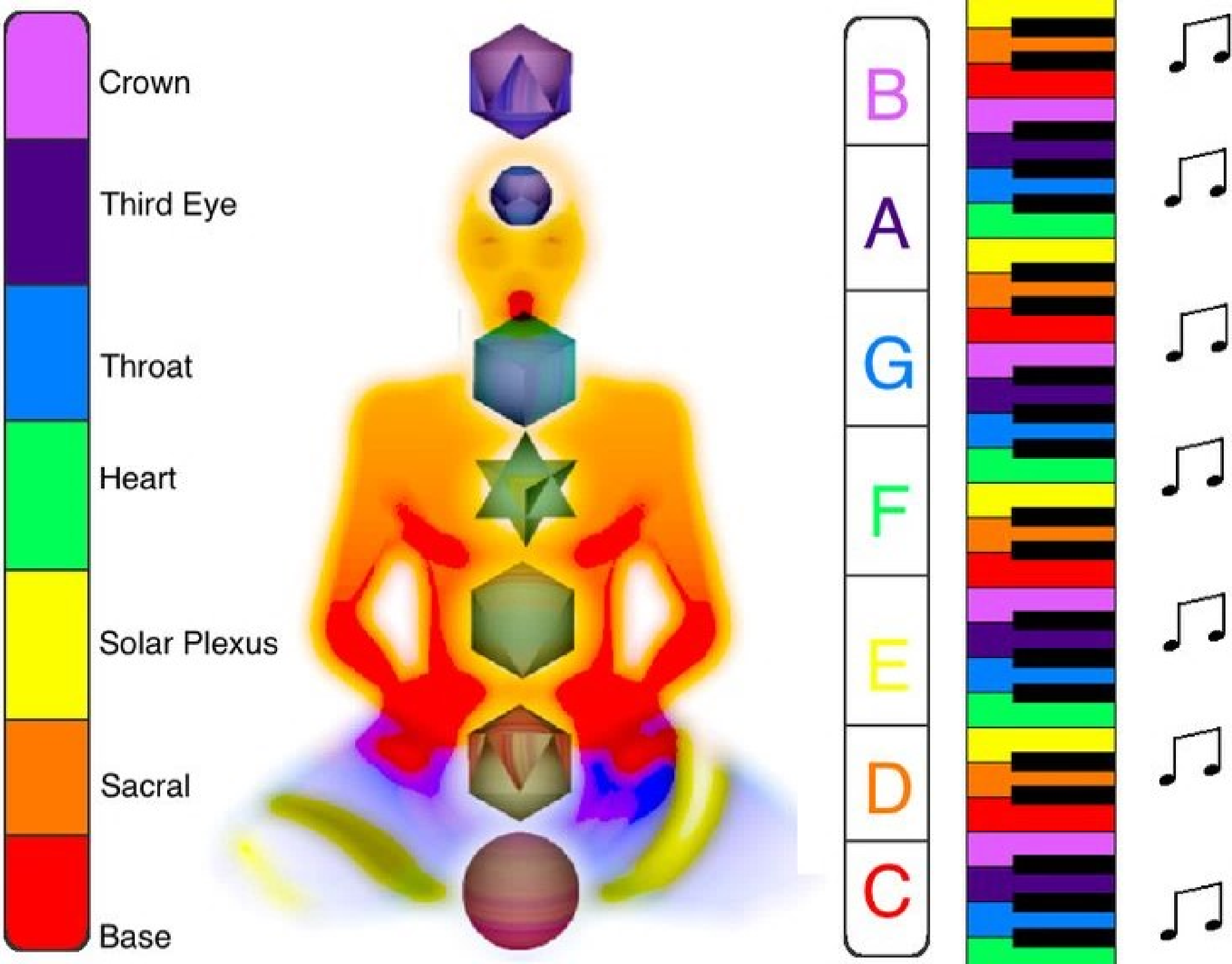
Crown
Third Eye
Throat
Heart
Solar Plexus
Sacral
Base
B
A
G
F
E
D
C

chakras & mudras

Sahasrara chakra mudra (7)

Keyword : intuition
Improves brain function, reduces headaches, increases concentration, stimulates the pituitary and pineal glands

Uttarabodhi mudra (7)

Keyword : enlightenment
Promotes heart and lungs, harmonizes body and mind helps find an idea, connects human being with his environment

Nirvana mudra (6)

Keyword : liberation
Reduces selfish desire for personal gain awakens the heart of compassion, reduces the ego grip

Mahashirsha mudra (6)

Keyword : mental clarity
Reduces tension in the eyes, breaks up congestion in the frontal sinuses, improves mental clarity, relieves headaches

Ajna chakra mudra (6)

Keyword : liberation
Opens spiritual vision, improves concentration and intuition, stimulates the pituitary gland, clarifies the mind

Hakini mudra (6)

Keyword : concentration
Promotes concentration, creativity, intellectual work, management, breathing

Granthita mudra (5)

Keyword : meditation
Prepares the mind for meditation, strengthens the voice, improves thyroid function, increases the capacity for body self-healing

Vishuddha chakra mudra (5)

Keyword : power of persuasion
Improves the health of the thyroid and parathyroid glands, promotes the voice, reduces tension in the neck, improves communication with self and others, increases sensitivity to the thoughts and feelings of others

Mritsamjivani mudra(4)

Keyword : life saver
Strengthens and heals the heart, regulates heart complications

Anahata chakra mudra (4)

Keyword : healing
Strengthens the heart, lungs and breasts, calms breathing, increases compassion and healing abilities

Ganesh mudra (4)

Keyword : obstacles overcome
Heart stimulant, promotes confidence and courage, develops the qualities of compassion and solidarity

Padma mudra (4)

Keyword : purity
Brings purity of heart and nobility of feelings, promotes benevolence and communication

Manipura Chakra mudra (3)

Keyword : empathy
Strengthens digestion, improves health of liver, gall bladder, spleen, stomach, pancreas, and small and large intestines, bolsters willpower, increases personal magnetism

Surabhi mudra (3)

Keyword : empathy
Balances Vata Dosha, treats cough and biliary disorders, improves memory, reduces rheumatism, increases empathy, promotes hidden gifts and talents,increases devotion and spiritual momentum

Adhomukha mudra (3)

Keyword : digestive fire
Activates digestive fire (agni), increases transformation and power of self-healing, reduces toxicity, prepares the mind for meditation and mantras

Kamajayi mudra (2)

Keyword : self-control
Restrains passion excess and sexual desire, regulates sexual energy to turn it inwards and upwards, strengthens digestion, assimilation and elimination

Rudra mudra (3)

Keyword : rebalance
Strengthens the Earth element, helps to refocus, to ask, to think calmly, stops the vital energy loss

Shakti mudra (2)

Keyword : life energy
Soothing and regulating total breathing, brings relaxation of the mind and the body

Svadhisthana chakra mudra (2)

Keyword : adjustment
Increases the ability to adjust to change, promotes creativity, stimulates interpersonal relationships, balances sexual health and fertility, tones the blood

Gada mudra (1)

Keyword : self-confidence
Improves elimination and tones the organs of the pelvis, relieves hemorrhoids, opens the flow of rising energy in the back of the body, arouses a feeling of stability, strength and safety

Mushti mudra (1)

Keyword : self-confidence
Reduces anxiety and nervousness, strengthens digestion and assimilation, eliminates nightmares, calms the mind, gives a feeling of focus on the body, reduces fatigue and increases vitality

Pran mudra (1)

Keyword : life
Increase vital energy and reduces fatigue and nervousness, increases endurance and self-confidence, gives the courage to start something new

Thumb	Fire	3rd chakra Manipura	Mars	Assertiveness, vitality, exteriorization
Index finger	Air	4th chakra Anahata	Jupiter	Pondering, judgment, valorization, travelling
Middle finger	Space	5th chakra Vishuddha	Saturn	Responsibility & self-control, weighting, rigidity
Ring finger	Earth	1st chakra Muladhara	Venus	Relationship, emotions and affections
Little finger	Water	2nd chakra Svadhisthana	Mercury	Communication, mind, movements

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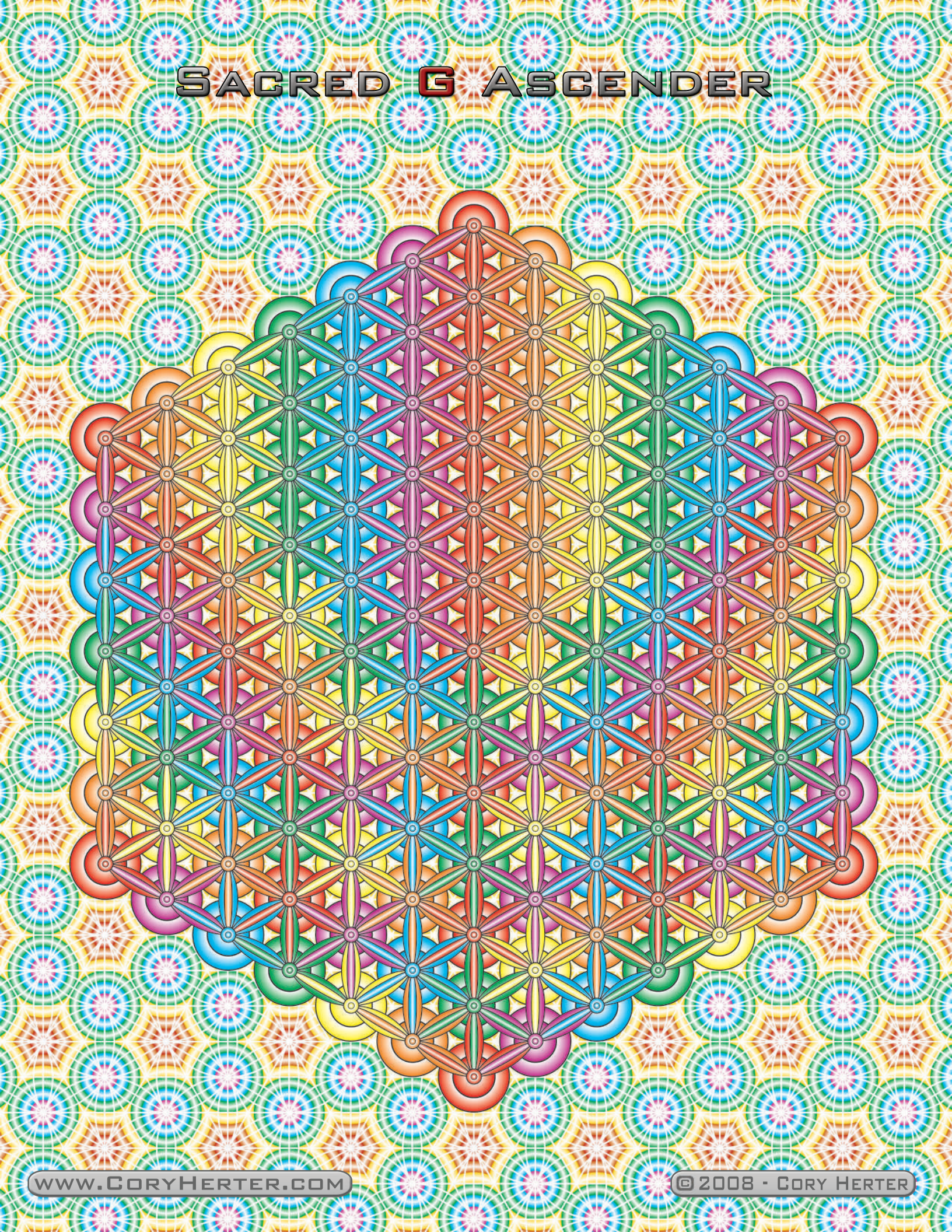
Sacred G Ascender



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THE 100 DEADLIEST KARATE MOVES

PRIMARY ĀSANA

Nose
Daṇḍāsana

Nose
Paśchimottānāsana A

Nose or Foot
B

Foot
C

Nose
Pūrvottānāsana

Nose
Ardha Baddha Padma Paśchimottānāsana

Foot
Tirieng Mukha Eka Pāda Paśchimottānāsana

Foot
Jānu Śīrṣāsana A

Foot
Jānu Śīrṣāsana B

Foot
Jānu Śīrṣāsana C

Foot
Marīchyāsana A

Nose
Marīchyāsana B

Side
Marīchyāsana C

Side
Marīchyāsana D

Nose
Navāsana x5 ☞

Nose
Lolāsana

Nose
Bhuja Pīḍāsana

3rd Eye
Kūrmāsana

Nose
Supta Kūrmāsana

Nose
Garbha Piṇḍāsana

Nose
Kukkuṭāsana

Nose
Baddha Koṇāsana A

Nose
B

Nose
C

Nose
Upaviṣṭha

Upward
Koṇāsana A & B

Navel
Supta Koṇāsana

Foot
Supta Hasta Pādāṅguṣṭhāsana

Side
Supta Pārśvasahita

Foot
Supta Hasta Pādāṅguṣṭhāsana

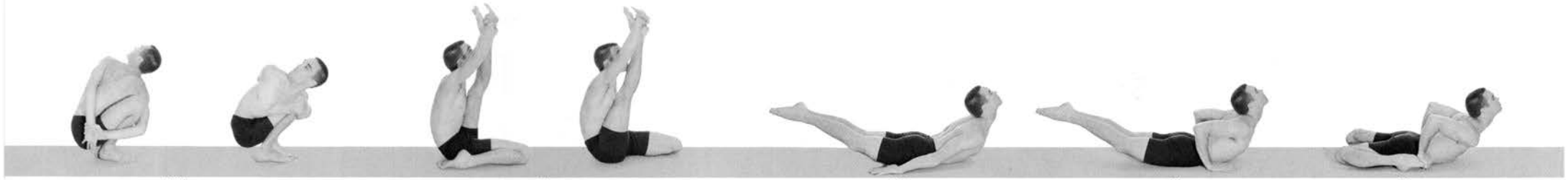
Side
Supta Pārśvasahita

Upward
Ubbaya Pādāṅguṣṭhāsana

Nose or Feet
Ūrdhva Mukha Paśchimottānāsana

Nose
Setu Bandhāsana

INTERMEDIATE ĀSANA



Side **Pāśāsana** | Foot **Krounchāsana** | Nose **Śalabhāsana A** | Nose **Śalabhāsana B** | Nose **Bhekāsana**

Nose **Dhanurāsana** | Nose **Pārśva Dhanurāsana** ☞ | Nose **Dhanurāsana** | Nose **Uṣṭrāsana** | Nose **Laghu Vajrāsana** | Nose **Kapotāsana A** | Nose **Kapotāsana B**

Nose **Supta Vajrāsana** | Nose **Up & down x5** | Nose **+ 5 Breaths** | Nose **Bakāsana A** | Nose **Bakāsana B** (Jump) | Side **Bharadvajāsana**

Side **Ardha Matsyendrāsana** | Foot **Eka Pāda Śīrṣāsana** | Nose **Dwi Pāda Śīrṣāsana** | 3rd Eye **Yoga Nidrāsana** | Nose **Tittibhāsana A** | Nose **B (+ walk)** | Nose **C**

Nose
Pincha Mayūrāsana

Nose
Karandavāsana

Nose
Mayūrāsana

Nose
Nakrāsana

Upward
Vātāyanāsana

Upward
Parighāsana

Nose Upward
Gomukhāsana A & B

Nose Upward
Gomukhāsana A & B

Nose Side
Supta Ūrdhva Pāda Vajrāsana

Nose Side
Supta Ūrdhva Pāda Vajrāsana

Nose
Mukta Hasta Śīrṣāsana A

B

C

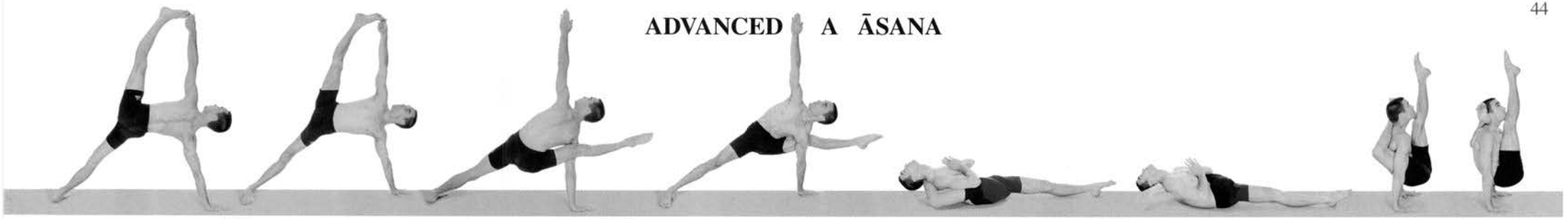
Nose
Baddha Hasta Śīrṣāsana A

B

C

D

ADVANCED A ĀSANA

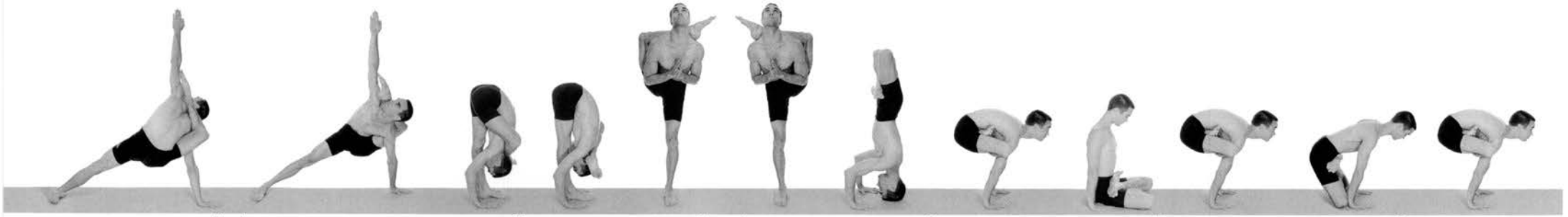


Foot
Vasiṣṭhāsana

Hand
Viśwāmitrāsana

3rd Eye
Kaśyapāsana

Foot
Chakorāsana



Hand
Bhairavāsana

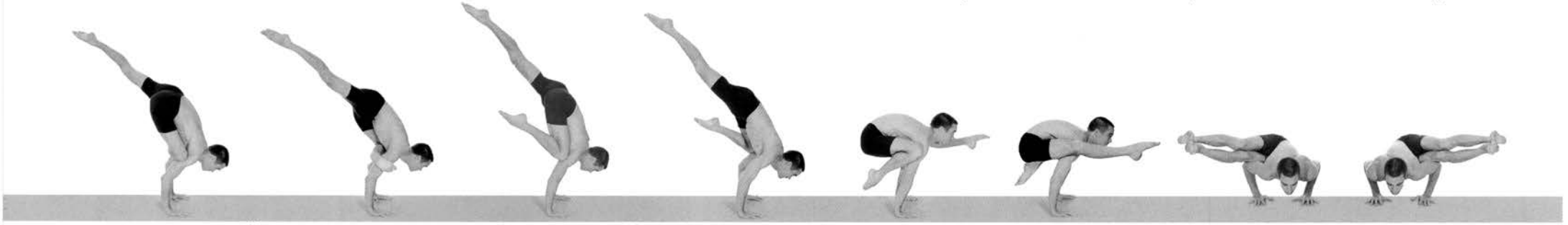
Nose
Skandāsana

Upward
Dūrvāsāsana

Nose
Ūrdhva Kukkuṭāsana A

Nose
Ūrdhva Kukkuṭāsana B

Nose
Ūrdhva Kukkuṭāsana C



Nose
Gālavāsana

Nose
Eka Pāda Bakāsana A

Nose
Eka Pāda Bakāsana B

Nose
Kouṇḍinyāsana A

Nose
Kouṇḍinyāsana B

Nose
Aṣṭāvakrāsana A

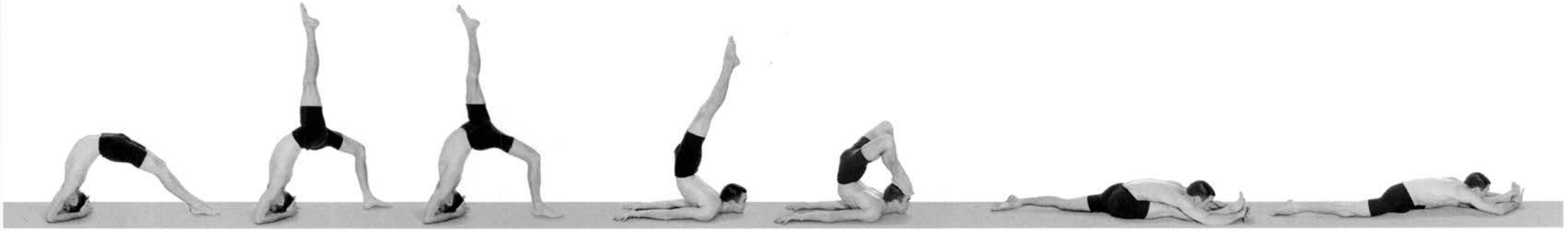
Nose
Aṣṭāvakrāsana B

Nose
Aṣṭāvakrāsana B

Side
Pūrṇa Matsyendrāsana

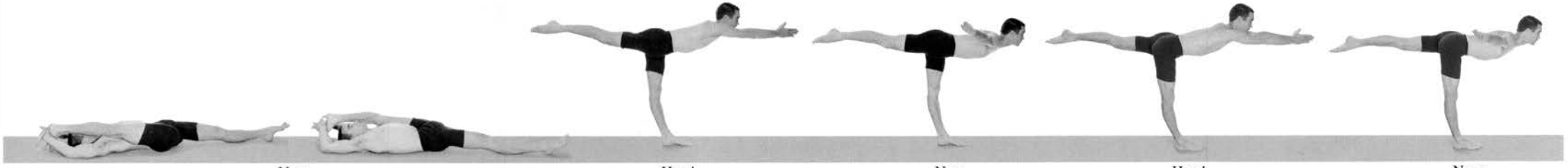
Nose Upward Nose Nose Upward Nose Nose Foot Side Nose Foot Side

Viranchyāsana A **Viranchyāsana A** **Viranchyāsana B** **Viranchyāsana B**



Nose Nose Nose Nose Foot

Viparīta Daṇḍāsana **Eka Pāda Viparīta Daṇḍāsana** **Viparīta Śalabhāsana** **Gaṇḍa Bheruṇḍāsana** **Hanumānāsana**



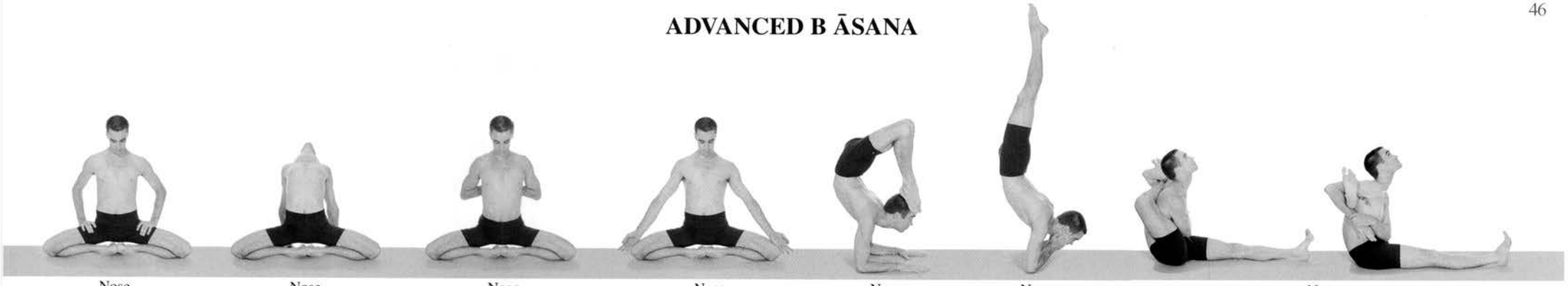
Nose Hand Nose Hand Nose

Supta Trivikramāsana **Dīghāsana A** **Dīghāsana B** **Dīghāsana A** **Dīghāsana B**

Nose Hand Nose Nose

Trivikramāsana **Naṭarājāsana** **Rāja Kapotāsana** **Eka Pāda Rāja Kapotāsana**

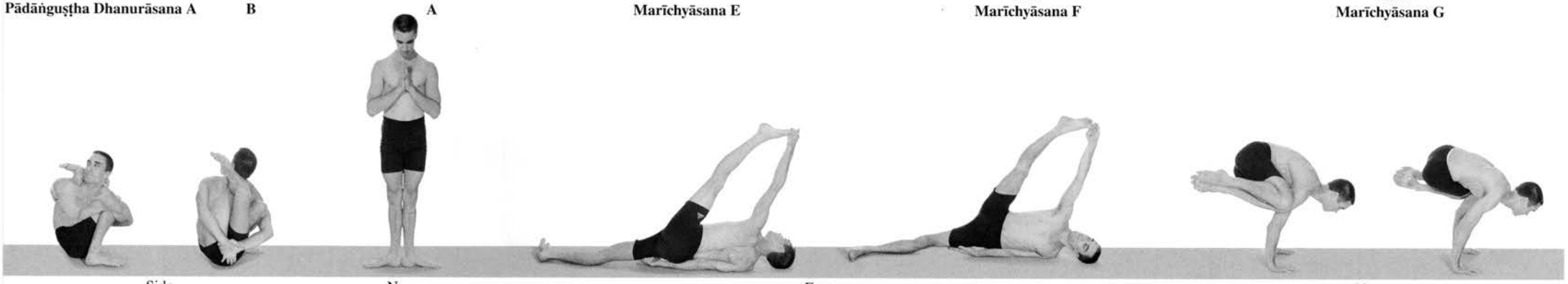
ADVANCED B ĀSANA



Nose **Mūla Bandhāsana** | Nose **Nahuśāsana A** | Nose **B** | Nose **C** | Nose **Vṛśchikāsana A** | Nose **Śayanāsana** | Nose **Buddhāsana**

Foot **Kapilāsana** | Foot **Ākarṇa Dhanurāsana A** | Upward **B** | Foot **Ākarṇa Dhanurāsana A** | Upward **B**

Nose **Pādāṅguṣṭha Dhanurāsana A** | Nose **B** | Nose **A** | Nose **Marīchyāsana E** | Side **Marīchyāsana F** | Nose **Marīchyāsana G**



Side **Marīchyāsana H** | Nose **Tāḍāsana** | Foot **Samānāsana** | Nose **Pārśva Bakāsana**

Nose
Puṇga Kukkuṭāsana

Nose
Eka Pāda Dhanurāsana

Nose
Eka Pāda Kapotāsana

Nose
Paryāṅgāsana A

Nose
B

Nose
Parivṛttāsana A

Circle x3 ↺

Circle x3 ↻

Nose
Parivṛttāsana B

Circle x3 ↺

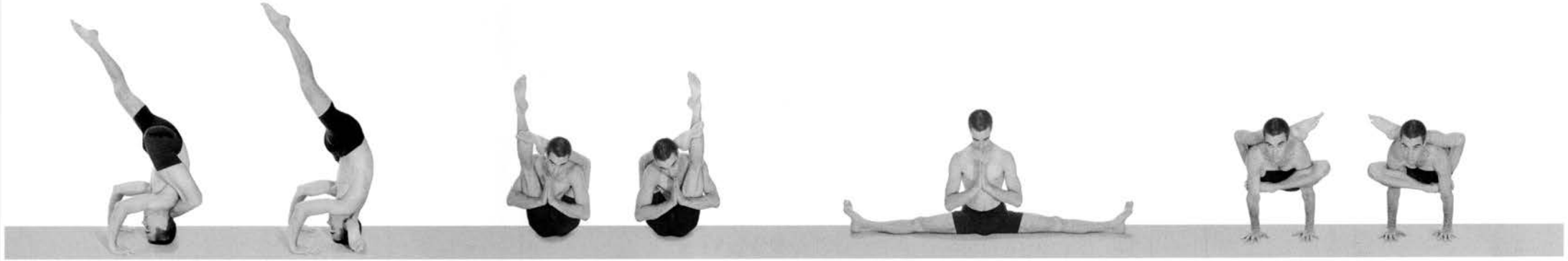
Circle x3 ↻

Nose
Yoni Daṇḍāsana

Hand
Yoga Daṇḍāsana

Nose
Bhuja Daṇḍāsana

Nose
Pārśva Daṇḍāsana



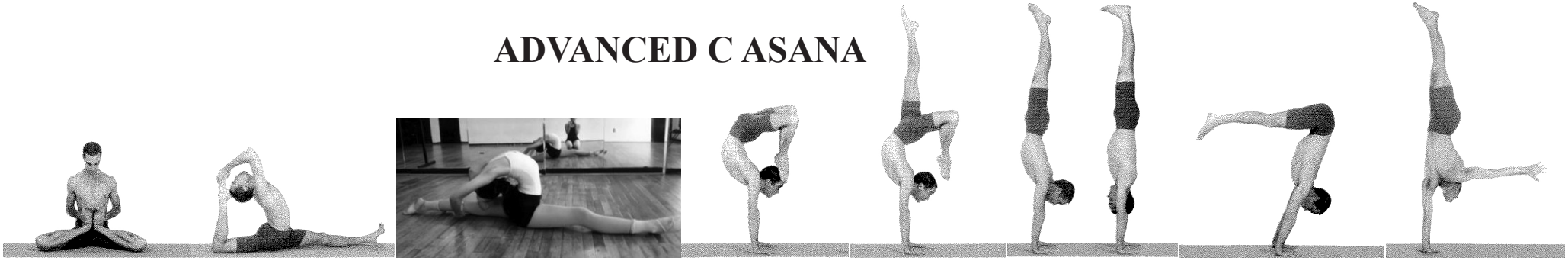
Nose
Ūrdhva Daṇḍāsana B

Nose
Adho Daṇḍāsana

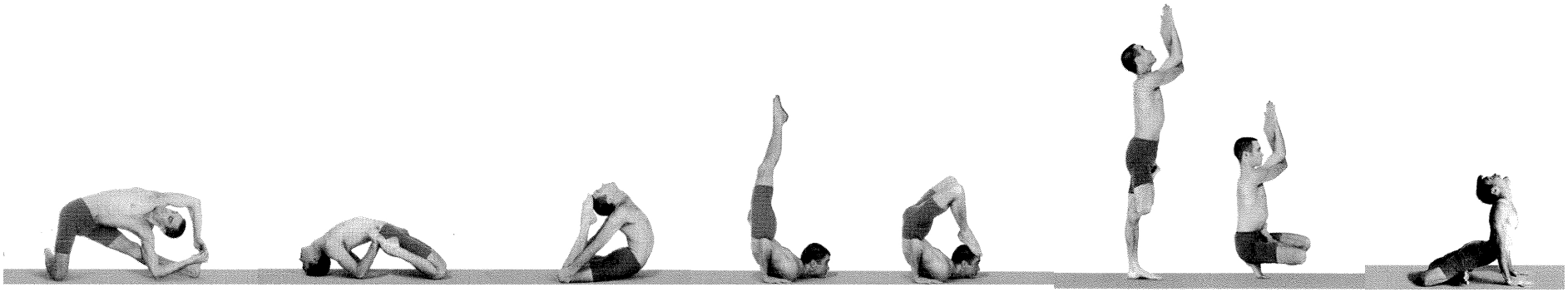
Nose
Sama Koṇāsana

Nose
Omkarāsana

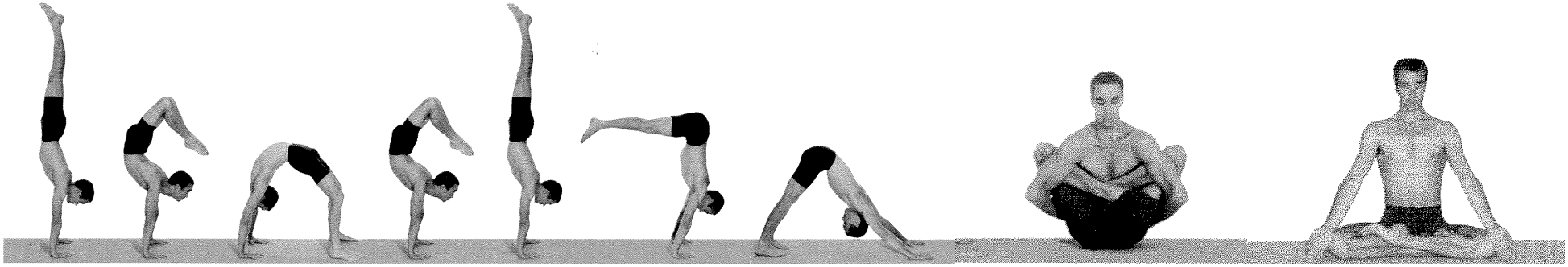
ADVANCED C ASANA



Nose **Kandapidasana** | Nose **Kraukachasana A** | Toes **Kraukachasana B** | 3rd Eye **Taraksvasana A** | 3rd Eye **Taraksvasana B** | Nose **Sama-vrikshasana** | **Urdhva-danda-vrikshasana** | **Ekahasta-vrikshasana**

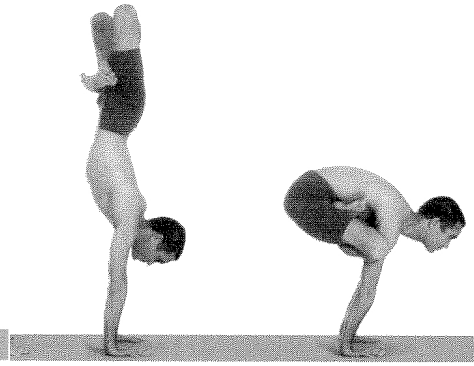


Upward **Uttana-parighasana** | Nose **Supta-bhekasana** | Nose **Baddha-rajakapotasana** | Nose **Uttana-shalabhasana A, B** | Nose | Upward **Utthita-swastikasana** | Upward **Simhasana**

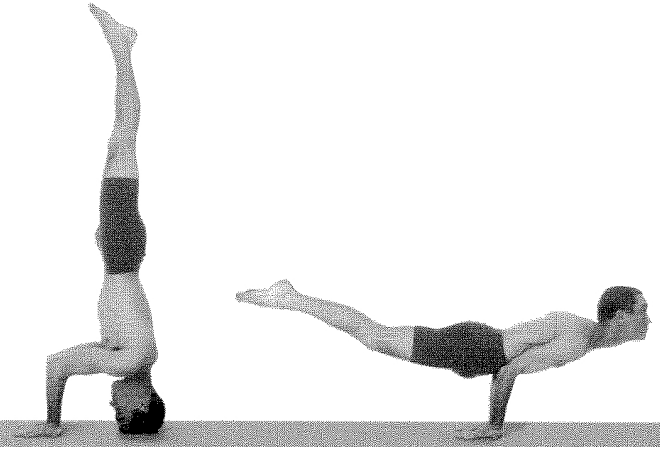


Nose **Viparita-chakrasana** | Nose **Yogasana A, B** | Nose **Swastikasana**

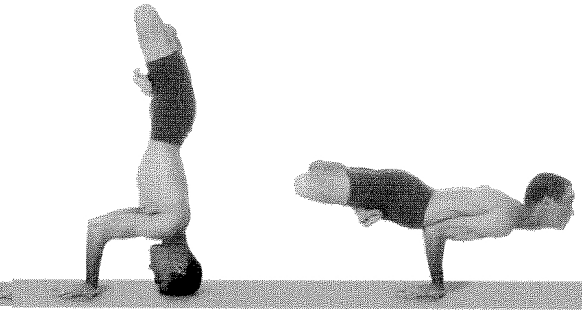
Nose
Siddhasana



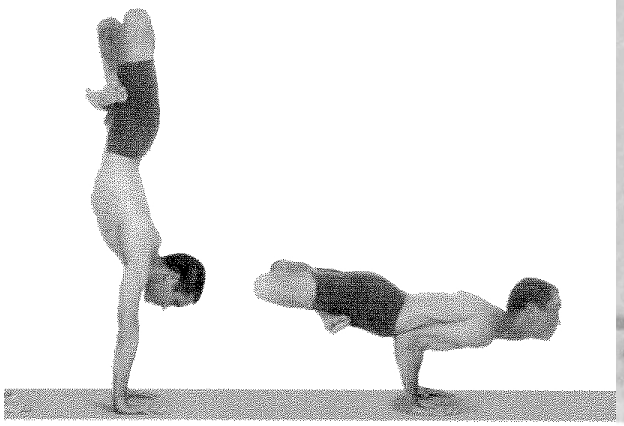
Nose
Urdhva-kukkutasana D



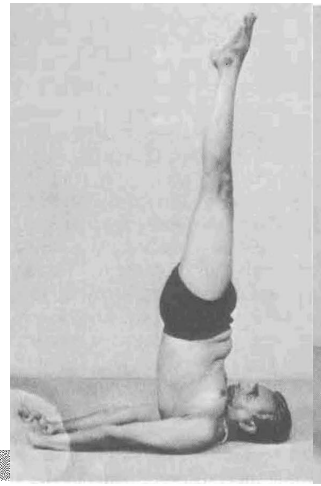
Nose
Shirsha-mayurasana



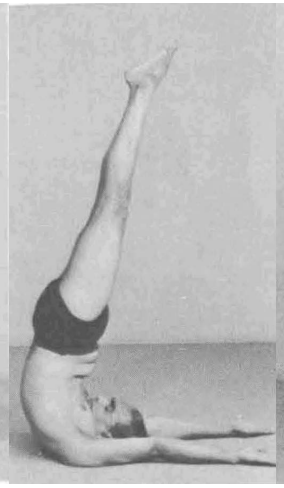
Nose
Shirsha-padma-mayurasana



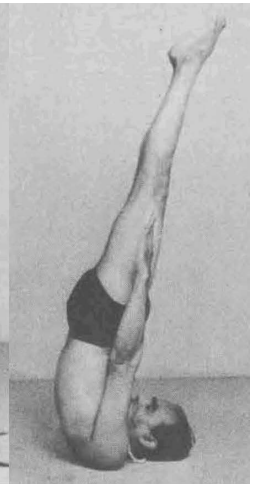
Nose
Adho-mukha-padmasana A, B



Navel
Salamba sarvangasana B

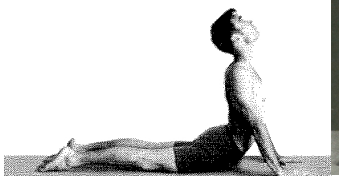


Navel

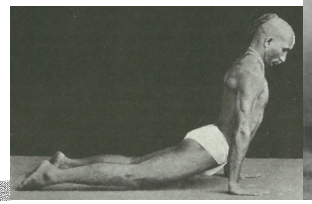


Navel
Niralamba sarvangasana A, B

ADVANCED D ASANA

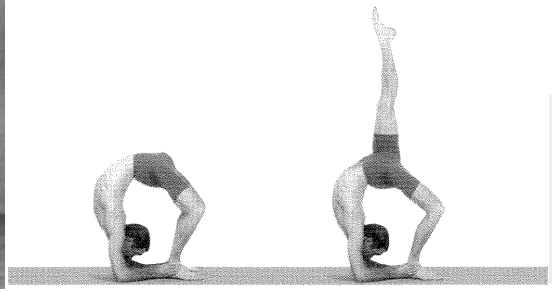


Nose
Bhujangasana A



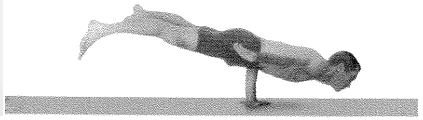
Nose
Bhujanasana B

Nose
Tiryang-mukhottanasana

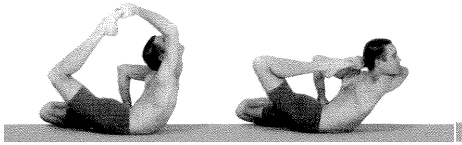


Nose Nose
Chakra-bandhasana (Ekapada)

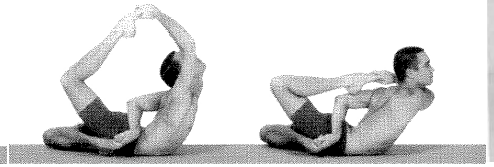
Nose
Shirsha-padasana



Fingers
Pungu-mayurasana

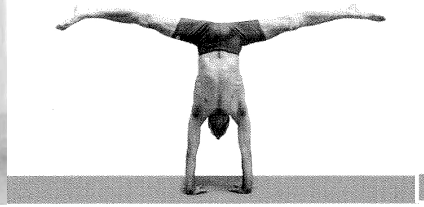


Nose Nose
Gherandasana A, B

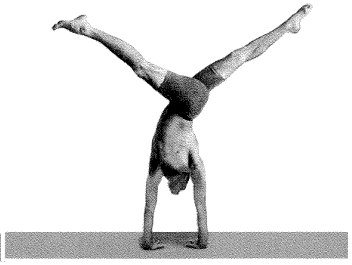


Nose Nose
Gherandasana C, D

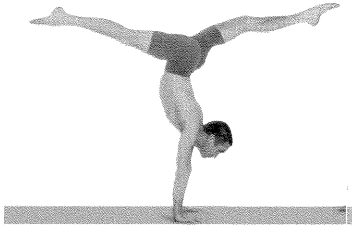
Nose
Ganda-bherundasana



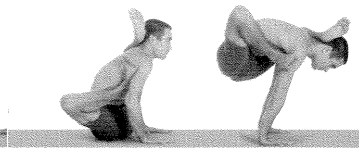
Nose
Urdhva-prasarita-padasana A, B



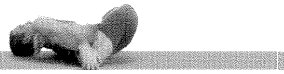
Nose Nose



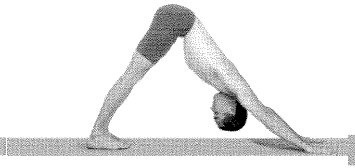
Nose
Tiryang-mukhotthita trikonasana



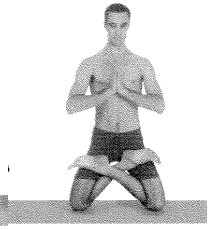
Nose
Ekapada-sirsa-yogadandasana



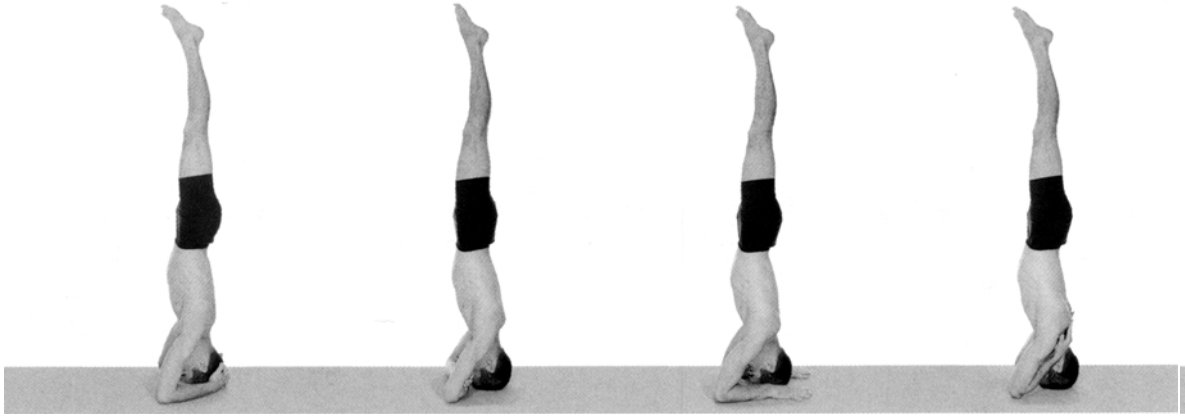
Nose
Supta-kandasana A, B



Nose
Ardha-chakrasana

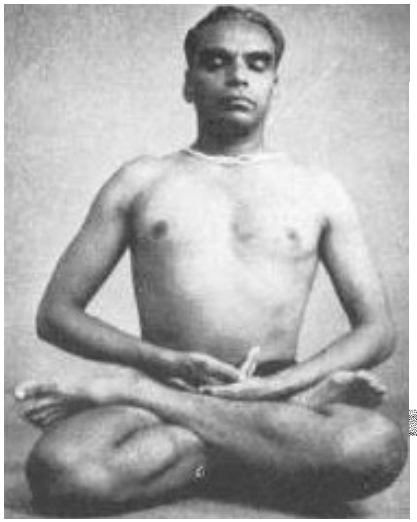


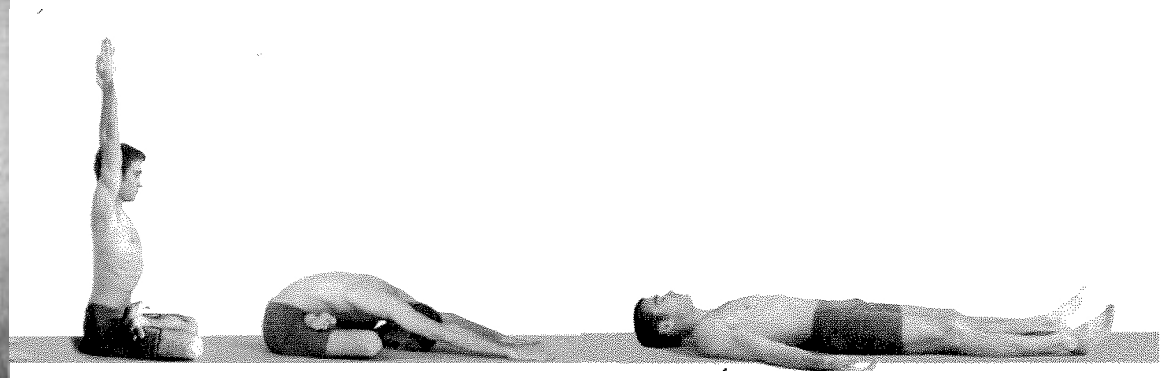
Nose
Yogapithasana A, B



Nose
Baddha-hasta Shisrshasana A B C D

Nose
Mukta-hasta Shirsasana A B C



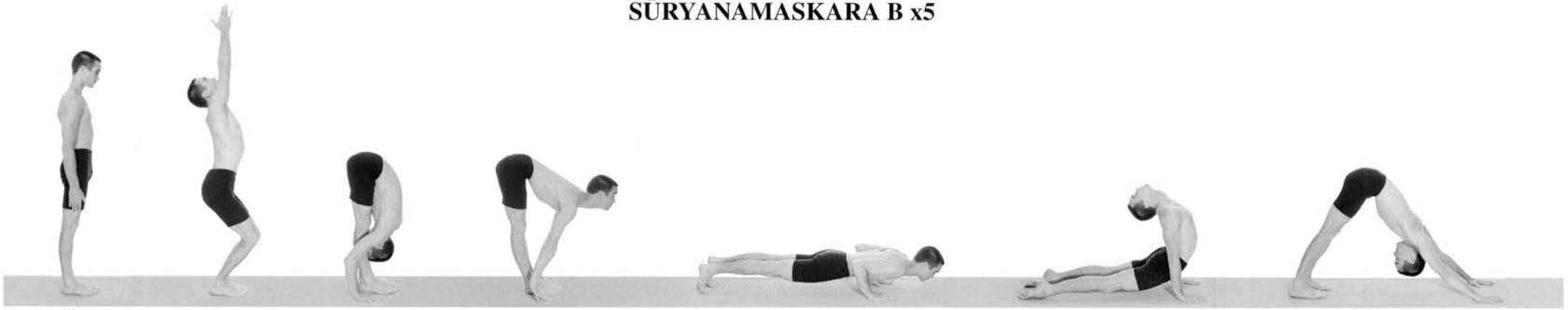


Nose **Parvatasana A** Hands **Parvatasana B** Hands **Parvatasana C** **Shavasana (Take rest)**

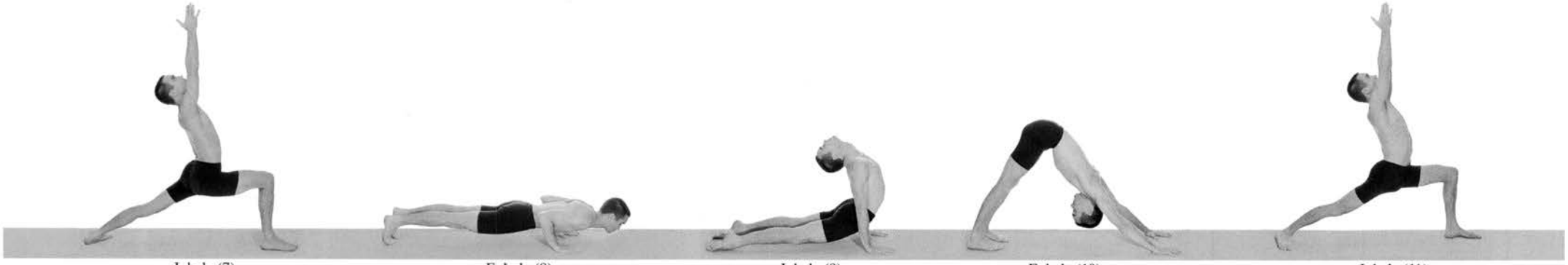
SŪRYANAMASKARA A x5

(0)	Inhale (1)	Exhale (2)	Inhale (3)	Exhale (4)	Inhale (5)	Exhale + 5 Breaths (6)	Inhale (7)	Exhale (8)	Inhale (9)	Exhale
Dṛiṣṭi:	3rd Eye	Nose	3rd Eye	Nose	3rd Eye	Nose	3rd Eye	Nose	3rd Eye	Nose
Samasthitiḥ	**Ūrdhva Vṛkṣāsana**	**Uttānāsana A**	**Uttānāsana B**	**Chaturāṅga Daṇḍāsana**	**Ūrdhva Mukha Śvānāsana**	**Adho Mukha Śvānāsana**	**Uttānāsana B**	**Uttānāsana A**	**Ūrdhva Vṛkṣāsana**	**Samasthitiḥ**

SŪRYANAMASKARA B x5



(0)	Inhale (1)	Exhale (2)	Inhale (3)	Exhale (4)	Inhale (5)	Exhale (6)
Dṛiṣṭi:	3rd Eye	Nose	3rd Eye	Nose	3rd Eye	Nose
Samasthitiḥ	**Utkaṭāsana**	**Uttānāsana A**	**Uttānāsana B**	**Chaturāṅga Daṇḍāsana**	**Ūrdhva Mukha Śvānāsana**	**Adho Mukha Śvānāsana**



Inhale (7)
3rd Eye
Vīrabhadrāsana A

Exhale (8)
Nose
Chaturāṅga Daṇḍāsana

Inhale (9)
3rd Eye
Ūrdhva Mukha Śvānāsana

Exhale (10)
Nose
Adho Mukha Śvānāsana

Inhale (11)
3rd Eye
Vīrabhadrāsana A

Exhale (12)
Nose
Chaturāṅga Daṇḍāsana

Inhale (13)
3rd Eye
Ūrdhva Mukha Śvānāsana

Exhale + 5 Breaths (14)
Nose
Adho Mukha Śvānāsana

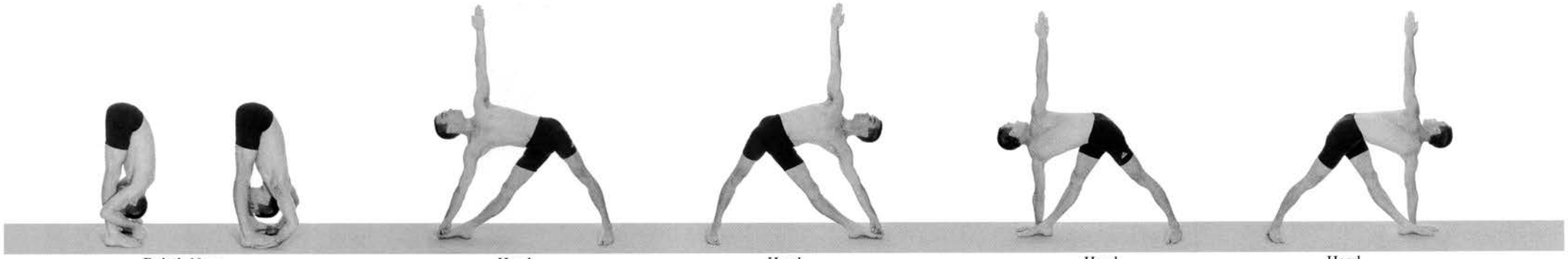
Inhale (15)
3rd Eye
Uttānāsana B

Exhale (16)
Nose
Uttānāsana A

Inhale (17)
3rd Eye
Utkaṭāsana

Exhale (0)
Nose
Samasthitiḥ

STANDING ĀSANA



Dṛiṣṭi: Nose
Hasta Pādāṅguṣṭhāsana & Pāda Hastāsana

Hand
Utthita Tri Koṇāsana

Hand
Utthita Tri Koṇāsana

Hand
Parivṛtta Tri Koṇāsana

Hand
Parivṛtta Tri Koṇāsana

Hand
Utthita Pārśva Koṇāsana

Hand
Utthita Pārśva Koṇāsana

Hand
Parivṛtta Pārśva Koṇāsana

Hand
Parivṛtta Pārśva Koṇāsana

Nose
Prasārita Pādottānāsana A

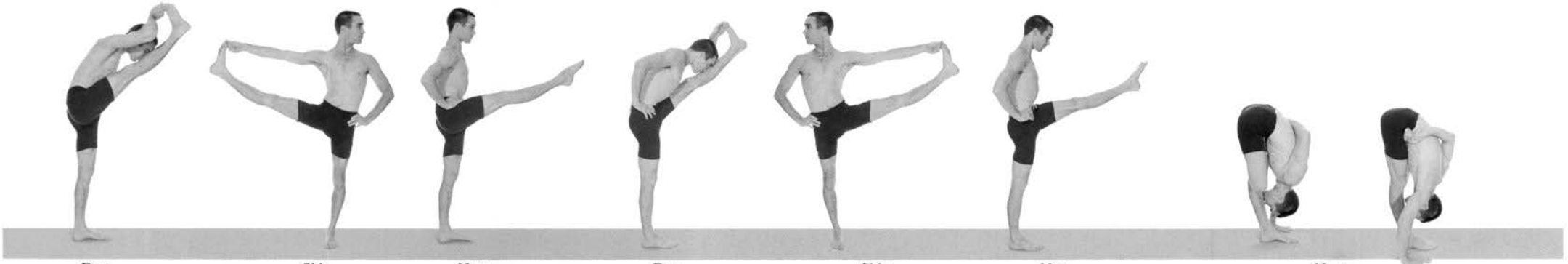
Nose
B

Nose
C

Nose
D

Nose
Utthita Pārśvottānāsana

Nose
Utthita Pārśvottānāsana



Foot
Utthita Hasta Pādāṅguṣṭhāsana

Side
Utthita Pārśvasahita

Nose
Utthita Eka Pādāsana

Foot
Utthita Hasta Pādāṅguṣṭhāsana

Side
Utthita Pārśvasahita

Nose
Utthita Eka Pādāsana

Nose
Ardha Baddha Padmottānāsana

Hand
Utkaṭāsana

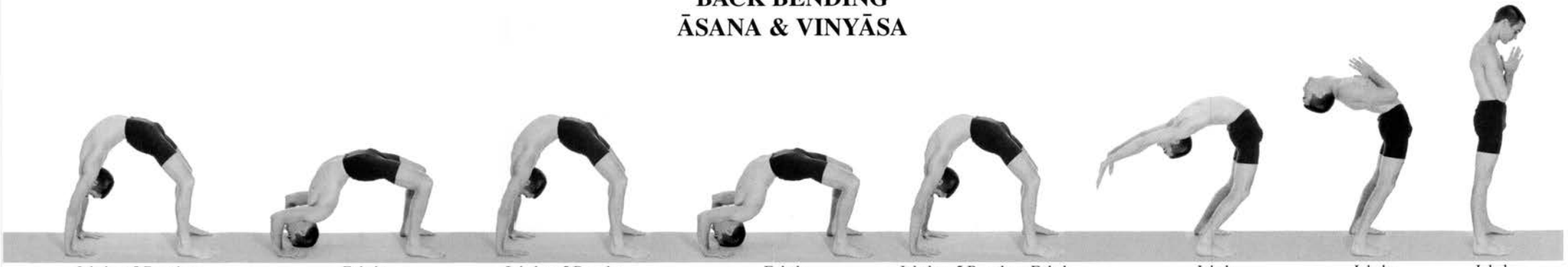
Hand
Vīrabhadrāsana A

Hand
Vīrabhadrāsana A

Hand
Vīrabhadrāsana B

Hand
Vīrabhadrāsana B

BACK BENDING
ĀSANA & VINYĀSA



Inhale + 5 Breaths | Exhale | Inhale + 5 Breaths | Exhale | Inhale + 5 Breaths + Exhale | Inhale | Inhale | Inhale

Ūrdhva Dhanurāsana

Dṛiṣṭi: Nose (for all the following)

Inhale | Exhale | Exhale | Exhale | Inhale | Inhale | Inhale...

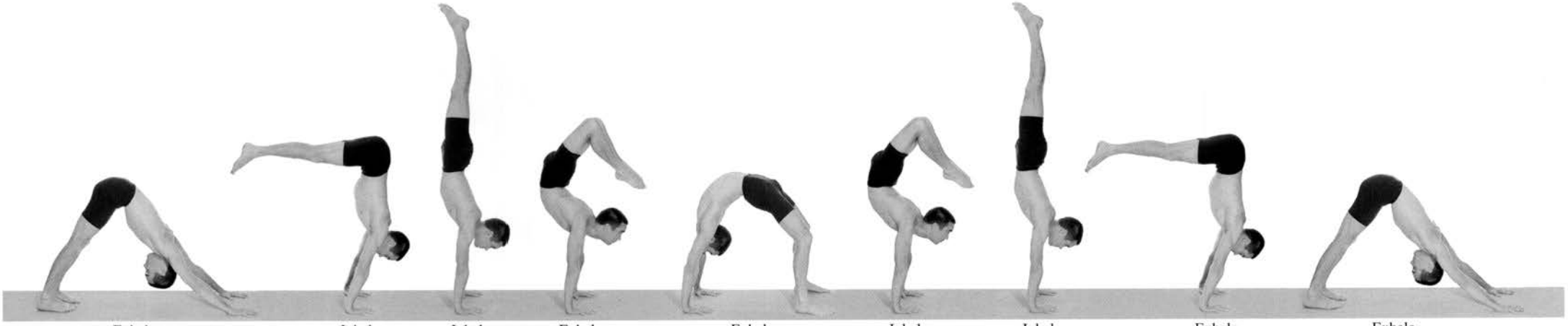
Drop Back x5 (Primary level)

...Exhale | Inhale | Inhale | Exhale | Exhale | Inhale | Inhale | Inhale...

Handstand drop-over x5 (Intermediate level)

(+ 5 Breaths first time only)

Vṛkṣāsana



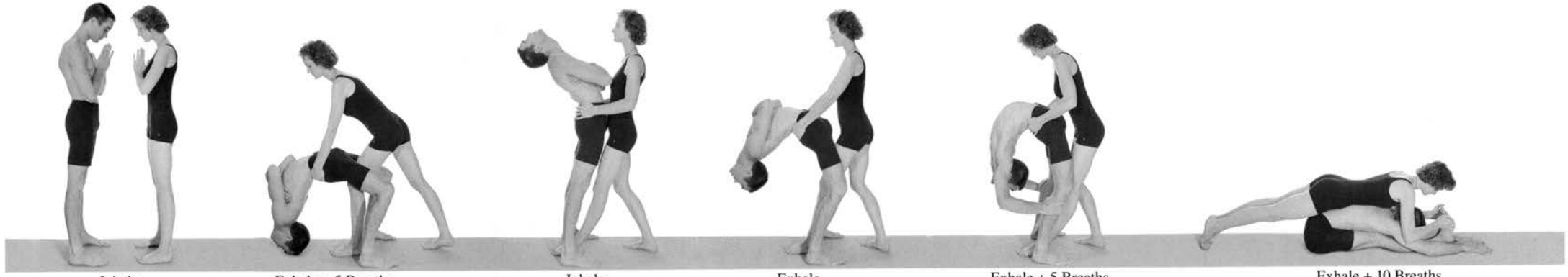
...Exhale | Inhale | Inhale | Exhale | Exhale | Inhale | Inhale | Exhale | Exhale...

Viparīta Chakrāsana x 5 (Advanced level)

...Exhale | Inhale | Inhale | Exhale + 5 Breaths + Inhale | Exhale | Inhale | Inhale | Inhale

Final Drop-over ☞

Vṛśchikāsana B



Inhale
Final Back Bending (all)

Exhale + 5 Breaths
Setu Bandhāsana

Inhale
Up & down x5

Exhale

Exhale + 5 Breaths
Chakra Bandhāsana

Exhale + 10 Breaths
Paśchimottānāsana

FINISHING SEQUENCE
ĀSANA & VINYĀSA

Inhale | Exhale (4) | Inhale (5) | Exhale (6) | Inhale (7) | Exhale + 10 Breaths

Inhale + 25 Breaths (8)
Navel
Sālamba Sarvāṅgāsana

Exhale + 10 Breaths + Inhale (8)
Navel
Halāsana

Exhale + 10 Breaths (8)
Navel
Karṇa Pīḍāsana

Inhale + 10 Breaths (8)
Navel
Ūrdhva Padmāsana

Exhale + 10 Breaths + In. (8)
Navel
Piṇḍāsana

Exhale + 10 Breaths + In. (8)
Nose
Matsyāsana

Exhale + 10 Breaths (8)
Nose
Uttāna Pādāsana

Inhale
Chakrāsana

Exhale (9) | Inhale (10) | Exhale (11/6) | Inhale (7) | Exhale

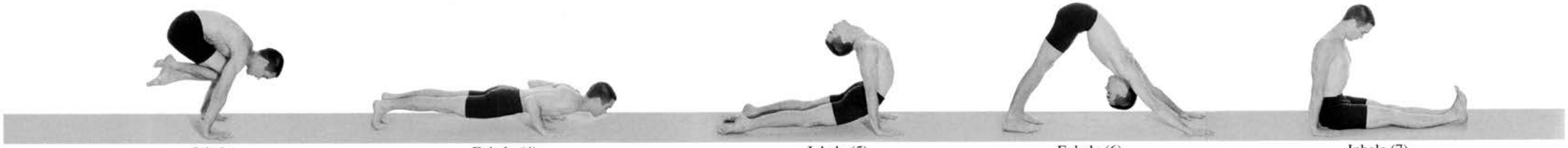
Inhale + 25 Breaths (8)
Nose
Śīrṣāsana

Exhale + 10 Breaths (9)
Nose
Ūrdhva Daṇḍāsana A

Inhale
Up & down x5 ☞

Exhale

Exhale + 10 Breaths
Eyes closed
Balāsana



Inhale

Exhale (4)

Inhale (5)

Exhale (6)

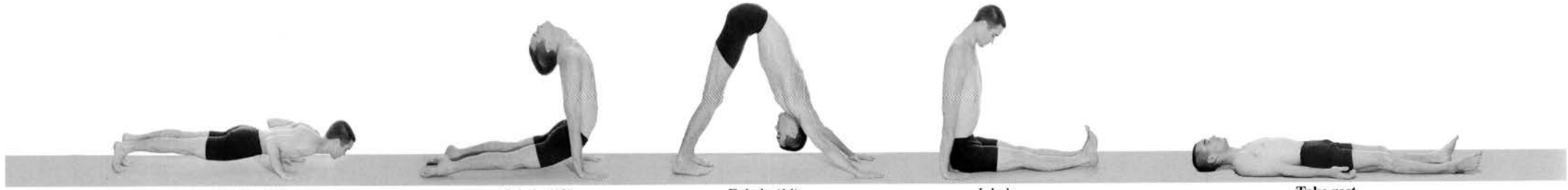
Inhale (7)

Exhale + 10 Breaths (8)
Nose
Baddha Padmāsana

Exhale + 10 Breaths (9)
3rd Eye
Yoga Mudrā

Exhale + 25 Breaths (10)
Nose
Padmāsana/Jñāna Mudrā

Inhale + 25 Breaths (11)
Nose
Utpluthiḥ



Exhale (12)

Inhale (13)

Exhale (14)
(do full vinyāsa for the mangala mantra)

Inhale

Take rest

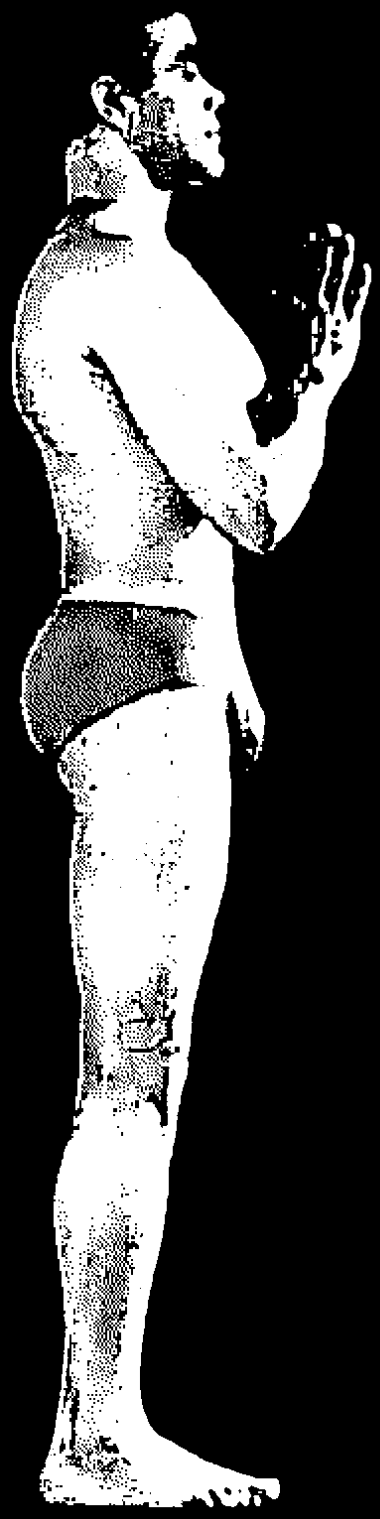
SURYA-NAMASKARA
VIRA-PARAMPARA

SUN SALUTATION
& HERO SERIES

These series are excellent preparatory exercises for the more difficult postures. Usually a series initiates practice because the fast movements generate heat and loosen the muscles, which makes moving into deeper poses easier. They also set the tone for all yoga practice. With the series, as well as with all *asana* practice, you must be well grounded, disciplined, and determined to face life's challenges victoriously. Untrained students often find it difficult to focus on several actions simultaneously; consequently they find their minds wandering during a series. It's important to restrain the mind and keep it focused. As one practices regularly, new energetic patterns emerge in the mind and body and less effort is required to perform the series in alignment.

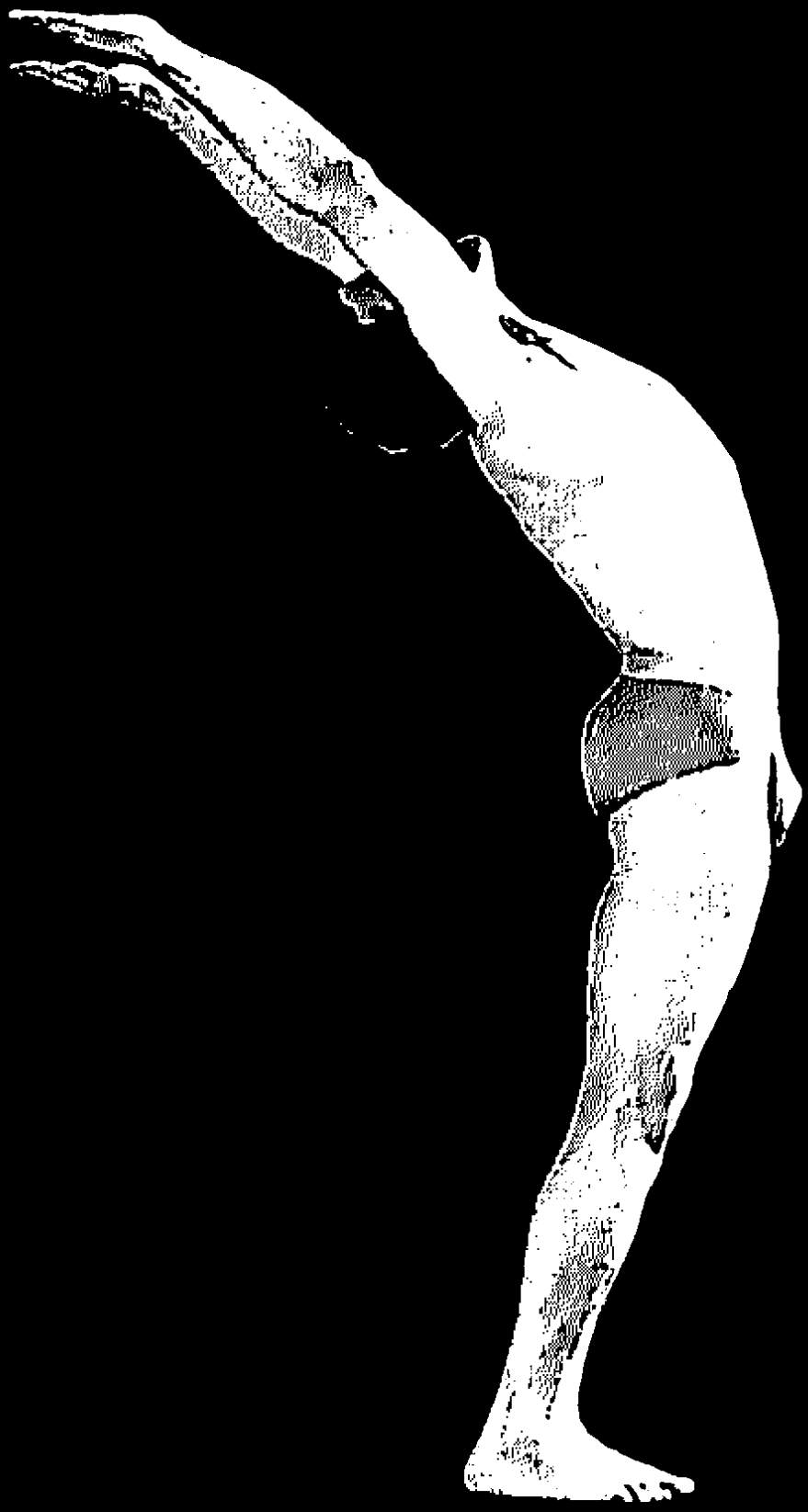
The two series here are known as *vinyasas*, which means a sequence of briefly held poses that flow into each other. Each series stresses slightly different parts of the body. The Salutation to the Sun was the first series created by the masters — it loosens the muscles of the legs, hips, arms, shoulders and gives the back a

gentle bend. It also represents the Lord in the physical plane. The Hero Series focuses more on the hips and legs. It's important to do the Hero on both the left and the right sides of the body.



Surya-Namaskara — Pranamasana

Sun Salutation — Prayer Pose

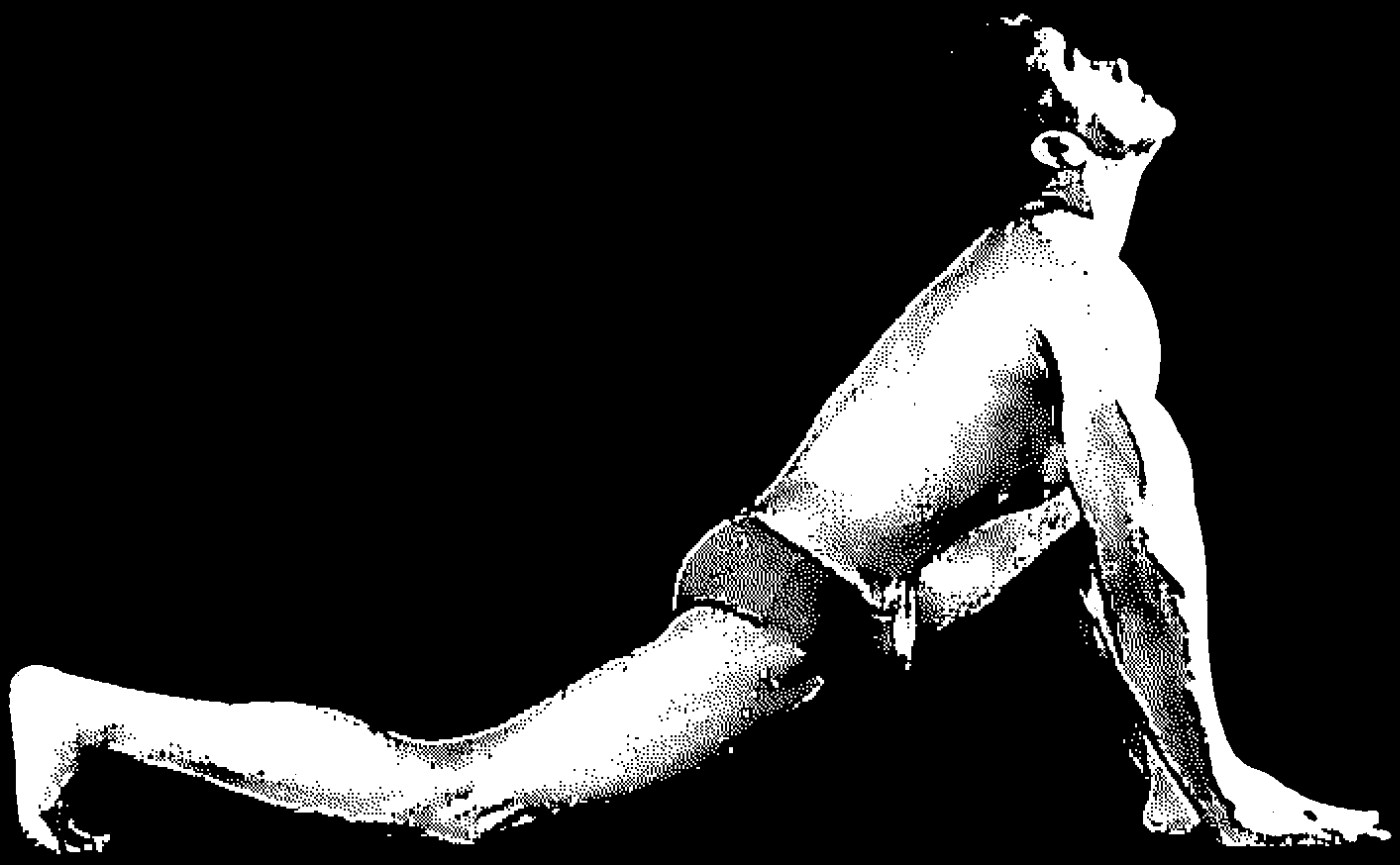


Surya-Namaskara — Hasta-Uttanasana

Sun Salutation — Raised Hands Pose

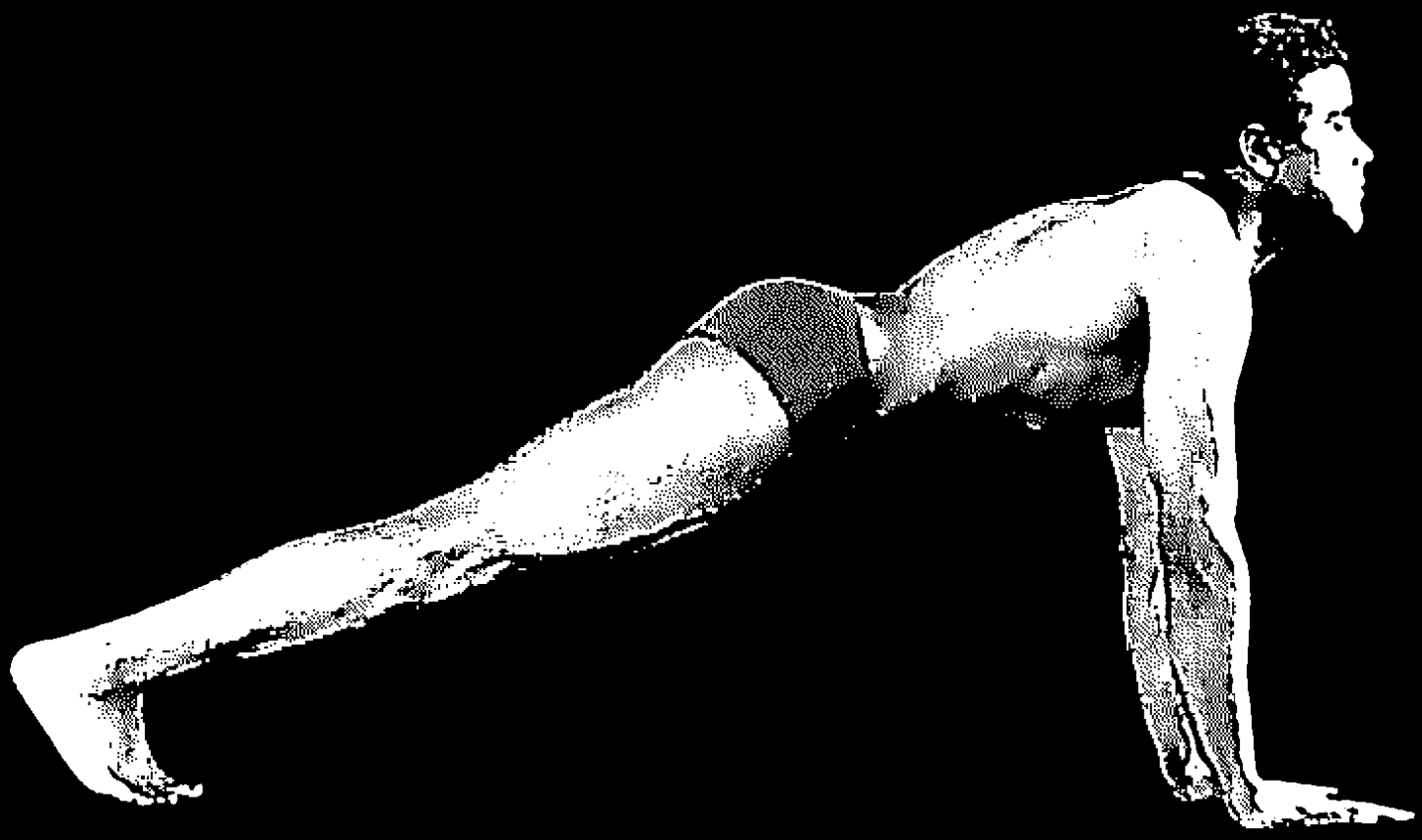
Surya-Namaskara — Uttanasana

Sun Salutation — Intense Stretch Pose

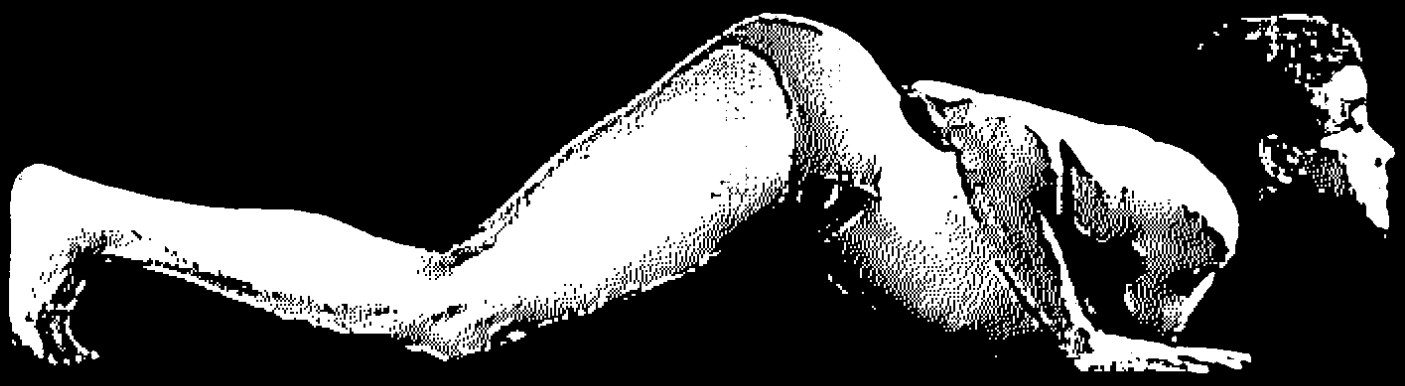


Surya-Namaskara — Ashva-Sanchalanasana

Sun Salutation — Equestrian Pose

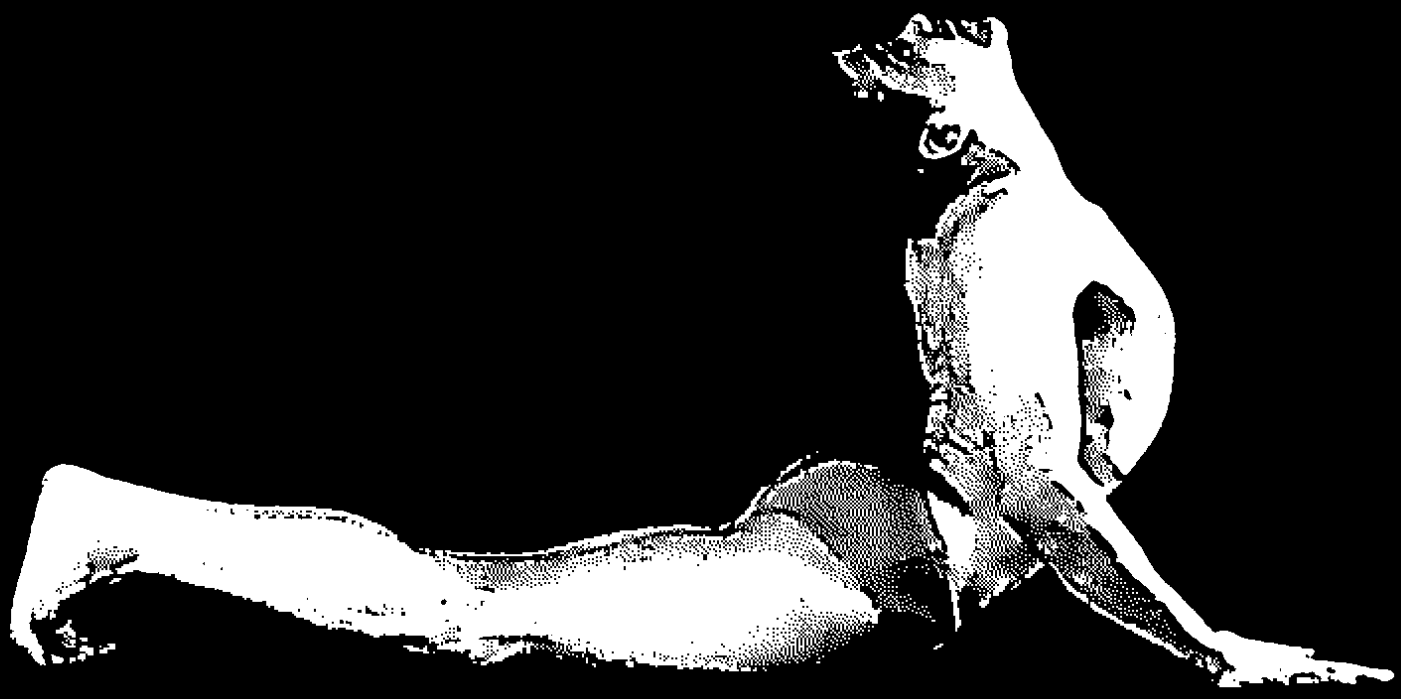


Surya-Namaskara — Chaturanga-Dandasana
Sun Salutation — Plank Pose (Variation)



Surya-Namaskara — Ashtanga-Namaskara

Sun Salutation — Eight-Point Bow Pose



Surya-Namaskara — Bhujangasana

Sun Salutation — Cobra Pose

Surya-Namaskara — Adho-Mukha-Svanasana

Sun Salutation — Downward Facing Dog Pose

Surya-Namaskara — Ashva-Sanchalanasana

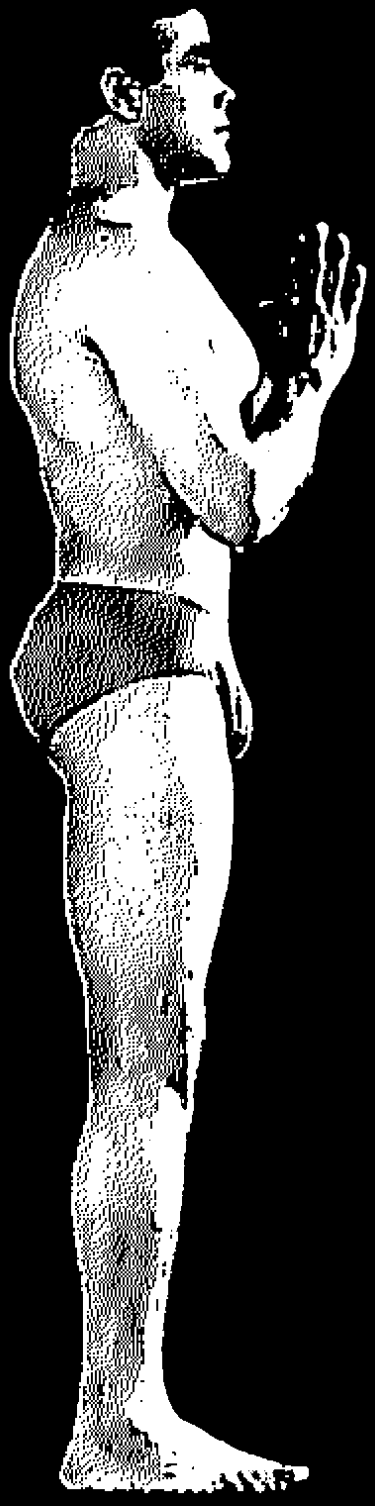
Sun Salutation — Equestrian Pose

Surya-Namaskara — Uttanasana

Sun Salutation — Intense Stretch Pose

Surya-Namaskara — Hasta-Uttanasana

Sun Salutation — Raised Hands Pose

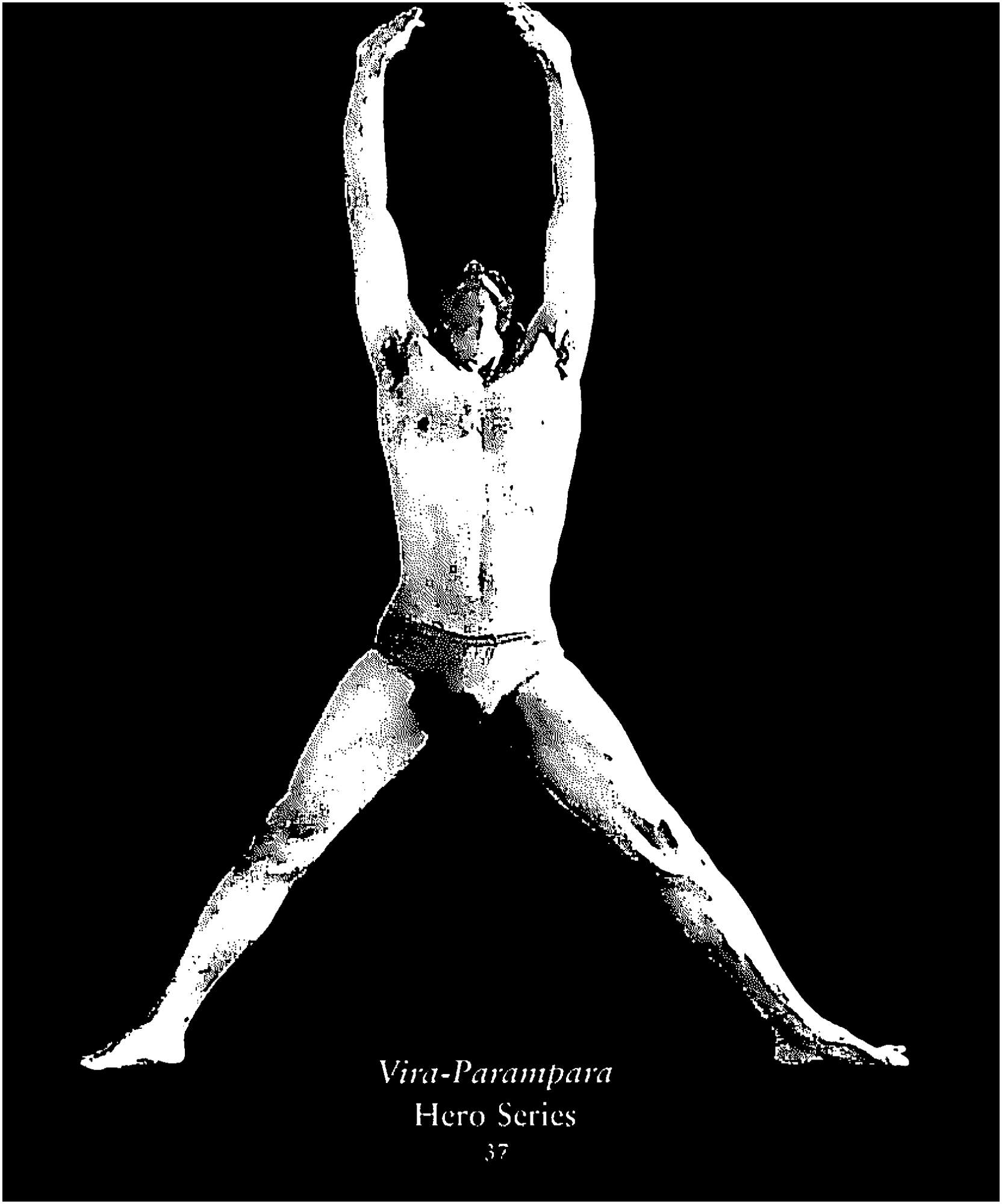


Surya-Namaskara — Pranamasana

Sun Salutation — Prayer Pose

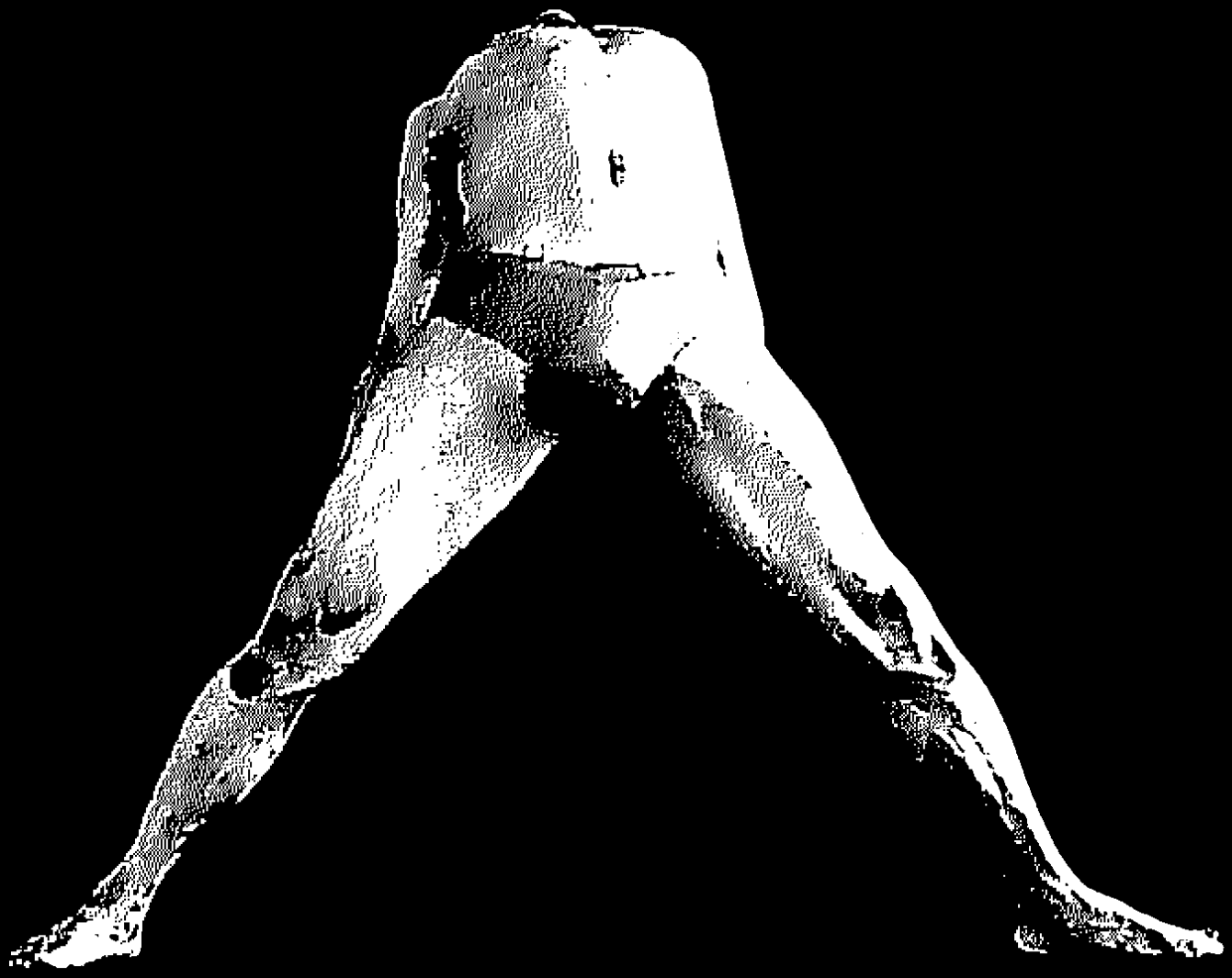
Vira-Parampara

Hero Series



Vira-Parampara

Hero Series

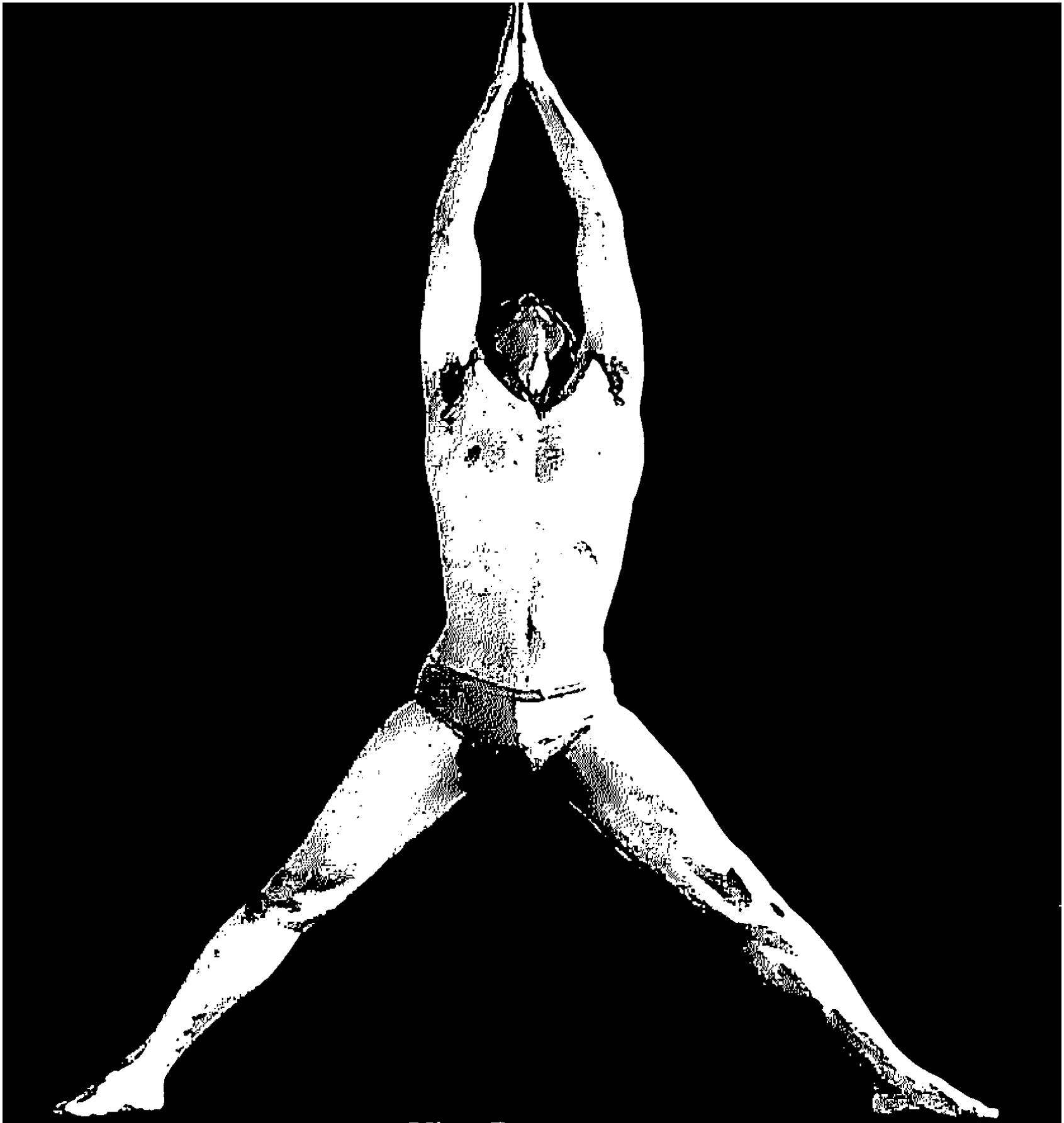


Vira-Parampara

Hero Series

Vira-Parampara

Hero Series

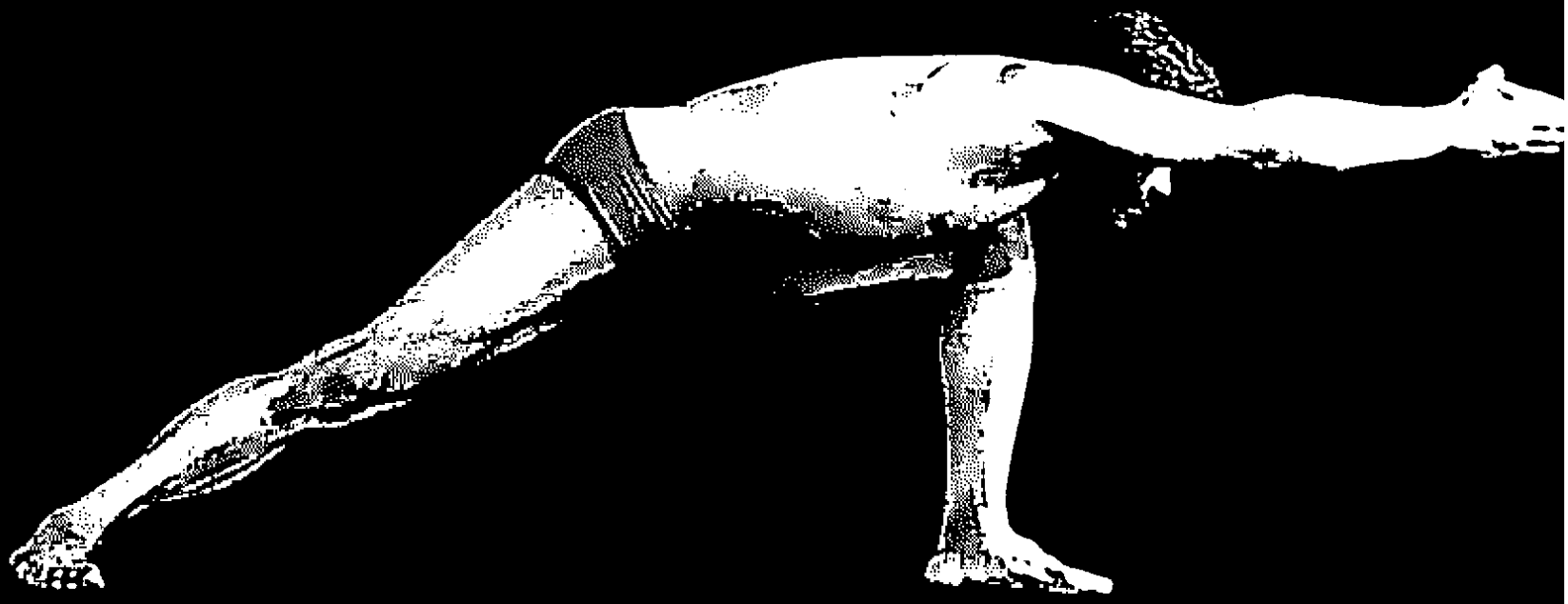


Vira-Parampara

Hero Series

Vira-Parampara

Hero Series

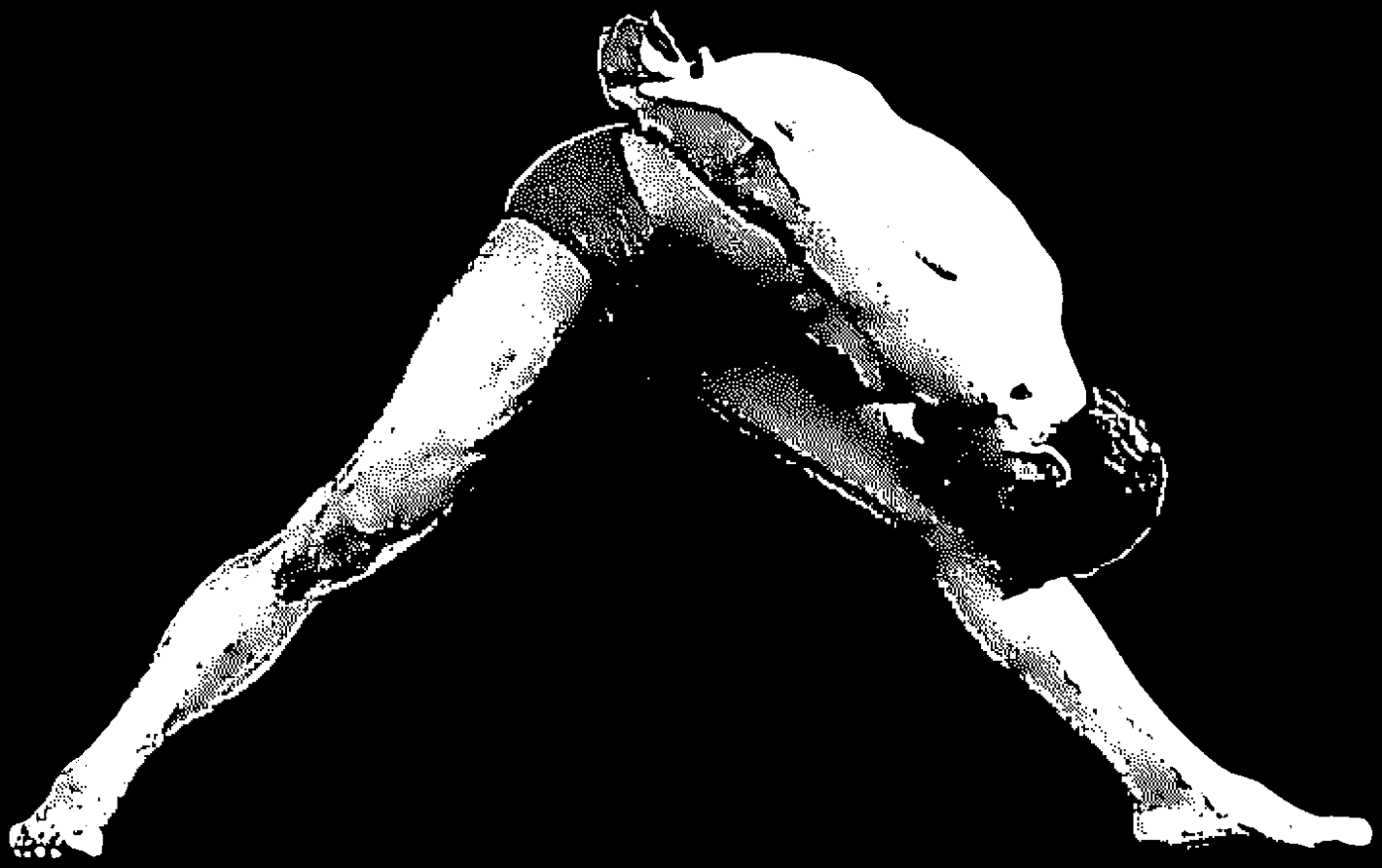


Vira-Parampara

Hero Series

Vira-Parampara

Hero Series



Vira-Parampara

Hero Series

Vira-Parampara

Hero Series

Vira-Parampara

Hero Series

STANDING POSES

During all poses you concentrate on the space between the eyebrows, the third eye, the seat of the mind. As you concentrate, your mind and thoughts slow down, cravings and desires diminish, and you feel calm. It's another way of enhancing mental focus and preparing yourself for meditation.

According to Patanjali, author of the Yoga Sutras, each *asana* physically reflects a particular attitude: acceptance, surrender, balance, or openheartedness. As you move into a posture, your body manifests the physical form of the attitude associated with it. You bypass verbal or rational understanding but you understand the pose emotionally.

In other words, standing tall and firm in *Tadasana* gives you the steadiness and foundation of a mountain. When you feel yourself closed to someone or to some experience, a backbend will open your chest as well as your heart. If you're shy, backbends will help you greet the world with more confidence. They also correct your spine and posture.

To master the balancing poses, it's useful to employ some physics. Move the body weight toward the toes, off the heels, then press the toes into the ground. If you picture a tree, imagine your foot as the roots digging deeply into the earth and it will help you find stillness and correct your posture.

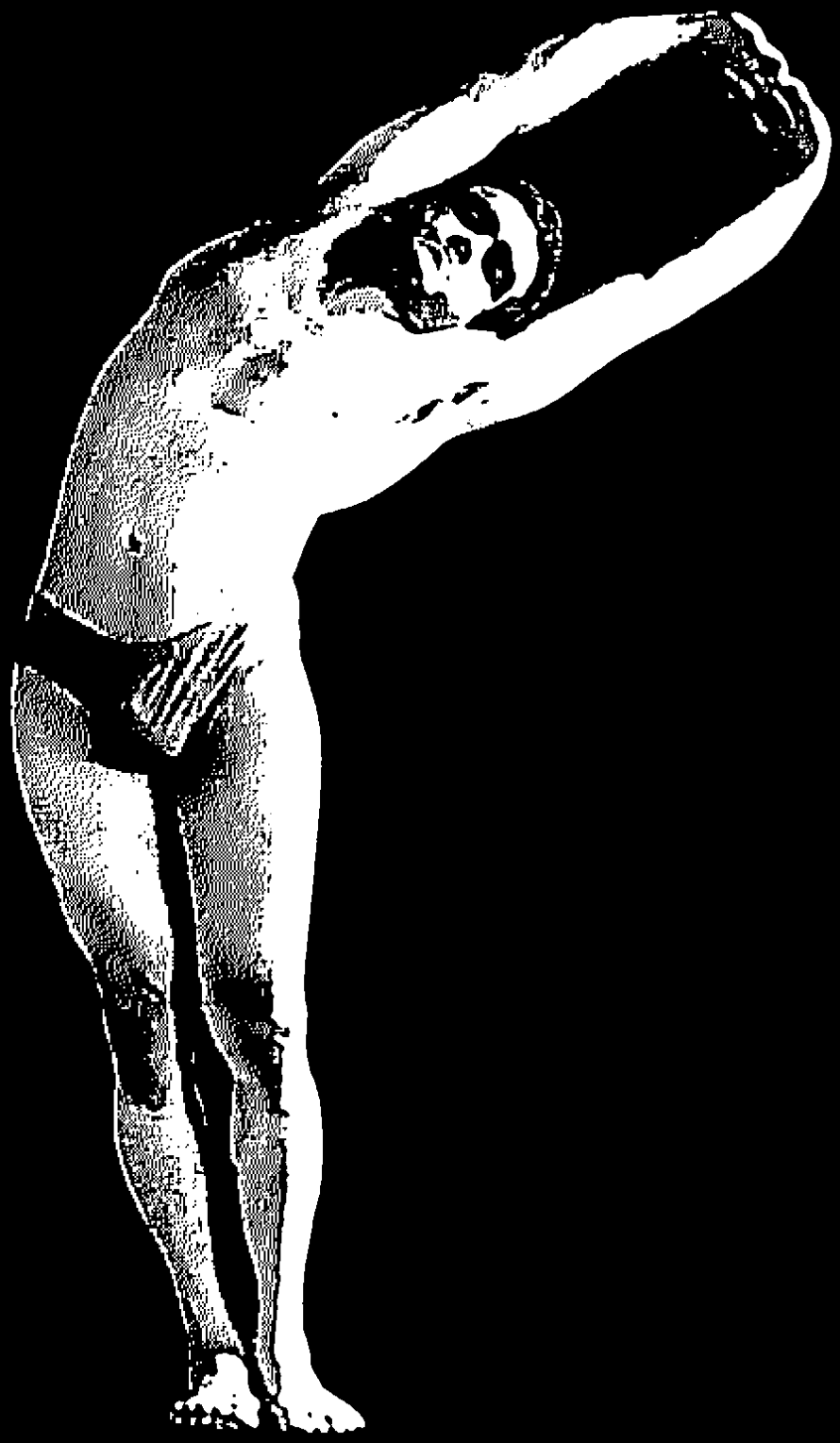
You can find further balance by gazing at a spot, which is called the *drishti*. Usually this spot is on the floor in front of your nose. In a backstretch try gazing at a point on the ceiling.

Tadasana / Samasthitih

Mountain Pose / Steady Standing

Tadasana

Mountain Pose (Variation)



Tadasana

Mountain Pose (Variation)

Utthita-Bhujangasana

Standing Cobra Pose

Virabhadrasana I

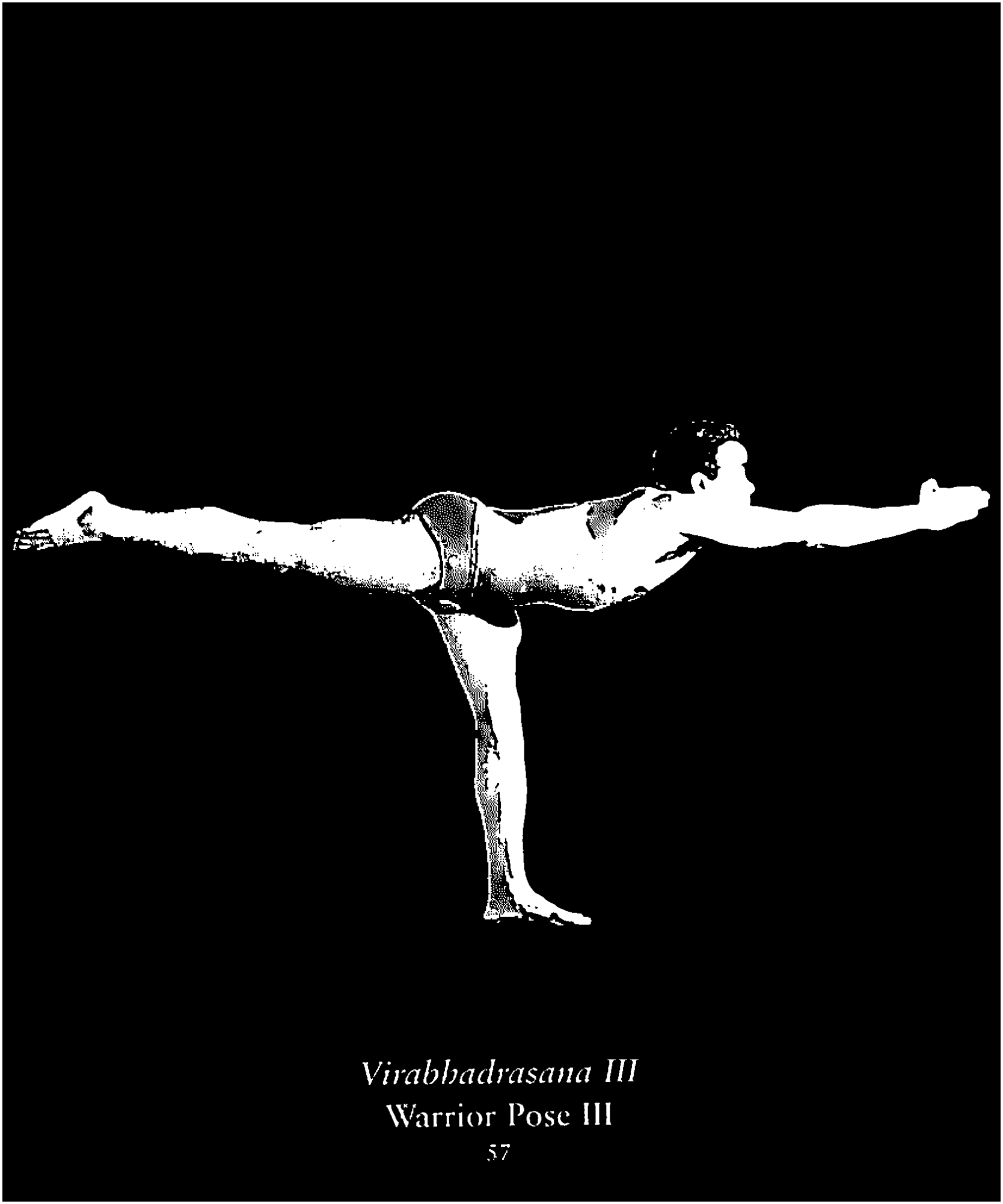
Warrior Pose I (Preparation)

Virabhadrasana I

Warrior Pose I

Virabhadrasana II

Warrior Pose II



Virabhadrasana III

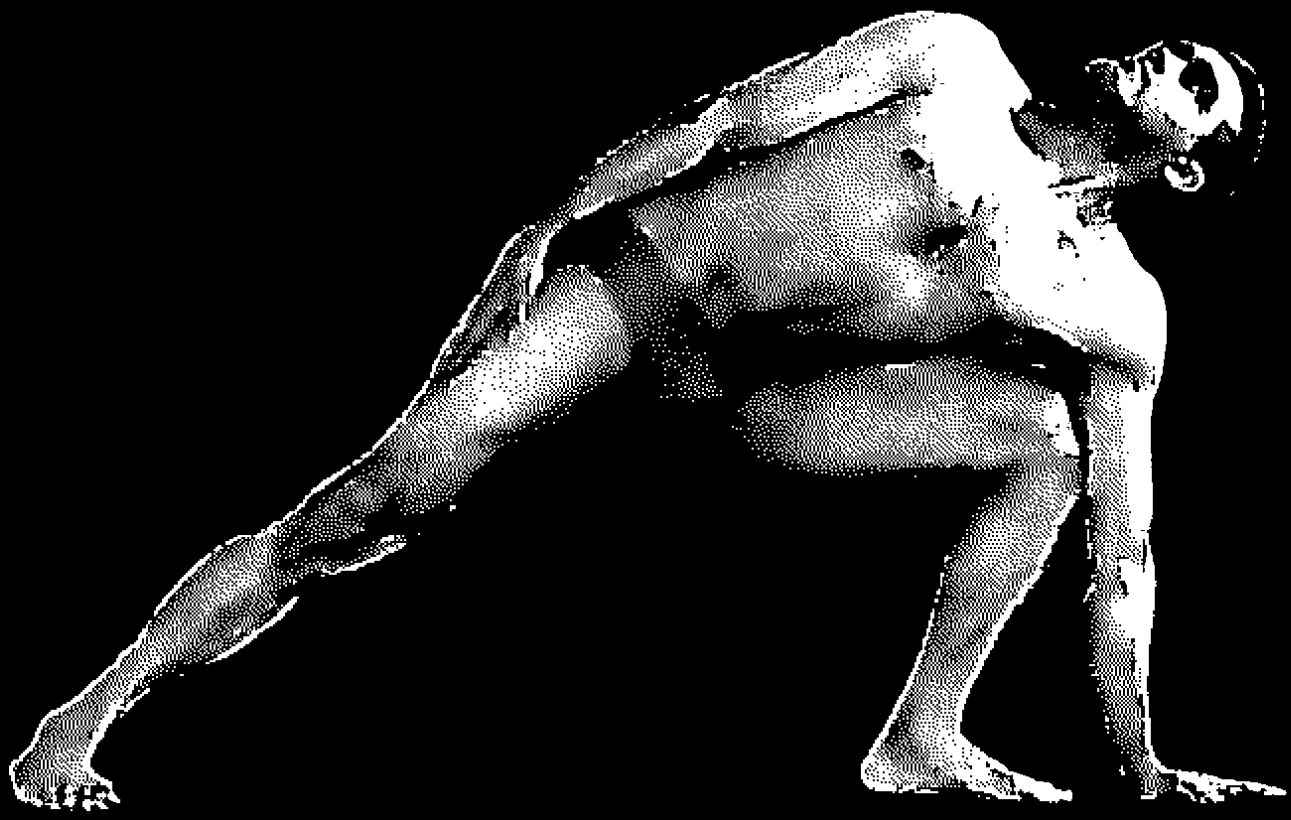
Warrior Pose III

Yudhasana

Fighting Warrior Pose

Patanvrkshasana

Toppling Tree Pose



Ardha-Chandrasana

Half Moon Pose (Preparation)

Ardha-Chandrasana

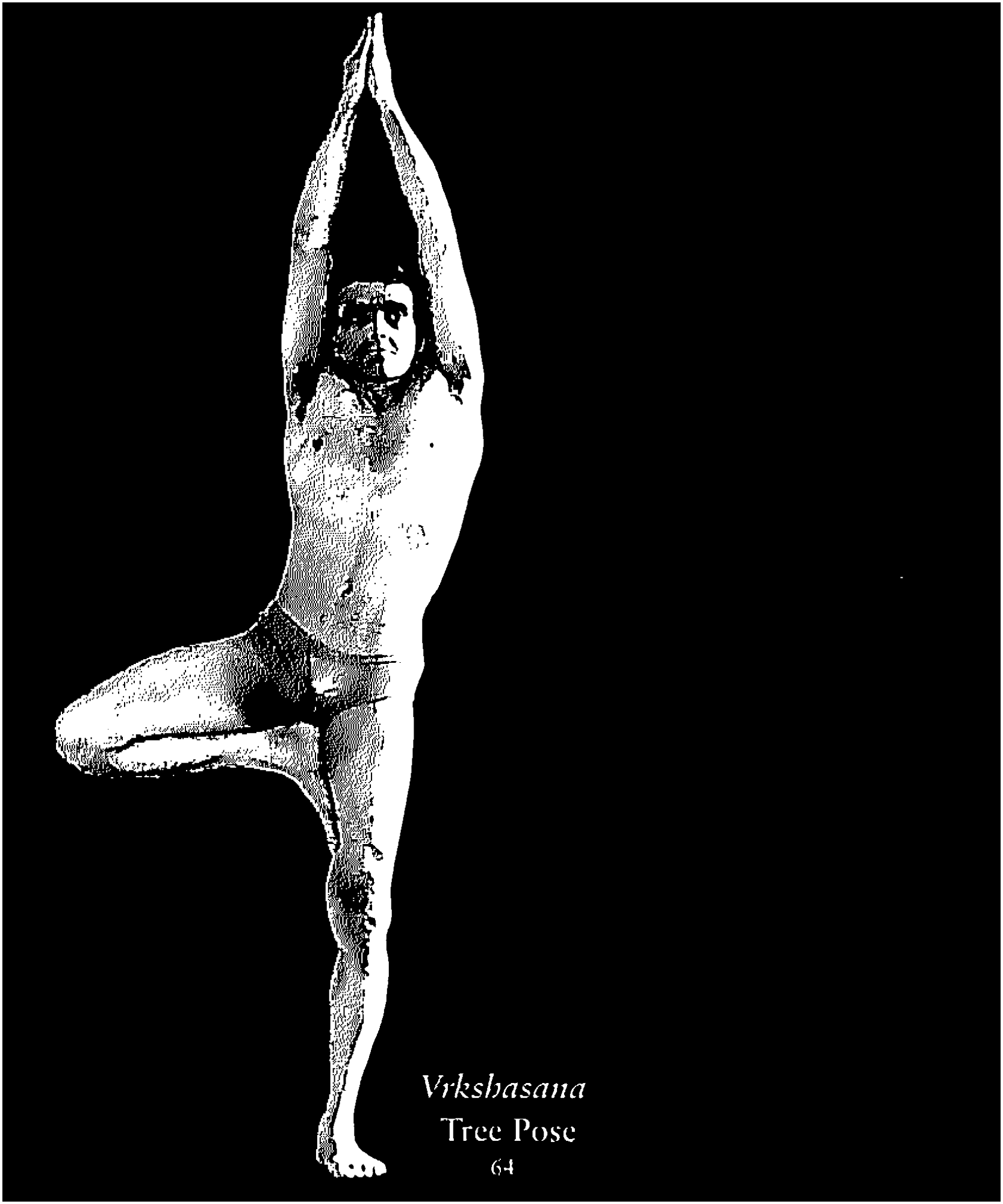
Half Moon Pose

Ardha-Chandrasana

Half Moon Pose (Variation)

Vrkshasana

Tree Pose (Variation)

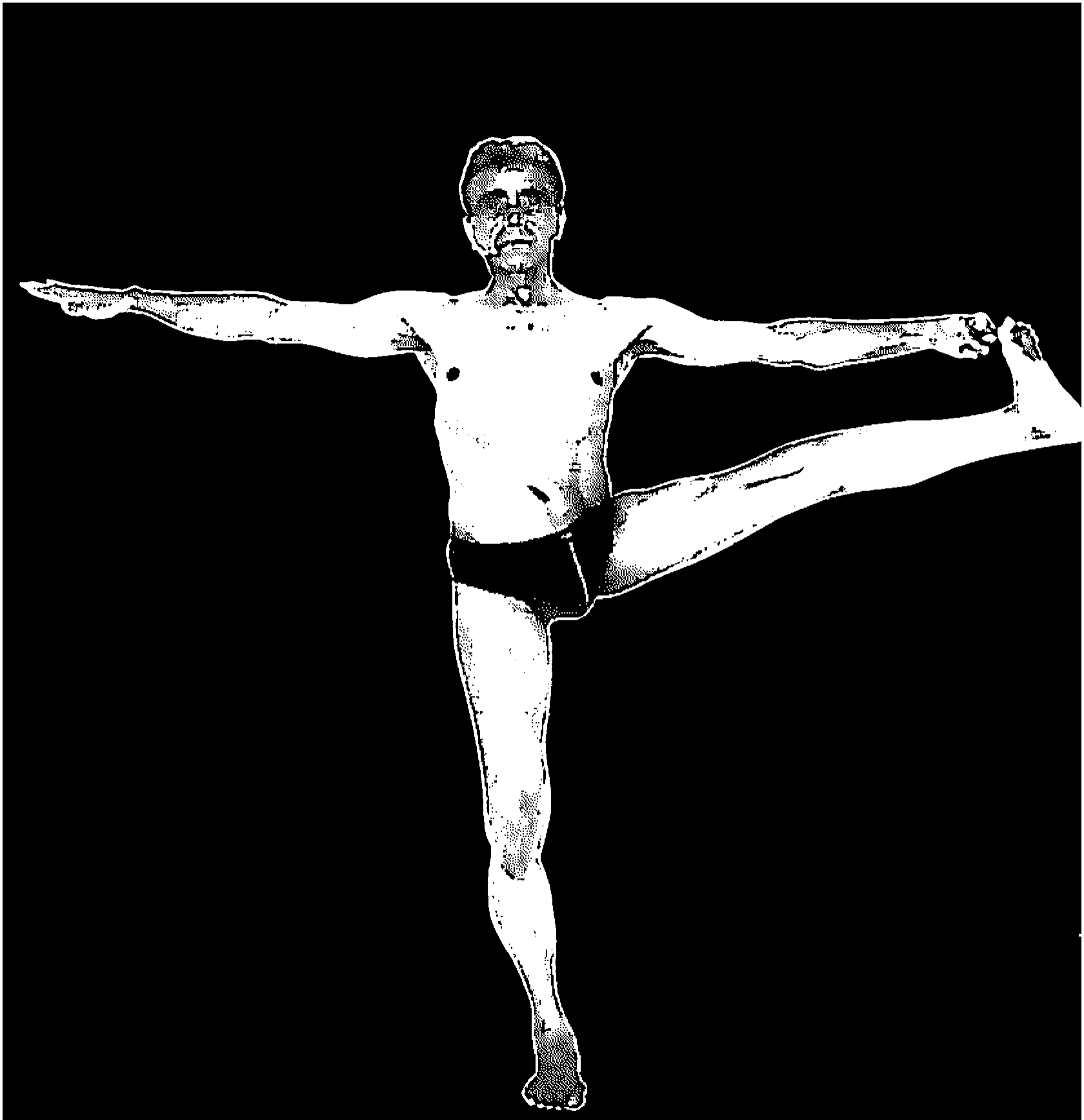


Vrkshasana

Tree Pose

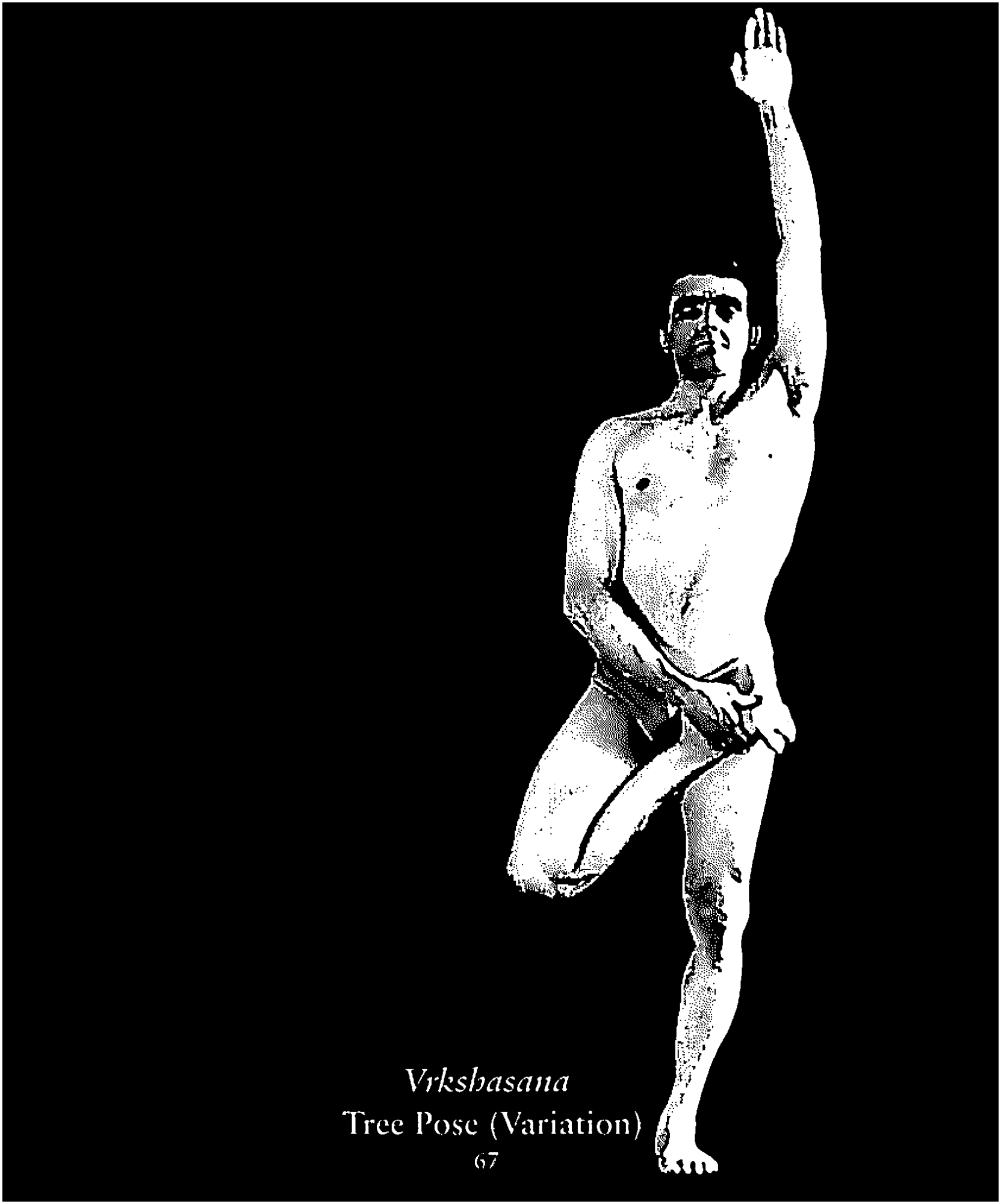
Vrkshasana

Tree Pose (Variation)



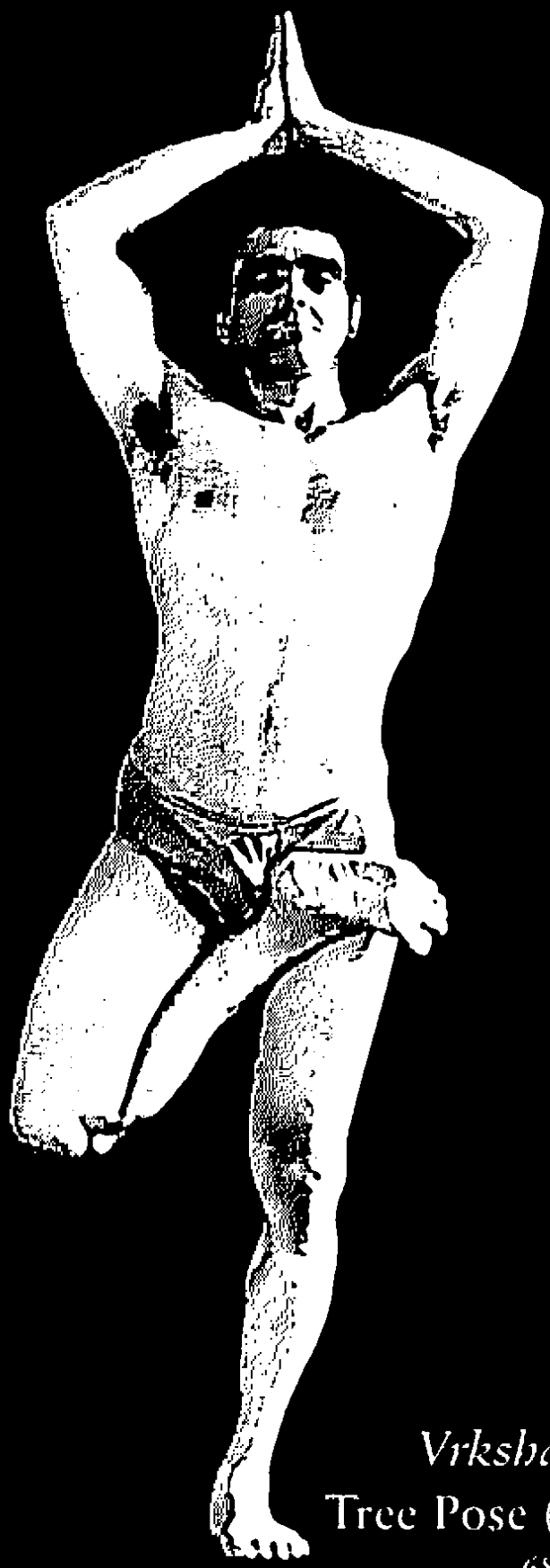
Utthita-Parshvasahita

Standing Leg Going to the Side Pose (Preparation)



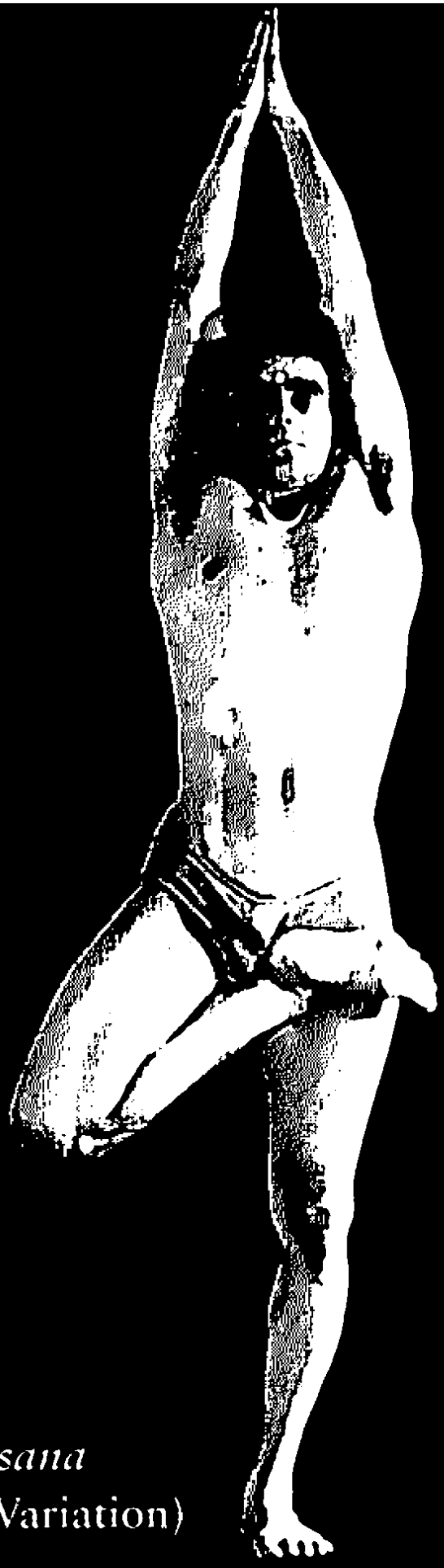
Vrkshasana

Tree Pose (Variation)



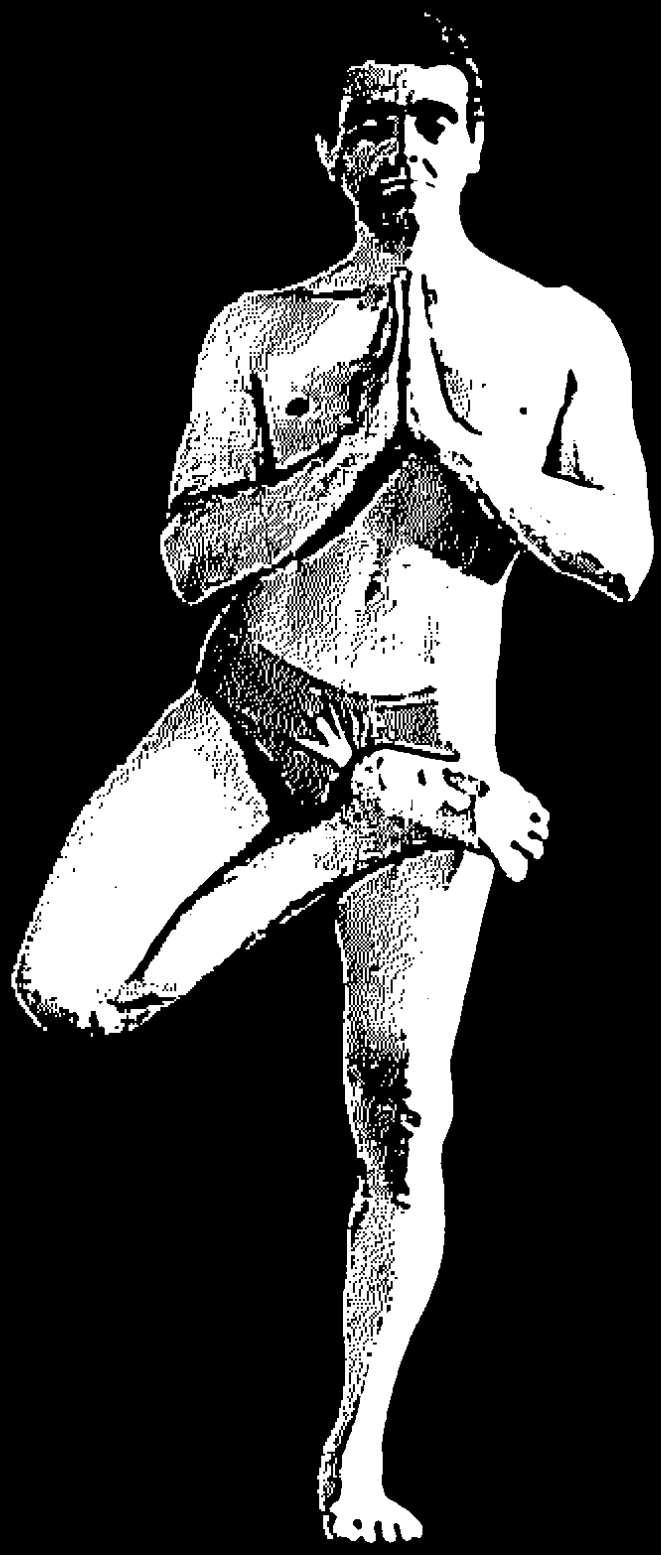
Vrkshasana

Tree Pose (Variation)



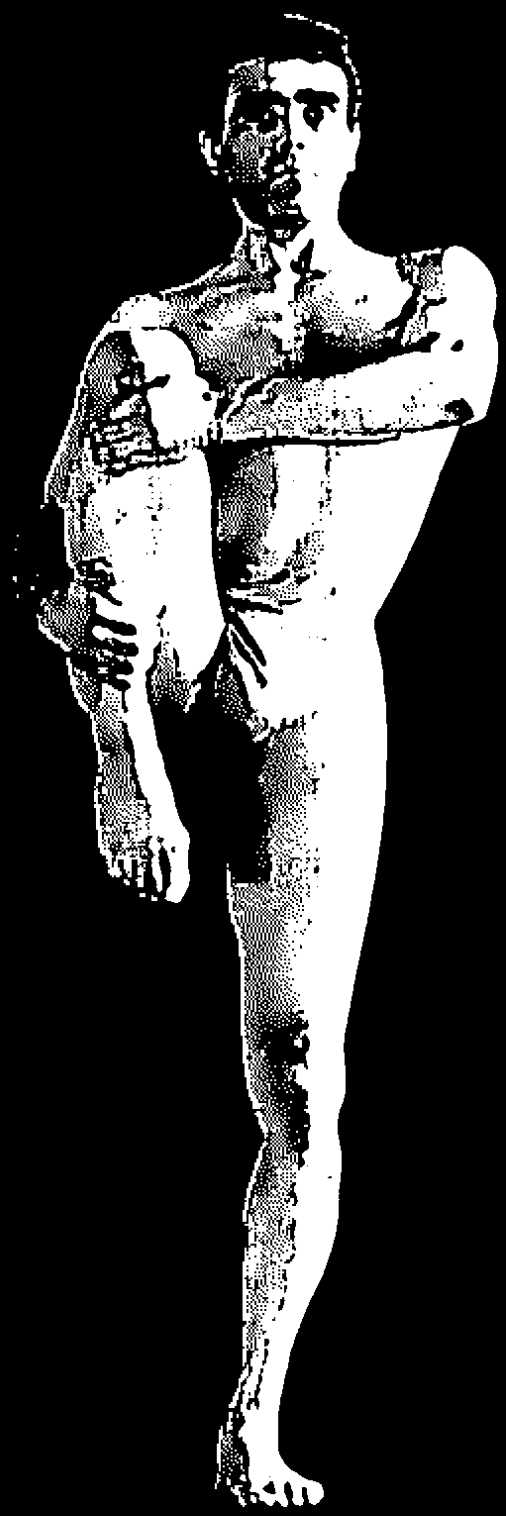
Vrkshasana

Tree Pose (Variation)



Vrkshasana

Tree Pose (Variation)

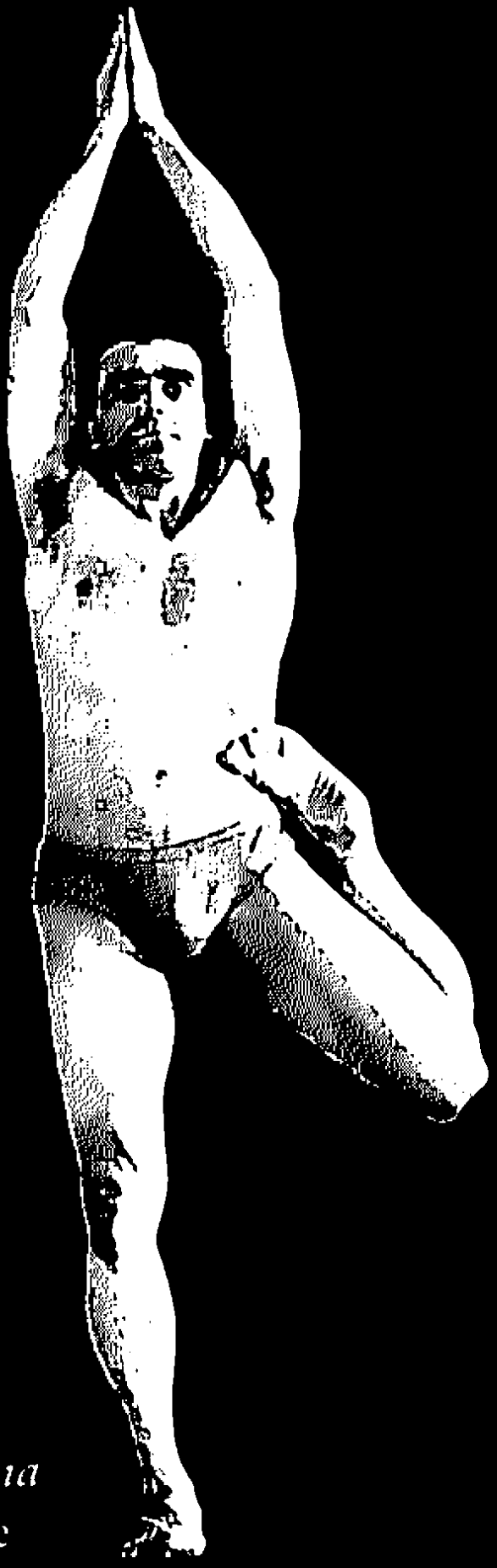


Utthita-Vayu-Muktyasana

Standing Wind Relieving Pose

Utthita-Vayu-Muktyasana

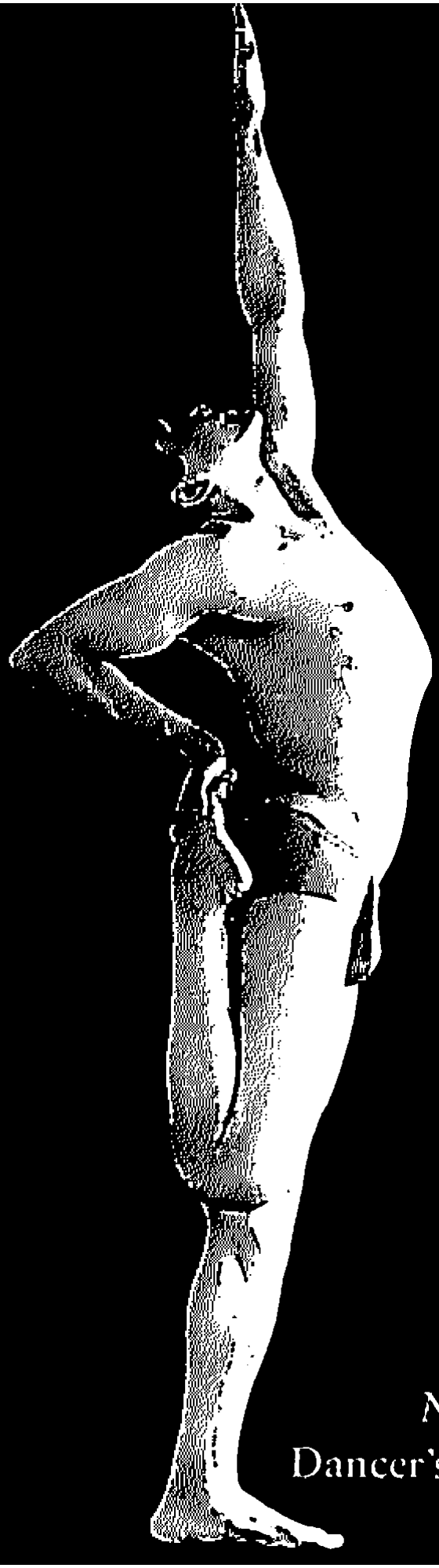
Standing Wind Relieving Pose (Variation)



Kulpha-Vrkshasana
Ankle Tree Pose

Kulpha-Vrkshasana
Ankle Tree Pose (Variation)

Kulpha-Vrkshasana
Ankle Tree Pose (Variation)



Natarajasana

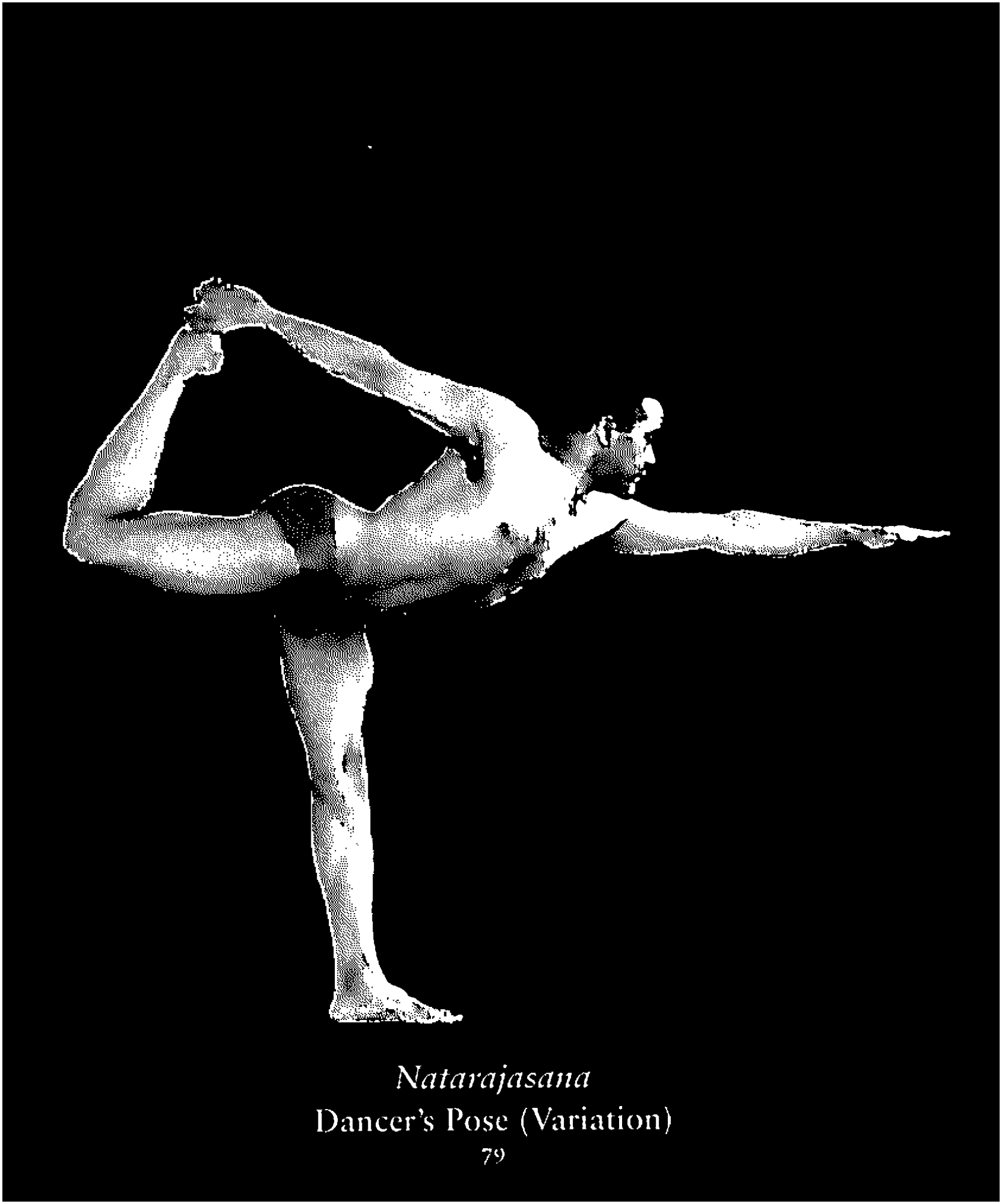
Dancer's Pose (Preparation)

Natarajasana

Dancer's Pose (Preparation)

Natarajasana

Dancer's Pose

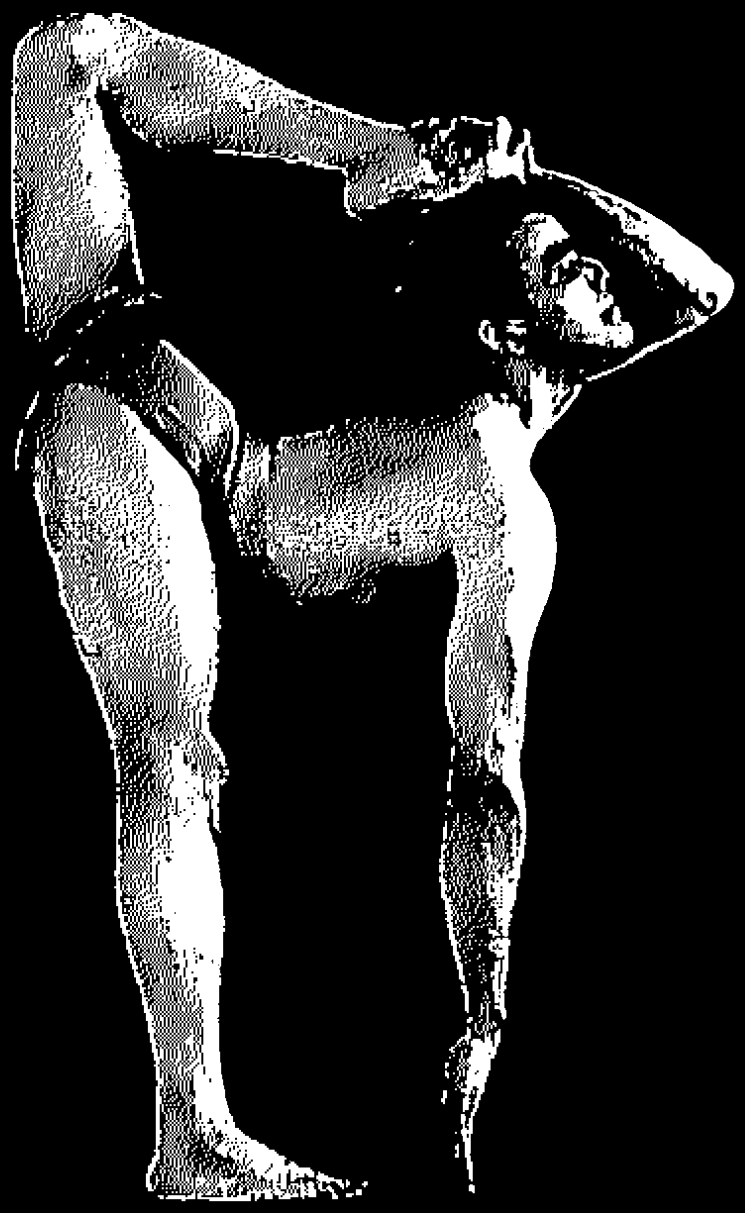


Natarajasana

Dancer's Pose (Variation)

Natarajasana

Dancer's Pose (Variation)



Natarajasana

Dancer's Pose (Variation)

Natarajasana

Dancer's Pose (Variation)

Natarajasana

Dancer's Pose (Variation)

Natarajasana

Dancer's Pose (Variation)

Yoganandasana

Yogananda's Pose

Yoganandasana

Yogananda's Pose (Variation)

Natarajasana

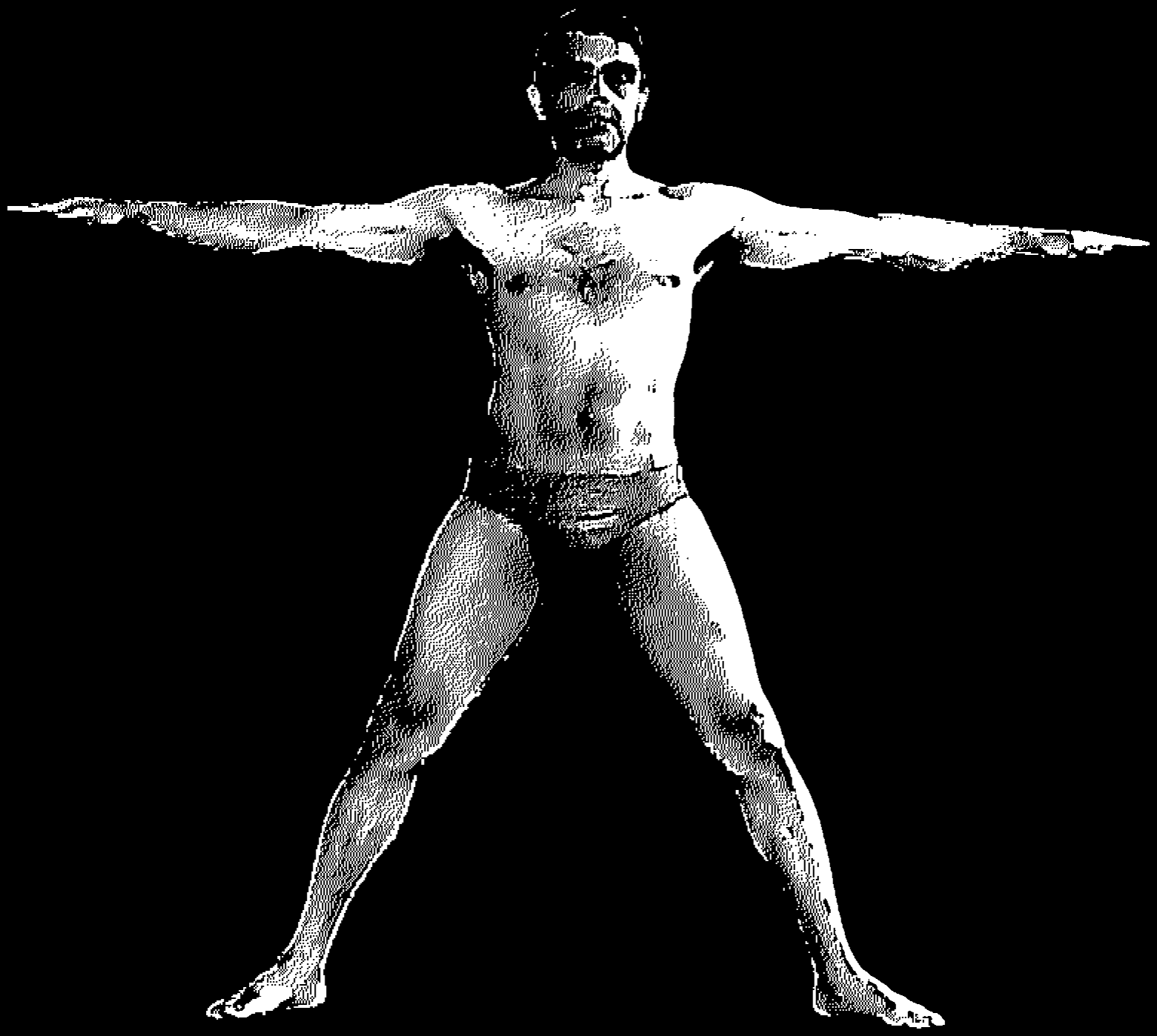
Dancer's Pose (Variation)

Vishnu-Devanandasana

Vishnu-Devanda's Pose

Vishnu-Devanandasana

Vishnu-Devananda's Pose (Variation)

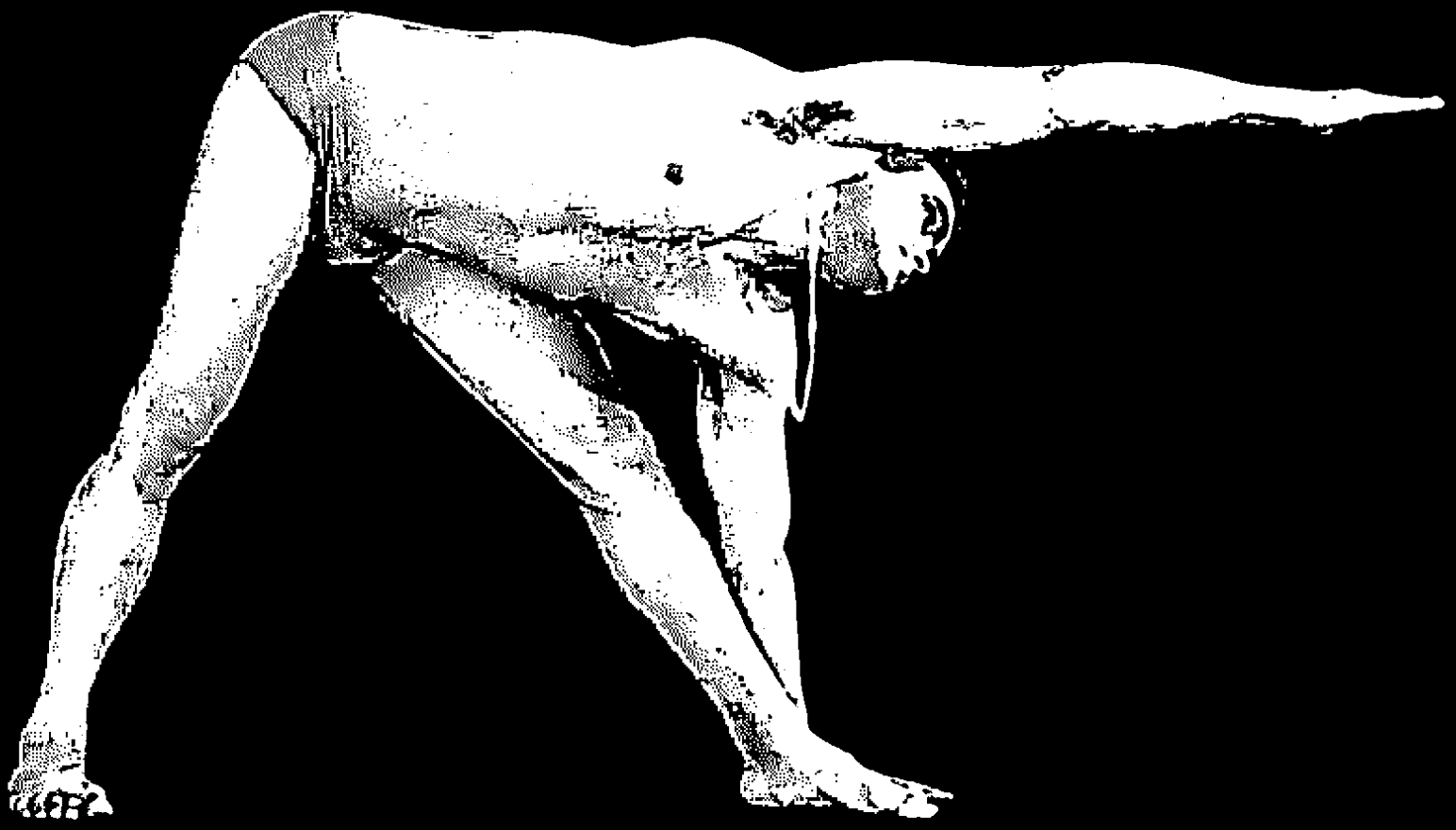


Trikonasana

Triangle Pose (Preparation)

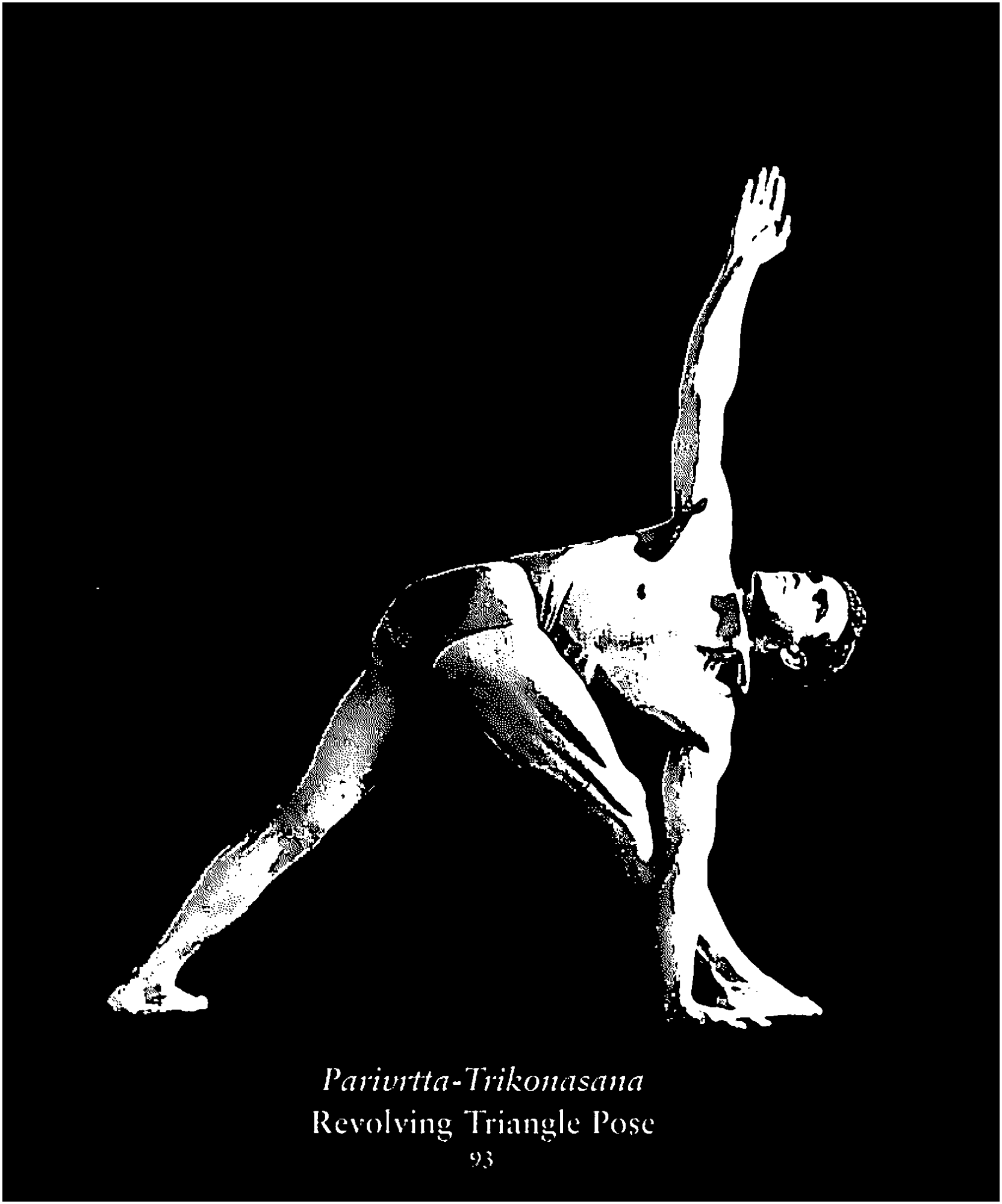
Trikonasana

Triangle Pose



Trikonasana

Triangle Pose (Variation)



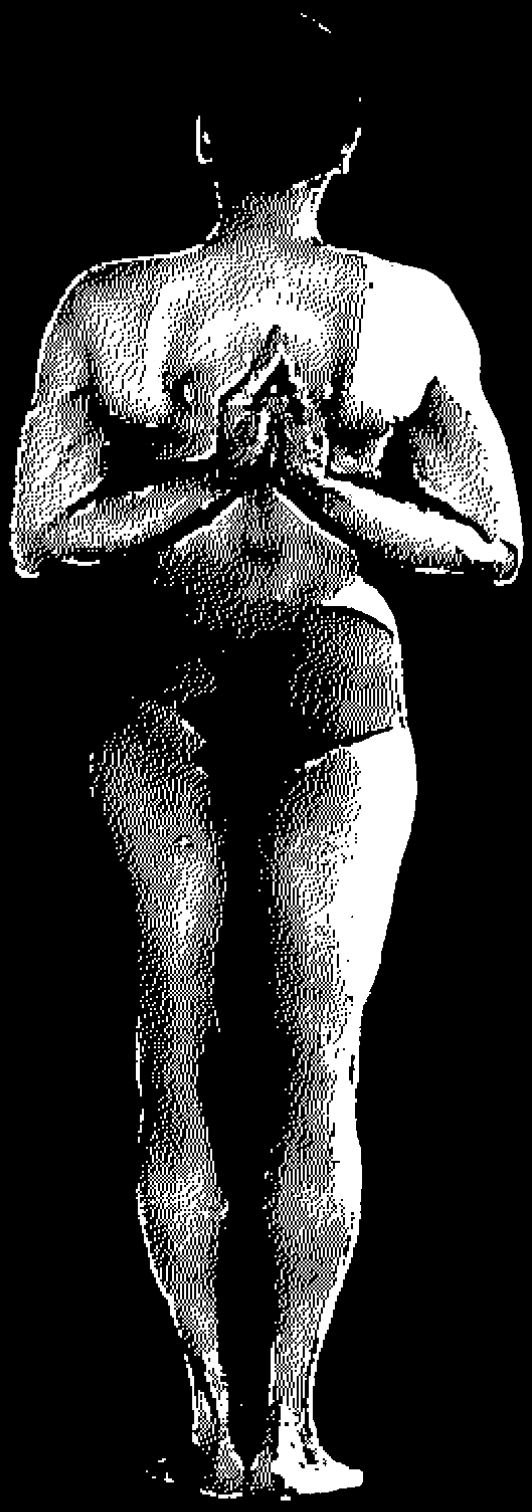
Parivrtta-Trikonasana
Revolving Triangle Pose

Parivrtta-Trikonasana

Revolving Triangle Pose (Variation)

Parivrtta-Trikonasana

Revolving Triangle Pose (Variation)



Parshvottanasana

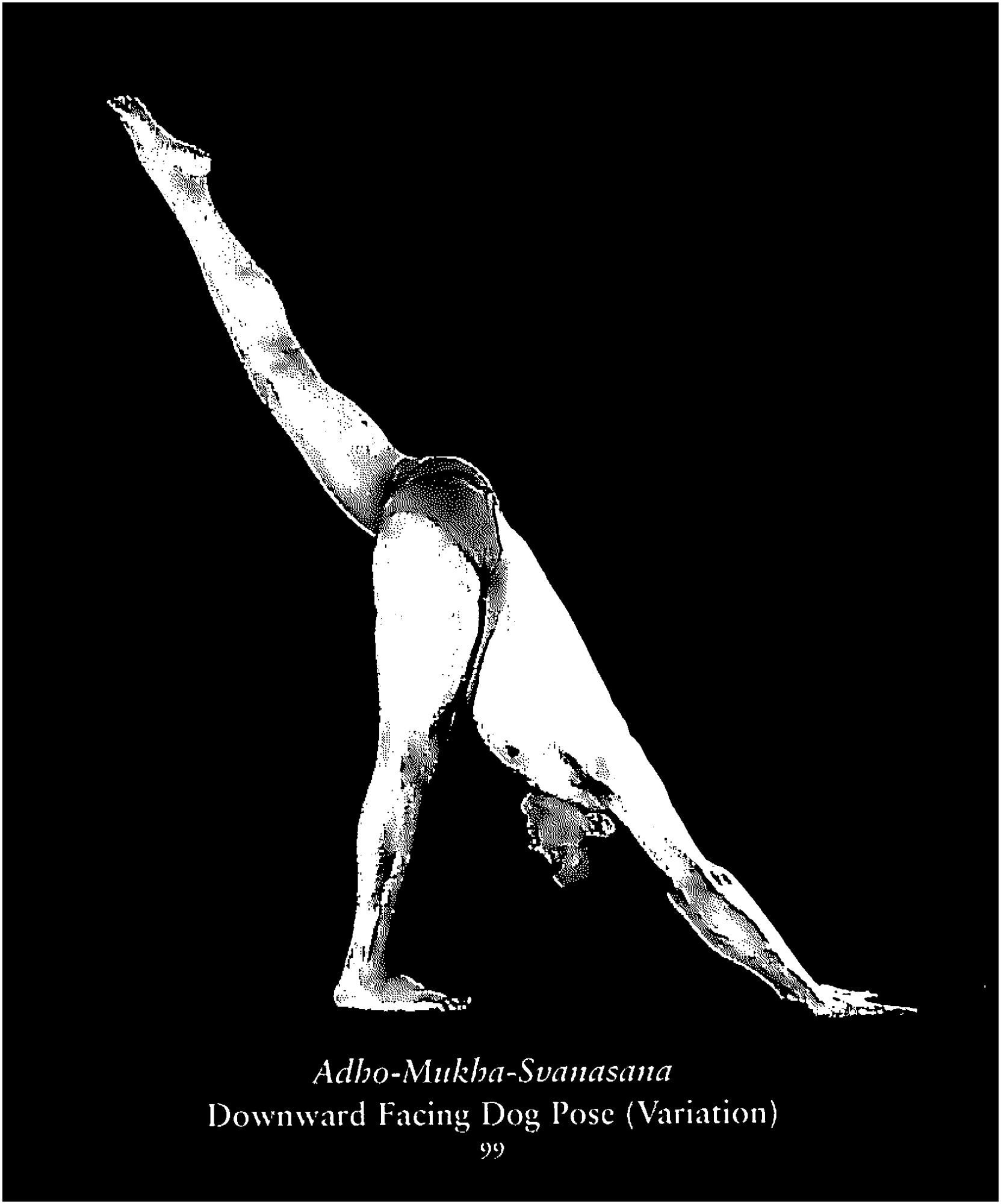
Side Intense Stretch Pose (Preparation)

Parshvottanasana

Side Intense Stretch Pose

Parshvottanasana

Side Intense Stretch Pose (Variation)

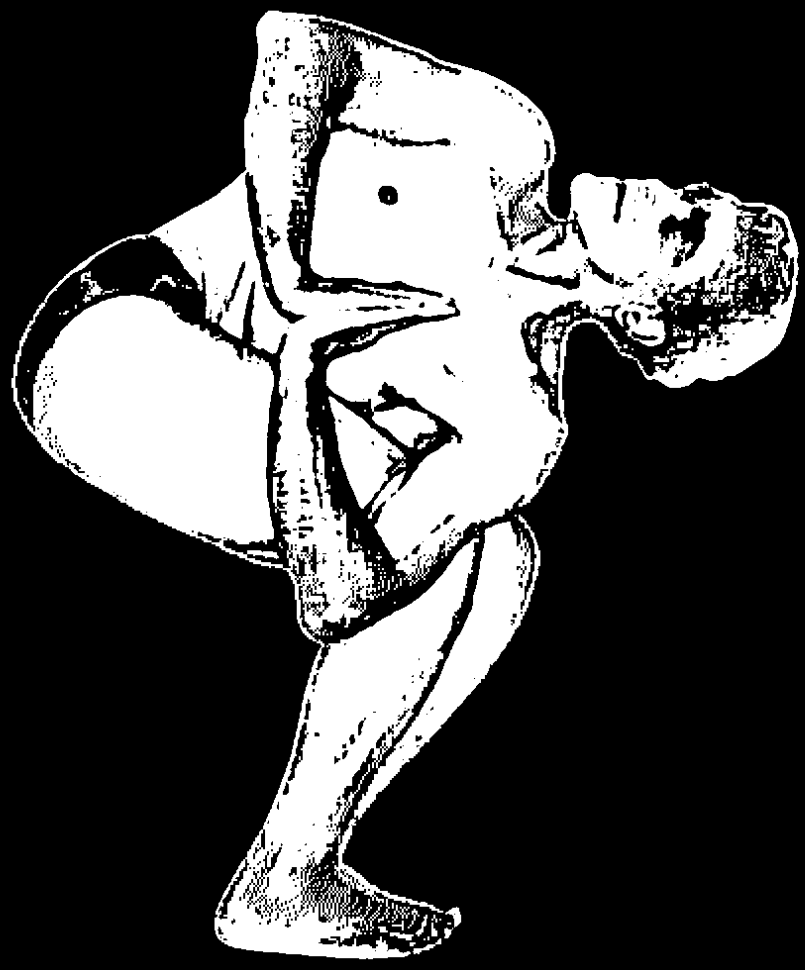


Adho-Mukha-Svanasana

Downward Facing Dog Pose (Variation)

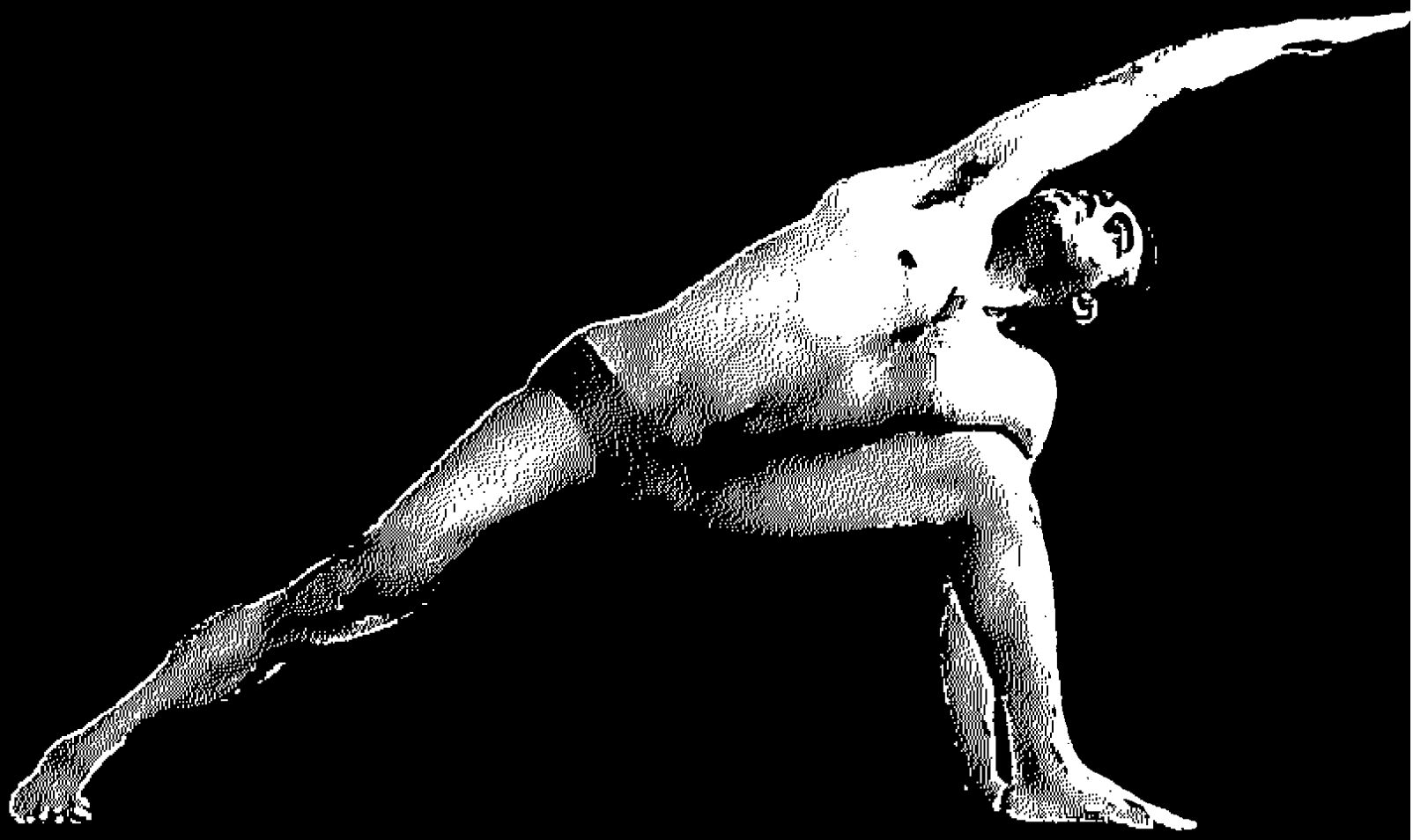
Utkatasana

Fierce Pose



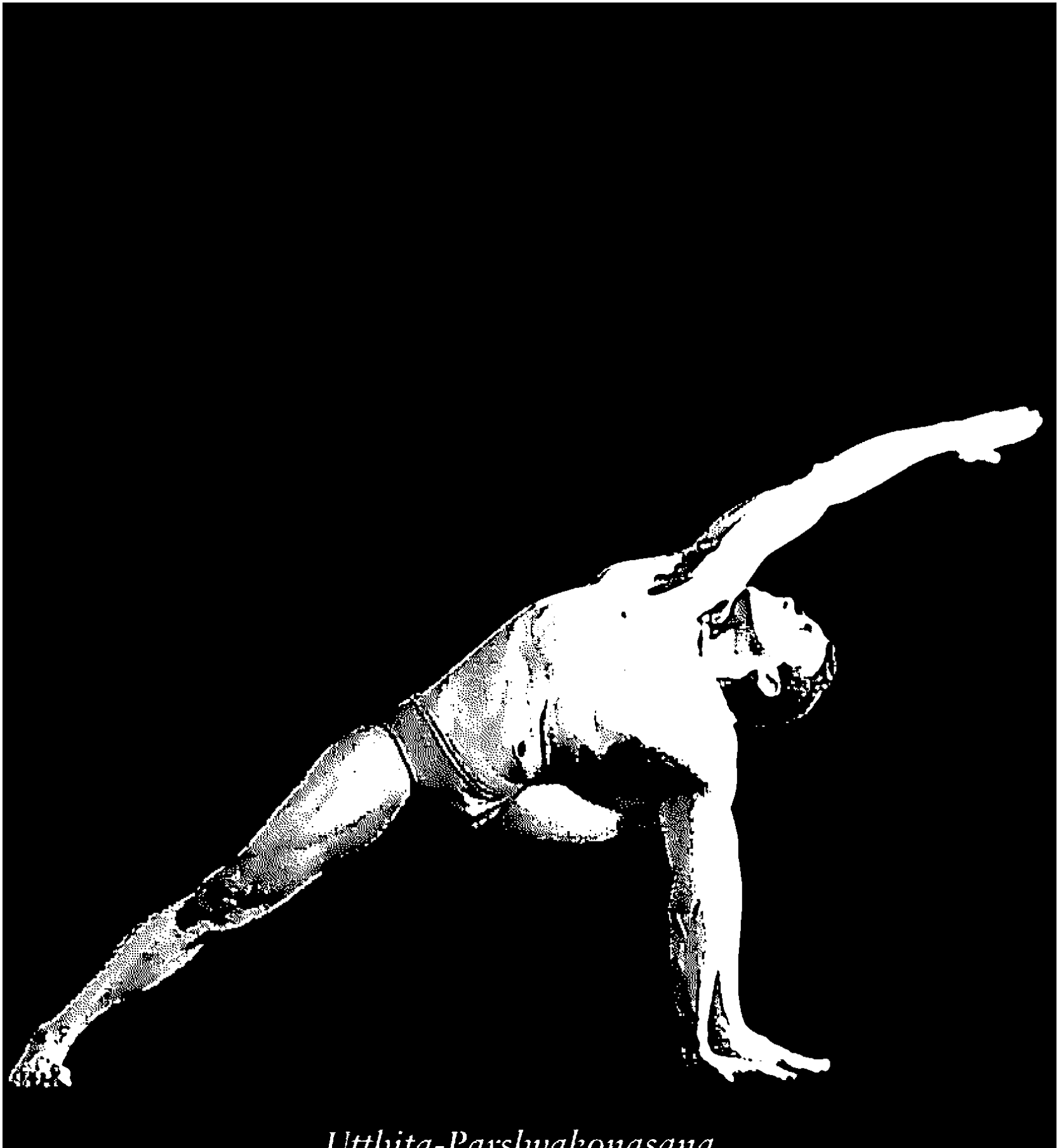
Utkatasana

Fierce Pose (Variation)



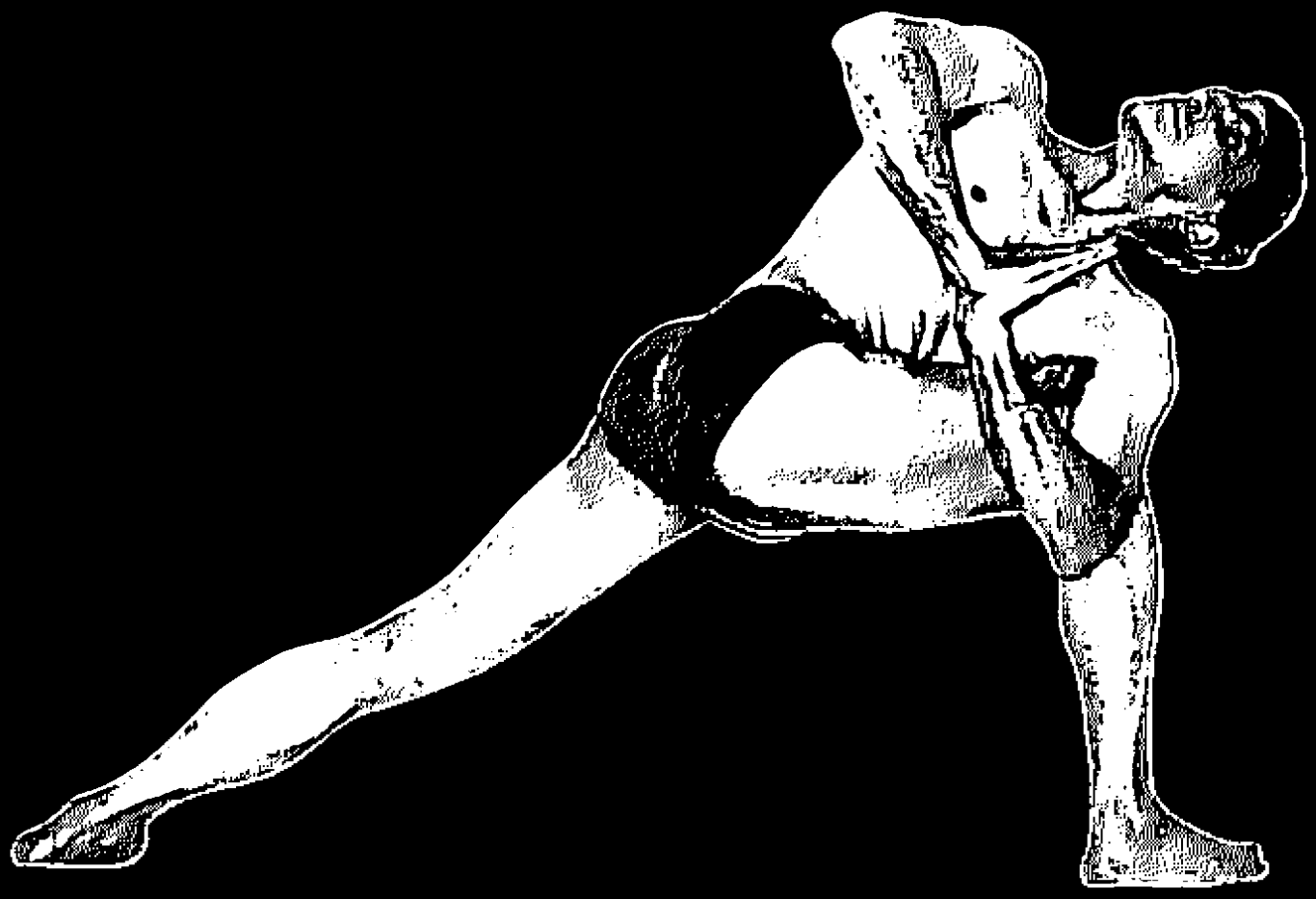
Utthita-Parshvakonasana

Extended Side Angle Pose



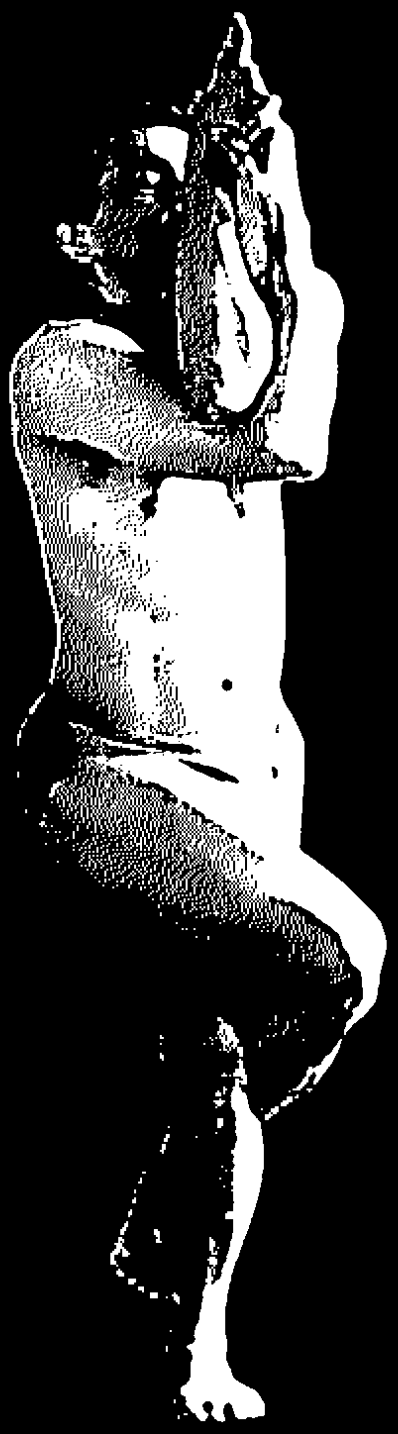
Utthita-Parshvakonasana

Extended Side Angle Pose (Variation)



Parivrtta-Parshvakonasana

Revolving Side Angle Pose (Variation)



Garudasana

Eagle Pose

Vatayanasana

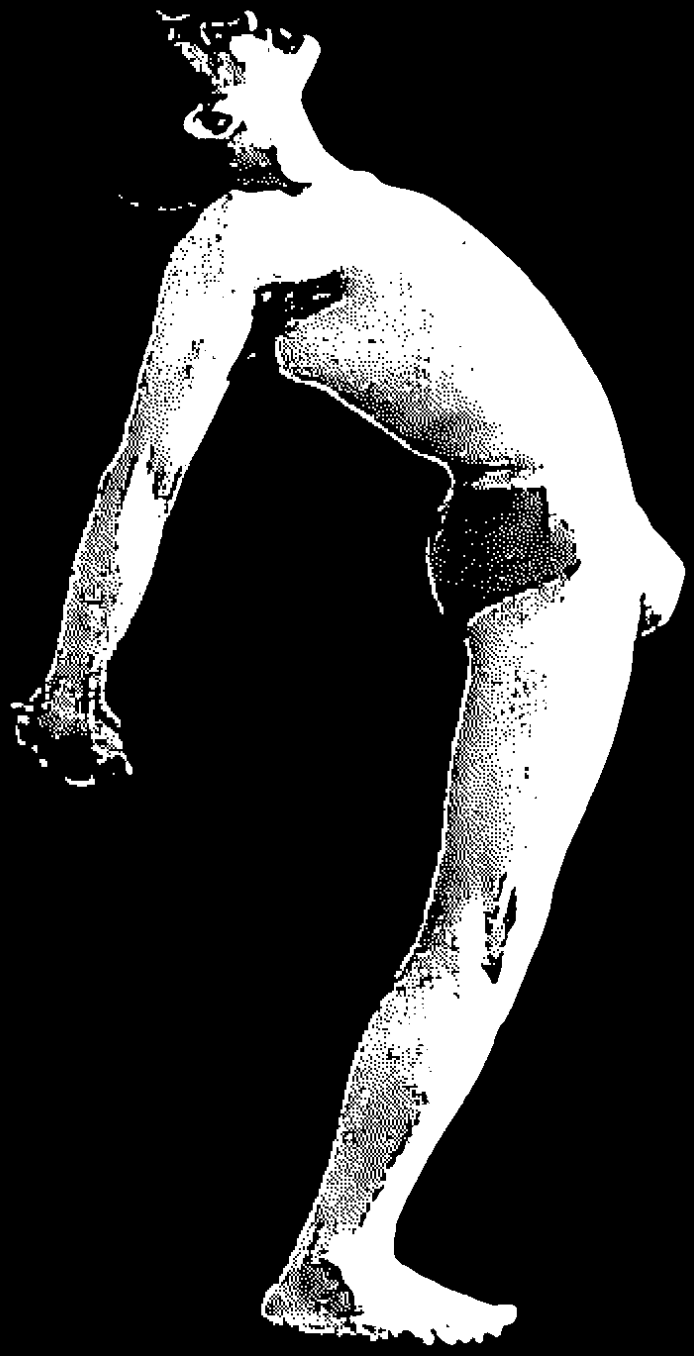
Horse Pose

Vatayanasana

Horse Pose (Variation)

Parighasana

Gate Pose

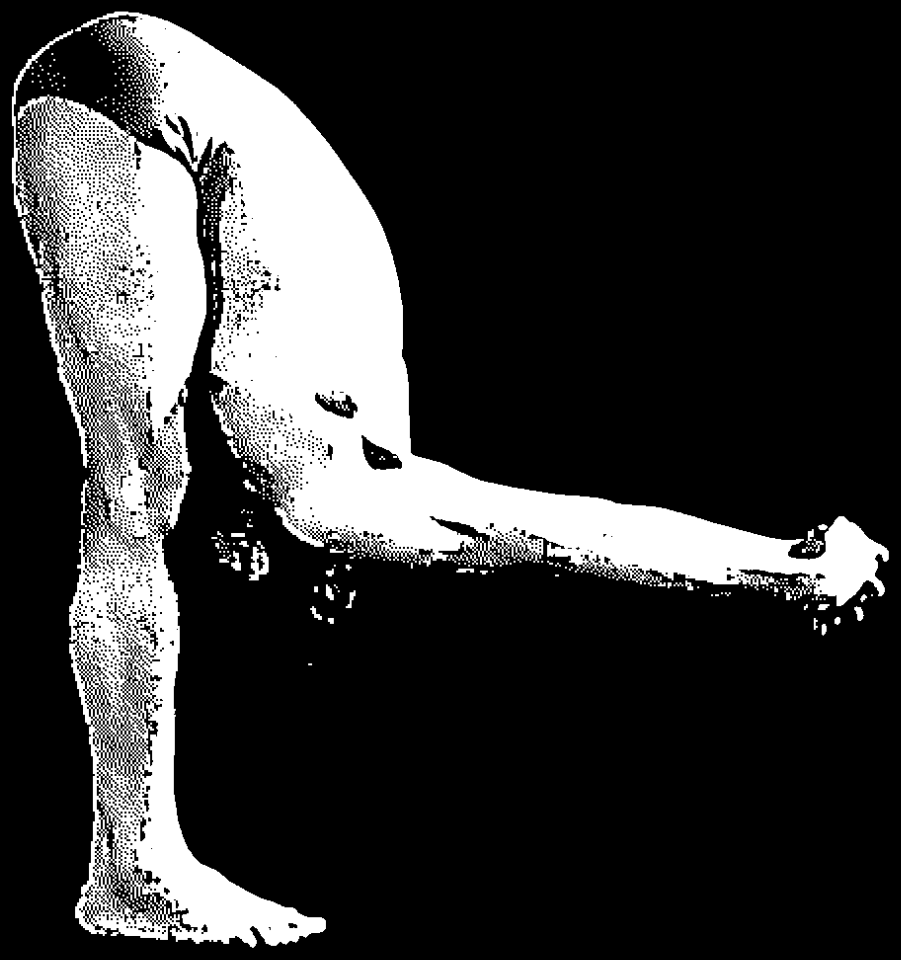


Uttanasana

Intense Stretch Pose (Preparation)

Uttanasana

Intense Stretch Pose (Preparation)



Uttanasana

Intense Stretch Pose (Variation)

Uttanasana

Intense Stretch Pose (Preparation)

Uttanasana

Intense Stretch Pose (Variation)

Uttanasana

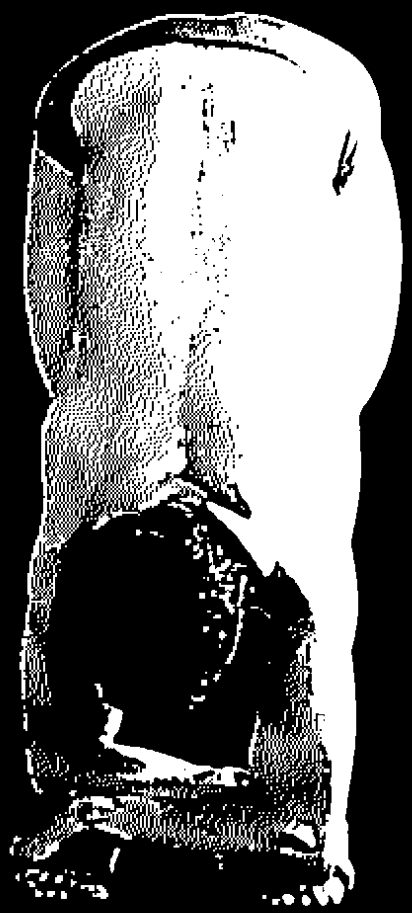
Intense Stretch Pose

Uttanasana

Intense Stretch Pose (Variation)

Uttanasana

Intense Stretch Pose (Variation)



Uttanasana

Intense Stretch Pose (Variation)

Uttanasana

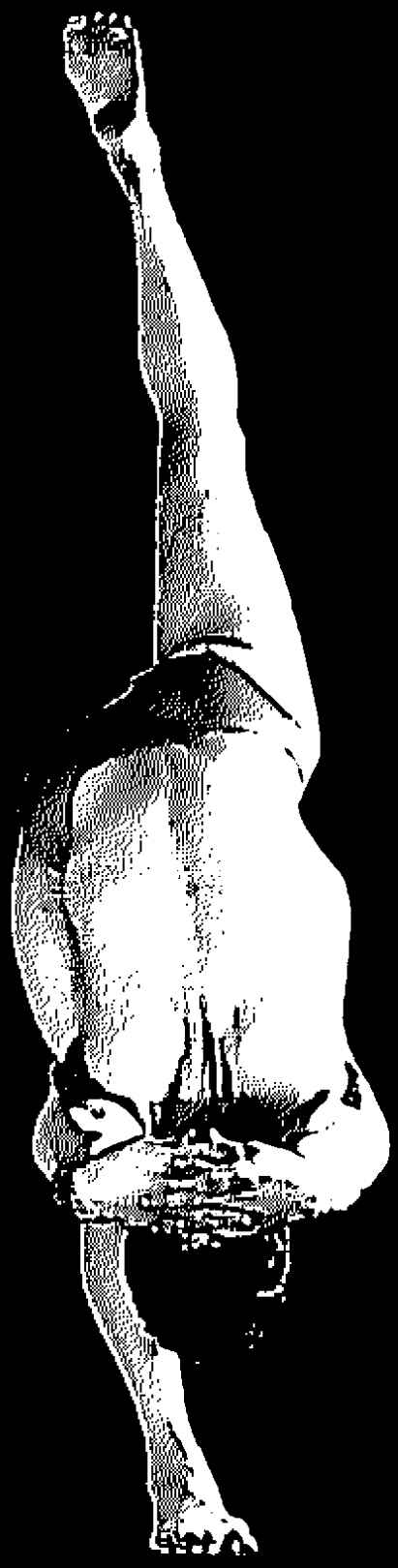
Intense Stretch Pose (Side View)

Uttanasana

Intense Stretch Pose / Stork (Variation)

Uttanasana

Intense Stretch Pose (Variation)



Uttanasana

Intense Stretch Pose (Variation)

Pada-Hastasana

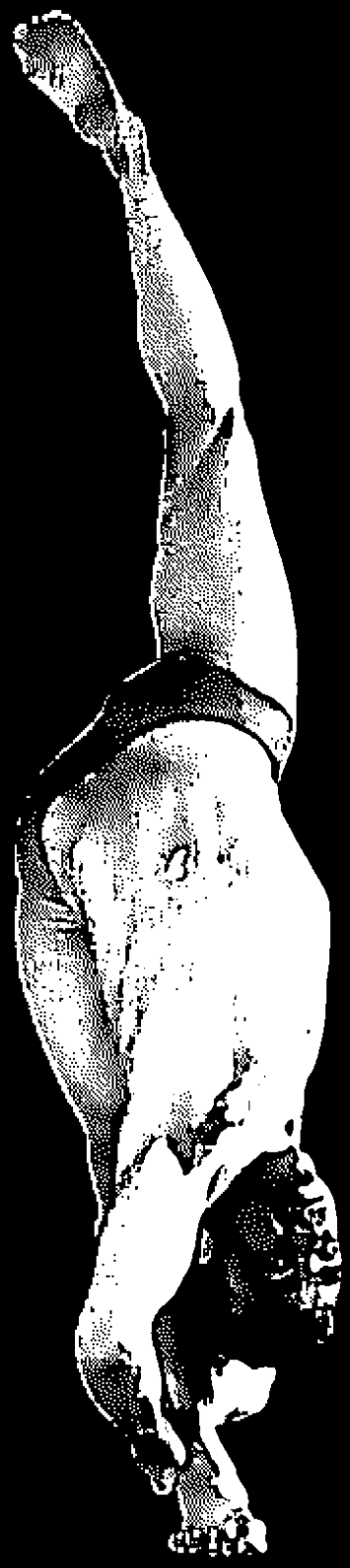
Hand Under Foot Pose (Preparation)

Pada-Hastasana

Hand Under Foot Pose

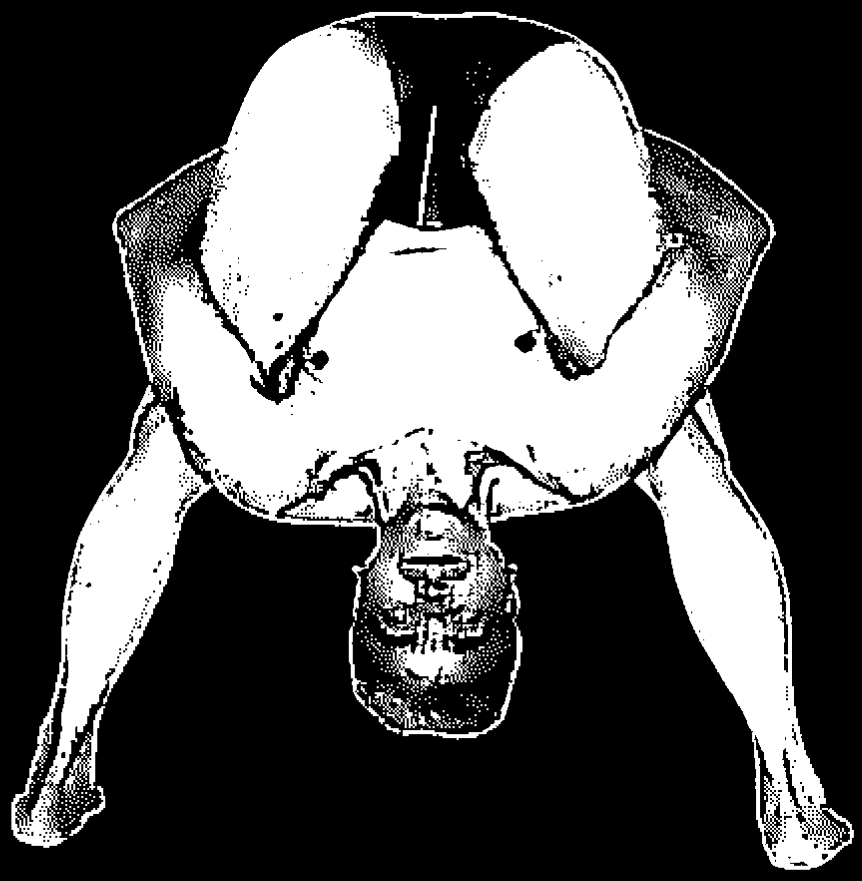
Parivrtta-Uttanasana

Revolving Intense Stretch Pose



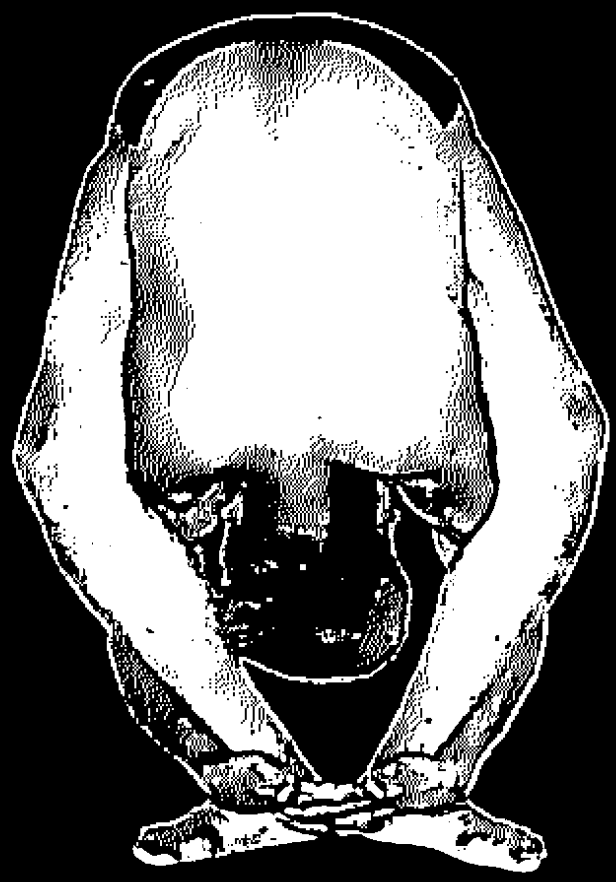
Parivrtta-Uttanasana

Revolving Intense Stretch Pose (Variation)



Utthita-Tittibhasana

Standing Firefly Pose (Variation)



Utthita-Tittibhasana

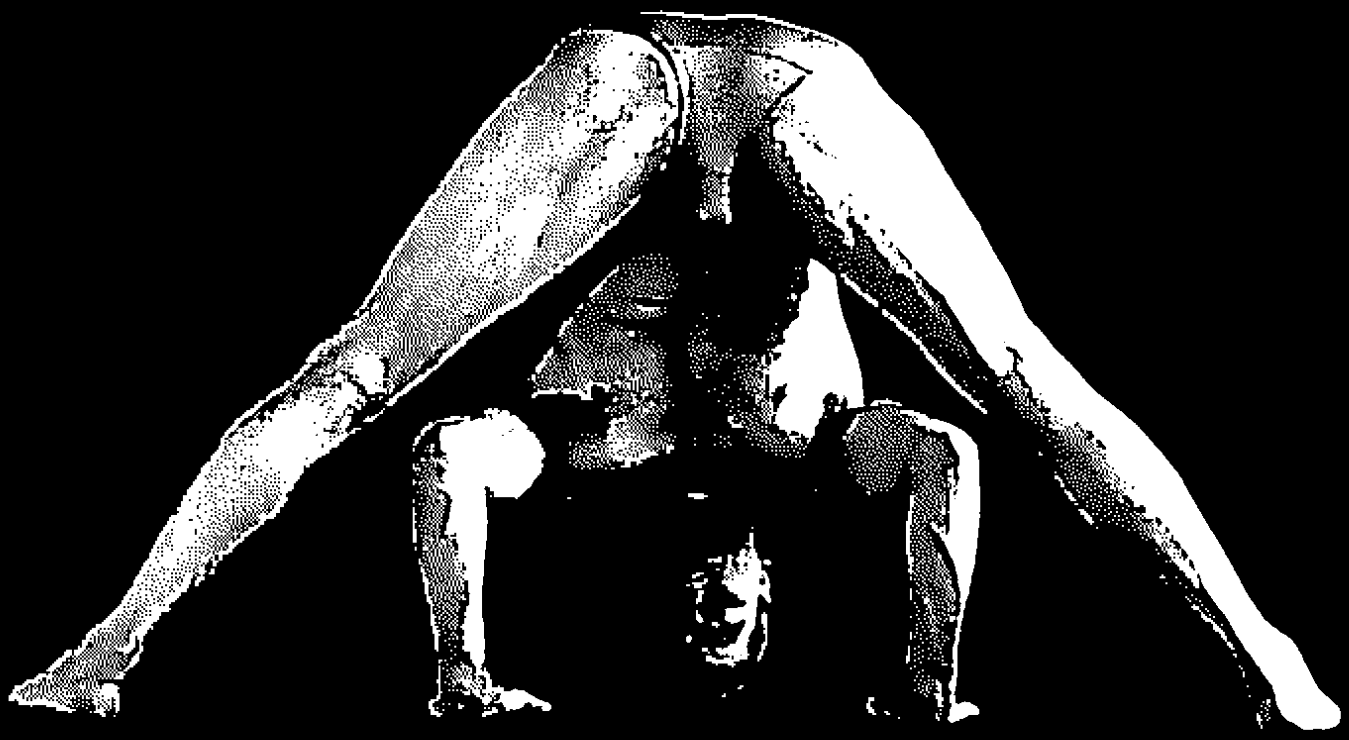
Standing Firefly Pose

Ardha-Baddha-Padmottanasana

Half-Bound Lotus Intense Stretch Pose (Variation)

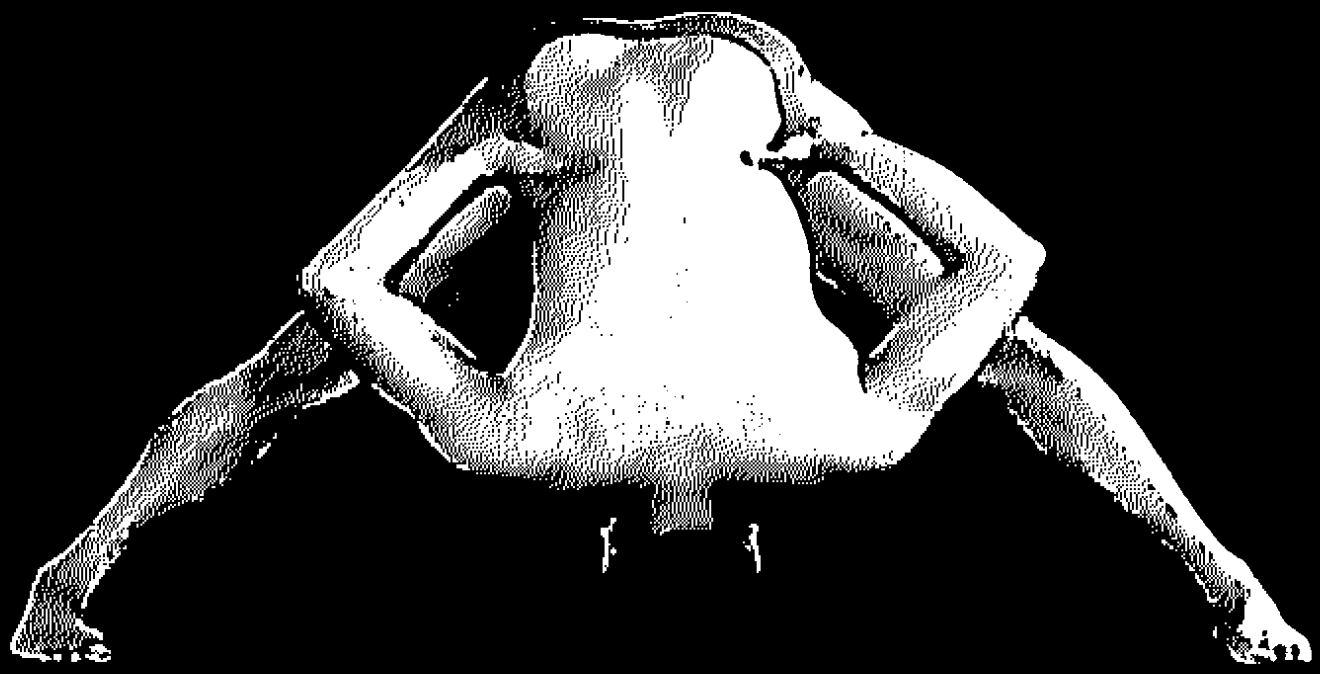
Ardha-Baddha-Padmottanasana

Half-Bound Lotus Intense Stretch Pose



Prasarita-Padottanasana

Spread Out Leg Intense Stretch Pose (Variation)



Prasarita-Padottanasana

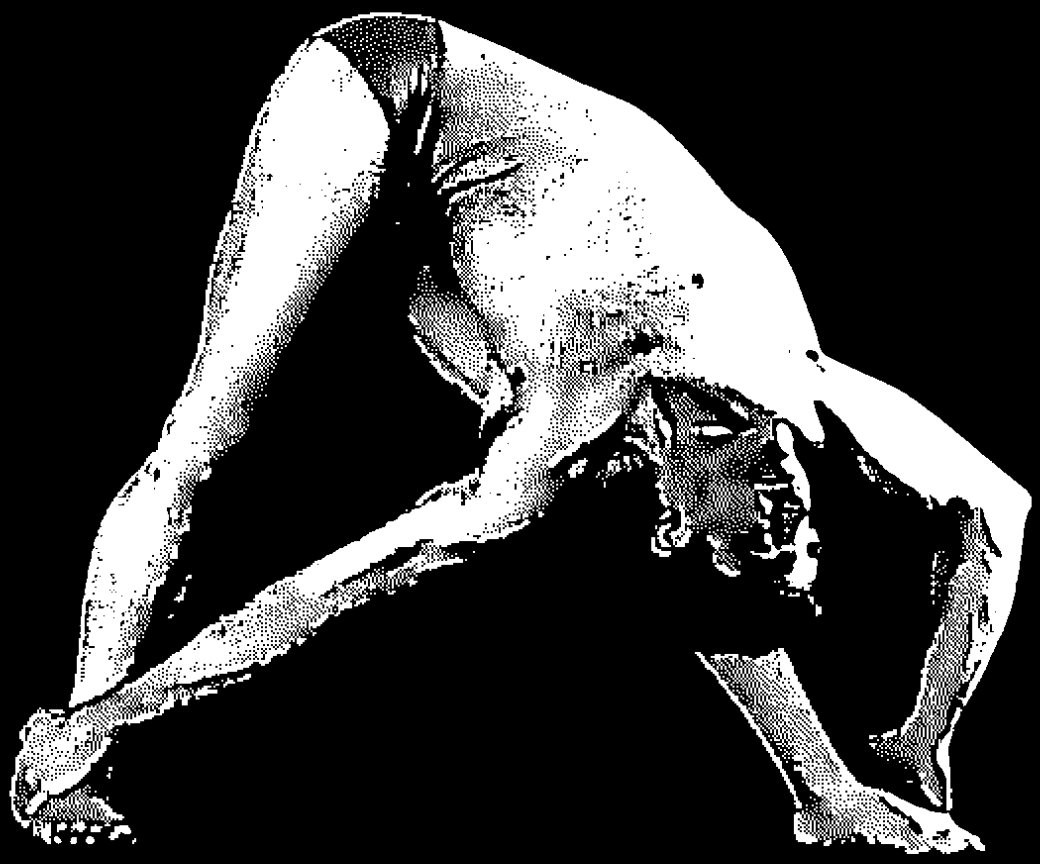
Spread Out Leg Intense Stretch Pose (Variation)

Prasarita-Padottanasana

Spread Out Leg Intense Stretch Pose (Variation)

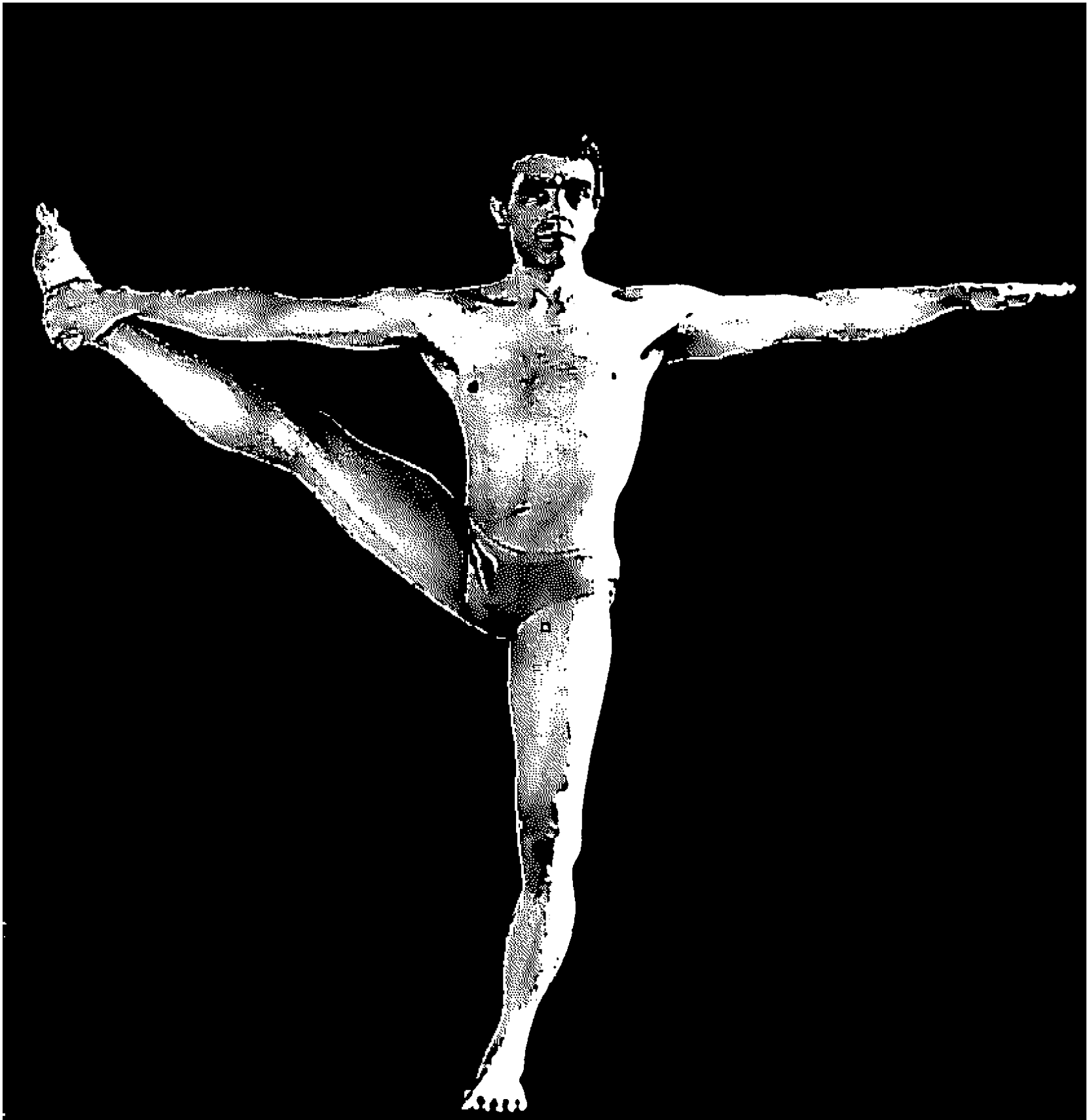
Prasarita-Padottanasana

Spread Out Leg Intense Stretch Pose (Variation)



Parivrtta-Prasarita-Padottanasana

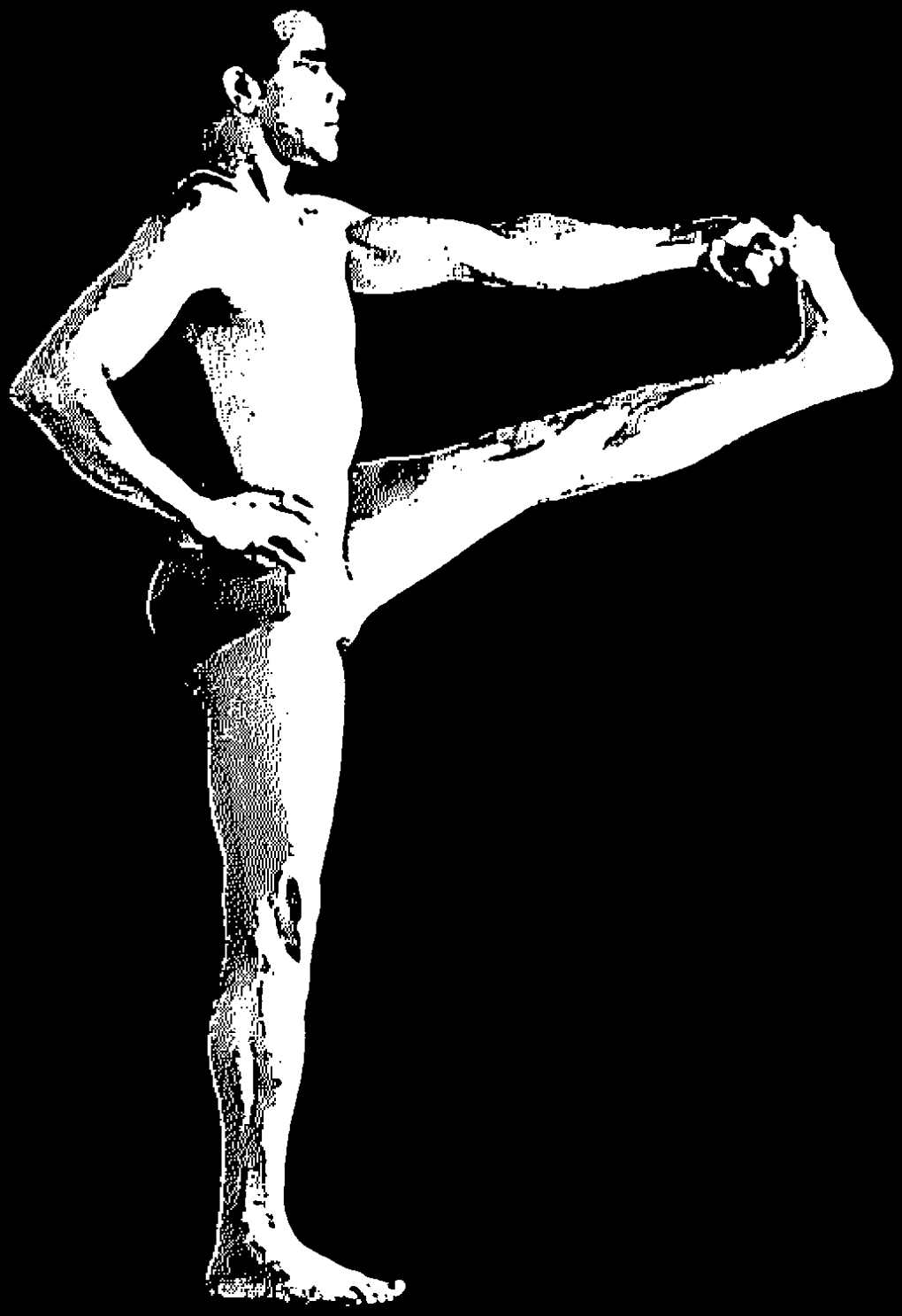
Revolving Spread Out Leg Stretch Pose



Natyasana
Ballet Pose

Natyasana

Ballet Pose (Variation)



Utthita-Hasta-Padangushtasana

Standing Hand to Big Toe Pose (Preparation)

Utthita-Hasta-Padangushtasana

Standing Hand to Big Toe Pose

Utthita-Hasta-Padangushtasana

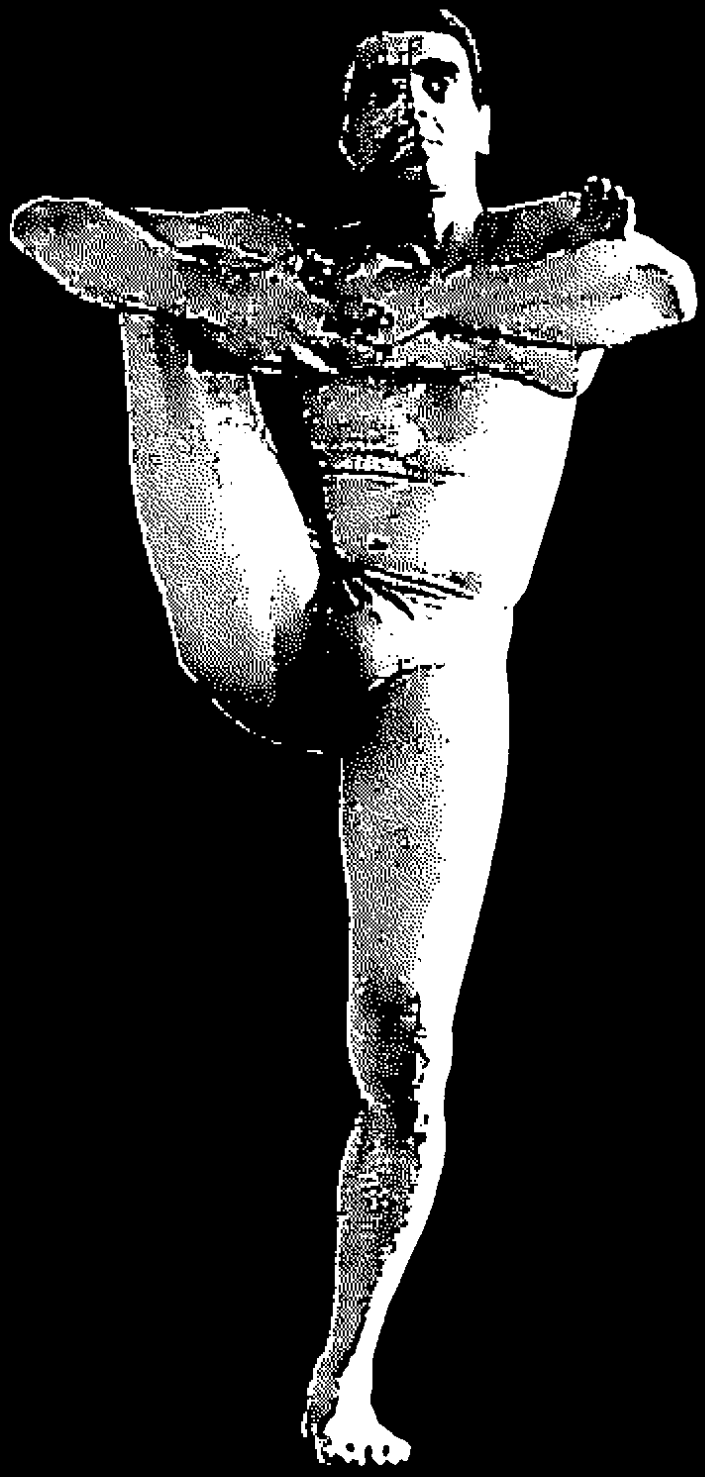
Standing Hand to Big Toe Pose (Variation)

Utthita-Hasta-Padangushtasana

Standing Hand to Big Toe Pose (Variation)

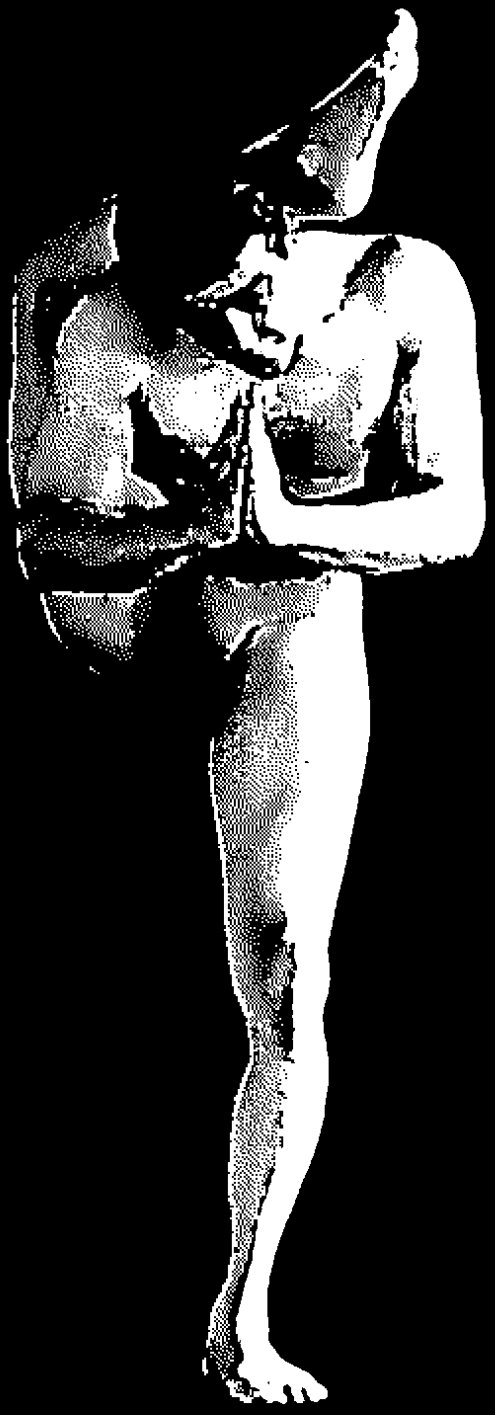
Utthita-Hasta-Padangushtasana

Standing Hand to Big Toe Pose (Variation)



Durvasana

Pose of the Sage Durva (Preparation)



Durvasana

Pose of the Sage Durva

Ruchikasana

Pose of the Sage Ruchika

INVERSIONS

Sometimes it's good to turn your world upside down. Inversions are poses in which the head is below the heart. By turning the body upside down, you reverse the flow of blood, draining the lower body of fluids while increasing the flow of fresh blood to the brain and to the glands in the head and upper torso regions. Inversions recharge the endocrine glands that regulate the immune system and hormonal production.

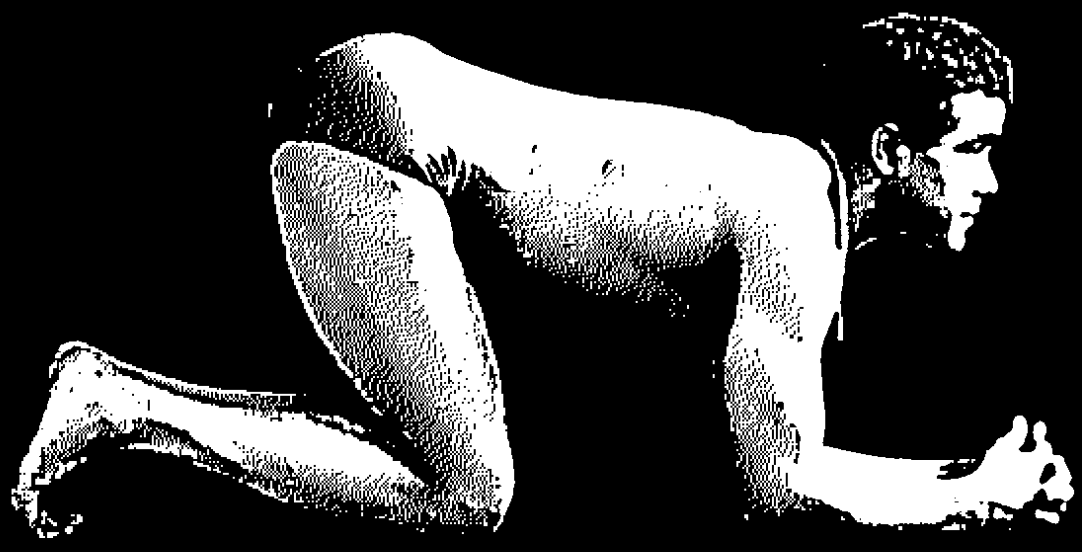
Inversions are also excellent if your flexibility is limited. Head Stand, the King of all Asanas, increases circulation to the brain and stimulates the pineal and pituitary glands. People who suffer from sleep loss, memory loss, and sluggishness have found tremendous benefit through this pose. It also rests the veins of the legs and, very importantly, tones the internal organs. Because the organs are placed upside down they must work extra hard to stay in place; they get their own workout.

Shoulder Stand, the Queen of all Asanas, is also known as a complete pose because it delivers the

maximum benefits of yoga. When the neck presses against the chest, the thyroid gland is massaged and stimulated. It's a soothing pose for people who suffer from headaches, nasal disturbances, breathing problems, and depression. Five minutes a day in the winter and life will appear brighter, happier. For those with high or low blood pressure, Shoulder Stand inverts the organs more gently than Head Stand. It's also a little more comfortable — everyone can do this pose.

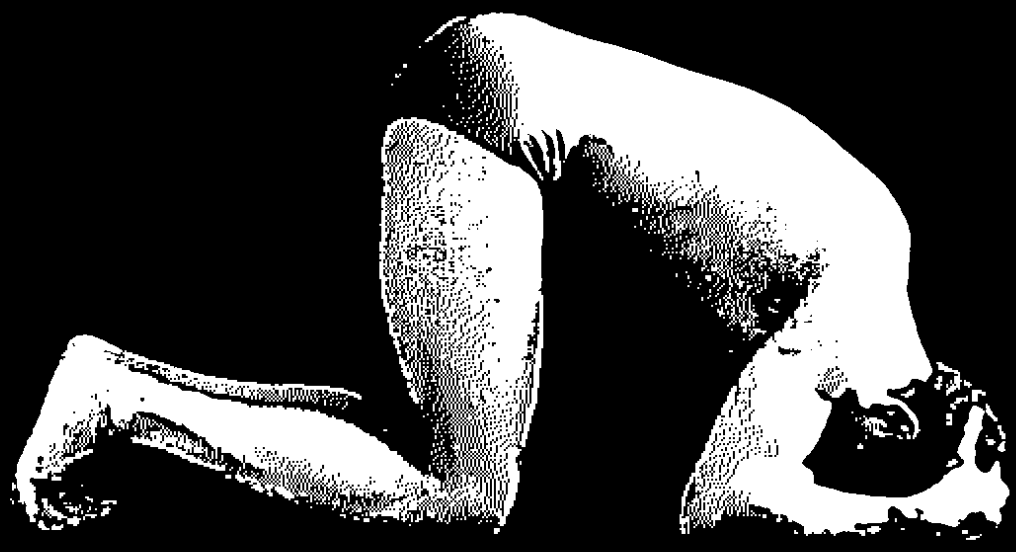
Shashankasana

Hare Pose



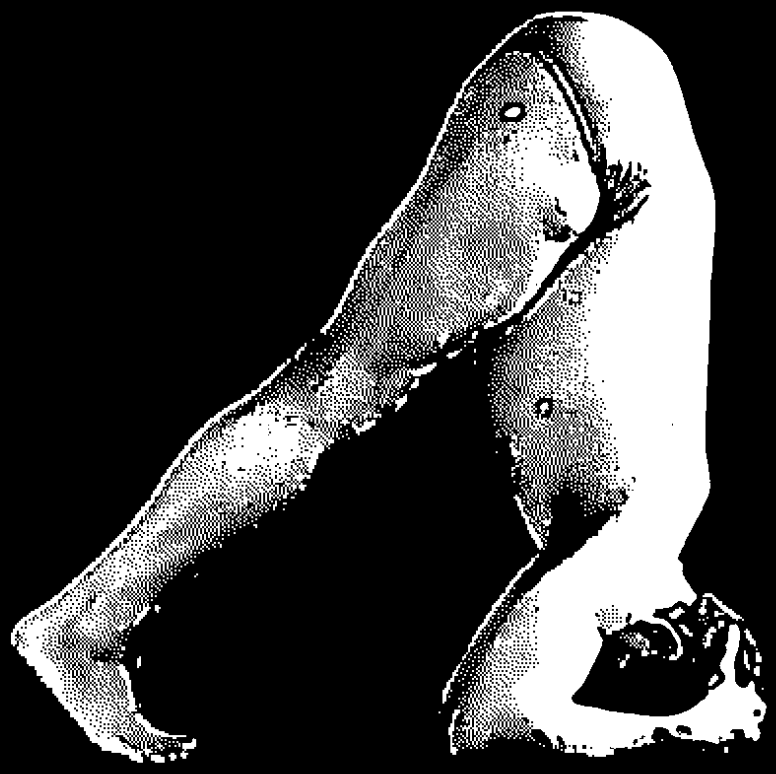
Shirshasana

Head Stand Pose (Preparation)



Shirshasana

Head Stand Pose (Preparation)



Shirshasana

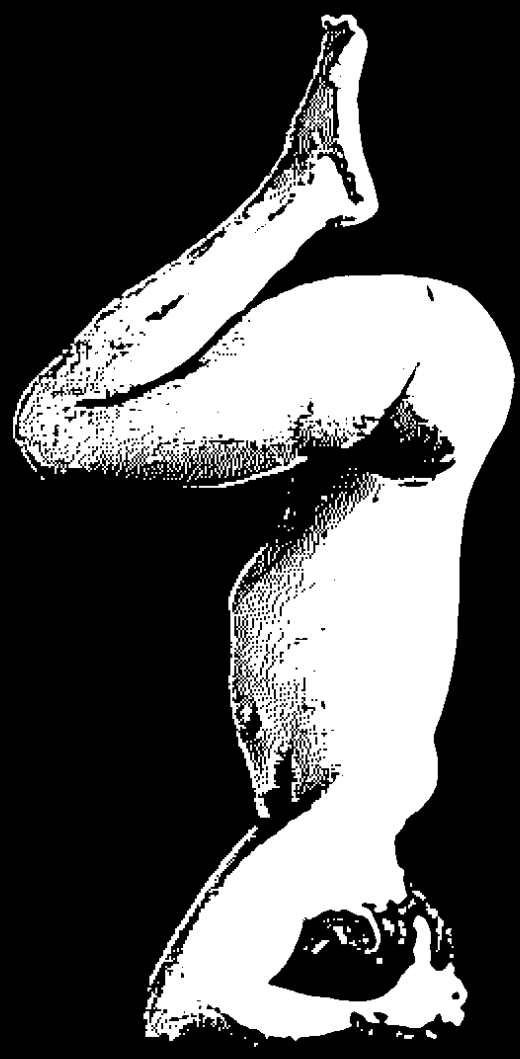
Head Stand Pose (Preparation)

Ardha-Shirshasana

Half Head Stand Pose (Preparation)

Shirshasana

Head Stand Pose (Preparation)

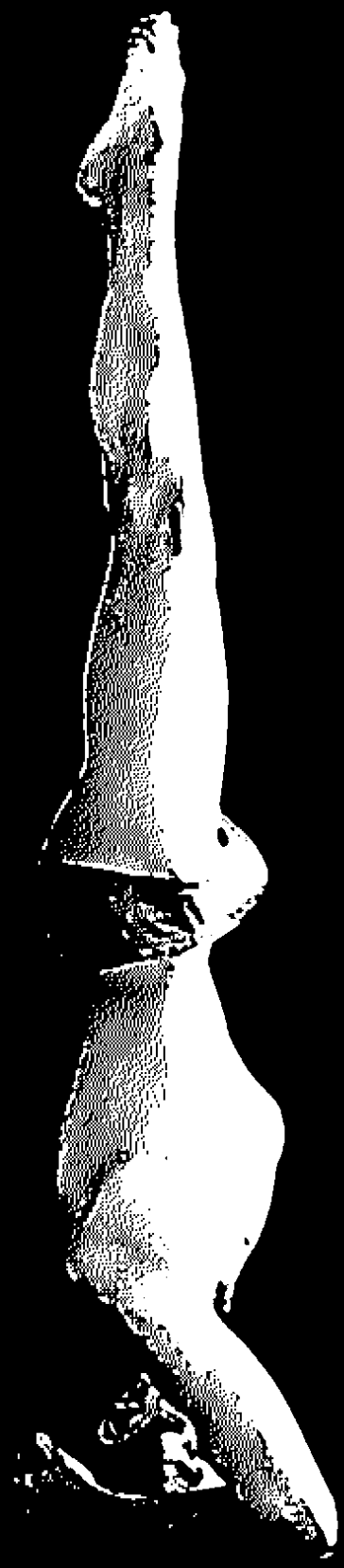


Shirshasana

Head Stand Pose (Preparation)

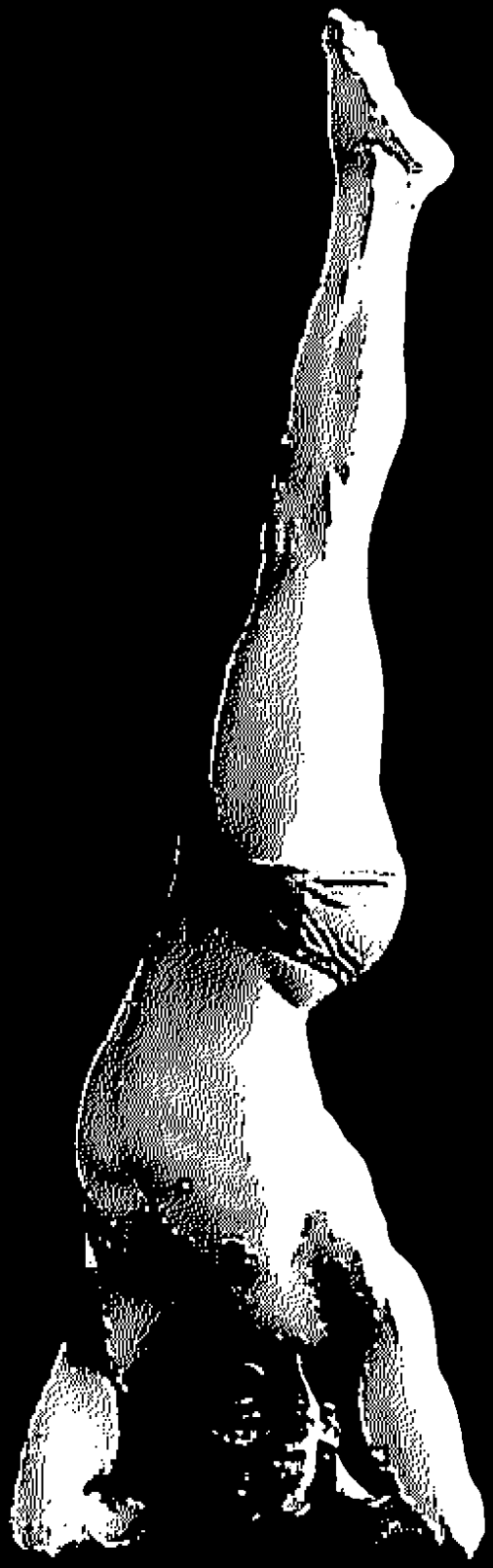
Shirshasana

Head Stand Pose (Preparation)



Shirshasana

Head Stand Pose

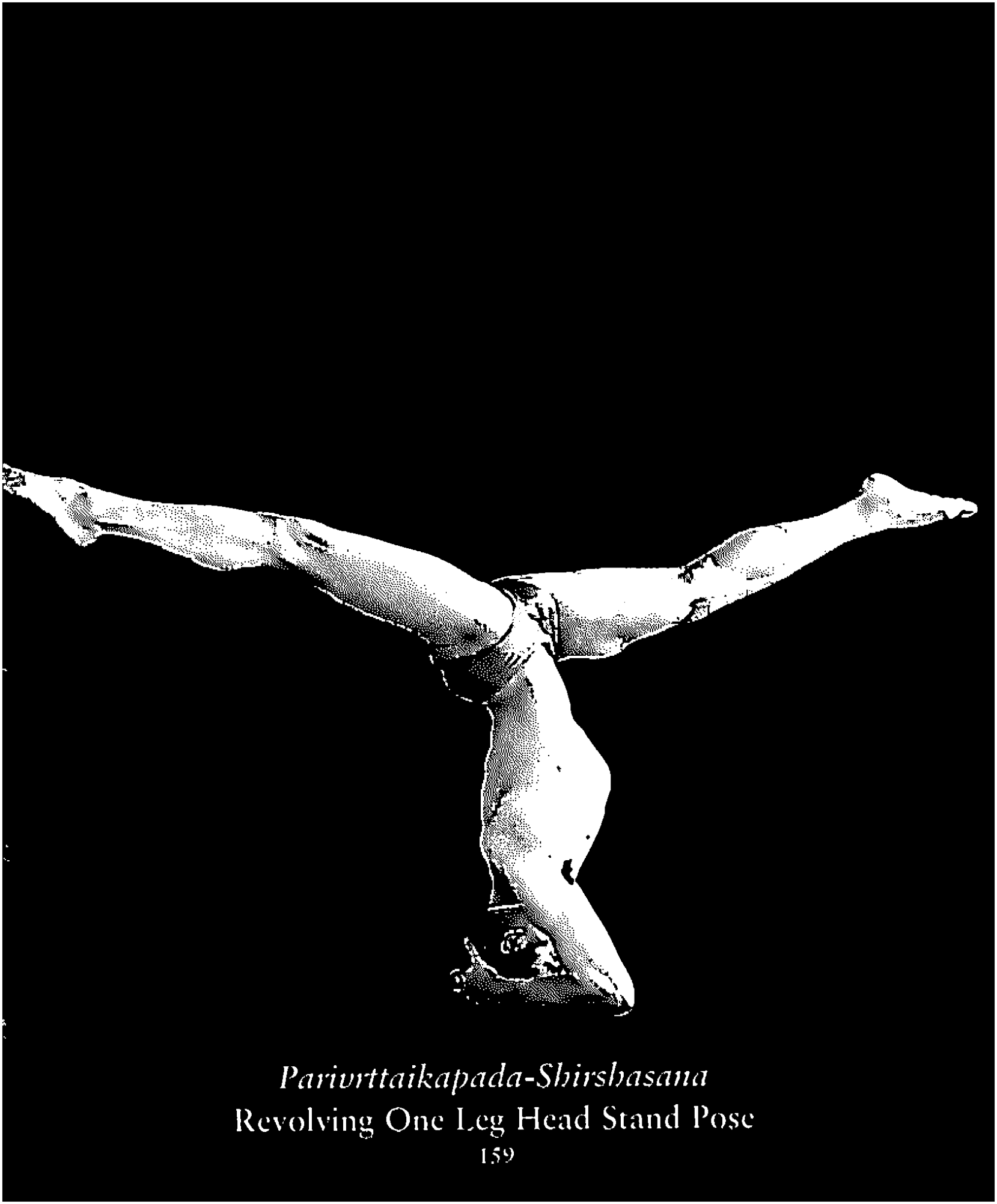


Parshva-Shirshasana

Side Head Stand Pose

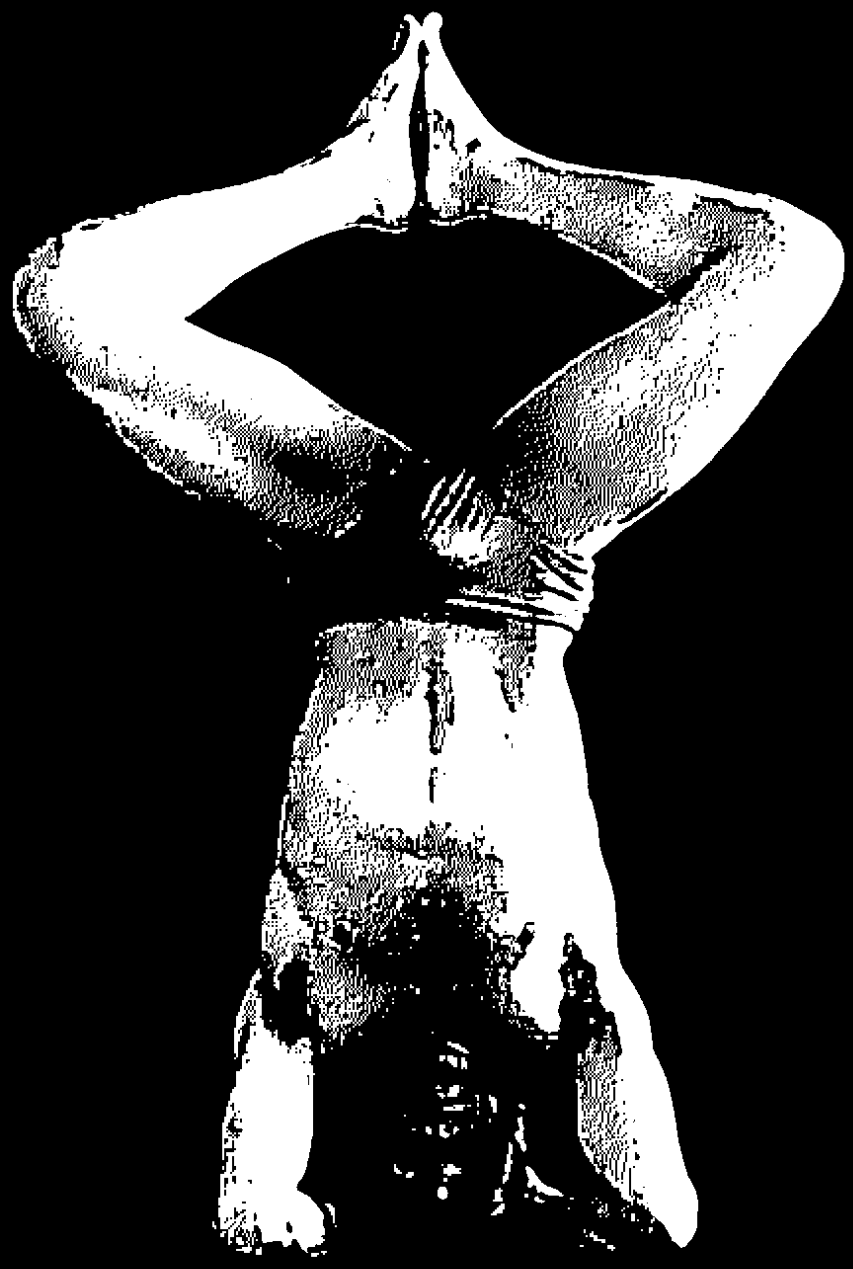
Eka-Pada-Shirshasana

One Leg Head Stand Pose



Parivrttaikapada-Shirshasana

Revolving One Leg Head Stand Pose



Padma-Shirshasana

Lotus Pose (Preparation)

Padma Shirshasana

Lotus Pose

Padma-Shirshasana

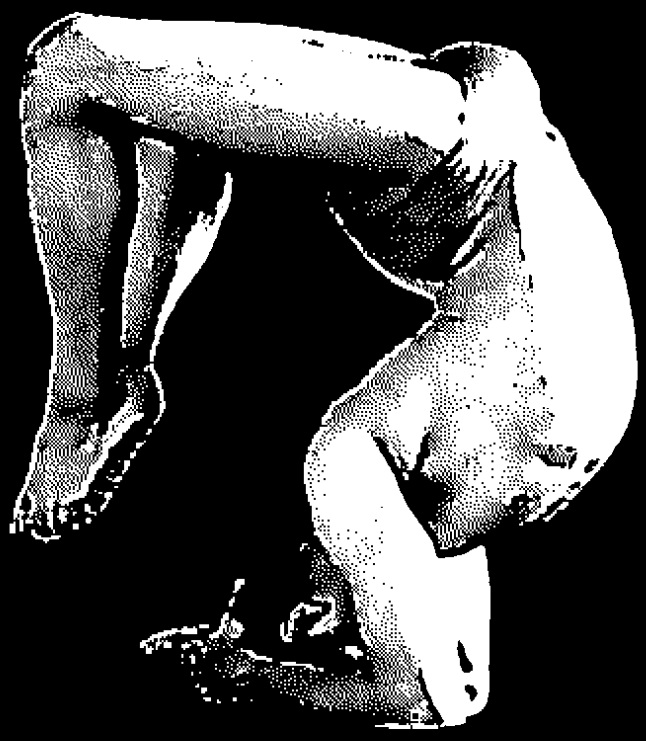
Lotus Pose (Side View)

Parshva-Padma-Shirshasana

Side Lotus Head Stand Pose

Pinda-Shirshasana

Embryo in Head Stand Pose



Shirsha-Padasana

Foot to Head Pose (Preparation)

Shirsha-Padasana

Foot to Head Pose (Preparation)

Shirsha-Padasana

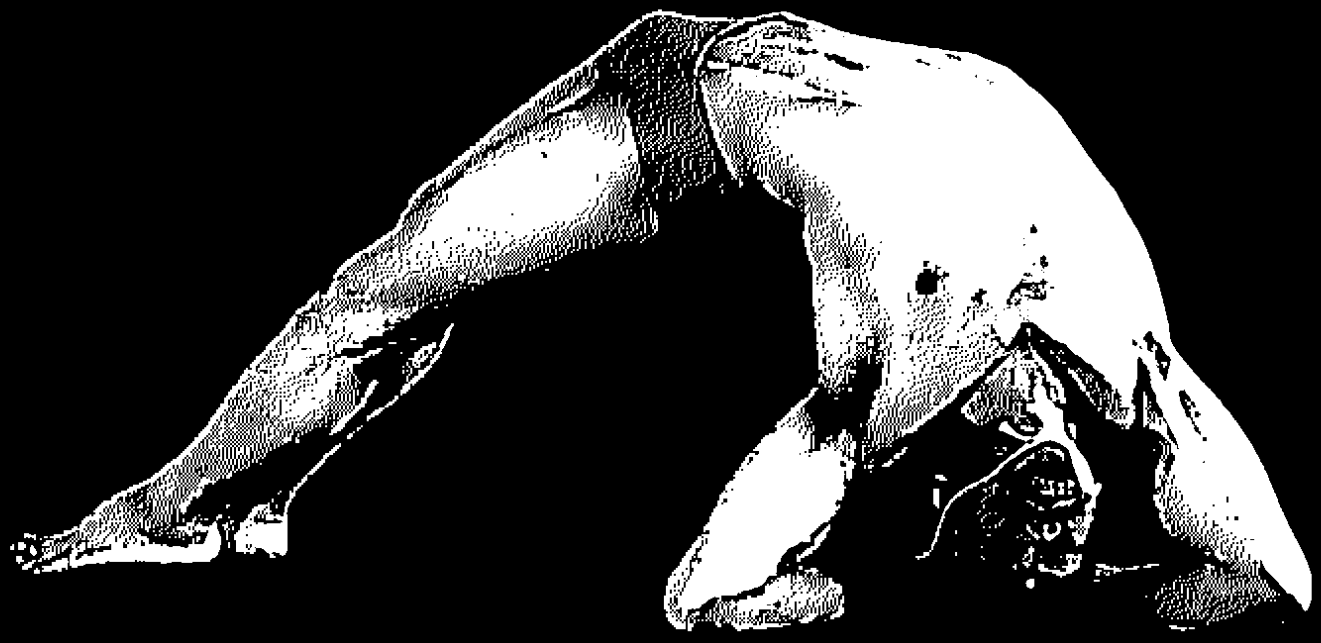
Foot to Head Pose

Dwi-Pada-Viparita-Dandasana

Both Feet Inverted Staff Pose

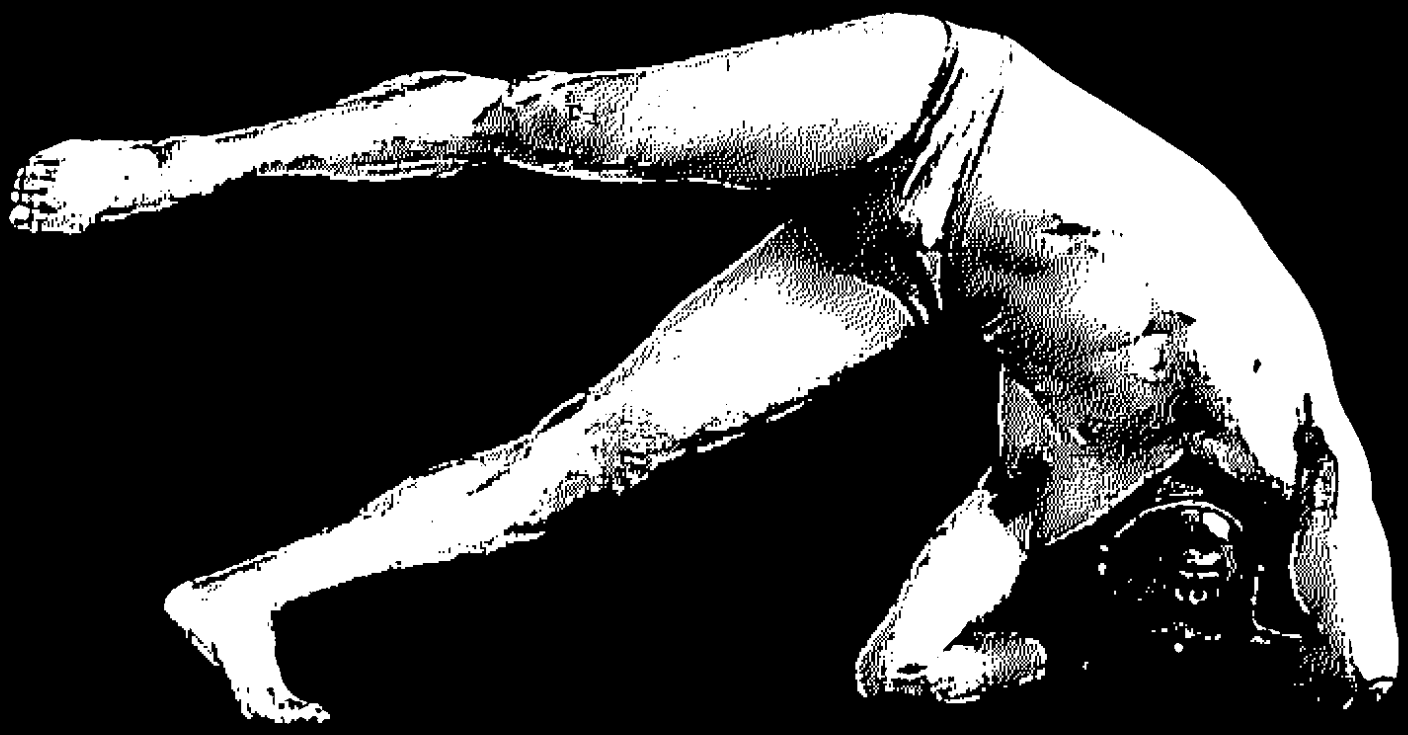
Mandalasana Parampara – Dwi-Pada-Viparita-Dandasana

Circle Pose – Both Feet Inverted Staff Pose



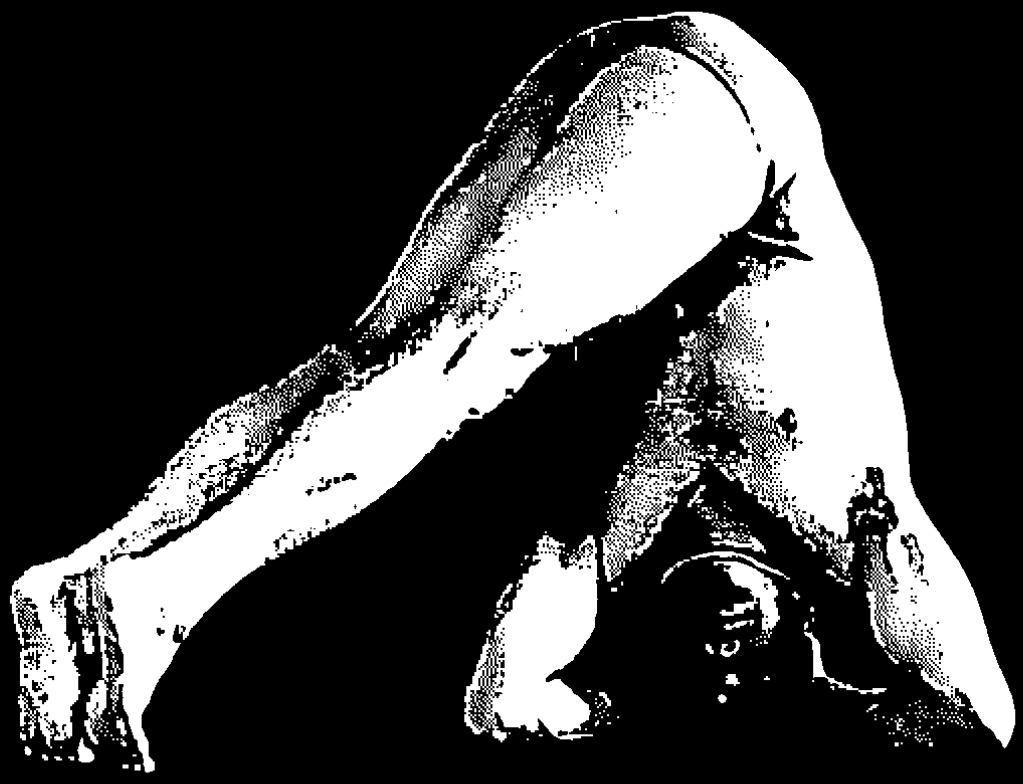
Mandalasana Parampara

Circle Pose



Mandalasana Parampara

Circle Pose

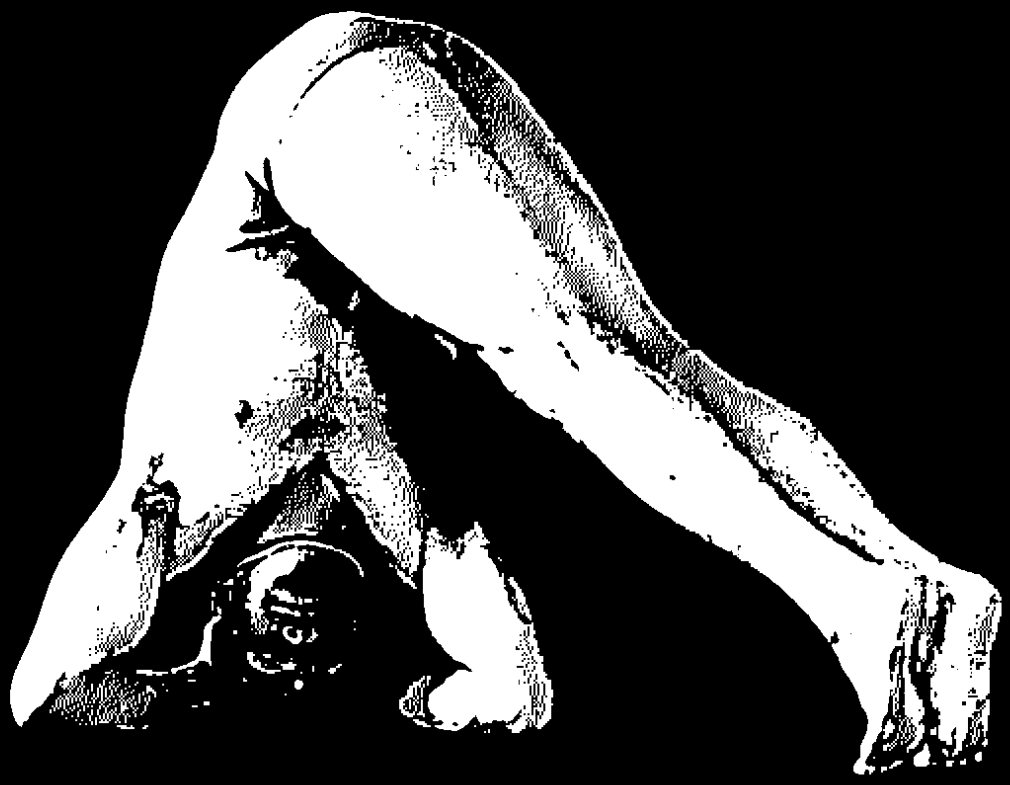


Mandalasana Parampara

Circle Pose

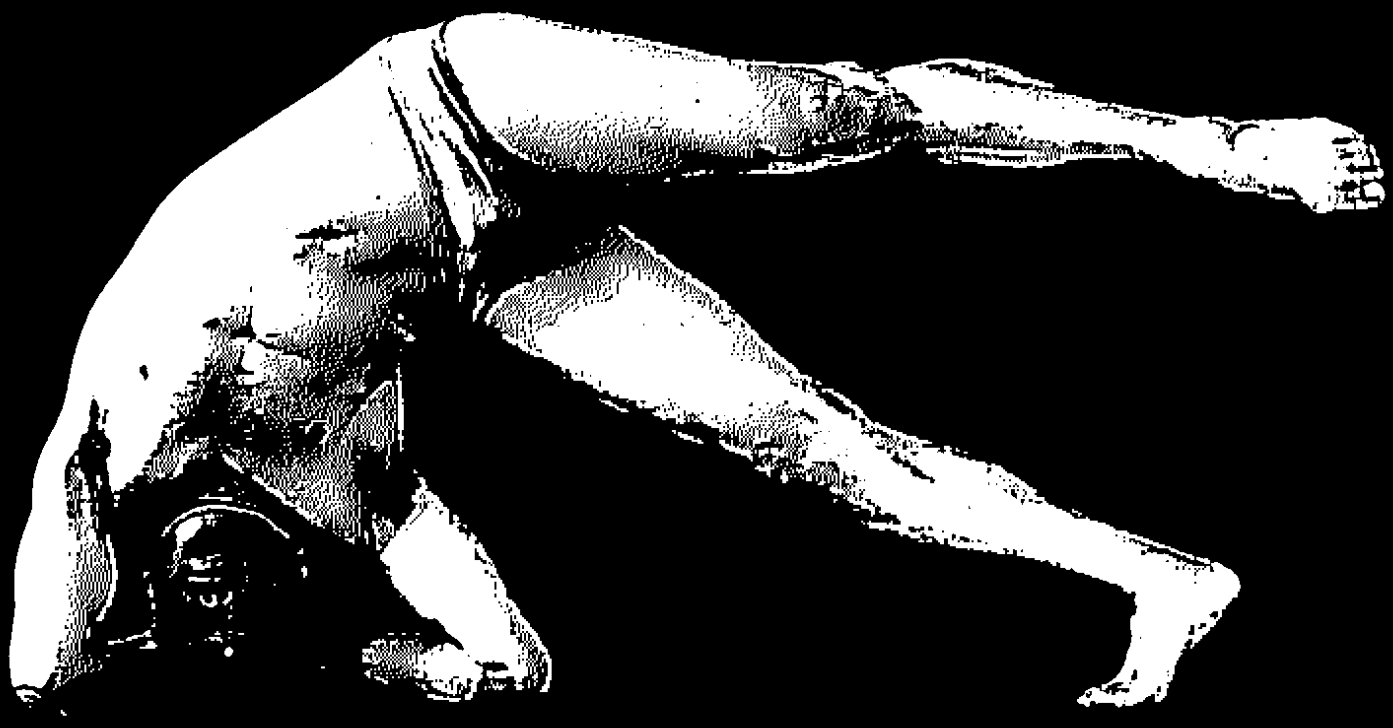
Mandalasana Parampara

Circle Pose



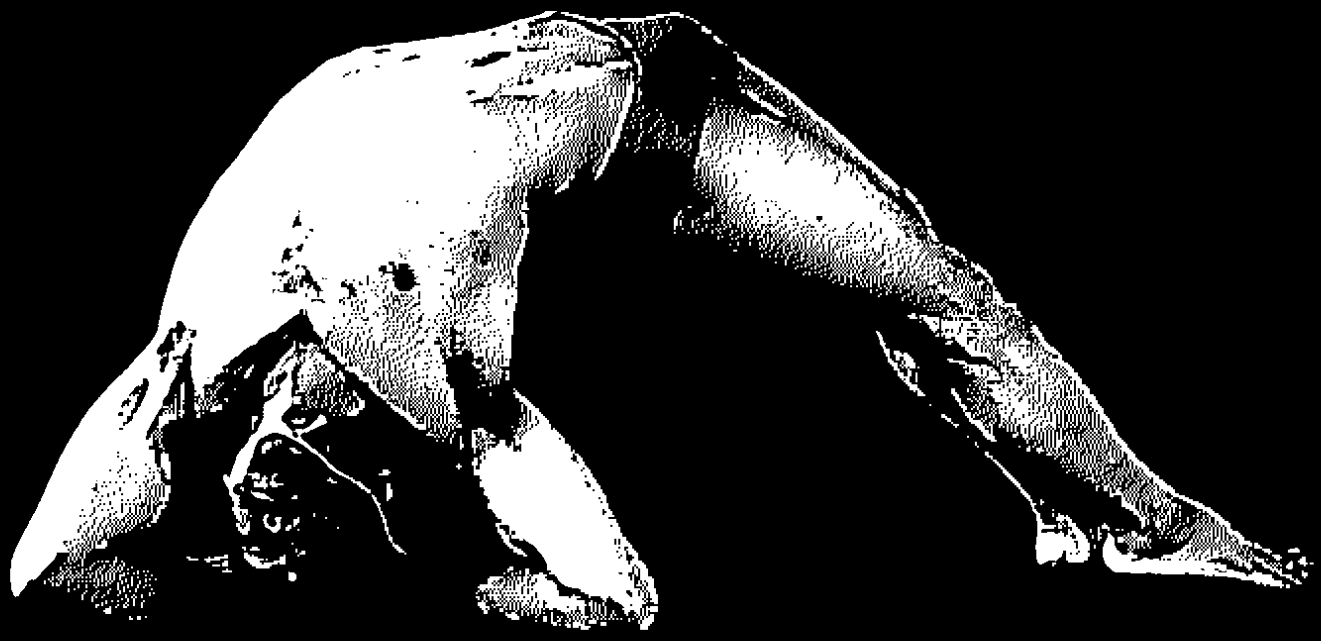
Mandalasana Parampara

Circle Pose



Mandalasana Parampara

Circle Pose

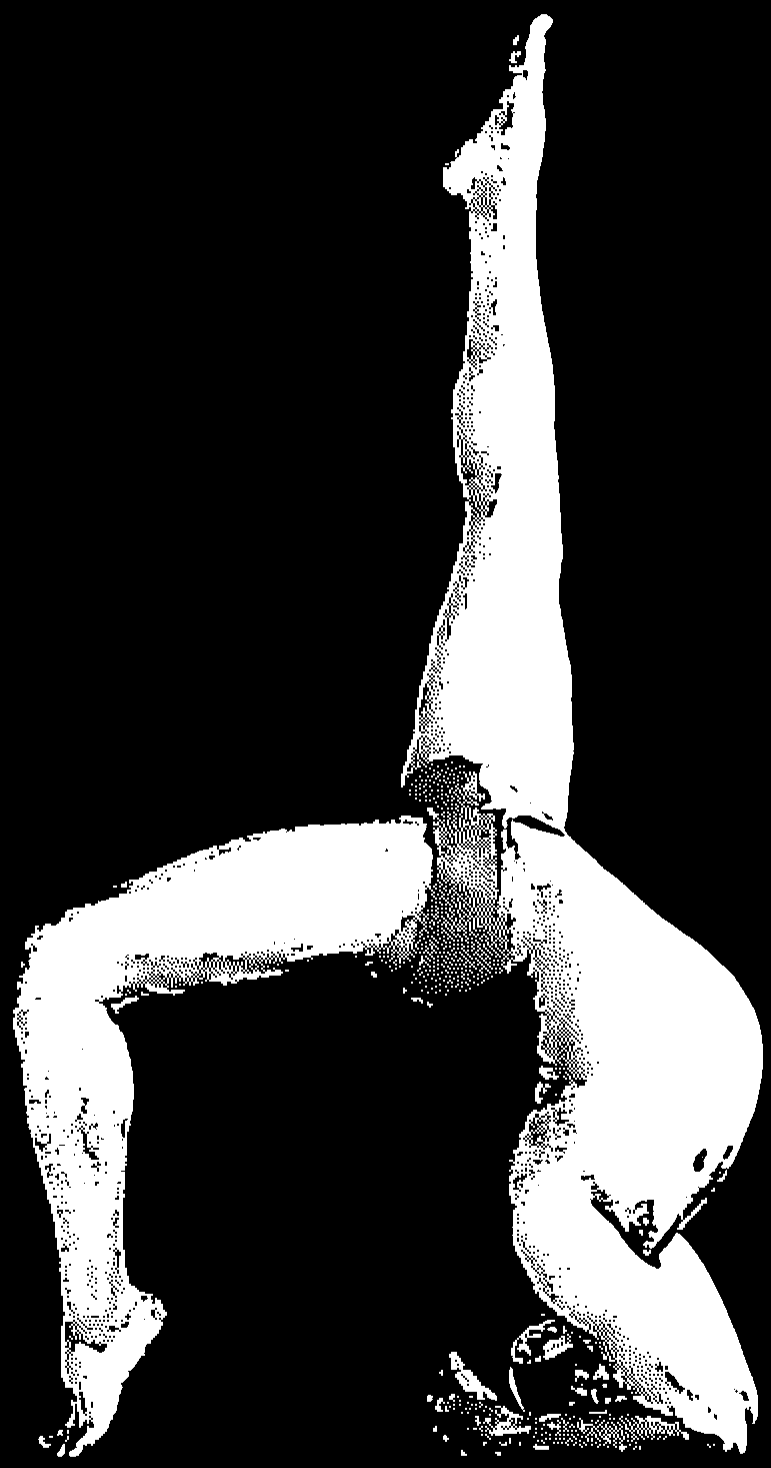


Mandalasana Parampara

Circle Pose

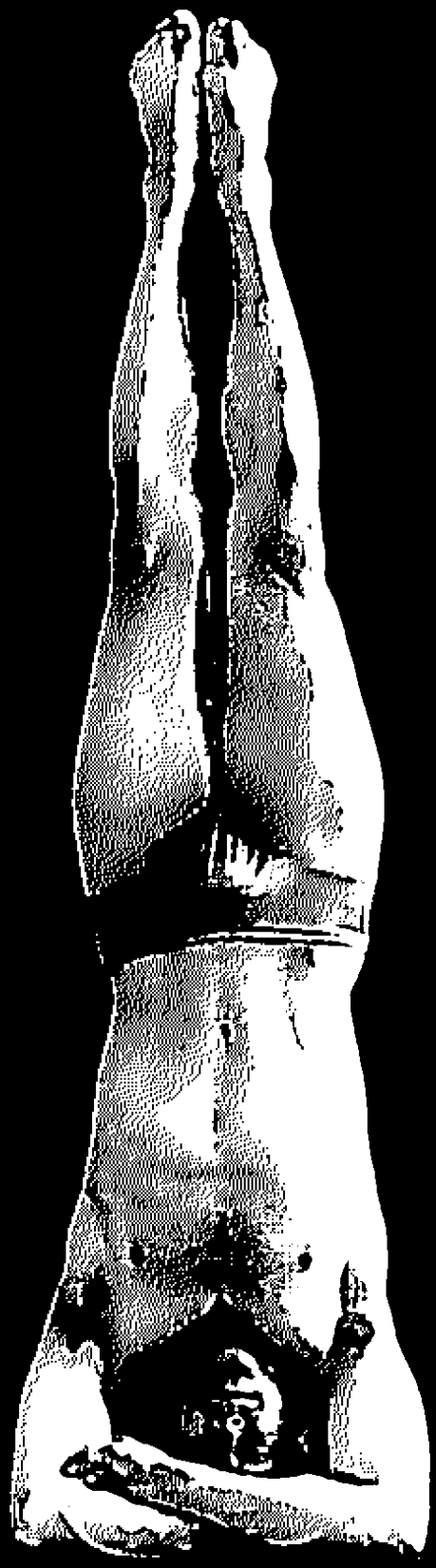
Eka-Pada-Viparita-Dandasana I

One Leg Inverted Staff Pose I



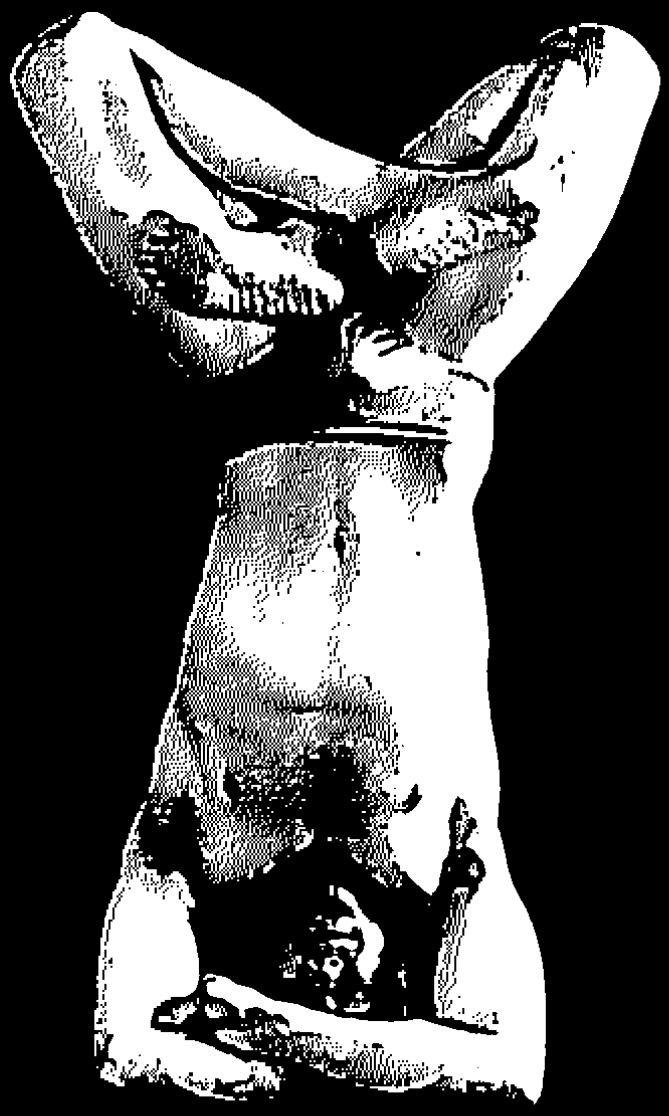
Eka-Pada-Viparita-Dandasana I

One Leg Inverted Staff Pose I (Variation)



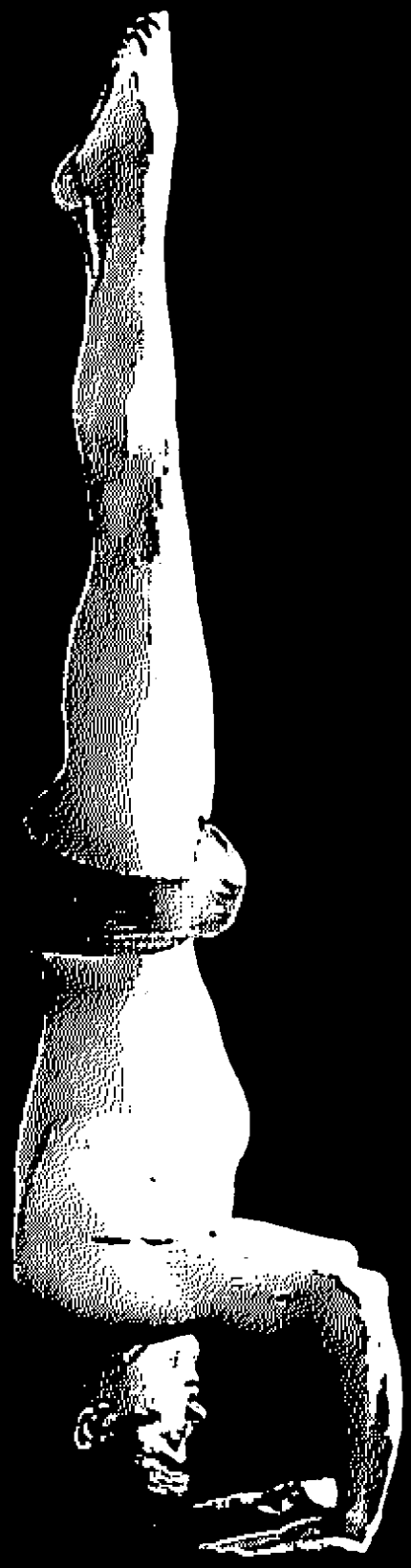
Baddha-Hasta-Shirshasana

Bound Hands Head Stand Pose



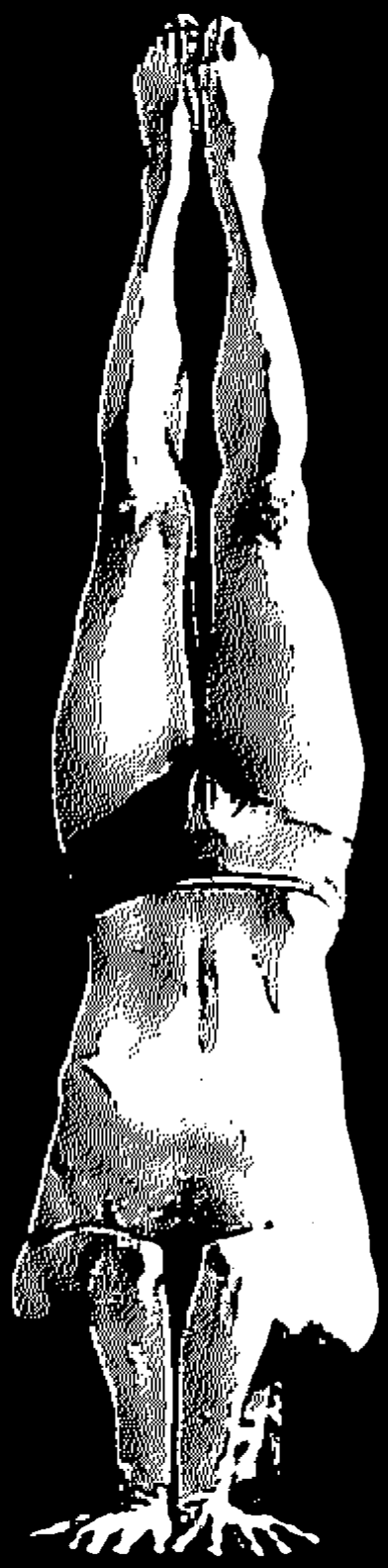
Baddha-Hasta-Padma Shirshasana

Bound Hands Lotus Head Stand Pose



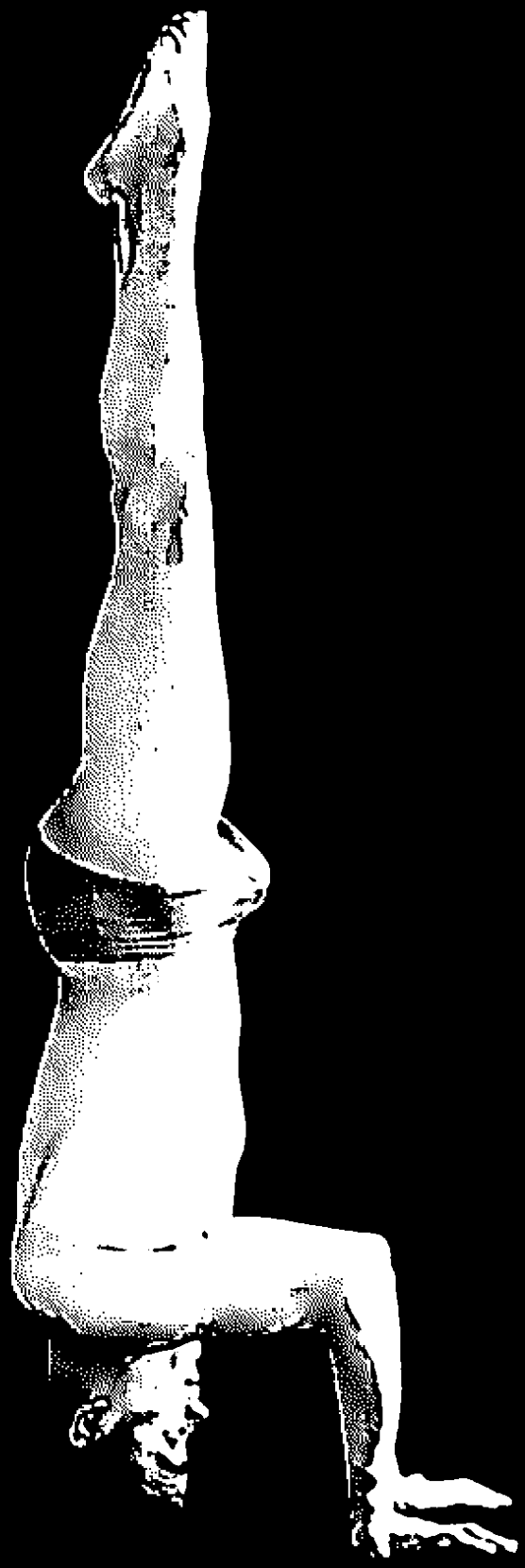
Salamba-Shirshasana

Supported Head Stand Pose



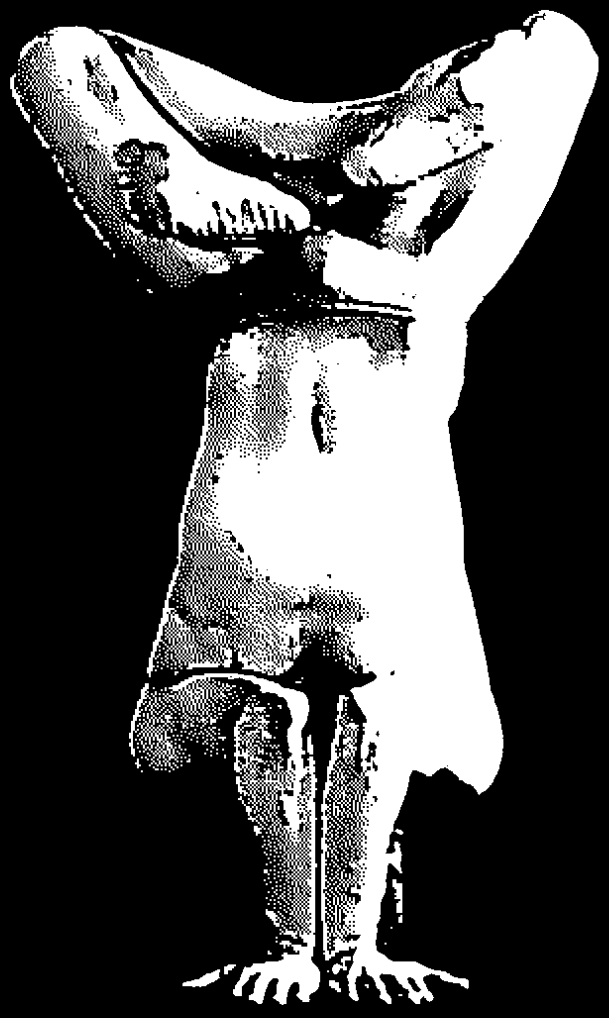
Salamba-Shirshasana

Supported Head Stand Pose (Front View)



Salamba-Shirshasana

Supported Head Stand Pose (Side View)



Salamba-Padma-Shirshasana

Supported Lotus Head Stand Pose

Salamba-Padma-Shirshasana

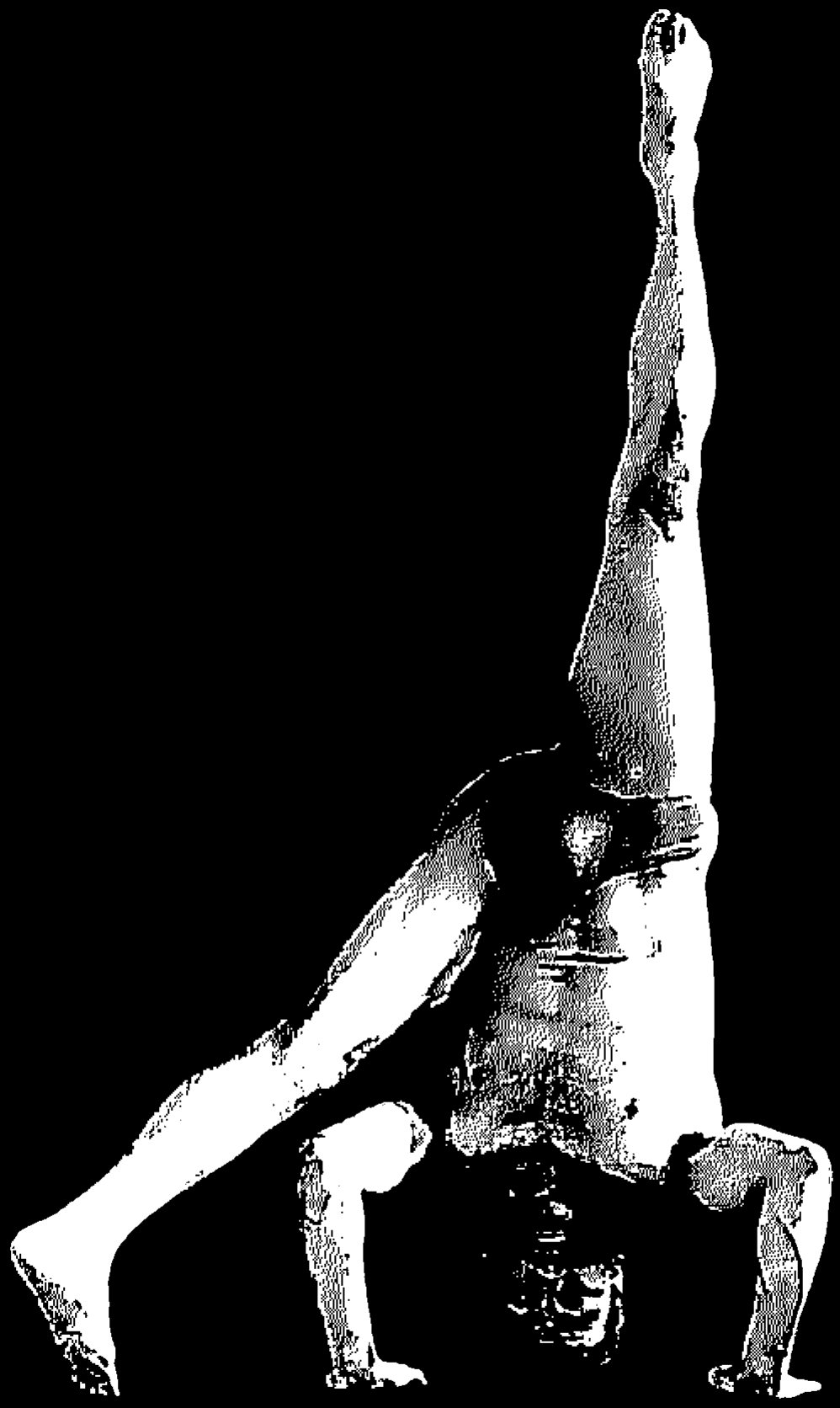
Supported Lotus Head Stand Pose (Side View)

Eka-Hasta-Shirshasana

One-Hand Head Stand Pose

Ardha-Salamba-Shirshasana

Supported Half Head Stand Pose

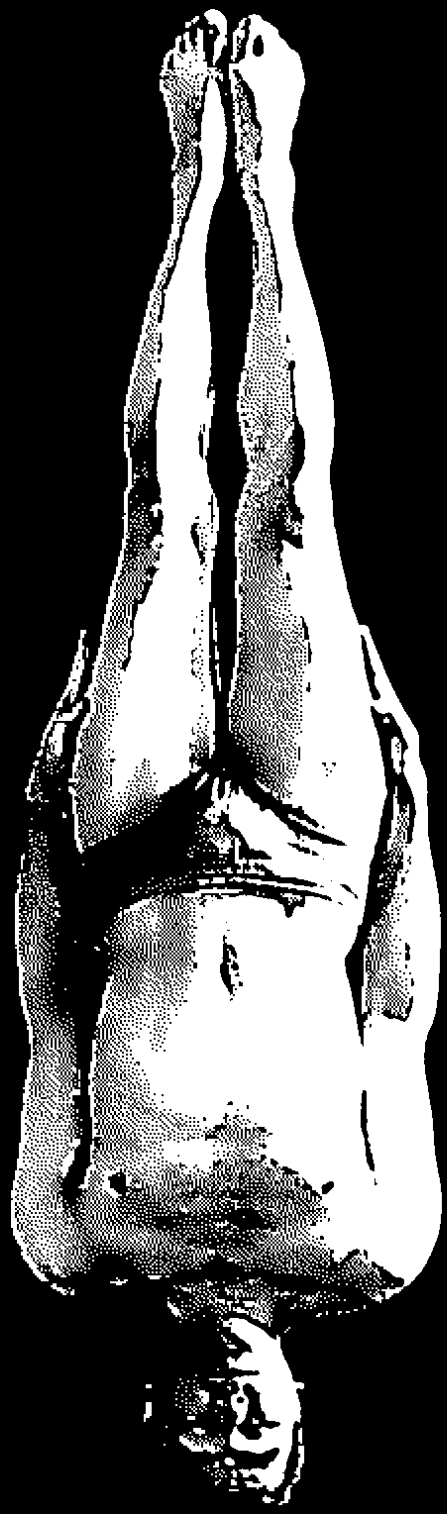


Eka-Pada-Salamba-Shirshasana

Supported One-Leg Head Stand Pose

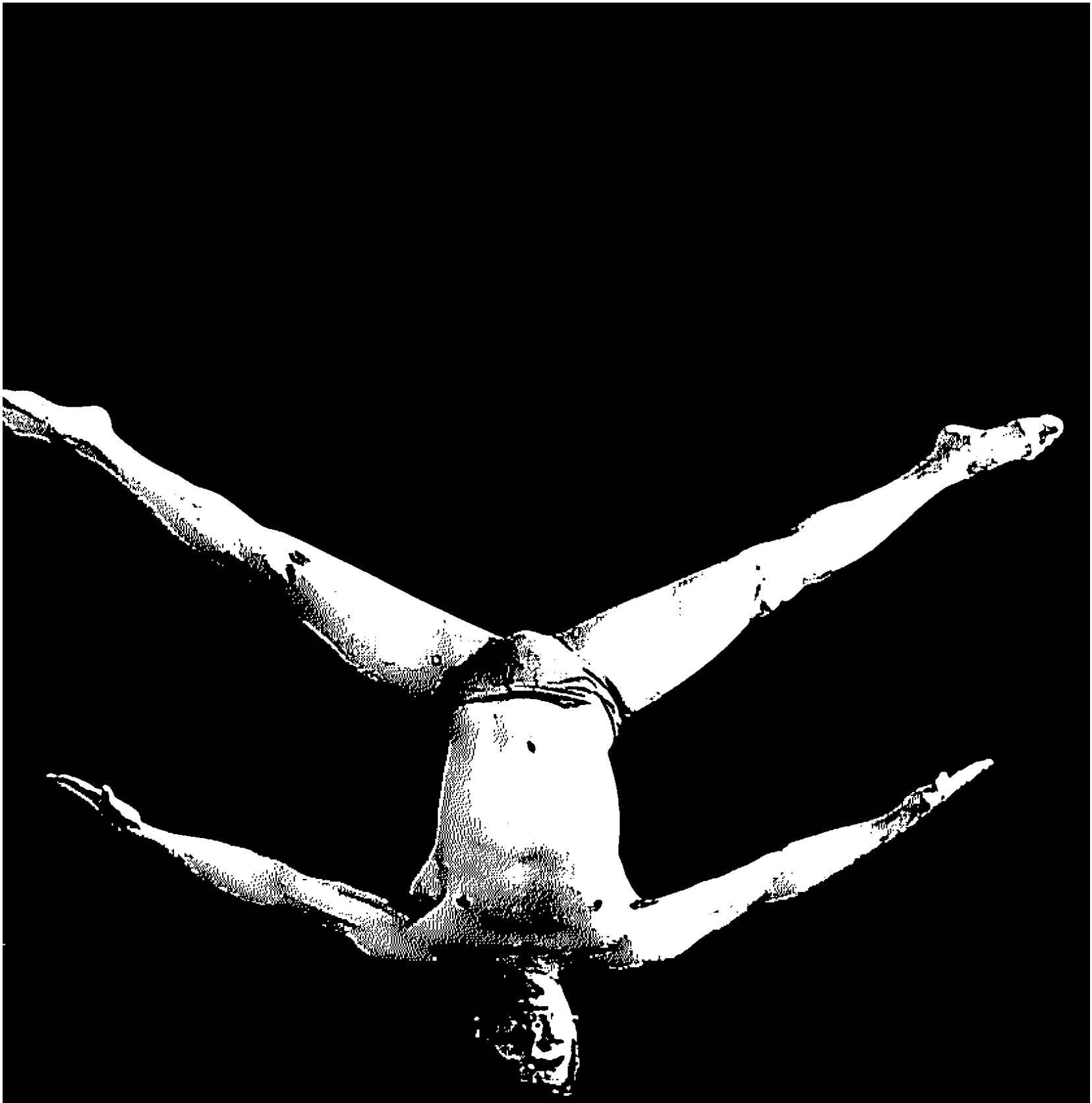
Parshva-Salamba-Shirshasana

Supported Side Head Stand Pose



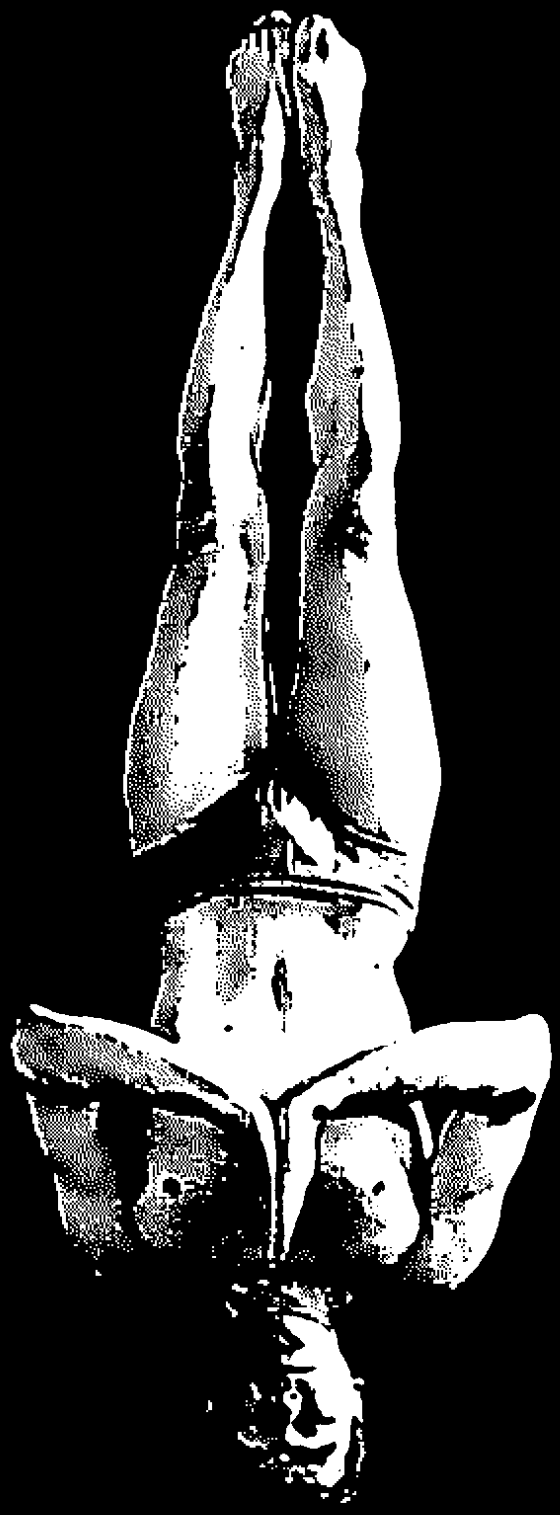
Niralamba-Shirshasana

Hands-Free Head Stand Pose



Niralamba-Shirshasana

Hands-Free Head Stand Pose (Variation)

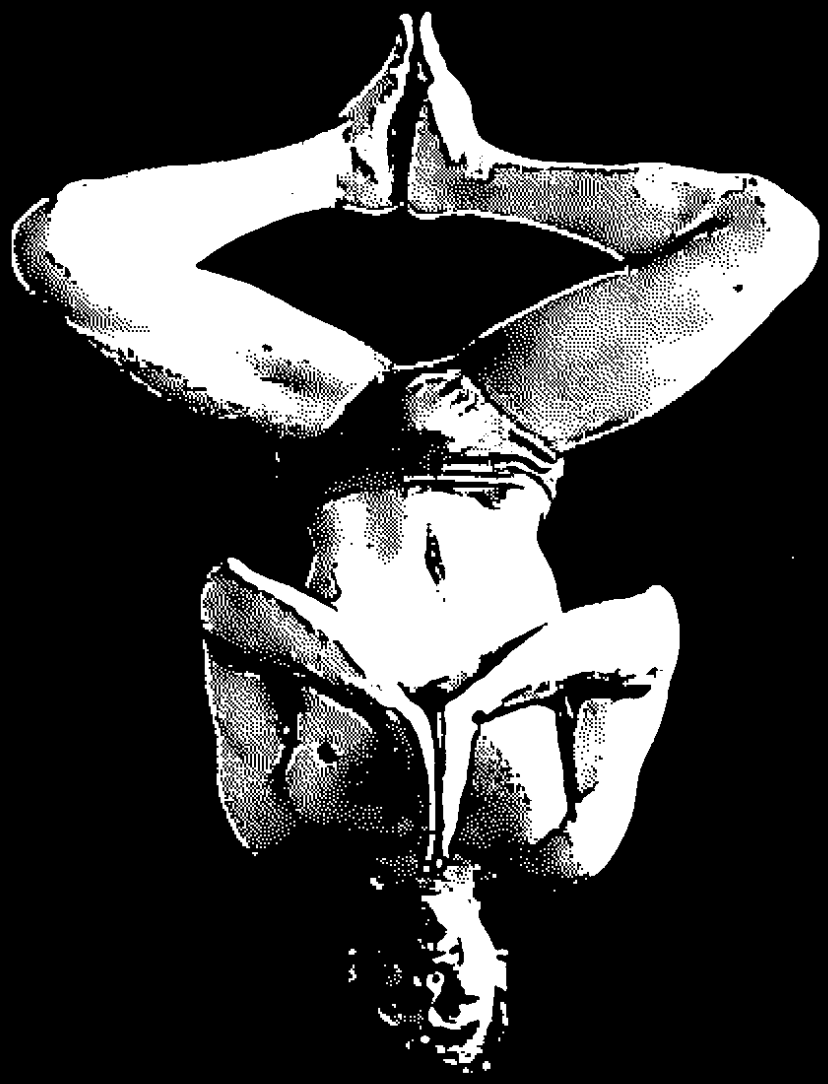


Niralamba-Shirshasana

Hands-Free Head Stand Pose (Variation)

Niralamba-Padma-Shirshasana

Hands-Free Lotus Head Stand Pose



Niralamba-Padma-Shirshasana

Hands-Free Lotus Head Stand Pose (Variation)

Niralamba-Shirshasana

Hands-Free Head Stand Pose (Variation)

Niralamba-Shirshasana

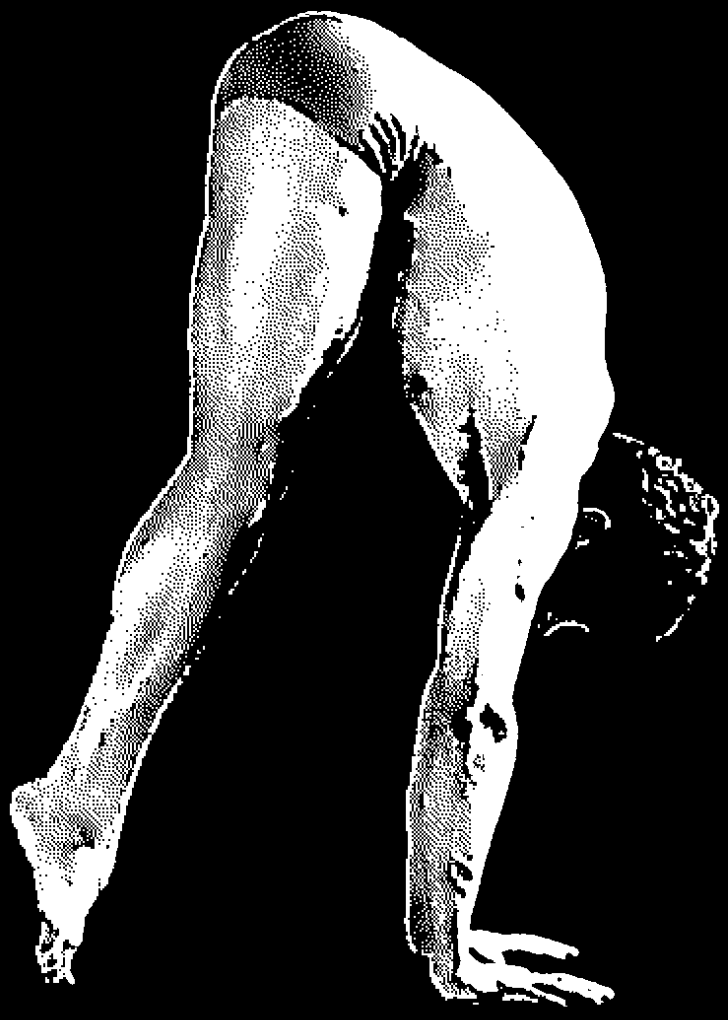
Hands-Free Head Stand Pose (Variation)

Niralamba-Shirshasana

Hands-Free Head Stand Pose (Variation)

Niralamba-Padma-Shirshasana

Hands-Free Lotus Head Stand Pose (Variation)

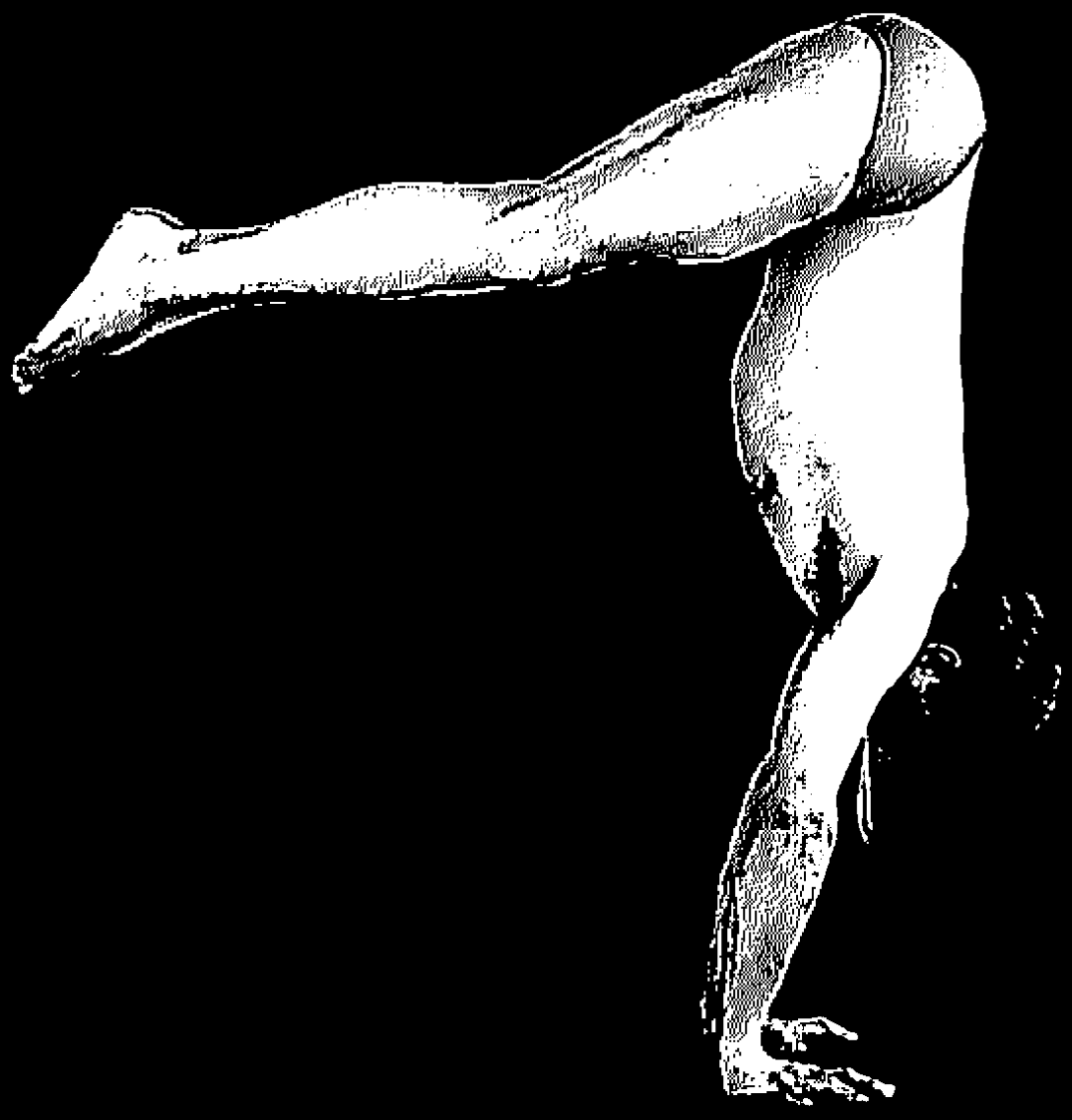


Adho-Mukha-Vrkshasana

Downward Facing Tree Pose / Hand Stand (Preparation)

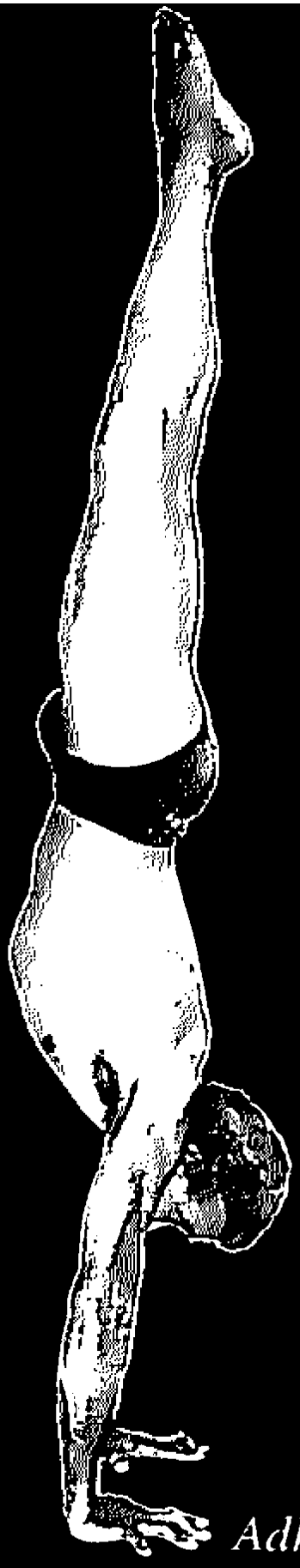
Adho-Mukha-Vrkshasana

Downward Facing Tree Pose / Hand Stand (Preparation)



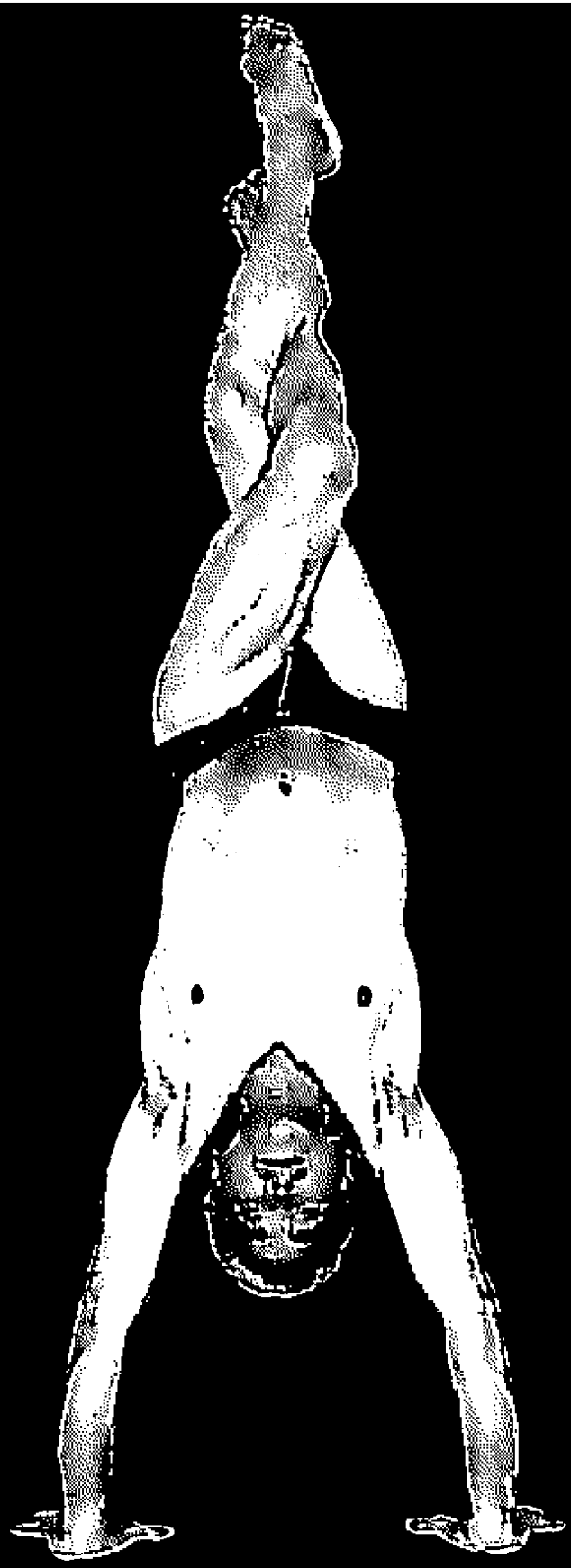
Adho-Mukha-Vrkshasana

Downward Facing Tree Pose / Hand Stand (Preparation)



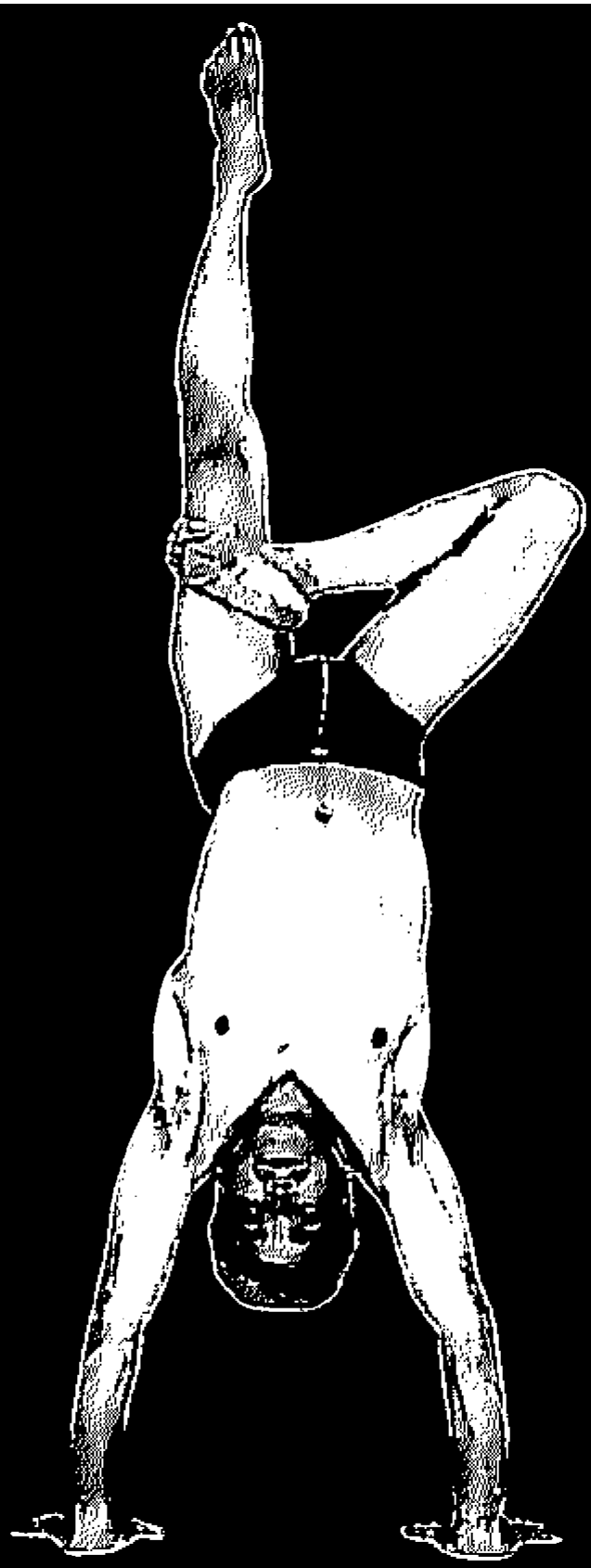
Adho-Mukha-Vrkshasana

Downward Facing Tree Pose / Hand Stand



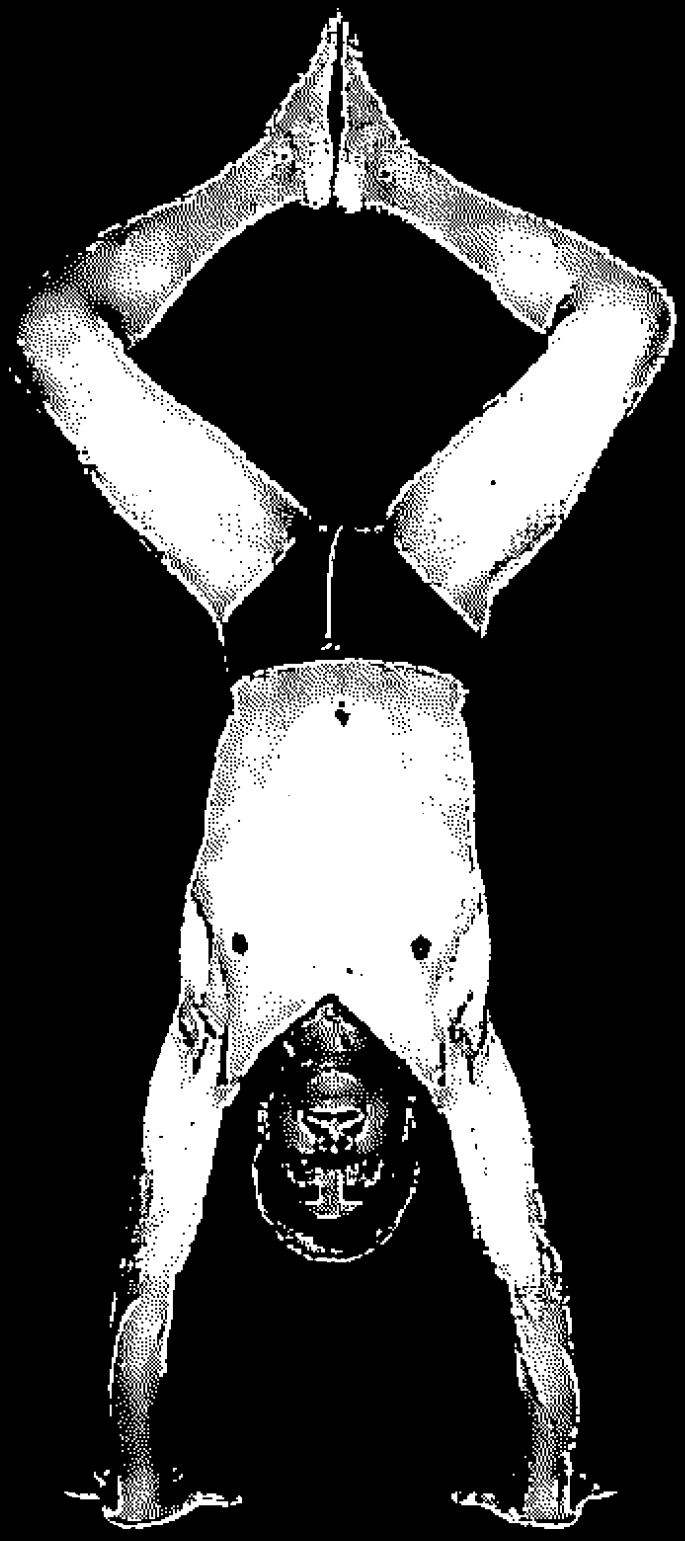
Adho-Mukha-Vrkshasana

Downward Facing Tree Pose / Hand Stand (Variation)



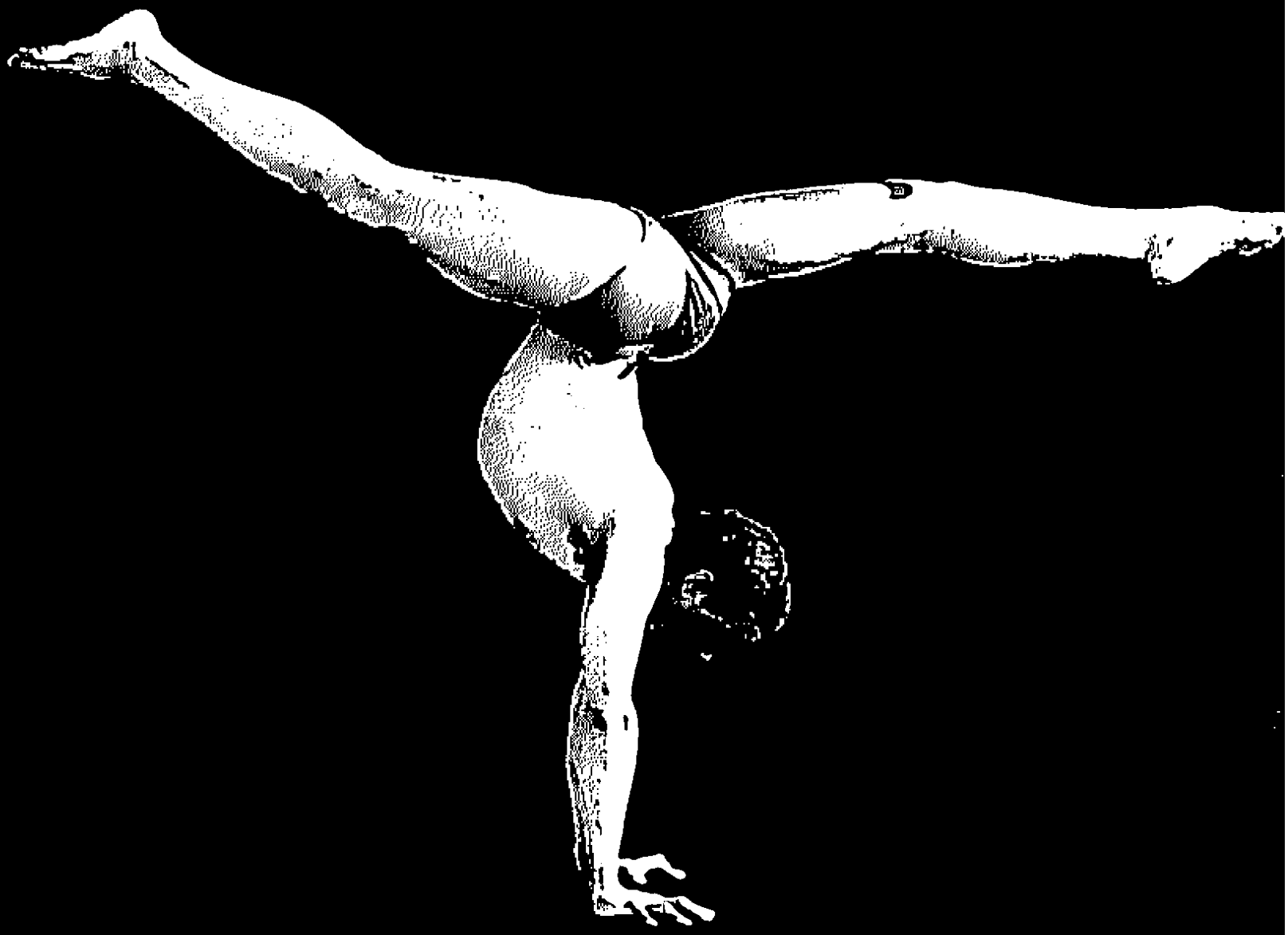
Adho-Mukha-Vrkshasana

Downward Facing Tree Pose / Hand Stand (Variation)



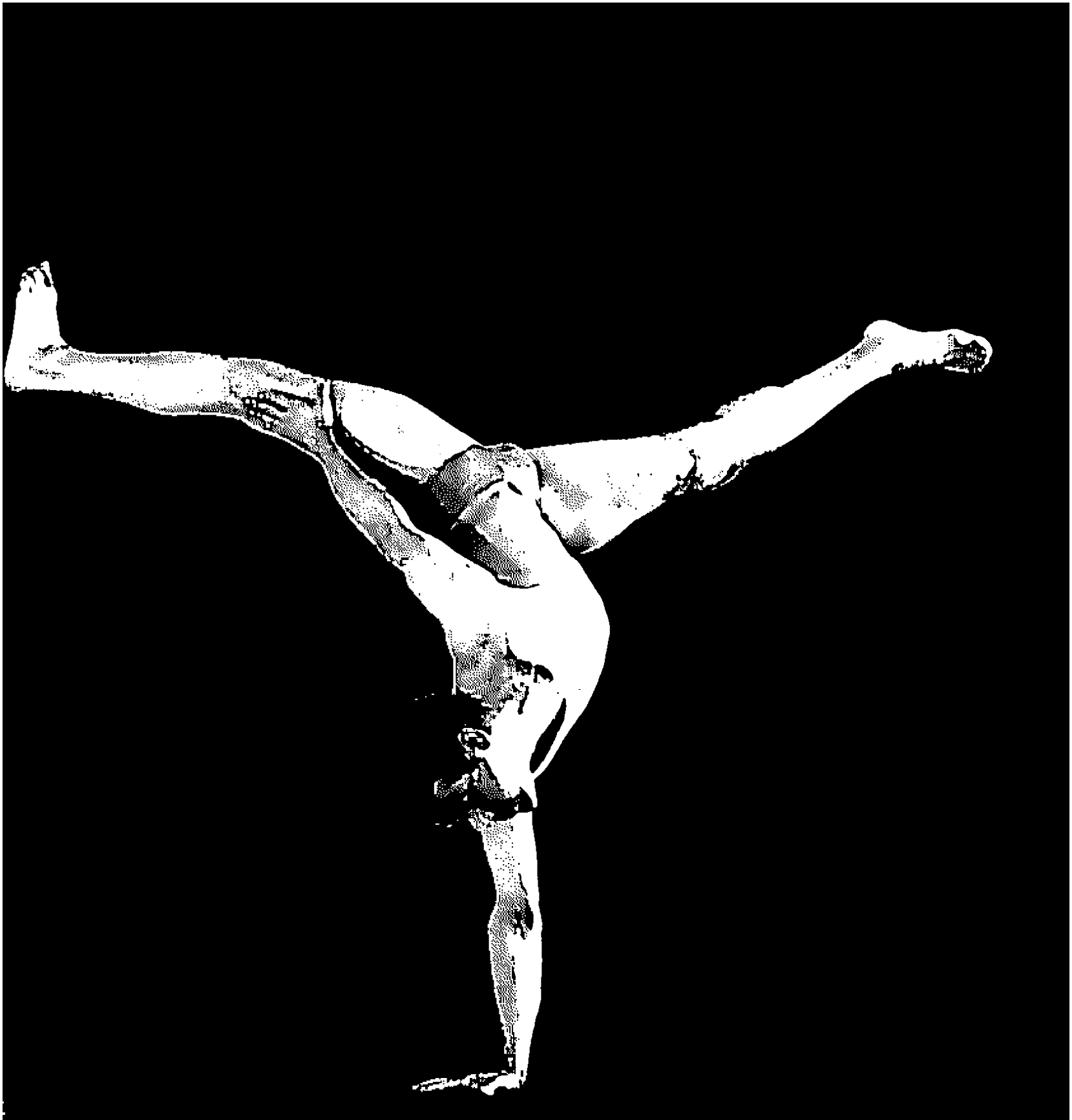
Adho-Mukha-Vrkshasana

Downward Facing Tree Pose / Hand Stand (Variation)



Adho-Mukha-Vrkshasana

Downward Facing Tree Pose / Hand Stand (Variation)

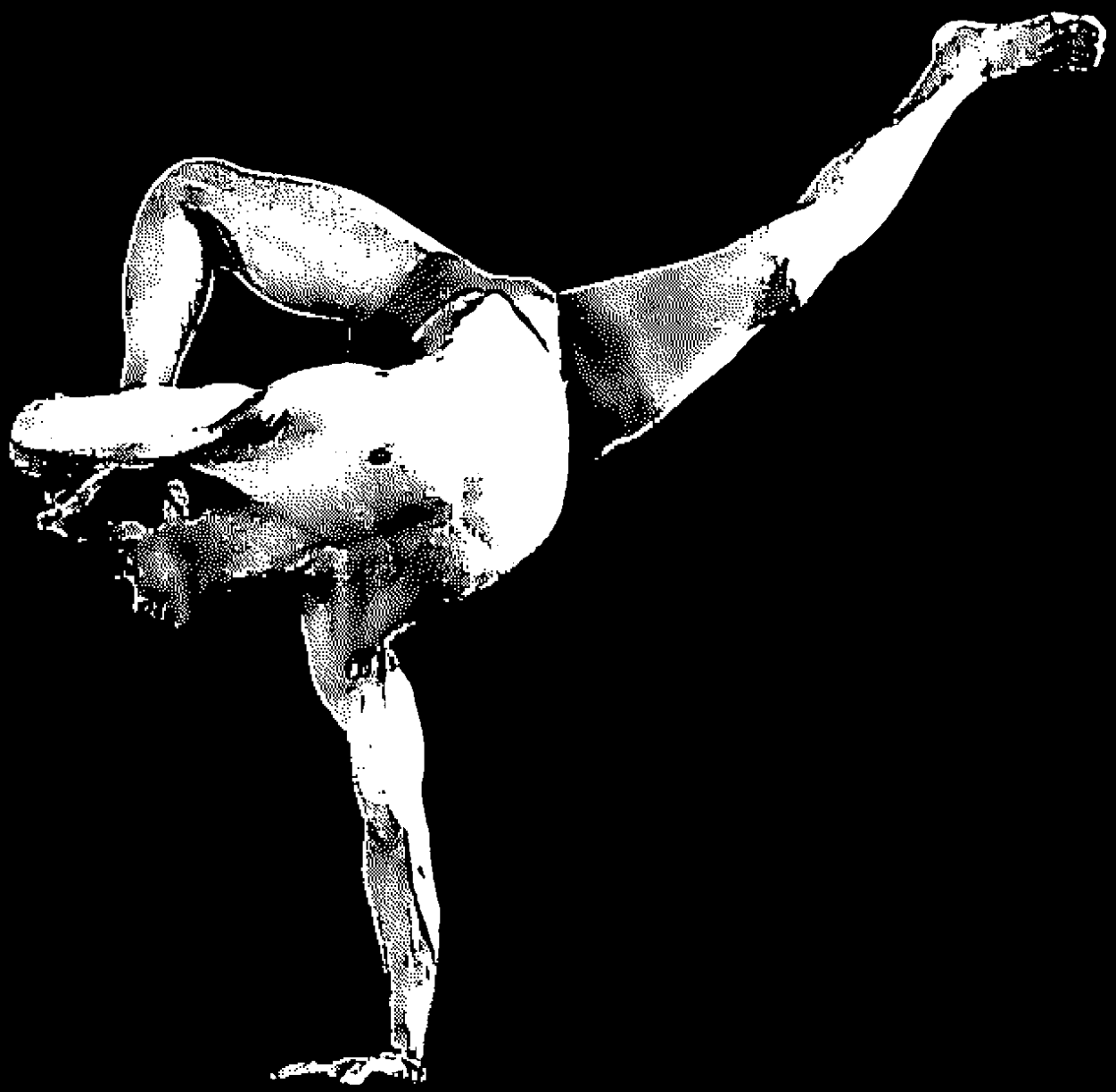


Eka-Hasta-Adho-Mukha-Vrkshasana

One-Hand Hand Stand Pose

Eka-Hasta-Padma-Adho-Mukha-Vrkshasana

One-Hand Lotus Hand Stand Pose



Shirsha-Pada-Eka-Hasta-Adho-Mukha-Vrkshasana

Foot to Head One-Hand Hand Stand Pose

Vrschikasana

Scorpion Pose (Preparation)

Vrschikasana II

Scorpion Pose

Eka-Pada-Vrschikasana

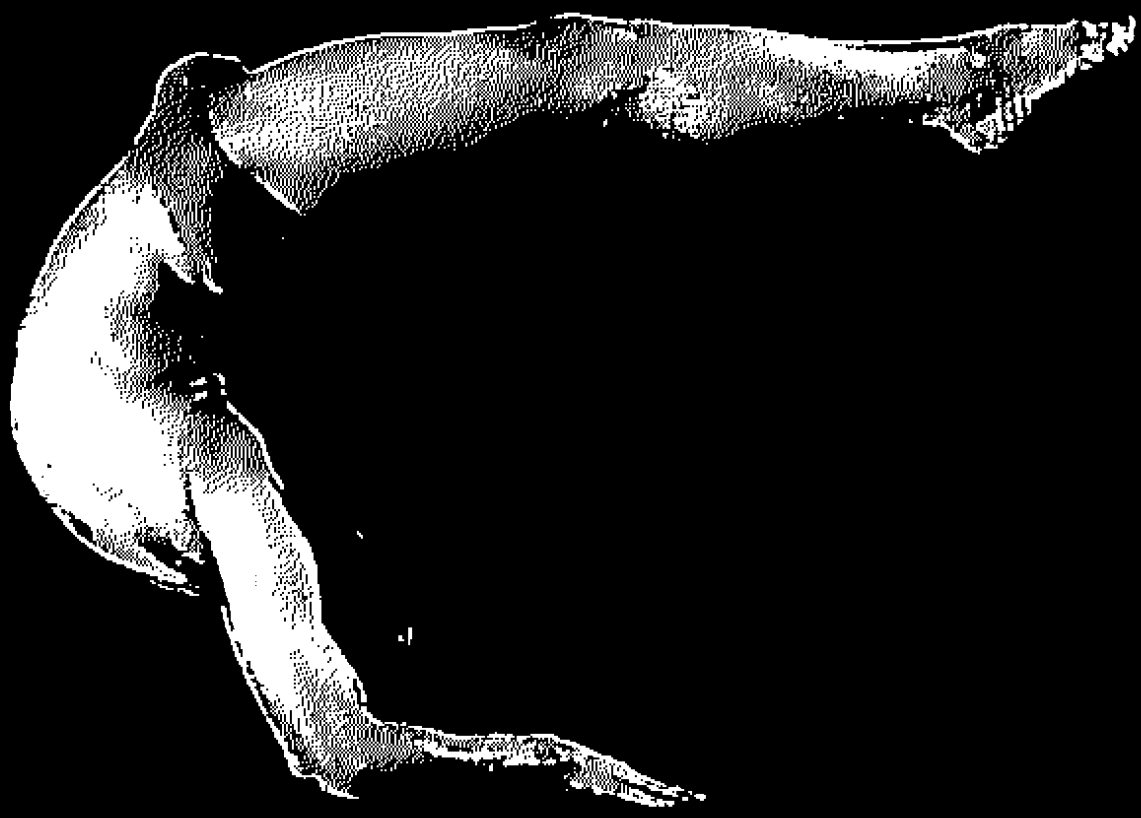
One-Leg Scorpion Pose

Ardha-Vrschikasana

Half Scorpion Pose

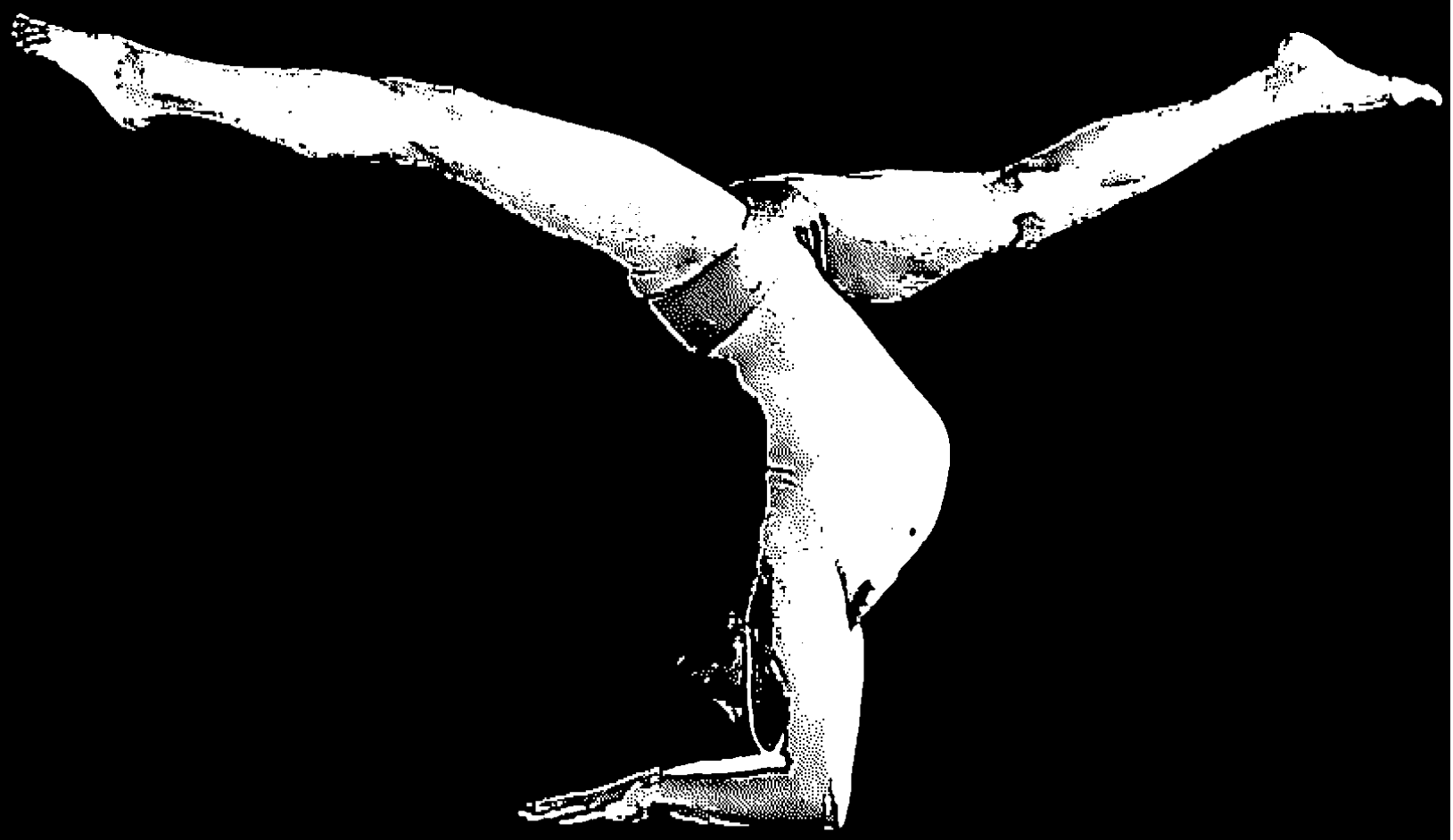
Vrschikasana I

Scorpion Pose



Vrschikasana

Charging Scorpion Pose (Variation)



Vrschikasana

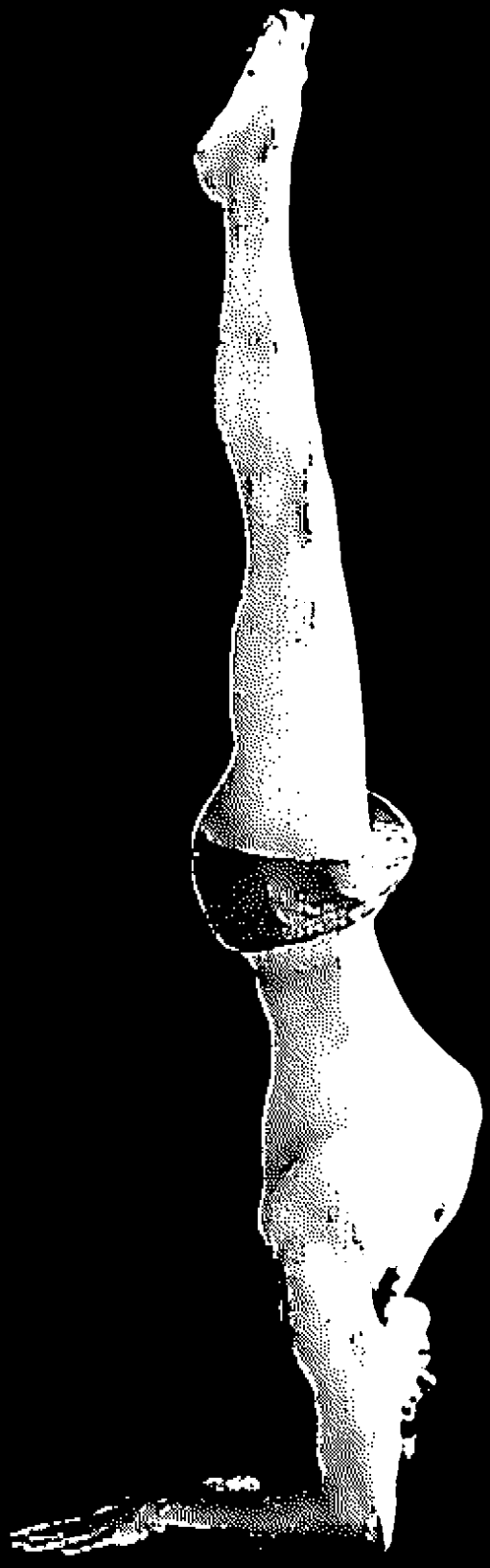
Scorpion Pose (Variation)

Padma-Vrschikasana

Lotus Scorpion Pose (Side View)

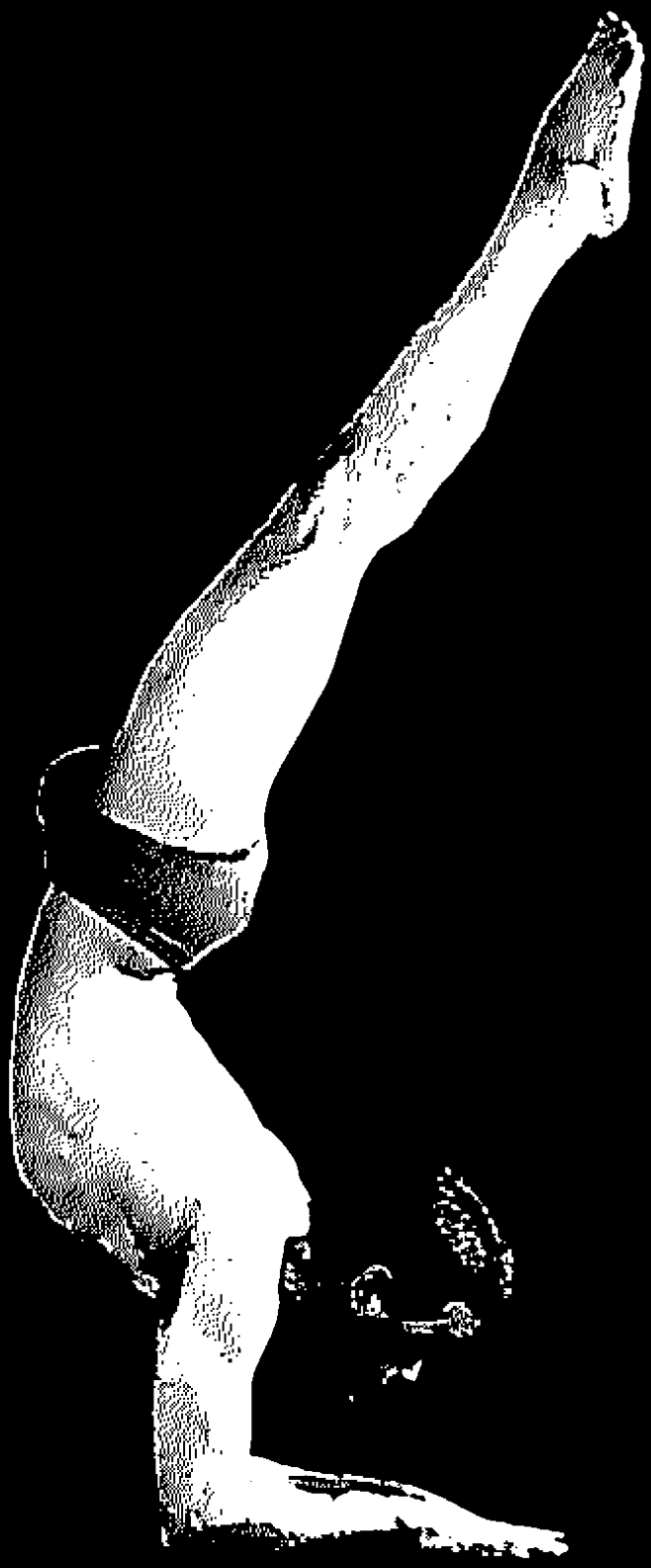
Padma-Vrschikasana

Lotus Scorpion Pose (Front View)



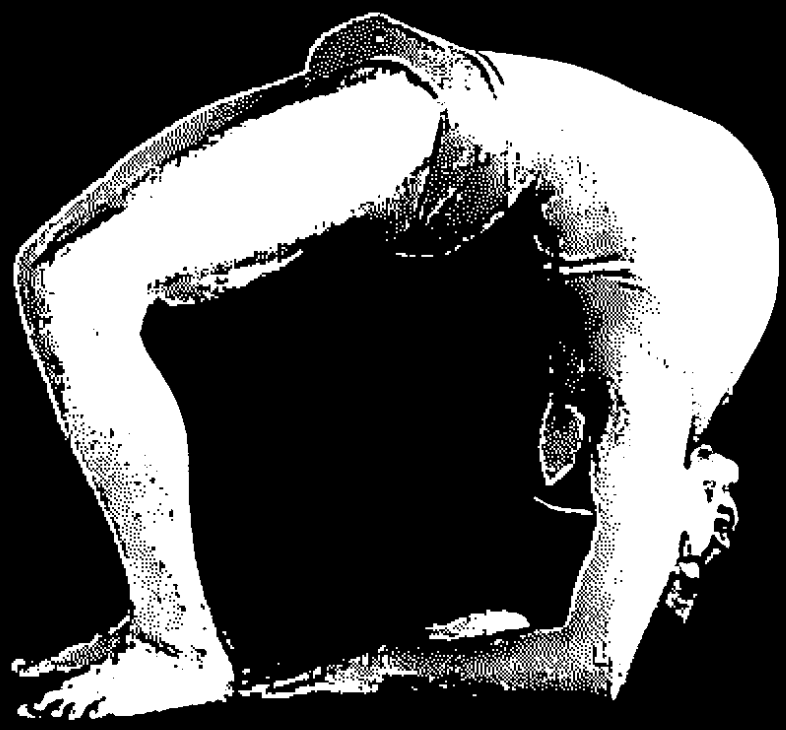
Pincha-Mayurasana

Peacock Feather Pose (Preparation)



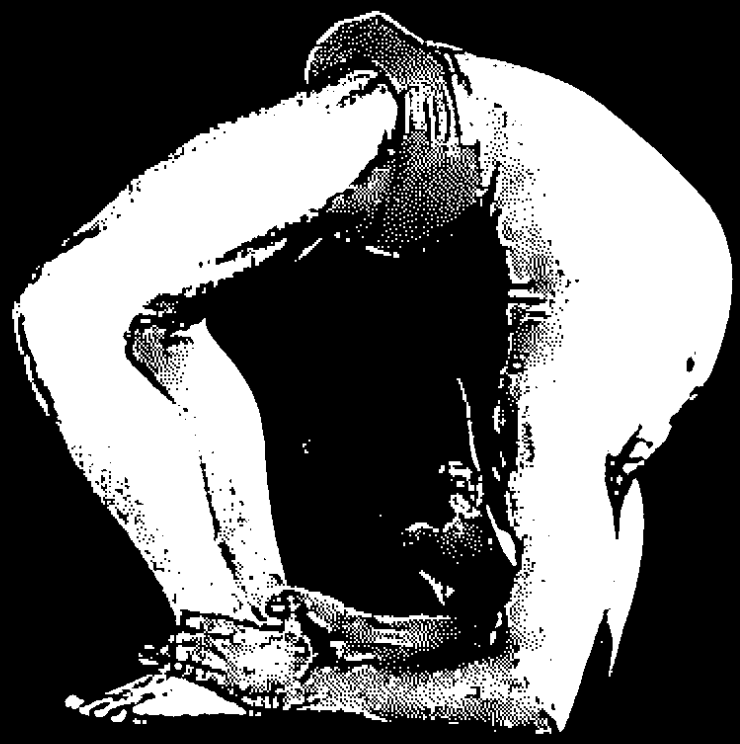
Pincha-Mayurasana

Peacock Feather Pose



Chakra-Bandhasana

Bound Wheel Pose (Preparation)



Chakra-Bandhasana

Bound Wheel Pose

Eka-Pada-Viparita-Dandasana II

One Leg Inverted Staff Pose II

Ardha-Sarvangasana
Half Shoulder Stand Pose

Ardha-Sarvangasana

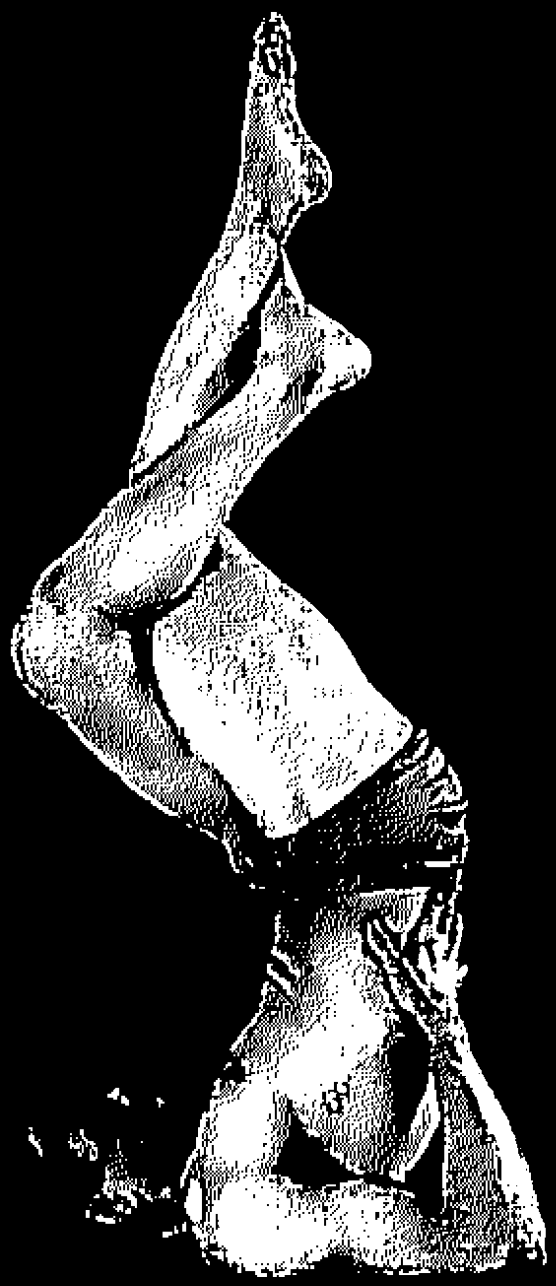
Half Shoulder Stand Pose (Variation)

Sarvangasana
Shoulder Stand Pose

Sarvangasana

Shoulder Stand Pose (Variation)

Sarvangasana
Shoulder Stand Pose (Variation)



Sarvangasana

Shoulder Stand Pose (Variation)

Salamba-Sarvangasana
Supported Shoulder Stand Pose

Niralamba-Sarvangasana I

Unsupported Shoulder Stand Pose I

Niralamba-Sarvangasana II

Unsupported Shoulder Stand Pose II (Preparation)

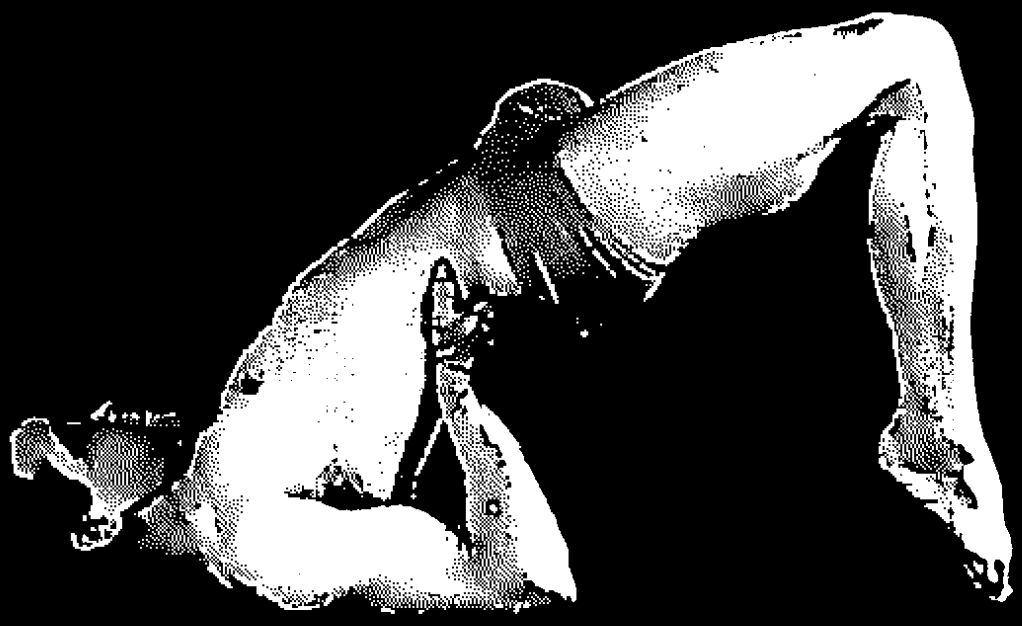
Niralamba-Sarvangasana II

Unsupported Shoulder Stand Pose II

Parshva-Sarvangasana
Side Shoulder Stand Pose

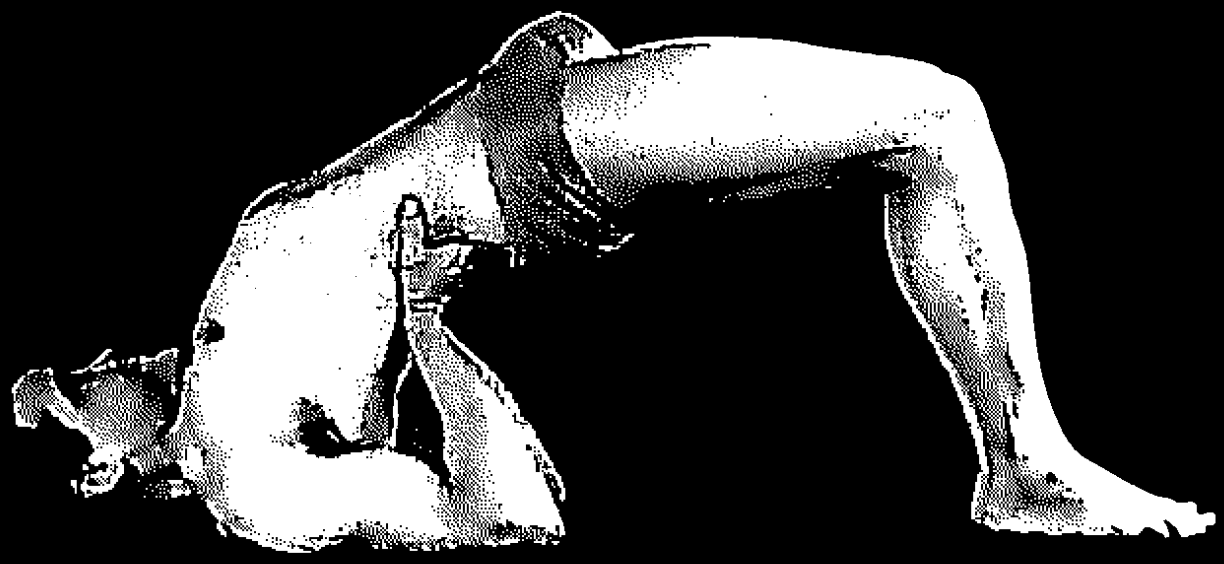
Setu-Bandha-Sarvangasana

Bridge Shoulder Stand Pose (Preparation)



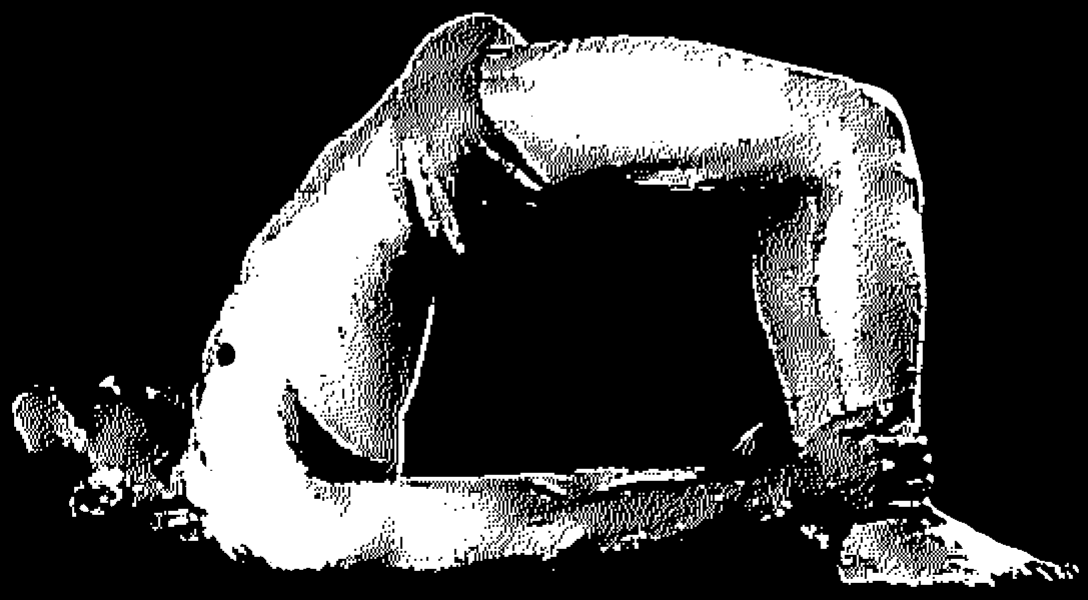
Setu-Bandha-Sarvangasana

Bridge Shoulder Stand Pose (Preparation)



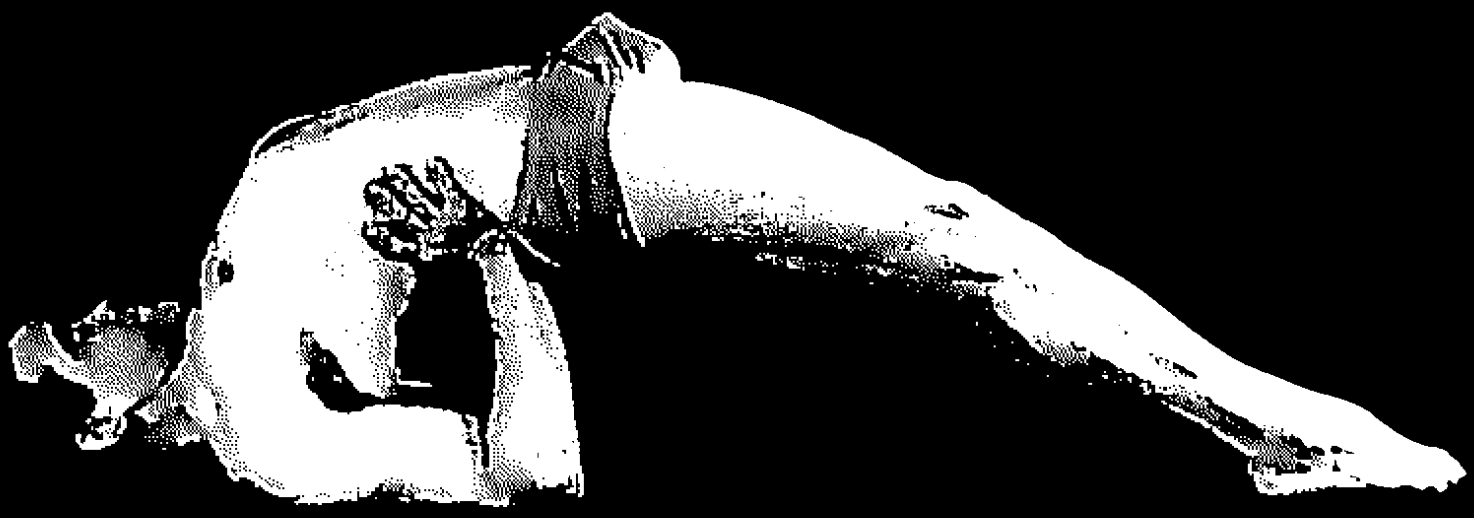
Setu-Bandha-Sarvangasana

Bridge Shoulder Stand Pose (Preparation)



Setu-Bandha-Sarvangasana

Bridge Shoulder Stand Pose (Preparation)



Setu-Bandha-Sarvangasana

Bridge Shoulder Stand Pose

Eka-Pada-Setu-Bandha-Sarvangasana

One-Leg Bridge-Forming Pose

Padma-Sarvangasana

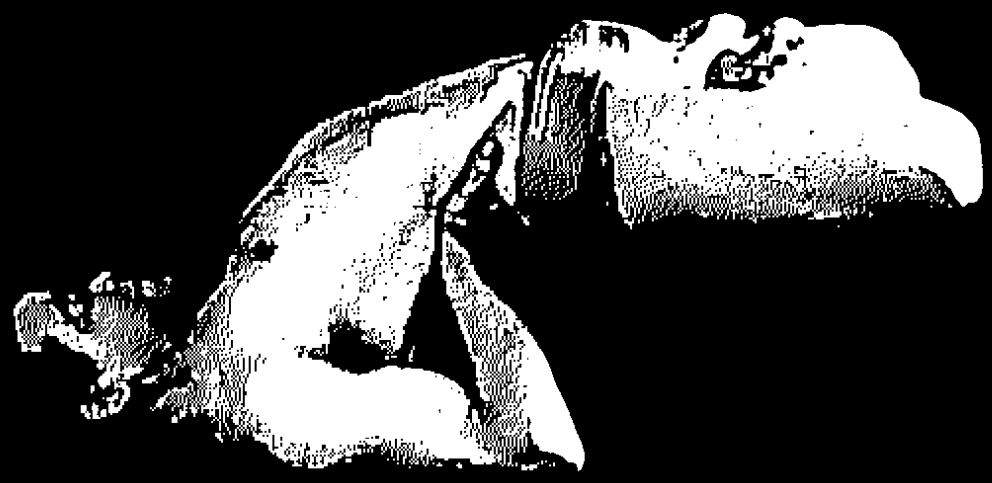
Lotus Shoulder Stand Pose

Padma-Sarvangasana
Lotus Shoulder Stand Pose

Urdhva-Padmasana

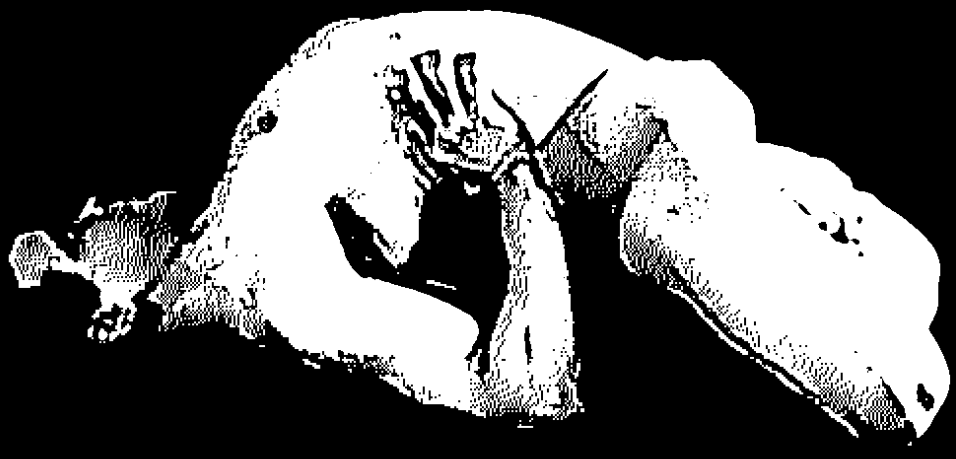
Upward Lotus Pose

Parshva-Padma-Sarvangasana
Side Lotus Shoulder Stand Pose



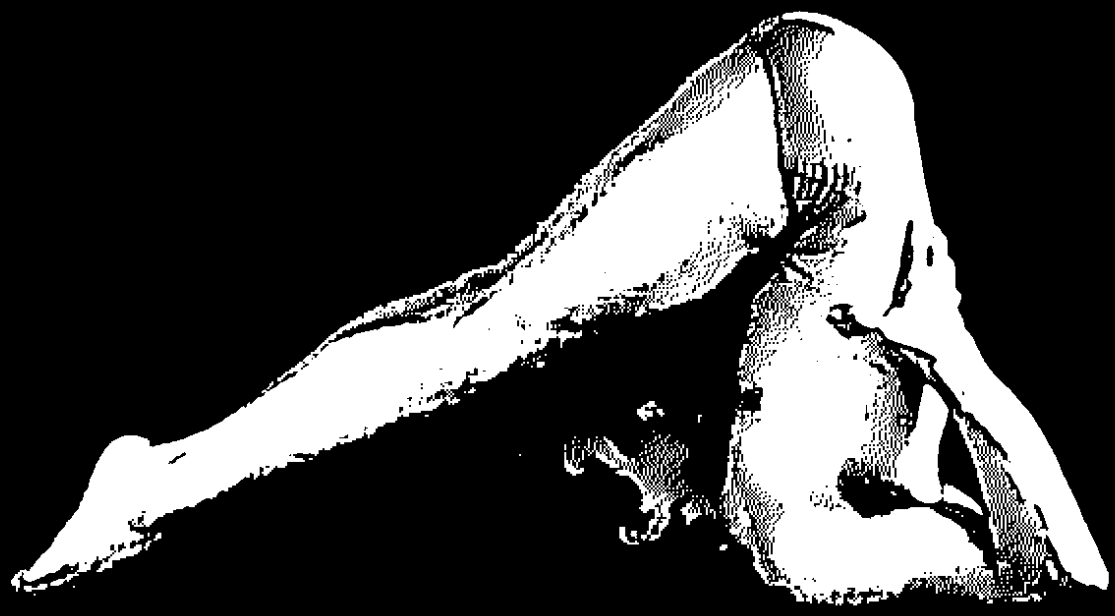
Padma-Mayurasana

Lotus Peacock Pose (Preparation)



Padma-Mayurasana

Lotus Peacock Pose



Halasana

Plough Pose (Preparation)

Halasana

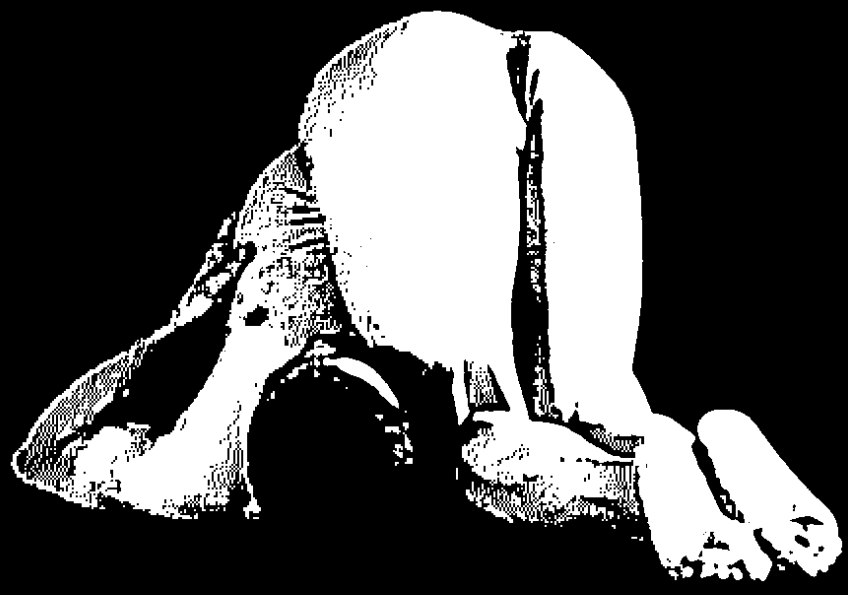
Plough Pose

Halasana

Plough Pose (Variation)

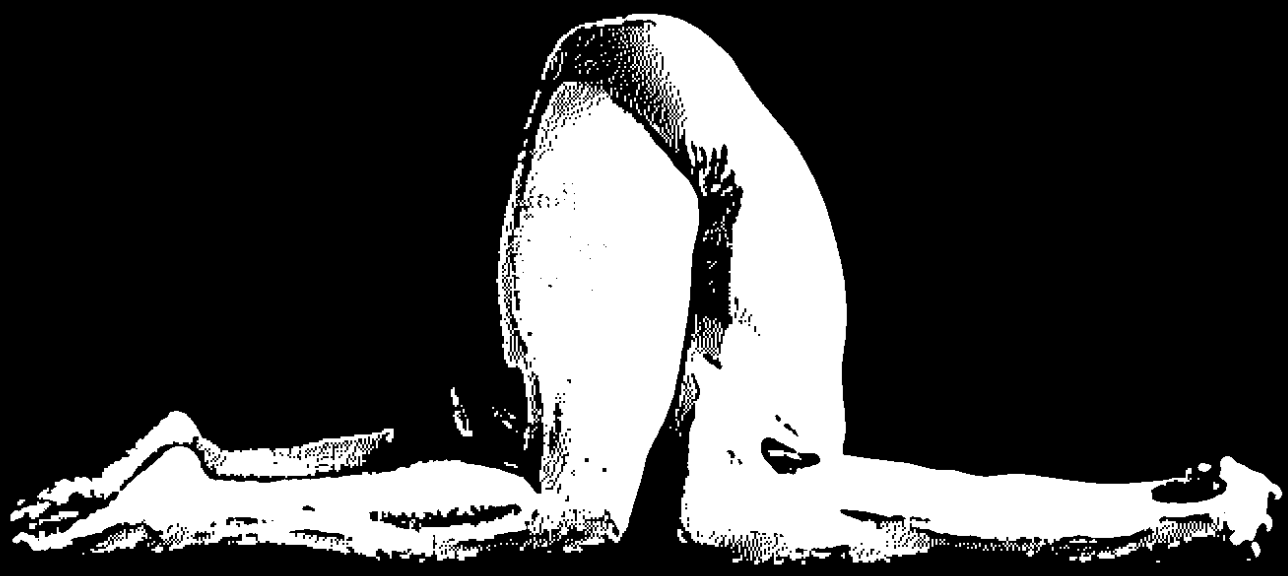
Parshva-Halasana

Side Plough Pose



Parshva-Halasana

Side Plough Pose (Variation)



Karna-Pidasana

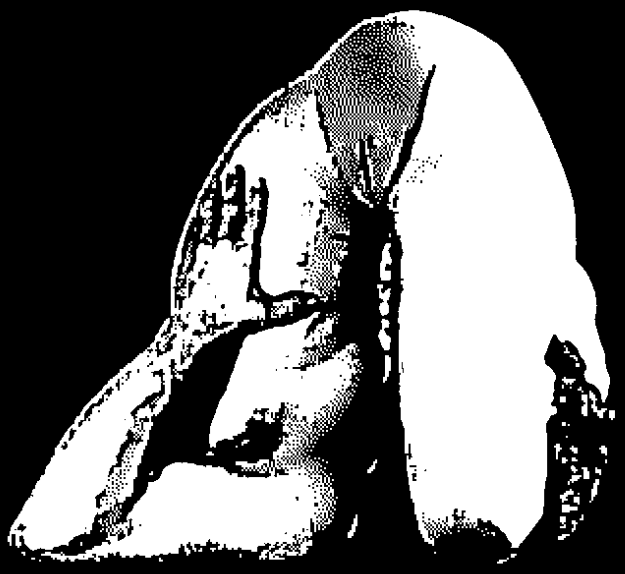
Ear Pressure Pose

Supta-Konasana

Reclining Angle Pose

Supta-Konasana

Reclining Angle Pose (Variation)



Salamba-Pindasana

Supported Embryo Pose

Pindasana

Embryo Pose

Parshva-Pindasana

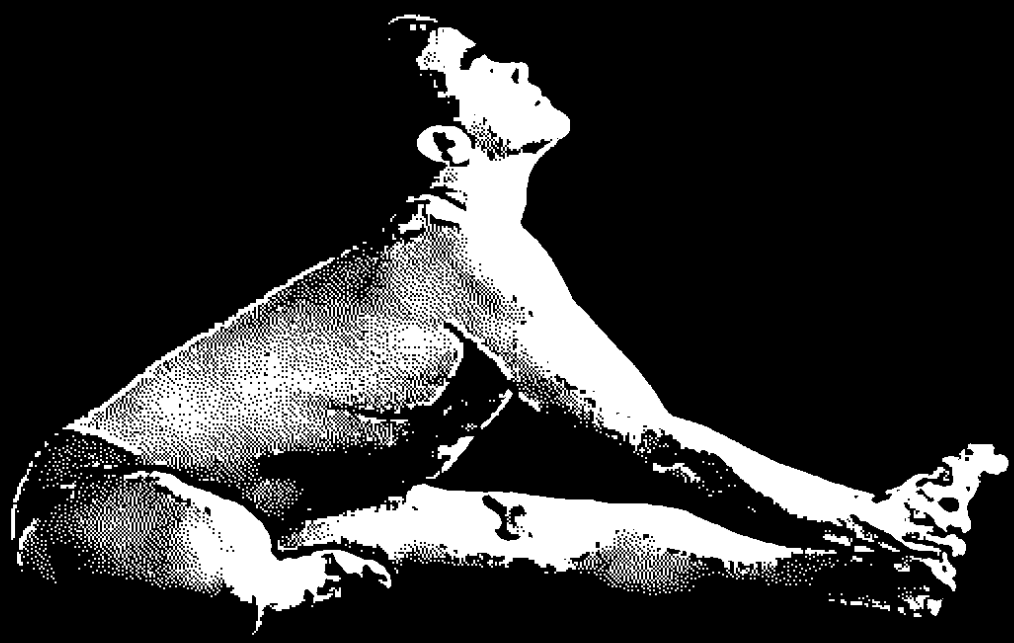
Side Embryo Pose

FLOOR & SUPINE POSES

Many different types of poses have been included in this section: hip openers, seated forward bends, and abdominal lifts, among them.

The poses that open the hips are among the most complex asanas in terms of mechanics, but they may be simplified so that even beginners can perform them and realize great benefits. Hip openers relieve lower back tension and sciatica, ease knee problems, and increase the flow of blood to the pelvic bones and reproductive organs. Likewise, abdominal poses strengthen the lumbar (lower region) of the back and assist in stabilizing the whole body.

Seated leg extensions stretch the hamstrings, buttocks, and the lower back. Once the legs become more flexible, the pelvis can move more easily, thus reducing pressure on the lower back. Deep forward bends like *Paschimatanasana* stimulate internal organs including the spleen, liver, stomach, intestines, and kidneys; in women they also stimulate the ovaries. Forward bends are generally comfortable poses in which the mind becomes quiet and the nervous system cools. They turn the yogi's awareness inward.

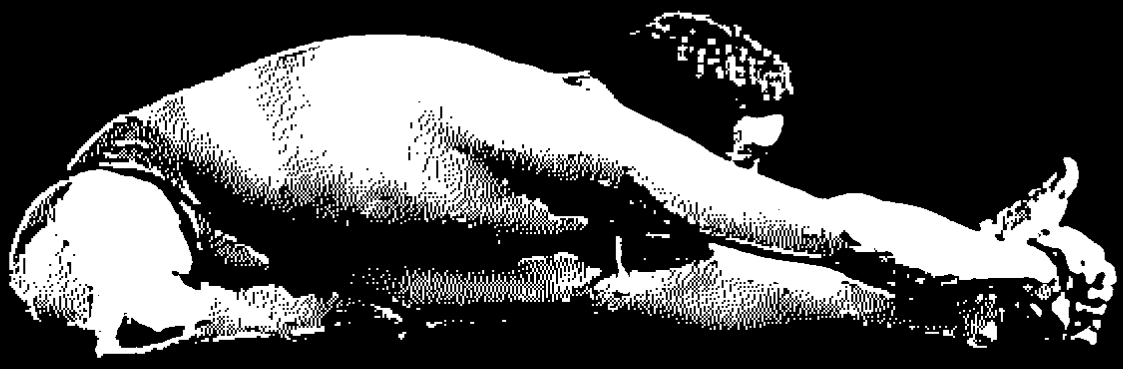


Janu-Shirshasana

Head-to-Knee Pose (Preparation)

Janu-Shirshasana

Head-to-Knee Pose (Preparation)



Janu-Shirshasana

Head-to-Knee Pose

Janu-Shirshasana

Head-to-Knee Pose (Variation)

Janu-Shirshasana

Head-to-Knee Pose (Variation)

Chalanasana

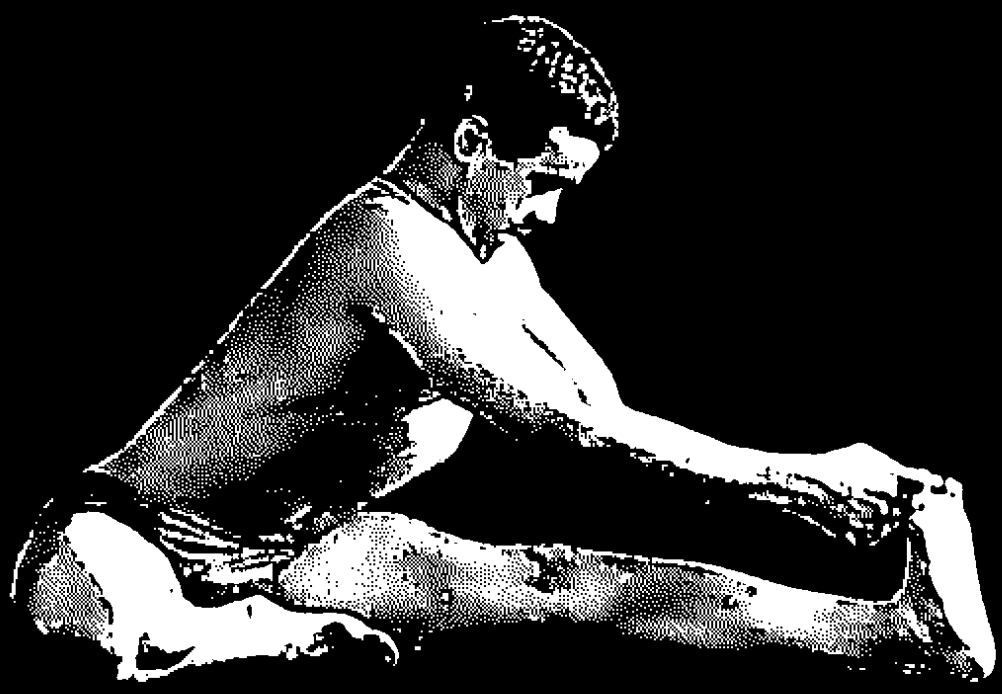
Churning Pose

Parivrtta-Janu-Shirshasana

Revolving Head-to-Knee Pose

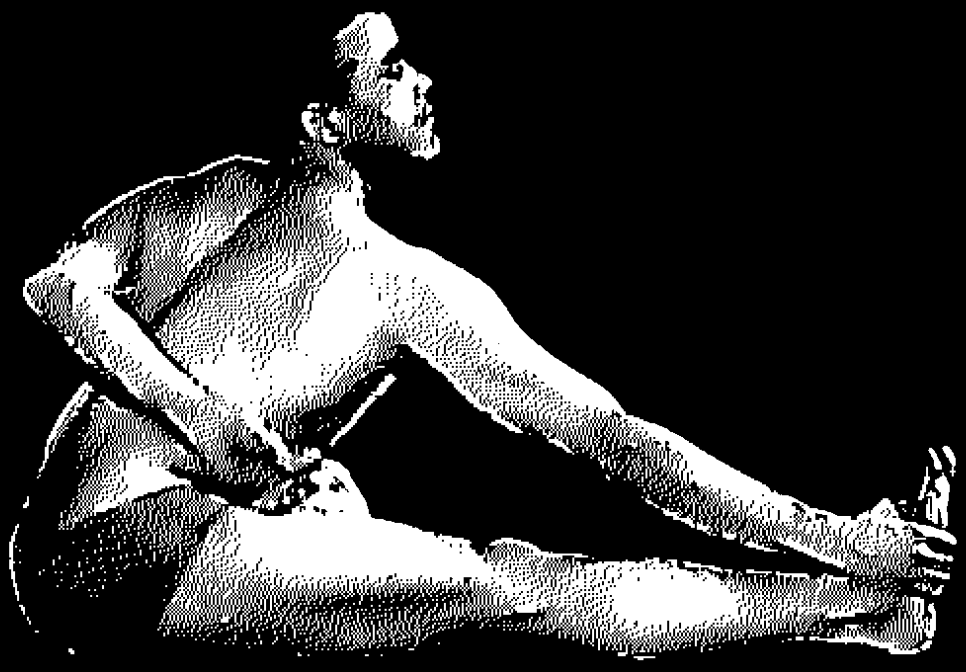
Parivrtta-Janu-Shirshasana

Revolving Head-to-Knee Pose (Variation)



Maha Mudra

Powerful Seal



Ardha-Baddha-Padma-Paschimatanasana

Half-Bound Lotus Back Stretch Pose (Preparation)

Ardha-Baddha-Padma-Paschimatanasana

Half-Bound Lotus Back Stretch Pose

Tryanga-Mukhaikapada-Paschimatanasana

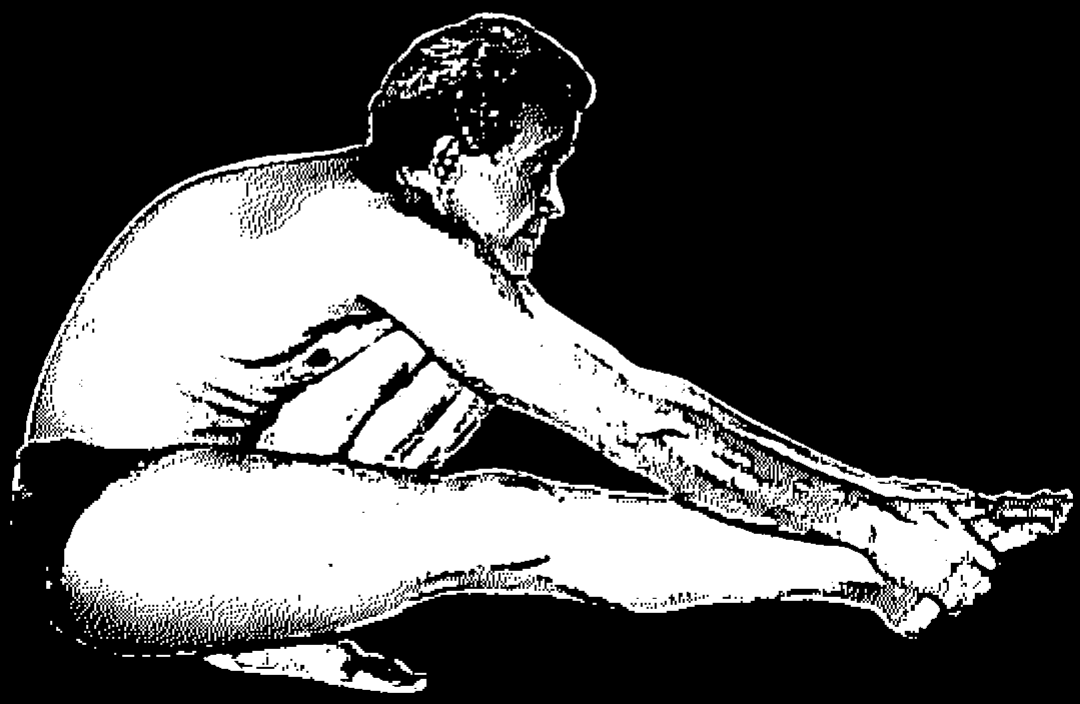
Three-Limbed Facing One-Foot Back Stretch Pose

Marichyasana I

Pose of the Sage Marichi I (Preparation)

Marichyasana I

Pose of the Sage Marichi I

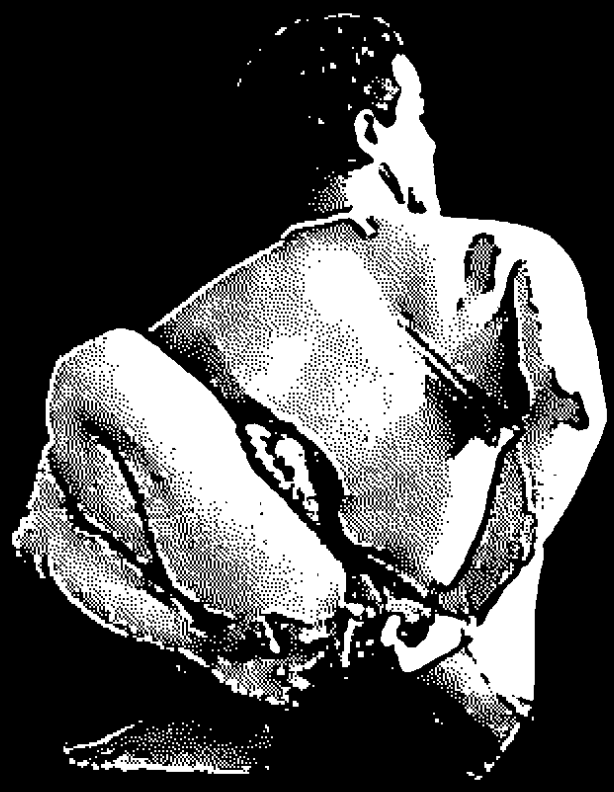


Marichyasana

Pose of the Sage Marichi (Variation)

Marichyasana II

Pose of the Sage Marichi II (Preparation, Front View)



Marichyasana II

Pose of the Sage Marichi II (Preparation, Rear View)

Marichyasana II

Pose of the Sage Marichi II

Paschimatanasana

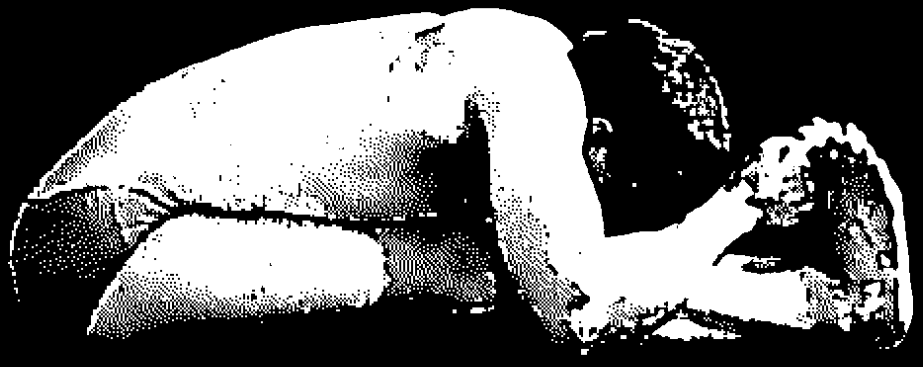
Back Stretch Pose (Preparation)

Paschimatanasana

Back Stretch Pose

Paschimatanasana

Back Stretch Pose



Paschimatanasana

Back Stretch Pose

Paschimatanasana

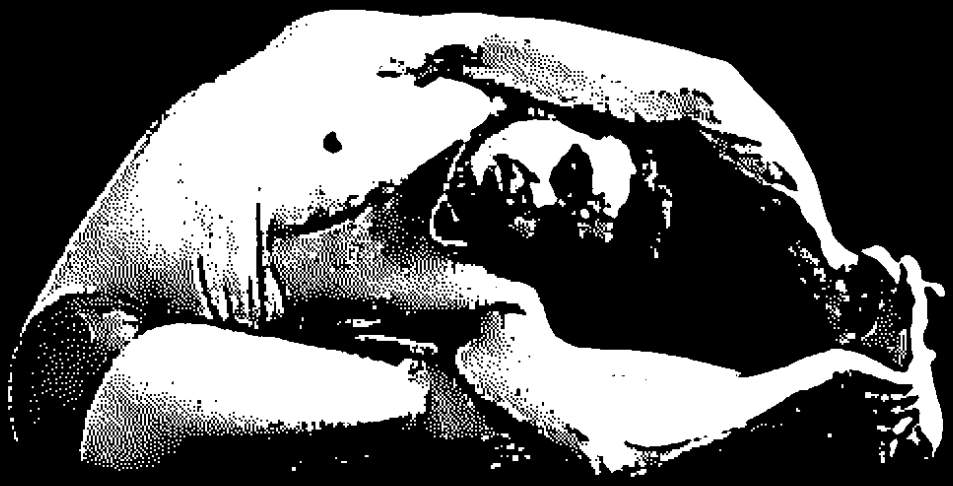
Back Stretch Pose

Paschimatanasana

Back Stretch Pose

Paschimatanasana

Back Stretch Pose



Parivrtta-Paschimatanasana

Revolving Back Stretch Pose

Parivrtta-Paschimatanasana

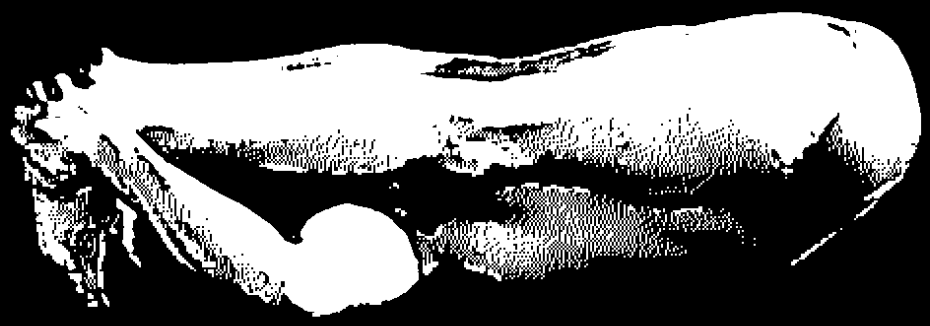
Revolving Back Stretch Pose (Variation)

Skandasana

Pose of the Lord Skanda

Urdhva-Mukha-Paschimatanasana II

Upward Facing Back Stretch Pose II (Preparation)

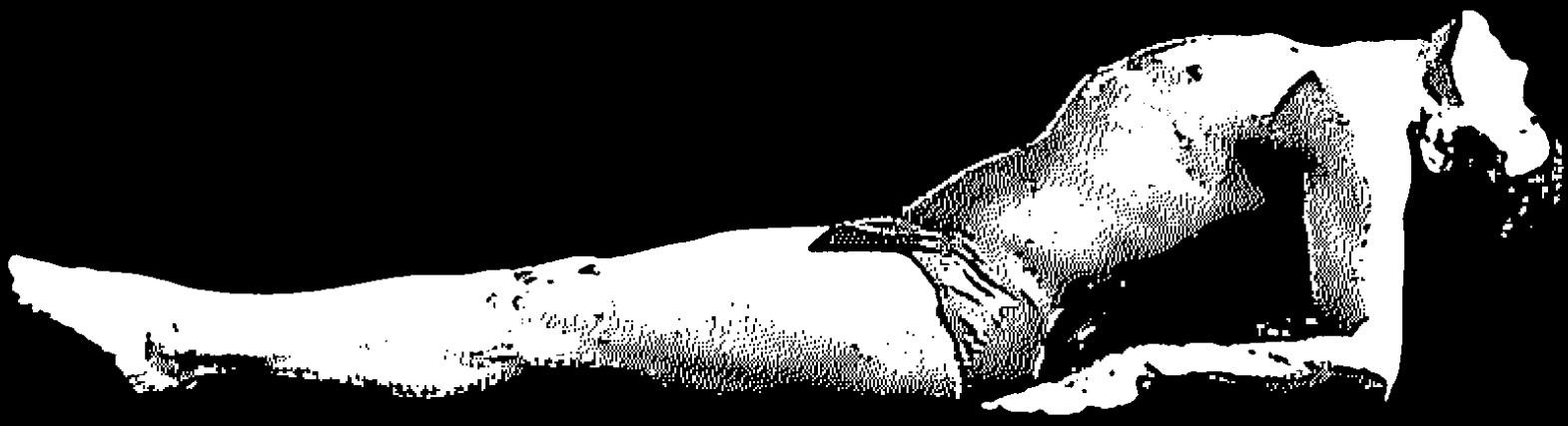


Urdhva-Mukha-Paschimatanasana II

Upward Facing Back Stretch Pose II

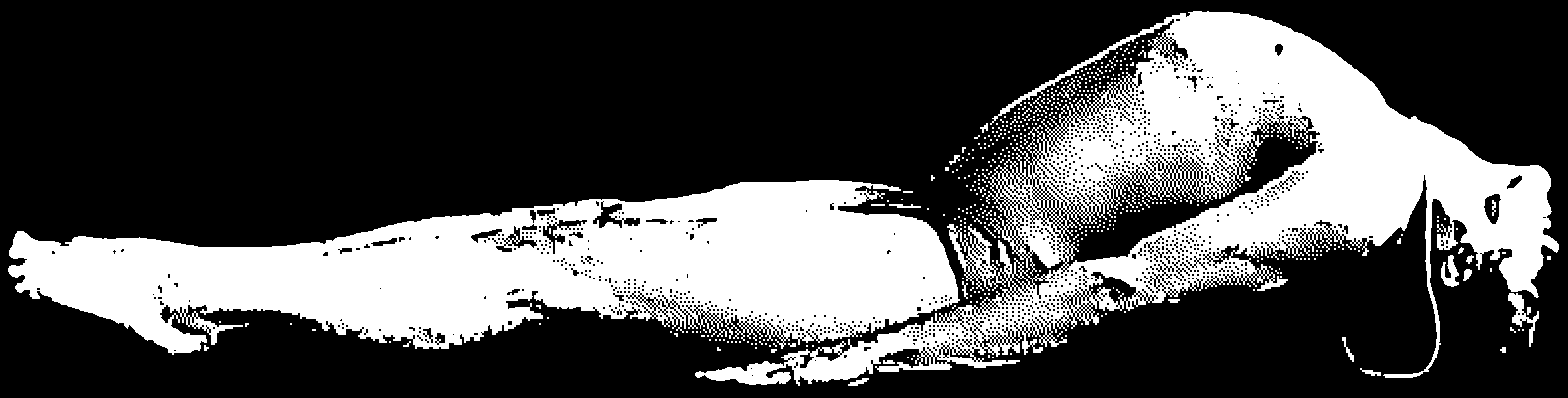
Purvatanasana

Front Stretch Pose



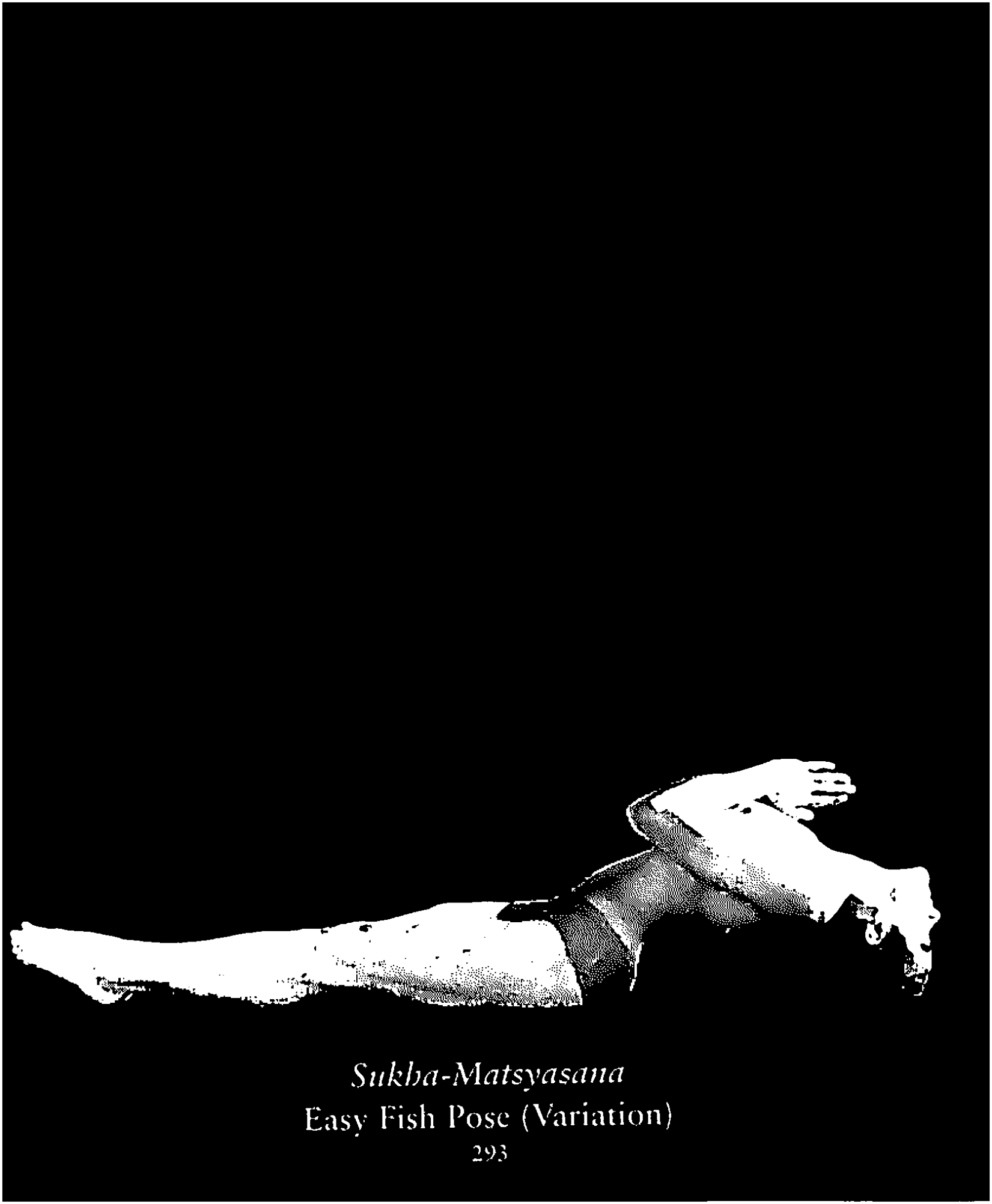
Sukha-Matsyasana

Easy Fish Pose (Preparation)



Sukha-Matsyasana

Easy Fish Pose



Sukha-Matsyasana

Easy Fish Pose (Variation)

Ardha-Matsyasana

Half Fish Pose

Matsyasana

Fish Pose

Matsyasana

Fish Pose (Variation)

Matsyasana

Fish Pose (Variation)

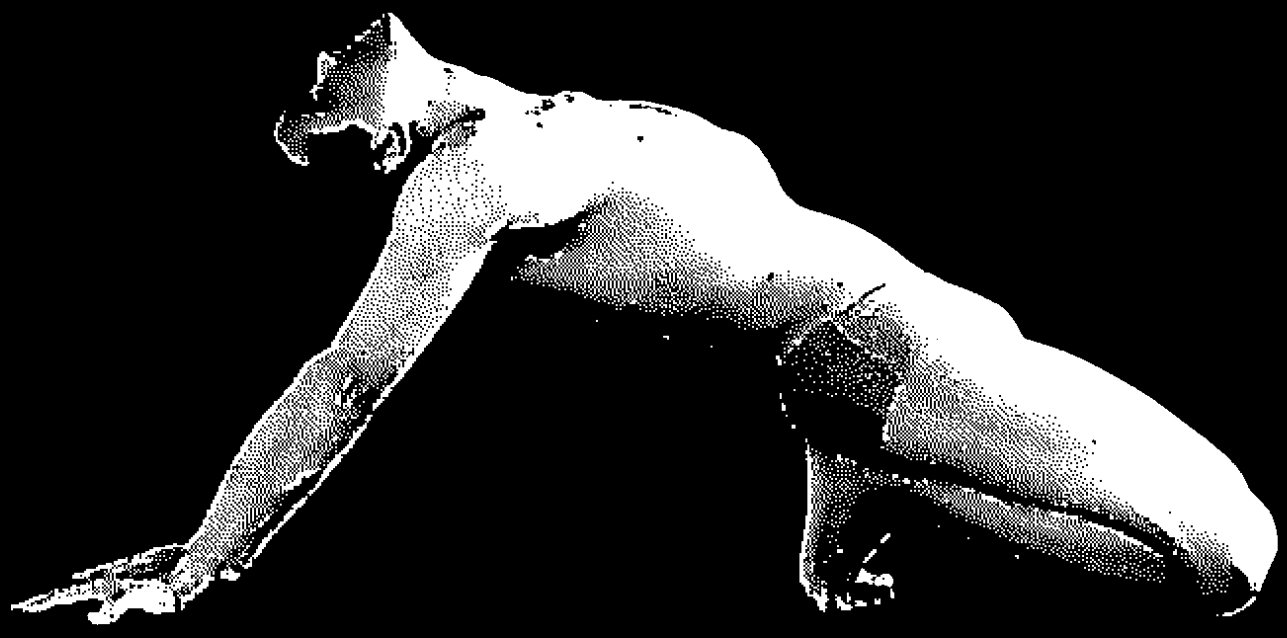
Baddha Matsyasana
Bound Fish Pose

Urdhva-Matsyasana

Raised Fish Pose

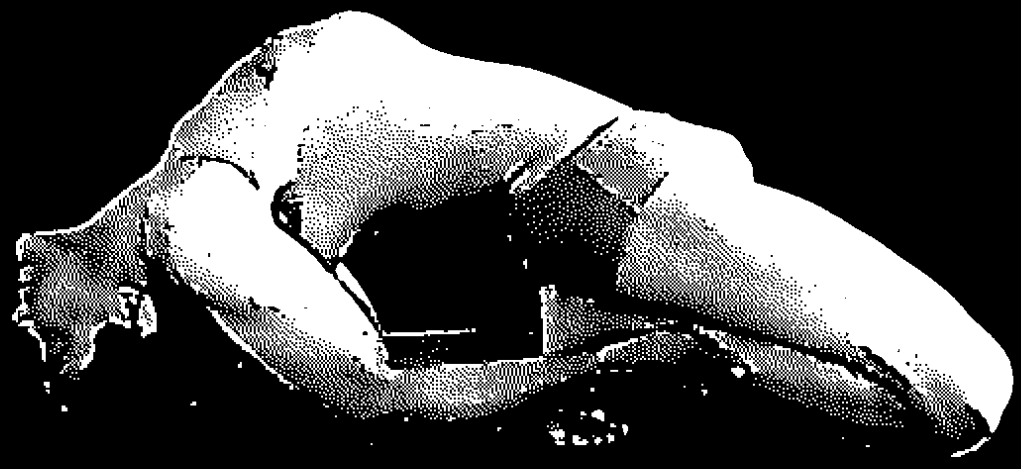
Uttana-Padasana

Extended Leg Pose



Prapada-Paryankasana

Tiptoe Couch Pose (Preparation)



Prapada-Paryankasana

Tiptoe Couch Pose

Supta-Virasana

Sleeping Hero Pose (Preparation)

Supta-Virasana

Sleeping Hero Pose

Supta-Virasana

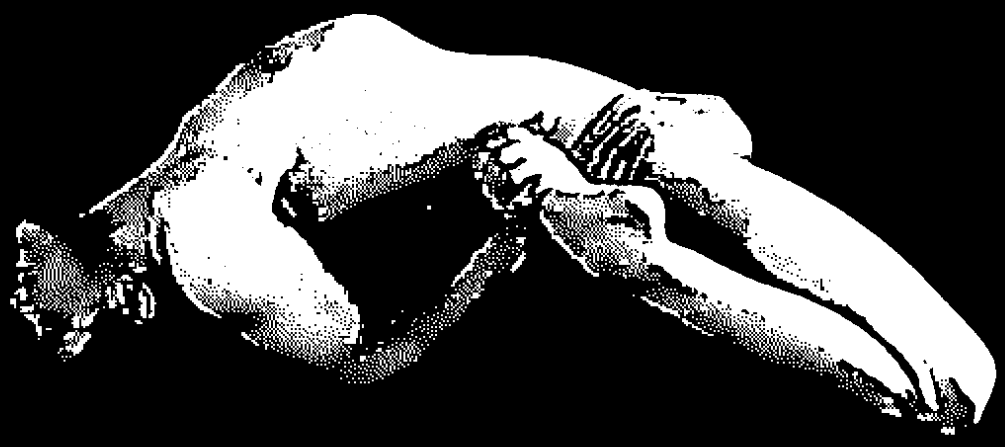
Sleeping Hero Pose (Variation)

Supta-Virasana

Sleeping Hero Pose (Variation)

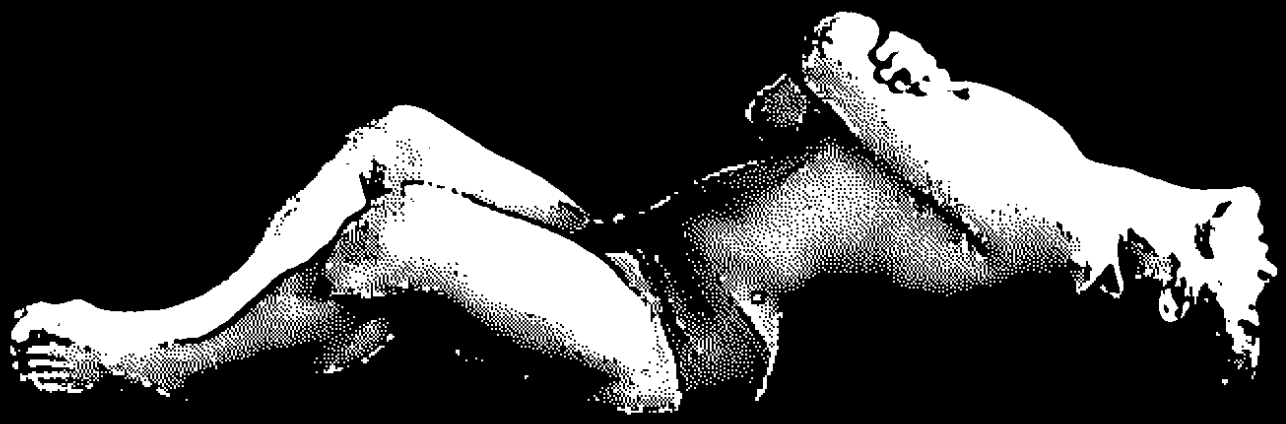
Supta-Bhekasana

Reclining Frog Pose (Preparation)



Supta-Bhekasana

Reclining Frog Pose



Setu-Bandhasana

Bridge-Forming Pose (Preparation)

Setu-Bandhasana

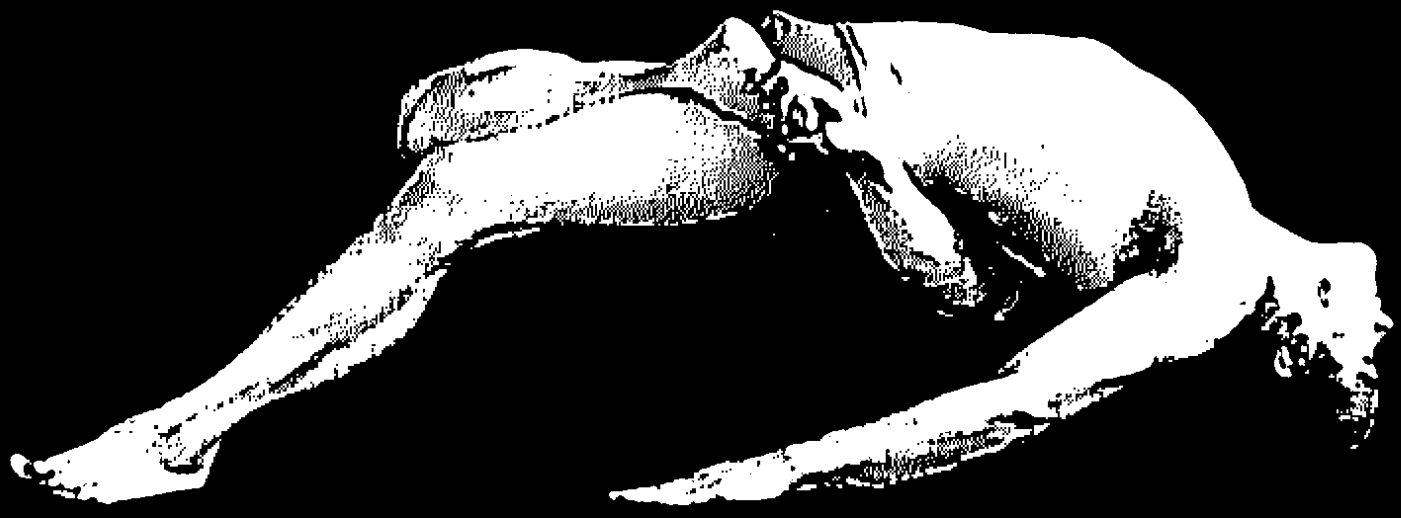
Bridge-Forming Pose

Setu-Bandhasana

Bridge-Forming Pose (Variation)

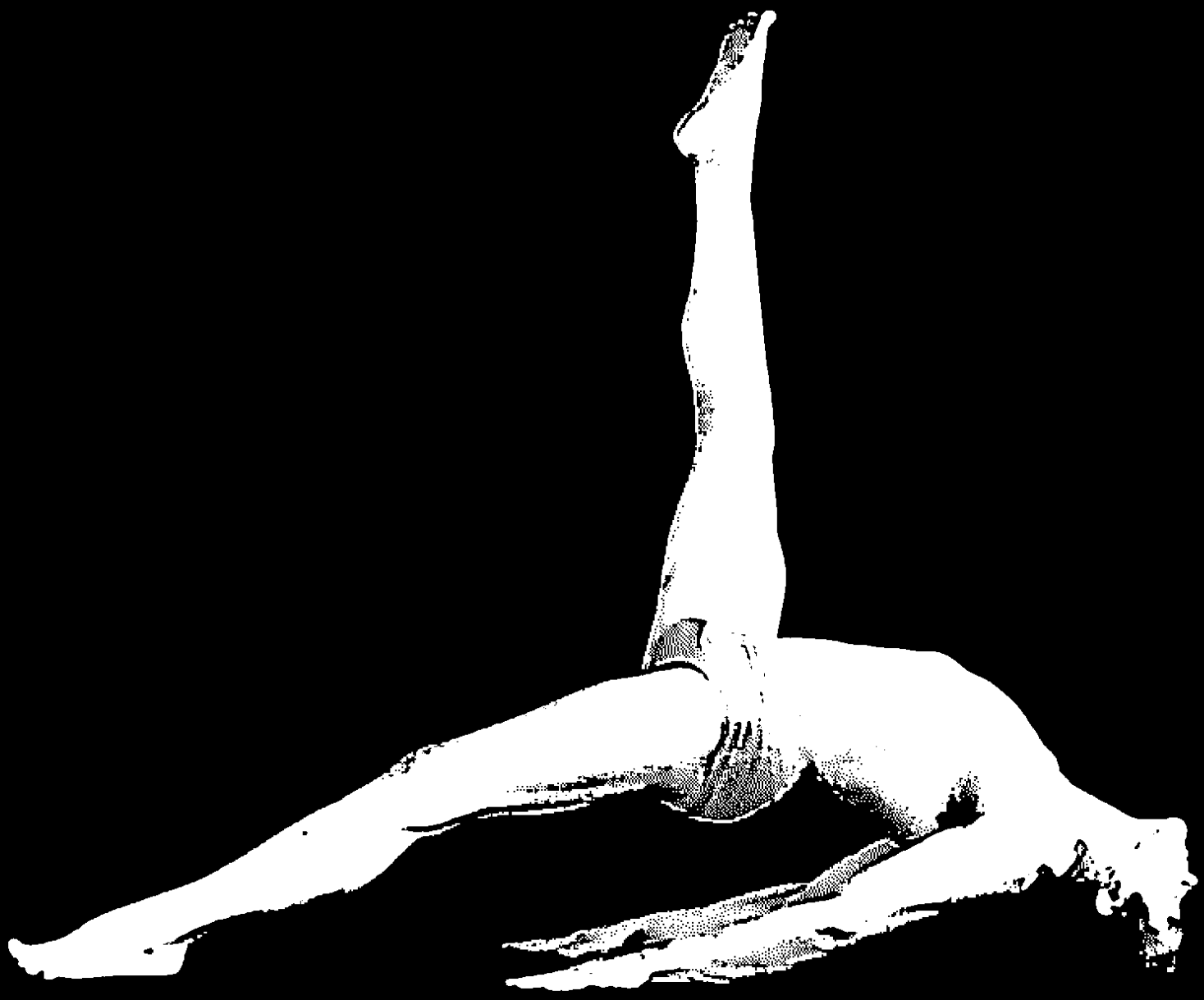
Ardha-Baddha-Padma-Setu-Bandhasana

Half-Bound Lotus Bridge-Forming Pose (Preparation)



Ardha-Baddha-Padma-Setu-Bandhasana

Half-Bound Lotus Bridge-Forming Pose

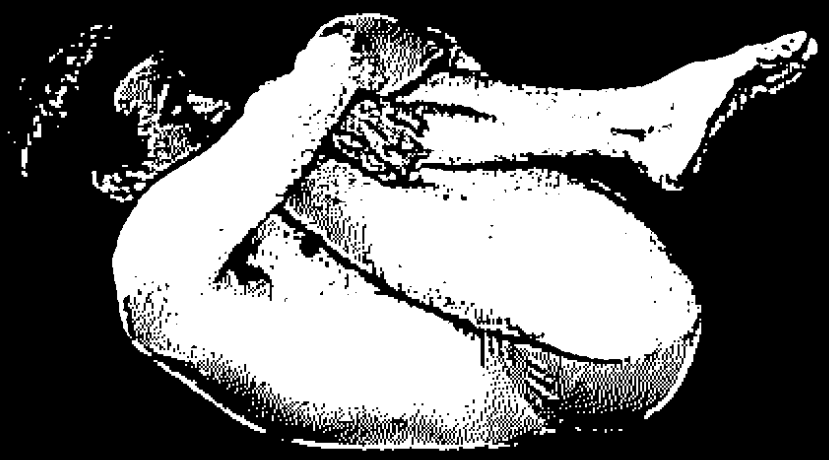


Eka-Pada-Setu-Bandhasana

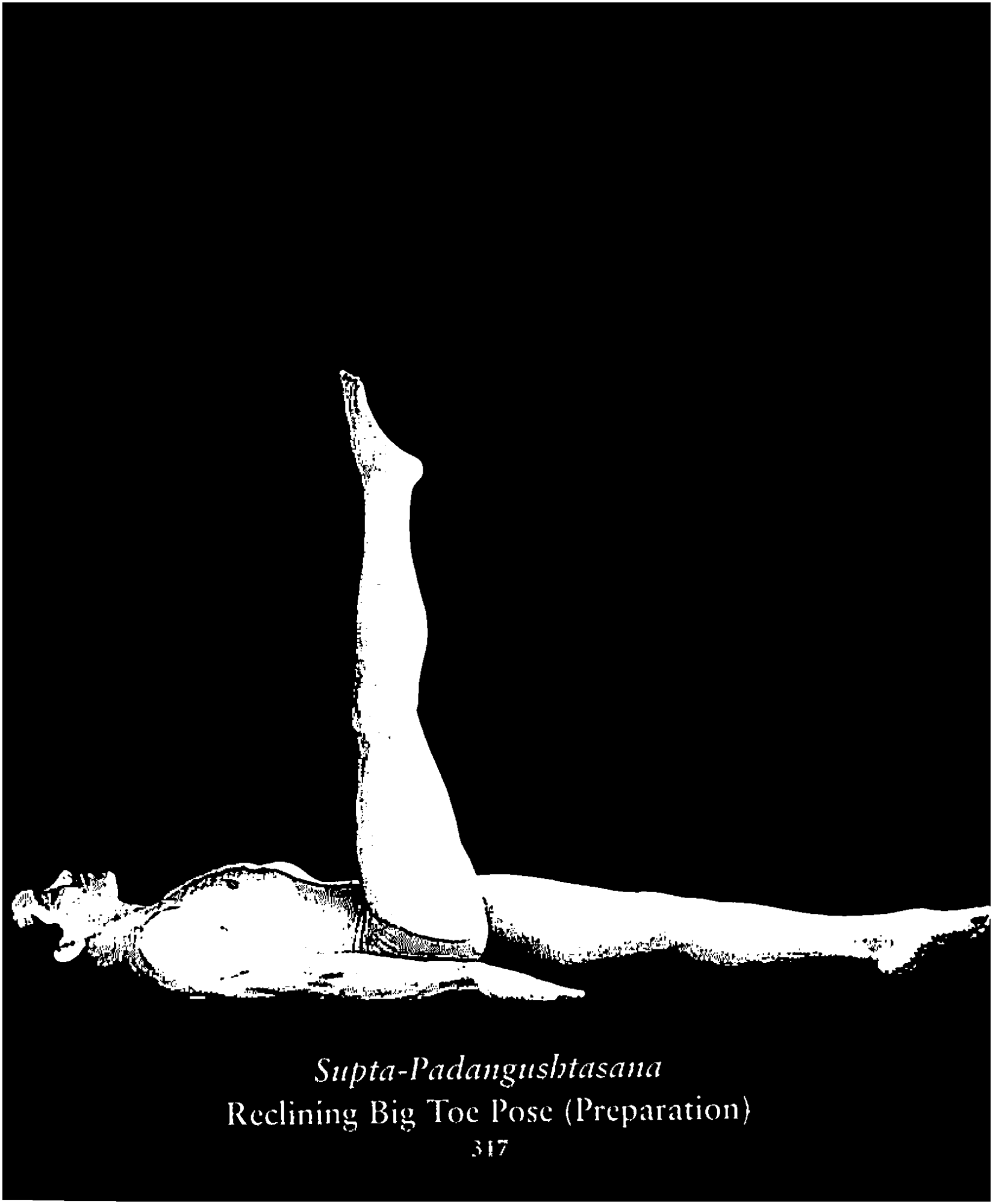
One-Leg Bridge-Forming Pose

Ardha-Vayu-Muktyasana

Half Wind-Relieving Pose

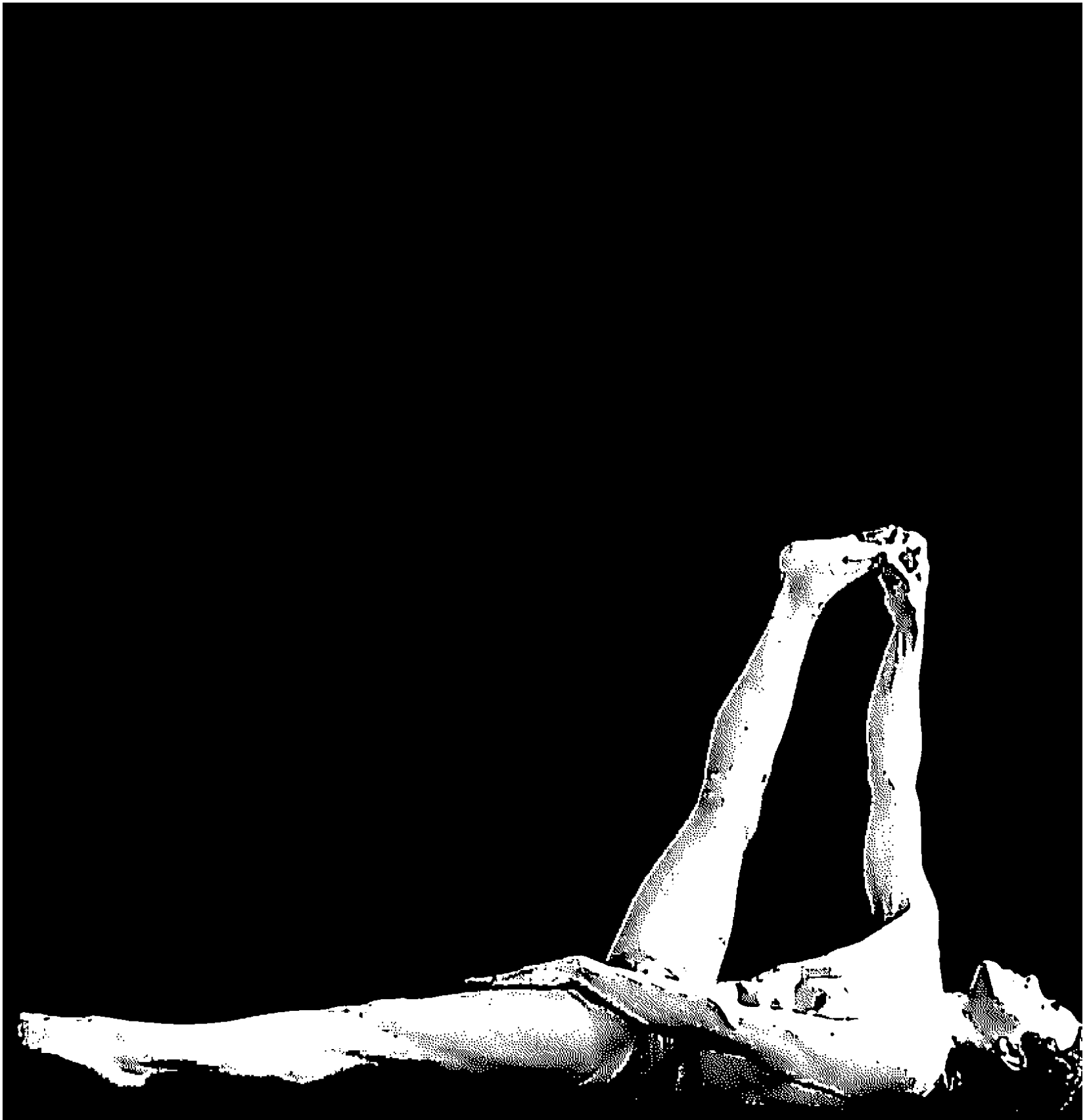


Vayu-Muktyasana
Wind-Relieving Pose



Supta-Padangushtasana

Reclining Big Toe Pose (Preparation)

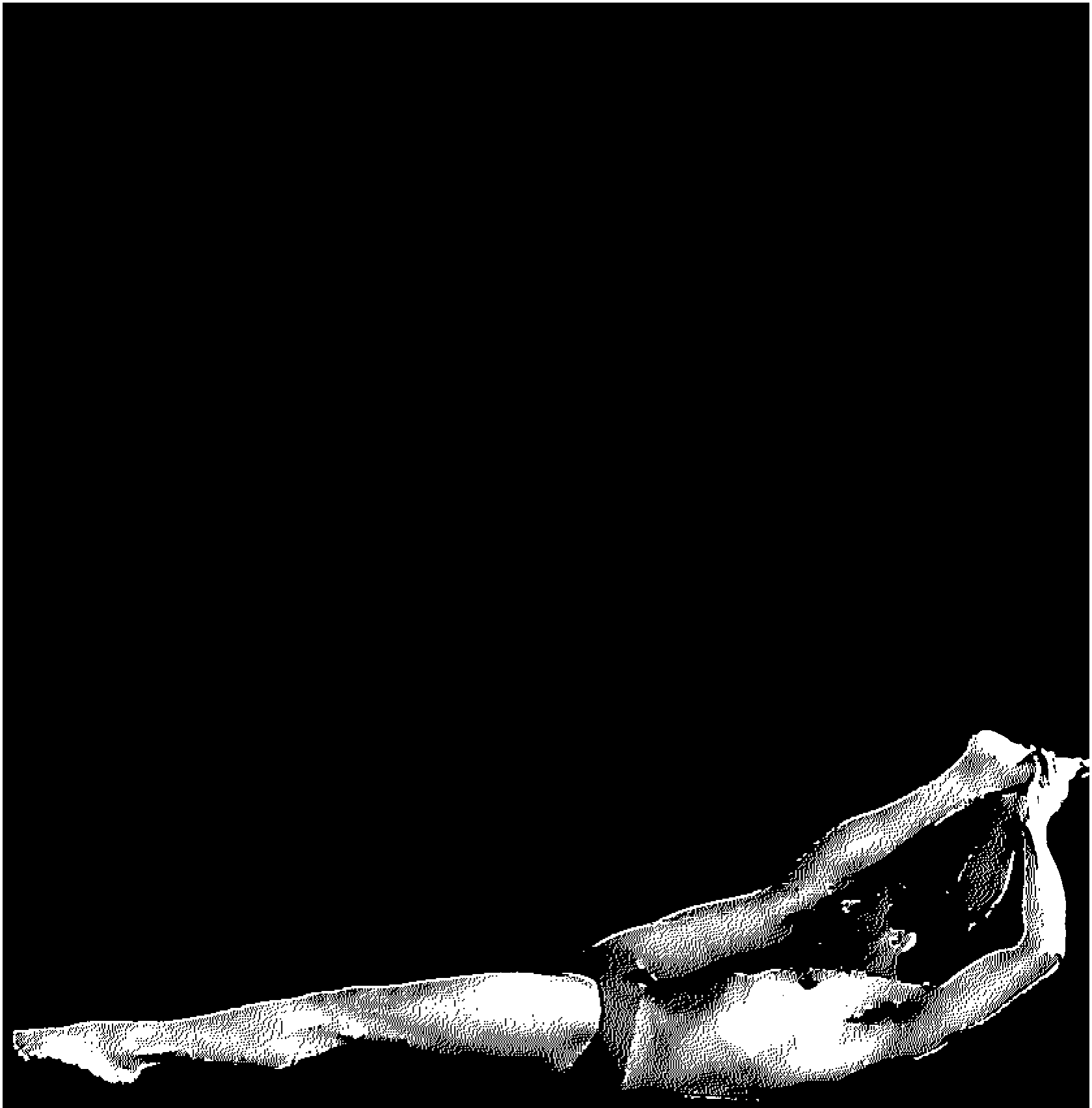


Supta-Padangushtasana

Reclining Big Toe Pose (Preparation)

Supta-Padangushtasana

Reclining Big Toe Pose



Supta-Padangushtasana

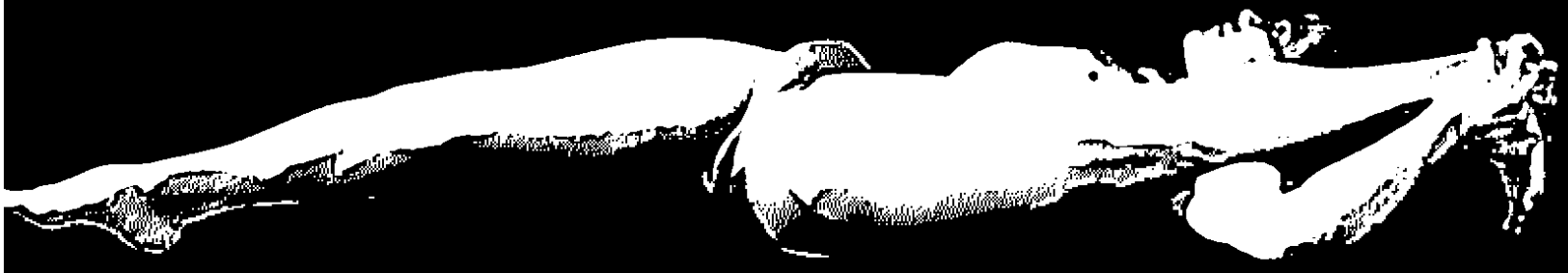
Reclining Big Toe Pose (Variation)

Supta-Padangushtasana

Reclining Big Toe Pose (Variation)

Supta-Padangushtasana

Reclining Big Toe Pose (Variation)

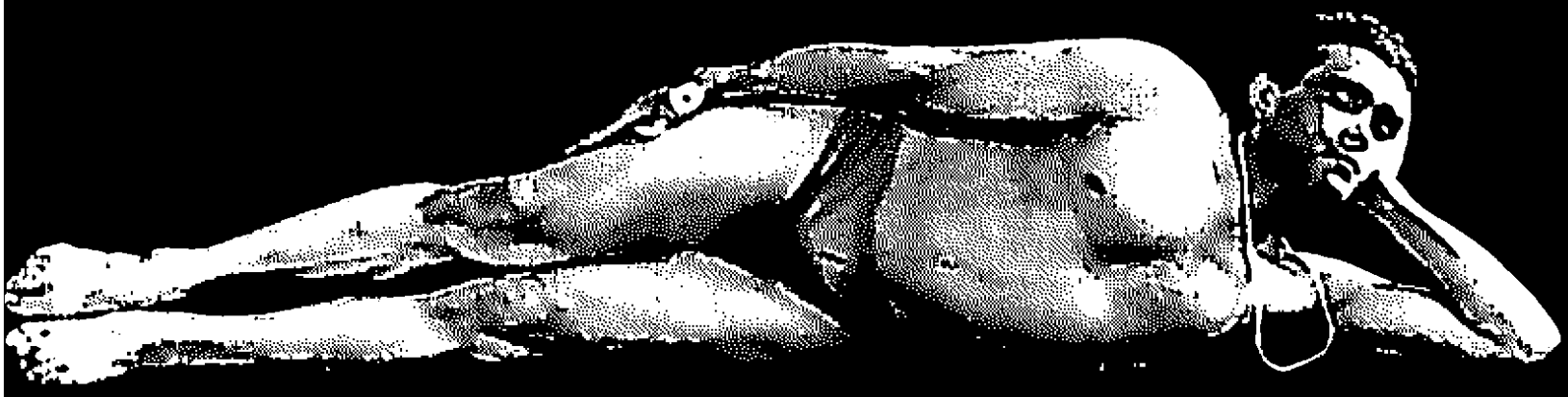


Supta-Trivikramasana

Reclining Vishnu Pose

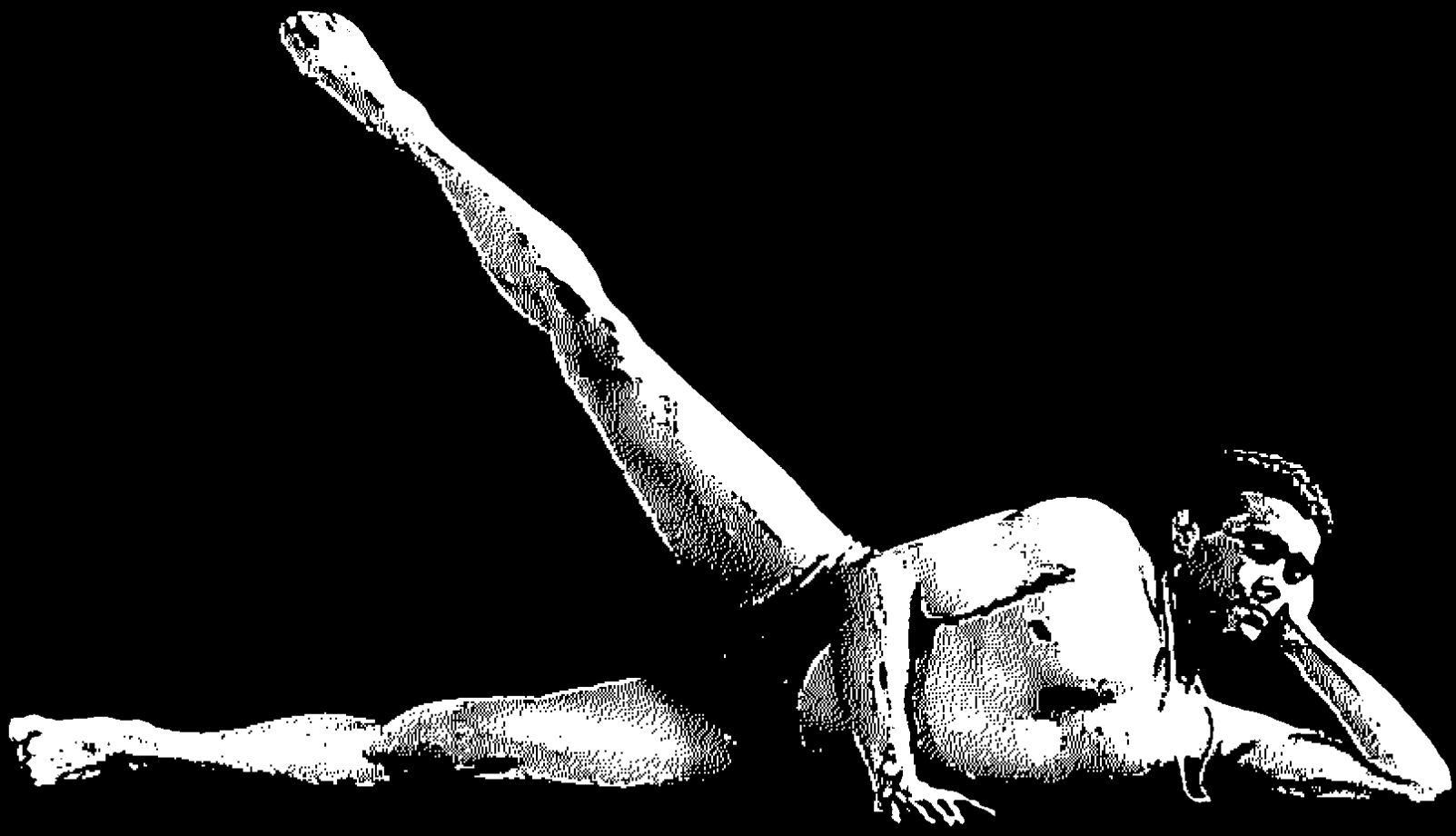
Bhairavasana

Formidable Shiva Pose



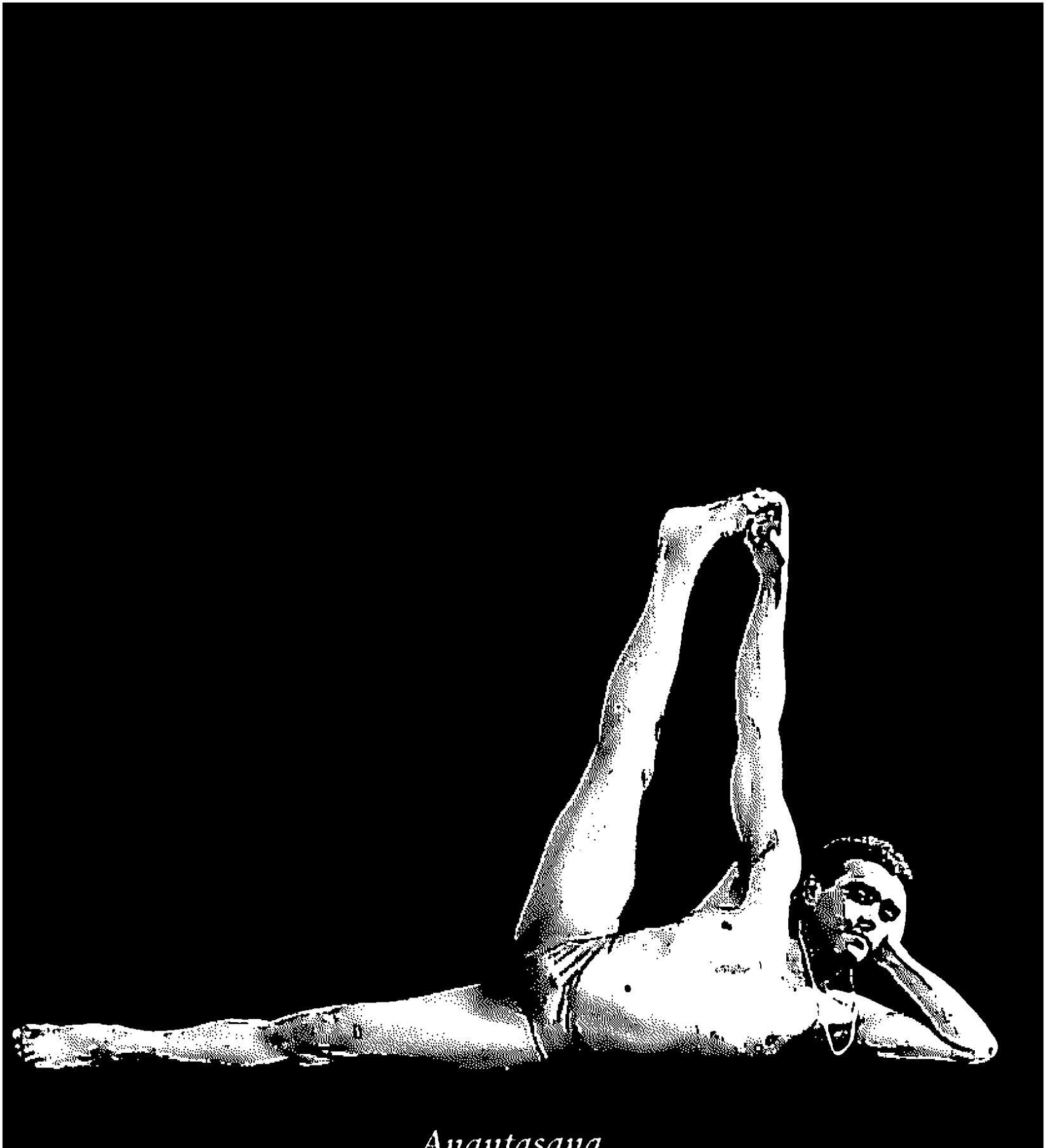
Anantasana

Infinity Pose (Preparation)



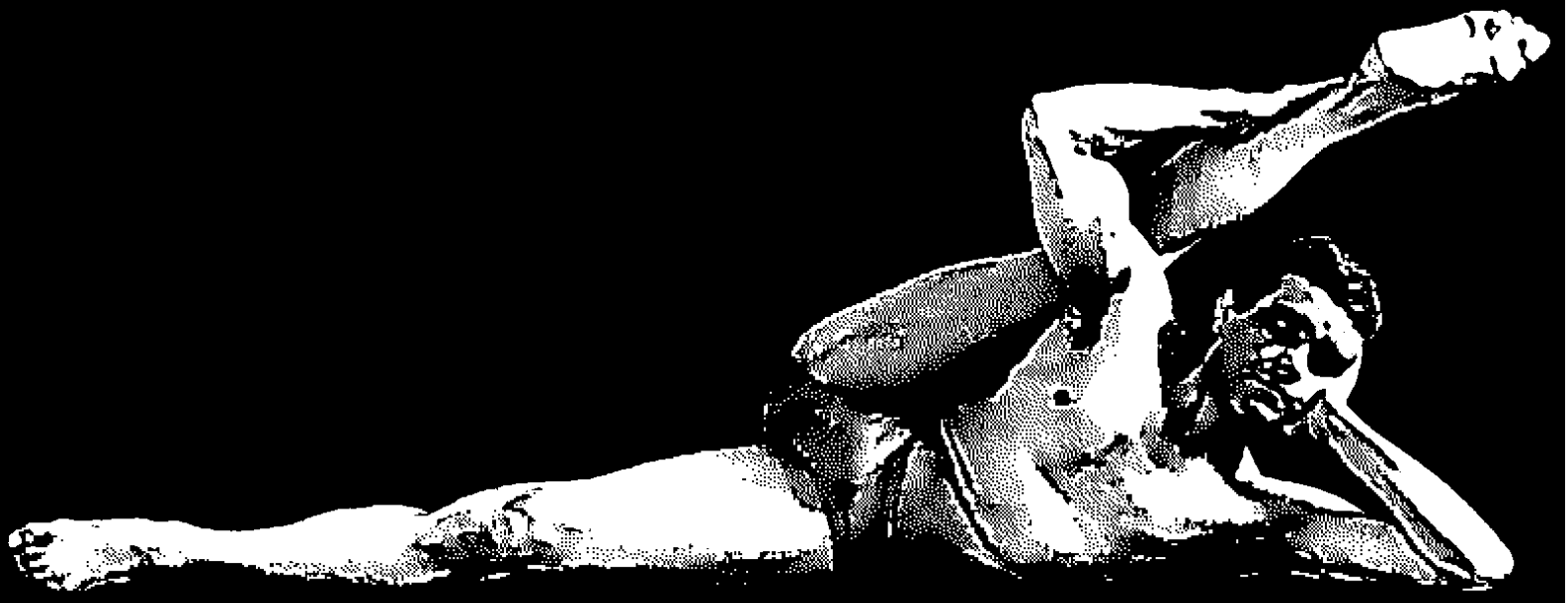
Anantasana

Infinity Pose (Preparation)



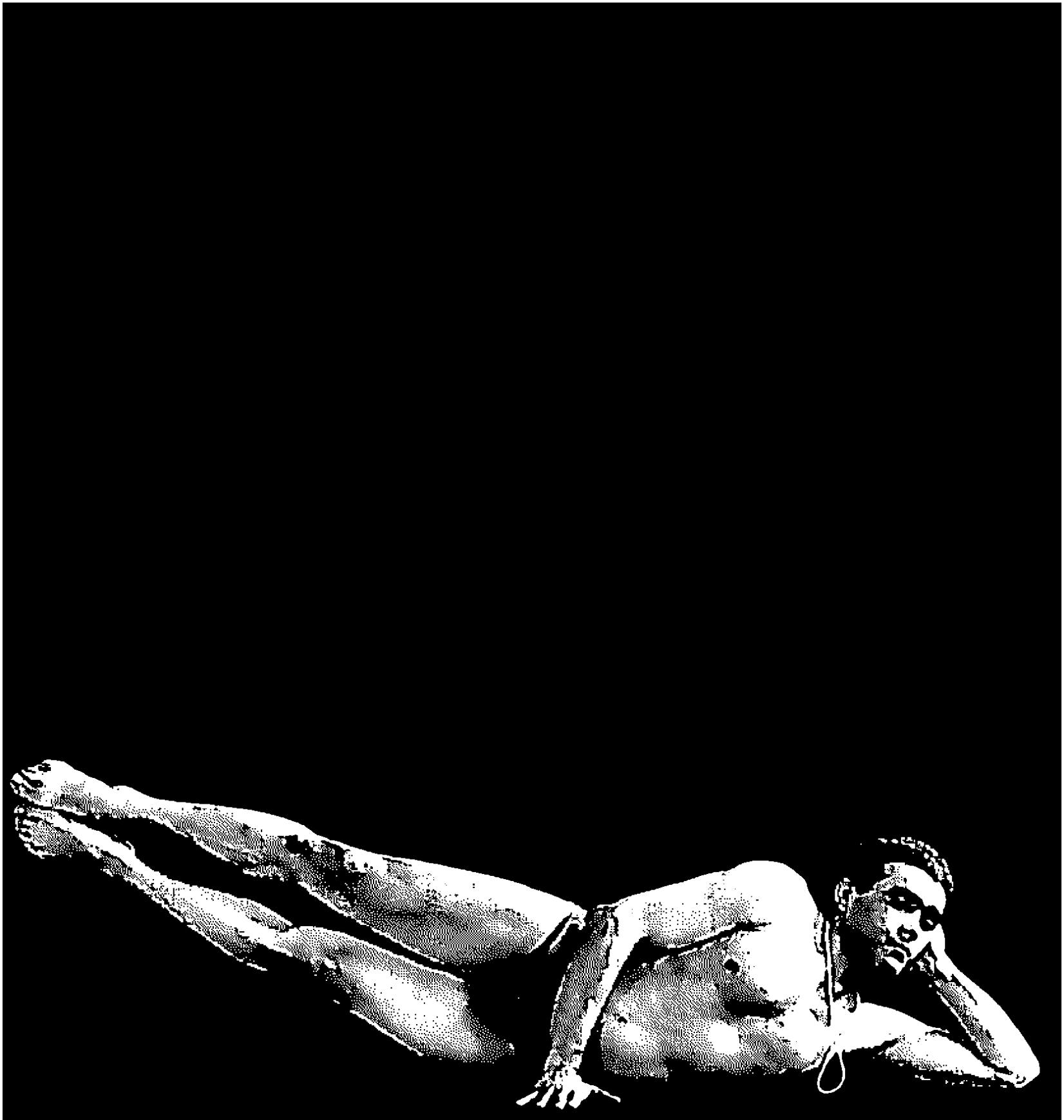
Anantasana

Infinity Pose



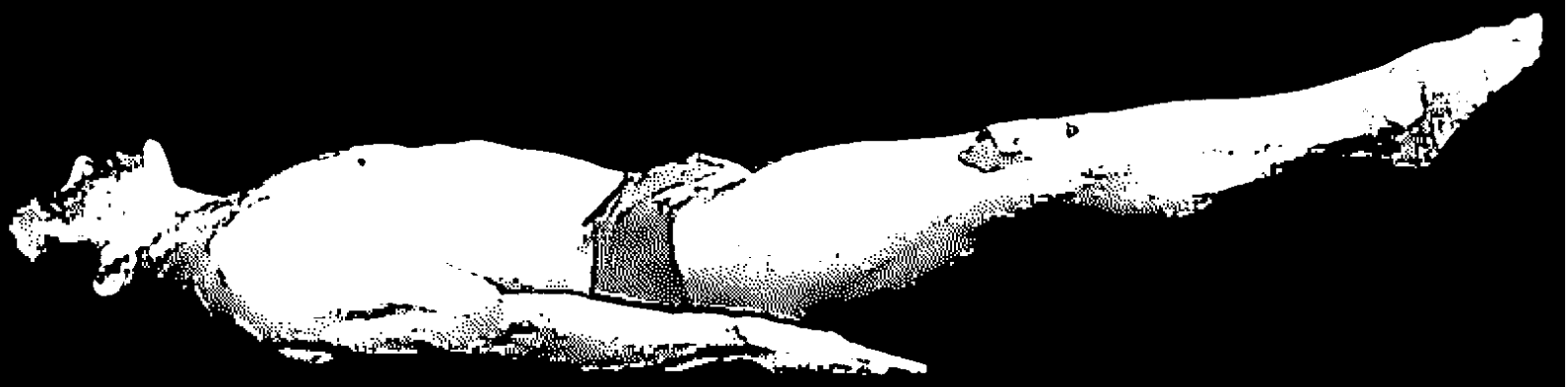
Anantasana

Infinity Pose (Variation)



Dwi-Pada-Anantasana

Two-Leg Infinity Pose

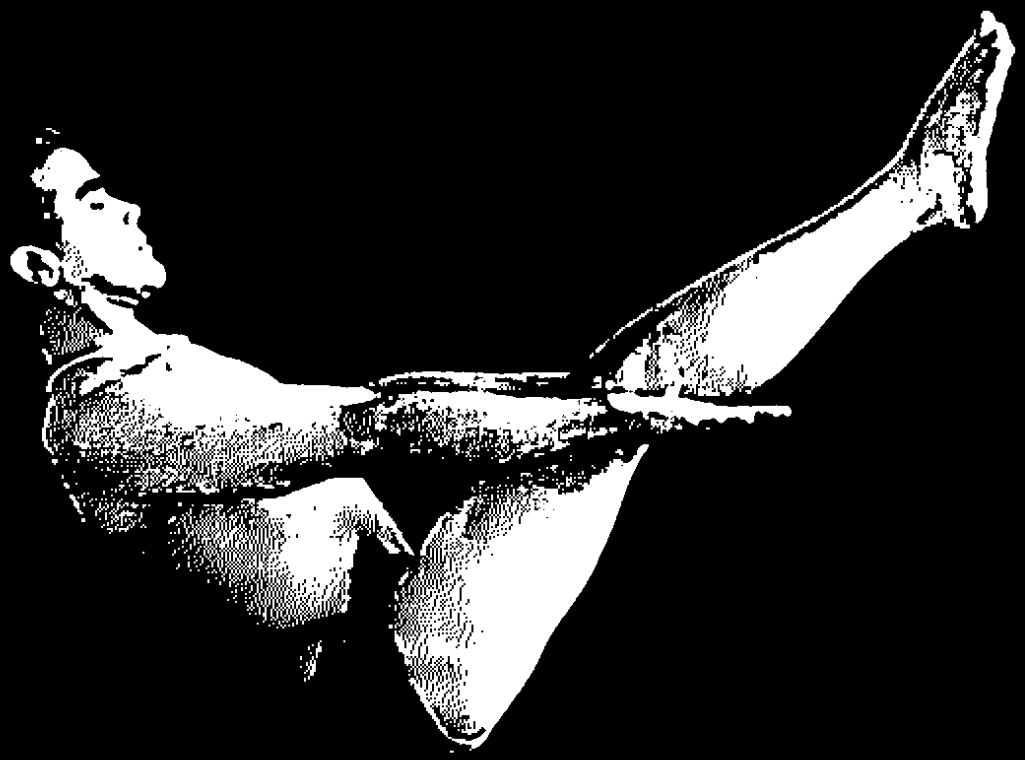


Jatharasana

Abdominal Lift Pose

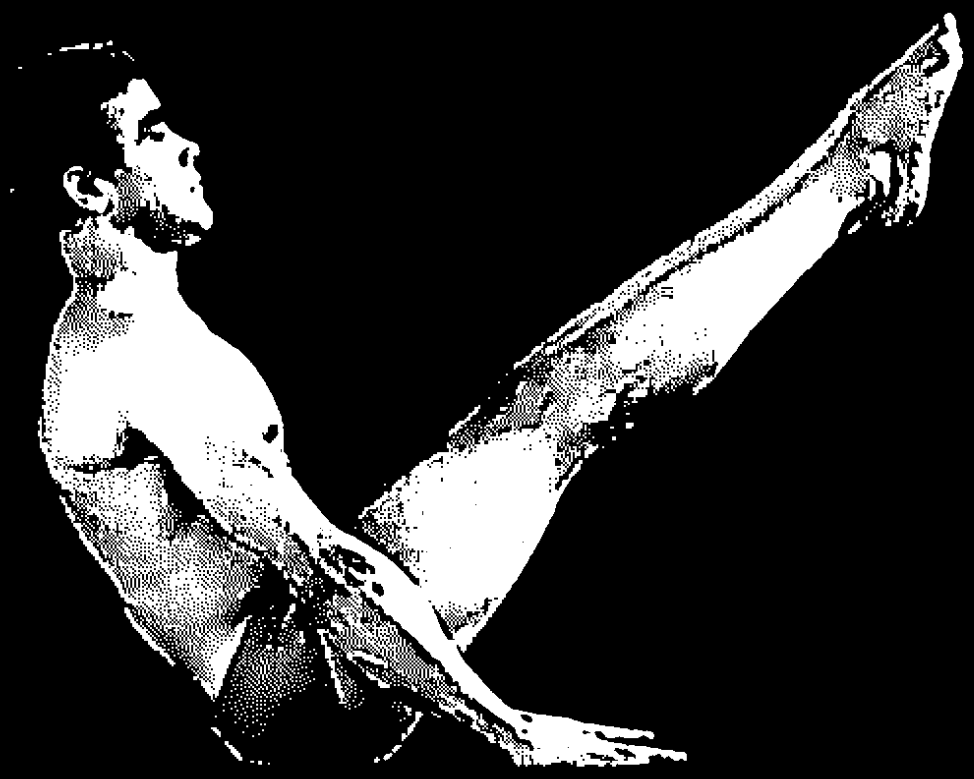
Ardha-Navasana

Half Boat Pose



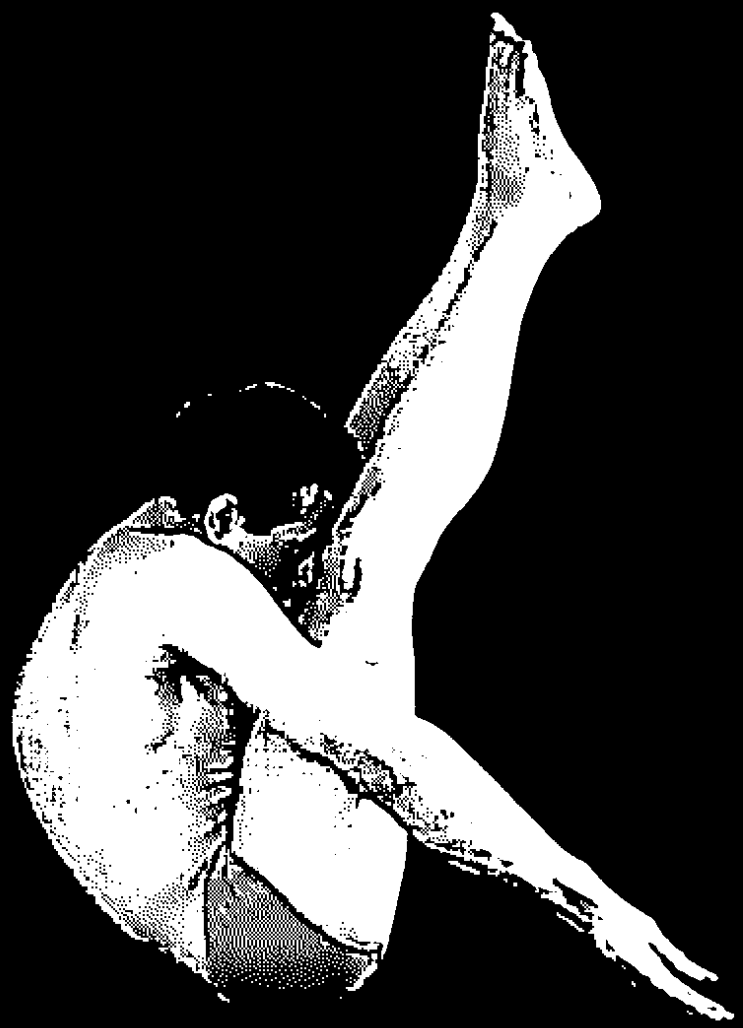
Paripurna-Navasana

Complete Boat Pose



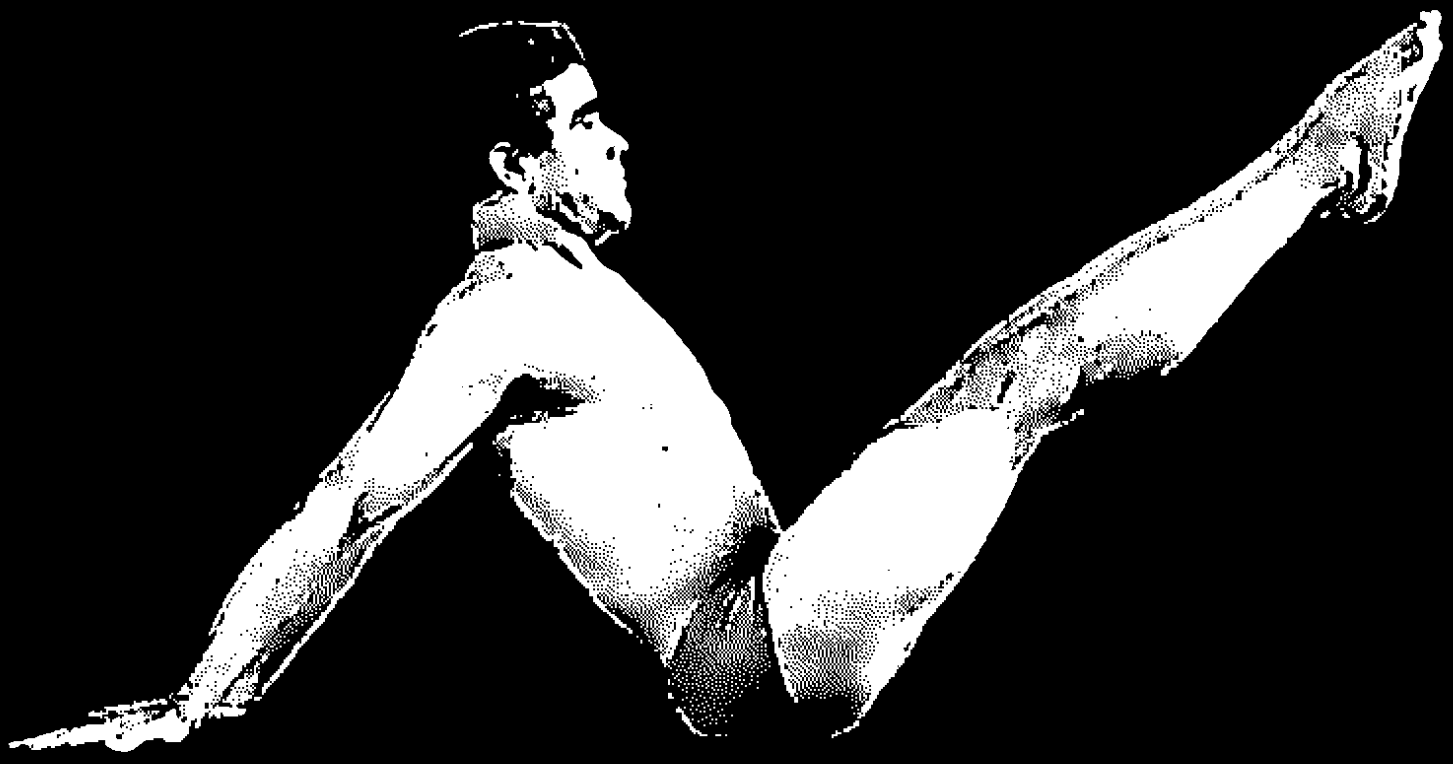
Salamba-Navasana

Supported Boat Pose



Salamba-Navasana

Supported Boat Pose (Variation)



Salamba-Navasana

Supported Boat Pose (Variation)

Ubhaya-Padangushtasana

Both Feet Big Toe Pose

Urdhva-Mukha-Paschimatanasana I

Upward Facing Back Stretch Pose (Front View)

Urdhva-Mukha-Paschimatanasana I

Upward Facing Back Stretch Pose (Side View)

Upavishta-Konasana

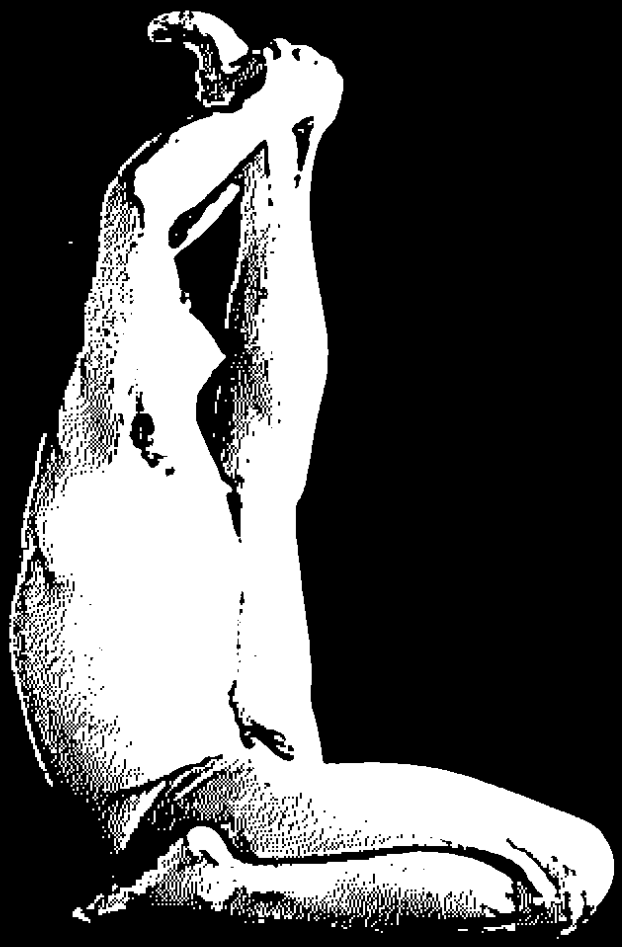
Seated Angle Pose (Variation)

Upavishta-Konasana

Seated Angle Pose (Variation)

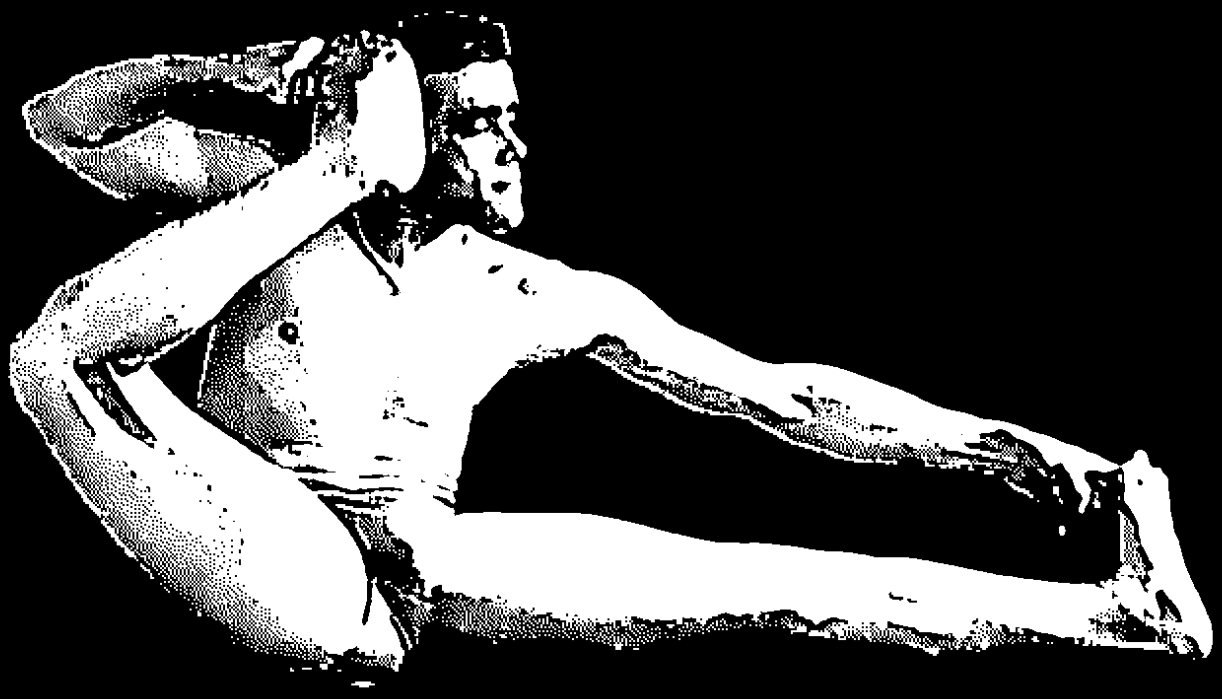
Krounchasana

Heron Pose (Preparation)



Krounchasana

Heron Pose



Akarna-Dhanurasana

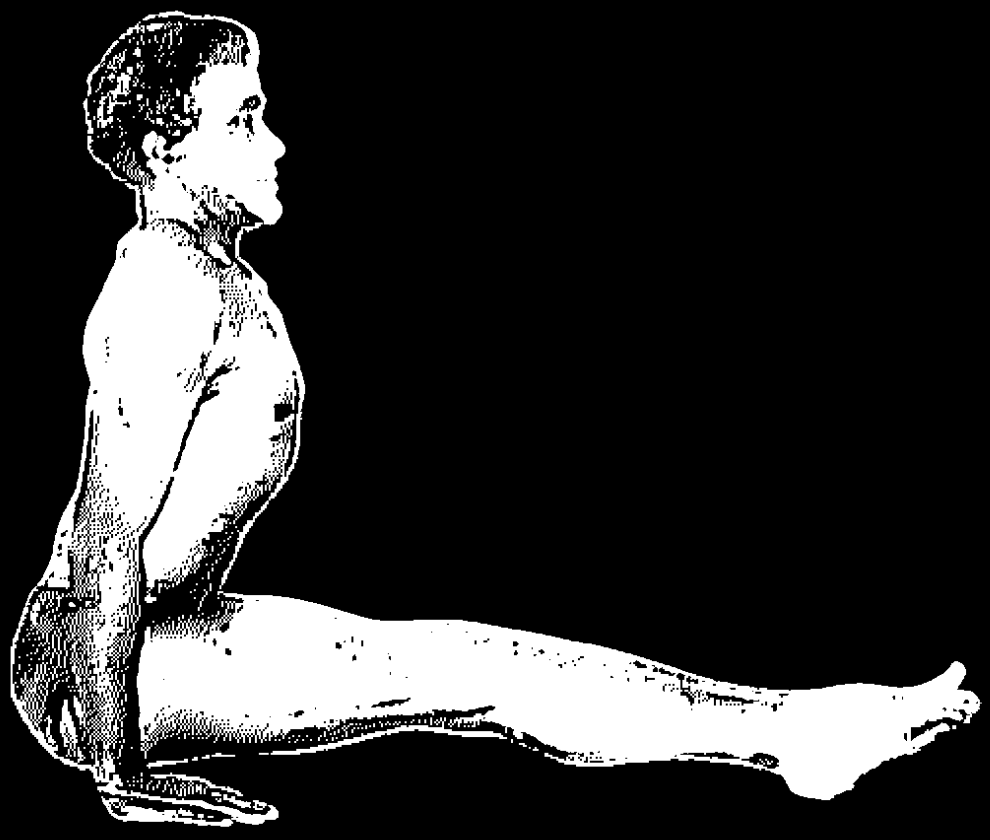
Shooting Bow Pose

Akarna-Dhanurasana

Shooting Bow Pose (Variation)

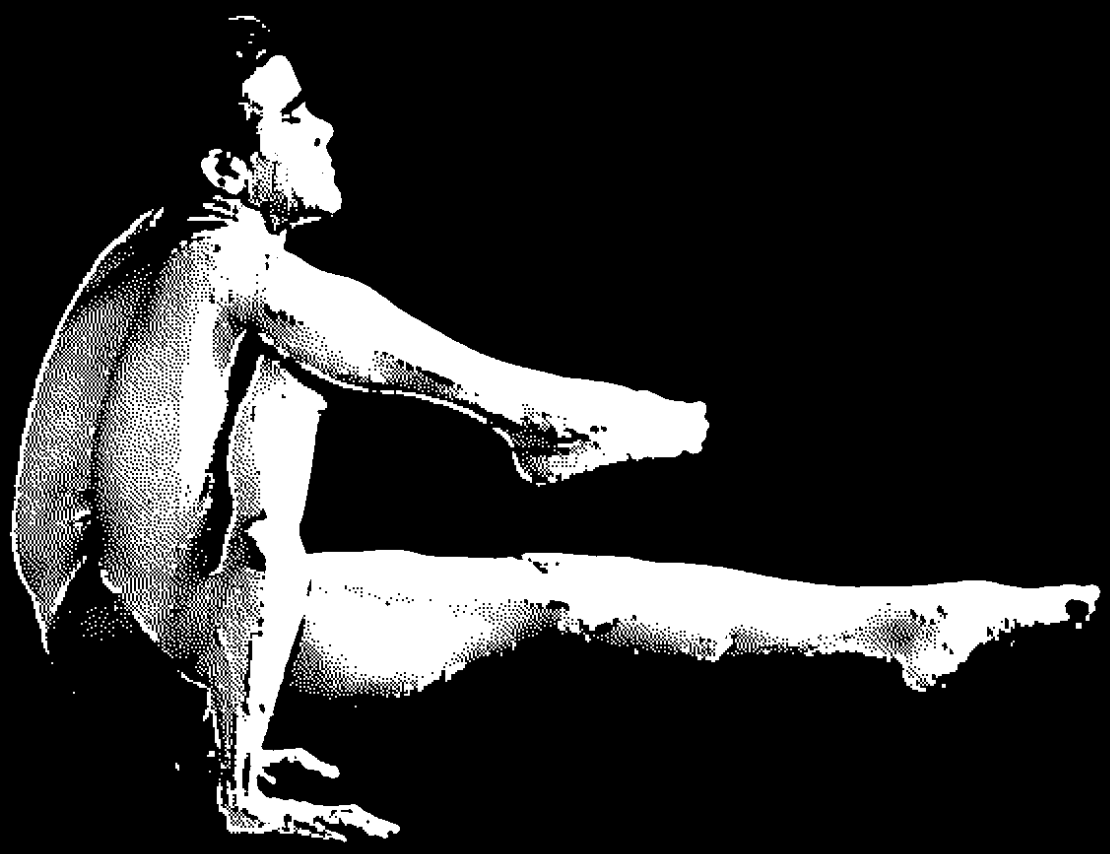
Akarna-Dhanurasana

Shooting Bow Pose (Variation)



Dandasana

Staff Pose



Sukha-Chakorasana
Comfortable Bird Pose

Chakorasana

Bird Pose

Chakorasana

Bird Pose (Variation)

Eka-Pada-Shirshasana

One Leg Behind the Head Pose

Viranchyasana

Pose of the Lord Viranchi

Viranchyasana

Pose of the Lord Viranchi (Variation)

Omkarasana

Om Pose

Sukha-Garbha-Pindasana

Easy Embryo in the Womb Pose

Garbha Pindasana

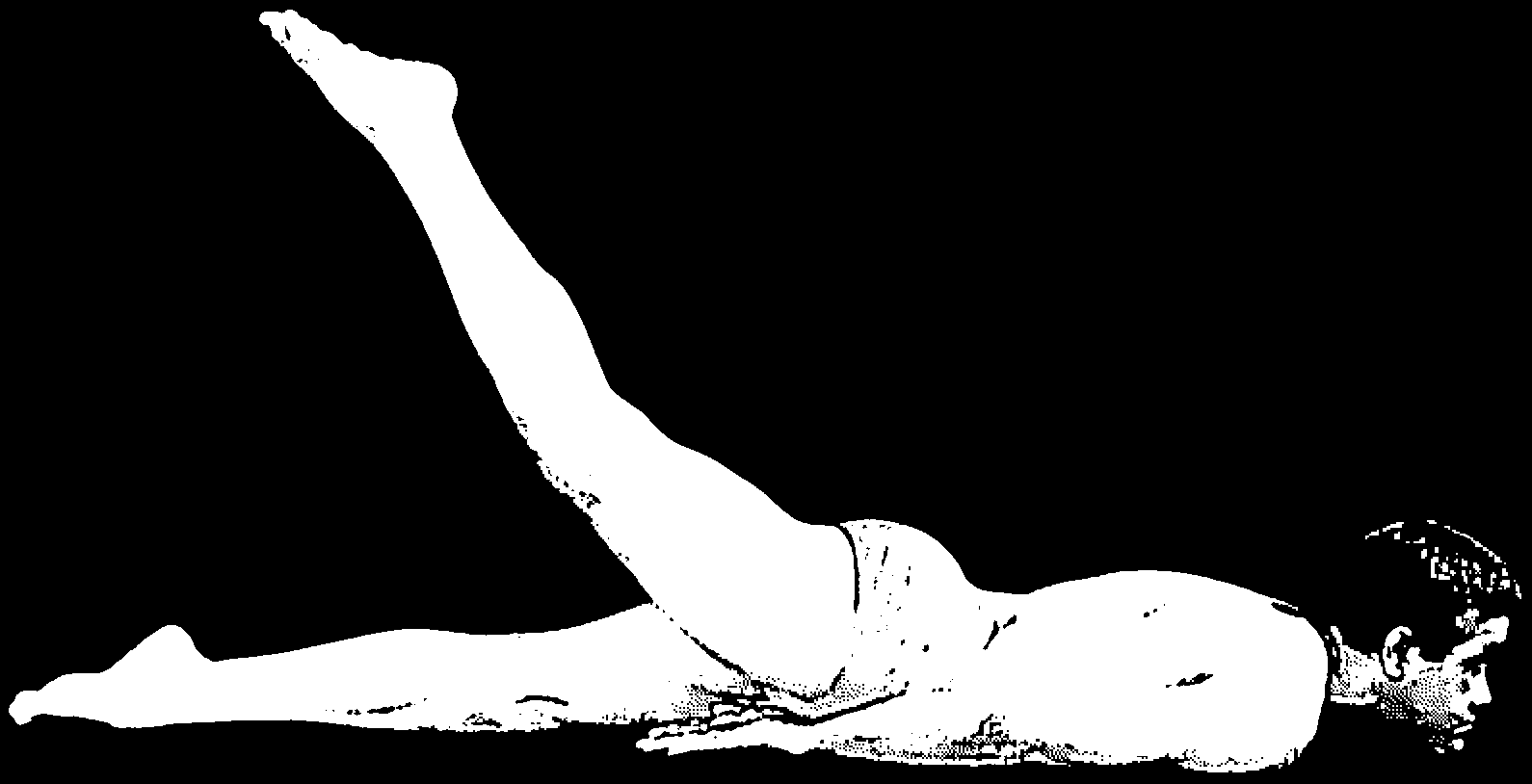
Embryo in the Womb Pose

Garbha Pindasana

Embryo in the Womb Pose (Variation)

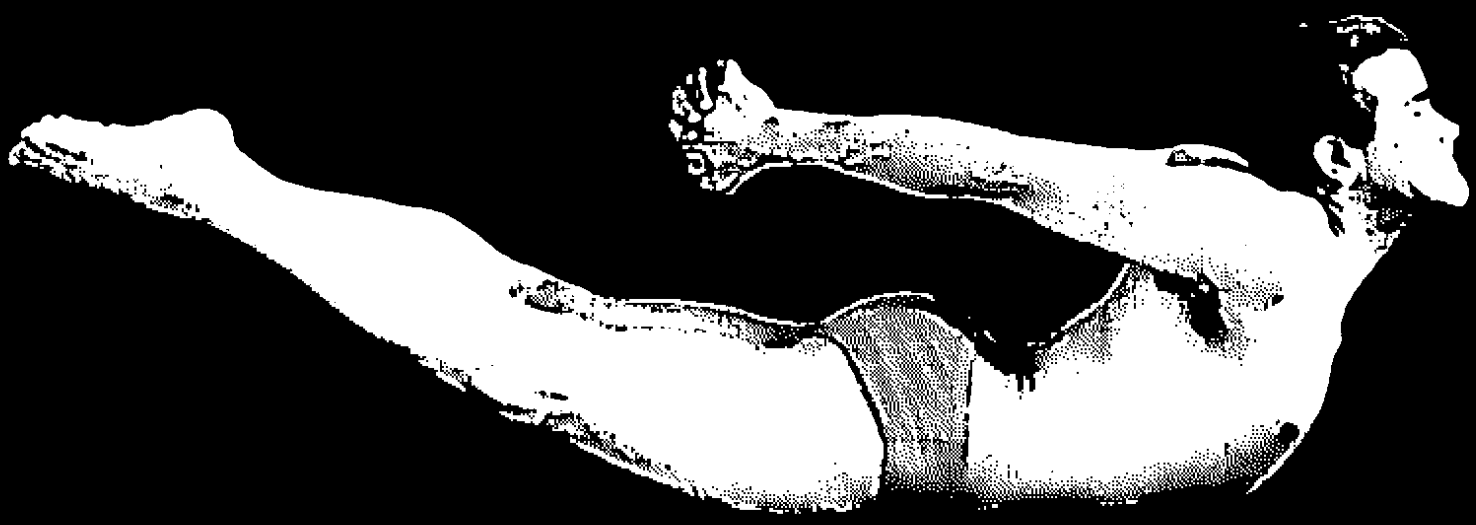
Dwi-Pada-Shirshasana

Balancing Tortoise Pose



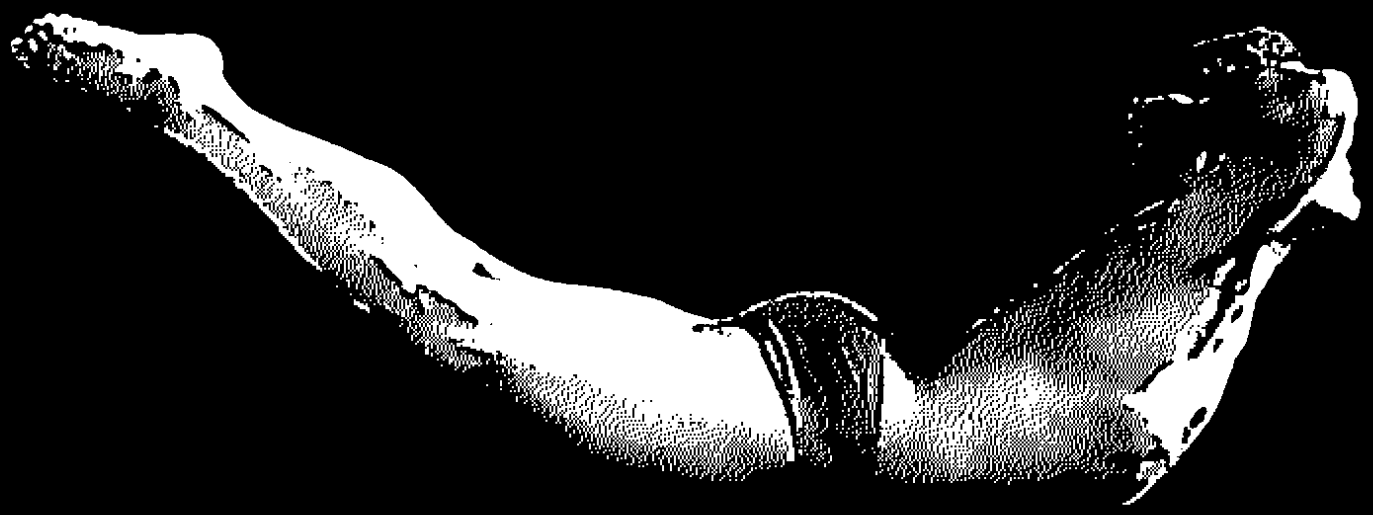
Ardha-Shalabhasana

Half Locust Pose



Shalabhasana

Locust Pose (Variation)



Makarasana

Crocodile Pose

Navasana

Boat Pose (Preparation)

Navasana

Boat Pose

Vyaghrasana
Tiger Pose

Vyaghrasana

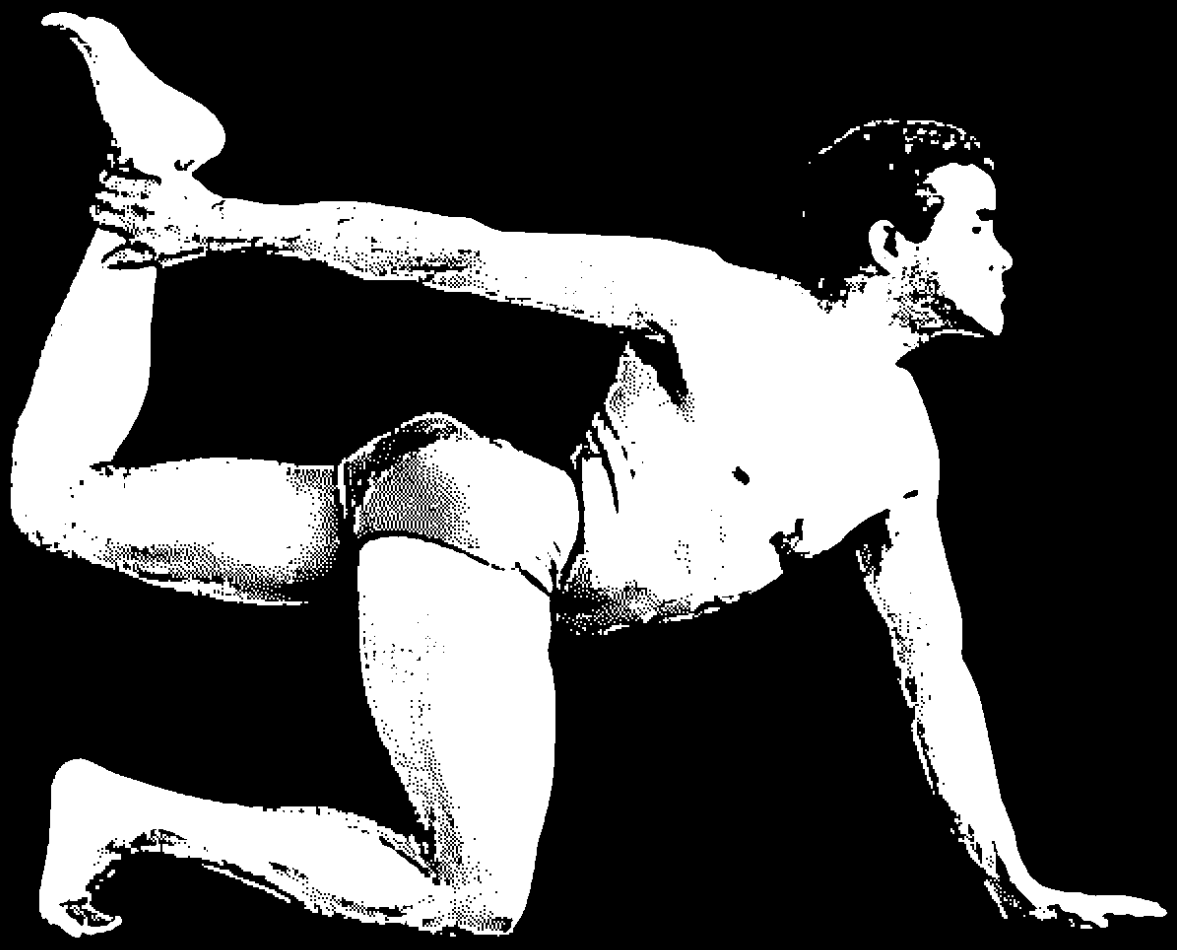
Tiger Pose (Variation)

Vyaghrasana

Tiger Pose (Variation)

Vyaghrasana

Tiger Pose (Variation)

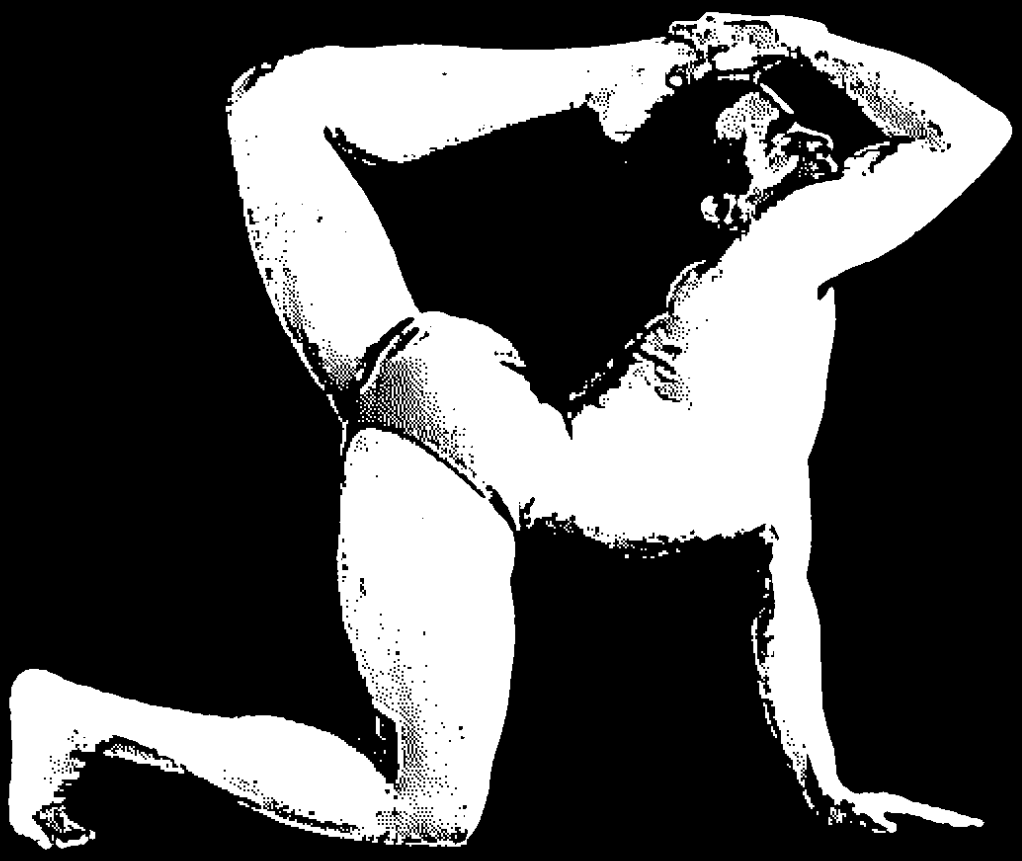


Vyaghrasana

Tiger Pose (Variation)

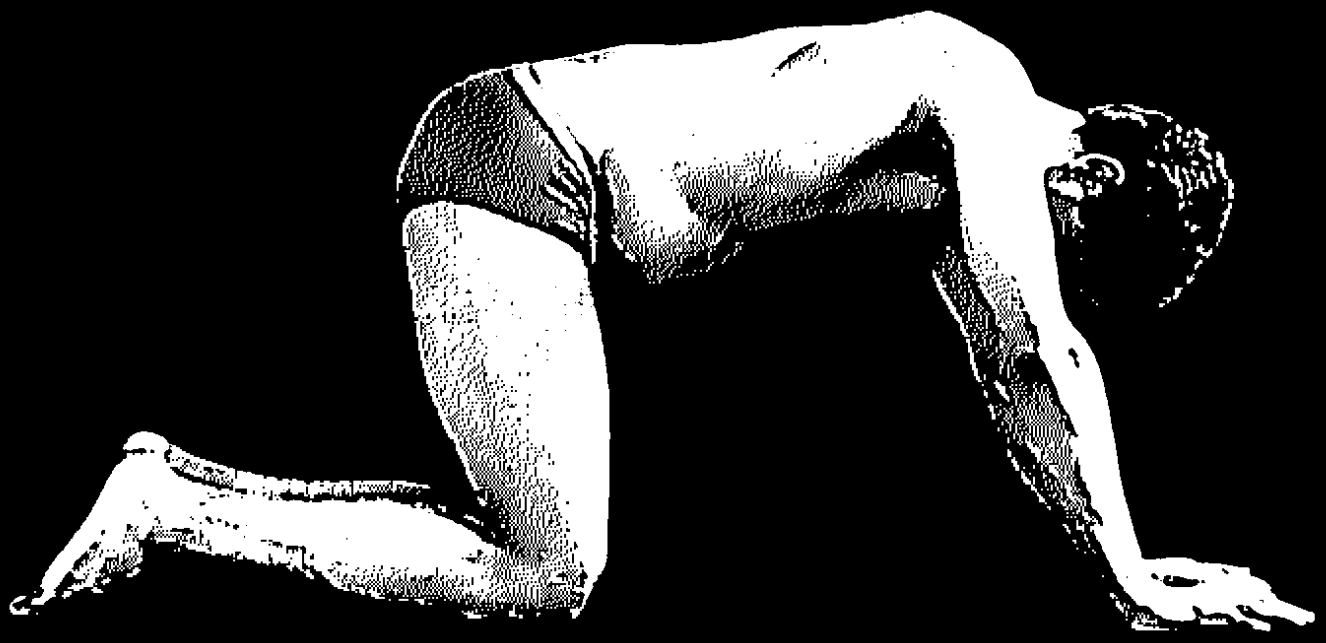
Vyaghrasana

Tiger Pose (Variation)



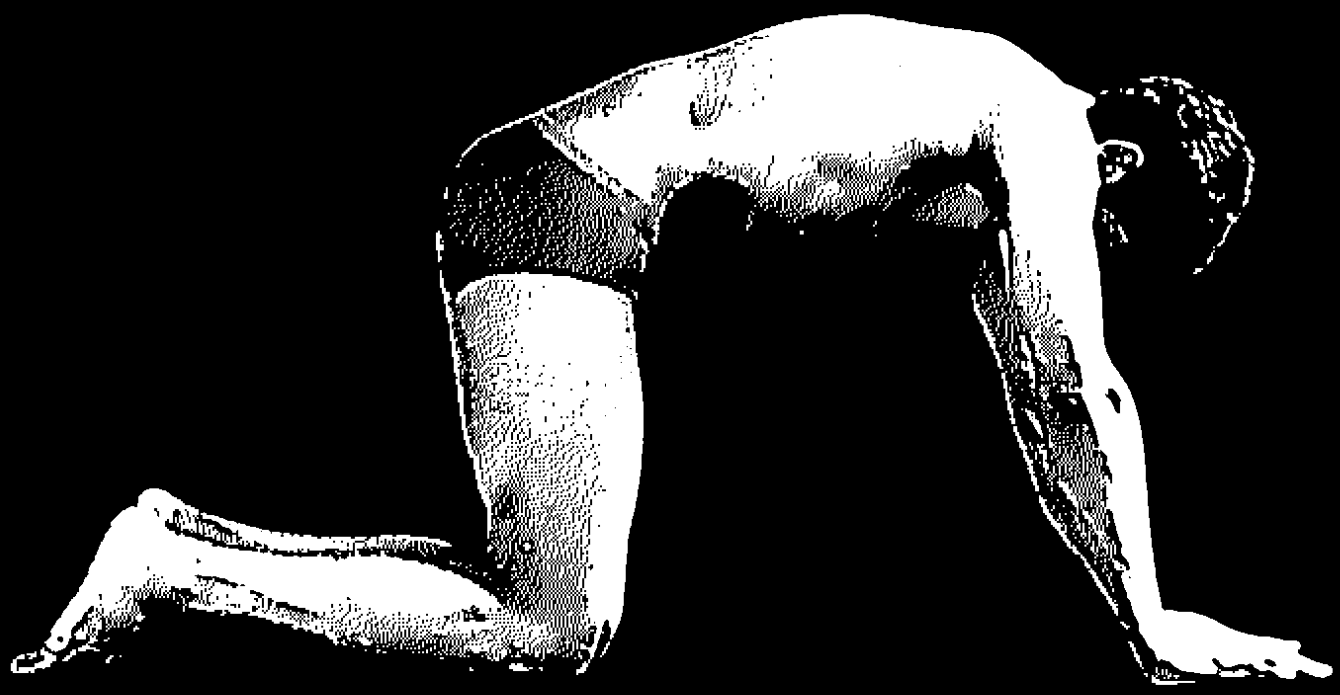
Vyaghrasana

Tiger Pose (Variation)



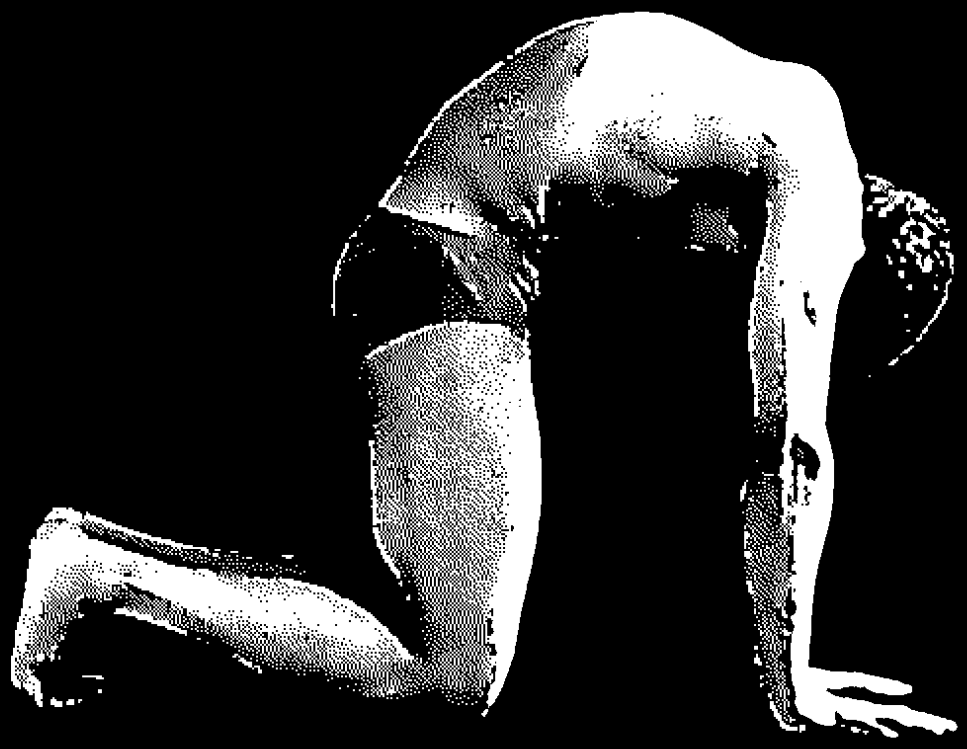
Uddhiyana-Marjaryasana

Abdominal Cat Lift A



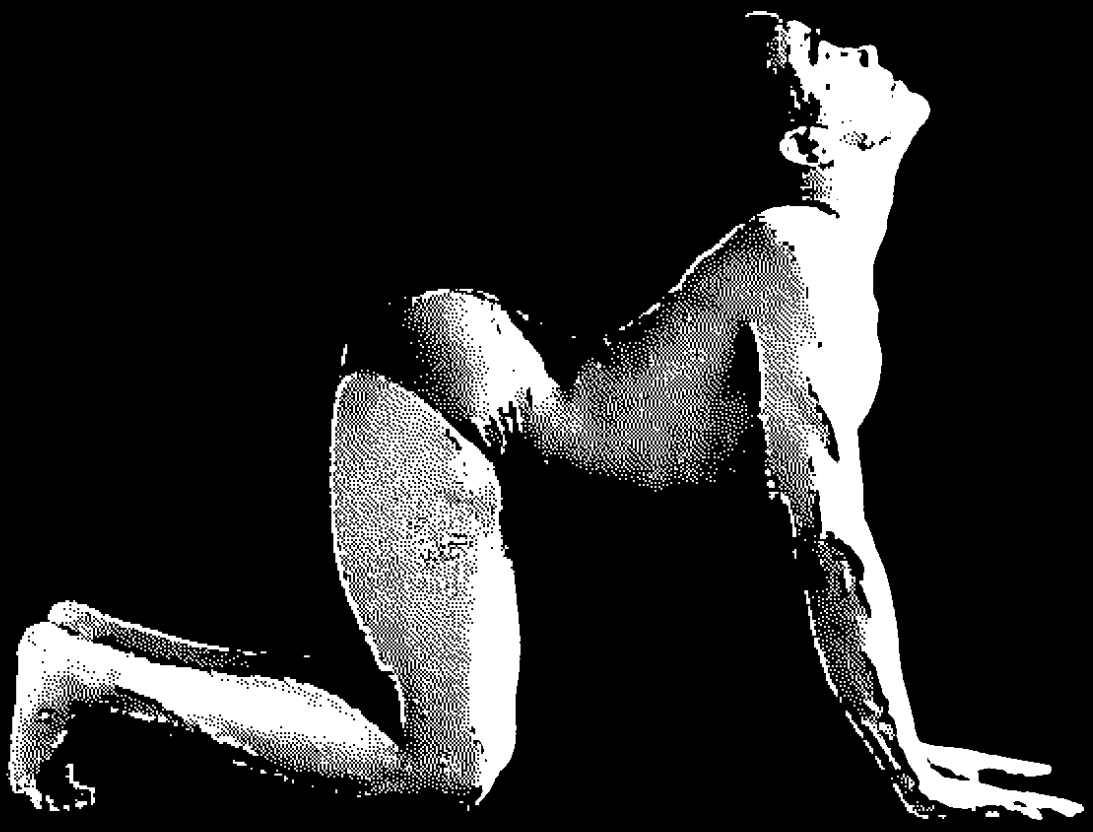
Uddhiyana-Marjaryasana

Abdominal Cat Lift B



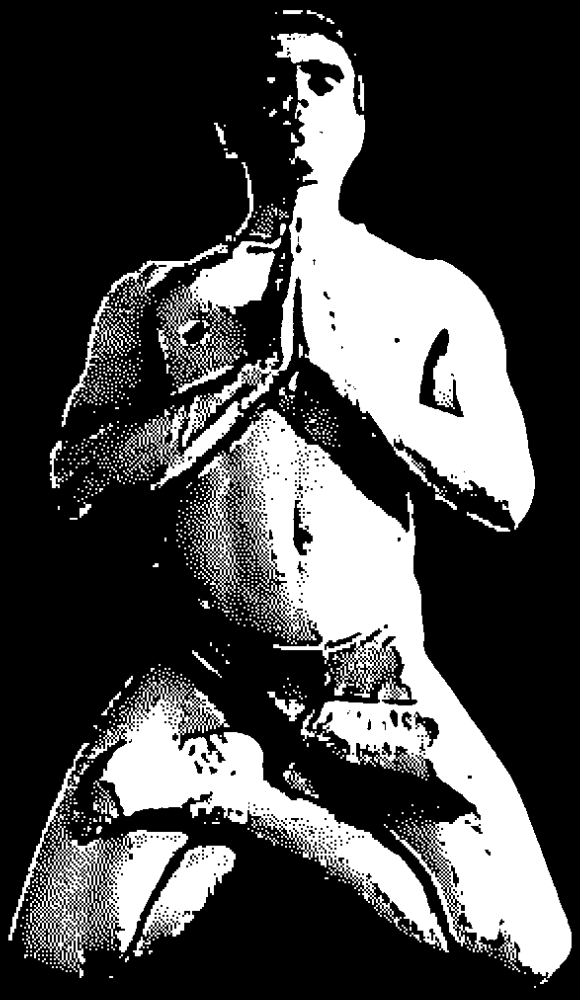
Marjaryasana

Cat Stretch Pose A



Marjaryasana

Cat Stretch Pose B



Gorakshasana

Pose of the Lord Goraksha

Gorakshasana

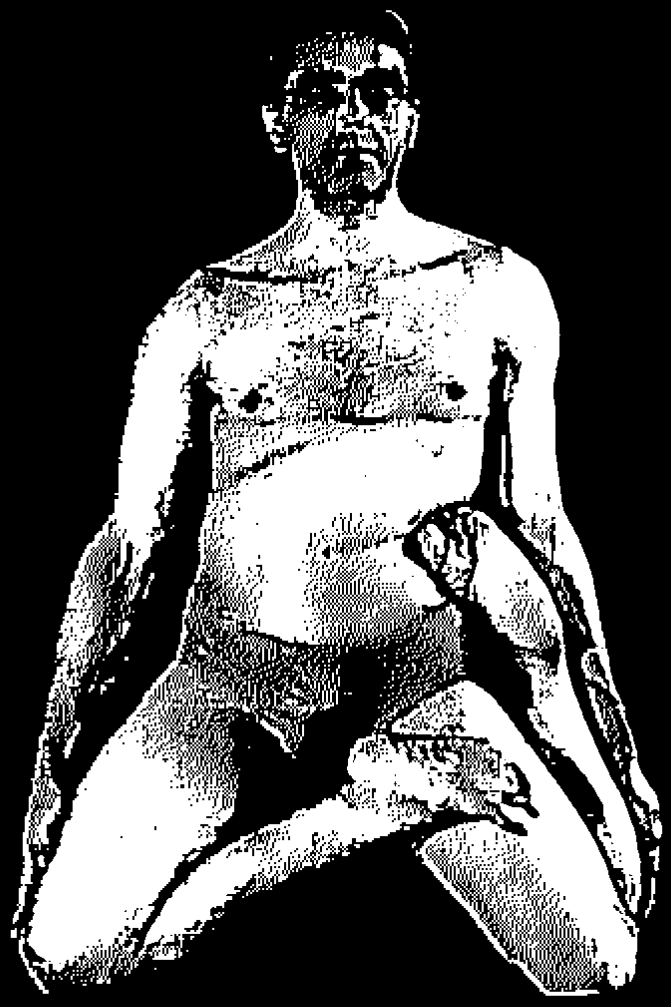
Pose of the Lord Goraksha (Variation)

Gorakshasana

Pose of the Lord Goraksha (Variation)

Gorakshasana

Pose of the Lord Goraksha (Variation)

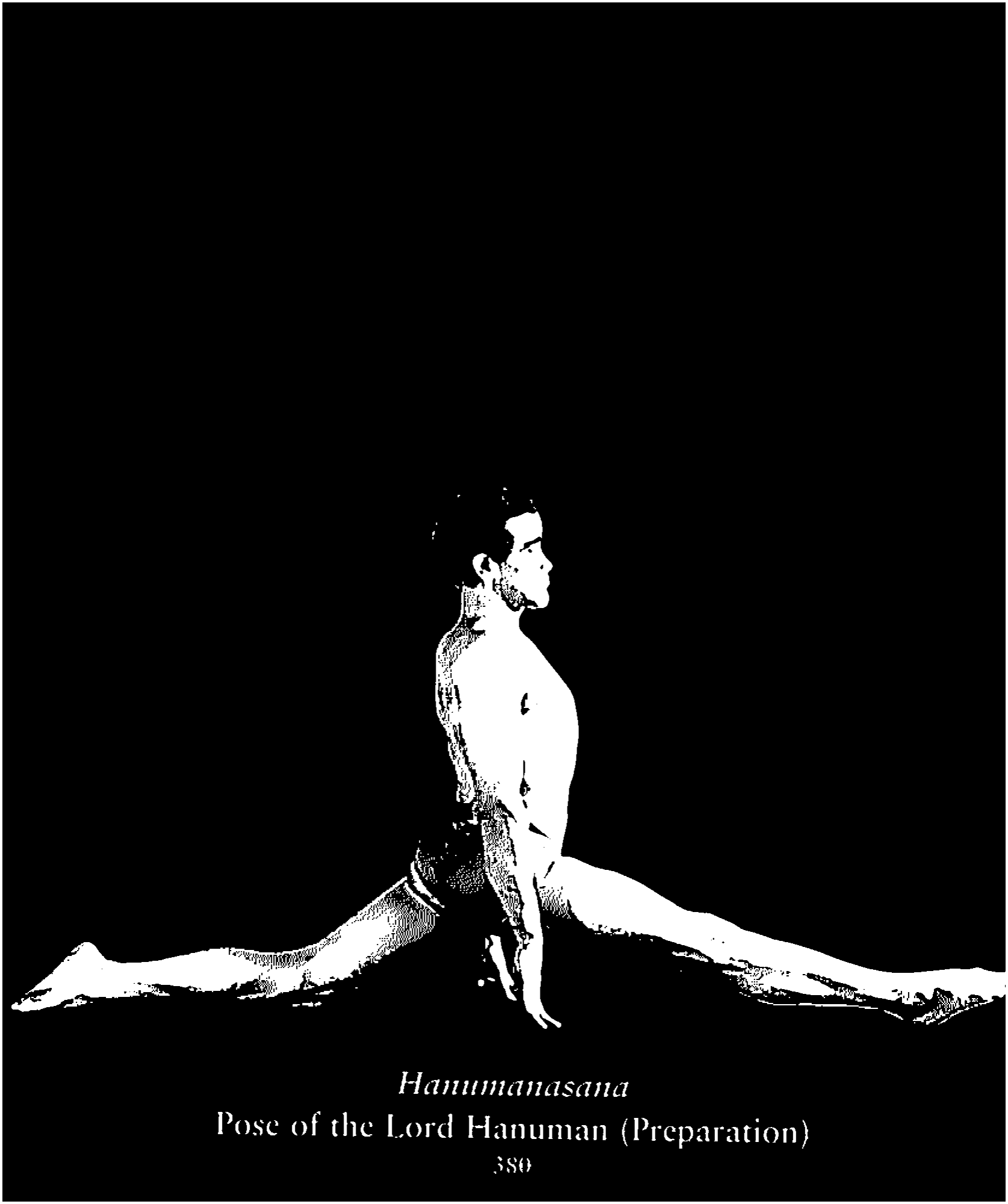


Gorakshasana

Pose of the Lord Goraksha (Variation)

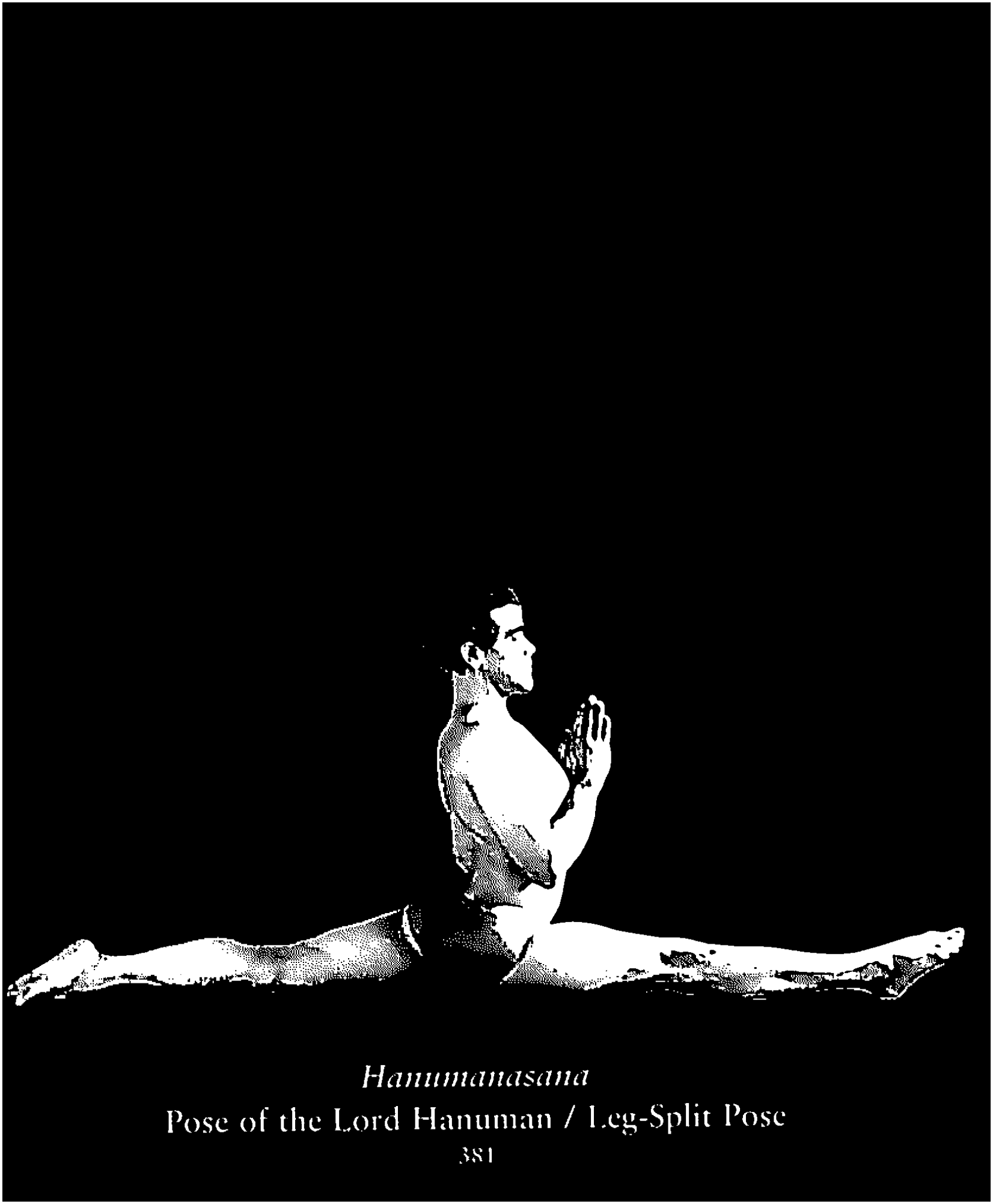
Gorakshasana

Pose of the Lord Goraksha (Variation)



Hanumanasana

Pose of the Lord Hanuman (Preparation)



Hanumanasana

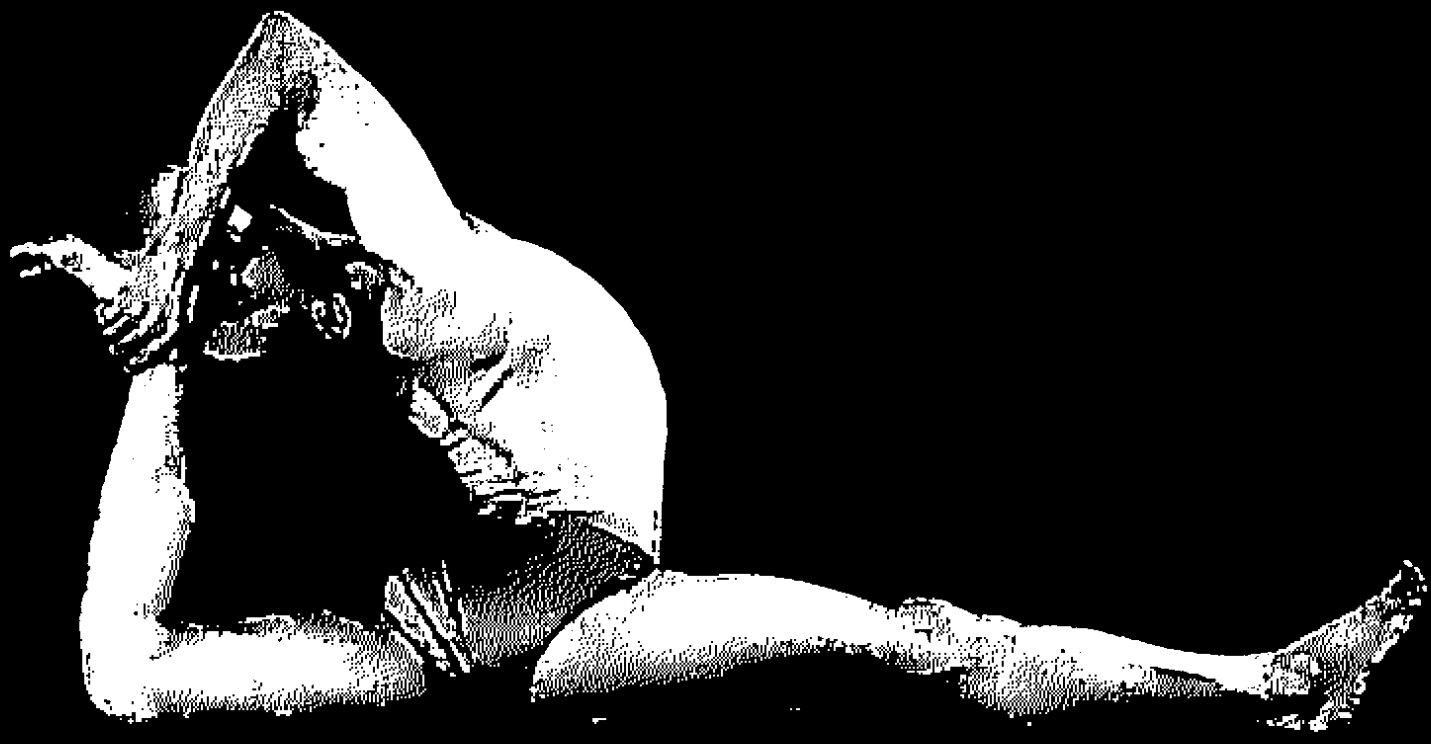
Pose of the Lord Hanuman / Leg-Split Pose

Hanumanasana

Pose of the Lord Hanuman / Leg-Split Pose (Variation)

Kailashasana

Pose of the Lord Kailasha (Preparation)



Kailashasana

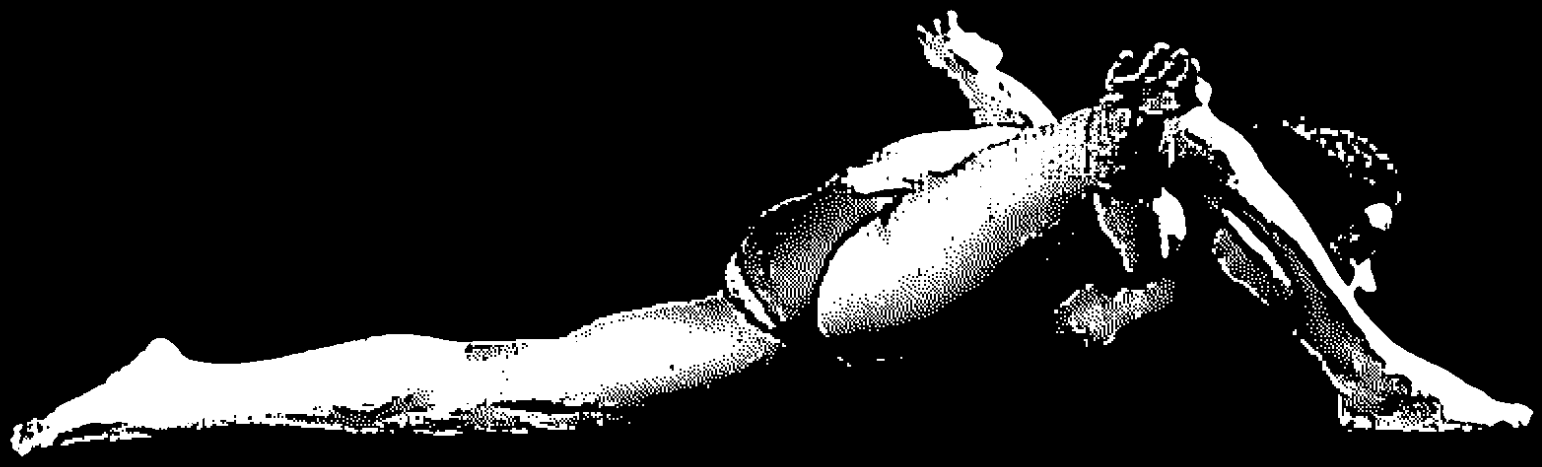
Pose of the Lord Kailasha

Hanumana-Namaskara

Hanuman Salutation Pose

Yajnasana

Christ's Cross Pose (Front View)

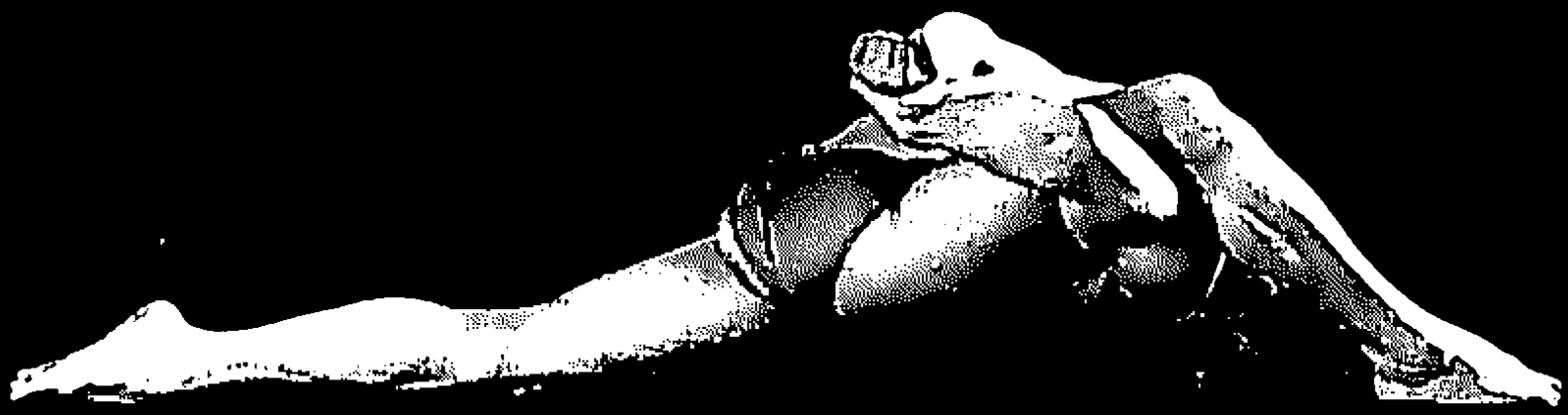


Yajnasana

Christ's Cross Pose (Side View)

Baddha-Yajnasana

Bound Christ's Cross Pose (Front View)



Baddha-Yajnasana

Bound Christ's Cross Pose (Side View)

Samakonasana

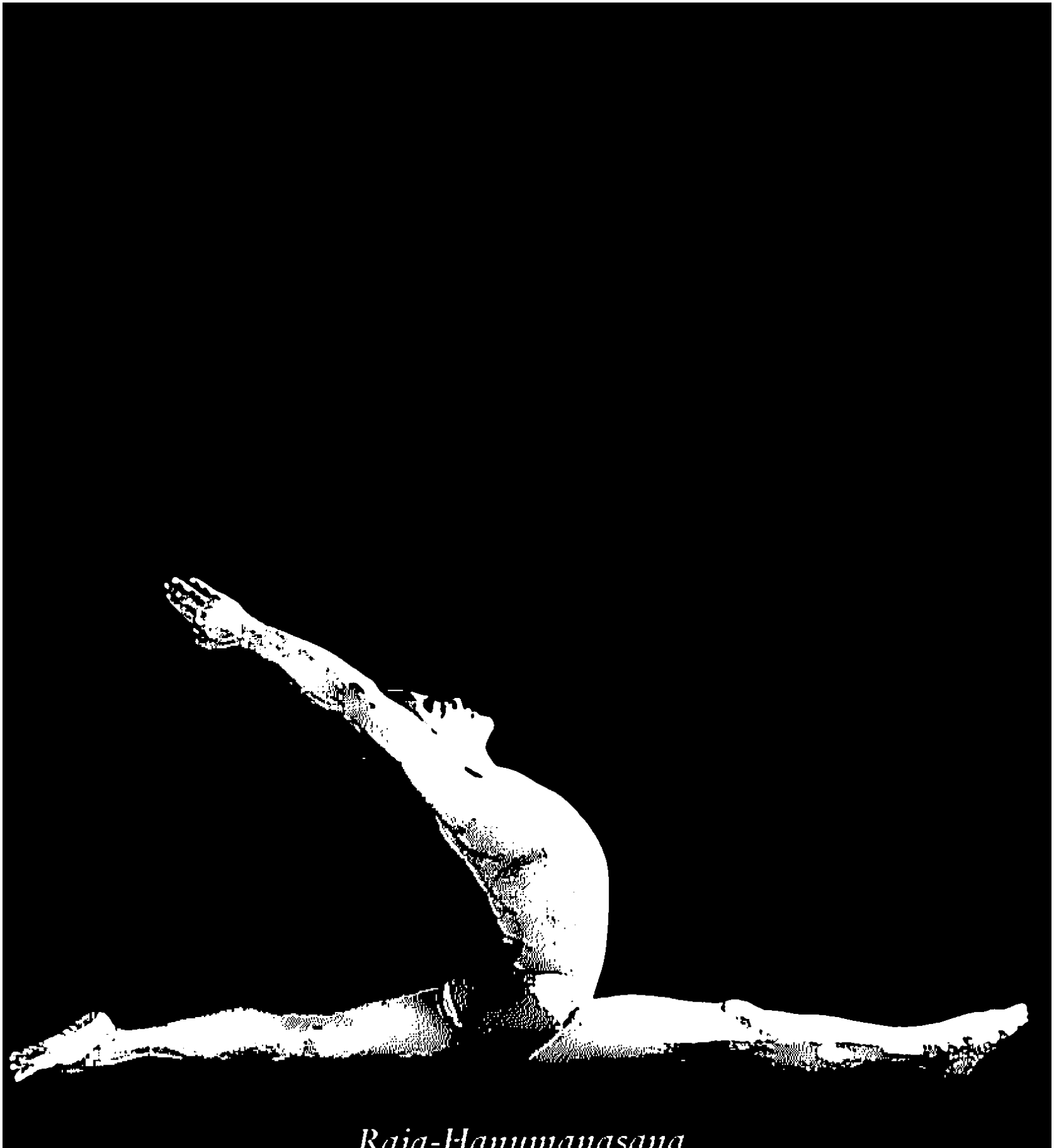
Even Angle Pose

Samakonasana

Even Angle Pose (Variation)

Samakonasana

Even Angle Pose (Variation)



Raja-Hanumanasana

King Leg-Split Pose (Preparation)

Raja-Hanumanasana

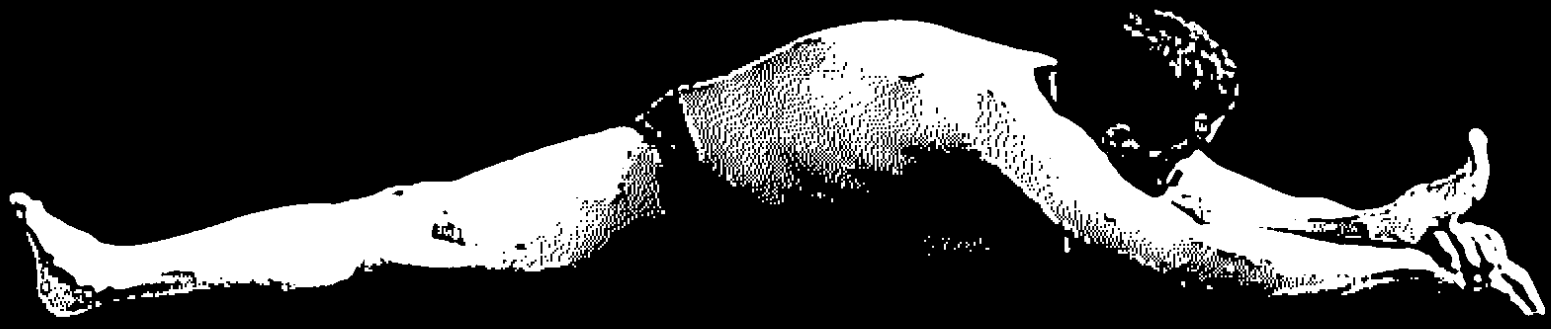
King Leg-Split Pose (Preparation)

Raja-Hanumanasana

King Leg-Split Pose (Preparation)

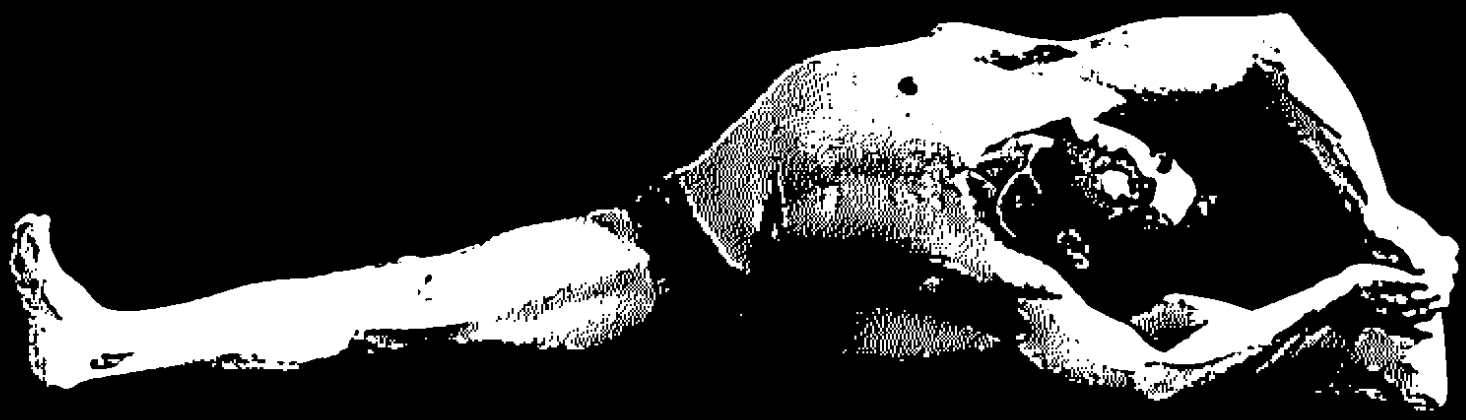
Raja-Hanumanasana

King Leg-Split Pose



Parshva-Upavishta-Konasana

Side Seated Angle Pose



Parivrtta-Upavishta-Konasana

Revolving Seated Angle Pose

Kurmasana

Tortoise Pose (Front View)

Kurmasana

Tortoise Pose (Side View)

Kurmasana

Tortoise Pose (Rear View)

Upavishta-Konasana

Seated Angle Pose (Variation)

Upavishta-Konasana

Seated Angle Pose (Variation)

Tarasana

Star Pose

Sukha-Supta-Kurmasana

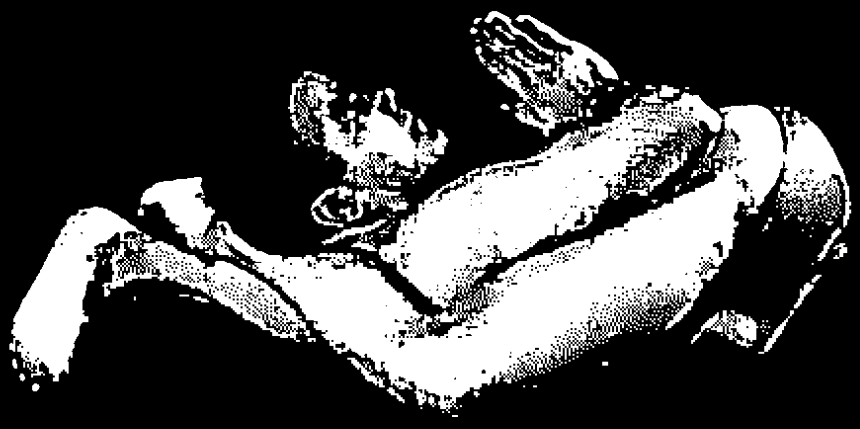
Easy Sleeping Tortoise Pose (Preparation)

Sukha-Supta-Kurmasana

Easy Sleeping Tortoise Pose

Supta-Kurmasana

Sleeping Tortoise Pose

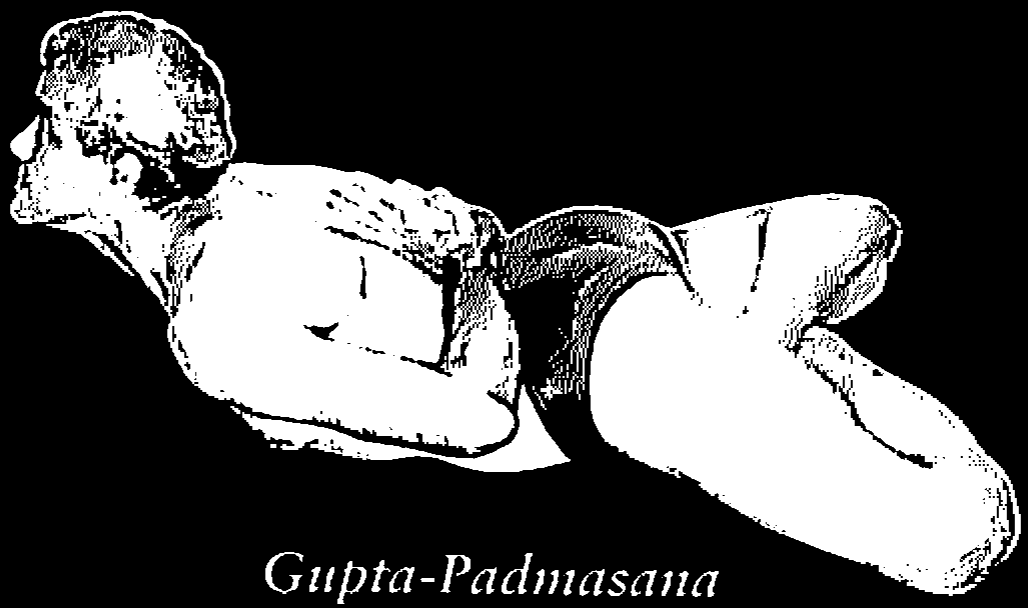


Yoganidrasana

Yogic Sleep Pose

Yoganidrasana

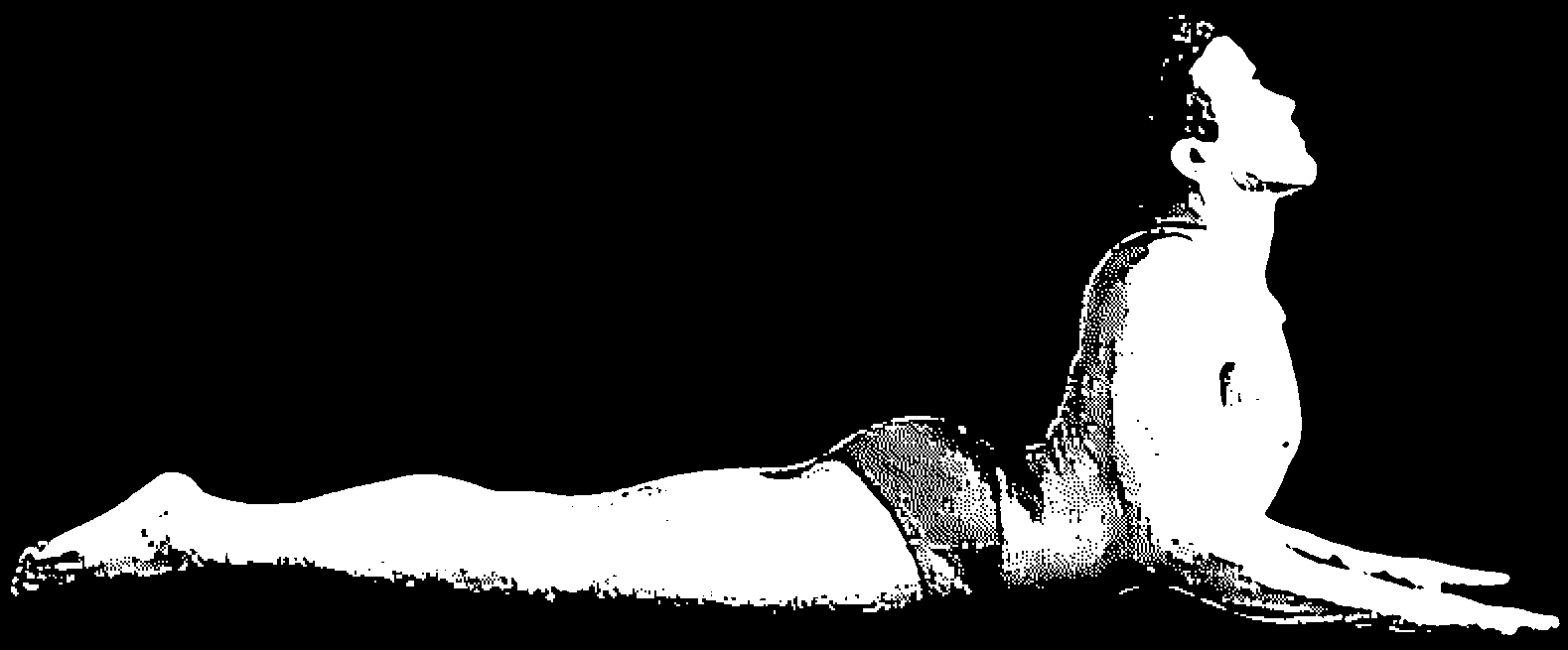
Yogic Sleep Pose (Variation)



Gupta-Padmasana
Hidden Lotus Pose

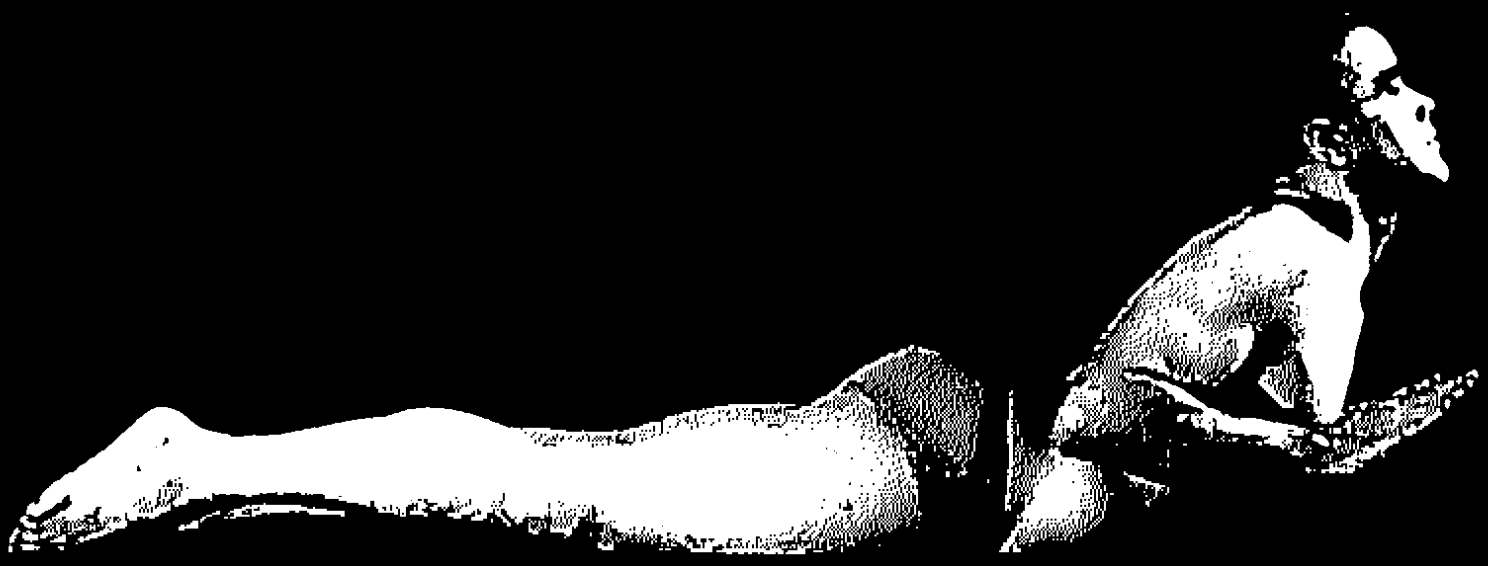
Vira-Tolasana

Hero Scale Pose



Bhujangasana

Cobra Pose (Preparation)

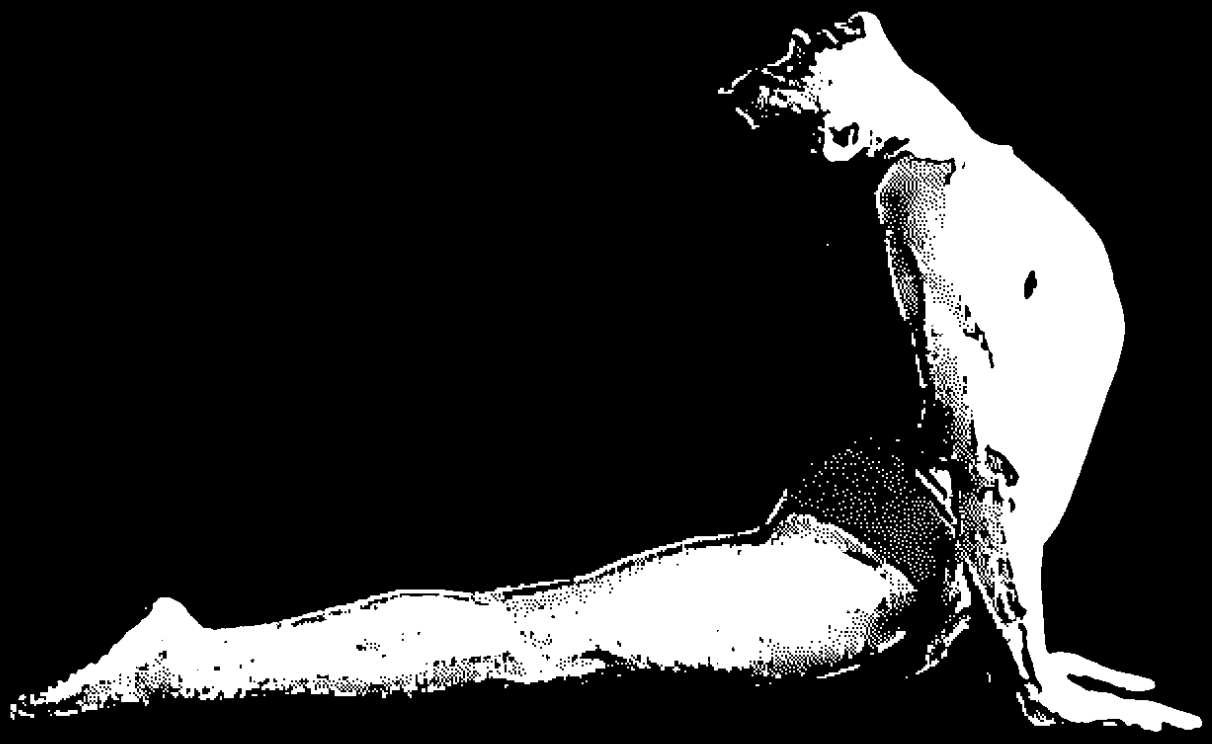


Bhujangasana

Cobra Pose (Variation)

Bhujangasana

Cobra Pose

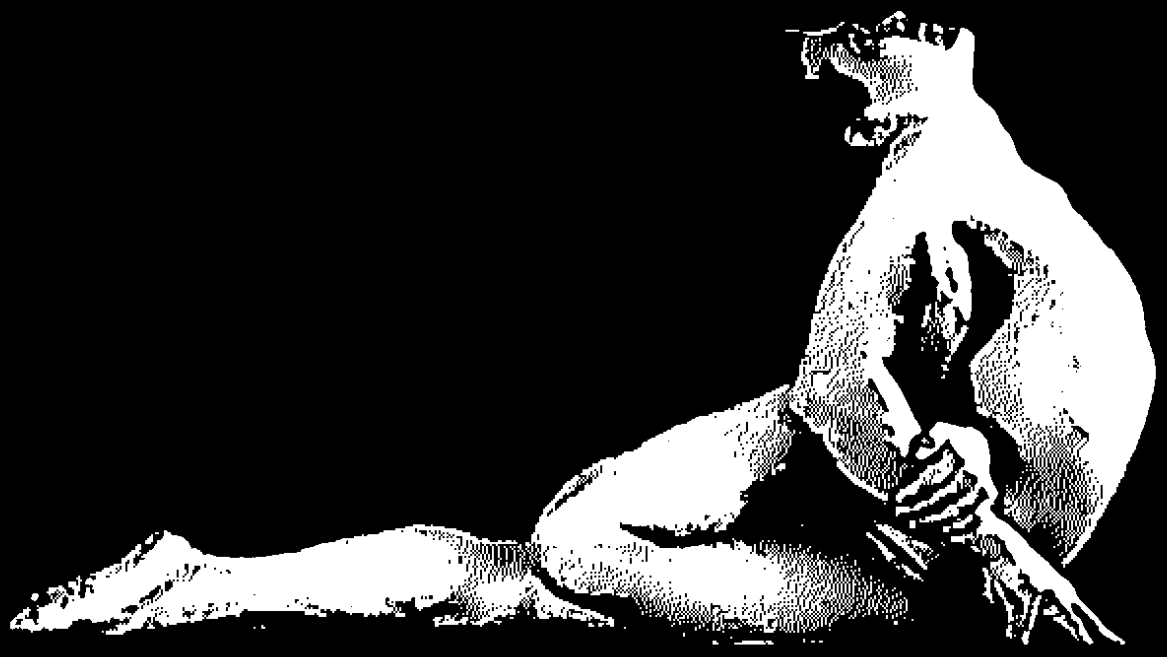


Urdhva-Mukha-Svanasana

Upward Facing Dog Pose

Eka-Pada-Raja-Bhujangasana

One-Leg King Cobra Pose (Preparation)



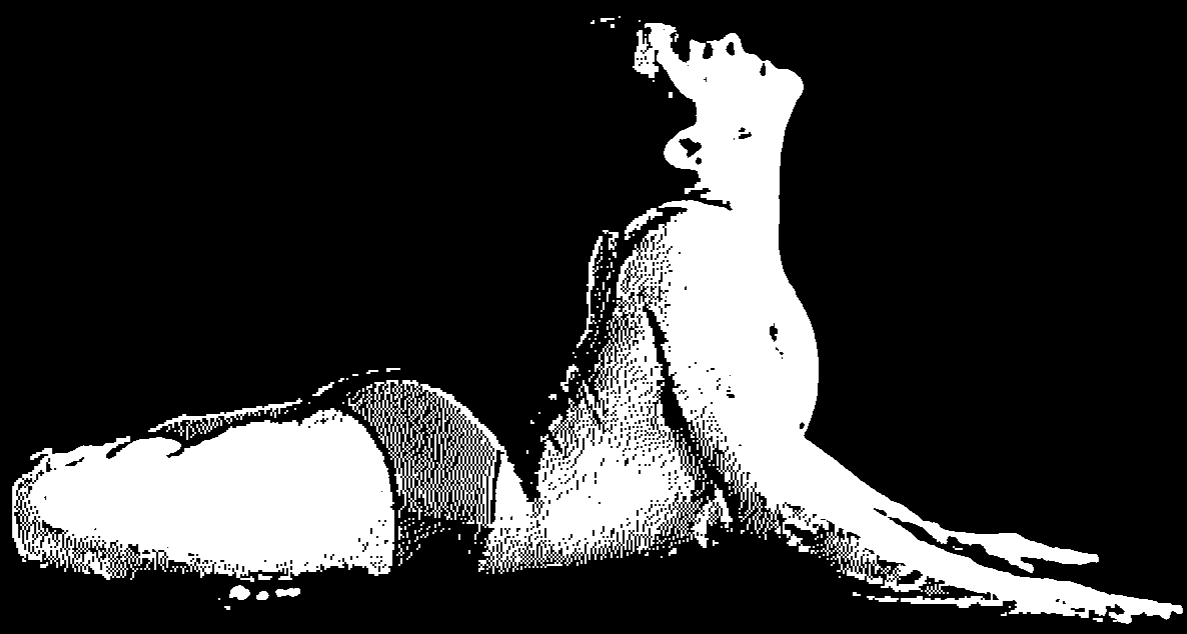
Eka-Pada-Raja-Bhujangasana

One-Leg King Cobra Pose (Preparation)

Raja-Bhujangasana

King Cobra Pose

Raja-Bhujangasana
King Cobra Pose (Variation)



Padma-Bhujangasana

Lotus Cobra Pose (Preparation)

Padma-Bhujangasana

Lotus Cobra Pose

Padma-Bhujangasana
Lotus Cobra Pose (Rear View)

Rajakapotasana

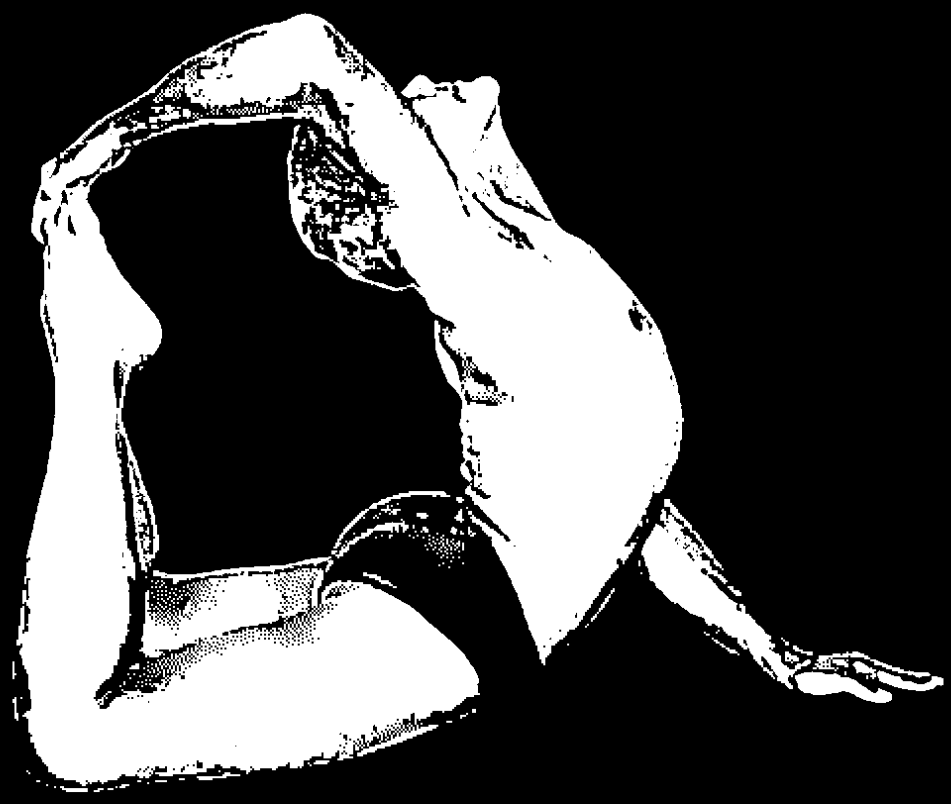
King Pigeon Pose (Preparation)

Rajakapotasana

King Pigeon Pose (Preparation)

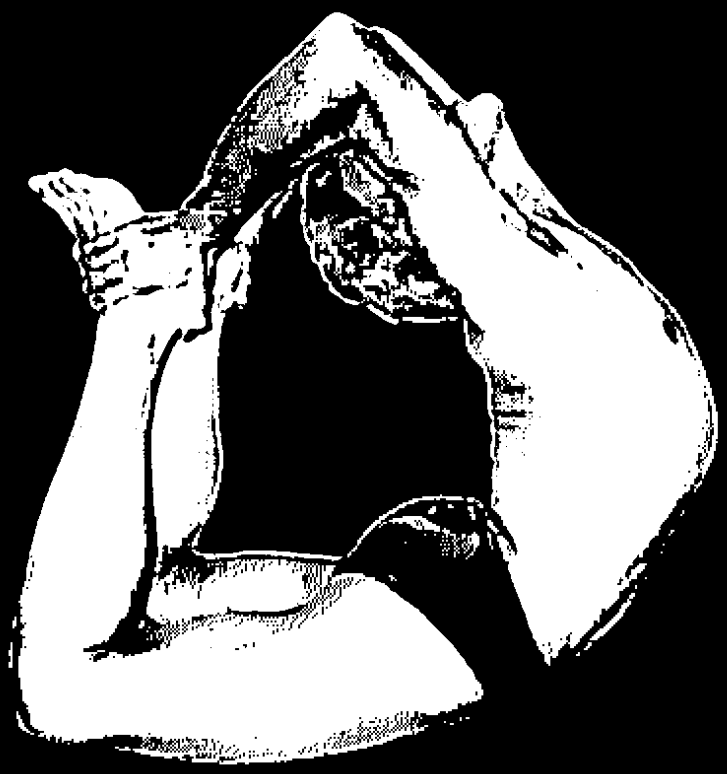
Sukha-Rajakapotasana

Easy King Pigeon Pose



Rajakapotasana

King Pigeon Pose (Preparation)



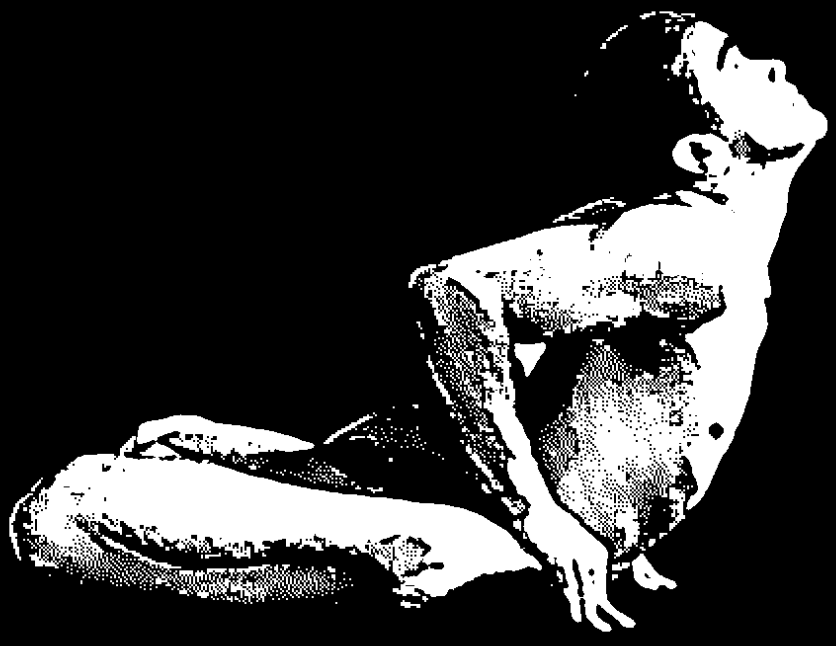
Rajakapotasana
King Pigeon Pose (Preparation)

Rajakapotasana

King Pigeon Pose

Eka-Pada-Shirsha-Rajakapotasana

One Leg to Head Pigeon Pose

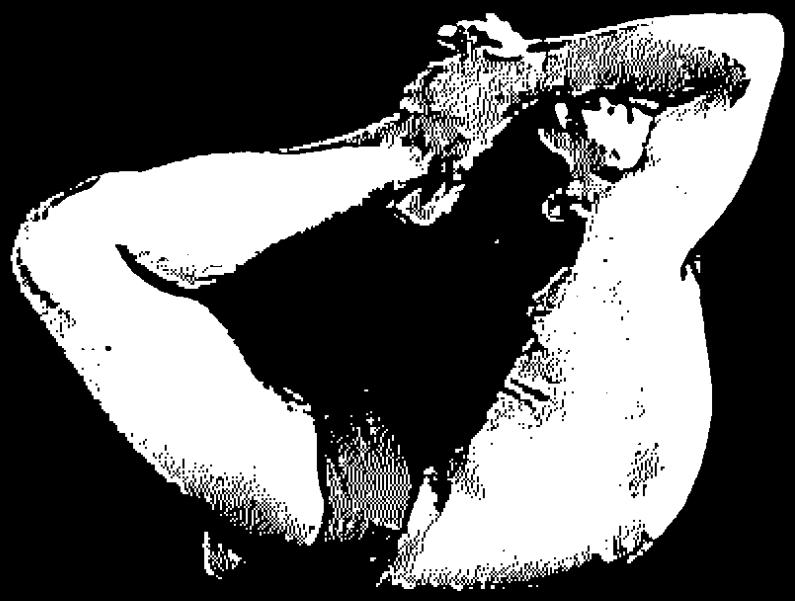


Bhekasana

Frog Pose

Dhanurasana

Bow Pose

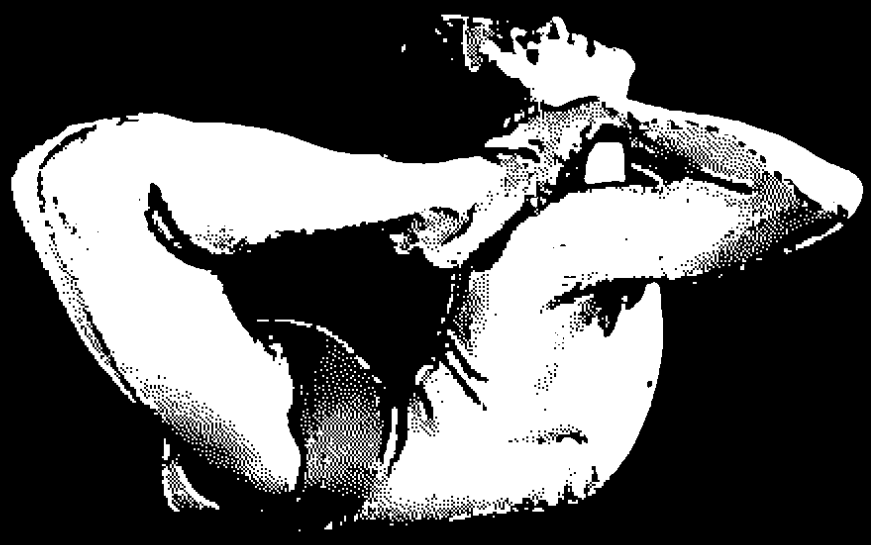


Dhanurasana

Bow Pose (Variation)

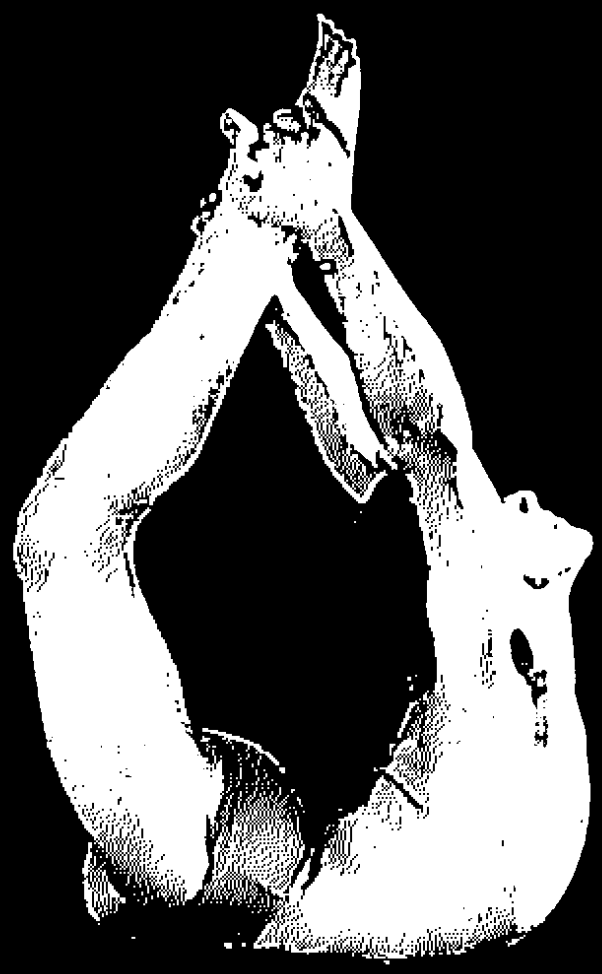
Dhanurasana

Bow Pose (Variation)



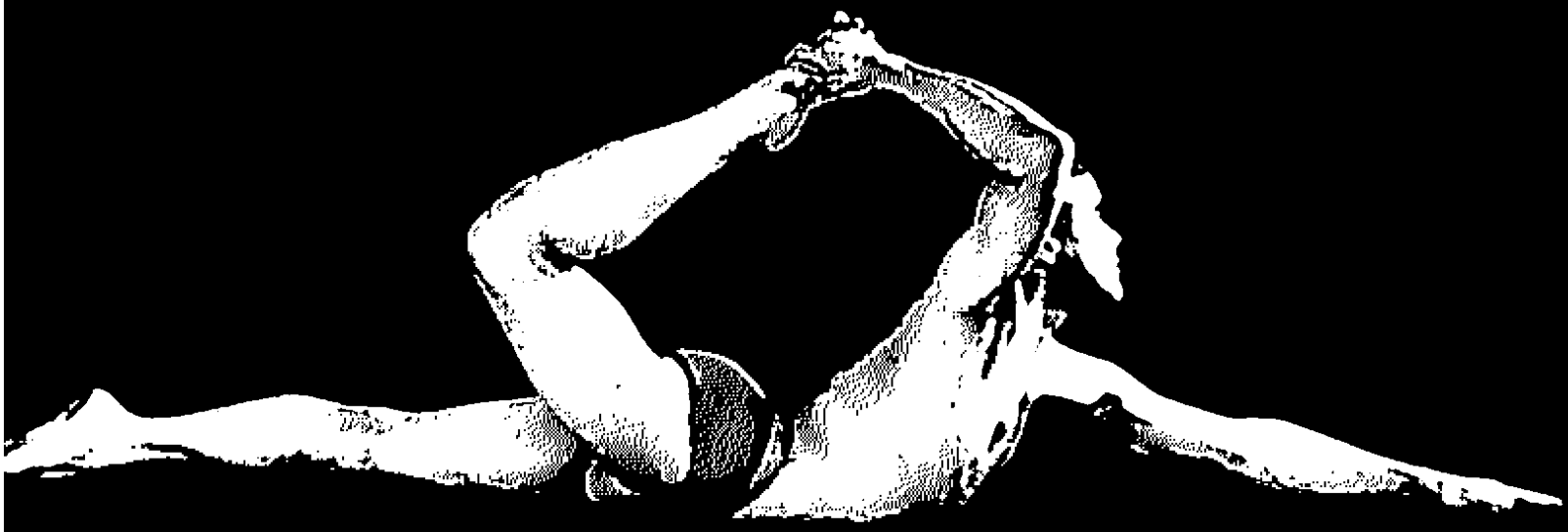
Dhanurasana

Bow Pose (Variation)



Dhanurasana

Bow Pose (Variation)

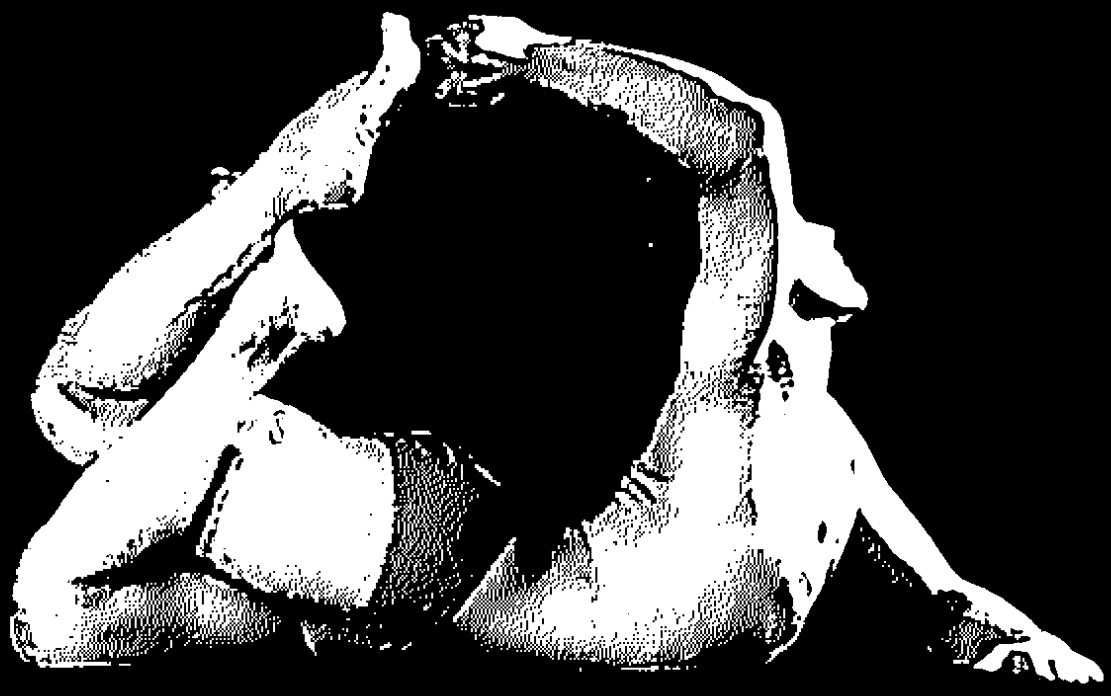


Eka-Pada-Dhanurasana

One Leg Bow Pose

Eka-Pada-Dhanurasana

One Leg Bow Pose (Variation)



Eka-Pada-Dhanurasana

One Leg Bow Pose (Variation)

Dur-Dhanurasana

Difficult Bow Pose

Dur-Dhanurasana

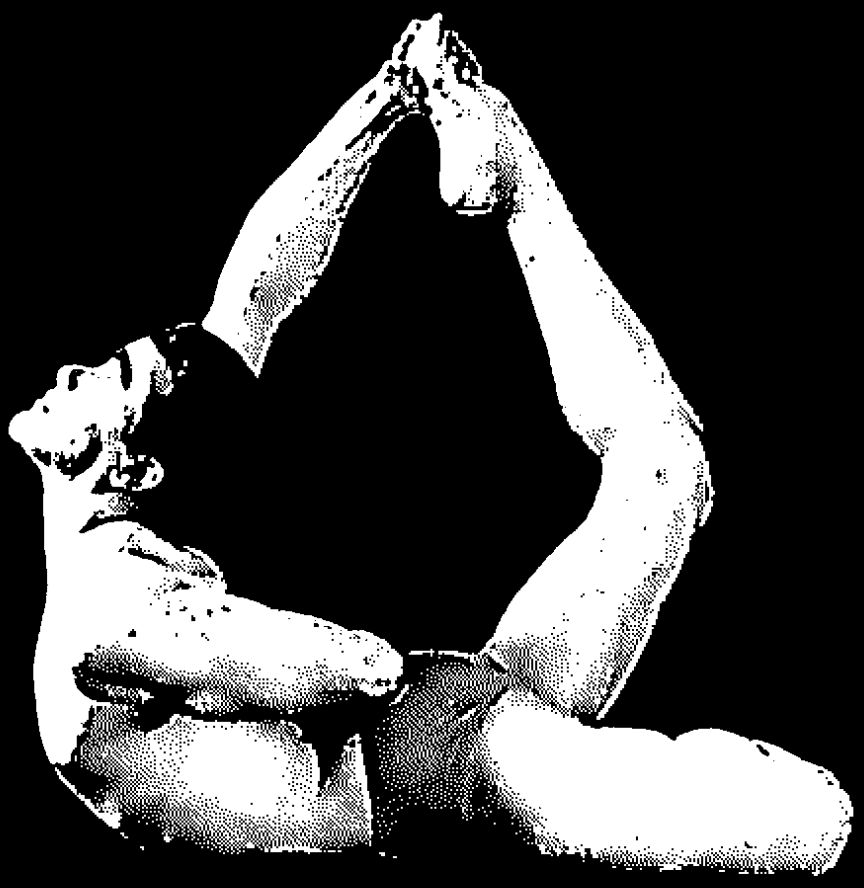
Difficult Bow Pose (Variation)

Kamalasana

Pose of the Goddess Kamala

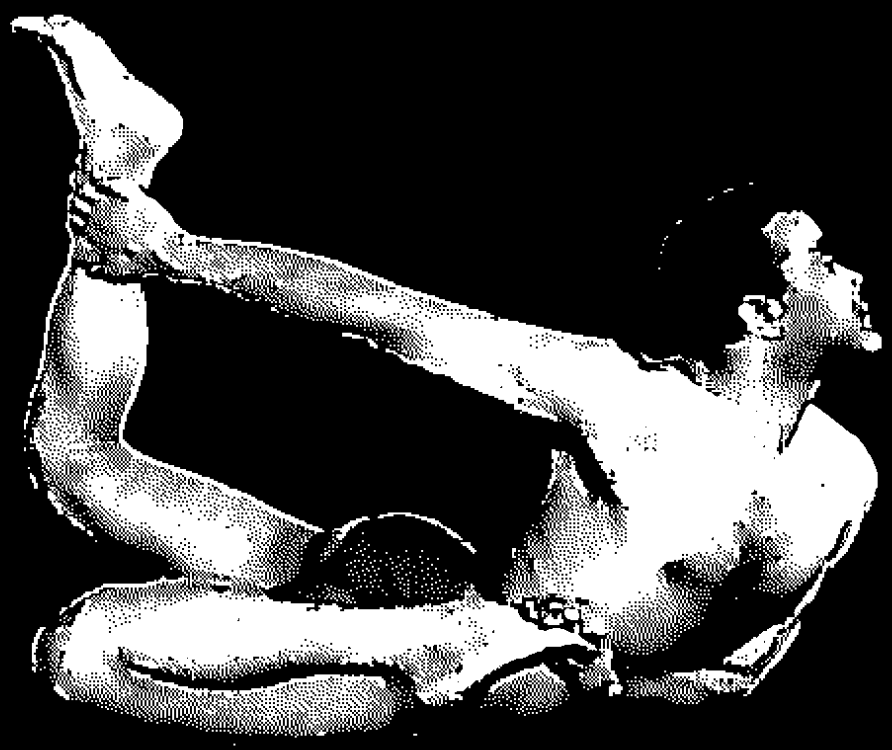
Gherandasana

Pose of the Sage Gheranda (Left View)



Gherandasana

Pose of the Sage Gheranda (Right View)



Gherandasana

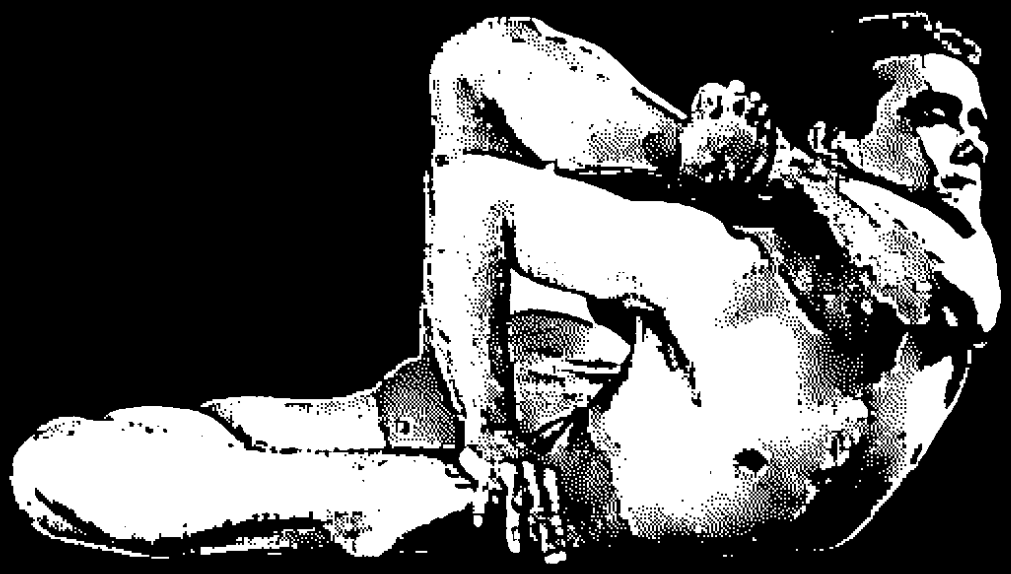
Pose of the Sage Gheranda (Variation)

Gherandasana

Pose of the Sage Gheranda (Variation)

Gherandasana

Pose of the Sage Gheranda (Variation)

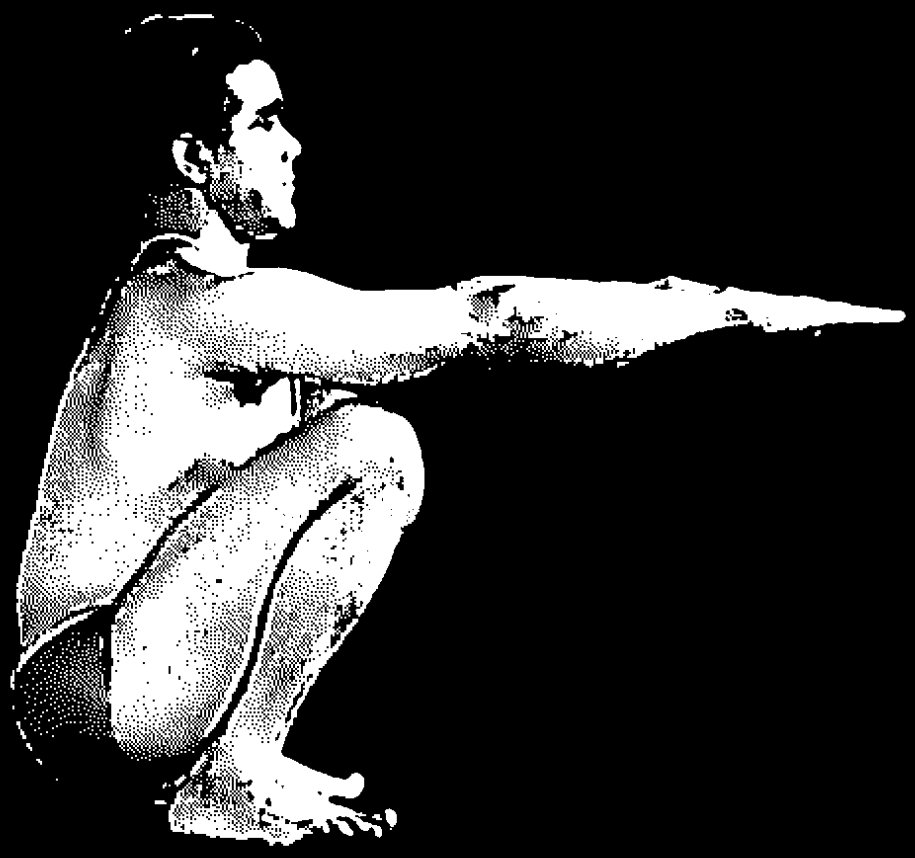


Gherandasana

Pose of the Sage Gheranda (Variation)

Kukkutasana

Cock Pose

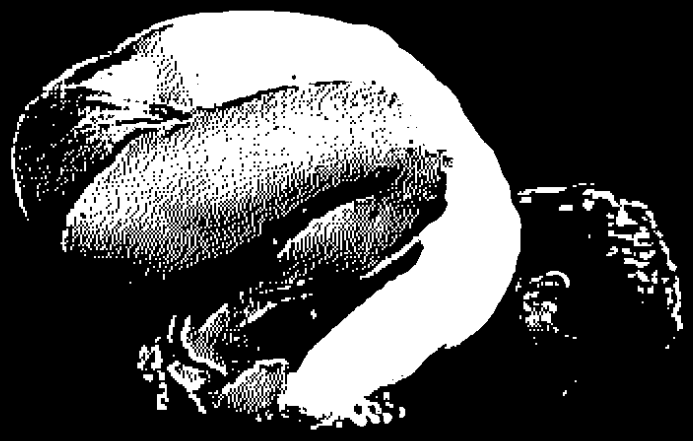


Malasana

Garland Pose (Preparation)

Malasana

Garland Pose



Malasana

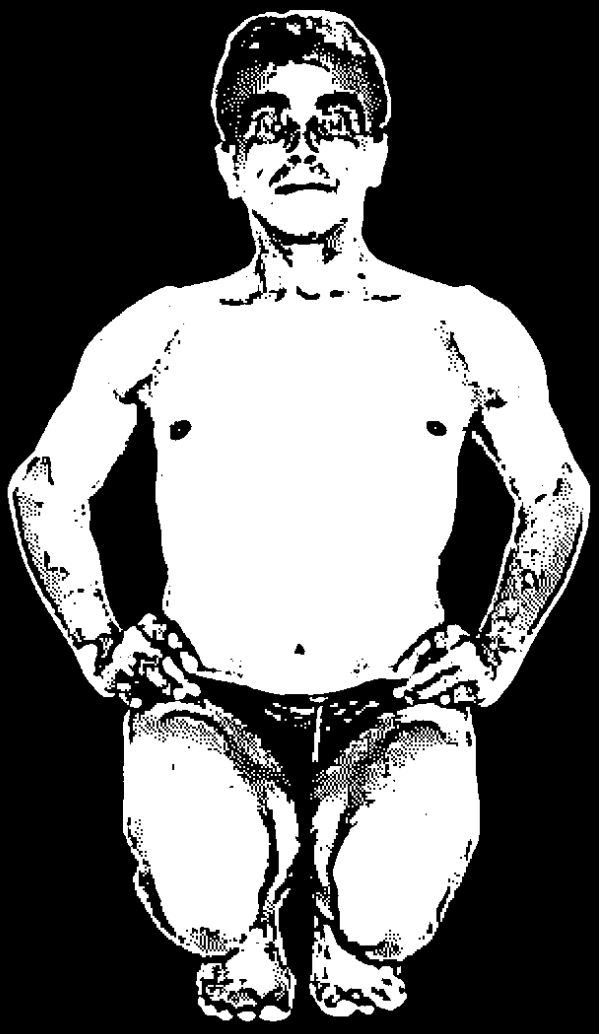
Garland Pose (Variation)

Upavistha-Prapadasana

Crouching Tiptoe Pose

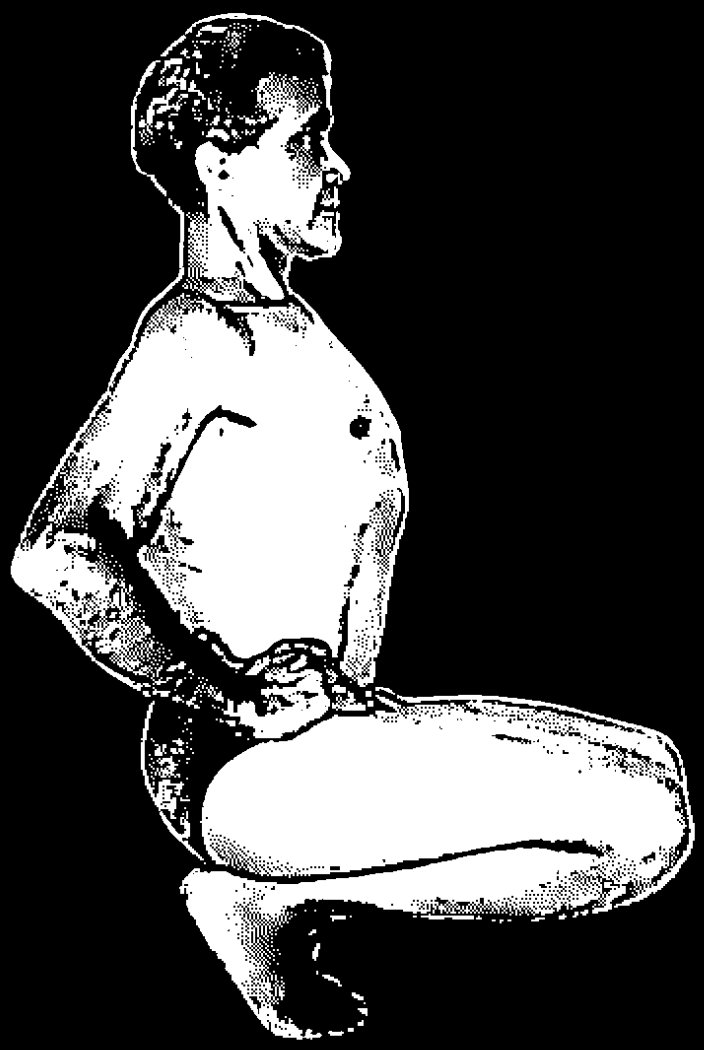
Prapadasana

Tiptoe Pose (Preparation)



Prapadasana

Tiptoe Pose (Front View)



Prapadasana

Tiptoe Pose (Side View)

Prapadasana

Tiptoe Pose (Preparation)

Prapadasana

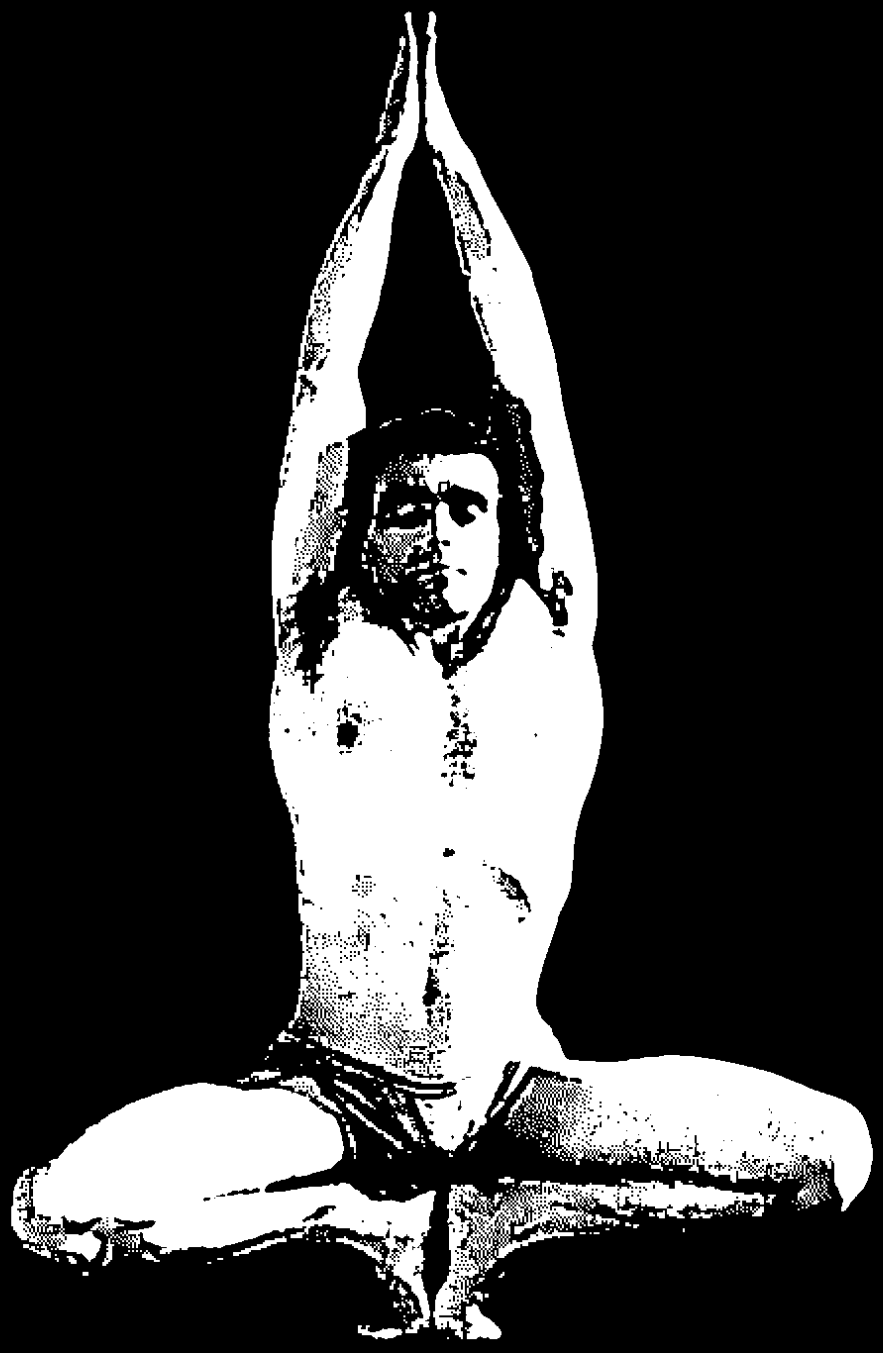
Tiptoe Pose

Prapadasana

Tiptoe Pose (Preparation)

Prapadasana

Tiptoe Pose (Variation)



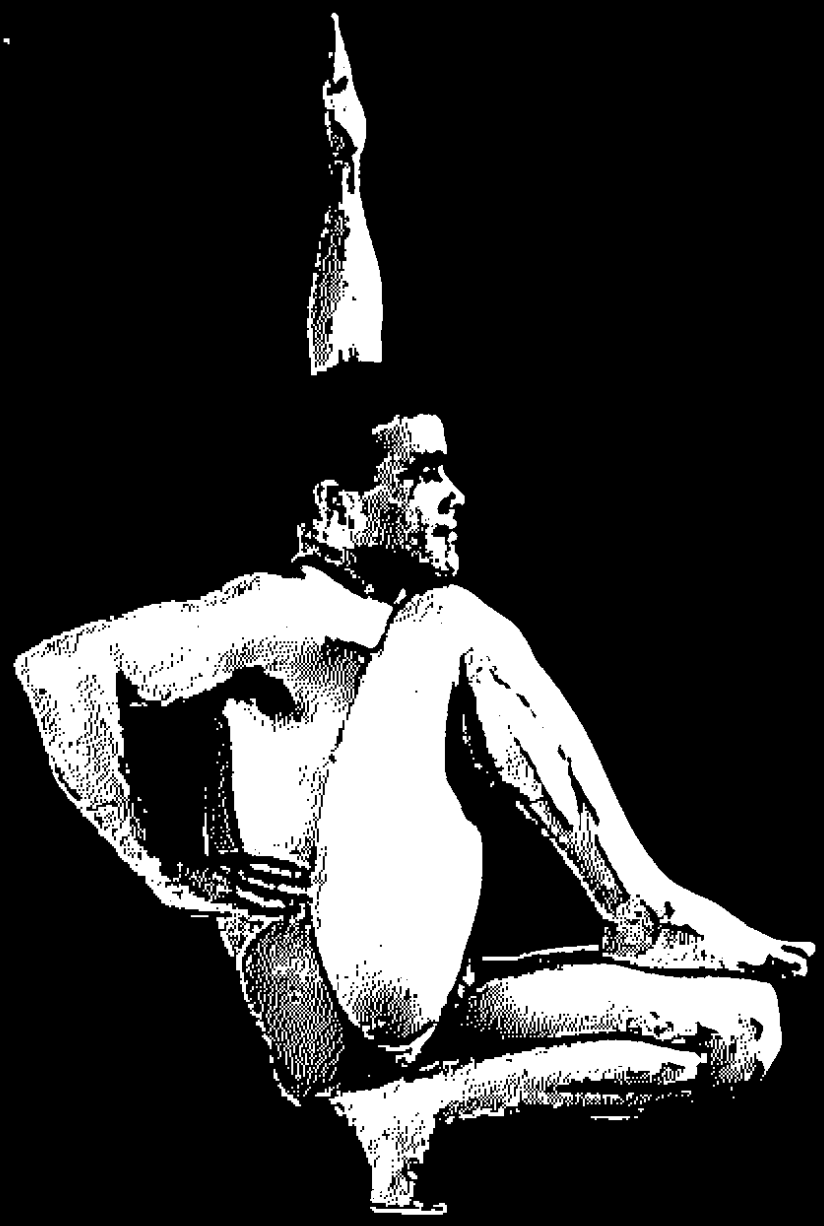
Prapadasana

Tiptoe Pose (Variation)

Ardha-Prapadasana
Half-Bound Tiptoe Pose

Ardha-Prapadasana

Half-Bound Tiptoe Pose

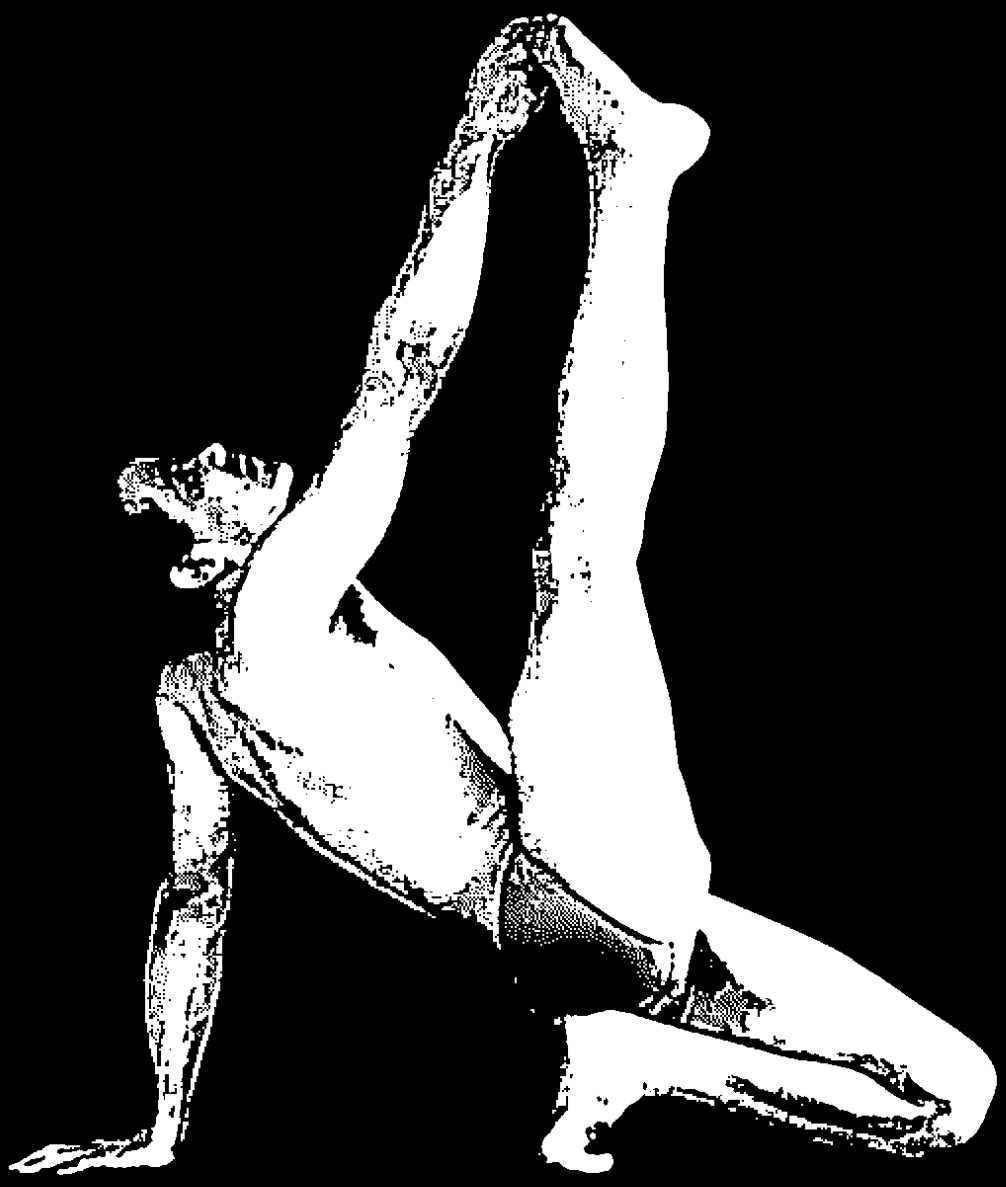


Prapadasana

Tiptoe Pose (Variation)

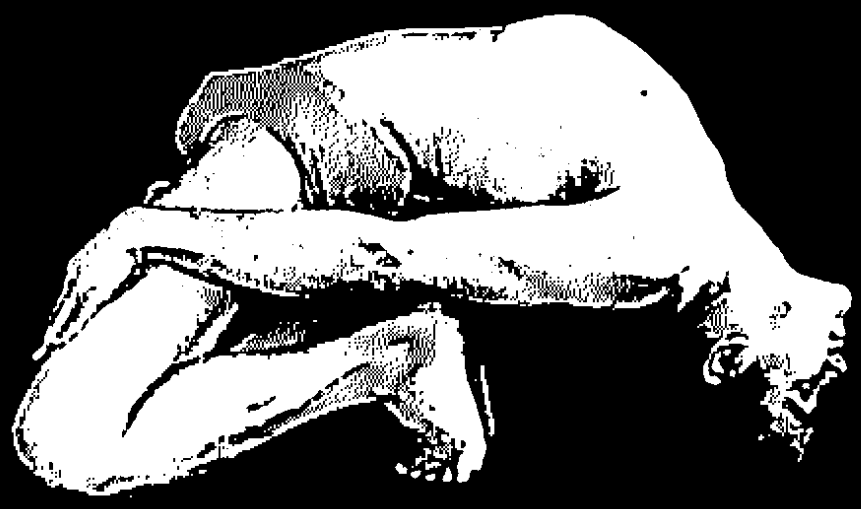
Prapadasana

Tiptoe Pose (Variation)



Prapadasana
Tiptoe Pose (Variation)

Prapadasana
Tiptoe Pose (Variation)

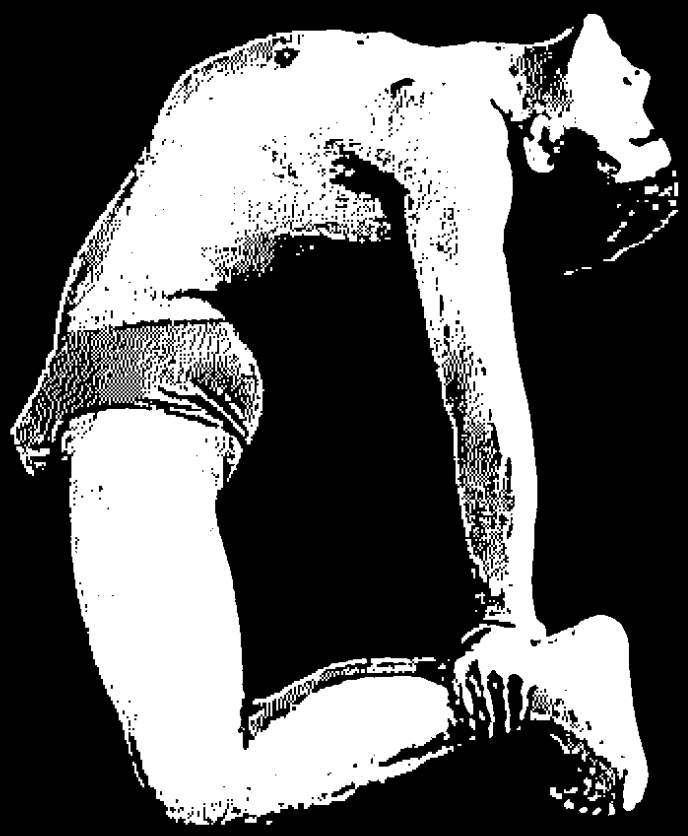


Prapada-Setu-Bhandasana

Tiptoe Bridge-Forming Pose

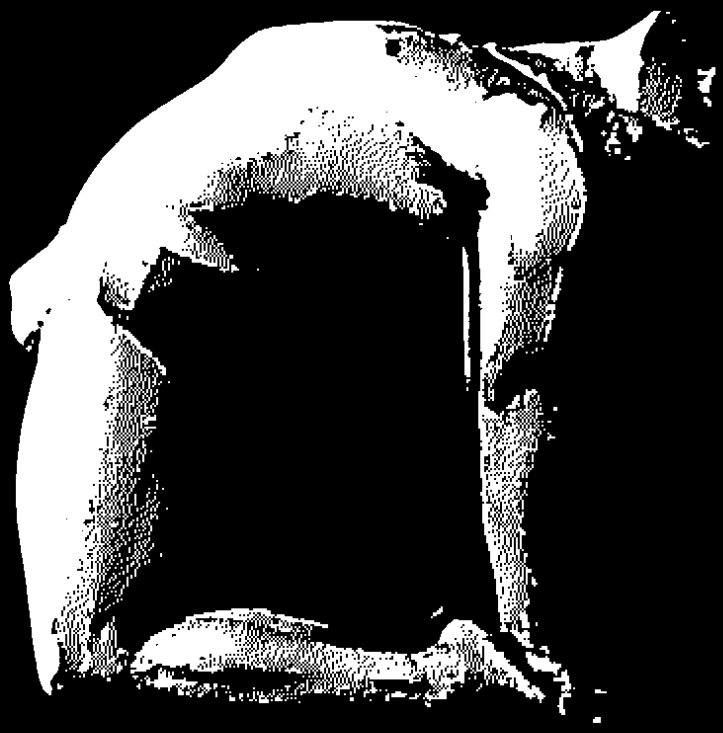
Ushtrasana

Camel Pose (Variation)



Ushtrasana

Camel Pose (Variation)



Ushtrasana

Camel Pose

Kapotasana

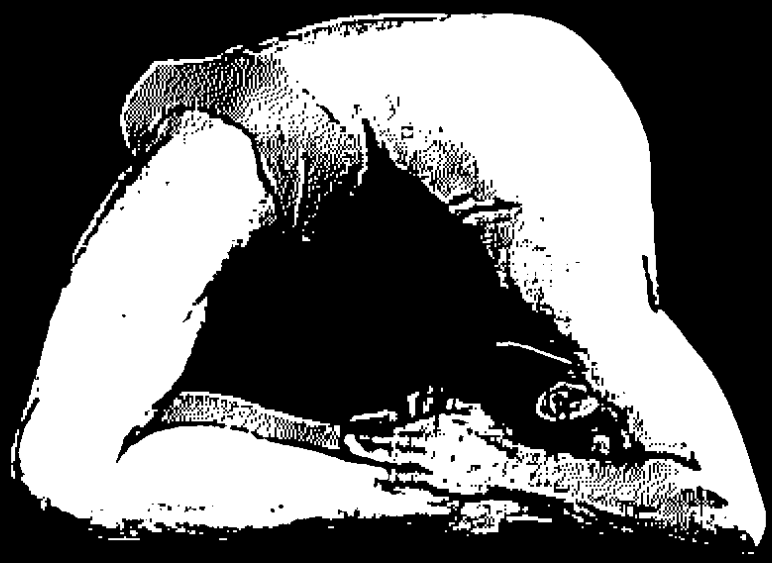
Pigeon Pose (Preparation)

Kapotasana

Pigeon Pose (Preparation)

Kapotasana

Pigeon Pose (Preparation)



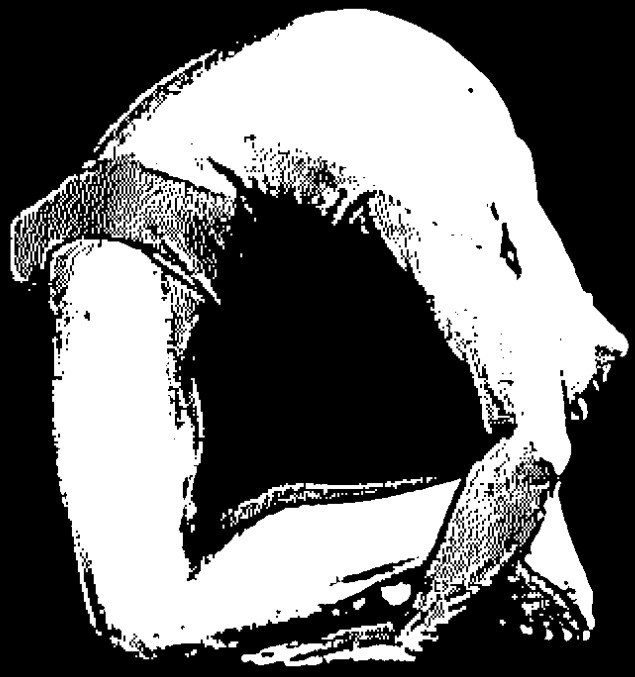
Kapotasana

Pigeon Pose

Kapotasana

Pigeon Pose (Variation)

Laghu-Vajrasana
Graceful Thunderbolt Pose



Laghu-Chakrasana

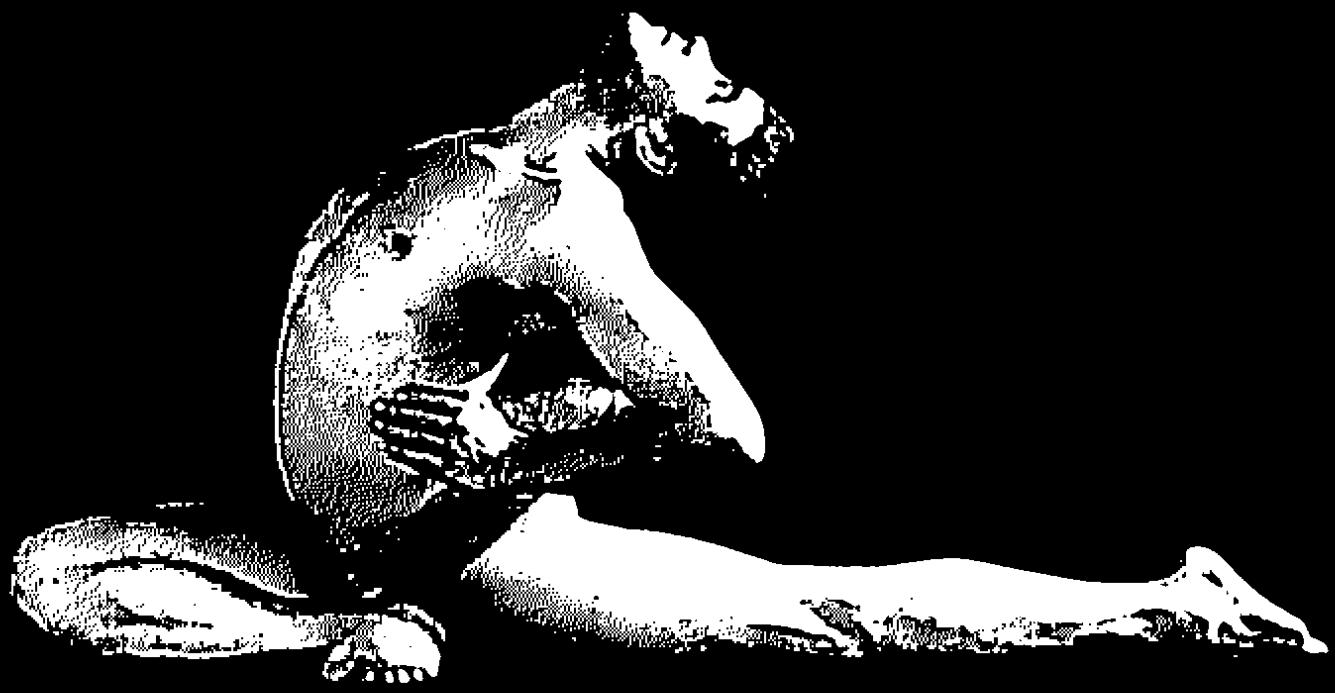
Little Wheel Pose (Variation)

Laghu-Chakrasana

Little Wheel Pose

Laghu-Chakrasana

Little Wheel Pose (Variation)

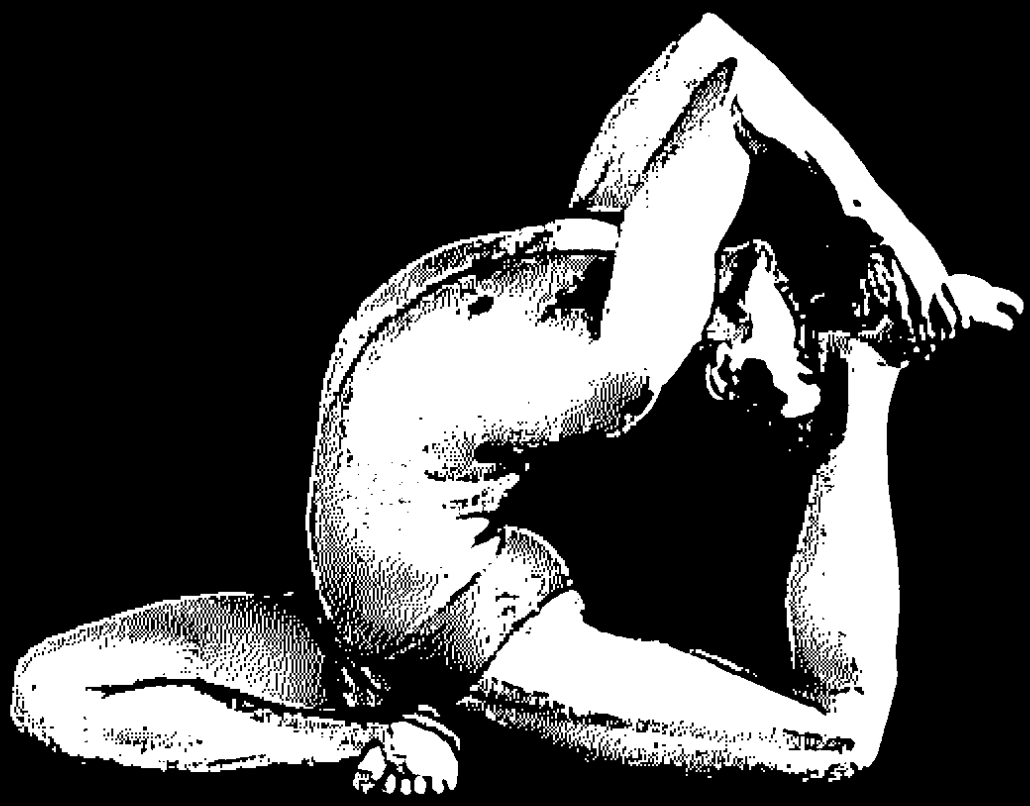


Eka-Pada-Kapotasana

One-Leg Pigeon Pose (Preparation)

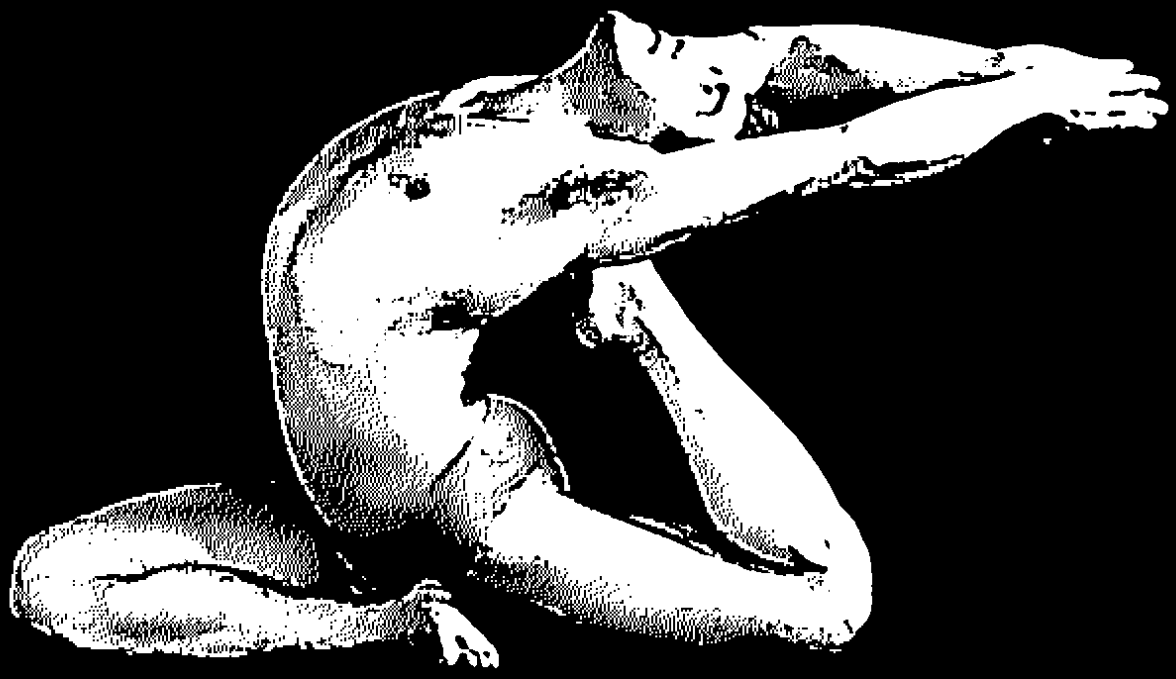
Eka-Pada-Kapotasana

One-Leg Pigeon Pose



Eka-Pada-Kapotasana

One-Leg Pigeon Pose (Variation)



Eka-Pada-Kapotasana

One-Leg Pigeon Pose (Variation)

Eka-Pada-Kapotasana

One-Leg Pigeon Pose (Variation)

Valakhilyasana

Pose of the Heavenly Spirits

Raja-Valakhilyasana

Kingly Pose of the Heavenly Spirits

Eka-Pada-Rajakapotasana

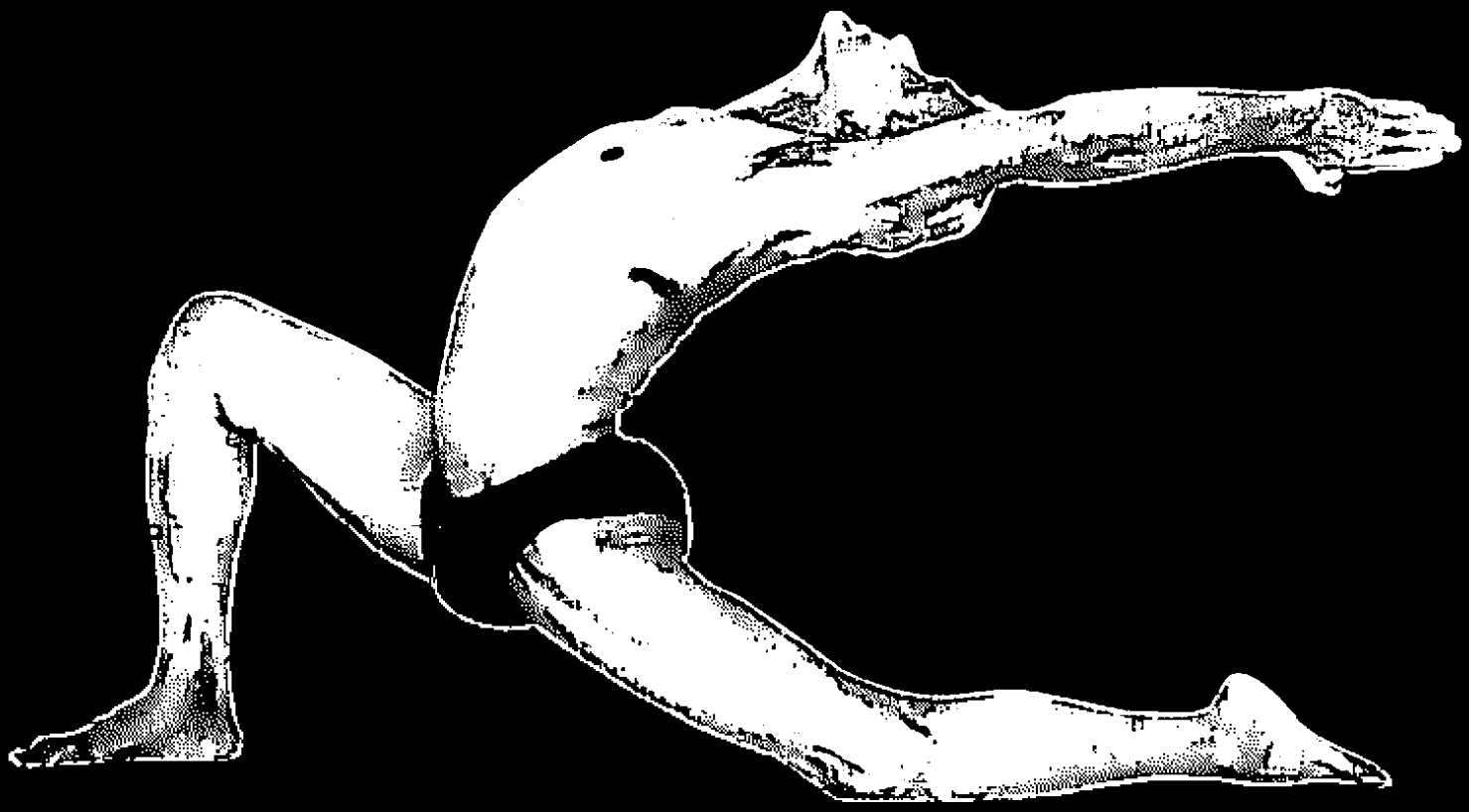
One-Leg King Pigeon Pose (Preparation)

Eka-Pada-Rajakapotasana

One-Leg King Pigeon Pose

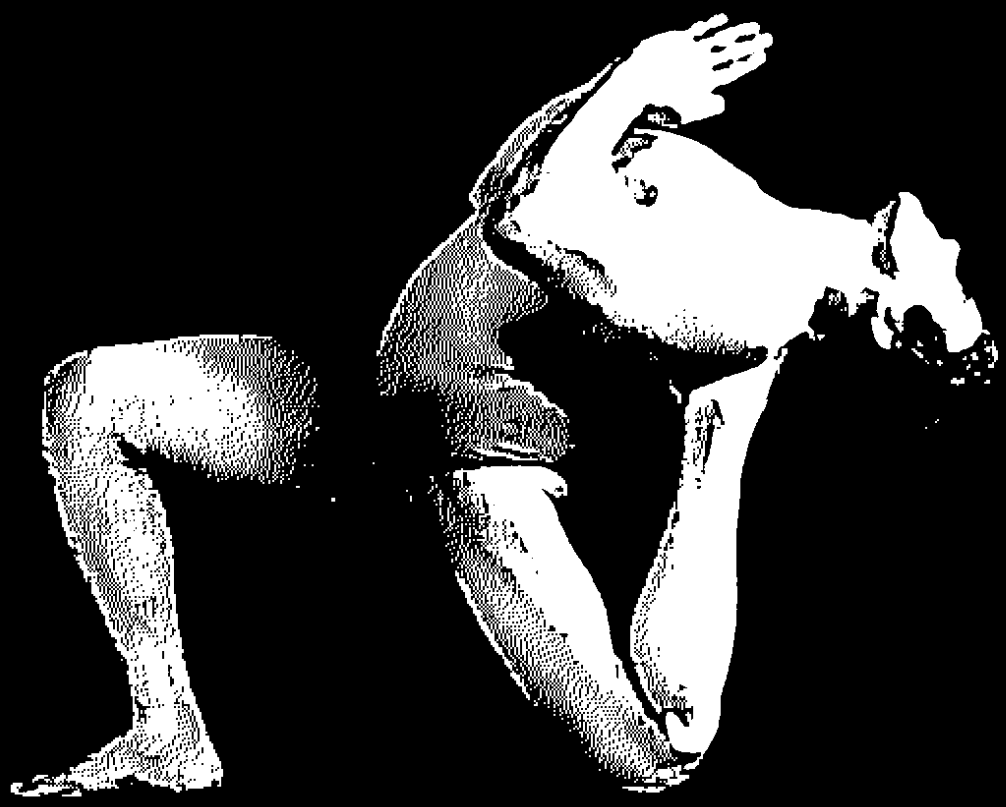
Eka-Pada-Rajakapotasana

One-Leg King Pigeon Pose (Variation)



Kapyasana

Monkey Pose



Gaivasana

Chain Pose (Preparation)

Gaivasana

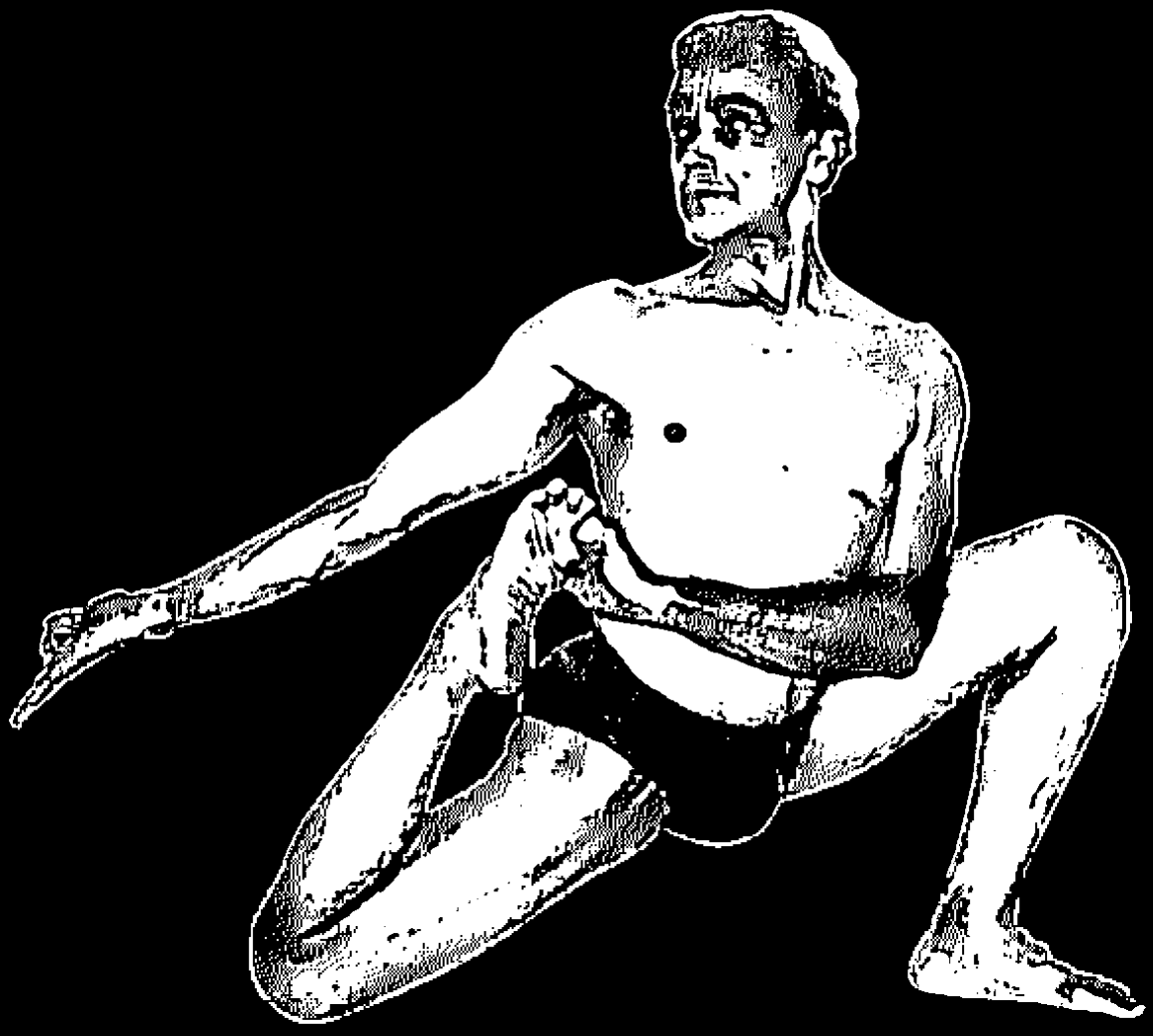
Chain Pose (Preparation)

Gaivasana

Chain Pose

Gaivasana

Chain Pose (Variation)

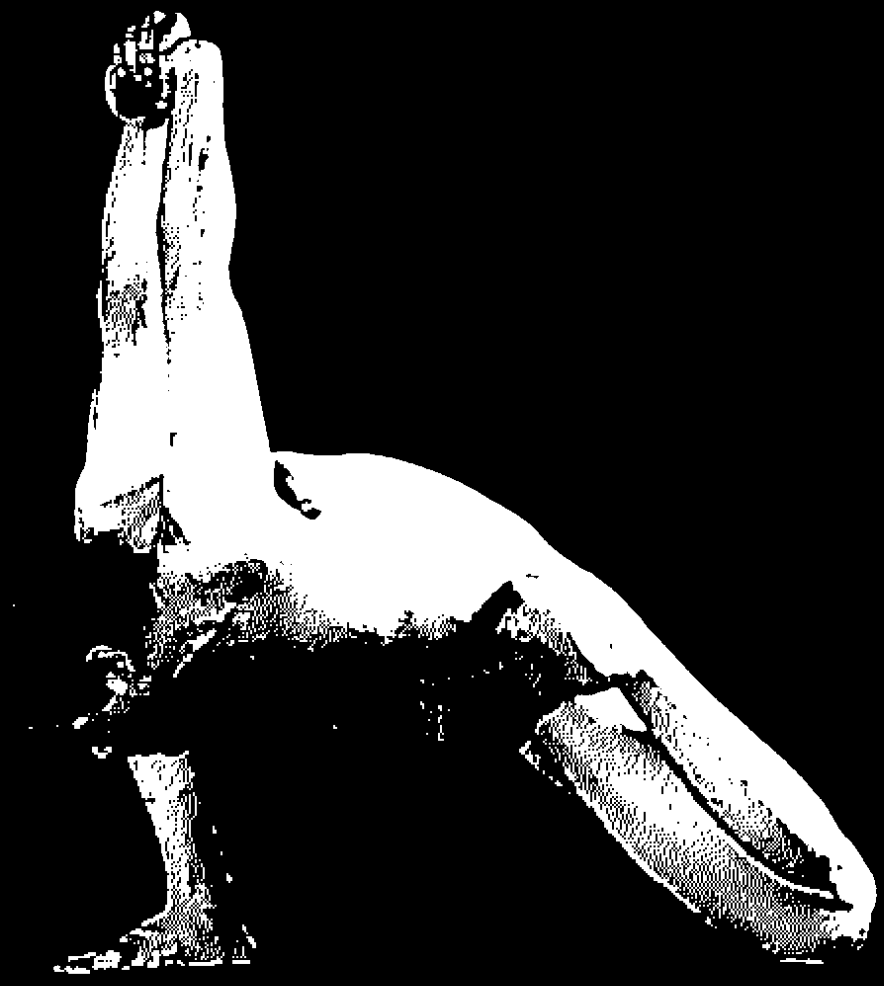


Kuntasana

Spear Pose

Kuntasana

Spear Pose



Kulphasana

Ankle Stretch Pose

Ganda-Bherundasana
Bird Pose (Preparation)

Ganda-Bherundasana

Bird Pose

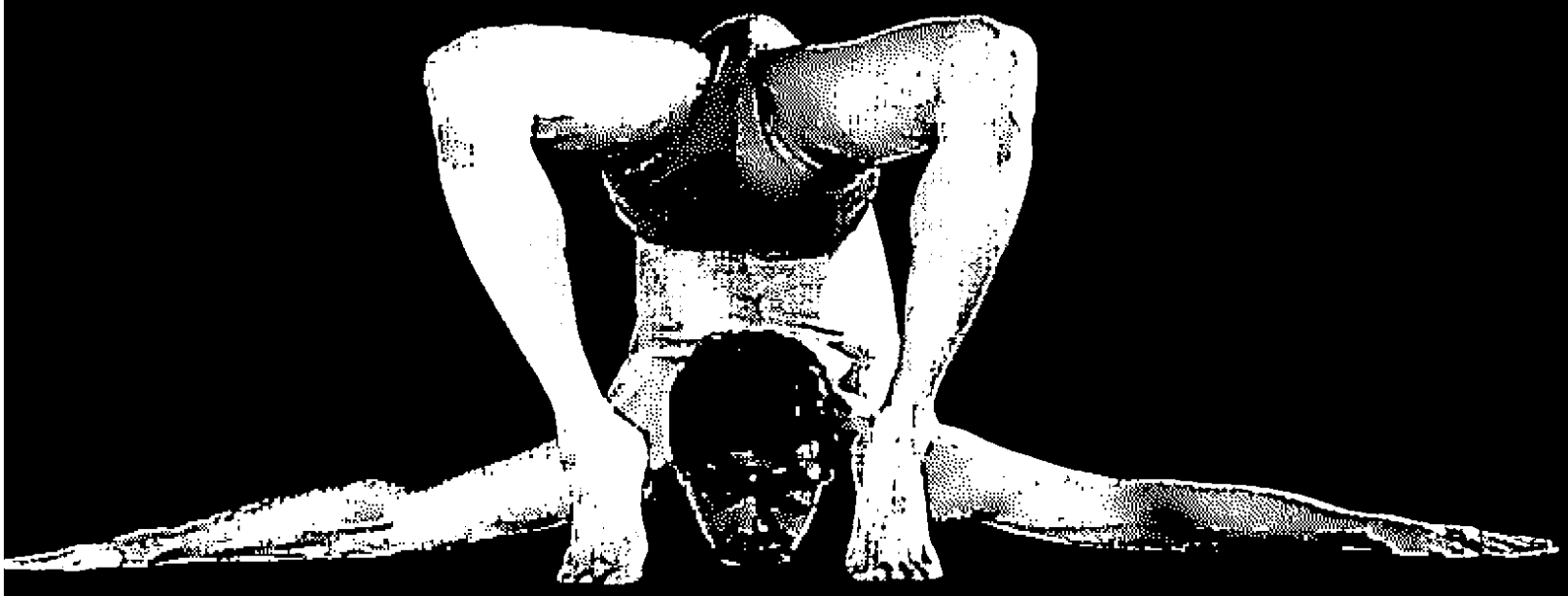
Ganda-Bherundasana
Bird Pose (Side View)

Ganda-Bherundasana

Bird Pose (Front View)

Ganda-Bherundasana

Bird Pose (Variation)

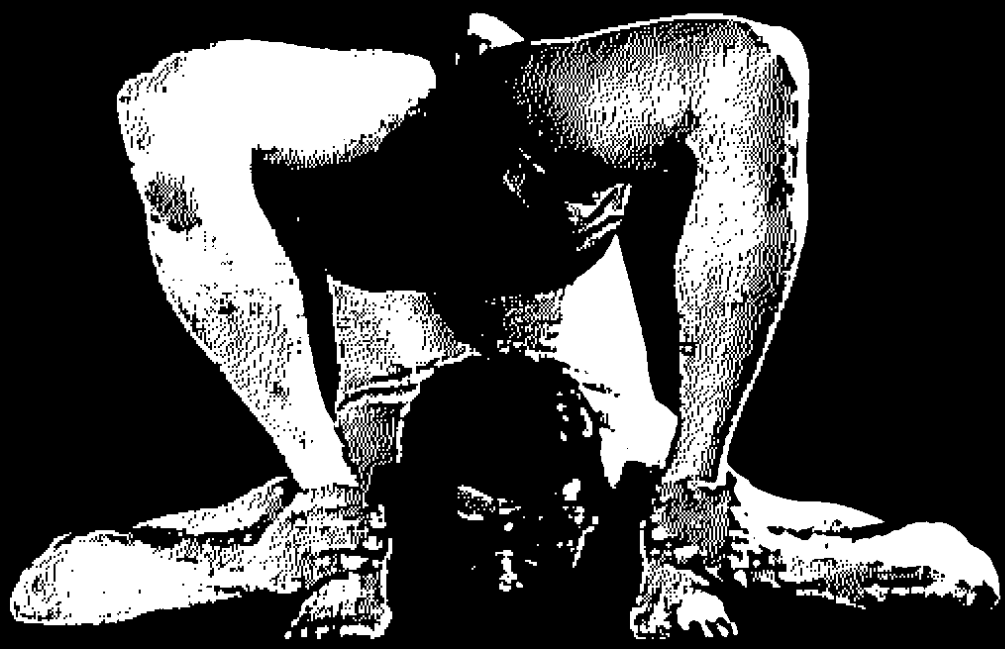


Ganda-Bherundasana

Bird Pose (Variation)

Ganda-Bherundasana

Bird Pose (Variation)

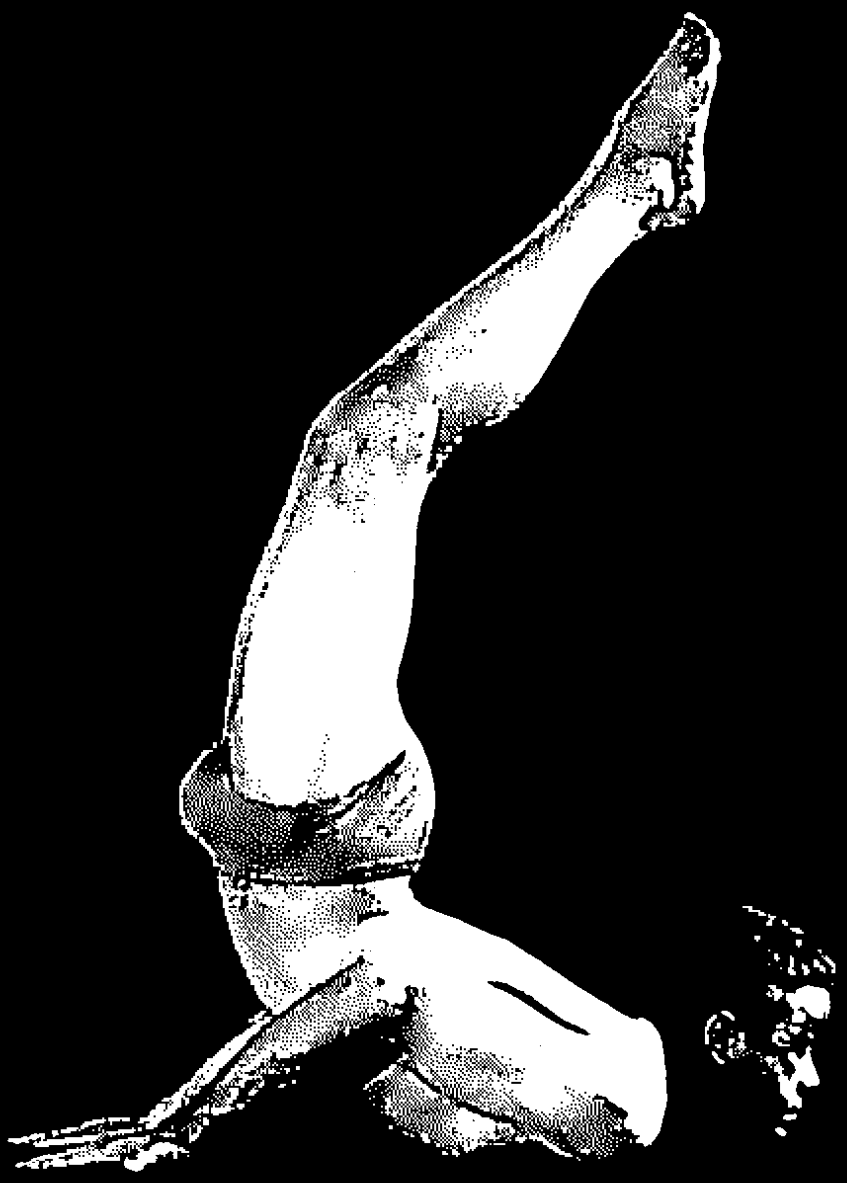


Ganda-Bherundasana

Bird Pose (Variation)

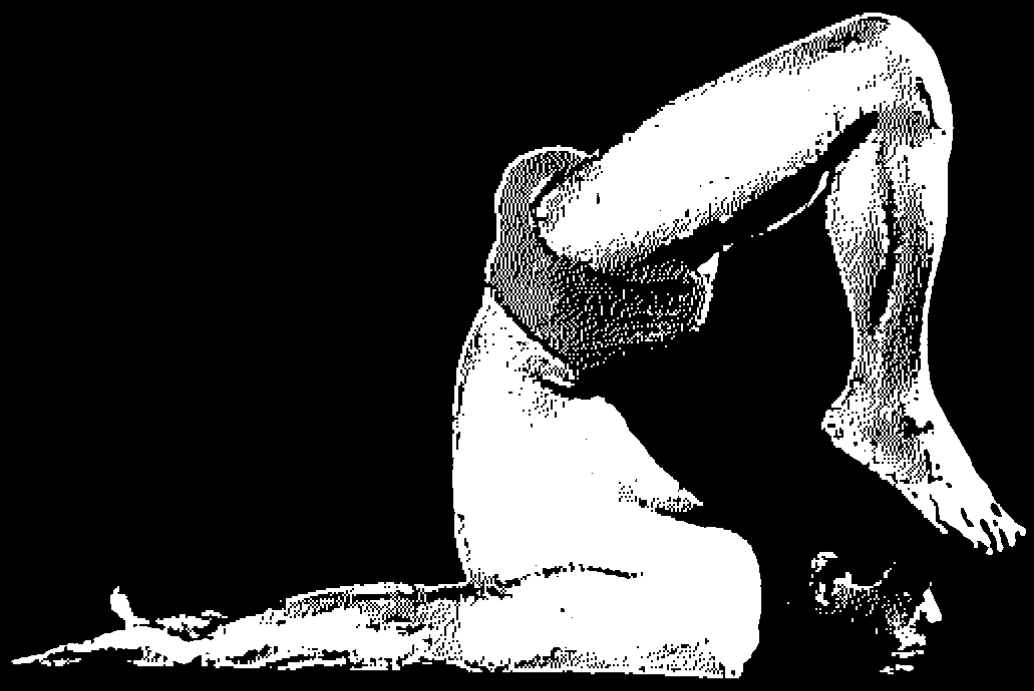
Shalabhasana

Locust Pose (Preparation)



Shalabhasana

Locust Pose



Viparita-Shalabhasana

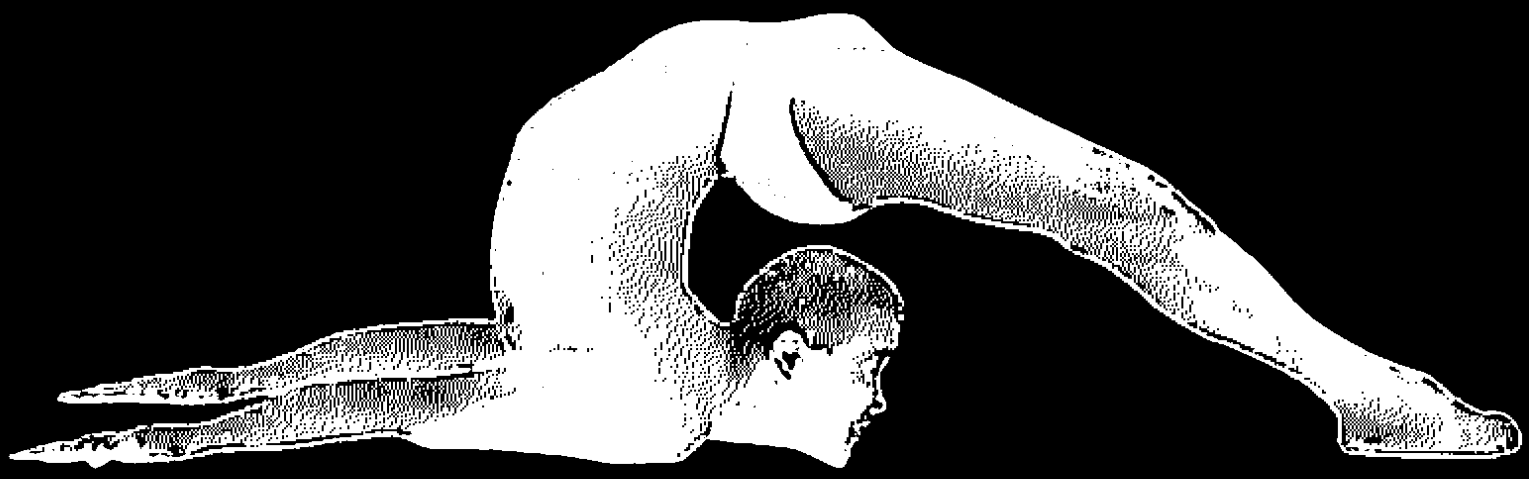
Inverted Locust Pose

Viparita-Shalabhasana

Inverted Locust Pose (Variation)

Viparita-Shalabhasana

Inverted Locust Pose (Variation)

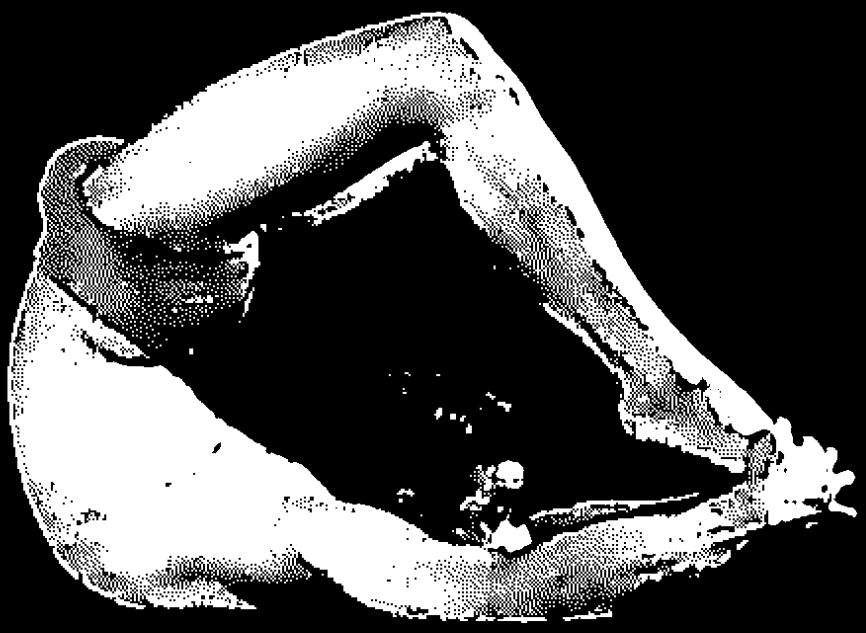


Viparita-Shalabhasana

Inverted Locust Pose

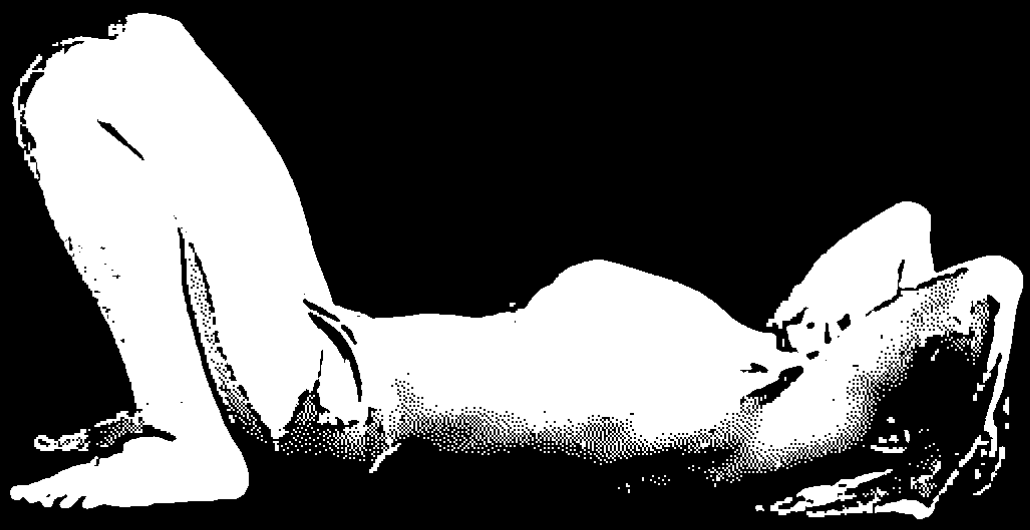
Viparita-Shalabhasana

Inverted Locust Pose (Variation)



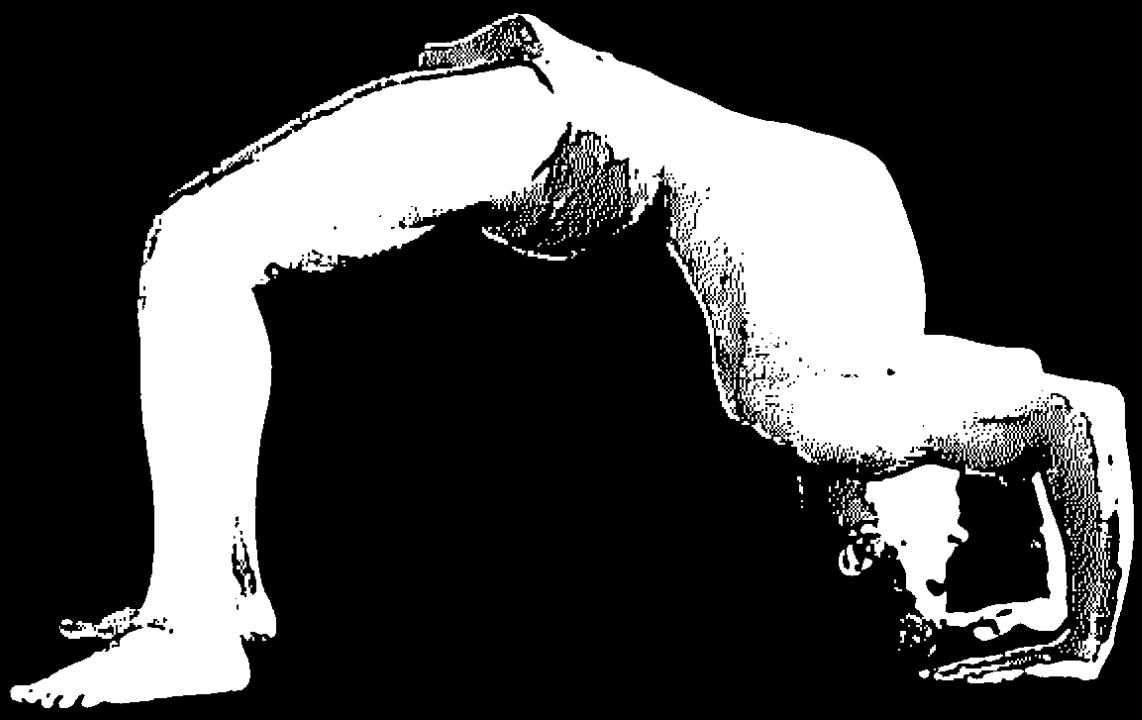
Viparita-Shalabhasana

Inverted Locust Pose (Variation)



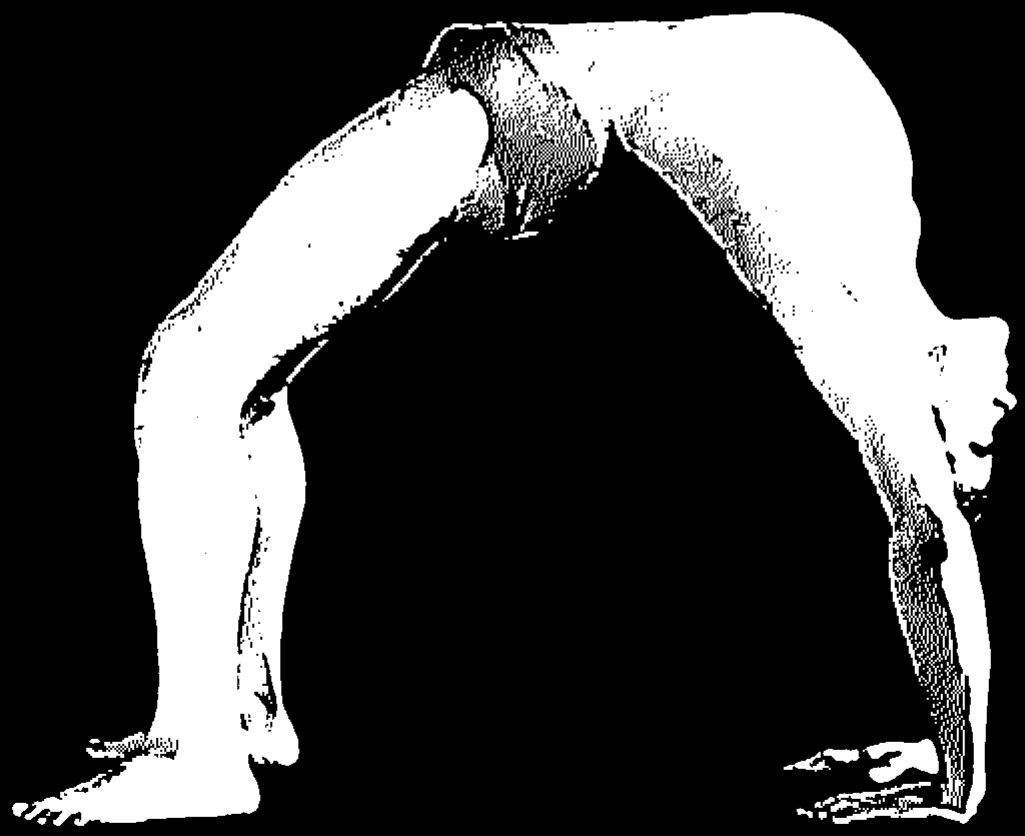
Urdhva-Dhanurasana

Raised Bow Pose (Preparation)



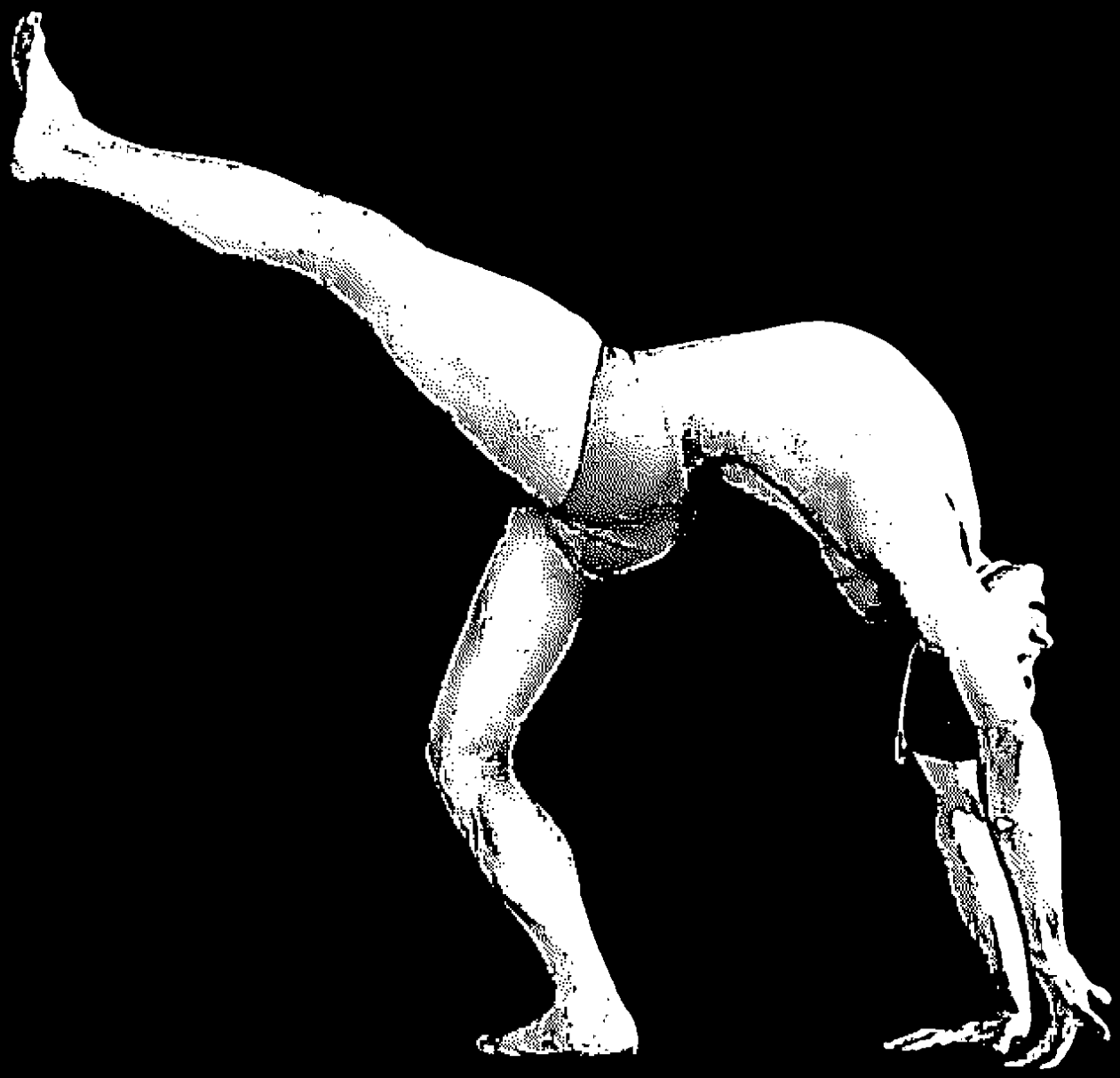
Urdhva-Dhanurasana

Raised Bow Pose (Preparation)



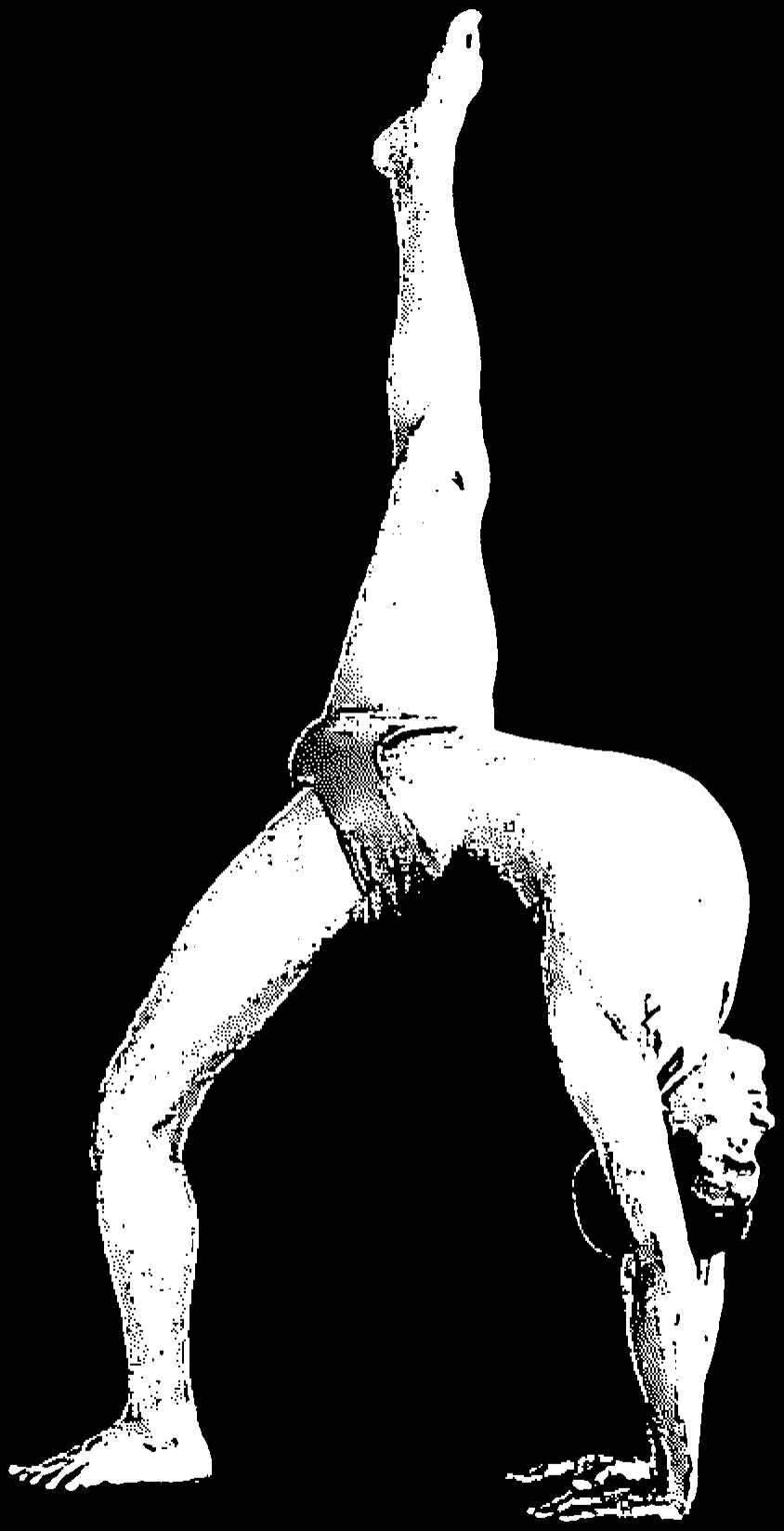
Urdhva-Dhanurasana

Raised Bow Pose



Eka-Pada-Urdhva-Dhanurasana

One-Leg Raised Bow Pose (Preparation)

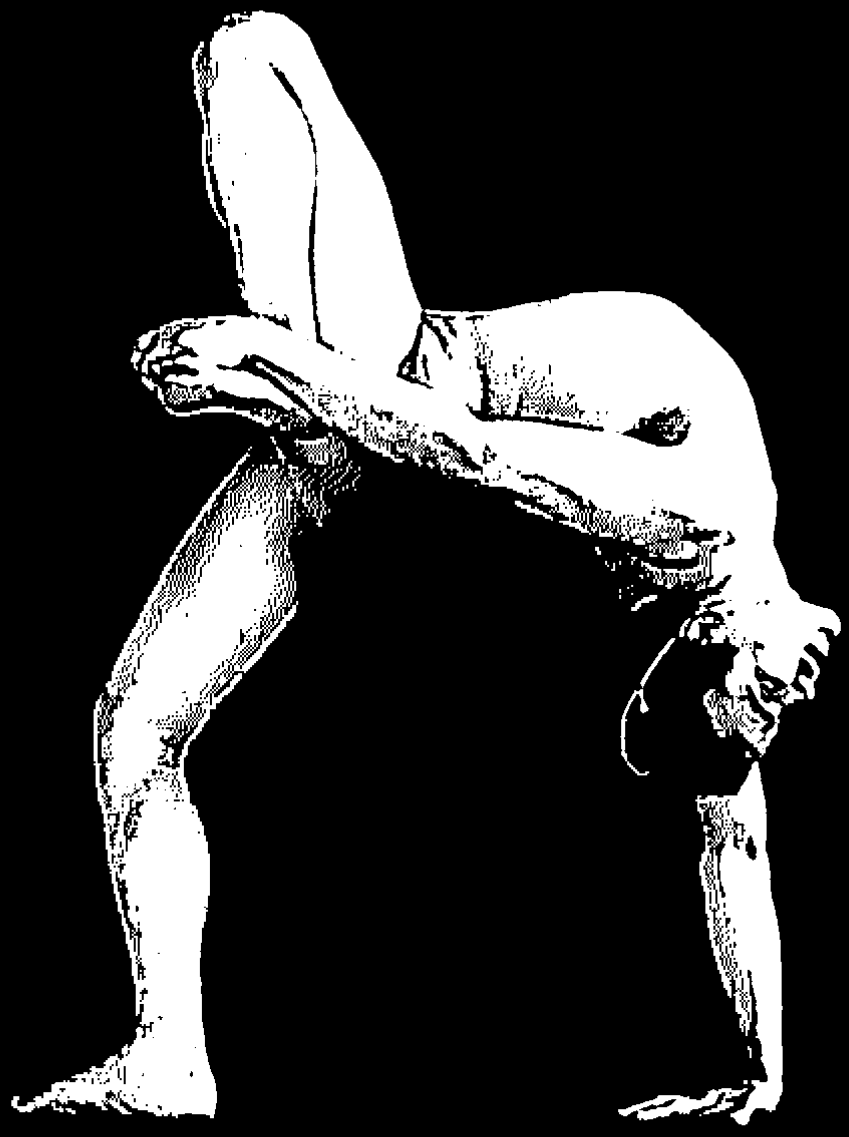


Eka-Pada-Urdhva-Dhanurasana

One-Leg Raised Bow Pose

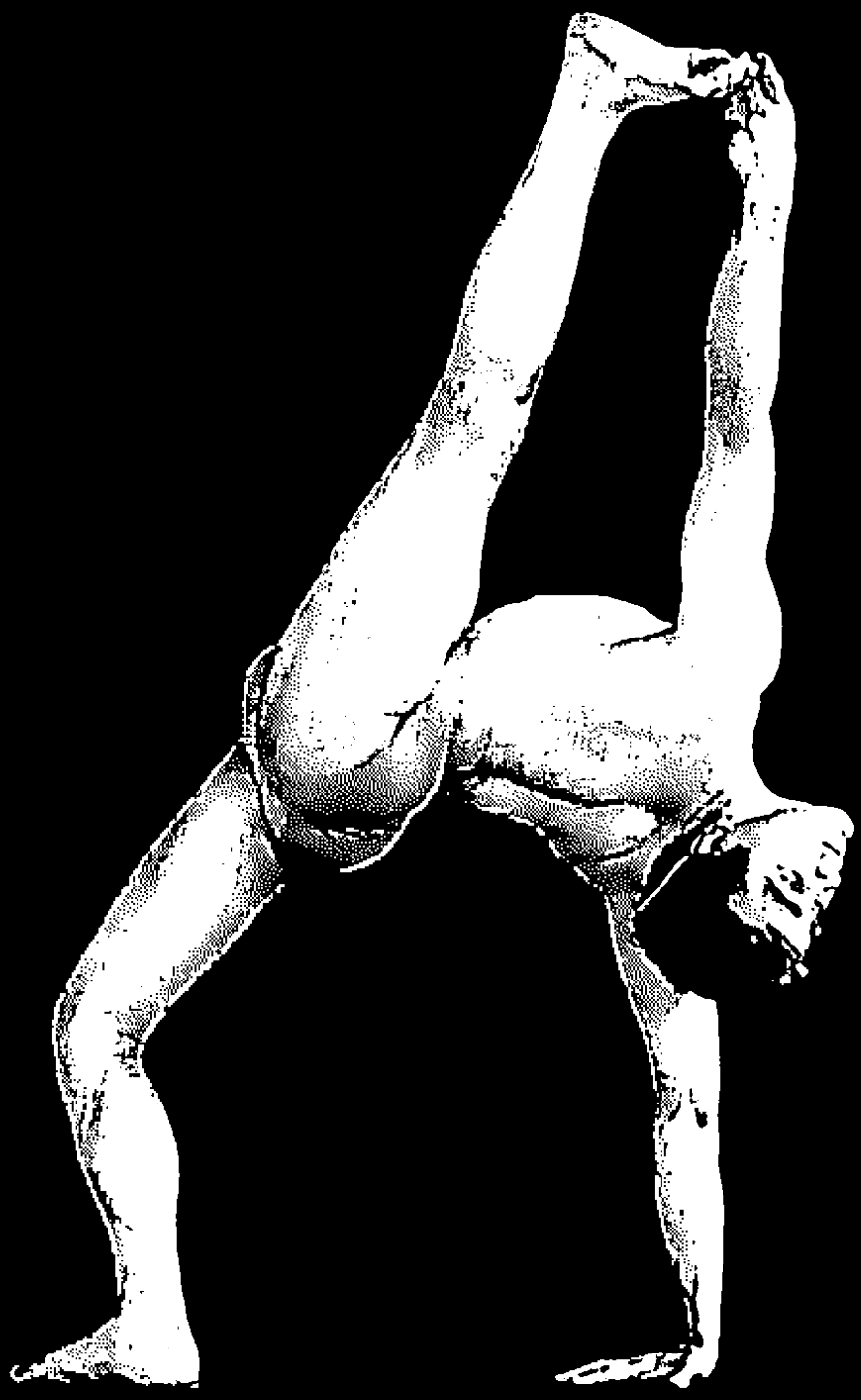
Eka-Pada-Urdhva-Dhanurasana

One-Leg Raised Bow Pose (Variation)



Himalayasana

Himalaya Pose (Preparation)

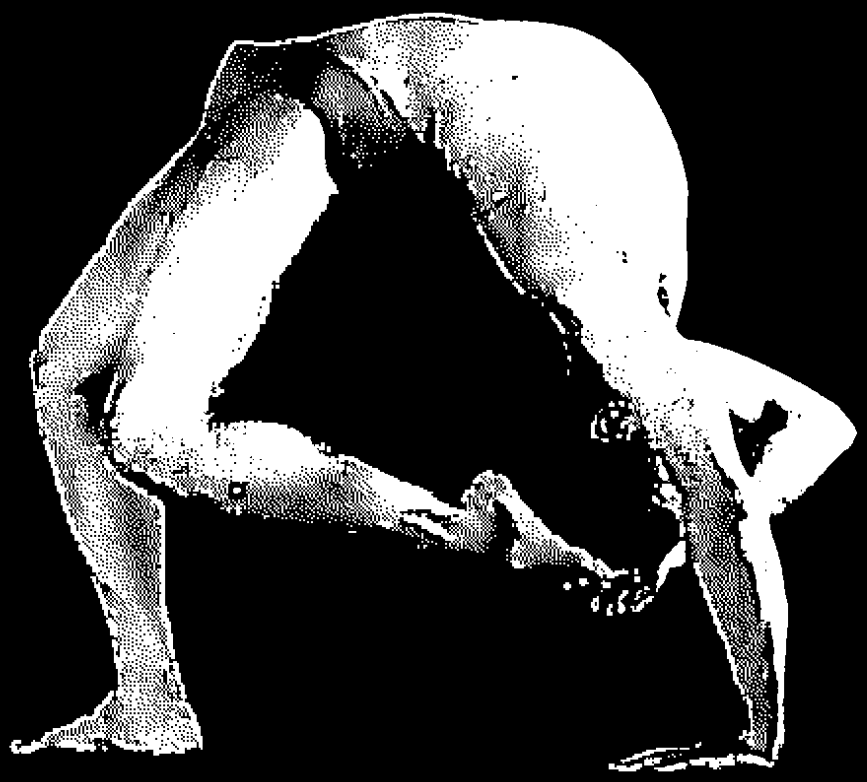


Himalayasana

Himalaya Pose

Pada-Shirsha-Urdhva-Dhanurasana

Foot to Head Raised Bow Pose



Pada-Shirsha-Urdhva-Dhanurasana

Foot to Head Raised Bow Pose (Variation)

Chakrasana

Wheel Pose (Preparation)

Chakrasana

Wheel Pose

Purna-Chakrasana

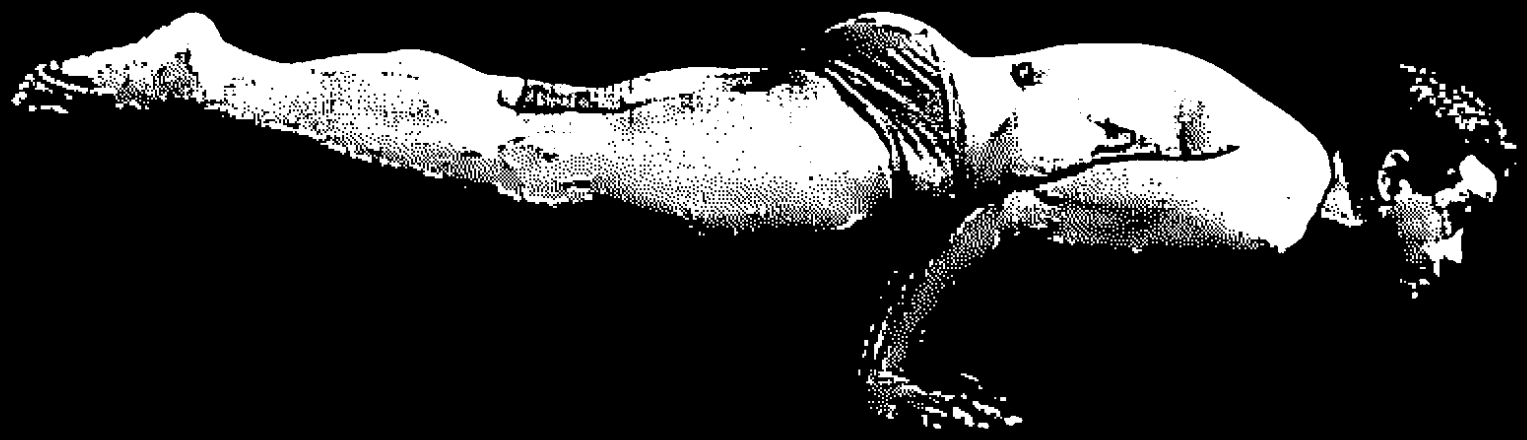
Full Wheel Pose

ARM BALANCING POSES

Arm poses require a great deal of strength and an extra dose of *tapas*. *Tapas*, or angry determination, is a positive attitude, much like what the Zen masters summon when sitting in meditation for hours. It involves faith, fortitude, and determination. Even if it is not pleasant you do it anyway. You must learn to go beyond the mind because the personal self is always resistant.

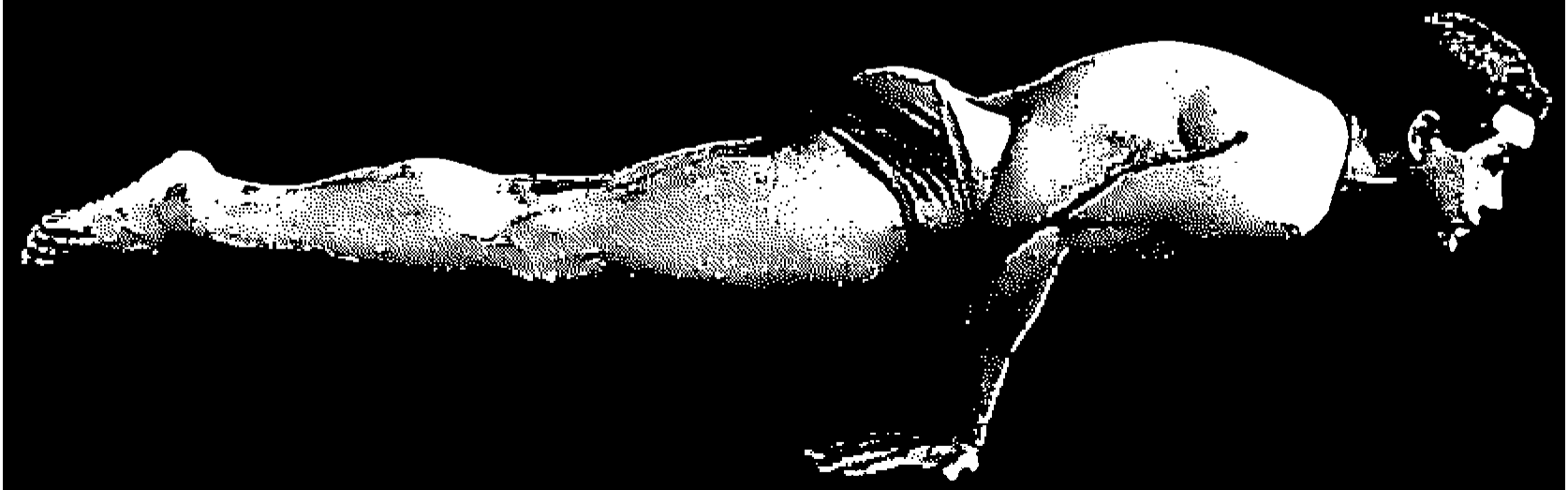
With difficult poses I like to recall the words of the late Swami Satchidananda. "A yogi is like a surfer who knows how to balance on his board. He welcomes even a big rolling wave because he knows how to enjoy it without getting caught in it."

Many arm-balancing poses also strengthen the shoulders, wrists, and hands. They are particularly useful for people who spend their days writing or drawing at computers and who are vulnerable to repetitive stress syndrome.



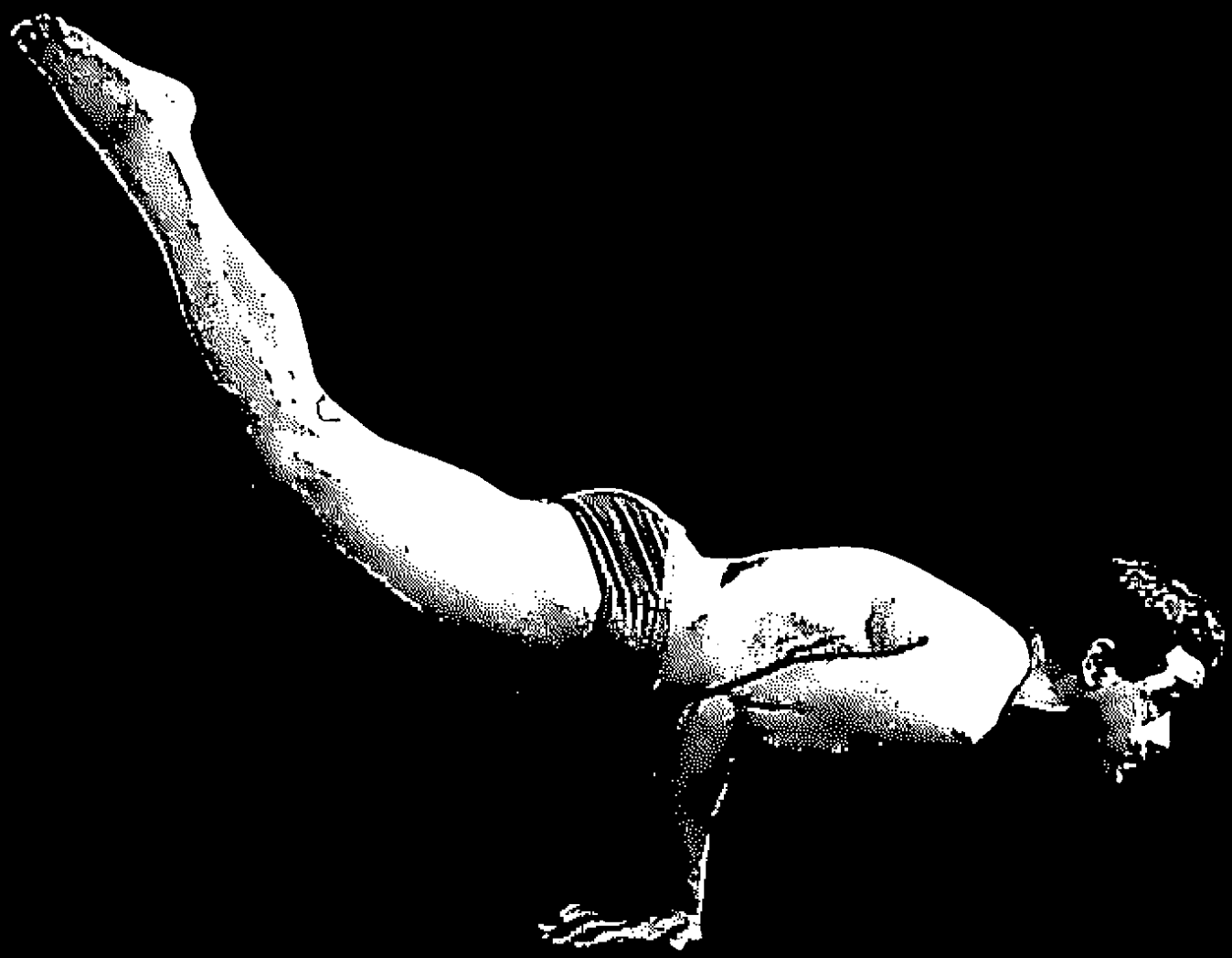
Hansasana

Swan Pose



Mayurasana

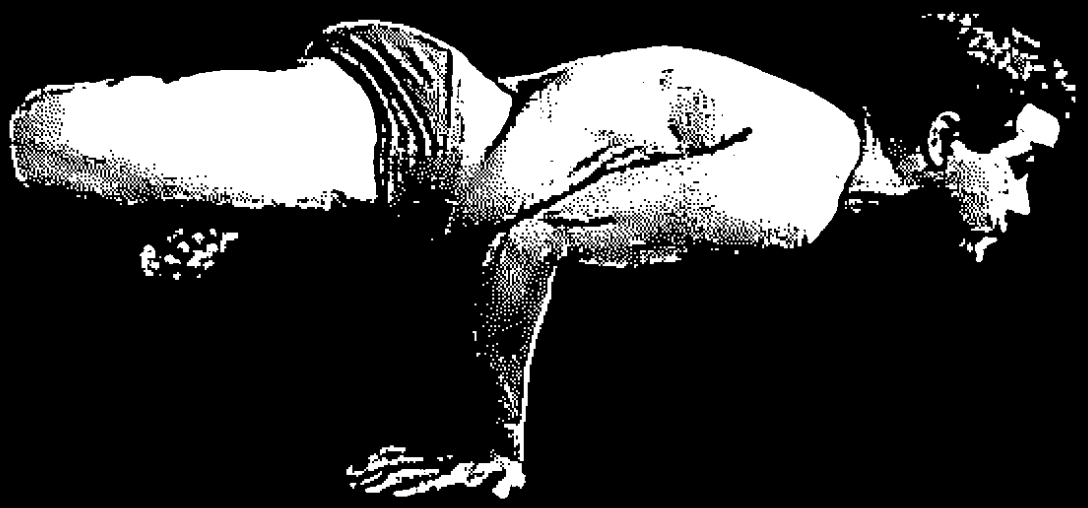
Peacock Pose



Mayurasana
Peacock Pose (Variation)

Mayurasana

Peacock Pose (Variation)



Padma-Mayurasana

Lotus Peacock Pose

Padma-Mayurasana

Lotus Peacock Pose (Variation)

Padma-Mayurasana

Lotus Peacock Pose (Variation)

Kakasana

Crow Pose (Preparation)

Kakasana

Crow Pose

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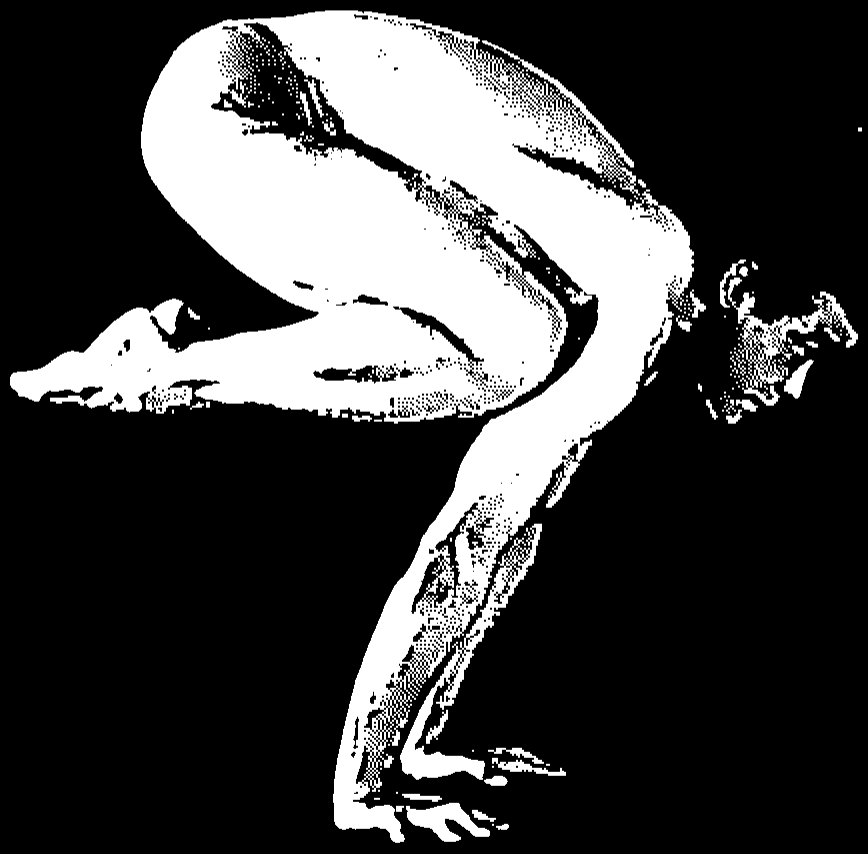
Parshvakakasana

Side Crow Pose (Preparation)

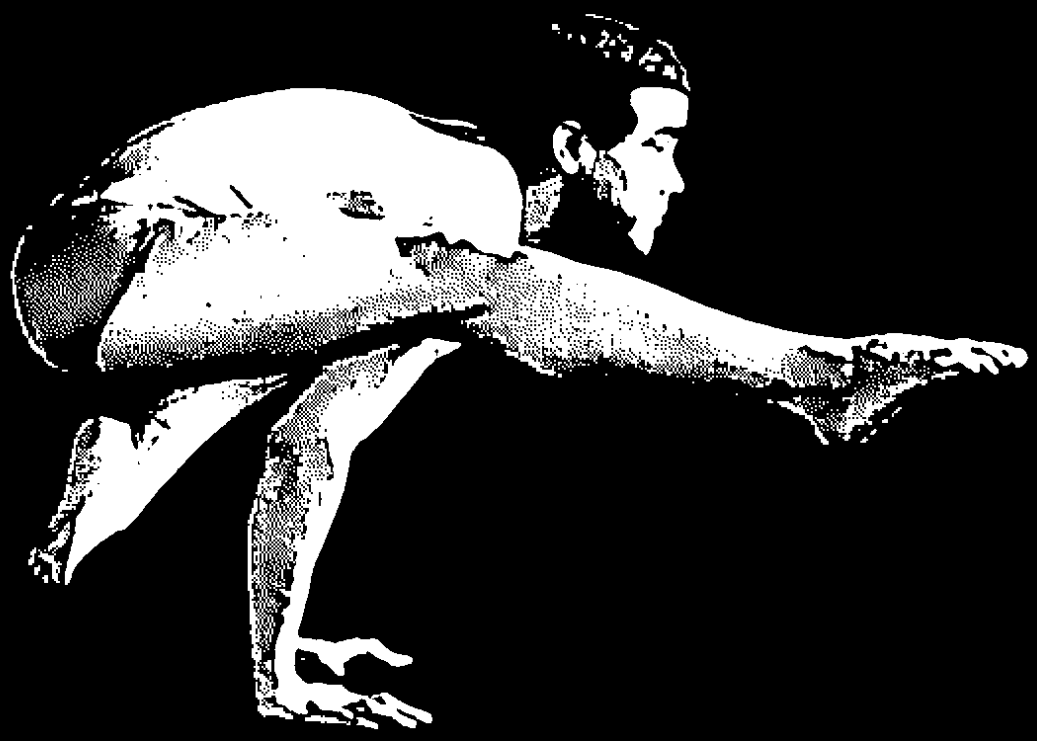
Parshvakakasana

Side Crow Pose



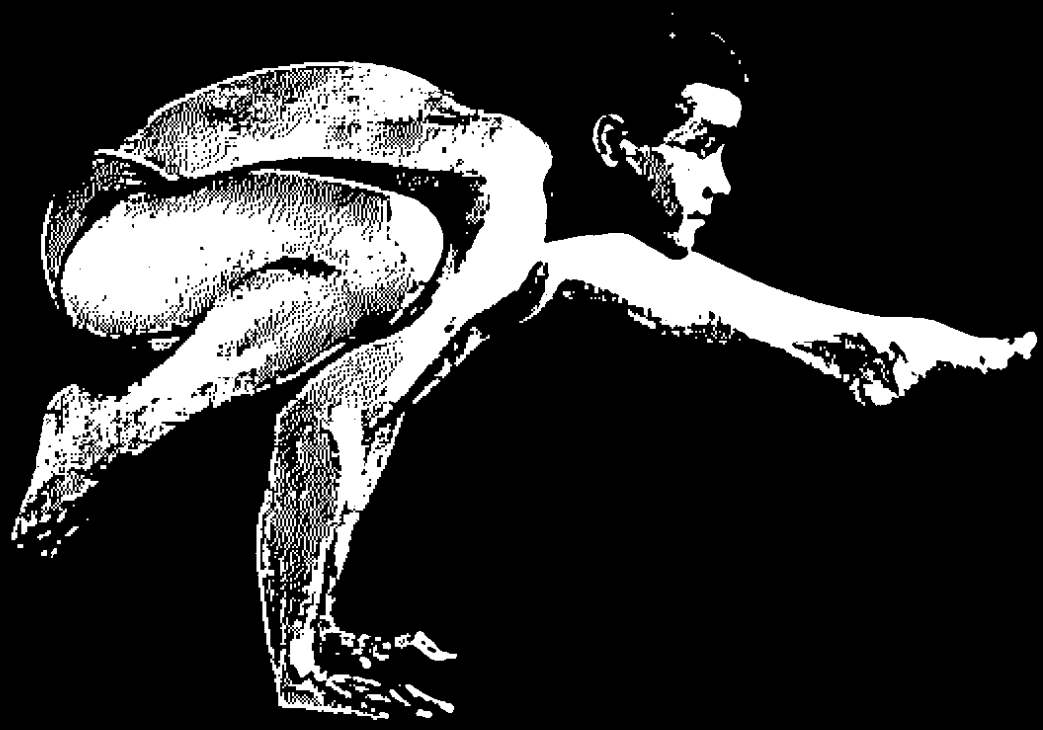
Bakasana

Crane Pose



Bakasana

Crane Pose (Variation)



Bakasana

Crane Pose (Variation)

Bakasana

Crane Pose (Variation)

Vakrasana

Crooked Pose (Preparation)

Vakrasana

Crooked Pose

Dwi-Pada-Koundinyasana

Two-Leg Pose of the Sage Koundinya (Preparation)

Dwi-Pada-Koundinyasana

Two-Leg Pose of the Sage Koundinya (Variation)

Dwi-Pada-Koundinyasana

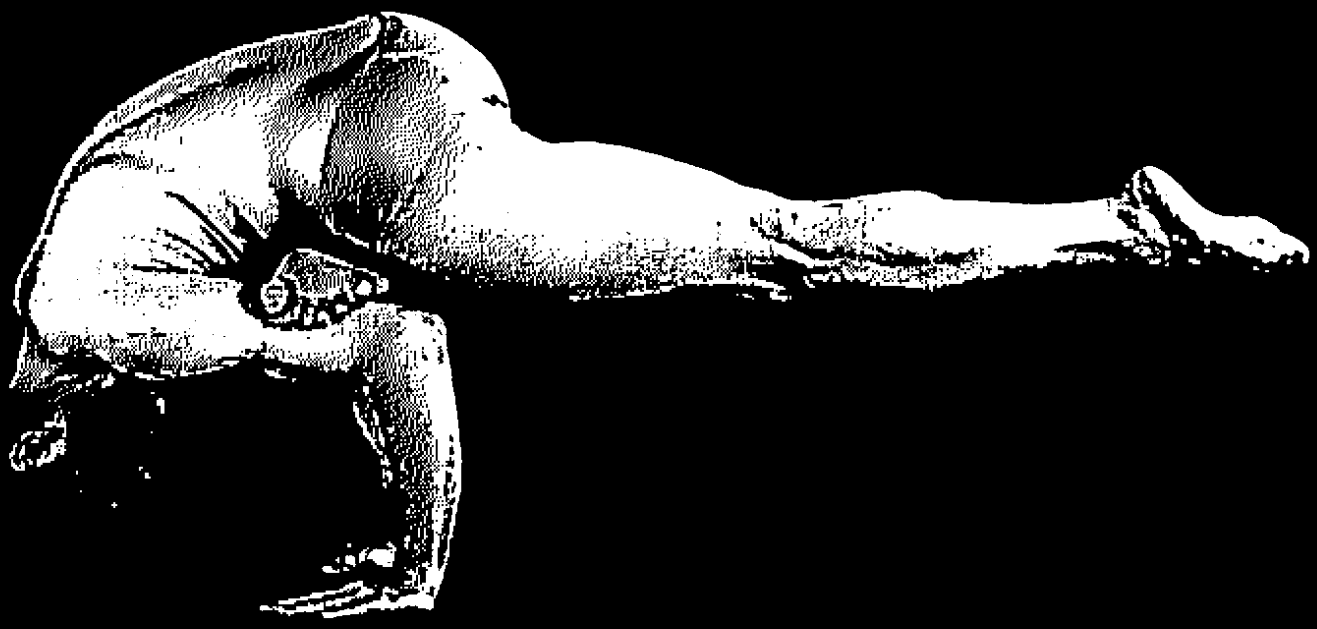
Two-Leg Pose of the Sage Koundinya

Galavasana

Pose of the Sage Galava

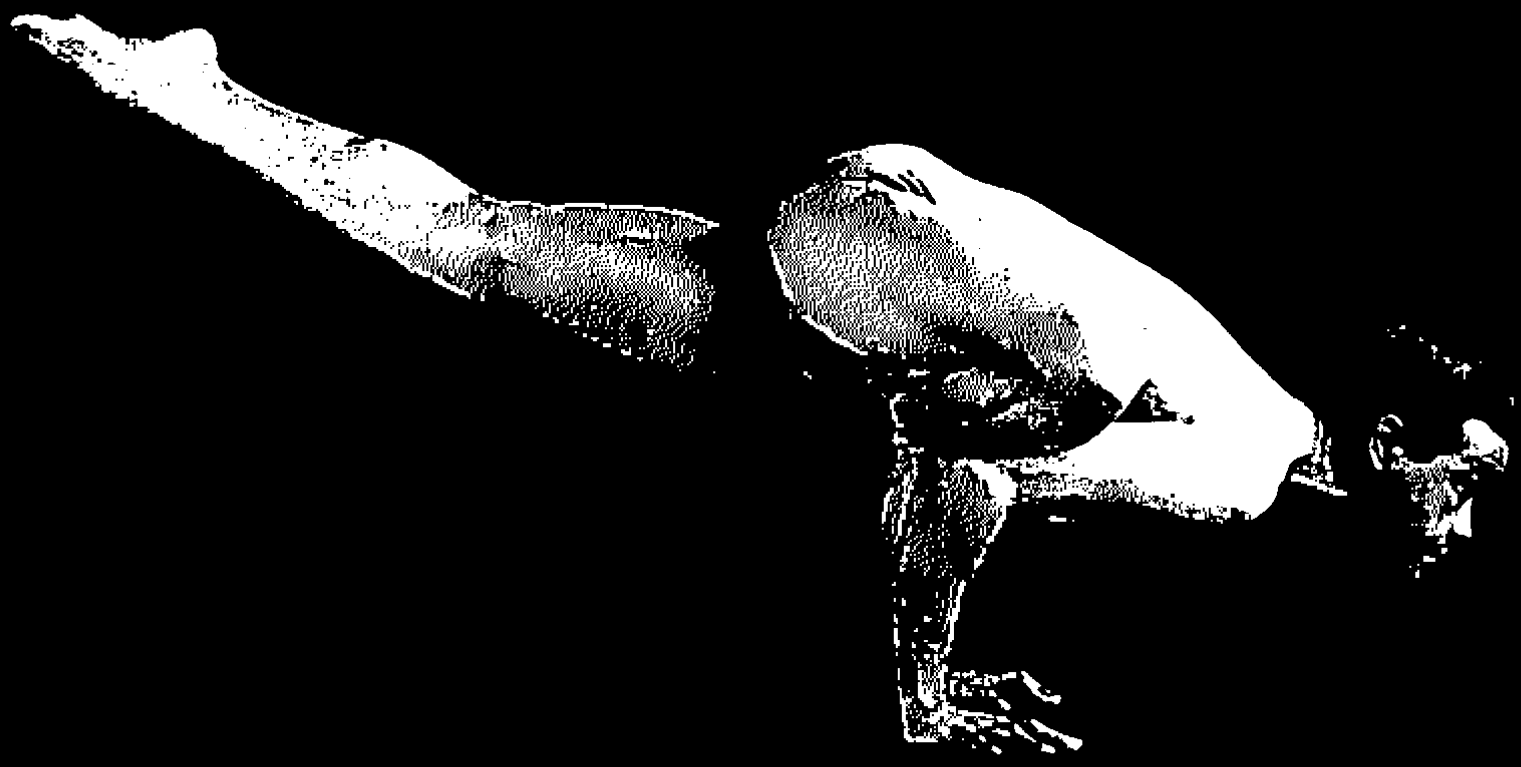
Eka-Pada-Galavasana

One-Leg Pose of the Sage Galava (Preparation)



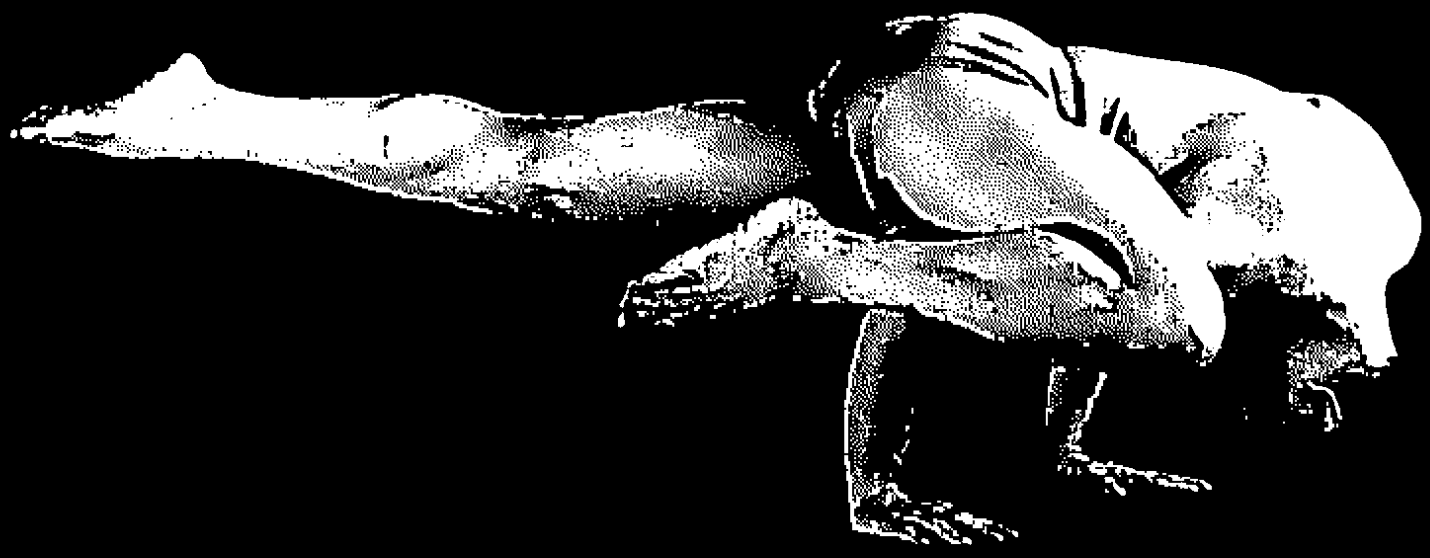
Eka-Pada-Galavasana

One-Leg Pose of the Sage Galava (Preparation)



Eka-Pada-Galavasana

One-Leg Pose of the Sage Galava

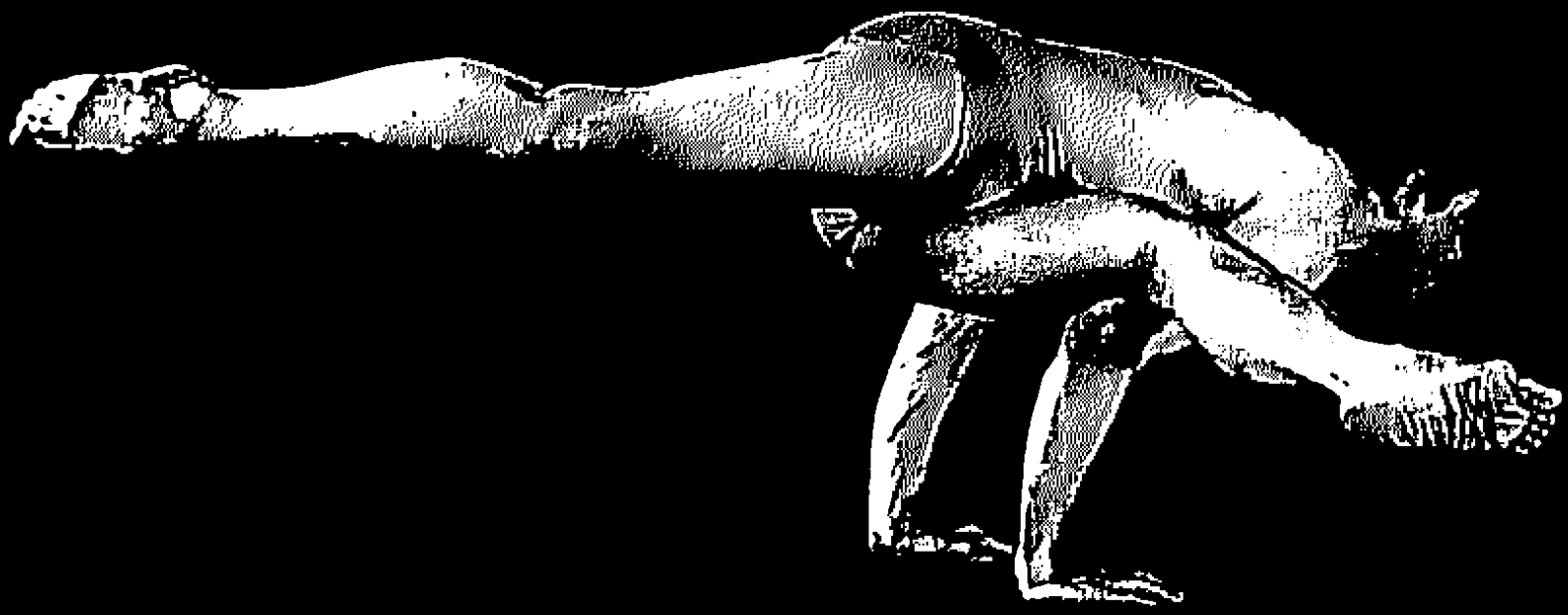


Eka-Pada-Koundinyasana II

One-Leg Pose of the Sage Koundinya II (Preparation)

Eka-Pada-Koundinyasana II

One-Leg Pose of the Sage Koundinya II

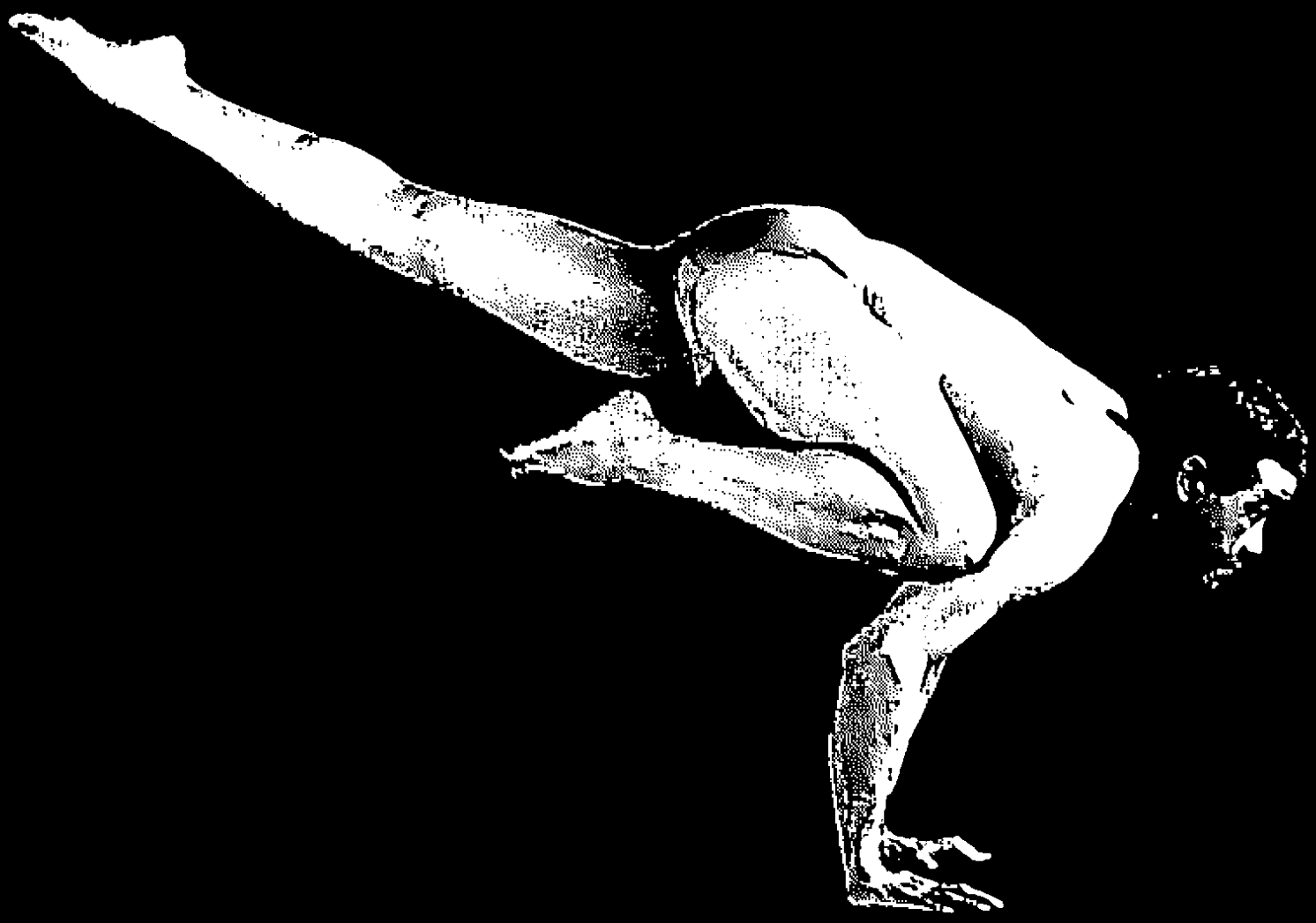


Eka-Pada-Koundinyasana II

One-Leg Pose of the Sage Koundinya II (Variation)

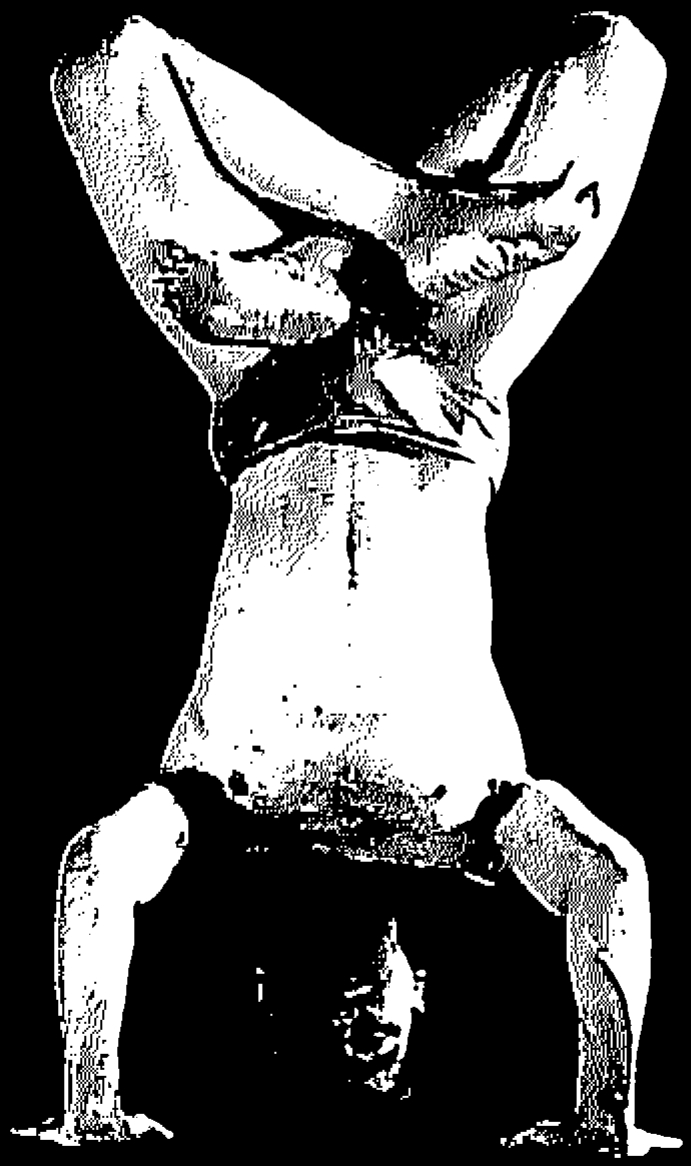
Eka-Pada-Bakasana

One-Leg Crane Pose (Preparation)



Eka-Pada-Bakasana

One-Leg Crane Pose



Urdhva-Kukkutasana

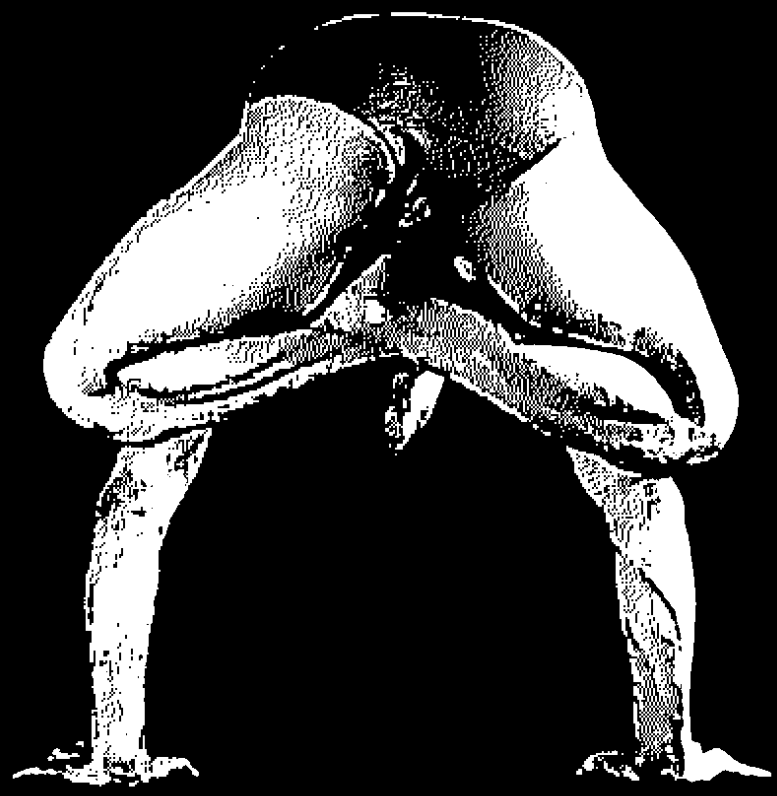
Raised Cock Pose (Preparation)

Urdhva-Kukkutasana

Raised Cock Pose (Preparation)

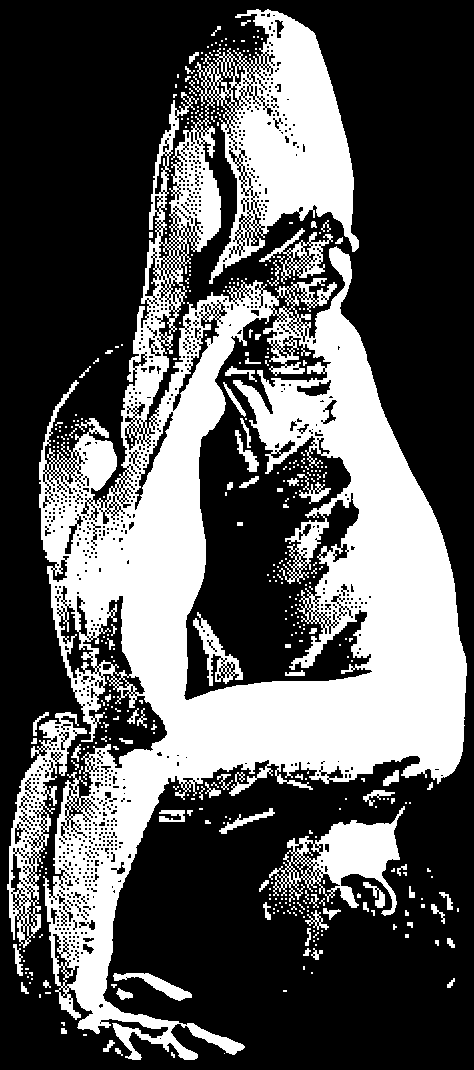
Urdhva-Kukkutasana

Raised Cock Pose (Front View)



Urdhva-Kukkutasana

Raised Cock Pose (Rear View)



Parshva-Kukkutasana

Side Cock Pose (Preparation)

Parshva-Kukkutasana

Side Cock Pose

Omkarasana

Om Pose (Variation)

Bhujapidasana

Squeeze the Shoulders Pose (Preparation)

Bhujapidasana

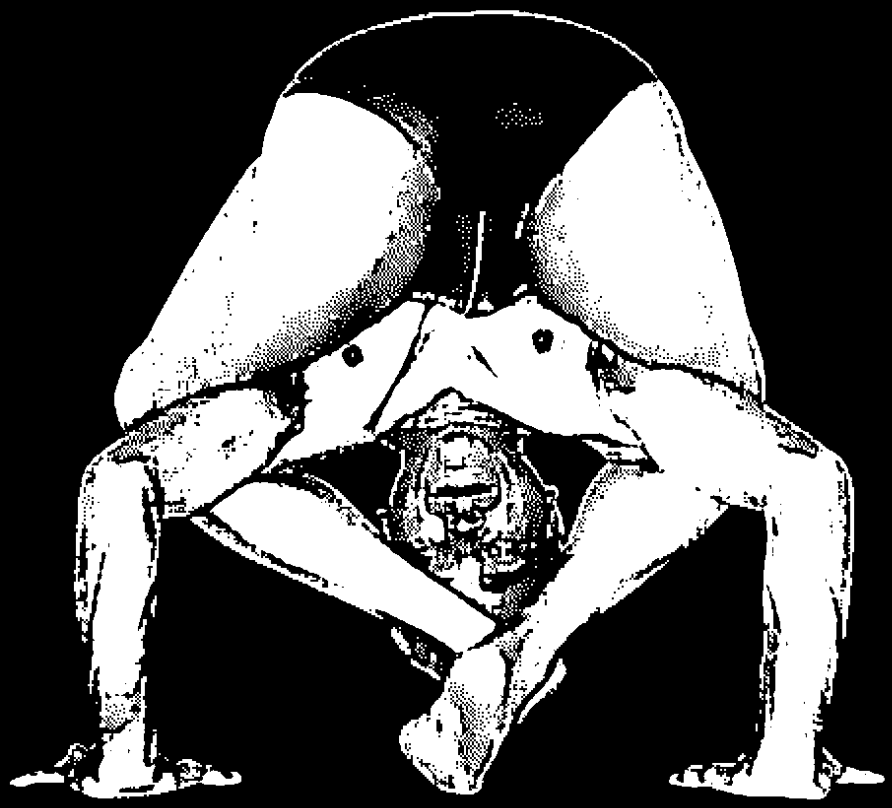
Squeeze the Shoulders Pose (Front View)

Bhujapidasana

Squeeze the Shoulders Pose (Side View)

Bhujapidasana

Squeeze the Shoulders Pose (Variation)



Bhujapidasana

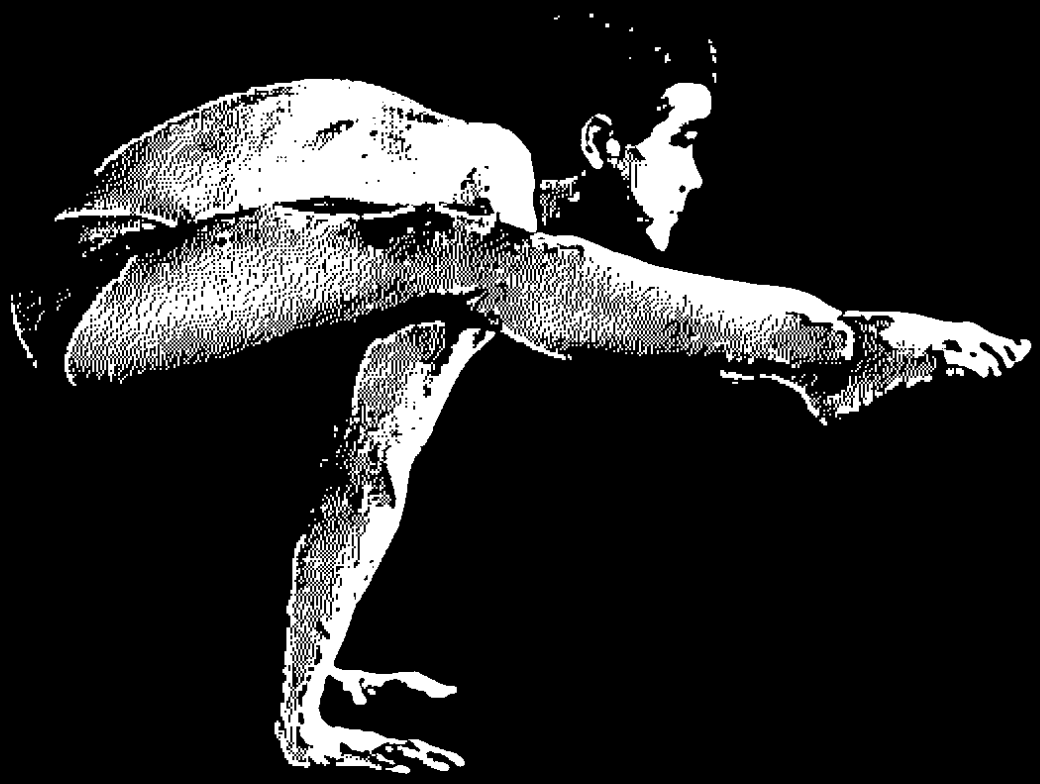
Squeeze the Shoulders Pose (Rear View)

Tittibhasana

Firefly Pose (Preparation)

Tittibhasana

Firefly Pose (Side View)



Tittibhasana

Firefly Pose

Raja-Kurmasana

King Tortoise Pose (Front View)

Raja-Kurmasana

King Tortoise Pose (Side View)

Raja-Kurmasana

King Tortoise Pose (Variation)

Raja-Kurmasana

King Tortoise Pose (Rear View)

Tolasana

Scale Pose

Lolasana

Pendulum Pose

578

Kulphasana

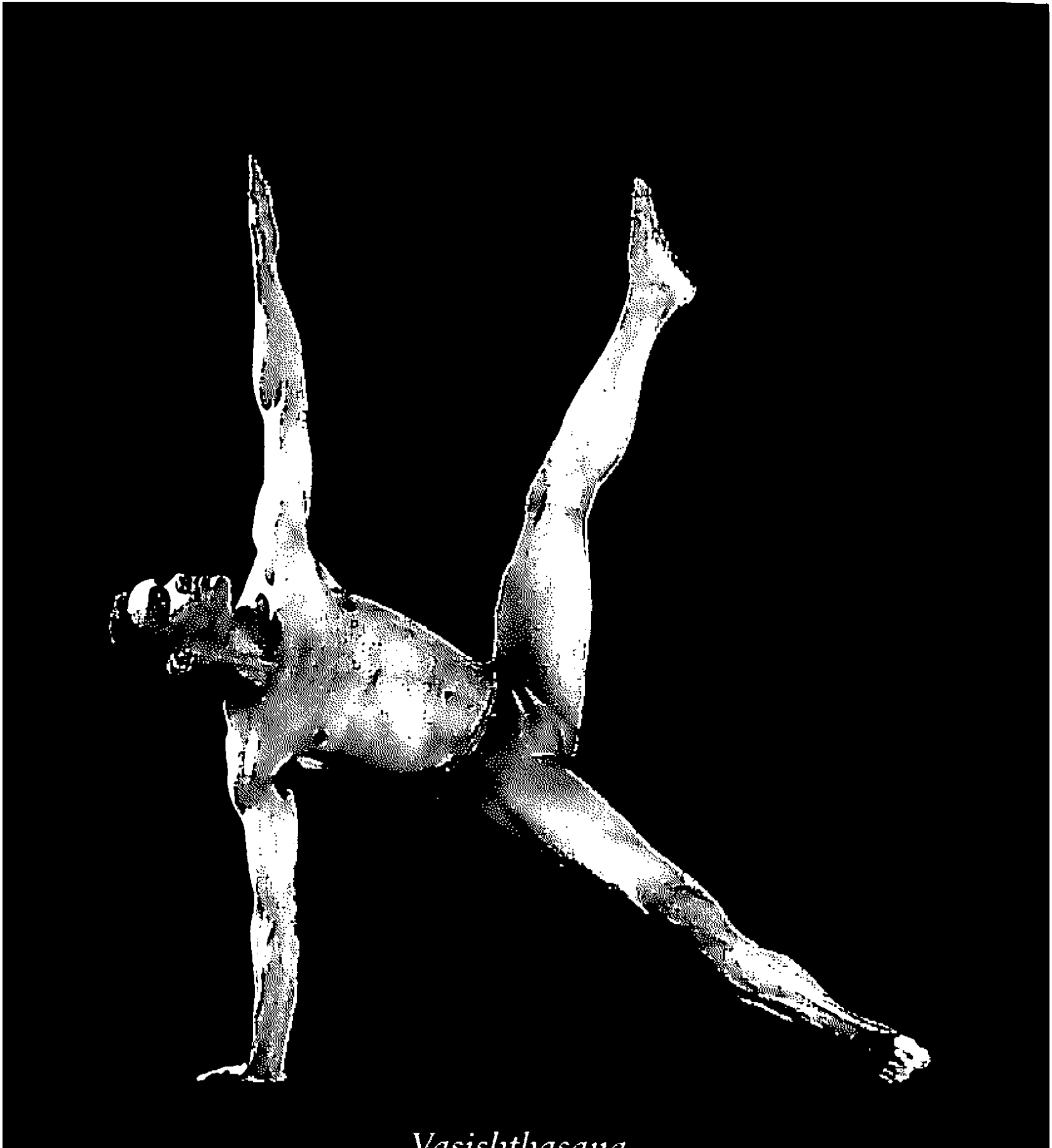
Ankle Stretch Pose

Vasishthasana

Pose of the Sage Vasishtha (Preparation)

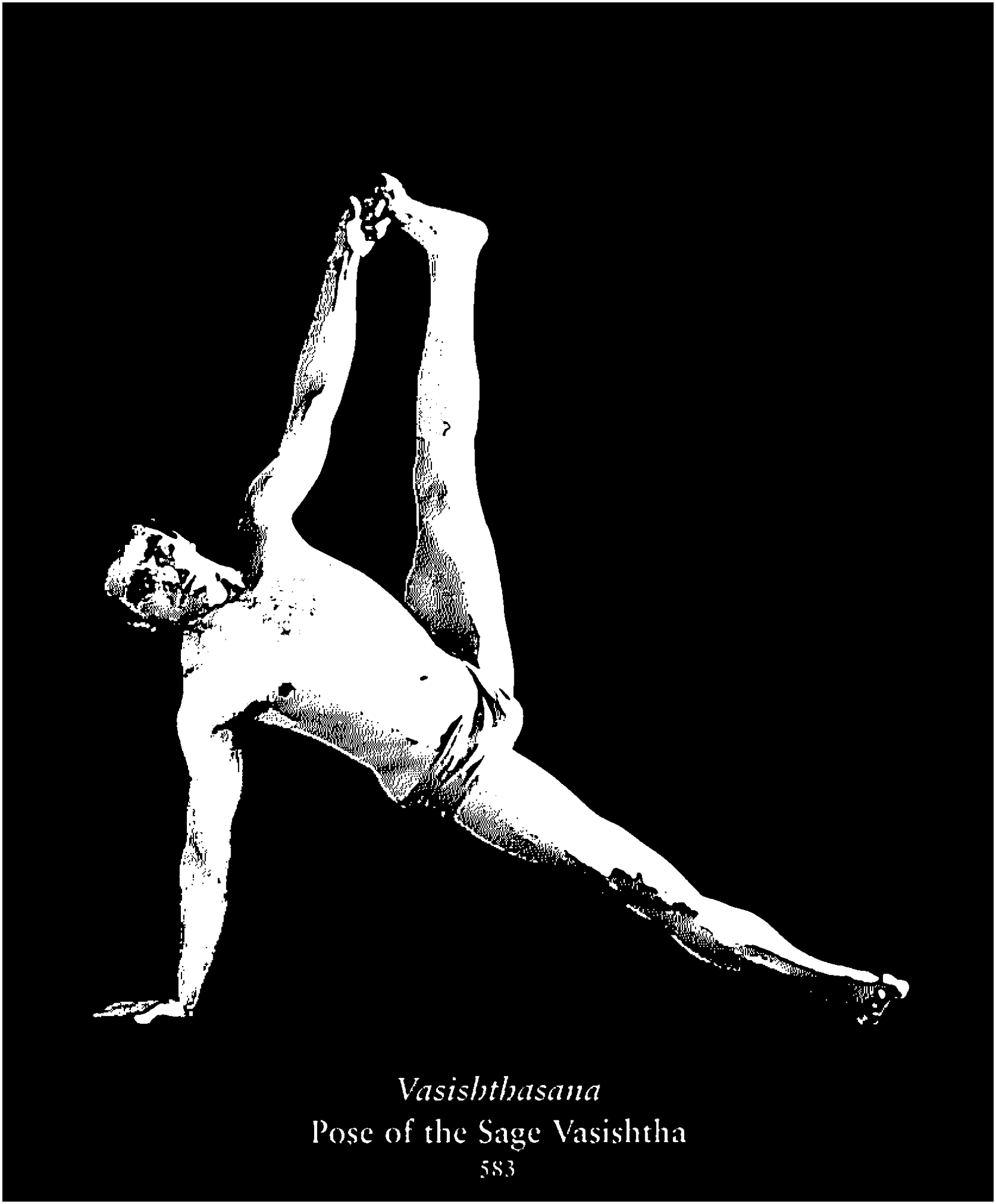
Vasishthasana

Pose of the Sage Vasishtha (Preparation)



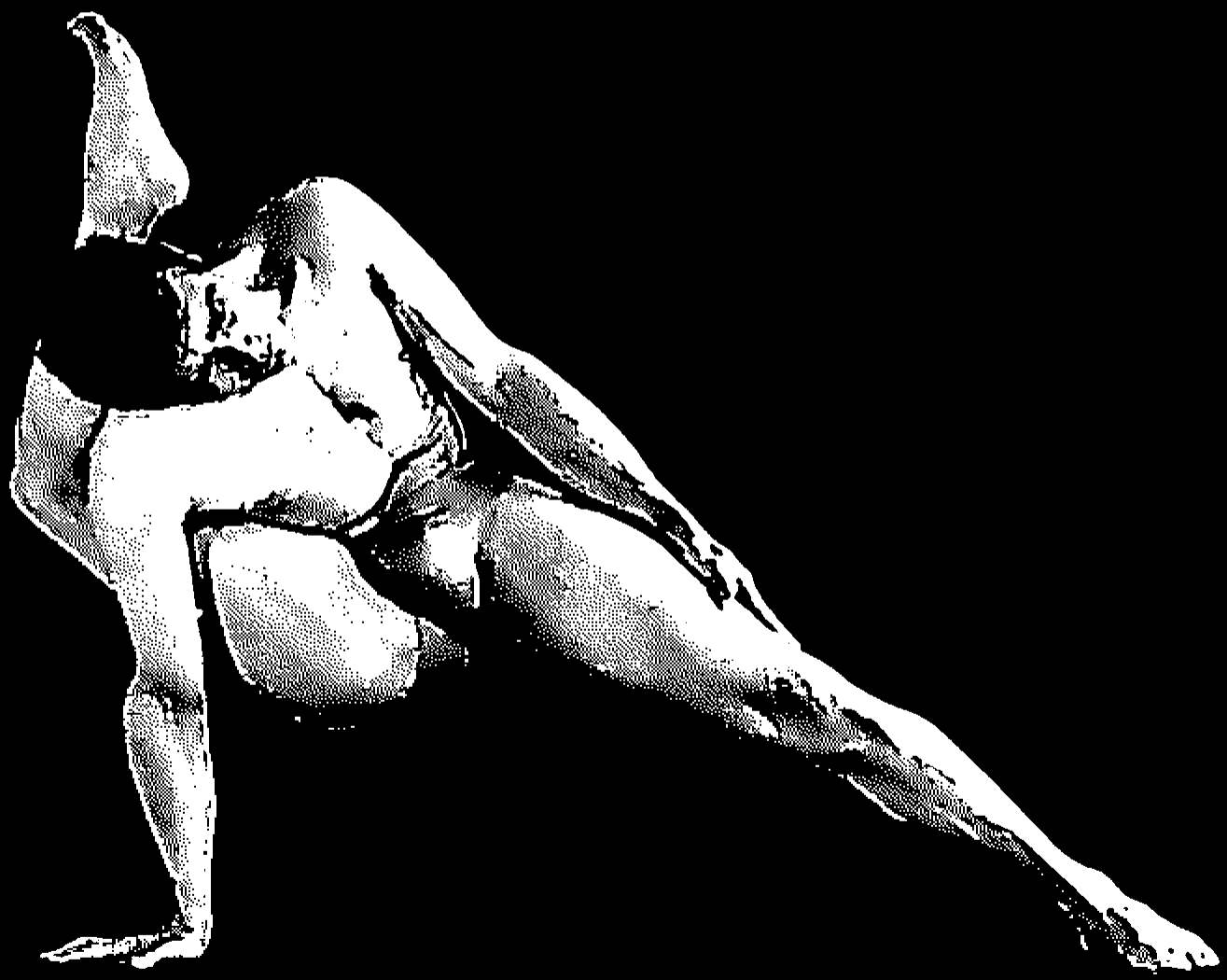
Vasishthasana

Pose of the Sage Vasishtha (Preparation)



Vasishthasana

Pose of the Sage Vasishtha

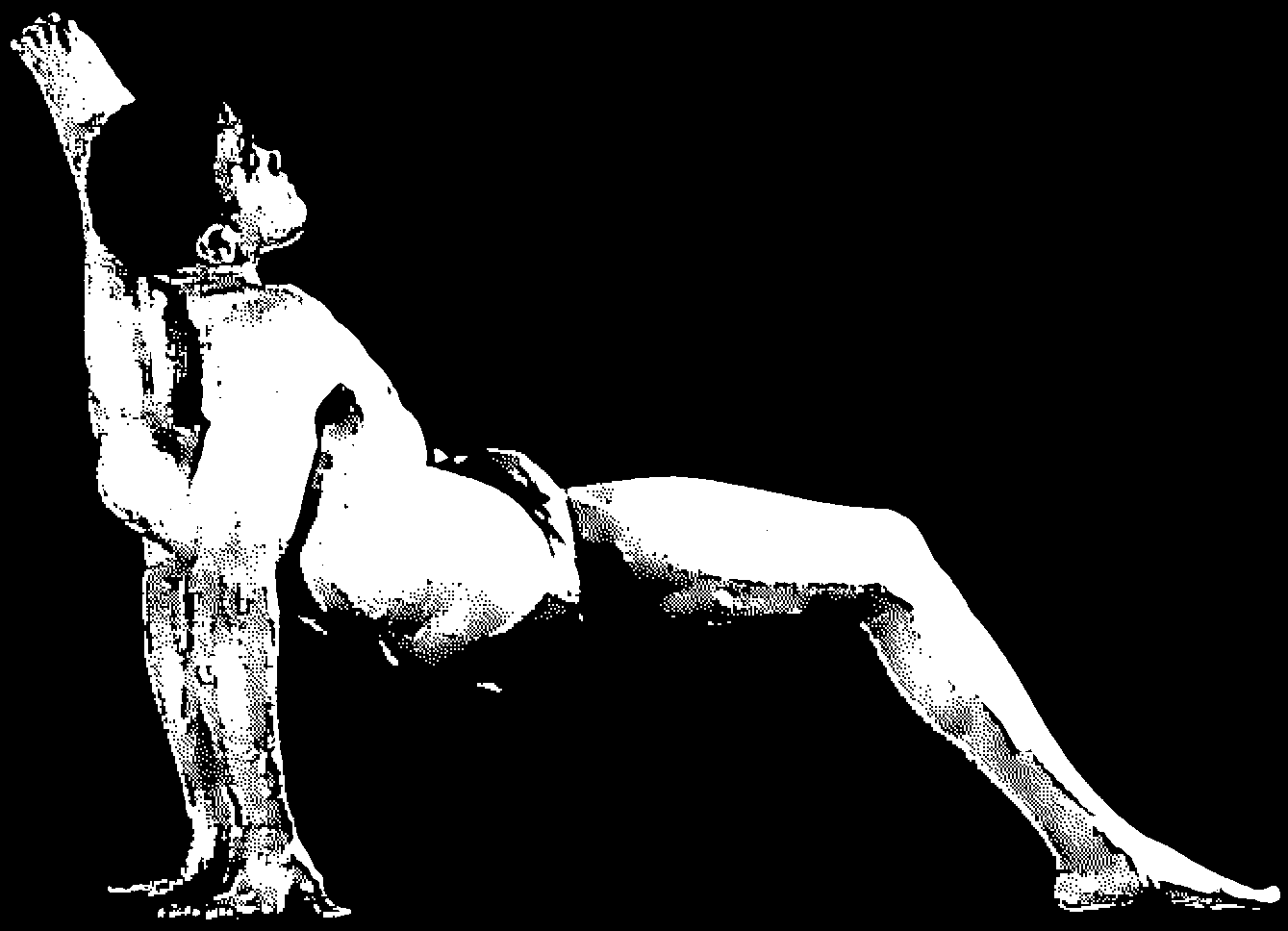


Kala-Bhairavasana

Shiva Pose (Preparation)

Kala-Bhairavasana

Shiva Pose



Kala-Bhairavasana

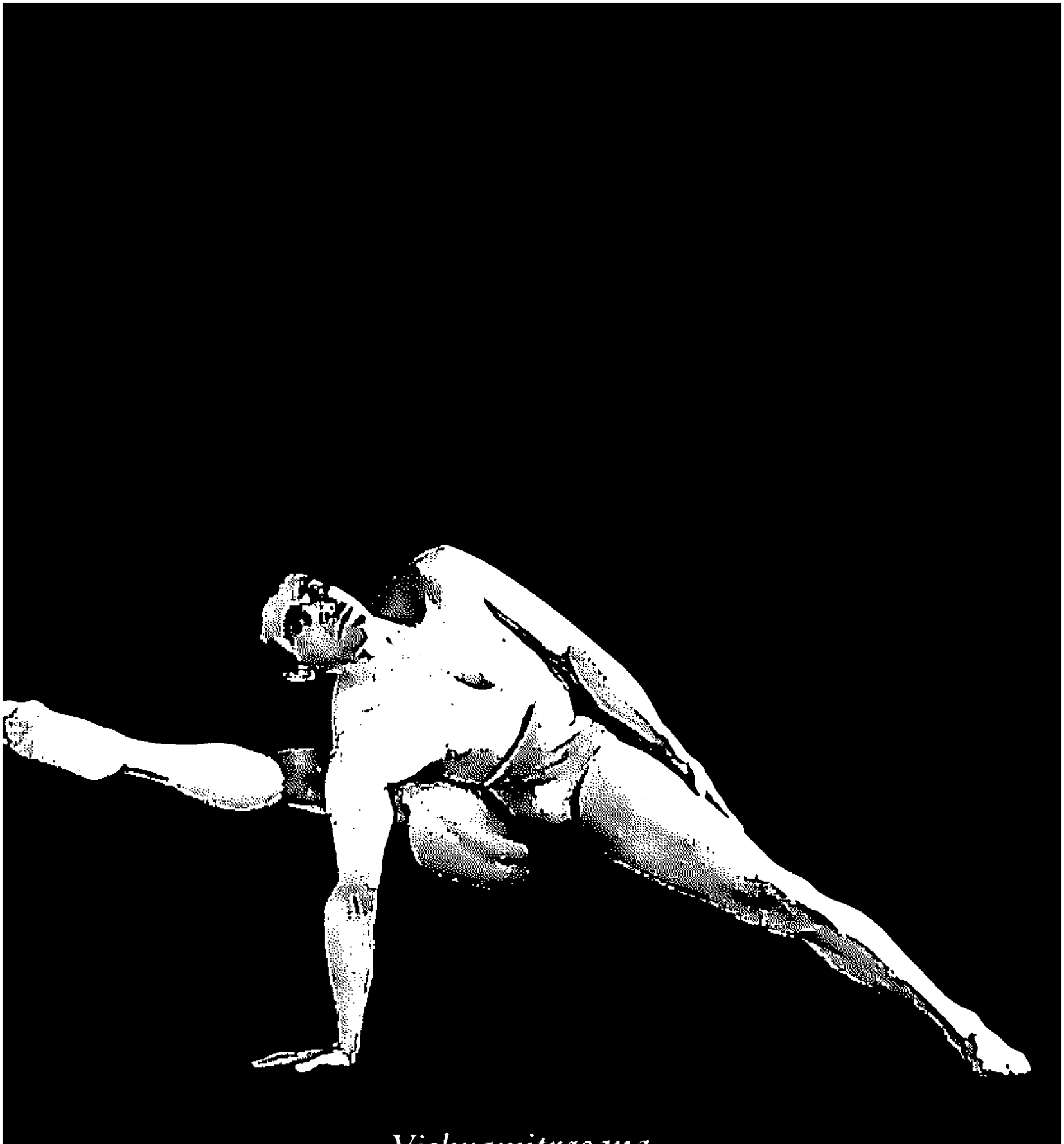
Shiva Pose (Variation)

Vishvamitrasana

Pose of the Sage Vishvamitra (Preparation)

Vishvamitrasana

Pose of the Sage Vishvamitra (Preparation)

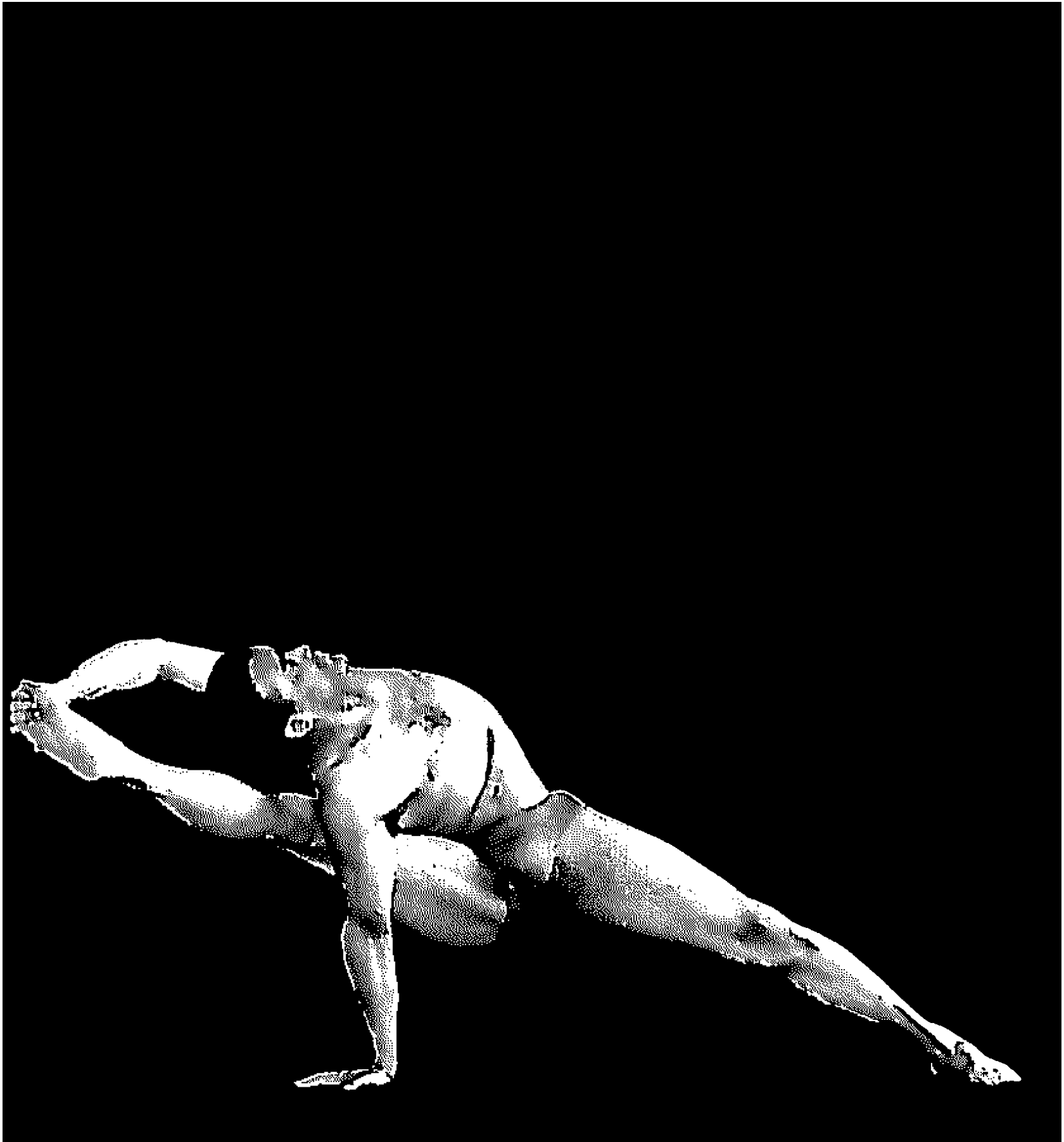


Vishvamitrasana

Pose of the Sage Vishvamitra (Preparation)

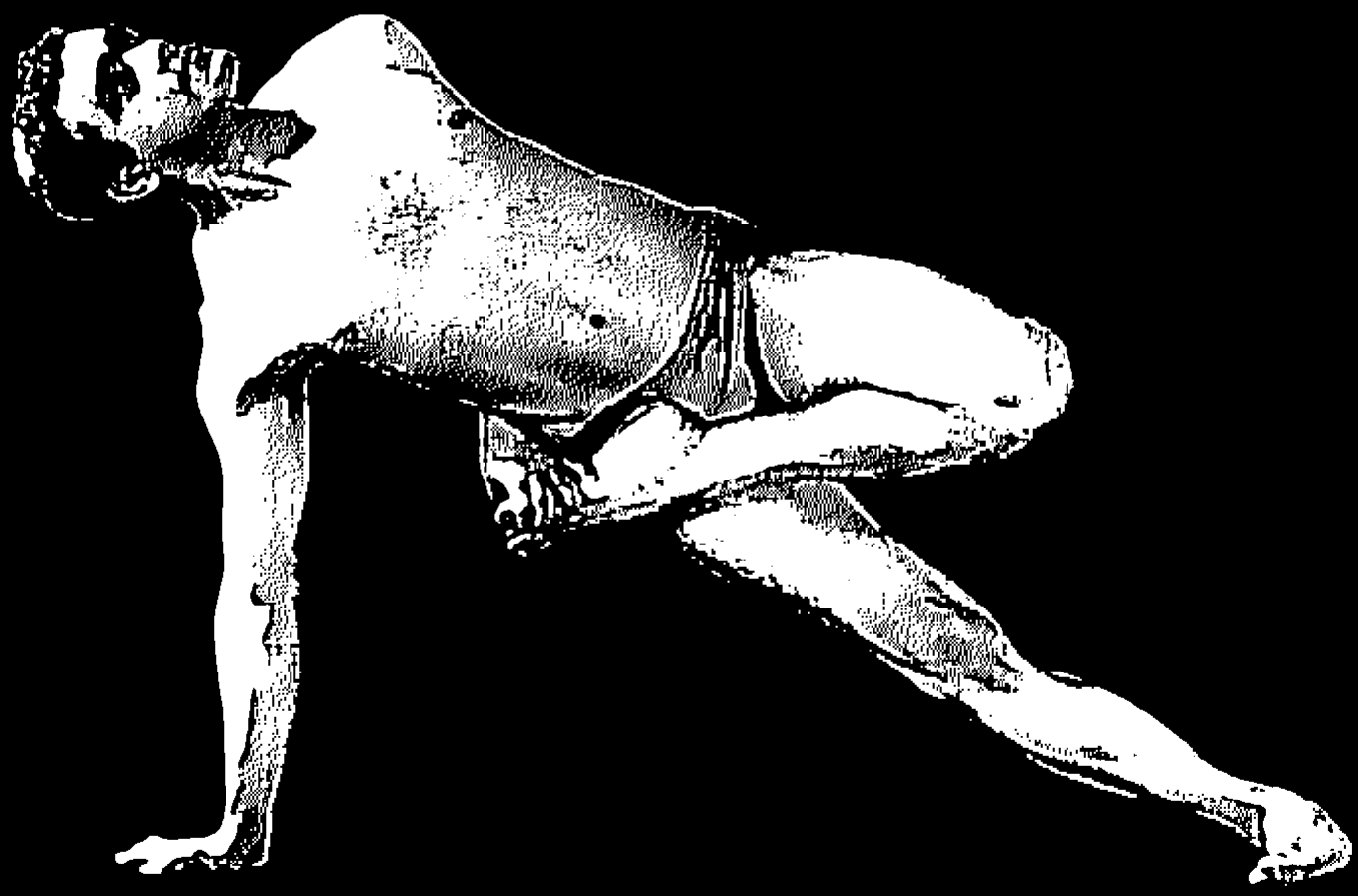
Vishvamitrasana

Pose of the Sage Vishvamitra



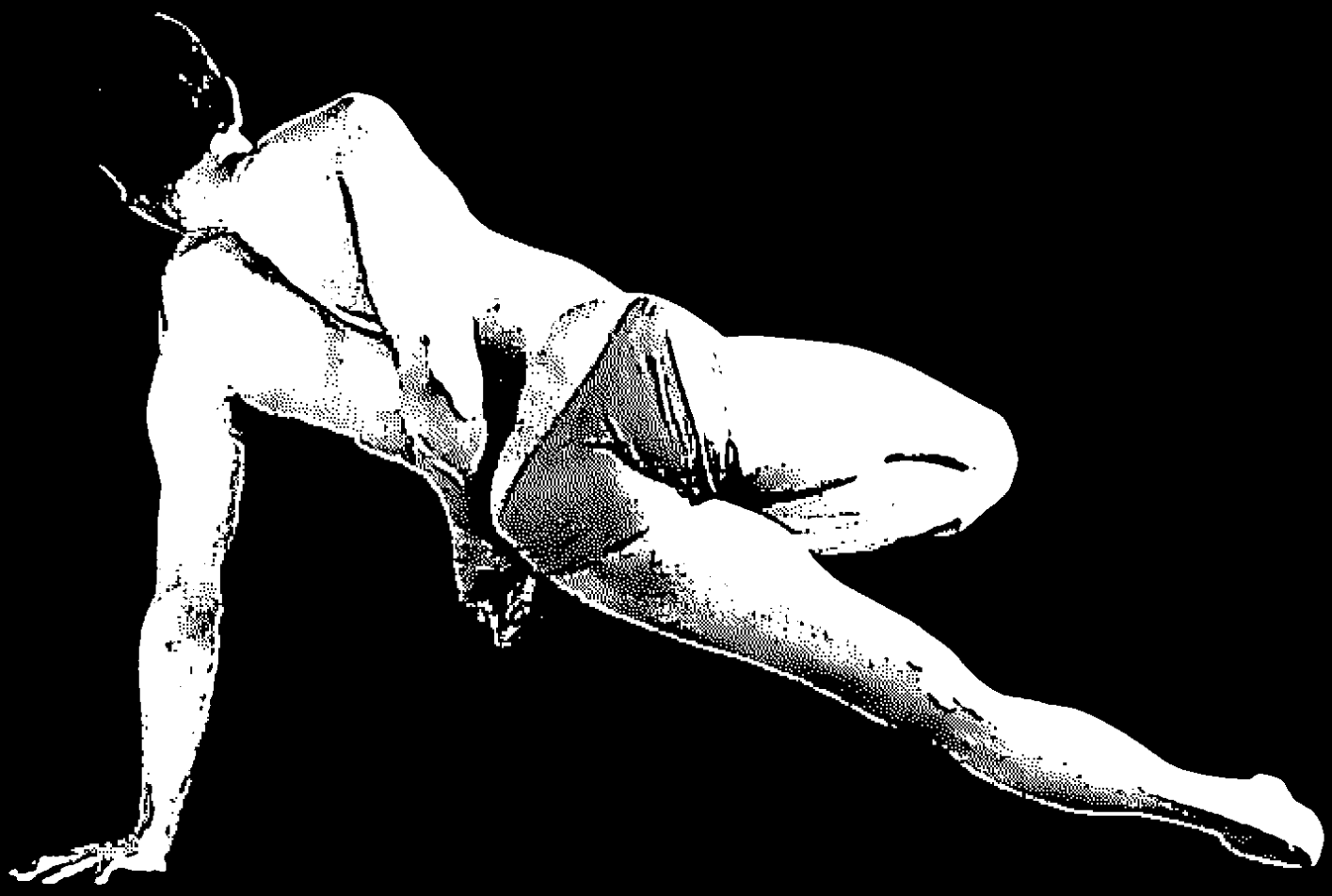
Vishvamitrasana

Pose of the Sage Vishvamitra (Variation)



Kashyapasana

Pose of the Sage Kashyapa



Kashyapasana

Pose of the Sage Kashyapa (Rear View)

Kapinjalasana

Raindrop-Drinking Bird Pose

Kapinjalasana

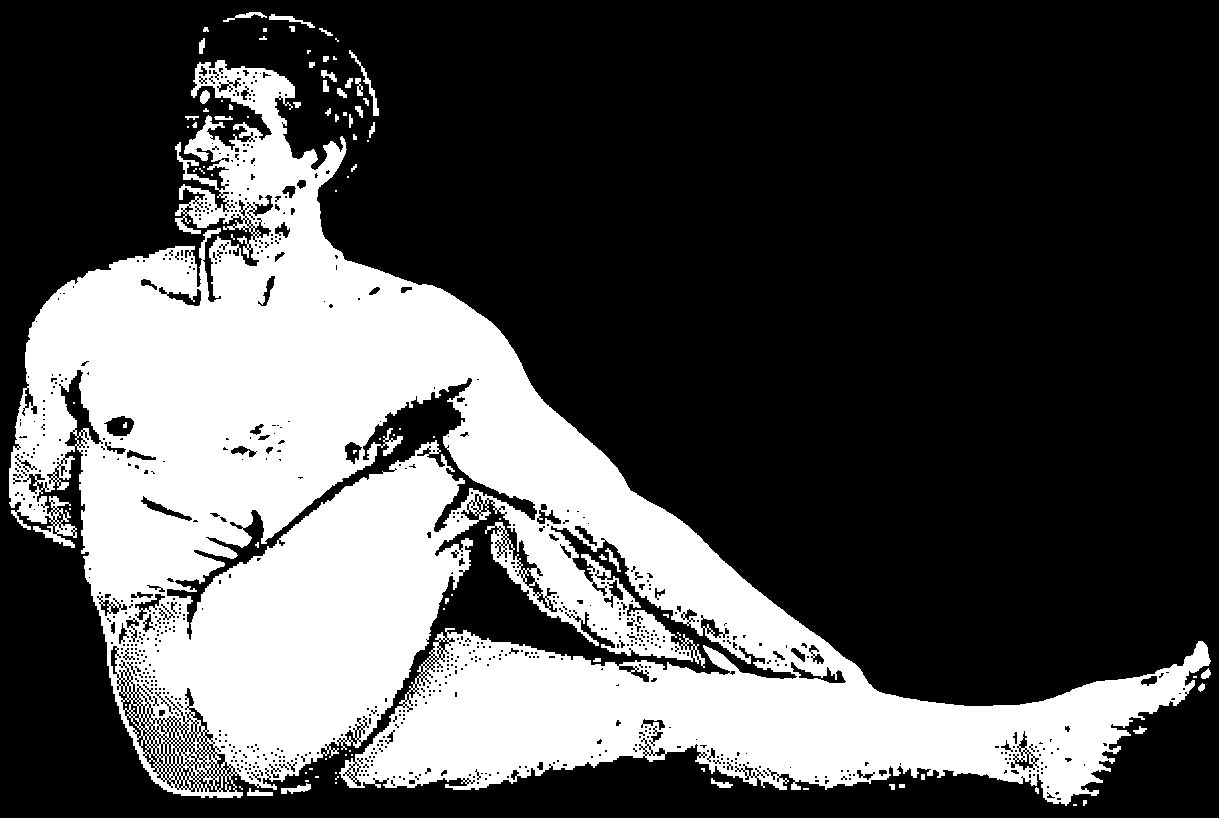
Raindrop-Drinking Bird Pose (Variation)

TWISTS & SEATED POSES

Imagine the internal organs as sponges that are full of liquid and you will understand the powerful impact of the twisting poses. The twist first wrings and squeezes the organs, then flushes them with fresh blood and oxygen. It's a natural and powerful way to detoxify organs and glands and boost the health of the entire body. It also keeps the back supple and increases circulation to the muscles and discs around the spine. One tip: when doing a twist try to extend upward during inhalation, then twist when exhaling. All twist variations are beneficial to people with arthritis and other related back and hip pains. *Marichyasana* helps heal shoulder sprains and displaced shoulder joints.

Full Lotus is a seated pose best for those blessed with flexible knees. In this posture your mind becomes one focused point. Crossing the legs cuts circulation to legs and increases blood flow to spine. If you can't do Full Lotus, *Siddhasana* is an excellent alternative position for meditation. It's comfortable and leaves you relaxed yet alert, quieting the hyperactive "monkey" mind. I have done Full Lotus for over 40 years and it still causes me terrible pain. I don't know what I did in past lives to cause such suffering.

Remember, the purpose of all seated poses is to find one in which you can sit for an hour and meditate.

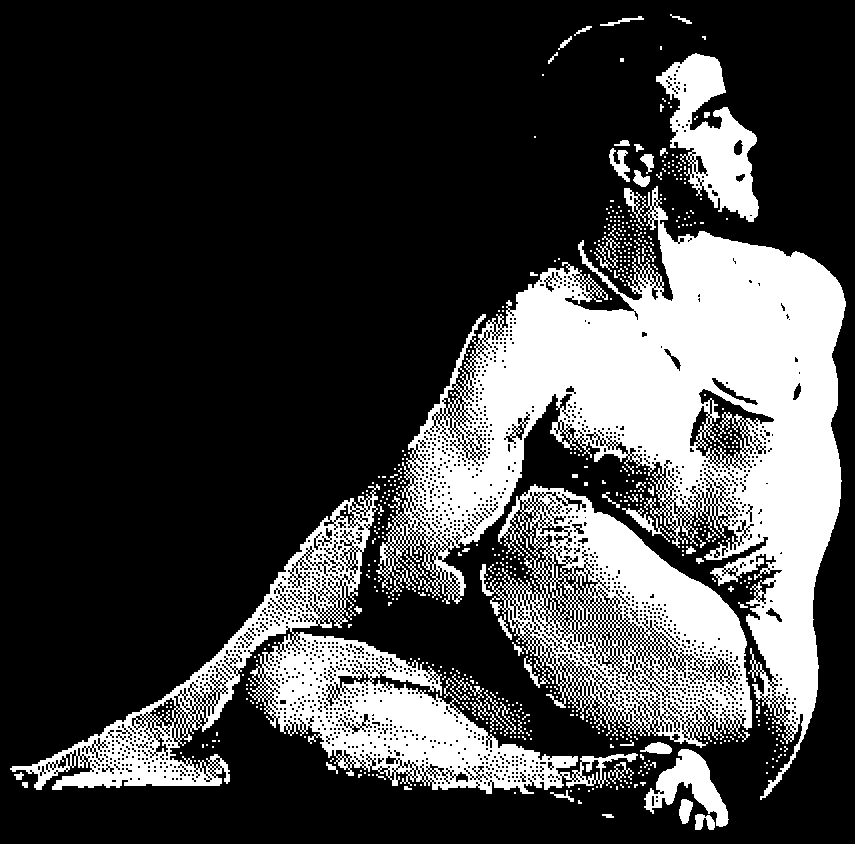


Sukha-Matsyendrasana

Easy Spinal Twist (Preparation)

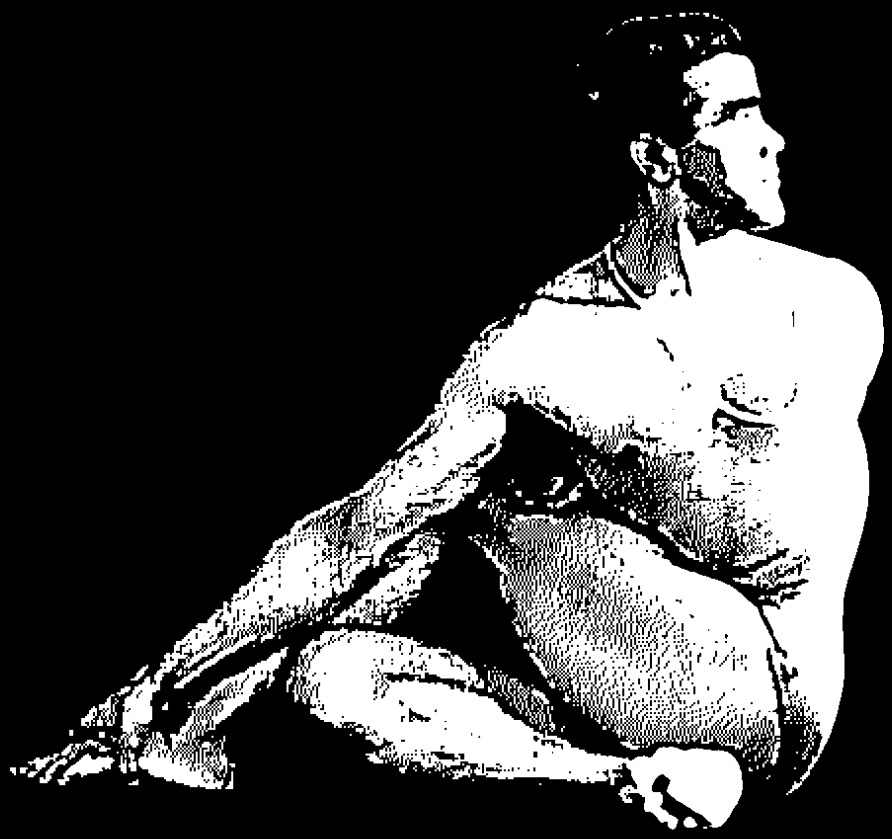
Sukha-Matsyendrasana

Easy Spinal Twist



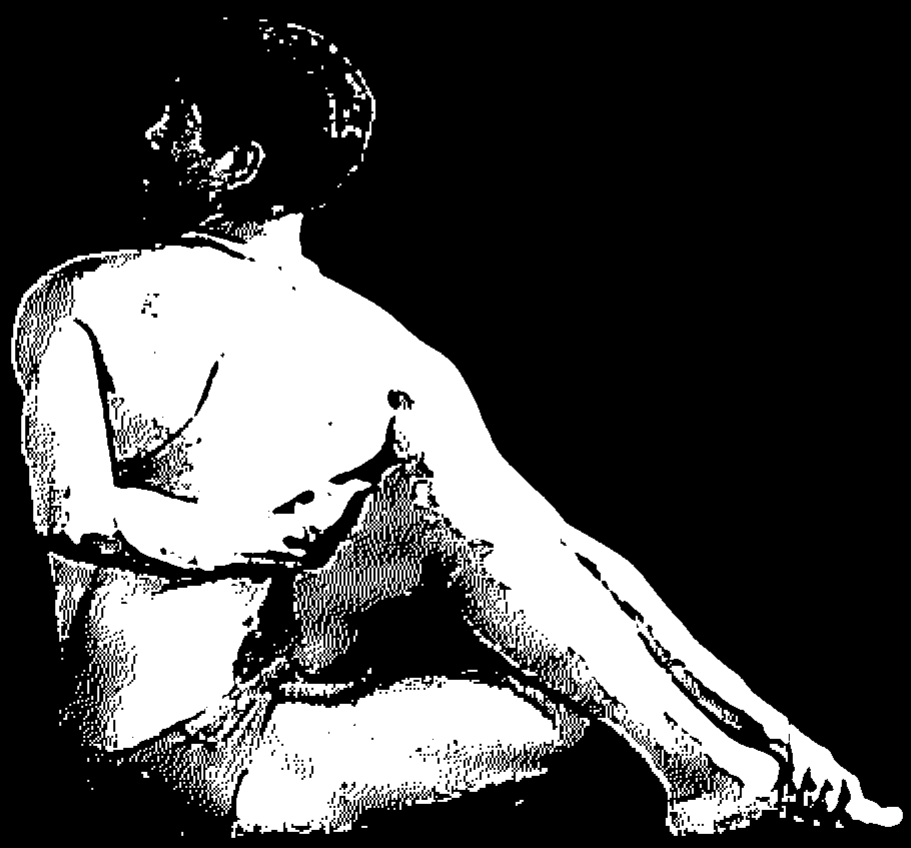
Ardha-Matsyendrasana

Half Spinal Twist (Preparation)



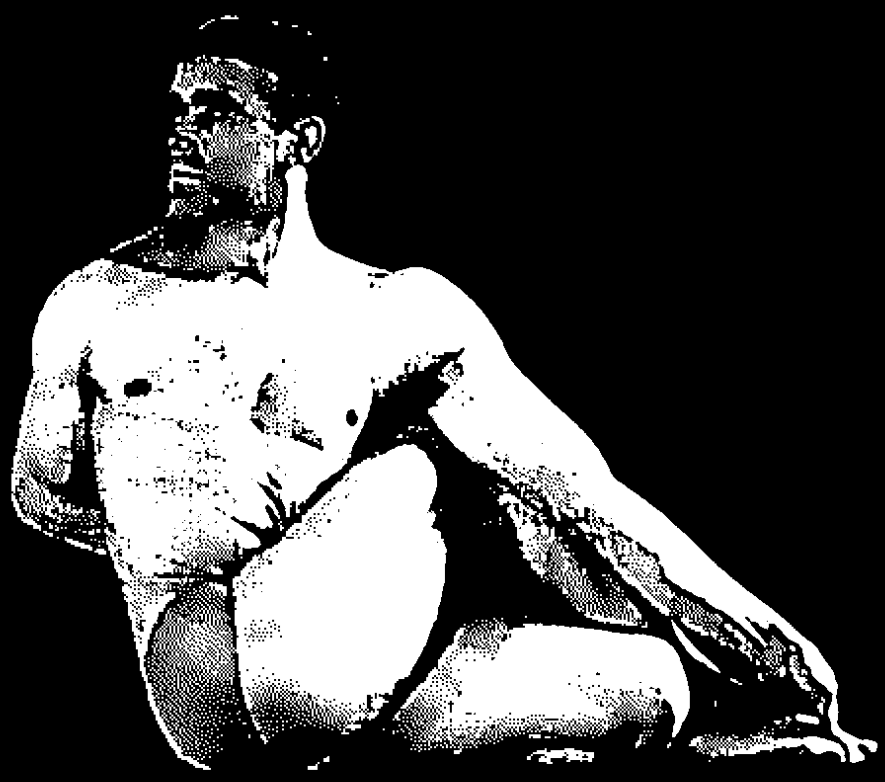
Ardha-Matsyendrasana

Half Spinal Twist

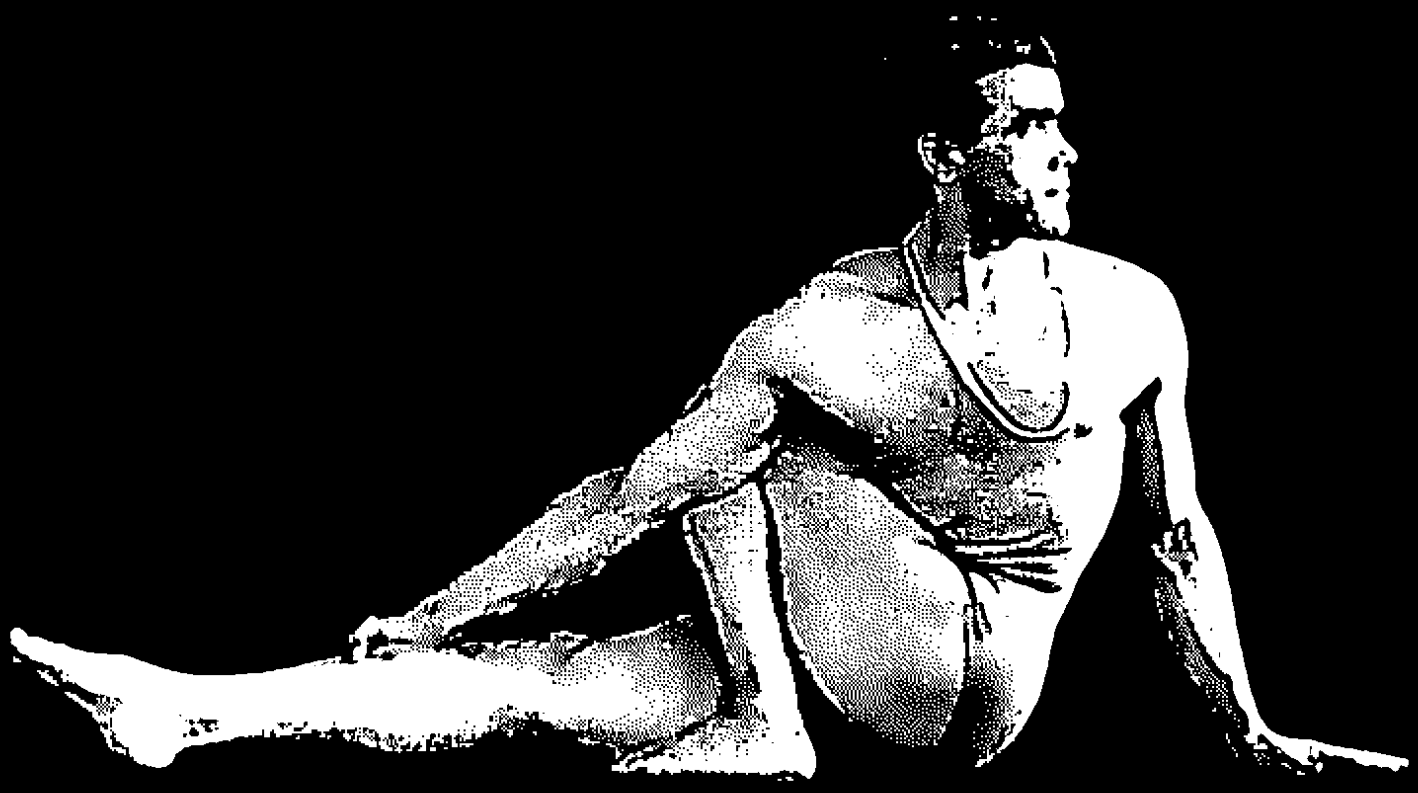


Ardha-Matsyendrasana

Half Spinal Twist (Rear View)

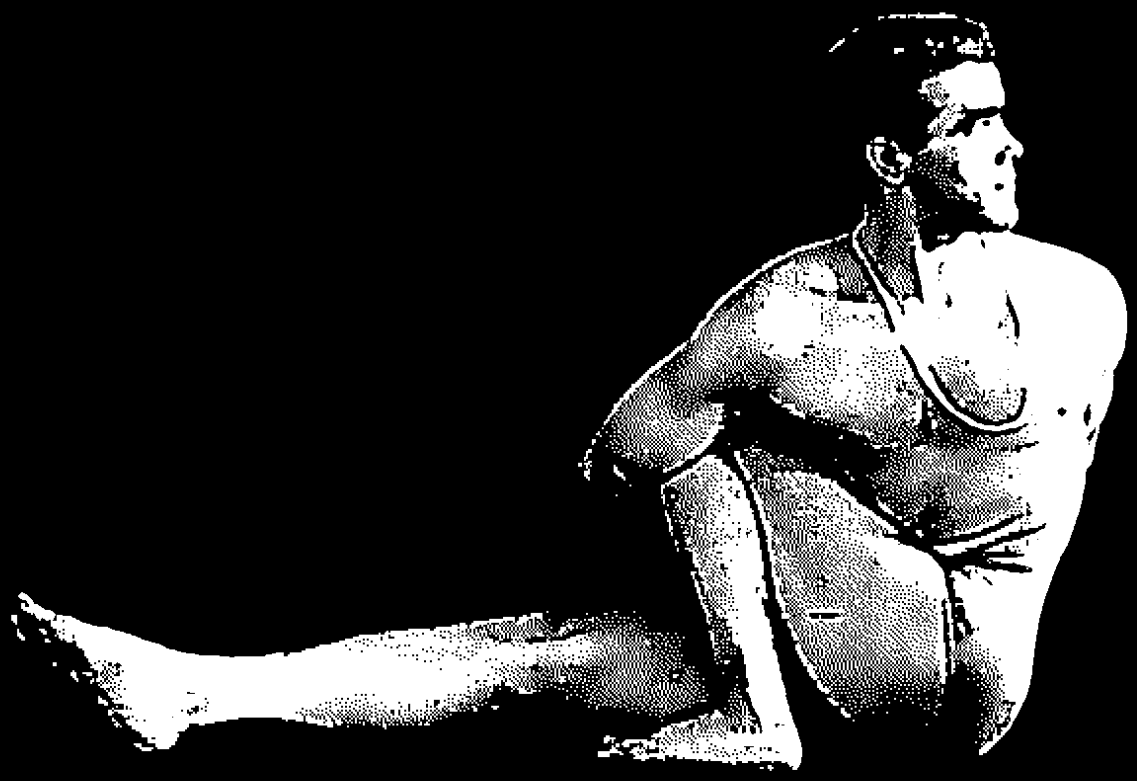


Paripurna-Matsyendrasana
Full Spinal Twist (Preparation)



Marichyasana III

Pose of the Sage Marichi III (Preparation)



Marichyasana III

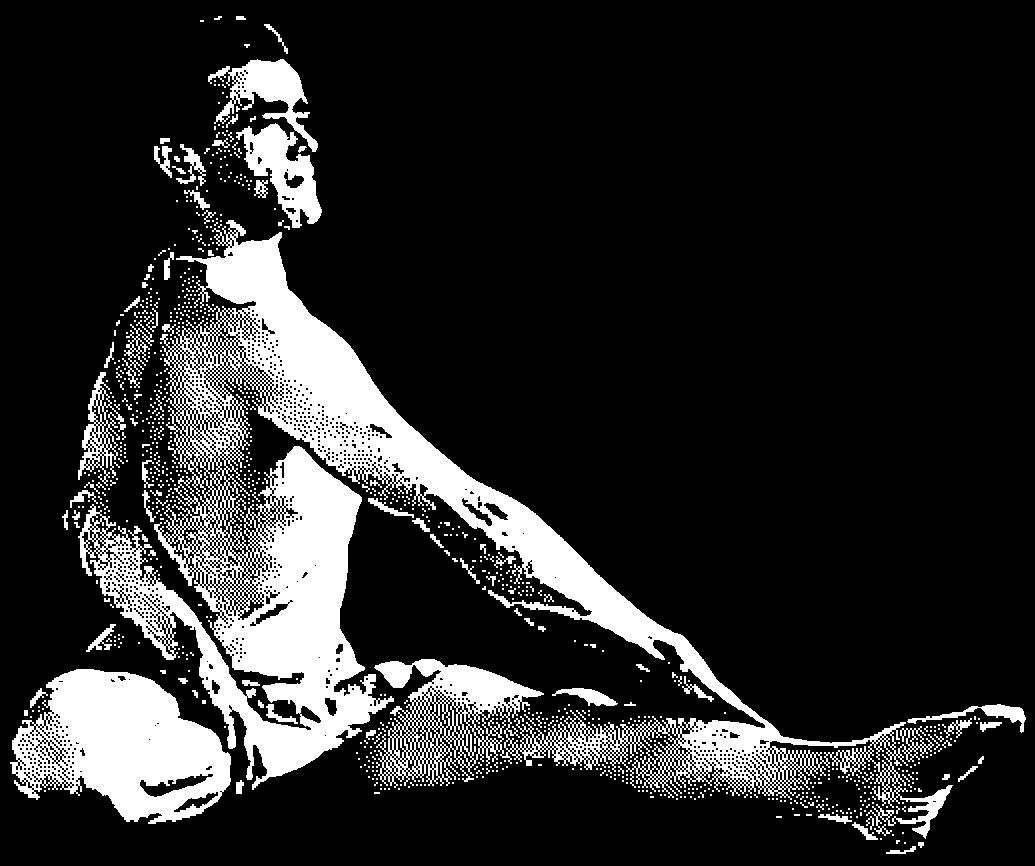
Pose of the Sage Marichi III

Marichyasana IV

Pose of the Sage Marichi IV (Preparation)

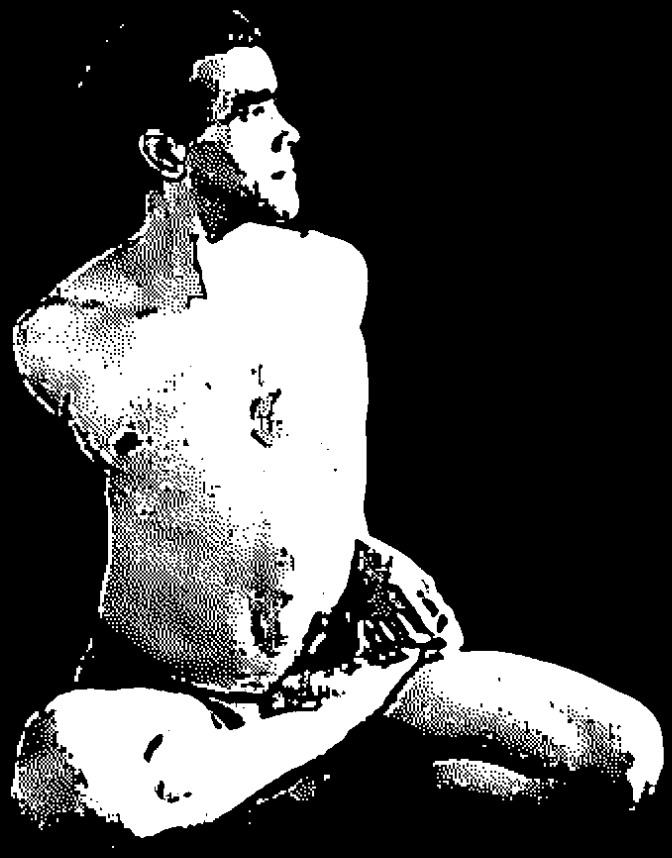
Marichyasana IV

Pose of the Sage Marichi IV



Bharadvajasana

Pose of the Sage Warrior Bharadvaja (Preparation)



Bharadvajasana

Pose of the Sage Warrior Bharadvaja

Bharadvajasana

Pose of the Sage Warrior Bharadvaja (Rear View)

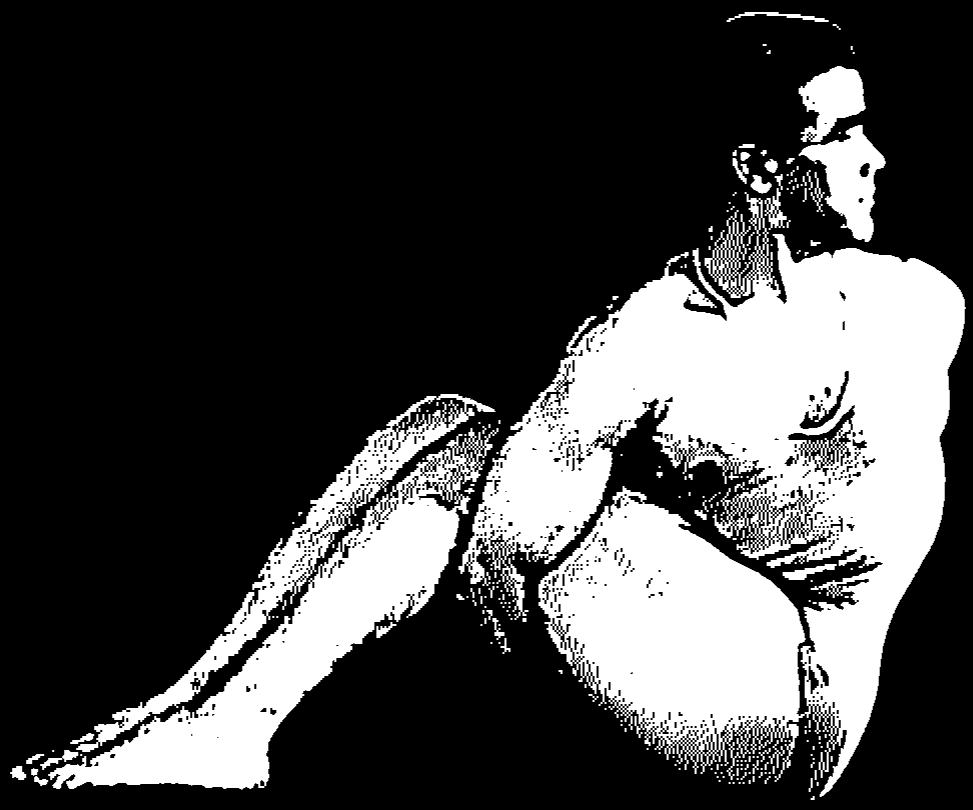
Vamadevasana

Pose of the Sage Vamadeva (Preparation)

Vamadevasana

Pose of the Sage Vamadeva

Prapada-Matsyendrasana
Spinal Twist in Tiptoe Pose



Pashasana

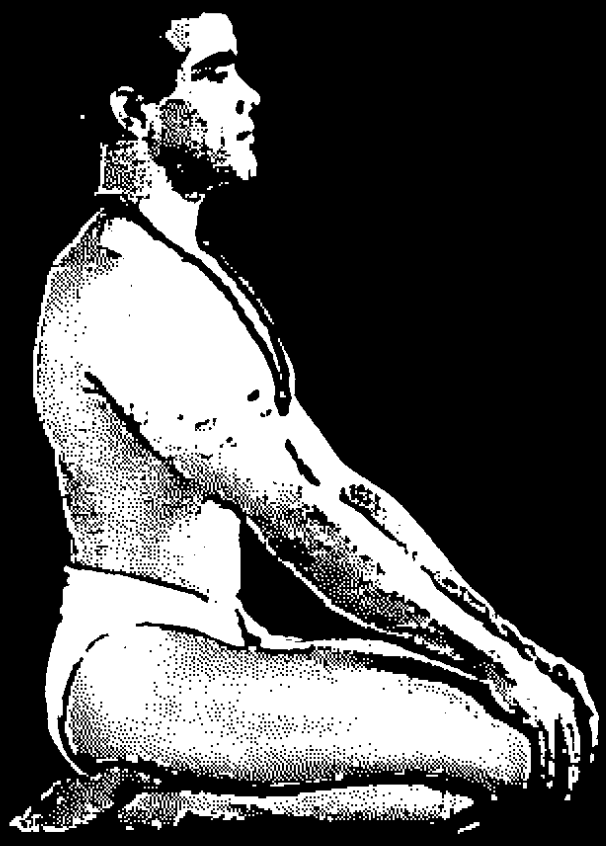
Noose Pose (Preparation)

Pashasana

Noose Pose (Front View)

Pashasana

Noose Pose (Rear View)



Virasana

Hero Pose (Preparation)

Virasana

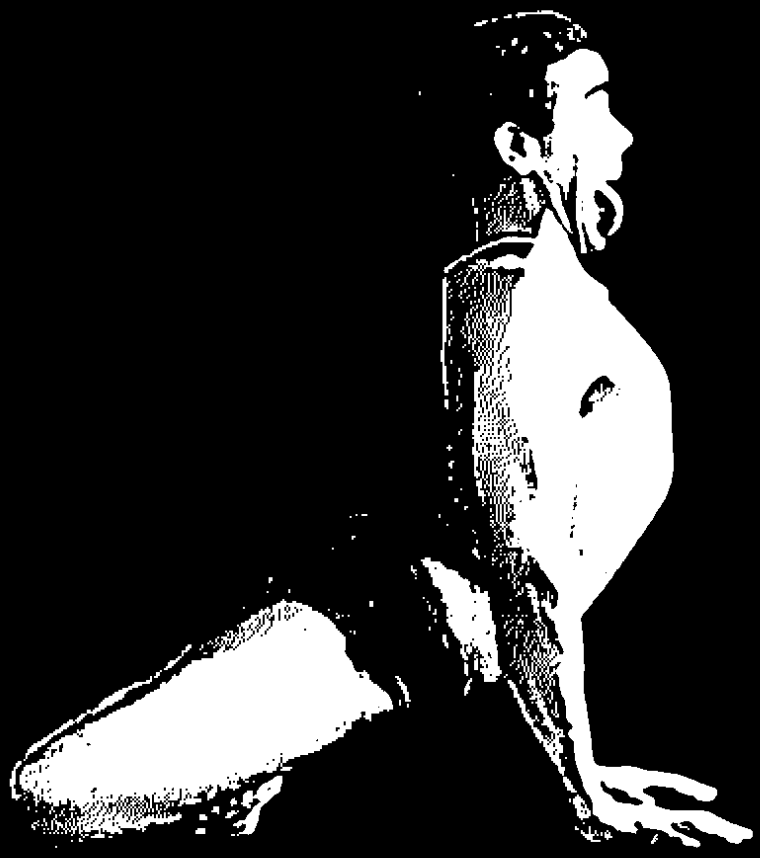
Hero Pose

Virasana

Hero Pose

Simhasana

Lion Pose



Padma Simhasana

Lion Pose

Mandukasana

Frog Pose

Sukhasana

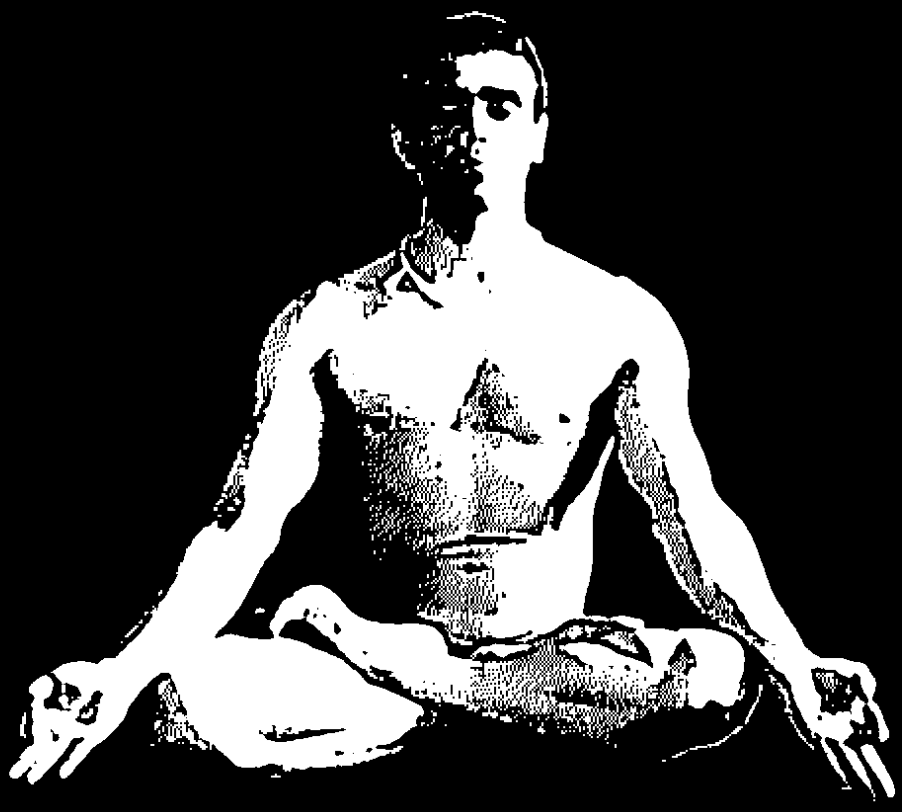
Easy Pose

Siddhasana

Accomplished Pose

Ardha-Padmasana

Half-Lotus Pose



Padmasana

Lotus Pose

Baddha-Padmasana

Bound Lotus Pose (Front View)

Baddha-Padmasana

Bound Lotus Pose (Rear View)

Yogasana
Yoga Pose

Yoga Mudra

Yogic Seal (Preparation)

Yoga Mudra

Yogic Seal

Yoga Mudra

Yogic Seal (Variation)

Yoga Mudra

Yogic Seal (Side View)

Mulabandhasana

Root Lock Pose (Preparation)

Mulabandhasana

Root Lock Pose

Baddha-Konasana

Bound Angle Pose

Baddha-Konasana

Bound Angle Pose (Variation)

Gomukhasana

Cowface Pose (Front View)

Gomukhasana

Cowface Pose (Rear View)

Leg Cradle

Squatting

BREATHING & CLEANSING PRACTICES

Pranayama is the rhythmic control of the breath that drives that vital force up the spine through all the chakras, opening consciousness. *Pranayama* is not an asana, yet it is the most important practice in yoga. Following *Akasha* (space), *Prana*, which means breath or life force, was the second creation in the universe. It is the energy that animates everything, even thought. Explaining the flow of energy in yogic terms would require its own book. All you need to know is that it resembles the flow of electricity through condensers, transformers, and resistors. Correct application of *pranayama* is very powerful, enabling you to control your emotions, increase concentration, and master certain difficult poses.

The breathing exercises in the following pages just a few of the many techniques used in *pranayama* practice. In nostril breathing practices like *Jalandhara Bandha* be sure to use the right hand to open and close the nostrils, as the right arm has different positive currents than the left. Keep the thumb on the right also with the middle and index fingers away from the nose. Keeping the left hand in *Jnana Mudra*,

tips of the thumb and index finger touching, prevents dissipation of energy.

The cleansing techniques are called *kriyas* and they function to physically rid the system of impurities. The *dhautis* (washing methods) are employed prior to pranayama to maximize its full benefits. When practicing *kriyas* it's essential to be guided by an experienced teacher.

Nadi Vibrator-Pranayama
(Side View)

Nadi Vibrator-Pranayama
(Front View)

Jalandhara-Bandha

Chin Lock

Shitali-Kumbahka

Cooling Retention of Inhalation

Sutra-Neti

String Neti / Nasal Cleansing

RESTING POSES

All restorative poses can be held for five to 30 minutes since they don't create any undue tension, sensation, or strain. *Shavasana*, Corpse Pose, is the pose of total relaxation, and the only pose in which a yogi breathes through the mouth. Beginners often skip this pose at the end of practice but they are missing one of yoga's most powerful moments. With every breath you allow awareness to enter the deepest parts of yourself. Resting, but with your mind fully aware, *Shavasana* calms the brain, relaxes the body, helps lower blood pressure, and rebalances the entire system. Ten minutes will bring you all these benefits; fifteen minutes is preferable, and corresponds to two or three hours of deep sleep.

Child's pose, *Garbhasana*, is often used as a relieving pose between more challenging asanas. It gently stretches the hips, thighs, and ankles, relieves back and neck pain, and calms the brain. Try to breathe fully into the back of the torso to deepen the intake of oxygen. In all restorative poses it's important not to collapse and to maintain good alignment. You can turn away from outside stimulation but you must stay awake.

Garbhasana

Child's Pose (Variation)

Garbhasana

Child's Pose

Makarasana

Crocodile Pose

Parshva-Shavasana

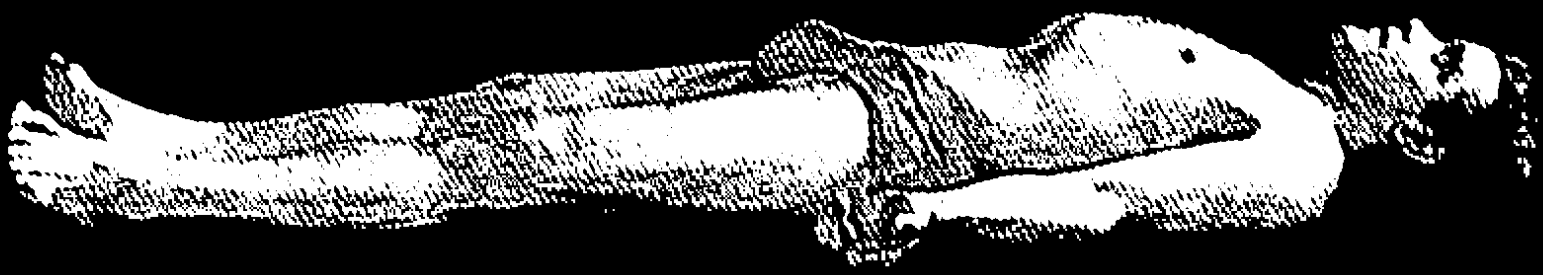
Side Corpse Pose

Supta-Madhyasana

Reclining Waist Pose (Preparation)

Supta-Madhyasana

Reclining Waist Pose



Shavasana

Corpse Pose

ॐ

BIOGRAPHY

Sri Dharma Mittra is one of the most accomplished yogis in the West. He has spent most of his life serving humanity, helping students achieve radiant health and spiritual development through yoga practice.

Dharma was born in 1939 in the state of Minas Gerais, Brazil. In 1964, following a career in the Brazilian Air Force, he moved to New York City to study yoga with his teacher Sri Swami Kailashananda, also known as Yogi Gupta. After intense study and practice of the eight limbs of yoga, he was accepted into the family of Bramacharia as a *sannyasin* — one who renounces the world in order to realize God. In 1975 he left his guru's ashram to found the Yoga Asana Center of New York City, now known as the Dharma Yoga Center.

He teaches classic Hatha-Raja-Ashtanga yoga and embodies the virtues of the discipline: kindness, patience, humility, fortitude, righteousness, humor, selfless service, *ahisma* (non-killing), compassion, and understanding for all. Like many early masters, much of his teaching is imparted nonverbally;

it is said that students can feel the truth and make rapid improvements simply by being in his presence.

Dharma has initiated tens of thousands of people into yoga practice, and has taught many well-known yogis practicing today. He is known as "the Teacher's Teacher" and "the Rock of Yoga."

In 1984 Dharma meticulously photographed himself in more than 1,300 yoga poses, then cut and pasted 908 of the images onto the Master Yoga Chart, offering it to his Guru and to all yoga aspirants. Today this masterpiece hangs in ashrams and centers worldwide, where it is used as a teaching tool and inspiration for all *sadahkas* (seekers of truth). *Asanas* is his first book.

GLOSSARY

Adhara: A support.

Adho-mukha: Face downwards.

Ajna-Chakra: The nerve plexus between the eyebrows. The third eye; the seat of command.

Alamba: Support.

Ananda: Bliss.

Anga: Limbs, points.

Angustha: The big toe.

Ardha: Half.

Asana ("seat"): A physical posture; the third limb of yoga; originally this meant "meditation posture."

Ashta: Eight.

Ashtanga-yoga ("eight-limbed union"): The eightfold yoga of Patanjali, consisting of moral discipline (*yama*), self-restraint (*niyama*), posture (*asana*), breath control (*pranayama*), sensory inhibition (*pratyahara*), concentration (*dharana*), meditation (*dhyana*), and ecstasy (*samadhi*), leading to liberation (*kaivalya*).

Ashva: Horse.

Ayama: Length, expansion, extension.

Baddha: Bound.

Baka: A crane.

Bandha: A bond; a posture in which certain organs or body parts are contracted and controlled.

Bhakti: Worship; devotion.

Bheka: A frog.

Bhuja: The shoulder or arm.

Bhujanga: A serpent or cobra.

Bindu: Seed, point. The creative potency of anything where all energies are focused; the third eye.

Chakra: Wheel. Literally, the wheel of a wagon; metaphorically, one of the psycho-energetic centers of

the subtle body in which energy flows. The seven chakras are: *muladhara-chakra* at the base of the spine, *svadhishthana-chakra* at the genitals, *manipura-chakra* at the navel, *anahata-chakra* at the heart, *vishuddha-chakra* at the throat, *ajna-chakra* in the middle of the head, and *sahasrara-chakra* at the top of the head.

Chakora: A type of bird (Greek partridge).

Chalana: To churn.

Chandra: The moon.

Chatur: Four.

Chin-mudra ("consciousness seal"): A hand gesture in meditation, which is formed by bringing the tips of the index finger and the thumb together, while the remaining fingers are kept straight.

Danda: A staff, stick.

Dhanu: A bow.

Dharma ("bearer"): A term signifying law, virtue, righteousness.

Drishti ("View"or "sight"): Yogic gazing, such as at the tip of the nose or the spot between the eyebrows.

Dur: Difficult.

Dwi: Two.

Dwi-hasta: Two hands.

Dwi-pada: Two feet or legs.

Eka: One.

Ganda: The cheek or side of the face including the temple.

Garbha: An infant.

Garuda: An eagle.

Go: A cow.

Goraksha: Cowhead.

Guru: ("he who is heavy, weighty"): A spiritual teacher.

Hala: A plough.

Hansa: Swan/gander; also refers to the breath as it moves within the body.

Hatha Yoga ("Forceful Yoga"): a major branch of yoga, developed by Goraksha and other adepts c. 1000 C.E., and emphasizing the physical aspects of the transformative path, notably postures (*asana*), cleansing techniques (*shodhana*), and breath control (*pranayama*). "Ha" means sun; "Tha" means moon.

Hasta: The hand.

Jalandhara-bandha: A posture where the neck and throat are contracted and the chin is rested in the notch between the collar bones.

Janu: The knee.

Jathara: The abdomen, stomach.

Jnana -mudra: Hand gesture in which the tip of the index finger touches the tip of the thumb. The symbol of true knowledge.

Kapalabhati: A process of sharp, quick inhalations and exhalations that clears the sinuses.

Kapota: A dove or pigeon.

Karma ("action"): Activity of any kind, including ritual acts; said to be binding only so long as engaged in a self-centered way.

Karna: The ear.

Khechari-mudra ("space-walking seal"): The Tantric practice of curling the tongue back against the upper palate in order to seal life energy.

Kona: An angle.

Krouncha: A heron.

Kriya: A cleansing process.

Kukkuta: A cock.

Kulpha: The ankle.

Kunta: A spear; lance.

Kurma: A tortoise.

Lalata: The forehead; also the name of a chakra.
Lola: Tremulous; swinging like a pendulum.
Loma: Hair.
Madhya: Middle (of the body).
Makara: A crocodile.
Mala: A wreath.
Mandala: A circular design symbolizing the cosmos.
Manduka: A frog.
Mantra: A sacred sound or phrase that has a transformative effect on the mind of the individual reciting it.
Matsya: A fish.
Mayura: A peacock.
Meru-danda: The spinal column.
Mrita: Dead, a corpse.
Mudra: A seal or sealing posture.
Mukha: Face.
Mukta: Free.
Mula: Root; a posture where the body from the anus to the navel is contracted and lifted toward the spine.
Nada: The inner sound, heard through the practice of nada yoga or kundalini yoga.
Nadi-shodhana ("channel cleansing"): The practice of purifying the conduits through breath control (*pranayama*).
Nakra: A crocodile.
Namaskara: Worship; salutation.
Nara: A man.
Nataraj: Name of Shiva as the cosmic dancer.
Natya: Dancing.
Nauli: A process in which the abdominal muscles and organs are made to move vertically and laterally in a surging motion.
Nava: A boat.
Nir: Without.

Ojas ("vitality"): The subtle energy produced through practice, especially the discipline of chastity (*brahmacharya*).

Om: The original mantra symbolizing the ultimate reality.

Pada: The foot or leg.

Padangustha: The big toe.

Padma: A lotus.

Parampara: A succession.

Parigha: Bolt lock on a gate.

Parivrtta: Revolving.

Parivartana: Turning around; revolving.

Parivartana-pada: With one leg turned around.

Parshva: The side, flank; lateral.

Parvata: A mountain.

Paryanka: A bed.

Pasha: A noose.

Paschima: West; the backside of the body.

Pid: Squeeze.

Pincha: The chin; a feather.

Pinda: A fetus, embryo; ball.

Prajna: Intelligence, wisdom.

Prana: Breath, life, vitality, wind, energy, strength. Also connotes the soul.

Pranama: A prayer.

Pranayama: Breath control, consisting of conscious inhalation (*puraka*), retention (*kumbhaka*), and exhalation (rechaka).

Prapada: The tip of the feet.

Prasarita: Spread out; stretched out.

Purva: East; the front of the body.

Purvottana: An intense stretch of the front side of the body.

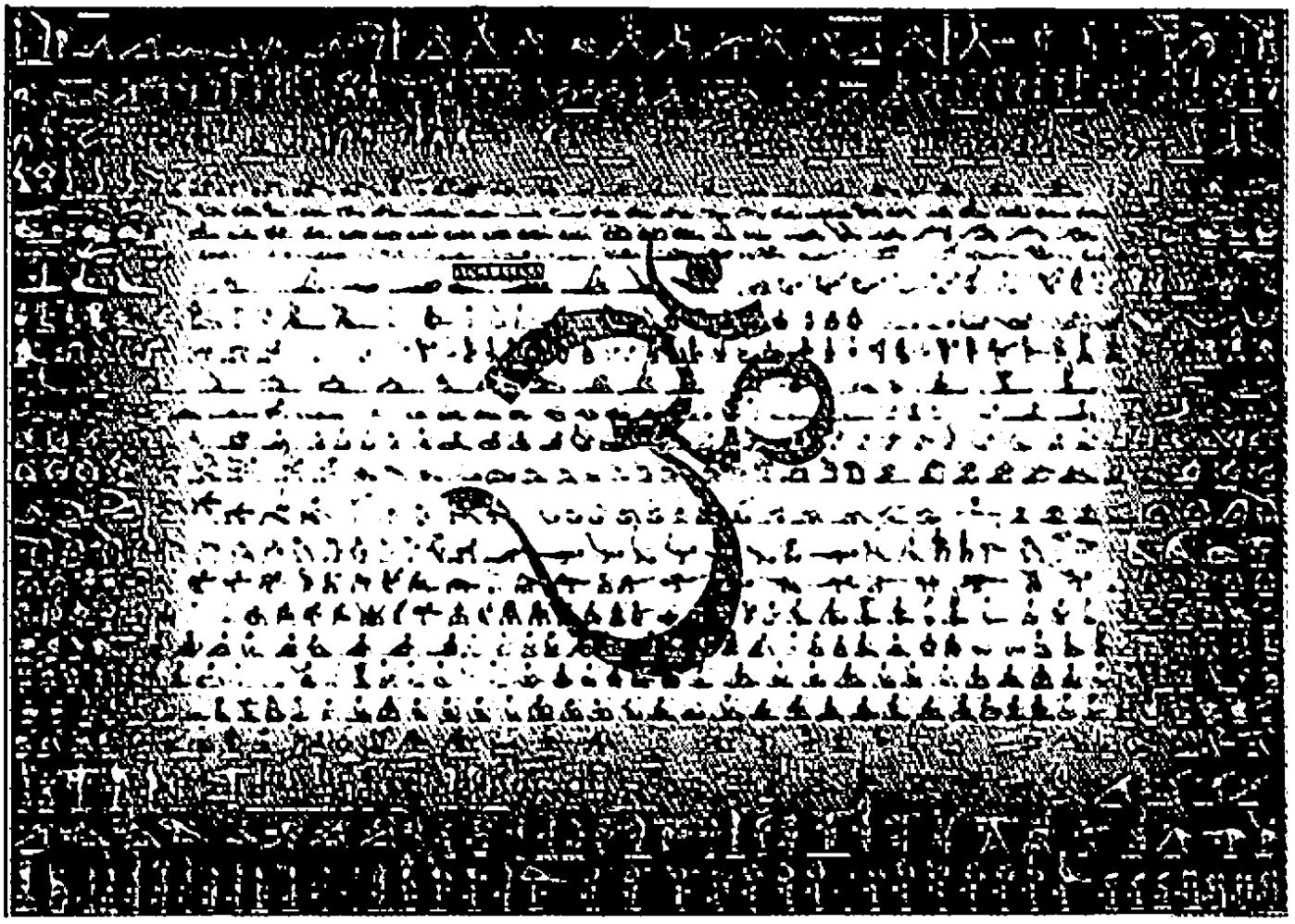
Raja-Yoga ("Royal Yoga"): Union with Supreme Spirit by becoming ruler of one's own mind. Another name for Patanjali's eight-fold path of yoga.

Raja-kapota: King pigeon.

Sa: With.

Salamba: With support.
Sama: Same, equal, even, upright.
Samadhi ("putting together"): The ecstatic or state in which the meditator becomes one with the object of meditation.
Sannyasin ("he who has cast off"): A renouncer.
Sansara ("confluence"): The finite world of change, as opposed to the ultimate reality.
Sanchalana: Shaking.
Sat-sanga ("company of truth"): The practice of frequenting the good company of saints, sages, and their disciples.
Sarva: All, whole.
Sarvanga: The whole body.
Setu: A bridge.
Shalabha: A locust.
Shava: A corpse.
Shirsha: The head.
Simha: A lion.
Sthiti: Stability.
Sukha: Easy, comfortable.
Supta: Sleeping.
Surya: The sun.
Sutra ("thread"): A work consisting of aphoristic statements, such as Patanjali's Yoga Sutra.
Svana: A dog.
Tada: A mountain.
Tan: To stretch or lengthen.
Tapas ("glow/heat"): A burning effort that involves purification, self-discipline and austerity.
Tittibha: A firefly.
Tolana: Weighing.
Trikona: A triangle.
Ubhaya: Both.
Uddiyana: A yogic lock in which the diaphragm is lifted high up in the thorax and the abdominal organs are pulled back toward the spine.
Upavistha: Seated.

Urdhva: Raised, elevated.
Urdhva-retus: Upward facing.
Ushtra: A camel.
Utkata: Powerful.
Uttana: An intense stretch.
Utthita: Raised up, extended, stretched.
Vakra: Crooked.
Vama: The left side.
Vatayana: A horse.
Vayu: The wind; vital air.
Vinyasa: Going progressively.
Viparita: Inverted, reversed.
Vira: A hero.
Vrksha: A tree.
Vrschika: A scorpion.
Vrt: To turn or revolve.
Yoga: Union, communion. Derived from *yuj*, meaning to join or to yoke.
Yoga-mudra: A posture; a seal.
Yogananda: A great yogi of the 20th century.
Yoga-nidra: Yogic sleep where the body is at rest but the mind remains fully conscious.
Yoga-sutra: Classical work on yoga by Patanjali, consisting of 185 aphorisms on yoga and divided into four parts dealing with Samadhi, the means by which yoga is attained, the powers the seeker comes across in his quest, and the state of absolution.
Yogi or yogini: One who follows the path of yoga.



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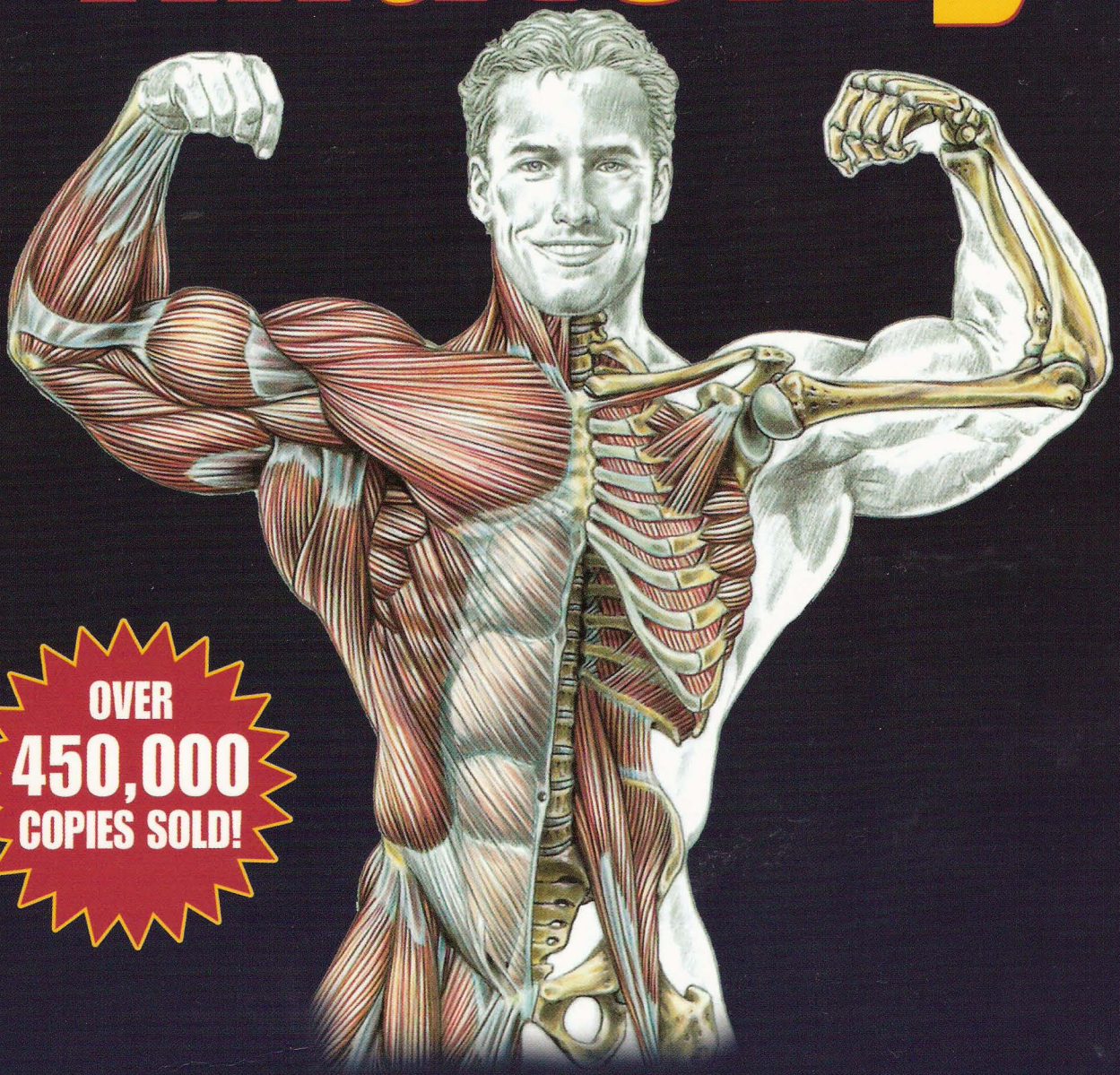

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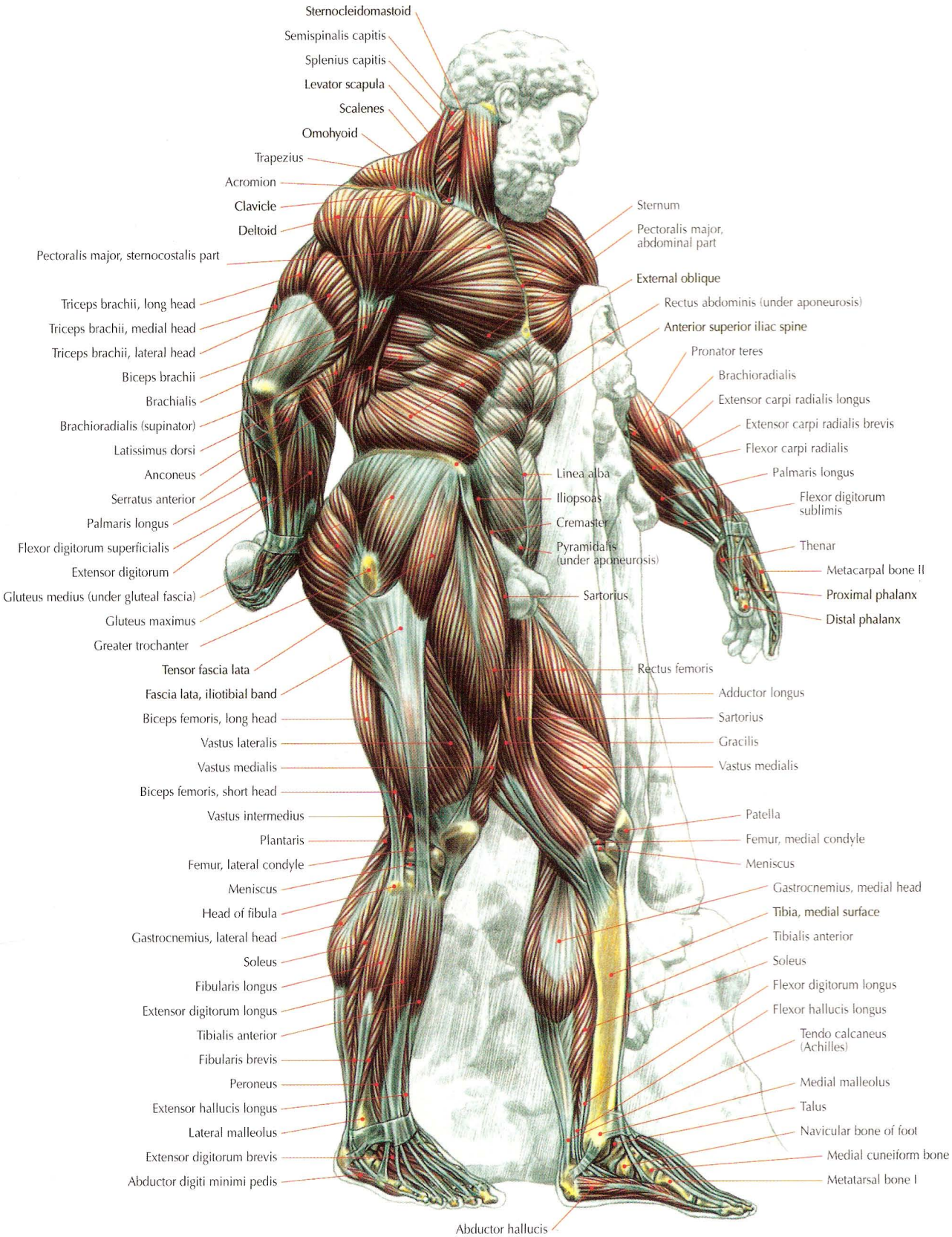
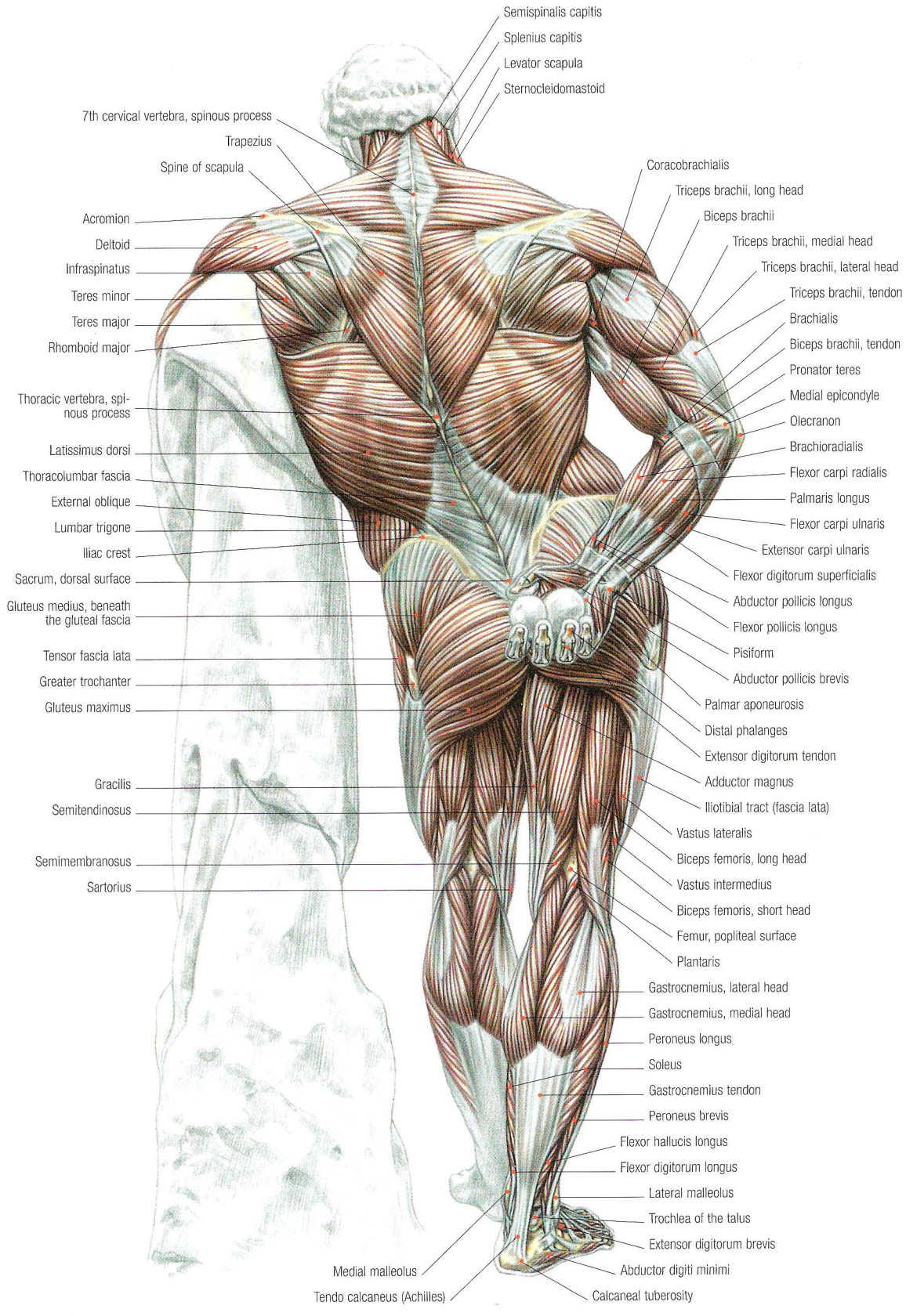
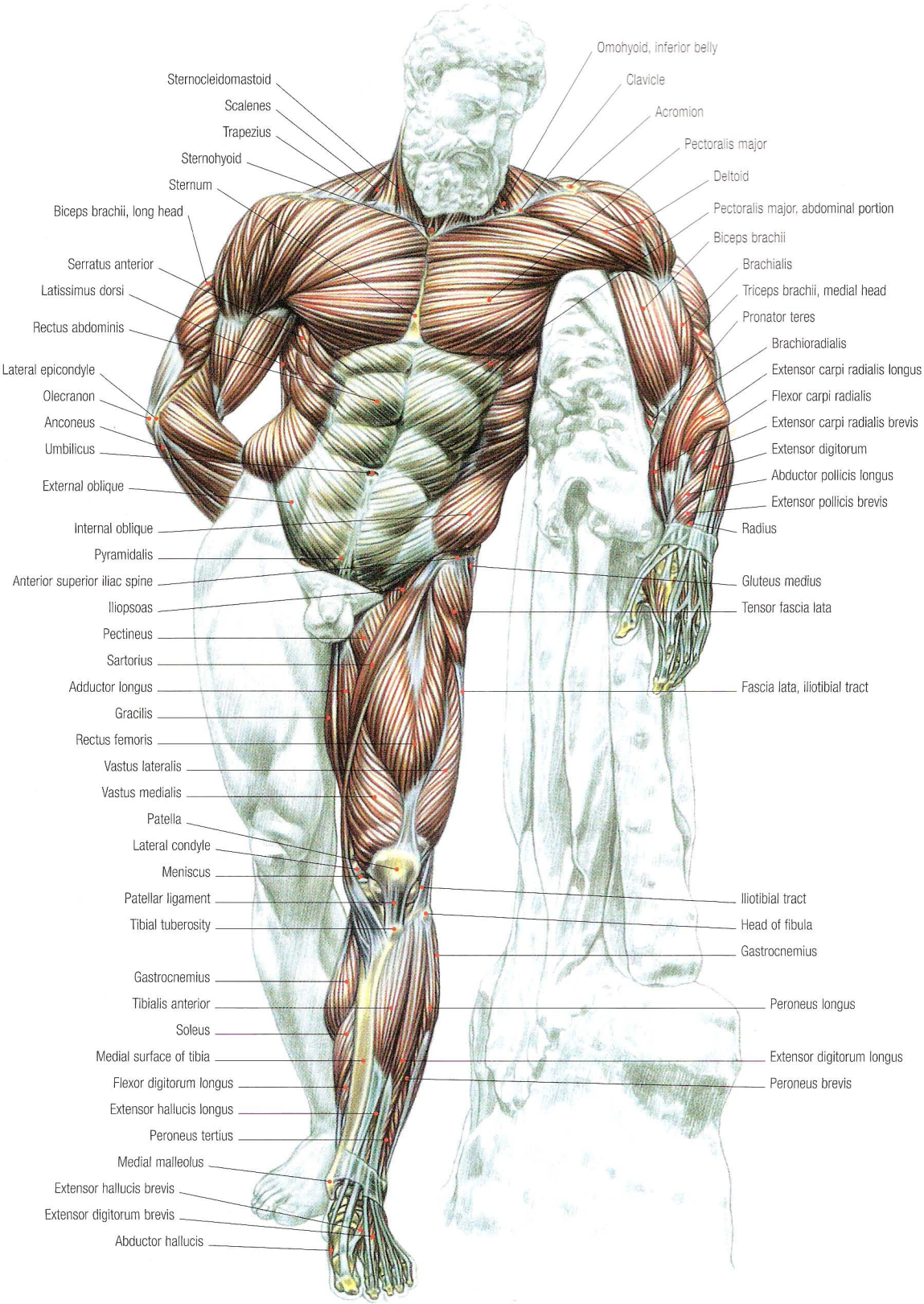

Sternocleidomastoid
Semispinalis capitis
Splenius capitis
Levator scapula
Scalenes
Omohyoid
Trapezius
Acromion
Clavicle
Deltoid
Pectoralis major, sternocostalis part
Triceps brachii, long head
Triceps brachii, medial head
Triceps brachii, lateral head
Biceps brachii
Brachialis
Brachioradialis (supinator)
Latissimus dorsi
Anconeus
Serratus anterior
Palmaris longus
Flexor digitorum superficialis
Extensor digitorum
Gluteus medius (under gluteal fascia)
Gluteus maximus
Greater trochanter
Tensor fascia lata
Fascia lata, iliotibial band
Biceps femoris, long head
Vastus lateralis
Vastus medialis
Biceps femoris, short head
Vastus intermedius
Plantaris
Femur, lateral condyle
Meniscus
Head of fibula
Gastrocnemius, lateral head
Soleus
Fibularis longus
Extensor digitorum longus
Tibialis anterior
Fibularis brevis
Peroneus
Extensor hallucis longus
Lateral malleolus
Extensor digitorum brevis
Abductor digiti minimi pedis
Abductor hallucis
Sternum
Pectoralis major, abdominal part
External oblique
Rectus abdominis (under aponeurosis)
Anterior superior iliac spine
Pronator teres
Brachioradialis
Extensor carpi radialis longus
Extensor carpi radialis brevis
Flexor carpi radialis
Palmaris longus
Flexor digitorum sublimis
Thenar
Metacarpal bone II
Proximal phalanx
Distal phalanx
Linea alba
Iliopsoas
Cremaster
Pyramidalis (under aponeurosis)
Sartorius
Rectus femoris
Adductor longus
Sartorius
Gracilis
Vastus medialis
Patella
Femur, medial condyle
Meniscus
Gastrocnemius, medial head
Tibia, medial surface
Tibialis anterior
Soleus
Flexor digitorum longus
Flexor hallucis longus
Tendo calcaneus (Achilles)
Medial malleolus
Talus
Navicular bone of foot
Medial cuneiform bone
Metatarsal bone I

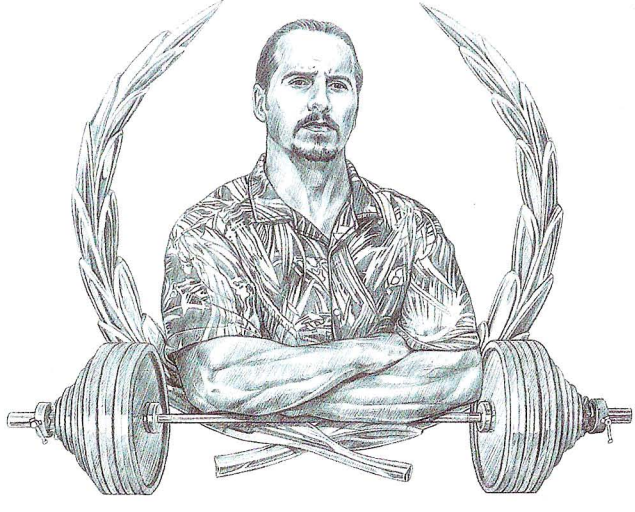

Semispinalis capitis
Splenius capitis
Levator scapula
Sternocleidomastoid
7th cervical vertebra, spinous process
Trapezius
Spine of scapula
Acromion
Deltoid
Infraspinatus
Teres minor
Teres major
Rhomboid major
Thoracic vertebra, spinous process
Latissimus dorsi
Thoracolumbar fascia
External oblique
Lumbar trigone
Iliac crest
Sacrum, dorsal surface
Gluteus medius, beneath the gluteal fascia
Tensor fascia lata
Greater trochanter
Gluteus maximus
Gracilis
Semitendinosus
Semimembranosus
Sartorius
Medial malleolus
Tendo calcaneus (Achilles)
Coracobrachialis
Triceps brachii, long head
Biceps brachii
Triceps brachii, medial head
Triceps brachii, lateral head
Triceps brachii, tendon
Brachialis
Biceps brachii, tendon
Pronator teres
Medial epicondyle
Olecranon
Brachioradialis
Flexor carpi radialis
Palmaris longus
Flexor carpi ulnaris
Extensor carpi ulnaris
Flexor digitorum superficialis
Abductor pollicis longus
Flexor pollicis longus
Pisiform
Abductor pollicis brevis
Palmar aponeurosis
Distal phalanges
Extensor digitorum tendon
Adductor magnus
Iliotibial tract (fascia lata)
Vastus lateralis
Biceps femoris, long head
Vastus intermedius
Biceps femoris, short head
Femur, popliteal surface
Plantaris
Gastrocnemius, lateral head
Gastrocnemius, medial head
Peroneus longus
Soleus
Gastrocnemius tendon
Peroneus brevis
Flexor hallucis longus
Flexor digitorum longus
Lateral malleolus
Trochlea of the talus
Extensor digitorum brevis
Abductor digiti minimi
Calcaneal tuberosity


Omohyoid, inferior belly
Sternocleidomastoid
Clavicle
Scalenes
Acromion
Trapezius
Pectoralis major
Sternohyoid
Deltoid
Sternum
Pectoralis major, abdominal portion
Biceps brachii, long head
Biceps brachii
Serratus anterior
Brachialis
Latissimus dorsi
Triceps brachii, medial head
Pronator teres
Rectus abdominis
Brachioradialis
Lateral epicondyle
Extensor carpi radialis longus
Olecranon
Flexor carpi radialis
Anconeus
Extensor carpi radialis brevis
Umbilicus
Extensor digitorum
Abductor pollicis longus
External oblique
Extensor pollicis brevis
Internal oblique
Radius
Pyramidalis
Anterior superior iliac spine
Gluteus medius
Iliopsoas
Tensor fascia lata
Pectineus
Sartorius
Adductor longus
Fascia lata, iliotibial tract
Gracilis
Rectus femoris
Vastus lateralis
Vastus medialis
Patella
Lateral condyle
Meniscus
Patellar ligament
Iliotibial tract
Tibial tuberosity
Head of fibula
Gastrocnemius
Gastrocnemius
Tibialis anterior
Peroneus longus
Soleus
Medial surface of tibia
Extensor digitorum longus
Flexor digitorum longus
Peroneus brevis
Extensor hallucis longus
Peroneus tertius
Medial malleolus
Extensor hallucis brevis
Extensor digitorum brevis
Abductor hallucis

frédéric delavier

STRENGTH TRAINING ANATOMY

SECOND EDITION



HUMAN KINETICS

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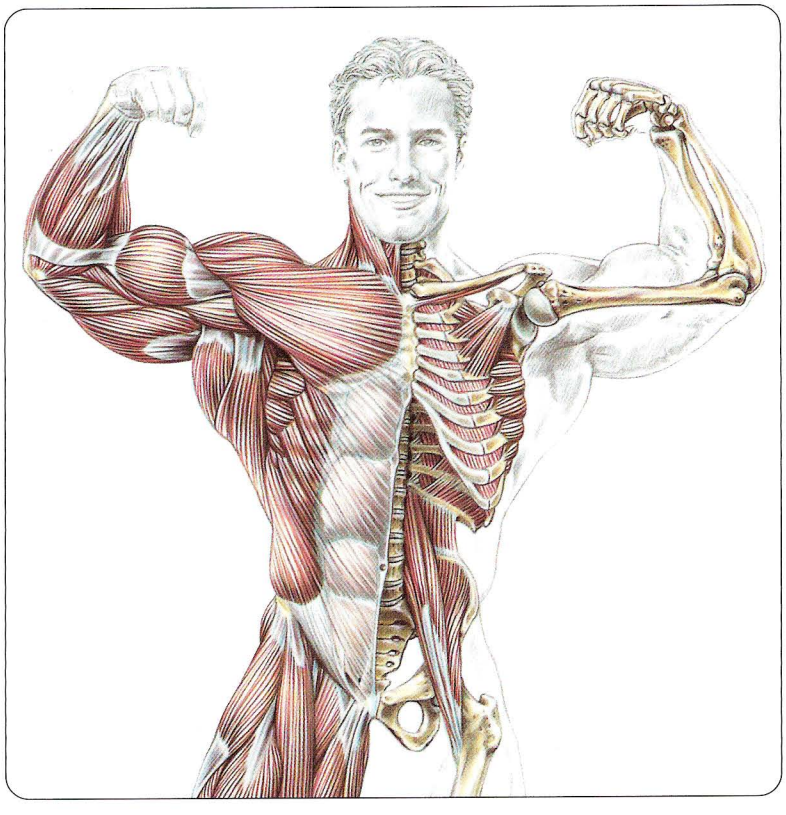

1 ARMS

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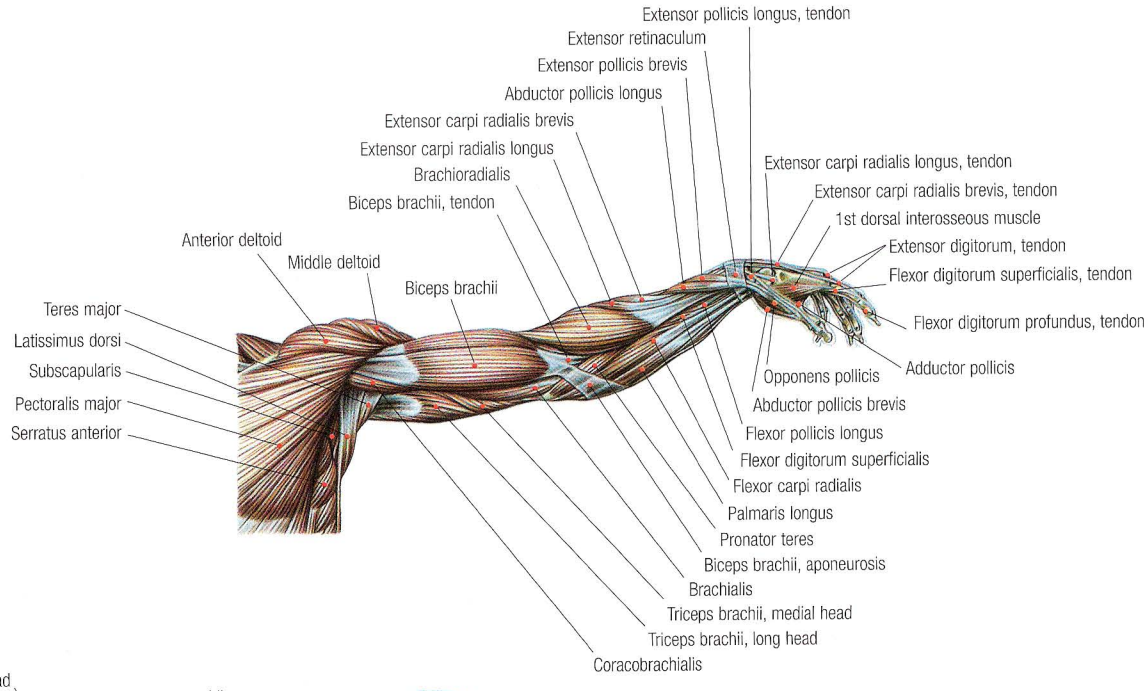
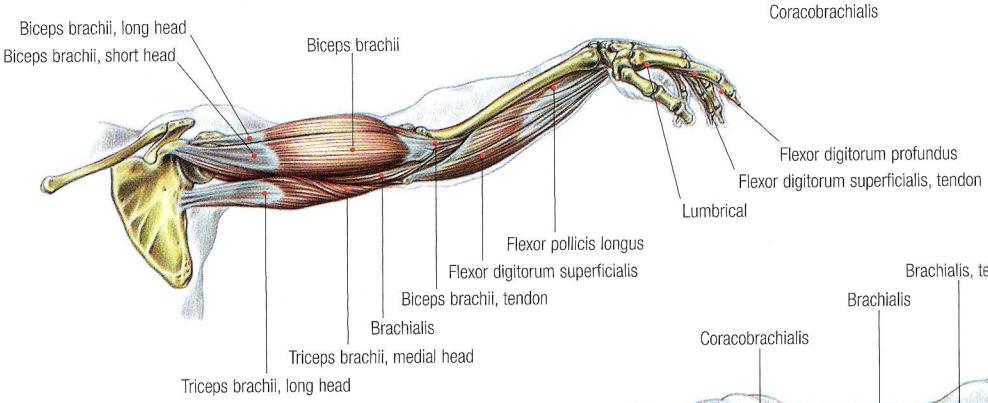
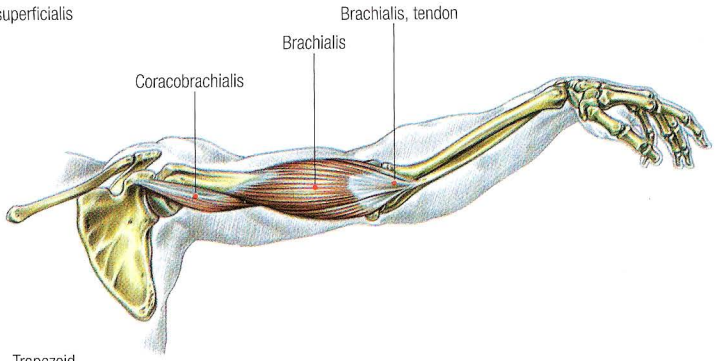
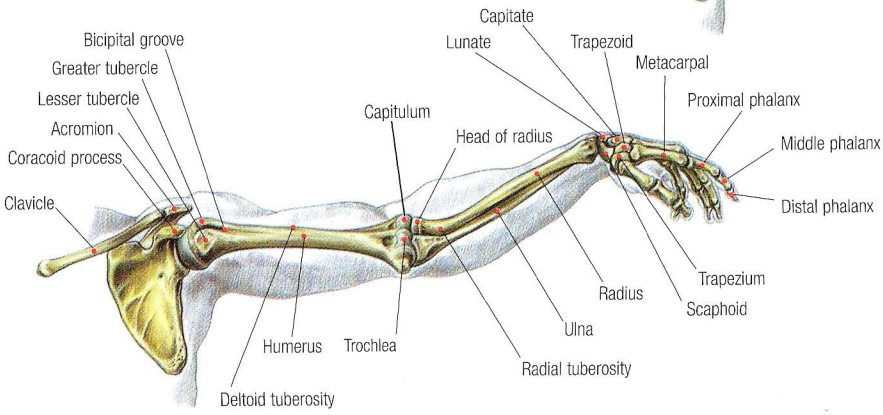

Extensor pollicis longus, tendon
Extensor retinaculum
Extensor pollicis brevis
Abductor pollicis longus
Extensor carpi radialis brevis
Extensor carpi radialis longus
Brachioradialis
Biceps brachii, tendon
Extensor carpi radialis longus, tendon
Extensor carpi radialis brevis, tendon
1st dorsal interosseous muscle
Extensor digitorum, tendon
Flexor digitorum superficialis, tendon
Flexor digitorum profundus, tendon
Adductor pollicis
Opponens pollicis
Abductor pollicis brevis
Flexor pollicis longus
Flexor digitorum superficialis
Flexor carpi radialis
Palmaris longus
Pronator teres
Biceps brachii, aponeurosis
Brachialis
Triceps brachii, medial head
Triceps brachii, long head
Coracobrachialis
Anterior deltoid
Middle deltoid
Biceps brachii
Teres major
Latissimus dorsi
Subscapularis
Pectoralis major
Serratus anterior

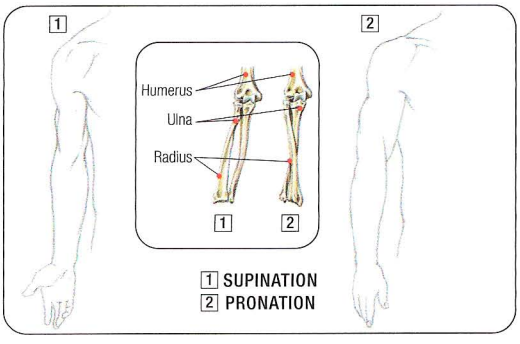

Biceps brachii, long head
Biceps brachii, short head
Biceps brachii
Flexor digitorum profundus
Flexor digitorum superficialis, tendon
Lumbrical
Flexor pollicis longus
Flexor digitorum superficialis
Biceps brachii, tendon
Brachialis
Triceps brachii, medial head
Triceps brachii, long head


Brachialis, tendon
Brachialis
Coracobrachialis


Capitate
Bicipital groove
Lunate
Trapezoid
Greater tubercle
Metacarpal
Lesser tubercle
Proximal phalanx
Capitulum
Acromion
Head of radius
Middle phalanx
Coracoid process
Clavicle
Distal phalanx
Trapezium
Radius
Scaphoid
Ulna
Humerus
Trochlea
Radial tuberosity
Deltoid tuberosity

1 CURLS

Pectoralis major (clavicular head)
Anterior deltoid
Middle deltoid
Flexor carpi ulnaris
Posterior deltoid
Triceps brachii, lateral head
Flexor carpi radialis
Biceps brachii
Brachialis
Palmaris longus
Brachioradialis
Pronator teres
Extensor carpi radialis longus
Triceps brachii, medial head
Anconeus
Brachialis
Extensor carpi radialis brevis
Triceps brachii, long head
Extensor digitorum
Extensor carpi ulnaris
Extensor digiti minimi



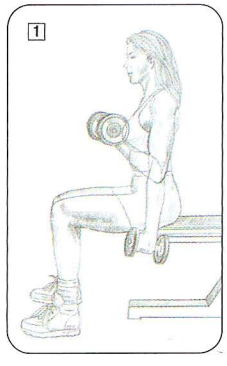
COMMENT: This exercise takes the biceps through its complete range of motion, which includes flexion, protraction, and supination.

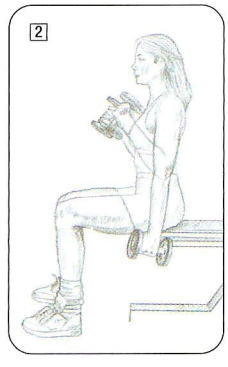
THREE WAYS TO EXECUTE CURLS
1 EMPHASIZE BICEPS
2 WORK BRACHIORADIALIS INTENSELY
3 WORK MAINLY BICEPS AND BRACHIALIS

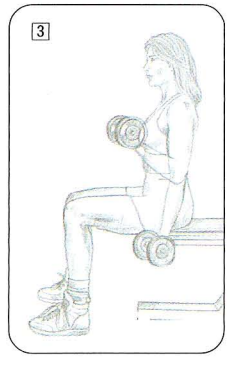
Sit holding a dumbbell in each hand with arms hanging down and the palms of the hands facing the body:

- Inhale and bend the the elbow, rotating the palm up before the forearm reaches horizontal.
- Continue by raising the elbows at the end of the movement.

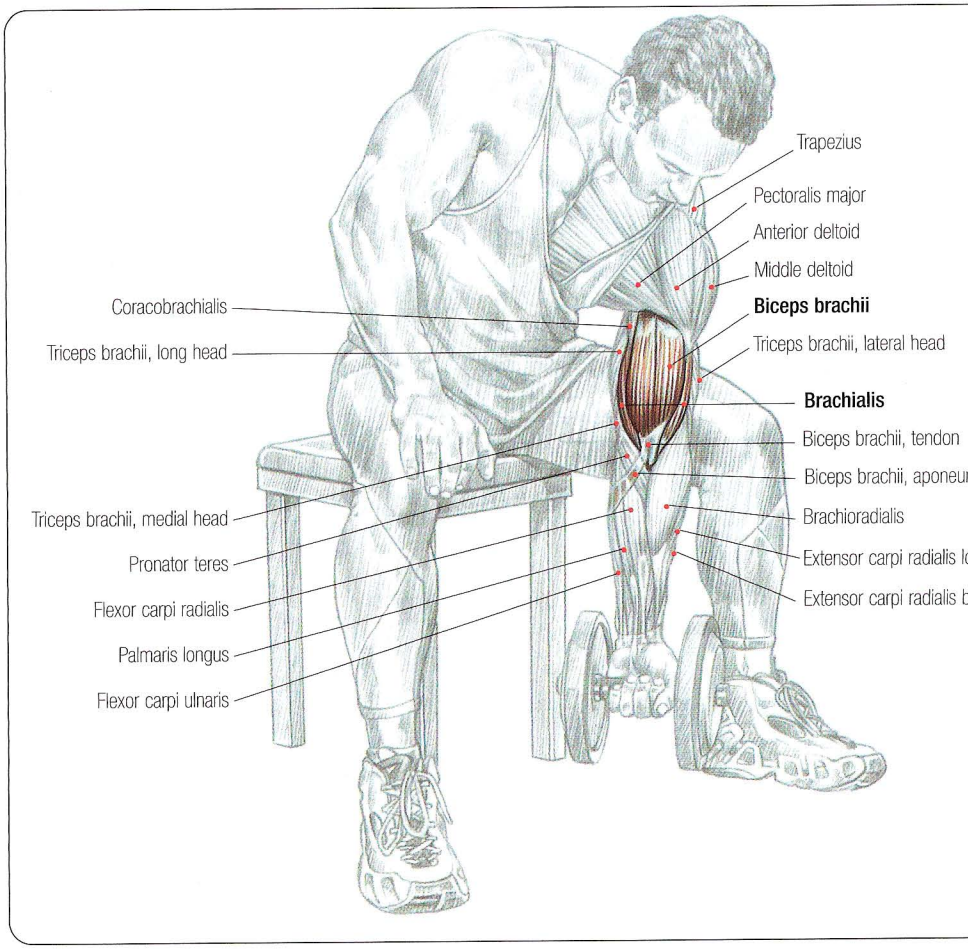
This exercise primarily uses the brachioradialis (long supinator), brachialis, biceps brachii, and anterior deltoid and, to a lesser extent, the coracobrachialis and clavicular head of the pectoralis major.

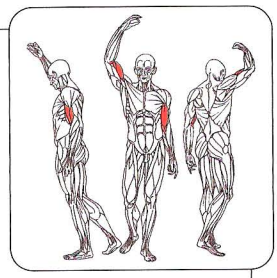


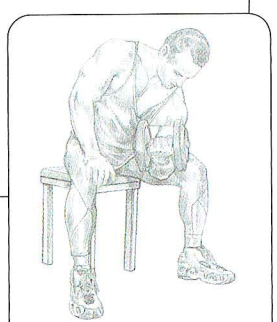




CONCENTRATION CURLS 2







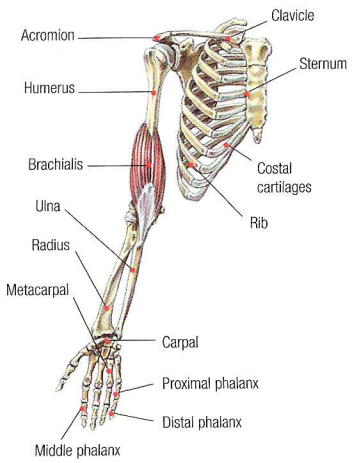
FINAL POSITION

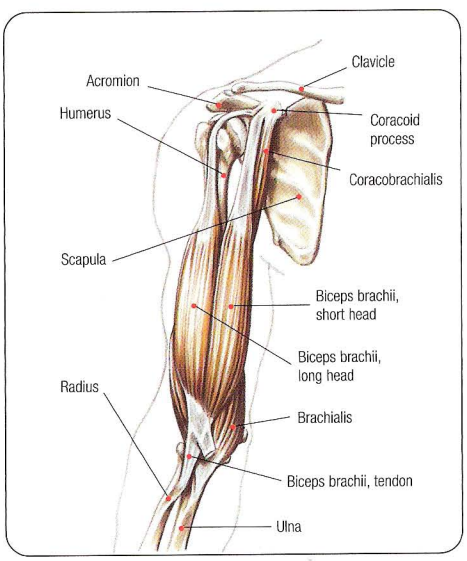
Sit holding a dumbbell with the palm facing forward and the elbow positioned against the inner thigh:

- Inhale and lift the forearm by bending the elbow.
- Exhale at the end of the effort.

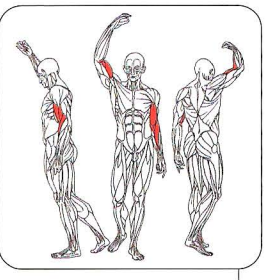
This isolation exercise allows you to control the range of motion, speed, and form of the movement.
It mainly works the biceps brachii and brachialis.

BRACHIALIS MUSCLE



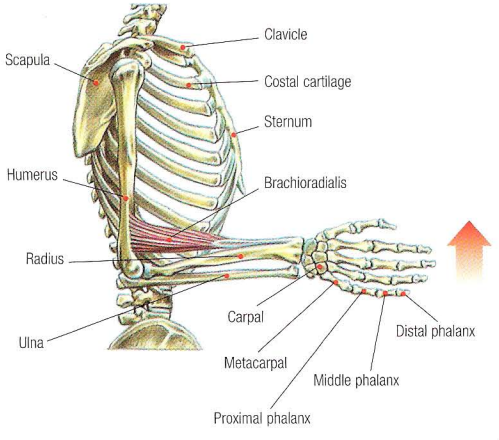


3 HAMMER CURLS



Trapezius
Infraspinatus
Teres minor
Teres major
Latissimus dorsi
Triceps brachii
Lateral head
Long head
Medial head
Extensor carpi radialis longus
Extensor carpi radialis brevis
Anconeus
Extensor carpi ulnaris
Flexor carpi ulnaris
Posterior deltoid
Middle deltoid
Anterior deltoid
Deltoid
Pectoralis major
Biceps brachii
Brachialis
Brachioradialis
Extensor digitorum
Extensor digiti minimi

BRACHIORADIALIS MUSCLE

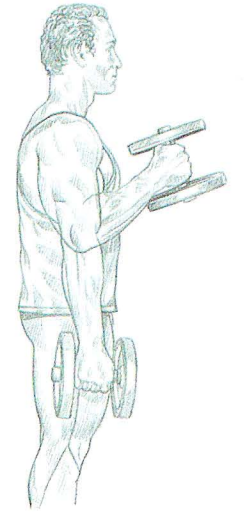


Stand or sit gripping a dumbbell in each hand with the palms facing each other:

- Inhale and raise the forearms together or alternately.
- Exhale at the end of the movement.

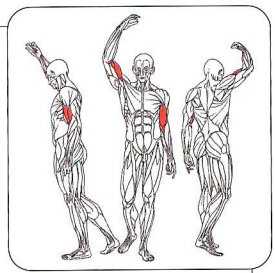
This is the best exercise for developing the brachioradialis.

It also develops the biceps brachii, brachialis, and, to a lesser degree, the extensor carpi radialis brevis and longus.

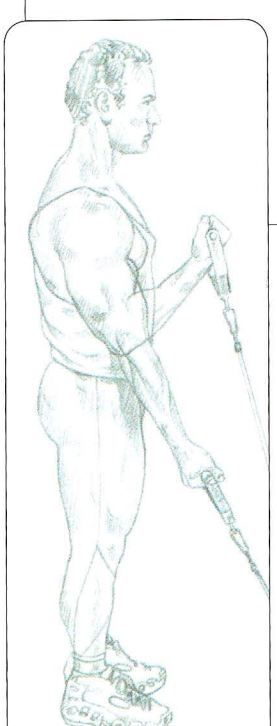


THE MOVEMENT

LOW-PULLEY CURLS 4



Splenius capitis
Sternocleidomastoid
Levator scapula
Trapezius
Scalenes
Deltoids
Pectoralis major
Biceps brachii
Infraspinatus
Teres minor
Teres major
Triceps brachii
Latissimus dorsi
Brachialis
Extensor carpi radialis longus
Anconeus
Extensor carpi radialis brevis
Brachioradialis
Extensor pollicis brevis
Flexor carpi radialis
Abductor pollicis longus
Extensor digitorum

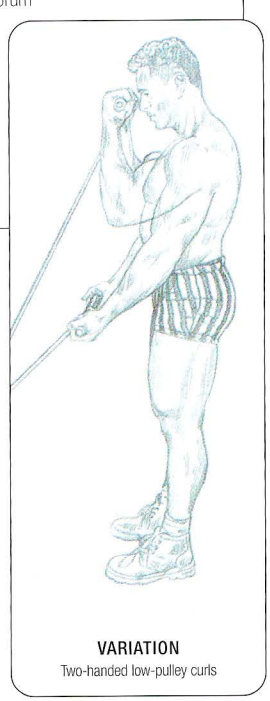


THE MOVEMENT

Stand facing the machine, grasping the handles with an underhand grip (thumbs facing away from each other):

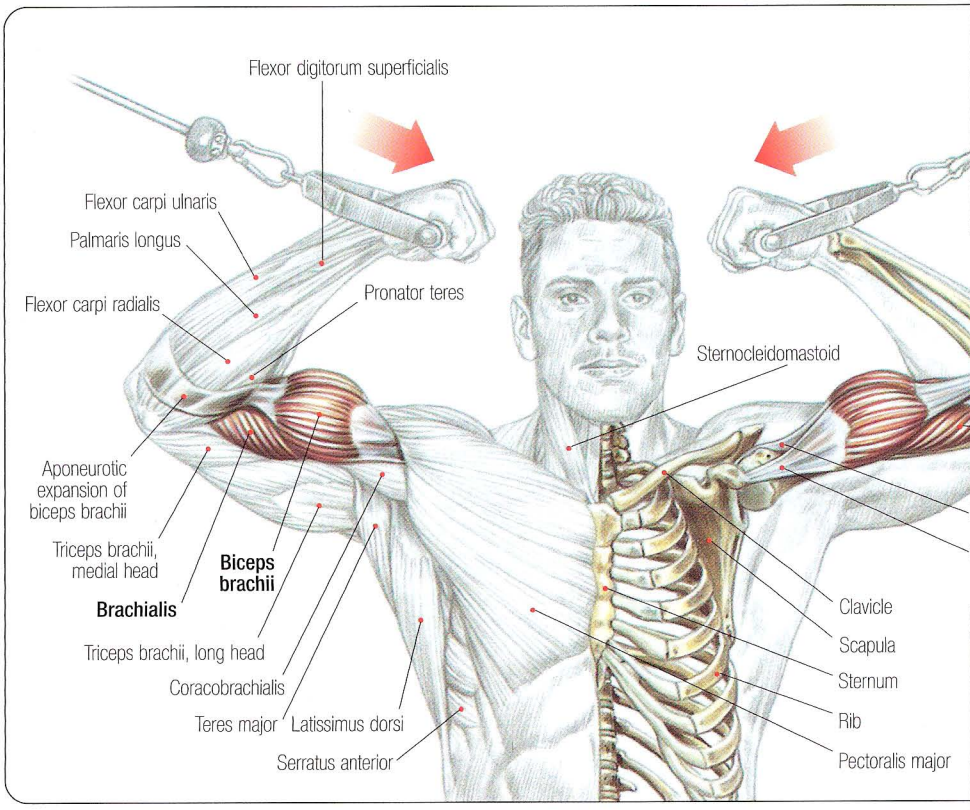
- Inhale and bend the elbows to raise the forearms.
- Exhale at the end of the movement.

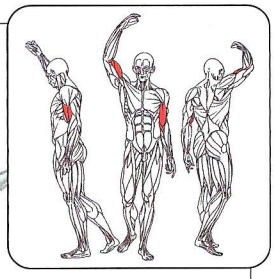
This exercise focuses the effort on the biceps brachii and works the muscle intensely.

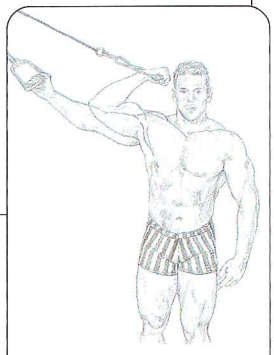


VARIATION
Two-handed low-pulley curls

5 HIGH-PULLEY CURLS







VARIATION
One-handed execution

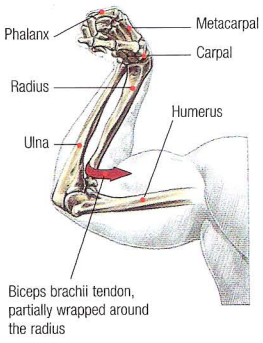
Stand between the pulleys with the arms outstretched in a "cross" and grasp the handles of the high pulleys with an underhand grip:

- Inhale and bend the elbows to bring the hands toward the body. Exhale at the end of the movement.

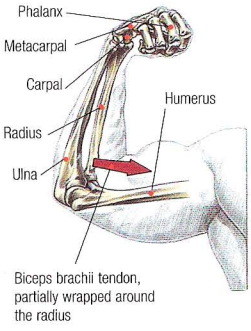
This exercise, which is most often performed as a cool-down at the end of an arm session, focuses the work on the short head of the biceps brachii, which has been stretched and put under tension in the "cross" start-up position.

This exercise also contracts the monoarticular brachialis elbow flexor.

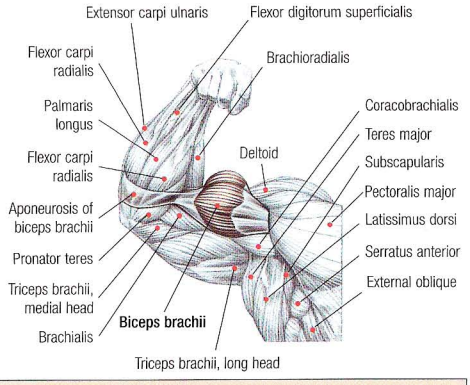
Perform this exercise with light weights so that you can concentrate and feel the contraction at the inside of the biceps brachii. Sets of high reps provide the best results.



When the hand is pronated, the distal tendon of the biceps brachii muscle is partially wrapped around the radius.

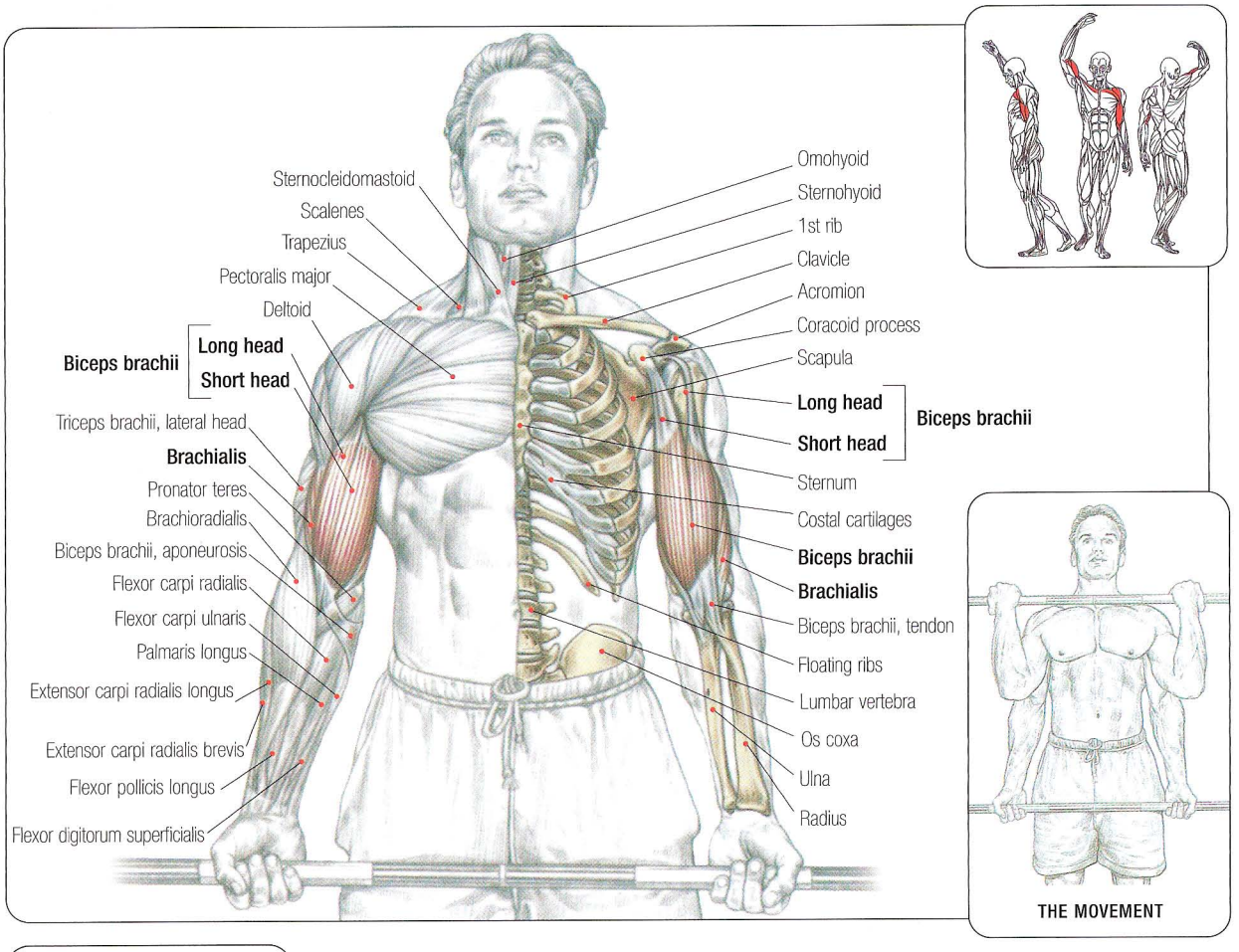


When the biceps brachii contracts, the force placed on its distal tendon causes the radius to pivot on its axis, bringing the hand into supination.

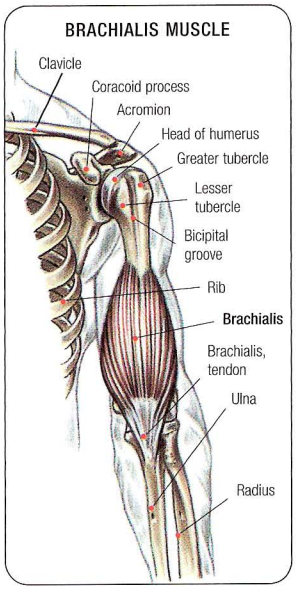


Comment: In addition to its role as a forearm flexor, the biceps brachii is the most powerful supinator.

BARBELL CURLS 6



THE MOVEMENT



BRACHIALIS MUSCLE

Stand with the back straight, grasping the barbell with an underhand grip and hands slightly wider than shoulder-width apart:

- Inhale and raise the barbell by bending the elbows, taking care to stabilize the torso and spine by isometrically contracting the gluteal muscles, abdominal muscles, and spinal muscles.
- Exhale at the end of the movement.

This exercise mainly contracts the biceps brachii, brachialis, and, to a lesser degree, the brachioradialis, pronator teres, and the wrist flexor group.

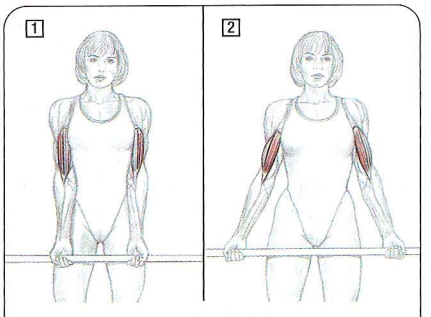
Variations: Vary the width of the grip to work different parts of the muscle more intensely:

- Placing the hands farther apart isolates the short head of the biceps brachii.
- Placing the hands closer together isolates the long head of the biceps brachii.

Raising both elbows after they are flexed increases the contraction of the biceps brachii and contracts the anterior deltoid.

To make the exercise more difficult, perform the movement with the back against a wall so that the shoulder blades don't move.

You can lift more weight and gain strength by leaning the torso back while lifting the bar; however, to prevent injury, this requires good technique and well-developed abdominal and lumbar muscles.

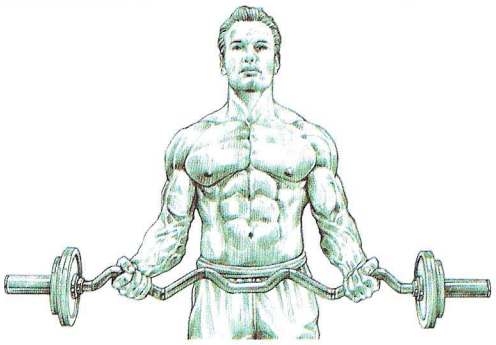


BARBELL CURLS

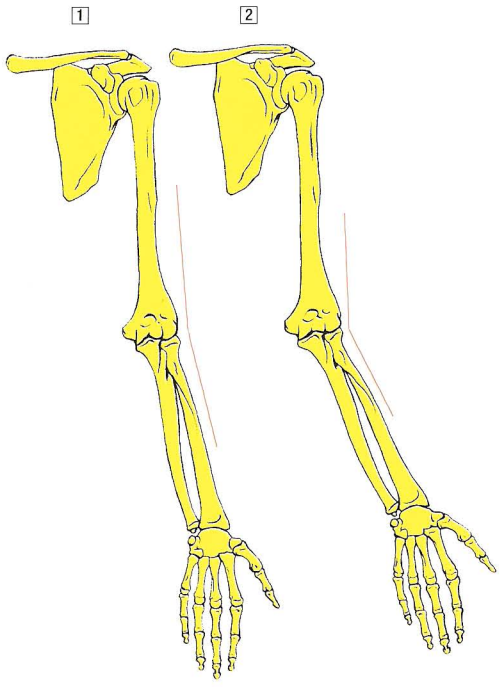
1 **Narrow grip**
Mainly works the long head of the biceps brachii.
2 **Wide grip**
Mainly works the short head of the biceps brachii.

ELBOW STRUCTURE AND ITS EFFECT ON TRAINING

Acromion
Clavicle
Head of humerus
Greater tuberosity
Lesser tuberosity
Bicipital groove
Coracoid process
Crest of lesser tubercle
Glenoid cavity
Crest of greater tubercle
Deltoid tuberosity
Radial fossa
Scapula
Lateral epicondyle
Coronoid fossa
Capitulum
Medial epicondyle
Head of radius
Trochlea
Radial tuberosity
Coronoid process
Radius
Ulnar tuberosity
Ulna
Lunate
Styloid process
Scaphoid
Head of ulna
Trapezium
Styloid process
Trapezoid
Capitate
Pisiform
Triquetral
Hamate
Metacarpal
Proximal phalanx
Middle phalanx
Distal phalanx



Biceps training with an E-Z bar eases excessive wrist tension.



1 Upper extremity with a small angle

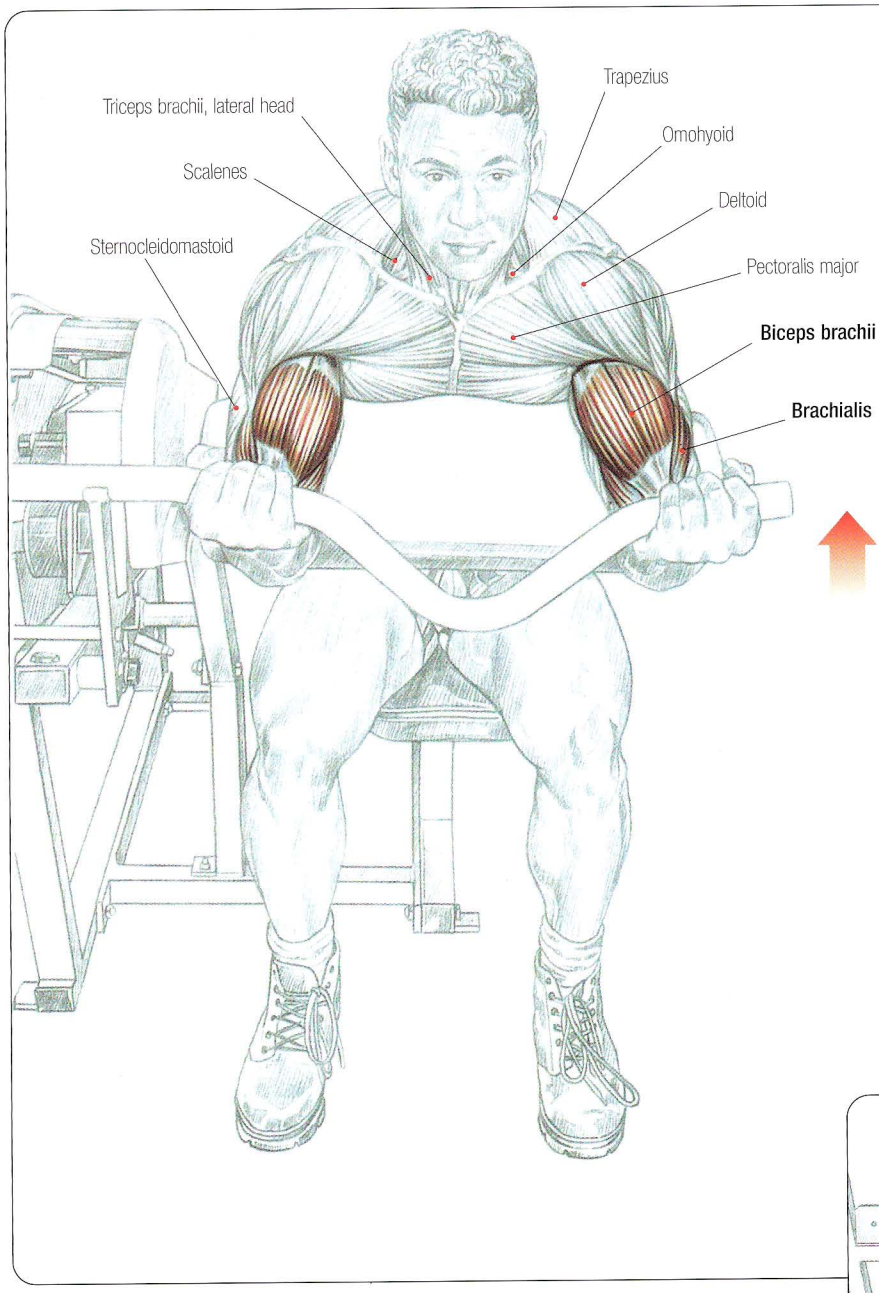
2 Upper extremity with a significant valgus angle (more common in women)

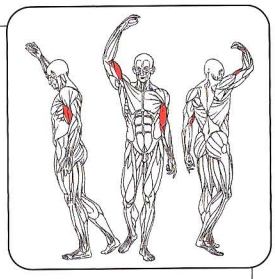
When training the biceps brachii using a barbell, take into account variations in each person's physical structure.

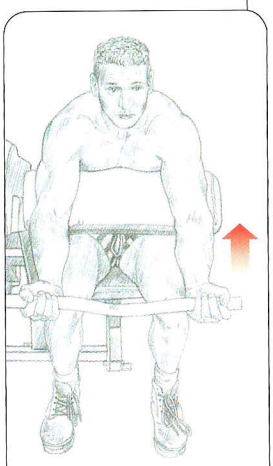
In the anatomical position (arms hanging alongside the body, palms facing forward, and thumbs pointing laterally), the angle at the elbow between the upper arm and the forearm varies from person to person. Someone whose forearm hangs distinctly away from the body in a valgus position must break excessively at the wrist when performing a curl with a straight bar, which is painful. Therefore, these people should work with an E-Z bar to spare their wrists.

Comment: Valgus of the elbow is usually more pronounced in women.

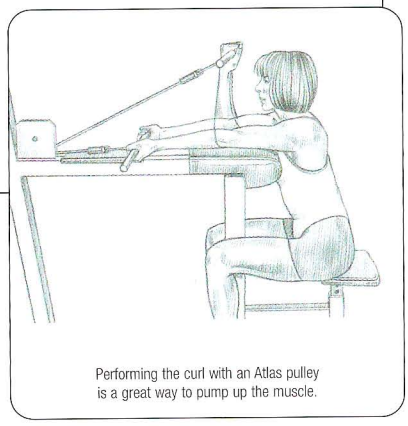
MACHINE CURLS 7







INITIAL POSITION



Performing the curl with an Atlas pulley is a great way to pump up the muscle.

Sit at the machine and grasp the bar with an underhand grip, arms extended, and resting on the support:

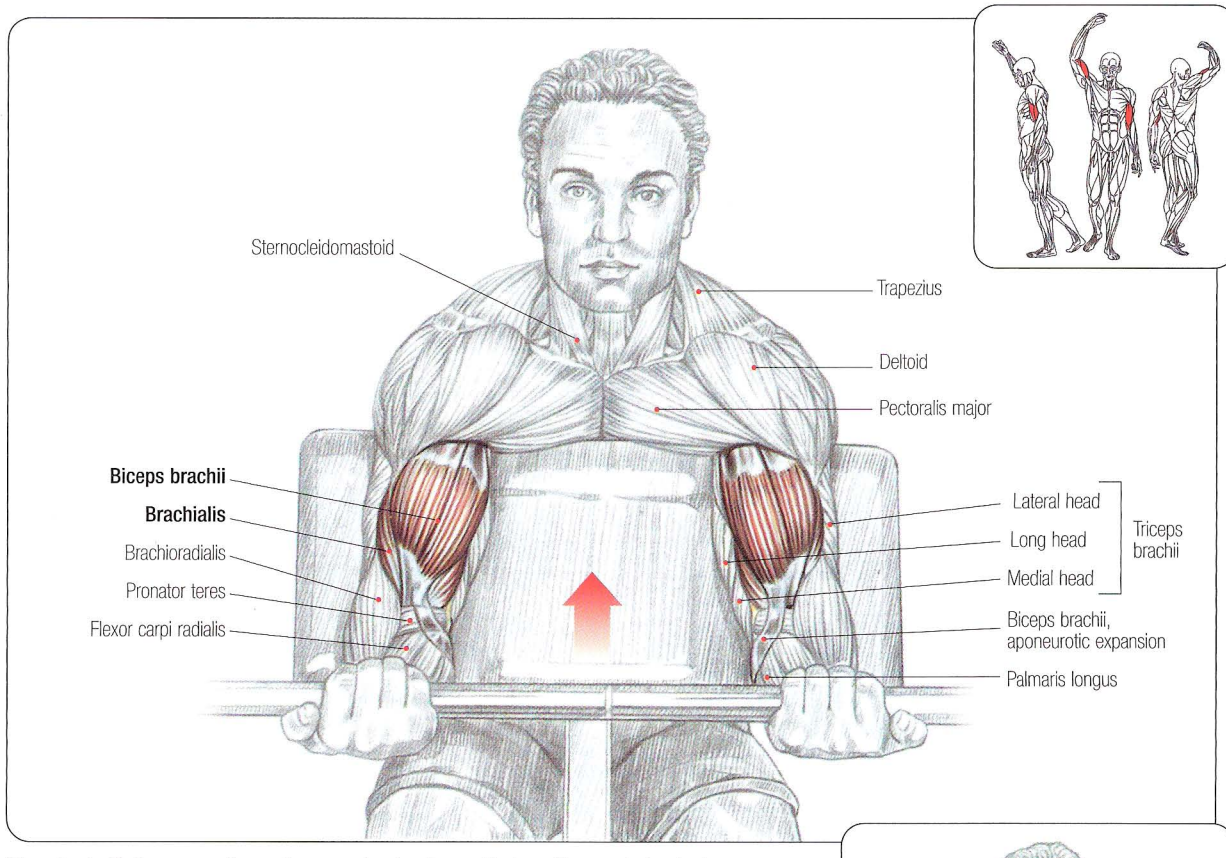
- Inhale and raise the forearms.
- Exhale at the end of the movement.

This is one of the best exercises for working the biceps brachii. Fixing the arms against the support makes it impossible to "cheat."

At the beginning, the muscle tension is intense, so be sure to warm up properly using light weights. To avoid the risk of tendonitis, do not completely extend the arm.

This movement also works the brachialis and, to a lesser extent, the brachioradialis and pronator teres.

8 PREACHER CURLS

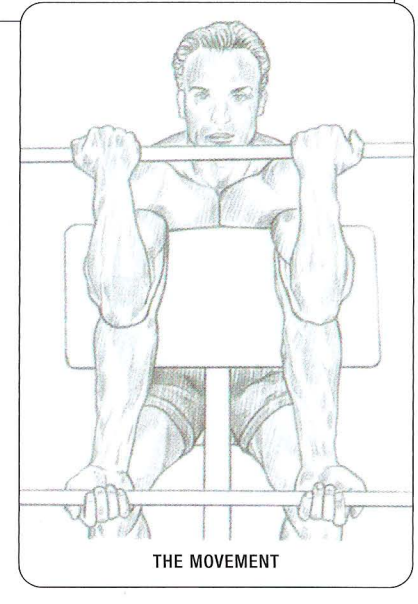


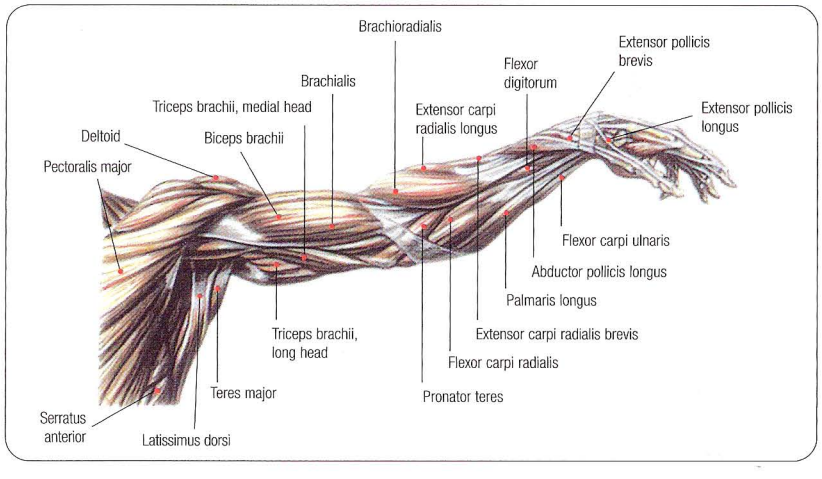
Sit or stand with the arms resting on the support pad and grasp the bar with an underhand grip:

- Inhale and raise the forearms by bending the elbows. Exhale at the end of the effort.

This is one of the best exercises for isolating the biceps.

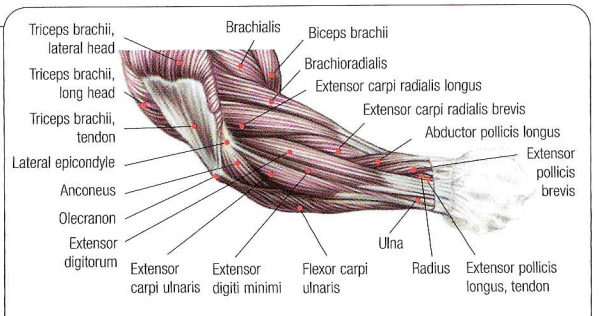
Attention: The angle of the support pad places significant tension on the forearms when the arm is completely extended. Therefore, warm up the muscles properly and begin with lighter weights.



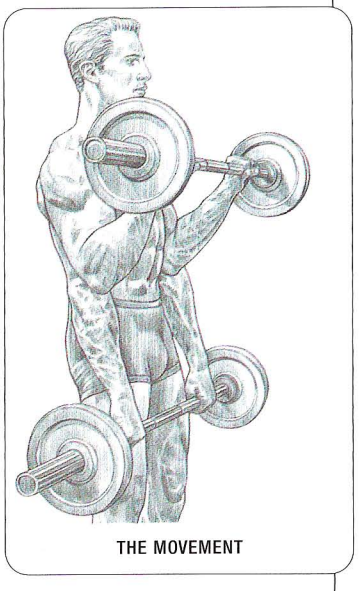


REVERSE CURLS 9

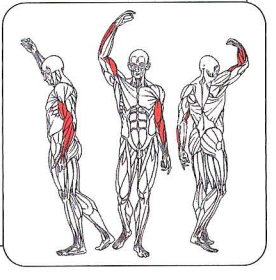
Splenius capitis
Thyrohyoid
Levator scapula
Sternocleidomastoid
Scalenes
Infraspinatus
Teres minor
Teres major
Triceps brachii
Long head
Lateral head
Brachioradialis
Extensor carpi radialis longus
Olecranon
Anconeus
Extensor carpi radialis brevis
Extensor digitorum
Extensor digiti minimi
Extensor carpi ulnaris
Flexor carpi ulnaris
Head of ulna
Extensor retinaculum
Omohyoid
Sternohyoid
Trapezius
Deltoids
Pectoralis major
Brachialis
Biceps brachii
Abductor pollicis longus
Extensor pollicis brevis



MUSCLES OF THE FOREARM (LATERAL VIEW)



THE MOVEMENT



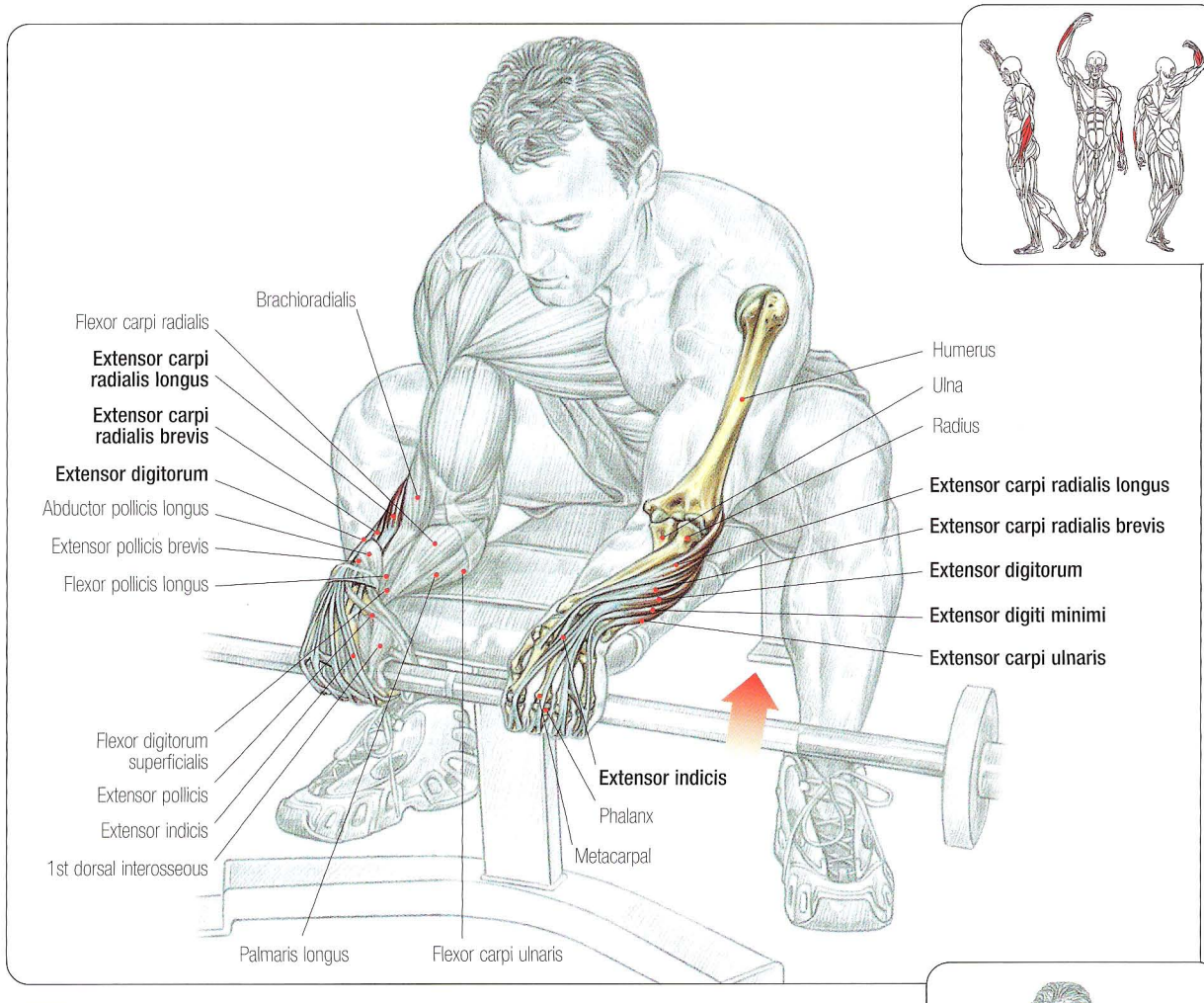
Stand with the legs slightly apart and arms extended and grasp the bar with an overhand grip (with the thumbs facing each other):

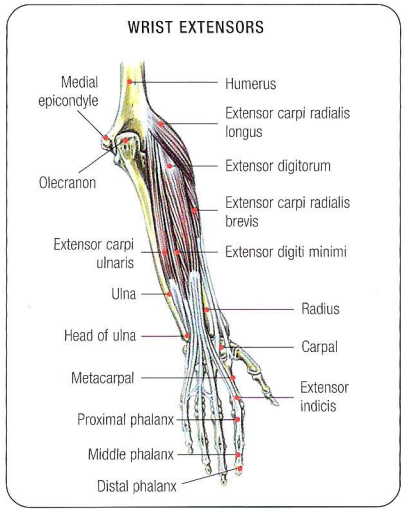
- Inhale and raise the forearms by bending the elbows.
- Exhale at the end of the movement.

This exercise works the extensor muscles of the wrist: extensor carpi radialis longus, extensor carpi radialis brevis, extensor digitorum, extensor digiti minimi, and extensor carpi ulnaris.
It also acts on the brachioradialis, brachialis, and, to a lesser degree, the biceps brachii.

Comment: This is an excellent exercise for strengthening the wrist, which is often weak because of an imbalance caused by using the wrist flexors rather than the wrist extensors. For this reason, many boxers include it in their training. Many bench press champions use it to keep their wrists from trembling under extreme weights.

10 REVERSE WRIST CURLS



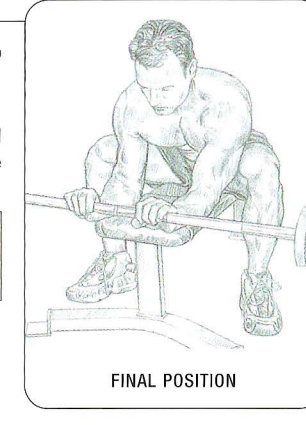


Sit with the forearms resting on the thighs or on a bench and grasp the bar with an overhand grip and keep the wrists relaxed:

- Raise the hands by extending at the wrists.

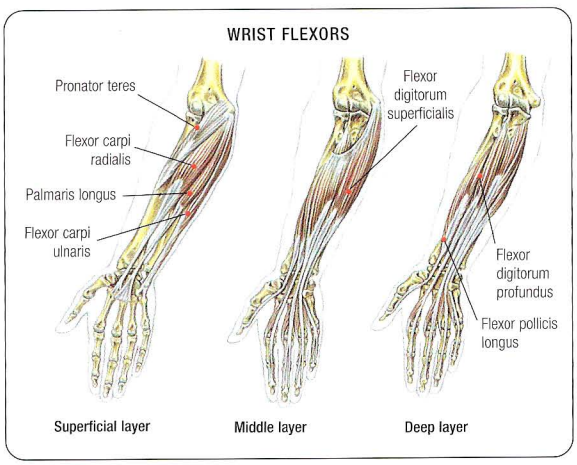
This exercise contracts the extensor carpi radialis longus and brevis, extensor digitorum, extensor digiti minimi, as well as the extensor carpi ulnaris.

Comment: This exercise strengthens the wrists, which are often vulnerable because of weak wrist extensors.


FINAL POSITION

WRIST CURLS 11

Deltoid
Biceps brachii
Triceps brachii, long head
Brachialis
Triceps brachii, medial head
Pronator teres
Brachioradialis
Flexor carpi radialis
Palmaris longus
Flexor digitorum superficialis and profundus
Pisiform
Flexor carpi ulnaris
Pectoralis major
Humerus
Ulna
Radial tuberosity
Radius
Flexor digitorum superficialis covering flexor digitorum profundus
Pisiform
Flexor pollicis longus
Trapezium
Metacarpal

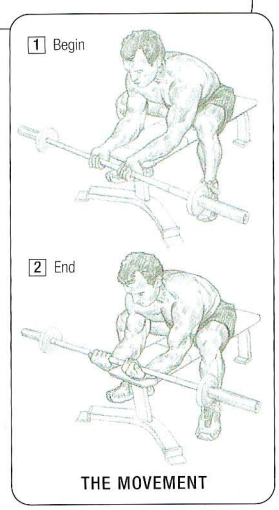


Sit with the forearms resting on the thighs or on a bench and grasp the bar with an underhand grip with wrists relaxed:

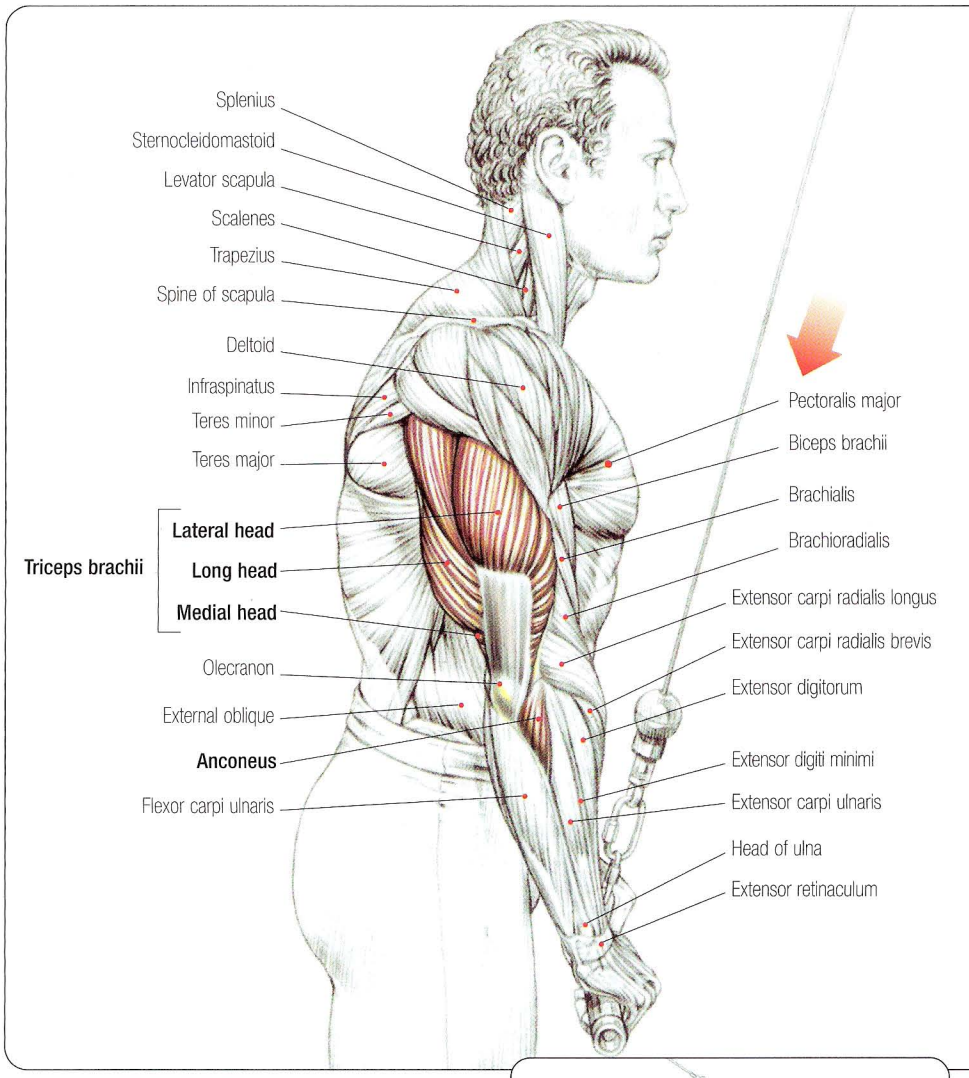
- Inhale and raise the hands by flexing at the wrists.

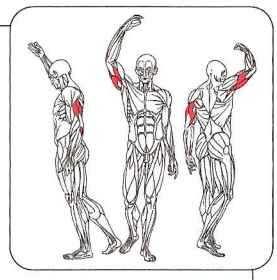
This exercise contracts the flexor carpi radialis, palmaris longus, flexor carpi ulnaris, and the flexors digitorum superficialis and profundus.

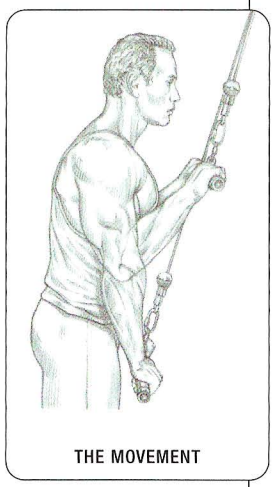
The latter two muscles, although located deep in the wrist, make up most of the muscle mass of the wrist flexors.



12 PUSH-DOWNS







THE MOVEMENT

Stand with the back to the machine and grasp the handle with an overhand grip, keeping the elbows tucked into the body:

- Inhale and extend the forearms, keeping the elbows tucked into the body.
- Exhale at the end of the movement.

Comment: This exercise isolates the triceps and the anconeus.

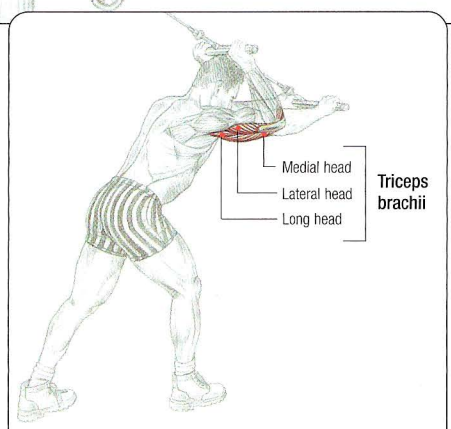
The variation using a rope rather than a handle engages the lateral head of the triceps more intensely.

Performing the movement with an underhand grip requires more contribution from the medial head of triceps.

Hold an isometric contraction for one or two seconds at the end of the movement to feel the effort more intensely.

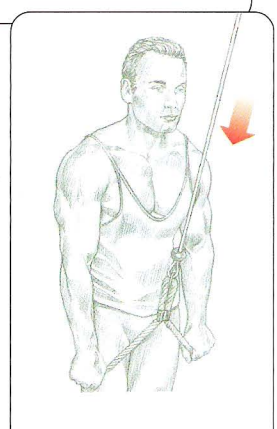
When using heavy weights, lean forward with the torso.

Beginners can use this exercise to develop enough strength to move on to more difficult exercises.



VARIATION WITH BACK TO THE MACHINE

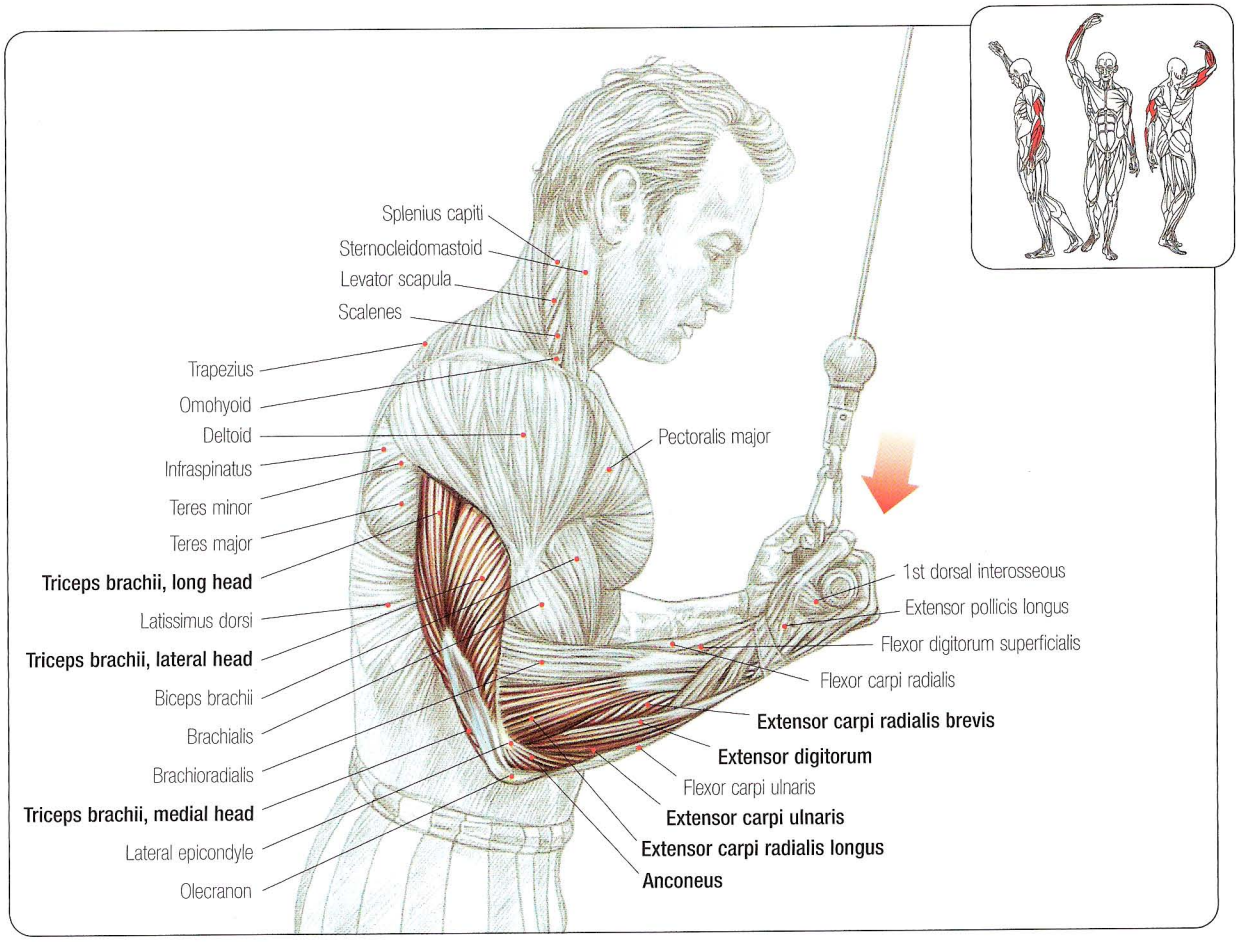
To isolate of the long head of the triceps.



VARIATION WITH A ROPE

To isolate the lateral head of the triceps

REVERSE PUSH-DOWNS 13



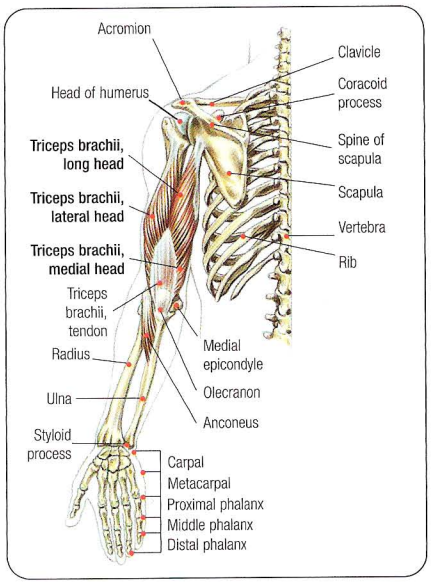
Stand facing the machine with the arms next the body and elbows bent and grasp the handle with an underhand grip:

- Inhale and extend the forearms by straightening the elbows, keeping them tucked into the body.
- Exhale at the end of the movement.

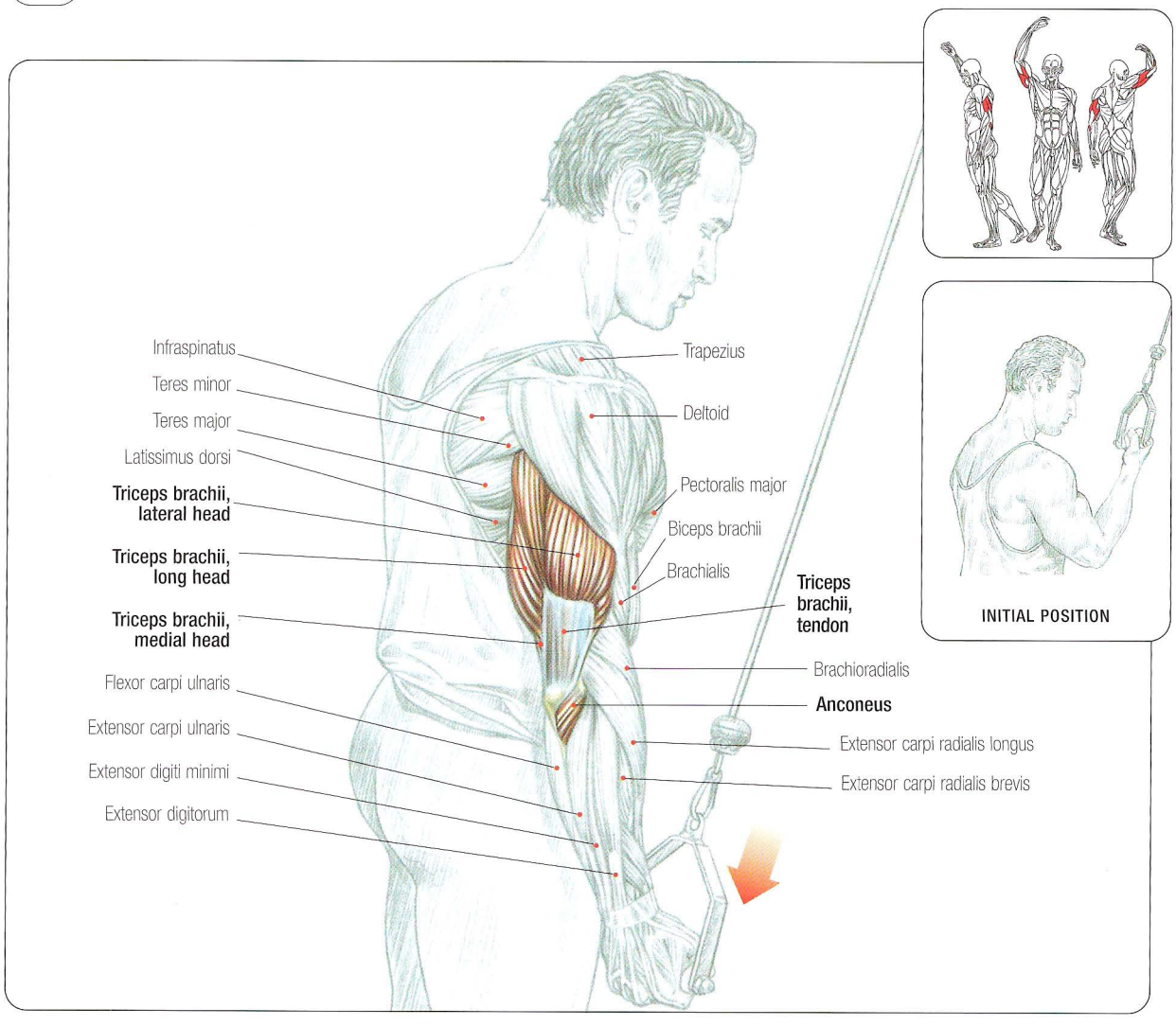
The underhand grip isolates the medial head of the triceps brachii and precludes working with heavy weights.

When extending the forearms, the anconeus and wrist extensors also contract.

The extensor carpi ulnaris, extensor digitorum, extensor digiti minimi, and extensors carpi radialis longus and brevis keep the wrist straight with isometric contraction during the exercise.



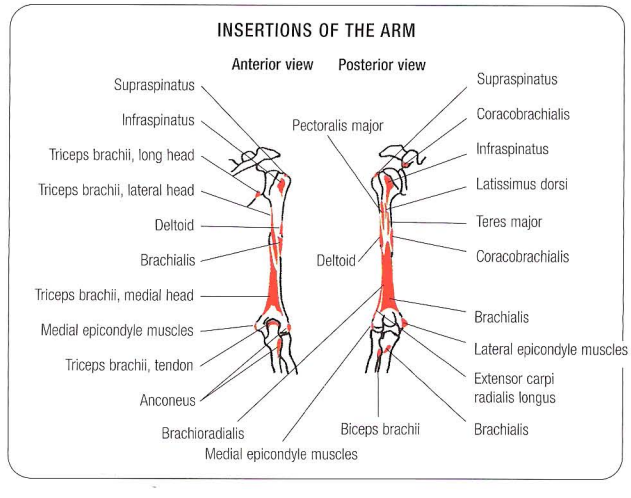
14 ONE-ARM REVERSE PUSH-DOWNS



Stand facing the machine and grasp the handle with an underhand grip:

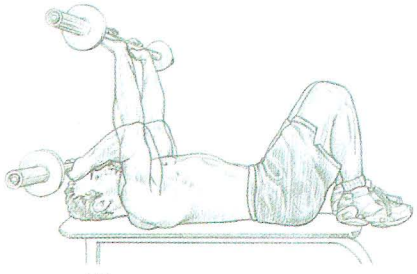
- Inhale and extend the forearm.
- Exhale at the end of the movement.

This exercise mainly works the lateral head of the triceps.

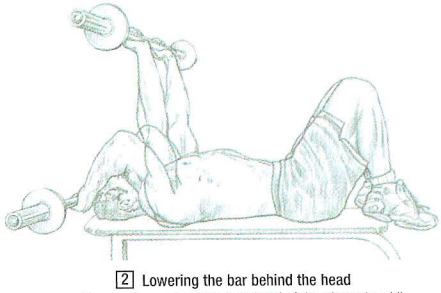


TRICEPS EXTENSIONS 15

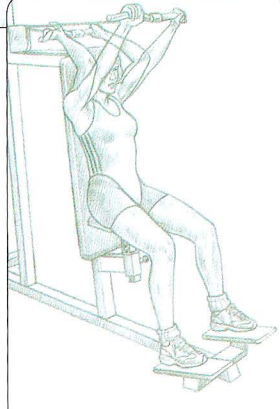
Flexor carpi ulnaris
Palmaris longus
Flexor carpi radialis
Flexor digitorum superficialis
Flexor pollicis longus
Abductor pollicis longus
Extensor pollicis brevis
Biceps brachii, aponeurotic expansion
Olecranon
Pronator teres
Brachialis
Medial head
Lateral head
Long head
Triceps brachii
Pectoralis major
Serratus anterior
Subscapularis
Teres major
Posterior deltoid
Latissimus dorsi
Biceps brachii
Coracobrachialis



1 **Lowering the bar to the forehead**
Focuses the work on the medial and lateral heads of the triceps brachii.



2 **Lowering the bar behind the head**
Focuses the work on the long head of the triceps brachii.



VARIATION ON A MACHINE

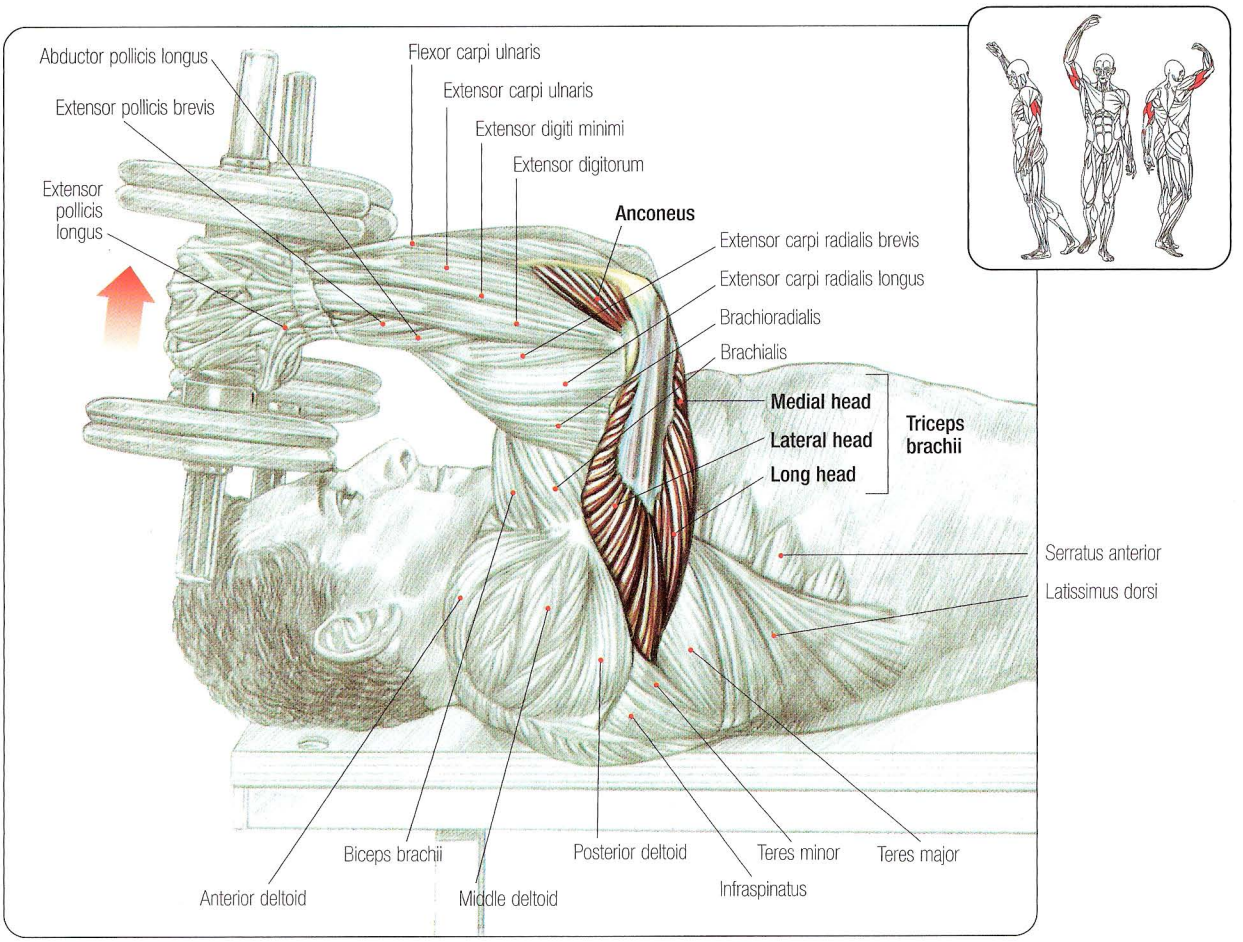
Performing this exercise at an Atlas triceps pulley simulates the movement with a barbell, but enables you to isolate the long head of the triceps brachii.

Lie on a horizontal bench and grasp the barbell with an overhand grip and the arms vertical:

- Inhale and lower the barbell to the forehead or behind the head by bending the elbows.
- Return to the initial position.
- Exhale at the end of the effort.

Comments: Because of individual variations in shoulder width, valgus angle at the elbows, and wrist flexibility, the hands can be closer or farther apart on the bar and the elbow angle more or less open during the exercise.
Using an E-Z bar helps prevent excessive strain at the wrists.

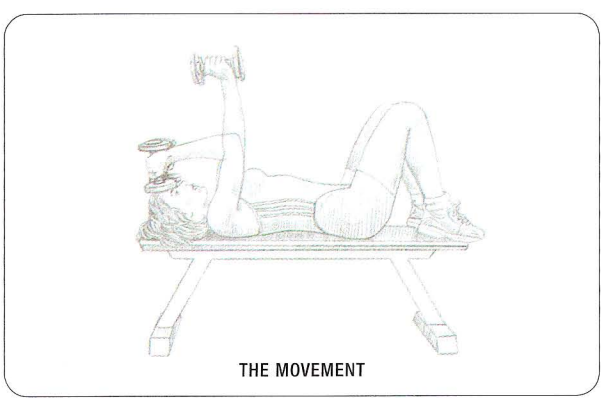
16 DUMBBELL TRICEPS EXTENSIONS



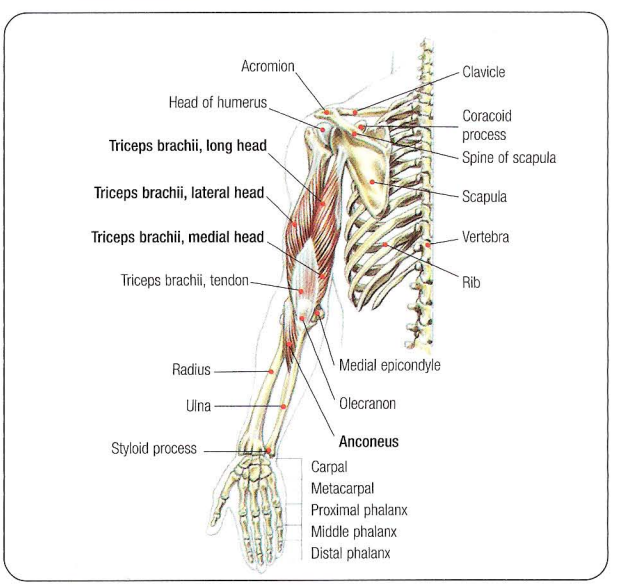
Lie on a flat bench and grasp a dumbbell in each hand with the arms vertical:

- Inhale and lower the forearms by bending the elbow with a controlled movement.
- Return to the initial position.
- Exhale at the end of the effort.

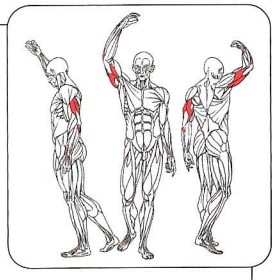
This exercise works all three heads of the triceps brachii equally.



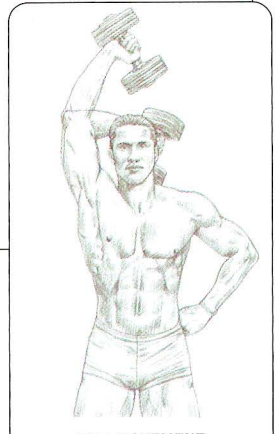
THE MOVEMENT



ONE-ARM DUMBBELL TRICEPS EXTENSIONS 17



Phalanx
Metacarpal
Carpal
Ulna
Radius
Sternocleidomastoid
Splenius
Levator scapula
Trapezius
Spine of scapula
Deltoid
Infraspinatus
Teres minor
Triceps brachii: Lateral head, Long head, Medial head
Biceps brachii
Brachialis
Olecranon
Pronator teres
Biceps brachii, aponeurosis
Brachioradialis
Flexor carpi radialis
Palmaris longus
Flexor digitorum
Flexor carpi ulnaris
Anconeus
Olecranon
Triceps brachii: Tendon, Lateral head, Long head
Humerus
Acromion
Clavicle
Scapula
Rhomboid major
Teres major
Rib
Latissimus dorsi
Vertebra
Thoracolumbar fascia
External oblique



THE MOVEMENT

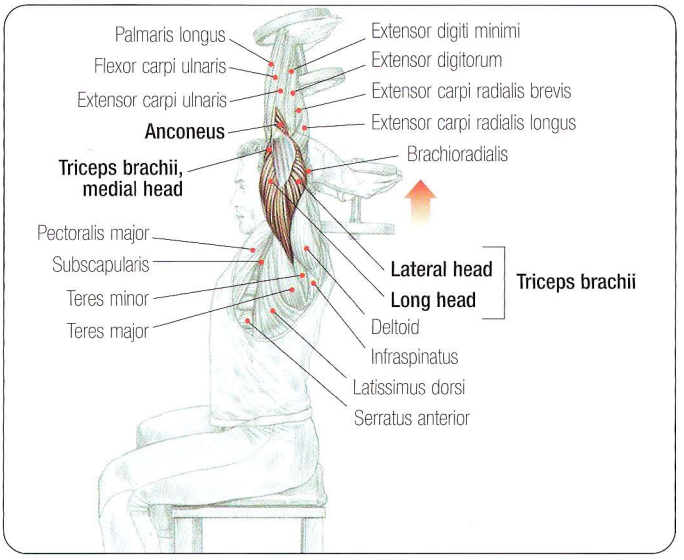
Sit or stand and grip a dumbbell in one hand with the arm vertical:

- Inhale and bend the elbow to lower the dumbbell behind the head to the neck.
- Return to the initial position.
- Exhale at the end of the movement.

The vertical position of the arm stretches the long head of the triceps brachii, emphasizing its contraction while working.

Comment: Contract the abdominal core to prevent arching the low back. If possible use a bench with support for the low back.

18 SEATED DUMBBELL TRICEPS EXTENSIONS

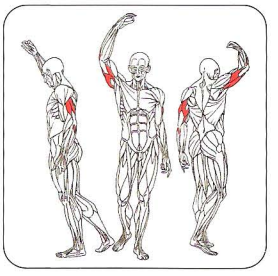


Sit and grasp a dumbbell, holding it behind the neck:

- Inhale, and extend the forearm.
- Exhale at the end of the movement.

The vertical position of the arm strongly stretches the long head of the triceps brachii, emphasizing its contraction while working.

Contract the abdominal core to prevent arching the low back. If possible use a bench with support for the low back.



19 SEATED E-Z BAR TRICEPS EXTENSIONS

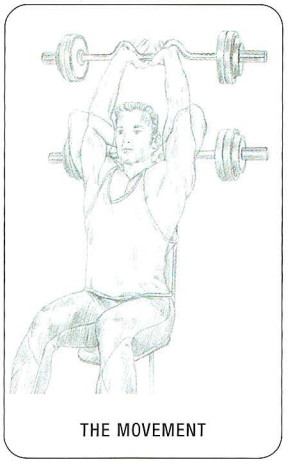
Sit or stand and grasp an E-Z bar with an overhand grip and arms vertical:

- Inhale and bend the elbows to lower the bar behind the head.
- Return to the initial position.
- Exhale at the end of the extension.

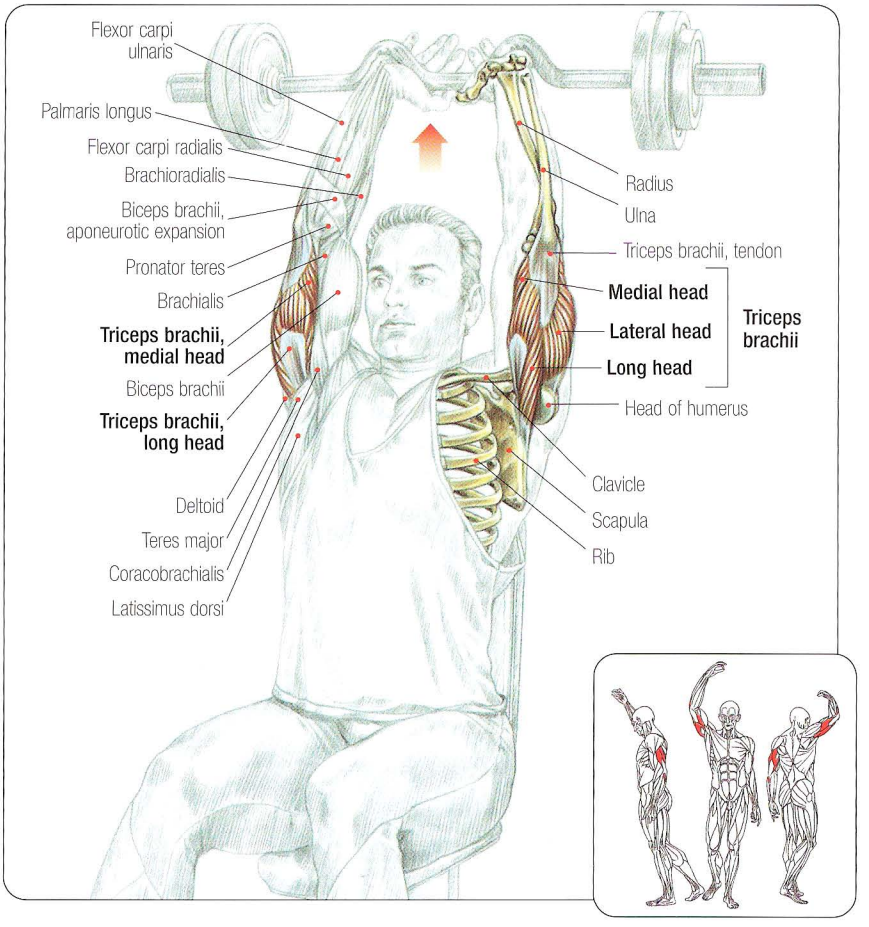
The vertical position of the arms strongly stretches the long head of the triceps brachii, emphasizing its contraction while working.

An overhand grip isolates the lateral head of the triceps brachii.

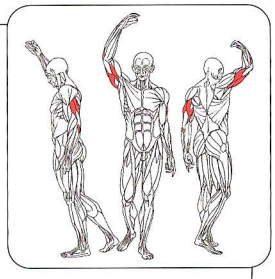
Contract the abdominal muscles and avoid arching the low back. If possible use a bench with support for the low back.



THE MOVEMENT



TRICEPS KICKBACKS 20



Flexor carpi ulnaris
Extensor digitorum
Extensor digiti minimi
Extensor carpi ulnaris
Triceps brachii
Lateral head
Long head
Teres major
Brachioradialis
Anconeus
Extensor pollicis brevis
Deltoid
Biceps brachii
Pectoralis major
Brachialis
Extensor carpi radialis longus
Extensor carpi radialis brevis
Abductor pollicis longus

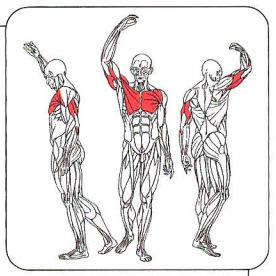
Stand with the knees slightly bent and lean forward at the waist, maintaining a straight back.
Bend the elbow and hold the upper arm horizontally alongside the body:

- Inhale and extend the forearm.
- Exhale at the end of the movement.

This is an excellent exercise for pumping the triceps group.
Perform this exercise until you feel a burn for best results.

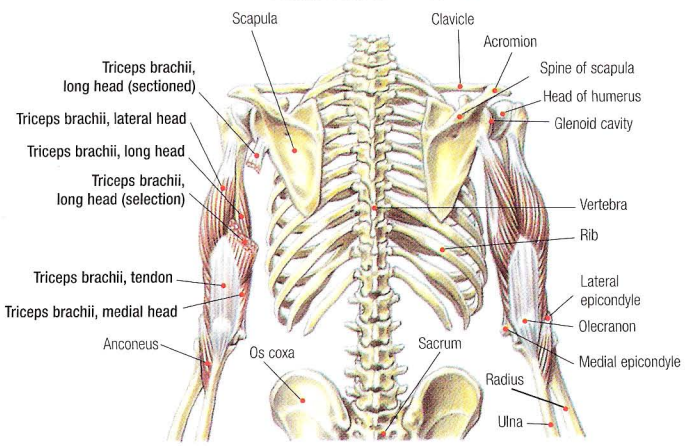
INITIAL POSITION

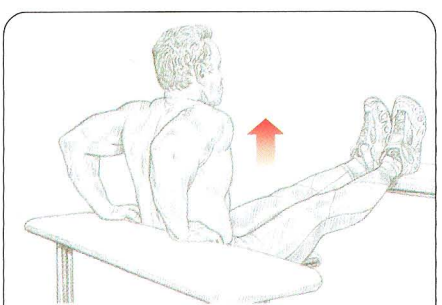
21 TRICEPS DIPS



Trapezius
Teres minor
Infraspinatus
Teres major
Rhomboid
Latissimus dorsi
Flexor carpi radialis
Palmaris longus
Extensor carpi ulnaris
Flexor carpi ulnaris
Deltoid
Pectoralis major
Lateral head
Long head
Medial head
Triceps brachii
Anconeus
Extensor digitorum
Extensor digiti minimi

TRICEPS BRACHII MUSCLE





INITIAL POSITION

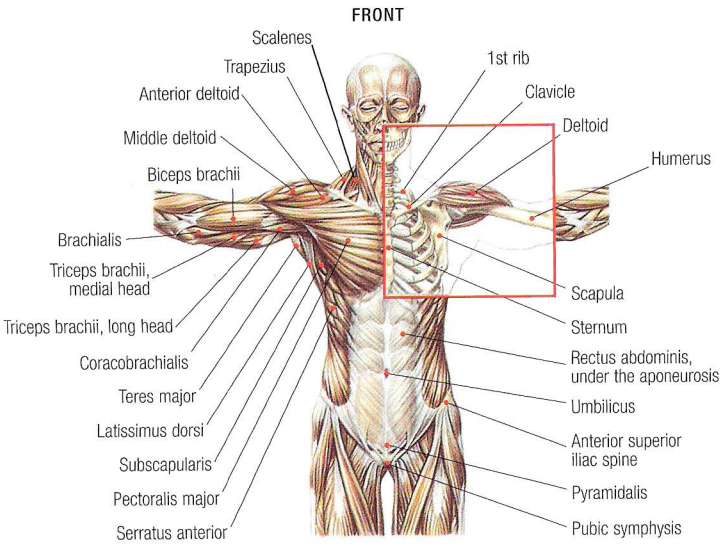
Suspend the body between two benches by placing the hands on the edge of one bench and the feet on the edge of the other bench:

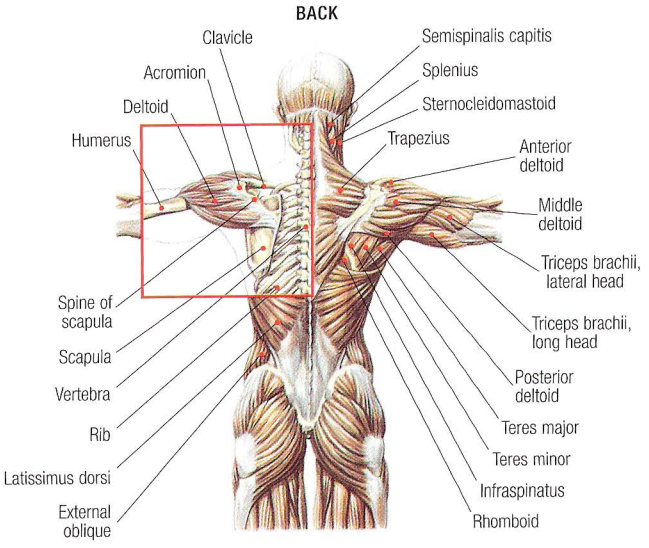
- Inhale, then dip by bending the elbows and rise by extending the forearms.
- Exhale at the end of the movement.

This exercise works the triceps and pectorals as well as the anterior deltoid.

Resting weights on top of the thighs increases the difficulty and intensity of the dip.

2 SHOULDERS





1 BACK PRESSES 28
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✚ SHOULDER INJURIES / LYING DUMBBELL PRESSES 30
3 SEATED DUMBBELL PRESSES 33
4 FRONT DUMBBELL PRESSES 34
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1 BACK PRESSES

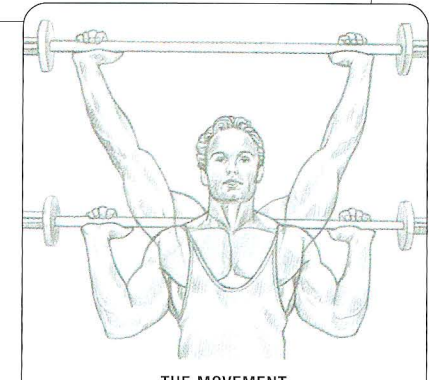
Epicranius, occipital belly
Deltoid
Anterior deltoid
Middle deltoid
Posterior deltoid
Semispinalis capitis
Splenius capitis
Sternocleido-mastoid
Cranium
Mastoid process
Cervical vertebra
Brachioradialis
Extensor digitorum
Extensor carpi radialis brevis
Extensor carpi ulnaris
Extensor carpi radialis longus
Anconeus
Brachialis
Biceps brachii
Trapezius
Clavicle
Supraspinatus
Acromion
Spine of sca-pula
Radius
Ulna
Humerus
Scapula
9th rib
Thoracic vertebra
Lumbar vertebra
Triceps brachii
Lateral head
Medial head
Long head
Teres minor
Teres major
Infraspinatus
Rhomboid major
Latissimus dorsi
External oblique
Thoracolumbar fascia

Sit with the back straight, holding the bar across the back of the neck with an overhand grip:

- Inhale and extend the bar straight up, keeping the low back as straight as possible.
- Exhale at the end of the effort.

This exercise uses the deltoid, mainly the middle and posterior fibers, as well as the trapezius, triceps brachii, and serratus anterior. Although not worked as intensely, the rhomboids, infraspinatus, teres minor, and, deeper in, the supraspinatus also contract. You can also perform this exercise while standing at a frame that guides the barbell. Various specific machines can help with the performance of this exercise.

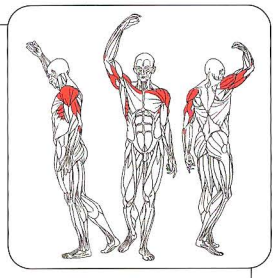
To prevent injury to the shoulder joint, which is vulnerable, lower the bar only as far as your unique shoulder structure and flexibility allow you to do comfortably.

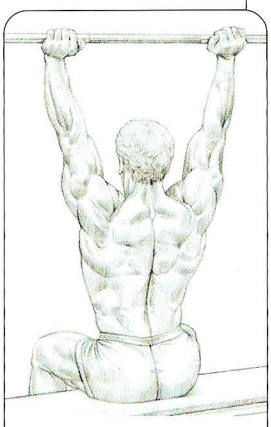


THE MOVEMENT

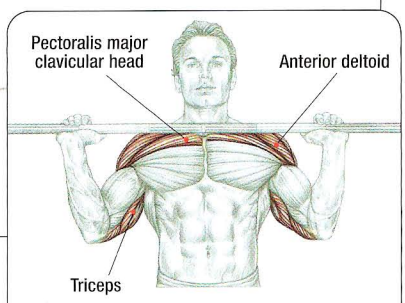
SEATED FRONT PRESSES 2

Splenius
Sternocleidomastoid
Trapezius
Spine of scapula
Acromion
Deltoid
Anterior deltoid
Posterior deltoid
Middle deltoid
Biceps brachii
Brachialis
Brachioradialis
Extensor carpi radialis longus
Anconeus
Triceps brachii
Lateral head
Medial head
Long head
Rhomboid major
Latissimus dorsi
Teres minor
Teres major
Infraspinatus

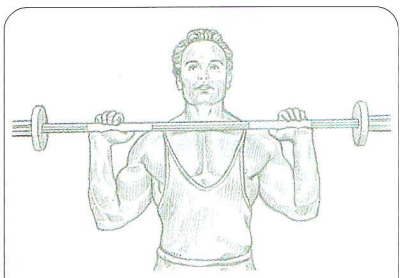




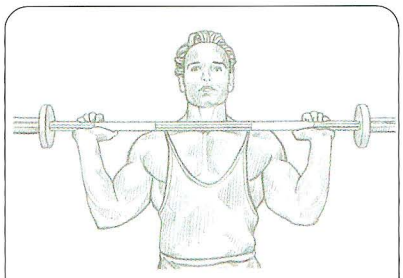
FINAL POSITION



FRONT VIEW



1 Narrow grip with the elbows forward
Isolates the anterior deltoid and the clavicular head of the pectoralis major.



2 Wide grip with the elbows out to the side
Isolates the anterior and middle deltoids.

Sit with the back straight and hold the bar with an overhand grip, resting it across the upper chest:

- Inhale and extend the bar vertically.
- Exhale at the end of the movement.

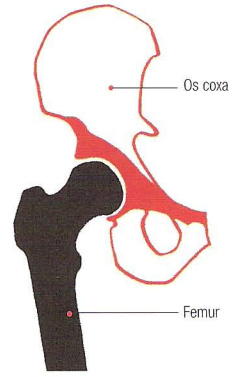
This fundamental exercise mainly uses the anterior and lateral deltoids, clavicular head of the pectoralis major, triceps brachii, serratus anterior, trapezius and, deeper in, the supraspinatus.

You can also perform this exercise standing, as long as you keep the back straight, avoiding excessive curvature of the lumbar spine. Extending the barbell with the elbows forward isolates the anterior deltoid.

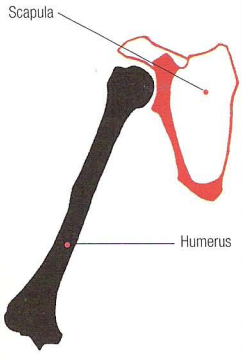
Extending the bar with the elbows spread apart isolates the middle deltoid.

You can use various machines for this exercise.

SHOULDER INJURIES

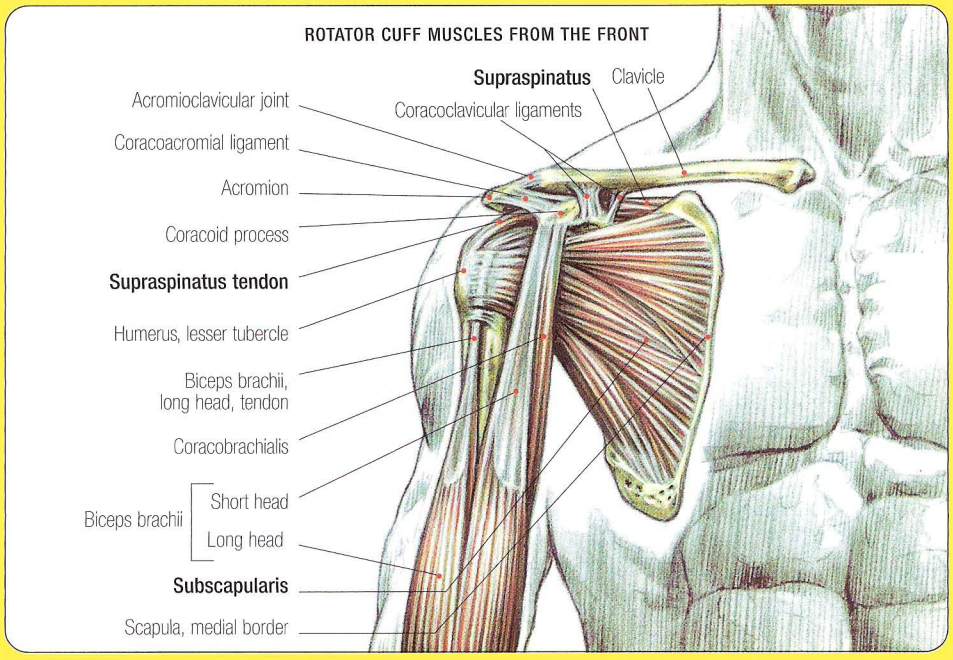


HIP JOINT



SHOULDER JOINT

Compared to the relatively stable coxofemoral joint, the shoulder joint is less encased and is more mobile, which makes it more vulnerable to injury.



Shoulder injuries occur frequently in weightlifting and especially in bodybuilding where developing the entire deltoid group requires the athlete to perform a significant number of repetitions and variations in exercises, which multiplies the risk of injury.

Compared to the stability of the hip joint, where the head of the femur sits deep in the glenoid cavity of the pelvis, the shoulder joint, which is very mobile and allows the arm to move through a wide range of motion, is in fact much less contained and protected.

The shoulder is defined as a ball-and-socket joint because the head of the humerus is mainly held within the glenoid cavity of the scapula by a complex musculotendinous group.

Most weightlifting injuries occur when training the deltoids, and they rarely result in muscle pulls or tears. They are usually caused by poor technique or overuse of the tendons reinforcing the articular capsule.

In contrast to contact sports, such as football, where sudden arm movements can create serious injuries involving dislocation or even torn tendons, the most serious injury in weightlifting involves entrapment.

When some people perform exercises in which they raise the arms, such as extensions from the neck or lateral raises, the supraspinatus tendon is rubbed and compressed between the head of the humerus and the osteoligamentous ceiling created by the inferior surface of the acromion and the coracoacromial ligament.

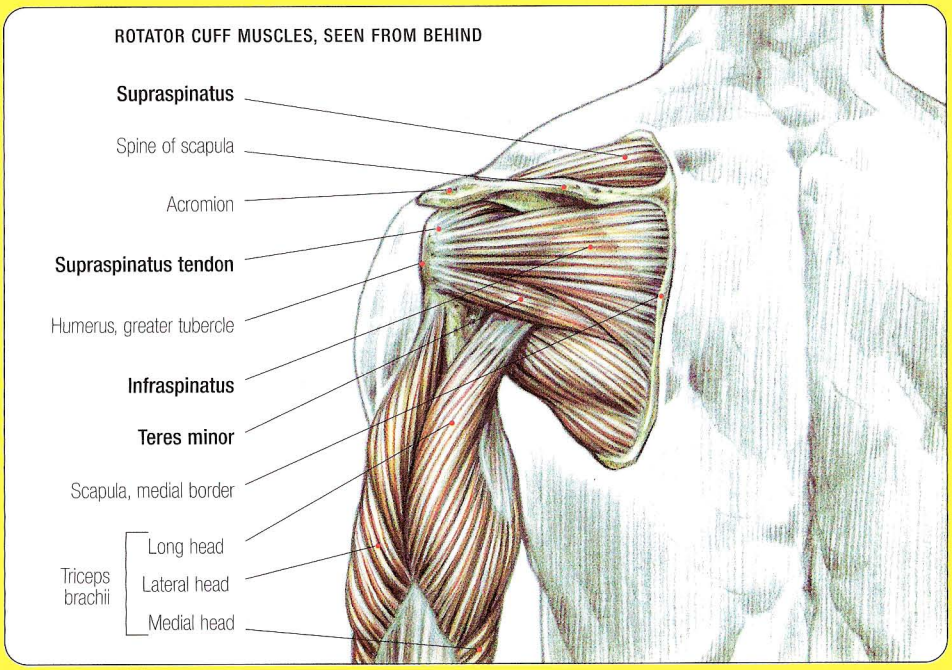
Inflammation follows. This generally begins with the serous bursa, which normally protects the supraspinatus from excessive friction, and extends to the supraspinatus tendon itself, which, without treatment, ends up affecting the adjacent infraspinatus tendon posteriorly and the long head of the biceps brachii anteriorly. Raising the arm becomes extremely painful and eventually can cause irreversible deterioration of the supraspinatus tendon through calcification and even tearing; however, this usually happens to people 40 years of age or older.

The space between the humerus and the osteoligamentous acromiocoracoid ceiling varies from person to person. Some athletes cannot raise their arms laterally without excessive friction. These people should avoid all extensions from the neck, lateral raises that go too high, and back presses.

All barbell extensions for the shoulders must be performed to the front with the elbows slightly forward. When doing lateral dumbbell raises, you'll need to determine the proper height to raise the arms to. The correct movement is the one you can perform without causing pain.

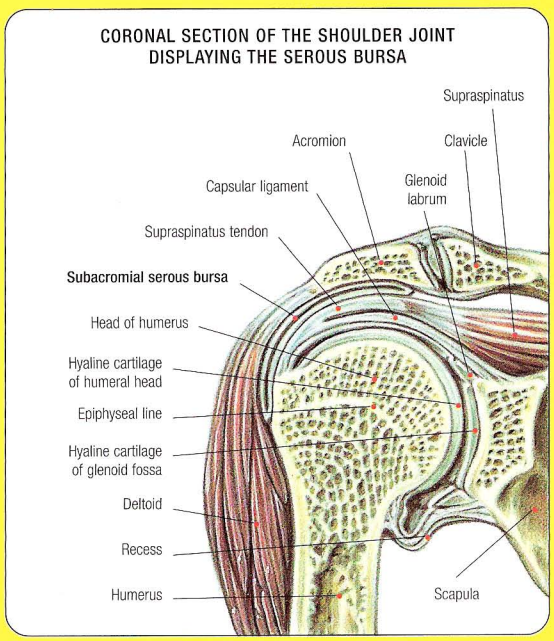
Not everyone responds the same way to the same shoulder injury. Some people may perform all sorts of arm raises that compress the tendon, sometimes even causing tendon degeneration, without initiating a painful inflammatory process. This is how a torn supraspinatus tendon can be discovered during assessment without that person ever having complained of pain.

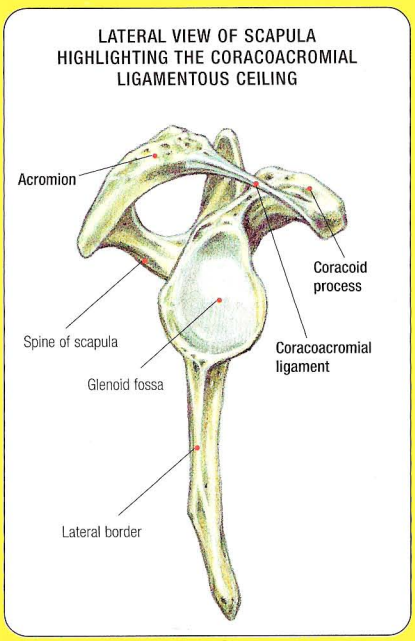
Another cause of shoulder pain may an imbalance in muscle tension around the articular capsule. Remember that the head of the humerus is solidly fixed against the glenoid fossa of the scapula by a group of muscle tendons adhering to or crossing over the articular capsule: In front, this is the subscapularis; a little more anterior is the long head of the biceps; superiorly, is the supraspinatus; and finally posteriorly, the infraspinatus and teres minor. Spasm, hypertonicity, or hypotonicity in one or more of these muscles can pull the shoulder joint into an incorrect position. This position can cause friction during arm movements, resulting in inflammation.



Example: Shortening or spasm of the teres minor and the infraspinatus will pull the head of the humerus in external rotation, which will cause rubbing at the anterior shoulder joint during arm movement. Over time, this will injure the long head of the biceps brachii.

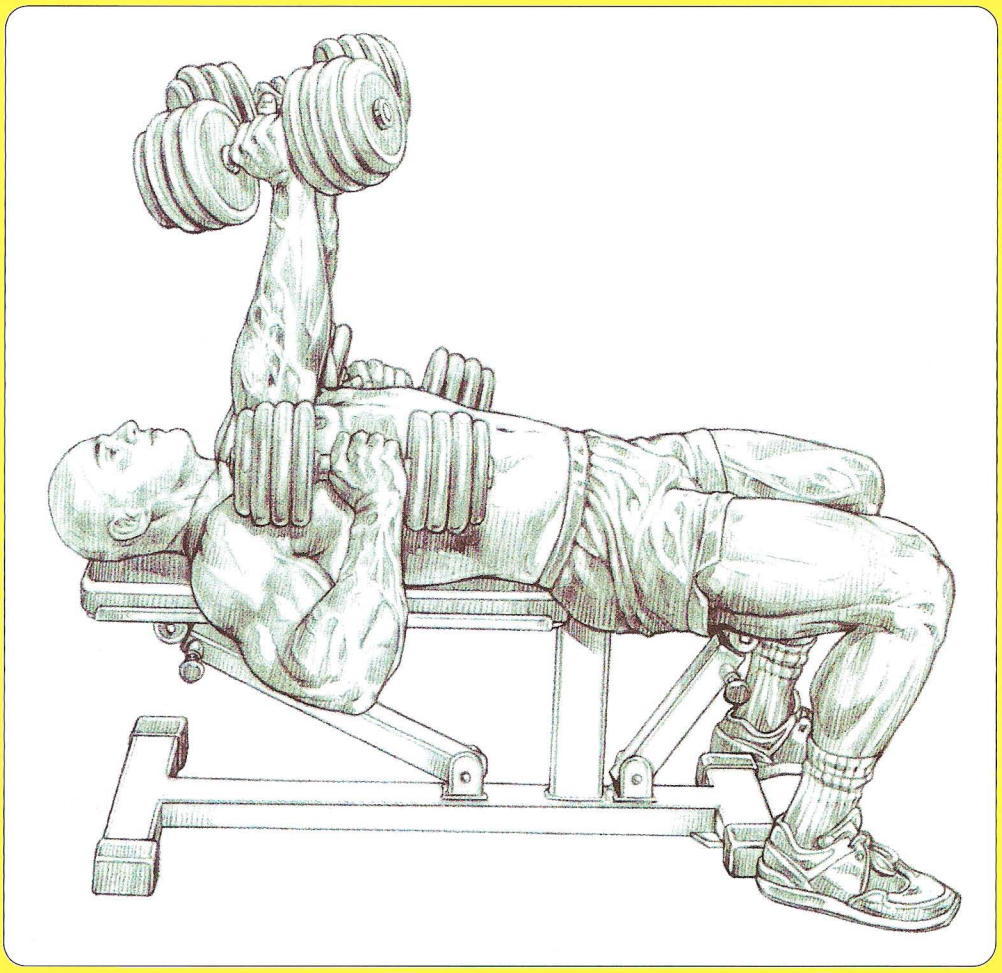
Balance the training of the shoulder muscles and avoid exercises that feel awkward or painful.





Comment:
Massage, either manually or even better with an electric massager, and electrical stimulation are effective for decreasing or eliminating spasms and shortening of the teres minor and infraspinatus.

LYING DUMBBELL PRESSES



This is one of the rare exercises that may be performed by people suffering from the all-too-common entrapment syndrome.

Performing arm extensions with dumbbells while lying on a bench and keeping the elbows next to the body works the anterior deltoid and, to a lesser degree, the middle deltoid intensely while preventing excessive rubbing at the anterior shoulder.

When performed regularly, this maintains size and tone of deltoids despite the existence of injury. You can also use this exercise to reeducate the pectoralis major following tearing. Extending while keeping the elbows against the body reduces its stretch, thus reducing the risk of tearing the scarred area.

Performing the exercise:

Lie on a bench with the chest expanded, back slightly arched, feet flat on the ground, and the elbows bent next to the body, holding a dumbbell in each hand.

- Inhale and extend the arms vertically.
- Exhale at the end of the movement.
- Return to the initial position with a controlled movement.

SEATED DUMBBELL PRESSES 3

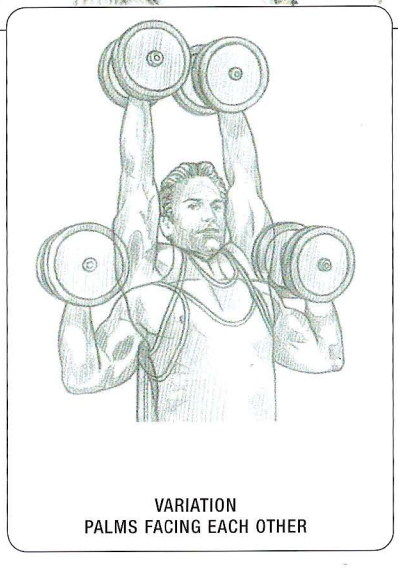
Splenius capitis
Sternocleidomastoid
Levator scapula
Trapezius
Semispinalis capitis
Phalanx
Extensor pollicis longus
Extensor digiti minimi
Biceps
Brachioradialis
Extensor digitorum
Flexor carpi ulnaris
Extensor carpi ulnaris
Extensor carpi radialis brevis
Anconeus
Extensor carpi radialis longus
Abductor pollicis longus
Biceps brachii
Acromion
Humerus
Metacarpal
Carpal
Radius
Ulna
Spine of scapula
Clavicle
Scapula
9th rib
Lumbar vertebra
Middle deltoid
Posterior deltoid
Anterior deltoid
Deltoid
Teres minor
Teres major
Infraspinatus
Latissimus dorsi
Triceps brachii
Medial head
Lateral head
Long head

Sit on a bench, keeping the back straight, and hold dumbbells at shoulder level with an overhand grip (thumbs pointing inward):

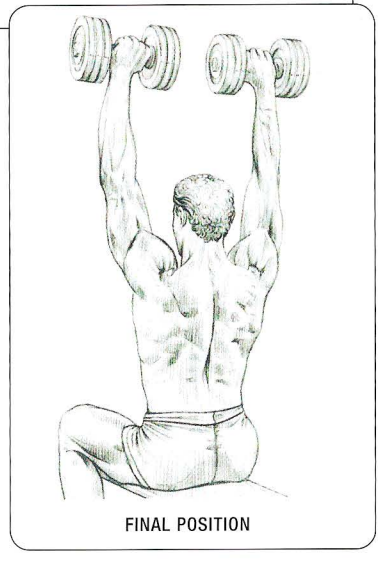
- Inhale and extend the arms vertically.
- Exhale at the end of the movement.

This exercise contracts the deltoid, mainly the middle deltoid, as well as trapezius, serratus anterior, and triceps brachii.

This movement may also be performed standing or alternating the arms. A backrest helps prevent an excessive arch in the back.

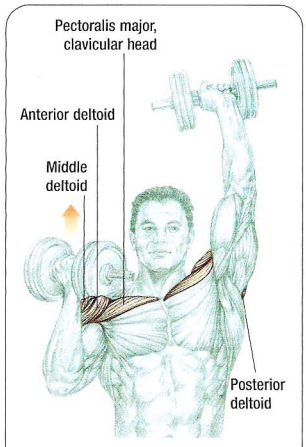


VARIATION
PALMS FACING EACH OTHER



FINAL POSITION

4 FRONT DUMBBELL PRESSES



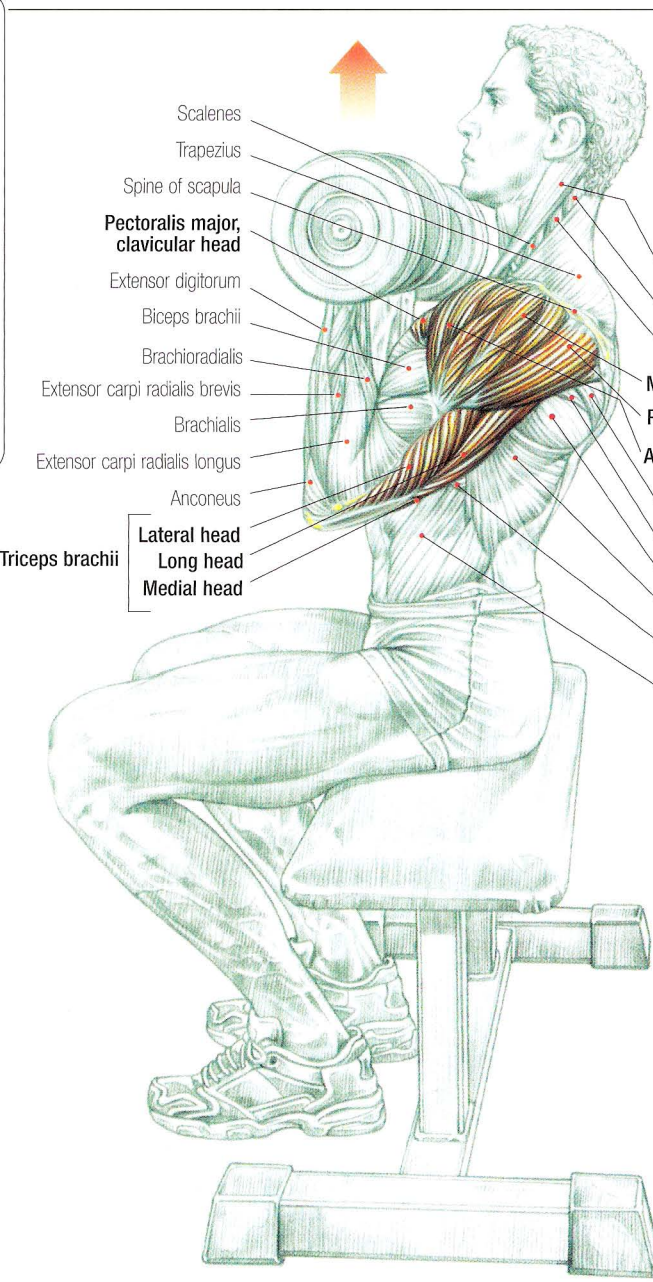
VARIATION WITH ALTERNATING EXTENSIONS

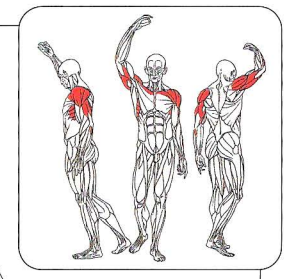
Sit on a bench, keeping the back straight. With elbows bent and pointing forward, hold the dumbbells at shoulder level with an underhand grip (thumbs pointing away from each other):

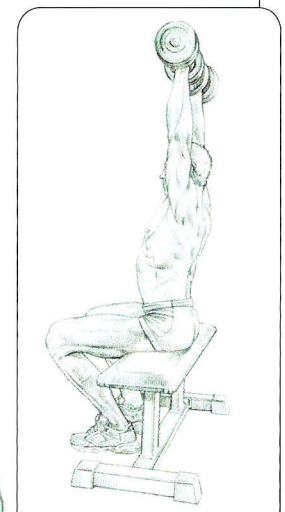
- Inhale and extend the arms vertically while rotating 180 degrees at the wrists, bringing them into an overhand grip (thumbs pointing toward each other).
- Exhale at the end of the movement.

This exercise solicits the deltoid, mainly the anterior deltoid, as well as the clavicular head of the pectoralis major, triceps brachii, trapezius, and serratus anterior.

Variations:
This exercise may be performed seated against a backrest to help prevent an excessive arch in the back, standing, and alternating arms.



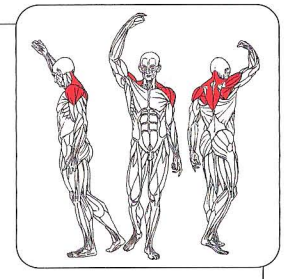




FINAL POSITION

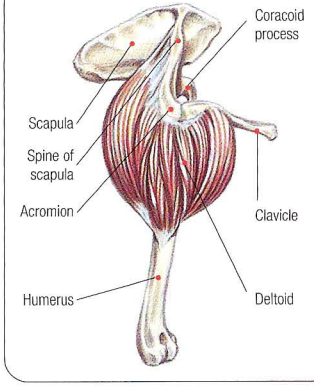
Comment: Working with the elbows pointing forward prevents excessive friction, which triggers inflammation in the shoulder that can eventually develop into a more serious injury.
This movement is recommended for people with weak shoulders and is meant to replace more intense exercises, such as classic dumbbell extensions with the elbows pointing to the sides or extensions from behind the neck.

BENT-OVER LATERAL RAISES 5



Clavicle
Trapezius
Infraspinatus
Latissimus dorsi
External oblique
Teres minor
Teres major
Acromion
Deltoid
Anterior deltoid
Posterior deltoid
Middle deltoid
Triceps brachii
Brachialis
Biceps brachii
Brachioradialis
Extensor carpi radialis longus
Anconeus
Flexor carpi ulnaris
Extensor carpi radialis brevis
Extensor carpi ulnaris
Extensor digiti minimi
Sternocleidomastoid
Pectoralis major
Biceps brachii
Brachioradialis
Pronator teres
Flexor carpi radialis
Palmaris longus
Flexor digitorum superficialis
Extensor digitorum

DELTOID INSERTIONS

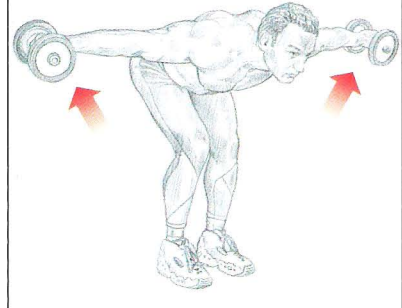


Stand with legs slightly apart and knees slightly bent and lean forward at the waist while keeping the back straight. With arms hanging down, grasp the dumbbells with the elbows slightly bent:

- Inhale and raise the arms to horizontal.
- Exhale at the end of the effort.

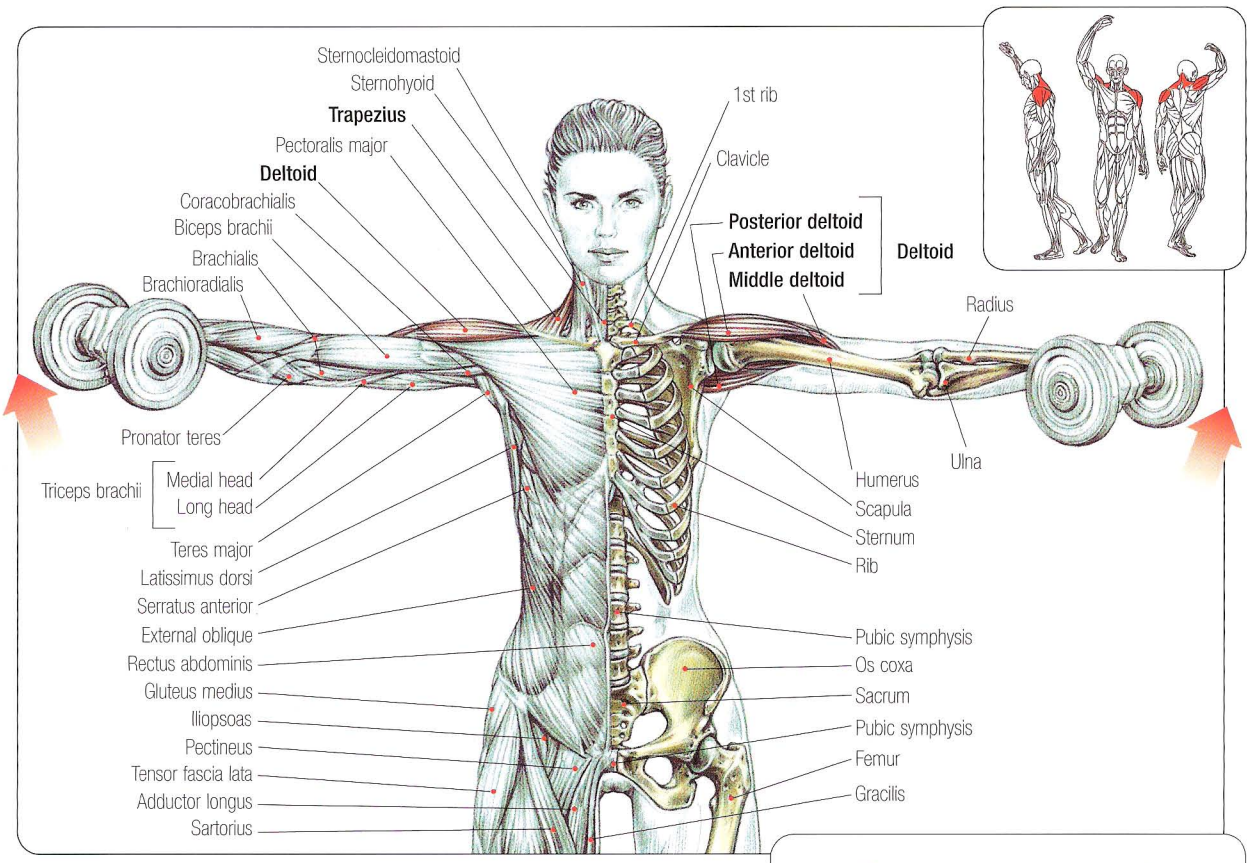
This exercise works the shoulder group, accenting the work of the posterior deltoid. Squeeze the shoulder blades together at the end of the movement to contract the middle and lower portions of the trapezius, rhomboids, teres minor, and infraspinatus.

Variation: The exercise may be performed facedown on an incline bench.

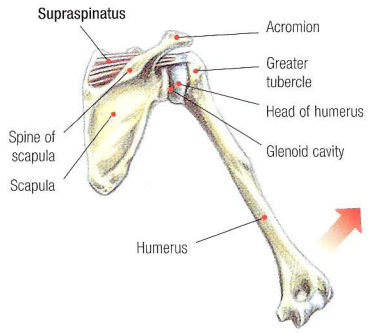


FINAL POSITION

6 LATERAL DUMBBELL RAISES



SUPRASPINATUS MUSCLE ACTION

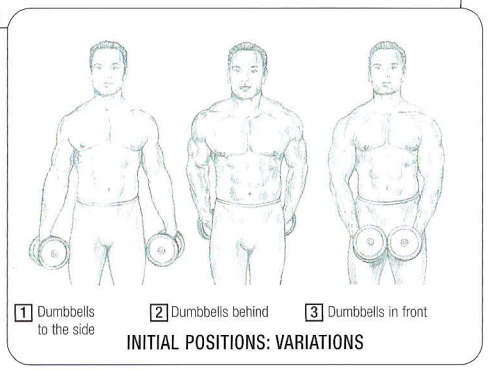


The supraspinatus helps the deltiod raise the arm laterally and helps keep the head of the humerus in the glenoid cavity.

Stand with a straight back, with legs slightly apart, arms hanging next to the body, holding a barbell in each hand:

- Raise the arms to horizontal with the elbows slightly bent.
- Return to the initial position.

This exercise mainly uses the middle deltoid.



INITIAL POSITIONS: VARIATIONS

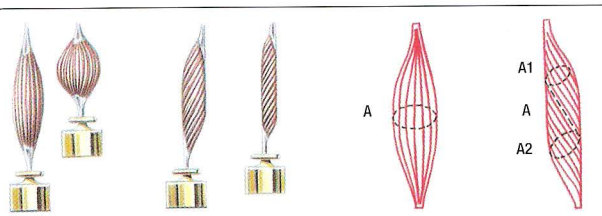
The three divisions of the deltoids create a multipennate muscle whose different fiber directions converge on the humerus. Their function is to support relatively heavy weight and to move the arm through its full range of motion with precision. Therefore, it is important to adapt training to the specifics of this muscle by varying the initial position of the movement (hands behind, to the side, or in front). This thoroughly works all the fibers of the middle deltoid. Because everyone's physical structure is different (length of the clavicle, shape of the acromion, and height of the insertion at the humerus), you must find the angle of the initial position that is best for you. Lateral raises contract the supraspinatus, although you can't see this because it is located deep in the supraspinatus fossa of the scapula (shoulder blade), where it attaches to the lesser tubercle of the humerus.

Raising the arm above horizontal contracts the upper part of the trapezius; however, many bodybuilders don't work above horizontal so that they isolate the the lateral deltoid. This exercise should not be performed with heavy weights, but instead in sets of 10 to 25 reps, while varying the working angle without much recuperation time until you feel a burn. To increase the intensity, maintain an isometric contraction for a few seconds with the arm at horizontal between each repetition.

Deltoid
- Anterior deltoid
- Middle deltoid
- Posterior deltoid

Splenius
Levator scapula
Sternocleidomastoid
Extensor carpi radialis brevis
Extensor digitorum
Extensor carpi ulnaris
Anconeus
Brachialis
Biceps brachii
Flexor carpi ulnaris
Triceps brachii
Teres major
Teres minor
Infraspinatus
Rhomboids
Serratus anterior
External oblique
Extensor carpi radialis longus
Brachioradialis
Trapezius
- Upper portion
- Middle portion
- Lower portion

Latissimus dorsi



CONVERGENT MUSCLE | PENNATE MUSCLE | CONVERGENT MUSCLE | PENNATE MUSCLE

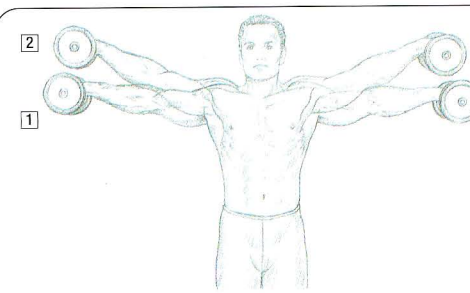
A pennate muscle displaces greater weight than a convergent muscle but over a shorter distance.

During lateral raises, because the pennate fibers of the middle deltoid produce great force but weak contraction, they work synergistically with the anterior and posterior deltoids to bring the arm to horizontal.

The sum of the actin* and myosin* filaments of a fusiform muscle is equal to its transverse section A.

The sum of the actin and myosin filaments of a pennate muscle is equal to the sum A of its oblique sections A1 and A2.

*The motor elements of a muscle whose maximum force of contraction is approximately 5 kg per cm^2 per second.

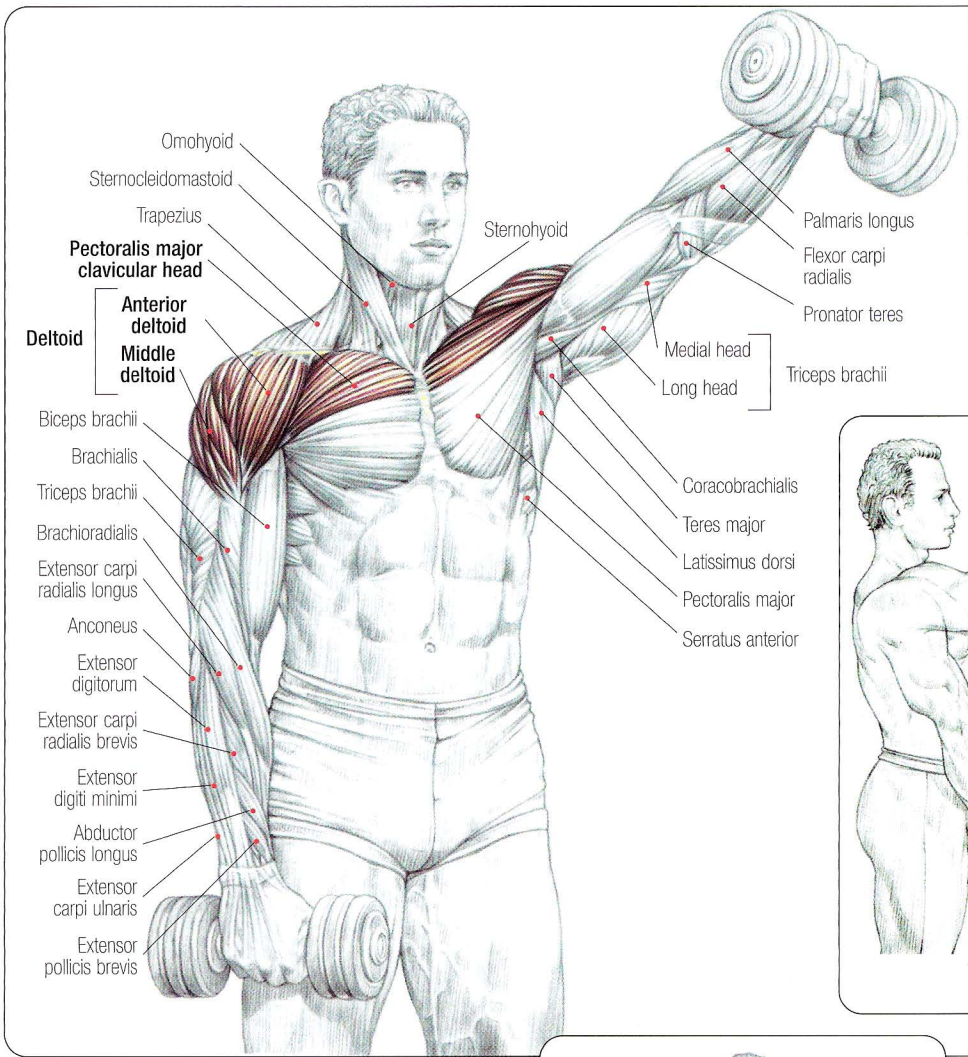


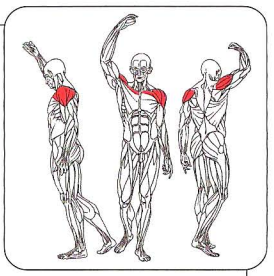
FINAL POSITION: VARIATIONS

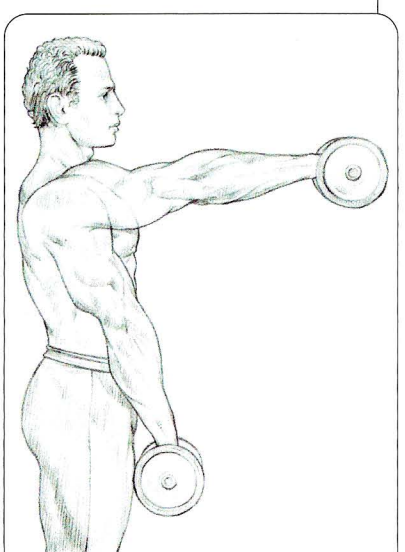
1 Arms raised to horizontal works the deltoid.

2 Arms raised above horizontal isolates the upper and middle portions of the trapezius.

7 ALTERNATE FRONT ARM RAISES





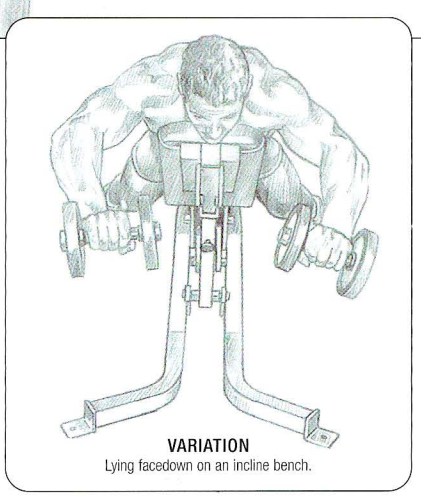


THE MOVEMENT

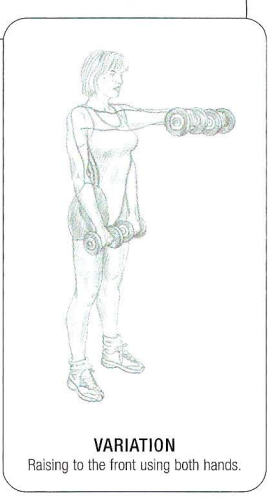
Stand with the feet slightly apart, holding the barbells with an overhand grip as they rest against the front of the thighs or slightly to the side:

- Inhale and alternate raising the arms to the front to eye level.
- Exhale at the end of the effort.

This exercise uses mainly the anterior deltoid, the clavicular head of the pectoralis major, and, to a lesser degree, the remaining deltoids. All movements that raise the arms contract the muscles that anchor the scapula to the rib cage, such as the serratus anterior and rhomboids, which create a stable support for the humerus to move from.



VARIATION
Lying facedown on an incline bench.



VARIATION
Raising to the front using both hands.

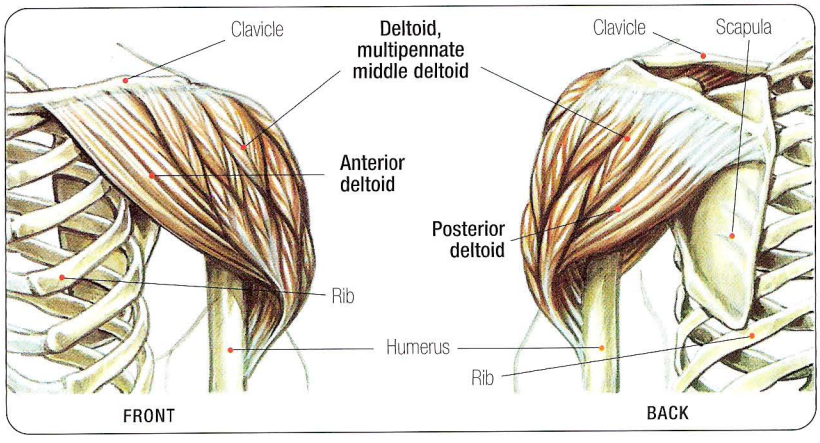
SIDE-LYING LATERAL RAISES 8

Extensor carpi radialis brevis
Extensor digitorum
Extensor carpi radialis longus
Extensor digiti minimi
Triceps brachii
Deltoid
Brachioradialis
Trapezius
Infraspinatus
Rhomboids
Anconeus
Flexor carpi ulnaris
Extensor carpi ulnaris
Flexor carpi ulnaris
Palmaris longus
Teres minor
Teres major
Latissimus dorsi

Lie on one side on the floor or on a bench holding a dumbbell with an overhand grip:

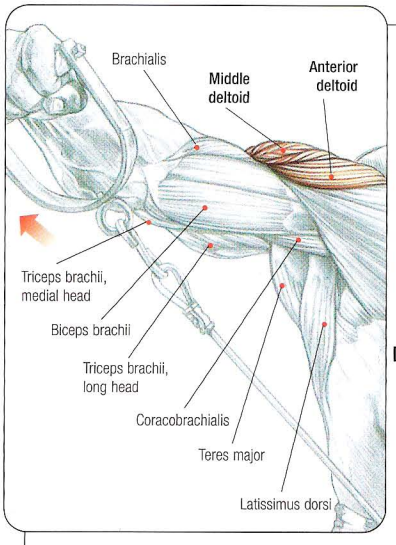
- Inhale and raise the arm to vertical.
- Exhale at the end of the movement.

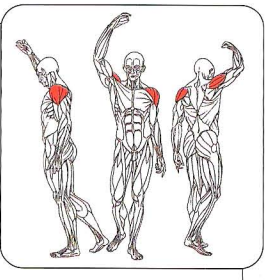
Unlike standing raises, which progressively work the muscle to maximum intensity at the end of the movement (when the arm reaches horizontal), this exercise works the deltoid differently by focusing the effort at the beginning of the raise. Sets of 10 to 12 repetitions work best.

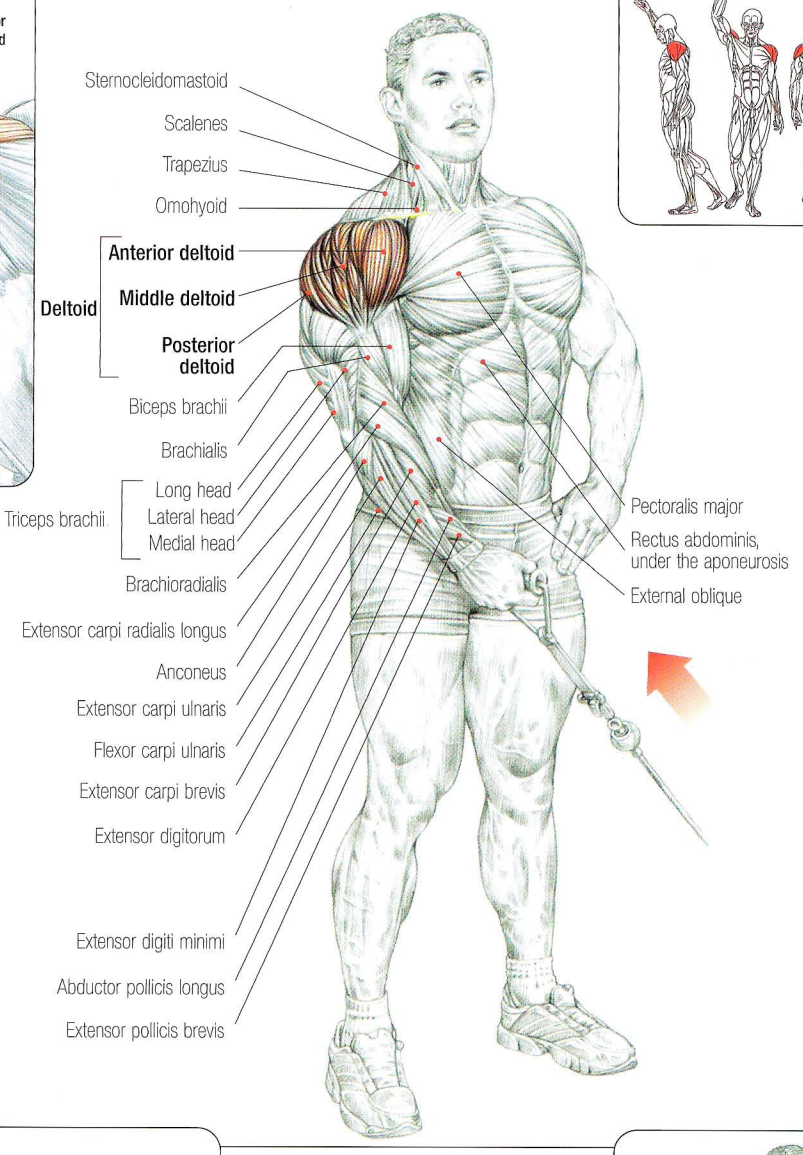


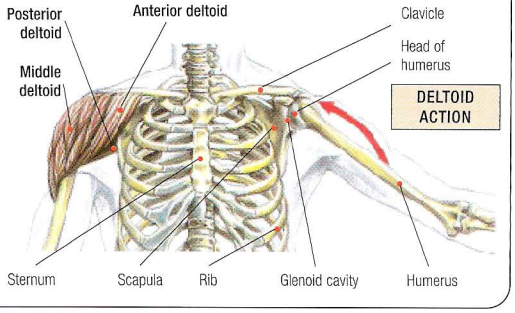
Comment: This movement contracts the supraspinatus, the muscle mainly responsible for initiating abduction. Varying the initial position (dumbbell in front of or behind the thigh) allows you to work all the deltoid fibers.

9 LOW-PULLEY LATERAL RAISES





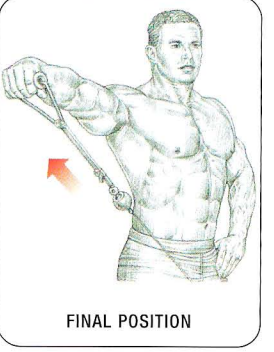




Grasp the handle with the arm next to the body:

- Inhale and raise the arm to horizontal.
- Exhale out at the end of the movement.

This exercise mainly develops the middle deltoid. Because the muscle is multipennate, composed of many fibers in the shape of a feather, it is best to vary the working angles in order to work all the fibers.



FINAL POSITION

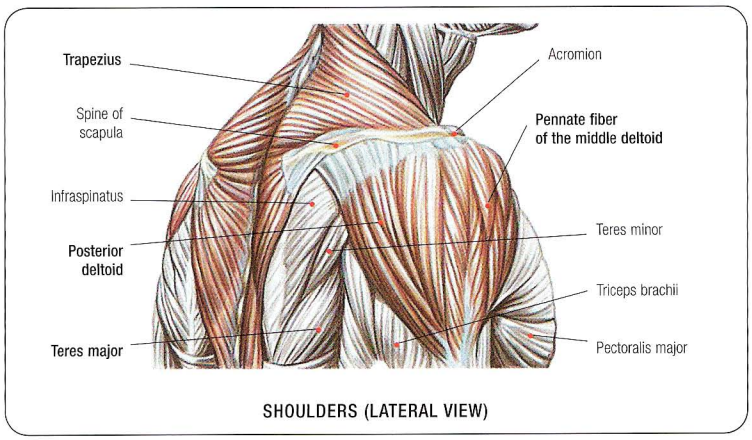
LOW-PULLEY FRONT RAISES 10

Trapezius
Deltoid
Middle deltoid
Posterior deltoid
Teres minor
Infraspinatus
Teres major
Pectoralis major
Latissimus dorsi
Serratus anterior
Brachialis
Brachioradialis
Extensor carpi radialis longus
Extensor carpi radialis brevis
Extensor digitorum
Extensor carpi ulnaris
Flexor carpi ulnaris
Anconeus
Triceps brachii, medial head
Triceps brachii, lateral head
Triceps brachii, long head

Stand with the feet slightly apart, arms next to the body. Grasp the handle with an overhand grip with one hand:

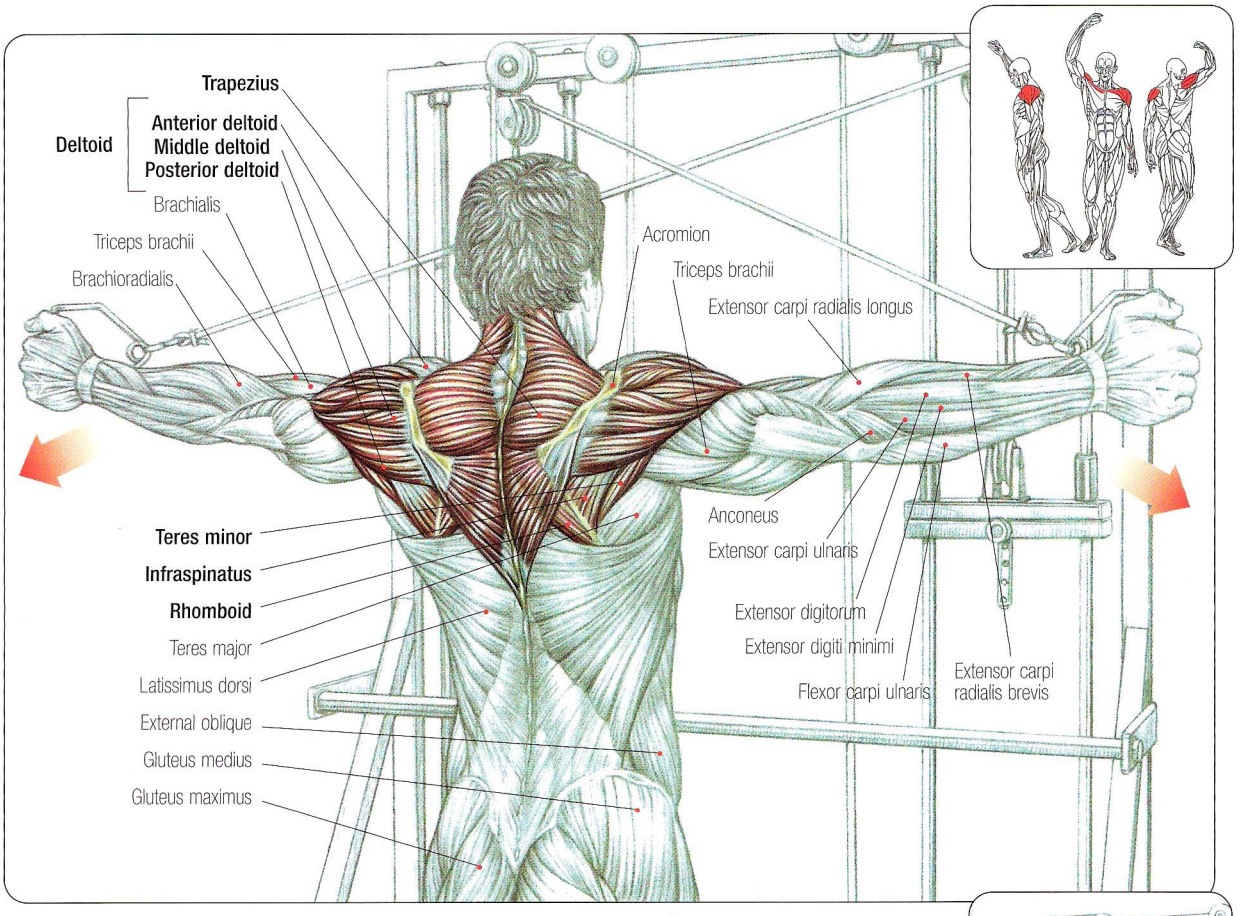
- Inhale and raise the arm up to eye level.
- Exhale at the end of the movement.

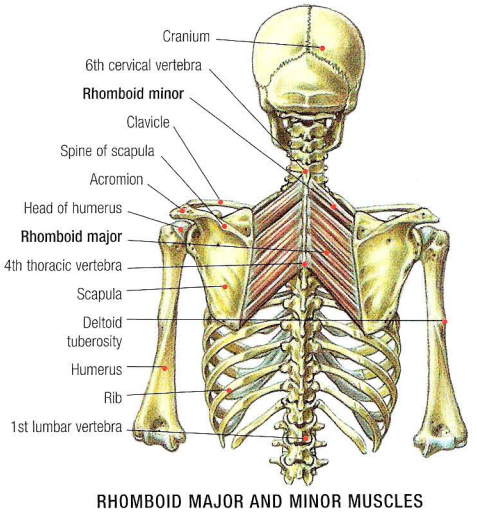
This exercise contracts the deltoid (mainly the anterior deltoid) as well as the clavicular head of the pectoralis major and, to a lesser degree, the short head of the biceps brachii.



SHOULDERS (LATERAL VIEW)

11 HIGH-PULLEY LATERAL EXTENSIONS





RHOMBOID MAJOR AND MINOR MUSCLES

Located deep under the trapezius, the rhomboids pull the shoulder blades together toward the spine and press them against the rib cage.

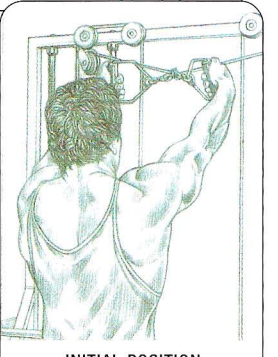
In some people, the major and minor rhomboids are fused, creating one muscle.

Stand facing the pulleys with the arms extended to the front, gripping the right handle with the left hand and the left handle with the right hand:

- Inhale and extend arms to the side and back.
- Exhale at the end of the movement.

Return to the initial position with a controlled movement and begin again.

This exercise mainly contracts the posterior deltoid, infraspinatus, teres minor, and, at the end of the movement as the shoulder blades come together, the trapezius and deeper in, the rhomboids.

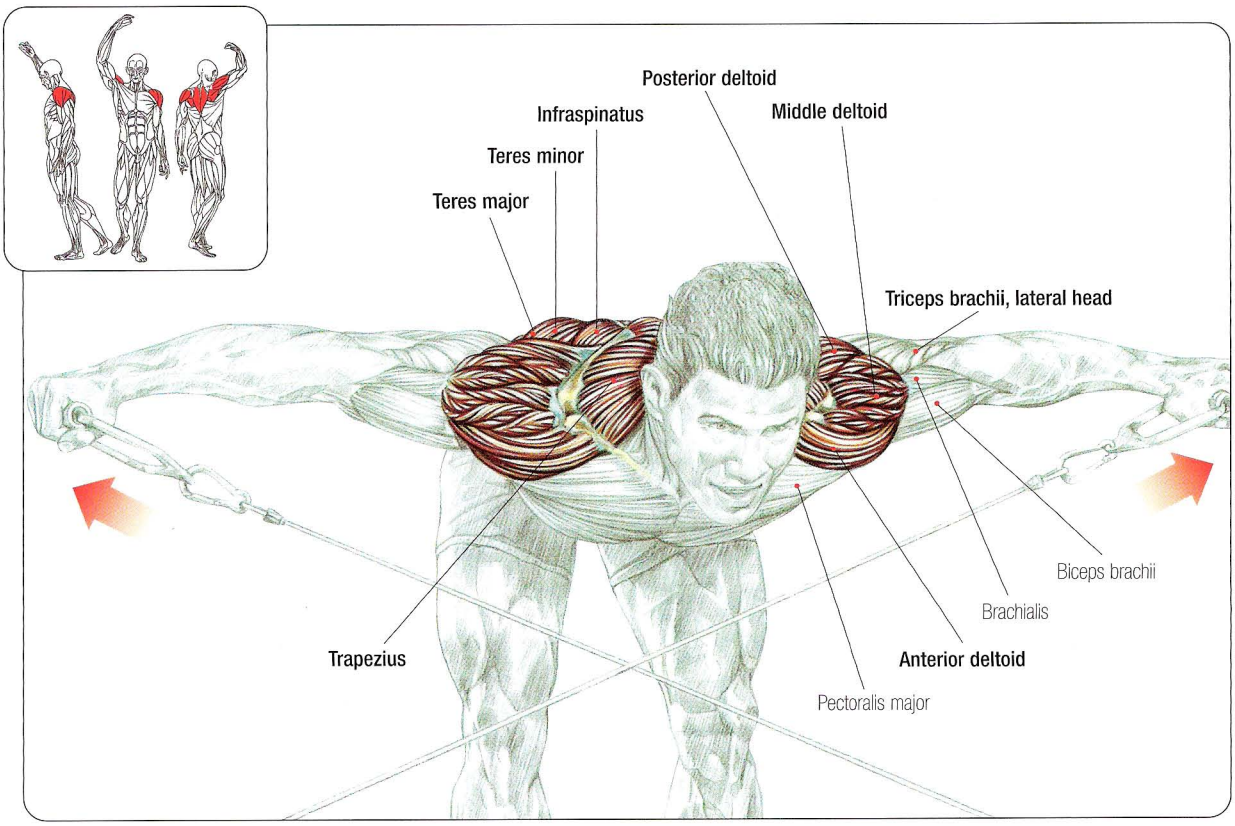


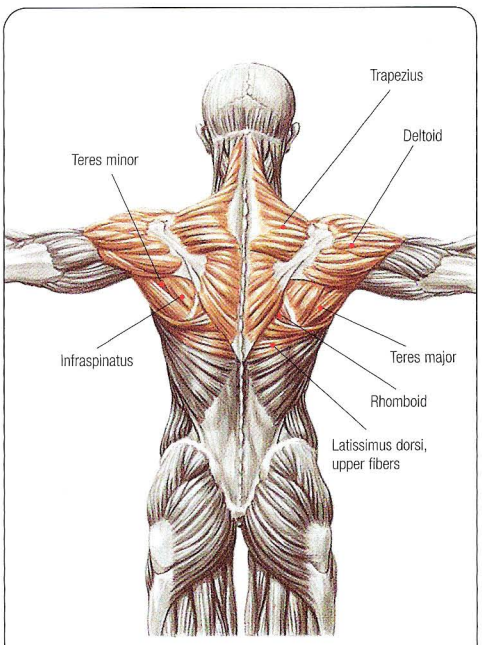
INITIAL POSITION

Comment: People who carry their shoulders forward because of chest muscle development can perform this exercise in addition to posterior shoulder work at a machine to help rebalance their posture.

To realign shoulders where they belong, work with moderate weights, and at the end of the movement squeeze the shoulders back.

LOW-PULLEY BENT-OVER LATERAL RAISES 12





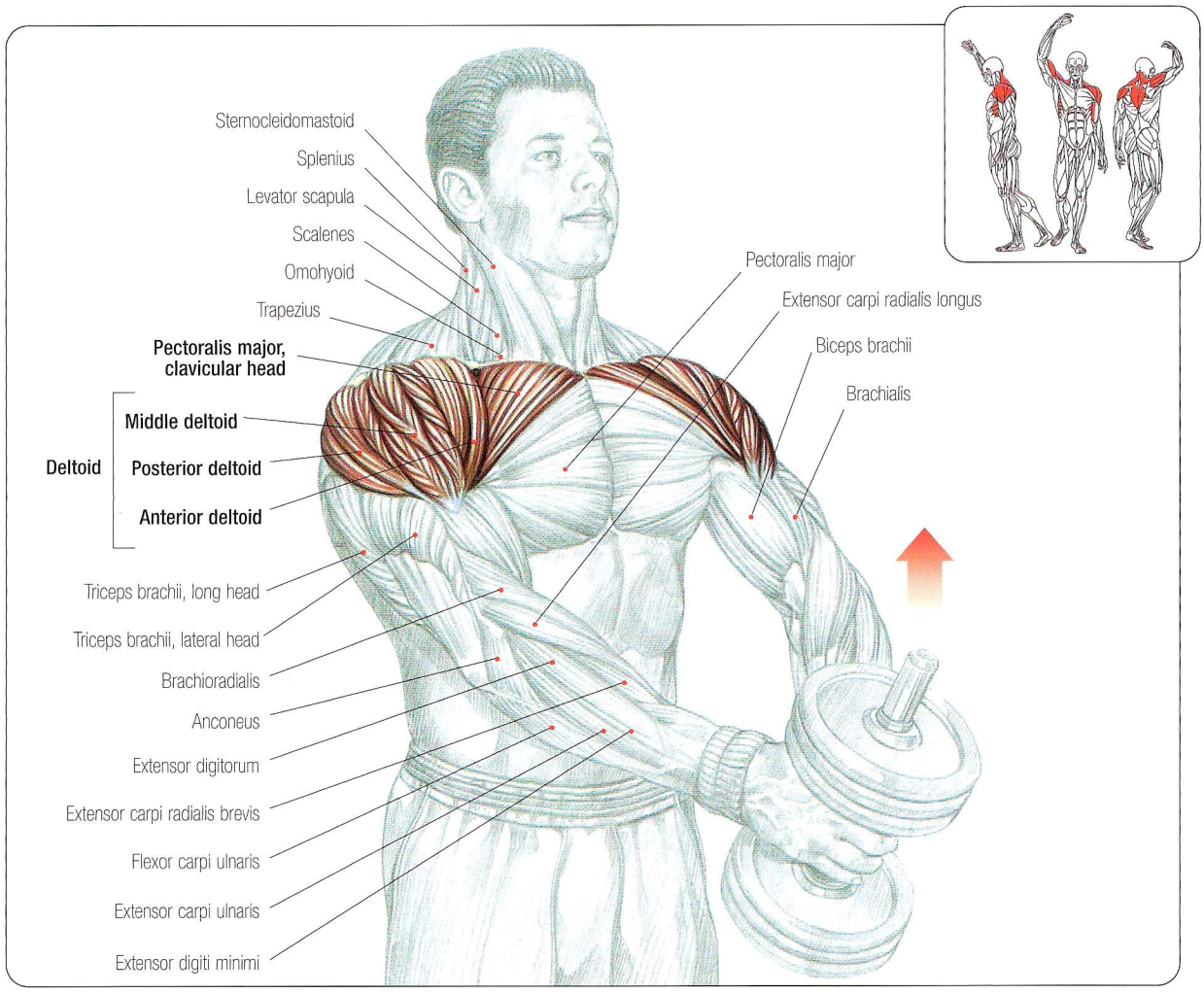
PARTS WORKED

Stand with the feet apart, legs slightly bent, and lean forward from the waist, keeping a flat back. Grip a handle in each hand with the cables crossed:

- Inhale and raise the arms to the side to horizontal.
- Exhale at the end of the effort.

This exercise mainly works the posterior deltoid. At the end of the movement, as the shoulder blades squeeze together, the trapezius (middle and lower portions) and the rhomboids contract.

13 ONE-DUMBBELL FRONT RAISES

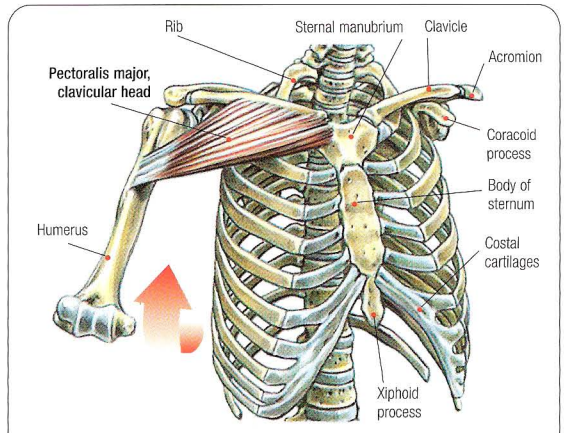


Stand with the legs slightly apart, a straight back, and the abdominal muscles contracted. With arms extended, grasp a dumbbell in both hands with fingers crossed over each other as it rests against the thighs:

- Inhale and raise the dumbbell to eye level.
- Lower gently, avoiding abrupt movements.
- Exhale at the end of the movement.

This exercise mainly contracts the anterior deltoid, the clavicular head of the pectoralis major, and the short head of the biceps.

Note that all the fixators of the scapula are used during the isometric contraction, which allows the humerus to move from a stable position.

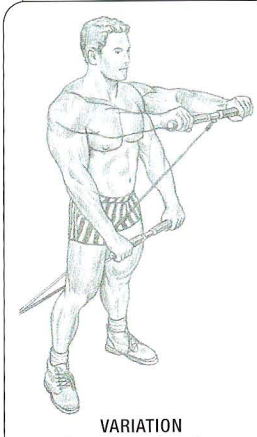


CLAVICULAR HEAD OF THE PECTORALIS MAJOR ACTIVELY PARTICIPATES IN RAISING THE ARM ANTERIORLY

BARBELL FRONT RAISES 14

Sternocleidomastoid
Scalenes
Omohyoid
Trapezius
Pectoralis major, clavicular head
Deltoid
- **Anterior deltoid**
- **Middle deltoid**
- **Posterior deltoid**

Teres major
Latissimus dorsi
Triceps brachii
Brachialis
Anconeus
Extensor digitorum
Extensor digiti minimi
Extensor carpi ulnaris
Flexor carpi ulnaris
Pectoralis major
Biceps brachii
Extensor carpi radialis longus
Pronator teres
Extensor carpi radialis brevis
Brachioradialis
Flexor carpi radialis



VARIATION
Front raise at a low pulley.

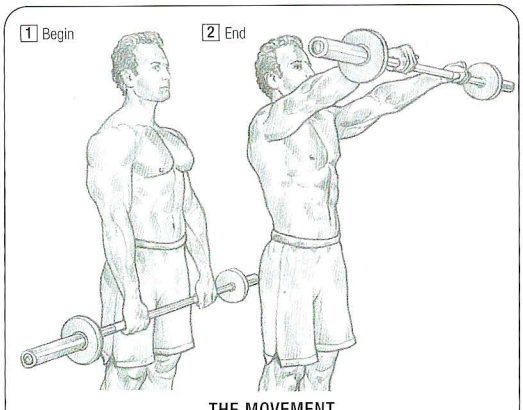
Stand with the legs slightly apart and the back straight, contracting the abdominal muscles. Hold the barbell with an overhand grip as it rests against the thighs:

- Inhale and raise the barbell with extended arms to eye level.
- Exhale at the end of the movement.

This exercise contracts the anterior deltoid, the clavicular head of the pectoralis major, the infraspinatus, and, to a lesser degree, the trapezius, serratus anterior, and short head of biceps.

If you continue raising the arms, the posterior deltoid contracts, reinforcing the work of the other muscles and allowing you to raise the arms to vertical.

The exercise may also be performed with your back to a low pulley and the cable passing between the legs.



THE MOVEMENT

Comment: The biceps brachii participates to a lesser degree in all anterior arm raises.

15 UPRIGHT ROWS

Trapezius
Superior portion
Middle portion
Inferior portion
Splenius
Sternocleidomastoid
Middle deltoid
Anterior deltoid
Brachialis
Posterior deltoid
Teres major
Rhomboids
Medial head
Lateral head
Long head
Triceps
Teres minor
Infraspinatus
Latissimus dorsi
External oblique

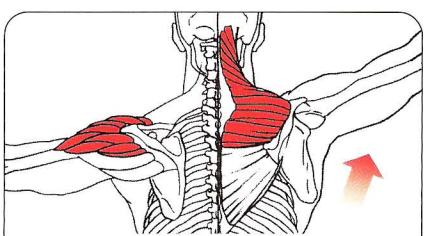
THE MOVEMENT

Stand with the legs slightly apart and back straight. Grasp the barbell with an overhand grip slightly wider than shoulder width as it rests against the thighs:

- Inhale and pull the barbell up along the body to the chin keeping the elbows as high as possible.
- Lower the bar in a controlled manner without abrupt movements.
- Exhale at the end of the effort.

This exercise mainly uses the deltoid, trapezius, and biceps, and to a lesser degree, the muscles of the forearms, the gluteal muscles, the lumbosacralis group, and the abdominal muscles.

This is a fundamental exercise that is comprehensive and helps develop a "Hercules" physique.



The deltoid raises the arm to horizontal. The trapezius takes over to rotate the scapula (shoulder blade), allowing the arm to continue its upward course.

NAUTILUS LATERAL RAISES 16

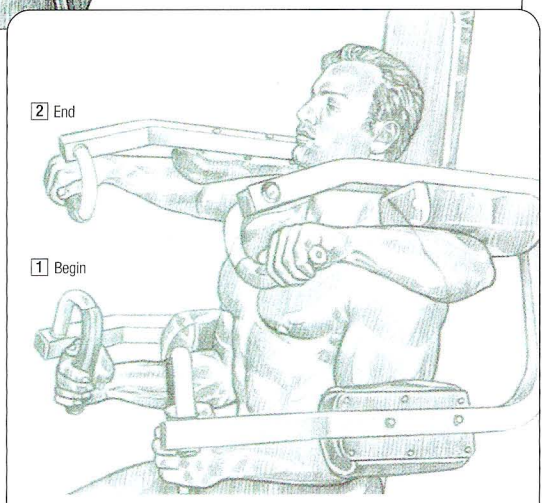
Sternohyoid
Pectoralis major, clavicular head
Pectoralis major
Clavicle
Sternum
Deltoid
Biceps brachii
Triceps brachii: Long head, Medial head
Brachialis
Pronator teres
Brachioradialis
Flexor carpi radialis
Palmaris longus
Flexor digitorum superficialis
Extensor carpi radialis longus
Flexor carpi ulnaris
Sternocleidomastoid
Levator scapula
Omohyoid
Trapezius
Scalenes
Middle deltoid
Anterior deltoid
Deltoid
Triceps brachii, lateral head

Sit at a machine, grasping the handles:

- Inhale and raise the elbows to horizontal
- Exhale at the end of the movement.

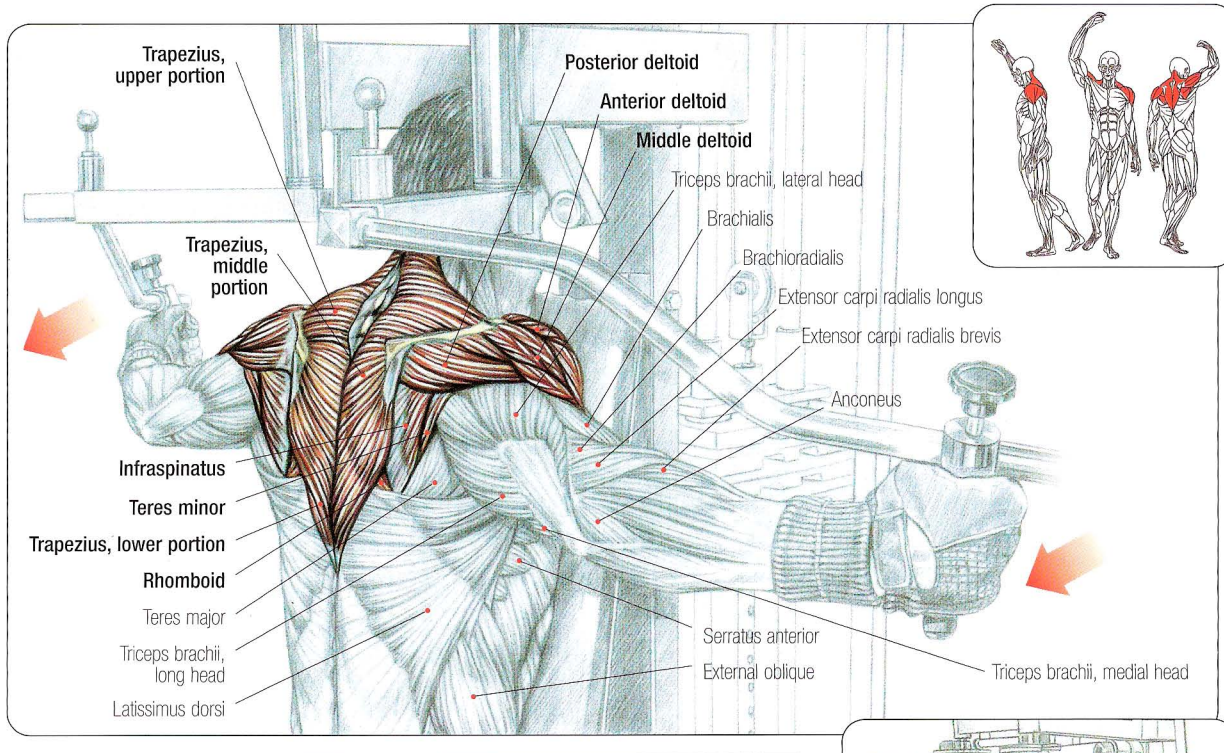
This exercise uses the deltoid (focusing most of the effort on the middle deltoid) and the supraspinatus, located under the deltoid. If raising the arm above horizontal, the upper portion of the trapezius also becomes involved.

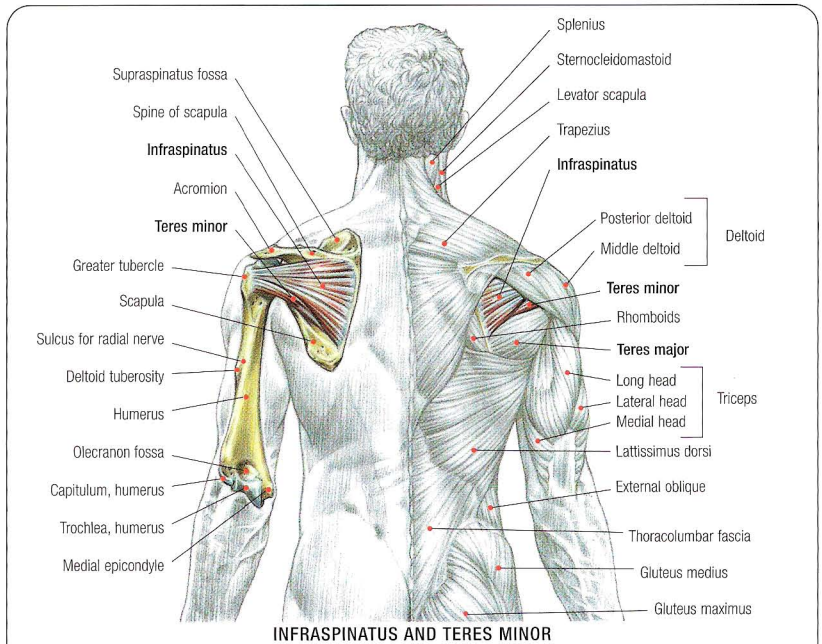
Comment: This is an excellent beginning exercise because you don't have to worry about your form or positioning, and it allows long sets of repetitions.



THE MOVEMENT

17 PEC DECK REAR-DELT LATERALS

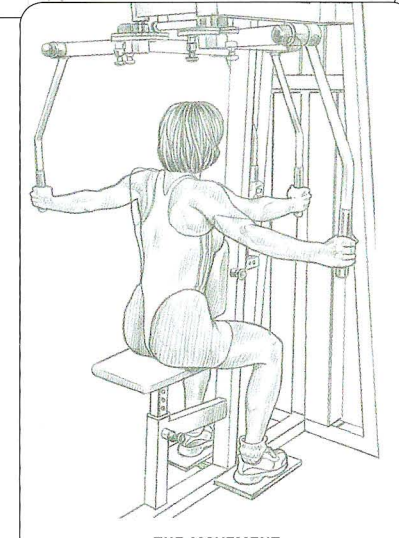




INFRASPINATUS AND TERES MINOR

Both of these muscles arise from the posterior surface of the scapula (shoulder blade), pass onto the scapulohumeral articulation, adhering to its articular capsule, and insert at the greater tubercle of the humerus.
They play an important role in external rotation of the arm and reinforce the action of the shoulder ligaments by actively reinforcing the attachment of the arm to the chest.

Comment: In some people, the teres minor and infraspinatus are fused, forming one muscle.



THE MOVEMENT

Sit facing the machine, with the torso against the back pad, arms forward, gripping the handles:

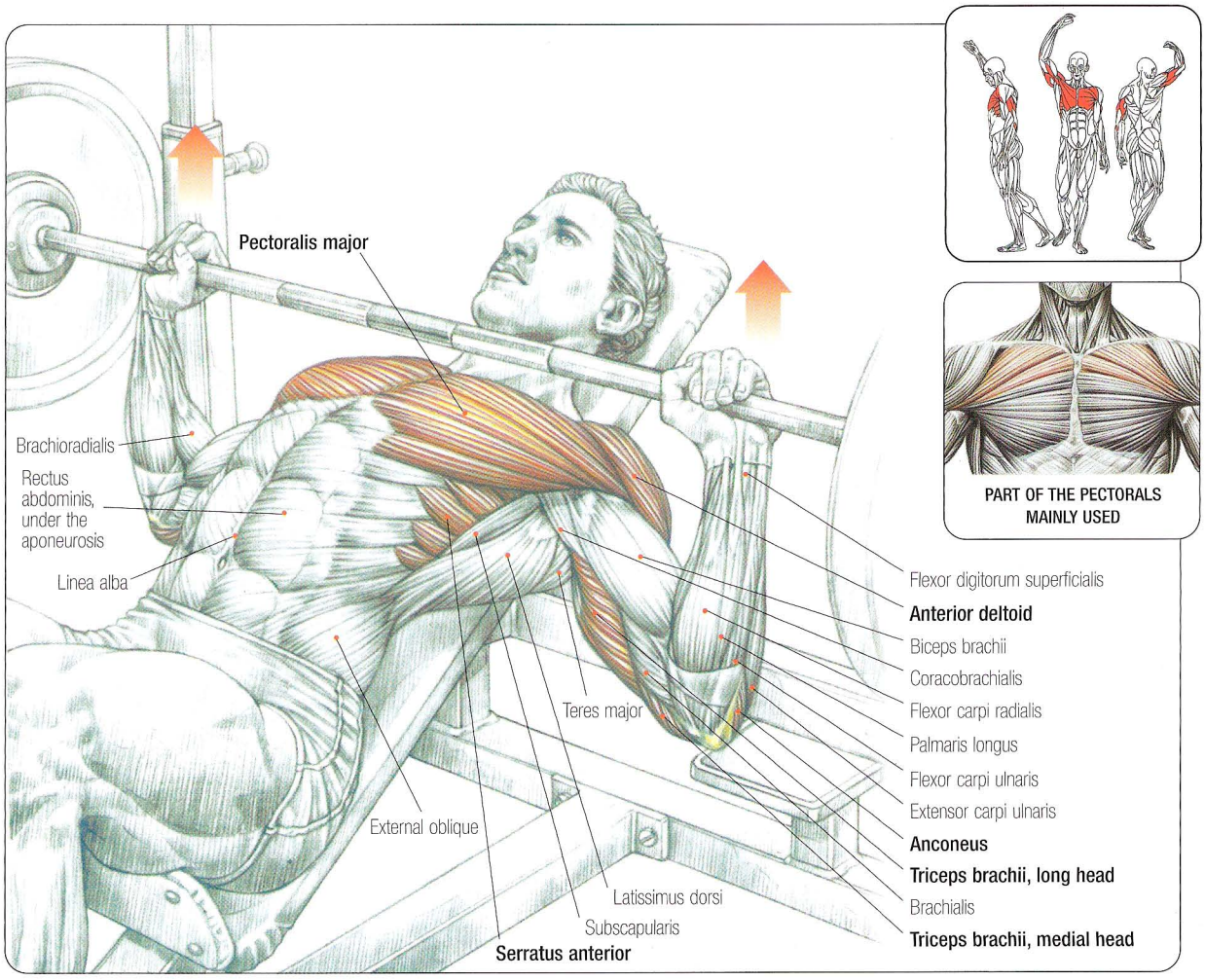
- Inhale and separate the arms, squeezing the shoulder blades together at the end of the movement.
- Exhale.

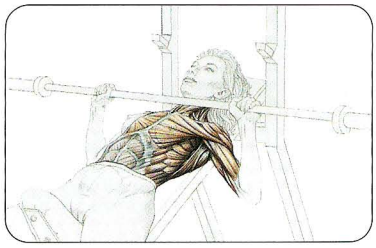
This exercise mainly engages the posterior deltoid, infraspinatus, and teres minor and, at the end of the movement, when the shoulder blades squeeze together, the trapezius and rhomboids.

3 CHEST

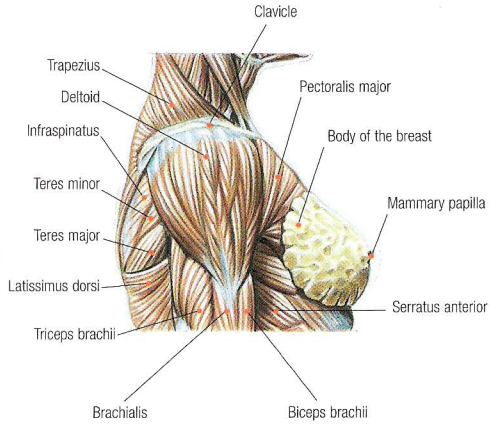
1 INCLINE PRESSES 50
+ PECTORALIS MAJOR TEAR 51
2 BENCH PRESSES 52
3 CLOSE-GRIP BENCH PRESSES 54
+ BENCH PRESS AND ELBOW PAIN 54
4 DECLINE PRESSES 55
5 PUSH-UPS 56
6 PARALLEL BAR DIPS 57
7 DUMBBELL PRESSES 58
8 DUMBBELL FLYS 59
9 INCLINE DUMBBELL PRESSES 60
10 INCLINE DUMBBELL FLYS 61
11 PEC DECK FLYS 62
12 CABLE CROSSOVER FLYS 63
13 DUMBBELL PULLOVERS 64
14 BARBELL PULLOVERS 65

1 INCLINE PRESSES





Comment: Contrary to popular lore, the incline press does not tone the breasts and in no way prevents their sagging. Breasts are composed of adipose tissue containing the mammary glands, all of which is contained in a net of connective tissue that rests on top of the pectoralis major.

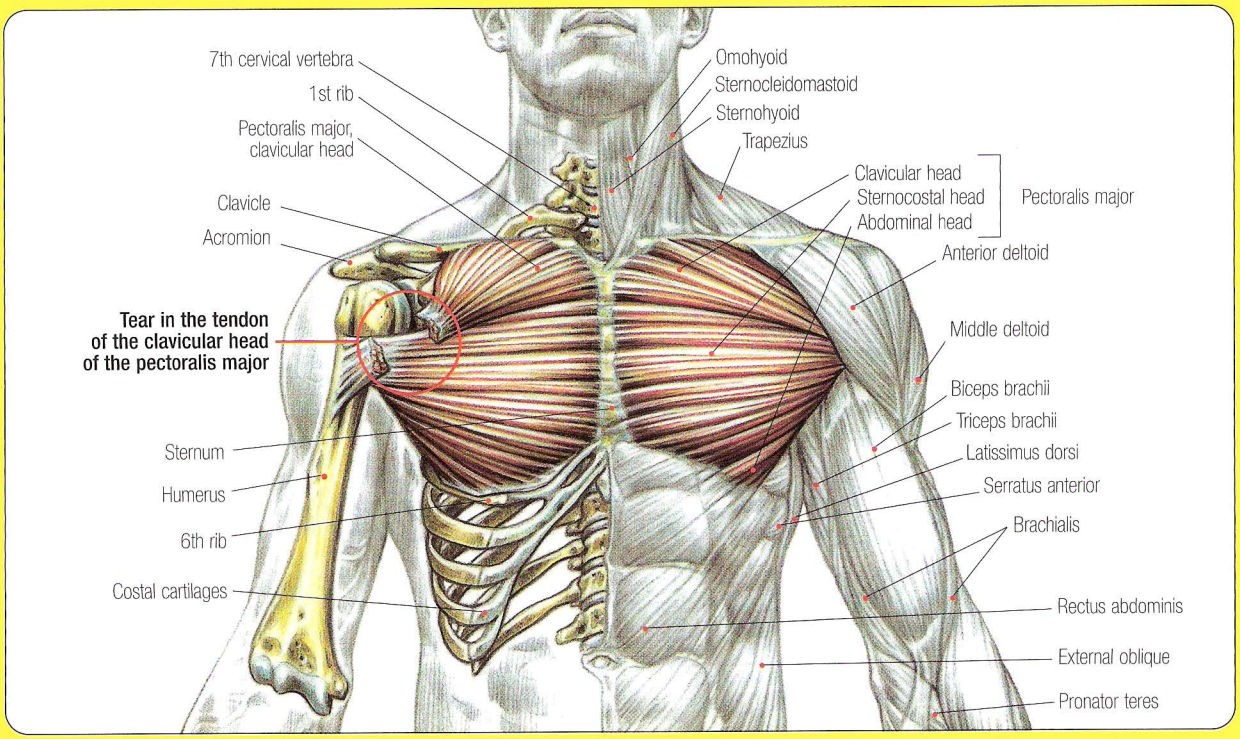


Sit on an incline bench angled at 45 to 60 degrees, grasp the barbell with an overhand grip wider than shoulder width:

- Inhale and lower the barbell to the sternal notch.
- Extend the arms.
- Exhale at the end of the movement.

This exercise mainly solicits the clavicular head of the pectoralis major, anterior deltoid, triceps brachii, serratus anterior, and pectoralis minor. This exercise may be done at a frame that guides the bar.

PECTORALIS MAJOR TEAR



The pectoralis major originates at the anterior surface of the rib cage and inserts at the anterior surface of the upper end of the humerus.

It is a powerful muscle whose main function is to bring the arms together in front of the rib cage. (It is the hugging muscle.)

Unlike most sports, where pectoralis major injuries are rare, weightlifting, especially the bench press, can lead to small tears and even partial rupture of its tendon.

This ultimate injury is seen only in relatively powerful athletes using abnormally rapid force before the tendon has had time to strengthen. Sometimes it is associated with a low-calorie diet aimed at increased muscle definition. (These diets tend to weaken the muscles, tendons, and joints.)

The injury, which always occurs during heavy bench-pressing, generally affects only the tendon of the clavicular head of the pectoralis major.

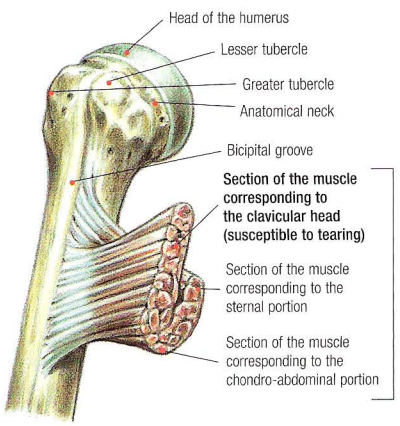
A torn tendon is extremely painful, and the athlete may faint. Swelling and bruising often appear on the anterior surface of the arm, and retraction of the clavicular head leads to a hollow that is medial to the anterior deltoid.

The problem with this injury is that doctors often misdiagnose it. This mistake is unfortunately common but is understandable because during the posttraumatic examination the injured party is able to perform all the movements that indicate full motor function of the pectoralis major. Therefore, the injury appears to be a simple muscle tear rather than the more serious tear of the tendinous insertion.

For example, despite a tear of the clavicular head of the pectoralis major, anterior elevation of the arm, which is part of its function, is compensated for by the anterior deltoid. And abduction is performed by the sternal and abdominal heads of the pectoralis major.

If the tendon of the clavicular head of the pectoralis major is torn, it must be surgically reinserted onto the humerus as soon as possible. If this is not done promptly, retraction and fibrosis of the muscle occurs, and the operation will no longer be possible.

Although you can move your arm through its full range of motion without the superior head of the pectoralis major, you will never recover your initial strength and will be at a serious disadvantage if you want to continue heavy weight training.



INSERTION OF THE PECTORALIS MAJOR MUSCLE ON THE HUMERUS DISPLAYING HOW THE TENDON TWISTS ON ITSELF CREATING A U-SHAPE

During bench presses or flys, the most lateral part of the pectoralis major tendon, which corresponds to the clavicular head, is put under the most stress.

Therefore, when lifting heavy weights, this is the tendon that tears or pulls away from its insertion.

2 BENCH PRESSES

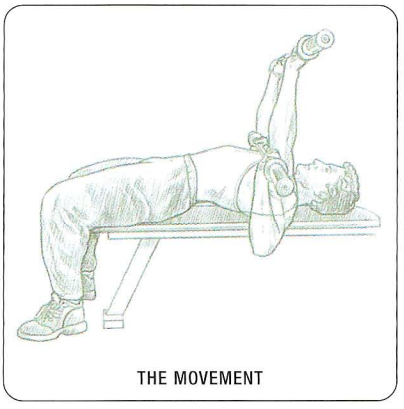
PART OF THE PECTORALS MAINLY USED

Brachioradialis
Pronator teres
Subscapularis
Serratus anterior
Teres major
Latissimus dorsi
Pectoralis major
Coracobrachialis
Anterior deltoid
Biceps brachii
Flexor digitorum superficialis
Palmaris longus
Flexor carpi ulnaris
Extensor carpi ulnaris
Flexor carpi radialis
Anconeus
Triceps brachii
Medial head
Long head

Lie faceup on a horizontal bench, with buttocks on the bench and feet flat on the ground:

- Grasp the barbell with an overhand grip wider than shoulder width.
- Inhale and lower the bar to the chest with a controlled movement.
- Extend the arms and exhale at the end of the effort.

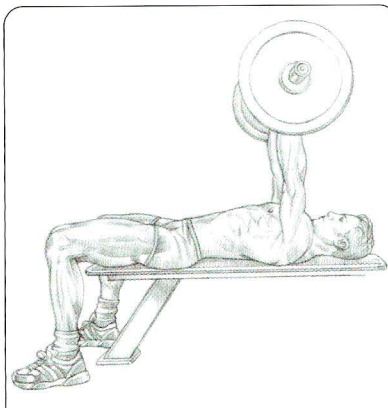
This exercise engages the complete pectoralis major muscle, pectoralis minor, anterior deltoid, serratus anterior, and coracobrachialis.



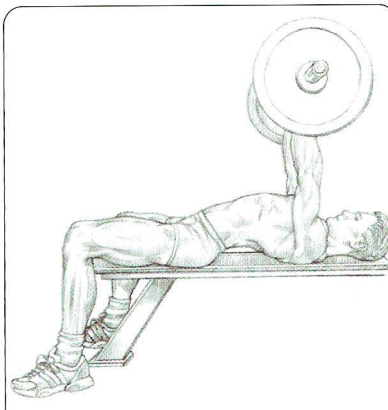
THE MOVEMENT

Variations

1. This movement may be performed while arching the back power-lifter style. This position brings the more powerful lower part of the pectoral muscle into play, allowing you to lift heavier weights.
2. Executing the extension with the elbows next to the body concentrates the work onto the anterior deltoid.
3. Varying the width of the hands isolates different parts of the muscle:
   - Hands closer together isolates the central part of the pectorals.
   - Hands wider apart isolates the lateral part of the pectorals.
4. Varying the angle of the barbell isolates different parts of the muscle:
   - Lowering the bar to the chondrocostal border of the rib cage isolates the lower part of the pectorals.
   - Lowering the barbell onto the middle part of the pectorals isolates the midline fibers.
   - Lowering the bar onto the sternal notch isolates the clavicular head of the muscle.
5. If you have back problems or want to isolate the pectorals, perform the extension with the legs raised.
6. Perform the extension at a frame that guides the bar.

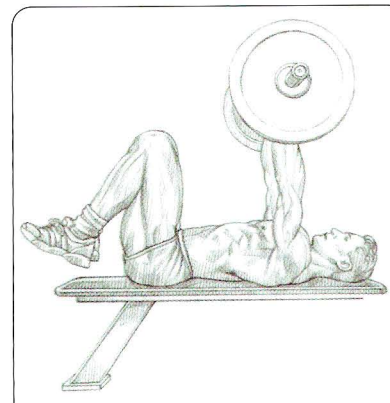


CLASSIC POSITION



ARCHED-BACK VARIATION

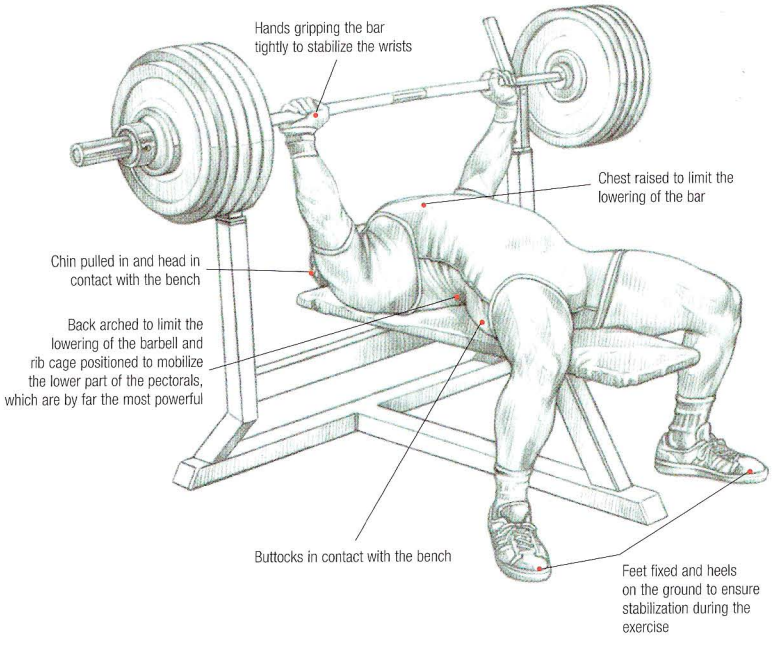
Executing the bench press with an arched back, power-lifter style, limits the range of the movement and allows you to lift significantly heavier weights because it uses mainly the lower part of the pectorals, which are the strongest. In competition, the feet and the head should not move, and the buttocks should remain in contact with the bench. People with back problems should not perform this variation.



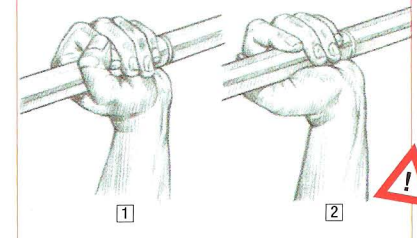
RAISED-LEG VARIATION

Performing the movement with raised legs helps prevent excessive arching, which can cause low back pain.

This variation diminishes the effort of the lower pectorals by working the middle and superior fibers more.



POSITIONING FOR A POWER BENCH PRESS



ATTENTION

1 For maximum safety, lock onto the bar with a grip in which the thumb and fingers oppose each other.

2 If the grip on the bar is not locked on in opposition, the bar could slip out of your hands and fall on the jaw or, worse, the neck and cause a serious injury.

3 CLOSE-GRIP BENCH PRESSES

Flexor digitorum superficialis
Flexor carpi ulnaris
Anconeus
Biceps brachii
Triceps brachii
Medial head
Lateral head
Long head
Teres major
Posterior deltoid
Serratus anterior
Latissimus dorsi
Subscapularis
Palmaris longus
Brachioradialis
Flexor carpi radialis
Pronator teres
Brachialis
Pectoralis major

PART OF THE PECTORAL MUSCLES THAT ARE MAINLY USED

EXECUTION WITH ELBOWS OPEN TO THE SIDES TO BETTER ISOLATE THE TRICEPS BRACHII

Lie on a horizontal bench with the buttocks on the bench and the feet on the ground, gripping the barbell with an overhand grip and wrists 4 to 15 inches apart, depending on the flexibility of the wrists: Inhale and lower the bar with a controlled movement to the chest, with the elbows out to the side. Extend and exhale at the end of the effort. This exercise develops the pectoral muscles at the sternal notch and the triceps brachii. (With this in mind, it may be included in a program for the arms.) By extending and keeping the elbows next to the body, a greater part of the work is performed by the anterior deltoid. This movement may be performed at a frame that guides the bar.

Attention: Depending on your physical structure, the narrow grip may cause wrist pain. In this case, use a wider grip.

Bench Presses and Elbow Pain

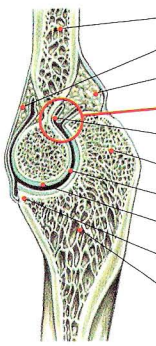
Elbow pain most often develops after bench pressing. This overuse injury is generally related to excessive training with long sets. In bench pressing, locking the extended arms at the end of the movement subjects the elbow to rubbing and microtrauma, which over time may lead to inflammation.

Comment: Occasionally, this condition can lead to intra-articular calcifications, which are particularly crippling. In this case, surgery is often the only solution for regaining complete arm extension.

At the first sign of elbow pain, avoid for several days exercises that involve arm extension in order to prevent serious injury.

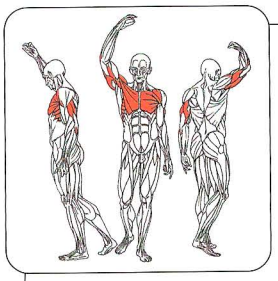
When you resume exercises that include arm extension, avoid completely extending the forearms at the end of the movement until the pain has completely disappeared.

SECTION THROUGH THE ELBOW JOINT



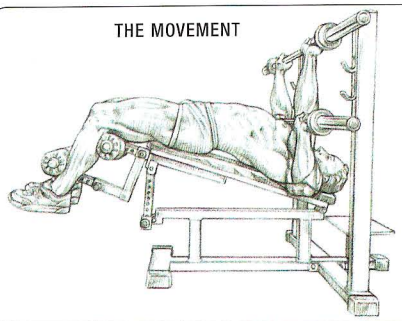
With repeated extension of the forearm, the olecranon butts up against the olecranon fossa of the humerus. The articulation then suffers from microtrauma, which over time may generate painful inflammation at the dorsal surface of the elbow.

DECLINE PRESSES 4



Pectoralis major
Brachioradialis
Rectus abdominis
Serratus anterior
Brachialis
Subscapularis
External oblique
Flexor carpi ulnaris
Palmaris longus
Superior finger flexors
Flexor carpi radialis
Triceps brachii
Long head
Short head
Pronator teres
Latissimus dorsi
Teres major

THE MOVEMENT



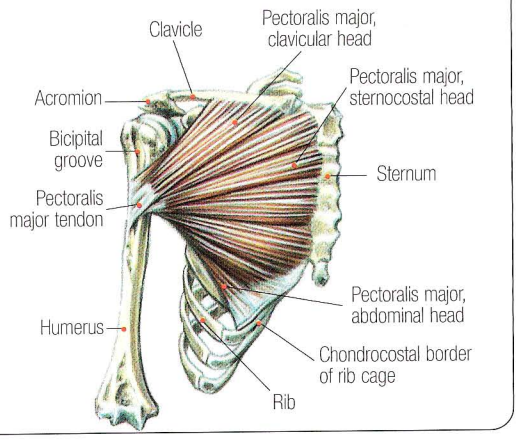
Lie on a decline bench (between 20 and 40 degrees), with the head angled down and feet fixed to prevent sliding and grasp the barbell with an overhand grip shoulder width or more:

- Inhale and lower the barbell to the lower pectorals with a controlled movement.
- Extend the arms and exhale at the end of the movement.

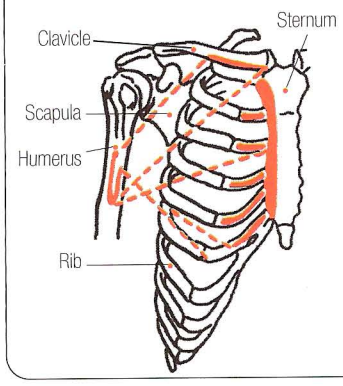
This exercise contracts the pectoralis major (mainly its inferior fibers), triceps brachii, and the anterior deltoid.

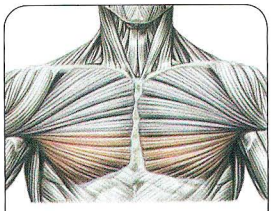
This exercise is useful for outlining the inferior groove of the pectorals. Using light weights and lowering the bar to the neck stretches the pectoralis major correctly. The decline press may be performed at a frame that guides the bar.

PECTORALIS MAJOR



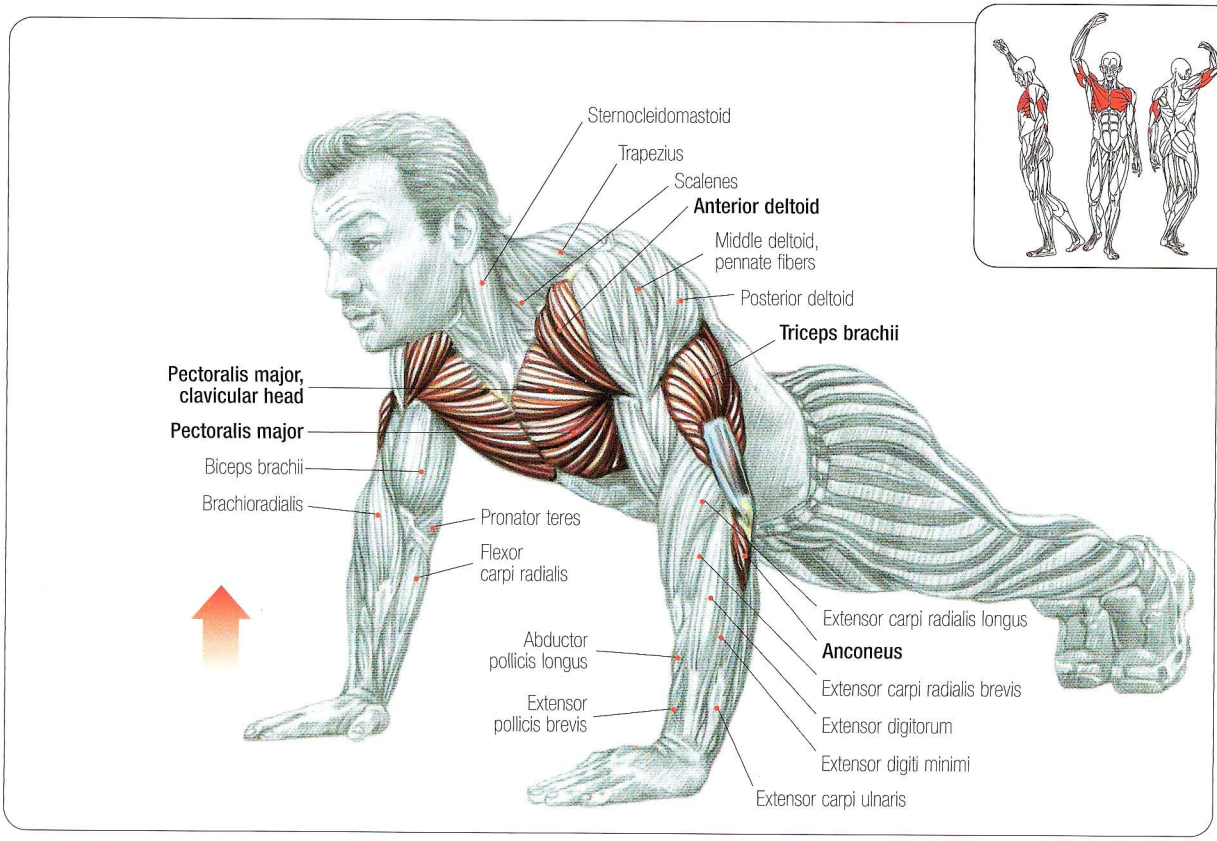
PECTORALIS MAJOR MUSCLE INSERTIONS

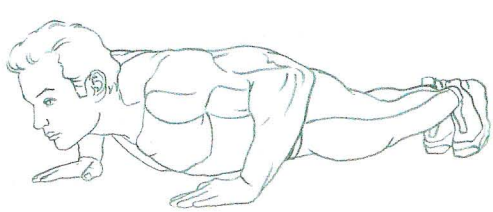




PART OF PECTORALIS MUSCLES MAINLY USED

5 PUSH-UPS



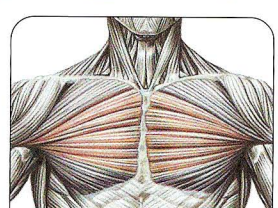


INITIAL POSITION

Support yourself facedown on the ground, with arms extended, hands shoulder-width (or more) apart, and feet touching or slightly apart:

- Inhale and bend the elbows to bring the rib cage close to the ground without arching the low back excessively.
- Push back up to complete arm extension.
- Exhale at the end of the movement.

This movement is excellent for the pectoralis major and the triceps brachii.



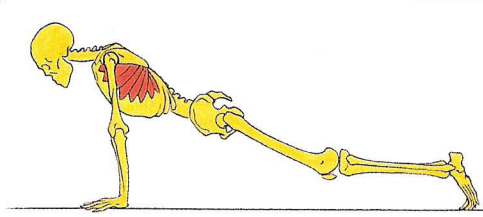
PART OF THE PECTORAL MUSCLES MAINLY USED

Varying the tilt of the chest focuses the work on different parts of the pectorals:

- Feet higher isolates the the clavicular head of the pectoralis major.
- Chest higher isolates the inferior part of the pectoralis major.

Varying the width of the hands focuses the work on different parts of the pectorals:

- Hands wider isolates the lateral part of the pectoralis major.
- Hands closer together isolates the sternal head of the pectoralis major.

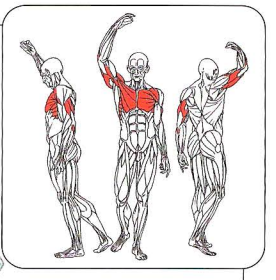


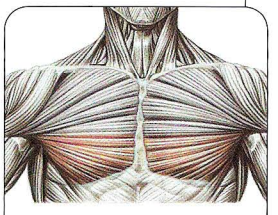
While performing push-ups the serratus anterior contracts to maintain the scapula against the rib cage, locking the arms onto the torso.

PARALLEL BAR DIPS 6

Triceps brachii
- Long head
- Lateral head
- Medial head

Brachialis
Olecranon
Anconeus
Extensor carpi radialis longus
Flexor carpi ulnaris
Extensor carpi ulnaris
Extensor digitorum
Middle deltoid
Posterior deltoid
Trapezius
Anterior deltoid
Biceps brachii
Pectoralis major
Serratus anterior
Brachioradialis
Extensor carpi radialis brevis





PART OF THE PECTORAL MUSCLES MAINLY USED

Hang from the parallel bars with arms extended and legs suspended:

- Inhale and bend the elbows to bring the chest level with the bars.
- Return to the extended arm position.
- Exhale at the end of the effort.

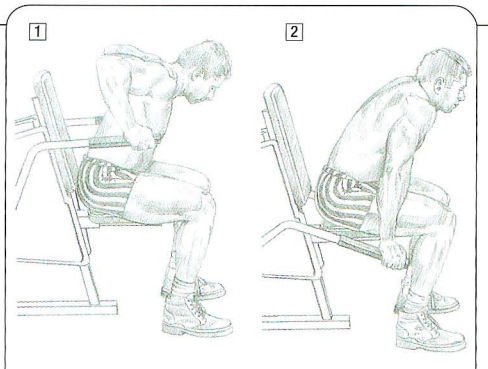
The more the chest is angled forward during the exercise, the more the inferior fibers of the pectorals are used. Conversely, the more vertical the chest, the more the triceps brachii will be used.

This exercise is excellent for stretching the pectoralis major and for working on the flexibility of the shoulder girdle. However, it is not recommended for beginners because it requires a certain amount of initial strength.

If you are a beginner, use a dips machine to familiarize yourself with the movement.

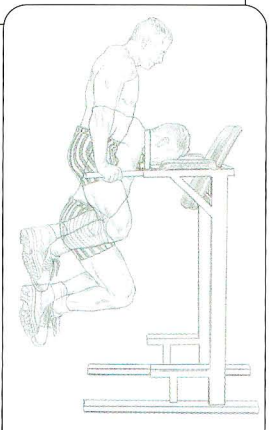
Sets of 10 to 20 repetitions provide the best results.

For developing more strength and also more size, athletes used to this movement may use a weight belt, or hang a weight from their legs.



EXECUTING DIPS AT A MACHINE

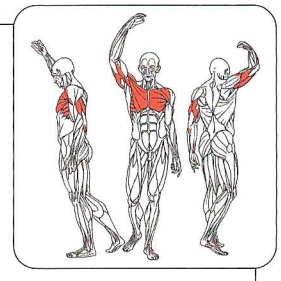
1 Initial position
2 Final position



THE MOVEMENT

Comment: Execute the dips with caution to prevent shoulder trauma.

7 DUMBBELL PRESSES



Pectoralis major

Extensor digiti minimi

Extensor digitorum

Flexor carpi ulnaris

Extensor carpi ulnaris

Extensor carpi radialis brevis

Anconeus

Extensor carpi radialis longus

Middle deltoid

Anterior deltoid

Trapezius

Biceps brachii

Brachioradialis

Brachialis

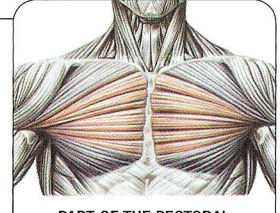
Triceps brachii

Lie faceup on a horizontal bench, with feet flat on the ground for stability and elbows bent, holding dumbbells with an overhand grip at the chest level:

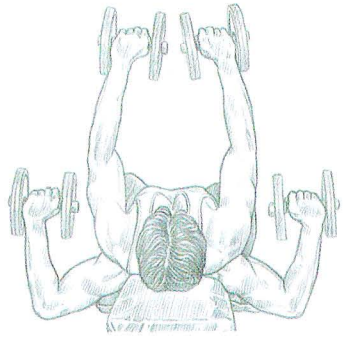
- Inhale and extend the arms vertically while rotating the forearms so that the palms face each other.
- Once the hands face each other, perform an isometric contraction to focus the effort on the sternal head of the pectoralis major.
- Exhale at the end of the movement.

This exercise is similar to the bench press, but with its greater range of motion, it stretches the pectoralis muscles.

Although not contracted as intensely, the triceps brachii and anterior deltoid are also used.



PART OF THE PECTORAL MUSCLES MAINLY USED

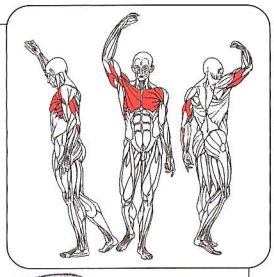


VARIATION

Executing the exercise without rotating the forearms.

DUMBBELL FLYS 8

Coracobrachialis
Pectoralis major, sternocostal head
Pectoralis major, clavicular head
Anterior deltoid
Sternum
Scalenes
Sternocleidomastoid
Trapezius
Flexor digitorum superficialis
Palmaris longus
Flexor carpi radialis
Pronator teres
Biceps brachii
Brachialis
Triceps brachii, lateral head
Middle deltoid
Subscapularis
Serratus anterior
Latissimus dorsi
Teres major
Abductor pollicis longus
Extensor pollicis brevis
Extensor carpi ulnaris
Flexor carpi ulnaris
Extensor digiti minimi
Extensor digitorum
Extensor carpi radialis brevis
Brachioradialis
Extensor carpi radialis longus
Anconeus

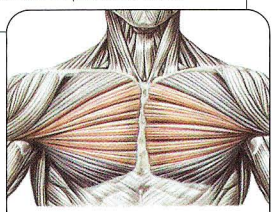


Lie on a narrow bench that won't interfere with the shoulder movement and hold a dumbbell in each hand with arms extended or slightly bent to relieve stress on the joint:

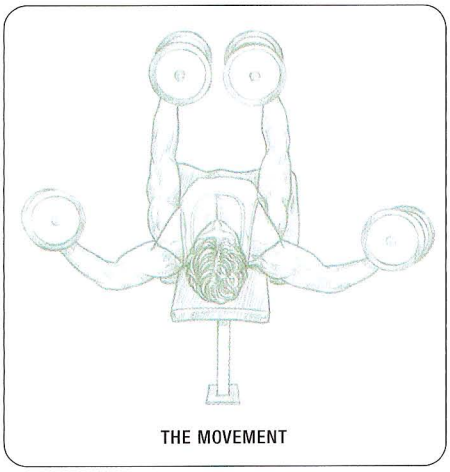
- Inhale and open the arms to horizontal.
- Raise the arms to vertical while exhaling.
- Perform a small isometric contraction at the end of the movement to emphasize the work on the sternal head of the pectoralis major.

This exercise is never performed with heavy weights.

This exercise focuses the work on the pectoralis major. It serves as a basic exercise to increase thoracic expansion, which contributes to increased pulmonary capacity. It also develops muscle flexibility.



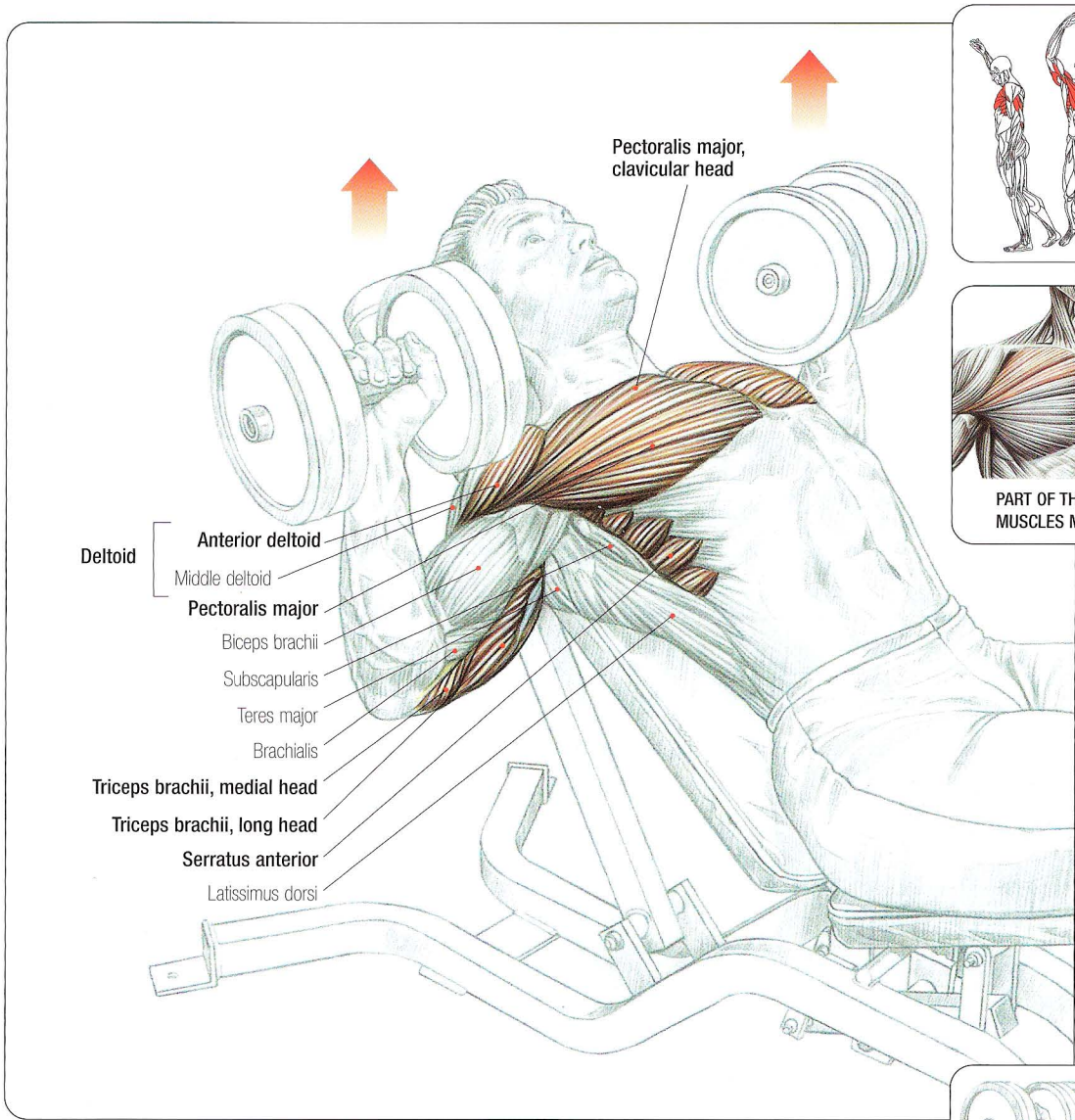
PART OF THE PECTORAL MUSCLES MAINLY USED

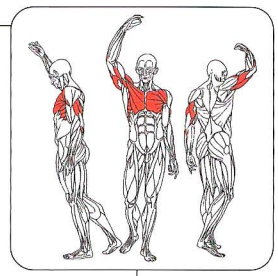


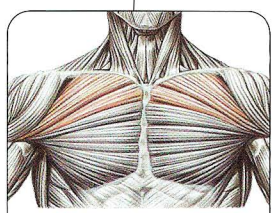
THE MOVEMENT

Comment: To avoid the risk of tearing the pectoral muscles, perform the exercise with extreme caution when using heavier weights.

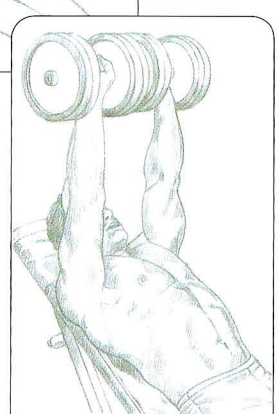
9 INCLINE DUMBBELL PRESSES







PART OF THE PECTORAL MUSCLES MAINLY USED



FINAL POSITION

Sit on a bench with an angle of no more than 60 degrees (to prevent too much work with the deltoid), with elbows bent and grasping the dumbbells with an overhand grip:

- Inhale and extend the arms vertically, bringing the dumbbells together.
- Exhale at the end of the movement.

This exercise, which is midway between an incline press and incline dumbbell fly, works the pectorals (mainly the clavicular head) and increases their flexibility. It also contracts the anterior deltoid, the serratus anterior, and the pectoralis minor (these last two muscles are fixators of the scapula, which stabilize the arm at the torso). It also uses the triceps brachii, but not as intensely as the barbell press does.

Variation: Beginning the press with the hands in an underhand grip and rotating the wrists halfway to an overhand grip so that the dumbbells face each other focuses the effort on the sternal head of the pectoralis major.

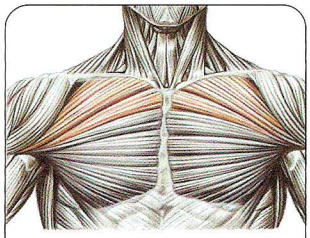
INCLINE DUMBBELL FLYS 10

Flexor pollicis longus
Extensor carpi radialis longus
Brachioradialis
Flexor digitorum superficialis
Palmaris longus
Flexor carpi ulnaris
Flexor carpi radialis
Biceps brachii, aponeurotic expansion
Medial epicondyle
Pronator teres
Deltoid
Coracobrachialis
Biceps brachii
Brachialis
Triceps brachii
Medial head
Long head
Teres major
Subscapularis
Latissimus dorsi
Serratus anterior
Pectoralis major

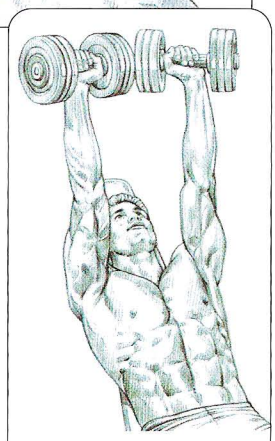
Sit on a bench angled between 45 and 60 degrees, dumbbells in hand and arms extended vertically or slightly bent to ease stress when bringing the arms together:

- Inhale and extend the arms to horizontal.
- Raise the arms to vertical while exhaling.

This movement should not be performed with heavy weights. It focuses the effort mainly on the clavicular head of the pectoralis major. Along with the pullover, it is a fundamental exercise for developing thoracic expansion.

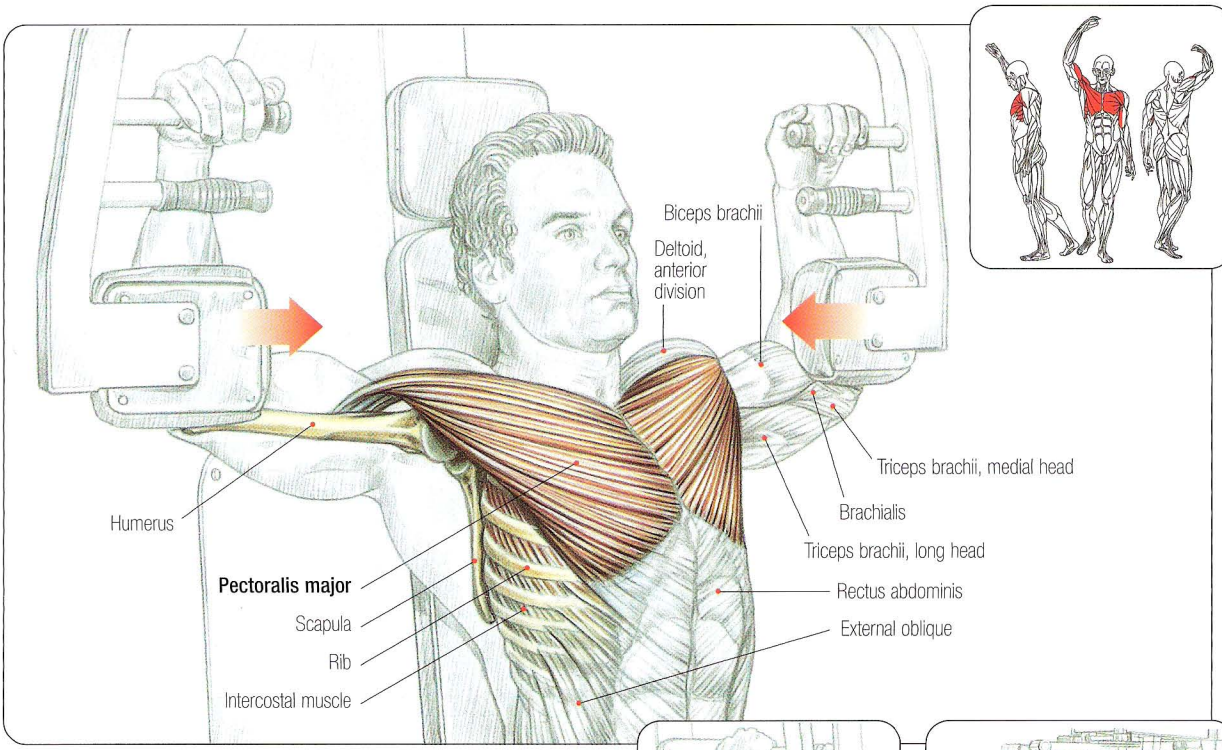


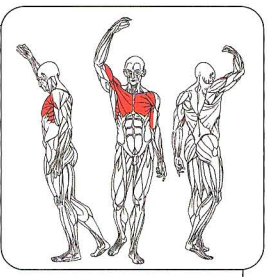
PART OF THE PECTORAL MUSCLES MAINLY USED



FINAL POSITION

11 PEC DECK FLYS





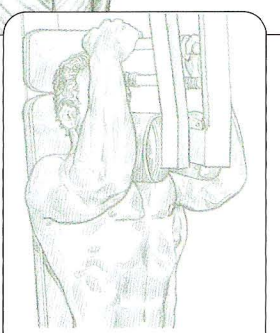
Sit at the machine with the arms open and horizontal, bent at the elbows. Rest the forearms on the pads, with the forearms and wrists relaxed:

- Inhale and squeeze the arms together. Exhale at the end of the movement.

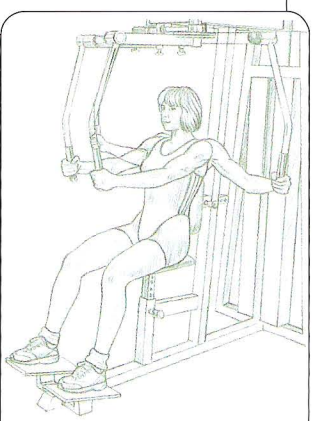
This exercise works the pectoralis major by stretching it. As the elbows come together, focus the effort onto the sternal head of the pectoralis major.

This exercise also develops the coracobrachialis and the short head of the biceps brachii. Long sets allow you to pump the muscles intensely.

This exercise helps beginners develop enough strength to move onto more complex movements.

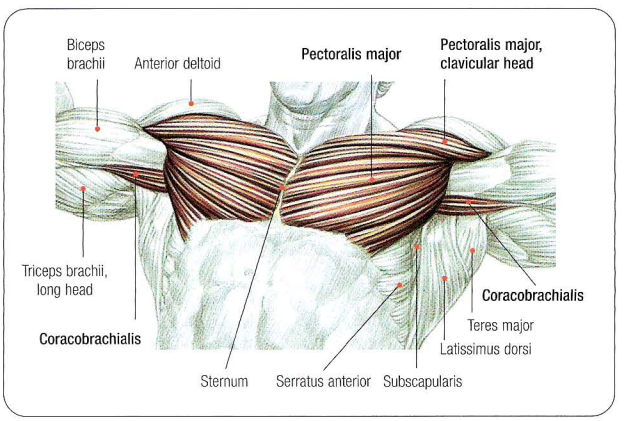


FINAL POSITION

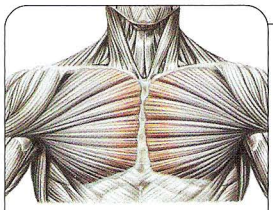


VARIATION

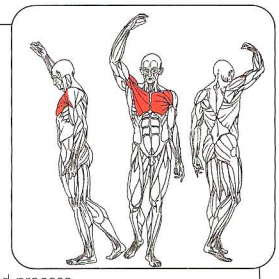
At a machine applying force with the hands.



CABLE CROSSOVER FLYS 12



PART OF THE PECTORAL MUSCLES MAINLY USED

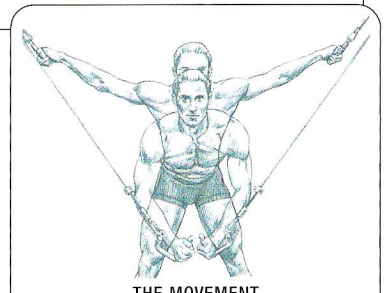


Clavicle
Acromion
Trapezius
Deltoid
1st rib
Clavicle
Acromion
Coracoid process
Humerus
Ulna
Radius
Triceps, lateral head
Brachialis
Biceps brachii
Latissimus dorsi
Sternocleidomastoid
Serratus anterior
Pectoralis major
External oblique
Rectus abdominis, under the aponeurosis
Linea alba
Pectoralis minor
Manubrium sterni
Cartilage
Body of sternum
Intercostal muscles
Vertebre lumbalis
Sacrum
Os coxa

Stand with the legs slightly apart and lean the torso forward a bit, with the arms spread apart and elbows slightly bent:

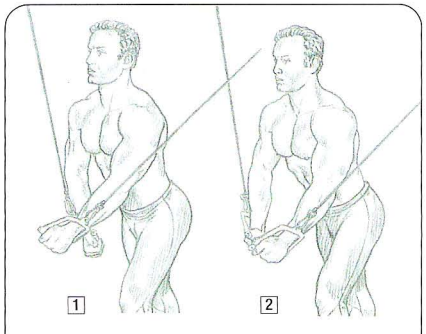
- Inhale and squeeze the arms together until the wrists touch. Exhale at the end of the contraction.

This is an excellent exercise for working the pectoralis major muscles. Sets with a lot of reps allow you to pump the muscle well. You can work all the fibers of the pectoralis major by varying the angle of the chest and the working angle of the arms (squeezing the arms at various heights).



THE MOVEMENT

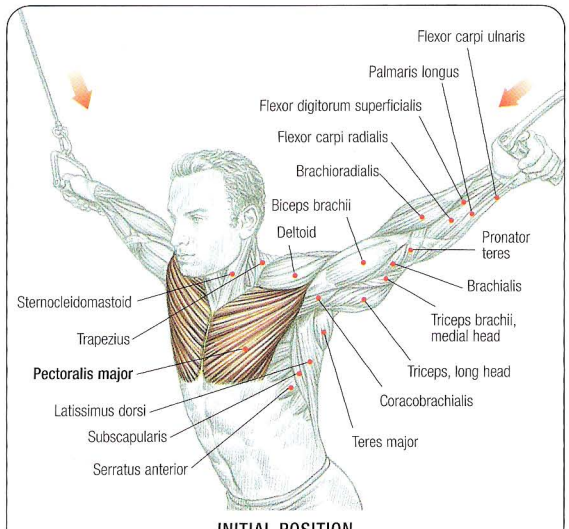
Comment: Cable crossover flys also contract the pectoralis minor, which is located deeper than the pectoralis major. Besides stabilizing the scapula (shoulder blade), this muscle also pulls it forward.



1 2

1 **Crossed arm:**
Increases the focus onto the sternal head of the pectoralis major.

2 Classic execution.



Flexor carpi ulnaris
Palmaris longus
Flexor digitorum superficialis
Flexor carpi radialis
Brachioradialis
Biceps brachii
Deltoid
Pronator teres
Brachialis
Sternocleidomastoid
Triceps brachii, medial head
Trapezius
Triceps, long head
Pectoralis major
Coracobrachialis
Latissimus dorsi
Subscapularis
Teres major
Serratus anterior

INITIAL POSITION

13 DUMBBELL PULLOVERS

Anconeus
Extensor carpi radialis longus
Brachioradialis
Medial head
Lateral head
Long head
Triceps brachii
Latissimus dorsi
Serratus anterior
Pectoralis major
External oblique
Thoracolumbar fascia
Extensor digitorum
Extensor carpi ulnaris
Brachialis
Flexor carpi ulnaris
Biceps brachii
Deltoid
Infraspinatus
Trapezius
Teres major
Teres minor
Abductor pollicis longus
Extensor digiti minimi
Extensor carpi radialis brevis
Extensor pollicis brevis

THE MOVEMENT

Lie on a bench with the feet flat on the ground and hold a dumbbell in the palms of both hands, with the thumbs surrounding the handle and arms extended:

- Inhale and lower the dumbbell behind the head, bending slightly at the elbows.
- Exhale and return to the initial position.

This exercise develops the bulk of the pectoralis major, long head of triceps brachii, teres major, latissimus dorsi, serratus anterior, rhomboids, and pectoralis minor. The last three muscles stabilize the scapula so that the humerus can move from a stable base.

STABILIZERS OF THE SHOULDER BLADES

Cranium
Vertebra
Levator scapula
Levator scapula
Clavicle
Spine of scapula
Acromion
Pectoralis minor
Rhomboid minor
Sternum
Serratus anterior
Rhomboid major
Rib
Costal cartilage
Serratus anterior

BACK FRONT

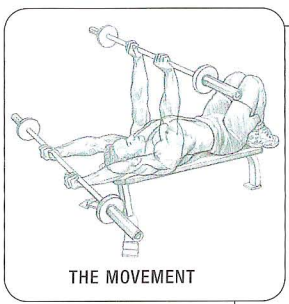
If you use this exercise to open the rib cage, you must work with light weights and avoid bending too much at the elbows. If possible, use a convex bench or place yourself across a horizontal bench and position the pelvis lower than the shoulder girdle. Take in a deep breath at the beginning of the movement and breathe out only at the end of the execution.

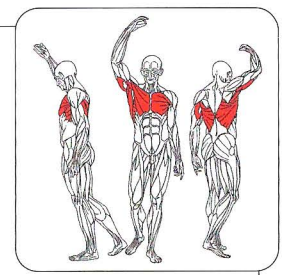
Trapezius

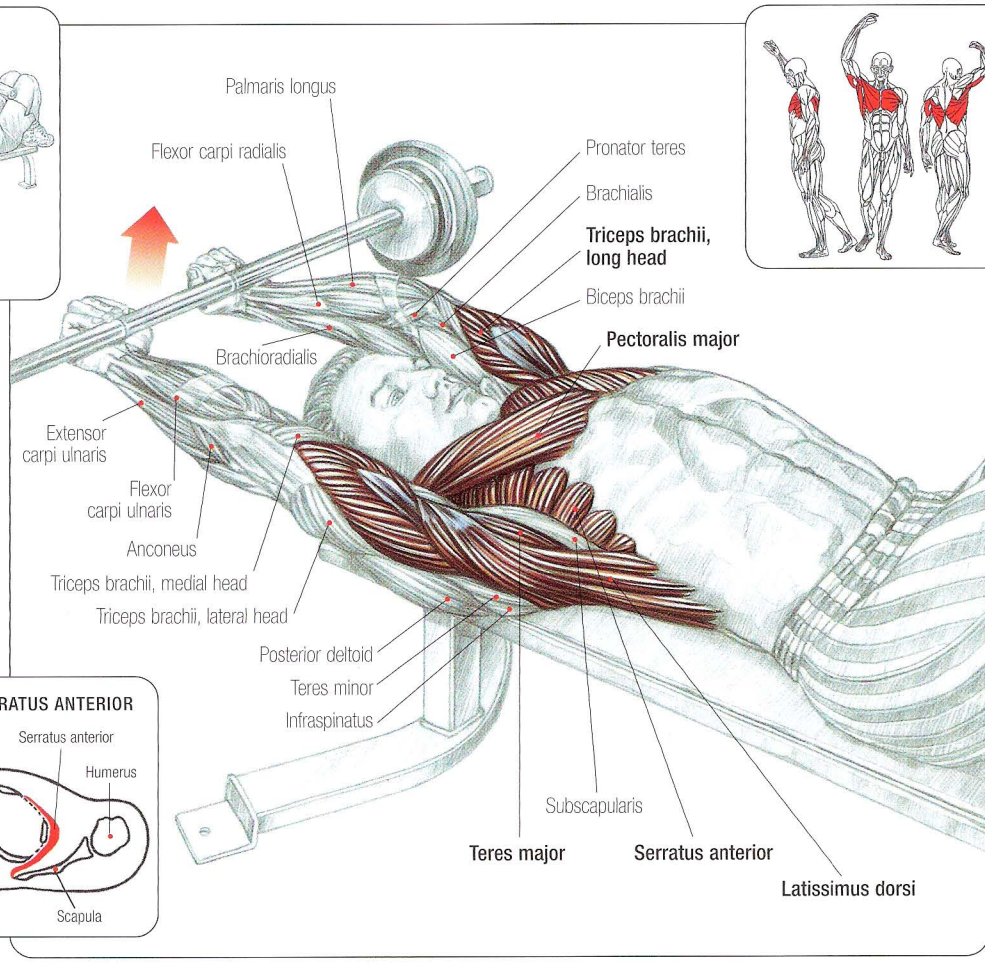
PERFORMING THE MOVEMENT AT A MACHINE

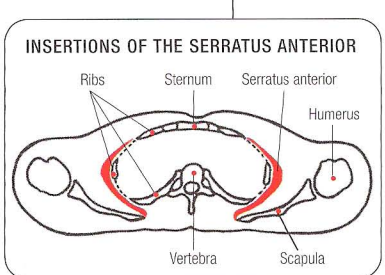
VARIATION POSITION ACROSS A BENCH
Placing yourself transversely across a bench opens the rib cage.

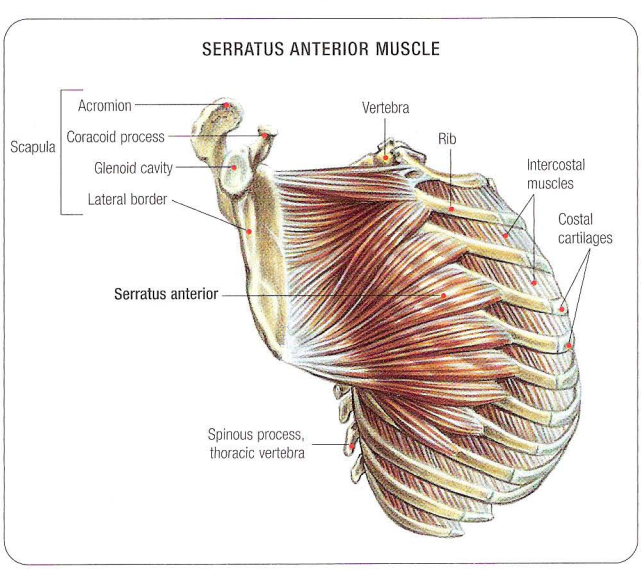
BARBELL PULLOVERS 14











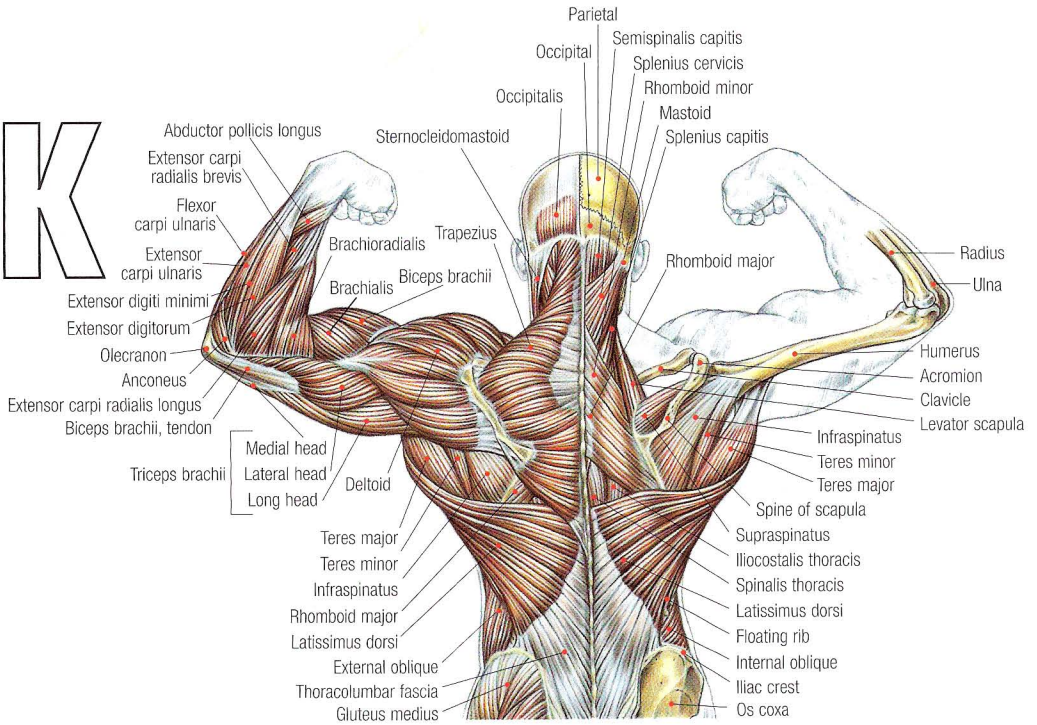
With arms extended, hold the barbell with an overhand grip and hands shoulder-width apart:

- Inhale and expand the chest as much as possible, lowering the barbell behind the head bending slightly at the elbows.
- Exhale while returning to the initial position.

This exercise develops the pectoralis major, long head of the triceps brachii, teres major, latissimus dorsi, serratus anterior, rhomboids, and pectoralis minor.

This is an excellent movement for developing the flexibility and expansion of the rib cage. It should be performed with light weights using proper form and breathing.

4 BACK



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REVERSE CHIN-UPS 1

Extensor carpi ulnaris
Extensor digiti minimi
Extensor digitorum
Anconeus
Triceps brachii, lateral head
Teres major
Deltoid
Infraspinatus
Teres minor
Teres major
Subscapularis
Latissimus dorsi
Serratus anterior
Flexor carpi ulnaris
Flexor digitorum
Palmaris longus
Flexor carpi radialis
Brachioradialis
Pronator teres
Triceps brachii, medial head
Brachialis
Triceps brachii, long head
Biceps brachii
Coracobrachialis

Hang from a bar with an underhand grip, hands shoulder-width apart:

- Inhale and push out the chest as you raise the chin to the bar.
- Exhale at the end of the movement.

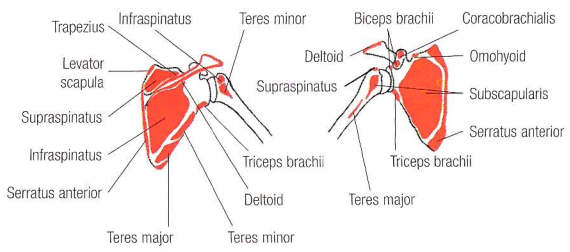
This movement develops the latissimus dorsi and teres major and is associated with the intense work of the biceps brachii and brachialis.

Therefore, it could be included in an arm workout program.

This exercise also contracts the middle and lower portions of the trapezius, the rhomboids, and the pectorals.

Performing this exercise takes a certain amount of strength; use a high pulley to make it easier.

MUSCLE INSERTIONS AT THE SHOULDER BLADE



POSTERIOR VIEW ANTERIOR VIEW

2 CHIN-UPS

Biceps brachii
Teres minor
Sternocleidomastoid
Cranium
Mastoid process
7th cervical vertebra
Brachioradialis
Trapezius
Splenius capitis
Extensor carpi radialis longus
Brachialis
Deltoid
Clavicle
Abductor pollicis longus
Extensor pollicis brevis
Extensor digiti minimi
Scapula
Humerus
Extensor digitorum
Extensor carpi ulnaris
Extensor carpi radialis brevis
Radius
Ulna
Flexor carpi ulnaris
Brachioradialis
Anconeus
Triceps brachii
Teres major
Teres major
Infraspinatus
Rhomboid
Rhomboid minor
Trapezius, lower portion
Rhomboid major
Latissimus dorsi
Latissimus dorsi
External oblique
Thoracolumbar fascia
Gluteus medius
Greater trochanter
Iliac crest
Gluteus maximus
Os coxa
Tensor fascia lata
Posterior superior iliac spine
Adductor magnus
Greater trochanter
Iliotibial band
Coccyx
Quadriceps, vastus lateralis
Femur
Biceps femoris, long head
Semitendinosus
Biceps femoris, short head
Semimembranosus

VARIATIONS

The chin-up may be performed by bringing the back of the neck almost level with the bar.

ATTENTION

To avoid tendinitis of the distal tendon of the biceps brachii (the biceps tendon that inserts at the radius), keep the elbows slightly bent.

Hang from a fixed bar with a very wide overhand grip:

- Inhale and pull the chest up to the level of the bar.
- Exhale at the end of the movement.

Return to the initial position with a controlled descent and begin again.

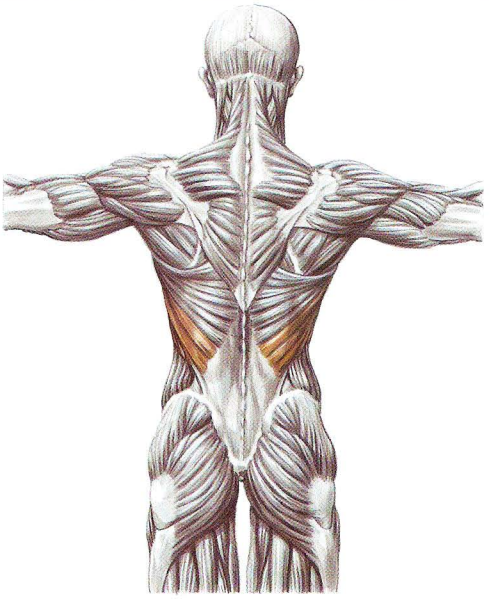
This exercise takes a certain amount of strength and is excellent for developing the latissimus dorsi and teres major and, when the shoulder blades come together at the top of the chin-up, the rhomboids and middle and lower portions of the trapezius. It also works the biceps brachii, brachialis, and brachioradialis.

Variations: By sticking out the chest you can raise your chest to chin level. To increase the intensity, wear a weight belt. Keeping the elbows in next to the body during the movement contracts mainly the external fibers of the latissimus dorsi and develops the width of the back.

Bringing the elbows back and the chest out as you raise the chin to the bar mainly solicits the upper and central fibers of the latissimus dorsi and those of the teres major. This exercise develops the bulk of the back when the shoulder blades come together and the rhomboids and the upper and lower portion of the trapezius are used equally.

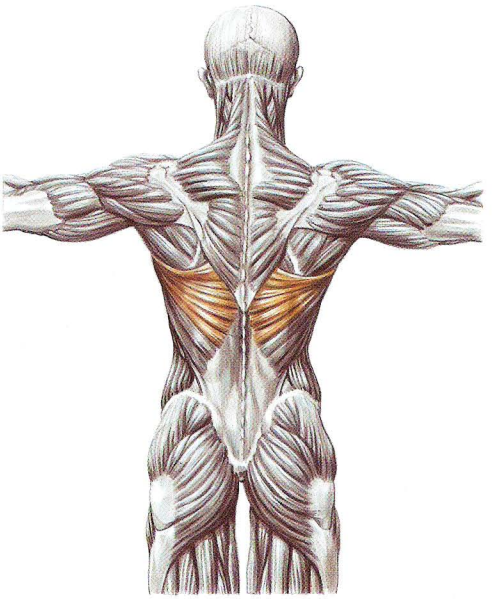
Comment: Although not as strongly contracted, the pectoralis major works with the latissimus dorsi and teres major to create the angle between the arm and the trunk.

BRINGING THE BAR TO THE NECK WITH ARMS ALONGSIDE THE BODY

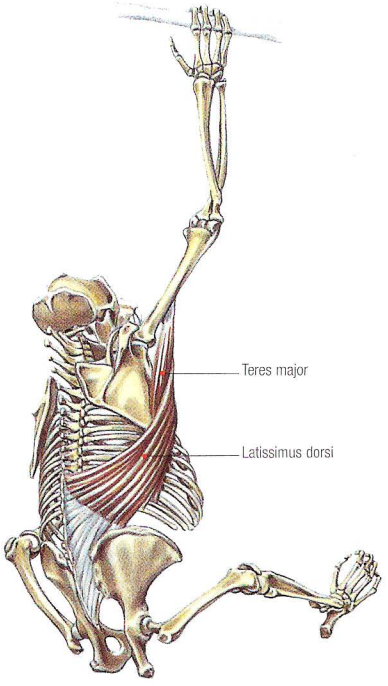


Bringing the elbows alongside the body
mainly solicits the lateral fibers of the latissimus dorsi
and develops the width of the back.

BRINGING THE BAR TO THE CHEST WITH ELBOWS BEHIND



Pulling the elbows back to raise the chin to the bar
mainly solicits the upper and central fibers of the latissimus dorsi.
This variation is excellent for developing the bulk of the back.

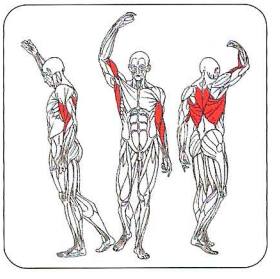


In both monkeys and humans, the latissimus dorsi
and teres major are particularly well developed.

Originally, the teres major and latissimus dorsi muscles of our far-off ancestors played a role in their getting around on all fours by helping them to push off with the front paws.

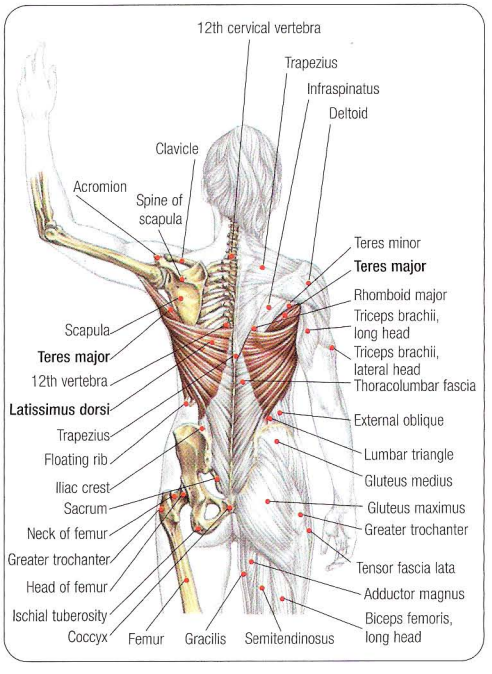
As our ancestors became tree climbers, these muscles became powerful, specializing in vertical displacement. Returning to the ground, our more recent ancestors adopted bipedal displacement without losing the possibility of climbing. For this reason we possess powerful back muscles capable of pulling our bodies up, still allowing us to climb trees.

Comment: The main difference between our locomotor mechanism and that of our close simian relatives is the development of lower extremities that allow us to walk on two legs. Our chest and upper extremities have not developed differently and have the same structure and proportions. Contrary to popular opinion, apes do not have relatively big arms; we just have big legs!



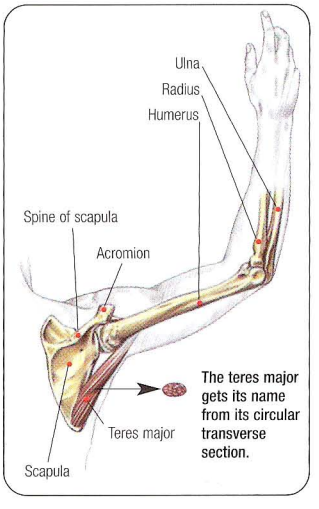
3 LAT PULL-DOWNS

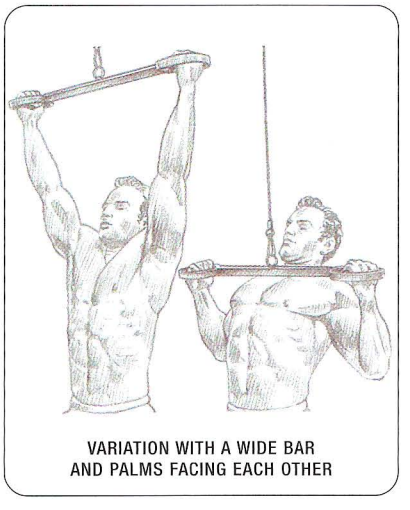
Biceps brachii
Brachialis
Sternocleido-mastoid
Splenius
Trapezius
Deltoid
Infraspinatus
Teres minor
Extensor carpi radialis brevis
Flexor carpi ulnaris
Extensor digitorum
Extensor carpi ulnaris
Anconeus
Extensor carpi radialis longus
Brachioradialis
Teres major
Latissimus dorsi
Triceps brachii
Aponeurosis for insertion of the latissimus dorsi
External oblique



Sit facing the machine with the legs positioned under the pads, gripping the bar in with a wide overhand grip: Inhale and pull the bar down to the sternal notch while puffing out the chest and pulling the elbows back. Exhale at the end of the movement.

This exercise develops the bulk of the back. It mainly works the upper and central fibers of the latissimus dorsi. The middle and lower portions of the trapezius, the rhomboids, the biceps brachii, the brachialis, and, to a lesser extent, the pectorals also contract.





VARIATION WITH A WIDE BAR AND PALMS FACING EACH OTHER

BACK LAT PULL-DOWNS 4

Splenius
Sternocleidomastoid
Trapezius
Spine of scapula
Trapezius, lower portion
Biceps brachii
Brachioradialis
Triceps brachii
Deltoid
Brachialis
Extensor carpi radialis brevis
Extensor carpi ulnaris
Flexor carpi ulnaris
Extensor digitorum
Olecranon
Anconeus
Rhomboid
Extensor carpi radialis longus
Teres minor
Aponeurosis of insertion of latissimus dorsi
Teres major
Infraspinatus
Latissimus dorsi
External oblique
Os coxa

THE MOVEMENT

VARIATION AT A MACHINE WITH A FIXED AXIS

ACTION OF TERES MAJOR AND LATISSIMUS DORSI

Supraspinatus
Acromion
Clavicle
Humerus
Infraspinatus
Teres minor
Teres major
Spine of scapula
Rib
7th thoracic vertebra
Latissimus dorsi
Iliac crest
Sacrum
Vertebral aponeurosis
Coccyx
Pubic symphysis

Sit facing the machine with the thighs positioned under the pads, grasping the bar with a wide overhand grip:

- Inhale and pull the bar down to the back of the neck, bringing the elbows alongside the body.
- Exhale at the end of the movement.

This exercise develops the width of the back. It works the latissimus dorsi (mainly the lateral and lower fibers), the teres major, the forearm flexors (biceps brachii, brachialis, and brachioradialis), the rhomboids, and the lower portion of the trapezius. The latter two muscles come into play when the shoulder blades are pulled together. Back lat pull-downs help beginners develop enough strength to move on to chin-ups.

TRICEPS BRACHII TEARS

Scapula
Brachioradialis
Extensor carpi radialis longus
Extensor carpi radialis brevis
Extensor digitorum longus
Extensor carpi ulnaris
Tear of long head of triceps brachii
Biceps brachii
Deltoid
Metacarpal
Humerus
Brachialis
Carpal
Radius
Ulna
Anconeus
Triceps brachii
Lateral head
Long head
Medial head
Teres minor
Teres major
Infraspinatus
Trapezius
Latissimus dorsi
Lateral head
Long head
Medial head
Triceps brachii

Heavy training of the back and injury to the long head of the triceps brachii

Although it is not the most-used muscle when working the back, the long head of the triceps brachii is the most frequently injured muscle during back lat pull-downs with heavy weights or during chin-ups with added weight.

The latissimus dorsi is a powerful, fan-shaped muscle that attaches the arm to the rib cage, and whose distal tendon is strongly attached to the humerus.

This is the main climbing muscle.

The long head of the triceps brachii, on the other hand, is a smaller muscle whose main function is to extend the forearm and secondarily to bring the arm toward the rib cage. In this way it complements the action of the latissimus dorsi.

Tearing of the long head of the triceps occurs when the muscle is fatigued, most frequently after an improper warm-up.

It only takes a sudden relaxation of the latissimus dorsi during chin-ups with added weight to immediately shift the tension to the long head of the triceps.

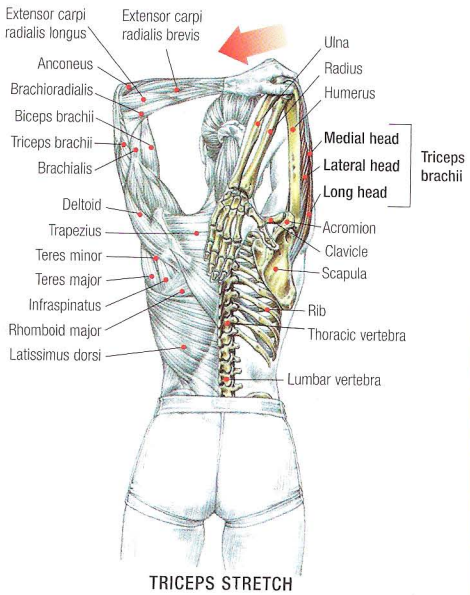
This tendon may partially tear, most often close to its insertion on the scapula. (Fortunately complete tears are infrequent.)

Unlike incapacitating shoulder injuries, which may completely halt upper-body training, a tear in the long head of the biceps is less devastating.

You can still perform back exercises such as seated rows or T-bar rows and movements for the triceps such as forearm extensions at a high pulley with the elbows next to the body despite the injury as long as you begin with lighter weights.

However, a brief rest period is recommended before beginning upper-body training.

Comment: Tearing the long head of the triceps may also occur during bench presses. To prevent this triceps tear, warm up with stretching exercises



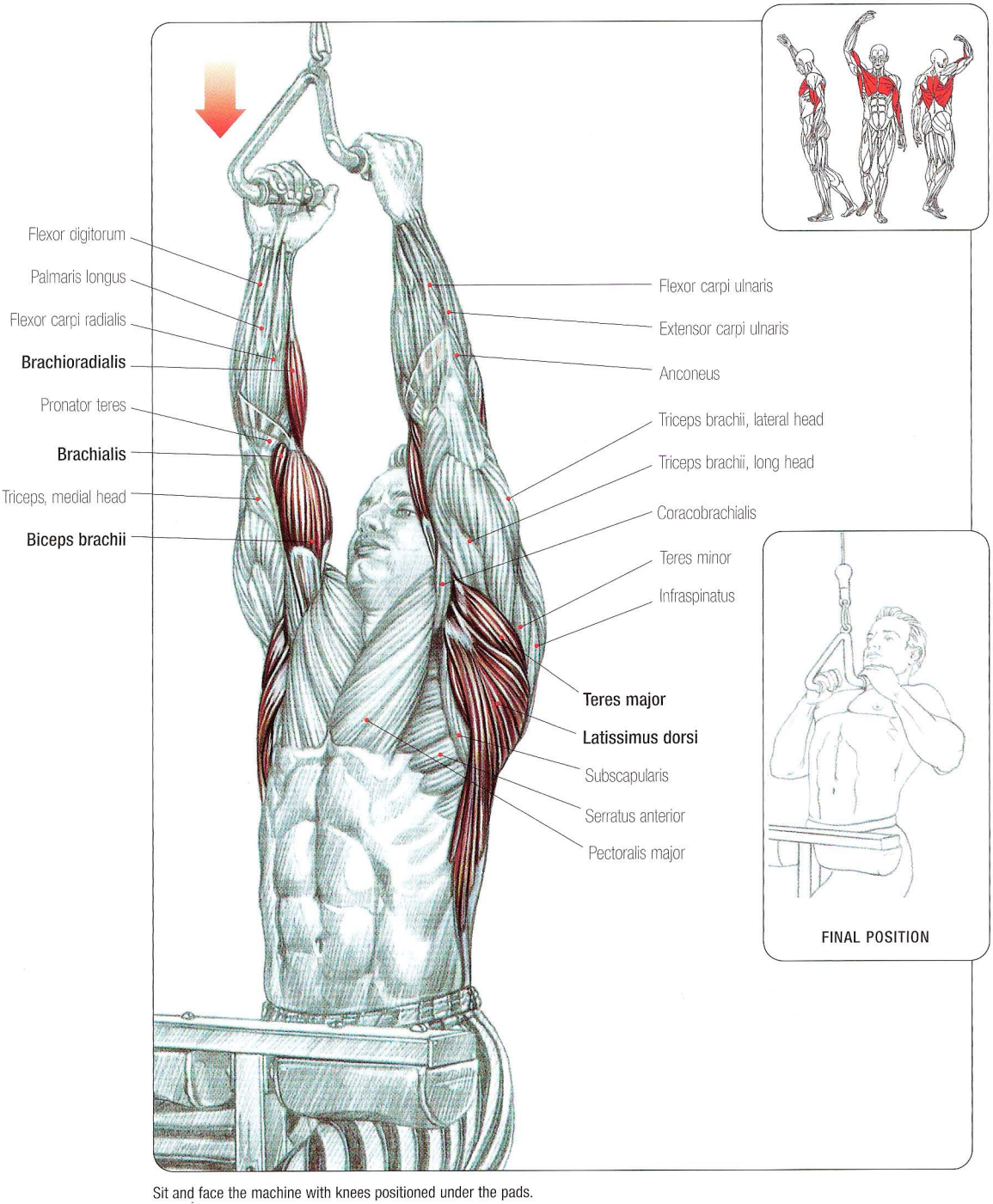
TRICEPS STRETCH

Stand or sit with your back straight and one arm raised vertically beside your head. Bend the arm at the elbow and touch the top of the back with your hand. With the other hand grasp the elbow and slowly try to pull it behind your head.

This stretches the teres major, the long head of the triceps brachii, and, to a lesser extent, the latissimus dorsi.

Variation: Pull the hand rather than the elbow. For greater intensity, place the raised arm against a wall.

CLOSE-GRIP LAT PULL-DOWNS 5



Sit and face the machine with knees positioned under the pads.

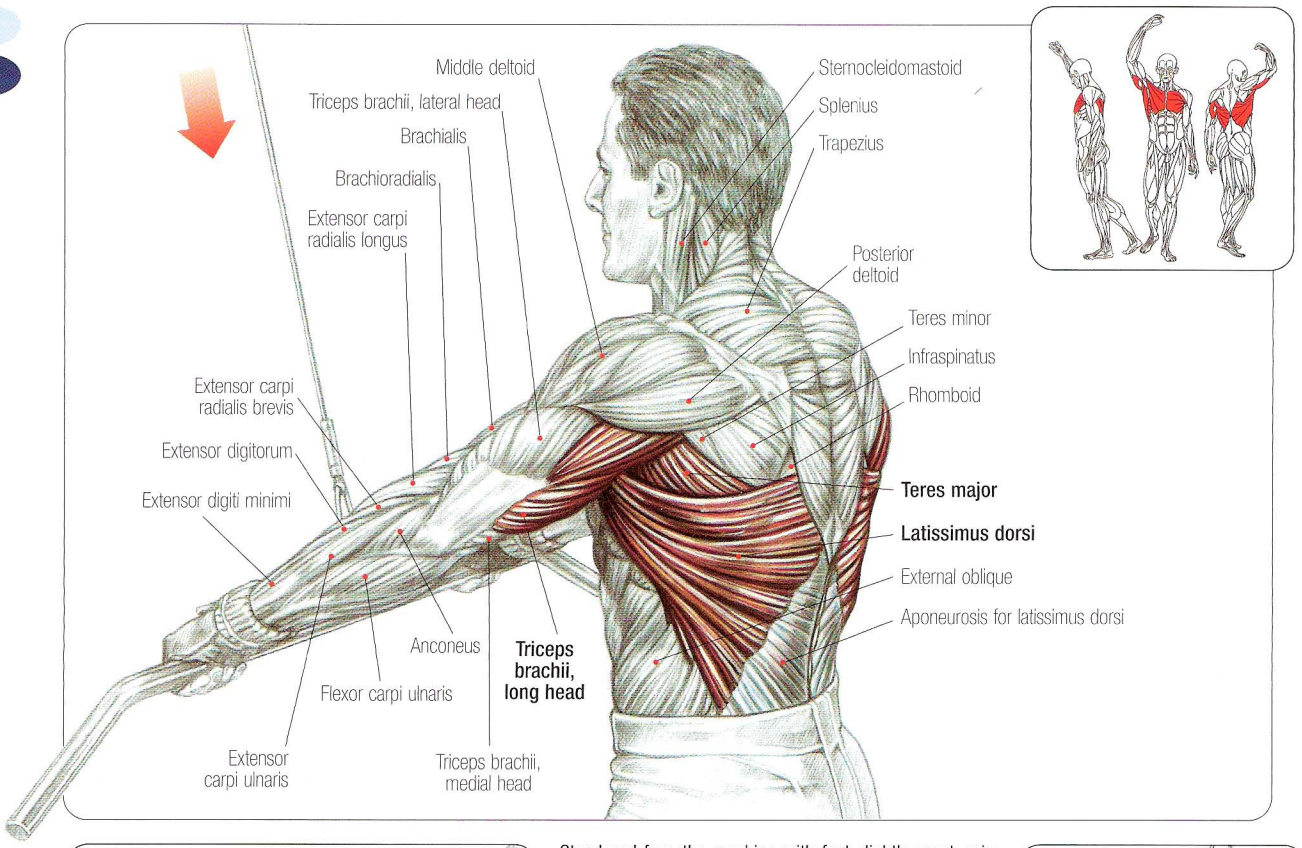
- Inhale and bring the handle to the sternum while expanding the chest and leaning slightly back with the torso.
- Exhale at the end of the movement.

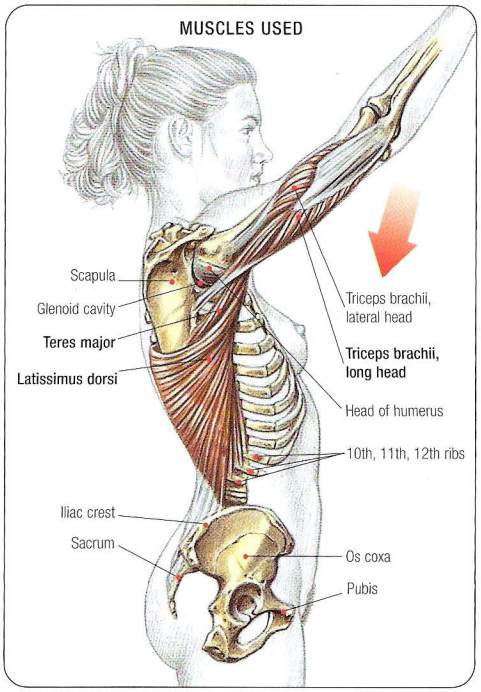
This exercise develops the latissimus dorsi and teres major.

When the shoulder blades come together, the trapezius and the posterior deltoid contract.

As with every pulling exercise, the biceps brachii and brachialis contract, and when the palms face each other, the brachioradialis comes into play.

6 STRAIGHT-ARM LAT PULL-DOWNS



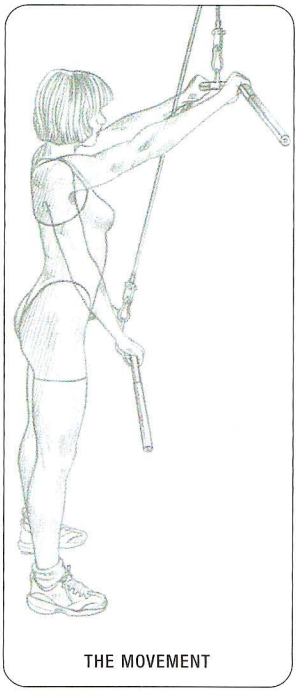


Stand and face the machine with feet slightly apart; grip the bar with an overhand grip, arms extended and shoulder-width apart; fix the back and contract the abdominal core:

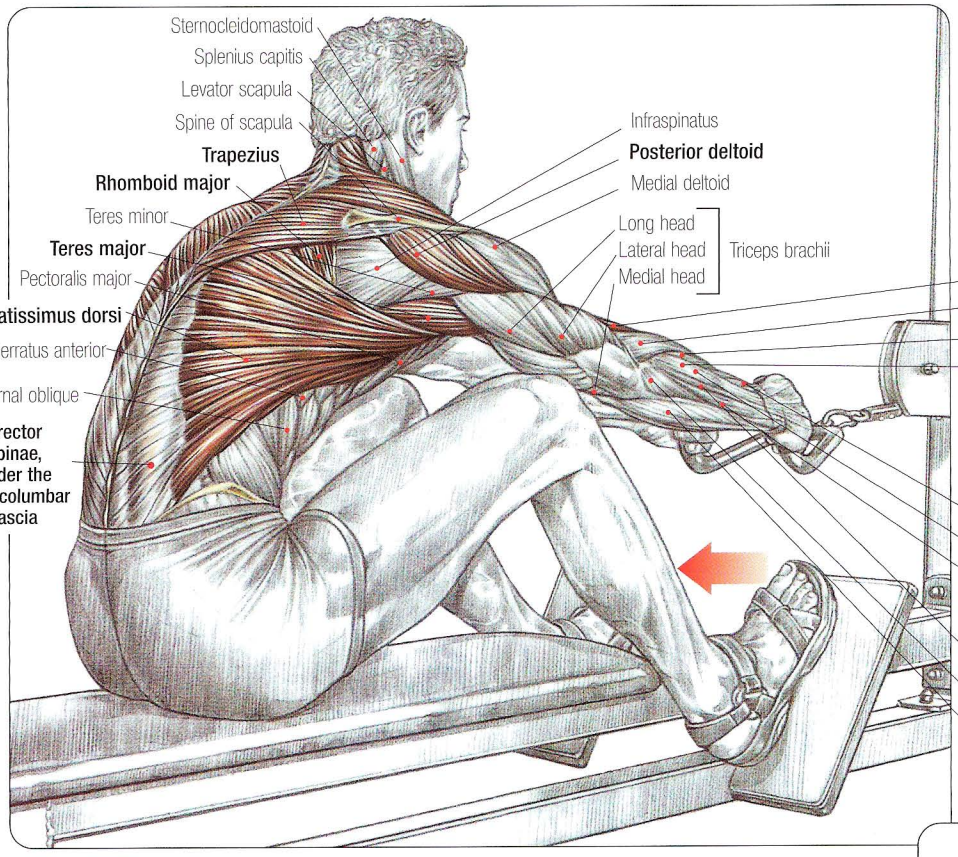
- Inhale and bring the bar to the thighs, keeping the arms extended (elbows can be slightly bent).
- Exhale at the end of the movement.

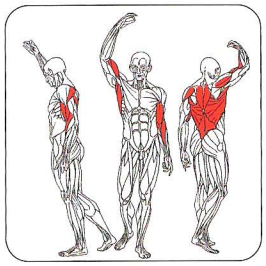
This exercise, which works the latissimus dorsi, strengthens the teres major and the long head of the triceps, which stabilizes the arm–trunk hinge.

Comment: Many swim coaches use this exercise to develop a powerful crawl stroke.



SEATED ROWS 7





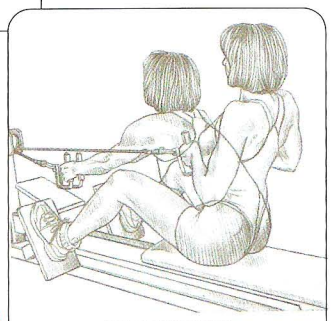
Sit facing the machine, feet resting on the foot pad and the torso bent forward. Inhale and bring the handle to the base of the sternum by straightening the back and pulling the elbows back as far as possible. Exhale at the end of the movement and return smoothly to the initial position.

This exercise works the bulk of the back; it focuses the effort on the latissimus dorsi, teres major, posterior deltoid, biceps brachii, and brachioradialis, and at the end of the movement, when the shoulder blades come together, the trapezius and rhomboids.

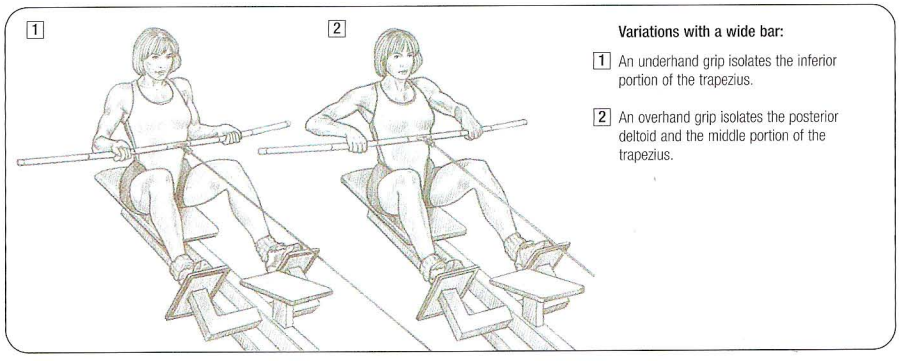
While raising the chest, the spinal muscles (erector spinae) also contribute.

Allowing the weight to pull you on the return helps develop back flexibility.

Attention: To prevent back injury, never round the back when performing seated rows with heavy weights.



THE MOVEMENT



Variations with a wide bar:

1 An underhand grip isolates the inferior portion of the trapezius.

2 An overhand grip isolates the posterior deltoid and the middle portion of the trapezius.

8 ONE-ARM DUMBBELL ROWS

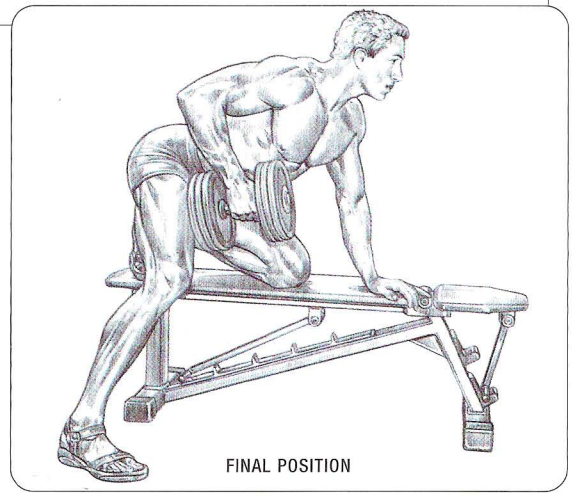
Rhomboid major
Infraspinatus
Latissimus dorsi
Thoracolumbar fascia
Teres major
Teres minor
External oblique
Serratus anterior
Pectoralis major
Triceps brachii: Long head, Lateral head, Medial head
Anconeus
Extensor digitorum
Extensor carpi ulnaris
Flexor carpi ulnaris
Cervical vertebra
Levator scapula
Splenius
Trapezius
Scalene
Sternocleidomastoid
Spine of scapula
Deltoid: Anterior deltoid, Middle deltoid, Posterior deltoid
Biceps brachii
Brachialis
Brachioradialis
Extensor carpi radialis longus
Extensor carpi radialis brevis
Extensor digiti minimi
Extensor pollicis brevis
Extensor pollicis longus
Abductor pollicis longus

Grasp a barbell with the palm facing in; use the opposite hand and knee on the bench to support the back:

- Inhale and lift the upper arm and elbow as high as possible next to the body with the elbow bent.
- Exhale at the end of the movement.

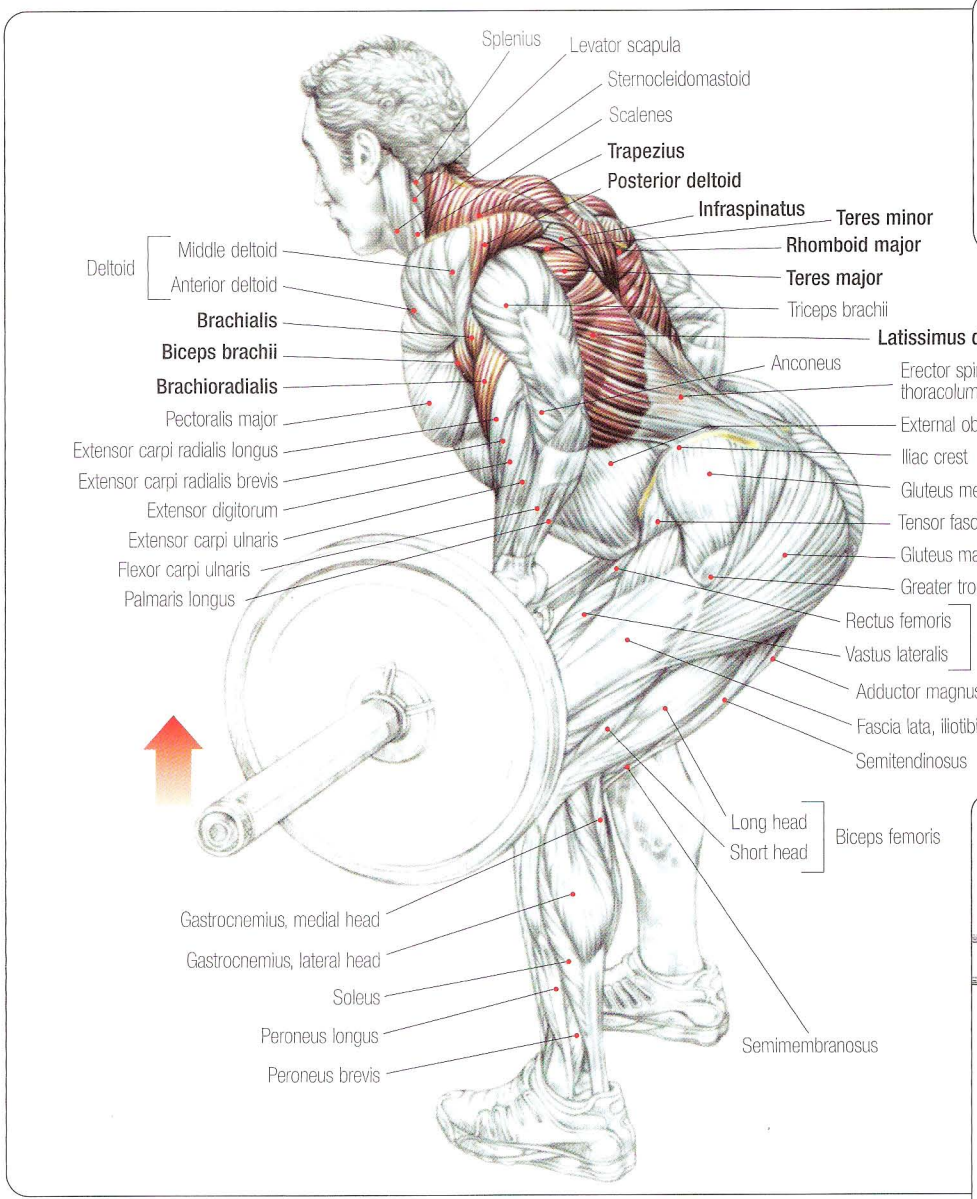
To maximize the contraction, rotate the torso slightly toward the working side at the end of the row.

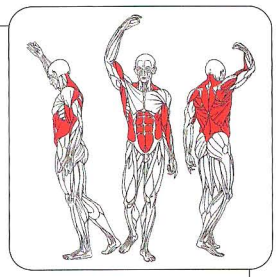
This exercise mainly works the latissimus dorsi, teres major, and posterior deltoid, and, at the end of the contraction, the trapezius and rhomboids. The forearm flexors (biceps brachii, brachialis, and brachioradialis) are also used.



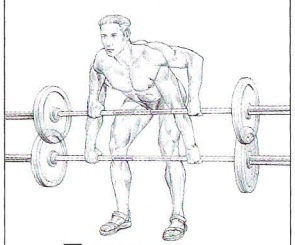
FINAL POSITION

BENT ROWS 9

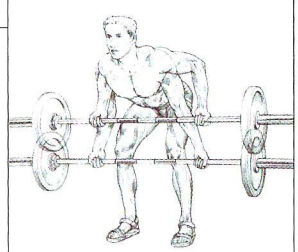




THE MOVEMENT



1 **Hands in pronation (overhand grip)**
Emphasizes the rhomboids and lower portion of the trapezius.



2 **Hands in supination (underhand grip)**
Emphasizes the upper portion of the trapezius and the biceps brachii.

Stand with legs slightly bent, grasping the bar with overhand grip and the hands wider than shoulder-width apart. With the back straight, lean forward at the waist 45 degrees, so that the bar is at knee level:

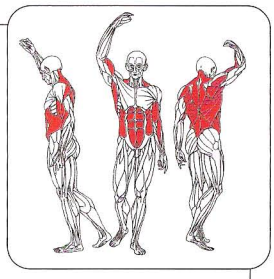
- Inhale and hold the breath during an isometric contraction of the core and pull the barbell up to the chest.
- Return to the initial position and exhale.

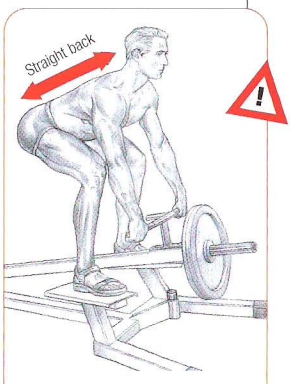
This exercise contracts the latissimus dorsi, teres major, posterior deltoid, and the forearm flexors (biceps brachii, brachialis, brachioradialis). When the shoulder blades come together, the rhomboids and trapezius contract.
The forward lean of the torso uses the spinal muscles in an isometric contraction.
Varying the hand position in width and grip (overhand or underhand) along with changing the angle of the torso allows you to work the back from a variety of angles.

Attention: To prevent injury, never round the back during this exercise.

10 FREESTANDING T-BAR ROWS

Sternocleidomastoid
Splenius
Levator scapula
Trapezius
Infraspinatus
Rhomboid
Latissimus dorsi
Serratus anterior
Erector spinae, under the thoracolumbar fascia
Gluteus maximus
Gluteus medius
Iliac crest
Greater trochanter
Tensor fascia lata
Biceps femoris, long head
Fascia lata, iliotibial band
Quadriceps
Rectus femoris
Vastus lateralis
Vastus intermedius
Vastus medialis
Spine of scapula
Posterior deltoid
Acromion
Teres minor
Teres major
Middle deltoid
Pectoralis major
External oblique
Triceps brachii
Brachialis
Brachioradialis
Extensor carpi radialis longus
Anconeus
Extensor digitorum
Extensor carpi radialis brevis
Biceps femoris, long head
Gastrocnemius
Peroneus longus
Extensor digitorum longus
Soleus
Peroneus brevis





Never round your back when performing freestanding T-bar rows.

Straddle the bar with the legs slightly bent, leaning forward with a flat back about 45 degrees. Grasp the bar with an overhand grip:

- Inhale and raise the bar to the chest.
- Exhale at the end of the movement.

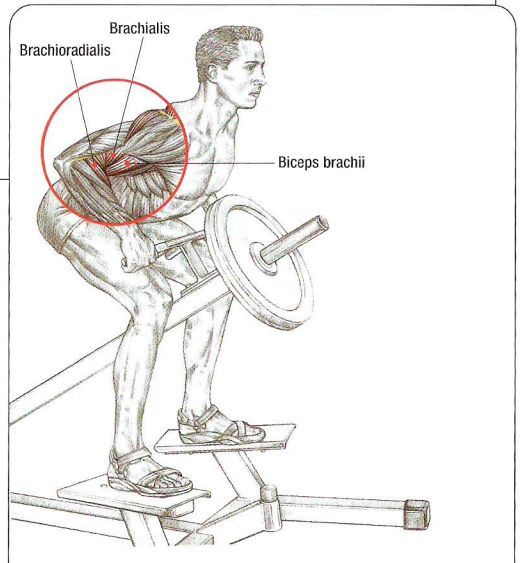
This exercise is similar to bent rows and allows you to concentrate on working your back because you do not have to focus too much effort on positioning.

This exercise uses mainly the latissimus dorsi, teres major, infraspinatus, rhomboids, trapezius (mainly the middle portion), and the flexors of the forearm.

The forward lean isolates the abdominal and spinal muscles in isometric contraction.

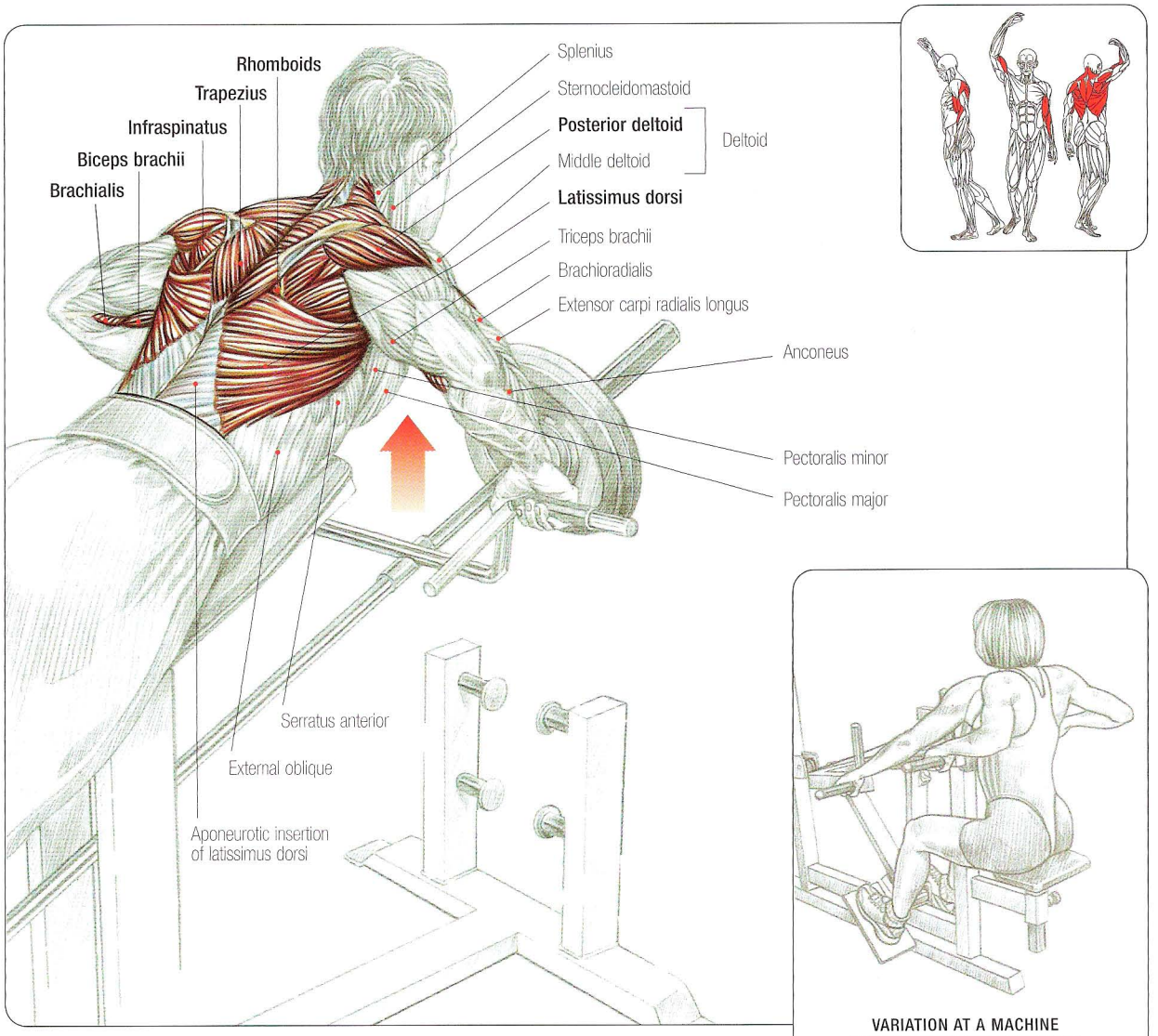
Using a supinated (underhand) grip transfers some of the effort to the triceps brachii and the upper portion of the trapezius at the end of the pull.

Some machines are equipped with parallel handles that allow a grip between pronated and supinated, which contracts the brachioradialis more intensely.



T-bar rows also work the forearm flexors.

T-BAR ROWS WITH ABDOMINAL SUPPORT



VARIATION AT A MACHINE REPRODUCING THE MOVEMENT AS PERFORMED AT A T-BAR

- Inhale and bring the bar to the chest with an overhand grip.
- Exhale at the end of the movement.

This exercise is similar to bent rows and allows you to concentrate on working your back because you do not have to focus too much effort on positioning.

It mainly uses the latissimus dorsi, teres major, posterior deltoid, arm flexors, trapezius, and rhomboids. Some machines are equipped with an abdominal support, which eliminates the work of the abdominal and spinal muscles. However, when using heavy weights, the rib cage is compressed against the abdominal-support pad, which interferes with breathing and makes the exercise painful to perform.

Comment: A pronated (overhand) hold shifts some of the effort to the biceps brachii and the upper portion of the trapezius at the end of the pull.

12 STIFF-LEGGED DEADLIFTS

Erector spinae, under the aponeurosis
Iliac crest
Latissimus dorsi
Rhomboids
Trapezius
Infraspinatus
Teres minor
Teres major
Deltoid
Acromion
Gluteus medius
Gluteus maximus
Greater trochanter
Tensor fascia lata
Biceps femoris, long head
Adductor magnus
Semitendinosus
Serratus anterior
External oblique
Long head
Lateral head
Medial head
Triceps brachii
Fascia lata iliotibial band
Vastus lateralis
Quadriceps, vastus intermedius
Biceps femoris, short head
Patella
Semimembranosus
Sartorius
Head of fibula
Extensor digitorum longus
Peroneus longus
Soleus
Gastrocnemius, lateral head
Triceps surae
Gastrocnemius, medial head
Soleus
Peroneus brevis

ACTION OF THE HAMSTRINGS AND GLUTEUS MAXIMUS WHEN SHIFTING THE PELVIS TO VERTICAL

HAMSTRING ACTIONS

ACTION OF THE GLUTEUS MAXIMUS

DEADLIFT WITH STRAIGHT LEGS

Stand with the feet slightly apart in front of the bar as it rests on the ground:

- Inhale and bend forward at the waist with the chest forward, back arched, and legs as straight as possible.
- Grasp the bar with an overhand grip. Keeping the arms relaxed, stand up straight by rotating the hips. Keep the abdominal muscles tight and a slight arch in the back for support.
- Exhale out at the end of the movement.
- Bend forward and return to the initial position, but without returning the bar to the floor.

To avoid injury, keep the back straight.

This exercise contracts the deep spinal muscles on either side of the spinal column that straighten the spine.

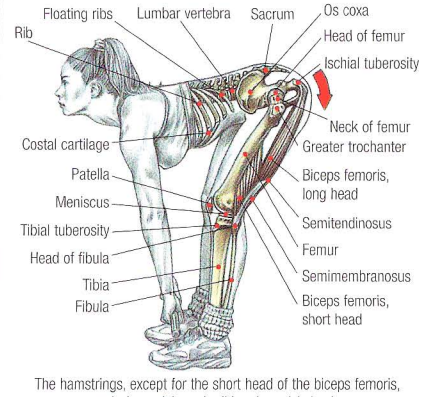
Straightening the torso by tilting the pelvis from front to back contracts the gluteus maximus and hamstrings (except the short head of the biceps femoris).

Deadlifting from the ground with extended knees stretches the back of the thighs.

To increase the intensity, stand on a box so that the feet are higher than the bar on the ground.

Comment: To stretch the hamstrings, perform the stiff-legged deadlift with very light weights. The greater the weight, the more the gluteal muscles take over from the hamstrings to straighten the pelvis to vertical.

HAMSTRING ACTIONS



The hamstrings, except for the short head of the biceps femoris, actively participate in tilting the pelvis back.

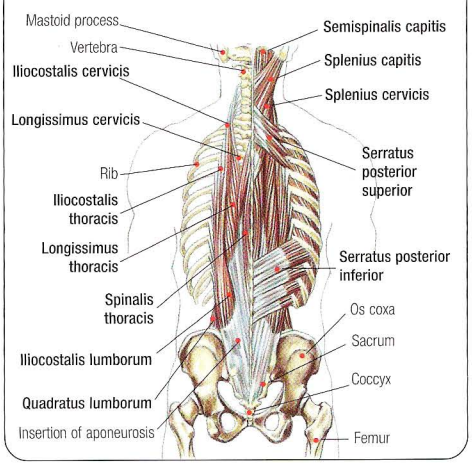
SUMO DEADLIFTS 13

THE MOVEMENT

INITIAL POSITION FINAL POSITION

Sternocleidomastoid
Scalenes
Sternohyoid
Deltoid
External oblique
Rectus abdominis, under the aponeurosis
Quadriceps: Rectus femoris, Vastus medialis, Vastus lateralis
Patella
Sartorius
Tibialis anterior
Gastrocnemius, medial head
Soleus
Tibia
Semimembranosus
Semitendinosus
Biceps femoris
Trapezius
Omohyoid
Pectoralis major
Biceps brachii
Brachialis
Triceps brachii
Tensor fascia lata
Iliopsoas
Adductor muscles: Pectineus, Adductor longus, Gracilis, Adductor magnus
Gluteus maximus

DEEP MUSCLES OF THE BACK USED DURING THE SUMO DEADLIFT



Stand facing the bar, with legs wider than shoulder-width apart and toes pointing out in line with the knees:

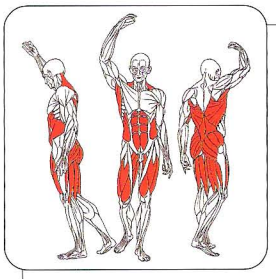
- Inhale and bend the legs until the thighs are horizontal to the ground; grasp the bar with an overhand grip about shoulder-width apart. If you are lifting very heavy weights, use a reverse grip (grasping the bar with one overhand and one underhand grip) to keep the bar from rolling.
- Hold your breath and contract the core, slightly round the back, and extend the legs, bringing the torso vertical and pulling the shoulders back.
- Exhale at the end of the movement.
- Return the bar to the ground holding your breath and never round your back.

The difference between this and the classic deadlift is that this exercise works the quadriceps and adductor muscles intensely. Because the pelvis is not as tilted, it works the back less.

Comment: When beginning the movement, slide the bar along the shins. High reps (10 maximum) with light weights strengthen the lumbar region and work the thighs and the gluteal muscles.

When using heavy weights, perform this exercise with great caution to prevent injuries to the hip joints, adductor group of the thighs, and the lumbosacral junction. The sumo deadlift is one of the three power-lifting movements.

14 DEADLIFTS



Sternocleidomastoid
Splenius capitis
Levator scapula
Trapezius
Scalenes
Deltoid
Triceps brachii
Trapezius
Brachioradialis
Extensor carpi radialis longus
Extensor carpi radialis brevis
Anconeus
Extensor digitorum

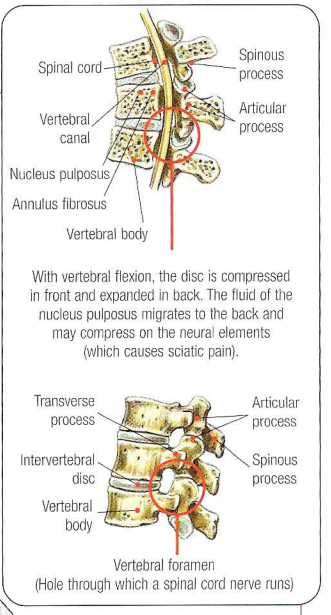
Biceps brachii
Pectoralis major
Serratus anterior
Sternum
Brachialis
External oblique
Rectus abdominis, under the aponeurosis
Linea alba
Iliopsoas
Palmaris longus
Flexor carpi radialis
Flexor digitorum
Pectineus
Adductor longus
Adductor magnus
Gracilis
Sartorius
Patella

Extensor digiti minimi
Gluteus maximus
Flexor carpi ulnaris
Extensor carpi ulnaris
Fascia lata, iliotibial band

Rectus femoris
Vastus lateralis
Vastus medialis
Quadriceps
Biceps femoris

Triceps surae
Gastrocnemius, medial head
Gastrocnemius, lateral head
Soleus
Tibia
Flexor digitorum longus

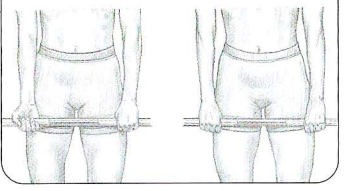
Tibialis anterior
Peroneus longus
Peroneus brevis
Extensor digitorum longus



COMMENT

By limiting the rolling of the bar, the reverse grip allows you to lift much heavier weights.

Reverse power grip **Classic grip**



Stand facing the barbell, legs slightly apart with the abdominal muscles contracted and the back slightly arched. Bend the knees until the thighs are horizontal with the floor. This position will vary depending on the flexibility at the ankles and your physical structure. (The thighs will be horizontal for someone with short femurs and arms. The thighs will be above than horizontal for someone with long femurs and arms.) Grasp the barbell with extended arms in an overhand grip a little wider than shoulder-width apart (reversing the grip of one hand—one overhand and one underhand—keeps the bar from rolling, which allows you to use much heavier weights):

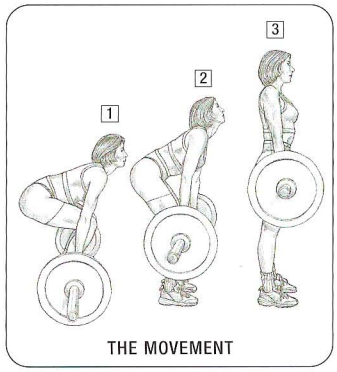
- Inhale, hold the breath, and contract the abdominal muscles and low back and raise the bar by straightening the legs and allowing the bar to slide up the shins. When the bar reaches the knees, straighten the torso while straightening the legs.
- Exhale at the end of the effort.

Throughout the exercise, never straighten your back.

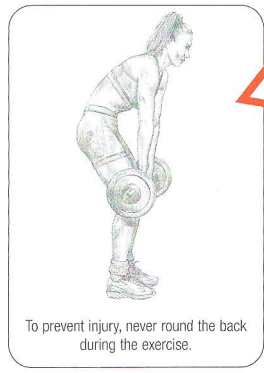
This exercise works nearly every muscle in the body and is effective for developing the lumbosacral and trapezius muscles. It also works the gluteal muscles and quadriceps intensely.

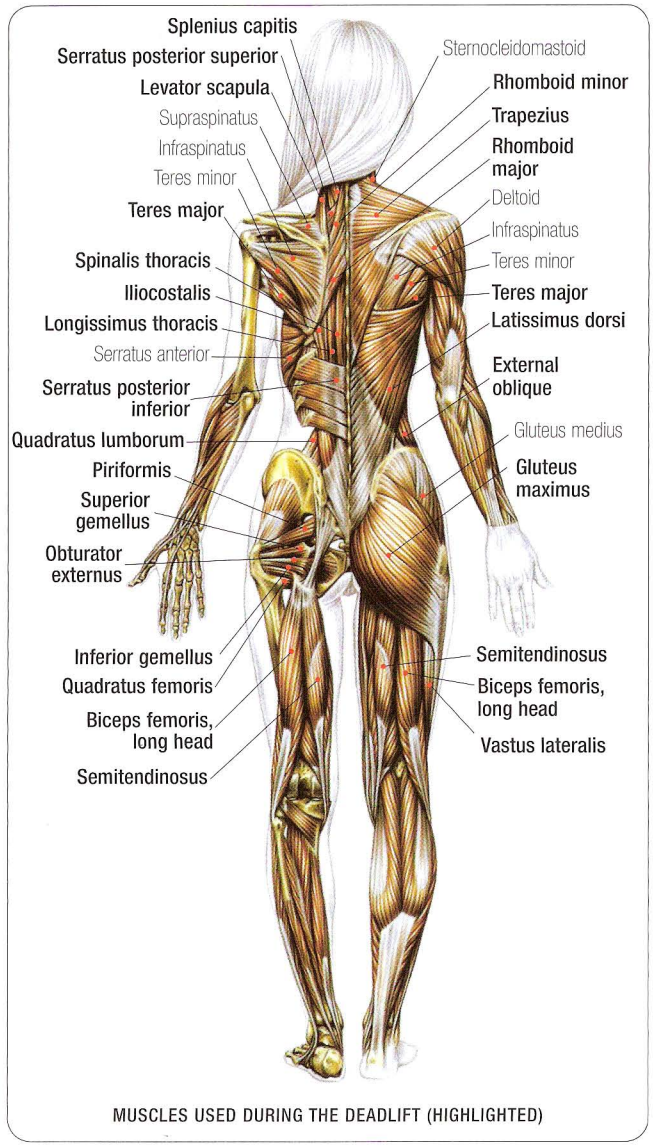
The deadlift, along with the bench press and the squat, make up the exercises in power-lifting competitions.

Splenius capitis
Levator scapula
Sternocleidomastoid
Scalene
Deltoid
Infraspinatus
Teres minor
Teres major
Triceps brachii, lateral head
Triceps brachii, long head
Triceps brachii, medial head
External oblique
Gluteus medius
Greater trochanter
Tensor fascia lata
Rectus femoris
Fascia lata, iliotibial band
Biceps femoris, long head
Vastus lateralis
Biceps femoris, short head
Peroneus longus
Extensor digitorum longus
Peroneus brevis
Spine of scapula
Trapezius
Rhomboid major
Latissimus dorsi
Gluteus maximus
Adductor magnus
Gracilis
Semi-tendinosus
Semi-membranosus
Sartorius
Plantaris
Vastus medialis
Gastrocnemius, lateral head
Gastrocnemius, medial head
Soleus
Flexor digitorum longus
Gastrocnemius tendon



THE MOVEMENT


To prevent injury, never round the back during the exercise.



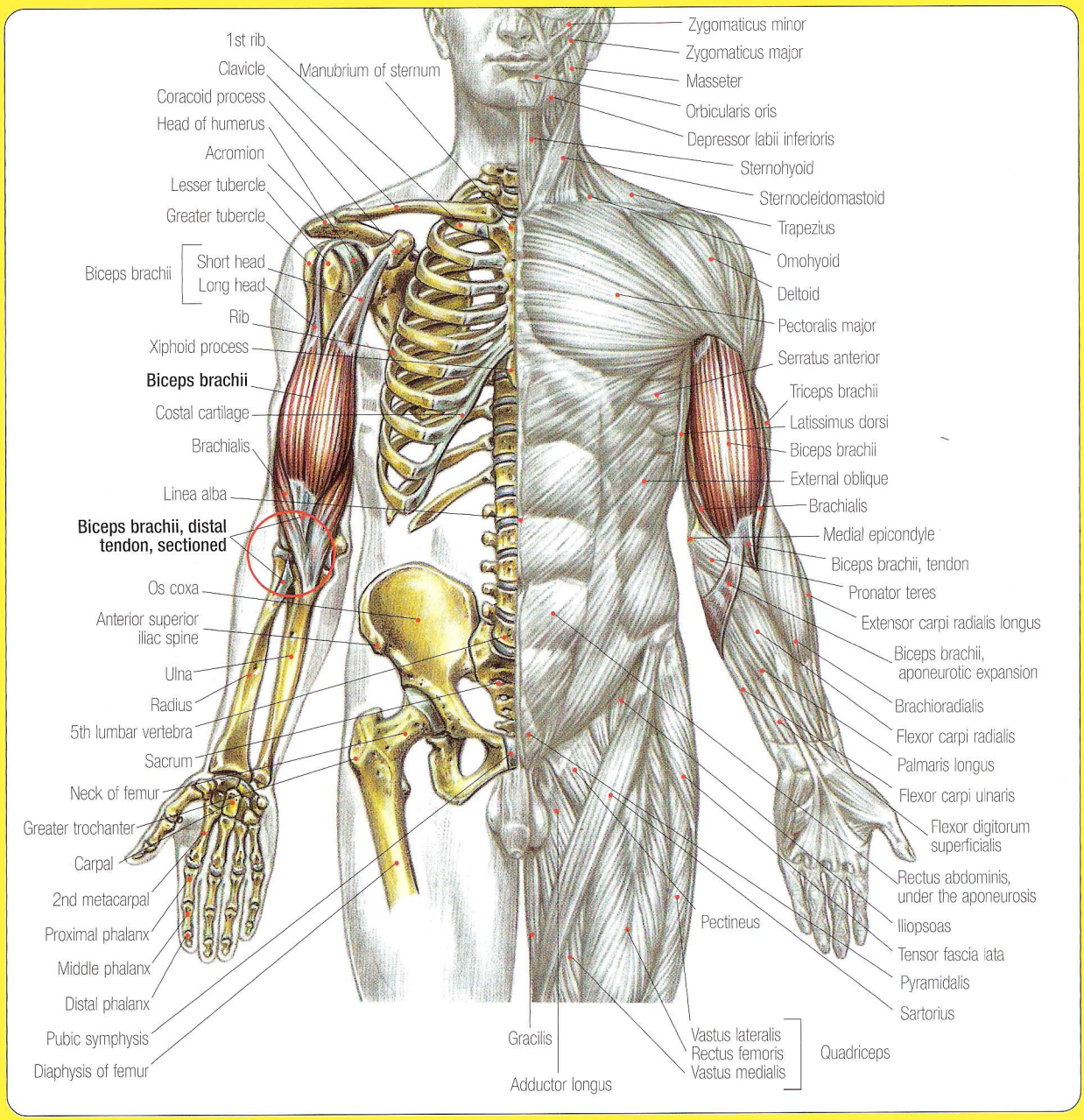
MUSCLES USED DURING THE DEADLIFT (HIGHLIGHTED)

No matter what the exercise, as soon as heavy weights are involved, it is essential to create a "block."

1. *Expanding the chest and holding a deep breath fills the lungs, which supports the rib cage and prevents the chest from collapsing forward.*
2. *Contracting the abdominal muscle group supports the core and increases the intra-abdominal pressure, which prevents the torso from collapsing forward.*
3. *Finally, arching the low back by contracting the lumbar muscles positions the spinal column in extension.*

These three actions together are referred to as *blocking*, which keeps you from rounding the back (vertebral flexion). A rounded back when lifting heavy weights can cause a herniated disc.

BICEPS BRACHII TENDON TEAR



Tearing the long head of the biceps brachii is by far the most common serious sport-related biceps injury.

Generally, it occurs in a muscle, already weakened by tendinitis, after a sudden backward movement of the arm, e.g., during a throw. This movement is relatively common in baseball, tennis, and any sport involving a throwing action, but it also occurs in the snatch in weightlifting. During this motion, tension is suddenly placed on the long head of the biceps brachii, most often where its tendon passes through the bicipital groove of the humerus.

Weightlifting, specifically the deadlift, with heavy weights can cause another characteristic biceps brachii injury.

A common practice when using heavy weights in the deadlift that prevents the bar from rolling in the hands is to use a reverse grip (one overhand grip and one underhand grip).

This technique, although usually safe, can in rare instances cause the tearing or the pulling away of the inferior tendon of the biceps brachii where the muscle inserts onto the humerus.

During the positive phase of the deadlift, the effort is mainly exerted by the muscles of the legs and gluteal muscles, the back, and the abdominal muscles. The arms hang down, completely extended and relaxed.

Unfortunately, the slight shortening caused by contracting either head of the biceps brings the hand into supination (the biceps being the strongest supinator), which with extra heavy weights may cause complete rupture of the tendon at the radius.

This injury occurs at the distal attachment because as the arms hang next to the body, the proximal tension is divided between the short and long heads of the biceps brachii whereas, distally, only one tendinous insertion supports the tension.

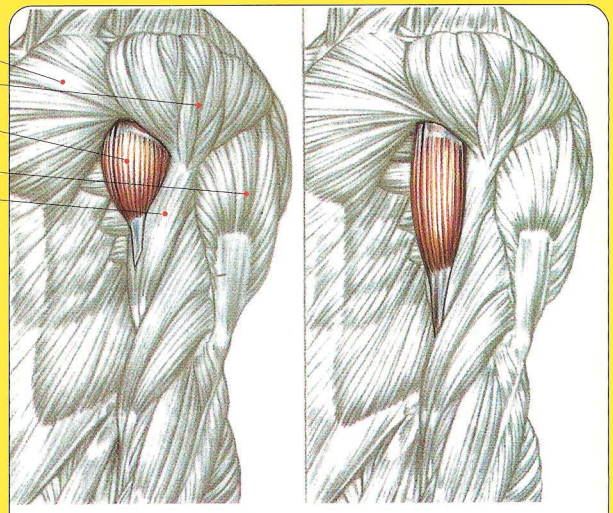
Compared to other tendon tears such as the pectoralis major or the adductors of the thigh in which the pain is unbearable and stops the athlete from continuing, the pain of a biceps tendon tear is relatively mild despite the seriousness of the actual injury.

In competitive power lifting, athletes have continued their lift despite the biceps tendon tear incurred during that lift.

After the accident the diagnosis is obvious: swelling caused by hemorrhaging appears in the forearm. But what is most striking is the appearance of the biceps brachii, which becomes ball shaped at the upper arm close to pectoralis major and the deltoid, revealing the brachialis muscle lower down.

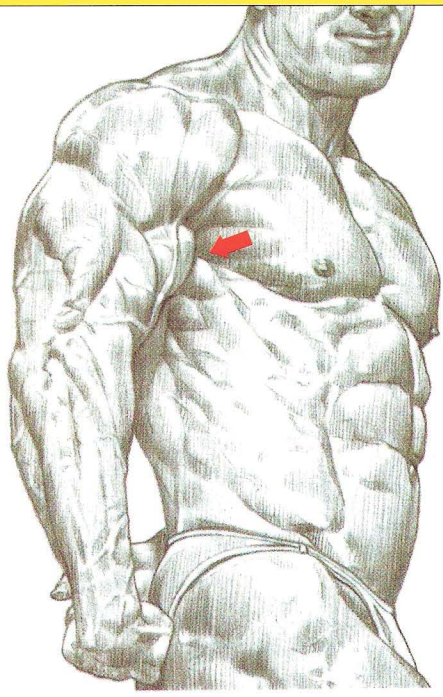
Despite the tear, the brachialis, brachioradialis, extensor carpi radialis longus and brevis, and pronator teres muscles can still flex the arm, just not as strongly. Supination of the forearm becomes much more of a problem because the end range of this movement relies only on the supinator muscle.

If this injury is not immediately treated with surgery to reattach the biceps tendon onto the radius, irreversible retraction of the muscle will occur with fibrous change. And although moving the arm will still be possible, there will be permanent loss of strength in flexion and supination. It is possible to prevent this injury by regularly working the biceps, not to develop the muscle, but to strengthen its tendon. For this reason add forearm flexion isolations using a bar in a series of "cheats" by leaning the chest back to give the bar a boost. If practiced regularly, this technique reinforces the distal tendon of the biceps by the tension it places on it. Nevertheless it must be performed carefully without rounding the back to avoid injury.



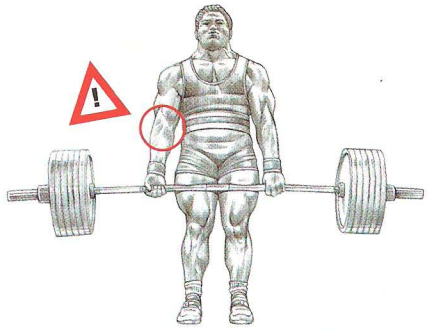
BICEPS BRACHII MUSCLE RETRACTED WITH TEARING OF ITS DISTAL TENDON

NORMAL BICEPS BRACHII MUSCLE



TYPICAL APPEARANCE OF AN UNTREATED DISTAL BICEPS TENDON TEAR

If, after tearing the distal tendon of the biceps brachii, surgery to reattach it to the radius is not performed quickly, permanent retraction and atrophy of the muscle will occur.



BICEPS TENDON ON THE ARM OF THE SUPINATED HAND CAN TEAR DURING A HEAVY DEADLIFT

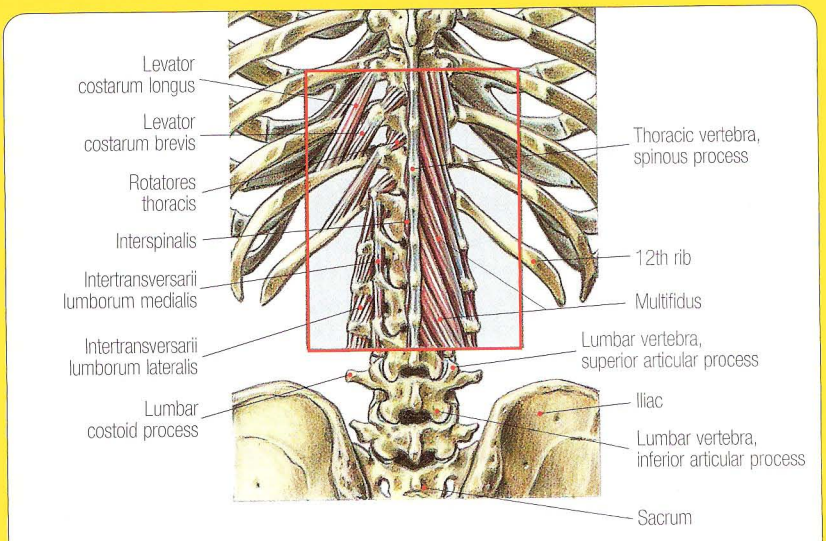
LOW BACK PAIN

Back pain is the most common problem of the lumbar spine region.

Generally, it is not serious and is most often caused by the shortening of the small, deep vertebral muscles that attach to the transverse processes.

If, during a poorly executed rotation or extension of the spine, one of these muscles is overstretched or is torn, it will automatically shorten along with its neighboring muscles and the superficial erector spinae. The back muscles cramp in pain; however, this cramping limits movement that otherwise might tear or increase the tearing of the small deep muscle.

This general shortening of a portion of the back muscles often disappears when the small deep muscle heals. But sometimes the back pain becomes entrenched, and even after the muscles heal, the local shortening can last several weeks and in some people for years.



SMALL DEEP MUSCLES OF THE BACK

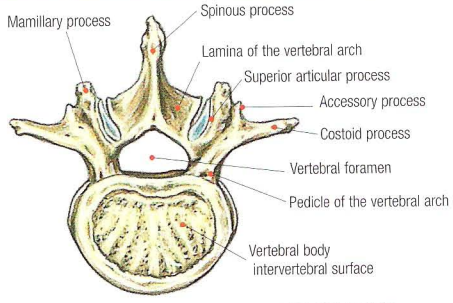
Comment: Although not serious in and of itself, lumbago, which is a painful contracture of the back muscles, can be part of more serious vertebral injuries such as herniated discs, tears in the paravertebral muscles and ligaments, and fractures.

SHOULD YOU ARCH YOUR BACK?

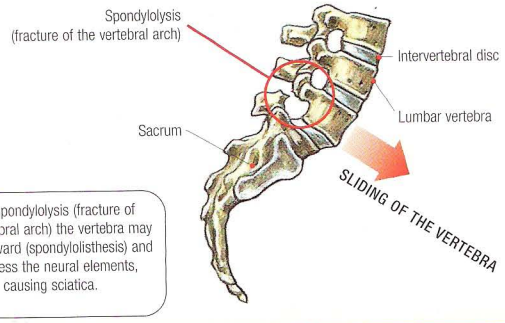
SHOULD YOU ARCH YOUR BACK?

For people without vertebral problems, arching the back during an exercise is not risky. In fact, with movements such as the squat (page 46) or the deadlift (page 132), where the back tends to round, arching the back can prevent injury. However, for some people arching the back during an exercise can be very dangerous.

- For people suffering from congenital spondylolysis (incomplete fusing of the vertebral arch), putting the lumbar spine in extension can cause the vertebra to slide (spondylolisthesis), which may cause serious nerve compression and lead to sciatica.
- For people who are not fully grown or people experiencing osteoporosis, extending the lumbar spine may lead to spondylolysis because of fractures in the vertebral arch. This fracture in the posterior anchoring system of the vertebra may allow the vertebra to slide forward and seriously compress the neural elements (which leads to sciatica).

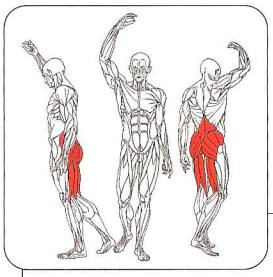


LUMBAR VERTEBRA FROM ABOVE

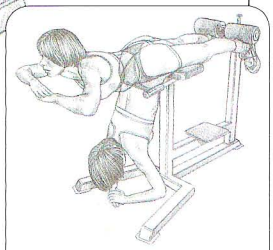


With spondylolysis (fracture of the vertebral arch) the vertebra may slide forward (spondylolisthesis) and compress the neural elements, causing sciatica.

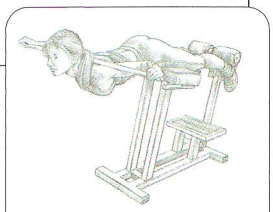
BACK EXTENSIONS 15



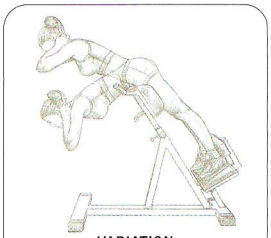
Biceps femoris, short head
Semitendinosus
Gluteus maximus
Fascia lata, iliotibial band
Gastrocnemius
Semimembranosus
Gluteus medius
Quadratus lumborum
Iliocostalis lumborum
Latissimus dorsi
Rhomboid major
Teres major
Infraspinatus
Trapezius
Quadriceps, vastus lateralis
Biceps femoris, long head
Soleus
Peroneus longus
Extensor digitorum longus
Tibialis anterior
Iliac crest
Spinalis thoracis
Longissimus thoracis
External intercostals
Iliocostalis thoracis
Scapula
Humerus



THE MOVEMENT



VARIATION WITH A BAR ACROSS THE SHOULDERS



VARIATION EXTENDING AT AN INCLINE BENCH

Lie facedown on a Roman chair and place the ankles under the roller pads. Because the axis of flexion passes through the coxofemoral joints, the pubic bone should not rest on the support pad:

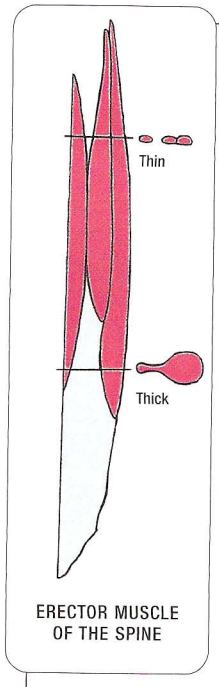
- With the torso bent forward, extend the back to horizontal. Raise the head and continue into hyperextension by arching the lumbar spine. This must be performed carefully to protect your low back.

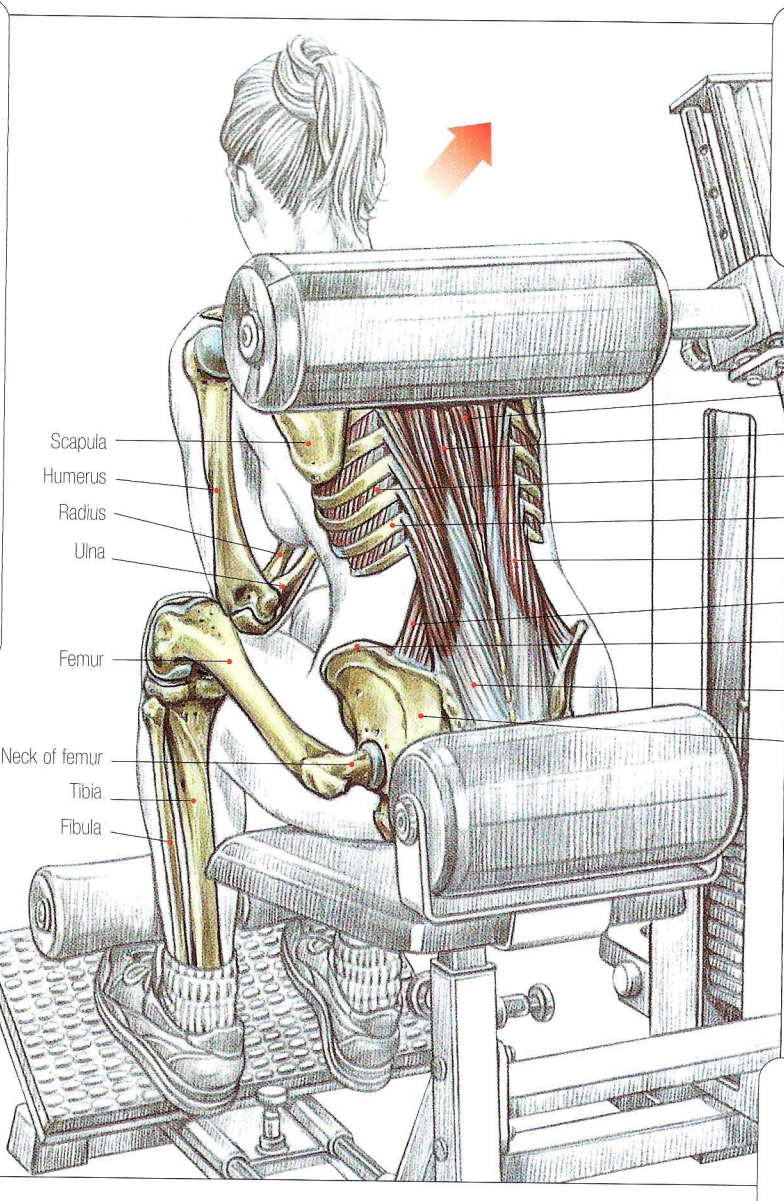
This exercise mainly develops the group of paraspinal erectors of the spine (iliocostales, longissimus thoracis, spinalis thoracis, splenius, and semispinalis capitis) and quadratus lumborum and, to a lesser degree, the gluteus maximus and the hamstrings except for the short head of the biceps femoris. Complete flexion of the torso develops the flexibility of the lumbosacral mass. Supporting the pelvis on the bench, so that the axis is displaced to the back of the body, focuses the movement completely at the lumbosacral level but less intensely given the range of motion and the greater power of the lever arm.
To increase the intensity, sustain the horizontal position of the torso at the end of the extension for a few seconds. Using an incline bench makes this exercise easier for beginners to execute.

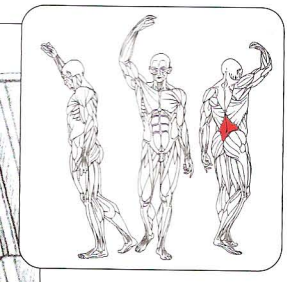
Variations

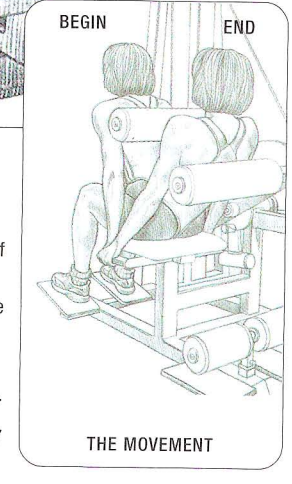
- Performing the torso extension with a bar on the shoulders stabilizes the upper back, which focuses the effort on the lower part of the erector spinae muscles.
- The back extension machine allows you to focus on the lumbosacral mass of the spinal muscles (see page 88, Torso Extensions at a Machine).
- To increase the intensity, perform the exercise while holding a weight to the chest or behind the neck.

16 TORSO EXTENSIONS AT A MACHINE









Sit at the machine, leaning the torso forward and the pad of the machine at shoulder-blade (scapula) level:

- Inhale and press back, straightening the torso as much as possible.
- Return slowly to the initial position while exhaling and begin again.

This exercise works the erector muscles of the spine, focusing the effort on the low back, specifically the lumbosacral mass of the spinal muscles.

This exercise is excellent for beginners. Done in sets of 10 to 12 repetitions, it develops the strength to progress to more technically demanding exercises for the back.

To perform this exercise with heavier weights, reduce the number of repetitions in the set.

Because the machine regulates the range of motion and the weight, the number of repetitions may vary during the same session.

Example: Two series of 15 repetitions with moderate weights and complete range of performance followed by two series of 7 repetitions with more weights and reduced range.

UPRIGHT ROWS 17

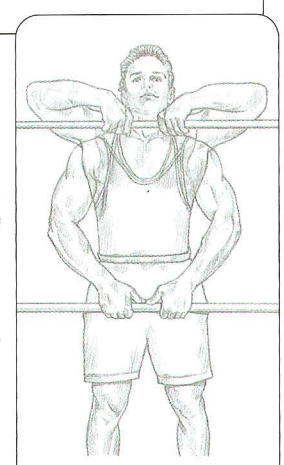
Sternocleidomastoid
Brachialis
Brachioradialis
Extensor carpi radialis longus
Semispinalis capitis
Splenius
Levator scapula
Triceps brachii
Lateral head
Long head
Medial head
Teres minor
Teres major
Infraspinatus
Rhomboid major
Serratus anterior
Latissimus dorsi
External oblique
Middle deltoid
Posterior deltoid
Anterior deltoid
Deltoid
Upper portion
Middle portion
Lower portion
Trapezius
Aponeurosis insertion of latissimus dorsi

Stand with the legs slightly apart, keeping the back straight and grasping the barbell with an overhand grip. The grip should be hand width or slightly wider:

- Inhale and pull the barbell up along the front of the body to the chin, raising the elbows as high as possible.
- Exhale and lower the barbell with a controlled movement.

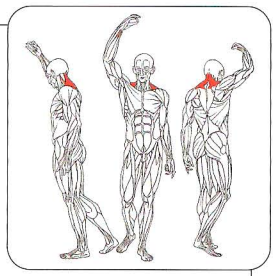
This exercise mainly uses the superior portion of the trapezius as well as the deltoid, levator scapula, biceps brachii, brachialis, muscles of the forearm, abdominal muscles, gluteal muscles, and lumbosacral group.

A wider grip uses the deltoid more than the trapezius.

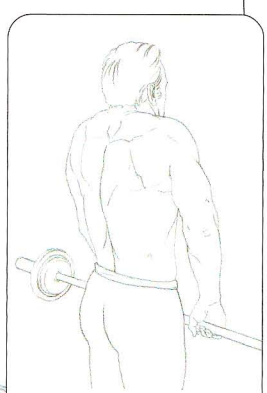


THE MOVEMENT

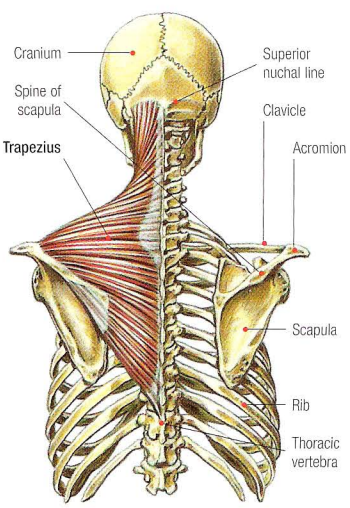
18 BARBELL SHRUGS



Splenius
7th cervical vertebra
Trapezius, middle portion
Trapezius, lower portion
Infraspinatus
Rhomboid
Teres major
Latissimus dorsi
External oblique
Sternocleidomastoid
Levator scapula
Trapezius, upper portion
Middle deltoid
Spine of scapula
Posterior deltoid
Teres minor
Long head
Lateral head
Medial head
Triceps brachii



FINAL POSITION
TRAPEZIUS CONTRACTED



TRAPEZIUS

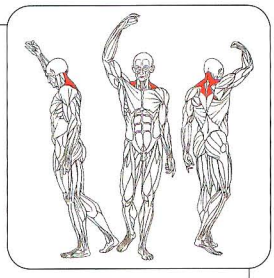
Stand with the legs slightly apart and face the bar that is either on the ground or on a stand:

- Grasp the bar with an overhand grip, with the hands slightly wider than shoulder-width apart, or use a reverse grip if the weight is heavy.
- Shrug the shoulders keeping the arms relaxed, back straight, and abdominal muscles contracted.

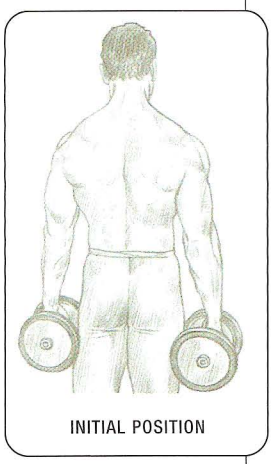
This exercise develops the upper portion of the trapezius, mainly its occipital-clavicular fibers, and the levator scapula.

Comment: Use a reverse grip when working with heavy weights. To balance the work on the trapezius, change the hands with each set. For example, perform one set with the right hand overhand and the left hand underhand. Switch on the following set.

DUMBBELL SHRUGS 19



Skull
Splenius
Sternocleidomastoid
Trapezius
Spine of scapula
Deltoid
Infraspinatus
Teres minor
Teres major
Triceps brachii
Rhomboid
Latissimus dorsi
Levator scapula
Clavicle
Acromion
Spine of scapula
Rhomboid
Scapula
Humerus
Vertebra
Rib



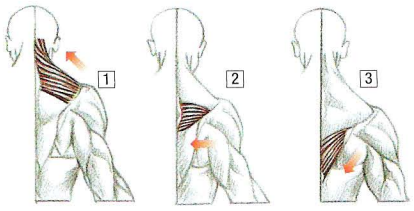
INITIAL POSITION

Stand with the legs slightly apart, head upright or slightly flexed forward, and arms relaxed at the sides gripping a dumbbell in each hand:

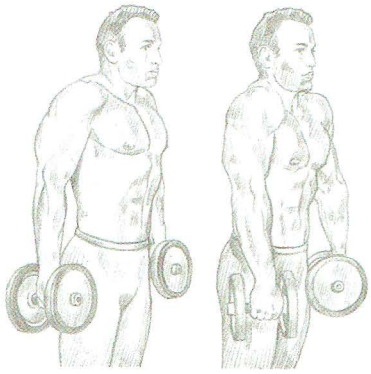
- Shrug the shoulders with an anterior to posterior rotation.
- Return to the initial position.

This exercise contracts the superior, or clavicular, portion of the trapezius, the levator scapula, and the middle portion of the trapezius and the rhomboids when squeezing the shoulder blades together and rotating the shoulders to the back.

TRAPEZIUS ACTION



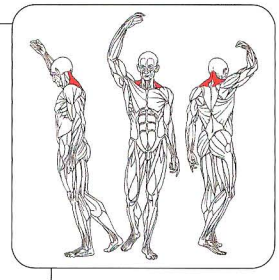
1 Upper portion
2 Middle portion
3 Lower portion



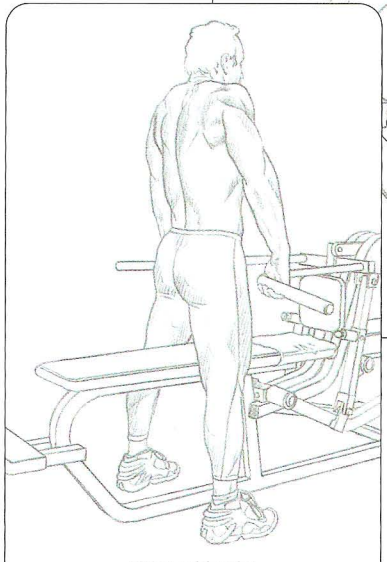
EXECUTING THE ROTATION AT THE END OF THE MOVEMENT

Comment: It is impossible to rotate the shoulders when using heavy weights.

20 MACHINE SHRUGS



Splenius
Sternocleidomastoid
Levator scapula
Scalene
Spine of scapula
Infraspinatus
Trapezius, lower portion
Teres major
Latissimus dorsi
Anconeus
Extensor digitorum
Trapezius, upper portion
Deltoid
Teres minor
Triceps brachii
Brachioradialis
Extensor carpi radialis longus
Extensor carpi radialis brevis



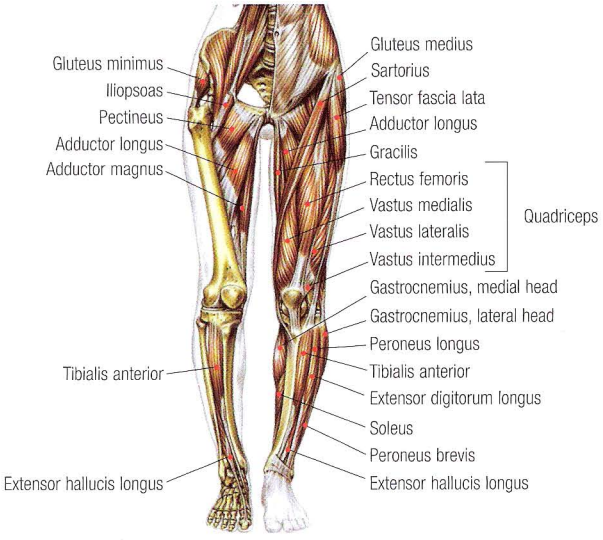
FINAL POSITION
TRAPEZIUS CONTRACTED

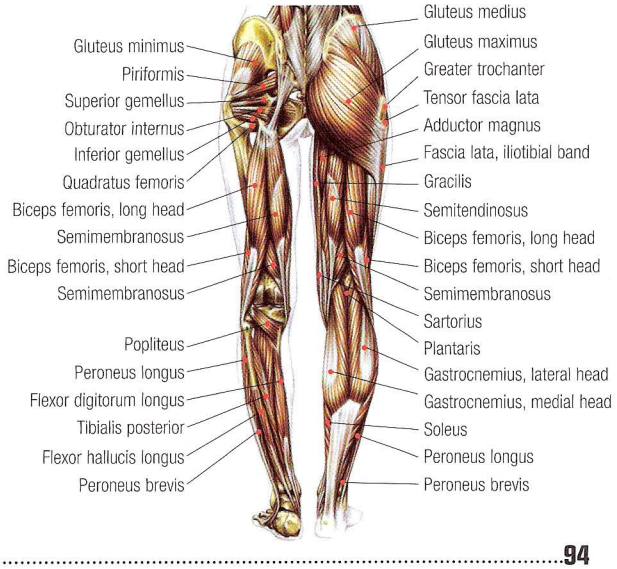
Stand facing the machine and hold the handles with an overhand grip slightly wider than shoulder width, or if the machine allows, with the palms facing each other:

- Shrug the shoulders, keeping the head and back straight.

This exercise allows you to perform long sets. It is excellent for developing the upper portion of the trapezius and the levator scapula.

5 LEGS





1 DUMBBELL SQUATS 94
2 FRONT SQUATS 95
3 SQUATS 96
4 POWER SQUATS 98
✚ DISC HERNIATION 99
5 ANGLED LEG PRESSES 100
6 HACK SQUATS 101
7 LEG EXTENSIONS 102
8 LYING LEG CURLS 103
9 STANDING LEG CURLS 104
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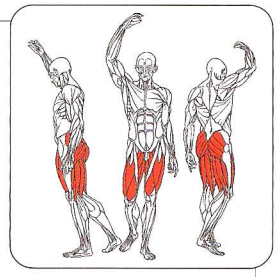
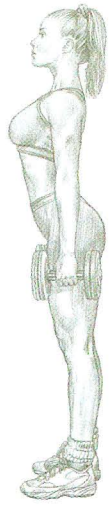
15 ONE-LEG TOE RAISES 111
16 DONKEY CALF RAISES 112
17 SEATED CALF RAISES 113
18 SEATED BARBELL CALF RAISES 114

1 DUMBBELL SQUATS



Latissimus dorsi
External oblique
Iliac crest
Tensor fascia lata
Gluteus medius
Greater trochanter
Gluteus maximus
Fascia lata
Biceps femoris, long head
Biceps femoris, short head
Quadriceps
Rectus femoris
Vastus lateralis
Vastus intermedius
Patella
Peroneus longus
Extensor digitorum longus



INITIAL POSITION

Stand with the feet slightly apart, a dumbbell in each hand and the arms relaxed, looking straight ahead:

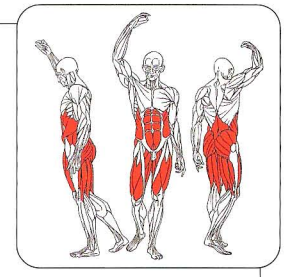
- Inhale, slightly arch the back, and bend the knees.
- When the thighs reach horizontal, extend the legs to return to the initial position.
- Exhale at the end of the effort.

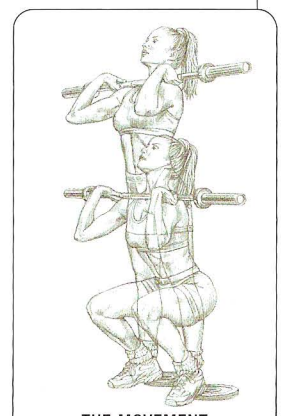
This exercise mainly works the quadriceps and the gluteal muscles.

Comment: There is no point in working with heavy weights. Working with moderate weights in sets of 10 to 15 repetitions provides the best results.

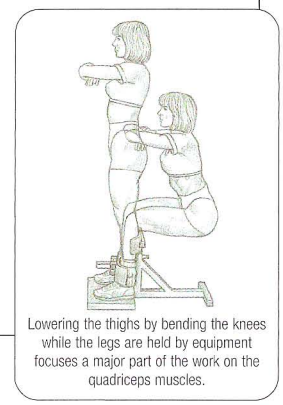
FRONT SQUATS 2

Rectus abdominis, under the aponeurosis
Pubic symphysis
Iliopsoas
Pectineus
Adductor longus
Gracilis
Sartorius
Patella
Patellar ligament
Gastrocnemius, medial head
Tibia, medial surface
Soleus
Flexor digitorum longus
Latissimus dorsi
External oblique
Anterior superior iliac spine
Gluteus medius
Tensor fascia lata
Gluteus maximus
Greater trochanter
Adductor magnus
Fascia lata
Rectus femoris
Vastus lateralis
Vastus medialis
Vastus intermedius
Quadriceps
Head of fibula
Tibialis anterior
Extensor digitorum longus
Peroneus longus





THE MOVEMENT



Lowering the thighs by bending the knees while the legs are held by equipment focuses a major part of the work on the quadriceps muscles.

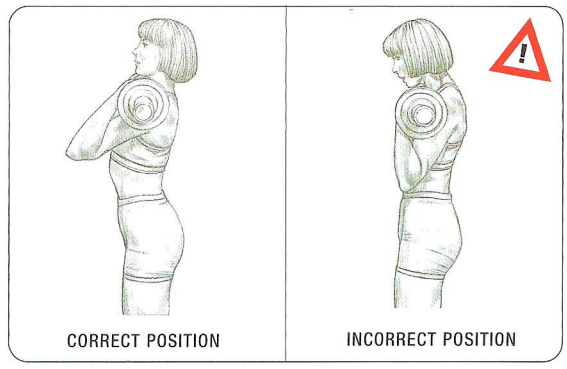
Stand with the legs about shoulder-width apart, holding the bar with an overhand grip as it rests on the upper pectoral muscles and the anterior deltoid:

- Inhale deeply to maintain intrathoracic pressure, which prevents the torso from collapsing forward, slightly arch the low back, contract the abdominal core, and bend the knees to lower the thighs horizontal to the floor.
- Return to the initial position and breathe out at the end of the movement.

Stick out the chest and to raise the elbows as high as possible to prevent the barbell from sliding forward.

Even though the barbell is in front, keep the back upright and don't lean the torso forward. To make the exercise easier, place blocks under the heels.

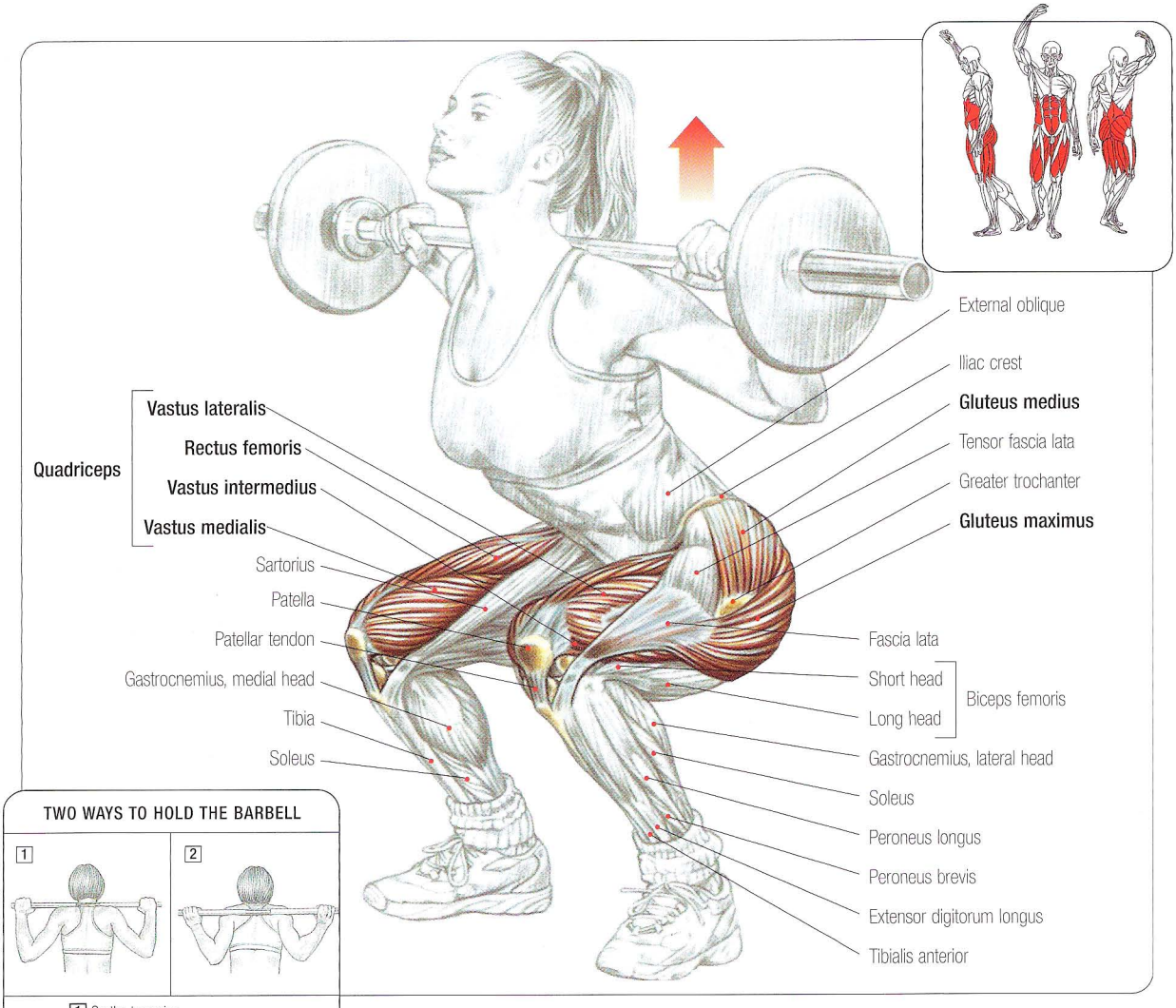
This type of squat focuses a greater part of the effort onto the quadriceps and is performed with lighter weights than the classic squat. This exercise contracts the gluteal muscles, hamstring, abdominal core, and the erector spinae. This is a movement frequently used in weight training because it corresponds perfectly with the work the thighs do at the end of a snatch.



CORRECT POSITION

INCORRECT POSITION

3 SQUATS



TWO WAYS TO HOLD THE BARBELL

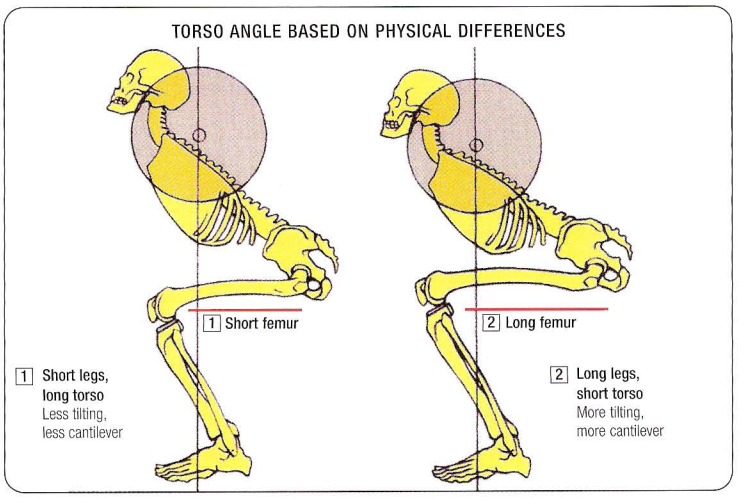
1 On the trapezius
2 On the deltoid and the trapezius, power-lifter style.

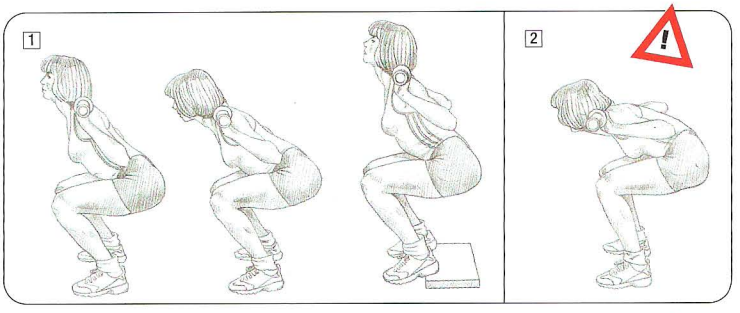
The squat is the number one bodybuilding movement: It uses nearly the entire muscular system, and it also works the cardiovascular system. It helps develop thoracic expansion, and therefore, respiratory capacity:

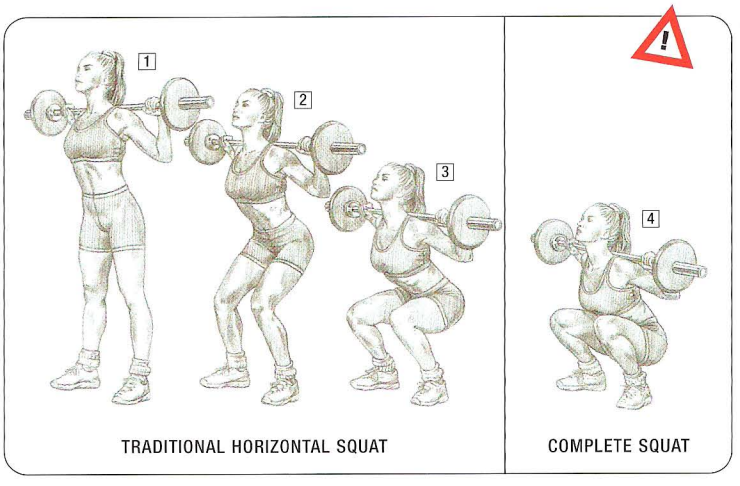
- With the barbell resting on a stand, slide under the bar and place it on the trapezius a bit higher than the posterior deltoid. Grasp the bar firmly with the hands at a comfortable width and the elbows back.
- Inhale deeply (to maintain the intrathoracic pressure, which will prevent the torso from collapsing forward), slightly arch the back by rotating the pelvis forward, contract the abdominal core, look straight ahead, and remove the barbell from the stand.
- Step back one or two steps and stop with both feet parallel to each other (or toes pointing slightly outward) and about shoulder-width apart. Bend forward from the hips (the axis of flexion should pass through the coxofemoral joints) and avoid rounding the back in order to prevent injury.
- When the thighs are horizontal to the floor, straighten the legs and lift the torso to return to the initial position.
- Exhale at the end of the movement.

The squat mainly works the quadriceps, gluteal muscles, adductor group, erector spinae, abdominal muscles, and the hamstrings.

Comment: The squat is one of the best exercises for developing the shape of the buttocks.







Variations:

- People with rigid ankles or long femurs can place a block under their heels to keep from tilting the torso too much. This variation isolates the quadriceps.
- Lowering the bar onto the posterior deltoid increases the leverage of the back, which helps you lift heavier weights. This technique is essential for power lifters.
- The squat can be performed at a frame, which keeps you from tilting the torso and lets you focus on the quadriceps.

FOOT PLACEMENT IN THE SQUAT

When executing the classic squat, that is, with the feet approximately shoulder-width apart, you must place the feet properly. They should be parallel or slightly pointed to the outside. However, you must take into consideration your unique physical structure and make adjustments as necessary to ensure that the feet are in line with the knees.
For example: If you naturally walk with the feet pointed out, perform the squat with the feet pointed out.

1 CORRECT POSITIONS

When executing squats, hold the back straight.
Given the variations in each person's physical structure (different leg lengths and ankle flexibility) and the variations in technique (width of stance, use of heel blocks, barbell higher or lower), the tilt of the torso will vary; however, the lean should start at the hips.

2 INCORRECT POSITION

Never round the back when executing squats.
This mistake is responsible for most lumbar spine injuries, especially herniated discs.

To feel the working of the gluteal muscles, lower the thighs to horizontal.

1-2-3 NEGATIVE PHASE
4 COMPLETE SQUAT

To feel the working of the gluteal muscles even more, lower the thighs past horizontal. However, this technique can only be performed by people with flexible ankles or short femurs. Furthermore, you must perform the complete squat carefully and avoid the tendency to round the low back, which can lead to serious injury.

No matter what the exercise, as soon as heavy weights are involved, it is essential to create a "**block**."

1. *Expanding the chest and holding a deep breath fills the lungs, which supports the rib cage and prevents the chest from collapsing forward.*
2. *Contracting the abdominal muscle group supports the core and increases the intra-abdominal pressure, which prevents the torso from collapsing forward.*
3. *Finally, arching the low back by contracting the lumbar muscles positions the spinal column in extension.*

These three actions together are referred to as *blocking*, which keeps you from rounding the back (vertebral flexion). A rounded back when lifting heavy weights can cause a herniated disc.

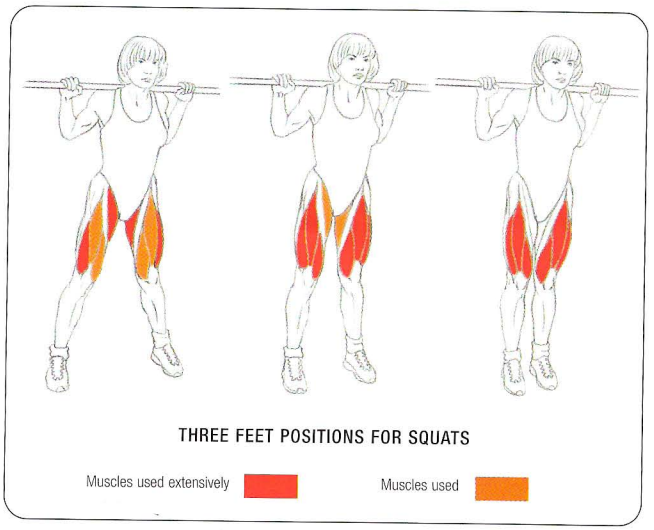
4 POWER SQUATS

Rectus abdominis, under the aponeurosis
Internal oblique, under the aponeurosis
Iliopsoas
Pubic symphysis
Pectineus
Quadriceps, rectus femoris
Sartorius
Adductor longus
Quadriceps, vastus medialis
Meniscus
Gracilis
Gastrocnemius, medial head
Tibia, medial surface
Soleus
Adductor magnus
Semimembranosus
Semitendinosus
External oblique
Gluteus medius
Anterior superior iliac spine
Tensor fascia lata
Greater trochanter
Gluteus maximus
Pyramidalis, under the aponeurosis
Fascia lata, iliotibial band
Quadriceps, vastus lateralis
Quadriceps, vastus intermedius
Head of fibula
Patella
Patellar ligament
Peroneus longus
Tibialis anterior
Extensor digitorum longus
Peroneus brevis

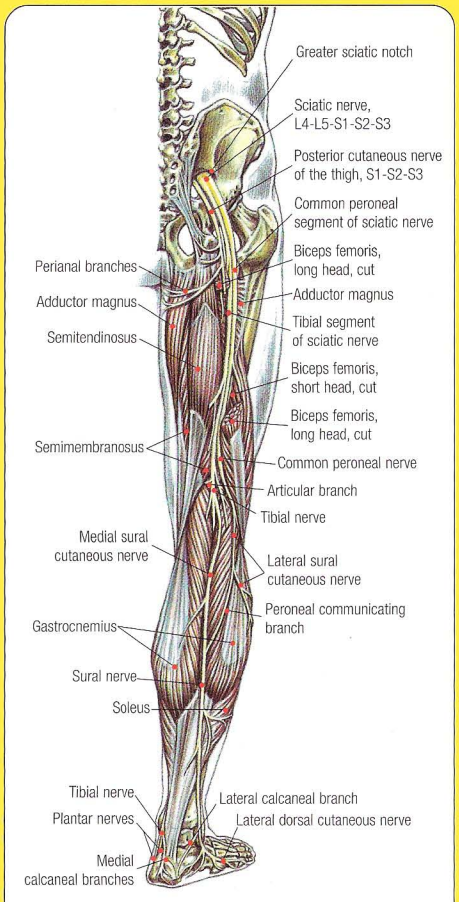
This movement is performed the same as the classic squat, except that the legs are farther apart and the toes point out, which works the inner thigh intensely.

The working muscles are as follows:

- quadriceps
- adductor muscle group (adductor magnus, adductor longus, adductor brevis, adductor pectineus, and gracilis)
- gluteal muscles
- hamstrings
- abdominal muscles
- lumbosacral muscle group



DISC HERNIATION



SCIATIC NERVE
AND POSTERIOR CUTANEOUS NERVE OF THIGH

Disc herniation is a relatively frequent injury in weightlifting, most often caused by incorrect back position during the squat, deadlift, or bent row.

When executing these exercises, the main thing to avoid is rounding the back (vertebral flexion), which expands the back of the disc and pinches the front of it.

If the intervertebral disc is cracked or aging, the gelatinous liquid of the nucleus pulposus migrates backward and can compress on the spinal cord or the roots of the spinal nerves. Symptoms depend on the type of lesion, the amount of nucleus pulposus pushed out, and the surface that is compressed. The nucleus pulposus can bulge or, worse, explode through the annulus fibrosus, which surrounds it, and sometimes tear the posterior ligament that connects the vertebrae to each other. Compression of the neural elements caused by the tearing of the annulus fibrosus is particularly painful and incapacitating.

In weight training, herniations usually occur at the lumbar level and most frequently between the third and fourth or between the fourth and fifth lumbar vertebrae. The pain is dull and deep, sometimes accompanied by swelling and tingling. The pain is located in the middle of the back or more often to one side, radiating to the gluteal muscles, pelvis, and pubis and down the leg following the path of the sciatic nerve (hence the name sciatica to define this type of pain). Generally, disc herniations are spontaneously reabsorbed, and the pain eventually disappears. But in some cases, the bulge in the disc does not disappear and continues to press painfully against the nerves, or a detached piece of intervertebral cartilage compresses the neural elements.

In both these cases, a surgeon can remove the part that is pressing against the nerves.

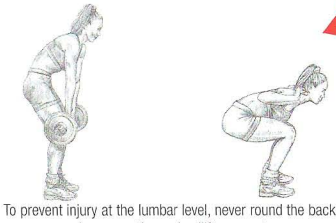
To prevent disc herniation, use proper form when performing risky exercises such as the squat, deadlift, good morning, and bent row.

No matter what the exercise, as soon as heavy weights are involved, it is essential to create a "block."

1. *Expanding the chest and holding a deep breath fills the lungs, which supports the rib cage and prevents the chest from collapsing forward.*
2. *Contracting the abdominal muscle group supports the core and increases the intra-abdominal pressure, which prevents the torso from collapsing forward.*
3. *Finally, arching the low back by contracting the lumbar muscles positions the spinal column in extension.*

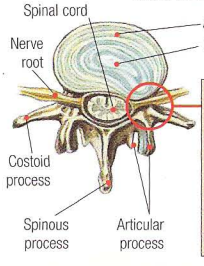
These three actions together are referred to as blocking, which keeps you from rounding the back (vertebral flexion). A rounded back when lifting heavy weights can cause a herniated disc.

Comment: After a heavy workout, stretch the back by hanging from a chinning bar and focusing on relaxing the body. This allows the muscles to relax and rebalance the pressures inside the intervertebral discs.



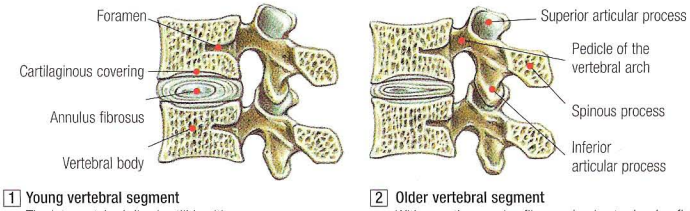
To prevent injury at the lumbar level, never round the back when executing a deadlift or squat.

DISC HERNIATION



Vertebral flexion using weights can cause a herniated disc, usually in the lumbar vertebrae. These herniations occur most frequently with the squat and deadlift, and most often are the result of incorrect back position because of bad technique.

EFFECT OF AGE ON DISC HERNIATION LUMBAR VERTEBRAL SEGMENT (CUT)



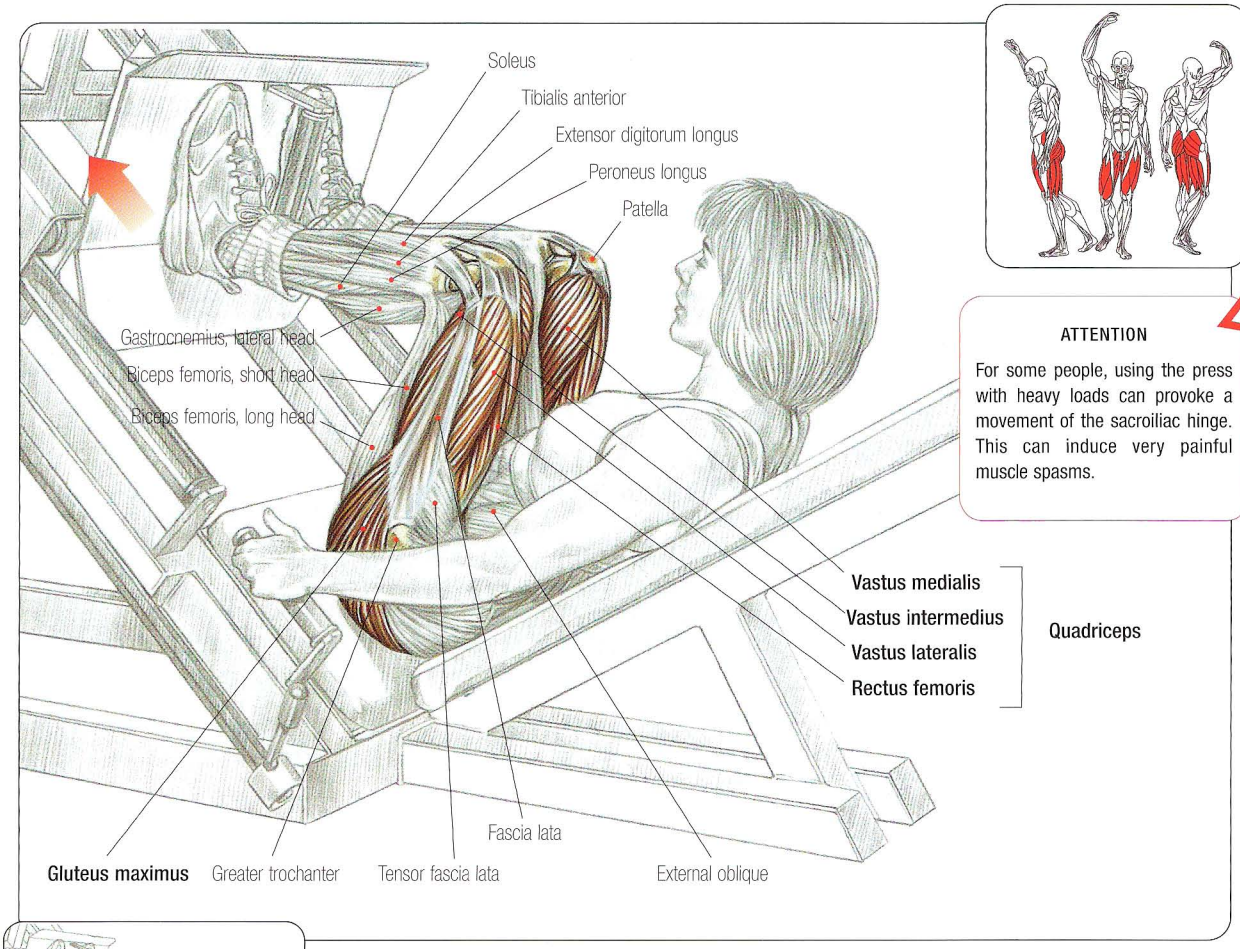
1 **Young vertebral segment**
The intervertebral disc is still healthy.

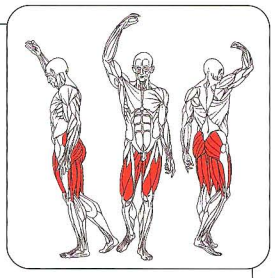
2 **Older vertebral segment**
With age, the annulus fibrosus begins to develop fissures and the viscous gel of the nucleus pulposus begins to dehydrate. The intervertebral disc collapses and the vertebral segments lose their mobility.

From the age of 30, the intervertebral discs degenerate, and the annulus fibrosus can crack as the nucleus pulposus begins to dehydrate. The discs of older athletes are more rigid and less elastic, and the mobility of the spine is limited. On the other hand, as the viscous gel of the nucleus pulposus gradually dehydrates, it becomes less likely that it will be displaced and compress against the nerve.

In comparison, disc herniation in a young person involves the movement of a greater amount of the gelatinous fluid of the nucleus pulposus, causing more compression, pain, and incapacity of the neural elements. Disc herniation therefore occurs more frequently with young athletes.

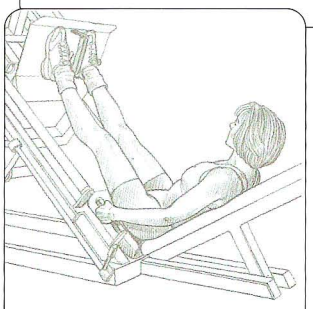
5 ANGLED LEG PRESSES





ATTENTION

For some people, using the press with heavy loads can provoke a movement of the sacroiliac hinge. This can induce very painful muscle spasms.



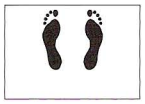
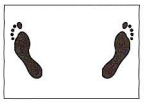
INITIAL POSITION

Position the back properly against the backrest on a machine, with the feet slightly apart:

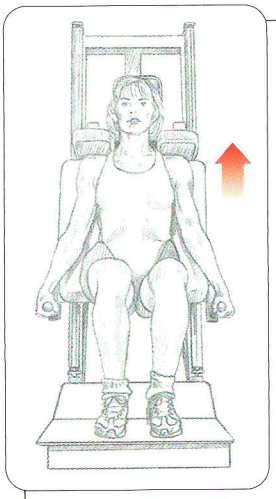
- Inhale and release the safety bars then bend the knees completely so that the thighs touch or nearly touch the torso.
- Return to the initial position, exhaling at the end of the movement.

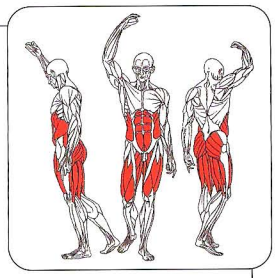
Placing the feet low against the foot plate isolates the quadriceps; placing the feet higher on the foot plate calls on the gluteal muscles and the hamstrings. Placing the feet wider apart focuses effort on the adductors.

Comment: People with back pain who are unable to perform squats can do this exercise. However, they must never lift the back off the back pad.

Feet high on the foot plate	Feet low on the foot plate	Feet apart	Feet close together
			
Strong use of the gluteal muscles and the hamstrings	Strong use of the quadriceps	Strong use of the adductors	Strong use of the quadriceps

HACK SQUATS 6





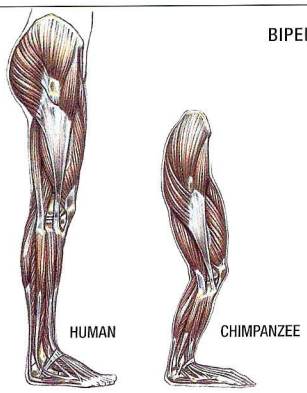
External oblique
Gluteus medius
Iliopsoas
Tensor fascia lata
Pectineus
Adductor longus
Sartorius
Biceps femoris
Gastrocnemius, medial head
Tibialis anterior
Soleus
Extensor digitorum longus
Peroneus longus
Soleus
Peroneus brevis

Rib
Vertebra
Os coxa
Sacrum
Femur
Vastus lateralis
Rectus femoris
Vastus medialis
Quadriceps
Patella
Patellar ligament
Tibia
Fibula

Stand with the legs straight and feet slightly apart, back against the back pad, and shoulders positioned under the shoulder pads. (Hack refers to a "yoke." The pads are reminiscent of the collar placed around the neck of draft animals.):

- Inhale and release the safety catch. Bend the knees, then return to the initial position.
- Exhale at the end of the exercise.

This movement focuses the effort on the quadriceps. The more the feet are forward, the more the gluteal muscles will be used. To protect the back, contract the abdominal core, which eliminates lateral movement of the pelvis or cervical spine.

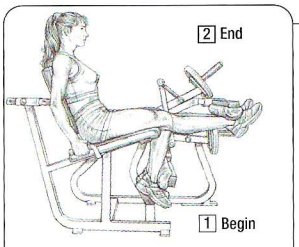


BIPEDAL ADAPTATION

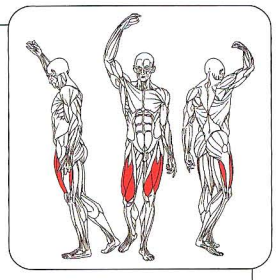
In the chimpanzee, our closest relative, the well-developed torso is paired with an underdeveloped gluteus maximus, which makes raising the trunk and standing erect difficult and causes an awkward two-footed gait.

The human is the only primate who has completely adapted to walking upright on two legs. Besides the well-developed gluteus maximus, the entire human structure has adapted to walking on two legs. For example, the torso is relatively small, which makes holding it erect easier, and, unlike the gorilla or chimpanzee, humans can lock the knee joint when it is extended, which makes standing much less tiring.

7 LEG EXTENSIONS



THE MOVEMENT



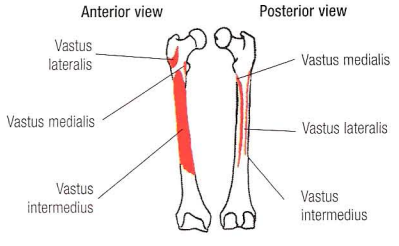
Rectus abdominis, under the aponeurosis
External oblique
Gluteus medius
Tensor fascia lata
Fascia lata
Gluteus maximus
Biceps femoris: Long head, Short head
Head of fibula
Tibia, medial surface
Tibialis anterior
Gastrocnemius, lateral head
Peroneus longus
Extensor digitorum longus
Soleus
Anterior superior iliac spine
Iliopsoas
Pectineus
Adductor longus
Sartorius
Quadriceps: Rectus femoris, Vastus lateralis, Vastus medialis, Vastus intermedius
Patella
Patellar ligament

Sit at the machine and grasp the handles or the seat to hold the torso immobile. Bend the knees and place the ankles under the ankle pads.

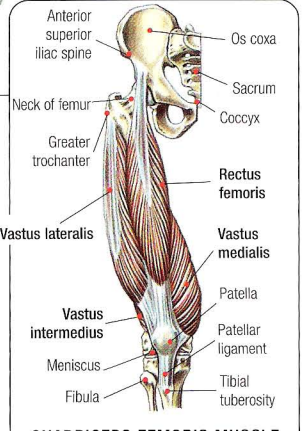
- Inhale and raise the legs to horizontal.
- Exhale at the end of the exercise.

This is the best exercise for isolating the quadriceps. The greater the angle of the backrest, the farther toward the back the pelvis rotates. This exercise stretches the rectus femoris, which is the midline biarticular portion of the quadriceps, which makes the work on it more intense while extending the legs.

This movement is recommended for beginners so that they can develop enough strength to move on to more technically demanding exercises.



INSERTIONS OF THE QUADRICEPS FEMORIS MUSCLE ONTO THE FEMUR



QUADRICEPS FEMORIS MUSCLE

LYING LEG CURLS 8

VARIATION WITH A DUMBBELL HELD BETWEEN THE ANKLES

Semimembranosus
Biceps femoris, short head
Semitendinosus
Biceps femoris, long head
Fascia lata, iliotibial band
Gluteus maximus
Greater trochanter
Tensor fascia lata
Gluteus medius
External oblique
Latissimus dorsi
Soleus
Peroneus brevis
Peroneus longus
Gastrocnemius
Extensor digitorum longus
Quadriceps, rectus femoris
Patella
Tibialis anterior
Quadriceps
Vastus medialis
Vastus lateralis
Vastus intermedius

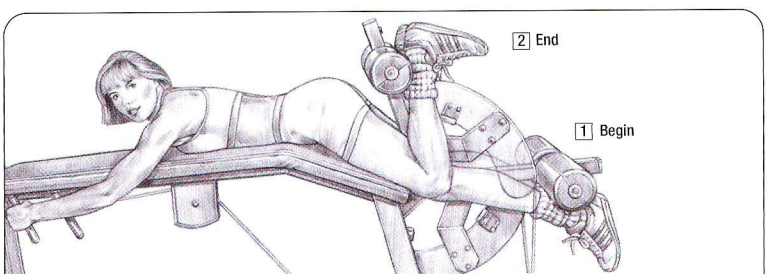
Lie facedown on the machine, holding the handles, legs extended, and ankles positioned under the ankle pads:

- Inhale and bend both legs at the same time, trying to touch the gluteal muscles with the heels.
- Exhale at the end of the effort.
- Return to the initial position with a controlled movement.

This exercise works the hamstring group and gastrocnemius and deeper, the popliteus muscle. In theory, during flexion, it is possible to target the semitendinosus and semimembranosus by internally rotating the feet, or to target the long and short heads of the biceps femoris by externally rotating the feet. But in practice, this proves to be difficult, and only emphasis on the hamstrings and the gastrocnemius can be easily achieved:

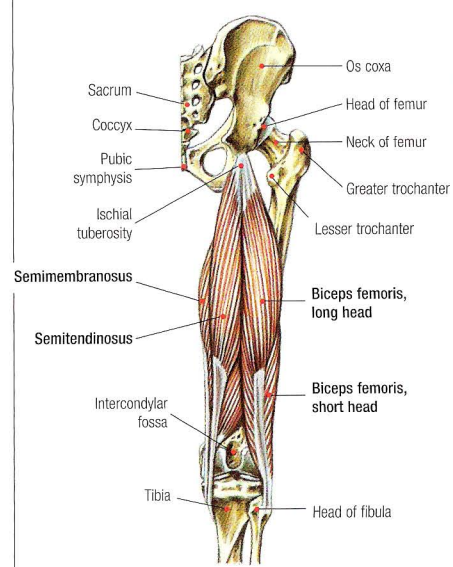
- Point the toes (plantar flexion) to feel the effort in the hamstrings.
- Flex the feet (dorisflexion) to feel the effort in the gastrocnemius.

Variation: This exercise may be performed by alternating the legs.



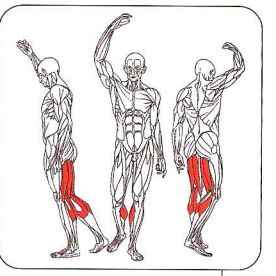
THE MOVEMENT

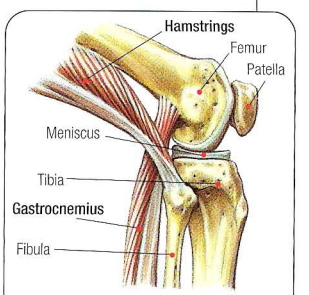
HAMSTRING MUSCLES



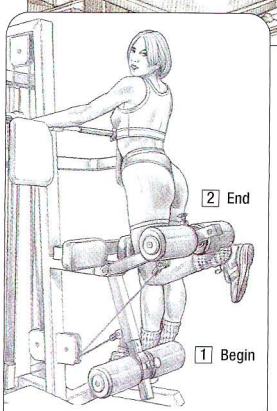
9 STANDING LEG CURLS

Latissimus dorsi
External oblique
Erector spinae, under the aponeurosis
Iliac crest
Gluteus medius
Sacrum
Greater trochanter
Gluteus maximus
Tensor fascia lata
Adductor magnus
Gracilis
Fascia lata, iliotibial band
Semitendinosus
Biceps femoris, long head
Semimembranosus
Biceps femoris, short head
Plantaris
Gastrocnemius, medial head
Gastrocnemius, lateral head
Head of fibula
Soleus
Peroneus longus
Rectus femoris
Vastus lateralis
Hamstrings





Contracting the hamstrings and the lateral and medial heads of the gastrocnemius flexes the knee joint.



THE MOVEMENT

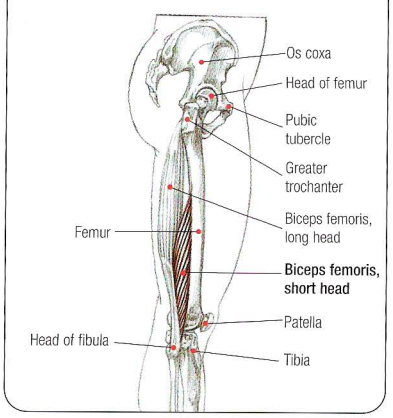
Stand with the torso resting against the pad, thigh positioned against the knee pad, the knee straight, and the back of the ankle resting against the ankle roll:

- Inhale and bend at the knee.
- Exhale at the end of the movement.

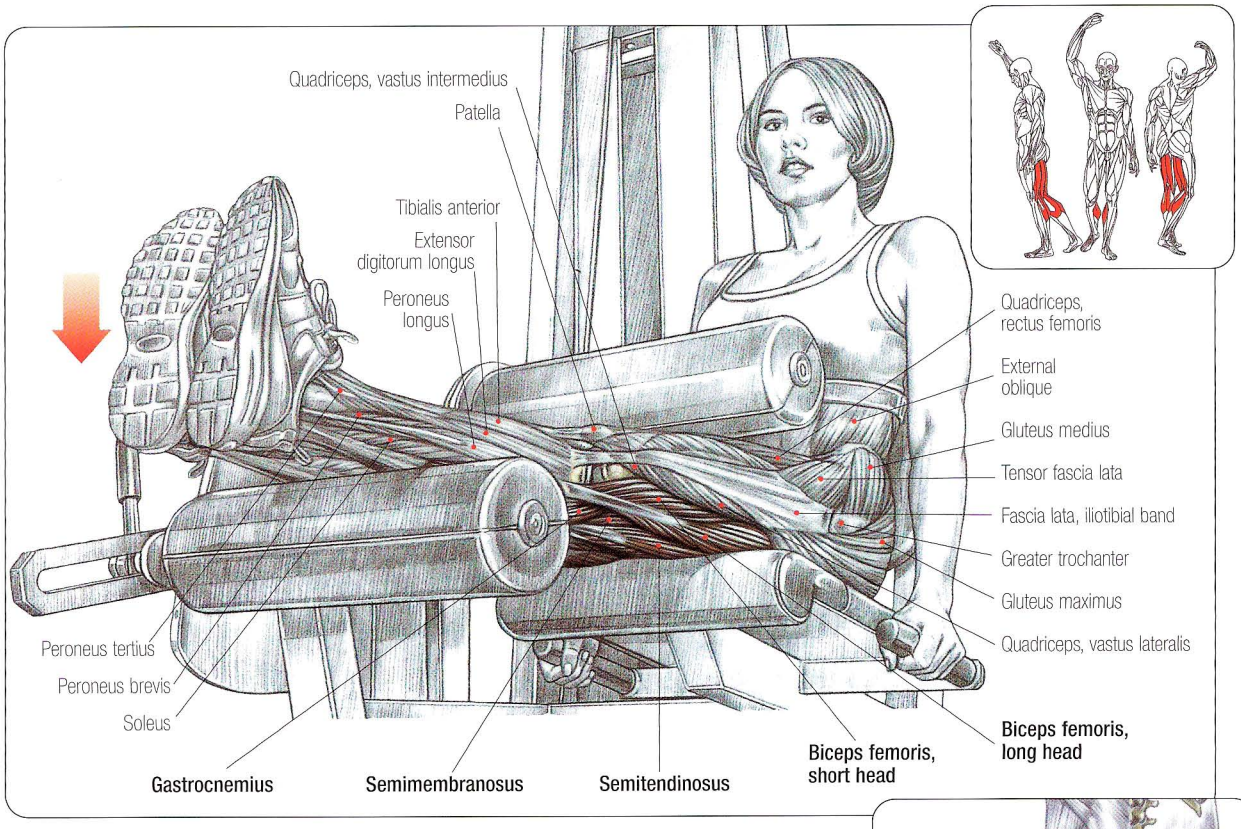
This exercise uses the hamstring group (semitendinosus and semimembranosus and the long and short heads of the biceps femoris) and, to a lesser extent, the gastrocnemius. To engage the gastrocnemius more, simply bend at the ankle when bending at the knee. To decrease its participation, which is often the goal, simply point the toes.

SHORT HEAD OF THE BICEPS FEMORIS

Of all the flexor muscles, only the short head of the biceps femoris works across just one joint: It bends the knee.



SEATED LEG CURLS 10



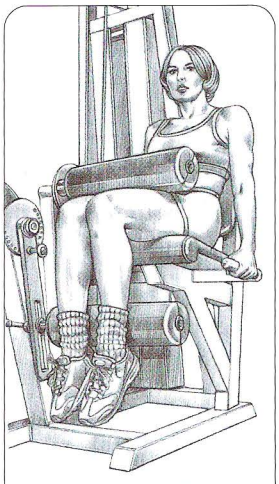
Sit at the machine, with the legs extended, ankles resting on the ankle pad, thighs positioned between the thigh pad and the seat, holding the handles:

- Inhale and bend the knees.
- Exhale at the end of the movement.

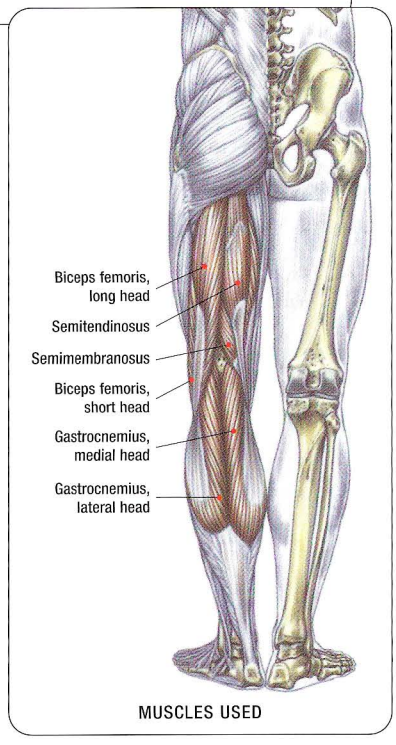
This exercise uses the hamstring muscles and, deeper, the popliteus. To a lesser extent, it works the gastrocnemius.

Variations

- Perform the exercise with the feet in dorsiflexion (feet flexed) to increase the work of the gastrocnemius muscles.
- Perform the exercise with the feet in plantar flexion (toes pointed) to focus the effort on the hamstrings.

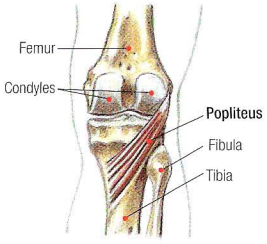


END OF MOVEMENT



MUSCLES USED

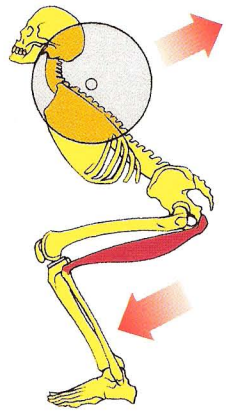
POPLITEUS MUSCLE



The popliteus, located on the posterior side of the leg at the knee joint, works with the hamstrings and gastrocnemius to bend the leg.

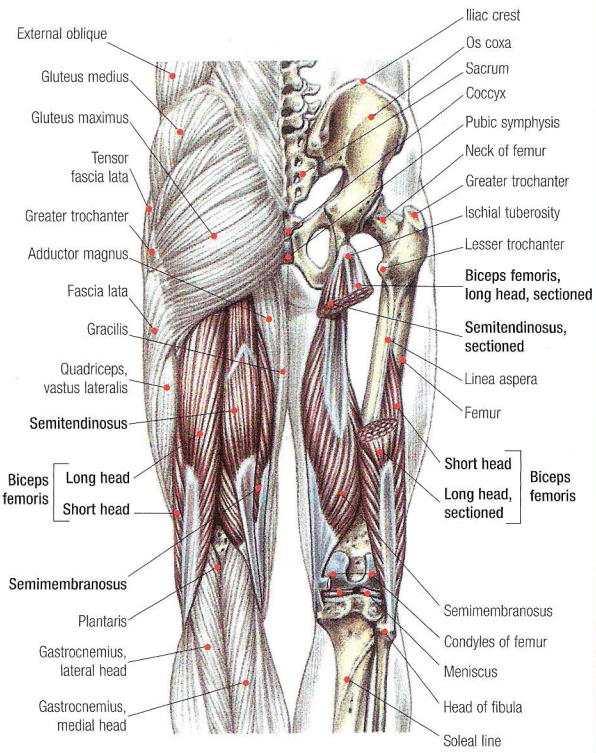
HAMSTRING MUSCLE TEARS

ACTION OF THE HAMSTRING MUSCLES DURING THE SQUAT



While performing the squat, the hamstring muscles contract to straighten the pelvis, which at the same time prevents the torso from tilting too far forward (as long as pelvis is aligned with the torso by contracting the abdominal and lumbar muscles).

HAMSTRING MUSCLES



Muscle tearing of the hamstrings

In bodybuilding, hamstring tears occur frequently. This injury occurs most often during the squat when the torso is too far forward. The hamstring muscle group, with the exception of the short head of biceps femoris, is in an extremely stretched position and contracts forcefully to straighten the pelvis. This can lead to tearing, most often at the high or middle portion of the muscle group.

Hamstring tears can also occur when working at a leg curl machine using heavy weights. This most often occurs at the beginning of the movement when the legs are extended and the muscles are stretched.

Although in general, the tears in hamstring muscle fibers are not extensive and not serious (it is rare to see a significant tear in the muscle or its tendinous insertion), they are always painful and prone to complications.

In fact, fibrous scarring frequently occurs after a tear in this muscle group, which creates friction that is especially painful and incapacitating during sport activity. Furthermore, this inelastic scar tissue is liable to tear during intense effort.

Preventing hamstring tearing

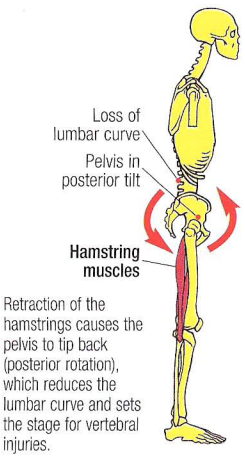
To prevent muscle tears, perform either a specific stretching workout or incorporate hamstring stretches during a lifting workout between sets of squats and deadlifts and exercises for the back of the thigh.

Certain weightlifting exercises, such as good mornings or stiff-legged deadlifts, can be considered the best hamstring protectors because of their combined action of muscle strengthening and stretching.

After hamstring tearing

To prevent the formation of fibrous scar tissue in the hamstrings, it is essential to reeducate the muscles as soon as possible. A week after a tear, you must perform gentle stretches for the back of the thighs. The goal is to stretch the injured muscles and especially to soften the scar so that it doesn't tear when you resume training.

RETRACTION OF THE HAMSTRINGS



Retraction of the hamstrings causes the pelvis to tip back (posterior rotation), which reduces the lumbar curve and sets the stage for vertebral injuries.

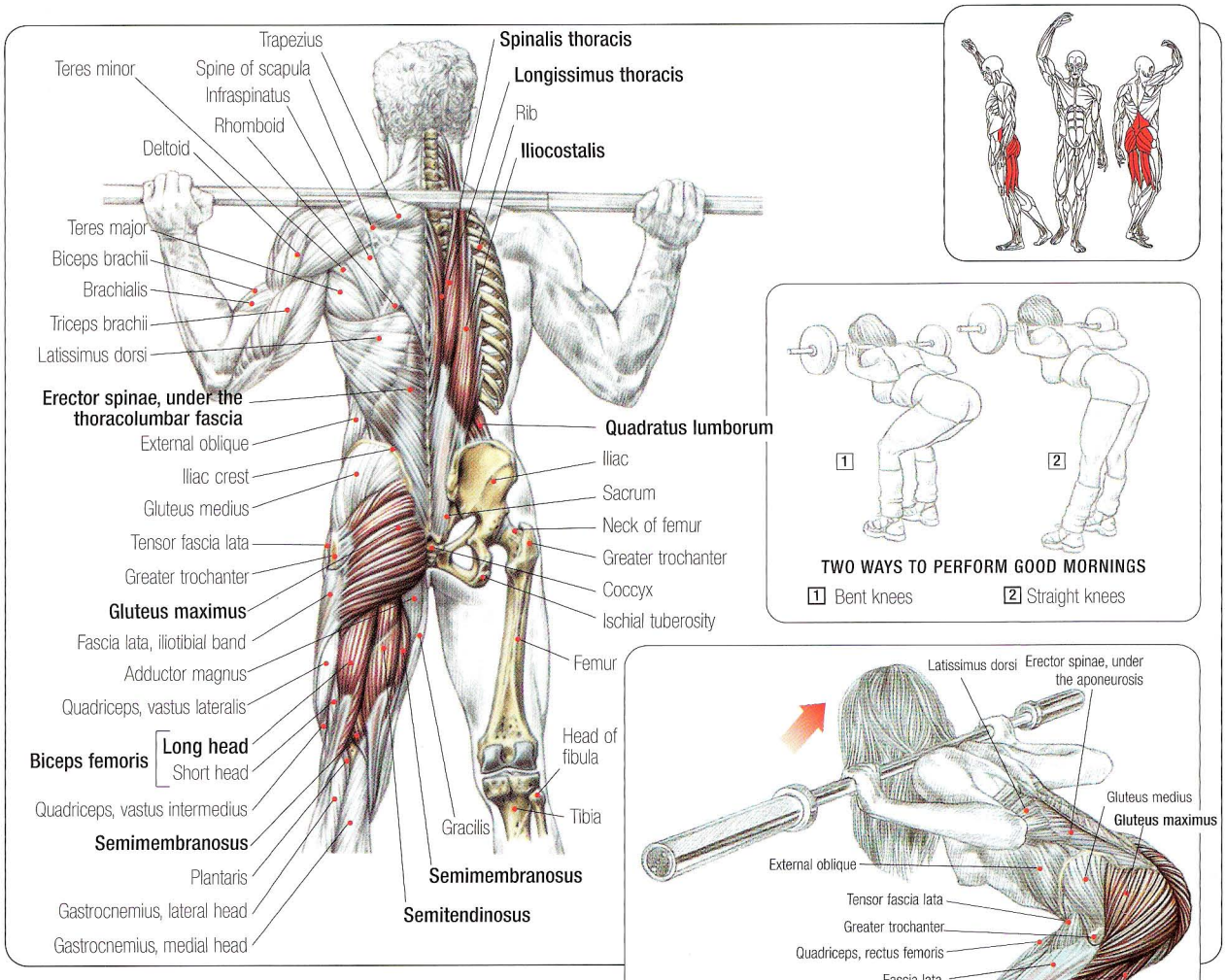
In today's modern world, sitting for long periods during the day can lead to retraction of the hamstring muscles in certain people.

This retraction of the muscles on the back of the thigh tips the pelvis back and reduces the normal curvature of the spine.

This causes the person to adopt poor posture with the pelvis tucked under and the back rounded, which over time can lead to vertebral injuries. To limit this relatively frequently occurring retraction of the hamstrings, stretching movements such as an easy good morning with straight legs and the stiff-legged deadlift are recommended. Hamstring stretches after a hamstring workout are also recommended.

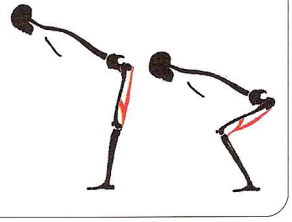
Comment: A massage therapist can also treat fibrous scars by using massage or mechanical techniques aimed at softening the lesion.

GOOD MORNINGS 11



Straightening the legs while tilting forward lengthens the hamstrings, helping to better feel the contraction while straightening the trunk.

Bending the knees while tilting forward allows the hamstrings to relax, which facilitates hip flexion.



Stand with the feet slightly apart and the bar resting on the trapezius or a little lower on the posterior deltoid:

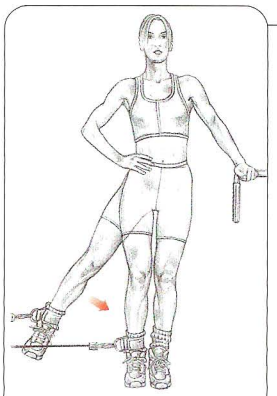
- Inhale and bend the torso forward, keeping the back straight. The axis of rotation should pass through the coxofemoral joints.
- Return to the initial position and exhale.

To make the exercise easier, bend slightly at the knees.

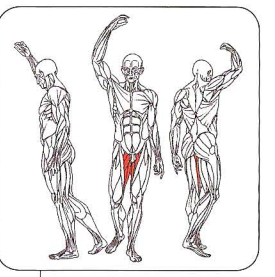
This movement, which works the gluteus maximus and the spinal group, is especially noteworthy for the action on the hamstrings (except the short head of the biceps femoris, which only flexes the knee). Besides knee flexion, the main function of the hamstrings is to tip the pelvis back (posterior rotation) and straighten the torso when the pelvis is locked to the torso through isometric contraction of the abdominal core and the lumbosacral muscle group.

To better feel the work of the hamstrings, don't work with heavy weights. In the negative phase, the good morning is excellent for stretching the back of the thighs. Worked regularly, it helps prevent injury when executing a heavy squat.

12 CABLE ADDUCTIONS

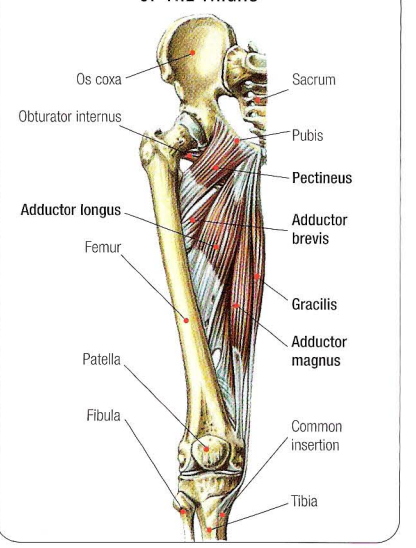


THE MOVEMENT



Gluteus medius
Tensor fascia lata
Iliopsoas
Pectineus
Adductor longus
Adductor magnus
Fascia lata, iliotibial band
Head of fibula
Patella
Patellar ligament
Tibialis anterior
Extensor digitorum longus
Peroneus longus
Tibia, medial surface
Gracilis
Rectus abdominis, under the aponeurosis
External oblique
Anterior superior iliac spine
Pyramidalis, under the aponeurosis
Pubic symphysis
Sartorius
Rectus femoris
Vastus lateralis
Vastus medialis
Vastus intermedius
Quadriceps
Gastrocnemius
Soleus
Flexor digitorum longus

ADDUCTOR MUSCLES OF THE THIGHS

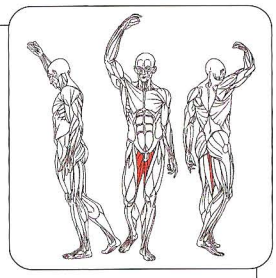


Stand on one leg, with the other leg in the ankle cuff and the hand of the supporting leg holding onto the machine:

- Pull the cable across the support leg.

This exercise works the adductor group (pectineus; adductors brevis, longus, and magnus; and gracilis). To develop definition of the inside of the thighs, perform sets of high repetitions.

MACHINE ADDUCTIONS 13



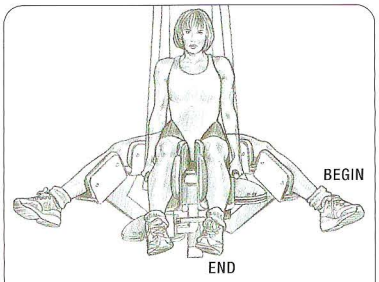
Anterior superior iliac spine
Anterior inferior iliac spine
Pubic symphysis
Pectineus
Adductor brevis
Adductor longus
Adductor magnus
Femur
Patella
Adductor tubercle
Tibial tuberosity
Medial meniscus
Tibia, subcutaneous medial surface
Metatarsals
Proximal phalanx
Distal phalanx
Sacrum
Head of femur
Ischial tuberosity
Calcaneus
Sustentaculum tali
Cuneiform
Navicular
Talus

Sit at the machine with the legs spread apart:

- Contract the thighs to bring the legs together.
- Return to the initial position with a controlled movement.

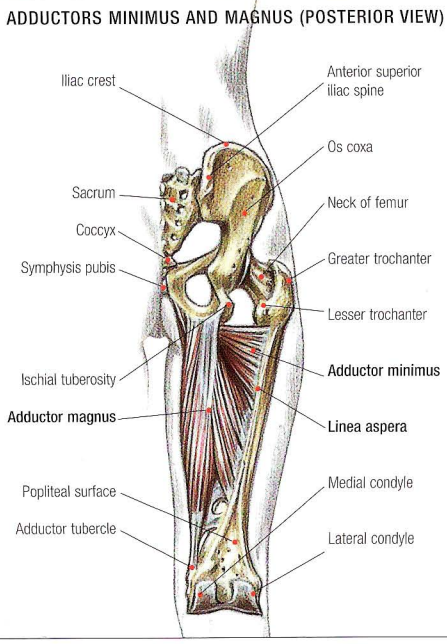
This exercise works the adductor muscle group (pectineus; adductors minimus, magnus, brevis and longus; and gracilis) and allows you to use heavier weights than you can with the cable adductions but with a decreased range of motion.
Best results are achieved in long sets until you feel a burn.

Comment: Perform this exercise to strengthen the adductors. This muscle group is often injured during intense exertion.
Therefore, increase the weights gradually and perform adductor muscle stretches at the end of the workout.



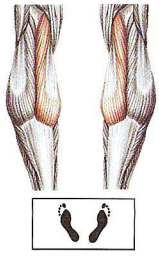
THE MOVEMENT

ADDUCTORS MINIMUS AND MAGNUS (POSTERIOR VIEW)

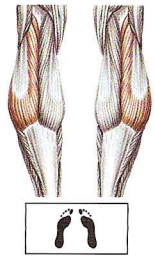


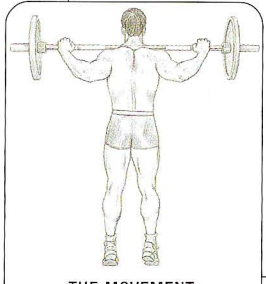
14 STANDING CALF RAISES

GASTROCNEMIUS MUSCLE MEDIAL HEAD

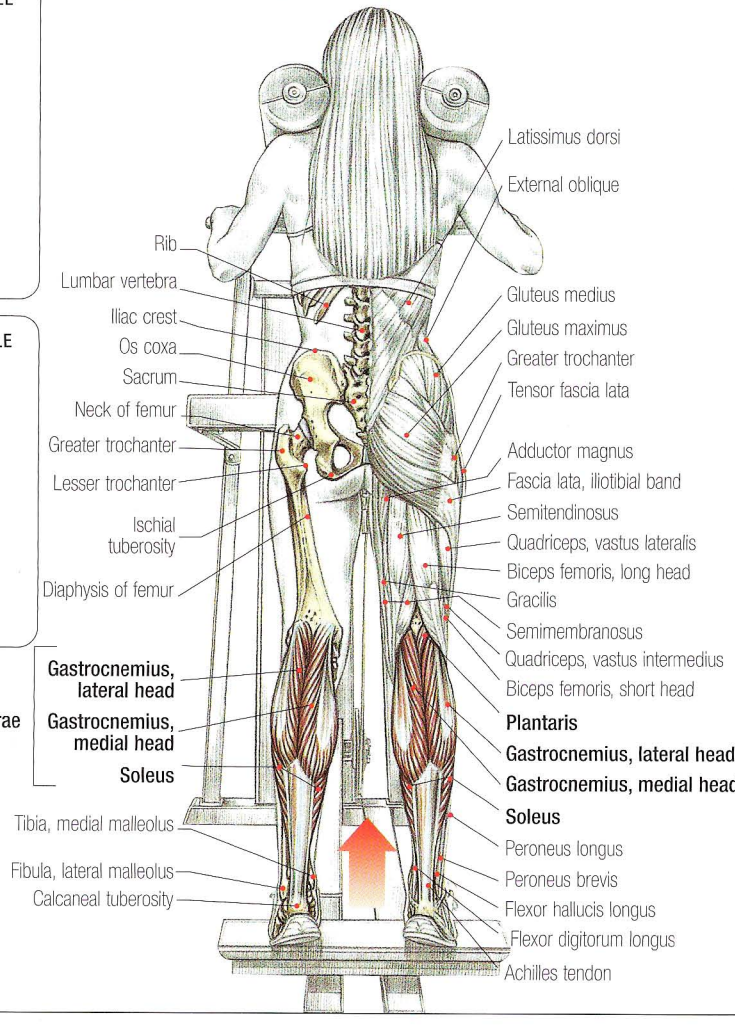


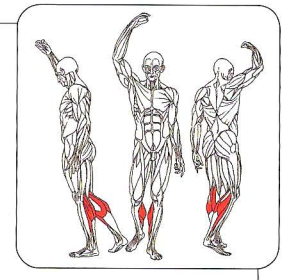
GASTROCNEMIUS MUSCLE LATERAL HEAD



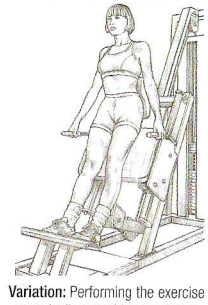


THE MOVEMENT





THE MOVEMENT



Variation: Performing the exercise at an incline machine works the calves without overloading the back.

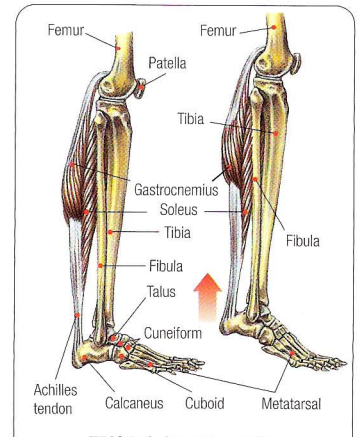
Stand at the machine with a straight back, shoulders under the pads, and the balls of the feet on the foot plate, with the calves relaxed and the heels hanging down:

- Rise up by extending (plantar flex) the feet, keeping the knees straight.

This exercise uses the triceps surae (made up of the soleus and the lateral and medial heads of the gastrocnemius). Move the feet through the complete range of flexion with each repetition in order to stretch the muscles properly. In theory, it is possible to isolate the medial gastrocnemius by pointing the toes out and to isolate the lateral gastrocnemius by pointing the toes in. But in practice, this is difficult to achieve. Only separating the work of the soleus and gastrocnemius is easy to achieve. This is done by flexing the knees to relax the gastrocnemius and to put more effort on the soleus.

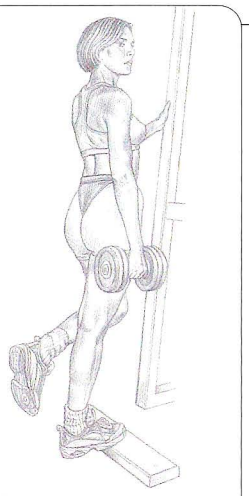
Variations: Perform the exercise at a frame with a wedge under the feet or with a free bar without the wedge for more balance; however, this reduces the amplitude of movement.

Comment: The triceps surae is an extremely powerful, tough muscle group that alone raises the entire weight of the body thousands of times in a day when we walk. Don't hesitate to work it with heavy weights.

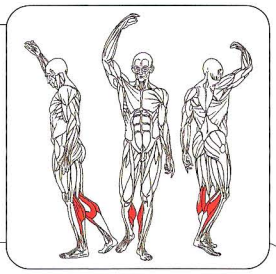


TRICEPS SURAE ACTION

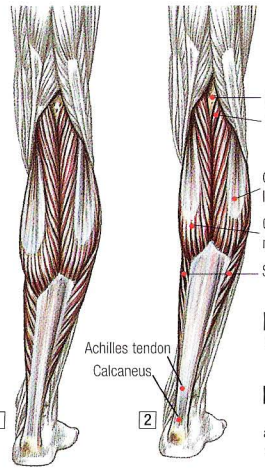
ONE-LEG TOE RAISES 15



INITIAL POSITION



TWO TYPES OF CALVES



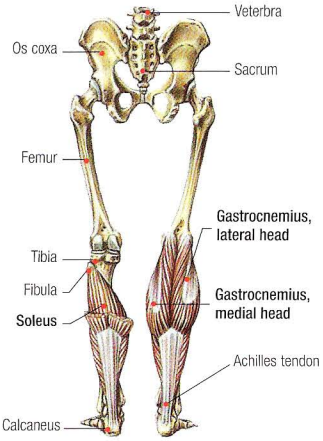
1 Long calf: Gastrocnemius and soleus are low

2 Short calf: Gastrocnemius and soleus are high with a long tendon.

Comment: Some people have an unusual triceps surae that does not grow larger with training. These people can develop strength only. Long gastrocnemius and soleus muscles develop easily. Conversely, short calves resist developing bulk.

Biceps femoris, long head
Semitendinosus
Biceps femoris, short head
Semimembranosus
Fascia lata
Quadriceps, vastus externus
Quadriceps, vastus intermedius
Patella
Peroneus longus
Extensor digitorum longus
Tibialis anterior
Peroneus brevis
Extensor hallucis longus
Peroneus tertius
Triceps surae
Gastrocnemius, medial head
Gastrocnemius, lateral head
Soleus
Achilles tendon
Calcaneus

TRICEPS SURAE MUSCLE GROUP

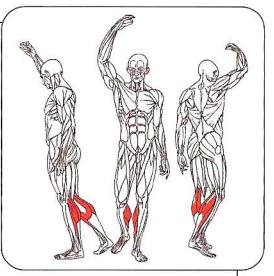


Stand with the toes of one foot on the foot plate and hold a dumbbell in one hand and use the other hand for support and balance:

- Rise up on the toes (plantar flexion), keeping the knee joint straight or slightly flexed.
- Return to the initial position.

This exercise contracts the triceps surae. Completely flex the foot with each repetition in order to stretch the triceps surae properly. Optimal results are obtained through long sets until you feel a burn.

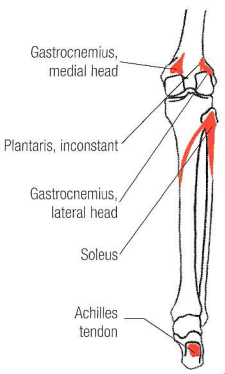
16 DONKEY CALF RAISES



Fascia lata, iliotibial band
Quadriceps: Vastus lateralis, Vastus medialis
Biceps femoris, short head
Patella
Head of fibula
Triceps surae: **Gastrocnemius, lateral head**, **Gastrocnemius, medial head**, **Soleus**
Peroneus longus
Extensor digitorum longus
Tibialis anterior
Flexor digitorum longus
Extensor hallucis longus
Extensor retinaculum
Lateral malleolus

Gastrocnemius, medial head
Soleus
Triceps surae
Tibia, medial face
Medial malleolus
Peroneal retinaculum

TRICEPS SURAE INSERTION



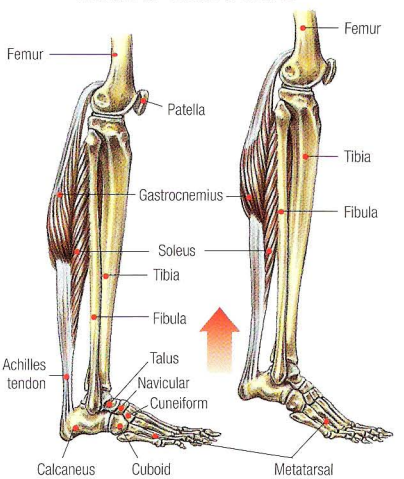
Stand with the legs relaxed, toes on the foot plate and heels hanging down, legs extended, torso leaning forward, forearms resting on the front support, and the padded plate of the machine resting on the back of the hips:

- Rise up by extending the ankles and pointing the toes (plantar flexion).

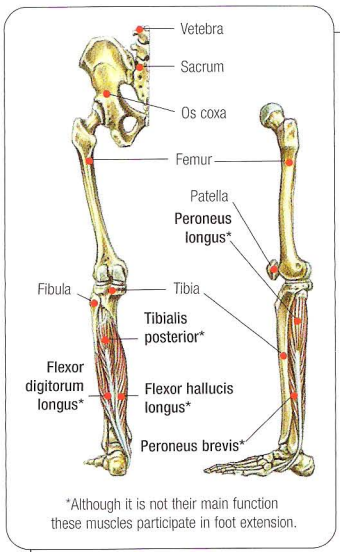
This exercise focuses on the triceps surae, especially the gastrocnemius.

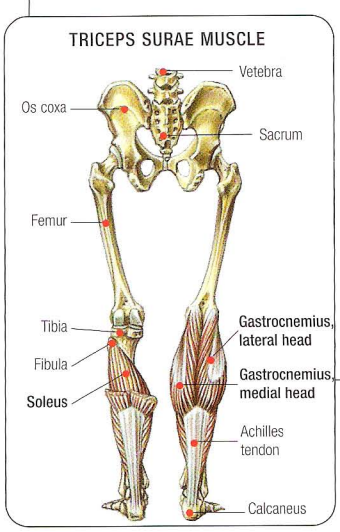
Variation: If there's no machine for this exercise, put a block under the feet, bend forward, and rest the forearms on a support, and perform this exercise while someone straddles your hips.

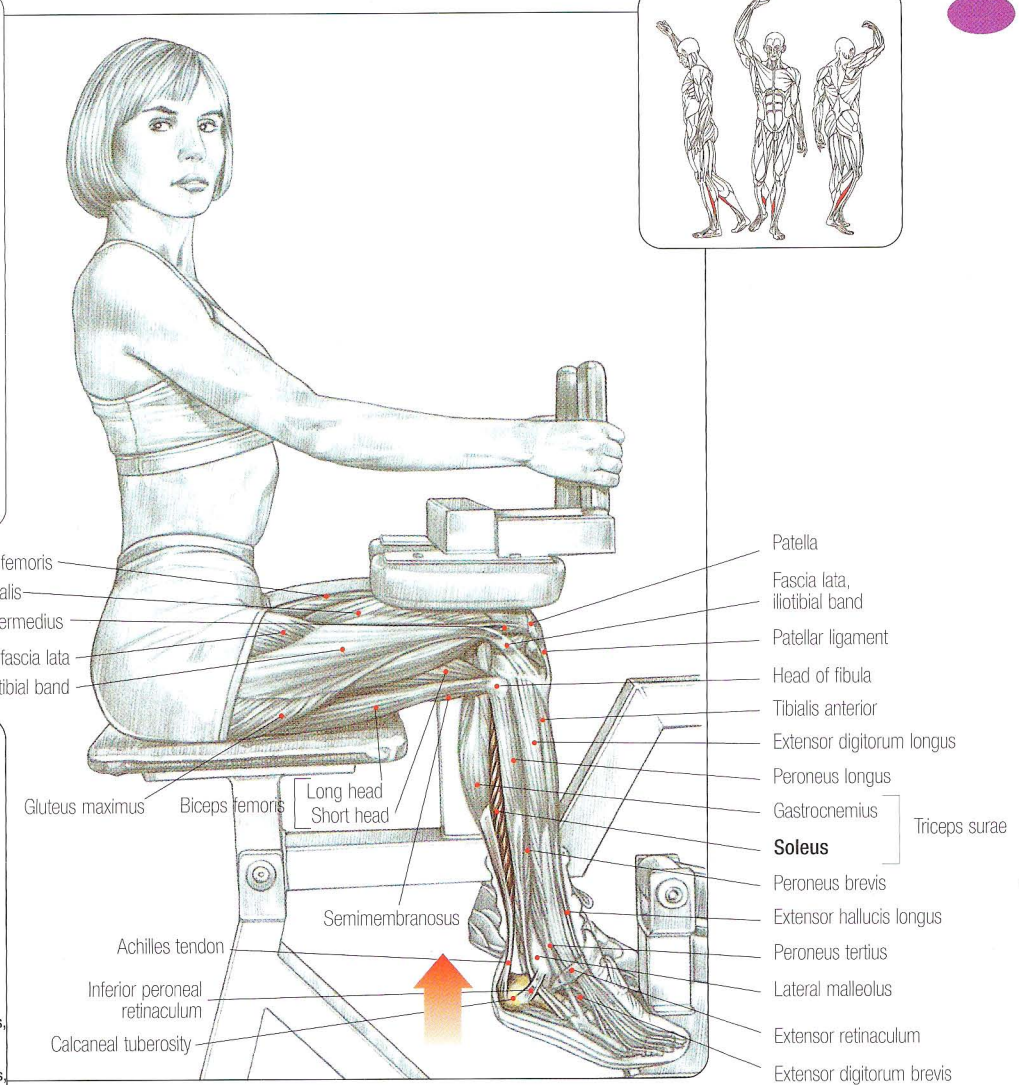
ACTION OF TRICEPS SURAE



SEATED CALF RAISES 17







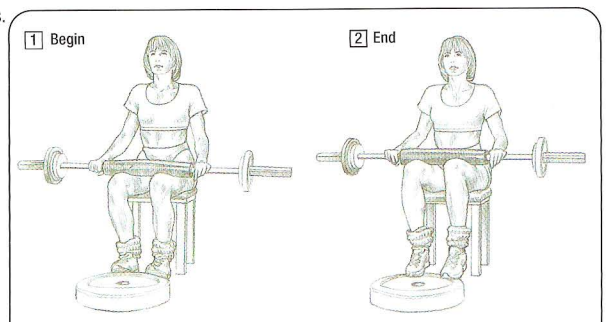
Sit at a machine, with the knees positioned under the pads, the toes on the foot bar, and the ankles relaxed:

- Extend the feet and point the toes.

This exercise isolates the soleus, whose name is derived from its resemblance to the flat fish, the sole. (This muscle inserts at the top at the tibia and fibula under the knee joint and attaches at the bottom to the calcaneus by the Achilles tendon. Its purpose is to extend the feet at the ankles.)

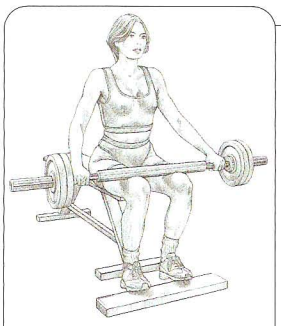
Bending at the knees relaxes the gastrocnemius, which attaches at the top above the knee joint and at the bottom onto the Achilles tendon, and reduces its contribution to ankle extension.

Variation: You can also perform this exercise by sitting on a bench with a wedge under the feet and a barbell resting on the thighs. Wrap the bar for comfort.

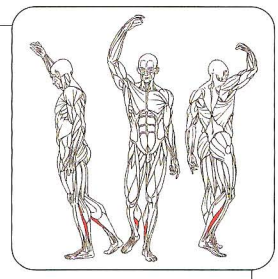


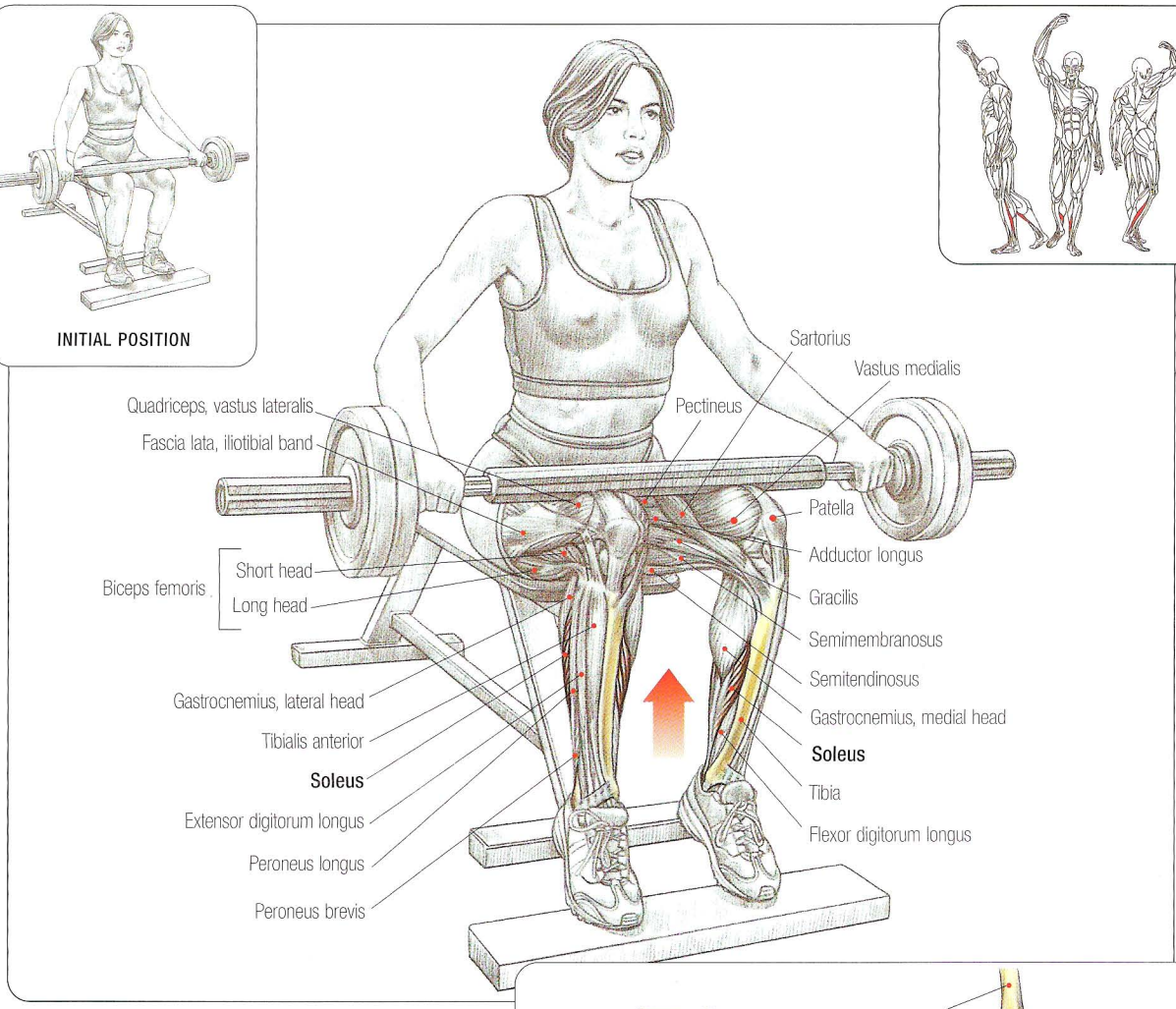
VARIATION WITH A BARBELL RESTING ON THE KNEES

18 SEATED BARBELL CALF RAISES



INITIAL POSITION





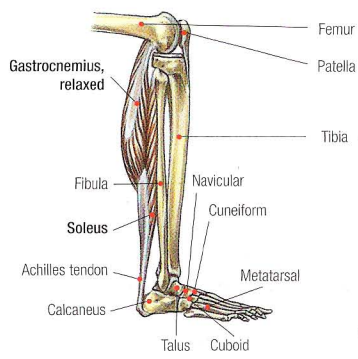
Sit on a bench with a block under the toes and the barbell resting on the thighs:

- Extend (plantar flex) the ankle.

Attention: Cushion the bar on the thighs with a rubber pad or a folded towel to reduce pain.

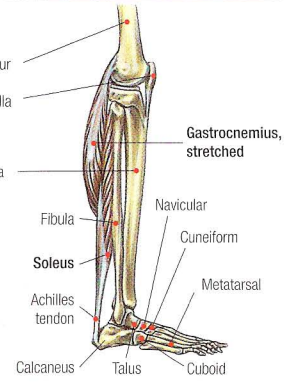
This exercise mainly uses the soleus. This muscle, which is part of the triceps surae group, inserts at the top below the knee joint on the tibia and fibula. At the bottom, it attaches to the calcaneus via the Achilles tendon. Its function is to extend the feet at the ankles. Unlike the calf raises, which allow you to work with heavy weights, this exercise does not allow heavy weights because of the awkwardness of the bar position. For best results, work in sets of 15 to 20 repetitions.

Variation: You can also perform this exercise without additional weights while sitting on a chair or bench. In this case, work in very long sets until you feel a burn.



1

When the knees are bent, the gastrocnemius muscle, which attaches above the knee, is relaxed. In this position, it weakly assists ankle extension because most of the work is done by the soleus.



2

Conversely, when the knee is straight, the gastrocnemius is stretched. In this position, it actively participates in ankle extension and completes the action of the soleus.

6 BUTTOCKS

Gluteal muscles, a human characteristic

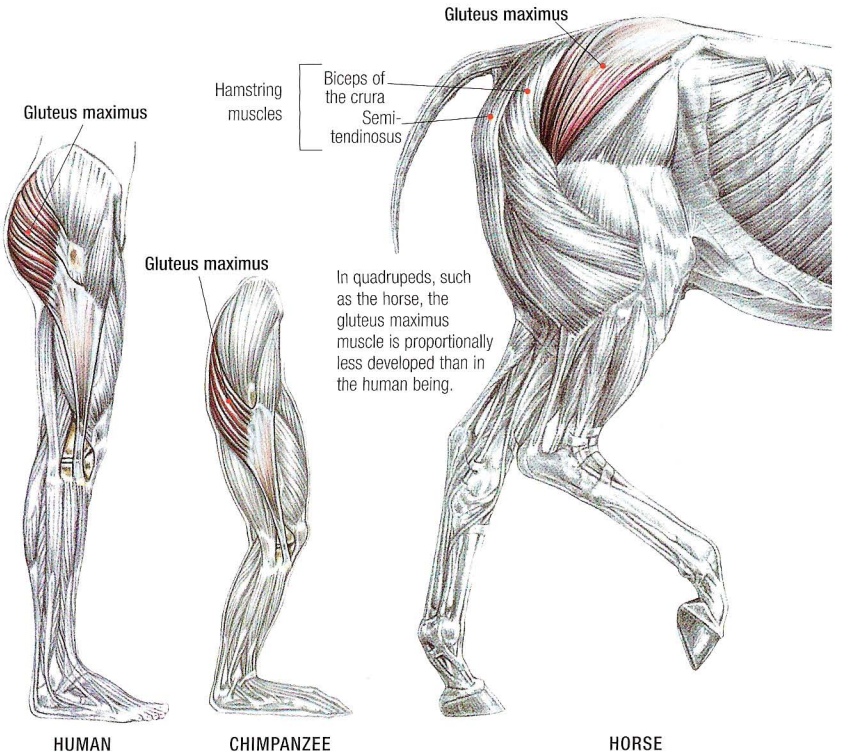
Although some of the larger primates occasionally walk, humans are the only primates and one of the few mammals that has completely adapted to two-legged locomotion. One of the structural features directly related to this way of getting around is the significant development of the gluteus maximus muscle, which has become the biggest and most powerful muscle in the human body.

The development of the gluteal muscles is truly a human characteristic. In comparison, the gluteal muscles in quadrupeds are proportionately underdeveloped, and the hindquarters of the horse, which some consider as typical for animals, is in fact made up of the hamstrings (the back of the thigh in humans).

In humans, the gluteus maximus, which extends the hip, does not play an important role in walking. Instead, the hamstrings play the major role in straightening the pelvis (hip extension) with each stride. Just put your hand on the buttocks while walking, and you can feel that they do not contract much.

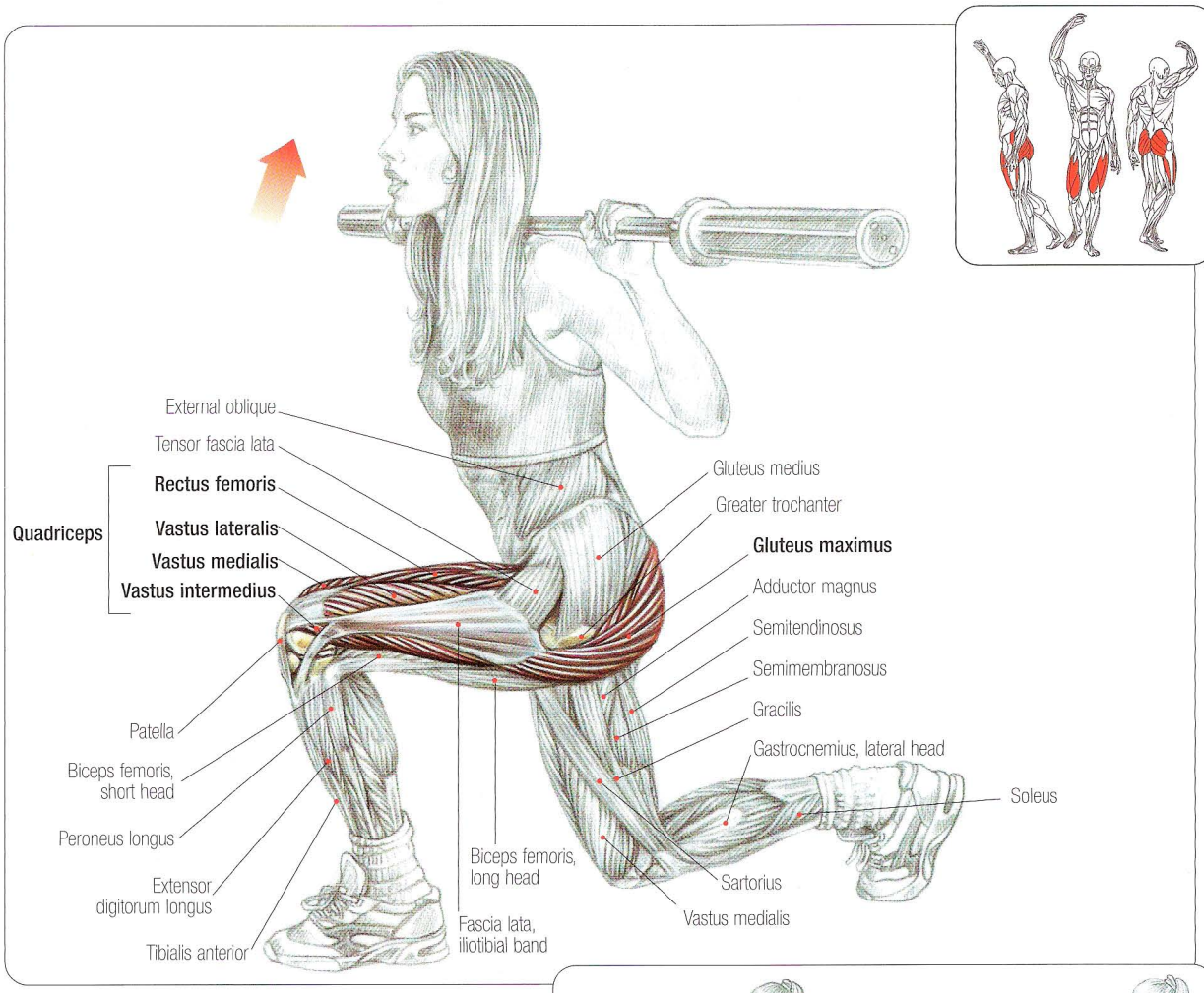
However, as soon as the effort becomes significant, such as when walking uphill, walking quickly, or running, the gluteal action is called into play to extend the hip and erect the torso.

These biomechanical points help explain why in exercises for the gluteal muscles and the hamstrings, such as good mornings (see page 107) and leg raises, either the gluteal muscles or the hamstrings are isolated depending on the amount of weight involved.



1 LUNGES 116
2 DUMBBELL LUNGES 117
KNEE INSTABILITY 118
3 CABLE BACK KICKS 119
4 MACHINE HIP EXTENSIONS 120
5 FLOOR HIP EXTENSIONS 121
6 BRIDGING 122
7 CABLE HIP ABDUCTIONS 123
INDIVIDUAL VARIATIONS IN HIP MOBILITY 124
8 STANDING MACHINE HIP ABDUCTIONS 125
9 FLOOR HIP ABDUCTIONS 126
10 SEATED MACHINE HIP ABDUCTIONS 127

1 LUNGES

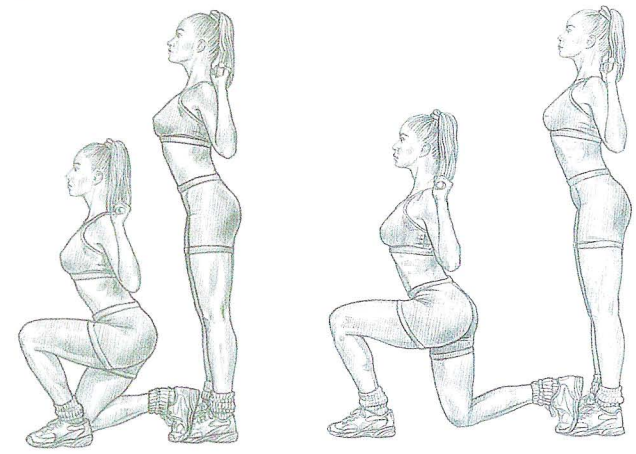


Stand with the legs slightly apart and the bar behind the neck resting on the trapezius muscles:

- Inhale and take a big step forward, keeping the trunk as straight as possible.
- Lunge until the front thigh is horizontal to the floor or slightly less.
- Exhale and return to the initial position.

This exercise, which works the gluteus maximus intensely, can be performed two different ways: either by taking a small step (which isolates the quadriceps) or taking a big step (which isolates the hamstrings and gluteus maximus and stretches the rectus femoris and iliopsoas of the back leg).

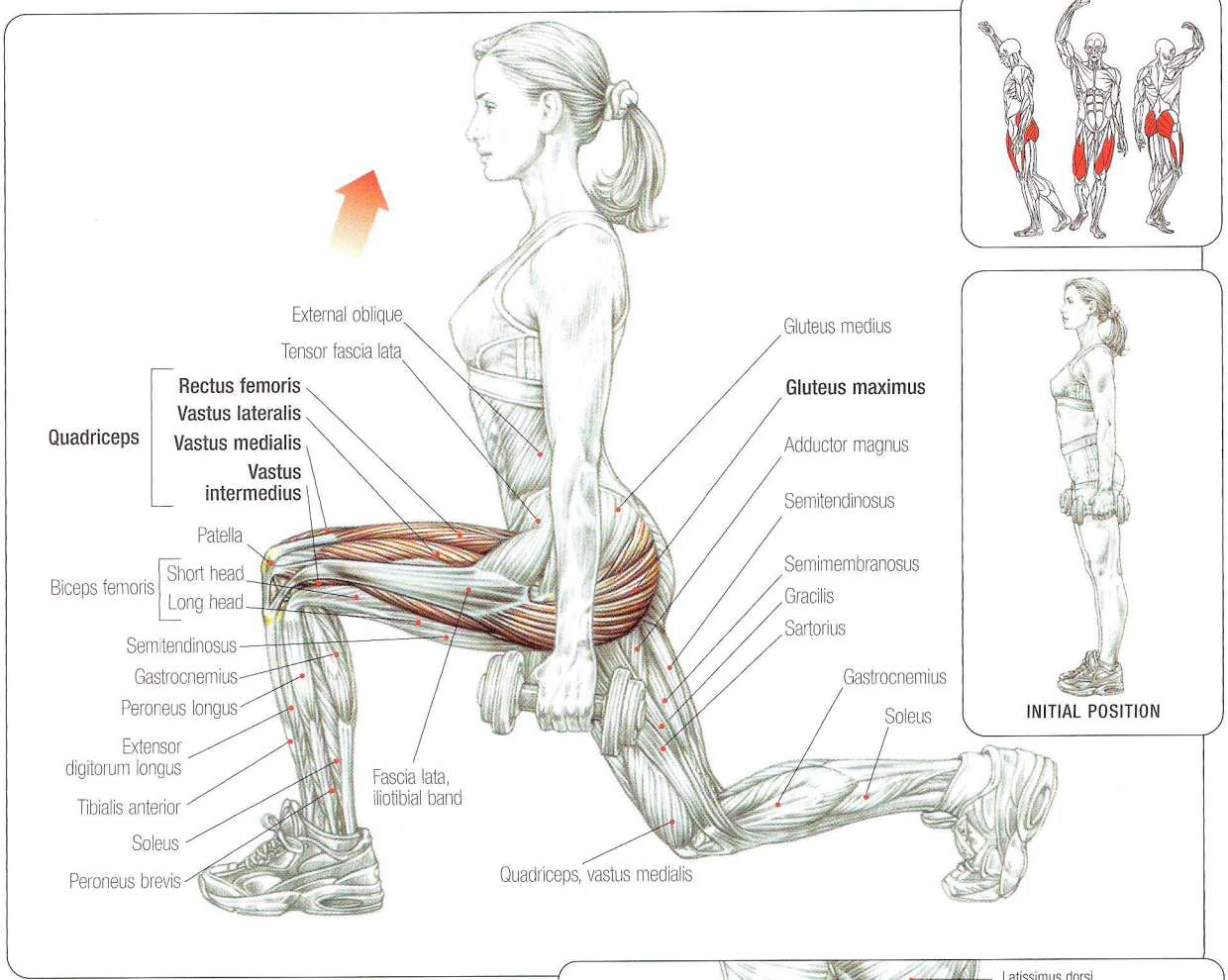
Comment: Because the front leg must support almost all the weight in the lunge position and the exercise demands a good sense of balance, begin with very light weights.



1 EXECUTION WITH A SMALL STEP: PREDOMINANTLY WORKS THE QUADRICEPS

2 EXECUTION WITH A BIG STEP: PREDOMINANTLY WORKS THE GLUTEUS MAXIMUS

DUMBBELL LUNGES 2



INITIAL POSITION

Stand with the legs slightly apart and hold a dumbbell in each hand:

- Inhale and take a big step forward, keeping the torso as straight as possible.
- When the forward thigh reaches horizontal or slightly below, use tonic extension to return to the initial position.
- Exhale at the end of the movement.

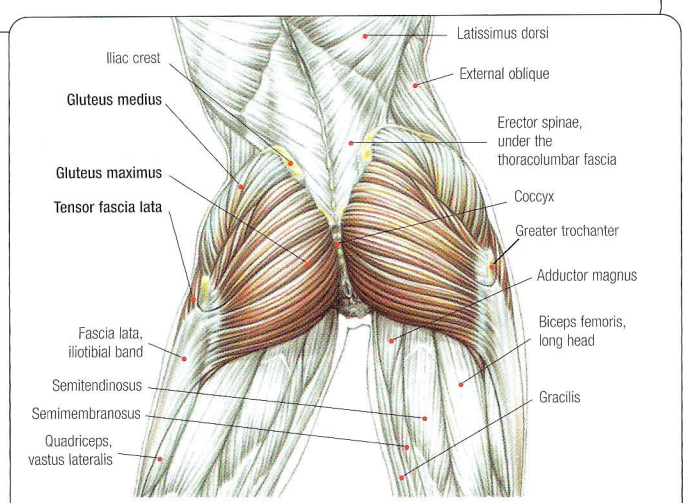
This exercise mainly works the gluteus maximus and quadriceps.

Variations: The bigger the step, the more the gluteus maximus of the forward leg is used and the iliopsoas and rectus femoris of the back leg is stretched.

A smaller step isolates the quadriceps of the forward leg.

You can perform a complete set on one side and then the other or work the legs alternately during the same set.

Comment: Because all of the weight is supported by the front leg in the lunge position and the exercise requires a good sense of balance, work with light weights to protect the knee.



ANATOMY OF THE BUTTOCKS

KNEE INSTABILITY

When the knee is extended, the medial and lateral collateral ligaments are stretched and prevent rotation of the joint. When you are standing, the knee locks in extension, and there is no need for muscle tension to stabilize the joint.

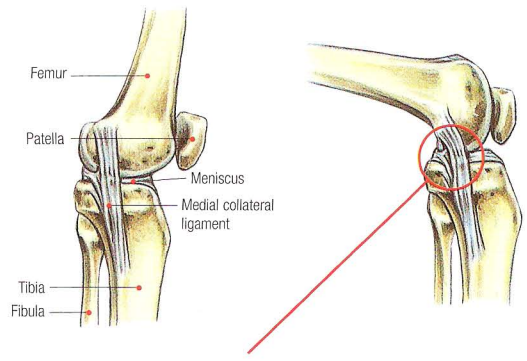
When the knee is bent, the medial and lateral collateral ligaments are relaxed. In this position muscle tension provides the stability.

When the knee flexes and rotates, the meniscus travels forward. Then, if extension is not controlled, the meniscus may not return to its normal position fast enough and becomes pinched between the condyles, which can tear the meniscus. If a piece of the meniscus is severed when it is pinched, surgery may be necessary to remove it.

With asymmetrical exercises such as the lunge (see page 116), control the speed and the form of the movement to protect the knee.

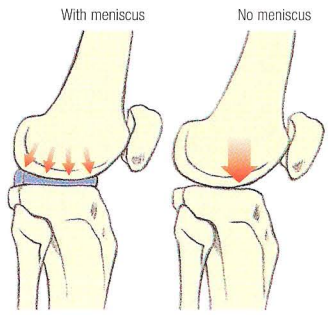
1 KNEE IN EXTENSION

2 KNEE IN FLEXION



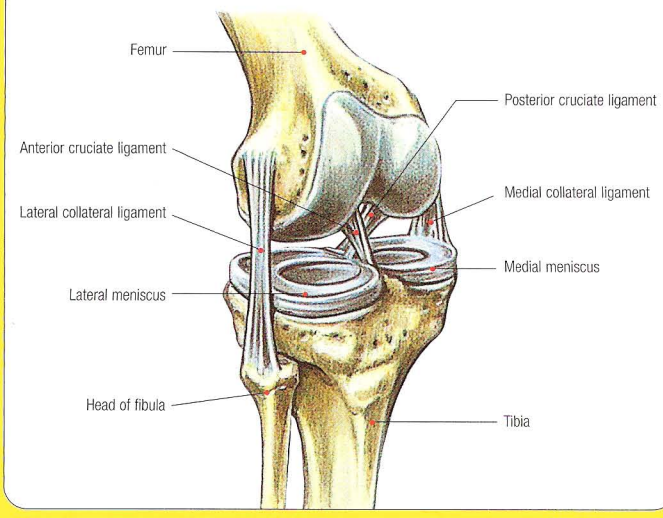
When the knee is flexed, the lateral ligaments are relaxed. Rotation of the joint is possible.

MENISCI

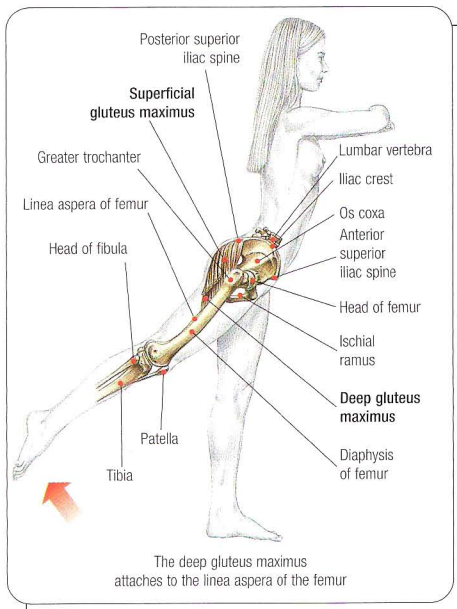


One of the main functions of the meniscus is to disperse pressure in the knee joint by increasing the supporting surface area for the femur on the tibia, avoiding premature wear on the articular surfaces.

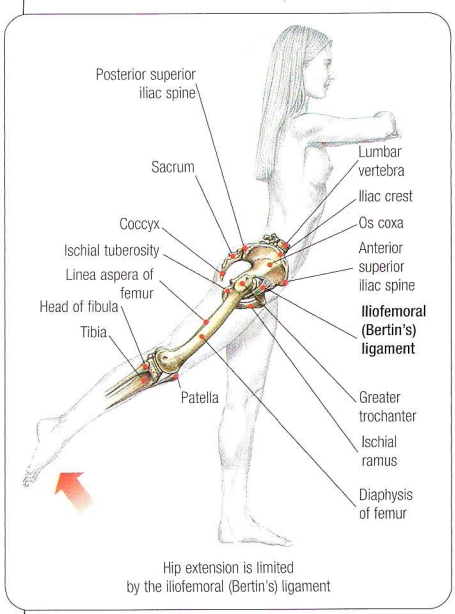
MENISCI AND KNEE LIGAMENTS



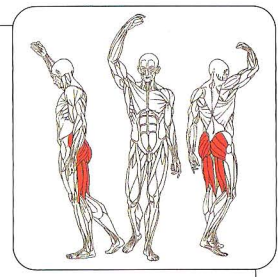
CABLE BACK KICKS 3

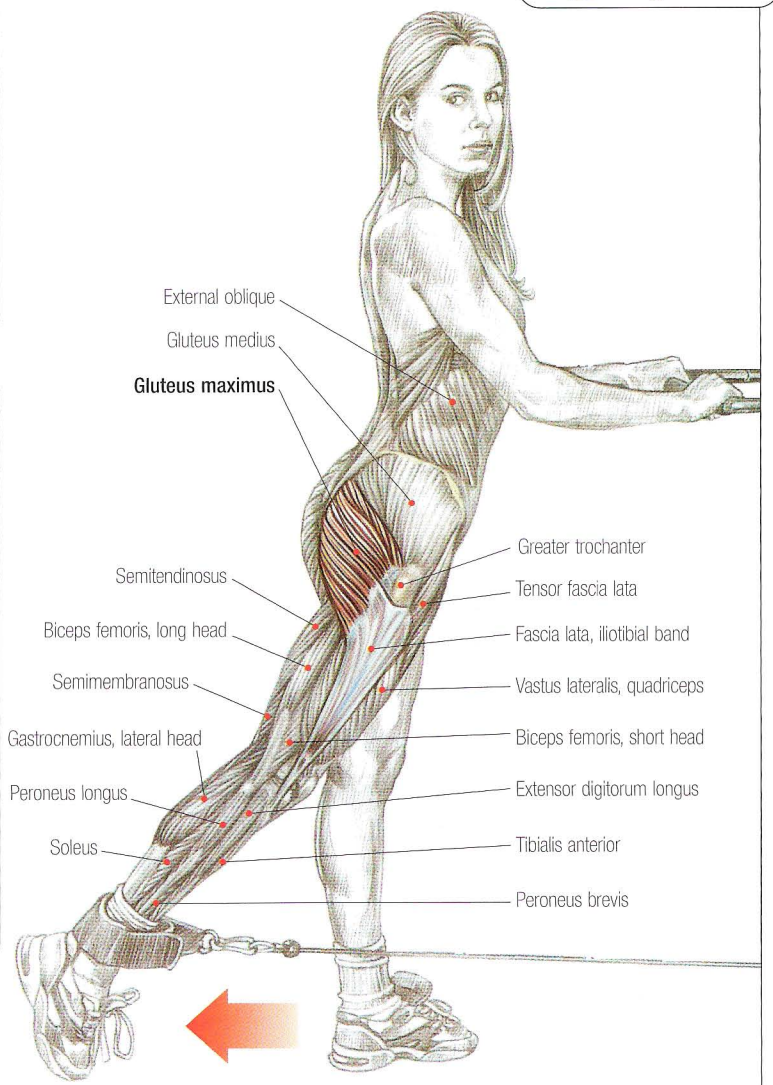


The deep gluteus maximus attaches to the linea aspera of the femur



Hip extension is limited by the iliofemoral (Bertin's) ligament





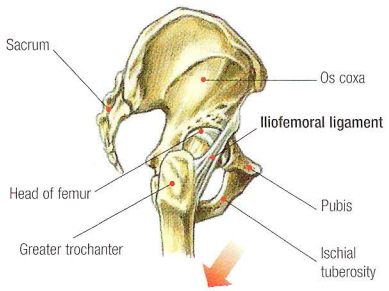
Stand on one leg facing the machine, the other leg attached to the ankle strap of the low pulley, and the pelvis tilted forward. Grasp the handle:

- Extend the hip and pull the leg back.
- Hip extension is limited by the tension of the iliofemoral (Bertin's) ligament.

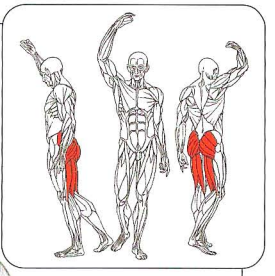
This exercise mainly works the gluteus maximus and, to a lesser extent, the hamstrings (except the short head of biceps femoris).

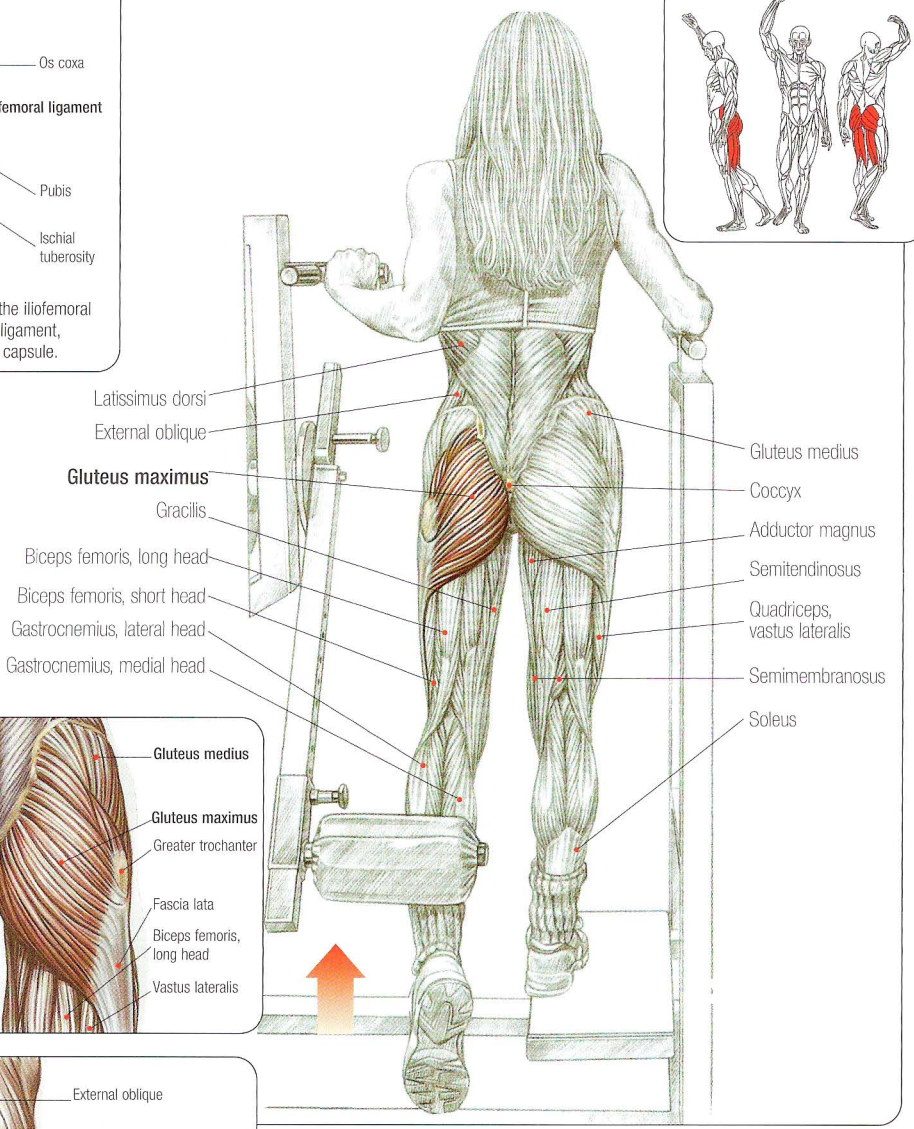
It helps develop the profile of the hips while firming the gluteal region.

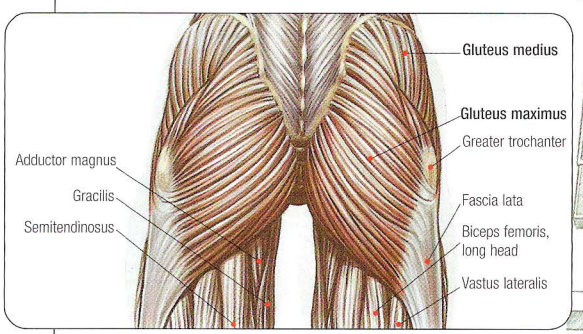
4 MACHINE HIP EXTENSIONS

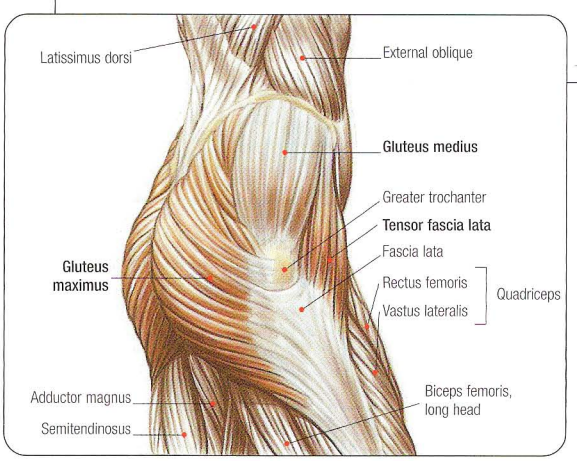


Hip extension is limited by the tension of the iliofemoral ligament, also referred to as Bertin's ligament, which is a thickening of the articular capsule.







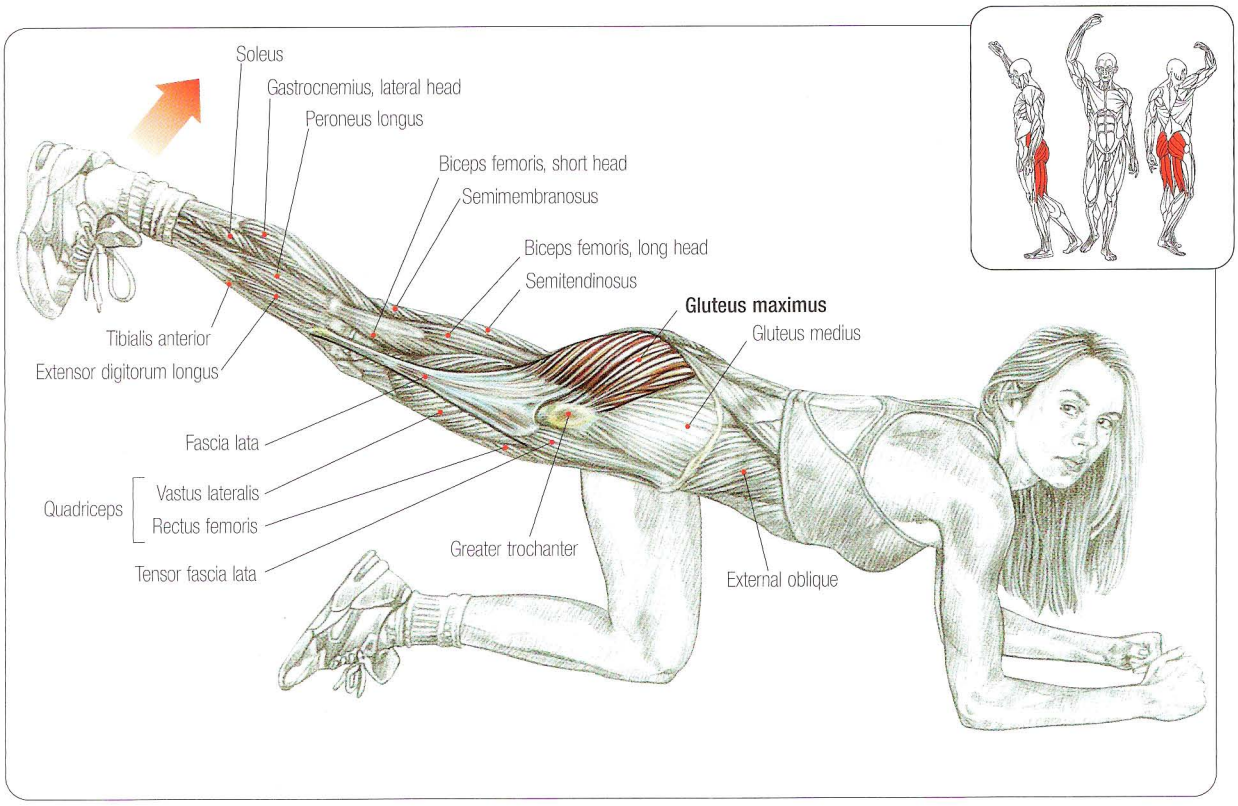


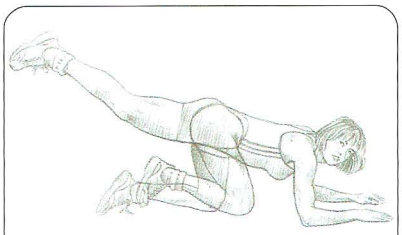
Stand on one leg with the other slightly forward and position the roll against the calf halfway between the knee and ankle. Lean the torso forward slightly and grasp the handles:

- Inhale and push the thigh back until the hip is hyperextended.
- Maintain the position with an isometric contraction for a couple of seconds.
- Return to the initial position.
- Exhale at the end of the extension.

This exercise mainly works the gluteus maximus and, to a lesser extent, the semitendinosus, semimembranosus, and the long head of the biceps femoris.

FLOOR HIP EXTENSIONS 5





THE MOVEMENT

Kneel on one leg and bring the other knee to the chest while leaning on the elbows or on the hands with the arms extended:

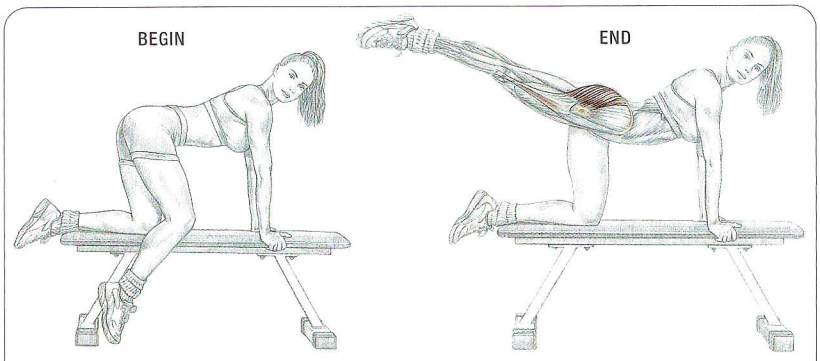
- Extend the bent leg back with complete hip extension.

With the leg extended, this exercise uses the hamstrings and gluteus maximus. With the knee bent, only the gluteus maximus is used and less intensely.

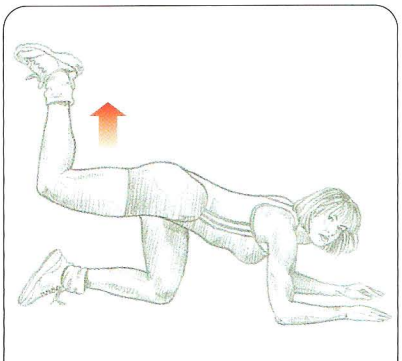
This exercise can be performed with higher or lower amplitude during the last part of the extension. You can maintain an isometric contraction for a couple of seconds at the end of the movement.

To increase the intensity, use ankle weights.

Its ease of execution and its effectiveness has made this exercise popular, and it is frequently used in group classes.

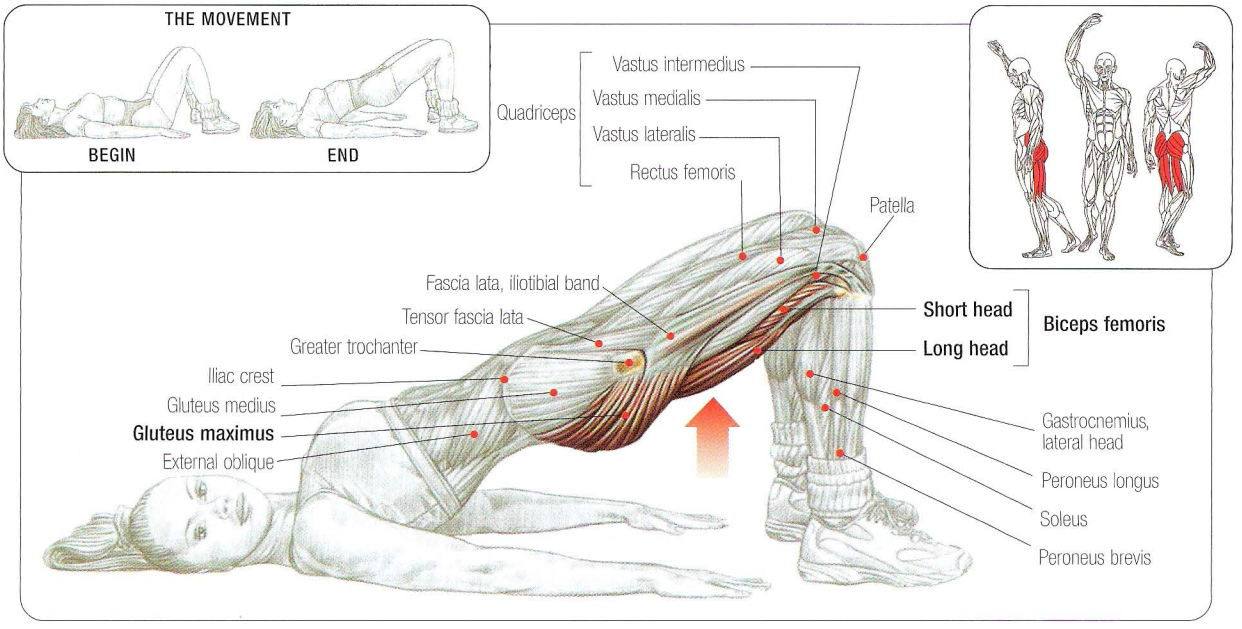


VARIATION ON A BENCH



VARIATION WITH BENT KNEE

6 BRIDGING



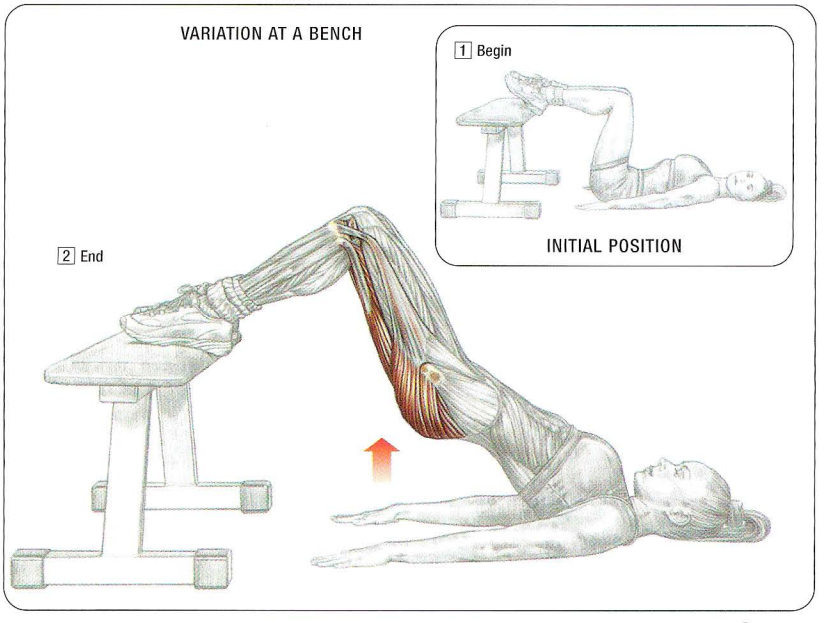
Lie on the back, with hands flat on the ground, arms alongside the body, and knees bent:

- Inhale and lift the buttocks off the ground, pushing down through the feet.
- Maintain the position for a couple of seconds and lower the pelvis without touching the buttocks on the ground.
- Exhale and begin again.

This exercise mainly works the hamstrings and gluteus maximus.

Perform this exercise in long sets, making sure to contract the muscles at the top of the lift, when the pelvis is off the ground.

Comment: Because it is easy and effective, bridging has become part of most group exercise classes.



Variation 1:

To perform bridging with the feet raised, lie on the back, with hands flat at the sides, arms alongside the body, thighs vertical, and feet resting on a bench:

- Inhale and raise the pelvis off the ground; maintain the position for two seconds and lower without touching the buttocks to the ground.
- Exhale and begin again.

This exercise works the gluteus maximus and especially the hamstrings. The hamstrings are used more in this exercise than when bridging from the ground. Execute this exercise slowly, and focus on the muscle contraction.

Sets of 10 to 15 repetitions provide the best results.

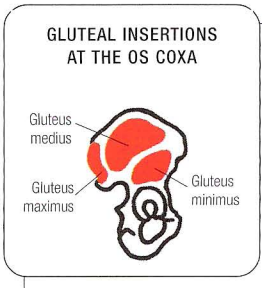
Another variation is to perform bridging with the calves resting on the bench. This isolates the hamstrings even more intensely and also requires strong work from the gastrocnemius.

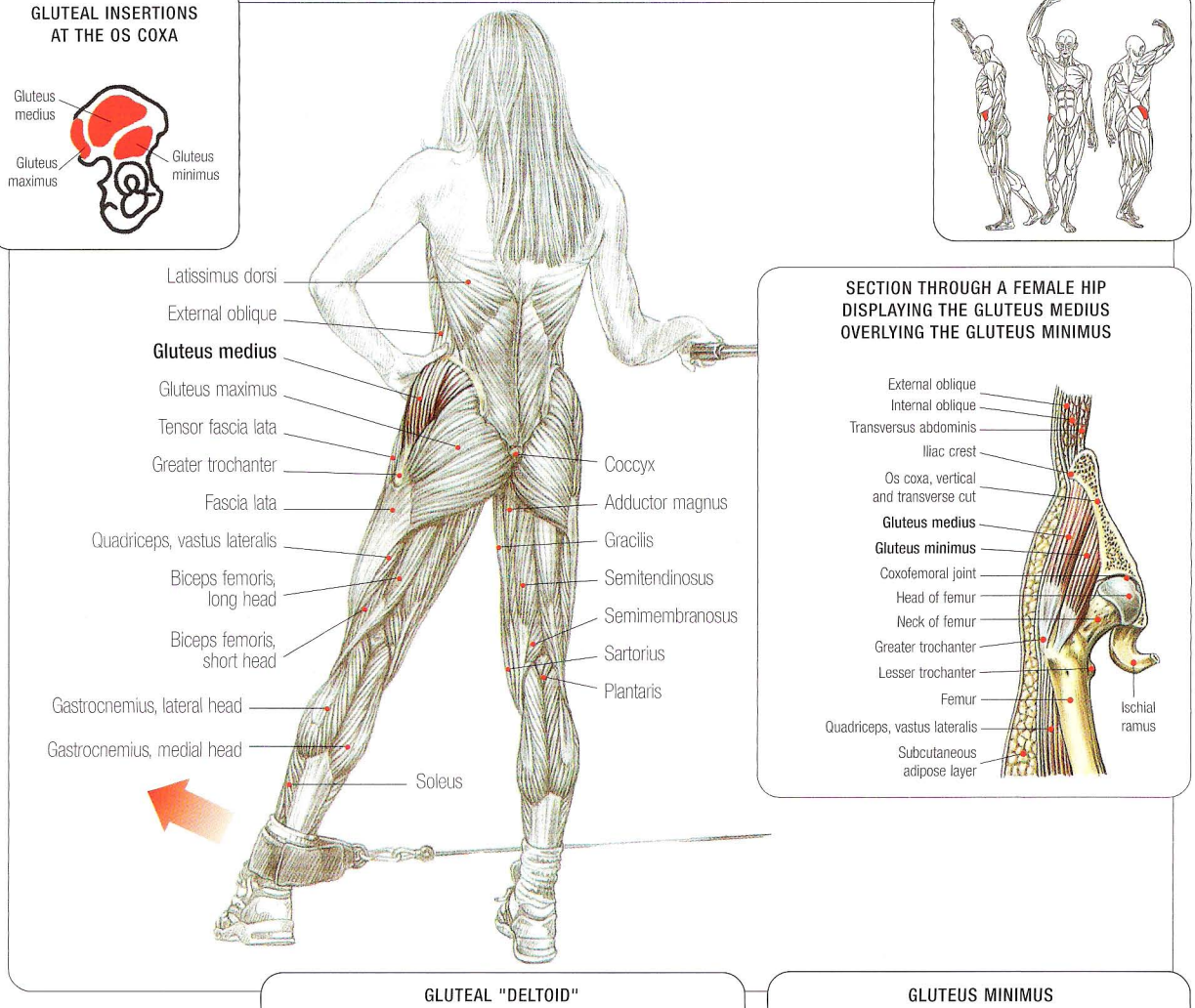
Variation 2:

Limit the range of the movement by not lowering the pelvis as far and create a burn.

Comment: Bridging is actually extending the hips.

CABLE HIP ABDUCTIONS 7



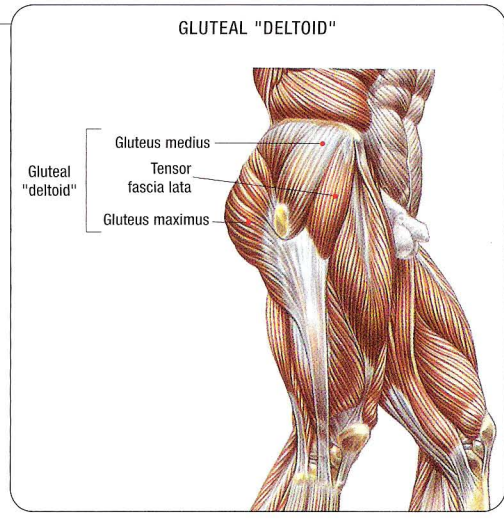


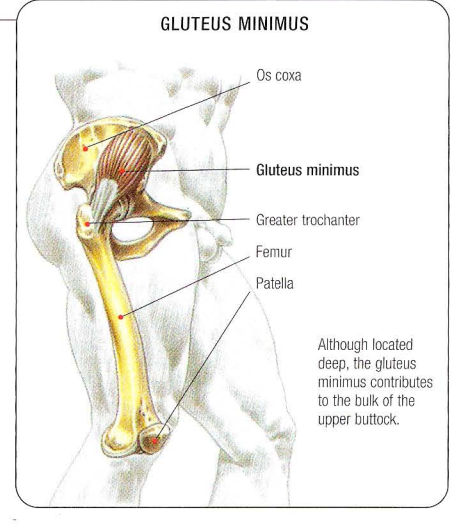
Stand on one leg with a pulley attached to the other ankle:

- Raise the leg laterally as high as possible.

This exercise mainly works gluteus medius and the deeper gluteus minimus.

Long sets until you feel a burn are most effective.





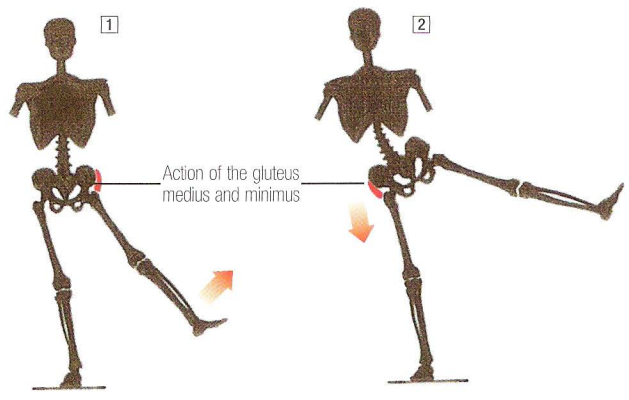
INDIVIDUAL VARIATIONS IN HIP MOBILITY

Regardless of individual muscle elasticity and ligamentous tension, it is mainly the shape of the bones of the coxofemoral joint that is responsible for hip mobility. The configuration of the bone is most important in hip abduction.

Example

- When the neck of the femur is almost horizontal (coxa vara) and associated with a well-developed superior rim of the acetabulum covering the head of the femur, abduction movements are limited.
- When the neck of the femur is close to vertical (coxa valga) and associated with an undeveloped superior acetabular rim, abduction movements are facilitated.

Therefore, it is useless to try to raise the leg high laterally if your hip joint is not made for it.

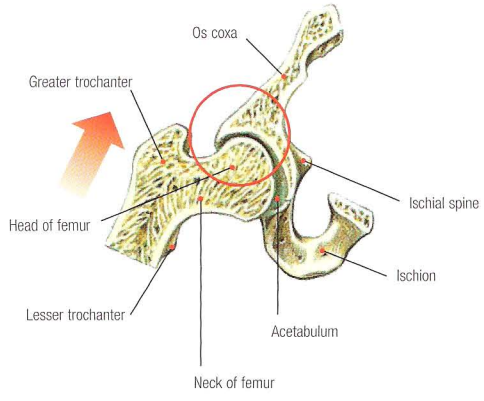


1 Abduction of the hip (limited by the neck of the femur butting against the acetabulum)

2 Forced abduction of the hip (tilting the pelvis onto the head of the opposite femur)

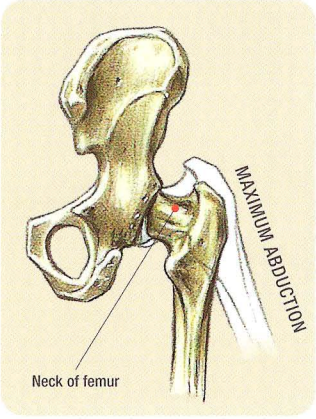
ATTENTION

If hip abduction is forced, the neck of the femur will butt up against the rim of the acetabulum, and the pelvis will tilt onto the head of the opposite femur to compensate for lateral extension of the leg. When some people perform sets of forced abductions, over time microtrauma may occur, which develops excessive growth of the superior rim of the acetabulum, limiting the mobility of the hip and risking painful inflammation.

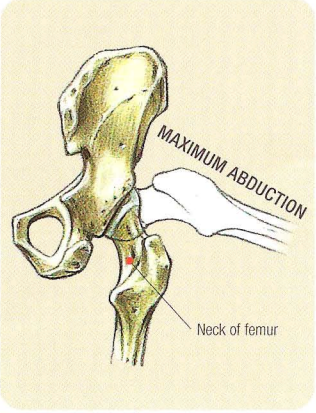


ABDUCTION IS LIMITED BY THE NECK OF THE FEMUR BUTTING UP AGAINST THE RIM OF THE ACETABULUM.

VARIATIONS IN OSSEOUS HIP STRUCTURE



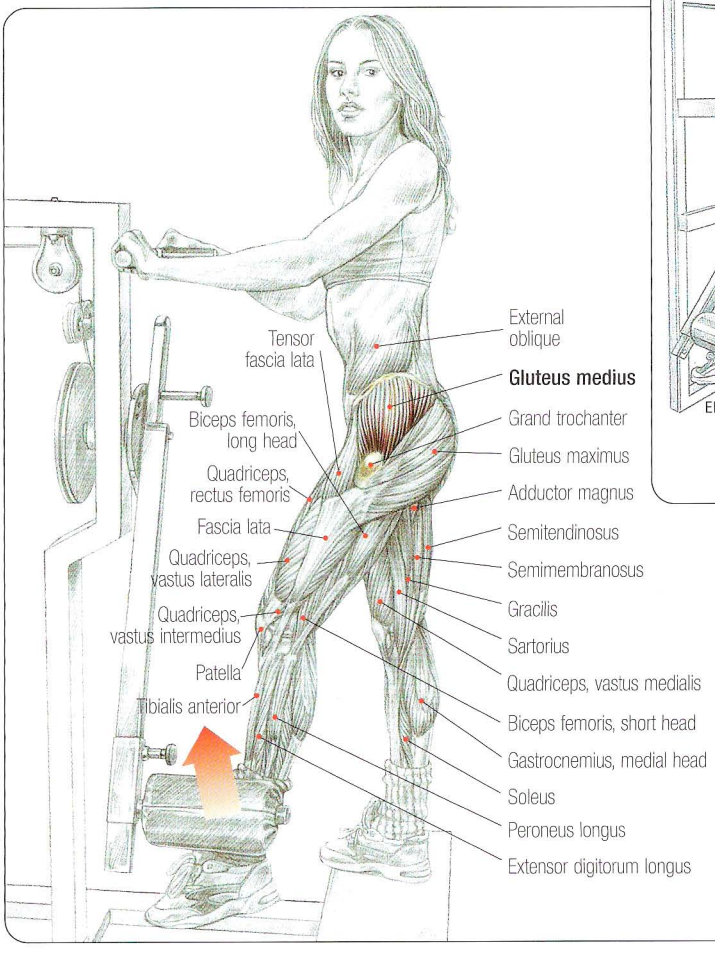
An almost horizontal neck of the femur is referred to as a **coxa vara**. It limits abduction movements because it butts up against the rim of the acetabulum sooner.

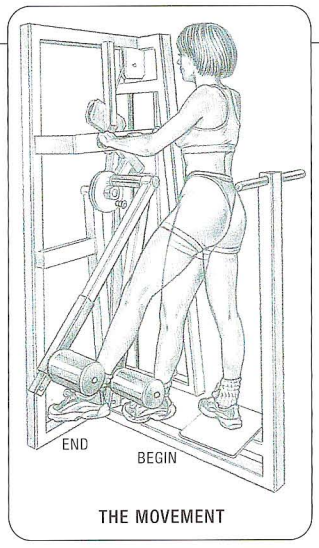


An almost vertical neck of the femur is referred to as **coxa valga**. It allows greater abduction movements.

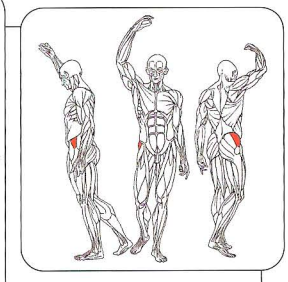
STANDING MACHINE HIP ABDUCTIONS

8





THE MOVEMENT

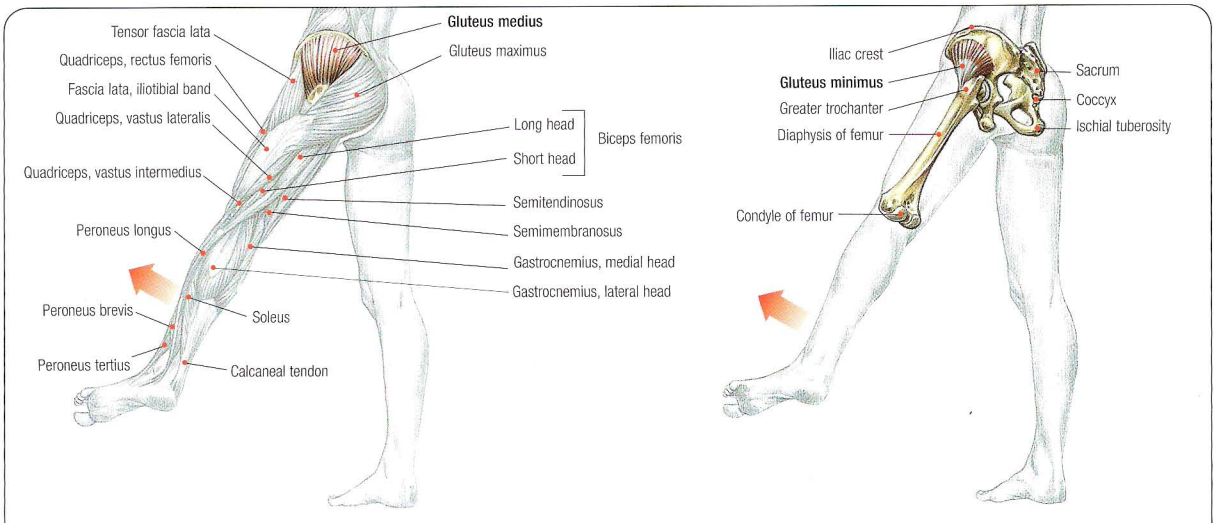


Stand on one leg at the machine, placing the other leg against the roll below the knee:

- Slowly raise the leg as high as possible.
- Return to the initial position.

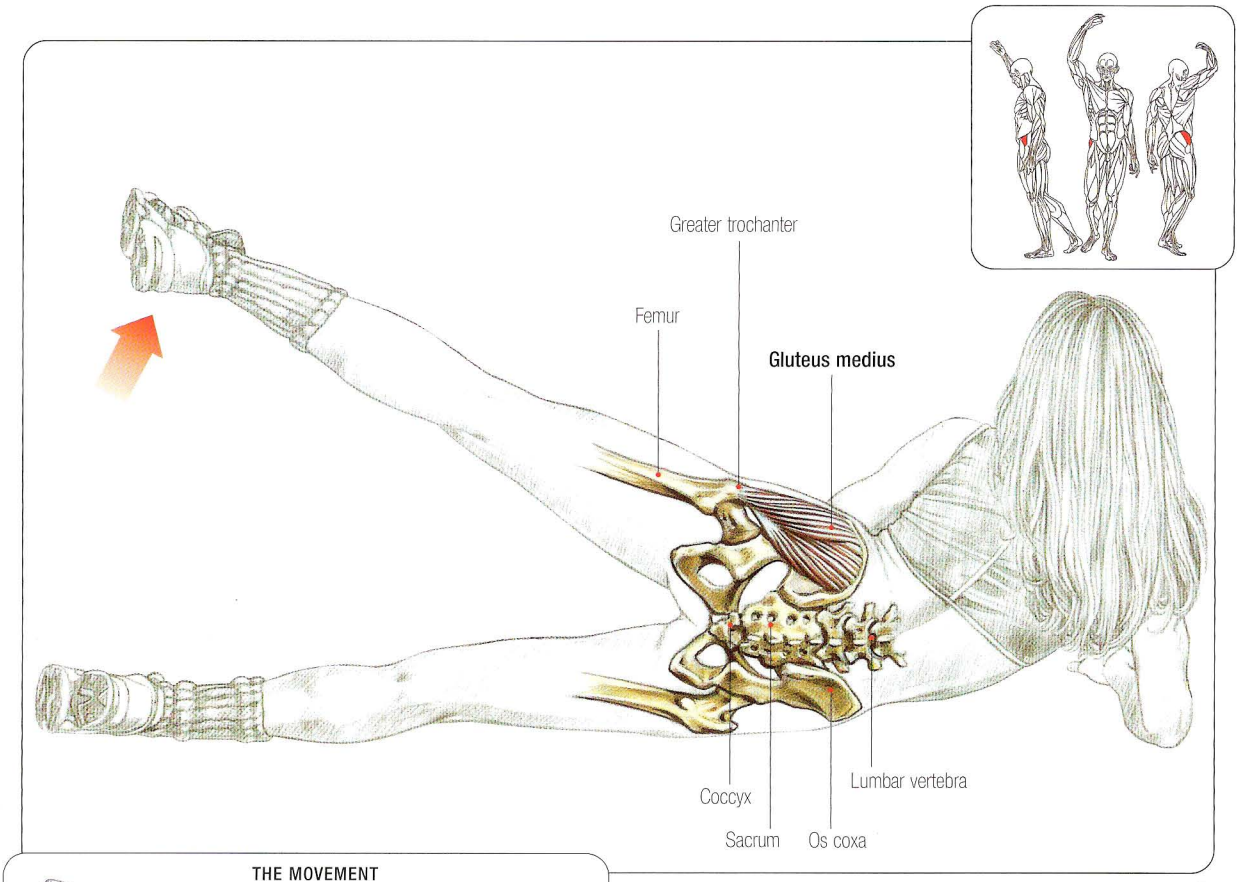
Abduction is limited by how soon the neck of the femur butts up against the rim of the acetabulum.

This exercise develops the gluteus medius. It also develops the deeper gluteus minimus, whose function is the same as that of the anterior fibers of the gluteus medius. For best results, use long sets.

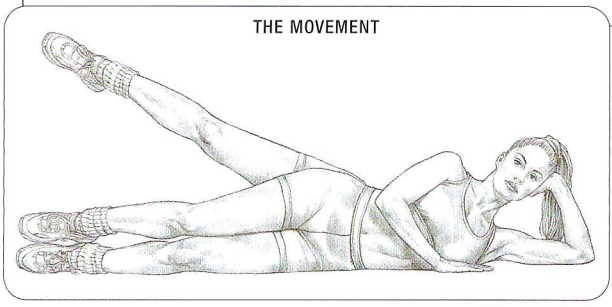


GLUTEUS MEDIUS AND MINIMUS RAISE THE LEG LATERALLY

9 FLOOR HIP ABDUCTIONS



THE MOVEMENT



Lie on the side and support the head with the hand:

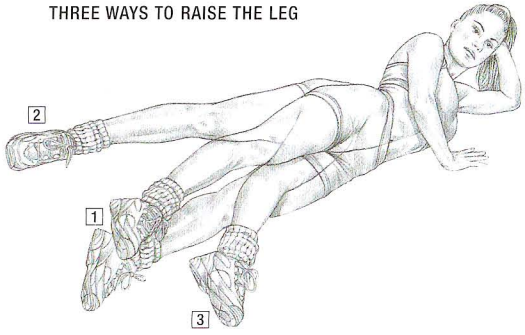
- Raise the leg laterally no more than 70 degrees, keeping the knee straight.

This exercise works the gluteus medius and minimus. You can vary how high you raise the leg. Hold the leg at the height of the movement for a few seconds with an isometric contraction.

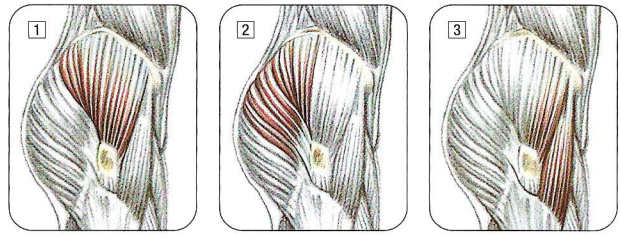
You can raise the leg slightly to the front or the back or raise it vertically.

To increase the intensity, use ankle weights, elastic band, or low pulley.

THREE WAYS TO RAISE THE LEG

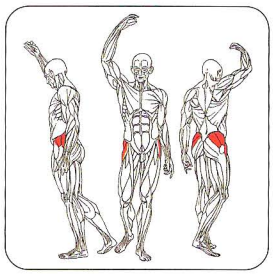


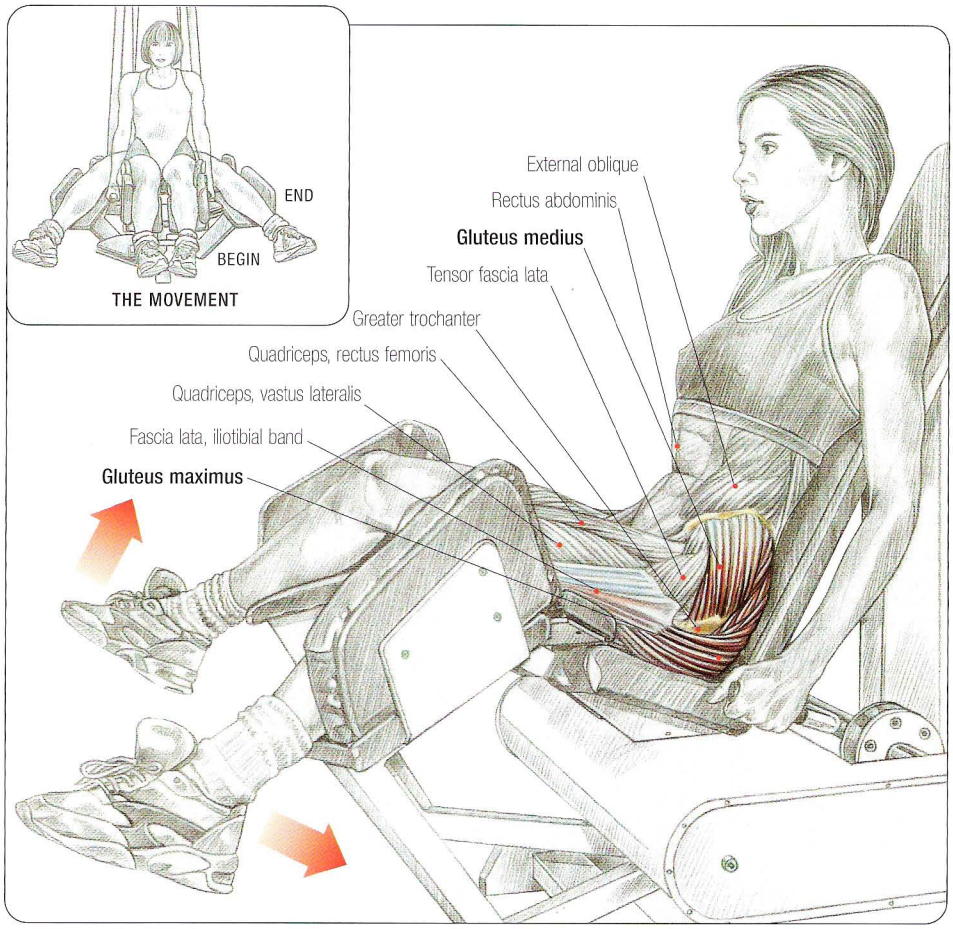
ISOLATED ZONES



1 Leg raised vertically
2 Leg raised slightly behind
3 Leg raised slightly in front

SEATED MACHINE HIP ABDUCTIONS 10





Sit at the machine:

- Spread the legs as wide as possible.
- Return to the initial position with a controlled movement.

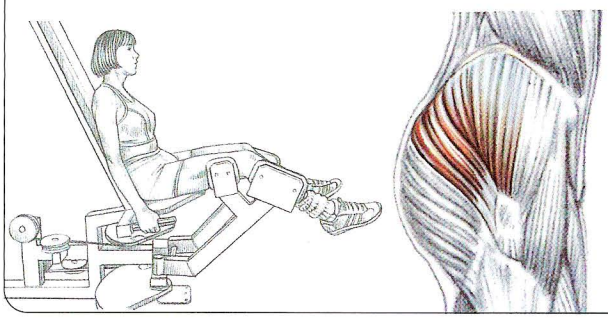
The more angled the backrest, the more the gluteus medius is isolated. The more vertical the backrest, the more the gluteus maximus is worked.

Ideally, lean forward or back to change the angle of the torso during a set.

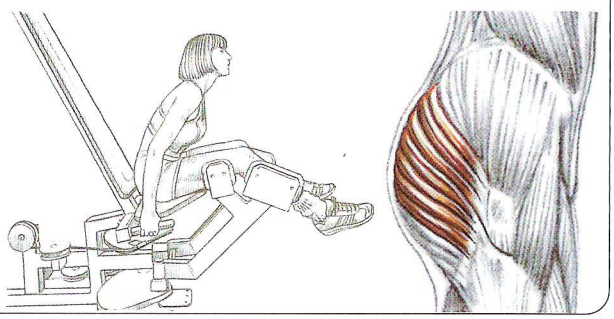
Example: Perform 10 repetitions with the torso resting against the backrest and 10 repetitions with the torso leaning forward.

This exercise sculpts and firms the top of the hip, which makes the waistline look narrower.

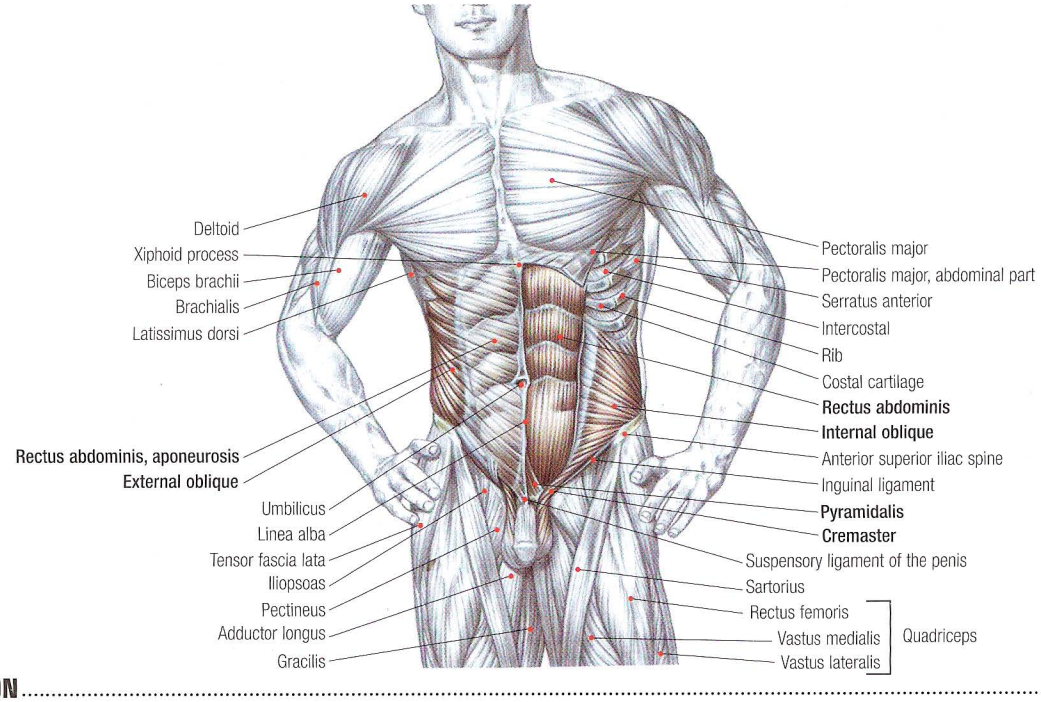
GLUTEAL PORTION ISOLATED
WITH THE TORSO AGAINST THE BACKREST



GLUTEAL PORTION ISOLATED
WITH THE TORSO LEANING FORWARD

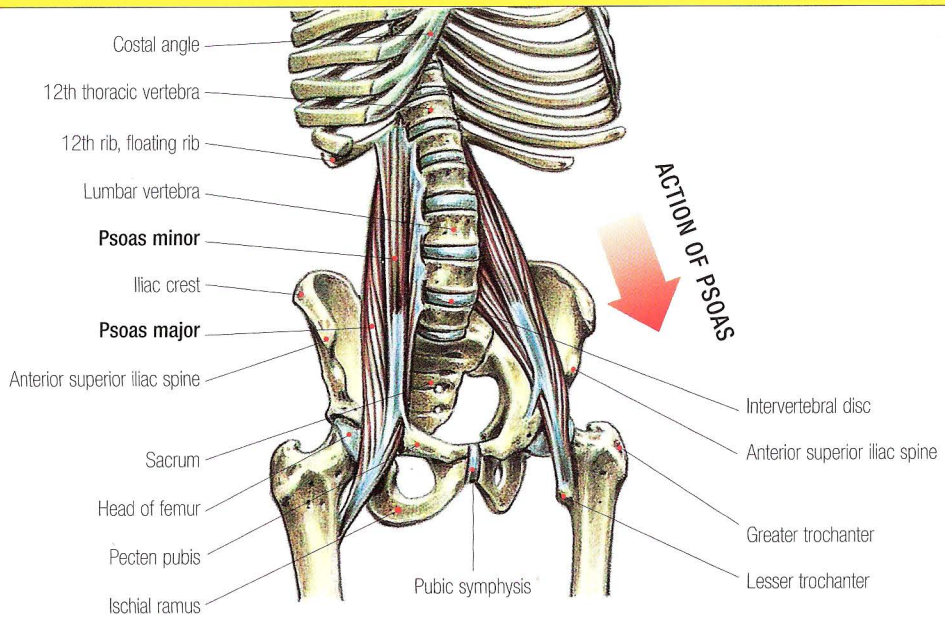


7 ABDOMEN



ATTENTION 129
1 CRUNCHES 130
2 SIT-UPS 131
3 GYM LADDER SIT-UPS 132
4 CALVES OVER BENCH SIT-UPS 133
5 INCLINE BENCH SIT-UPS 134
6 SUSPENDED BENCH SIT-UPS 135
7 HIGH-PULLEY CRUNCHES 136
8 MACHINE CRUNCHES 137
9 INCLINE LEG RAISES 138
10 LEG RAISES 139
11 HANGING LEG RAISES 140
12 BROOMSTICK TWISTS 141
13 DUMBBELL SIDE BENDS 142
14 ROMAN CHAIR SIDE BENDS 143
15 MACHINE TRUNK ROTATIONS 144

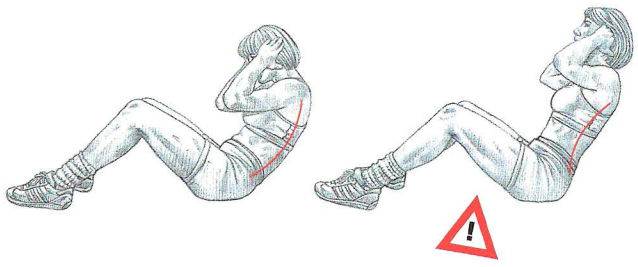
ATTENTION!



ACTION OF PSOAS MAJOR ON THE LUMBAR CURVE

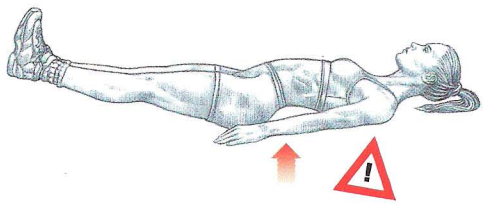
Aside from its role as a powerful hip flexor, the psoas muscle pulls the lumbar spine into lordosis, increasing the curve.

When performing exercises for the abdominal muscles, round the back.



CORRECT POSITION, ROUNDED BACK — INCORRECT POSITION, ARCHED BACK

As with most movements involving the abdominal core, leg raises either on the ground or at an incline bench should never be performed with an arched back.



INCORRECT POSITION, BACK ARCHED

Unlike other weightlifting movements, exercises for the abdominal core and especially those for the rectus abdominis absolutely must be worked with a rounded back (rolling up the spine).

When performing exercises that roll the spine up off the floor, as in crunches, you hold the spine differently than when performing squats, deadlifts, or other standing movements.

If during exercises with additional weights, such as squats, deadlifts, or good mornings, the vertebral column is not arched at the lumbar spine, vertical pressure combined with rounding the back pushes the nucleus pulposus of the intervertebral disc posteriorly, which can compress the nerves and cause sciatica or a herniated disc.

On the other hand, when performing specific exercises for the abdomen, if the back is not rounded with intense contraction of the rectus abdominis and the internal and external obliques, the powerful psoas hip flexors will increase the lumbar curve, forcing the intervertebral discs forward.

This causes increased pressure at the posterior lumbar vertebral articulations, which can cause low back pain or, more seriously, articular compression or shearing.

1 CRUNCHES*

Tibialis anterior
Extensor digitorum longus
Gastrocnemius, lateral head
Quadriceps, vastus intermedius
Patella
Rectus abdominis
Internal oblique
External oblique
Pectoralis major
Peroneus longus
Soleus
Biceps femoris, short head
Quadriceps, vastus lateralis
Biceps femoris, long head
Fascia lata
Quadriceps, rectus femoris
Greater trochanter
Gluteus maximus
Gluteus medius
Tensor fascia lata
Serratus anterior
Teres major
Latissimus dorsi

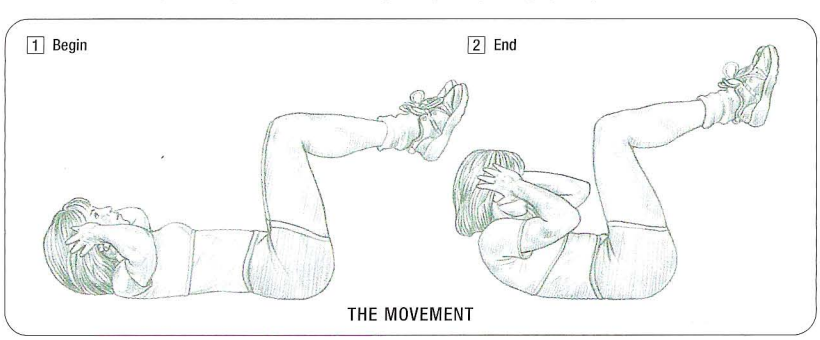
Lie on the back, with hands behind the head, thighs vertical, and knees bent:

- Inhale and raise the shoulders off the ground, bringing the knees and head toward each other by crunching, which means rounding the back and rolling the spine up.
- Exhale at the end of the movement.

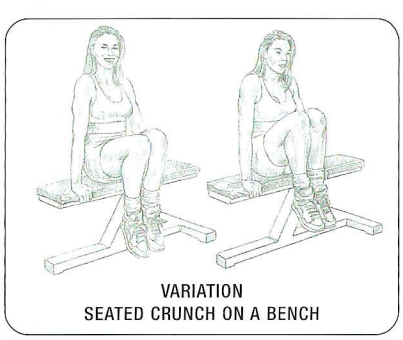
This exercise mainly uses the rectus abdominis.

To work the obliques more intensely, bring the right elbow to the left knee, then the left elbow to the right knee alternately with each crunch.

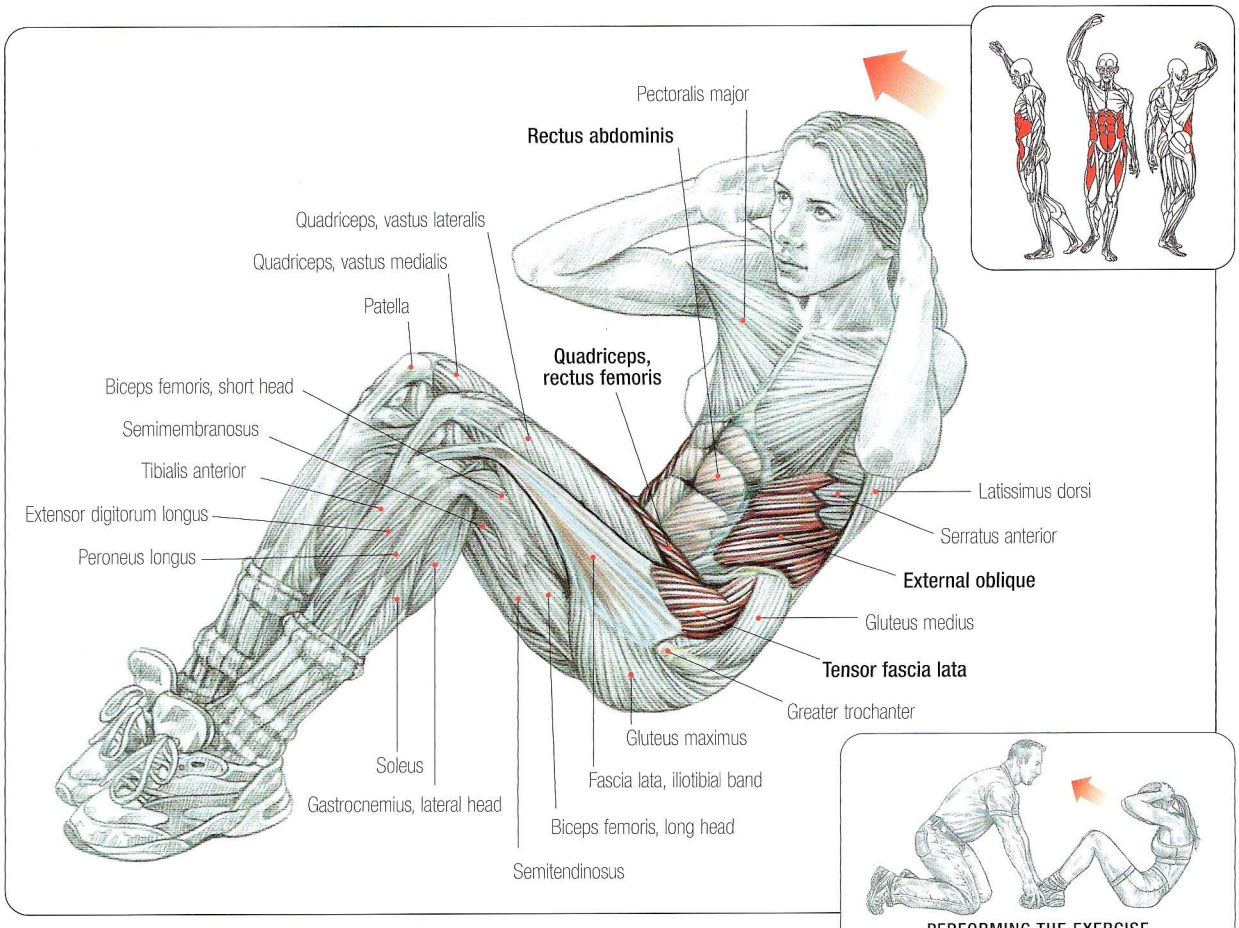
* Perform a crunch by rounding the back and rolling the spine up, bringing the pubis and sternum toward each through voluntary contraction.



THE MOVEMENT


VARIATION
SEATED CRUNCH ON A BENCH

SIT-UPS 2



PERFORMING THE EXERCISE WITH A PARTNER ANCHORING THE FEET

Lie on the back, with knees bent, feet flat on the ground, and hands behind the head:

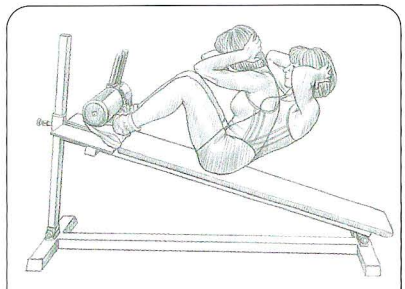
- Inhale and raise the torso by rounding the back.
- Exhale at the end of the movement.
- Return to the initial position without touching the ground.

Continue until a burn develops in the abdominal muscles.

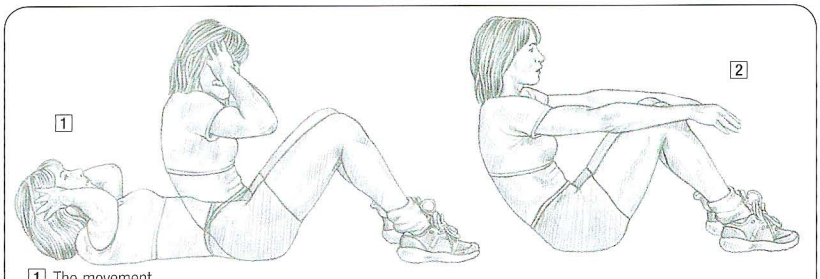
This exercise works the hip flexors as well as the obliques, but it mainly acts on the rectus abdominis.

Variations:

1. Having a partner hold the feet makes the exercise easier.
2. Extending the arms forward makes the exercise easier for beginners.
3. Working on an incline bench makes the exercise more intense.



VARIATION ON AN INCLINE BENCH
The greater the angle, the greater the effort.

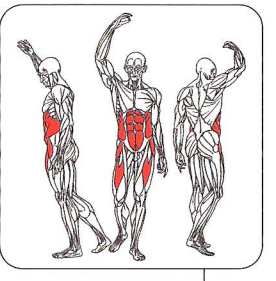


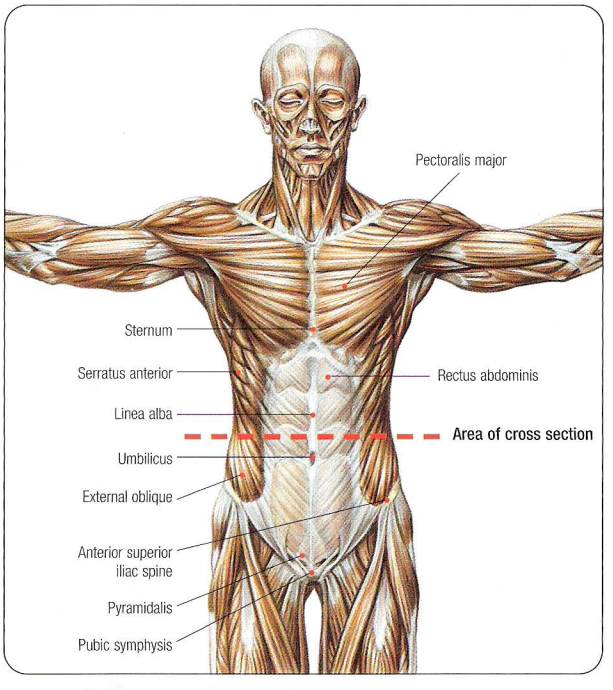
1 The movement.
2 Variation with arms extended to make the movement easier.

Comment: Because, in general, a woman's torso is not as bulky proportionate to the legs as in men, performing sit-ups without lifting the feet off the ground is easier for women than for men.

3 GYM LADDER SIT-UPS

Tibialis anterior
Extensor digitorum brevis
Peroneus longus
Peroneus brevis
Patella
Vastus lateralis, quadriceps
Soleus
Gastrocnemius, lateral head
Biceps femoris, short head
Quadriceps, rectus femoris
Biceps femoris, long head
Fascia lata, iliotibial band
Gluteus maximus
Gluteus medius
Tensor fascia lata
Rectus abdominis
External oblique
Serratus anterior
Latissimus dorsi
Teres major
Pectoralis major





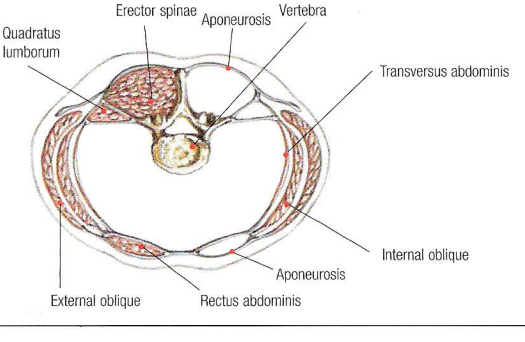
Lie faceup on the ground and position the feet between two bars in the ladder, with the thighs vertical, and hands behind the head:

- Inhale and raise the torso as high as possible, rounding the spine.
- Exhale at the end of the movement.

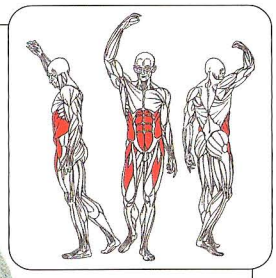
This exercise works the rectus abdominis and, to a lesser degree, the external oblique.

Position the feet lower on the ladder so that the pelvis can rock more and better contract the flexor muscles of the hip (iliopsoas, rectus femoris, and tensor fascia lata) when lowering the torso.

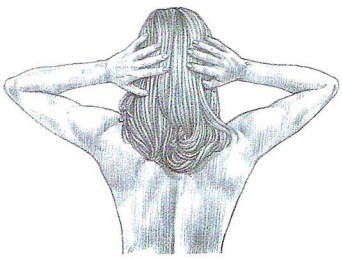
CROSS SECTION



CALVES OVER BENCH SIT-UPS 4



Extensor digitorum longus
Tibialis anterior
Tibia
Quadriceps, vastus medialis
Patella
Quadriceps, vastus lateralis
Rectus abdominis
Quadriceps, rectus femoris
Pectoralis major
Peroneus brevis
Peroneus longus
Gastrocnemius, lateral head
Semi-tendinosus
Biceps femoris, long head
Biceps femoris, short head
Gluteus maximus
Greater trochanter
Tensor fascia lata
Gluteus medius
External oblique
Latissimus dorsi
Serratus anterior
Teres major



Correct position

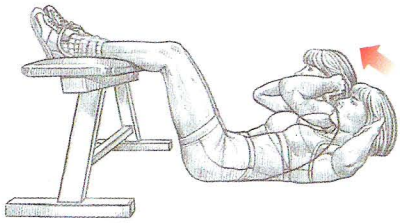
Incorrect position

PLACEMENT OF THE HANDS AND ELBOWS

To prevent pulling on the neck excessively, place the hands behind the ears rather than behind the head.

The wider the elbows, the more difficult the movement.

Conversely, the closer together and more forward the elbows, the easier the execution.



THE MOVEMENT

Lie on your back with your calves laying over a flat exercise bench. Place your hands behind your head:

- Inhale and lift your shoulders off the floor.
- Try to touch your knees with your head.
- Exhale as you complete the movement.

This exercise focuses on the rectus abdominis, particularly above the navel. By placing your torso farther from the bench you increase pelvic mobility, which allows your torso upward by contracting the iliopsoas, tensor fasciae latae, and rectus femoris in order to flex the hips.

5 INCLINE BENCH SIT-UPS

Pectoralis major
Rectus abdominis
Quadriceps, rectus femoris
Patella
Quadriceps, vastus lateralis
Fascia lata
Tibialis anterior
Teres major
Latissimus dorsi
Serratus anterior
External oblique
Gluteus medius
Tensor fascia lata
Greater trochanter
Gluteus maximus
Gastrocnemius, lateral head
Soleus
Extensor digitorum longus

VARIATION WITH TORSO ROTATION

ORIENTATION OF THE ABDOMINAL MUSCLES THAT SUPPORT AND PROTECT THE INTERNAL ORGANS

1 Rectus abdominis
2 External oblique
3 Internal oblique
4 Transversus abdominis

In quadrupeds, the muscles of the abdominal core create a hammock-like structure that passively supports the internal organs. These muscles move little during locomotion.

With the shift to bipedal locomotion in humans, the muscles of the abdominal core have grown stronger to align the pelvis with the trunk in a vertical position and to prevent the trunk from swaying too much during walking or running.

The abdominal core has developed into powerful muscles that actively contain the internal organs.

Sit on a bench with the feet positioned under the rolls, hands behind the ears:

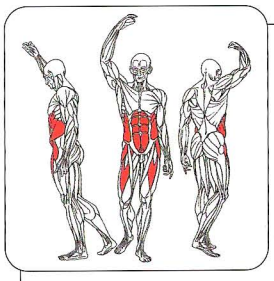
- Inhale and lower the torso less than 20 degrees.
- Raise the torso while slightly rounding the back to better focus on the rectus abdominis.
- Exhale at the end of the movement.

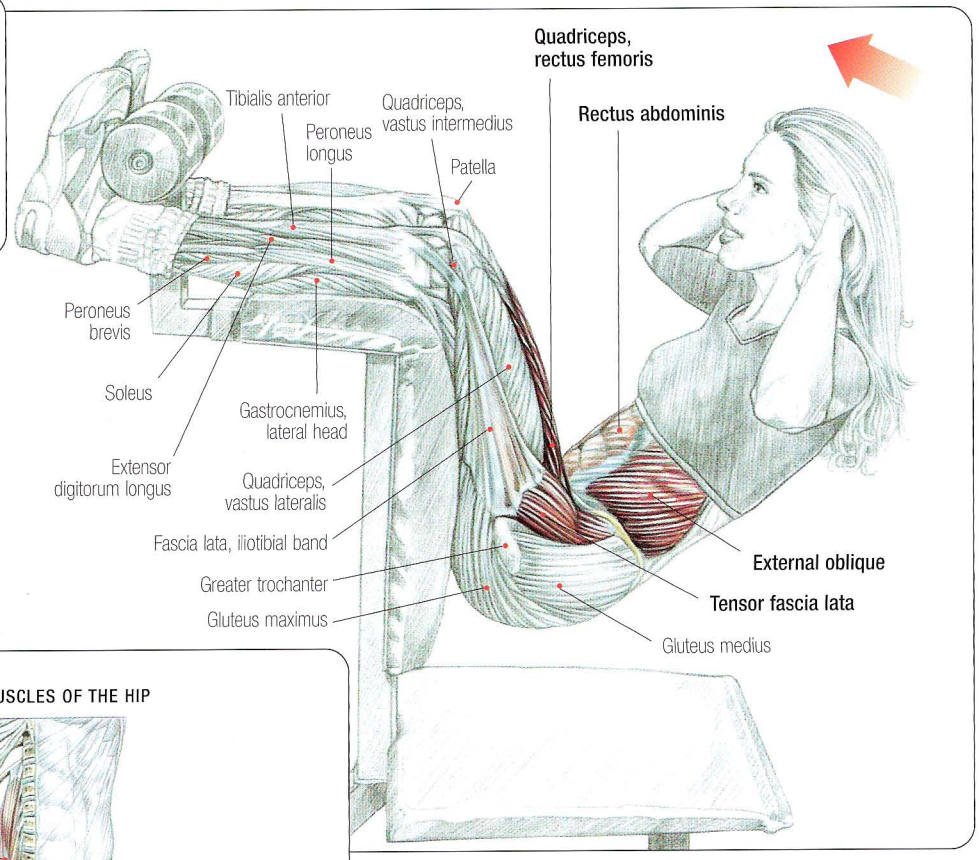
Perform this exercise in long sets. It works the abdominal core as well as the iliopsoas, tensor fascia lata, and rectus femoris of the quadriceps. The latter three muscles tilt the pelvis forward.

Variation: Rotating the torso on the way up focuses some of the effort on the internal and external obliques.

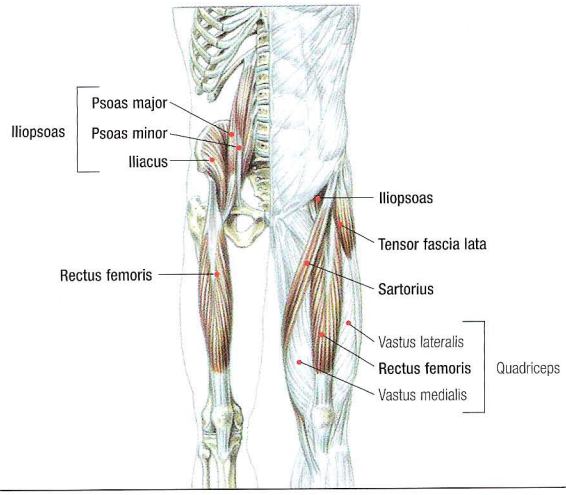
Example: Rotating to the left works the right external oblique, the left internal oblique, and the right rectus abdominis more intensely. Rotations can be performed in sets of alternating sides or sets all on the same side. In either case, concentrate on feeling the muscles contract. There is no point in angling the bench excessively.

SUSPENDED BENCH SIT-UPS 6





FLEXOR MUSCLES OF THE HIP



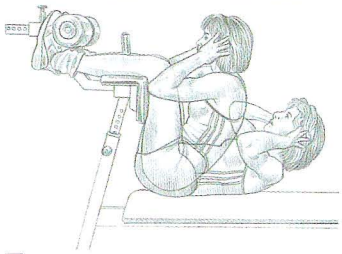
Position the feet under the pads, with the torso suspended in midair, hands near the ears:

- Inhale and raise the torso, trying to bring the head to the knees while rounding the spine.
- Exhale at the end of the contraction.

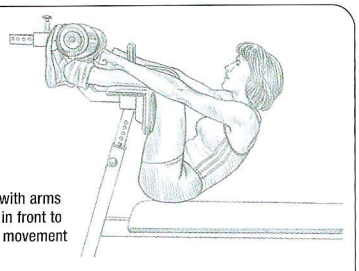
This exercise develops the rectus abdominis. It also contracts the obliques, but less intensely.

Because of the forward tilt of the pelvis, the rectus abdominis, iliopsoas, and tensor fascia lata contribute strongly.

Comment: This movement requires a fair amount of strength, which you can build through other easier exercises.

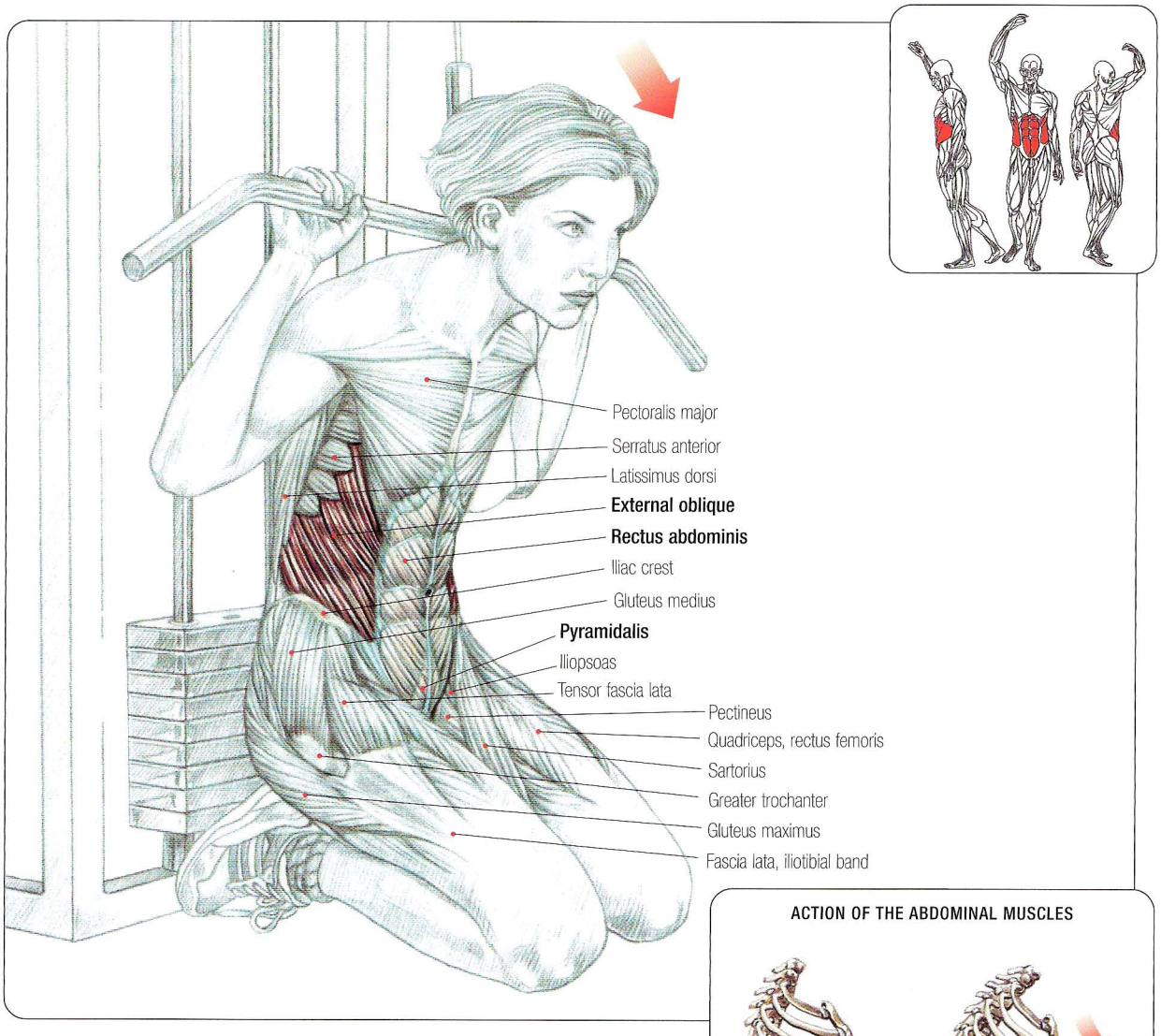


1 The movement

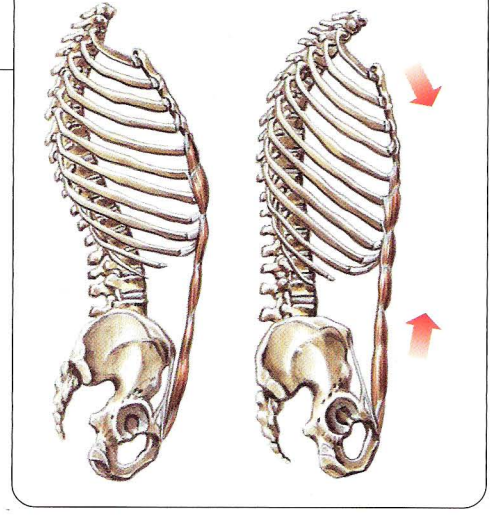


2 Variation with arms extended in front to make the movement easier.

7 HIGH-PULLEY CRUNCHES



ACTION OF THE ABDOMINAL MUSCLES

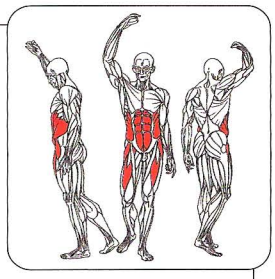


Kneel in front of the machine, holding the handle behind the neck:

- Inhale.
- Exhale and roll the spine as you lower the sternum toward the pubis.

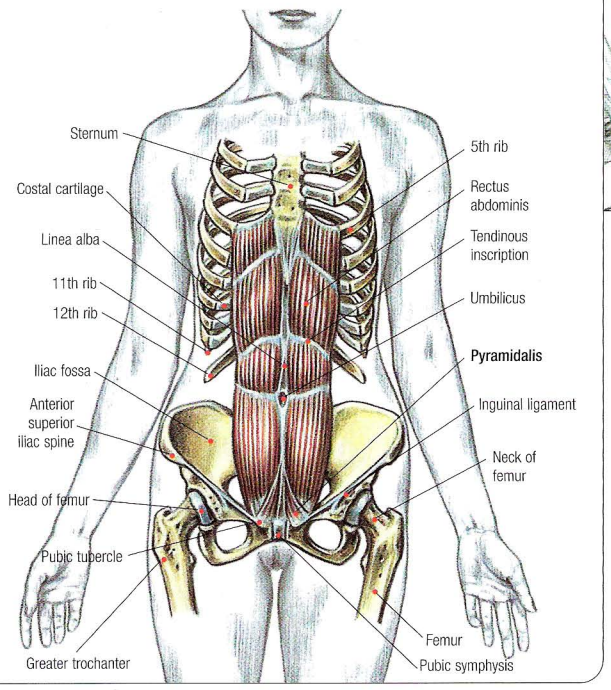
This movement is never performed with heavy weights. Concentrate on feeling the muscles contract, mainly the rectus abdominis, in order to focus the work on the abdominal core.

MACHINE CRUNCHES 8



Latissimus dorsi
Serratus anterior
External oblique
Rectus abdominis
Quadriceps, vastus lateralis
Gluteus medius
Tensor fascia lata
Fascia lata, iliotibial band
Biceps femoris, short head
Peroneus longus
Extensor digitorum longus
Pectoralis major
Quadriceps, rectus femoris
Quadriceps, vastus medialis
Patella
Sartorius
Tibialis anterior
Gastrocnemius, medial head
Soleus
Tibia

RECTUS ABDOMINIS MUSCLES

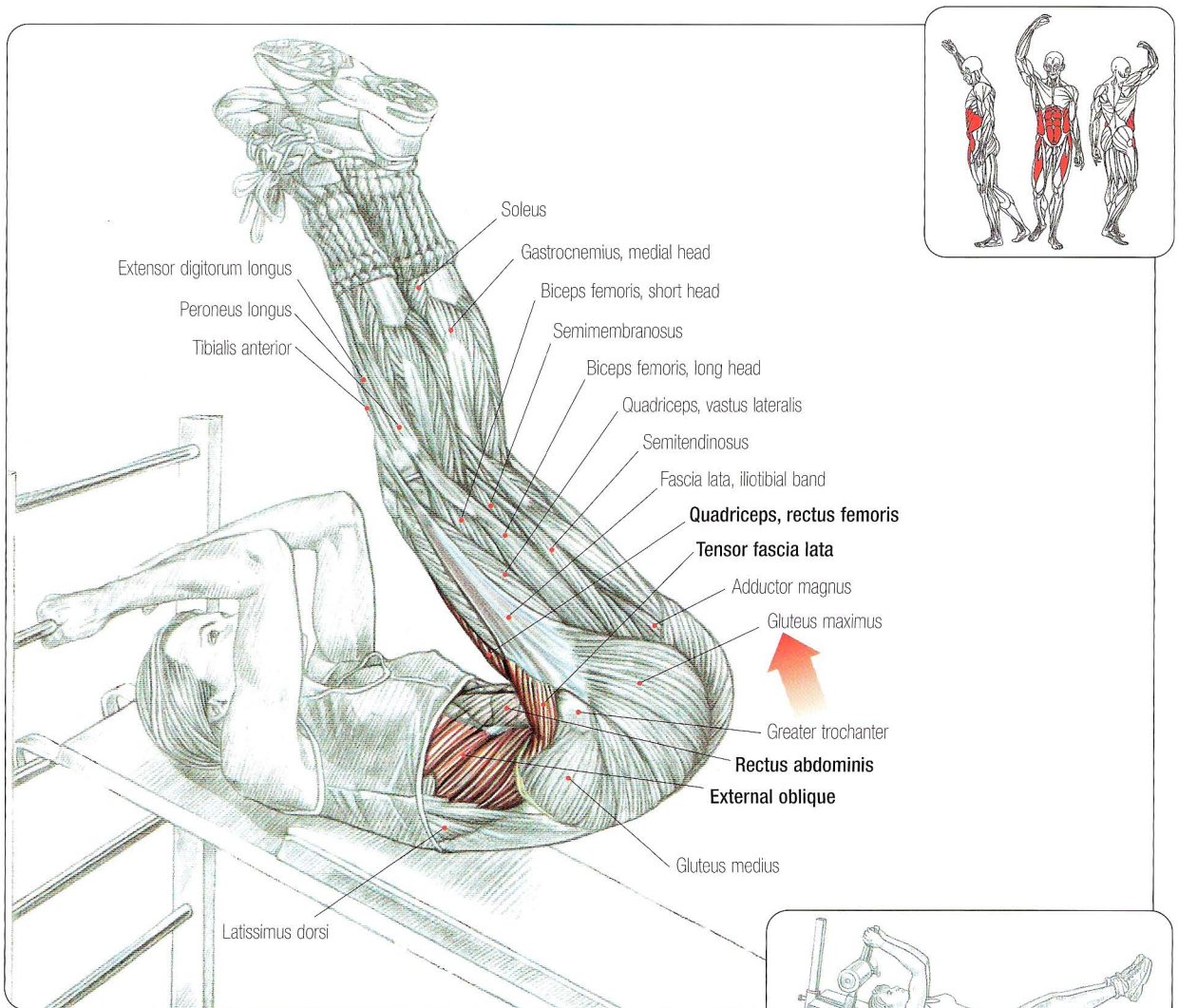


Sit at the machine, grasp the handles, and position the feet under the pad:

- Inhale and roll the spine, trying to bring the sternum to the pubis.
- Exhale at the end of the movement.

This exercise allows you to adjust the weight, or workload, to your ability. To avoid risk, beginners should use light weights. Well-trained athletes can use heavier weights.

9 INCLINE LEG RAISES



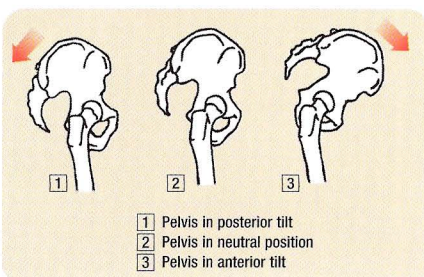
Lie on an incline bench and grip the bars or handles:

- Inhale and raise the legs to horizontal, then raise the pelvis, rolling the spine up as if trying to bring the knees to the head.

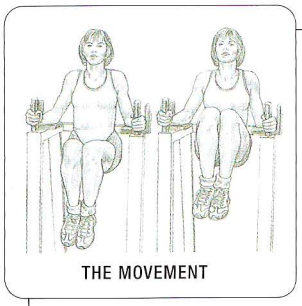
This exercise first works the iliopsoas, tensor fascia lata, and rectus femoris of the quadriceps when raising the legs. Then it works the abdominal core and contracts mainly the infraumbilical portion of the rectus abdominis when raising the pelvis and rolling up the spine.

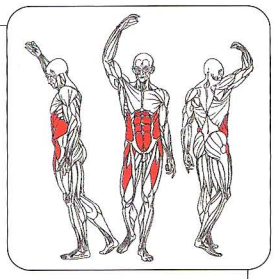
VARIATION
Performing leg flutters

Comment: This is an excellent exercise if you have trouble feeling the work on the lower abdominal muscles. Given the difficulty of the exercise, beginners should start with the bench only slightly inclined.

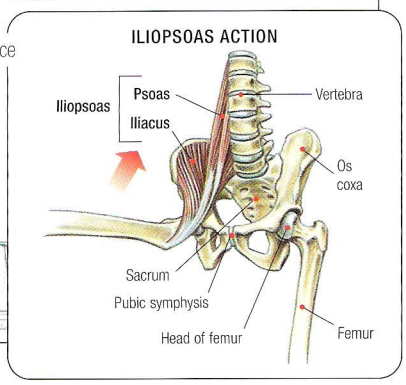


LEG RAISES 10





Sternum
Serratus anterior
Deltoid
Clavicle
Scapula
Humerus
Rib
Costal cartilages
Latissimus dorsi
Serratus anterior
Rectus abdominis, under the aponeurosis
External oblique
Anterior superior iliac spine
Gluteus medius
Sacrum
Iliopsoas
Pyramidalis, under the aponeurosis
Tensor fascia lata
Fascia lata, iliotibial band
Quadriceps
Rectus femoris
Vastus medialis
Vastus lateralis
Vastus intermedius
Patellar ligament
Gastrocnemius
Tibialis anterior
Extensor digitorum longus
Peroneus longus
Soleus
Flexor digitorum longus
Peroneus brevis
Extensor hallucis longus
12th rib
Vertebra
Psoas minor
Iliacus
Psoas major
Iliopsoas
Pubic symphysis
Greater trochanter
Pectineus
Lesser trochanter
Adductor longus
Gracilis
Sartorius
Femur
Patella
Tibial tuberosity
Fibula
Tibia, medial surface
Talus
Navicular
Cuneiform
Cuboid
Metatarsal
Proximal phalanx
Distal phalanx



Support the body by resting the elbows on the pads. Position the back against the back support:

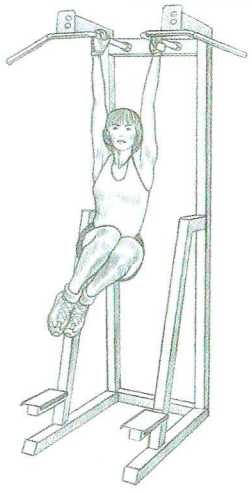
- Inhale and raise the knees to the chest, rounding the back in order to contract the abdominal core.
- Exhale at the end of the movement.

This exercise works the hip flexors, mainly the iliopsoas, and the obliques. It intensely works the lower part of the rectus abdominis.

Variations:

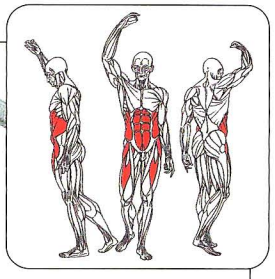
1 To target the lower abdominal muscles, perform small flutters with the legs when rolling up the spine.
2 To make the exercise more intense, extend the legs horizontally. However, this requires flexible hamstrings.
3 Hold the knees to the chest for a few seconds with an isometric contraction.

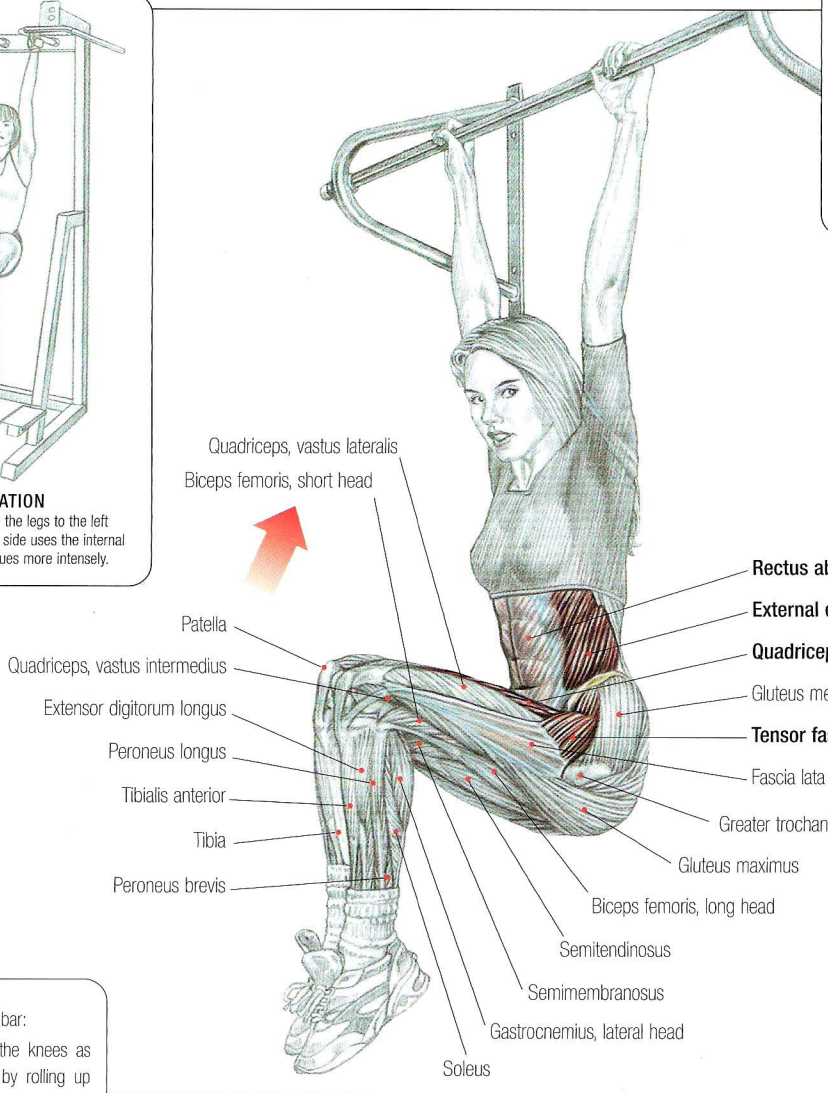
11 HANGING LEG RAISES



VARIATION

Alternately raising the legs to the left and then to the right side uses the internal and external obliques more intensely.



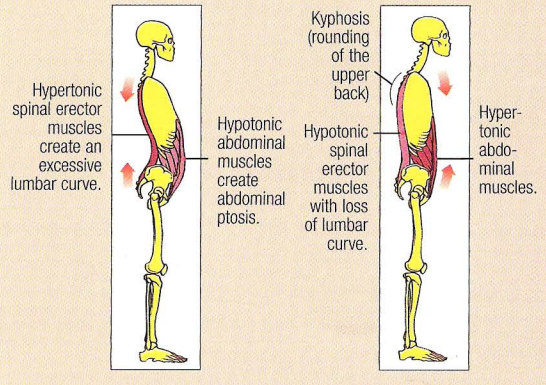


Hang from a chin-up bar:

- Inhale and raise the knees as high as possible by rolling up the spine and bringing the pubis toward the sternum.
- Exhale at the end of the movement.

This exercise uses the iliopsoas, rectus femoris, and tensor fascia lata when you raise the legs and the rectus abdominis and, to a lesser degree, the internal and external obliques when you bring the pubis toward the sternum.

Small leg flutters without lowering the knees below horizontal focus the effort on the abdominal core.



ABDOMINAL–LUMBAR EQUILIBRIUM

Balance the work between the abdominal muscles and the erector muscles of the spine.

Hypotonicity or hypertonicity of either of these muscle groups can lead to poor posture, which over time can cause injury.

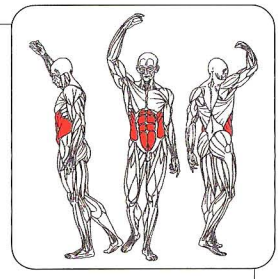
Example

Hypertonicity of the lower part of the erector muscles of the spine (lumbosacral mass) associated with hypotonicity of the abdominal muscles leads to hyperlordosis with abdominal ptosis (sagging).

If addressed in time with exercises to strengthen the abdominal core, this postural fault can sometimes be corrected.

Conversely, hypertonic abdominal muscles associated with slack erector muscles, especially in the upper part (spinalis thoracis, longissimus thoracis, iliocostalis thoracis) leads to kyphosis (rounding of the upper back) with loss of the lumbar curve. This postural fault can be corrected with exercises to strengthen the erector muscles of the spine.

BROOMSTICK TWISTS 12



Deltoid
Biceps brachii
Latissimus dorsi
Serratus anterior
External oblique
Gluteus medius
Tensor fascia lata
Iliopsoas
Pectineus
Fascia lata, iliotibial band
Adductor longus
Quadriceps, rectus femoris
Quadriceps, vastus lateralis
Pectoralis major
Rectus abdominis
Internal oblique, in deep
Pyramidalis
Sartorius
Gracilis
Adductor magnus
Quadriceps, vastus medialis

Stand with the legs apart, holding a stick across the trapezius above the posterior deltoid, hands resting on the stick without pushing:

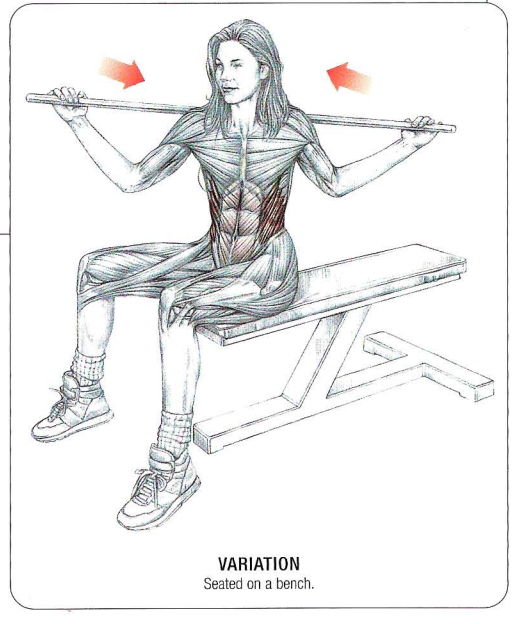
- Rotate the torso to one side and to the other, keeping the pelvis fixed with isometric contraction of the gluteal muscles.

When the right shoulder is forward, this exercise works the right external oblique and, deep in, the left internal oblique and, to a lesser degree, the rectus abdominis, quadratus lumborum, and the extensor muscles of the spine on the left side.

To increase the intensity, round the back slightly.

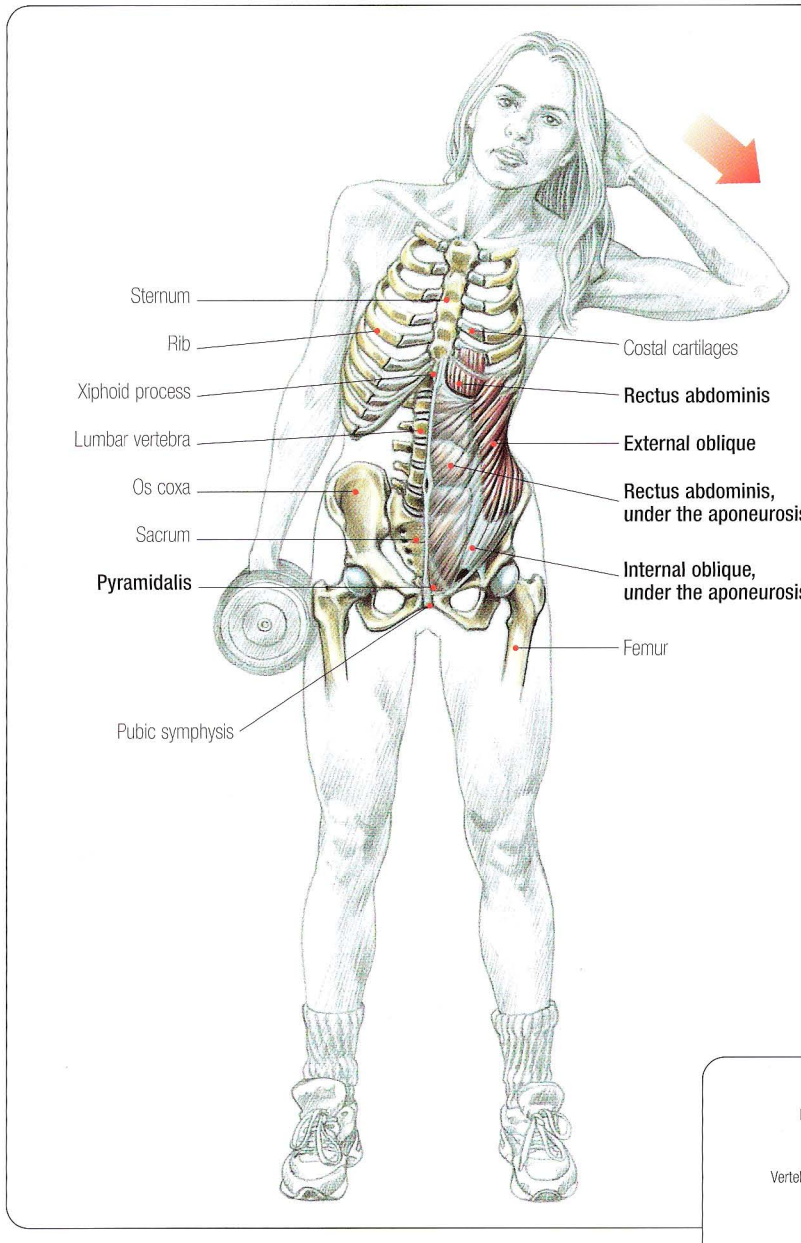
You can also perform the movement while seated, which helps to fix the pelvis so that you can focus the effort on the abdominal core.

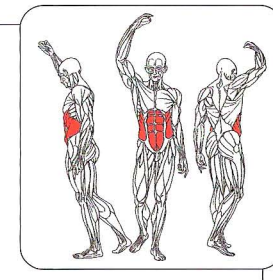
Best results are obtained with sets lasting several minutes.

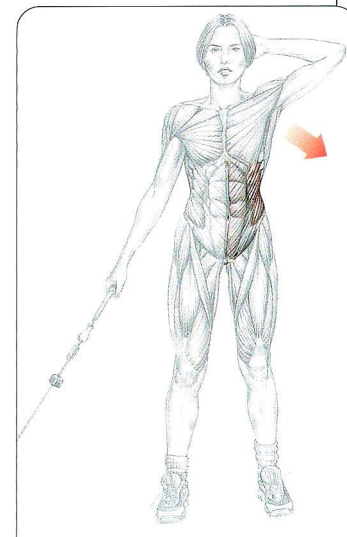


VARIATION
Seated on a bench.

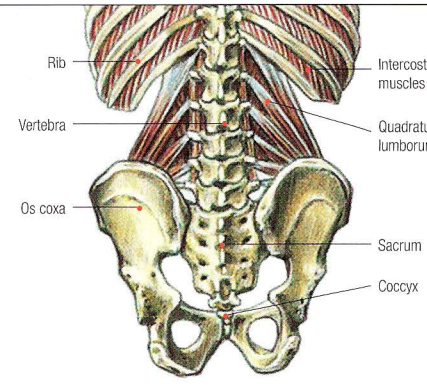
13 DUMBBELL SIDE BENDS







VARIATION AT A LOW PULLEY



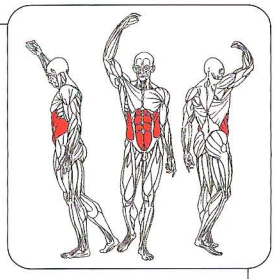
QUADRATUS LUMBORUM MUSCLE

Stand with the legs slightly apart, one hand behind the head and holding a dumbbell in the other hand:

- Bend the torso to the side opposite to the dumbbell.
- Return to the initial position or beyond with passive flexion of the torso.
- Alternate sets changing the side of the dumbbell without resting.

This exercise mainly works the obliques on the side the torso bends toward. It works the rectus abdominis, deep muscles of the back, and quadratus lumborum (back muscle that inserts on the 12th rib, the transverse processes of the lumbar vertebrae, and the iliac crest) less intensely

ROMAN CHAIR SIDE BENDS 14

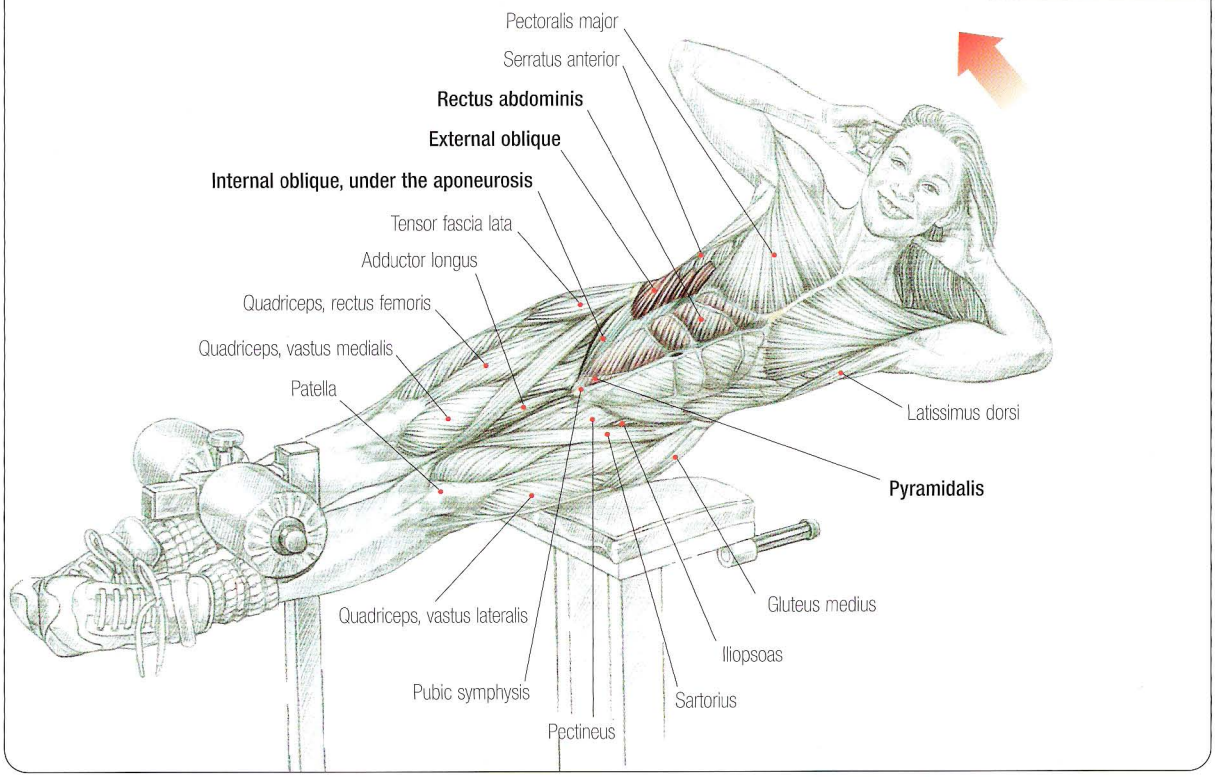


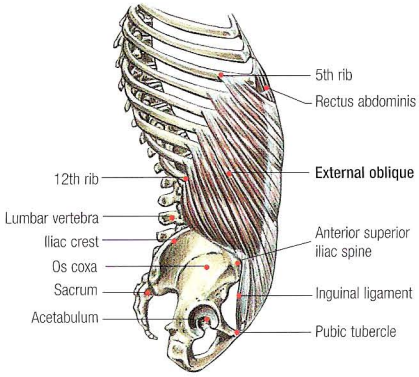
This exercise is performed on a bench originally designed for lumbar extensions.
Lie on your side with the hip on the bench, torso in the air, hands near the ears or on the chest, and feet positioned under the rolls:

- Raise the side of the body toward the ceiling.

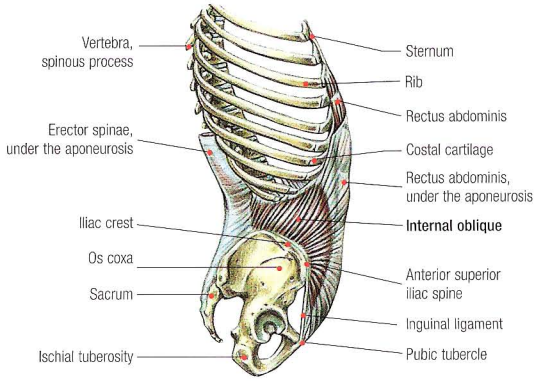
This exercise mainly works the obliques and rectus abdominis on the side that is bending, but the opposite obliques and rectus abdominis are also used in isometric contraction to prevent the torso from lowering below horizontal.

Comment: The quadratus lumborum muscle is always used when bending the torso toward the side.



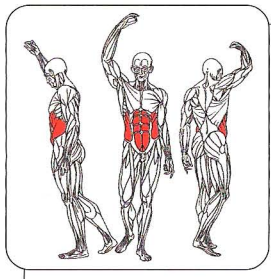


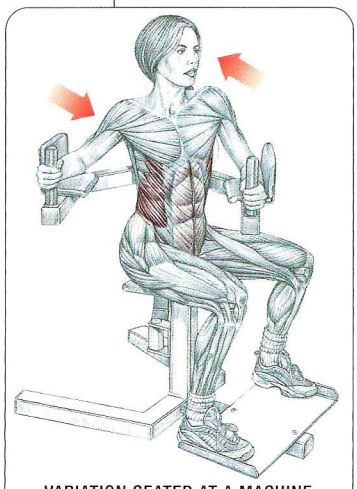
EXTERNAL OBLIQUE MUSCLE OF THE ABDOMEN



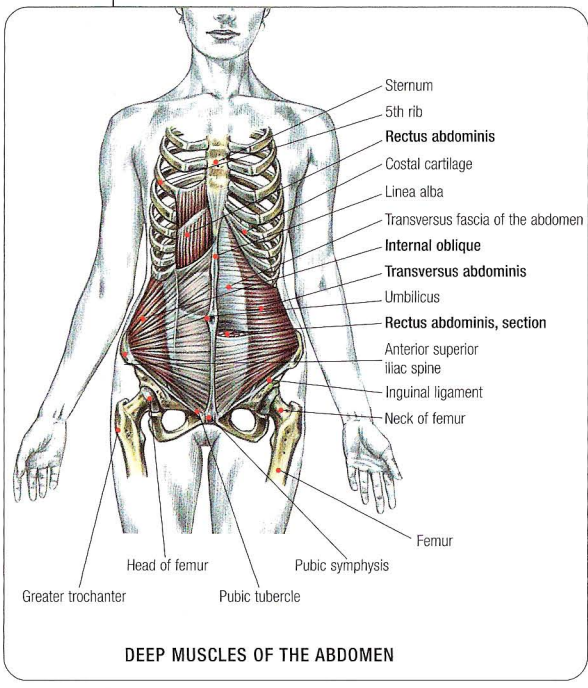
INTERNAL OBLIQUE MUSCLE OF THE ABDOMEN

15 MACHINE TRUNK ROTATIONS

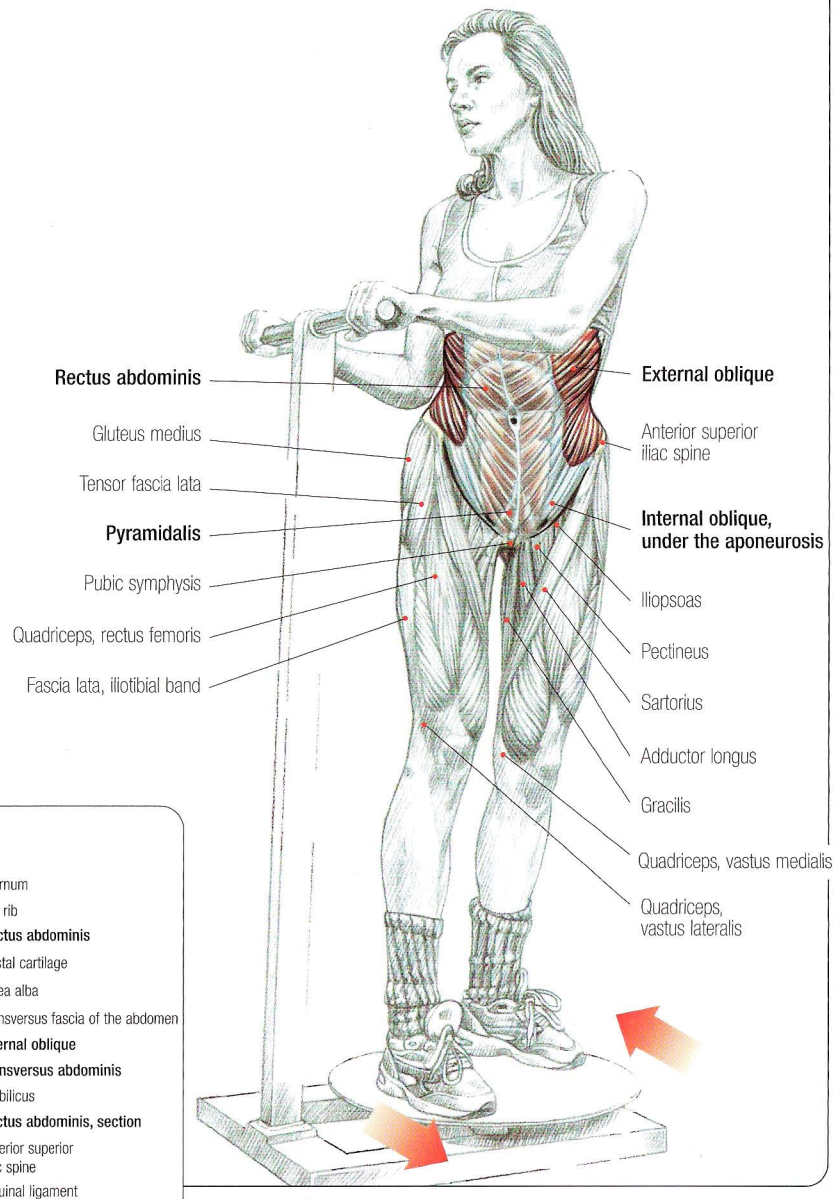




VARIATION SEATED AT A MACHINE



DEEP MUSCLES OF THE ABDOMEN



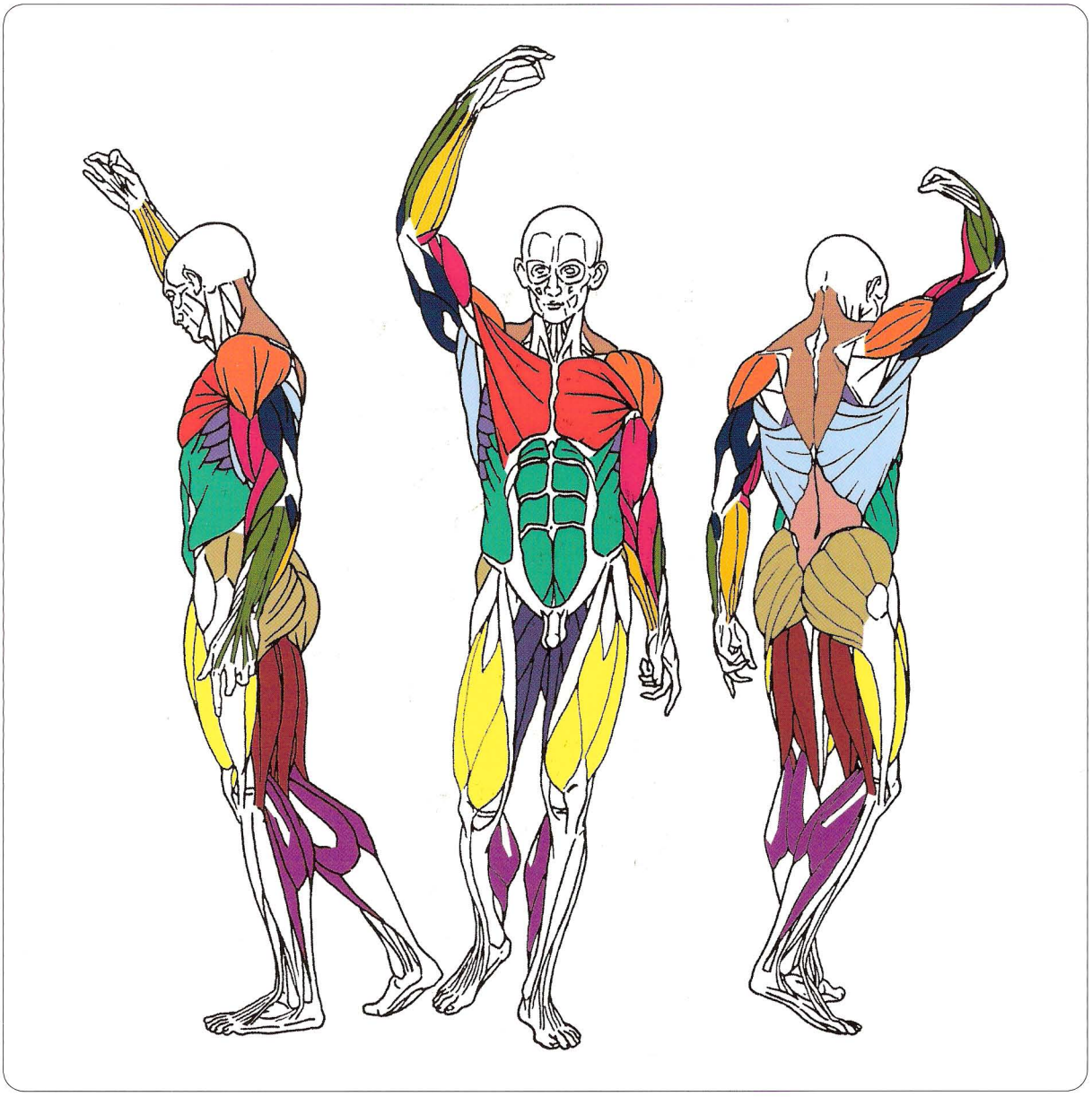
Stand on the swivel plate and grasp the handle:

- Rotate the pelvis to one side then to the other, keeping the shoulders fixed. The knees should be slightly bent. Control the rotations.

This exercise mainly works the external and internal obliques and, to a lesser degree, the rectus abdominis.

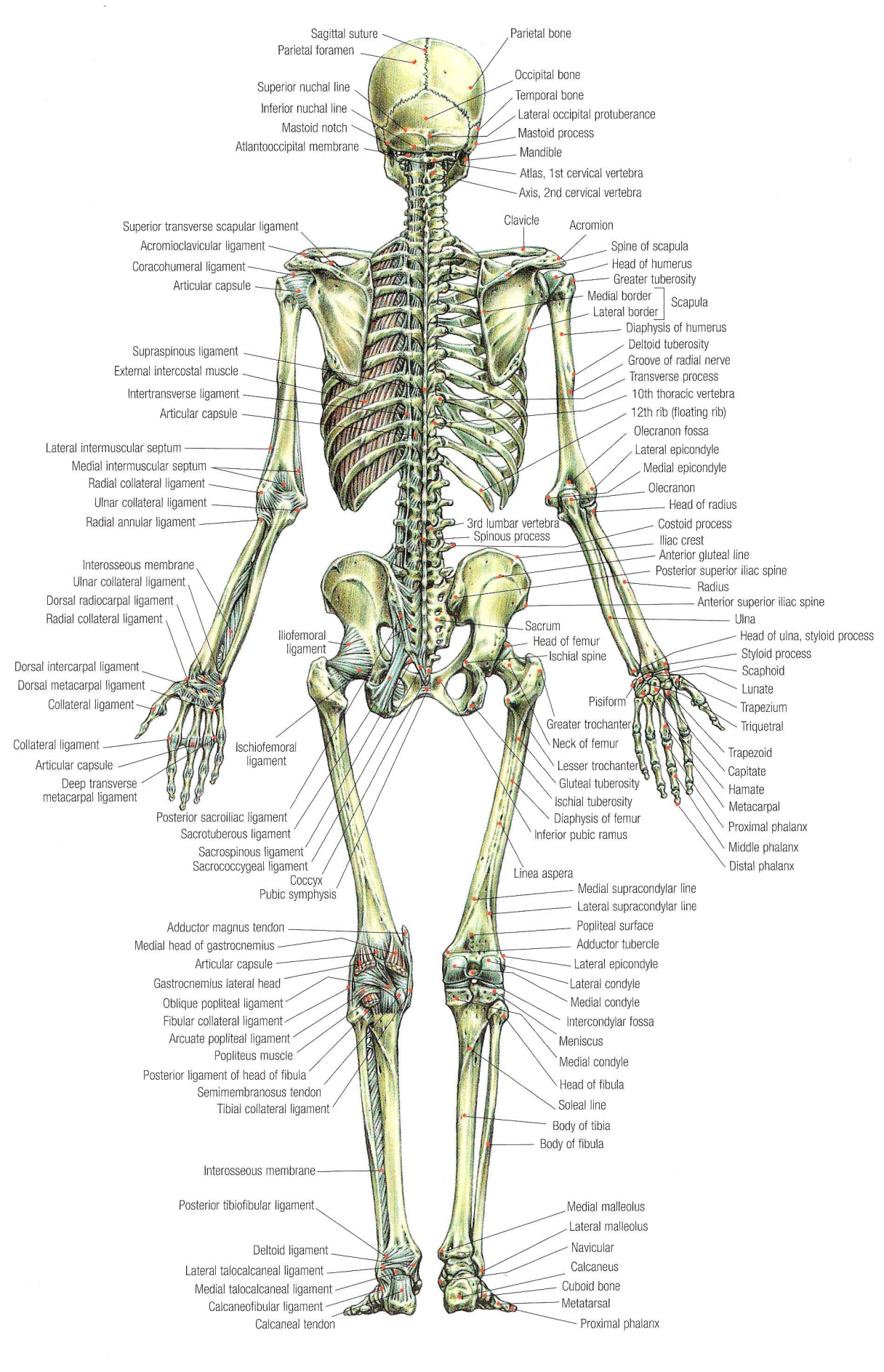
To feel the effort more intensely on the external and internal obliques, round the back slightly.

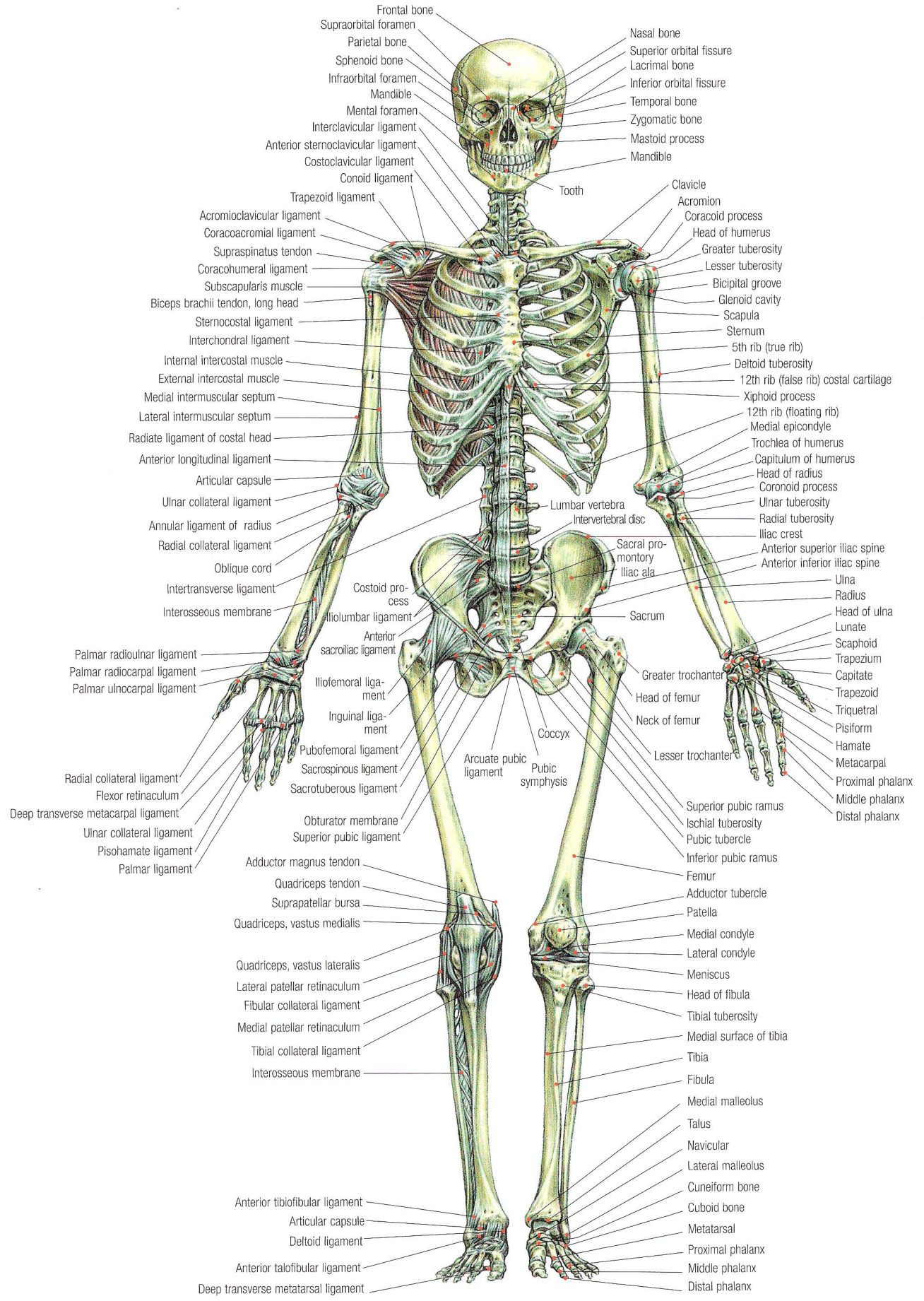
Best results are obtained with very long sets.



MAIN MUSCLE GROUPS

- Abdominals
- Arm extensors
- Wrist flexors
- Surae
- Adductors
- Wrist extensors
- Scapulae fixers
- Pectorals
- Dorsal muscles
- Gluteals
- Thigh flexors
- Quadriceps
- Shoulders
- Arm flexors
- Lumbar muscles
- Trapezii


Sagittal suture
Parietal foramen
Parietal bone
Occipital bone
Superior nuchal line
Temporal bone
Inferior nuchal line
Lateral occipital protuberance
Mastoid notch
Mastoid process
Atlantooccipital membrane
Mandible
Atlas, 1st cervical vertebra
Axis, 2nd cervical vertebra
Superior transverse scapular ligament
Clavicle
Acromion
Acromioclavicular ligament
Spine of scapula
Coracohumeral ligament
Head of humerus
Articular capsule
Greater tuberosity
Medial border
Scapula
Lateral border
Diaphysis of humerus
Supraspinous ligament
Deltoid tuberosity
External intercostal muscle
Groove of radial nerve
Transverse process
Intertransverse ligament
10th thoracic vertebra
Articular capsule
12th rib (floating rib)
Olecranon fossa
Lateral intermuscular septum
Lateral epicondyle
Medial intermuscular septum
Medial epicondyle
Radial collateral ligament
Olecranon
Ulnar collateral ligament
Head of radius
Radial annular ligament
3rd lumbar vertebra
Costoid process
Spinous process
Iliac crest
Anterior gluteal line
Interosseous membrane
Posterior superior iliac spine
Ulnar collateral ligament
Radius
Dorsal radiocarpal ligament
Anterior superior iliac spine
Radial collateral ligament
Ulna
Sacrum
Iliofemoral ligament
Head of femur
Head of ulna, styloid process
Ischial spine
Styloid process
Dorsal intercarpal ligament
Scaphoid
Dorsal metacarpal ligament
Lunate
Collateral ligament
Pisiform
Trapezium
Greater trochanter
Triquetral
Collateral ligament
Ischiofemoral ligament
Neck of femur
Trapezoid
Articular capsule
Lesser trochanter
Capitate
Deep transverse metacarpal ligament
Gluteal tuberosity
Hamate
Ischial tuberosity
Metacarpal
Posterior sacroiliac ligament
Diaphysis of femur
Proximal phalanx
Sacrotuberous ligament
Inferior pubic ramus
Middle phalanx
Sacrospinous ligament
Sacrococcygeal ligament
Distal phalanx
Coccyx
Linea aspera
Pubic symphysis
Medial supracondylar line
Lateral supracondylar line
Adductor magnus tendon
Popliteal surface
Medial head of gastrocnemius
Adductor tubercle
Articular capsule
Lateral epicondyle
Gastrocnemius lateral head
Lateral condyle
Oblique popliteal ligament
Medial condyle
Fibular collateral ligament
Intercondylar fossa
Arcuate popliteal ligament
Meniscus
Popliteus muscle
Medial condyle
Posterior ligament of head of fibula
Head of fibula
Semimembranosus tendon
Soleal line
Tibial collateral ligament
Body of tibia
Body of fibula
Interosseous membrane
Posterior tibiofibular ligament
Medial malleolus
Lateral malleolus
Deltoid ligament
Navicular
Lateral talocalcaneal ligament
Calcaneus
Medial talocalcaneal ligament
Cuboid bone
Calcaneofibular ligament
Metatarsal
Calcaneal tendon
Proximal phalanx


Frontal bone
Supraorbital foramen
Parietal bone
Sphenoid bone
Infraorbital foramen
Mandible
Mental foramen
Interclavicular ligament
Anterior sternoclavicular ligament
Costoclavicular ligament
Conoid ligament
Trapezoid ligament
Acromioclavicular ligament
Coracoacromial ligament
Supraspinatus tendon
Coracohumeral ligament
Subscapularis muscle
Biceps brachii tendon, long head
Sternocostal ligament
Interchondral ligament
Internal intercostal muscle
External intercostal muscle
Medial intermuscular septum
Lateral intermuscular septum
Radiate ligament of costal head
Anterior longitudinal ligament
Articular capsule
Ulnar collateral ligament
Annular ligament of radius
Radial collateral ligament
Oblique cord
Intertransverse ligament
Interosseous membrane
Palmar radioulnar ligament
Palmar radiocarpal ligament
Palmar ulnocarpal ligament
Radial collateral ligament
Flexor retinaculum
Deep transverse metacarpal ligament
Ulnar collateral ligament
Pisohamate ligament
Palmar ligament
Nasal bone
Superior orbital fissure
Lacrimal bone
Inferior orbital fissure
Temporal bone
Zygomatic bone
Mastoid process
Mandible
Tooth
Clavicle
Acromion
Coracoid process
Head of humerus
Greater tuberosity
Lesser tuberosity
Bicipital groove
Glenoid cavity
Scapula
Sternum
5th rib (true rib)
Deltoid tuberosity
12th rib (false rib) costal cartilage
Xiphoid process
12th rib (floating rib)
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Trochlea of humerus
Capitulum of humerus
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Anterior superior iliac spine
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Metacarpal
Proximal phalanx
Middle phalanx
Distal phalanx
Lumbar vertebra
Intervertebral disc
Sacral promontory
Iliac ala
Costoid process
Iliolumbar ligament
Sacrum
Anterior sacroiliac ligament
Iliofemoral ligament
Inguinal ligament
Pubofemoral ligament
Sacrospinous ligament
Sacrotuberous ligament
Obturator membrane
Superior pubic ligament
Coccyx
Arcuate pubic ligament
Pubic symphysis
Greater trochanter
Head of femur
Neck of femur
Lesser trochanter
Superior pubic ramus
Ischial tuberosity
Pubic tubercle
Inferior pubic ramus
Femur
Adductor tubercle
Patella
Medial condyle
Lateral condyle
Meniscus
Head of fibula
Tibial tuberosity
Medial surface of tibia
Tibia
Fibula
Medial malleolus
Talus
Navicular
Lateral malleolus
Cuneiform bone
Cuboid bone
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Medial patellar retinaculum
Tibial collateral ligament
Interosseous membrane
Anterior tibiofibular ligament
Articular capsule
Deltoid ligament
Anterior talofibular ligament
Deep transverse metatarsal ligament

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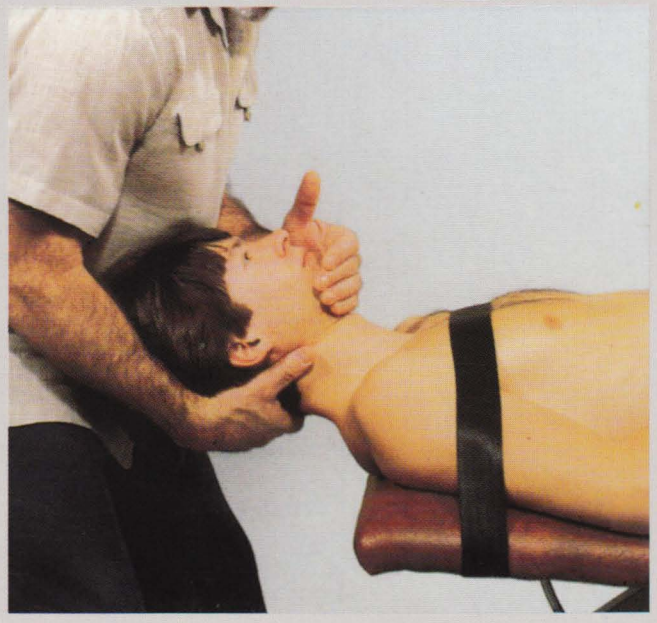
MUSCLE STRETCHING IN MANUAL THERAPY
A CLINICAL MANUAL



The Spinal Column and the TM - Joint

Volume II

Olaf Evjenth & Jern Hamberg

ALFTA REHAB

Olaf Evjenth & Jern Hamberg

MUSCLE STRETCHING IN MANUAL THERAPY

A Clinical Manual

Muscle stretching 2000 years ago. Statue from Bangkok.

Volume II The Spinal Column and the Temporo-Mandibular Joint

ALFTA REHAB

MUSCLE STRETCHING IN MANUAL THERAPY, A CLINICAL MANUAL, TWO VOLUMES

by

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PREFACE

Today, one patient in four seeking medical aid does so solely with a locomotor system complaint. Many of the remaining three-quarters of all patients seeking medical aid primarily for other reasons also complain of stiffness, aches, and painful movement. The muscular-skeletal disorders of patients in these two categories comprise the greatest single cause of sick leave. The persons affected dominate the group of those who retire early on disability pensions. The socio-economic problems resulting from muscular-skeletal disorders are undoubtedly greater and more widespread than indicated by any single statistic.

Years of research and experience in studying and treating locomotor system maladies have clearly proven the effectiveness of treatment through relaxation and stretching of shortened muscles and other related structures. The techniques involved are basically therapeutic, but they may also be applied in preventative exercise at all levels of physical training programs, for persons of all ages.

Our research has been pragmatically oriented towards attaining results for a greater number of patients over longer periods of time. Hence we have not conducted double-blind tests, but instead have allowed our patients to function as their own controls. Prolonged dysfunction, which diminishes dramatically after relaxation and stretching treatment, is more than ample proof of treatment effectiveness, both for the therapist and for the patients involved.

This book is a compendium of therapeutic techniques that we have used to successfully treat patients with reduced mobility caused by shortened structures. Treatments for the extremities and their associated joints are covered in **Volume I**. Treatments for the spine and the temporomandibular joint are covered in **Volume II**. Although the temporo-mandibular joint is anatomically removed from the spine, it is therapeutically recognized as being closely connected to the cervical spine and therefore is included in **Volume II**. Each of the two Volumes is arranged to be used as an independent clinical reference.

In this **Volume II**:

The general principles of manual therapy are outlined in **Part 1**, along with a guide to the organization of the therapy techniques.

The movement pattern of the spine, including the movements involved in *locking* techniques for the cervical, thoracic and lumbar spine are covered in **Part 2**.

The therapy techniques are fully described in **Part 3**, one to a page. Each description consists of a drawing showing the muscles involved, two photos showing the starting and final positions of the technique, and an explicit text giving positions, grips and procedures.

The Movement Restriction Tables and Index of Muscles of **Part 4** list the muscles which may restrict movement and reference them to pages.

The two volumes of this book are intended primarily to be used as ready-reference clinical manuals and as texts on muscle stretching in manual therapy. However, we hope that they will also provide physiotherapists and medical doctors with a fresh, comprehensive approach to the entire subject of muscle stretching in manual therapy. Our underlying goal has been to contribute to improving the quality of the treatment of muscular-skeletal disorders, both for patients and for therapists. We will be pleased if the users of this manual find it useful in realizing that goal.

Oslo, Norway and Alfta, Sweden
August 1984
Olaf Evjenth and Jern Hamberg

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PART 1

GENERAL PRINCIPLES OF RELAXATION AND STRETCHING OF MUSCLES AND OTHER STRUCTURES

1.1 INTRODUCTION

1.2 INDICATIONS

1.3 CONTRAINDICATIONS

1.4 GUIDELINES FOR THE THERAPIST

1.5 DYSFUNCTION

1.6 MANUAL THERAPY METHODS

1.7 RECOMMENDED THERAPY PROCEDURE

1.8 THERAPY TECHNIQUES - PART 3

1.9 REFERENCES

1. GENERAL PRINCIPLES OF RELAXATION AND STRETCHING OF MUSCLES AND OTHER STRUCTURES

1.1. INTRODUCTION

Humans have always been physically active for reasons other than pure necessity. Nonessential activities, which now classify physiologically as exercise or stretching, evolved for reasons long forgotten or never recorded. Although dance and ritual were obvious progenitors, non-productive physical activity undoubtedly had utilitarian origins: Its early practitioners felt better after stretching. Historical confirmation of the origins of exercise and stretching is lacking. But there's ample evidence that stretching, such as that depicted by the 2000 year old statue shown in the frontispiece of this book, has been practiced since the dawn of history.

Stretching now divides into *therapeutic stretching*, the topic of this Manual and *self-stretching*, as used in exercise, athletic training, dance, and certain ritual exercises. The two categories of stretching may supplement each other. For instance, therapists may teach their patients self-stretching to speed recovery, and sports teams may employ therapists to treat athletes. Yet there is good reason to differentiate. Controlled, proper stretching is beneficial. But uncontrolled stretching of muscles and other structures may damage, such as through causing instability or pathological hypermobility. In most such cases, self-stretching is involved.

Unwary athletes and other persons exercising often self-stretch with great force at long lever arms, which easily injures. Some competitive athletic events, such as gymnastics in general and women's gymnastics in particular, require extreme movement and therefore frequently injure participants. Other extreme activities, such as group exercises to music ("jazzexercise" and "aerobic dance" are two) also pose high hazard of stretching damage. Some exercises are faulted, but lack of knowledge is the leading underlying cause of self-stretching damage. Most people know little of the normal ranges of movement of the joints of their bodies. The result is that when they stretch, normal structures are often overstretched, while shortened structures are seldom adequately stretched.

An understanding of why, when and how muscles or other structures should be stretched is prerequisite to stretching to benefit rather than degrade body function. The role of the therapist in stretching is then not just to understand and treat, but also to guide and teach patients self-stretching (see references 6 and 7).

1.2. INDICATIONS

Every patient with symptoms involving the locomotor system, particularly symptoms of pain and/or constrained movement, should be examined to assess joint and muscle function. If examination shows joint play to be normal, but reveals shortened muscles or muscle spasm, then treatment by stretching is indicated. With a view towards preventive medicine, all younger children should be examined and, if necessary, treated for any disturbed muscle function before symptoms appear.

1.3. CONTRAINDICATIONS

Any dysfunction and/or pain of suspected pathological origin contraindicates manual therapy. Affected patients should be advised to seek medical diagnosis, and return to therapy if their doctors negate the suspected pathology and recommend return.

1.4. GUIDELINES FOR THE THERAPIST

The only reliable way to become proficient in detecting and treating muscle dysfunction is through experience gained by *thoroughly examining every patient*. Unfortunately there are no exact rules for examination. Normal ranges of movement referenced in texts, though typical of large populations, are seldom directly applicable in individual cases and therefore do not always indicate if muscles and/or other structures need stretching. So patient examinations should start with *preliminary biomechanical analyses*.

If the preliminary analysis identifies shortened muscles, then a provisional trial treatment is performed. If the provisional treatment reduces pain and improves the affected movement pattern, the preliminary analysis is confirmed, and treatment may proceed. The restoration of the muscles' *normal pattern of movement*, with *freedom from pain*, is the *only real measure* by which the treatment may be judged to have been successful. With experience, examiners can detect particular shortened muscles that constrain movement in their surrounding structures. Sometimes movement patterns and/or ranges of movements cannot be fully restored because of irreversible damage or changes in locomotive structures. Nonetheless, stretching can still be valuable in treatment.

The starting positions, Fig. a, of the techniques of Part 3, correspond to positions imposed by shortening, while the final positions, Fig. b, correspond to extent of maximum range of movement.

1.5. DYSFUNCTION

1.5.1. Causes and Mechanisms

When functioning normally, a muscle has optimum circulation and innervation, is able to move freely, is unimpaired in contracting and relaxing, and has normal elasticity and strength. All movements should be free of pain. Muscle function may depart from this norm in many ways, primarily because muscles are among the most susceptible of body structures. They must continually readjust to their use, disuse, or misuse. Muscle shortening frequently results. Stiff or shortened muscles are often activated in movements in which they otherwise would not take part. This overuse in turn leads to injury and/or to excess inhibition of their antagonists. In general, the shorter the muscle, the more it may inhibit its antagonists. Therefore, stimulating and strengthening a muscle's antagonists always aids treatment. However, note that *the shortened muscle being treated should always be stretched before its antagonists are strengthened.*

Shortened muscles may cause pain from the periosteum, tendons, or muscle belly, including referred pain to other structures or segments. In a synergistic group, no one muscle should be shorter than the others of the group. A stiff, shortened muscle will be subjected to greater stress when contracted suddenly and forcefully, thus damaging itself and/or its associated tendon. This can be prevented by stretching the relevant muscle or muscle group.

Normal range of movement is determined by several structures: skin, subcutaneous tissue, muscles, ligaments, joint capsules, joint surfaces, and intraarticular structures. Changes in any of these structures alter ranges of movement. Conditions such as septic or aseptic inflammations may cause restricted movements when acute, and pathological instability when chronic. The structures most affected are the fascia, joint capsules, ligaments, and joint cartilages. An example is the development of *ankylosing spondylarthritis* (Morbus Bechterew). An initial instability becomes hypomobility through degenerative change. Subsequent development may further restrict movement ranges, and occasionally lead to ankylosis. If a reduced range of movement is caused by shortened muscles, then treatment by stretching increases and may restore the range of movement to normal.

1.5.2. Symptoms

Dysfunction due to shortened structures can be detected by observing one or more of the following changes it may cause:

1. Pattern of movement,
2. Volume and swelling and/or distention of a muscle,
3. Elasticity of a muscle,
4. Range of movement at a joint,
5. Joint play (section **1.6.3**, p. 9),
6. Quality of the passive stop, end feel (section 1.6.3, p. 9); *most important.*

In addition to these indicators, a patient may experience fatigue, pain radiating to other muscles and structures, and a feeling of stiffness in the shortened muscle(s). Shortened muscles may also irritate and damage peripheral nerves and blood vessels; examples include sports injuries, and the scalenus, the supinator, the pronator and piriformis syndromes. Poor physical condition, inadequate coordination, or unaccustomed movement often cause altered circulation and faulty muscle movement patterns. According to Vladimir Janda(1), this leads to constant *micro-traumata*, which, in turn, subsequently effects alterations in patterns of movement with chronic muscle spasm, contractures and pain. In an advanced case, joint function is altered and degenerative changes at the joints result. Stretching of the relevant muscle(s) is one way of *preventing* this chain of events.

1.6. MANUAL THERAPY METHODS

1.6.1. The Basics of Stretching

All therapy techniques including stretching should be based on thorough examination. Stretching techniques differ primarily by the type and degree of patient involvement in procedures administered by the therapist. Common to all procedures is a basic, safest sequence of events based on the principle that a muscle is most relaxed and therefore may be maximally stretched immediately after an isometric contraction. According to Sherrington(2), the stronger the contraction (without pain), the greater the subsequent relaxation.

So all procedures start with a static *contraction* of the shortened muscle(s). Then the muscles are relaxed, which makes them more easily stretched for a period of a fraction of a second up to 10 or 12 seconds in pathological cases. During this period, the muscles can be safely stretched. Often patients cannot contract from an extreme position, so treatment procedure cannot begin there. In these cases, it is best to move back to a position in the range of movement where the patient can easily contract, and begin the procedure there.

Muscles are most amenable to stretching when they are *warmed up* in the physiological sense, by preliminary exercise rather than by the application of passive, external heat. Thus all treatment should start with some form of warmup. The best and most specific warmup exercise is contraction

against resistance. The stronger the contraction, the greater the warmup effect.

Unwanted external stimuli, such as noise or discomfort, can impair treatment, particularly treatments requiring combined efforts of patient and therapist. So the patient should always be made as comfortable as possible. The treatment surroundings should be quiet, and other distracting influences should be eliminated whenever possible.

1.6.2. Therapy Procedures

In all therapy procedures, the therapist works to counteract some restriction of movement about a joint. Three different therapeutic approaches are possible, depending on whether the patient is completely passive, participates by offering resistance, or participates both by offering resistance and by working with the therapist.

1. Patient passive: This technique is used in treating more serious contractures to produce lasting lengthening of shortened tissue. The patient relaxes while the therapist moves the joint further in the direction of restriction, and then holds the extreme position as long as necessary, even up to two minutes or more, to lengthen the shortened structures.

2. Patient resists: In this gentle technique, the therapist applies moderate force to move a joint as far as possible in the direction of restriction. The shortened structures then press the joint surfaces together. Then the therapist applies traction at the joint, and thus tries to separate the joint surfaces as the patient resists. Thereafter, the patient relaxes and the therapist maintains traction as long as necessary, until the joint surfaces are felt to separate. The procedure is repeated until movement is appreciably improved.

3. Patient resists and aids: This is the *recommended technique* of this Manual. It starts as does the "Patient resists" technique above, but differs thereafter. First, the therapist moves a joint as far as possible in the direction of restriction. Then the therapist holds the position and asks the patient to isometrically resist it. Patient and therapist should resist each other equally, with the patient contracting one or all of the muscles which are to be stretched; this ensures negligible joint movement. The patient then relaxes while the therapist moves the joint further in the direction of restriction. The process is repeated until improvement is attained. In some cases when the therapist moves a joint, the patient either feels pain or fears pain to an extent that blocks relaxation. The therapist can then apply traction and aid or even offer slight resistance as the patient actively moves the joint in the direction of restriction. Thus the patient controls movement and therefore can relax. In all cases, the therapist holds the extreme position as long as necessary, even up to two minutes or more, to lengthen the shortened structures.

1.6.3. Character of Joint Movement

In treating joints, the therapist should continually assess the quality and quantity of joint movement and the manner in which movement stops. These evaluations then guide the course of further therapy. For instance, some joint movement abnormalities may contraindicate stretching therapy.

1. *Joint Play*

Joint play is the gliding and/or separation of joint surfaces without angular movement about a joint. All joints have a characteristic joint play, with which the therapist should be familiar. Normally joint play is greatest in the maximally loose-packed position and diminishes to minima at the extremes of the joint range of movement. The therapist must always examine a joint for joint play before using any of the treatment procedures described above. If joint play is less than normal, it must be restored to normal before other therapy is begun or continued.

2. *End Feel*

The therapist must be able to sense the extremes of the various possible ranges of movements about body joints, that is, the points at which passive movement stops (3,4). **End feel** is the sensation imparted to the therapist at these points. There are several different types of end feel; the therapist must be able to differentiate between them:

Normal end feel may be *soft, firm or hard*:

Soft: Soft tissue approximation and/or stretching, such as knee or elbow flexion with normally-developed muscles.

Firm: Capsule and/or ligament stretching, such as medial rotation of the humerus or femur.

Hard: Bone-to-bone stop, such as elbow extension.

Abnormal end feel: Abnormalities may produce varying end feels; six are differentiated:

Less-elastic: Such as due to scar tissue or shortened connective tissue.

More-elastic: Such as due to increased muscle tonus, shortened muscles.

Springy block: Internal derangement where the rebound is seen and felt, such as due to torn meniscus.

"*Empty*": The patient feels severe pain, such as due to acute bursitis, extraarticular abscess or neoplasm, and will not permit the movement to go further; no physical stop felt by the therapist.

Premature: Occurs *before* normal stop, such as in rheumatoid arthritis or osteoarthrosis, or contracted ligaments or capsules.

Extended: Occurs *after* normal stop, such as in cases of instability or hypermobility.

1.7. RECOMMENDED THERAPY PROCEDURE

The therapy techniques of Section 3 involve the patient resisting and aiding, the third of the three approaches to procedure described in **1.6.2**, p. 9. In these techniques:

* The therapist moves a patient's joint(s), in the direction of restriction, to positions progressively approaching, but never exceeding the normal range of joint motion, as determined by end feel.

* The patient actively participates in the treatment procedure, alternately resisting or aiding motion as directed by the therapist.

* Successive sequences of isometric contraction, relaxation and stretching are used to attain the desired improvement in joint movement range, followed by stimulation of the antagonists. Descriptions of these treatment phases follow.

1.7.1. Isometric Contraction

First, the therapist moves the joint(s) to a position in the line of movement to less than that which might cause pain. It may be possible to start in a position with the shortened structures relatively stretched. However, it is often necessary to start in a position where the patient can easily resist the movement.

Then, in this position, the patient is instructed to resist movement by isometrically contracting the shortened muscle(s). In this **phase, the therapist and the patient apply forces that counterbalance so there is no movement in the joint itself**. The therapist's grip and resistance applied must be comfortable, painless, and secure for the patient.

If isometric contraction causes the patient no pain, the therapist can readily and rapidly tire the muscle(s) involved by applying sufficient resistance (relative to the contracting muscular force) for a few seconds or longer. If the isometric contraction is painful for the patient, then the therapist should decrease resistance and increase the period of force counterbalance, up to 10 to 30 seconds.

1.7.2. Relaxation

When the therapist feels that the patient has sufficiently contracted the shortened muscle(s), the patient is instructed to relax. As the patient relaxes, the therapist releases resistance accordingly, so as not to cause pain or unwanted movement(s).

1.7.3. Stretching to Counteract and Reduce Restriction

After the preceding isometric contraction and relaxation, movement may be improved in four ways:

1. The therapist moves the joint in the direction of restriction.
2. If this movement is painful or if the patient fears pain, then the therapist may be more passive and let the patient actively move at the joint.
3. Pain experienced often may be lessened considerably if the therapist applies gentle traction while the patient actively moves at the joint.
4. Sometimes pain may be further reduced if, in addition to applying gentle traction, the therapist also simultaneously either:
   a) aids the patient's movement at the joint, or
   b) provides *gentle resistance* while the patient moves at the joint.

Once an initial new position is attained, the sequence of contraction, relaxation and stretching is successively repeated to progressively attain the desired improvement in movement range. Thereafter, the antagonist(s) should be stimulated.

1.7.4. Stimulation of Antagonists

The antagonists to the muscle(s) treated always should be stimulated immediately after the sequence of treatment to increase movement in the direction of restriction.

To stimulate the antagonists, the therapist reverses the direction of force or resistance applied, and counteracts movement. To reverse the direction of force applied, the therapist may either retain grip or change grip, depending on the treatment technique involved. Once the therapist is prepared to apply a reverse force, the patient is asked to move in the direction just stretched in the treatment, and the therapist opposes that movement to evaluate the ability and the force with which the antagonists contract.

Inhibition of antagonists can be reduced through vigorous stimulation, such as rapid vibrating movements, pinching and shaking/stretching muscles, slapping the skin, or traction or compression (approximation) of the joint(s).

Restricted joint mobility or pain may inhibit and thus lead to weakening of the antagonists. Therefore it may be necessary to strengthen these muscles throughout their full range of movement. The muscles should be able to control movement through the full range and should also be able to lock the joint in any position in that range. Stimulation of the antagonists is always a vital part of successful treatment.

Neurological dysfunction may block or mask a patient's perception of stimuli. In these cases, stimulation must be confined to localized areas. For instance, in stimulating the finger flexor muscles (antagonists to the finger extensors), the

therapist should apply pressure only to the volar sides of the fingers.

1.7.5. Stretching of Other Structures

Whenever successive contraction and relaxation treatments fail to increase movement at a joint, the joint should be reexamined to ascertain if the restriction is caused by structures other than muscle(s), such as by ligaments or joint capsules. If joint play is noticably diminished or absent, it may be restored using joint mobilization techniques, such as those described by Kaltenborn(3) and Stoddard(5). However, if joint glide is normal but movement is restricted, the following procedure may be used. The therapist stretches the shortened structures by applying an *optimal intensity* force. *Intensity* is the combination of force magnitude and duration of application, with duration being the more important in stretching. *Optimal* means as small as possible, yet adequate for results: a small force for a few seconds to two minutes or more.

The patient should feel the stretching, possibly even as pain, though not to the point of serious discomfort. **Elsewhere the treatment should cause no pain**. If the procedure produces no improvement, the force applied may have been of insufficient intensity. If so, stretching should be repeated at greater intensity, preferably for longer periods of time, and then if necessary, with greater force.

Physiotherapists or doctors may administer these therapeutic stretching techniques. However, therapy is more effective if it is supplemented by more frequent self stretching, preferably daily or several times a day. Therefore, patients should be taught self stretching (6,7). In general, the more frequent the stretching, the more moderate the intensity. Less frequent stretching, such as that done every other day, may be at greater intensity.

1.8. THERAPY TECHNIQUES - PART 3

1.8.1. Therapeutic Relation Between the Spine and the Temporo-Mandibular Joint

The commonplace view of the human body places the head on top of but separate from the back, and anatomical classification separates the jaw from the spine. Such conceptual lack of connection can deceive. Acrobats thrill circus spectators by hanging in midair from bars clenched in their teeth, and strongmen stunts often include impressively gigantic humans moving trucks or railroad cars by pulling on towropes with their teeth. These extraordinary performances underscore that there actually is a very strong connnection between the jaw and the spine.

Jaw misalignment, habitually clenched teeth, or other mastication abnormalities can asymmetrically load and thus lead to dysfunction in the temporo-mandibular joints. This dysfunction may result in referred muscular stress, which, in turn, can hinder treatment of or even worsen existing dysfunction in the neck. Whenever therapeutic treatment of the cervical spine fails (and there is no underlying neurological or pathological abnormality), dysfunction in the temporo-mandibular joints often is the barrier to improvement. Therefore, from a therapeutic viewpoint, the temporo-mandibular joints are closely connected to the cervical spine. Thorough therapeutic examination of the cervical spine should always include examination of the temporo-mandibular joints, and vice versa. For these reasons, the therapies for restrictions at the temporo-mandibular joints are regarded as being part of the treatments of the spinal column rather than part of the treatments of the extremities (**Volume I**).

1.8.2. Caveat

In treating all joints, and particularly in treating the cervical spine, the therapist should strive to avoid compression. Compression may hinder desired movement at the various articulations, can stress nerve tissue, or can otherwise damage the spinal column. Therefore, traction is used in all procedures as a means of counteracting any compression which may result from the movement induced in treatment.

Therapeutic treatment of the spine and the temporo-mandibular joints builds on the same general principles as does the corresponding treatment of the extremeties described in **Volume I**. However, the nature and function of the spinal column dictate a more cautious approach, which demands greater experience and skill on the part of the therapist.

In particular, complex spinal movements, involving ventral/dorsal flexion, lateral flexion, and rotation, must be made in sequential small increments. First ventral/dorsal flexion is increased slightly, then rotation is increased slightly, and finally lateral flexion is increased slightly. Thereafter, the sequence of slight increases of each of the three component movements is repeated successively until the final position is attained. Specifically, **a final position should not be approached through maximum movements**. That is, the therapist **does not** maximally ventral/dorsal flex, then maximally rotate, and finally maximally laterally flex to attain a final position.

The success of any therapeutic technique used is contingent upon the cooperation of the patient and upon a careful examination and appropriate treatment. The therapist must continuously aim, through practice, to increase the sensitivity of

mind, fingers and hands to "receive signals" from the patient. The character of these "signals" often makes verbal communication superfluous. The development of the requisite skills to "feel" what lies below the surface and to register the events there, and then to interpret this information along with the patient's reactions, may take years of practice, even for a skilled and gifted therapist.

1.8.3. Key to Therapy Techniques

Detailed descriptions of the techniques used to stretch restricting structures are arranged in five sections in **Part 3**: cervical spine, temporomandibular joints, thoracic spine and ribs, lumbar spine and coccyx. Each of these sections starts with a Therapy Guide, the first four of which contain two tables. The tables list the possible restrictions at the articulation group, the muscles which may cause each of the restrictions, the corresponding techniques (indexed by number and page), and the relevant muscle actions.

Alternative therapies for any particular restriction are indicated by suffix letters. For instance, there are three specific techniques for increasing ventral flexion of the occiput on the atlas listed in section 3.2.2:

3.2.2.C (see Notes!)

Section 3 on the cervical spine

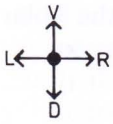
Subsection 2 on restricted ventral flexion

Specific techniques 2 for the occiput on the atlas

Technique C, patient supine

For uniformity, all technique descriptions are similar. In dealing with movements symmetrical with respect to the mid-sagittal plane where the choice of right versus left is arbitrary for the therapist, techniques are explained primarily assuming a right-handed therapist. In these cases, the therapist may interchange right and left if more convenient. In all cases where movements are asymmetrical with respect to the mid-sagittal plane, the treatment for movement to the right is shown and discussed. The therapist then reads right for left and vice versa in the equivalent therapy for movement to the patient's left.

Each therapy is illustrated with a muscle drawing and starting and final position photos.



Drawings show directions in all planes.

in illustrations indicates **locking**

X in illustrations indicates points of stabilization by hands, belts etc. **Arrows** in illustrations indicate directions of stretching movements and also patient movement in the antagonist muscle stimulation phase. **P** in texts denotes the patient, **T** the therapist.

All instructions are for you, the Therapist, and are divided into four parts: **Starting Position, Grip, Procedure and Stimulation of Antagonists**. When needed, **Notes** clarify or supplement these four parts.

The **Starting Position** instructions consist of short statements on how to arrange the patient and yourself to start treatment. They may easily be remembered if you view them as brief descriptions of a scene, or as notes you might take upon first seeing the technique performed by another therapist. The other three instructions, **Grip, Procedure and Stimulation of Antagonists** are direct instructions on how to perform the treatment.

Instructions for the patient also require monitoring by the therapist. For instance, some **Procedure** instructions require the patient to exhale. You must then ask the patient to exhale, and must check that he/she exhales and does not immediately inhale again as the treatment is performed.

Note that most stretching should be performed gradually and fully, so as to approach but not go beyond the normal range of movement.

As in anatomy texts, the descriptions of *muscle action* of this Manual assume starting in the anatomical position. However, muscle action may change at an extreme joint position, sometimes to the opposite of that described. For instance, the **sternocleidomastoid** muscle in the neck acts as a ventral flexor of the cervical spine when it is ventrally flexed, but acts as a dorsal flexor of the upper cervical spine when the cervical spine is dorsally flexed.

1.8.4. Terminology

Standard anatomic terminology is used throughout this Manual. However, whenever two or more synonymous anatomical terms are in accepted current use, the terms most pertinent to the physiotherapy situation are used.

Because manual therapy is concerned with joints and muscles and related structures, all

descriptions of therapy procedures and of muscle actions are in terms of joint movements. For instance, the action the **rectus capitis dorsalis major** muscle of the neck is described as "dorsally flexes the occiput on the atlas" while a medical anatomy text author might prefer "extends head."

In summary, the terminology of this Manual may be viewed as chosen to suit an *active situation*, in which the therapist promotes, directs, or elicits motion, as opposed to some surgical or medical choices of terms, which may be viewed as more *passive*, intended primarily for identification or description.

1.8.5. Using the Ready Reference Features

The ready reference features of this Manual can best be explained by example. Assume an adult whose complaint is that they cannot turn their head and look to the rear when backing a car. The restricted movements involve various degrees of ventral flexion with lateral flexion and rotation to the same side of the cervical spine. First, Section 3 on the Cervical Spine is found either by page number from the Contents or by flipping through the pages to find The Cervical Spine at the top of the pages involved. **Table 3-1** lists the techniques for treating the restricted movement as part of section **3.3**, pp.38-43. All primary and secondary restricting muscles are listed in **Muscle Restriction Table 8-1**, pp. 142-143.

1.9. REFERENCES

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PART 2
THERAPEUTIC VIEW OF THE SPINE

2.1. IMPORTANCE OF MOVEMENT PATTERN IN THERAPY

2.2. BASIC MOVEMENTS

2.3. PHYSIOLOGIC MOVEMENT

2.4. PHYSIOLOGICAL AND UNPHYSIOLOGICAL/LOCKING POSITIONS

2.5. LOCKING TECHNIQUES

2. THERAPEUTIC VIEW OF THE SPINE

2.1. Importance of the Movement Pattern in Therapy

The structure and function of the vertebral column dictate that therapy techniques for the spine differ from therapy techniques for other joints in the body in two respects. First, because the vertebral column consists of many articulating segments, movements are complex and usually involve several segments. This also means that restrictions may be complex. For instance, if a single segment is restricted, the adjacent segments may assume part of its normal tasks in executing movement. Thus hypomobility and forced hypermobility may both exist in a relatively short section of the spine. Second, because the spinal cord runs along the channel formed by the vertebral column, damage to or excessive movement of the column is potentially hazardous to the central nervous system.

The therapist may exploit the movement pattern of the spine to therapeutic advantage. For instance, through controlling movement, segments may be positioned such that they are either maximally free or maximally constrained. Exercising such control increases the precision and efficiency of both non-specific and specific treatments.

For these reasons, a thorough familiarity with the movement pattern of the spine is prerequisite to all therapy techniques for the spine.

The movement pattern of the spine delineates the movements attainable by the unrestricted, normal spine. It should not and normally cannot be exceeded without injury. It is described in terms of *quantity* and *quality* of the various movements involved. The quantity of a spinal movement is described in terms of the basic component movements and can be measured in degrees. The *quality* of a spinal movement describes the manner in which it is made. A *high quality* movement is made throughout its range without pain or obvious mechanical difficulty. Both the *quantity* and the *quality* of a spinal movement and of its basic component movements are determined by the physiology of the spine and its surrounding structures.

2.2. Basic Movements

Almost all self-propelled human motion is produced and controlled by movements of the appendicular portion of the body. Much of the science of kinesology is devoted to studies of how the limbs move in executing various tasks and in propelling the body. In comparison to the relatively large normal ranges of movements at the joints of the extremities, the movements of the articulating segments of the vertebral column are small, and sometimes almost imperceptible. Nonetheless they are extremely important. And they profoundly affect movements of other parts of the body, as anyone who has ever tried to walk with a "stiff back" can attest. Movement, however subtle, is a vital part of the function of the spine. Therefore, the movements of the spine are precisely defined:

All movements of the spine are referenced to the neutral position in which the spine appears:

* As a straight, vertical column in the *frontal plane*.
* As a double S-curved column (post-infancy spine) in the *sagittal plane*, with normal cervical, thoracic, lumbar and sacral curves.

And **all complex movements are described in terms of three constituent component movements.** In their most customary order, the components are:

* Sagittal plane: Ventral or dorsal flexion: Movements changing curvature of the spine in the mid sagittal plane.
* Frontal (coronal) plane: Lateral flexion: Movements inducing curvature of the spine in the frontal (coronal) plane, to the right or to the left.
* *Transverse plane: Rotation* about a midline in the vertebral column, defined when viewed from above the head as right (clockwise) or left (counterclockwise).

Theoretically, these three components may be considered in any order. But in practice, flexion in the sagittal plane is always first, because ventral

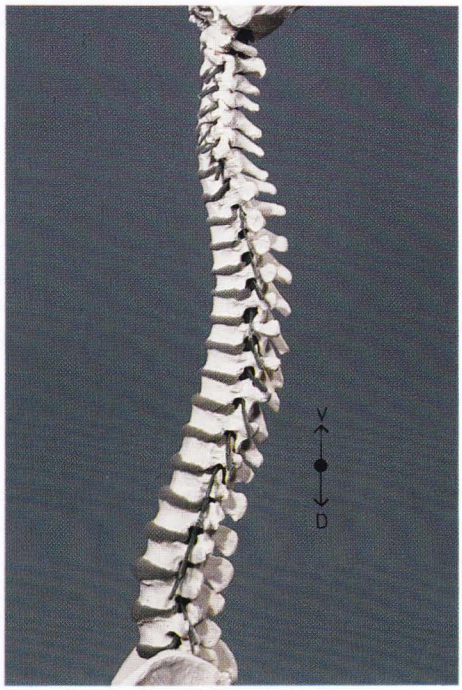


Fig. 1. Normal vertebral column in sagittal plane; left lateral view.

and dorsal flexion differ in magnitude throughout most of the spine and because together they comprise the greatest range of movement of the spine. Thereafter, there are two possible orders. The order most commonly used in physiotherapy is as above: ventral/dorsal flexion, followed by lateral flexion, followed by rotation. However, in treating, particularly in treating the cervical spine, therapists will rotate before laterally flexing. So the order of ventral/dorsal flexion, followed by rotation, followed by lateral flexion is also valid.

The three basic component movements are not independent, but interact in various ways depending on where movement occurs in the spine. Because the spine is not a completely symmetrical articulating unit, as is, say, a chain of beads, ventral and dorsal flexion may have differing effects on the two other basic movements, depending on position in the spine. In the cervical spine, ventral and dorsal flexion have similar effects on lateral flexion and on rotation. But in the thoracic and lumbar spine, where the position of the articular facets relative to the body of the vertebrae differs from that in the cervical vertebrae, ventral and dorsal flexion have differing effects on the two other basic movements. The differences are discussed in the following section.

Lateral flexion and rotation interdepend throughout the spine. Normally, one cannot occur without the other. The single exception is the rotation of the atlas on the axis, which produces only negligible lateral flexion at the segment itself.

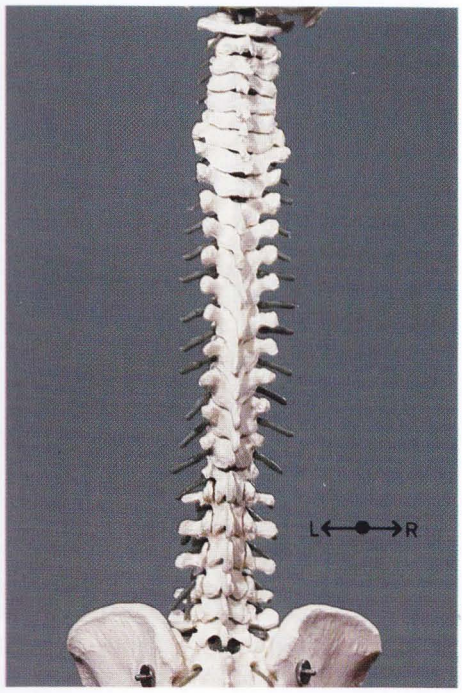


Fig. 2. Normal vertebral column in coronal (frontal) plane; dorsal view.

However, there is still a degree of movement interdependence, as rotation of the atlas on the axis causes lateral flexion of the occiput on the atlas to the opposite side. In general, full lateral flexion is contingent upon rotation.

The theoretically perfect spine can ventrally or dorsally flex throughout without involving lateral flexion or rotation. However, in almost all practical situations, apparently pure ventral or dorsal flexion actually involves some lateral flexion and some rotation.

2.3. Physiologic Movement

In addition to consisting of three component movements, all complex spinal movements are characterized by the relative ease with which the physiology of the vertebral column permits them to be made. In either ventral or dorsal flexion, the normal, unrestricted spine laterally flexes equally well to the right and to the left. However, for each of the four combinations of ventral/dorsal flexion and right/left lateral flexion, there is a difference in the magnitude and the ease with which right and left rotation may be made. One direction of rotation is as free as physiologically possible, while the other is constrained.

The same situation arises if rotation is considered (or induced in treatment) before lateral flexion. In ventral/dorsal flexion, the normal, unrestricted spine rotates equally well to the right and to the left. However, for each of the four combinations of ventral/dorsal flexion and right/left rotation, there is a difference in the ease with which right and left lateral flexion may be made. One lateral flexion is as free as physiologically possible, while the other is constrained. In both of these cases, the relative ease of movement depends on the direction chosen for the last of the three component movements. So the terms describing ease of movement are referenced to that last component movement, and the first two component movements are regarded as attaining a position:

* A position where a final component movement is maximally free is termed the **"physiological" position for movement, which stops with a soft end feel; i. e. coupled movements.**
* A position where the final component movement is constrained is termed the **"unphysiological" position for movement, which stops with a hard end feel; i. e. combined movements.**

The range of movement ease, from maximum freedom in the physiological position for a movement to constraint in the unphysiological position for movement is best illustrated by examples in everyday life. Consider, for instance, the normal sequence of movements a sitting person uses to glance to the left, such as to speak

to someone in the seat to the left in a theater. The chin tucks in and the head inclines and rotates to the left. The sequence of movements involve ventral flexion followed by left lateral flexion followed by left rotation in the cervical spine. The movement is accomplished with ease and without discomfort, as it has been made from the *physiological position for left rotation*. Now consider a similar movement as it is often made by busy office workers at their desks. The typical right-handed office worker places the telephone on the left of his/her desk to leave the right hand free for writing. When talking on the phone, the head is bent to the left to cradle the telephone receiver between the head and the left shoulder, and notes are taken with the right hand, on a pad held stable on the desk with the left hand. Now, if the call requires some information filed on the worker's shelf, typically located behind the chair, most workers will crane their heads to the right to locate the desired item, without putting the telephone receiver down. But head movement to the right is difficult, because the sequence of movements has involved ventral flexion followed by left lateral flexion (which is held) followed by right rotation in the cervical spine. This is the *unphysiological position for right rotation*. The first two component movements, ventral flexion and lateral flexion to the left, are the same in both cases, and the position attained by them may even be identical. The position is physiological for left rotation, but unphysiological for right rotation.

In therapy, the segment(s) treated is/are placed in the physiological position for the movement involved. Therapy techniques are most effective if the segments not being treated do not move in the procedure, or "follow" the movement the therapist induces in the treated segments. They are then placed in an unphysiological position for that movement. This use of unphysiological positions to deliberately constrain movement is termed *locking*. *Locking* is written in *italics* to indicate that it does not mean becoming locked, as a door locks, but rather considerable constraint to movement.

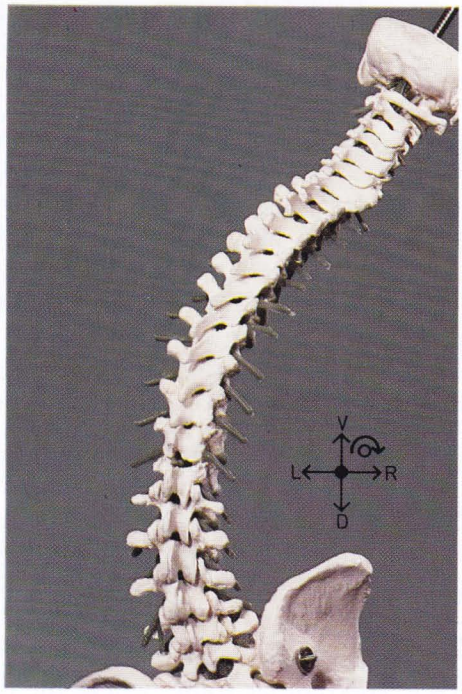


Fig. 3. Vertebral column in ventral flexion lateral flexion and rotation to the right; dorsal view.

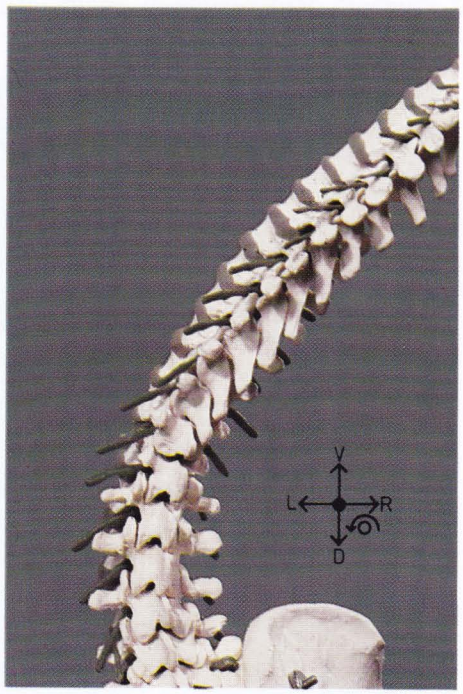


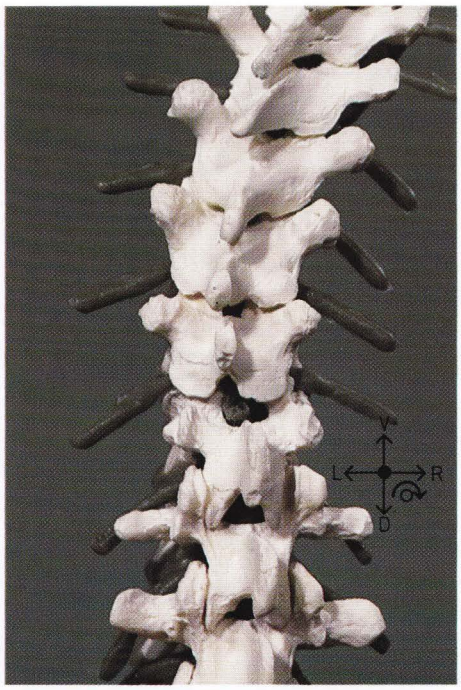
Fig. 4. Vertebral column in dorsal flexion, lateral flexion to the right and rotation to the left; dorsal view.

A

B

Fig.5. Lower thoracic and upper lumbar vertebrae in ventral flexion, lateral flexion and rotation to the right (A, above figure) and in dorsal flexion, lateral flexion to the right and rotation to the left (B, below figure), both physiological positions for movement involved; dorsal view.

A



B

Fig.6. Lower thoracic and upper lumbar vertebrae in dorsal flexion and lateral flexion to the right. Rotation to the left (A, above figure) is physiological, while rotate to the right, (B, below figure) is unphysiological; dorsal view.

2.4. Physiological and Unphysiological/*Locking* Positions

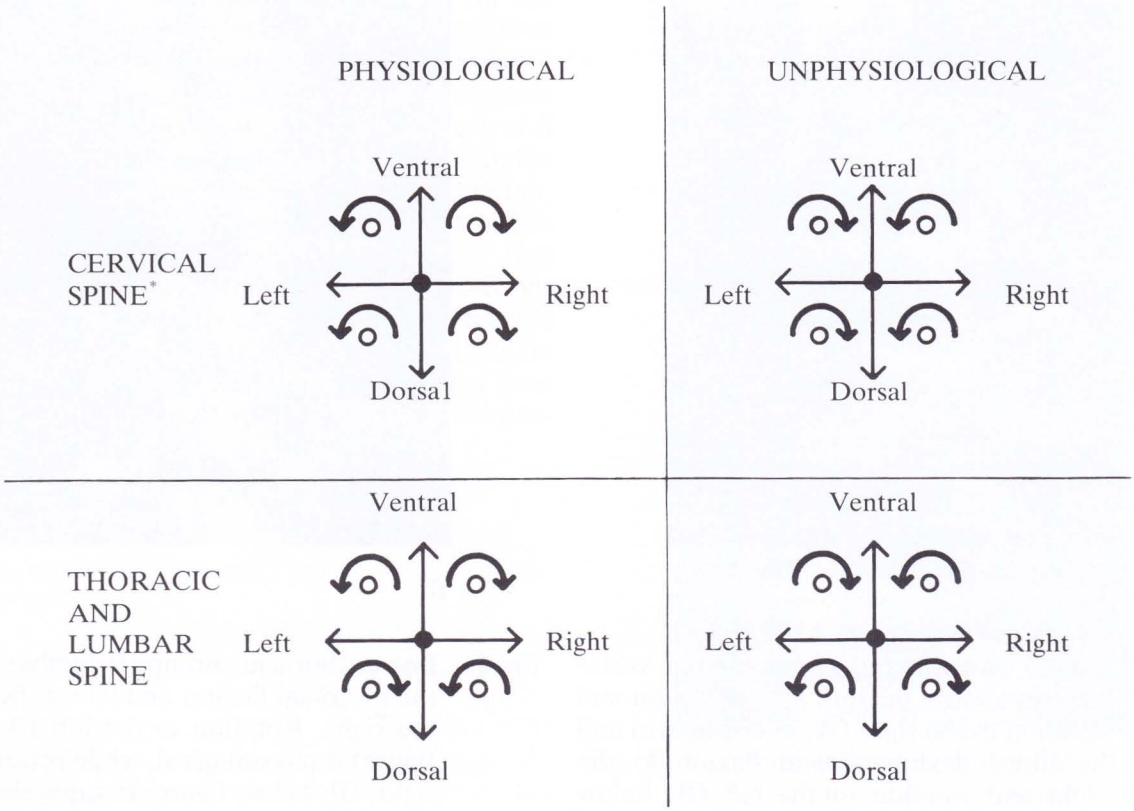
The spine is, so to speak, well designed for its purpose. The physiological positions are those involved in natural human movement. Therefore, they differ from the cervical spine to the thoracic and lumbar spines, as suits the differences in neck/head and trunk movements. The physiological and unphysiological positions are listed in Table 2-1 and shown schematically in Fig. 7.

Table 2-1 Physiological and Unphysiological Positions of the Spine.

Part of Spine	Sagittal Plane Flexion	Lateral Flexion	Physiological Rotation	Unphysiological Position for Rotation to
Cervical[1]	Ventral Ventral	Right Left	Right Left	Left Right
	Dorsal Dorsal	Right Left	Right Left	Left Right
Thoracic and Lumbar	Ventral Ventral	Right Left	Right Left	Left Right
	Dorsal Dorsal	Right Left	Right Left	Left Right

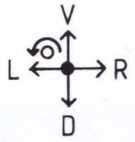
Note 1 May include part of the upper thoracic spine

Fig. 7.



The differences in cervical spine behavior and thoracic and lumbar spine behavior are seen most clearly in the schematic drawing of Fig. 7. In ventral flexion, the *physiological* and *unphysiological positions* are alike throughout the spine. But in dorsal flexion, there is a right-to-left reverse between the cervical spine and the lumbar and thoracic spine, as best suits overall body biomechanics. The differences between the behaviors of the cervical spine and the lumbar spine is clearly noticeable in normal body movement. However, the difference between the behaviors of the lower cervical spine and the upper thoracic spine may be less obvious. The transition from typical cervical spine behavior to typical thoracic spine behavior is not always abrupt at the C7-T1 segment. It may be gradual. In other words, cervical spine behavior may extend slightly caudally into the thoracic spine. So in Table 2-1 and Fig. 7, *Cervical* may in some cases be extended to mean *Cervical and possibly part of the upper Thoracic*.

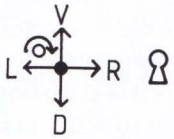
The example of the previous section can be easily explained using Fig. 7. Both the theater-goer and the office worker attain positions of the cervical spine falling into the ventral-left quadrants of the diagrams. The theater-goer's left rotation is physiological:



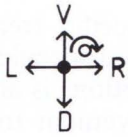
• Segment(s) in neutral position.
○ Segment(s) displaced.

Fig.7. Schematic representation of the physiological and unphysiological positions of spinal segments. Drawings show directions in transverse planes through the spine: ventral and dorsal sagittal-plane flexion, and right and left lateral flexion. Arrows circling displaced spine positions indicate directions of rotation. Note the right-left symmetry of movement in the cervical spine. The corresponding symmetry in the thoracic and lumbar spines is by sectors in the above drawings, or mirror symmetric about a coronal plane. **Note 1:** May include part of the upper thoracic spine.

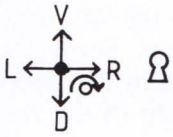
However, the office worker's right rotation is unphysiological, or *locked* (indicated by keyhole symbol in schematic drawing below):



Other everyday movements may be analyzed using the figure. Consider, for instance, the case of the theater-goer whispering to the person in the seat to the right and the office worker trying to find papers filed on the shelf behind his/her chair while talking on the telephone. The theater-goer most likely will bend forward slightly and then rotate his/her shoulders to the right to come closer to the next person's ear to whisper. The sequence of movements involve ventral flexion followed by right rotation and right lateral flexion. The movement falls in the ventral-right quadrant of the physiological diagram for the thoracic and lumbar spine:



It is easy, as it has been made from the physiological position. On the other hand, the stressed office worker, who finds that he/she cannot see the desired item on the shelf behind because head rotation to the right is blocked, will often bend backwards to come closer to the shelf, and then turn shoulders and the chair back to the right for a better view. The sequence of movements involve dorsal flexion followed by right rotation and right lateral flexion of the thoracic and lumbar spine. The movement falls in the dorsal-right quadrant of the unphysiologic diagram:



It is difficult as it has been made from the unphysiological position. The office worker has compounded the original error, and has strained to move against *locking* in the thoracic/lumbar spine as well as *locking* in the cervical spine.

Table 2-1 and Fig. 7 may be used to analyze difficulties due to unintentional *locking* brought about by improper movement. But their major utility to the therapist is as a reference of *locking* positions used intentionally in various spinal therapy techniques.

2.5. Locking Techniques

Locking in therapy involves intentionally placing segments in positions to constrain their movement, so adjacent segments may be more effectively treated. Usually cranial/superior segments or caudal/inferior segments to the treated segment are *locked*. But in some instances, *locking* may be used both caudal to and cranial to the treated segment.

The basics of therapeutic *locking* are easily derived from Table 2-1 and Fig. 7. Consider, for instance, a treatment technique to enhance lateral flexion to the left and rotation to the right of a segment of the lower thoracic spine in dorsal flexion, as shown in Fig. 8. The segment itself is placed in the physiological position, and the adjacent segments are placed in the unphysiological position for rotation to the right. There are two options for *locking* against right rotation:

1. Retain dorsal flexion and induce lateral flexion to the right, or
2. Induce ventral flexion and retain lateral flexion to the left.

For most non-specific treatments and some more easily performed specific treatments, one of these two *locking* options is adequate. Because it is usually more convenient to position a patient with the spine completely in dorsal flexion or completely in ventral flexion, the first of the two options is the most frequently used. The sagittal plane flexion (ventral/dorsal) in which the treated segment is placed is retained caudal to the segment, because of the convenience of stabilizing

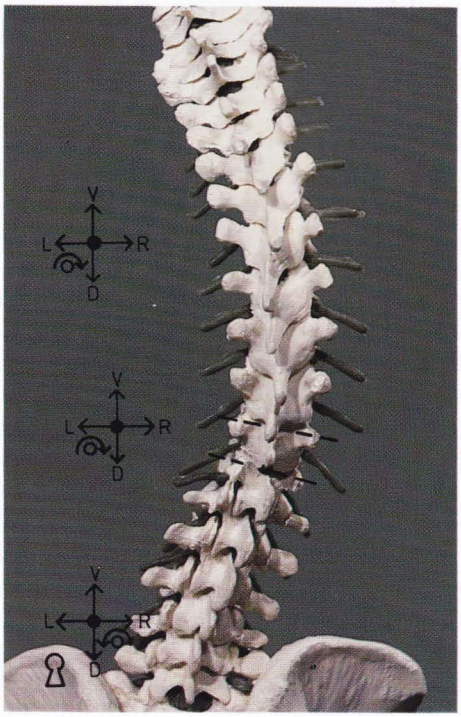


Fig. 8 a.

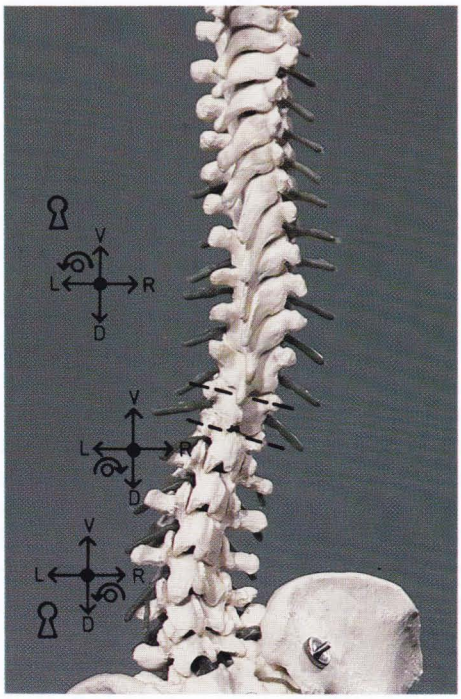


Fig. 8 b.

Fig.8. Typical treatment of lower thoracic spine: T11-T12 segment in physiological position: Dorsal flexion, lateral flexion to the left, and rotation to the right.

A: ***Locking*** retaining dorsal flexion throughout. Segments caudal to segment treated laterally flexed to the right and rotated to the left, *thus locking for rotation to the right.* Segments cranial to segment treated retain the lateral flexion to the left and rotation to the right and therefore do not *lock*.

B: ***Locking*** with change of flexion in sagittal plane: Segments caudal to segment treated positioned as in A: Dorsal flexion, lateral flexion to the right and rotation to the left, *thus locking for rotation to the right.* Segments cranial to segment treated placed in *ventral* flexion, *lateral flexion* and *rotation* to the *left, thus locking for rotation to the right. This is double locking,* with segments both caudal to and cranial to the segment treated *locked* for rotation to the right.

the relatively larger mass of the hips. In the example above, this means that dorsal flexion will be retained caudal to the treated segment. Theoretically, specific treatments, with *locking* both caudal and cranial to the segment treated, can be conducted by placing the entire vertebral column in dorsal flexion and lateral flexion to the right (so it *locks*) and inducing left lateral flexion in the treated segment. But in practice this is impossible to induce. Therefore, flexion is changed in both the frontal and the sagittal planes. In the example above, dorsal flexion is retained but lateral flexion changes from left to right to *lock* caudal to the segment treated, while lateral flexion to the left is retained while sagittal plane flexion changes from dorsal to ventral to *lock* cranial to the segment treated. As illustrated in Fig. 9, *locking* both caudal to and cranial to the segment treated can be achieved by changing sagittal plane flexion either caudal to or cranial to the segment treated. The choice between these two approaches is largely a matter of convenience for the therapist and for the patient.

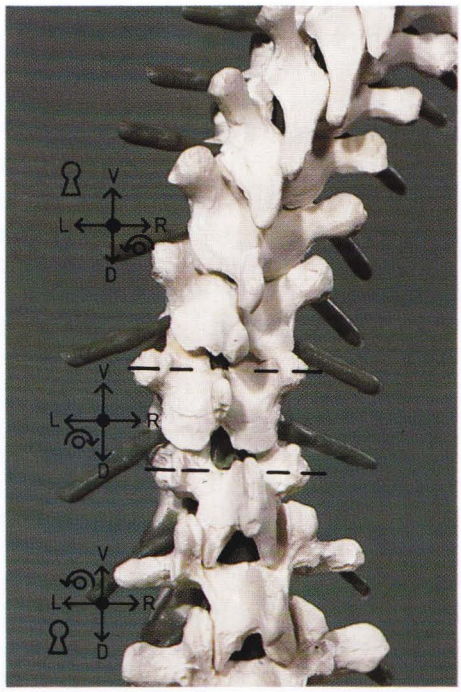


Fig. 9 a.

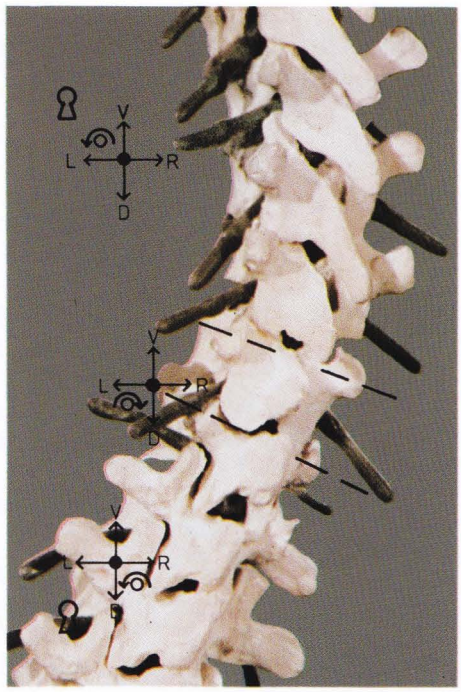


Fig. 9 b.

Fig. 9. Two alternative double *locking* methods for a typical specific treatment of lower thoracic spine; segment T11-T12 in physiological position in dorsal flexion, lateral flexion to the left and rotation to the right.

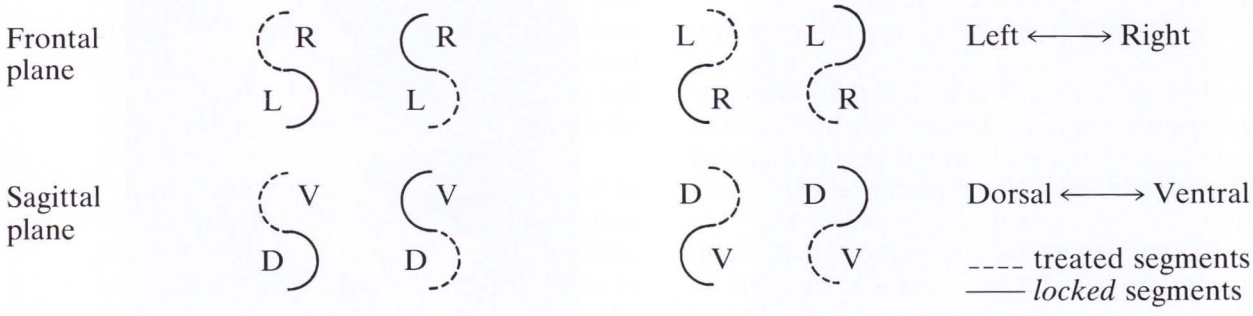
A: Segments caudal to the segment treated are in ventral flexion, lateral flexion and rotation to the left, and *thus lock for rotation to the right.* Segments cranial to the segment treated are in dorsal flexion, lateral flexion to the right and rotation to the left, and *thus lock for rotation to the right.*

B: Opposite *locking* alternative: Segments caudal to the segment treated in dorsal flexion, lateral flexion to the right and rotation to the left, *thus locking for rotation to the right.* Segments cranial to the segment treated are in ventral flexion, lateral flexion and rotation to the left, and *thus lock for rotation to the right.*

Three simple rules for *locking* may be derived from these examples.

1. ***Locking* is always relative:** Segments to be *locked* are themselves physiologically positioned. For instance, in the first option of the example above, the segments to be *locked* caudal to the treated segment are placed in dorsal flexion and lateral flexion to the right. That position involves slight left rotation, and therefore is physiological for the segments themselves. So for the normal, unrestricted spine, the position easily attained. But rotation to the right is constrained, which effects the desired *locking*. *Locking* is always relative to a particular final movement, in this case rotation to the right, from a position attained by normal physiological movement.
2. ***Locking* always involves inflection (changes of flexion):** Changes of flexion, either in the sagittal or the frontal planes, or sometimes in both planes, effect *locking*. In the first option of the example above, the flexion change is from left to right lateral flexion. In the second option, the change is from dorsal to ventral flexion. Inflection is depicted schematically in Fig. 10.

Fig.10. Schematic representation of inflections used in *locking*. Curves shown are for illustration only, and indicate flexion deviations from the neutral position of the spine shown in Figures 1 and 2.



3. **Only one inflection per *locking:*** The spine is not rubbery; it has an inescapable rigidity (otherwise it could not fulfill its support function). So two changes of flexion from a treated to an adjacent *locked* segment are not possible. One cannot, for instance, induce both a change from dorsal to ventral flexion and a change from left to right lateral flexion for a single *locking*. This is equivalent to requiring that at least one of the flexions of the treated segment be the same as that of the adjacent *locked* segment. The relationship is shown schematically in Fig. 11. The single exception is the case of *double locking* for treatment of the C2-C3 segment, where the occiput, atlas and axis must be moved as a unit.

The simplest inflections to constrain adjacent segment movement involve changes of flexion in the sagittal plane alone, and are used in treatments for pure ventral or pure dorsal flexion.

In general, inflection in the frontal plane (lateral flexion) is adequate for *locking* caudal to or cranial to the segment treated in non-specific treatments. However, for specific treatments, *locking* both caudal to and cranial to the treated segment, as shown in Figures 8 and 9, is frequently used.

Fig.11. Diagram of inflections and "transmitted" flexions that "go into" segment treated, with *locking* both cranial to and caudal to the segment treated. Case shown is that of Fig. 9B.

	SAGITTAL PLANE	FRONTAL PLANE	ROTATION
LOCKING CRANIAL TO TREATED SEGMENT	Ventral Flexion	Left Lateral Flexion	Left Rotation
	\ /	|	
	inflection	transmission	
	/ \	↓	
TREATED SEGMENT	Dorsal Flexion	Left Lateral Flexion	Right Rotation
	↑	\ /	
	transmission	inflection	
	|	/ \	
LOCKING CAUDAL TO TREATED SEGMENT	Dorsal Flexion	Right Lateral Flexion	Left Rotation

Theoretically, there may be as many as four ways to achieve *double locking*, with segments cranial to and caudal to the treated segment *locked*. However, the requirement that the treated segment "receive" flexions from the adjacent *locked* segments limits the number of possible combinations for *locking*.

For instance, *double locking* is extremely difficult in the cervical spine itself, except for the C2-C3 segment, where the mechanical convenience provided by the occiput, atlas, and axis moving as a unit permits cranial *locking*. Cervical segment treatment is also facilitated by the relatively exposed positions of the segments which makes direct manipulation possible. So the advantage offered by *double locking* may also be achieved through a single cranial/caudal *locking*. In this case, the Therapist can *lock* caudally to the segment treated and achieve segment treatment by holding and moving the cranial vertebrae involved. The opposite procedure may also be used: *locking* cranial to the segment, and holding and moving the caudal vertebrae involved. *Double locking* is possible in the thoracic and lumbar spines.

The possible combinations for *double locking* are listed in Table 2-2.

Table 2-2. Combinations possible for *double locking*

Part of Spine	Segment Treated In			*Locking* Caudal to Segment Treated			*Locking* Cranial to Segment Treated		
	Flexions		Rotation	Flexions		*Locked* for rotation to ♀	Flexions		*Locked* for rotation to ♀
	Ventral/ Dorsal	Lateral		Ventral/ Dorsal	Lateral		Ventral/ Dorsal	Lateral	
Cervical C2-C3 only	Ventral	Right	Right	Either	Left	Right	Either	Left	Right
	Ventral	Left	Left	Either	Right	Left	Either	Right	Left
	Dorsal	Right	Right	Either	Left	Right	Either	Left	Right
	Dorsal	Left	Left	Either	Right	Left	Either	Right	Left
Cervical-thoracic[1]	Ventral	Right	Right	Dorsal	Right	Right	Ventral	Left	Right
	Ventral	Left	Left	Dorsal	Left	Left	Ventral	Right	Left
	Dorsal	Right	Left	Dorsal	Left	Left	Ventral	Right	Left
	Dorsal	Left	Right	Dorsal	Right	Right	Ventral	Left	Right
Thoracic & Lumbar	Ventral	Right	Right	Ventral	Left	Right	Dorsal	Right	Right
	"	"	"	Dorsal	Right	Right	Ventral	Left	Right
	Ventral	Left	Left	Ventral	Right	Left	Dorsal	Left	Left
	"	"	"	Dorsal	Left	Left	Ventral	Right	Left
	Dorsal	Right	Left	Dorsal	Left	Left	Ventral	Right	Left
	"	"	"	Ventral	Right	Left	Dorsal	Left	Left
	Dorsal	Left	Right	Dorsal	Right	Right	Ventral	Left	Right
	"	"	"	Ventral	Left	Right	Dorsal	Right	Right

Note: 1) Usually at the C7-T1 segment; may be in segments caudal to C7-T1, in cases where cervical behavior extends caudally into upper thoracic spine. Therapist must test patient to determine location of cervical-thoracic behavior transition.

♀ indicates *locking* for rotation when used in illustrations.

EXAMPLE OF *LOCKING*

T11-T12 SEGMENT TREATED IN VENTRAL FLEXION, LATERAL FLEXION AND ROTATION TO THE RIGHT

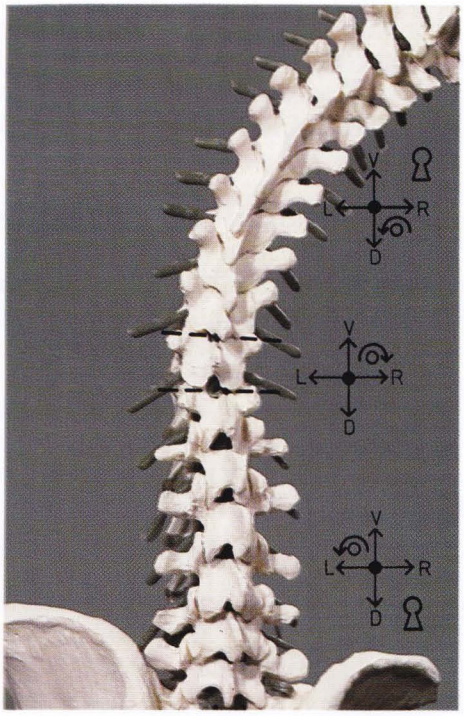
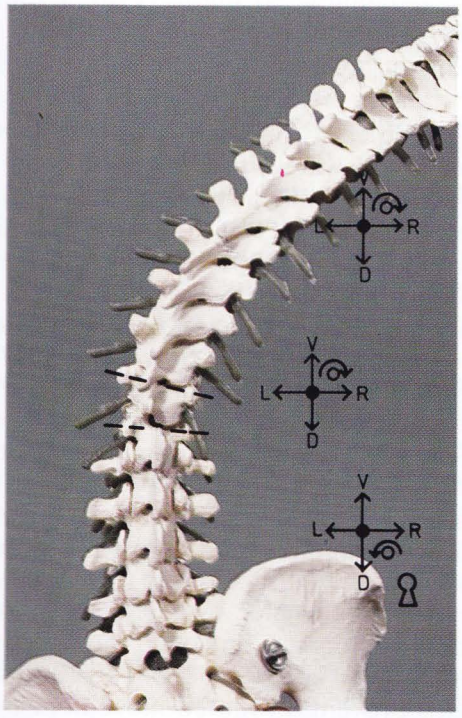
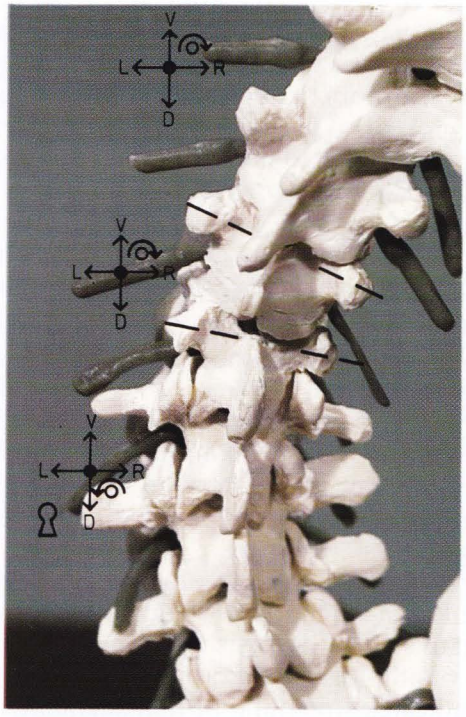


Fig.12. *Locking* caudal to the segment: ventral flexion, lateral flexion and rotation to the left; *locked for rotation to the right.*
Locking cranial to the segment: dorsal flexion, lateral flexion to the right and rotation to the left; *locked for rotation to the right.*



A



B

Fig.13. A:*Locking* caudal to the segment: dorsal flexion, lateral flexion to the right and rotation to the left; *locked for rotation to the right.*
Locking cranial to the segment: *None*: Ventral flexion, lateral flexion, and rotation to the right.
B: Closeup of A.

PART 3

THERAPY TECHNIQUES FOR THE SPINE AND TEMPORO-MANDIBULAR JOINT

3. THE CERVICAL SPINE

4. THE TEMPORO-MANDIBULAR JOINT

5. THE THORACIC SPINE AND RIBS

6. THE LUMBAR SPINE

7. THE COCCYX

3. THE CERVICAL SPINE *(Occiput on C1 to C7 on T1)*

3.1. Therapy Guide

3.1.1. Mandatory Examination

Restrictions of the cervical spine of pathologic etiology contraindicate manual therapy; patients affected should be referred to relevant medical specialists. Therefore, all patients must be examined prior to and continuously monitored during treatment of the cervical spine, least any existing pathological condition be worsened, increasing the risk of injury.

Prior to treatment: Assure, by test or test report, that De Kleyn's, Hautand's and Romberg's tests are negative. Positive tests contraindicate manual therapy. Pathological hypermobility in a segment contraindicates stretching of that segment.

During treatment: Patient dizziness, nausea, radiating pain, or other severe discomfort during treatment may be signs of vascular spasm, anomalous blood vessels, fractures, ruptured ligaments, instability, herniated discs, or other pathological conditions that contraindicate manual therapy. The patient should be continuously monitored for these signs: If they appear, therapy should be stopped immediately.

3.1.2. Treatment Guidelines

Caution is the watchword in treating the spine. Therefore, in treating any restriction, *perform the non-specific techniques first*. Perform specific techniques only if the non-specific techniques elicit no contraindications to further therapy.

All manual therapy techniques for the cervical spine involve traction, basically to prevent potentially hazardous compression. The therapist applies traction through a firm grip on the patient's head. The grip should be adequate for the traction needed, and should be positioned to avoid discomfort in sensitive areas, such as the ears, nose, eyes, mandible and larnyx. This is most easily done if the therapist fixes the patient's head and then moves his/her own body to induce the movement required. Controlled movement of the therapist's body and the patient's head as a unit also helps prevent unwanted movements.

The therapist may instruct or direct patient eye movements and respiration to aid therapy. *Eye movements* evoke reflex responses, such as "leading" movements of the head. Directing eye movement then gives the therapist control over patient head movement. *Respiration*: Normal breathing, particularly exhaling, promotes relaxation, while inhaling or holding the breath are often naturally evoked when producing muscular force. Therefore, instructing the patient to *exhale* aids

relaxation during stretching, while *breathing normally* promotes relaxation during sustained stretching (two minutes or more). *Inhaling* helps the patient contract against the therapist's resistance, such as during the stimulation of antagonists phase of treatment.

Lateral flexion and rotation interdepend throughout the spine. Normally, one cannot occur without the other. The single exception is the rotation of the atlas on the axis, which produces only negligible lateral flexion at the segment itself. However, there is still a degree of movement interdependence, as rotation of the atlas on the axis does cause lateral flexion of the occiput on the atlas to the opposite side.

Of the two mutually dependent movements, rotation is the more crucial. Full lateral flexion is contingent upon rotation. In all procedures involving both movements, **rotation must be increased before lateral flexion is increased**. Reversing the sequence by laterally flexing the spine to initiate rotation usually causes compression at the facet articulations and is therefore potentially hazardous.

In cases when the patient's deep, ventral flexors are inhibited, they should be stimulated. Therefore, treatment should be arranged to prevent contraction of the superficial ventral flexors. The therapist must monitor patient head position throughout treatment to assure that the superficial ventral flexors are not activated when the movement involved is intended to either stretch or stimulate the deep ventral flexors.

Many of the following therapy techniques for treating the cervical spine may be performed with the patient either sitting or lying down. The choice between alternative treatment positions depends both on comfort and convenience for both the patient and the therapist. For example, some patients may not be able to tolerate a sitting position when being treated, and therefore must be treated lying down. Likewise, a smaller therapist may find treatment of a large patient in a prone or supine position to be far easier than the equivalent treatment of a sitting patient.

3.1.3. Movement Patterns and *Locking*

Movement patterns and *locking* are discussed in **Part 2**, pp. 14-25. The following is a short summary review for the cervical spine.

First, although the cervical spine and its mobile segments are anatomically well defined (in the cranial to caudal direction, as starting at the occiput on C1 and ending with the C7-T1 segment), the therapeutic definition is not so rigid. In many cases, the transition from typical cervical spine segment behavior to typical thoracic spine segment behavior is not abrupt at the C7-T1 segment, but rather more gradual. This means that cervical spine behavior may extend caudally into the thoracic spine. So therapeutically the *cervical* spine should always be regarded as the *cervical and possibly part of the upper thoracic spine*.

Segments adjacent to those treated should be stabilized so they do not follow the movement induced to effect treatment. Stabilization always requires *inflection*, or changes of flexion, either in the sagittal or the frontal plane. Basic stabilization of the cervical spine involves changing flexion from ventral to dorsal or vice versa. For instance, treatment of a segment in ventral flexion is most effective if segments adjacent cranial to or caudal to it are placed in dorsal flexion.

The movement pattern of the cervical spine is **symmetric about the mid-sagittal plane**. As shown in Fig. 7 (p. 18), for both ventral and dorsal flexion, lateral flexion and rotation to the same side are "physiological" movements, while lateral flexion and rotation to opposite sides are "unphysiological." This means that segments to be treated in lateral flexion and/or rotation should be placed either in *right* lateral flexion *and right* rotation (the convention chosen for the technique illustrations of this book) or in *left* lateral flexion *and left* rotation. A right-left direction difference between lateral flexion and rotation produces the "unphysiological" position used for *locking*. *Locking* is a more secure method of stabilization than a single change of ventral or dorsal flexion. However, it obviously can be used only when the treatment involves lateral flexion and/or rotation.

Double locking, both cranial to and caudal to the segment treated is possible in the cervical spine *itself* only for the C2-C3 segment (see discussion, p. 24). Otherwise, *double locking* in cervical spine treatments is possible only when the "lower," or caudal *lock* is effected in the upper thoracic spine.

3.1.4. Restrictions, Muscles and Therapies

The non-specific and specific therapy techniques for treating restrictions of the cervical spine and its segments are listed in Table 3-1. The actions of the muscles which may cause those restrictions are listed in Table 3-2. The various restrictions possible are listed in Movement Restriction Table 8-1, pp. 142-143.

Table 3-1. Restrictions of the Cervical Spine

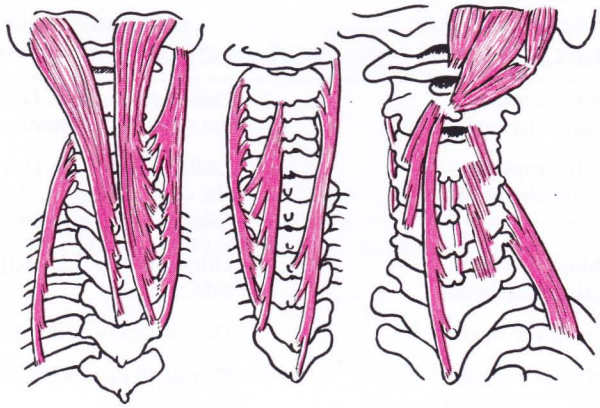
SECTION	MOVEMENT RESTRICTED	MUSCLES WHICH MAY RESTRICT MOTION	TECHNIQUE/THERAPY	Number, Page
3.2.	*Ventral flexion*	Most on dorsal side	non-specific	**3.2.1**, 30
		rectus capitis dorsalis major & minor, obliquus capitis superior, splenius capitis, semispinalis capitis, trapezius	specific, occiput on atlas atlas on axis C2 on C3	**3.2.2**, 31-33 **3.2.3**, 34-35 **3.2.4**, 36-37
3.3.	*Ventral flexion with lateral flexion and rotation to same side*	Most around cervical spine	non-specific specific, C2 on C3	**3.3.1**, 38-40 **3.3.2**, 41-43
3.4.	*Ventral flexion with lateral flexion and rotation to opposite sides*	Most around cervical spine	non-specific	**3.4.1**, 44
3.5.	*Dorsal flexion*	Most on ventral side	non-specific	**3.5.1**, 45
		rectus capitis anterior, longus capitis, suprahyoidales, infrahyoidales, platysma	specific, occiput on atlas	**3.5.2**, 46-48
		Most on ventral side	specific, atlas on axis	**3.5.3**, 49-51
		platysma, suprahyoidales, infrahyoidales, suprathyreoidales	non-specific, for superficial ventral muscles	**3.5.4**, 52-53
		infrathyreoidales[1]; longus colli, longus capitis[2]	non-specific, for deep ventral muscles	**3.5.5**, 54-57
3.6.	*Dorsal flexion with lateral flexion and rotation to same side*	Most around cervical spine	non-specific specific, C2 on C3	**3.6.1**, 58-59 **3.6.2**, 60-63
3.7.	*Dorsal flexion with lateral flexion and rotation to opposite sides*	Most around cervical spine	non-specific specific, C2 on C3	**3.7.1**, 64-66 **3.7.2**, 67-71
3.8.	*Lateral flexion and rotation to opposite sides*	Most between occiput and atlas	specific, occiput on atlas	**3.8.1**, 72-75
3.9.	*Rotation*	Most around atlas and axis	specific, atlas on axis	**3.9.1**, 76-77
3.10.	*MUSCLES*	Sternocleidomastoideus Scaleni Subclavius		**3.10.1**, 78-80 **3.10.2&3**, 81-83 **3.10.4**, 84-85

Notes: 1. With mouth closed. 2. With mouth open.

Table 3-2. Actions of muscles which may restrict movement of cervical spine

MUSCLE	ACTION
rectus capitis dorsalis major	**Unilateral Action:** Dorsal flexes, rotates and laterally flexes the occiput and the atlas to the same side. **Bilateral Action:** Dorsal flex the occiput and the atlas.
rectus capitis dorsalis minor	**Unilateral Action:** Dorsal flexes, rotates and laterally flexes the occiput to the same side. (In ventral flexion, it may laterally flex to the same side and rotates to the opposite side). **Bilateral Action:** Dorsal flex occiput.
obliquus capitis superior head	Dorsal flexes the occiput while rotating to one side and laterally flexing to the opposite side.
inferior head	Dorsal flexes and rotates the atlas on the axis to the same side.
splenius capitis	Dorsal flexes and rotates the occiput to the same side.
splenius cervicis	Dorsal flexes, laterally flexes and rotates to the same side.
spinalis cervicis	Dorsal flexes, laterally flexes and rotates to the same side.
iliocostalis cervicis, longissimus cervicis, longissimus capitis	Dorsal flex, laterally flex and rotate cervical spine to same side.
semispinalis capitis	Dorsal flexes and slightly rotates the occiput to the opposite side.
trapezius descending part	Elevates the shoulder with the head and neck stabilized. Laterally flexes to one side and rotates the head and neck to the opposite side with the shoulder stabilized. Dorsal flexes the head when acting bilaterally.
interspinales	Dorsal flex the cervical spine
intertransversarii	**Unilateral Action:** Laterally flexes and rotates the cervical spine to the same side. **Bilateral Action:** Dorsal flex the cervical spine.
rotatores cervicis	**Unilateral Action:** Laterally flexes to one side; rotates to opposite side; dorsal flexes the cervical spine. **Bilateral Action:** Dorsal flex the cervical spine.
multifidi	Dorsal flex, laterally flex and rotate to the opposite side.
rectus capitis anterior	Ventral flexes the occiput on the atlas.
lateralis	Laterally flexes the occiput to the same side.
longus capitis	Ventral flexes, laterally flexes and rotates to the same side.
longus colli	Ventral flexes, laterally flexes and rotates to the same side.
suprahyoidales infrahyoidales platysma	Ventral flex while rotating and laterally flexing the occiput on the atlas to the same side (with the mouth closed).
sternocleidomastoideus	**Unilateral Action:** Ventral flexes the cervical spine while laterally flexing and rotating to opposite sides. **Bilateral Action:** (a) Dorsal flex the occiput on the atlas with the cervical spine stabilized in the mid-position. (b) Ventral flex the cervical spine with the cervical spine stabilized in the mid-position and with the occiput and the atlas ventrally flexed. (c) Act as an accessory muscle of respiration with the head and cervical spine stabilized.
scalenus anterior medius	**Unilateral Action:** Ventral flexes the cervical spine while laterally flexing and rotating to opposite sides. **Bilateral Action:** Ventral flex the cervical spine. Act as accessory muscles of respiration when the cervical spine is stabilized.
posterior	**Unilateral Action:** Rotates and laterally flexes to the same side. **Bilateral Action:** Dorsal flex the cervical spine.
subclavius	Depresses and stabilizes the clavicle during movements of the shoulder. Lifts the first rib when the shoulder is stabilized.

3.2.1. Non-specific technique to increase **ventral flexion**.



Starting Position: P: Supine; head and neck beyond end of couch, shoulders and thorax stabilized with a belt. T: Standing at head of couch.

Grip: T's right hand grips P's occiput, with wrist and forearm supporting P's head. T's left hand grips P's chin (without pressing on the larynx).

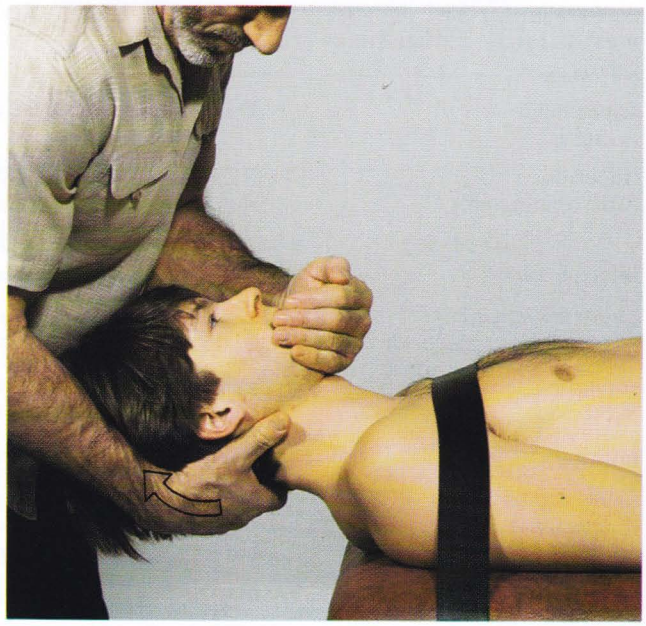


Fig. 14 a. Starting Position.

Procedure: Using this grip, T applies traction with both hands, and then maintaining this traction, moves his/her body in an upward arc to gradually and fully *ventrally flex* P's cervical spine.

Stimulation of Antagonists: T retains grip. T then asks P to look downward and move his/her head further in the direction of stretching. T resists that movement to stimulate P's antagonists.

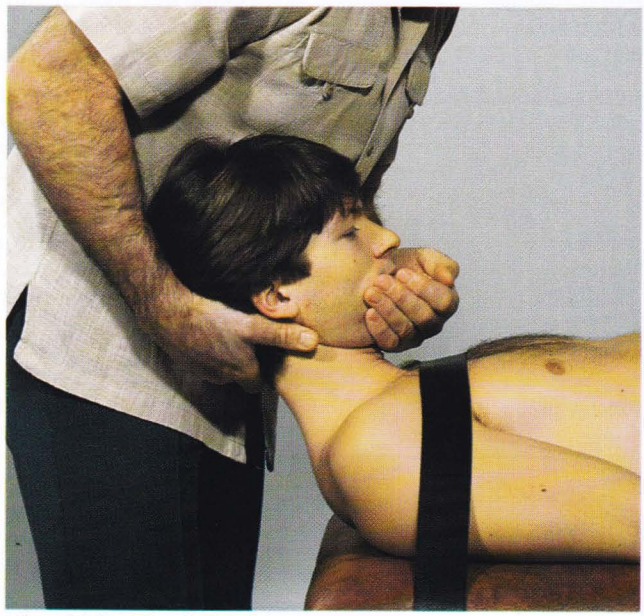
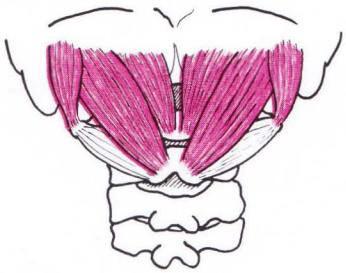


Fig. 14 b. Final Position.

3.2.2A. **Specific** technique to increase **ventral flexion** of the **occiput on the atlas.**
P sitting.



Starting Position: P: Sitting; left side of head supported against T's left shoulder and chest. T: Standing facing P's left side.

Grip: T's right index finger and thumb stabilize the posterior arch of P's atlas. P's head is held firmly between T's left hand and T's chest. For comfort, T's left palm cups over P's ear, with hand and forearm positioned to avoid pressure on P's mandible.

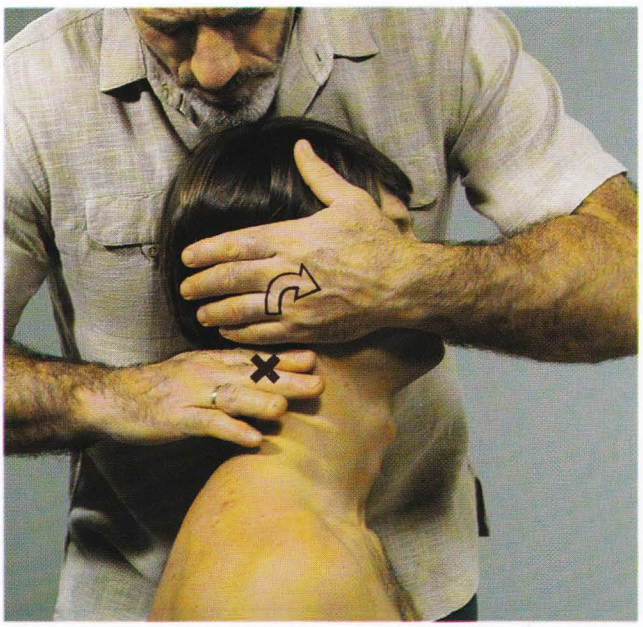


Fig. 15 a. Starting Position.

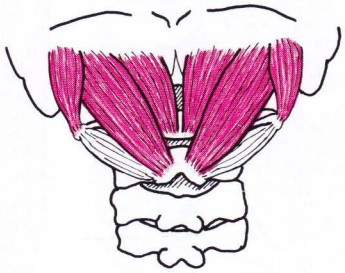
Procedure: Using this grip, T applies traction, and then maintaining this traction moves his/her body with P's head to gradually and fully *ventrally flex* P's occiput on the atlas. T also uses right hand to push P's atlas in a ventral direction.

Stimulation of Antagonists: T retains grip. T then asks P to look downward, tuck chin in, and move head further in the direction of stretching. T resists that movement to stimulate P's antagonists.

Note: This technique is more easily performed if P's chin is in crook of T's elbow; see alternative technique **3.2.2B**, p. 32. Treatment accuracy and force T can apply are greatest with P supine, see 3.2.2C, p. 33.

Fig. 15 b. Final Position.

3.2.2B. **Specific** technique to increase **ventral flexion** of the **occiput on the atlas**.
P sitting. Alternative grip.



Starting Position: P: Sitting; left side of head supported against T's left shoulder and chest. T: Standing facing P's left side.

Grip: T's right index finger and thumb stabilize the posterior arch of P's atlas. P's head is held firmly between T's left hand and T's chest, chin in the crook of T's elbow. For comfort, T's left palm cups over P's ear, with the hand and forearm positioned to avoid pressure on P's mandible.

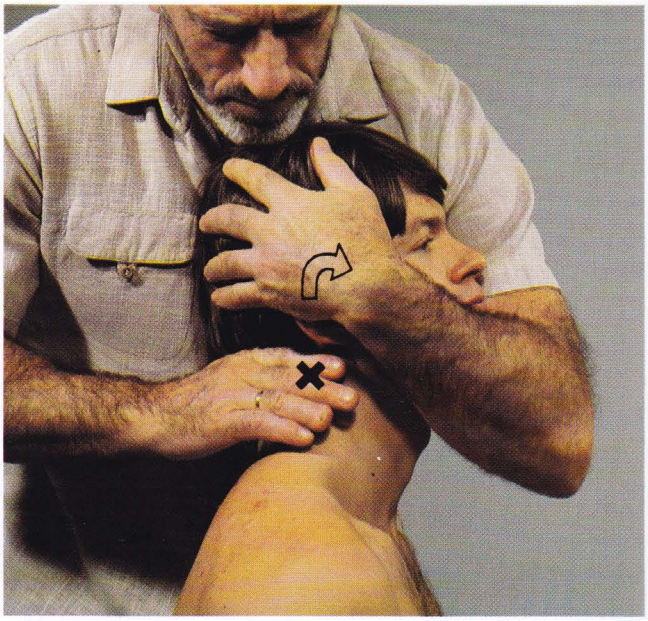


Fig. 16 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction moves his/her body with P's head to gradually and fully *ventrally flex* P's occiput on the atlas. T also uses right hand to push P's atlas in a ventral direction.

Stimulation of Antagonists: T retains grip. T then asks P to look downward, tuck chin in, and move the head further in the direction of stretching. T resists that movement to stimulate P's antagonists.

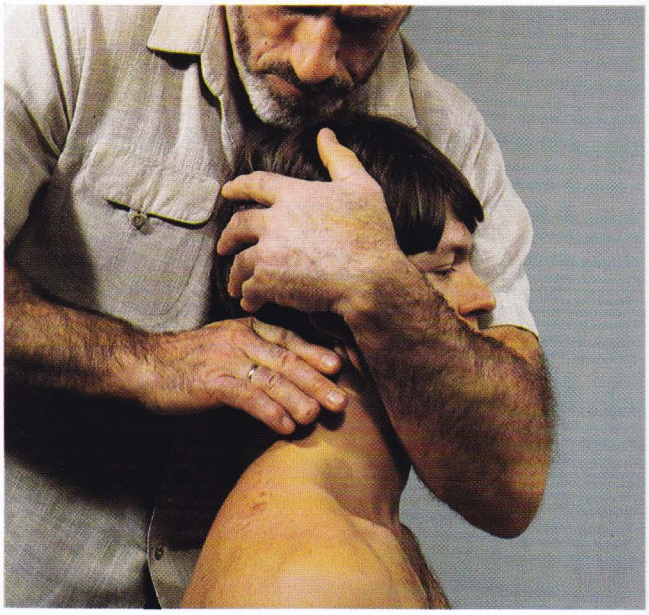
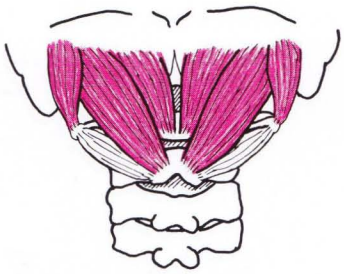


Fig. 16 b. Final Position.

3.2.2C. **Specific** technique to increase **ventral flexion** of the **occiput on the atlas.**
P supine.



Starting Position: P: Supine; head beyond end of couch with atlas at the edge.
T: Standing at head of couch.

Grip: T's right hand grips P's occiput with wrist and forearm supporting P's head. T's right shoulder presses against P's forehead, without pressing on P's nose or eyes. (If P finds this grip uncomfortable, a small cushion may be placed between T's right shoulder and P's forehead). T's left hand rests, vertical and stable, against the couch, firmly and rigidly under P's neck, with the posterior arch of P's atlas lying against the radial aspect of T's 2nd metacarpal bone and index finger.

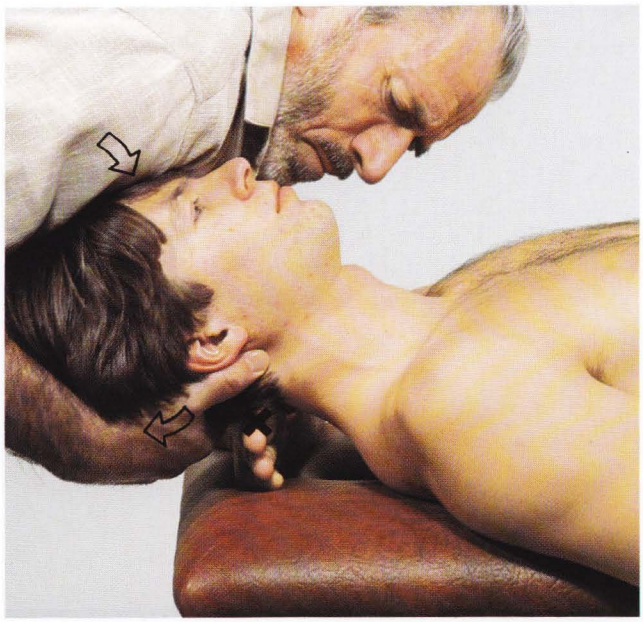


Fig. 17 a. Starting Position.

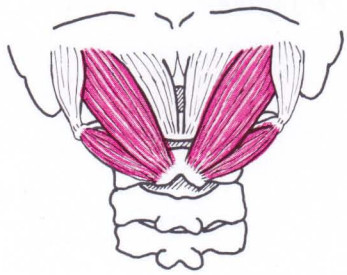
Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body with P's head to gradually and fully *ventrally flex* P's occiput on the atlas. T also uses right shoulder to push against P's forehead to produce a dorsal glide of the occipital condyles on the atlas, thus moving P's atlas ventrally.

Stimulation of Antagonists: T retains grip. T then asks P to look downward, tuck chin in, and move the head further in the direction of stretching. T resists that movement to stimulate P's antagonists.

Note: If P cannot tolerate supine position, treat in a sitting position, see the preceding two therapies, **3.2.2A** and **3.2.2B**, pp. 31 and 32.

Fig. 17 b. Final Position.

3.2.3A. **Specific** technique to increase **ventral flexion** of the **atlas on the axis.** *P sitting.*



Starting Position: P: Sitting; left side of head supported against T's left shoulder and chest. T: Standing facing P's left side.

Grip: T's right index finger and thumb stabilize P's axis. T's left hand grips around the right side of P's head with the little finger along the posterior arch of P's atlas. P's head is held firmly between T's left hand and T's chest, chin in crook of T's elbow. For comfort, T's left palm cups over P's ear, with the hand positioned to avoid pressure on P's mandible.

Fig. 18 a. Starting Position.

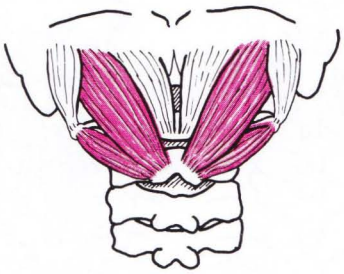
Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body with P's head to gradually and fully *ventrally flex* P's atlas on the axis. T's right hand also pushes P's axis ventrally and caudally.

Stimulation of Antagonists: T retains grip. T then asks P to look downward, tuck chin in, and move his/her head further in the direction of stretching. T resists that movement to stimulate P's antagonists.

Note: The transverse ligament of the atlas may be pathologically weakened. If so, it must not be strained by the procedure. T avoids strain by simultaneously moving P's head dorsally while ventrally flexing, which causes P's occiput and atlas to dorsally glide on the axis. The odontoid process (dens) is then pressed against the anterior arch of the atlas, which prevents pressure on the transverse ligament.

Fig. 18 b. Final Position.

3.2.3B. **Specific** technique to increase **ventral flexion** of the **atlas on the axis**. *P supine.*



Starting Position: P: Supine; head beyond end of couch with the axis at the couch edge. T: Standing at head of couch.

Grip: T's right index finger and thumb grip P's atlas. T's right wrist and forearm support P's head. T's right shoulder presses against P's forehead, without pressing on P's nose or eyes. If P finds this grip uncomfortable, a small cushion may be placed between T's right shoulder and P's forehead. T's left hand rests, vertical and stable, against the couch, held firmly and rigidly under P's neck, stabilizing the spinous process of P's axis against the radial aspect of T's 2nd metacarpal bone and index finger. (Or T's left index finger and thumb may grip P's axis).

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body with P's head, to gradually and fully *ventrally flex* P's atlas on the axis. Simultaneously T's right shoulder presses against P's forehead to hold anterior arch of atlas in contact with the dens, which prevents stretching of the transverse ligament of the atlas.

Stimulation of Antagonists: T retains grip. T then asks P to look downward, tuck chin in, and move his/her head further in the direction of stretching. T resists that movement to stimulate P's antagonists.

Note: The transverse ligament of the atlas may be pathologically weakened. If so, it must not be strained by the procedure. T avoids strain by simultaneously moving P's head dorsally while ventrally flexing, which causes P's occiput and atlas to dorsally glide on the axis. The odontoid process (dens) is then pressed against the anterior arch of the atlas, which prevents pressure on the transverse ligament.

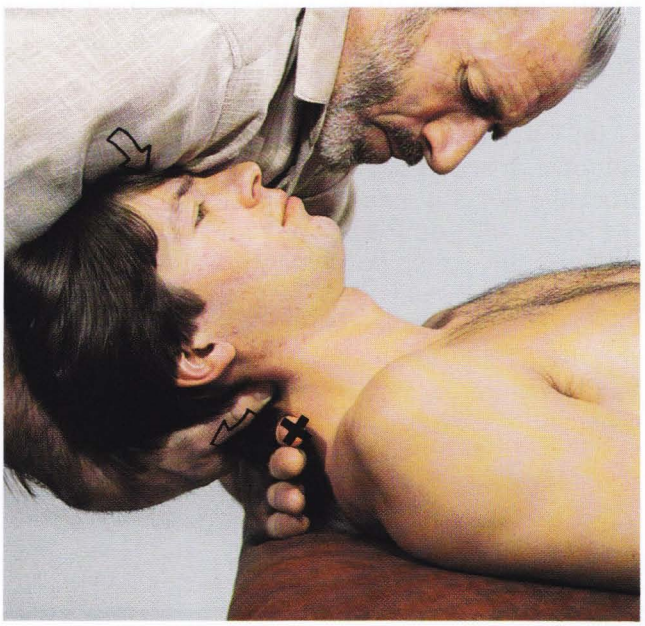


Fig. 19 a. Starting Position.

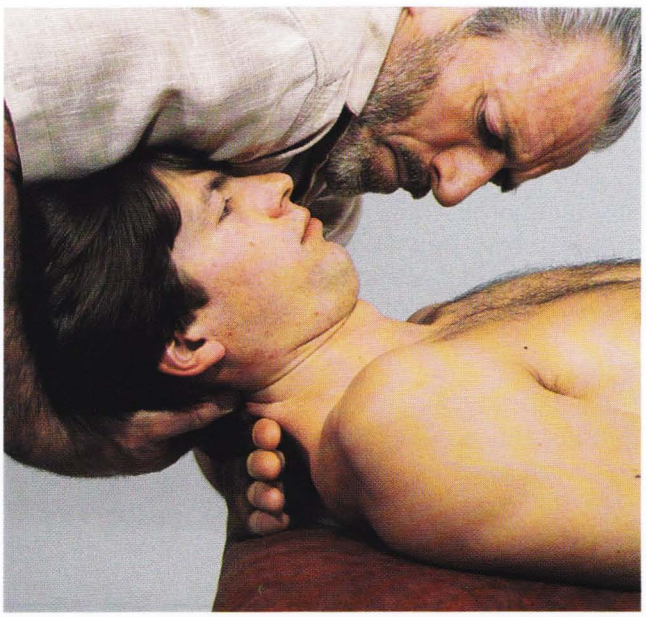
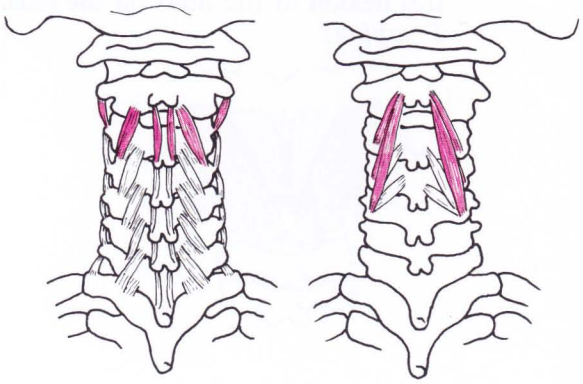


Fig. 19 b. Final Position.

3.2.4A. **Specific** technique to increase **ventral flexion** of **C2 on C3.**
P sitting.



Starting Position: P: Sitting; left side of head supported against T's left shoulder and chest. T: Standing facing P's left side.

Grip: T's right index finger and thumb stabilize the spinous, articular and transverse processes of C3 from the dorsal aspect. T's left hand grips around the right side of P's head with the little finger around the spinous, articular and transverse processes of P's axis (C2). P's head is held firmly between T's left forearm and T's chest. For comfort, T's left palm cups over P's ear, with the hand positioned to avoid pressure on P's mandible.

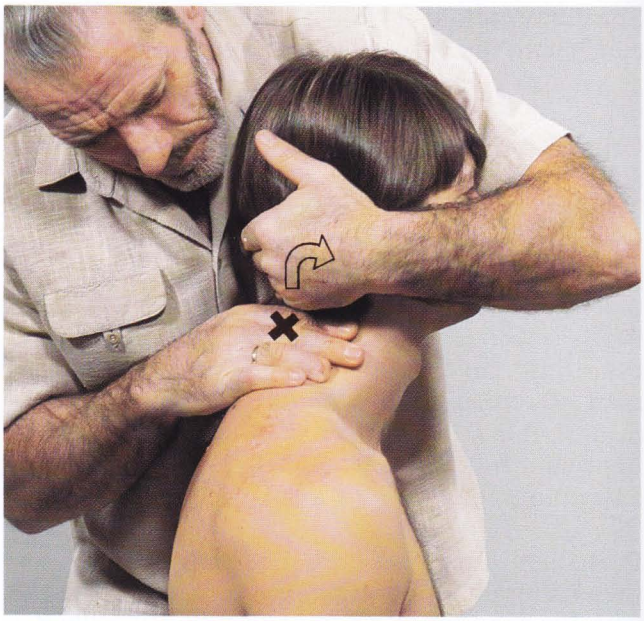


Fig. 20 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body with P's head to gradually and fully *ventrally flex* C2 on C3. T's right hand stabilizes C3 by pushing it ventrally and caudally.

Stimulation of Antagonists: T retains grip. T then asks P to look downwards, tuck chin in, and move his/her head further in the direction of stretching. T resists that movement to stimulate P's antagonists.

Note: During the procedure, T should draw the spinous and articular processes of C2 in a cranial and ventral direction along C3 so the articular facets glide parallel to each other.

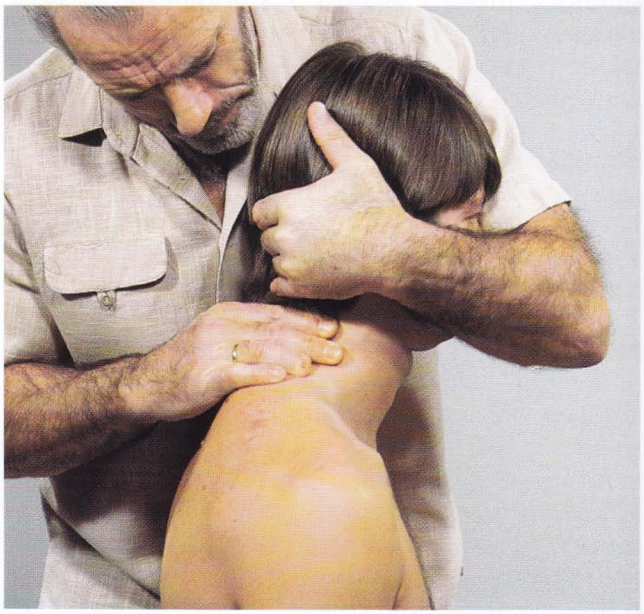
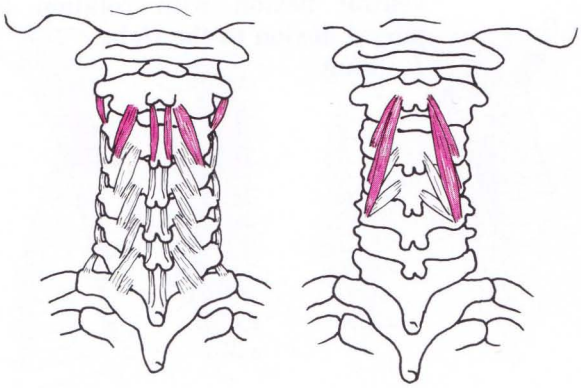


Fig. 20 b. Final Position.

3.2.4B. **Specific** technique to increase **ventral flexion** of **C2 on C3.**
P supine.



Starting Position: P: Supine; head beyond end of couch with C3 positioned at the edge. T: Standing at head of couch.

Grip: T's right index finger and thumb grip the spinous, articular and transverse processes of P's axis (C2) from the dorsal aspect. T's right wrist and forearm support P's head. T's right shoulder presses against P's forehead, without pressing on P's nose or eyes. (If P finds this grip uncomfortable, a small cushion may be placed between T's right shoulder and P's forehead). The dorsal side of T's left hand rests on the couch, and the index finger and thumb stabilize the spinous, articular and transverse processes of C3 from the dorsal aspect.

Fig. 21 a. Starting Position.

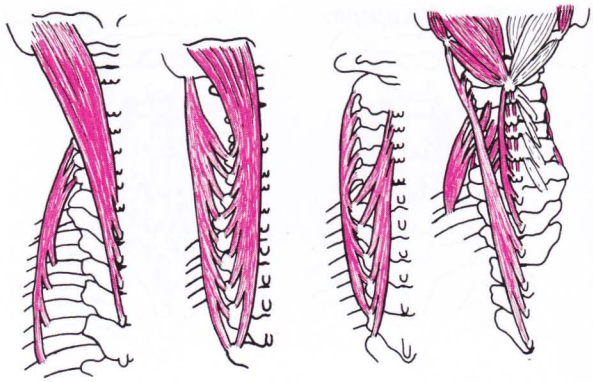
Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body with P's head to gradually and fully *ventrally flex* C2 on C3. T's left hand stabilizes C3 by pushing it ventrally and caudally.

Stimulation of Antagonists: T retains grip. T then asks P to look downward, tuck chin in, and move his/her head further in the direction of stretching. T resists that movement to stimulate P's antagonists.

Note: During the procedure, T should draw the spinous and articular processes of C2 in a cranial and ventral direction along C3 so the articular facets glide parallel to each other.

Fig. 21 b. Final Position.

3.3.1A. **Non-specific** technique to increase **ventral flexion** with **rotation** and **lateral flexion to the right.**
P sitting.



Starting Position: P: Sitting; right side of head supported against T's right shoulder and chest. T: Standing oblique facing P's right side.

Grip: T's right hand grips the left side of P's occiput, and fixes it against T's shoulder and chest. T's left hand and forearm grip around P to the left shoulder, stabilizing it from the dorsal aspect, and applying pressure to stabilize P's right shoulder against T's trunk.

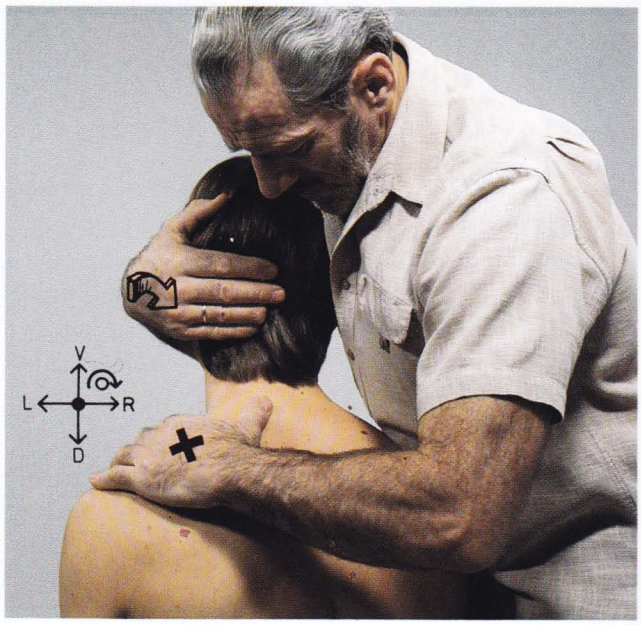


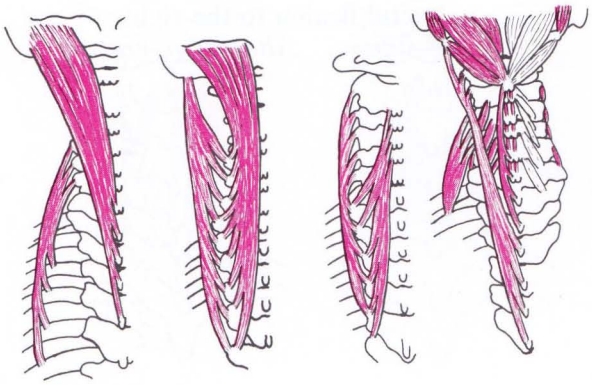
Fig. 22 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body to gradually and fully *ventrally flex* and simultaneously *rotate* and *laterally flex* P's cervical spine *to the right.*

Stimulation of Antagonists: T retains grip. T then asks P to look and then move this/her head further in the direction just stretched. T resists that movement to stimulate P's antagonists.

Fig. 22 b. Final Position.

3.3.1B. **Non-specific** technique to increase **ventral flexion** with **rotation** and **lateral flexion to the right.**
P supine.



Starting Position: P: Supine; head and neck beyond end of couch; cervical spine in ventral flexion; shoulders and thorax may be stabilized with a belt.
T: Standing at head of couch, facing oblique to P's right side.

Grip: T's left hand grips the left side of P's occiput, and stabilizes it against T's trunk. T's right forearm lies across P's chest, with the right hand gripping P's left shoulder to stabilize it against the couch.

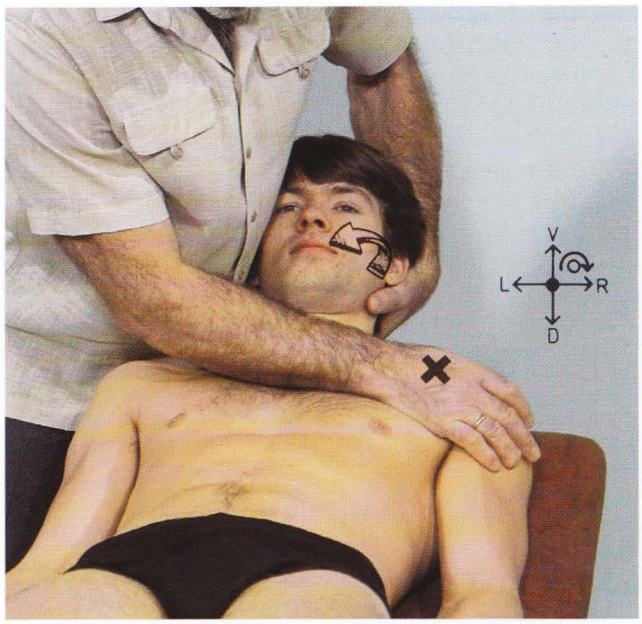


Fig. 23 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his /her body with P's head to gradually and fully *ventrally flex* and simultaneously *rotate* and *laterally flex* P's cervical spine *to the right.*

Stimulation of Antagonists: T retains grip. T then asks P to look and move his/her head further in the direction just stretched. T resists that movement to stimulate P's antagonists.

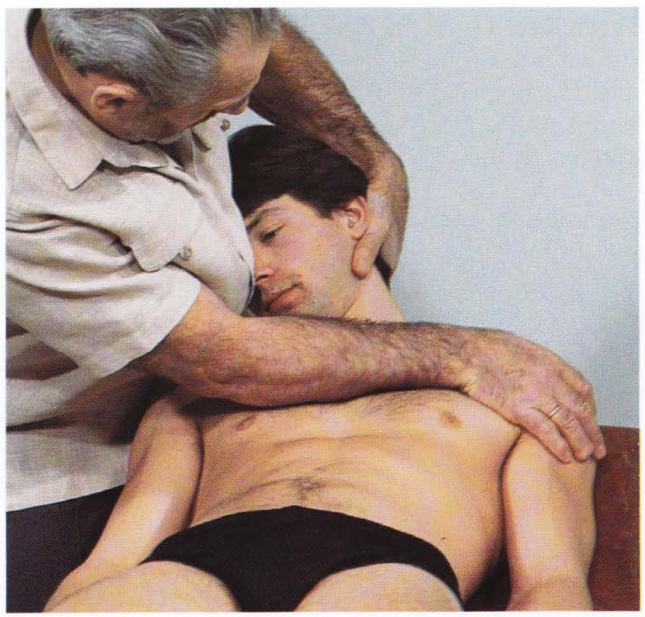
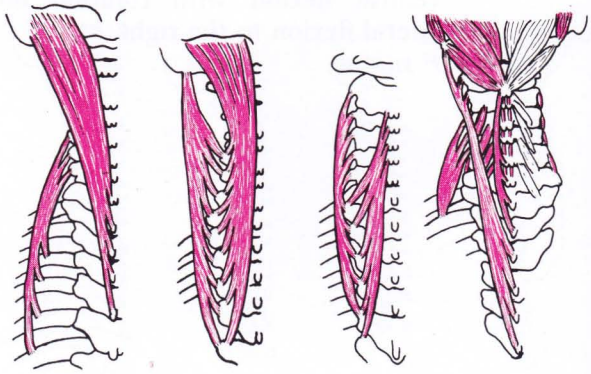


Fig. 23 b. Final Position.

3.3.1C. **Non-specific** technique to increase **ventral flexion** with **rotation** and **lateral flexion to the right.**
P supine. Alternative grip.



Starting Position: P: Supine; head and neck beyond end of couch; shoulders and thorax stabilized with a belt. T: Standing at head of couch.

Grip: T's right hand grips P's occiput, with wrist and forearm supporting P's head. T's left hand grips P's chin (without pressing on the larynx).

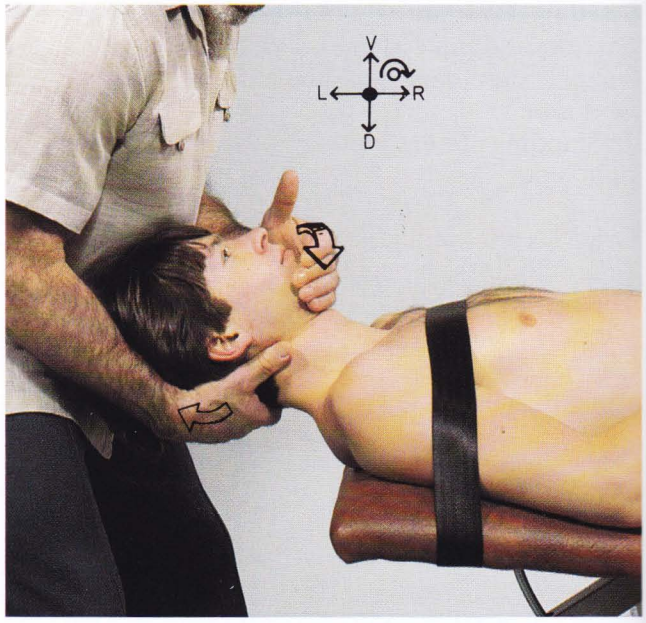


Fig. 24 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body and P's head to gradually and fully *ventrally flex* and simultaneously *rotate* and *laterally flex* P's cervical spine *to the right.*

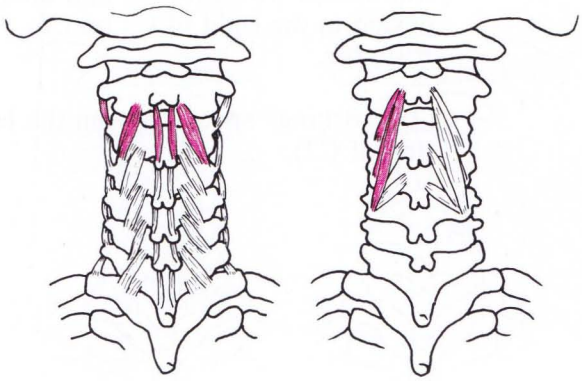
Stimulation of Antagonists: T retains grip, and pulls against the right side of P's chin. T then asks P to look and move his/her head further in the direction just stretched. T resists that movement to stimulate P's antagonists.

Note: This starting position and grip may be used for all **non**-specific techniques for stretching the muscles around the cervical spine.

Fig. 24 b. Final Position.

3.3.2A. **Specific** technique to increase **ventral flexion** with **rotation** and **lateral flexion** to the **right of C2 on C3.** *P sitting.*

(T "working" specifically on the **left** side of C2).



Starting Position: P: Sitting; right side of head supported against T's right shoulder and chest. T: Standing facing P's right side.

Grip: T's right hand grips the left side of P's occiput, with P's head fixed against T's chest and shoulder. T's right little finger lies along the spinous and left articular processes of P's axis (C2), parallel to the articular facets between C2 and C3. T's left index finger stabilizes the spinous and articular processes on the left side of C3. T's left thumb stabilizes the inferior articular process on the right side of C3 (positioned so as not to hinder the dorsal caudal glide of the right C2 facet).

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body with P's head to gradually and fully *ventrally flex* while *rotating* and *laterally flexing* C2 on C3 *to the right*. T's right little finger, "working" on the left side of C2, pulls the left articular process of C2 cranially and ventrally.

Stimulation of Antagonists: T retains grip. T then asks P to look downward to the right, and then move his/her head further in the direction of stretching. T resists that movement to stimulate P's antagonists.

Notes: When moving the left articular facet of C2 cranially and ventrally (as in ventral flexion), the right articular facet moves caudally and dorsally (as in dorsal flexion).

To prevent compression of the right articular facets, lateral flexion to the right should always be preceded by rotation to the right with the articular facets gliding parallel to each other.

P is best positioned supine for "working" on right side (see following therapy, **3.3.2B**, p. 42.)

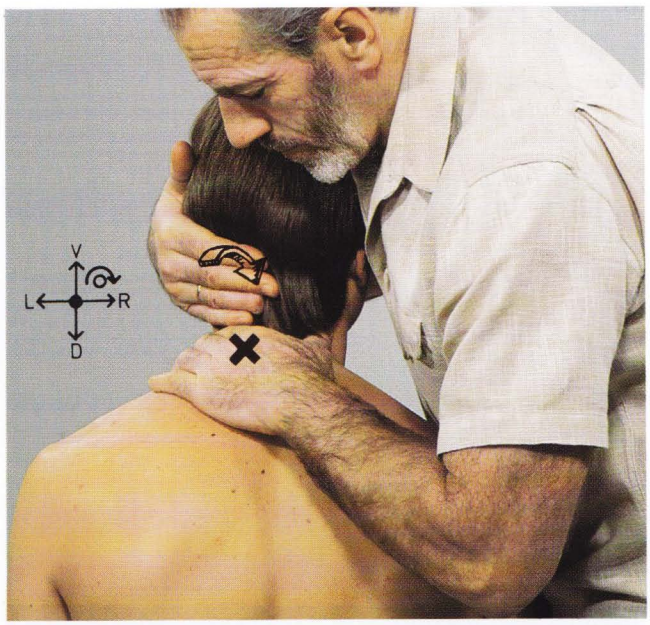


Fig. 25 a. Starting Position.

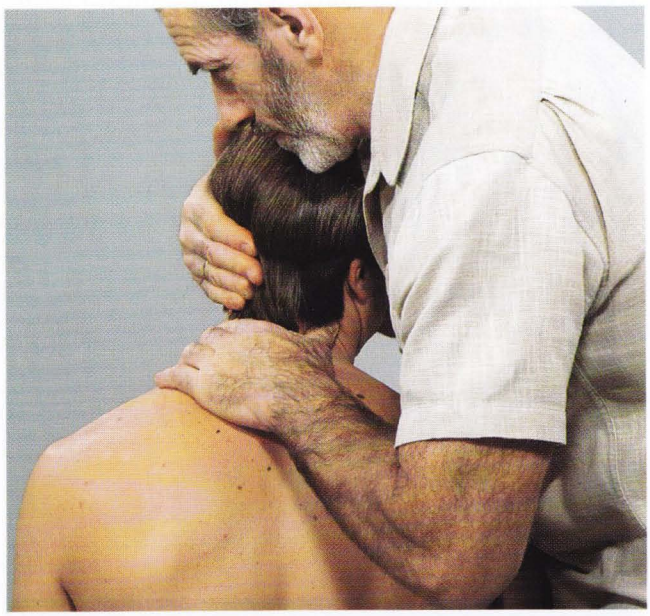
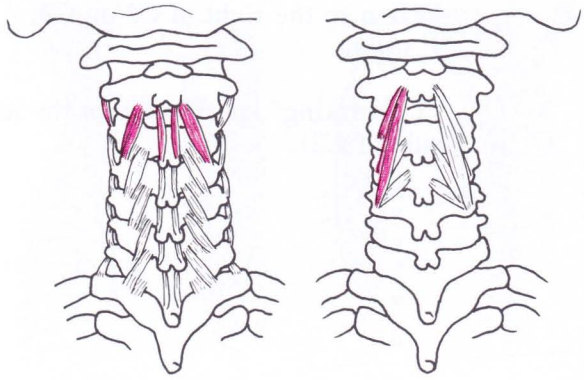


Fig. 25 b. Final Position.

3.3.2B. **Specific** technique to increase **ventral flexion** with **rotation** and **lateral flexion to the right of C2 on C3.**
P supine.

(T "working" specifically on the **left** side of C2).



Starting Position: P: Supine; head beyond end of couch with C3 positioned at couch edge; shoulders and thorax may be stabilized with a belt. T: Standing at head of couch, to the right of P's head.

Grip: T's left index finger lies along the spinous, articular and transverse processes on the left side of P's axis (C2). P's head is supported between T's wrist/forearm and trunk. T's right index finger stabilizes the spinous and articular processes on the left side of C3. T's right thumb stabilizes the inferior articular process on the right side of C3 (so as not to hinder the dorsal-caudal glide of the right C2 facet).

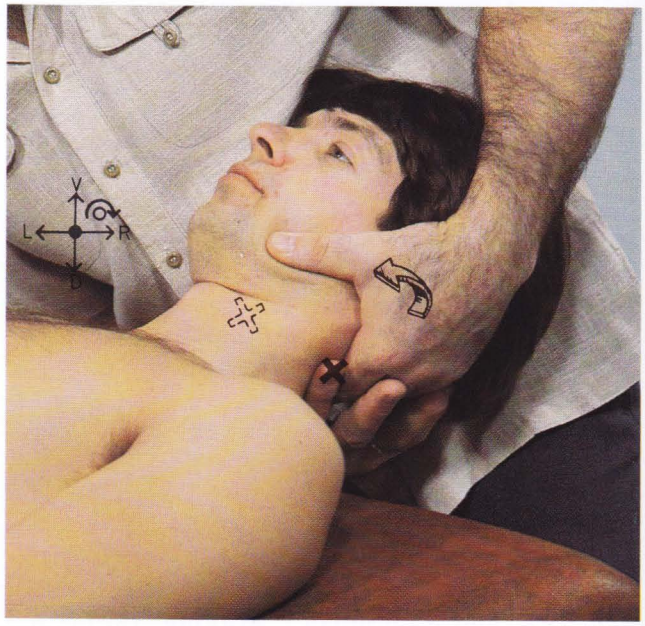


Fig. 26 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body with P's head to gradually and fully *ventrally flex* while *rotating* and *laterally flexing* C2 on C3 *to the right*. T's left index finger, "working" on the left side of C2, pulls the left articular process of C2 cranially and ventrally.

Stimulation of Antagonists: T retains grip. T then asks P to look downward to the right and then move his/her head further in the direction just stretched. T resists that movement to stimulate P's antagonists.

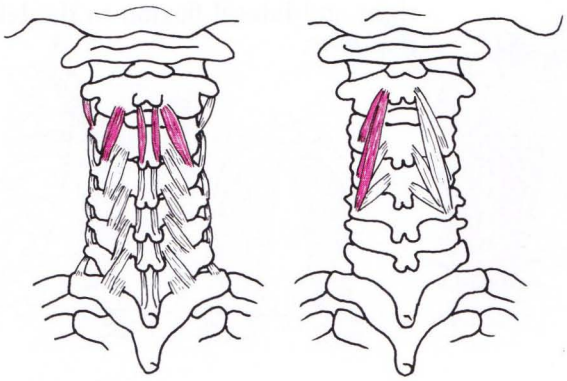
Notes: When moving the left articular facet of C2 cranially and ventrally (as in ventral flexion), the right articular facet moves caudally and dorsally (as in dorsal flexion).

To prevent compression of the right articular facets, lateral flexion to the right should always be preceded by rotation to the right such that the articular facets glide parallel to each other.

Fig. 26 b. Final Position.

3.3.2C. **Specific** technique to increase **ventral flexion** with **rotation** and **lateral flexion** to the **right** of **C2 on C3.**
P supine.

(T "working" specifically on the **right** side of C2).



Starting Position: P: Supine; head beyond end of couch with C3 positioned at couch edge; shoulders and thorax may be stabilized with a belt. T: Standing at head of couch, to the left of P's head.

Grip: T's right index finger lies along the spinous and articular processes on the right side of P's axis (C2). P's head is supported between T's right forearm and chest. T's left index finger stabilizes the spinous and articular processes on the left side of C3.

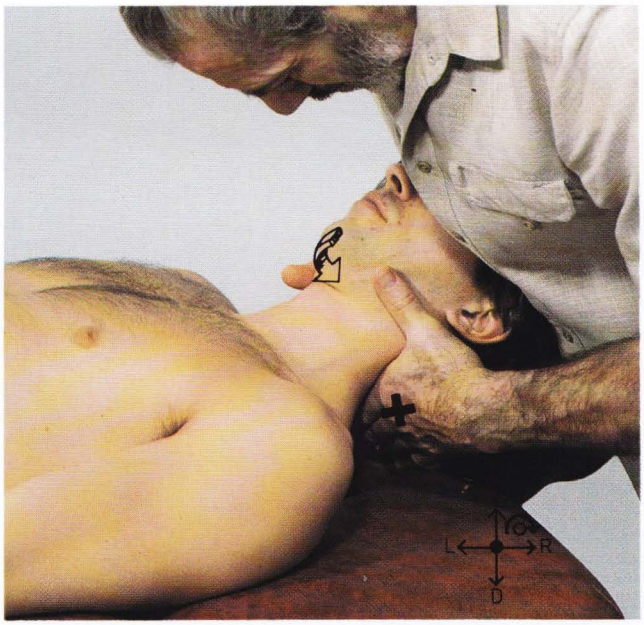


Fig. 27 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body with P's head to gradually and fully *ventrally flex* while *rotating* and **laterally flexing** C2 on C3 *to the right*. T's right index finger, "working" on the right side of C2, pushes the right articular process of C2 caudally and dorsally.

Stimulation of Antagonists: T retains grip. T then asks P to look downward and to the right, and move his/her head further in the direction just stretched. T resists that movement to stimulate P's antagonists.

Notes: When moving the right articular facet of C2 caudally and dorsally (as in dorsal flexion), the left articular facet moves cranially and ventrally (as in ventral flexion).

To prevent compression of the right articular facets, lateral flexion to the right should always be preceded by rotation to the right with the articular facets gliding parallel to each other.

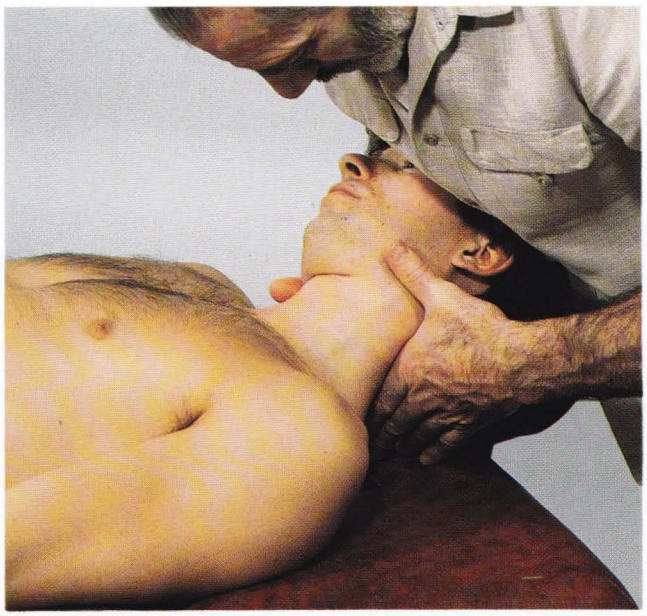
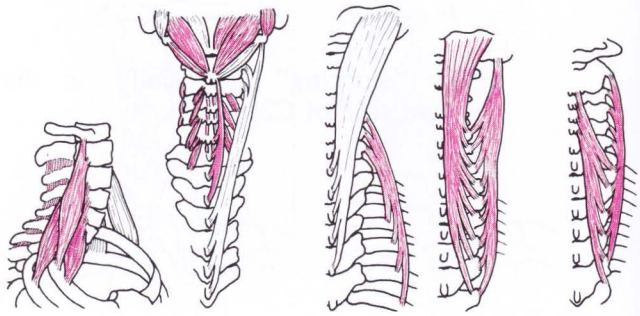


Fig. 27 b. Final Position.

3.4.1. **Non-specific** technique to increase **ventral flexion** with **rotation to the right** and **lateral flexion to the left.**
P supine.



Starting Position: P: Supine; head and neck beyond end of couch; shoulders and thorax stabilized with a belt. T: Standing at head of couch.

Grip: T's right hand grips P's occiput, wrist and forearm supporting P's head. T's left hand grips P's chin (without pressing on the larynx).

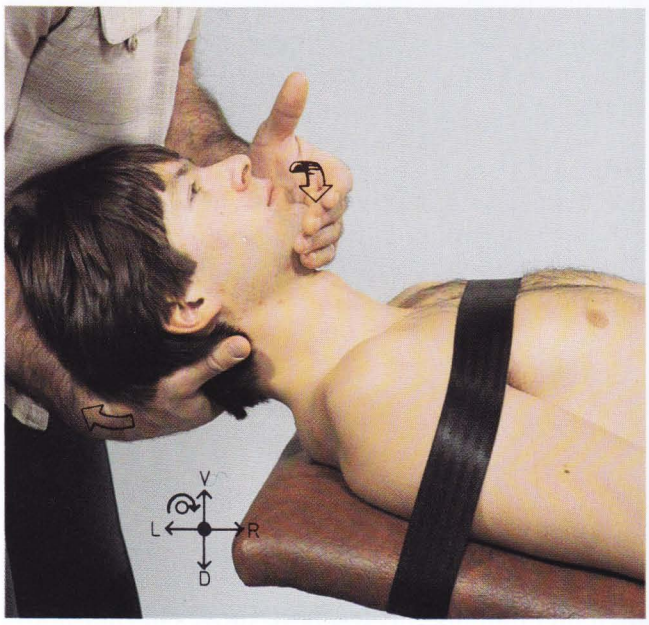


Fig. 28 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body with P's head to gradually and fully *ventrally flex*, *rotate to the right* and *laterally flex to the left* P's cervical spine.

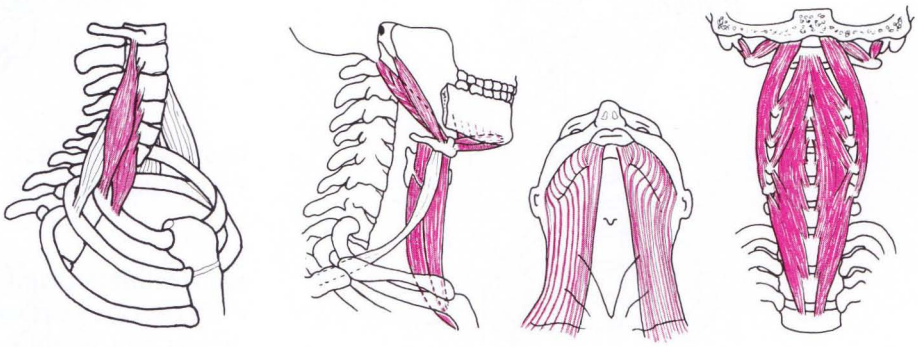
Stimulation of Antagonists: T retains grip, and pulls against the right side of P's chin. T then asks P to look and move his/her head further in the direction just stretched. T resists that movement to stimulate P's antagonists.

Notes: The final position may move the vertebrae into a *locked* position.
Therefore, T must cautiously use successively smaller forces and movements in approaching the final position.

This starting position and grip may be used for all **non**-specific techniques for stretching muscles around the cervical spine.

Fig. 28 b. Final Position.

3.5.1. **Non-specific** technique to increase **dorsal flexion.**
P supine.



Starting Position: P: Supine; head and neck beyond end of couch; shoulders and thorax stabilized with a belt. T: Standing at head of couch.

Grip: T's right hand grips P's occiput, with wrist and forearm supporting P's head. T's left hand grips P's chin (without pressing on the larynx).

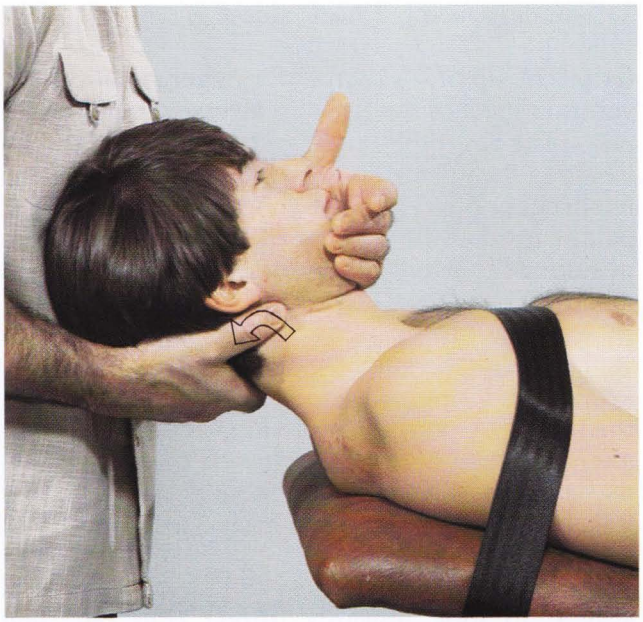


Fig. 29 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body with P's head to gradually and fully *dorsally flex* P's cervical spine.

Stimulation of Antagonists: T retains grip and asks P to look upwards and rearwards, and then dorsally flex to move his/her head. T then resists that movement to stimulate P's antagonists.

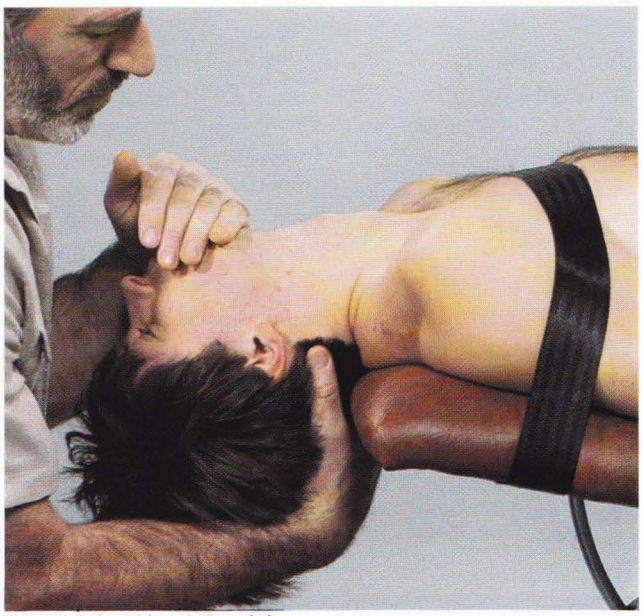
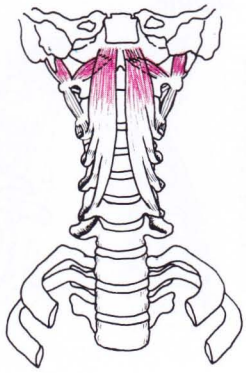


Fig. 29 b. Final Position.

3.5.2A. **Specific** technique to increase **dorsal flexion** of the **occiput on the atlas.** *P sitting.*



Starting Position: P: Sitting; left side of head supported against T's chest.
T: Standing facing P's left side.

Grip: The tip of T's right index finger stabilizes the ventral aspect of the right transverse process of P's atlas. The rest of T's right index finger and thumb lie along the posterior arch of P's atlas. P's head is fixed beetween T's left hand and chest. T's left palm cups comfortably over P's ear, with the arm positioned to avoid uncomfortable pressure on P's mandible.

Procedure: Using this grip, T applies traction, and then maintaining this traction, induces ventral glide of P's occipital condyles on the atlas while moving his/her body to gradually and fully *dorsally flex* occiput on the atlas.

Stimulation of Antagonists: T retains grip, and asks P to look upwards, thrust chin out, and dorsally flex in the direction just stretched. T resists that movement to stimulate P's antagonists.

Notes: Ideally, T should induce dorsal flexion involving simultaneous and equal right and left occipital condyle ventral glide on the atlas. However, in practice this is possible with P sitting only if T's hands are large enough to permit simultaneous stabilization of both transverse processes of the atlas. In most cases, T will be able to stabilize only one side of the atlas at a time.

So to promote the desired occipital condyle ventral glide, T must treat in two stages, first on P's right (as shown here), and then on P's left. The procedure for P's left is the mirror image of that shown here; T stands facing P's right side, stabilizes P's atlas with left hand, and fixes P's head with right hand.

If T is unable to firmly grip P's head, the supine technique of **3.5.2C**, p. 48 may be used.

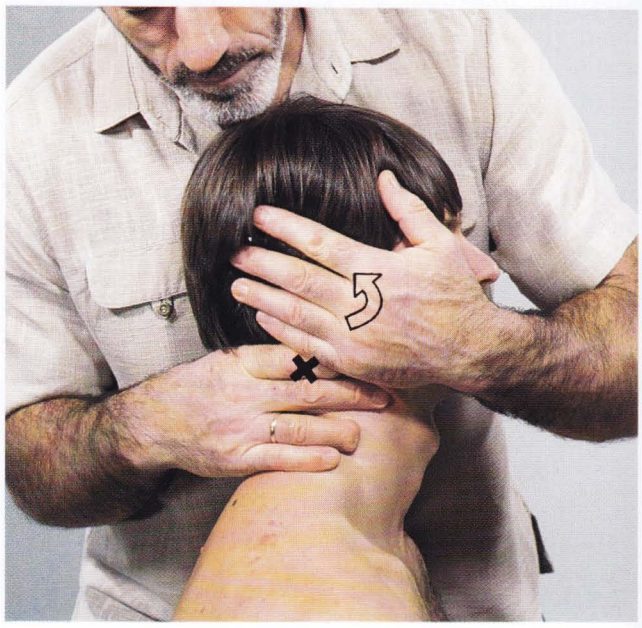


Fig. 30 a. Starting Position.

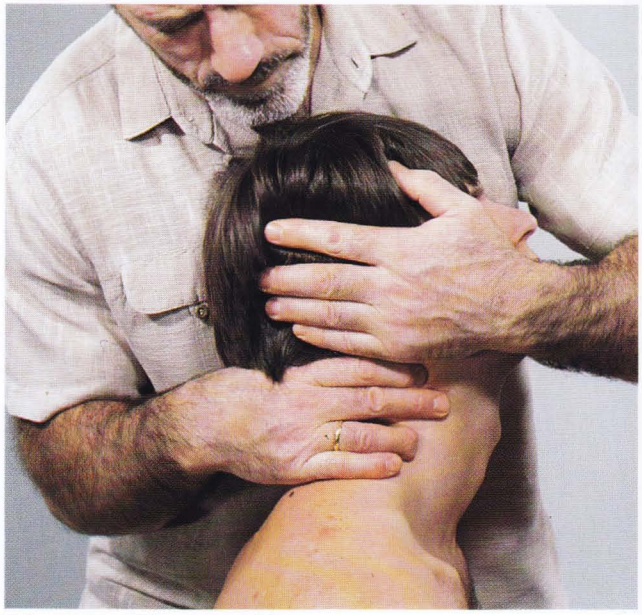
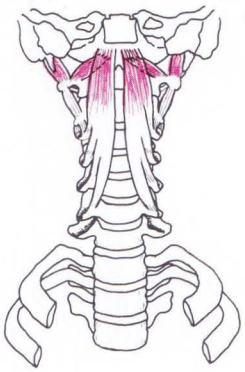


Fig. 30 b. Final Position.

3.5.2B. **Specific** technique to increase **dorsal flexion** of the **occiput on the atlas.**
P sitting. Alternative grip.



Starting Position: P: Sitting; left side of head supported against T's chest. T: Standing facing P's left side.

Grip: The tip of T's right index finger stabilizes the ventral aspect of the right transverse process of P's atlas. The rest of T's right index finger and thumb lie along the posterior arch of P's atlas. T's left hand grips the right side of P's head with P's chin fixed in the crook of T's left elbow. P's head is fixed against T's chest. T's left palm is comfortably cupped over P's ear, with hand and arm positioned to avoid uncomfortable pressure on P's mandible.

Procedure: Using this grip, T applies traction, and then maintaining this traction, induces ventral glide of P's occipital condyles on the atlas while moving his/her body to gradually and fully *dorsally flex* P's occiput on the atlas. T moves the condyles of P's occiput on the atlas in the ventral direction.

Stimulation of Antagonists: T retains grip, and asks P to look upwards, thrust chin out, and dorsally flex in the direction just stretched. T resists that movement to stimulate P's antagonists.

Notes: Ideally, T should induce dorsal flexion involving simultaneous and equal right and left occipital condyle ventral glide on the atlas. However, in practice this is possible with P sitting only if T's hands are large enough to permit simultaneous stabilization of both transverse processes of the atlas. In most cases, T will be able to stabilize only one side of the atlas at a time.

So to promote the desired occipital condyle ventral glide, T must then treat in two stages, first on P's right (as shown here), and then on P's left. The procedure for P's left is the mirror image of that shown here.

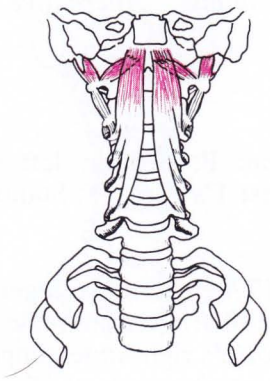
This technique may be performed only if mandible, teeth and temporo-mandibular joint can tolerate the force applied.

If T is unable to firmly grip P's head, the supine technique of **3.5.2C**, p. 48 may be used.

Fig. 31 a. Starting Position.

Fig. 31 b. Final Position.

3.5.2C. **Specific** technique to increase **dorsal flexion** of the **occiput on the atlas.**
P supine.



Starting Position: P: Supine; head beyond couch end with the atlas positioned at couch edge. T: Standing at head of couch.

Grip: T's right hand grips P's occiput, thumb stabilizing the ventral aspect of the right transverse process of P's atlas, and wrist and forearm supporting P's head. T's right shoulder presses against P's forehead, without pressing on P's nose or eyes. (If P finds this grip uncomfortable, a small cushion may be placed between T's right shoulder and P's forehead). T's left hand rests on the couch under P's neck, thumb stabilizing the ventral aspect of the left transverse process of P's atlas.

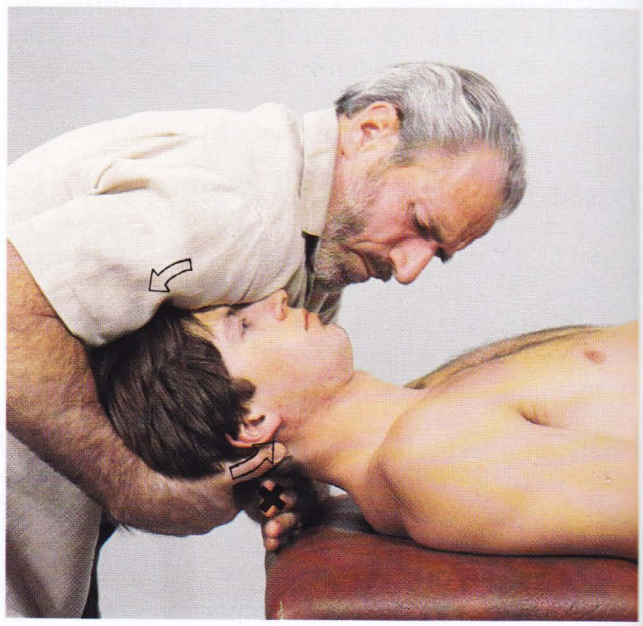


Fig. 32 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body (see **Notes**) to gradually and fully *dorsally flex* P's occiput on the atlas. T's thumbs stabilize P's atlas to prevent it from following the ventral movement of the occipital condyles.

Stimulation of Antagonists: T retains grip, and asks P to look upwards, thrust chin out, and dorsally flex in the direction just stretched. T resists that movement to stimulate P's antagonists.

Notes: This procedure is most easily performed if T starts with slight knee flex, and then "sinks," bending knees more to induce the desired dorsal flexion.
T may also control knee flex to supply or vary resistance in the Stimulation of Antagonists phase.

T may find traction more easily applied with P sitting, see the preceding two techniques, **3.5.2A** and **3.5.2B**, pp. 46 and 47.

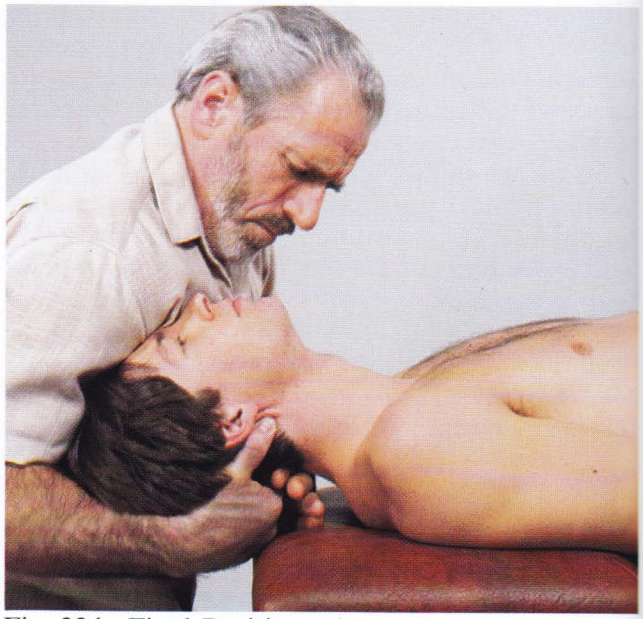
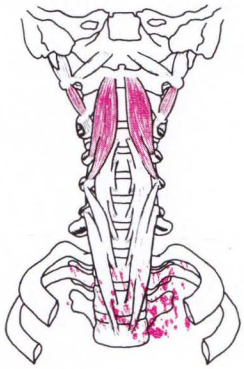


Fig. 32 b. Final Position.

3.5.3A. **Specific** technique to increase **dorsal flexion** of the **atlas on the axis.**
P. sitting.



Starting Position: P: Sitting; left side of head supported against T's left shoulder and chest. T: Standing facing P's left side.

Grip: T's right index finger and thumb stabilize P's axis from the dorsal aspect. T's left hand grips around the right side of P's head with the little finger along the posterior arch of P's atlas. P's head is fixed between T's left hand and chest. T's left palm cups comfortably over P's ear, with the hand and arm positioned to avoid uncomfortable pressure on P's mandible.

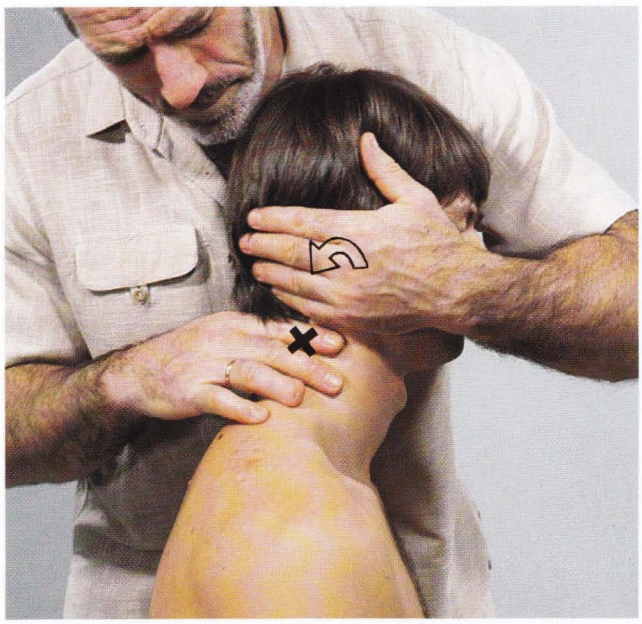


Fig. 33 a. Starting Position.

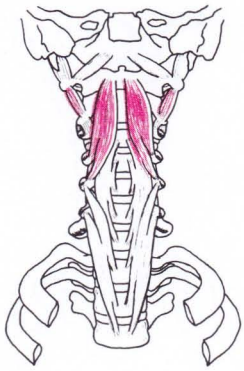
Procedure: Using this grip, T applies traction at P's head, and then maintaining this traction, moves his/her body to gradually and fully *dorsally flex* P's occiput and atlas on the stabilized axis. In this movement, P's occiput presses the posterior arch of the atlas caudally against the spinous process of the axis, achieving the desired dorsal flexion.

Stimulation of Antagonists: T retains grip and asks P to look upwards, thrust chin out, and dorsally flex in the direction just stretched. T resists that movement to stimulate P's antagonists.

Note: T may increase traction, if necessary, by altering grip, see therapy **3.5.3B**, p. 50.

Fig. 33 b. Final Position.

3.5.3B. **Specific** technique to increase **dorsal flexion** of the **atlas on the axis.**
P sitting. Alternative grip.



Starting Position: P: Sitting; left side of head supported against T's left shoulder and chest. T: Standing facing P's left side.

Grip: T's right index finger and thumb stabilize P's axis from the dorsal aspect. T's left hand grips around the right side of P's head with the little finger along the posterior arch of P's atlas, and hand positioned to avoid uncomfortable pressure on P's mandible, palm cupped over P's ear. P's head is fixed between T's left hand and chest, and P's chin is fixed in the crook of T's left elbow.

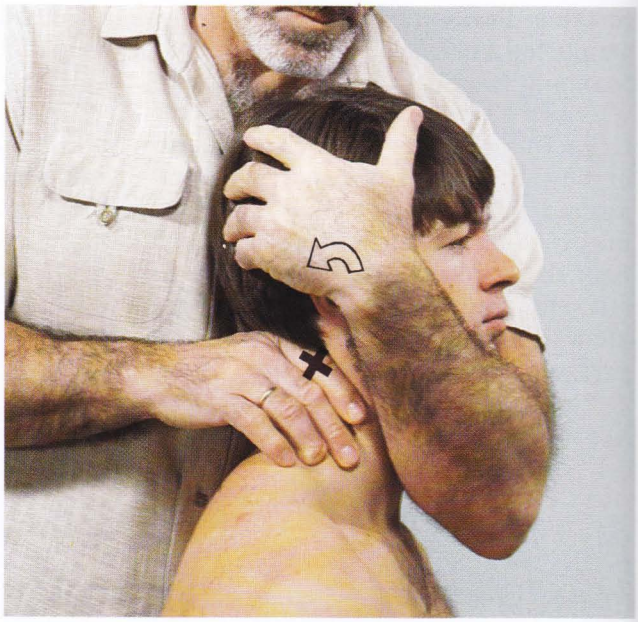


Fig. 34 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body to gradually and fully *dorsally flex* P's atlas on the stabilized axis. In this movement, P's occiput presses the posterior arch of the atlas caudally against the spinous process of the axis, achieving the desired dorsal flexion.

Stimulation of Antagonists: T retains grip, and asks P to look upwards, thrust chin out, and dorsally flex in the direction just stretched. T resists that movement to stimulate P's antagonists.

Note: This technique may be performed only if the mandible, teeth and temporo-mandibular joint can tolerate the force applied.

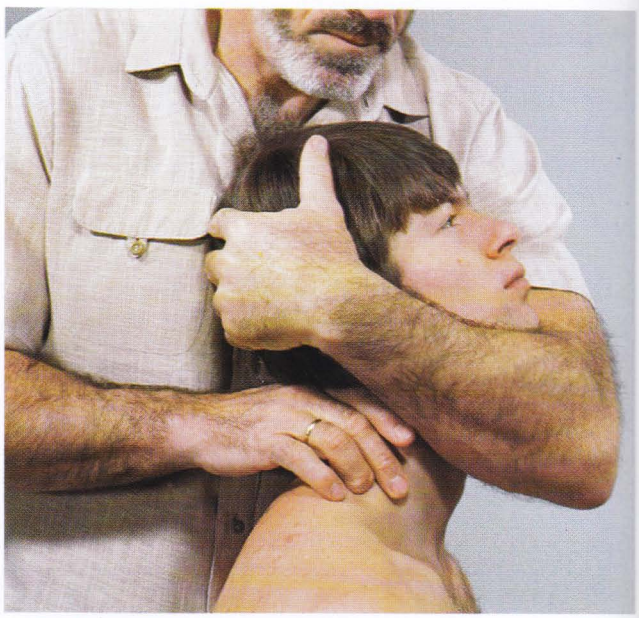
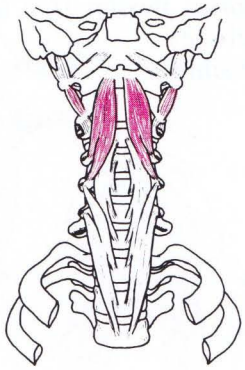


Fig. 34 b. Final Position.

3.5.3C. **Specific** technique to increase **dorsal flexion** of the **atlas on the axis.**
P supine.



Starting Position: P: Supine; head beyond end of couch with the axis at couch edge. T: Standing at head of couch.

Grip: T's right hand grips P's occiput and atlas, thumb stabilizing the ventral aspect of the right transverse process of P's atlas, wrist and forearm supporting P's head. T's right shoulder presses against P's forehead, without pressing on P's nose or eyes. (If P finds this grip uncomfortable, a small cushion may be placed between T's right shoulder and P's forehead). T's left hand rests vertically on the couch, rigidly under P's neck, to stabilize the spinous process of P's axis against the radial aspect of T's left 2nd metacarpal bone and index finger, thumb stabilizing the ventral aspect of the left transverse process of P's atlas.

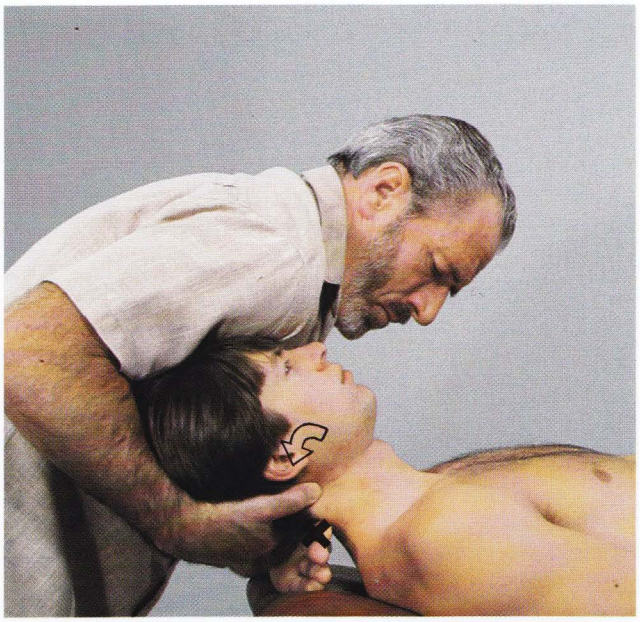


Fig. 35 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body to gradually and fully *dorsally flex* P's atlas on the axis. T's thumbs also pull dorsally against the tranverse processes of P's atlas to produce a dorsal-cranial glide of the atlas along the odontoid process (dens) of the axis.

Stimulation of Antagonists: T retains grip, and asks P to look upwards, thrust chin out, and dorsally flex in the direction just stretched. T resists that movement to stimulate P's antagonists.

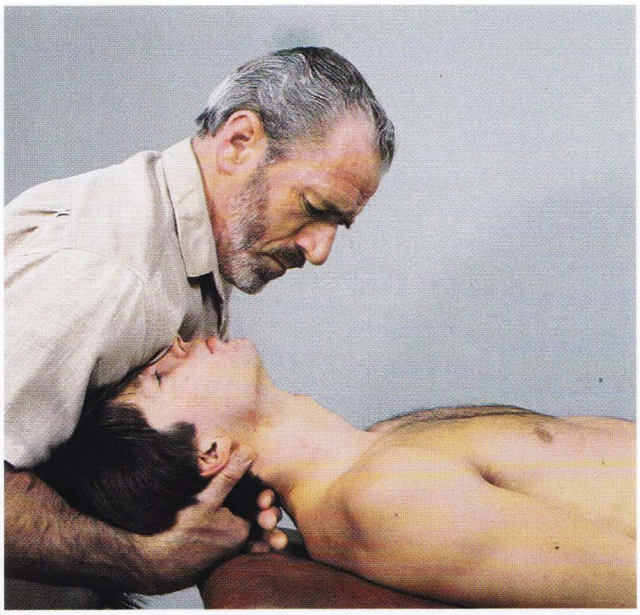
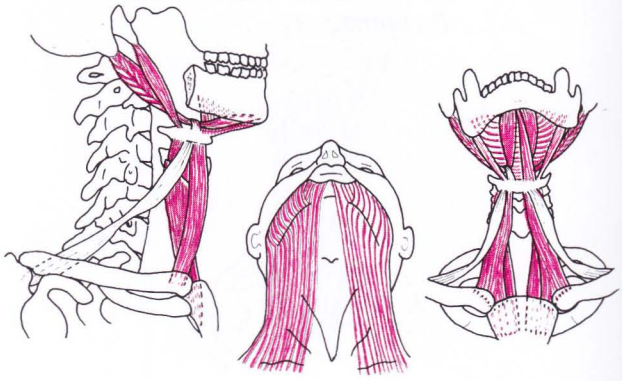


Fig. 35 b. Final Position.

3.5.4A. **Non-specific** technique for the **superficial ventral muscles** to increase **dorsal flexion** (C2 and caudal vertebrae).
P sitting.



Starting Position: P: Sitting; upper thoracic region well supported. T: Standing facing P's left side.

Grip: T's left hand grips the right side of P's head with P's chin fixed in crook of T's left elbow. P's head is fixed firmly between T's left hand and chest. T's left palm cups comfortably over P's right ear, with hand and arm positioned to avoid uncomfortable pressure on P's mandible. T's right hand stabilizes the upper thoracic region of P's back.

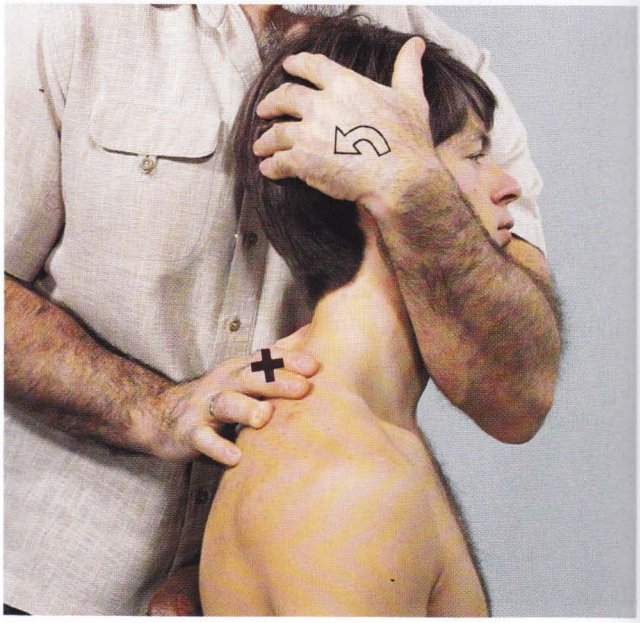


Fig. 36 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body to gradually and fully *dorsally flex* P's cervical spine.

Stimulation of Antagonists: T retains grip, and asks P to look upwards and rearwards, and then move head and cervical spine in the direction just stretched. T resists that movement to stimulate P's antagonists.

Notes: P's thoracic spine can be more easily stabilized by using a chair as a back support, which also stabilizes the sternum, clavicles and the first ribs.

Test for necessity of stretching the superficial ventral muscles: See if P has less cervical spine dorsal flexion with his/her mouth closed than with it open.

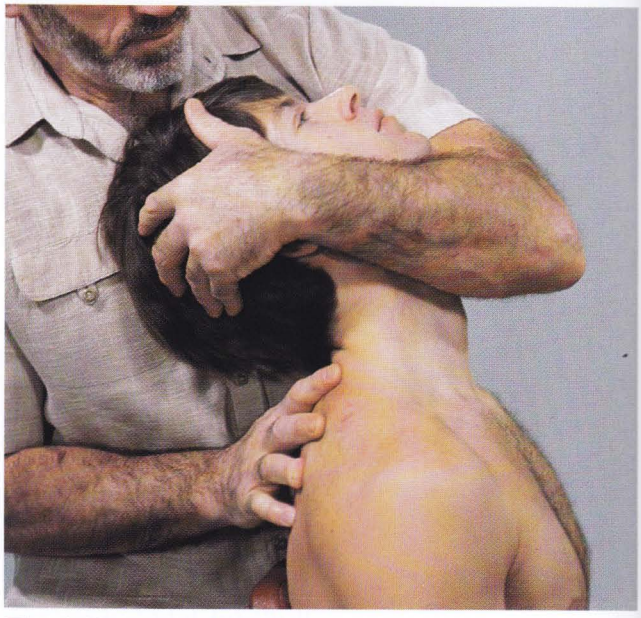
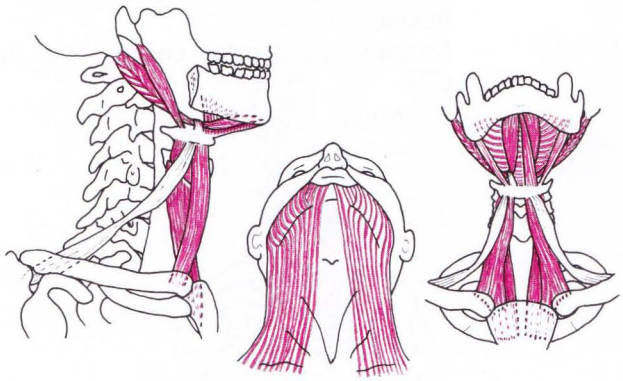


Fig. 36 b. Final Position.

3.5.4B. **Non-specific** technique for the **superficial ventral muscles** to increase **dorsal flexion** (C2 and caudal vertebrae).
P supine.



Starting Position: P: Supine; head and neck (cranial to T1) beyond end of the couch; shoulders and thorax stabilized with a belt. T: Standing or sitting at head of couch.

Grip: T's right hand grips P's occiput. T's right wrist and forearm support P's head. T's left hand grips under P's chin (without pressing on the larynx).

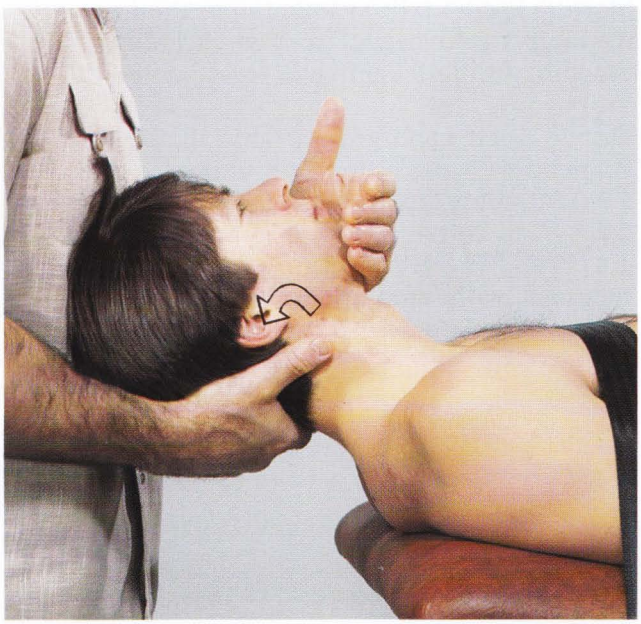


Fig. 37 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body to gradually and fully *dorsally flex* P's cervical spine.

Stimulation of Antagonists: T retains grip and asks P to look upwards and rearwards, and then move head and cervical spine in the direction just stretched. T resists that movement to stimulate P's antagonists.

Notes: Stabilization of P's thoracic spine can be improved by slightly raising the head of the couch.

Test for necessity of stretching the superficial ventral muscles: See if P has less cervical spine dorsal flexion with his/her mouth closed than with it open.

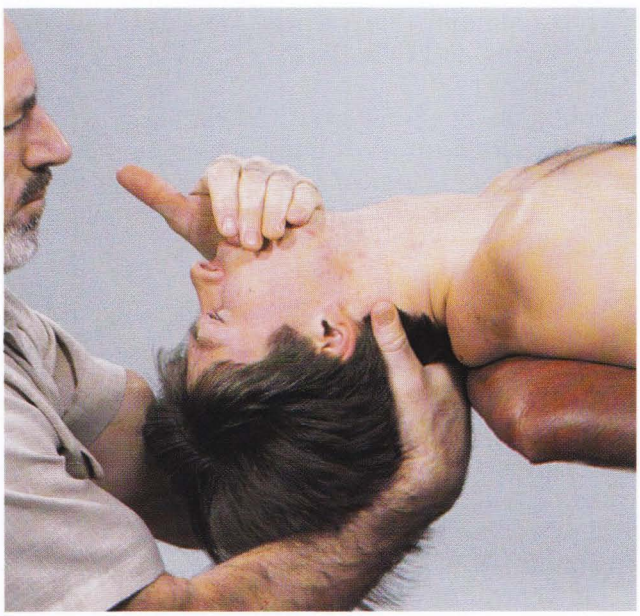
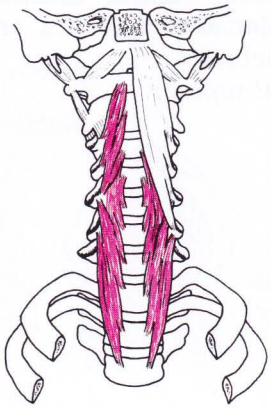


Fig. 37 b. Final Position.

3.5.5A. **Non-specific** technique for the **deep ventral muscles** to increase **dorsal flexion**
(mainly the **longus colli** at C2 on C3).
P sitting.



Starting Position: P: Sitting; upper thoracic region well supported caudal to and including T3. T: Standing facing P's left side.

Grip: T's left hand grips around the right side of P's head with the little finger along P's axis (C2). T's right index finger and thumb stabilize C3 from the dorsal aspect. P's head is held firmly against T's chest. T's left palm cups comfortably over P's right ear, with hand and arm positioned to avoid uncomfortable pressure on P's mandible.

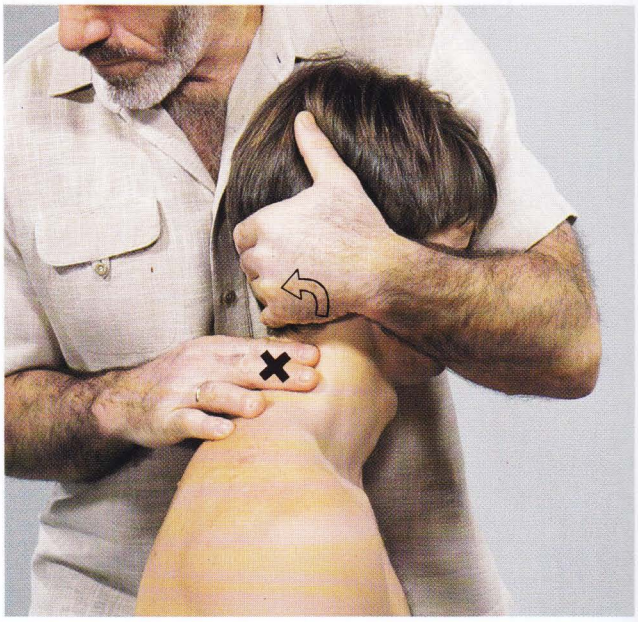


Fig. 38 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body to gradually and fully *dorsally flex* C2 on C3.

Stimulation of Antagonists: T retains grip, and asks P to look upwards and backwards, and then move head and cervical spine in the direction just stretched. T resists that movement to stimulate P's antagonists.

Notes: The longus colli originates at T3. Therefore P's thoracic spine should be supported at and caudal to this level.

When treating the segments caudal to C3, T's left hand grips the cranial vertebra of the segment treated, and T's right hand stabilizes the caudal vertebra. For ease of grip and efficiency of treatment, T may position the segments cranial to C3 in ventral flexion.

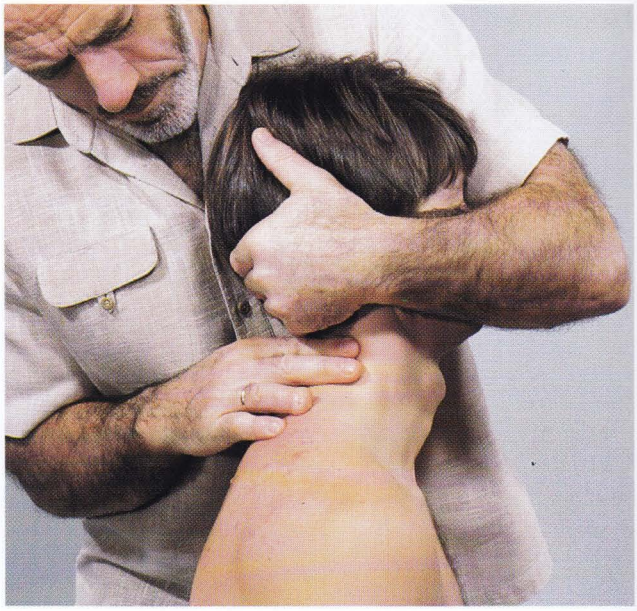
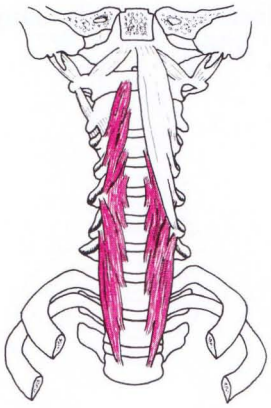


Fig. 38 b. Final Position.

3.5.5B. **Non-specific** technique for the **deep ventral muscles** to increase **dorsal flexion**
(mainly the **longus colli** at C2 on C3).
P supine.



Starting Position: P: Supine; head and neck beyond end of couch; shoulders and thorax may be stabilized with a belt. T: Standing or sitting at head of couch.

Grip: T's right index finger and thumb grip P's axis (C2). T's right wrist and forearm support P's head. T's left hand grips under P's chin (without pressing on the larynx).

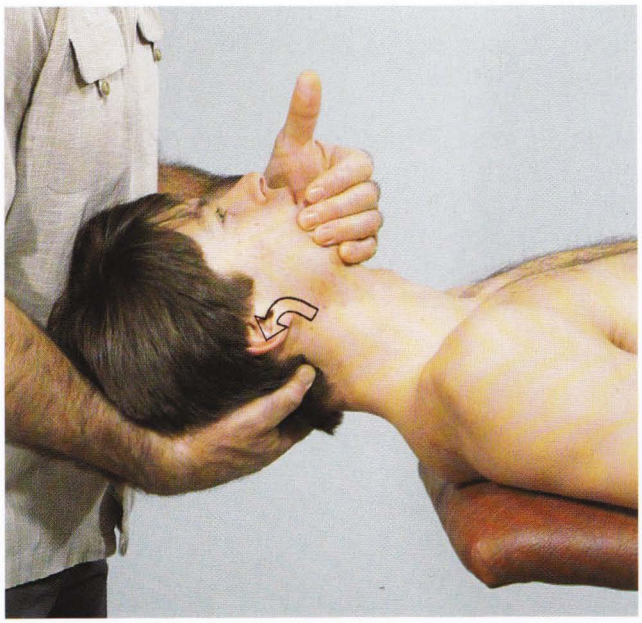


Fig. 39 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body to gradually and fully *dorsally flex* P's cervical spine.

Stimulation of Antagonists: T retains grip and asks P to look upwards and backwards, and then move head and cervical spine in the direction just stretched. T resists that movement to stimulate P's antagonists.

Note: To obtain a more specific effect, P's occiput, atlas and axis (C2) are firmly held between T's right hand and shoulder with T's left hand stabilizing C3 (see grip of therapy **3.2.4B**, p. 37).

When treating the segments caudal to C3, T's right hand grips the cranial vertebra of the segment treated, and T's left hand stabilizes the caudal vertebra. For ease of grip and efficiency of treatment, T may position the segments cranial to C3 in ventral flexion.

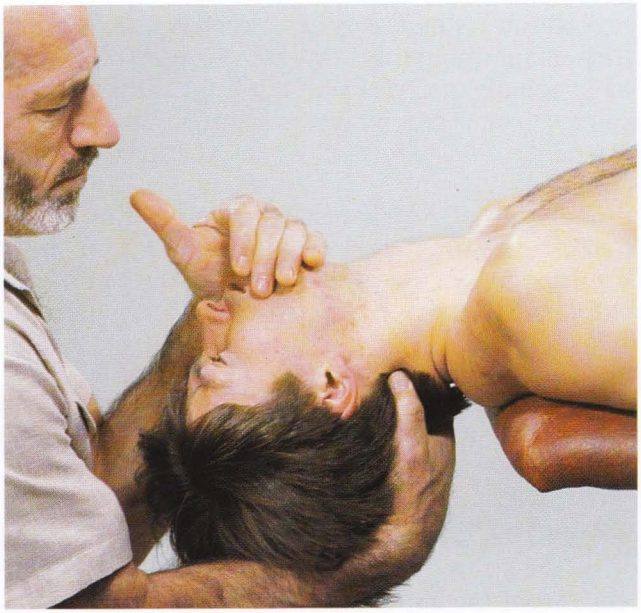
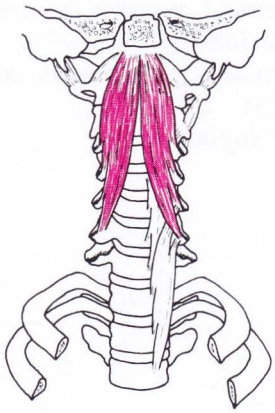


Fig. 39 b. Final Position.

3.5.5C. **Non-specific** technique for the **deep ventral muscles to increase dorsal flexion**(mainly the **longus capitis**). *P sitting.*



Starting Position: P: Sitting; mouth opened and upper thoracic region well supported. T: Standing facing P's left side.

Grip: P's head is firmly fixed between T's left hand and chest. T's left palm cups comfortably over P's right ear, with hand and arm positioned to avoid uncomfortable pressure on P's mandible. T's right hand stabilizes P's C6 and caudal vertebrae, from the dorsal aspect.

Fig. 40 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body to gradually and fully *dorsally flex* P's cervical spine, from the occiput through the C5-C6 segment.

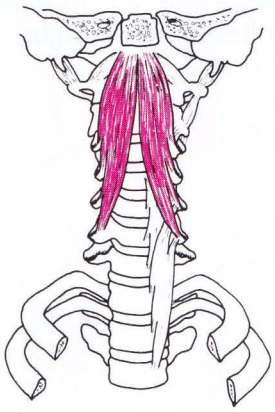
Stimulation of Antagonists: T retains grip, asks P to look upwards and rearwards, and then move head and cervical spine in the direction just stretched. T resists that movement to stimulate P's antagonists.

Notes: The longus capitis inserts at C6, so P's cervical spine should be stabilized at and caudal to C6.

During treatment, P's mouth should be kept open, with the lower jaw relaxed, to prevent interference from the superficial ventral muscles.

Fig. 40 b. Final Position.

3.5.5D. **Non-specific** technique for the **deep ventral muscles to increase dorsal flexion** (mainly the **longus capitis**). *P supine.*



Starting Position: P: Supine; mouth open; head and neck (cranial to C6) beyond end of couch; a firm cushion may be used to stabilize the C6 and caudal vertebrae; shoulders and thorax may be stabilized with a belt. T: Standing or sitting at head of couch.

Grip: T's right hand grips P's occiput. T's right wrist and forearm support P's head. T's left hand grips P's forehead.

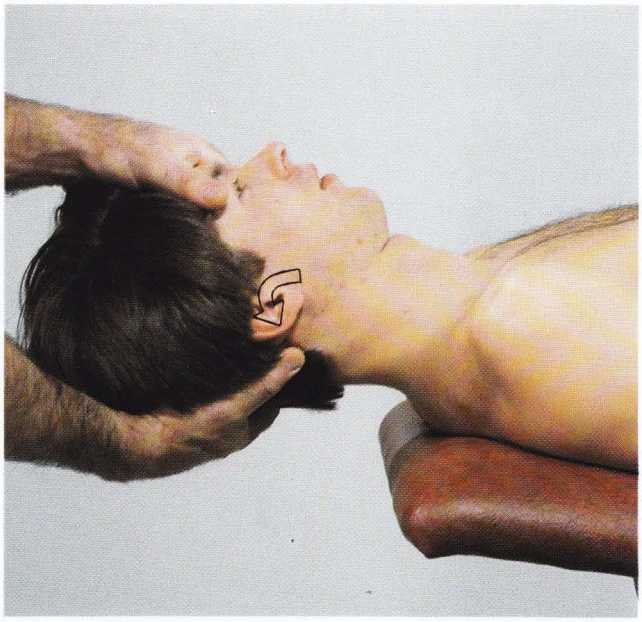


Fig. 41 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body to gradually and fully *dorsally flex* P's cervical spine, from the occiput through the C5-C6 segment.

Stimulation of Antagonists: T retains grip, and asks P to look upwards and backwards, and then move his/her head and cervical spine in the direction just stretched. T resists that movement to stimulate P's antagonists.

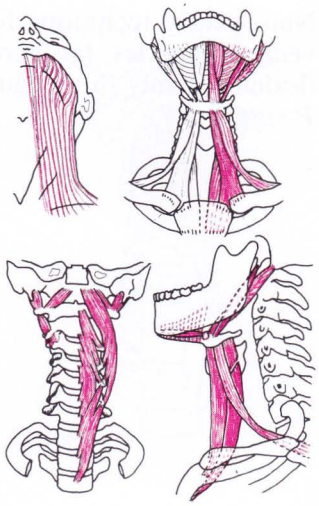
Notes: For a more specific effect, T can hold P's head and vertebrae cranial to the one treated with the right hand. T's left hand stabilizes the caudal vertebrae (see grip of therapy **3.2.4B**, p. 37). For ease of grip and efficiency of treatment, T may position the segments cranial to the one treated in ventral flexion.

The **longus capitis** inserts at C6, so P's cervical spine should be stabilized at and caudal to C6.

During treatment, P's mouth should be kept open, with the lower jaw relaxed, to prevent interference from the superficial ventral muscles.

Fig. 41 b. Final Position.

3.6.1A. **Non-specific** technique to increase **dorsal flexion** with **rotation** and **lateral flexion to the right.**
P sitting.



Starting Position: P: Sitting; left side of head supported against T's left shoulder and chest. T: Standing facing P's left side.

Grip: T's left hand grips the right side of P's occiput and fixes it against his/her shoulder and chest. T's right hand and forearm stabilize P's right shoulder from the dorsal aspect. P's left shoulder is stabilized against T's trunk.

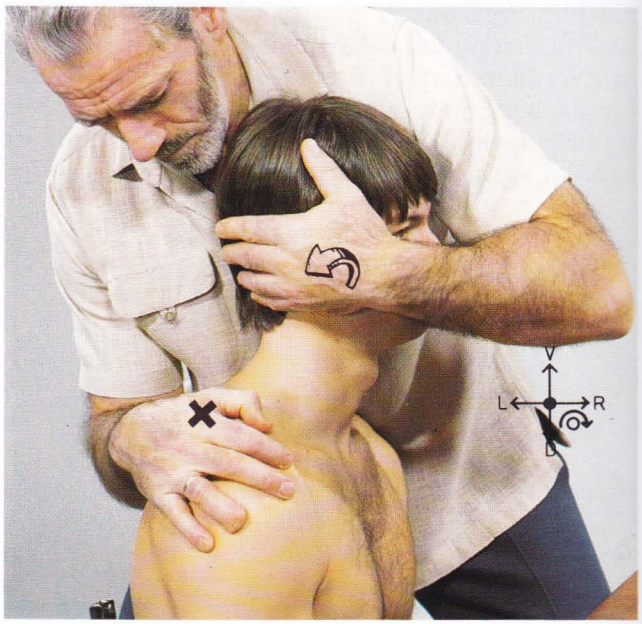


Fig. 42 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body to gradually and fully *dorsally flex* while *rotating* and *laterally flexing* P's cervical spine *to the right.*

Stimulation of Antagonists: T retains grip, and asks P to look to the right, to the rear, and downwards, as if looking over shoulder, and then move his/her head further in the direction just stretched. T resists that movement to stimulate P's antagonists.

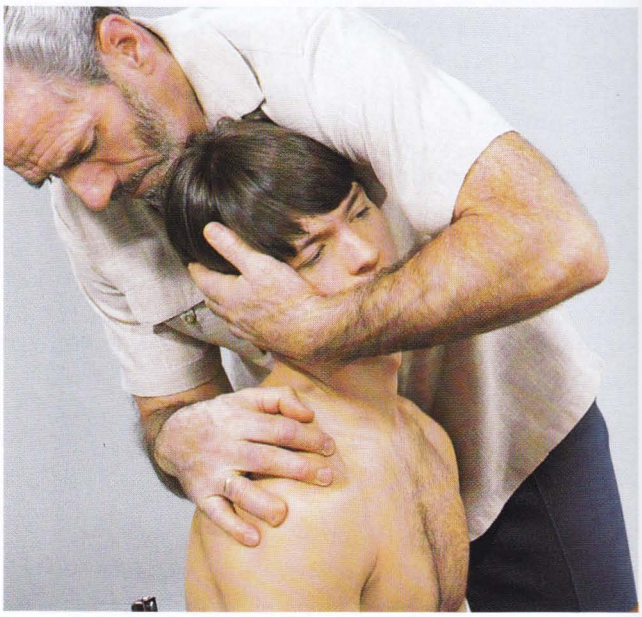
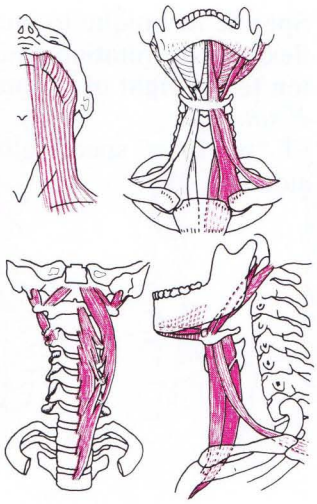


Fig. 42 b. Final Position.

3.6.1B. **Non-specific** technique to increase **dorsal flexion** with **rotation** and **lateral flexion to the right**
P supine.



Starting Position: P: Supine; head and neck beyond end of couch; shoulders and thorax stabilized with a belt. T: Standing at head of couch.

Grip: T's right hand grips P's occiput; T's right wrist and forearm and right side of chest support P's head. T's left hand grips P's chin (without pressing on the larynx).

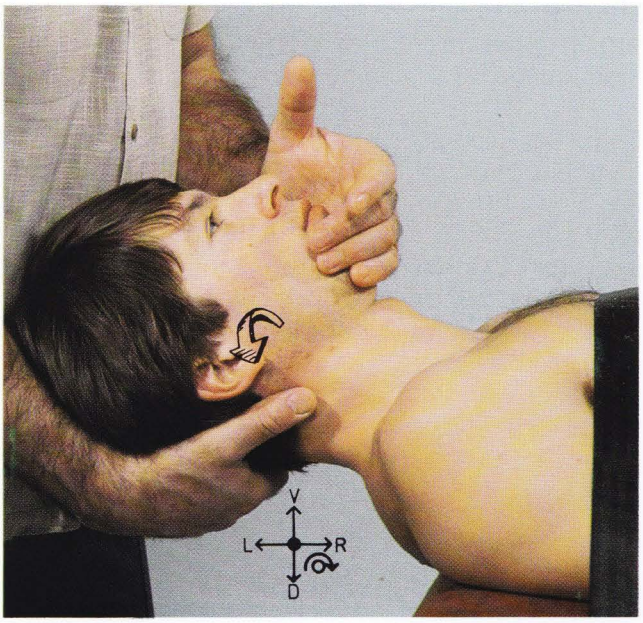


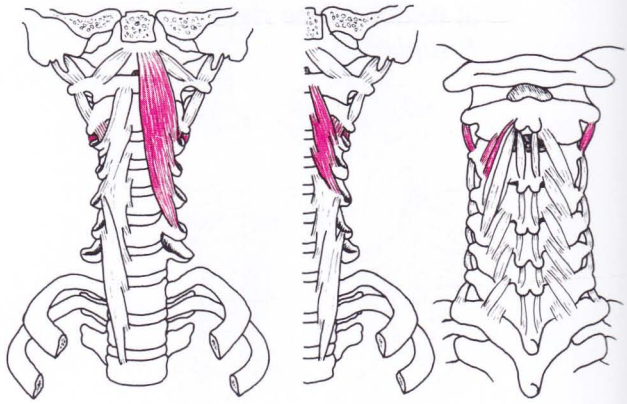
Fig. 43 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction,moves his/her body to gradually and fully *dorsally flex* while *rotating* and *laterally flexing* P's cervical spine *to the right.*

Stimulation of Antagonists: T retains grip, and asks P to look to the right, to the rear, and downwards, as if looking over shoulder, and move further in the direction just stretched. T resists that movement to stimulate P's antagonists.

Fig. 43 b. Final Position.

3.6.2A. **Specific** technique to increase **dorsal flexion** with **rotation** and **lateral flexion to the right of C2 on C3.**
P sitting.
(T "working" specifically on the **left** side of C2).



Starting Position: P: Sitting; right side of head supported against T's right shoulder and chest. T: Standing facing P's right side.

Grip: P's occiput is stabilized between T's right hand and chest and shoulder. T's right little finger lies along the spinous and left articular processes of P's axis (C2), parallel to the articular facets between C2 and C3. T's left index finger stabilizes the spinous and articular processes on the **left** side of C3. T's left thumb stabilizes the **inferior** articular process on the **right** side of C3 (so that the thumb does not hinder the dorsal/caudal glide of the right C2 facet).

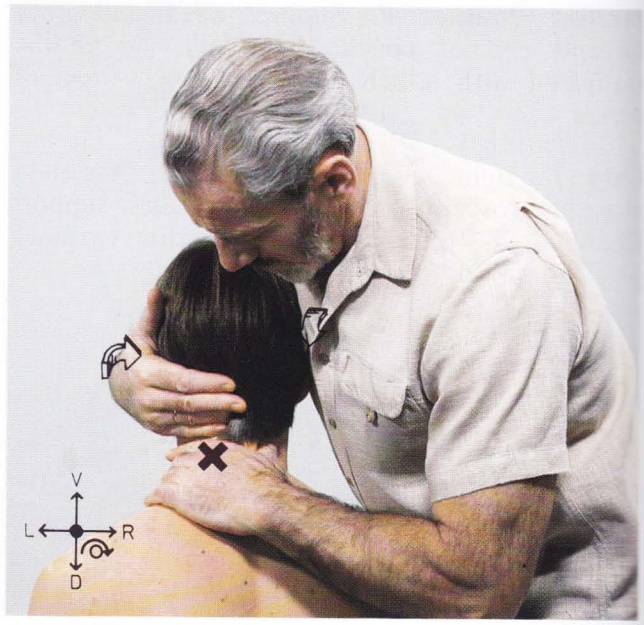


Fig. 44 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body to gradually and fully *dorsally flex* while *rotating* and *laterally flexing* C2 on C3 *to the right*. T's right little finger, "working" on the left side of C2, pulls the left articular process of C2 slightly ventrally.

Stimulation of Antagonists: T retains grip, and asks P to look to the right, rearwards and downwards, and to move his/her head further in the direction just stretched. T resists that movement to stimulate P's antagonists.

Notes: When moving the **left** articular facet of C2 slightly ventrally, the right articular facet moves slightly dorsally.

To avoid compressing the right articular facets, lateral flexion to the right should always be preceded by rotation to the right such that the articular facets glide parallel to one another.

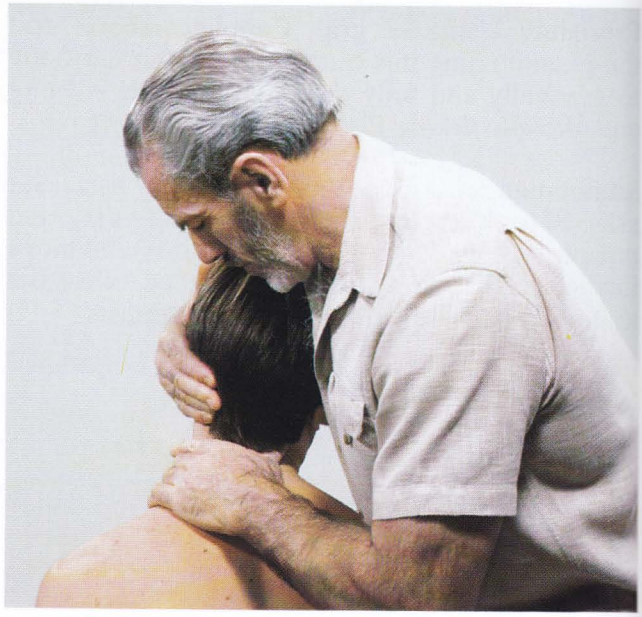
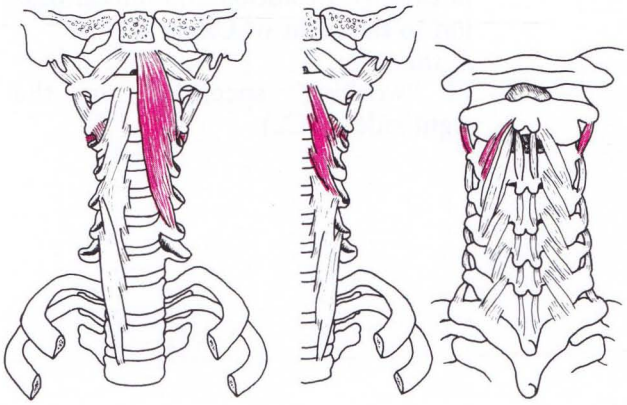


Fig. 44 b. Final Position.

3.6.2B. **Specific** technique to increase **dorsal flexion** with **rotation** and **lateral flexion to the right of C2 on C3.**
P supine.
(T "working" specifically on the **right** side of C2).



Starting Position: P: Supine; head beyond end of couch with C3 positioned at couch edge; P's shoulders and thorax may be stabilized with a belt. T: Standing at head of couch, to the left of P's head.

Grip: T's right index finger lies along the spinous and articular processes on the right side of P's axis (C2). T's right wrist and forearm support P's head against the right side of T's abdomen. T's left index finger stabilizes the spinous and articular processes on the left side of C3.

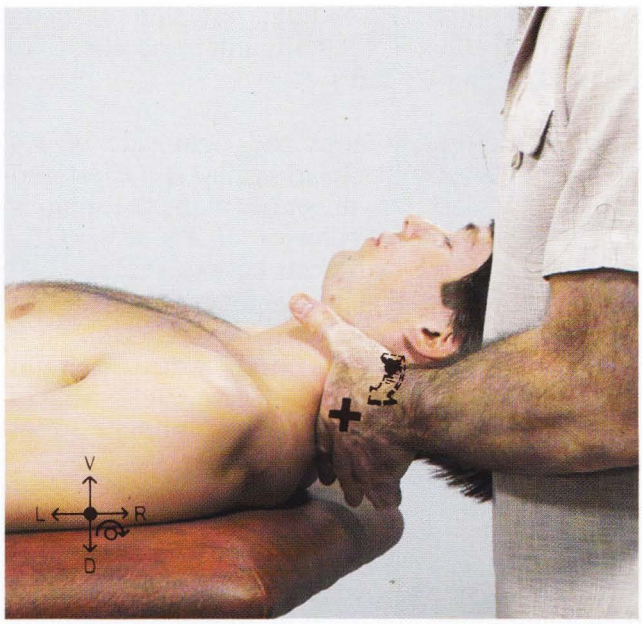


Fig. 45 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body and P's head to gradually and fully *dorsally flex* while *rotating* and *laterally flexing* C2 on C3 *to the right*. T's right index finger, "working" on the right side of C2, pushes the right articular process of C2 slightly dorsally.

Stimulation of Antagonists: T retains grip, and asks P to look to the right, rearwards and downwards, and move his/her head further in the direction just stretched. T resists that movement to stimulate P's antagonists.

Notes: When moving the right articular facet of C2 slightly dorsally, the left articular facet moves slightly ventrally.

To avoid compressing the right articular facets, lateral flexion to the right should always be preceded by rotation to the right such that the articular facets glide parallel to one another.

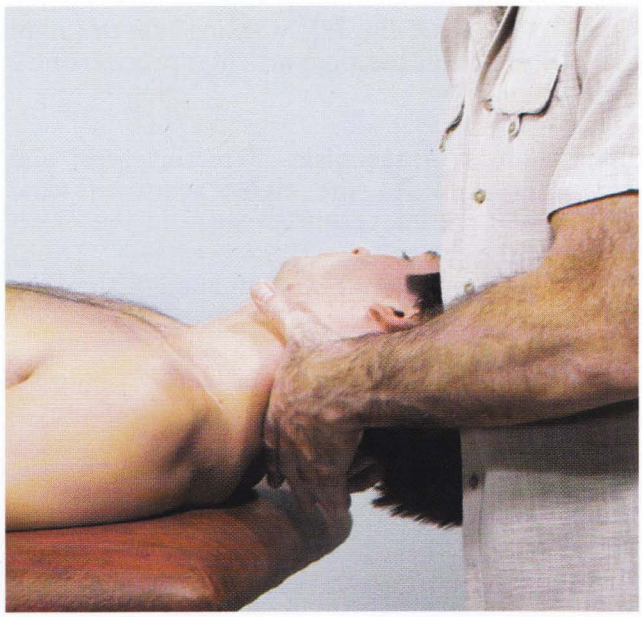
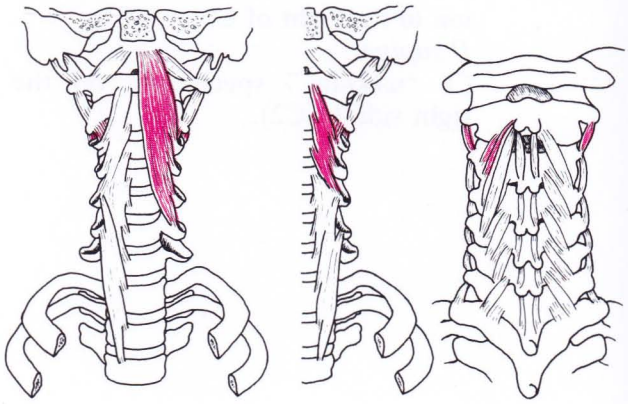


Fig. 45 b. Final Position.

3.6.2C. **Specific** technique to increase **dorsal flexion** with **rotation** and **lateral flexion to the right** of **C2 on C3.**
P sitting.
(T "working" specifically on the **right** side of C2).



Starting Position: P: Sitting; left side of head supported against T's left shoulder and chest. T: Standing facing P's left side.

Grip: T's left hand grips the right side of P's occiput, stabilizing P's head against T's chest and shoulder. T's left little finger lies along the spinous and right articular processes of P's axis (C2), parallel to the articular facets between C2 and C3. T's right index finger stabilizes the inferior articular process on the right side of C3 (so that it does not hinder the dorsal-caudal glide of the right C2 facet). T's right thumb stabilizes the left side of the spinous process of C3, preventing it from rotating to the right.

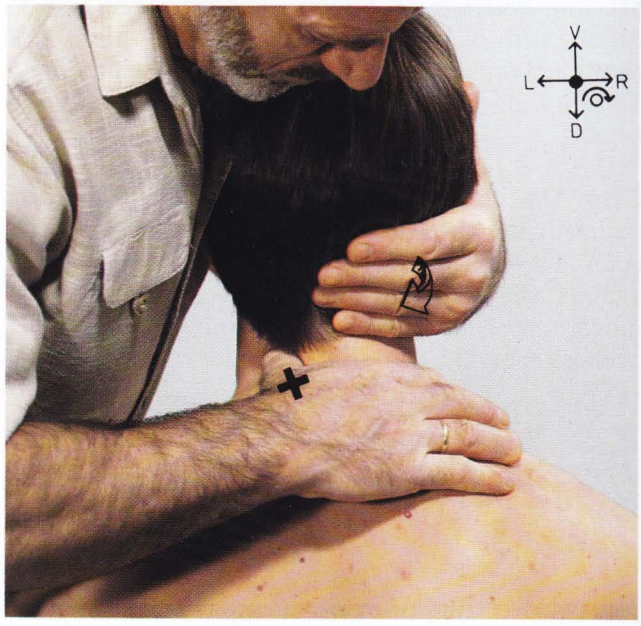


Fig. 46 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body and P's head to gradually and fully *dorsally flex* while *rotating* and *laterally flexing* C2 on C3 *to the right*. T's left little finger, "working" on the right side of C2, pushes the right articular process of C2 slightly dorsally.

Stimulation of Antagonists: T retains grip, and asks P to look to the right, rearwards and downwards, and move his/her head in the direction just stretched.
T resists that movement to stimulate P's antagonists.

Notes: When moving the right articular facet of C2 slightly dorsally, the left articular facet moves slightly ventrally.

To avoid compressing the right articular facets, lateral flexion to the right should always be preceded by rotation to the right with the articular facets gliding parallel to one another.

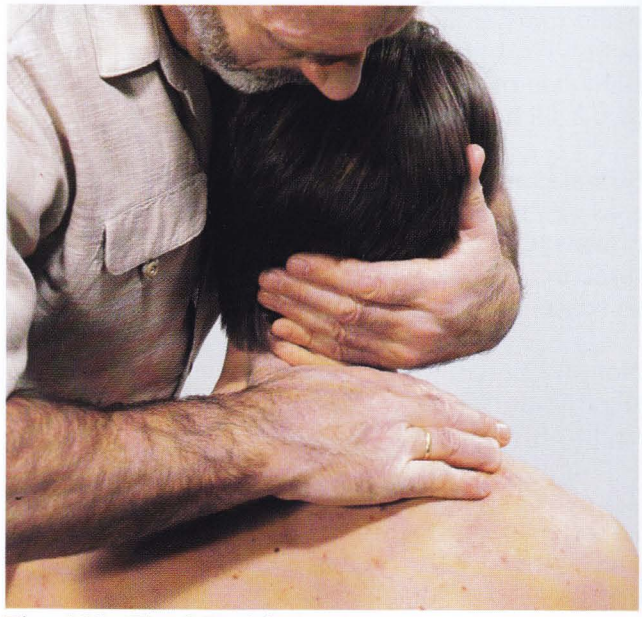
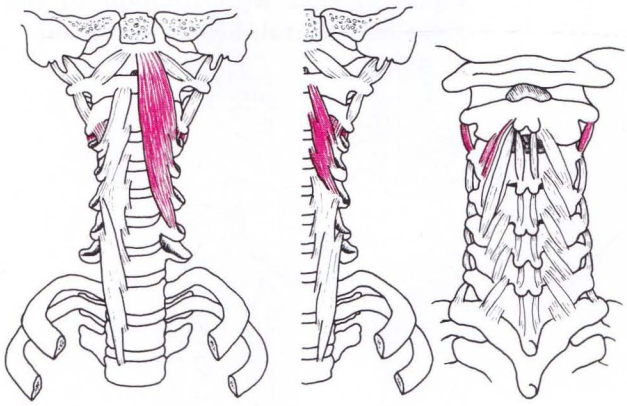


Fig. 46 b. Final Position.

3.6.2D. **Specific** technique to increase **dorsal flexion** with **rotation** and **lateral flexion to the right** of C2 on C3.
P supine.
(T "working" specifically on the **left** side of C2).



Starting Position: P: Supine; head beyond end of couch with C3 positioned at couch edge; shoulders and thorax may be stabilized with a belt. T: Standing at head of couch, to the right of P's head.

Grip: T's left index finger lies along the spinous and articular processes on the left side of P's axis (C2). T's left wrist and forearm support P's head against the left side of T's abdomen. T's right index finger stabilizes the spinous and articular processes on the left side of C3. T's right thumb stabilizes the inferior articular process on the right side of C3 (so the thumb does not hinder the dorsal-caudal glide of the right C2 facet).

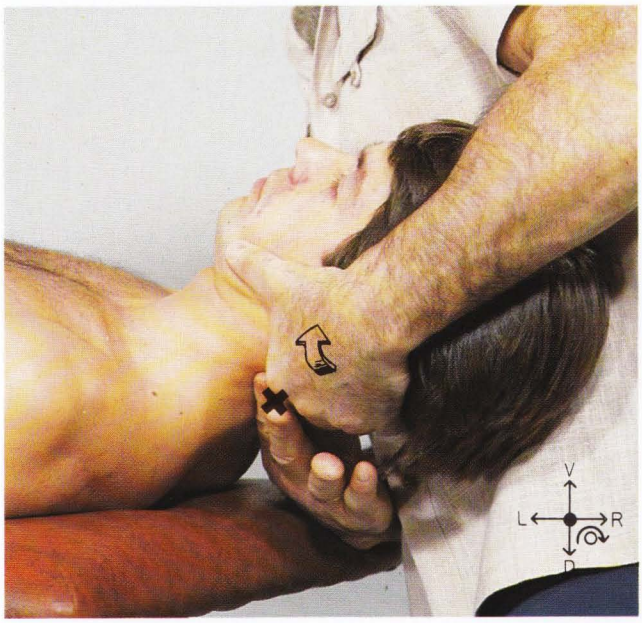


Fig. 47 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction,moves his/her body and P's head to gradually and fully *dorsally flex* while *rotating* and *laterally flexing* C2 on C3 *to the right*. T's left index finger, "working" on the left side of C2, pulls the left articular process of C2 slightly ventrally.

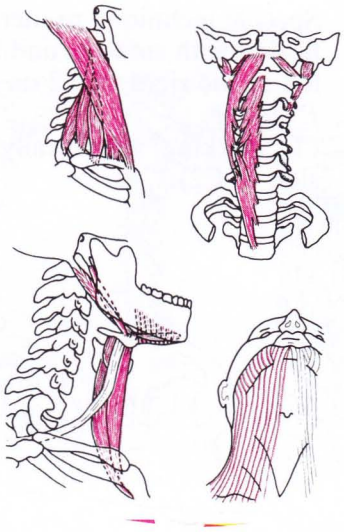
Stimulation of Antagonists: T retains grip, and asks P to look to the right, rearwards and downwards, and to move his/her head in the direction just stretched. T resists that movement to stimulate P's antagonists.

Notes: When moving the left articular facet of C2 slightly ventrally, the right articular facet moves slightly dorsally.

To avoid compressing the right articular facets, lateral flexion to the right should always be preceded by rotation to the right with the articular facets gliding parallel to one another.

Fig. 47 b. Final Position.

3.7.1A. **Non-specific** technique to increase **dorsal flexion** with **rotation to the right** and **lateral flexion to the left.** *P sitting.*



Starting Position: P: Sitting; right side of head supported against T's right shoulder and chest. T: Standing facing P's right side.

Grip: P's occiput is fixed between T's right hand, shoulder and chest. T's left hand and forearm stabilize P's left shoulder from the dorsal aspect. P's right shoulder is stabilized against T's abdomen.

Fig. 48 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body to gradually and fully *dorsally flex* while *rotating to the right* and *laterally flexing* P's cervical spine *to the left.*

Stimulation of Antagonists: T retains grip, and asks P to look upwards and to the rear and then move his/her head further in the direction just stretched. T resists that movement to stimulate P's antagonists.

Note: The final position may move the vertebrae into a *locked* position.
Therefore, T must cautiously use successively smaller forces and movements in approaching the final position.

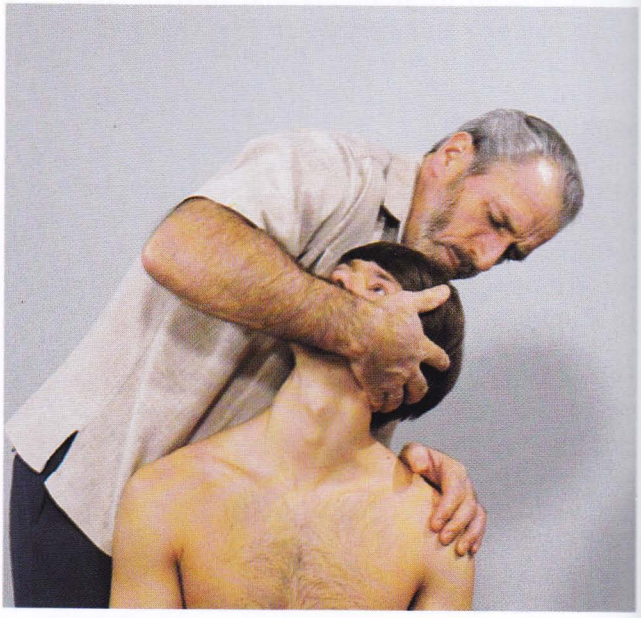
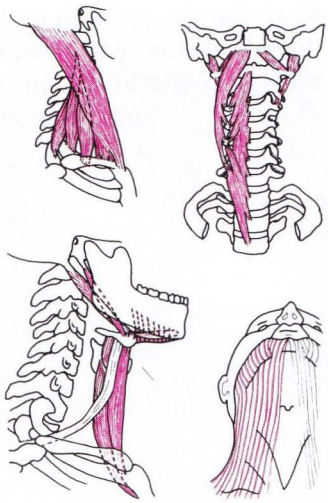


Fig. 48 b. Final Position.

3.7.1B. **Non-specific** technique to increase **dorsal flexion** with **rotation to the right** *and* **lateral flexion to the left.** *P supine.*



Starting Position: P: Supine; head beyond end of couch with shoulders at couch edge; shoulders and thorax may be stabilized with a belt. T: Standing at head of couch, to the left of P's head.

Grip: T's right hand grips the right side of P's occiput to fix P's head between T's right forearm and chest. T's left hand stabilizes P's left shoulder against the couch.

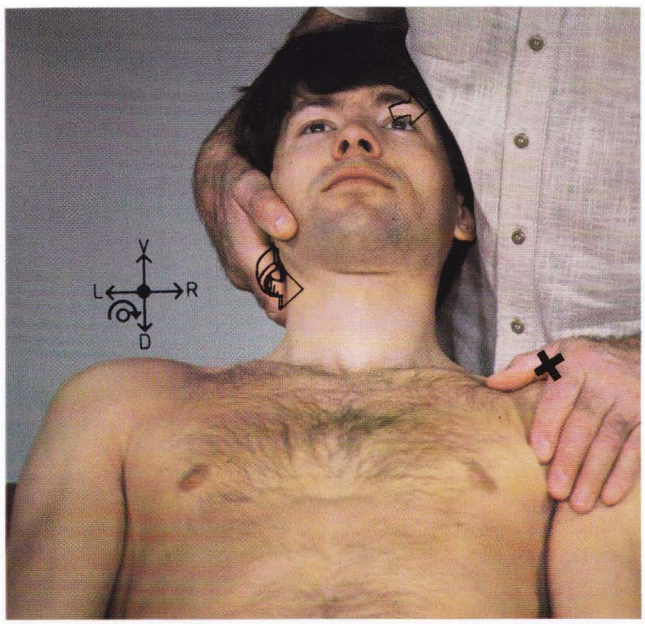


Fig. 49 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body to gradually and fully *dorsally flex* while *rotating to the right* and *laterally flexing* P's cervical spine *to the left.*

Stimulation of Antagonists: T retains grip, and asks P to look upwards, to the rear, and as much as possible to the right, and then move his/her head further in the direction just stretched. T resists that movement to stimulate P's antagonists.

Notes: T may find the complex movement of this technique more easily performed using both hands to guide motion; see technique **3.7.1C**, p. 66.

The final position may move the vertebrae into a *locked* position.
Therefore, T must cautiously use successively smaller forces and movements in approaching the final position.

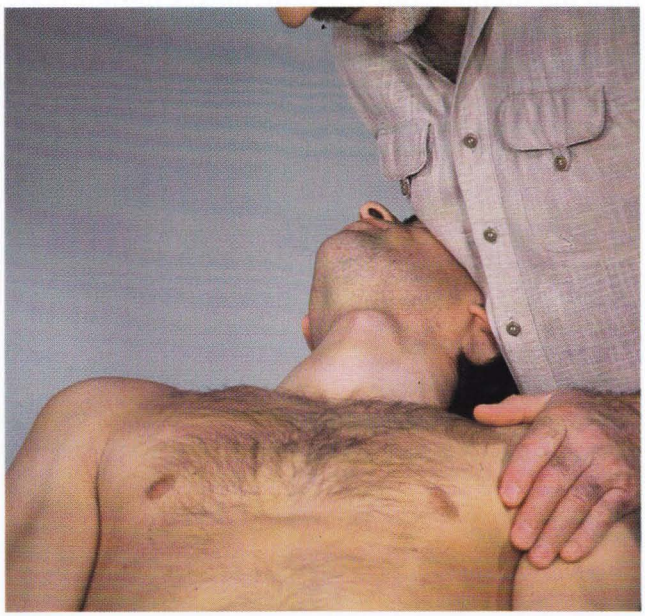
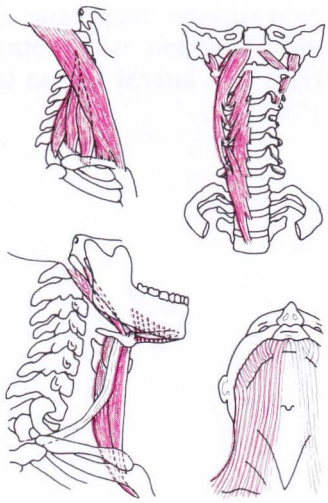


Fig. 49 b. Final Position.

3.7.1C. **Non-specific** technique to increase **dorsal flexion** with **rotation to the right** and **lateral flexion to the left.**
P supine. Alternative grip.



Starting Position: P: Supine; head and neck beyond end of couch with shoulders at couch edge; shoulders and thorax stabilized with a belt. T: Standing at head of couch.

Grip: T's right hand grips P's occiput, with wrist and forearm supporting P's head against T's chest. T's left hand grips P's chin (without pressing on the larynx).

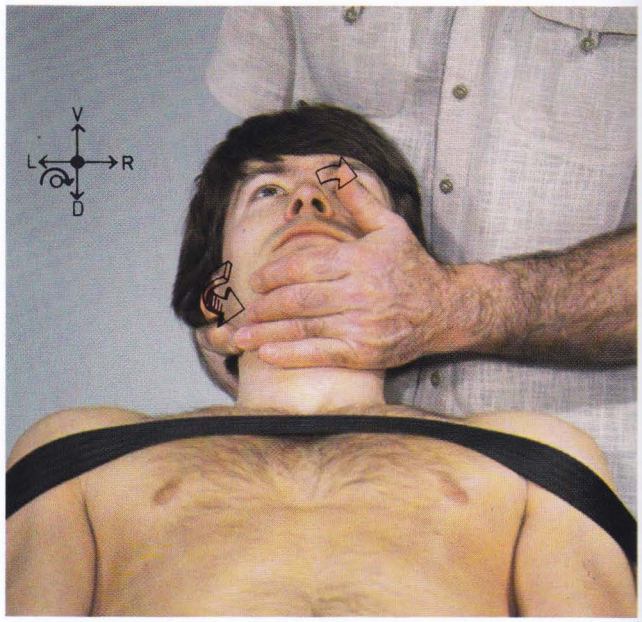


Fig. 50 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body to gradually and fully *dorsally flex* while *rotating to the right* and *laterally flexing* P's cervical spine *to the left.*

Stimulation of Antagonists: T retains grip, and asks P to look upwards, to the rear, and as much as possible to the right, and then move his/her head further in the direction just stretched. T resists that movement to stimulate P's antagonists.

Note: The final position may move the vertebrae into a *locked* position.
Therefore, T must cautiously use successively smaller forces and movements in approaching the final position.

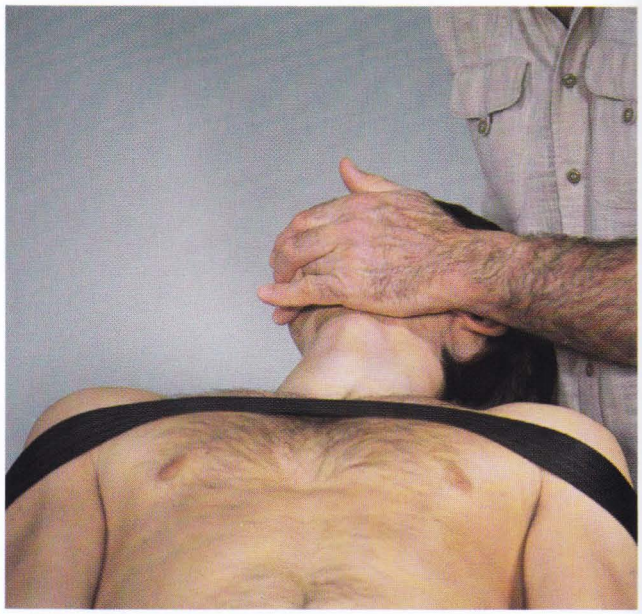
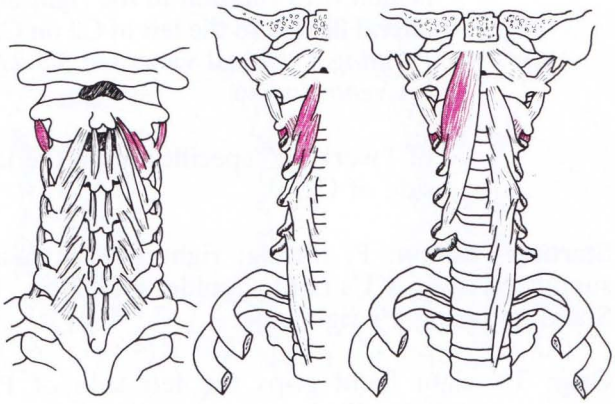


Fig. 50 b. Final Position.

3.7.2A1. **Specific** technique to increase **dorsal flexion** with **rotation to the right** and **lateral flexion to the left of C2 on C3.** *P sitting.* ***Ventral view***; see **3.7.2A2** for *dorsal view.*
(T "working" specifically on the **left** side of C2).



Starting Position: P: Sitting; right side of head supported against T's right shoulder and chest. T: Standing facing P's right side.

Grip: T's right hand grips the left side of P's occiput, stabilizing P's head against T's chest and shoulder. T's right little finger lies along the spinous and left articular and transverse processes of P's axis (C2) from the dorsal aspect, parallel to the articular facets between C2 and C3. T's left index finger stabilizes the spinous and articular processes on the left side of C3. T's left thumb stabilizes the **inferior** articular process on the right side of C3 (so the thumb does not hinder the dorsal glide of the right articular facet of C2 on C3).

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body to gradually but **not** fully *dorsally flex* while fully *rotating to the right* and *laterally flexing* C2 on C3 *to the left*. T's right little finger, "working" on the left side of C2, pulls the left articular process of C2 slightly ventrally.

Stimulation of Antagonists: T retains grip, and asks P to look upwards, to the right, and rearwards, and then move his/her head in the direction just stretched. T resists that movement to stimulate P's antagonists.

Notes: When moving the **left** articular facet of C2 slightly ventrally, the **right** articular facet moves slightly dorsally.

When the cervical spine is dorsally flexed, rotated to the right and laterally flexed to the left, *locking* results. Therefore, T must be able to interpret the various types of end feel, see section **1.6.3**, p. 9.

The final position may move the vertebrae into a *locked* position.
Therefore, T must cautiously use successively smaller forces and movements in approaching the final position.

The following technique, **3.7.2A2**, p. 68 is a dorsal view of the same procedure.

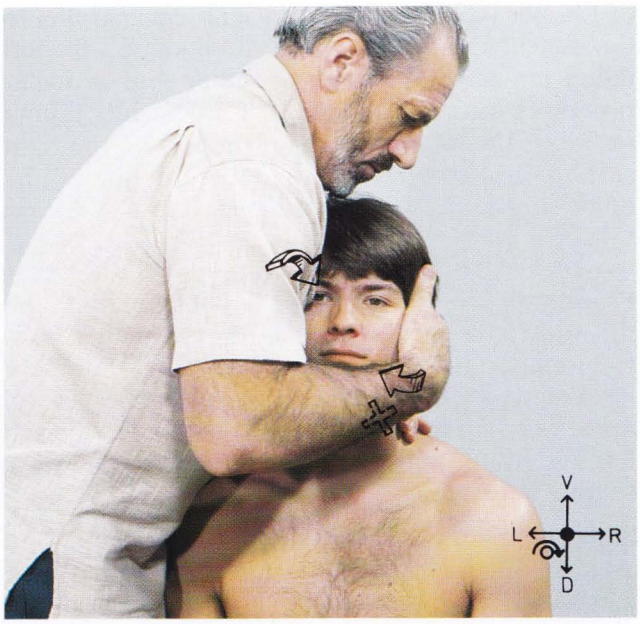


Fig. 51 a. Starting Position.

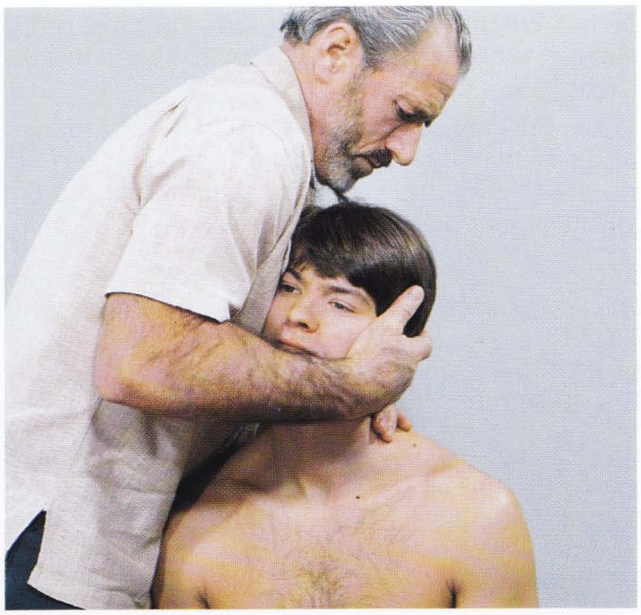
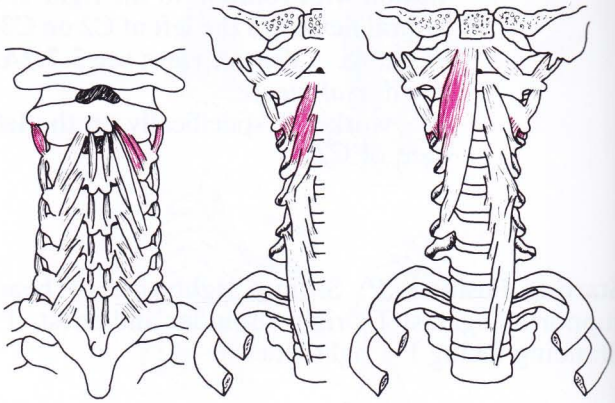


Fig. 51 b. Final Position.

3.7.2A2. **Specific** technique to increase **dorsal flexion** with **rotation to the right** and **lateral flexion to the left of C2 on C3.** *P sitting.* ***Dorsal view***; *see* **3.7.2A1** for *ventral view.*

(T "working" specifically on the **left** side of C2).



Starting Position: P: Sitting; right side of head supported against T's right shoulder and chest. T: Standing facing P's right side.

Grip: T's right hand grips the left side of P's occiput, stabilizing P's head against T's chest and shoulder. T's right little finger lies along the spinous and left articular and transverse processes of P's axis (C2) from the dorsal aspect, parallel to the articular facets between C2 and C3. T's left index finger stabilizes the spinous and articular processes on the left side of C3. T's left thumb stabilizes the **inferior** articular process on the right side of C3 (so the thumb does not hinder the dorsal glide of the right articular facet of C2 on C3).

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body to gradually but **not** fully *dorsally flex* while fully *rotating to the right* and *laterally flexing* C2 on C3 *to the left*. T's right little finger, "working" on the left side of C2, pulls the left articular process of C2 slightly ventrally.

Stimulation of Antagonists: T retains grip, and asks P to look upwards, to the right, and rearwards, and then move his/her head in the direction just stretched. T resists that movement to stimulate P's antagonists.

Notes: When moving the **left** articular facet of C2 slightly ventrally, the right articular facet moves slightly dorsally.

When the cervical spine is dorsally flexed, rotated to the right and laterally flexed to the left, *locking* results. Therefore, T must be able to interpret the various types of end feel, see section **1.6.3**, p. 9.

The final position may move the vertebrae into a *locked* position.
Therefore, T must cautiously use successively smaller forces and movements in approaching the final position.

The previous technique, **3.7.2A1**, p. 67 is a ventral view of the same procedure.

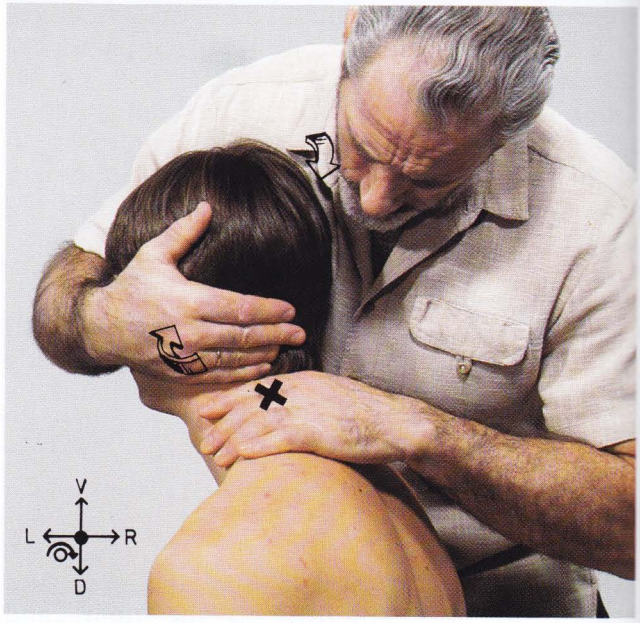


Fig. 52 a. Starting Position.

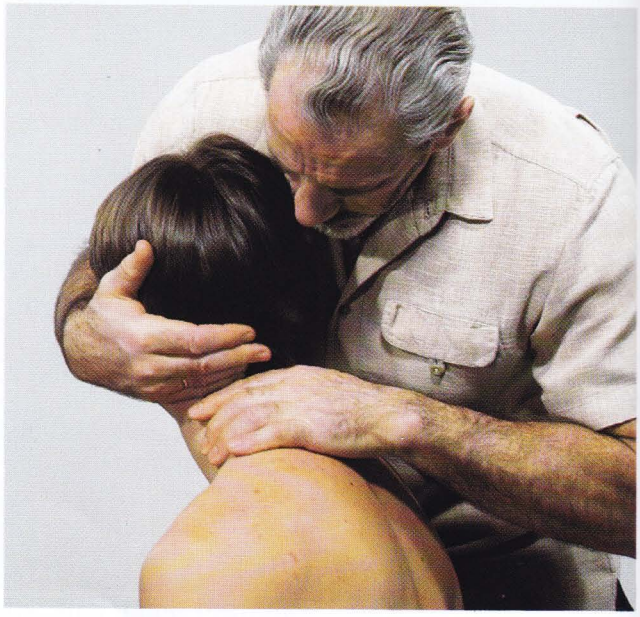
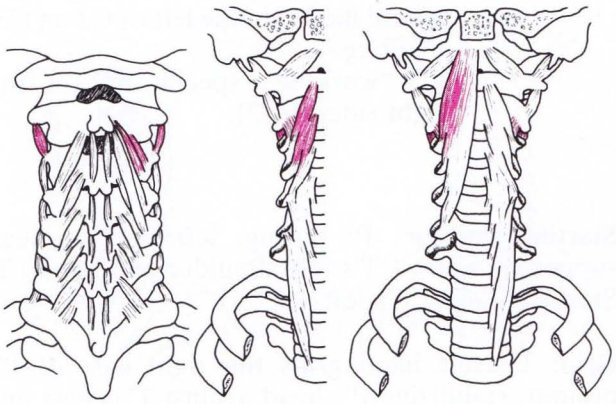


Fig. 52 b. Final Position.

3.7.2B. **Specific** technique to increase **dorsal flexion** with **rotation to the right** and **lateral flexion to the left** of C2 on C3. *P supine.*

(T "working" specifically on the **left** side of C2).



Starting Position: P: Supine; head beyond end of couch with C3 at couch edge; shoulders and thorax may be stabilized with a belt. T: Standing at head of couch to the right of P's head.

Grip: T's left index finger lies along the spinous, articular and transverse processes on the left side of P's axis (C2) from the dorsal aspect. T's left wrist and forearm support P's head against the left side of T's abdomen. The radial aspect of T's right index finger stabilizes the right transverse process and the right inferior articular processes of C3. Or, for greater stability and ease of grip, T's right index finger stabilizes the left side of the spinous process and the left inferior articular processes of C3, and T's right thumb stabilizes the right inferior articular process and the right transverse process of C3. T's right index finger or right thumb should not hinder the dorsal glide of the right C2 facet on C3.

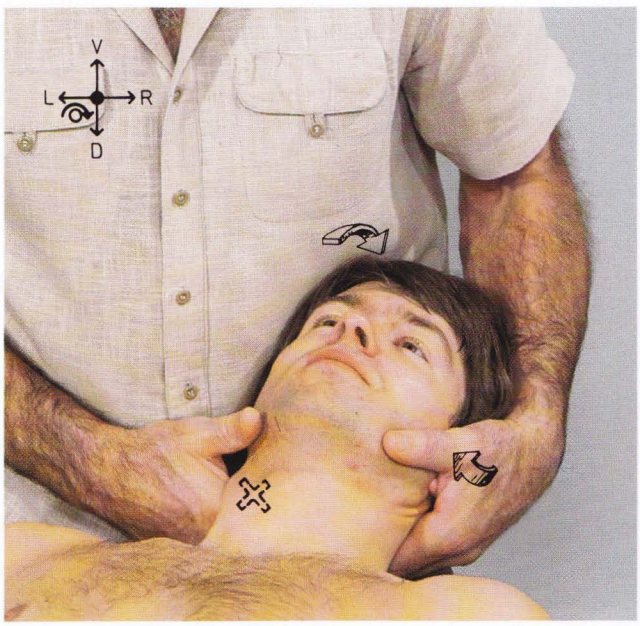


Fig. 53 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body to gradually, but **not** *fully dorsally* flex while fully *rotating to the right* and *laterally flexing* C2 on C3 *to the left*. T's left index finger, "working" on the left side of C2, pulls the left articular process of C2 slightly ventrally.

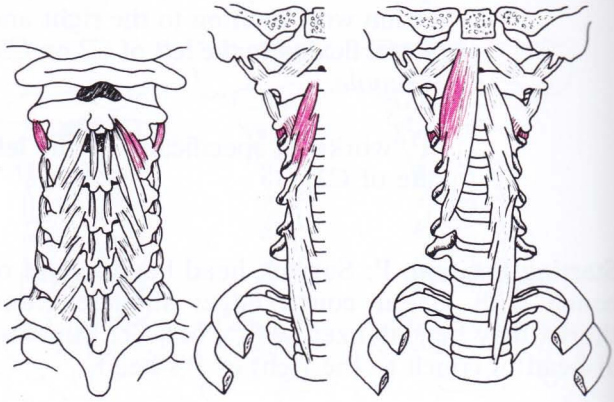
Stimulation of Antagonists: T retains grip, and asks P to look upwards, to the right, and rearwards, and then move his/her head further in the direction just stretched. T resists that movement to stimulate P's antagonists.

Notes: When moving the **left** articular facet of C2 slightly ventrally, the **right** articular facet moves slightly dorsally.

The final position may move the vertebrae into a *locked* position.
Therefore, T must cautiously use successively smaller forces and movements in approaching the final position.

Fig. 53 b. Final Position.

3.7.2C. **Specific** technique to increase **dorsal flexion** with **rotation to the right** *and* **lateral flexion to the left** of C2 on C3. *P sitting.*
(T "working" specifically on the **right** side of C2).



Starting Position: P: Sitting; left side of head supported against T's left shoulder and chest. T: Standing facing P's left side.

Grip: T's left hand grips the right side of P's occiput, stabilizing P's head against T's chest and shoulder. T's left little finger lies along the spinous and right articular processes of P's axis (C2), parallel to the articular facets between C2 and C3. To prevent C3 from rotating to the right, T's right index finger stabilizes the right inferior articular process of C3 from the dorsal aspect (so that it does not hinder the dorsal glide of the right C2 facet). For the same reason, T's right thumb stabilizes the left side of the spinous process of C3, thus also preventing it from rotating to the right.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body to gradually but **not** fully *dorsally flex* while fully *rotating to the right* and *laterally flexing* C2 on C3 *to the left*. T's left little finger, "working" on the right side of C2, pushes the right articular process of C2 slightly dorsally.

Stimulation of Antagonists: T retains grip, and asks P to look upwards, to the right, and rearwards, and then move his/her head further in the direction just stretched. T resists that movement to stimulate P's antagonists.

Notes: When moving the **right** articular facet of C2 slightly dorsally, the **left** articular facet moves slightly ventrally.

When the cervical spine is dorsally flexed, rotated to the right and laterally flexed to the left, *locking* results. Therefore, T must be able to interpret the various types of end feel, see section **1.6.3**, p. 9.

The final position may move the vertebrae into a *locked* position.
Therefore, T must cautiously use successively smaller forces and movements in approaching the final position.

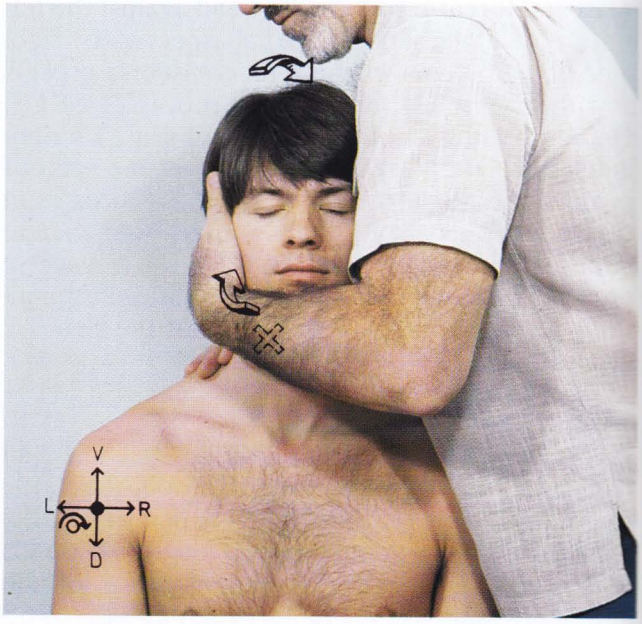


Fig. 54 a. Starting Position.

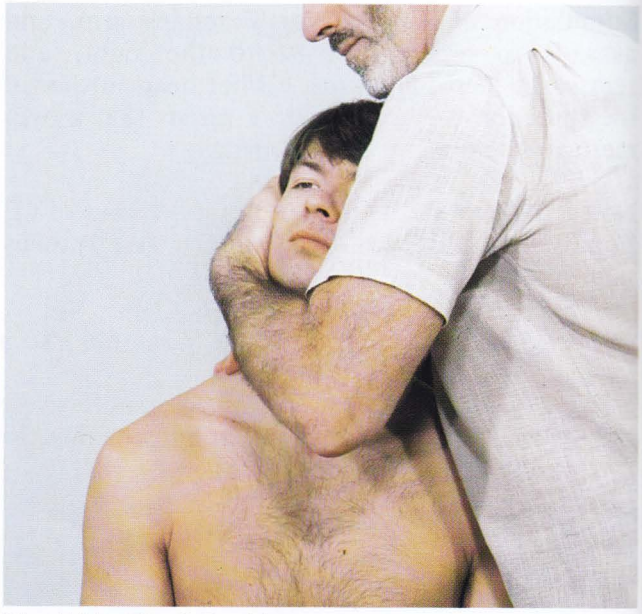
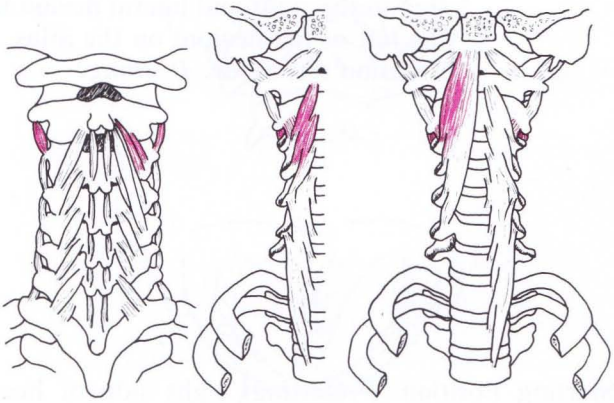


Fig. 54 b. Final Position.

3.7.2D. **Specific** technique to increase **dorsal flexion** with **rotation to the right** and **lateral flexion to the left of C2 on C3.** *P supine.*

(T "working" specifically on the **right** side of C2).



Starting Position: P: Supine; head beyond end of couch with C3 positioned at couch edge; shoulders and thorax may be stabilized with a belt. T: Standing at head of couch, to the left of P's head.

Grip: T's right index finger lies along the spinous and articular processes on the right side of P's axis (C2) from the dorsal aspect. T's right wrist and forearm support P's head against the right side of T's abdomen. The radial aspect of T's left index finger stabilizes the spinous and articular processes on the left side of C3, preventing it from rotating to the right.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body to gradually but **not** fully *dorsally flex* while fully *rotating to the right* and *laterally flexing* C2 on C3 *to the left*. T's right index finger, "working" on the right side of C2, pushes the right articular process of C2 slightly dorsally.

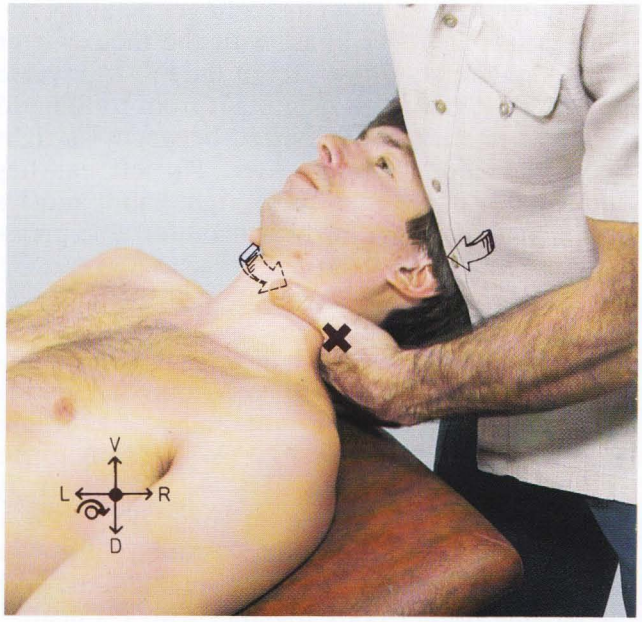


Fig. 55 a. Starting Position.

Stimulation of Antagonists: T retains grip, and asks P to look upwards, to the right, and rearwards, and then move his/her head further in the direction just stretched. T resists that movement to stimulate P's antagonists.

Notes: When moving the **right** articular facet of C2 slightly dorsally, the **left** articular facet moves slightly ventrally.

The final position may move the vertebrae into a *locked* position.
Therefore, T must cautiously use successively smaller forces and movements in approaching the final position.

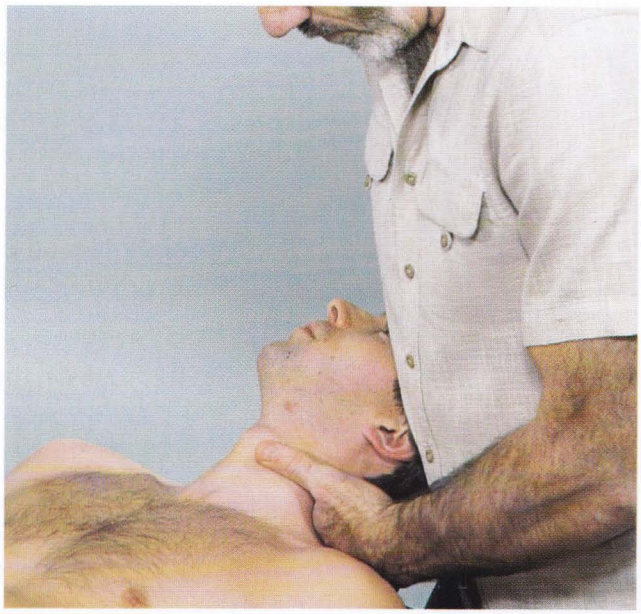
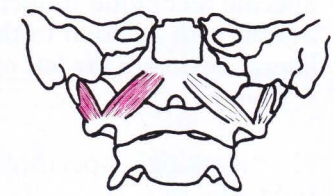
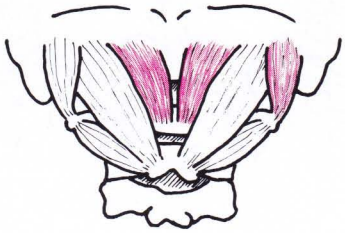


Fig. 55 b. Final Position.

3.8.1A. **Specific** technique to increase **rotation to the right** and **lateral flexion to the left** of the **occiput on the atlas Traction technique.** *P sitting.*





Starting Position: P: Sitting; right side of head supported against T's right shoulder and chest. T: Standing facing P's right side.

Grip: T's left thumb and index finger lie along the posterior arch of P's atlas, with the index finger stabilizing the ventral aspect of the left transverse process of P's atlas, preventing it from rotating to the right. P's head is stabilized between T's right hand and chest and shoulder. P's left ear lies comfortably in the palm of T's right hand, and T's arm is positioned to prevent uncomfortable pressure on P's mandible.

Procedure: (Traction is the only treatment modality of this technique. The procedure comprises two steps.) **Step one:** Using this grip, T positions P's occiput on the atlas into full *rotation to the right* and *lateral flexion to the left* by fully stretching the tissues.
Step two: Maintaining this position, T applies maximal *traction* between the occiput and the atlas by moving his/her body together with P's head.
These steps are repeated until considerable improvement is attained.

Stimulation of Antagonists: T retains grip, and asks P to look upwards, to the right, and rearwards, and then move his/her head further in the direction just stretched. T resists that movement to stimulate P's antagonists.

Notes: Step two is the key part of the procedure, as further rotation to the right and lateral flexion to the left depend on traction.

This technique is the gentlest and safest of the Section **3.8.1** techniques.

Biomechanically, restricted rotation of the atlas on the axis or of the axis (C2) on C3 may also restrict rotation and lateral flexion between the occiput and the atlas. If so, then these restricted movements must be treated first.

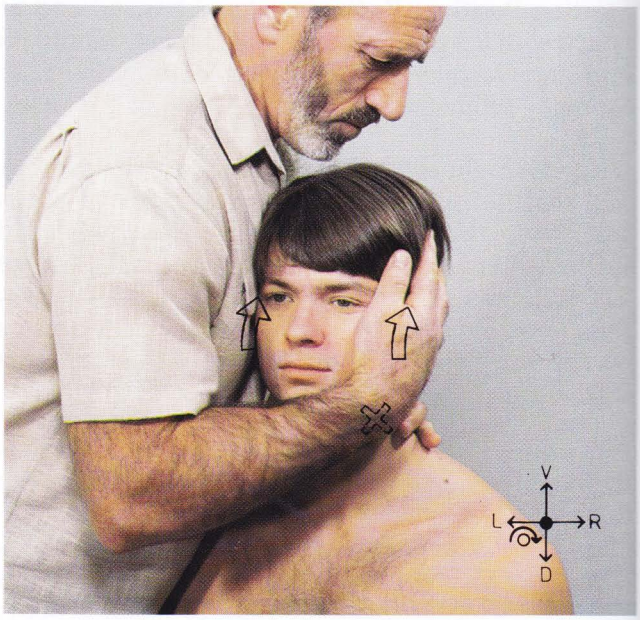


Fig. 56 a. Starting Position.

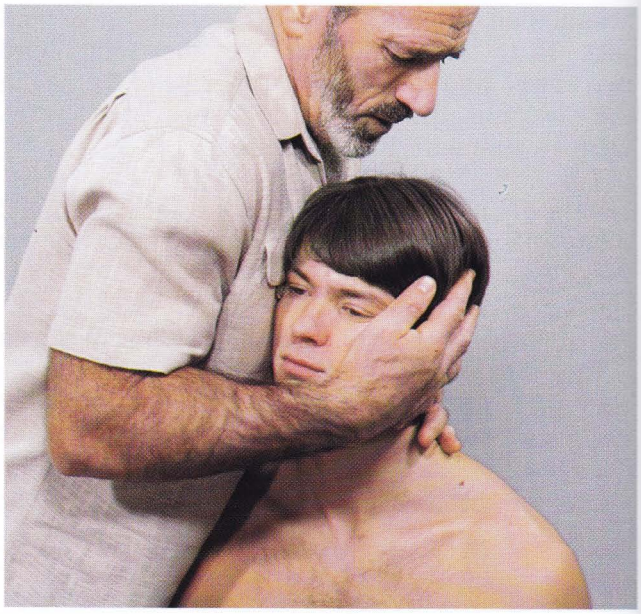
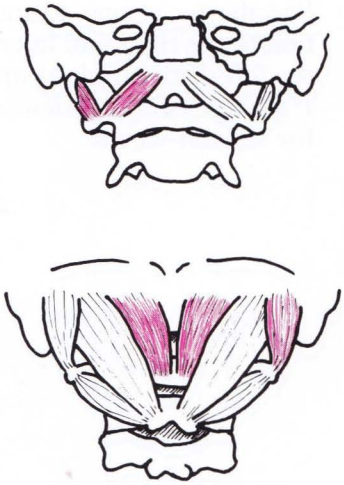


Fig. 56 b. Final Position.

3.8.1B1. **Specific** technique to increase **rotation to the right** and **lateral flexion to the left** of the **occiput on the atlas.** *P sitting. Ventral view*; see **3.8.1B2** for dorsal view.



Starting Position: P: Sitting; right side of head supported against T's right shoulder and chest. T: Standing facing P's right side.

Grip: The tip of T's left index finger stabilizes the ventral aspect of the left transverse process of P's atlas, preventing it from rotating to the right. The rest of T's left index finger and thumb lie along the posterior arch of P's atlas. T's right hand grips the left side of P's occiput, stabilizing P's head against T's chest and right shoulder. P's left ear should lie comfortably in the palm of T's right hand, and T's arm should be positioned to prevent uncomfortable pressure on P's mandible.

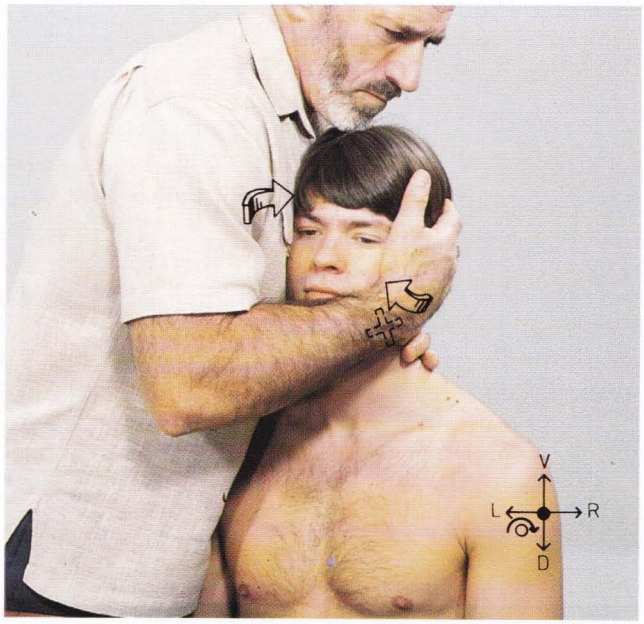


Fig. 57 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body to gradually and fully *rotate to the right* and *laterally flex* P's occiput on the atlas *to the left*. T stabilizes P's atlas from the ventral aspect with the left index finger and from the dorsal aspect with the left thumb, thus allowing the occipital condyles to glide and rotate to the right on the atlas.

Stimulation of Antagonists: T retains grip, and asks P to look upwards, to the right, and rearwards, and then move his/her head further in the direction just stretched. T resists that movement to stimulate P's antagonists.

Note: The following technique, **3.8.1B2**, p. 74 is a dorsal view of the same procedure.

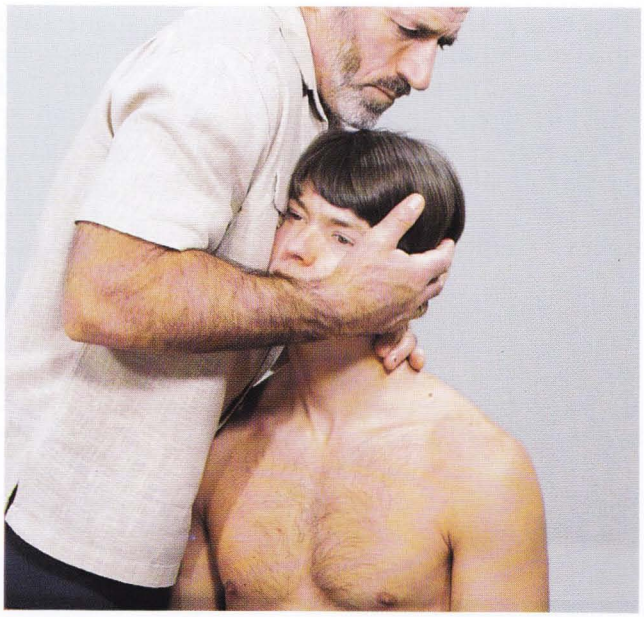
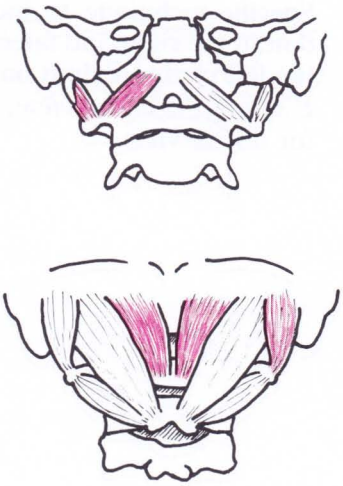


Fig. 57 b. Final Position.

3.8.1B2. **Specific** technique to increase **rotation to the right** and **lateral flexion to the left** of the occiput on **the atlas.** *P sitting. Dorsal view*; see **3.8.1B1** for ventral view.



Starting Position: P: Sitting; right side of head supported against T's right shoulder and chest. T: Standing facing P's right side.

Grip: The tip of T's left index finger stabilizes the ventral aspect of the left transverse process of P's atlas, preventing it from rotating to the right. The rest of T's left index finger and thumb lie along the posterior arch of P's atlas. T's right hand grips the left side of P's occiput, stabilizing P's head against T's chest and right shoulder. P's left ear should lie comfortably in the palm of T's right hand, and T's arm should be positioned to prevent uncomfortable pressure on P's mandible.

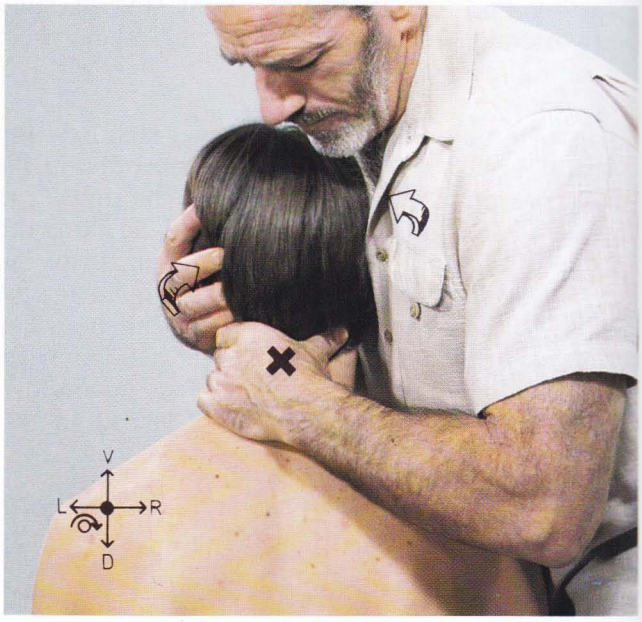


Fig. 58 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body to gradually and fully *rotate to the right* and *laterally flex* P's occiput on the atlas *to the left*. T stabilizes P's atlas from the ventral aspect with the left index finger and from the dorsal aspect with the left thumb, thus allowing the occipital condyles to glide and rotate to the right on the atlas.

Stimulation of Antagonists: T retains grip, and asks P to look upwards, to the right, and rearwards, and then move his/her head further in the direction just stretched. T resists that movement to stimulate P's antagonists.

Note: The previous technique, **3.8.1B1**, p. 73 is a ventral view of the same procedure.

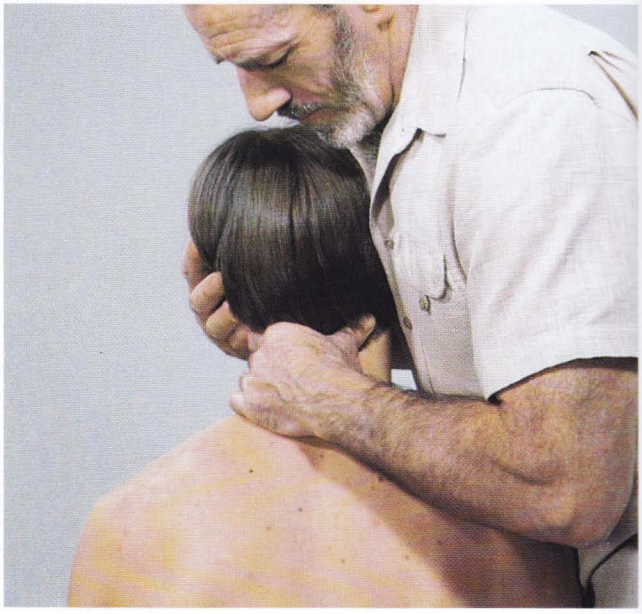
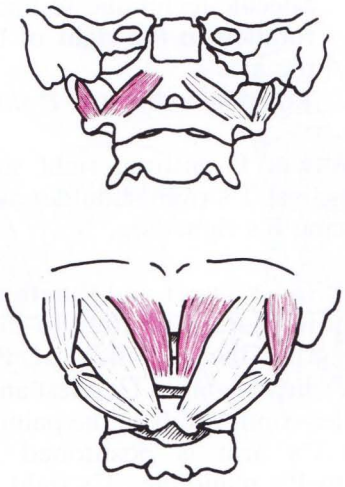


Fig. 58 b. Final Position.

3.8.1C. **Specific** technique to increase **rotation to the right** and **lateral flexion to the left** of the occiput on **the atlas**. *P supine.*



Starting Position: P: Supine; head beyond end of couch with the atlas positioned at couch edge; shoulders and thorax may be stabilized with a belt. T: Standing at head of couch, to the right of P's head.

Grip: The tip of T's right index finger stabilizes the ventral aspect of the left transverse process of P's atlas, preventing it from rotating to the right. The rest of T's right index finger and thumb lie along the posterior arch of P's atlas. T's left hand grips the left side of P's occiput, stabilizing P's head against T's chest and left shoulder. P's left ear should lie comfortably in the palm of T's left hand, and T's arm should be positioned to prevent uncomfortable pressure on P's mandible.

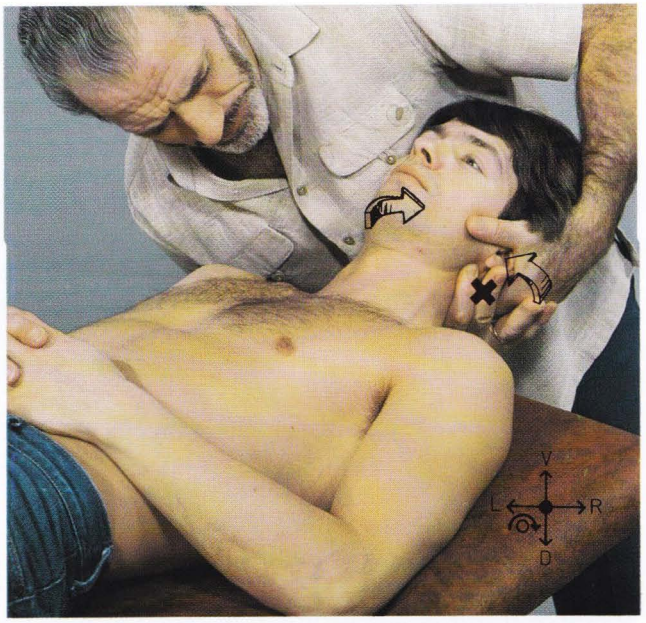


Fig. 59 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, gradually and fully *rotates to the right* and *laterally flexes* P's occiput on the atlas *to the left*. T stabilizes P's atlas from the ventral aspect with the right index finger and from the dorsal aspect with the right thumb, thus allowing the occipital condyles to glide and rotate to the right on the atlas.

Stimulation of Antagonists: T retains grip, and asks P to look upwards, to the right, and rearwards, and then move his/her head further in the direction just stretched. T resists that movement to stimulate P's antagonists.

Note: This technique (with P supine) is among the more difficult for therapists to master. Therefore, it is best to use the previous techniques, **3.8.1A** and **3.8.1B**, pp. 73 and 74, with P sitting, whenever possible, because of their simplicity and effectiveness.

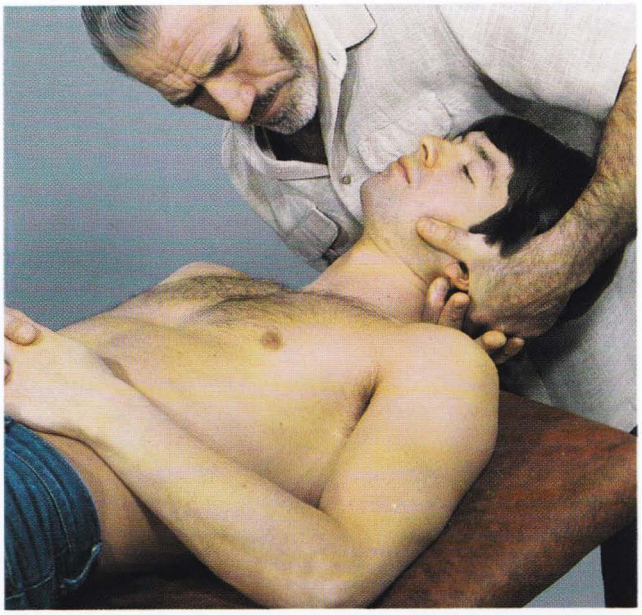
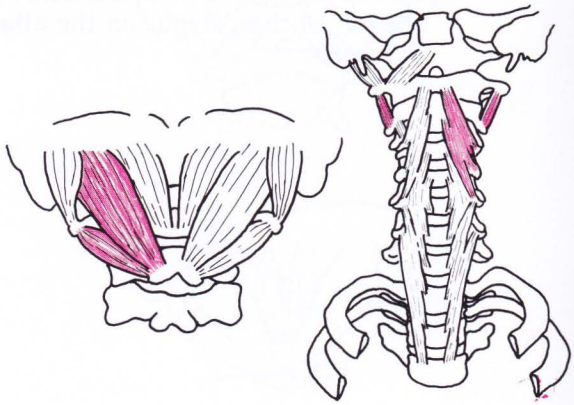


Fig. 59 b. Final Position.

3.9.1A. **Specific** technique to increase **rotation to the right** of the **atlas on the axis**
Traction technique; *P sitting*.



Starting Position: P: Sitting; right side of head supported against T's right shoulder and chest. T: Standing facing P's right side.

Grip: T's left index finger and thumb stabilize P's axis, preventing it from rotating to the right. T's right hand grips the left side of P's occiput, stabilizing P's head against T's chest and shoulder. P's left ear lies comfortably in the palm of T's right hand, and T's arm is positioned to prevent discomfort to P's mandible. T's right little finger lies along the posterior arch of P's atlas.

Procedure: (*Traction* is the *only* treatment modality of this technique. The procedure comprises two steps.) **Step one**: Using this grip, T positions P's occiput and the atlas in full *rotation to the right* (and a slight lateral flexion to the left), thus fully stretching the tissues.
Step two: Maintaining this position, T applies *traction* between P's atlas and the axis by moving his/her body together with P's head. These steps are repeated until considerable improvement is attained.

Stimulation of Antagonists: T retains grip, and asks P to look upwards, to the right, and rearwards, and then move his/her head further in the direction just stretched. T resists that movement to stimulate P's antagonists.

Notes: The transverse ligament of the atlas may be pathologically weakened. If so, it must not be strained in treating. T prevents strain by using right shoulder to push P's head dorsally, applying more force than when rotating with the right hand. This moves P's atlas dorsally. By simultaneously pressing C2 ventrally, T can press the odontoid process (dens) against the anterior arch of the atlas, preventing pressure on the transverse ligament.

Step two is the key part of the procedure, as further rotation to the right depends on **traction**. With slight lateral flexion to the left, the rotation to the right also increases, which prevents the joints from being compressed.

The atlas on the axis is the most vulnerable segment of the cervical spine.
Using this safe, gentle technique and slight, gentle forces when rotating, minimizes the risk of therapist error.

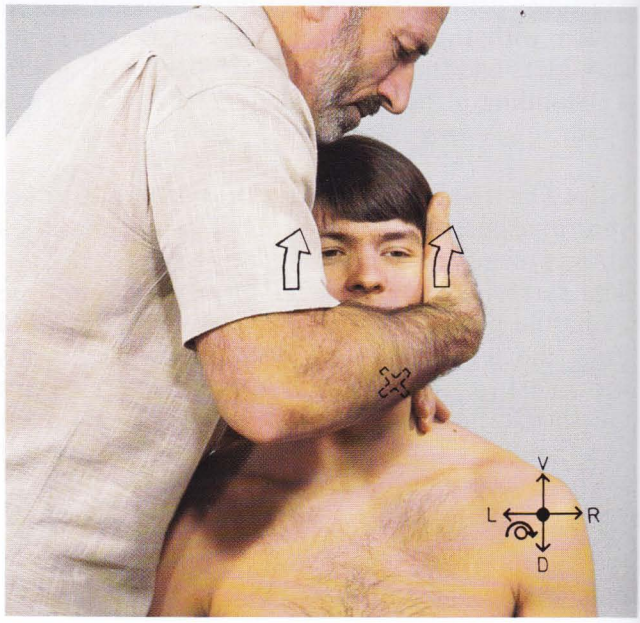


Fig. 60 a. Starting Position.

Fig. 60 b. Final Position.

3.9.1B. **Specific** technique to increase **rotation to the right** of the **atlas on the axis.**
Traction technique; *P supine.*

Starting Position: P: Supine; head beyond end of couch with the axis positioned at couch edge; shoulders and thorax may be stabilized with a belt. T: Standing at head of couch to the right of P's head.

Grip: T's right index finger and thumb stabilize P's axis, preventing it from rotating to the right. T's left hand grips the left side of P's occiput, stabilizing P's head against T's chest and abdomen. P's left ear should lie comfortably in the palm of T's left hand, with T's arm positioned to avoid discomfort to P's mandible. The radial side of T's left index finger lies along the posterior arch and transverse process on the left side of P's atlas.

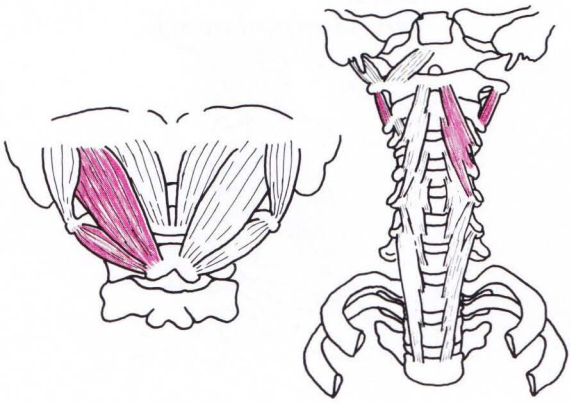
Procedure: (*Traction* is the *only* treatment modality of this technique. The procedure comprises two steps.) **Step one**: Using this grip, T positions P's occiput and the atlas in full *rotation to the right* (and a slight lateral flexion to the left), thus fully stretching the tissues.
Step two: Maintaining this position, T applies *traction* between P's atlas and the axis by moving his/her body together with P's head. These steps are repeated until considerable improvement is attained.

Stimulation of Antagonists: T retains grip, and asks P to look upwards, to the right, and rearwards, and then move his/her head further in the direction just stretched. T resists that movement to stimulate P's antagonists.

Notes: The transverse ligament of the atlas may be pathologically weakened. If so, it must not be strained in treating. T prevents strain by using left shoulder to push P's head dorsally, applying more force than when rotating with left hand. This moves P's atlas dorsally. By simultaneously pressing C2 ventrally, T can press the odontoid process (dens) against the anterior arch of the atlas, preventing pressure on the transverse ligament.

Step two is the key part of the procedure, as further rotation to the right depends on **traction**. With slight lateral flexion to the left, the rotation to the right also increases, which prevents the joints from being compressed.

The atlas on the axis is the most vulnerable segment of the cervical spine. Using this safe, gentle technique and slight, gentle forces when rotating, minimizes the risk of therapist error.



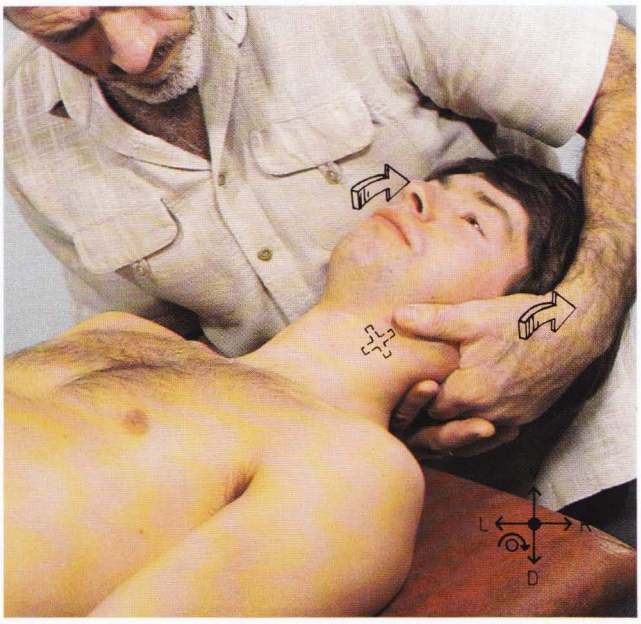
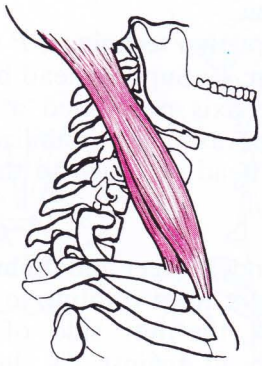


Fig. 61 a. Starting Position.

Fig. 61 b. Final Position.

3.10.1A. Therapy for the **sternocleidomastoideus.**
Very shortened muscle.



Starting Position: P: Supine; head and neck beyond end of couch; shoulders positioned at couch edge; shoulders and thorax stabilized with a belt.
T: Standing at head of couch.

Grip: T's hands grip P's head, so that P's ears lie comfortably against T's palms with T's fingers gripping P's mastoid processes.

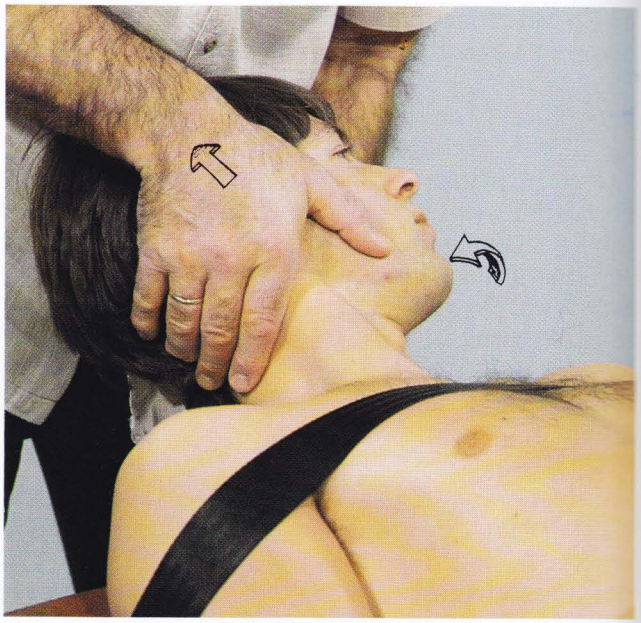


Fig. 62 a. Starting Position.

Procedure: Step one: Using this grip, T positions P's head in full ventral flexion, rotation to the left and lateral flexion to the right (or the position where P can easily feel the tension in the shortened muscle).
Step two: T applies **traction** while gradually moving P's head and neck to the neutral position.

Stimulation of Antagonists: T retains grip, and asks P to look to the right, and then move his/her head in the direction just stretched. T resists that movement to stimulate P's antagonists.
Note: T should "work" primarily with right hand.

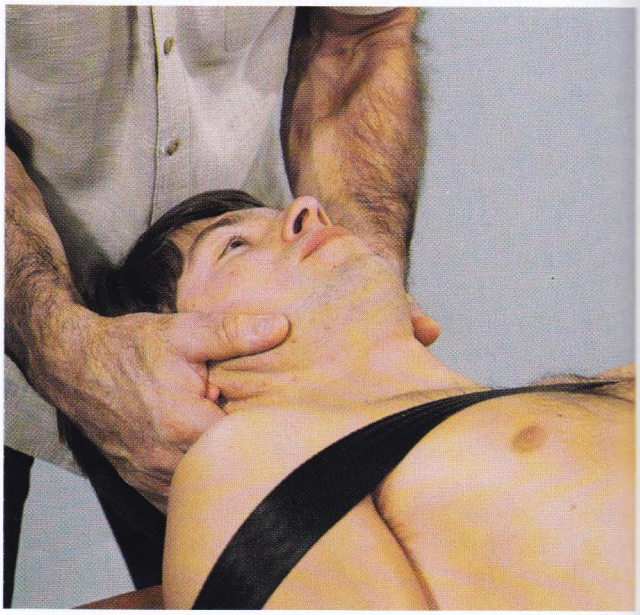
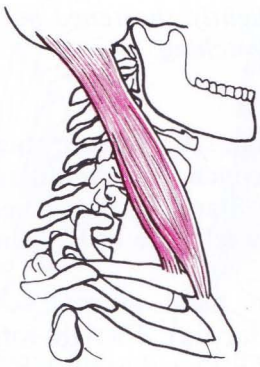


Fig. 62 b. Final Position.

3.10.1B. Therapy for the **sternocleidomastoideus.**
Moderately shortened muscle.



Starting Position: P: Supine; head and neck beyond end of couch with the shoulders positioned at couch edge; shoulders and thorax stabilized with a belt; head and neck held in the position where P can easily feel the tension in the shortened muscle. T: Standing at head of couch.

Grip: T's hands grip P's head, so that P's ears lie comfortably against T's palms with T's fingers gripping P's mastoid processes.

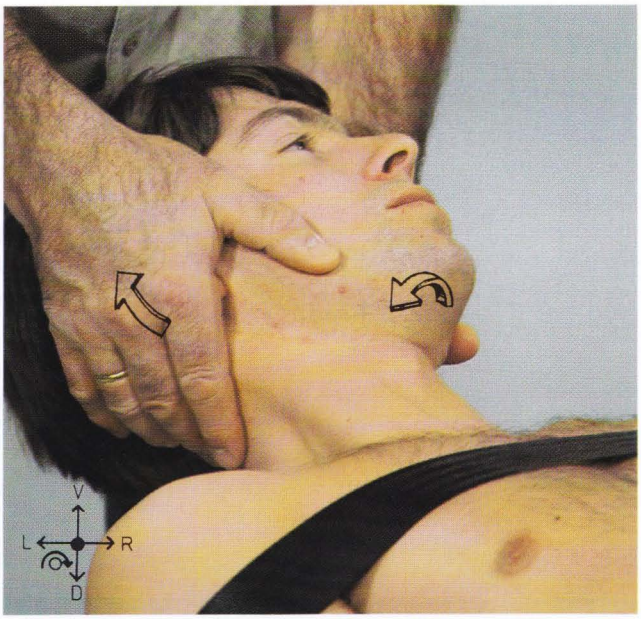


Fig. 63 a. Starting Position.

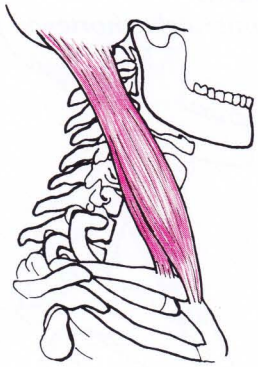
Procedure: Using this grip, T gradually *rotates to the right* and *laterally flexes* P's head *to the left* while simultaneously applying traction. (Not to the extreme position).

Stimulation of Antagonists: T retains grip, and asks P to look to the right, and then move his/her head in the direction just stretched. T resists that movement to stimulate P's antagonists.

Note: T should "work" primarily with the right hand.

Fig. 63 b. Final Position.

3.10.1C. Therapy for the **sternocleidomastoideus.**
Slightly shortened muscle. Maximal stretching.



Starting Position: P: Supine; head and neck beyond end of couch with shoulders positioned at couch edge. T: Standing at the head end of the couch facing the left side of P's head.

Grip: T's right hand grips P's chin (without pressing on the larynx). T's right forearm supports the right side of P's head against T's chest. T's left hand is placed over P's right sternoclavicular joint and manubrium sterni.

Procedure: Step one: Using this grip, T positions P's occiput and atlas in ventral and lateral flexion to the left. The rest of P's cervical spine is then positioned in dorsal flexion, lateral flexion to the left and rotation to the right.
Step two: T then asks P to exhale while he/she presses P's sternum and right clavicle caudally and dorsally. T then applies *traction* to P's cervical spine, and moves his/her body together with P's head. Step two is repeated until considerable improvement is achieved.

Stimulation of Antagonists: T moves left hand to the left side of P's occiput, with the index finger hooked on P's mastoid process. T then asks P to look to the right, rearwards, and upwards, and then move his/her head further in the direction of stretching. T resists that movement to stimulate P's antagonists.

Fig. 64 a. Starting Position.

Notes: It is important with this technique that P exhales as T stretches and inhales while resisting.

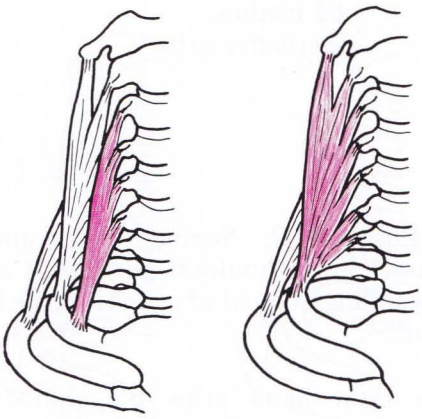
The final position may move the vertebrae into a *locked* position.
Therefore, T must cautiously use successively smaller forces and movements in approaching the final position.

Therapy for the **sternocleidomastoideus** should start with technique **3.10.1A**, p. 78, because P can easily feel which muscle is being treated. Even if P's sternocleidomastoideus is only moderately shortened, it is advisable to procede gradually from the technique of **3.10.1A** to this procedure, **3.10.1C**.

The techniques of **3.10.1** are well suited to treating congenital torticollis.

Fig. 64 b. Final Position.

3.10.2A. Therapy for the scalenus anterior and medius.



Starting Position: P: Supine; head and neck beyond end of couch with shoulders positioned at couch edge. T: Standing at head of couch facing the left side of P's head.

Grip: T's right hand grips the right side of P's head and atlas. T's right forearm supports P's head against the right side of T's chest. T's left thumb is placed just below P's clavicle with the thenar and hypothenar over P's 1st and 2nd ribs.

Procedure: Step one: Using this grip, T positions P's cervical spine in full rotation to the right while also laterally flexed to the left and slightly dorsally flexed.
Step two: T then asks P to exhale while he/she presses P's 1st and 2nd ribs caudally and dorsally. T simultaneously applies *traction* to P's cervical spine, and moves his/her body together with P's head. Step two is repeated until considerable improvement is achieved.

Stimulation of Antagonists: T moves left hand to occiput, with the index finger hooked on P's mastoid process. T then asks P to look to the right, rearwards and upwards, and press head and neck in dorsal flexion. T resists that movement to stimulate P's antagonists.

Notes: It is important that P exhales as T stretches and inhales when resisting.

The final position may move the vertebrae into a *locked* position.
Therefore, T must cautiously use successively smaller forces and movements in approaching the final position.

If the movements at the costotransverse and/or costovertebral joints are restricted, T must begin treatment by mobilizing P's 1st rib.

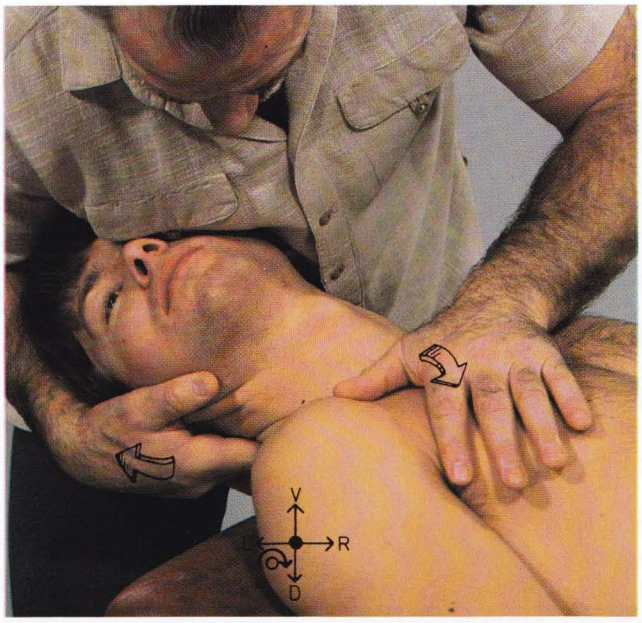
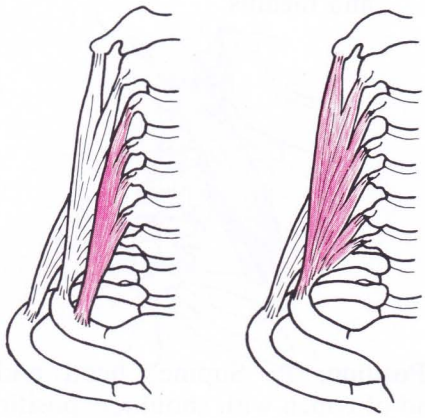


Fig. 65 a. Starting Position.

Fig. 65 b. Final Position.

3.10.2B. Therapy for the **scalenus anterior and medius.**
Alternative grip.



Starting Position: P: Supine; head and neck beyond couch end; shoulders positioned at couch edge.T: Standing at head of couch, facing left side of P's head.

Grip: T's right hand grips P's chin (without pressing on the larynx). T's right forearm supports the right side of P's head against T's chest. T's left thumb is placed just below P's clavicle with the thenar and hypothenar over P's 1st and 2nd ribs.

Procedure: Step one: Using this grip, T positions P's cervical spine in full rotation to the right while also laterally flexed to the left and slightly dorsally flexed.
Step two: T then asks P to exhale while he/she presses P's 1st and 2nd ribs caudally and dorsally. T simultaneously applies *traction* to P's cervical spine, and moves his/her body together with P's head. Step two is repeated until considerable improvement is attained.

Stimulation of Antagonists: T moves left hand to occiput, with the index finger hooked on P's mastoid process. T then asks P to look to the right, rearwards and upwards, and press head and neck in dorsal flexion. T resists that movement to stimulate P's antagonists.

Notes: It is important that P exhales as T stretches and inhales when resisting.

The final position may move the vertebrae into a *locked* position.
Therefore, T must cautiously use successively smaller forces and movements in approaching the final position.

If the movements at the costotransverse and/or costovertebral joints are restricted, T must begin treatment by mobilizing P's first rib.

The **sternocleidomastoideus** will also be fully stretched if P's occiput is positioned in ventral flexion and laterally flexed to the left.

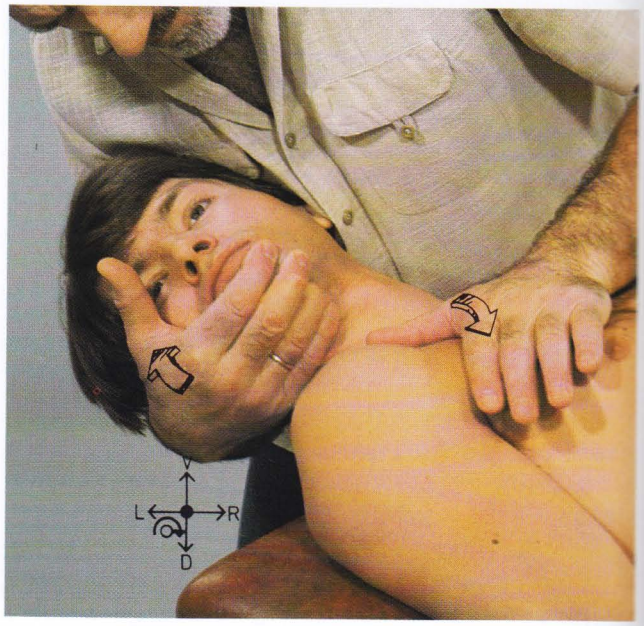


Fig. 66 a. Starting Position.

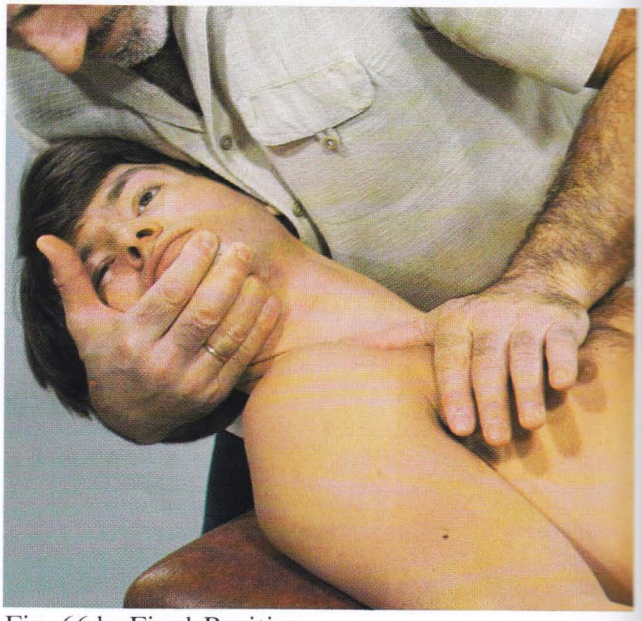
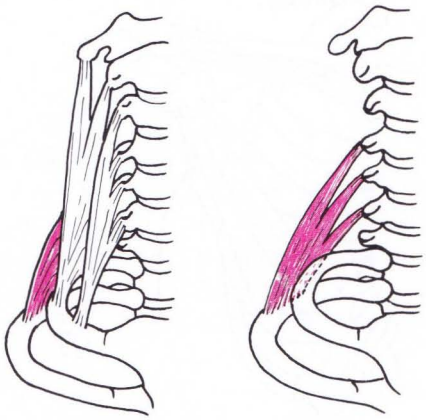


Fig. 66 b. Final Position.

3.10.3. Therapy for the **scalenus posterior**.



Starting Position: P: Supine; head and neck beyond end of the couch; shoulders and thorax stabilized with a belt. T: Standing at head of couch.

Grip: T's right hand grips P's occiput and upper cervical spine (including the C3 vertebra), with the right wrist and forearm supporting P's head. T's left hand grips P's chin (without pressing on the larynx).

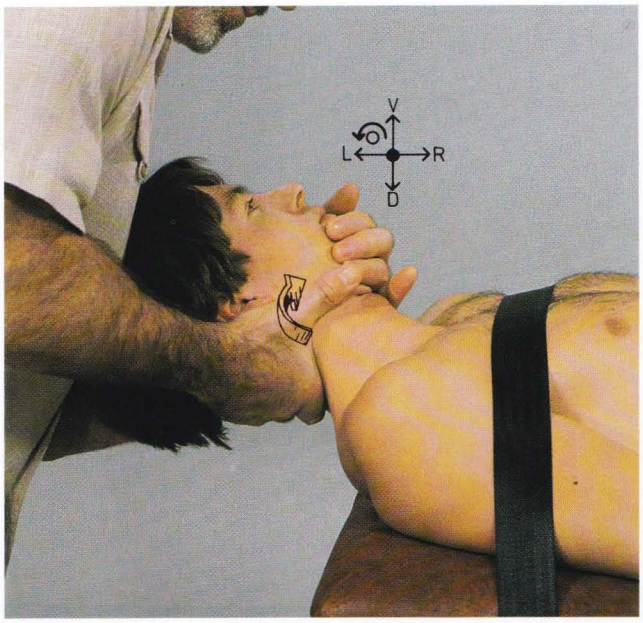


Fig. 67 a. Starting Position.

Procedure: Using this grip, T applies traction, and then maintaining this traction, moves his/her body to gradually and fully *ventrally flex* while *rotating* and *laterally flexing* P's cervical spine *to the left*.

Stimulation of Antagonists: T retains grip, and asks P to look downwards and to the left, and then to move head and neck in the direction just stretched. T resists that movement to stimulate P's antagonists.

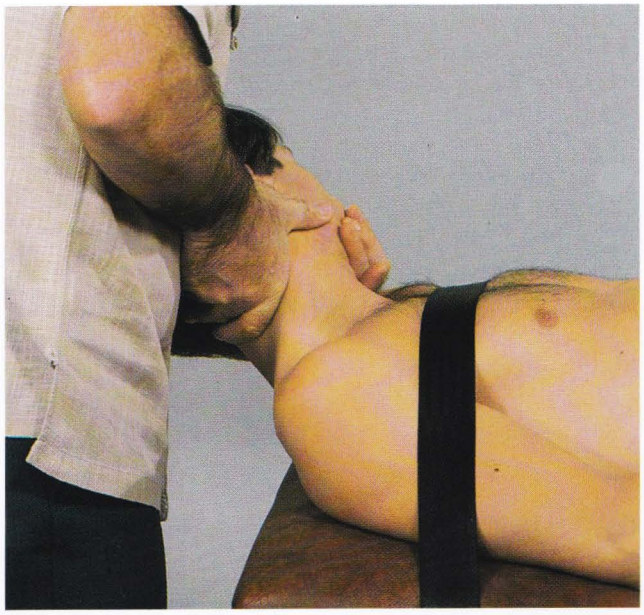
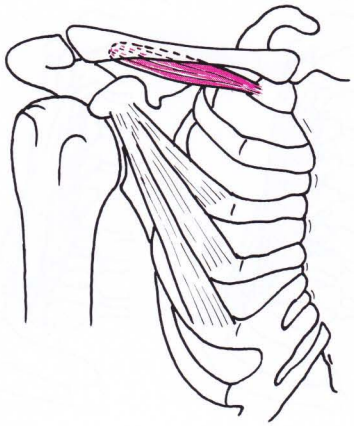


Fig. 67 b. Final Position.

3.10.4A. Therapy for the **subclavius.**
P sitting.



Starting Position: P: Sitting or standing; right upper arm held against side of thorax with elbow flexed. T: Standing slightly behind P, facing P's right side.

Grip: T's right hand grips P's right forearm just below the elbow. T's left hand and forearm support P's left shoulder. P's left side may also be supported against a wall with T using both hands to grip P's right elbow.

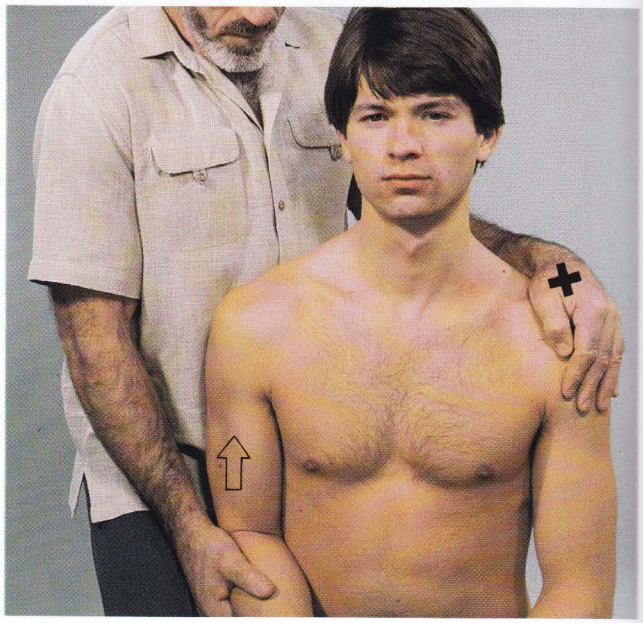


Fig. 68 a. Starting Position.

Procedure: Using this grip, T then asks P to exhale (which lowers the ribs) while gradually and fully *elevating* P's shoulder girdle *cranially* by pulling up against the right elbow.

Stimulation of Antagonists: T moves left hand to P's right shoulder and asks P to lift the shoulder maximally. T resists P's lifting of the shoulder to stimulate the antagonists.

Note: For alternative technique, see **Volume I** (therapy **2.2.7**, p. 28).

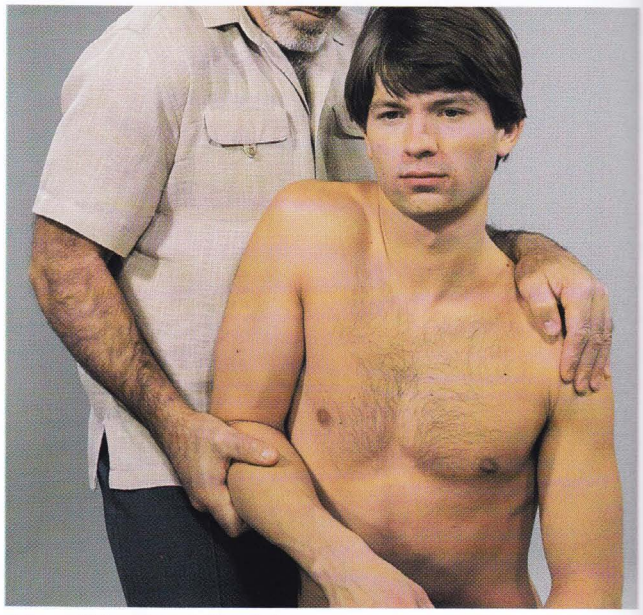
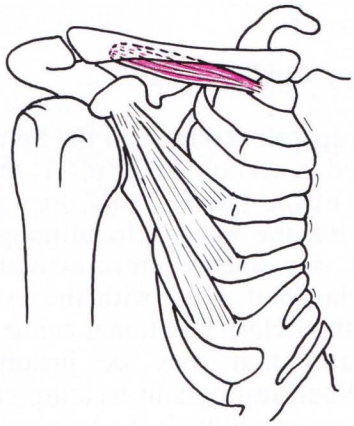


Fig. 68 b. Final Position.

3.10.4B. Therapy for the **subclavius.**
P lying on side.



Starting Position: P: lying on left side; right upper arm held against side of thorax with elbow flexed. T: Standing behind P, facing oblique towards P's head.

Grip: T's right hand grips P's right elbow. T's left hand grips P's right shoulder with the left forearm supporting the dorsal aspect of P's thorax.

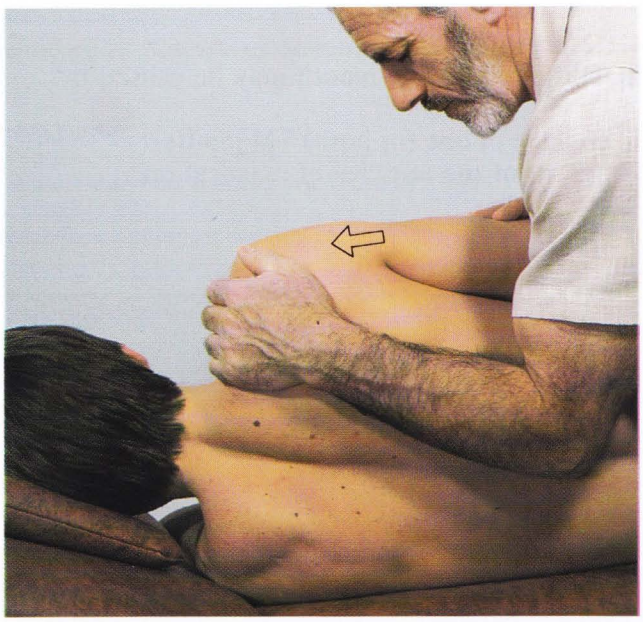


Fig. 69 a. Starting Position.

Procedure: Using this grip, T then asks P to exhale (thus lowering the ribs) while he/she gradually and fully *pushes* P's shoulder girdle *cranially* at the elbow.

Stimulation of Antagonists: T retains grip and asks P to lift the shoulder maximally in the direction just stretched. T resists that movement to stimulate P's antagonists.

Note: For alternative technique, see **Volume I** (therapy **2.2.7**, p. 28).

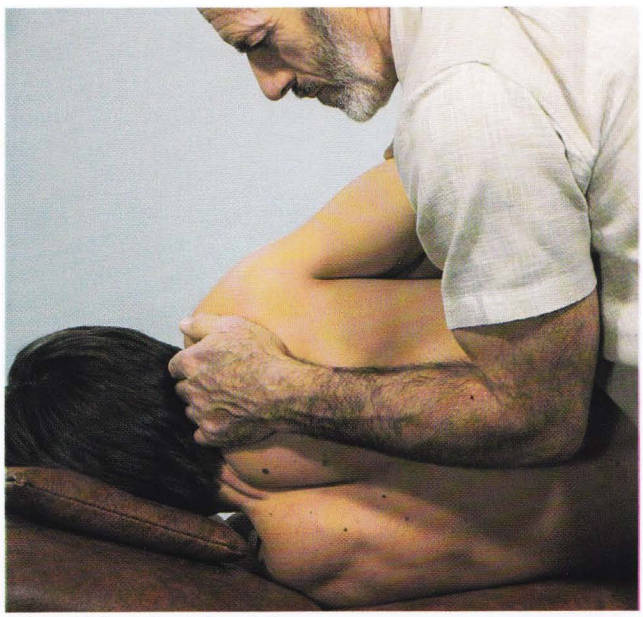


Fig. 69 b. Final Position.

4. THE TEMPORO-MANDIBULAR (TM) JOINTS

4.1. Therapy Guide

4.1.1. Therapeutic Relation to the Spine

As discussed in section **1.8.1**, p. 11, the commonplace view of the human body does not connect the jaw with the spine. So although from an anatomical view the temporo-mandibular joints might be classified along with the extremities in **Volume I**, their close functional connection to the spine dictates that they be included in this Volume. When testing and treating patients with symptoms associated with the head and neck, the temporo-mandibular joints and the spine should be regarded as therapeutically closely related.

4.1.2. Dysfunction

Inability to open the mouth may be caused by:

1. *Locking* of one (or both) TM-joint(s).
2. Spasm of the muscles of mastication.

Deviation to one side of the mandible on opening the mouth may have several causes, such as:

1. Reduced glide on the side of deviation due to joint hypomobility or shortened structures.
2. Paralysis of the muscles responsible for opening and protruding the mandible on the same side.
3. Hypermobility of the opposite side.

If examination shows that the restriction of movement is due to shortened muscles (or other structures), then the therapeutic treatments of this Section may be used.

4.1.3. Restrictions, Muscles and Therapies

The therapy techniques for treating restrictions of the temporo-mandibular joints are listed in Table 4-1. The actions of the muscles which may cause those restrictions are listed in Table 4-2. The various restrictions possible are listed in Movement Restriction Table 8-2, p. 144.

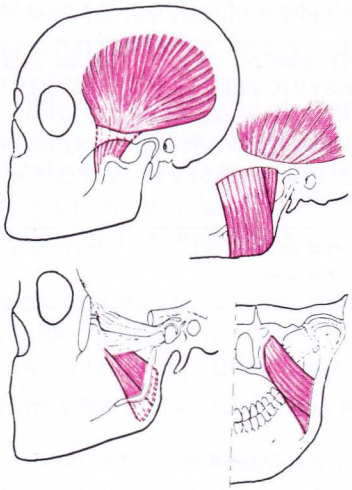
Table 4-1. Restrictions of the Temporo-Mandibular Joint

SECTION	MOVEMENT RESTRICTED	MUSCLES WHICH MAY RESTRICT MOTION	TECHNIQUE/THERAPY	Number, Page
4.2.	*opening of mouth and protrusion of mandible*	pterygoideus medialis, masseter, temporalis	for *ventral glide* for *side-to-side glide* for *ventral, caudal movement*	**4.2.1**, 88 **4.2.2**, 89 **4.2.3**, 90-91
4.3.	*dorsal movement (retraction)*	pterygoideus lateralis	for *dorsal movement* for *dorsal and caudal movement*	**4.3.1**, 92 **4.3.2**, 93

Table 4-2. Actions of muscles which may restrict movement of the temporo-mandibular joints.

MUSCLE	ACTION
masseter	Lifts mandible so mouth closes and teeth press together. Has a very minor effect on lateral glide, protraction and retraction.
temporalis	Lifts mandible so mouth closes and teeth press together. Aids side-to-side movements of mastication. Anterior fibres: Pull cranially. Posterior fibres: Pull dorsally (from a protruded position).
pterygoideus lateralis	Assists in opening the mouth by pulling the mandible and the articular disc ventrally.
pterygoideus medialis	Assists in closing the mouth by lifting the mandible and pulling it dorsally.

4.2.1. Specific technique to increase **ventral glide** of the **mandible** (*protrusion*). *Inability to open the mouth.*



Starting Position: P: Sitting or supine. T: Standing facing P's left side.

Grip: T's right forearm and hand grip P's head from behind, fingers against P's forehead. T stabilizes P's head between his/her right hand, arm and chest. T's left hand lies along P's mandible from the right side with fingers behind the angle of the jaw (ramus mandibulae).

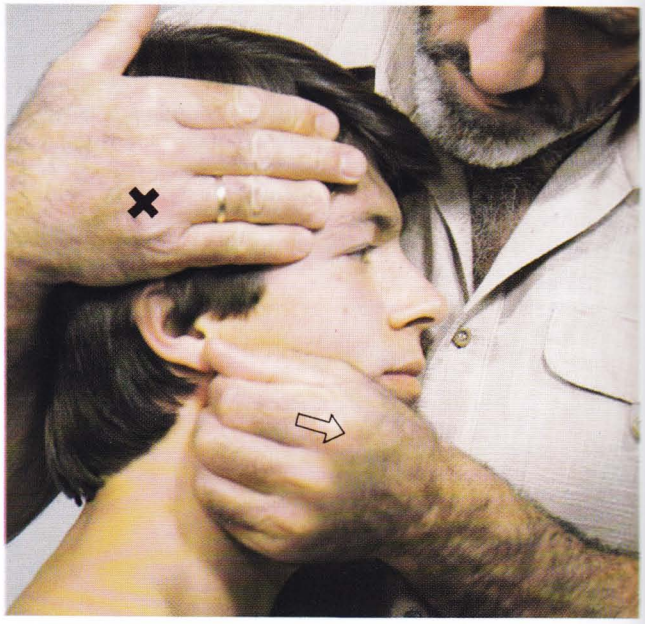


Fig. 70 a. Starting Position.

Procedure: Using this grip, T gradually and maximally *pulls ventrally* against P's mandible to produce a ventral glide at the TM-joint.

Stimulation of Antagonists: T retains right-hand grip and reverses left-hand grip (to left side of P's chin). T then asks P to look to the left and then move his/her mandible further in the direction just stretched. T resists that movement to stimulate P's antagonists.

Notes: During this procedure P's mandible should be completely relaxed and P should not attempt to open mouth.

If the restriction of movement is bilateral, the same treatment may be performed on P's opposite side.

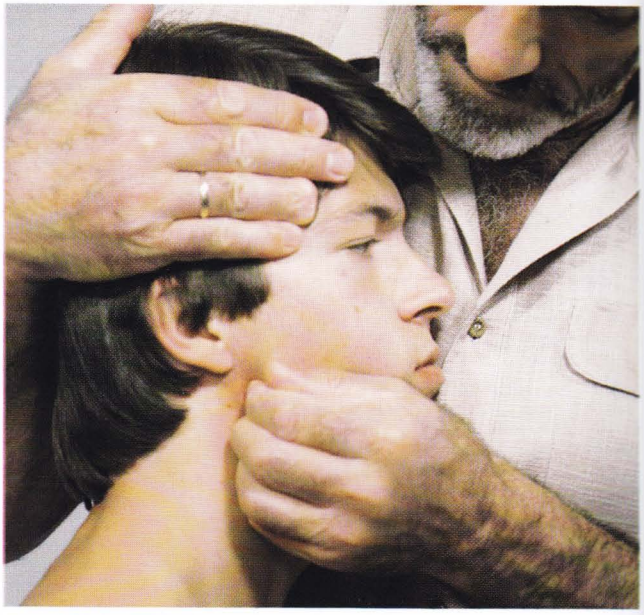
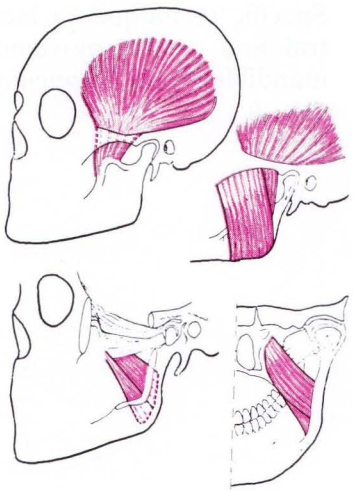


Fig. 70 b. Final Position.

4.2.2. Specific technique to increase **side-to-side glide** of the **mandible.** *Inability to open the mouth.*



Starting Position: P: Sitting or supine. T: Standing oblique behind P to P's right.

Grip: T's left forearm and hand grip P's head, hand against P's forehead. T stabilizes P's head between his/her left hand, arm and chest. T's right hand is under P's right zygomatic arch with T's thenar eminence on the ramus of P's mandible.

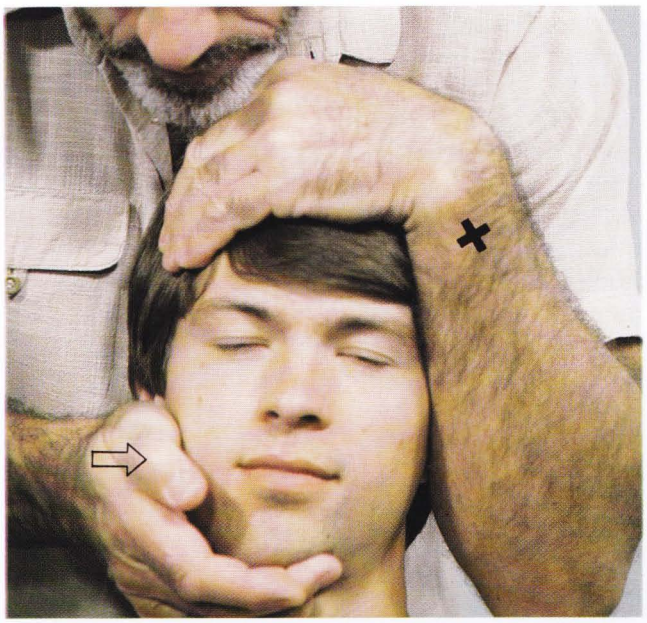


Fig. 71 a. Starting Position.

Procedure: Using this grip, T gradually and fully pushes medially to move the right head of P's mandible medially (inwards) at the TM joint.

Stimulation of Antagonists: T reverses grip, interchanging relative positions of right and left hands, and then asks P to look to the left and move the mandible to the left. T resists that movement to stimulate P's antagonists.

Notes: During this procedure, the **left head** of P's mandible is moved laterally (outwards).

To mobilize the mandible in the opposite direction, this treatment may be repeated on P's opposite side.

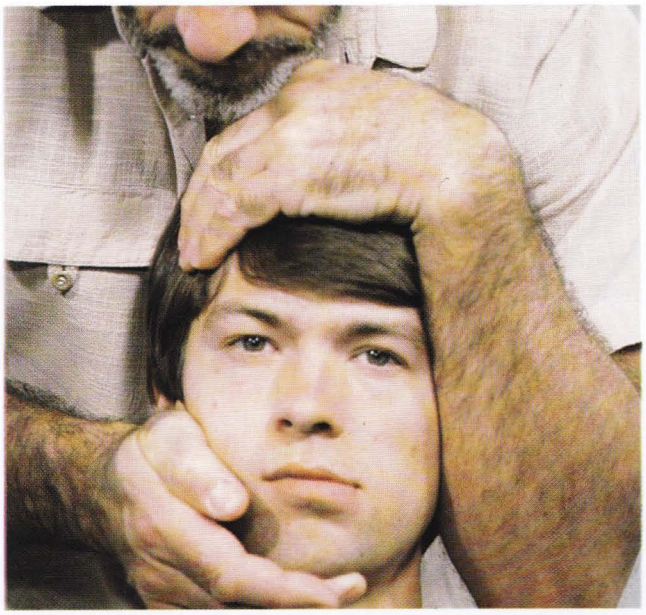
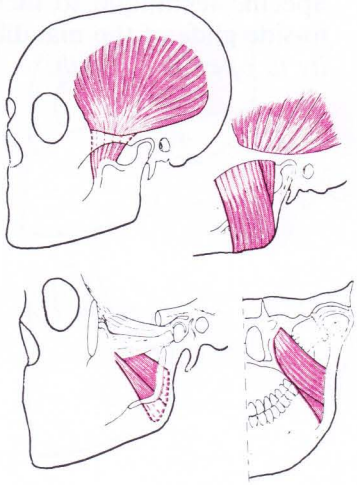


Fig. 71 b. Final Position.

4.2.3 A. Specific technique to increase **ventral and caudal** movement of the **mandible.** *Slight opening of the mouth.*



Starting Position: P: Sitting or supine. T: Standing facing P's left side.

Grip: T's right forearm and hand grip P's head from behind, fingers against P's forehead. T stabilizes P's head between his/her right hand, arm and chest. With medical gloved hand, T's left thumb is placed on P's lower molars on the right side, as far back in the mouth as possible. T's index and middle fingers grip the angle of P's mandible on the right side with the ring and/or little fingers held under P's mandible (depending on the size of T's hand and P's mandible).

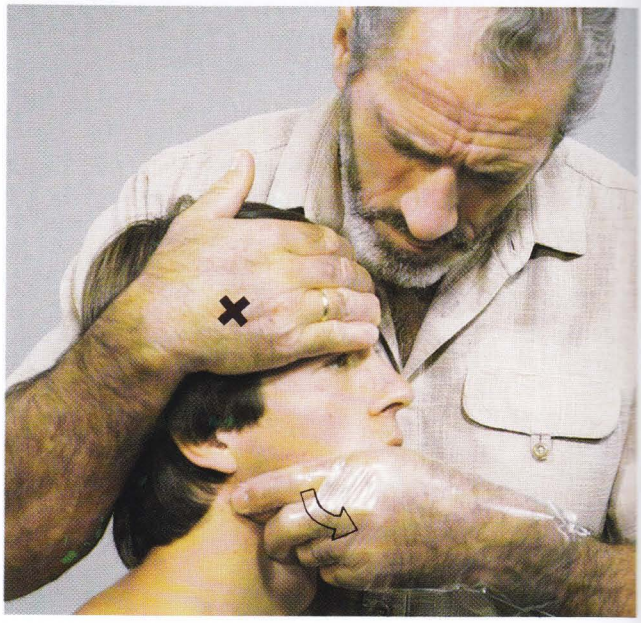


Fig. 72 a. Starting Position.

Procedure: Using this grip, T applies light traction *caudally* to P's right TM-joint by pressing his/her thumb caudally against the lower molars while gradually and maximally *pulling ventrally* to produce a ventral glide of the right head of the mandible at the TM joint.

Stimulation of Antagonists: T retains grip with right hand and places left hand on the left side of P's chin and asks P to look to the left and downwards and then move his/her mandible caudally and to the left (in the direction of stretching). T resists that movement to stimulate P's antagonists.

Note: If the restriction of movement is bilateral, the same treatment may be performed on P's opposite side.

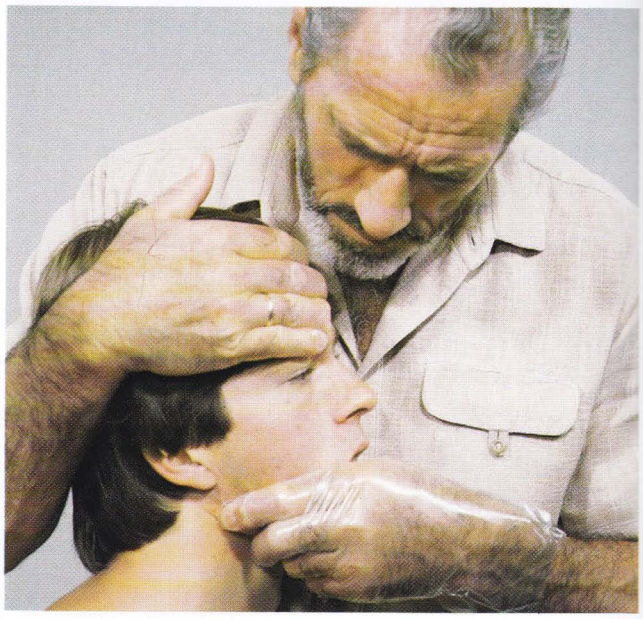
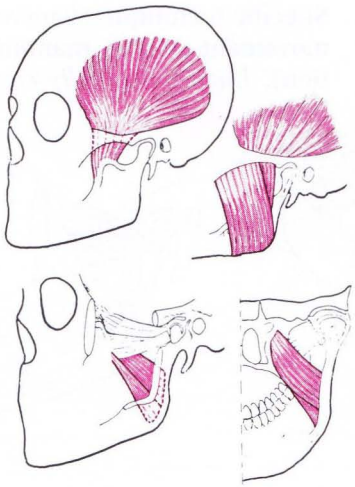


Fig. 72 b. Final Position.

4.2.3B. Specific technique to increase **ventral and caudal** movement of the **mandible.** *Inability to fully open the mouth.*



Starting Position: P: Sitting or supine. T: Standing facing P's left side.

Grip: T's right forearm and hand grip P's head from behind, fingers against P's forehead. T stabilizes P's head between his/her right hand, arm and chest. With medical gloved hand, T's left thumb is placed on P's lower molars on the right side, as far back in the mouth as possible. T's index and middle fingers grip the angle of P's mandible on the right side with the ring and little fingers held under P's mandible (depending on the size of T's hand and P's mandible).

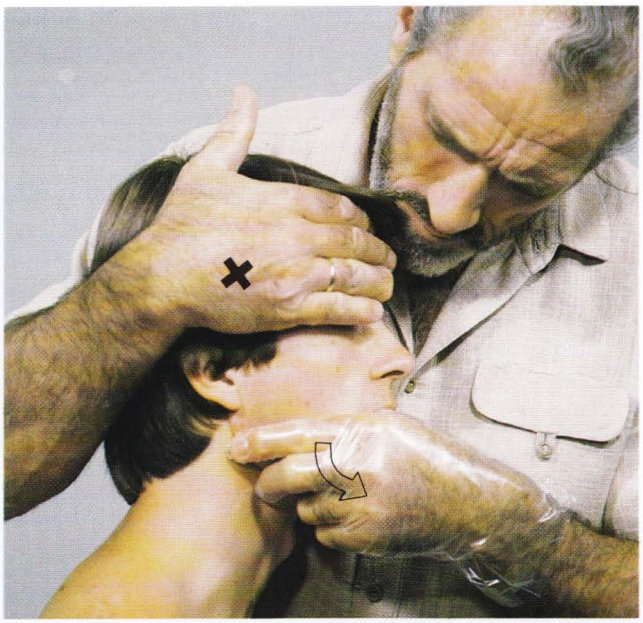


Fig. 73 a. Starting Position.

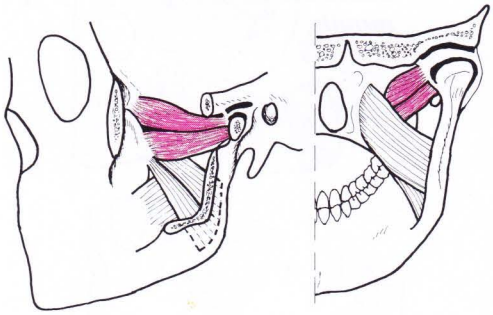
Procedure: Using this grip, P opens his/her mouth as much as possible and relaxes. With P's mandible in this position, T applies light traction *caudally* to P's right TM-joint by pressing his/her thumb caudally against the lower molars while gradually and maximally *pulling ventrally* to produce ventral glide of the right head of the mandible at the TM joint.

Stimulation of Antagonists: T retains grip with right hand and places left hand on the left side of P's chin and asks P to look to the left and downwards and then move his/her mandible caudally and to the left (in the direction of stretching). T resists that movement to stimulate P's antagonists.

Note: The procedure must be performed gradually. T combines caudal traction with a ventral glide. When T, in this position, produces ventral glide of P's mandible, P is again asked to open his/her mouth as much as possible. The procedure is then repeated until P is able to fully open his/her mouth or considerable improvement is attained.

Fig. 73 b. Final Position.

4.3.1. Specific technique to increase **dorsal movement** of the **mandible (retraction).** *Inability to fully close mouth.*



Starting Position: P: Sitting or supine. T: Standing facing P's left side.

Grip: T's right forearm and hand grip P's head from behind, fingers against P's forehead. T stabilizes P's head between his/her right hand, arm and chest. T's left hand holds P's chin.

Fig. 74 a. Starting Position.

Procedure: Using this grip, T gradually and maximally *pushes dorsally* against P's mandible to produce a dorsal glide of the head of the mandible at the TM-joint.

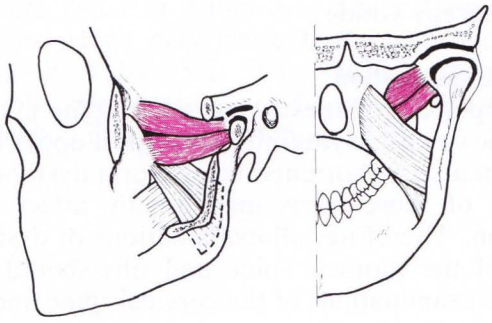
Stimulation of Antagonists: If P cannot fully close his/her mouth, T's left hand is placed over P's right mandible, fingers behind the angle. T then asks P to look to the right and move mandible to the right (in the direction of stretching). T resists that movement to stimulate P's antagonists.

Notes: During the procedure, P's mandible should be completely relaxed and P should not attempt to open his/her mouth.

If the restriction of movement is bilateral, the same treatment may be performed on P's opposite side.

Fig. 74 b. Final Position.

4.3.2. Specific technique to increase **dorsal and caudal movement** of the **mandible.** *Inability to close the mouth.*



Starting Position: P: Sitting or supine. T: Standing facing P's left side.

Grip: T's right forearm and hand grip P's head from behind, fingers against P's forehead. T stabilizes P's head between his/her right hand, arm and chest. With medical gloved hand, T's left thumb is placed on P's lower molars on the right side, as far back in the mouth as possible. T's index and middle fingers grip the angle of P's mandible on the right side with the ring and/or little fingers held under P's mandible (depending on the size of T's hand and P's mandible).

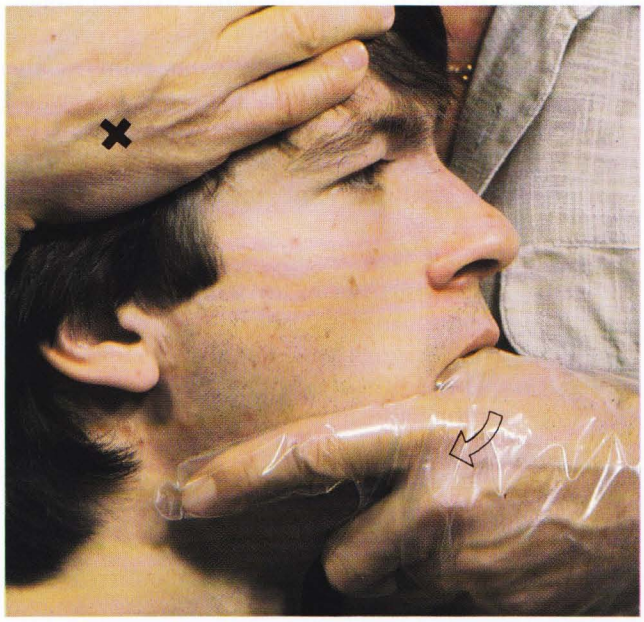


Fig. 75 a. Starting Position.

Procedure: Using this grip, P closes his/her mouth almost as much as possible and relaxes. With P's mandible in this position, T gradually and maximally *pushes caudally* and *dorsally* by pressing his/her thumb caudally and dorsally against the lower molars of P's mandible on the right side to produce a dorsal glide of the head of the mandible at the TM joint.

Stimulation of Antagonists: T retains grip and asks P to look to the right and then move the mandible to the right and rearwards. T resists that movement to stimulate P's antagonists.

Notes: If the restriction of movement is bilateral, the same treatment may be performed on P's opposite side.

The procedure is used when P cannot close his/her mouth. It may also be tried when P cannot fully open his/her mouth, and when the previous technique, **4.3.1**, p.92, is ineffective.

Fig. 75 b. Final Position.

5. THE THORACIC SPINE AND RIBS (T1 on T2 through T12 on L1)

5.1. Therapy Guide

5.1.1. Examination

The upper extremities, the cervical spine and the thoracic spine and ribs interact in most upper body movements. A shortened muscle or a dysfunction in any of these areas may greatly affect total function. Therefore, all examinations of dysfunctions of the thoracic spine and ribs should also include examinations of the cervical spine and the upper extremities.

Pain and/or reduced mobility in the thoracic spine may be a **secondary** symptom of internal organ pathology or malfunction, which may cause changes in the skin, subcutaneus tissue, fasciae, muscles and tendons or joints. For example, a healed pleurisy may cause residual pain in the thorax or thoracic spine with hyperaesthesia and reduced mobility in the relevant segments. This pain may disappear when the mobility of the thoracic spine and ribs is normalized.

5.1.2. Treatment Guidelines

Caution is the watchword in treating the spine. Therefore, in treating any restriction, *perform the non-specific techniques first*. Perform specific techniques only if the non-specific techniques elicit no contraindications to further therapy.

The therapist may instruct or direct patient eye movements and respiration to aid therapy.

Eye movements evoke reflex responses, such as "leading" movements of the head. Directing eye movement then gives the therapist control over patient head movement.

Respiration: Normal breathing, particularly exhaling, promotes relaxation, while inhaling or holding the breath are often naturally evoked when producing muscular force. Therefore, instructing the patient to *exhale* aids relaxation during stretching, while *breathing normally* promotes relaxation during sustained stretching (two minutes or more). *Inhaling* helps the patient contract against the therapist's resistance, such as during the stimulation of antagonists phase of treatment.

Many of the following therapy techniques for treating the thoracic spine and ribs may be performed with the patient either sitting or lying on the couch. The choice between the two alternative treatment positions depends both on comfort and convenience for both the patient and the therapist.

For example, some patients may not be able to tolerate a sitting position when being treated, and therefore must be treated lying down. Likewise, a smaller therapist may find treatment of a large patient in a prone or supine position to be far easier than the equivalent treatment of a sitting patient.

5.1.3. Movement Patterns and *Locking*

Movement patterns and *locking* are discussed in Part 2, pp. 14-25. The following is a short summary review for the thoracic spine and ribs.

First, although the thoracic spine and its mobile segments are anatomically well defined (in the cranial to caudal direction, as starting at T1 on T2 and ending with the T12 on L1 segment), the therapeutic definition is not so rigid. In many cases, the transition from typical cervical spine segment behavior to typical thoracic spine segment behavior is not abrupt at the C7-T1 segment, but rather more gradual. This means that cervical spine may extend caudally into the upper thoracic spine. So therapeutically the *upper thoracic spine* should always be regarded as possibly behaving as if it were a part of the *cervical spine*. Whenever "cervical behavior" is noted in the upper thorac spine, it must be treated accordingly.

As can be seen from the schematic representation of Fig. 7, p. 18, in ventral flexion the cervical and thoracic spines behave similarly. However, in dorsal flexion, they differ. The movement pattern of the thoracic spine is mirror symmetric with respect to a coronal plane. That is, in ventral flexion, lateral flexion and rotation to the *same* side are "physiological" movements, while in dorsal flexion, lateral flexion and rotation to *opposite* sides are "physiological." The pattern for "physiological" movement in dorsal flexion appears to be the mirror image of the pattern in ventral flexion.

Segments adjacent to those treated should be stabilized so they do not follow the movement induced to effect treatment. Stabilization always requires *inflection*, or changes of flexion, either in the sagittal or the frontal planes. Basic stabilization of the thoracic spine involves changing flexion from ventral to dorsal or vice versa. For instance, treatment of a segment in ventral flexion is most effective if its adjacent (superior or inferior) segments are placed in dorsal flexion.

However, when rotation and/or lateral flexion are restricted in ventral or dorsal flexion, it is possible and necessary to *lock* the segments above and/or below more securely than is possible by inflection in the sagittal plane alone. *Locking* is then attained by changing flexion and/or rotation in the frontal plane. This type of *locking*, most often used in non-specific techniques, involves retaining ventral/dorsal flexion but changing to the *opposite* lateral flexion and rotation to effect the *lock*. End feel indicates when *locking* is

attained. It may be necessary to stretch the muscles and other structures in order to *lock* the segments. *Movement must not be forced beyond that necessary to attain the desired fixation by locking.*

Double locking, cranial to and caudal to the segment treated is possible throughout the thoracic spine, and always involves inflections in both the sagittal and frontal planes. As discussed in Part 2, p. 23, there must be only *one inflection per locking*. So one of the two inflections required for *double locking* will involve a change from ventral to dorsal flexion, and the other inflection will involve a change from right to left lateral flexion. This is equivalent to the requirement that the segment treated must "receive" the flexions of the treatment from its adjacent *locked* segments, ventral/dorsal flexion from one direction and right/left lateral flexion from the other direction.

5.1.4. Restrictions, Muscles and Therapies

The non-specific and specific therapy techniques for treating restrictions of the thoracic spine and ribs are listed in Table 5-1. The actions of the muscles which may cause those restrictions are listed in Table 5-2. The various restrictions possible are listed in Movement Restriction Tables 8-3 and 8-4, pp. 145 and 146.

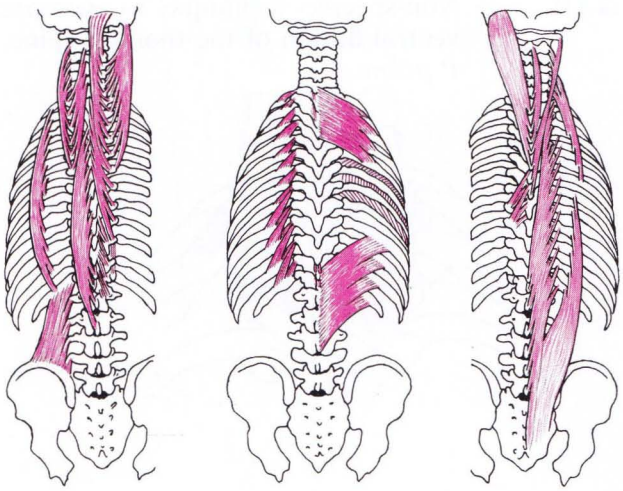
Table 5-1. Restrictions of the Thoracic Spine and Ribs

SECTION	MOVEMENT RESTRICTED	MUSCLES WHICH MAY RESTRICT MOTION	TECHNIQUE/THERAPY	Number, Page
5.2.	*Ventral Flexion*	Most on dorsal side of thoracic spine, as well as stiffness in rib cage and spine itself	non-specific	**5.2.1**, 97-98
			specific, T1 on T2	**5.2.2**, 99-100
5.3.	*Ventral flexion with lateral flexion and rotation to same side*	Most of torso, as well as stiffness in rib cage and spine itself	nonspecific	**5.3.1**, 101-102
			specific, T1-T2 to T12-L1	**5.3.2**, 103-104
5.4.	*Dorsal Flexion*	Most on ventral side of thoracic spine, as well as stiffness in rib cage and spine itself	non-specific	**5.4.1**, 105-108
			specific, T1-T2 to T12-L1	**5.4.2**, 109-110
5.5.	*Dorsal flexion with lateral flexion and rotation to opposite sides*	Most of torso, as well as stiffness in rib cage and spine itself	non-specific	**5.5.1**, 111-112
			specific, T1-T2 to T12-L1	**5.5.2**, 113-115
5.6.	*Rib mobility*	Most between ribs and around thorax, and those associated with upper arm, as well as stiffness in rib cage and spine itself	specific, 2nd to 5th ribs	**5.6.1**, 116
			specific, 5th to 12th ribs	**5.6.2**, 117

Table 5-2. Actions of muscles which may restrict movement of the thoracic spine and ribs

MUSCLE	ACTION
Abdominals; external & internal oblique	Move upper body with respect to pelvis and vice versa; tense abdominal wall; compress abdominal viscera.
iliocostalis thoracis longissimus thoracis spinalis thoracis semispinalis thoracis	Dorsal flex, laterally flex, rotate, and stabilize the spine.
intertransversarii	Laterally flex and rotate spine to the same side.
interspinales	Dorsal flex spine.
rotatores	Dorsal flex and rotate spine to opposite side.
multifidi	Dorsal flex and rotate spine to opposite side.
diaphragma	Principal muscle of respiration; increases thoracic cavity volume.
scalenus anterior, medius	Raise 1st rib; ventral flex and laterally flex to same side, rotate neck to opposite side.
scalenus posterior	Raises 2nd rib; laterally flexes neck to same side.
subclavius	Depresses and stabilizes clavicle during movements of shoulder; lifts 1st rib.
intercostales interni	Draw ribs together.
intercostales externi	Draw ribs together; elevate rib cage; increase thoracic cavity size.
sternocleidomastoideus	Ventral flexes, laterally flexes to same side, rotates cervical spine to opposite side, elevates chin.
levatores costarum	Raise ribs to increase thoracic capacity.
serratus posterior superior	Raises ribs in inspiration.
serratus posterior inferior	Lowers ribs in expiration.
transversus abdominis	Supports and compresses abdominal viscera.
rectus abdominis	Flexes thoracic and lumbar spine; supports abdominal wall.
quadratus lumborum	Laterally flexes to the same side, aids forced expiration.
latissimus dorsi	Extends, adducts and medially rotates at shoulder; depresses shoulder girdle.
longus colli	Ventral flexes, laterally flexes and rotates to the same side.

5.2.1A. Non-specific technique increase **ventral flexion.** *P sitting.*



Starting Position: P: Sitting; lumbar spine and abdomen (up to ribs) stabilized against a support; hands clasped on nape of neck, reaching as far down the thorax as possible (In some cases it may be more convenient for P not to clasp hands, but rather place his/her fingers parallel to the spine to obtain a better grip and avoid straining the neck). T: Standing facing P's right side.

Grip: T's right hand is placed over P's elbows and forearms. T's left hand stabilizes P's L1-L2 segment.

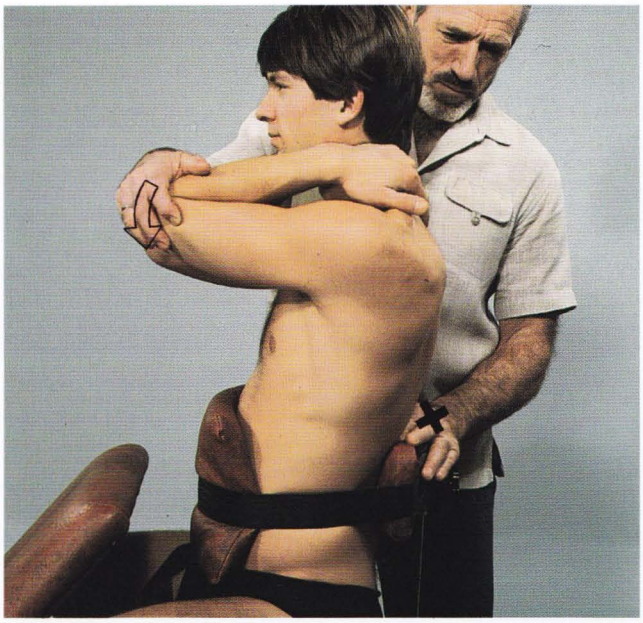


Fig. 76 a. Starting Position.

Procedure: Using this grip, T asks P to exhale and gradually and fully *ventrally flexes* P's thoracic spine.

Stimulation of Antagonists: T reverses (or if strong enough, maintains) grip and asks P to look down and bend forward in the direction of stretching. T resists that movement to stimulate P's antagonists.

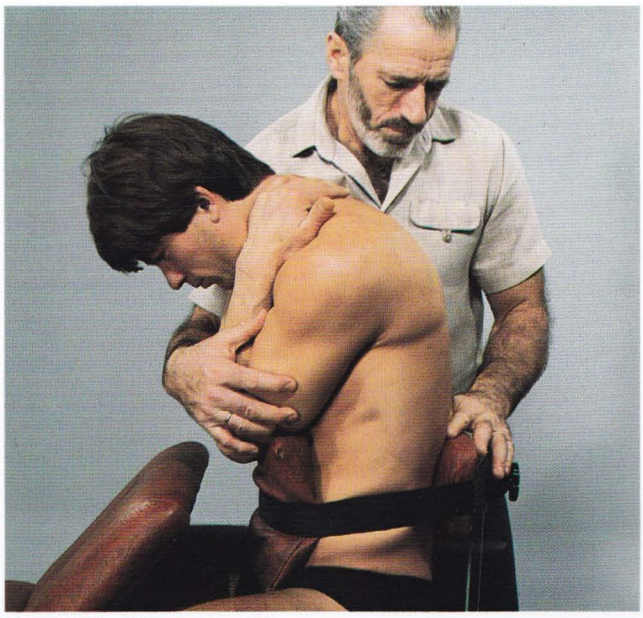
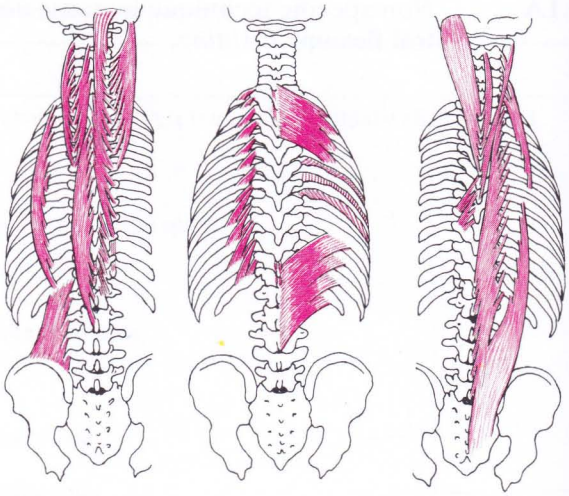


Fig. 76 b. Final Position.

5.2.1B. Non-specific technique to increase **ventral flexion** of the **thoracic spine.** *P prone.*



Starting Position: P: Prone; head of couch lowered (if couch is not articulated, P's head and shoulders may be positioned over the couch end); arms along sides; cushion under abdomen; lumbar region stabilized with a belt. T: Standing facing P's right side.

Grip: T's right hand is placed over P's T1 and T2 vertebrae. T's left hand stabilizes P's L1-L2 segment.

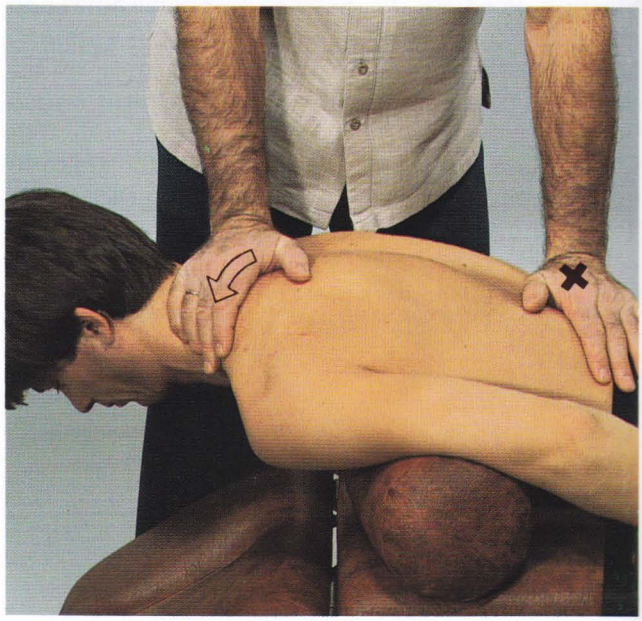


Fig. 77 a. Starting Position.

Procedure: Using this grip, T asks P to exhale and gradually and fully *ventrally flexes* P's thoracic spine by pressing ventrally and cranially with his/her right hand.

Stimulation of Antagonists: T moves right hand to under P's sternum and asks P to look down and bend forward in the direction of stretching. T resists that movement to stimulate P's antagonists.

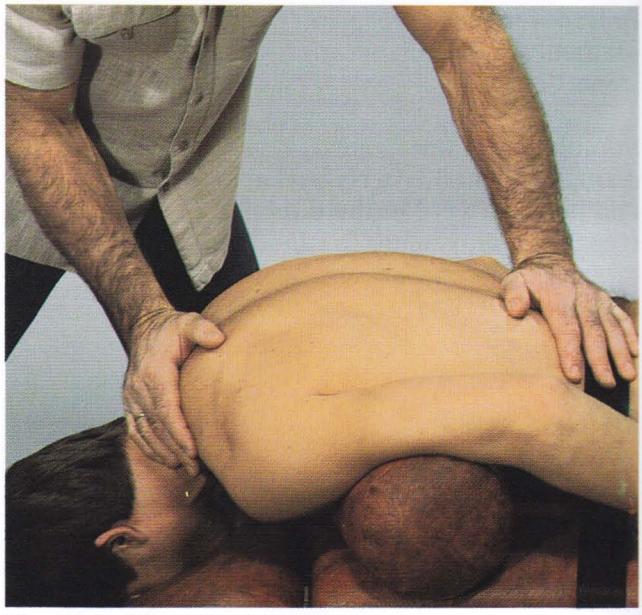
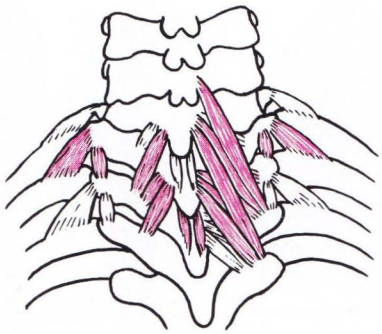


Fig. 77 b. Final Position.

5.2.2A. Specific technique to increase **ventral flexion** of **T1 on T2.** *P supine.*



Starting Position: P: Supine; hips and knees flexed; right heel resting on left knee with left foot against the raised foot of the couch; (this position flattens P's lumbar lordosis); hands clasped on nape of neck (or folded across chest) to stabilize cervical spine; wedge-shaped support stabilizes the caudal vertebrae of the segment treated (here T2). T: Standing facing P's left side.

Grip: T's left hand grips P's elbows and adjusts the specific segment with small "rocking" movements (moving P's elbows cranially and caudally) so that the force is directed at the cranial vertebra (here T1). T's right index finger palpates the movement between the spinous processes. (If necessary, T's index and ring fingers may then stabilize the transverse processes with T's middle finger against the spinous process of P's upper vertebra). P's head and neck are supported by T's right hand and forearm.

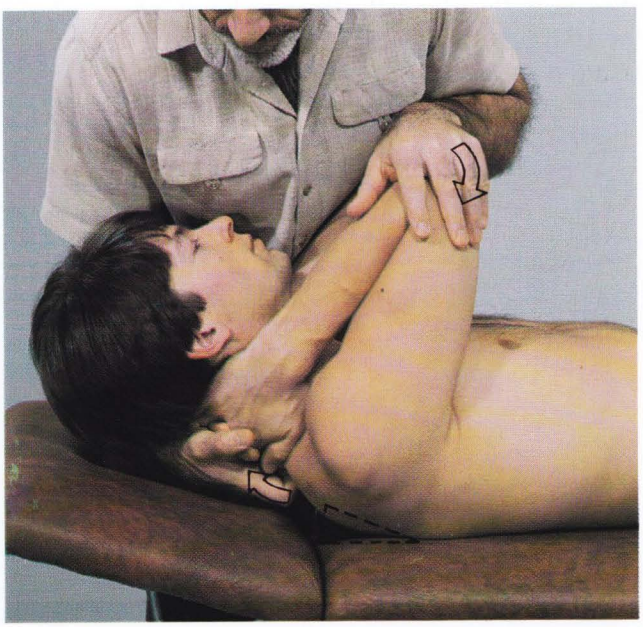


Fig. 78 a. Starting Position.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *ventrally flexes* T1 on T2. As P exhales, T uses left hand to push P's elbows in a cranial and dorsal direction and right hand to simultaneously pull in a cranial and ventral direction.

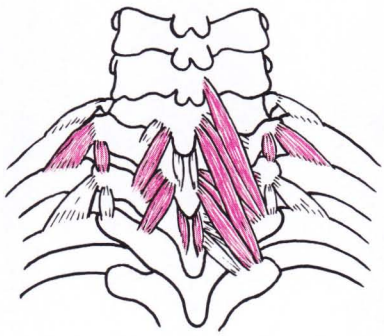
Stimulation of Antagonists: T retains grip and asks P to exhale, look down, and then move further in the direction of stretching. T resists that movement to stimulate P's antagonists.

Notes: If the treatment, using ventral (or dorsal) flexion, is of a lower thoracic segment, P may need to be in a more upright position to prevent upper body from excessively weighting at the segment treated (see technique **5.4.1A**, p. 105).

If P has shoulder or elbow pain, he/she may fold arms across chest while T uses the alternative grip of technique **5.4.1B**, p. 106.

Fig. 78 b. Final Position.

5.2.2 B. Specific technique to increase **ventral flexion of T1 on T2.** *P prone.*



Starting Position: P: Prone; head of couch lowered; arms along sides; cushion under chest just caudal to the ribs corresponding to the segment treated; lumbar region may be stabilized with a belt. T: Standing facing P's right side.

Grip: T's left hand stabilizes T2. T's right thenar and hypothenar are placed on the transverse processes of P's T1 vertebra. Or, if T's hands are small, his/her right thenar may be held against the spinous process of T1.

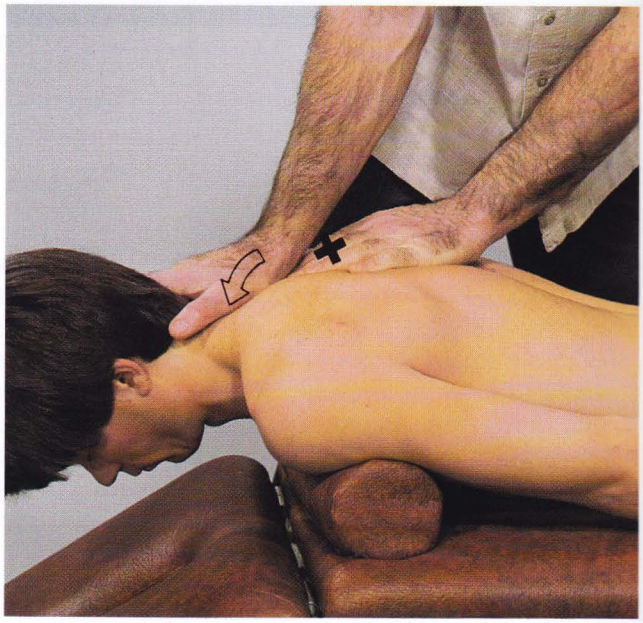


Fig. 79 a. Starting Position.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *ventrally flexes* T1 on T2 by pressing ventrally and cranially with his/her right hand.

Stimulation of Antagonists: T retains grip with left hand and moves right hand to P's manubrium, and then asks P to exhale, look down, and move further in the direction of stretching. T resists that movement to stimulate P's antagonists.

Note: This technique is the same for all the segments in the thoracic spine. T needs only to reposition the cushion and his/her hands. However, it may then be necessary to lower the head of the couch.

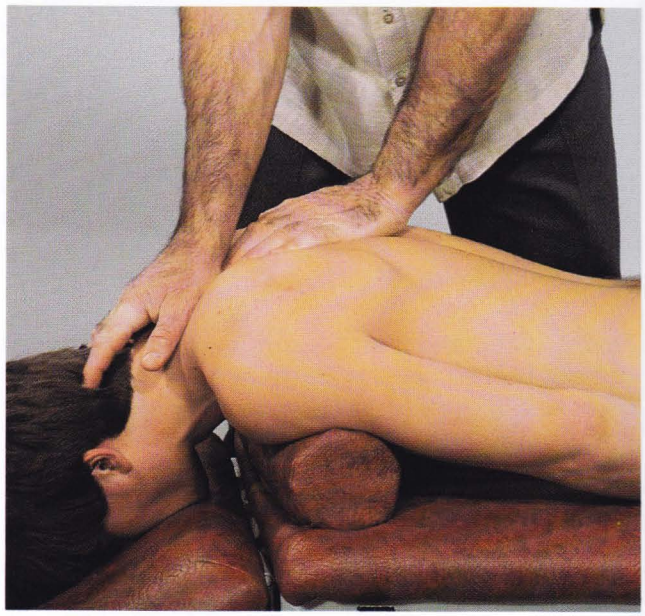
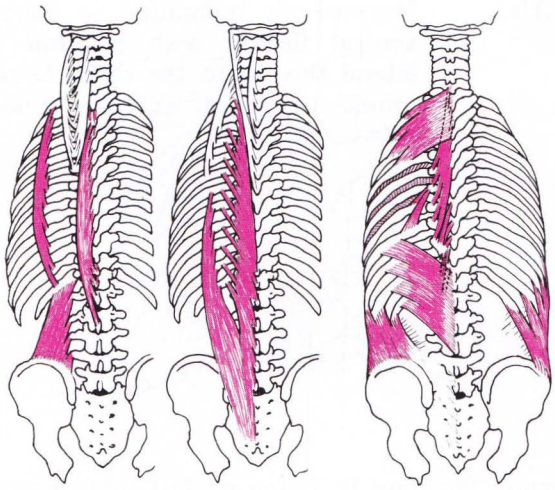


Fig. 79 b. Final Position.

5.3.1A. Non-specific technique to increase **ventral flexion** with **rotation** and **lateral flexion to the right.** *Locking caudal* to segment treated. *P sitting.*



Starting Position: P: Sitting; spine ventrally flexed; when using a 3-D stool, P's lumbar spine is laterally flexed to the left by tilting the right side of the pelvis downwards, which also produces a rotation to the left of the lumbar spine; otherwise, a cushion under the left buttock and thigh produces the same lateral flexion and rotation; pelvis stabilized with a belt (in this position, P's lumbar spine is prevented from rotating to the right); arms should be folded across chest with hands gripping shoulders. T: Standing facing P's right side.

Grip: T's right hand grips P's left shoulder from the ventral aspect. P's right shoulder is supported against T's chest. T's left hand and thumb are placed on the left side of the spinous processes at P's L1- L2 segment to monitor *locking* of the lumbar spine.

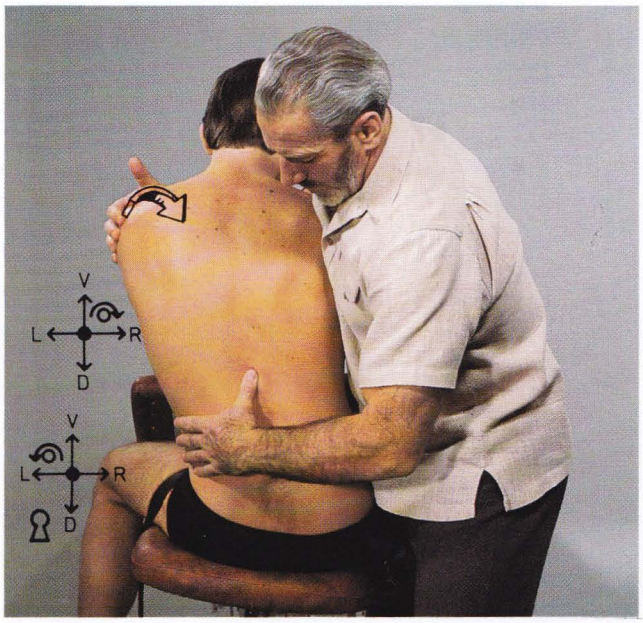


Fig. 80 a. Starting Position.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *ventrally flexes* and *rotates and laterally* flexes P's thoracic spine *to the right* by pulling P's left shoulder ventrally and caudally. P's right shoulder simultaneously moves dorsally and caudally.

Stimulation of Antagonists: T retains grip and asks P to exhale, look down to the right and move further in the direction of stretching. T resists that movement to stimulate P's antagonists.

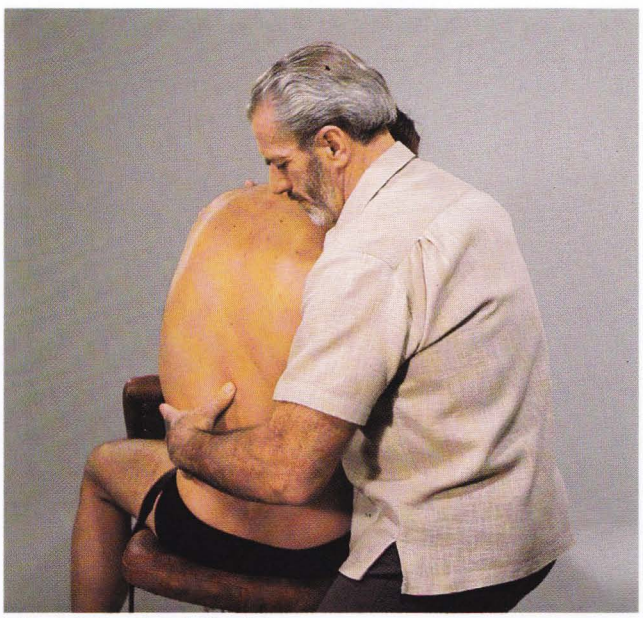
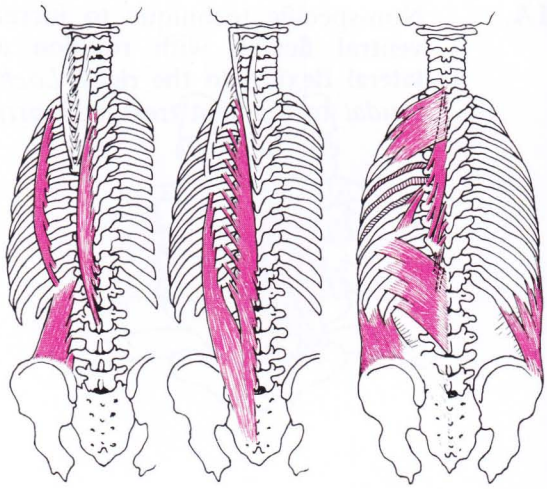


Fig. 80 b. Final Position.

5.3.1B. Non-specific technique to increase **ventral flexion** with **rotation** and **lateral flexion to the right.** *Locking caudal* to segment treated. *P lying on side.*



Starting Position: P: Lying on left side; hips and knees flexed; spine in ventral flexion; firm cushion under waist to laterally flex the lumbar spine to the left (this also produces a rotation to the left, which prevents the lumbar spine from rotating to the right); head of couch raised to laterally flex thoracic spine to the right; left arm and shoulder girdle pulled ventrally to rotate thoracic spine to the right; left hand grips right shoulder. T: Standing facing P's trunk.

Grip: T's right hand grips P's right shoulder (over P's left hand). T's left hand and thumb are placed on the left side of the spinous processes at P's L1-L2 segment to monitor *locking* of the lumbar spine.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *rotates* P's thoracic spine *to the right* by pushing P's right shoulder dorsally and caudally.

Stimulation of Antagonists: T retains left-hand grip and moves right hand to dorsal side of P's right shoulder. T then asks P to exhale, look down to the right, and move thorax in the direction of stretching. T resists that movement to stimulate P's antagonists.

Note: The above procedure is performed in steps by successively repositioning P in the following manner. To increase:

Lateral flexion and rotation to the right,	raise the head of the couch
Ventral flexion and rotation to the right,	reposition P's left arm and shoulder girdle by pulling them ventrally and possibly increasing hip flexion.

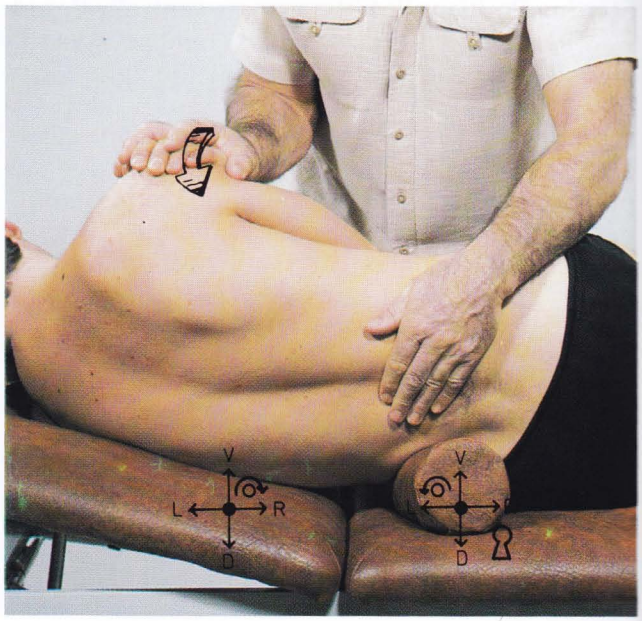
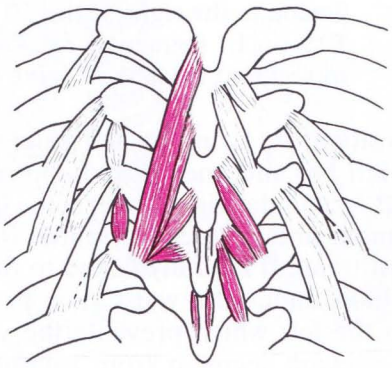


Fig. 81 a. Starting Position.

Fig. 81 b. Final Position.

5.3.2 A. Specific technique to increase **ventral flexion** with **rotation** and **lateral flexion to the right** of the T1 on T2 to T12 on L1 segments. *Locking caudal* to segment treated. *P sitting.*



Starting Position: P: Sitting; spine in ventral flexion; when using a 3-D stool, P's lumbar and thoracic vertebrae (up to, but not including, the segment treated), positioned in lateral flexion to the left by tilting P's pelvis downwards on the right side; this produces a rotation to the left of the vertebrae up to the relevant segment; (cushion under the left buttock and thigh will produce the same lateral flexion and rotation); pelvis stabilized with a belt (in this position, the vertebrae up to the relevant segment are prevented from rotating to the right); arms folded across chest. T: Standing facing P's right side.

Grip: T's right hand grips under P's left arm with his forearm across P's chest. T's right little finger lies along P's rib belonging to the **cranial** vertebra of the segment treated (in this case the 7th rib on the left side). T supports P's right shoulder against his/her chest. T's left thumb is placed on the left side of the spinous process on the **caudal** vertebra of the segment treated (in this case T8). T can then monitor the *locking* caudal to the segment treated while also simultaneously controlling its movement. **Note:** T's thumb must be in contact with **both** spinous processes, or T's left hand can be placed against P's transverse processes of T8.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *ventrally flexes* P's upper vertebra (here T7 on T8) while also fully *rotating* and *laterally flexing to the right* by pulling P's left shoulder ventrally and cranially. P's right shoulder simultaneously moves dorsally and caudally.

Stimulation of Antagonists: T retains his grip and asks P to exhale, look down to the right, and move further in the direction of stretching. T resists that movement to stimulate P's antagonists.

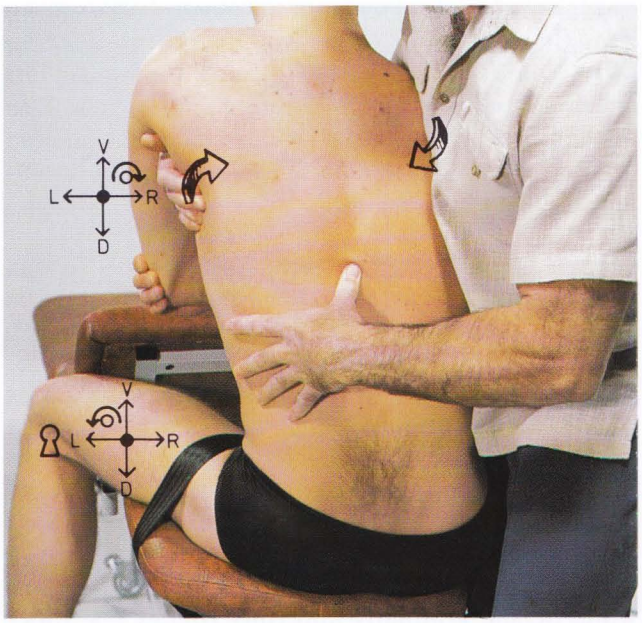


Fig. 82 a. Starting Position.

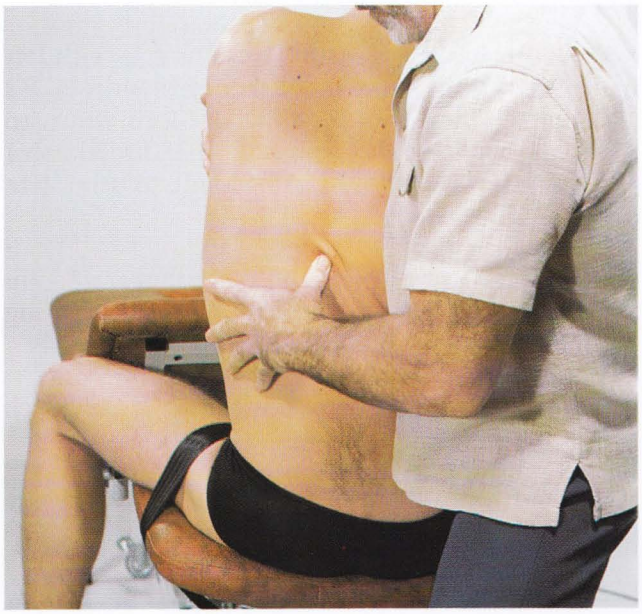
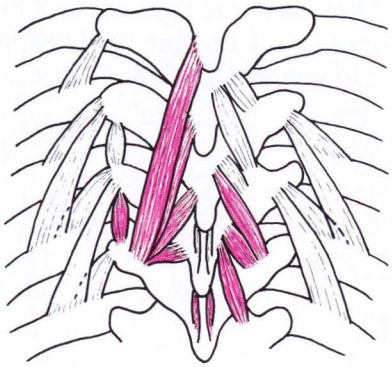


Fig. 82 b. Final Position.

5.3.2B. Specific technique to increase **ventral flexion** with **rotation** and **lateral flexion to the right** of the T1 on T2 to T12 on L1 segments. *Locking caudal* to segment treated. *P lying on side.*



Starting Position: P: Lying on left side; right leg extended; left hip and knee flexed approximately 90° with left foot under right knee; spine in ventral flexion; lumbar and thoracic vertebrae (caudal to the segment treated) laterally flexed to the left by a firm cushion under the waist (this produces a rotation to the left which prevents the vertebrae up to the relevant segment from rotating to the right); head of couch raised to laterally flex thoracic spine (cranial to the segment treated) to the right (in this position, *locking* is attained caudal to the specific segment treated. If *locking* cranial to the segment is also desired, the *locking* of technique **6.3.3, p. 129,** may be used); left arm and shoulder girdle pulled ventrally to rotate the thoracic spine to the right (cranial to the segment treated); left hand may grip right shoulder. T: Standing facing P.

Grip: T's left hand and wrist support P's thorax (up to the segment to be treated); fingers stabilizing the lower vertebra (here T9) and thumb stabilizing the adjoining right rib with his thumb. T's left index finger palpates the spinous processes to verify that the movement occurs in the correct segment (here T8 on T9). T's right hand is threaded under P's right arm with the forearm and wrist against the right side of P's thorax.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *rotates* P's upper vertebra (here T8 on T9) *to the right* by pushing P's thorax dorsally and caudally.

Stimulation of Antagonists: T retains grip with left hand and moves right hand to dorsal side of P's shoulder. T then asks P to exhale, look down to the right and move further in the direction of stretching. T resists that movement to stimulate P's antagonists.

Note: The above procedure is performed in successive steps by repositioning P in the following manner. To increase:

Lateral flexion and rotation to the right,	raise the head of the couch.
Ventral flexion and rotation to the right,	reposition P's left arm and shoulder girdle by pulling them ventrally.

Fig. 83 a. Starting Position.

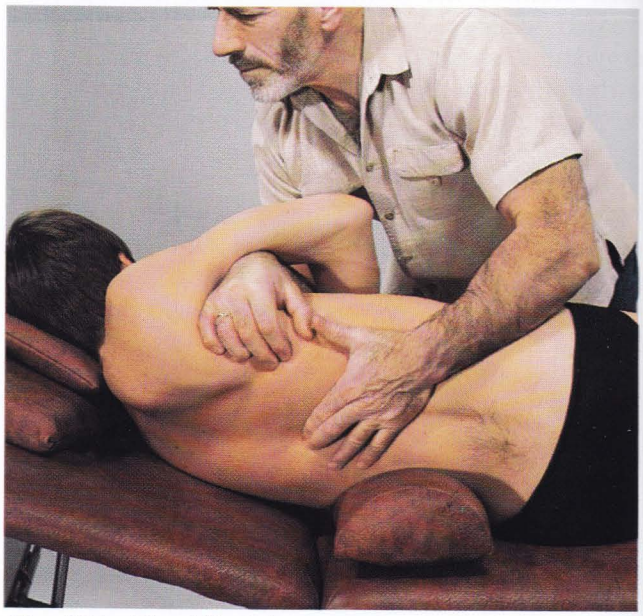
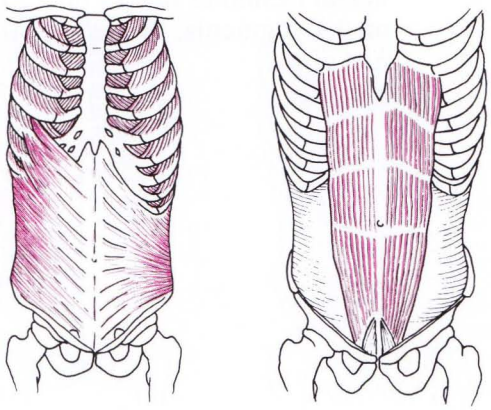


Fig. 83 b. Final Position.

5.4.1A. Non-specific technique to increase **dorsal flexion** of the **T1 on T2 to T12 on L1** segments. *P sitting.*



Starting Position: P: Sitting; lumbar spine supported with pelvis stabilized with a belt; knee and hip joints flexed to flatten lumbar lordosis; hands clasped on nape of neck supporting cervical spine. T: Standing facing P's right side.

Grip: T's right hand and forearm grip under P's elbows. T's left hand supports P's lower thoracic region.

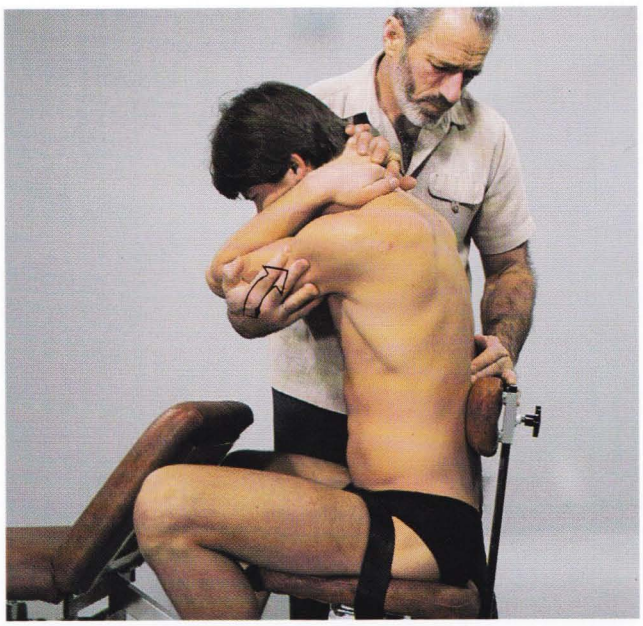


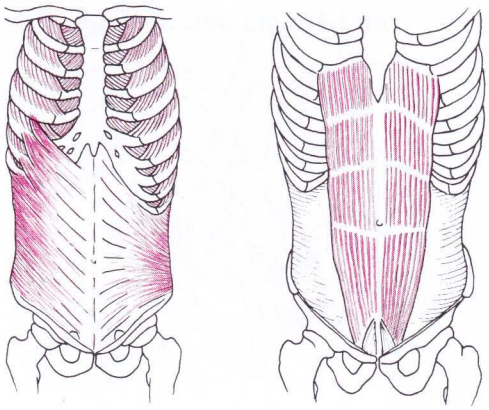
Fig. 84 a. Starting Position.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *dorsally flexes* P's thoracic spine by pushing his/her arms dorsally and cranially.

Stimulation of Antagonists: T retains grip with left hand and moves right hand and forearm to over P's elbows. T then asks P to exhale, look upwards, and bend backwards. T resists that movement to stimulate P's antagonists.

Fig. 84 b. Final Position.

5.4.1B. Non-specific technique to increase **dorsal flexion** of the **T1 on T2 to T12 on L1** segments. *P sitting. Alternative grip.*



Starting Position: P: Sitting; lumbar spine supported with pelvis stabilized with a belt; knee and hip joints flexed to flatten lumbar lordosis; arms crossed in front with hands supporting lower cervical-upper thoracic region. T: Standing facing P's right side.

Grip: T places right forearm and hand under P's elbows, with fingers on P's left shoulder. T's left hand supports P's lower thoracic region.

Fig. 85 a. Starting Position.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *dorsally flexes* P's thoracic spine by pushing his/her arms dorsally and cranially.

Stimulation of Antagonists: T retains grip with left hand, and moves right hand and forearm to over P's elbows. T then asks P to exhale, look upwards and rearwards while bending backwards. T resists that movement to stimulate P's antagonists.

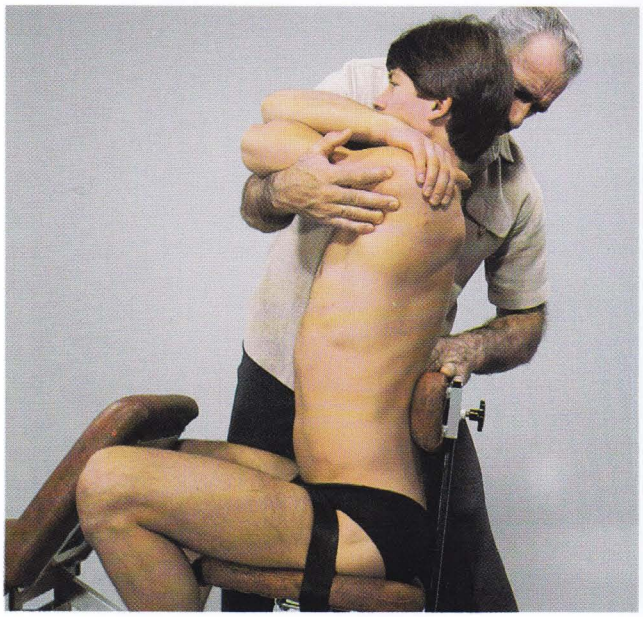
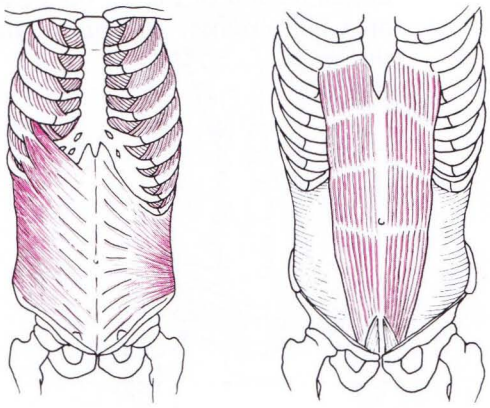


Fig. 85 b. Final Position.

5.4.1C. Non-specific technique to increase **dorsal flexion** of the **T1 on T2 to T12 on L1** segments. *P supine.*



Starting Position: P: Supine; firm cushion under thorax; hips and knees fully flexed to flatten lumbar lordosis; position stabilized with a belt across thighs; it may be necessary to lower the head end of the couch; hands clasped on nape of neck supporting the cervical spine. T: Standing facing P's left side.

Grip: T's right hand grips P's hands and supports the thorax. T's left hand grips P's elbows.

Fig. 86 a. Starting Position.

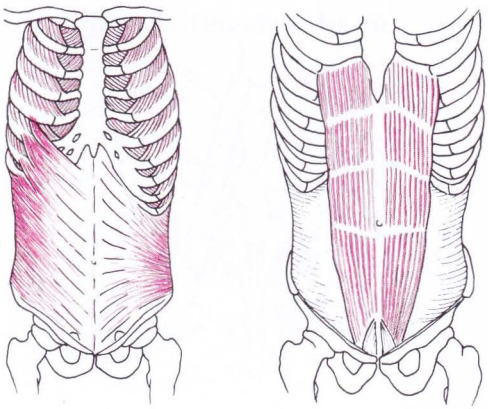
Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *dorsally flexes* P's thoracic spine by pushing his/her arms dorsally and cranially. T's right hand helps to control and regulate the movement in P's thoracic spine.

Stimulation of Antagonists: T retains grip and asks P to exhale, and look upwards while bending backwards. T resists that movement to stimulate P's antagonists.

Note: The force in this procedure comes primarily from the weight of P's upper body moving the thoracic spine dorsally. However, if P finds this painful, more body weight must be supported by T's right hand, or by raising P's upper body.

Fig. 86 b. Final Position.

5.4.1B. Non-specific technique to increase **dorsal flexion** of the **T1 on T2 to T12 on L1** segments. *P sitting. Alternative grip.*



Starting Position: P: Sitting; lumbar spine supported with pelvis stabilized with a belt; knee and hip joints flexed to flatten lumbar lordosis; arms crossed in front with hands supporting lower cervical-upper thoracic region. T: Standing facing P's right side.

Grip: T places right forearm and hand under P's elbows, with fingers on P's left shoulder. T's left hand supports P's lower thoracic region.

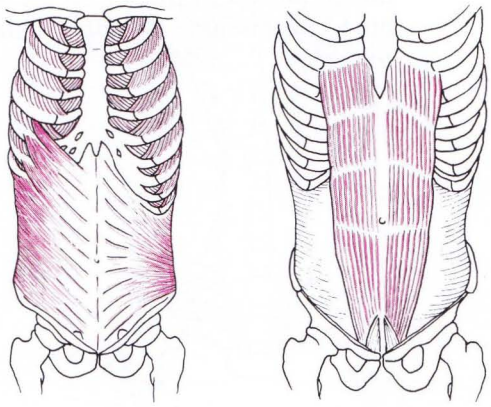
Fig. 85 a. Starting Position.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *dorsally flexes* P's thoracic spine by pushing his/her arms dorsally and cranially.

Stimulation of Antagonists: T retains grip with left hand, and moves right hand and forearm to over P's elbows. T then asks P to exhale, look upwards and rearwards while bending backwards. T resists that movement to stimulate P's antagonists.

Fig. 85 b. Final Position.

5.4.1C. Non-specific technique to increase **dorsal flexion** of the **T1 on T2 to T12 on L1** segments. *P supine.*



Starting Position: P: Supine; firm cushion under thorax; hips and knees fully flexed to flatten lumbar lordosis; position stabilized with a belt across thighs; it may be necessary to lower the head end of the couch; hands clasped on nape of neck supporting the cervical spine. T: Standing facing P's left side.

Grip: T's right hand grips P's hands and supports the thorax. T's left hand grips P's elbows.

Fig. 86 a. Starting Position.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *dorsally flexes* P's thoracic spine by pushing his/her arms dorsally and cranially. T's right hand helps to control and regulate the movement in P's thoracic spine.

Stimulation of Antagonists: T retains grip and asks P to exhale, and look upwards while bending backwards. T resists that movement to stimulate P's antagonists.

Note: The force in this procedure comes primarily from the weight of P's upper body moving the thoracic spine dorsally. However, if P finds this painful, more body weight must be supported by T's right hand, or by raising P's upper body.

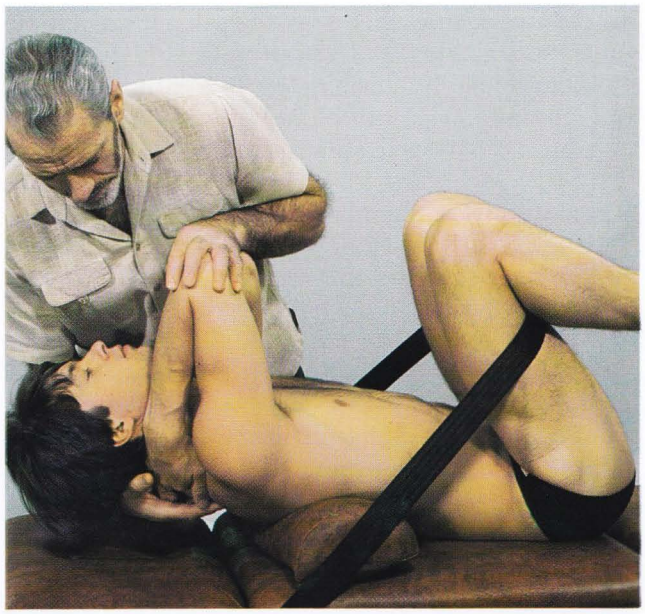
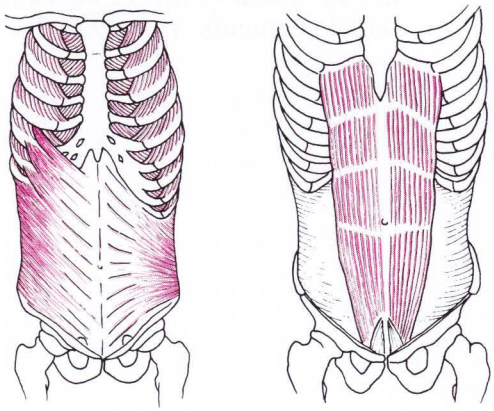


Fig. 86 b. Final Position.

5.4.1D. Non-specific technique to increase **dorsal flexion** of the **T1 on T2 to T12 on L1** segments. *P supine. Alternative grip.*



Starting Position: P: Supine; firm cushion under thorax; hips and knees fully flexed to flatten lumbar lordosis; position stabilized with a belt across thighs; to attain reasonable range of dorsal flexion, it may be necessary to lower the head of the couch; arms crossed in front with hands supporting lower cervical-upper thoracic region. T: Standing facing P's left side.

Grip: T's right hand grips the upper part of P's thoracic spine from the dorsal aspect. T's right forearm supports P's head. T's left hand grips P's elbows.

Fig. 87 a. Starting Position.

Procedure: Using this grip, T asks P to exhale while he/s gradually and fully *dorsally flexes* P's thoracic spine by pushing his/her arms dorsally and cranially. T's right hand helps to monitor and regulate the thoracic spine movement.

Stimulation of Antagonists: T retains grip and asks P to exhale, and look upwards while bending backwards. T resists that movement to stimulate P's antagonists.

Note: The force in this procedure comes primarily from the weight of P's upper body moving the thoracic spine dorsally. However, if P finds this painful, some of his/her body weight must be supported by T's right hand, or reduced by raising the head end of the couch.

Fig. 87 b. Final Position.

5.4.2A. Specific technique to increase **dorsal flexion** of the **T1 on T2 to T12 on L1** segments. *P supine with upper body raised.*

Starting Position: P: Supine; upper body raised; hips and knees flexed to flatten lumbar lordosis; head of couch raised to ventrally flex lumbar and thoracic vertebrae (caudal to the segment treated); wedge-shaped support against thoracic spine supporting the transverse processes of the caudal vertebra of the segment treated (here T3); hands clasped on nape of neck. T: Standing facing P's left side.

Grip: T's left hand grips P's elbows and adjusts the specific segment with small "rocking" movements (moving P's elbows cranially and caudally) so that the force is directed at the cranial vertebra (in this case T2). T's right index finger palpates the movement between the spinous processes. P's head and neck are supported by T's right wrist and forearm.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *dorsally flexes* the segment treated (in this case T2 on T3) by pushing P's elbows in a cranial and dorsal direction. (If necessary, T can apply slight traction to P's cranial vertebra in a cranial-dorsal direction using both hands).

Stimulation of Antagonists: T retains grip and asks P to exhale, and look upwards while bending backwards. T resists that movement to stimulate P's antagonists.

Notes: In treating lower thoracic segments in dorsal or ventral flexion, P may need to be in a more upright position to prevent upper body weight from excessively loading the segment treated and/or prevent uncomfortable pressure against the edge of the support wedge. The angle of the raised couch section is adjusted to suit the force required at each segment. The less the angle, the greater the force.

If P has shoulder or elbow pain, the following Alternative Grip may be used. P may also fold his/her arms across chest if he/she finds the above technique uncomfortable.

Alternative Grip: T's left hand grips P's right shoulder from the ventral aspect. T's left arm supports P's arms. T's right index and ring fingers may then stabilize the transverse processes with the middle finger against the spinous process of P's cranial vertebra. P's head and neck are supported by T's right wrist and forearm.

Alternative Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *dorsally flexes* the relevant segment by lifting P's arms in a cranial and dorsal direction. T's right fingers palpate to verify that the movement occurs at the correct segment.

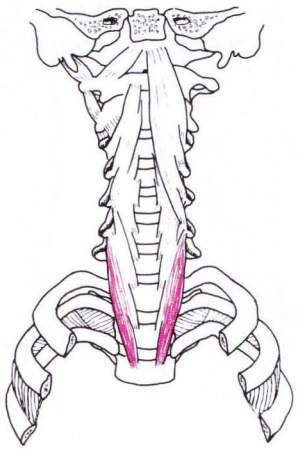


Fig. 88 a. Starting Position.

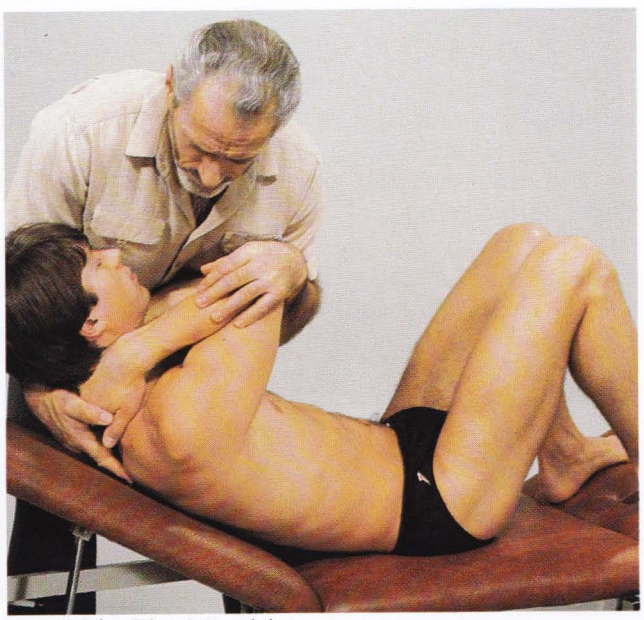
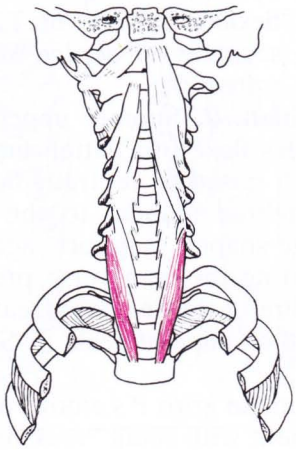


Fig. 88 b. Final Position.

5.4.2B. Specific technique to increase **dorsal flexion** of the **T1 on T2 to T12 on L1** segments. *P supine.*



Starting Position: P: Supine; hips and knees flexed; right heel resting on left knee with left foot against the raised lower couch end; in this position, lumbar lordosis is flattened; hands on nape of neck (or folded across chest) to stabilize cervical spine; wedge-shaped block stabilizes the caudal vertebrae of the segment treated (in this case T3). T: Standing facing P's left side.

Grip: T's left hand grips P's elbows and adjusts the specific segment with small "rocking" movements (moving P's elbows cranially and caudally) so that the force is directed at the cranial vertebra (in this case T2). T's right index finger palpates the movement between the spinous processes. T's head and neck are supported by T's right hand and forearm.

Fig. 89 a. Starting Position.

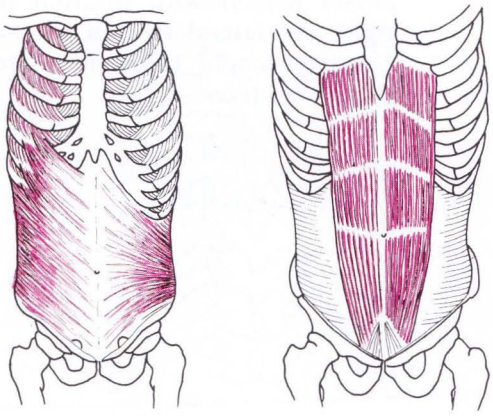
Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *dorsally flexes* the relevant segment (in this case T2 on T3) by pushing P's elbows in a cranial and dorsal direction. (If necessary, T can apply slight traction to P's cranial vertebra in a cranial/dorsal direction using both hands).

Stimulation of Antagonists: T retains grip and asks P to exhale, and look upwards while bending backwards. T resists that movement to stimulate P's antagonists.

Notes: If P has shoulder or elbow pain, he/she may fold his/her arms across the chest while T uses the alternative grip of the preceding technique, **5.4.2A**, p. 109

Fig. 89 b. Final Position.

5.5.1A. Non-specific technique to increase **dorsal flexion** with **rotation to the right** and **lateral flexion to the left.** *Locking caudal* to segment treated. *P sitting.*



Starting Position: P: Sitting; spine dorsally flexed; when using a 3-D stool, the lumbar spine is laterally flexed to the right by tilting the pelvis downwards on the left side, which also produces a rotation to the left of the lumbar spine (a cushion under the right buttock and thigh produces the same lateral flexion and rotation); pelvis stabilized with a belt (in this position, P's lumbar spine is prevented from rotating to the right); arms folded across chest with hands gripping shoulders. T: Standing facing P's right side.

Grip: T's right hand grips P's left shoulder from the ventral aspect. P's right shoulder is supported against T's right shoulder and chest. T's left thumb is placed on the left side of the spinous processes at P's T 12 segment. This enables T to control the *locking* of the spine up to the segments to be treated. (Or T can place his/her left hand against P's transverse processes of L1).

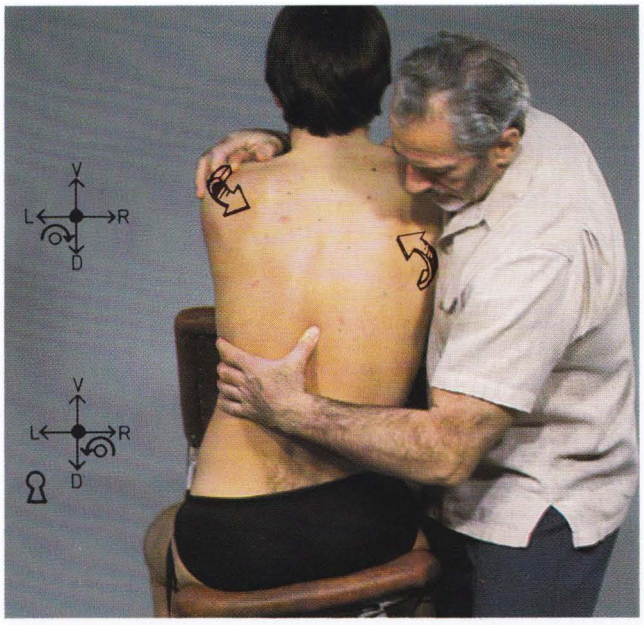


Fig. 90 a. Starting Position.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *dorsally flexes* P's thoracic spine while also fully *rotating to the right* and *laterally flexing to the left* by pulling P's left shoulder ventrally and caudally. P's right shoulder simultaneously moves dorsally and cranially.

Stimulation of Antagonists: T retains grip and asks P to exhale, look upwards to the right and rearwards, and move further in the direction of stretching. T resists that movement to stimulate P's antagonists.

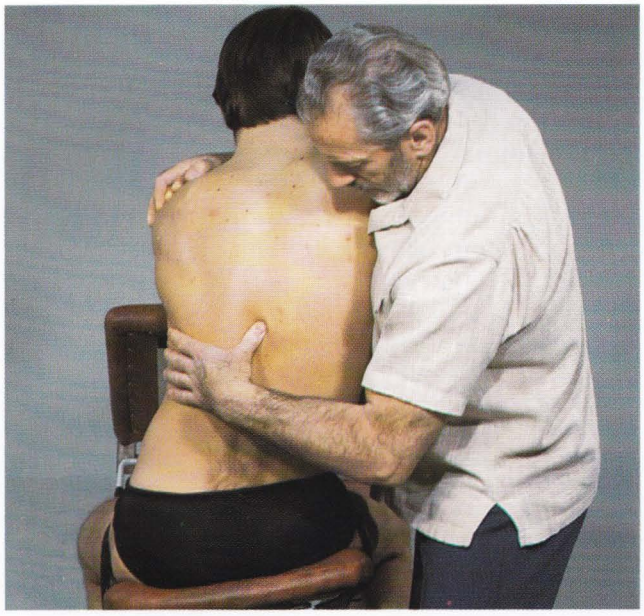
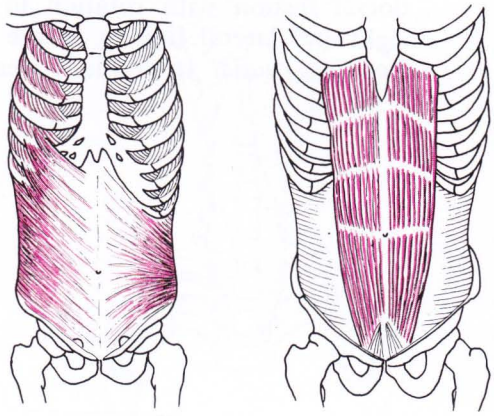


Fig. 90 b. Final Position.

5.5.1B. Non-specific technique to increase **dorsal flexion** with **rotation to the right** and **lateral flexion to the left.** *Locking caudal* to segment treated. *P lying on side.*



Starting Position: P: Lying on left side; pillow supporting head and neck; left leg extended with right hip and knee flexed approximately 90° and right foot hooked behind left knee; spine in dorsal flexion; lower end of couch raised to laterally flex lumbar spine to the right (this produces a rotation to the left of the lumbar vertebrae, which prevents them from rotating to the right during the procedure); firm cushion under torso to laterally flex thoracic spine to the left; left hand grips right shoulder. T: Standing facing P.

Grip: T's right hand grips P's right shoulder (over P's left hand). T's left index finger monitors P's T 12 segment.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *rotates* P's thoracic spine *to the right* by pushing P's right shoulder dorsally and cranially.

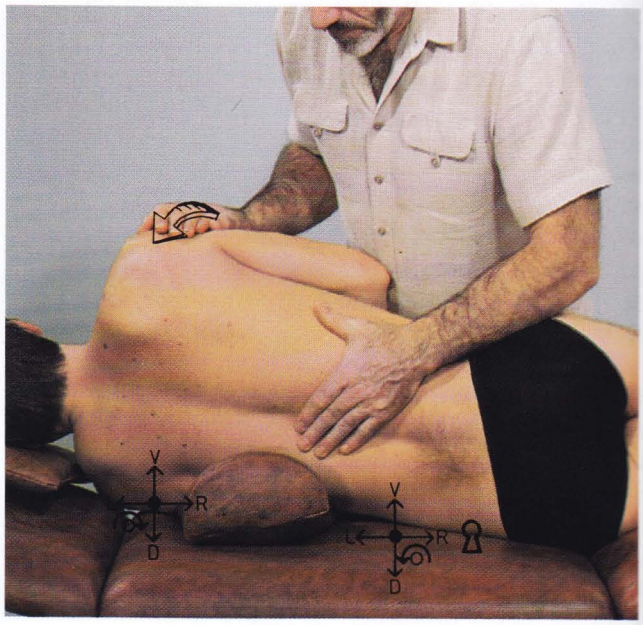


Fig. 91 a. Starting Position.

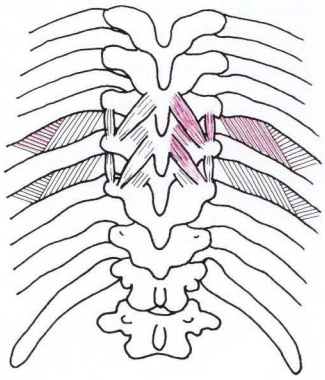
Stimulation of Antagonists: T retains grip and asks P to exhale, look upwards to the right and rearwards, and move further in the direction of stretching. T resists that movement to stimulate P's antagonists.

Note: The above procedure is performed in successive steps by repositioning P in the following manner. To increase:

Lateral flexion to the left,	lower the head of the couch and/or use a larger cushion under P's torso.
Dorsal flexion,	T pulls ventrally with his left hand and/or pushes P's right shoulder dorsally.

Fig. 91 b. Final Position.

5.5.2A. Specific technique to increase **dorsal flexion** with **rotation to the right** and **lateral flexion to the left** of the **T1 on T2 to T12 on L1** segments. *P sitting. Locking* **caudal** to segment treated.



Starting Position: P: Sitting; spine dorsally flexed; when using a 3-D stool, P's lumbar and thoracic vertebrae (up to, but not including, the segment treated) are laterally flexed to the right by tilting left side of pelvis downward (this produces a rotation to the left of the vertebrae up to segment treated); a cushion under the right buttock and thigh produces the same lateral flexion and rotation; pelvis stabilized with a belt (in this position, the vertebrae up to the segment treated are prevented from rotating to the right); arms folded across chest with hands gripping shoulders. T: Standing facing P's right side.
Grip: T's right hand grips under P's left arm, forearm across P's chest. T's right little finger lies along P's rib corresponding to the **cranial** vertebra of the segment to be treated (in this case the 8th rib on the left side). T supports P's right shoulder against his/her chest. T's left thumb is placed on the left side of the spinous process of the **caudal** vertebra of the segment to be treated (in this case T9). This enables T to monitor *locking* of the vertebrae caudal to it and the movement in the specific segment to be treated. (Or T can place his/her left hand against P's transverse processes). T's right hand, arm and shoulder maintain the dorsal flexion, lateral flexion to the left and rotation to the right of P's thoracic spine (from the relevant cranial vertebra, in this case T8, and cranial to it). T's left hand helps to maintain the dorsal flexion, lateral flexion to the right and rotation to the left of P's lumbar and thoracic vertebrae (from the relevant caudal vertebra, in this case T9, and caudal to it). In this position, locking is attained below the specific segment to be treated. It is easier to maintain and monitor dorsal flexion by using the back support of the 3-D stool.

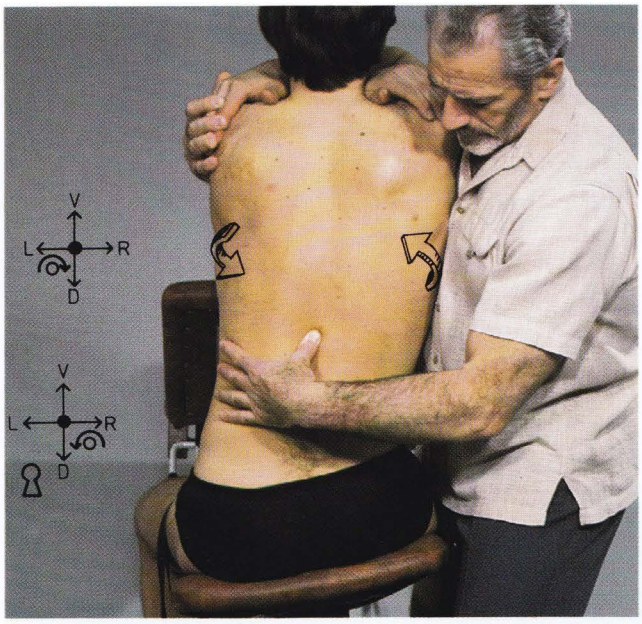


Fig. 92 a. Starting Position.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *dorsally flexes* P's thoracic spine while also fully *rotating to the right* and *laterally flexing to the left* by pulling P's left shoulder ventrally and caudally. P's right shoulder simultaneously moves dorsally and cranially.
Stimulation of Antagonists: T retains grip and asks P to move further in the direction of stretching. T resists that movement to stimulate P's antagonists.

Note: See following technique, **5.5.2B**, p. 114, for *locking* cranial to and caudal to the segment treated.

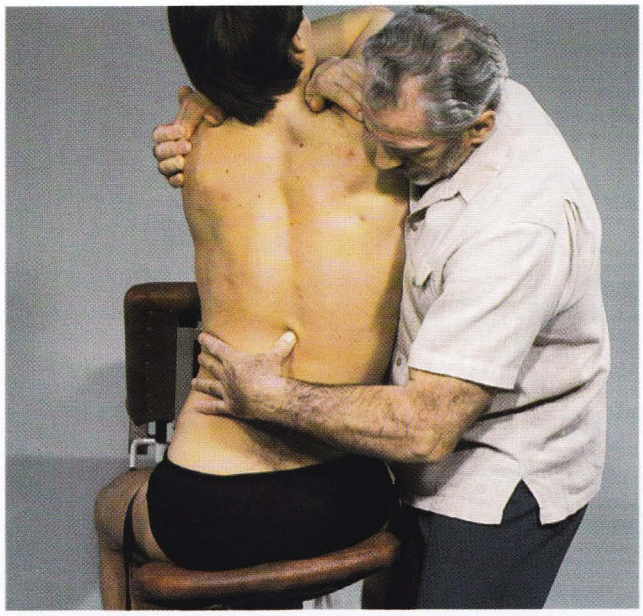
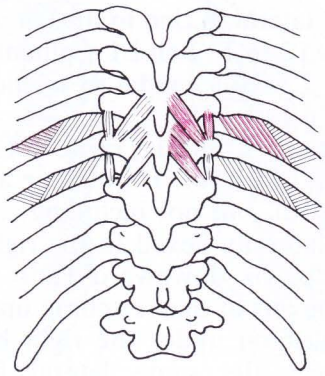


Fig. 92 b. Final Position.

5.5.2B. Specific technique to increase **dorsal flexion** with **rotation to the right** and **lateral flexion to the left** of the **T1 on T2 to T12 on L1** segments. *P sitting. Locking* **cranial to and caudal** to segment treated.



If *locking* **cranial** to the specific segment to be treated is also desired, the following procedure may be used:

The restricted function is dorsal flexion, rotation to the right and lateral flexion to the left of T8 on T9. Maintain the same grip as described in technique **5.5.2A**. The segments from T8 and cranial to it are positioned in ventral flexion and lateral flexion to the left.

The segments caudal to that treated are *locked* in **dorsal flexion**. The segment to be treated must be gradually and maximally moved into dorsal flexion. The dorsal flexion, coming from the caudal direction, must therefore "go into" the segment to be treated.

The **segments cranial to that treated** are *locked* in **lateral flexion** to the **left**. The segment to be treated must also be gradually and maximally moved into left lateral flexion, in addition to the movement into dorsal flexion described above. Therefore, the lateral flexion to the left, coming from above, must also "go into" the segment to be treated.

To achieve this *double locking*, it is important that:

1) The **segments caudal to that treated** be held in **dorsal flexion** and **lateral flexion** to the **right**.
2) The **segments cranial to that treated** be held in **ventral flexion** and **lateral flexion** to the **left**.
3) The **segment to be treated** be gradually and maximally moved into **dorsal flexion** and **lateral flexion** to the **left**.

If this procedure is not followed closely, *locking* (stabilization) is lost.
A back support caudal to the segment treated makes treatment easier and more precise.

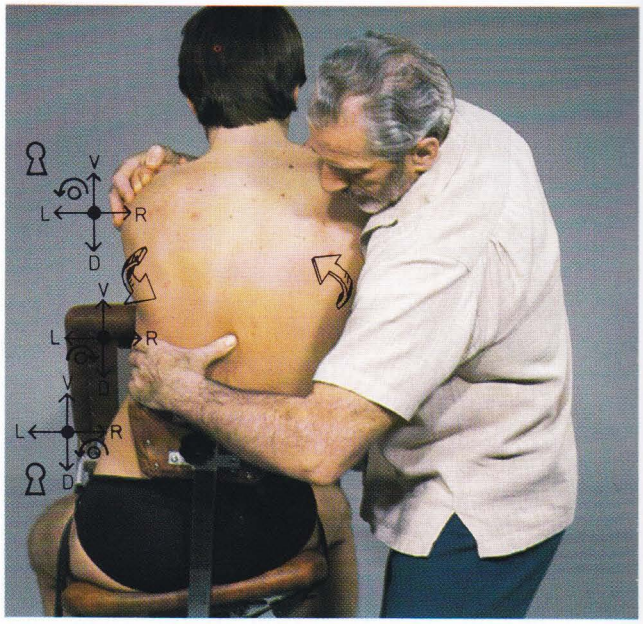


Fig. 92 c. Starting Position.

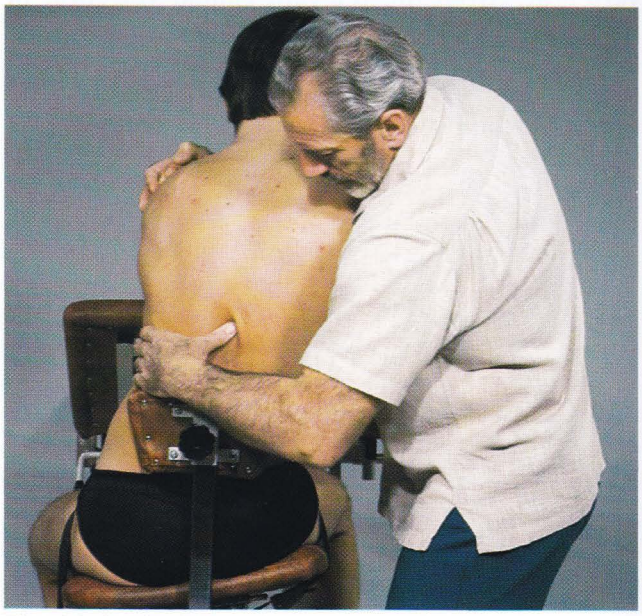
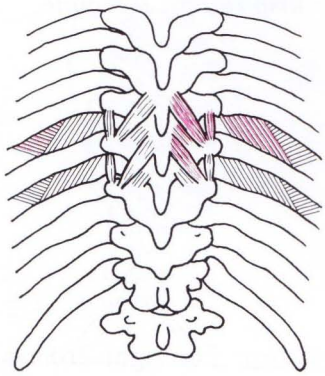


Fig. 92 d. Final Position.

5.5.2 C. Specific technique to increase **dorsal flexion** with **rotation to the right** and **lateral flexion to the left** of the T1 on T2 to T12 on L1 segments. *Locking caudal* to segment treated. *P lying on side.*



Starting Position: P: Lying on left side; pillow supporting head and neck; left leg extended; his/her right hip and knee flexed approximately 90°; right foot hooked behind left knee; spine in dorsal flexion; lower end of couch raised to laterally flex lumbar and thoracic vertebrae to the right (up to, but not including, the segment treated); this produces a rotation to the left, which prevents the vertebrae up to the segment treated from rotating to the right; thoracic spine (cranial to the segment treated) laterally flexed to the left by a firm cushion under the torso; left hand may grip right shoulder. T: Standing facing P.

Grip: T's right hand is threaded under P's right arm, forearm and wrist against the right side of P's thorax. T's left hand and wrist support P's thorax (up to the segment to be treated), fingers stabilizing the caudal vertebra (in this case T10), and thumb stabilizing the right rib. T's left index finger palpates the spinous processes to verify that the movement occurs in the correct segment (in this case T9 on T10).

Procedure: Using this grip, T asks P to exhale while he gradually and fully rotates P's upper vertebra (here T9 on T10) *to the right* by pushing P's thorax dorsally and cranially.

Stimulation of Antagonists: T retains grip and asks P to exhale, look to the right, and move his/her thorax to the right. T resists that movement to stimulate P's antagonists.

Note: The above procedure can be performed in steps. *Dorsal flexion* is increased by T pushing P's left shoulder dorsally. T can increase the *lateral flexion to the left* by either gradually lowering the head end of the couch and/or by using a larger cushion under P's side.

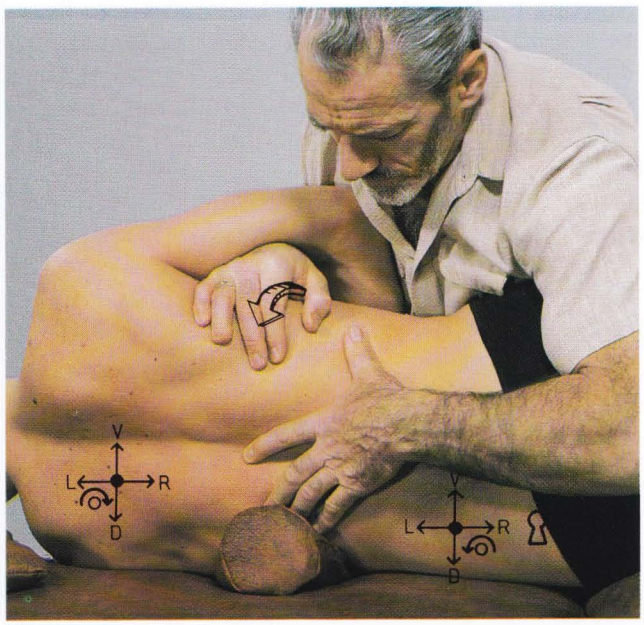


Fig. 93 a. Starting Position.

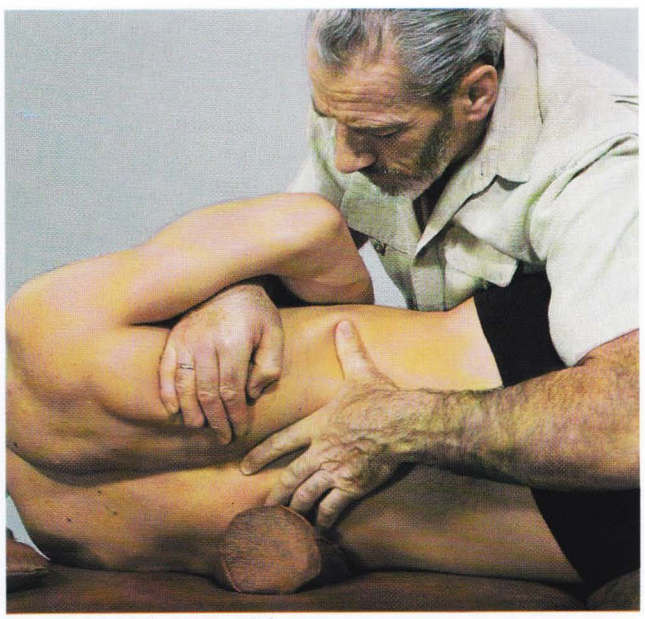
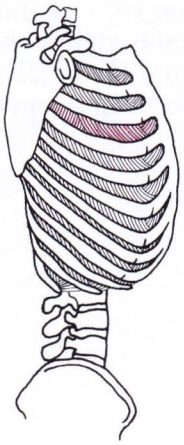


Fig. 93 b. Final Position.

5.6.1. Specific technique to **increase mobility between the 2nd to 5th ribs during *inspiration.*** *P supine.*



(Treatment shown: For right 3rd rib which does not move during inspiration but "**adheres**" to the 4th rib.)

Starting Position: P: Supine; hips and knees flexed to stabilize and protect lumbar spine; small, firm cushion under thorax to fully dorsally flex thoracic spine; right arm fully flexed and laterally rotated. T: Standing at head of couch, facing P's right side.

Grip: T's left hand grips the dorsal aspect of P's upper arm just above the elbow. P's right hand and forearm are supported between T's left forearm and chest. T's right thumb and thenar eminence are placed between P's 3rd and 4th rib on the ventral aspect of the right side.

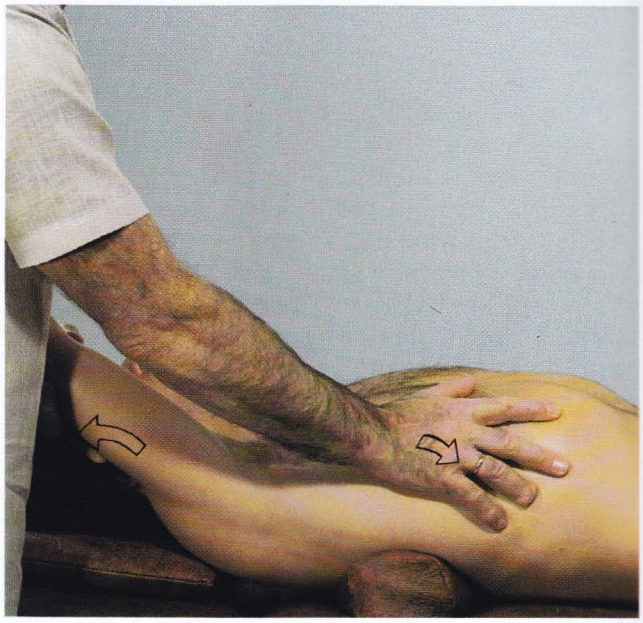


Fig. 94 a. Starting Position.

Procedure: Step one: Using this grip, T asks P to exhale. T resist the caudal movement of the rib by pressing cranially with his/her thumb and thenar against the caudal aspect of the 3rd rib,
Step two: T then asks P to relax and inhale while he/she gradually and fully draws right arm, shoulder girdle and 3rd rib *cranially* and *dorsally* and simultaneously pushes the 4th rib caudally and dorsally.

Stimulation of Antagonists: T places his/her right thumb and thenar on the ventral-cranial aspect of P's 3rd rib on the right side. T then asks P to inhale while T resists that movement to stimulate P's antagonists.

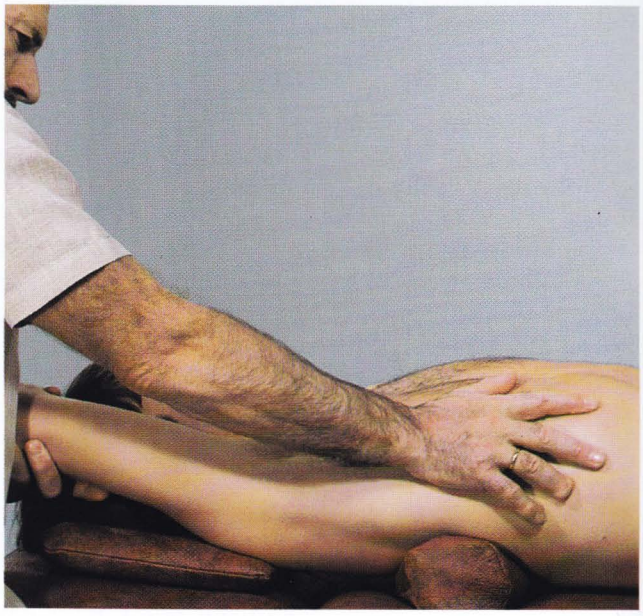
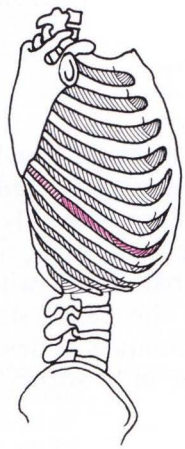


Fig. 94 b. Final Position.

5.6.2. Specific technique to **increase mobility between the 5th and 12th ribs during *expiration*.** *P lying on side.*



(Treatment shown: For the right 8th rib which does not move during expiration but "**adheres**" to the 7th rib.

Starting Position: P: Lying on left side; cushion under torso to laterally flex thoracic spine; right arm fully flexed and laterally rotated. T: Standing at head of couch, facing P's head.

Grip: T's left hand grips P's upper arm just above the elbow. P's right hand and forearm are supported between T's left forearm and chest. T places the radial side of his/her index finger and extended thumb against P's 8th rib from the ventral-cranial aspect. (T can also place right thumb and thenar at the same place).

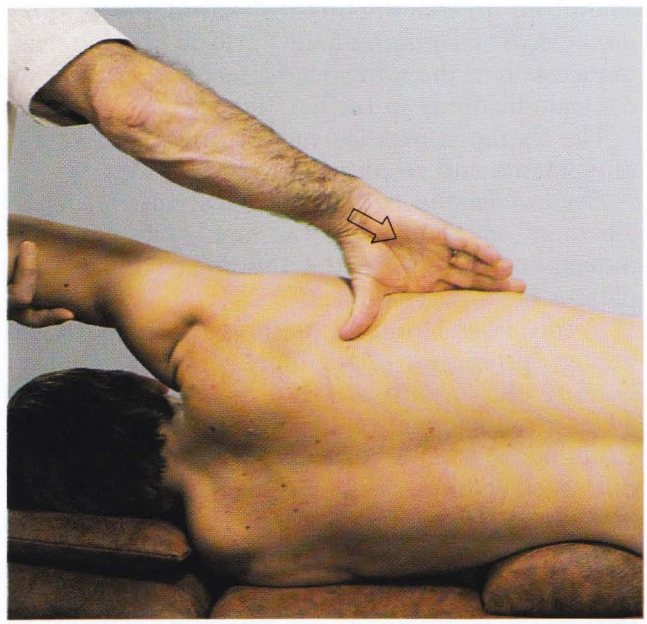


Fig. 95 a. Starting Position.

Procedure: Step one: Using this grip, T asks P to inhale. T resists against the cranial movement of the 8th rib by pushing caudally.
Step two: T then asks P to exhale and relax while he/she gradually and fully *pushes* P's 8th rib *caudally*. During expiration T stabilizes P's right arm, shoulder girdle and 7th rib.

Stimulation of Antagonists: T retains grip with left hand, and grips with right index finger and thumb the 8th rib from the ventral-caudal aspect and asks P to exhale. During expiration T resists the caudal movement of the 8th rib to stimulate P's antagonists.

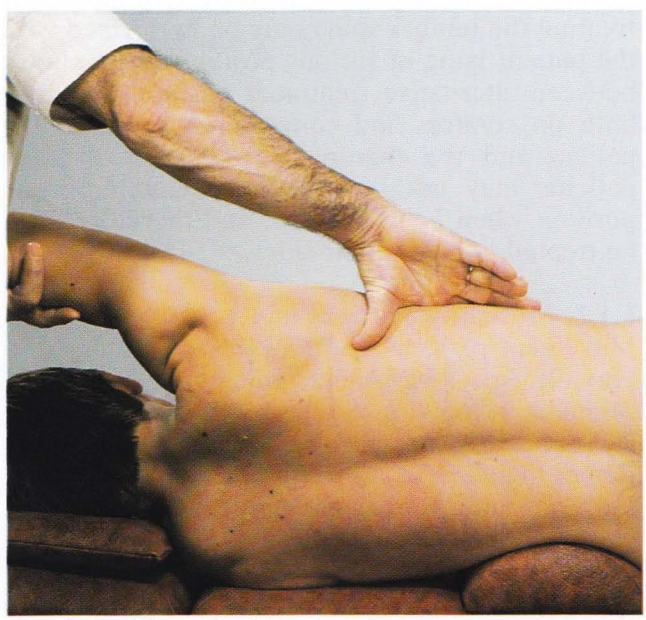


Fig. 95 b. Final Position.

6. THE LUMBAR SPINE (L1 on L2 to L5 on S1)

6.1. Therapy Guide

6.1.1. Examination

To minimize the pressure on P's intervertebral discs during treatment, the only techniques described here are those with P lying either supine, prone or on his/her side. It is, of course, possible to treat the lumbar spine with P in a sitting position and with the pelvis stabilized, in which cases the same techniques as described for treating the thoracic spine in a sitting position may be used.

6.1.2. Treatment Guidelines

Caution is the watchword in treating the spine. Therefore, in treating any restriction, *perform the non-specific techniques first*. Perform specific techniques only if the non-specific techniques elicit no contraindications to further therapy.

The therapist may instruct or direct patient eye movements and respiration to aid therapy.

Eye movements evoke reflex responses, such as "leading" movements of the head. Directing eye movement then gives the therapist control over patient head movement.

Respiration: Normal breathing, particularly exhaling, promotes relaxation, while inhaling or holding the breath are often naturally evoked when producing muscular force. Therefore, instructing the patient to *exhale* aids relaxation during stretching, while *breathing normally* promotes relaxation during sustained stretching (two minutes or more). *Inhaling* helps the patient contract against the therapist's resistance, such as during the stimulation of antagonists phase of treatment.

Many of the following therapy techniques for treating the lumbar spine may be performed with the patient lying in various positions. The choice between alternative treatment positions depends both on comfort and convenience for both the patient and the therapist. For example, some patients may not be able to tolerate a prone position when being treated, and therefore must be treated lying on their sides.

6.1.3. Movement Patterns and *Locking*

Movement patterns and *locking* are discussed in Part 2, pp. 14-25. The following is a short summary review for the lumbar spine.

As can be seen from the schematic representation of Fig. 7, p. 18, in ventral flexion the cervical, thoracic and lumbar spines behave similarly. However, in dorsal flexion, they differ. The movement pattern of the thoracic and lumbar spines are mirror symmetric with respect to a coronal plane. That is, in ventral flexion, lateral flexion and rotation to the *same* side are "physiological" movements, while in dorsal flexion, lateral flexion and rotation to *opposite* sides are "physiological." The pattern for "physiological" movement in dorsal flexion appears to be the mirror image of the pattern in ventral flexion.

Segments adjacent to those treated should be stabilized so they do not follow the movement induced to effect treatment. Stabilization always requires *inflection*, or changes of flexion, either in the sagittal or the frontal planes. Basic stabilization of the thoracic spine involves changing flexion from ventral to dorsal or vice versa. For instance, treatment of a segment in ventral flexion is most effective if its adjacent (superior and inferior) segments are placed in dorsal flexion.

However, when rotation and/or lateral flexion are restricted in ventral or dorsal flexion, it is possible and necessary to *lock* the segments above and/or below more securely than is possible by inflection in the sagittal plane alone. *Locking* is then attained by changing flexion and/or rotation in the frontal plane. This type of *locking*, most often used in non-specific techniques, involves retaining ventral/dorsal flexion but changing to the *opposite* lateral flexion and rotation to effect the *lock*. End feel indicates when *locking* is attained. It may be necessary to stretch the muscles and other structures in order to *lock* the segments. *Movement must not be forced beyond that necessary to attain the desired fixation by locking.*

Double locking ("above" and "below" the segment treated) is possible throughout the lumbar spine, and always involves inflections in both the sagittal and frontal planes. As discussed in Part 2, p. 23, there must be only *one inflection per locking*. So one of the two inflections required for *double locking* will involve a change from ventral to dorsal flexion, and the other inflection will involve a change from right to left lateral flexion. This is equivalent to the requirement that the segment treated must "receive" the flexions of the treatment from its adjacent *locked* segments, ventral/dorsal flexion from one direction and right/left lateral flexion from the other direction.

6.1.4. Restrictions, Muscles and Therapies

The non-specific and specific therapy techniques for treating restrictions of the lumbar spine are listed in Table 6-1. The actions of the muscles which may cause those restrictions are listed in Table 6-2. The various restrictions possible are listed in Movement Restriction Table 8.3, p. 145. and 146.

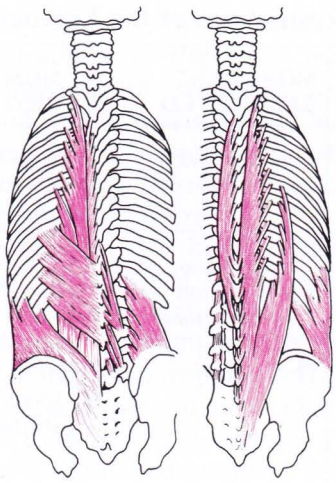
Table 6-1. Restrictions of the Lumbar Spine

SECTION	MOVEMENT RESTRICTED	MUSCLES WHICH MAY RESTRICT MOTION	TECHNIQUE/ THERAPY	Number, Page
6.2.	*Ventral Flexion*	Most on dorsal side of torso, as well as stiffness of spine itself	non-specific specific, L5 on S1 specific, L5 on S1	**6.2.1**, 120-122 **6.2.2**, 123 **6.2.3**, 124
6.3.	*Ventral flexion with lateral flexion and rotation to same side*	Most of torso, as well as stiffness of spine	non-specific specific, L5 on S1 specific, L1 on L2	**6.3.1**, 125-127 **6.3.2**, 128 **6.3.3**, 129
6.4.	*Dorsal flexion*	Most on ventral side of torso, as well as stiffness of spine	non-specific relatively specific, thoraco-lumbar transition specific, L5 on S1 specific, L1 on L2	**6.4.1**, 130-131 **6.4.2**, 132 **6.4.3**, 133 **6.4.4**, 134
6.5.	*Dorsal flexion with lateral flexion and rotation to opposite sides*	Most of torso, as well as stiffness of spine	non-specific specific, L5 on S1 specific, L1 on L2	**6.5.1**, 135-137 **6.5.2**, 138 **6.5.3**, 139

Table 6-2. Actions of muscles which may restrict movement of the lumbar spine

MUSCLE	ACTION
rectus abdominis	Ventral flexes thoracic and lumbar spine; supports abdominal wall.
external and internal oblique	Move upper body with respect to pelvis and vice versa; tense abdominal wall; compress abdominal viscera.
iliopsoas	Ventral and laterally flexes lumbar spine, flexes and laterally rotates at hip, abducts or adducts (depending on which extreme position hip is in).
psoas major	Ventral and laterally flexes lumbar spine, flexes and laterally rotates at hip, abducts or adducts (depending on which extreme position hip is in).
psoas minor	Ventral and laterally flexes trunk on pelvis.
quadratus lumborum	Laterally flexes lumbar spine to the same side, aids forced expiration.
iliocostalis lumborum	Dorsal and laterally flexes spine to the same side.
intertransversarii	Laterally flex spine to the same side.
interspinales	Dorsal flex spine.
rotatores	Dorsal flex and rotate to opposite side.
multifidi	Dorsal flex and rotate to opposite side.

6.2.1A. Non-specific technique to increase **ventral flexion.** *P lying on side.*



Starting Position: P: Lying on left side; hips and knees flexed approximately 90°; cushion may be placed under waist to prevent lumbar spine scoliosis. T: Standing facing P's trunk.

Grip: P's knees supported against T's abdomen and left thigh. T's right hand stabilizes P's T12-L1 segment. T's left hand presses against P's sacrum and pelvis.

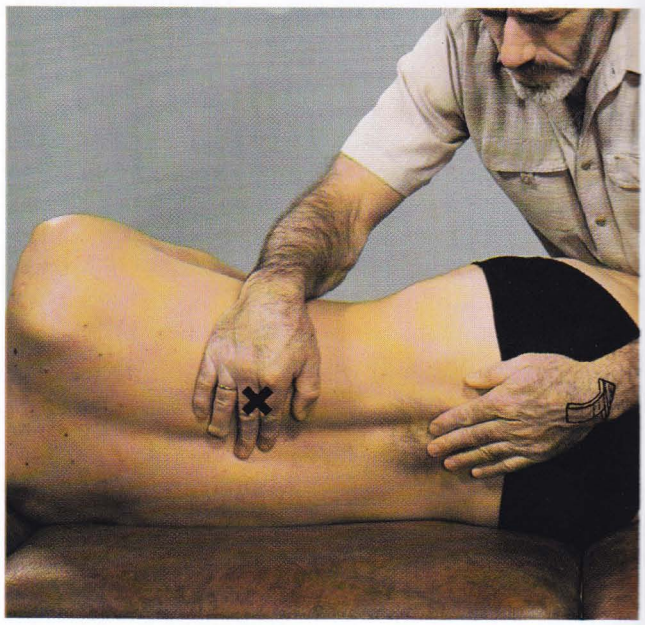


Fig. 96 a. Starting Position.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *ventrally flexes* P's lumbar spine by moving his/her body to the right.

Stimulation of Antagonists: T retains grip and asks P to exhale and maximally ventrally flex lumbar spine. T resists that flexion to stimulate P's antagonists.

Note: In the final position P's hips and knees should be fully flexed, so that the pelvis is involved in the ventral flexion.

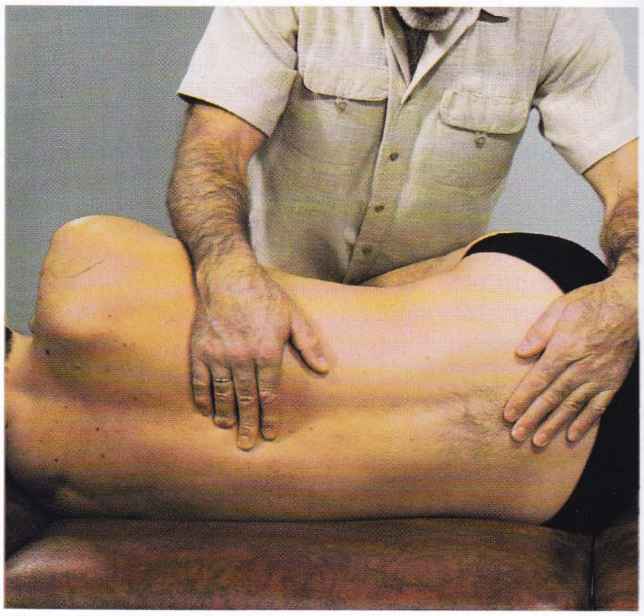
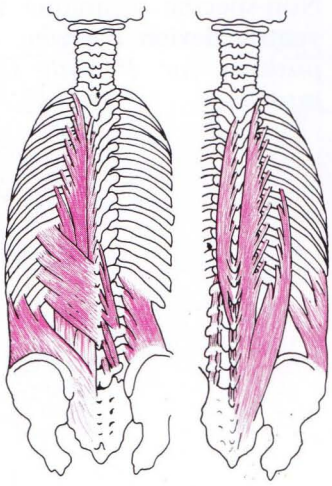


Fig. 96 b. Final Position.

6.2.1B. Non-specific technique to increase **ventral flexion.** *P prone.*



Starting Position: P: Prone; legs and pelvis over couch end; cushion under abdomen; feet resting lightly against floor; hands holding on to the sides of the couch. T: Standing facing P's left side.

Grip: T's left hand stabilizes P's T12-L1 segment. T's right hand is placed on P's sacrum and pelvis.

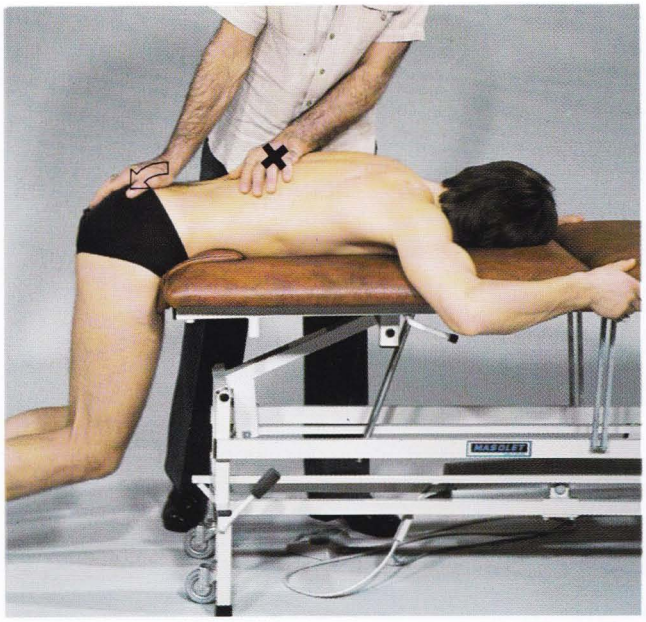


Fig. 97 a. Starting Position.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *ventrally flexes* P's lumbar spine by pressing against P's sacrum and pelvis.

Stimulation of Antagonists: T retains grip with left hand (supporting it with the right hand), and asks P to maximally ventrally flex lumbar spine. T resists that flexion to stimulate P's antagonists.

Note: If P's back muscles are especially strong, then the following alternative technique, **6.2.1C**, p. 122 may be used. Here P's hips and knees are extended (off the floor) to increase loading; P then needs only to relax his/her lower back muscles during the procedure.

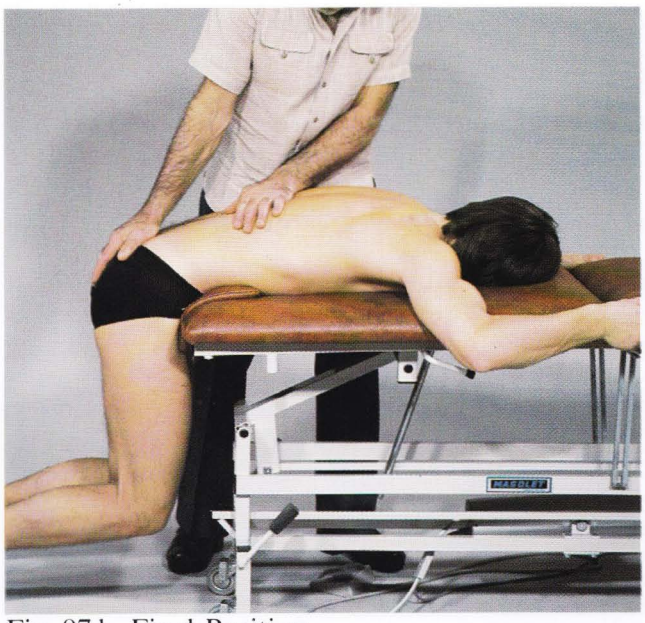
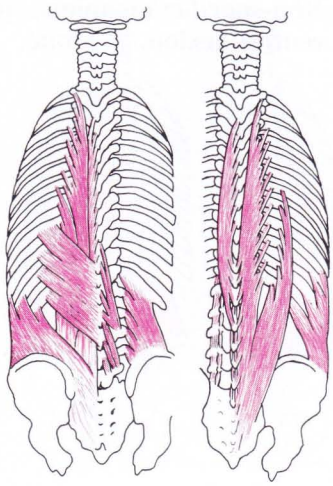


Fig. 97 b. Final Position.

6.2.1 C. Non-specific technique to increase **ventral flexion** *P prone. Alternative position for P with strong back muscles.*



Starting Position: P: Prone; legs and pelvis over couch end; cushion under abdomen; hips and knees extended with legs horizontal or above horizontal; hands holding on to the sides of the couch. T: Standing facing P's left side.

Grip: T's left hand stabilizes P's T12-L1 segment. T's right hand is placed on P's sacrum and pelvis.

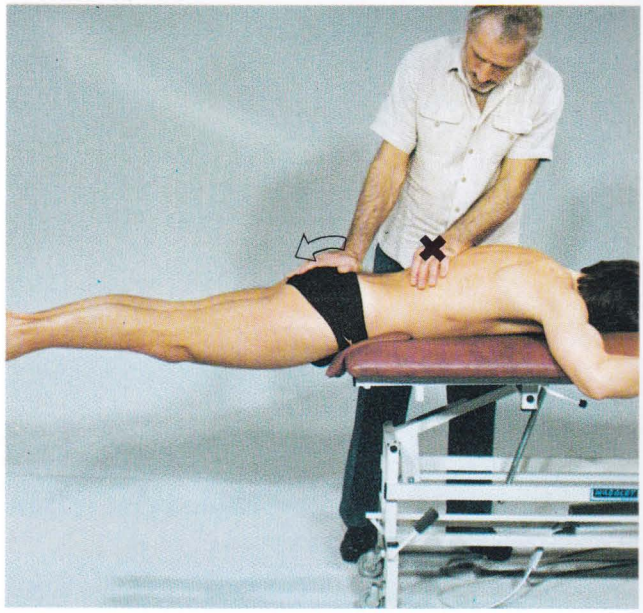


Fig. 97 c. Starting Position.

Procedure: Using this grip, T asks P to exhale and relax back muscles to gradually sink both legs *and* pelvis down towards floor, keeping knees extended. The movement should only *ventrally flex* P's lumbar spine; there should be no movement at the hip joints. T guides and may aid the movement by pressing against P's sacrum and pelvis.

Stimulation of Antagonists: T retains grip with left hand (supporting it with the right hand), and asks P to drop legs and pelvis towards floor, by flexing in lumbar spine (*not* the hip joints). T resists lumbar spine flexion to stimulate P's antagonists.

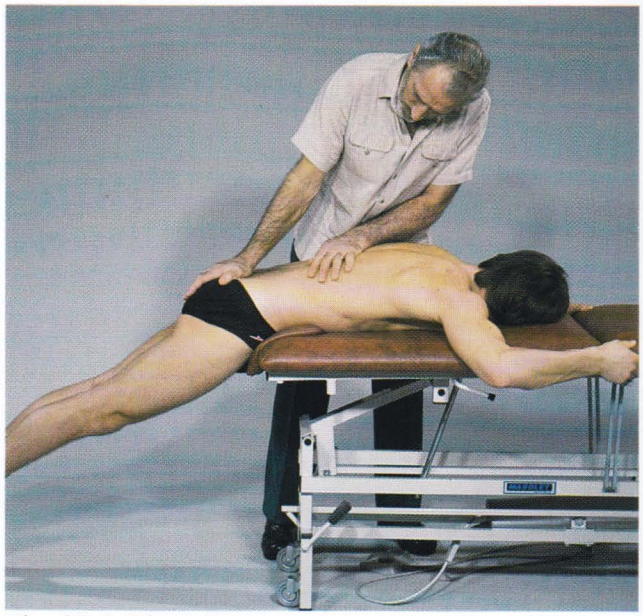
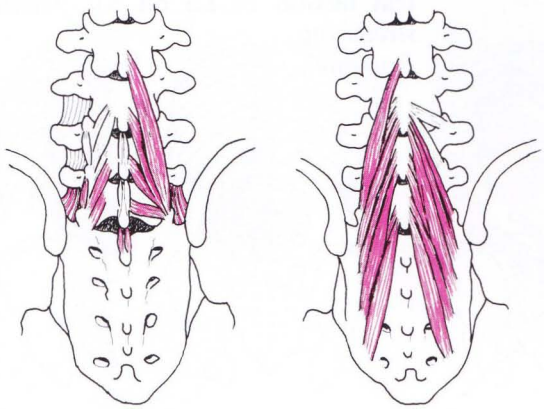


Fig. 97 d. Final Position.

6.2.2. Specific technique to increase **ventral flexion** of **L5 on S1.**
P prone.



Starting Position: P: Prone; lumbar spine ventrally flexed with a firm cushion under the abdomen at the cranial vertebra of the segment treated (in this case L5 on S1); if possible, the middle of the couch should also be raised. T: Standing facing P's left side.

Grip: T's right hypothenar is placed over P's spinous process of L5 with the rest of his hand stabilizing the segments cranial to it. T's left thenar/hypothenar is placed on P's sacrum.

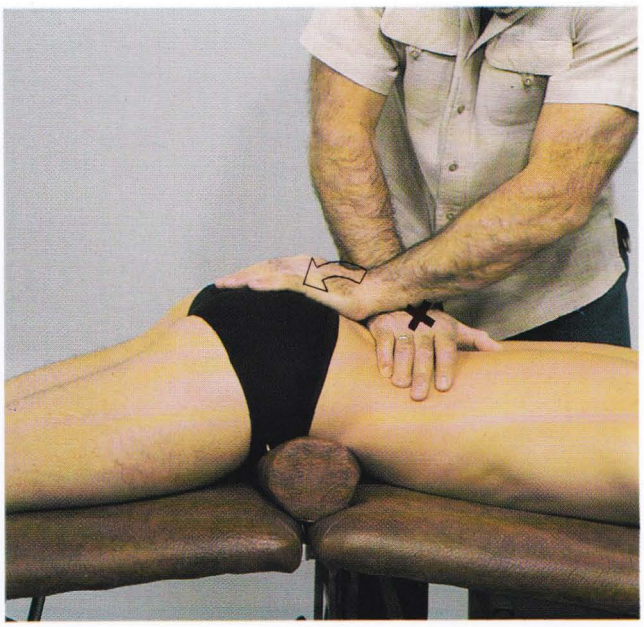


Fig. 98 a. Starting Position.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *ventrally flexes* L5 on S1 by pushing P's sacrum caudally and ventrally.

Stimulation of Antagonists: T places left hand on top of right and asks P to exhale while rotating pelvis backwards (pulling symphysis towards thorax). T resists that backwards rotation to stimulate P's antagonists.

Note: When treating a lumbar segment cranial to L5, T's left thenar or hypothenar should be placed against the spinous process of the **caudal** vertebra in the segment to be treated. T's right hypothenar then stabilizes the spinous process of the **cranial** vertebra in the same segment. Otherwise the technique is performed as above.

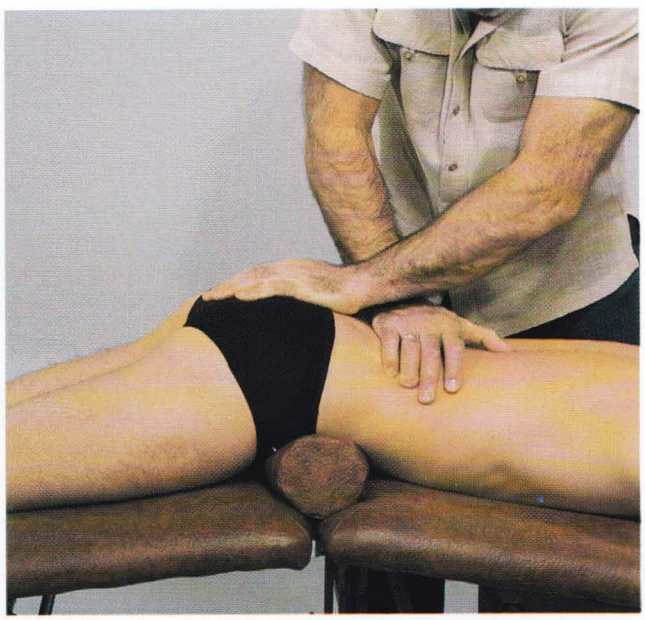
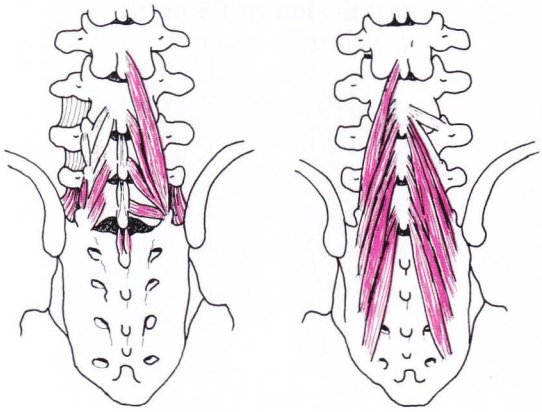


Fig. 98 b. Final Position.

6.2.3. Specific technique to increase **ventral flexion** of **L5 on S1**. *Maximal stretching.*
P prone.



Starting Position: P: Prone; legs and pelvis over couch end; lumbar spine ventrally flexed using a firm cushion under the abdomen at the cranial vertebra of the segment treated (in this case L5 on S1); feet resting lightly on the floor; hands holding on to sides of couch. T: Standing facing P's left side.

Grip: T's right hypothenar is placed over P's spinous process of L5 with the rest of the hand stabilizing the segments cranial to it. T's left thenar/hypothenar is placed against P's sacrum.

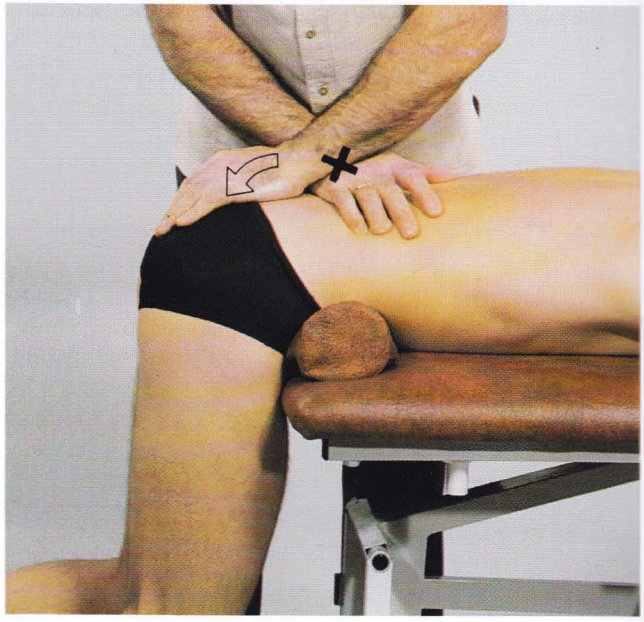


Fig. 99 a. Starting Position.

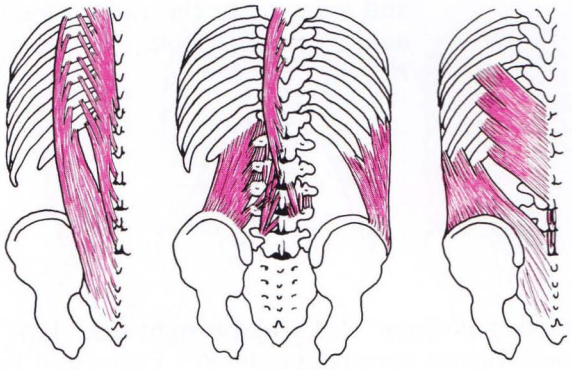
Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *ventrally flexes* L5 on S1 by pushing P's sacrum caudally and ventrally.

Stimulation of Antagonists: T places left hand on top of right and asks P to exhale while rotating pelvis backwards (pulling symphysis towards thorax). T resists that backwards rotation to stimulate P's antagonists.

Note: This technique should be used to obtain **maximal ventral flexion** of L5 on S1, but only if P's physical condition permits.

Fig. 99 b. Final Position.

6.3.1 A. Non-specific technique to increase **ventral flexion** with **rotation** and **lateral flexion to the right.** *Predominantly rotation.*
P lying on side.



Starting Position: P: Lying on left side; hips and knees flexed approximately 90°; spine ventrally flexed; head of couch raised to laterally flex lumbar spine to the right; pelvis may be stabilized with a belt. T: Standing facing P.

Grip: T's right hand is threaded under P's right arm, with forearm and wrist against the right side of P's thorax. To maintain ventral flexion and stabilize P's pelvis, T's left hand grips P's right iliac crest and sacrum, and P's knees are supported against T's abdomen and left thigh.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully rotates P's lumbar spine *to the right* by pushing P's thorax dorsally and caudally. T also gradually and fully *laterally flexes* P's lumbar spine to the right by raising couch section to elevate P's upper body.

Stimulation of Antagonists: T retains grip and asks P to exhale, look to the right, and rotate to the right. T resists that rotation to stimulate P's antagonists.

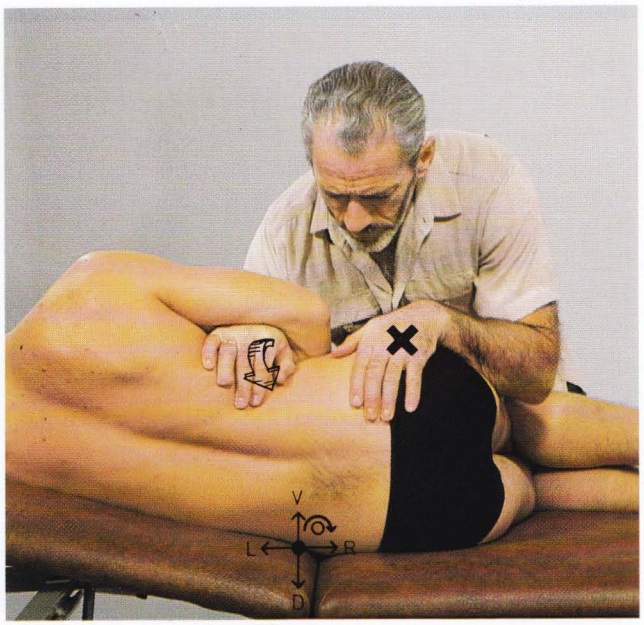


Fig. 100 a. Starting Position.

Notes: This procedure is performed in successive steps by repositioning P in the following manner. To increase:

Lateral flexion to the right,	raise the head end of the couch.
Rotation to the right,	pull P's left arm and shoulder ventrally.
Ventral flexion,	flex P's hip further.

To obtain **maximal rotation** to the right of P's lumbar spine:

1) P's pelvis must be fully rotated to the left by pulling it further ventrally.
2) Left side of P's pelvis must be tilted caudally, which increases lateral flexion to the right.

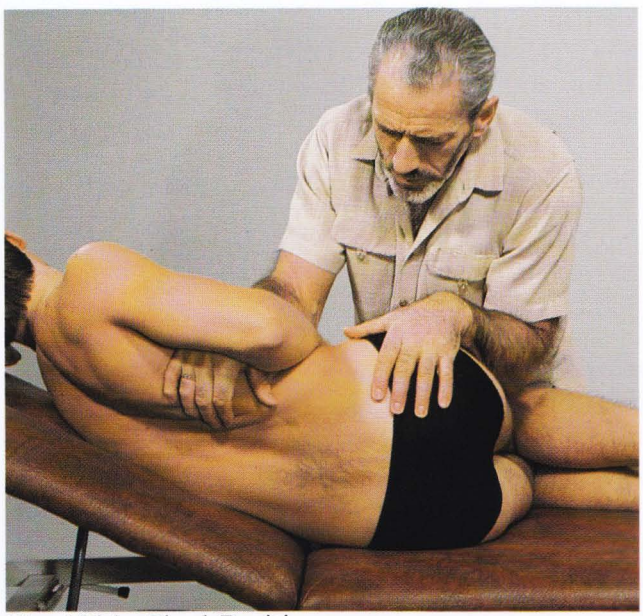
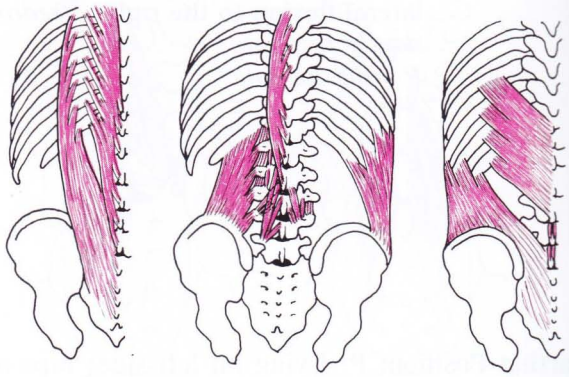


Fig. 100 b. Final Position.

6.3.1B. Non-specific technique to increase **ventral flexion** with **lateral flexion** and **rotation to the right.** *Predominantly lateral flexion.*
P lying on side.



Starting Position: P: Lying on right side; hips and knees flexed approximately 90°; knees and lower legs over side of the couch; spine ventrally flexed; firm cushion under waist to laterally flex and rotate lumbar spine to the right. T: Standing facing P.

Grip: T's left hand grips P's lower thorax on the left side, forearm lying along P's upper thorax. T's right hand grips P's left iliac crest with the right forearm lying along the lateral aspect of P's left thigh.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *laterally flexes* P's lumbar spine *to the right* by both pushing P's pelvis and left thigh caudally with right forearm and pushing P's thorax cranially with left forearm. P aids T during the procedure by gradually lowering his/her legs below the level of the couch. T simultaneously *rotates* P's lumbar spine *to the right* by both pushing P's left iliac crest dorsally with right hand and pulling P's thorax ventrally with left hand.

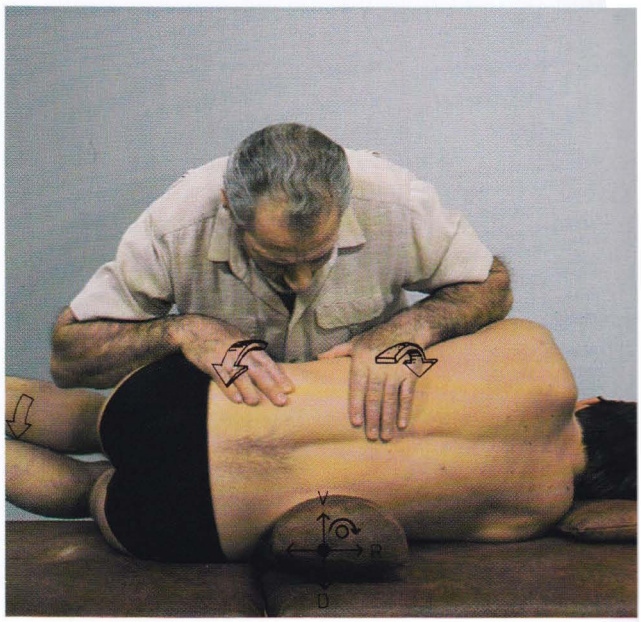


Fig. 101 a. Starting Position.

Stimulation of Antagonists: T retains grip with left, and moves right hand to right side of P's right lower leg. T then asks P to move feet towards floor, and resists that movement to stimulate P's antagonists.

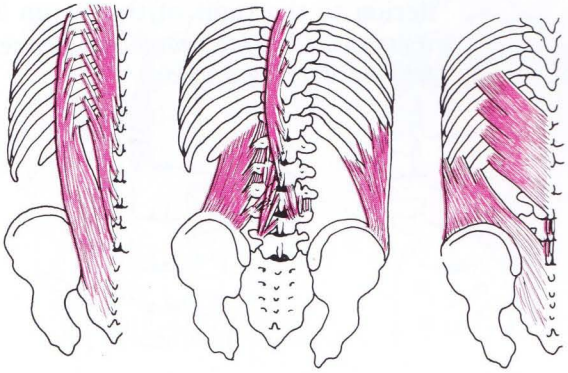
Note: To increase the ventral flexion, flex P's hips further.

To obtain **maximal lateral flexion** to the right of P's lumbar spine:

1) Place a larger cushion under P's waist (this also increases rotation to the right).
2) P's pelvis must be rotated as fully as possible to the left by pushing it further dorsally and caudally.
3) P's thorax must be rotated as fully as possible to the right by positioning it further ventrally and cranially.

Fig. 101 b. Final Position.

6.3.1C. Non-specific technique to increase **ventral flexion** with **lateral flexion** and **rotation to the right.** *Maximal stretching.*
P lying on side.



Starting Position: P: Lying on right side; head of couch raised slightly; upper body over couch end at head (the higher the area in P's lumbar spine to be treated, the less P's upper body extends beyond couch end); it may be necessary to place a cushion under P's right side to prevent any pain caused by pressure against couch edge; hips and left knee extended with his/her right knee flexed approximately 90°; legs stabilized with a belt across the lower legs; lumbar spine ventrally flexed; arms folded across chest. T: Standing facing P.

Grip: T's left hand grips P's right shoulder, arm supporting P's shoulder and chest. T's right hand stabilizes P's pelvis. (If necessary, T's right forearm may be used to stabilize P's pelvis while T's right fingers monitor the movement of the lumbar spine).

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *laterally flexes* and rotates P's lumbar spine *to the right* by slowly lowering P's upper body below the level of the couch and pushing P's left shoulder ventrally and towards the floor.

Stimulation of Antagonists: T retains grip and asks P to exhale, while ventrally flexing and rotating to the right. T resists that movement to stimulate P's antagonists.

Notes: If P is not sufficiently strong and/or T finds this technique difficult, then P may support own weight by placing his/her right hand against the floor (or a chair). Alternatively, T can stabilize P's pelvis with a belt and support P's upper body with both arms.

This technique should be used to obtain **maximal lateral flexion** and **rotation** to the right of P's lumbar spine, but only if P's physical condition permits.

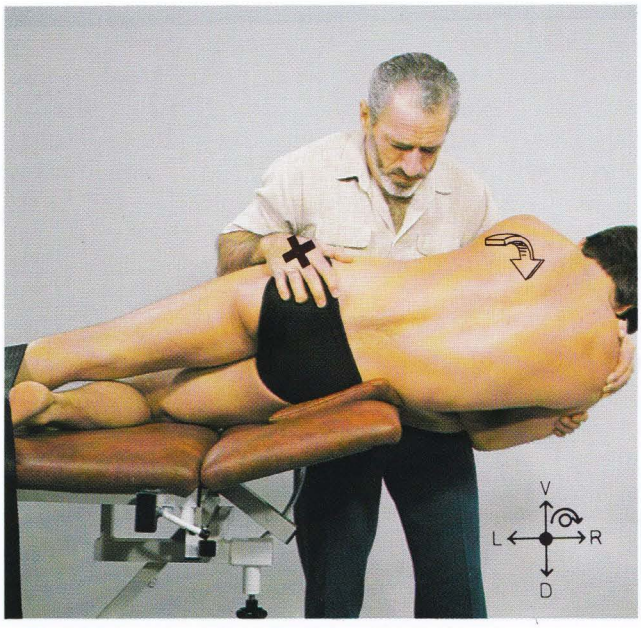


Fig. 102 a. Starting Position.

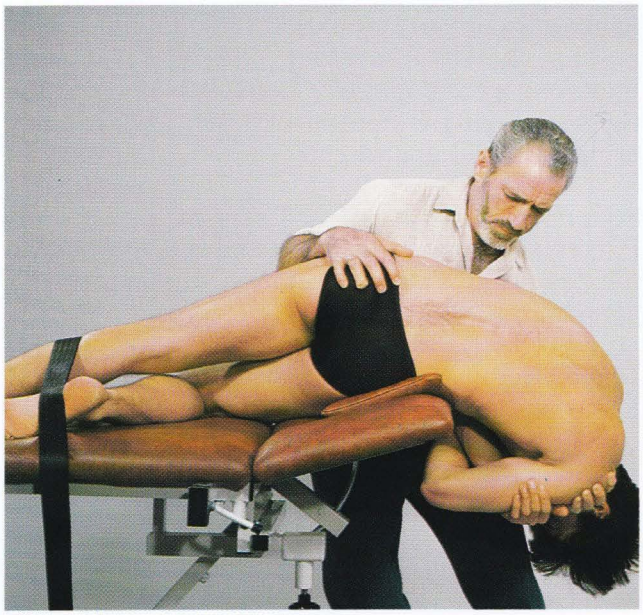
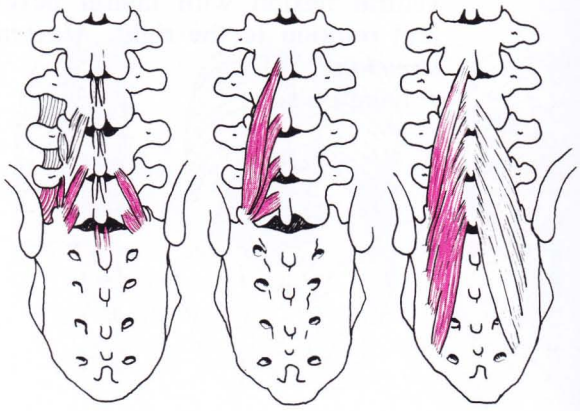


Fig. 102 b. Final Position.

6.3.2. Specific technique to increase **ventral flexion** with **rotation** and **lateral flexion to the right** of the **L5 on S1** segment. *Locking cranial* to segment treated. *P lying on side.*



Starting Position: P: Lying on left side; left leg extended; right hip and knee flexed approximately 90°; right foot hooked behind left knee; spine ventrally flexed; vertebrae cranial to L5 laterally flexed to the left by a firm cushion under the waist; this produces a rotation to the left, which *locks* segments cranial to L5 from rotating to the right; the L5-S1 segment must be in the neutral position; left hand grips right wrist. T: Standing facing P's trunk.

Grip: T's right hand is threaded under P's right arm, with thumb on the right side of the spinous process of P's L5 vertebra (the tip also palpating the spinous process of S1 to monitor the movement). T's right forearm lies along P's right thorax. T's left hand and wrist are placed against P's right iliac crest with left forearm lying along the lateral aspect of P's right thigh.

Procedure: To stabilize the lumbar spine including the L4-L5 segment, T rotates P's thorax and lumbar spine to the right. Maintaining this position, T asks P to exhale while gradually and fully *rotating* and *laterally flexing* L5 on S1 to the *right* by pulling P's pelvis ventrally and cranially using left hand and forearm.

Stimulation of Antagonists: T retains grip and asks P to exhale, look to the right and rotate thorax to the right. T resists that rotation to stimulate P's antagonists.

Note: To obtain **maximal rotation** to the right of L5 on S1:

1) P's pelvis must be fully rotated to the left by pulling it further ventrally and cranially.
2) P's pelvis must be tilted caudally to the left and/or a larger cushion placed at the waist to increase lateral flexion to the right.

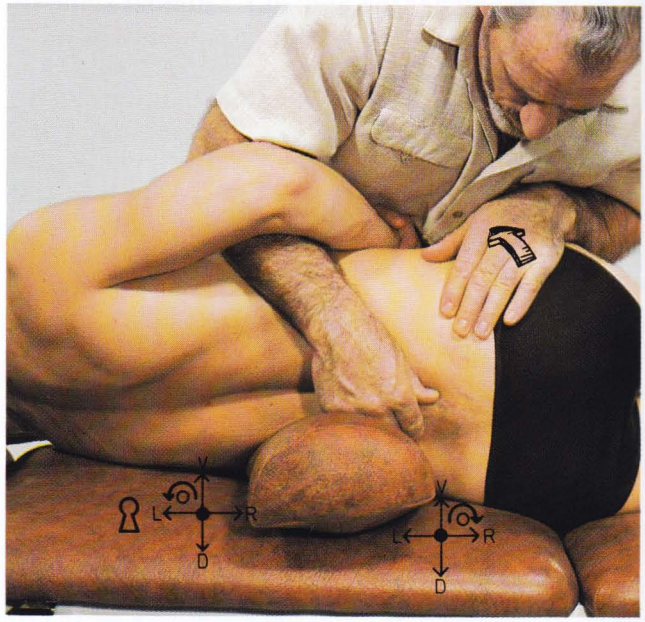
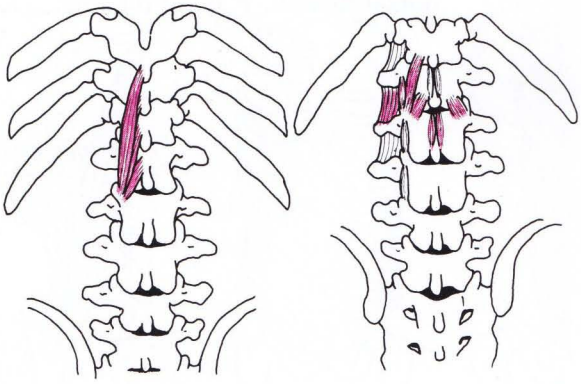


Fig. 103 a. Starting Position.

Fig. 103 b. Final Position.

6.3.3. Specific technique to increase **ventral flexion** with **rotation** and **lateral flexion to the right** of the **L1 on L2** segment. *Locking cranial* to and *caudal* to segment treated. *P lying on side.*



Starting Position: P: Lying on left side; left hip and knee fully flexed to ventrally flex lumbar spine; right leg extended to tilt right side of pelvis caudally, which laterally flexes and rotates the lumbar spine (up to L2) to the left; to obtain adequate lateral flexion and rotation to the left, it may be necessary to place the right leg over the side of the couch (towards T), with perhaps a cushion under the waist (if P has a small pelvis); The thoracic spine cranial to L1 dorsally flexed and the head of couch raised to obtain lateral flexion to the right. (This produces a rotation to the left, which *locks* segments cranial to L1 from rotating to the right.) left hand grips right forearm. T: Standing facing P.

Grip: T's right hand threads under P's right arm, thumb against the right side of the spinous process at P's L1 vertebra (tip palpating the L2 spinous process to monitor movement). T's right forearm lies along P's right thorax. T's left fingers are on the left side of the spinous process of L2 and caudal to it to monitor *locking* of the vertebrae. T's left forearm lies against P's right pelvis.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *rotates* L1 on L2 *to the right* and laterally flexes to the right by pushing P's thorax dorsally and caudally. T's left hand and forearm support P's pelvis and lumbar spine (including L2) from the caudal direction.

Stimulation of Antagonists: T retains grip (reversing its force) and asks P to exhale, look to the right, and rotate thorax to the right. T resists that rotation to stimulate P's antagonists.

Notes: The right rotation of L1 relative to L2 may be produced by: 1) T's left hand and forearm stabilizing L2 caudally, and right hand rotating L1 to the right, or 2) T's right hand and forearm stabilizing L1 cranially, and left hand rotating L2 to the left. T's right hand and forearm control rotation and lateral flexion to the right and the dorsal flexion of P's thoracic spine cranial to L1. The right lateral flexion is "transmitted" caudally to the L1-L2 segment. T's left hand and forearm control rotation and lateral flexion to the left and the ventral flexion of P's lumbar spine caudal to L2. The ventral flexion is "transmitted" cranially to the L1-L2 segment. In this manner, T produces full ventral flexion with rotation and lateral flexion to the right at the L1-L2 segment, as well as *locking* both caudal to and cranial to the segment. This treatment is therefore *specific* to one segment.

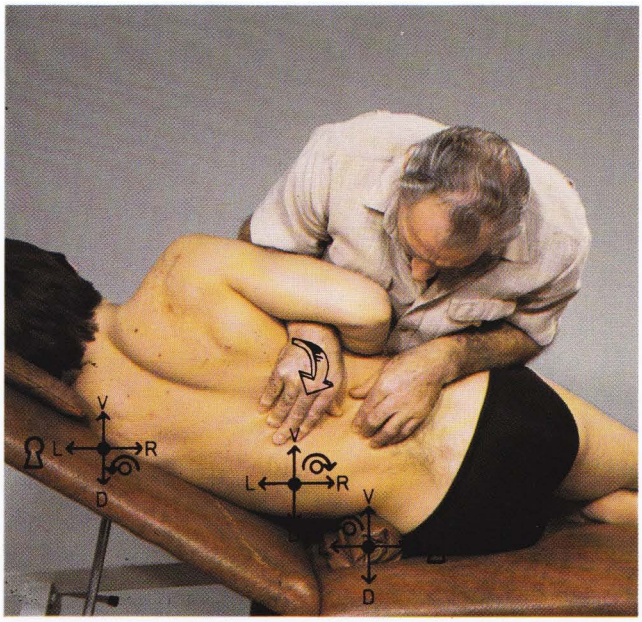


Fig. 104 a. Starting Position.

Fig. 104 b. Final Position.

8. MOVEMENT RESTRICTION TABLES

The following tables list the various movements which may be restricted, indexed to the muscles which, when shortened, cause the restrictions.

The tables may be used *diagnostically*, to identify the muscles which may be involved in restricting particular movements. Or they may be used *analytically*, to identify the movements which may be restricted by the shortening of particular muscles.

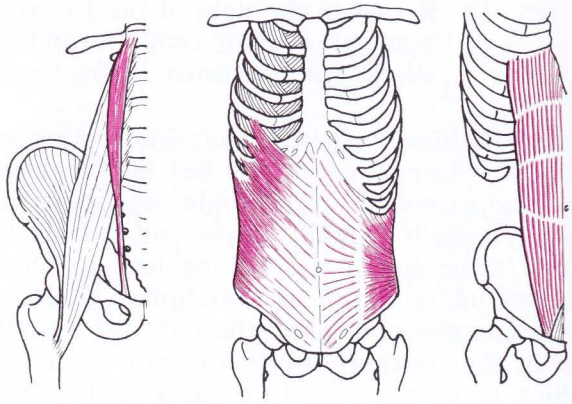
In most, but not all cases, a shortened muscle causes restriction to motion in an opposite manner to its main action. In some cases, actions and/or restricting effects may change when muscles are in extreme positions. For the spine and TM joint and associated structures, these effects are not as pronounced as they are for the muscles associated with movements of the extremities (see Volume I). They are nonetheless present to some degree in all extreme movements.

8.1. Table of
HEAD AND NECK (CERVICAL SPINE) MOVEMENTS RESTRICTED BY SHORTENED MUSCLES

•• = Primary restrictor • = Secondary restrictor

	RESTRICTED MOVEMENT					
SHORTENED MUSCLE	Ventral flexion	Dorsal flexion	Lateral flexion to the same side	Lateral flexion to the opposite side	Rotation to the same side	Rotation to the opposite side
sternocleido-mastoideus				••	••	
scalenus anterior		•		••	••	
scalenus medius		•		••	••	
scalenus posterior	•			•		•
trapezius, descending part	•			•	•	
longus colli		•		•		•
longus capitis		•		•		•
rectus capitis anterior		•		•		•

6.4.1 A. Non-specific technique to increase **dorsal flexion.** *P lying on side.*



Starting Position: P: Lying on left side; hips and knees flexed approximately 90°; cushion under waist to prevent lumbar spine scoliosis. T: Standing facing P.

Grip: P's knees are supported against T's abdomen and thighs. T's hands are on top of one another pressing P's lumbar segments to increase dorsal flexion.

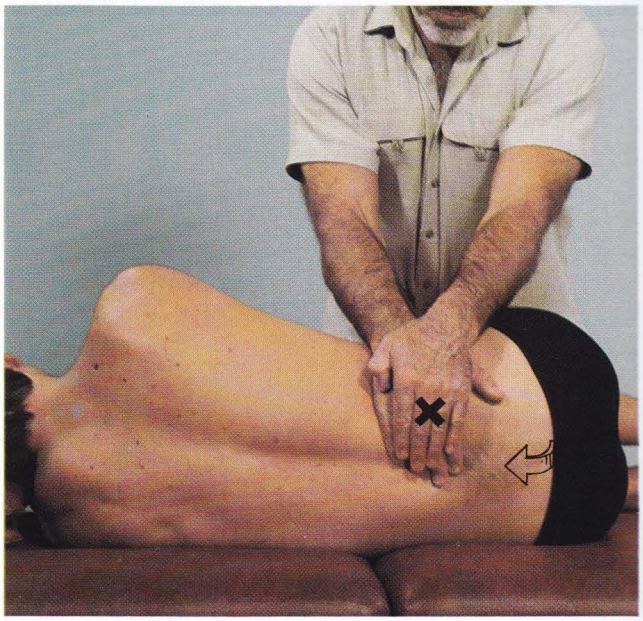


Fig. 105 a. Starting Position.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *dorsally flexes* P's lumbar spine by moving his/her body to the left, thus pushing P's pelvis and sacrum dorsally and cranially.

Stimulation of Antagonists: T moves right hand to P's upper thorax, and asks P to increase lordosis, pressing knees against T's thigh (by contracting hip extensors). T resists that movement to stimulate P's antagonists.

Note: P's hips should remain in 90° flexion throughout the procedure. Therefore, T must step sideways when moving towards the foot of the couch to dorsally flex P's lumbar spine.

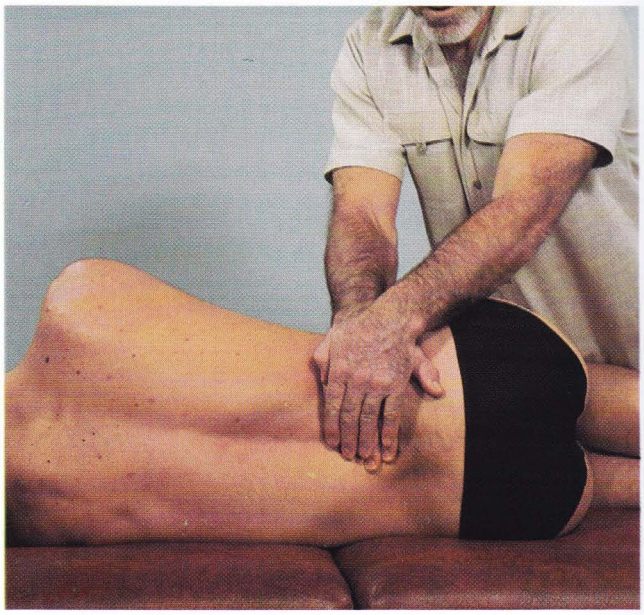
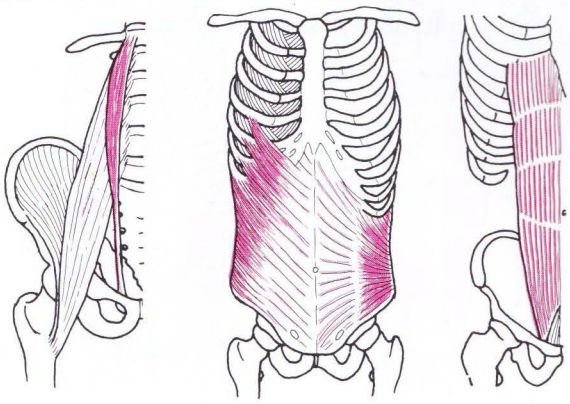


Fig. 105 b. Final Position.

6.4.1B. Non-specific technique to increase **dorsal flexion** *P supine.*



Starting Position: P: Supine; firm cushion under lower back to dorsally flex lumbar spine (cushion should be large enough to hold P's buttocks up off couch even when dorsal flexion is maximum); hips and knees flexed; feet against the raised foot of couch. T: Standing facing P's left side.

Grip: T's right hand and forearm stabilize P's thorax just below the sternum. T's left wrist and forearm are placed over P's pelvis.

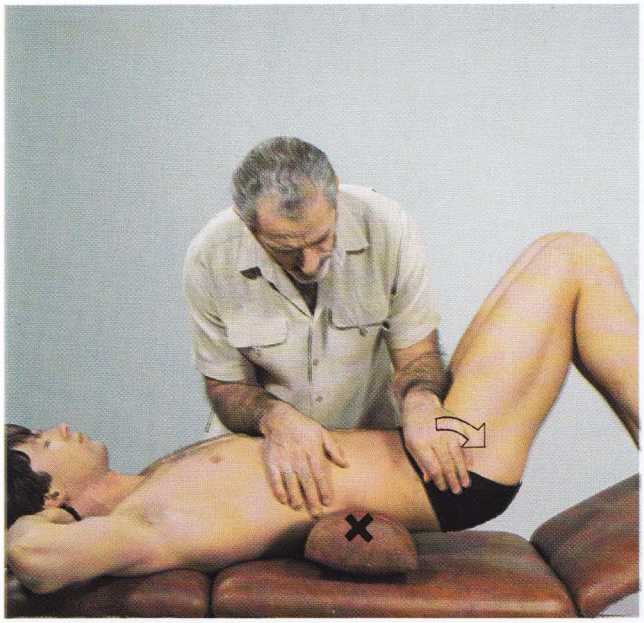


Fig. 106 a. Starting Position.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *dorsally flexes* P's lumbar spine by pressing the pelvis dorsally.

Stimulation of Antagonists: T retains right hand grip and places left hand under P's buttocks, and then asks P to press pelvis against couch to increase lordosis. T resists that movement to stimulate P's antagonists.

Note: This technique is best used when T wishes to treat P's lumbar spine while also avoiding full dorsal flexion of the segments caudal to the one treated (as when P has low back pain and/or hypermobility).

The stretching effect will be greater (but without protection of the lower lumbar segments) if a larger cushion is placed under P's lower back with the foot of the couch lowered and P's legs extended.

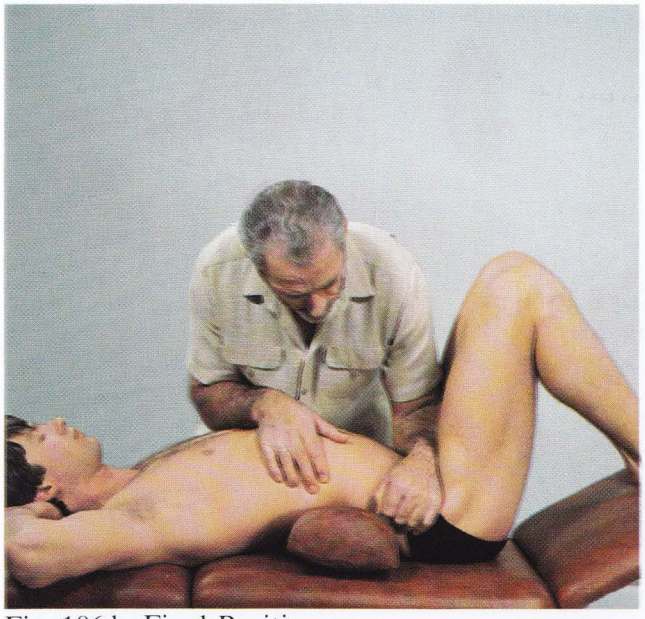
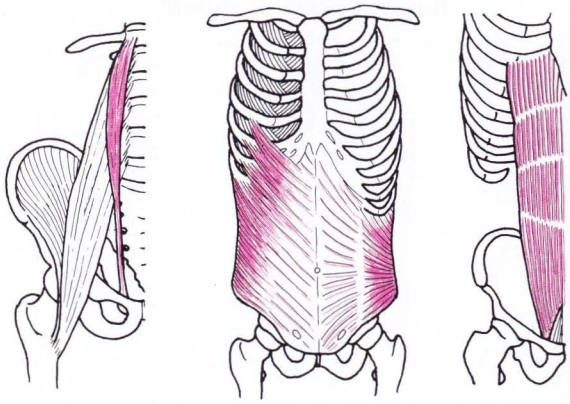


Fig. 106 b. Final Position.

6.4.2. Relatively specific technique to increase **dorsal flexion** of the **thoraco-lumbar transition.** *P supine.*



Starting Position: P: Supine; firm cushion under T12- L1 segment; hips and knees flexed; feet against the fully raised foot of the couch, to produce a **ventral** flexion in lower lumbar spine. T: Standing facing P's left side.

Grip: T's right hand and forearm stabilize P's thorax below the sternum. T's left forearm is placed against the upper part of P's iliac crests.

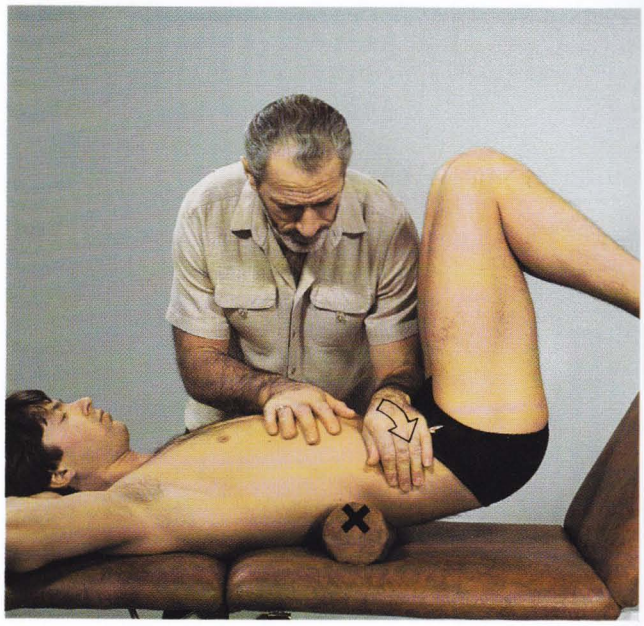


Fig. 107 a. Starting Position.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *dorsally flexes* P's thoraco-lumbar transition by pressing the pelvis and lower lumbar spine dorsally, keeping the lower lumbar spine flexed ventrally.

Stimulation of Antagonists: T retains right hand grip and places left hand under P's lower lumbar spine. While assuring that ventral flexion of lumbar spine is retained, T asks P to press lower back against couch to increase lordosis. T resists that movement to stimulate P's antagonists.

Note: This technique is best used when T wishes to treat P's lumbar spine at a higher level while also avoiding full dorsal flexion of the segments caudal to the one treated (as when P has low back pain and/or hypermobility).

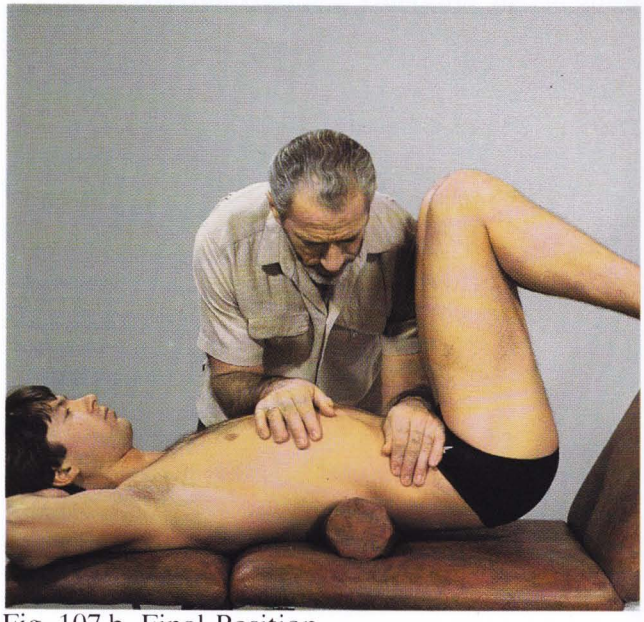
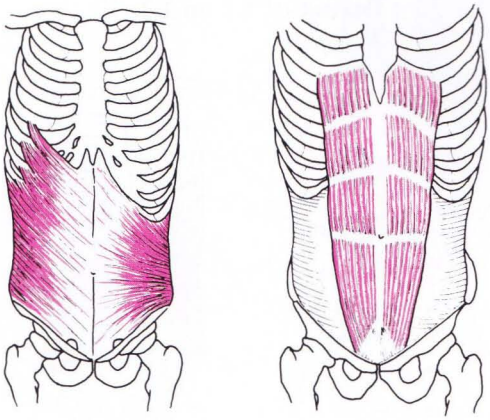


Fig. 107 b. Final Position.

6.4.3. Specific technique to increase **dorsal flexion** of **L5 on S1.**
P supine.



Starting Position: P: Supine; hips and knees flexed; feet against the raised foot of couch to lift pelvis ventrally; wedge-shaped block against the transverse processes of L5 to stabilize it and cranial vertebrae.
T: Standing facing P's right side.

Grip: T's left hand and forearm stabilizes P's thorax below the sternum. T's right forearm is placed against P's pelvis.

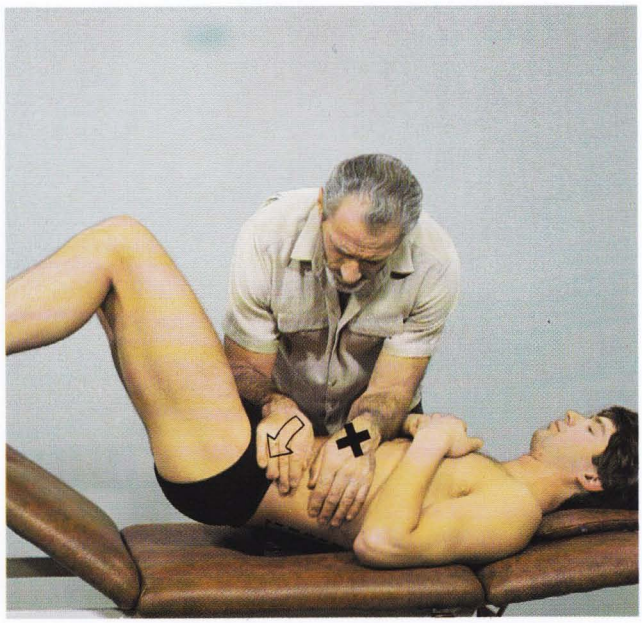


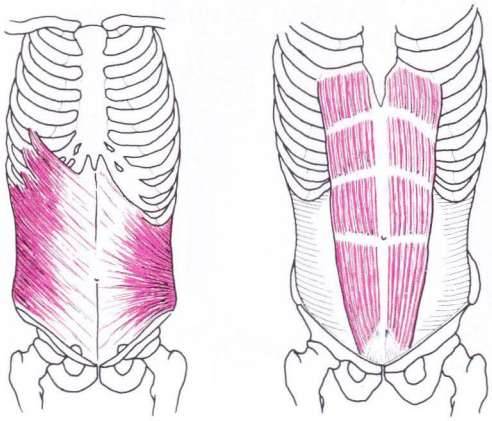
Fig. 108 a. Starting Position.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *dorsally flexes* L5 on S1 by pressing P's pelvis dorsally.

Stimulation of Antagonists: T retains left-hand grip, moves right hand to under P's sacrum, and asks P to press pelvis towards the couch. T resists that movement to stimulate P's antagonists.

Fig. 108 b. Final Position.

6.4.4. Specific technique to increase **dorsal flexion** of **L1 on L2.**
P supine.



Starting Position: P: Supine; hips and knees flexed; feet against fully raised foot of couch, which ventrally flexes lower lumbar spine; wedge-shaped support against the transverse processes of L1 to stabilize it and the cranial vertebrae. T: Standing facing P's right side.

Grip: T's right hand palpates P's spinous processes of L1 and L2 to monitor movement. T's right forearm may support P's pelvis. T's left hand and forearm are placed over P's abdomen and lower thorax.

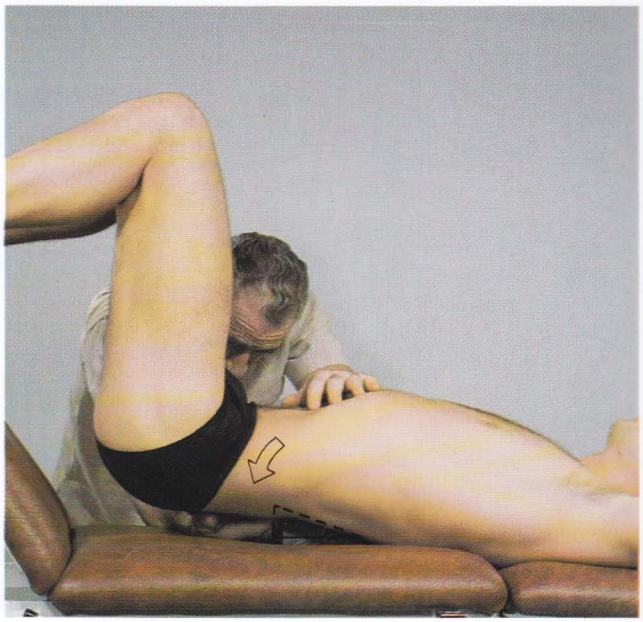


Fig. 109 a. Starting Position.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *dorsally flexes* L1 on L2 by lowering the pelvis and lumbar spine.

Stimulation of Antagonists: T retains hand positions, and asks P to press lower lumbar spine towards couch, keeping lower lumbar spine ventrally flexed. T resists that movement to stimulate P's antagonists.

Notes: This technique is best used when T wishes to treat P's upper lumbar spine while also avoiding full dorsal flexion of the segments caudal to the one treated (as when P has pain and/or instability in his lower lumbar spine). P's knees can be either flexed or extended with the foot of the couch raised, which produces sufficient ventral flexion to protect the lower lumbar segments.

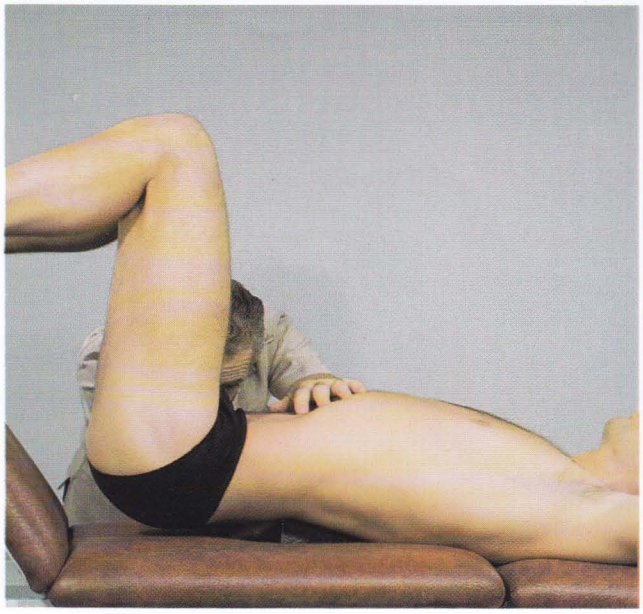
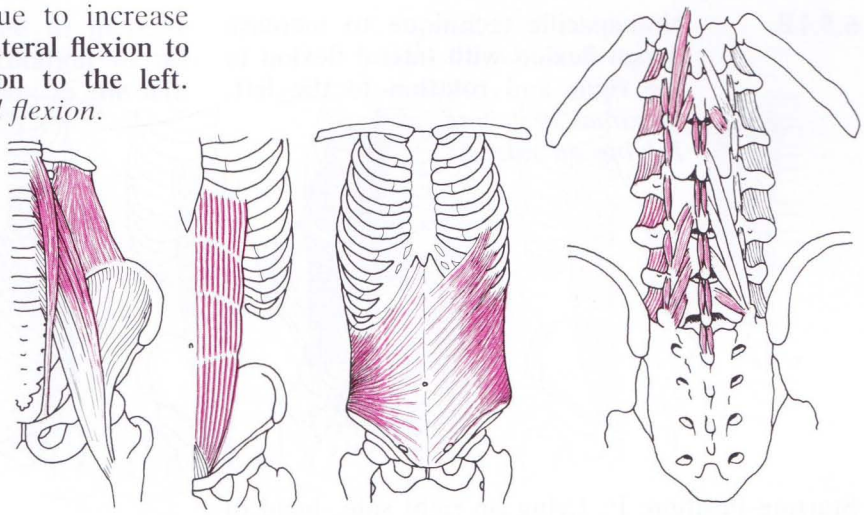


Fig. 109 b. Final Position.

6.5.1A. Non-specific technique to increase **dorsal flexion** with **lateral flexion to the right** and **rotation to the left.** *Predominantly lateral flexion. P lying on side.*



Starting Position: P: Lying on right side; hips and knees flexed approximately 90°; knees and lower legs over side of couch; spine dorsally flexed; firm cushion under waist to laterally flex lumbar spine to the right, which rotates lumbar vertebrae to the left. T: Standing facing P.

Grip: T's left hand stabilizes P's lower thorax on the left side, forearm lying along P's upper thorax. T's right hand grips P's left iliac crest with right forearm lying along the lateral side of P's left thigh.

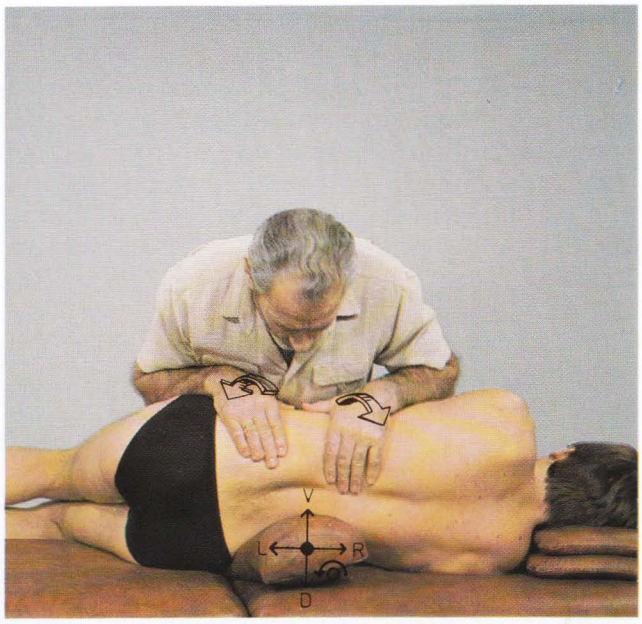


Fig. 110 a. Starting Position.

Procedure: Using this grip, T asks P to exhale and gradually and fully *increases rotation to the left, laterally flexes to the right* and *dorsal flexes* P's lumbar spine, using right hand and forearm to pull P's pelvis and left thigh caudally and ventrally, and left hand and forearm to push P's thorax cranially and dorsally. This movement is aided by P gradually lowering his/her legs below the level of the couch.

Stimulation of Antagonists: T retains grip with left hand and moves right hand to lateral side of P's lower leg, and asks P to press feet towards floor. T resists that movement to stimulate P's antagonists.

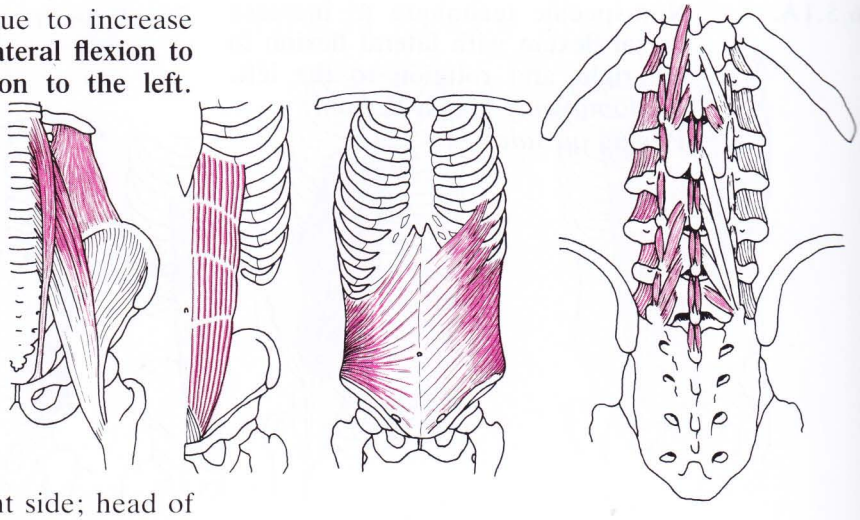
Note: To increase the dorsal flexion, move P's upper torso dorsally along the couch.

To attain **maximal lateral flexion** to the right of P's lumbar spine:

1) Place a larger cushion under P's waist (which also increases rotation to the left).
2) P's pelvis must be fully rotated to the right by pulling it further ventrally and caudally.

Fig. 110 b. Final Position.

6.5.1B. Non-specific technique to increase **dorsal flexion** with **lateral flexion to the right** and **rotation to the left.** *Maximal stretching. P lying on side.*



Starting Position: P: Lying on right side; head of couch raised slightly; upper body extends beyond couch head. (The higher the area in P's lumbar spine to be treated, the less P's upper body extends beyond couch end); it may be necessary to place a cushion under right side to avoid any pain caused by pressure against couch edge; left hip and knee extended; right knee flexed approximately 90°; left leg stabilized with a belt; lumbar spine dorsally flexed; arms folded across chest. T: Standing facing P.

Grip: T's left hand grips P's right shoulder, arm supporting P's shoulder and chest. T's right hand stabilizes P's pelvis. (If necessary, T's right forearm may be used to stabilize P's pelvis, with fingers monitoring the movement of the lumbar spine).

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *laterally flexes to the right* and *rotates* P's lumbar spine *to the left* by slowly lowering P's upper body below the level of the couch and pulling the right shoulder ventrally.

Stimulation of Antagonists: T retains grip with left hand and moves right hand to dorsal side of P's left shoulder. T then asks P to exhale, look upwards to ceiling, bend backwards, and rotate thorax to the left. T then resists that movement to stimulate P's antagonists.
Notes: If P is not sufficiently strong and/or T finds this technique difficult, then P may support own weight by placing his/her right hand against the floor (or a chair). Alternatively, T can stabilize P's pelvis with a belt and support P's upper body with both arms. It is also possible to perform this technique using an articulated couch (see technique **6.5.1C**, p. 137).

This technique should be used to obtain **maximal lateral flexion** and **rotation** of P's lumbar segments, but only if P's physical condition permits.

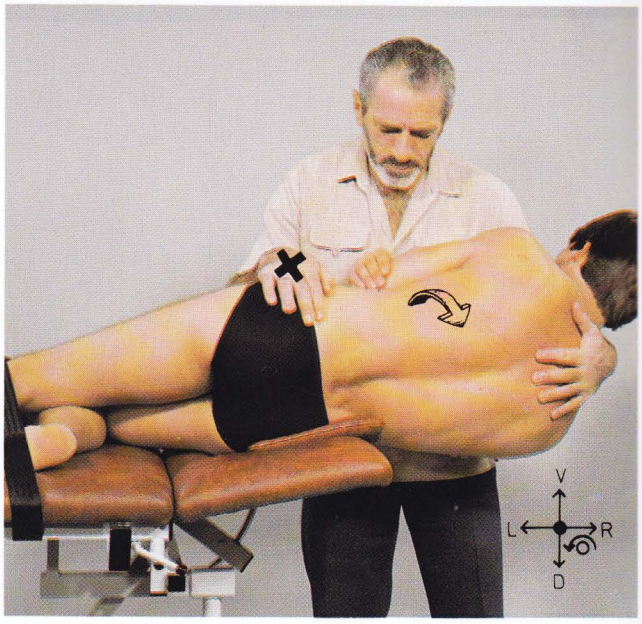


Fig. 111 a. Starting Position.

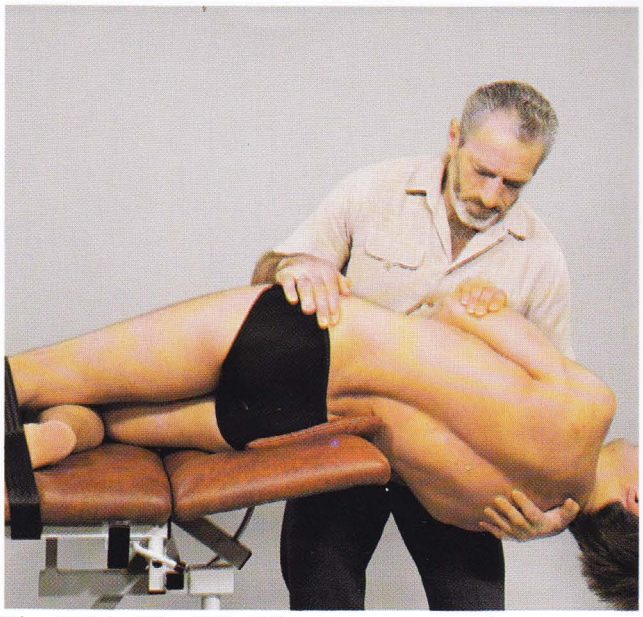
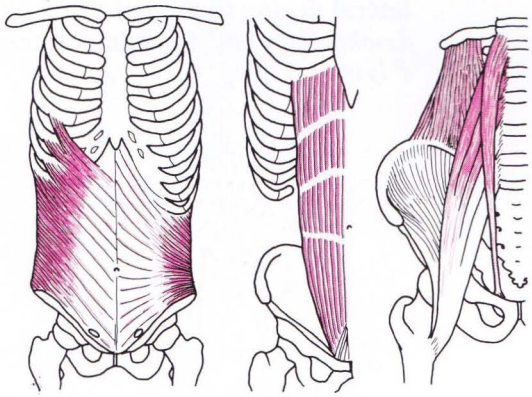


Fig. 111 b. Final Position.

6.5.1C. Non-specific technique to increase **dorsal flexion** with **rotation to the right** and **lateral flexion to the left.**
Predominantly rotation.
P lying on side.



Starting Position: P: Lying on left side; right hip and knee extended; left hip and knee flexed; left foot under right knee; lumbar spine dorsally flexed; lumbar segments over raised middle section of couch, which tilts pelvis to the right and produces lateral flexion to the left of the lumbar spine (a large cushion may be placed at P's left waist if the couch is not articulated); left hand grips right forearm. T: Standing facing P.

Grip: T's right hand is threaded under P's right arm, forearm and wrist against the right side of P's thorax. T's left hand stabilizes P's right iliac crest and sacrum with his/her left forearm against P's pelvis and thigh.

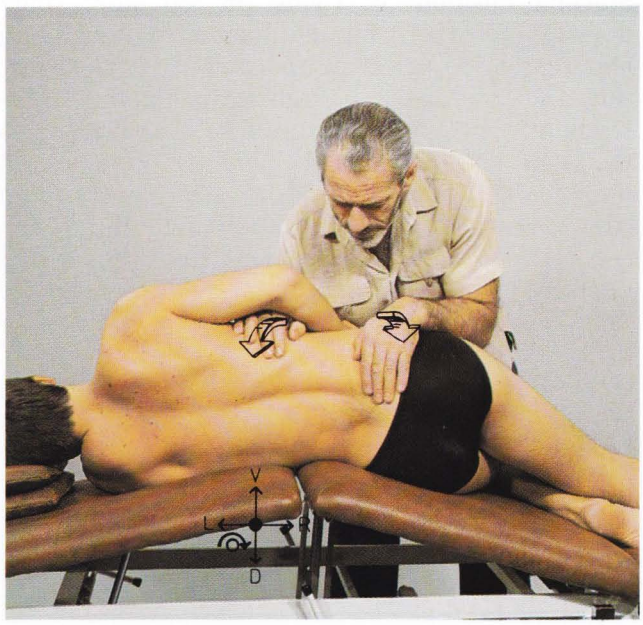


Fig. 112 a. Starting Position.

Procedure: Using this grip, T asks P to exhale while he/she gradually and fully *rotates to the right* and *laterally flexes* P's lumbar spine to the left by pushing P's thorax dorsally and cranially and pulling P's right iliac crest ventrally and caudally.

Stimulation of Antagonists: T retains grip (reversing its force) and asks P to exhale, look to the right, and rotate thorax to the right. T resists that movement to stimulate P's antagonists.

Note: To obtain **maximal rotation** to the right of P's lumbar spine:

1) P's pelvis must be fully rotated to the left by positioning it further ventrally and caudally.
2) P's pelvis must be tilted caudally on the right side and/or the middle section of the couch must be raised which will increase the lateral flexion to the right.

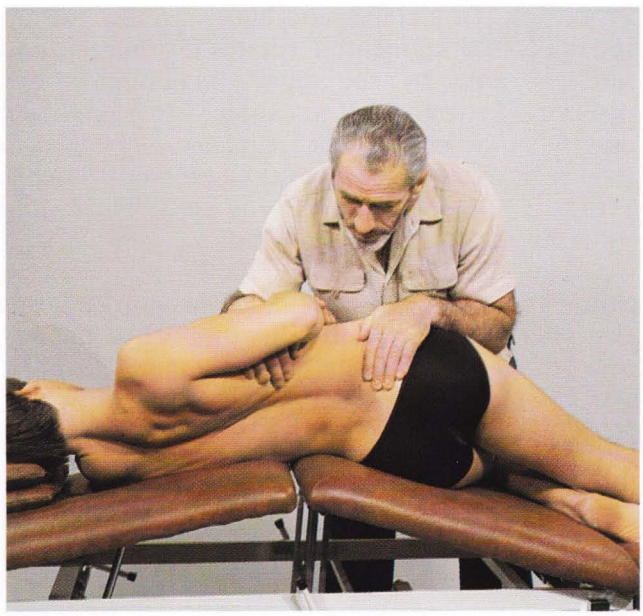
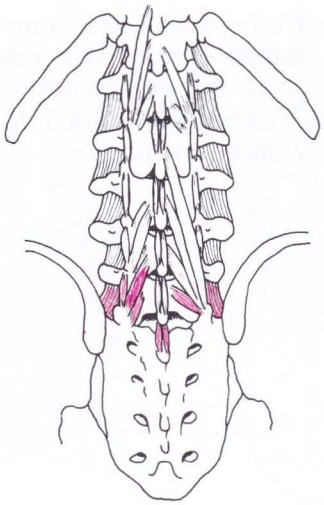


Fig. 112 b. Final Position.

6.5.2. Specific technique to increase **dorsal flexion** with **rotation to the right** and **lateral flexion to the left** of **L5 on S1.** *Locking cranial* to segment treated. *P lying on side.*



Starting Position: P: Lying on left side; spine dorsally flexed; left hip and knee flexed; right leg hyperextended to tilt pelvis caudally to the right side and permit left lateral flexion of the L5-S1 segment; head of couch raised to laterally flex to the right and rotate to the left the thoracic and lumbar segments cranial to L5, which *locks* them from following the rotation to the right during the procedure; the L5-S1 segment must be in the neutral position; left hand grips right forearm. T: Standing facing P.

Grip: T's right hand is threaded under P's right arm, thumb against the right side of P's L5 spinous process (the tip also palpating the spinous process of S1 to monitor the movement). T's right forearm lies along P's right thorax. T's left hand and fingers are placed on P's right ilium and sacrum. T's left forearm lies against P's right pelvis and thigh.

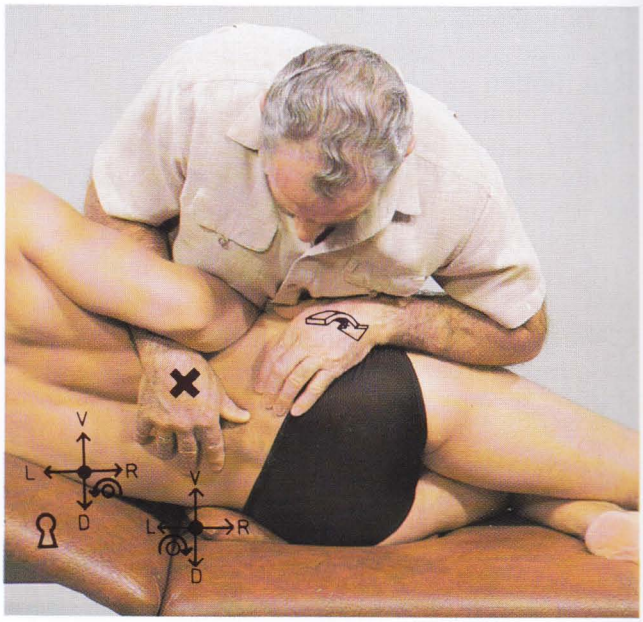


Fig. 113 a. Starting Position.

Procedure: To stabilize the lumbar spine, including the L4-L5 segment, T rotates P's thoracic and lumbar spine to the right. Maintaining this position, T then asks P to exhale, while gradually and fully *rotating to the right* and *laterally flexing to the left* the L5 on S1 segment by pulling P's pelvis ventrally and caudally using left hand and forearm.

Stimulation of Antagonists: T retains grip and asks P to move further in the direction of stretching, and resists that movement to stimulate P's antagonists.

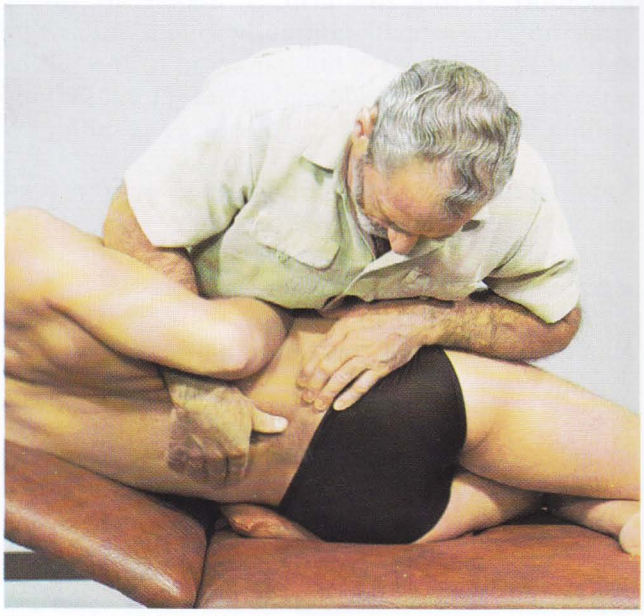
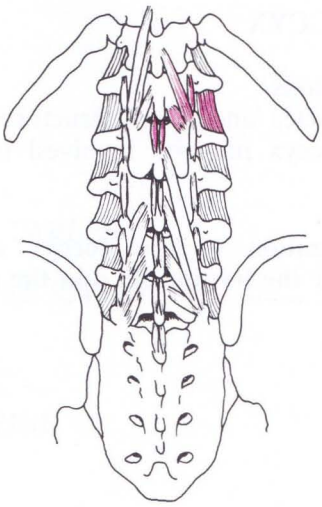


Fig. 113 b. Final Position.

6.5.3. Specific technique to increase **dorsal flexion** with **rotation to the right** and **lateral flexion to the left** of **L1 on L2.** *Locking cranial* to and *caudal* to segment treated. *P lying on side.*



Starting Position: P: Lying on left side; thoracic spine dorsally flexed; head of couch raised (or large cushion placed under left upper body) to laterally flex thoracic segments to the right (which also rotates them to the left) to *lock* them from following the rotation to the right during the procedure; hips and knees flexed approximately 90° to ventrally flex lumbar spine (caudal to L2); a cushion under the waist will laterally flex the lumbar segments caudal to L2 to the left; the L1-L2 segment is in the neutral position; left hand grips right forearm. T: Standing facing P.

Grip: T's right hand is threaded under P's right arm, thumb against the right side of P's L1 spinous process (the tip also palpating the spinous process of L2 to monitor the movement). T's right forearm lies along P's right thorax. T's left hand fingers hold the left side of P's lumbar spinous processes caudal to and including L2. T's left hand and forearm lie against P's right pelvis and thigh.

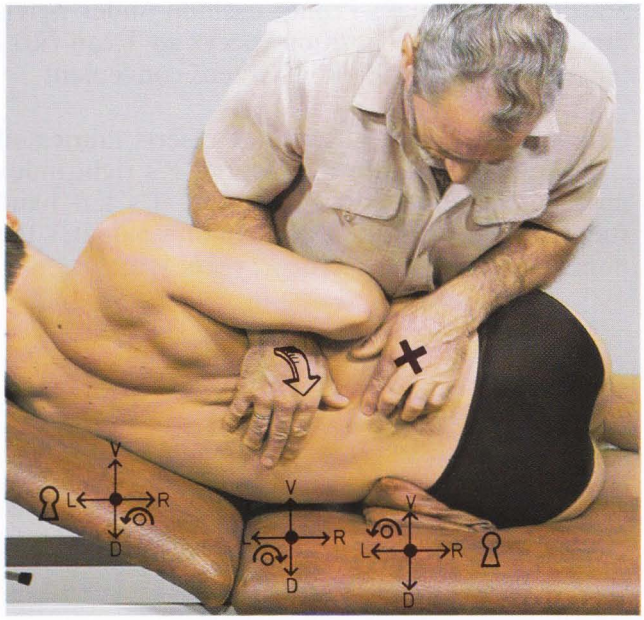


Fig. 114 a. Starting Position.

Procedure: Using this grip, T asks P to exhale as he/she gradually and fully *dorsally flexes* while *rotating* L1 on L2 *to the right* and *laterally flexing to the left* by pushing dorsally and caudally against P's right forearm and thorax with T's chest, right forearm and hand. T's left hand and forearm stabilize P's pelvis and lumbar spine up to and including L2.

Stimulation of Antagonists: T retains grip (reversing its force) and asks P to exhale, look to the right, and rotate thorax to the right. T resists that movement to stimulate P's antagonists.

Note: The **dorsal flexion** from cranial to L1-L2 and the **lateral flexion** to the left caudal to it must "go into" the segment to be treated in rotation to the right and lateral flexion to the left in dorsal flexion.

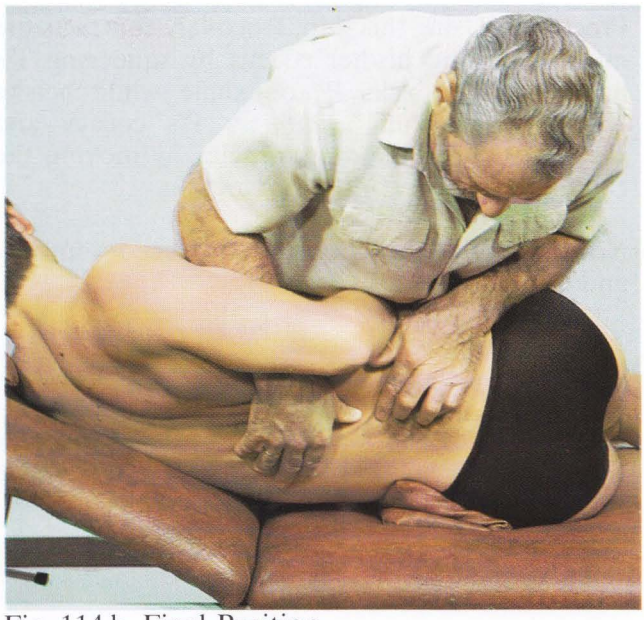
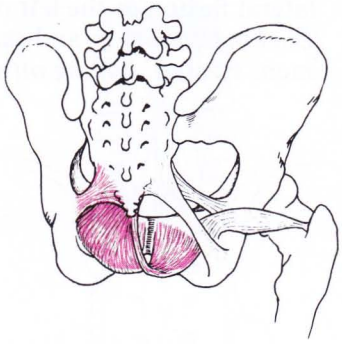


Fig. 114 b. Final Position.

7. THE COCCYX

7.1. Restrictions

All the muscles and other structures associated with the coccyx may be involved in restricting movement.



7.2. Mobilization of the coccyx and specific technique for the levator ani and the coccygeus.

Starting Position: P: Prone; cushion under pelvis for comfort and to position coccyx so T can carry out procedure. T: Standing where convenient.

Grip: Using a medical glove, T inserts lubricated right index finger into P's rectum. P's right index finger and thumb grip P's coccyx. T's left hand stabilizes P's sacrum. T's left thumb palpates the dorsal aspect of the sacrococcygeal joint.

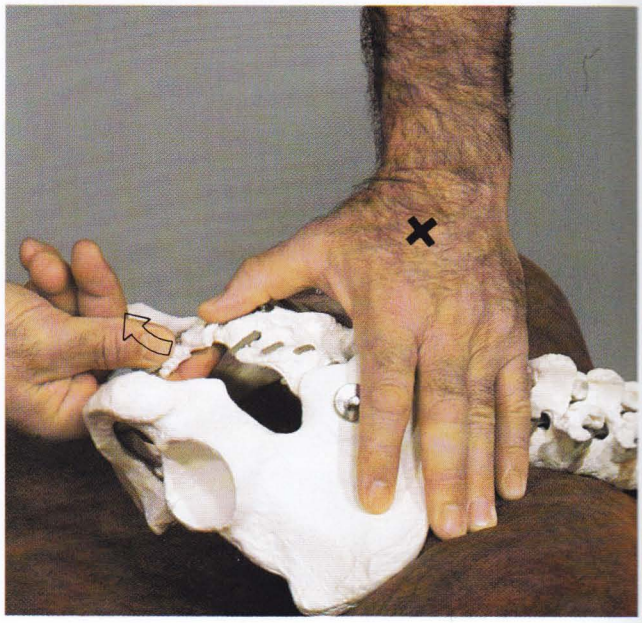


Fig. 115 a. Starting Position.

Procedure: Using this grip, P actively contracts the muscles around his/her coccyx by squeezing T's finger. T then asks P to exhale while he/she gradually and fully *mobilizes* P's coccyx and *stretches* the surrounding muscles by moving the coccyx in the direction of restriction.

Note: Usually, the coccyx is displaced ventrally and/or laterally.

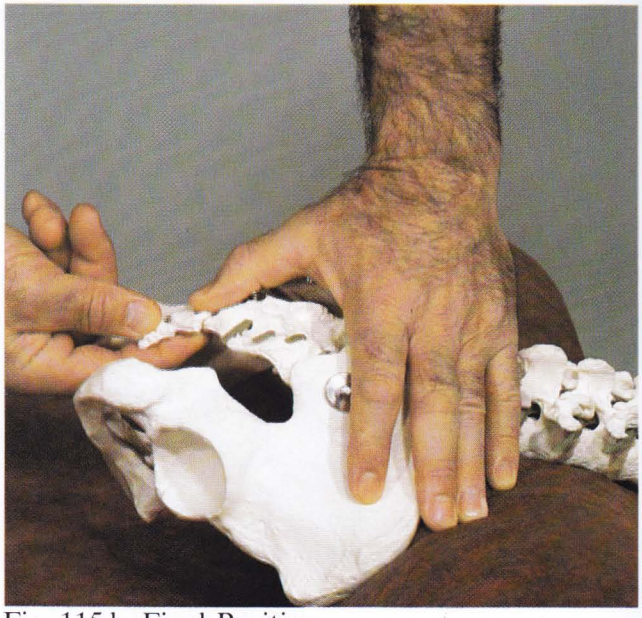


Fig. 115 b. Final Position.

PART 4

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8. MOVEMENT RESTRICTION TABLES

8.1. HEAD AND NECK (CERVICAL SPINE)

8.2. MANDIBLE (T-M JOINTS)

8.3. THORACIC AND LUMBAR SPINE

8.4. RIB CAGE

INDEX OF MUSCLES

8.1. Table 8.1. (Continued)

•• = Primary restrictor • = Secondary restrictor

	RESTRICTED MOVEMENT					
SHORTENED MUSCLE	Ventral flexion	Dorsal flexion	Lateral flexion to the same side	Lateral flexion to the opposite side	Rotation to the same side	Rotation to the opposite side
rectus capitis lateralis		•		•		•
splenius capitis	••			•		•
splenius cervicis	••			•		•
iliocostalis cervicis	••			••		••
longissimus cervicis	••			••		••
longissimus capitis	••			••		••
spinalis cervicis	••			••		••
semispinalis capitis	••			••		••
intertrans-versarii	••			••	•	•
interspinales	••				•	•
rotatores	••				••	
multifidi	••				••	
rectus capitis dorsalis major	•		•			•
rectus capitis dorsalis minor	•			•	•	
obliquus capitis inferior	•		•			•
obliquus capitis superior	•			•	•	
platysma		••		•		•
suprahyo-idales and infrahyoidales		••		•		•
suprathyreo-idales and infrathyreoidales		••		•		

8.2. Table of
MANDIBLE (TEMPORO-MANDIBULAR JOINT) MOVEMENTS RESTRICTED BY SHORTENED MUSCLES

•• = Primary restrictor • = Secondary restrictor

	RESTRICTED MOVEMENT		
SHORTENED MUSCLE	Protrusion	Retraction	Opening the mouth
pterygoideus medialis	•	•	•
masseter	••		•
temporalis	••		•
pterygoideus lateralis		•	

8.3. Table of
THORACIC AND LUMBAR SPINE MOVEMENTS RESTRICTED BY SHORTENED MUSCLES

•• = Primary restrictor • = Secondary restrictor

	RESTRICTED MOVEMENT					
SHORTENED MUSCLE	Ventral flexion	Dorsal flexion	Lateral flexion to the same side	Lateral flexion to the opposite side	Rotation to the same side	Rotation to the opposite side
rectus abdominis		••				
obliquus abdominis externus		••		•	••	
obliquus abdominis internus		••		(•)		••
iliopsoas	•	•		••	•	
quadratus lumborum	•			••	•	•
iliocostalis thoracis	••			•		•
iliocostalis lumborum	••			•		•
longissimus thoracis	••			•		•
spinalis thoracis	••			•		•
semispinalis thoracis	••			•	•	
intertrans-versarii	••			•	•	•
interspinales	••				•	•
rotatores	••				••	
multifidi	••				••	

8.4. Table of
RIB CAGE MOVEMENTS RESTRICTED BY SHORTENED MUSCLES

•• = Primary restrictor • = Secondary restrictor

	RESTRICTED MOVEMENT			
SHORTENED MUSCLE	Inspiration		Expiration	
	at rest	forced	at rest	forced
diaphragma			••	••
scalenus anterior			•	••
scalenus medius			•	••
scalenus posterior			•	••
subclavius			•	•
intercostales interni		•	•	•
intercostales externi		•	•	•
sternocleido-mastoideus				•
levatores costarum			•	•
serratus posterior superior			•	•
erector spinae				•
transversus abdominis		••		
rectus abdominis		••		
obliquus abdominis externus		••		
obliquus abdominis internus		••		
serratus posterior inferior		•		
quadratus lumborum		•		
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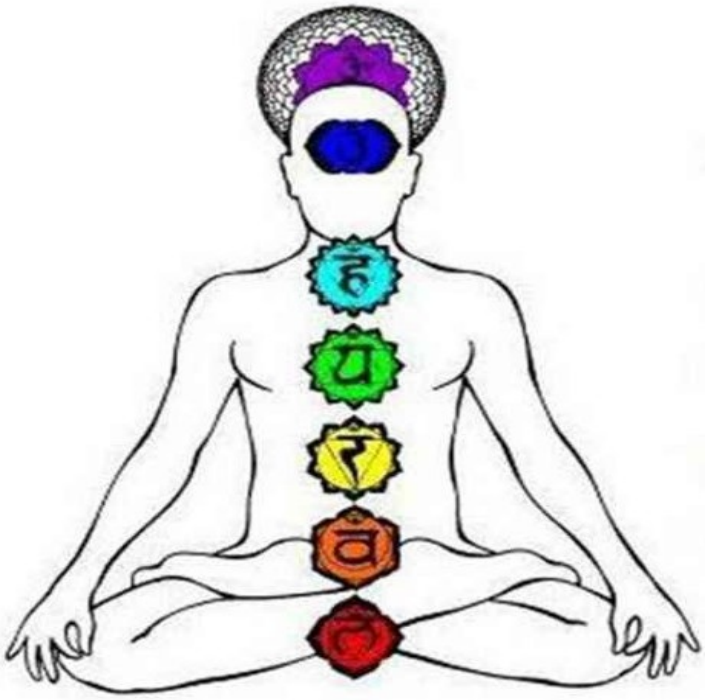
MUDRAS *for* AWAKENING CHAKRAS



19 Simple Hand Gestures *for* AWAKENING & BALANCING CHAKRAS

Advait

‘Mudras for Awakening Chakras’

19 Simple Hand Gestures for Awakening & Balancing your Chakras

By

Advait

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What are Mudras?

According to the Vedic culture of ancient India, our entire world is made of 'the five elements' called as *The Panch-Maha-Bhuta's*. The five elements being **Earth**, **Water**, **Fire**, **Wind** and **Space/Vacuum**. They are also called the earth element, water element, fire element, wind element and space element.

These five elements constitute the human body – the nutrients from the soil (earth) are absorbed by the plants which we consume (thus we survive on the earth element), the blood flowing through own veins represents the water element, the body heat represents the fire element, the oxygen we inhale and the carbon dioxide we exhale represents the wind element and the sinuses we have in our nose and skull represent the space element.

As long as these five elements in our body are balanced and maintain appropriate levels we remain healthy. An imbalance of these elements in the human body leads to a deteriorated health and diseases.

Now understand this, the command and control center of all these five elements lies in our fingers. So literally, our health lies at our fingertips.

The Mudra healing method that I am going to teach you depends on our fingers.

To understand this, we should first know the finger-element relationship:

Thumb – Fire element.

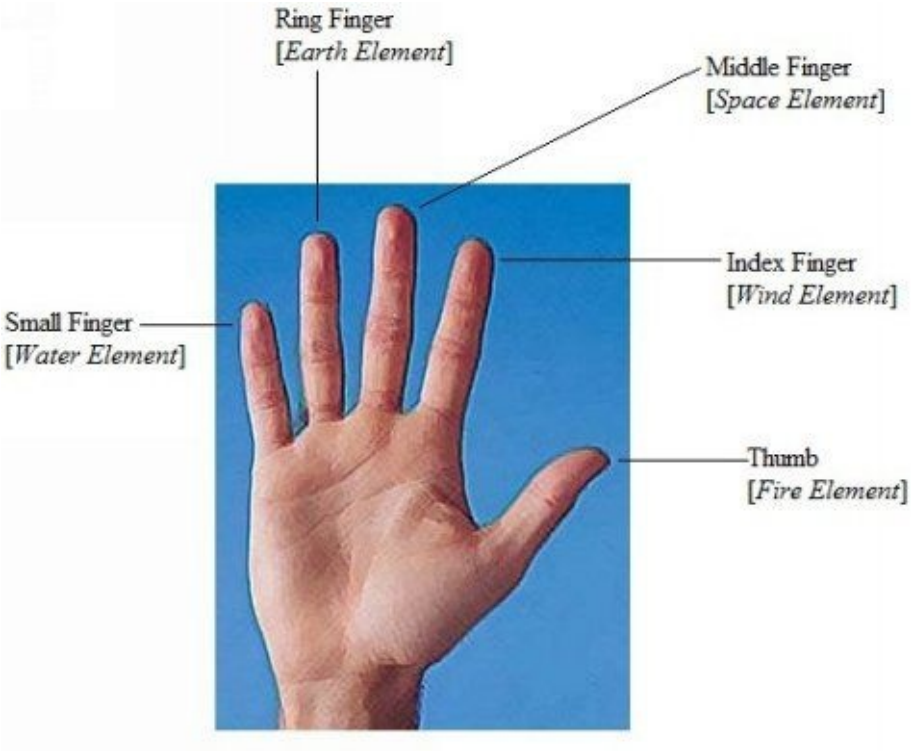
Index finger – Wind element.

Middle finger – Space/Vacuum element.

Third finger – Earth element.

Small finger – Water element.

This image will give you a better understanding of the concept:



When the fingers are brought together in a specific pattern and are touched to each other, or slightly pressed against each other, the formation is called as a *'Mudra'*.

When the five fingers are touched and pressed in a peculiar way to form a Mudra, it affects the levels of the five elements in our body, thus balancing those elements and inducing good health.

P.S. The Mudra Healing Methods aren't just theory or wordplay; these are healing methods from the ancient Indian Vedic culture, proven and tested over ages.

Important

Read this before you read any further

For the better understanding of the reader, detail images have been provided for every mudra along with the method to perform it.

Most of the Mudras given in this book are to be performed using both your hands, but the Mudras whose images show only one hand performing the Mudra, are to be performed simultaneously on both your hands for the Mudras to have the maximum effect.

Do you wish to receive Information on Mudras on a regular basis?

Hi, I am Advait,

I am and wish to remain a life-long student of *Ayurveda*, *Yoga* and *Mudra Vigyaan.* During the course of my study, work and research I come across many priceless gems in the field of Vedic Health & Healing.

You'll be surprised to know how many serious ailments can be prevented and cured by using some basic ingredients available in our kitchen pantry or doing these simple hand gestures (Mudras) or by simple Yoga exercises.

Grab this opportunity and get useful information & tips on Ayurveda, Yoga & Mudras, right into your inbox….once a week.

From Addiction to Arthritis, for Improving Digestion to Detoxification, Ayurveda & Mudras are extremely effective. In cases of Cancer and even in patients with HIV/AIDS they work like magic.

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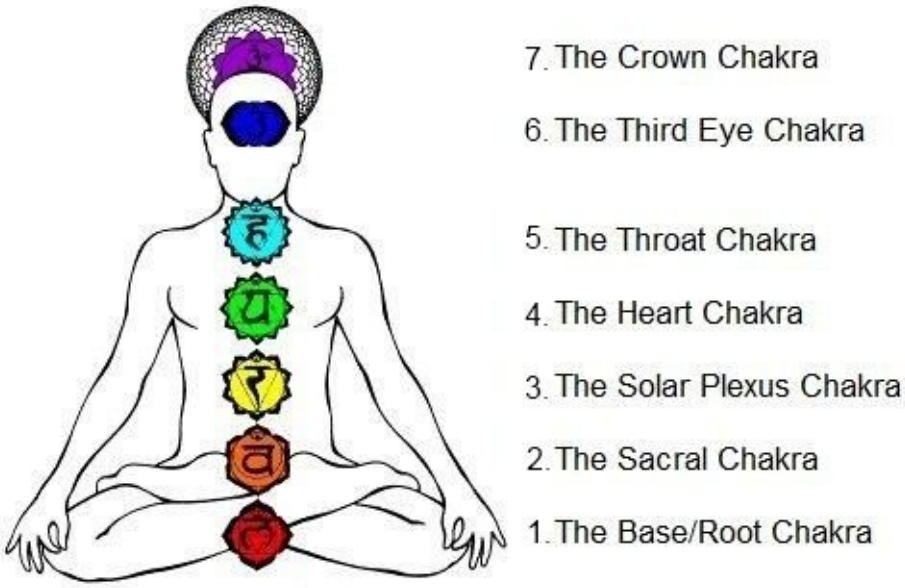
Thanks,
Advait

What are Chakras?



I want to keep this book absolutely fluff free, so, I will not talk about how Chakras are the metaphysical entities that are essential for spiritual awakening and how they take you closer to The Divine One and keep you at peace. All I want to do is to make you understand that by awakening and balancing your Chakras you will achieve everlasting health, physically and emotionally and that this book is the best Medical Insurance you ever bought!

"Energy can neither be created nor can it be destroyed, it only changes from one form to another."

The Human body needs energy to sustain life, this essential energy is obtained in two ways:

The Physical mode – The food we consume and the air we breathe cause a physical combustion of food and the assimilation of essential nutrients which provide us with the energy we need for survival.

The Meta-physical mode – The Omnipresent Universal Life energy is absorbed or channeled into our body.

This Universal Life energy enters the human body at Seven specific points, located on the spine, these points are THE CHAKRAS.

Simply put, The Seven Chakras are the inlet energy taps of the human body.

All these Chakras are associated with certain Glands and Vital Organs and the energy entering the Chakras is lead to them for proper functioning and nourishment.

If a Chakra is Closed, Blocked or Un-Balanced then these Vital Organs and Glands are malnourished leading to further complications and diseases. (Both on a physical and meta-physical level)

For example: If The Anaahat Chakra (The Heart Chakra) is blocked or unbalanced then the person is prone to cardiovascular disorders and also to emotional instability.

A person whose Chakras are awakened and in a balanced state will be in the best of his health. Also, a consistent harmony between the Chakras will induce a feeling of prosperity, well being and satisfaction. Such a person can only look forward to spiritual awakening and eternal bliss.

Now, let’s get down to business, and awaken & balance your Chakras.

Muladhaar Chakra / The Root Chakra

Sanskrit Name:

□□□□□□□ □□□□ - Muladhaar chakra

English Name:

The Root Chakra

Symbol:
Lotus with four petals.

Colour:
Red.

Location:

It is Located at the base of the spine.

Element:
Earth element.

Glands it Controls:
Gonads and Adrenal Medulla.

Organs it Controls:
Rectum, Kidneys, and Organs in lower abdomen.

Food that nourishes this Chakra:
Red Meat, Spinach, Spices and Pepper.

The Root Chakra is located at the base of the spine, hence the name. It is associated and responsible for the health of the digestive track, intestines and the lower abdominal organs. When this Chakra is balanced, you will feel at peace, confident and secure.

Mudras for Awakening & Balancing Muladhaar Chakra / The Root Chakra

While performing these Mudras, Concentrate on your breathing and visualize a ray of bright Red light entering your Root Chakra and the Chakra glowing in a bright Red Luminescence.

MuladhaarChakramudra / Mudra of Root Chakra

Method:

This Mudra has to be performed in a seating position.

Be seated comfortably in an upright posture and concentrate on your breathing to relax.

Join both the palms together like in the Indian salutation ‘Namaste’.

Then interlace and bend the Ring fingers and the Little fingers of both the hands (see to it that the fingers are folded inwards, within the palms).

Extend out the Middle fingers and join the tips of both the Middle fingers and press slightly.

Now join the tips of the Index fingers to the tips of the Thumbs, forming

interlocking circles (Refer the image).

This Mudra is to be held in front of your pubic bone.

While you are doing this Mudra, simultaneously keep contracting your Perineal floor muscle (Refer the image).

(Don’t keep the muscle contracted but keep clenching and relaxing this muscle continuously)

Duration:

This Mudra should be performed till you feel tired by clenching and relaxing your Perineal muscle. Take rest then repeat a couple of times.

This Mudra should be performed twice a day, once in the morning and once in the evening for best results.

Mushtimudra / Mudra of Fist

Method:

This Mudra has to be performed in a seating position.

Be seated comfortably in an upright posture and concentrate on your breathing to relax.

Touch the tip of your thumb to the base of the Ring finger and press slightly.

Close all the other fingers over the Thumb to form a fist.

(Refer the image)

Form this Mudra on each hand and rest the fists against the lower belly.

Duration:

This Mudra should be performed for at least 5 minutes and can be performed for 40 minutes at a stretch.

This Mudra should be performed twice a day, once in the morning and once in the evening for best results.

Gadamudra / Mudra of Spear

Method:

This Mudra has to be performed in a seating position.

Be seated comfortably in an upright posture and concentrate on your breathing to relax.

Form two interlacing rings by touching the tips of your index fingers with the tips of your thumbs as shown in the image.

Keep the Middle fingers straight and pointing upwards, and then touch the upright middle fingers to each other.

The final step is to interlace the ring fingers and the little fingers together, and bend them in the second knuckle such that there tips point downwards.

This Mudra should be held in front of your lower abdomen and not at chest

height.

Duration:

This Mudra should be performed for at least 5 minutes and can be performed for 40 minutes at a stretch.

This Mudra should be performed twice a day, once in the morning and once in the evening for best results.

Svadhishtaana Chakra / The Sacral Chakra

Sanskrit Name:

□□□□□□□□□□□□ □□□□ - Svadhistaana Chakra

English Name:

The Sacral Chakra

Symbol:
Crescent moon within A Lotus with 6 petals.

Colour:
Orange/Vermilion

Location:
Sacrum. (Lower Abdomen region)

Element:
Water.

Glands it Controls:
Sexual glands. (Testes and the Ovaries)

Organs it Controls:
Organs from the lower abdomen region, mainly the reproductive organs.

Food that nourishes this Chakra:
Milk and dairy products, Melons, Bananas, Honey, Chocolate, Butter and Red Wine in Moderation.

The Sacral Chakra is located on the spine at the sacral level, hence the name. It is associated and responsible for the health of the sexual organs and Urinary system. When this Chakra is balanced, you will feel free and joyous and you will exude an amazing sexual confidence.

Mudras for Awakening & Balancing Svadhishtaana / The Sacral Chakra

While performing these Mudras, Concentrate on your breathing and visualize a ray of bright Orange light entering your Root Chakra and the Chakra glowing in a bright Orange Luminescence.

SvadhishtaanaChakramudra / Mudra of Pelvic Centre Chakra

Method:

This Mudra can be performed while being seated, in a standing position or lying in bed.

Concentrate on your breathing to relax and feel comfortable.

Join both the palms together like in the Indian salutation ‘Namaste’.

Then interlace and bend the Ring fingers and the Little fingers of both the hands within the palms.

Cross the Middle fingers over the Index fingers.

Touch the tip of the Middle fingers to the tip of the Thumbs and press slightly.

Press the heels of both the palms together.

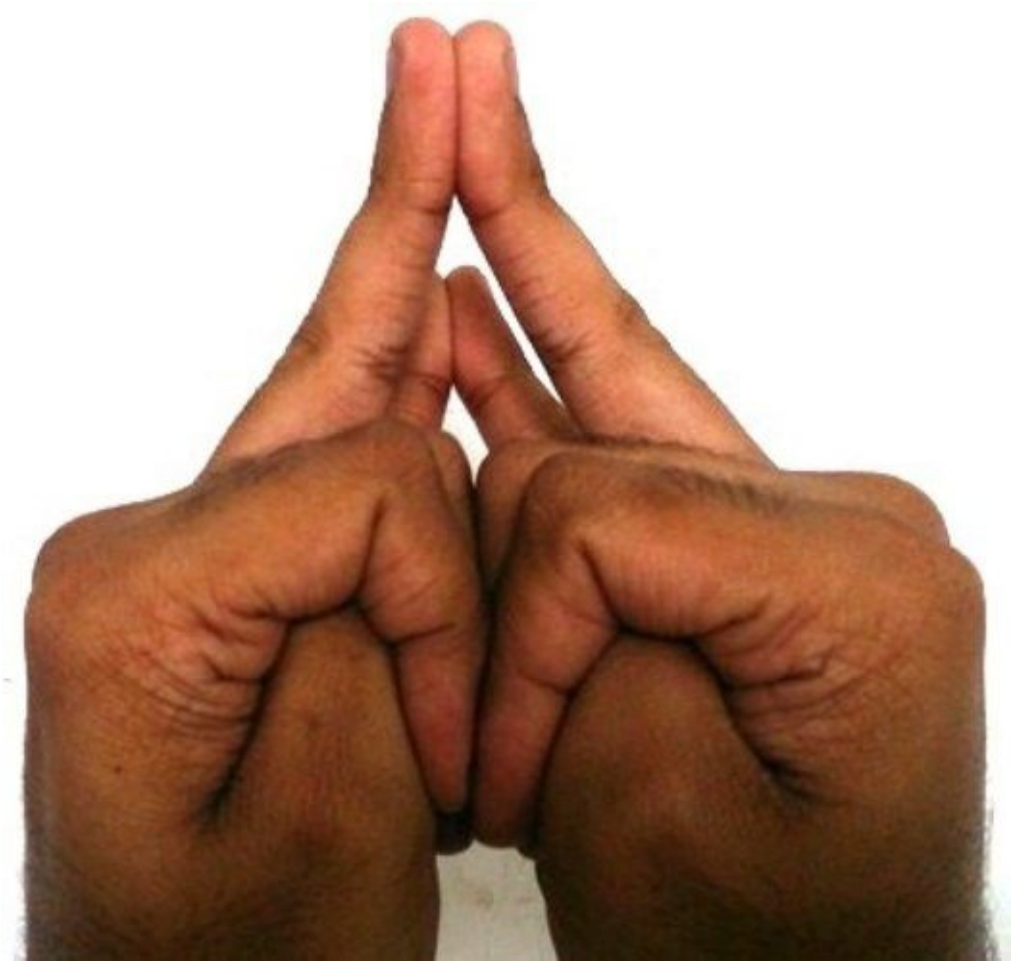
Hold this Mudra in front of your chest.

Duration:

This Mudra should be performed for at least 5 minutes and can be performed for 40 minutes at a stretch.

This Mudra should be performed twice a day, once in the morning and once in the evening for best results.

Shaktimudra / Mudra of Divine Feminine



Method:

This Mudra has to be performed in a seating position.

Be seated comfortably in an upright posture and concentrate on your breathing to relax.

Keep your palms facing each other in front of your chest.

Then touch the tips of both your Little fingers and press slightly.

After that, touch the tips of both your Ring fingers and press slightly.

Fold your thumbs in to your palms

And, cover up the folded thumbs curling down your Index and Middle fingers into your palms.

Duration:

This Mudra should be performed for at least 5 minutes and can be performed for 40 minutes at a stretch.

This Mudra should be performed twice a day, once in the morning and once in the evening for best results.

Kaamjayimudra / Mudra to Conquer Lust

Method:

This Mudra can be performed while being seated, in a standing position or lying in bed.

Concentrate on your breathing to relax and feel comfortable.

Touch the tip of the Index finger to the nail of your Thumb and press slightly.

Curl down the remaining three fingers, and press them together (not too tight).

Refer to the image for more clarity.

Duration:

This Mudra does not have a specific duration; it should be performed till the desired results are achieved.

Note

The Kaamjayi Mudra was used by ancient Indian Maharshi's and Yogi's to suppress their sexual desires.

*****Important***

Don't overdo this Mudra, you sexual desires are a healthy part of your relationships. There's nothing to feel guilty about your sexual desires.

Manipur Chakra / The Abdominal Chakra (The Solar Plexus Chakra)

Sanskrit Name:

□□□□□□ □□□□ - Manipur Chakra

English Name:

The Abdominal Chakra / The Solar Plexus Chakra.

Symbol:
Downward pointing triangle within A Lotus with 10 petals.

Colour:
Yellow

Location:
Solar Plexus. (Just beneath the Diaphragm)

Element:
Fire. (Since it is related to digestion)

Glands it Controls:
Adrenal Glands and the Pancreas.

Organs it Controls:
Organs of the digestive system.

Food that nourishes this Chakra:
Fish, Chicken, Eggs, Oranges, Papaya, Apricots, Carrots.

The Solar Plexus Chakra is located on the spine at a level just beneath the diaphragm, hence the name. It is associated and responsible for the health of Stomach, Liver, Pancreas and the Spleen. When this Chakra is balanced, you will feel satisfied and an affectionate adoration towards your loved ones and it induces a feeling of being in control.

Mudras for Awakening & Balancing Manipur / The Abdominal Chakra

While performing these Mudras, Concentrate on your breathing and visualize a ray of bright Yellow light entering your Root Chakra and the Chakra glowing in a bright Yellow Luminescence.

ManipurChakramudra / Mudra of Solar Plexus Chakra

Method:

This Mudra has to be performed in a seating position.

Be seated comfortably in an upright posture and concentrate on your breathing to relax.

Place your palms adjacent to each other, facing down.

Now slide your right Index finger over your left Index finger, then under the left Middle finger and then rest it over the left Ring finger. (I know it sounds very confusing, please refer the adjoining images for more clarity.)

Now curl in your left Middle finger, pressing the down the right Index finger.

The next step is to curl in the right middle finger so that it presses down the left Index finger, but see to it that the tip of the left Index finger is over the right Ring finger. (refer the image)

Now join the tips of both the Ring and Little fingers together and press slightly.

Then join the tips of both the Thumbs together and press slightly.

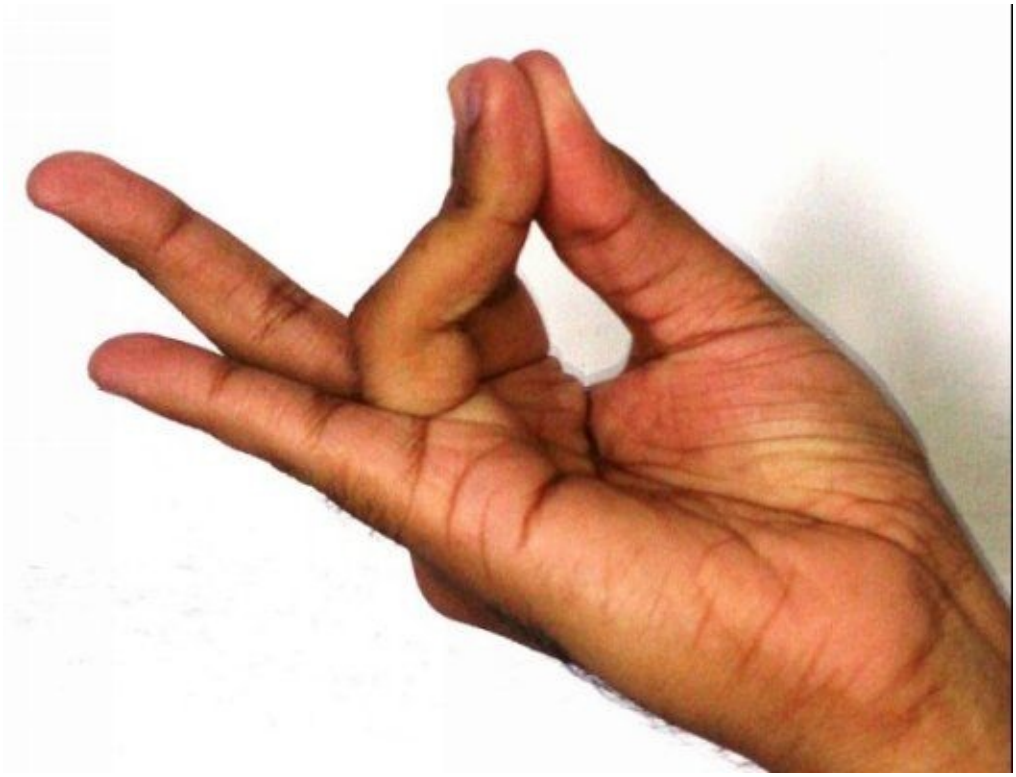
Hold the Mudra in front of your solar plexus.

Duration:

This Mudra should be performed for at least 5 minutes and can be performed for 30 minutes at a stretch.

This Mudra should be performed twice a day, once in the morning and once in the evening for best results.

Rudramudra / Mudra of Lord Shiva



Method:

This Mudra has to be performed in a seating position.

Be seated comfortably in an upright posture and concentrate on your breathing to relax.

Place your hands on your thighs with your palms facing upwards.

Touch the tip of your Thumb with the tip of your Index finger and the tip of the Ring finger, press slightly.

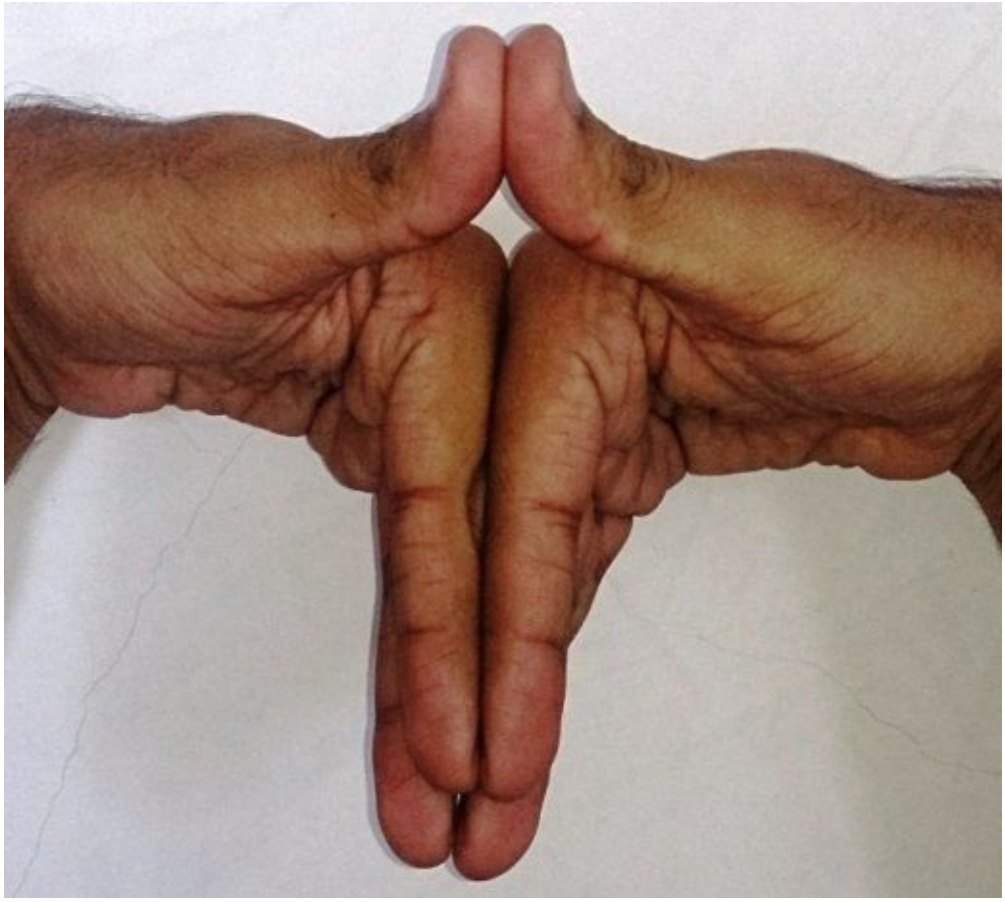
Refer the image for more clarity.

Duration:

This Mudra should be performed for at least 5 minutes and can be performed for 40 minutes at a stretch.

If you are serious about losing weight then this Mudra should be performed at least 4 times a day.

Adhomukhmudra / Mudra that Faces Down



Method:

This Mudra has to be performed in a seating position.

Be seated comfortably in an upright posture and concentrate on your breathing to relax.

Now bring both your palms in front of you, the palms should be facing downward.

Join the tips of both your Thumbs and press slightly.

All other fingers should be pointed downwards and outstretched in such a way

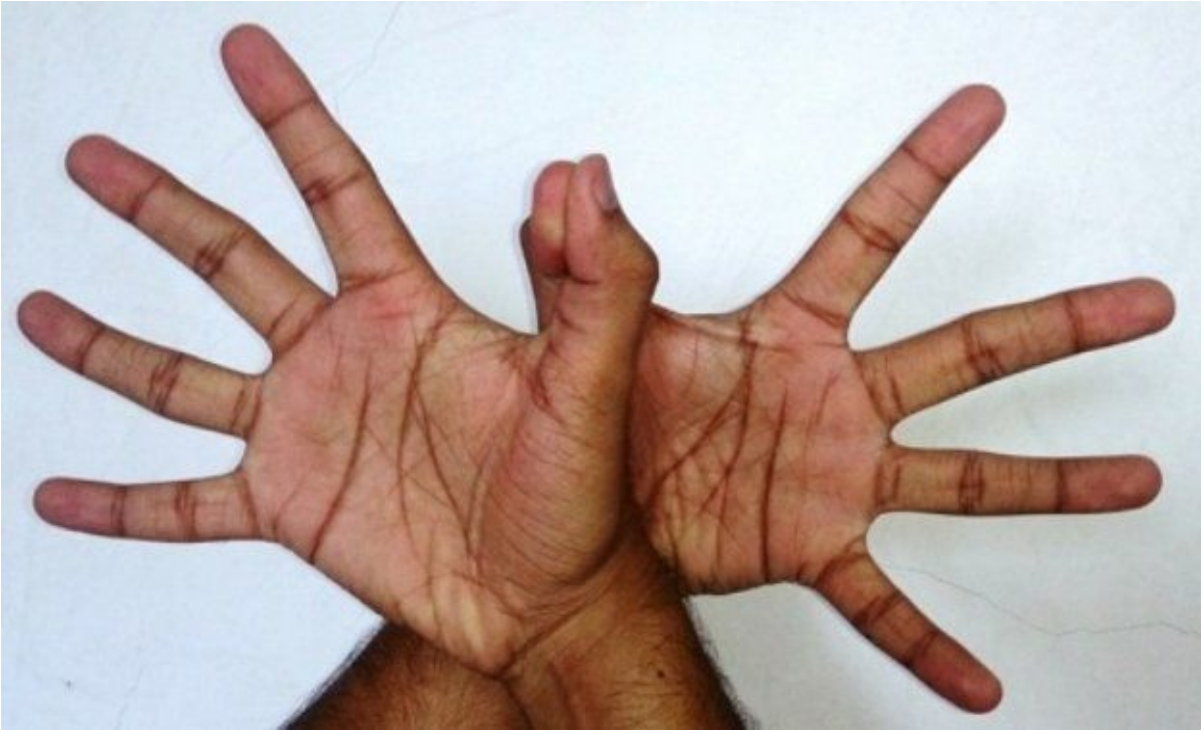
that all the nails are resting on each other. (refer the image)

Duration:

It’s a highly effective Mudra, also a very strong one.

Perform this Mudra for not more than 5-7 minutes at a time, and a t total of 3-4 sessions per day.

Garudamudra / Mudra of Eagle



Method:

This Mudra can be performed while being seated, in a standing position or lying in bed.

Concentrate on your breathing to relax and feel comfortable.

Bring both your hands in front of your chest, palms facing the chest.

Cross the hands with the right hand crossing over the left hand and interlock the Thumbs at the first padding. (Refer the image)

Keep all the other fingers extended and outstretched.

Create a firm pressure between the pads of the Thumb.

Duration:

This Mudra should be performed for at least 5 minutes and can be performed for 40 minutes at a stretch.

This Mudra should be performed twice a day, once in the morning and once in the evening for best results.

Surabhimudra (Dhenumudra) / Mudra of Cow

Method:

This Mudra has to be performed in a seating position.

Be seated comfortably in an upright posture and concentrate on your breathing to relax.

Touch the tip of the Little finger of the left hand to the tip of the Ring finger of the right hand.

Touch the tip of the Middle finger of the left hand to the tip of the Index finger of the right hand.

Touch the tip of the ring finger of the left hand to the tip of the Little finger of the right hand.

Touch the tip of the Index finger of the left hand to the tip of the Middle finger of the right hand. (This is a bit confusing; refer to the image for clarity)

Then join the tips of both the Thumbs together and press slightly.

Hold this Mudra in front of your chest.

Duration:

This Mudra should be performed for at least 5 minutes and can be performed for 30 minutes at a stretch.

This Mudra should be performed twice a day, once in the morning and once in the evening for best results.

Anaahat Chakra / The Heart Chakra

Sanskrit Name:

□□□□□ □□□□ - Anaahat Chakra

English Name:

The Heart Chakra

Symbol:
Six pointed star within a Circular flower with 12 petals.

Colour:
Green.

Location:
Chest.

Element:
Air.

Glands it Controls:

The Thymus Gland. (It is responsible for a sound Immune system.)

Organs it Controls:
Heart, Lungs, Upper limbs, Organs of the Circulatory system and Immune system.

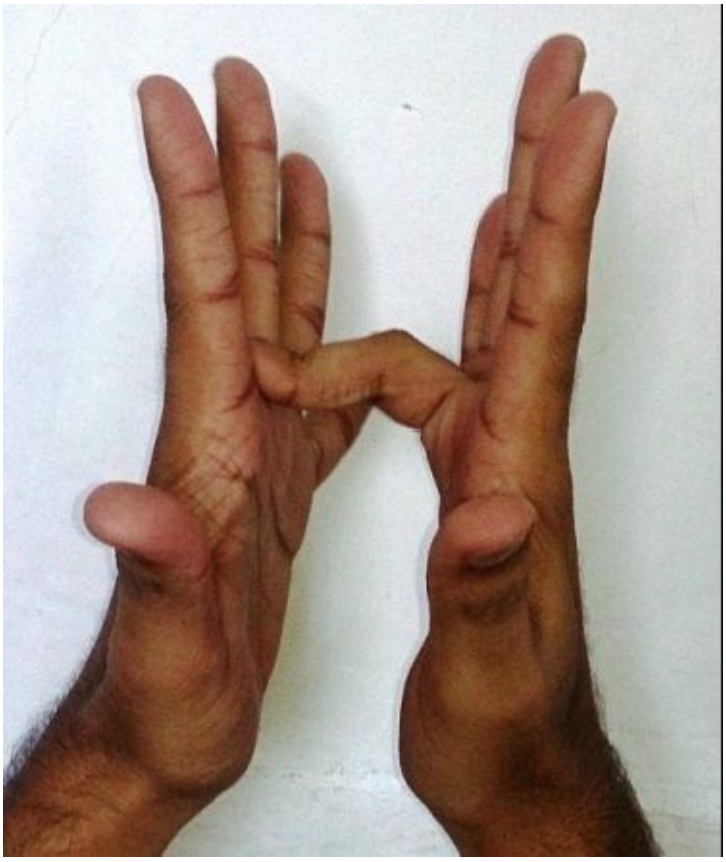
Food that nourishes this Chakra:
Cherries, Strawberries, Whole Wheat, Unpolished Rice, Soya bean, Green Leafy Vegetables (especially Spinach).

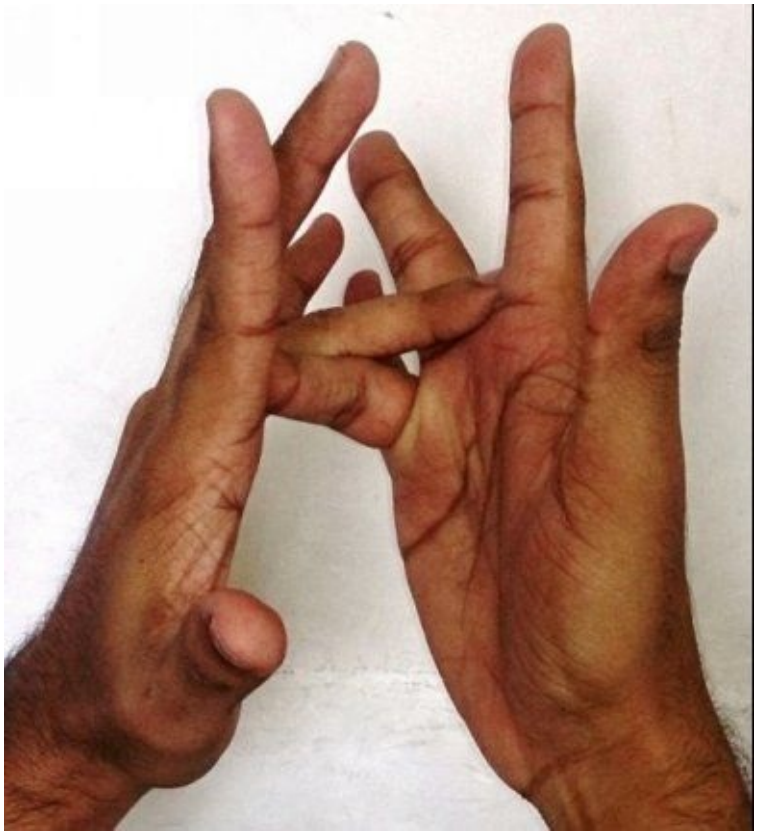
The Heart Chakra is located on the spine at the level of the Heart, hence the name. It is associated and responsible for the cardiovascular health and the health of the respiratory system and also keeps the immune system healthy. On an emotional level this Chakra is about affection, love, care and romance. This Chakra enables one to give and receive pure love.

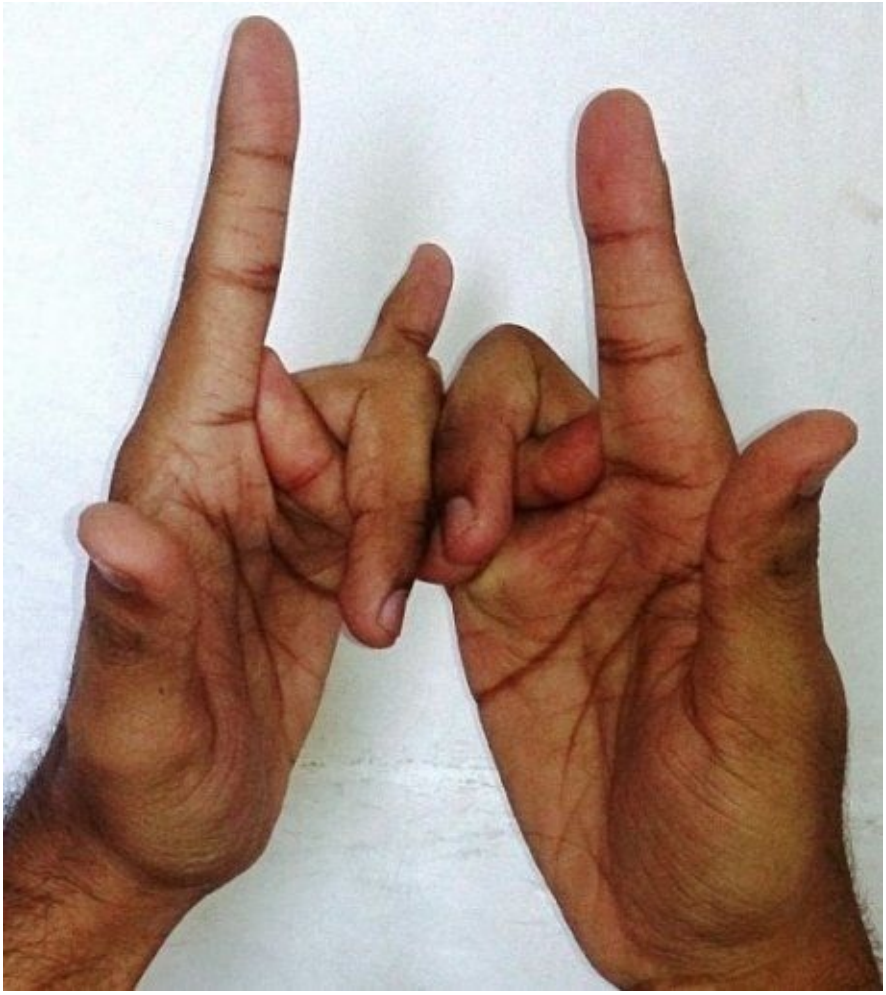
Mudras for Awakening & Balancing Anaahat Chakra / The Heart Chakra

While performing these Mudras, Concentrate on your breathing and visualize a ray of bright Green light entering your Root Chakra and the Chakra glowing in a bright Green Luminescence.

AnaahatChakramudra / Mudra of Un-struck Hymn







Method:

This Mudra has to be performed in a seating position.

Be seated comfortably in an upright posture and concentrate on your breathing to relax.

Place the right Ring finger on the web between the Index and Middle finger of the left hand.

Place the left Ring finger on the web between the Index and Middle finger of the right hand.

Curl down both the middle fingers to wrap and press down the respective Ring fingers of the opposite hands.

Now join the tips of both the Index and Little fingers together, outstretch them and press slightly.

Then join the tips of both the Thumbs together, outstretch them and press

slightly.

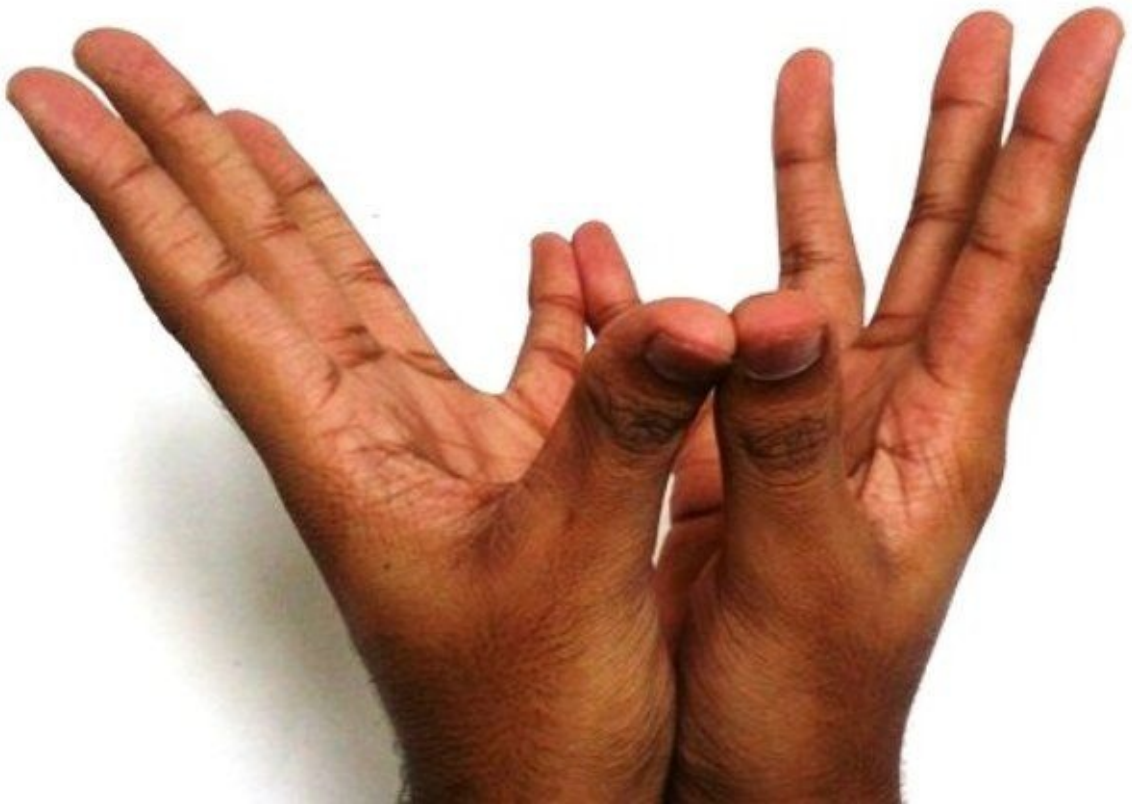
This Mudra is to be held in front of your chest.

Duration:

This Mudra should be performed for at least 5 minutes and can be performed for 40 minutes at a stretch.

This Mudra should be performed twice a day, once in the morning and once in the evening for best results.

Padmamudra (Pankajmudra) / Mudra of Lotus



Method:

This Mudra has to be performed in a seating position.

Be seated comfortably in an upright posture and concentrate on your breathing to relax.

Touch the Thumb and Little finger of the left hand to the Thumb and Little finger of the right hand.

Join the base of both the palms together.

Stretch all the other fingers outwards and keep them straight.

Refer the image above.

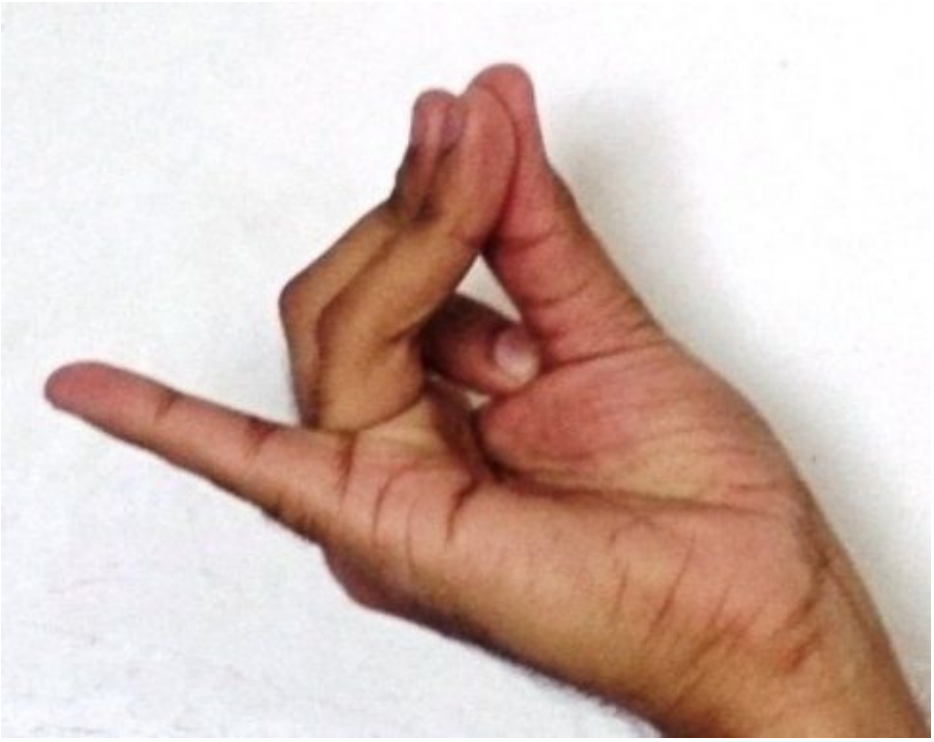
This Mudra should be held in front of your chest.

Duration:

This Mudra should be performed for at least 5 minutes and can be performed for 40 minutes at a stretch.

This Mudra should be performed twice a day, once in the morning and once in the evening for best results.

Mrutsanjivanimudra(Apaanvaayumudra) / Mudra of Resurrection



Method:

This Mudra has to be performed in a seating position.

Be seated comfortably in an upright posture and concentrate on your breathing to relax.

Touch the base of your Thumb with the tip of the Index finger and press slightly.

Then, touch the tips of the Index finger, Middle finger and Thumb together.

Keep the Little finger extended outwards.

Perform the Mudra’s on both your hands and place them on your thighs.

Duration:

This Mudra should be performed for at least 5 minutes and can be performed for 40 minutes at a stretch.

This Mudra should be performed twice a day, once in the morning and once in the evening for best results.

Vishuddha Chakra / The Throat Chakra

Sanskrit Name:

□□□□□□□ □□□□ - Vishuddha Chakra (Vishuddhi = Purification)

English Name:

The Throat Chakra / The Chakra of Purification

Symbol:
A Circle housed within a downward facing Triangle, which is housed in a flower with 16 petals.

Colour:
Blue / Turquoise

Location:
Throat.

Element:
Sound. (The base element is ‘Air’, since air when modulated creates sound)

Glands it Controls:
Thyroid

Organs it Controls:
Throat, Neck and other Oral organs.

Food that nourishes this Chakra:
Mushrooms, Bananas, Kelp, Wheat Grass juice.

The Throat Chakra is located on the spine along the throat, hence the name. It is associated and responsible for the health of the Throat, Neck and the Thyroid Gland. When this Chakra is balanced, it induces proper growth and you will feel aware about the people around you and you will feel active creatively.

Mudras for Awakening & Balancing Vishuddha Chakra / The Throat Chakra

While performing these Mudras, Concentrate on your breathing and visualize a ray of bright Blue light entering your Root Chakra and the Chakra glowing in a bright Blue Luminescence.

VishuddhaChakramudra / Mudra of Throat Chakra

Method:

This Mudra has to be performed in a seating position.

Be seated comfortably in an upright posture and concentrate on your breathing to relax.

Join the hands together as in the Indian salutation, ‘Namaste’.

Now, interlace the Middle, Ring and Little into the palm (Refer the image)

Then, create two interlocking rings with the Index fingers and Thumbs as shown in the image.

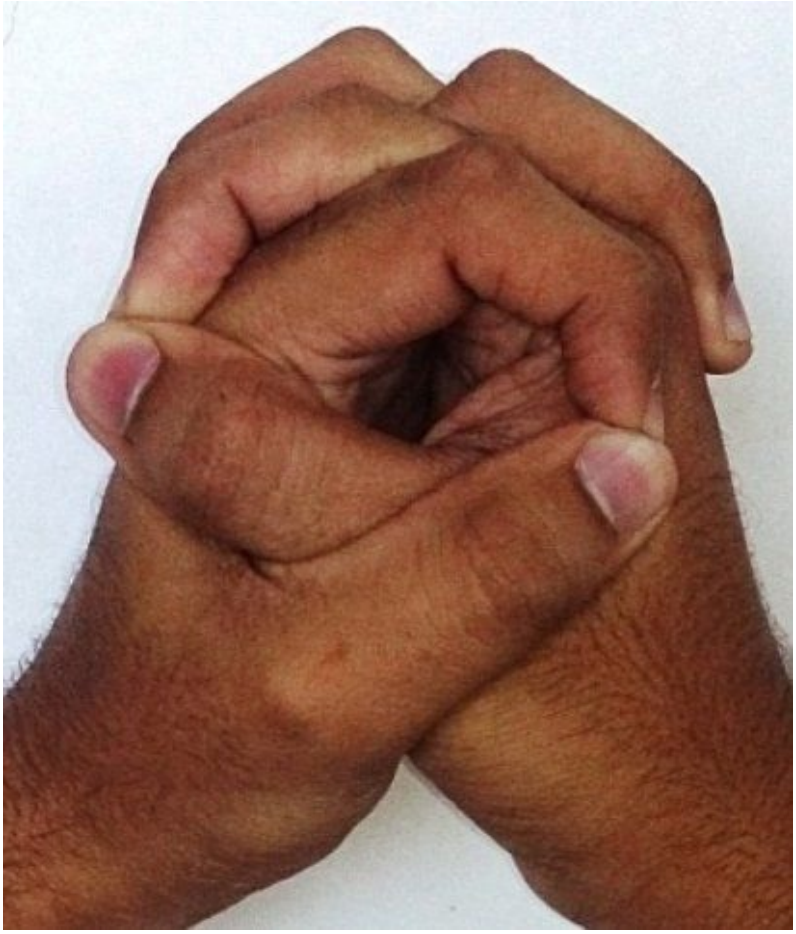
Hold this Mudra in front of your Throat.

Duration:

This Mudra should be performed for at least 5 minutes and can be performed for 40 minutes at a stretch.

This Mudra should be performed twice a day, once in the morning and once in the evening for best results.

Granthitamudra / Mudra of Glands



Method:

This Mudra has to be performed in a seating position.

Be seated comfortably in an upright posture and concentrate on your breathing to relax.

Clasp both your hands together as shown in the image.

Note that the left index figure is on top of the right index finger.

Now, join the tips of the Index finger and Thumb of the respective hands together.

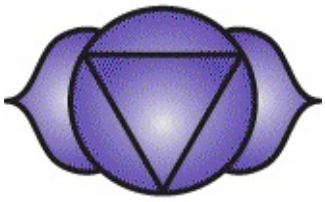
Hold this Mudra in front of your Throat.

Duration:

This Mudra should be performed for at least 5 minutes and can be performed for 40 minutes at a stretch.

This Mudra should be performed twice a day, once in the morning and once in the evening for best results.

Aadnya (Ajna) Chakra / The Third Eye Chakra



Sanskrit Name:

□□□□□ □□□□ - Aadnya Chakra

English Name:

The Third Eye Chakra

Symbol:
A Lotus with two petals.

Colour:
Violet / Indigo.

Location:
Half a centimeter above the midpoint between the two eyebrows.

Element:
Light.

Glands it Controls:
Pineal Glands.

Organs it Controls:
Eyes, Ears, Nose and Brain.

Food that nourishes this Chakra:
Wheat, food stuffs rich in Vitamin E and Vitamin A, Sprouts.

The Third Eye Chakra is located at the point of the third eye, hence the name. It is associated and responsible for the health of the eyes and the entire nervous system. When this Chakra is balanced, you will feel an insightful awareness and also feel very clairvoyant.

Mudras for Awakening & Balancing Aadnya Chakra / The Third Eye Chakra

While performing these Mudras, Concentrate on your breathing and visualize a ray of bright Indigo light entering your Root Chakra and the Chakra glowing in a bright Indigo Luminescence.

Nirvaanamudra / Mudra of Liberation

Method:

This Mudra has to be performed in a seating position.

Be seated comfortably in an upright posture and concentrate on your breathing to relax.

Cross your hands at your wrists in front of your face, with your left hand crossing over the right hand.

Now, fold/curl down the Little, Ring and Middle fingers of both the hands.

Now, touch the tips of both the Index fingers together, while keeping your Thumbs parallel to each other and touching.

Then, gently bow down your head and let the tip of the index fingers touch the Third-Eye point. (The Third-Eye point is located half a centimeter above the

midpoint between the eyebrows.)

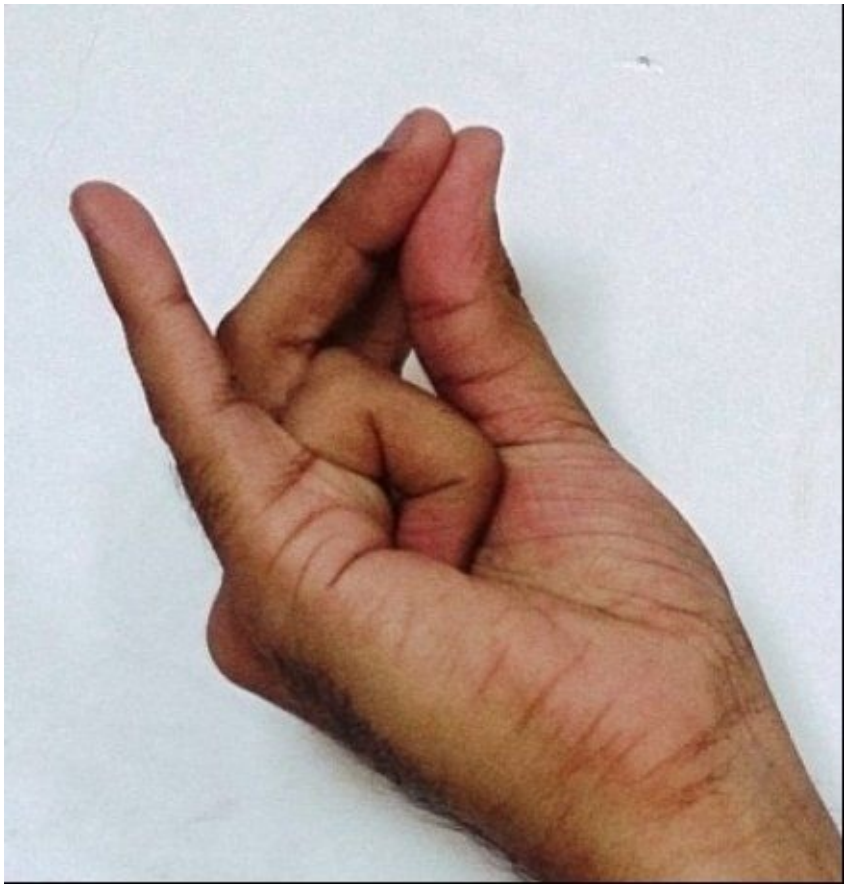
Hold for 1 to 2 minutes.

While performing this Mudra visualize your third eye opening and wherever you see, there is peace and calmness.

Duration:

1 to 2 minutes.

Mahashirshamudra / Mudra of The Great Head



Method:

This Mudra has to be performed in a seating position.

Be seated comfortably in an upright posture and concentrate on your breathing to relax.

Touch the centre of the palm with the tip of the Ring finger.

Join the tips of the Index finger, Middle finger and Thumb together.

Keep the Little finger extended outwards.

(Refer the image)

Perform this Mudra on each hand and place the hands in your lap.

Duration:

This Mudra should be performed for at least 5 minutes and can be performed for 20 minutes at a stretch.

This Mudra should be performed twice a day, once in the morning and once in the evening for best results.

Sahastraar Chakra / The Crown Chakra

Sanskrit Name:

□□□□□□□ □□□□ - Sahastraar Chakra (Sahastraar = A Thousand Petals)

English Name:

The Crown Chakra

Symbol:
A Lotus with Thousand petals.

Colour:
Multicolored or sometimes White.

Location:
Just above the Crown of the skull.

Element:
Space.

Glands it Controls:

The Entire Central Nervous system.

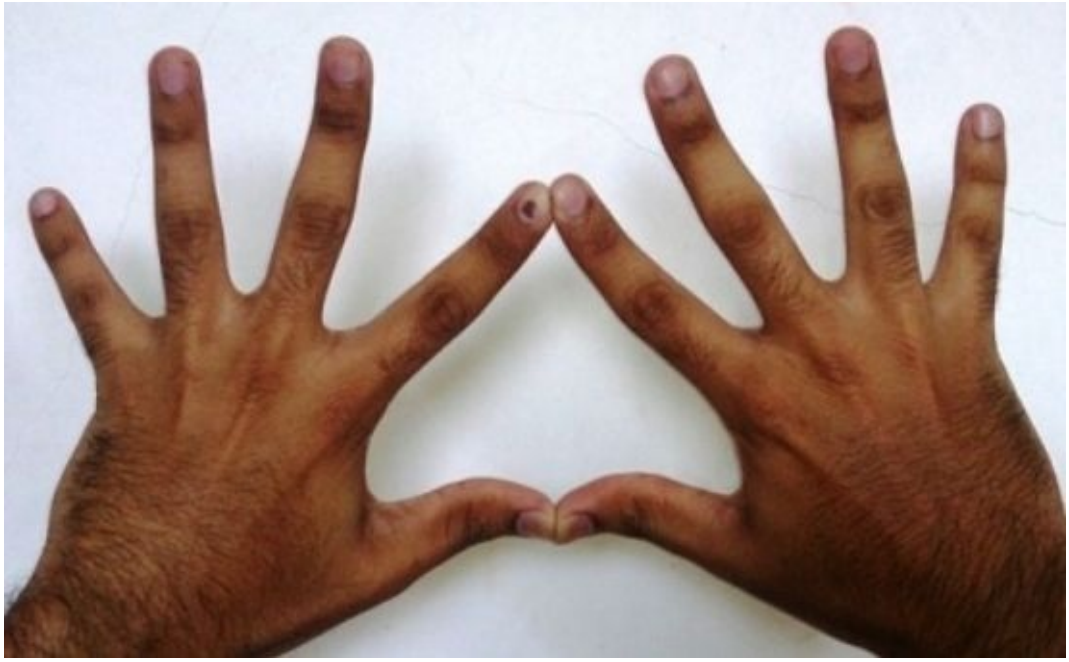
Organs it Controls:
Cerebrum, Spinal Cord and Organs of the Nervous System.

The Crown Chakra is located on the crown of the skull, hence the name. It is associated and responsible for the health of the pineal glands and the nervous system. When this Chakra is balanced, you will feel extremely satisfied and blissful. It is the most spiritual Chakra.

Mudras for Awakening & Balancing Sahastraar Chakra / The Crown Chakra

While performing these Mudras, Concentrate on your breathing and visualize a ray of bright White light entering your Root Chakra and the Chakra glowing in a bright White Luminescence.

Sahastraarmudra / Mudra of Thousand Petals



Method:

This Mudra can be performed while being seated, in a standing position.

Concentrate on your breathing to relax and feel comfortable.

Raise your hands at chest height, with your palms facing down.

Now, join the tips of both the Index fingers together and press slightly.

Then, join the tips of both the Thumbs together forming a Triangle. (Refer the image)

Keep all the other fingers extended and outstretched.

Once you have formed this Mudra, raise the Mudra at a height of around 6 inches above your head.

And now visualize as if a shower of light and energy are entering the top of your head through the triangle formed in the Mudra.

Duration:

This Mudra should be performed for at least 5 minutes and can be performed for 20 minutes at a stretch.

This Mudra should be performed twice a day, once in the morning and once in the evening for best results.

Forming a Routine

Every Mudra that I have mentioned in this book has to be performed for at least five minutes for best results.

But, to perform all the 19 Mudras for at least 5 minutes will eat up a little over 1 and a 1/2 hrs of your time every day and many of you might not be able to take off that much time every day from your busy schedules and chores.

Understand that it is NOT a hard and fast rule that you should perform all these 19 Mudras back to back in one session.

What I would suggest is, perform any one (1) Mudra pertaining to each of the seven Chakras daily. Thus, you'll have to take out only a minimum of 35 minutes every day.

(Make sure that you perform all the 19 Mudras at least thrice in a week.)

The beauty of Mudra Health and Healing Techniques is that Mudras can be performed at any time and place: while stuck in traffic, at the office, watching TV, or whenever you have to twiddle your thumbs waiting for something or someone.

So, please don't come up with any excuses to avoid them, Mudras are as Easy and Effortless as Chakra Awakening and Balancing could get.

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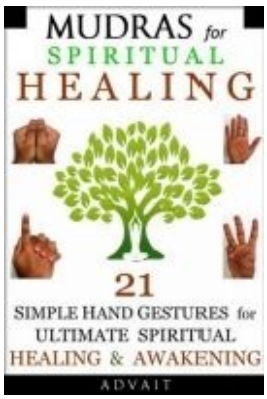

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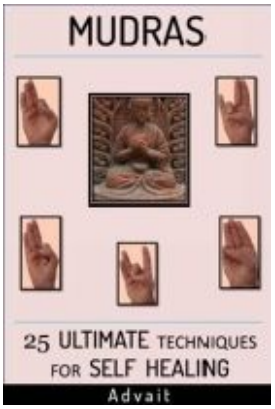

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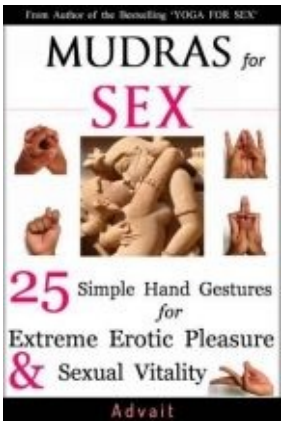

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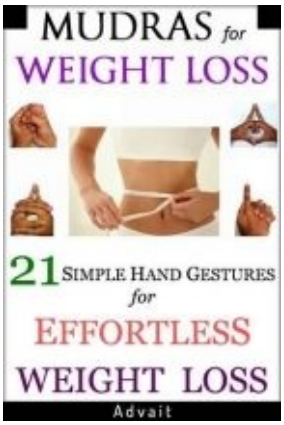

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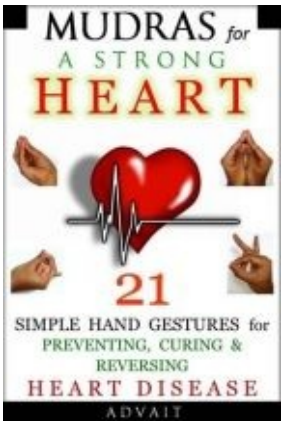

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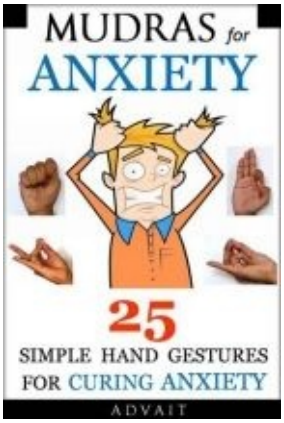

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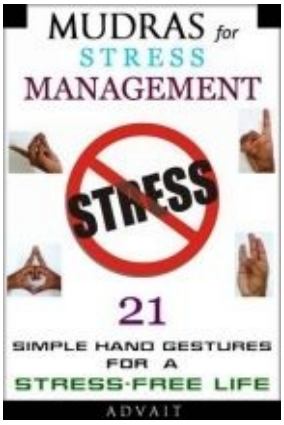

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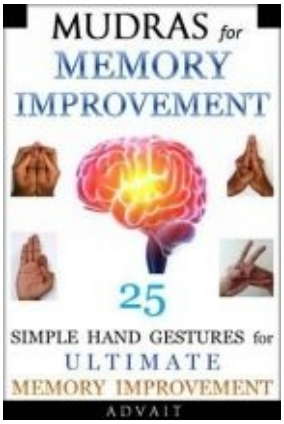

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60 seconds is all I'm asking for, and it would mean a lot to me.

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All the best,

Advait

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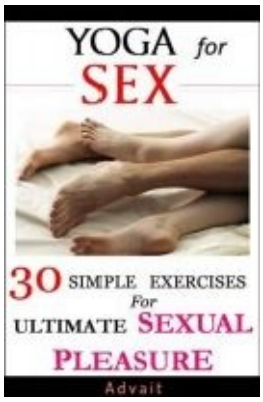

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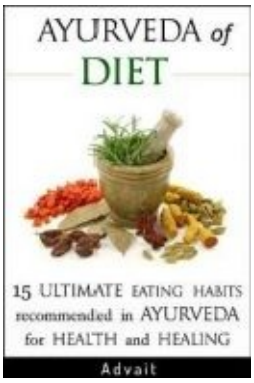

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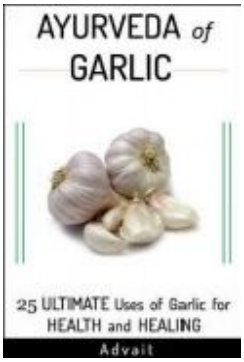

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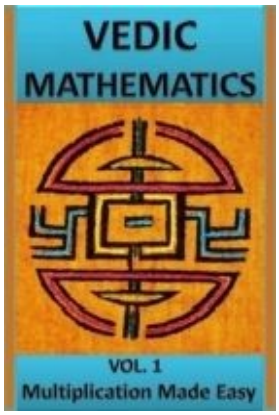

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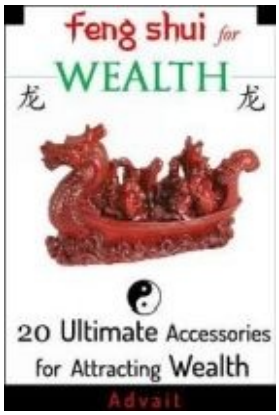

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Light on Yoga

The Bible of Modern Yoga—Its Philosophy and Practice
—by the World's Foremost Teacher

B.K.S. IYENGAR

Foreword by Yehudi Menuhin

With complete descriptions and illustrations of all the postures
and breathing techniques

With More than 600 Photographs Positioned Next to the Exercises

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50 Years of Publishing

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LIGHT ON YOGA

Yoga Dipika

B. K. S. IYENGAR

Foreword by Yehudi Menuhin

REVISED EDITION

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Dedicated to my Revered Gurujī

Sāmkya-yoga-Śikhāmaṇi; Veda-kesari; Vedāntavāgīśa; Nyāyāchārya; Mīmāmsa-ratna; Mīmāmsa-thīrtha

Professor, Śrīmān, T. Krishnamāchārya of Mysore (South India), India

PRAYER

'I bow before the noblest of sages, Patañjāli, who brought serenity of mind by his work on yoga, clarity of speech by his work on grammar and purity of body by his work on medicine.'

'I salute Ādīśvara (the Primeval Lord Siva) who taught first the science of Haṭha Yoga – a science that stands out as a ladder for those who wish to scale the heights of Rāja Yoga.'

Foreword by Yehudi Menuhin

The practice of Yoga induces a primary sense of measure and proportion. Reduced to our own body, our first instrument, we learn to play it, drawing from it maximum resonance and harmony. With unflagging patience we refine and animate every cell as we return daily to the attack, unlocking and liberating capacities otherwise condemned to frustration and death.

Each unfulfilled area of tissue and nerve, of brain or lung, is a challenge to our will and integrity, or otherwise a source of frustration and death. Whoever has had the privilege of receiving Mr Iyengar's attention, or of wimessing the precision, refinement and beauty of his art, is introduced to that vision of perfection and innocence which is man as first created – unarmed, unashamed, son of God, lord of creation – in the Garden of Eden. The tree of knowledge has indeed yielded much fruit of great variety, sweet, poisonous, bitter, wholesome according to our use of it. But is it not more imperative than ever that we cultivate the tree, that we nourish its roots? And furthermore how dangerous is that knowledge to those who, ill at ease with themselves, would rather apply it to the manipulation of other people and things than to the improvement of their own persons.

The practice of Yoga over the past fifteen years has convinced me that most of our fundamental attitudes to life have their physical counterparts in the body. Thus comparison and criticism must begin with the alignment of our own left and right sides to a degree at which even finer adjustments are feasible: or strength of will will cause us to start by stretching the body from the toes to the top of the head in defiance of gravity. Impetus and ambition might begin with the sense of weight and speed that comes with free-swinging limbs, instead of with the control of prolonged balance on foot, feet or hands, which gives poise. Tenacity is gained by stretching in various Yoga postures for minutes at a time, while calmness comes with quiet, consistent breathing and the expansion of the lungs. Continuity and a sense of the universal come with the knowledge of the inevitable alternation of tension and relaxation in eternal rhythms of which each inhalation and exhalation constitutes one cycle, wave or vibration among the countless myriads which are the universe.

What is the alternative? Thwarted, warped people condemning the order of things, cripples criticising the upright, autocrats slumped in expectant coronary attitudes, the tragic spectacle of people working out their own imbalance and frustration on others.

Yoga, as practised by Mr Iyengar, is the dedicated votive offering of a man who brings himself to the altar, alone and clean in body and mind, focussed in attention and will, offering in simplicity and innocence not a burnt sacrifice, but simply himself raised to his own highest potential.

It is a technique ideally suited to prevent physical and mental illness and to protect the body generally, developing an inevitable sense of self-reliance and assurance. By its very nature it is inextricably associated with universal laws: for respect for life, truth, and patience are all indispensable factors in the drawing of a quiet breath, in calmness of mind and firmness of will.

In this lie the moral virtues inherent in Yoga. For these reasons it demands a complete and total effort, involving and forming the whole human being. No mechanical repetition is involved and no lip-service as in the case of good resolutions or formal prayers. By its very nature it is each time and every moment a living act.

Mr Iyengar's *Light on Yoga* will, I hope, enable many to follow his example and to become the teachers whom mankind so sorely needs. If this book will serve to spread this basic art and will ensure that it is practised at the highest level, I shall feel more than ever grateful for having shared in its presentation.

Preface

It is only thanks to the persistent encouragement of my devoted friends and pupils that this book is now achieved – for alone I would have repeatedly faltered not only because of my inadequate command of the English language but because I would have lost heart without their buoyant support and assurance.

Yoga is a timeless pragmatic science evolved over thousands of years dealing with the physical, moral, mental and spiritual well-being of man as a whole.

The first book to systematise this practice was the classic treatise the *Yoga Sutras* (or Aphorisms) of Patañjāli dating from 200 BC. Unfortunately most of the books published on Yoga in our day have been unworthy of both the subject and its first great exponent, as they are superficial, popular and at times misleading. I have even been asked by their readers whether I can drink acid, chew glass, walk through fire, make myself invisible or perform other magical acts. Scholarly and reliable expositions of the religious and philosophical texts already exist in most languages – but the practice of an art is more difficult to communicate than a purely literary or philosophical concept.

The title of this book is *Light on Yoga* (Yoga Dīpikā in Sanskrit), as my purpose is to describe as simply as possible the āsanas (postures) and prāṇāyāmas (breathing disciplines) in the new light of our own era, its knowledge and its requirements. Instructions on āsana and prāṇāyāma are therefore given in great detail and are based on my experience for over twenty-seven years in many parts of the world. It contains the complete technique of 200 āsanas with 592 photographs from which the āsanas can be mastered: and it also covers bandha, kriyā and prāṇāyāma with a further 5 photographs.

The Western reader may be surprised at the recurring reference to the Universal Spirit, to mythology and even to philosophical and moral principles. He must not forget that in ancient times all the higher achievements of man, in knowledge, art and power, were part of religion and were assumed to belong to God and to His priestly servants on earth. The Catholic Pope is the last such embodiment of divine knowledge and power in the West. But formerly, even in the Western world, music, painting, architecture, philosophy and medicine, as well as wars,

were always in the service of God. It is only very recently in India that these arts and sciences have begun to be emancipated from the Divine – but with due respect, for the emancipation of man's will, as distinct from the Divine will, we in India continue to value the purity of purpose, the humility of discipline and the selflessness that are the legacy of our long bondage to God. I consider it important as well as interesting that the reader should know the origin of āsanas, and I have, therefore, included legends handed down by practising yogis and sages.

All the ancient commentaries on yoga have stressed that it is essential to work under the direction of a GURU (Master), and although my experience proves the wisdom of this rule, I have endeavoured with all humility in this book to guide the reader – both teacher and student – to a correct and safe method of mastering these āsanas and prāṇāyāmas.

In Appendix I, I have introduced a 300 weeks' course for the intense practitioner, grouping the āsanas stage by stage according to their structure.

In Appendix II, I have arranged groups of āsanas for their therapeutic and curative value.

Study in detail the hints and cautions before attempting the āsana and prāṇāyāma techniques.

I am sincerely grateful to my esteemed friend and pupil Mr Yehudi Menuhin for his foreword and immeasurable support.

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B. K. S. IYENGAR

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PART I

Introduction

What is Yoga?

The word Yoga is derived from the Sanskrit root yuj meaning to bind, join, attach and yoke, to direct and concentrate one's attention on, to use and apply. It also means union or communion. It is the true union of our will with the will of God. 'It thus means,' says Mahadev Desai in his introduction to the *Gita according to Gandhi*, 'the yoking of all the powers of body, mind and soul to God; it means the disciplining of the intellect, the mind, the emotions, the will, which that Yoga presupposes; it means a poise of the soul which enables one to look at life in all its aspects evenly.'

Yoga is one of the six orthodox systems of Indian philosophy. It was collated, co-ordinated and systematised by Patañjāli in his classical work, the *Yoga Sutras*, which consists of 185 terse aphorisms. In Indian thought, everything is permeated by the Supreme Universal Spirit (Paramātmā or God) of which the individual human spirit (jīvātmā) is a part. The system of yoga is so called because it teaches the means by which the jīvātmā can be united to, or be in communion with the Paramātmā, and so secure liberation (mokṣa).

One who follows the path of Yoga is a yogi or yogin.

In the sixth chapter of the *Bhagavad Gītā*, which is the most important authority on Yoga philosophy, Śri Krishna explains to Arjuna the meaning of Yoga as a deliverance from contact with pain and sorrow. It is said:

'When his mind, intellect and self (ahaṁkāra) are under control, freed from restless desire, so that they rest in the spirit within, a man becomes a Yukta–one in communion with God. A lamp does not flicker in a place where no winds blow; so it is with a yogi, who controls his mind, intellect and self, being absorbed in the spirit within him. When the restlessness of the mind, intellect and self is stilled through the practice of Yoga, the yogi by the grace of the Spirit within himself finds fulfilment. Then he knows the joy eternal which is beyond the pale of the senses which his reason cannot grasp. He abides in this reality and moves not therefrom. He has found the treasure above all others. There is nothing higher than this. He who has achieved it, shall not be moved by the greatest sorrow. This is the real meaning of Yoga–a deliverance from contact with pain and sorrow.'

As a well cut diamond has many facets, each reflecting a different colour of light, so does the word yoga, each facet reflecting a different shade of meaning and revealing different aspects of the entire range of human endeavour to win inner peace and happiness.

The *Bhagavad Gītā* also gives other explanations of the term yoga and lays stress upon Karma Yoga (Yoga by action). It is said: 'Work alone is your privilege, never the fruits thereof. Never let the fruits of action be your motive; and never cease to work. Work in the name of the Lord, abandoning selfish desires. Be not affected by success or failure. This equipoise is called Yoga.'

Yoga has also been described as wisdom in work or skilful living amongst activities, harmony and moderation.

'Yoga is not for him who gorges too much, nor for him who starves himself. It is not for him who sleeps too much, nor for him who stays awake. By moderation in eating and in resting, by regulation in working and by concordance in sleeping and waking, Yoga destroys all pain and sorrow.'

The *Kaṭhopanishad* describes Yoga thus: 'When the senses are stilled, when the mind is at rest, when the intellect wavers not – then, say the wise, is reached the highest stage. This steady control of the senses and mind has been defined as Yoga. He who attains it is free from delusion.'

In the second aphorism of the first chapter of the *Yoga Sutras*, Patañjāli describes Yoga as 'chitta vṛtti nirodhah'. This may be translated as the restraint (nirodhah) of mental (chitta) modifications (vṛtti) or as suppression (nirodhah) of the fluctuations (vṛtti) of consciousness (chitta). The word chitta denotes the mind in its total or collective sense as being composed of three categories: (a) mind (manas, that is, the individual mind having the power and faculty of attention, selection and rejection; it is the oscillating indecisive faculty of the mind); (b) intelligence or reason (buddhi, that is, the decisive state which determines the distinction between things) and (c) ego (ahaṁkāra, literally the I-maker, the state which ascertains that 'I know').

The word vṛtti is derived from the Sanskrit root vṛt meaning to turn, to revolve, to roll on. It thus means course of action, behaviour, mode of being, condition or mental state. Yoga is the method by which the restless mind is calmed and the energy directed into constructive channels. As a mighty river which when properly harnessed by dams and canals, creates a vast reservoir of water, prevents famine and provides abundant power for industry; so also the mind, when controlled, provides a reservoir of peace and generates abundant energy for human uplift.

The problem of controlling the mind is not capable of easy solution, as borne out by the following dialogue in the sixth chapter of the *Bhagavad Gītā*. Arjuna asks Śri Krishna:

'Krishna, you have told me of Yoga as a communion with Brahman (the Universal Spirit), which is ever one. But how can this be permanent, since the mind is so restless and inconsistent? The mind is impetuous and stubborn, strong and wilful, as difficult to harness as the wind.' Śri Krishna replies: 'Undoubtedly, the mind is restless and hard to control. But it can be trained by constant practice (abhyāsa) and by freedom from desire (vairāgya). A man who cannot control his mind will find it difficult to attain this divine communion; but the self-controlled man can attain it if he tries hard and directs his energy by the right means.'

THE STAGES OF YOGA

The right means are just as important as the end in view. Patañjāli enumerates these means as the eight limbs or stages of Yoga for the quest of the soul. They are:

1. Yama (universal moral commandments); 2. Niyama (self purification by discipline); 3. Āsana (posture); 4. Prāṇāyāma (rhythmic control of the breath); 5. Pratyāhāra (withdrawal and emancipation of the mind from the domination of the senses and exterior objects); 6. Dhāraṇa (concentration); 7. Dhyāna (meditation) and 8. Samādhi (a state of super-consciousness brought about by profound meditation, in which the individual aspirant (sādhaka) becomes one with the object of his meditation – Paramātmā or the Universal Spirit).

Yama and Niyama control the yogi's passions and emotions and keep him in harmony with his fellow man. Ásanas keep the body healthy and strong and in harmony with nature. Finally, the yogi becomes free of body consciousness. He conquers the body and renders it a fit vehicle for the soul. The first three stages are the outward quests (bahiranga sādhanā).

The next two stages, Prāṇāyāma and Pratyāhāra, teach the aspirant to regulate the breathing, and thereby control the mind. This helps to free the senses from the thraldom of the objects of desire. These two stages of Yoga are known as the inner quests (antaranga sādhanā).

Dhāranā, Dhyāna and Samādhi take the yogi into the innermost recesses of his soul. The yogi does not look heavenward to find God. He knows that HE is within, being known as the Antarātmā (the Inner Self). The last three stages keep him in harmony with himself and his Maker. These stages are called antarātmā sādhanā, the quest of the soul.

By profound meditation, the knower, the knowledge and the known become one. The seer, the sight and the seen have no separate existence from each other. It is like a great musician becoming one with his instrument and the music that comes from it. Then, the yogi stands in his own nature and realises his self (Ātman), the part of the Supreme Soul within himself.

There are different paths (mārgas) by which a man travels to his Maker. The active man finds realisation through Karma Mārga, in which a man realises his own divinity through work and duty. The emotional man finds it through Bhakti Mārga, where there is realisation through devotion to and love of a personal God. The intellectual man pursues Jñāna Mārga, where realisation comes through knowledge. The meditative or reflective man follows Yoga Mārga, and realises his own divinity through control of the mind.

Happy is the man who knows how to distinguish the real from the unreal, the eternal from the transient and the good from the pleasant by his discrimination and wisdom. Twice blessed is he who knows true love and can love all God's creatures. He who works selflessly for the welfare of others with love in his heart is thrice blessed. But the man who combines within his mortal frame knowledge, love and selfless service is holy and becomes a place of pilgrimage, like the confluence of the rivers Gangā, Saraswatī and Jamunā. Those who meet him become calm and purified.

Mind is the king of the senses. One who has conquered his mind, senses, passions, thought and reason is a king among men. He is fit for Rāja Yoga, the royal union with the Universal Spirit. He has Inner Light.

He who has conquered his mind is a Rāja Yogi. The word rāja means a king. The expression Rāja Yoga implies a complete mastery of the Self. Though Patañjāli explains the ways to control the mind, he nowhere states in his aphorisms that this science is Rāja Yoga, but calls it Aṣṭāṅga Yoga or the eight stages (limbs) of Yoga. As it implies complete mastery of the self one may call it the science of Rāja Yoga.

Swātmārāma, the author of the *Hatha Yoga Pradīpikā* (haṭha = force or determined effort) called the same path Haṭha Yoga because it demanded rigorous discipline.

It is generally believed that Rāja Yoga and Haṭha Yoga are entirely distinct, different and opposed to each other, that the *Yoga Sutras* of Patañjāli deal with Spiritual discipline and that the *Haṭha Yoga Pradīpikā* of Swātmārāma deals solely with physical discipline. It is not so, for Haṭha Yoga and Rāja Yoga complement each other and form a single approach towards Liberation. As a mountaineer needs ladders, ropes and crampons as well as physical fitness and discipline to climb

the icy peaks of the Himālayas, so does the Yoga aspirant need the knowledge and discipline of the Haṭha Yoga of Swātmārāma to reach the heights of Rāja Yoga dealt with by Patañjāli.

This path of Yoga is the fountain for the other three paths. It brings calmness and tranquillity and prepares the mind for absolute unqualified self-surrender to God, in which all these four paths merge into one.

Chitta Vṛtti (Causes for the Modification of the Mind)

In his *Yoga Sutras* Patañjāli lists five classes of chitta vṛtti which create pleasure and pain. These are:

1. Pramāṇa (a standard or ideal), by which things or values are measured by the mind or known, which men accept upon (a) direct evidence such as perception (pratyakṣa), (b) inference (anumāna) and (c) testimony or the word of an acceptable authority when the source of knowledge has been checked as reliable and trustworthy (āgama).

2. Viparyaya (a mistaken view which is observed to be such after study). A faulty medical diagnosis based on wrong hypotheses, or the formerly held theory in astronomy that the Sun rotates round the Earth, are examples of viparyaya.

3. Vikalpa (fancy or imagination, resting merely on verbal expression without any factual basis). A beggar may feel happy when he imagines himself spending millions. A rich miser, on the other hand, may starve himself in the belief that he is poor.

4. Nidrā (sleep), where there is the absence of ideas and experiences. When a man is sleeping soundly, he does not recall his name, family or status, his knowledge or wisdom, or even his own existence. When a man forgets himself in sleep, he wakes up refreshed. But, if a disturbing thought creeps into his mind when he is dropping off, he will not rest properly.

5. Smṛti (memory, the holding fast of the impressions of objects that one has experienced). There are people who live in their past experiences, even though the past is beyond recall. Their sad or happy memories keep them chained to the past and they cannot break their fetters.

Patañjāli enumerates five causes of chitta vṛtti creating pain (kleśa). These are:

1. Avidyā (ignorance or nescience); (2) asmitā (the feeling of individuality which limits a person and distinguishes him from a group and which may be physical, mental, intellectual or emotional); (3) rāga

(attachment or passion); (4) dveśa (aversion or revulsion) and (5) abhiniveśa (love of or thirst for life, the instinctive clinging to worldly life and bodily enjoyment and the fear that one may be cut off from all this by death). These causes of pain remain submerged in the mind of the sādhaka (the aspirant or seeker). They are like icebergs barely showing their heads in the polar seas. So long as they are not studiously controlled and eradicated, there can be no peace. The yogi learns to forget the past and takes no thought for the morrow. He lives in the eternal present.

As a breeze ruffles the surface of a lake and distorts the images reflected therein, so also the chitta vṛtti disturb the peace of the mind. The still waters of a lake reflect the beauty around it. When the mind is still, the beauty of the Self is seen reflected in it. The yogi stills his mind by constant study and by freeing himself from desires. The eight stages of Yoga teach him the way.

Chitta Vikṣepa (Distractions and Obstacles)

The distractions and obstacles which hinder the aspirant's practice of Yoga are:

1. Vyādhi – sickness which disturbs the physical equilibrium
2. Styāna – languor or lack of mental disposition for work
3. Saṁśaya – doubt or indecision
4. Pramāda – indifference or insensibility
5. Ālasya – laziness
6. Avirati – sensuality, the rousing of desire when sensory objects possess the mind
7. Bhrānti Darśana – false or invalid knowledge, or illusion
8. Alabdha Bhūmikatva – failure to attain continuity of thought or concentration so that reality cannot be seen
9. Anavasthitattva – instability in holding on to concentration which has been attained after long practice.

There are, however, four more distractions: (1) duḥkha – pain or misery, (2) daurmansya – despair, (3) aṅgamejayatva – unsteadiness of the body and (4) śvāsa-praśvāsa – unsteady respiration.

To win a battle, a general surveys the terrain and the enemy and plans counter-measures. In a similar way the Yogi plans the conquest of the Self.

Vyādhi: It will be noticed that the very first obstacle is ill-health or sickness. To the yogi his body is the prime instrument of attainment. If his vehicle breaks down, the traveller cannot go far. If the body is broken by ill-health, the aspirant can achieve little. Physical health is

important for mental development, as normally the mind functions through the nervous system. When the body is sick or the nervous system is affected, the mind becomes restless or dull and inert and concentration or meditation become impossible.

Styāna: A person suffering from languor has no goal, no path to follow and no enthusiasm. His mind and intellect become dull due to inactivity and their faculties rust. Constant flow keeps a mountain stream pure, but water in a ditch stagnates and nothing good can flourish in it. A listless person is like a living corpse for he can concentrate on nothing.

Saṁśaya: The unwise, the faithless and the doubter destroy themselves. How can they enjoy this world or the next or have any happiness? The seeker should have faith in himself and his master. He should have faith that God is ever by his side and that no evil can touch him. As faith springs up in the heart it dries out lust, ill-will, mental sloth, spiritual pride and doubt, and the heart free from these hindrances becomes serene and untroubled.

Pramāda: A person suffering from pramāda is full of self-importance, lacks any humility and believes that he alone is wise. No doubt he knows what is right or wrong, but he persists in his indifference to the right and chooses what is pleasant. To gratify his selfish passions and dreams of personal glory, he will deliberately and without scruple sacrifice everyone who stands in his way. Such a person is blind to God's glory and deaf to His words.

Ālasya: To remove the obstacle of laziness, unflagging enthusiasm (vīrya) is needed. The attitude of the aspirant is like that of a lover ever yearning to meet the beloved but never giving way to despair. Hope should be his shield and courage his sword. He should be free from hate and sorrow. With faith and enthusiasm he should overcome the inertia of the body and the mind.

Avirati: This is the tremendous craving for sensory objects after they have been consciously abandoned, which is so hard to restrain. Without being attached to the objects of sense, the yogi learns to enjoy them with the aid of the senses which are completely under his control. By the practice of pratyāhāra he wins freedom from attachment and emancipation from desire and becomes content and tranquil.

Bhrānti Darśana: A person afflicted by false knowledge suffers from delusion and believes that he alone has seen the true Light. He has a

powerful intellect but lacks humility and makes a show of wisdom. By remaining in the company of great souls and through their guidance he sets his foot firmly on the right path and overcomes his weakness.

Alabdha Bhūmikatva: As a mountain climber fails to reach the summit for lack of stamina, so also a person who cannot overcome the inability to concentrate is unable to seek reality. He might have had glimpses of reality but he cannot see clearly. He is like a musician who has heard divine music in a dream, but who is unable to recall it in his waking moments and cannot repeat the dream.

Anavasthitattva: A person affected with anavasthitattva has by hard work come within sight of reality. Happy and proud of his achievements he becomes slack in his practice (sādhana). He has purity and great power of concentration and has come to the final cross-roads of his quest. Even at this last stage continuous endeavour is essential and he has to pursue the path with infinite patience and determined perseverance and must never show slackness which hampers progress on the path of God realization. He must wait until divine grace descends upon him. It has been said in the *Kaṭhopanishad:* 'The Self is not to be realised by study and instruction, nor by subtlety of intellect, nor by much learning, but only by him who longs for Him, by the one whom He chooses. Verily to such a one the Self reveals His true being.'

To overcome the obstacles and to win unalloyed happiness, Patañjāli offered several remedies. The best of these is the fourfold remedy of Maitri (friendliness), Karuṇa (compassion), Muditā (delight) and Upekṣā (disregard).

Maitri is not merely friendliness, but also a feeling of oneness with the object of friendliness (ātmīyatā). A mother feels intense happiness at the success of her children because of ātmīyatā, a feeling of oneness. Patañjāli recommends maitri for sukha (happiness or virtue). The yogi cultivates maitri and ātmīyatā for the good and turns enemies into friends, bearing malice towards none.

Karuṇa is not merely showing pity or compassion and shedding tears of despair at the misery (duḥkha) of others. It is compassion coupled with devoted action to relieve the misery of the afflicted. The yogi uses all his resources—physical, economic, mental or moral—to alleviate the pain and suffering of others. He shares his strength with the weak until they become strong. He shares his courage with those that are timid until they become brave by his example. He denies the maxim of the 'survival of the fittest', but makes the weak strong enough to survive. He becomes a shelter to one and all.

Muditā is a feeling of delight at the good work (punya) done by

another, even though he may be a rival. Through muditā, the yogi saves himself from much heart-burning by not showing anger, hatred or jealousy for another who has reached the desired goal which he himself has failed to achieve.

Upekṣā: It is not merely a feeling of disdain or contempt for the person who has fallen into vice (apuṇya) or one of indifference or superiority towards him. It is a searching self-examination to find out how one would have behaved when faced with the same temptations. It is also an examination to see how far one is responsible for the state into which the unfortunate one has fallen and the attempt thereafter to put him on the right path. The yogi understands the faults of others by seeing and studying them first in himself. This self-study teaches him to be charitable to all.

The deeper significance of the fourfold remedy of maitri, karuṇa, muditā and upekṣā cannot be felt by an unquiet mind. My experience has led me to conclude that for an ordinary man or woman in any community of the world, the way to achieve a quiet mind is to work with determination on two of the eight stages of Yoga mentioned by Patañjāli, namely, āsana and prāṇāyāma.

The mind (manas) and the breath (prāṇa) are intimately connected and the activity or the cessation of activity of one affects the other. Hence Patañjāli recommended prāṇāyāma (rhythmic breath control) for achieving mental equipoise and inner peace.

Śiṣya and Guru (*A Pupil and a Master*)

The *Śiva Samhitā* divides sādhakas (pupils or aspirants) into four classes. They are (1) mṛdu (feeble), (2) madhyama (average), (3) adhimātra (superior) and (4) adhimātratama (the supreme one). The last, the highest, is alone able to cross beyond the ocean of the manifest world.

The feeble seekers are those who lack enthusiasm, criticise their teachers, are rapacious, inclined to bad action, eat much, are in the power of women, unstable, cowardly, ill, dependent, speak harshly, have weak characters and lack virility. The Guru (Teacher or Master) guides such seekers in the path of Mantra Yoga only. With much effort, the sādhaka can reach enlightenment in twelve years. (The word mantra is derived from the root 'man', meaning to think. Mantra thus means a sacred thought or prayer to be repeated with full understanding of its meaning. It takes a long time, perhaps years, for a mantra to take firm root in the mind of a feeble sādhaka and still longer for it to bear fruit.)

Of even mind, capable of bearing hardship, wishing to perfect the work, speaking gently, moderate in all circumstances, such is the

average seeker. Recognising these qualities, the Guru teaches him Laya Yoga, which gives liberation. (Laya means devotion, absorption or dissolution.)

Of stable mind, capable of Laya Yoga, virile, independent, noble, merciful, forgiving, truthful, brave, young, respectful, worshipping his teacher, intent on the practice of Yoga, such is a superior seeker. He can reach enlightenment after six years of practice. The Guru instructs this forceful man in Haṭha Yoga.

Of great virility and enthusiasm, good looking, courageous, learned in scriptures, studious, sane of mind, not melancholy, keeping young, regular in food, with his senses under control, free from fear, clean, skilful, generous, helpful to all, firm, intelligent, independent, forgiving, of good character, of gentle speech and worshipping his Guru, such is a supreme seeker, fit for all forms of Yoga. He can reach enlightenment in three years.

Although the *Śiva Samhitā* and the *Haṭha Yoga Pradīpikā* mention the period of time within which success might be achieved, Patañjāli nowhere lays down the time required to unite the individual soul with the Divine Universal Soul. According to him abhyāsa (constant and determined practice) and vairāgya (freedom from desires) make the mind calm and tranquil. He defines abhyāsa as effort of long duration, without interruption, performed with devotion, which creates a firm foundation.

The study of Yoga is not like work for a diploma or a university degree by someone desiring favourable results in a stipulated time.

The obstacles, trials and tribulations in the path of Yoga can be removed to a large extent with the help of a Guru. (The syllable gu means darkness and ru means light. He alone is a Guru who removes darkness and brings enlightenment.) The conception of a Guru is deep and significant. He is not an ordinary guide. He is a spiritual teacher who teaches a way of life, and not merely how to earn a livelihood. He transmits knowledge of the Spirit and one who receives such knowledge is a śiṣya, a disciple.

The relationship between a Guru and a śiṣya is a very special one, transcending that between parent and child, husband and wife or friends. A Guru is free from egotism. He devotedly leads his śiṣya towards the ultimate goal without any attraction for fame or gain. He shows the path of God and watches the progress of his disciple, guiding him along that path. He inspires confidence, devotion, discipline, deep understanding and illumination through love. With faith in his pupil, the Guru strains hard to see that he absorbs the teaching. He encourages him to ask questions and to know the truth by question and analysis.

A śiṣya should possess the necessary qualifications of higher realisation and development. He must have confidence, devotion and love for his Guru. The perfect examples of the relationship between a Guru and a śiṣya are those of Yama (the God of Death) and Nachiketā in the *Kaṭhopaniṣad* and of Śri Krishna and Arjuna in the *Bhagavad Gītā*. Nachiketā and Arjuna obtained enlightenment through their one-pointed mind, their eagerness and questioning spirit. The śiṣya should hunger for knowledge and have the spirit of humility, perseverance and tenacity of purpose. He should not go to the Guru merely out of curiosity. He should possess śraddhā (dynamic faith) and should not be discouraged if he cannot reach the goal in the time he had expected. It requires tremendous patience to calm the restless mind which is coloured by innumerable past experiences and saṁskāra (the accumulated residue of past thoughts and actions).

Merely listening to the words of the Guru does not enable the śiṣya to absorb the teaching. This is borne out by the story of Indra and Virochana. Indra, the king of Gods, and Virochana, a demon prince, went together to their spiritual preceptor Brahmā to obtain knowledge of the Supreme Self. Both stayed and listened to the same words of their Guru. Indra obtained enlightenment, whereas Virochana did not. Indra's memory was developed by his devotion to the subject taught and by the love and faith which he had for his teacher. He had a feeling of oneness with his Guru. These were the reasons for his success. Virochana's memory was developed only through his intellect. He had no devotion either for the subject taught or for his preceptor. He remained what he originally was, an intellectual giant. He returned a doubter. Indra had intellectual humility, while Virochana had intellectual pride and imagined that it was condescending on his part to go to Brahmā. The approach of Indra was devotional while that of Virochana was practical. Virochana was motivated by curiosity and wanted the practical knowledge which he believed would be useful to him later to win power.

The śiṣya should above all treasure love, moderation and humility. Love begets courage, moderation creates abundance and humility generates power. Courage without love is brutish. Abundance without moderation leads to over-indulgence and decay. Power without humility breeds arrogance and tyranny. The true śiṣya learns from his Guru about a power which will never leave him as he returns to the Primeval One, the Source of His Being.

Sādhanā (A Key to Freedom)

All the important texts on Yoga lay great emphasis on sādhanā or abhyāsa (constant practice). Sādhanā is not just a theoretical study

of Yoga texts. It is a spiritual endeavour. Oil seeds must be pressed to yield oil. Wood must be heated to ignite it and bring out the hidden fire within. In the same way, the sādhaka must by constant practice light the divine flame within himself.

'The young, the old, the extremely aged, even the sick and the infirm obtain perfection in Yoga by constant practice. Success will follow him who practises, not him who practises not. Success in Yoga is not obtained by the mere theoretical reading of sacred texts. Success is not obtained by wearing the dress of a yogi or a sanyāsi (a recluse), nor by talking about it. Constant practice alone is the secret of success. Verily, there is no doubt of this.' – (*Haṭha Yoga Pradīpikā*, chapter I, verses 64–6.)

'As by learning the alphabet one can, through practice, master all the sciences, so by thoroughly practising first physical training one acquires the knowledge of Truth (Tattva Jnāṇa), that is the real nature of the human soul as being identical with the Supreme Spirit pervading the Universe.' – (*Gheraṇḍa Saṁhitā*, chapter I, verse 5.)

It is by the co-ordinated and concentrated efforts of his body, senses, mind, reason and Self that a man obtains the prize of inner peace and fulfils the quest of his soul to meet his Maker. The supreme adventure in a man's life is his journey back to his Creator. To reach the goal he needs well developed and co-ordinated functioning of his body, senses, mind, reason and Self. If the effort is not co-ordinated, he fails in his adventure. In the third valli (chapter) of the first part of the *Kaṭhopaniṣad*, Yama (the God of Death) explains this Yoga to the seeker Nachiketā by way of the parable of the individual in a chariot.

'Know the Ātman (Self) as the Lord in a chariot, reason as the charioteer and mind as the reins. The senses, they say, are the horses, and their objects of desire are the pastures. The Self, when united with the senses and the mind, the wise call the Enjoyer (Bhoktṛ). The undiscriminating can never rein in his mind; his senses are like the vicious horses of a charioteer. The discriminating ever controls his mind; his senses are like disciplined horses. The undiscriminating becomes unmindful, ever impure; he does not reach the goal, wandering from one body to another. The discriminating becomes mindful, ever pure; he reaches the goal and is never reborn. The man who has a discriminating charioteer to rein in his mind reaches the end of the journey – the Supreme Abode of the everlasting Spirit.'

'The senses are more powerful than the objects of desire. Greater than the senses is the mind, higher than the mind is the reason and superior to reason is He – the Spirit in all. Discipline yourself by the Self and destroy your deceptive enemy in the shape of desire.' (*Bhagavad Gītā*, chapter III, verses 42–3.)

To realise this not only constant practice is demanded but also renunciation. As regards renunciation, the question arises as to what one should renounce. The yogi does not renounce the world, for that would mean renouncing the Creator. The yogi renounces all that takes him away from the Lord. He renounces his own desires, knowing that all inspiration and right action come from the Lord. He renounces those who oppose the work of the Lord, those who spread demonic ideas and who merely talk of moral values but do not practise them.

The yogi does not renounce action. He cuts the bonds that tie himself to his actions by dedicating their fruits either to the Lord or to humanity. He believes that it is his privilege to do his duty and that he has no right to the fruits of his actions.

While others are asleep when duty calls and wake up only to claim their rights, the yogi is fully awake to his duty, but asleep over his rights. Hence it is said that in the night of all beings the disciplined and tranquil man wakes to the light.

Aṣṭāṅga Yoga – The Eight Limbs of Yoga

The *Yoga Sutra* of Patañjāli is divided into four chapters or pāda. The first deals with samādhi, the second with the means (sādhanā) to achieve Yoga, the third enumerates the powers (vibhūti) that the yogi comes across in his quest, and the fourth deals with absolution (kaivalya).

Yama

The eight limbs of Yoga are described in the second chapter. The first of these is yama (ethical disciplines) – the great commandments transcending creed, country, age and time. They are: ahimsā (non-violence), satya (truth), asteya (non-stealing), brahmacharya (continence) and aparigraha (non-coveting). These commandments are the rules of morality for society and the individual, which if not obeyed bring chaos, violence, untruth, stealing, dissipation and covetousness. The roots of these evils are the emotions of greed, desire and attachment, which may be mild, medium or excessive. They only bring pain and ignorance. Patañjāli strikes at the root of these evils by changing the direction of one's thinking along the five principles of yama.

Ahimsā. The word ahimsā is made up of the particle 'a' meaning 'not' and the noun himsā meaning killing or violence. It is more than a negative command not to kill, for it has a wider positive meaning, love. This love embraces all creation for we are all children of the same Father – the Lord. The yogi believes that to kill or to destroy a thing or being is to insult its Creator. Men either kill for food or to protect

themselves from danger. But merely because a man is a vegetarian, it does not necessarily follow that he is non-violent by temperament or that he is a yogi, though a vegetarian diet is a necessity for the practice of yoga. Blood-thirsty tyrants may be vegetarians, but violence is a state of mind, not of diet. It resides in a man's mind and not in the instrument he holds in his hand. One can use a knife to pare fruit or to stab an enemy. The fault is not in the instrument, but in the user.

Men take to violence to protect their own interests–their own bodies, their loved ones, their property or dignity. But a man cannot rely upon himself alone to protect himself or others. The belief that he can do so is wrong. A man must rely upon God, who is the source of all strength. Then he will fear no evil.

Violence arises out of fear, weakness, ignorance or restlessness. To curb it what is most needed is freedom from fear. To gain this freedom, what is required is a change of outlook on life and reorientation of the mind. Violence is bound to decline when men learn to base their faith upon reality and investigation rather than upon ignorance and supposition.

The yogi believes that every creature has as much right to live as he has. He believes that he is born to help others and he looks upon creation with eyes of love. He knows that his life is linked inextricably with that of others and he rejoices if he can help them to be happy. He puts the happiness of others before his own and becomes a source of joy to all who meet him. As parents encourage a baby to walk the first steps, he encourages those more unfortunate than himself and makes them fit for survival.

For a wrong done by others, men demand justice; while for that done by themselves they plead mercy and forgiveness. The yogi on the other hand, believes that for a wrong done by himself, there should be justice, while for that done by another there should be forgiveness. He knows and teaches others how to live. Always striving to perfect himself, he shows them by his love and compassion how to improve themselves.

The yogi opposes the evil in the wrong-doer, but not the wrong-doer. He prescribes penance not punishment for a wrong done. Opposition to evil and love for the wrong-doer can live side by side. A drunkard's wife whilst loving him may still oppose his habit. Opposition without love leads to violence; loving the wrong-doer without opposing the evil in him is folly and leads to misery. The yogi knows that to love a person whilst fighting the evil in him is the right course to follow. The battle is won because he fights it with love. A loving mother will sometimes beat her child to cure it of a bad habit; in the same way a true follower of ahimsā loves his opponent.

Along with ahimsā go abhaya (freedom from fear) and akrodha (freedom from anger). Freedom from fear comes only to those who lead a pure life. The yogi fears none and none need fear him, because he is purified by the study of the Self. Fear grips a man and paralyses him. He is afraid of the future, the unknown and the unseen. He is afraid that he may lose his means of livelihood, wealth or reputation. But the greatest fear is that of death. The yogi knows that he is different from his body, which is a temporary house for his spirit. He sees all beings in the Self and the Self in all beings and therefore he loses all fear. Though the body is subject to sickness, age, decay and death, the spirit remains unaffected. To the yogi death is the sauce that adds zest to life. He has dedicated his mind, his reason and his whole life to the Lord. When he has linked his entire being to the Lord, what shall he then fear?

There are two types of anger (krodha), one of which debases the mind while the other leads to spiritual growth. The root of the first is pride, which makes one angry when slighted. This prevents the mind from seeing things in perspective and makes one's judgement defective. The yogi, on the other hand, is angry with himself when his mind stoops low or when all his learning and experience fail to stop him from folly. He is stern with himself when he deals with his own faults, but gentle with the faults of others. Gentleness of mind is an attribute of a yogi, whose heart melts at all suffering. In him gentleness for others and firmness for himself go hand in hand, and in his presence all hostilities are given up.

Satya. Satya or truth is the highest rule of conduct or morality. Mahatma Gandhi said: 'Truth is God and God is Truth.' As fire burns impurities and refines gold, so the fire of truth cleanses the yogi and burns up the dross in him.

If the mind thinks thoughts of truth, if the tongue speaks words of truth and if the whole life is based upon truth, then one becomes fit for union with the Infinite. Reality in its fundamental nature is love and truth and expresses itself through these two aspects. The yogi's life must conform strictly to these two facets of Reality. That is why ahimsā, which is essentially based on love, is enjoined. Satya presupposes perfect truthfulness in thought, word and deed. Untruthfulness in any form puts the sādhaka out of harmony with the fundamental law of truth.

Truth is not limited to speech alone. There are four sins of speech: abuse and obscenity, dealing in falsehoods, calumny or telling tales and lastly ridiculing what others hold to be sacred. The tale bearer is more poisonous than a snake. The control of speech leads to the

rooting out of malice. When the mind bears malice towards none, it is filled with charity towards all. He who has learnt to control his tongue has attained self-control in a great measure. When such a person speaks he will be heard with respect and attention. His words will be remembered, for they will be good and true.

When one who is established in truth prays with a pure heart, then things he really needs come to him when they are really needed: he does not have to run after them. The man firmly established in truth gets the fruit of his actions without apparently doing anything. God, the source of all truth, supplies his needs and looks after his welfare.

Asteya. The desire to possess and enjoy what another has, drives a person to do evil deeds. From this desire spring the urge to steal and the urge to covet. Asteya (a=not, steya=stealing), or non-stealing includes not only taking what belongs to another without permission, but also using something for a different purpose to that intended, or beyond the time permitted by its owner. It thus includes misappropriation, breach of trust, mismanagement and misuse. The yogi reduces his physical needs to the minimum, believing that if he gathers things he does not really need, he is a thief. While other men crave for wealth, power, fame or enjoyment, the yogi has one craving and that is to adore the Lord. Freedom from craving enables one to ward off great temptations. Craving muddies the stream of tranquillity. It makes men base and vile and cripples them. He who obeys the commandment *Thou shalt not steal*, becomes a trusted repository of all treasures.

Brahmacharya. According to the dictionary brahmacharya means the life of celibacy, religious study and self-restraint. It is thought that the loss of semen leads to death and its retention to life. By the preservation of semen the yogi's body develops a sweet smell. So long as it is retained, there is no fear of death. Hence the injunction that it should be preserved by concentrated effort of the mind. The concept of brahmacharya is not one of negation, forced austerity and prohibition. According to Śankarāchārya, a brahmachārī (one who observes brahmacharya) is a man who is engrossed in the study of the sacred Vedic lore, constantly moves in Brahman and knows that all exists in Brahman. In other words, one who sees divinity in all is a brahmachārī. Patañjāli, however, lays stress on continence of the body, speech and mind. This does not mean that the philosophy of Yoga is meant only for celibates. Brahmacharya has little to do with whether one is a bachelor or married and living the life of a householder. One has to translate the higher aspects of Brahmacharya in one's daily living. It is not necessary for one's salvation to stay unmarried and without

a house. On the contrary, all the smṛtīs (codes of law) recommend marriage. Without experiencing human love and happiness, it is not possible to know divine love. Almost all the yogis and sages of old in India were married men with families of their own. They did not shirk their social or moral responsibilities. Marriage and parenthood are no bar to the knowledge of divine love, happiness and union with the Supreme Soul.

Dealing with the position of an aspirant who is a householder, the *Śiva Saṁhitā* says: Let him practise free from the company of men in a retired place. For the sake of appearances, he should remain in society, but not have his heart in it. He should not renounce the duties of his profession, caste or rank; but let him perform these as an instrument of the Lord, without any thought of the results. He succeeds by following wisely the method of Yoga; there is no doubt of it. Remaining in the midst of the family, always doing the duties of the householder, he who is free from merits and demerits and has restrained his senses, attains salvation. The householder practising Yoga is not touched by virtue or vice; if to protect mankind he commits any sin, he is not polluted by it. (Chapter V, verses 234–8.)

When one is established in brahmacharya, one develops a fund of vitality and energy, a courageous mind and a powerful intellect so that one can fight any type of injustice. The brahmachārī will use the forces he generates wisely: he will utilise the physical ones for doing the work of the Lord, the mental for the spread of culture and the intellectual for the growth of spiritual life. Brahmacharya is the battery that sparks the torch of wisdom.

Aparigraha. Parigraha means hoarding or collecting. To be free from hoarding is aparigraha. It is thus but another facet of asteya (non-stealing). Just as one should not take things one does not really need, so one should not hoard or collect things one does not require immediately. Neither should one take anything without working for it or as a favour from another, for this indicates poverty of spirit. The yogi feels that the collection or hoarding of things implies a lack of faith in God and in himself to provide for his future. He keeps faith by keeping before him the image of the moon. During the dark half of the month, the moon rises late when most men are asleep and so do not appreciate its beauty. Its splendour wanes but it does not stray from its path and is indifferent to man's lack of appreciation. It has faith that it will be full again when it faces the Sun and then men will eagerly await its glorious rising.

By the observance of aparigraha, the yogi makes his life as simple as possible and trains his mind not to feel the loss or the lack of any-

thing. Then everything he really needs will come to him by itself at the proper time. The life of an ordinary man is filled with an unending series of disturbances and frustrations and with his reactions to them. Thus there is hardly any possibility of keeping the mind in a state of equilibrium. The sādhaka has developed the capacity to remain satisfied with whatever happens to him. Thus he obtains the peace which takes him beyond the realms of illusion and misery with which our world is saturated. He recalls the promise given by Śri Krishna to Arjuna in the ninth chapter of the *Bhagavad Gītā*: 'To those who worship Me alone with single-minded devotion, who are in harmony with Me every moment, I bring full security. I shall supply all their wants and shall protect them for ever.'

Niyama

Niyama are the rules of conduct that apply to individual discipline, while yama are universal in their application. The five niyama listed by Patañjāli are: śaucha (purity), santoṣa (contentment), tapas (ardour or austerity), svādhyāya (study of the Self) and Iśvara praṇidhāna (dedication to the Lord).

Śaucha. Purity of body is essential for well-being. While good habits like bathing purify the body externally, āsana and prāṇāyāma cleanse it internally. The practice of āsanas tones the entire body and removes the toxins and impurities caused by over-indulgence. Prāṇāyāma cleanses and aerates the lungs, oxygenates the blood and purifies the nerves. But more important than the physical cleansing of the body is the cleansing of the mind of its disturbing emotions like hatred, passion, anger, lust, greed, delusion and pride. Still more important is the cleansing of the intellect (buddhi) of impure thoughts. The impurities of the mind are washed off in the waters of bhakti (adoration). The impurities of the intellect or reason are burned off in the fire of svādhyāya (study of the Self). This internal cleansing gives radiance and joy. It brings benevolence (saumanasya) and banishes mental pain, dejection, sorrow and despair (daurmanasya). When one is benevolent, one sees the virtues in others and not merely their faults. The respect which one shows for another's virtues, makes him self-respecting as well and helps him to fight his own sorrows and difficulties. When the mind is lucid, it is easy to make it one-pointed (ekāgra). With concentration, one obtains mastery over the senses (indriya-jaya). Then one is ready to enter the temple of his own body and see his real self in the mirror of his mind.

Besides purity of body, thought and word, pure food is also necessary. Apart from cleanliness in the preparation of food it is also

necessary to observe purity in the means by which one procures it.

Food, the supporting yet consuming substance of all life, is regarded as a phase of Brahman. It should be eaten with the feeling that with each morsel one can gain strength to serve the Lord. Then food becomes pure. Whether or not to be a vegetarian is a purely personal matter as each person is influenced by the tradition and habits of the country in which he was born and bred. But, in course of time, the practitioner of yoga has to adopt a vegetarian diet, in order to attain one-pointed attention and spiritual evolution.

Food should be taken to promote health, strength, energy and life. It should be simple, nourishing, juicy and soothing. Avoid foods which are sour, bitter, salty, pungent, burning, stale, tasteless, heavy and unclean.

Character is moulded by the type of food we take and by how we eat it. Men are the only creatures that eat when not hungry and generally live to eat rather than eat to live. If we eat for flavours of the tongue, we over-eat and so suffer from digestive disorders which throw our systems out of gear. The yogi believes in harmony, so he eats for the sake of sustenance only. He does not eat too much or too little. He looks upon his body as the rest-house of his spirit and guards himself against over-indulgence.

Besides food, the place is also important for spiritual practices. It is difficult to practise in a distant country (away from home), in a forest, in a crowded city, or where it is noisy. One should choose a place where food is easily procurable, a place which is free from insects, protected from the elements and with pleasing surroundings. The banks of a lake or river or the sea-shore are ideal. Such quiet ideal places are hard to find in modern times; but one can at least make a corner in one's room available for practice and keep it clean, airy, dry and pest-free.

Santoṣa. Santoṣa or contentment has to be cultivated. A mind that is not content cannot concentrate. The yogi feels the lack of nothing and so he is naturally content. Contentment gives bliss unsurpassed to the yogi. A contented man is complete for he has known the love of the Lord and has done his duty. He is blessed for he has known truth and joy.

Contentment and tranquillity are states of mind. Differences arise among men because of race, creed, wealth and learning. Differences create discord and there arise conscious or unconscious conflicts which distract and perplex one. Then the mind cannot become one-pointed (ekāgra) and is robbed of its peace. There is contentment and tranquillity

when the flame of the spirit does not waver in the wind of desire. The sādhaka does not seek the empty peace of the dead, but the peace of one whose reason is firmly established in God.

Tapas. Tapas is derived from the root 'tap' meaning to blaze, burn, shine, suffer pain or consume by heat. It therefore means a burning effort under all circumstances to achieve a definite goal in life. It involves purification, self-discipline and austerity. The whole science of character building may be regarded as a practice of tapas.

Tapas is the conscious effort to achieve ultimate union with the Divine and to burn up all desires which stand in the way of this goal. A worthy aim makes life illumined, pure and divine. Without such an aim, action and prayer have no value. Life without tapas, is like a heart without love. Without tapas, the mind cannot reach up to the Lord.

Tapas is of three types. It may relate to the body (kāyika), to speech (vāchika) or to mind (mānasika). Continence (brahmacharya) and non-violence (ahimsā) are tapas of the body. Using words which do not offend, reciting the glory of God, speaking the truth without regard for the consequences to oneself and not speaking ill of others are tapas of speech. Developing a mental attitude whereby one remains tranquil and balanced in joy and sorrow and retains self-control are tapas of the mind.

It is tapas when one works without any selfish motive or hope of reward and with an unshakable faith that not even a blade of grass can move without His will.

By tapas the yogi develops strength in body, mind and character. He gains courage and wisdom, integrity, straightforwardness and simplicity.

Svādhyāya. Sva means self and adhyāya means study or education. Education is the drawing out of the best that is within a person. Svādhyāya, therefore, is the education of the self.

Svādhyāya is different from mere instruction like attending a lecture where the lecturer parades his own learning before the ignorance of his audience. When people meet for svādhyāya, the speaker and listener are of one mind and have mutual love and respect. There is no sermonising and one heart speaks to another. The ennobling thoughts that arise from svādhyāya are, so to speak, taken into one's bloodstream so that they become a part of one's life and being.

The person practising svādhyāya reads his own book of life, at the same time that he writes and revises it. There is a change in his outlook on life. He starts to realise that all creation is meant for bhakti

(adoration) rather than for bhoga (enjoyment), that all creation is divine, that there is divinity within himself and that the energy which moves him is the same that moves the entire universe.

According to Śri Vinobā Bhāve (the leader of the Bhoodan movement), svādhyāya is the study of one subject which is the basis or root of all other subjects or actions, upon which the others rest, but which itself does not rest upon anything.

To make life healthy, happy and peaceful, it is essential to study regularly divine literature in a pure place. This study of the sacred books of the world will enable the sādhaka to concentrate upon and solve the difficult problems of life when they arise. It will put an end to ignorance and bring knowledge. Ignorance has no beginning, but it has an end. There is a beginning but no end to knowledge. By svādhyāya the sādhaka understands the nature of his soul and gains communion with the divine. The sacred books of the world are for all to read. They are not meant for the members of one particular faith alone. As bees savour the nectar in various flowers, so the sādhaka absorbs things in other faiths which will enable him to appreciate his own faith better.

Philology is not a language but the science of languages, the study of which will enable the student to learn his own language better. Similarly, Yoga is not a religion by itself. It is the science of religions, the study of which will enable a sādhaka the better to appreciate his own faith.

Īśvara praṇidhāna. Dedication to the Lord of one's actions and will is Īśvara praṇidhāna. He who has faith in God does not despair. He has illumination (tejas). He who knows that all creation belongs to the Lord will not be puffed up with pride or drunk with power. He will not stoop for selfish purposes; his head will bow only in worship. When the waters of bhakti (adoration) are made to flow through the turbines of the mind, the result is mental power and spiritual illumination. While mere physical strength without bhakti is lethal, mere adoration without strength of character is like an opiate. Addiction to pleasures destroys both power and glory. From the gratification of the senses as they run after pleasures arise moha (attachment) and lobha (greed) for their repetition. If the senses are not gratified, then, there is śoka (sorrow). They have to be curbed with knowledge and forbearance; but to control the mind is more difficult. After one has exhausted one's own resources and still not succeeded, one turns to the Lord for help for He is the source of all power. It is at this stage that bhakti begins. In bhakti, the mind, the intellect and the will are surrendered to the Lord and the sādhaka prays: 'I do not know what is good for

me. Thy will be done.' Others pray to have their own desires gratified or accomplished. In bhakti or true love there is no place for 'I' and 'mine'. When the feeling of 'I' and 'mine' disappears, the individual soul has reached full growth.

When the mind has been emptied of desires of personal gratification, it should be filled with thoughts of the Lord. In a mind filled with thoughts of personal gratification, there is danger of the senses dragging the mind after the objects of desire. Attempts to practise bhakti without emptying the mind of desires is like building a fire with wet fuel. It makes a lot of smoke and brings tears to the eyes of the person who builds it and of those around him. A mind with desires does not ignite and glow, nor does it generate light and warmth when touched with the fire of knowledge.

The name of the Lord is like the Sun, dispelling all darkness. The moon is full when it faces the sun. The individual soul experiences fullness (pūrṇatā) when it faces the Lord. If the shadow of the earth comes between the full moon and the sun there is an eclipse. If the feeling of 'I' and 'mine' casts its shadow upon the experience of fullness, all efforts of the sādhaka to gain peace are futile.

Actions mirror a man's personality better than his words. The yogi has learnt the art of dedicating all his actions to the Lord and so they reflect the divinity within him.

Āsana

The third limb of yoga is āsana or posture. Āsana brings steadiness, health and lightness of limb. A steady and pleasant posture produces mental equilibrium and prevents fickleness of mind. Āsanas are not merely gymnastic exercises; they are postures. To perform them one needs a clean airy place, a blanket and determination, while for other systems of physical training one needs large playing fields and costly equipment. Āsanas can be done alone, as the limbs of the body provide the necessary weights and counter-weights. By practising them one develops agility, balance, endurance and great vitality.

Āsanas have been evolved over the centuries so as to exercise every muscle, nerve and gland in the body. They secure a fine physique, which is strong and elastic without being muscle-bound and they keep the body free from disease. They reduce fatigue and soothe the nerves. But their real importance lies in the way they train and discipline the mind.

Many actors, acrobats, athletes, dancers, musicians and sportsmen also possess superb physiques and have great control over the body, but they lack control over the mind, the intellect and the Self. Hence they are in disharmony with themselves and one rarely comes

across a balanced personality among them. They often put the body above all else. Though the yogi does not underrate his body, he does not think merely of its perfection but of his senses, mind, intellect and soul.

The yogi conquers the body by the practice of āsanas and makes it a fit vehicle for the spirit. He knows that it is a necessary vehicle for the spirit. A soul without a body is like a bird deprived of its power to fly.

The yogi does not fear death, for time must take its toll of all flesh. He knows that the body is constantly changing and is affected by childhood, youth and old age. Birth and death are natural phenomena but the soul is not subject to birth and death. As a man casting off worn-out garments takes on new ones, so the dweller within the body casting aside worn-out bodies enters into others that are new.

The yogi believes that his body has been given to him by the Lord not for enjoyment alone, but also for the service of his fellow men during every wakeful moment of his life. He does not consider it his property. He knows that the Lord who has given him his body will one day take it away.

By performing āsanas, the sādhaka first gains health, which is not mere existence. It is not a commodity which can be purchased with money. It is an asset to be gained by sheer hard work. It is a state of complete equilibrium of body, mind and spirit. Forgetfulness of physical and mental consciousness is health. The yogi frees himself from physical disabilities and mental distractions by practising āsanas. He surrenders his actions and their fruits to the Lord in the service of the world.

The yogi realises that his life and all its activities are part of the divine action in nature, manifesting and operating in the form of man. In the beating of his pulse and the rhythm of his respiration, he recognises the flow of the seasons and the throbbing of universal life. His body is a temple which houses the Divine Spark. He feels that to neglect or to deny the needs of the body and to think of it as something not divine, is to neglect and deny the universal life of which it is a part. The needs of the body are the needs of the divine spirit which lives through the body. The yogi does not look heaven-ward to find God for he knows that He is within, being known as the Antarātmā (the Inner Self). He feels the kingdom of God within and without and finds that heaven lies in himself.

Where does the body end and the mind begin? Where does the mind end and the spirit begin? They cannot be divided as they are inter-related and but different aspects of the same all-pervading divine consciousness.

The yogi never neglects or mortifies the body or the mind, but cherishes both. To him the body is not an impediment to his spiritual liberation nor is it the cause of its fall, but is an instrument of attainment. He seeks a body strong as a thunderbolt, healthy and free from suffering so as to dedicate it in the service of the Lord for which it is intended. As pointed out in the *Muṇḍakopaniṣad* the Self cannot be attained by one without strength, nor through heedlessness, nor without an aim. Just as an unbaked earthen pot dissolves in water the body soon decays. So bake it hard in the fire of yogic discipline in order to strengthen and purify it.

The names of the āsanas are significant and illustrate the principle of evolution. Some are named after vegetation like the tree (vṛkṣa) and the lotus (padma); some after insects like the locust (śalabha) and the scorpion (vṛśchika); some after aquatic animals and amphibians like the fish (matsya), the tortoise (kūrma), the frog (bheka or maṇḍūka) or the crocodile (nakra). There are āsanas called after birds like the cock (kukkuṭa), the heron (baka), the peacock (mayūra) and the swan (haṁsa). They are also named after quadrupeds like the dog (śvāna), the horse (vātāyana), the camel (uṣṭra) and the lion (siṁha). Creatures that crawl like the serpent (bhujaṅga) are not forgotten, nor is the human embryonic state (garbha-pinda) overlooked. Āsanas are named after legendary heroes like Vīrabhadra and Hanumān, son of the Wind. 'ages like Bharadvāja, Kapila, Vasiṣṭha and Viśvāmitra are remembered y having āsanas named after them. Some āsanas are also called after ods of the Hindu pantheon and some recall the Avatārās, or incarna- ons of Divine Power. Whilst performing āsanas the yogi's body assumes many forms resembling a variety of creatures. His mind is trained not to despise any creature, for he knows that throughout the whole gamut of creation, from the lowliest insect to the most perfect sage, there breathes the same Universal Spirit, which assumes innumerable forms. He knows that the highest form is that of the Formless. He finds unity in universality. True āsana is that in which the thought of Brahman flows effortlessly and incessantly through the mind of the sādhaka.

Dualities like gain and loss, victory and defeat, fame and shame, body and mind, mind and soul vanish through mastery of the āsanas, and the sādhaka then passes on to prāṇāyāma, the fourth stage in the path of yoga. In prāṇāyāma practices the nostrils, nasal passages and membranes, the windpipe, the lungs and the diaphragm are the only parts of the body which are actively involved. These alone feel the full impact of the force of prāṇa, the breath of life. Therefore, do not seek to master prāṇāyāma in a hurry, as you are playing with life itself. By its improper practice respiratory diseases will arise and the nervous

system will be shattered. By its proper practice one is freed from most diseases. Never attempt to practise prāṇāyāma alone by yourself. For it is essential to have the personal supervision of a Guru who knows the physical limitations of his pupil.

Prāṇāyāma

Just as the word yoga is one of wide import, so also is prāṇa. Prāṇa means breath, respiration, life, vitality, wind, energy or strength. It also connotes the soul as opposed to the body. The word is generally used in the plural to indicate vital breaths. Āyāma means length, expansion, stretching or restraint. Prāṇāyāma thus connotes extension of breath and its control. This control is over all the functions of breathing, namely, (1) inhalation or inspiration, which is termed pūraka (filling up); (2) exhalation or expiration, which is called rechaka (emptying the lungs), and (3) retention or holding the breath, a state where there is no inhalation or exhalation, which is termed kumbhaka. In Haṭha Yoga texts kumbhaka is also used in a loose generic sense to include all the three respiratory processes of inhalation, exhalation and retention.

A kumbha is a pitcher, water pot, jar or chalice. A water pot may be emptied of all air and filled completely with water, or it may be emptied of all water and filled completely with air. Similarly, there are two states of kumbhaka namely (1) when breathing is suspended after full inhalation (the lungs being completely filled with life-giving air), and (2) when breathing is suspended after full exhalation (the lungs being emptied of all noxious air). The first of these states, where breath is held after a full inhalation, but before exhalation begins, is known as antara kumbhaka. The second, where breath is held after a full exhalation, but before inhalation begins is known as bāhya kumbhaka. Antara means inner or interior, while bāhya means outer or exterior. Thus, kumbhaka is the interval or intermediate time between full inhalation and exhalation (antara kumbhaka) or between full exhalation and inhalation (bāhya kumbhaka). In both these types breathing is suspended and restrained.

Prāṇāyāma is thus the science of breath. It is the hub round which the wheel of life revolves. 'As lions, elephants and tigers are tamed very slowly and cautiously, so should prāṇa be brought under control very slowly in gradation measured according to one's capacity and physical limitations. Otherwise it will kill the practitioner,' warns the *Haṭha Yoga Pradīpikā* (chapter II, verse 16).

The yogi's life is not measured by the number of his days but by the number of his breaths. Therefore, he follows the proper rhythmic patterns of slow deep breathing. These rhythmic patterns strengthen

the respiratory system, soothe the nervous system and reduce craving. As desires and cravings diminish, the mind is set free and becomes a fit vehicle for concentration. By improper practice of prāṇāyāma the pupil introduces several disorders into his system like hiccough, wind, asthma, cough, catarrh, pains in the head, eyes and ears and nervous irritation. It takes a long time to learn slow, deep, steady and proper inhalations and exhalations. Master this before attempting kumbhaka.

As a fire blazes brightly when the covering of ash over it is scattered by the wind, the divine fire within the body shines in all its majesty when the ashes of desire are scattered by the practice of prāṇāyāma.

'The emptying the mind of the whole of its illusion is the true rechaka (exhalation). The realisation that "I am Ātmā (spirit)" is the true pūraka (inhalation). And the steady sustenance of the mind on this conviction is the true kumbhaka (retention). This is true prāṇāyāma,' says Śankarāchārya.

Every living creature unconsciously breathes the prayer 'So'ham' (Saḥ=He: Aham=I–He, the Immortal Spirit, am I) with each inward breath. So also with each outgoing breath each creature prays 'Haṁsaḥ' (I am He). This ajapa-mantra (unconscious repetitive prayer) goes on for ever within each living creature throughout life. The yogi fully realises the significance of this ajapa-mantra and so is released from all the fetters that bind his soul. He offers up the very breath of his being to the Lord as a sacrifice and receives the breath of life from the Lord as his blessing.

Prāṇa in the body of the individual (jīvātmā) is part of the cosmic breath of the Universal Spirit (Paramātmā). An attempt is made to harmonise the individual breath (piṇḍa-prāṇa) with the cosmic breath (Brahmāṇḍa-prāṇa) through the practice of prāṇāyāma.

It has been said by Kariba Ekken, a seventeenth-century mystic; 'If you would foster a calm spirit, first regulate your breathing; for when that is under control, the heart will be at peace; but when breathing is spasmodic, then it will be troubled. Therefore, before attempting anything, first regulate your breathing on which your temper will be softened, your spirit calmed.'

The chitta (mind, reason and ego) is like a chariot yoked to a team of powerful horses. One of them is prāṇa (breath), the other is vāsanā (desire). The chariot moves in the direction of the more powerful animal. If breath prevails, the desires are controlled, the senses are held in check and the mind is stilled. If desire prevails, breath is in disarray and the mind is agitated and troubled. Therefore, the yogi masters the science of breath and by the regulation and control of breath, he controls the mind and stills its constant movement. In the practice of prāṇāyāma the eyes are kept shut to prevent the mind from wandering. 'When the

prāṇa and the manas (mind) have been absorbed, an undefinable joy ensues.' (*Haṭha Yoga Pradīpikā*, chapter IV, verse 30.)

Emotional excitement affects the rate of breathing; equally, deliberate regulation of breathing checks emotional excitement. As the very object of Yoga is to control and still the mind, the yogi first learns prāṇāyāma to master the breath. This will enable him to control the senses and so reach the stage of pratyāhāra. Only then will the mind be ready for concentration (dhyāna).

The mind is said to be twofold – pure and impure. It is pure when it is completely free from desires and impure when it is in union with desires. By making the mind motionless and freeing it from sloth and distractions, one reaches the state of mindlessness (amanaska), which is the supreme state of samādhi. This state of mindlessness is not lunacy or idiocy but the conscious state of the mind when it is free from thoughts and desires. There is a vital difference between an idiot or a lunatic on the one hand, and a yogi striving to achieve a state of mindlessness on the other. The former is careless; the latter attempts to be carefree. It is the oneness of the breath and mind and so also of the senses and the abandonment of all conditions of existence and thought that is designated Yoga.

Prāṇa Vāyu. One of the most subtle forms of energy is air. This vital energy which also pervades the human body is classified in five main categories in the Haṭha Yoga texts according to the various functions performed by the energy. These are termed vāyu (wind) and the five main divisions are: prāṇa (here the generic term is used to designate the particular), which moves in the region of the heart and controls respiration; apāna, which moves in the sphere of the lower abdomen and controls the function of eliminating urine and faeces; samāna, which stokes the gastric fires to aid digestion; udāna, which dwells in the thoracic cavity and controls the intake of air and food; and vyāna, which pervades the entire body and distributes the energy derived from food and breath. There are also five subsidiary vāyūs. These are: nāga, which relieves abdominal pressure by belching; kūrma, which controls the movements of the eyelids to prevent foreign matter or too bright a light entering the eyes; kṛkara, which prevents substances passing up the nasal passages and down the throat by making one sneeze or cough; devadatta, which provides for the intake of extra oxygen in a tired body by causing a yawn, and lastly dhanaṁjaya, which remains in the body even after death and sometimes bloats up a corpse.

Pratyāhāra

If a man's reason succumbs to the pull of his senses he is lost. On the

other hand, if there is rhythmic control of breath, the senses instead of running after external objects of desire turn inwards, and man is set free from their tyranny. This is the fifth stage of Yoga, namely, pratyāhāra, where the senses are brought under control.

When this stage is reached, the sādhaka goes through a searching self-examination. To overcome the deadly but attractive spell of sensual objects, he needs the insulation of adoration (bhakti) by recalling to his mind the Creator who made the objects of his desire. He also needs the lamp of knowledge of his divine heritage. The mind, in truth, is for mankind the cause of bondage and liberation; it brings bondage if it is bound to the objects of desire and liberation when it is free from objects. There is bondage when the mind craves, grieves or is unhappy over something. The mind becomes pure when all desires and fears are annihilated. Both the good and the pleasant present themselves to men and prompt them to action. The yogi prefers the good to the pleasant. Others driven by their desires, prefer the pleasant to the good and miss the very purpose of life. The yogi feels joy in what he is. He knows how to stop and, therefore, lives in peace. At first he prefers that which is bitter as poison, but he perseveres in his practice knowing well that in the end it will become as sweet as nectar. Others hankering for the union of their senses with the objects of their desires, prefer that which at first seems sweet as nectar, but do not know that in the end it will be as bitter as poison.

The yogi knows that the path towards satisfaction of the senses by sensual desires is broad, but that it leads to destruction and that there are many who follow it. The path of Yoga is like the sharp edge of a razor, narrow and difficult to tread, and there are few who find it. The yogi knows that the paths of ruin or of salvation lie within himself.

According to Hindu philosophy, consciousness manifests in three different qualities. For man, his life and his consciousness, together with the entire cosmos are the emanations of one and the same prakṛti (cosmic matter or substance) – emanations that differ in designation through the predominance of one of the guṇās. These guṇās (qualities or attributes) are:

1. Sattva (the illuminating, pure or good quality), which leads to clarity and mental serenity.
2. Rajas (the quality of mobility or activity), which makes a person active and energetic, tense and wilful, and
3. Tamas (the dark and restraining quality), which obstructs and counteracts the tendency of rajas to work and of sattva to reveal.

Tamas is a quality of delusion, obscurity, inertia and ignorance. A person in whom it predominates is inert and plunged in a state of torpor.

The quality of sattva leads towards the divine and tamas towards the demonic, while in between these two stands rajas.

The faith held, the food consumed, the sacrifices performed, the austerities undergone and the gifts given by each individual vary in accordance with his predominating guṇa.

He that is born with tendencies towards the divine is fearless and pure. He is generous and self-controlled. He pursues the study of the Self. He is non-violent, truthful and free from anger. He renounces the fruits of his labour, working only for the sake of work. He has a tranquil mind, with malice towards none and charity towards all, for he is free from craving. He is gentle, modest and steady. He is illumined, clement and resolute, being free from perfidy and pride.

A man in whom rajō-guṇa predominates has inner thirst and is affectionate. As he is passionate and covetous, he hurts others. Being full of lust and hatred, envy and deceit, his desires are insatiable. He is unsteady, fickle and easily distracted as well as ambitious and acquisitive. He seeks the patronage of friends and has family pride. He shrinks from unpleasant things and clings to pleasant ones. His speech is sour and his stomach greedy.

He that is born with demonic tendencies is deceitful, insolent and conceited. He is full of wrath, cruelty and ignorance. In such people there is neither purity, nor right conduct, nor truth. They gratify their passions. Bewildered by numerous desires, caught in the web of delusion, these addicts of sensual pleasures fall into hell.

The working of the mind of persons with different predominating guṇās may be illustrated by their different ways of approach towards a universal commandment like 'Thou shalt not covet.' A man in whom tamō-guṇa predominates might interpret it thus: 'others should not covet what is mine, no matter how I obtained it. If they do, I shall destroy them.' The rajō-guṇa type is a calculating self-interested person who would construe the commandment as meaning: 'I will not covet others' goods lest they covet mine.' He will follow the letter of the law as a matter of policy, but not the true spirit of the law as a matter of principle. A person of sattvika temperament will follow both the letter and the spirit of the precept as a matter of principle and not of policy, as a matter of eternal value. He will be righteous for the sake of righteousness alone, and not because there is a human law imposing punishment to keep him honest.

The yogi who is also human is affected by these three guṇās. By his constant and disciplined study (abhyāsa) of himself and of the objects which his senses tend to pursue, he learns which thoughts, words and actions are prompted by tamas and which by rajas. With unceasing effort he weeds out and eradicates such thoughts as are prompted by

tamas and he works to achieve a sattvika frame of mind. When the sattva-guṇa alone remains, the human soul has advanced a long way towards the ultimate goal.

Like unto the pull of gravity is the pull of the guṇās. As intensive research and rigorous discipline are needed to experience the wonder of weightlessness in space, so also a searching self-examination and the discipline furnished by Yoga is needed by a sādhaka to experience union with the Creator of space when he is freed from the pull of the guṇās.

Once the sādhaka has experienced the fullness of creation or of the Creator, his thirst (tṛṣṇā) for objects of sense vanishes and he looks at them ever after with dispassion (vairāgya). He experiences no disquiet in heat or cold, in pain or pleasure, in honour or dishonour and in virtue or vice. He treats the two imposters – triumph and disaster – with equanimity. He has emancipated himself from these pairs of opposites. He has passed beyond the pull of the guṇās and has become a guṇātīta (one who has transcended the guṇās). He is then free from birth and death, from pain and sorrow and becomes immortal. He has no self-identity as he lives experiencing the fullness of the Universal Soul. Such a man, scorning nothing, leads all things to the path of perfection.

Dhāraṇā

When the body has been tempered by āsanas, when the mind has been refined by the fire of prāṇāyāma and when the senses have been brought under control by pratyāhāra, the sādhaka reaches the sixth stage called dhāraṇā. Here he is concentrated wholly on a single point or on a task in which he is completely engrossed. The mind has to be stilled in order to achieve this state of complete absorption.

The mind is an instrument which classifies, judges and co-ordinates the impressions from the outside world and those that arise within oneself.

Mind is the product of thoughts which are difficult to restrain for they are subtle and fickle. A thought which is well guarded by a controlled mind brings happiness. To get the best out of an instrument, one must know how it works. The mind is the instrument for thinking and it is therefore necessary to consider how it functions. Mental states are classified in five groups. The first of these is the kṣipta state, where the mental forces are scattered, being in disarray and in a state of neglect. Here the mind hankers after objects, the ragō-guṇa being dominant. The second is the vikṣipta state, where the mind is agitated and distracted. Here there is a capacity to enjoy the fruits of one's efforts, but the desires are not marshalled and controlled. Then in the mūḍha state the mind is foolish, dull and stupid. It is confounded and at a loss to know what it wants and here the tamō-guṇa predominates. The fourth

state of the mind is the ekāgra (eka = one; agra = foremost) state, where the mind is closely attentive and the mental faculties are concentrated on a single object or focussed on one point only, with the sattva-guṇa prevailing. The ekāgra person has superior intellectual powers and knows exactly what he wants, so he uses all his powers to achieve his purpose. At times the ruthless pursuit of the desired object, irrespective of the cost to others, can create great misery, and it often happens that even if the desired object is achieved it leaves behind a bitter taste.

Arjuna, the mighty bowman of the epic Mahābhārata, provides us with an example of what is meant by dhāraṇā. Once Droṇa, the preceptor of the royal princes, organised an archery contest to test their proficiency. They were called upon one by one to describe the target, which was pointed out to them. It was a nesting bird. Some princes described the grove of trees, others the particular tree or the bough on which the nest stood. When Arjuna's turn came, he described first the bird. Then he saw only its head, and lastly he could see nothing but the shining eye of the bird, which was the centre of the target chosen by Droṇa.

There is danger, however, of an ekāgra person becoming supremely egotistical. Where the senses start roaming unchecked, the mind follows suit. They cloud a man's judgement and set him adrift like a battered ship on a storm-tossed sea. A ship needs ballast to keep her on an even keel and the helmsman needs a star to steer her by. The ekāgra person needs bhakti (adoration of the Lord) and concentration on divinity to keep his mental equilibrium so that he goes on always in the right direction. He will not know happiness until the sense of 'I' and 'mine' disappears.

The last mental state is that of niruddha, where the mind (manas), intellect (buddhi) and ego (ahaṁkāra) are all restrained and all these faculties are offered to the Lord for His use and in His service. Here there is no feeling of 'I' and 'mine'. As a lens becomes more luminous when great light is thrown upon it and seems to be all light and undistinguishable from it, so also the sādhaka who has given up his mind, intellect and ego to the Lord, becomes one with Him, for the sādhaka thinks of nothing but Him, who is the creator of thought.

Without ekāgratā or concentration one can master nothing. Without concentration on Divinity, which shapes and controls the universe, one cannot unlock the divinity within oneself or become a universal man. To achieve this concentration, what is recommended is eka-tattva-abhyāsa or study of the single element that pervades all, the inmost Self of all beings, who converts His one form into many. The sādhaka, therefore, concentrates upon AUM, which is His symbol, to achieve ekāgratā.

Aum: According to Śri Vinobā Bhāve, the Latin word Omne and the Sanskrit word Aum are both derived from the same root meaning all and both words convey the concepts of omniscience, omnipresence and omnipotence. Another word for Aum is praṇava, which is derived from the root nu meaning to praise, to which is added the prefix pra denoting superiority. The word, therefore, means the best praise or the best prayer.

The symbol AUM is composed of three syllables, namely the letters A, U, M, and when written has a crescent and dot on its top. A few instances of the various interpretations given to it may be mentioned here to convey its meaning.

The letter A symbolises the conscious or waking state (jāgrata-avasthā), the letter U the dream state (svapna-avasthā) and the letter M the dreamless sleep state (suṣupta-avasthā) of the mind and spirit. The entire symbol, together with the crescent and the dot, stands for the fourth state (turīya-avasthā), which combines all these states and transcends them. This is the state of samādhi.

The letters A, U and M symbolise respectively speech (vak), the mind (manas) and the breath of life (prāṇa), while the entire symbol stands for the living spirit, which is but a portion of the divine spirit.

The three letters also represent the dimensions of length, breadth and depth, while the entire symbol represents Divinity, which is beyond the limitations of shape and form.

The three letters A, U and M symbolise the absence of desire, fear and anger, while the whole symbol stands for the perfect man (a sthita-prajñā), one whose wisdom is firmly established in the divine.

They represent the three genders, masculine, feminine and neuter, while the entire symbol represents all creation together with the Creator.

They stand for the three guṇās or qualities of sattva, rajas and tamas, while the whole symbol represents a guṇātīta, one who has transcended and gone beyond the pull of the guṇās.

The letters correspond to the three tenses – past, present and future – while the entire symbol stands for the Creator, who transcends the limitations of time.

They also stand for the teaching imparted by the mother, the father and the Guru respectively. The entire symbol represents Brahma Vidyā, the knowledge of the Self, the teaching which is imperishable.

The A, U and M depict the three stages of yogic discipline, namely, āsana, prāṇāyāma and pratyāhāra. The entire symbol represents samādhi, the goal for which the three stages are the steps.

They represent the triad of Divinity, namely, Brahmā – the creator, Viṣṇu – the Maintainer, and Śiva – the Destroyer of the universe. The whole symbol is said to represent Brahman from which the universe emanates, has its growth and fruition and into which it merges in the

end. It does not grow or change. Many change and pass, but Brahman is the One that ever remains unchanged.

The letters A, U and M also stand for the mantra 'Tat Twam Asi' ('That Thou Art'), the realisation of man's divinity within himself. The entire symbol stands for this realisation, which liberates the human spirit from the confines of his body, mind, intellect and ego.

After realising the importance of AUM, the yogi focusses his attention on his beloved Deity adding AUM to the name of the Lord. The word AUM being too vast and too abstract, he unifies his senses, will, intellect, mind and reason by focussing on the name of the Lord and adding the word AUM with one pointed devotion and so experiences the feeling and meaning of the mantra.

The yogi recalls the verses of the *Muṇḍakopaniṣad*: 'Taking as a bow the great weapon of the Upaniṣad, one should put upon it an arrow sharpened by meditation. Stretching it with a thought directed to the essence of That, penetrate the Imperishable as the mark, my friend. The mystic syllable AUM is the bow. The arrow is the Self (Ātmā). Brahman is the target. By the undistracted man is It penetrated. One should come to be in It, as the arrow in the mark.'

Dhyāna

As water takes the shape of its container, the mind when it contemplates an object is transformed into the shape of that object. The mind which thinks of the all-pervading divinity which it worships, is ultimately through long-continued devotion transformed into the likeness of that divinity.

When oil is poured from one vessel to another, one can observe the steady constant flow. When the flow of concentration is uninterrupted, the state that arises is dhyāna (meditation). As the filament in an electric bulb glows and illumines when there is a regular uninterrupted current of electricity, the yogi's mind will be illumined by dhyāna. His body, breath, senses, mind, reason and ego are all integrated in the object of his contemplation—the Universal Spirit. He remains in a state of consciousness which has no qualification whatsoever. There is no other feeling except a state of SUPREME BLISS. Like a streak of lightning the yogi sees LIGHT that shines beyond the earth and the heavens. He sees the light that shines in his own heart. He becomes a light unto himself and others.

The signs of progress on the path of Yoga are health, a sense of physical lightness, steadiness, clearness of countenance and a beautiful voice, sweetness of odour of the body and freedom from craving. He has a balanced, serene and a tranquil mind. He is the very symbol of humility. He dedicates all his actions to the Lord and taking refuge in

Him, frees himself from the bondage of karma (action) and becomes a Jīvana Mukta (a Liberated Soul).

'What becomes of him who strives and fails to reach the end of Yoga, who has faith, but whose mind wanders away from Yoga?' To this query of Arjuna, the Lord Śri Krishna replied:

'No evil can befall a righteous man. He dwells long years in the heaven of those who did good, and then he is reborn in the house of the pure and the great. He may even be born in a family of illumined yogis; but to be born in such a family is most difficult in this world. He will regain the wisdom attained in his former life and strives ever for perfection. Because of his former study, practice and struggle which drive him ever onwards, the yogi ever strives with a soul cleansed of sin, attains perfection through many lives and reaches the supreme goal. The yogi goes beyond those who only follow the path of austerity, knowledge or service. Therefore, Arjuna, be thou a yogi. The greatest of all yogis is he who adores Me with faith and whose heart abides in Me.' (*Bhagavad Gītā*, chapter VI, verses 38 to 47.)

Samādhi

Samādhi is the end of the sādhaka's quest. At the peak of his meditation, he passes into the state of samādhi, where his body and senses are at rest as if he is asleep, his faculties of mind and reason are alert as if he is awake, yet he has gone beyond consciousness. The person in a state of samādhi is fully conscious and alert.

All creation is Brahman. The sādhaka is tranquil and worships it as that from which he came forth, as that in which he breathes, as that into which he will be dissolved. The soul within the heart is smaller than the smallest seed, yet greater than the sky, containing all works, all desires. Into this the sādhaka enters. Then there remains no sense of 'I' or 'mine' as the working of the body, the mind and the intellect have stopped as if one is in deep sleep. The sādhaka has attained true Yoga; there is only the experience of consciousness, truth and unutterable joy. There is a peace that passeth all understanding. The mind cannot find words to describe the state and the tongue fails to utter them. Comparing the experience of samādhi with other experiences, the sages say: 'Neti! Neti!'–'It is not this! It is not this!' The state can only be expressed by profound silence. The yogi has departed from the material world and is merged in the Eternal. There is then no duality between the knower and the known for they are merged like camphor and the flame.

There wells up from within the heart of the yogi the Song of the Soul, sung by Śankarāchārya in his *Ātma Ṣaṭkam*.

Song of the Soul

I am neither ego nor reason, I am neither mind nor thought,
I cannot be heard nor cast into words, nor by smell nor sight ever caught:
In light and wind I am not found, nor yet in earth and sky–
Consciousness and joy incarnate, Bliss of the Blissful am I.

I have no name, I have no life, I breathe no vital air,
No elements have moulded me, no bodily sheath is my lair:
I have no speech, no hands and feet, nor means of evolution–
Consciousness and joy am I, and Bliss in dissolution.

I cast aside hatred and passion, I conquered delusion and greed;
No touch of pride caressed me, so envy never did breed:
Beyond all faiths, past reach of wealth, past freedom, past desire,
Consciousness and joy am I, and Bliss is my attire.

Virtue and vice, or pleasure and pain are not my heritage,
Nor sacred texts, nor offerings, nor prayer, nor pilgrimage:
I am neither food, nor eating, nor yet the eater am I–
Consciousness and joy incarnate, Bliss of the Blissful am I.

I have no misgiving of death, no chasms of race divide me,
No parent ever called me child, no bond of birth ever tied me:
I am neither disciple nor master, I have no kin, no friend–
Consciousness and joy am I, and merging in Bliss is my end.

Neither knowable, knowledge, nor knower am I, formless is my form,
I dwell within the senses but they are not my home:
Ever serenely balanced, I am neither free nor bound–
Consciousness and joy am I, and Bliss is where I am found.

PART II

Yogasānas, Bandha and Kriyā

Hints, Cautions, Technique and Effects

(After the name of each āsana, there is a number with an asterisk. These numbers before an asterisk indicate the intensity of the āsana; the lower the number, the easier the āsana, the higher the number, the more difficult the āsana. The easiest is numbered 'one*', the most difficult 'sixty*'.)

Yogāsanas

Hints and Cautions for the Practice of Āsanas

The requisites

1. Without firm foundations a house cannot stand. Without the practice of the principles of yama and niyama, which lay down firm foundations for building character, there cannot be an integrated personality. Practice of āsanas without the backing of yama and niyama is mere acrobatics.

2. The qualities demanded from an aspirant are discipline, faith, tenacity and perseverance to practise regularly without interruptions.

Cleanliness and food

3. Before starting to practise āsanas, the bladder should be emptied and the bowels evacuated. Topsy-turvy poses help bowel movements. If the student is constipated or it is not possible to evacuate the bowels before the practice of āsanas, start with Śīrṣāsana and Sarvāngāsana and their variations. Attempt other āsanas only after evacuation. Never practise advanced āsanas without having first evacuated the bowels.

Bath

4. Āsanas come easier after taking a bath. After doing them, the body feels sticky due to perspiration and it is desirable to bathe some fifteen minutes later. Taking a bath or a shower both before and after practising āsanas refreshes the body and mind.

Food

5. Āsanas should preferably be done on an empty stomach. If this is difficult, a cup of tea or coffee, cocoa or milk may be taken before doing them. They may be practised without discomfort one hour after a very light meal. Allow at least four hours to elapse after a heavy meal before starting the practice. Food may be taken half an hour after completing the āsanas.

Time

6. The best time to practise is either early in the morning or late in the evening. In the morning āsanas do not come easily as the body is stiff. The mind, however, is still fresh but its alertness and determination

diminish as time goes by. The stiffness of the body is conquered by regular practice and one is able to do the āsanas well. In the evening, the body moves more freely than in the mornings, and the āsanas come better and with greater ease. Practice in the morning makes one work better in one's vocation. In the evening it removes the fatigue of the day's strain and makes one fresh and calm. Difficult āsanas should, therefore, be done in the morning when one has more determination and stimulative āsanas (like Śīrṣāsana, Sarvāngāsana and their variations and Paśchimottānāsana) should be practised in the evening.

Sun

7. Do not practise āsanas after being out in the hot sun for several hours.

Place

8. They should be done in a clean airy place, free from insects and noise.

9. Do not do them on the bare floor or on an uneven place, but on a folded blanket laid on a level floor.

Cautions

10. No undue strain should be felt in the facial muscles, ears and eyes or in breathing during the practice.

Closing of the eyes

11. In the beginning, keep the eyes open. Then you will know what you are doing and where you go wrong. If you shut your eyes you will not be in a position to watch the requisite movements of the body or even the direction in which you are doing the pose. You can keep your eyes closed only when you are perfect in a particular āsana for only then will you be able to adjust the bodily movements and feel the correct stretches.

Mirror

12. If you are doing the āsanas in front of a mirror, keep it perpendicular to the floor and let it come down to ground level, for otherwise the poses will look slanting due to the angle of the mirror. You will not be able to observe the movements or placing of the head and shoulders in the topsy-turvy poses unless the mirror reaches down to the floor.

The Brain

13. During the practice of āsanas, it is the body alone which should be active while the brain should remain passive, watchful and alert. If they are done with the brain, then you will not be able to see your own mistakes.

Breathing

14. In all the āsanas, the breathing should be done through the nostrils only and not through the mouth.

15. Do not restrain the breath while in the process of the āsana or while staying in it. Follow the instructions regarding breathing given in the technique sections of the various āsanas as described hereafter.

Śavāsana

16. After completing the practice of āsanas always lie down in Śavāsana for at least 10 to 15 minutes, as this will remove fatigue.

Āsanas and Prāṇāyāma

17. Read carefully the hints and cautions for the practice of prāṇāyāma before attempting it (see Part III). Prāṇāyāma may be done either very early in the morning before the āsanas or in the evening after completing them. If early in the morning, prāṇāyāma may be done first for 15 to 30 minutes: then a few minutes of Śavāsana, and after allowing some time to elapse, during which one may be engaged in normal activities, practise āsanas. If, however, these are done in the evening, allow at least half an hour to elapse before sitting for prāṇāyāma.

Special provisions for persons suffering from dizziness or blood pressure

18. Do not start with Śīrṣāsana and Sarvāngāsana if you suffer from dizziness or high blood pressure. First practise Paśchimottānāsana Uttānāsana, and Adhomukha Śvānāsana before attempting topsy-turvy poses like Śīrṣāsana and Sarvāngāsaṇa and after doing these poses repeat Paśchimottānāsana, Adhomukha Śvānāsana and Uttānāsana in that order.

19. All forward bending poses are beneficial for persons suffering from either high or low blood pressure.

Special warning for persons affected by pus in the ears or displaced retina

20. Those suffering from pus in the ears or displacement of the retina should not attempt topsy-turvy poses.

Special provisions for women

21. *Menstruation:* Avoid āsanas during the menstrual period. But if the flow is in excess of normal, Upaviṣṭha Koṇāsana, Baddha Koṇāsana, Vīrāsana, Jānu Śīrṣāsana, Paśchimottānāsana and Uttānāsana may be performed with beneficial effect. On no account stand on your head during the menstrual period.

Pregnancy

22. All the āsanas can be practised during the first three months of pregnancy. All the standing poses and the forward bending āsanas may be done with mild movements, for at this time the spine should be made strong and elastic and no pressure should be felt on the abdomen. Baddha Koṇāsana and Upaviṣṭha Koṇāsana may be practised throughout pregnancy at any time of the day (even after meals, but not forward bending immediately after meals) as these two āsanas will strengthen the pelvic muscles and the small of the back and also reduce labour pains considerably. Prāṇāyāma without retention (kumbhaka) may be practised throughout pregnancy, as regular deep breathing will help considerably during labour.

After delivery

23. No āsanas should be done during the first month after delivery. Thereafter they may be practised mildly. Gradually increase the course as mentioned in Appendix I. Three months after delivery all āsanas may be practised with comfort.

Effects of āsanas

24. Faulty practice causes discomfort and uneasiness within a few days. This is sufficient to show that one is going wrong. If you cannot find the fault for yourself, it is better to approach a person who has practised well and get his guidance.

25. The right method of doing āsanas brings lightness and an exhilarating feeling in the body as well as in the mind and a feeling of oneness of body, mind and soul.

26. Continuous practice will change the outlook of the practiser. He will discipline himself in food, sex, cleanliness and character and will become a new man.

27. When one has mastered an āsana, it comes with effortless ease and causes no discomfort. The bodily movements become graceful. While performing āsanas, the student's body assumes numerous forms of life found in creation – from the lowliest insect to the most perfect sage – and he learns that in all these there breathes the same Universal Spirit – the Spirit of God. He looks within himself while practising and feels the presence of God in different āsanas which he does with a sense of surrender unto the feet of the LORD.

ĀSANAS

1. *Tāḍāsana* (also called Samasthiti) One* (Plate 1)

Tāḍa means a mountain. Sama means upright, straight, unmoved. Sthiti is standing still, steadiness. Tāḍāsana therefore implies a pose where one stands firm and erect as a mountain. This is the basic standing pose.

1

Technique

1. Stand erect with the feet together, the heels and big toes touching each other. Rest the heads of metatarsals on the floor and stretch all the toes flat on the floor.

2. Tighten the knees and pull the knee-caps up, contract the hips and pull up the muscles at the back of the thighs.

3. Keep the stomach in, chest forward, spine stretched up and the neck straight.

4. Do not bear the weight of the body either on the heels or the toes, but distribute it evenly on them both.

5. Ideally in Tāḍāsana the arms are stretched out over the head, but for the sake of convenience, one can place them by the side of the thighs.

Each of the standing poses described below can then be followed easily, starting with the pupil standing in Tāḍāsana with palms by the side of the thighs.

Effects

People do not pay attention to the correct method of standing. Some stand with the body weight thrown only on one leg, or with one leg turned completely sideways. Others bear all the weight on the heels, or on the inner or outer edges of the feet. This can be noticed by watching where the soles and heels of the shoes wear out. Owing to our faulty method of standing and not distributing the body weight evenly on the feet, we acquire specific deformities which hamper spinal elasticity. Even if the feet are kept apart, it is better to keep the heel and toe in a line parallel to the median plane and not at an angle. By this method, the hips are contracted, the abdomen is pulled in and the chest is brought forward. One feels light in body and the mind acquires agility. If we stand with the body weight thrown only on the heels, we feel the gravity changing; the hips become loose, the abdomen protrudes, the body hangs back and the spine feels the strain and consequently we soon feel fatigued and the mind becomes dull. It is therefore essential to master the art of standing correctly.

2. *Vṛkṣāsana* One* (Plate 2)

Vṛkṣa means a tree.

Technique

1. Stand in Tāḍāsana. (Plate 1)

2. Bend the right leg at the knee and place the right heel at the root of the left thigh. Rest the foot on the left thigh, toes pointing downwards.

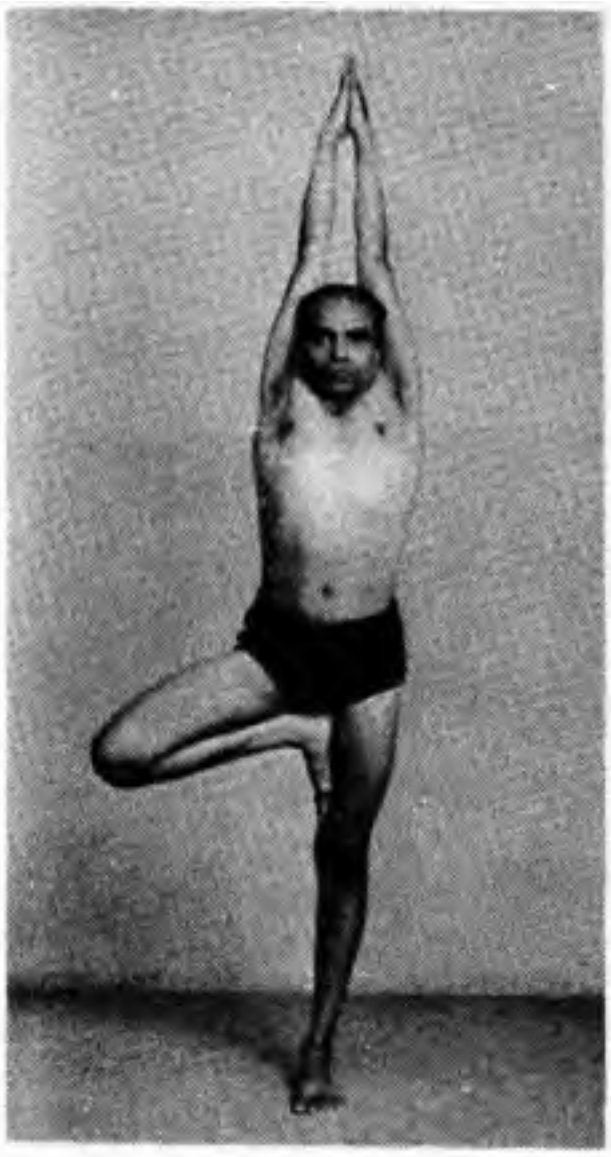
3. Balance on the left leg, join the palms and raise the arms straight over the head. (Plate 2)

4. Stay for a few seconds in the pose breathing deeply. Then lower the arms and separate the palms, straighten the right leg and stand again in Tāḍāsana.

5. Repeat the pose, standing on the right leg, placing the left heel at the root of the right thigh. Stay for the same length of time on both sides, come back to Tāḍāsana (Plate 1) and relax.

Effects

The pose tones the leg muscles and gives one a sense of balance and poise.



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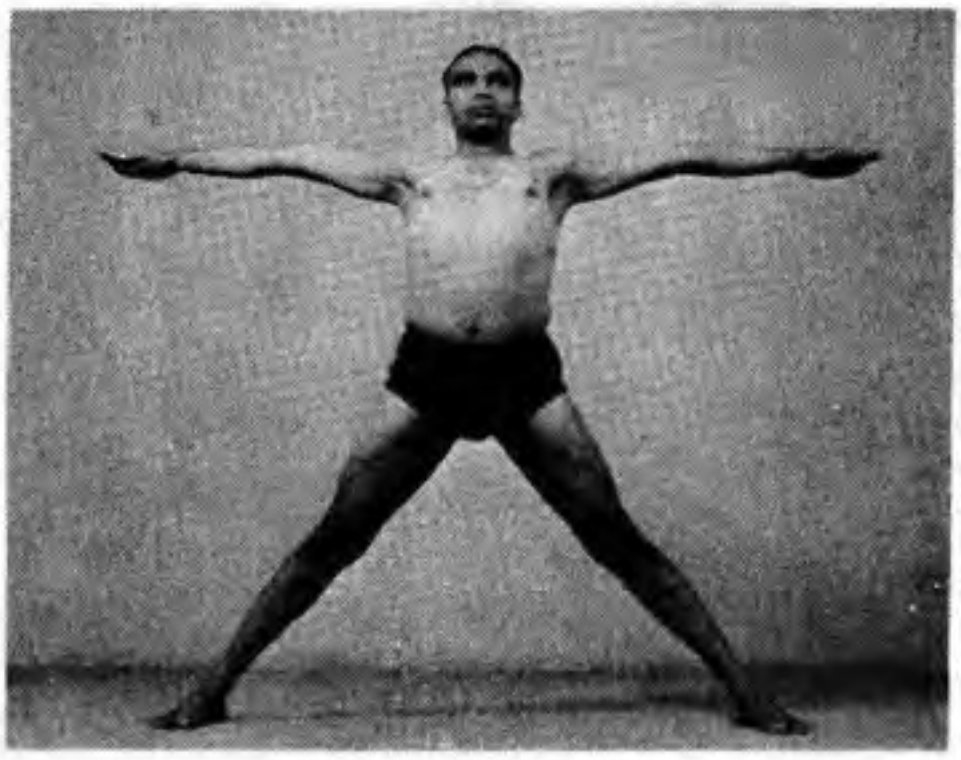

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3. *Uttihita Trikoṇāsana* Three* (Plates 4 and 5)

Uttihita means extended, stretched. Trikoṇa (tri = three; koṇa = angle) is a triangle. This standing āsana is the extended triangle pose.

Technique

1. Stand in Tāḍāsana. (Plate 1)

2. Inhale deeply and with a jump spread apart the legs sideways 3 to $3\frac{1}{2}$ feet. Raise the arms sideways, in line with the shoulders, palms facing down. Keep the arms parallel to the floor. (Plate 3)

3. Turn the right foot sideways 90 degrees to the right. Turn the left foot slightly to the right, keeping the left leg stretched from the inside and tightened at the knee.

4. Exhale, bend the trunk sideways to the right, bringing the right palm near the right ankle. If possible, the right palm should rest completely on the floor. (Plates 4 and 5)

5. Stretch the left arm up (as in the illustration), bringing it in line with the right shoulder and extend the trunk. The back of the legs, the back of the chest and the hips should be in a line. Gaze at the thumb of the

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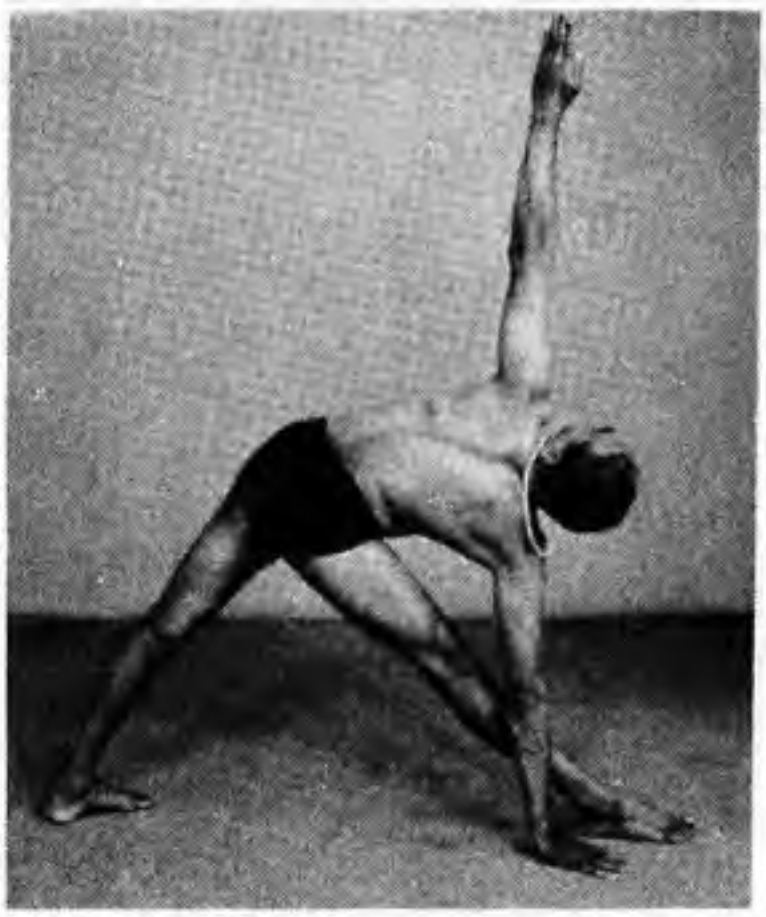

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outstretched left hand. Keep the right knee locked tight by pulling up the knee-cap and keep the right knee facing the toes.

6. Remain in this position from half a minute to a minute, breathing deeply and evenly. Then lift the right palm from the floor. Inhale and return to position 2 above.

7. Now, turn the left foot sideways 90 degrees to the left, turn the right foot slightly to the left, keep both knees tight and continue from position 2 to 6, reversing all processes. Inhale and come to position 2. Hold the posture for the same length of time on the left side.

8. Exhale, and jump, coming back to Tāḍāsana. (Plate 1)

Effects

This āsana tones up the leg muscles, removes stiffness in the legs and hips, corrects any minor deformity in the legs and allows them to develop evenly. It relieves backaches and neck sprains, strengthens the ankles and develops the chest.

4. *Parivṛtta Trikoṇāsana* Five* (Plates 6 and 7)

Parivṛtta means revolved, turned round or back. Trikoṇa is a triangle. This is the revolving triangle posture. It is a counter pose to Uttihita Trikoṇāsana. (Plate 4)

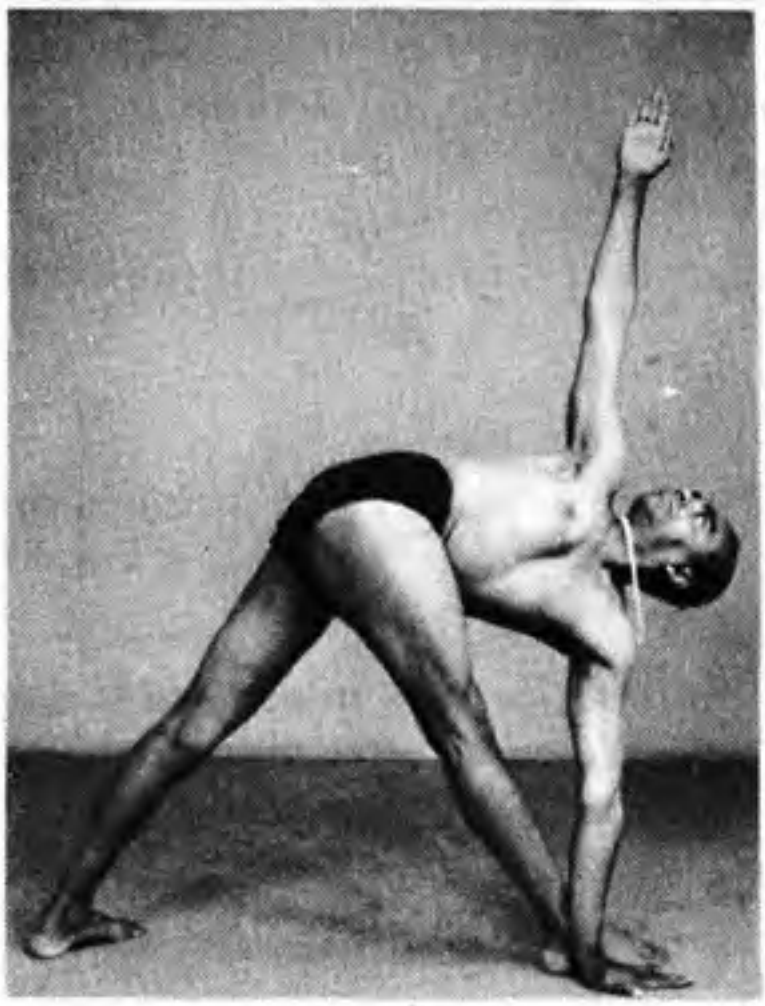
Technique

1. Stand in Tāḍāsana. (Plate 1.) Take a deep inhalation and with a jump spread the legs apart sideways 3 to 3½ feet. Raise the arms sideways, in line with the shoulders, palms facing down. (Plate 3)

2. Turn the right foot sideways 90 degrees to the right. Turn the left foot 60 degrees to the right, keeping the left leg stretched out and tightened at the knee.

3. Exhale, rotate the trunk along with the left leg in the opposite direction (to the right) so as to bring the left palm on the floor near the outer side of the right foot.

4. Stretch the right arm up, bringing it in line with the left arm. Gaze at the right thumb. (Plates 6 and 7)



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5. Keep the knees tight. Do not lift the toes of the right foot from the floor. Remember to rest the outer side of the left foot well on the floor.

6. Stretch both the shoulders and shoulder-blades.

7. Stay in this pose for half a minute with normal breathing.

8. Inhale, lift the left hand from the floor, rotate the trunk back to its original position and come back to position 1.

9. Exhale, repeat the pose on the left side by turning the left foot sideways 90 degrees to the left and the right foot 60 degrees to the left and place the right palm on the floor near the outer side of the left foot.

10. Stay in the pose on both sides for the same length of time, which can be adjusted by doing, say, three to four deep respirations on each side.

11. After completing the time, inhale, raise the trunk back to its original position, bring the toes to the front and keep the arms as in position 1.

12. Exhale and jump back to Tāḍāsana. (Plate 1.) This completes the āsana.

Effects

This āsana tones the thigh, calf and hamstring muscles. The spine and muscles of the back are also made to function properly, as the pose increases the blood supply round the lower part of the spinal region. The chest is expanded fully. The pose relieves pains in the back, invigorates the abdominal organs and strengthens the hip muscles.

5. *Utthita Pārśvakoṇāsana* Four* (Plates 8 and 9)

Pārśva means side or flank. Koṇa is an angle. This is the extended lateral angle pose.

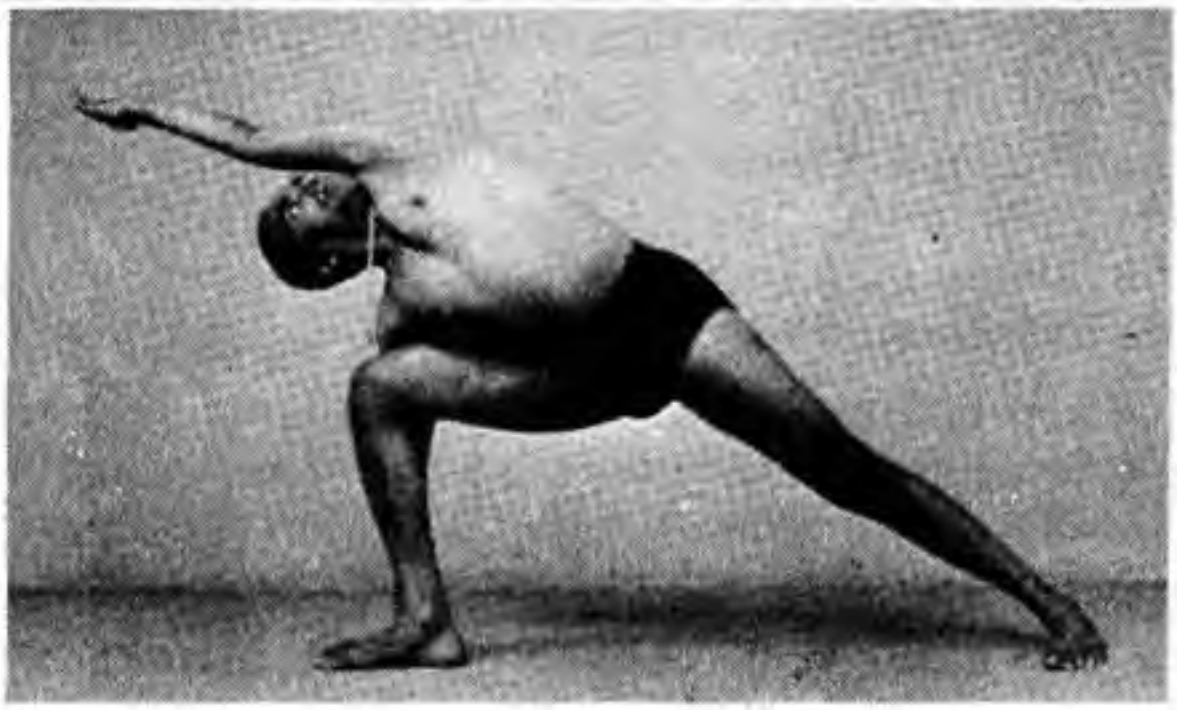
Technique

1. Stand in Tāḍāsana. (Plate 1.) Take a deep inhalation and with a jump spread the legs apart sideways 4 to 4½ feet. Raise the arms sideways, in line with the shoulders, palms facing down. (Plate 3)

2. While exhaling slowly, turn the right foot sideways 90 degrees to the right, and the left foot slightly to the right, keeping the left leg stretched out and tightened at the knee. Bend the right leg at the knee until the thigh and the calf form a right angle and the right thigh is parallel to the floor.

3. Place the right palm on the floor by the side of the right foot, the right armpit covering and touching the outer side of the right knee. Stretch the left arm out over the left ear. Keep the head up. (Plates 8 and 9)

4. Tighten the loins and stretch the hamstrings. The chest, the hips and the legs should be in a line and in order to achieve this, move the chest up and back. Stretch every part of the body, concentrating on the back portion of the whole body, specially the spine. Stretch the spine until all the vertebrae and ribs move and there is a feeling that even the skin is being stretched and pulled.



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5. Remain in this pose from half a minute to a minute, breathing deeply and evenly. Inhale and lift the right palm from the floor.

6. Inhale, straighten the right leg and raise the arms as in position 1.

7. Continue with exhalation as in positions 2 to 5, reversing all processes, on the left side.

8. Exhale and jump back to Tāḍāsana. (Plate 1)

Effects

This āsana tones up the ankles, knees and thighs. It corrects defects in the calves and thighs, develops the chest and reduces fat round the waist and hips and relieves sciatic and arthritic pains. It also increases peristaltic activity and aids elimination.

6. *Parivṛtta Pārśvakoṇāsana* Eight* (Plates 10 and 11)

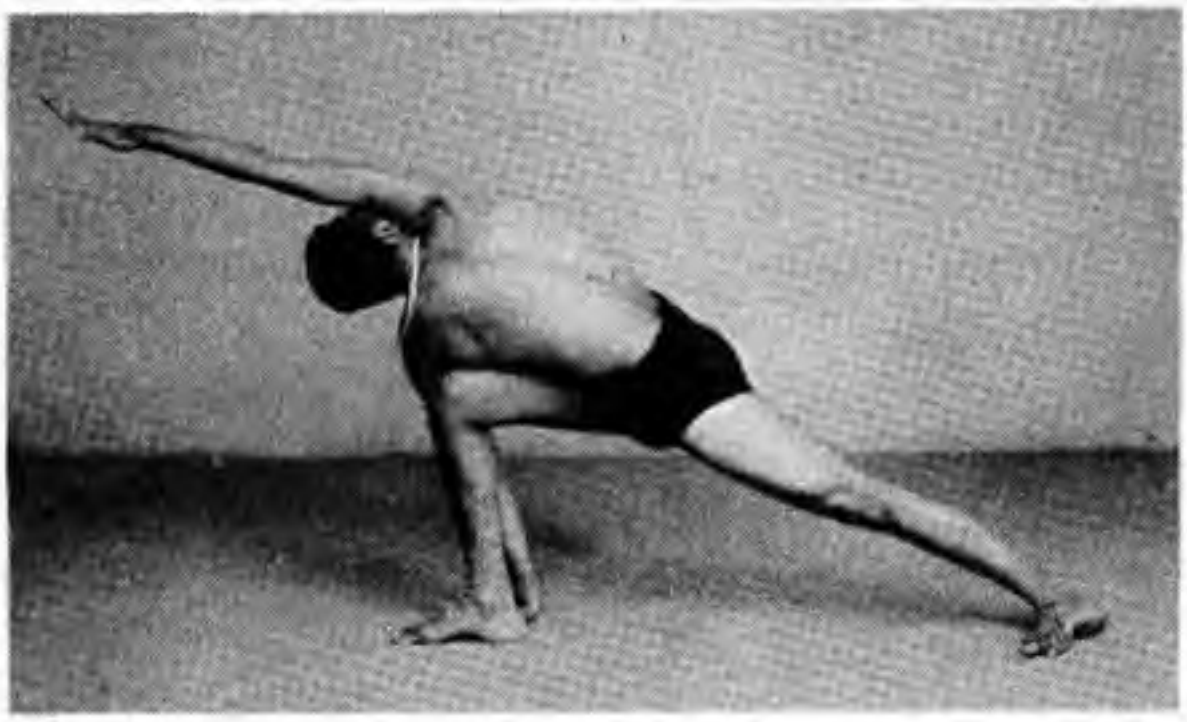
Parivṛtta means revolved, turned round or back. Pārśva means side or flank. Koṇa is an angle. This is the revolving lateral angle posture.

Technique

1. Stand in Tāḍāsana. (Plate 1)

2. Take a deep inhalation, and with a jump spread the legs apart sideways 4 to 4½ feet. Raise the arms sideways in line with the shoulders, palms down. (Plate 3)

3. Turn the right foot sideways 90 degrees to the right and the left foot 60 degrees to the right, keeping the left leg stretched out and tightened at the knee. Bend the right leg at the knee until the thigh and the calf form a right angle and the right thigh is parallel to the floor.



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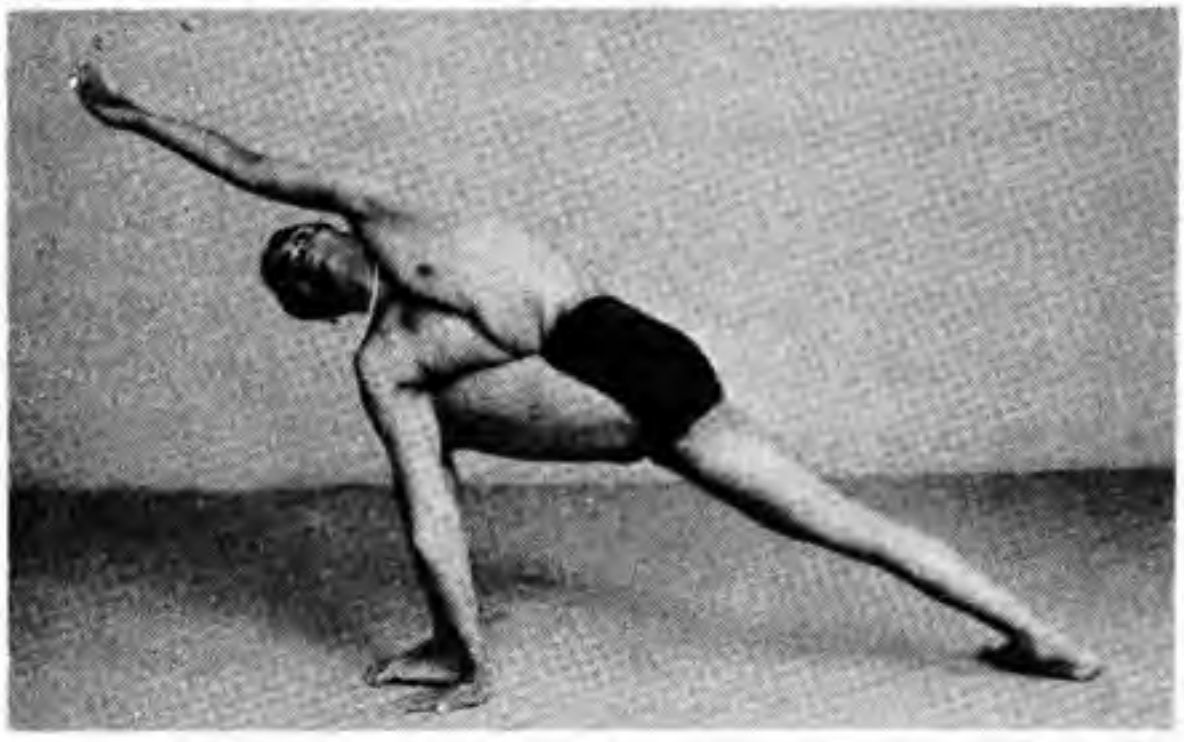

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4. Exhale, and rotate the trunk and the left leg so as to bring the left arm over the right knee. Rest the left armpit on the outer side of the right knee, and place the left palm on the floor by the outer side of the right foot. (Plates 10 and 11)

5. Give a good twist to the spine (to the right), turn the trunk and bring the right arm over the right ear (as in the illustrations) and gaze up at the outstretched right arm. Keep the left knee tight throughout.

6. Hold this pose from half a minute to a minute, breathing deeply and evenly. Inhale, and lift the left palm from the floor. Raise the trunk and come back to position 2, by straightening the right leg and raising the arms.

7. Continue with exhalation on the left side, as in positions 3 to 5, reversing all processes.

8. In all cases where the movements are done first on one side and then on the other the time taken should be the same in each case. This general rule applies here.

Effects

This pose being a more intensified one than Parivṛtta Trikoṇāsana (Plate 6), has a greater effect. The hamstrings, however, are not stretched as much as in Parivṛtta Trikoṇāsana. The abdominal organs are more contracted and that aids digestion. The blood circulates well round the abdominal organs and the spinal column, and they are thus rejuvenated. The āsana helps to remove waste matter from the colon without strain.

7. *Vīrabhadrāsana I* Three* (Plate 14)

Dakṣa once celebrated a great sacrifice, but he did not invite his daughter Satī nor her husband Śiva, the chief of the gods. Satī, however, went to the sacrifice, but being greatly humiliated and insulted threw herself into the fire and perished. When Śiva heard this he was gravely provoked, tore a hair from his matted locks and threw it to the ground. A powerful hero named Vīrabhadra rose up and awaited his orders. He was told to lead Śiva's army against Dakṣa and destroy his sacrifice. Vīrabhadra and his army appeared in the midst of Dakṣa's assembly like a hurricane and destroyed the sacrifice, routed the other gods and priests and beheaded Dakṣa. Śiva in grief for Satī withdrew to Kailās and plunged into meditation. Satī was born again as Umā in the house of Himālaya. She strove once more for the love of Śiva and ultimately won his heart. The story

is told by Kālidāsa in his great poem *Kumāra saṁbhava* (The Birth of the War-Lord).

This āsana is dedicated to the powerful hero created by Śiva from his matted hair.

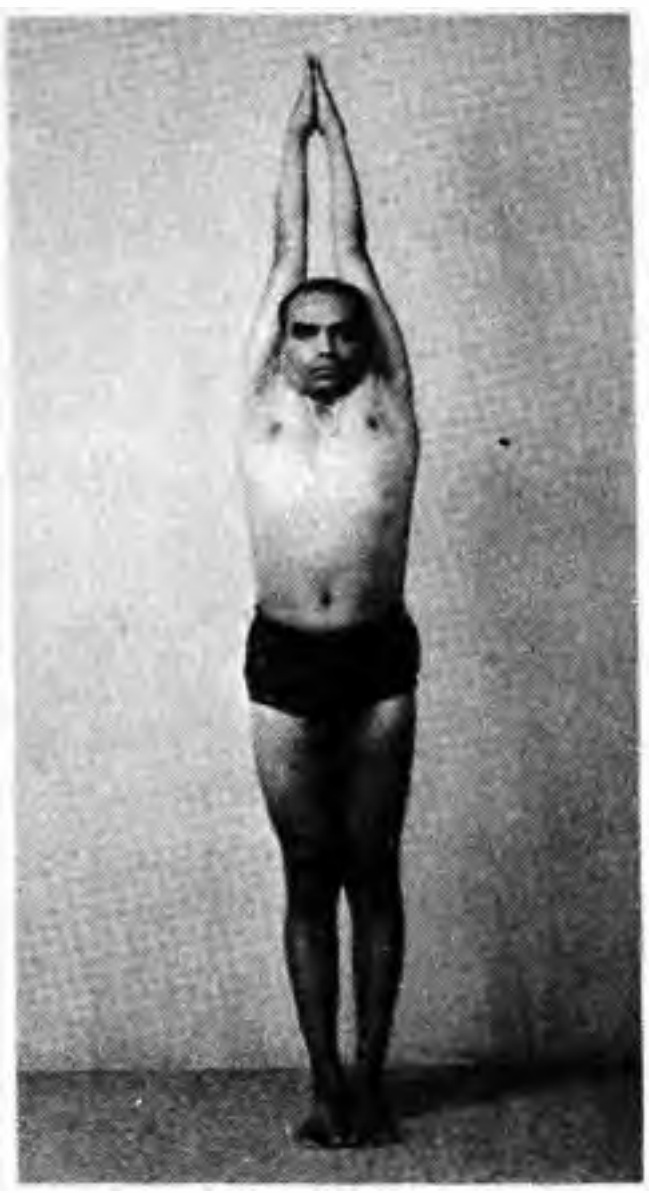
Technique

1. Stand in Tāḍāsana. (Plate 1)

2. Raise both arms above the head; stretch up and join the palms. (Plate 12)

3. Take a deep inhalation and with a jump spread the legs apart sideways 4 to 4½ feet.

4. Exhale, turn to the right. Simultaneously turn the right foot 90 degrees to the right and the left foot slightly to the right. (Plate 13.) Flex the right knee till the right thigh is parallel to the floor and the right shin perpendicular to the floor, forming a right angle between the right thigh and the right calf. The bent knee should not extend beyond the ankle, but should be in line with the heel.



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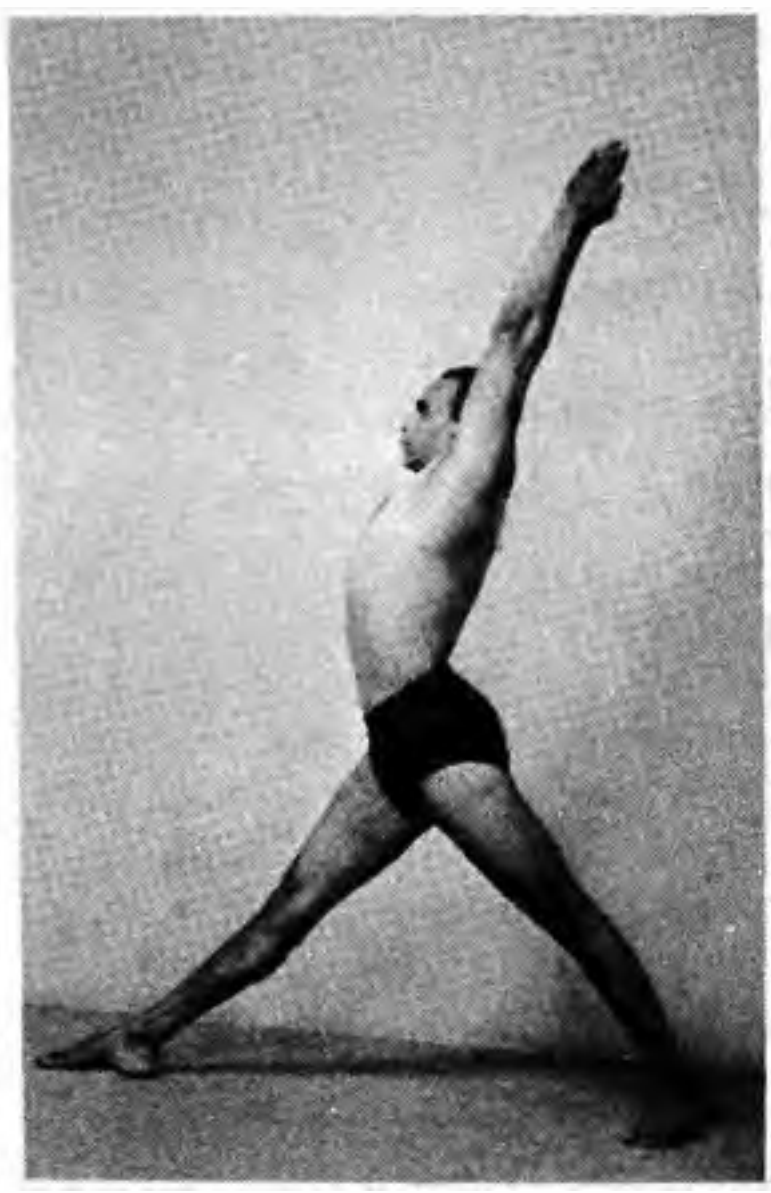

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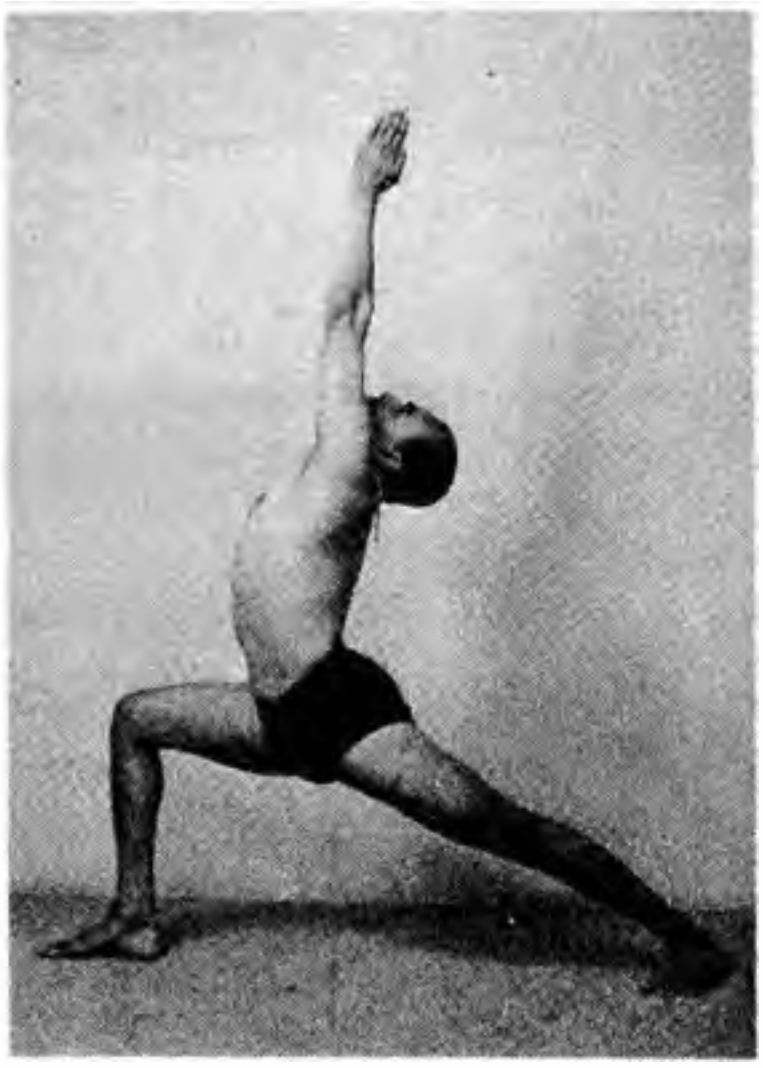
5. Stretch out the left leg and tighten at the knee.

6. The face, chest and right knee should face the same way as the right foot, as illustrated. Throw the head up, stretch the spine from the coccyx and gaze at the joined palms. (Plate 14)



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7. Hold the pose from 20 seconds to half a minute with normal breathing.

8. Repeat on the left side as in positions 4 to 6, reversing all processes.

9. Exhale and jump back to Tāḍāsana. (Plate 1)

*** All standing poses are strenuous, this pose in particular. It should not be tried by persons with a weak heart. Even people who are fairly strong should not stay long in this āsana.

Effects

In this pose the chest is fully expanded and this helps deep breathing. It relieves stiffness in shoulders and back, tones up the ankles and knees and cures stiffness of the neck. It also reduces fat round the hips.

8. *Vīrabhadrāsana II* One* (Plate 15)

Technique

1. Stand in Tāḍāsana. (Plate 1)

2. Take a deep inhalation, and with a jump spread the legs apart sideways 4 to 4½ feet. Raise the arms sideways in line with the shoulders, palms facing down. (Plate 3)

3. Turn the right foot sideways 90 degrees to the right and the left foot slightly to the right, keeping the left leg stretched out and tightened at the knee. Stretch the hamstring muscles of the left leg.

4. Exhale and bend the right knee till the right thigh is parallel to the floor, keeping the right shin perpendicular to the floor, thus forming a right angle between the right thigh and the right calf. The bent knee should not extend beyond the ankle, but should be in line with the heel. (Plate 15)

15

5. Stretch out the hands sideways, as though two persons are pulling you from opposite ends.

6. Turn the face to the right and gaze at the right palm. Stretch the back muscles of the left leg fully. The back of the legs, the dorsal region and the hips should be in one line.

7. Stay in the pose from 20 seconds to half a minute with deep breathing. Inhale and return to position 2.

8. Turn the left foot sideways 90 degrees to the left and the right foot slightly to the left, flex the left knee and continue from positions 3 to 6 on the left side, reversing all processes.

9. Inhale, again come back to position 2. Exhale and jump back to Tāḍāsana. (Plate 1)

Effects

Through this pose the leg muscles become shapely and stronger. It relieves cramp in the calf and thigh muscles, brings elasticity to the leg and back muscles and also tones the abdominal organs.

Mastery of the standing poses prepares the pupil for the advanced poses in forward bending, which can then be acquired with ease.

9. *Vīrabhadrāsana III* Five* (Plate 17)

This posture is an intensified continuation of Vīrabhadrāsana I. (Plate 14)

Technique

1. Stand in Tāḍāsana. (Plate 1)

2. Take a deep inhalation and with a jump spread the legs apart sideways 4 to 4½ feet. (Plate 3)

3. Come to the final pose of Vīrabhadrāsana I on the right side. (Plate 14)

16

4. Exhale, bend the trunk forward and rest the chest on the right thigh. Keep the arms straight and the palms together. (Plate 16.) Rest in this position, taking two breaths.

5. Now exhale and simultaneously lift the left leg from the floor by swinging the body slightly forward and also straighten the right leg, making it stiff as a poker. Turn the left leg inwards so that the front is parallel to the floor. (Plate 17)

17

6. Hold in this pose from 20 to 30 seconds, with deep and even breathing.

7. While balancing, the whole body (except the right leg) is to be kept parallel to the floor. The right leg, which should be fully stretched and stiff, should be kept perpendicular to the floor. Pull the back of the right thigh and stretch the arms and the left leg as if two persons are pulling you from either end.

8. Exhale and come back to Vīrabhadrāsana I. (Plate 14)

9. Repeat the pose on the left side.

Effects

The illustration (Plate 17) conveys the harmony, balance, poise and power attained by practising this āsana. It helps to contract and tone the abdominal organs and makes the leg muscles more shapely and sturdy. It is recommended for runners, as it gives vigour and agility.

All the movements of this āsana improve one's bearing and carriage. When we stand badly, by throwing the weight on the heels, we retard symmetrical growth and hamper spinal elasticity. Standing with the weight on the heels causes the stomach to protrude and lessens bodily and mental agility. This āsana helps one to stand firmly on the soles of the feet, keeps the stomach muscles in and gives agility to the body and the mind.

10. *Ardha Chandrāsana* Five* (Plate 19)

Ardha means half. Chandra is the moon. The pose resembles the half moon, hence the name.

Technique

1. Stand in Tāḍāsana (Plate 1) and then do Utthita Trikoṇāsana, (Plate 4), following the technique described earlier.

2. After attaining Trikoṇāsana on the right side, exhale and place the right palm about a foot away from the right foot by bending the right knee and at the same time bringing the left foot near the right one. (Plate 18)

18

3. Wait in this position and take two breaths. Then exhale and raise the left leg from the floor, toes pointing up. Stretch the right hand and the right leg.

4. Place the left palm over the left hip and stretch up, keeping the shoulders well up. Turn the chest to the left and balance. (Plate 19)

19

5. The weight of the body is borne on the right foot and hip. The right hand is only a support to control the balance.

6. Hold the pose from 20 to 30 seconds, breathing deeply and evenly. Then slide the left leg to the floor and go back to Trikoṇāsana. (Plate 4)

7. Repeat the pose on the left side.

Effects

The posture is beneficial for those whose legs are damaged or infected. It tones the lower region of the spine and the nerves connected with the leg muscles and it strengthens the knees. Along with other standing postures, this āsana cures gastric troubles.

Note. Those who feel weak and are exhausted by the standing poses should only practise Utthita Trikoṇāsana (Plate 4) and Utthita Pārśvakoṇāsana (Plate 8), as these two āsanas strengthen the body. The other standing āsanas should be done only by people who have built up their strength and whose bodies have become elastic.

11. *Utthita Hasta Pādāṅguṣṭhāsana* Sixteen* (Plate 23)

Utthita means extended. Hasta means the hand. Pādāṅguṣṭha is the big toe. This pose is done by standing on one leg, extending the other in front, holding the toe of the extended leg and resting the head on the leg.

Technique

1. Stand in Tāḍāsana. (Plate 1)

2. Exhale, raise the right leg by bending the knee and hold the big toe of the right foot between the thumb and the fore and middle fingers of the right hand.

3. Rest the left hand on the left hip and balance. (Plate 20.) Take two breaths.

4. Exhale, stretch the right leg forward and pull it. (Plate 21.) Take two breaths.

5. When you are firm in this position, hold the right foot with both hands and raise it still higher. (Plate 22.) Take two breaths.

6. Now, with an exhalation rest the head, then the nose and lastly the chin beyond the right knee. (Plate 23.) Stay in this position and take a few deep breaths.

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7. Exhale, release the hands and lower the right leg to the floor to return to Tāḍāsana. (Plate 1)

8. Repeat the pose on the other side, keeping the right leg on the floor and raising the left leg.

9. Balancing in positions 5 and 6 is difficult and cannot be attained without mastering position 4.

Effects

This āsana makes the leg muscles powerful and the balance gives one steadiness and poise.

12. *Pārśvōttānāsana* Six* (Plate 26)

Pārśva means side or flank. Uttāna (ut = intense, and tān = to extend, stretch, lengthen) means an intense stretch. The name implies a pose in which the side of the chest is stretched intensely.

Technique

1. Stand in Tāḍāsana. (Plate 1.) Inhale deeply and stretch the body forward.

2. Join the palms behind the back and draw the shoulders and elbows back.

3. Exhale, turn the wrists and bring both palms up above the middle of the back of the chest, the fingers at the level of the shoulder-blades. You are doing 'namaste' (the Indian gesture of respect by folding the hands) with your hands behind your back. (Plate 24)

4. Inhale and with a jump spread the legs apart sideways 3 to 3½ feet. Stay in this position and exhale.

5. Inhale and turn the trunk to the right. Turn the right foot 90 degrees sideways to the right keeping the toes and heel in a line with the trunk; turn the left foot with the leg 75 to 80 degrees to the right and keep the left foot stretched out and the leg tightened at the knee. Throw the head back. (Plate 25)

6. Exhale, bend the trunk forward and rest the head on the right knee. Stretch the back and gradually extend the neck until the nose, then the lips and lastly the chin touch and then rest beyond the right knee. (Plate 26.) Tighten both the legs by pulling the knee-caps up.

7. Stay in the pose from 20 seconds to half a minute with normal breathing. Then slowly move the head and trunk towards the left knee by swinging the trunk round the hips. At the same time turn the

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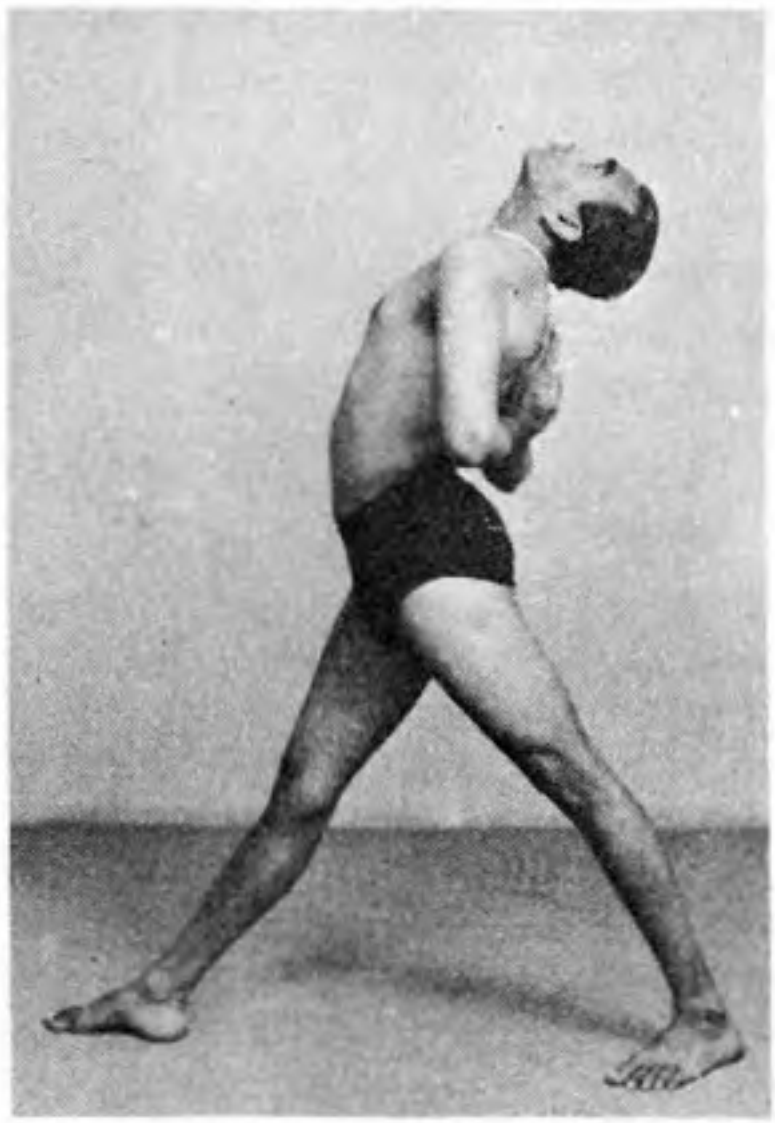

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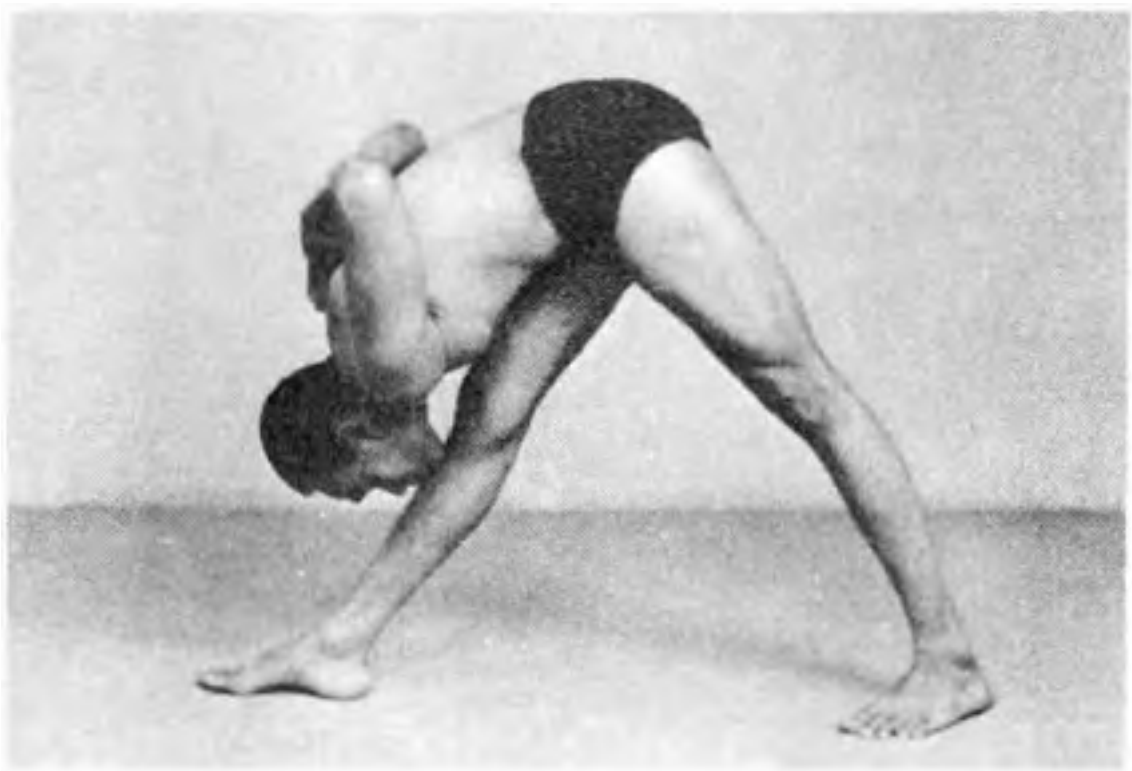


26

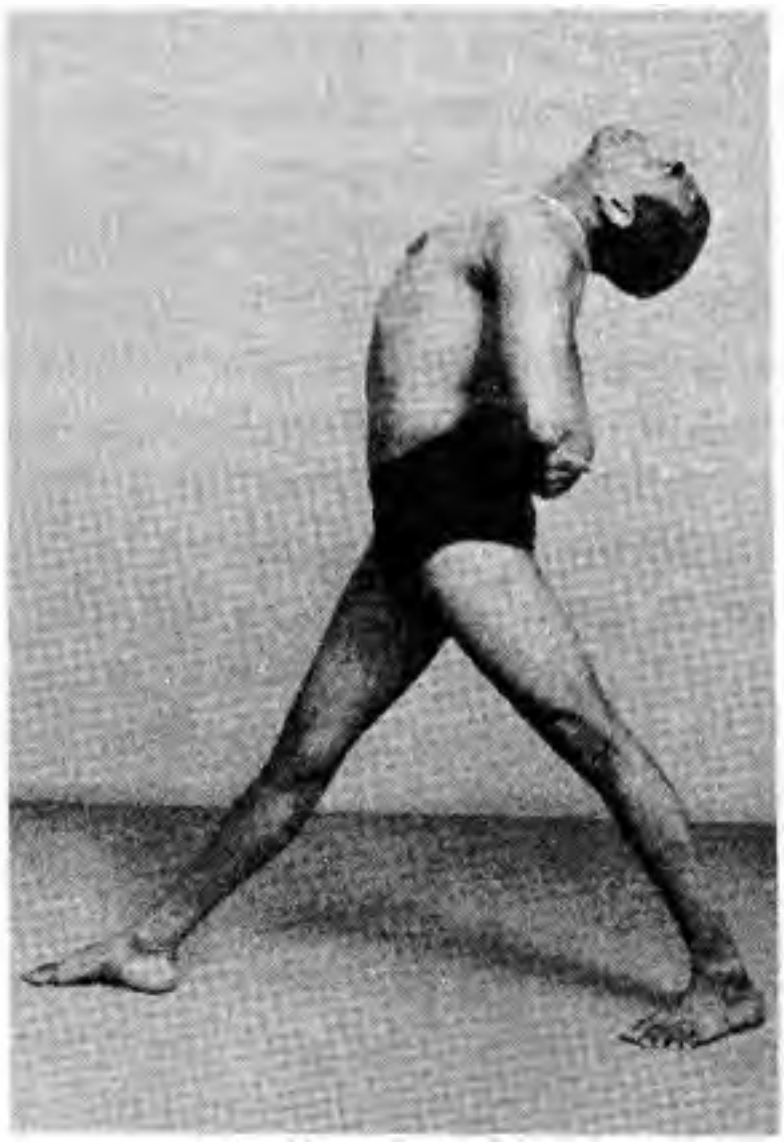
left foot 90 degrees towards the left and the right foot 75 to 80 degrees to the left. Now raise the trunk and head as far back as you can, without bending the right leg. This movement should be done with one inhalation.

8. Exhale, bend the trunk forward, rest the head on the left knee and gradually extend the chin beyond the left knee by stretching the neck as in position 6.

9. After holding the pose from 20 seconds to half a minute with normal breathing, inhale, move the head to the centre and the feet to their original position so that the toes point forward. Then raise the trunk up.

10. Exhale and jump back to Tāḍāsana (Plate 1), releasing the hands from the back.

11. If you cannot fold the hands together behind the back, just grip the wrist and follow the above technique. (Plates 27 and 28)



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Effects

This āsana relieves stiffness in the legs and hip muscles and makes the hip joints and spine elastic. While the head is resting on the knees, the abdominal organs are contracted and toned. The wrists move freely and any stiffness there disappears. The posture also corrects round and drooping shoulders. In the correct pose, the shoulders are drawn well back and this makes deep breathing easier.

28

13. *Prasārita Pādōttānāsana I* Four* (Plates 33 and 34)

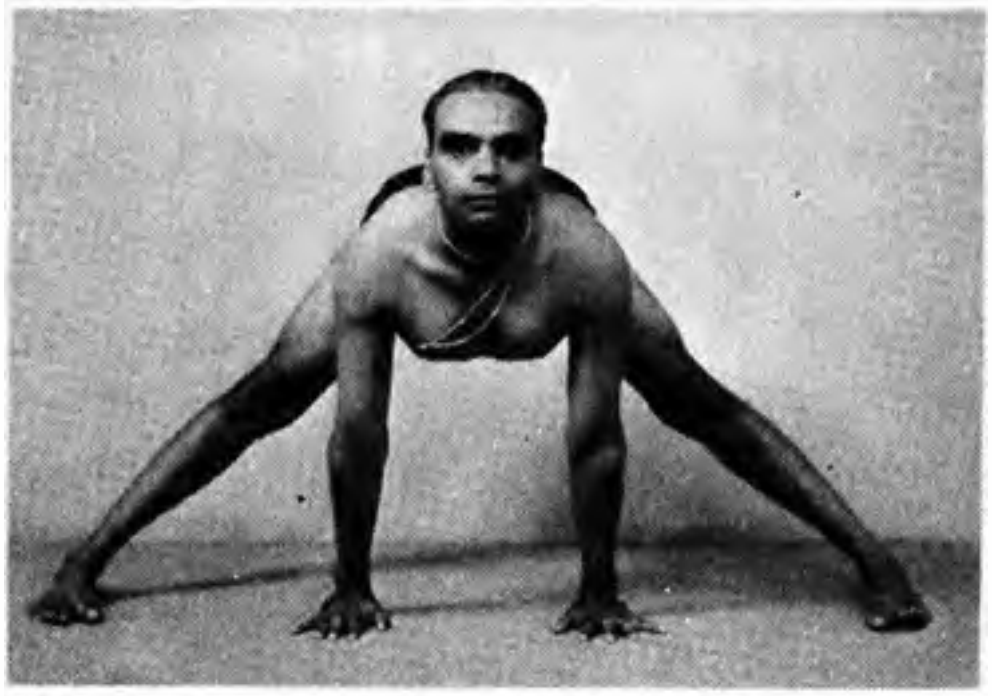
Prasārita means expanded, spread, extended. Pāda means a foot. The pose is one where the expanded legs are stretched intensely.

Technique

1. Stand in Tāḍāsana. (Plate 1)
2. Inhale, place the hands on the waist and spread the legs apart 4½ to 5 feet. (Plate 29)

29

3. Tighten the legs by drawing up the knee-caps. Exhale, and place the palms on the floor in line with the shoulders between the feet. (Front view Plate 30)



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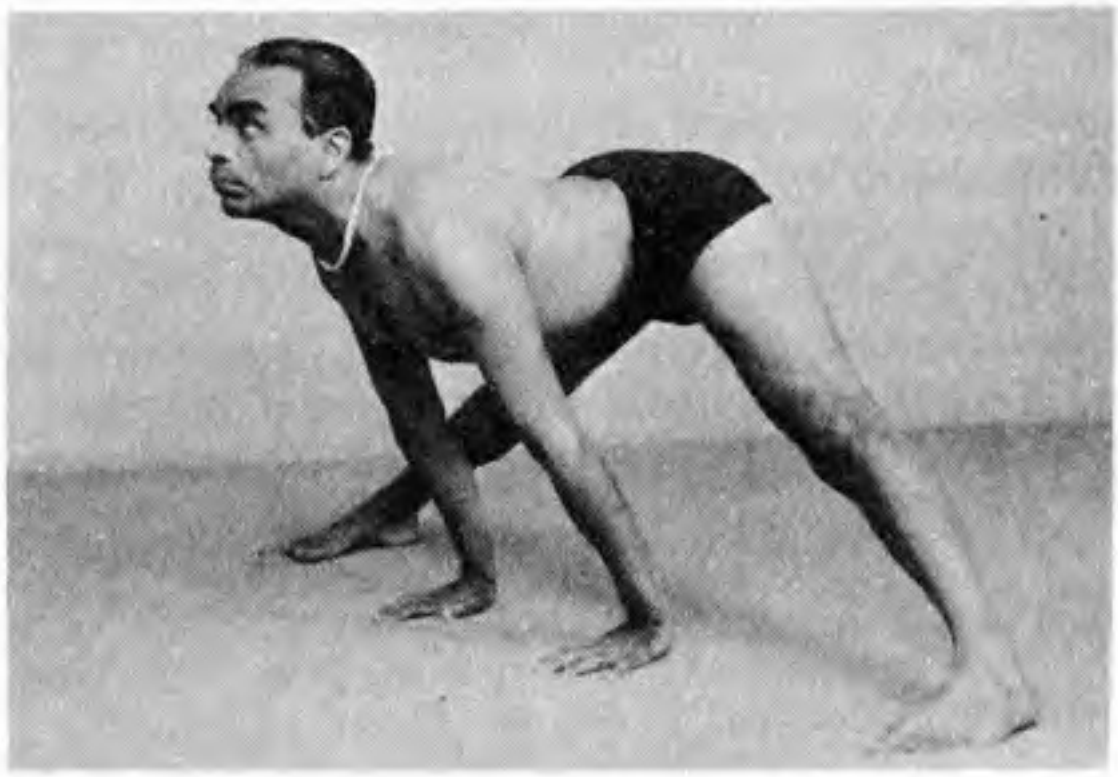
4. Inhale and raise the head up, keeping the back concave. (Side view Plates 31 and 32)

5. Exhale, bend the elbows and rest the crown of the head on the floor, keeping the weight of the body on the legs. (Plates 33 and 34.)



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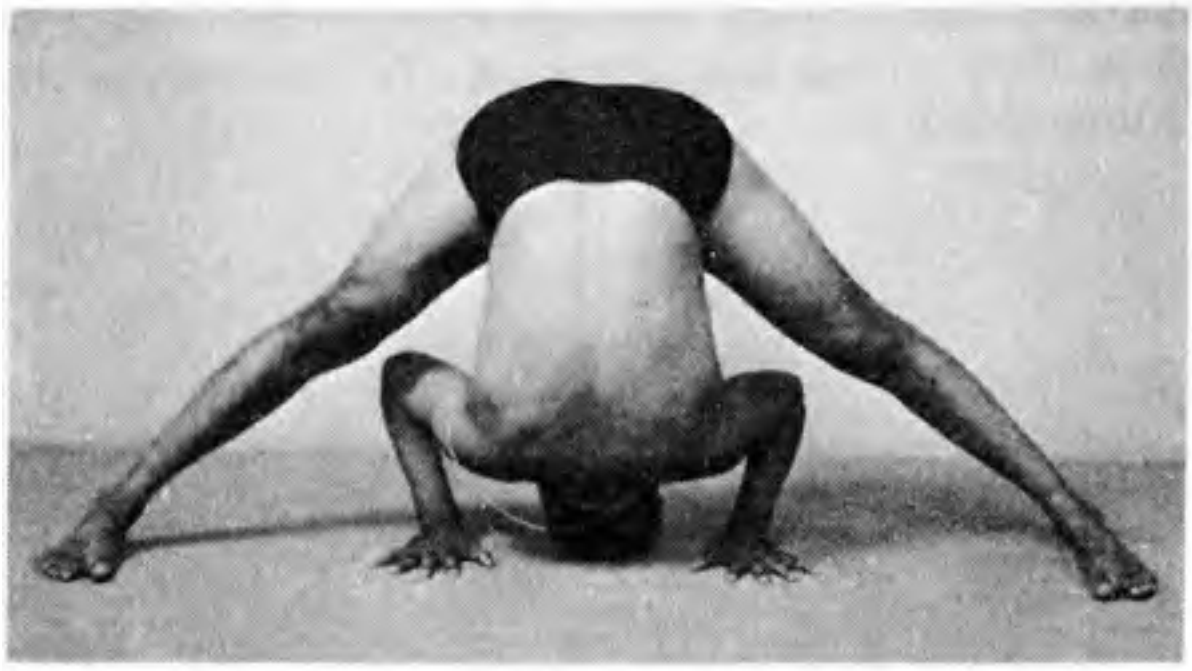

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Do not throw the body weight on the head. Both feet, both palms and the head should be in a straight line.

6. Stay in the pose for half a minute, breathing deeply and evenly.

7. Inhale, raise the head from the floor and straighten the arms at the elbows. Keep the head well up by making the back concave as in position 4. (Plate 30)

8. Exhale and stand as in position 2. (Plate 29)

9. Jump back to Tādāsana. (Plate 1)

14. *Prasārita Pādōttānāsana II* Four* (Plates 35 and 36)

This is an advanced movement of the earlier pose. Here the hands are placed on the waist instead of on the floor (Plate 35), or are folded at the back as if one is doing 'namaste' behind the back (Plate 36) as described in Pārśvōttānāsana. (Plate 26.) In this movement the leg stretch is intensified.

35

36

Effects

In this pose the hamstring and abductor muscles are fully developed, while blood is made to flow to the trunk and the head. People who cannot do Śīrṣāsana (Plate 184) can benefit from this pose, which increases digestive powers.

All the standing poses described above are necessary for beginners. As the pupil advances he attains better flexibility and then the standing poses can be dispensed with, though it is advisable to do them once a week. All these standing poses help to reduce the body weight.

15. *Parighāsana* Four* (Plate 39)

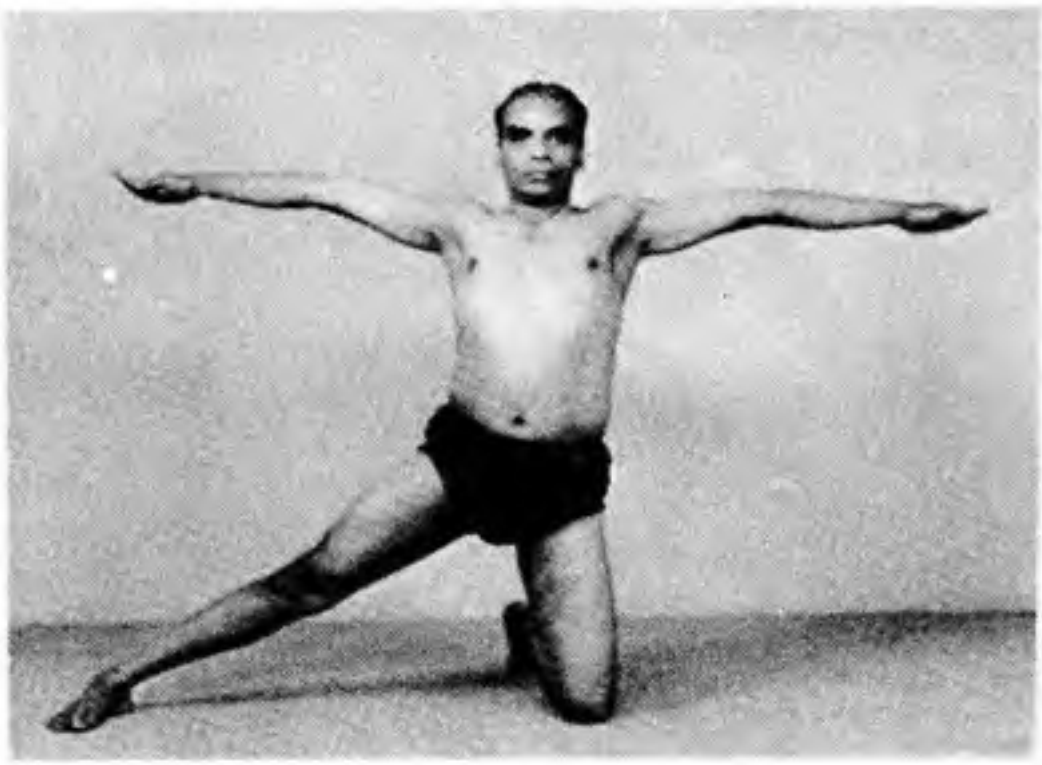
Parighā means a beam or bar used for shutting a gate. In this posture, the body resembles a cross beam used for locking a gate, hence the name of the pose.

Technique

1. Kneel on the floor with the ankles together.

2. Stretch the right leg sideways to the right and keep it in line with the trunk and the left knee. Turn the right foot sideways to the right, keeping the right leg stiff at the knee.

3. Extend the arms sideways with an inhalation. (Plate 37.) Take two breaths.



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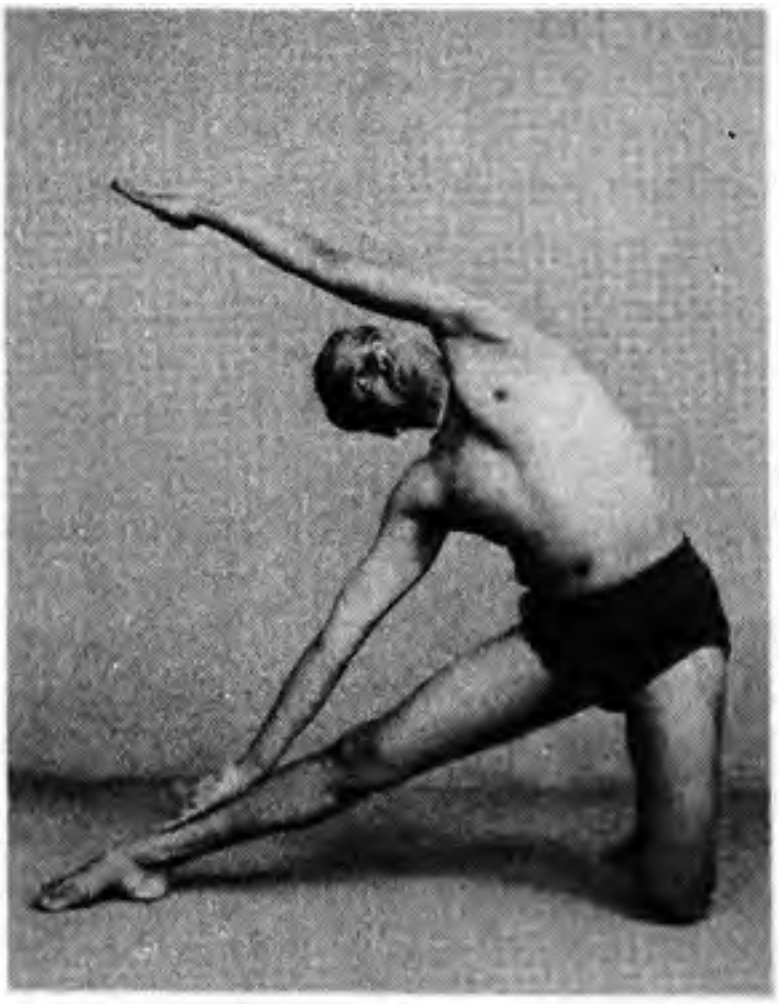
4. Exhale, move the trunk and right arm down towards the extended right leg. (Plate 38.) Rest the right forearm and wrist on the right shin and ankle respectively, the right palm facing up. The right ear will then rest on the right upper arm. Move the left arm over the head

and touch the right palm with the left. The left ear will then touch the left upper arm. (Plate 39)



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39

5. Stay in this position from 30 to 60 seconds, breathing normally.

6. Inhale, move the trunk and arms back to position 3. Bend the right leg and kneel on the floor, keeping the ankles together again.

7. Repeat the pose on the other side, substituting right for left and vice versa. Stay in the pose on both the sides for the same time.

Effects

In this posture the pelvic region is stretched. One side of the abdomen is extended while the other side is laterally flexed. This keeps the abdominal muscles and organs in condition and the skin round the abdomen will not sag but remain healthy. The sideways spinal movement will help persons suffering from stiff backs.

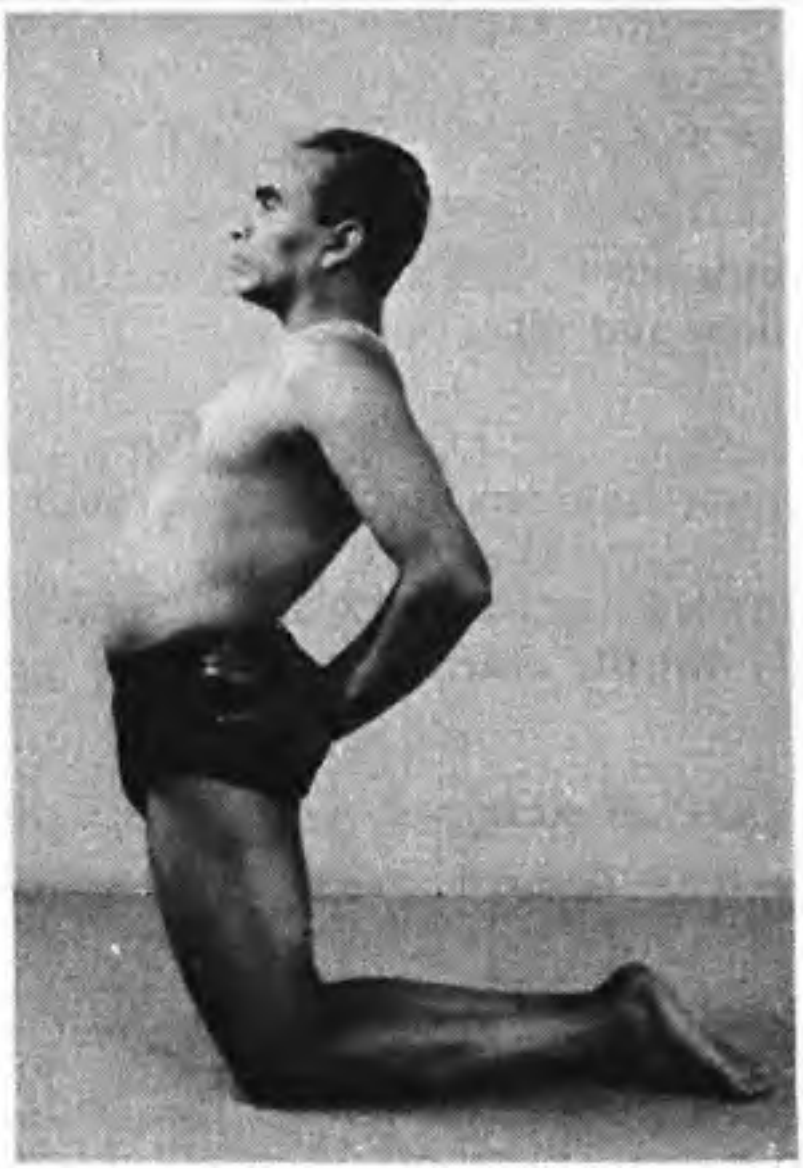
16. *Uṣṭrāsana* Three* (Plate 41)

Uṣṭra means a camel.

Technique

1. Kneel on the floor, keeping the thighs and feet together, toes pointing back and resting on the floor.

2. Rest the palms on the hips. Stretch the thighs, curve the spine back and extend the ribs. (Plate 40)



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3. Exhale, place the right palm over the right heel and the left palm over the left heel. If possible, place the palms on the soles of the feet.

4. Press the feet with the palms, throw the head back and push the spine towards the thighs, which should be kept perpendicular to the floor.

5. Contract the buttocks and stretch the dorsal and the coccyx regions of the spine still further, keeping the neck stretched back. (Plate 41)

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6. Remain in this position for about half a minute with normal breathing.

7. Release the hands one by one and rest them on the hips. (Plate 40.) Then sit on the floor and relax.

Effects

People with drooping shoulders and hunched backs will benefit by this āsana.

The whole spine is stretched back and is toned. This pose can be tried conveniently by the elderly and even by persons with spinal injury.

17. *Utkaṭāsana* Two* (Plate 42)

Utkaṭa means powerful, fierce, uneven. This āsana is like sitting on an imaginary chair.

Technique

1. Stand in Tāḍāsana (Plate 1), stretch the arms straight over the head and join the palms. (Plate 12)

2. Exhale, bend the knees and lower the trunk till the thighs are parallel to the floor. (Plate 42)

3. Do not stoop forward, but keep the chest as far back as possible and breathe normally.

42

4. Stay in the pose for a few seconds, 30 being sufficient. It is difficult to balance in this pose.

5. Inhale, straighten the legs (Plate 12), lower the arms, come back to Tāḍāsana (Plate 1) and relax.

Effects

The pose removes stiffness in the shoulders and corrects any minor deformities in the legs. The ankles become strong and the leg muscles develop evenly. The diaphragm is lifted up and this gives a gentle massage to the heart. The abdominal organs and the back are toned, and the chest is developed by being fully expanded. It is a beneficial pose for horsemen.

18. *Pādāṅguṣṭhāsana* Three* (Plate 44)

Pāda means the foot. Aṅguṣṭha is the big toe. This posture is done by standing and catching the big toes.

Technique

1. Stand in Tāḍāsana. (Plate 1.) Spread the legs a foot apart.

2. Exhale, bend forward and hold the big toes between the thumbs and the first two fingers, so that the palms face each other. Hold them tight. (Plate 43)

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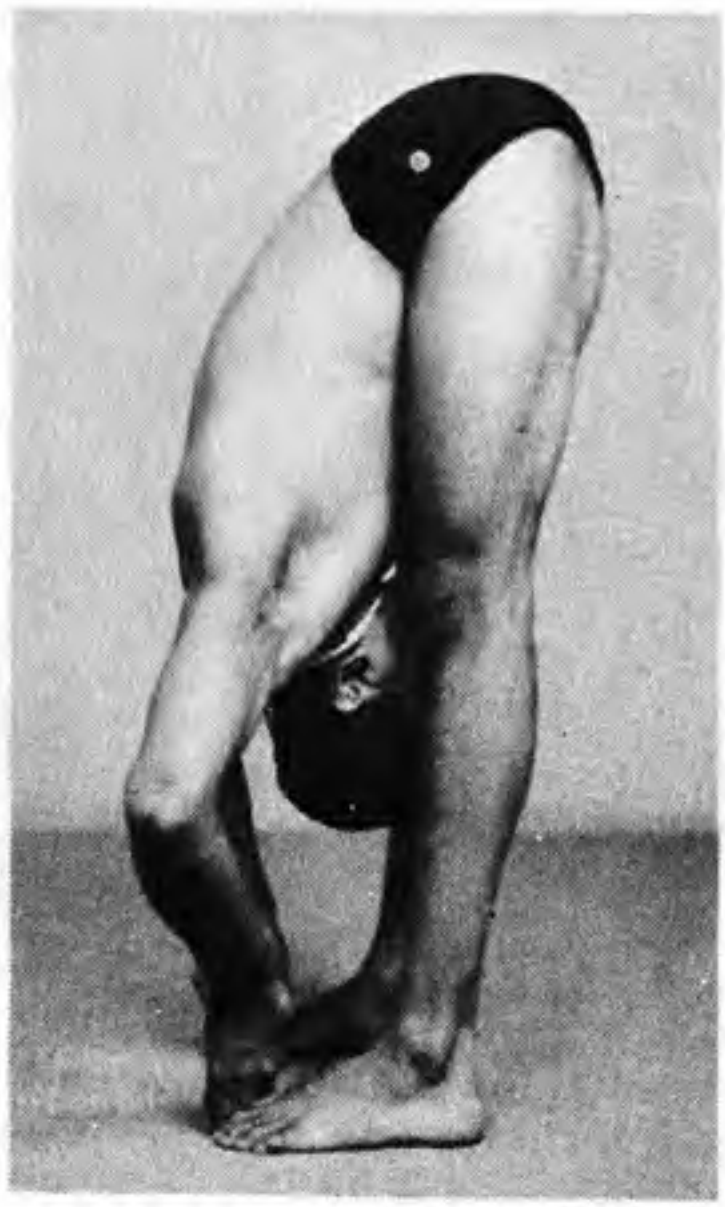

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3. Keep the head up, stretch the diaphragm towards the chest and make the back as concave as possible. Instead of stretching down from the shoulders, bend forward from the pelvic region to get the concave shape of the back from the coccyx.

4. Keep the legs stiff and do not slacken the grip at the knees and toes. Stretch the shoulder-blades also. Take one or two breaths in this position.

5. Now exhale, and bring the head in between the knees by tightening the knees and pulling the toes without lifting them off the floor. (Plate 44.) Remain in this pose for about 20 seconds, maintaining normal breathing.

6. Inhale, come to position 2 (Plate 43), release the toes and stand up. Return to Tāḍāsana. (Plate 1)

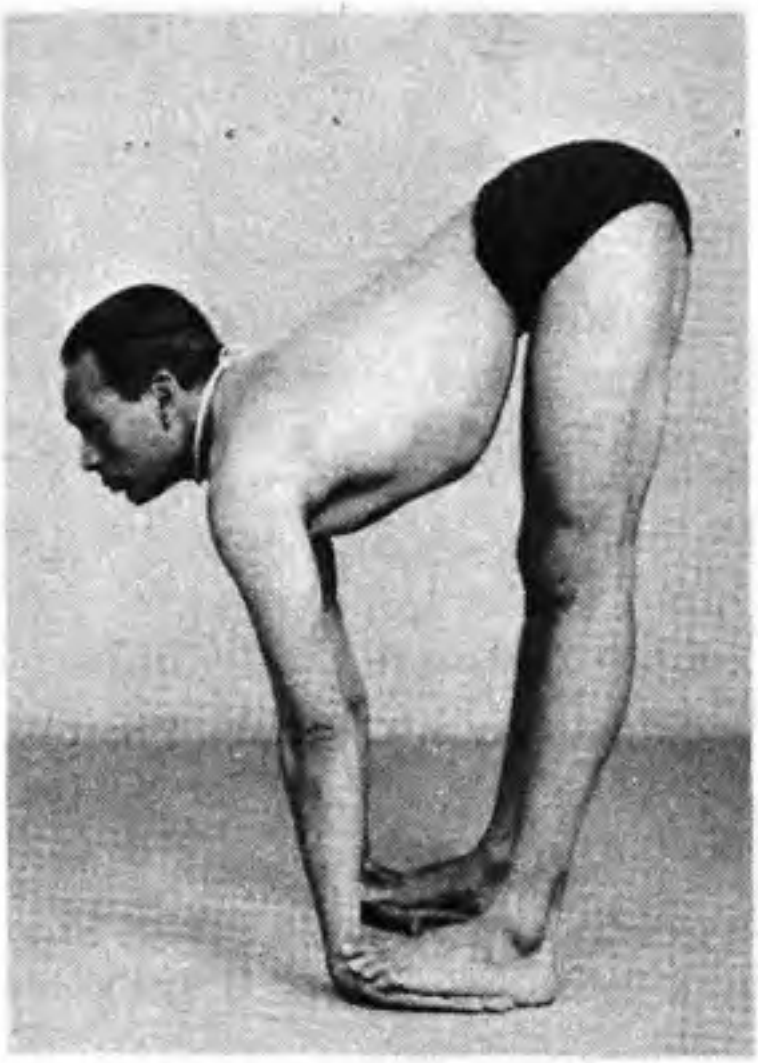
19. *Pādahastāsana* Six* (Plate 46)

Pāda means the foot. Hasta means the hand. This posture is done by bending forward and standing on one's hands.

Technique

1. Stand in Tāḍāsana. (Plate 1.) Spread the legs a foot apart.

2. Exhale, bend forward and without bending the legs at the knees insert the hands under the feet so that the palms touch the soles. (Plate 45)



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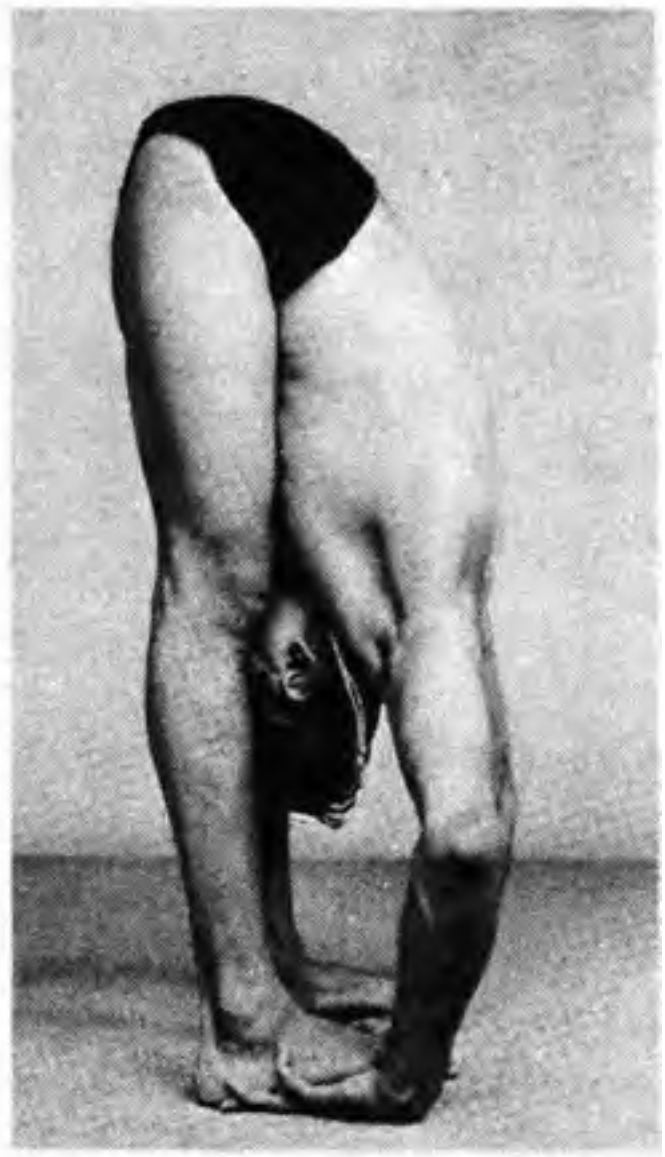

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3. Keep the head up and make the back as concave as possible. Do not slacken the grip at the knees and take a few breaths in this position.

4. Now exhale, and move the head in between the knees by bending the elbows and pulling the feet up from the palms. (Plate 46.) Stay in the pose for about 20 seconds with normal breathing.

5. Inhale, raise the head and come back to position 2 (Plate 45), with the head well up. Take two breaths.

6. Inhale, stand up and return to Tāḍāsana. (Plate 1)

Effects of Pādāṅguṣṭhāsana and Pādahastāsana

The second āsana is more strenuous than the first, but the effects of both are the same. The abdominal organs are toned and digestive juices increase, while the liver and spleen are activated. Persons suffering from a bloating sensation in the abdomen or from gastric troubles will benefit by practising these two āsanas.

Slipped spinal discs can only be adjusted in the concave back position as in Plates 43 and 45. Do not bring the head in between the knees if you have a displaced disc. I have experimented with persons suffering from slipped discs and the concave back position proved a boon to them. It is imperative to get guidance from a guru (master) before trying this pose, because it may not be possible to achieve the concave back position immediately. One has to master other minor poses before attempting this one.

20. *Uttānāsana* Eight* (Plate 48)

Ut is a particle indicating deliberation, intensity. The verb tān means to stretch, extend, lengthen out. In this āsana, the spine is given a deliberate and an intense stretch.

Technique

1. Stand in Tāḍāsana (Plate 1), keeping the knees tight.

2. Exhale, bend forward and place the fingers on the floor. Then place the palms on the floor by the side of the feet, behind the heels. Do not bend the legs at the knees. (Plate 47)

3. Try to hold the head up and stretch the spine. Move the hips a little forward towards the head so as to bring the legs perpendicular to the floor.

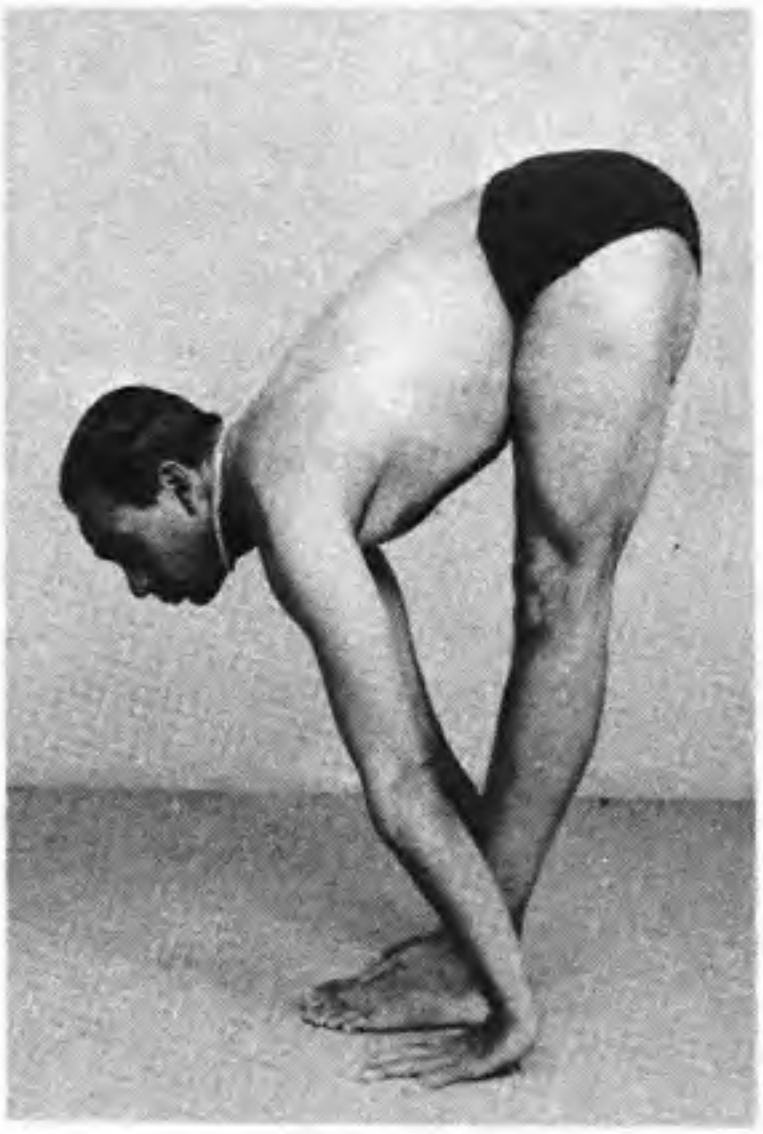
4. Remain in this position and take two deep breaths.

5. Exhale, move the trunk closer to the legs and rest the head on the knees. (Plate 48)

6. Do not slacken the grip at the knees, but pull the knee-caps well up. Hold this position for a minute with deep and even breathing.

7. Inhale and raise the head from the knees, but without lifting the palms from the floor. (Plate 47)

8. After two breaths, take a deep inhalation, lift the hands from the floor and come back to Tāḍāsana. (Plate 1)



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Effects

This āsana cures stomach pains and tones the liver, the spleen and the kidneys. It also relieves stomach pain during menstrual periods. The heart beats are slowed down and the spinal nerves rejuvenated. Any depression felt in the mind is removed if one holds the pose for two minutes or more. The posture is a boon to people who get excited quickly, as it soothes the brain cells. After finishing the āsana, one feels calm and cool, the eyes start to glow and the mind feels at peace.

Persons who feel heaviness in the head, flushing or any discomfort while attempting Śīrṣāsana (Plate 184), should do Uttānāsana first; then they will be able to do Śīrṣāsana (the head stand) with comfort and ease.

21. *Ūrdhva Prasārita Ekapādasana* Six* (Plate 49)

Ūrdhva means upright, above, high. Prasārita means extended, stretched out. Eka means one, pāda means the foot. This posture is done by standing on one leg, bending forward and lifting the other leg high up.

Technique

1. Stand in Tāḍāsana. (Plate 1)

2. Exhale and bend the trunk forward. With the left hand catch the back of the right ankle. Rest the right hand on the floor by the side of the right foot and the head or the chin on the right knee.

3. Lift the left leg as high up in the air as possible. Tighten both knees. Keep the toes of the lifted leg pointed upwards. The legs should remain straight so that the toes point straight ahead and do not tilt sideways. (Plate 49)

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4. Stay in the pose for about 20 seconds, with even breathing. Inhale, bring the left leg down to the ground and come back to Tāḍāsana. (Plate 1)

5. Repeat the pose on the other side, keeping the left leg on the ground and the right leg up in the air. Stay in the pose for the same length of time on both sides.

Effects

This āsana tones the leg muscles and reduces fat around the hips.

22. *Ardha Baddha Padmōttānāsana* Nine* (Plate 52)

Ardha means half. Baddha means bound, restrained, caught, withheld. Padma is a lotus. Uttāna is an intense stretch.

Technique

1. Stand in Tāḍāsana. (Plate 1)

2. Inhale, raise the right leg from the floor, bend the right knee and rest the sole of the right foot on the left thigh.

3. Hold the right foot with the left hand, bring the right arm round the back and catch hold of the big toe of the right foot with the thumb and the fore and middle fingers of the right hand. (Plate 50)

50

51

4. Release the left hand. Exhale, bend the trunk forward, place the left hand on the floor by the left foot (Plate 51), and keep the head up. Make the back as concave as possible. Take a few breaths.

5. Exhale, rest the head or the chin on the left knee. (Plate 52)

6. If the whole left palm cannot be placed on the floor, start with the tips of the fingers, then gradually place the fingers and lastly the whole palm on the floor. Similarly with the position of the head, first place the forehead on the left knee, then extend the neck to place the tip of the nose, then the lips and lastly the chin on the left knee. The progress from the head to the chin shows that the body is becoming more and more elastic.

7. After taking a few deep breaths in this pose, inhale and raise the trunk to position 4. (Plate 51.) Take two breaths.

52

53

8. Inhale, lift the left palm from the floor and come to position 3. (Plate 50)

9. Release the left foot from the grip of the right hand and return to Tāḍāsana. (Plate 1)

10. Repeat on the other side, keeping the right leg on the floor, bending the left leg, placing the left foot on the right thigh, catching the left toe with the left hand from behind, bending forward and placing the right palm on the floor. (Plate 53)

11. If you cannot hold the toe with the hand from behind, place both the palms on the floor and follow the above technique. (Plates 54 and 55)

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Effects

Stiffness of the knees is cured by this āsana. As the abdominal organs are contracted, digestive powers increase and the peristaltic activity helps to eliminate toxin creating waste matter. The pose helps one to move the shoulders further back. This expands the chest and helps in breathing freely and deeply.

23. *Garuḍāsana* One* (Plate 56)

Garuḍa means an eagle. It is also the name of the king of birds. Garuḍa is represented as the vehicle of Viṣṇu and as having a white face, an acquiline beak, red wings and a golden body.

Technique

1. Stand in Tāḍāsana. (Plate 1.) Bend the right knee.

2. Bring the left leg over the right thigh above the right knee and rest the back of the left thigh on the front of the right thigh.

3. Then move the left foot behind the right calf so that the left shin touches the right calf and the left big toe hooks just above the inner side of the right ankle. The left leg is now entwined around the right leg.

4. You are balancing on the right leg only; this will take some time to learn.

5. Bend the elbow and raise the arms to the level of the chest. Rest the right elbow on the front of the left upper arm near the elbow joint. Then move the right hand back to the right and the left hand back to the left and join the palms. The left arm will now be entwined around the right arm. (Plate 56)

6. Remain in this position for a few seconds, say about 15 to 20 with deep breathing. Then release the arms and legs and come back to Tāḍāsana. (Plate 1)

7. Repeat the pose, standing on the left leg and entwining the right leg around the left leg and the right arm around the left arm. Stay for an equal length of time on both the sides.

Effects

This āsana develops the ankles and removes stiffness in the shoulders. It is recommended for preventing cramps in the calf muscles. For removing cramps in the legs and for relieving pain the poses recommended are Garuḍāsana, Vīrāsana (Plate 89) and Bhekāsana, also called Maṇḍukāsana (Plate 100), described later.

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24. *Vātāyanāsana* Eleven* (Plate 58)

Vātāyana means a horse. The pose resembles a horse's face hence the name.

Technique

1. Sit on the floor, and place the left foot at the root of the right thigh in half Padmāsana.

2. Place the hands on the floor by the side of the hips. Exhale, raise the trunk off the floor and place the top of the left knee on the floor. Place the right foot near the bent left knee and keep the right thigh parallel to the floor. (Plate 57)

3. Stretch the pelvis forward, keep the left thigh perpendicular to the floor, raise the hands, straighten the back and balance the body. Do not stoop forward while maintaining the balance, but keep the back erect.

4. Bend the elbows and raise the arms to the level of the chest. Place the back of the upper right arm near the elbow on the front of the upper left arm above the elbow joint. Entwine the forearms round one another and join the palms. Hold this position for about 30 seconds with normal breathing. (Front view: Plate 58. Side view: Plate 59)

5. Release the arms, sit on the floor and straighten the legs.

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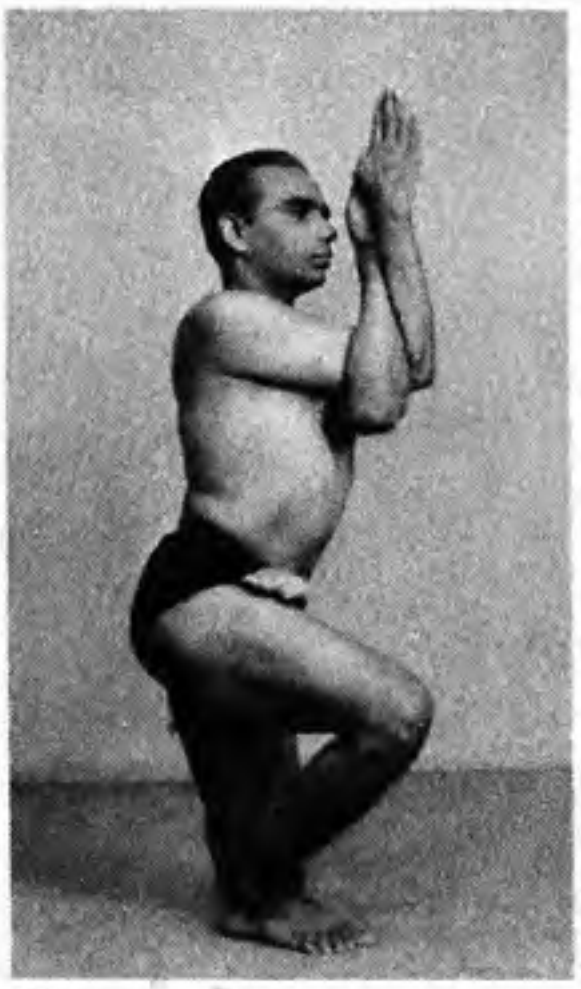

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6. Repeat the pose on the other side. Here, place the right foot at the root of the left thigh, place the left foot near the bent right knee on the floor and entwine the arms in front of the chest so that the left arm is over the right near the elbow joint, and balance, keeping the left thigh parallel to the floor. Maintain the pose for an equal length of time on both sides. Then release the pose and relax on the floor.

7. In the beginning, it will be difficult to balance and the knees will be painful. With practice the pain disappears and the balance is achieved.

Effects

In this pose the hip joints receive proper circulation of the blood and minor deformity in the hips and thighs is corrected. The pose is also good for stiffness in the sacroiliac region.

25. *Śalabhāsana* One* (Plate 60)

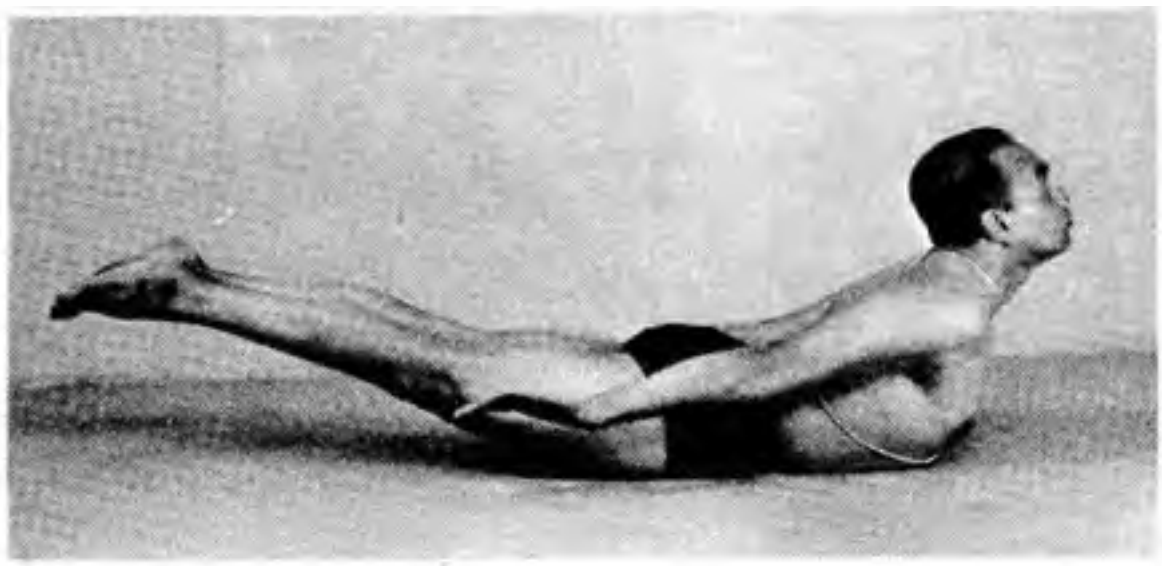
Śalabhā means a locust. The pose resembles that of a locust resting on the ground, hence the name.

Technique

1. Lie full length on the floor on the stomach, face downwards. Stretch the arms back.

2. Exhale, lift the head, chest and legs off the floor simultaneously as high as possible. The hands should not be placed and the ribs should

not rest on the floor. Only the abdominal front portion of the body rests on the floor and bears the weight of the body. (Plate 60)



60

3. Contract the buttocks and stretch the thigh muscles. Keep both legs fully extended and straight, touching at the thighs, knees and ankles.

4. Do not bear the weight of the body on the hands but stretch them back to exercise the upper portion of the back muscles.

5. Stay in the position as long as you can with normal breathing.

6. In the beginning it is difficult to lift the chest and the legs off the floor, but this becomes easier as the abdominal muscles grow stronger.

Effects

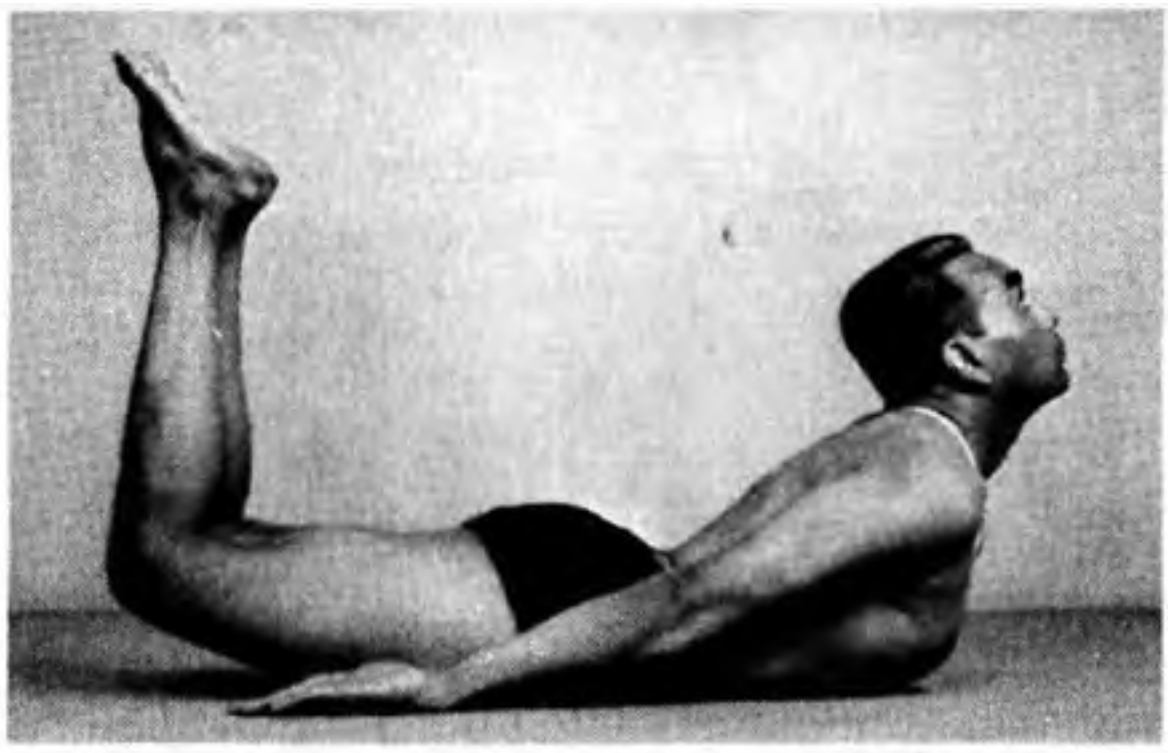
The pose aids digestion and relieves gastric troubles and flatulence. Since the spine is stretched back it becomes elastic and the pose relieves pain in the sacral and lumbar regions. In my experience, persons suffering from slipped discs have benefited by regular practice of this āsana without recourse to enforced rest or surgical treatment. The bladder and the prostate gland also benefit from the exercise and remain healthy.

A variation of the pose may also be tried to relieve aches in the lower part of the back. Here, the legs are bent at the knees and the thighs are kept apart while the shins are kept perpendicular to the floor. Then with an exhalation, the thighs are lifted off the floor and brought closer together until the knees touch, the shins still being kept perpendicular. (Plate 61)

Verse 40 of the second chapter of the Gheraṇḍa Saṁhitā describes

26. *Makarāsana* (Plate 62) thus:

'Lie on the ground face down, the chest touching the earth and both legs stretched out: catch the head with the arms. This is the Crocodile Posture which increases bodily heat.' It is a variation of Śalabhāsana.



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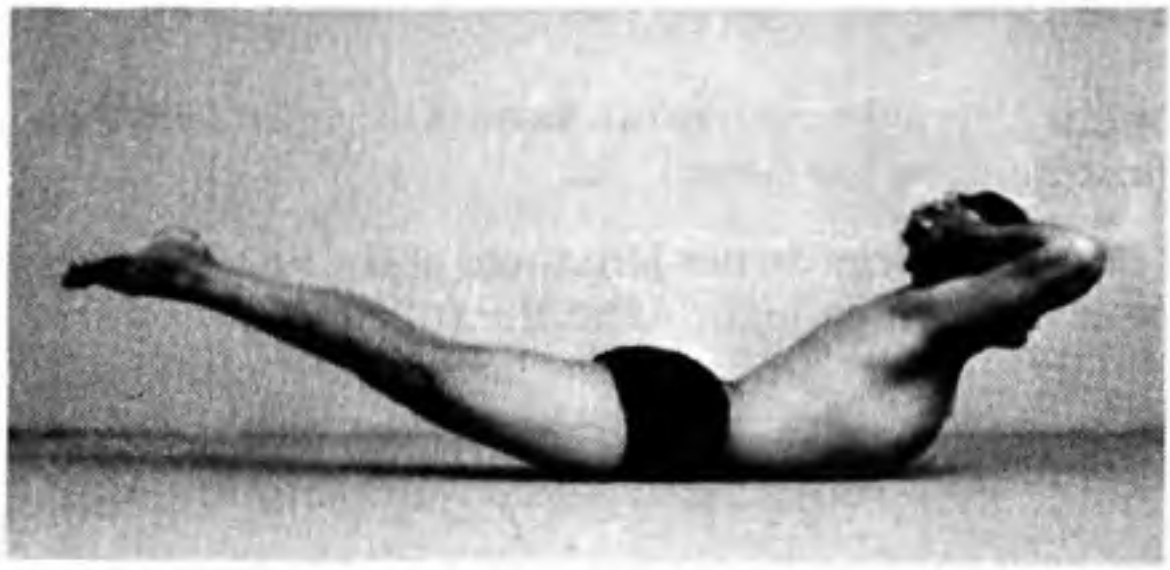


62

27. *Dhanurāsana* Four* (Plate 63)

Dhanu means a bow. The hands here are used like a bow-string to pull the head, trunk and legs up and the posture resembles a bent bow.

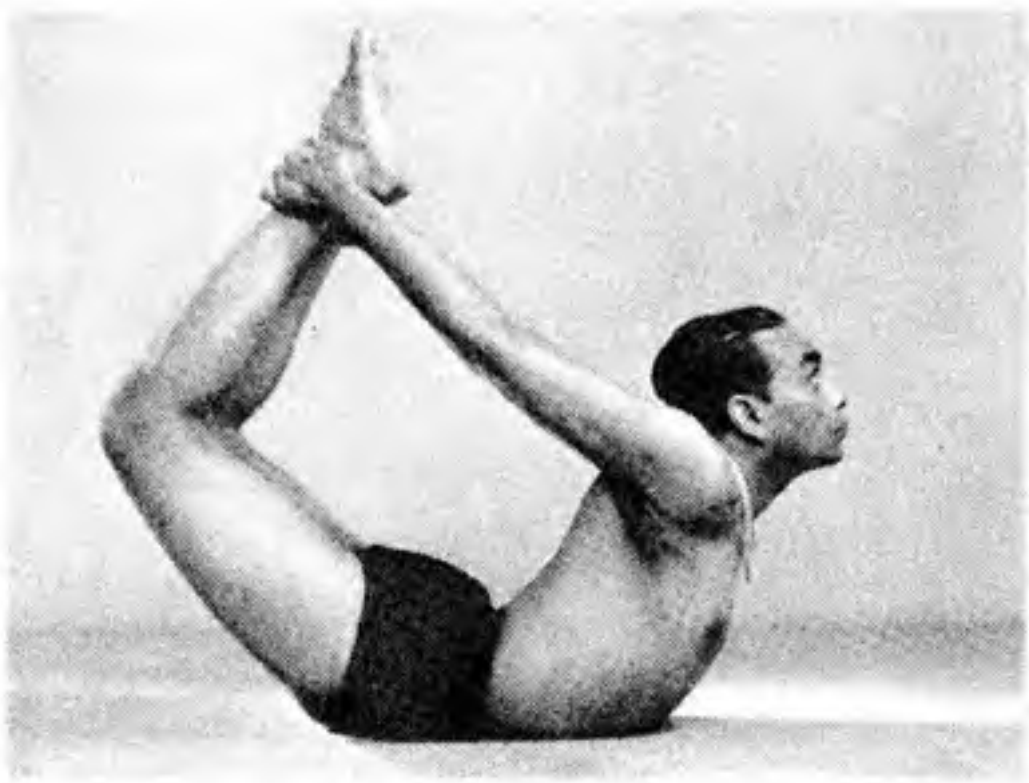
Technique

1. Lie full length on the floor on the stomach, face downwards.

2. Exhale and bend the knees. Stretch the arms back and hold the left ankle with the left hand and the right ankle with the right hand. Take two breaths.

3. Now exhale completely and pull the legs up by raising the knees above the floor, and simultaneously lift the chest off the floor. The arms and hands act like a bow-string to tauten the body like a bent bow. (Plate 63)

4. Lift up the head and pull it as far back as possible. Do not rest either



63

the ribs or the pelvic bones on the floor. Only the abdomen bears the weight of the body on the floor.

5. While raising the legs do not join them at the knees, for then the legs will not be lifted high enough. After the full stretch upwards has been achieved, join together the thighs, the knees and the ankles.

6. Since the abdomen is extended, the breathing will be fast, but do not worry about it. Stay in the pose to your capacity from 20 seconds to one minute.

7. Then, with an exhalation, release the ankles, stretch the legs straight, bring the head and the legs back to the floor and relax.

Effects

In this posture the spine is stretched back. Elderly people do not normally do this, so their spines get rigid. This āsana brings back elasticity to the spine and tones the abdominal organs. In my experience, persons suffering from slipped discs have obtained relief by the regular practice of Dhanurāsana and Śalabhāsana (Plate 60) without being forced to rest or to undergo surgical treatment.

28. *Pārśva Dhanurāsana* Four* (Plates 64 and 65)

Pārśva means sideways. In this variation of Dhanurāsana, one performs the posture lying on one's side.

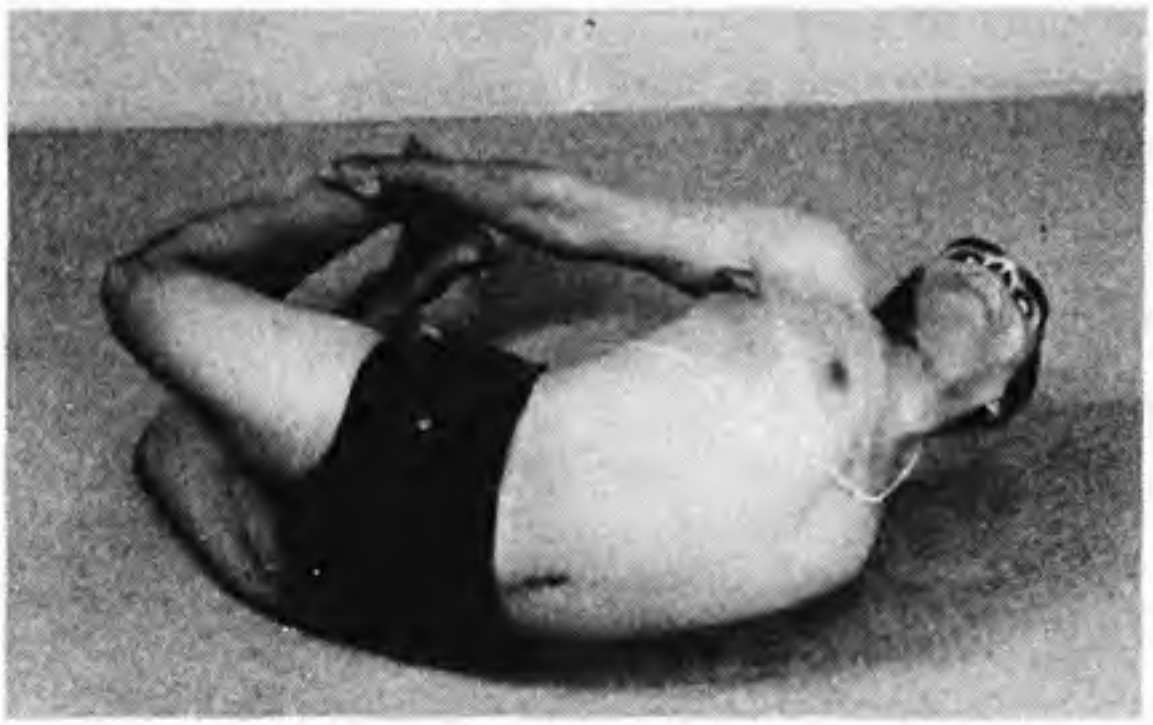
Technique

1. Perform Dhanurāsana. (Plate 63)

2. Exhale, roll over to the right side and stretch the legs and chest. (Plate 64)

3. Inhale and come to position 1. Then exhale, and roll over to the left side. (Plate 65)

64



65

4. Stay on either side for the same length of time according to your capacity with normal breathing. Inhale, come back to Dhanurāsana, release the legs and relax.

5. In this pose, which is a more strenuous version of the earlier one, the ankles are inclined to slip from the hand grip. Therefore, grip the ankles more firmly.

Effects

The sideways roll in this posture massages the abdominal organs by pressing them against the floor.

29. *Chaturaṅga Daṇḍāsana* One* (Plate 67)

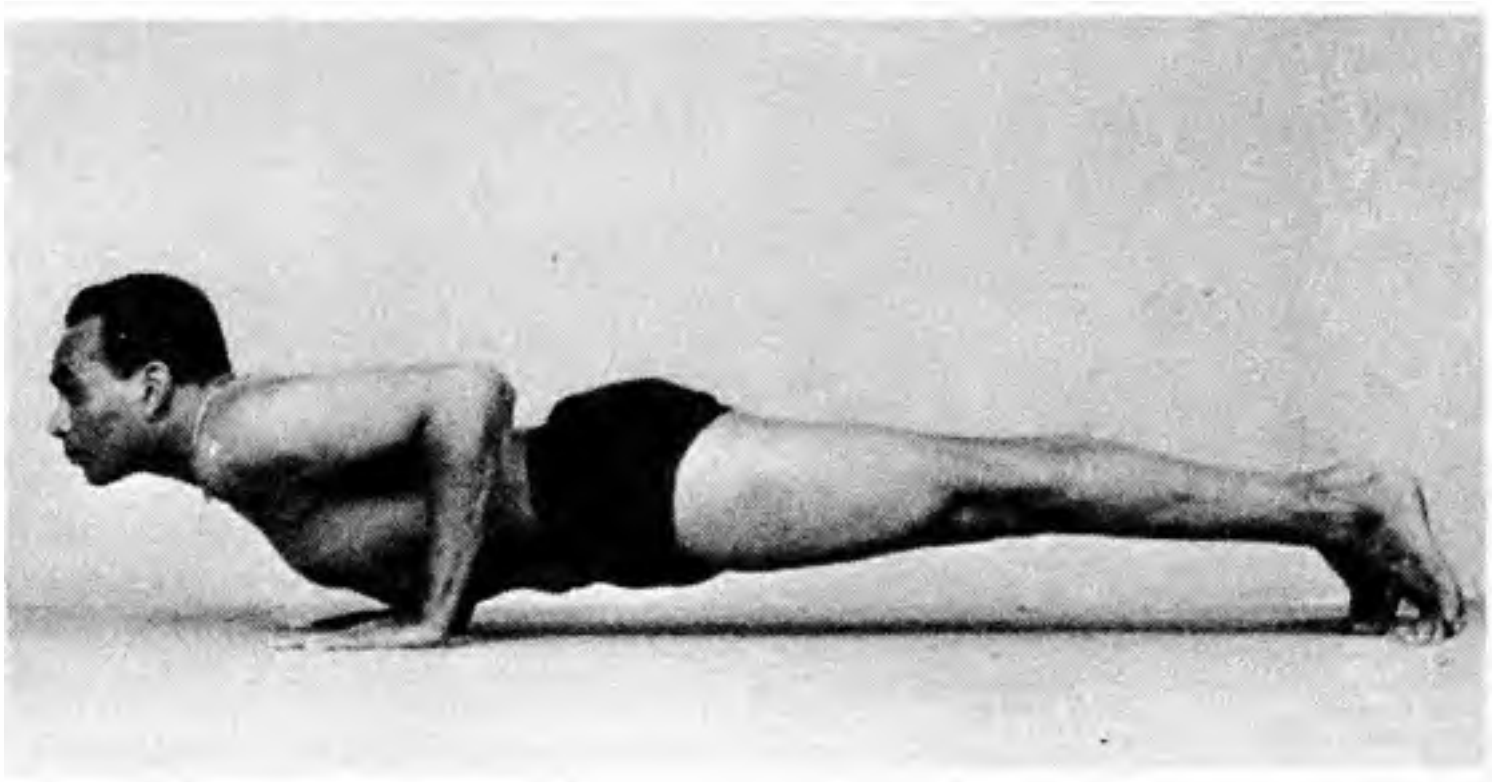
Chatur means four. Aṅga means a limb or a part thereof. Daṇḍa means a staff. Lie flat on the floor, face down and take the weight of the body on the palms and toes, exhale and keep the body parallel to the floor, stiff as a staff. The four limbs supporting the body are the hands and feet. The pose is similar to dips in western gymnastics.

Technique

1. Lie flat on the floor, face downwards.

2. Bend the elbows and place the palms by the side of the chest. Keep the feet about a foot apart.

3. With an exhalation, raise the whole body a few inches above the floor, balancing it on the hands and the toes. (Plate 66.) Keep the body stiff as a staff, parallel to the floor from head to heel and the knees taut. Stay for some time with normal breathing.



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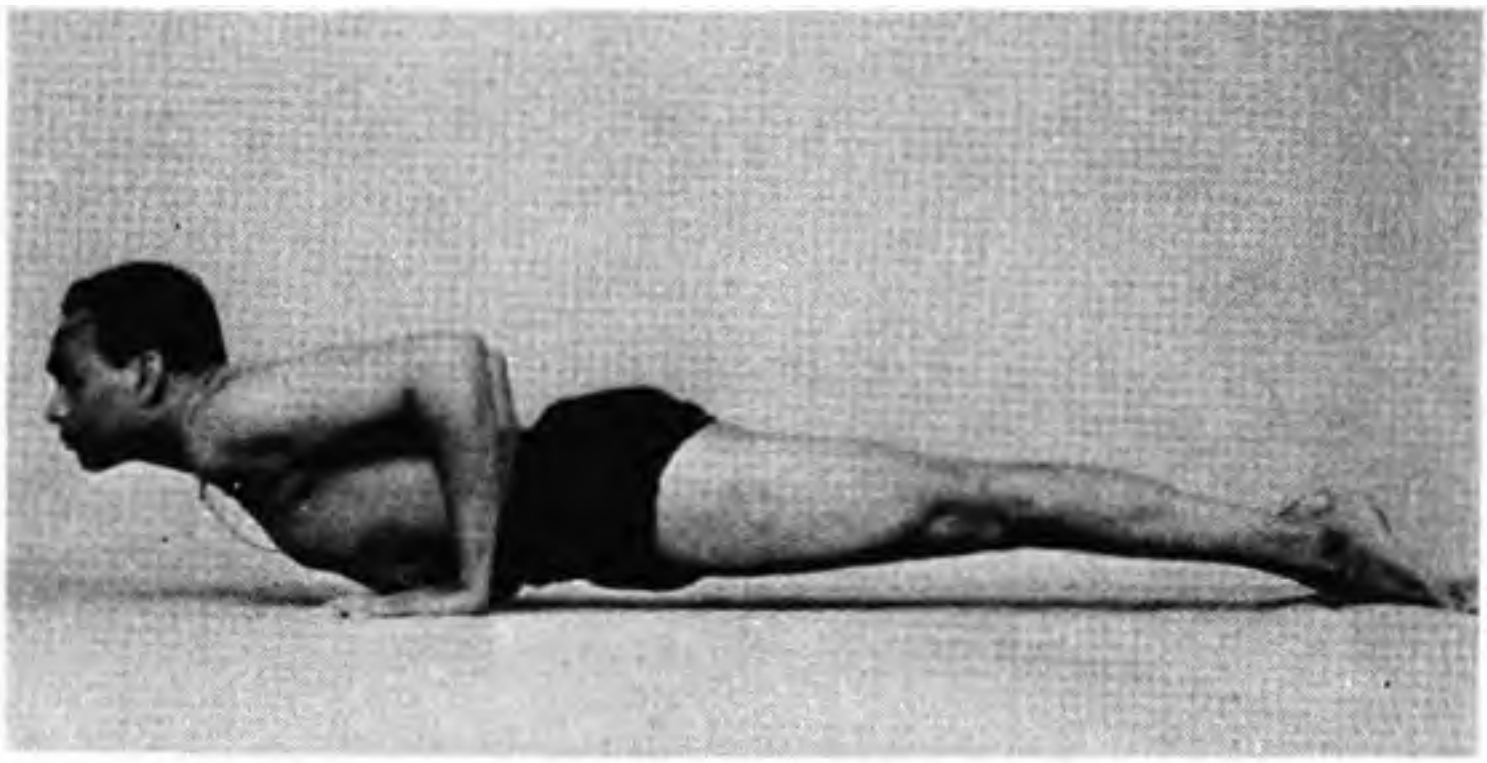
4. Then gradually extend the whole body forward so that the feet rest on the upper portion of the toes on the floor. (Plate 67)

5. Stay in the pose for about 30 seconds with normal or deep breathing. The movement may be repeated several times. Then relax on the floor.



67

Effects

The pose strengthens the arms and the wrists develop mobility and power. It also contracts and tones the abdominal organs.

30. *Nakrāsana* Six* (Plates 68 to 71)

Nakra means a crocodile. This posture consists of several dynamic movements resembling those of a crocodile stalking its prey, hence the name.

Technique

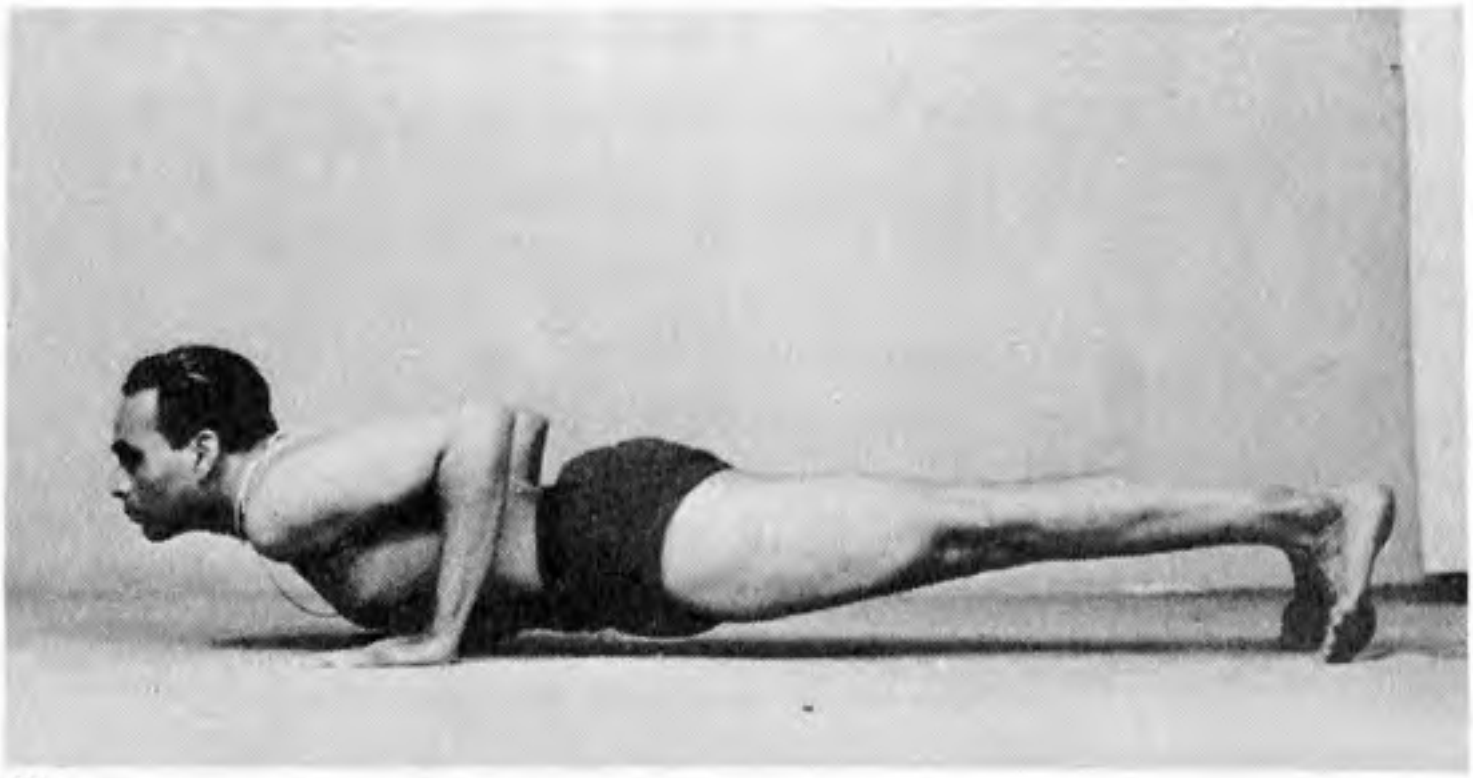
1. Lie flat on the floor, face downwards.

2. Bend the elbows and place the palms by the side of the waist.

3. Keep the feet about one foot apart. Exhale, raise the whole body a few inches above the floor, balancing it on the palms and the toes. Keep the body stiff as a poker and the knees taut. The body should remain parallel to the floor. (Plate 68)

4. Take a few breaths and with an exhalation lunge the whole body a foot forward, lifting the hands and feet simultaneously off the floor. (Plates 69, 70 and 71.) After going a foot forward, take a few breaths. Then exhale and lunge forward again.

5. Repeat the forward lunges four or five times. At the end of each lunge, the position of the body should be as described in position 3 above. These movements resemble the lunges made by a crocodile stalking its prey. After each lunge, rest a few seconds taking deep breaths.



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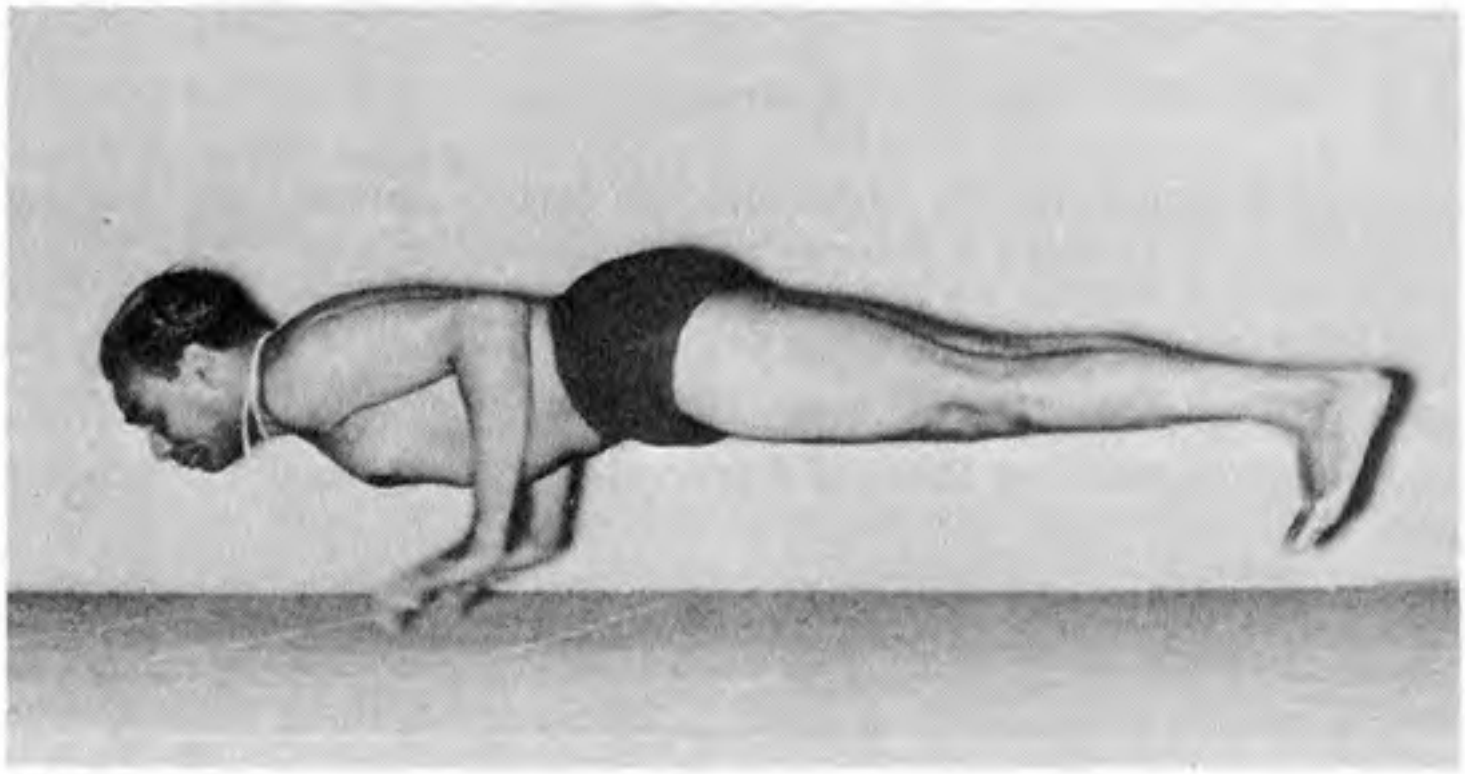

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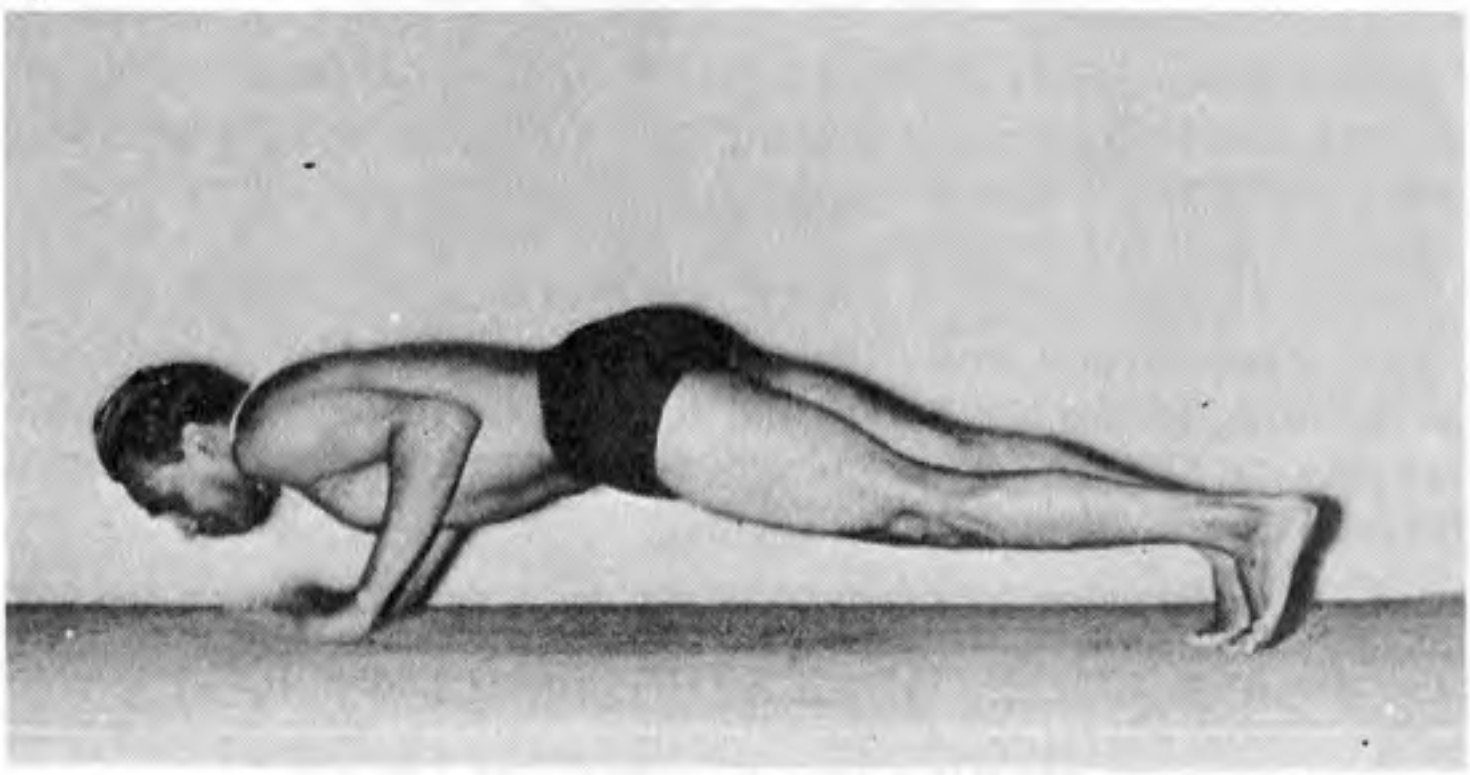

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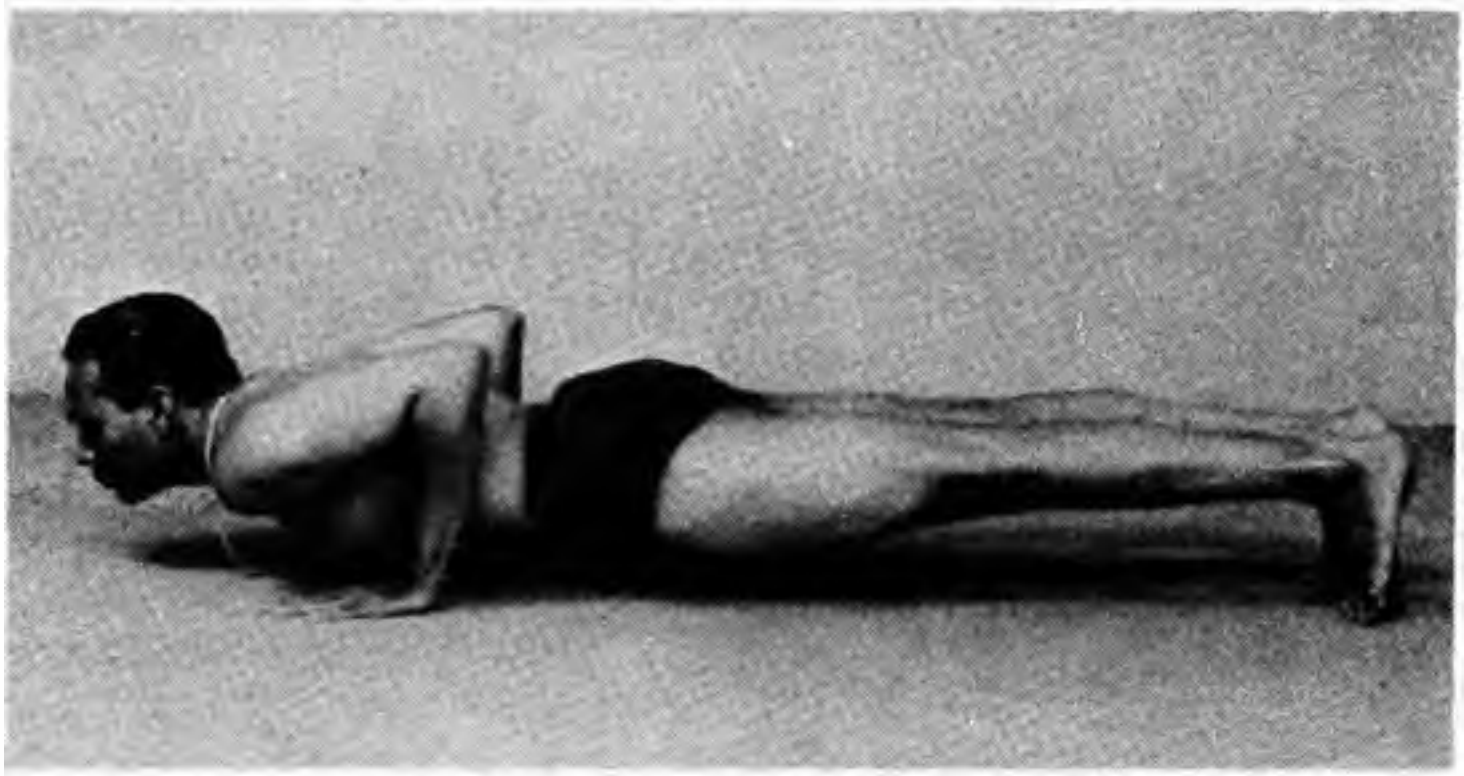


71

6. Now reverse the movements and with exhalations jump back about a foot at a time until you return to the position from where you started.

7. Rest the trunk on the floor and relax.

Effects

This āsana develops powerful wrists, throws off lethargy of the body and fatigue of the brain, rejuvenates the entire body and makes one feel lively and vigorous. Since the movements bring great pressure on the wrists, it is recommended that they be tried gradually, otherwise one is apt to sprain the wrists.

31. *Bhujaṅgāsana I* One* (Plate 73)

Bhujaṅga means a serpent. In this posture, lie flat on the floor, face downwards, lift the body up from the trunk and throw the head back like a serpent about to strike.

Technique

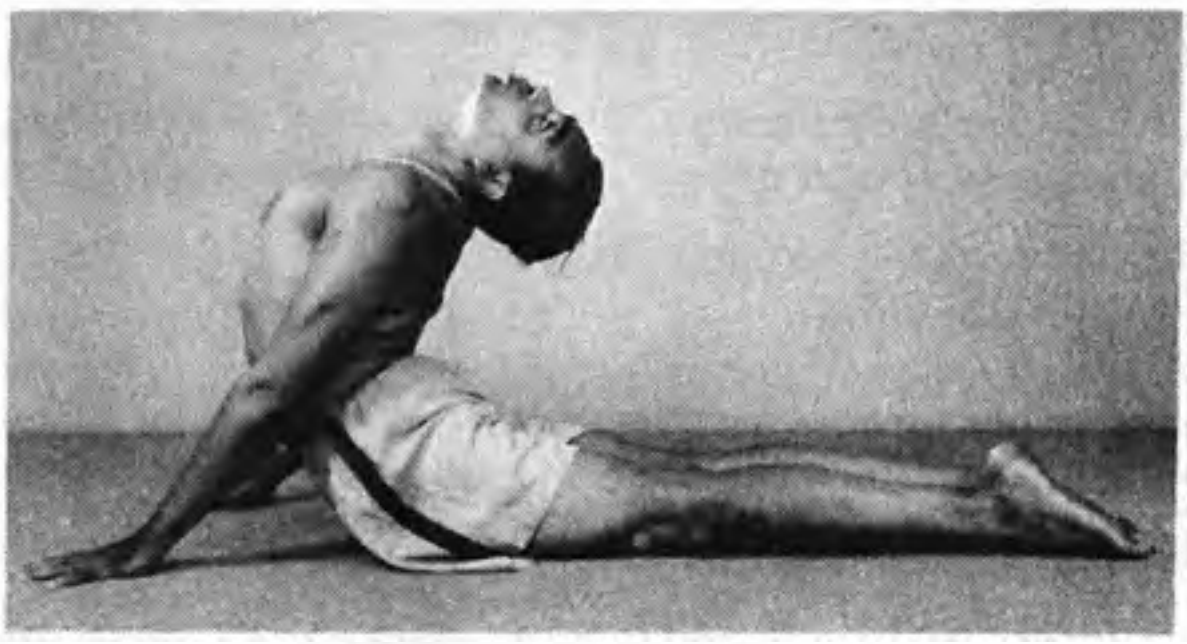
1. Lie on the floor face downwards. Extend the legs, keeping the feet together. Keep the knees tight and the toes pointing.

2. Rest the palms by the side of the pelvic region.

3. Inhale, press the palms firmly on the floor and pull the trunk up. (Plate 72.) Take two breaths.

4. Inhale, lift the body up from the trunk until the pubis is in contact with the floor and stay in this position with the weight on the legs and palms. (Plate 73)

72



73

5. Contract the anus and the buttocks, tighten the thighs.

6. Maintain the pose for about 20 seconds, breathing normally.

7. Exhale, bend the elbows and rest the trunk on the floor. Repeat the pose two or three times and then relax.

Effects

The posture is a panacea for an injured spine and in cases of slight displacement of spinal discs the practice of this pose replaces the discs in their original position. The spinal region is toned and the chest fully expanded.

32. *Ūrdhva Mukha Śvānāsana* One* (Plate 74)

Ūrdhva Mukha means having the mouth upwards. Śvāna means a dog. The pose resembles a dog stretching itself with the head up in the air, hence the name.

Technique

1. Lie on the floor on the stomach, face downwards.

2. Keep the feet about one foot apart. The toes should point straight back. Place the palms on the floor by the side of the waist, the fingers pointing to the head.

3. Inhale, raise the head and trunk, stretch the arms completely and push the head and trunk as far back as possible, without resting the knees on the floor.

4. Keep the legs straight and tightened at the knees, but do not rest the knees on the floor. The weight of the body rests on the palms and toes only. (Plate 74)

74

5. The spine, thighs and calves should be fully stretched, and the buttocks contracted tight. Push the chest forward, stretch the neck fully and throw the head as far back as possible. Stretch also the back portions of the arms.

6. Stay in the pose from half a minute to a minute with deep breathing.

7. Bend the elbows, release the stretch and rest on the floor.

Effects

The pose rejuvenates the spine and is specially recommended for people suffering from a stiff back. The movement is good for persons with lumbago, sciatica and those suffering from slipped or prolapsed discs of the spine. The pose strengthens the spine and cures backaches. Due to chest expansion, the lungs gain elasticity. The blood circulates properly in the pelvic region and keeps it healthy.

33. *Adho Mukha Śvānāsana* Five* (Plate 75)

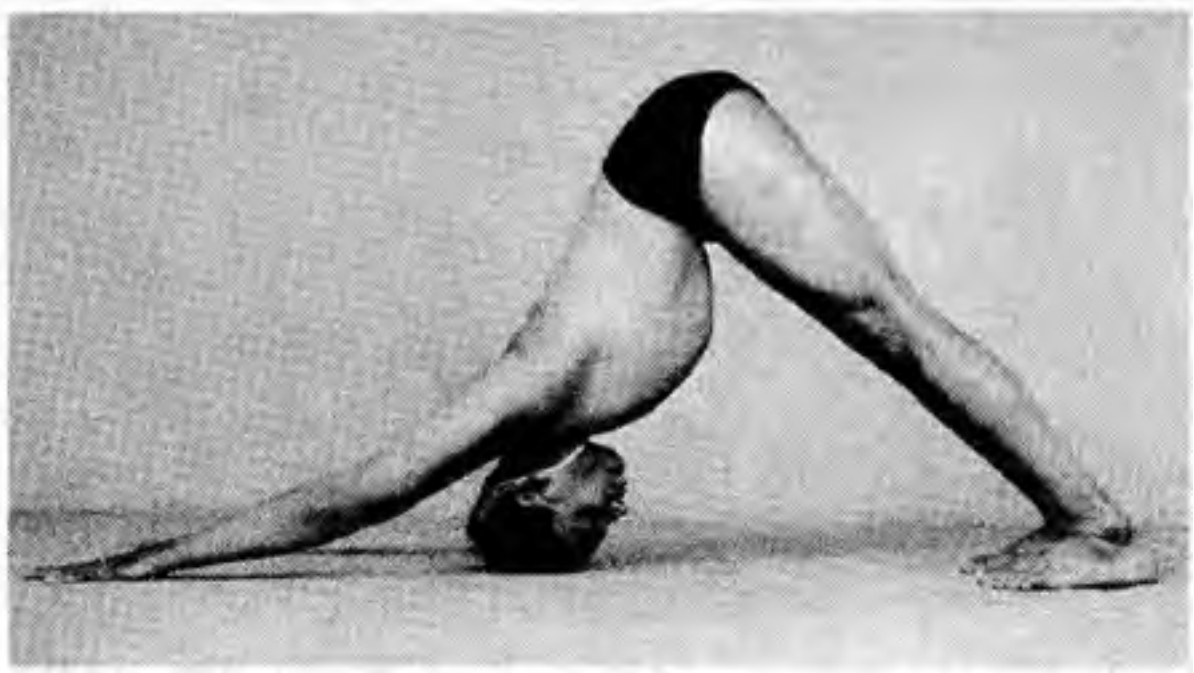
Adho Mukha means having the face downwards. Śvāna means a dog. The pose resembles a dog stretching itself with head and forelegs down and the hind legs up, hence the name.

Technique

1. Lie full length on the floor on the stomach, face downwards. The feet should be kept one foot apart.

2. Rest the palms by the side of the chest, the fingers straight and pointing in the direction of the head.

3. Exhale and raise the trunk from the floor. Straighten the arms, move the head inwards towards the feet and place the crown of the head on the floor, keeping the elbows straight and extending the back. (Side view: Plate 75. Back view: Plate 76)



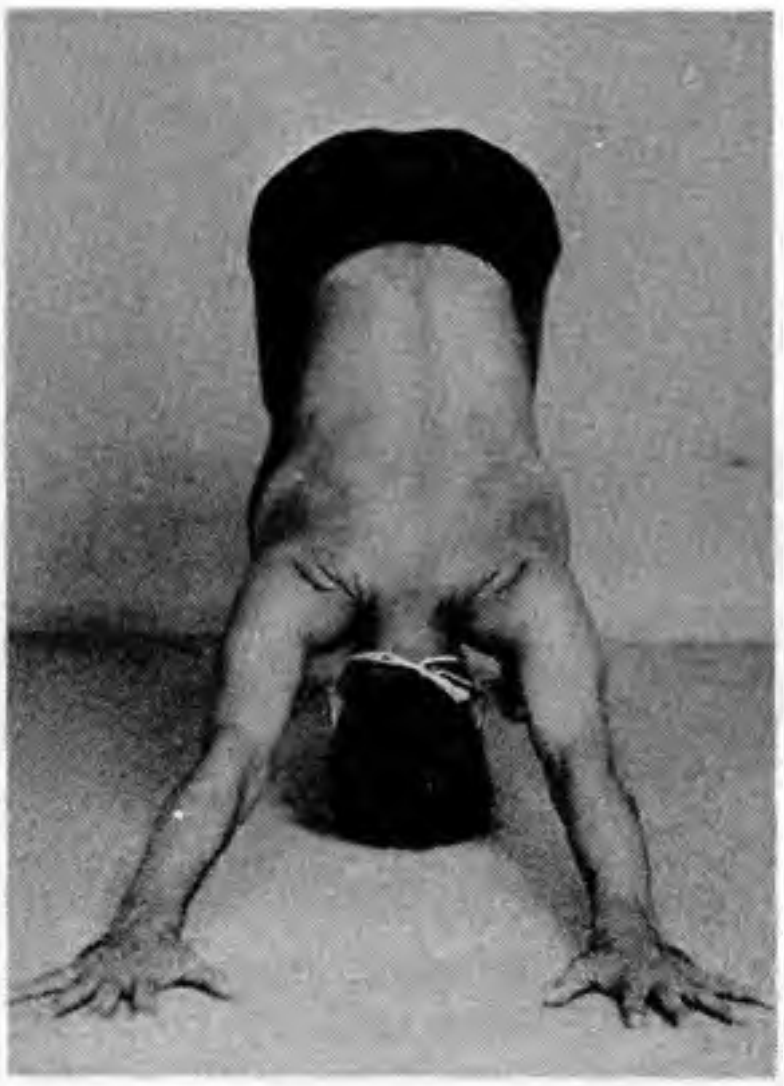
75

4. Keep the legs stiff and do not bend the knees but press the heels down. The heels and soles of the feet should rest completely on the floor, while the feet should be parallel to each other, the toes pointing straight ahead.

5. Stay in the pose for about a minute with deep breathing. Then with an exhalation lift the head off the floor, stretch the trunk forward and lower the body gently to the floor and relax.

Effects

When one is exhausted, a longer stay in this pose removes fatigue and brings back the lost energy. The pose is especially good for runners who get tired after a hard race. Sprinters will develop speed and lightness in the legs. The pose relieves pain and stiffness in the heels and helps to



76

soften calcaneal spurs. It strengthens the ankles and makes the legs shapely. The practice of this āsana helps to eradicate stiffness in the region of the shoulder-blades, and arthritis of the shoulder joints is relieved. The abdominal muscles are drawn towards the spine and strengthened. As the diaphragm is lifted to the chest cavity the rate of the heart beat is slowed down. This is an exhilarating pose.

Those who are afraid to do Śīrṣāsana (Plate 184) can conveniently practise this position. As the trunk is lowered in this āsana it is fully stretched and healthy blood is brought to this region without any strain on the heart. It rejuvenates the brain cells and invigorates the brain by relieving fatigue.

Persons suffering from high blood pressure can do this pose.

34. *Paripūrṇa Nāvāsana* Two* (Plate 78)

Paripūrṇa means entire or complete. The posture here resembles that of a boat with oars, hence the name.

Technique

1. Sit on the floor with the legs stretched straight in front. Place the palms on the floor by the hips, the fingers pointing to the feet. Stretch the hands straight and keep the back erect. This position is called:

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35. *Daṇḍāsana* Two* (Plate 77) (Daṇḍa = a staff or rod)

2. Exhale, recline the trunk slightly back and simultaneously raise the legs from the floor and keep them stiff as a poker with the knees tight and the toes pointing forwards. Balance is maintained only on the buttocks and no part of the spine should be allowed to touch the floor, from which the legs should be kept at an angle of 60 to 65 degrees. The feet are higher than the head and not level with it as in Ardha Nāvāsana. (Plate 79)

3. Remove the hands from the floor and stretch the arms forward, keeping them parallel to the floor and near the thighs. The shoulders and the palms should be on one level, and the palms should face each other. (Plate 78)

4. Stay in the pose for half a minute, with normal breathing. Gradually increase the time to one minute. One feels the effect of the exercise after only 20 seconds.

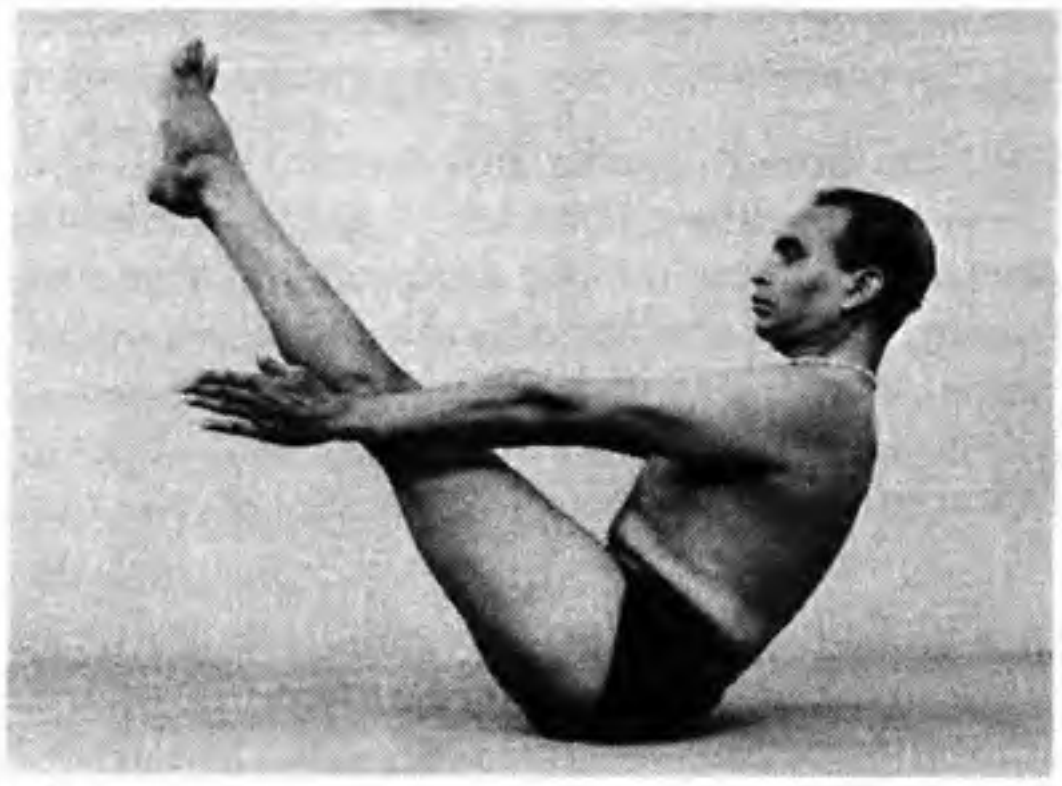
5. Then exhale, lower the hands, rest the legs on the floor and relax by lying on the back.

Effects

This āsana gives relief to persons who feel a bloating sensation in the abdomen due to gas and also to those suffering from gastric complaints. It reduces fat around the waistline and tones the kidneys.

36. *Ardha Nāvāsana* Two* (Plate 79)

Ardha means half. Nāva is a ship, boat or vessel. This posture resembles the shape of a boat, hence the name.



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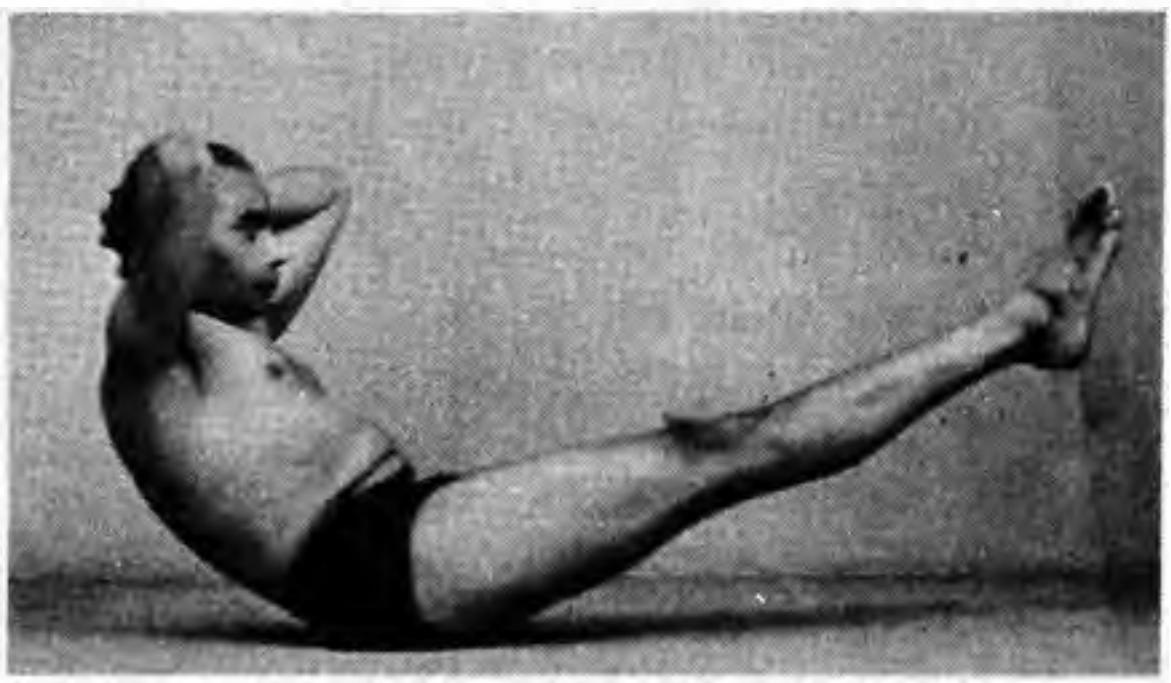
Technique

1. Sit on the floor. Stretch the legs out in front and keep them straight. (Plate 77)

2. Interlock the fingers and place them on the back of the head just above the neck.

3. Exhale, recline the trunk back and simultaneously raise the legs from the floor, keeping the knees tight and the toes pointed. The balance of the body rests on the buttocks and no part of the spine should be allowed to touch the floor. (Plate 79.) One feels the grip on the muscles of the abdomen and the lower back.



79

4. Keep the legs at an angle of about 30 to 35 degrees from the floor and the crown of the head in line with the toes.

5. Hold this pose for 20 to 30 seconds with normal breathing. A stay for one minute in this posture indicates strong abdominal muscles.

6. Do not hold the breath during this āsana, though the tendency is always to do it with suspension of breath after inhalation. If the breath is held, the effect will be felt on the stomach muscles and not on the abdominal organs. Deep inhalation in this āsana would loosen the grip on the abdominal muscles. In order to maintain this grip, inhale, exhale and hold the breath and go on repeating this process but without breathing deeply. This will exercise not only the abdominal muscles but the organs also.

7. The difference between Ardha Nāvāsana and Paripūrṇa Nāvāsana should be noted; in the latter, the legs are moved higher and the distance between them and the stomach is less than in the former.

Effects

The effects of Ardha Nāvāsana and that of Paripūrṇa Nāvāsana (Plate 78) differ due to the position of the legs. In Paripūrṇa Nāvāsana the exercise is effective on the intestines; whereas, Ardha Nāvāsana works on the liver, gall bladder and spleen.

In the beginning, the back is too weak to bear the strain of the pose. When power to retain the pose comes, it indicates that the back is gaining strength. A weak back is a handicap in many ways, especially to women as they need strong backs for child-bearing. These two āsanas coupled with lateral twistings of the spine will help to strengthen the back.

The importance of having a healthy lower back can be realised if we watch old people when they sit down, get up and walk, for consciously or unconsciously they support their backs with their hands. This indicates that the back is weak and cannot withstand the strain. As long as it is strong and needs no support, one feels young though advanced in age. The two āsanas bring life and vigour to the back and enable us to grow old gracefully and comfortably.

37. *Gomukhāsana* Two* (Plate 80)

Go means a cow. Mukha means face. Gomukha means one whose face resembles a cow. It also means a kind of a musical instrument, narrow at one end and broad at the other like the face of a cow.

Technique

1. Sit on the floor with the legs stretched straight in front. (Plate 77)

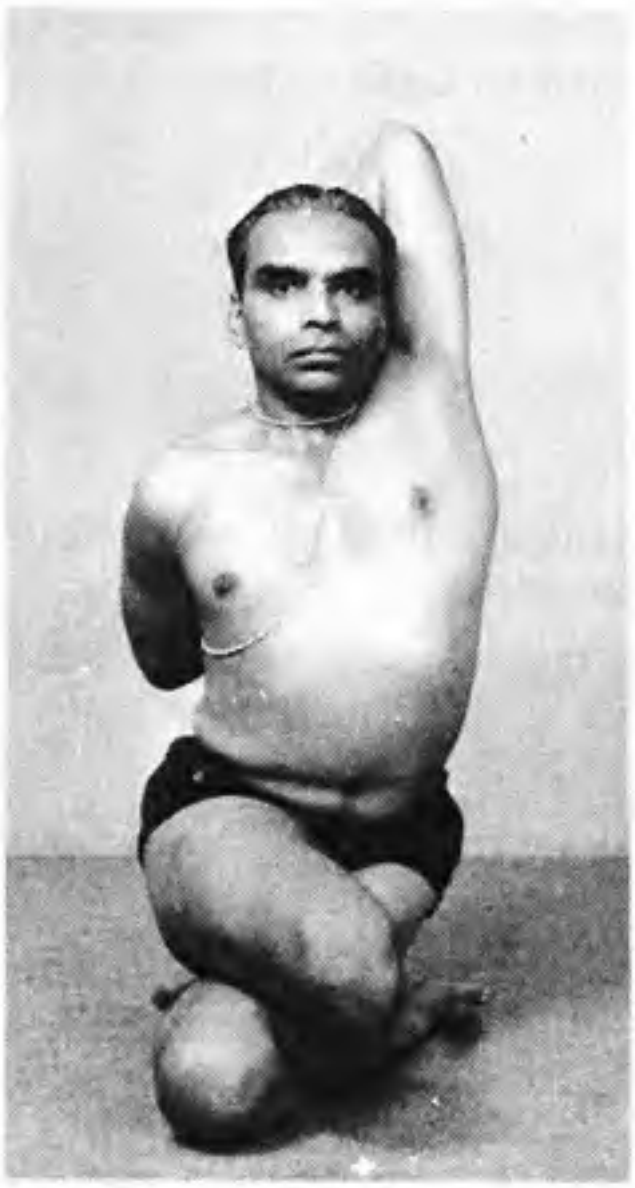
2. Place the palms on the floor and raise the seat.

3. Bend the left knee back and sit on the left foot. Remove the hands

from the floor, raise the right leg and place the right thigh over the left one. Raise the buttocks and with the help of the hands bring the ankles and the back of the heels together till they touch each other.

4. Rest the ankles, keeping the toes pointing back.

5. Raise the left arm over the head, bend it at the elbow and place the left palm below the nape of the neck between the shoulders. Lower the right arm, bend it at the elbow and raise the right forearm up behind the back until the right hand is level with and between the shoulder-blades. Clasp the hands behind the back between the shoulders. (Front view: Plate 80. Back view: Plate 81)



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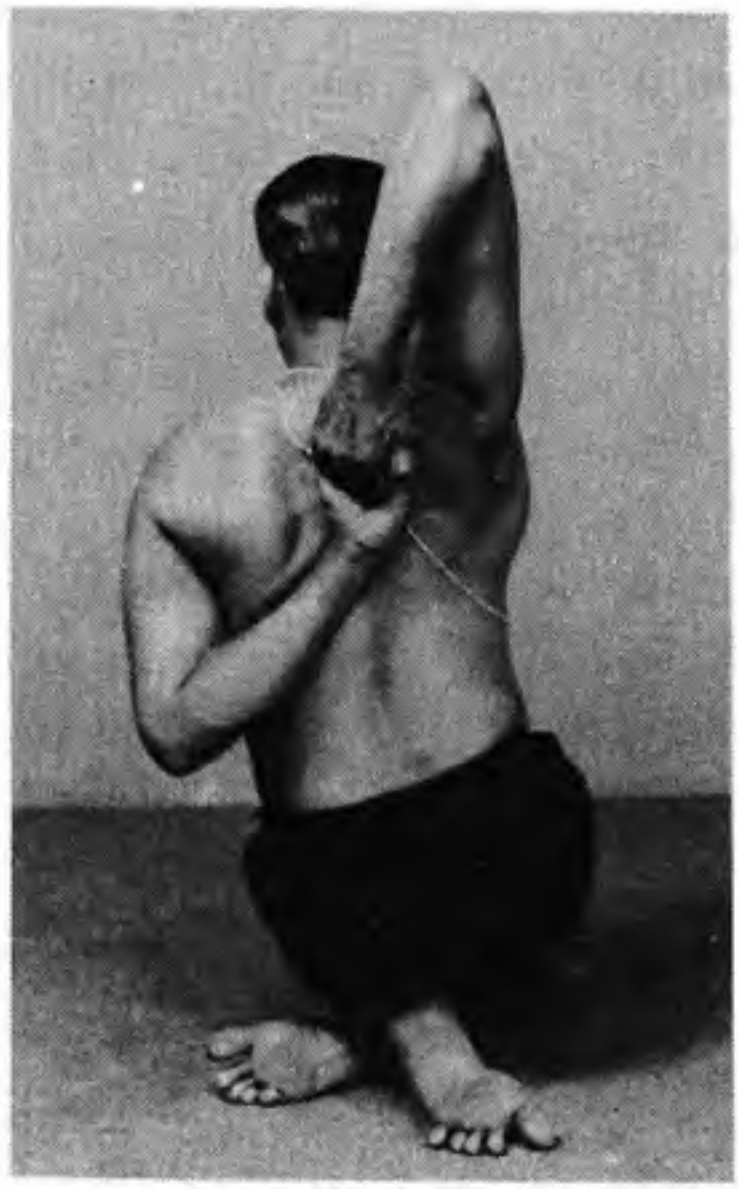


81

6. Hold this position from 30 to 60 seconds breathing normally. Keep the neck and head erect and look straight ahead.

7. Unclasp the hands, straighten the legs and repeat the pose on the other side for the same length of time by inserting 'left' for 'right' and vice versa. Then unclasp the hands at the back, straighten the legs and relax.

Effects

The pose cures cramp in the legs and makes the leg muscles elastic.

The chest is well expanded and the back becomes erect. The shoulder joints move freely and the latissimus dorsi are fully extended.

38. *Lolāsana* Six* (Plate 83)

Lola means tremulous, moving to and fro or dangling like an ear-ring. In this posture the legs and feet are kept as in Gomukhāsana. (Plate 80.) The hands are placed on the floor by the side of the hips and the body is raised up and supported only by the hands and wrists. Then one balances swaying slightly forward and backward, the movement resembling that of a dangling pendant.

Technique

1. Sit on the floor with the legs stretched straight in front. (Plate 77)

2. Place the palms on the floor by the side of the hips.

3. Raise the seat, bend the right knee back, place the right sole beneath the left buttock and sit on it.

4. Bend the left knee back and again raising the seat, place the left sole beneath the right buttock and sit on it.

5. The feet will be crossed so that the right shin is above the left calf. Keep the toes pointing backwards. (Plate 82)

6. Take a few breaths. Exhale, raise the trunk and legs off the floor and balance on the hands, stretching out the arms. (Plate 83.) Gently rock the trunk and legs forwards and backwards. Breathe normally.

7. Rest on the floor and uncross the legs.

8. Recross the legs the other way and again balance on the hands.

9. Balance as long as possible.

Effects

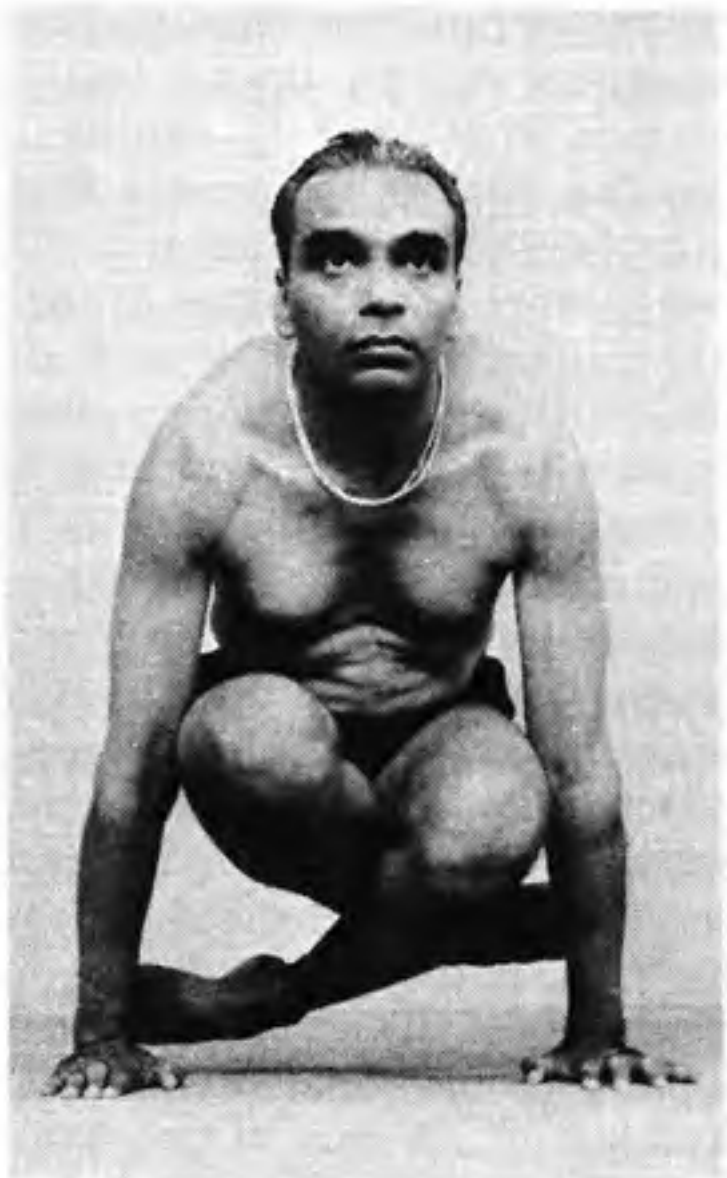
This āsana strengthens the wrists and hands, the muscles of the back and the abdominal organs. It makes the leg muscles elastic and the minor muscles of the arms will be developed and toned.

39. *Siddhāsana* One* (Plate 84)

Siddha means a semi-divine being supposed to be of great purity and holiness, and to possess supernatural faculties called siddhis. Siddha means also an inspired sage, seer or prophet.

'The Siddhas say that as among niyamas, the most important is not to harm anyone, and among the yamas a moderate diet, so is Siddhāsana among the āsanas.'

82



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'Of the 84 lacs of āsanas, one should always practise Siddhāsana. It purifies 72,000 nāḍīs.' (Nāḍīs are channels in the human body through which nervous energy passes.)

'The yogin practising contemplation upon Ātman and observing a moderate diet, if he practises Siddhāsana for twelve years, obtains the yoga siddhis.' (Ātman means the Self and the supreme Soul. Siddhīs are supernatural faculties.)

'When Siddhāsana is mastered, the Unmanī Avasthā (Samādhi) that gives delight follows without effort and naturally.'

The soul has three avasthās or conditions which are included in a fourth. They are waking, dreaming, sleeping and what is called Turīya. 'The first condition is that of wakefulness, where the self is conscious of the common world of gross objects. It enjoys gross things. Here the dependence of body is predominant. The second condition is that of dreaming, where the self enjoys subtle things, fashioning for itself a new world of forms from the material of its waking experience. The spirit is said to roam freely unfettered by the bonds of the body. The third condition is that of sound sleep, where we have neither dreams nor desires. It is called suṣupti. In it the soul is said to become temporarily one with Brahman and to enjoy bliss. In deep sleep we are lifted above

all desires and freed from the vexations of spirit.... The soul is divine in origin, though clogged with the flesh. In sleep it is said to be released from the shackles of the body and to regain its own nature.... But this (that is, the eternal dreamless sleep) is likely to be confused with sheer unconsciousness.... The highest is not this dreamless sleep, but another, a fourth state of the soul, a pure intuitional consciousness where there is no knowledge of objects internal or external. In deep sleep the spirit dwells in a region far above the changeful life of sense in absolute union with Brahman. The turīya condition brings out the positive aspect of the negative emphasised in the condition of deep sleep.' – Radhakrishnan in *Philosophy of the Upanishads*. This fourth condition has been thus described in the Māṇḍūkya Upanishad as follows: 'The fourth, say the wise, is not subjective experience, nor objective experience, nor experience intermediate between the two, nor is it a negative condition which is neither consciousness nor unconsciousness. It is not the knowledge of the senses, nor is it relative knowledge, nor yet inferential knowledge. Beyond the senses, beyond understanding, beyond all expression, is the fourth. It is pure unitary consciousness, wherein all awareness of the world and of multiplicity is completely obliterated. It is the supreme good. It is One without a second. It is the Self. Know it alone!'

'Rāja-Yoga, Samādhi, Unmanī, Manomanī, Immortality, Concentration, Śūnyāśūnya (void and yet non-void), Parama Pāda (the Supreme State), Amanaska (suspended operation of the mind), Advaita (non-duality), Nirālamba (without support), Niraṅjana (pure), Jīvanmukti (emancipated state), Sahajāvasthā (natural state) and Turīyā (literally the Fourth), all mean the same thing. As a grain of salt thrown into water unites and becomes one with it, a like union between the Mind and the Ātman is Samādhi. When Praṇa and Manas (mind) are annihilated (absorbed), the state of harmony then arising is called Samādhi.' – *Haṭha Yoga Pradīpikā*, chapter IV, verses 3 to 6.

There is no āsana like Siddha, no kumbhaka like Kevala, no mudrā like Khecharī, and no laya (absorption of the mind) like Nāda.

(Khecharī Mudrā, literally roaming through space, is described in the *Gheraṇḍa Saṁhitā* as follows in verses 25 to 28 of the third chapter: 'Cut the lower tendon of the tongue and move the tongue constantly; rub it with fresh butter, and draw it out (to lengthen it) with an iron instrument. By practising this always, the tongue becomes long and when it reaches the space between the eyebrows, then Khecharī is accomplished. Then (the tongue being lengthened) practise turning it up and back so as to touch the palate, till at length it reaches the holes of the nostrils opening into the mouth. Close those holes with the tongue (thus stopping inspiration), and gaze on the space between the eyebrows.

This is called Khecharī. By this practice there is neither fainting, nor hunger, nor thirst, nor laziness. There comes neither disease, nor decay, nor death. The body becomes divine.')

(Nāda is the inner mystical sound. Verses 79 to 101 of the fourth chapter describes it in great detail with a variety of similes. Yoga is defined as control over the aberrations of the mind. In order to control the mind it is necessary that it should first be absorbed in concentration of some object, then it is gradually withdrawn from that object and made to look within one's own self. This is where the yogi is asked to concentrate upon the inner mystical sounds. 'The mind is like a serpent, forgetting all its unsteadiness by hearing Nāda, it does not run away anywhere.' Gradually as Nāda becomes latent so does the mind along with it. 'The fire, catching the wood, is extinguished along with it (after burning it up); and so the mind also, working with Nāda, becomes latent along with it.')

Technique

1. Sit on the floor, with legs stretched straight in front. (Plate 77)

2. Bend the left leg at the knee. Hold the left foot with the hands, place the heel near the perineum and rest the sole of the left foot against the right thigh.

3. Now bend the right leg at the knee and place the right foot over the left ankle, keeping the right heel against the pubic bone.

4. Place the sole of the right foot between the thigh and the calf of the left leg.

5. Do not rest the body on the heels.

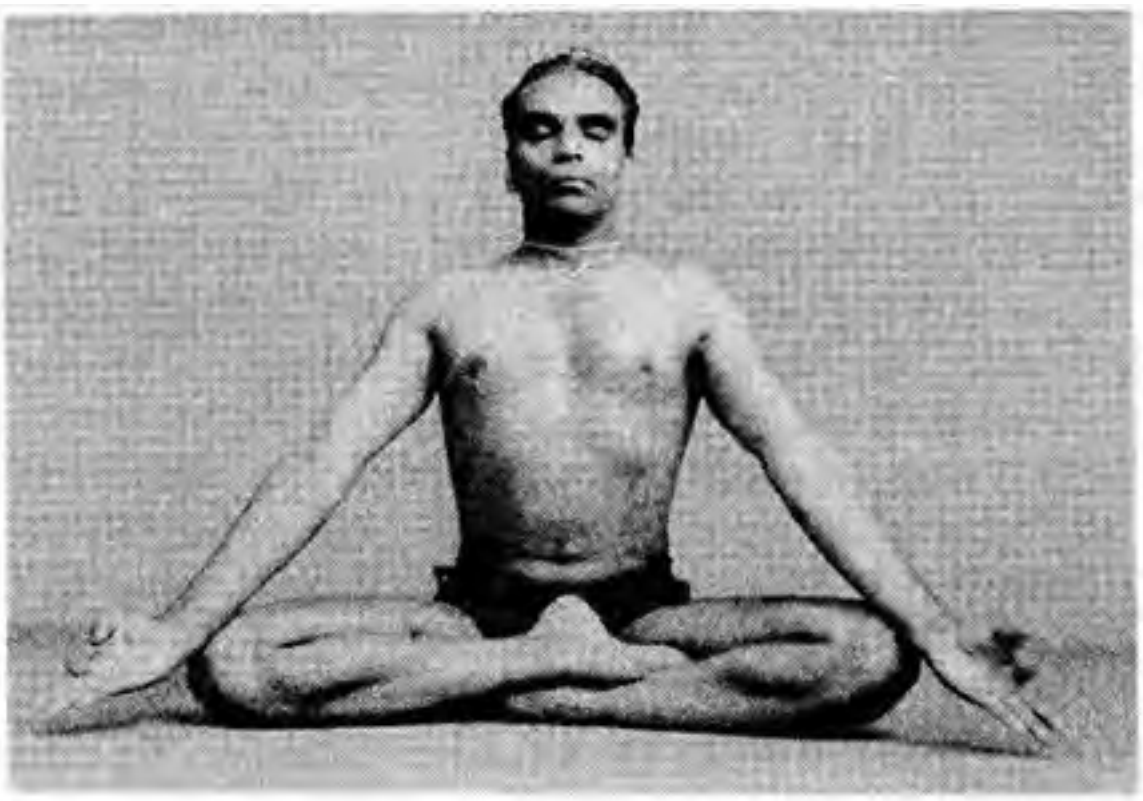
6. Stretch the arms in front and rest the back of the hands on the knees so that the palms face upwards. Join the thumbs and the forefingers and keep the other fingers extended. (Plate 84)

7. Hold this position as long as you can, keeping the back, neck and head erect and the vision indrawn as if gazing at the tip of the nose.

8. Release the feet and relax for some time. Then repeat the pose for the same length of time, now placing the right heel near the perineum first and then the left foot over the right ankle as described above.

Effects

This posture keeps the pubic region healthy. Like Padmāsana (Plate 104), it is one of the most relaxing of āsanas. The body being in a sitting posture is at rest, while the position of the crossed legs and erect back



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keeps the mind attentive and alert. This āsana is also recommended for the practice of prāṇāyāma and for meditation.

From the purely physical point of view, the āsana is good for curing stiffness in the knees and ankles. In it the blood circulates in the lumbar region and the abdomen, and this tones the lower region of the spine and the abdominal organs.

40. *Vīrāsana* One* (Plate 89)

Vīra means a hero, warrior, champion. This sitting posture is done by keeping the knees together, spreading the feet and resting them by the side of the hips.

The pose is good for meditation and prāṇāyāma.

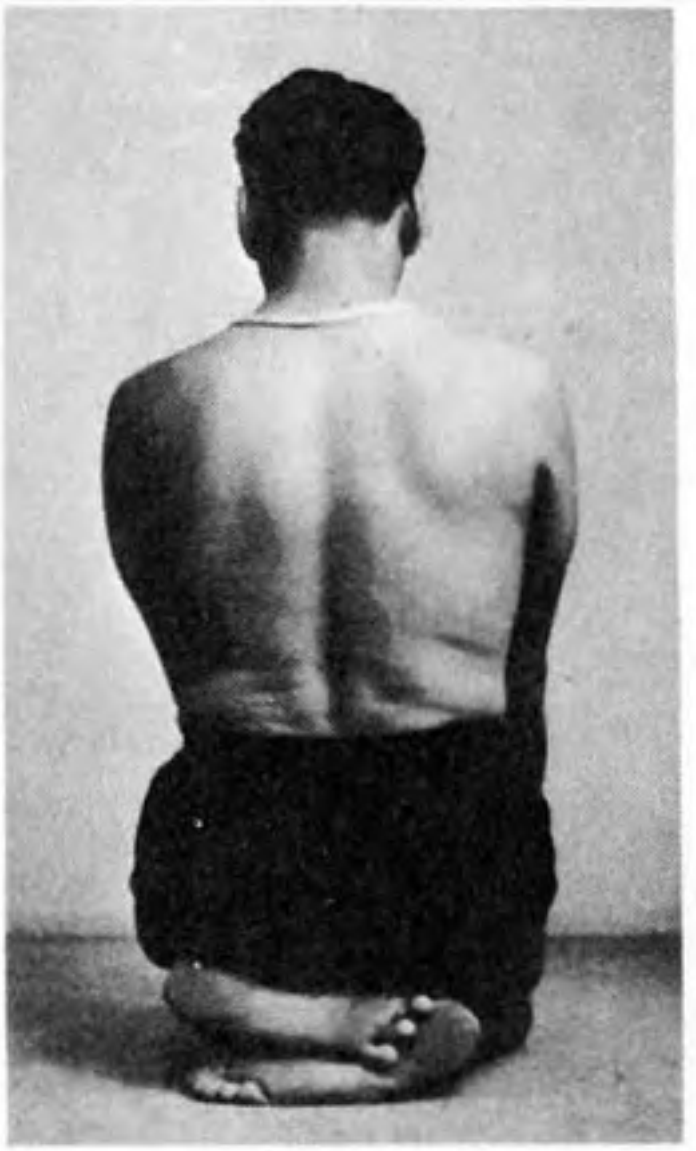
Technique

1. Kneel on the floor. Keep the knees together and spread the feet about 18 inches apart.

2. Rest the buttocks on the floor, but not the body on the feet. The feet are kept by the side of the thighs, the inner side of each calf touching the outer side of its respective thigh. Keep the toes pointing back and touching the floor. Keep the wrists on the knees, palms facing up, and join the tips of the thumbs and forefingers. Keep the other fingers extended. Stretch the back erect. (Back view: Plate 88. Front view: Plate 89)

3. Stay in this position as long as you can, with deep breathing.

4. Then rest the palms on the knees for a while. (Side view: Plate 90)



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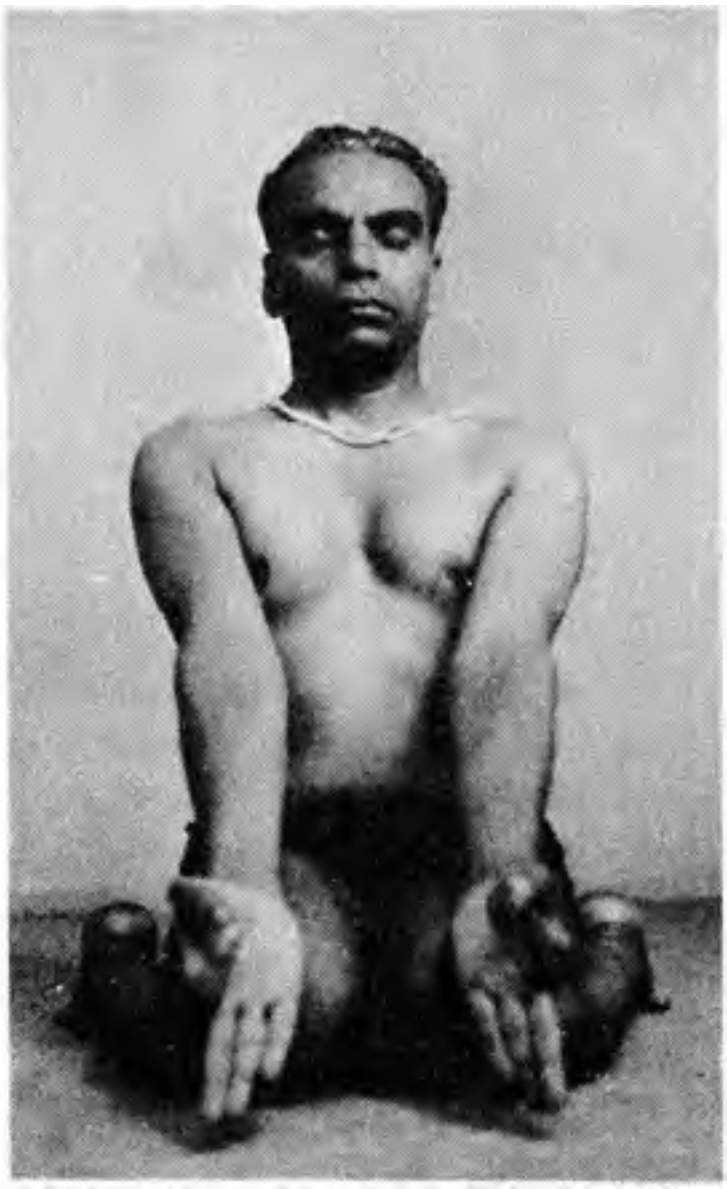
5. Now interlock the fingers and stretch the arm straight over the head, palms up. (Plate 91)

6. Stay in this position for a minute with deep breathing.

7. Exhale, release the fingerlock, place the palms on the soles, bend forward and rest the chin on the knees. (Plate 92)



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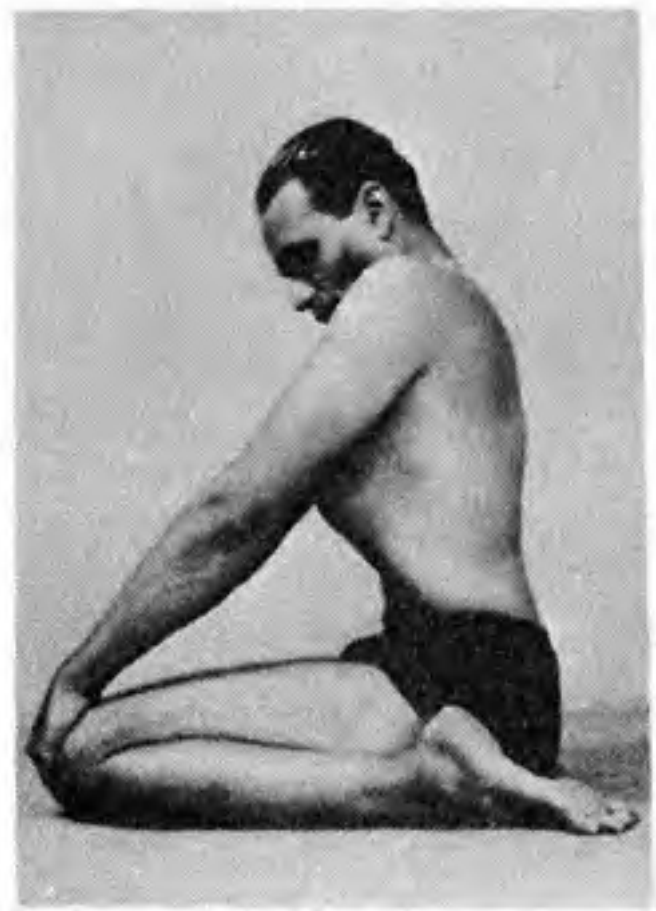

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8. Stay in this position for a minute with normal breathing.

9. Inhale, raise the trunk up, bring the feet forward and relax.

10. If you find it difficult to perform the pose as described above, try placing the feet one above the other and rest the buttocks on them. (Plate 85.) Gradually move the toes further apart, separate the feet (Plates 86 and 87) and bring them to rest outside the thighs. Then, in time the buttocks will rest properly on the floor and the body will not rest on the feet.

Effects

The pose cures rheumatic pains in the knees and gout, and is also good for flat feet. Due to the stretching of the ankles and the feet, proper arches will be formed. This, however, takes a long time and requires

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daily practice of the pose for a few minutes for several months. Those suffering from pain in the heels or growth of calcaneal spurs there will get relief and the spurs will gradually disappear.

The pose can even be done immediately after food and will relieve heaviness in the stomach.

41. *Supta Vīrāsana* Two* (Plate 96)

Supta means lying down. In this āsana one reclines back on the floor and stretches the arms behind the head.

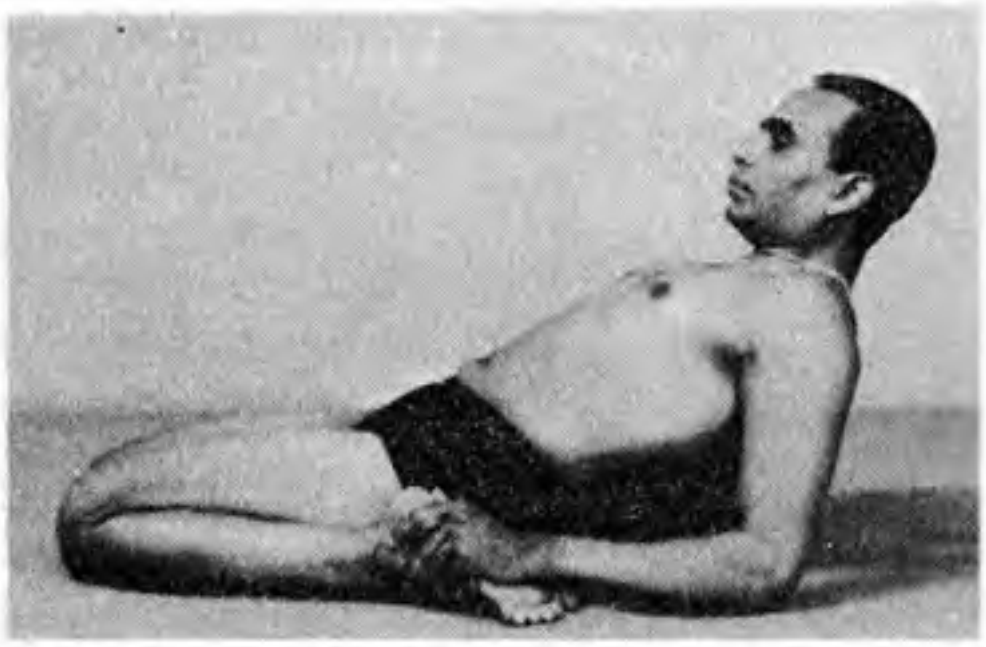
Technique

1. Sit in Vīrāsana. (Plate 89)

2. Exhale, recline the trunk back and rest the elbows one by one on the floor. (Plate 93)

3. Relieve the pressure on the elbows one after the other by extending the arms.

4. At first rest the crown of the head on the floor. (Plate 94.) Gradually rest the back of the head and then the back on the floor. (Plate 95.) Take thearms overthe head and stretch them out straight. (Plate 96.) Hold this pose as long as you can while breathing deeply. Then place the arms beside the trunk, press the elbows to the floor and sit up again with an exhalation.



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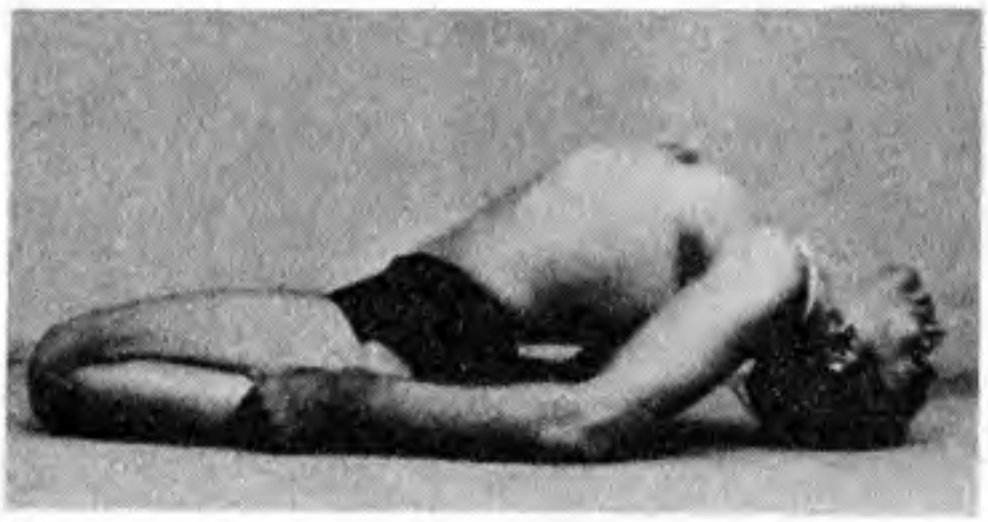

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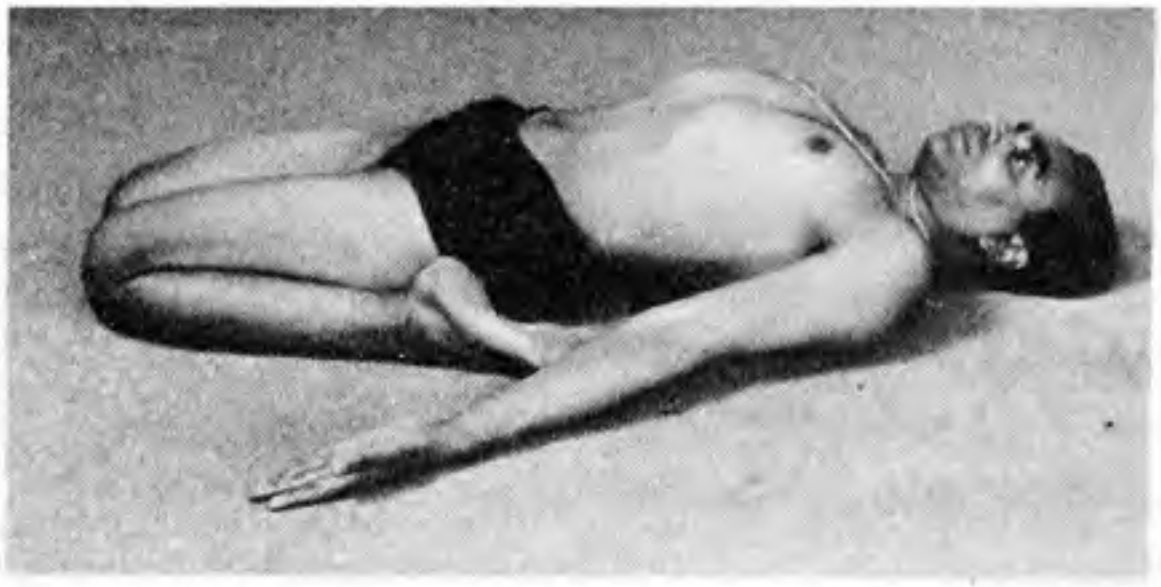

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5. The hands may be stretched over the head or placed beside the thighs. When they are stretched over the head, do not raise the shoulder-blades from the floor.

6. Beginners may keep the knees apart.

Effects

This āsana stretches the abdominal organs and the pelvic region. People whose legs ache will get relief from holding this pose for 10 to 15 minutes and it is recommended to athletes and all who have to walk or stand about for long hours. It can be done after meals and if before retiring at night the legs feel rested next morning. Several of my pupils who were cadets at the National Defence Academy after long route marches found great relief by combining this āsana with Sarvāngāsana I. (Plate 223)

42. *Paryankāsana* Two* (Plate 97)

Paryanka means a bed, couch or sofa. This āsana is a continuation of Supta Vīrāsana. (Plate 96.) In it the body resembles a couch, hence the name.

Technique

1. Sit in Vīrāsana. (Plate 89)

2. Exhale and recline on the back. (Plate 93.) Lift the neck and the chest and arching the back up rest only the crown of the head on the floor. (Plate 94.) No part of the trunk should be on the floor.

3. Bend the arms at the elbows. Hold with the right hand the left upper arm near the elbow and with the left hand the right upper arm near the elbow. Rest the folded arms on the floor behind the head. (Plate 97)

4. Stay in the pose for a minute with even breathing.

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5. Inhale, rest the trunk and neck on the floor, release the hands and sit up in Vīrāsana. (Plate 89)

6. Then straighten the legs one by one, lie flat on the back and relax.

Effects

As in Matsyāsana (Plate 113) and Paryankāsana the dorsal region is fully extended so that the lungs are well expanded. The neck muscles are stretched and the thyroids and parathyroids are stimulated so that they function properly. Those who cannot perform Matsyāsana will derive the same benefit from this exercise.

Whereas Vīrāsana (Plate 89) and Supta Vīrāsana (Plate 96) can be done at any time, even immediately after taking food, Paryankāsana cannot be done immediately after a meal.

43. *Bhekāsana* (also called Maṇḍūkāsana) Four* (Plate 100)

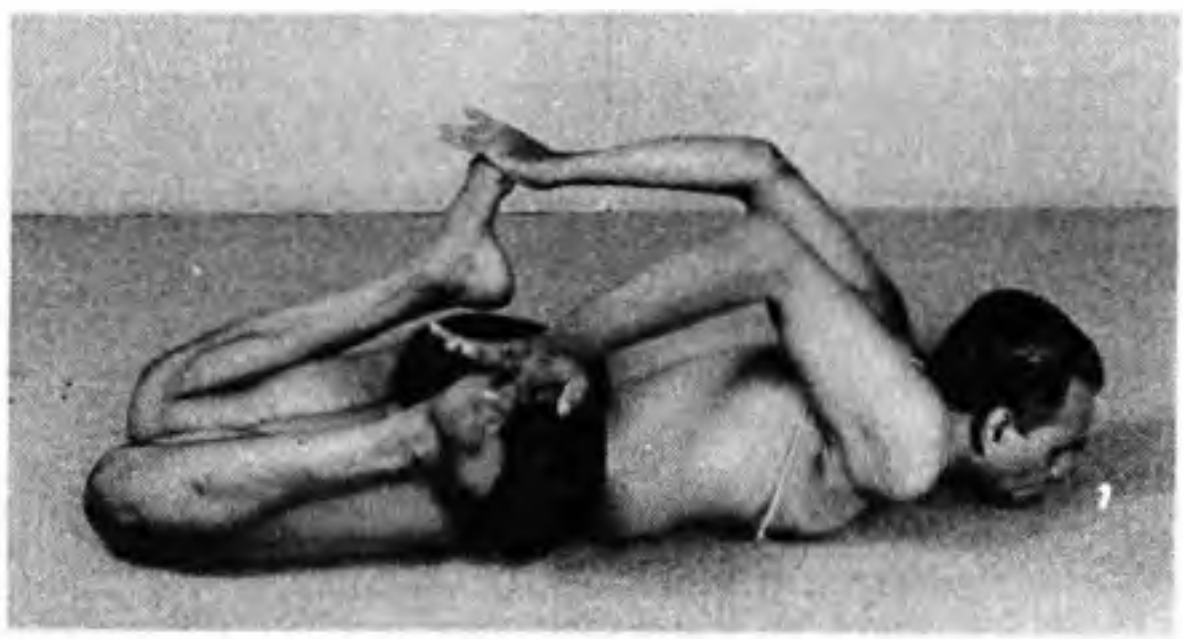
Bheka means a frog. The action in this āsana resembles that of a frog, hence the name.

Technique

1. Lie full length on the floor on the stomach, face downwards. Stretch the arms back.

2. Exhale, bend the knees and move the heels towards the hips. Hold the sole of the right foot with the right hand and the sole of the left foot with the left hand. (Plate 98.) Take two breaths. Exhale, lift the head and trunk from the floor and look up.

3. Now turn the hands so that the palms touch the upper part of the feet and the toes and fingers point to the head. (Plate 99.) Push the



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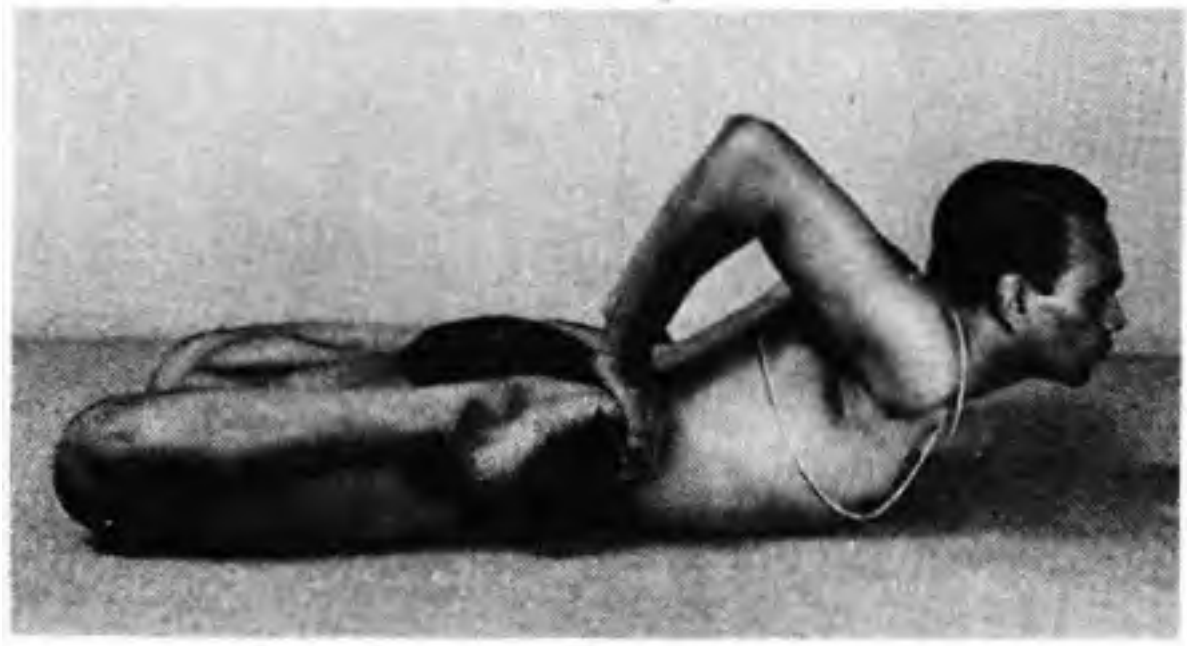
hands further down and bring the toes and heels closer to the ground. Keep the arms from the wrists to the elbows perpendicular. (Plate 100.) When the knees and ankles become flexible, the heels can be made to touch the floor.



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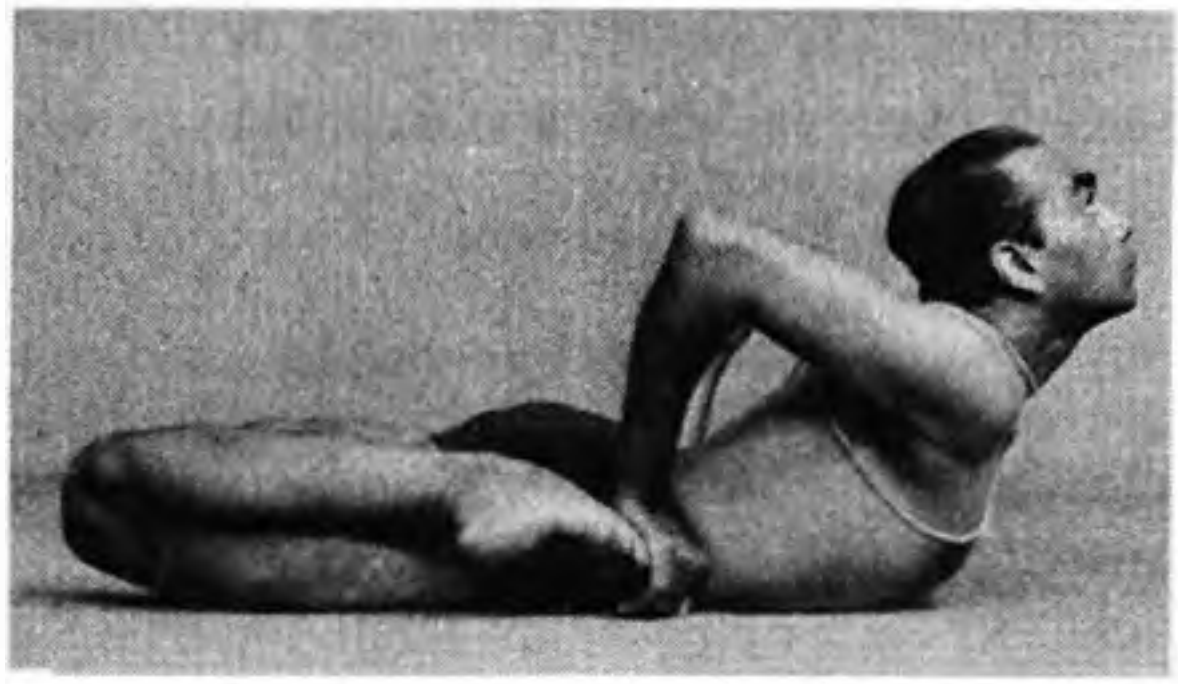

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4. Remain in the pose from 15 to 30 seconds, but do not hold the breath. Exhale, release the palms from the feet, stretch the legs and relax.

Effects

The abdominal organs benefit from the exercise as they are pressed against the floor. The knees become firmer and the pose relieves pain in the knee joints due to rheumatism and gout. It also gives relief when there is any internal derangement of the knee joints. The pressure of the hands on the feet creates a proper arch and so cures flat feet. It helps sprained ankles and strengthens them. The pose also relieves pain in the heels. By continued practice of this āsana, the heels become

softer. Persons suffering from calcaneal spurs in the heels benefit from it as well as from Vīrāsana. (Plate 89)

44. *Baddha Koṇāsana* Three* (Plate 102)

Baddha means caught, restrained. Koṇa means an angle. In this posture, sit on the floor, bring the heels near the perineum, catch the feet and widen the thighs until the knees touch the floor on either side. This is how Indian cobblers sit.

Technique

1. Sit on the floor with the legs stretched straight in front. (Plate 77)

2. Bend the knees and bring the feet closer to the trunk.

3. Bring the soles and heels of the feet together and catching the feet near the toes, bring the heels near the perineum. The outer sides of both feet should rest on the floor, and the back of the heels should touch the perineum.

4. Widen the thighs and lower the knees until they touch the floor.

5. Interlock the fingers of the hands, grip the feet firmly, stretch the spine erect and gaze straight ahead or at the tip of the nose. (Plate 101.) Hold the pose as long as you can.

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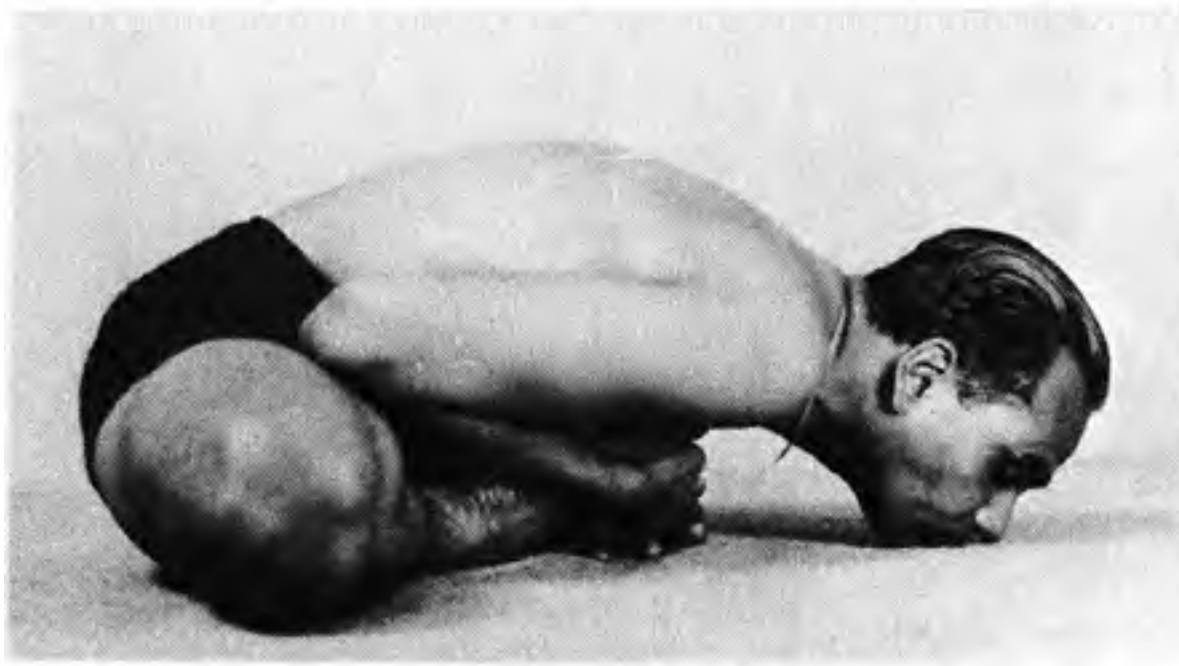
6. Place the elbows on the thighs and press them down. Exhale, bend forward, rest the head, then the nose and lastly the chin on the floor. (Plate 102.) Hold this position from half a minute to a minute with normal breathing.



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7. Inhale, raise the trunk from the floor and come back to position 5. (Plate 101)

8. Then release the feet, straighten the legs and relax.

Effects

The pose is specially recommended for those suffering from urinary disorders. The pelvis, the abdomen and the back get a plentiful supply of blood and are stimulated. It keeps the kidneys, the prostate and the urinary bladder healthy. It is well known that diseases of the urinary tract are rarely found among the Indian cobblers and the reason for that is that they sit all day in this pose.

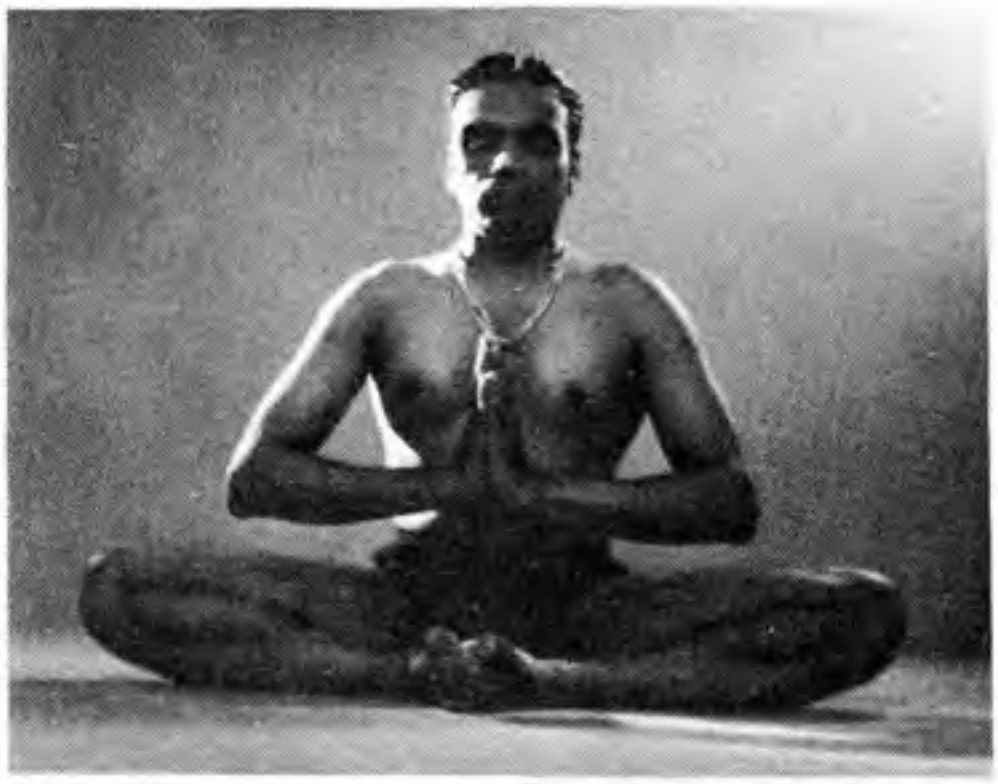
It relieves sciatic pain and prevents hernia. If practised regularly, it relieves pain and heaviness in the testicles.

The pose is a blessing to women. Coupled with Sarvāngāsana I (Plate 223) and its cycle (Plates 235 to 271) it checks irregular menstrual periods and helps the ovaries to function properly. It is found that pregnant women who sit daily in this pose for a few minutes will have much less pain during delivery and will be free from varicose veins. (It is recommended for pregnant women in Dr Grantly Dick Reed's book *Childbirth Without Fear*.)

Along with Padmāsana (Plate 104) and Vīrāsana (Plate 89) this āsana is recommended for Prāṇāyāma practice and for meditation. When sitting in meditation in this pose the palms should be folded in front of the chest (Plate 103), but to do this with the back erect requires practice. This āsana can be done without fear even after meals as long as the head is not rested on the floor.

45. *Padmāsana* Four* (Plate 104)

Padma means a lotus. This is the lotus posture, one of the most



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important and useful āsanas. It is the posture for meditation and the Buddha is often depicted in it.

Verse 48 of the first chapter of the *Haṭha Yoga Pradīpikā* describes the posture and the practice of breath control while seated in it thus:

'Assuming Padmāsana and having placed the palms one upon another, fix the chin firmly upon the breast and contemplating upon Brahman, frequently contract the anus and raise the apāna up; by similar contraction of the throat force the prāna down. By this he obtains unequalled knowledge through the favour of Kuṇḍalinī (which is roused by this process).'

Kuṇḍalinī is the Divine Cosmic Energy in bodies. It is symbolised by a coiled and sleeping serpent in the lowest bodily centre at the base of the spinal column. This latent energy has to be awakened and made to go up the spine to the brain through Suṣumnā Nāḍi, a channel through which nervous energy passes, and through the six chakrās, the subtle centres in the body, the fly-wheels in the nervous system of the human machine. The awakening of Kuṇḍalinī is discussed in detail in Arthur Avalon's (Sir John Woodroffe's) book entitled *The Serpent Power*.

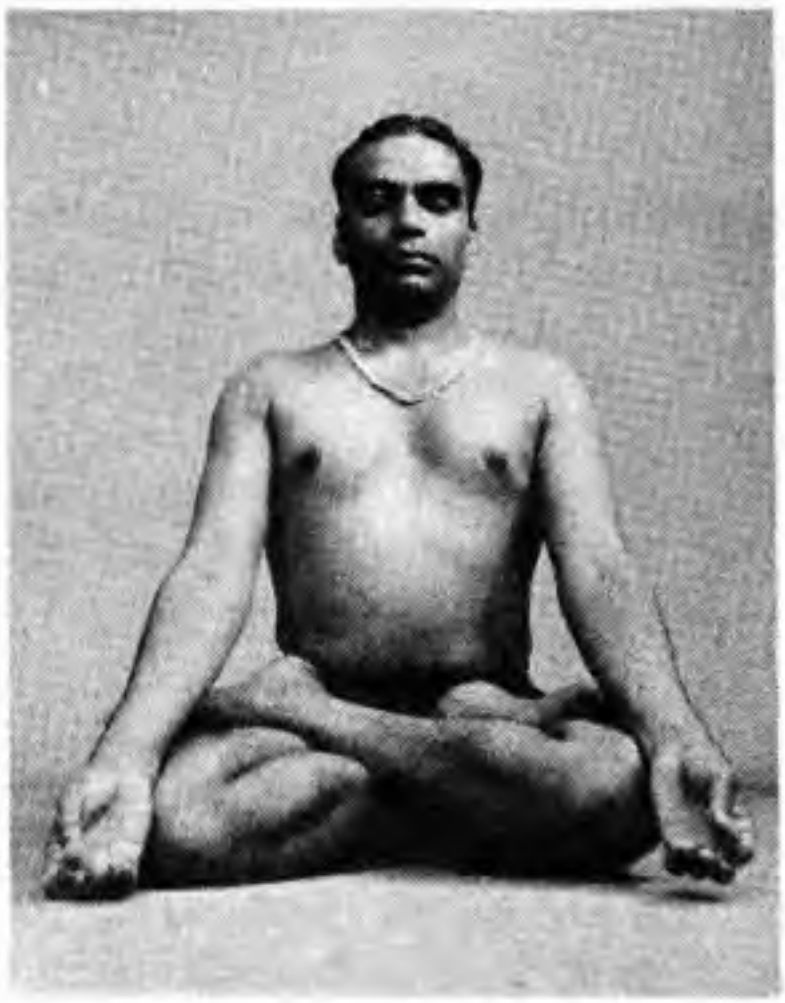
This is one of the basic postures and is often used in the variations of Śīrṣāsana and Sarvāngāsana.

Technique

1. Sit on the floor with the legs straight. (Plate 77)

2. Bend the right leg at the knee, hold the right foot with the hands and place it at the root of the left thigh so that the right heel is near the navel.

3. Now bend the left leg, and holding the left foot with the hands place it over the right at the root, the heel being near the navel. The soles of the feet should be turned up. This is the basic Padmāsana pose. (Plate 104)



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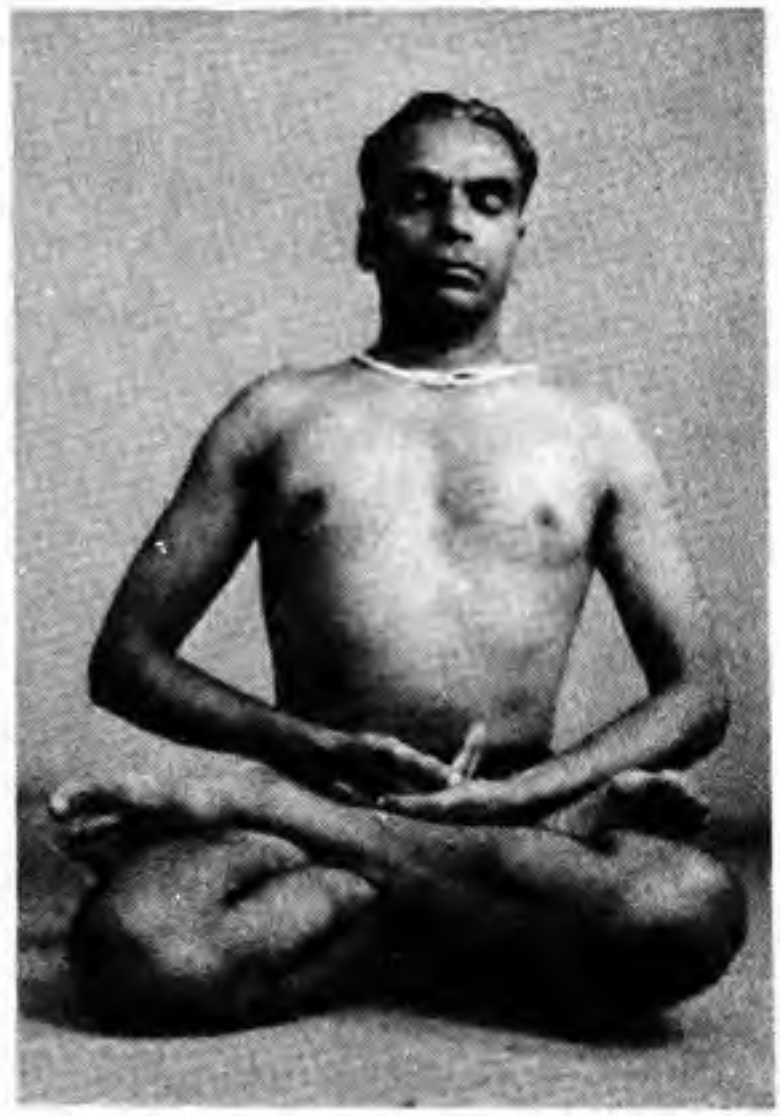

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4. People not used to sitting on the floor seldom have flexible knees. At the start they will feel excruciating pain around the knees. By perseverance and continued practice the pain will gradually subside and they can then stay in the pose comfortably for a long time.

5. From the base to the neck the spine should remain erect. The arms may be stretched out, the right hand being placed on the right knee and the left hand on the left knee. The forefingers and the thumbs are bent and touch each other. Another way of placing the hands is in the middle where the feet cross each other with one palm upon the other. (Plate 105)

6. Change the leg position by placing the left foot over the right thigh and the right foot over the left thigh. This will develop the legs evenly.

Effects

After the initial knee pains have been overcome, Padmāsana is one of the most relaxing poses. The body being in a sitting posture, it is at

rest without being sloppy. The position of the crossed legs and the erect back keeps the mind attentive and alert. Hence it is one of the āsanas recommended for practising prāṇāyāma (breath control).

On the purely physical level, the pose is good for curing stiffness in the knees and ankles. Since the blood is made to circulate in the lumbar region and the abdomen, the spine and the abdominal organs are toned.

46. *Ṣanmukhī Mudrā* Four* (Plate 106)

Ṣan means six and mukha means the mouth. Ṣanmukha is the name of the six-headed god of war, also known as Kārtikeya. Mudrā means a seal or closing up.

The posture is also called Parāngmukhī Mudrā (facing inwards), Sāmbhavī Mudrā (Sambhu is the name of Siva, father of Kārtikeya. Hence, Śāmbhava is the progeny of Śiva), also as Yoni Mudrā. Yoni means the womb, the source. The mudrā is so called because the aspirant looks within himself to find the very source of his being.

Technique

1. Sit in Padmāsana. (Plate 104.) Keep the spine erect and the head level.

2. Raise the hands to the face. Lift the elbows to the level of the shoulders, place the thumbs on the ear-holes so as to cut off external sounds. If the thumbs in the ear-hole cause pain, push the tragus (the small prominence at the entrance of the external ear) over the ear-holes and press it with the thumbs.

3. Close the eyelids, but turn the eyes up. Place the index and middle fingers on the closed lids so that the first two phalanges only press the entire eyeball. Do not, however, press the cornea. Pull the eyelids down with the middle finger. Push the upper part of the eyelids below the eyebrow upwards with the index fingers. Gently press the eyes at both the corners.

4. Equal pressure should be maintained on the ears and the eyes.

5. With the tips of the ring fingers press both nostrils equally. The nasal passages are thus narrowed for slow, deep, steady, rhythmic and subtle breathing.

6. The little fingers are placed on the upper lip where they can check the rhythmic flow of the breath.

7. Stay in this position as long as you can, drawing the vision inwards. (Plate 106)

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Effects

The senses are turned inwards and the rhythmic breathing calms the mind's wandering. This brings a feeling of inner peace and one hears the divine voice of his self within, 'Look here! look within! not outside, for the source of all peace is within yourself.' The posture thus prepares the practitioner for the fifth stage of yoga, Pratyāhāra, where he attempts to free himself from the thraldom of the senses and to prevent them from running after their desires.

47. *Parvatāsana* Four* (Plate 107)

Parvata means a mountain. In this variation of Padmāsana the arms are stretched over the head with the fingers interlocked.

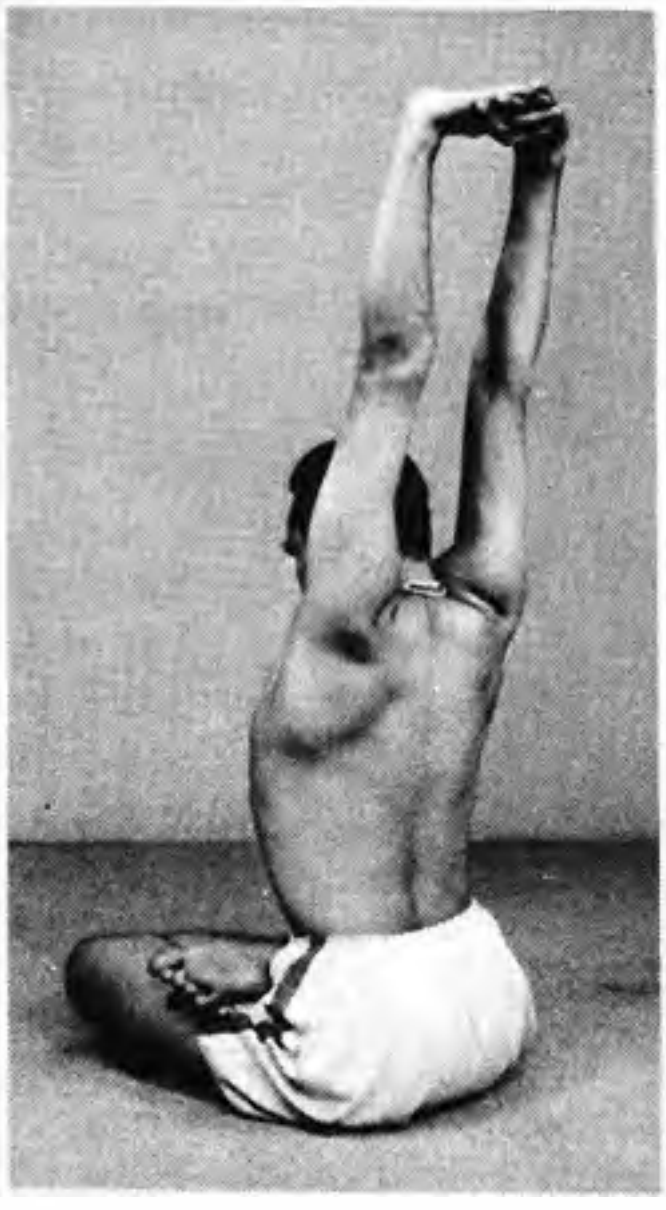
Technique

1. Sit in Padmāsana. (Plate 104)

2. Interlock the fingers, and stretch the hands vertically up over the head. Keep the head bent forward with the chin on the breast bone.

3. Stretch the arms up from the latissimus dorsi (near the floating ribs at the back) and the shoulder-blades. The palms should face upwards. (Plate 107)

4. Hold the pose for a minute or two with deep and even breathing. Change the crossing of the legs and the interlock of the fingers and repeat the pose, keeping the back erect.



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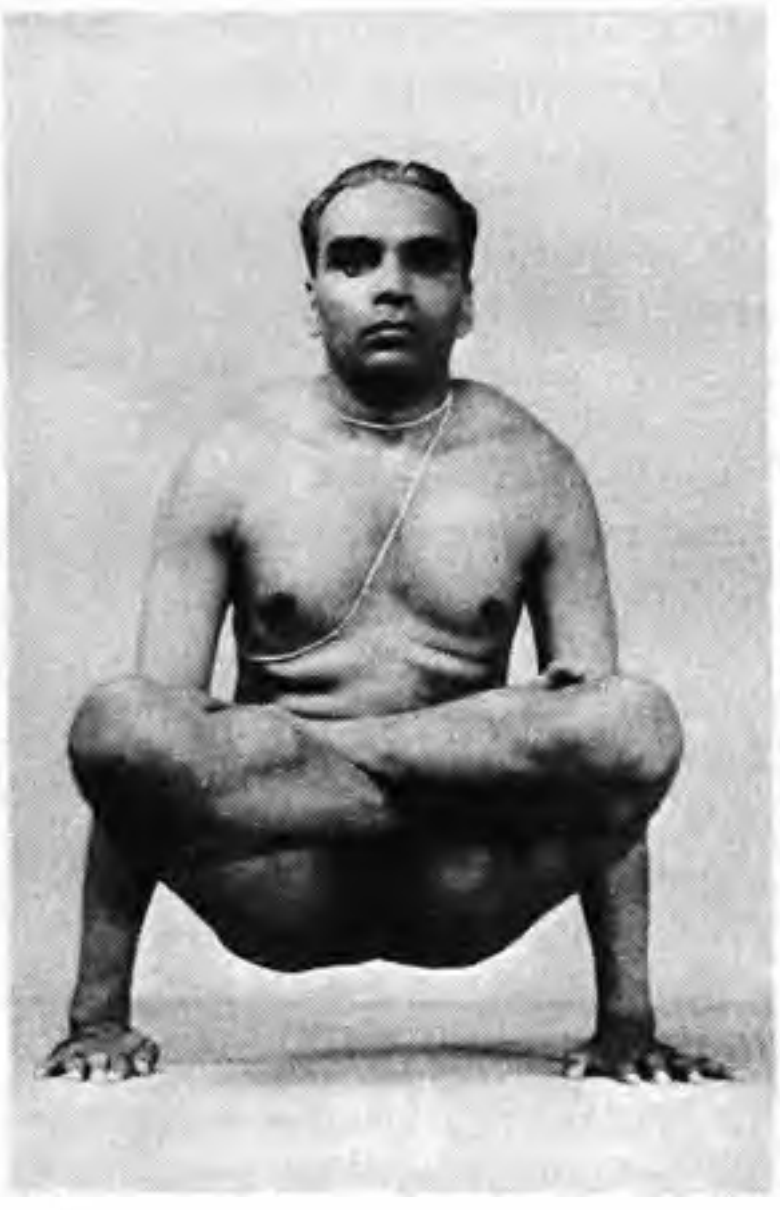

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Effects

The āsana relieves rheumatic pains and stiffness in the shoulders. It helps free movement and to develop the chest. The abdominal organs are drawn in and the chest expands fully.

48. *Tolāsana* Four* (Plate 108)

Tola means a pair of scales. This pose resembles one pan of the scales, hence the name.

Technique

1. Sit in Padmāsana. (Plate 104)

2. Rest the palms on the floor beside the hips. Exhale, raise the trunk and balance only on the hands, stretching out the arms (Plate 108)

3. Rest on the floor, uncross the legs, recross them the other way and again balance on the hands.

4. Balance as long as possible.

Effects

This āsana strengthens the wrists, hands and abdominal walls.

49. *Siṃhāsana I* One* (Plate 109)

Siṃha means a lion. This āsana is dedicated to Narasiṃha (Nara = man: Siṃha = lion), the Man-Lion Incarnation of Viṣṇu. It is related that the demon king Hiraṇya Kaśipu had obtained a boon from Brahmā ensuring that he would not be killed by day or night, in or out of his house, on land or water, by God, man or beast. The demon king then persecuted both gods and men, including his pious son Prahlāda, who was an ardent devotee of Viṣṇu. Prahlāda was subjected to a variety of cruelties and ordeals, but by the favour of Viṣṇu he remained unscathed and preached with greater faith and vigour the omnipresence, omniscience and omnipotence of Lord Viṣṇu. In a fit of exasperation Hiraṇya Kaśipu asked his son why, if Viṣṇu was omnipresent, he could not see Him in the pillar of his palace hall. The demon king contemptuously kicked the pillar to convince his son of the absurdity of his faith. When Prahlāda called upon Viṣṇu for help, the Lord burst from the pillar in a fearful form, the top half being a lion and the lower half a man. It was then dusk, when it was neither day nor night. The Lord lifted Hiraṇya Kaśipu in the air, seated Himself on the threshold, placed the demon king on His thigh and tore him to pieces. Narasiṃha Avatār is often depicted in Indian sculpture and one such powerful group can be seen in the Ellora caves.

There are two variations of this āsana. The first, described in the technique given below, follows the texts, whereas the second variation, which is more strenuous to perform but which has greater beneficial effects, is described later as Siṃhāsana II. (Plate 110)

Technique

1. Sit on the floor, with the legs stretched straight in front. (Plate 77)

2. Raise the seat, bend the right knee and place the right foot under the left buttock. Then bend the left knee and place the left foot under the right buttock. The left ankle should be kept under the right one.

3. Sit on the heels with the toes pointing back.

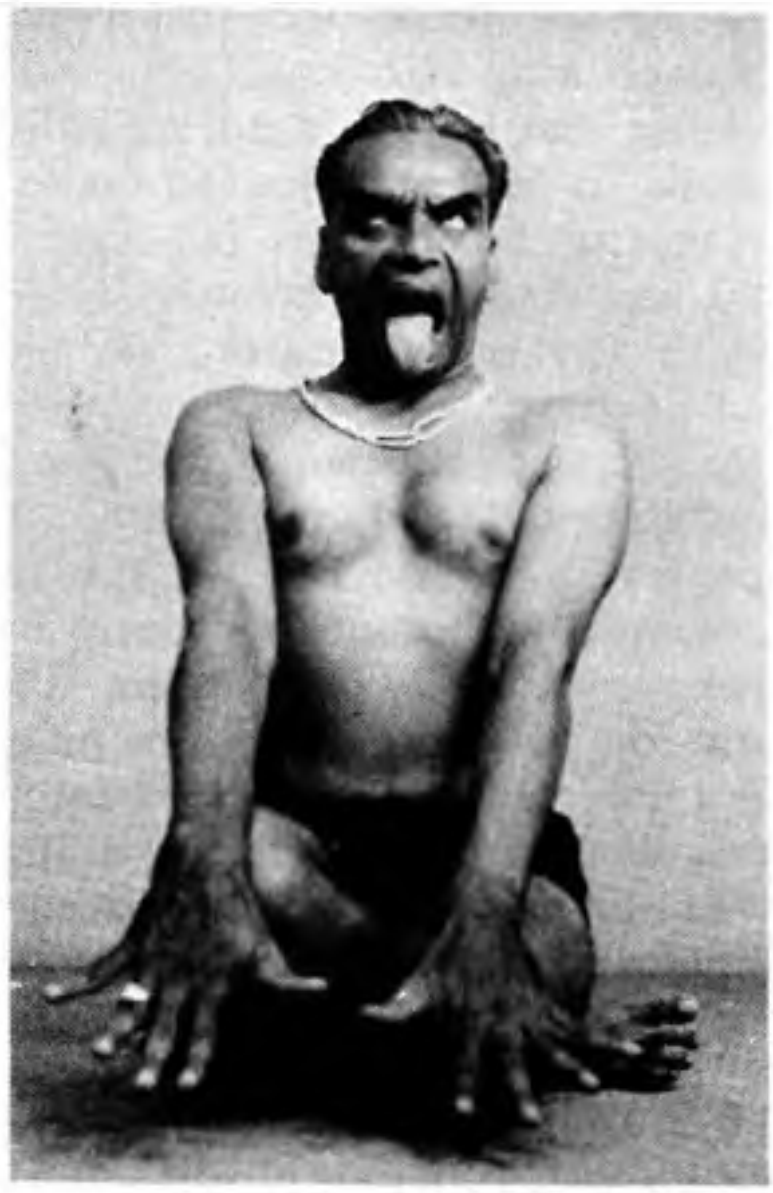
4. Then bring the weight of the body on the thighs and knees.

5. Stretch the trunk forward and keep the back erect.

6. Place the right palm on the right knee and the left palm on the

left knee. Stretch the arms straight and keep them stiff. Spread the fingers and press them against the knees.

7. Open the jaws wide and stretch the tongue out towards the chin as far as you can. (Plate 109)



109

8. Gaze at the centre of the eyebrows or at the tip of the nose. Stay in the pose for about 30 seconds, breathing through the mouth.

9. Withdraw the tongue into the mouth, lift the hands from the knees and straighten the legs. Then repeat the pose, first placing the left foot under the right buttock and then the right foot under the left buttock.

10. Stay for an equal length of time on both sides.

Effects

The pose cures foul breath and cleans the tongue. After continued practice speech becomes clearer so this āsana is recommended to stammerers. It also helps one to master the three Bandhas (see Part III).

50. *Siṃhāsana II* Six* (Plate 110)

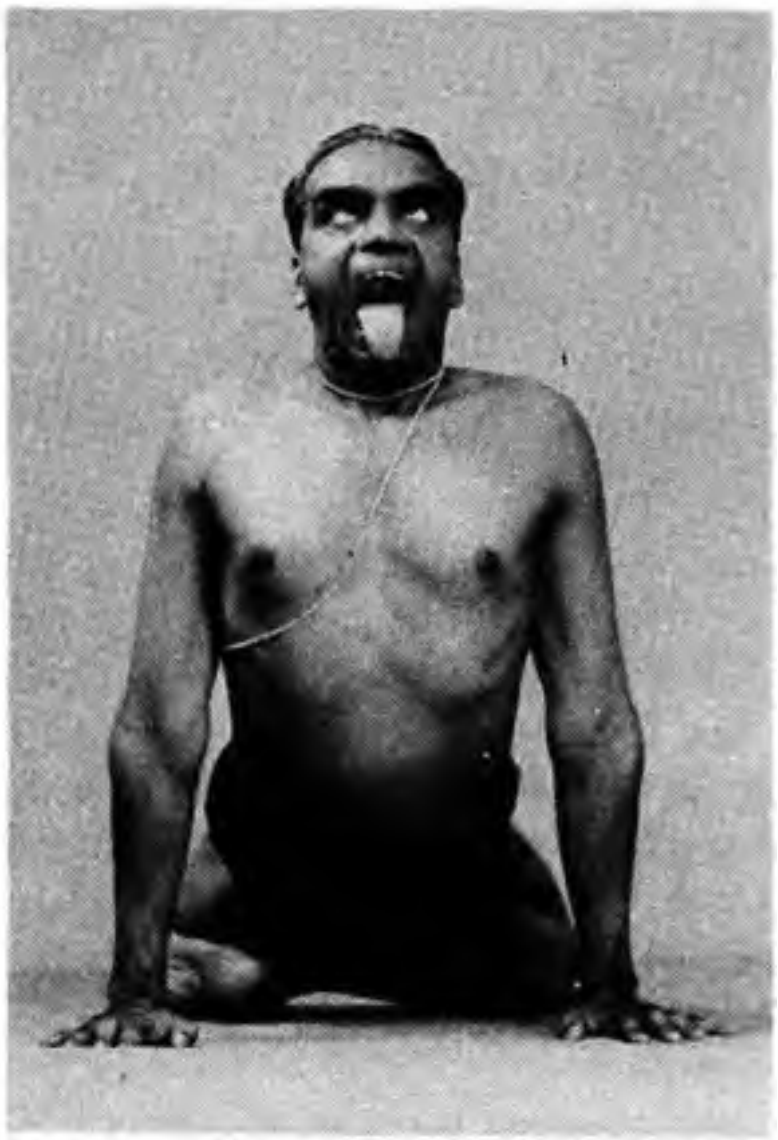
Technique

1. Sit in Padmāsana. (Plate 104)

2. Extend the arms in front and place the palms on the floor, fingers pointing forward.

3. Stand on the knees and then push the pelvic region to the floor.

4. Stretch the back by contracting the buttocks, keeping the arms fully stretched. The weight of the body rests on the palms and knees only. Open the mouth and stretch the tongue out towards the chin as far as you can. (Front view: Plate 110. Side view: Plate 111)



110

5. Gaze at the centre of the eyebrows or at the tip of the nose and keep the pose for about 30 seconds. Breathe through the mouth.

6. Sit in Padmāsana (Plate 104) and lift the hands off the floor. Then interchange the position of the legs, perform Padmāsana again and repeat the pose for the same length of time.

Effects

The pose exercises the liver and controls the flow of bile. It cures

111

foul breath, the tongue becomes cleaner and words are enunciated more clearly. It is, therefore, recommended to persons who stammer.

The āsana relieves a painful coccyx and helps to set it when displaced.

51. *Matsyāsana* Five* (Plate 113)

Matsya means a fish. This posture is dedicated to Matsya the Fish Incarnation of Viṣṇu, the source and maintainer of the universe and of all things. It is related that once upon a time the whole earth had become corrupt and was about to be overwhelmed by a universal flood. Viṣṇu took the form of a fish and warned Manu (the Hindu Adam) of the impending disaster. The fish then carried Manu, his family and the seven great sages in a ship, fastened to a horn on his head. It also saved the Vedas from the flood.

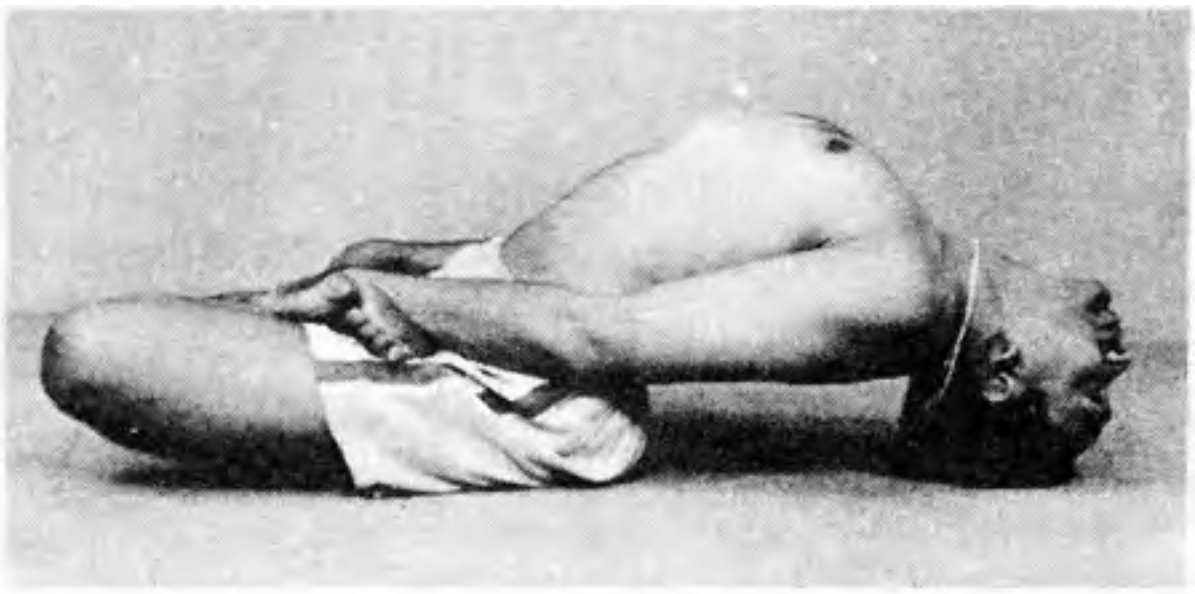
Technique

1. Sit in Padmāsana. (Plate 104)

2. Lie flat on the back with the legs on the floor.

3. Exhale, arch the back by lifting the neck and the chest, take the head back and rest the crown on the floor. Drag the head further back by holding the crossed legs with the hands and increase the back arch. (Plate 112)

4. Now take the hands from the legs, bend the arms, hold the elbows with the hands and rest the forearms on the floor behind the head (Plate 113)



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113

5. Stay in this position from 30 to 60 seconds while breathing deeply.

6. Rest the back of the head on the floor, lie flat on the back, inhale and then come up to Padmāsana, release the legs and relax.

7. Recross the legs the other way and repeat the pose for the same length of time.

114

8. If positions 3 and 4 are difficult to achieve, lie flat on the back with the arms stretched straight over the head. (Plate 114)

Effects

The dorsal region is fully extended in this posture and the chest is well expanded. Breathing becomes fuller. The thyroids benefit from the exercise due to the stretching of the neck. The pelvic joints become elastic. The āsana relieves inflamed and bleeding piles.

52. *Kukkuṭāsana* Six* (Plate 115)

Kukkuṭa means a cock, which this posture resembles.

Technique

1. Sit in Padmāsana. (Plate 104)

2. Insert the hands in the space between the thigh and calf near the knees. Start with the fingers and gradually push the hands down up to the elbows.

3. Exhale, raise the body off the floor and balance on the palms keeping the thumbs together. Maintain the balance as long as you can with normal breathing. (Plate 115)

115

4. Rest on the floor, release the hands, change the crossing of the legs and repeat the pose.

Effects

This posture strengthens the wrists and abdominal walls.

53. *Garbha Piṇḍāsana* Seven* (Plate 116)

Garbha Piṇḍa means an embryo in the womb (garbha = womb; piṇḍa = embryo). In this variation of Padmāsana, insert the hands and arms in the space between the calves and thighs until the elbows are bent. The arms are then bent up and the hands brought close to the ears. The pose then resembles that of a human foetus in the womb, the differences being that the embryo's head is down, while the legs are up and not folded in Padmāsana. The name of the posture indicates that the ancient sages knew about the growth of the human foetus in the mother's womb though the medical instruments at their disposal were limited.

Technique

1. Sit in Padmāsana. (Plate 104)

2. Insert the hands in the space between the thighs and calves, each on its own side.

3. Push the arms forwards till the elbows can be easily bent.

4. Then, with an exhalation, lift the thighs off the floor, balance the body on the coccyx (the tail bone) and catch the ears with the fingers. (Plate 116)

116

5. Remain in the pose for about 15 to 30 seconds with normal breathing. Lower the legs, release the arms from between the legs one by one, straighten the legs and relax.

6. Change the crossing of the legs and repeat the pose.

Effects

In this posture the abdominal organs are contracted completely and the blood is made to circulate well round the organs. This keeps them in trim.

54. *Gorakṣāsana* Ten* (Plate 117)

Gorakṣa means a cowherd. It is a difficult balancing pose and one feels elated even if one can only balance for a few seconds.

Technique

1. Perform Padmāsana (Plate 104), stretch the arms forward and place them on the floor.

2. Rest on the hands and raise the hips from the floor.

3. Stretch the trunk up vertically and stand with the top part of the knees on the floor.

4. Stretch the thighs and balance gradually by lifting the hands one by one from the floor.

5. When balance is secured, fold the hands in front of the chest and hold the position as long as you can. (Plate 117)

6. Place the hands on the floor, sit down and release the legs.

7. Change the leg position and repeat the pose for the same length of time.

Effects

In addition to the benefits of Padmāsana (Plate 104), one achieves a sense of balance. The coccyx (the tail bone) gets elasticity by the practice of this pose.

55. *Baddha Padmāsana* Six* (Plate 118)

Baddha means caught, restrained. In this position the hands are crossed at the back and the big toes are caught from behind. The body is caught between the crossed legs in front and the crossed hands behind, hence the name.

117

Technique

1. Sit in Paḍmāsana. (Plate 104)

2. Exhale, swing the left arm back from the shoulders and bring the hand near the right hip. Catch the left big toe, hold the position and inhale.

3. Similarly, with an exhalation, swing the right arm back from the shoulder, bring it near the left hip and catch the right big toe. (Front view: Plate 118. Back view: Plate 119)

4. If the toes are difficult to catch stretch the shoulders back, so that the shoulder-blades are brought near each other. A little practice in swinging the arms back with an exhalation will enable one to catch the big toes.

5. If the right foot is placed first over the left thigh and then the left foot over the right thigh, catch the left big toe first and then the right big toe. If, on the other hand, the left foot is placed over the right thigh first and then the right foot over the left thigh, catch the right big toe first and then the left big toe. Catch first the big toe of the foot which is uppermost.

118

119

6. Throw the head as far back as possible and take a few deep breaths.

7. Inhale deeply, and then with an exhalation bend the trunk forward from the hips and rest the head on the floor, without releasing the toes from the hand grip. Bending the head forward in Baddha Padmāsana (Plate 118) and touching it on the floor is called:

56. *Yoga Mudrāsana* Six* (Plate 120)

This āsana is especially useful in awakening Kuṇḍalinī.

8. Also move the head on to the right and left knees alternately with an exhalation. (Plates 121 and 122)

Effects

Crossing the hands behind the back expands the chest and increases the range of shoulder movements. Yoga Mudrāsana (Plate 120) intensifies the peristaltic activity and pushes down the accumulated waste matter in the colon and thereby relieves constipation and increases digestive power.

120

121

122

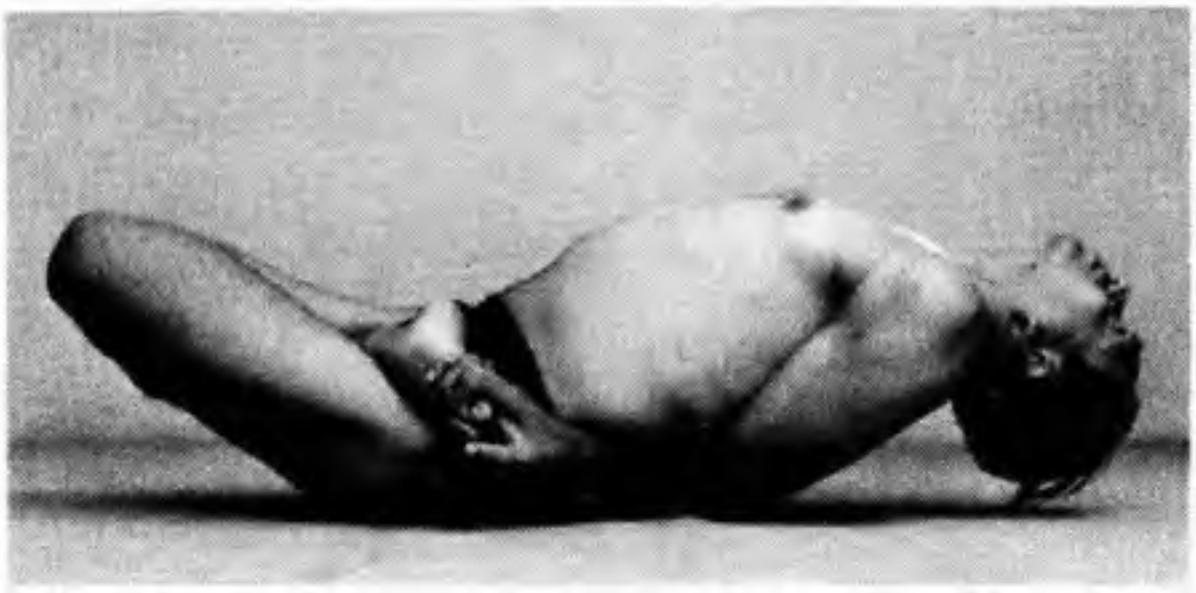
57. *Supta Vajrāsana* Twelve* (Plate 124)

Supta means lying down. Vajra means a thunderbolt, the weapon of Indra, king of the gods. This is a difficult āsana and requires great practice.

Technique

1. Sit in Padmāsana. (Plate 104.) Then perform Baddha Padmāsana. (Plate 118)

2. Exhale, raise the knees and thighs off the floor and recline back on the floor. (Plate 123.) Take two breaths.



123

3. Stretch the neck back to rest the crown of the head on the floor, and arch the chest and trunk up.

4. Without releasing the grip on the toes throughout, exhale and lower the knees and thighs back to the floor. (Plate 124.) Then the crown of the head, the elbows and crossed arms behind the back and the buttocks will be the only parts of the body touching the floor.

124

5. Stay in the pose for a few seconds. Exhale, release the grips on the toes, uncross the hands at the back and sit up again in Padmāsana. (Plate 104.) Then straighten the legs and relax.

6. Change the leg position and repeat the pose.

Effects

The dorsal region is fully extended in this posture and so the chest is expanded fully. Due to the stretch of the neck the thyroids benefit by the exercise. The pelvic joints become elastic. Once the pose is mastered, Matsyāsana (Plate 113) will appear to be child's play.

58. *Mahā Mudrā* Five* (Plate 125)

Mahā means great or noble. Mudrā means shutting, closing or sealing. In this sitting posture the apertures at the top and bottom of the trunk are held fast and sealed.

Technique

1. Sit on the floor with the legs stretched straight in front. (Plate 77)

2. Bend the left knee and move it to the left, keeping the outer side of the left thigh and the left calf on the floor.

3. Place the left heel against the inner side of the left thigh near the perineum. The big toe of the left foot should touch the inner side of the right thigh. The angle between the extended right leg and the bent left leg should be a right angle of 90 degrees.

4. Stretch the arms forward towards the right foot and hook the big toe with the thumbs and forefingers.

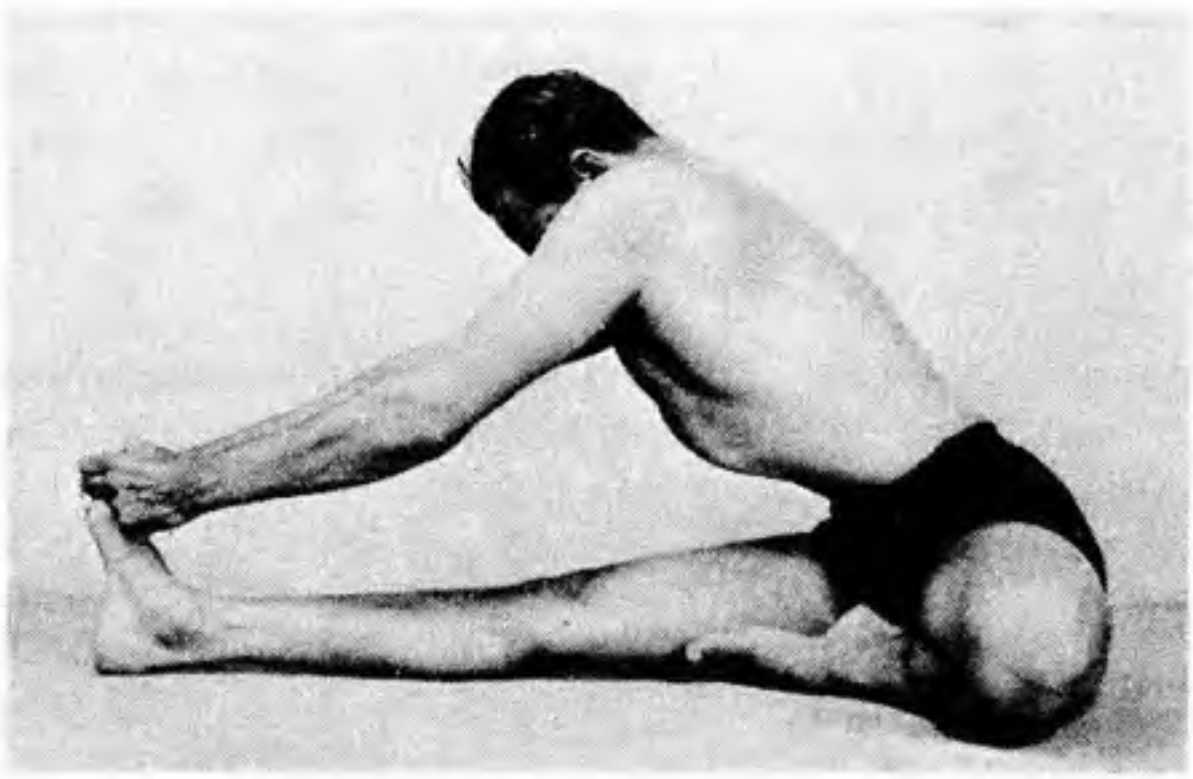
5. Lower the head to the trunk until the chin rests in the hollow between the collar bones just above the breast-bone.

6. Keep the spine fully stretched and do not allow the right leg to tilt to the right.

7. Inhale completely. Tighten the entire abdomen from the anus to the diaphragm. Pull the abdomen back towards the spine and also up towards the diaphragm.

8. Relax the abdominal tension, then exhale, again inhale and hold the breath, maintaining the abdominal grip. Hold this posture as stated above from one to three minutes. (Plate 125)

9. Relax the abdominal tension, exhale, raise the head, release the hands and straighten the bent leg.



125

10. Repeat on the other side, keeping the left leg straight and the right one bent for an equal length of time.

Effects

This āsana tones the abdominal organs, the kidneys and adrenal glands. Women suffering from a prolapsed womb find relief as it pulls the womb up to its original position. Persons suffering from spleen ailments and from enlargement of the prostate gland will benefit by staying in this pose longer. It cures indigestion.

'This Mahāmudrā destroys death and many other pains.' 'There is nothing that one cannot eat or has to avoid (if one has practised it). All food regardless of taste and even when deadly poisonous is digested.' 'He who practises Mahāmudrā, overcomes consumption, leprosy, piles, enlargement of the spleen, indigestion and other complaints of long duration.' (*Haṭha Yoga Pradīpikā*, chapter 3, verses 14, 16 and 17.)

59. *Jānu Śīrṣāsana* Five* (Plate 127)

Jānu means the knee. Śīrṣa is the head. In this posture sit with one leg stretched out on the ground and the other bent at the knee. Then catch the extended foot with both the hands and place the head on that knee.

Technique

1. Sit on the floor, with legs stretched straight in front. (Plate 77)

2. Bend the left knee and move it to the left, keeping the outer side of left thigh and the left calf on the floor.

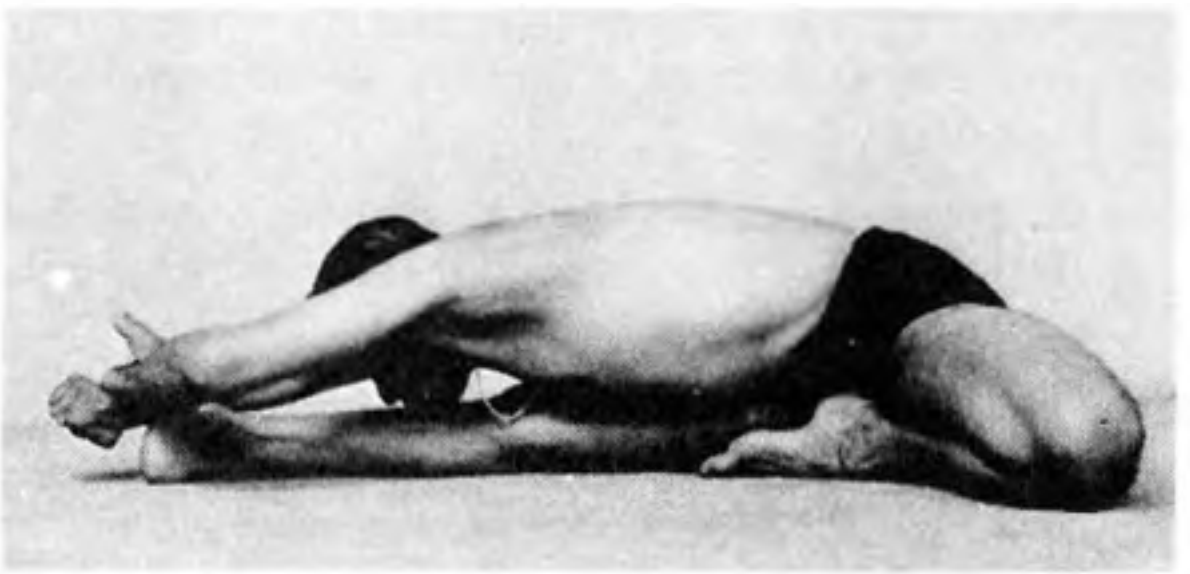
3. Place the left heel against the inner side of the left thigh near the perineum. The big toe of the left foot should touch the inner side of the right thigh. The angle between the two legs should be obtuse. Do not keep the left knee in line with the left thigh at a right angle to the extended right leg. Try and push the left knee as far back as possible, so that the body is stretched from the bent leg.

4. Extend the arms forward towards the right foot and hold it with the hands. First catch the toes of the right foot, then gradually catch the sole, then the heel and finally extend the arms and catch the wrist of one hand with the other, beyond the outstretched foot. (Plate 126)

126

5. Keep the right leg stretched throughout by tightening the knee. See that the back of the right knee rests on the floor.

6. Exhale, move the trunk forward by bending and widening the elbows, and rest first the forehead, then the nose, then the lips and lastly the chin beyond the right knee. (Plate 127.) Then rest on either side of the right knee. (Plates 128 and 129.) The right foot will tilt to the right in the beginning. Do not allow the leg to tilt.



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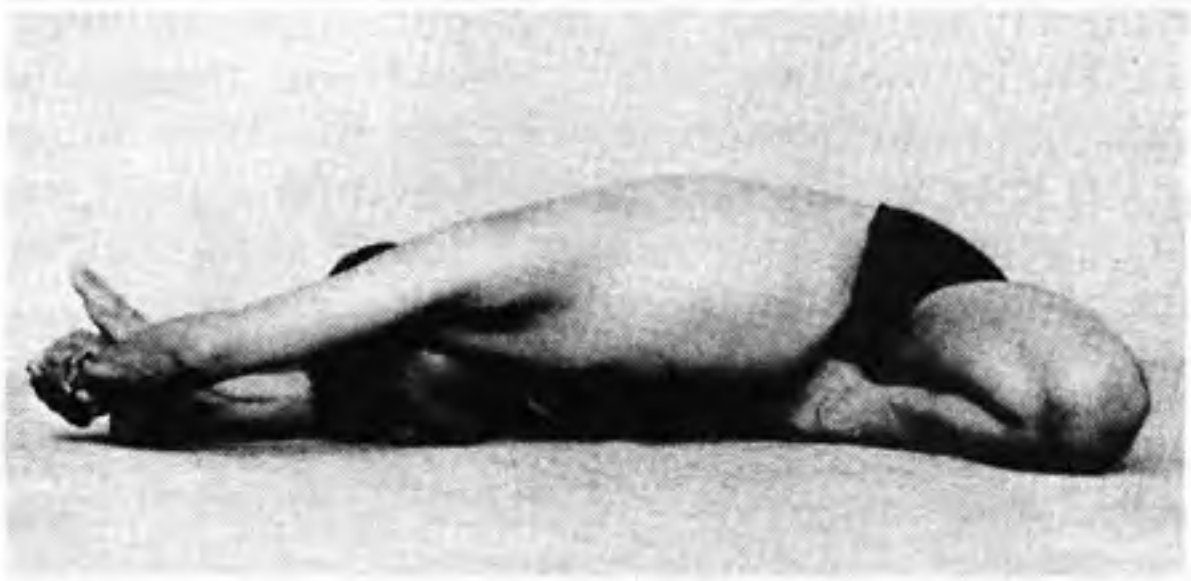

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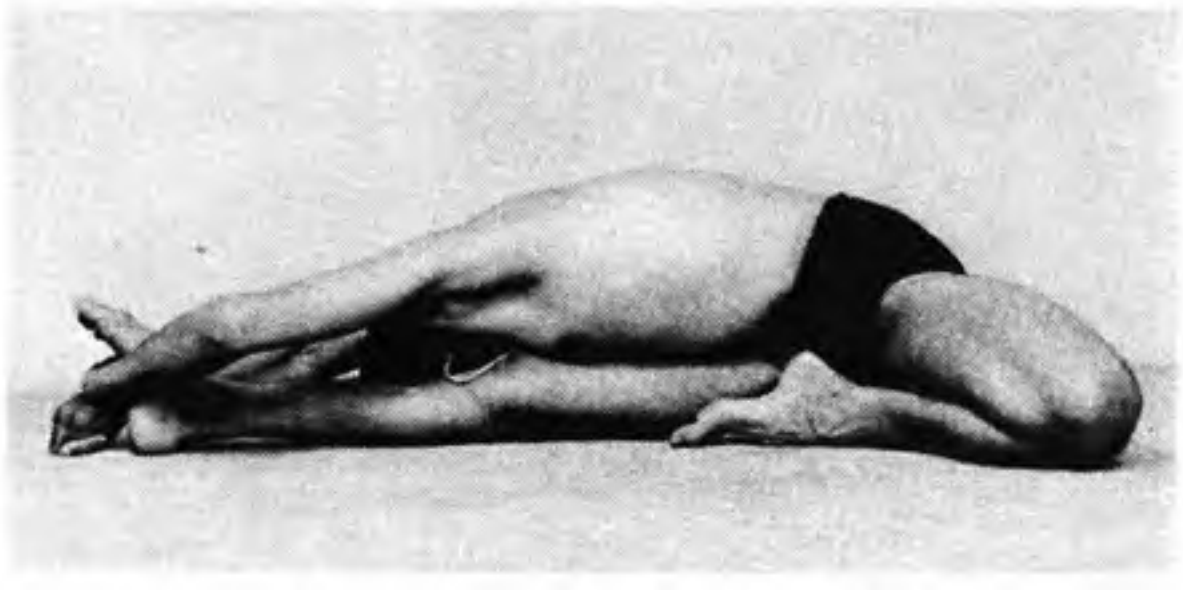


129

7. Stretch the back fully, pull the trunk forward and keep the chest against the right thigh.

8. Stay in this position with deep breathing from half a minute to a minute. One can also do the pose holding the breath after each exhalation.

9. Inhale, raise the head and trunk, straighten the arms and gaze up for a few seconds, extending the spine and trying to make it concave. (Plate 126)

10. Release the hand grip on the right foot, straighten the left leg and come back to position 1.

11. Repeat the pose keeping the left leg stretched out and bending the right leg at the knee. Stay in the pose for the same length of time on both the sides.

Effects

This āsana tones the liver and the spleen and thereby aids digestion. It also tones and activates the kidneys, the effect on which can be felt while one is performing the pose as explained above.

Persons suffering from enlargement of the prostate gland will benefit by staying longer in this pose. They should practise this āsana along with Sarvāngāsana. (Plate 223)

The pose is also recommended for people suffering from low fever for a long time.

60. *Parivṛtta Jānu Śīrṣāsana* Nine* (Plate 132)

Parivṛtta means turned round, revolved, jānu means the knee and śīrṣa the head. In this variation of Jānu Śīrṣāsana one leg is extended on the ground, the other is bent at the knee, the trunk is twisted round, the extended foot is caught with both hands and the back of the head is placed on the knee of the extended leg by bending the spine back.

Technique

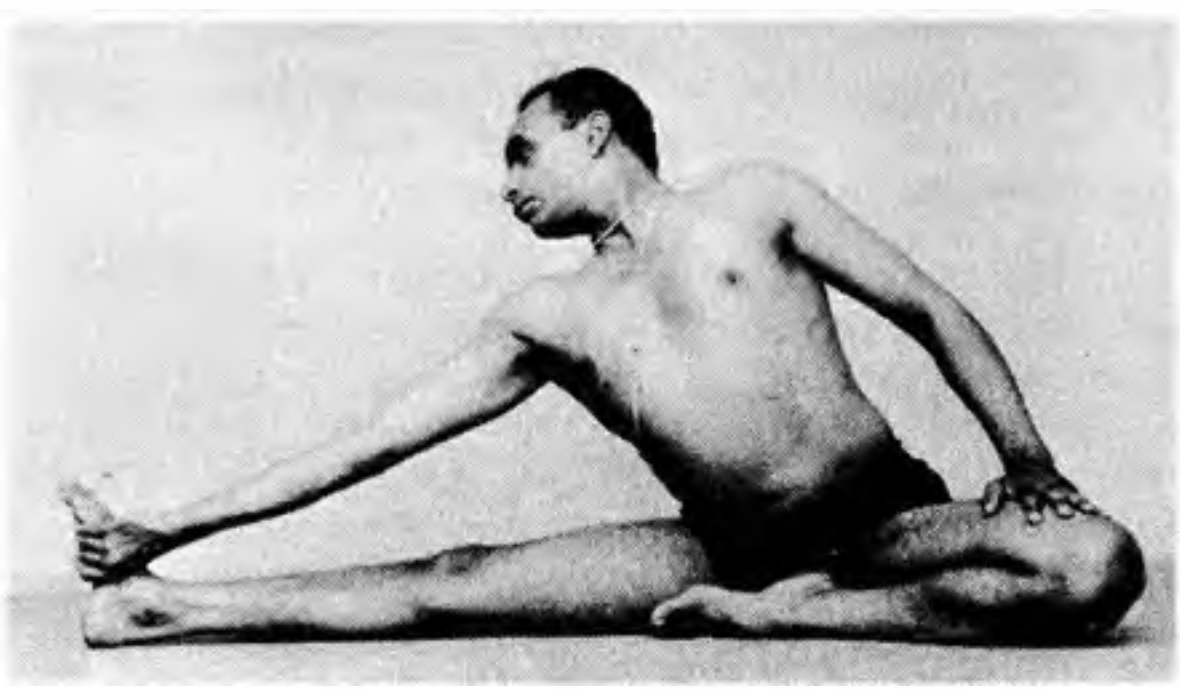
1. Sit on the floor with the legs stretched straight in front. (Plate 77)

2. Bend the left knee and move it to the left, keeping the outer side of the left thigh and the left calf on the floor.

3. Place the left heel against the inner side of the left thigh near the perineum. The big toe of the left foot should touch the inner side of the right thigh. The angle between the two legs should be obtruse. Extend the left knee as far back as possible.

4. Twist the trunk to the left.

5. Stretch the right arm towards the extended right leg. Turn the right forearm and wrist so that the right thumb points to the floor and the right little finger points up. Then, with the right hand hold the inner side of the right foot. (Plate 130)



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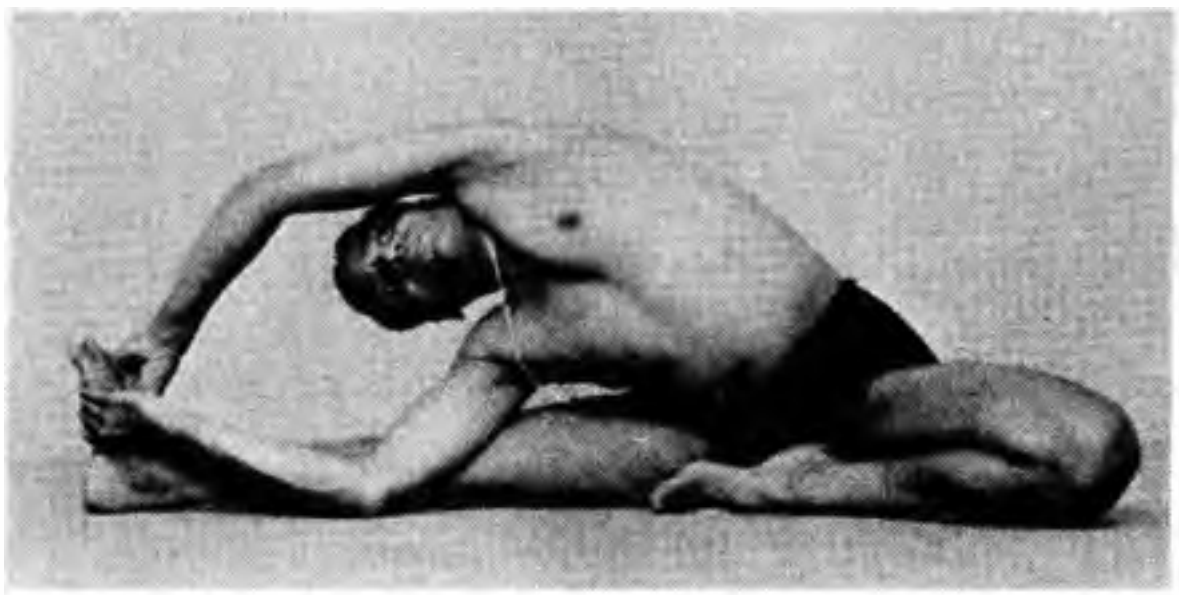
6. Throw the trunk back, stretch the left arm over the head keeping the wrist up, and with the left hand hold the outer side of the extended right foot. Here also the left thumb points to the floor and the little finger points up. (Plate 131)



131

7. Bend and widen the elbows. Exhale, turn the trunk up, move the head in between the arms and rest the back of the head on the right knee. Try to touch the inner side of the right knee joint with the back of the right shoulder so that the back of the ribs on the right side rests on the right knee. Extend the bent left knee still further and stretch the left side of the ribs. (Plate 132)

132

8. Maintain the pose for about 20 seconds. The breathing will be short and fast due to the contraction of the abdomen.

9. Inhale, release the hands, move the trunk back to its original position so that you face the extended right leg, raise the head and straighten the left leg to come to position 1.

10. Repeat the pose on the other side. Here bend the right knee and keep the left leg straight. Twist the trunk to the right until you face the bent right knee and extend the left arm towards the left foot. Then

turn the left forearm and the left wrist so that the left thumb points to the floor. With the left hand catch the inner side of the left foot, bring the right arm over the head and catch the outer side of the left foot near the heel. Then rest the back of the head on the left knee and try to touch the inner side of the left knee with the back of the left shoulder so that the back of the left side ribs rests on the left knee and stretch the right side of the ribs. Remain on this side for the same length of time.

Effects

In addition to the effects stated in the note on Jānu Śīrṣāsana (Plate 127), this pose stimulates the blood circulation to the spine and relieves backaches. In Jānu Śīrṣāsana the abdominal organs are contracted, here they are stretched on both sides. This is a very invigorating pose.

61. *Ardha Baddha Padma Paschimottānāsana* Eight* (Plate 135)

Ardha means half, baddha means caught, restrained and padma a lotus. Paschimottānāsana (Plate 160) is the posture where the back of the whole body is intensely stretched.

Technique

1. Sit on the floor, with the legs stretched straight in front. (Plate 77)

2. Bend the left leg at the knee, and place the left foot over the right thigh. The left heel should press the navel and the toes should be stretched and pointing. This is the half lotus posture.

3. Bring the left arm round the back from behind and with an exhalation catch the big toe of the left foot. If the toe cannot be grasped easily, swing back the left shoulder.

4. After holding the left big toe, move the bent left knee nearer to the extended right leg. Stretch the right arm forward and catch the right foot with the right hand, the palm touching the sole. (Plates 133 and 134)

5. Inhale, stretch the back and gaze up for a few seconds, without releasing the grip on the left big toe.

6. Exhale, move the trunk forward by bending the right elbow outwards. Rest the forehead, then the nose, then the lips and lastly the chin on the right knee. (Plate 135)

7. In the initial stages, the knee of the extended leg will be lifted off the floor. Tighten the thigh muscles and rest the entire back of the extended right leg on the floor.

8. Stay in this position from 30 to 60 seconds, breathing evenly.

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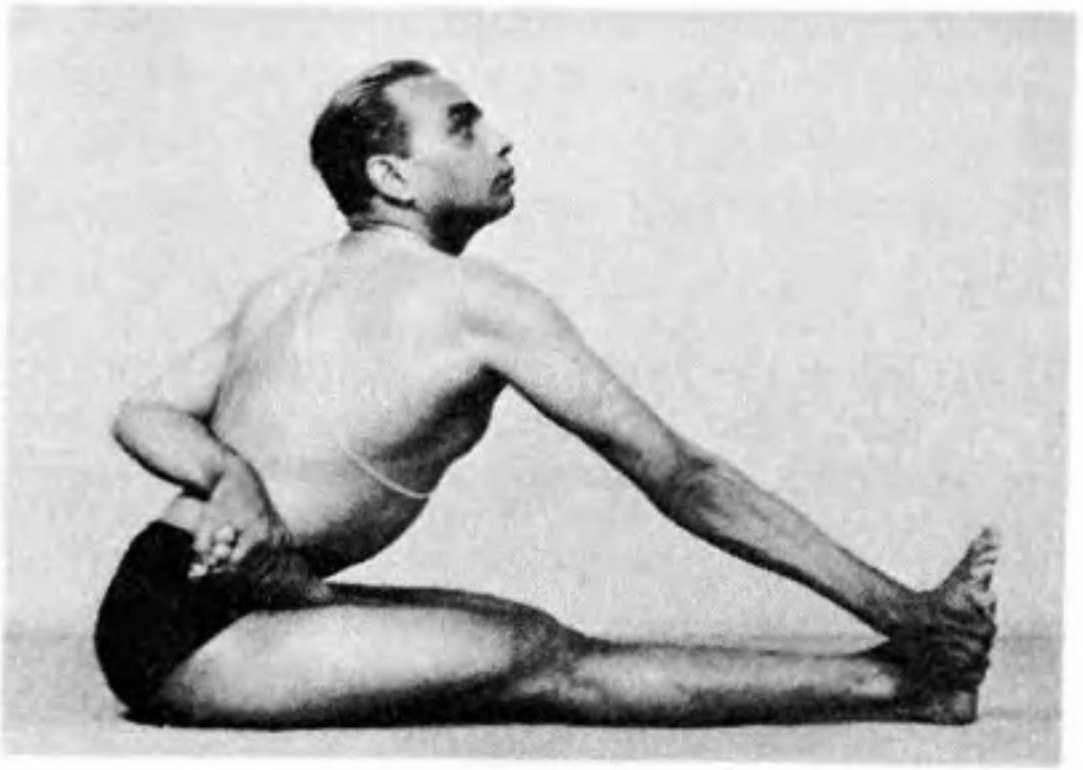

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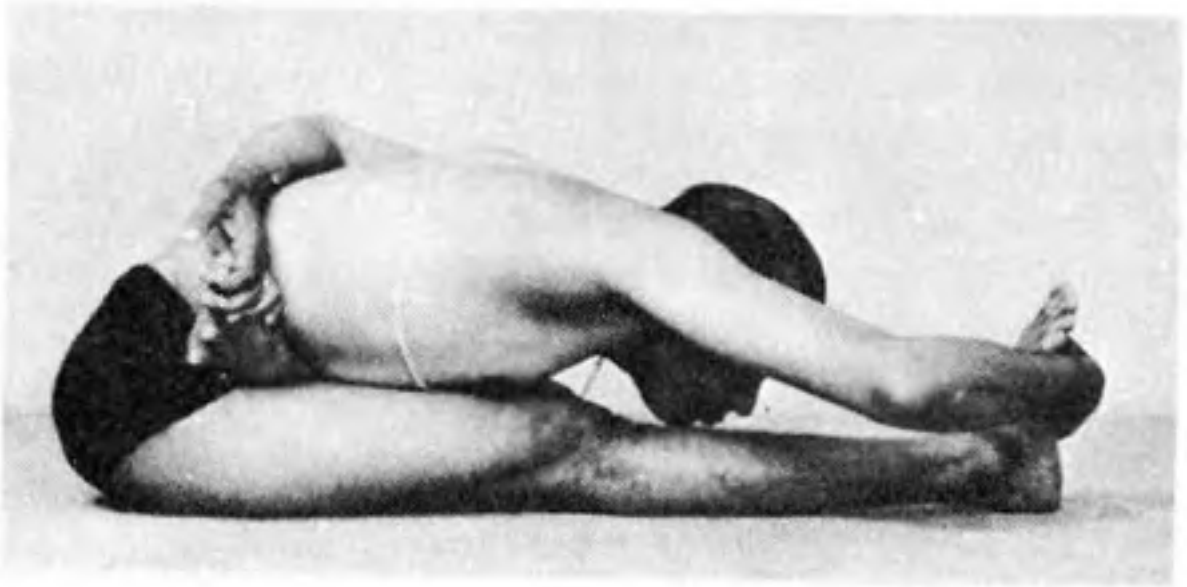

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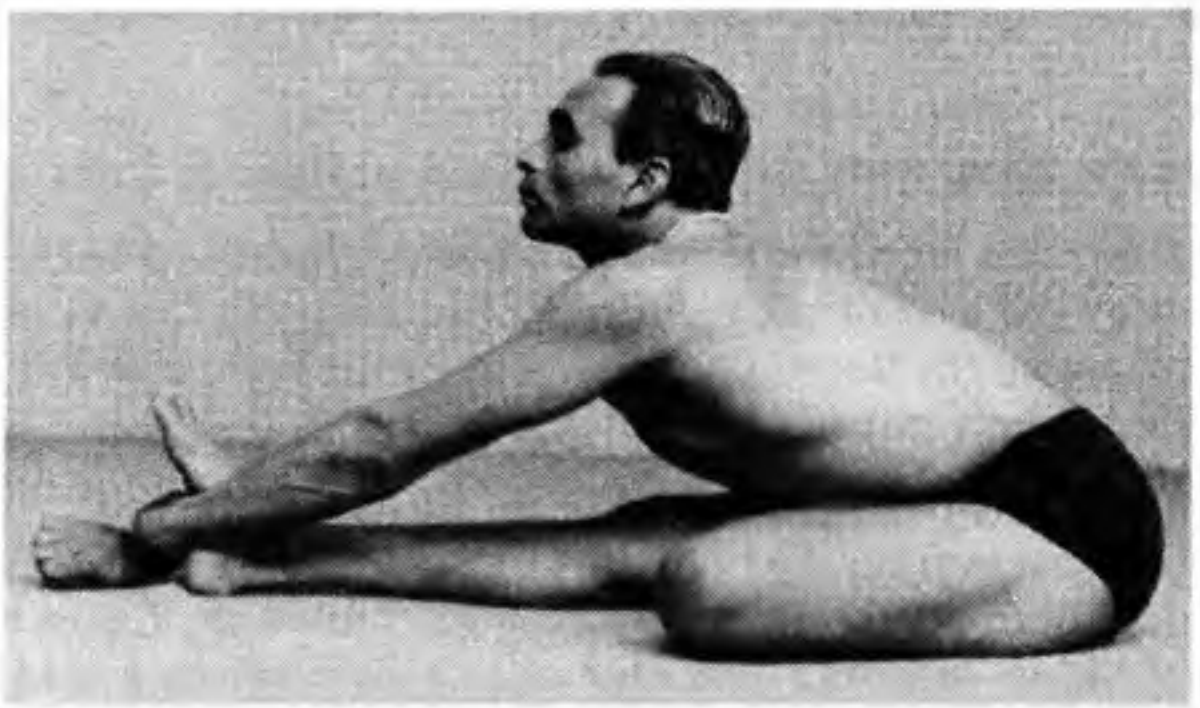
9. Inhale, raise the head and trunk, release the hands, straighten the left leg and come to position 1.

10. Repeat the pose on the other side, keeping the left leg stretched out on the ground, bending the right knee and placing the right foot on the left thigh. Stay for the same length of time on both sides.

11. If you cannot hold the toe with the hand from behind, hold the extended leg with both hands and follow the above technique. (Plates 136 and 137)



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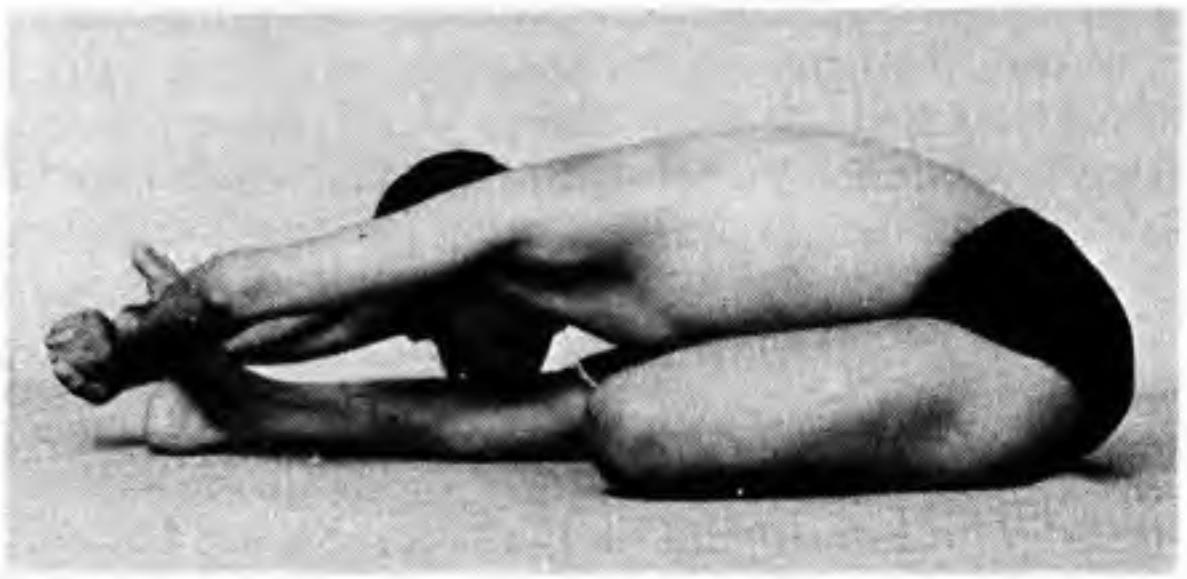

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Effects

Due to the half lotus pose, the knees become flexible enough to execute the full lotus pose. While placing the chin on the knee of the extended leg, the bent knee is brought close to the stretched leg. This gives a good pull to the navel and abdominal organs. Blood is made to flow round the navel and the genital organs. The navel is considered to be a nerve centre, and the Svādhiṣṭhāna Chakra, one of the purificatory fly-wheels

in the human nervous system, is situated there. This chakra corresponds to the hypo-gastric plexus. The pose is recommended for persons with rounded and drooping shoulders.

62. *Triaṅgā Mukhaikapda Paschimottānāsana* Five* (Plate 139)

Trianga means three limbs or parts thereof. In this posture the three parts are the feet, knees and buttocks. Mukhaikapāda (a compound of three words, mukha = face, eka = one, and pāda = leg or foot) corresponds to the face (or mouth) touching one (extended) leg. In Paschimottānāsana (Plate 160) the back of the whole body is intensely stretched.

Technique

1. Sit on the floor, with the legs stretched straight in front. (Plate 77)

2. Bend the right leg at the knee and move the right foot back. Place the right foot by the side of the right hip joint, keep the toes pointing back and rest them on the floor. The inner side of the right calf will touch the outer side of the right thigh.

3. Balance in this position, throwing the weight of the body on the bent knee. In the beginning, the body tilts to the side of the outstretched leg, and the foot of the outstretched leg also tilts outwards. Learn to balance in this position, keeping the foot and toes stretched and pointing forward.

4. Now hold the left foot with both the palms, gripping the sides of the sole. If you can, then extend the trunk forward and hook the wrists round the outstretched left foot. (Plate 138.) Take two deep breaths. It usually takes several months before one can hook the wrists in this way, so do not despair after the first few attempts.

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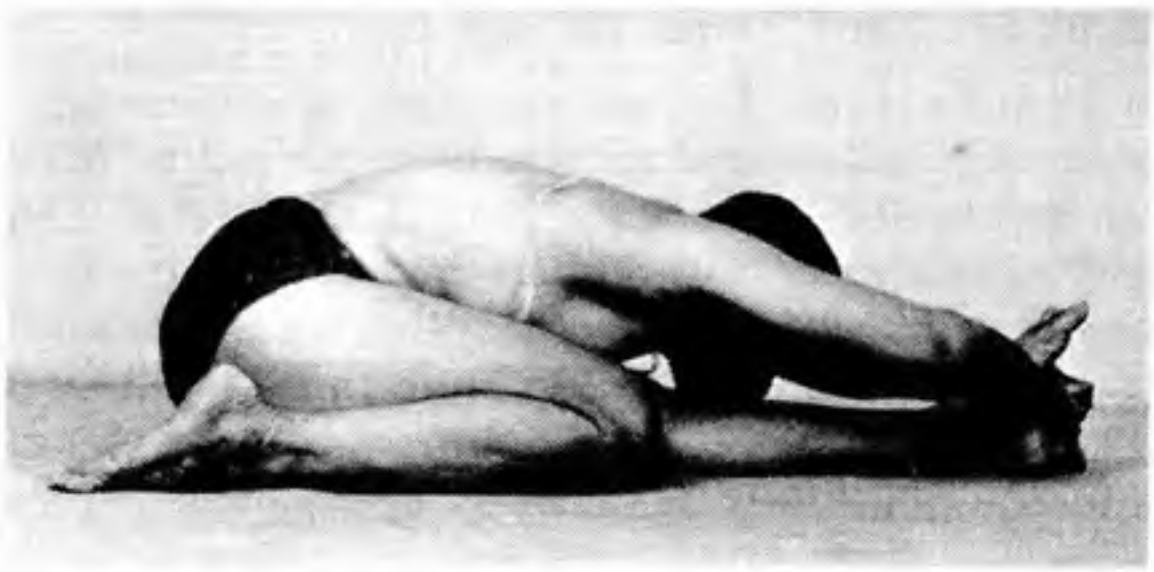


139

5. Join the knees, exhale and bend forward. Rest first the forehead, then the nose, next the lips and ultimately the chin on the left knee. (Plate 139.) To achieve this, widen the elbows and push the trunk forward with an exhalation.

6. Do not rest the left elbow on the floor. In the beginning, one loses balance and topples over to the side of the extended leg. The trunk should, therefore, be slightly bent towards the side of the bent leg and the weight of the body should be taken by the bent knee.

7. Stay in this position from half a minute to a minute, breathing evenly.

8. Inhale, raise the head and trunk, release the hands, straighten the right leg and come to position 1.

9. Repeat the pose on the other side, keeping the right leg stretched out on the ground, bending the left knee and placing the left foot by the left hip joint. Stay for the same length of time on both sides.

Effects

This āsana is recommended for persons suffering from dropped arches and flat feet. It cures sprains in the ankle and the knee, and any swelling in the leg is reduced.

Along with Jānu Śīrṣāsana (Plate 127) and Ardha Baddha Padma Paschimottānāsana (Plate 135), this āsana tones the abdominal organs and keeps them free from sluggishness. We abuse our abdominal organs by over-indulgence or by conforming to social etiquette. Abdominal organs cause a majority of diseases and ancient sages emphasised that their health was essential for longevity, happiness and peace of mind. These forward bending āsanas keep the abdominal organs healthy and in trim. Apart from keeping the muscles in shape, they work on the organs as well.

63. *Krounchāsana* Ten* (Plates 141 and 142)

Krouncha means a heron. It is also the name of a mountain, said to be the grandson of Himālaya and to have been pierced by Kārtikeya, the god of war, and by Paraśurāma, the sixth incarnation of Viṣṇu. In this sitting posture, one leg is bent back at the knee and the foot is placed against the side of the hip joint, while the other leg is raised up vertically, its foot being held by the hands. The chin is then placed on the knee of the vertical leg. The raised leg resembles the outstretched neck and head of a heron, also a precipice. Hence the name.

Technique

1. Sit on the floor, with the legs stretched straight in front. (Plate 77)

2. Bend the right leg at the knee and move the right foot back. Place the right foot by the side of the hip joint, keep the toes pointing back and rest all of them on the floor. The inner side of the right calf will touch the outer side of the right thigh. Join the knees together.

3. Exhale, bend the left knee, hold the left foot with both hands and raise the left leg up vertically. (Plate 140)

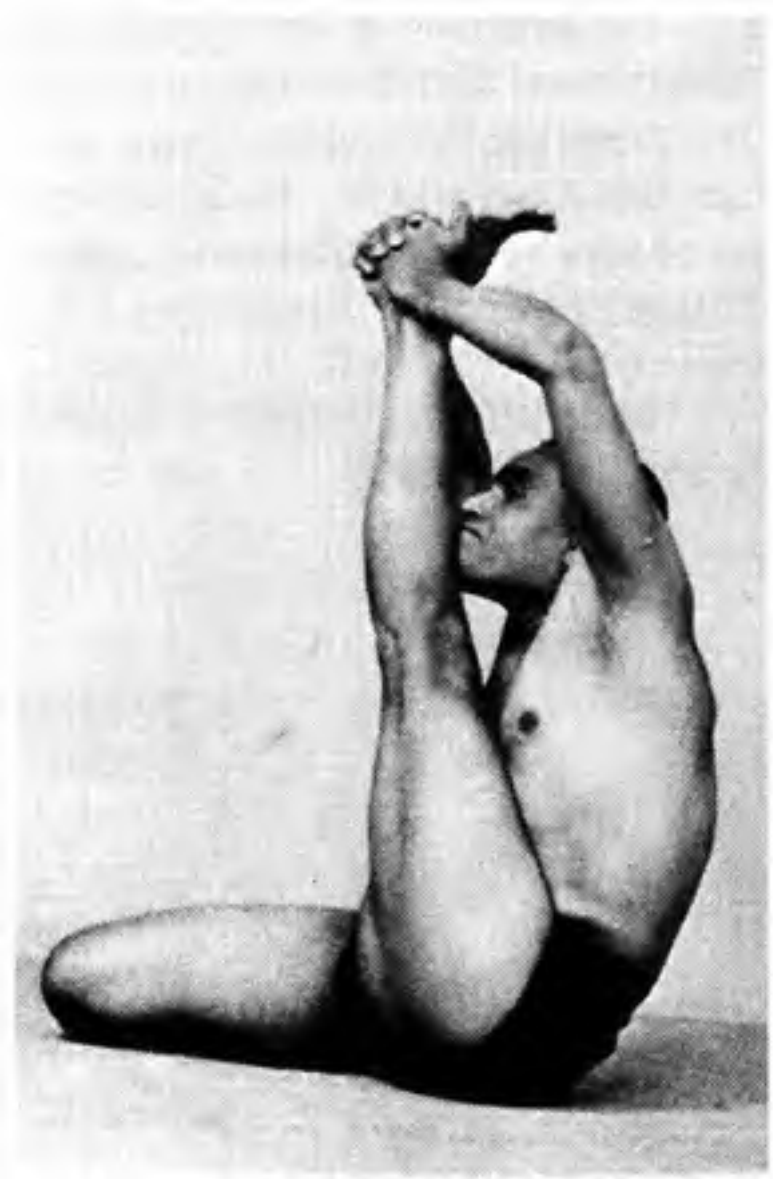
140

4. Stretch out the left leg fully and keep the back erect. After a few breaths in this position, exhale, move the head and trunk forward and at the same time try and bring the left leg nearer and rest the chin on the knee of the left leg. (Plates 141 and 142)

5. Hold this position for 20 to 30 seconds, with deep breaths. Do not lift the bent knee off the floor while the chin is touching the knee of the lifted leg.

6. Inhale, move the head and trunk back (Plate 140), lower the left leg, release the hands, bring the right leg straight forward and return to position 1.

7. Repeat the pose on the other side, bending the left knee and placing



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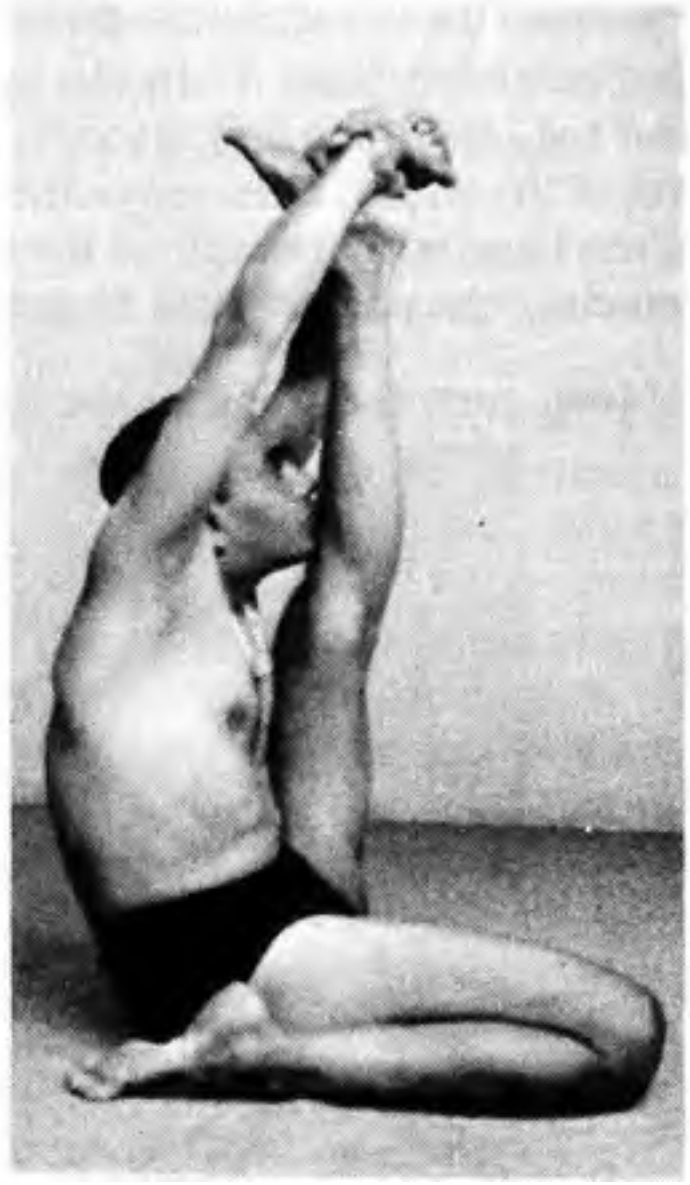


142

the left foot by the left hip joint and raising the right leg up. Stay for an equal length of time on this side also.

Effects

The pose can be done as a continuation of Triang Mukhaikapāda Paschimottānāsana (Plate 139). It is harder to do than Paschimottānāsana (Plate 160) and therefore its effects are greater. It gives a full extension to the leg and exercises the muscles of the legs. The abdominal organs are also rejuvenated.

64. *Marīchyāsana I* Five* (Plate 144)

This āsana is dedicated to the sage Marīchi, son of the Creator, Brahmā. Marīchi was the grandfather of Sūrya (the Sun God).

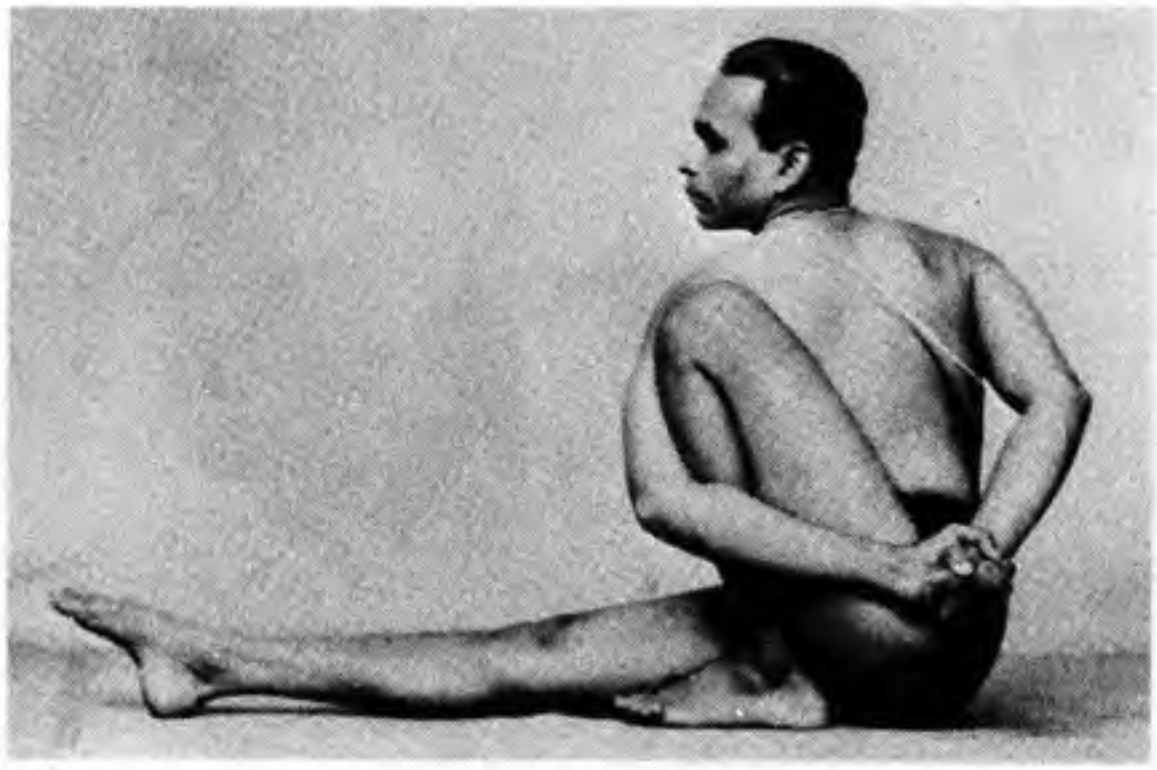
Technique

1. Sit on the floor with the legs stretched straight in front. (Plate 77)

2. Bend the left knee and place the sole and heel of the left foot flat on the floor. The shin of the left leg should be perpendicular to the floor and the calf should touch the thigh. Place the left heel near the perineum. The inner side of the left foot should touch the inner side of the outstretched right thigh.

3. Stretch the left shoulder forward till the left armpit touches the perpendicular left shin. Turn the left arm round the left shin and thigh, bend the left elbow and throw the left forearm behind the back at the level of the waist. Then move the right hand behind the back and clasp the left hand with the right at the wrist or vice versa. If that is not possible then clasp the palms or the fingers. (Plate 143)

4. Now, turn the spine to the left, keeping the outstretched right leg



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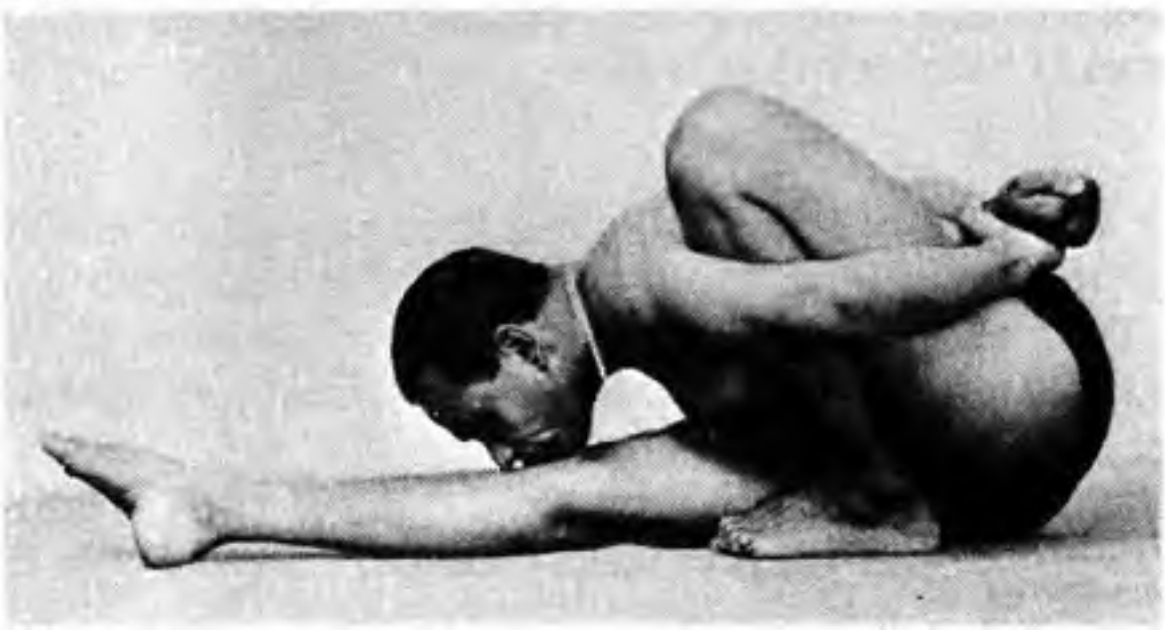


144

straight. Remain in this position gazing at the outstretched right big toe and take a few deep breaths.

5. Exhale, and bend forward. Rest the forehead, then the nose, next the lips and lastly the chin on the right knee. (Plate 144.) While in this position, keep both shoulders parallel to the floor and breathe normally. Stay in the pose for about 30 seconds and see that the back of the entire extended leg rests on the floor throughout.

6. Inhale, raise the head from the right knee (Plate 143), release the hands, straighten the left leg and come to position 1.

7. Repeat the pose on the other side for an equal length of time.

Effects

The fingers gain in strength by the practice of this āsana. In the preceding āsanas (namely, Jānu Śīrṣāsana (Plate 127), Ardha Baddha Padma Paschimottānāsana (Plate 135) and Triang Mukhaikapāda Paschimottānāsana (Plate 139) the abdominal organs are made to contract by gripping a leg with the hands. In this pose the hands do not hold the legs. To bend forward and to rest the chin on the knee of the extended leg the abdominal organs have to contract vigorously. This creates a better circulation of blood round the abdominal organs and keeps them healthy. In the beginning it is very difficult to bend forward at all after gripping both hands behind the back, but it comes with practice. The dorsal region of the spine is also exercised in this pose.

Note. The four poses, Jānu Śīrṣāsana, Ardha Baddha Padma Paschimottānāsana, Triang Mukhaikapāda Paschimottānāsana and Marīchyāsana I, are preparatory poses for the correct Paschimottānāsana. (Plate 161.) It is difficult for many to get a good grip on the feet in Paschimottānāsana (Plate 160) even after several attempts. These four āsanas give one sufficient elasticity in the back and legs so that one gradually achieves the correct Paschimottānāsana (Plate 161) as described later. Once this is done with ease, these four āsanas can be practised once or twice a week instead of daily.

65. *Marīchyāsana II* Six* (Plates 146 and 147)

Technique

1. Sit on the floor, with the legs stretched straight in front. (Plate 77)

2. Bend the left leg at the knee and place the left foot at the root of the right thigh. The left heel should press the navel and the toes be stretched and pointing. The left leg is now in half Padmāsana.

3. Bend the right leg at the knee. Place the sole and heel of the right foot flat on the floor. Keep the shin of the right leg perpendicular, so that

the right thigh and the right calf touch each other and the right heel touches the perineum.

4. Bend slightly forward, stretch the right shoulder forward until the right armpit touches the perpendicular right shin. With an exhalation, curl the right arm round the right shin and thigh, bend the right elbow and turn the right forearm behind the back at the level of the waist. Then move the left hand behind the back and clasp the right hand with the left at the wrist. (Plate 145)

145

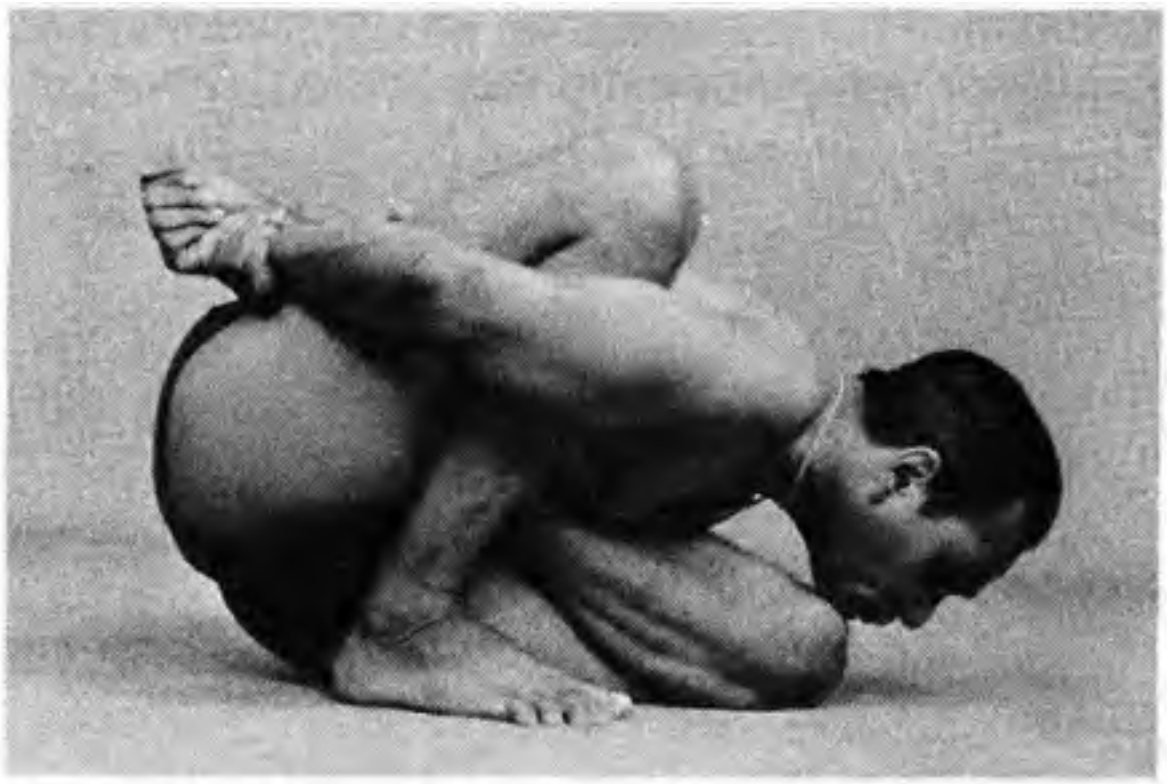
5. Stretch the spine up and hold this position for a few seconds, breathing deeply.

6. Exhale, move the trunk and head forward and rest the head on the bent left knee. Then extend the neck and rest the chin on the left knee. (Plates 146 and 147.) Repeat this movement three or four times, inhaling while coming up and exhaling while going down.

7. Inhale, move the head and trunk up, release the hands, straighten the legs, and then repeat the pose on the other side for the same length of time.

Effects

As this pose is an intensified form of Marīchyāsana I (Plate 144), its effects are greater. The heel at the navel puts extra pressure on the abdomen so that the abdominal organs are toned better and grow stronger and digestive power increases.



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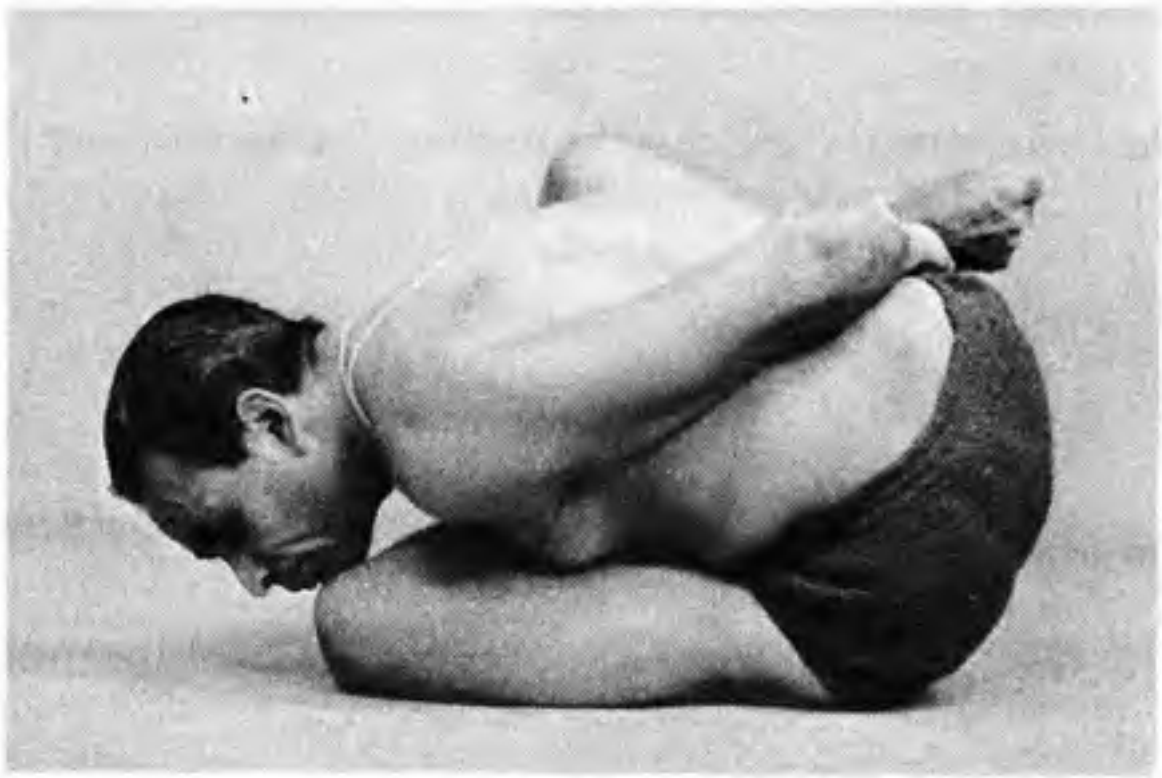

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66. *Upaviṣṭha Koṇāsana* Nine* (Plate 151)

Upaviṣṭha means seated. Koṇa means an angle.

Technique

1. Sit on the floor with the legs stretched straight in front. (Plate 77)

2. Move the legs sideways one by one and widen the distance between them as far as you can. Keep the legs extended throughout and see that the back of the entire legs rests on the floor.

3. Catch the big toes between the respective thumbs and index and middle fingers.

4. Keep the spine erect and extend the ribs. Pull the diaphragm up and hold the pose for a few seconds with deep breaths. (Plate 148)

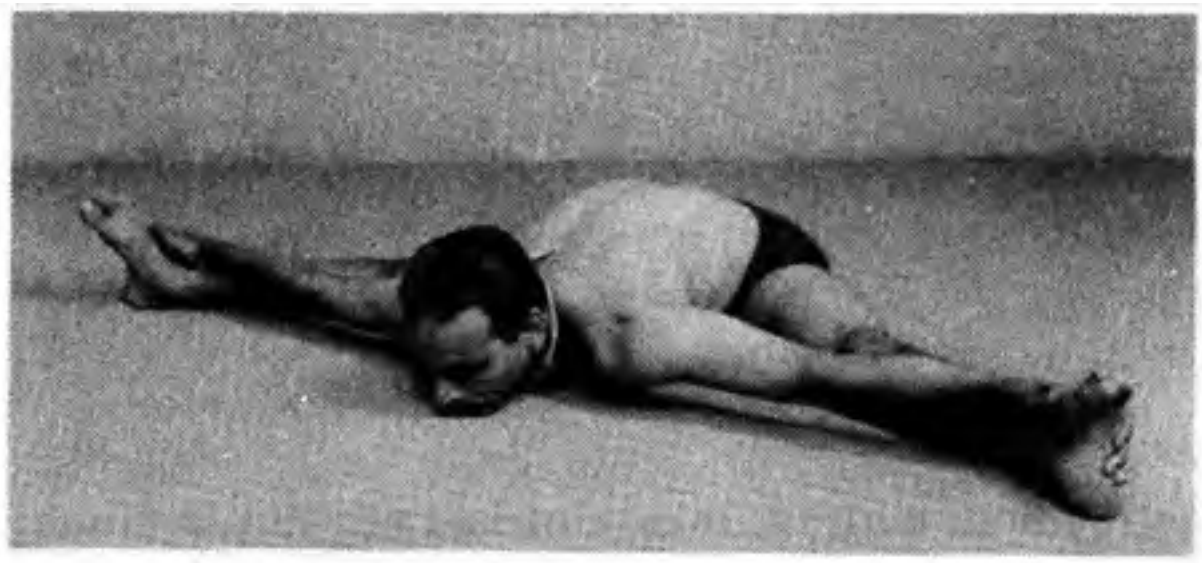
148

5. Exhale, bend forward and rest the head on the floor. (Plate 149.) Then extend the neck and place the chin on the floor. (Plate 150)

149

150

6. Then, clasp the feet with the hands and try to rest the chest on the floor. (Plate 151.) Stay in this position from 30 to 60 seconds with normal breathing.



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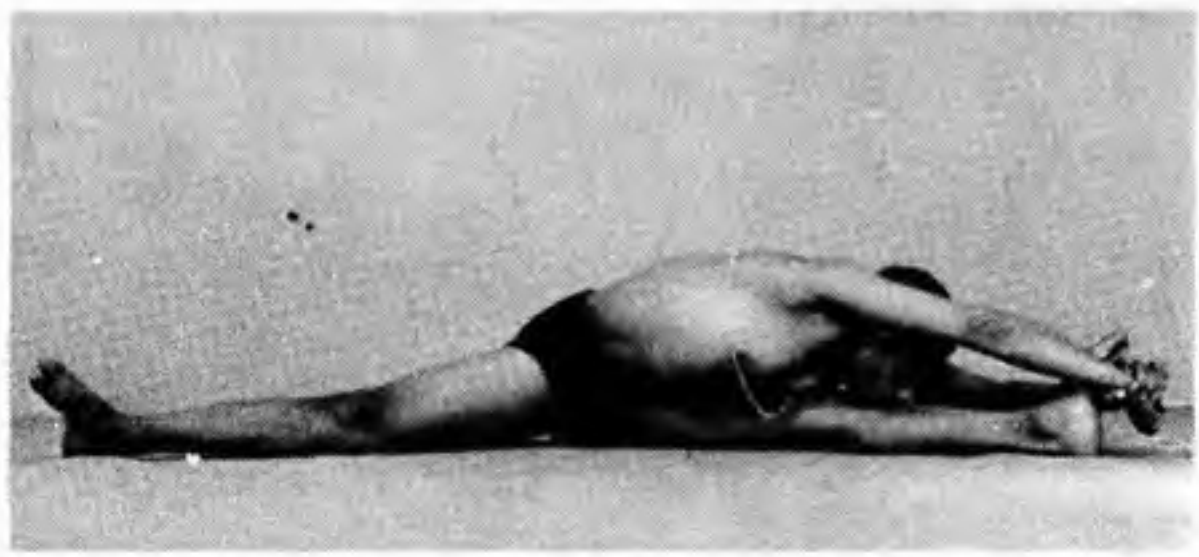
7. Inhale, raise the trunk off the floor (Plate 148) and release the hold on the feet, bring them together and relax.



152

8. Hold the left foot with both hands, exhale and rest the chin on the left knee. (Plate 152.) Inhale and raise the head and trunk. Now catch the right foot and with an exhalation rest the chin on the right knee. Inhale, raise the head and trunk, release the hands, bring the feet together and relax.

Effects

The āsana stretches the hamstrings and helps the blood to circulate properly in the pelvic region and keeps it healthy. It prevents the development of hernia of which it can cure mild cases and relieves sciatic pains. Since the āsana controls and regularises the menstrual flow and also stimulates the ovaries, it is a boon to women.

67. *Paschimottānāsana* Six* (Plate 161)

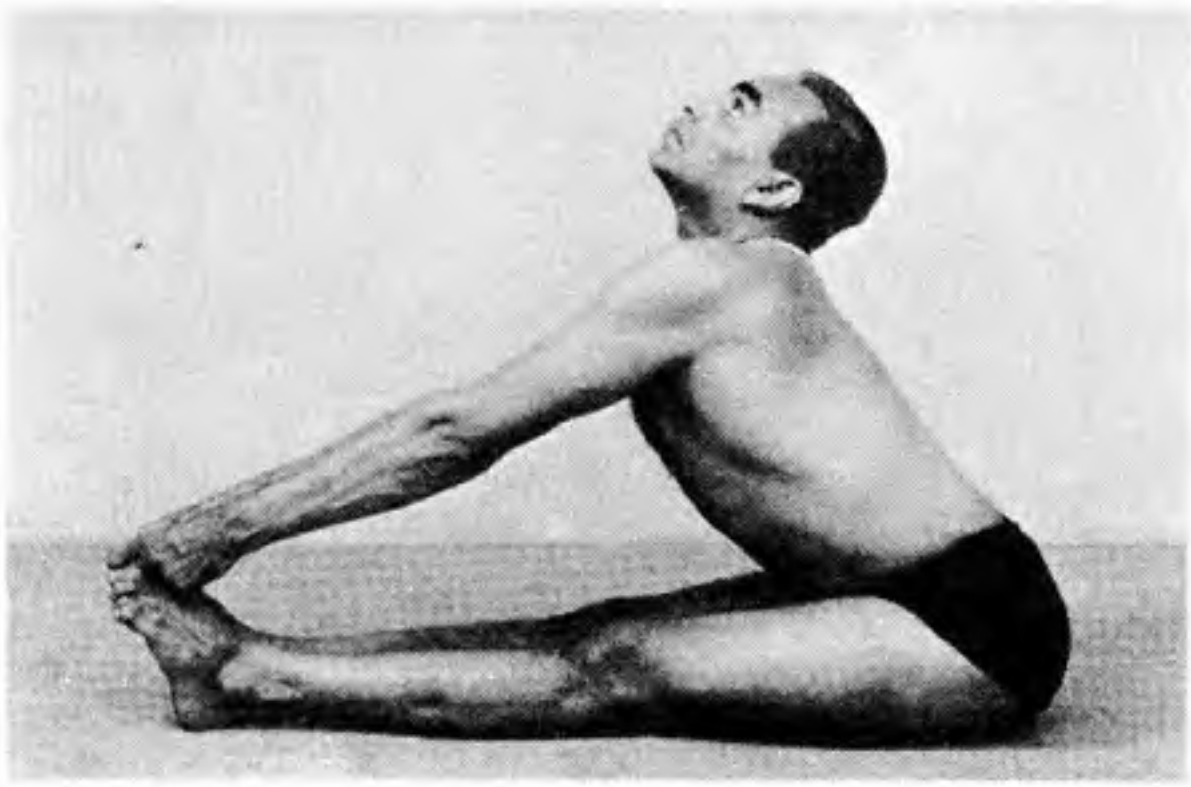
(Also called Ugrāsana or Brahmacharyāsana)
Paschima literally means the west. It implies the back of the whole body from the head to the heels. The anterior or eastern aspect is the front of the body from the face down to the toes. The crown of the head is the upper or northern aspect while the soles and heels of the feet form the lower or southern aspect of the body. In this āsana the back of the whole body is intensely stretched, hence the name.

Ugra means formidable, powerful and noble. Brahmacharya means religious study, self-restraint and celibacy.

Technique

1. Sit on the floor with the legs stretched straight in front. Place the palms on the floor by the side of the hips. Take a few deep breaths. (Plate 77)

2. Exhale, extend the hands and catch the toes. Hold the right big toe between the right thumb and the index and middle fingers and likewise the left big toe. (Plate 153)

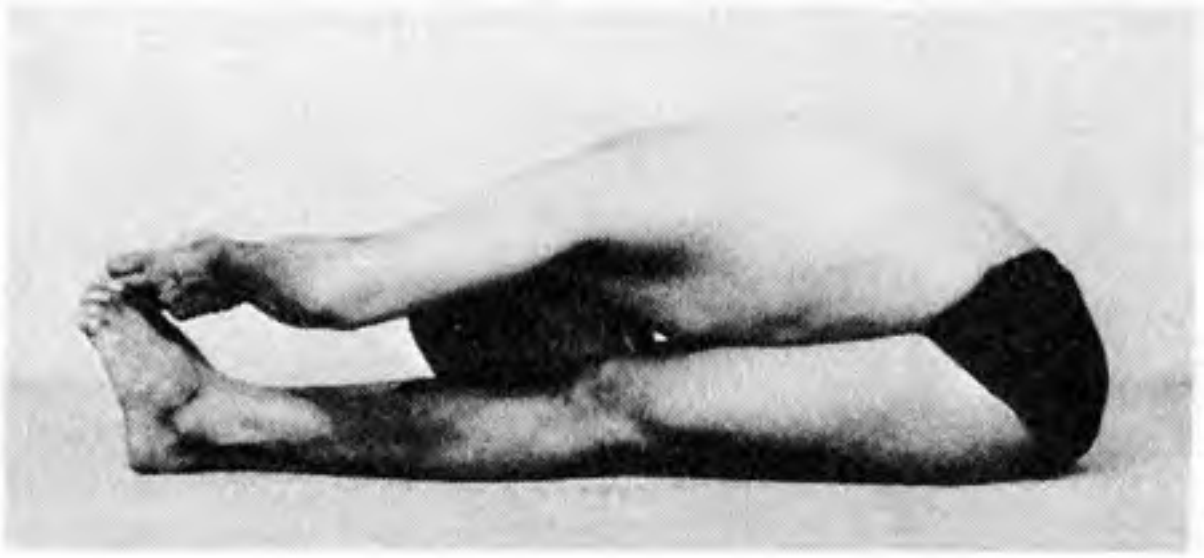


153

3. Extend the spine and try to keep the back concave. To start with the back will be like a hump. This is due to stretching the spine only from the area of the shoulders. Learn to bend right from the pelvic region of the back and also to extend the arms from the shoulders. Then the hump will disappear and the back will become flat as in Plate 153. Take a few deep breaths.

4. Now exhale, bend and widen the elbows, using them as levers, pull the trunk forward and touch the forehead to the knees. (Plate 154.)

Gradually rest the elbows on the floor, stretch the neck and trunk, touch the knees with the nose and then with the lips. (Plate 155)



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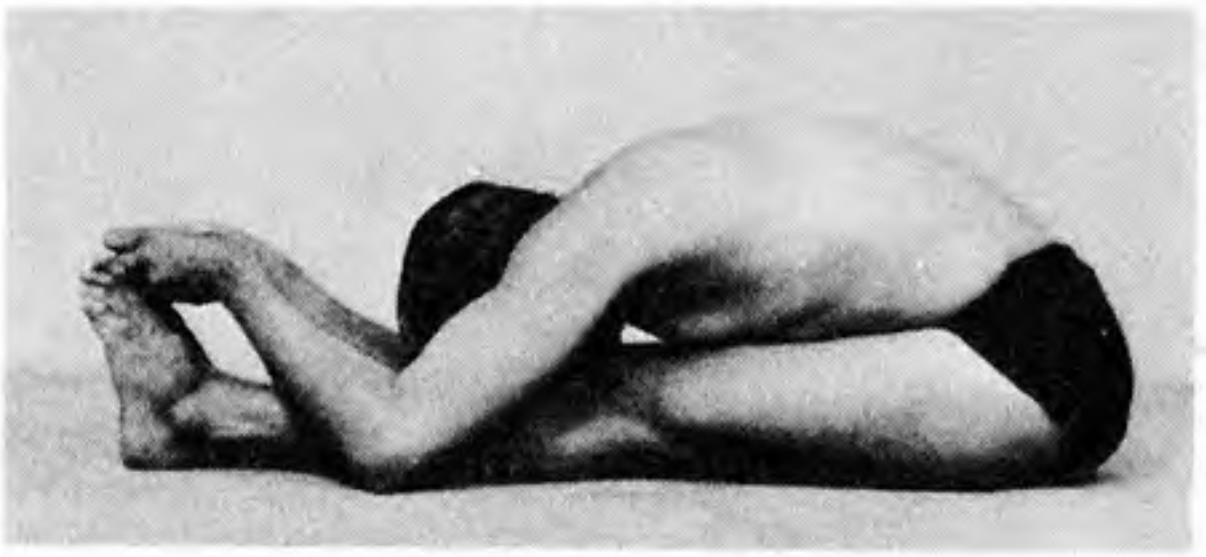
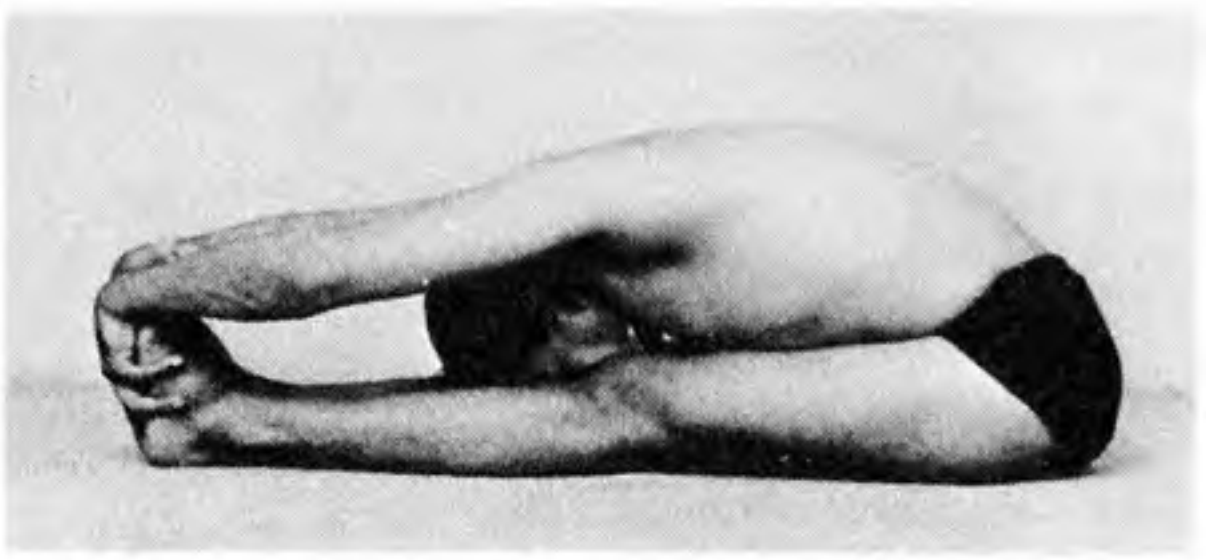


155

5. When this becomes easy, make a further effort to grip the soles and rest the chin on the knees. (Plate 156)



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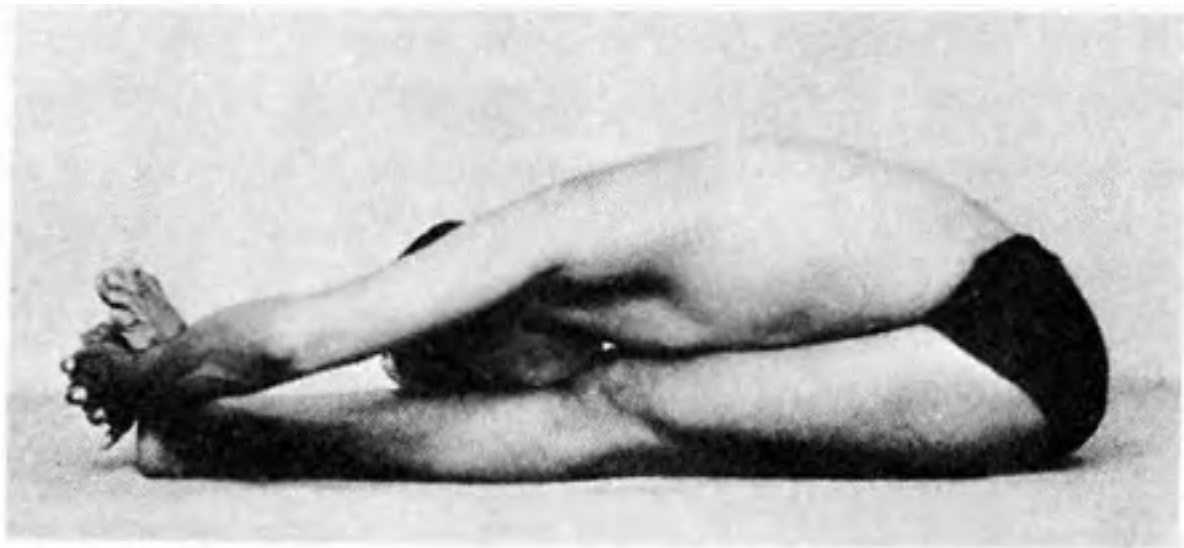
6. When this also becomes easy, clasp the hands by interlocking the fingers and rest the chin on the shins beyond the knees. (Plate 157)

7. When position 6 becomes easy, grip the right palm with the left hand



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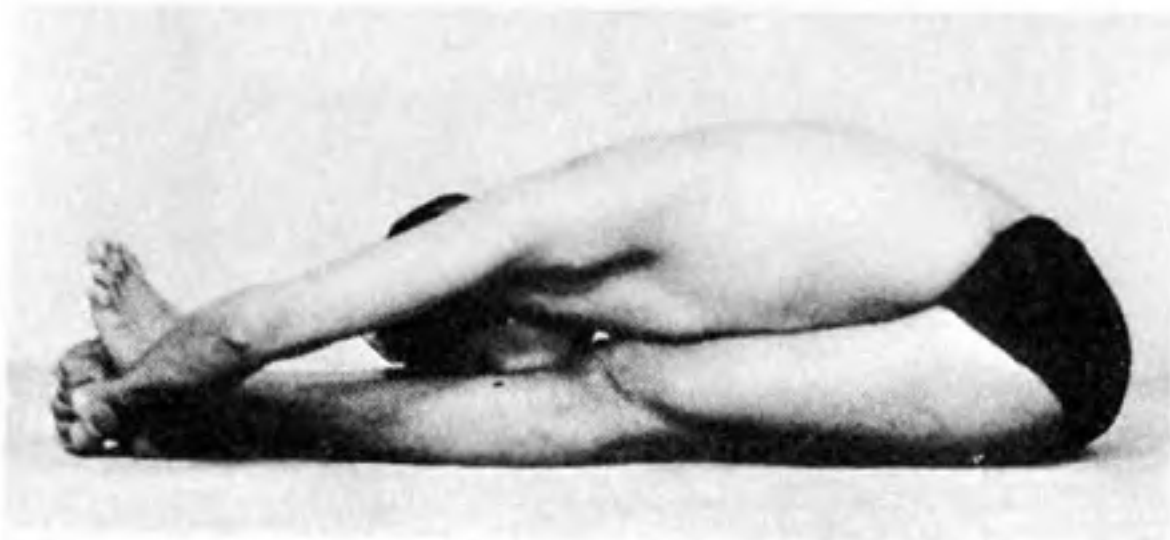
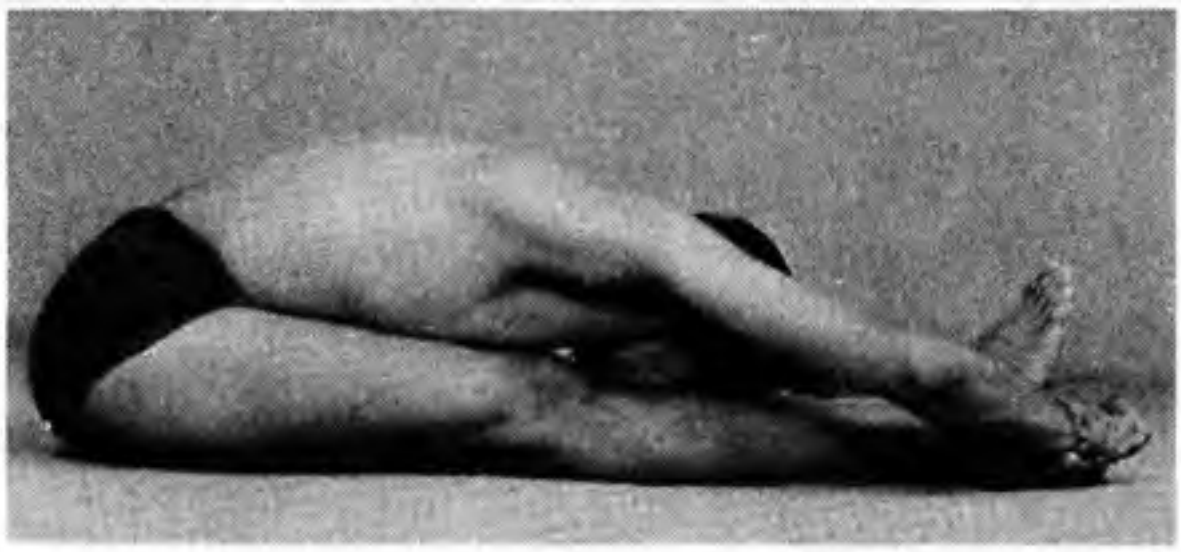


159

or the left palm with the right hand beyond the outstretched feet and keep the back concave. (Plate 158.) Take a few deep breaths.

8. Exhale and rest the chin on the shins beyond the knees. (Plate 159)

9. If position 8 also becomes easy, hold the right wrist with the left hand or the left wrist with the right hand and rest the chin on the shins beyond the knees. (Plate 160)

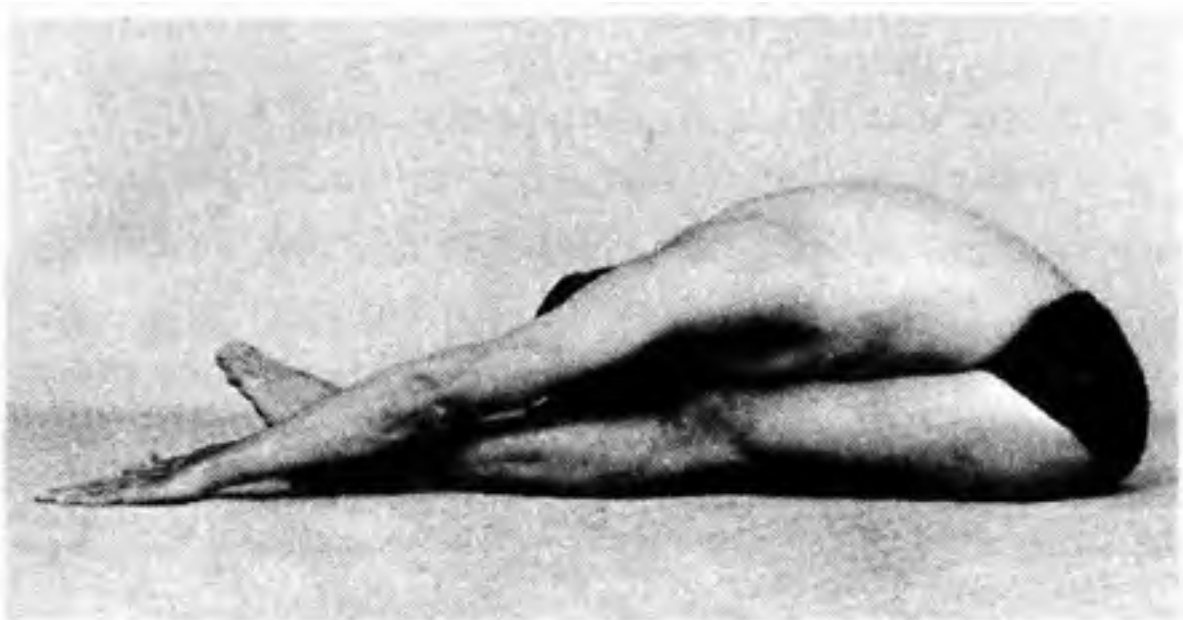


160

10. See that the back of the legs at the knee joints rests firmly on the ground. In the initial stages the knees will be lifted off the floor. Tighten the muscles at the back of the thighs and pull the trunk forward. Then the back of the knee joints will rest on the floor.

11. Try and stay in whichever of the above positions you can achieve from 1 to 5 minutes, breathing evenly.

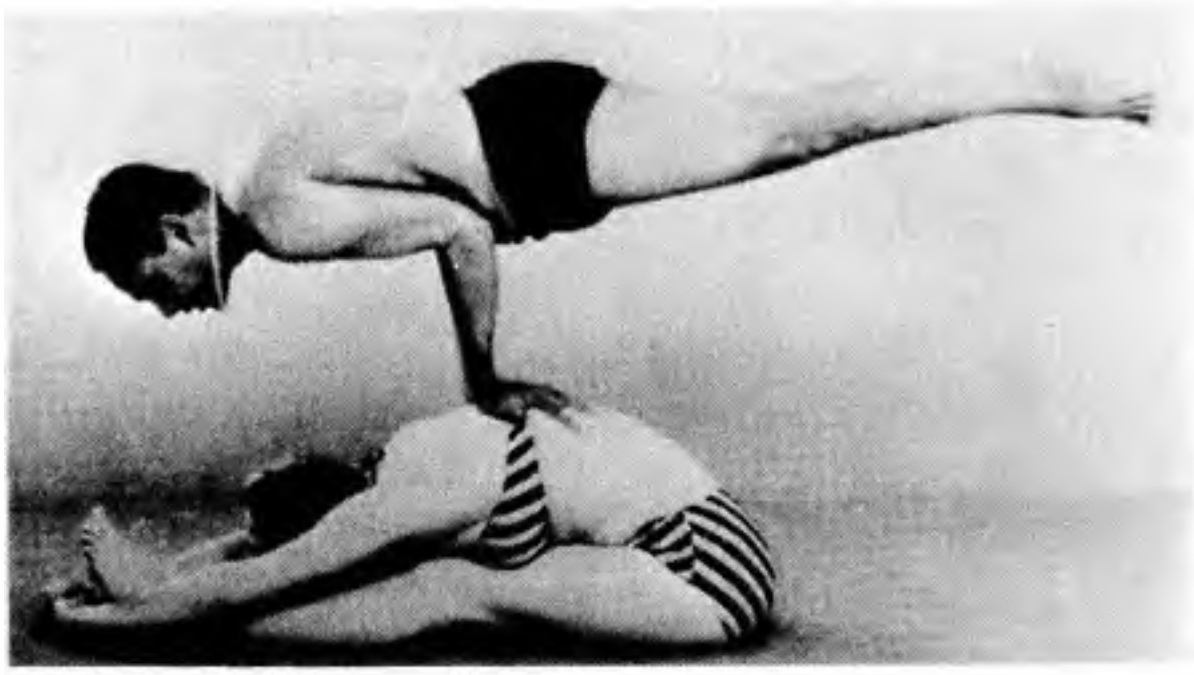
12. Advanced pupils may extend the hand straight, rest the palms on the floor, join the thumbs beyond the outstretched feet and rest the chin on the shins beyond the knees. (Plate 161.) Stay for a minute or two with even breathing.



161

13. Inhale, raise the head from the knees and relax.

14. One does not feel any weight on the back in correct Paschimottanāsana. (Plate 162)



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Effects

This āsana tones the abdominal organs and keeps them free from sluggishness. It also tones the kidneys, rejuvenates the whole spine and improves the digestion.

The spines of animals are horizontal and their hearts are below the spine. This keeps them healthy and gives them great power of endurance. In humans the spine is vertical and the heart is not lower than the spine, so that they soon feel the effects of exertion and are also susceptible to the heart diseases. In Paschimottānāsana the spine is kept straight and horizontal and the heart is at a lower level than the spine. A good stay in this pose massages the heart, the spinal column and the abdominal organs, which feel refreshed and the mind is rested. Due to the extra stretch given to the pelvic region more oxygenated blood is brought there and the gonad glands absorb the required nutrition from the blood. This increases vitality, helps to cure impotency and leads to sex control. Hence, this āsana was called Brahmacharyāsana. Brahmacharya means celibacy and a Brahmachāri is one who has controlled the sex appetite.

68. *Parivṛtta Paschimottānāsana* Nine* (Plate 165)

Parivṛtta means turned around, revolved. Paschima literally means the west and refers to the back of the entire body from the head to the heels. Uttāna means an intense stretch. In this variation of Paschimottānāsana the trunk is twisted on one side.

Technique

1. Sit on the floor with the legs stretched straight in front. Keep the

knees tight and the legs touching each other at the knees, ankles, heels and big toes. (Plate 77)

2. Exhale, extend the right arm towards the left foot. Twist the right forearm and the right wrist so that the right thumb points to the floor and the right little finger points up. Then with the right hand hold the outer side of the left foot. Take a breath.

3. Now, exhale, extend the left arm over the right forearm keeping the left wrist up. Twist the left forearm and the left wrist so that the left thumb points to the floor and the left little finger points up. Hold the outer side of the right foot (Plate 163) and take a breath.

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4. Exhale, twist the trunk about 90 degrees to the left by bending and widening the elbows. (Plate 164.) Take a breath. Exhale again, move the head between the arms and look up. The back portion of the upper right arm near the armpit will rest across the left knee. Try and rest the right side ribs on the left thigh. (Front view: Plate 165. Back view: Plate 166.) Due to the lateral twist of the trunk, breathing will be fast. Hold the pose for about 20 seconds.

5. Inhale, release the hands and move the trunk back to its original position. (Plate 163)

6. Now twist the trunk to the right and repeat the pose for the same length of time, following the technique given above, but substituting the word 'left' for the word 'right' and the word 'right' for the word 'left'.

Effects

This invigorating posture tones the abdominal organs and keeps them

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free from sluggishness. It also tones the kidneys and rejuvenates the entire spine, while the digestion is improved. The lateral twist stimulates blood circulation in the spine and relieves backaches. Due to the stretch of the pelvic region, more oxygenated blood is brought there and the

gonad glands absorb the required nutrition from the blood. This increases vitality, helps to cure impotency and promotes sex control.

69. *Ūrdhva Mukha Paschimottānāsana I* Ten* (Plate 168)

Ūrdhva (upwards) and Mukha (face, mouth) when used together mean having the face upwards. Paschimottānāsana is the intense posterior stretch.

Technique

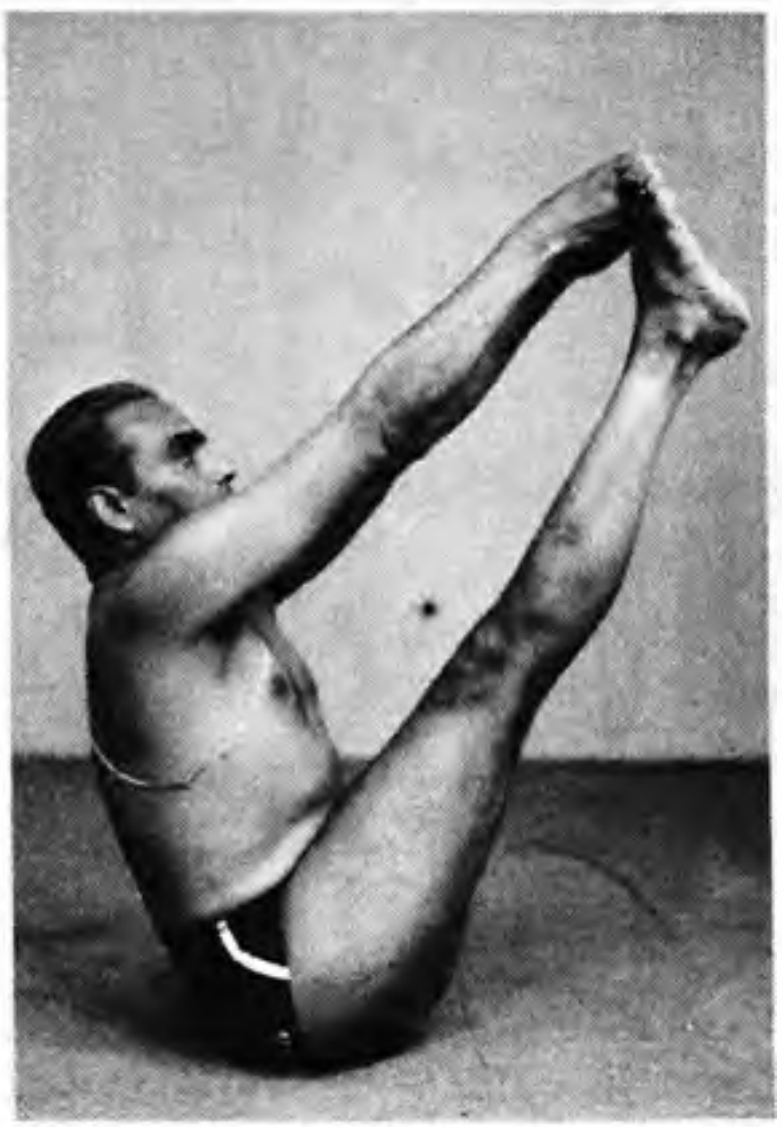
1. Sit on the floor with the legs stretched straight in front. (Plate 77)

2. Flex the knees and bring the feet closer to the buttocks.

3. Catch the toes with the hands, exhale and stretch the legs up in the air, straighten them at the knees, pull the knee-caps towards the thighs and balance on the buttocks, keeping the spine as concave as you can. This position is called:

70. *Ubhaya Pādāṅguṣṭhāsana* Three* (Plate 167)

(Ubhaya = both, pādāṅguṣṭha = big toe)
To start with one rolls over backwards to the floor, and it takes some time and practice to learn to balance on the buttocks alone. Stay in the pose from 30 to 60 seconds with normal breathing.



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4. After securing the balance, release the toes and hold the heels.

5. When this becomes easy, interlock the fingers behind the extended feet and balance. Then without disturbing the position of the legs, move the head and trunk nearer to them, stretch the neck up and with an exhalation rest the forehead on the knees. (Plate 168.) Now stretch the legs up to the full extent and also the spine. Hold the pose for about 30 seconds with normal breathing.

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6. Inhale, release the hands, bend the legs, rest them on the floor and relax.

71. *Ūrdhva Mukha Paschimottānāsana II* Ten* (Plate 170)

Technique

1. Lie flat on the floor or carpet and place the hands straight over the head. (Plate 276)

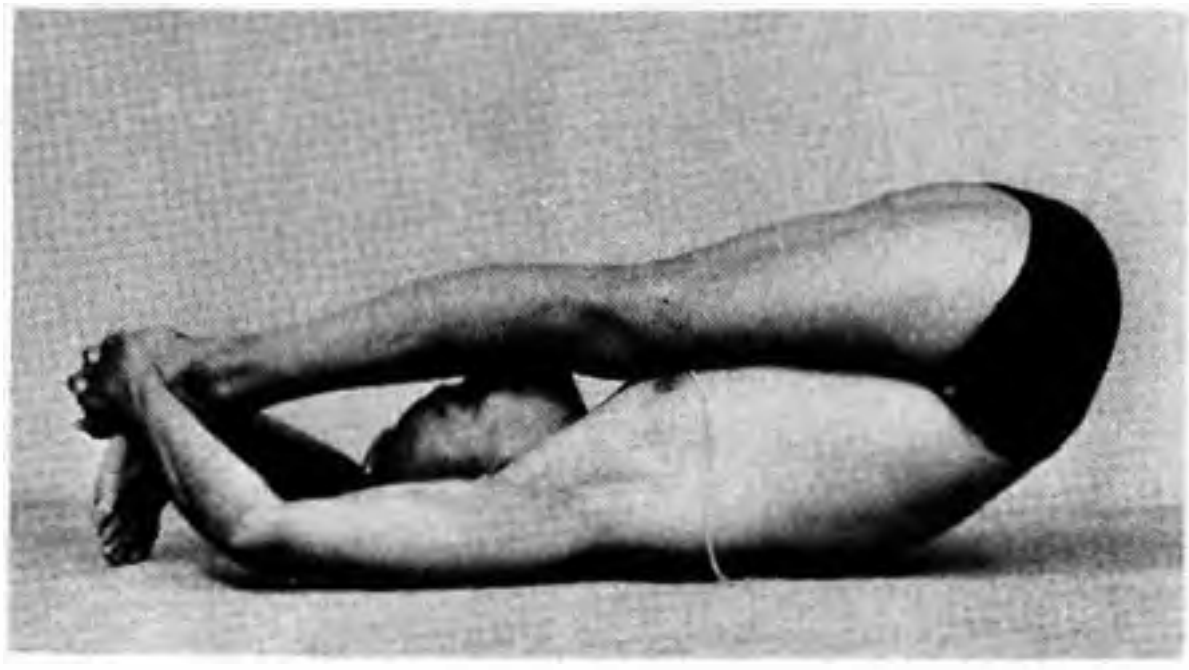
2. Stretch the legs straight, tighten the knees and take a few deep breaths.

3. Exhale and slowly raise the legs together and bring them over the head.

4. Interlock the fingers, clasp the soles and stretch the legs straight up with the knees kept tight. Rest the entire back on the floor. (Plate 169.) Take three deep breaths.

169

5. Exhale, lower the legs towards the floor beyond the head by widening the elbows. Try and keep the pelvis as near the floor as possible. Keep the legs tightened at the knees throughout. Rest the chin on the knees. (Plate 170)



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6. Stay in the position from 30 to 60 seconds, breathing evenly.

7. Exhale and move the legs to the original position. (Plate 169)

8. Inhale, release the hands, bring the legs straight to the floor (Plate 276) and relax.

Effects

The pose helps balance and poise. The legs stretch fully which makes the thighs and calves shapely. The benefits are the same as those of Paschimottānāsana (Plate 160), and in addition this pose prevents hernia and relieves severe backaches.

72. *Pūrvottānāsana* One* (Plate 171)

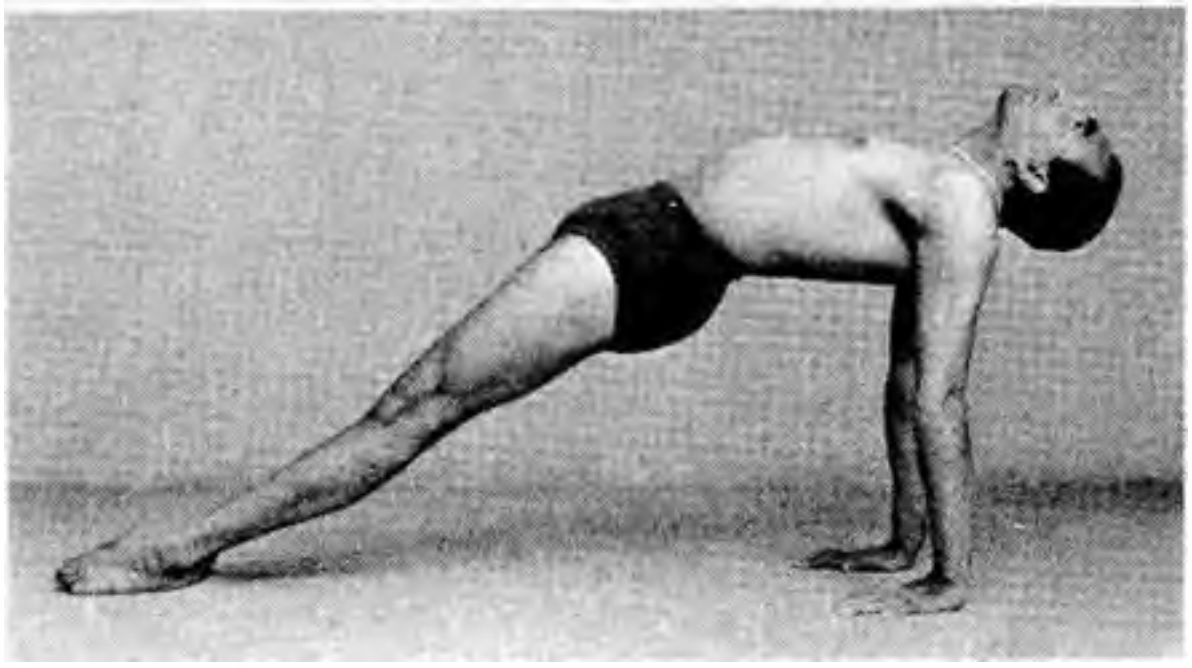
Pūrva literally means the East. It means the front of the whole body from the forehead to the toes. Uttāna means an intense stretch. In this posture, the whole front of the body is stretched intensely.

Technique

1. Sit on the floor with the legs stretched straight in front. Place the palms on the floor by the hips, with the fingers pointing in the direction of the feet. (Plate 77)

2. Bend the knees and place the soles and heels on the floor.

3. Take the pressure of the body on the hands and feet, exhale and lift the body off the floor. Straighten the arms and the legs and keep the knees and elbows tightened. (Plate 171)



171

4. The arms will be perpendicular to the floor from the wrists to the shoulders. From the shoulders to the pelvis, the trunk will be parallel to the floor.

5. Stretch the neck and throw the head as far back as possible.

6. Stay in this posture for one minute, breathing normally.

7. Exhale, bend the elbows and knees, lower the body to sit on the floor and relax.

Effects

This posture strengthens the wrists and ankles, improves the movement of the shoulder joints and expands the chest fully. It gives relief from the fatigue caused by doing other strenuous forward bending āsanas.

73. *Ākarṇa Dhanurāsana* Eleven* (Plates 173 and 175)

Karṇa means the ear. The prefix ā expresses the sense of near to, towards. Dhanu means a bow. In this posture, the left foot is pulled up till the heel touches the ear as an archer pulls the bow-string, while the other hand holds the right big toe, this leg lying straight on the floor. In the second movement the raised leg is straightened up until it is almost perpendicular, the big toe being held throughout by the hand like an extended bow.

The āsana is given below in two movements.

Technique

1. Sit on the floor with the legs stretched straight in front. (Plate 77)

2. Hold the right big toe between the right thumb and the index and middle fingers. Similarly hold the left big toe. (Plate 153)

3. Exhale, bend the left elbow and lift the left foot up by bending the knee. (Plate 172.) Take a breath. Now exhale and pull the left foot up until the heel is close to the left ear. At the same time draw the left arm back from the shoulder. (Plate 173.) Do not let go of the right big toe. Keep the right leg extended throughout and see that the back of the entire leg rests on the floor. The extended right leg should not bend at the knee.

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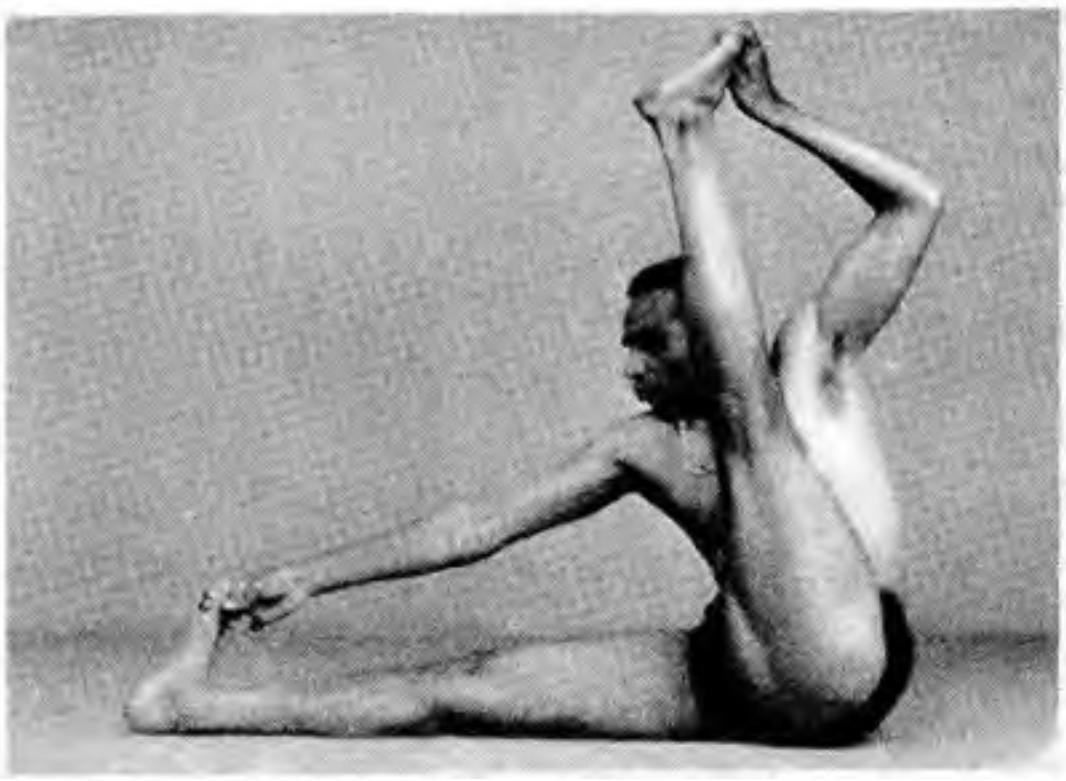
173

4. Hold this position from 15 to 20 seconds with normal breathing. This is the first movement.

5. Now exhale and stretch the left leg up vertically. (Plate 174.) Take a breath. Exhale, draw the leg further back until it touches the left ear. (Plate 175.) Continue to grip the toes of both feet and fully extend both legs. Do not bend them at the knees. It takes some time to learn to balance in this second movement. Remain in this position from 10 to 15 seconds, breathing normally.

174

6. Exhale, bend the left leg at the knee and bring the left heel to the left ear as in position 3 above. (Plate 173.) Then lower the left leg to the floor and keep both legs stretched on the floor. (Plate 153)



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7. Repeat the pose on the right side, pulling the right foot towards the right ear and raising it up vertically near the right ear, while keeping the left leg straight on the floor. Do not relax the hand grip of the toes. Maintain the position on both sides for an equal length of time. Then release the hands and relax.

Effects

The practice of this posture makes the leg muscles very flexible. The abdominal muscles are contracted and this helps to move the bowels. Minor deformities in the hip joints are adjusted. The lower portion of the spine is exercised. The pose is full of grace. It should be practised until it comes effortlessly and gives the appearance of a trained archer discharging arrows from his bow.

74. *Sālamba Śīrṣāsana I* Four* (Plates 184, 185 and 190)

Sālamba means with support. Śīrṣa means the head. This is the head stand pose, one of the most important Yogic āsanas. It is the basic posture. It has several variations, which are described later as the Śīrṣāsana cycle. Its mastery gives one balance and poise, both physically and mentally. The technique of doing it is given at length in two parts; the first is for beginners, the second for those who can remain balanced in the pose. Attention is specially directed to the hints on Śīrṣāsana given after the two techniques.

Technique for beginners

1. Spread a blanket fourfold on the floor and kneel near it.

2. Rest the forearms on the centre of the blanket. While doing so take care that the distance between the elbows on the floor is not wider than the shoulders.

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3. Interlock the fingers right up to the finger-tips (Plate 176), so that the palms form a cup. Place the sides of the palms near the little fingers on the blanket. While going up on to your head or balancing, the fingers should be kept tightly locked. If they are left loose, the weight of the body falls on them and the arms ache. So remember to lock them well.

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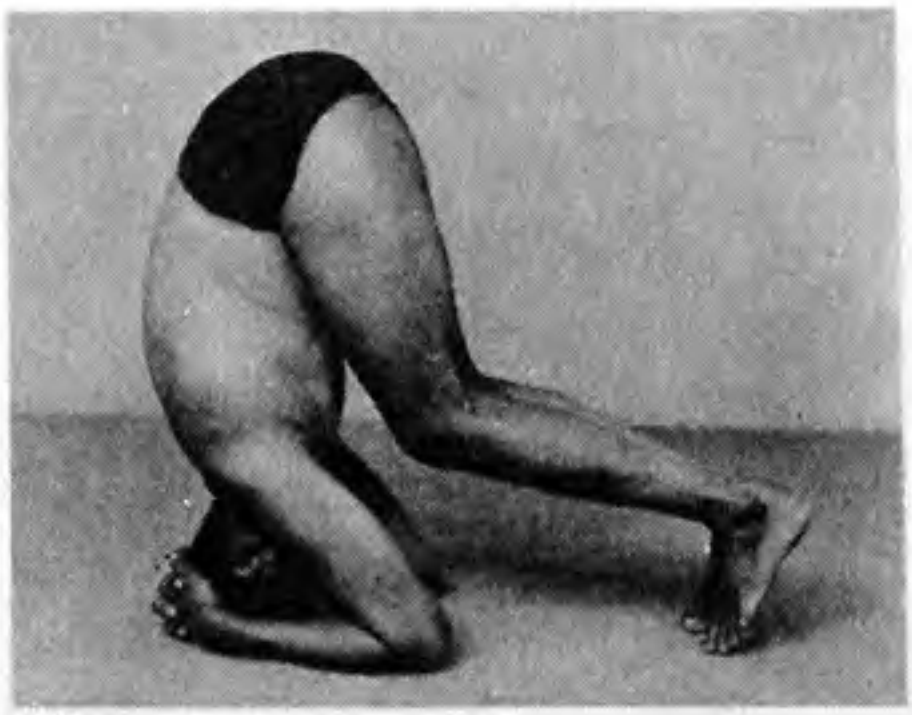
4. Rest the crown of the head only on the blanket, so that the back of the head touches the palms which are cupped. (Plate 177.) Do not rest the forehead nor the back but only the crown of the head on the blanket. To do this move the knees towards the head.

5. After securing the head position, raise the knees from the floor by moving the toes closer to the head. (Plate 178)



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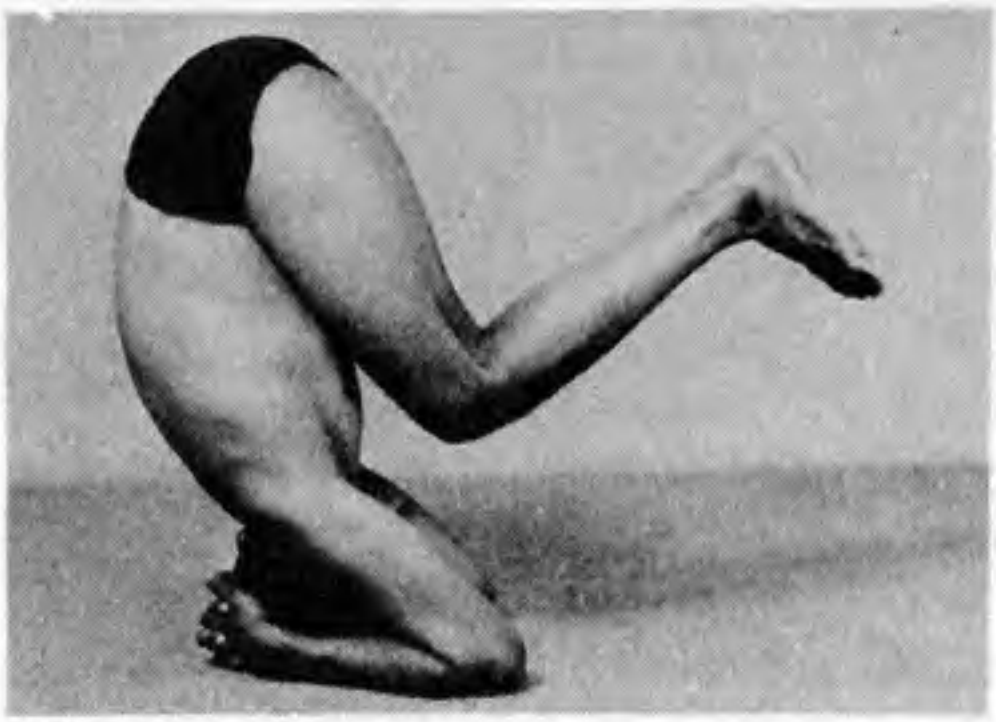

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6. Exhale, take a gentle swing from the floor and lift the legs off the ground with bent knees. (Plate 179.) Take the swing in such a way that both feet leave the floor simultaneously. When once this position is secured, follow the various stages of the leg movements as in Plates 180, 181, 182 and 183, step by step.

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183

7. Stretch the legs and stand on the head, keeping the whole body perpendicular to the floor. (Front view: Plate 184. Back view: Plate 185. Side view: Plate 190)

8. After staying in the final position to capacity, from one to five minutes, flex the knees and slide down to the floor in the reverse order as in Plates 183, 182, 181, 180, 179, 178 and 177.

9. A beginner must have the assistance of a friend or do the āsana against a wall. While practising against a wall, the distance between it and the head should not be more than 2 or 3 inches. If the distance is greater, the spine will curve and the stomach will protrude. The weight of the body will be felt on the elbows and the position of the head may change. The face will appear to be flushed and the eyes either strained or puffed. It is, therefore, advisable for a beginner to do the head stand in a corner where two walls meet, placing the head some 2 to 3 inches from either wall.

10. While doing the head stand against a wall or in a corner, the beginner should exhale, swing the legs up, support the hips against the side of the wall and move the feet up. In a corner, he can touch the heels to either side of the walls. He should then stretch the back vertically up, gradually leave the support of the wall and learn to

184

185

master the balance. While coming down, he can rest the feet and hips against the wall, slide down and kneel, resting his knees on the floor. The movements of coming down and going up should be done with an exhalation.

11. The advantage which the beginner has of balancing in a corner is that his head and legs will be in the right angle formed by the walls, and he will be sure of his right position. This will not be the case if he balances against a straight wall. For while his balance is insecure he may sway from the wall, or his body may tilt or swing to the stronger side, while his legs may rest against the wall with a bend either at the waist or the hips. The beginner will not be in a position to know that he has tilted to one side, much less to correct it. In time he may learn to balance on the head, but by habit his body may still tilt or his head may not be straight. It is as hard to correct a wrong pose in the head stand as it is to break a bad habit. Moreover this wrong posture may well lead to aches and pains in the head, neck, shoulders and back. But the two walls of a corner will help the beginner to keep the āsana symmetrical.

12. When once balance is secured, it is advisable to come down to the floor with the legs straight (that is, without bending the knees

at all) and with a backward action of the hips. At first, it is not possible to go up and come down without bending the legs, but the correct method should be learnt. Once the beginner has confidence in the head stand, he will find it more beneficial to go up and down with the legs together and straight, without any jerks.

13. It takes time for the beginner to become oriented to his surroundings while he is balancing on his head. Everything will seem at first to be completely unfamiliar. The directions and instructions will appear confusing and he will find it an effort to think clearly or to act logically. This is due to fear of a fall. The best way to overcome fear is to face with equanimity the situation of which one is afraid. Then one gets the correct perspective, and one is not frightened any more. To topple over while learning the head stand is not as terrible as we imagine. If one overbalances, one should remember to loosen the interlocked fingers, relax, go limp and flex the knees. Then one will just roll over and smile. If the fingers are not loosened they will take the jerk of the fall which will be painful. If we do not relax and go limp while falling we hit the floor with a hard bump. If we flex the knees, we are unlikely to graze them in the fall. After one has learnt to balance against a wall or in a corner, one should try the head stand in the middle of the room. There will be a few spills and one must learn the art of falling as indicated above. Learning to do Śīrṣāsana in the middle of a room gives the beginner great confidence.

Technique for those who can balance Eight*

1. Follow the technique described for beginners from positions 1 to 4.

2. After securing the head position, stretch the legs straight by raising the knees from the floor. Move the toes nearer to the head and try to press the heels to the floor, keeping the back erect. (Plate 186)

3. Stretch the dorsal or middle region of the spine and stay in this position for about 30 seconds while breathing evenly.

4. Exhale, raise the heels and take the toes off the floor with a backward movement of the hips. Raise both legs simultaneously, keeping them poker stiff. (Plate 187.) Take a breath.

5. Again with an exhalation move the legs up until they are parallel to the floor. This position is called:

75. *Ūrdhvā Daṇḍāsana* Eight* (Plate 188)

(Ūrdhvā = up, daṇḍa = a staff)

Stay in this position for 10 seconds with normal breathing.

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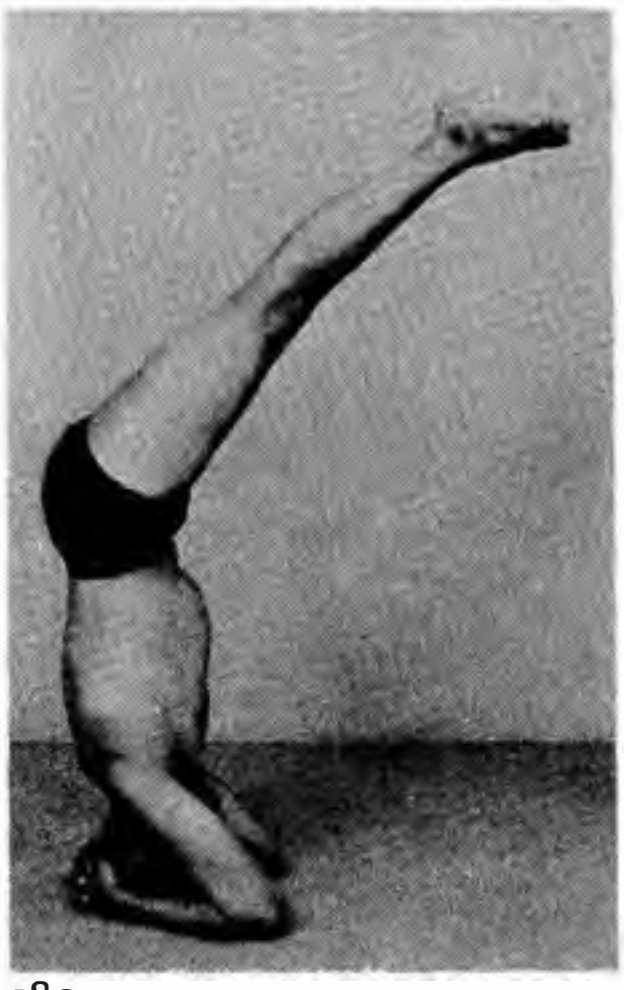
6. Exhale, move the legs up as in Plate 189, and then pull them up to the vertical position. (Side view: Plate 190.) Stay in this pose from 1 to 5 minutes while breathing evenly.



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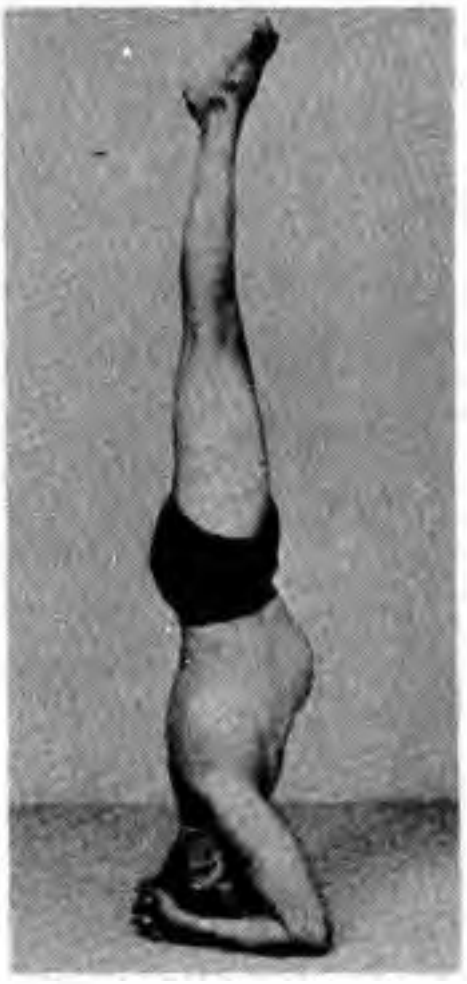

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7. Come down gradually, observing the above technique in a reverse order. (Plates 189, 188, 187 and 186.) Rest the feet on the floor, bend the knees and raise the head from the floor or blanket.

8. While coming down, it is advisable to stay in Ūrdhvā Daṇḍāsana according to capacity up to one minute while breathing normally. In this position, the neck and trunk will not be perpendicular to the floor but will sway slightly backwards. The neck, shoulders and spine will be put to a very great strain and in the initial stages one cannot stay with the legs parallel to the floor for more than a few seconds. The stay will become longer as the neck, shoulders, abdomen and spine become stronger.

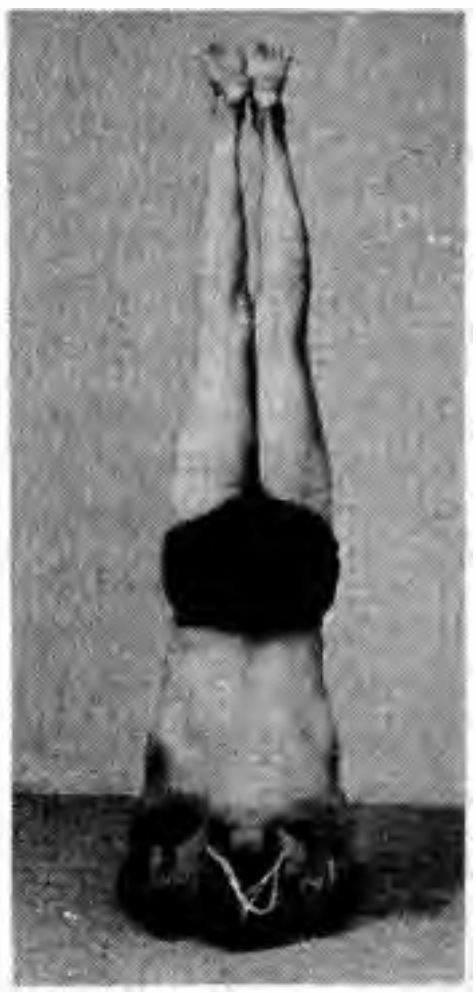
Hints on Śīrṣāsana

1. In Śīrṣāsana the balance alone is not important. One has to watch from moment to moment and find out the subtle adjustments. When we stand on our feet, we need no extra effort, strength or attention, for the position is natural. Yet the correct method of standing affects our bearing and carriage. It is, therefore, necessary to master the correct method as pointed out in the note on Tāḍāsana. In Śīrṣāsana also, the correct position should be mastered, as a faulty posture in this āsana will lead to pains in the head, neck and back.

2. The whole weight of the body should be borne on the head alone and not on the forearms and hands. The forearms and hands are to be used only for support to check any loss of balance. In a good pose you feel a circle, about the size of an Indian rupee, of the head in contact with the blanket on the floor.

3. The back of the head, the trunk, the back of the thighs and the heels should be in a line perpendicular to the floor and not inclined to one side. The throat, chin and breast-bone should be in one line, otherwise the head will tilt to one side or move forward. As regards the interlocked hands behind the head, the palms should not be stuck into the head. The upper and the lower sides of the palms should be in a line, otherwise the crown of the head will not rest on the floor correctly.

4. The elbows and the shoulders should be in a line and the elbows should not be widened. The shoulders should be kept as high above the floor as possible by moving them up and stretching them sideways. In order to learn the correct shoulder stretch, release the interlocked fingers and remove the hands from behind the head and widen the wrists from the forearms, keeping the elbows stationary. Place the wrists on the floor with the palms facing up, touch the shoulders with the fingers, keeping the wrists on the floor and maintain the balance. (Plate 191.) This will not only improve the balance but also prepare you for the other Śīrṣāsana poses described later.



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5. As to the position of the trunk, the dorsal region should be pushed forward as well as up. The lumbar (waist) and pelvic regions should not be pushed forward, while the trunk from the shoulders to the pelvis should be kept perpendicular. If the pelvic area juts forward, it means that you are bearing the weight of the body not on the head alone but also on the elbows for you have not stretched the dorsal region (the chest) correctly. When viewed from the side, the body from the neck to the heels should appear straight.

6. As far as possible try and join the thighs, knees, ankles and toes. Stretch the legs fully, especially the back of the knees and thighs. If the legs swing back tighten the knees and the lower median portion of the abdomen above the pubes. This will keep the legs perpendicular. Keep the toes pointing up. If the legs swing forward, stretch the dorsal region and push the pelvic area slightly back until it is in line with the shoulders. The body will then feel light and the pose will be exhilarating.

7. While going up or holding the head stand the eyes should never become bloodshot. If they do, the pose is faulty.[1]

8. The time limit for Śīrṣāsana depends upon individual capacity and the time at one's disposal. One can hold it comfortably from 10 to 15 minutes. A beginner can do it for 2 minutes and go up to 5 minutes. It is always difficult for a beginner to balance for one minute, but once he succeeds he can be sure that from then on he will be able to master Śīrṣāsana soon.

9. While going up or coming down, move both legs together, inch by inch. All the movements should be done with exhalation. Inhale while waiting in a position. The effect of going down and coming up straight without bending the legs at the knees is that harmonious slow movement is gained and the flow of blood to the head is controlled. The face does not flush from jerky and fast movements, as the flow of blood to the waist and the legs is also controlled. Then there is no danger of losing balance from giddiness or numbness of the feet when one stands up immediately after the head balance. In course of time the whole movement of going up, staying and coming down should become as effortless as possible. In a perfect Śīrṣāsana your body feels completely stretched and at the same time you experience a feeling of complete relaxation.

[1] I have taught this pose to a lady of 65 who was suffering from glaucoma. Now she finds the eyes are completely rested and the pain in them is much lessened. Medical examination revealed that the tension in the eyeballs had decreased. I am mentioning this to prove the value of the correct head stand.

10. It is always safe to perfect Sarvāngāsana (Plate 223) first before attempting Śīrṣāsana. If the standing poses described earlier (Plates 1 to 36) and the various movements of Sarvangāsana and Halāsana (Plates 234 to 271) are mastered first, Śīrṣāsana will come without much effort. If these elementary āsanas have not been mastered, the period taken to learn Śīrṣāsana will be longer.

11. After one has learnt to balance in Śīrṣāsana, however, it is preferable to perform Śīrṣāsana and its cycle (Plates 190 to 218) first before practising any other āsana. This is because one cannot balance or hold the head stand if the body is exhausted by doing other poses or if the breathing becomes fast and shaky. Once the body is tired or the breathing is not free and easy, the body will shake and it will be difficult to maintain the balance. It is always better to do Śīrṣāsana first when one is fresh.

12. Śīrṣāsana and its cycle should always be followed by Sarvāngāsana and its cycle. It has been observed that people who devote themselves to Śīrṣāsana alone without doing the Sarvāngāsana poses are apt to lose their temper over trifling things and become irritated quickly. The practice of Sarvāngāsana coupled with Śīrṣāsana checks this trait. If Sarvāngāsana is the Mother, then Śīrṣāsana may be regarded as the Father of all āsanas. And just as both parents are necessary for peace and harmony in a home, so the practice of both these āsanas is essential to keep the body healthy and the mind tranquil and peaceful.

Effects of Śīrṣāsana

The ancient books have called Śīrṣāsana the king of all āsanas and the reasons are not hard to find. When we are born, normally the head comes out first and then the limbs. The skull encases the brain, which controls the nervous system and the organs of sense. The brain is the seat of intelligence, knowledge, discrimination, wisdom and power. It is the seat of Brahman, the soul. A country cannot prosper without a proper king or constitutional head to guide it; so also the human body cannot prosper without a healthy brain.

The *Bhagavad-Gītā* says: 'Harmony (sattva), mobility (rajas), inertia (tamas), such are the qualities, matter-born; they bind fast, O great armed one (Arjuna), the indestructible dweller in the body.' (Fourteenth Discourse, verse 5.) All these qualities stem from the brain, and sometimes one quality prevails and sometimes the others. The head is the centre of sattvic qualities which control discrimination; the trunk of Rājasic qualities which control passion, emotion and actions; and the region below the diaphragm of tāmasic qualities which control sensual

pleasures like the enjoyment of food and drink, and the thrills and pleasures of sex.

Regular practice of Śīrṣāsana makes healthy pure blood flow through the brain cells. This rejuvenates them so that thinking power increases and thoughts become clearer. The āsana is a tonic for people whose brains tire quickly. It ensures a proper blood supply to the pituitary and pineal glands in the brain. Our growth, health and vitality depend on the proper functioning of these two glands.

People suffering from loss of sleep, memory and vitality have recovered by the regular and correct practice of this āsana and have become fountains of energy. The lungs gain the power to resist any climate and stand up to any work, which relieves one from colds, coughs, tonsillitis, halitosis (foul breath) and palpitations. It keeps the body warm. Coupled with Sarvāngāsana movements (Plates 234 to 271), it is a boon to people suffering from constipation. Regular practice of Śīrṣāsana will show marked improvement in the haemoglobin content of the blood.

It is not advisable to start with Śīrṣāsana and Sarvāngāsana when one suffers from high or low blood pressure.

Regular and precise practice of Śīrṣāsana develops the body, disciplines the mind and widens the horizons of the spirit. One becomes balanced and self-reliant in pain and pleasure, loss and gain, shame and fame and defeat and victory.

The Śīrṣāsana Cycle

In Śīrṣāsana there is a variety of movements which can be practised at one stretch after staying in Sālamba Śīrṣāsana I (Plate 184) for not less than 5 minutes according to one's capacity. One may practise for 5 to 15 minutes and then perform these various movements for 20 to 30 seconds on each side at a time.

76. *Sālamba Śīrṣāsana II* Five* (Plate 192)

Technique

1. Spread a blanket fourfold on the floor and kneel near it.

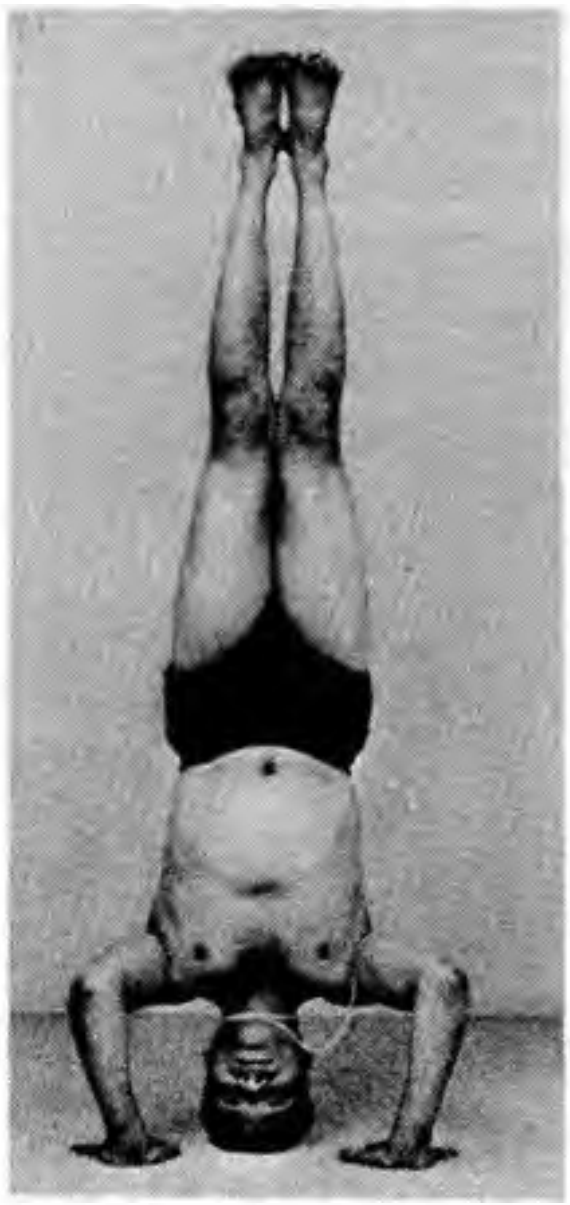
2. Place the right palm on the floor just outside the right knee, and the left palm just outside the left knee. The palms should be parallel to each other and the fingers should point straight towards the head. The distance between the palms on the floor should not be wider than the width of the shoulders.

3. Move the knees towards the head and place the crown on the centre of the blanket.

4. After securing the head position, stretch the legs straight by raising the knees from the floor. Move the toes still closer to the head and press the heels to the floor, keeping the back erect.

5. Stretch the dorsal region of the spine by pushing the chest forward and hold this position for a few seconds. Take 3 to 4 breaths.

6. Exhale, take a gentle swing from the floor and lift the legs off it by flexing the knees. Both feet should leave the floor together. When this position is secured, stretch the legs up, exhale, keep the toes pointing up, tighten at the knees and balance. (Plate 192)



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7. In the balancing position only the crown of the head and the two hands are on the floor. From the wrists to the elbows the forearms are to be kept perpendicular to the floor and parallel to each other. From the elbows to the shoulder the upper arms should be kept parallel to the floor and to each other.

8. Follow the rest of the technique and hints given under Sālamba Śīrṣāsana I for those who can balance.

9. Mastery of this variation of the head stand is essential for learning the other advanced āsanas like Bakāsana (Plate 410), Ūrdhva Kukku-

ṭāsana (Plate 419), Gālavāsana (Plates 427 and 428) and Kouṇḍinyāsana (Plate 438), etc.

The Śīrṣāsana Cycle (continued)

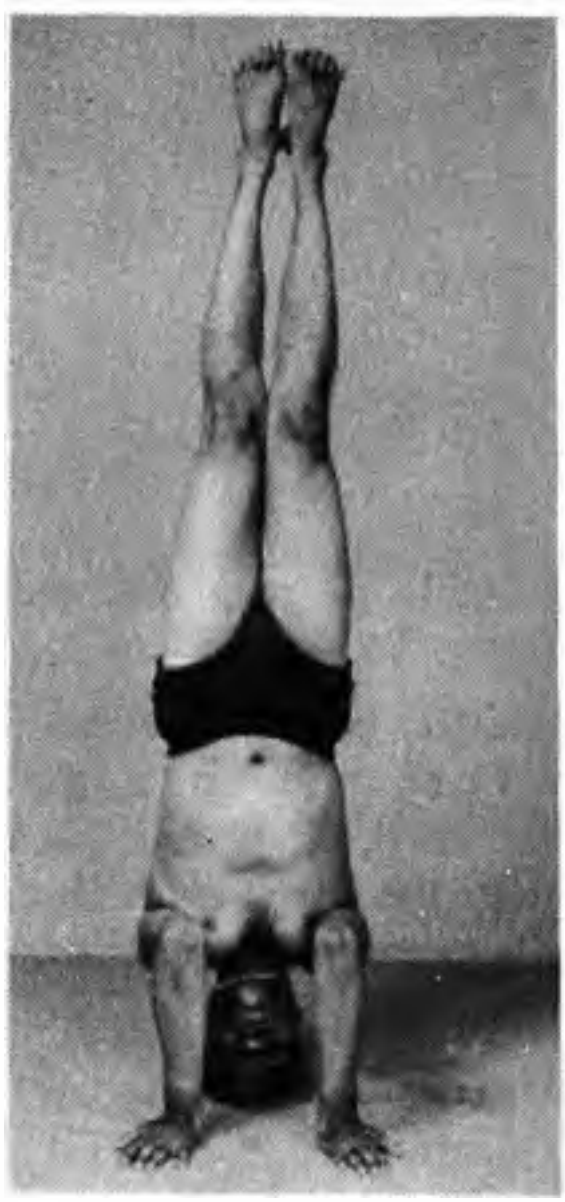
77. *Sālamba Śīrṣāsana III* Eight* (Plates 194 and 195)

Technique

1. Kneel on the floor near the blanket. Widen the knees about one foot.

2. Invert the palms and place them on the blanket between the knees so that the fingers point to the feet. The forearms from the wrist to the elbow should be kept perpendicular to the floor and parallel to each other. The distance between the palms should not be wider than that between the shoulders.

3. Rest the crown of the head on the blanket just behind the wrists. The forehead will face the inner side of the wrists. The head should be placed in the centre of the two hands, so that the crown is equidistant from the palms on the floor.



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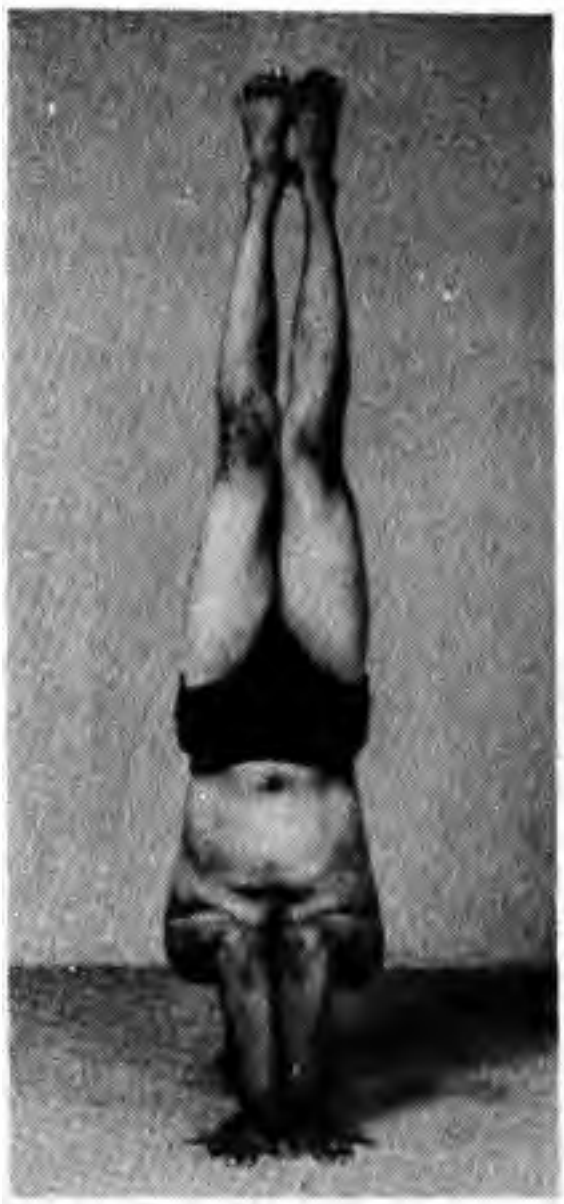
4. Press the wrists and palms down firmly, exhale, raise the feet from the floor, lift the legs up to a perpendicular position and balance. Do not widen the elbows, but try and bring them as close as possible. (Plate 193)

5. Balance in this position for a minute with normal breathing and then exhale and gently lower the legs to the floor.

6. After learning to balance in this variation of Śīrṣāsana, try to bring the hands as near to each other as possible until the sides of the palms and the little fingers touch each other. (Front view: Plate 194. Side view: Plate 195.) Also learn to go up and come down, keeping the legs straight without bending at the knees. (Plates 196 and 197.) This variation of Śīrṣāsana will give firmness and confidence in balance.



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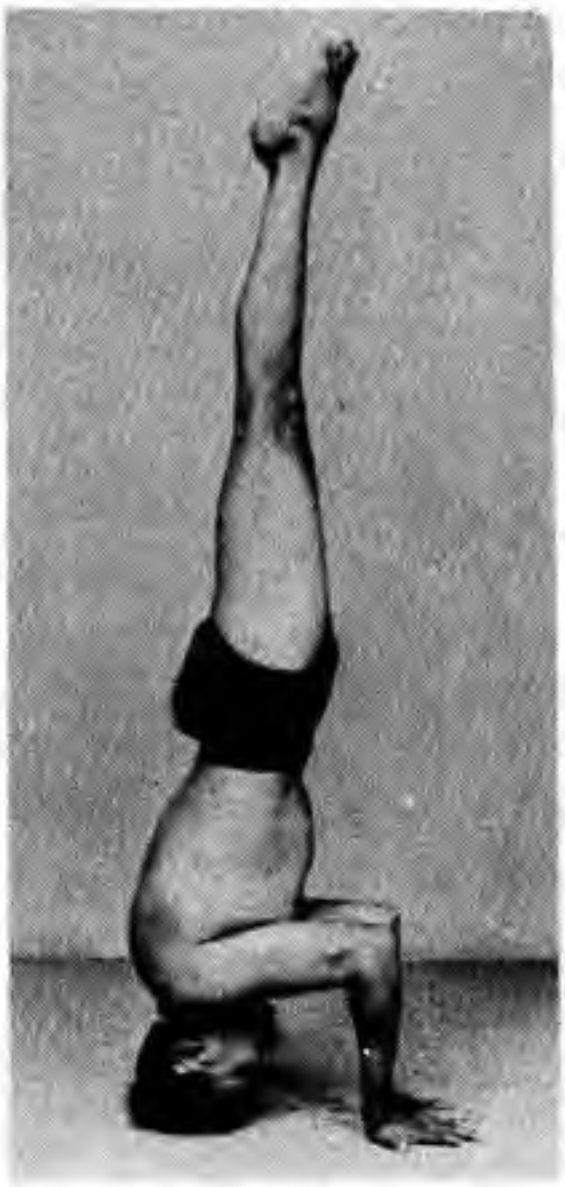

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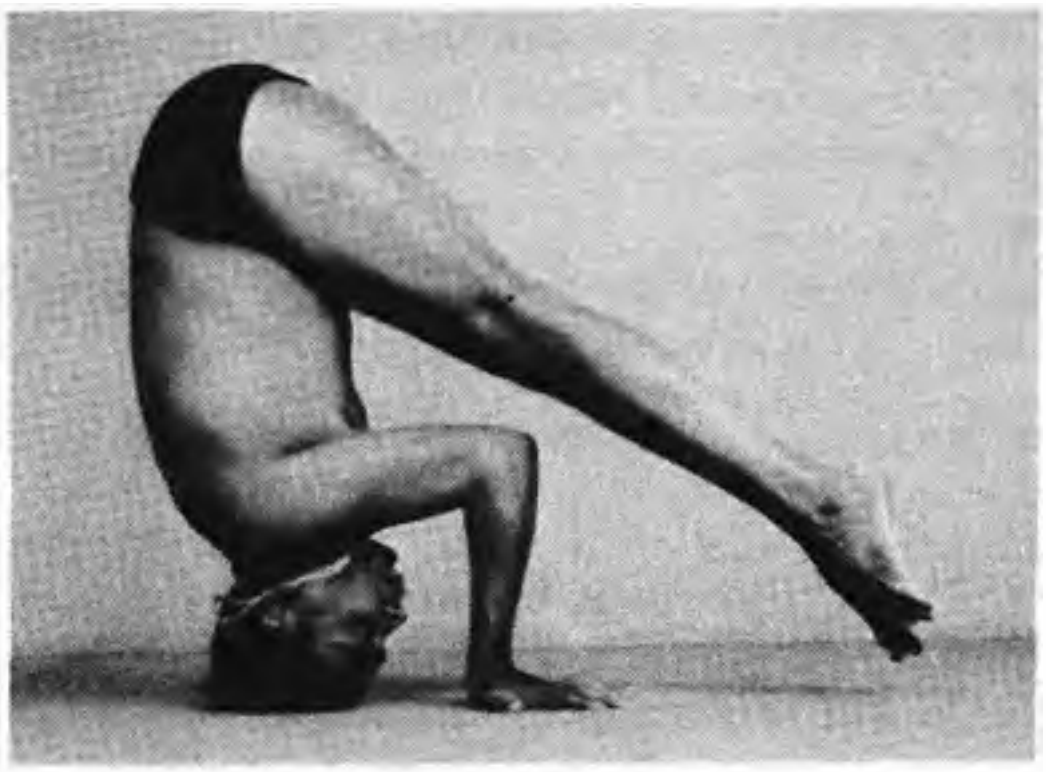
78. *Baddha Hasta Śīrṣāsana* Four* (Plate 198)

Baddha means bound, caught, restrained. Hasta means hand. This is a variation of the head stand.

Technique

1. Spread a blanket fourfold on the floor, and kneel near it.



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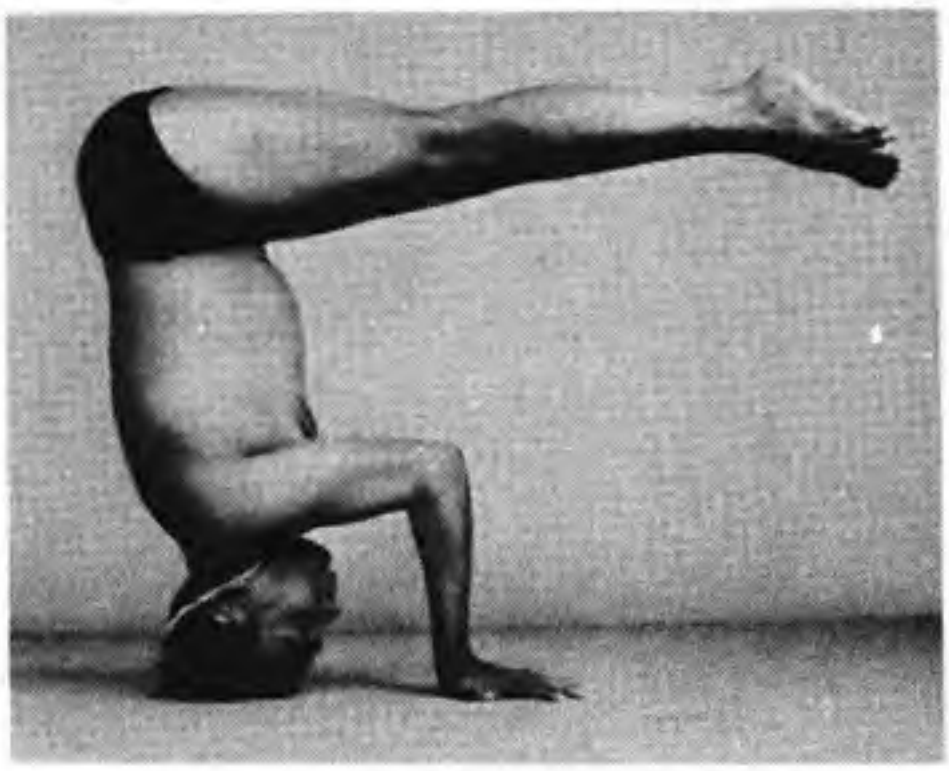

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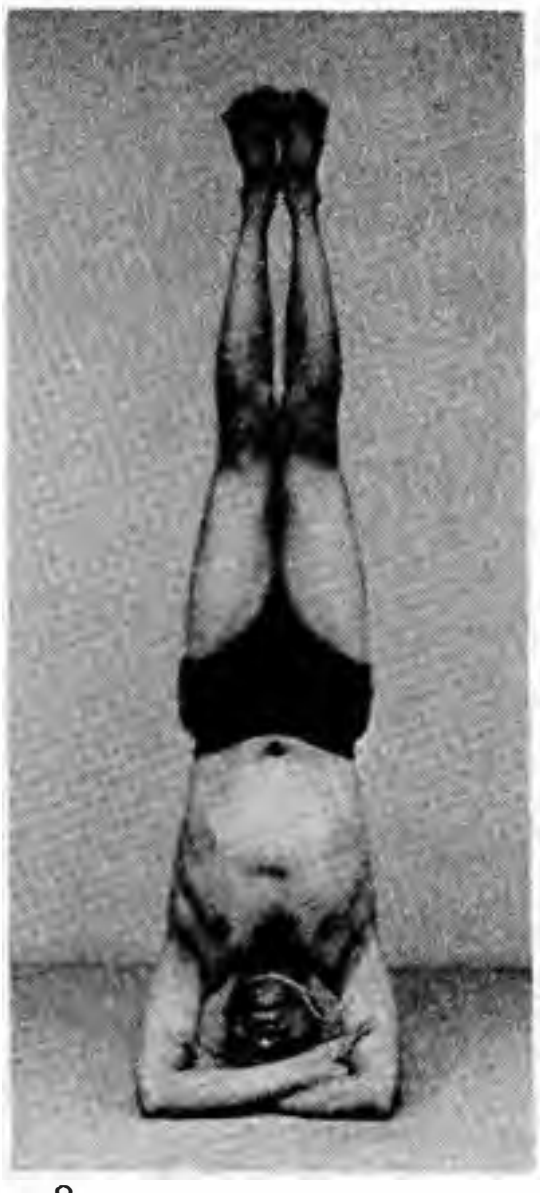
2. Fold the arms in front of the chest and catch the right upper arm near the elbow joint with the left hand. Similarly catch the left upper arm with the right hand.

3. Rest the elbows and the folded forearms on the blanket. Bend forward and place the crown of the head on the blanket just beyond the folded forearms. The forehead will be just behind the locked forearms.

4. Raise the knees from the floor and stretch the legs out straight.

5. After securing the weight on the head and elbows, press the forearms down, exhale, gently push the trunk slightly back without losing the hand grip and pull the legs up off the floor. (Plate 198)



198

6. While the legs are going up to the perpendicular, the neck bears the weight of the body and feels the strain. Move the legs up until you feel lightness on the back of the neck and forearms and stretch the dorsal region of the trunk forward. When you feel the lightness, be sure that the body is straight. Follow the technique and hints given for Sālamba Śīrṣāsana I for those who can balance.

7. Remain erect in the head stand for a minute. Then exhale, draw the hips slightly back without lifting the elbows and gently lower the legs to the floor. Try to keep the legs straight and do not bend them at the knees while lowering them.

79. *Mukta Hasta Śīrṣāsana* Six* (Plates 200 and 201)

Mukta means free. Hasta means hand. This is the most difficult variation of Śīrṣāsana to master. When it comes comfortably, one is a perfect master of the head stand. It is comparatively easy to balance in this āsana, but it is extremely difficult to go up and come down keeping the the legs straight without bending them at the knees.

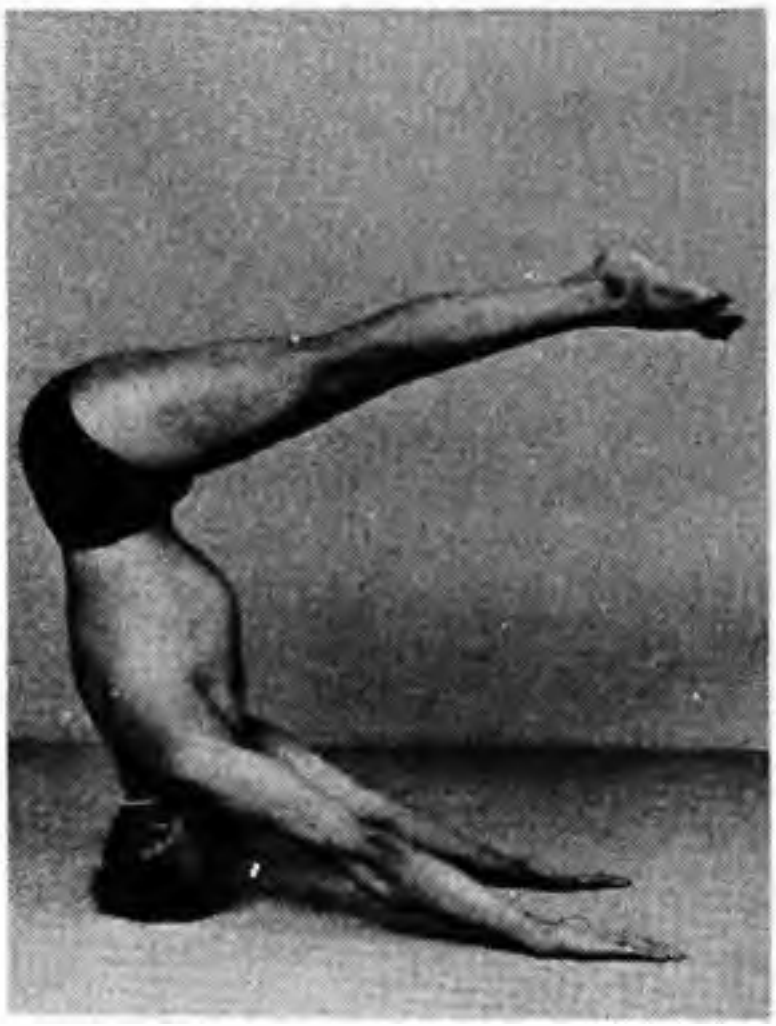
Technique

1. Spread a balanket fourfold on the floor and kneel near it.

2. Bend the trunk forward and rest the crown of the head on the blanket.

3. Stretch the arms straight out in front of the chest towards the feet and rest the back of the wrists on the floor. Keep the arms straight at the elbows with the palms up. The distance between the wrists should be the same as that between the shoulders.

4. Raise the trunk until it is perpendicular to the floor. Press the wrists gently against the floor, exhale and raise the feet. (Plate 199.) Tighten the legs and slowly raise them up until they are perpendicular. (Side view: Plate 200)



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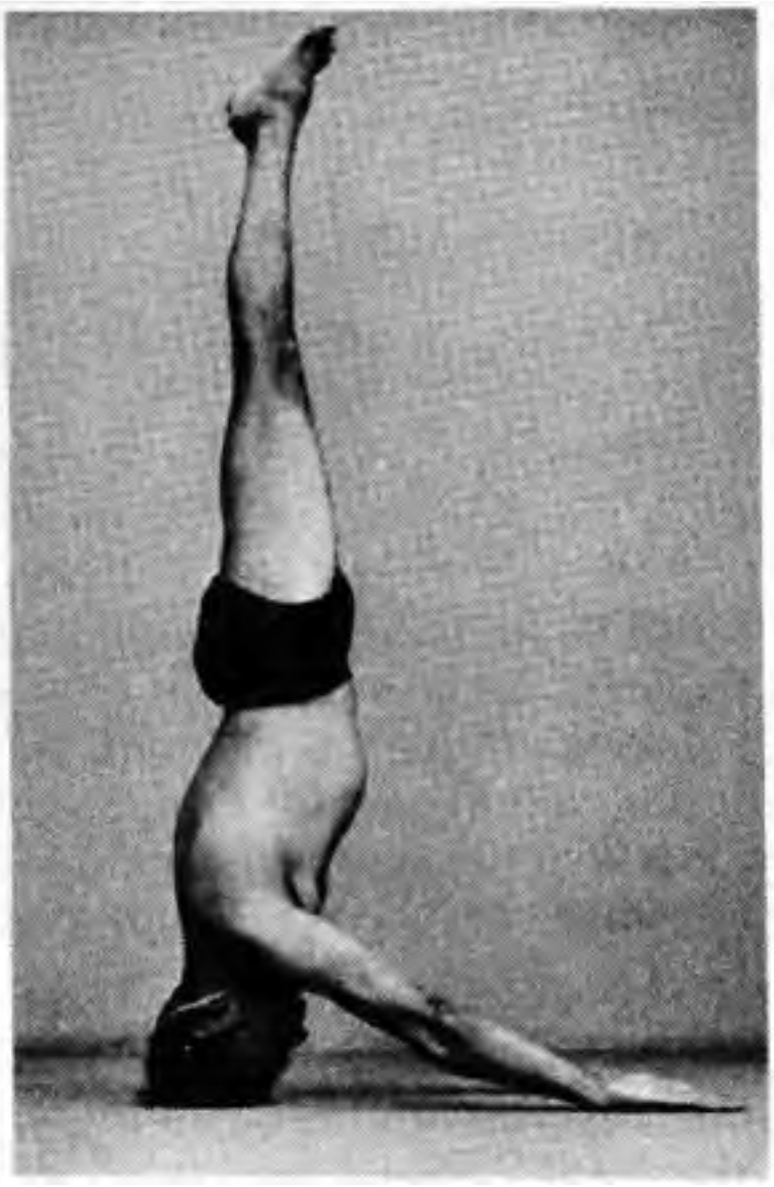
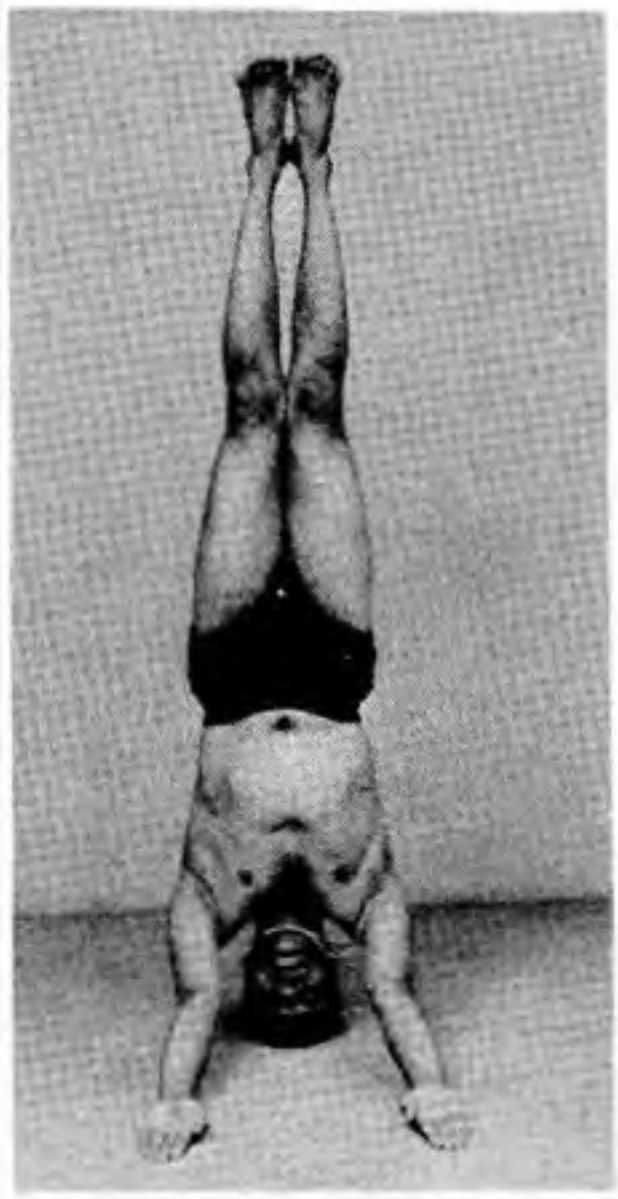


200

5. Stay in the pose for a minute with normal breathing. Keep the arms straight, stretch the elbows and extend the shoulders as high as possible from the floor, without disturbing the position of the wrists. (Front view: Plate 201)

6. Exhale, swing the hips slightly back and bring the legs down to the floor gradually, with the weight of the body thrown slightly on the wrists.



201

7. Then lift the head up from the floor, sit down and relax.

Note. Once mastery over the variations of Śīrṣāsana is secured, it is possible to change the position of the hands while balancing on the head only. One need not then come down again to change the position of the hands. One should learn this gradually, otherwise one is apt to strain the neck and shoulders.

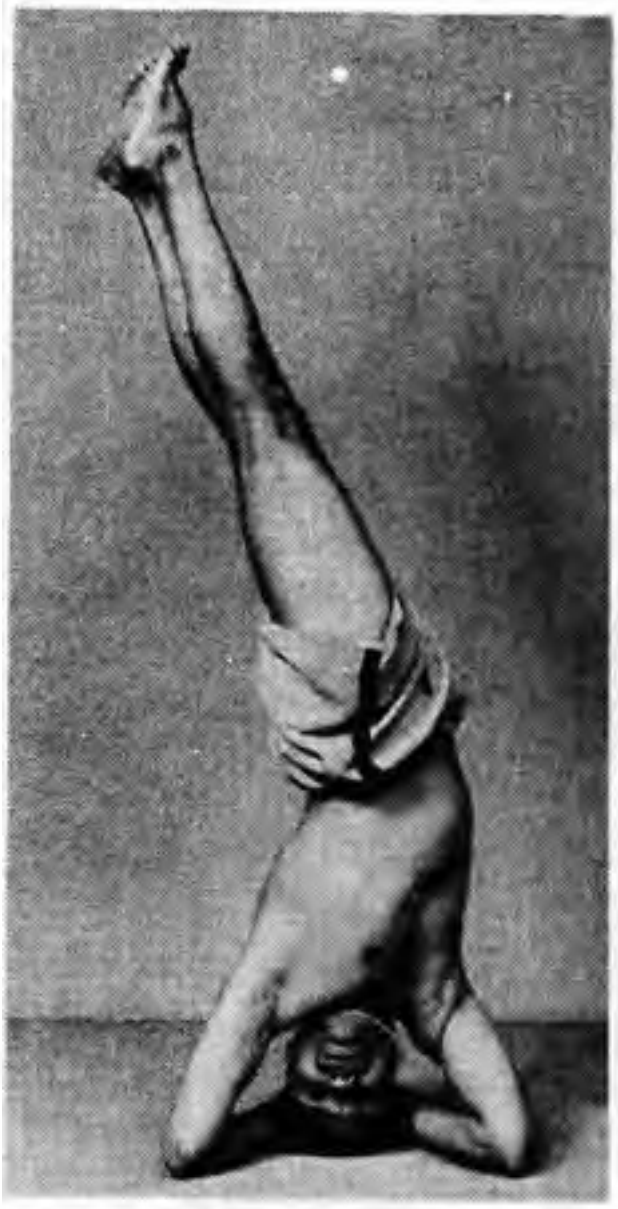
80. *Pārśva Śīrṣāsana* Eight* (Plates 202 and 203)

Pārśva means side or flank. In this variation of Śīrṣāsana, the trunk and legs are turned sideways on either side while balancing without disturbing the position of the head or hands.

Technique

1. From the straight Sālamba Śīrṣāsana I (Plate 184), exhale and move the spine with a twist to the right; except the head and the hands turn the body sideways. (Front view : Plate 202. Back view : Plate 203)

2. The legs and navel should face sideways 90 degrees to their original positions as in the illustrations. One should feel the stretch near the region of the floating ribs.



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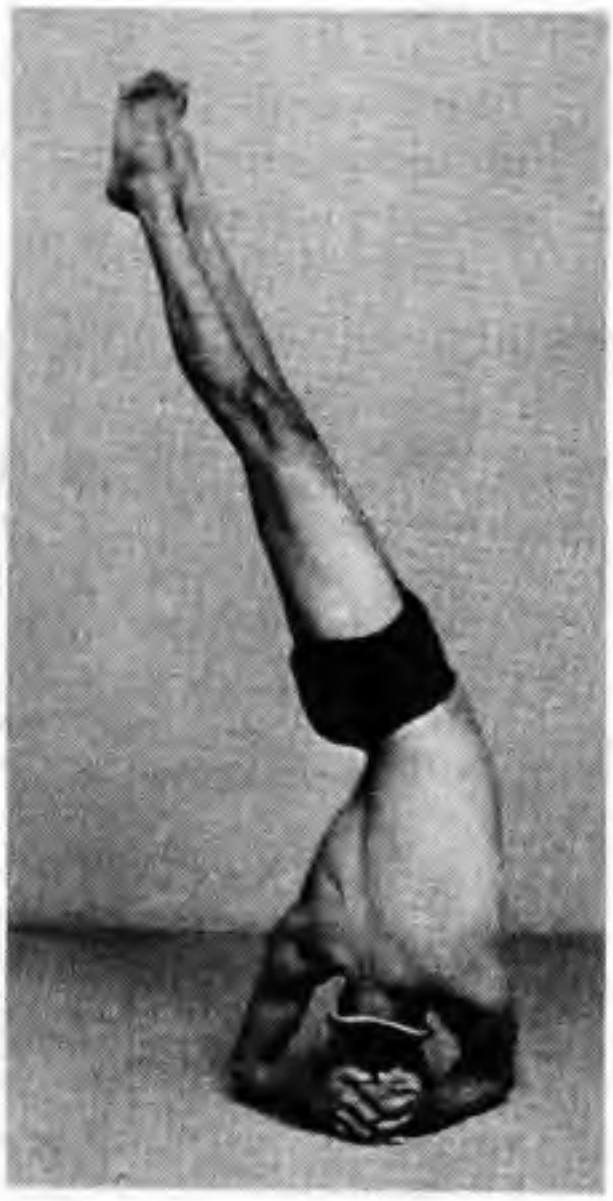


203

3. Hold the pose from 20 to 30 seconds with normal breathing.

4. Exhale, come back to the straight Sālamba Śīrṣāsana I. Take a breath, exhale and repeat the pose on the left side for the same length of time. Exhale and come to the straight position of Sālamba Śīrṣāsana I.

Effects

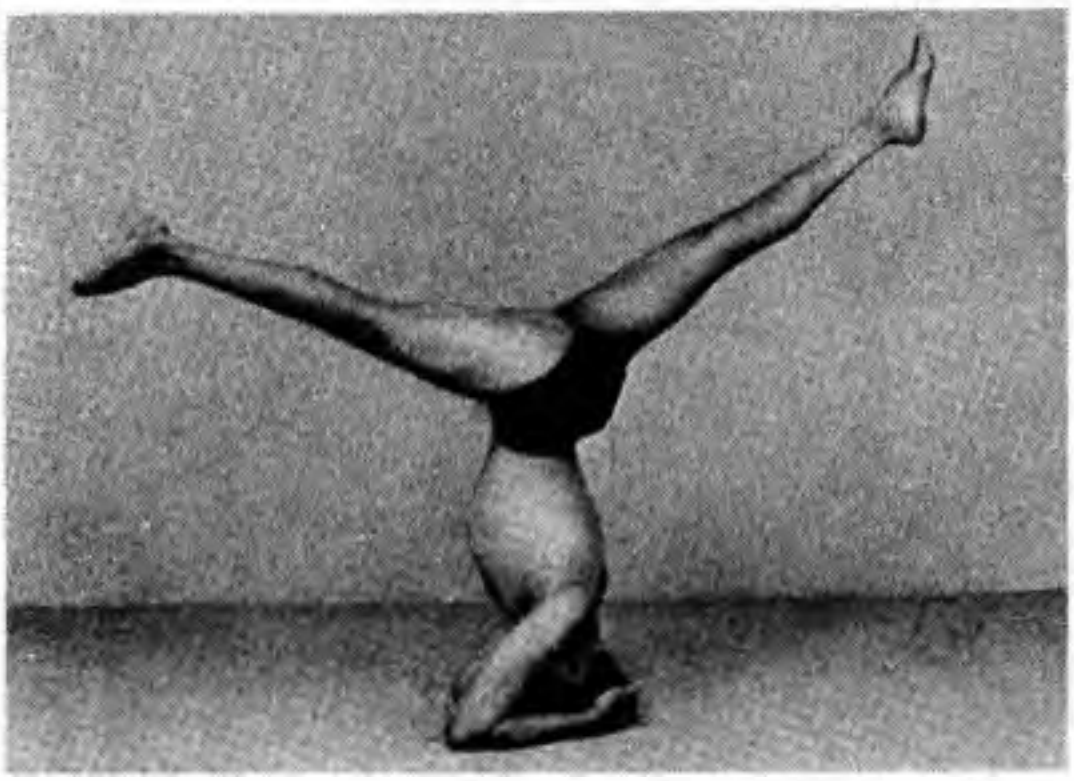
This āsana makes the spine strong and elastic.

81. *Parivṛttaikapāda Śīrṣāsana* Ten* (Plates 205, 206 and 207)

Parivṛtta means revolved, turned round. Eka means one and pāda the leg. In this variation of Sīrṣāsana, the legs are spread apart and the trunk and legs are then turned sideways on either side, while maintaining the balance without disturbing the position of the head or the hands.

Technique

1. After completing Pārśva Śīrṣāsana (Plate 202), spread the legs apart, move the right leg forward and the left leg back evenly. (Plate 204.) Then exhale, twist the spine to the left so that the legs move sideways clockwise through 90 degrees. (Side view: Plate 205)



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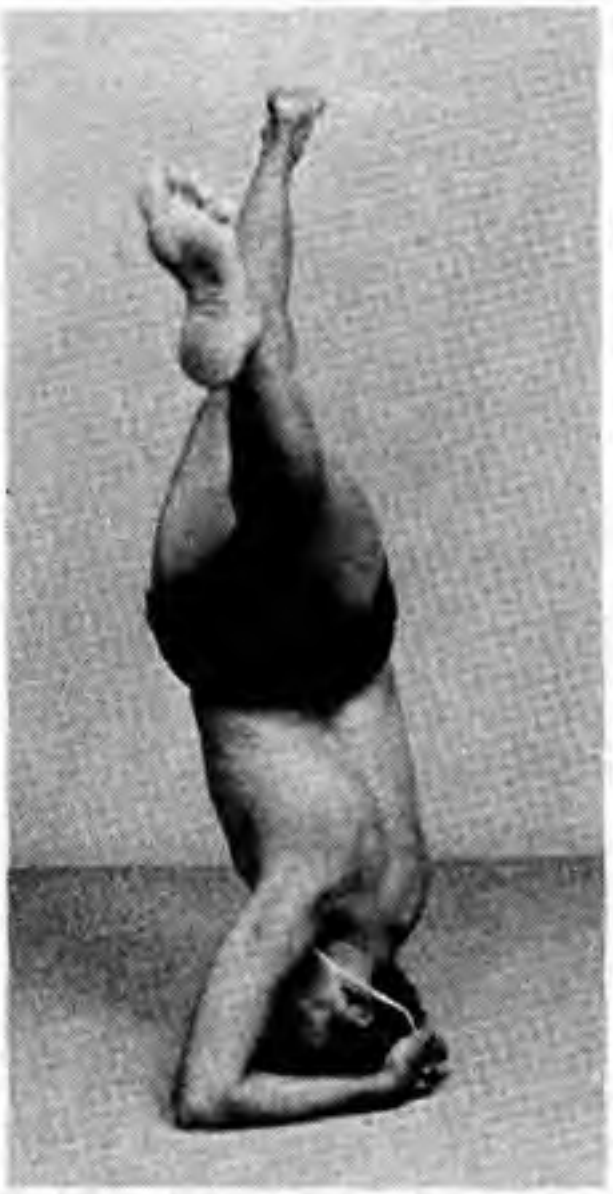


205

2. After turning sideways, keep the legs poker stiff by tightening the hamstring muscles, knees and calves.

3. Spread the legs still wider and stay in that position from 20 to 30 seconds trying to breathe normally.

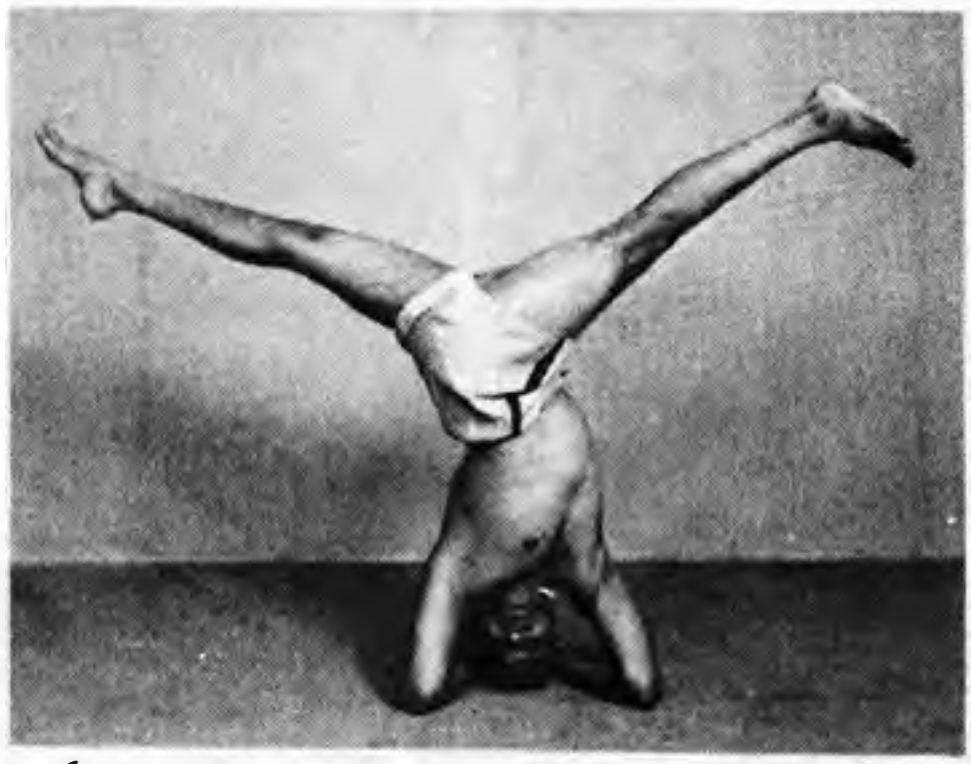
4. Exhale, come to the straight Sālamba Śīrṣāsana I. Now, move the left leg forward and the right leg back, twist the spine to the right so that the legs move sideways anti-clockwise through 90 degrees. (Front view: Plate 206. Back view: Plate 207.) Stay in that position for the same length of time. Exhale and return to Sālamba Śīrṣāsana I.

Effects

This āsana develops the leg muscles and tones the kidneys, bladder, prostate and intestines.

82. *Eka Pāda Śīrṣāsana* Eleven* (Plates 208 and 209)

Eka means one. Pāda is the leg. This variation of Śīrṣāsana is done by lowering one leg to the floor in front of the head, holding the other leg up vertically.



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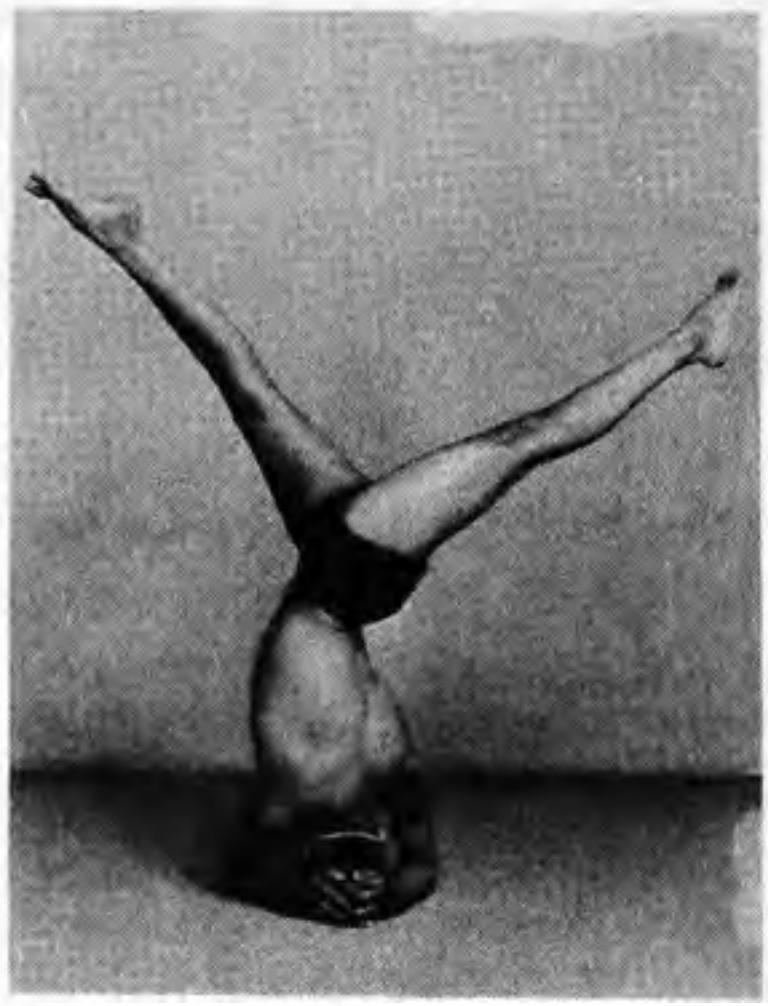

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Technique

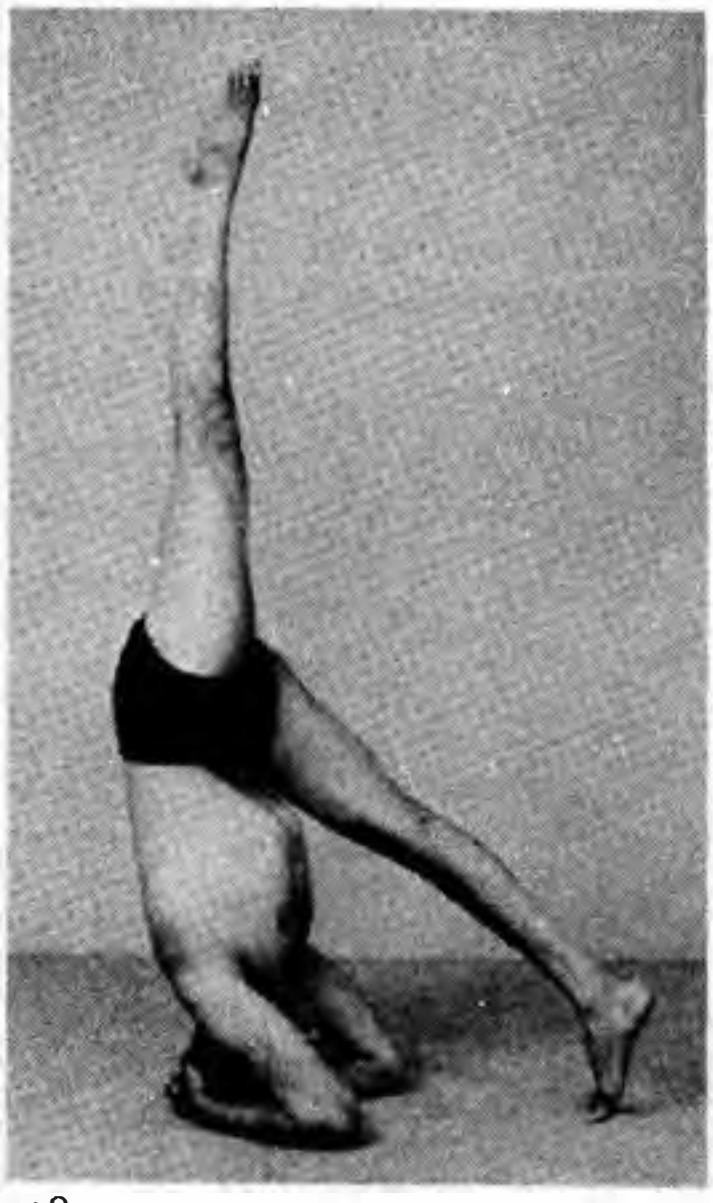
1. After staying according to your capacity in Sālamba Śīrṣāsana I, exhale, and move the right leg down to the floor in front of the head. (Side view: Plate 208)

2. While the right leg is being lowered and is resting on the floor, the left leg should be held up vertically as in Sīrṣāsana.

3. In the beginning, the neck feels tremendous strain. The left leg is also dragged down forwards. To overcome this, keep the legs rigid at the

knees and stretch the muscles at the back of the thighs of both the legs. Also tighten the muscles of the lower median portion of the abdomen.

4. The knees and toes of both legs should be in a line and should not tilt sideways.



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5. Stay in the pose from 10 to 20 seconds with deep breathing. Exhale, and lift the right leg up to Śīrṣāsana.

6. After staying in Śīrṣāsana for some time, lower the left leg to the floor (Front view: Plate 209) and after keeping it on the floor for the same length of time, exhale and go back to Śīrṣāsana.

7. While lowering and raising the legs, keep them straight and do not bend at the knees. If the knees are bent one loses the head balance.

Effects

This is a difficult pose, so it may not be possible to touch the floor in the beginning. Gradually as the legs become more elastic and the back gets stronger, the legs will touch and then rest on the floor without loss of the head balance. This āsana strengthens the neck and also the abdominal walls. The abdominal organs are contracted and made to function well.

83. *Pārśvaika Pāda Śīrṣāsana* Twelve* (Plate 210)

Pārśva means sideways. Eka is one and pāda is the leg. In this pose, one leg is lowered to the floor sideways in line with the head, while the other leg remains vertically up.

Technique

1. Do this position after completing Eka Pāda Śīrṣāsana (Plates 208 and 209) as described earlier.

2. Exhale and lower the right leg sideways to the right, placing it on the floor in line with the head. (Plate 210.) Keep the left leg erect as in Śīrṣāsana.

210

3. It is more difficult to hold the head stand in this position than in Eka Pāda Śīrṣāsana. To balance on the head in this pose, stretch the muscles at the back of the thighs of both the legs, tighten the knees and muscles of the groin in the iliac region of the abdomen on the side of the lowered leg.

4. Stay in this position for 10 to 20 seconds with deep breathing. Stretch the hamstrings and thighs and with an exhalation move the right leg to the Śīrṣāsana position.

5. Stay in Śīrṣāsana for some time and then exhale, lower the left leg sideways to the floor until it rests in line with the head. Maintain the pose for the same length of time here also. Then exhale, and return to Śīrṣāsana.

6. Do not bend the knees while lowering or raising the legs or you will lose balance.

Effects

This āsana makes the neck, abdominal walls and thighs powerful. It tones and strengthens the intestines and the spine.

84. *Ūrdhva Padmāsana in Śīrṣāsana* Six* (Plate 211)

Ūrdhva means above or high. Padmāsana (Plate 104) is the lotus pose described earlier. In this variation, Padmāsana is done in the head stand.

Technique

1. This pose is to be done after the Eka Pāda (Plates 208 and 209) and Pārśvaika Pāda Śīrṣāsanas. (Plate 210.) After completing these two positions cross the legs as in Padmāsana. First place the right foot over the left thigh and the left foot over the right thigh.

2. Press the knees closer to each other and stretch the thighs up vertically. (Plate 211)

3. Hold this position for half a minute with deep and even breaths. Then, exhale and extend the thighs as far back as possible. (Plate 212)

4. Uncross the legs and return to Śīrṣāsana. Now cross the legs the other way, first placing the left foot over the right thigh and then the right foot over the left thigh. Stay like this also for half a minute and then extend the thighs back.

5. While stretching the thighs up do not change the position of the head or the neck.

Effects

This posture gives an extra pull to the dorsal region, the ribs and the pelvic region. Consequently, the chest is fully expanded and blood circulates properly in the pelvic region. To give an added stretch, one can perform the pose by giving the trunk a lateral twist while doing the head stand. This is called:

85. *Pārśva Ūrdhva Padmāsana in Śīrṣāsana* Seven* (Plates 213 to 216)

(Pārśva means flank.)

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86. *Piṇḍāsana in Śīrṣāsana* Six* (Plate 218)

Piṇḍa means an embryo. From Padmāsana in the head stand (Plate 211), the hips are flexed and the legs are lowered to touch the armpits.

Technique

1. Do Padmāsana in Śīrṣāsana as described above. (Plate 211.) Exhale, flex the hips (Plate 217) and take two breaths. Again with an exhalation lower the legs till they touch the arms near the armpits. (Plate 218)

2. Stay in this position from 20 to 30 seconds with normal breathing.

3. Inhale, go back to Ūrdhva Padmāsana, uncross the legs and stay in Śīrṣāsana for some time. Then cross the legs the other way and repeat the pose.

4. Relax the crossed legs one by one, stretch them back to Śīrṣāsana and then lower them gradually and straight to the floor with an exhalation.

Effects

This pose has the same effects as the earlier one. Further the abdominal organs are toned by contraction and an additional supply of blood.

87. *Sālamba Sarvāngāsana I* Two* (Plates 223, 224 and 234)

Ālamba means a prop, a support and sa together with or accompanied by. Sālamba, therefore, means supported or propped up. Sarvānga (Sarva = all, whole, entire, complete; anga = limb or body) means the

217

218

entire body or all the limbs. In this pose the whole body benefits from the exercise, hence the name.

Technique for beginners

1. Lie flat on the back on the carpet keeping the legs stretched out, tightened at the knees. Place the hands by the side of the legs, palms down. (Plate 219.) Take a few deep breaths.

2. Exhale, bend the knees and move the legs towards the stomach till the thighs press it. (Plate 220.) Take two breaths.

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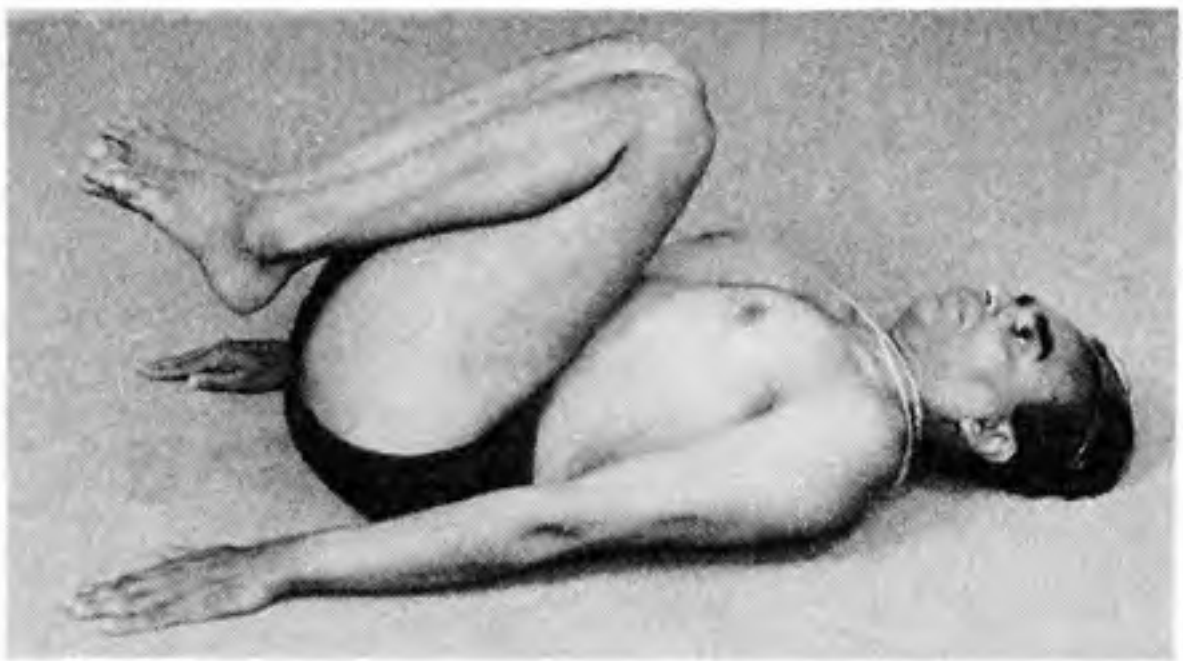

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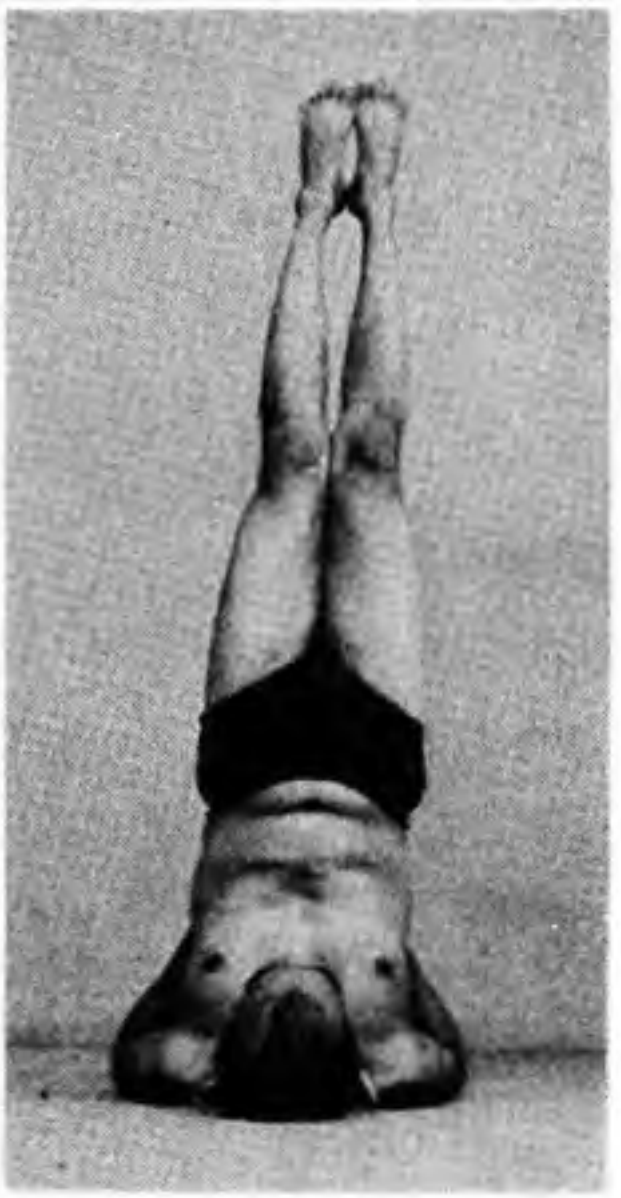
3. Raise the hips from the floor with an exhalation and rest the hands on them by bending the arms at the elbows. (Plate 221.) Take two breaths.

4. Exhale, raise the trunk up perpendicularly supported by the hands until the chest touches the chin. (Plate 222)

5. Only the back of the head and the neck, the shoulders and the backs of the arms up to the elbows should rest on the floor. Place the hands in the middle of the spine as in Plate 222. Take two breaths.



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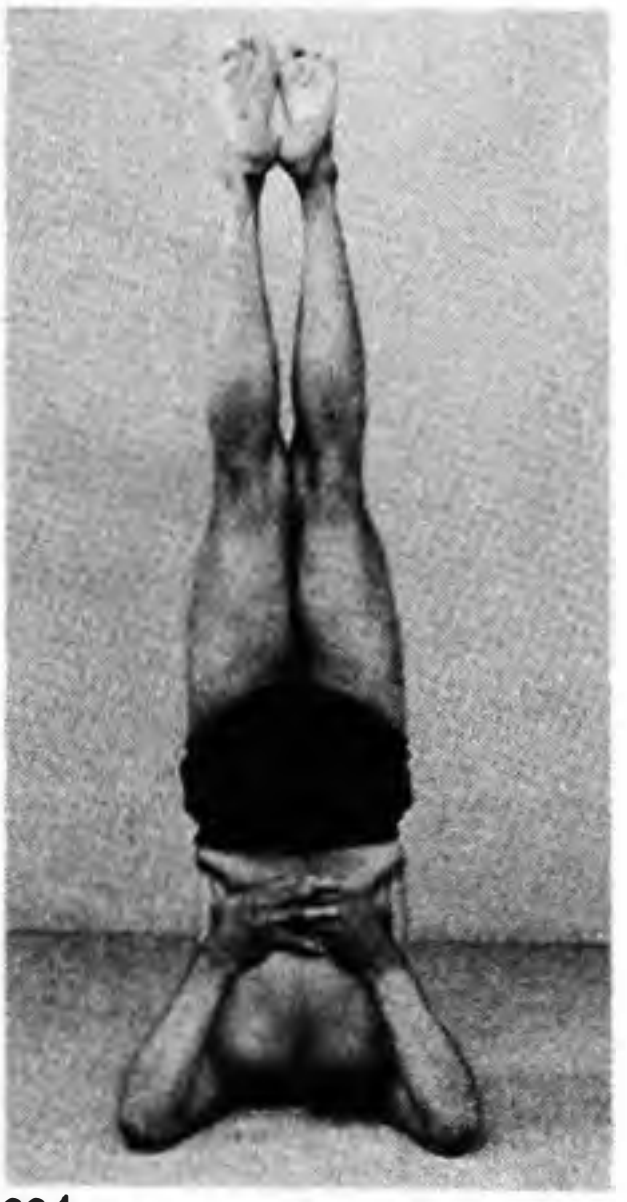

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6. Exhale and stretch the legs straight with the toes pointing up. (Front view: Plate 223. Back view: Plate 224)

7. Stay in this position for 5 minutes with even breathing.

8. Exhale, gradually slide down, release the hands, lie flat and relax.

9. If you cannot do the āsana without support use a stool and follow the technique. See Plate 225.

Technique for advanced pupils

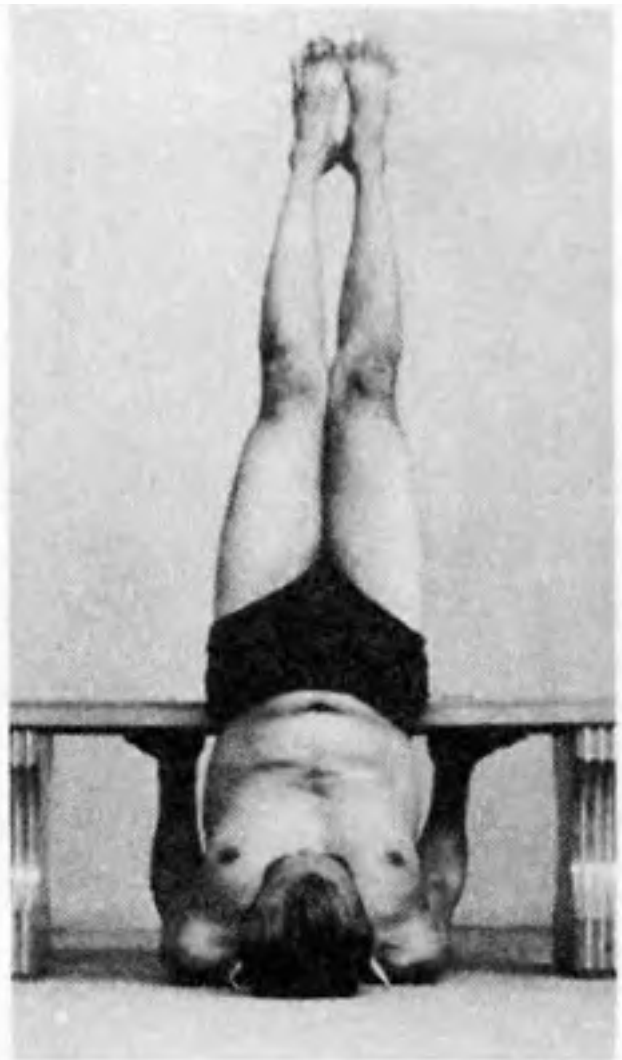
1. Lie flat on the back on the carpet.

2. Keep the legs stretched out, tightened at the knees. Place the hands by the side of the legs, palms down. (Plate 219)

3. Take a few deep breaths. Exhale slowly and at the same time raise both legs together and bring them at a right angle to the body as in Plates 226, 227 and 228. Remain in this position and inhale, keeping the legs steady.

4. Exhale, again raise the legs further up by lifting the hips and back from the floor, pressing the palms gently against the floor as in Plates 229, 230 and 231.

5. When the whole trunk is raised off the ground, bend the elbows



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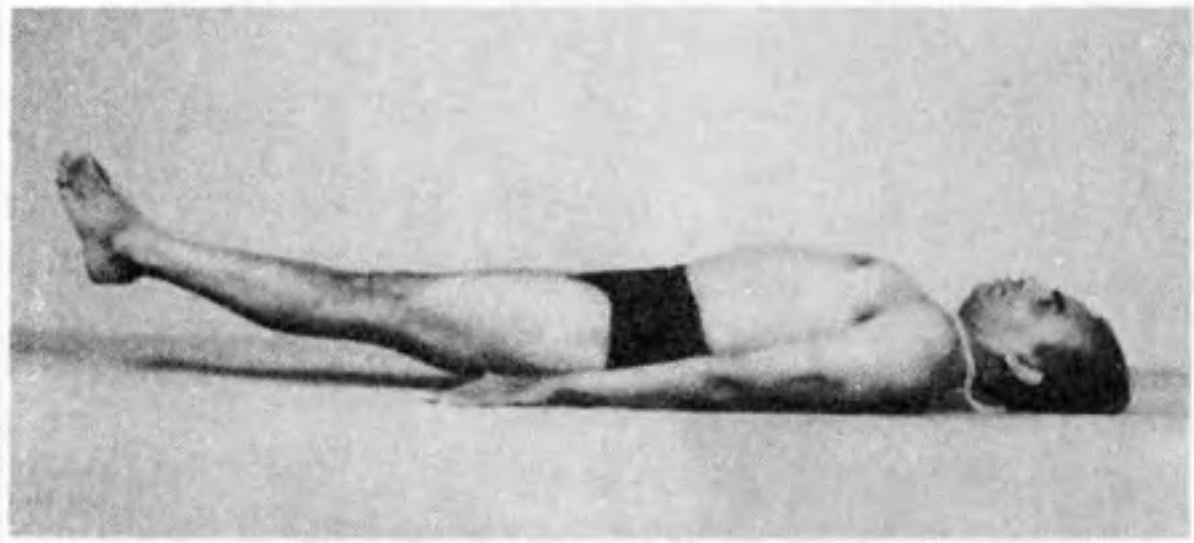

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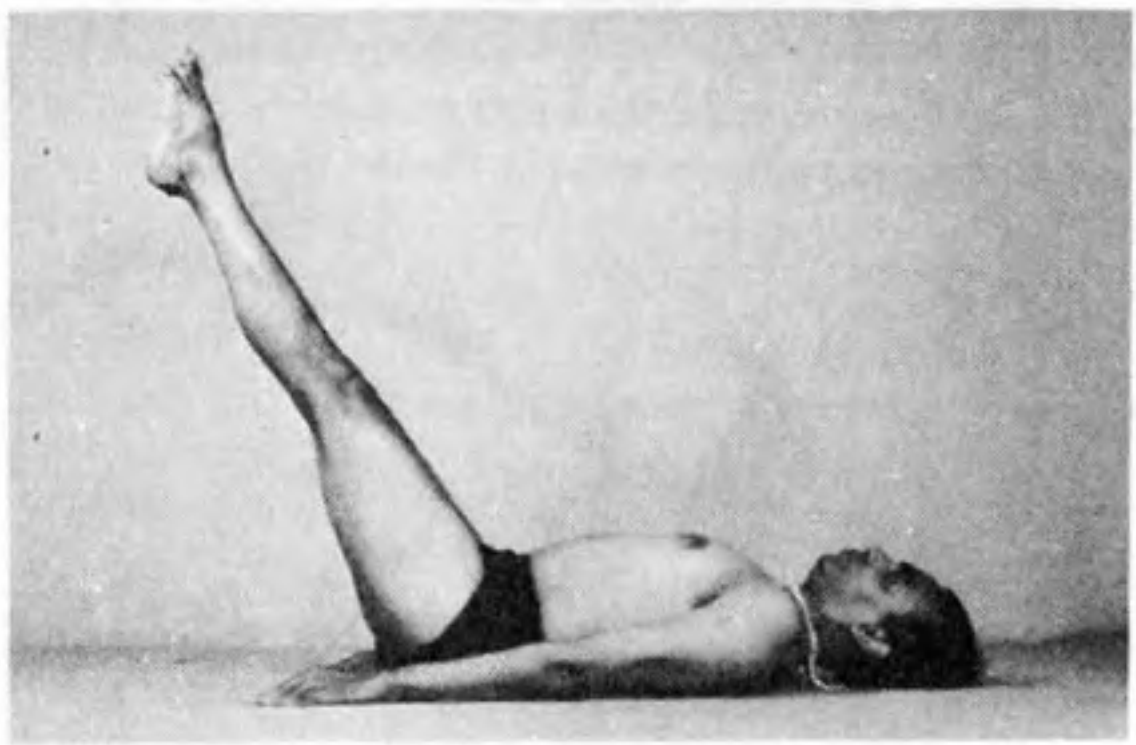

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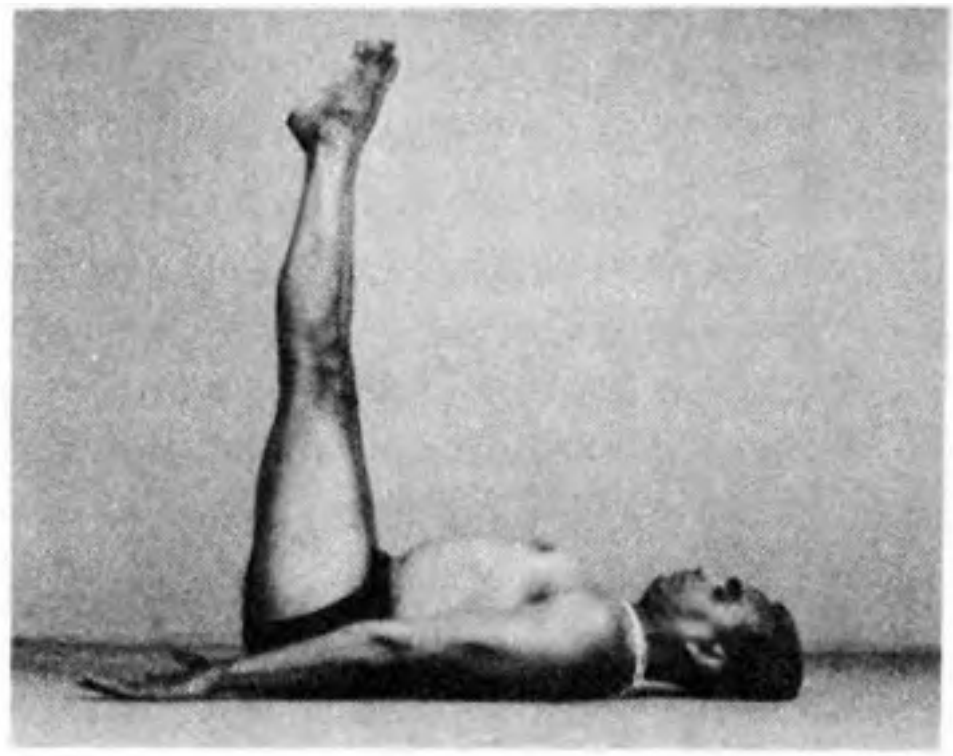

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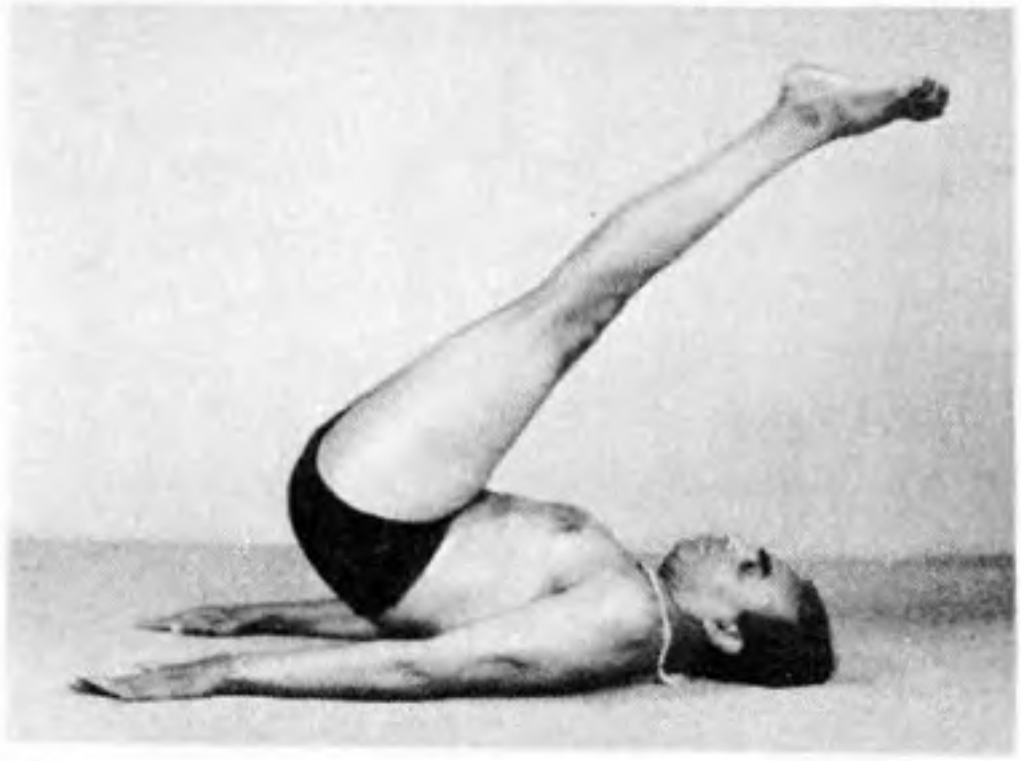

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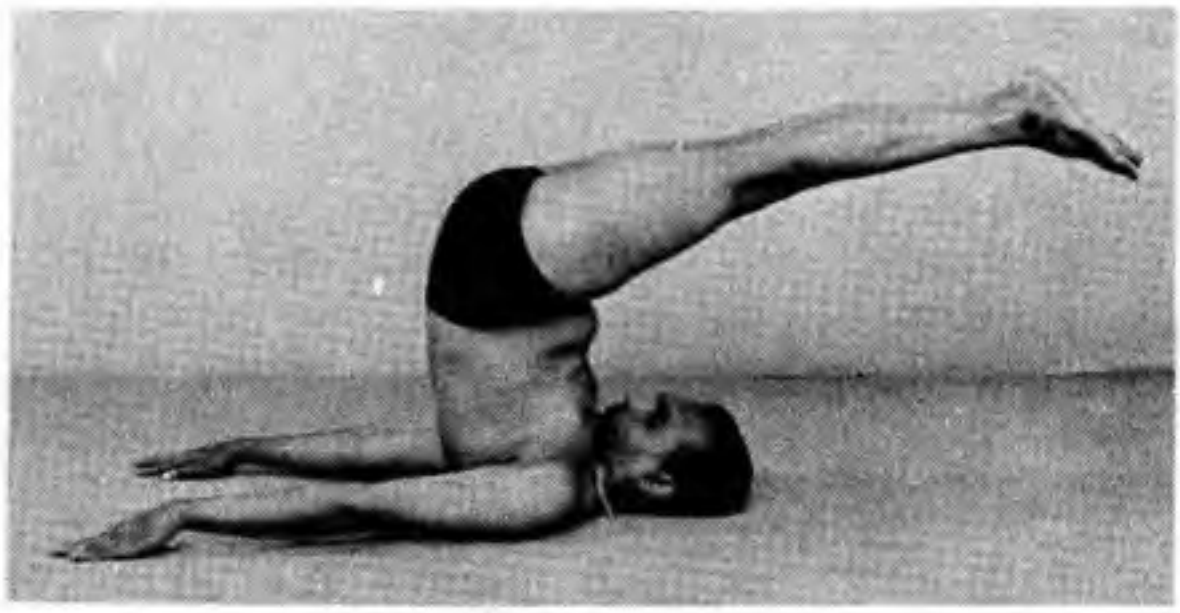

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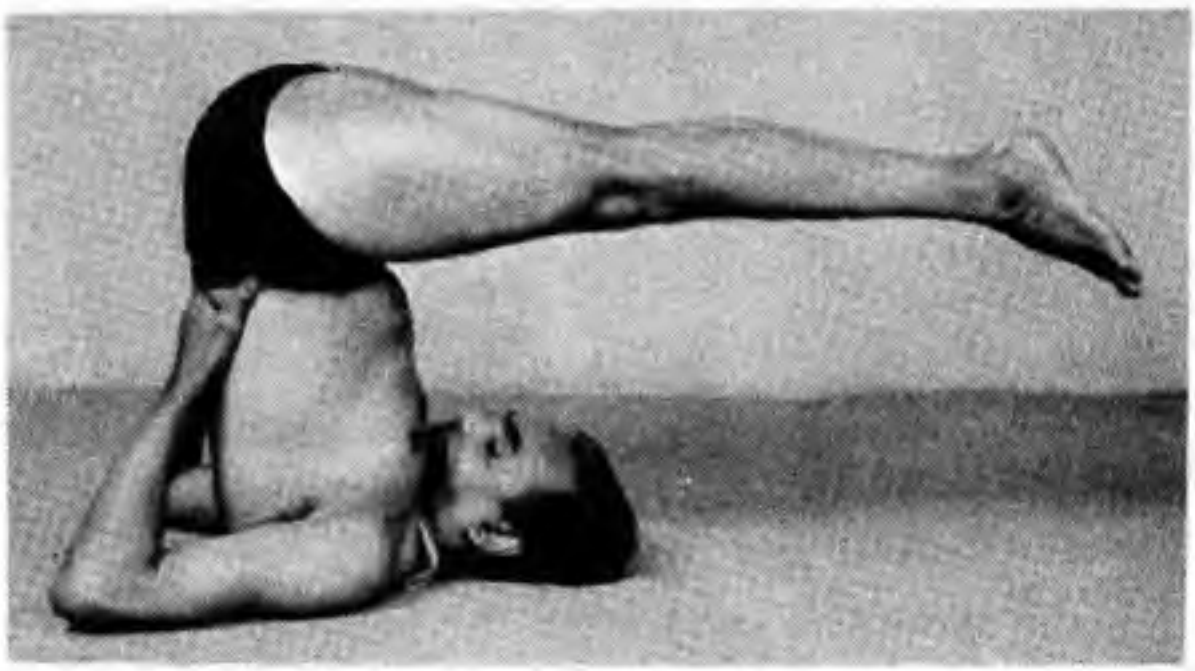

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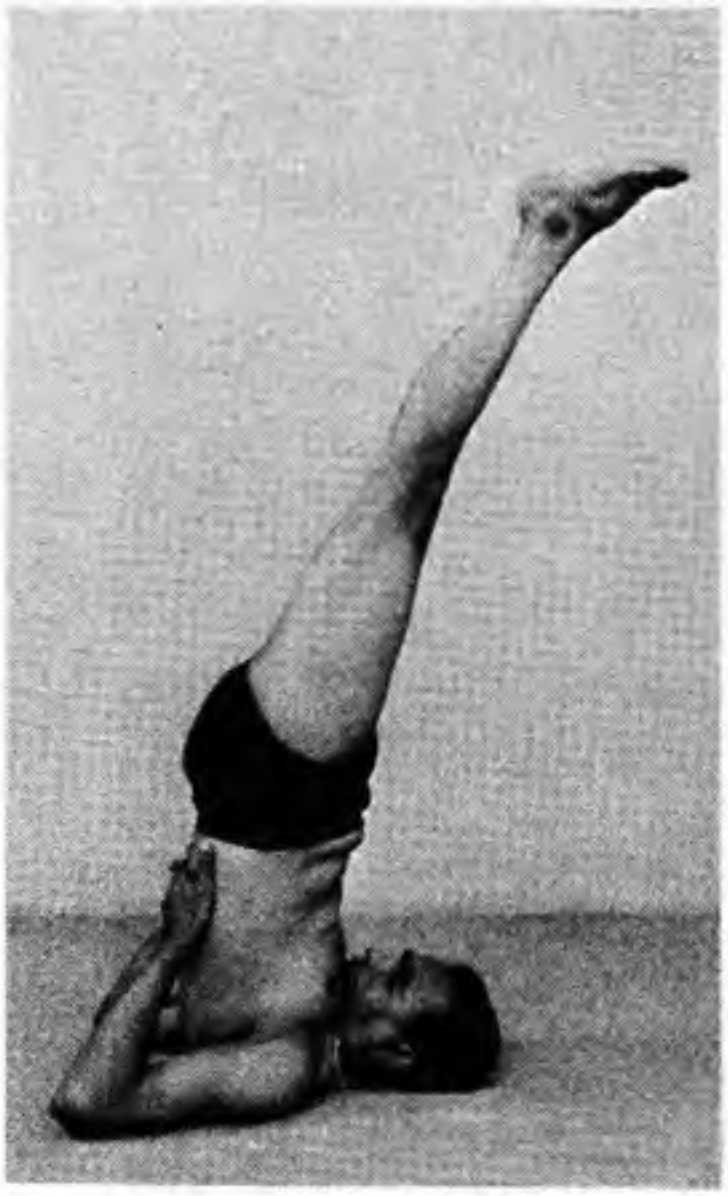
and place the palms on the back of the ribs, resting the shoulders well on the floor. (Plate 232)

6. Utilise the palm pressure and raise the trunk and legs up vertically as in Plate 233 so that the breast-bone presses the chin to form a firm chinlock. The contraction of the throat and pressing the chin against the breast-bone to form a firm chinlock is known as Jālandhara Bandha. Remember to bring the chest forward to touch the chin and not to bring the chin towards the chest. If the latter is done, the spine is not stretched completely and the full effect of this āsana will not be felt.

7. Only the back of the head and neck, the shoulders and the upper portion of the arms up to the elbows should rest well on the floor. The remainder of the body should be in one straight line, perpendicular to the floor. This is the final position. (Side view: Plate 234)

8. In the beginning, there is a tendency for the legs to swing out of the perpendicular. To correct this, tighten the back thigh muscles and stretch up vertically.

9. The elbows should not be placed wider than the shoulders. Try



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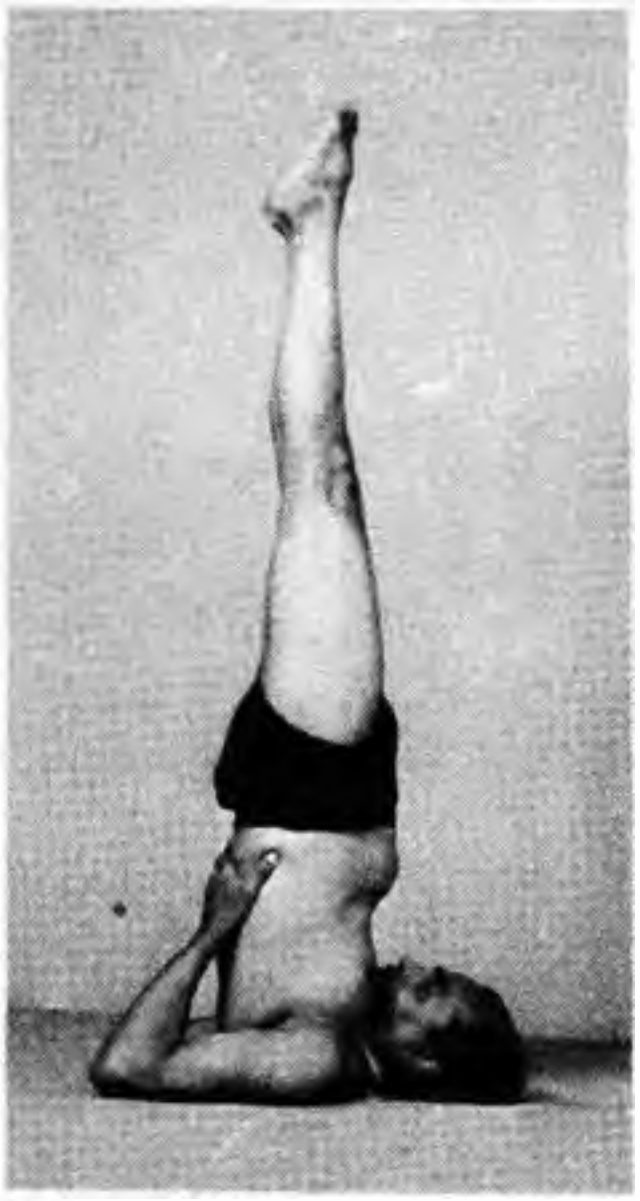

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and stretch the shoulders away from the neck and also to bring the elbows close to each other. If the elbows are widened, the trunk cannot be pulled up properly and the pose will look imperfect. Also see that the neck is straight with the centre of the chin resting on the sternum. In the beginning, the neck moves sideways and if this is not corrected, it will cause pain and injure the neck.

10. Remain in this pose for not less than 5 minutes. Gradually increase the time to 15 minutes; this will have no ill effects.

11. Release the hands, slide down to the floor, lie flat and relax.

As the weight of the whole body is borne on the neck and shoulders and as the hands are used to support the weight this āsana is called Sālamba Sarvāngāsana. In Sarvāngāsana there are various movements which can be done in addition to the basic pose described above.

Effects

The importance of Sarvāngāsana cannot be over-emphasised. It is one of the greatest boons conferred on humanity by our ancient sages. Sarvāngāsana is the Mother of āsanas. As a mother strives for harmony and happiness in the home, so this āsana strives for the harmony and happiness of the human system. It is a panacea for most common ail-

ments. There are several endocrine organs or ductless glands in the human system which bathe in blood, absorb the nutriments from the blood and secrete hormones for the proper functioning of a balanced and well developed body and brain. If the glands fail to function properly, the hormones are not produced as they should be and the body starts to deteriorate. Amazingly enough many of the āsanas have a direct effect on the glands and help them to function properly. Sarvāngāsana does this for the thyroid and parathyroid glands which are situated in the neck region, since due to the firm chinlock their blood supply is increased. Further, since the body is inverted the venous blood flows to the heart without any strain by force of gravity. Healthy blood is allowed to circulate around the neck and chest. As a result, persons suffering from breathlessness, palpitation, asthma, bronchitis and throat ailments get relief. As the head remains firm in this inverted position, and the supply of the blood to it is regulated by the firm chinlock, the nerves are soothed and headaches—even chronic ones—disappear. Continued practice of this āsana eradicates common colds and other nasal disturbances. Due to the soothing effect of the pose on the nerves, those suffering from hypertension, irritation, shortness of temper, nervous breakdown and insomnia are relieved. The change in bodily gravity also affects the abdominal organs so that the bowels move freely and constipation vanishes. As a result the system is freed from toxins and one feels full of energy. The āsana is recommended for urinary disorders and uterine displacement, menstrual trouble, piles and hernia. It also helps to relieve epilepsy, low vitality and anaemia. It is no over-statement to say that if a person regularly practises Sarvāngāsana he will feel new vigour and strength, and will be happy and confident. New life will flow into him, his mind will be at peace and he will feel the joy of life. After a long illness, the practice of this āsana regularly twice a day brings back lost vitality. The Sarvāngāsana cycle activates the abdominal organs and relieves people suffering from stomach and intestinal ulcers, severe pains in the abdomen and colitis.

People suffering from high blood pressure should not attempt Sālamba Sarvāngāsana I unless they do Ḥalāsana (Plate 244) first and can stay in it for not less than 3 minutes.

Halāsana is described on p. 216 (Plate 244).

The Sarvāngāsana Cycle

These various movements can be practised at one stretch after staying in Sarvāngāsana I (Plate 223) from 5 to 10 minutes or more according to capacity; do them for 20 to 30 seconds at a time each side except Halāsana, which should last from 3 to 5 minutes at a stretch.

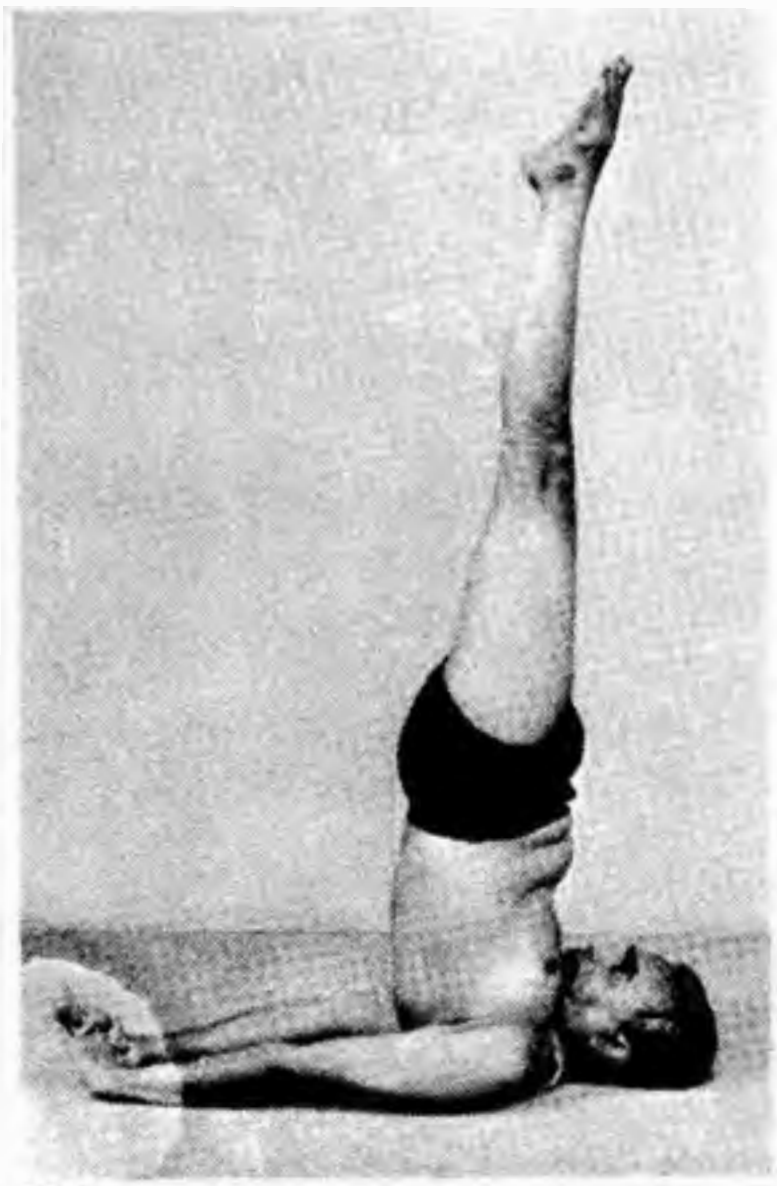
88. *Sālamba Sarvāngāsana II* Three* (Plate 235)

This position is slightly harder than the first one.

Technique

1. Do Sālamba Sarvāngāsana I. (Plate 223)

2. Release the hands from the back of the trunk, interlock the fingers, turn the wrists and extend the arms. The thumbs will then touch the floor and the palms will face outwards. (Plate 235.) The head will be on one side of the vertically extended body and the arms will be on the other side.



235

3. Keep the legs and back as steady as possible.

4. This pose can be done for a minute after doing Sarvāngāsana I.

Effects

As the balance is maintained by stretching the back muscles and as the weight of the body falls on the back of the neck, the back and the neck gain strength. The arm muscles are also toned.

89. *Nirālamba Sarvāngāsana I* Three* (Plate 236)

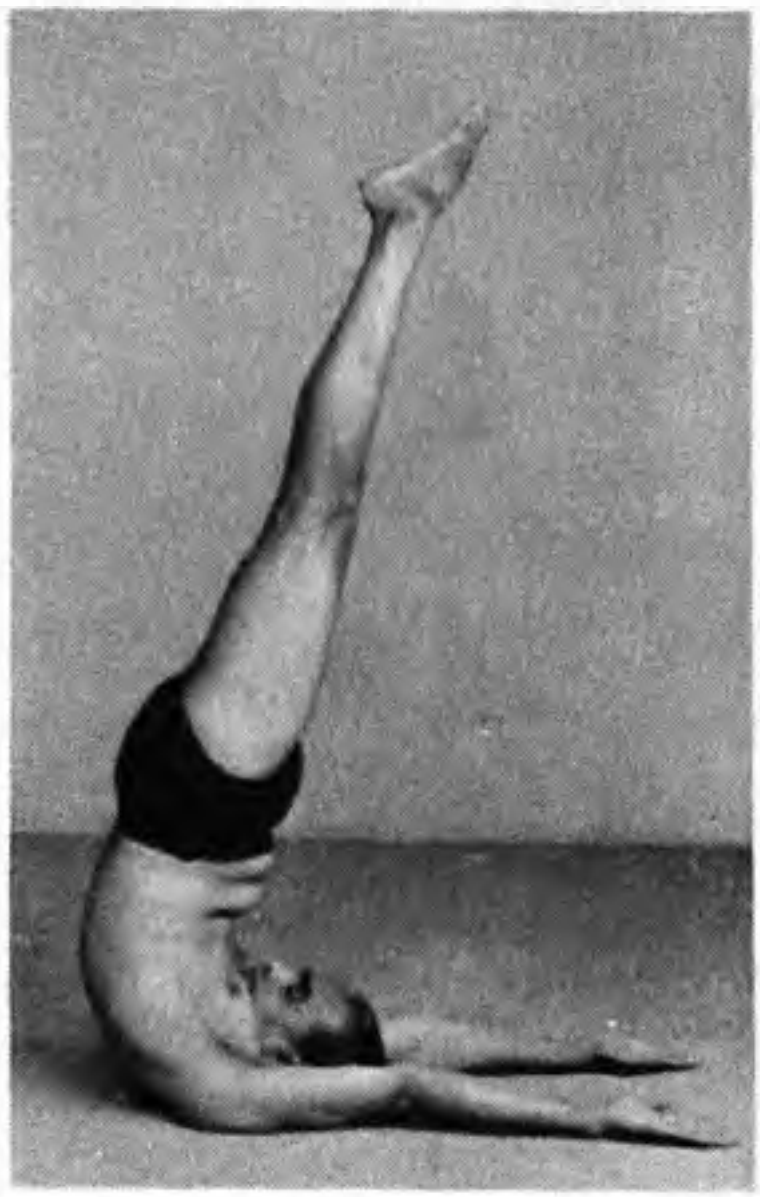
Ālamba means a prop, a support, while nir conveys the sense of away

from, without, free from. Nirālamba, therefore, means without support. This variation of Sarvāngāsana is harder than the earlier two, as in it the body is not supported by the arms and the body weight and balance are maintained by the muscles of the neck, back and abdomen, which are thus strengthened.

Technique

1. Do Sālamba Sarvāngāsana I. (Plate 223)

2. Release the hands, bring them over the head, rest the extended arms on the floor on the same side of the vertical body as the head, and balance. (Plate 236)



236

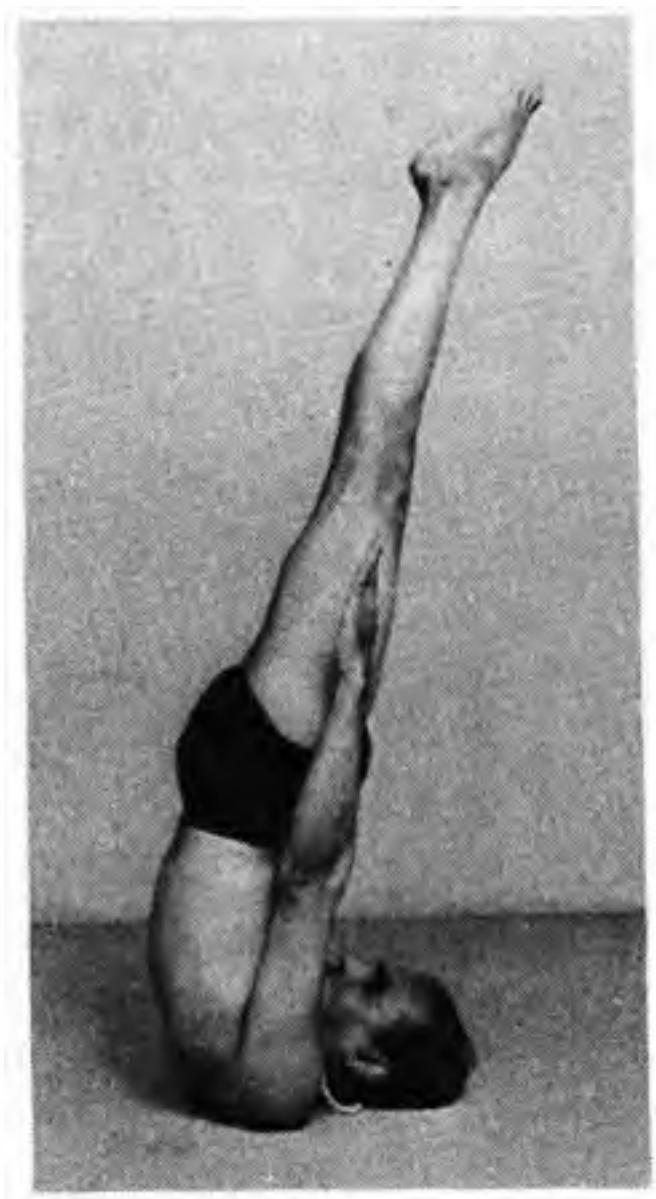
3. This pose can also be held for a minute.

90. *Nirālamba Sarvāngāsana II* Four* (Plate 237)

This is the hardest of the Sarvāngāsana poses. It enables one to extend the spinal vertebrae more than in the other Sarvāngāsanas and thus helps one to achieve a perfect Sālamba Sarvāngāsana. (Plate 223)

Technique

1. From the previous pose, raise the hands and place the palms on or by the side of the knees. (Plate 237.) Do not rest the legs on the palms.



237

2. Stay in the pose for a minute. Then move into Sālamba Sarvāngāsana I for some time, slide into Halāsana (Plate 244) and continue the other Sarvāngāsana movements one after the other.

Effects

By practising these various Sarvāngāsana movements, the entire body is toned by an increase in the flow of blood and by the elimination of toxin-forming waste matter. These āsanas stimulate one like tonics. After convalescing one can practise them for speedier recovery from weakness.

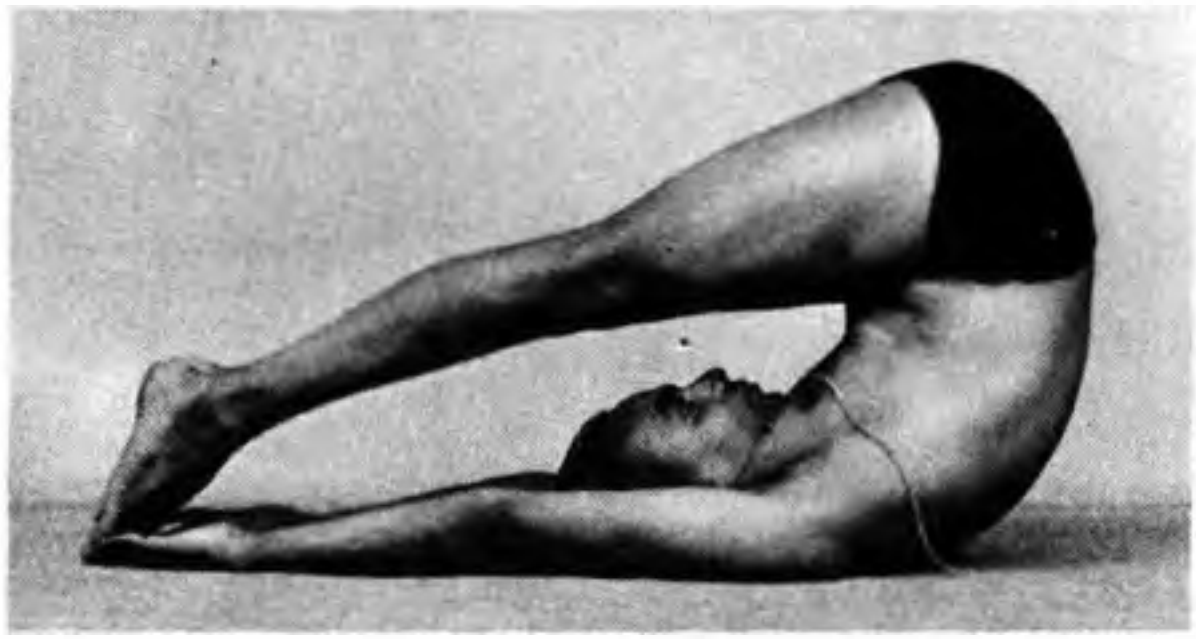
91. *Halāsana* Four* (Plate 244)

Hala means a plough, the shape of which this posture resembles, hence the name. It is a part of Sarvāngāsana I and a continuation thereof.

Technique

1. Do Sālamba Sarvāngāsana I (Plate 223) with a firm chinlock.

2. Release the chinlock, lower the trunk slightly, moving the arms and legs over the head and resting the toes on the floor. (Plate 238)



238

3. Tighten the knees by pulling up the hamstring muscles at the back of the thighs and raise the trunk. (Plate 239)

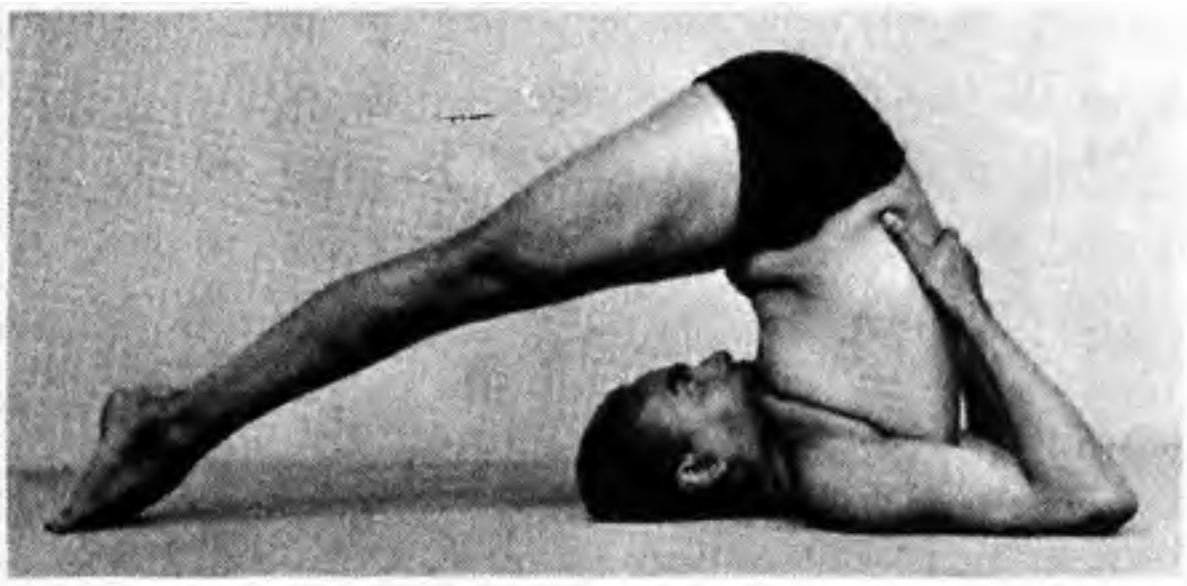
239

4. Place the hands in the middle of the back and press it to keep the trunk perpendicular to the floor. (Plate 240)

5. Stretch the arms on the floor in the direction opposite to that of the legs. (Plate 241)

6. Hook the thumbs and stretch the arms and legs. (Plate 242)

7. Interlock the fingers (Plate 243) and turn the wrists so that the thumbs rest on the floor. (Plate 244.) Stretch the palms along with the



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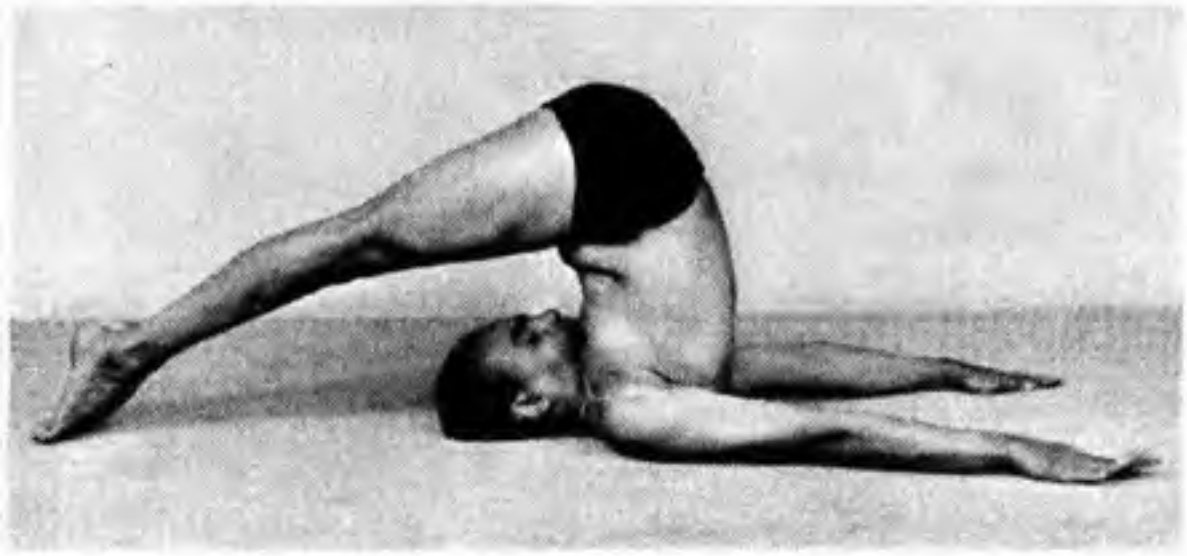

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242

fingers, tighten the arms at the elbows and pull them from the shoulders.

8. The legs and the hands are stretched in opposite directions and this stretches the spine completely.

9. While interlocking the fingers, it is advisable to change the interlock. Suppose that the right thumb touches the floor first, maintain the position for a minute. Then release the grip and bring the left thumb

first on the floor, follow the interlock, finger by finger, and stretch out the arms for the same length of time. This will lead to harmonious development and elasticity of both the shoulders, elbows and wrists.

243

244

10. In the beginning interlocking will be difficult. By gradual practice of the above mentioned positions, you will interlock the fingers easily.

11. In the beginning it is also difficult to keep the toes firmly on the floor behind the head. If you lengthen the timing and stretch of Sarvāngāsana I (Plate 223) before going into Halāsana, the toes will remain longer on the floor.

12. Remain in the attainable pose from one to five minutes with normal breathing.

13. Release the hands. Raise the legs up to Sarvāngāsana I and gradually slide down to the floor. Lie flat on the back and relax.

Effects

The effect of Halāsana is the same as that of Sarvāngāsana I. (Plate 223.) In addition, the abdominal organs are rejuvenated due to contraction. The spine receives an extra supply of blood due to the forward bend and this helps to relieve backache. Cramps in the hands

are cured by interlocking and stretching the palms and fingers. People suffering from stiff shoulders and elbows, lumbago and arthritis of the back find relief in this āsana. Griping pain in the stomach due to wind is also relieved and lightness is felt immediately.

The pose is good for people with a tendency for high blood pressure. If they perform Halāsana first and then Sarvāngāsana I, they will not feel the rush of blood or the sensation of fullness in the head.

Halāsana is a preparatory pose to Paschimottānāsana. (Plate 160.) If one improves in Halāsana, the resulting mobility of the back will enable one to perform Paschimottānāsana well.

Note. For persons suffering from high blood pressure the following technique is recommended for doing Halāsana before they attempt Sālamba Sarvāngāsana I.

1. Lie flat on the back on the floor.

2. Exhale, slowly raise the legs to a perpendicular position and stay there breathing normally for about 10 seconds.

3. Exhale, bring the legs over and beyond the head and touch the toes on the floor. Keep the toes on the floor and the legs stiff at the knees.

4. If you have difficulty in keeping the toes on the floor, then place a chair or a stool behind the head and rest the toes on it.

5. If the breathing becomes heavy or fast do not rest the toes on the floor, but on a stool or chair. Then fullness or pressure is not felt in the head.

6. Extend the arms over the head, keep them on the floor and stay in this position with normal breathing for 3 minutes.

7. Throughout the āsana, gaze at the tip of the nose with the eyes shut.

92. *Karṇapīdāsana* One* (Plate 246)

Karṇa means the ear. Pīda means pain, discomfort or pressure. This is a variant of Halāsana and can be done along with it.

Technique

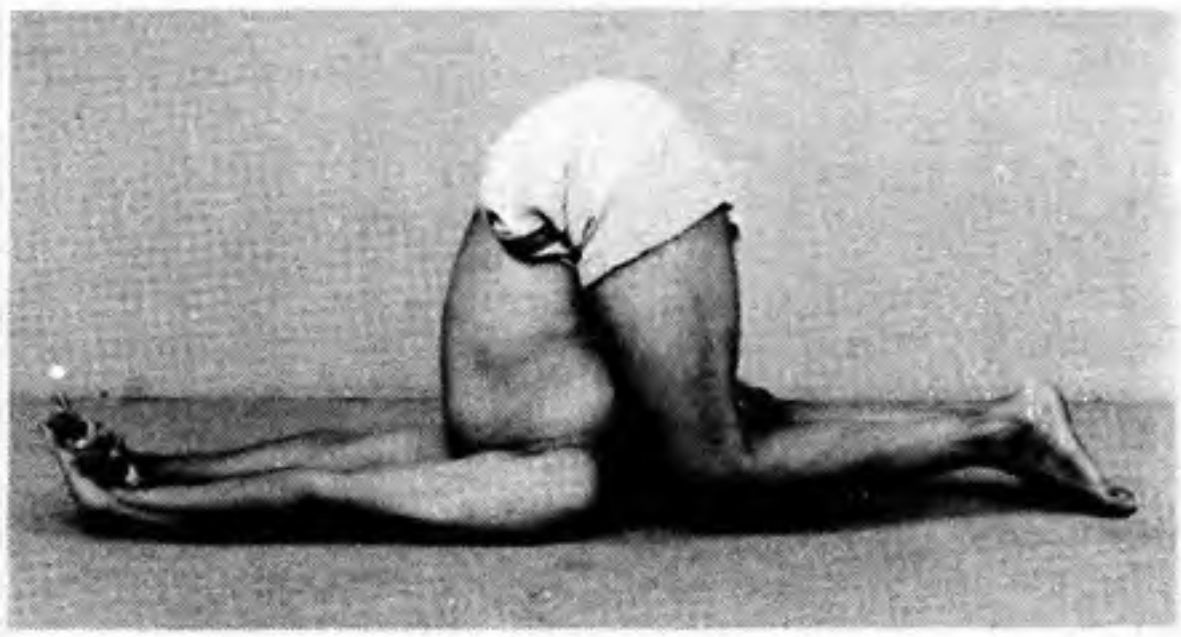
1. Do Halāsana (Plate 244) and after completing the time limit for that pose, flex the knees and rest the right knee by the side of the right ear and the left knee by the side of the left.

2. Both knees should rest on the floor, pressing the ears.

3. Keep the toes stretched out and join the heels and toes. Rest the

hands either on the back of the ribs (Plate 245) or interlock the fingers and stretch out the arms (Plate 246) as in Halāsana.

245



246

4. Remain in this position for half a minute or a minute with normal breathing.

Effects

This āsana rests the trunk, heart and legs. The spine is stretched more while bending the knees, and this helps the circulation of blood round the waistline.

93. *Supta Koṇāsana* Two* (Plate 247)

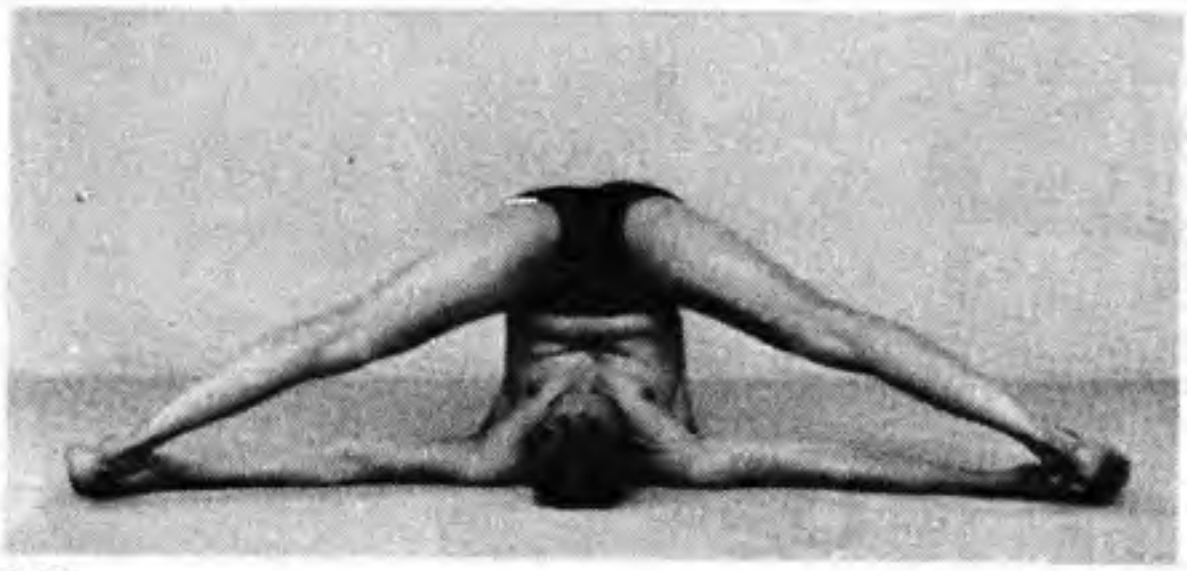
Supta means lying down and koṇa an angle. It is a variation of Halāsana in which the legs are spread apart.

Technique

1. From Karṇapīdāsana (Plate 246), stretch the legs straight and spread the legs as far apart as you can.

2. Pull the trunk up and tighten the knees.

3. Hold the right toe with the right hand and the left toe with the left one. Keep the heels up. After gripping the toes, move the dorsal region of the spine still further up and extend the hamstring muscles. (Plates 247 and 248)



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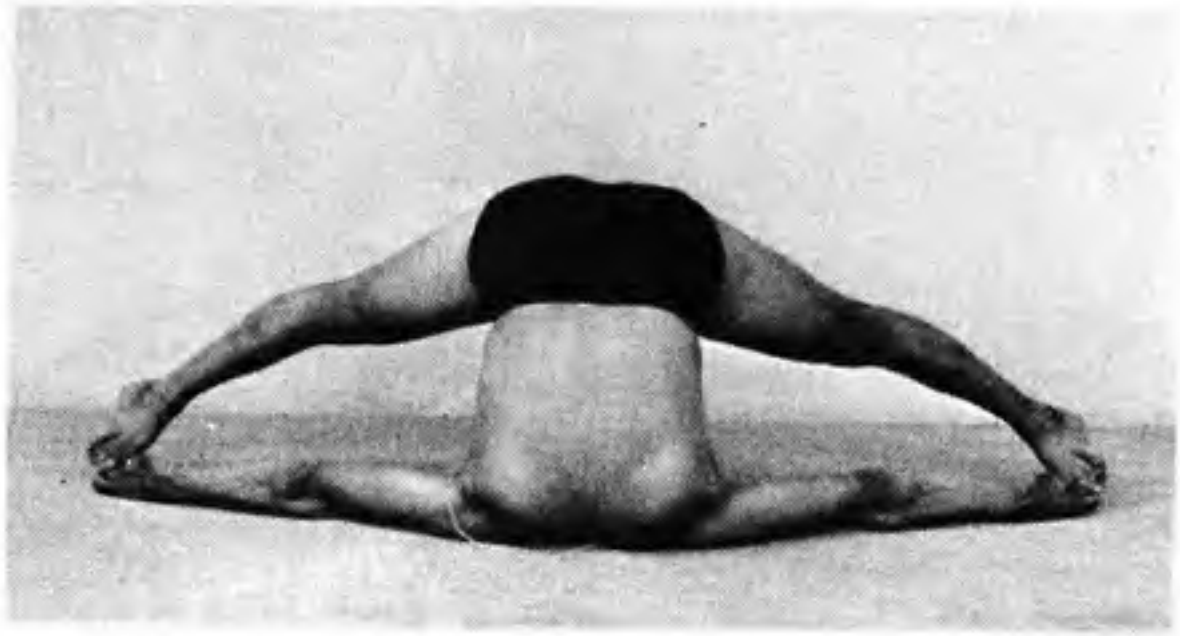


248

4. Stay in the pose from 20 to 30 seconds with normal breathing.

Effects

This pose tones the legs and helps to contract the abdominal organs.

94. *Pārśva Halāsana* Four* (Plate 249)

In Halāsana (Plate 244) both the legs rest behind the head. In this pose they rest sideways on one side of and in line with the head. This is the lateral plough pose.

Technique

1. Do Supta Koṇāsana (Plate 247) and come back to Halāsana.

2. Place the palms on the back of the ribs. (Plate 240)

3. Move both the legs as far as you can to the left.

4. Tighten both knees, raise the trunk up with the help of the palms and stretch the legs. (Plate 249)

249

5. Remain in this position for half a minute with normal breathing.

6. Exhale, move the legs to the right until they are in line with the head and hold the pose for half a minute. Do not disturb the position of the chest and trunk when the legs are moved. The chest and trunk should remain as in Sarvāngāsana or Halāsana.

Effects

In this āsana, the spine moves laterally and becomes more elastic. The colon, which is inverted during the movements, is exercised properly and elimination will be complete. People suffering from acute or chronic constipation which is the mother of several diseases derive great benefit from this āsana. If rubbish is dumped outside our house we feel sick. How much more so when waste matter which creates toxins is allowed to accumulate in our own system? If this waste matter is not eliminated, diseases will enter the body like thieves and rob us of health. If the bowels do not move freely, the mind becomes dull and one feels heavy and irritable. This āsana helps us to keep the bowels free and thereby win the prize of health.

95. *Eka Pāda Sarvāngāsana* Five* (Plate 250)

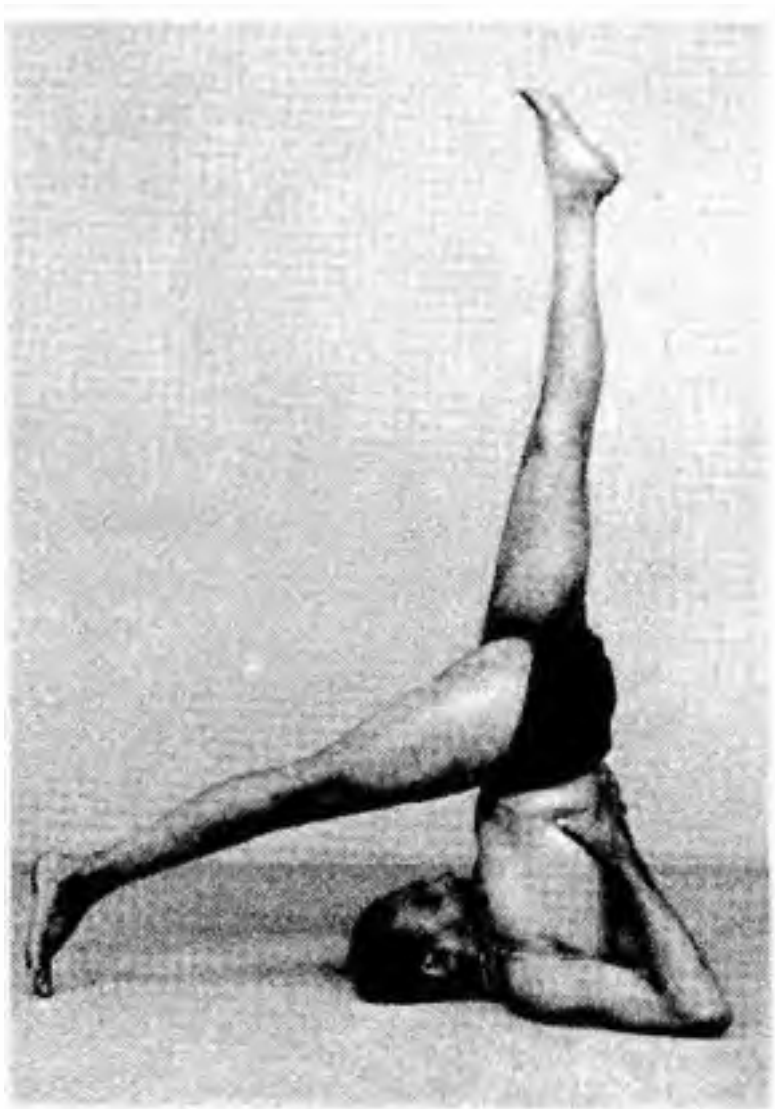
Eka means one, single. Pāda means the foot. In this variation of

Sarvāngāsana, one leg is on the floor in Halāsana, while the other is in a vertical position along with the trunk.

Technique

1. Do Sālamba Sarvāngāsana I. (Plate 223)

2. Keep the left leg up in Sarvāngāsana. Exhale and move the right leg down to the floor to Halāsana. (Plate 250.) It should remain stiff and straight and not bend at the knee.



250

3. While resting the right leg on the floor, the left knee should be kept taut and not allowed to tilt sideways. The left leg should be kept straight, facing the head.

4. Stay in the pose for 20 seconds maintaining normal breathing.

5. Exhale, lift the right leg back to Sarvāngāsana, and then move the left leg down to the floor in Halāsana, keeping the right leg vertically up and stiff. Lifting the leg from the floor back to Sarvāngāsana exercises the abdominal organs more than if one brings both legs down to Halāsana.

6. Stay on this side for the same length of time.

Effects

This āsana tones the kidneys and the leg muscles.

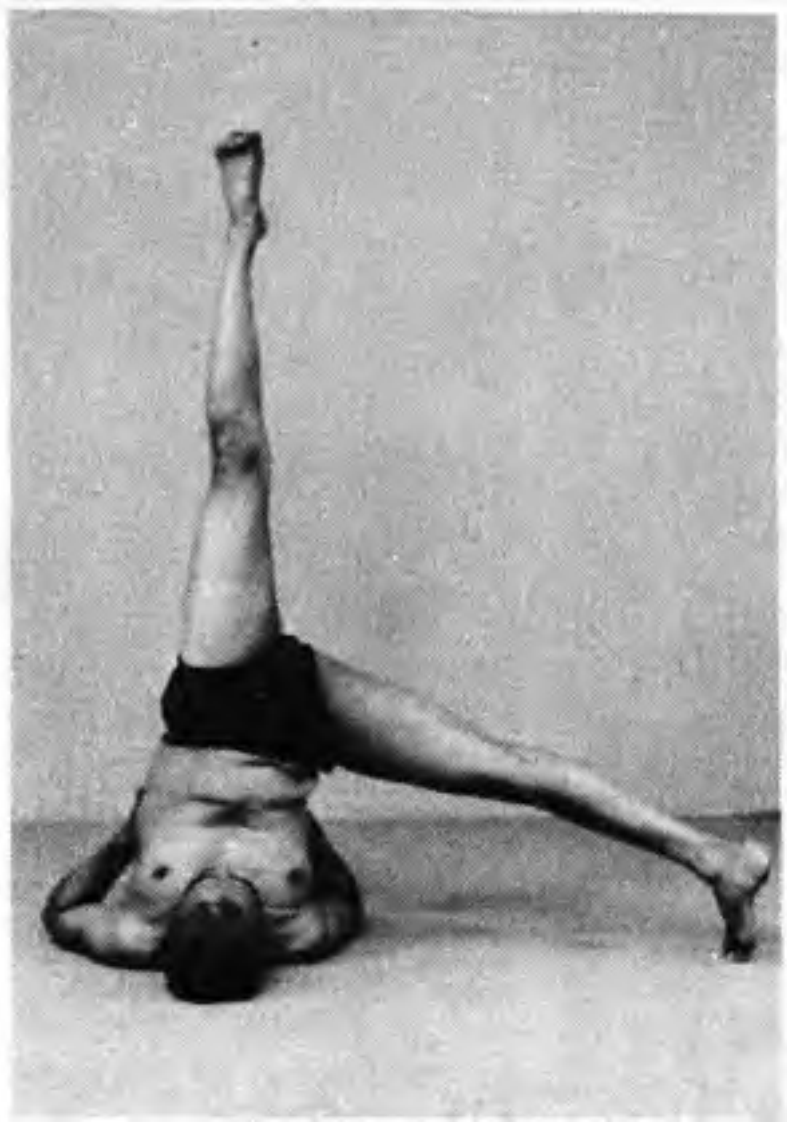
96. *Pārśvaika Pāda Sarvāngāsana* Six* (Plate 251)

Pārśva means the side. In Eka Pāda Sarvāngāsana (Plate 250) the lower leg rests behind the head, whereas here it rests sideways in line with the trunk.

Technique

1. Perform Eka Pāda Sarvāngāsana on both sides as described above and come back to Sarvāngāsana.

2. Exhale, move the right leg down sideways to the floor until it is in line with the trunk. (Plate 251.) Keep the right leg straight and stiff and do not bend it at the knee.



251

3. The left leg which is vertically up should be kept straight and not allowed to tilt to the right. The ribs should be lifted with the palms to expand the chest fully.

4. Remain in the pose for 20 seconds with normal breathing, exhale, and go back to Sarvāngāsana. Repeat with the other leg for the same length of time and return to Sarvāngāsana.

Effects

This pose relieves constipation and also tones the kidneys.

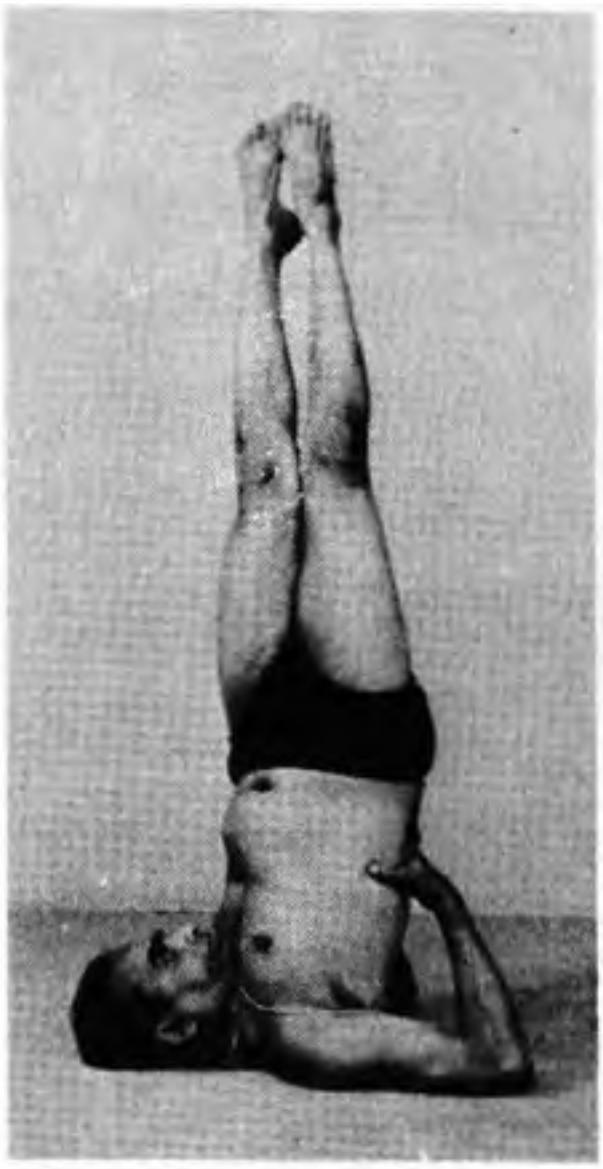
97. *Pārśva Sarvāngāsana* Nine* (Plate 254)

Pārśva means side or flank. This Sarvāngāsana variation is done by giving the trunk a lateral twist.

Technique

1. From Sālamba Sarvāngāsana I (Plate 223) turn the trunk and legs to the right.

2. Place the left palm on the left hip, so that the coccyx rests on the wrist. (Plate 252.) Lower the body on the left hand and bear the weight of the body on the left elbow and wrist. (Plate 253)



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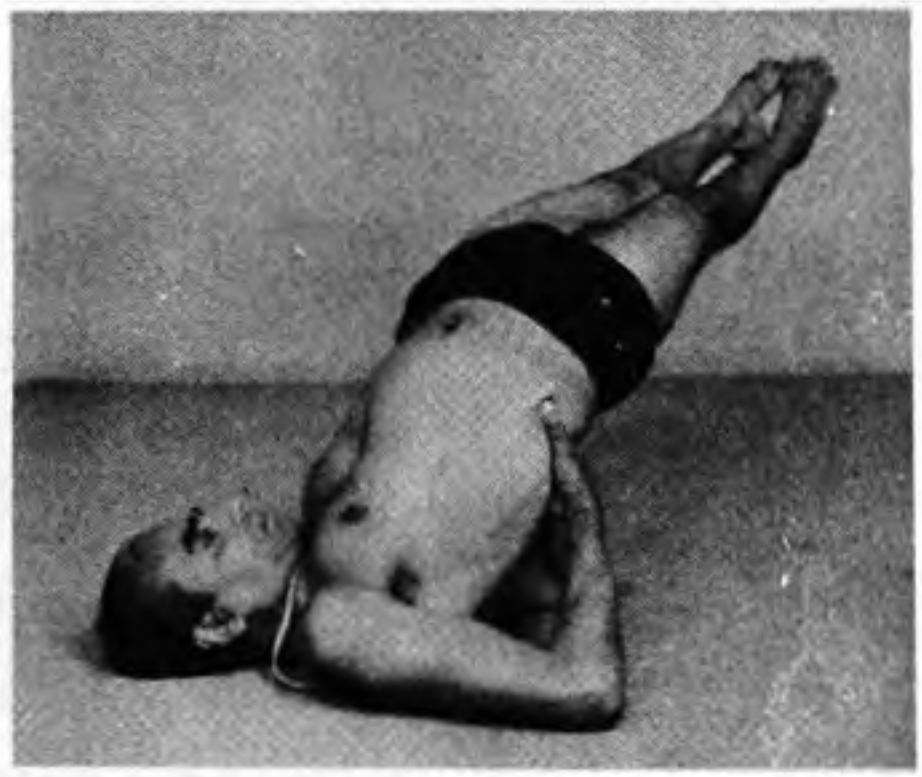
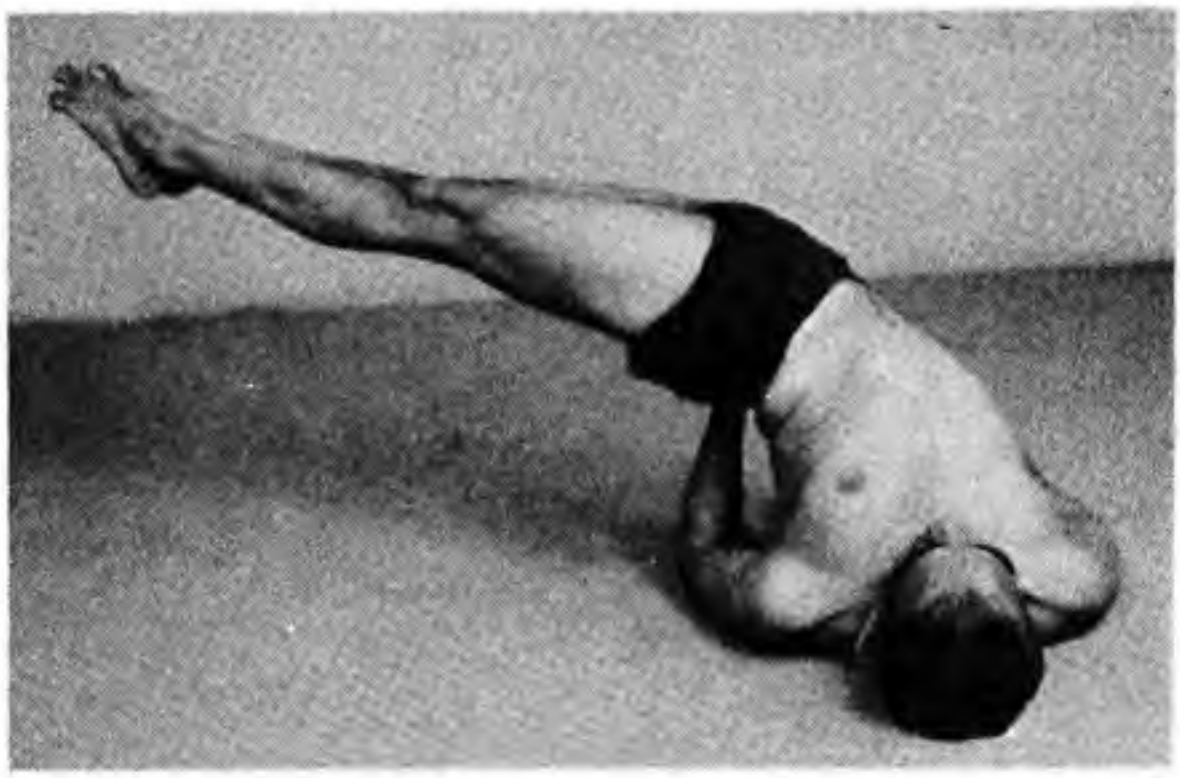


253

3. The right palm remains as in Sarvāngāsana on the back dorsal region.

4. Move the legs over the left palm at an angle (Plate 254) and stay in this position for 20 seconds breathing normally.

5. Exhale, come back to Sālamba Sarvāngāsana I and repeat on the right side for the same length of time. (Plate 255)



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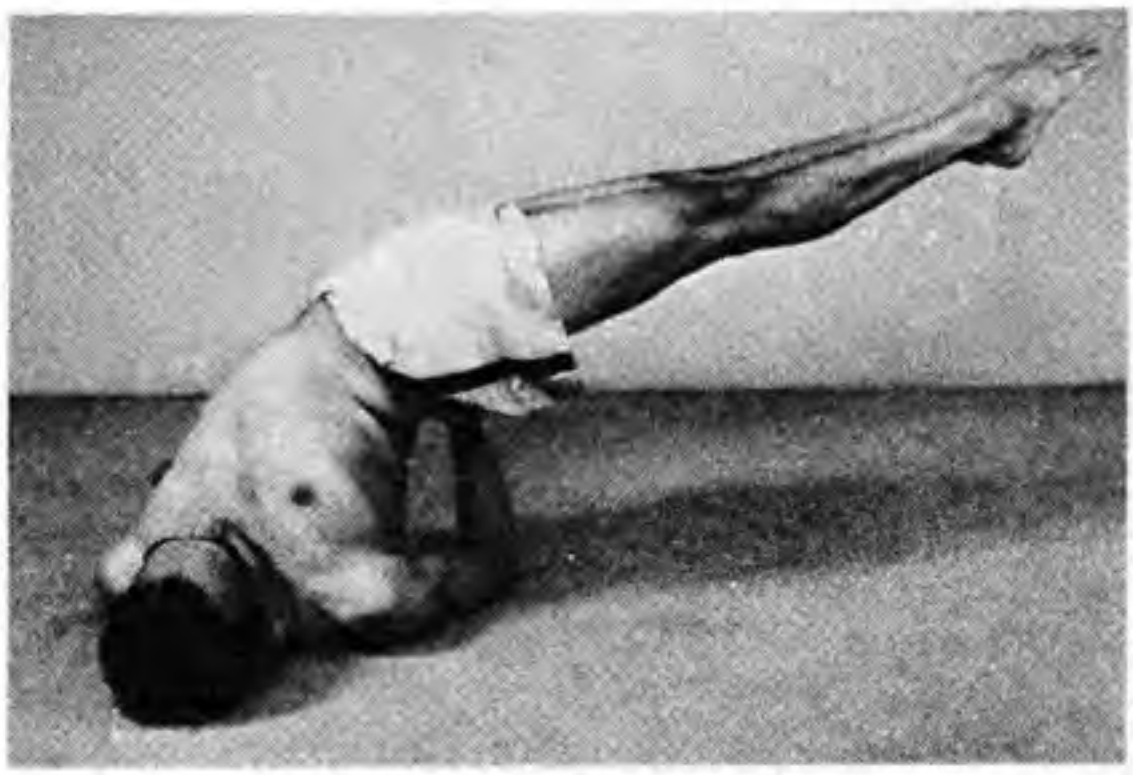

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Effects

This āsana strengthens the wrists. It also exercises the liver, pancreas and spleen and ensures a generous blood supply to them. These organs are thereby kept in a healthy condition.

98. *Setu Bandha Sarvāngāsana* – also called *Uttāna Mayūrāsana* Ten* (Plate 259)

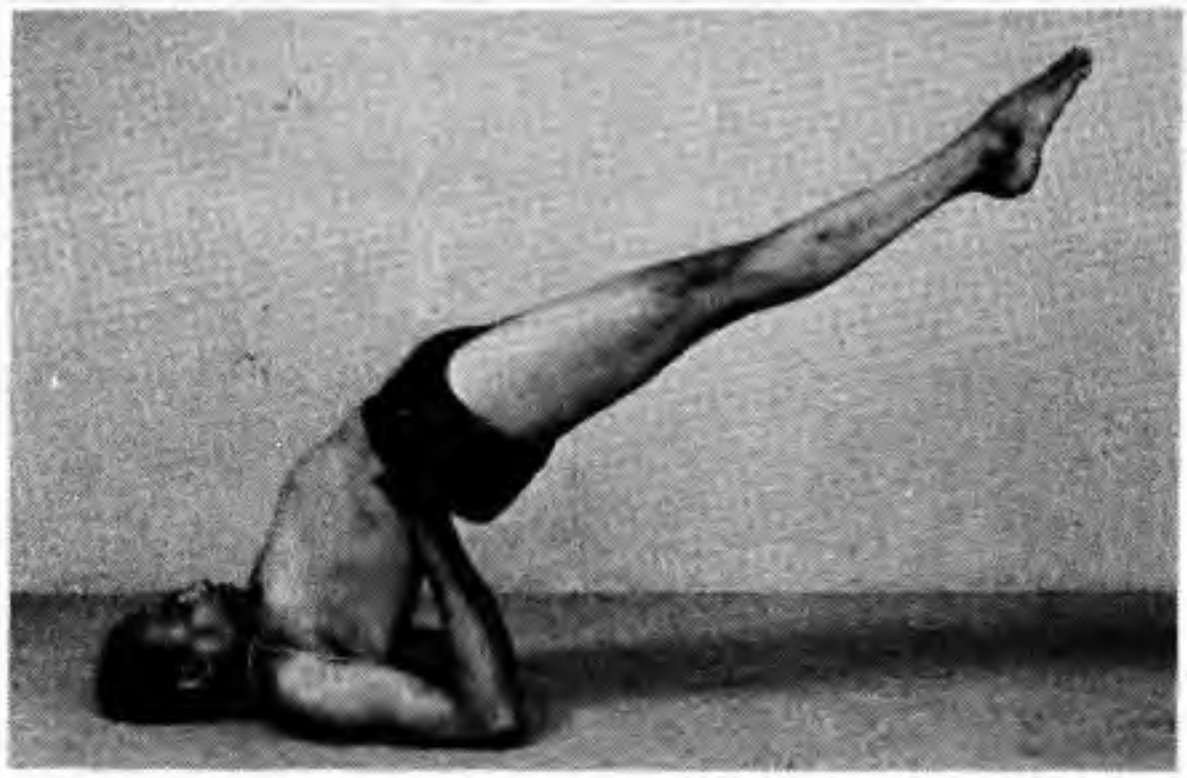
Setu means a bridge and Setu Bandha means the formation or construction of a bridge. In this position, the body is arched and supported on the shoulders, soles and heels. The arch is supported by the hands at the waist.

Ut means intense and tān means to stretch. This āsana resembles a stretched peacock (Mayūra), hence the name.

Technique

1. Do Sālamba Sarvāngāsana. (Plate 223)

2. Rest the palms well on the back, raise the spine up, take the legs back straight (Plate 256) or bend the knees (Plate 257) and throw the legs back over the wrists to the floor. (Plate 258.) Stretch out the legs and keep them together. (Plate 259)



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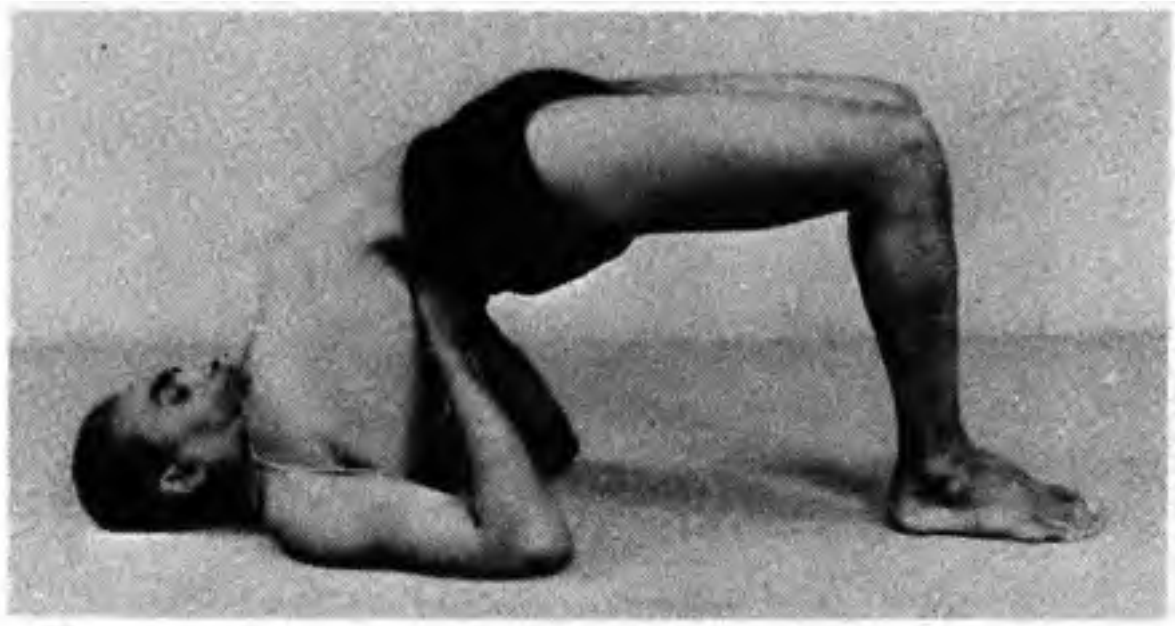
257

3. The whole body forms a bridge, the weight of which is borne by the elbows and the wrists. The only parts of the body in contact with



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259

the ground will be the back of the head and neck, the shoulders, the elbows and the feet. Stay in the pose from half a minute to a minute with normal breathing.

4. It is possible to lessen the pressure on the elbows and the wrists by stretching the spine towards the neck, keeping the heels firmly on the ground.

99. *Eka Pāda Setu Bandha Sarvāngāsana*—also called *Eka Pāda Uttāna Mayūrāsana* Eleven* (Plate 260)

Eka means one and pāda means the foot. This is a variation of the previous āsana, with one leg high in the air.

Technique

1. After staying in Setu Bandha Sarvāngāsana (Plate 259), exhale and lift the right leg up to a perpendicular position. (Plate 260.) Stretch both the legs fully and hold this pose for 10 seconds.

2. Inhale, bring the right leg to the floor, exhale, lift the left leg to the perpendicular and stretch out both the legs fully. Stay for the same length of time. Inhale and bring the leg to the floor.

260

3. Exhale, swing the legs back to Sarvāngāsana (Plate 223), slide them gradually to the floor by removing the hands from the back and rest on the floor.

Effects of Setu Bandha Sarvāngāsana and Eka Pāda Setu Bandha Sarvāngāsana

These two āsanas give the spine a backward movement and remove the strain on the neck caused by the other various movements of Sarvāngāsana.

A healthy and flexible spine indicates a healthy nervous system. If the nerves are healthy a man is sound in mind and body.

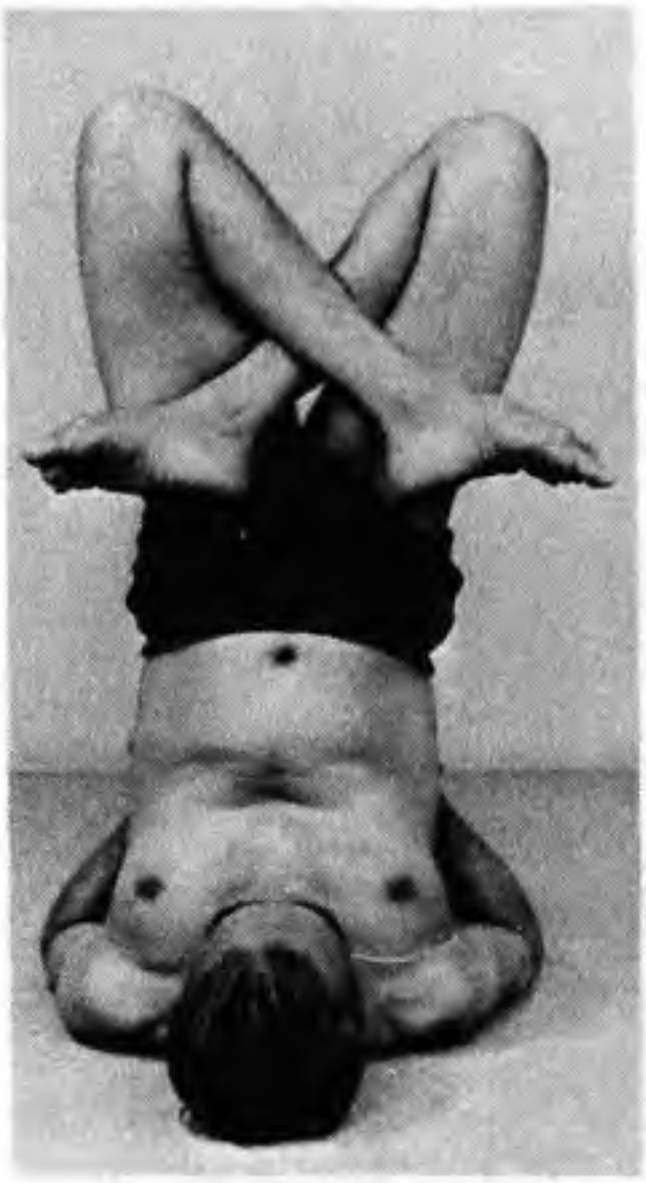
100. *Ūrdhva Padmāsana in Sarvāngāsana* Four* (Plate 261)

Ūrdhva means above, high. Padma means a lotus. In this Sarvāngāsana variation, the legs, instead of being kept straight up, are bent at the knees and crossed so that the right foot rests on the left thigh and the left foot on the right thigh as in the lotus pose. (Plate 104)

Technique

1. From Sālamba Sarvāngāsana, bend the legs at the knees and cross them. First place the right foot over the left thigh, and then the left foot over the right thigh.

2. Stretch the crossed legs vertically up, move the knees closer to each other and the legs as far back as possible from the pelvic region. (Plate 261)



261

3. Stay in this pose from 20 to 30 seconds with deep and even breathing.

4. To increase the stretch, perform the pose by giving the trunk a lateral twist following the technique of Pārśva Sarvāngāsana. (Plate 254.) This is called:

101. *Pārśva Ūrdhva Padmāsana in Sarvāngāsana* Seven* (Plates 262 to 265)

(Pārśva means flank.)

5. Stay on each side for 10 to 15 seconds with normal breathing.

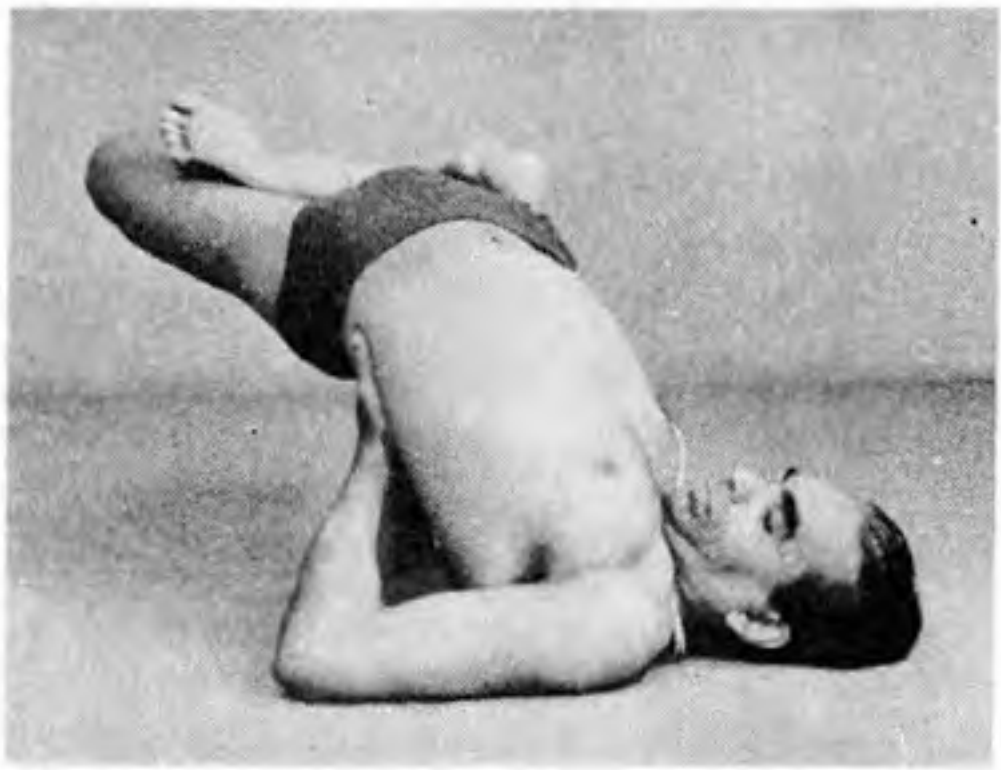
6. Exhale, come back to Ūrdhva Padmāsana and rest awhile.

7. Now, with an exhalation arch the trunk back (Plate 266) following the technique of Setu Bandha Sarvāngāsana. (Plate 259.) Gradually stretch the thighs back until the knees rest on the floor forming a bridge over the hands. This is called:

102. *Uttāna Padma Mayūrāsana* Twenty-five* (Plate 267)

Uttāna means an intense stretch, padma is a lotus and mayūra a peacock.

262



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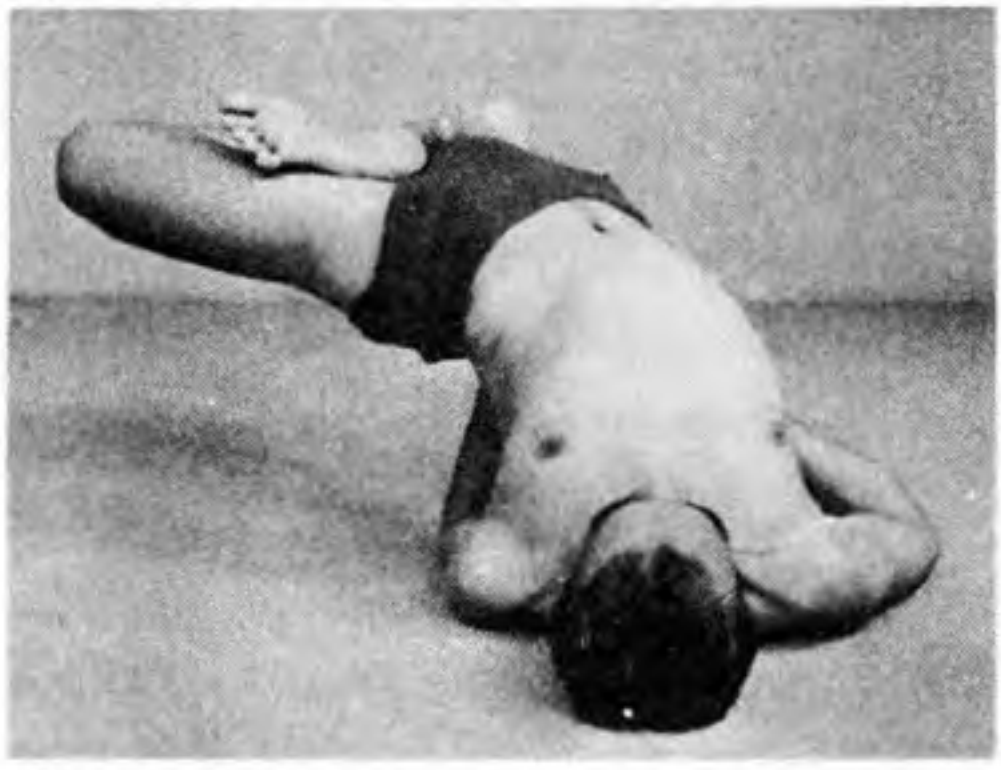

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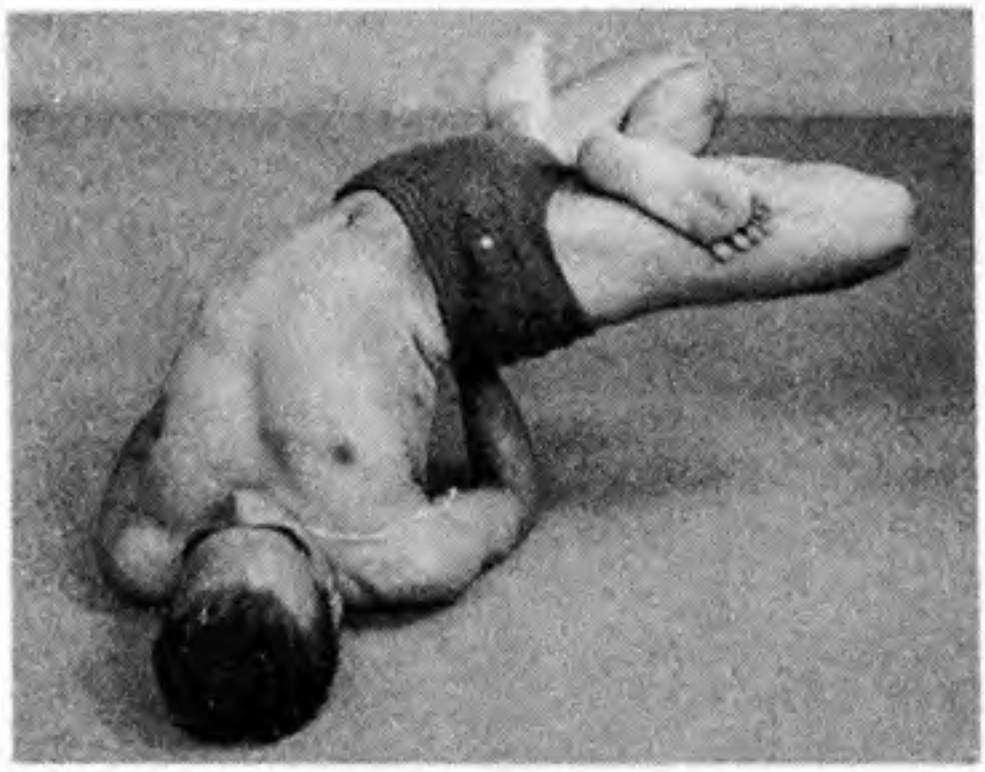

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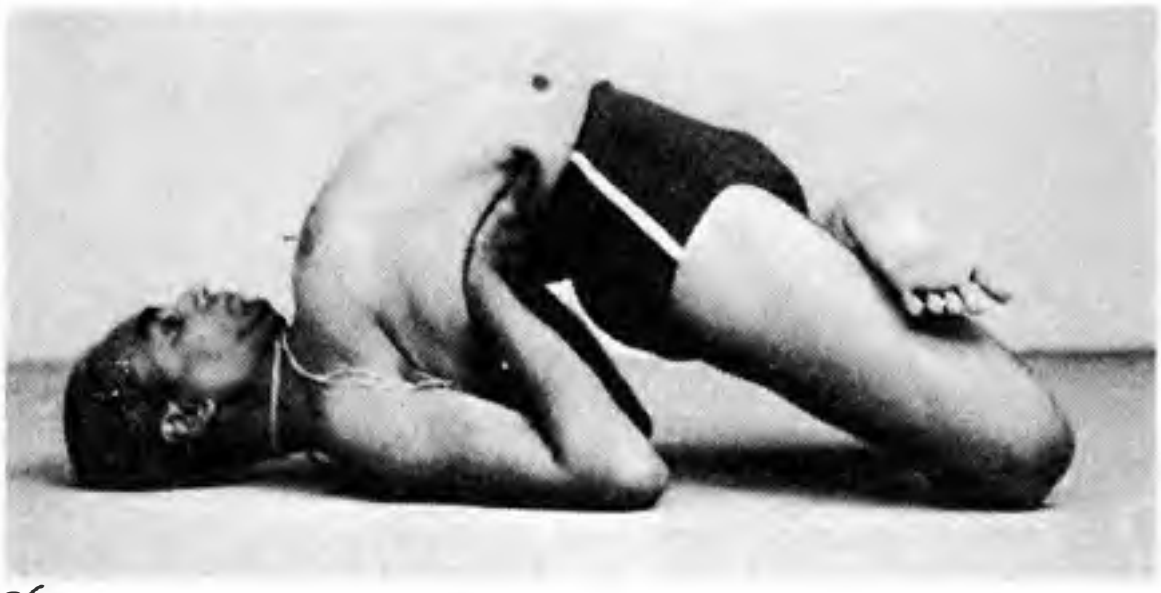


267

8. Stay in this position for 10 to 15 seconds with normal breathing.

9. Exhale, come back to Ūrdhva Padmāsana.

10. Uncross the legs, return to Sālamba Sarvāngāsana and repeat the pose by first placing the left foot over the right thigh and then the right

foot over the left thigh. Stay for an equal length of time in all these positions as in the earlier ones.

103. *Piṇḍāsana in Sarvāngāsana* Five* (Plate 269)

Piṇḍa means embryo or foetus. In this variation of Sarvāngāsana which is a continuation of the earlier posture, the bent crossed legs are brought down until they rest on the head. The posture resembles that of an embryo in the womb, hence the name.

Technique

1. From Ūrdhva Padmāsana in Sarvāngāsana (Plate 261), exhale, bend and lower the crossed legs from the hips towards the head.

268

2. Rest the legs over the head. (Plate 268)

3. Release the hands from the back, and clasp the legs. (Plate 269.) While clasping, move the trunk nearer to the neck to rest the legs well.

4. Remain in this position from 20 to 30 seconds with normal breathing and go back to Ūrdhva Padmāsana in Sarvāngāsana.

104. *Pārśva Piṇḍāsana in Sarvāngāsana* Eight* (Plates 270 and 271)

Pārśva means the side or flank. In this Piṇḍāsana variation of the earlier pose, both the bent knees are moved sideways and placed on the floor on the same side of the trunk. This is the lateral embryo pose in Sarvāngāsana.

Technique

1. After releasing the handclasp from Piṇḍāsana (Plate 269) bring the hands back and place the palms at the back of the ribs. (Plate 268)

269

2. Turn the hips sideways to the right, exhale and lower both knees to the floor. The left knee should be by the side of the right ear. (Plate 270)

270

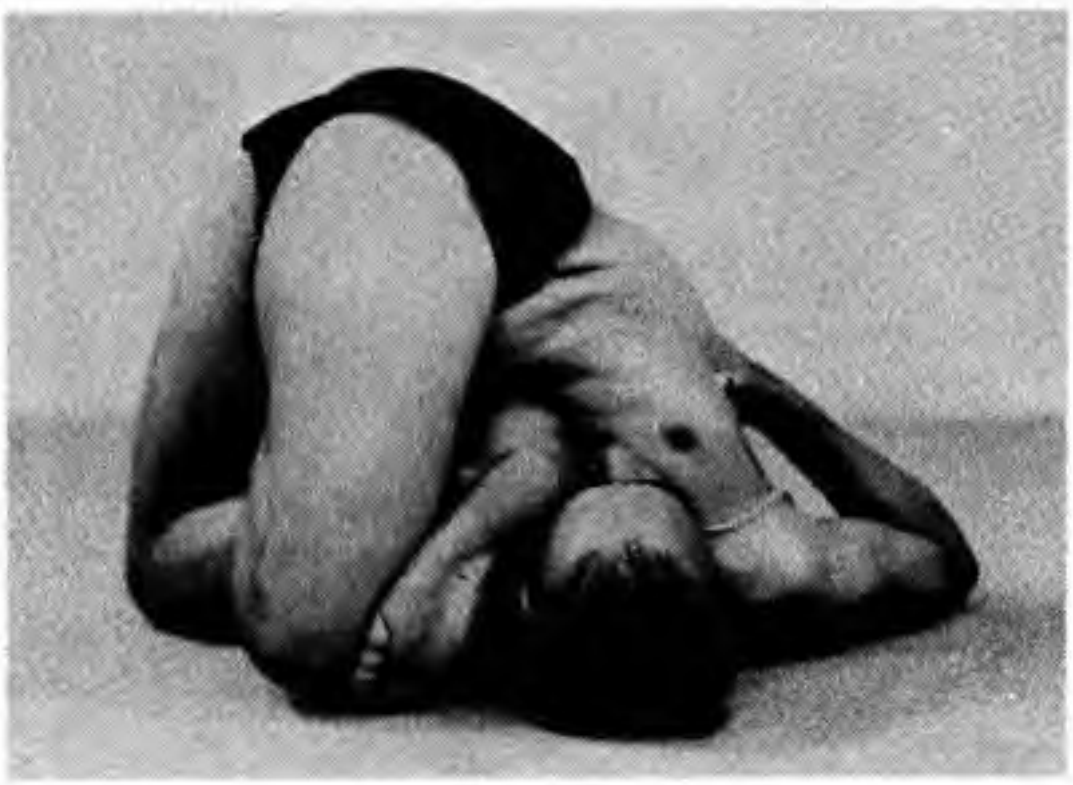
3. The left shoulder will be raised off the floor in the beginning. Push the shoulder against the floor and press the left hand firmly against the back. If this is not done, you will lose balance and roll over to one side.

4. Due to the lateral twist, breathing will be fast and difficult as the diaphragm is pressed in this position.

5. The knee near the ear will not rest on the floor to start with, but only after long practice.

6. Stay in this position for 20 to 30 seconds, with normal breathing.

7. Exhale, come up from the right side and move the crossed legs over to the left, so that the left foot will be near the left ear. (Plate 271.) Stay here also for the same length of time.



271

8. Go back to Ūrdhva Padmāsana. (Plate 261.) Release the lotus pose by uncrossing the legs and return to Sālamba Sarvāngāsana.

9. Now change the position of the crossed legs. Cross the legs again by putting the left foot over the right thigh first and then the right foot over the left thigh instead of the other way as done earlier.

10. Repeat the movements again on both the sides as described earlier.

Effects of Ūrdhva Padmāsana and Pārśva Piṇḍāsana movements in Sarvāngāsana

The change of crossing the legs brings equal pressure on both sides of the abdomen and colon and relieves constipation. For those suffering from chronic constipation a longer stay in Pārśva Piṇḍāsana is recommended, and one minute on each side will prove most efficacious. Griping pain in the stomach is relieved by these poses.

Persons with extremely flexible knees, can easily perform these positions. It is, however, difficult for many people to cross the legs in Padmāsana. For them a longer stay in Pārśva Halāsana (Plate 249)–

(there also the spine and trunk get a lateral twist but the legs remain straight)– is recommended.

In all these positions breathing at first will be fast and laboured. Try to maintain normal breathing.

Note. The spine is given the forward, lateral and backward movements in these variations of Sarvāngāsana. In Halāsana, Eka Pāda Sarvāngāsana, Karṇa Pīdāsana and Piṇḍāsana the spine moves in the forward direction. In Pārśvaika Pāda Sarvānga, Pārśva Halāsana and Pārśva Piṇḍāsana the spine moves laterally, as in Pārśva Sarvāngāsana and in Pārśva Ūrdhva Padmāsana. In Setu Bandha and Uttāna Padma Mayūra it is given a backward movement. These movements tone the spine on all sides and keep it healthy.

It is related that in the Krita Age (the first Age of the Universe) a host of Dānavās (giants and demons) became invincible in battle under the leadership of Vṛtra and scattered the Devas (or Gods) in all directions. Realising that they could not regain their power until Vṛtra was destroyed, the gods appeared before their Grandsire, Brahmā, the creator. Brahmā instructed them to consult Viṣṇu who asked them to obtain the bones of a sage called Dadhīcha, from which to make a demon-slaying weapon. The gods appeared before the sage and begged the boon according to Viṣṇu's advice. The sage renounced his body for the benefit of the gods. From the spine of Dadhīcha was fashioned Vajra, the thunderbolt, which Indra the king of the gods hurled and slew Vṛtra.

The story is symbolical. The Dānavās represent the tāmasic qualities in men and diseases. The Devas represent health, harmony and peace. To destroy the tāmasic qualities and the diseases due to them and to enjoy health and happiness, we have to make our spines strong as a thunderbolt like the spine of Dadhīcha. Then we shall enjoy health, harmony and happiness in abundance.

105. *Jaṭhara Parivartanāsana* Five* (Plates 274 and 275)

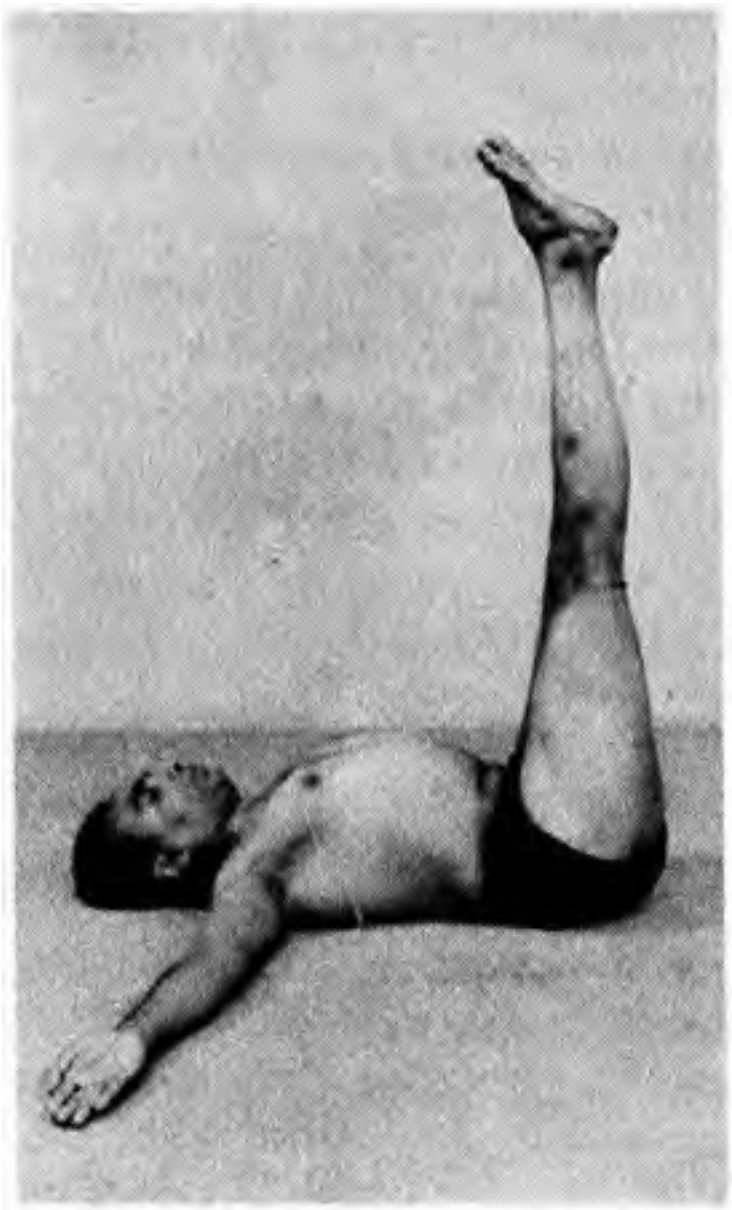
Jaṭhara means the stomach, the belly. Parivartana means turning or rolling about, turning round.

Technique

1. Lie flat on the back on the floor. (Plate 219)

2. Stretch out both arms sideways in line with the shoulders, so that the body resembles a cross.

3. Exhale, raise both legs together until they are perpendicular to the floor. They should remain poker stiff, so do not bend them at the knees. (Plate 272)



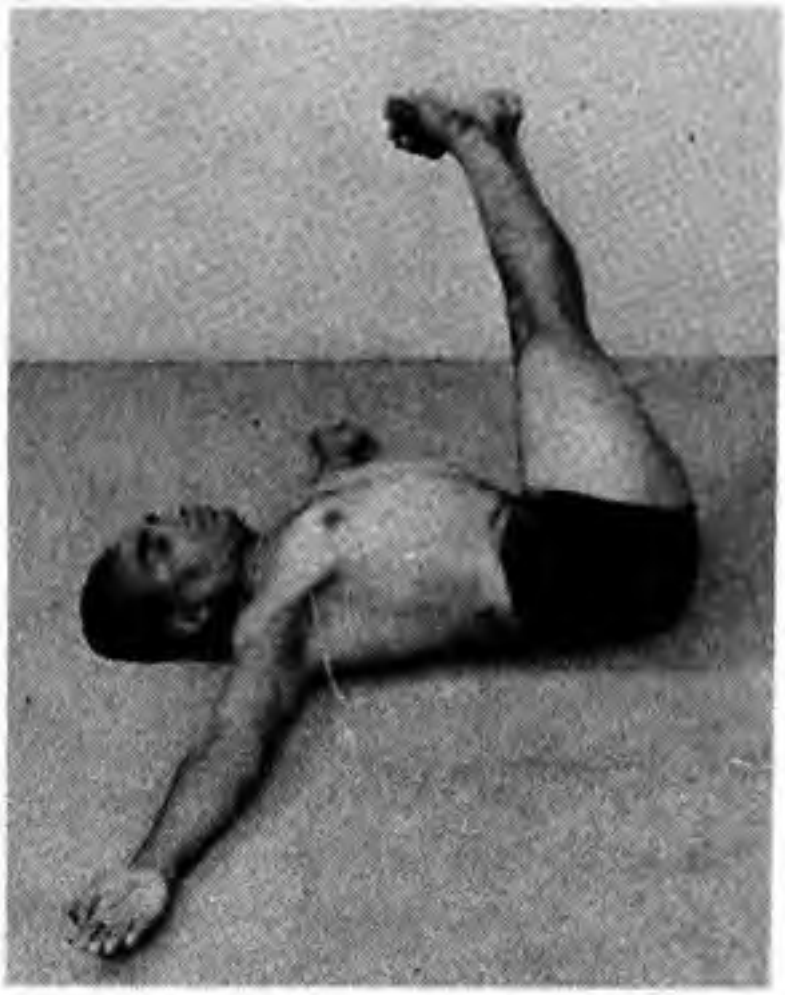
272

4. Remain in this position for a few breaths. Then exhale, and move both the legs sideways (Plate 273) down towards the floor to the left until the toes of the left foot almost touch the finger-tips of the outstretched left hand. (Plate 274.) Try and keep the back well on the floor. In the initial stages, the right shoulder will be lifted off the floor. To prevent this ask a friend to press it down, or catch hold of a heavy piece of furniture with the right hand when the legs are turned sideways to the left.

5. Both legs should go down together, the knees being kept tight throughout. As far as possible keep the lumbar portion of the back on the floor and turn the legs only from the hips. When the legs are near the outstretched left hand, move the abdomen to the right.

6. Stay in the pose for about 20 seconds, keeping the legs stiff throughout. Then move the still stiffened legs slowly back to the perpendicular with an exhalation. (Plate 272)

7. Remain with the legs perpendicular for a few breaths and then repeat the movements by lowering the legs to the right and turning the abdomen to the left. (Plate 275.) Stay here also for the same length of



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274

time and with an exhalation, come back to the perpendicular legs position (Plate 272) and then gently lower the legs to the floor (Plate 219) and relax.

Effects

This āsana is good for reducing excess fat. It tones and eradicates sluggishness of the liver, spleen and pancreas. It also cures gastritis and strengthens the intestines. By its regular practice all the abdominal

275

organs are kept in trim. It helps to relieve sprains and catches in the lower back and the hip region.

106. *Ūrdhva Prasarita Pādāsana* One* (Plates 276 to 279)

Ūrdhva means upright, above, high. Prasarita means extended, stretched out. Pāda means foot.

Technique

1. Lie flat on the back keeping the legs stretched out and tightened at the knees. Place the hands by the side of the legs. (Plate 219)

2. Exhale, move the arms over the head and stretch them out straight. (Plate 276.) Take two breaths.

276

3. Exhale, raise the legs up through 30 degrees (Plate 277) and hold the position for 15 to 20 seconds with normal breathing.

4. Exhale, move the legs up to 60 degrees (Plate 278) and hold for 15 to 20 seconds with normal breathing.

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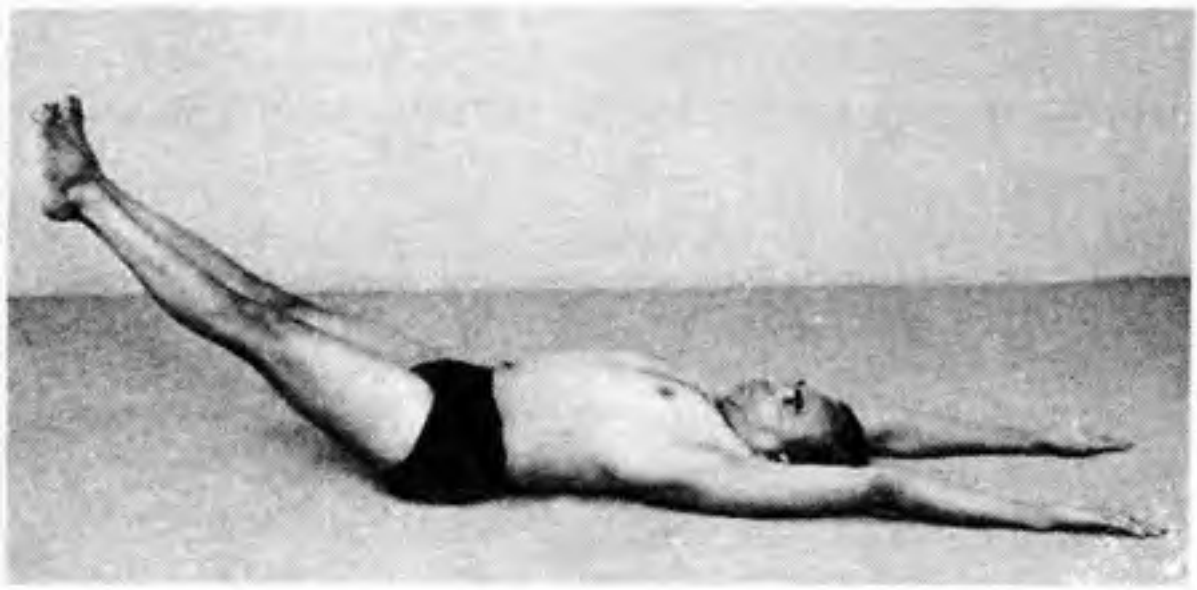

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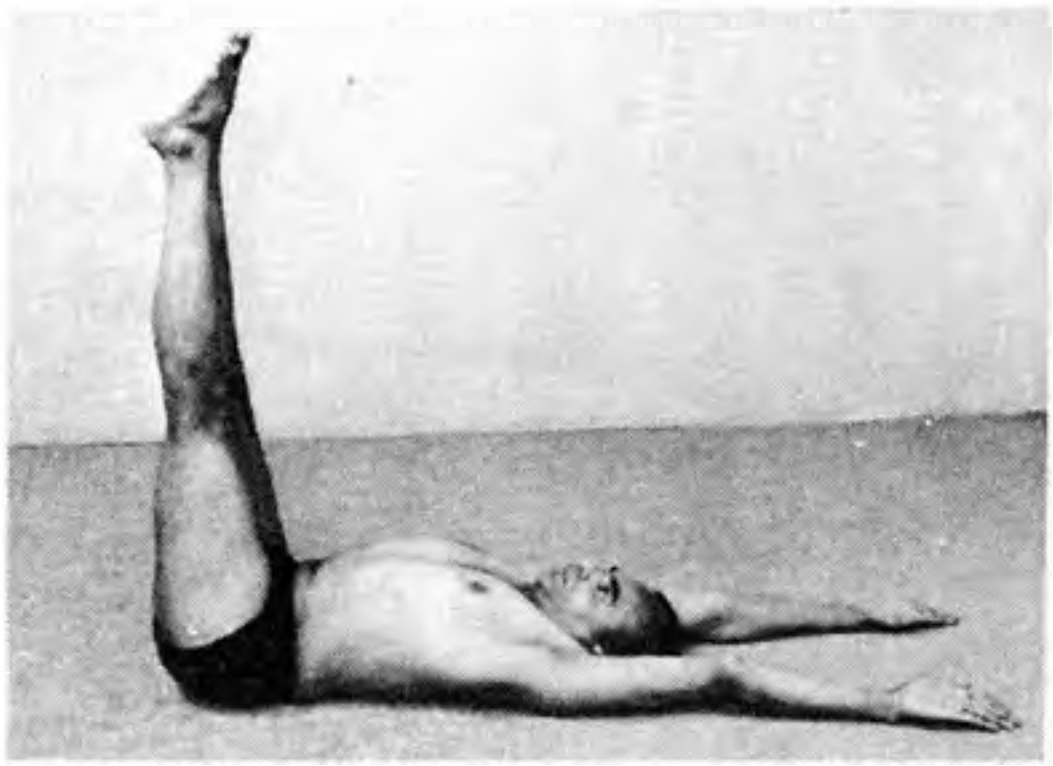
5. Again exhale, move the legs higher still to the perpendicular (Plate 279) and hold it for 30 to 60 seconds with normal breathing.



279

6. Now exhale, lower the legs slowly to the floor and relax.
7. Repeat 3 or 4 times from position 2 to 6.

Note. If you cannot do all the three positions at one stretch, do them in 3 steps, resting between each.

Effects

This āsana is a wonderful exercise for reducing fat round the abdomen. It strengthens the lumbar region of the back, tones the abdominal organs, and relieves those suffering from gastric trouble and flatulence.

107. *Chakrāsana* Four* (Plates 280 to 283)

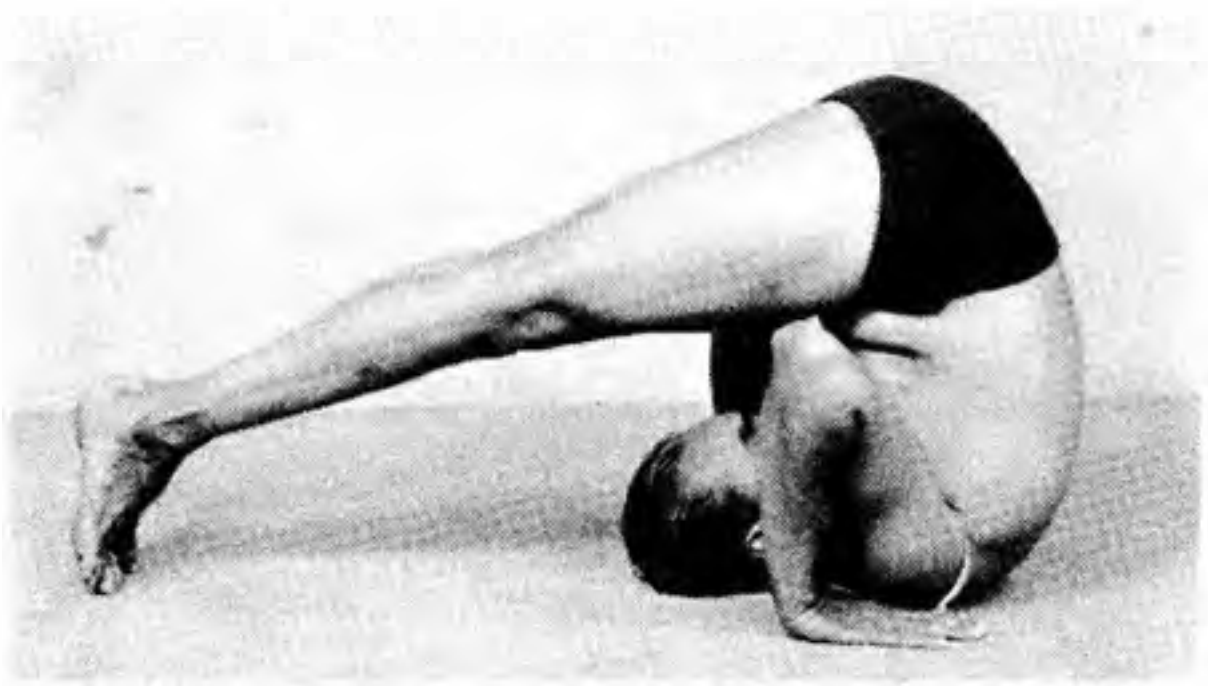
Chakra means a wheel. In this pose, lie flat on the floor, lift both legs, raise them straight up together and bring them over the head to Halāsana. (Plate 239.) Place the hands by the ears and roll over the head. This rolling over resembles the movement of a wheel, hence the name.

Technique

1. Lie flat on the back on the floor. (Plate 219)

2. Exhale, raise both the legs together and bring them over the head and rest the toes on the floor as in Halāsana. (Plate 239.) Take 2 or 3 breaths.

3. Move the hands over the head, bend the elbows and place the palms down beside the shoulders, the fingers pointing away from the feet. (Plate 280)



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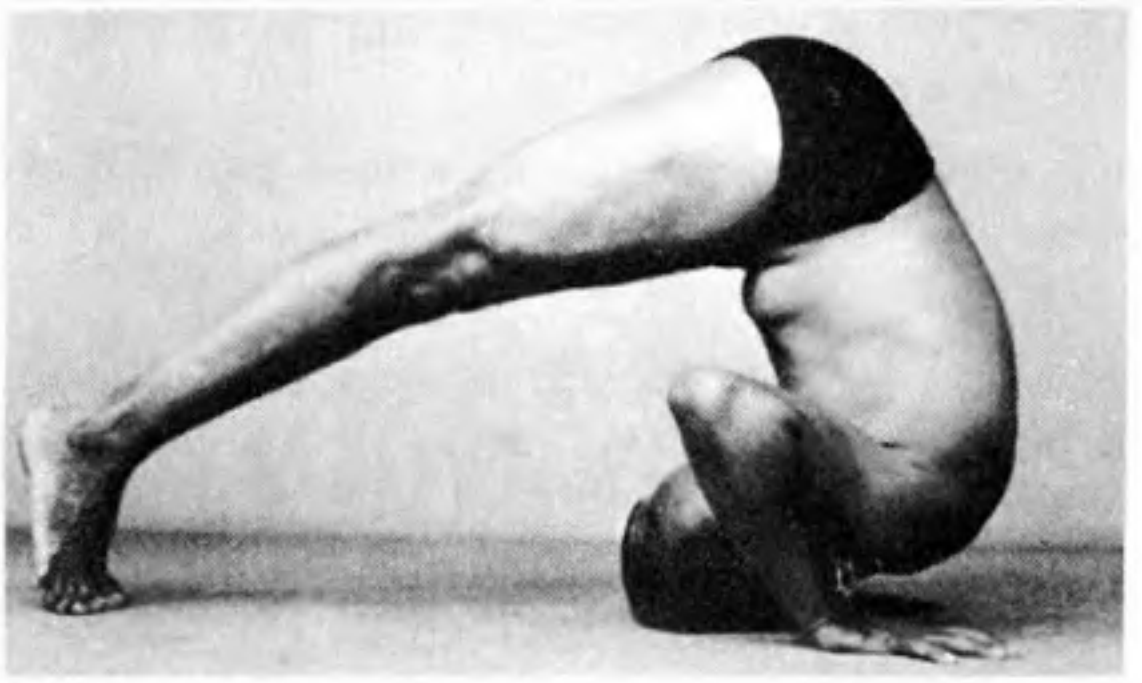
4. Exhale, press the palms on the floor and stretch the legs further to raise the back of the neck and roll over the head as in Plates 281, 282 and 283.



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282

283

5. Now stretch the arms out straight and go into Adho Mukha Śvānāsana. (Plate 75)

6. Bend the elbows, lower the trunk to the floor, turn over on the back and relax.

Effects

This āsana tones the abdominal organs and the spine. Due to the wheeling movement, the blood circulates round the spinal column and rejuvenates it. It is also good for people suffering from gastric trouble and a sluggish liver.

108. *Supta Pādāṅguṣṭhāsana* Thirteen* (Plate 285)

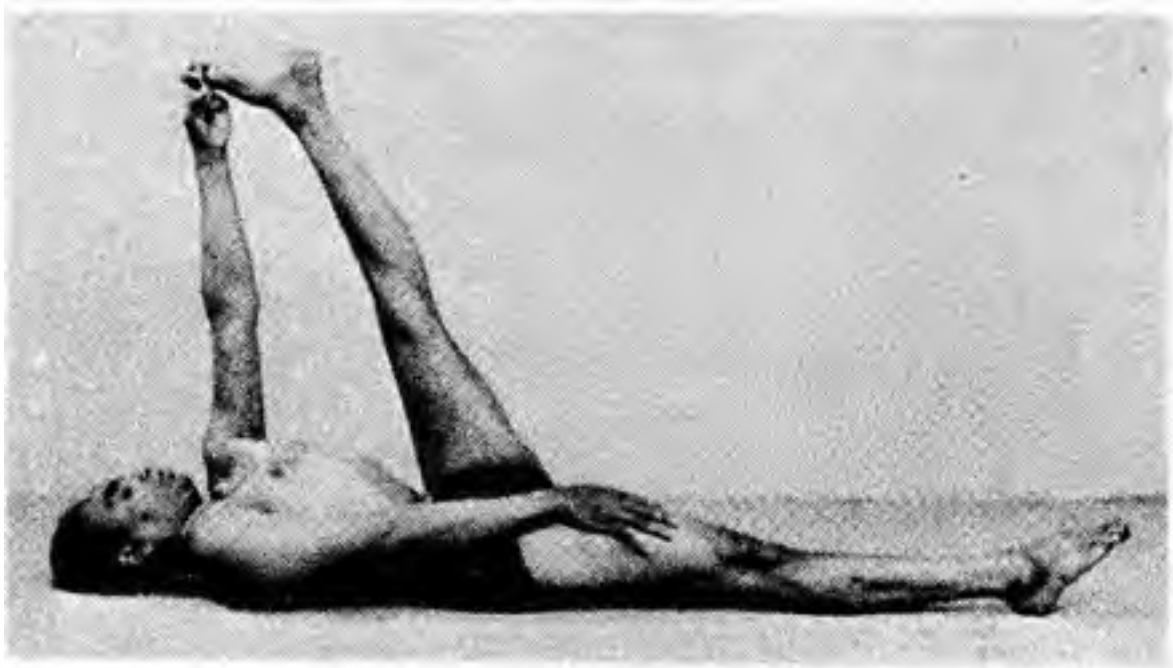
Supta means lying down. Pāda is the foot. Aṅguṣṭha means the big toe. This āsana is done in three movements.

Technique

1. Lie flat on the back, stretch both legs and keep the knees tight. (Plate 219)

2. Inhale, raise the left leg from the floor until it is perpendicular. Keep the right leg stretched fully on the floor and rest the right hand on the right thigh.

3. Raise the left arm and catch the left big toe between the thumb and the fore and middle fingers. (Plate 284.) Take 3 or 4 deep breaths.



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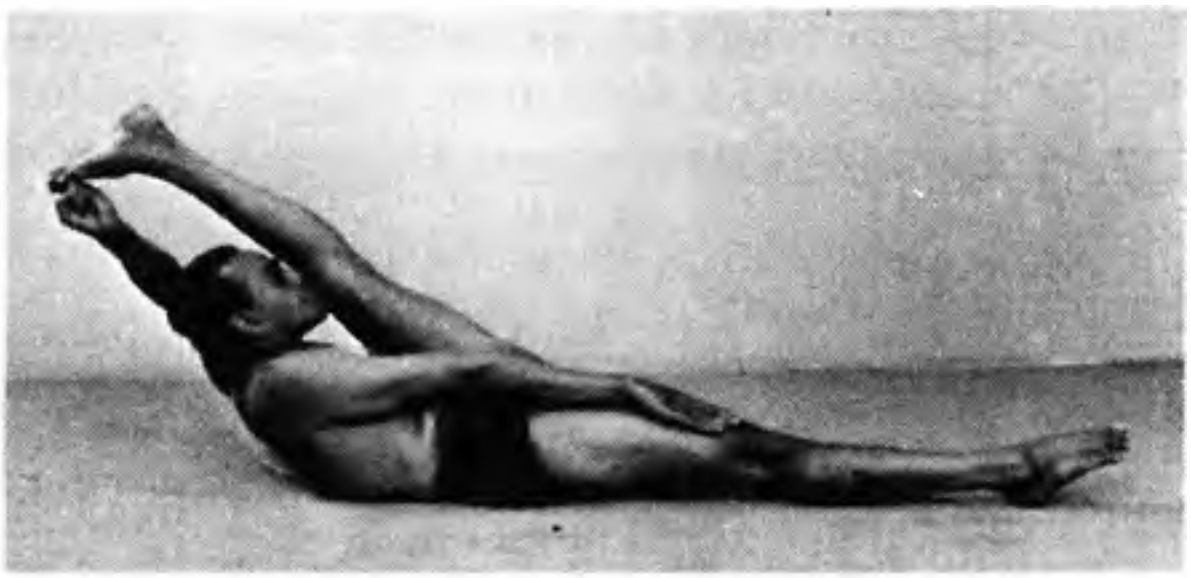
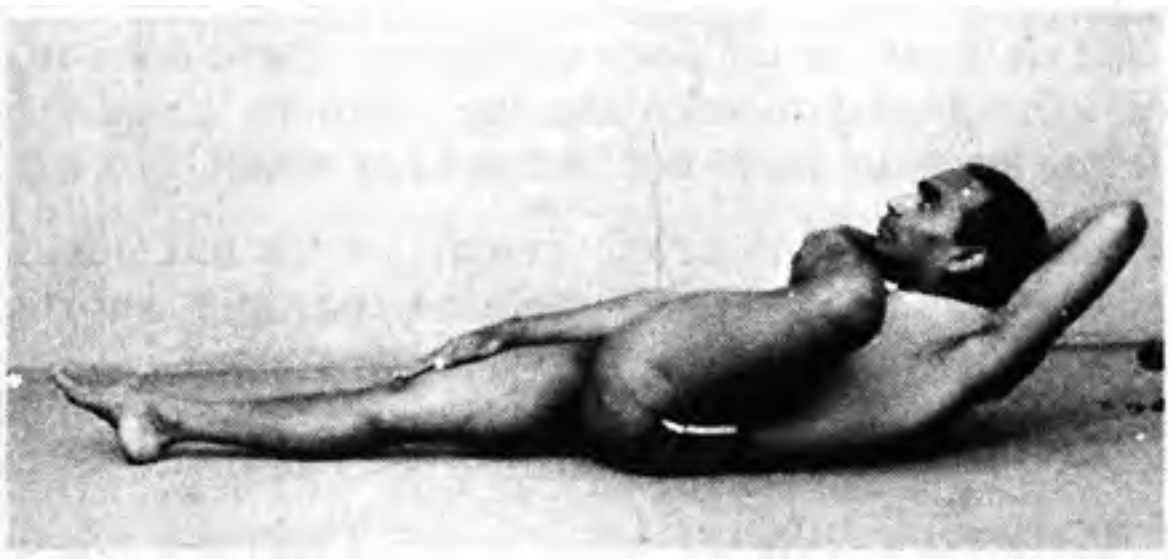
4. Exhale, raise the head and trunk from the floor, bend the left arm at the elbow and pull the left leg towards the head without bending it at the knee. Pull the leg down, lift the head and trunk up together and rest the chin on the left knee. (Plate 285.) Stay in this position for about 20 seconds, keeping the right leg fully stretched straight along the floor while breathing normally.



285

5. Inhale, move the head and trunk back to the floor and the left leg back to the perpendicular. (Plate 284.) This completes the first movement.

6. Exhale, hold the left big toe, bend the left knee and move the grasped toe towards the right shoulder. Bend the left elbow, stretch the left arm behind the head and move the head up into the space between the left forearm and the left shin. (Plate 286.) Take a few deep breaths.



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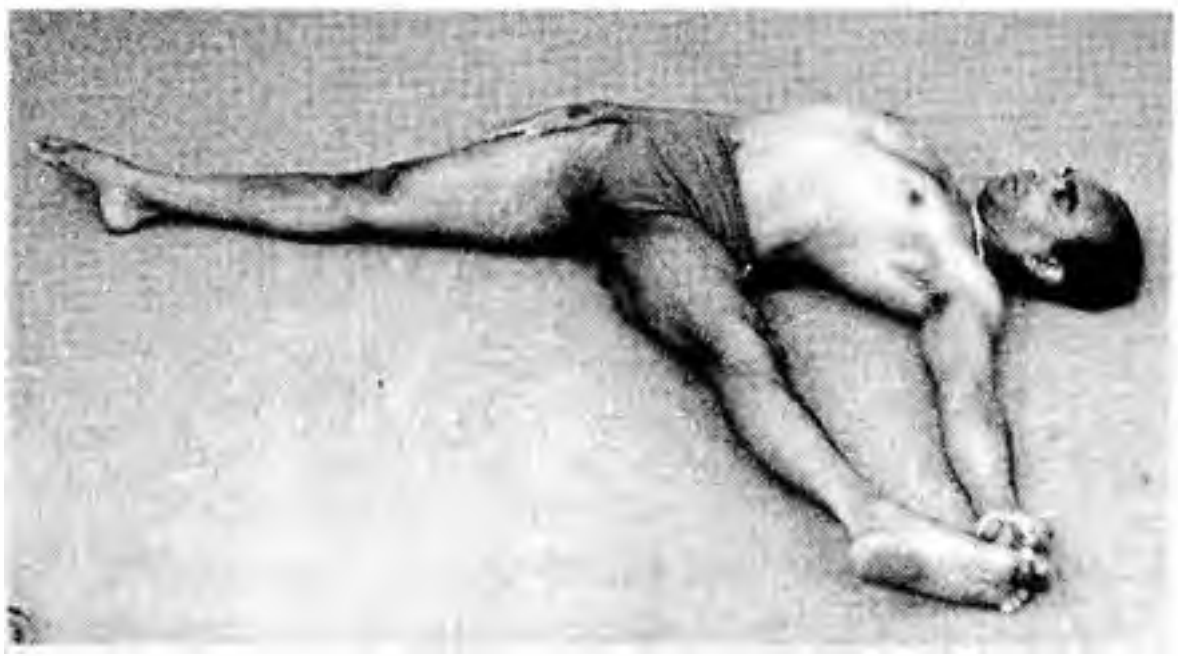
7. Inhale, move the head back to the floor, bring the left arm in front of the head and straighten the left arm and leg. Take the left leg back to the perpendicular, maintaining the toe hold throughout. (Plate 284.) During this movement also the right leg remains fully extended on the floor throughout and the right hand rests on the right thigh. This completes the second movement.

8. Exhale, and without disturbing the head and trunk or lifting the right leg off the floor, move the left arm and leg sideways to the left down to the floor. (Plate 287.) Do not release the toe hold but bring the left arm in level with the shoulders on the floor. Stay in this position

for about 20 seconds without bending the left leg at the knee. Breathe normally.



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9. Now inhale and without bending the left leg at the knee, bring it back to the perpendicular without releasing the grip on the left big toe or disturbing the right leg stretched on the floor. (Plate 284)

10. Exhale, release the toe grip, rest the left leg on the floor beside the right one and keep the left hand on the left thigh. This completes the third movement. To start with it is difficult to keep the extended leg stretched right out on the floor throughout these three movements. Therefore, ask a friend to keep the leg down by pressing the thigh just above the knee, or press the foot against a wall.

11. After completing the three movements on the left side, take a few deep inhalations and then repeat them on the right, substituting the word 'left' for the word 'right'.

Effects

The legs will develop properly by the practice of this āsana. Persons suffering from sciatica and paralysis of the legs will derive great benefit from it. The blood is made to circulate in the legs and hips where the nerves are rejuvenated. The pose removes stiffness in the hip joints and prevents hernia. It can be practised by both men and women.

109. *Anantāsana* Nine* (Plate 290)

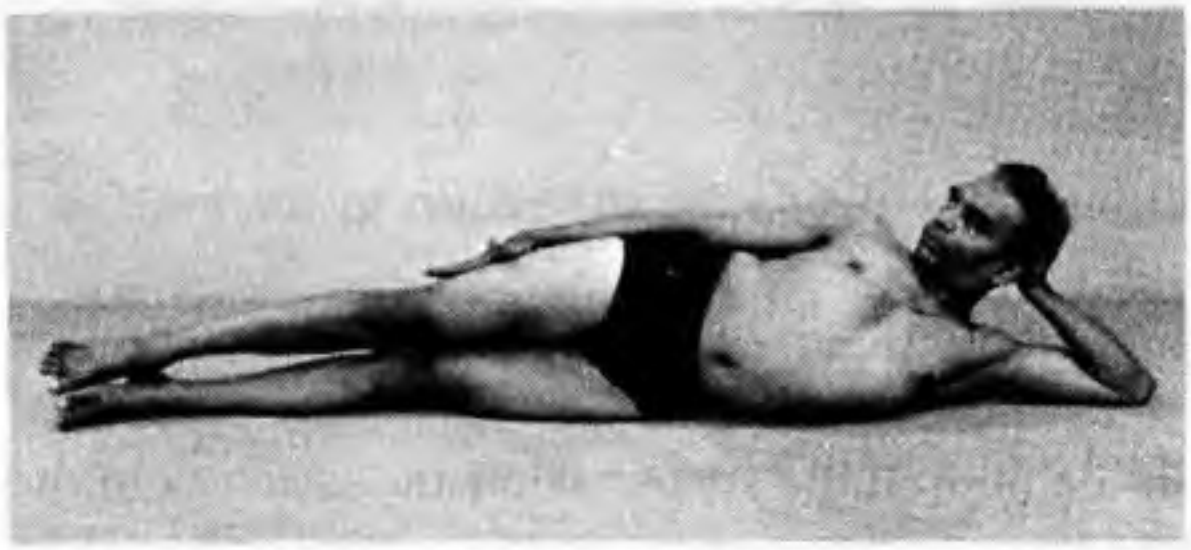
Ananta is a name of Viṣṇu and also of Viṣṇu's couch, the serpent Śeṣa. According to Hindu mythology, Viṣṇu sleeps in the primeval ocean on his couch Śeṣa, the thousand-headed serpent. In his sleep a lotus grows from his navel. In that lotus is born the Creator Brahmā, who fashions the world. After the creation, Viṣṇu awakens to reign

in the highest heaven, Vaikuṇṭha. The pose is found in the temple dedicated to Lord Ananta Padmanābha (padma = lotus: nābha = navel) of Trivandrum in South India.

Technique

1. Lie flat on the back. (Plate 219.) Exhale, turn to the left and rest the body, keeping the side in contact with the floor.

2. Raise the head, stretch the left arm beyond the head in line with the body, bend the left elbow, raise the forearm and rest the head on the left palm which should be placed above the ear. (Plate 288.) Stay in this position for a few seconds with either normal or deep breaths.



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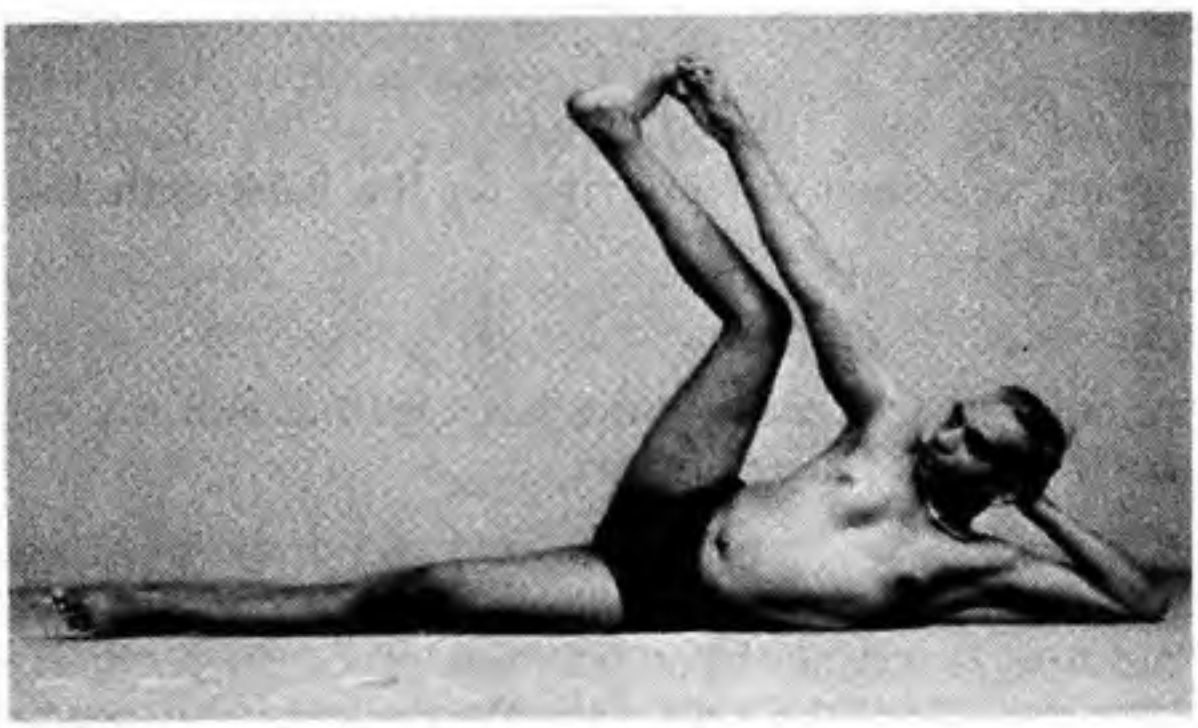
3. Bend the right knee and catch the right big toe with the right thumb and the fore and middle fingers. (Plate 289)



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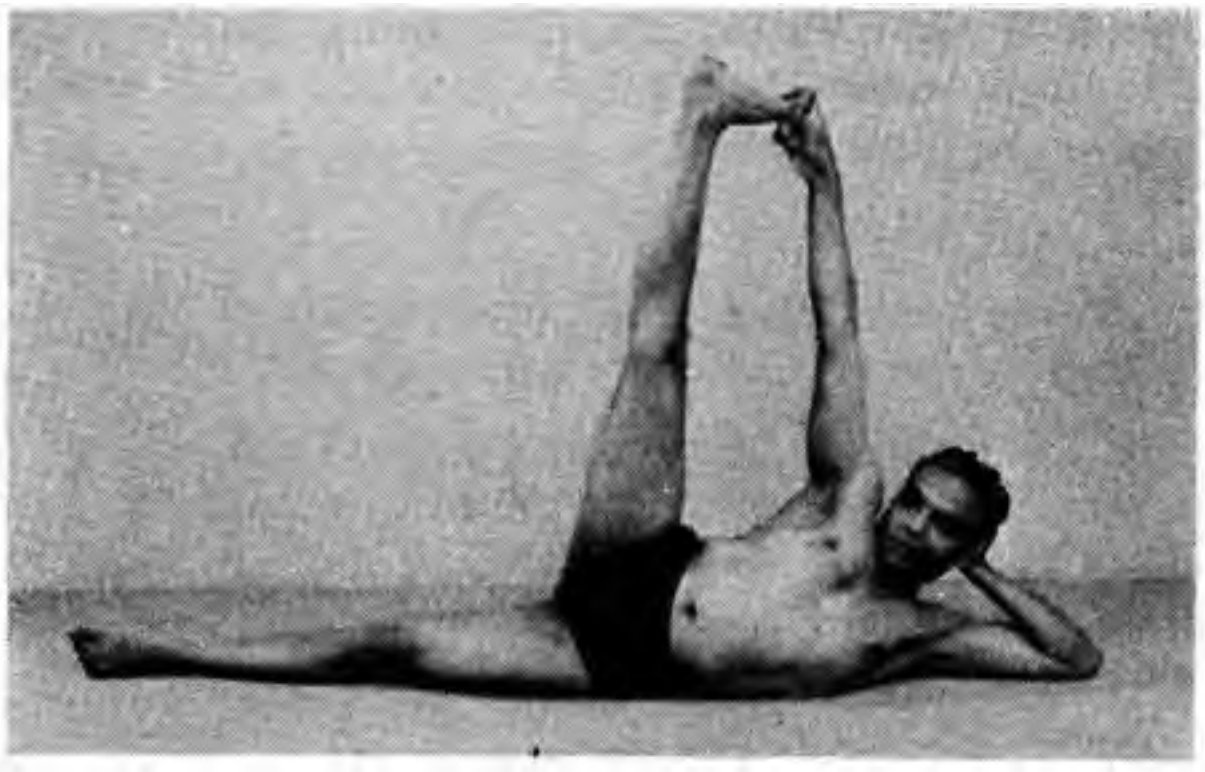
4. Exhale, stretch the right arm and leg up vertically together. (Plate 290.) Hold the pose from 15 to 20 seconds with normal breathing.



290

5. Exhale, bend the right knee and return to the position described in para. 2.

6. Lower the head from the left palm and roll over on the back. (Plate 219)

7. Repeat the pose on the other side for the same length of time and then relax.

Effects

The pelvic region benefits from this exercise and the hamstring muscles are properly toned. The āsana also relieves backaches and prevents the development of hernia.

110. *Uttāna Pādāsana* Nine* (Plate 292)

Uttāna means stretched out or lying on the back with the face up. Pāda means a leg.

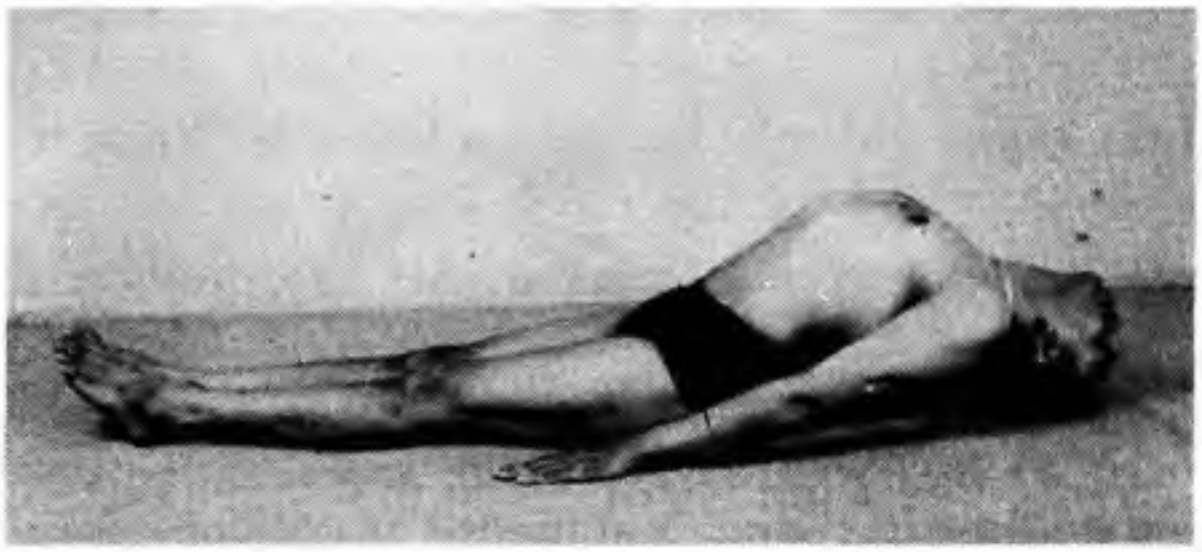
Technique

1. Lie flat on the back, keeping the feet together and the knees tight. (Plate 219.) Take 3 or 4 deep breaths.

2. Exhale, raise the back off the floor and arch it up by stretching the neck and moving the head back until the crown of the head rests on the floor. (Plate 291.) If resting the crown on the floor proves difficult, bring the hands by the side of the head, raise the neck and pull the head as far back as possible by raising the dorsal and lumbar regions of the back from the floor. Then rest the arms at the side. Take 2 or 3 breaths.

3. Stretch the back and with an exhalation lift the legs up until they are

about 45 to 50 degrees from the floor. Raise the arms, join the palms and keep them parallel to the legs. (Plate 292.) The arms and the legs should be kept stiff and not bent at the elbows or knees. Keep the legs together at the thighs, knees, ankles and feet.



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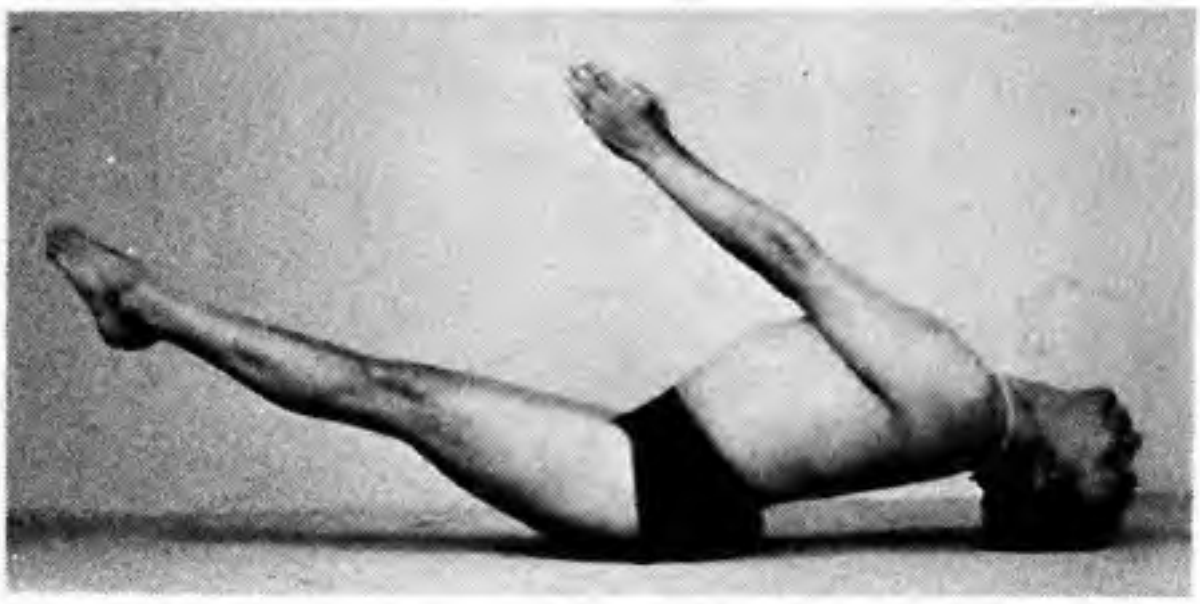

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4. Extend the ribs fully and remain in this pose for half a minute with normal breathing. The body should be balanced only on the crown of the head and the buttocks.

5. Exhale, lower the legs and arms to the floor, straighten the neck, release the head grip, lower the trunk and relax lying flat on the back on the floor.

Effects

The āsana gives full expansion to the chestwall and keeps the dorsal portion of the spine supple and healthy. It tones the neck and back and regulates the activity of the thyroids by ensuring their supply of healthy blood. The abdominal muscles are also stretched and strengthened.

111. *Setu Bandhāsana* Fourteen* (Plate 296)

Setu means a bridge. Setu bandha means the construction of a bridge. In this posture, the whole body forms an arch and is supported at one

end by the crown of the head and at the other on the feet, hence the name.

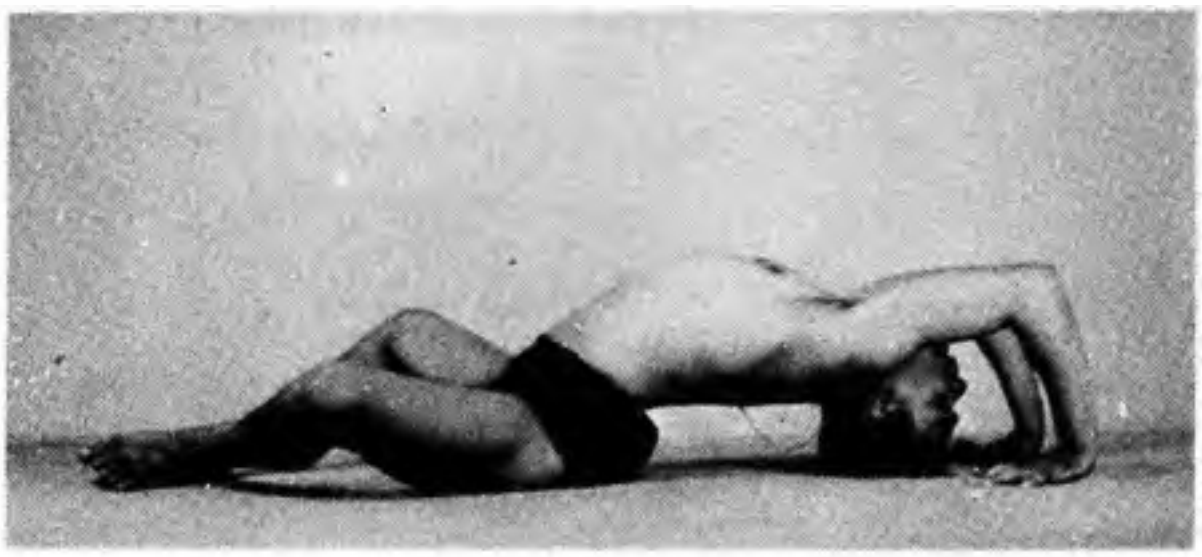
Technique

1. Lie flat on the back on the floor. (Plate 219.) Take a few deep breaths.

2. Bend the knees, widen the legs at the knees and bring the heels in towards the buttocks.

3. Keep the heels together and rest the outer sides firmly on the floor.

4. Bring the hands by the side of the head and, with an exhalation, raise the trunk and arch the body up to rest the crown of the head on the floor. (Plate 293.) Pull the head as far back as possible by stretching the neck up and lifting the dorsal and lumbar regions of the back off the floor.



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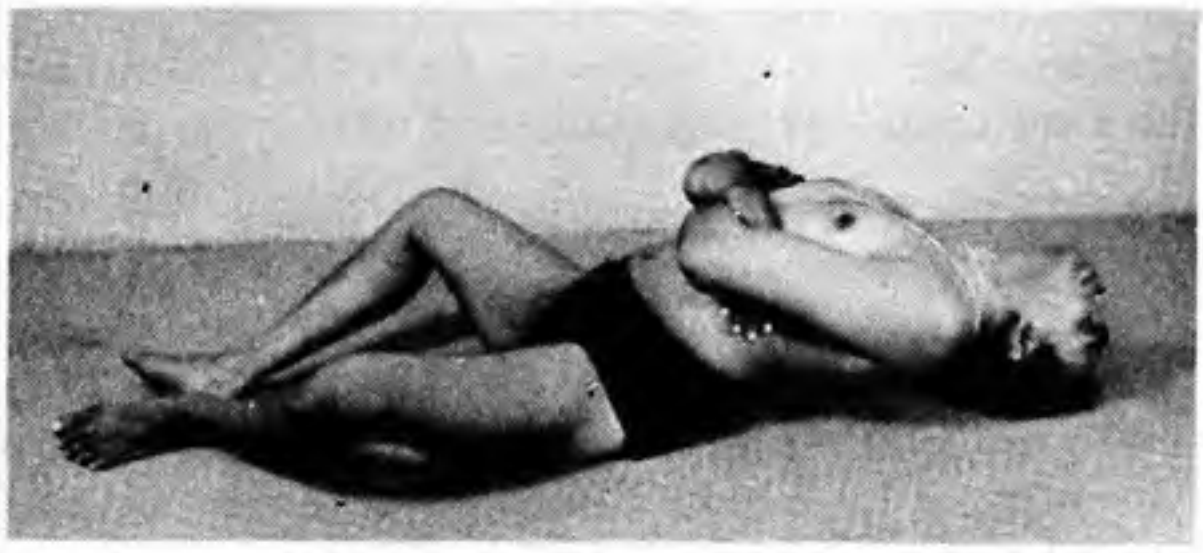
5. Fold the arms across the chest and hold the left elbow with the right hand and the right elbow with the left hand. (Plate 294.) Take 2 or 3 breaths.



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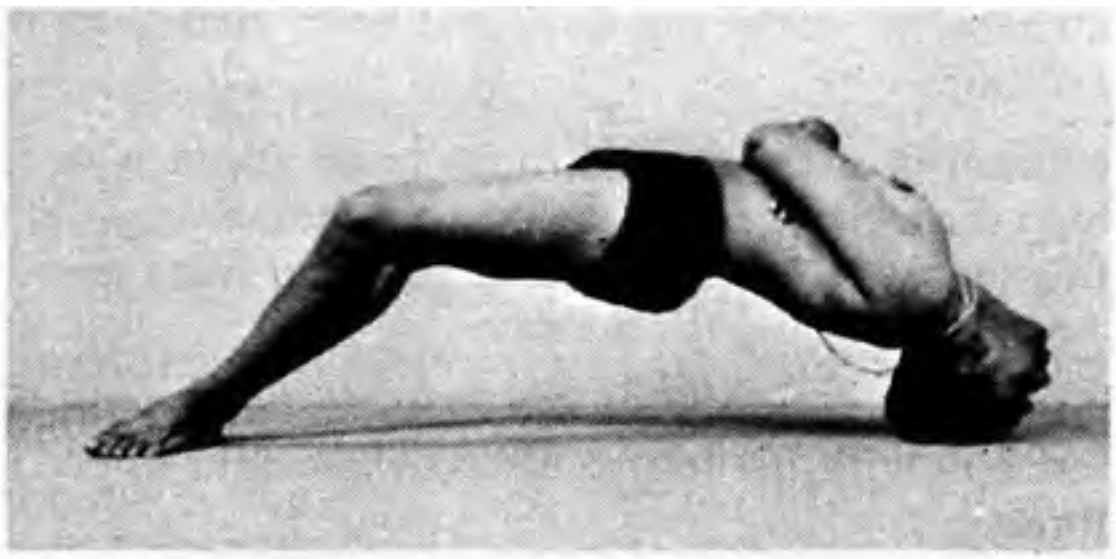
6. Exhale, draw the hips up (Plate 295) and stretch out the legs until they are straight. (Plate 296.) Join the feet and press them firmly to the

ground. The whole body now forms a bridge or an arch. One end of it is supported by the crown of the head and the other end on the feet.



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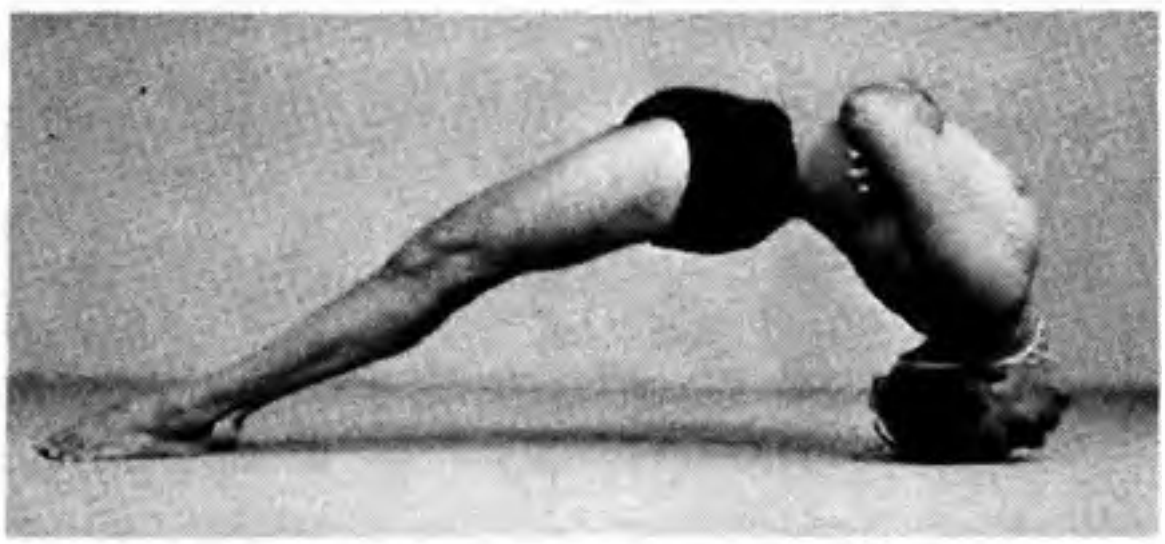

296

7. Hold this position for a few seconds with normal breathing.

8. Exhale, unfold the arms and place the hands on the floor, bend the knees, lower the legs and trunk to the floor, release the head grip, straighten the neck, lie flat on the back and relax.

Effects

The āsana strengthens the neck and tones the cervical, dorsal, lumbar and sacral regions of the spine. The extensor muscles of the back grow powerful and the hips are contracted and hardened. The pineal, pituitary, thyroid and adrenal glands are bathed in blood and function properly.

112. *Bharadvājāsana I* One* (Plates 297 and 298)

Bharadvāja was the father of Droṇa, the military preceptor of the Kauravas and Pāṇḍavas, who fought the great war described in the Mahābhārata. This āsana is dedicated to Bharadvāja.

Technique

1. Sit on the floor with the legs stretched straight in front. (Plate 77)

2. Flex the knees, move the legs back and bring both feet to the right side beside the hip.

3. Rest the buttocks on the floor, turn the trunk about 45 degrees to the left, straighten the right arm and place the right hand on the outer side of the left thigh near the left knee. Insert the right hand underneath the left knee, the palm touching the floor.

4. Exhale, turn the left arm from the shoulder behind the back, bend the left elbow and with the left hand clasp the right upper arm above the right elbow.

5. Turn the neck to the right and gaze over the right shoulder. (Plates 297 and 298)

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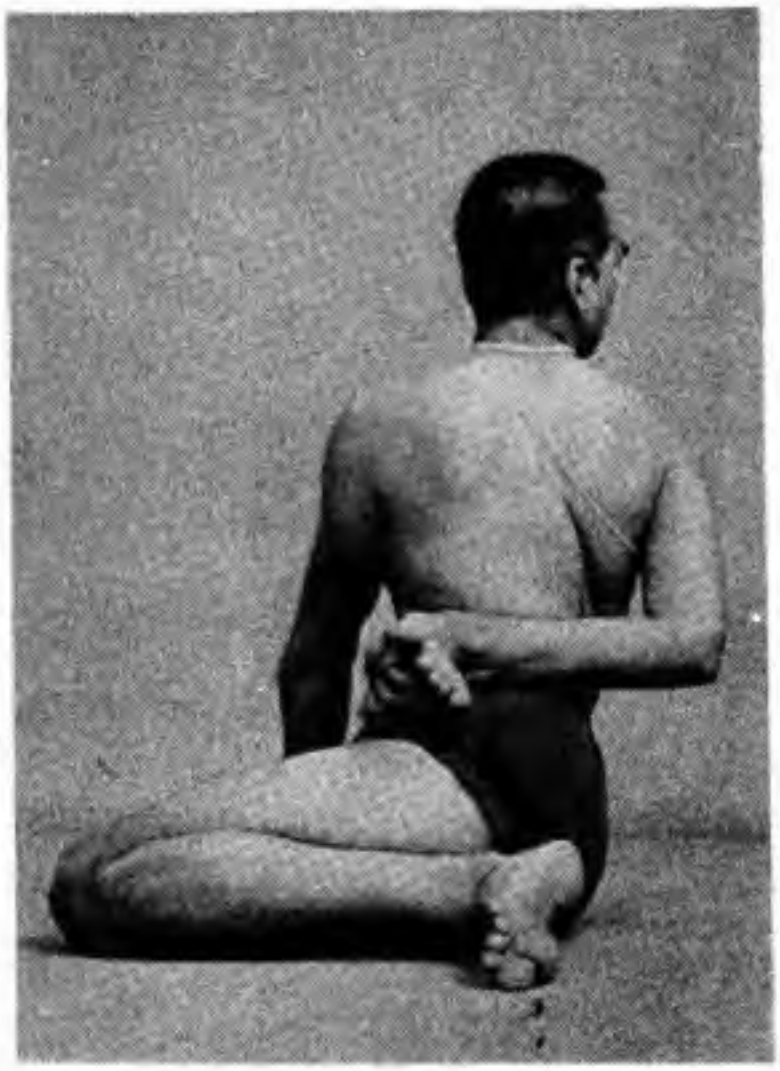

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6. Hold the position for half a minute with deep breathing.

7. Loosen the hand grip, straighten the legs and repeat the pose on the other side. Here, bring both the feet beside the left hip, turn the trunk to the right, straighten the left arm, place the left palm underneath the right knee and catch the left upper arm near the elbow with the right hand from behind the back. Stay there for an equal length of time.

Effects

This simple āsana works on the dorsal and lumbar regions of the spine. People with very stiff backs find the other lateral twisting positions extremely difficult. This pose helps to make the back supple. People with arthritis will find it very beneficial.

113. *Bharadvājāsana II* Two* (Plates 299 and 300)

Technique

1. Sit on the floor with the legs stretched straight in front. (Plate 77)

2. Bend the left leg at the knee, hold the left foot with the hands and place it at the root of the right thigh near the pelvis so that the left heel is kept near the navel. The left leg will then be in the half lotus pose.

3. Bend the right foot at the knee and bring the right foot back and rest the right heel beside the right hip. The inner side of the right calf will touch the outer side of the right thigh. Keep both the knees on the floor near each other.

4. Exhale, turn the left arm from the shoulder behind the back, bend the left elbow, bring the left hand near the right hip and catch the left foot with the left hand.

5. Straighten the right arm, place the right hand on the outer side of the left thigh near the left knee. Insert the right hand underneath the left knee, the palm touching the floor and the fingers pointing to the right. (Plates 299 and 300)

6. Hold the left foot tight and turn the trunk to as far to the left as you can. Turn the neck in either direction and gaze over the shoulder.

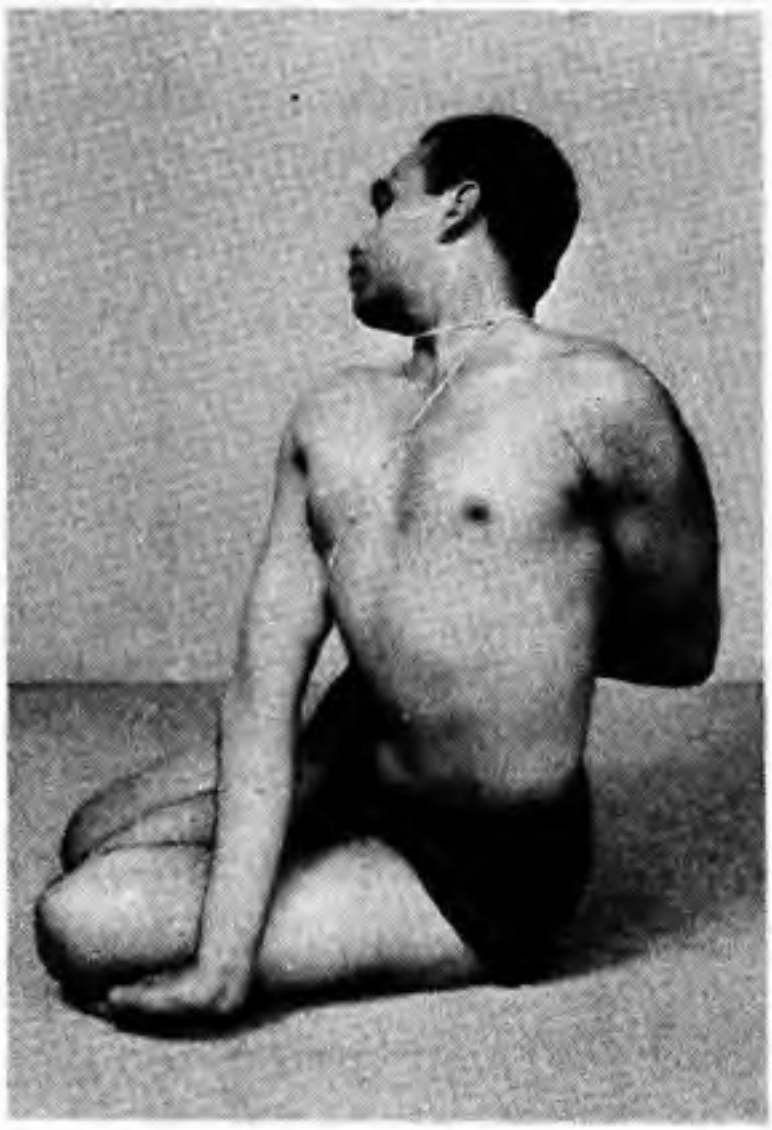
7. Stay in the pose from half a minute to a minute with normal or deep breathing.

8. Then release the pose and repeat it on the other side for the same length of time. Here the right foot will be placed at the root of the left thigh and will be held from behind the back by the right hand. The left leg will be bent at the knee and the left heel will rest on the floor beside the left hip. The left hand will be placed underneath the right knee and the trunk will be twisted as far to the right as possible.

9. After completing the āsana on both the sides, stretch out the legs, straighten the arms and rest.

Effects

The knees and shoulders become flexible by the practice of this pose. It



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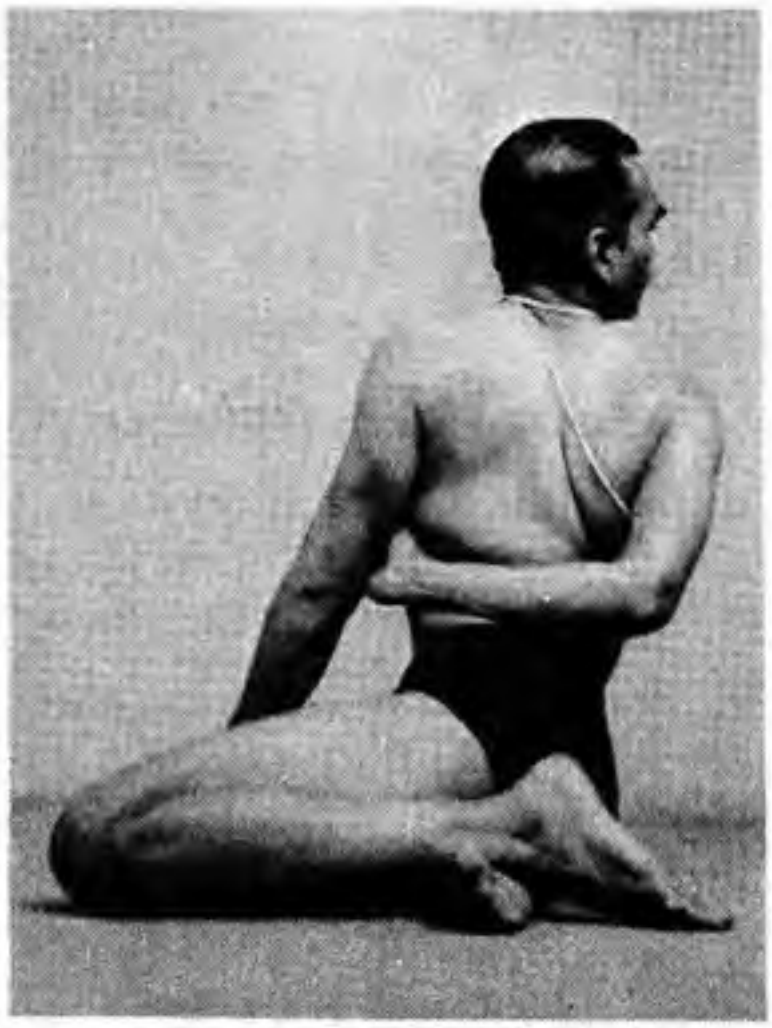


300

is not very effective for people with elastic spinal movements, but the arthritic will find the pose to be a blessing.

114. *Marīchyāsana III* Ten* (Plates 303 and 304)

This is one of the sitting lateral twisting postures.

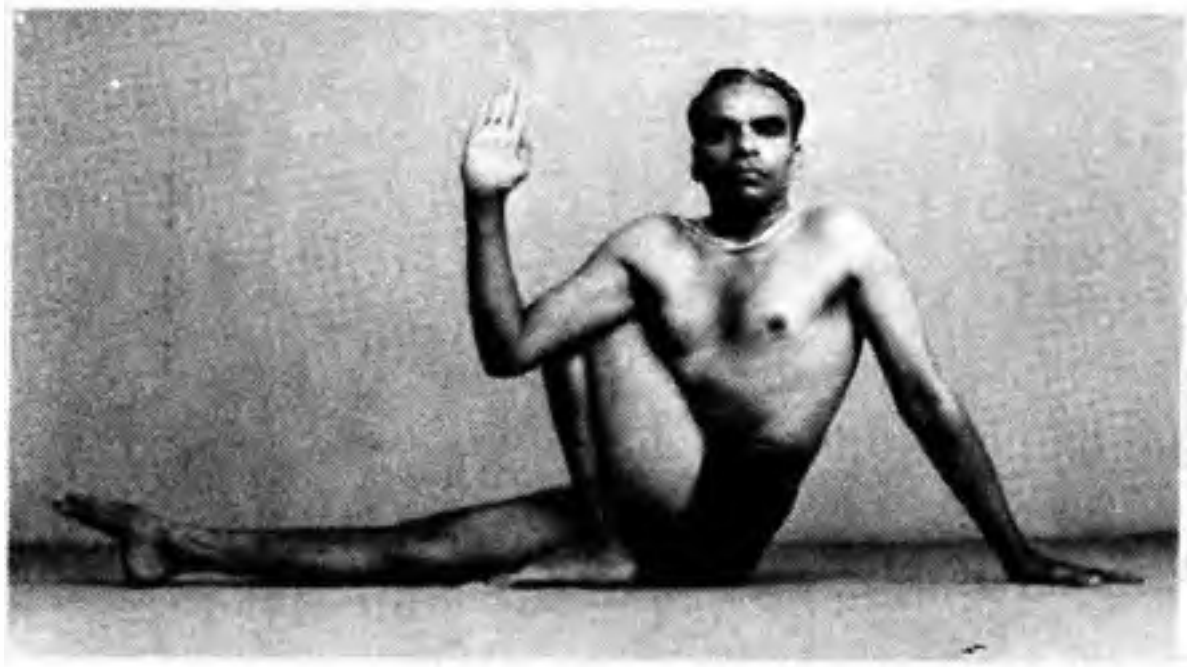
Technique

1. Sit on the floor with the legs stretched straight in front. (Plate 77)

2. Bend the left knee, place the sole and heel of the left foot flat on the floor. The shin of the left leg should be perpendicular to the floor and the calf should touch the thigh. Place the left heel near the perineum. The inner side of the left foot should touch the inner side of the outstretched right thigh.

3. With an exhalation, turn the spine about 90 degrees to the left, so that the chest goes beyond the bent left thigh and bring the right arm over the left thigh. (Plate 301)

4. Place the right shoulder beyond the left knee and stretch the right arm out forwards by turning the spine still more to the left and stretching the region at the back of the right floating ribs. (Plate 302.) Take two breaths.



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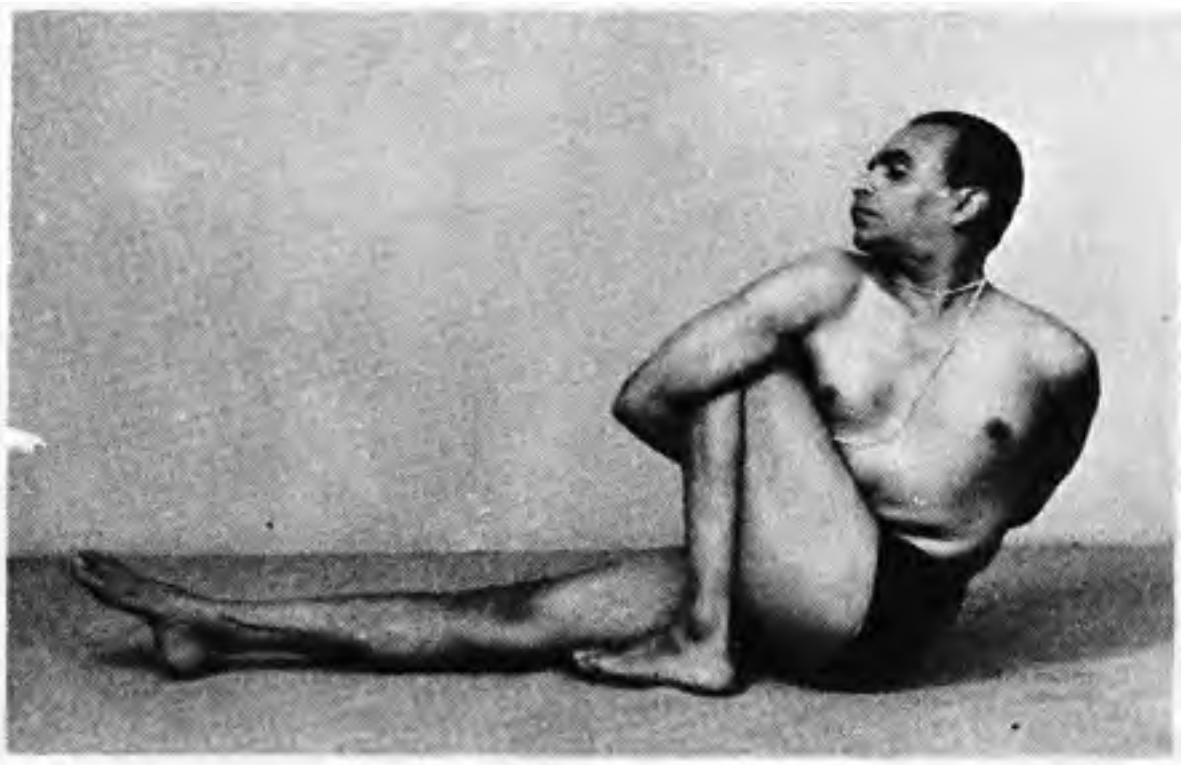
302

5. With an exhalation, twist the right arm round the left knee, flex the right elbow and place the right wrist at the back of the waist. Inhale and hold the pose.

6. Exhale deeply and turn the left arm from the shoulder behind the back. Either clasp the left hand behind the back with the right hand or vice versa. (Plates 303 and 304.) In the beginning, one finds it difficult to twist the trunk sideways, but with practice, the armpit touches the bent knee. After one has twisted the arm round the knee, one also finds it difficult to clasp the fingers of one hand with the other. Gradually one learns to clasp the fingers, then the palm and lastly to hold the hand at the wrist behind the back.

7. The right arm should lock the left bent knee tightly. There should be no space between the right armpit and the bent left knee.



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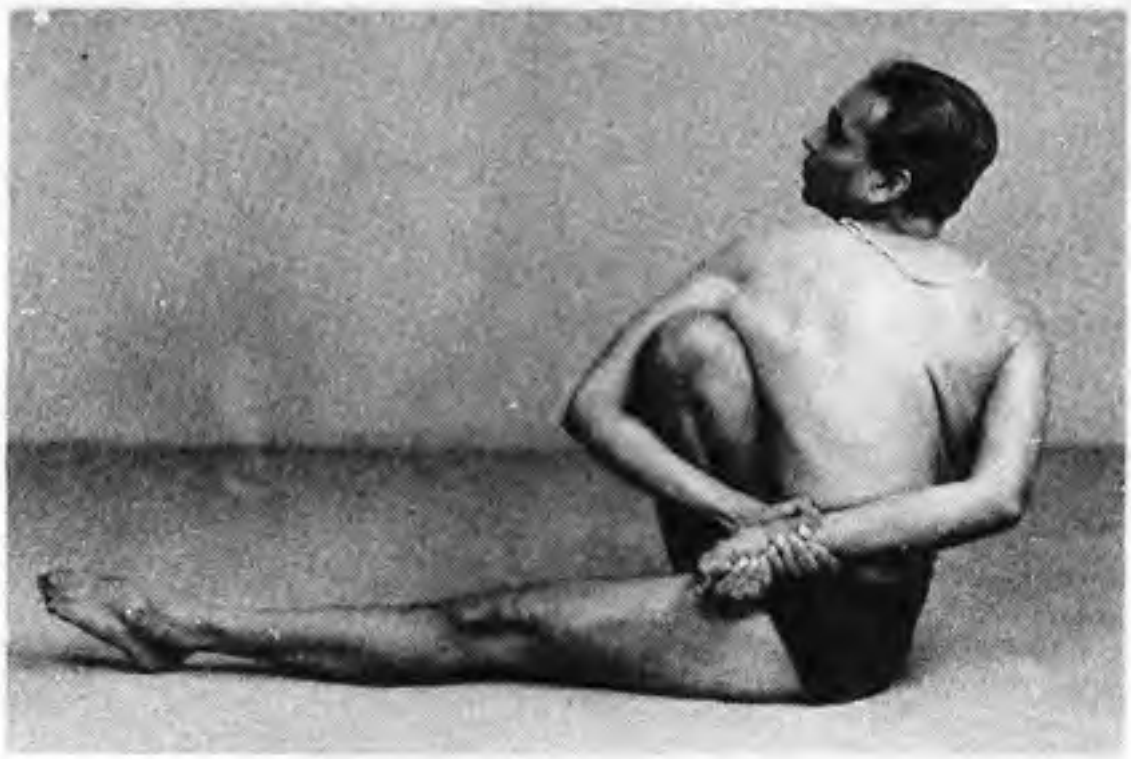


304

8. After clasping the hands at the back, turn the spine still more to the left by tugging at the clasped hands.

9. The whole of the outstretched right leg should remain straight and securely on the floor, but you will not be able to achieve this to start with. Tighten the muscles of the outstretched thigh so that the knee-cap is pulled up towards the thigh and also tighten the muscles of the calf of the outstretched leg. Then the leg will remain firm and extended on the floor.

10. Stay in this position from half a minute to a minute with normal breathing. The neck may be turned either way to gaze at the toes of the extended leg on the floor or to look over the shoulder.

11. Unclasp the hands at the back and turn the trunk back to its original position. Lower the bent leg and extend it fully on the floor.

12. Then repeat the pose on the other side. This time bend the right knee and place the right foot firmly on the floor so that the right heel touches the perineum and the inner side of the right foot touches the outstretched left thigh. Turn the trunk about 90 degrees to the right so that the left armpit touches the bent right knee. With an exhalation, twist the left arm round the right knee and bring the left hand to the back of the waist. Then throw the right arm behind the back from the shoulder and flexing the right elbow, bring the right hand to the left hand and clasp them. Turn still more to the right and gaze at either the toes of the outstretched left leg or over the right shoulder. Stay on this side also for the same length of time. Unclasp the hands, turn the trunk back to normal, stretch the right leg on the floor and relax.

Effects

By the regular practice of this āsana, splitting backaches, lumbago and pains in the hips disappear rapidly. The liver and the spleen are contracted and so are toned and cease to be sluggish. The muscles of the neck gain power. Sprains in the shoulder and displacement of the shoulder joints are relieved and the shoulder movements become free. The intestines also benefit from this āsana. Its effects will be less on lean persons, for whom there are better poses described later. It also helps to reduce the size of the abdomen.

115. *Marīchyāsana IV* Eleven* (Plate 305)

This variation combines the movements of Marīchyāsana II (Plate 146) and Marīchyāsana III. (Plate 303)

Technique

1. Sit on the floor with legs stretched straight in front. (Plate 77)

2. Bend the right leg at the knee and place the right foot at the root of the left thigh. The right heel should press against the navel and the toes should be stretched and pointing. The right leg is now in half Padmāsana.

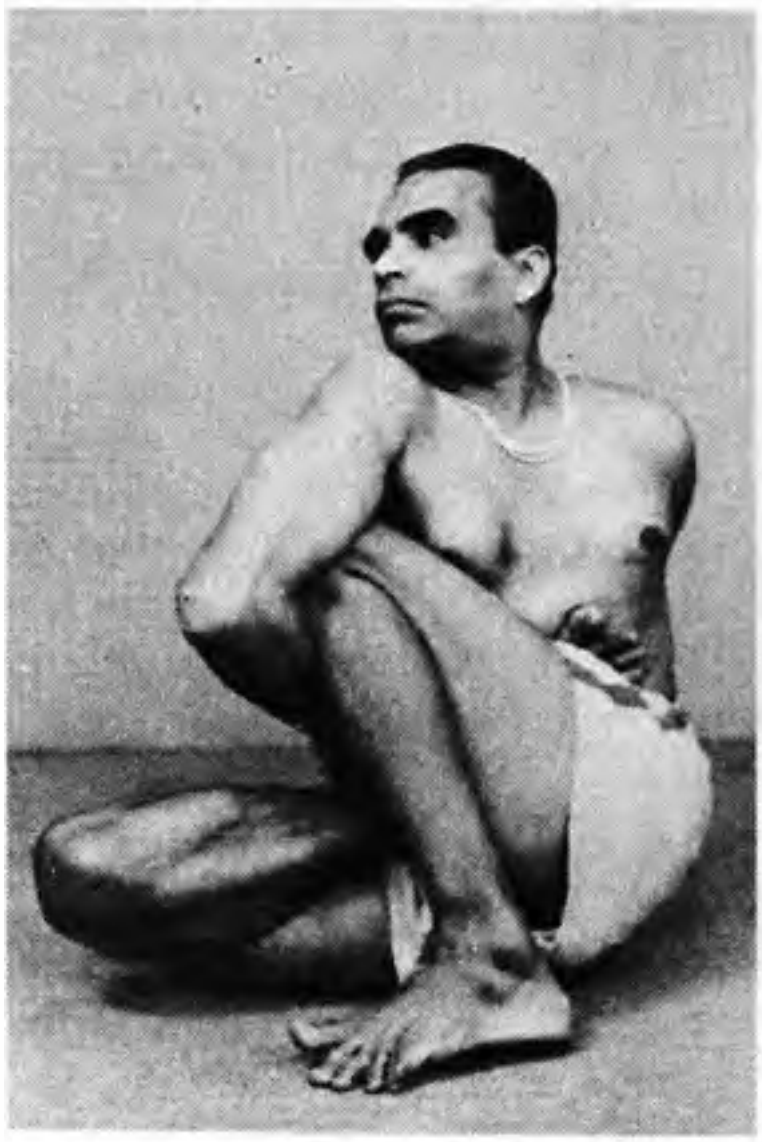
3. Bend the left leg at the knee, place the sole and heel of the left foot flat on the floor. Keep the shin perpendicular to the floor so that the left thigh and the calf touch each other and the left heel touches the perineum.

4. With an exhalation, turn the spine about 90 degrees to the left, so that the right armpit touches the outer side of the left thigh.

5. Place the right shoulder beyond the left knee and stretch the right arm forward by turning the spine still more to the left by stretching the region at the back of the floating ribs. Take a breath.

6. Exhale, move the right arm round the left knee, bend the right elbow and place the right hand at the back of the waist. The left knee is locked tightly in the right armpit. Take a breath.

7. Now with a deep exhalation, twist the left arm from the shoulder behind the back and clasp the right hand behind the back with the left hand. Stretch the chest and pull up the spine. (Plates 305 and 306)



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8. Remain in this position for 30 seconds. Breathing will be faster.

9. Release the hands and straighten the legs.

10. Then repeat the pose on the other side reading 'right' for 'left' and vice versa. Stay on both sides for the same length of time. Release the hands, straighten the legs and relax.

Effects

The pressure of the heel against the navel and the clasping of the hands behind the back rejuvenates the nerves round the navel. It tones the

liver, spleen and pancreas. Calcium deposits in the shoulder joints are resolved and the pose helps free movement at the shoulders.

116. *Ardha Matsyendrāsana I* Eight* (Plates 311 and 312)

Ardha means half. In the *Haṭha Yoga Pradīpikā*, Matsyendra is mentioned as one of the founders of Haṭha Vidyā. It is related that once Lord Śiva went to a lonely island and explained to his consort Pārvati the mysteries of Yoga. A fish near the shore heard everything with concentration and remained motionless while listening. Śiva, realising that the fish had learnt Yoga, sprinkled water upon it, and immediately the fish gained divine form and became Matsyendra (Lord of the Fishes) and thereafter spread the knowledge of Yoga. Paripūrṇa Matsyendrāsana (Plates 336 and 339), where the spine is given the maximum lateral twist, is dedicated to Matsyendra. Ardha Matsyendrāsana is a milder version of that āsana.

Technique

1. Sit on the floor, with the legs stretched straight in front. (Plate 77)

2. Bend the left knee and join the thigh and calf; raise the seat from the floor, place the left foot under the buttocks and sit on the left foot so that the left heel rests under the left buttock. The foot used as the seat should be kept horizontal on the floor, the outer side of the ankle and the little toe of the foot resting on the ground. If the foot is not so placed, it will be impossible to sit on it. Balance securely in this position.

3. Then bend the right knee and lifting the right leg from the floor, place it by the outer side of the left thigh so that the outer side of the right ankle touches the outer side of the left thigh on the floor. Balance in this position, keeping the right shin perpendicular to the floor. (Plate 307)

4. Turn the trunk 90 degrees to the right until the left armpit touches the outer side of the right thigh. Bring the armpit over the right knee. (Plate 308.) Exhale, stretch the left arm from the shoulder and twist it round the right knee. Bend the left elbow and move the left wrist to the back of the waist.

5. The left arm should lock the bent right knee tightly and there should be no space between the left armpit and the bent right knee. To achieve this, exhale and move the trunk forward. Stay in this position and take 2 breaths.

6. Now exhale deeply and swing back the right arm from the shoulder, bend the right elbow, move the right hand behind the waist and either clasp it with the left hand or vice versa. At first you will be able to catch

307

308

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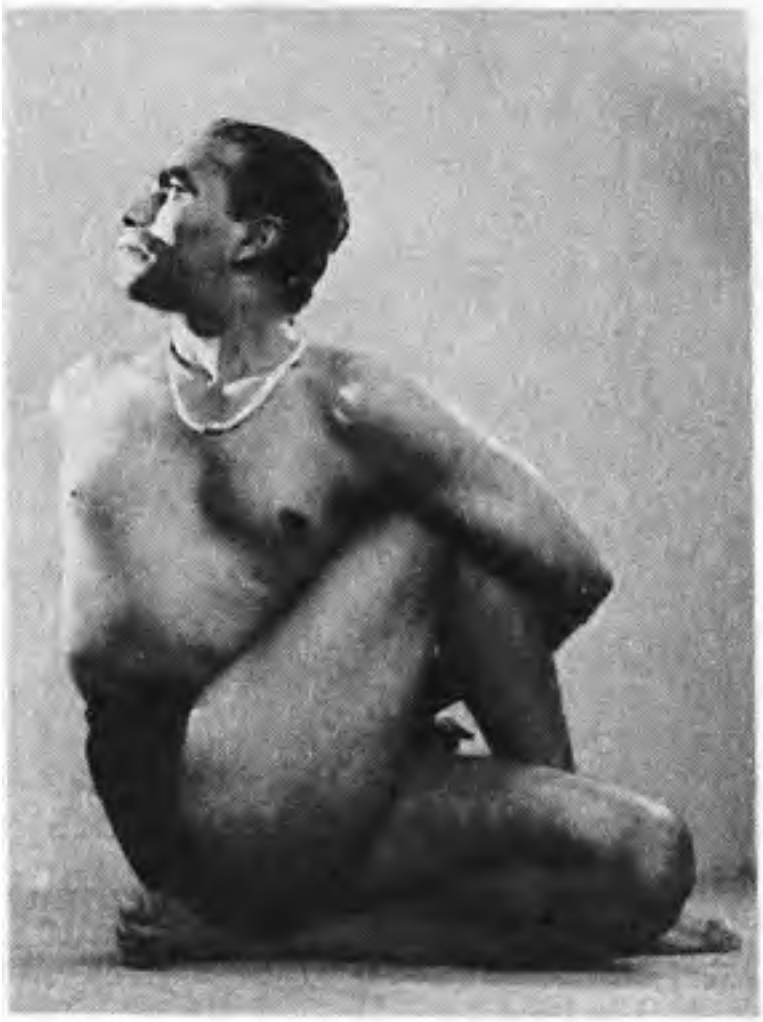
310

a finger or two. With practice it will be possible to catch the palms and then the wrists behind the back. (Plate 309)

7. The neck may be turned to the left and the gaze directed over the left shoulder (Plate 310), or to the right, and the gaze fixed at the centre of the eyebrows. (Plates 311 and 312.) The spinal twist will be greater if the neck is turned to the left than when to the right.



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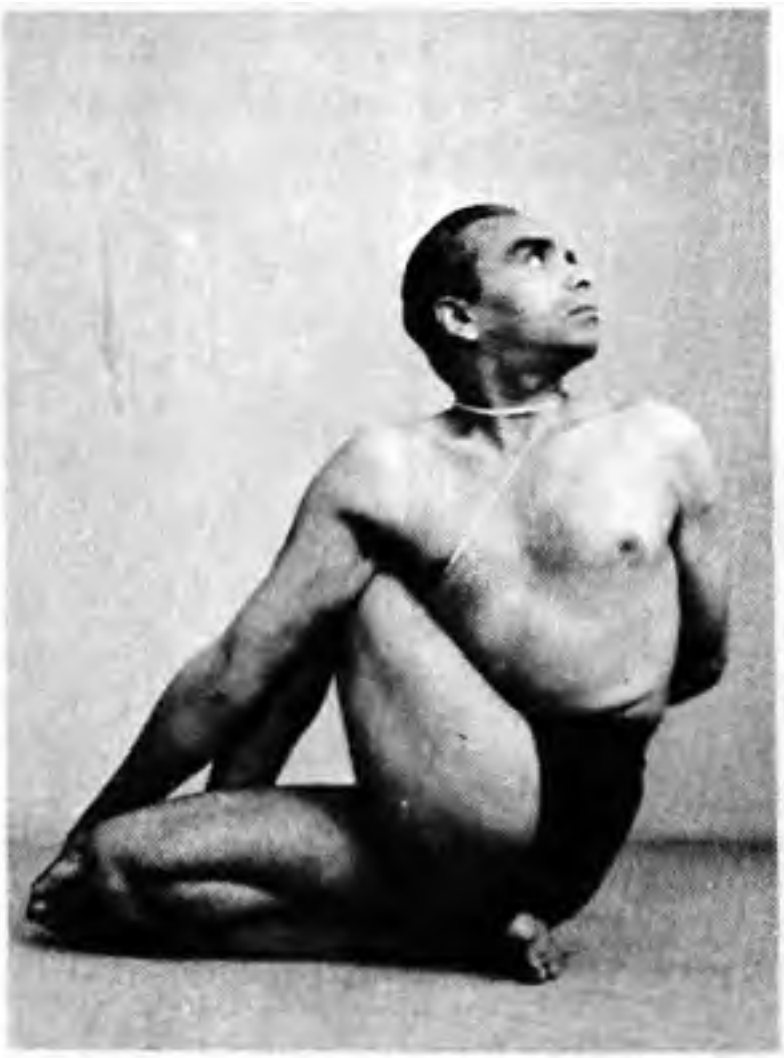
8. As the diaphragm is squeezed by the spinal twist, the breathing will at first become short and fast. Do not be nervous. After some practice the pose can be held from half a minute to a minute with normal breathing.

9. Release the hands, remove the right foot from the floor and straighten the right and then the left leg.

10. Repeat the pose on the other side and hold it for the same length of time. Here, bend the right leg and sit on the right foot so that the right heel is under the right buttock. Place the left leg over the right leg and rest the left foot on the floor so that the outer side of the left ankle touches the outer side of the right thigh on the floor. Turn the trunk 90 degrees to the left, placing the right armpit over the left knee and twist the right arm round the left knee. Flex the right elbow and move the right hand behind the waist. Hold the pose and take 2 breaths. Again

exhale completely and swing the left arm back from the shoulder, bend the left elbow and clasp the hands behind the back at the wrist. Then release and relax.



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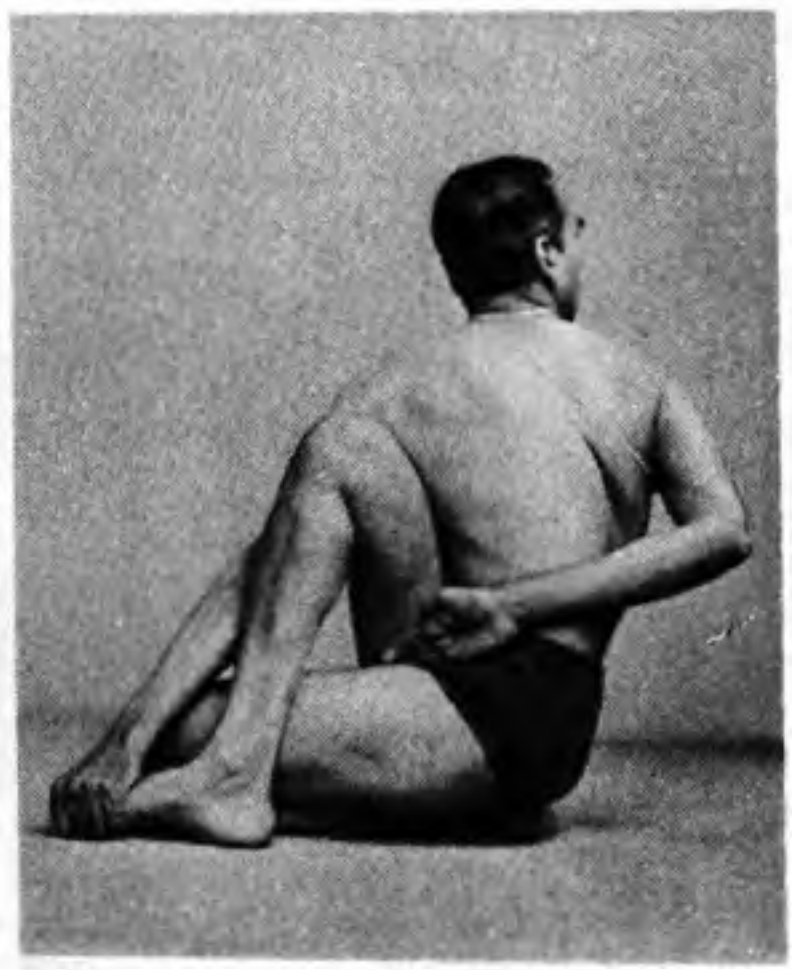

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11. In the beginning it may not be possible to twist either arm round the opposite knee. In that case try and hold the opposite foot, keeping the arm straight at the elbow. (Plates 313 and 314.) It also takes time to clasp the hands behind the back. Gradually, the backward stretch of the arms will increase, and one will be able to catch at first the fingers, next the palms, then the wrist and as the pose is mastered even the forearms above the wrists. Beginners who find it difficult to sit on the foot can sit on the floor. (Plates 315 and 316)

Effects

By the practice of this āsana, one derives the benefits mentioned under Marīchyāsana III. (Posture 114 and Plate 303.) But here as the range of movement is more intensified, the effects will also be greater. In Marīchyāsana III the upper part of the abdomen is squeezed. Here the lower part of the abdomen has the benefit of the exercise. The prostate and bladder are not enlarged if one practises regularly.

117. *Mālāsana I* Eight* (Plate 321)

Mālā means a garland.

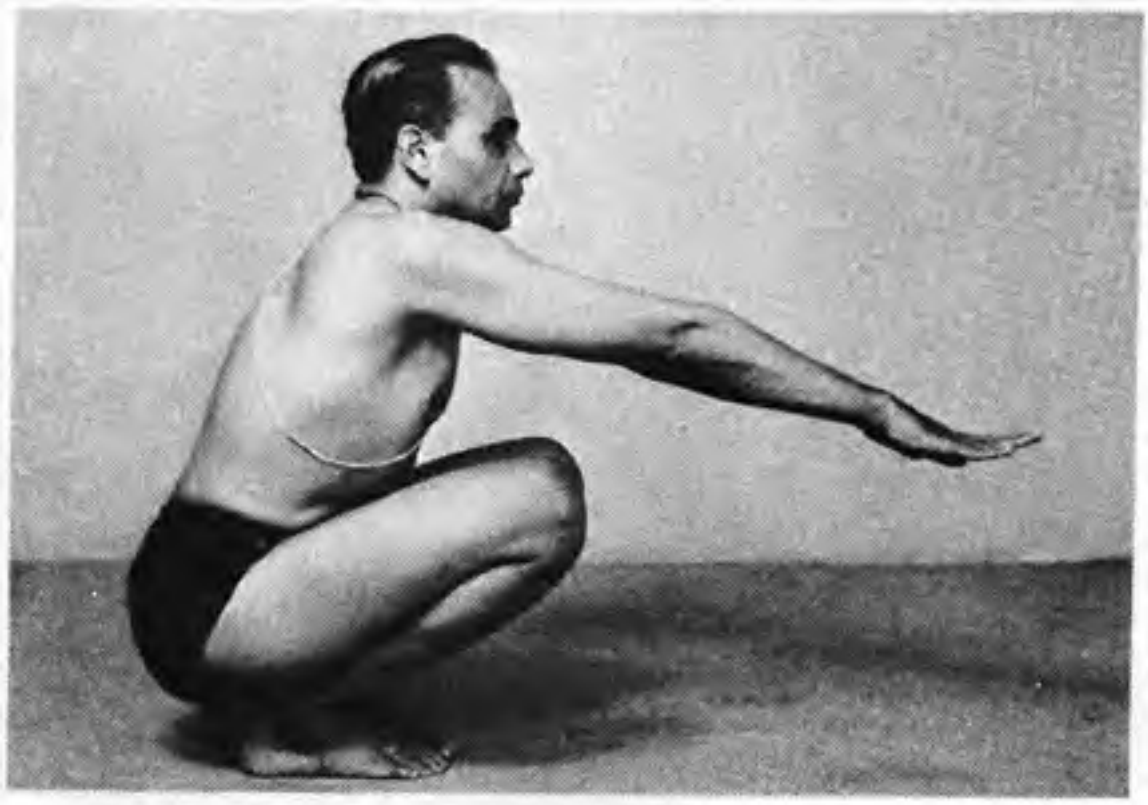
315

316

There are two different techniques for doing this āsana which are given below.

Technique

1. Squat on the haunches with the feet together. The soles and the heels should rest completely on the floor. Raise the seat from the floor and balance. (Plate 317)



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2. Now widen the knees and move the trunk forward.

3. Exhale, wrap the arms round the bent legs and rest the palms on the floor. (Plate 318)

318

4. Take the hands one by one behind the back and clasp the fingers. (Plates 319 and 320)

5. Then stretch the back and neck up.

6. Remain in this position for 30 to 60 seconds breathing normally.

7. Now exhale, bend forward and rest the head on the floor. (Plate 321.) Stay in this position also for 30 to 60 seconds with normal breathing.

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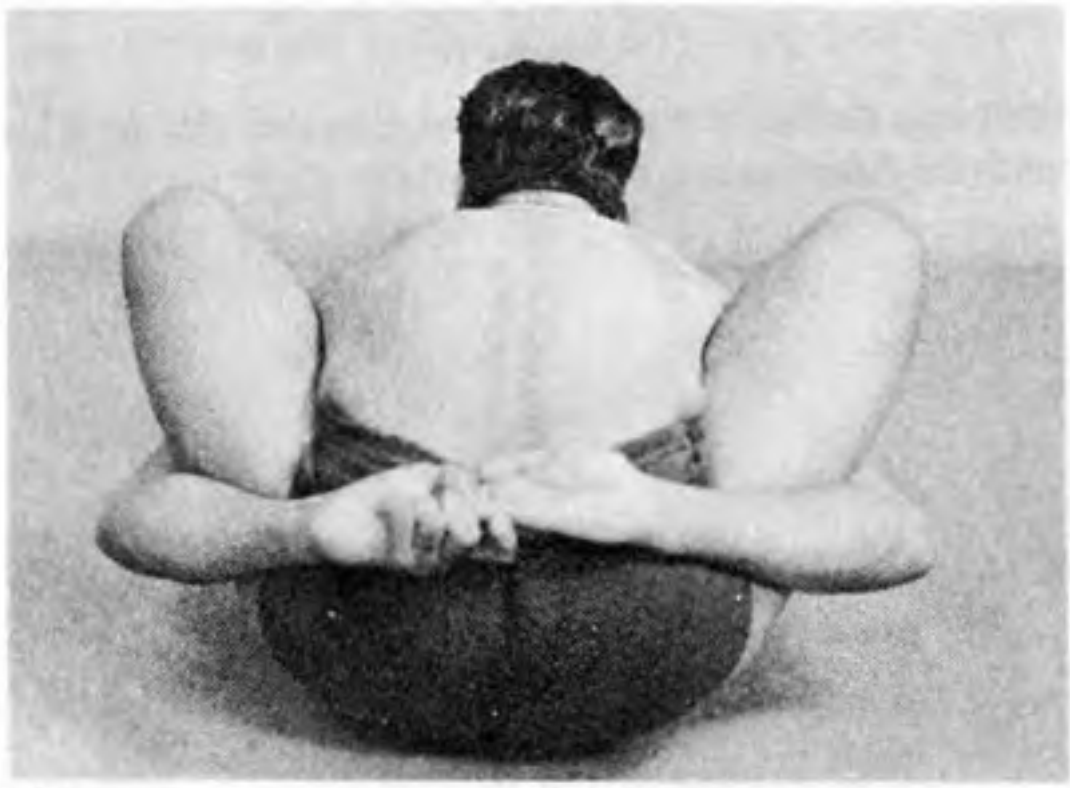

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321

8. Inhale, raise the head from the floor and return to position 5.

9. Release the hands and rest on the floor.

Effects

The āsana tones the abdominal organs and relieves backaches.

118. *Mālāsana II* Two* (Plate 322)

1. Squat on the haunches with the feet together. The soles and heels should rest completely on the floor. Raise the seat from the floor and balance. (Plate 317)

2. Widen the thighs and knees and move the trunk forward until the armpits extend beyond the knees.

3. Bend forward and catch the back part of the ankles.

4. After gripping the ankles, exhale and move the head down to the toes and rest the forehead on them. (Plate 322)

322

5. Maintain the pose for about a minute breathing normally.

6. Inhale, raise the head, release the ankle grip and relax on the floor.

Effects

By doing this posture the abdominal organs are exercised and gain strength. Ladies suffering from severe pain in the back during the menstrual period will obtain relief in this pose and the back will feel soothed.

In these two poses the arms hang from the neck like a garland, hence the name.

119. *Pāśāsana* Fifteen* (Plates 328 and 329)

Pāśā means a noose or cord. In this posture, squat on the floor, turn the trunk about 90 degrees to one side, twist one arm round both the thighs and turning the other arm from the shoulder clasp hands behind the back. The arms are used as a noose to hold the trunk to the legs, hence the name.

Technique

1. Squat on the floor with the soles and heels completely on the floor.

2. Keep the knees and feet together, raise the seat from the floor and balance. (Plate 317)

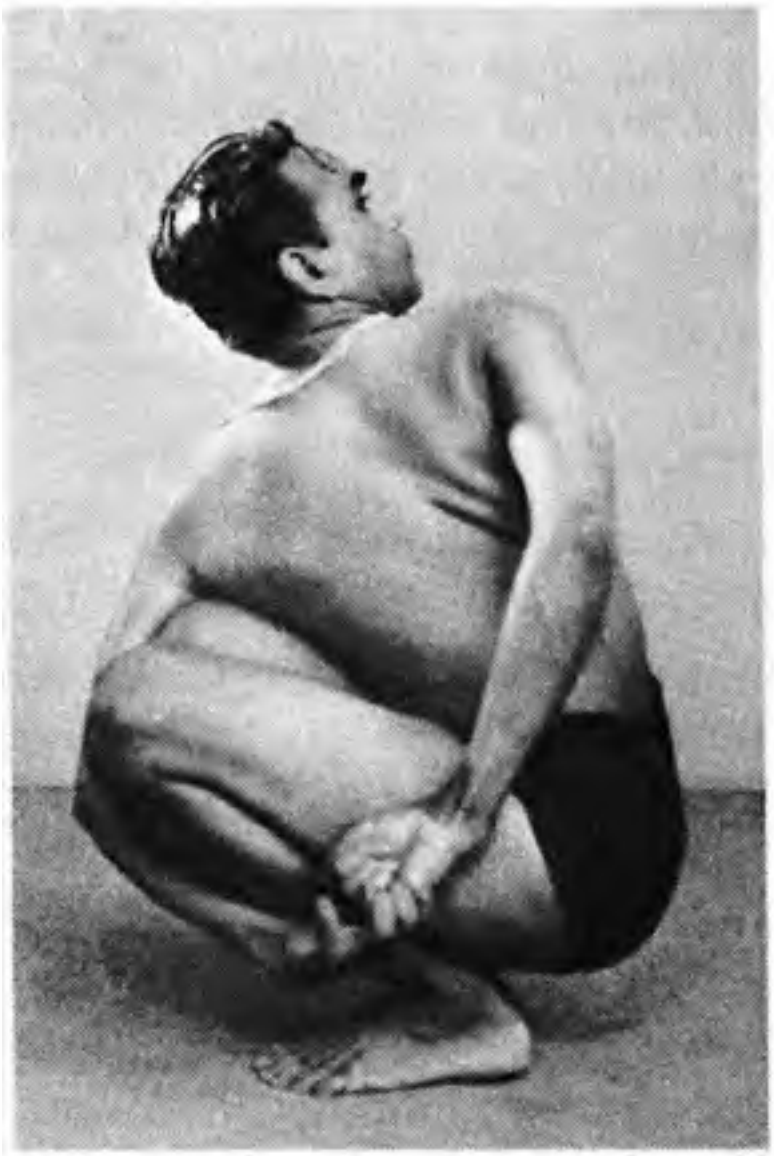
3. After securing the balance, twist the trunk about 90 degrees to the right until the left armpit is beyond the outer side of the right thigh near the right knee. (Plate 323.) To achieve the maximum twist, flex the left knee about an inch forward.

323

324

4. Exhale, extend the left arm from the shoulder (Plate 324), leave no space between the left armpit and the right thigh, turn the left arm round the right thigh and, bending the left elbow towards the left leg, bring the left hand near the left hip. Take a breath.

5. Exhale, twist the right arm from the shoulder behind the back, bend the right elbow and hook the fingers behind the back near the left hip. (Plate 325)



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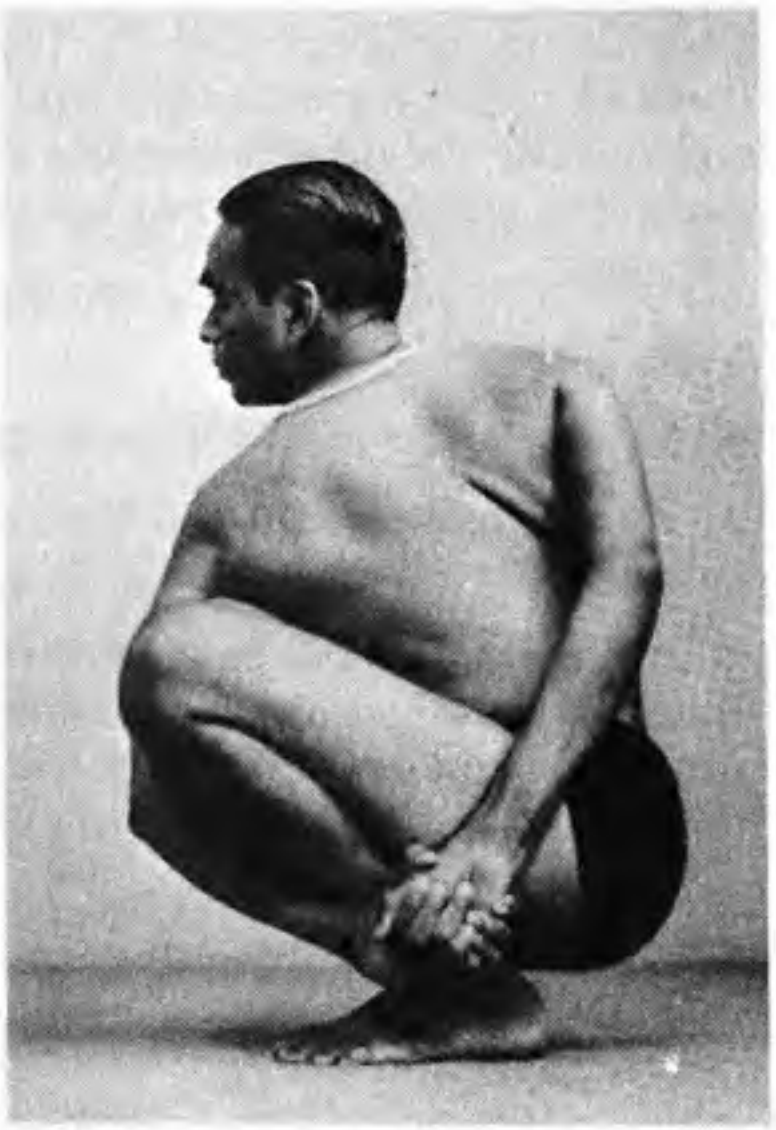

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6. Gradually clasp the palms (Plate 326) and when this becomes easy, clasp the wrists. (Plates 327, 328 and 329)

7. Tighten the calf muscles to maintain the balance, twist the spine as far to the right as you can and stay in the pose from 30 to 60 seconds with normal breathing. Turn the neck and gaze over either shoulder.

8. Release the hand clasp and repeat the pose on the other side. Here, twist the trunk to the left, bring the right arm round the left thigh, bend the right elbow and bring the right hand near the right hip. Then with an exhalation turn the left arm back from the shoulder, bend the left elbow and clasp the right hand with the left behind the back near the right hip.

Effects

The pose gives strength and elasticity to the ankles. Persons whose work entails standing for hours will rest their feet in this position. It tones the spine and makes one agile. The shoulders move freely and grow

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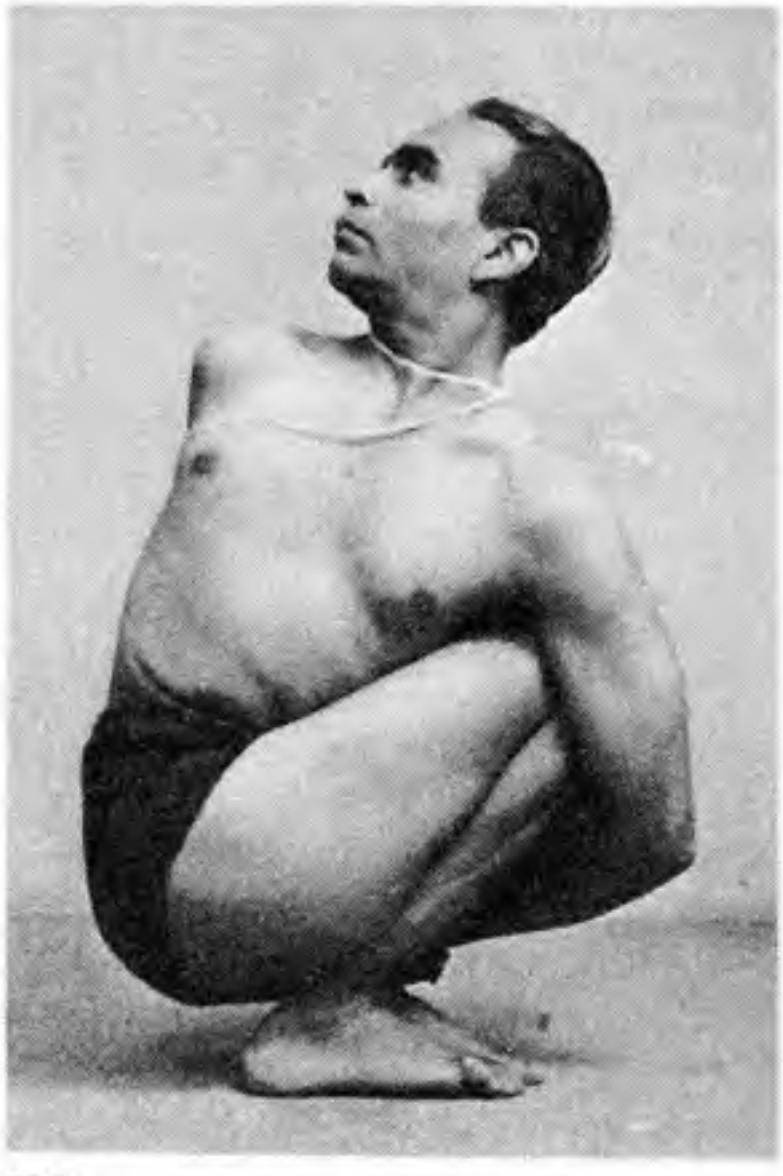

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stronger. The pose reduces fat around the abdomen, massages the abdominal organs and at the same time expands the chest fully. It is more intense than Ardha Matsyendrāsana I and II (Plates 311 and 330) and so it gives greater benefits. It is good for curing sluggishness of the liver, spleen and pancreas and is recommended for persons suffering from diabetes. It also improves digestion.

120. *Ardha Matsyendrāsana II* Nineteen* (Plates 330 and 331)

This āsana is a variation of Ardha Matsyendrāsana I (Plate 311) and it gives a greater lateral twist to the spine.

Technique

1. Sit on the floor with the legs stretched straight in front. (Plate 77)

2. Bend the right knee and place the right foot at the root of the left thigh, pressing the heel against the navel.

3. Exhale, turn the trunk 90 degrees to the left, swing the left arm from the shoulder behind the back, bend the left elbow and with the left hand grasp the right ankle or shin.

4. The left leg should remain stretched straight on the floor throughout, and the sole of the left foot or the left big toe should be held by the right hand and the right arm should be kept straight. To start with one finds it difficult to keep the left leg stretched throughout on the floor. In that case bend the left knee, catch the left big toe with the right hand and then straighten out both the right arm and the left leg. Turn the neck to the right and gaze over the right shoulder. (Plates 330 and 331)

330

331

5. Keep the knees near each other and stay in the position from 30 to 60 seconds while trying to maintain normal breathing which at first will be fast due to the lateral twist.

6. Release the grip on the legs, straighten them and then repeat the pose on the other side, changing the word left to that for right and vice versa.

7. Stay on both sides for the same length of time and then relax.

Effects

The abdominal organs are toned by being contracted on one side and stretched on the other. Due to the lateral twist of the spine, backaches, lumbago and pain in the hip joints disappear rapidly. The neck muscles become more powerful and the shoulder movements become easier. The prostate and bladder do not become hypertrophied if one practises this āsana regularly. It helps one to achieve Paripūrṇa Matsyendrāsana (Plates 336 and 339), where the spine is given the maximum lateral twist.

121. *Ardha Matsyendrāsana III* Twenty-two* (Plates 332 and 333)

Technique

1. Sit on the floor with the legs stretched straight in front. (Plate 77)

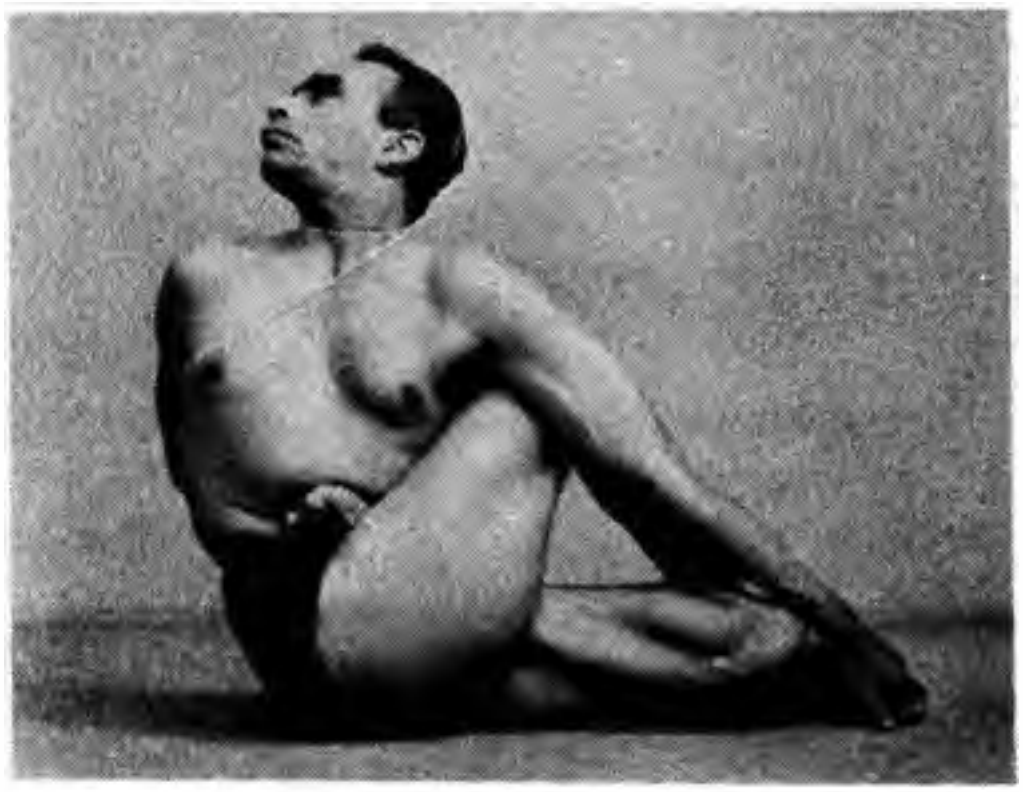
2. Bend the left knee and place the left foot at the root of the right thigh, pressing the heel against the navel.

3. Bend the right knee, lift the right leg from the floor and place it by the outer side of the left thigh. Then the outer side of the right ankle will touch the outer side of the left thigh on the floor. Take 2 or 3 breaths.

4. Exhale, turn the trunk 90 degrees to the right and bring the left shoulder over the right knee. Do not leave any space between the left armpit and the right thigh and hold the right foot with the left hand.

5. Swing the right arm behind the back, bending it at the elbow and rest the hand at the back.

6. Turn the neck to the right, raise the chin and gaze either at the centre of the eyebrows or at the tip of the nose. (Plates 332 and 333)



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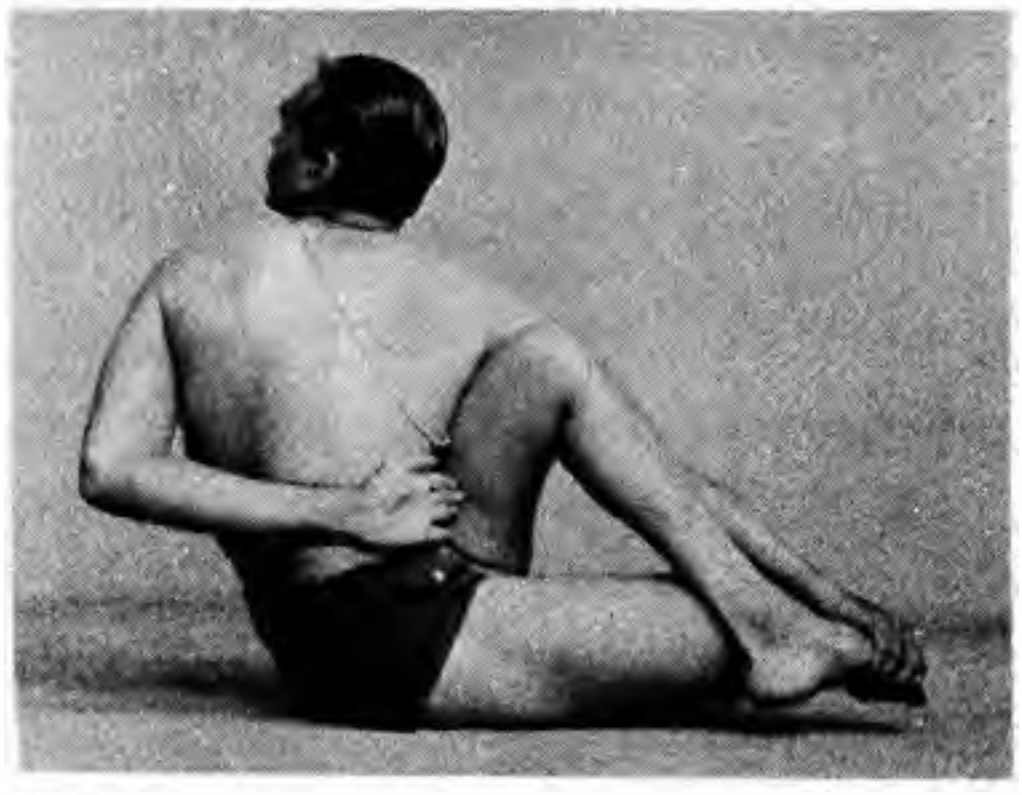

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7. Stay in the position from 30 to 60 seconds according to capacity. Breathing will be faster but try to make it normal.

8. Release your hold on the right foot, lift it over the left thigh and stretch the right leg straight. Then release the left leg and stretch it out straight.

9. Repeat the pose on the other side for the same length of time and relax.

Effects

This exercises and massages the abdominal organs and keeps them healthy. It tones the spine and keeps it elastic. It is a preparatory pose for Paripūrṇa Matsyendrāsana. (Plates 336 and 339)

122. *Paripūrṇa Matsyendrāsana* Thirty-eight* (Plates 336 and 339)

Paripūrṇa means entire or complete. Matsyendra was one of the founders of Haṭha Vidyā.

Verse 27 of the *Haṭha Yoga Pradīpikā* states 'Matsyendrāsana increases the appetite by fanning the gastric fire and destroys terrible diseases in the body; when practised it rouses Kuṇḍalinī and makes the moon steady.'

It is said that the breath in the right nostril is hot and that in the left one is cold. Therefore, the breath in the right nostril is called the sun breath and the right nāḍi is referred to as piṅgalā (of the colour of fire) and the breath of the left nostril is called the moon breath and the left nāḍi is called iḍā. The moon travelling in iḍā sprinkles its nectar through the entire system and the sun travelling through piṅgalā dries out the whole system, for the human body is regarded as a miniature universe. It is said that the moon is located at the root of the palate, ever dropping cool ambrosial nectar that is wasted by feeding the gastric fire. Matsyendrāsana prevents this.

This āsana is dedicated to the founder of Haṭha Vidyā Matsyendra.

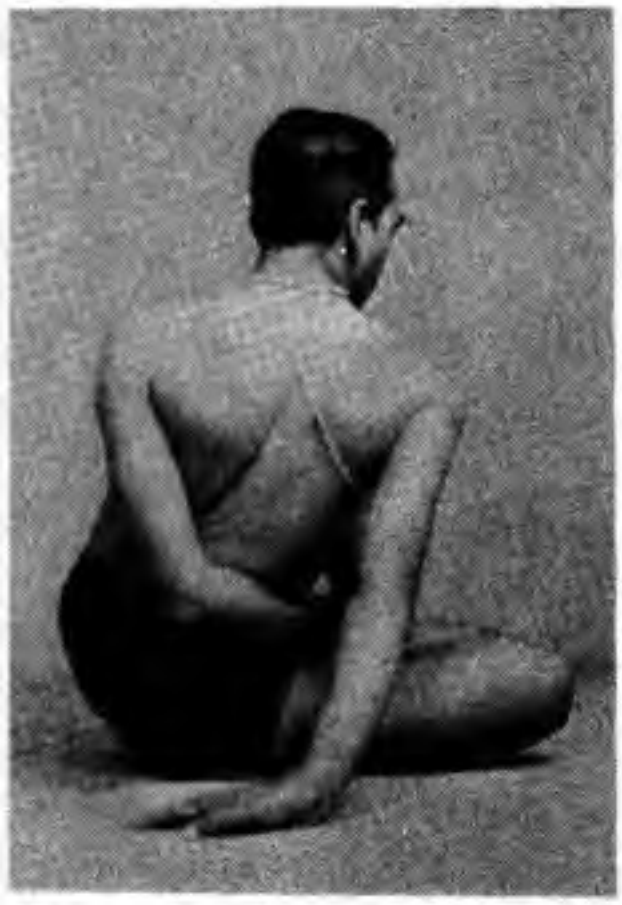
Technique

1. Sit on the floor with the legs stretched straight in front. (Plate 77)

2. Flex the right knee and place the right foot at the root of the left thigh, the right heel pressing against the navel. Bend the left knee up and bring it near the chest.

3. Exhale, twist the trunk to the left, and swinging the left arm from the shoulder catch the right ankle with the left hand from behind the back. (Plate 334.) Grip the ankle firmly. This is the first stage.

4. Lift the left foot over the right thigh and place it on the floor by the outer side of the right knee. (Plate 335.) Take a few breaths. This is the second stage.



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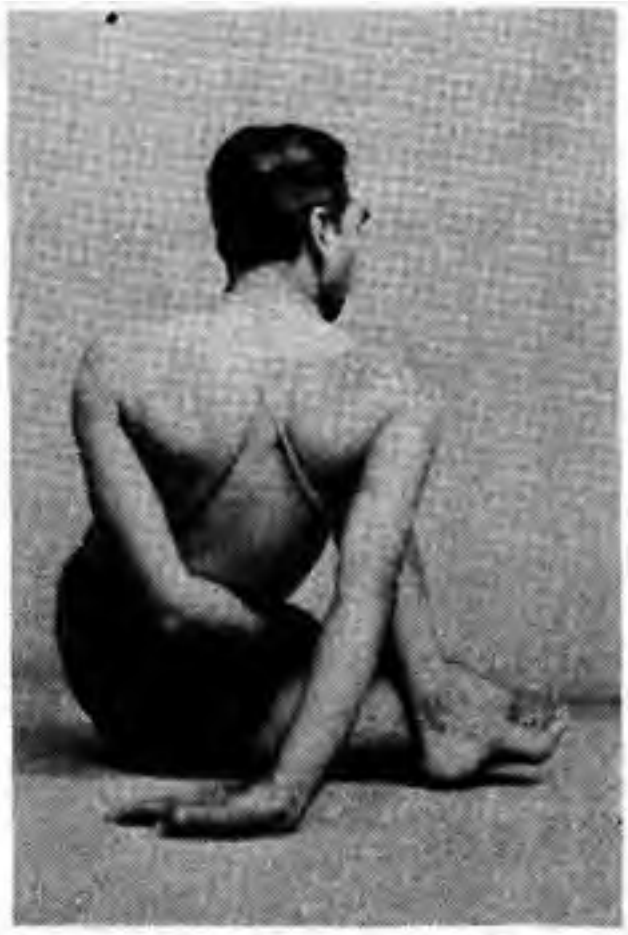
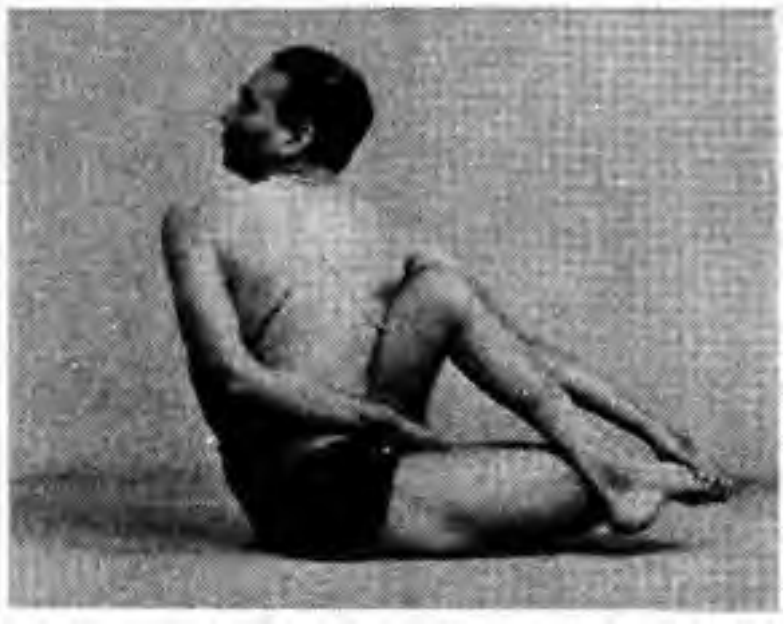


335

5. Again exhale, turn the trunk to the left to bring the right shoulder over to the left knee and hold the left foot with the right hand. Turn the neck to the left, raise the chin and gaze up. (Plate 336.) This is the final stage of the āsana. Stay in this pose from 30 to 60 seconds according to your capacity. Breathing will be faster due to the pressure on the diaphragm.



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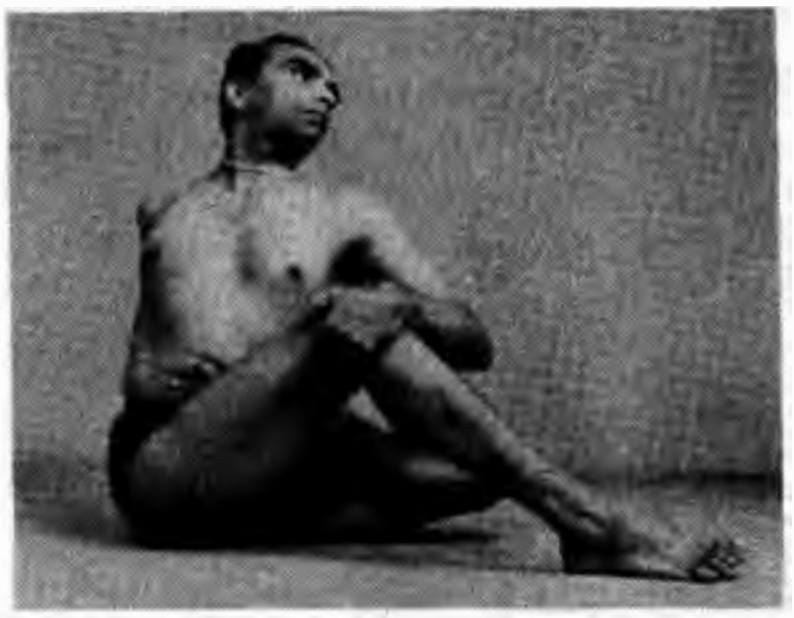
6. First release the hold on the left foot, lift it over the right thigh and stretch the left leg straight. Then release the grip on the right ankle, stretching the right leg straight and relax.

7. In this pose the spine is twisted to its utmost limit and so it is easier if all movements are done with exhalation.

The following technique should be employed to practise on the other side.

1. Sit on the floor with the legs stretched straight in front. Bend the left knee and place the left foot at the root of the right thigh, the left heel pressing against the navel.

2. Exhale, turn the trunk to the right, swing the right arm from the shoulder, grip the left ankle firmly with the right hand from behind the back and bend the right leg up. (Plate 337.) This is the first stage.



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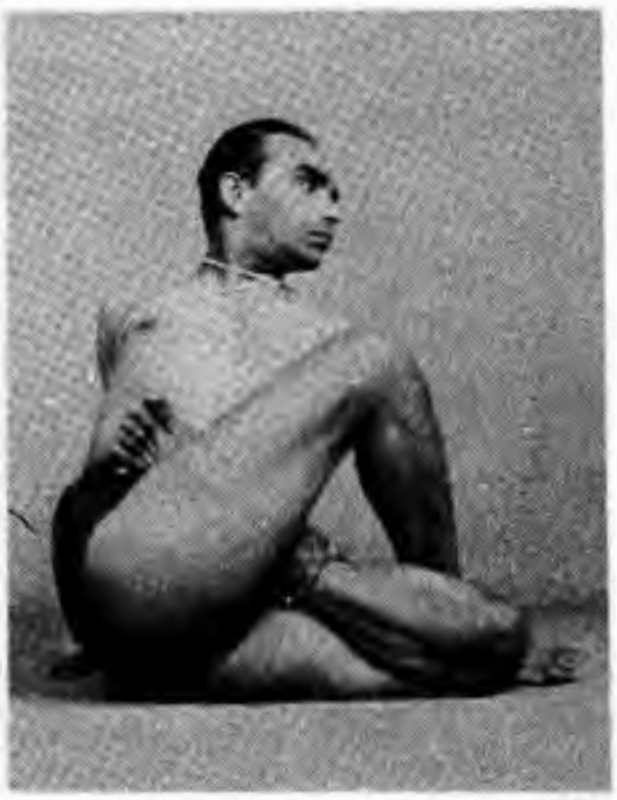
3. Lift the right foot over the left thigh and place it on the floor by the outer side of the left knee. (Plate 338.) Take a few breaths. This is the second stage.



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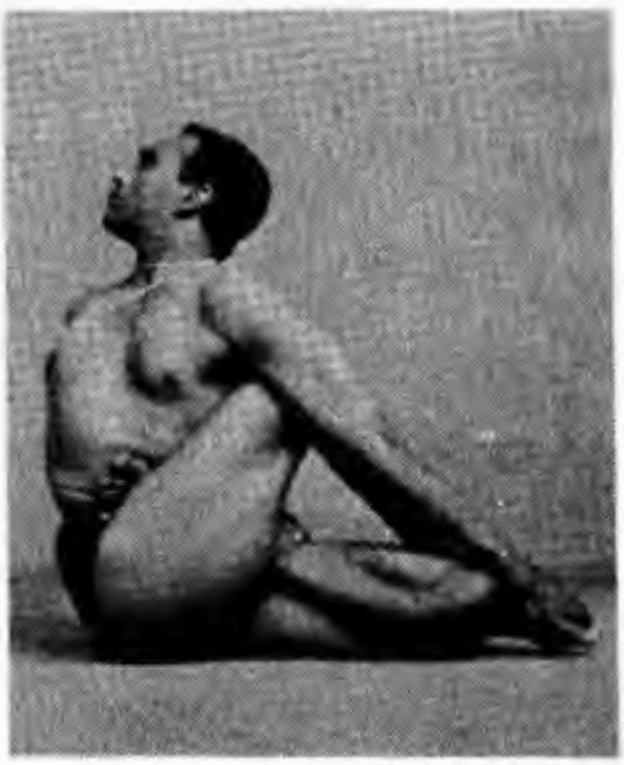

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4. Exhale again, turn the trunk to the right to bring the left shoulder over the right knee and with the left hand hold the right foot. Turn the

neck to the right, raise the chin and gaze up. (Plate 339.) This is the final stage. Hold the pose on this side for the same length of time as on the other.

5. Release the hold on the right foot, lift it over the left thigh and straighten the right leg. Next release the grip over the left ankle, straighten the left leg and relax.

Effects

This difficult lateral movement tones the spine by supplying the spinal nerves with a copious supply of blood. It increases gastric activity, helps to digest food and eliminate toxins. The spine and the abdomen being kept healthy ensures tranquillity of body and mind. The spine is given the maximum lateral twist.

123. *Aṣṭāvakrāsana* Thirteen* (Plates 342 and 343)

This āsana is dedicated to the sage Aṣṭāvakra, the spiritual preceptor of King Janaka of Mithilā, who was the father of Sītā. It is related that when the sage was in his mother's womb, his father Kagola (or Kahola) made several mistakes while reciting the Vedas (the sacred scriptures). Hearing these the unborn sage laughed. The father became enraged and cursed his son to be born as Aṣṭāvakra. So it came to pass that he was born crooked in eight places. These crooks earned him the name Aṣṭāvakra or Eight-Crooks. The sage's father had been defeated in a philosophical debate by Vaṇḍi, the court scholar of Mithilā. While yet a boy the sage became a great scholar and avenged his father's defeat by worsting Vaṇḍi in argument and becoming the preceptor of Janaka. Then his father blessed him, his deformity vanished and he became straight.

The āsana is given in two stages.

Technique

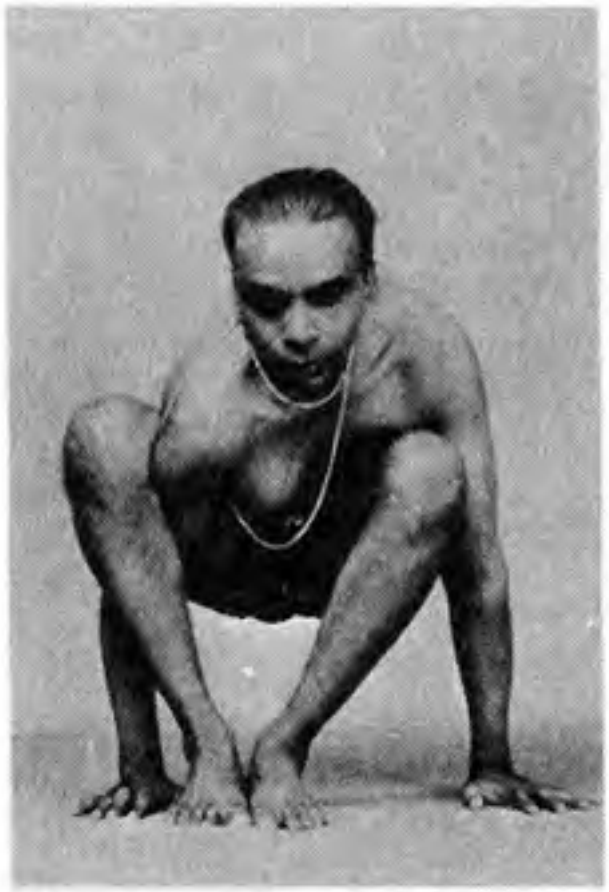
1. Stand with the feet about 18 inches apart.

2. Bend the knees, rest the right palm on the floor between the feet and place the left palm on the floor just beyond the left foot.

3. Bring the right leg over the right arm and rest the back of the right thigh on the back of the right arm just above the elbow. Bring the left leg forward between the arms but close to the right one. (Plate 340)

4. Exhale and lift both the legs off the floor. Interlock the legs by placing the left foot upon the right at the ankle (Plate 341) and extend the legs sideways to the right. (Plate 342.) The right arm will be

gripped between the thighs and will be slightly bent at the elbow. The left arm should be straight. Balance on the hands for some time in this position with normal breathing. This is the first stage.



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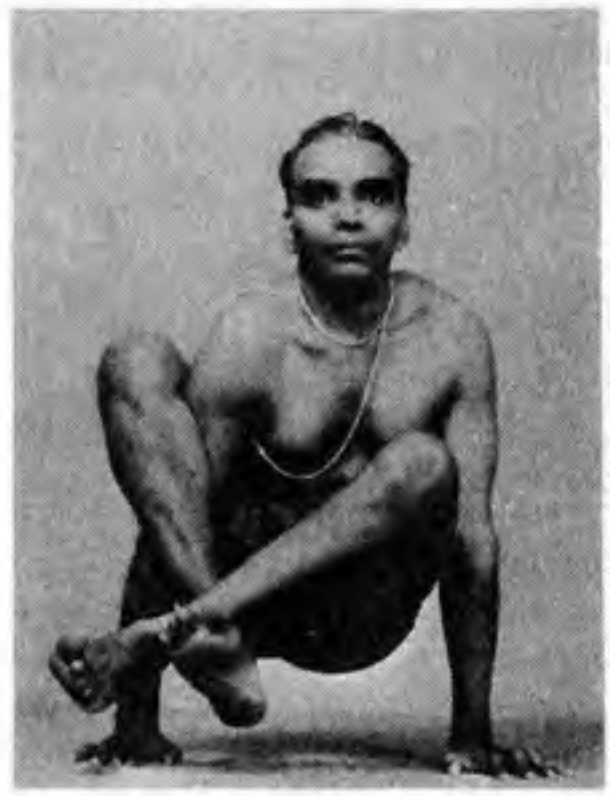

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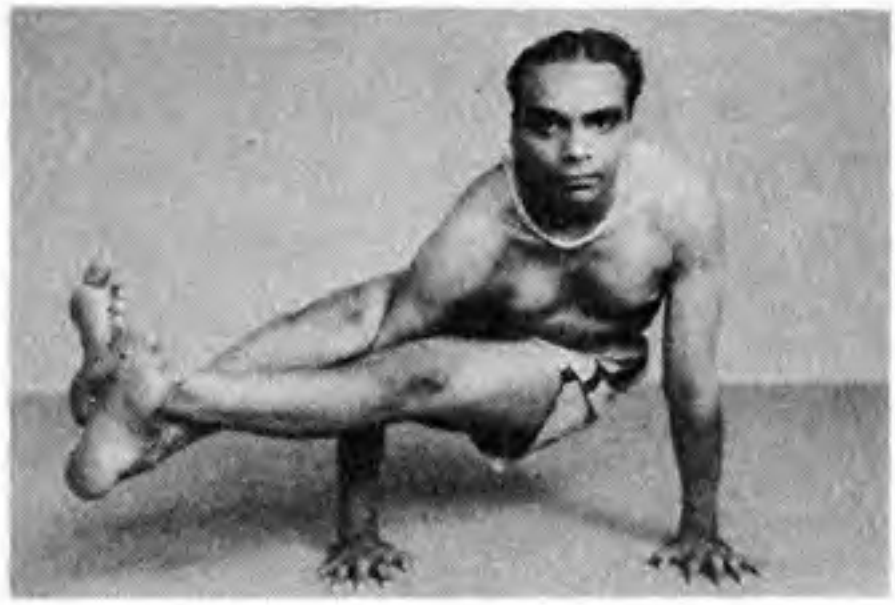

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343

5. Now exhale, bend the elbows and lower the trunk and head until they are parallel to the floor. (Plate 343.) Move the head and trunk from side to side while breathing normally. This is the second stage.

6. Inhale, straighten the arms, raise the trunk (Plate 342), uncross and release the legs and lower them to the floor.

7. Repeat the pose on the other side, reading the word left for right and vice versa in positions 2 to 5 above.

Effects

This āsana strengthens the wrists and arms and also develops the muscles of the abdomen.

124. *Eka Hasta Bhujāsana* Five* (Plate 344)

Eka means one. Hasta means a hand and bhuja an arm.

Technique

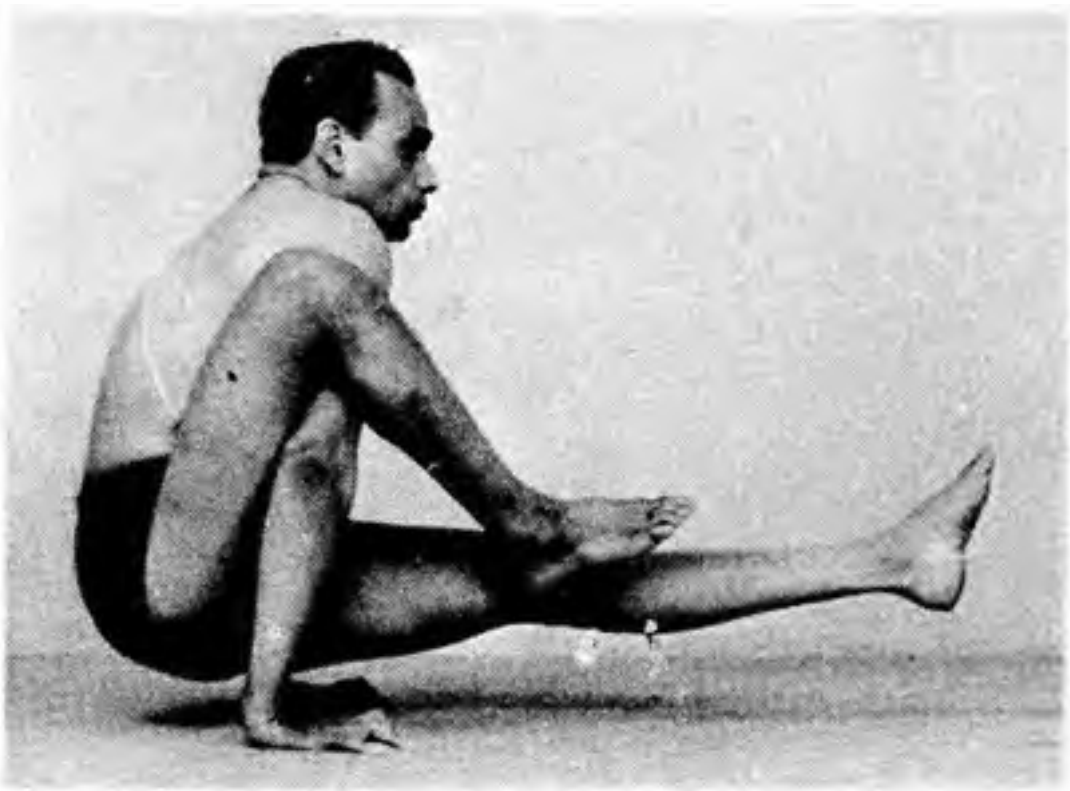
1. Sit on the floor with the legs stretched straight in front. (Plate 77)

2. Exhale, bend the right leg at the knee, clasp it at the ankle with the right hand and place it on the back of the right upper arm. Now the back of the right thigh will touch the back of the upper right arm. Place it as high up as you can.

3. Place the palms on the floor and with an exhalation raise the whole body above the ground and balance. (Plate 344)

4. Stay in this position for 20 to 30 seconds with normal breathing.

5. Keep the left leg straight and parallel to the floor throughout the balance.



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6. Exhale, lower the trunk to the floor, release the right leg, stretch it out straight in front and repeat on the other side for the same length of time.

Effects

This āsana strengthens the arms and exercises the abdominal organs.

125. *Dwi Hasta Bhujāsana* Four* (Plate 345)

Dwi means two or both, hasta means a hand and bhuja an arm. It is a variation of Eka Hasta Bhujāsana (Plate 344).

Technique

1. Stand with the feet 18 inches apart.

2. Bend the knees and rest the palms on the floor between the feet.

3. Bring the right leg over the right arm and rest the back of the right thigh on the back of the right upper arm. Likewise place the left thigh on the left arm.

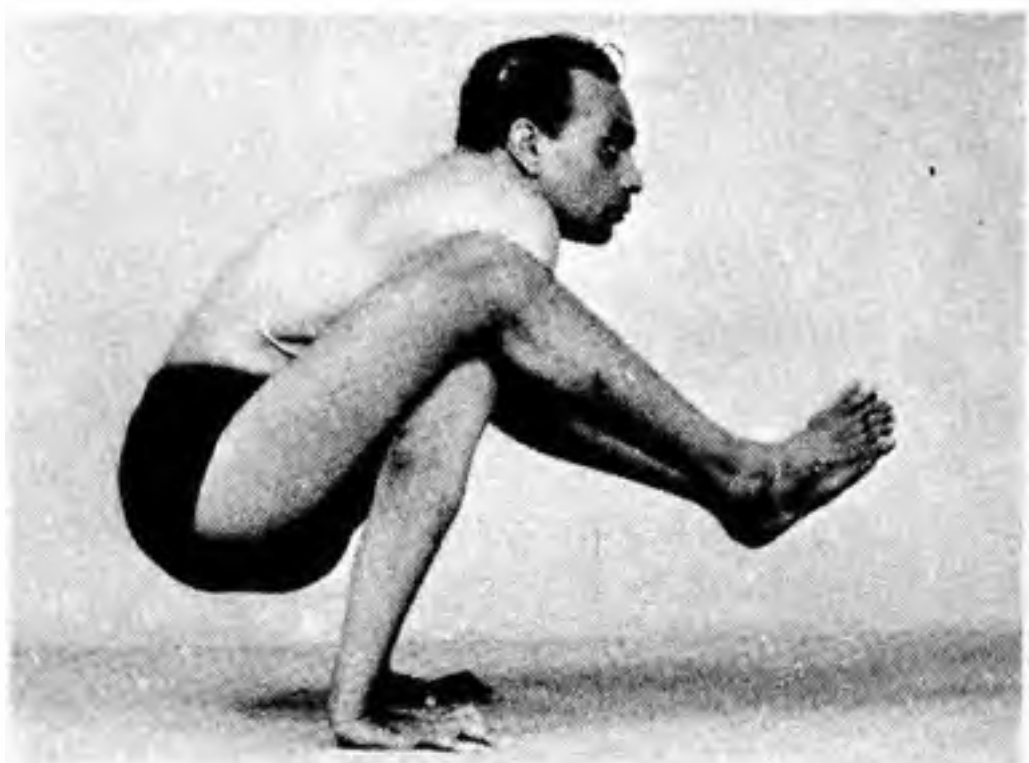
4. Exhale, lift the feet from the floor and balance on the hands. Stretch the arms straight and keep the feet together, high up. (Plate 345)

5. Stay in the position from 20 to 30 seconds with normal breathing.

6. Exhale, bend the elbows, lower the body to the floor, release the legs, stretch them straight in front and relax.

Effects

The effects are the same as in Eka Hasta Bhujāsana.



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126. *Bhujapīdāsana* Eight* (Plate 348)

Bhuja means an arm or shoulder. Pīda means pain or pressure. In this āsana, the body is balanced on the hands by resting the back of the knees on the shoulders, hence the name.

Technique

1. Stand in Tāḍāsana. (Plate 1.) Spread the legs till the feet are about two feet apart.

2. Stoop forward and bend the knees.

3. Place the palms on the floor about a foot and a half apart, between the legs. (Plate 346)

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4. Rest the back of the thighs on the back of the upper arms. Rest the thighs on the middle of the upper arms between the shoulders and elbows.

5. While placing the thighs in this position, in the beginning raise the heels from the floor.

6. Exhale, slowly raise the toes off the floor one by one, balance on the hands (Plate 347) and then interlock the feet at the ankles. (Plate 348.) In the beginning the legs will slip down and there will be difficulty in balancing. To secure the balance try and place the back of the thighs as high up on the upper arms as you can. The arms will be slightly bent at the elbows. Try and extend the arms as far as you can and raise the head up.

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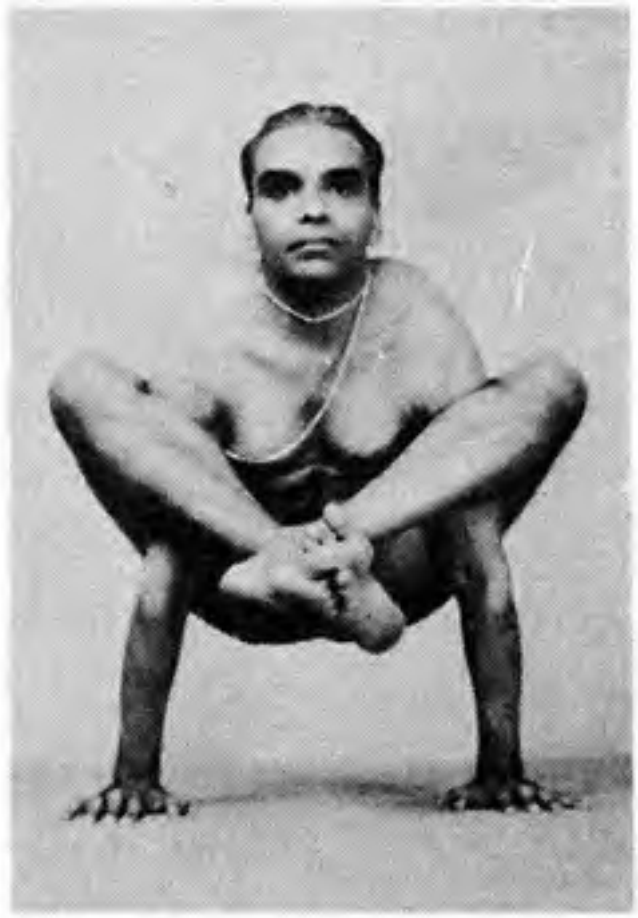

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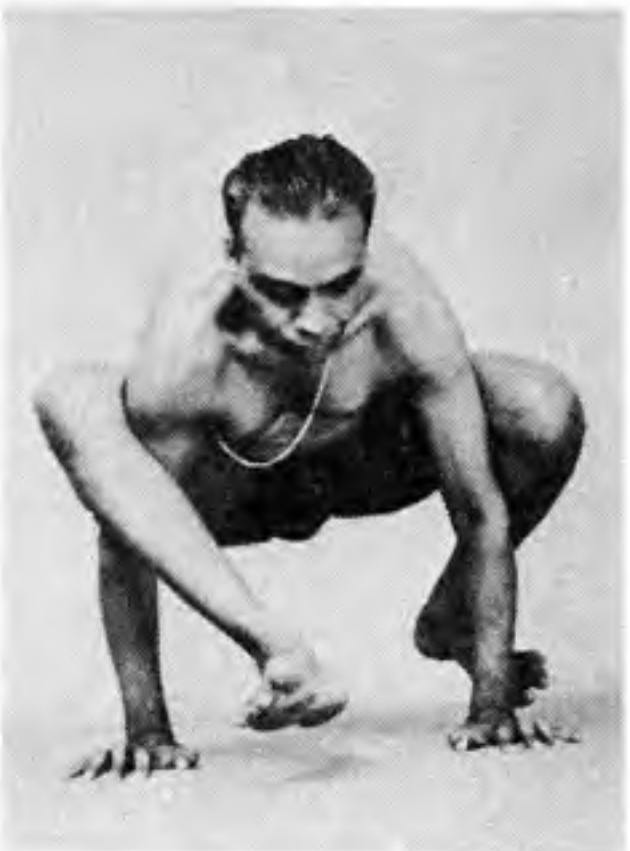
7. Remain in the balancing position with normal breathing as long as the wrists can bear the weight of the body. Then release the feet by taking the legs back one by one (Plates 349 and 350) and then rest them on the floor. Lift the hands from the floor and stand up in Tāḍāsana. (Plate 1)



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8. Repeat the pose by changing the position of the interlocked ankles. If, at first, the right foot is placed over the left one at the ankle, then

while repeating the pose place the left foot over the right one at the ankle.

Effects

By the practice of this āsana the hands and the wrists grow strong, as do the abdominal muscles due to contraction of the abdomen. The body will feel light. The minor muscles of the arms will be developed and toned by the practice of this pose, which requires no special apparatus or gymnasiums. The various parts of the body supply the weights and counterweights. All that is needed is strength of will.

127. *Mayūrāsana* Nine* (Plate 354)

Mayūra means a peacock.

Technique

1. Kneel on the floor with the knees slightly apart.

2. Bend forward, invert the palms and place them on the floor. The little fingers should touch and the fingers should point towards the feet. (Plate 351)

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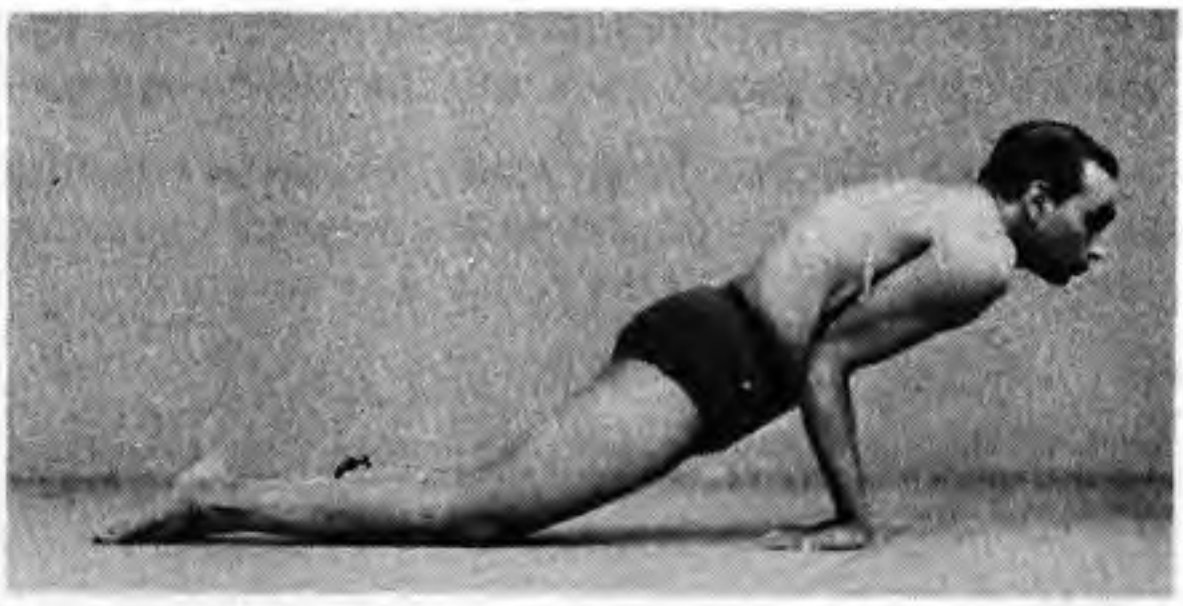
3. Bend the elbows and keep the forearms together. Rest the diaphragm on the elbows and the chest on the back of the upper arms. (Plate 352)

4. Stretch the legs straight one by one and keep them together and stiff. (Plate 353)

5. Exhale, bear the body weight on the wrists and hands, raise the



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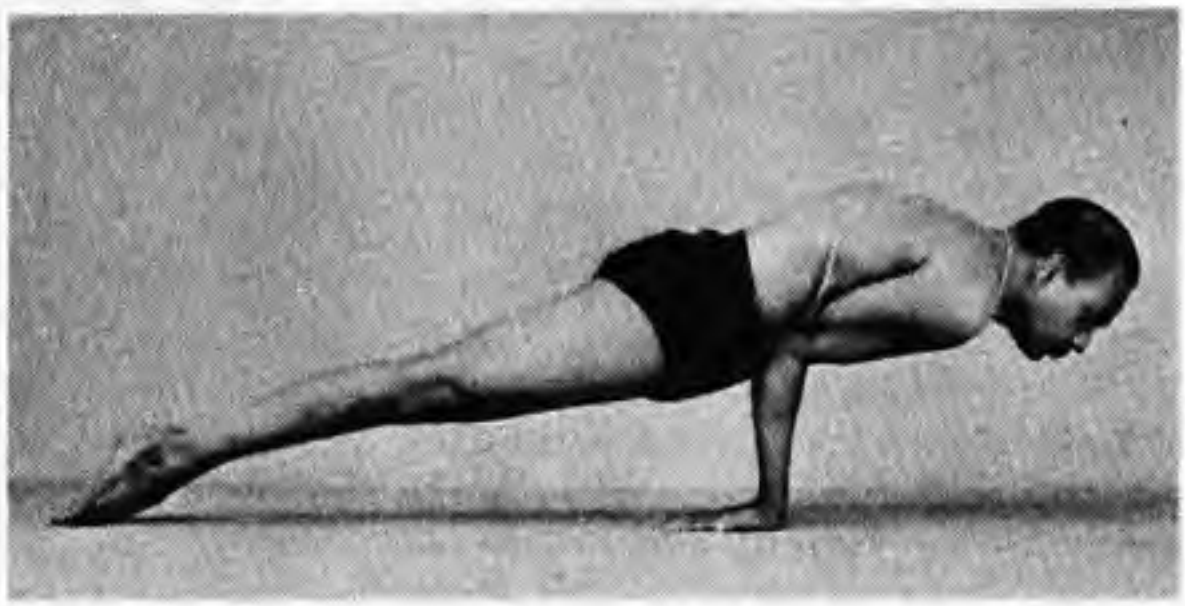

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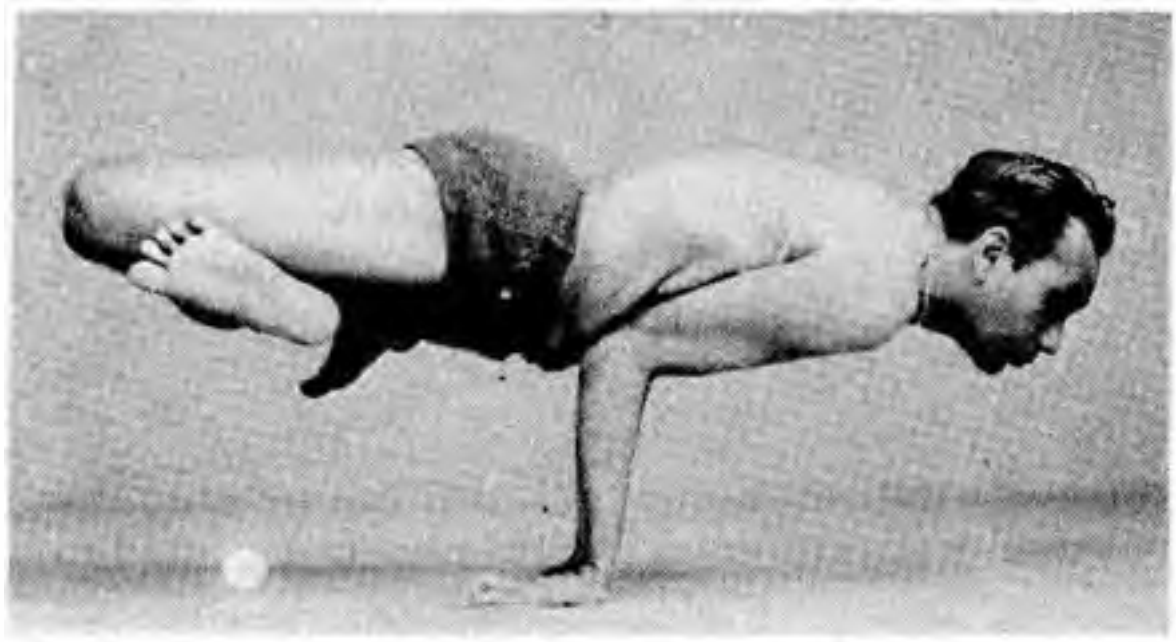
legs from the floor (either one by one or together) and at the same time stretch the trunk and head forward. Keep the whole body parallel to the floor with the legs stretched out straight and the feet together. (Plate 354)

6. Hold the pose as long as you can, gradually increasing the time to between 30 and 60 seconds. Do not put pressure on the ribs. The diaphragm being pressed, breathing will be laboured.

7. Lower the head to the floor and then the legs. Place the knees on the floor by the side of the hands, then lift the hands and relax.

8. After mastering this position learn to cross the legs as in Padmāsana (Plate 104) while practising the posture instead of keeping the legs stretched out straight. This variation is known as:

128. *Padma Mayūrāsana* Ten* (Plate 355)



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Effects

This āsana tones up the abdominal portion of the body wonderfully. Due to the pressure of the elbows against the abdominal aorta, blood circulates properly in the abdominal organs. This improves digestive power, cures ailments of the stomach and spleen, and prevents the accumulation of toxins due to faulty eating habits. Persons suffering from diabetes will find the pose beneficial. As a peacock destroys snakes, this āsana kills toxins in the body. It also strengthens the forearms, wrists and elbows.

129. *Haṃsāsana* Ten* (Plate 356)

Haṃsa means a swan. This posture is very similar to Mayūrāsana (Plate 354), except that the placing of the hands is different. In Mayūrāsana the little fingers touch and the fingers point to the feet, whereas in Haṃsāsana the hands are so placed that the thumbs touch and the fingers point to the head. The posture resembles the plant balance in modern gymnastics.

Technique

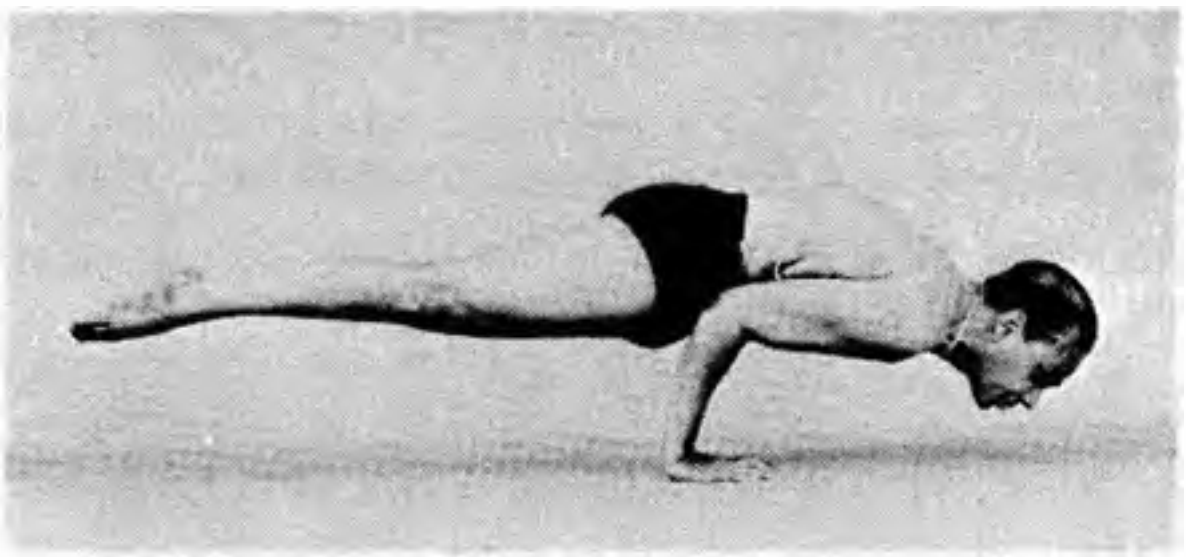
1. Kneel on the floor with the knees slightly apart.

2. Bend forward and place the palms on the floor. The thumbs should touch and the fingers should point forward.

3. Bend the elbows and keep the forearms together. Rest the diaphragm on the elbows and the chest on the back of the upper arms.

4. Stretch the legs straight one by one and keep them together.

5. Exhale, swing the trunk forward, bear the body weight on the wrists and hands, raise the legs from the floor and keep them stretched straight with the feet together and parallel to the floor. (Plate 356)



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6. Balance in this position without holding your breath as long as you can. The forearms will not remain perpendicular to the floor due to the greater pressure on the wrists as a result of the position of the hands. It is harder to balance in Haṃsāsana than in Mayūrāsana. As the diaphragm is being pressed, breathing will be hard and laboured. The forearms do not bear the weight of the body as in Mayūrāsana.

7. Exhale and rest the head and toes on the floor. Place the knees on the floor by the side of the hands, take the weight of the body off the elbows, raise the hands and the head from the floor and relax.

Effects

This āsana tones the abdominal region of the body, because due to the pressure of the elbows against the abdominal aorta, blood circulates properly in the abdominal organs. This improves digestive power and prevents the accumulation of toxins in the system. It develops and strengthens the elbows, forearms and wrists.

130. *Pīnchā Mayūrāsana* Twelve* (Plate 357)

Pīncha means the chin or a feather. Mayūra means a peacock. At the approach of the rainy season peacocks dance. When they start they lift up their trailing tail feathers and spread them to form fans. In this posture, the trunk and legs are lifted off the floor and the body is balanced on the forearms and palms. The pose resembles that of a peacock starting his dance.

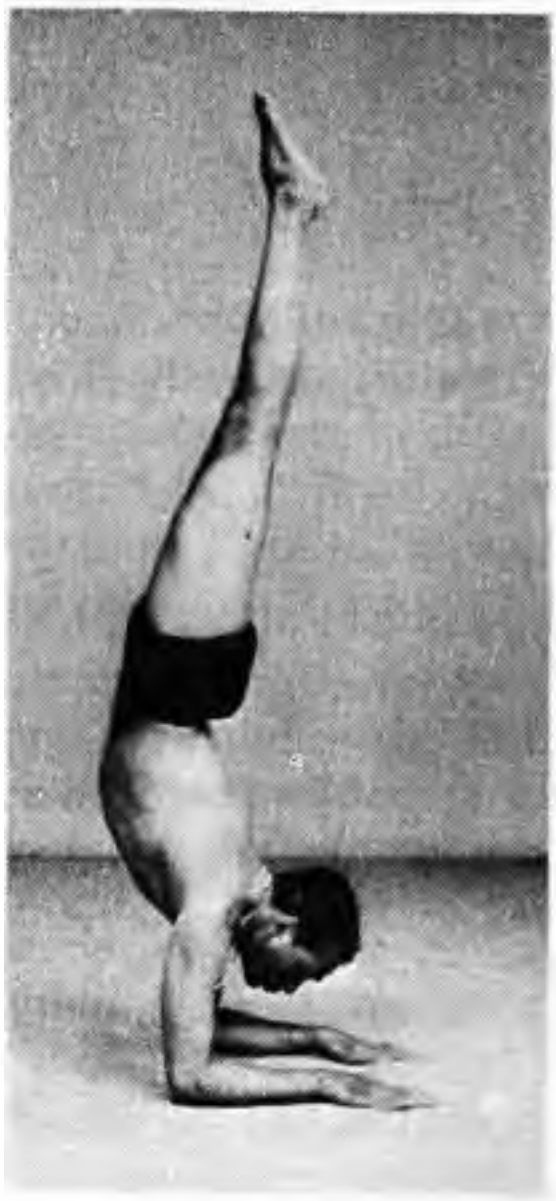
The pose is given below in two stages: in the second, the hands are lifted from the floor and the palms cupped under the chin, while the balance is maintained only on the elbows. The second stage is known as Śayanāsana. (Plate 358)

Technique

1. Kneel on the floor. Bend forward and rest the elbows, forearms and palms on the floor. The distance between the elbows should not be wider than that between the shoulders. Keep the forearms and hands parallel to each other.

2. Stretch the neck and lift the head up as high as possible.

3. Exhale, swing the legs up and try to balance without dropping the legs behind the head. (Plate 357)



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4. Stretch the region of the chest up vertically. Keep the legs stretched up vertically and together at the knees and ankles. The toes should point up.

5. Tighten the leg muscles at the hips and knees. While balancing, stretch the shoulders up and keep the thighs taut. Balance for a

minute. This is the first stage. In the beginning, try to get the balance by doing the pose against a wall so that you do not topple over. Gradually learn to stretch the spine and shoulders and to keep the head up and after mastering the balance do the pose in the middle of the room.

6. After perfecting the first stage, when the balance is secured lift the hands one by one from the floor, join the wrists and cupping the palms, place them under the chin. The body is balanced in this second stage of the posture only on the elbows. This is difficult, but by determined and regular practice one can achieve it. This second stage is known as the posture of repose:

131. *Śayanāsana* Fifteen* (Plate 358)

Effects

The posture develops the muscles of the shoulders and back. It tones the spine and stretches the abdominal muscles.

132. *Adho Mukha Vṛkṣāsana* Ten* (Plate 359)

Adho Mukha means having the face downwards. Vṛkṣa means a tree. The pose is the full arm balance in modern gymnastics.

Technique

1. Stand in Tāḍāsana. (Plate 1.) Bend forward and place the palms on the floor about a foot away from a wall. The distance between the palms should be the same as between the shoulders. Keep the arms fully stretched.

2. Take the legs back and bend the knees. Exhale, swing the legs up against the wall and balance. If the hands are kept far from the wall, then when the legs are supported by the wall the curvature of the spine will be great and will cause much strain. It will also be difficult to balance if the hands are kept away from the wall. Stay in the pose for a minute with normal breathing.

3. After learning to balance on the hands against the wall, take the feet away from the wall. Then try the pose in the middle of the room. Keep the legs fully stretched and the toes pointing up. Lift the head as far up as you can. (Plate 359)

Effects

The pose develops the body harmoniously. It strengthens the shoulders, arms and wrists and expands the chest fully.

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133. *Kūrmāsana* Fourteen* (Plates 363 and 364)

Kūrma means a tortoise. The āsana is dedicated to Kūrma the Tortoise Incarnation of Viṣṇu, the maintainer of the universe. Many divine treasures had been lost in a universal flood including amṛta (nectar) with which the gods preserved their youth. To retrieve the lost treasures the gods entered into an alliance with the demons and jointly undertook to churn the cosmic ocean. Viṣṇu became a great tortoise and dived to the bottom of the ocean. On his back was Mount Mandara for the churning stick and round the mountain was twined the divine serpent Vāsuki for the rope. The ocean was churned by the joint efforts of the gods and demons in pulling the snake and twirling the mountain. From the churned ocean emerged amṛta and various other treasures including Lakṣmī, consort of Viṣṇu and the goddess of wealth and beauty.

The pose is given in three stages. The final one resembles a tortoise with head and limbs withdrawn under its shell and is called Supta Kūrmāsana (Plate 368), the sleeping tortoise pose.

Technique

1. Sit on the floor with the legs stretched straight in front. (Plate 77.)

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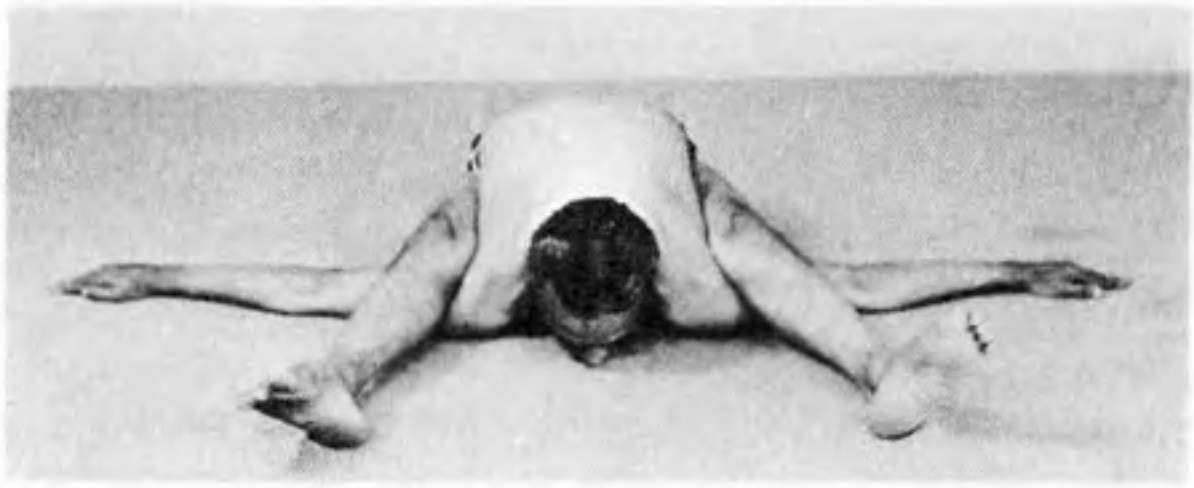

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Widen the legs until the distance between the two knees is about a foot and a half.

2. Bend the knees and lift them up by drawing the feet towards the trunk.

3. Exhale, bend the trunk forward and insert the hands one by one under the knees. (Plates 360 and 361.) Push the arms underneath the knees and stretch them straight out sideways. Rest the shoulders on the floor and keep the palms on it. (Plate 362.) Take a breath.

4. Exhale, stretch the trunk, still more, extend the neck and bring the forehead, then the chin and lastly the chest down to the floor. Then stretch the legs straight again. (Plates 363 and 364.) The knees will then be near the armpits and the back of the knees will touch the back of the upper arms near the armpits.

5. Gradually intensify the stretch until the chin and the chest rest on the floor. Extend the legs fully also and press the heels down to the floor. This is the first stage. Hold this position from 30 to 60 seconds.

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6. Now turn the wrists so that the palms face up, and keeping the legs, trunk and head in the same position, move the arms back from the shoulders and stretch them straight so that the forearms are near the hip joints. (Plate 365.) Stay in this position without bending the elbows for 30 to 60 seconds. This is the second stage.

7. Bend and lift up the knees. Then lift the chest slightly off the floor, move the hands behind the back by bending at the elbows and clasp them. (Plate 366)

8. Now move the feet towards the head. Interlock the feet at the ankles by placing the right foot over the left one or vice versa. (Plate 367)

9. Exhale, insert the head in between the feet and keep the forehead on the floor. The back of the head will touch the interlocked feet near the ankles. This is the final stage known as:

134. *Supta Kūrmāsana* Fourteen* (Plate 368)

Stay in this pose from one to two minutes. It is advisable to change the position of the feet while interlocking them, so that if at first the right foot is placed over the left one, when changing the position of

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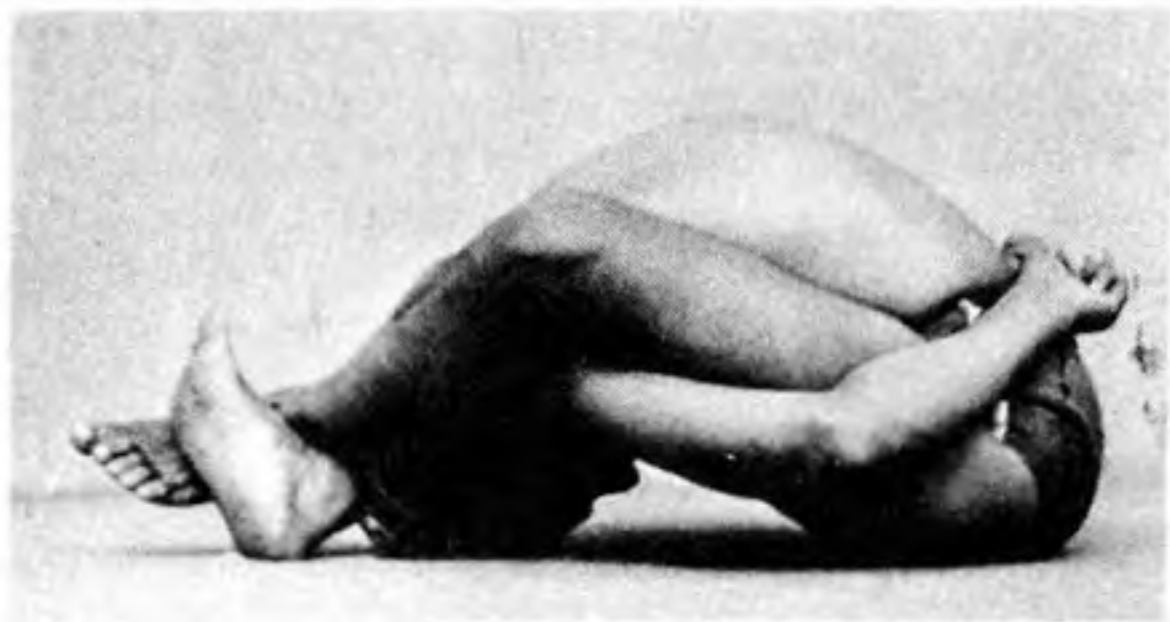

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the feet place the left foot over the right one. This will develop the legs evenly.

10. Inhale, lift the head and release the hands and feet; stretch the legs out straight, recline on the floor and relax.

11. Breathe normally throughout the three stages described above.

Effects

This pose is sacred to a yogi. While describing the qualities of a sthita-prajñā (one who is stable of mind) to Arjuna, the Blessed Lord says: 'When, again as a tortoise draws its limbs in on all sides, he withdraws his senses from the objects of sense, and then his understanding is well-poised.' (*Bhagavad Gītā*, second discourse, verse 58.) In this pose the limbs are withdrawn and the body resembles a tortoise. The mind becomes calm and composed and one develops equanimity whether in sorrow or in joy. It will gradually become free from anxiety amid pains and indifferent amid pleasures, while the emotions of passion, fear and anger will loosen their hold upon the mind.

On the purely physical level the effects are also great. It tones the spine, activates the abdominal organs and keeps one energetic and healthy. It soothes the nerves of the brain and after completing it one feels refreshed as though one had woken up from a long undisturbed sleep.

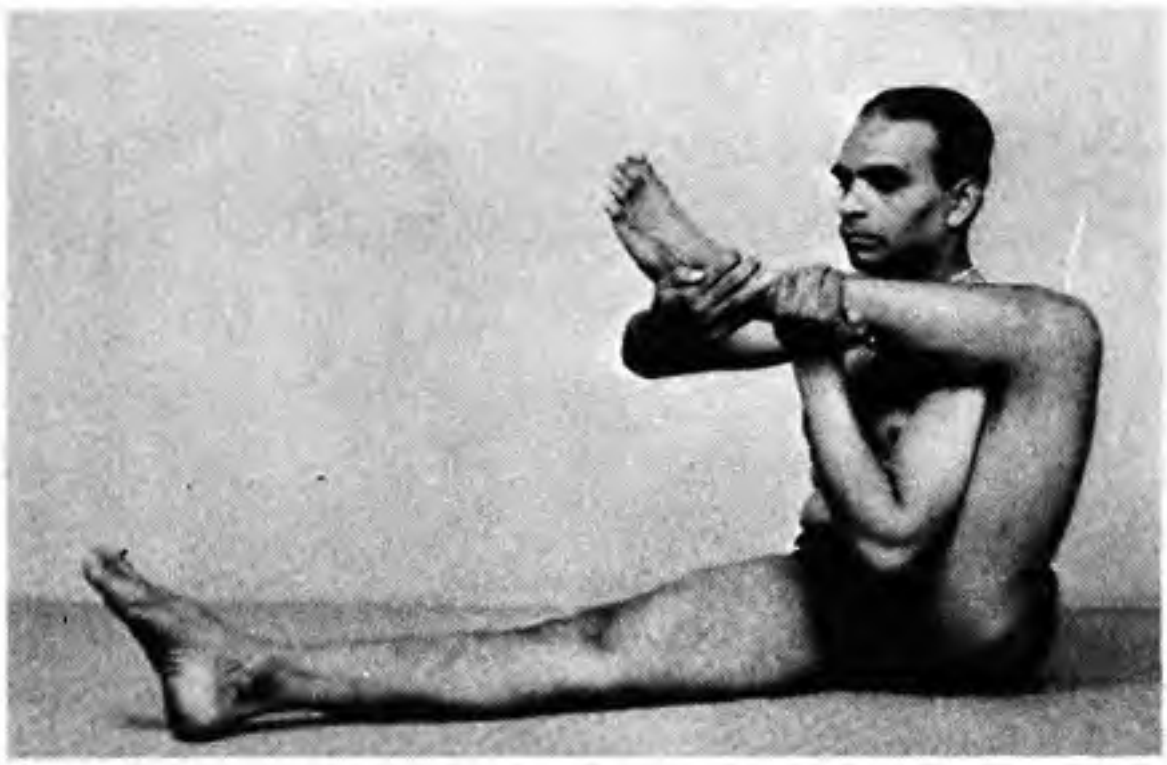
This āsana prepares the aspirant for the fifth stage of yogic practices, namely, Pratyāhāra (withdrawal of the senses from outside objects).

135. *Eka Pāda Śīrṣāsana* Fifteen* (Plate 371)

Eka means one. Pāda means a leg or a foot. Śīrṣa means the head.

Technique

1. Sit on the floor with the legs stretched straight in front. (Plate 77)



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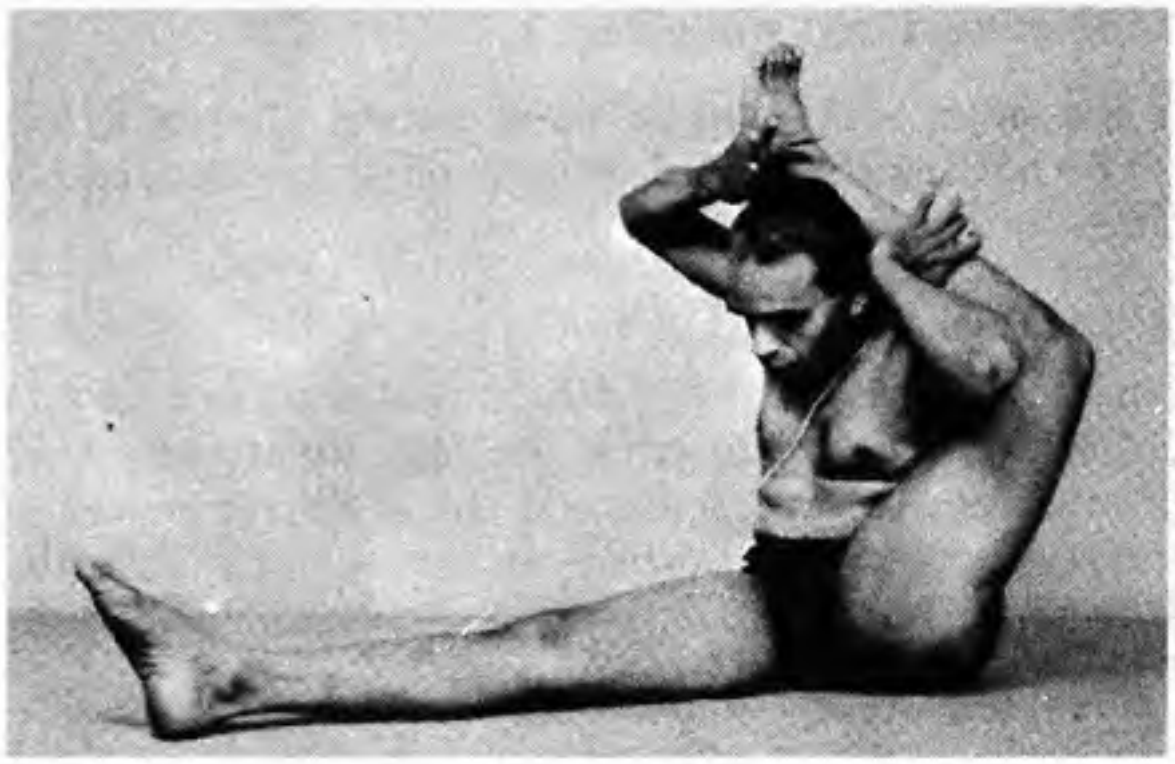

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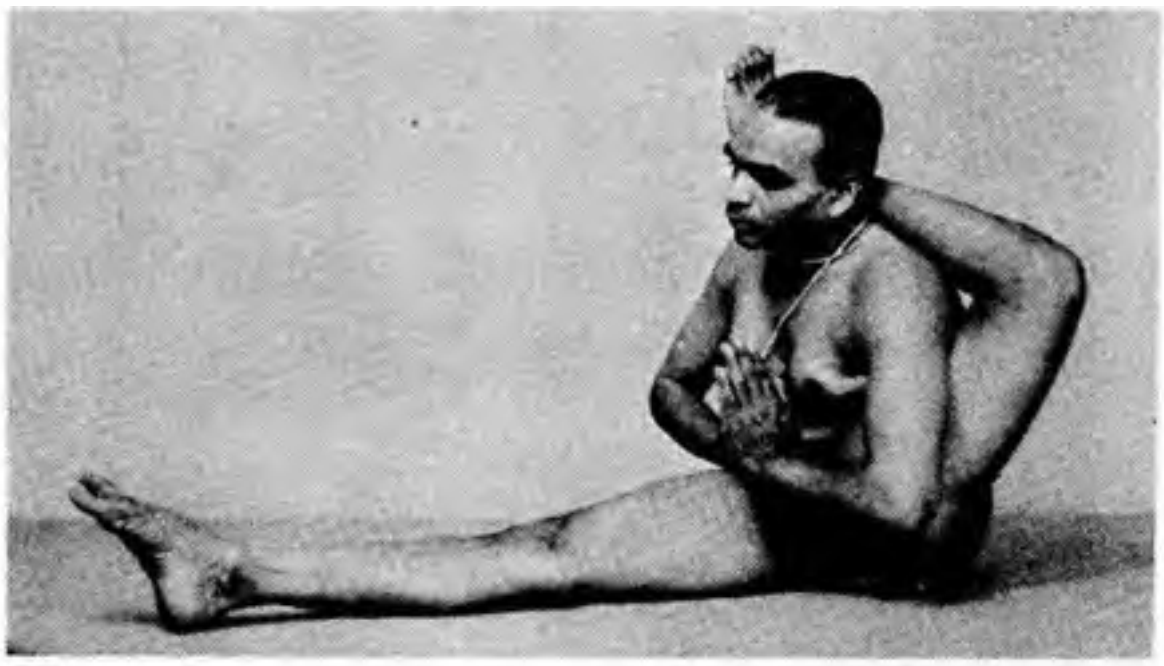
2. Bend the knee, lift the left foot and bring it near the trunk by holding the left ankle with both hands. (Plate 369)

3. Exhale, pull the left thigh up and back, bend the trunk a little forward and place the left leg on the back of the neck. (Plate 370.) The outer side of the lower left leg just above the ankle will touch the back of the neck.

4. Raise up the neck and head, keep the back straight, let go of the left ankle and fold the palms in front of the chest. (Plate 371.) The back of the left thigh will then touch the back of the left shoulder. If the head is not held up properly, the leg will slip off the neck. The right leg should lie straight on the floor. The back of the entire leg should touch the floor and the toes point forward.



371

5. Remain in this position from 15 to 60 seconds with deep breathing.

6. Unfold the palms, hold the left ankle with both hands, lower the left leg to the ground and straighten it.

7. Repeat the pose on the right side, placing the right leg behind the neck. The left leg should lie straight on the floor. Keep the pose on both sides for the same length of time.

Effects

By the practice of this posture the neck and the back grow stronger while the thighs and the hamstring muscles are stretched fully. The abdominal muscles are contracted and the digestive power increases. Until one has practised the posture one does not realise the weight and pressure of the leg which rests on the neck.

Eka Pāda Śīrṣāsana Cycle

The āsanas given below can be done in continuation of Eka Pāda Śīrṣāsana (Plate 371) one after another at a stretch. There is no need to do them separately.

First, perform the entire cycle of āsanas doing Eka Pāda Śīrṣāsana with one leg placed on the back of the neck. Then rest for a minute or two and repeat the cycle with the other leg placed on the back of the neck. These poses are strenuous and require long practice to master.

136. *Skandāsana* Sixteen* (Plate 372)

Skanda is the name of Kārtikeya, the god of War, whose birth forms the subject matter of *Kumāra-saṁbhava*, the epic poem written by Kālidāsa. Once the gods were troubled by the demon Tārakạ, who it was prophesied could only be destroyed by the son of Śiva and Pārvatī, the beautiful daughter of the mountain Himālaya. But the

prospect of Śiva having a son seemed to the other gods to be very faint, because he was continually wrapped in meditation after the death of his wife Satī. Pārvatī, who was the reincarnation of Satī, was sent by the gods to wait upon Siva, but though she made many attempts to win his attention he took no notice of her. Vasanta, the god of Spring, and Kāma, the god of Love, did their best to help Pārvatī to win Śiva. Kāma shot his arrow of desire at him and disturbed him in his meditation. Śiva opened his third eye and by the flames issuing from it burnt Kāma to ashes. In order to win her husband of a former life, Pārvatī decided to follow Śiva in asceticism. She laid aside her ornaments and became a hermitess on a nearby peak, and in this guise, Śiva, who had already been smitten by Kāma's arrow, noticed and fell in love with her. Śiva and Pārvatī were married at a great ceremony, which all the gods attended. Pārvatī gave birth to the war-god Skanda, who when he grew to manhood, slew the demon Tāraka.

Technique

1. Do Eka Pāda Śīrṣāsana. (Plate 371)

2. With an exhalation, bend the trunk forward and hold the outstretched right leg with both hands as in Paschimottānāsana (Plate 160) and rest the chin on the right knee.

3. Extend the chin to prevent the leg from slipping off.

4. Stay in the pose for about 20 seconds with deep breathing.

137. *Buddhāsana* Twenty-two* (Plate 373)

Buddha means enlightened. This āsana is a continuation of Skandāsana. (Plate 372)

372

373

Technique

1. From Skandāsana (Plate 372) with the left leg placed on the back of the neck, inhale and raise the head and trunk up.

2. Hold the left ankle with the left hand and lower the leg still further.

3. Raise the right arm from the shoulder, move it sideways and turn the forearm back to bring it over the left ankle from above the left foot. (Plate 373)

4. Stay in the pose for about 15 seconds with deep breathing. Inhale, lift up the head and trunk.

138. *Kapilāsana* Twenty-two* (Plate 374)

Kapila was the name of a great sage, who is said to have been the founder of the Sankhya system of philosophy. This āsana is a continuation of Buddhāsana. (Plate 373)

Technique

1. Maintain the hand grip in Buddhāsana with the left leg placed on the back of the neck, exhale, bend the trunk forward and rest the chin on the outstretched right knee as in Paschimottānāsana. (Plate 160)

2. Stay in the pose from 10 to 15 seconds with deep breathing. Inhale, lift up the head and trunk and release the hand grip.

139. *Bhairavāsana* Sixteen* (Plate 375)

Bhairava means terrible, formidable. This is one of the eight aspects of Śiva.

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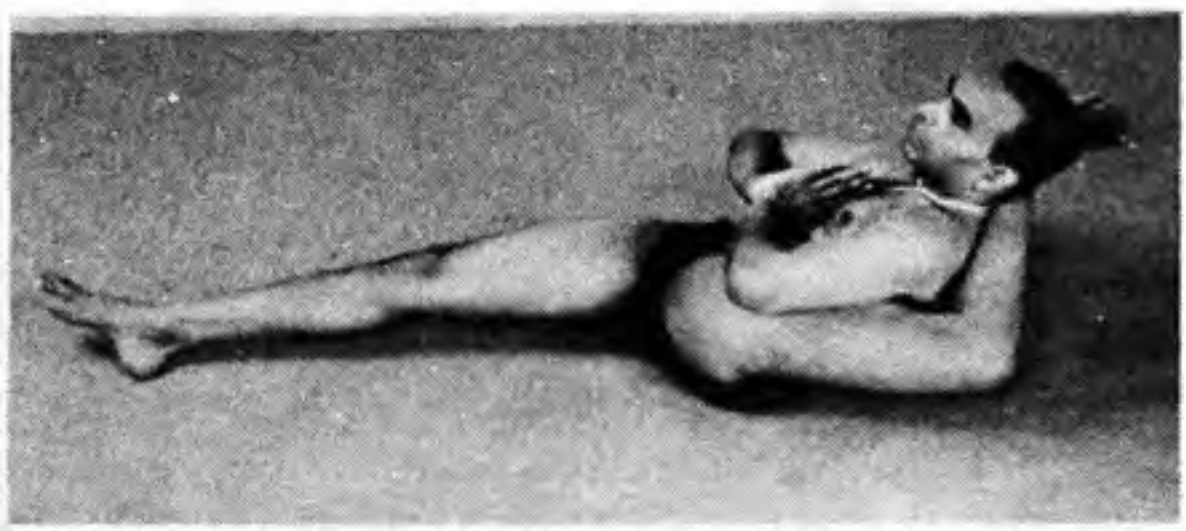


375

Technique

1. After releasing the hand grip in Kapilāsana (Plate 374), exhale and recline backwards.

2. Fold the arms across the chest. Keep the right leg stretched straight on the floor. (Plate 375)

3. Stay in the pose for about 20 seconds, with deep breathing.

140. *Kāla Bhairavāsana* Nineteen* (Plate 378)

Kāla Bhairava is Śiva in his terrible aspect as destroyer of the universe, a personification of the destructive principle.

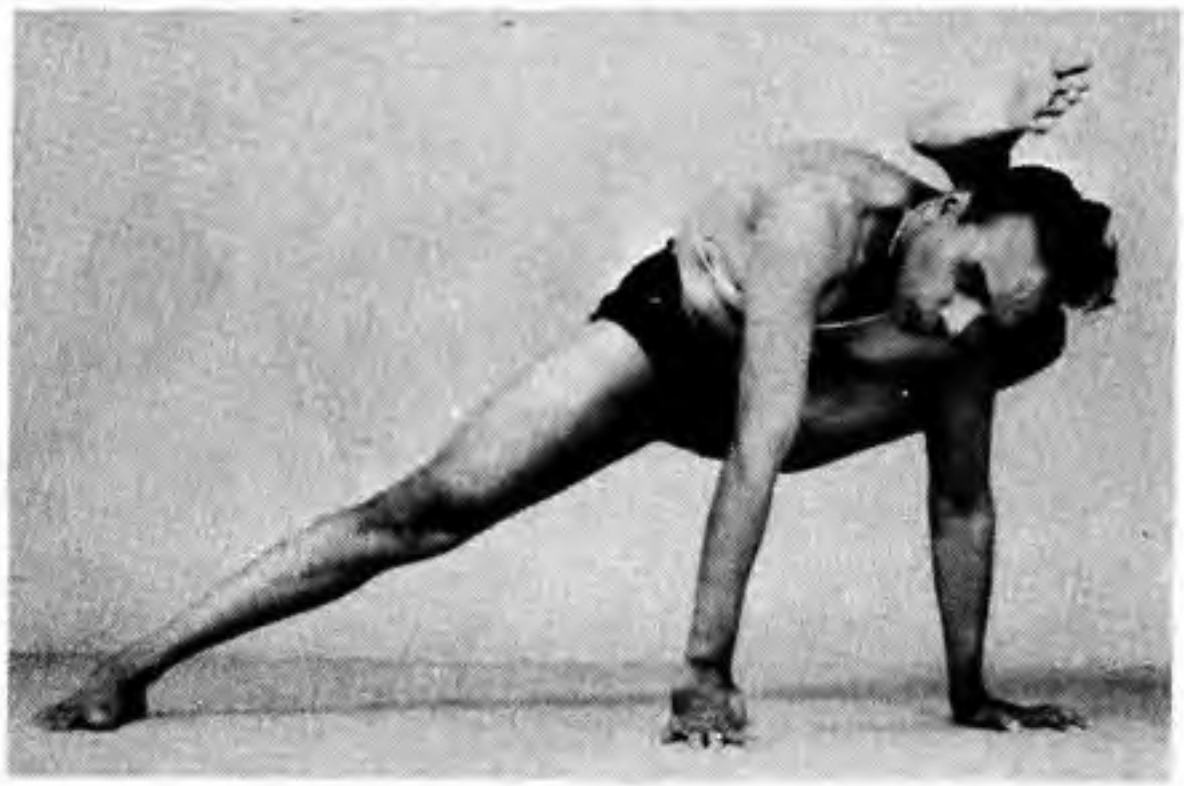
Technique

1. After completing Bhairavāsana (Plate 375), unfold the arms from the chest, press the palms to the floor and come back to Eka Pāda Śīrṣāsana. The palms should be kept by the side of the hips.

2. Move the right leg sideways to the right.

3. Exhale, raise the body off the floor (Plate 376) and take two breaths.

4. Exhale, take the right arm off the floor, turn the trunk to the right and place the right arm along the right thigh. (Plate 377.) Take two breaths.



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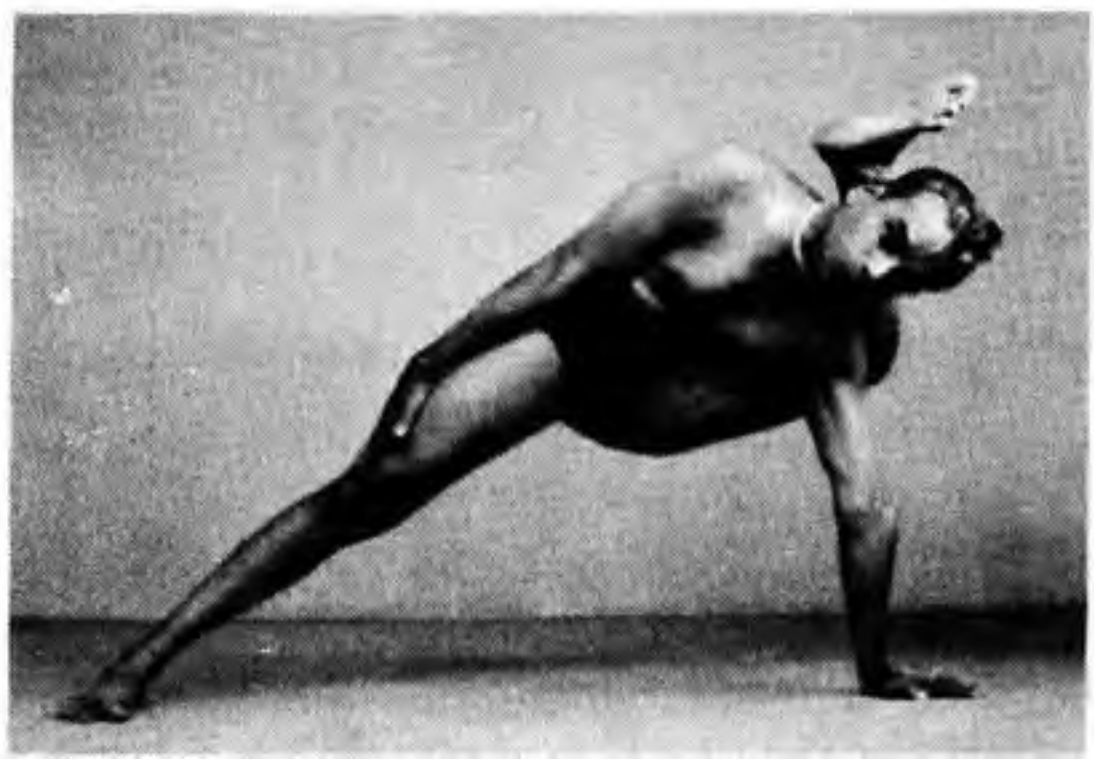


377

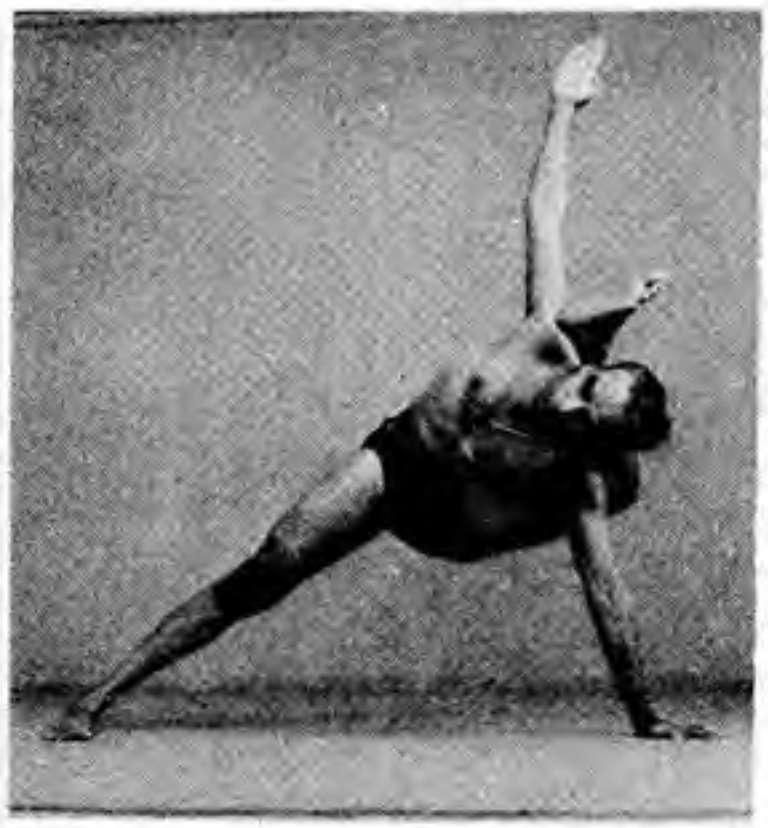
5. Now stretch the right arm up vertically. (Plate 378)

6. The whole body is balanced sideways on the left palm and the outer side of the right foot, the right leg forming an angle of 30 degrees from the floor.

7. Stay in the pose for about 20 seconds with deep breathing.

141. *Chakorāsana* Twenty* (Plates 379 and 380)

Chakora is a bird like a partridge, which is said to feed on moonbeams.



378

Technique

1. From Kāla Bhairavāsana (Plate 375), place the right palm on the floor and bending the right knee, rest on the floor with the left leg on the back of the neck, thus coming back to Eka Pāda Śīrṣāsana. (Plate 371)

2. Press the palms on the floor by the side of the hips.

3. Raise the hips off the floor and balance the body on the palms. Lift the outstretched right leg up until it forms an angle of about 60 to 75 degrees from the floor. (Plates 379 and 380.) Stay in the pose to your capacity with normal breathing.

142. *Dūrvāsāsana* Twenty-one* (Plate 383)

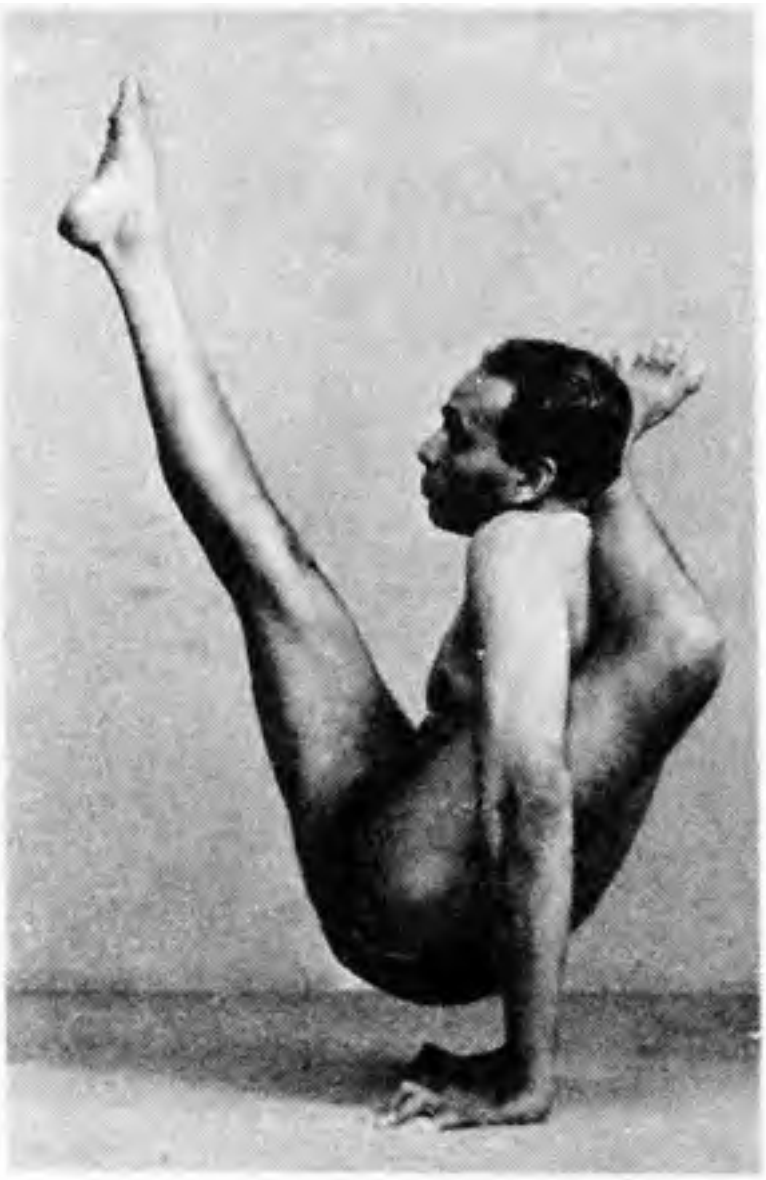
Dūrvāsa was the name of a very irascible sage whose anger has become proverbial.

Technique

1. From Chakorāsana (Plate 379) rest the outstretched right leg on the floor. Bend the right knee and squat by resting the palms on the floor. (Plate 381)

2. Then rest the palms on the right thigh. Exhale, press the palms on the right thigh, pull the trunk up and gradually stand up on the right leg, keeping it erect by making the muscles taut. (Plate 382)

3. Pull the waist and chest up, fold the hands in front of the chest



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381

and balance the body on the right leg. (Plate 383.) The left leg lies across the back of the neck. Try to breathe normally.

382

383

4. Hold the posture as long as you can. Since it is difficult to balance, use the support of a wall or a friend to start with.

143. *Ruchikāsana* Eighteen* (Plates 384 and 385)

Ruchika was the name of a sage, the grandfather of Bhagavān Paraśurāma, the sixth incarnation of Viṣṇu.

Technique

1. After completing Dūrvāsāsana (Plate 383), exhale, bend the trunk forward and rest the palms on either side of the right foot. (Plates 384 and 385)

2. Rest the head on the right knee without allowing the left leg to slip from the back of the neck. Then gradually extend the neck until the chin touches the right knee, as in Uttānāsana. (Plate 48)

3. Stay in the pose for about 15 seconds with normal breathing.

4. Bend the right knee, sit on the floor, release the left leg from the back of the neck and relax.

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385

5. Then put the right leg behind the neck and repeat the cycle of āsanas given above, reading the word 'left' for the word 'right' and vice versa.

Effects of the āsanas in the Eka Pāda Śīrṣāsana Cycle

The various movements in this cycle of āsanas tone up the muscular, nervous and circulatory systems of the entire body. The spine receives a rich supply of blood, which increases the nervous energy in the chakras (the various nerve plexuses situated in the spine), the fly-wheels in the human body machine. These poses develop the chest and make the breathing fuller and the body firmer; they stop nervous trembling of the body and prevent the diseases which cause it; they also help to eliminate toxins by supplying pure blood to every part of the body and bringing the congested blood back to the heart and lungs for purification. By the practice of these āsanas the haemoglobin content of the blood improves, the body and mind become vigorous and the capacity for work increases.

144. *Viranchyāsana I* Nineteen* (Plates 386 and 387)

Virancha or Viranchi is one of the names of Brahmā, the supreme

Being, the first deity of the Hindu Trinity, to whom is entrusted the work of creating the world.

Technique

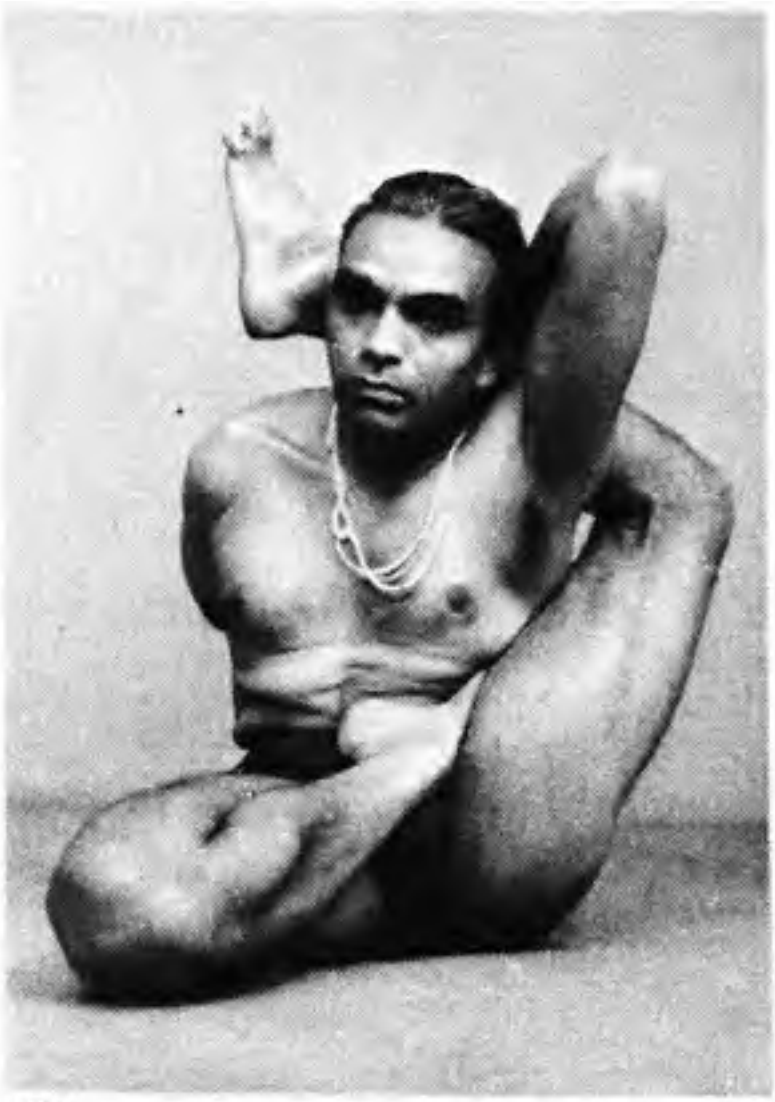
1. Sit on the floor with the legs stretched straight in front. (Plate 77)

2. Bend the right knee and place the right foot at the root of the left thigh in half Padmāsana.

3. Bend the left knee, bring the foot near the trunk and grasp the left ankle with both hands. Exhale, pull the left thigh up and back, bend the trunk a little forward and place the left leg on the back of the neck. The outer side of the left leg just above the ankle will touch the back of the neck.

4. Raise the head and neck up, keep the back erect and let go of the left ankle.

5. Now raise the left arm up vertically, bend it at the elbow and take it behind the back of the neck over the left leg across the neck. Lower the right arm, bend it at the elbow and raise the right forearm up behind the back till the right hand is level with and between the shoulder-blades. Clasp the hands behind the back between the shoulders. (Plates 386 and 387)



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387

6. Stay in this pose from 10 to 20 seconds with normal breathing. Unclasp the hands, lower the left leg, straighten the right one and return to position 1.

7. Repeat the pose on the other side for the same length of time, reading left for right and vice versa.

145. *Viranchyāsana II* Ten* (Plate 388)

Technique

1. Sit on the floor with the legs stretched straight in front. (Plate 77)

2. Bend the left leg at the knee and move it back. Place the left foot by the hip joint, keep the toes pointing backwards and rest them on the floor. The left leg will now be in Virāsana. (Plate 89)

388

3. Then follow the technique stated above for Viranchyāsana I. (Plate 386)

Effects

Both these poses strengthen the back and the neck while the shoulder movements become freer. The thighs and hamstring muscles are extended fully, the abdominal muscles contract and digestive power increases.

146. *Yoganidrāsana* Eighteen* (Plate 391)

Nidrā means sleep. Yoganidrā is a state between sleep and wakeful-

ness. It is also the name given to the sleep of Viṣṇu at the end of a Yuga, an age of the world.

In this pose the legs are interlaced behind the back of the neck and the hands are clasped behind the back which rests on the ground. The legs form the Yogi's pillow and the back is his couch. The practice of this pose warms up the body very rapidly. It is therefore used by Yogis living at high altitudes to keep warm.

Technique

1. Lie flat on the back on the floor. (Plate 219)

2. Bend both the knees and bring the legs over the head.

3. Exhale, move the right leg from behind the right shoulder by holding the right foot with both the hands and placing it well behind the back of the neck, as in Eka Pāda Śīrṣāsana. (Plate 389)

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4. Maintain the position of the right leg, breathing in several times.

5. Exhale and with the help of the left palm move the left leg behind the left shoulder and place it under the right leg. (Plate 390.) Lock the feet at the ankles.

6. Lift the shoulders well up, move the arms behind the back and clasp the fingers. (Plate 391.) The back of the upper arms will be in contact with the back of the thighs. Take a few breaths.

7. Exhale, lift the chest well up and stretch the neck back. This is the final position (which is the reverse position of Supta Kūrmāsana, Plate 368). Stay in the pose for 30 to 60 seconds, trying to breathe normally.

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8. Exhale and release the hand grip behind the back and the leg grip behind the neck.

9. Relax on the floor, keeping the legs straight for some time.

10. Then repeat the pose for the same length of time, first placing the left leg behind the back of the neck with the right leg under it.

11. Loosen the hand and leg grips and relax on the floor.

12. Do not cross both legs first and then move them behind the neck. This will not give the correct feel of the āsana. Remember to bring one leg behind the back of the neck and then the other leg under the first one. Before resting the legs behind the neck, raise the neck and dorsal region and also extend the shoulders, so that the latter do not get wedged between the chest and the legs. This will ensure that the pose is correct.

Effects

In this pose the spine is given a full forward stretch and one feels a pleasing sensation in the back. It is one of the best front bending poses. Even the maximum stretch of Paschimottānāsana (Plate 160) does not give the same feeling of right exercise, comfort and rest as the correct practice of Yoganidrāsana.

In the back bending poses the lungs and the abdominal muscles are given maximum expansion. In this āsana the lungs and the abdominal muscles are contracted to the full. In a short time, the practice of the pose tones the kidneys, liver, spleen, intestines, gall bladder, prostates and the urine bladder. The abdominal organs will be free from diseases by continued practice of this pose. It also exercises the gonads and releases energy and vitality in the system. The nerves will be rested and energy will be stored in the body for better thinking and better work.

147. *Dwi Pāda Śīrṣāsana* Twenty-four* (Plate 393)

Dwi Pāda (dwi = two or both; pāda = leg or foot) means of both feet. In Eka Pāda Śīrṣāsana (Plate 371) one leg is placed behind the back of the neck. In this āsana both legs are so placed, the hands are folded in front of the chest and the body is balanced on a small section of the seat near the tail-bone. This is difficult and one is apt to fall backwards. The pose is very similar to Yoganidrāsana (Plate 391), but here the body is vertical, whereas in Yoganidrāsana the back rests on the floor.

Technique

1. Sit on the floor with the legs stretched straight in front. (Plate 77)
2. Bend both knees and bring the feet near the trunk.
3. Exhale, catch the right ankle with both hands, pull the right thigh up and back, bend the trunk a little forward and place the right leg on the back of the neck as in Eka Pāda Śīrṣāsana. The back of the right thigh will then touch the back of the right shoulder. Release the hands from the ankle and take a few breaths.
4. Exhale, catch the left ankle with the left hand, pull the left thigh up and back and place the left leg over the right one in the same manner as described above. Release the hand from the left ankle, but keep the feet locked at the ankles. Place the hands on the floor by the side of the hips and balance upright on the portion of the seat near the tail-bone. (Plate 392.) This requires practice. Try to maintain normal breathing.
5. Lift the hands off the floor, fold them in front of the chest and stay balanced in the vertical position for a few seconds or as long as you can from 10 to 30 seconds. (Plate 393.) This is the final position.

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6. After holding this posture, place the palms on the floor by the side of the hips, exhale, straighten the arms and pull the body up by taking the weight on the hands. Do not release the ankle lock. (Plate 394.) Hold the pose from 10 to 20 seconds to your capacity.

7. Release the foot lock at the ankles, stretch the legs up vertically and balance on the hands. This is called:

148. *Tittibhāsana* Twenty-two* (Plate 395)
Tittibha is an insect like a firefly.

After staying in this position for a few seconds, bend the legs at the knees, lower the body to the floor, release the legs from the arms, stretch them straight in front and rest for a few seconds.

8. Repeat the movements for the same length of time, this time first placing the left leg on the back of the neck and then the right leg on the top of the left one. Finally relax on the floor.

Effects

In this āsana the lungs and abdominal muscles are most tightly contracted. The spine is given a full forward stretch and the abdominal organs benefit quickly from the exercise. The effect is the same as that of Yoganidrāsana (Plate 391), but in this pose the thighs are stretched

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more and greater strain is felt on the neck, the sacrolumbar region of the spine and the abdomen.

149. *Vasiṣṭhāsana* Eighteen* (Plate 398)

Vasiṣṭha was a celebrated sage or seer, the family priest of the solar race

of kings and the author of several Vedic hymns, particularly of the seventh Maṇḍala of the Ṛg Veda. He was a typical representative of the brahmanic dignity and power and is one of the seven sages who are identified with the stars of the Great Bear. The rivalry between him and the royal sage Viśvāmitra, a kṣatriya (a man of the warrior caste) who by his piety and asceticism raised himself to brahman status, forms the subject of many legends.

The āsana is dedicated to the sage Vasiṣṭha.

Technique

1. Stand in Tāḍāsana. (Plate 1.) Bend forward, rest the palms on the floor and take the legs back about 4 to 5 feet as if you are doing Adho Mukha Śvānāsana. (Plate 75)

2. Turn the whole body sideways to the right and balance on the right hand and foot only. The outer side of the right foot should rest firmly on the floor. Place the left foot over the right one, rest the left palm on the left hip and balance, keeping the body straight. (Plate 396.) In order to learn the art of balancing in this position, be close to a wall so that the inner side of the right foot rests against it.

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3. Exhale, bend the left leg at the knee, move the body slightly forward and catch the left big toe between the thumb and the index and middle fingers of the left hand. (Plate 397.) Pull the left arm and the left leg up vertically. (Plate 398.) The grip on the toe will be like that described in Supta Pādāṅguṣṭhāsana. (Plate 284.) Balance in this position, keeping the arms and legs rigid, with deep breathing, for about 20 to 30 seconds.

4. Release the toe grip, rest the left leg again over the right foot and lower the left hand to the hip once more.

5. Exhale, turn the body over to the left so that it balances only on the

left hand and the left foot. Repeat the pose on this side for the same length of time, following the technique stated above, reading right for left and left for right.

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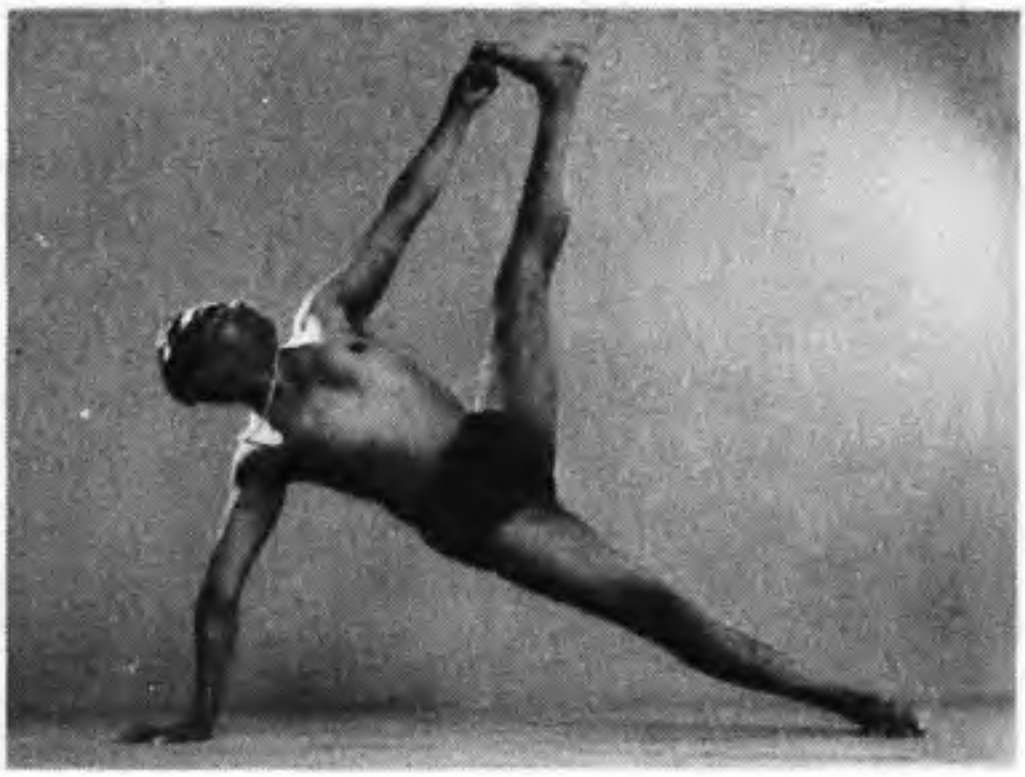

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Effects

This pose strengthens the wrists, exercises the legs and tones the lumbar and coccyx regions of the spine.

150. *Kaśyapāsana* Nineteen* (Plates 399 and 400)

This āsana is dedicated to the sage Kaśyapa, son of the sage Marīchi, a son of Brahmā. He bore an important share in the work of creation. It is said that Kaśyapa married the thirteen daughters of Dakṣa. He begot by Aditi the twelve Adityas (the gods) and by Diti the Daityas (the

demons). By his other wives he had diversified and numerous progeny such as serpents, reptiles, birds and nymphs of the lunar constellations. He was thus the father of Sūrya (the sun god) and all living beings and is often called Prajāpati (the Progenitor).

Technique

1. Stand in Tāḍāsana. (Plate 1.) Bend forward, rest the palms on the floor as in Uttānāsana (Plate 47) and take the legs back about 4 to 5 feet, in Adho Mukha Śvānāsana. (Plate 75)

2. Turn the whole body sideways to the right and balance on the right hand and foot. The outer side of the right foot should rest firmly on the floor. Place the left foot over the right foot, rest the left palm on the left hip and balance keeping the body straight. (Plate 396)

3. Exhale, bend the left knee and place the left foot at the root of the right thigh as in half Padmāsana. Swing the left arm from the shoulder behind the back and with the left hand catch the left big toe. This is the final position. (Plates 399 and 400.) Balance in it for some time with deep breathing. The entire chest and the extended right arm should be in one plane.

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4. Exhale, release the left foot, place it again over the right one and put the left hand on the left thigh. (Plate 396.) Take a few deep breaths.

5. Exhale, turn the body over to the left so that it balances only on the left hand and foot. Place the right foot at the root of the left thigh in half Padmāsana and catch the right big toe from behind the back with the right hand. Balance on the both sides for an equal length of time.

6. Exhale, release the right foot and place it over the left foot and the right hand on the right thigh.

400

7. Rest the right palm on the floor and come back to Uttānāsana (Plate 47), take a few breaths and with an exhalation return to Tāḍāsana. (Plate 1)

Effects

This āsana strengthens the hands and relieves pain and stiffness in the sacral region of the spine.

151. *Viśvāmitrāsana* Twenty* (Plate 403)

Viśvāmitra was the name of a celebrated sage. He was originally a kṣatriya (a member of the warrior caste), being the king of Kanyākubja. One day while out hunting, he went to the hermitage of the sage Vasiṣṭha, and seeing there Kāmadhenu (the Cow of Plenty), offered the sage untold treasures in exchange for her. On being refused, the king tried to take her by force. A long contest ensued in which the king was defeated. Although sorely vexed, he was greatly impressed with the power inherent in Brahmanism. The king devoted himself to the most rigorous austerities until he successively achieved the status and titles of Rājarṣi (a royal sage, a saint-like prince), Riṣi (a sage or seer), Maharṣi (a great sage or patriarch of mankind) and finally Brahmarṣi (a Brahmanical sage), but he was not content until Vasiṣṭha himself called him Brahmarṣi. During his arduous penance, the heavenly nymph Menakā seduced him and conceived Śakuntalā, the heroine of Kalidasa's famous drama.

This āsana is dedicated to Viśvāmitra.

Technique

1. Stand in Tāḍāsana. (Plate 1.) Bend forward, rest the palms on the

floor and take the legs back about 4 to 5 feet, as in Adho Mukha Śvānāsana. (Plate 75)

2. Exhale, swing the right leg over the right hand and place the back of the right thigh on the back of the upper part of the right arm. (Plate 401)

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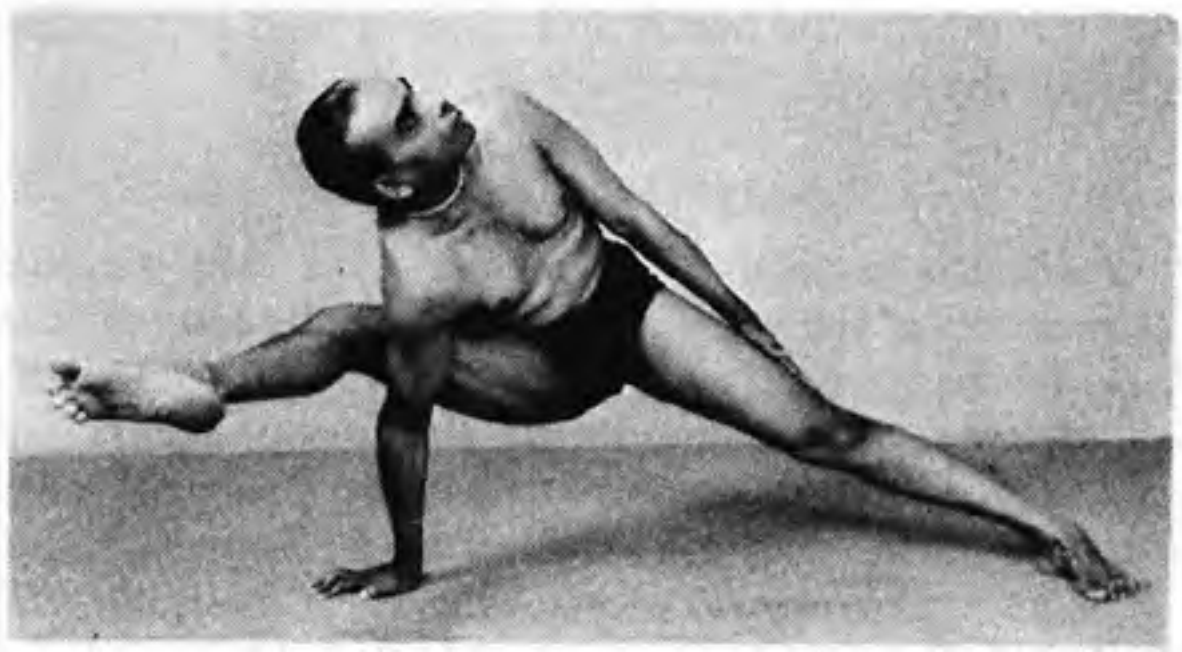
3. Immediately turn the body to the left, place the left arm along the left thigh and balance. (Plate 402)



402

4. Turn the left foot sideways and press the sole and heel on the floor.

5. Stretch the right leg straight up and take two breaths.

6. Exhale, stretch the left arm up vertically from the shoulder and gaze at the outstretched left hand. (Plate 403)

7. Stay in the pose from 20 to 30 seconds with deep breathing.

8. Exhale, release the right leg and come back to position 1.

9. Repeat the pose for the same length of time on the other side, following the technique stated above, reading right for left and left for right.

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Effects

This pose strengthens the hands and the abdominal organs and exercises the thigh muscles.

152. *Bakāsana* Nine* (Plates 406 and 410)

Baka means a crane.
The body in this pose resembles that of a crane wading in a pool of water, hence the name.

The techniques here are given in two different ways, one for beginners and the other for advanced pupils.

Technique for beginners

1. Squat on the haunches with the feet together. The soles and heels should rest completely on the floor. Raise the seat from the floor and balance. (Plate 317)

2. Widen the knees and move the trunk forward.

3. Exhale, wrap the arms around the bent legs and rest the palms on the floor. (Plate 318)

4. Bend the elbows, raise the heels from the floor, move the trunk further forward and rest the shins on the back of the upper arms near the armpits. (Plate 404.) Take 2 or 3 breaths.

5. Exhale, swing the body forward and lift the toes off the floor. (Plate 405)

6. Stretch the arms straight and balance the entire body on the hands. (Plate 406)

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7. Stay in this position for 20 to 30 seconds with normal breathing.

8. Exhale, bend the elbows, lower the trunk, release the legs from the armpits, squat on the floor and relax.

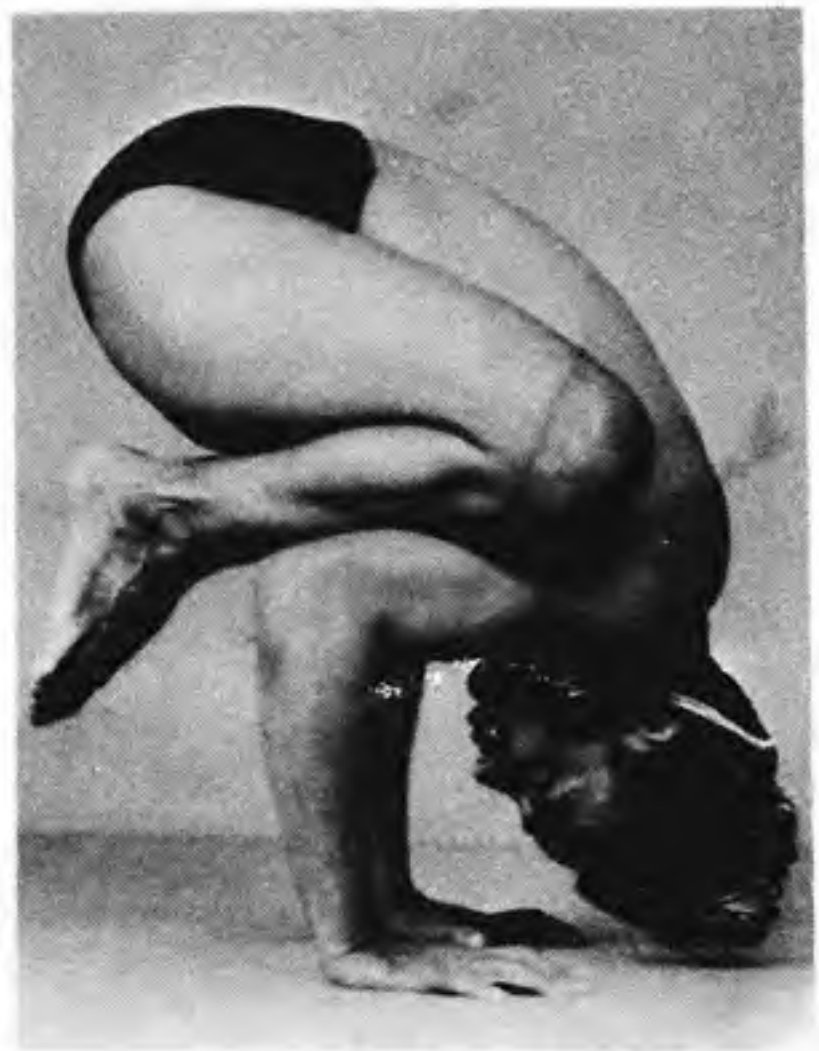
Technique for advanced pupils

1. Perform Sālamba Śīrṣāsana II. (Plate 192)

2. Exhale, bend the knees and lower the legs so that the thighs touch the stomach and chest.

3. Place the right knee on the back of the upper right arm as near the armpit as possible, then the left knee similarly on the left arm. The feet should be kept together. (Plate 407.) Secure this position and balance with even breathing.

407



408

4. Exhale, pull the trunk up and raise the head off the floor. (Plate 408.) Stretch and straighten the arms and raise the buttocks. (Plate 409.) Extend the neck and keep the head as high as possible. (Plate 410)

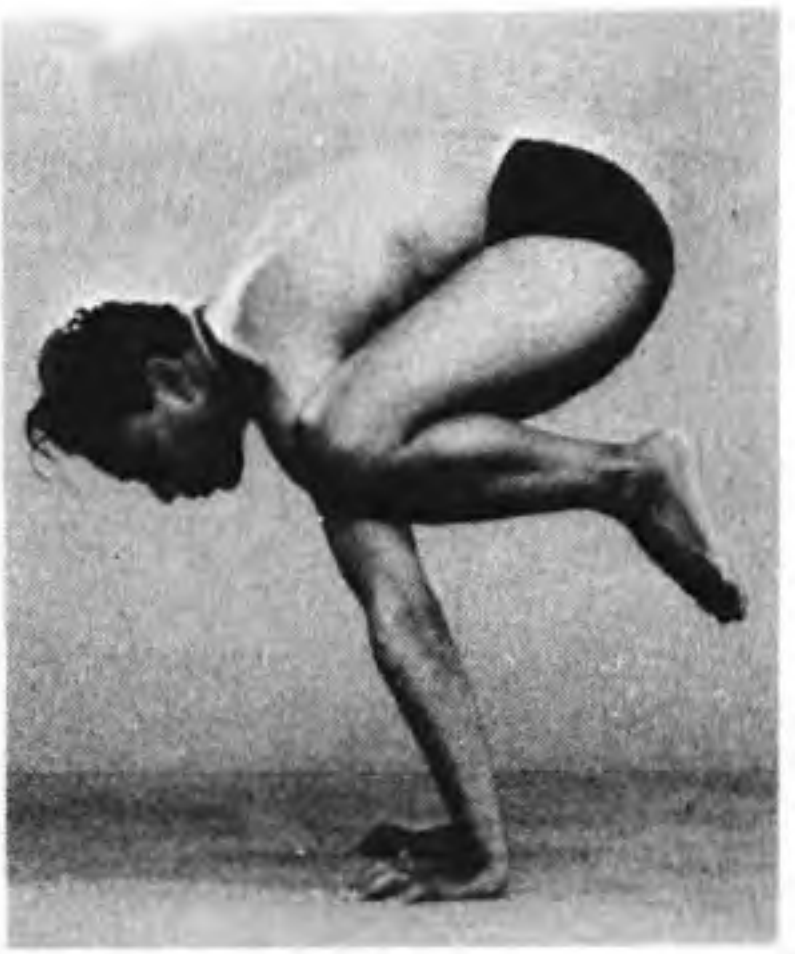
5. Balance in this position on the hands for a few seconds by tightening the muscles in the region of the diaphragm. Try to breathe normally.

6. Exhale, rest the head on the floor and go back to Sālamba Śīrṣāsana II. Then lower the legs to the floor and rest. Advanced pupils may perform Ūrdhva Dhanurāsana (Plate 486) by dropping the legs back after going up in Śīrṣāsana II and then standing up straight in Tāḍāsana. (Plate 1.) After one has mastered Viparīta Chakrāsana (Plates 488 to 499) it is a soothing exercise after practising Ūrdhva Dhanurāsana.

Effects

This āsana strengthens the arms and abdominal organs since the latter are contracted.

409



410

153. *Pārśva Bakāsana* Sixteen* (Plate 412)

Pārśva means side, flank or oblique, baka means a crane or a wading bird. Here the legs are in a lateral position.

Technique

1. Perform Sālamba Śīrṣāsana II. (Plate 192)

2. Exhale and bend the knees so that the thighs touch the stomach and chest.

3. Keep both thighs and feet together. Turn the bent legs and trunk obliquely to the right. Rest the left thigh on the back of the upper right arm as near the armpit as possible. (Plate 411.) Take a few deep breaths and balance.

4. Then with an exhalation lift the head from the floor, tighten the muscles near the diaphragm, straighten the arms and balance on the hands. (Plate 412.) Stay in this position for a few seconds with even breathing. Greater strain will be felt on the apparently free arm.

5. Bend the elbows, rest the head on the floor (Plate 411) and again go back to Sālamba Śīrṣāsana II.

6. Then bend the knees and turn the bent legs obliquely to the left.

411

412

Rest the right thigh on the back of the upper left arm as near the armpit as possible. Exhale, lift the head off the floor and balance as in position 4.

7. Go back again to Sālamba Śīrṣāsana II after resting the head on the floor. Then either lower the legs to the floor and relax or move into Ūrdhva Dhanurāsana (Plate 486) and stand up in Tāḍāsana. (Plate 1.) When one has mastered Viparīta Chakrāsana (Plates 488 to 499), it is a soothing exercise after practising Ūrdhva Dhanurāsana.

Effects

This pose strengthens the arms. By continued practice the lateral muscles of the abdomen will develop and the intestines will grow stronger.

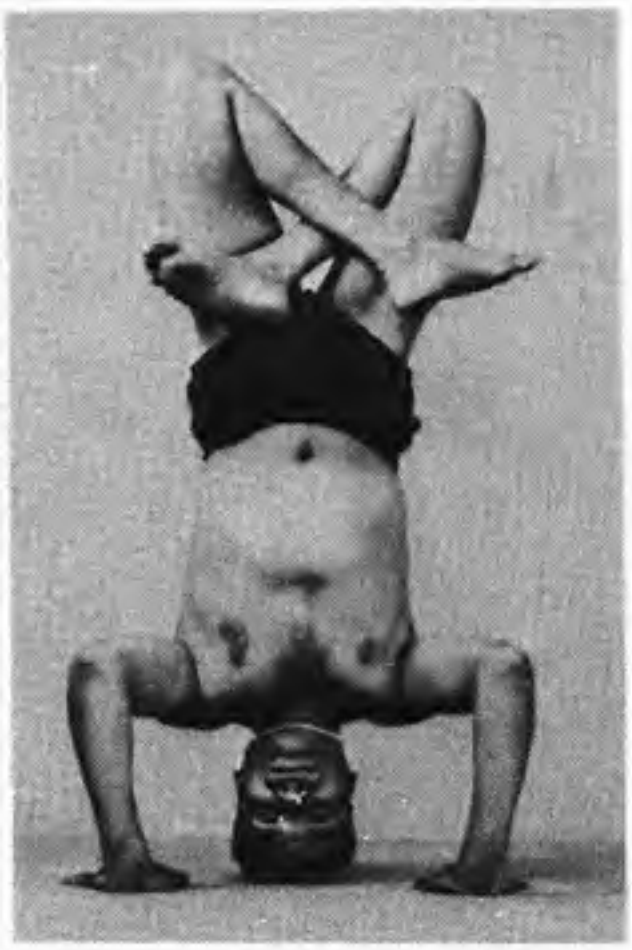
154. *Ūrdhva Kukkuṭāsana* Eighteen* (Plates 417, 418 and 419)

Ūrdhva means upwards. Kukkuṭa means a cock. In this posture the body resembles a strutting cock, hence the name.

Technique

1. Perform Sālamba Śīrṣāsana II. (Plate 192)

2. After securing steadiness, move into Padmāsana by placing the right foot at the root of the left thigh and the left foot at the root of the right thigh (Plate 413), then with an exhalation bend the legs and rest them on the back of the upper arms as near the armpits as possible. (Plate 414.) Secure this position and balance with even breathing.



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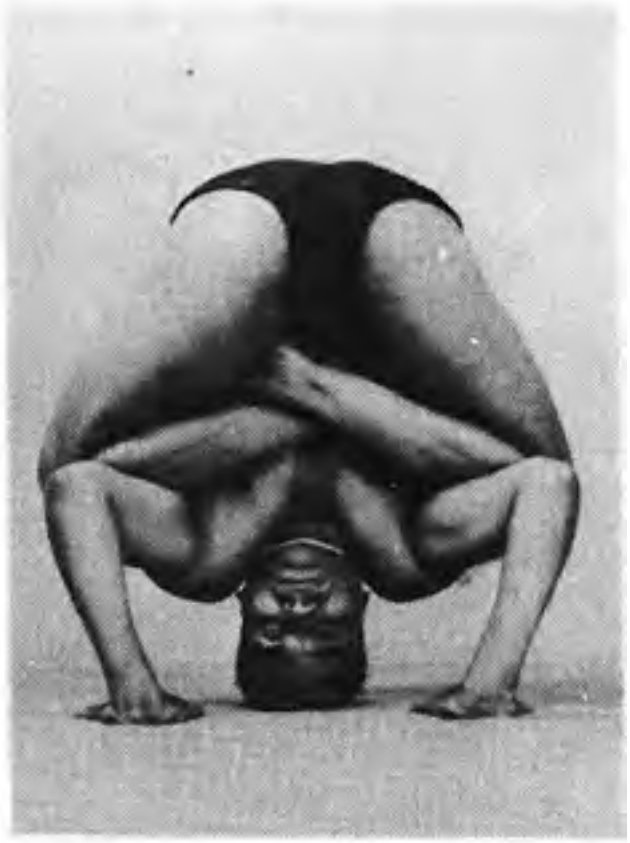


414

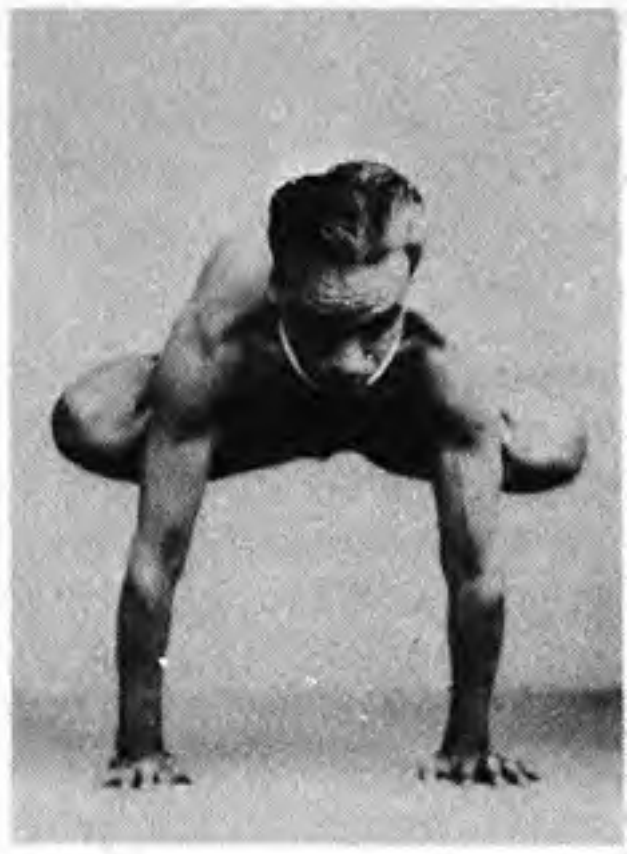
3. Exhale, press the palms firmly on the ground, pull the trunk up and raise the head off the floor following the stages of the movement as in Plates 415 and 416. Stretch and straighten the arms and lift up the buttocks. Extend the neck and keep the head as high as possible. (Plates 417, 418 and 419)

4. Balance in this position on the hands for a few seconds by tightening the muscles in the region of the diaphragm. Try to breathe normally.

415

416

417



418

5. Exhale, bend the elbows, lower the head to the floor following Plates 414 and 413, and return to Sālamba Śīrṣāsana II by releasing the foot lock of Padmāsana.

6. Again perform Padmāsana, this time placing the left foot first at the root of the right thigh and the right foot at the root of the left thigh. Then repeat the āsana as stated above.

7. After staying for the same length of time on both the sides, go back to Sālamba Śīrṣāsana II, lower the legs to the floor and relax. Advanced

419

pupils may then move into Ūrdhva Dhanurāsana (Plate 486) by dropping the legs behind the back and extending the arms and then stand up in Tāḍāsana. (Plate 1.) When one has mastered Viparīta Chakrāsana (Plates 488 to 499), it is a soothing exercise after practising Ūrdhva Dhanurāsana.

Effects

The spine is stretched fully and the effect of Paschimottānāsana (Plate 160) is gained in a very short time. The arms and the abdominal organs will grow strong.

All these intricate and difficult positions bring results quicker than the simple ones. When the body becomes more pliable, the simple poses will have little or no effect. The wise therefore discard them and practise the intricate poses just as a scholar will not repeat the alphabet daily. But, just as dancers daily practise some basic steps and do not discard them, so also pupils of yoga should continue daily to perform Śīrṣāsana (Plates 184 to 218) and Sarvāngāsana with their cycles. (Plates 234 to 271)

155. *Pārśva Kukkuṭāsana* Twenty-four* (Plates 424 and 424a; 425 and 425a)

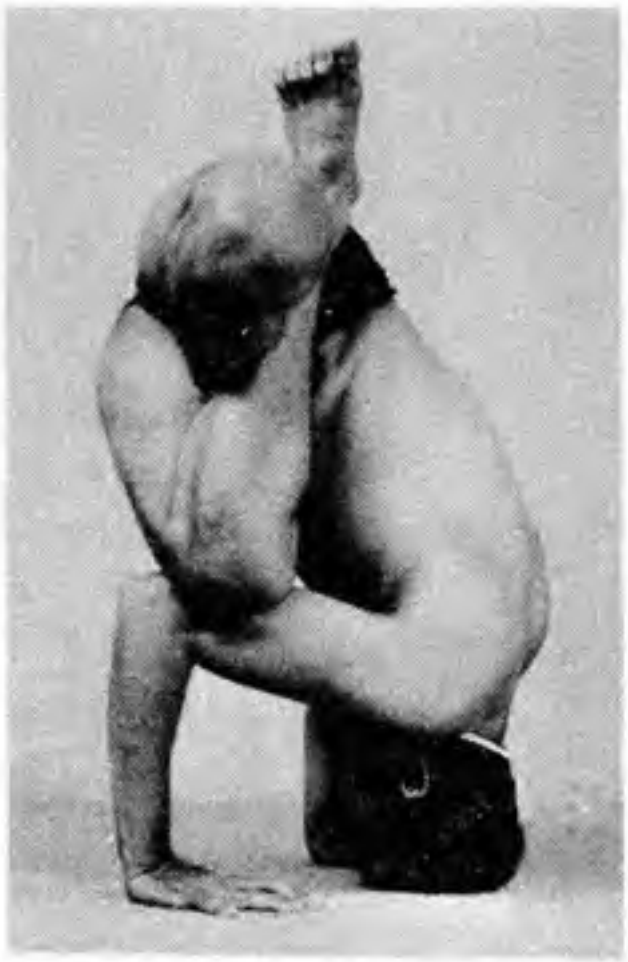
Pārśva means side, flank or oblique. Kukkuṭa means a cock.

Technique

1. Perform Sālamba Śīrṣāsana II. (Plate 192)
2. Move into Padmāsana by placing first the right foot on the root of

the left thigh and then the left foot at the root of the right thigh. (Plate 413.) After securing steadiness, exhale, turn the trunk to the right (Plate 420) and lower the legs so that the left thigh rests on the back of the upper right arm. (Plate 421.) Secure this position and balance for some time with even but fast breathing due to the lateral twist of the trunk.

420



421

3. The pose is a difficult one, the hardest part being to place the thigh on the opposite hand. In the beginning one finds it difficult to balance while securing the proper placing of the thigh and one often sits down on the floor with a hard bump.

4. Exhale, press the hands firmly on the ground, raise the head from the floor (Plate 422) and pull the trunk. (Plate 423.) Stretch and straighten the arms and lift up the buttocks. Extend the neck forwards and hold the head up as high as possible. (Plate 424)

5. This is the final position. Balance the body on the hands for a few seconds as long as you can. Greater strain will be felt on the left arm which is apparently free.

6. Exhale, bend the elbows, lower the head to the floor and go up again to Śīrṣāsana II. Then release the foot lock of Padmāsana.

7. Rest for a while in Śīrṣāsana. Move into Padmāsana again, this time by placing first the left foot at the root of the right thigh and then the right foot at the root of the left thigh. Then repeat the pose on the left side. (Plate 425.) Here the right thigh will rest on the back

422

423

424

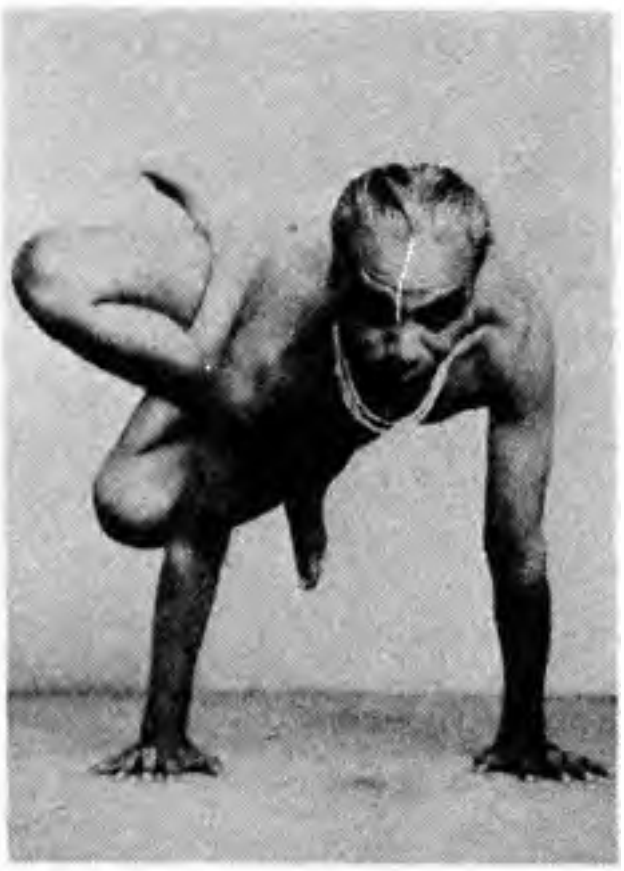
425

of the upper left arm. While balancing the body on the left side it is necessary to change the position of the legs in Padmāsana. If they are not changed, it is extremely difficult to rest the thigh on the back of the opposite upper arm.

8. Stay for the same length of time on both sides.

9. After perfecting the positions as explained above in paras 4 and 7 an attempt may be made, without releasing the foot lock in para. 6, to turn the body to the left, rest the right thigh on the upper left arm, raise the head from the floor and balance. (Plate 424a)

424a



425a

10. Go back to Śīrṣāsana II. Then after completing the pose from para. 7 without changing the crossed leg by turning the body to the right, attempt to place the left thigh on the upper right arm, raise the head from the floor and balance. (Plate 425a)

11. Hold the pose for the same length of time on all occasions. Then go back to Śīrṣāsana II, lower the legs to the floor and relax. Or perform Ūrdhva Dhanurāsana (Plate 486) and then stand up in Tāḍāsana. (Plate 1.) When one has mastered Viparīta Chakrāsana (Plates 488 to 499) this is an exhilarating exercise after practising Ūrdhva Dhanurāsana.

Effects

In addition to the benefit one secures from Ūrdhva Kukkuṭāsana (Plate 419), in this variation the spine receives a lateral twist and is toned. The chest, arms and the abdominal muscles and organs become stronger and vital power increases.

156. *Gālavāsana* Sixteen* (Plates 427 and 428)

Gālava was a sage and one of Viśvāmitra's pupils. This āsana is dedicated to him.

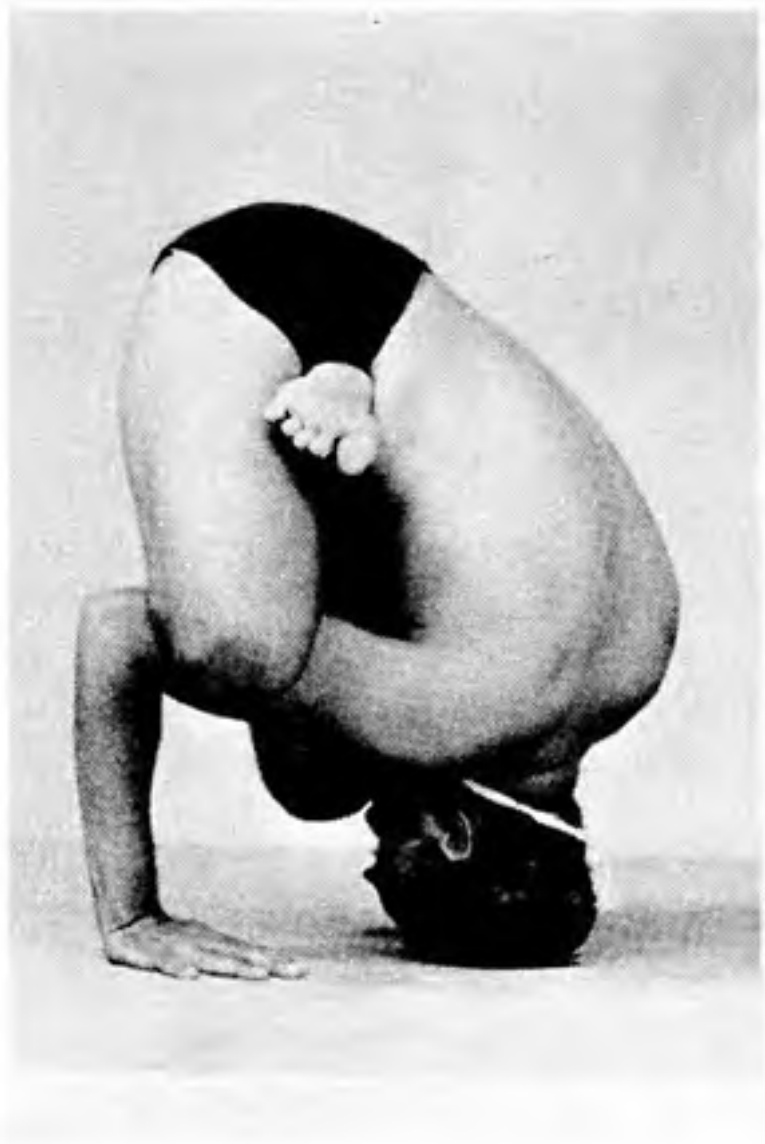
Technique

1. Perform Sālamba Śīrṣāsana II. (Plate 192)

2. Then move into Padmāsana (by placing the right foot at the root of the left thigh, and the left foot at the root of the right thigh, Plate

413), exhale and bend the trunk so that the thighs touch the stomach and chest.

3. Take a few breaths, turn the trunk to the right and with an exhalation lower the folded legs to where the shins cross on the back of the right upper arm as near the armpit as possible. (Plate 426.) Secure the position, take a few deep breaths and balance.



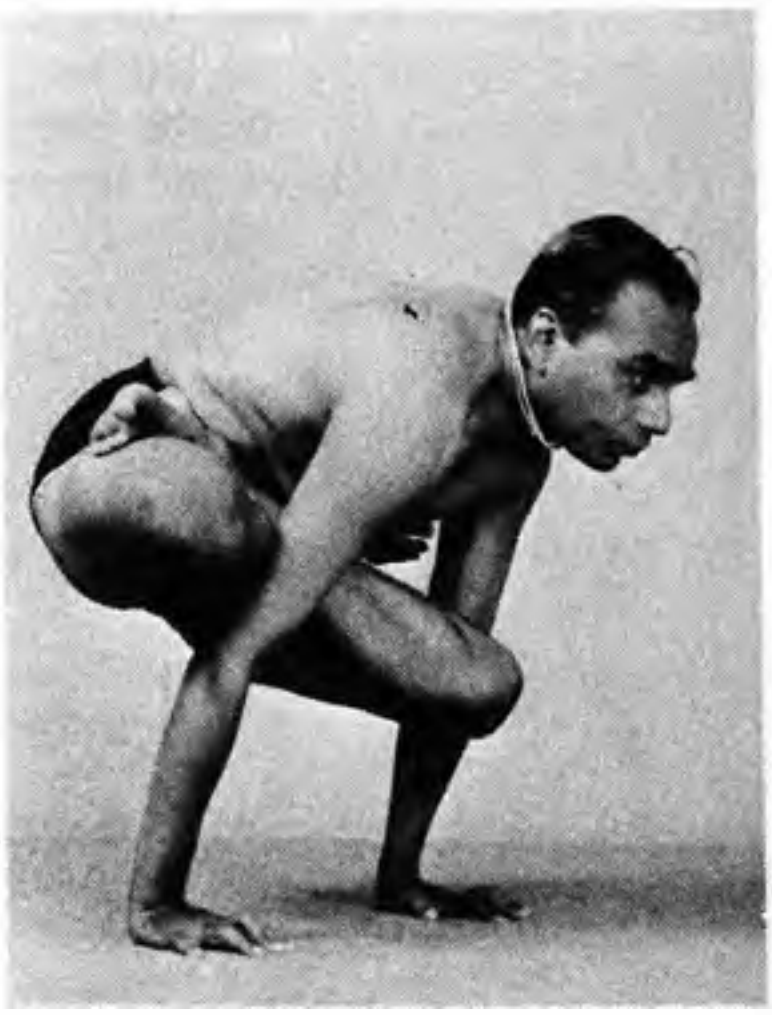
426

4. Exhale, pull the body up by raising the head from the floor, tighten the muscles near the diaphragm, straighten the arms, balance on the hands (Plate 427) and stay in this position for a few seconds up to your capacity. In this pose greater strain will be felt on the left shoulder and arm, which are apparently free.

5. Bend the elbows, rest the head on the floor and again go up to Sālamba Śīrṣāsana II without releasing the foot lock of Padmāsana.

6. Exhale, bend the trunk, rest the legs on the back of the upper left arm and balance as you did on the right. (Plate 428)

7. Bend the elbows, rest the head on the floor and go up to Sālamba Śīrṣāsana II and release the foot lock. Do Padmāsana again, this time first placing the left foot at the root of the right thigh and the right



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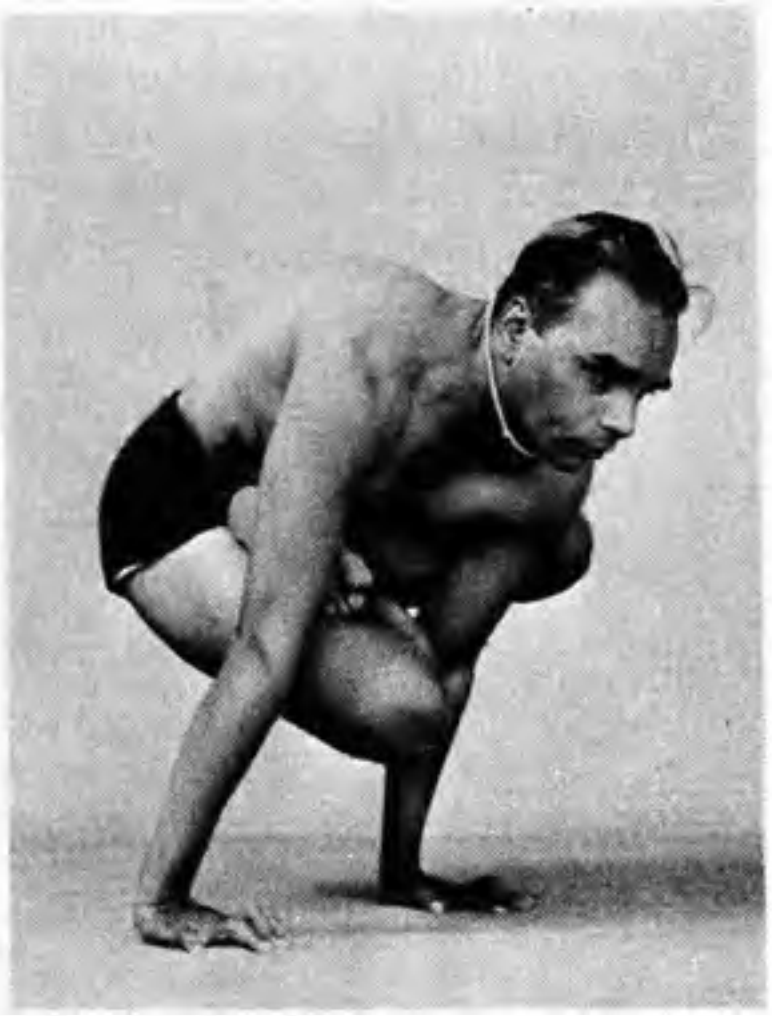


428

foot at the root of the left thigh and repeat the āsana as described above.

8. Do Sālamba Śīrṣāsana II again after resting the head on the floor. Then either lower the legs to the floor and relax or do Ūrdhva Dhanurāsana (Plate 486) and stand up in Tāḍāsana. (Plate 1.) When one has mastered Viparīta Chakrāsana (Plates 488 to 499), this exercise is soothing after practising Ūrdhva Dhanurāsana.

Effects

By continued practice of this pose, the wrists and the abdominal organs will grow stronger and the lateral muscles of the abdomen will also develop. The spine will become more elastic and the neck and shoulders will grow powerful. This pose has the combined effects of Śīrṣāsana (Plate 184), Padmāsana (Plate 104) and Paschimottānāsana (Plate 160)

157. *Eka Pāda Gālavāsana* Twenty-one* (Plates 431 and 433)

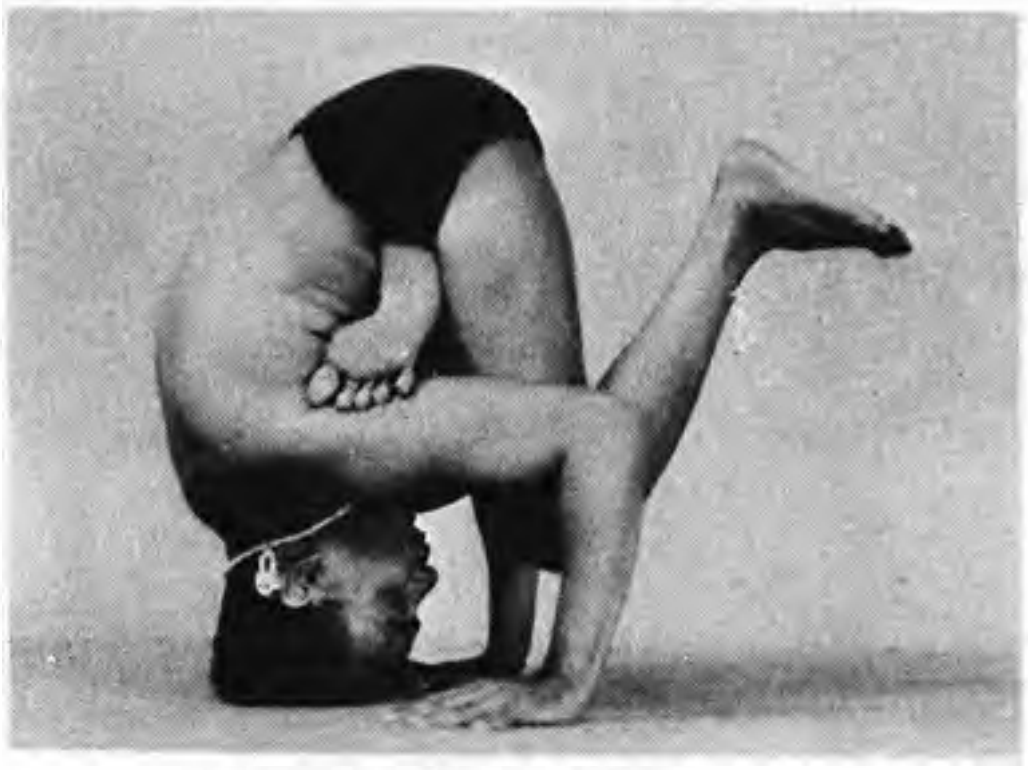
Eka means one. Pāda means a leg. Gālava is the name of a sage.

Technique

1. Perform Sālamba Śīrṣāsana II. (Plate 192)

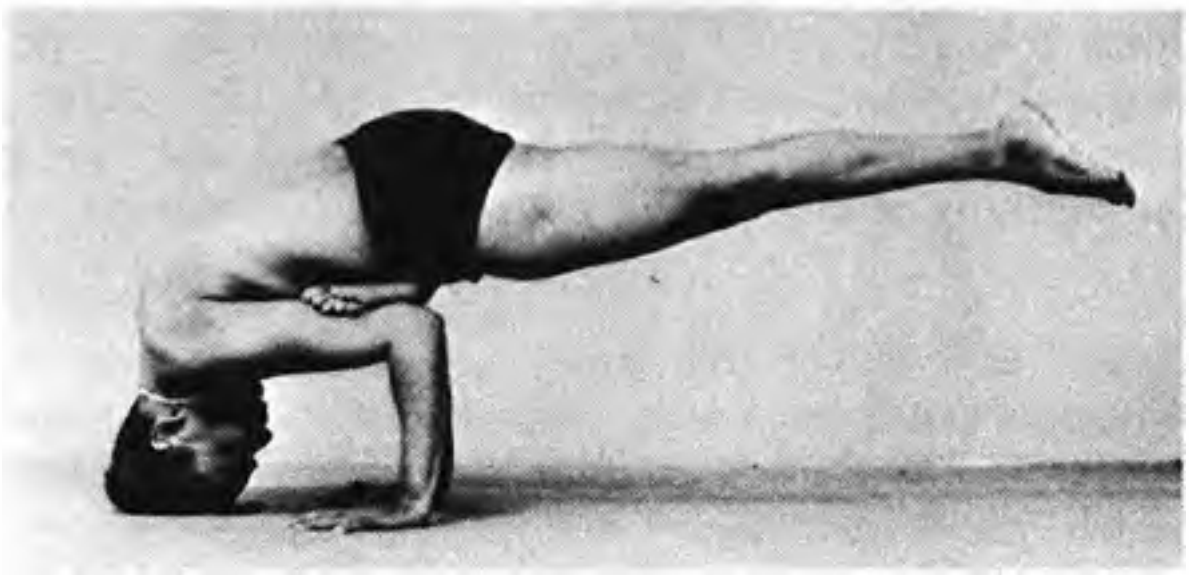
2. Exhale, place the right foot at the root of the left thigh in half Padmāsana and bend the trunk till the legs are parallel to the floor.

3. Then bend the left leg at the knee. Take a few deep breaths. Exhale and rest the right foot on the back of the upper left arm. While placing the foot, turn it so that the toes point in the same direction as the fingers. Rest the right knee on the back of the upper right arm. (Plate 429)



429

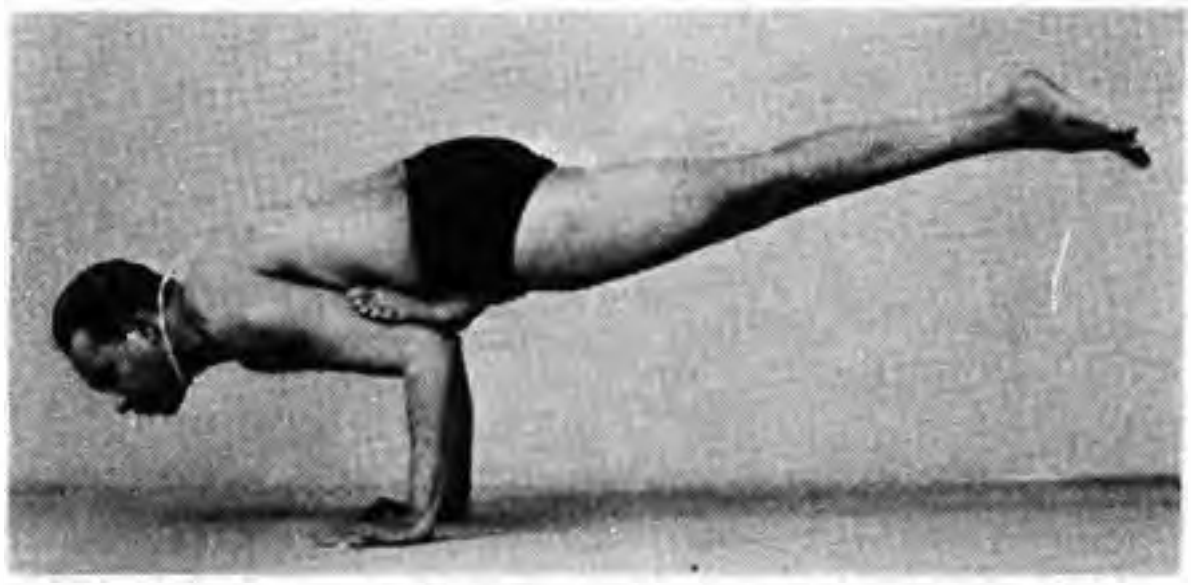
4. Secure the position of the right leg and take a few breaths. Stretch the left leg straight and keep it parallel to the floor. (Plate 430)



430

5. Exhale and lift the body up by raising the head off the floor. The left leg remains straight and parallel to the floor. The elbows remain bent, the upper arms stay parallel to the floor and the forearms from the wrists to the elbows remain perpendicular to it. (Plate 431)

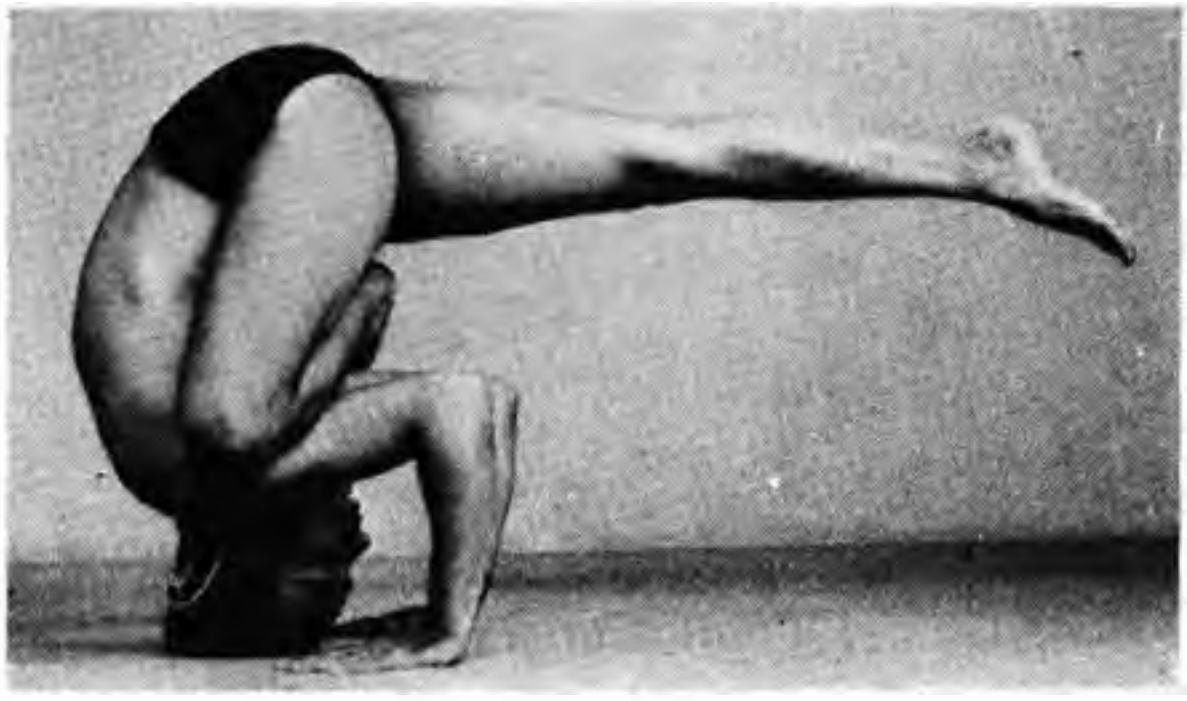
6. Extend the neck and keep the head as high as possible. Stay in this position for a few seconds. Since the diaphragm is being pressed, breathing will be fast and laboured.



431

7. Bend the left leg at the knee, rest the head on the floor and again go up to Sālamba Śīrṣāsana II.

8. Take a few deep breaths and repeat the āsana, this time bending the left leg to half Padmāsana, placing the left foot on the back portion of the upper right arm and the left knee on the back portion of the left upper arm and raise the head off the floor. (Plates 432 and 433.) Stay for the same length of time on both sides. Return to Śīrṣāsana again.

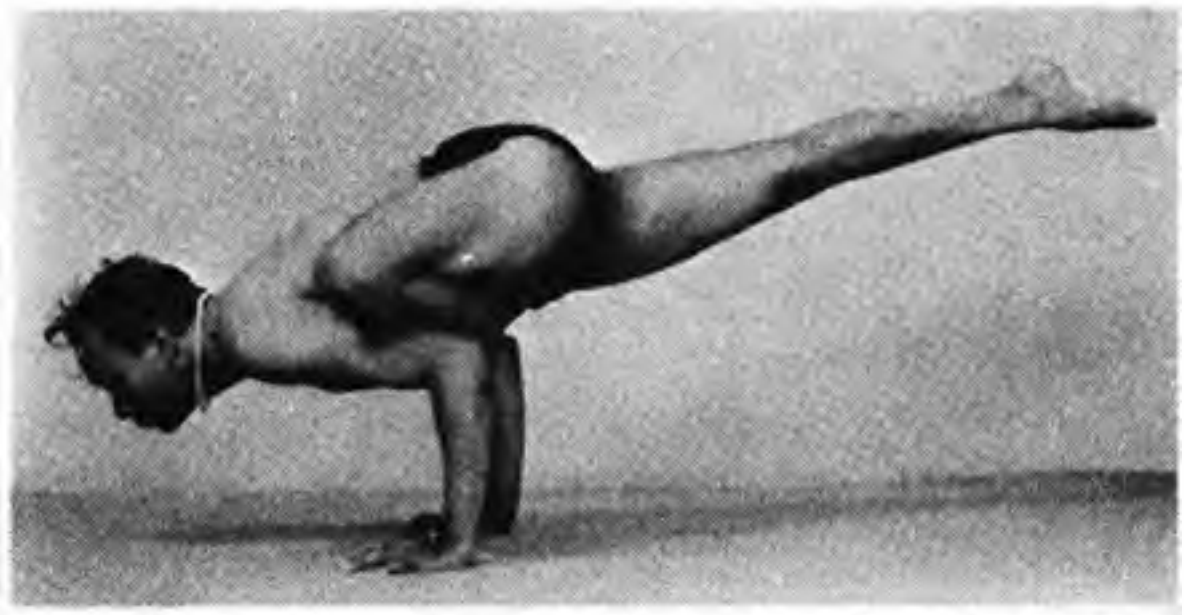


432

9. One can finish the pose by either lowering the legs to the floor or by moving into Ūrdhva Dhanurāsana (Plate 486) and then standing up in Tāḍāsana. (Plate 1.) When one has mastered Viparīta Chakrāsana (Plates 488 to 499), this exercise is exhilarating after practising Ūrdhva Dhanurāsana.

Effects

This pose strengthens the wrists. The abdominal organs are massaged by the pressure of the foot against the abdomen.



433

158. *Dwi Pāda Kouṇḍinyāsana* Twenty-two* (Plate 458)

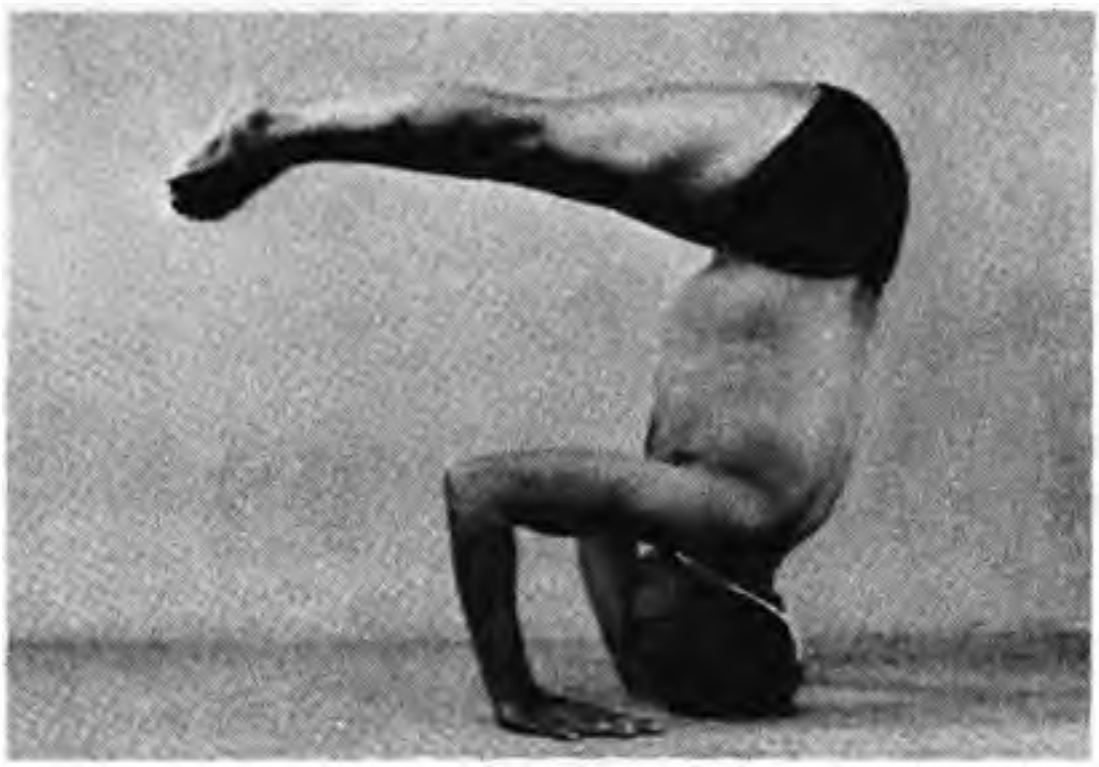
Dwi Pāda (dwi = two or both; pāda = leg or foot) means both feet.

Kouṇḍinya was a sage belonging to the family of Vasiṣṭha and founded the Kouṇḍinya Gotra (sect). This āsana is dedicated to him.

Technique

1. Perform Sālamba Śīrṣāsana II. (Plate 192)

2. Exhale and lower the legs straight together until they are parallel to the floor. (Plate 434.) Pause here and take a few breaths.



434

3. Exhale, turn the trunk slightly to the right and move both legs sideways to the right. (Plate 435.) Lower both legs together over the right arm so that the outer side of the left thigh above the knee rests on the back of the upper right arm as near the armpit as possible. (Plate 436)

435

436

437

4. Balance and take a few breaths. Then exhale and firmly pressing down both palms to the floor, lift the head off the floor. (Plate 437.) Then raise the trunk and stretch the neck. (Plate 438.) This is the final position in which the legs will be in the air almost parallel to the floor, while due to the twist of the trunk, breathing will be fast. Balance as long as you can from 10 to 20 seconds. Greater pressure will be felt on the left shoulder and arm which are apparently free.

438

5. Bend the knees, rest the head on the floor and again go up to Sālamba Śīrṣāsana II. Rest here for a while and repeat the āsana on the left side as described above, reading left for right and vice versa. Here the right thigh will rest on the back of the upper left arm. Stay for the same length of time on both sides. Go up to Śīrṣāsana again.

6. To complete the pose, either lower the legs to the floor and relax or do Ūrdhva Dhanurāsana (Plate 486) and stand up in Tāḍāsana. (Plate 1.) When one has mastered Viparīta Chakrāsana (Plates 488 to 499), this exercise is exhilarating after Ūrdhva Dhanurāsana.

Effects

The pose tones the abdominal organs. The colon moves properly and toxins therein are eliminated. It requires experience to balance with the legs well stretched. The spine will become more elastic due to the lateral movement and the neck and arms will become more powerful.

159. *Eka Pāda Kouṇḍinyāsana I* Twenty-three* (Plate 441)

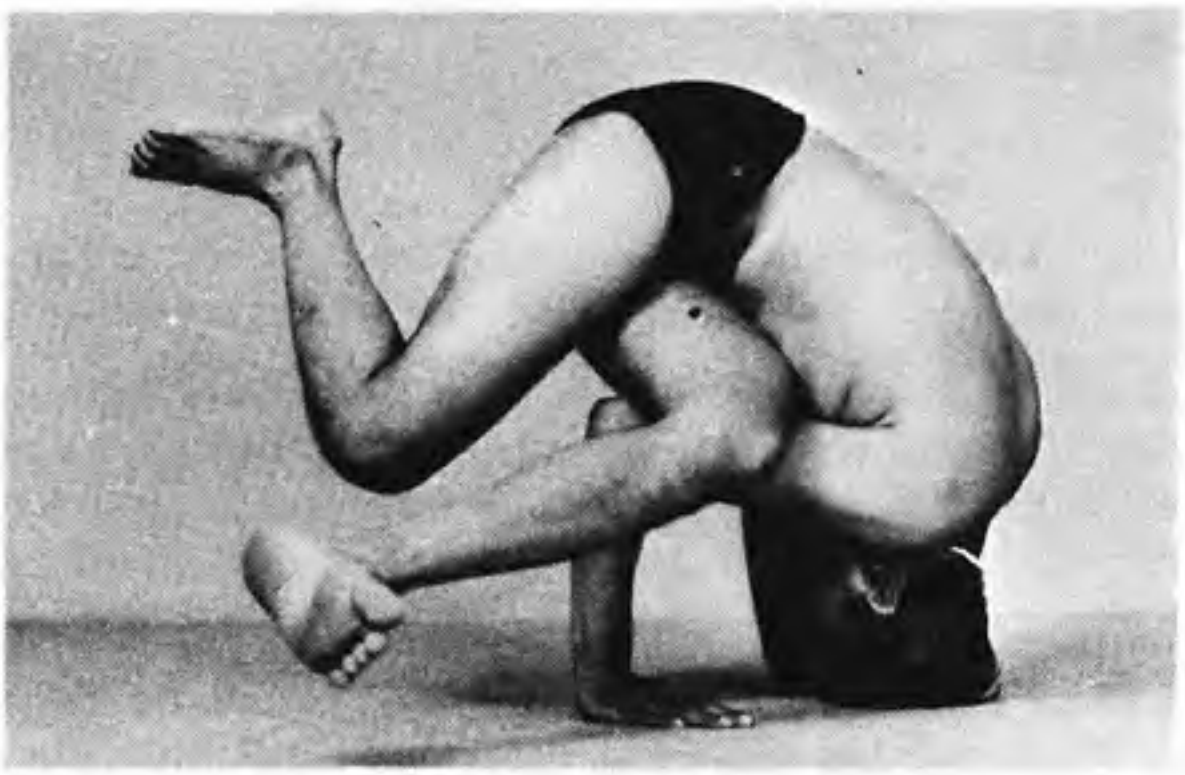
Eka means one. Pāda means a leg or foot. Kouṇḍinya is the name of a sage.

Technique

1. Perform Sālamba Śīrṣāsana II. (Plate 192)

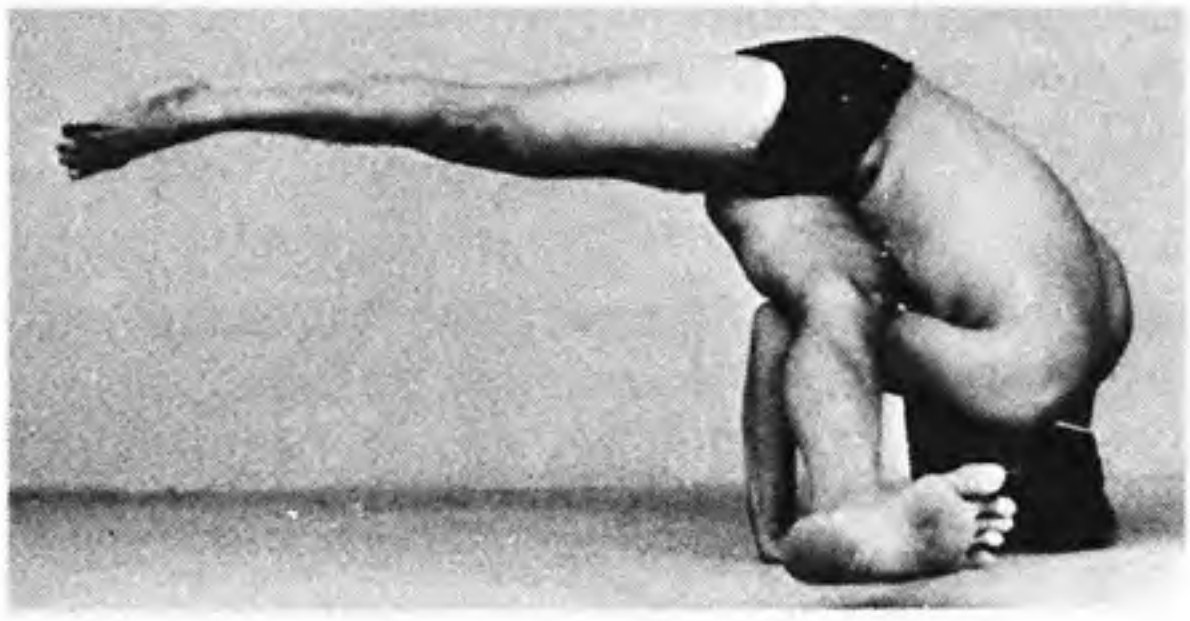
2. Exhale, lower the legs straight together until they are parallel to the floor. (Plate 434.) Pause here and take a few breaths.

3. Exhale, bend the legs and move the left leg sideways to the right. Place the left leg over the back of the upper right arm so that the outer side of the left thigh above the knee rests as near the right armpit as possible. (Plate 439.) Take a few breaths and balance.



439

4. Stretch the left leg straight sideways and the right leg straight back. (Plate 440.) Take two breaths.



440

5. Exhale, raise the head above the floor, extend the arms and balance on the hands. Keep both legs straight and taut at the knees. (Plate 441.)

This is the final position. Remain in the pose as long as you can up to 30 seconds with normal breathing.

441

6. Bend both knees, exhale, rest the head on the floor and again go up to Śīrṣāsana. Rest here for some time with normal breathing.

7. Repeat the āsana on the other side for the same length of time as above, reading left for right and vice versa. Here the right thigh will rest on the back of the upper left arm and the left leg will be stretched straight back. Then again go up to Śīrṣāsana as stated in position 6.

8. To complete the pose, either lower the legs to the floor and relax, or do Ūrdhva Dhanurāsana (Plate 486) and stand up in Tāḍāsana. (Plate 1.) When one has mastered Viparīta Chakrāsana (Plates 488 to 499), this exercise is exhilarating after Ūrdhva Dhanurāsana.

Effects

The pressure of the legs on the abdomen in this pose massages the abdominal organs. The spinal twist rejuvenates and strengthens the spine. The arms and neck grow powerful.

160. *Eka Pāda Koundinyāsana II* Twenty-four* (Plates 442 and 443)

Technique

1. Perform Viśvāmitrāsana (Plate 403) with the right leg over the back of the upper right arm.

2. Exhale, place the left palm on the floor. Move the head and trunk towards the floor. Bend both the elbows, keep the body parallel to the floor, stretch both the legs straight and keep the toes off the floor. Balance the body on the hands as long as you can. The left leg will be stretched straight back while the right leg is stretched on the right side. The inner side of the right thigh rests on the back of the right upper arm. (Plates 442 and 443)

442

443

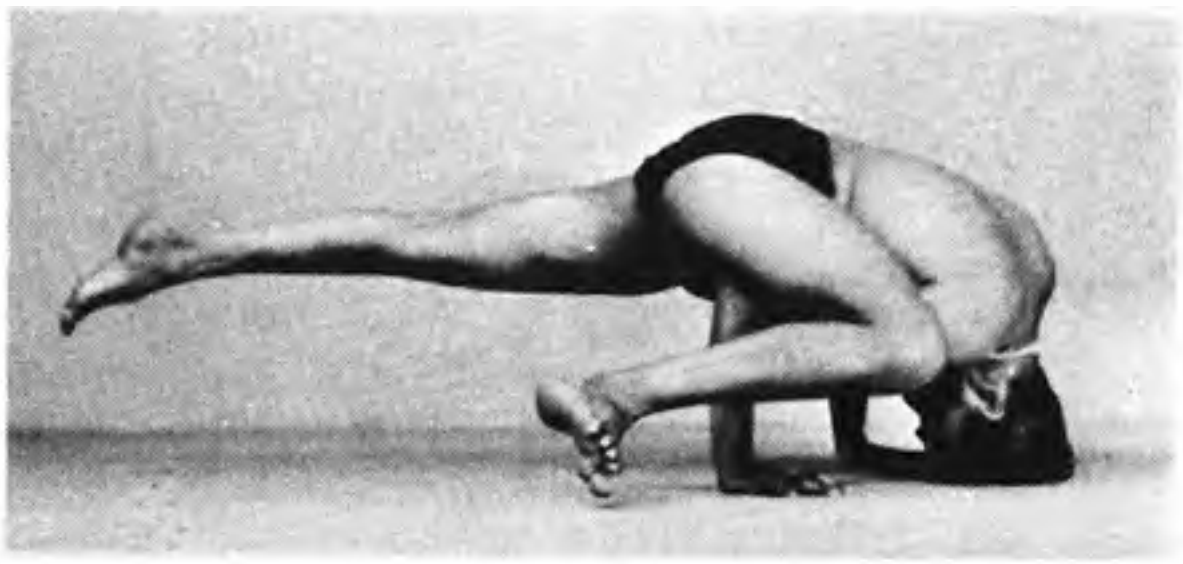
3. The pose is very strenuous and requires persistent effort to master. Breathing will be fast and hard. Stretch the neck and keep the head up.

4. Lower the left leg to the floor, remove the right leg from the right arm and relax for some time.

5. Repeat the pose on the other side, this time keeping the left leg on the back of the upper left arm and the right leg straight behind. Stay for the same length of time on both sides.

6. Advanced pupils may do the pose from Sālamba Śīrṣāsana II (Plate 192) by following the technique of Eka Pāda Kouṇḍinyāsana I (Plate 441), but placing one leg on the back of the upper arm of the same side as in Plate 444 and then lifting the head off the floor, keeping both legs straight and parallel to the floor.

7. Repeat the pose on the other side and then go back to Śīrṣāsana II (Plate 192), perform Ūrdhva Dhanurāsana (Plate 486) and stand in Tāḍāsana (Plate 1) or perform Viparīta Chakrāsana. (Plates 488 to 499)



444

Effects

The pose strengthens the arms and abdominal organs and the thigh muscles.

161. *Eka Pāda Bakāsana I* Twenty-six* (Plates 446 and 447)

Eka means one. Pāda means leg or foot. Baka means a crane.

Technique

1. Perform Sālamba Śīrṣāsana II. (Plate 192)

2. Exhale, lower both legs until they are parallel to the floor. (Plate 434.) Bend the right knee and place the right shin on the back of the upper right arm as near the armpit as possible. Keep the left leg in the air parallel to the floor. (Plate 445.) Secure this position and balance with even breathing.

445

3. Exhale, pull the trunk up, raise the head off the floor and stretch the neck forward. Try to keep the body parallel to the floor and do not rest any part of it on the left elbow. (Plates 446 and 447)

446

447

4. Stay in this position for 10 to 20 seconds with full extension of the spine and of the stretched left leg. Try to breathe normally. This is a difficult balancing pose.

5. Bend the left leg and rest the head on the floor. Exhale, and return to Sālamba Śīrṣāsana II.

6. Repeat the āsana on the left side for the same length of time, keeping the right leg stretched straight in the air parallel to the floor.

7. Go back to Sālamba Śīrṣāsana II, lower the legs to the floor and rest. Advanced pupils may perform Ūrdhva Dhanurāsana (Plate 486) and stand up in Tāḍāsana. (Plate 1.) When one has mastered Viparīta

Chakrāsana (Plates 488 to 499), this exercise is exhilarating after Ūrdhva Dhanurāsana.

Effects

In this pose, the organs or the abdomen are contracted on one side and stretched on the other. To balance in this pose the abdominal muscles and organs are exercised more than the arms.

162. *Eka Pāda Bakāsana II* Twenty-five* (Plates 451 and 452)

Technique

1. Perform Sālamba Śīrṣāsana II. (Plate 192)

2. Exhale, lower the legs until they are parallel to the floor. (Plate 434.) Bend the left knee and rest the left shin on the back of the upper left arm as near the armpit as possible as in Bakāsana. (Plate 410.) Move the right leg to the right until it extends beyond the right arm, so that the inner side of the right thigh touches the back of the upper right arm. (Plate 448)

448

3. Exhale, pull the trunk up, raise the head off the floor and extend the neck forward. (Plates 449 and 450.) Now bring the right leg in front and stretch it straight without touching the floor. Stretch the arms straight and balance. (Plate 451)

4. Stay in this position for 10 to 20 seconds, with full extension of the spine and the right leg. Try to breathe normally.

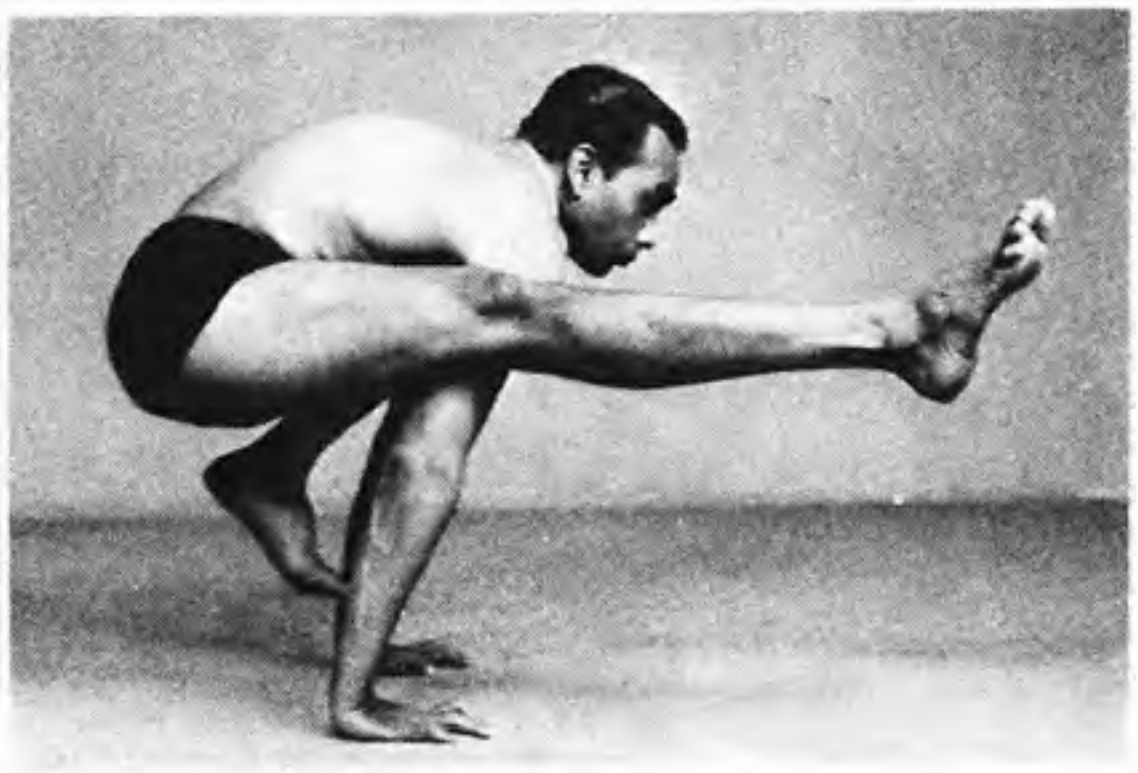
5. Bend the right knee, place the head on the floor and go to Sālamba Śīrsāsana II. (Plate 192)

449

450

6. Repeat the āsana on the other side for the same length of time, keeping the left leg stretched straight in front and the bent right leg back of the upper right arm. (Plate 452)

7. There are two ways of completing the pose. You can bend the leg stretched straight in front, then go up to Śīrṣāsana and lower the legs. Once you have mastered this method you may try the other one. Here you keep the leg stretched straight in front. Then you bend the elbows, stretch the bent leg back and keep it straight and parallel to, without touching, the floor. Keep the whole body and the head off the floor. You will now be in Eka Pāda Kouṇḍinyāsana II. (Plates 442 and 443.) Then exhale, rest the head on the floor, bend both legs and go up to Śīrṣāsana II. Then move into Ūrdhva Dhanurāsana (Plate 486) followed by Viparīta Chakrāsana. (Plates 488 to 499)



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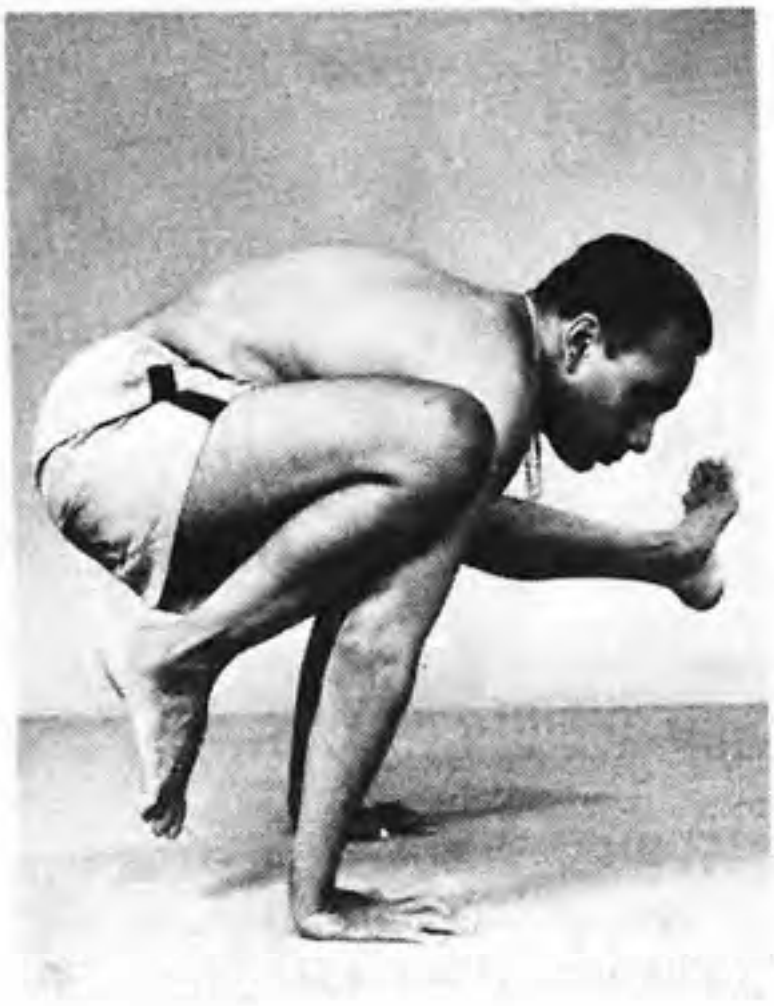


452

Effects

The abdominal organs and muscles as well as the hands, chest and back become stronger. Here our own body acts as a weight-lifting apparatus and the different directions in which it moves cause the various parts of the body to bear the weight and thereby gain strength.

163. *Yogadaṇḍāsana* Nineteen* (Plate 456)

Yogadaṇḍa means the staff of a Yogin. In this pose, the yogi sits using one leg as a crutch under the armpit, hence the name.

Technique

1. Sit on the floor with the legs stretched straight in front. (Plate 77)

2. Bend the right leg at the knee and bring the right foot beside the right hip. The right leg will now be in Vīrāsana. (Plate 86)

3. Take the left leg to the left to widen the distance between the thighs and bend it at the knee so that the left foot is near the right knee. (Plate 453)

453

4. With the right hand catch the left foot. Turn the trunk to the right and with an exhalation, turn the left foot up towards the chest, keeping the left knee on the floor. Take a few breaths and with an exhalation, draw the left foot up underneath the left armpit. The left foot now rests like a crutch under the left armpit which the sole touches. (Plate 454)

5. After taking a few breaths, exhale, move the left arm from the shoulder round the left foot and bring it behind the back. (Plate 455.) Move the right arm from the shoulder behind the back and clasp the left forearm, turn the head to the left, raise the chin and gaze up. (Plate 456)

6. Stay in the pose for about 30 seconds with deep breathing.

454

455

456

7. Release the hands, straighten the legs and relax.

8. Repeat the pose on the other side for the same length of time. Now, bend the left leg so that the left foot is besides the left hip and the right foot rests under the right armpit like a crutch and clasp the right forearm behind the back with the left hand.

9. It takes time and practice to be comfortable in the āsana, but when you are it is restful.

Effects

In this pose, the spine is rested and the body relaxed. It also makes the knees and ankles more elastic in movement.

164. *Supta Bhekāsana* Twenty-one* (Plate 458)

Supta means reclining. Bheka means a frog. This pose is the reverse posture of Bhekāsana. (Plate 100)

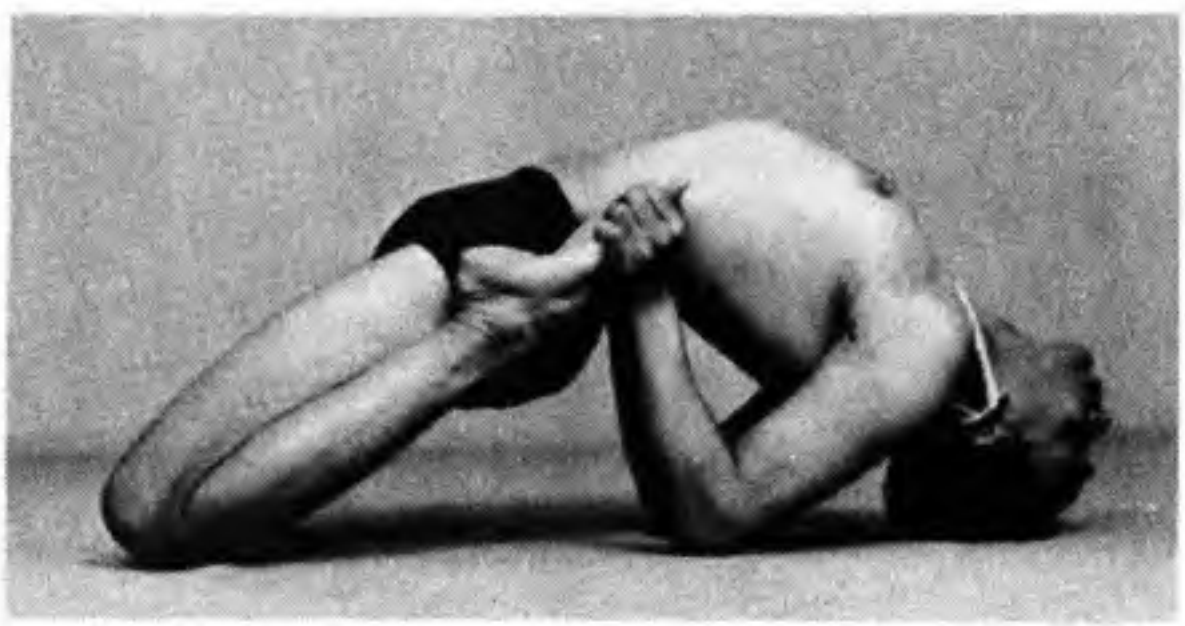
Technique

1. Sit in Vīrāsana. (Plate 86)

2. Turn the palms up and insert each hand under the respective foot. Push the feet up from the floor and recline. Take a few breaths.

3. Exhale, lift the hips off the floor (Plate 457), pull the thighs up and arch the trunk, resting the crown of the head on the floor. (Plate 458)

457



458

4. The body rests on the crown of the head, the elbows and knees. The forearms will be perpendicular to the floor and the hands will hold the outer side of the feet near the little toes. Try and raise the toes level with the hip joints.

5. Stay in the pose from 20 to 30 seconds, with normal breathing.

6. Lift the head from the floor and the hands from the feet so that the legs drop to Supta Vīrāsana. (Plate 96)

7. Sit up in Vīrāsana, straighten the legs and relax.

Effects

This āsana tones the spine. In it blood circulates well round the knees, ankles, hips and neck, and backache is relieved. It relieves any internal derangement of the knee joints. The pressure of the hands on the feet strengthens the arches and cures flat feet. Atrophy and other defects of the leg muscles are cured by its continued practice. The lungs are fully expanded and the abdominal organs benefit.

165. *Mūlabandhāsana* Thirty-two* (Plates 462 and 463)

Mūla means the root, the base, the beginning or the foundation. Bandha means a fetter, bond, or posture.

Technique

1. Sit in Baddhakonāsana. (Plate 101)

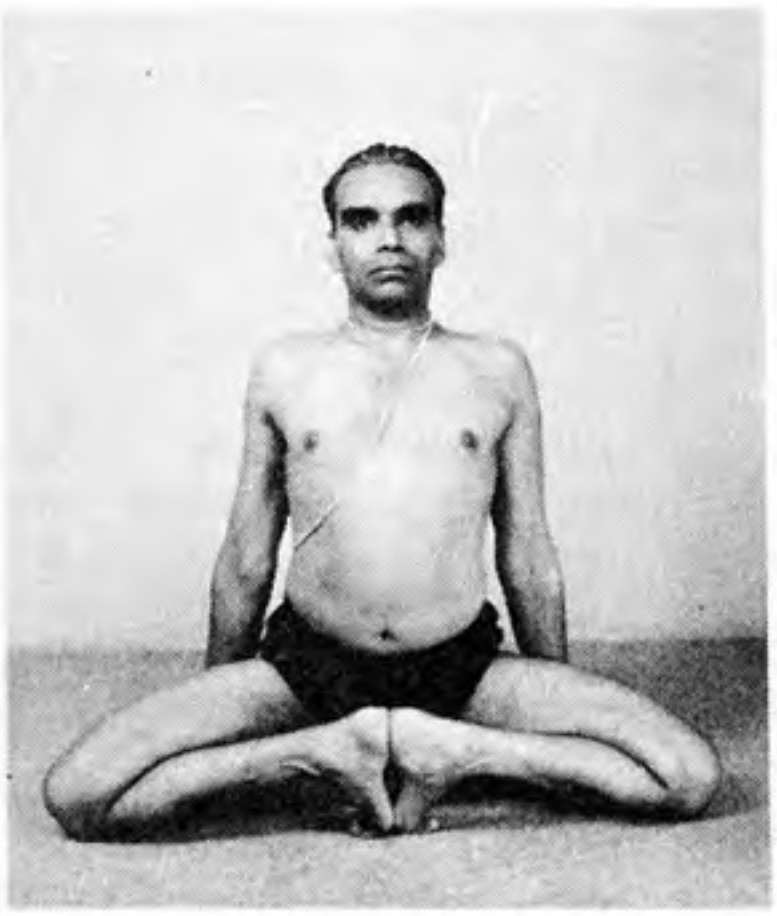
2. Insert the hands between the thighs and the calves and hold the feet, each with its respective hand.

3. Join the soles and heels. Raise the heels, keep the toes on the ground and drag the feet near the perineum. (Plate 459)

459

4. Hold this position and move the hands, so that the palms rest on the back of the hips. (Plate 460)

460



461

5. Lift the body off the floor with the help of the hands and move the hips forward (Plate 461), simultaneously turning the feet and the knees to push the heels forward without moving. (Plates 462 and 463)

462

463

6. Rest the body on the toes and knees and hold the pose from 30 to 60 seconds with deep breathing.

7. To release the position move the hands in front and bear the weight on them. Lift the trunk, turn the heels and then straighten the legs. While releasing the pose do not put any weight on the legs.

Effects

This āsana exercises Mūlādhāra Chakra, the prostate gland and gonads. It also has the wonderful effect of controlling excessive sexual desire and helps to save energy. It therefore controls and stills the mind.

'The mind is the lord of the Indriyas (organs of the senses); Prāṇa is the lord of the mind; Laya or absorption is the lord of Prāṇa; and that Laya depends on Nāda (the inner sounds). When the mind is absorbed, it is called Mokṣa (emancipation); but others say that it is not: however, when the Prāṇa and Manas (the mind) have been absorbed, an undefinable joy ensues.' (*Haṭha Yoga Pradīpikā*, 4th chapter, verses 29 and 30.)

Baddhakoṇāsana (Plate 101) and Mūlabandhāsana are a great help to people with excessive sexual desire. When this desire is controlled, energy is sublimated and real joy of life is limitless.

166. *Vāmadevāsana I* Fifteen* (Plate 465)

Vāmadeva is the name of a sage, and also of Śiva, the third god of the Hindu Trinity, who is entrusted with the work of destruction.

Technique

1. Sit in Baddhakoṇāsana. (Plate 101)

2. Insert the right hand between the right thigh and calf. Keep the toes of the right foot on the ground, raise the heel and drag the foot near the perineum. Remove the hand and push the heel forward towards the floor, lift the body off the floor, move the right hip forward and put the right knee on the ground. The right foot is now in Mūlabandhāsana. (Plate 464)

3. Now place the left foot at the root of the right thigh, that is, in Padmāsana. (Plate 104)

4. Swing the left arm from the shoulder behind the back and with an exhalation catch the left big toe. With the right hand grip the front of the left foot.

5. Turn the neck to the right (Plate 465) and balance for 30 seconds with deep breathing.

6. Release the position, come back to Baddhakoṇāsana and repeat the āsana on the other side for the same length of time following the technique described above, reading left for right and vice versa.

464

465

Effects

The pose cures stiffness of the legs and relieves pain. It keeps the genital organs healthy. It also tones the spine and aids digestion.

167. *Vāmadevāsana II* Fifteen* (Plate 466)

Technique

1. Sit on the floor and widen the thighs.

2. Bend the left knee back so that the left calf touches the back of the left thigh.

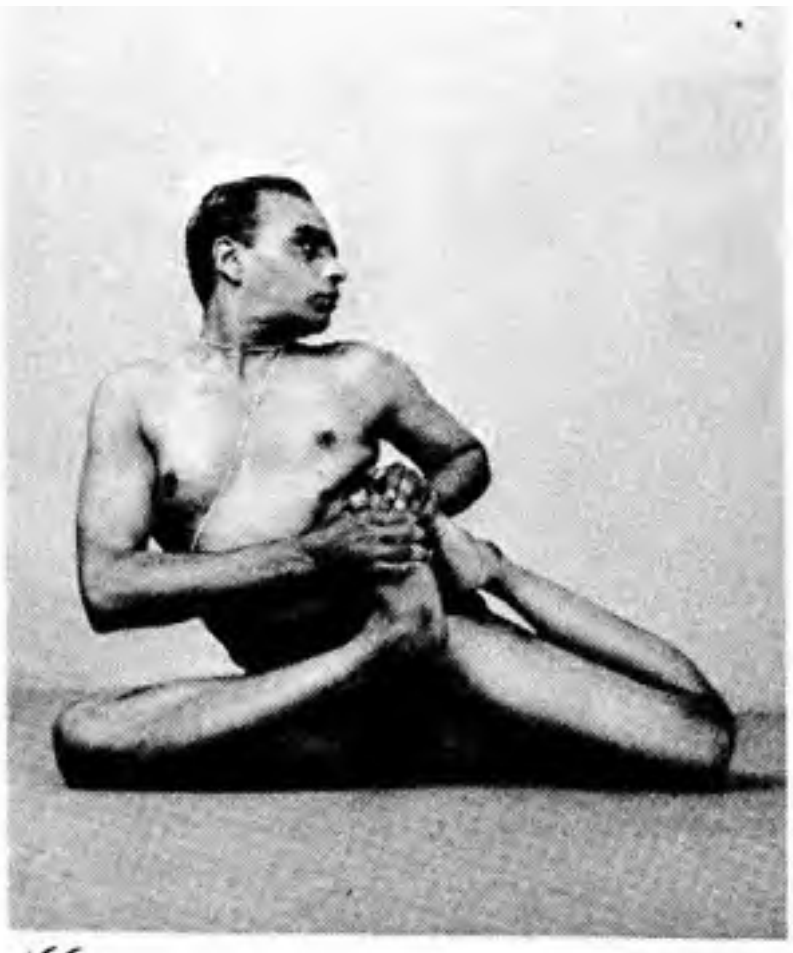
3. With the left hand lift the left foot up until the left heel touches the left hip joint. Hold the left foot with the left hand as in Bhekāsana. (Plate 100)

4. With the right hand place the right foot at the root of the left thigh as in Padmāsana. (Plate 104)

5. Using both hands press the soles of the feet together until they touch. (Plate 466)

6. The trunk will lean towards the leg in Padmāsana. Balance by gripping the hands and hold the pose for 30 seconds with deep breathing.

7. Release the hands and legs and repeat the pose on the other side,



466

keeping the right foot in Bhekāsana and the left one in Padmāsana. Stay for the same length of time on both sides.

Effects

The āsana relieves pain, cures stiffness in the legs and keeps the genital organs healthy. It also tones the spine and improves digestion.

168. *Kandāsana* Thirty-nine* (Plates 470, 471, 471a and 471b)

Kanda means a bulbous root, a knot. Verses 107 and 113 in the third chapter of the *Haṭha Yoga Pradīpikā* speak of the Kanda as follows:

107. The Kuṇḍalinī sleeps above the kanda (the place near the navel where the nāḍīs unite and separate). It gives Mukti (emancipation) to the yogins and bondage to the fools. He who knows her knows Yoga.

113. The Kanda is 12 inches above the anus and extends 4 inches both ways. It has been described as round and covered as if with a soft white piece of cloth. (The word used in the text is vitasti which means a measure of length equal to 12 'angulas' (a finger's breadth), the distance between the extended thumb and little finger.)

Technique

1. Sit on the floor with the legs stretched straight in front. (Plate 77.) Bend the knees, widen the thighs, bring the feet towards the trunk until the heels are close to the perineum and keep the knees on the floor. The position is similar to Baddhakonāsana. (Plate 101)

2. Hold the right foot with the right palm and the left foot with the left palm.

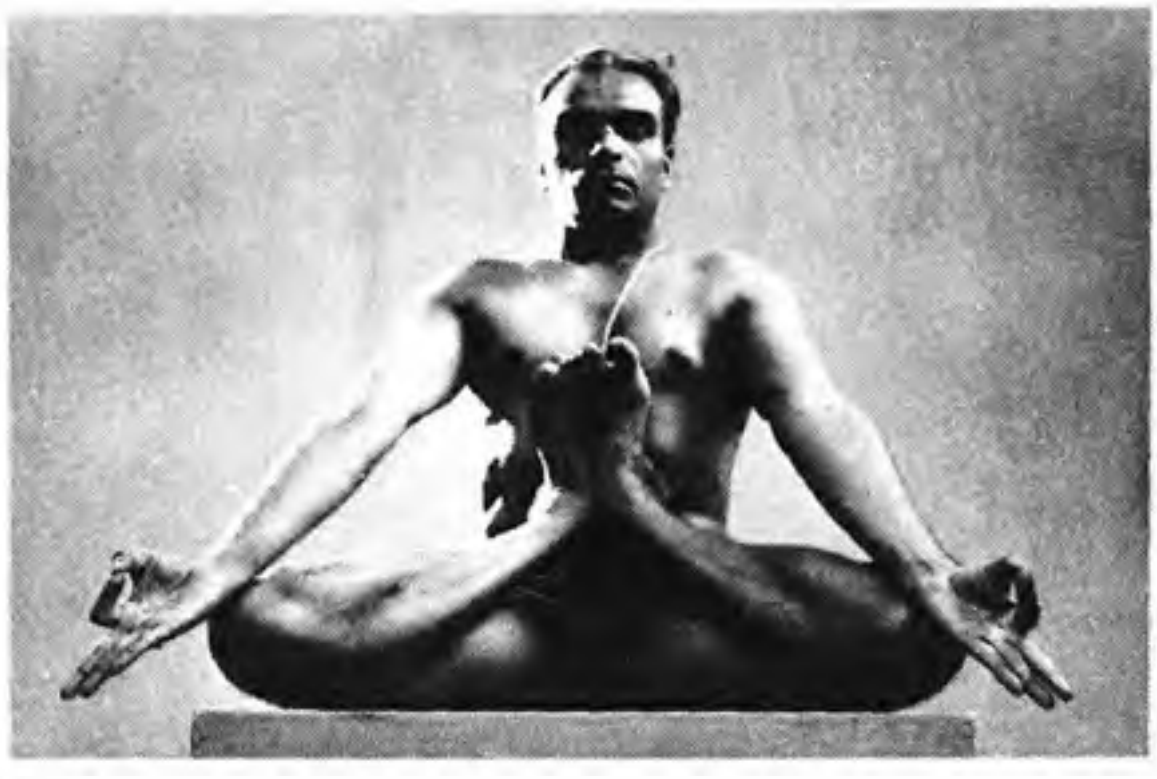
3. With the help of the hands, draw the feet up towards the trunk, invert the ankles (Plate 467), pull the knees and thighs (Plate 468), and place the heels and the outer sides of the feet against the navel and chest. (Plate 469.) To start with the feet are likely to slip down. Practise the pose for a few weeks, holding the feet firmly against the chest.

467

468

4. Release the hands, and either stretch the arms straight and rest the back of the hands on the knees (Plate 470) or join the palms in front of the chest. (Plate 471.) Keep the back erect and stay in the pose for about 30 seconds with deep breathing.

469



470

5. Advanced pupils may raise the hands, palms together, above the head. (Plate 471a.) Then try to join the palms behind the back and balance (Plate 471b): this is the most difficult part of the āsana.

6. Hold the feet with the hands, lower them to the floor and rest.

7. As the pelvic and other joints of the legs are rotated it takes a long time to master the pose.

471

471a

471b

Effects

Every muscle below the navel is exercised. The pose cures stiffness in the hip, knee and ankle joints. It restores sexual energy and controls sexual desires.

The āsana also exercises the Svādhiṣṭhāna Chakra (the hypogastric plexus) and the Maṇipūraka Chakra (the solar plexus), thus helping proper digestion.

169. *Hanumānāsana* Thirty-six* (Plates 475, 476 and 476a)

Hanumān was the name of a powerful monkey chief of extraordinary strength and prowess. The son of Vāyu, the god of Wind, and Anjāna, he was the friend and devoted servant of Rāma, the seventh incarnation of Viṣṇu. When Rāma, his wife Sītā and his brother Lakṣmaṇa were in exile as hermits in the Daṇḍaka forest, Rāvaṇa, the demon king of Laṅkā (Ceylon), came to their hermitage in the guise of an ascetic and seizing Sītā carried her off to Laṅkā while Rāma and Lakṣmaṇa were hunting game. The brothers searched far and wide for Sītā, and enlisted the help of Sugrīva, the king of the monkeys, and his general Hanumān. Hanumān went in search of Sītā, crossed the sea by leaping over the straits, found her in Rāvaṇa's palace, and brought the news to Rāma. With the aid of a great army of monkeys and bears Rāma built a causeway of stones across the sea to Laṅkā and after a fierce battle slew Rāvaṇa and his hosts and rescued Sītā. During the battle, Lakṣmaṇa had been struck by an arrow and lay unconscious and it was said that the only cure was the juice of a herb which grew in the Himālayās. With one prodigious leap Hanumān crossed the sea and reached the Himālayās to bring back with him the mountain top on which the life-giving plant grew and thus saved the life of Lakṣmaṇa. This āsana is dedicated to Hanumān and commemorates his fabulous leaps. It is practised by going down on the floor with the legs spread out laterally while the hands are folded in front of the chest. It resembles the splits of Western ballet.

Technique

1. Kneel on the floor. (Plate 40)

2. Rest the palms a foot apart on the floor on either side of the body.

3. Lift the knees up. Bring the right leg forward and the left leg back. (Plate 472.) Try to stretch both the legs straight with an exhalation and keep the hips up. (Plate 473.) Then press the legs and hips to the ground, and bear the weight on the hands. (Plate 474)

4. It takes a long time to master this position and to attain it one

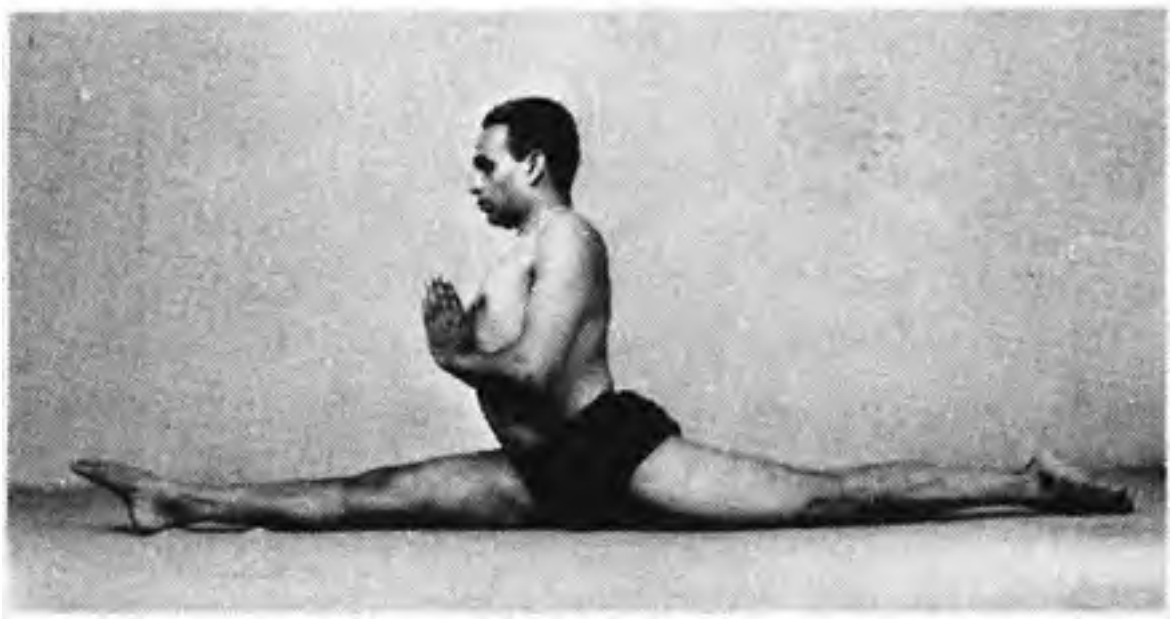
472

473

474

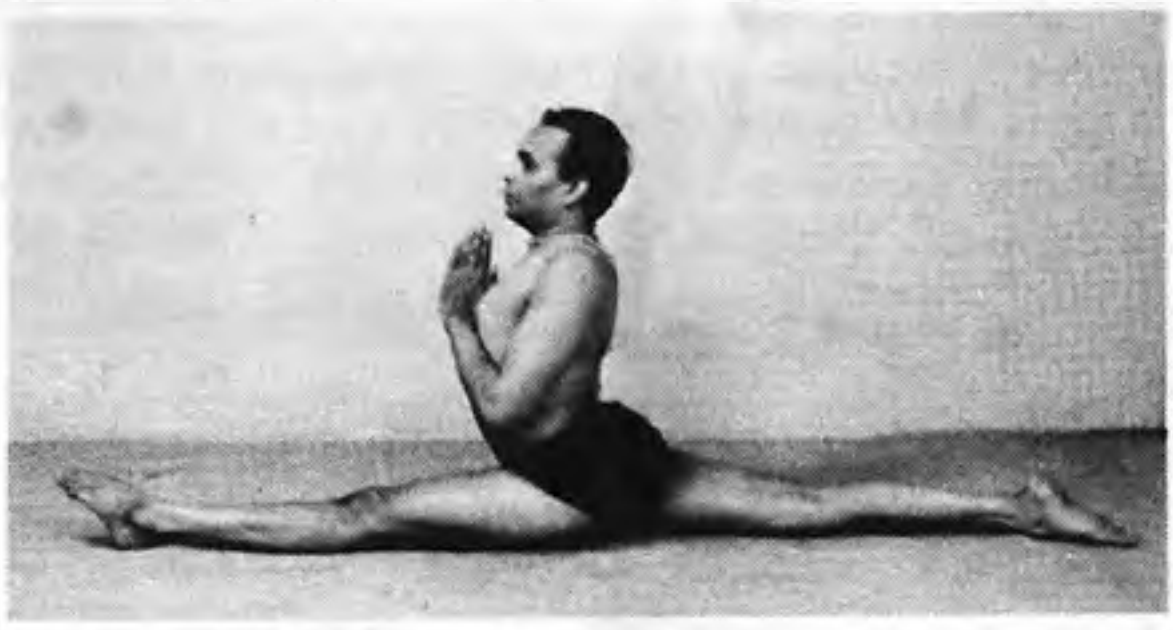
must make several attempts each day to rest the legs straight on the floor, with the buttocks touching the ground. The back portion of the front leg and the front portion of the rear leg should touch the floor.

5. Once the straight legs position is attained, sit on the floor, raise the hands, fold them in front of the chest and balance. (Plate 475.) Stay in the pose from 10 to 30 seconds with normal breathing.



475

6. Then with the help of the hands raise the hips and repeat the pose for the same length of time, keeping the left leg in front and the right leg behind. (Plate 476)



476

7. Remember that the back of the knee joint of the front leg and the knee of the back leg should touch the floor.

8. Advanced pupils may raise the hands above the head, stretch up, put the palms together and balance. (Plate 476a.) This gives an extra stretch to the legs, and relieves strain on the back.

Effects

This beautiful pose helps to cure sciatica and other defects of the legs. It tones the leg muscles, keeps the legs in condition and if practised regularly is recommended for runners and sprinters. It relaxes and strengthens the abductor muscles of the thighs.

170. *Samakoṇāsana* Thirty-eight* (Plate 477)

Sama means the same, like, even or straight. Koṇa means an angle

476a

and a point of a compass. In this āsana the split is performed with the legs spread apart sideways, and the hands are folded in front of the chest. It is harder to perform than Hanumānāsana. (Plate 475.) Both the legs and the pelvic region of the body are in one straight line.

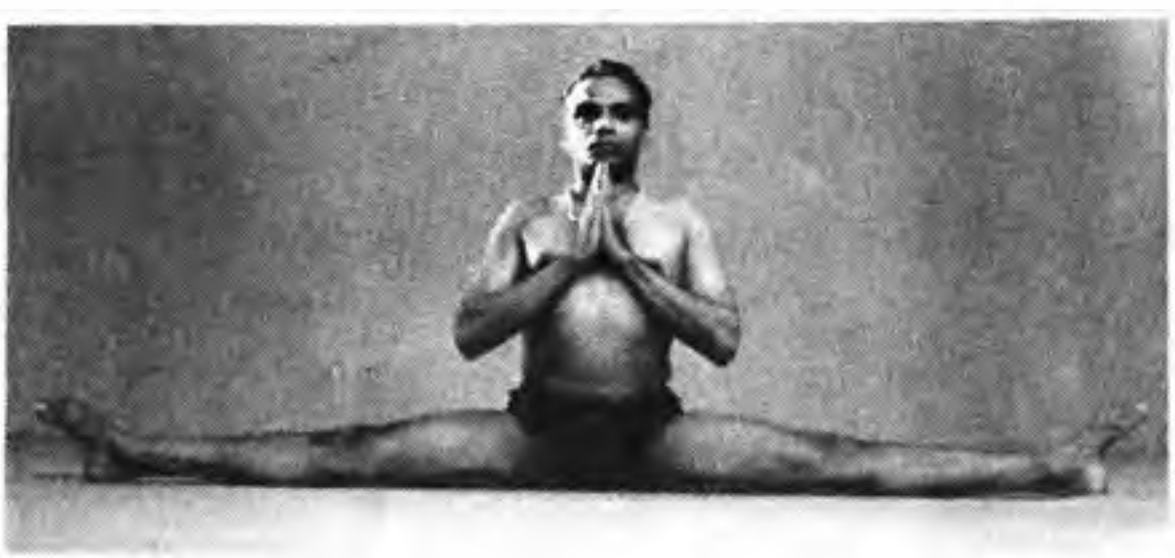
Technique

1. Stand in Tāḍāsana (Plate 1), rest the hands on the hips and spread the legs apart sideways to your capacity. (Plate 29)

2. Place the palms on the floor (Plate 30) and with an exhalation stretch the legs further and further until you sit on the floor with both legs spread sideways in a straight line. The entire back of the legs, especially the back of the knees, should rest on the floor.

3. Join the palms in front of the chest (Plate 477) and stay in the pose for a few seconds.

4. Place the palms on the floor, raise the hips and bring the legs closer



477

and closer to each other until you stand up again in Uttānāsana. (Plate 47.) Then stand in Tāḍāsana (Plate 1) and relax.

Effects

In this pose the hip joints are exercised and the legs are made to move freely in all directions. The spine is stretched and any defect in the lower part of the spine is cured. The pose, like Hanumānāsana (Plate 475), tones the leg muscles and makes the legs shapely. It prevents the development of hernia and relieves sciatic pains. It helps the blood to circulate in the pelvic region and genital organs and keeps them healthy.

171. *Supta Trivikramāsana* Thirty-nine* (Plate 478)

Supta means reclining. Trivikrama (tri = three; vikrama = a step, stride or pace) is a name of Viṣṇu. The āsana is dedicated to Vāmanāvatār, the Dwarf Incarnation of Viṣṇu. It is said that Bali, the grandson of Prahlāda, who was the king of the demons, gained control of the world. Bali practised asceticism by which his power so increased that he threatened even the gods who prayed to Viṣṇu for help. The god descended on earth and was born as the dwarf son of the Brahman sage Kaśyapa and his wife Aditi. At one of the sacrifices performed by Bali, Viṣṇu appeared before him in the form of a dwarf (Vāmana) and asked for as much earth as he could cover in three strides. Bali, who was noted for his liberality, unhesitatingly granted this boon. Thereupon, the Dwarf assumed a mighty form, and made three strides. The first covered the earth, and the second the heavens. As there was no other place for the third stride, Bali offered his own head on which the Lord planted his foot. He then sent him and all his legions to Pātāla, the nether regions, and allowed him to be its ruler. The universe was thus once more restored to the gods.

This āsana is more difficult than Hanumānāsana. (Plate 475.) Here, the pose is performed by lying on the floor on the back, then doing the splits and holding the heel of one foot near the head, while the other heel rests on the floor.

Technique

1. Lie flat on the back on the floor, keeping both legs straight. (Plate 219)

2. Raise the right leg up. Interlock the fingers, stretch the arms and hold the right heel in the cup of the hands.

3. Exhale, pull the right leg straight down behind the head and place the right big toe on the floor, without letting go of the heel. (Plate

478.) The inner side of the right calf will touch the right ear and the elbows will be widened slightly. The left leg should remain straight on the floor throughout.

478

4. Remain in the pose as long as you conveniently can with normal breathing.

5. Release the right heel and lower the right leg beside the left one.

6. Repeat the pose for an equal length of time, now holding the left heel and keeping the right leg on the floor.

7. After finishing this strenuous pose, rest for a while and relax.

Effects

In this pose, the legs are fully stretched. It prevents and cures hernia. It also lessens sexual desire and thereby stills the mind.

172. *Ūrdhva Dhanurāsana I* Seven* (Plate 482)

Ūrdhva means upwards. Dhanu means a bow. In this posture the body is arched back and supported on the palms and soles.

Technique (This is for beginners)

1. Lie flat on the back on the floor. (Plate 219)

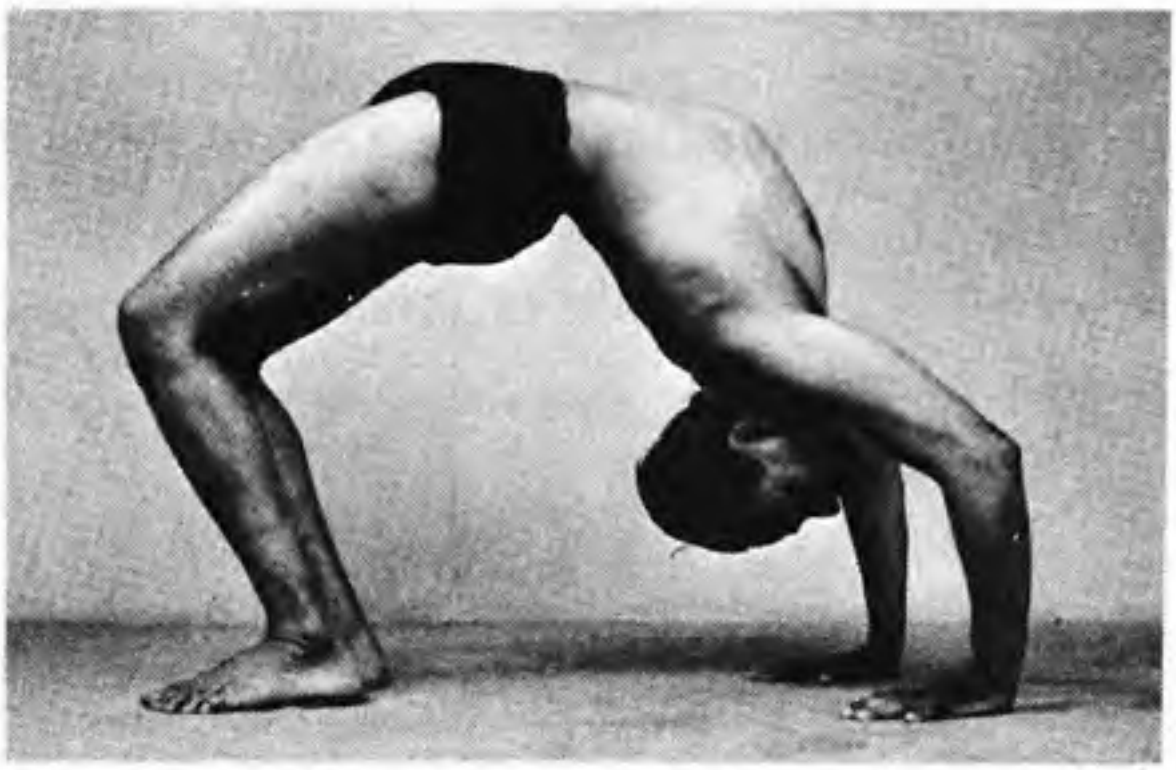
479

2. Bend and raise the elbows over the head, and place the palms under the shoulders. The distance between the palms should not be wider than the shoulders and the fingers should point towards the feet.

3. Bend and raise the knees, then bring the feet nearer until they touch the hips. (Plate 479)

4. Exhale, raise the trunk and rest the crown of the head on the floor. (Plate 480.) Take two breaths.

480



481

5. Now exhale, lift the trunk and head and arch the back so that its weight is taken on the palms and the soles. (Plate 481)

6. Stretch the arms from the shoulders until the elbows are straightened, at the same time pulling the thigh muscles up. (Plate 482)

482

7. To get a better stretch, exhale and pull the thigh muscles still higher by lifting the heels off the floor. Extend the chest, stretch up the sacral region of the spine until the abdomen is taut as a drum and then lower the heels to the floor, maintaining the stretch of the spine.

8. Remain in this position from half a minute to a minute, with normal breathing.

9. With an exhalation, lower the body to the floor by bending the knees and elbows.

172a. *Ūrdhva Dhanurāsana II* Fifteen* (Plate 486)

Technique (This is for intermediate pupils)

1. Stand erect with the feet one foot apart and the palms on the hips.

2. Push the pelvic region slightly forward (Plate 483), exhale and curve the trunk back so that the weight of the body is felt on the thighs and the toes. (Plate 484)

3. Raise the arms above the head and drop the hands on to the floor. (Plate 485.) Immediately try to straighten the arms at the elbows and rest the palms on the floor. (Plate 486.) If the elbows are not stretched immediately as the palms touch the floor, one is likely to bang the head.

483

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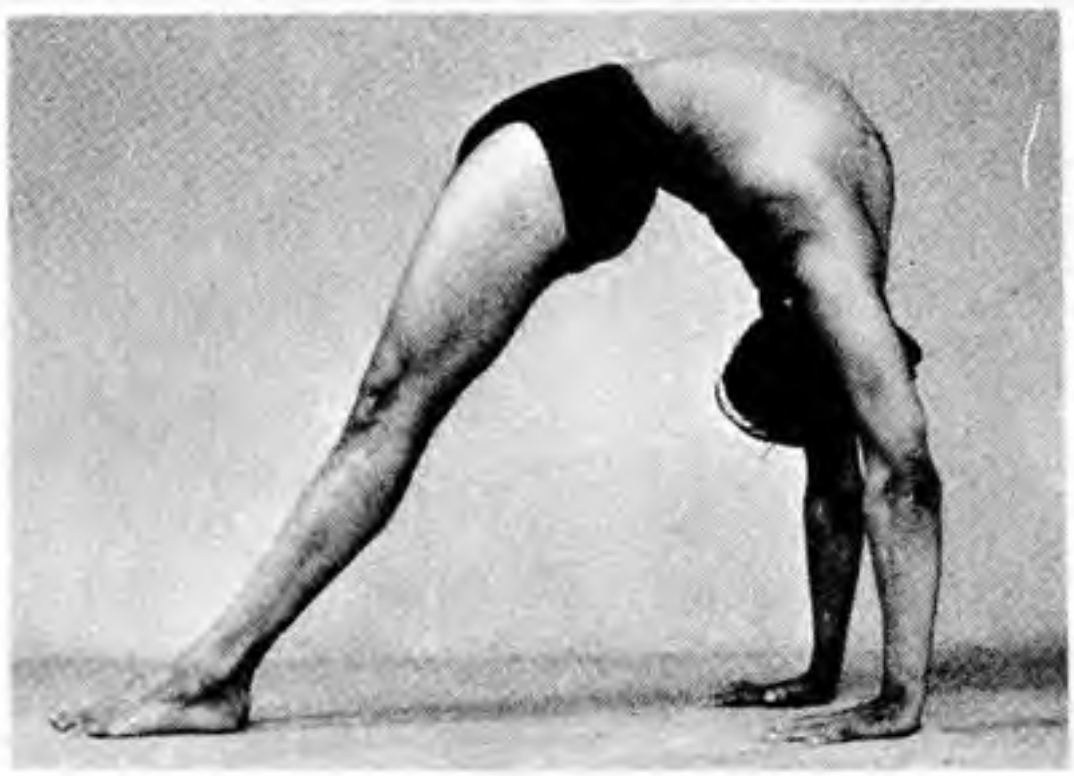
485

486

4. After securing the above position stretch the legs and arms straight. (Plate 487)



487

5. While learning the pose this way it is helpful to use a friend or a wall. Stand about three feet from a wall with your back to it. Curve the back and move the head towards the wall. Raise the arms over the head and rest the palms on the wall. Push the pelvis forward so that the body weight is felt on the thighs and move the palms down the wall until you touch the floor. Use the wall for coming up in a similar manner. After mastering this, only use the wall until you are half-way up. Then learn to do the āsana in the middle of the room.

173. *Viparīta Chakrāsana in Ūrdhva Dhanurāsana.* Twenty-six* (Plates 488 to 499)

Technique (This is for advanced pupils)

1. Stand erect. Bend forward and place the palms on the floor. Exhale and swing both legs up as though you were doing the full arm balance (Plate 359), bend the knees, arch the back and drop the legs behind the head. (Plate 486)

2. While the legs are coming down beyond and behind the head, contract the hips, extend the back up, stretch the ribs and abdomen and straighten the arms at the elbows. Unless you do this, you will sit on the floor with a bump.

3. When all this has been mastered, learn the reverse swinging movements of the leg as shown from Plates 488 to 499, so that one swings the legs up and back in a reverse somersault movement. This reverse somersault into the forward bending position is called *Viparīta*

Chakrāsana, the reversed wheel pose. (Viparīta = reverse, contrary, opposite, inverted; chakra = wheel.) Most people, however, can only learn to do it with the aid of a competent teacher.

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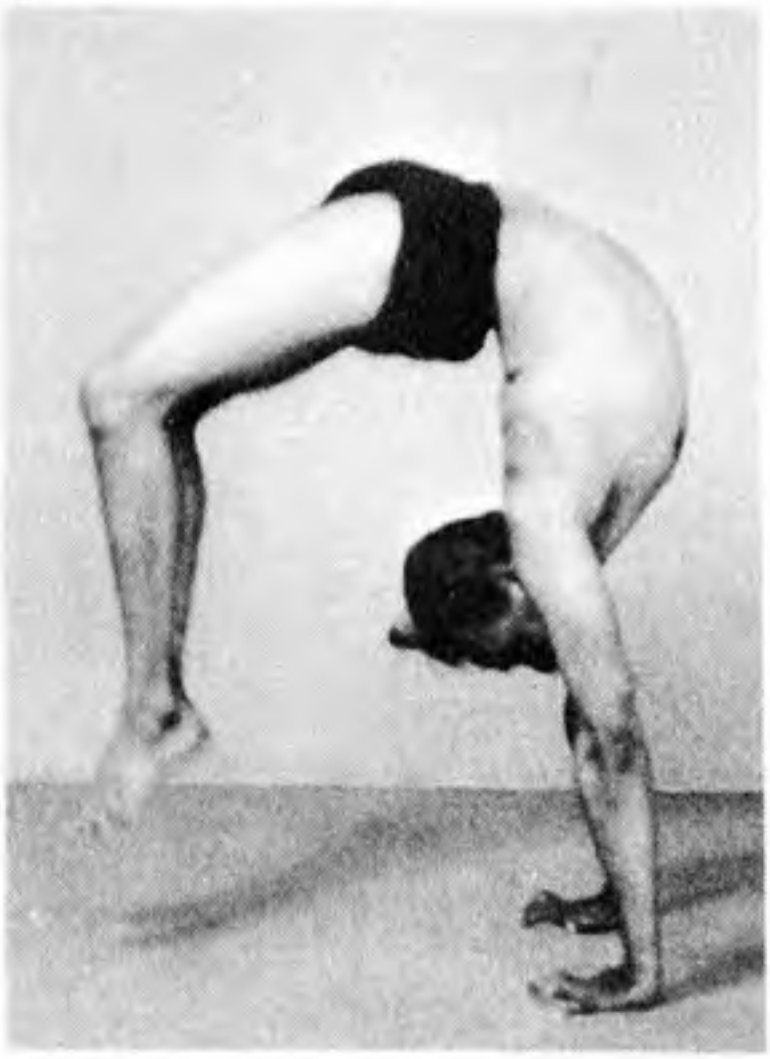

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4. If, however, no guru is available and you have confidence in yourself, you can try to achieve the reverse somersault movement in the following manner. Do Ūrdhva Dhanurāsana near a wall so that the feet face the wall about a foot away from it. Swing the trunk with an exhalation towards the shoulders so that the weight of the body is borne on the wrists and shoulders. Then lift one leg from the floor and place the foot on the wall at the height of about two feet. Press and push against the wall with that foot, lift the other leg off the floor and with an exhalation swing the legs over the head, making a reverse somersault. After repeated attempts, you will gain confidence. You will learn to rock the body forward and backward and to swing the trunk towards the shoulders with a backward movement of the legs in the reverse somersault. When you are sure of taking the legs off the floor, then try Viparīta Chakrāsana in the middle of the room away from the wall. This is how I learnt the reverse somersault movements in Viparīta Chakrāsana.

Effects

This āsana is the beginning of the advanced and difficult back-bending poses. It tones the spine by stretching it fully and keeps the body alert and supple. The back feels strong and full of life. It strengthens the arms and wrists and has a very soothing effect on the head. Once Viparīta Chakrāsana is mastered, it can be repeated several times a day. It gives one great vitality, energy and a feeling of lightness.

174. *Eka Pāda Ūrdhva Dhanurāsana* Twelve* (Plates 501 and 502)

Eka means one. Pāda is a leg. Ūrdhva means upwards and dhanu a bow.

Technique

1. After performing Ūrdhva Dhanurāsana (Plate 486), exhale and raise the right leg off the floor.

2. Stretch the right leg straight, and keep it at an angle of about 45 degrees from the floor. (Plate 500)

3. Then lift the right hand from the floor and place it on the right thigh. (Plate 501.) The body is then balanced on the left hand and foot. Hold this position from 10 to 15 seconds, with normal breathing.

4. Exhale, lower the hands and raised leg and go back to Ūrdhva Dhanurāsana.

5. Repeat the pose by lifting the left leg and placing the left hand on the left thigh, balancing the body on the right hand and leg. (Plate 502.) Maintain the pose on this side for the same length of time.

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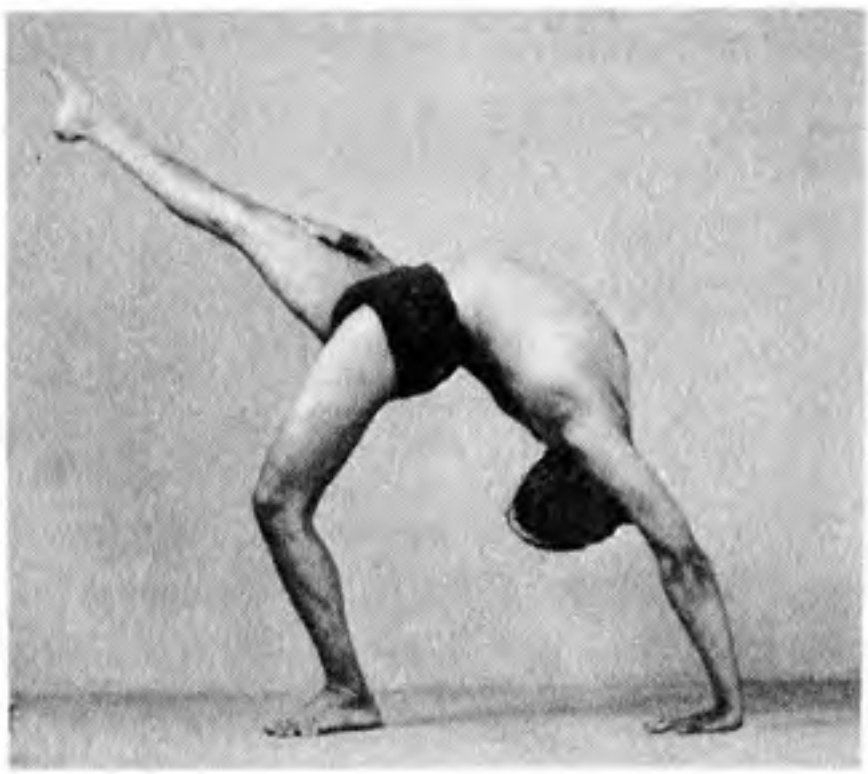

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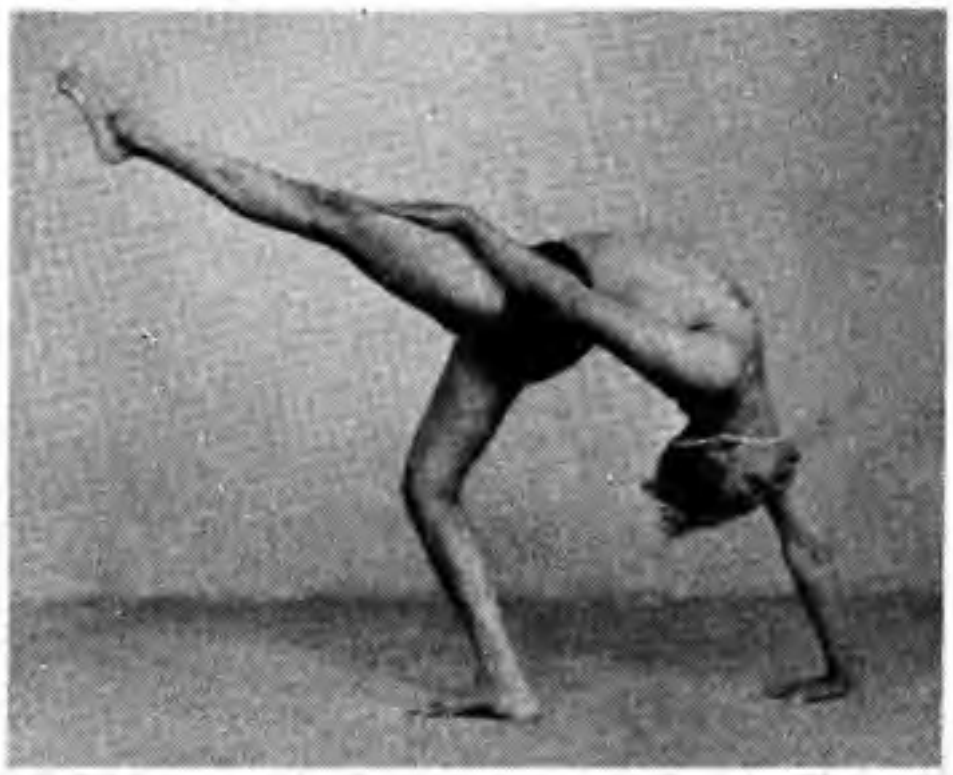
Effects

In addition to the benefits derived by Ūrdhva Dhanurāsana (Plate 486), this beautiful āsana develops a sense of balance and gives grace and poise.



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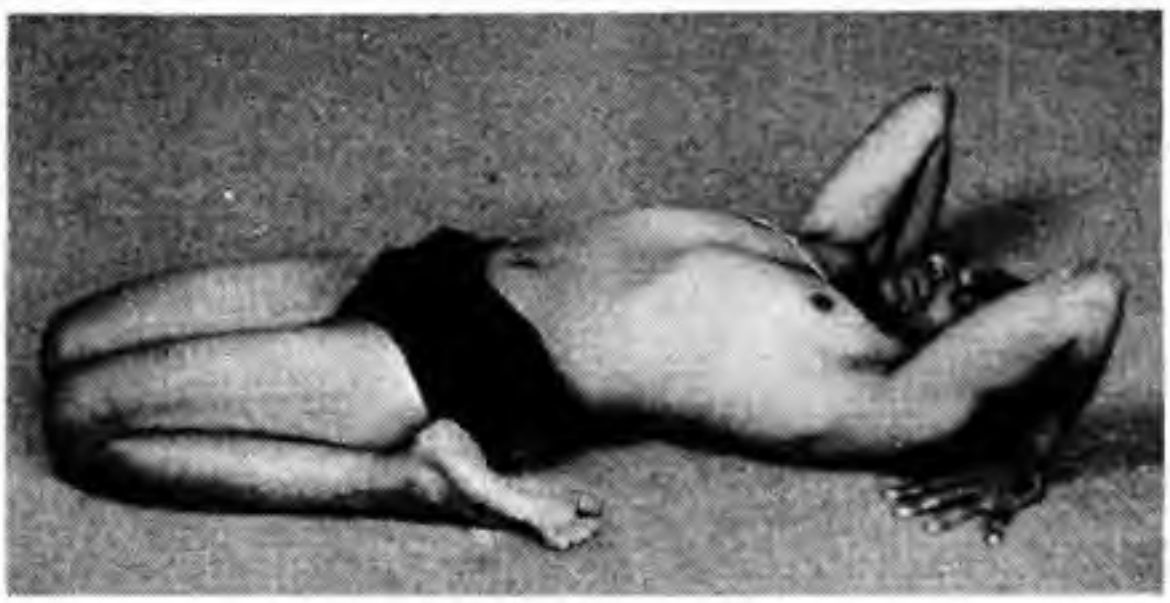
175. *Kapotāsana* Twenty-one* (Plates 507 and 512)

Kapota means a dove or a pigeon. In this pose the chest expands and puffs out like that of a pouter pigeon, hence the name.

Technique (For beginners)

1. Sit in Vīrāsana on a folded blanket. (Plate 90)

2. Recline back on the blanket and do Supta Vīrāsana. (Plate 95.) Stretch the arms over the head, bend the elbows and place the palms near the ears, the fingers pointing to the shoulders. (Plate 503)



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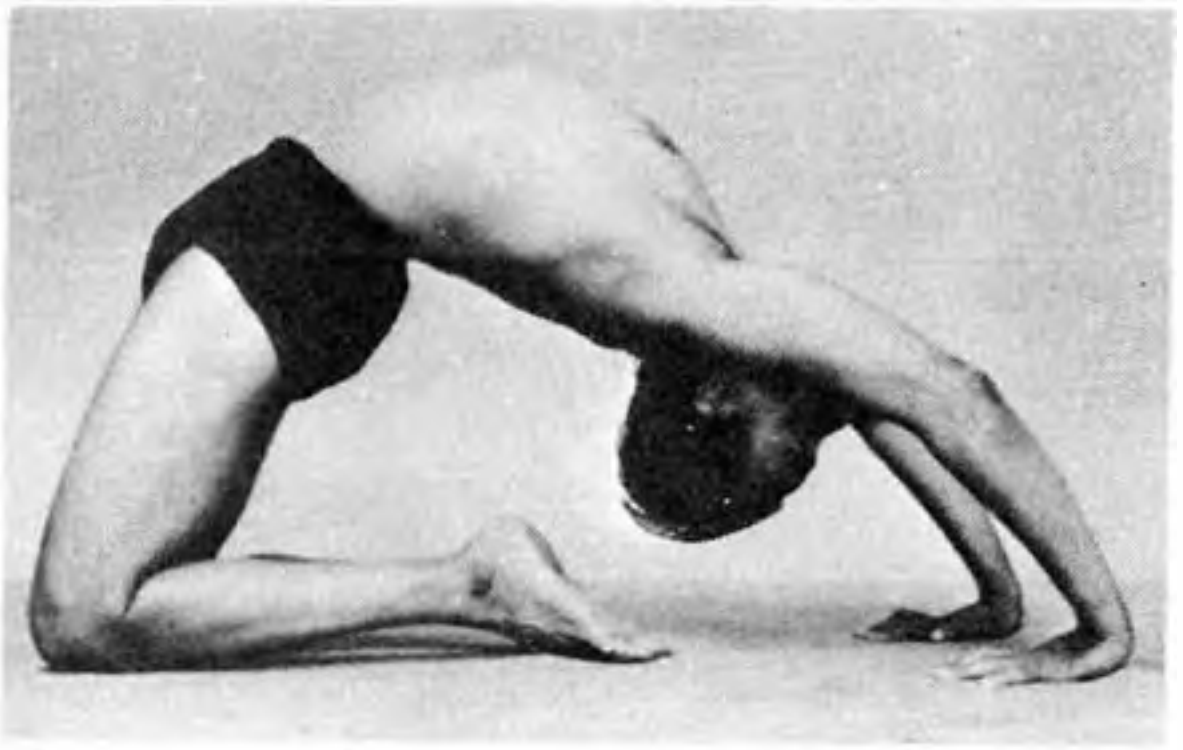
3. Bear the weight on the palms and exhale. Stretch the arms and raise the whole body from the knees by stretching the thighs and then join the knees. (Plate 504)

4. Contract the buttocks, stretch the entire spine, bend the elbows and hold the toes. (Plate 505.) Then rest the elbows on the floor. (Plate 506.)



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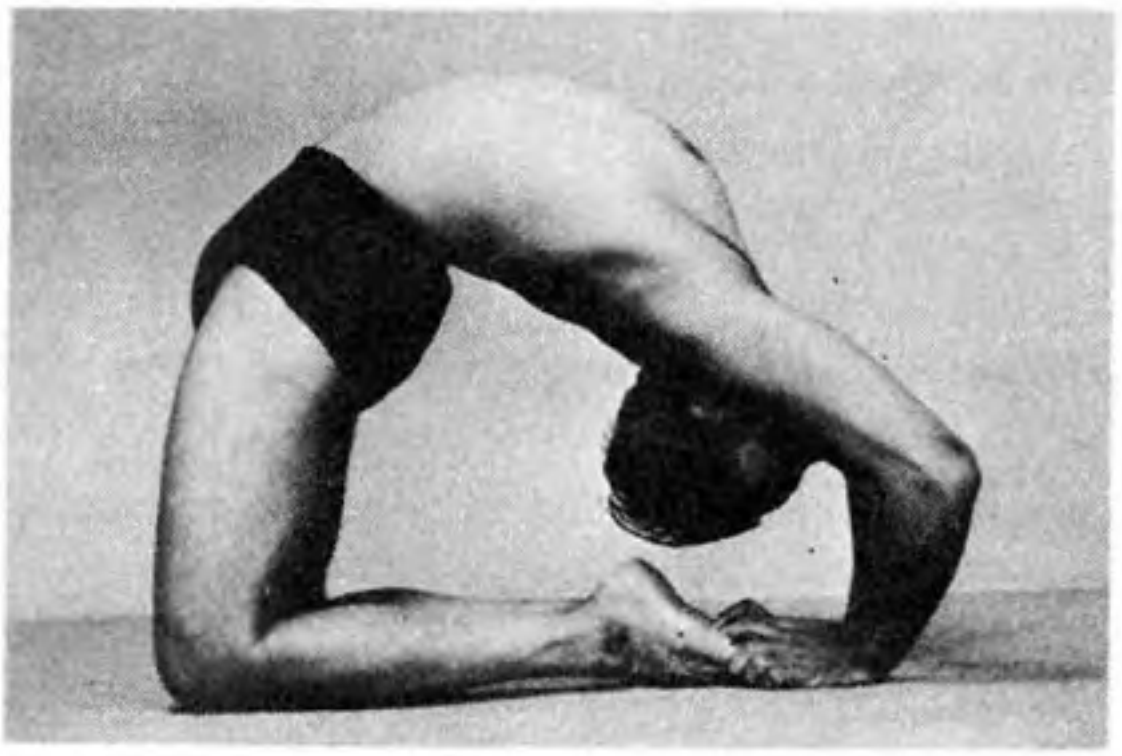

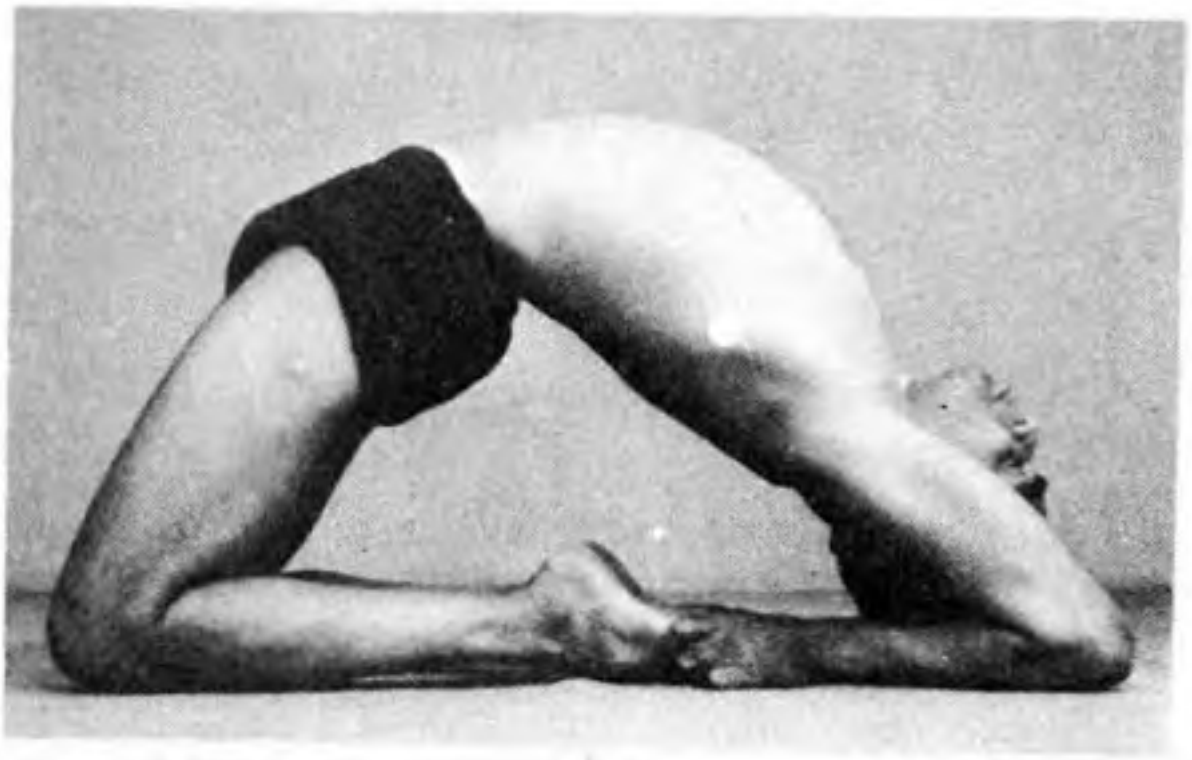

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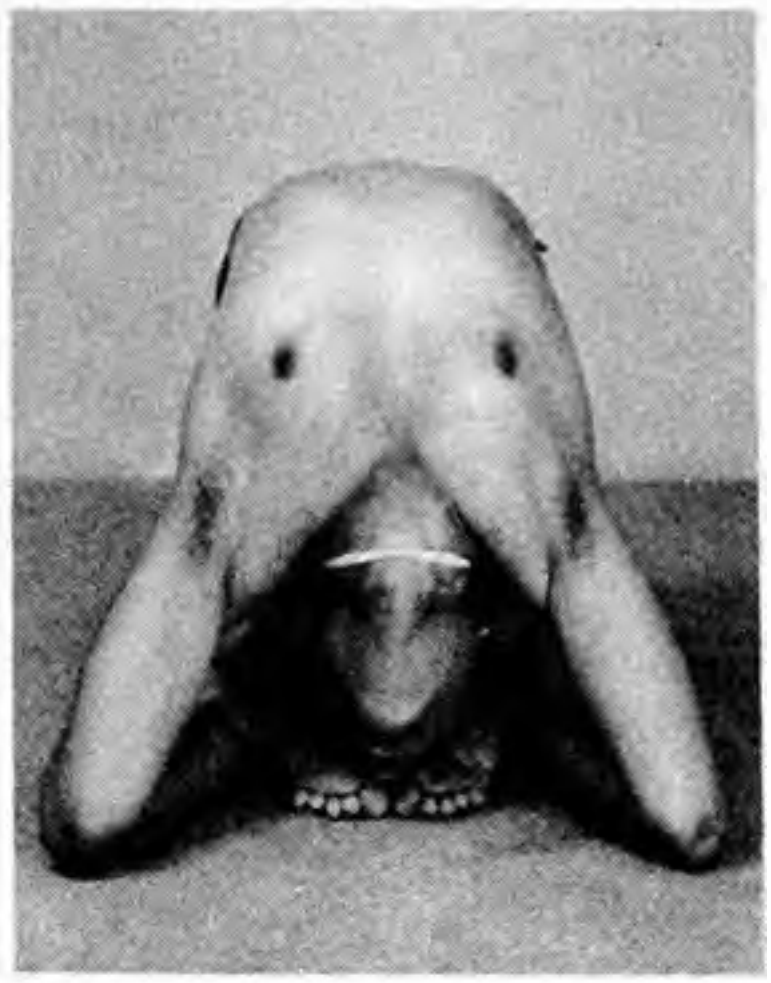
Breathing will be very fast and laboured as the diaphragm is fully contracted.

5. Take a few quick breaths, exhale, raise the pelvic region by tightening the muscles of the thighs. Gradually bring the hands near the heels and catch them by bringing the head towards the feet. Now place the crown of the head on the soles of the feet. (Plate 507)



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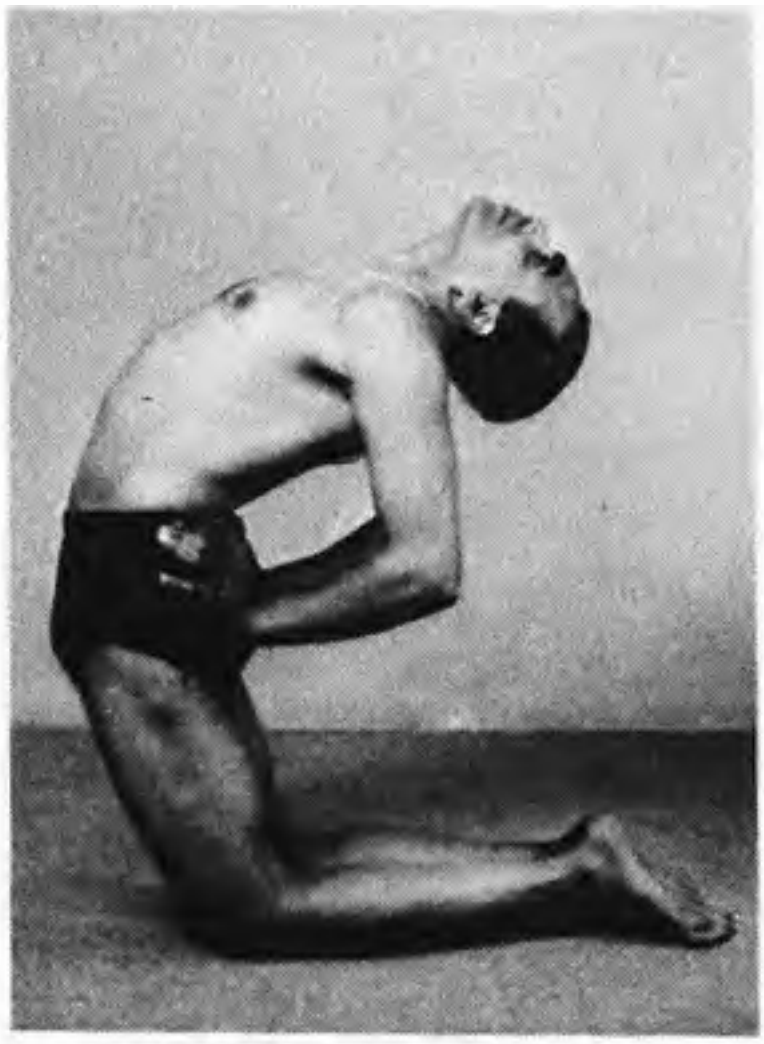
6. Stay in the pose for a few seconds. Gradually increase the time according to your capacity up to a minute.

7. Exhale, release the grip on the feet and lower the head and body until you are again in Supta Vīrāsana. (Plate 95.) Straighten the legs one by one and relax on the floor.

Technique (For advanced pupils)

1. Kneel on a folded blanket with the feet and knees together. Place the hands on the hips, stretch the thighs and keep them perpendicular to the floor. (Plate 40)

2. Exhale, stretch the entire spine and bend back as in Plates 508 and 509. Take the arms over the head towards the feet, place the palms on the heels and grip them. (Plate 510.) Breathing will be fast and laboured. Take a few quick breaths.



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3. Exhale, stretch the spine still further back, bend the elbows and place them on the floor. (Plate 511)

4. Stretch the neck back and rest the crown of the head on the soles of the feet. Contract the buttocks, lift up the pelvic region, stretch the thighs and catch the ankles. (Plate 512)

5. Remain in this position as long as you can for about 60 seconds, breathing rhythmically.

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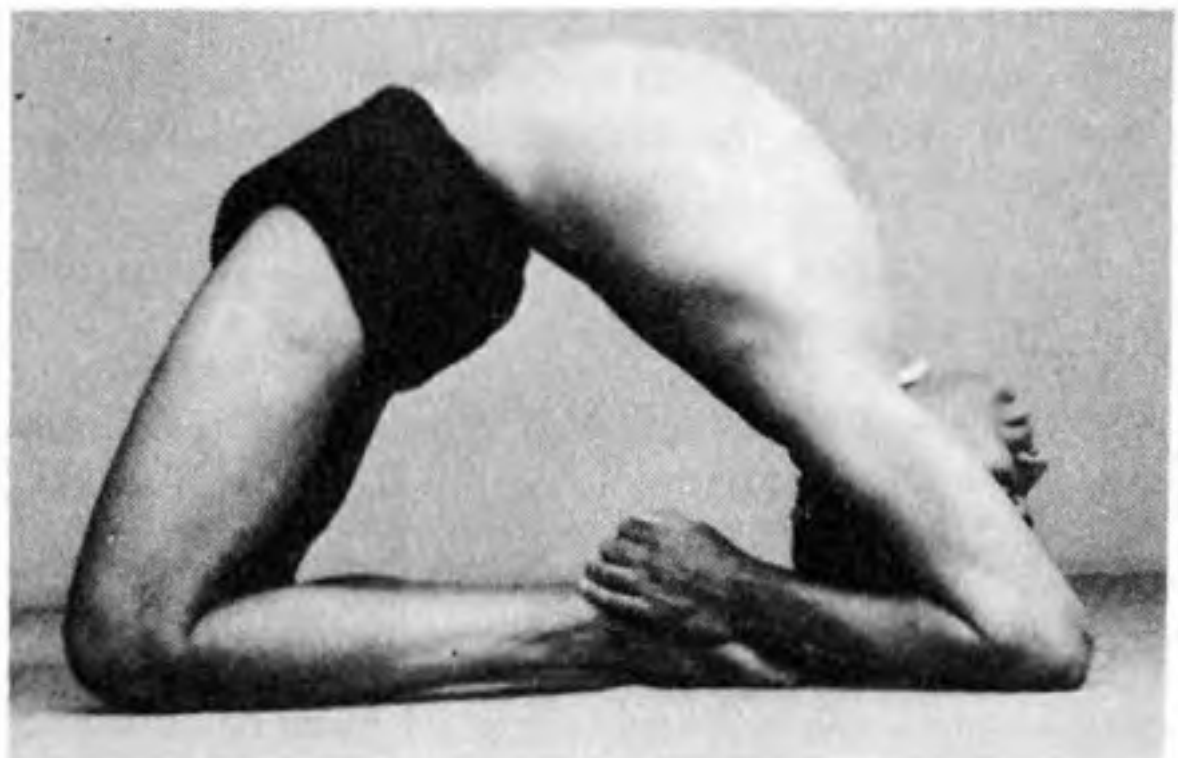

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6. Release the grip on the feet. Extend the arms and bring the body forward until you are again standing on the knees. Then rest on the floor and relax.

Effects

The pose tones up the entire spinal region as the blood is made to circulate well round the spinal column. Since the pelvic region is stretched, the genital organs keep healthy. The diaphragm is lifted up and this massages the heart gently and helps to strengthen it. The chest expands fully. It is essential to master Kapotāsana before practising the more difficult back-bending poses, which cannot be done until you have perfected Kapotāsana and Viparīta Daṇḍāsana (Plate 516) to Maṇḍalāsana. (Plates 525 and 535)

176. *Laghu Vajrāsana* Twenty-three* (Plate 513)

Laghu means little, small, easy as well as lovely, handsome, beautiful. Vajra means a thunderbolt, the weapon of Indra, the king of gods.

Technique

1. Kneel on the floor with the knees and feet together. Rest the palms on the sides of the waist. (Plate 40)

2. Exhale, arch the spine back and at the same time tighten the muscles of the thighs. (Plates 508 and 509)

3. Push the hips forward and keep bending the spine back until the crown of the head rests on the feet. It requires great practice to achieve the necessary spinal elasticity. The weight of the body is borne only on the knees.

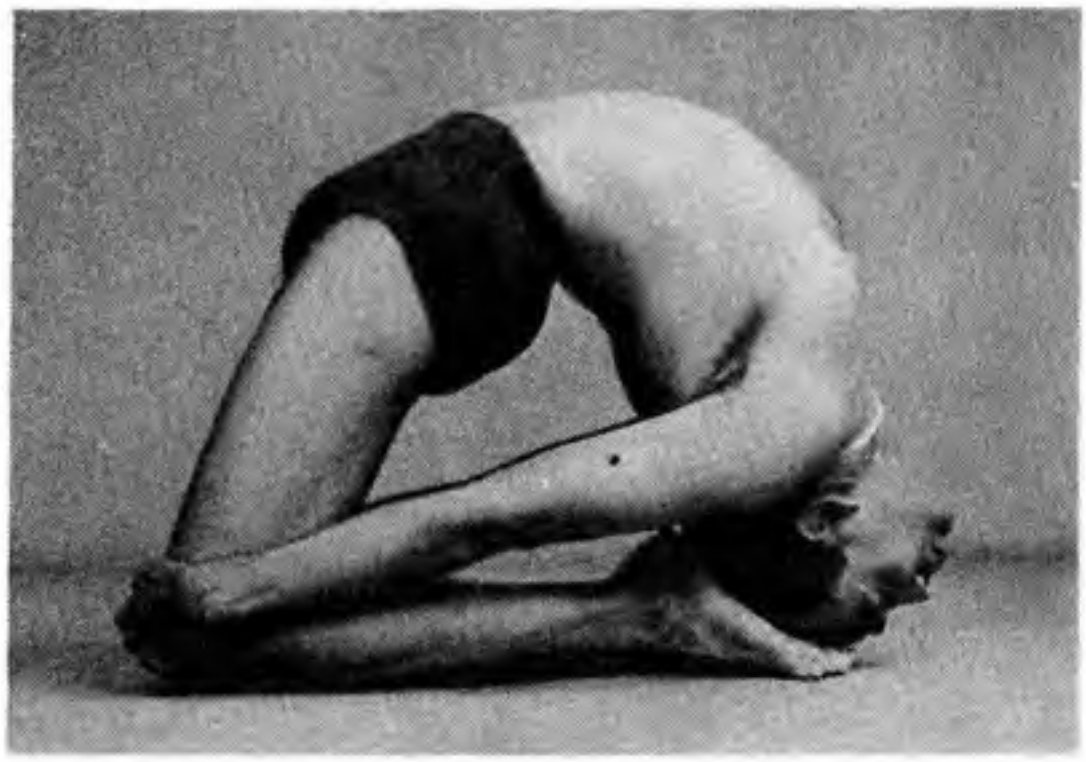
4. When the above position is achieved, remove the hands from the waist, stretch the arms straight from the shoulders and grip each knee with the respective hand. (Plate 513)

5. Due to the spine being stretched and the pressure against the abdomen, breathing will be fast and laboured. Try to hold the pose from 10 to 15 seconds while breathing normally.

6. Exhale, keep the knees firm, raise the head and trunk until you are kneeling again. Then sit on the floor and rest.

Effects

This āsana tones the spinal nerves and exercises the coccyx (the terminal triangular bone of the vertebral column). The pose, if practised regularly, relieves pain and disc displacements in the lower region of the spine. Due to the arch, the abdominal muscles and chest are fully extended.



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177. *Dwi Pāda Viparīta Daṇḍāsana* Twenty-four* (Plate 516)

Dwi Pāda means both feet. Viparīta means reverse or inverted. Daṇḍa means staff or rod, a symbol, authority or punishment as well as the body and its prostration. The Hindu devotee prostrates before the Lord lying flat upon the floor, face downwards with hands outstretched. The Yogi on the other hand prostrates himself in the graceful inverted arch described below.

Technique (For beginners)

1. Lie flat on the back. (Plate 219)

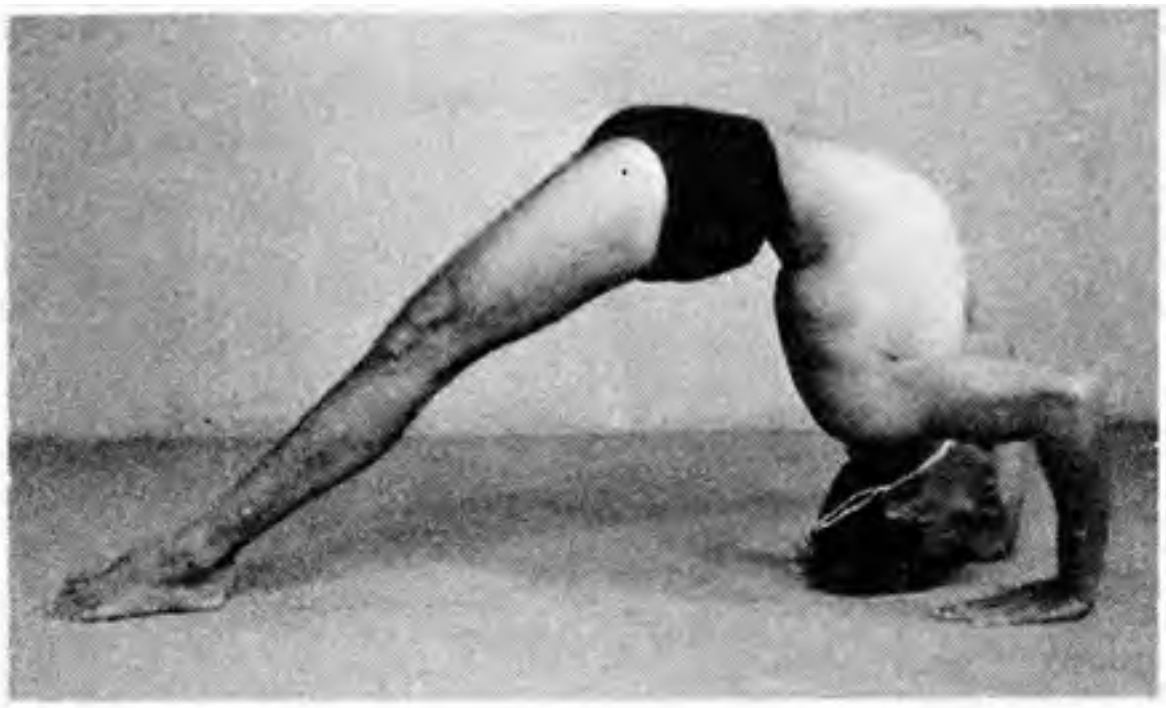
2. Extend the arms over the head, bend the elbows and place the palms underneath the shoulders, fingers pointing to the feet. Also bend and raise the knees, bring the feet near the hips and rest them on the floor. (Plate 479)

3. Exhale and at the same time lift up the head and trunk and rest the crown of the head on the floor. (Plate 480.) Take a few breaths.

4. Exhale, extend the legs, straighten them one by one bearing the weight on the hands, head and neck. (Plate 514)

5. Take the left hand off the floor and place it behind the head, resting the elbow on the floor. (Plate 515.) Take two breaths.

6. Now remove the right hand from and place the elbow on the floor, move the hand behind the head, interlock the fingers and rest the cupped hands against the back of the head. This is the final position. (Plate 516.) In it the head and the hands will be in the same position as in Sālamba Śīrṣāsana I. (Plate 190)



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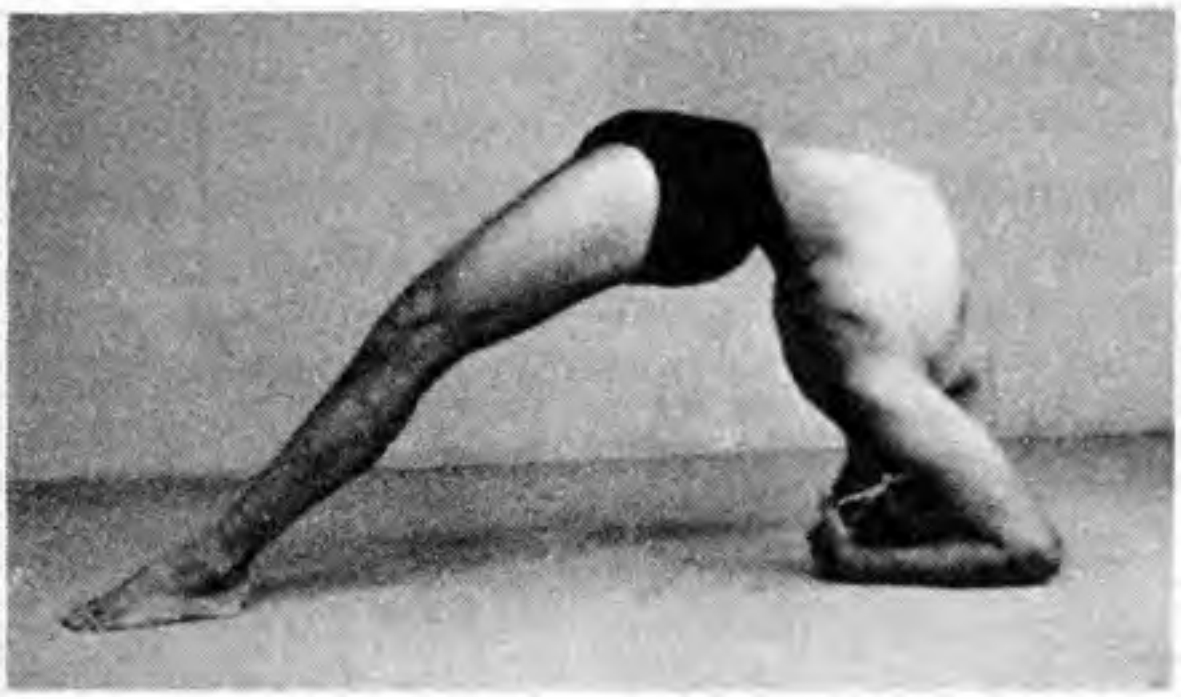

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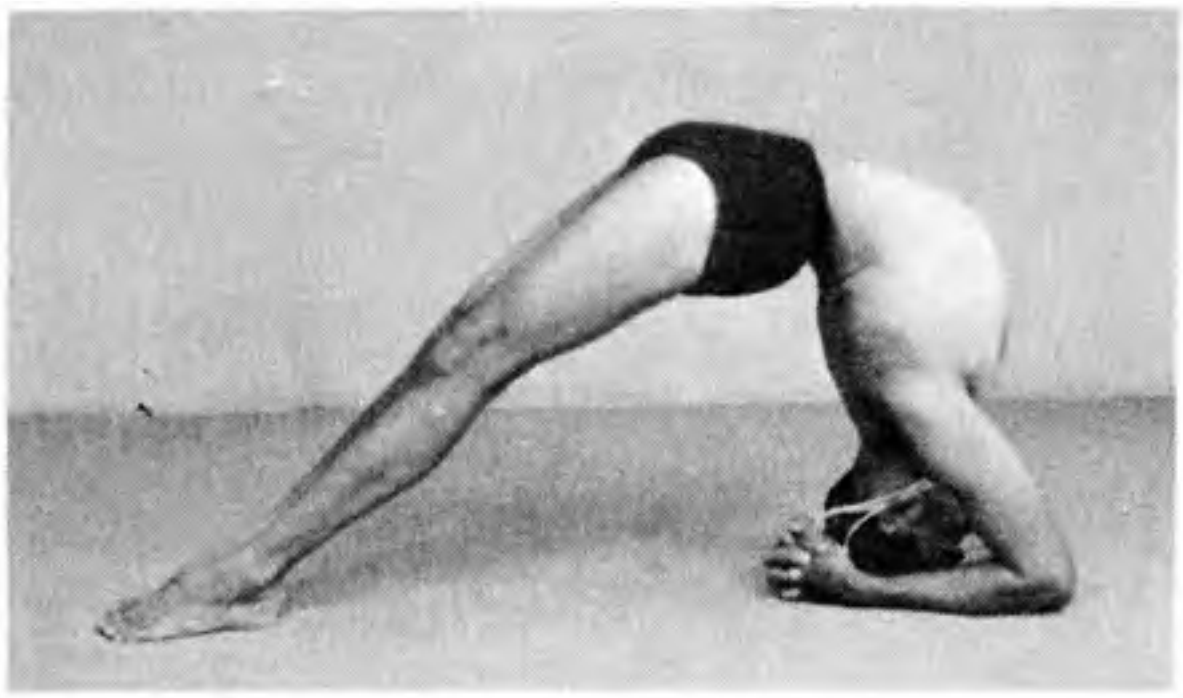
7. The diaphragm being contracted, breathing will be fast and short. Take a few breaths, exhale and raise the shoulders as high as you can above the floor, as also the chest, trunk, hips, thighs and calves. Stretch the legs straight from the pelvis to the ankles. Dig the heels into the floor and stay in this position to your capacity from one to two minutes.

8. Move the feet towards the head, bend the knees, release the finger-lock, raise the head from the floor, lower the trunk and relax.

9. The neck, chest and shoulders should be fully extended and the pelvic region raised as high as possible above the floor. To start with the neck will not stay perpendicular to the floor as it should and there will be a tendency for the head and forearms to slip away. So rest the feet against a wall and ask a friend to press down the elbows until the distance between the feet and the head on the floor is properly adjusted while the spine and legs are fully extended.



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Technique (For advanced pupils)

1. Do Sālamba Śīrṣāsana I (Plate 190), bend the knees and drop the legs behind the back on the floor, following the various movements as in Plates 517, 518 and 519.

517

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2. This should be done without lifting the elbows off the floor and without disturbing the position of the head on the floor.

519

3. Now stretch the legs straight one by one (Plates 520 and 516) and at the same time raise and stretch the dorsal and lumbar regions of the spine. Press the heels firmly on the floor.

520

4. Contract the buttocks, raise the pelvic region up and tighten the knees, thighs and calves.

5. Attempt to stay in this position for a minute or two with normal breathing.

6. Then bend the knees and swing the legs up with an exhalation back to Sālamba Śīrṣāsana I. Rest there for a few seconds with deep breathing and lower the legs to the floor. Release the grip of the fingers, lift the head from the floor and relax or perform Ūrdhva Dhanurāsana (Plate 486) and stand in Tāḍāsana (Plate 1) or move into Viparīta Chakrāsana. (Plates 488 to 499)

Effects

This exhilarating pose keeps the spine sound and healthy while the chest expands fully. Along with this, one also feels the effects of Śīrṣāsana. It is recommended for relieving pain in the coccyx region of the spine.

The pose has a very soothing effect on the mind, so that the emotionally disturbed find it a great boon.

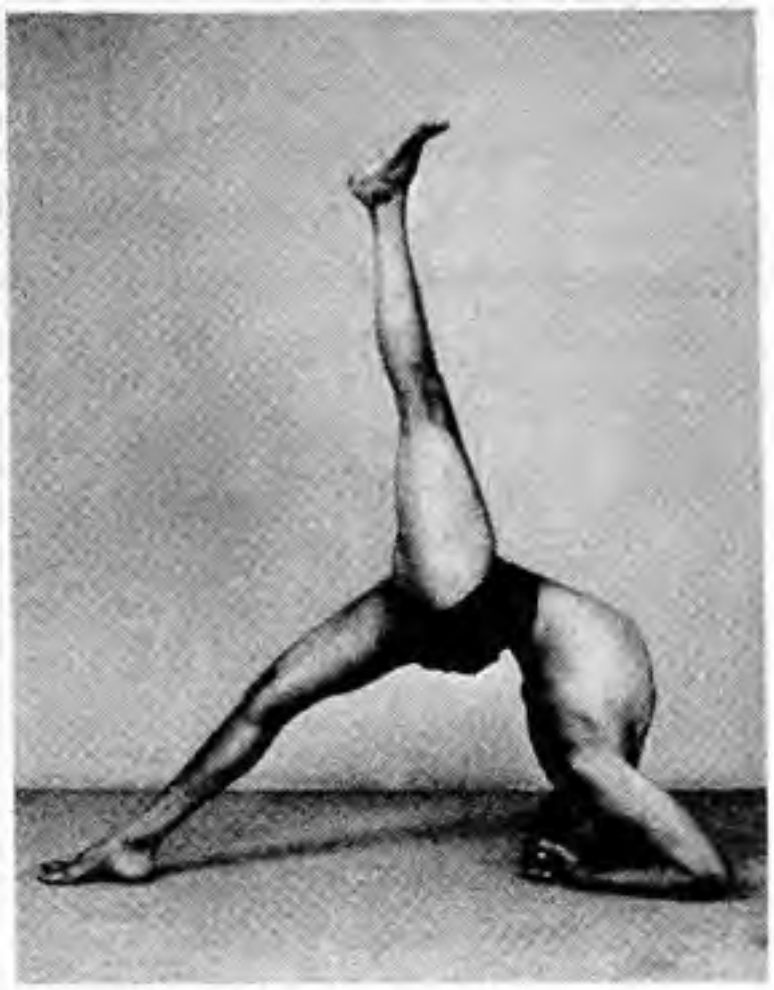
178. *Eka Pāda Viparīta Daṇḍāsana I* Twenty-six* (Plate 521)

Eka means one and Pāda a leg or foot. Viparīta means reverse or inverted. Daṇḍa is a staff or rod, a symbol of authority and punishment. It also means the body. The pose is an advanced movement of Dwi Pāda Viparīta Daṇḍāsana. (Plate 516)

Technique

1. Perform Dwi Pāda Viparīta Daṇḍāsana. (Plate 516)

2. Exhale and lift the left leg up vertically while keeping the right leg on the floor in Viparīta Daṇḍāsana. (Plate 521)



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3. Stay in this pose with normal breathing for 10 seconds.

4. Lower the left leg and come to Viparīta Daṇḍāsana. Then with an exhalation, repeat the pose for an equal length of time, keeping the right leg perpendicular.

5. Come back to Viparīta Daṇḍāsana and then relax on the floor.

6. Advanced pupils may, with an exhalation, swing both the legs up to Sālamba Śīṛsāsana I (Plate 190), then lower them to the floor and relax or perform Ūrdhva Dhanurāsana (Plate 486) and stand up in Tāḍāsana (Plate 1) or move into Viparīta Chakrāsana. (Plates 488 to 499)

Effects

The pose tones the spine and expands the chest fully. Coupled with this are the effects of Śīrṣāsana. (Plate 190.) This exhilarating pose also soothes the mind.

179. *Eka Pāda Viparīta Daṇḍāsana II* Twenty-nine* (Plate 523)

This is a more strenuous version of the earlier āsana.

Technique

1. Perform Dwi Pāda Viparīta Daṇḍāsana. (Plate 516)

2. Move both feet towards the head.

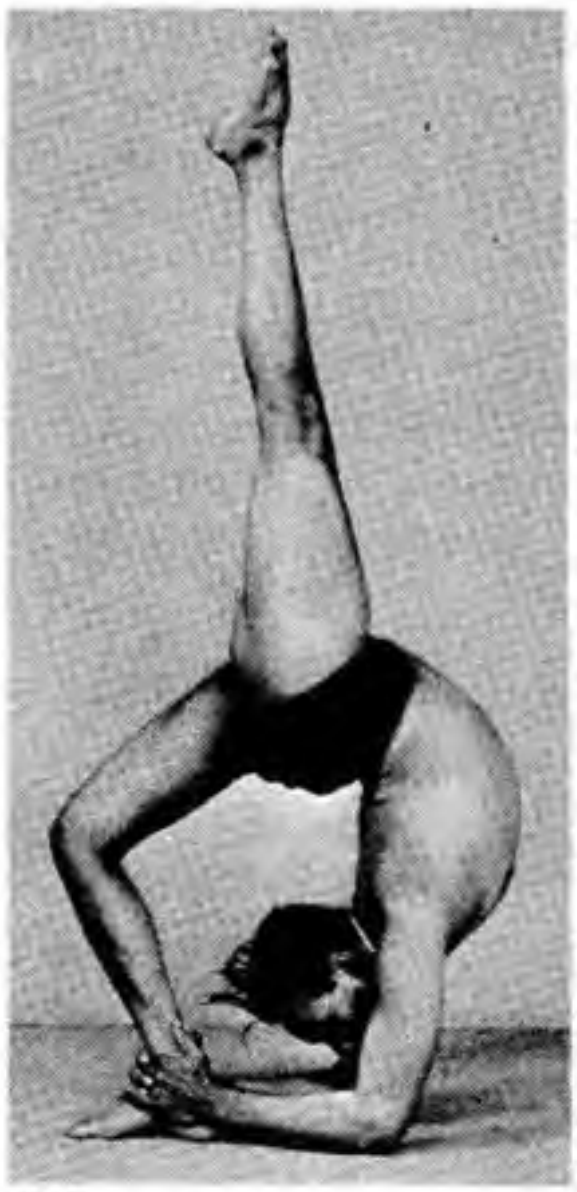
3. Release the fingers, spread the wrists and rest the palms on the floor.

4. With an exhalation, raise the head off the floor, extend the neck towards the legs and bring the right leg nearer to the hands.

5. Catch the right ankle with both hands and keep the entire foot on the floor. (Plate 522)

522

6. When the grip on the ankle is firm, exhale and lift the left leg up vertically by stretching the shoulders up and extending the spine. Keep the leg up taut at the knee. (Plate 523)



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7. Stay in the pose from 10 to 15 seconds. Due to the contraction of the abdominal muscles, breathing will be fast and laboured.

8. Bring the left leg down to the floor.

9. Release the right ankle and catch the left one. Repeat the pose described above, now raising the right leg up vertically. Stay in the pose on the other side for the same length of time. Then lower the raised leg.

10. Release the ankle and with an exhalation swing both the legs up to Sālamba Śīrṣāsana I (Plate 190), then lower them to the floor and relax or do Ūrdhva Dhanurāsana (Plate 486) and stand up in Tāḍāsana (Plate 1) or move into Viparīta Chakrāsana. (Plates 488 to 499)

Effects

In this āsana, the abdominal muscles are exercised and the spine is toned. As the bending is more strenuous, the effect is correspondingly greater.

180. *Chakra Bandhāsana* Thirty-one* (Plate 524)

Chakra means a nerve centre, the fly-wheels in the machine, that is the human body. Bandha means a fetter or a bond. The chakras are the

regions situated within the spinal column where the nāḍis cross each other. There are seven of them in the human body. They are (1) Mūlādhāra Chakra (the pelvic plexus); (2) Svādhiṣṭhāna Chakra (the hypogastric plexus); (3) Maṇipūraka Chakra (the solar plexus); (4) Anāhata Chakra (the cardiac plexus); (5) Viśuddha Chakra (the pharyngeal plexus); (6) Ājñā Chakra (the plexus of command between the two eyebrows); and (7) Sahasrāra Chakra (the thousand petalled lotus, the upper cerebral centre). The chakras are subtle and not easily cognisable. Though they are here compared to the various plexi, it should not be taken for granted that the plexi alone are the chakras.

Technique

1. Perform Dwi Pāda Viparīta Daṇḍāsana. (Plate 516)

2. Move both the feet towards the head with an exhalation.

3. Release the fingers, spread the wrists and rest the forearms on the floor, fingers pointing to the feet. Take two breaths.

4. With an exhalation raise the head off the floor and extending the neck towards the legs, bring both the feet nearer to the hands.

5. Then catch the right ankle with the right hand and the left ankle with the left hand and rest the feet on the floor. Take two breaths.

6. Grip the ankles firmly and with an exhalation, press the feet and the elbows to the floor and arch the trunk by stretching the shoulders and the thighs. (Plate 524)

524

7. Stay in the pose from 10 to 15 seconds. Breathing will be fast.

8. Release the grip on the ankles, rest the crown of the head on the floor and interlock the fingers behind the head. Now with an exhalation swing the legs up to Sālamba Śīrṣāsana I (Plate 190) and then lower them to the floor and relax or do Ūrdhva Dhanurāsana (Plate 486) and perform Viparīta Chakrāsana (Plates 488 to 499) or stand in Tāḍāsana.

Effects

All the chakras are stimulated. The āsana helps the adrenal glands to function healthily. The rectum, kidneys, neck and eye muscles are exercised.

181. *Maṇḍalāsana* Twenty-seven* (Plates 525 to 535)

Maṇḍala means a wheel, a ring, circumference or orbit. Keeping the head and hands in Sālamba Śīrṣāsana I (Plate 190) circle round the head clockwise and then anti-clockwise. The movements of your feet will then form a circle, maṇḍala or orbit round your head which should remain stationary.

Technique

1. Perform Dwi Pāda Viparīta Daṇḍāsana. (Plate 525)

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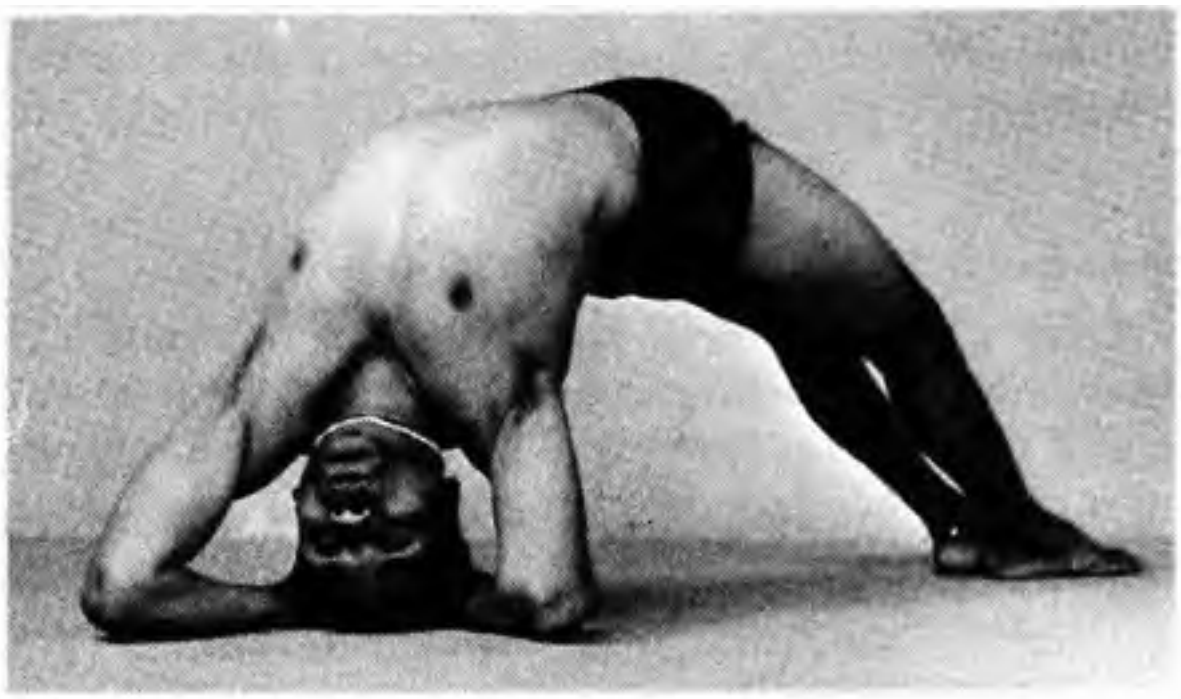
2. Without disturbing the head position, raise the shoulders and chest as high as possible.

3. Move the legs sideways clockwise one after the other and so circle round the head. When the legs come to the 3 o'clock and 9 o'clock positions, raise the opposite shoulder slightly, and lifting the chest up and forward, rotate the trunk as shown in the plates. (Plates 525 to 535.) The spine is given a complete circular rotation of 360 degrees.



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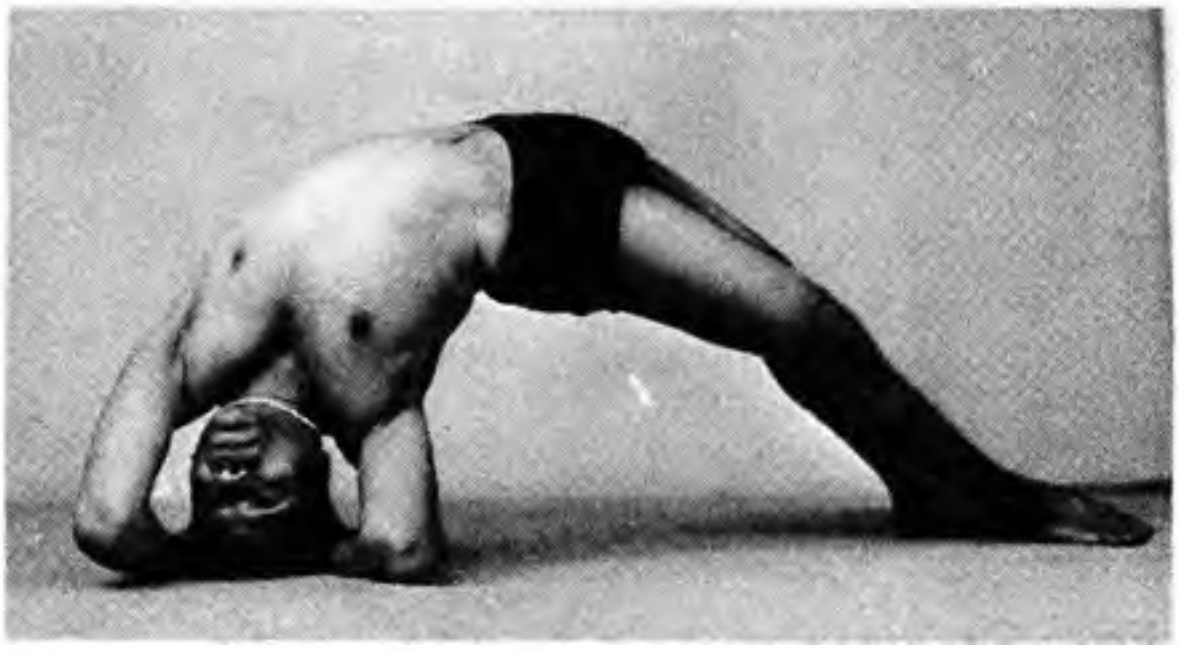

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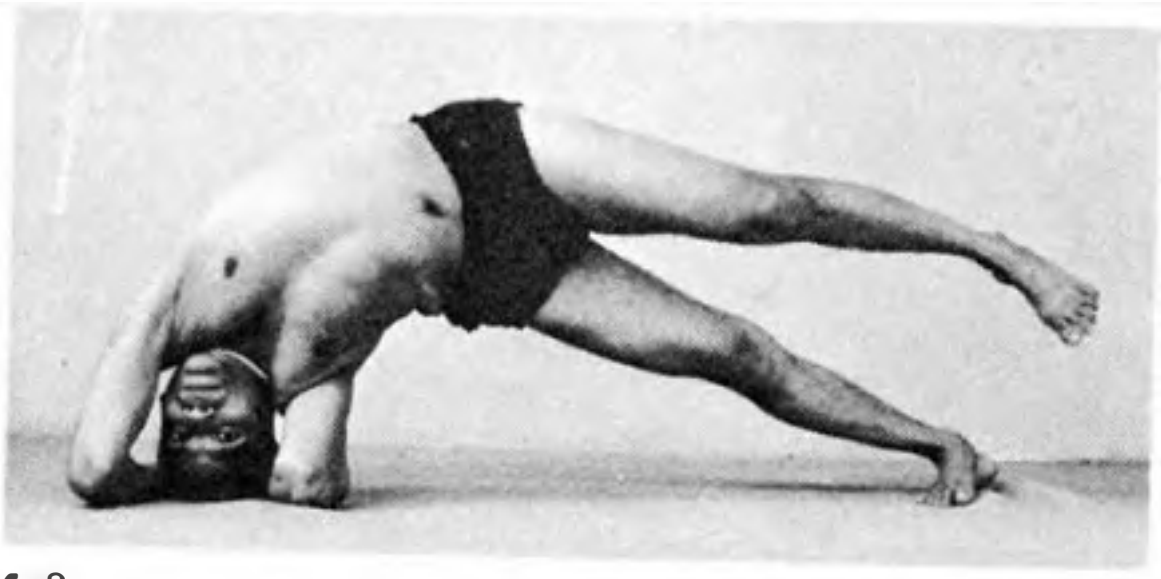
4. After completing the full circle clockwise, pause awhile and take a few deep breaths. Then repeat the movement anti-clockwise following the plates in the reverse order.

5. To get sufficient elasticity it is necessary first to make the spine supple by practising Viparīta Chakrāsana (Plates 488 to 499) in Ūrdhva Dhanurāsana. (Plate 486.) To start with the neck and shoulders sag towards the floor. After they have gained sufficient strength and the back has become elastic it is easier to perform this āsana.



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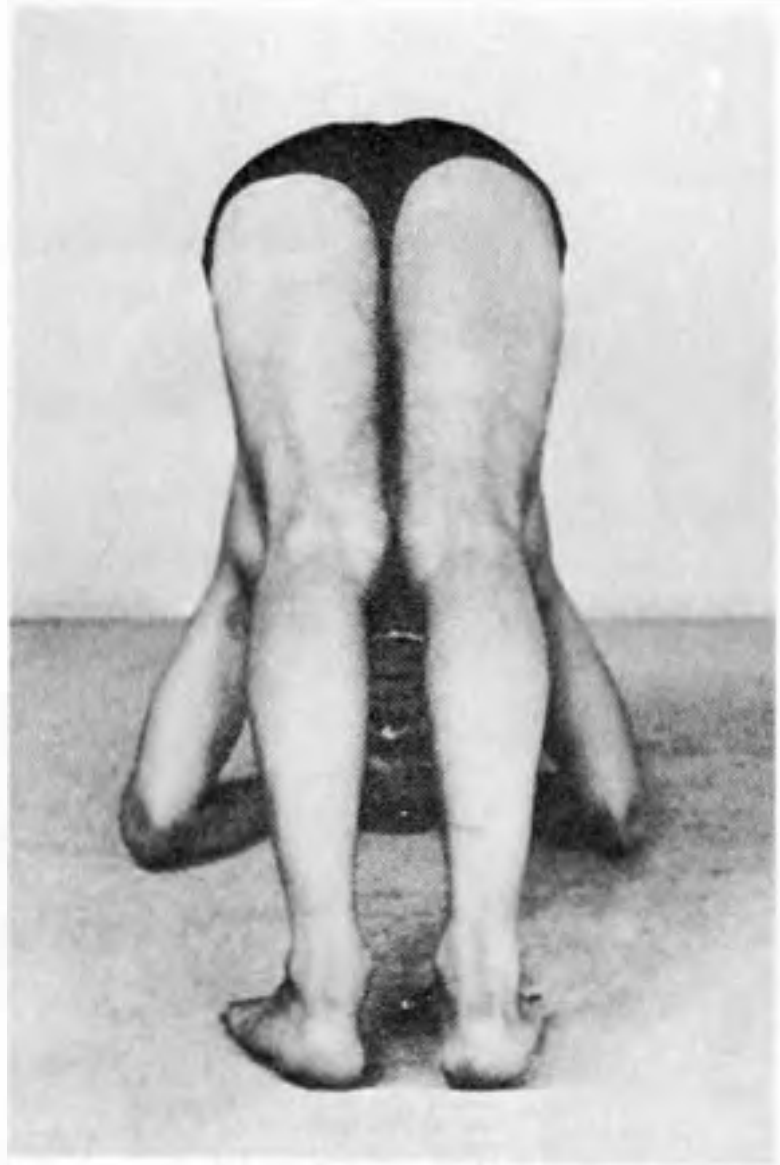

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Effects

During the rotation, the trunk and abdomen are contracted on one side and stretched on the other side. This keeps the spine and the abdominal organs in trim and promotes health and longevity.

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182. *Vṛśchikāsana I* Thirty-two* (Plates 536 and 537)

Vṛśchika means a scorpion. In order to sting its victim the scorpion arches its tail above its back and then strikes beyond its head. This posture resembles that of a striking scorpion, hence the name.

Technique

1. Kneel on the floor, bend forward and rest the elbows, forearms and palms on the floor parallel to each other. The distance between the forearms should not be wider than that between the shoulders.

2. Extend the neck and lift the head as high as you can above the floor.

3. Exhale, swing the legs and trunk up and try to balance without dropping the legs beyond the head. Stretch the region of the chest up vertically, keeping the arms from the elbows to the shoulders perpendicular to the floor. Stretch the legs up vertically and balance. This is Pīncha Mayūrāsana. (Plate 357)

4. After balancing on the forearms, exhale, bend the knees, raise the neck and head as high as you can above the floor, stretch the spine from the shoulders and lower the feet until the heels rest on the crown of the head. (Front view: Plate 536.) After you have learnt this, try to keep the knees and ankles together and the toes pointing. (Side view: Plate 537.) From the heels to the knees, the legs should be perpendicular to the head. The shins and the upper arms should be parallel to each other.

5. As the neck, shoulders, chest, spine and abdomen are all extended in this pose, breathing will be very fast and heavy. Try to breathe normally and stay in this posture as long as you can for about 30 seconds.

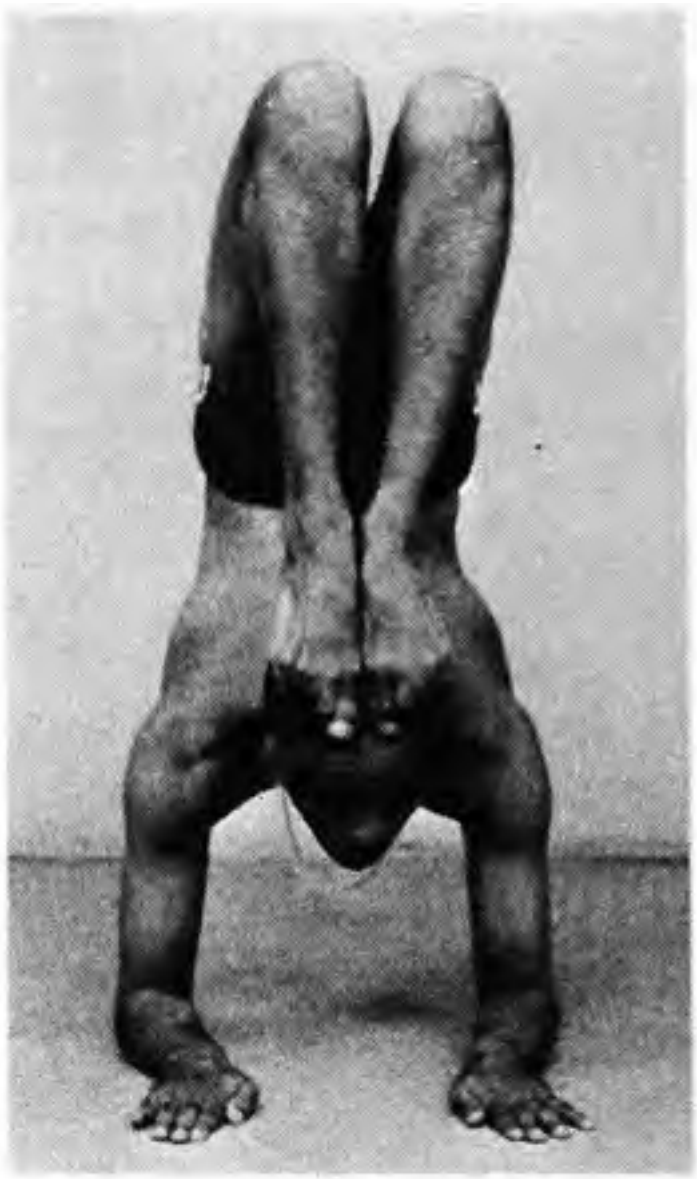
6. After holding the pose to your capacity, drop the legs to the floor beyond the head, lift the elbows from the floor and straighten the arms to perform Ūrdhva Dhanurāsana. (Plate 486)

7. Then, either stand up in Tāḍāsana (Plate 1) or do Viparīta Chakrāsana. (Plates 488 to 499)

8. To relieve the strain on the back caused by Vṛśchikāsana, bend forward and touch the palms on the floor without bending the knees–Uttānāsana. (Plate 48)

183. *Vṛśchikāsana II* Thirty-three* (Plate 538)

This is a harder version of the earlier one as it is practised while doing the full arm balance–Adho Mukha Vṛkṣāsana. (Plate 359)



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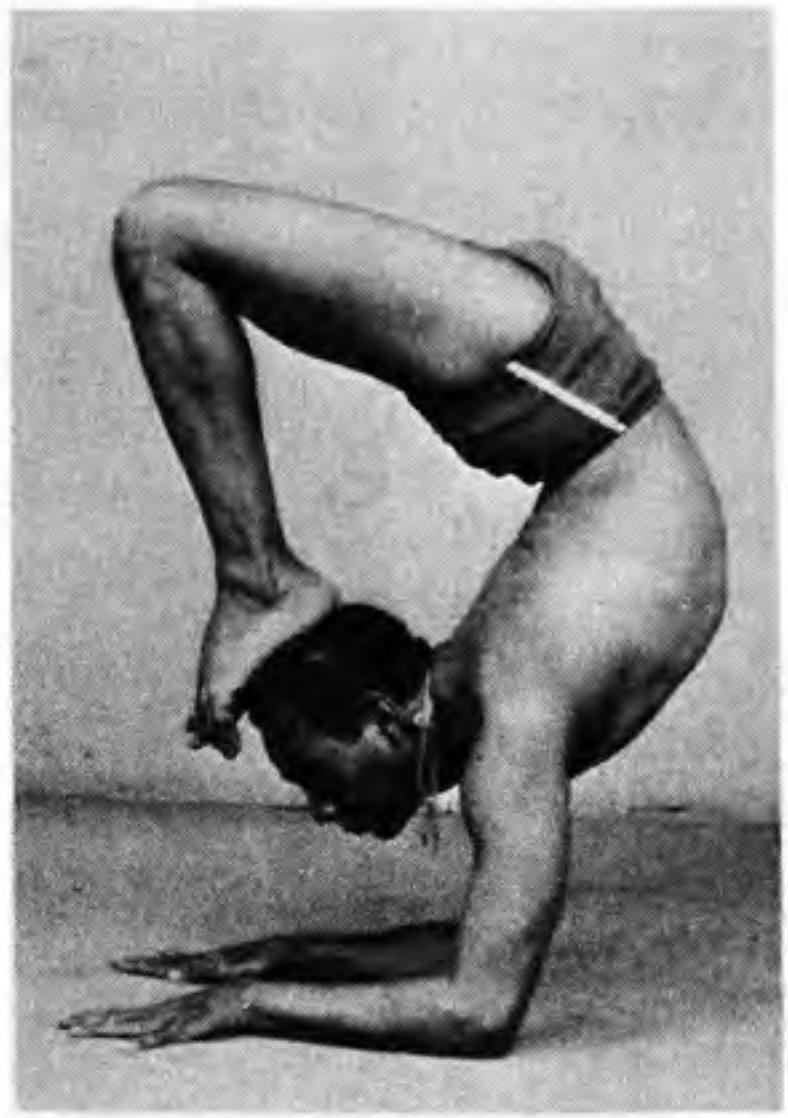

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Technique

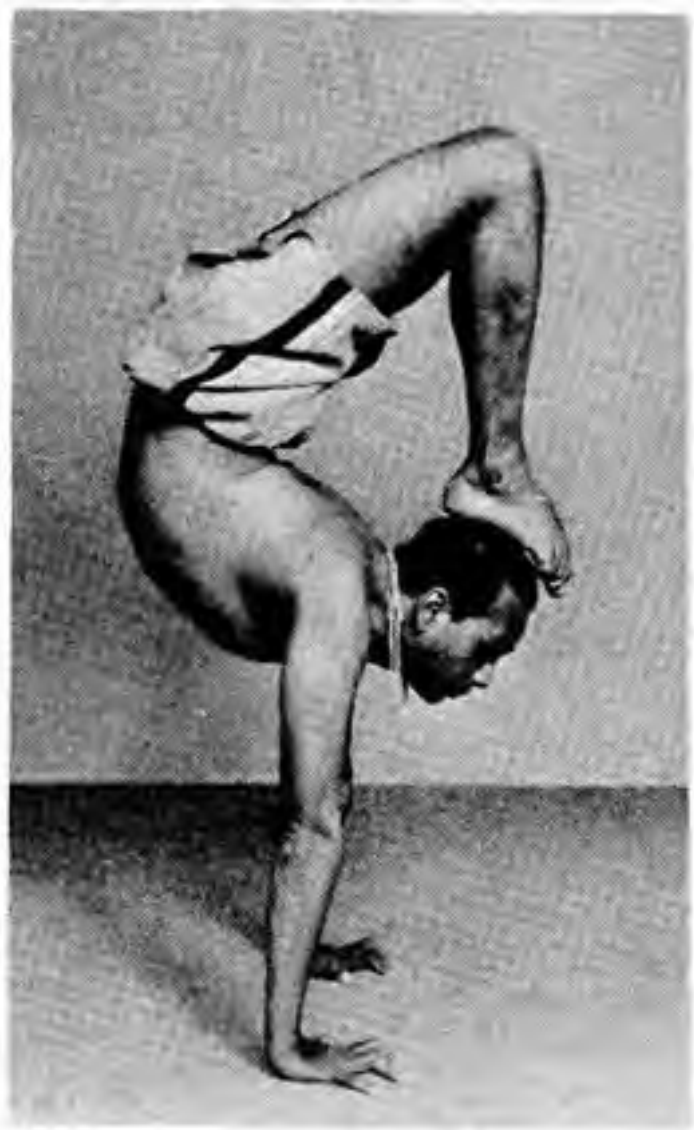
1. Stand in Tāḍāsana. (Plate 1.) Bend forward and place the palms on the floor. The distance between them should be the same as that between the shoulders. Keep the arms fully stretched.

2. Lift the legs and bend the knees. Exhale, swing the trunk and legs up vertically and balance on the hands. Lift the neck and head as high as possible above the floor. This is Adho Mukha Vṛkṣāsana. (Plate 359)

3. After securing the balance, exhale, bend the knees, stretch the spine and chest and lower the feet till the heels rest on the crown of the head. Keep the toes pointing. When balancing try to keep the knees and ankles joined. The shins should be perpendicular to the head and the arms to the floor. The shins and arms should be parallel to each other. (Plate 538)

4. It is extremely difficult to balance in this pose, which is much harder to perform than doing it as described earlier in Pīncha Mayūrāsana. (Plate 537)

5. It requires tremendous strength of the wrists and determined and continued effort to master this āsana. Breathing will be fast and laboured because the neck, shoulders, chest and spine are extended and the



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abdomen is contracted. Try to maintain normal breathing and stay in the pose as long as you can from 10 to 15 seconds.

6. Then drop the legs to the floor beyond the head to perform Ūrdhva Dhanurāsana (Plate 486) and either stand up in Tāḍāsana (Plate 1) or perform Viparīta Chakrāsana. (Plates 488 to 499)

7. To get relief from the strain on the back caused by Vṛśchikāsana, bend forward and touch the palms on the floor without bending the knees – Uttānāsana. (Plate 48)

Effects

The lungs expand fully while the abdominal muscles are stretched. The entire spine is vigorously toned and remains healthy. The āsana has also psychological significance. The head which is the seat of knowledge and power is also the seat of pride, anger, hatred, jealousy, intolerance and malice. These emotions are more deadly than the poison which the scorpion carries in its sting. The yogi, by stamping on his head with his feet, attempts to eradicate these self-destroying emotions and passions. By kicking his head he seeks to develop humility, calmness and tolerance and thus to be free of ego. The subjugation of the ego leads to harmony and happiness.

184. *Eka Pāda Rājakapotāsana I* Twenty-eight* (Plate 542)

Eka means one, pāda the leg or foot and kapota a dove or pigeon. Rājakapota means the king of pigeons. In this āsana, the chest is pushed forward like that of a pouter pigeon, hence the name of the pose.

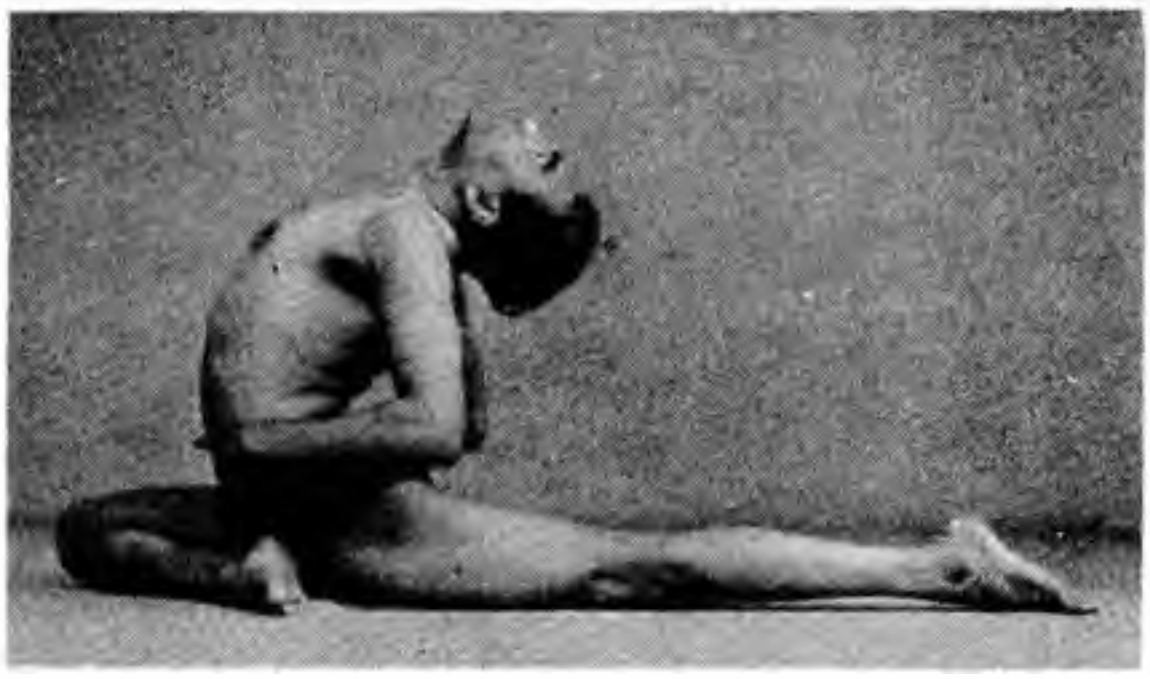
Technique

1. Sit on the floor, with the legs stretched straight in front. (Plate 77)

2. Bend the right knee and place the right foot on the floor so that the right heel touches the left groin. Keep the right knee on the floor.

3. Take the left leg back and rest its entire length straight on the floor. The front of the left thigh, knee and shin and the upper part of the toes of the left foot will then touch the floor.

4. Place the palms on the waist, push the chest forward, stretch the neck, throw the head as far back as possible and balance for some time in this preparatory movement of the pose. (Plate 539)



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5. Now rest the hands on the floor in front, bend the left knee and lift the left foot up near to the head. The left leg from the knee to the ankle should be perpendicular to the floor and to achieve this, tighten the muscles of the left thigh.

6. With an exhalation, take the right arm over the head and grip the left foot with the right hand. (Plate 540.) Take a few breaths. Then exhale again and catch the left foot with the left hand. Rest the head against the left foot. (Plate 541)

7. Push the chest forward, move the hands further down, grip the ankles and lower the head so that the upper lip touches the left heel. (Plate

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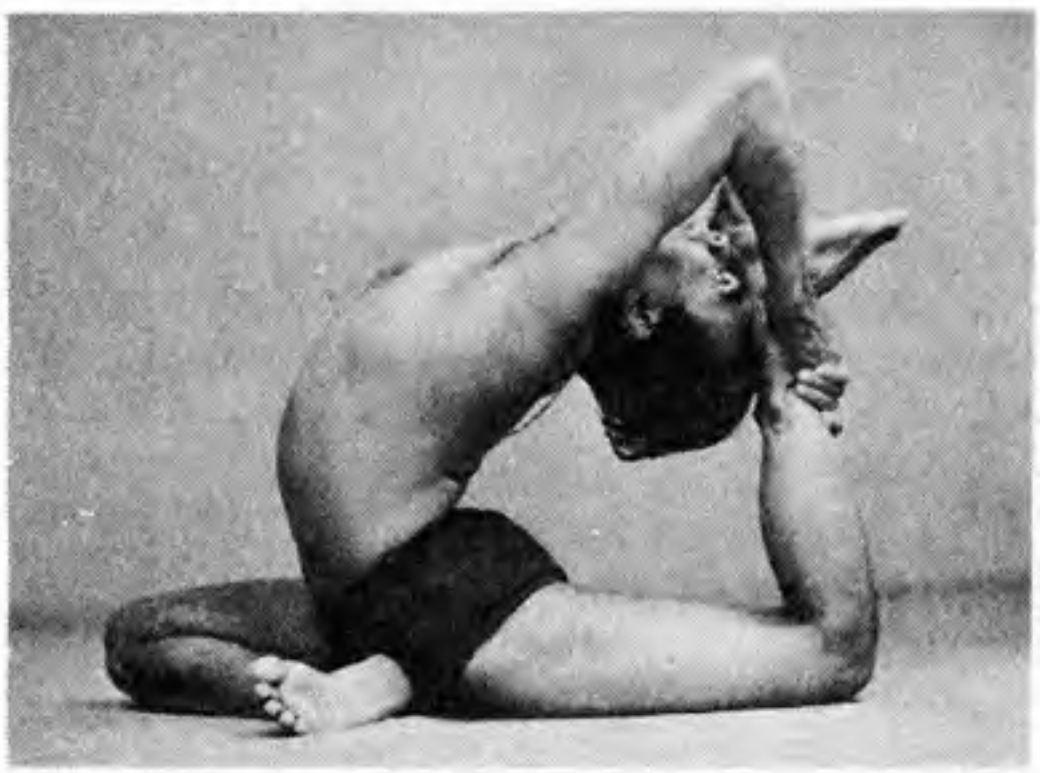

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542.) Stay in the pose for about 10 seconds. As the chest is expanded fully while the abdomen is contracted, breathing will be fast. Try and breathe normally.

8. Release the grip of the hands on the left ankle one by one and place the palms on the floor. Straighten the left leg and bring it in front, then straighten the right leg.

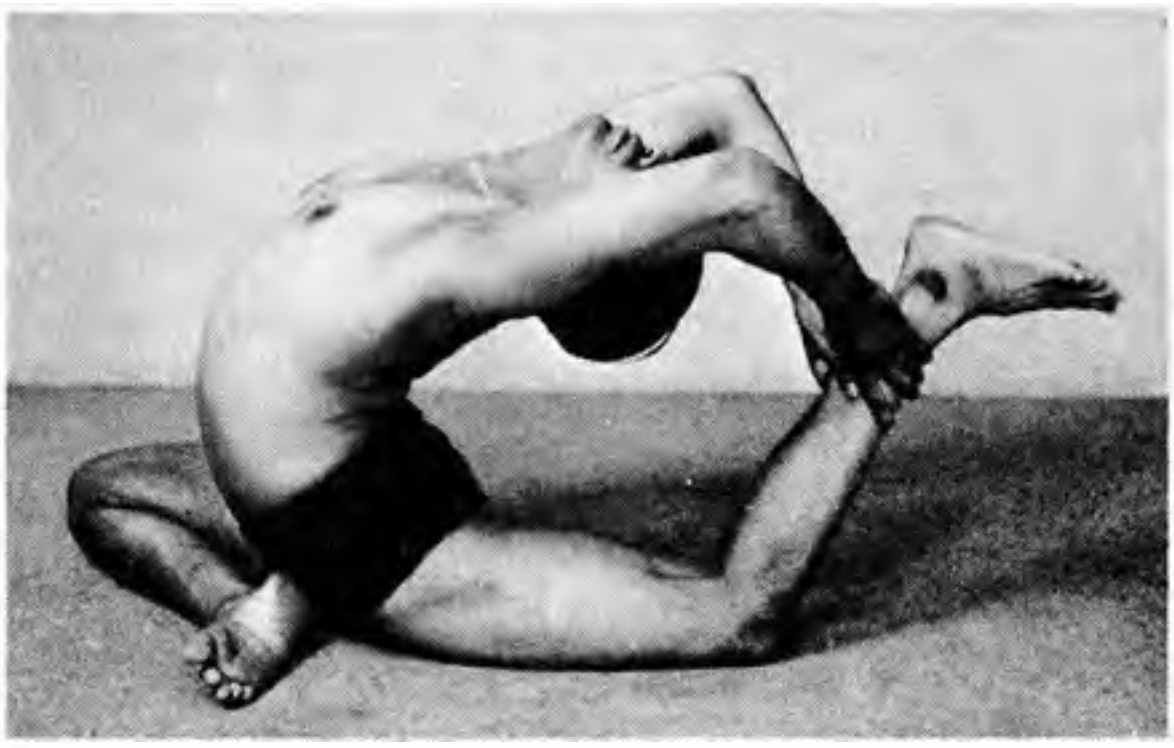
9. Repeat the pose on the other side for the same length of time. This time the left foot will touch the right groin, the right leg will be stretched back and the right foot will be caught by extending both arms over the head.

185. *Vālakhilyāsana* Forty-five* (Plate 544)

The Vālakhilya were heavenly spirits the size of a thumb, produced from the Creator's body. They are said to precede the Sun's chariot and to number sixty thousand. They are referred to in Kālidāsa's epic poem *Raghuvaṁśa.* This difficult āsana is a continuation of Eka Pāda Rājakapotāsana I. (Plate 542.) (Do not attempt it until you have mastered Eka Pāda Rājakapotāsana I and can perform the latter comfortably and gracefully.)

Technique

1. Perform Eka Pāda Rājakapotāsana I. (Plate 542.) After gripping the left ankle firmly with both the hands, contract the hips and move the coccyx up. Without releasing the ankle, stretch the left leg back (Plate 543) and take a few breaths.



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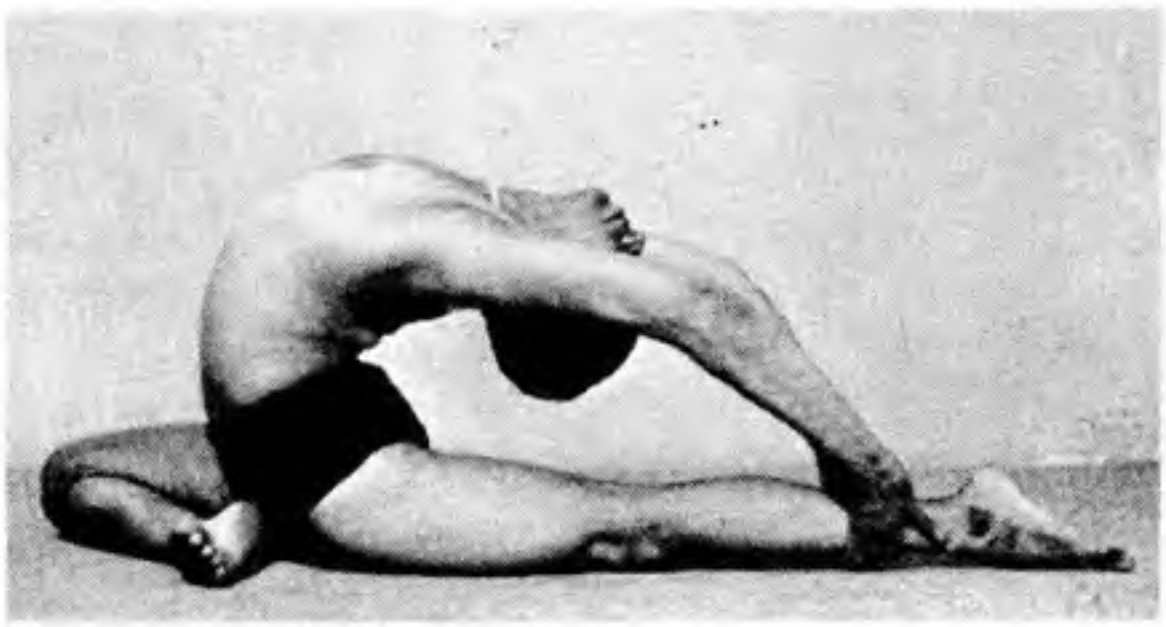
2. Exhale, extend the arms further and push the leg down until it lies flat on the floor. The entire front of the leg from the thigh to the toes should touch the floor. (Plate 544)



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3. Stay in the pose for a few seconds. As the chest is fully extended while the abdominal organs are contracted, breathing will be fast and laboured.

4. Release the ankle grip, straighten the back and rest for a while.

5. Repeat the pose on the other side for the same length of time.

Effects

The pose is a counter movement of Jānu Śīrṣāsana (Plate 127) and it rejuvenates the lower region of the spine. In it more blood circulates round the pubic region, keeping it in a healthy condition. By practising this and other poses of the Rājakapotāsana cycle, disorder of the urinary system is rectified. The neck and shoulder muscles are exercised fully. The thyroids, parathyroids, adrenals and gonads receive a rich supply of blood and this increases one's vitality. This and other āsanas of the Rājakapotāsana cycle are recommended for controlling sexual desire.

186. *Eka Pāda Rājakapotāsana II* Twenty-nine* (Plate 545)

Technique

1. Sit on the floor, with legs stretched straight in front. (Plate 77)

2. Bend the right knee and place the sole and heel of the right foot flat on the floor. The shin of the right leg will then be almost perpendicular to the floor and the calf will touch the back of the thigh. Place the right heel near the perineum. The right leg will now be in Marīchyāsana I. (Plate 144)

3. Take the left leg back and rest the entire length of it on the floor.

4. Bend the left leg at the knee until the left shin is perpendicular to the floor. Balance the body on the right foot and the left knee. In order

to balance push the right knee forward until the right thigh is parallel to the floor and the shin is almost at an angle of 40 degrees to the floor.

545

5. With an exhalation, take the right arm over the head and grip the left foot firmly with the right hand. Take a few breaths and after exhaling again take the left arm over the head and catch the same foot with the left hand as well. Rest the head on the foot. (Plate 545)

6. Push the chest forward and hold the pose for about 15 seconds.

7. Due to the extension of the chest and contraction of the abdomen breathing will be fast. Try to keep it normal.

8. Release the grip on the ankles and straighten the legs.

9. Repeat the pose on the other side. This time the left leg will be in Marīchyāsana I, the right foot will be caught by the hands and the balance maintained while the head rests on it. Hold the pose for the same length of time on both sides.

10. This āsana is easier than the earlier one, once the difficulty of balancing in it is overcome.

187. *Eka Pāda Rājakapotāsana III* Thirty* (Plate 546)

Technique

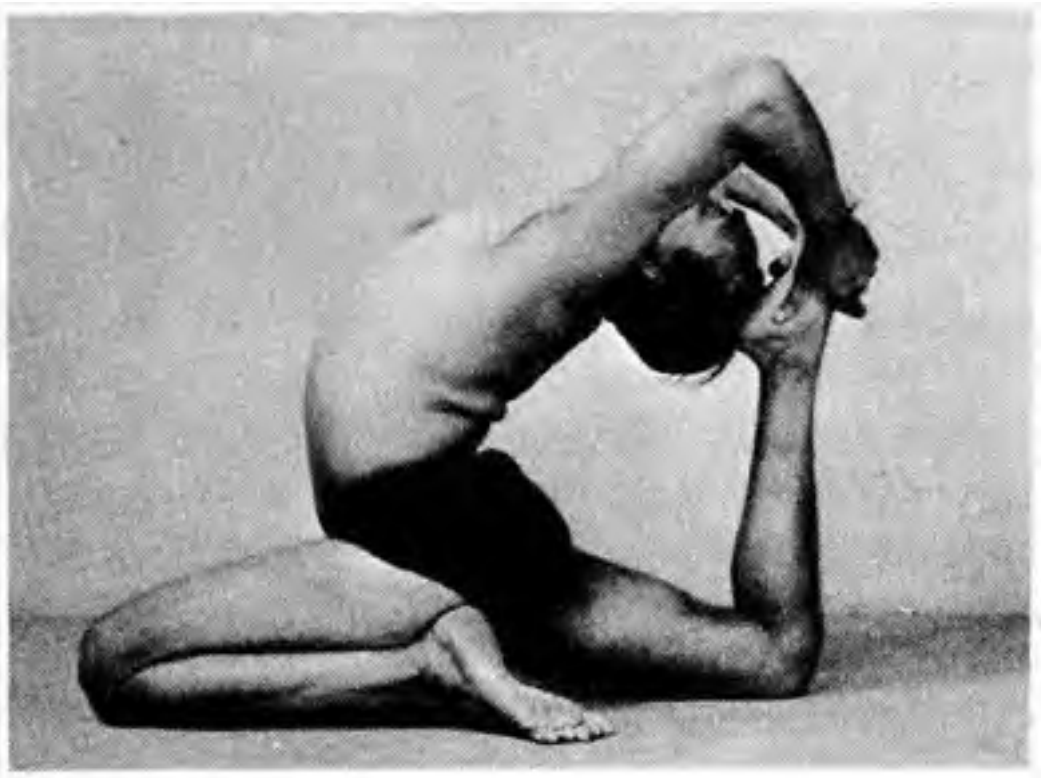
1. Sit on the floor, with both legs stretched straight in front. (Plate 77)

2. Bend the left leg at the knee so that the toes point back and touch the floor by the left buttock. The inner side of the left calf should touch the outer side of the left thigh and the left knee should be kept on the floor. The left leg will not be in Vīrāsana. (Plate 89)

3. Take the right leg back and rest its entire length straight on the floor.

4. Place the palms on the floor. Exhale, bend the right knee and take the right foot up near the head. The right shin from knee to ankle should be perpendicular to the floor and to get this position, tighten the muscles of the right thigh. Take a few breaths.

5. Exhale, stretch the spine and neck, throw the head back and taking the arms one by one over the head grip the right foot and rest the head on it. (Plate 546.) Balance for about 15 seconds and try to breathe normally.



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6. Release the grip on the right ankle and straighten the legs.

7. Repeat the pose for the same length of time on the other side. Now the right leg will be in Vīrāsana and the head will rest on the left foot which will be caught by both hands taken over the head.

188. *Eka Pāda Rājakapotāsana IV* Forty* (Plate 547)

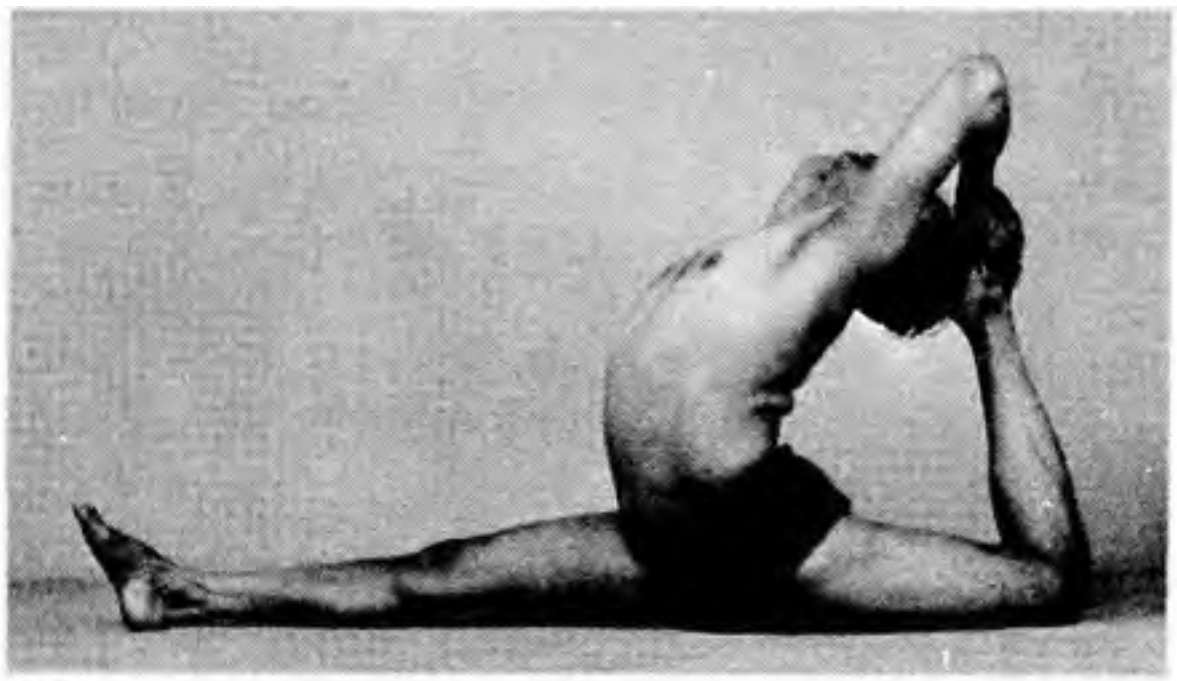
Technique

1. Kneel on the floor and place the palms on either side of the body on the floor. Lift the knees up. Bring the right leg forward and the left leg back and stretch both legs straight with an exhalation. The back of the leg in front and the front of the leg in the rear should touch the floor.

The legs will now be in Hanumānāsana (Plate 475), which resembles the splits of Western ballet.

2. Push the chest forward, extend the neck and throw the head as far back as you can. Bend the left knee and take the left foot up near the head. The left shin from knee to ankle should be perpendicular to the floor.

3. With an exhalation, take the left arm over the head and grip the left foot with the left hand. After taking a few breaths, exhale again, take the right arm over the head and catch the left foot with the right hand. Rest the head against it. (Plate 547)



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4. Stay in the pose for about 10 seconds. Release the grip on the left foot and come back to Hanumānāsana. (Plate 475.) Raise the hips from the floor by placing the palms on the ground.

5. Now return to Hanumānāsana, this time keeping the left leg stretched straight on the floor in front. Bend the right knee and take the right foot up near the head.

6. Repeat the pose by catching the right foot and resting the head on it. Stay for the same length of time on this side.

Effects of the Eka Pāda Rājakapotāsana Cycle

These poses rejuvenate the lumbar and dorsal regions of the spine. The neck and shoulder muscles are fully exercised and the various positions of the legs strengthen the thighs and ankles. The thyroids, parathyroids, adrenals and gonads receive a rich supply of blood and function properly, which increases vitality. In these poses more blood circulates round the pubic region, which is kept healthy. These āsanas are recommended for disorders of the urinary system and for controlling sexual desire.

189. *Bhujaṅgāsana II* Thirty-seven* (Plate 550)

Bhujaṅga means a serpent. This pose is preparatory to Rājakapotāsana (Plate 551), and resembles that of a serpent about to strike.

Technique

1. Lie flat on the floor on the stomach. Bend the elbows and place the palms on the floor on either side of the waist.

2. Exhale, lift the head and trunk up and back, by stretching the arms fully, without moving the pubic region and the legs. (Plate 73)

3. Remain in this position breathing normally for a few seconds.

4. Exhale, bend the knees and lift the feet up. The weight of the body will be felt on the pelvic region, thighs and hands. Take a few breaths.

5. Taking more pressure on the right hand, lift the left hand off the floor and with a deep exhalation swing the left arm back from the shoulder and grasp the left knee-cap. (Plate 548.) After a few breaths exhale again fast and deeply, and swinging the right arm back from the shoulder, grip the right knee-cap with the right hand. (Plate 549)

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6. Stretch the legs straight on the floor again without loosening the grip on the knees. Stretch the neck and throw the head as far back as you can. (Plate 550.) Gradually try to bring the knees as close to each other as possible.

7. Contract the anus, tighten the thighs and hold the pose for about 15 to 20 seconds. As the spine, chest and shoulders are fully extended while the abdomen is contracted, breathing is fast and difficult.

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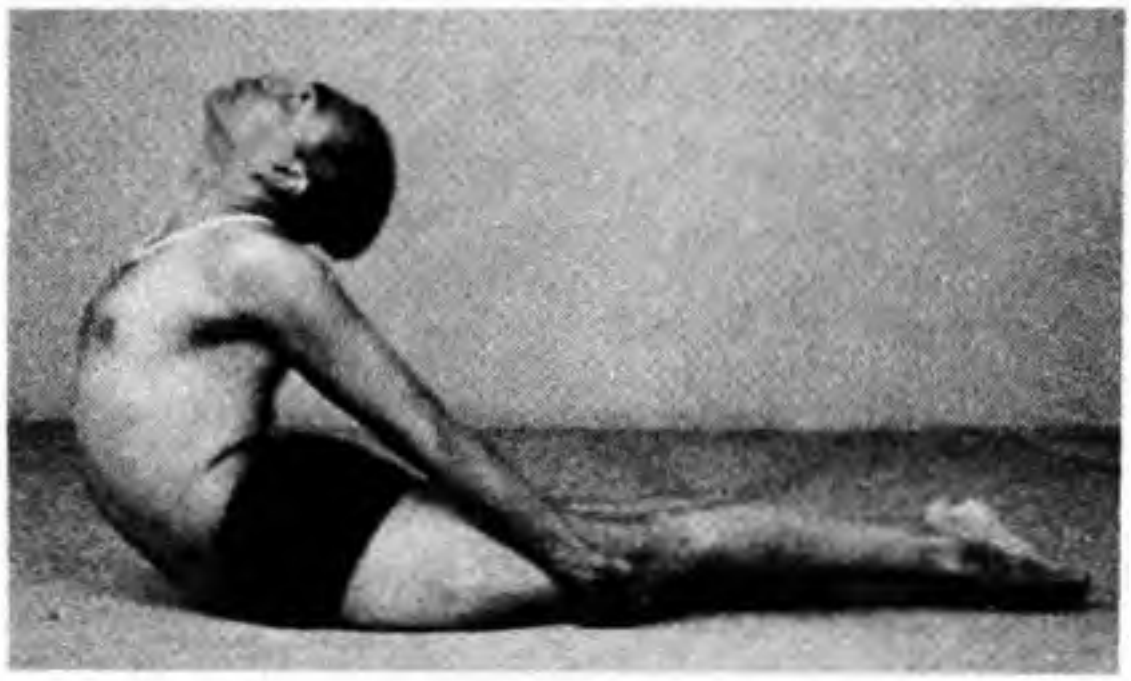

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8. Bend the knees, release the hands one by one from the knee-caps and rest on the floor.

Effects

As the posture is an intensified version of Bhujaṅgāsana I (Plate 73) its effect is greater. Here the sacroiliac, lumbar and dorsal regions of the spine benefit along with the neck and shoulder muscles which are fully stretched. In this pose more blood circulates in the pubic region which is kept healthy. The thyroids, parathyroids, adrenals and gonads receive a copious supply of blood and this results in increased vitality. The chest is also expanded fully.

190. *Rājakapotāsana* Thirty-eight* (Plate 551)

Rājakapota means the king of pigeons. This is a very attractive but

difficult pose. The chest is pushed forward like that of a strutting pigeon, hence this name.

Technique

1. Lie full length on the floor on the stomach, bend the elbows and place the palms on the floor on either side of the waist.

2. Exhale, lift the head and trunk up and back by stretching the arms fully, without moving the pubic region and the legs. Remain in this position for a few seconds, breathing normally.

3. Exhale, bend the knees and lift the feet up. The body weight will be felt by the pelvic region and the thighs. Take a few breaths.

4. Taking pressure on the right hand, lift the left hand and with a fast and deep exhalation swing the left arm back from the shoulder and catch hold of the left knee-cap. (Plate 548.) Take a few breaths. Again with a fast and deep exhalation, swing the right arm back from the shoulder and grip the right knee-cap with the right hand. (Plate 549)

5. Raise the chest and using the hold on the knees as a lever stretch the spine and neck still further back until the head rests on the soles and heels. Keep the feet together and the knees as close to each other as possible. (Plate 551)

551

6. Maintain the pose as long as you can for about 15 seconds. As the spine and chest are fully extended while the abdomen is pressed against the ground, breathing will be very fast and difficult and a stay of about 15 seconds will seem like an age. The pose closely resembles Laghu Vajrāsana (Plate 513), the difference being that the body now rests on

the pelvic region and the thighs, instead of on the legs from the knees to the toes.

7. Stretch the legs straight again. Let go of the knees and bring the palms in front on the floor one by one. If both hands are released simultaneously, due to the tension of the spine one is apt to fall on the face and hurt oneself. After resting the palms one by one in front, rest the chest on the floor and relax.

8. If this is difficult, place the palms on the floor and rest the crown of the head on the feet. (Plate 552)

552

Effects

In Kapotāsana (Plate 512) the lumbar region of the spine feels the stretch. In Rājakapotāsana on the other hand, both the lumbar and the dorsal regions of the spine benefit by it. The neck and shoulder muscles are fully stretched and exercised. As the weight of the body falls on the pubic region, more blood circulates there so that the region is kept healthy. The abdominal organs are pressed against the floor and so are massaged. The thyroids, parathyroids, adrenals and the gonads receive a copious and rich supply of blood and this ensures increased vitality. The āsana is recommended for disorders of the urinary system. Along with Kandāsana (Plate 471) and Supta Trivikramāsana (Plate 478) Rājakapotāsana is recommended for controlling sexual desire.

191. *Pādāṅguṣṭha Dhanurāsana* Forty-three* (Plate 555)

Pāda means the foot. Aṅguṣṭha means the big toe and dhanu a bow. This is an intensified version of Dhanurāsana. (Plate 63)

The body here resembles a taut bow from the shoulders to the

knees. The legs from the knees to the toes and the extended arms over the head resemble the tightly drawn bow-string.

The posture is given below in three movements.

Technique

1. Lie flat on the floor on the stomach, face downwards.

2. Put the palms on the floor on either side of the chest. Press them down and straightening the arms, raise the head and trunk off the floor as in Bhujaṅgāsana I. (Plate 73.) Bend the knees and lift the feet up. Exhale, move the feet and head closer to each other and try to touch the head with the feet. (Plate 552)

3. Place one foot over the other. Then, putting greater weight on the hand on one side, lift the other hand off the floor. With a fast and deep exhalation stretch the lifted arm from the shoulder over the head and catch the toes. (Plate 553.) Now lift the other hand off the floor with an exhalation and also grasp the toes. Maintain a firm grip on the toes and with the right hand catch the right big toe tightly and hold the left one with the left hand. (Plate 554.) Take a few breaths.

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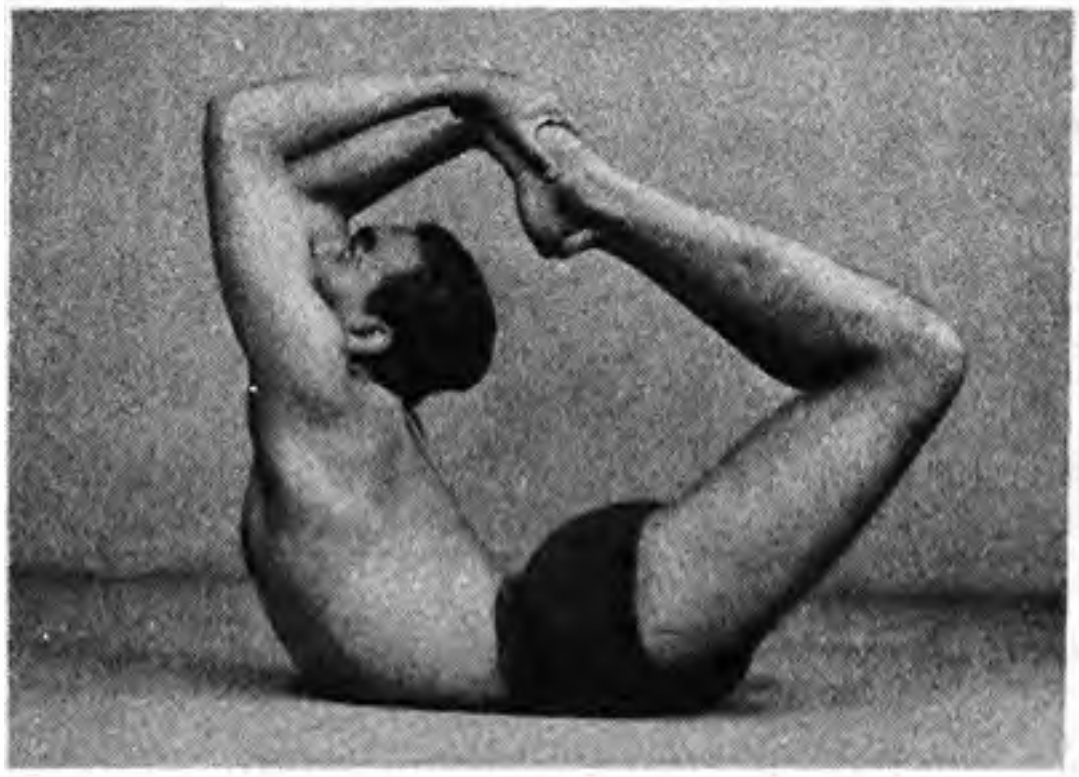
4. Hold the feet firmly, otherwise they will slip from the hands. Then with an exhalation stretch the arms and the legs as high as you can above the head. Try to straighten the arms at the elbows. This is the first movement. (Plate 555.) Hold the pose for about 15 seconds.

5. Maintaining the grip on the toes, now bend the elbows and pull the feet down until the heels rest on the head. Gradually increase the tension so that the heels rest first on the forehead, then on the eyes



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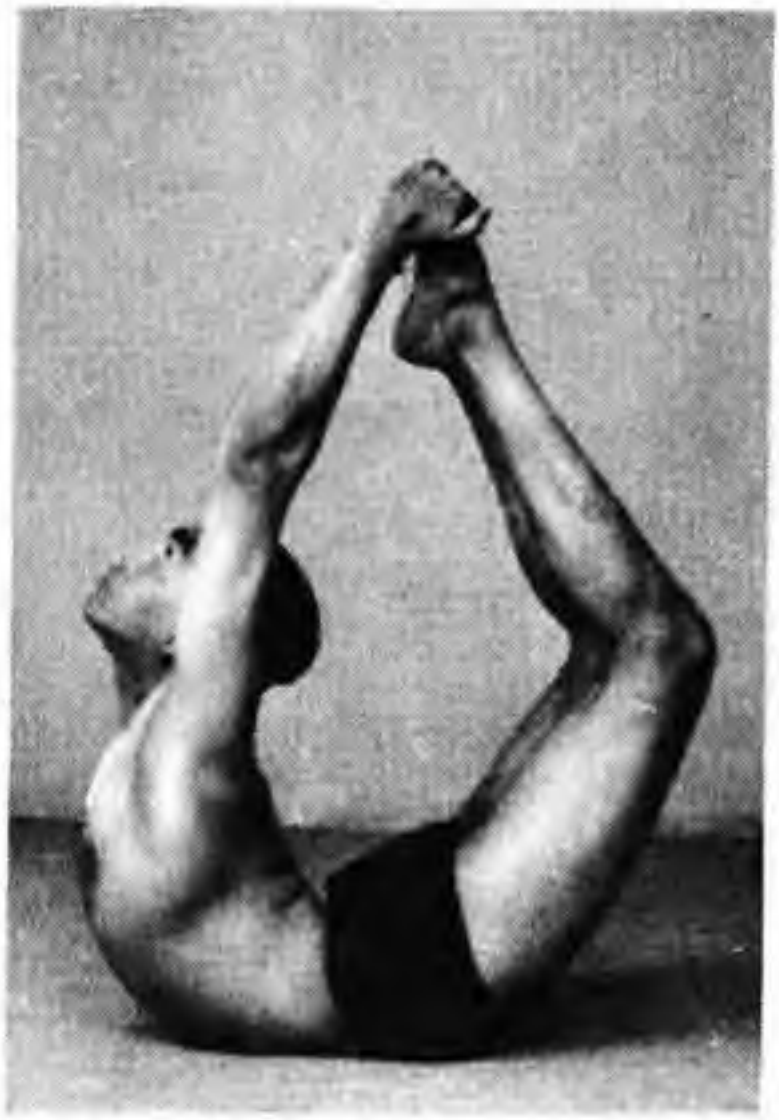

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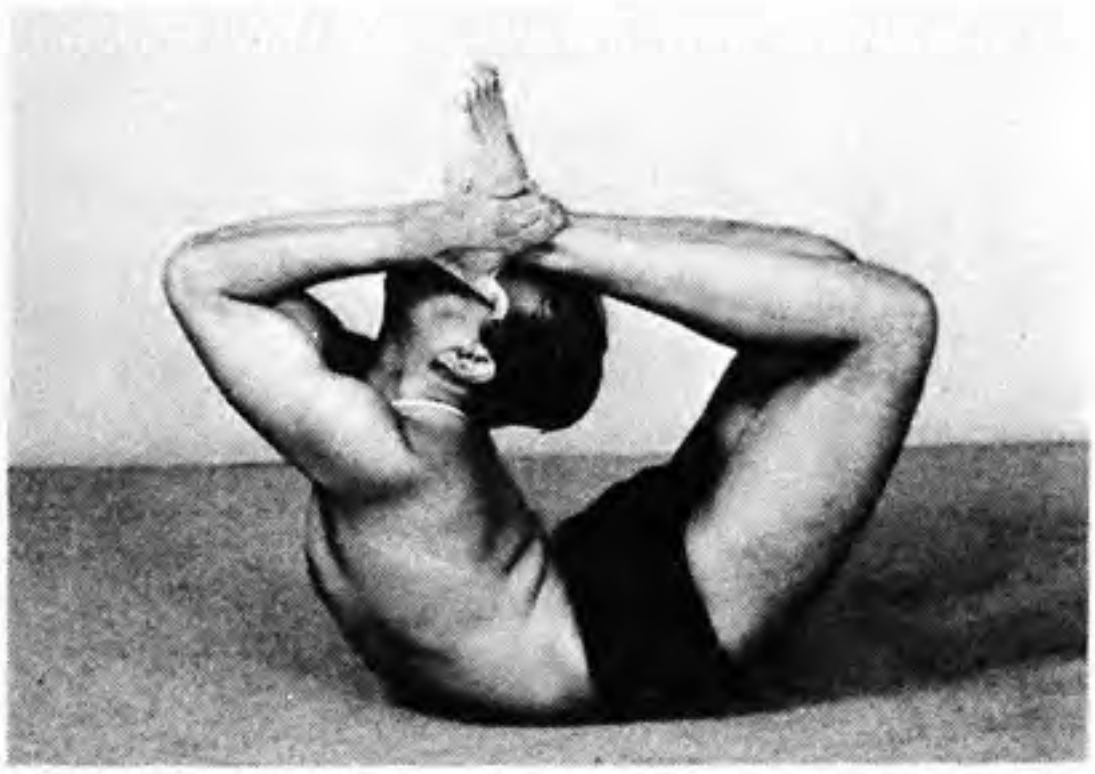
and lastly on the lips. (Plate 556.) This is the second movement. Stay in the pose for a few seconds.

6. Still maintaining a firm grip on the toes, lower the feet until they touch the sides of the shoulders. (Plate 557.) This is the third movement. Stay in it for a few seconds.

7. After completing the third movement, exhale and stretch the legs and



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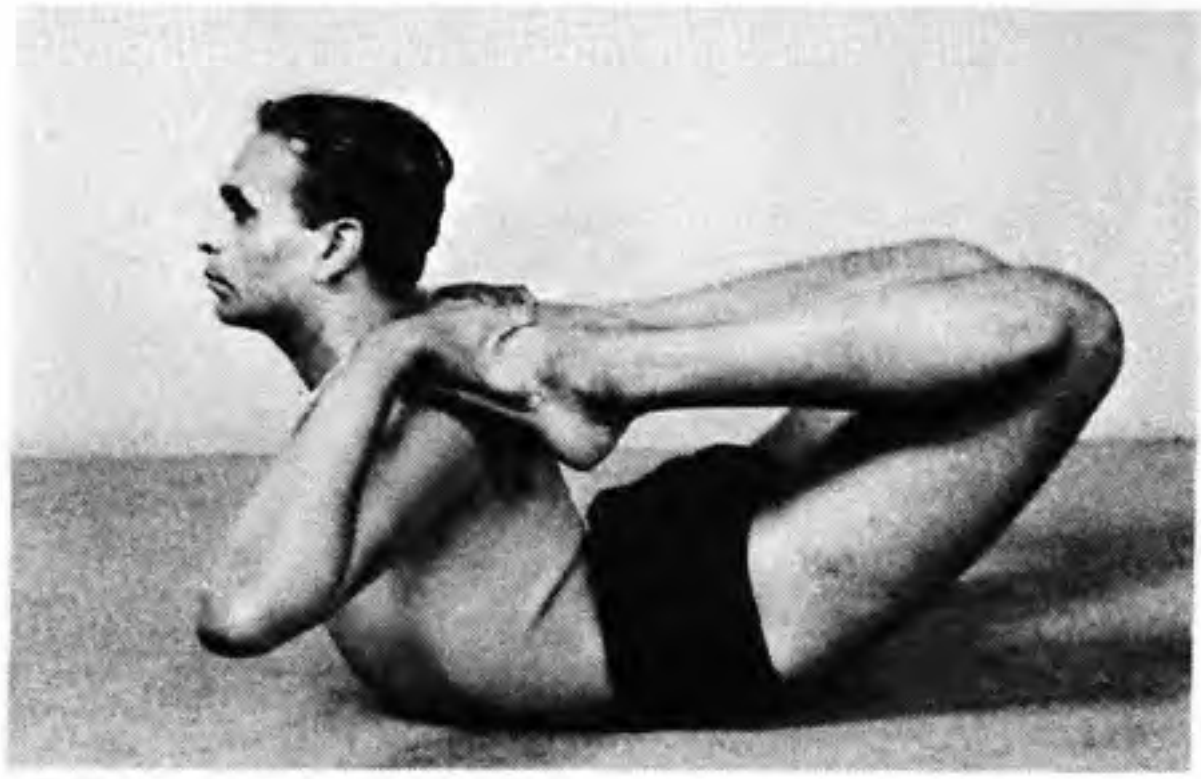

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arms up. Release the legs one by one, putting the hands down immediately on the floor, otherwise due to the recoil of the spine, one is likely to bang the face. Then rest on the floor and relax.

8. Due to the stretch of the neck, shoulders, chest and spine as well as the pressure of the abdomen against the floor, the breathing will be very fast and laboured. Try to breathe normally during all three movements.

Effects

In this āsana, all the vertebrae benefit from the stretch. The entire body bears the strain and becomes more elastic. The whole weight falls on the abdominal area near the navel and due to the pressure on the

abdominal aorta, blood circulates properly round the abdominal organs. This keeps them healthy and improves the digestion. In this posture the shoulder-blades are well stretched so that stiffness in the shoulders is relieved. The most noticeable effect, however, is that throughout the strenuous movements, the mind remains passive and still. This āsana helps to keep one trim and young in body, and fresh and alert in mind.

192. *Gheraṇḍāsana I* Forty-four* (Plates 561 and 562)

Gheraṇḍa is the name of a sage, the author of the *Gheraṇḍa Saṁhitā*, to whom the āsana is dedicated. The pose is a combination of Bhekāsana (Plate 100) and Pādāṅguṣṭha Dhanurāsana (Plate 555), the arm and leg of one side being in the position of the former āsana, while the arm and leg of the other side are in the latter āsana.

Technique

1. Lie flat on the floor on the stomach, face downwards.

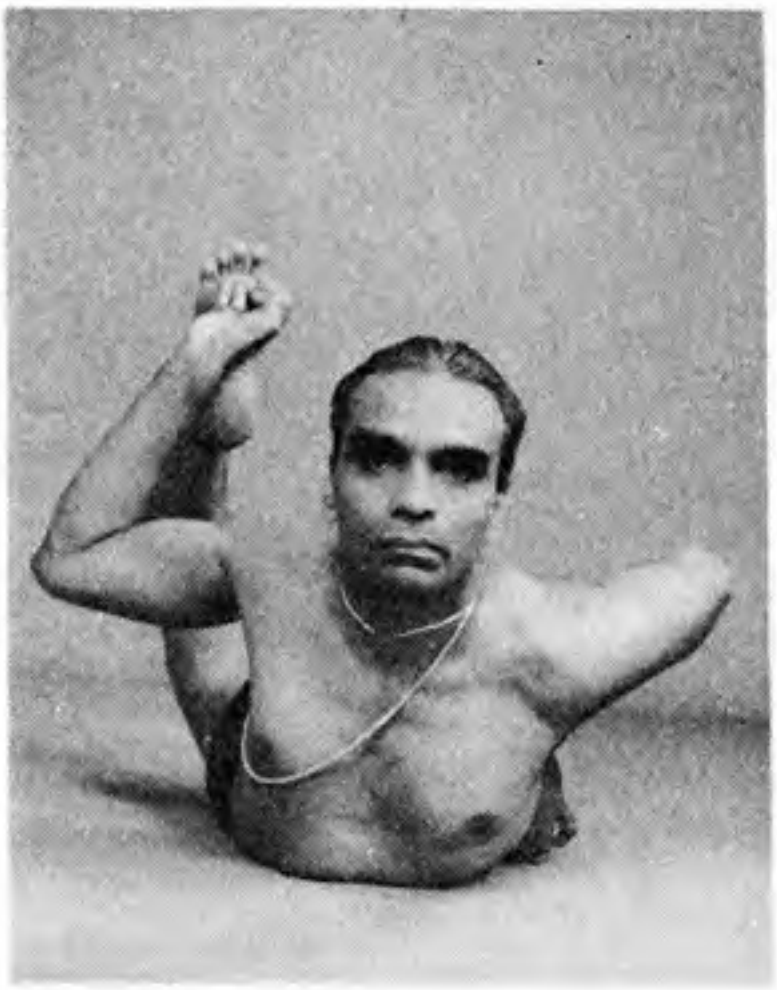
2. Exhale, bend the left knee and move the left foot towards the left hip.

3. Hold the sole of the left foot with the left hand. Take a few breaths. Now rotate the left hand so that the palm touches the upper part of the left foot and the toes and fingers point to the head.

4. Exhale and push the left foot down with the left hand to bring the sole and heel closer to the ground. Lift the head and chest off the floor. The left arm and leg are now in Bhekāsana. (Plate 100.) Take a few breaths.

558

5. With the right hand catch the right big toe by bending the right knee. (Plate 558.) Rotate the right elbow and shoulder (Plate 559) and stretch the right arm and leg up. (Plate 560.) Take a few breaths.



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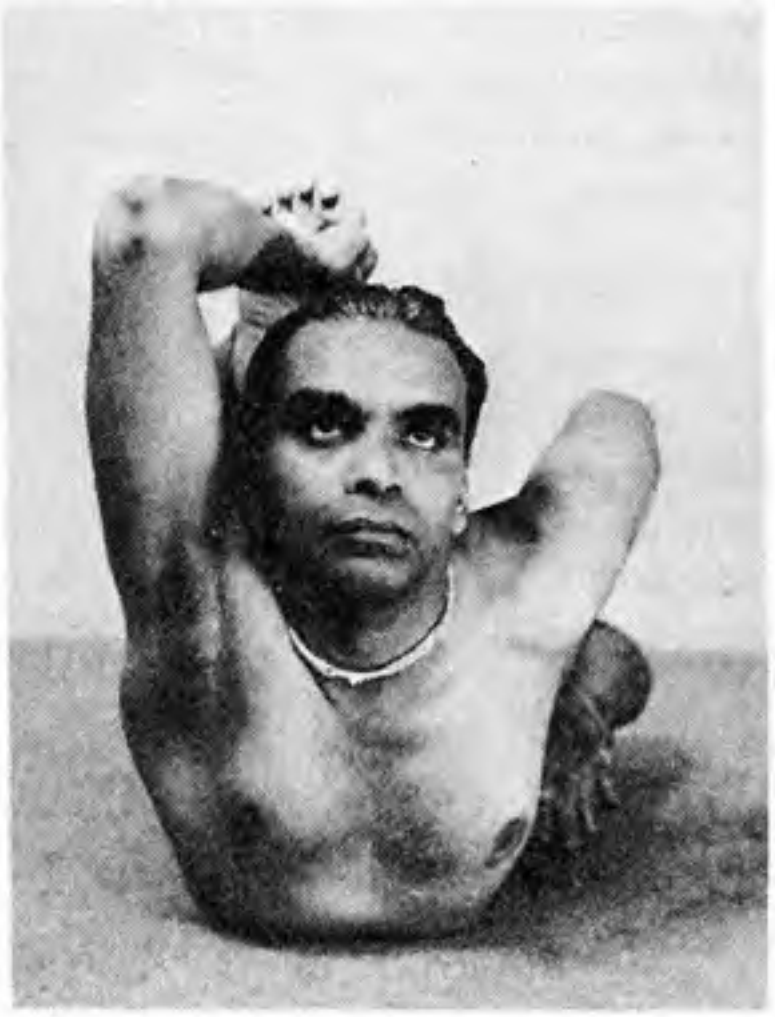

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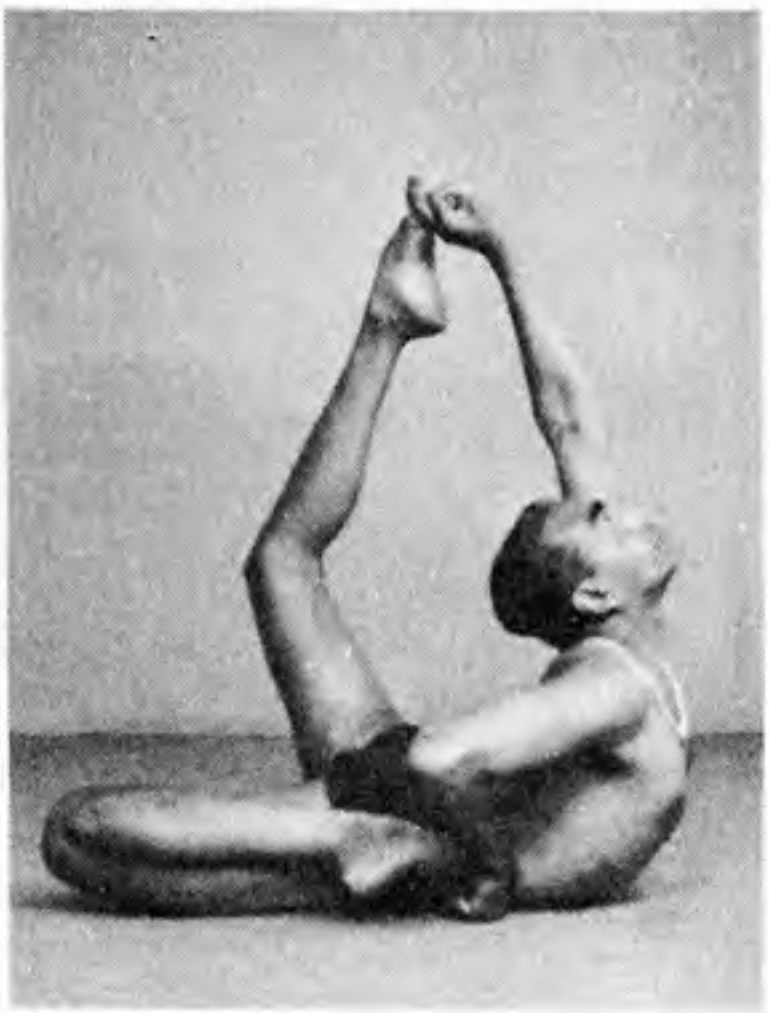
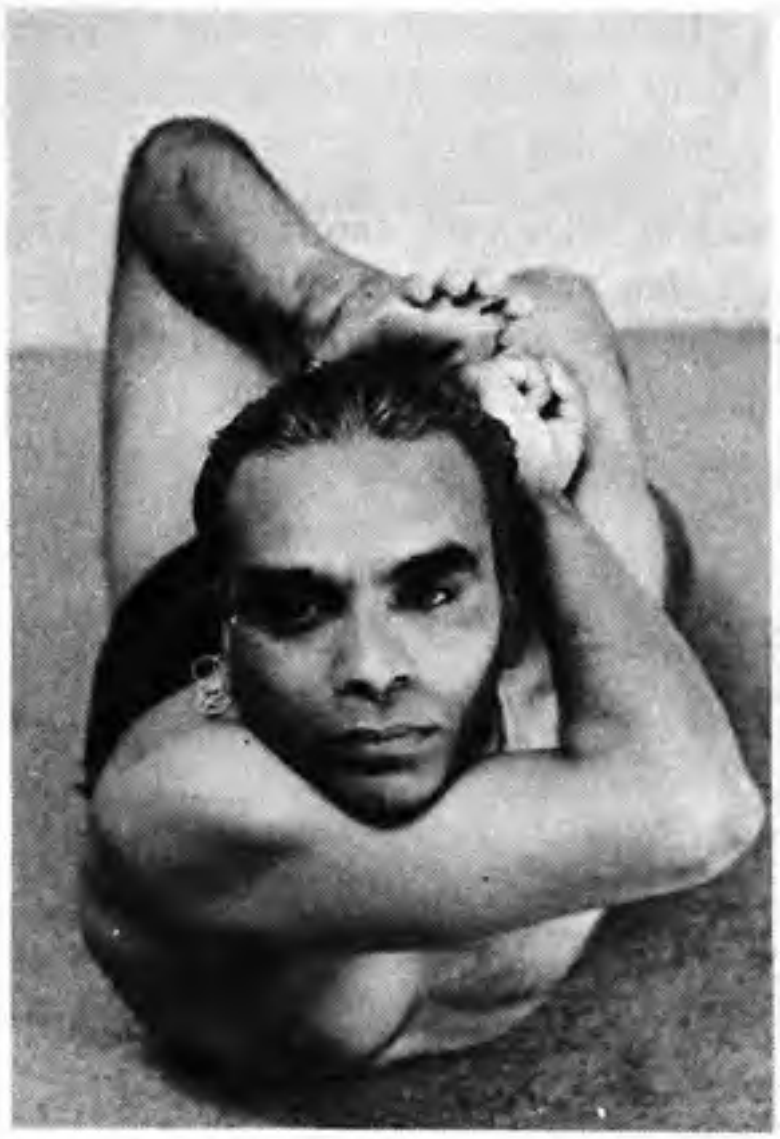


562

6. Exhale, raise the right arm and leg up vertically without releasing the grip on the right big toe. (Plates 561 and 562.) The right arm and leg are now in Pādāṅguṣṭha Dhanurāsana. (Plate 555)

7. Stay in the position from 15 to 20 seconds. Breathing will be fast due to the pressure of the abdomen on the floor.

8. Then exhale, stretch the neck and throw the head back. Bend the right elbow and knee, and pull the right leg down until the foot touches the left shoulder. (Plate 563)



563

9. Stay in this posture for a few seconds.

10. With an exhalation come back to position 6. (Plate 561)

11. Now release the feet, stretch the legs on the floor, lower the head and chest and relax for a short time.

12. Repeat the pose, this time keeping the right arm and leg in Bhekāsana and the left arm and leg in Pādāṅguṣṭha Dhanurāsana. Stay for the same length of time in this position also. Follow the technique given above, reading left for right and vice versa.

193. *Gheraṇḍāsana II* Forty-six* (Plates 564 and 565)

In this āsana, the arm and leg of one side are in Baddha Padmāsana

(Plate 118), while the arm and leg of the other side are in Pādāṅguṣṭha Dhanurāsana. (Plate 555)

Technique

1. Sit on the floor with the legs stretched straight in front. (Plate 77.) Place the right foot at the root of the left thigh and then lie flat on the back.

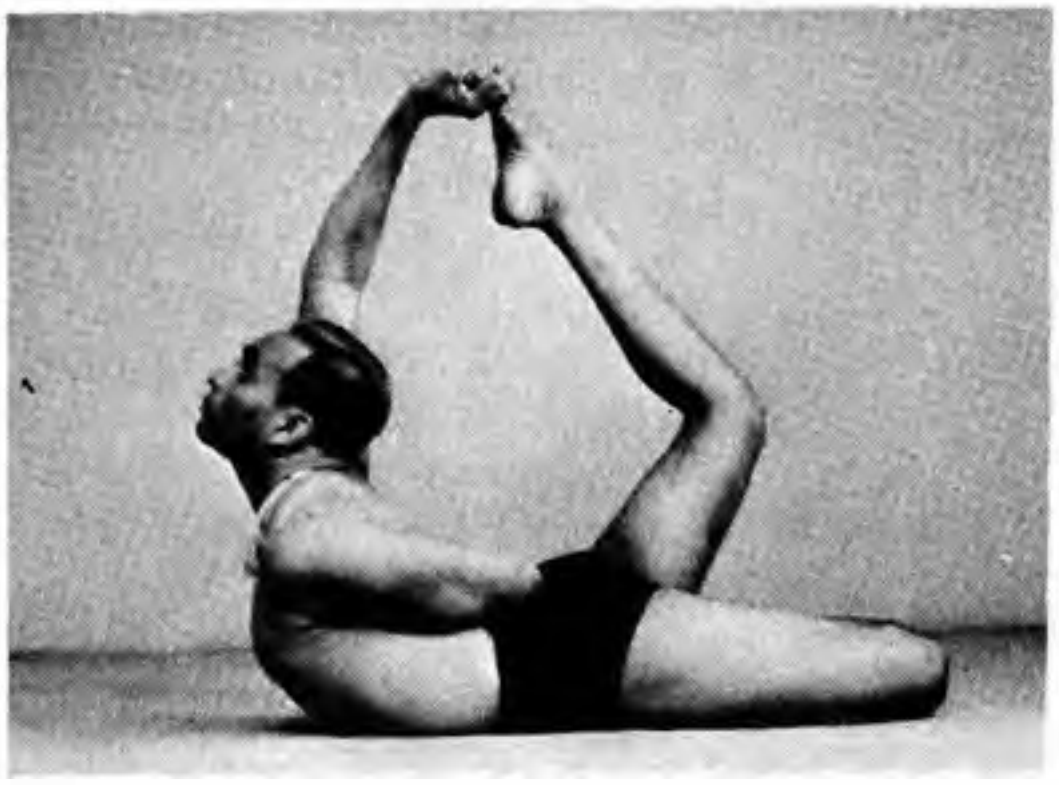
2. Now roll over on the stomach without disturbing the position of the right foot. Exhale, and moving the right arm from the shoulder behind the back, catch the right big toe with the right hand. The right arm and leg are now in Baddha Padmāsana. (Plate 118.) Take a few breaths and lift the head and chest off the floor.

3. Exhale, bend the left knee and catch the left big toe with the left hand. Rotate the left arm and shoulder and without releasing the grip on the toe lift the left arm and leg up until they are in Pādāṅguṣṭha Dhanurāsana. (Plates 564 and 565)

564

4. Stay in the position for 15 seconds. Breathing will be fast and laboured due to the pressure of the abdomen against the floor.

5. Then exhale, stretch the neck and throw the head back, bend the



565

left elbow and knee and pull the left leg down until the foot touches the right shoulder. (Plate 566)

566

6. Stay in this posture for a few seconds. Due to the pressure on and contraction of the abdomen, breathing will be laboured.

7. With an exhalation come back to position 3. (Plate 564)

8. Release the hold on the feet, stretch the legs straight and lower them, the chest and head to the floor and relax for a short time.

9. Repeat the pose on the other side for the same length of time. The left arm and leg will now be in Baddha Padmāsana, while the right arm and leg will be in Pādāṅguṣṭha Dhanurāsana. Follow the technique stated above, reading left for right and vice versa.

Effects

All the vertebrae benefit from the intense stretch and the whole body becomes more supple. The abdominal area near the navel bears the weight of the body and, due to the pressure on the abdominal aorta, blood circulates properly in that region thus keeping the abdominal organs healthy. This improves the digestion. The shoulder-blades are fully extended so that stiffness in the shoulder joints is relieved. The pose makes the knees firm and relieves pain in the knee joints due to rheumatism or gout. The pressure of the hands on the feet corrects the arches and helps to cure flat feet. The pose strengthens the ankle joints, relieves pain in the heels and helps persons suffering from calcaneal spurs.

194. *Kapiṅjalāsana* Forty-three* (Plate 567)

Kapiṅjala is a kind of partridge, the Chātaka bird which is supposed to live only on raindrops and dew.

The pose is a combination of Vasiṣṭhānāsana (Plate 398) and Pādāṅguṣṭha Dhanurāsana (Plate 555) and is a difficult one to master.

Technique

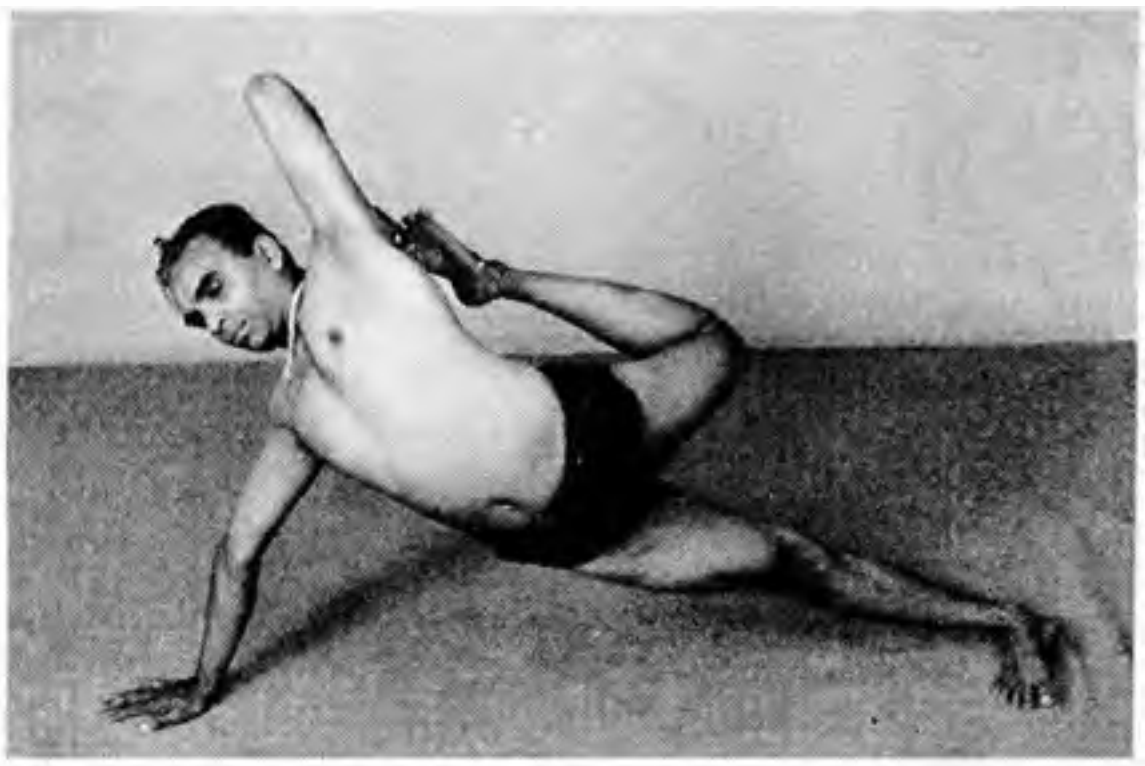
1. Stand in Tāḍāsana. (Plate 1.) Bend forward, rest the palms on the floor and move the legs back about 4 to 5 feet as if performing Adho Mukha Svānāsana. (Plate 75)

2. Turn the whole body sideways to the right and balance it on the right palm and foot. The outer side of the right foot should rest firmly on the ground.

3. Place the left foot over the right foot, rest the left palm on the left hip and balance, without moving the body. (Plate 396.) The right side of the body is in Vasiṣṭhāsana.

4. Exhale, bend the left leg at the knees and catch the left big toe firmly between the thumb and the index and middle fingers of the left hand.

5. Rotate the left elbow and shoulder and stretch the left arm and leg behind the back to form a bow, without releasing the grip on the left big toe. (Plate 567.) The left arm and leg are now in Pādāṅguṣṭha Dhanurāsana.



567

6. Balance for a few seconds, keeping the right arm and leg rigid and also maintaining the grip of the left hand on the left big toe. As the spine, chest, neck and shoulders are fully stretched and the abdomen is contracted, breathing will be laboured.

7. Release the grip on the left big toe, straighten the left leg and place the left foot over the right foot and the left hand on the left hip. Rest both palms and feet on the floor as in position 1 above. Then repeat the pose on the other side for the same length of time. The left side of the body will now be in Vasiṣṭhāsana (Plate 398) while the right side will be in Pādāṅguṣṭha Dhanurāsana. (Plate 555.) Follow the technique given above, reading left for right and vice versa.

Effects

In this posture the wrists are strengthened and the shoulder-blades fully exercised so that stiffness in the shoulder joints is relieved. The legs are toned and all the vertebrae benefit. The chest expands fully and the abdominal muscles become powerful. The āsana helps to keep the whole body in good condition.

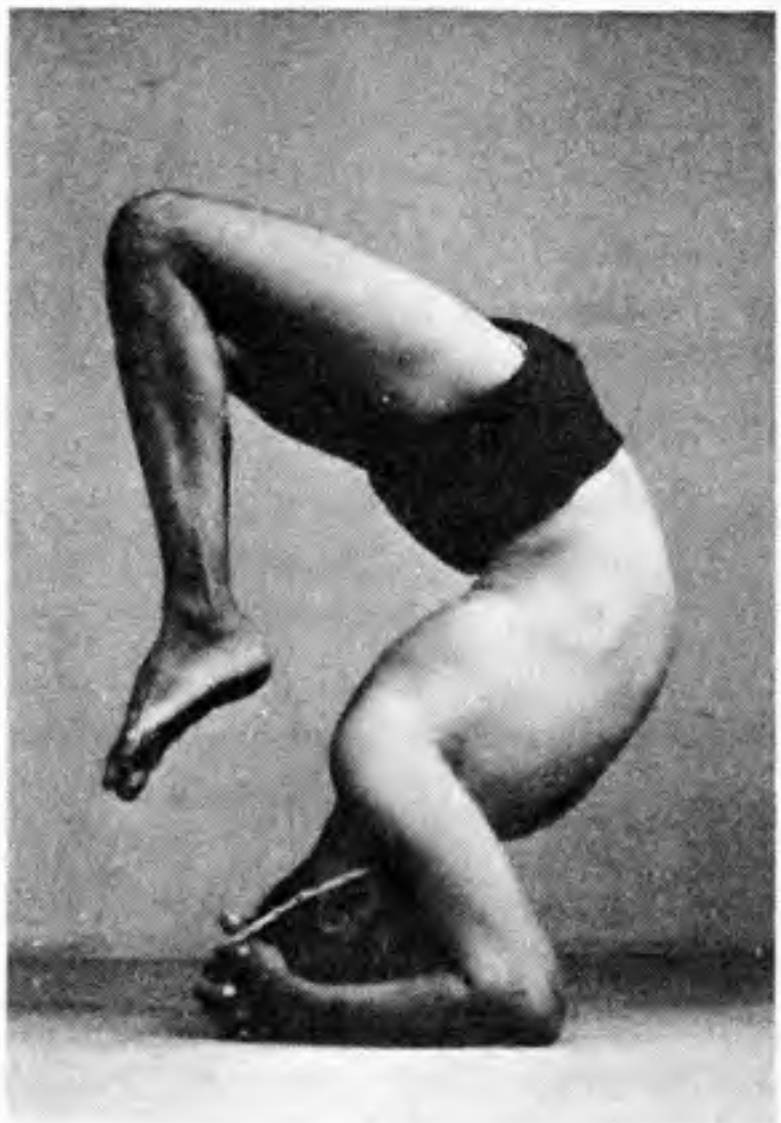
195. *Śīrṣa Pādāsana* Fifty-two* (Plate 570)

Śīrṣa means the head and pāda the foot. This is the hardest of all the back-bending poses and is practised while balancing on the head in Śīrṣāsana. (Plate 190.) Here the back is arched after the head stand and the feet are brought down until the heels rest on the back of the neck and the big toes are caught by the hands and made to touch the back of the head.

Technique

1. Spread a blanket on the floor, kneel on it and perform Sālamba Śīrṣāsana I. (Plate 190)

2. Bend the knees and lower the legs behind the back. (Plates 517 and 518.) Exhale, stretch the spine, contract the buttocks, pull back and lower the thighs (Plate 568) and feet until the toes touch the back of the head. (Plate 569.) Without moving the elbows, lift the wrists slightly off the ground and catch the big toes with the hands without loosening the finger grip. (Plate 570.) Push the chest forward and stay in the pose as long as you can, for a few seconds.



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3. In other back-bending postures, one is able to get some help to stretch the spine. Here, however, the spine has to move independently in order to get the requisite curvature.

4. As the spine, chest, shoulders and neck are fully stretched, and the abdomen is contracted, it is difficult to breathe normally. Return to Śīrsāsana I (Plate 190), slide the legs to the floor and relax or do Ūrdhva Dhanurāsana (Plate 486) and stand up in Tāḍāsana (Plate 1), or follow on with Viparīta Chakrāsana. (Plates 488 to 499)

570

Effects

In addition to the effects of Śīrṣāsana I (Plate 190), all the vertebrae are exercised in this āsana. As the blood supply to the spine is increased, the nerves do not degenerate. The abdominal organs are also toned by the stretch.

196. *Gaṇḍa Bheruṇḍāsana* Fifty-six* (Plates 580 and 581)

Gaṇḍa means the cheek, the whole side of the face including the temple. Bheruṇḍa means terrible, formidable; it is also a species of bird. This difficult back-bending posture is given below in two stages.

Technique

1. Fold a blanket on the floor and lie on it full length on the stomach, face down with the hands stretched back. Stretch the neck and rest the chin firmly on the blanket, otherwise it will scrape on the floor.

2. Bend the elbows, place the hands by the chest, fingers pointing in the direction of the head. Bend the knees and move the feet towards the chest, which will be lifted slightly off the floor. (Plate 571)

3. Exhale, press the palms to the floor, kick the legs and stretch them straight. (Plate 572.) The chin, neck, arms and upper ribs are the only parts of the body touching the blanket on the floor.

571

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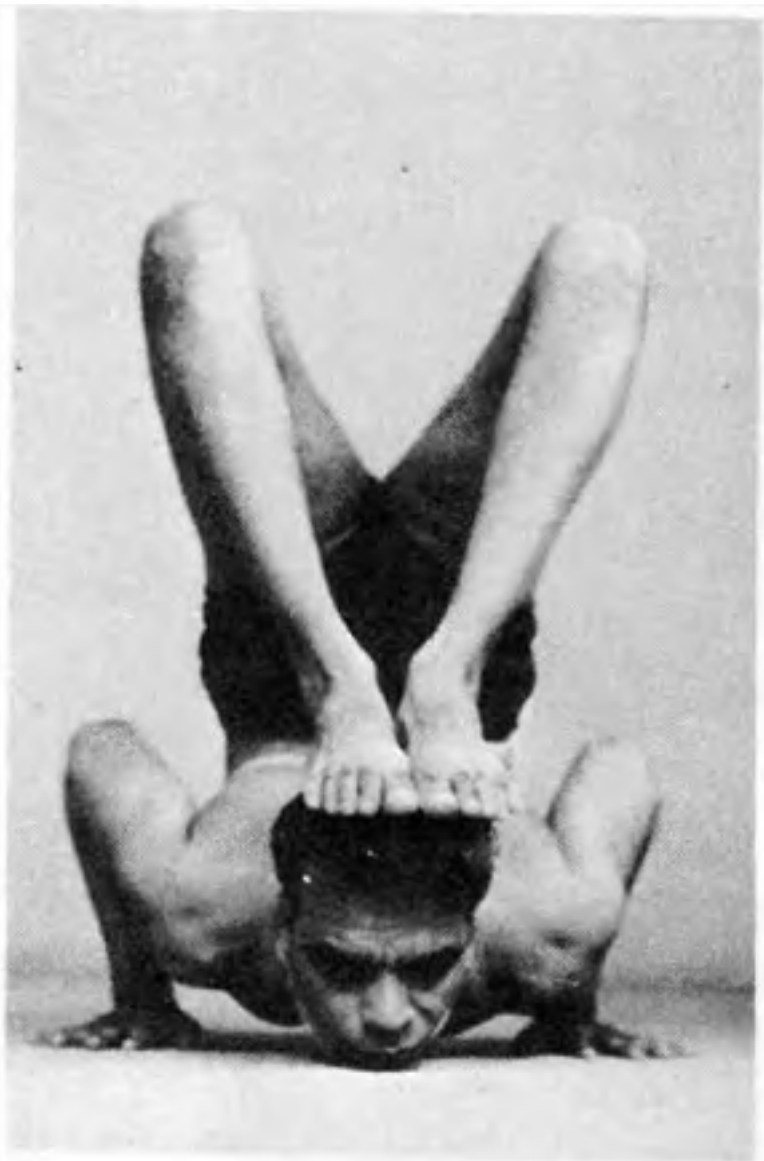
573

4. Take the pressure of the body on the neck and the chin, bend the knees (Plate 573), and lower the feet till they rest on the head. (Plate 574.) Take a few breaths.

5. Exhale, lower the legs still further and bring the feet in front of the head. (Plate 575)

6. Take the palms off the floor, widen the arms from the shoulders, bring them one by one in front of the head and clasp the feet with the hands. (Plates 576 and 577.) Take two breaths.



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7. Exhale, pull the feet to the floor on each side of the face near the temples and cheeks. (Plates 578.) The heels should touch the shoulders. Now press the toes down with the wrists and forearms. (Plate 579)

578

8. Interlock the fingers and place the palms on the floor by pressing the upper part of the feet with the wrists. (Plate 580.) This is the first stage.

9. Stay in the pose for a few seconds. Due to the intense stretch of the spine and contraction of the abdomen, breathing will be very fast and laboured. Do not hold the breath.

10. Extend the arms straight sideways like the wings of a gliding bird and balance for a few seconds. (Plate 581.) This is the second stage which is more difficult than the first one.

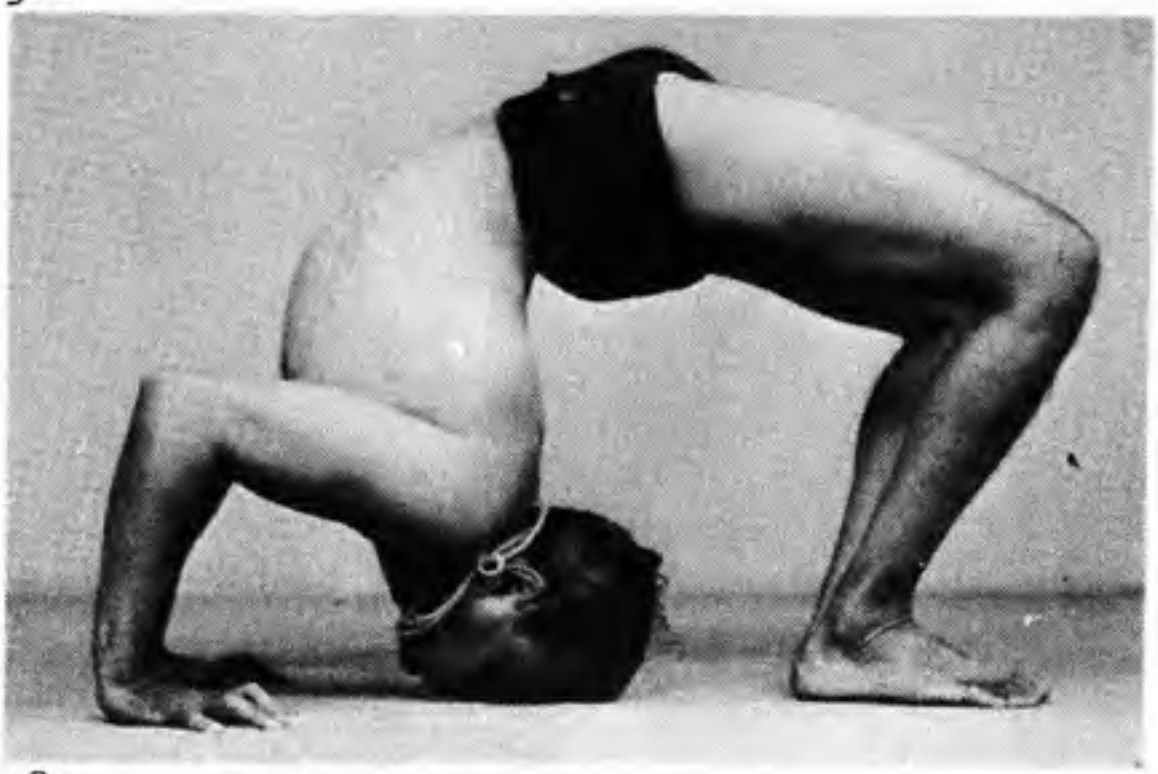
579

580

581

11. Place the palms on the floor, roll the body over the chin (Plates 582 and 583), move into Ūrdhva Dhanurāsana (Plate 486) and stand up in Tāḍāsana (Plate 1) and relax or practise Viparīta Chakrāsana. (Plates 488 to 499)

582



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Effects

Apart from toning the entire spine and abdominal organs, the āsana stimulates the nerve centres in Mūlādhāra Chakra (the pelvic plexus), Svādhiṣṭhāna Chakra (the hypo-gastric plexus) and Viśuddhi Chakra (the pharyngeal plexus) and the glands situated there. Due to the copious supply of blood to these glands, their functioning improves and this leads to increased vitality.

197. *Viparīta Śalabhāsana* Fifty-eight* (Plate 584)

Viparīta means reverse, opposite or inverted. Śalabha is a locust. The

stretch in this pose is more intense than in Gaṇḍa Bheruṇḍāsana (Plates 580 and 581) and the movements are converse to those in Halāsana. (Plate 241)

Technique

1. Fold a blanket on the floor and lie on it full length on the stomach, face down. Stretch the neck and rest the chin firmly on the blanket, otherwise it will scrape.

2. Bend the elbows and place the palms by the chest, fingers pointing to the head.

3. Exhale, bend, lift the knees and move the feet towards the chest, which will be lifted slightly off the floor. (Plate 571)

4. Take a few breaths and then with an exhalation, kick the legs up in the air, stretch the body up and balance (Plate 572), taking the weight of the body on the chin, neck, shoulders, elbows and wrists. Try to breathe normally.

5. Exhale, bend the knees (Plate 573), lower the legs and move the feet over and beyond the head until the toes rest on the floor. (Plate 582.) Stretch the feet as far as you can from the head and try to straighten the legs as much as possible. Stretch the arms back, palms down. (Plate 584)

584

6. Stay for a few seconds in the āsana, which now appears to be the converse pose of Halāsana. (Plate 241.) Due to the intense stretch of the spine and pressure on the abdomen, breathing will be very fast and laboured, so do not hold the breath.

7. Bend the elbows and widen the arms. Bring the hands near the shoulders and place the palms on the floor. Bend the knees, bring the feet closer to the head (Plate 582), roll the body over the chin (Plate 583) and perform Ūrdhva Dhanurāsana. (Plate 486.) Stand up in

Tāḍāsana (Plate 1) or with an exhalation do Viparīta Chakrāsana (Plates 488 to 499) and relax.

Effects

The effects of this āsana are the same as those of Gaṇḍa Bheruṇḍ-āsana. (Plates 580 and 581.) The purpose of these two āsanas is to awaken Kuṇḍalinī the Divine Cosmic Energy in our bodies, symbolised by a coiled and sleeping serpent lying dormant in the lowest nerve centre at the base of the spine. The Yogi makes a conscious effort to arouse this latent Energy and lead it up the spine to the brain (the Sahasrāra or thousand-petalled lotus in the upper cerebral centre) and then he submerges his ego by concentrating upon the Divine Source of all energy in order to be released from worldly bondage. 'As rivers flow into the sea and so lose name and form, even so the wise man, freed from name and form, attains the Supreme Being, the Self-Luminous, the Infinite.'

198. *Tiriang Mukhottānāsana* Sixty* (Plate 586)

Tiriang means oblique, transverse, horizontal, reverse or upside down. Mukha means the face and also chief, principal or prominent. Uttāna is a deliberate or an intense stretch. In this back-bending posture the head is upside down with an intense stretch on arms, legs and the entire trunk.

Technique

1. Stand in Tāḍāsana. (Plate 1.) Spread the legs a foot apart and rest the palms on the hips.

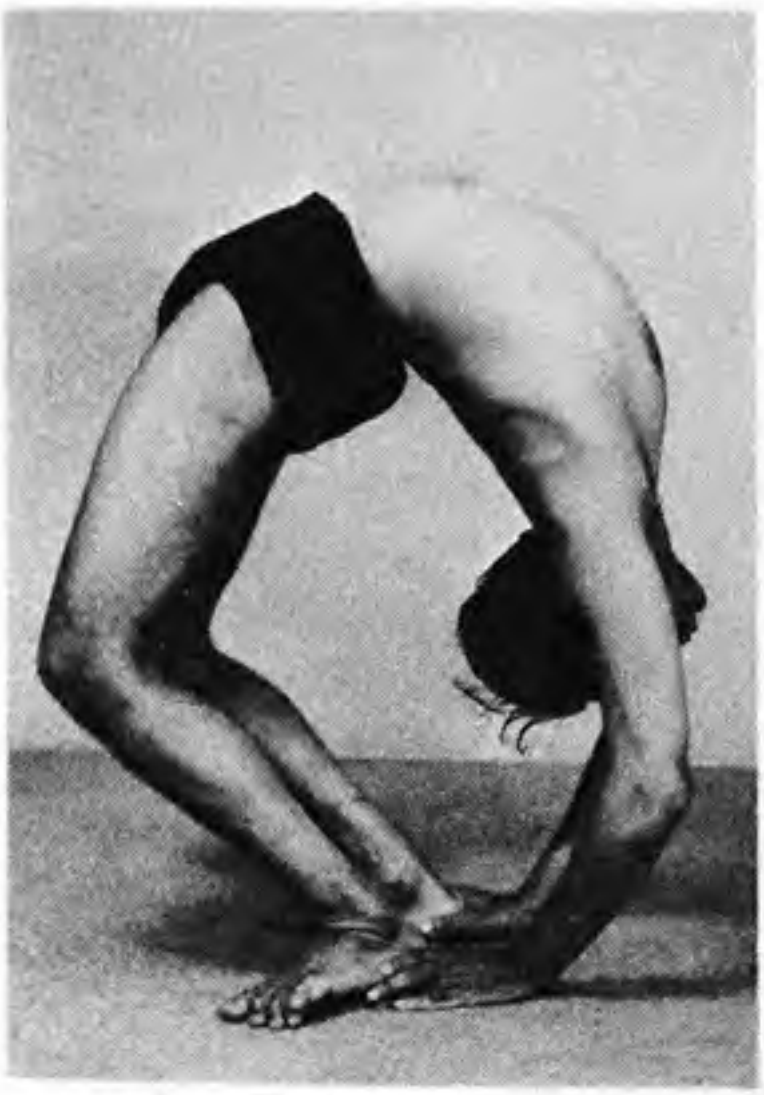
2. Push the pelvic region slightly forward (Plate 483), exhale and curve the trunk back so that the weight of the body is felt on the thighs and feet. (Plate 484)

3. Raise the arms above the head and drop the hands to the floor. (Plate 485.) Immediately straighten the arms at the elbows and rest the palms on the floor. This is now Ūrdhva Dhanurāsana. (Plate 486)

4. Without moving the heels, widen the distance between the toes, so that the feet will be at an angle instead of parallel to each other.

5. Exhale, stretch the trunk as high as you can above the floor and bring the hands closer and closer to the feet. Stretch the head and neck as far back as possible and touch the feet with the hands. (Plate 585.) Take a few breaths which will be fast and laboured due to the intense stretch of the abdomen, chest and back.

6. With a deep exhalation, lift the hands off the floor one by one and catch the shins just above the ankles. (Plate 586.) Move the toes in and balance. This is the final position. After holding it for a few seconds according to capacity, put the hands one by one on the floor, go back to Ūrdhva Dhanurāsana (Plate 486) and then to Tāḍāsana. (Plate 1.) After mastering the technique, one can release the hands and stand up in Tāḍāsana without going back to Ūrdhva Dhanurāsana.



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Effects

This difficult pose strengthens the legs and tones and vitalises the spine and abdominal organs. The chest and shoulder joints are fully stretched while the pelvic region receives an ample supply of blood and becomes healthier.

199. *Naṭarājāsana* Fifty-eight* (Plates 590, 591 and 591a)

Naṭarāja (naṭa = dancer; rāja = lord, king) is a name of Śiva, Lord of the Dance. Śiva is not only the god of mystical stillness, death and destruction, but also Lord of the Dance. In His Himālayan abode on Mount Kailāsa and in His southern home, the temple of Chidambaram, Śiva dances. The God created over a hundred dances, some calm and gentle, others fierce and terrible. The most famous of the terrible ones

is the Tāṇḍava, the cosmic dance of destruction, in which Śiva, full of fury at his father-in-law Dakṣa for killing his beloved spouse Satī, surrounded by his attendants (gaṇas), beats out a wild rhythm, destroys Dakṣa and threatens the world. Śiva, as Lord of the Dance, has inspired some of the finest Indian sculptures and South Indian bronzes.

This vigorous and beautiful pose is dedicated to Śiva, Lord of the Dance, who is also the fountain and source of Yoga.

Technique

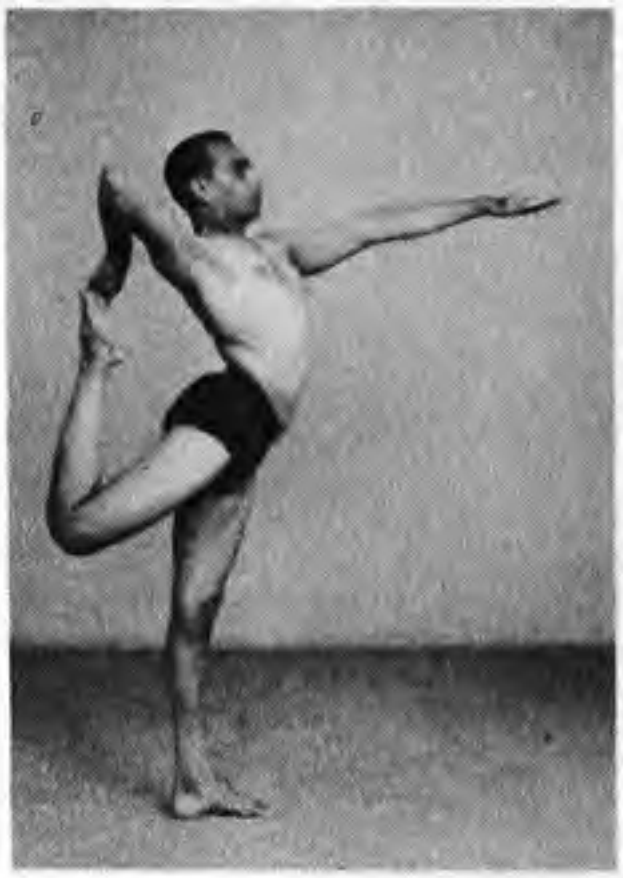
1. Stand in Tāḍāsana. (Plate 1.) Stretch the left arm out in front keeping it parallel to the floor.

2. Bend the right knee and lift up the right foot. Hold the right big toe between the thumb and the index and middle fingers of the right hand. Bend the lifted right knee and draw the leg up and back. (Plate 587)

587

3. Roll the fingers and thumb of the right hand round the right big toe. Simultaneously rotate the right elbow and shoulder and stretch the right arm up behind the head, without releasing the grip on the big toe. (Plate 588.) Again pull the right arm and leg up so that they form a bow behind the back. (Plate 589.) The right thigh will be parallel to the floor and the right shin perpendicular to it. (Plates 590 and 591)

4. Bring the left arm straight in front level with the shoulder, keeping the fingers pointing forward.



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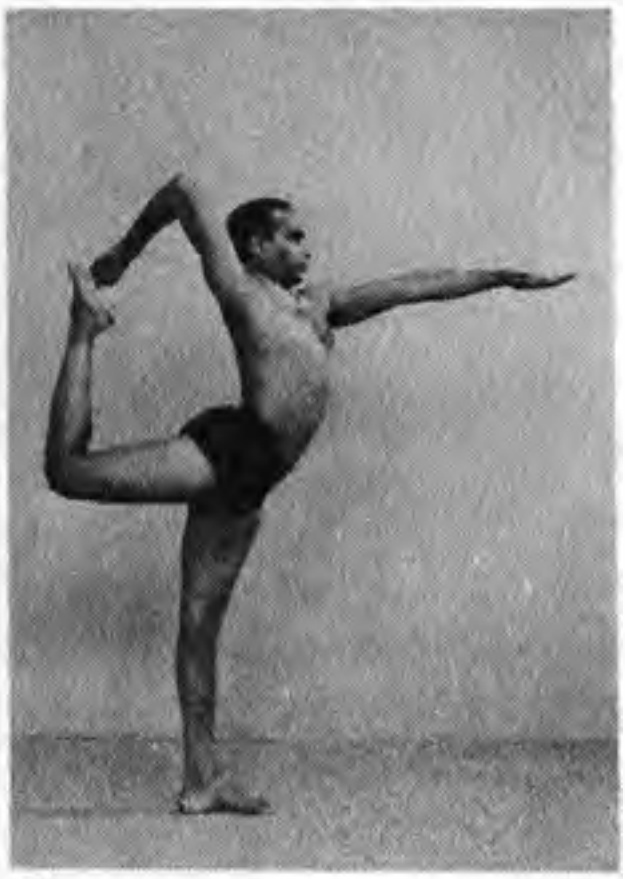

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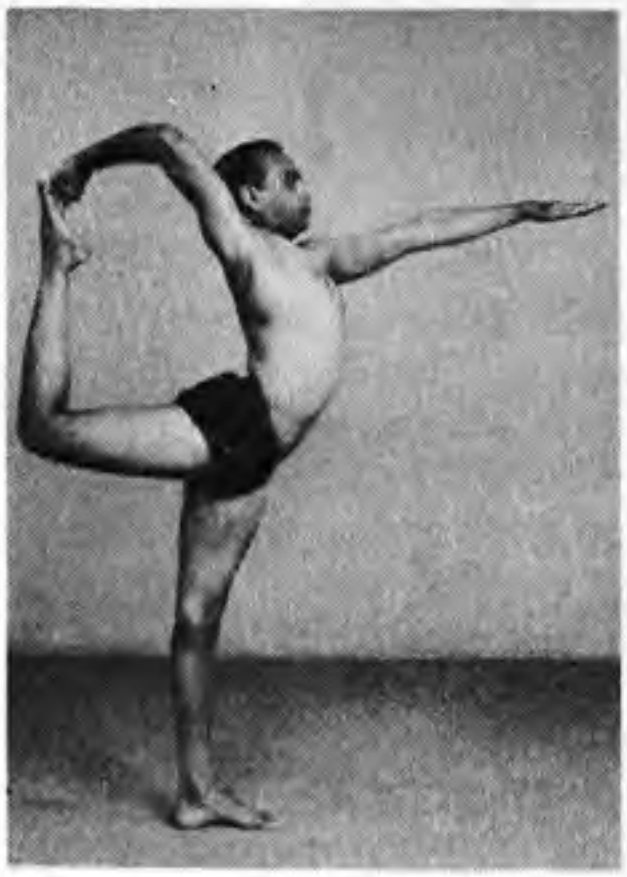

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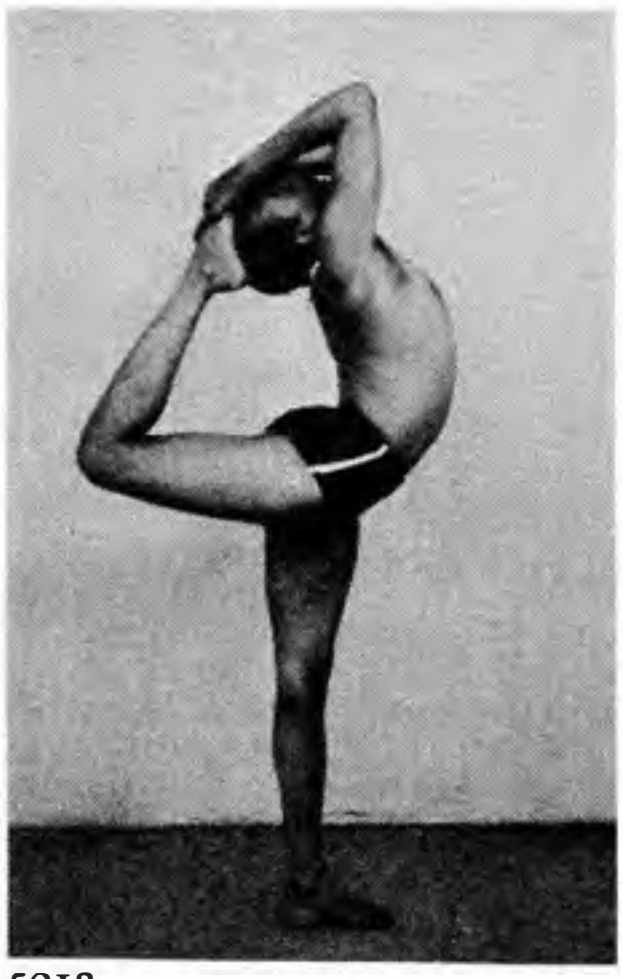
5. Pull the knee-cap up and keep the left leg poker stiff and perpendicular to the floor.

6. Balance firmly from 10 to 15 seconds with deep and even breathing.

7. Release the grip on the right foot, lower both arms and stand again in Tāḍāsana. (Plate 1.) Repeat the pose for the same length of time on the other side. This time, balance on the right leg, catch the left big toe behind the back with the left hand and stretch the right arm straight out in front.

8. Advanced pupils may hold the foot with both hands, rest it on the head and balance. (Plate 591a)



591a

Effects

This difficult balancing āśana develops poise and a graceful carriage. It tones and strengthens the leg muscles. The shoulder-blades get full movement and the chest expands fully. All the vertebral joints benefit from the exercise in this pose.

200. *Śavāsana* (Also called Mṛtāsana) (Plate 592)

Śava or Mṛta means a corpse. In this āsana the object is to imitate a corpse. Once life has departed, the body remains still and no movements are possible. By remaining motionless for some time and keeping the mind still while you are fully conscious, you learn to relax. This conscious relaxation invigorates and refreshes both body and mind. But it is much harder to keep the mind than the body still. Therefore, this apparently easy posture is one of the most difficult to master.

Technique

1. Lie flat on the back full length like a corpse. Keep the hands a little away from the thighs, with the palms up.

2. Close the eyes. If possible place a black cloth folded four times over the eyes. Keep the heels together and the toes apart.

592

3. To start with breathe deeply. Later the breathing should be fine and slow, with no jerky movements to disturb the spine or the body.

4. Concentrate on deep and fine exhalations, in which the nostrils do not feel the warmth of breath.

5. The lower jaw should hang loose and not be clenched. The tongue should not be disturbed, and even the pupils of the eyes should be kept completely passive.

6. Relax completely and breathe out slowly.

7. If the mind wanders, pause without any strain after each slow exhalation.

8. Stay in the pose from 15 to 20 minutes.

9. One is apt to fall asleep in the beginning. Gradually, when the nerves become passive, one feels completely relaxed and refreshed.

In good relaxation one feels energy flow from the back of the head towards the heels and not the other way round. One also feels as if the body is elongated.

Effects

Verse 32 of the First Chapter of the *Haṭha Yoga Pradīpikā* states: 'Lying upon one's back on the ground at full length like a corpse is called Śavāsana. This removes the fatigue caused by the other āsanas and induces calmness of mind.'

Mṛtāsana is thus described in verse 11 of the Second Chapter of the *Gheraṇḍa Saṁhitā*: 'Lying flat on the ground (on one's back) like a corpse is called Mṛtāsana. This posture destroys fatigue, and quiets the agitation of the mind.'

'The mind is the lord of the Indriyas (the organs of senses); the Praṇa (the Breath of Life) is the lord of the mind.' 'When the mind is absorbed it is called Mokṣa (final emancipation, liberation of the

soul); when Prāṇa and Manas (the mind) have been absorbed, an undefinable joy ensues.' Verses 29 and 30, chapter IV, *Haṭha Yoga Pradīpikā.*

To tame Prāṇa depends upon the nerves. Steady, smooth, fine and deep breathing without any jerky movements of the body soothes the nerves and calms the mind. The stresses of modern civilisation are a strain on the nerves for which Śavāsana is the best antidote.

Bandha and Kriyā

201. *Uḍḍīyāna Bandha* Twelve* (Plates 593 and 594)

Uḍḍīyāna means flying up. Strictly speaking it is not an āsana, but a bandha, that is a restraint. As condensers, fuses and switches control the flow of electricity, so bandhas regulate the flow of prāṇa (energy). In this bandha the prāṇa or energy is made to move from the lower abdomen towards the head. For a detailed discussion on bandha and prāṇa, see Part Three on Prāṇāyāma.

Technique

1. Stand in Tāḍāsana. (Plate 1)

2. Spread the legs a foot apart.

3. Stoop slightly forward, bending the knees slightly and place the hands with the fingers spread wide on the middle of the thighs.

4. Lower the hands until the chin rests in the notch between the collar-bones on top of the breast-bone.

5. Inhale deeply and then exhale quickly so that all the air is forced from the lungs in a rush.

6. Hold the breath (without any inhalation). Pull the whole abdominal region back towards the spine. Contract the abdominal region and lift it up towards the breast-bone, pressing the hands against the thighs. (Plate 593)

7. Maintaining the abdominal grip, lift the hands from the thighs and rest them on the hips.

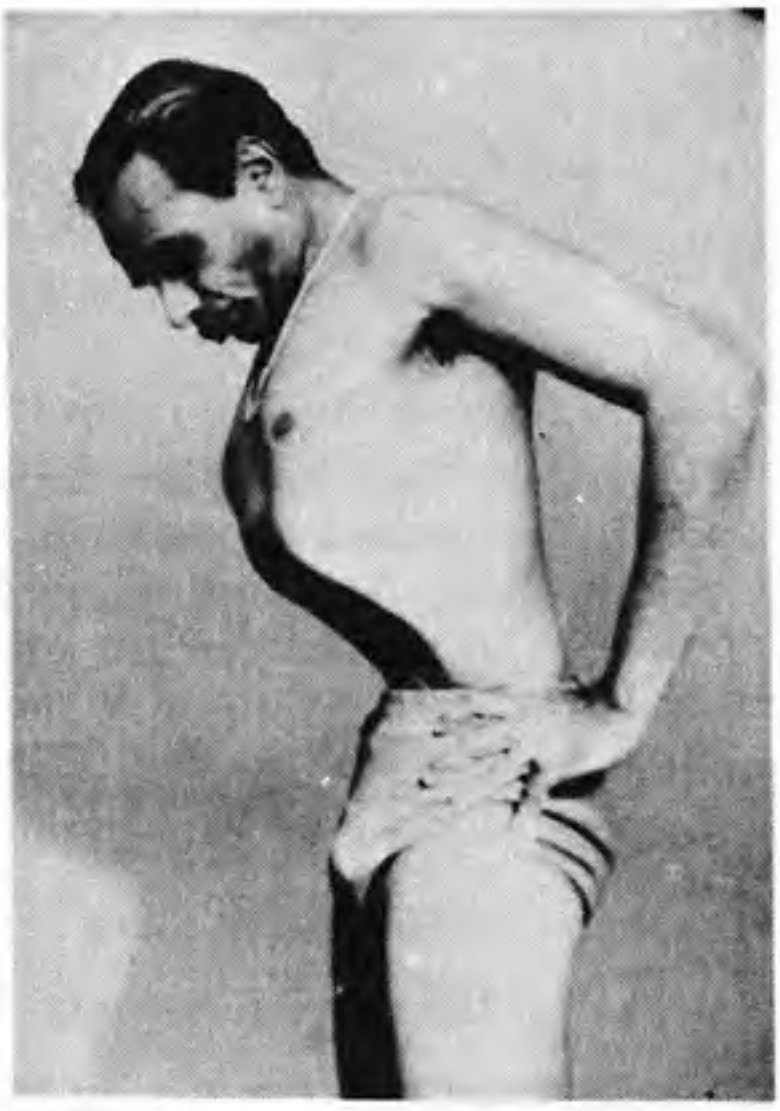
8. Straighten both legs and the back without loosening the abdominal grip or raising the chin from the breast-bone. (Plate 594)

9. Relax the abdominal muscles but without moving the chin and head. If the latter move, strain is at once felt in the region of the heart.

10. Inhale slowly and deeply.

11. Throughout positions 6 to 9 above, do not inhale. Do not hold the pose for more than 5 to 10 seconds depending on your endurance.

593



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12. Take a few breaths, then repeat the cycle stated in paras 1 to 10 above. Do not, however, repeat it more than six to eight times at a stretch in 24 hours. Only increase the duration of the pose or the number of cycles under the personal supervision of an experienced Guru.

13. The cycles should be done only once a day at a stretch.

14. Practise on an empty stomach after evacuating both the bladder and bowels.

15. First learn Uḍḍīyāna Bandha in the standing position, then in the sitting position as a preliminary step for the practice of Prānāyāma.

16. It should be done during exhalation (rechaka) and retention of breath (kumbhaka) in the various types of Prānāyāma described in Part Three.

Effects

It tones the abdominal organs, increases the gastric fire and eliminates toxins in the digestive tract.

202. *Nauli* Sixteen* (Plates 595 and 596)

The word Nauli is not found in standard dictionaries. Ullola meaning

a large wave or surge, conveys some idea of the process of Nauli where the abdominal muscles and organs are made to move laterally and vertically in a surging motion. Nau means a boat and li to cling to, lie on, hide or cover. The pitching of a boat on a stormy sea conveys some idea of the process of Nauli.

Nauli is a kriyā or process and not an āsana. Care should be observed in its performance, otherwise the process leads to numerous diseases. It is not, therefore, recommended for the average practitioner. First master Uḍḍīyāna Bandha before attempting Nauli, which is described in the *Gheruṇḍa Saṃhita* under the name Lauliki.

Technique

1. Stand in Tāḍāsana. (Plate 1)

2. Spread the legs a foot apart, bend slightly at the knees and stoop forward.

3. Place the hands with the fingers spread wide on the thighs just above the knees.

4. Lower the head until the chin rests in the notch between the collar-bones on the top of the breast-bone.

5. Inhale deeply, then exhale quickly so that all the air is forced from the lungs in a rush.

6. Hold the breath (without any inhalation). Pull the whole abdominal region back towards the spine.

7. The area between the pelvic rim and the floating ribs on both sides of the abdomen should be made passive to create hollowness there. At the same time push the abdominal recti forward. (Plate 595 front view; and Plate 596 side view)

8. Maintain this position from 5 to 10 seconds, according to your capacity.

9. Relax the grip on the recti and go back to the position described in para. 6 above.

10. Relax the abdomen and inhale slowly.

11. Take a few deep breaths. Repeat the cycle in paras 1 to 10 above, six to eight times at a stretch only once every 24 hours.

12. Practise Nauli on an empty stomach after evacuating the bladder and bowels.

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Effects

The abdominal recti are strengthened. The other effects of Nauli are the same as those of Uḍḍīyāna Bandha.

PART III

Prāṇāyāma

Hints and Cautions

Read and digest thoroughly the following hints and cautions before attempting the prāṇāyāma techniques mentioned later.

Qualifications for fitness

1. Just as post-graduate training depends upon the ability and discipline acquired in mastering the subject in which one graduated, so prāṇāyāma training demands mastery of āsanas and the strength and discipline arising therefrom.

2. The fitness of the aspirant for training and advancement in Prāṇāyāma is to be gauged by an experienced Guru or teacher and his personal supervision is essential.

3. Pneumatic tools can cut through the hardest rock. In Prāṇāyāma the yogi uses his lungs as pneumatic tools. If they are not used properly, they destroy both the tool and the person using it. The same is true of prāṇāyāma.

Cleanliness and Food

4. One does not enter a temple with a dirty body or mind. Before entering the temple of his own body, the yogi observes the rules of cleanliness.

5. Before starting prāṇāyāma practices the bowels should be evacuated and the bladder emptied. This leads to comfort in the bandhas.

6. Preferably prāṇāyāma should be practised on an empty stomach, but if this is difficult, a cup of milk, tea, coffee or cocoa may be taken. Allow at least six hours to elapse after a meal before practising prāṇāyāma.

7. Light food may be taken half an hour after finishing prāṇāyāma practices.

Time and Place

8. The best time for practice is in the early morning (preferably before sunrise) and after sunset. According to the *Haṭha Yoga Pradīpikā*, prāṇāyāma should be practised four times a day, in the early morning,

noon, evening and midnight, with 80 cycles at a time (chapter II, verse 11). This is hardly possible in the fast modern age. What is therefore recommended is to practise at least 15 minutes a day, but the 80 cycles are for intensely devoted practitioners, and not for the average householder.

9. The best seasons in which to start the practice are spring and autumn when the climate is equable.

10. Prāṇāyāma should be done in a clean airy place, free from insects. Since noise creates restlessness practise during quiet hours.

11. Prāṇāyāma should be practised with determination and regularity at the same time and place and in the same posture. Variation is permissible only in the type of prāṇāyāma practised, that is to say, if Sūrya Bhedana Prāṇāyāma is done one day, Śitalī may be done the next day and Bhastrikā be done on the third day. Nāḍī Shodhana Prāṇāyāma, however, should be practised daily.

Posture

12. Breathing in prāṇāyāma practices is done through the nose only, except in Śitalī and Śitakāri.

13. Prāṇāyāma is best done sitting on the floor on a folded blanket. The postures suitable are Siddhāsana, Vīrāsana, Padmāsana and Baddhakoṇāsana. Any other sitting posture may be taken provided the back is kept absolutely erect from the base of the spine to the neck and perpendicular to the floor. Some types, however, may be done in a reclining position as detailed later.

14. During practice no strain should be felt in the facial muscles, eyes and ears, or in the neck muscles, shoulders, arms, thighs and feet. The thighs and arms should be relaxed deliberately since they are unconsciously tensed during prāṇāyāma.

15. Keep the tongue passive or saliva will accumulate in the mouth. If it does, swallow it before exhalation (rechaka) and not while holding the breath (kumbhaka).

16. During inhalation and retention the rib cage should expand both forwards and sideways, but the area below the shoulder-blades and armpits should only expand forwards.

17. To start with there will be perspiration and trembling which will disappear in course of time.

18. In all the prāṇāyāma practices done in a sitting posture, the head should hang down from the nape of the neck, the chin resting in the

notch between the collar-bones on the top of the breast-bone. This chinlock or Jālandhara Bandha should be used except where specifically stated in the techniques hereafter given.

19. Keep the eyes closed throughout as otherwise the mind will wander after outside objects and be distracted. The eyes, if kept open, will feel a burning sensation, and irritability.

20. No pressure should be felt inside the ear during the practice of prāṇāyāma.

21. The left arm is kept straight, the back of the wrist resting on the left knee. The forefinger is bent towards the thumb, its tip touching the tip of the thumb. This is the Jñāna Mudrā described later in the technique.

22. The right arm is bent at the elbow and the hand is kept on the nose to regulate the even flow of breath and to gauge its subtlety. This is felt through the tips of the ring and little fingers which control the left nostril and through the tip of the thumb which controls the right nostril. Details of the right hand position are discussed in the technique. In some methods of prāṇāyāma both the hands rest on the knees in the Jñāna Mudrā.

23. When a baby learns to walk by itself, the mother remains passive bodily, but alert mentally. In an emergency, as when the child stumbles, her body springs into action to save it from a fall. So also, in the practice of prāṇāyāma the brain is kept passive but alert. Whenever the organs of the body fail to work properly, the watchful brain sends messages of warning. The ear is told to listen for the proper sound of the breath (which is described below). The hand and nose are told to observe the sensitivity of the breath flowing through the nasal passages.

24. It may be asked that if the brain is required to send warnings to the senses, how can one concentrate on prāṇāyāma? A painter absorbed in his work notes various details like perspective and composition, the colour tones and shades, the foreground and background and the strokes of the paint-brush all at once. A musician playing a melody watches his finger movements and sound patterns, the tuning of the instrument and its pitch. Though the artist and the musician are both observing and correcting the details, they are concentrating on their work. So also the yogi observes details like time, posture and an even breath rhythm, and is alert and sensitive to the flow of prāṇa within him.

25. As a careful mother teaches her child to walk carefree, so the careful mind of the yogi teaches the senses to be carefree. By continued practice of prāṇāyāma the senses become free of obsession for the things they once pined for.

26. Each should measure his own capacity when doing prāṇāyāma and not exceed it. This may be gauged as follows: suppose one can with comfort inhale and exhale for 10 seconds each in rhythmic cycles for a given length of time, say 5 minutes. If there is any change in the rhythm in which the period of inhalation or of exhalation decreases, to say 7 or 8 seconds, one has reached one's capacity. To go beyond this point, strains the lungs unduly and brings in its wake a host of respiratory diseases.

27. Faulty practice puts undue stress on the lungs and diaphragm. The respiratory system suffers and the nervous system is adversely affected. The very foundation of a healthy body and a sound mind is shaken by faulty practice of prāṇāyāma. Forceful and strained inhalation or exhalation is wrong, except in Bhastrikā Prāṇāyāma.

28. Evenness of breathing leads to healthy nerves and so to evenness of mind and temper.

29. Āsanas should never be practised immediately after prāṇāyāma. If prāṇāyāma is done first, allow an hour to elapse before starting āsanas, for the nerves which are soothed in prāṇāyāma are liable to be ruffled by the bodily movement of the āsanas.

30. Prāṇāyāma, however, may be done not less than 15 minutes after mild practice of āsanas.

31. Strenuous āsanas cause fatigue. When exhausted do not practise prāṇāyāma in any sitting posture, as the back cannot stay erect, the body trembles and the mind becomes disturbed. Deep breathing as in Ujjāyī done in a reclining position relieves fatigue.

32. When deep, steady and long breathing cannot be maintained rhythmically, stop. Do not proceed further. The rhythm should be gauged from the nasal sound produced in inhalation ('ssssssa' which sounds like a leak in a cycle tube) and exhalation (the aspirate 'huuuuuuuuum' sound). If the volume of the sound is reduced, stop.

33. Try to achieve an even ratio in inhalation (puraka) and exhalation (rechaka). For example, if one is for 5 seconds during a given continuous cycle, the other should be for the same time.

34. The Ujjāyī and Nāḍī Śodhana types of prāṇāyāma are the most

beneficial ones which can be practised by pregnant women, preferably in Baddhakoṇāsana. During pregnancy, however, the breath should never be held without the guidance of an experienced teacher.

35. After completing any prānāyāma practice always lie down on the back like a corpse in Śavāsana (Plate 592) for at least 5 or 10 minutes in silence. The mind should be completely switched off and every limb and sense organ completely passive as if dead. Śavāsana after prāṇāyāma refreshes both the body and the mind.

Kumbhakas

36. All the three Bandhas, namely Jālandhara, Uḍḍīyāna and Mūla, should be observed in kumbhaka (retention of breath after full inhalation or restraint following complete exhalation) as mentioned later. The bandhas are like safety-valves which should be kept shut during the practice of kumbhakas.

37. Thorough mastery of inhalation (puraka) and exhalation (rechaka) is essential before any attempt is made to learn antara kumbhaka (retention following inhalation).

38. Bāhya kumbhaka (restraint following exhalation) should not be tried until antara kumbhaka has become natural.

39. During the practice of kumbhaka there is a tendency to draw in air as well as to tighten and loosen the diaphragm and abdominal organs for the sake of increasing the period of retention. This is unconscious and unintentional. Care should be taken to avoid it.

40. If it is found difficult to hold the breath (khumbaka) after each inhalation or exhalation, do some cycles of deep breathing and then practise kumbhakas. For instance, 3 cycles of deep breathing may be followed by one cycle of kumbhaka. Then there should be another 3 cycles of deep breathing followed by a second cycle of kumbhaka, and so on.

41. If the rhythm of inhalation or exhalation is disturbed by holding the breath, lessen the duration of kumbhaka.

42. Persons suffering from eye or ear trouble (like glaucoma and pus in the ear) should not attempt to hold the breath.

43. Sometimes constipation occurs in the initial stages following upon the introduction of kumbhaka. This is temporary and will disappear in due course.

44. The normal rate of breaths per minute is 15. This rate increases

when the body is upset by indigestion, fever, cold and cough, or by emotions like fear, anger or lust. The normal rate of breathing is 21,600 breaths inhaled and exhaled every 24 hours. The yogi measures his span of life not by the number of days, but of breaths. Since breathing is lengthened in prāṇāyāma, its practice leads to longevity.

45. Continuous practice of prāṇāyāma will change the mental outlook of the practitioner and reduce considerably the craving of his senses for worldly pleasures like smoking, drinking and sexual indulgence.

46. In the practice of prāṇāyāma the senses are drawn inwards and in the silence of the kumbhaka the aspirant hears his inner voice calling: 'Look within! The source of all happiness is within!' This also prepares him for the next stage of yoga, pratyāhāra, which leads to freedom from the domination and tyranny of the senses.

47. Since the eyes are kept closed throughout the practice of prāṇāyāma, the passage of time is noted by the mental repetition (japa) of a sacred word or name. This repetition of the sacred words or names is the seed (bīja) planted in the yogi's mind. This seed grows and makes him fit for dhyānaor concentration, the sixth stage of Yoga. Ultimately it produces the fruit of samādhi, where there is experience of full consciousness and supreme joy, where the yogi merges with the Maker of the Universe and feels what he can never express—yet cannot entirely conceal. Words fail to convey the experience adequately, for the mind cannot find words with which to describe it. It is a feeling of that peace which passeth all understanding.

BANDHAS, NĀḌIS AND CHAKRAS

In order to follow the techniques of prāṇāyāma it is necessary to know something about bandhas, nāḍis and chakras.

Bandha means bondage, joining together, fettering or catching hold of. It is also a posture in which certain organs or parts of the body are contracted and controlled.

Nāḍi is a tubular channel in the body through which energy flows.

Chakras are wheels or circles. Those in the body are the fly-wheels in the body machinery.

When electricity is generated, it is necessary to have transformers, conductors, fuses, switches and insulated wires to carry the power to its destination, as without these the electricity generated would be lethal. When prāṇa is made to flow in the yogi's body by the practice of prāṇāyāma it is equally necessary for him to employ bandhas to prevent the dissipation of energy and to carry it to the right quarters without causing damage elsewhere. Without the bandhas, prāṇa is lethal.

The three main bandhas, which are important for prāṇāyāma, are: (1) Jalandhara Bandha, (2) Uḍḍīyāna Bandha and (3) Mūla Bandha.

The first one which the yogi should master is Jālandhara. Jāla means a net, a web, a lattice or a mesh. In Jālandhara the neck and throat are contracted and the chin is made to rest on the chest in the notch between the collar-bones and at the top of the breast-bone. It is mastered while doing Sarvāngāsana (see pp. 205–20) and its cycles, for here also the chin is pressed against the sternum. The Jālandhara Bandha regulates the flow of blood and prāṇa to the heart, the glands in the neck and the head together with the brain. If prāṇāyāma is performed without Jālandhara Bandha pressure is immediately felt on the heart, behind the eyeballs and in the ear cavity and the head feels dizzy. Jālandhara Bandha is essential in the three processes of prāṇāyāma, namely, pūraka (inhalation), rechaka (exhalation) and kumbhaka (retention).

Uḍḍīyāna means flying up. The process in Uḍḍīyāna Bandha is to lift the diaphragm high up the thorax and to pull in the abdominal organs against the back towards the spine. It is said that through Uḍḍīyāna Bandha, the great bird prāṇa is forced to fly up through the suṣumṇā nāḍi, the main channel for the flow of nervous energy, which is situated inside the meru-daṇḍa or the spinal column. It is said that Uḍḍīyāna is the best of bandhas and he who constantly practises it as taught by his Guru or master becomes young again. It is said to be the lion that kills the elephant named Death. It should be performed only during bāhya kumbhaka following rechaka, that is, during the interval between complete exhalation and fresh inhalation when breathing is suspended. It exercises the diaphragm and abdominal organs. The cavity created by the lift of the diaphragm gives a gentle massage to the muscles of the heart, thereby toning it. Uḍḍīyāna Bandha should never be attempted during antara kumbhaka, that is the interval between complete inhalation and the start of exhalation when breath is retained, otherwise it will strain the heart and diaphragm and the eyes will puff out.

Mūla means root, source, origin or cause, basis or foundation. Mūla Bandha is the region between the anus and the scrotum. By contracting this region, Apāna Vāyu (the prāṇa in the lower abdomen), whose course is downwards, is made to flow up to unite with the Prāṇa Vāyu, which has its seat in the region of the chest.

Mūla Bandha should be attempted first in antara kumbhaka (retention after inhalation). The region of the lower abdomen between the navel and the anus is contracted towards the spine and pulled up towards the diaphragm. In Uḍḍīyāna Bandha the entire region from the anus to the diaphragm up to the sternum is pulled back towards the spine and lifted up. But in Mūla Bandha the whole lower abdominal area between the

anus and the navel is contracted, pulled back to the spine and lifted up towards the diaphragm.

The practice of contracting the anal sphincter muscles (the Aśvinī Mudrā) helps one to master Mūla Bandha. Aśva means a horse. This mudrā (a sealing posture) is so called because it suggests the staling of a horse. It should be learnt while doing various āsanas, especially Tāḍāsana, Śīrṣāsana, Sarvāngāsana, Ūrdhva Dhanurāsana, Uṣtrāsana and Paśchimottanāsana.

It is said that by the practice of these bandhas the sixteen ādharas are closed. Ādhāra (from the root ('dhṛ' = to support) means a support, a vital part. The sixteen vital parts are: the thumbs, ankles, knees, thighs, prepuce, organs of generation, navel, heart, neck, throat, palate, nose, the middle of the eyebrows, forehead, head and Brahmarandhra (the aperture in the crown of the head through which the soul is said to escape on leaving the body).

There is a grave danger in attempting to learn the Uḍḍīyāna and Mūla Bandhas by oneself, without the personal supervision of an experienced Guru or teacher. Improper performance of the Uḍḍīyāna Bandha will cause involuntary discharge of semen and loss of vitality, while that of Mūla Bandha will seriously weaken the practitioner who will lack virility. Even the correct performance of Mūla Bandha has its own dangers. It increases sexual retentive power, thereby tempting the practitioner to abuse that power. If he succumbs to that temptation, he is lost. All his dormant desires are aroused and become lethal like a sleeping serpent struck with a stick. With the mastery of the three bandhas, the yogi is at the cross-roads of his destiny. One road leads to bhoga or the enjoyment of worldly pleasures; the other leads to Yoga or union with the Supreme Soul. The attraction of worldly pleasures is great. The yogi, however, feels greater attraction for their Creator. The senses open outwards and consequently they are attracted to objects and follow the path of bhoga. If the direction of the senses is changed so that they turn inwards, then they follow the path of Yoga. The yogi's senses invert to meet the Creator, the source of all creation. It is when the aspirant has mastered the three bandhas that the guidance of a Guru is most essential, for under proper guidance this increased power is sublimated for higher and nobler pursuits. The practitioner then becomes an ūrdhvaretus (ūrdhva = upwards; retus = semen) or one who lives a life of celibacy and does not dissipate his virility. He will then acquire moral and spiritual power. The power within him will shine forth like the sun.

While practising Mūla Bandha, the yogi attempts to reach the true source or mūla of all creation. His goal is the complete restraint or bandha of the chitta which includes the mind (manas), the intellect (buddhi) and the ego (ahaṁkāra).

The human body is a miniature universe in itself. Haṭha is composed of the syllables ha and ṭha which mean the sun and the moon respectively. The solar and the lunar energy is said to flow through the two main nāḍis, Piṅgala and Iḍā, which start from the right and the left nostrils respectively and move down to the base of the spine. Piṅgala is the nāḍi of the sun, while the Iḍā is the nāḍi of the moon. In between them is the Suṣumṇā, the nāḍi of fire. As stated earlier, Suṣumṇā Nāḍi is the main channel for the flow of nervous energy, and it is situated inside the meru-daṇḍa or spinal column. Piṅgalā and Iḍā intersect each other and also Suṣumṇā at various places. These junctions are called chakras or wheels and regulate the body mechanism as fly-wheels regulate an engine.

The main chakras are: Mūlādhāra Chakra which is situated in the pelvic region above the anus (mūla=root, cause, source: ādhāra=support, or vital part); Svādhiṣṭhāna Chakra above the organs of generation (sva=vital force, soul: adhiṣṭhāna=seat or abode); Maṇipūraka Chakra is the navel (maṇipūra=navel); the Manas and the Sūrya Chakras between the navel and the heart (manas=mind: sūrya=sun); Anāhata Chakra in the cardiac region (anāhata=heart); Viśuddha Chakra in the pharyngeal region (viśuddha=pure); Ājñā Chakra between the eyebrows (ājñā=command); the Sahasrāra Chakra, which is called the thousand-petalled lotus, in the cerebral cavity; and Lalāṭa Chakra which is at the top of the forehead (lalāṭa=forehead).

It may be that these chakras correspond to the endocrine glands, which supply hormones and other internal secretions to the system. The Mūlādhara and the Svādhiṣṭhāna Chakras perhaps correspond to the gonads (the testicles, penis and prostate in males and the ovaries, uterus and vagina in females). In between these two chakras is the seat of the genitals, known as Kāmarūpa after Kāma the god of passion and love. The abdominal organs like the stomach, spleen, liver and pancreas perhaps correspond to the Maṇipūraka Chakra. The two adrenals may stand for the Sūrya and Manas Chakras. The Anāhata Chakra is the heart and the main blood vessels around it. The Viśuddha Chakra may be the thyroid, parathyroid and the thymus. The Ājñā, Sahasrāra and Lalāṭa Chakras may be the brain matter and the pitutiary and pineal glands.

According to the Tantric texts the object of Prāṇāyāma is to arouse Kuṇḍalinī, the divine cosmic force in our bodies. Kuṇḍalinī is symbolised as a coiled and sleeping serpent lying dormant in the lowest nerve centre at the base of the spinal column, the Mūlādhāra Chakra. This latent energy has to be aroused and made to go up the spinal column piercing the chakras up to the Sahasrāra (the thousand-petalled lotus in the head, the network of nerves in the brain) and there to unite with

the Supreme Soul. This is perhaps an allegorical way of describing the tremendous vitality, especially sexual, which is obtained by the practice of Uḍḍīyāna and Mūla Bandhas described above. The arousing of Kuṇḍalinī and forcing it up is perhaps a symbolic way of describing the sublimation of sexual energy.

Technique and Effects of Prāṇāyāma

203. *Ujjāyī Prāṇāyāma* (Plate 597)

The prefix ud attached to verbs and nouns, means upwards or superiority in rank. It also means blowing or expanding. It conveys the sense of pre-eminence and power.

Jaya means conquest, victory, triumph or success. Looked at from another viewpoint it implies restraint or curbing.

Ujjāyi is the process in which the lungs are fully expanded and the chest puffed out like that of a proud conqueror.

Technique

1. Sit in any comfortable position like Padmāsana (Plate 104), Siddhāsana (Plate 84) or Vīrāsana (Plate 89).

2. Keep the back erect and rigid. Lower the head to the trunk. Rest the chin in the notch between the collar-bones just above the breast-bone. (This is the Jālandhara Bandha.)

3. Stretch the arms out straight and rest the back of the wrists on the knees. Join the tips of the index fingers to the tips of the thumbs, keeping the other fingers extended. (This position or gesture of the hand is known as the Jñāna Mudrā, the symbol or seal of knowledge. The index finger symbolises the individual soul and the thumb the Universal Soul. The union of the two symbolises knowledge.)

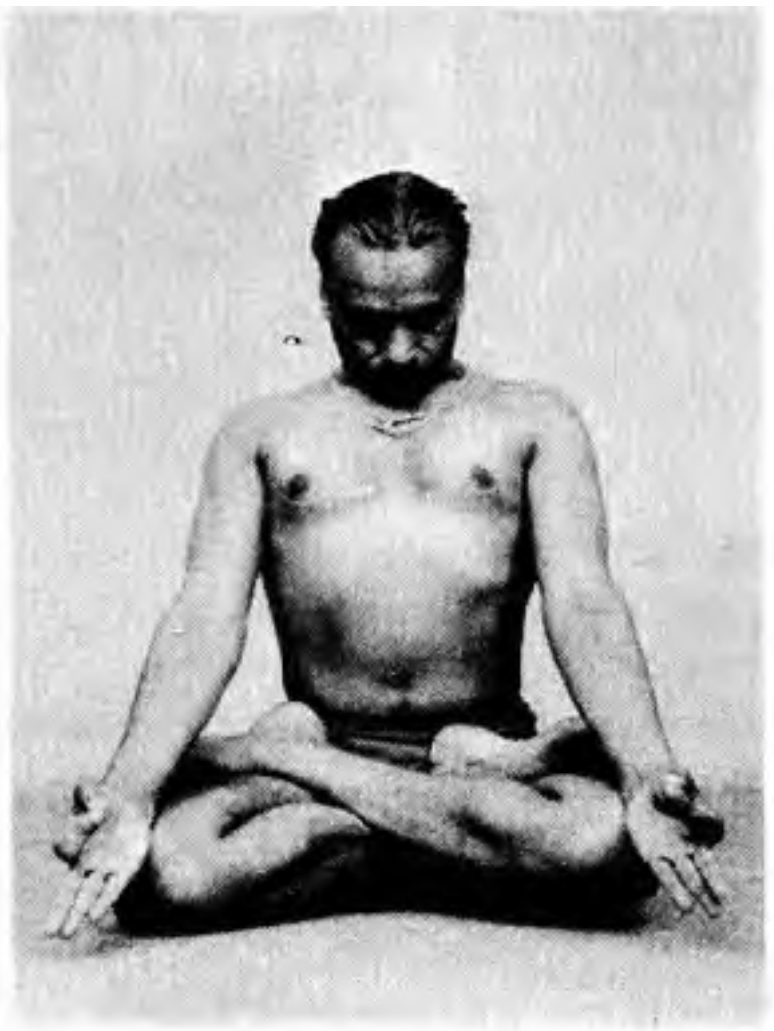
4. Close the eyes and look inwards. (Plate 597)

5. Exhale completely.

6. Now the Ujjāyi method of breathing begins.

7. Take a slow, deep steady breath through both nostrils. The passage of the incoming air is felt on the roof of the palate and makes a sibilant sound (sa). This sound should be heard.

8. Fill the lungs up to the brim. Care should be taken not to bloat the abdomen in the process of inhalation. (Observe this in all the types of Prāṇāyāma.) This filling up is called puraka (inhalation).



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9. The entire abdominal area from the pubes up to the breast-bone should be pulled back towards the spine.

10. Hold the breath for a second or two. This internal retention is called antara kumbhaka. Observe Mūla Bandha as described on p. 437.

11. Exhale slowly, deeply and steadily, until the lungs are completely empty. As you begin to exhale, keep your grip on the abdomen. After two or three seconds of exhalation, relax the diaphragm gradually and slowly. While exhaling the passage of the outgoing air should be felt on the roof of the palate. The brushing of the air on the palate should make an aspirate sound (ha). This exhalation is called rechaka.

12. Wait for a second before drawing a fresh breath. This waiting period is called bāhya kumbhaka.

13. The process described from para. 7 to para. 12 completes one cycle of Ujjāyi Prāṇāyāma.

14. Repeat the cycles for five to ten minutes keeping the eyes closed throughout.

15. Lie on the floor in Śāvāsana. (Plate 592)

16. Ujjāyi Prāṇāyāma may be done without the Jālandhara Bandha even while walking or lying down. This is the only prāṇāyāma which can be done at all times of the day and night.

Effects

This type of prāṇāyāma aerates the lungs, removes phlegm, gives endurance, soothes the nerves and tones the entire system. Ujjāyi without kumbhaka, done in a reclining position, is ideal for persons suffering from high blood pressure or coronary troubles.

204. *Sūrya Bhedana Prāṇāyāma* (Plate 599)

Sūrya is the sun. Bhedana is derived from the root bhid meaning to pierce, to break or pass through.

In Sūrya Bhedana Prāṇāyāma, the breath is inhaled through the right nostril. In other words the prāṇa passes through the Piṅgalā or Sūrya nāḍī. A kumbhaka is then performed and the breath is then exhaled through the left nostril which is the path of the Idā nāḍī.

Technique

1. Sit in any comfortable position like Padmāsana (Plate 104), Siddhāsana (Plate 84) or Vīrāsana (Plate 89).

2. Keep the back erect and rigid. Lower the head to the trunk. Rest the chin in the notch between the collar-bones just above the breast-bone. (This is Jālandhara Bandha.)

3. Stretch the left arm. Rest the back of the left wrist on the left knee. Perform Jñāna Mudrā with the left hand (as stated in stage 3 of the technique of Ujjāyi).

4. Bend the right arm at the elbow. Bend the index and middle fingers towards the palm, keeping them passive. Bring the ring and little fingers towards the thumb. (Plate 598)

5. Place the right thumb on the right side of the nose just below the nasal bone, the ring and little fingers on the left side of the nose just below the nasal bone, just above the curve of the fatty tissue of the nostrils above the upper jaw.

6. Press the ring and the little finger to block the left side of the nose completely.

7. With the right thumb, press the fatty tissue on the right side so as to make the outer edge of the right nostril parallel to the lower edge of the cartilage of the septum.

8. The right thumb is bent at the top joint and the tip of the thumb is placed at a right angle to the septum. (Plate 599)

9. Now inhale slowly and deeply controlling the aperture of the right

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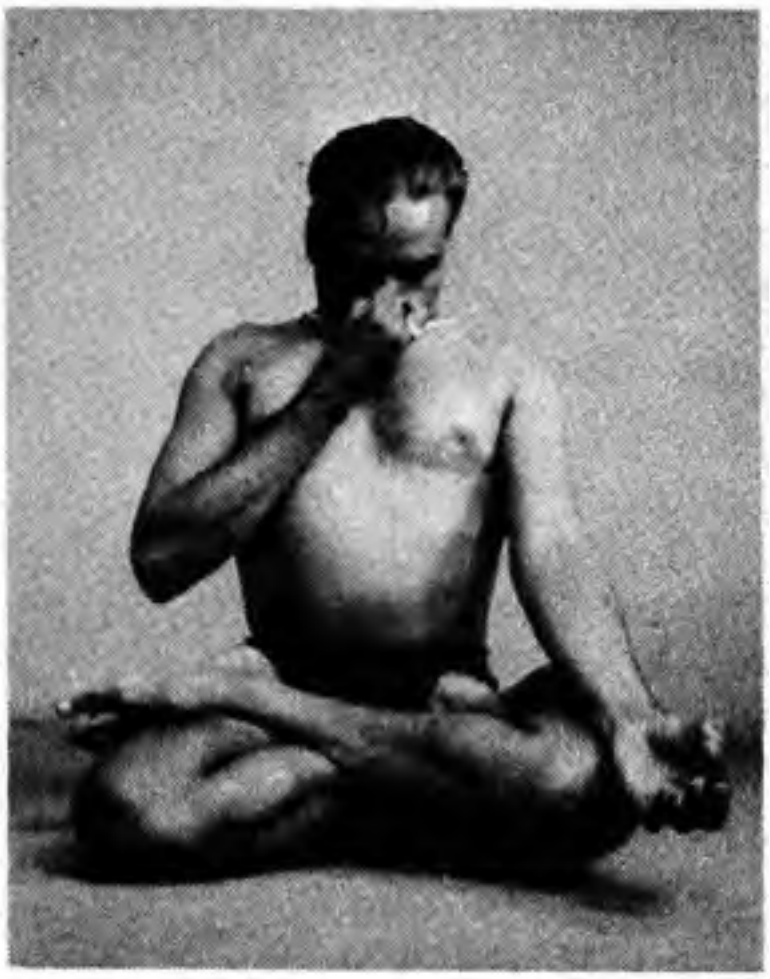

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nostril with the tip of the thumb nearer the nail. Fill the lungs to the brim (puraka).

10. Then block the right nostril so that both are now blocked.

11. Hold the breath for about 5 seconds (antara kumbhaka) while practising Mūla Bandha (see p. 437).

12. Keeping the right nostril completely blocked, open the left nostril partially and exhale through it slowly and deeply (rechaka).

13. During the exhalation regulate the rhythmic flow of air from the left nostril by adjusting pressure with the ring and little fingers, so that the outer edge of the left nostril is kept parallel to the septum. The pressure should be exerted from the inner sides of the tips of the fingers (away from the nails).

14. This completes one cycle of Sūrya Bhedana Prāṇāyāma. Continue with more cycles at a stretch from 5 to 10 minutes, according to capacity.

15. All the inhalations in Sūrya Bhedana are from the right nostril and all the exhalations from the left nostril.

16. Throughout the process, the passage of air is felt at the tips of the fingers and the thumbs and in the nasal membranes where pressure is applied. The passage of air makes a sound similar to air escaping from a cycle tube. This sound should be maintained constant throughout by varying pressure on the nostrils.

17. The eyes, temples, eyebrows and the skin on the forehead should remain completely passive and show no sign of strain.

18. The mind should be absorbed completely in listening to the proper sound of the passage of air and in maintaining a proper rhythm in breathing.

19. Each inhalation and exhalation should last for the same length of time.

20. The inhalation and the exhalation should not be forced. An even and slow rhythm should be maintained throughout.

21. Lie down in Śavāsana after completing prāṇāyāma. (Plate 592)

Effects

By reason of the pressure on the nostrils, in this Prāṇāyāma the lungs have to work more than in the case of Ujjāyi. In Sūrya Bhedana they are filled more slowly, steadily, and fuller than in Ujjāyi. Sūrya Bhedana increases digestive power, soothes and invigorates the nerves, and cleans the sinuses.

Note. – It often happens that the passages of both the nostrils are not of the same width, one being bigger than the other. In that case the pressure of the fingers has to be adjusted. In some cases the right nostril is completely blocked while the left one is clear. In that case, inhalation may be done only through the left nostril, while exhalation is done only through the right nostril. In course of time due to the manipulation of the fingers the right nostril clears and inhalation through it becomes possible.

Caution. – Persons suffering from low blood pressure will derive benefit but those with high blood pressure or heart trouble should not hold their breath after inhalation (antara kumbhaka) whilst practising this prāṇāyāma.

205. *Nāḍī Śodhana Prāṇāyāma*

Nāḍī is a tubular organ of the body like an artery or a vein for the passage of prāṇa or energy. A nāḍī has three layers like an insulated electric wire. The innermost layer is called sirā, the middle layer damanī and the entire organ as well as the outer layer is called nāḍī.

Śodhana meaning purifying or cleansing, so the object of Nāḍī Śodhana Prāṇāyāma is the purification of the nerves. A little obstruction in a water pipe can cut off the supply completely. A little obstruction in the nerves can cause great discomfort and paralyse a limb or organ.

Technique

1. Follow the technique given in paras 1 to 8 of Sūrya Bhedana Prāṇāyāma. (Plate 599)

2. Empty the lungs completely through the right nostril. Control the aperture of the right nostril with the inner side of the right thumb, away from the nail.

3. Now inhale slowly, steadily and deeply through the right nostril, controlling the aperture with the tip of the right thumb near the nail. Fill the lungs to the brim (puraka). During this inhalation the left nostril is completely blocked by the ring and little fingers.

4. After full inhalation, block the right nostril completely with the pressure of the thumb and release the pressure of the ring and little fingers on the left nostril. Readjust them on the outer edge of the left nostril and keep it parallel to the septum. Exhale slowly, steadily and deeply through the left nostril. Empty the lungs completely. The pressure should be exerted from the inner sides of the tips of the ring and little fingers (away from the nails) (rechaka).

5. After full exhalation through the left nostril, change the pressure on it by adjusting the fingers. In the changed position, the tips of the ring and little fingers nearer the nails exert the pressure.

6. Now inhale through the left nostril slowly, steadily and deeply, filling the lungs to the brim (puraka).

7. After full inhalation through the left nostril, block it and exhale through the right nostril, adjusting the pressure of the right thumb on the right nostril as stated in para. 2 above (rechaka).

8. This completes one cycle of Nāḍī Śodhana Prāṇāyāma. Here the rhythm of breathing is as follows:

(a) Exhale through the right nostril.
(b) Inhale through the right nostril.
(c) Exhale through the left nostril.
(d) Inhale through the left nostril.
(e) Exhale through the right nostril.
(f) Inhale through the right nostril.
(g) Exhale through the left nostril.
(h) Inhale through the left nostril.
(i) Exhale through the right nostril.
(j) Inhale through the right nostril . . . and so on.

Stage (a) above is the preparatory one. The first real Nāḍī Śodhana Prāṇāyāma cycle starts at stage (b) and ends at stage (e). The second

cycle starts at stage (f) and ends at stage (i). Stage (j) is the safety measure to be observed after the completion of the cycles in order to prevent gasping, breathlessness and strain on the heart.

9. Do 8 to 10 cycles at a stretch as described above. This may take 6 or 8 minutes.

10. Inhalation and exhalation from each side should take the same time. In the beginning the duration will be unequal. Persevere until equality is achieved.

11. After achieving mastery over the equal duration and precision over inhalation and exhalation on either side an attempt may be made to retain breath (antara kumbhaka) after inhaling.

12. This precision is only achieved after long practice.

13. Retention should not disturb the rhythm and equality of inhalation and exhalation. If either are disturbed curtail the period of retention or hold the breath on alternate cycles.

14. During retention after inhalation practise Mūla Bandha (see p. 437).

15. Do not attempt to hold the breath after exhalation (bāhya kumbhaka, Plate 600) until you have mastered retention after inhalation (antara kumbhaka). Then during bāhya kumbhaka practise Uḍḍiyānā (Plates 593, 594) with Mūla Bandha (see p. 437).

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16. Retention and the lengthening of inhalation and exhalation should only be attempted with the help and under the guidance of an experienced Guru.

17. Always conclude by lying down in Śavāsana. (Plate 592)

Effects

The blood receives a larger supply of oxygen in Nāḍī Śodhana than in normal breathing, so that one feels refreshed and the nerves are calmed and purified. The mind becomes still and lucid.

Note.– In the beginning the body perspires and shakes, while the thigh and arm muscles become tense. Such tension should be avoided.

Caution

1. Persons suffering from high blood pressure or heart trouble should never attempt to hold their breath (kumbhaka). They can practise Nāḍī Śodhana Prāṇāyāma without retention (kumbhaka) with beneficial effect.

2. Persons suffering from low blood pressure can do this prāṇāyāma with retention after inhalation (antara kumbhaka) *only*, with beneficial effects.

Prāṇāyāmas

206. *Bhastrikā Prāṇāyāma*

Bhastrikā means a bellows used in a furnace. Here the air is forcibly drawn in and out as in a blacksmith's bellows. Hence the name. The technique is given in two stages here.

Technique Stage I

1. Follow the technique in paras 1 and 2 of Ujjāyi.

2. Take a fast, vigorous breath and exhale fast and forcefully. One inhalation and one exhalation completes a cycle of Bhastrikā. The sound made resembles air rushing through bellows.

3. Complete at a stretch 10 to 12 cycles. Then take a slow deep breath as in Ujjāyi. Retain the breath with Mūla Bandha for 2 to 3 seconds, then exhale slowly and deeply as in Ujjāyi.

4. This Ujjāyi type of breathing rests the lungs and the diaphragm and prepares them for fresh cycles of Bhastrikā.

5. Repeat the cycles of Bhastrikā three to four times with Ujjāyi breathing in between.

6. If the sound of the air lessens, and the vigour diminishes, then reduce their number.

7. After completion lie down in Śavāsana. (Plate 592)

Stage II

1. Follow the technique in paras 1 and 2 of Ujjāyi.

2. Adjust the thumb and finger pressure on the nostrils as explained in the technique of Sūrya Bhedana.

3. Close the left nostril completely but keep the right nostril partially open.

4. Inhale and exhale vigorously only through the right nostril for 10 to 12 cycles of Bhastrikā as in Stage I above.

5. Close the right nostril. Open the left nostril partially and repeat Bhastrikā for an equal number of cycles.

6. Release the fingers from the nostrils.

7. Take a few deep breaths as in Ujjāyi.

8. Repeat the cycles on both sides three or four times, doing Ujjāyi in between.

9. After completion lie down in Śavāsana. (Plate 592)

Note.—The process or kriyā of—207—*Kapālabhāti* (kapāla=skull; bhāti=light, lustre) is a milder form of Bhastrikā Prāṇāyāma. In Kapālabhāti, the inhalation is slow but the exhalation is vigorous. There is a split second of retention after each exhalation. Do a few cycles of Kapālabhāti instead of Bhastrikā if the latter breathing proves too strenuous. Lie down in Śavāsana after finishing Kapālabhāti. (Plate 592)

Effects

Both Bhastrikā and Kapālabhāti activate and invigorate the liver, spleen, pancreas and abdominal muscles. Thus digestion is improved, the sinuses are drained, the eyes feel cool and one has a general sense of exhilaration.

Caution

1. As a locomotive engine is stoked with coal to generate steam to pull the train, so Bhastrikā generates prāṇā to activate the entire body. Too much stoking burns out the boiler of the engine. So also too long a practice of Bhastrikā wears out the system as the breathing process is forceful.

2. Persons with a weak constitution and poor lung capacity should not attempt Bhastrikā or Kapālabhāti.

3. Those suffering from ear or eye complaints (pus in the ear, detachment of the retina or glaucoma) should not attempt them either.

4. Nor should persons with high or low blood pressure.

5. If the nose starts to bleed or the ears to throb and ache, immediately stop Bhastrikā or Kapālabhāti.

6. Do not practise either for some time.

208. *Bhamarī Prāṇāyāma*

Bhamarī means a large black bee.

Technique

The technique of Bhamarī Prāṇāyāma is the same as that of Ujjāyi. The difference is that in Bhamarī, during exhalation, a soft humming sound like the murmuring of bees is made. After completion lie down in Śavāsana. (Plate 592)

Effects

The humming sound in Bhamarī Prāṇāyāma is helpful in cases of insomnia.

209. *Śītalī Prāṇāyāma* (Plate 601)

Śītala means cool. This prāṇāyāma cools the system, hence the name.

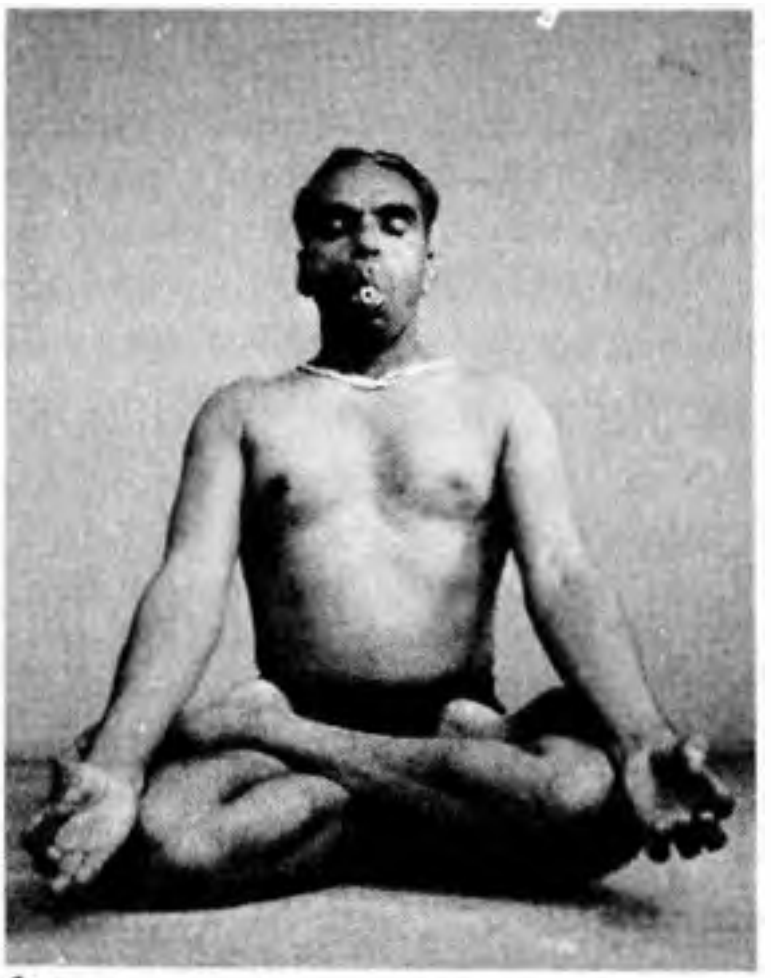
Technique

1. Sit in Padmāsana (Plate 104), Siddhāsana (Plate 84) or Vīrāsana (Plate 89).

2. Keep the back erect and rigid and the head level. Perform the Jñāna Mudrā with the hands (see p. 433, para. 21). Here Jālandhara Bandha is not done during inhalation but later.

3. Open the mouth and form the lips into an 'O'.

4. The sides and tip of the tongue touching the teeth, from the molars to the front teeth, should be lifted and curled up. The shape of the tongue will resemble a fresh curled leaf about to open. (Plate 601)



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5. Protrude the curled tongue out of the lips. Draw in the air past the curled tongue with a sibilant sound (ssssssssa) to fill the lungs completely. The air is drawn in as if through a pipette or a drinking straw. After full inhalation withdraw the tongue and close the mouth.

6. After full inhalation, lower the head, from the nape of the neck, to the trunk. The chin should rest in the notch between the collar-bones just above the breast-bone. The head is now in the Jālandhara Bandha position.

7. Now hold the breath (antara kumbhaka) for about 5 seconds, practising Mūla Bandha (see p. 437).

8. Exhale slowly with an aspirate sound (hhuuuuuuuum) through the nose as in Ujjāyī.

9. This completes one cycle of Śitalī Prāṇāyāma.

10. Lift the head and repeat the cycle for 5 to 10 minutes.

11. After completion lie down in Śavāsana. (Plate 592)

Effects

This cools the system and soothes the eyes and ears. It is beneficial in cases of low fever and biliousness. It activates the liver and the spleen, improves digestion and relieves thirst.

Caution

1. Persons suffering from high blood pressure should omit antara kumbhaka.

2. Those with heart trouble should not attempt Śitalī Prāṇāyāma in the beginning.

210. *Śitakārī Prāṇāyāma*

Śitakārī is that which causes cold. This is a variation of Śitalī Prāṇāyāma.

Technique

Here the tongue is not curled. The lips are kept slightly parted and only the tip of the tongue protrudes between the teeth. The tongue is kept flat as in its normal state. Follow the same technique as in Śitalī Prāṇāyāma.

Effects

The effects are the same as those mentioned for Śitalī Prāṇāyāma.

Caution

Persons with high blood pressure may find greater strain in Śitakārī than in Śītalī Prāṇāyāma.

211. *Sama Vṛtti Prāṇāyāma*

1. Sama means the same or identical, straight, entire, whole and complete: also similarly or in the same manner.

2. Vṛtti means action, movement, function or operation, a course of conduct or method.

3. In Sama Vṛtti Prāṇāyāma, therefore, an attempt is made to achieve uniformity in the duration of all the three processes of breathing, namely, puraka or inhalation, kumbhaka or retention, and rechaka or exhalation in any type of prāṇāyāma. If one lasts 5 seconds so do the others.

4. This uniformity of 5 seconds should be maintained throughout all the cycles of breathing in any type of Prāṇāyāma like Ujjāyī, Sūrya Bhedana, Nāḍī Śodhana, Śitalī and so on.

Caution

5. In the beginning Sama Vṛtti Prāṇāyāma should be confined only to inhalation (puraka) and exhalation (rechaka).

6. First, achieve uniformity of length of time in puraka and rechaka then only attempt antara kumbhaka (retention of breath after full inhalation).

7. Start the antara kumbhaka gradually. In the beginning, the ratio of time for pūraka, antara kumbhaka and rechaka should be kept at $1 : \frac{1}{4} : 1$. Very slowly increase the proportions to $1 : \frac{1}{2} : 1$. After this is firmly established attempt $1 : \frac{3}{4} : 1$. Only after mastering this, increase the proportion of antara kumbhaka so as to achieve the ratio of $1 : 1 : 1$.

8. Do not attempt bāhya kumbhaka (restraint of breath after full exhalation) until you have achieved the desired ratio of $1 : 1 : 1$ in pūraka, antara kumbhaka and rechaka.

9. If all air is expelled from the lungs, the vacuum inside and the atmospheric pressure outside will create a tremendous strain upon the lungs. Therefore, in the beginning, do not do both antara kumbhaka and bāhya kumbhaka together.

10. Practise antara kumbhaka and bāhya kumbhaka separately or alternately. It is beneficial to practise kumbhakas first by interspersing

them after two or three cycles of deep breathing with pūraka and rechaka alone. For example do two or three cycles of deep breathing and one cycle of antara kumbhaka. Then do two or three cycles of deep breathing followed by one cycle of bāhya kumbhaka. Start with 3 antara kumbhakas and 3 bāhya kumbhakas, and increase the number of kumbhakas very gradually.

212. *Viṣama Vṛtti Prāṇāyāma*

1. Viṣama means among many other things irregular and difficult.

2. Viṣama Vṛtti Prāṇāyāma is so called because the same length of time for inhalation, retention and exhalation is not maintained. This leads to interruption of rhythm and the difference in ratio creates difficulty and danger for the pupil.

3. In this type of prāṇāyāma if full inhalation takes 5 seconds, the breath is held (antara kumbhaka) for 20 seconds, and exhalation takes 10 seconds, the ratio being 1 : 4 : 2. At first the pupil will find it hard to maintain the rhythm during exhalation, but it all eases with practice.

4. Conversely, if inhalation is for 10 seconds, the breath is held for 20 seconds and exhalation takes 5 seconds, the ratio here being 2 : 4 : 1.

5. Again if the length of time can be so varied that if inhalation is for 20 seconds, retention is for 10 seconds and exhalation for 5, the ratio being 4 : 2 : 1.

6. In one cycle of prāṇāyāma, one can adopt the ratios 1 : 2 : 4, 2 : 4 : 1, and 4 : 1 : 2. Then these three ratios are counted as one cycle of prāṇāyāma.

7. If bāhya kumbhaka (restraint after full exhalation and before fresh inhalation) is also observed, the combination of ratios will be greater still.

8. If the different ratios are observed in the Viloma, Anuloma and Pratiloma methods of prāṇāyāma (described below) in the basic varieties of prāṇāyāmas like Ujjāyi, Sūrya Bhedana, Nāḍī Śodhana, Bhramari, Śitalī and Śitakāri, the number of combinations will be astronomical.

9. No mortal could perform all these different combinations in one lifetime.

10. The path of Viṣama Vṛtti Prāṇāyāma is fraught with danger. Do

not, therefore, dream of attempting to practise it on your own without the personal supervision of an experienced Guru or teacher.

11. Due to disharmony caused by these different time ratios for inhalation, retention and exhalation, all the systems of the body, especially the respiratory and nervous ones, are overtaxed and unduly strained.

12. The caution given on Sama Vṛtti Prāṇāyāma (see p. 453), regarding the practice of kumbhaka in paragraphs 5 to 10, applies with greater force in Viṣama Vṛtti Prāṇāyāma.

13. One now begins to realise the truth of Svātmārāma's statement in the second chapter of the *Haṭha Yoga Pradīpikā*: 'Prāṇa should be tamed more slowly and more gradually than lions, elephants and tigers (according to one's capacities and physical limitations); otherwise it will kill the practitioner.'

VILOMA, ANULOMA AND PRATILOMA PRĀṆĀYĀMAS

Sama Vṛtti and Viṣama Vṛtti Prāṇāyāma are concerned with the maintenance of a particular ratio of time taken in inhalation, retention and exhalation.

The Viloma, Anuloma and Pratiloma types of Prāṇāyāma are concerned with the methods and techniques of inhalation and exhalation. In Viloma, the inhalation or exhalation is not one continuous process, but is done gradually with several pauses. In Anuloma, inhalation is through both nostrils as in Ujjāyi and exhalation is alternate through either nostril as in Nāḍī Śodhana. In Pratiloma, all inhalation is alternate through either nostril while all exhalation is through both nostrils as in Ujjāyi.

213. *Viloma Prāṇāyāma*

Loma means hair. The particle vi is used to denote negation or privation. Viloma thus means against the hair, against the grain, against the natural order of things.

In Viloma Prāṇāyāma inhalation or exhalation is not one uninterrupted continuous process, but is interrupted by several pauses. For instance, if continuous inhalation to fill the lungs or continuous exhalation to expel the air were to take 15 seconds in each case, in Viloma there would be a pause of about 2 seconds after every third second of inhalation or of exhalation. The process of inhalation or of exhalation is thus lengthened to 25 seconds. The technique given below is in two stages, which are distinct.

Technique: Stage I

1. Viloma Prāṇāyāma can be done either in a sitting posture or while lying down.

2. If done when seated, keep the back erect, lower the head to the trunk so that the chin rests in the notch between the collar-bones on the top of the breast-bone. This is Jālandhara Bandha. Keep the hands in Jñāna Mudra (see p. 433, para. 21).

3. Inhale for 2 seconds, pause for 2 seconds holding the breath, again inhale for 2 seconds, again pause for 2 seconds holding the breath, and continue like this until the lungs are completely full.

4. Now hold the breath for 5 to 10 seconds (antara kumbhaka) according to capacity, practising Mūla Bandha (see p. 437).

5. During the pauses in the process of inhalation Mūla Bandha should be practised.

6. Exhale slowly and deeply as in Ujjāyi with an aspirate sound (huuuum). During exhalation relax the Mūla Bandha.

7. This completes one cycle of the first stage of Viloma Prāṇāyāma.

8. Repeat 10 to 15 cycles of this first stage at a stretch.

Stage II

9. Rest for a minute or two.

10. Then take a deep breath without any pauses as in Ujjāyi with a sibilant sound (ssssssa), keeping the chin on the top of the breast-bone. Fill the lungs completely.

11. Hold the breath from 5 to 10 seconds (antara kumbhaka), keeping the Mūla Bandha grip.

12. Exhale for 2 seconds and pause for 2 seconds. Again exhale for 2 seconds, pause for 2 seconds and continue like this until the lungs are completely emptied.

13. During the pauses maintain the Mūla Bandha grip.

14. This completes one cycle of the second stage of Viloma Prāṇāyāma.

15. Repeat the second stage of Viloma 10 to 15 times at a stretch.

16. This completes Viloma Prāṇāyāma.

17. Then lie down in Śavāsana. (Plate 592)

Effects

Viloma Prāṇāyāma in the first stage helps those suffering from low blood pressure. In the second stage it benefits persons suffering from high blood pressure.

Caution

1. The second stage of Viloma should only be done when lying down by persons suffering from high blood pressure.

2. Those suffering from heart complaints should not attempt it until they have mastered the Nāḍī Śodhana and Ujjāyi Prāṇāyāmas.

214. *Anuloma Prāṇāyāma*

Anu means with, along with or connected: also in an orderly succession. Anuloma, therefore, means in regular gradation, with the hair (loma=hair), along the grain or in natural order. In Anuloma Prāṇāyāma, inhalation is done through both nostrils and exhalation alternately through either nostril.

Technique

1. Sit in any comfortable position like Padmāsana (Plate 104), Siddhāsana (Plate 84) or Vīrāsana (Plate 89).

2. Keep the back erect and rigid. Lower the head to the trunk and rest the chin in the notch between the collar-bones just above the breast-bone. (This is the Jālandhara Bandha.)

3. Inhale deeply through both nostrils as in Ujjāyi until the lungs are fully filled.

4. Hold the breath after inhalation (antara kumbhaka) from 5 to 10 seconds according to capacity, maintaining Mūla Bandha (see p. 437).

5. Bring the right hand to the nose as described in Sūrya Bhedana Prāṇāyāma, relax the Mūla Bandha and exhale slowly from the partially opened right nostril, keeping the left one completely blocked. Completely empty the lungs and then lower the hand.

6. Inhale through both nostrils, until the lungs are filled as in para. 3.

7. Hold the breath after inhalation (antara kumbhaka) from 5 to 10 seconds according to capacity, maintaining Mūla Bandha. The retention of breath described in para. 4 and in this para. should be of equal length.

8. Again bring the right hand to the nose. Release the Mūla Bandha and close the right nostril completely. Now keep the left nostril

partially open, and exhale slowly and deeply to empty the lungs completely.

9. This completes one cycle of Anuloma Prāṇāyāma.

10. Do 5 to 8 cycles at a stretch.

11. Then lie down in Śavāsana. (Plate 592)

Effects

The effects are the same as those of Ujjāyi, Nāḍī Śodhana and Sūrya Bhedana.

Caution

1. In Anuloma Prāṇāyāma, the exhalation lasts longer than the inhalation. This leads to a variation in the rhythm of breathing. This is difficult and should therefore be done by advanced pupils only.

2. Persons suffering from blood pressure or heart ailments and nervous disorders should not attempt it as the results may be disastrous.

215. *Pratiloma Prāṇāyāma*

Prati means opposite. This type of Prāṇāyāma is the converse of Anuloma. In it inhalation is alternate through either nostril and then exhalation is through both nostrils as in Ujjāyi.

Technique

1. Sit in any comfortable position like Padmāsana (Plate 104), Siddhāsana (Plate 84) or Vīrāsana (Plate 89).

2. Keep the back erect and rigid. Lower the head to the trunk. Rest the chin in the notch between the collar-bones just above the breast-bone. This is the Jālandhara Bandha.

3. Stretch the left arm. Rest the back of the left wrist on the left knee. Perform the Jñāna Mudra with the left hand (see 203, 3).

4. Bend the right arm at the elbow, and the index and middle fingers towards the palm, keeping them passive. Bring the ring and little fingers towards the thumb. (Plate 598)

5. Place the right thumb on the right side of the nose just below the nasal bone and the ring and little fingers on the left side of the nose just below the nasal bone, just above the curve of the fatty tissue of the nostrils.

6. Press the ring and little fingers to block the left side of the nose completely.

7. With the right thumb, press the right side of the fatty tissue so as to make the outer edge of the nostril parallel to the lower edge of the cartilage of the septum.

8. The right thumb is bent at the top joint and the tip of the thumb is placed at a right angle to the septum. (Plate 599)

9. Now inhale slowly and deeply, controlling the aperture of the right nostril with the tip of the thumb nearer the nail. Fill the lungs to the brim (puraka).

10. Then block the right nostril so that both the nostrils are now blocked.

11. Hold the breath for about 5 to 10 seconds (antara kumbhaka) and stay in Mūla Bandha (see p. 437).

12. Lower the right hand. Release the Mūla Bandha grip. Exhale slowly and deeply as in Ujjāyi (203) until the lungs are completely empty.

13. Again raise the right hand to the nose. Inhale through the partially opened left nostril slowly and deeply, keeping the right nostril completely closed.

14. Fill the lungs to the brim.

15. Hold the breath with the Mūla Bandha grip from 5 to 10 seconds. The retention of breath (antara kumbhaka) after inhalation from either nostril should be of equal duration.

16. Lower the right hand, release the Mūla Bandha, exhale slowly and deeply, completely expelling all air from the lungs as in Ujjāyi.

17. This completes one cycle of Pratiloma Prāṇāyāma.

18. Do 5 to 8 cycles at a stretch.

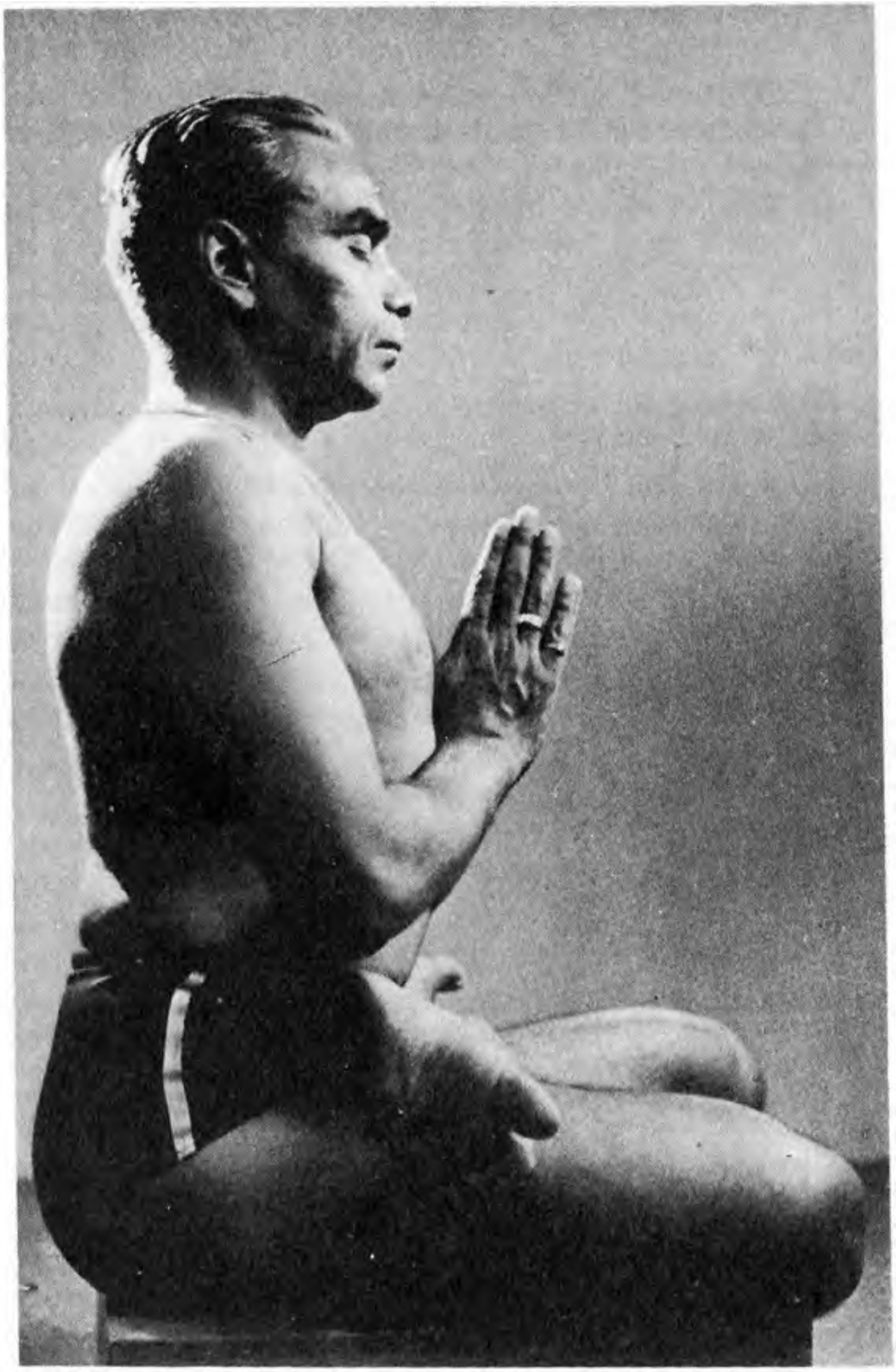
19. Then lie down in Śavāsana. (Plate 592)

Effects

The effects are the same as those of Ujjāyi, Nāḍī Śodhana and Sūrya Bhedana Prāṇāyāma.

Caution

1. Here, as in Anuloma, there is variation in the breath rhythm as the inhalation is longer than the exhalation. This difficult type of prāṇāyāma should, therefore, only be done by advanced pupils.



2. Persons suffering from blood pressure, heart ailments and nervous disorders should not attempt it, as the results will be disastrous.

216. *Sahita and Kevala Kumbhaka Prāṇāyāma*

Sahita means accompanied by, together with or associated with.

When prāṇāyāma practices are observed with the intentional aid and deliberate accompaniment of bāhya and antara kumbhaka, they are known as Sahita Kumbhaka Prāṇāyāmas.

Kevala means isolated, pure, absolute and perfect. When the practices of kumbhaka becomes *instinctive*, they are called Kevala Kumbhaka.

When the pupil has mastered Kevala Kumbhaka, he has isolated himself from the world and is in tune with the Infinite. He has obtained a measure of control over one of the most subtle and powerful of elements which can pervade the smallest crevice as well as the vast sky. His mind is completely absorbed with Prāṇa and becomes as free as Prāṇa itself.

As a wind drives smoke and impurities from the atmosphere, prāṇāyāma drives away the impurities of the body and the mind. Then, says Patañjāli, the DIVINE FIRE within blazes forth in its full glory and the mind becomes fit for concentration (dhāraṇā) and meditation (dhyāna). (*Yoga Sutras*, chapter II, 52 and 53.) This takes a long time. By degrees is the darkness banished by the dawn.

Appendix I

Āsana Courses

I am dividing the āsanas into three groups; the primary, intermediate and advanced courses. I am giving the series of āsanas in a serial order for practice and the possible time it may take to gain control in all these three courses.

(The figures within the brackets after the āsanas denote the serial number of the illustrations.)

COURSE ONE

1st and 2nd week

Tāḍāsana (1); Vṛkṣāsana (2); Utthita Trikoṇāsana (4 and 5); Utthita Pārśvakoṇāsana (8 and 9); Vīrabhadrāsana I & II (14 and 15); Pārśvottānāsana (26); Sālamba Sarvāngāsana I (223); Halāsana (244); Śavāsana (592).

3rd and 4th week

Utthita Trikoṇāsana (4 and 5); Utthita Pārśvakoṇāsana (8 and 9); Vīrabhadrāsana I & II (14 and 15); Parivṛtta Trikoṇāsana (6 and 7); Pārśvottānāsana (26); Prasārita Pādottānāsana I (33 and 34); Sālamba Sarvāngāsana I (223); Halāsana (244); Śavāsana (592).

5th and 6th week

Utthita Trikoṇāsana (4 and 5); Utthita Pārśvakoṇāsana (8 and 9); Vīrabhadrāsana I & II (14 and 15); Parivṛtta Trikoṇāsana (6 and 7); Pārśvottānāsana (26); Prasārita Pādottānāsana I (33 and 34); Ūrdhva Prasārita Pādāsana (276 to 279); Paripoorṇa Nāvāsana (78); Ardha Nāvāsana (79); Sālamba Sarvāngāsana I (223); Halāsana (244); Ujjāyī Prāṇāyāma (Section 203) for five minutes in Śavāsana (592).

7th week

Consolidate the āsanas and increase the length of stay in all of them.

8th week

Utthita Trikoṇāsana (4 and 5); Utthita Pārśvakoṇāsana (8 and 9); Vīrabhadrāsana I, II & III (14, 15 and 17); Ardha Chandrāsana (19); Parivṛtta Trikoṇāsana (6 and 7); Pārśvottānāsana (26); Prasārita

Pādottānāsana I & II (33 and 34, 35 and 36); Ūrdhva Prasārita Pādāsana (276 to 279); Paripoorṇa Nāvāsana (78); Ardha Nāvāsana (79); Sālamba Sarvāngāsana (223); Halāsana (244); Ujjāyī Prāṇāyāma (Section 203) for five minutes in Śavāsana (592).

9th and 10th week

Utthita Trikoṇāsana (4 and 5); Utthita Pārśvakoṇāsana (8 and 9); Vīrabhadrāsana I, II and III (14, 15 and 17); Ardha Chandrāsana (19); Parivṛtta Trikoṇāsana (6 and 7); Parivṛtta Parśvakoṇāsana (10 and 11); Pārśvottānāsana (26); Prasārita Pādottānāsana I & II (33 and 34, 35 and 36); Parighāsana (39); Ūrdhva Prasārita Pādāsana (276 to 279); Paripoorṇa Nāvāsana (78); Ardha Nāvāsana (79); Sālamba Sarvangāsana I (223); Halāsana (244); Karṇapīdāsana (246); Ekapāda Sarvāngāsana (250); Jaṭara Parivartanāsana (274 and 275); Ujjāyī Prāṇāyāma with inhalation retention (Section 203) for five minutes in Śavāsana (592).

11th and 12th week

Utthita Trikoṇāsana (4 and 5); Parivṛtta Trikoṇāsana (6 and 7); Utthita Pārśvakoṇāsana (8 and 9); Parivṛtta Pārśvakoṇāsana (10 and 11); Vīrabhadrāsana I, II & III (14, 15 and 17); Ardha Chandrāsana (19); Pārśvottānāsana (26); Prasārita Pādottānāsana I & II (33 and 34, 35 and 36); Pādāngusṭhāsana (44); Pādahastāsana (46); Uttānāsana (48); Parighāsana (39); Ūrdhva Prasārita Pādāsana (276 to 279); Paripoorṇa Nāvāsana (78); Ardha Nāvāsana (79); Sālamba Sarvāngāsana I (223); Halāsana (244); Karṇapīdāsana (246); Ekapāda Sarvāngāsana (250); Jaṭara Parivartanāsana (274 and 275); Ujjāyī Prāṇāyāma with inhalation retention (Section 203) in Śavāsana (592).

13th week

Repeat and become steady in your daily practices. Those who find it difficult to master all these āsanas within this period can continue with them for several more weeks.

14th and 15th week

Sālamba Śīrṣāsana I (184); Utthita and Parivṛtta Trikoṇāsana (4 and 5, 6 and 7); Utthita and Parivṛtta Pārśvakoṇāsana (8 and 9, 10 and 11); Vīrabhadrāsana I, II & III (14, 15 and 17); Ardha Chandrāsana (19); Pārśvottānāsana (26); Prasārita Pādottānāsana I & II (33, 34, 35 and 36) Pādāngusṭhāsana (44); Pādahastāsana (46); Uttānāsana (48); Parighāsana (39); Śalabhāsana or Makarāsana (60 or 62); Dhanurāsana (63); Bhujangāsana I (73); Ūrdhva Prasārita Pādāsana (276 to 279); Paripoorṇa Nāvāsana (78); Ardha Nāvāsana (79); Sālamba Sarvāngāsana I (223);

Halāsana (244); Karṇapīdāsana (246); Supta Koṇāsana (247); Pārśva Halāsana (249); Ekapāda Sarvāngāsana (250); Jaṭara Parivartanāsana (274 and 275); Mahāmudra (125); Januśīrṣāsana (127); Daṇḍāsana (77); Paschimottānāsana (160); Ujjāyī Prāṇāyāma with inhalation retention (Section 203) in Savāsana (592).

16th and 17th week (Observe the change in the order of the āsanas)

Sālamba Śīrṣāsana I (184); Utthita and Parivṛtta Trikoṇāsana (4, 5, 6 and 7); Utthita and Parivṛtta Pārśvakoṇāsana (8, 9, 10 and 11); Vīrabhadrāsana I, II & III (14, 15 and 17); Ardha Chandrāsana (19); Pārśvottānāsana (26); Prasārita Pādottānāsana I & II (33, 34, 35 and 36); Pādāngusṭhāsana (44); Pādahastāsana (46); Uttānāsana (48); Ūrdhva Prasārita Ekapādāsana (49); Utkaṭāsana (42); Parighāsana (39); Uṣṭrāsana (41); Salabhāsana or Makarāsana (60 or 62); Dhanurāsana (63); Chaturanga Daṇḍāsana (67); Bhujangāsana I (73); Ūrdhva Mukha Śvānāsana (74); Adho Mukha Śvānāsana (75); Vīrāsana (86); Sālamba Sarvāngāsana I (223); Halāsana (244); Karṇapīdāsana (246); Supta Koṇāsana (247); Pārśva Halāsana (249); Ekapāda Sarvāngāsana (250); Pārśvaikapāda Sarvāngāsana (251); Jaṭara Parivartanāsana (274 and 275); ŪrdhvaPrasāritaPādāsana (276to279); Paripoorṇa Nāvāsana (78); Ardha Nāvāsana (79); Mahāmudrā (125); Jānuśīrṣāsana (127); Paschimottānāsana (160); Poorvottānāsana (171); Śavāsana (592); Siddhāsana (84). Do Ujjāyī Prāṇāyāma (without inhalation retention) (Section 203) in Siddhāsana.

18th week

Repeat.

If you now find all the standing āsanas are easy enough, you can do them on alternate days or twice a week.

19th to 21st week

Sālamba Śīrṣāsana I (184); Pārśva Śīrṣāsana (202 and 203); Ekapāda Śīrṣāsana (208 and 209); Sālamba Sarvāngāsana I (223); Sālamba Sarvāngāsana II (235); Nirālamba Sarvāngāsana I (236); Nirālamba Sarvāngāsana II (237); Halāsana (244); Karṇapīdāsana (246); Supta Koṇāsana (247); Pārśva Halāsana (249); Ekapāda Sarvāngāsana (250); Pārśvaikapāda Sarvāngāsana (251); Ūrdhva Prasārita Pādasana (276 to 279); Jaṭara Parivartanāsana (275); Chakrāsana (280 to 283); Paripoorṇa Nāvāsana (78); Ardha Nāvāsana (79); Utkaṭāsana (42); Uṣṭrāsana (41); Vīrāsana (89); Śalabhāsana (60); Dhanurāsana (63); Chaturanga Daṇḍāsana (67); Bhujangāsana I (73); Urdhva Mukha Svānāsana (74); Adho Mukha Śvānāsana (75); Mahāmudra (125); Jānuśīrṣāsana (127); Triangmukhaikapāda Paschimottānāsana (139); Ardha Baddha Padma Paschi-

mottānāsana (135); Marīchyāsana I & II (144, 146 and 147); Ubhaya Pādāngusṭhāsana (167); Ūrdhva Mukha Paschimottānāsana I (168); Paschimottānāsana (160); Poorvottānāsana (171); Bharadwājāsana I & II (297, 298, 299 and 300); Mālāsana II (322); Baddha Koṇāsana (102); Śavāsana (592); Ujjāyī Prāṇāyāma without Kumbhaka or retention (Section 203) in Siddhāsana (84).

22nd to 25th week

Follow the serial order up to Chakrāsana (280 to 283) as in the 19th week. Then: Śalabhāsana (60); Dhanurāsana (63); Chaturanga Daṇḍāsana (67); Bhujangāsana I (73); Ūrdhva Mukha Śvānāsana (74); Adho Mukha Śvānāsana (75); Jānuśīrṣāsana (127); Ardha Baddha Padma Paschimottānāsana (135); Triangmukhaikapāda Paschimottānāsana (139); Marīchyāsana I & II (144, 146 and 147); Paschimottānāsana (160); Ubhaya Pādāngusṭhāsana (167); Ūrdhva Mukha Paschimottānāsana I (168); Lolāsana (83); Gomukhāsana (80); Simhāsana I (109); Padmāsana (104); Parvatāsana (107); Tolāsana (108); Vīrāsana (89); Supta Vīrāsana (96); Paryankāsana (97); Uṣṭrāsana (41); Utkaṭāsana (42); Uttānāsana (48); Bharadwājāsana I & II (297, 298, 299 and 300); Marīchyāsana III (303 and 304); Ardha Matsyendrāsana I (311 and 312); Mālāsana II (322); Baddha Koṇāsana (102); Śavāsana (592); Ujjāyī Prāṇāyāma without retention (Section 203) in Siddhāsana (84).

26th to 30th week

Sālamba Śīrṣāsana I (184); Pārśva Śīrṣāsana (202 and 203); Ekapāda Śīrṣāsana (208 and 209); Ūrdhva Padmāsana (211); Piṇḍāsana in Śīrṣāsana (218); Sālamba Sarvāngāsana I & II (223 and 235); Nirālamba Sarvāngāsana I & II (236 and 237); Halāsana (244); Karṇapīḍāsana (246); Supta Koṇāsana (247); Pārśva Halāsana (249); Ekapāda Sarvāngāsana (250); Pārśvaikapāda Sarvāngāsana (251); Ūrdhva Padmāsana (261); Piṇḍāsana in Sarvāngāsana (269); Jaṭara Parivartanāsana (275); Paripoorṇa Nāvāsana (78); Ardha Nāvāsana (79); Jānuśīrṣāsana (127); Ardha Baddha Padma Paschimottānāsana (135); Triangmukhaikapāda Paschimottānāsana (139); Marīchyāsana I (144); Paschimottānāsana (160); Ūrdhva Mukha Paschimottānāsana I (168); Gomukhāsana (80); Lolāsana (83); Simhāsana I (109); Padmāsana (104); Parvatāsana (107); Tolāsana (108); Matsyāsana (113); Vīrāsana (89); Supta Vīrāsana (96); Paryankāsana (97); Marīchyāsana III (303 and 304); Ardha Matsyendrāsana I (311 and 312); Baddha Koṇāsana (102); Adho Mukha Śvānāsana (75); Ūrdhva Mukha Śvānāsana (74); Chaturanga Daṇḍāsana (67); Śalabhāsana (60); Dhanurāsana (63); Uṣṭrāsana (41); Utkaṭāsana (42); Uttānāsana (48); Garuḍāsana (56); Śavāsana (592); Ujjāyī Prāṇāyāma

with Antar Kumbhaka (inhalation retention) (Section 203) in Siddhāsana (84), or in Vīrāsana (89) or in Padmāsana (104).

When you do the standing positions, eliminate the various movements in Śīrṣāsana and Sarvāngāsana cycles and do the rest. If Padmāsana has not yet been mastered, try to do so by continuing the āsanas for several weeks. One can add more of them to the programme if one can do so without strain.

For those who are satisfied with this first course I will now give a short three-day course which whenever followed will benefit the body and bring harmony to the mind.

First day of the week

Sālamba Śīrṣāsana I (184) for 10 minutes; Sālamba Sarvāngāsana I (223) for 10 minutes; Halāsana (244) for 5 minutes; Jaṭara Parivartanāsana (275) half a minute on each side; Paripoorṇa Nāvāsana (78) for one minute; Ardha Nāvāsana (79) for 20 to 30 seconds; Paschimottānāsana (160) for 3 to 5 minutes; Marīchyāsana III (303 and 304) for 30 seconds each side; Ardha Matsyendrāsana I (311 and 312) for 30 seconds on each side. If Marīchyāsana III or Ardha Matsyendrāsana I is difficult to perform then do Bharadwājāsana I and II (297, 298, 299 and 300). Parvatāsana (107) for one minute; Matsyāsana (113) for 20 to 30 seconds; Śalabhāsana (60) for 20 to 30 seconds; Dhanurāsana (63) for 30 seconds; Ūrdhva Mukha Śvānāsana (74) for 20 to 30 seconds; Adho Mukha Śvānāsana (75) for one minute; Uttānāsana (48) for 1 to 2 minutes; Śavāsana (592) for 5 minutes and Nāḍī Śodhana Prāṇāyāma in Padmāsana (104) or in Vīrāsana (89) or in Siddhāsana (84) with inhalation retention for 10 minutes and 6 Uḍḍīyānas (Section 201) and again do Śavāsana (592).

Second day of the week

Sālamba Śīrṣāsana I (184) for 10 minutes; Pārṣva Śīrṣāsana (202 and 203) for 20 seconds each side; Ekapāda Śīrṣāsana (208 and 209) for 10 to 15 seconds on each side; Ūrdhva Padmāsana (211) for 20 seconds; Piṇḍāsana in Śīrṣāsana (218) for 30 seconds (do all these at one stretch). Sālamba Sarvāngāsana I (223) for 8 to 10 minutes; Sālamba Sarvāngāsana II (235) for 30 seconds; Nirālamba Sarvāngāsana I & II (236 and 237) for 30 seconds each; Halāsana (244) for 5 minutes; Karṇapīdāsana (246) for 30 seconds; Supta Koṇāsana (247) for 20 seconds; Pārśva Halāsana (249) for 20 seconds on each side; Ekapāda Sarvāngāsana (250) for 15 seconds on each side; Pārsvaikapāda Sarvāngāsana (251) for 15 seconds on each side; Ūrdhva Padmāsana (261) for 20 seconds; Piṇḍāsana in Sarvāngāsana (269) for 20 seconds (all to be done at one stretch). Jaṭara Parivartanāsana (275) for 15 seconds on each side; Ūrdhva

Prasārita Pādāsana (276 to 279) for 15 seconds on each position; Mahāmudra (125) for 20 to 30 seconds on each side; Jānuśīrṣāsana (127), Ardha Baddha Padma Paschimottānāsana (135), Triangmukhaikapāda Paschimottānāsana (139), Marīchyāsana I & II (144, 146 and 147) for 20 seconds on each side in all these āsanas; Paschimottānāsana (160) for 3 minutes; Ūrdhva Mukha Paschimottānāsana I (168) for one minute; Marīchyāsana III (303 and 304) for half a minute on each side; Ardha Matsyendrāsana I (311 and 312) for half a minute on each side; Baddha Koṇāsana (102) for one minute; Uttānāsana (48) for 2 minutes; Śavāsana (592) for 5 minutes. Ujjāyī Prāṇāyāma (Section 203) or Nāḍī Śodhana Prāṇāyāma (Section 205) for 8 minutes in any comfortable āsana and then end with Śavāsana (592).

Third day of the week

Sālamba Śīrṣāsana I (184) for 10 minutes; Utthita Trikoṇāsana (4 and 5) for half a minute on each side; Parivṛtta Trikoṇāsana (6 and 7) for half a minute on each side; Utthita Pārśvakoṇāsana and Parivṛtta Pārśvakoṇāsana (8, 9, 10 and 11) for 20 seconds each side; Vīrabhadrāsana I, II & III (14, 15 and 17) for 15 seconds on each side; Ardhachandrāsana (19) for 20 seconds on each side; Pārśvottānāsana (26) for 30 seconds on each side; Prasārita Pādottānāsana I (33 and 34), Pādāṅguṣṭhāsana (44) for 30 seconds; Pādahastāsana (46) for 30 seconds; Uttānāsana (48) for one minute; Urdhva Prasārita Ekapādāsana (49) for 15 seconds on each side; Garuḍāsana (56) for 10 seconds on each side; Utkaṭāsana (42) for 15 seconds; Parighāsana (39) for 15 seconds on each side; Uṣṭrāsana (41) for 20 seconds; Bhujangāsana I (73) for 20 to 30 seconds; Vīrāsana (89), Supta Vīrāsana (96) and Paryankāsana (97) for 30 to 40 seconds in each āsana; Padmāsana (104), Parvatāsana (107), Tolāsana (108), Matsyāsana (113) for 30 seconds in each āsana; Gomukhāsana (80) 15 seconds on each side; Lolāsana (83) for 15 seconds; Simhāsana I (109) for 20 seconds; Paschimottānāsana (160) for 3 to 5 minutes; Ujjāyī Prāṇāyāma (Section 203) or Nāḍī Śodhana Prāṇāyāma (Section 205) without Kumbhaka or retention for 10 minutes; Śavāsana (592) for 5 minutes.

Again one can repeat in the same order on the following days resting on Sundays or doing only Śīrṣāsana I (184) for 10 minutes; Sālamba Sarvāṅgāsana I (223) for 10 minutes; Halāsana (244) for 5 minutes; Paschimottānāsana (160) for 5 minutes and Nāḍī Śodhana Prāṇāyāma (Section 205) for 15 minutes with inhalation retention and Śavāsana (592) for 5 minutes.

If one finds that the number of āsanas or the length of time they take has increased, one can adjust according to capacity and the time at one's disposal. Do Śavāsana (592) after Prāṇāyāma.

Do Antarkumbhaka (inhalation retention) only when you have mastered the art of deep inhalation and deep exhalation without any jerks.

Do not do the āsanas and Prāṇāyāma together. You may feel the strain and the fatigue.

If you do Prāṇāyāma in the mornings, then āsanas can be done in the evenings or half an hour after the āsanas.

Never do āsanas immediately after Prāṇāyāma, but one can practise Prāṇāyāma after āsanas if one is still fresh.

Those who wish to prostrate to the sun (sūryanamaskar) and to develop the arms and chest, can do the following āsanas in sequence at first for six rounds, increasing the number according to capacity.

Āsanas	*Method of breathing*
1. Tāḍāsana (1)	Inhalation
2. Uttānāsana (47 and 48) and jump to,	Exhalation, inhalation (Plate 47)
3. Chaturanga Daṇḍāsana (66 and 67)	Exhalation
4. Ūrdhva Mukha Śvānāsana (74) and go back to,	Inhalation
5. Chaturanga Daṇḍāsana (67)	Exhale, inhale
6. Adho Mukha Śvānāsana (75) and from here jump to,	Exhale
7. Uttānāsana (47 and 48) and then back to,	Inhalation
8. Tāḍāsana (1)	Exhalation

Important āsanas in Course 1

Utthita Trikoṇāsana (4 and 5); Parivṛtta Trikoṇāsana (6 and 7); Utthita Pārśvakoṇāsana (8 and 9); Parivṛtta Pārśvakoṇāsana (10 and 11); Vīrabhadrāsana I & III (14 and 17); Ardhachandrāsana (19); Pārśvottānāsana (26); Prasārita Pādottānāsana I (33 and 34); Ustrāsana (41); Uttanāsana (48); Śalabhāsana (60); Dhanurāsana (63); Adho Mukha Śvānāsana (75); Paripoorṇa Nāvāsana (78); Ardha Nāvāsana (79); Siddhāsana (84); Vīrāsana (89); Baddha Koṇāsana (102); Padmāsana (104); Maṭsyāsana (113); Jānuśīrṣāsana (127); Paschimottānāsana (160); Sālamba Śīrṣāsana I (184); Sālamba Sarvāngāsana I (223); Halāsana (244); Marīchyāsana III (303 and 304); Ardha Matsyendrāsana I (311 and 312); and Śavāsana (592).

If these āsanas are mastered then the others given in this course will come even without regular practice.

COURSE TWO

31st to 35th week

Sālamba Śīrṣāsana I (184); Ūrdhva Daṇḍāsana (188); Pārśva Śīrṣāsana (202 and 203); Parivṛttaika Pāda Śīrṣāsana (206 and 207); Ekapāda Śīrṣāsana (208 and 209); Pārśvaikapāda Śīrṣāsana (210); Ūrdhva Padmāsana (211); Pārśva Ūrdhva Padmāsana (215 and 216); Piṇḍāsana in Śīrṣāsana (218); Sālamba Sarvāngāsana I & II (223 and 235); Nirālamba Sarvāngāsana I & II (236 and 237); Halāsana (244); Karṇapīdāsana (246); Supta Koṇāsana (247); Pārśva Halāsana (249); Ekapāda Sarvāngāsana (250); Pārśvaikapāda Sarvāngāsana (251); Ūrdhva Padmāsana (261); Piṇḍāsana in Sarvāngāsana (269); Pārśva Piṇḍāsana (270 and 271); Setubandha Sarvāngāsana (259); Ekapāda Setubandha Sarvāngāsana (260); Jaṭara Parivartanāsana (275); Supta Pādāngusṭhāsana (285 to 287); Chakrāsana (280 to 283); Paripoorṇa Nāvāsana (78); Ardha Nāvāsana (79); Uṣṭrāsana (41); Vīrāsana (89); Supta Vīrāsana (96) Paryankāsana (97); Jānu Śīrṣāsana (127); Ardha Baddha Padma Paschimottānāsana (135); Triang Mukhaikapāda Paschimottānāsana (139); Krouchāsana (141 and 142); Marīchyāsana I (144); Paschimottānāsana (160); Baddha Padmāsana (118); Yoga Mudrāsana (120); Parvatāsana (107); Kukkuṭāsana (115); Garbha Piṇḍāsana (116) (all the Padmāsana Cycle can be done at one stretch). Upaviṣṭa Koṇāsana (151); Akarṇa Dhanurāsana (173 and 175); Baddha Koṇāsana (102); Marīchyāsana III (303 and 304); Ardha Matsyendrāsana I (311 and 312); Śalabhāsana (60); Dhanurāsana (63); Pārśva Dhanurāsana (64 and 65); Uttānāsana (48); Nāḍī Śodhana Prāṇāyāma (Section 205) without inhalation retention for 10 minutes and Ujjāyī Prāṇāyāma (Section 203) in Śavāsana (592).

36th to 40th week

Follow the above order in Sālamba Śīrṣāsana and cycle and Sālamba Sarvāngāsana and cycle up to Supta Pādāngusṭhāsana (285 to 287); Utthita and Parivṛtta Trikoṇāsana (4 and 5, 6 and 7); Utthita and Parivṛtta Pārsvakoṇāsana (8 and 9, 10 and 11); Vīrabhadrāsana I & III (14 and 17); Ardha Chandrāsana (19); Pārśvottānāsana (26); Pādāngusṭhāsana (44); Pāda Hastāsana (46); Uttānāsana (48); Utthita Hasta Pādāngusṭhāsana (23); Ardha Baddha Padmottānāsana (52); Vātāyanāsana (58); Jānu-Śīrṣāsana (127); Parivṛtta Jānu-Śīrṣāsana (132); Ardha Baddha Padma Paschimottānāsana (135); Krounchāsana (141 and 142); Marīchyāsana I (144); Paschimottānāsana (160); Ūrdhvamukha Paschimottānāsana I (168); Ūrdhvamukha Paschimottānāsana II (170); Baddha Padmāsana (118); Yoga Mudrāsana (120); Kukkuṭāsana (115);

Garbha Piṇḍāsana (116); Simhāsana II (110); Matsyāsana (113); Baddha-koṇāsana (102); Upaviṣṭa Koṇāsana (151); Ākarṇa Dhanurāsana (173 and 175); Marīchyāsana III (303 and 304); Ardha Matsyendrasana I (311 and 312); Uttānapādāsana (292); Śalabhāsana (60); Dhanurāsana (63); Pārśva Dhanurāsana (64 and 65); Ūrdhva Dhanurāsana I (482); Śavāsana (592); Nāḍī Śodhana Prāṇāyāma (Section 205) for 5 minutes; Sūryabhedana Prāṇāyāma (Section 204) for 5 minutes with inhalation retention; Uḍḍīyāna (Section 201) for 8 times.

40th to 44th week

Consolidate all the positions concentrating on the āsanas which were left out in Course I.

45th to 50th week

Śālamba Śīrṣāsana I (184); Sālamba Śīrṣāsana II (192); Sālamba Śīrṣāsana III (194 and 195); Baddha Hasta Śīrṣāsana (198); Mukta Hasta Śīrṣāsana (200 and 201); Pārśva Śīrṣāsana (202 and 203); Parivṛttaikapāda Śīrṣāsana (206 and 207); Ekapāda Śīrṣāsana (208 and 209); Pārśvaikapāda Śīrṣāsana (210); Ūrdhva Padmāsana (211); Pārśva Ūrdhva Padmāsana (215 and 216); Piṇḍāsana in Śīrṣāsana (218); Sālamba Sarvāngāsana I & II (223 and 235); Nirālamba Sarvāngāsana I & II (236 and 237); Halāsana (244); Karṇapīdāsana (246); Supta Koṇāsana (247); Pārśva Halāsana (249); Ekapāda Sarvāngāsana (250); Pārśvaikapāda Sarvāngāsana (251); Pārśva Sarvāngāsana (254); Setubandha Sarvāngāsana (259); Ekapāda Setubandha Sarvāngāsana (260); Ūrdhva Padmāsana (261); Pārśva Ūrdhva Padmāsana (264 and 265); Piṇḍāsana in Sarvāngāsana (269); Pārśva Piṇḍāsana (270 and 271); Supta Pādāngusṭhāsana (285 to 287); Anantāsana (290); Paschimottānāsana (160); Parivṛtta Paschimottānāsana (165); Jānu-Śīrṣāsana (127); Parivṛtta Jānu-Śīrṣāsana (132); Krounchāsana (141 and 142); Ākarṇa Dhanurāsana (173 and 175); Baddha Padmāsana (118); Yoga Mudrāsana (120); Kukkuṭāsana (115); Garbha Piṇḍāsana (116); Gorakṣāsana (117); Simhāsana II (110); Matsyāsana (113); Supta Vīrāsana (96); Bhekāsana (100); Baddha Koṇāsana (102); Ardha Matsyendrāsana I (311 and 312); Marīchyāsana III (303 and 304); Marīchyāsana IV (305); Mālāsana I (321); Uttānapādāsana (292); Urdhva Dhanurāsana I (482) 6 times and Śavāsana (592).

(All the Śīrṣāsana cycle can be done at one stretch staying 10 to 15 seconds on each side, except Sīrṣāsana I (184) where you have to stay for 5 minutes. Also stay for 5 minutes in Sālamba Sarvāngāsana I (234) and Halāsana (244) for 5 minutes each, and the rest for 15 seconds on each side. Do Paschimottānāsana (160) for 3 to 5 minutes and the rest of the āsanas from 15 to 20 seconds.)

Do Nāḍī Sodhana (Section 205) with Antara Kumbhaka or inhalation retention for 10 minutes, Bhastrika (Section 206) for 3 minutes and Uḍḍīyāna (Plates 593, 594) 8 times.

51st to 54th week

Do the important āsanas of Course I and perfect the poses in Course II. Some will be mastered quickly, but others will take longer. Adjust, therefore, to your own convenience.

55th to 60th week

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271 except 267); Jatara Parivartanāsana (275); Supta Pādāngusthāsana (285 to 287); Anantāsana (290); Ūrdhva Prasārita Pādāsana (276 to 279); Paschimottānāsana (160); Parivṛtta Paschimottānāsana (165); Urdhva Mukha Paschimottānāsana I (168); Ākarṇa Dhanurāsana (173 and 175); Bhujapīdāsana (348); Kūrmāsana (363 and 364); Supta Kūrmāsana (368); Ekapāda Śīrṣāsana (371); Padmāsana cycle (104 to 120) and Supta Vajrāsana (124); Bhekāsana (100); Baddha Koṇāsana (102); Marīchyāsana III (303 and 304); Ardha Matsyendrāsana I (311 and 312); Mālāsana I (321); Pāśāsana (328 and 329); Uttānapādāsana (292); Setubandhāsana (296); Ūrdhva Dhanurāsana II (486) twelve times following the technique 11 in the section on the āsana; Uttānāsana (48); Śavāsana (592); Prāṇāyāma as mentioned above and start meditation in Siddhāsana (84), Vīrāsana (89), Baddha Koṇāsana (103) or Padmāsana (104).

61st to 65th week

Śīrṣāsana and cycle (184 to 218). If the Sālamba Śīrṣāsana II & III (192, 194 and 195), Baddha Hasta Śīrṣāsana (198) and Mukta Hasta Śīrṣāsana (200 and 201) are mastered, they can be dropped as daily practices but should be done once in a while so that the balance is not lost. Sarvāngāsana and cycle (234 to 271 except 267); Jaṭara Parivartanāsana (275); Supta Pādanguṣṭhāsana (285 to 287); Anantāsana (290); Paschimottānāsana (160); Parivṛtta Paschimottānāsana (165); Ākarṇa Dhanurāsana (173 and 175); Kūrmāsana (363 and 364); Supta Kūrmāsana (368); Ekapada Śīrṣāsana (371); Skandāsana (372); Bhujapīdāsana (348); Aṣṭāvakrāsana (342 and 343); Ekahasta Bhujāsana (344); Dwihasta Bhujāsana (345); Adhomukha Vṛkṣāsana (359—against the wall); Padmāsana cycle (104 to 124); Marīchyāsana III (303 and 304); Ardha Matsyendrāsana I (311 and 312); Pāśāsana (328 and 329); Uttānāpādāsana (292); Setubandhāsana (296); Ūrdhva Dhanurāsana for 12 to 15 times as stated in the 55th week; Uttānāsana (48); Śavāsana (592). Follow the Prāṇāyāma as stated previously and increase the length of

inhalation, inhalation retention, exhalation and also the cycles and finish with meditation in the āsanas as stated above.

66th to 70th week

Śīrṣāsana I and cycle (184 to 218 except 192, 194, 195, 198 and 200–1); Adhomukha Vṛkṣāsana (359); Mayūrāsana (354); Padma Mayūrāsana (355); Nakrāsana (68 to 71); Sālamba Sarvāngāsana and cycle (234 to 271 except 267); Jaṭara Parivartanāsana (275); Supta Padanguṣṭhāsana (285 to 287); Anantāsana (290); Uttānapādāsana (292); Setubandhāsana (296); Ūrdhva Dhanurāsana (486); from Vṛkṣāsana (359) for 12 times and arch up to Tāḍāsana (1); Marīchyāsana III (303 and 304); Ardha Matsyendrāsana I (311 and 312); Pāśāsana (328 and 329); Bhujapīdāsana (348); Aṣṭavakrāsana (342 and 343); Bakāsana (406); Paschimottānāsana (160); Parivṛtta Paschimottānāsana (165); Upaviṣṭa Koṇāsana (151); Ākarṇa Dhanurāsana (173 and 175); Padmāsana cycle (104 to 124); Kūrmāsana (363 and 364); Supta Kūrmāsana (368); Ekapāda Śīrṣāsana (371); Skandāsana (372); Baddha Koṇāsana (102); Bhekāsana (100); Supta Vīrāsana (96); Śavāsana (592).

71st to 73rd week

Do as explained in the 66th week but at the time of performing Ūrdhva Dhanurāsana (486) add Ekapada Ūrdhva Dhanurāsana (501 and 502) and proceed with Marīchyāsana III (303 and 304) and do the rest. Do Prāṇāyāma as stated above and after Uddiyāṇa, add Nauli (Section 202) 6 to 8 times and finish with meditation.

74th to 78th week

Repeat all the āsanas of Course One and Course Two.

Important āsanas in Course Two

Utthita Hasta Pādānguṣṭhāsana (23); Vātāyanāsana (58); Nakrāsana (68 to 71); Bhekāsana (100); Simhāsana II (110); Garbha Piṇḍāsana (116); Yoga Mudrāsana (120); Supta Vajrāsana (124); Parivṛtta Jānu-Śīrṣāsana (132); Krounchāsana (141 and 142); Upaviṣṭa Koṇāsana (151); Parivṛtta Paschimottānāsana (165); Ākarṇa Dhanurāsana (173 and 175); Ūrdhva Daṇḍāsana (188); Śīrṣāsana and Sarvāngāsana cycles; Supta Pādānguṣṭhāsana (285 to 287); Anantāsana (290); Setubandhāsana (296); Pāśāsana (328 and 329); Aṣṭāvakrāsana (342 and 343); Bhujapīdāsana (348); Mayūrāsana (354); Adhomukha Vṛkṣāsana (359); Kūrmāsana (363 and 364); Supta Kūrmāsana (368); Ekapāda Śīrṣāsana (371); Skandāsana (372); Bakāsana (406); and Ūrdhva Dhanurāsana (486).

For those who like to do the āsanas from Course One and Two, I now give the method of practice in a week's course.

First day of the week

Śīrṣāsana and cycle (184 to 218 except 192, 194–5, 198, 200–1); Sarvāngāsana and cycle (234 to 271 except 267); Supta Pādāngusṭhāsana (285 to 287); Anantāsana (290); Paschimottānāsana (160); Utthita and Parivṛtta Trikoṇāsana (4 and 5, 6 and 7); Utthita and Parivṛtta Pārśva Koṇāsana (8 and 9, 10 and 11); Virabhadrāsana I, II and III (14, 15 and 17); Ardha Chandrāsana (19); Utthita Hasta Pādāngusṭhāsana (23); Pārśvottānāsana (26); Prasārita Pādottānāsana I and II (33 and 34, 35 and 36); Ardha Baddha Padmottānāsana (52); Pādāngusṭhāsana (44); Pādahastāsana (46); Uttānāsana (48); Marīchyāsana II, III and IV (144–6, 303–4, 305); Ardha Matsyendrāsana I (311 and 312); Mālāsana I & II (321 and 322); Pāśāsana (328 and 329); Ūrdhva Dhanurāsana (486) for 12 times; Śavāsana (592). Nāḍī Śodhana Prāṇāyāma (Section 205) for 15 minutes and meditation for 5 minutes.

Second day of the week

Śīrṣāsanaand cycle (184 to 218); Adhomukha Vṛkṣāsana (359); Mayūrāsana (354); Padma Mayūrāsana (355); Nakrāsana (68 to 71); Salabhāsana or Makarāsana (60 or 62); Dhanurāsana (63); Pārśva Dhanurāsana (64 and 65); Chaturanga Daṇḍāsana (67); Bhujangāsana I (73); Ūrdhva Mukha Śvānāsana (74); Adhomukha Śvānāsana (75); Sālamba Sarvāngāsana cycle (234 to 271 except 267); Jaṭara Parivartanāsana (275); Supta Pādāngusṭhāsana (285 to 287); Ūrdhva Prasārita Pādottānāsana (276 to 279); Chakrāsana (280 to 283); Paripoorṇa Nāvāsana (78); Ardha Nāvāsana (79); Utkaṭāsana (42); Uṣṭrāsana (41); Parighāsana (39); Garuḍāsana (56); Vātāyanāsana (58); Marīchyāsana III (303 and 304); Ardha Matsyendrāsana I (311 and 312); Pāśāsana (328 and 329); Paschimottānāsana (160); Kūrmāsana and Supta Kūrmāsana (363–4 and 368); Ekapāda Śīrṣāsana and Skandāsana (371 and 372); Ūrdhva Dhanurāsana (486) for 15 times and Śavāsana (592); Uḍḍīyāna (Section 201) and Nauli (Section 202) for 8 times each. Ujjāyi Prāṇāyāma (Section 203) with inhalation retention for 10 minutes and meditation for 5 minutes.

Third day of the week

Sālamba Śīrṣāsana (184) 10 minutes; Sarvāngāsana I (234) 10 minutes; Halāsana (244) 5 minutes; Supta Pādāngusṭhāsana (285 to 287); Ūrdhva Prasārita Pādāsana (276 to 279); Paripoorṇa Nāvāsana (78); Ardha Nāvāsana (79); Jānu-Śīrṣāsana (127); Parivṛtta Jānu-Śīrṣāsana (132); Ardha Baddha Padma Paschimottānāsana (135); Triang Mukhaikapāda

Paschimottānāsana (139); Krounchāsana (141 and 142); Marīchyāsana I (144); Paschimottānāsana (160); Ūrdhva Mukha Paschimottānāsana I & II (168 and 170); Parivṛtta Paschimottānāsana (165); Ākarṇa Dhanurāsana (486) for 15 times and Ekapāda Ūrdhva Dhanurāsana once and 368); Ekapāda Sīrṣāsana and Skandāsana (371 and 372); Ūrdhva Dhanurāsana (486) for 15 times and Ekapāda Urdhva Dhanurāsana once (501 and 502); Uttānāsana (48) and Śavāsana (592). Sūryabhedana Prāṇāyāma (Section 204) for 10 minutes; Ujjāyi (Section 203) for 5 minutes; Bhastrika (Section 206) for 3 minutes and meditation for 5 minutes.

Fourth day of the week

Sālamba Śīrṣāsana and cycle (184 to 218 except 192, 194–5, 198, 200 and 201); Sālamba Sarvāngāsana and cycle (234 to 271 except 267); Jaṭara Parivartanāsana (275); Supta Pādāngusṭhāsana (285 to 287); Paschimottānāsana (160) for 5 minutes; Padmāsana and cycle (104 to 124); Vīrāsana (89); Supta Vīrāsana (96); Paryankāsana (97); Upaviṣṭa Koṇāsana (151); Baddha Koṇāsana (102); Kūrmāsana (363 and 364) for one minute each; Supta Kūrmāsana (368) for 3 minutes; Ekapāda Śīrṣāsana (371) one minute on each side; Skandāsana (372) for 30 seconds on each side; Marīchyāsana III (303 and 304); Ardha Matsyendrāsana I (311 and 312); Pāśāsana (328 and 329); Uttānapādāsana (292); Setubandhāsana (296); Ūrdhva Dhanurāsana (486) for 12 times staying 20 seconds each time; Śavāsana (592). Nāḍī Śodhana Prāṇāyāma (with inhalation retention) (Section 205) for 15 minutes and meditation to capacity in any āsana as stated earlier.

Fifth day of the week

Sālamba Śīrṣāsana and cycle (184 to 218); Sālamba Sarvāngāsana and cycle (234 to 271 except 267); Supta Pādāngusṭhāsana (285 to 287); Paschimottānāsana (160); Parivṛtta Paschimottānāsana (165); Kūrmāsana for 15 to 20 times (486); Śavāsana (592). Prāṇāyāma and medita-Aṣṭāvakrāsana (342 and 343); Mayūrāsana and Padma Mayūrāsana (354 and 355); Ūrdhva Mukha Svānāsana (74); Bakāsana (406); Lolāsāna (83); Adho Mukha Vṛkṣāsana (359); Adho Mukha Śvānāsana (75); Chaturanga Daṇḍāsana (67); Nakrāsana (68 to 71); Ūrdhva Dhanurāsana for 15 to 20 times (486); Savāsana (592). Prāṇāyāma and meditation as in the 3rd day.

Sixth day of the week

Sālamba Śīrṣāsana I (184) for 15 minutes. Ūrdhva Daṇḍāsana (188) for 1 minute; Sālamba Sarvāngāsana I (234) for 10 minutes; Halāsana (244) for 5 minutes; Paschimottānāsana (160) for 5 minutes; Ūrdhva Mukha

Paschimottānāsana I (168) for 1 minute; Paripoorṇa Nāvāsana (78) for 1 minute; Ardha Nāvāsana (79) for 30 seconds; Supta Vīrāsana (96) for 3 to 5 minutes; Krounchāsana (141 and 142) for 20 seconds each side; Kūrmāsana and Supta Kūrmāsana (363–4 and 368) for 1 minute each; Ardha Matsyendrāsana I (311 and 312) for 30 seconds each side; Pāśāsana (328 and 329) for 1 minute on each side; Adhomukha Vṛkṣāsana (359) for 1 minute; Mayūrāsana (354) for 1 minute; Ūrdhva Dhanurāsana (486) for 6 times, each time staying for 20 to 30 seconds; Śavāsana (592) for 10 to 15 minutes.

(Wherever the time is not given, it should be done according to one's capacity and the time at one's disposal.)

Seventh day of the week

You can rest or do only Prāṇāyāma of all types. Uḍḍīyāna (Section 201) and Nauli (Section 202) for 8 times each.

COURSE THREE

This course is mainly for those who like to persevere further and who have sufficient devotion for the Science.

79th to 84th week

Śīrṣāsana and cycle (184 to 218 except 192, 194–5, 198, 200–1); Sarvāngāsana and cycle (234 to 271 except 267); Paschimottānāsana (160); Kūrmāsana and Supta Kūrmāsana (363–4 and 368); Ekapāda Śīrṣāsana (371); Skandāsana (372); Bhairavāsana (375); Yoganidrāsana (391); Bhujapīdāsana (348); Bakāsana (406); Aṣṭāvakrāsana (342 and 343); Adhomukha Vṛkṣāsana (359); Pincha Mayūrāsana (357); Mayūrāsana (354); Marīchyāsana III (303 and 304); Ardha Matsyendrāsana I (311 and 312); Pāśāsana (328 and 329); Ardha Matsyendrāsana II (330 and 331); Setubandhāsana (296); Ūrdhva Dhanurāsana (486) for 8 times; Dwipāda Viparīta Daṇḍāsana (516); Ekapāda Ūrdhva Dhanurāsana (501 and 502); Uttanāsana (48); Śavāsana (592). Nāḍī Śodhana Prāṇāyāma (Section 205) for 10 minutes and meditation for 5 minutes in Siddhāsana (84) or Vīrāsana (89) or Padmāsana (104) or Baddha Koṇāsana (102).

85th to 90th week

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271 except 267); Jaṭara Parivartanāsana (275); Ūrdhva Prasārita Pādāsana (276 to 270); Supta Pādāngusṭhāsana (285 to 287); Anantāsana (290); Jānu-Śīrṣāsana (127); Parivṛtta Jānu-Śīrṣāsana (132); Ardha Baddha Padma Paschimottānāsana (135); Triang Mukhaikapāda Paschimottānāsana (139); Krounchāsana (141 and 142); Marīchyāsana I (144); Paschimottānāsana (160); Parivṛtta Paschimottānāsana (165); Upaviṣṭa Koṇāsana (151); Baddha Koṇāsana (102); Baddha Padmāsana (118); Yoga Mudrāsana (120); Kukkuṭāsana (115); Garbha Piṇḍāsana (116); Siṃhāsana II (110); Gorakṣāsana (117); Matsyāsana or Supta Vajrāsana (113 or 124); Vīrāsana (89); Supta Vīrāsana (96); Paryankāsana (97); Bhekāsana (100); Kūrmāsana and Supta Kūrmāsana (363–4 and 368); Yoganidrāsana (391); Ekapāda Śīrṣāsana (371); Bhairavāsana (375); Skandāsana (372); Chakorāsana (379 and 380); Bhujapīdāsana (348); Bakāsana (406); Pincha Mayūrāsana (357); Adhomukha Vṛkṣāsana (359); Mayūrāsana (354); Ardha Matsyendrāsana I & II (311–12 and 330–1); Mālāsana I & II (321 and 322); Pāśāsana (328 and 329); Dwipada Viparīta Daṇḍāsana (516); Ūrdhva Dhanurāsana (486) for 8 times and Śāvāsana (592). Follow the Prāṇāyāma as in 79th week.

91st to 94th week

Do the important āsanas in Course One and Two as well as all the āsanas which have been added so far in Course Three including the Śīrṣāsana and Sarvāngāsana cycles.

95th to 100th week

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271 except 267); Supta Pādāngusṭhāsana (285 to 287); Paschimottānāsana (160); Kūrmāsana and Supta Kūrmāsana (363–4 and 368); Yoganidrāsana (391); Ekapāda Śīrṣāsana (371); Bhairavāsana (375); Skandāsana (372); Chakorāsana (379 and 380); Pinçha Mayūrāsana (357); Śayanāsana (358); Mayūrāsana (354); Haṃsāsana (356); Bhujapīdāsana (348); Bakāsana (406); Adhomukha Vṛkṣāsana (359); Vasiṣṭhāsana (398); Viśvāmitrāsana (403); Ūrdhva Dhanurāsana (486) for 8 times, stretching the legs and arms out straight after each time (487) to relieve stiffness in the back; Dwipāda Viparīta Daṇḍāsana (516) for 1 minute; Kapotāsana (507); Ardha Matsyendrāsana I & II (311–12 and 330–1); Pāśāsana (328 and 329); Uttānāsana (48); Śavāsana (592). Prāṇāyāma as before.

101st to 108th week

As the 95th week but do Viparīta Daṇḍāsana (516) from Sālamba Śīrṣāsana I (184) and again swing back to Śīrṣāsana I. For many this period is too short for acquiring control of Viparīta Daṇḍāsana. Concentrate then on this and shorten the time spent on the other āsanas.

109th to 125th week

Follow the 95th week course, add Viparīta Daṇḍāsana (516) as above and learn Viparīta Chakrāsana (488 to 499) by doing it 15 times daily at a stretch. It is a difficult āsana and it needs perseverance to perfect it. If you cannot do so in this period, do not lose heart but continue with it for several more weeks.

126th to 130th week

Śīrṣāsana and cycle (184 to 218); Ūrdhva Kukkuṭāsana (419); Bakāsana (410) from Śīrṣāsana II (192); Adhomukha Vṛkṣāsana (359); Pincha Mayūrāsana (357) following these four āsanas with Ūrdhva Dhanurāsana (486); and Viparīta Chakrāsana (488 to 499); Bhuja Pīdāsana (348); Aṣṭāvakrāsana (342–3); Mayurāsana (354); Hamsāsana (356); Vasiṣṭhāsana (398); Kaśyapāsana (399–400); Visvāmitrāsana (403); Sālamba Sarvāngāsana and cycle (234 to 271 except 267); Supta Pādāngusṭhāsana (285 to 287); Paschimottānāsana (160); Kūrmāsana (363–4); Supta Kūrmāsana (368); Yoganidrāsana (391); Ekapāda Śīrṣāsana

(371); Skandāsana (372); Bhairavāsana (375); Kālabhairavāsana (378); Chakorāsana (379–80); Dwipāda Viparīta Daṇḍāsana (516) from Sīrṣāsana (184); Kapotāsana (507); Viparīta Chakrāsana (488 to 499) 6 times; Ardha Matsyendrāsana I & II (311–12, 330–1); Pāśāsana (328–9); Uttānāsana (48); Śavāsana (592). Prāṇāyāma as before with meditation.

131st to 136th week

Go back to Courses One and Two and do Ūrdhva Kukkuṭāsana (419); Yoganidrāsana (391); Viparīta Chakrāsana (488 to 499) for 15 times; Dwipāda Viparīta Daṇḍāsana (516) and Kapotāsana (507).
Note– Viparīta Chakrāsana (488 to 499) is a strenuous āsana so that one may not be able to do Prāṇāyāma daily. In that event, do Prāṇāyāma on alternate days and the cycles of Śīrṣāsana and Sarvāngāsana on alternate days. Also, if the body is stiff and you cannot cope with the table as given above, then spread the āsanas and the weeks to your convenience. Unless you improve these back-bending postures you cannot proceed much with the other difficult āsanas. It is also possible that those over 35 will find it difficult to master Viparitā Chakrāsana in so short a time. I have instructed many people of different ages and some learn quicker than others. But there is no age limit for these āsanas.

137th to 142nd week

Śīrṣāsana and cycle (184 to 218); Ūrdhva Kukkuṭāsana (419); Bakāsana (410) from Śīrṣāsana II (192); Pārśva Bakāsana (412); Gālavāsana (427 and 428); Adhomukha Vṛkṣāsana (359); Pincha Mayūrāsana (357); Mayūrāsana (354); Vasiṣṭhāsana (398); Kaśyapāsana (399 and 400); Viśvāmitrāsana (403); Sālamba Sarvāngāsana and cycle (234 to 271 except 267); Supta Pādāngusṭhāsana (285 to 287); Paschimottānāsana (160); Kūrmāsana and Supta Kūrmāsana (363–4 and 368); Yoganidrāsana (391); Ekapāda Śīrṣāsana (371); Skandāsana (372); Bhairavāsana (375); Kālabhairavāsana (378); Dūrvāsāsana (383); Ruchikāsana (384); Dwipāda Viparīta Daṇḍāsana (516) from Śīrṣāsana I (184) and back 3 times; Maṇḍalāsana (525 to 535); Kapotāsana (507); Viparīta Chakrāsana (488 to 499) for 12 times; Ardha Matsyendrāsana I & II (311–12 and 330–1); Pāśāsana (328 and 329); Uttānāsana (48); Śavāsana (592); Prāṇāyāma as before with meditation.

143rd to 145th week

Repeat the 137th week course up to Ruchikāsana (384) and add Viranchyāsana I & II (386–7 and 388) and continue with Dwipāda Viparīta Daṇḍāsana (516) and the remaining exercises of that course.

If you can add the different methods of Prāṇāyāma explained in Part Three, do so. Then do early morning Prāṇāyāma; the difficult āsanas in

the morning and only the Śīrṣāsana and Sarvāngāsana cycles in the evening. If you have not the time, do Prāṇāyāma in the morning and the āsanas in the evening.

146th to 155th week

Śīrṣāsana and cycle (184 to 218); Ūrdhva Kukkutāsana (419); Bakāsana (410); Pārśva Bakāsana (412); Gālavāsana (427 and 428); Ekapāda Gālavāsana(432and 433); Adhomukha Vṛkṣāsana (359); Pincha Mayūrāsana (357); finishing these āsanas with Viparīta Chakrāsana (488 to 499); Vasiṣṭhāsana (398); Kaśyapāsana (399 and 400); Viśvamitrāsana (403); Sālamba Sarvāngāsana and cycle (234 to 271 inclusive) of Uttāna Padma Mayūrāsana (267); Supta Pādāngusṭhāsana (285 to 287); Paschimottānāsana (160); Kūrmāsana and Supta Kūrmāsana (363–4 and 368); Ekapāda Śīrṣāsana (371); Skandāsana (372); Buddhāsana (373); Kapilāsana (374); Bhairavāsana (375); Kālabhairavāsana (378); Chakorāsana (379 and 380); Dūrvāsāsana (383); Ruchikāsana (384); Viranchyāsana I & II (386 and 388); Dwipāda Śīrṣāsana (393); Tittibhāsana (395); Ardha Matsyendrāsana I & II (311–12 and 330–1); Pāśāsana (328); Ardha Matsyendrāsana III (332 and 333); Dwipāda Viparīta Daṇḍāsana (516); Mandalāsana (525 to 535); Kapotāsana (512); Ekapāda Viparīta Daṇḍāsana (521); Chakrabandhāsana (524); Savāsana (592). Prāṇāyāma of Ujjāyī (Section 203) or Sūryabhedana (Section 204) or Nādī Śodhana (Section 205) with inhalation retention (Antarkumbhaka); Uḍḍīyāna (Section 201) 8 times; Nauli (Section 202) 8 times and meditation for 5 to 10 minutes.

156th to 160th week

Repeat the important āsanas from Courses One and Two and then do the āsanas of Course Three so far learnt.

161st to 165th week

Śīrṣāsana and cycle (184 to 218); Ūrdhva Kukkutāsana (419); Bakāsana (410); Pārśva Bakāsana (412); Gālavāsana (427 and 428); Ekapāda Gālavāsana (432 and 433); Dwipāda Kouṇḍinyāsana (438); Ekapāda Kouṇḍinyāsana I (441); Adhomukha Vṛkṣāsana (359); Pincha Mayūrāsana (357) finishing each āsana with Viparīta Chakrāsana (488 to 499); Aṣṭāvakrāsana (342 and 343); Bhujapīdāsana (348); Vaśiṣṭhāsana (398); Viśvāmitrāsana (403); Sarvāngāsana and cycle (234 to 271); Paschimottānāsana (160); Kūrmāsana and Supta Kūrmāsana (363–4 and 368); Ekapāda Śīrṣāsana and cycle (371 to 384); Dwipāda Śīrṣāsana and Tittibhāsana (393 and 395); Yoganidrāsana (391); Ardha Matsyendrāsana I, II & III (311–12, 330–1, 332–3); Pāśāsana (328); Yogadaṇḍāsana (456); Supta Bhekāsana (458).

166th to 175th week

Sālamba Śīrṣāsana I (184) for 10 minutes; Sālamba Sarvāngāsana I (234) for 10 minutes; Halāsana (244) for 5 minutes; Jaṭara Parivartanāsana (275); Supta Pādāngusṭhāsana (285 to 287); Ūrdhva Kukkuṭāsana (419); Bakāsana (410); Pārśva Bakāsana (412); Gālavāsana (427); Ekapāda Gālavāsana (432); Dwipāda Kouṇḍinyāsana (438); Ekapāda Koundinyāsana I & II (441 and 442); Ekapāda Bakāsana I & II (446 and 451); finishing each āsana with Viparīta Chakrāsana (488 to 499); Paschimottānāsana (160); Kūrmāsana and Supta Kūrmāsana (363–4 and 368); Ekapāda Śīrṣāsana and cycle (371 to 384); Dwipāda Śīrṣāsana (393); Yoganidrāsana (391); Yogadaṇḍāsana (456); Supta Bhekāsana (458); Mūlabandhāsana (462 and 463); Vāmadevāsana I & II (465 and 466); Dwipāda Viparīta Daṇḍāsana (516); Maṇḍalāsana (525 to 535); Ekapāda Viparīta Daṇḍāsana I & II (521 and 522); Chakrabandhāsana (524); Kapotāsana (512); Laghuvajrāsana (513); Ardha Matsyendrāsana I, II & III (311, 330 and 332); Pāśāsana (328); Śavāsana (592). Prāṇāyāma as before.

176th to 180th week

Repeat the 166th week's course, add Pārśva Kukkuṭāsana (424 and 425) after Ūrdhva Kukkuṭāsana (419) and Paripoorṇa Matsyendrāsana (336 and 339) after Pāśāsana (328).

Paripoorṇa Matsyendrāsana (336 and 339) may take a longer time to master than I have anticipated. One should try this āsana every day irrespective of failures. If one cannot master the āsanas of Course Three so far dealt with in the stipulated period, spread them out over several more weeks.

As the other āsanas take years to master, I shall try my best to give a résumé for each day's practice of all these āsanas.

First day of the week

Sālamba Śīrṣāsana I (184) for 8 to 10 minutes; Sālamba Sarvangāsana I (234) for 10 minutes; Halāsana (244) for 5 minutes; Jaṭara Parivartanāsana (274); Supta Pādāngusṭhāsana (285 to 287); Bhujapīdāsana (348); Aṣṭāvakrāsana (342 and 343); Adhomukha Vṛkṣāsana (359); Pincha Mayūrāsana (357); Mayūrāsana (354); Haṃsāsana (356); Ūrdhva Kukkuṭāsana (419); Pārśva Kukkuṭāsana (424 and 425); Bakāsana (410); Pārśva Bakāsana (412); Dwipāda Kouṇḍinyāsana (438); Ekapāda Kouṇḍinyāsana I & II (441 and 442); Ekapāda Bakāsana I & II (446 and 451); Gālavāsana (427); Ekapāda Gālavāsana (432) and finish each of these āsanas with Viparīta Chakrāsana (488 to 499); Uttānāsana (48); Śavāsana (592). Nāḍī Sodhana Prāṇāyāma (Section 205) for 10 minutes, Uḍḍīyāna (Section 201) 8 times and Nauli 8 times (Section 202).

Second day of the week

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Jaṭara Parivartanāsana (274); Supta Pādāngusṭhāsana (285 to 287); Jānu-Śīrṣāsana (127); Parivṛtta Jānu-Śīrṣāsana (132); Ardha Baddha Padma Paschimottānāsana (135); Triang Mukhaikapāda Paschimottānāsana (139); Krounchāsana (141); Marichyāsana I & II (144 and 146); Upaviṣṭa Koṇāsana (151); Paschimottānāsana (160); Padmāsana and cycle (104 to 124); Baddha Koṇāsana (102); Vīrāsana (89); Vātāyanāsana (58); Paripoorṇa Nāvāsana (78); Ardha Nāvāsana (79); Gomukhāsana (80); Ūrdhva Mukha Paschimottānāsana I (168); Yoganidrāsana (391); Śavāsana (592). Prāṇāyāma as before with Bhastrikā (Section 206) and Śītali (Section 209).

Third day of the week

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); all the standing positions (4 to 36); Dhanurāsana (63); Salabhāsana (60); Chaturaṇga Daṇḍāsana (67); Ūrdhva Mukha Śvānāsana (74); Adho Mukha Śvānāsana (75); Paschimottānāsana (160); Parivṛtta Paschimottānāsana (165); Ākarṇa Dhanurāsana (173 and 175); Uttānapādāsana (292); Setubandhāsana (296); Marīchyāsana III & IV (303 and 305); Ardha Matsyendrāsana I (311); Pāśāsana (328); Mayūrāsana (354); Yoganidrāsana (391); Dwipāda Śīrṣāsana (393); Dwipāda Viparīta Daṇḍāsana(516); Maṇḍalāsana (525 to 535); Kapotāsana (512); Viparīta Chakrāsana (488 to 499) 8 times at a stretch; Uttānāsana (48); Śavāsana (592). Prāṇāyāma to capacity without strain.

Fourth day of the week

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Adhomukha Vṛkṣāsana (359); Pincha Mayūrāsana (357); Śayanāsana (358); Mayūrāsana (354); Haṃsāsana (356); Paschimottānāsana (160); Kūrmāsana and Supta Kūrmāsana (363–4, 368); Ekapāda Śīrṣāsana and cycle (371 to 384); Virinchyāsana I & II (386 and 388); Yoganidrāsana (391); Dwipāda Viparīta Daṇḍāsana (516); Maṇḍalāsana (525 to 535); Ekapāda Viparīta Daṇḍāsana I & II (521 and 523); Chakrabandhāsana (524); Laghuvajrāsana (513); Kapotāsana (512); Uttānāsana (48); Savāsana (592). Nāḍī Śodhana Prāṇāyāma without retention for 15 minutes and meditation in Siddhāsana (84) or in Padmāsana (104).

Fifth day of the week

Sālamba Śīrṣāsana I (184) for 10 minutes; Sālamba Sarvāngāsana I (234) for 10 minutes; Halāsana (244) for 5 minutes; Paschimottānāsana (160) for 5 minutes; Vasiṣṭhāsana (398); Kaśyapāsana (399); Viśvāmitrāsana

(403); Ūrdhva Kukkuṭāsana (429); Pārśva Kukkuṭāsana (424 and 425); Bakāsana (410); Pārśva Bakāsana (412); Dwipāda Kouṇḍinyāsana (438); Ekapāda Kouṇḍinyāsana I & II (441 and 442); Ekapāda Bakāsana I & II (446 and 451) (all these balancing āsanas at one stretch); Yogadaṇḍāsana (456); Mulabandhāsana (462); Vāmadevāsana I & II (465 and 466); Dwipāda Viparīta Daṇḍāsana (516); Maṇḍalāsana (525 to 535); Kapotāsana (512); Paschimottānāsana (160) for 5 minutes; Uttānāsana (48) for 3 minutes; Śavāsana (592) for 5 minutes; Ujjāyī Prāṇāyāma for 10 minutes.

Sixth day of the week

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Paschimottānāsana (160) for 5 minutes; Yoganidrāsana (391) one minute on each way changing the legs; Dwipāda Śīrṣāsana (393) half a minute each way; Marichyāsana III (303); Ardha Matsyendrāsana I, II & III (311, 330 and 332); Mālāsana I & II (321 and 322); Pāśāsana (328); Paripoorṇa Matsyendrāsana (336 and 339); Dwipāda Viparīta Daṇḍāsana (516); Maṇḍalāsana (525 to 535); Ekapāda Viparīta Daṇḍāsana I & II (521 and 523); Kapotāsana (512); and 6 of Viparīta Chakrāsana (488 to 499); Śavāsana (592).

Seventh day of the week

Rest completely or do only Prāṇāyāma.

181st to 190th week

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Ūrdhva Kukkuṭāsana (419); Pārśva Kukkuṭāsana (424); Bakāsana (410); Pārśva Bakāsana (412); Dwipāda Kouṇḍinyāsana (438); Ekapāda Kouṇḍinyāsana I & II (441 and 442); Ekapāda Bakāsana I & II (446 and 451); Vasiṣṭhāsana (398); Viśvāmitrāsana (403); Paschimottānāsana (160); Kūrmāsana and Supta Kūrmāsana (363–4 and 368); Ekapāda Śīrṣāsana and cycle (371 to 384); Yoganidrāsana (391); Dwipāda Śīrṣāsana and Tittibhāsana (393 and 395); Yogadaṇḍāsana (456); Mulabandhāsana (462); Ardha Matsyendrāsana I (311); Pāśāsana (328); Paripoorṇa Matsyendrāsana (326); Dwipāda Viparīta Daṇḍāsana (516); Maṇḍalāsana (525 to 535); Ekapāda Viparīta Daṇḍāsana I & II (521 and 523); Kapotāsana (512); Laghuvajrāsana (513); Ekapāda Rājakapotāsana I (542); Hanumānāsana (475 and 476); Uttānāsana (48); Śavāsana (592). Nāḍī Śodhana Prāṇāyāma (Section 205) for 20 minutes.

191st to 200th week

Śīrṣāsana (184); Sarvāngāsana (234); Halāsana (244); Ūrdhva Kukkuṭāsana (419); Pārśva Kukkuṭāsana (424); Bakāsana (410); Pārśva Bakāsana

(412); Dwipāda Kouṇḍinyāsana (438); Ekapāda Kouṇḍinyāsana I & II (441 and 442); Ekapāda Bakāsana I & II (446 and 451) finishing each āsana with Viparīta Chakrāsana (488 to 499); Dwipāda Viparīta Daṇḍāsana (516); Maṇḍalāsana (525 to 535); Ekapāda Viparīta Daṇḍāsana I & II (521 and 523); Chakrabandhāsana (524); Kapotāsana (512); Ekapāda Rājakapotāsana I (542); Hanumānāsana (475); Samakoṇāsana (477); Yogadaṇḍāsana (456); Mulabandhāsana (462); Vasiṣṭhāsana (398); Viśvāmitrāsana (403); Paschimottānāsana (160); Kūrmāsana and Supta Kūrmāsana (363–4 and 368); Yoganidrāsana (391); Ekapāda Śīrṣāsana and cycle (371 to 384); Dwipāda Śīrṣāsana (393); Ardha Matsyendrāsana I (311); Pāśāsana (328); Paripoorṇa Matsyendrāsana (336); Kandāsana (470); Śavāsana (592). Prāṇāyāma as above.

201st to 225th week

Follow the 191st week's course up to Ekapāda Rājakapotāsana I (542) and add Ekapāda Rājakapotāsana II (545); Pādāṅguṣṭha Dhanurāsana (555); Bhujangāsana II (550); Rājakapotāsana (551); Hanumānāsana (475); Samakoṇāsana (477); Supta Trivikramāsana (478); Yogadaṇḍāsana (456); Mūlabandhāsana (462); Kandāsana (470); Ardha Matsyendrāsana I (311); Pāśāsana (328); Paripoorṇa Matsyendrāsana (336); Yoganidrāsana (391); Dwipāda Śīrṣāsana (393); Paschimottānāsana (160); Śavāsana (592). Prāṇāyāma as before.

226th to 250th week

Follow the 200th week's course up to Rājakapotāsana (551); add Vṛschikāsana I & II (537 and 538); Gheruṇḍāsana I & II (561 and 564); Kapinjalāsana (567) and again follow from Hanumānāsana (475) of the 200th week.

251st to 275th week

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Ūrdhva Kukkuṭāsana (419); Pārśva Kukkuṭāsana (424); Bakāsana (410); Pārśva Bakāsana (412); Dwipāda Kouṇḍinyāsana (438); Ekapāda Kouṇḍinyāsana I (441); Ekapāda Bakāsana I and Ekapāda Bakāsana II with Ekapāda Kouṇḍinyāsana II (446, 451 and 442) finishing each āsana with Viparīta Chakrāsana (488 to 499); Dwipāda Viparīta Daṇḍāsana, Maṇḍalāsana, Ekapāda Viparīta Daṇḍāsana I & II at one stretch (516, 525 to 535, 521 and 523); Kapotāsana (512); Vṛschikāsana I (537); Bhujangāsana II (550); Rājakapotāsana (551); Pādāṅguṣṭha Dhanurāsana (555); Gheruṇḍāsana I & II (561 and 564); Ekapāda Rājakapotāsana I, II, III & IV (542, 545, 546 and 547); Gaṇḍa-Bheruṇḍāsana (580); Natarājāsana (590 and 591) and then follow the 200th week course from Hanumānāsana (475) onwards.

276th to 300th week

Follow the 251st week's course up to Ekapāda Rājakapotāsana I (542); then do Vālakhilyāsana (544); Ekapāda Rājakapotāsana II, III and IV (545, 546 and 547); Sīrṣapādāsana (570); Gaṇḍa-Bheruṇḍāsana and Viparīta Śalabhāsana together (580, 581 and 584) at one stretch and go to Ūrdhva Dhanurāsana (486) to do Tiriang-Mukhottānāsana (586); Natarājāsana (590 and 591). Then follow the 200th week's course from Hanumānāsana (475) and Prāṇāyāma as before.

To start with many fail to advance further than the exercises given for the 166th week. But by tenacity and persistent practice one can master every āsana and prāṇāyāma recommended in this book. In my earlier years it took me four years of hard work in which optimism and pessimism were balanced equally. When you have achieved mastery of the 166th week of the course, I ask you in all sincerity to persevere in the work you have undertaken happy in what you have attained and never despairing at any temporary failure. Most people, however, take far longer than I have stipulated to master all these āsanas with comfort and ease. When you have perfected all those detailed in this third course, you can divide them up into a week's course as suggested below. Then by daily practice, learn to remain master of them all.

First day of the week

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Bhujapīdāsana (348); Aṣṭāvakrāsana (342 and 343); Bakāsana (410); Pārśva Bakāsana (412); Urdhva Kukkuṭāsana (419); Pārśva Kukkuṭāsana (424); Dwipāda Kouṇḍinyāsana (438); Ekapāda Kouṇḍinyāsana I (441); Ekapāda Bakāsana I (446); Ekapāda Bakāsana II with Ekapāda Kouṇḍinyāsana II (451 with 442); Gālavāsana (427); Ekapāda Gālavāsana (432); finishing each āsana with Viparīta Chakrāsana (488 to 499); Adhomukha Vṛkṣāsana (359); Pincha Mayūrāsana (357); Mayūrāsana (354); Paschimottānāsana (160) for 5 minutes; Śavāsana (592). Nāḍī Śodhana Prāṇāyāma for 15 minutes; Ujjāyī Prāṇāyāma with Antarkumbhaka (inhalation retention) for 8 times; Meditation in Padmāsana (104) or Siddhāsana (84) for 5 minutes.

Second day of the week

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Supta Pādāngusṭhāsana (285 to 287); Jaṭara Parivartanāsana (274); Paschimottānāsana (160); Ākarṇa Dhanurāsana (173 and 175); Kūrmāsana and Supta Kūrmāsana (363, 364 and 368); Ekapāda Śīrṣāsana and cycle (371 to 384); Viranchyāsana I & II (386 and 388); Dwipāda

Śīrṣāsana (393); Yoganidrāsana (391); Yogadaṇḍāsana (456); Mulabandhāsana (462); Vāmadevāsana I & II (465 and 466); Kandāsana (470); Hanumānāsana (475); Uttānāsana (48); Śavāsana (592).

Prāṇāyāma as before with 8 times Uddiyāṇa and 8 times Nauli.

Third day of the week

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Dwipāda Viparīta Daṇḍāsana (516); Maṇḍalāsana (525 to 535); Ekapāda Viparīta Daṇḍāsana I & II (521 and 523); Chakrabandhāsana (524); Kapotāsana (512); Laghu Vajrāsana (513); Vṛśchikāsana I (537); Bhujangāsana II (550); Rājakapotāsana (551); Pādāṅguṣṭha Dhanurāsana (555); Gheraṇḍāsana I & II (561 and 564); Ekapāda Rājakapotāsana I & II (542 and 545); Vālakhilyāsana (544); Sīrṣapādāsana (570) and Gaṇḍa Bheruṇḍāsana, Viparīta Śalabhāsana and Tiriang-Mukhottānāsana (580, 581, 584 and 586) all together; Paschimottānāsana (160); Marichyāsana III (303); Ardha Matsyendrāsana I (311); Pāśāsana (328); Paripoorṇa Matsyendrāsana (336); Śavāsana (592). Nāḍī Śodhana Prāṇāyāma without retention for 10 to 15 minutes.

Fourth day of the week

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Paschimottānāsana (160); Yoganidrāsana (391); Marichyāsana III (303); Ardha Matsyendrāsana I (311); Pāśāsana (328); Paripoorṇa Matsyendrāsana (336); Yogadaṇḍāsana (456); Mūlabandhāsana (462); Kandāsana (470); Hanumanāsana (475); Samakoṇāsana (477); Supta Trivikramāsana (478); Ūrdhva Mukha Paschimottānāsana I & II (168 and 170); Śavāsana (592). Prāṇāyāma as on the first day of the week.

Fifth day of the week

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Ūrdhva Kukkuṭāsana (419); Pārśva Kukkuṭāsana (424); Bakāsana (410); Pārśva Bakāsana (412); Dwipāda Kouṇḍinyāsana (438); Ekapāda Kouṇḍinyāsana I (441); Ekapāda Bakāsana I & II (446 and 451); Ekapāda Kouṇḍinyāsana II (442); Gālavāsana (427); Ekapāda Gālavāsana (432); all these āsanas at one stretch without going to Ūrdhva Dhanurāsana (486); Vasiṣṭhāsana (398); Kaśyapāsana (399); Visvamitrāsana (403); Maṇḍalāsana (525 to 535); Kapotāsana (512); Vṛṣchikāsana I (537); Rājakapotāsana (551); Pādāṅguṣṭha Dhanurāsana (555); Śīrṣapādāsana (570); Gaṇḍa Bheruṇḍāsana (580 and 581); Uttānāsana (48); Śavāsana (592). Nāḍī Śodhana Prāṇāyāma without retention for 15 minutes.

Sixth day of the week

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Paschimottānāsana (160); Yoganidrāsana (391); Marichyāsana III (303); Ardha Matsyendrāsana I (311); Pāśāsana (328); Paripoorṇa Matsyendrāsana (336); Hanumānāsana (475); Samakoṇāsana (477); Supta Trivikramāsana (478); Mūlabandhāsana (462); Kandāsana (470); Maṇḍalāsana (525 to 535); Kapotāsana (512); Vṛśchikāsana I (537); Rājakapotāsana (551); Ekapāda Rajakapotāsana I (542); Vālakhilyāsana (544); Śīrsapādāsana (570); Gaṇḍa Bheruṇḍāsana (580 and 581); Uttānāsana (48); Śavāsana (592). Nāḍī Śodhana Prāṇāyāma, Ujjāyī Prāṇāyāma with inhalation retention and 8 times Uḍḍīyāna.

Seventh day of the week

Complete rest or only Śīrṣāsana I (184); Sālamba Sarvāngāsana I (234); Halāsana (244); Paschimottānāsana (160) and Nāḍī Śodhana Prāṇāyāma without retention for 30 minutes.

Appendix II

Curative Āsanas for Various Diseases

After working for 25 years as a teacher, I am giving groups of āsanas for different functional and organic ailments and diseases, based on experiences with my pupils.

I have listed a number of āsanas under each complaint, so it is advisable to seek the guidance of an experienced teacher and to adopt them according to one's ability, suppleness of body and constitution. When practising āsanas it is important to use common sense and to watch the reactions of your body, thereby judging the time that you stay in them.

Acidity

Utthita Trikoṇāsana (4 and 5); Parivṛtta Trikoṇāsana (6 and 7); Utthita Pārśvakoṇāsana (8 and 9); Parivṛtta Pārśvakoṇāsana (10 and 11); Vīrabhadrāsana I, II & III (14, 15 and 17); Ardha Chandrāsana (19); Pārśvottānāsana (26); Pādāṅguṣṭhāsana (44); Pāda Hastāsana (46); Uttānāsana (48); Sālamba Śīrṣāsana and cycle (184 to 218); Sālamba Sarvāṅgāsana and cycle (234 to 271); Jaṭara Parivartanāsana (275); Paripoorṇa Nāvāsana (78); Ardha Nāvāsana (79); Ūrdhva Prasārita Pādāsana (276 to 279); Jānu-Śīrṣāsana (127); Parivṛtta Jānu-Śīrṣāsana (132); Paschimottānāsana (160); Marīchyāsana I, II & III (144, 146 and 303); Ardha Matsyendrāsana I, II & III (311, 330 and 332); Pāśāsana (328); Paripoorṇa Matsyendrāsana (336); Yoganidrāsana (391); Śalabhāsana (60); Dhanurāsana (63); Bhujangāsana I (73); Mayūrāsana (354); Ūrdhva Dhanurāsana (486) and Uḍḍīyāna (Section 201).

Anaemia

Śīrṣāsana and cycle (184 to 218); Sarvāṅgāsana and cycle (234 to 271); Paschimottānāsana (160); Uttānāsana (48); Ujjāyī Prāṇāyāma; Nāḍī Śodhana Prāṇāyāma without Kumbhaka (retention) for 2 to 3 months. After 3 months do Antarkumbhaka (inhalation retention). Savāsana (592) whenever possible from 10 to 15 minutes at a stretch.

Ankles

Utthita and Parivṛtta Trikoṇāsana (4, 5, 6 and 7); Utthita and Parivṛtta

Pārśvakoṇāsana (8, 9, 10 and 11); Vīrabhadrāsana I, II and III (14, 15 and 17); Pārśvottānāsana (26); Prasārita Pādottānāsana (33); Adhomukha Śvānāsana (75); Gomukhāsana (80); Vīrāsana (89); Supta Vīrāsana (96); Bhekāsana (100); Baddha Padmāsana and cycle (104 to 124); Baddha-koṇāsana (102); Supta Pādāngusthāsana (285 to 287); Triang Mukhaikapāda Paschimottānāsana (139); Krounchāsana (141); Bharadwājāsana I & II (297 and 299); Ākarṇa Dhanurāsana (173 and 175); Śalabhāsana (60); Dhanurāsana (63); Uṣṭrāsana (41); Vātāyanāsana (58); Garuḍāsana (56); Supta Bhekāsana (458); Mālāsana I and II (321 and 322).

Appendicitis

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Paschimottānāsana (160); Ūrdhvamukha Paschimottānāsana I & II (168 and 170); Poorvottānāsana (171); Mahā Mudra (125); Jānu-Śīrṣāsana (127); Ardha Matsyendrāsana I (311); Pāśāsana (328); Ūrdhva Dhanurāsana (468); Dwipāda Viparīta Daṇḍāsana (516); Uttānāsana (48). Nāḍī Śodhana Prāṇāyāma (Section 205) without retention for 2 months, then with retention after inhaling.

Arthritis of the lower back

Utthita and Parivṛtta Trikoṇāsana (4, 5, 6 and 7); Utthita and Parivṛtta Pārśvakoṇāsana (8, 9, 10 and 11); Vīrabhadrāsana I, II & III (14, 15 and 17); Ardhachandrāsana (19); Pādāngusṭhāsana (44); Pāda Hastāsana (46); Uttānāsana (48); Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Marichyāsana I, II, III & IV (143, 145, 303 and 305); Bharadwājāsana I & II (297 and 299); Ardha Matsyendrāsana I (311); Pāśāsana (328); Parighāsana (39); Śalabhāsana (60); Dhanurāsana (63); Pārśva Dhanurāsana (64 and 65); Uttānapādāsana (292); Uṣṭrāsana (41); Setubandhāsana (296); Ūrdhva Dhanurāsana (486); Dwipāda Viparīta Daṇḍāsana (516); Adhomukha Vṛkṣāsana (359); Pincha Mayūrāsana (357).

Arthritis of the dorsal region

Padmāsana and cycle (104 to 124); Vīrāsana (91); Paryankāsana (97); Gomukhāsana (80); all standing positions (4 to 36); Parighāsana (39); Paschimottānāsana (160); Ūrdhva Mukha Paschimottānāsana I & II (168 and 170); Bhujangāsana I (73); Ūrdhva Mukha Śvānāsana (74); Adhomukha Śvānāsana (75); Pincha Mayūrāsana (357); Adhomukha Vṛkṣāsana (359); Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Bharadwājāsana I & II (297 and 299); Marīchyāsana I & III (143 and 303); Ardha Matsyendrāsana I & II (311 and 330); Pāśāsana (328); Uṣṭrāsana (41); Dhanurāsana (63); Urdhva Dhanur-

āsana (486 and 487); Ekapāda Ūrdhva Dhanurāsana (501); Dwipāda Viparīta Daṇḍāsana (516); Ekapāda Viparīta Daṇḍāsana I (521); Kapotāsana (512); Laghuvajrāsana (513).

Arthritis of the shoulder joints

Utthita and Parivṛtta Trikoṇāsana (4, 5, 6 and 7); Utthita and Parivṛtta Pārśvakoṇāsana (8, 9, 10 and 11); Vīrabhadrāsana I, II & III (14, 15 and 17); Ardhachandrāsana (19); Pārśvottānāsana (26); Sālamba Sīrṣāsana (184); Sālamba Sarvāngāsana I & II (234 and 235); Halāsana (244); Dhanurāsana (63); Ūrdhva Mukha Śvānāsana (74); Adhomukha Śvānāsana (75); Vīrāsana (89); Parvatāsana (107); Ardha Baddha Padmottānāsana (52); Ardha Baddha Padma Paschimottānāsana (135); Paschimottānāsana (160); Gomukhāsana (80); Baddha Padmāsana (118); Yogamudrāsana (120); Pincha Mayūrāsana (357); Adhomukha Vṛkṣāsana (359); Vasiṣṭhāsana (398); Kaśyapāsana (399); Viśvamitrāsana (403); Bhujapidāsana (348); Bakāsana (410); Marichyāsana I, II & III (144, 146 and 303); Ardha Matsyendrāsana I & II (311 and 330); Bharadwājāsana I & II (297 and 299); Pāśāsana (328); Paripoorṇa Matsyendrāsana (336); Uṣṭrāsana (41); Yogadaṇḍāsana (456); Ūrdhva Dhanurāsana (486); Kapotāsana (512); Maṇḍalāsana (525 to 535); Pādāngusṭha Dhanurāsana (555).

Arms and abdominal organs

Chaturanga Daṇḍāsana (67); Nakrāsana (68 to 71); Ūrdhva Mukha Śvānāsana (74); Adhomukha Śvānāsana (75); Lolāsana (83); Tolāsana (108); Simhāsana II (110); Mayūrāsana (354); Padma Mayūrāsana (355); Haṃsāsana (356); Aṣṭāvakrāsana (342); Bhujapīdāsana (348); Pincha Mayūrāsana (357); Adhomukha Vṛkṣāsana (359); Bakāsana (410); Pārśva Bakāsana (412); Ekahasta Bhujāsana (344); Dwihasta Bhujāsana (345); Chakorāsana (379); Vasiṣṭhāsana (398); Viśvāmitrāsana (403); Tittibhāsana (395); Ūrdhva Kukkuṭāsana (419); Parśva Kukkuṭāsana (424); Dwipāda Kouṇḍinyāsana (438); Ekapāda Kouṇḍinyāsana I & II (441 and 442); Ekapāda Bakāsana I & II (446 and 451); Gālavāsana (427); Ekapāda Gālavāsana (432); Viparīta Chakrāsana (488 to 499).

Asthma

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Mahāmudra (125); Jānu-Śīrṣāsana (127); Uttanāsana (48); Paschimottānāsana (160); Bhujaṅgāsana I & II (73 and 550); Śalabhāsana (60); Dhanurāsana (63); Ūrdhva Mukha Śvānāsana (74); Adhomukha Śvānāsana (75); Vīrāsana (89); Supta Vīrāsana (96); Paryankāsana (97); Padmāsana and cycle (104 to 124); Uttānapādāsana (292); Setubandh-

āsana (296); Poorvottānāsana (171); Ardha Matsyendrāsana I & II (311 and 330); Pāśāsana (328); Uṣṭrāsana (41); Ūrdhva Dhanurāsana (486); Dwipāda Viparīta Daṇḍāsana (516). Ujjāyī Prāṇāyāma (Section 203) and Nāḍī Śodhana Prāṇāyāma (Section 205) without retention when there is an attack and at other times with inhalation retention and Uḍḍīyāna (Section 201).

Backache

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); all standing poses (4 to 36); Jaṭara Parivartanāsana (275); Supta Pādāngusṭhāsana (285 to 287); Mahāmudra (125); Jānu-Śīrṣāsana (127); Parivṛtta Jānu-Śīrṣāsana (132); Paschimottānāsana (160); Ūrdhva Mukha Paschimottānāsana I and II (168 and 170); Parivṛtta Paschimottānāsana (165); Marichyāsana I & III (144 and 303); Ardha Matsyendrāsana I & II (311 and 330); Pāśāsana (328); Paripoorṇa Matsyendrāsana (336); Mālāsana I & II (321 and 322); Adhomukha Śvānāsana (75); Uṣṭrāsana (41); Śalabhāsana (60); Dhanurāsana (63); Pārśva Dhanurāsana (64 and 65); Ūrdhva Dhanurāsana (486); Viparīta Chakrāsana (488 to 499); Dwipāda Viparīta Daṇḍāsana (516); Maṇḍalāsana (525 to 535).

High blood pressure

Halāsana (244); Jānu-Śīrṣāsana (127); Ardha Baddha Padma Paschimottānāsana (135); Triang Mukhaikapāda Paschimottānāsana (139); Paschimottānāsana (160); Vīrāsana (89); Siddhāsana (84); Padmāsana (104); Śavāsana (592). Nāḍī Śodhana Prāṇāyāma (Section 205) without retention. Meditation with closed eyes. (If the blood pressure is very high, then it is better to do Ujjāyī Prāṇāyāma (Section 203) in the lying position without pillows first for 5 minutes and then to perform Nāḍī Śodhana Prāṇāyāma (Section 205) and immediately do Śavāsana (592) for 15 minutes.)

Low blood pressure

Sālamba Śīrṣāsana I (184); Sālamba Sarvāngāsana I (234); Halāsana (244); Karṇapīdāsana (246); Paschimottānāsana (160); Vīrāsana (89); Siddhāsana (84); Padmāsana (104); Baddhakoṇāsana (102); Nāḍī Śodhana Prāṇāyāma (Section 205) without retention in the beginning and Śavāsana (592).

Brain

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Adhomukha Śvānāsana (75); Paschimottānāsana (160); Uttānāsana (48); Kūrmāsana and Supta Kūrmāsana (363, 364 and 368); Yoganidr-

āsana (391); Ūrdhva Dhanurāsana (486); Viparīta Chakrāsana (488 to 499); Dwipāda Viparīta Daṇḍāsana (516); Ekapāda Viparīta Daṇḍāsana I & II (521 and 523); Vṛiśchikāsana I & II (537 and 538); Śīrṣapādāsana (570); Gaṇḍa Bheruṇḍāsana (580 and 581); Viparīta Śalabhāsana (584); Nāḍī Śodhana (Section 205), Sūryabhedana (Section 204), Bhastrikā (Section 206) and Śītali Prāṇāyāmas (601); Śavāsana (592).

Loss of memory

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Uttānāsana (48); Paschimottānāsana (160); Ūrdhva Mukha Paschimottānāsana I & II (168 and 170); Trāṭaka or gazing at the middle of the eyebrows or tip of the nostrils. Nāḍī Śodhana Prāṇāyāma (Section 205) with inhalation retention and Bhastrikā Prāṇāyāma (Section 206).

Breathlessness

Sālamba Śīrṣāsana I (184); Sālamba Sarvāngāsana I (234); Halāsana (244); Paschimottānāsana (160); Uttānāsana (48); Adhomukha Śvānāsana (75); Parvatāsana (107); Ūrdhva Dhanurāsana (486); Ūjjāyi Prāṇāyāma Nādī Śodhana Prāṇāyāma; Uḍḍīyāna; Śavāsana (592).

Bronchitis

All standing positions (4 to 39); Śīrṣāsana and if possible cycle (184 to 218); Sarvāngāsana and cycle (234 to 271 except 267); Paschimottānāsana (160); Jaṭara Parivartanāsana (275); Ūrdhva Mukha Paschimottānāsana I & II (168 and 170); Jānu-Śīrṣāsana (127); Mahāmudra (125); Bhujangāsana I (73); Adhomukha Śvānāsana (75); Gomukhāsana (80); Marīchyāsana I & III (144 and 303); Ardha Matsyendrāsana I (311); Mālāsana I & II (321 and 322); Pāśāsana (328); Vīrāsana (89); Supta Vīrāsana (96); Paryankāsana (97); Padmāsana and whatever possible in the cycle (104 to 124); Baddha Koṇāsana (102); Upaviṣṭha Koṇāsana (151); Ekapāda Śīrṣāsana and cycle (371 to 384); Yoganidrāsana (391); Dwipāda Śīrṣāsana (393); Kūrmāsana and Supta Kūrmāsana (363, 364 and 368); Śalabhāsana (60); Dhanurāsana (63); Uṣṭrāsana (41); Urdhva Dhanurāsana (486); Kapotāsana (512); Dwipāda Viparīta Daṇḍāsana (516); Ujjāyī (Section 203), Nāḍī Sodhana (Section 205) and Sūrya Bhedana Prāṇāyāmas (Section 204) with inhalation retention.

Broncho-pneumonia

Sālamba Śīrṣāsana I (184); Sālamba Sarvāngāsana I (234); Halāsana (244); Paschimottānāsana (160); Uttānāsana (48); Mahā Mudra (125);

Adhomukha Śvānāsana (75); Vīrāsana (89); Siddhāsana (84); Padmāsana (104); Baddha Padmāsana (118); Baddha Koṇāsana (102); Ujjāyi, Nāḍī Sodhana and Sūrya-bhedana Prāṇāyāmas; Śavāsana (592).

Chest

All standing positions (1 to 48); Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Dhanurāsana (63); Chaturanga Daṇḍāsana (67); Bhujangāsana I & II (73 and 550); Ūrdhva-mukha Śvānāsana (74); Adhomukha Svānāsana (75); Padmāsana and cycle (104 to 124); Paschimottānāsana (160); Ākarna Dhanurāsana (173 and 175); Ubhaya Pādāngusṭhāsana (167); Ūrdhva Mukha Paschimottānāsana I & II (168 and 170); Baddha Koṇāsana (101); Bhujapīḍāsana (348); Marīchyāsana III (303); Ardha Matsyendrāsana I, II & III (311, 330 and 332); Pāśāsana (328); Pincha Mayūrāsana (357); Adhomukha Vṛkṣāsana (359); Bakāsana (410); Pārśva Bakāsana (412); Dwipāda Kouṇḍinyāsana (348); Ekapāda Kouṇḍinyāsana I & II (441 and 442); Ekapāda Bakāsana I & II (446 and 451); Ūrdhva Kukkuṭāsana (419); Pārśva Kukkuṭāsana (424); Vāmadevāsana I & II (465 and 466); Ūrdhva Dhanurāsana (486); Viparīta Chakrāsana (488 to 499); Kapotāsana (512); Laghuvajrāsana (513); Dwipāda Viparīta Daṇḍāsana (516); Ekapāda Viparīta Daṇḍāsana I & II (521 and 523); Chakrabandhāsana (524); Maṇḍalāsana (525 to 535); Vṛiśchikāsana I (537); Rājakapotāsana (551); Ekapāda Rājakapotāsana I, II, III and IV (542, 545, 546 and 547); Vālakhilyāsana (544); Pādāngusṭha Dhanurāsana (555); Gaṇḍa Bheruṇḍāsana (580 and 581); Viparīta Śalabhāsana (584); Tiriang Mukhottānāsana (586); Natarājāsana (590); Ujjāyi (Section 203) and Nāḍī Śodhana Prāṇāyāma (Section 205) with inhalation retention.

Chill

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Uttānāsana (48); Paschimottānāsana (160); Ardha Matsyendrāsana I (311); Pāśāsana (328); Ūrdhva Dhanurāsana (486). Ujjāyi (Section 203), Bhastrikā (Section 206), Nāḍī Śodhana (Section 205) and Sūryabhedana (Section 204) Prāṇāyāmas.

Coccyx (Pain and displacement)

Vīrāsana (86); Supta Vīrāsana (96); Padmāsana and cycle (104 to 124); Śīrṣāsana I (184); Sarvāngāsana I (234); Setubandha Sarvāngāsana and Ekapāda Setubandha Sarvāngāsana (259 and 260); Śalabhāsana (60); Dhanurāsana (63); Pārśva Dhanurāsana (64 and 65); Bhujangāsana I & II (73 and 550); Adhomukha-Vṛkṣāsana (359); Pincha-Mayūrāsana (357); Ūrdhva Mukha Śvānāsana (74); Vātāyanāsana (58); Uṣṭrāsana (41); Ūrdhva Dhanurāsana (486 and 487); Dwipāda Viparīta Daṇḍ-

āsana (516); Kapotāsana (512); Laghuvajrāsana (513); Vṛiśchikāsana I (537); Rājakapotāsana (551); Ekapāda Rājakapotāsana I, II, III & IV (542, 545, 546 and 547); Vālakhilyāsana (544); Gaṇḍa Bherunḍāsana (580 and 581); Viparīta Salabhāsana (584); Pādāṅguṣṭha Dhanurāsana (550); Tiriang Mukhottānāsana (586); Hanumānāsana (475); Mulabandhāsana (462).

Cold

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Uttānāsana (48); Paschimottānāsana (160); Kūrmāsana and Supta Kūrmāsana (363, 364 and 368); Yoganidrāsana (391); Ujjāyi Prāṇāyāma (Section 203) with inhalation retention.

Cough

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Uttānāsana (48); Paschimottānāsana (160); Ardha Matsyendrāsana I (311); Pāśāsana (328); Ūrdhva Dhanurāsana (486); Ujjāyi Prāṇāyāma (Section 203) with inhalation retention.

Colic

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Uttānāsana (48); Jaṭara Parivartanāsana (275); Paripoorṇa Nāvāsana (78); Ardha Nāvāsana (79); Vīrāsana (89); Supta Vīrāsana (96); Mahāmudra (125); Uḍḍīyāna 6 to 8 times (Section 201).

Colitis

Śīrsāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Uttānāsana (48); Paschimottānāsana (160); Vīrāsana (89); Supta Vīrāsana (96); Jaṭara Parivartanāsana (275); Paripoorṇa Nāvāsana (78); Ardha Nāvāsana (79); Marīchyāsana III (303); Ardha Matsyendrāsana I (311); Pāśāsana (328); Mahāmudra (125); Adhomukha Śvānāsana (75); Jānu-Śīrṣāsana (127); Yoganidrāsana (391); Śalabhāsana (60); Dhanurāsana (63); Urdhva Dhanurāsana (486); Ujjāyī (Section 203) and Nāḍī Śodhana Prāṇāyāma (Section 205).

Constipation

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); all the standing poses (4 to 36); Uttānāsana (48); Paschimottānāsana (160); Jaṭara Parivartanāsana (275). Nāḍī Śodhana Prāṇāyāma (Section 205).

Coronary thrombosis

Ujjāyī Prāṇāyāma (Section 203) in the lying position without retention.

(Even the deep breathing, this should be done without strain and preferably with the guidance of a competent teacher.) Śavāsana (592) for 15 minutes twice a day.

Deformity in legs

All the standing positions (4 to 48); Jānu-Śīrṣāsana (127); Ardha Baddha Padma Paschimottānāsana (135); Triangmukhaikapāda Paschimottānāsana (139); Krounchāsana (141); Upaviṣhṭa Koṇāsana (151); Ubhaya Pādāngusṭhāsana (167); Ūrdhva Mukha Paschimottānāsana I & II (168 and 170); Halāsana (244); Jaṭara Parivartanāsana (275); Supta Pādāngusṭhāsana (284 to 287); Anantāsana (290); Adhomukha Śvānāsana (75); Salabhāsana (60); Hanumānāsana (475); Samakoṇāsana (477); Supta Trivikramāsana (478).

Deformity in arms

All the standing poses (1 to 48); Parvatāsana (107); Halāsana (244); Ūrdhva Mukha Śvānāsana (74); Adhomukha Śvānāsana (75); Adhomukha Vṛkṣāsana (359); Gomukhāsana (80); Marīchyāsana I & III (144 and 303); Ardha Matsyendrāsana I (311); Baddha Padmāsana (118); Mālāsana I (321); Pāśāsana (328).

Diabetes

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Mahāmudra (125); Jānu-Śīrṣāsana (127); Paschimottānāsana (160); Vīrāsana (89); Supta Vīrāsana (96); Ākarṇa Dhanurāsana (173 and 175); Śalabhāsana (60); Dhanurāsana (63); Paripoorṇa Nāvāsana (78); Ardha Nāvāsana (79); Jatara Parivartanāsana (275); Uttānāsana (48); Marīchyāsana I, II, III and IV (146, 303 and 305); Ardha Matsyendrāsana I, II and III (311, 330 and 332); Pāśāsana (328); Paripoorṇa Matsyendrāsana (336); Ūrdhva Dhanurāsana (486); Dwipāda Viparīta Daṇḍāsana (516); Mayūrāsana (354); Hamṣāsana (356); Bhujangāsana I and II (73 and 550); Uḍḍīyāna (Section 201), Nauli (Section 202), Nāḍī Śodhana Prāṇāyāma (Section 205) with inhalation retention; Śavāsana (592).

Diarrhoea

Sālamba Śīrṣāsana I (184); Sālamba Sarvāngāsana I (234); Nāḍī Śodhana Prāṇāyāma (Section 205) without retention.

Dilation of heart

Nāḍī Śodhana Prāṇāyāma (Section 205) without retention.

Displacement of uterus

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271);

Uttānāsana (48); Pādāṅguṣṭhāsana (44); Pāda-Hastāsana (46); Adhomukha Śvānāsana (75); Daṇḍāsana (77); Parvatāsana (107); Matsyāsana (114); Baddha Koṇāsana (101); Upaviṣṭha Koṇāsana (151); Ujjāyi (Section 203) and Nāḍī Śodhana Prāṇāyāma (Section 205); Uḍḍīyāna (Section 201).

Displacement of the spinal discs

All the standing poses (4 to 19); Pādāṅguṣṭhāsana (43); Pāda Hastāsana (45); Uttānāsana (47); Paschimottānāsana (160); Salabhāsana (60 and 61); Makarāsana (62); Dhanurāsana (63); Uṣṭrāsana (41); Bhujangāsana I (73); Ūrdhva Mukha Śvānāsana (74); Uttānapādāsana (292); Setubandhāsana (296); Sarvāngāsana I (234); Setubandha Sarvāngāsana (259); Pincha Mayūrāsana (357); Adhomukha Vṛkṣāsana (359); Parvatāsana (107); Matsyāsana (113); Supta Vīrāsana (96); Paryankāsana (97); Parighāsana (39); Ūrdhva Dhanurāsana (486and 487); Dwipāda Viparīta Daṇḍasāna (516); Ujjāyi (Section 203) and Nāḍī Śodhana Prāṇāyāma (Section 205).

Dysentery

Śīrṣāsana and possible āsanas in the cycle (184 to 218); Sarvāngāsana and possible āsanas in the cycle (234 to 271); Mahāmudra (125); Jānu-Śīrṣāsana (127); Nāḍī Śodhana Prāṇāyāma (Section 205) without retention.

Dyspepsia

Follow the āsanas dealing with *Acidity*

Epilepsy

Sālamba Śīrṣāsana I (184); Sālamba Sarvāngāsana I (234); Halāsana (244); Mahāmudra (125); Paschimottānāsana (160); Ujjāyi Prāṇāyāma with inhalation retention and Nāḍī Śodhana Prāṇāyāma without retention; Śanmukhi Mudra (106) for 5 minutes; Savāsana (592) for any length of time at disposal. Sītali Prāṇāyāma (601); Dhyāna or meditation.

Eyes

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Uttānāsana (48); Paschimottānāsana (160); Trāṭaka or gazing with eyes closed at the tip of the nose for some time and in between the eyebrows for some time. Śanmukhi Mudra (106); Śītali (601) and Nāḍī Śodhana Prāṇāyāma (Section 205); Śavāsana (592).

Fatigue

Sālamba Śīrṣāsana I (184); Sālamba Sarvāngāsana I (234); Halāsana (244); Paschimottānāsana (160); Ūrdhva Mukha Paschimottānāsana II (170); Adhomukha Śvānāsana (75); Uttānāsana (48); Ardha Matsyendrāsana I (311); Pāśāsana (328); Mālāsana II (322); Dwipāda Viparīta Daṇḍāsana (516); Nāḍī Sodhana Prāṇāyāma (Section 205) without retention; Śavāsana (592).

Flatfoot

All the standing positions (1 to 48); Śīrṣāsana I (184); Sarvāngāsana I (234); Vīrāsana (89); Supta Vīrāsana (96); Paryankāsana (97); Bhekāsana (100); Supta Bhekāsana (458); Triang Mukhaikapāda Paschimottānāsana (139); Krounchāsana (141); Baddha Padmāsana (118); Baddha Koṇāsana (102); Mūlabandhāsana (462); Supta Pādāngusṭhāsana (284 to 287); Gomukhāsana (80); Yogadaṇḍāsana (456); Vāmadevāsana I & II (465 and 466); Gheraṇḍāsana I (561).

Flatulence

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); all the standing positions (1 to 36); Pādāngusṭhāsana (44); Pāda Hastāsana (46); Uttānāsana (48); Mahāmudra (125); Jānu-Śīrṣāsana (127); Ardha Baddha Padma Paschimottānāsana (135); Triang Mukhaikapāda Paschimottānāsana (139); Krounchāsana (142); Marīchyāsana I (144); Paripoorṇa Nāvāsana (78); Ardha Nāvāsana (79); Marīchyāsana III (303); Ardha Matsyendrāsana I & III (311 and 332); Mālāsana II (322); Pāśāsana (328); Paripoorṇa Matsyendrāsana (336); Paschimottānāsana (160); Ūrdhva Mukha Paschimottānāsana I & II (168 and 170); Jaṭara Parivartanāsana (275); Ūrdhva Prasārita Pādāsana (276 to 279); Chakrāsana (280 to 283); Supta Vīrāsana (96); Yoga Mudrāsana (120); Ekapāda Śīrṣāsana and cycle (371 to 384); Kūrmāsana and Supta Kūrmāsana (363, 364 and 368); Yoganidrāsana (391); Dwipāda Śīrṣāsana (393); Salabhāsana (60); Dhanurāsana (63); Mayūrāsana (354); Ūrdhva Dhanurāsana (486); Dwipāda Viparīta Daṇḍāsana (516); Maṇḍalāsana (525 to 535); Uḍḍīyāna (Section 201) and Nauli (Section 202).

Gall bladder and liver exercises

Follow the āsanas given under the headings *Acidity*, *Dyspepsia* and *Flatulence.*

Gastritis

Same as in *Flatulence.*

Giddiness

Sālamba Śīrṣāsana I (184); Sālamba Sarvāngāsana I (234); Halāsana (244); Paschimottānāsana (160); Śanmukhi Mudra (106); Nāḍī Śodhana Prāṇāyāma (Section 205) without retention; Śavāsana (592).

Gout

Śīrṣāsana and whatever possible in the cycle (184 to 218); Sarvāngāsana and whatever possible in the cycle (234 to 271); standing positions (4 to 36); if possible Padmāsana and cycle (104 to 124); Vīrāsana (89); Supta Vīrāsana (96); Paryankāsana (97); Parighāsana (39); Garuḍāsana (56); Gomukhāsana (80); Uttānāsana (48); Paschimottānāsana (160); Ubhaya Pādāngusṭhāsana (167); Ākarṇa Dhanurāsana (173 and 175); Krounchāsana (142); Marīchyāsana III (303); Ardha Matsyendrāsana I (311); Mālāsana I & II (321 and 322); Pāśāsana (328); Yogadaṇḍāsana (456); Bhekāsana (100); Supta Bhekāsana (458); Mūlabandhāsana (462); Vāmadevāsana I & II (465 and 466); Kandāsana (470); Hanumānāsana (475).

Halitosis (Bad breath)

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Uttānāsana (48); Jaṭara Parivartanāsana (275); Paschimottānāsana (160); Simhāsana I & II (109 and 110); Ujjāyi (Section 203), Nāḍī Śodhana (Section 205) and Śītali Prāṇāyāma (601); Uḍḍīyāna (Section 201).

(While doing āsanas and Prāṇāyāma, open the mouth, extend the tongue and curl it upwards so that the tip is pushed towards and brought close to the glottis throughout the practices. This not only removes the foul smell but also quenches the thirst. It is called Kāka Mudrā in Yoga. Kāka means a crow and mudrā a symbol.)

Hamstring muscles

All the standing positions (4 to 36); Sālamba Śīrṣāsana and whatever possible in the cycle (184 to 218); Sālamba Sarvāngāsana and whatever possible in the cycle (234 to 271); Jaṭara Parivartanāsana (275); Supta Pādāngusṭhāsana (284 to 287); Anantāsana (290); Paschimottānāsana (160); Poorvottānāsana (171); Baddha Koṇāsana (101); Upaviṣṭha Koṇāsana (151); Ākarṇa Dhanurāsana (173 and 175); Kūrmāsana (363 and 364); Ustrāsana (41); Śalabhāsana (60); Dhanurāsana (63); Ūrdhva Dhanurāsana (486 and 487); Dwipāda Viparīta Daṇḍāsana (516); Maṇḍalāsana (525 to 535); Ardha Matsyendrāsana I (311); Mālāsana II (322); Pāśāsana (328); Hanumānāsana (475); Samakoṇāsana (477); Supta Trivikramāsana (478).

Headache

Sālamba Śīrṣāsana I (184) for 10 minutes; Sālamba Sarvāngāsana I (234) for 10 minutes; Halāsana (244) for 5 minutes and possible āsanās in Sarvāngāsana cycle; Paschimottānāsana (160) for 5 minutes; Uttānāsana (48) for 3 minutes; Nāḍī Śodhana Prāṇāyāma (Section 205) without retention for 10 to 15 minutes; Śavāsana (592) for 10 minutes.

Heart trouble

Ujjāyī (Section 203) or Nāḍī Śodhana Prāṇāyāma (Section 205) without retention and without strain. Meditation. Śavāsana (592).

Heartburn

Follow the exercises given under the headline *Acidity*.

Heels (Pain or spurs)

Śīrsāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Adhomukha Śvānāsana (75); Vīrāsana (89); Supta Vīrāsana (96); Paryankāsana (97); Bhekāsana (100); Supta Bhekāsana (458); Baddha Koṇāsana (101); Mulabandhāsana (462); Ardha Matsyendrāsana I (311); Mālāsana I & II (321 and 322); Pāśāsana (328); Paripoorṇa Matsyendrāsana (336); Ūrdhva Mukha Paschimottānāsana I & II (168 and 170); Gomukhāsana (80); Pincha Mayūrāsana (357); Adhomukha Vṛkṣāsana (359); Vāmadevāsana I & II (465 and 466); Yogadaṇḍāsana (456); Kandāsana (470).

Hernia (Umbilical)

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Baddhakoṇāsana (103); Upavista Koṇāsana (151); Paschimottānāsana (160); Ūrdhva Mukha Paschimottānāsana I & II (168 and 170); Ākarṇa Dhanurāsana (173 and 175); Supta Pādāngusṭhāsana (284 to 287); Mahāmudra (125); Adhomukha Śvānāsana (75); Pādāngusṭhāsana (43); Pāda Hastāsana (45); Uttānāsana (57); Ūrdhva Dhanurāsana (486); Dwipāda Viparīta Daṇḍāsana (516); Kūrmāsana and Supta Kūrmāsana (363, 364 and 368); Ekapāda Śīrṣāsana and cycle (371 to 384); Yoganidrāsana (391); Dwipāda Śīrṣāsana (393); Paripoorṇa Nāvāsana (78); Ardha Nāvāsana (79); Uḍḍīyāna.

Hernia (Inguinal)

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Ubhaya Pādāngusṭhāsana (167); Ūrdhva Mukha Paschimottānāsana I & II (168 and 170); Krounchāsana (141); Ākarṇa Dhanurāsana (173 and 175); Supta Pādāngusṭhāsana (284 to 287); Upaviṣṭa Koṇāsana

(151); Baddha-Koṇāsana (102); Hanumānāsana (475); Samakoṇāsana (477); Supta Trivikramāsana (478); Yogadaṇḍāsana (456); Mūlabandhāsana (462); Yoganidrāsana (391); Uḍḍīyāna (Section 201).

(It is advisable to do Baddha Koṇāsana (101) in the lying position while retiring. Do not immediately stand or move about after performing the āsana. Do Śavāsana after the above āsana.)

Hunch-back

All the standing positions (1 to 36); Chaturanga Daṇḍāsana (67); Śalabhāsana (60); Makarāsana (62); Dhanurāsana (63); Uṣṭrāsana (41); Pādāṅguṣṭhāsana (43); Pāda Haṣtāsana (45); Uttānāsana (47); Bhujangāsana I (73); Ūrdhva Mukha Śvānāsana (74); Adhomukha Śvānāsana (75); Mahāmudra (125); Jānu-Śīrṣasana (127); Upaviṣṭa Koṇāsana (151); Gomukhāsana (80); Parvatāsana (107); Bharadwājāsana I & II (297 and 299); Marīchyāsana I, II, III and IV (144, 146, 303 and 305); Baddha Padmāsana (118); Paryankāsana (97); Ardha Matsyendrāsana I & II (311 and 330); Jaṭara Parivartanāsana (275); Supta Pādāṅguṣṭhāsana (285 to 287); Ūrdhva Dhanurāsana (486); Pincha Mayurāsana (357); Adhomukha Vṛkṣāsana (359); Dwipāda Viparīta Daṇḍāsana (516).

Hydrocele

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Padmāsana and cycle (104 to 124); Adhomukha Vṛkṣāsana (359); Pincha Mayūrāsana (357); Adhomukha Svānāsana (75); Jaṭara Parivartanāsana (275); Supta Pādāṅguṣṭhāsana (285 to 287); Baddha Koṇāsana (101); Upaviṣṭa Koṇāsana (151); Paschimottānāsana (160); Yoganidrāsana (391); Yogadaṇḍāsana (456); Mulabandhāsana (462); Vāmadevāsana I & II (465 and 466); Kandāsana (470); Hanumānāsana (475); Samakoṇāsana (477); Uḍḍīyāna (Section 201) and Nauli (Section 202).

Impotency

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Paschimottānāsana (160); Uttānāsana (48); Mahāmudra (125); Baddha Koṇāsana (101); Ardha Matsyendrāsana I (311); Pāśāsana (328); Mūlabandhāsana (462); Kandāsana (470); Hanumānāsana (475); Yoganidrāsana (391); Ūrdhva Dhanurāsana (486); Dwipāda Viparīta Daṇḍāsana (516); Uḍḍīyāna; Nāḍī Śodhana Prāṇāyāma (Section 205) with inhalation retention.

Indigestion

All the standing positions (4 to 48); Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Jaṭara Parivartanāsana (275); Ūrdhva Prasarīta Pādāsana (276 to 279); Paripoorṇa Nāvāsana (78);

Ardha Nāvāsana (79); Mahāmudra (125); Śalabhāsana (60); Dhanurāsana (63); Paschimottānāsana (160); Yoganidrāsana (391); Marīchyāsana III (303); Ardha Matsyendrāsana I (311); Pāśāsana (328); Paripoorṇa Matsyendrāsana (336); Supta Vīrāsana (96); Uḍḍiyāna (Section 201) and Nauli (Section 202), Bhastrika Prāṇāyāma (Section 206), Nāḍi Śodhana Prāṇāyāma (Section 205) with inhalation retention.

Insomnia

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Paschimottānāsana (160); Uttānāsana (48); Bhastrika, Nāḍī Śodhana and Sūryabhedana Prāṇāyāma without retention, Śanmukhi Mudra (106) and Śavāsana (592).

Kidneys

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); all the standing positions (4 to 48); Ūrdhva Mukha Śvānāsana (74); Adhomukha Śvānāsana (75); Śalabhāsana (60); Dhanurāsana (63); Jānu-Śīrṣāsana (127); Parivṛtta Jānu-Śīrṣāsana (132); Paschimottānāsana (160); Parivṛtta Paschimottānāsana (165); Baddha Koṇāsana (103); Upaviṣṭa Koṇāsana (151); Jaṭara Parivartanāsana (275); Ardha Nāvāsana (79); Marīchyāsana III (303); Ardha Matsyendrāsana I, II and III (311, 330 and 332); Pasāśāna (328) Paripoorṇa Matsyendrāsana (336); Bhujangāsana I and II (73 and 550); Mulabandhāsana (462); Kandāsana (470); Hanumānāsana (475); Yoganidrāsana (391); Ūrdhva Dhanurāsana (486 and 487); Dwipāda Viparīta Daṇḍāsana (516); Maṇḍalāsana (525 to 535); Kapotāsana (512); Rājakapotāsana (551); Vṛiśchikāsana I or II (537 or 538); Pādāngusṭha Dhanurāsana (555); Śīrṣapādāsana (570); Gaṇḍa Bheruṇḍāsana (580 and 581); Viparīta Śalabhāsana (584); Tiriang Mukhottānāsana (586); Natarājāsana (590); Uḍḍīyāna (Section 201) and Nāḍī Śodhana Prāṇāyāma (Section 205).

Knees

All the standing positions (1 to 48); Jānu-Śīrṣāsana (127); Parivṛtta Jānu-Śīrṣāsana (132); Ardha Baddha Padma Paschimottānāsana (135); Triangmukhaikapāda Paschimottānāsana (139); Krounchāsana (141); Marīchyāsana I, II, III & IV (144, 146, 303 and 305); Ākarṇa Dhanurāsana (173 and 175); Padmāsana and cycle (104 to 124); Vīrāsana (89); Supta Vīrāsana (96); Paryankāsana (97); Gomukhāsana (80); Siddhāsana (84); Baddha Koṇāsana (101); Bharadwājāsana I & II (297 and 299); Ardha Matsyendrāsana I (311); Mālāsana I & II (321 and 322); Pāśāsana (328); Kūrmāsana and Supta Kūrmāsana (363, 364 and 368); Yoganidrāsana (391); Yogadaṇḍāsana (456); Bhekāsana (100); Supta Bhekāsana (458); Mulabandhāsana (462); Vāmadevāsana I & II

(465 and 466); Kandāsana (470); Hanumānāsana (475); Gheraṇḍāsana I & II (561 and 564).

Labour pain

Vīrāsana (89); Baddha Koṇāsana (101 and 103); Upaviṣṭa Koṇāsana (148) but with or without holding the toes; Ujjāyi Prāṇāyāma (Section 201) with inhalation retention and Nāḍī Śodhana Prāṇāyāma (Section 203) without retention; Śavāsana (592).

Legs

All the standing positions (1 to 58); Śalabhāsana (60); Dhanurāsana (63); Bhujangāsana I & II (73 and 550); Chaturanga Daṇḍāsana (67); Ūrdhva-mukha Śvānāsana (74); Adhomukha Śvānāsana (75); Paripoorṇa Nāvāsana (78); Ardha Nāvāsana (79); Paschimottānāsana (160); Ūrdhva Mukha Paschimottānāsana I & II (168 and 170); Ākarṇa Dhanurāsana (173 and 175); Upaviṣṭa Koṇāsana (151); Jaṭara Parivartanāsana (275); Supta Pādāngusṭhāsana (285 to 287); Krounchāsana (141); Sālamba Sīrṣāsana I (184); Sālamba Sarvāngāsana (234); Halāsana (244); Pincha Mayūrāsana (357); Adhomukha Vṛkṣāsana (359); Anantāsana (290); Ekapada Śīrṣāsana and cycle (371 to 384); Vasiṣṭhāsana (398); Viśvāmitrāsana (403); Hanumānāsana (475); Samakoṇāsana (477); Supta Trivikramāsana (478).

Liver, Spleen, Pancreas and Intestines

Follow the āsanas given under *Arms* and *Kidneys.*

Lumbago

All the standing positions (4 to 48); Śalabhāsana (60); Dhanurāsana (63); Bhujangāsana I (73); Poorvottānāsana (171); Mālāsana I & II (321 and 322); Bharadwājāsana I & II (297 and 299); Marīchyāsana III (303); Ardha Matsyendrāsana I (311); Pāśāsana (328); Ūrdhva Mukha Paschimottānāsana II (170); Jaṭara Parivartanāsana (275); Parvatāsana (107); Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Ūrdhva Dhanurāsana (486 and 487); Viparīta Chakrāsana (488 to 499); Dwipāda Viparīta Daṇḍāsana (516); Maṇḍalāsana (525 to 535).

Lungs

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Padmāsana and cycle (104 to 124); Vīrāsana (89); Supta Vīrāsana (96); Paryankāsana (97); all the standing positions (4 to 36); Urdhva Dhanurāsana (486); Dwipāda Viparīta Daṇḍāsana (516); all the types of Prāṇāyāma with inhalation retention.

Menstrual disorders

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Paschimottānāsana (160); Uttanāsana (48); Adhomukha Śvānāsana (75); Baddha Padmāsana (118); Yogamudrāsana (120); Parvatāsana (107); Matsyāsana (113); Kūrmāsana and Supta Kūrmāsana (363, 364 and 368); Vīrāsana (89); Supta Vīrāsana (96); Paryankāsana (97); Baddha Koṇāsana (102); Upaviṣṭa Koṇāsana (151); Ūrdhva Mukha Paschimottānāsana I & II (168 and 170); Yoganidrāsana (391); Marīchyāsana III (303); Ardha Matsyendrāsana I (311); Pāśāsana (328); Ūrdhva Dhanurāsana (486); Dwipāda Viparīta Daṇḍāsana (516); Śavāsana (592); Nāḍī Śodhana Prāṇāyāma with inhalation retention and Uḍḍīyāna (Section 201).

Migraine

Sālamba Śīrṣāsana (184); if possible cycle of Śīrṣāsana; Sarvāngāsana (and whatever possible in the cycle) (234 to 271); Paschimottānāsana (160); Uttānāsana (48); Nāḍī Śodhana Prāṇāyāma without retention; Śītali Prāṇāyāma; Śanmukhi Mudra (106); Meditation in Vīrāsana (89) or Siddhāsana (84) or Baddha Koṇāsana (103) or Padmāsana (104); Śavāsana (592).

Nasal catarrh

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Paschimottānāsana (160); Uttānāsana (48); Adhomukha Śvānāsana (75); Ujjāyī (Section 203), Bhastrikā (Section 206), Sūryabhedana (Section 204) and Nāḍī Śodhana Prāṇāyāma (Section 205).

Nervous debility

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Uttānāsana (48); Paschimottānāsana (160); Nāḍī Śodhana Prāṇāyāma without retention; Śanmukhi Mudra (106); Meditation and Śavāsana (592).

Obesity

Follow the āsanas under *Acidity*, *Dyspepsia* and *Gastritis*.

Ovaries

Follow the āsanas under *Menstrual disorders*.

Palpitation

Sālamba Śīrṣāsana I (184); Sālamba Sarvāngāsana I (234); Halāsana (244); Paschimottānāsana (160); Uttānāsana (48); Adhomukha

Śvānāsana (75); Dwipada Viparīta Daṇḍāsana (516); Vīrāsana (89), Supta Vīrāsana (96); Ujjāyī (Section 203) and Nāḍī Sodhana Prāṇāyāma (Section 205) without retention in the beginning. After 2 or 3 months start with 5 seconds of inhalation retention and increase the time gradually. Śavāsana (592).

Polio

All the standing positions (1 to 36). Śalabhāsana (60); Dhanurāsana (63) and so on. But with Polio in my experience direct guidance is essential so do not work from the book. The āsanas have to be adjusted to the individual needs and state of the patient.

Paralysis

Here also, guidance from a competent teacher is a necessity. All the standing positions (1 to 36); Pādāngusṭhāsana (44); Pāda Hastāsana (46); Uttānāsana (48); Śalabhāsana (60 and 61); Makarāsana (62); Dhanurāsana (63); Bhujangāsana I (73); Sālamba Śīrṣāsana I (184); Sālamba Sarvāngāsana I (234); Halāsana (244); Ekapāda Sarvāngāsana (250); Pārśvaikapāda Sarvāngāsana (251); Pārśva Halāsana (249); Supta Koṇāsana (247); Supta Pādāngusṭhāsana (284, 285 and 287); Ūrdhva Prasārita Pādāsana (276 to 279); Śavāsana (592); Ujjāyi (Section 203) and Nāḍī Śodhana Prāṇāyāma (Section 205).

Piles

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Jaṭara Parivartanāsana (275); Supta Pādāngusṭhāsana (285 to 287); Matsyāsana (114); Simhāsana II (110); Śalabhāsana (60); Dhanurāsana (63); Ūrdhva Dhanurāsana (486); Dwipāda Viparīta Daṇḍāsana (516); Ujjāyi (Section 203) and Nāḍī Śodhana Prāṇāyāma (Section 205) with retention and Śavāsana (592).

Pleurisy and pneumonia

(After medical treatment and rest, the patient can conveniently take to yoga practices to gain strength and lead a normal life in a shorter time.)

Sālamba Śīrṣāsana I (184); Sālamba Sarvāngāsana I (234); Halāsana (244); Paschimottānāsana (160); Uttānāsana (48); Vīrāsana (89); Parvatāsana (107); Matsyāsana (114); Ujjāyi (Section 203) and Nāḍī Śodhana Prāṇāyāma (Section 205) without retention, meditation and Śavāsana (592).

Prostates

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Jaṭara Parivartanāsana (275); Uttānāsana (48); Śalabhāsana (60);

Dhanurāsana (63); Adhomukha Śvānāsana (75); Paripoorna Nāvāsana (78); Ardha Nāvāsana (79); Jānu-Śīrṣāsana (127); Vīrāsana (89); Supta Vīrāsana (96); Baddha Koṇāsana (102); Padmāsana and cycle (104 to 124); Kūrmāsana and Supta Kūrmāsana (363, 364 and 368); Ekapāda Śīrṣāsana and cycle (371 to 384); Yoganidrāsana (391); Ardha Matsyendrāsana I & II (311 and 320); Pāśāsana (328); Paripoorna Matsyendrāsana (336); Mūlabandhāsana (462); Kandāsana (470); Hanumānāsana (475); Samakoṇāsana (477); Ūrdhva Dhanurāsana (486); Viparīta Chakrāsana (488 to 499); Dwipāda Viparīta Daṇḍāsana (516); Maṇḍalāsana (525 to 535); Uḍḍīyāna (Section 201), Nāḍī Śodhana (Section 205) and Ujjāyi Prāṇāyāma (Section 203) with retention.

Rheumatic pains

Follow the āsanas given under *Arthritis* and *Lumbago.*

Sciatica

All standing positions (1 to 36); Sīrṣāsana and do whatever is possible in the cycle (184 to 218); Sarvāngāsana and possible āsanas in the cycle (234 to 271); Jaṭara Parivartanāsana (275); Supta Pādāngusṭhāsana (284 to 287); Anantāsana (290); Uttānapādāsana (292); Setubandhāsana (296); Paschimottānāsana (160); Śalabhāsana (60); Dhanurāsana (63); Bhujangāsana I (73); Ūrdhva Mukha Śvānāsana (74); Adhomukha Śvānāsana (75); Ūrdhva Mukha Paschimottānāsana I & II (168 and 170); Poorvottānāsana (171); Kūrmāsana (363 and 364); Mūlabandhāsana (462); Bharadwājāsana I & II (297 and 299); Marīchyāsana III (303); Ardha Matsyendrāsana I (311); Mālāsana I & II (321 and 322); Pāśāsana (328); Hanumānāsana (475); Supta Trivikramāsana (478); Uṣṭrāsana (41); Dwipāda Viparīta Daṇḍāsana (516). If possible, Paripoorṇa Matsyendrāsana (336).

Spermatorrhoea

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Paschimottānāsana (160); Baddha Koṇāsana (103); Mūlabandhāsana (462); Kandāsana (470); Ujjāyi (Section 203) and Nāḍī Śodhana Prāṇāyāma (Section 205) without retention for 2 to 3 months, then do them with inhalation retention.

Sterility

Follow the āsanas under *Spermatorrhoea.*

Thrombosis of the legs

Sālamba Sarvāngāsana I, if possible (234); Halāsana (244); Vīrāsana

(89); Siddhāsana (84); Baddha Koṇāsana (102); and any sitting āsanas without strain. Ujjāyi (Section 203) and Nāḍī Śodhana Prāṇāyāma (Section 205) and Śavāsana (592).

Tonsillitis

Śīrṣāsana and whatever āsana is possible in the cycle (184 to 218); Sarvāngāsana and possible āsanas in the cycle (234 to 271); Vīrāsana (89); Paryankāsana (97); Padmāsana and cycle (104 to 124); standing positions (1 to 36); Uṣṭrāsana (41); Dhanurāsana (63); Ūrdhva Mukha Śvānāsana (74); Marīchyāsana III (303); Ardha Matsyendrāsana I (311); Pāśāsana (328); Paripoorṇa Matsyendrāsana (336); Paschimottānāsana (160); Yoganidrāsana (391); Ūrdhva Dhanurāsana (486); Dwipāda Viparīta Daṇḍāsana (516); Ujjāyi (Section 203) and Nāḍī Śodhana Prāṇāyāma (Section 205); Bhastrikā (Section 206) and Uḍḍīyāna (Section 201).

Tuberculosis

It is advisable to get the guidance of a competent teacher after medical treatment.

Tumour of the stomach

(Only if the disease is in the beginning stage.)

Sālamba Śīrṣāsana I and possible āsanas in the cycle (184 to 218); Sālamba Sarvāngāsana I and possible āsanas in the cycle (234 to 271); standing positions (1 to 36); Uttānāsana (48); Mahāmudra (125); Jānu-Śīrṣāsana (127); Supta Vīrāsana (96); Matsyāsana (114); Parvatāsana (107); Paschimottānāsana (160); Uḍḍīyāna (Section 201) and Ujjāyī (Section 203) or Nāḍī Śodhana Prāṇāyāma (Section 205).

Ulcer (Gastric)

Follow the āsanas under *Acidity*, *Dyspepsia* and *Flatulence*.

Ulcer (Duodenal)

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Mahāmudra (125); Jānu-Śīrṣāsana (127); Paschimottānāsana (160); Kūrmāsana and Supta Kūrmāsana (363, 364 and 368); Yoganidrāsana (391); Marīchyāsana III (303); Ardha Matsyendrāsana I (311); Pāśāsana (328); Dwipāda Viparīta Daṇḍāsana (516); Uḍḍīyāna (Section 201), Ujjāyī (Section 203) and Nāḍī Śodhana Prāṇāyāma (Section 205) with inhalation retention.

Urine (Dribbling or excessive)

Śīrṣāsana and what you can in the cycle (184 to 218); Sarvāngāsana

and what you can in the cycle (234 to 271); Supta Vīrāsana (96); Matsyāsana (114); Siṃhāsana II (110); Mahāmudra (125); Baddha Koṇāsana (101); Uḍḍīyāna (594); Nāḍī Śodhana Prāṇāyāma (Section 205) with Antara Kumbhaka and Bāhya Kumbhaka.

Varicose veins

Śīrṣāsana and cycle (184 to 218); Sarvāngāsana and cycle (234 to 271); Vīrāsana (89); Supta Vīrāsana (96); Paryankāsana (97); Bhekāsana (100).

Ā Table to Correlate the Āsanas with the Plates that Illustrate them

Names of Āsanas, etc.	*Intermediate Āsana Plate No.*	*Final Āsana Plate No.*
1. Tāḍāsana	—	1
2. Vṛkṣāsana	—	2
3. Utthita Trikoṇāsana	3	4 and 5
4. Parivṛtta Trikoṇāsana	—	6 and 7
5. Utthita Pārśvakoṇāsana	—	8 and 9
6. Parivṛtta Pārśvakoṇāsana	—	10 and 11
7. Vīrabhadrāsana I	12 and 13	14
8. Vīrabhadrāsana II	—	15
9. Vīrabhadrāsana III	16	17
10. Ardha Chandrāsana	18	19
11. Utthita Hasta Pādāṅguṣṭhāsana	20 to 22	23
12. Pārśvōttānāsana	24 and 25	26, 27 and 28
13. Prasārita Pādottānāsana I	29 to 32	33 and 34
14. Prasārita Pādottānāsana II	—	35 and 36
15. Parighāsana	37 and 38	39
16. Uṣṭrāsana	40	41
17. Utkaṭāsana	—	42
18. Pādāṅguṣṭhāsana 44	43	44
19. Pāda Hastāsana	45	46
20. Uttānāsana	47	48
21. Ūrdhva Prasārita Ekapādāsana	—	49
22. Ardha Baddha Padmottānāsana	50 and 51	52, 53, 54 and 55
23. Garuḍāsana	—	56
24. Vātāyanāsana	57	58 and 59
25. Śalabhāsana	61	60
26. Makarāsana	—	62
27. Dhanurāsana	—	63
28. Pārśva Dhanurāsana	—	64 and 65
29. Chaturanga Daṇḍāsana	66	67
30. Nakrāsana	—	68 to 71
31. Bhujaṅgāsana I	72	73
32. Ūrdhva Mukha Śvānāsana	—	74
33. Adho Mukha Śvānāsana	—	75 and 76
34. Daṇḍāsana	—	77
35. Paripūrṇa Nāvāsana	—	78

Names of Āsanas, etc.	*Intermediate Āsana Plate No.*	*Final Āsana Plate No.*
36. Ardha Nāvāsana	—	79
37. Gomukhāsana	—	80 and 81
38. Lolāsana	82	83
39. Siddhāsana	—	84
40. Vīrāsana	85 to 92	89
41. Supta Vīrāsana	93 to 95	96
42. Paryankāsana	—	97
43. Bhekāsana	98 and 99	100
44. Baddha Koṇāsana	101	102 and 103
45. Padmāsana	—	104 and 105
46. Ṣanmukhī Mudrā	—	106
47. Parvatāsana	—	107
48. Tolāsana	—	108
49. Siṃhāsana I	—	109
50. Siṃhāsana II	—	110 and 111
51. Matsyāsana	112 and 114	113
52. Kukkuṭāsana	—	115
53. Garbha Piṇḍāsana	—	116
54. Gorakṣāsana	—	117
55. Baddha Padmāsana	—	118 and 119
56. Yoga Mudrāsana	—	120, 121 and 122
57. Supta Vajrāsana	123	124
58. Mahā Mudrā	—	125
59. Jānu Śīrṣāsana	126	127, 128 and 129
60. Parivṛtta Jānu Śīrṣāsana	130 and 131	132
61. Ardha Baddha Padma Paschimottānāsana	133, 134 and 136	135 and 137
62. Triang Mukhaikapāda Paschimottānāsana	138	139
63. Krounchāsana	140	141 and 142
64. Marīchyāsana I	143	144
65. Marīchyāsana II	145	146 and 147
66. Upaviṣṭha Koṇāsana	148 to 150	151 and 152
67. Paschimottānāsana (or Ugrāsana or Brahmacharyāsana)	153 to 160	161 and 162
68. Parivṛtta Paschimottānāsana	163 and 164	165 and 166
69. Ubhaya Pādāṅguṣṭhāsana	—	167
70. Ūrdhva Mukha Paschimottānāsana I	—	168
71. Ūrdhva Mukha Paschimottānāsana II	169	170
72. Pūrvottānāsana	—	171
73. Ākarṇa Dhanurāsana	172 and 174	173 and 175
74. Sālamba Śīrṣāsana I	176 to 183 and 186 to 189, 191	184, 185 and 190

Names of Āsanas, etc.	*Intermediate Āsana Plate No.*	*Final Āsana Plate No.*
75. Ūrdhva Daṇḍāsana	—	188
76. Sālamba Śīrṣāsana II	—	192
77. Sālamba Śīrṣāsana III	193, 196 and 197	194 and 195
78. Baddha Hasta Śīrṣāsana	—	198
79. Mukta Hasta Śīrṣāsana	199	200 and 201
80. Pārśva Śīrṣāsana	—	202 and 203
81. Parivṛttaikapāda Śīrṣāsana	204	205, 206 and 207
82. Eka Pāda Śīrṣāsana	—	208 and 209
83. Pārśvaika Pāda Śīrṣāsana	—	210
84. Ūrdhva Padmāsana in Śīrṣāsana	—	211 and 212
85. Pārśva Ūrdhva Padmāsana in Śīrṣāsana	—	213 to 216
86. Piṇḍāsana in Śīrṣāsana	217	218
87. Sālamba Sarvāngāsana I	219 to 222 and 226 to 235	223 and 224, 225 and 234
88. Sālamba Sarvāngāsana II	—	235
89. Nirālamba Sarvāngāsana I	—	236
90. Nirālamba Sarvāngāsana II	—	237
91. Halāsana	238 to 243	244
92. Karṇapīḍāsana	245	246
93. Supta Koṇāsana	—	247 and 248
94. Pārśva Halāsana	—	249
95. Eka Pāda Sarvāngāsana	—	250
96. Pārśvaika Pāda Sarvāngāsana	—	251
97. Pārśva Sarvāngāsana	252 and 253	254 and 255
98. Setu Bandha Sarvāngāsana (or Uttana Mayūrāsana)	256 to 258	259
99. Eka Pāda Setu Bandha Sarvāngāsana (or Eka Pāda Uttāna Mayūrāsana)	—	260
100. Ūrdhva Padmāsana in Sarvāngāsana	—	261
101. Pārśva Ūrdhva Padmāsana in Sarvāngāsana	—	262 to 265
102. Uttāna Padma Mayūrāsana	266	267
103. Piṇḍāsana in Sarvāngāsana	268	269
104. Pārśva Piṇḍāsana in Sarvāngāsana	—	270 and 271
105. Jaṭhara Parivartanāsana	272 and 273	274 and 275
106. Ūrdhva Prasārita Pādāsana	—	276 to 279
107. Chakrāsana	—	280 to 283
108. Supta Pādāṅguṣṭhāsana	284	285 to 287
109. Anantāsana	288 and 289	290
110. Uttāna Pādāsana	291	292
111. Setu Bandhāsana	293 to 295	296

Names of Āsanas, etc.	*Intermediate Āsana Plate No.*	*Final Āsana Plate No.*
112. Bharadvājāsana I	—	297 and 298
113. Bharadvājāsana II	—	299 and 300
114. Marīchyāsana III	301 and 302	303 and 304
115. Marīchyāsana IV	—	305 and 306
116. Ardha Matsyendrāsana I	307 to 310 and 313 to 316	311 and 312
117. Mālāsana I	317 to 320	321
118. Mālāsana II	—	322
119. Pāśāsana	323 to 327	328 and 329
120. Ardha Matsyendrāsana II	—	330 and 331
121. Ardha Matsyendrāsana III	—	332 and 333
122. Paripūrṇa Matsyendrāsana	334 and 335, 337 and 338	336 and 339
123. Aṣṭāvakrāsana	340 and 341	342 and 343
124. Eka Hasta Bhujāsana	—	344
125. Dwi Hasta Bhujāsana	—	345
126. Bhujapidāsana	346 and 347, 349 and 350	348
127. Mayūrāsana	351 to 353	354
128. Padma Mayūrāsana	—	355
129. Haṃsāsana	—	356
130. Pīncha Mayūrāsana	—	357
131. Śayanāsana	—	358
132. Adho Mukha Vṛkṣāsana	—	359
133. Kūrmāsana	360 to 362	363 and 364
134. Supta Kūrmāsana	365 to 367	368
135. Eka Pāda Śīrṣāsana	369 and 370	371
136. Skandāsana	—	372
137. Buddhāsana	—	373
138. Kapilāsana	—	374
139. Bhairavāsana	—	375
140. Kāla Bhairavāsana	376 and 377	378
141. Chakorāsana	—	379 and 380
142. Dūrvāsāsana	381 and 382	383
143. Ruchikāsana	—	384 and 385
144. Viranchyāsana I	—	386 and 387
145. Viranchyāsana II	—	388
146. Yoganidrāsana	389 and 390	391
147. Dwi Pāda Śīrṣāsana	392	393 and 394
148. Tittibhāsana	—	395
149. Vasiṣṭhāsana	396 and 397	398
150. Kaśyapāsana	—	399 and 400
151. Viśvāmitrāsana	401 and 402	403
152. Bakāsana	404 and 405, 407 to 409	406 and 410
153. Pārśva Bakāsana	411	412

Names of Āsanas, etc.	*Intermediate Āsana Plate No.*	*Final Āsana Plate No.*
154. Ūrdhva Kukkuṭāsana	413 to 416	417 to 419
155. Pārśva Kukkuṭāsana	420 to 423	424 and 424a, 425 and 425a
156. Gālavāsana	426	427 and 428
157. Eka Pāda Gālavāsana	429, 430 and 432	431 and 433
158. Dwi Pāda Kouṇḍinyāsana	434 to 437	438
159. Eka Pāda Kouṇḍinyāsana I	439 and 440	441
160. Eka Pāda Kouṇḍinyāsana II	444	442 and 443
161. Eka Pāda Bakāsana I	445	446 and 447
162. Eka Pāda Bakāsana II	448 to 450	451 and 452
163. Yogadaṇḍāsana	453 to 455	456
164. Supta Bhekāsana	457	458
165. Mūlabhandāsana	459 to 461	462 and 463
166. Vāmadevāsana I	464	465
167. Vāmadevāsana II	—	466
168. Kandāsana	467 to 469	470 to 471b
169. Hanumānāsana	472 to 474	475 to 476a
170. Samakoṇāsana	—	477
171. Supta Trivikramāsana	—	478
172. Ūrdhva Dhanurāsana I	479 to 481	482
172a. Ūrdhva Dhanurāsana II	483 to 485	486 and 487
173. Viparīta Chakrāsana in Ū. Dh.	—	488 to 499
174. Eka Pāda Ūrdhva Dhanurāsana	500	501 and 502
175. Kapotāsana	503 to 506 508 to 511	507 and 512
176. Laghuvajrāsana	—	513
177. Dwi Pāda Viparīta Daṇḍāsana	514 and 515, 517 to 520	516
178. Eka Pāda Viparīta Daṇḍāsana I	—	521
179. Eka Pāda Viparīta Daṇḍāsana II	522	523
180. Chakra Bandhāsana	—	524
181. Maṇḍalāsana	—	525 to 535
182. Vṛśchikāsana I	—	536 and 537
183. Vṛśchikāsana II	—	538
184. Eka Pāda Rājakapotāsana I	539 to 541	542
185. Vālakhilyāsana	543	544
186. Eka Pāda Rājakapotāsana II	—	545
187. Eka Pāda Rājakapotāsana III	—	546
188. Eka Pāda Rājakapotāsana IV	—	547
189. Bhujaṅgāsana II	548 and 549	550
190. Rājakapotāsana	552	551
191. Pādāṅguṣṭha Dhanurāsana	553 and 554, 556 and 557	555
192. Gheraṇḍāsana I	558 to 560	561 to 563

Names of Āsanas, etc.	*Intermediate Āsana Plate No.*	*Final Āsana*
193. Gheraṇḍāsana II	—	564 to 566
194. Kapiṅjalāsana	—	567
195. Śīrṣa Pādāsana	568 and 569	570
196. Gaṇḍa Bheruṇḍāsana	571 to 579, 582 and 583	580 and 581
197. Viparīta Śalabhāsana	—	584
198. Tiriang Mukhottānāsana	585	586
199. Naṭarājāsana	587 to 589	590, 591 and 591a
200. Śavāsana (or Mṛtāsana)	—	592
201. Uḍḍtyāna Bandha	—	593 and 594
202. Nauli	—	595 and 596
Prāṇāyāma		
203. Ujjāyi	—	597
204. Sūrya Bhedana	598	599
— Bāhya Kumbhaka	—	600
205. Nāḍī Śodhana	—	—
206. Bhastrikā	—	—
207. Kapālabhāti	—	—
208. Bhamarī	—	—
209. Śitalī	—	601
210. Śitakārī	—	—
211. Sama Vṛtti	—	—
212. Viṣama Vṛtti	—	—
213. Viloma	—	—
214. Anuloma	—	—
215. Pratiloma	—	—
216. Sahita and Kevala	—	—
— Dhyāna	—	602

Glossary

A	Negative particle meaning 'non', as in non-violence.
Abhaya	Freedom from fear.
Abhiniveśa	Instinctive clinging to life and the fear that one may be cut off from all by death.
Abhyāsa	Constant and determined study or practice.
Adhaḥ	Down, lower.
Ādhāra	A support.
Adhimātra	Beyond measure, superior.
Adhimātratama	The supreme one, the highest.
Adho-mukha	Face downwards.
Ādīśvara	The primeval Lord; an epithet of Śiva.
Aditi	The mother of the gods, known as Ādityas.
Āditya	Son of Aditi or gods.
Advaita	Non-duality of the Universal Spirit with the individual soul.
Āgama	Testimony or proof of an acceptable authority when the source of knowledge has been checked and found trustworthy.
Ahaṁkāra	Ego or egotism; literally 'the I-Maker', the state that ascertains 'I know'.
Ahiṁsā	Non-violence. The word has not merely the negative and restrictive meaning of 'non-killing or non-violence', but the positive and comprehensive meaning of 'love embracing all creation'.
Ajapa-mantra	Unconscious repetitive prayer. Every living creature unconsciously breathes the prayer 'So'ham' (Saḥ= He (the Universal Spirit), aham=am I) with each inward breath, and with each outgoing breath prays 'Haṁsaḥ' (Aham = I am, Saḥ=He (the Universal Spirit)).
Ājñā-chakra	The nervous plexus situated between the eyebrows, the seat of command.
Ākarṇa	Near to the ear, towards the ear.
Akrodha	Freedom from anger.

Alabhdha-bhūmikatva	Failure to attain firm ground or continuity in practice, feeling that it is not possible to see reality.
Ālamba	Support.
Ālasya	Idleness, sloth, apathy.
Amanaska	The mind which is free from thoughts and desires.
Amṛta	Nectar of immortality.
Anāhata-chakra	The nervous plexus situated in the cardiac region.
Ananta	Infinite; a name of Viṣṇu as also of Viṣṇu's couch, the serpent Śeṣa.
Ananta-padmanābha	A name of Viṣṇu.
Anavasthitattva	Instability to continue the practices feeling that it is not necessary to continue as he thinks that he has reached the highest state of Samādhi.
Aṅga	The body; a limb or a part of the body; a constituent part.
Aṅgamejayatva	Unsteadiness or tremor of the body.
Aṅgula	A finger; the thumb.
Aṅguṣṭha	The big toe.
Aṅjanā	Name of the mother of Hanumān, a powerful monkey chief.
Antara	Within; interior.
Antara Kumbhaka	Suspension of breath after full inhalation.
Antaranga Sādhanā	The inward quest of the soul by Prāṇāyāma and Pratyāhāra whereby the mind is brought under control and the senses are emancipated from the thraldom of objects of desire.
Antarātmā	The Supreme Soul residing in the heart of man.
Antarātmā Sādhanā	The innermost quest of the soul by means of Dhāraṇā (concentration), Dhyāna (meditation) and Samādhi.
Anuloma	With the hair, with the grain, regular. In a natural order.
Anumāna	An inference.
Apāna	One of the vital airs which move in the sphere of the lower abdomen and control the function of elimination of urine and faeces.
Aparigraha	Freedom from hoarding or collecting.
Apuṇya	Vice or demerit.
Ardha	Half.
Arjuna	A Pāṇḍava prince, the mighty bowman and hero of the epic Mahābhārata.
Āsana	Posture. The third stage of yoga.

Asmitā	Egotism.
Aṣṭa	Eight.
Aṣṭāṅga Yoga	The eight limbs of Yoga described by Patañjāli.
Aṣṭāvakra	One whose body was crooked in eight places. Name of a sage, who, though born physically deformed, became the spiritual preceptor of King Janaka of Mithilā.
Asteya	Non-stealing.
Aśva	A horse.
Aśvinī-mudrā	The contraction of the anal sphincter muscles. It is so called because it brings to the mind the image of a horse excreting.
Ātmā or *Ātman*	The Supreme Soul or Brahman.
Ātma Ṣaṭkam	A group of six verses written by Śankarāchārya describing the soul in the state of Samadhi.
Ātmīyatā	The feeling of oneness, as a mother's feeling for her children.
Auṁ	Like the Latin word 'Omne', the Sanskrit word 'Auṁ' means 'all' and conveys concepts of 'Omniscience', 'Omnipresence' and 'Omnipotence'.
Avasthā	State or condition of the mind.
Avatāra	Descent, advent or incarnation of God. There are ten avatāras of Viṣṇu: Matsya (the Fish); Kūrma (the Tortoise); Varāha (the Boar); Narasiṁha (the Man-lion); Vāmana (the Dwarf); Paraśurāma; Rāma (hero of the epic Rāmāyaṇa); Krishna (hero of the epic Mahābhārata who related the Bhagavad Gītā); Balarāma and Kalki.
Avidyā	Ignorance.
Avirati	Sensuality.
Āyāma	Length, expansion, extension. It also conveys the idea of restraint, control and stopping.
Baddha	Bound, caught, restrained, firm.
Bahiraṅga Sādhanā	The outward quest of the soul for its Maker. The first three stages of Yoga, namely, Yama, Niyama and Āsana, are the outward quest and keep the seeker in harmony with his fellow men and nature.
Bāhya Kumbhaka	Suspension of breath after full exhalation when the lungs are completely empty.
Baka	A crane, a wading bird.
Bali	Name of a demon king.
Bandha	Bondage or fetter. It means a posture where certain

organs or parts of the body are contracted and controlled.

Bhagavad Gītā — The Song Divine, the sacred dialogues between Krishna and Arjuna. It is one of the source books of Hindu philosophy, containing the essence of the Upanishads.

Bhagavān — Lord; venerable, holy.

Bhairava — Terrible, formidable; one of the forms of Śiva.

Bhakti — Worship, adoration.

Bhakti-mārga — The way or path to realisation through adoration of a personal god.

Bharadvāja — A sage.

Bhastrikā — A bellows used in a furnace. Bhastrikā is a type of prāṇāyāma where air is forcibly drawn in and out as in a blacksmith's bellows.

Bhaya — Fear.

Bhedana — Piercing, breaking through, passing through.

Bheka — A frog.

Bheruṇḍa — Terrible, frightful. It also means a species of bird.

Bhoga — Enjoyment; an object of pleasure.

Bhoktṛ — One who enjoys or experiences.

Bhramara — A large black bee.

Bhramarī — A type of prāṇāyāma where during exhalation a soft humming sound like the murmuring of a bee is made.

Bhrānti-darśana — Erroneous (bhrānti) vision or knowledge (darśana), delusion.

Bhu — Land.

Bhūdāna — The donation of land.

Bhuja — The arm or the shoulder.

Bhuja-pīdā — Pressure on the arm or shoulder.

Bhujaṅga — A serpent, a snake.

Bhūmikatva — Firm ground.

Bīja — Seed or germ.

Bīja-mantra — A mystical syllable with a sacred prayer repeated mentally duringprāṇāyāma, and the seed thus planted in the mind germinates into one-pointedness.

Brahmā — The Supreme Being, the Creator. The first deity of the Hindu Trinity entrusted with the work of creation of the world.

Brahma-raṅdhra — An aperture in the crown of the head through which the soul is said to leave the body on death.

Brahma-vidyā — The knowledge of the Supreme Spirit.

Brahmachārī — A religious student vowed to celibacy and abstinence.

One who is constantly moving (chārin) in Brahman (the Supreme Spirit); one who sees divinity in all.

Brahmacharya A life of celibacy, religious study and self-restraint.

Brahman The Supreme Being, the cause of the universe, the all-pervading spirit of the universe.

Brahmāṇḍa-prāṇa The cosmic breath.

Brahmarsī A Brahmin sage.

Buddhi Intellect, reason, discrimination, judgement.

Chakra Literally, a wheel or circle. Energy (prāṇa) is said to flow in the human body through three main channels (nāḍīs), namely, Suṣumṇā, Piṅgalā and Idā. Suṣumṇa is situated inside the spinal column. Piṅgalā and Idā start respectively from the right and left nostrils, move up to the crown of the head and course downwards to the base of the spine. These two nāḍīs intersect with each other and also the Suṣumṇā. These junctions of the nāḍīs are known as chakras or the fly-wheels which regulate the body mechanism. The important chakras are: (a) Mūlādhāra (mūla= root, source; ādhāra=support, vital part) situated in the pelvis above the anus; (b) Svādhiṣṭhāna (sva= vital force, soul; adhiṣṭhāna=seat or abode) situated above the organs of generation; (c) Maṇipūraka (maṇipūra=navel) situated in the navel; (d) Manas (mind) and (e) Sūrya (the Sun), which are situated in the region between the navel and the heart; (f) Anāhata (=unbeaten) situated in the cardiac area; (g) Viśuddha (=pure) situated in the pharyngeal region; (h) Ājñā (=command) situated between the eyebrows; (i) Sahasrāra (=thousand), which is called the thousand-petalled lotus in the cerebral cavity; and (j) Lalāṭa (=forehead) which is at the top of the forehead.

Chakra-bandha The binding or sealing posture where all the chakras are exercised.

Chandra The moon.

Chatur The number four.

Chidambaram A place of pilgrimage in South India. (Chit=consciousness, ambara=atmosphere or dress.) A name of God, who covers all with His consciousness.

Chitta The mind in its total or collective sense, being composed of three categories: (a) Mind, having the faculty

of attention, selection and rejection; (b) Reason, the decisive state which determines the distinction between things and (c) Ego, the I-maker.

Chitta-vikṣepa Distraction, confusion, perplexity.

Chitta-vṛtti Fluctuations of the mind. A course of behaviour, mode of being, condition or mental state.

Dadhīcha A celebrated sage, who donated his bones to the gods. From these bones was fashioned the thunderbolt, with which Indra, the king of the gods, slew the demon Vṛtra.

Daityа A son of Diti. A demon.

Dakṣa A celebrated prajāpati, a lord of created beings.

Dakṣiṇa The right side.

Damanī A layer within a nāḍī or channel for the passage of energy.

Dānava A demon.

Daṇḍa A staff.

Daṇḍakā The forest region in the Deccan between the rivers Narmāda and Godāvarī.

Daurmanasya Despair, dejection.

Deva A god.

Devadatta One of the vital airs which provides for the intake of extra oxygen in a tired body by causing a yawn.

Dhanu A bow.

Dhāraṇā Concentration or complete attention. The sixth stage of Yoga mentioned by Patañjāli.

Dhasañjaya One of the vital airs which remains in the body even after death, and sometimes bloats up a corpse.

Dhenu A cow.

Dhṛ To hold, to support, to maintain.

Dhyāna Meditation. The seventh stage of Yoga mentioned by Patañjāli.

Diti The mother of the demons called Daityas.

Droṇa The preceptor of the Pāṇḍava and Kaurava princes in the arts of war, especially archery. He was the son of the sage Bharadvāja.

Duḥkha Pain, sorrow, grief.

Durvāsā A very irascible sage.

Dveṣa Hate, dislike, repugnance.

Dwi Two, both.

Dwi-hasta Two hands.

Dwi-pāda Two feet or legs.

Eka	One, single, alone, only.
Eka-pāda	One leg.
Eka-tattvābhyāsa	The study of the single element, the Supreme Spirit that pervades the innermost self of all beings.
Ekāgra	(Eka=one; agra=foremost.) Fixed on one object or point only; closely attentive, where the mental faculties are all focussed on a single object.
Ekāgratā	One-pointedness.
Gālava	A sage.
Gaṇa	A troop of demigods, who were Śiva's attendants.
Gaṇḍa	The cheek, the whole side of the face including the temple.
Gaṇḍa-bheruṇḍa	A species of bird.
Gaṅgā	The river Ganges, the most sacred river in India.
Garbha-piṇḍa	Embryo in the womb.
Garuḍa	An eagle. Name of the king of birds. Garuḍa is represented as a vehicle of Viṣṇu and as having a white face, an aquiline beak, red wings and a golden body.
Gheraṇḍa	A sage, the author of Gheraṇḍa-Saṁhitā, a classical work on Haṭha-yoga.
Gheraṇḍa-Saṁhita	*See* above.
Go	A cow.
Gomukha	Face resembling a cow. It is also a kind of musical instrument, narrow at one end and broad at the other like the face of a cow.
Gorakṣa	A cowherd. Name of a famous Yogi.
Gotra	A family, race, lineage.
Gu	First syllable in the word 'Guru', meaning darkness.
Gulma	The spleen.
Guṇa	A quality, an ingredient or constituent of nature.
Guṇātīta	One who is freed from and gone beyond or crossed the three guṇas of Sattva, Rajas and Tamas.
Guru	Spiritual preceptor, one who illumines the darkness of spiritual doubt.
Ha	First syllable of the word 'Haṭha', which is composed of the syllables 'ha' meaning the sun, and 'ṭha' meaning the moon. The object of Haṭha-yoga is to balance the flow of solar and lunar energy in the human system.

Hala	A plough.
Haṁsa	A swan.
'Haṁsaḥ'	'I am He, the Universal Spirit', the unconscious repetitive prayer that goes on with each exhalation within every living creature throughout life.
Hanumān	A powerful monkey chief of extraordinary strength and prowess, whose exploits are celebrated in the epic Rāmāyaṇa. He was the son of Aṅjana and Vāyu, the god of wind.
Hasta	The hand.
Haṭha	Force. The word 'haṭha' is used adverbially in the sense of 'forcibly' or 'against one's will'. Haṭha-yoga is so called because it prescribes rigorous discipline, in order to find union with the Supreme.
Haṭha-vidyā	The science of Haṭha-yoga.
Haṭha-yoga	The way towards realisation through rigorous discipline.
Haṭhā-yoga-pradīpikā	A celebrated textbook on Haṭha-yoga written by Svātmārāma.
Himālaya	The abode of ice and snow. Name of the mountain ranges on the northern borders of India.
Hiṁsā	Violence, killing.
Hiraṇya-kaśipu	A celebrated demon king, slain by Viṣṇu to save Prahlāda, his devotee.
Iḍā	A nāḍī, a channel of energy starting from the left nostril, then moving to the crown of the head and thence descending to the base of the spine. In its course it conveys lunar energy and so is called chandra nāḍī (channel of the lunar energy).
Indra	Chief of the gods. The god of thunder, lightning and rain.
Indriya	An organ of sense.
Indriya-jaya	Conquest, restraint or mastery of the senses by controlling desires.
Īśvara	The Supreme Being, God.
Īśvara-praṇidhāna	Dedication to the Lord of one's actions and one's will.
Jāgrata-avasthā	The complete awareness of the state of the mind.
Jālandhara-bandha	Jālandhara is a posture where the neck and throat are contracted and the chin is rested in the notch between the collar-bones at the top of the breast-bone.

Jamunā A tributary of the Ganges.
Janaka A famous philosopher king of Videha or Mithilā.
Jānu The knee.
Japa A repetitive prayer.
Jaṭhara The abdomen, stomach.
Jaṭhara-parivartana An āsana, in which the abdomen is made to move to and fro.
Jaya Conquest, victory. It also means control, mastery.
Jīva A living being, a creature.
Jīvana Life.
Jīvana-mukta A person who is emancipated during his lifetime by true knowledge of the Supreme Spirit.
Jīvana-mukti The emancipated state.
Jīvātmā The individual or personal soul.
Jñāna Sacred knowledge derived from meditation on the higher truths of religion and philosophy, which teaches a man how to understand his own nature.
Jñāna-mārga The path of knowledge by which man finds realisation.
Jñāna-mudrā The gesture of the hand where the tip of the index finger is brought in contact with the tip of the thumb, while the remaining three fingers are kept extended. The gesture is a symbol of knowledge (jñāna). The index finger is the symbol of the individual soul, the thumb signifies the Supreme Universal Soul, and the union of these two symbolises true knowledge.
Jñānendriya Hearing, touch, sight, taste and smell.

Kagola or *Kahola* The father of the sage Aṣṭāvakra.
Kailāsa A mountain peak in the Himālayas, considered as the abode of Śiva.
Kaivalya Final emancipation.
Kaivalya-pāda The fourth and last part of Patañjāli's Yoga Sūtra, dealing with Absolution.
Kāla-Bhairava A name of Śiva.
Kālidāsa The most renowned dramatist and poet in Sanskrit literature, whose work 'Śakuntalā' is universally respected.
Kāma Desire, lust. Name of the god of Passion.
Kāma-dhenu The heavenly cow yielding all desires.
Kāma-rūpa The seat of the genitals, so named after Kāma, the god of passion.
Kanda A bulbous root, a knot. The kanda is of a round shape of about four inches situated twelve inches above the

anus and near the navel, where the three main nāḍīs – Suṣumṇā, Iḍā and Piṅgalā – unite and separate. It is covered as if with a soft white piece of cloth.

Kanyākubja — An ancient city and country situated on a tributary of the Ganges, now called Kanoja.

Kapālabhāti — Kapāla = skull; bhāti = light, lustre. A process of clearing the sinuses.

Kapila — A sage, the founder of the Sānkhya system, one of the six orthodox systems of Hindu philosophy.

Kapiṅjala — The chātaka bird, which is supposed to drink only raindrops.

Kapota — A dove, pigeon.

Karma — Action.

Karma-mārga — The way of an active man towards realisation through action.

Karma-yoga — The achievement of union with the Supreme Universal Soul through action.

Karmendriya — Organs of excretion, generation, hands, feet and speech.

Karṇa — The ear, also one of the heroes in the Mahābhārata.

Karṇa-pīdā — Pressure around the ear.

Kārtikeya — The god of war, also known as Kumāra, Ṣaṇmukha and Skanda. He is a son of Siva and is so called because he was reared by the Kṛttikās, the Pleiades, each six of whom fed him at her breast (Ṣaṇ = six; mukha = mouth or face). The story of his birth is told by Kalidasa in his epic 'Kumāra-saṁbhava'.

Karuṇā — Compassion, pity, tenderness. It also implies devoted action to alleviate the suffering of the afflicted ones.

Kaśyapa — A sage, husband of Aditi and Diti. He is one of the lords or progenitors of living beings.

Kaṭhopaniṣad — One of the principal Upanishads in verse and in the form of a dialogue between the seeker Nachiketā and Yama, the god of Death.

Kauṇḍinya — A sage.

Kauravas — Descendants of Kuru, who fought the fratricidal Mahābhārata war with their cousins the Pāṇḍavas.

Kāyā — The body.

Kāyika — Relating to the body.

Kevala — Whole, entire, absolute, perfect, pure.

Kevala Kumbhaka — When the practices of Kumbhaka (respiratory processes) become so perfect that they are instinctive, they are known as Kevala Kumbhaka.

Kleśa — Pain, anguish, suffering.

Koṇa — An eagle.

Krauncha — A bird like a heron, the name of a mountain.

Krishṇa — The most celebrated hero in Hindu mythology. The eighth incarnation of Viṣṇu.

Kriyā — An expiatory rite, a cleaning process.

Kṛkara — Name of one of the subsidiary vital airs, whose function is to prevent substances going up the nasal passages and throat by bringing on sneezes and coughing.

Kṛta — Name of the first of the four ages of the world of men.

Kṣatriya — A member of the warrior class.

Kṣipta — Distracted, neglected.

Kukkuṭa — A cock.

Kumāra-saṁbhava — *See* Kārtikeya.

Kumbha — A water pot, a pitcher, a chalice.

Kumbhaka — Kumbhaka is the interval of time or retention of breath after full inhalation or after full exhalation.

Kuṇḍalinī — The Kuṇḍalinī (kuṇḍala=the coil of a rope; Kuṇḍalinī=a coiled female serpent) is the divine cosmic energy. This force or energy is symbolised as a coiled and sleeping serpent lying dormant in the lowest nerve centre at the base of the spinal column, the Mūlādhāra-chakra. This latent energy has to be aroused and made to ascend the main spinal channel, the Suṣumṇa piercing the chakras right up to the Sahasrāra, the thousand-petalled lotus in the head. Then the Yogi is in union with the Supreme Universal Soul.

Kūrma — A tortoise. It is also the name of one of the subsidiary vital airs whose function is to control the movements of the eyelids to prevent foreign matter or too bright a light going into the eyes.

Laghu — Little, small. It also means handsome.

Lakṣmana — A brother of Rāma, hero of the epic Rāmāyaṇa.

Lakṣmī — The goddess of beauty and fortune, consort of Viṣṇu.

Lalāṭa — The forehead. It is also the name of a chakra.

Lankā — The kingdom of the demon king Rāvaṇa. It is identified with Ceylon.

Lauliki	The same as nauli, q.v.
Laya	Dissolution; absorption of the mind, devotion.
Laya-yoga	The achievement of union with the Supreme Universal Soul through adoration or devotion.
Lobha	Greed.
Lola	Tremulous, dangling, moving to and fro like a swing or a pendulum.
Loma	Hair.
Madhyama	Middling, average, mediocre.
Mahā	Great, mighty, powerful, lofty, noble.
Mahābhārata	The celebrated epic composed by Vyāsa. It includes the Bhagavad Gītā.
Maharṣi	A great sage.
Maitri	Friendliness coupled with a feeling of oneness.
Makara	A crocodile.
Mālā	A garland, wreath.
Man	To think.
Manas	The individual mind having the power and faculty of attention, selection and rejection. The ruler of the senses.
Manas-chakra	Nervous plexus situated between the navel and the heart.
Mānasika	Of the mind, mental.
Maṇḍala	A circle. It also means a collection, a division of the Ṛgveda.
Mandara	A mountain used by the gods and demons as a churning stick when they churned the cosmic ocean for nectar.
Maṇḍūka	A frog.
Maṇipūraka-chakra	The nervous plexus situated in the region of the navel.
Manomanī	The state of samādhi.
Mantra	A sacred thought or a prayer.
Manu	Name of the father of the human race.
Mārga	A way, road, path.
Marīchi	Name of one of the sons of Brahmā. He was a sage and the father of Kaśyapa, q.v.
Matsya	A fish.
Matsyendra	One of the founders of Haṭha-yoga.
Mayūra	A peacock.
Menakā	A nymph, the mother of Śakuntalā.
Meru-daṇḍa	The spinal column.

Mithilā — The capital of the kingdom of Videha, ruled by King Janaka.

Moha — Delusion, infatuation.

Mokṣa — Liberation, final emancipation of the soul from recurring births.

Mṛdu — Soft, gentle, mild.

Mṛta — Dead, a corpse.

Mūdha — Perplexed, confounded, foolish, dull, stupid.

Muditā — Joy, delight.

Mudrā — A seal: a sealing posture.

Mukha — Face.

Mukta — Liberated.

Mukti — Release, liberation, final absolution of the soul from the chain of birth and death.

Mūla — The root, base.

Mūla-bandha — A posture where the body from the anus to the navel is contracted and lifted up and towards the spine.

Mūlādhāra-chakra — Nervous plexus situated in the pelvis above the anus at the base or root of the spine, the main support of the body.

Muṇḍakopaniṣad — Name of an Upanishad dealing with the mystic syllable Aum̐.

Nachiketā — Name of the seeker and one of the principal characters in the Kaṭhopaniṣad. His father Vājaśravas wanted to give away all his possessions so as to acquire religious merit. Nachiketā felt puzzled and asked his father again and again: 'To whom will you give me?' His father said: 'I give you to Yama (the god of Death).' Nachiketā went down to the realm of Death and obtained three boons, the last of which was the knowledge of the secret of life after death. Yama tried to divert Nachiketā from obtaining his wish by offering the greatest earthly pleasures, but Nachiketā was not swayed from his purpose and ultimately Yama gave him the knowledge desired.

Nāda — Inner mystical sound.

Nāḍī — A tubular organ of the subtle body through which energy flows. It consists of three layers, one inside the other, like insulation of an electric wire. The innermost layer is called the 'sirā' and the middle layer 'damanī'. The entire organ as well as the outer layer is called 'nāḍī'.

Nāḍī-śodhana	The purification or cleansing of the nāḍīs.
Nāga	One of the subsidiary vital airs which relieves abdominal pressure, causing one to belch.
Nakra	A crocodile.
Nara	A man.
Narasiṁha	The man-lion, Visnu in his fourth incarnation.
Naṭarāja	A name of Śiva, the lord of the dancers.
Nauli	A process in which the abdominal muscles and organs are made to move vertically and laterally in a surging motion.
Nāva	A boat.
'Neti Neti'	'Not this! Not this!' The experience of samādhi is not like other experiences, which can be described in words. About it the sages say 'It is not this! It is not this!', for speech fails to convey the feeling of joy and peace experienced in that state.
Nirālamba	Without support.
Niranjana	Unstained; free from falsehood, pure.
Nirodha	Restraint, suppression.
Niruddha	Restrained, checked, controlled.
Niyama	Self-purification by discipline. The second stage of yoga mentioned by Patañjāli.
Pāda	The foot or leg; also part of a book.
Pādāṅguṣṭha	The big toe.
Padma	A lotus.
Padmanābha	A name of Viṣṇu who is said to have a lotus growing out of his navel. From this lotus came forth Brahmā.
Pāṇḍava	Name of any of the five sons of Pāṇḍu, the heroes in the Mahābhārata.
Paramapāda	The highest step, the supreme state, final beatitude.
Paramātmā	The Supreme Spirit.
Parāṅgmukhi	Facing inwards.
Paraśurāma	The sixth incarnation of Viṣṇu, who destroyed the Kṣatriya or warrior class with his battle-axe (paraśu).
Parigha	A beam or a bar used for bolting or shutting a gate.
Parigraha	Hoarding.
Paripūrṇa	Entire, complete.
Parivartana	Turning round, revolving.
Parivṛtta	Turned around, revolved.
Parivṛttaika-pāda	With one leg turned around.
Pārśva	The side, flank; lateral.

Parśvaika-pāda	With one leg turned sideways.
Parvata	A mountain.
Pārvati	A goddess, consort of Śiva, daughter of Himālaya.
Paryanka	A bed, a couch.
Pāśa	A fetter, trap, noose.
Paśchima	West; the back side of the body.
Paśchimottana	Intense stretch of the back side of the body from the nape to the heels.
Pātāla	The nether region.
Patañjāli	The propounder of Yoga philosophy. He was the author of the Yoga Sūtras, the Mahābhāśya (a classical treatise on grammar) and a treatise on medicine.
Pīḍā	Pain, suffering, pressure.
Pincha	The chin, a feather.
Piṇḍa	The foetus or embryo, the body.
Piṇḍa-prāṇa	The individual breath, as contrasted with the cosmic or Universal breath.
Piṅgalā	A nāḍī or channel of energy, starting from the right nostril, then moving to the crown of the head and thence downwards to the base of the spine. As the solar energy flows through it it is also called the sūrya-nāḍī. Piṅgalā means tawny or reddish.
Plīhā	The spleen.
Prahlāda	A great devotee of Viṣṇu. He was the son of the demon king Hiraṇya-kaśipu.
Prajāpati	The lord of created beings.
Prajñā	Intelligence, wisdom.
Prajñātmā	The intelligential self.
Prakṛti	Nature, the original source of the material world, consisting of three qualities, sattva, rajas and tamas.
Pramāda	Indifference, insensibility.
Pramāṇa	A standard or ideal; authority.
Prāṇa	Breath, respiration, life, vitality, wind, energy, strength. It also connotes the soul.
Prāṇa-vāyu	The vital air which pervades the entire human body. It moves in the region of the chest.
Pranava	Another word for the sacred syllable Auṁ.
Prāṇāyāma	Rhythmic control of breath. The fourth stage of yoga.
Praṇidhāna	Dedication.
Prasārita	Spread out, stretched out.
Praśvāsa	Expiration.

Pratiloma	Against the hair, against the grain.
Pratyāhāra	Withdrawal and emancipation of the mind from the domination of the senses and sensual objects. The fifth stage of yoga.
Pratyakṣa	Direct evidence.
Puṇya	Virtue, merit, righteous, just, good.
Puraka	Inhalation.
Pūrṇatā	Fullness, perfection.
Pūrva	East. The front of the body.
Pūrvottana	The intense stretch of the front side of the body.
Rāga	Love, passion, anger.
Rāja	A king, a ruler.
Rāja-kapota	King pigeon.
Rāja-mārga	The royal road to self-realisation through the control of the mind.
Rāja-yoga	The achievement of union with the Supreme Universal Spirit, by becoming the ruler of one's own mind by defeating its enemies. The chief of these enemies are: Kāma (passion or lust), krodha (anger or wrath), lobha (greed), moha (delusion), mada (pride) and matsara (jealousy or envy). The eight-fold yoga of Patañjāli shows the royal road (rāja-mārga) for achieving this objective.
Rāja-yogī	One who has complete mastery over his mind and self. One who has conquered himself.
Rājarṣi	A royal sage, a philosopher king.
Rajas	Mobility or activity; one of the three qualities or constituents of everything in nature.
Rajo-guṇa	The quality of mobility or activity.
Rāma	The hero of the epic Rāmāyaṇa. The seventh incarnation of Viṣṇu.
Rāmāyaṇa	Name of the celebrated epic about the exploits of Rāma. It is the work of the sage Vālmīki.
Rāvaṇa	Name of the demon king of Lankā who abducted Sītā, wife of Rāma.
Rechaka	Exhalation, emptying of the lungs.
Retus	Semen.
Ṛṣi	An inspired sage.
Ṛu	The second syllable in the word 'guru', meaning light.
Ruchika	A sage.

Sādhaka	A seeker, an aspirant.
Sādhanā	Practice, quest.
Sādhana-pāda	The second part of Patañjāli's Yoga Sūtras, dealing with the means.
Sahajāvasthā	The natural state of the soul in samādhi.
Sahasrāra-chakra	The thousand-petalled lotus in the cerebral cavity.
Sahita Kumbhaka	'Sahita' means 'accompanied' or 'attended by' or 'together with'. An intentional suspension of breath.
Śakuṅtalā	The daughter of the sage Viśvāmitra and the nymph Menakā. She is the heroine of Kālidāsa's play bearing her name.
Śalabha	A locust.
Sālamba	With support.
Sama	Same, equal, even, upright.
Sama-sthiti	Standing still and straight.
Sama-vṛtti	Of equal movement in inhalation, exhalation and suspension of breath in Prāṇāyāma.
Samādhi	A state in which the aspirant is one with the object of his meditation, the Supreme Spirit pervading the universe, where there is a feeling of unutterable joy and peace.
Samādhi-pāda	The first part of Patañjāli's Yoga Sūtras, dealing with the state of samādhi.
Samāna	One of the vital airs, whose function is to aid digestion.
Sambhava	Birth.
Śāmbhava or *Śāmbhavī*	Belonging to Śambhu or Śiva.
Śambhu	A name of Siva.
Saṁśaya	Doubt.
Saṁskāra	Mental impression of the past.
Ṣan	Six.
Sanjīvani	A kind of elixir or medicinal plant, said to restore the dead to life.
Śankarāchārya	A celebrated teacher of the doctrine of Advaita.
Ṣaṇmukha	Literally with six mouths. Another name of Kārtikeya, the god of war.
Ṣaṇmukhī-mudrā	A sealing posture where the apertures in the head are closed and the mind is directed inwards to train it for meditation.
Santoṣa	Contentment.
Saraswatī	A tributary of the Ganges. Also the name of the

goddess of speech and learning, the consort of Brahmā.

Sarva — All, whole.

Sarvāṅga — The whole body.

Satī — The daughter of Dakṣa Prajāpati. She immolated herself for the insult offered to her husband Śiva by her father, and was then reborn as the daughter of Himālaya and again won Śiva as her husband. She was the mother of Kārtikeya (the god of war) and of Ganapati (the god of learning, wisdom and good luck).

Sattva — The illuminating, pure and good quality of everything in nature.

Sattva-guṇa — The quality of goodness and purity.

Śaucha — Purity, cleanliness.

Śava — A corpse, a dead body.

Śayana — A bed, a couch.

Śeṣa — A celebrated serpent, said to have a thousand heads. Śeṣa is represented as the couch of Viṣṇu, floating on the cosmic ocean, or as supporting the world on his hoods. Other names of Śeṣa are Ananta and Vāsuki.

Setu — A bridge.

Setu-bandha — The construction of a bridge. Name of an āsana in which the body is arched.

Siddha — A sage, seer or prophet; also a semi-divine being of great purity and holiness.

Siṁha — A lion.

Sirā — A tubular organ in the body. *See* nāḍī.

Śirṣa — The head.

Śiṣya — A pupil, a disciple.

Sītā — Name of the wife of Rāma, the heroine of the epic Rāmāyaṇa.

Śita — Cool, cold.

Sitakārī and *Śitalī* — Types of prāṇāyāma which cool the system.

Śiva — Name of the third god of the Hindu Trinity, who is entrusted with the task of destruction.

Śiva-saṁhitā — A classical textbook on Haṭha-yoga.

Skanda — A name of Kārtikeya, the god of war.

Smṛti — Memory, a code of law.

Śodhana — Purification, cleansing.

'Soham' — 'He am I'; the unconscious repetitive prayer that

	goes on with every inhalation within every living creature throughout life.
Śoka	Anguish, distress, grief, sorrow.
Śraddhā	Faith, trust.
Steya	Theft, robbery.
Sthita-prajñā	One whose wisdom is firmly established and does not waver; one who is unmoved by the dualities of pleasure and pain, gain and loss, joy and sorrow, victory and defeat.
Sthiti	Stability.
Styāna	Languor, sloth.
Sugrīva	A monkey chief who assisted Rāma in his search and recovery of Sītā, who had been abducted by the demon king Rāvaṇa.
Sukha	Happiness, delight, joy, pleasure, comfort.
Sumanasya	Benevolence.
Śunyāśūnya	The mind is in a state of void (Śūnya) and yet a state that is not void (aśūnya).
Supta	Sleeping.
Sūrya	The sun.
Sūrya-bhedana	Piercing or passing through (bhedana) the sun. Here the inhalation is done through the right nostril, from where the Piṅgalā-nāḍī or Sūrya-nāḍī starts. Exhalation is done through the left nostril, from where the Iḍā-nāḍī or Chandra-nāḍī starts.
Sūrya-chakra	Nervous plexus situated between the navel and the heart.
Sūrya-nāḍī	The nāḍī of the sun. Another name for Piṅgalā-nāḍī.
Suṣumṇā	The main channel situated inside the spinal column.
Suṣupti-avasthā	The state of the mind in dreamless sleep.
Sva	One's own, innate, vital force, soul, self.
Svādhiṣṭhāna-chakra	The nervous plexus situated above the organs of generation.
Svādhyāya	Education of the self by study of divine literature.
Śvāna	A dog.
Svapnāvasthā	The state of the mind in a dream.
Śvāsa	Inspiration.
Śvāsa-praśvāsa	Heaving and sighing.
Svātmārāma	The author of the Haṭha-yoga-pradīpikā, a classical textbook on Haṭha-yoga.
Tāḍa	A mountain.

Tamas	Darkness or ignorance, one of the three qualities or constituents of everything in nature.
Tamo-guṇa	The quality of darkness or ignorance.
Tan or *Tān*	To stretch, extend, lengthen out.
Tāṇḍava	The violent dance of Śiva, symbolising the destruction of the universe.
Tap	To burn, to blaze, to shine, to suffer pain, to be consumed by heat.
Tapas	A burning effort which involves purification, self-discipline and austerity.
Tāraka	A demon slain by Kārtikeya, the god of war.
'*Tat twam asi*'	'That thou art.' The realisation of the real nature of man as being part of the divine, and of the divinity within himself, which liberates the human spirit from the confines of his body, mind, intellect and ego.
Tattva	The true or first principle, an element or primary substance. The real nature of the human soul or the material world and the Supreme Universal Spirit pervading the universe.
Tattva-jñāna	The knowledge of the true principle.
Tejas	Lustre, brilliance, majesty.
Ṭha	The second syllable of the word 'haṭha'. The first syllable 'ha' stands for the sun, while the second syllable 'ṭha' stands for the moon. The union of these two is Haṭha-yoga.
Tirieng	Horizontal, oblique, transverse, reverse and upside down.
Tittibha	A firefly.
Tola	A balance.
Tri	Three.
Triaṅga	Three limbs.
Trikoṇa	A triangle.
Trivikrama	Viṣṇu is his fifth incarnation, who with his three steps (krama) filled the earth, heaven and hell.
Tṛṣṇā	Thirst, longing, desire.
Turīyāvasthā	The fourth state of the soul, combining yet transcending the other three states of waking, dreaming and sleeping state—the state of samādhi.
Ubhaya	Both.
Udāna	One of the vital airs which pervades the human body, filling it with vital energy. It dwells in the thoracic cavity and controls the intake of air and food.

Uḍḍīyāna — A fetter or bondage. Here the diaphragm is lifted high up the thorax and the abdominal organs are pulled back towards the spine. Through the Uḍḍīyāna-bandha the great bird Prāṇa (life) is forced to fly up through the Suṣumṇā-nāḍī.

Ugra — Formidable, powerful, noble.

Ujjāyi — A type of prāṇāyāma in which the lungs are fully expanded and the chest is puffed out.

Ullola — A large wave or surge.

Umā — Another name of the goddess Pārvati, consort of Śiva.

Unmanī — The state of samādhi.

Upaniṣad — The word is derived from the prefixes 'upa' (near) and 'ni' (down), added to the root 'sad' (to sit). It means sitting down near a Guru to receive spiritual instruction. The Upanishads are the philosophical portion of the Vedas, the most ancient sacred literature of the Hindus, dealing with the nature of man and the universe and the union of the individual soul or self with the Universal Soul.

Upaviṣṭha — Seated.

Upekṣā — Disregard. Upekṣā is not only a feeling of disdain for a person who has fallen into vice or a feeling of indifference or superiority towards him. It is also a self-examination to find out how one would have behaved in like circumstances and also how far he is responsible for the state of the fallen one and to help him on to the right path.

Ūrdhva — Raised, elevated, tending upwards.

Ūrdhva-mukha — Face upwards.

Ūrdhva-retus — (Ūrdhva = upwards, retus = semen.) One who lives in perpetual celibacy and abstains from sexual intercourse. One who has sublimated sexual desire.

Uṣṭra — A camel.

Ut — A particle, denoting intensity.

Utkaṭa — Powerful, fierce.

Uttāna — An intense stretch.

Utthita — Raised up, extended, stretched.

Vāchā — Speech.

Vāchika — Relating to speech, oral.

Vaikuṇṭha — An epithet of Viṣṇu.

Vairāgya — Absence of worldly desires.

Vajra	A thunderbolt, the weapon of Indra.
Vakra	Crooked.
Vālakhilya	A class of divine personages of the size of a thumb, produced from the Creator's body, and said to precede the chariot of the sun.
Valli	A chapter of the Upanishads.
Vāma	The left side.
Vāmadeva	A sage.
Vāmana	Viṣṇu in his fifth incarnation, when he was born as a dwarf to humble the demon king Bali.
Vaṇḍi	A court scholar at the court of king Janaka.
Vāsanā	Desire, inclination, longing.
Vasanta	The season of spring personified as a deity. A companion of Kāma, the god of love and passion.
Vasiṣṭha	A celebrated sage, author of several Vedic hymns.
Vāsuki	Another name of Śeṣa, q.v.
Vātāyana	A horse.
Vāyu	The wind, the vital airs.
Veda	The sacred scriptures of the Hindus, revealed by the Supreme Being.
Vibhūti	Might, power, greatness.
Vibhūti-pāda	The third part of the Yoga Sūtras of Patañjāli, dealing with the powers that the yogi comes across in his quest.
Vidyā	Knowledge, learning, lore, science.
Vikalpa	Fancy, resting merely on verbal expression, without any factual basis.
Vikṣepa	Distraction, confusion, perplexity.
Vikṣipta	Agitated state of the mind.
Viloma	Against the hair, against the order of things. The particle 'vi' denotes negation or privation.
Viparīta	Inverted, reversed.
Viparyaya	A mistaken view, which is later observed to be such, after study.
Vīra	A hero, brave.
Vīrabhadra	A powerful hero created out of Śiva's matted hair.
Virancha or *Viranchi*	A name of Brahmā.
	A demon prince, who was the son of Prahlāda and the father of Bali.
	Vigour, strength, virility, enthusiasm.
	Uneven or vehement movement while breathing.

Viṣṇu — The second deity of the Hindu trinity, entrusted with the preservation of the world.

Viśuddha-chakra — The nervous plexus in the pharyngeal region.

Viśvāmitra — A celebrated sage.

Vitasti — A span.

Vṛkṣa — A tree.

Vṛśchika — A scorpion.

Vṛt — To turn, to revolve, to roll on.

Vṛtti — A course of action, behaviour, mode of being, condition or mental state.

Vyādhi — Sickness, disease, illness.

Vyāna — One of the vital airs, which pervades the entire body and circulates the energy derived from food and breathing all over the body.

Yama — The god of death. Yama is also the first of the eight limbs or means of attaining yoga. Yamas are universal moral commandments or ethical disciplines transcending creeds, countries, age and time. The five mentioned by Patañjāli are: non-violence, truth, non-stealing, continence and non-coveting.

Yoga — Union, communion. The word 'yoga' is derived from the root 'yuj' meaning to join, to yoke, to concentrate one's attention on. It is the union of our will to the will of God, a poise of the soul which enables one to look evenly at life in all its aspects. The chief aim of yoga is to teach the means by which the human soul may be completely united with the Supreme Spirit pervading the universe and thus secure absolution.

Yoga-mudrā — A posture.

Yoga-nidrā — The sleep of yoga, where the body is at rest as if in sleep while the mind remains fully conscious, though all its movements are stilled. Yoga-nidrā is also the name of an āsana.

Yoga Sūtra — The classical work on yoga by Patañjāli. It consists of 185 terse aphorisms on yoga and it is divided into four parts dealing respectively with samādhi, the means by which yoga is attained, the powers the seeker comes across in his quest and the state of absolution.

Yogi or *Yogin* — One who follows the path of yoga.

Yoni-mudrā — Yoni means the womb or source and mudrā a seal.

	Yoni-mudrā is a sealing posture where the apertures of the head are closed and the aspirant's senses are directed within to enable him to find out the source of his being.
Yuga	An age.
Yuj	To join, to yoke, to use, to concentrate one's attention on.
Yukta	One who has attained communion with the Supreme Spirit pervading the universe.

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—Yehudi Menuhin

B.K.S. Iyengar, for whom hundreds of Iyengar Institutes all over the world are named, heads his own institute in India.

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B. K. S. IYENGAR

Light on Prãnãyãma

The Yogic Art of Breathing

Introduction by Yehudi Menuhin

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Part One

Section I
The Theory of Prāṇāyāma

Chapter 1

What is Yoga?

1. Nobody knows the timeless, primeval absolute One, nor when the world came into existence. God and nature existed before man appeared, but as man developed he cultivated himself and began to realise his own potential. Through this came civilisation. Words were evolved with this, concepts of God (Puruṣa) and nature (prakṛti), religion (dharma) and Yoga developed.

2. Since it is so difficult to define these concepts, each man has to interpret them according to his understanding. When man was caught in the web of worldly joys, he found himself separated from God and nature. He became a prey to the polarities of pleasure and pain, good and evil, love and hatred, the permanent and the transient.

3. Caught in these opposites, man felt the need of a personal divinity (Puruṣa), who was supreme, unaffected by afflictions, untouched by actions and reactions, and free from the experience of joy and sorrow.

4. This led man to seek the highest ideal embodied in the perfect Puruṣa or God. Thus the Eternal Being, whom he called Īśvara, the Lord, the guru of all gurus, became the focus of his attention, and of his concentration and meditation. In this fundamental quest of reaching Him, man devised a code of conduct whereby he could live in peace and harmony with nature, his fellow beings and himself.

5. He learnt to distinguish between good and evil, virtue and vice, and what was moral and immoral. Then arose a comprehensive concept of right action (dharma) or the science of duty. Dr S. Radhakrishnan wrote that '*it is Dharma which upholds, sustains, supports*' and guides mankind to live a higher life irrespective of race, caste, class or faith.

6. Man realised that he should keep his body healthy, strong and clean in order to follow Dharma and to experience the divinity within himself. Indian seers in their search for light distilled the essence of the Vēdas in the Upaniṣads and Darśanas (mirrors of spiritual perception). The Darśanas or schools are: sāṃkhya, yoga, nyāya, vaiśeṣika, pūrva mīmāṁsa and uttara mīmāṁsa.

7. *Sāṃkhya* says that all creation takes place as a product of the twenty-five essential elements (tattvas) but does not recognise the Creator (Īśvara). Yoga recognises the Creator. *Nyāya* stresses logic and is primarily concerned with the laws of thought, relying on reason and analogy. It accepts God as the result of inference. *Vaiśeṣika* stresses notions such as space, time, cause and matter, and is supplementary to nyāya. It, too, endorses the Nyāya view of God. *Mīmāṁsa* is dependent on the Vēdas and has two schools – pūrva mīmāṁsa, which deals with the general concept of the Deity but stresses the importance of action (karma) and rituals; and uttara mīmāṁsa, which accepts God on the basis of the Vēdas, but lays special stress on spiritual knowledge (jñāna).

8. *Yoga* is the union of the individual self (jīvātma) with the Universal Self (Paramātma). The sāṁkhya philosophy is theoretical while Yoga is practical. Sāṁkhya and Yoga combined give a dynamic exposition of the system of thought and life. Knowledge without action, and action without knowledge do not help man. They must be intermingled. So sāṁkhya and Yoga go together.

9. According to Yoga, Yājnavalkya Smṛti, the Creator (Brahmā) as Hiraṇyagarbha (the Golden Foetus) was the original propounder of the Yoga system for the health of the body, control of the mind and attainment of peace. The system was first collated and written down by Patanjali in his *Yoga Sūtras* or aphorisms. These are directive rather than discursive, revealing the means and the end. When all the eight disciplines of Yoga are combined and practised, the yogi experiences oneness with the Creator and loses his identity of body, mind and self. This is the Yoga of integration (saṁyama).

10. The *Yoga Sūtras* consist of 195 aphorisms divided into four chapters. The first deals with the theory of Yoga. It is aimed at those who have already attained a poised mind and lays down what they should do to maintain their poise. The second chapter on the art of Yoga initiates the beginner into his practices. The third is concerned with internal discipline and the powers (siddhis) he gains. The fourth and the last chapter deals with emancipation or freedom from the shackles of this world.

11. The word 'Yoga' is derived from the Sanskrit root 'yuj' which means to bind, join, attach and yoke, to direct and concentrate the attention in order to use it for meditation. Yoga, therefore, is the art which brings an incoherent and scattered mind to a reflective and coherent state. It is the communion of the human soul with Divinity.

12. In nature's heritage to man are the three characteristics or qualities (guṇas), namely, illumination (sattva), action (rajas) and inertia (tamas).

Set on the wheel of time (kālachakra: kāla = time, chakra = wheel), like a pot on the potter's wheel (kulālachakra), man is moulded and remoulded in accordance with the predominating order of these three fundamental intermingling characteristics.

13. Man is endowed with mind (manas), intellect (buddhi) and ego (ahaṁkāra), collectively known as consciousness (chitta), which is a source of thinking, understanding and acting. As the wheel of life turns, consciousness experiences the five miseries of ignorance (avidyā), selfishness (asmitā), attachment (rāga), aversion (dveṣa) and love of life (abhiniveśa). These in turn leave the chitta in five different states which may be dull (mūḍha), wavering (kṣipta), partially stable (vikṣipta), one-pointed attention (ekāgra) and controlled (niruddha). Chitta is like fire, fuelled by desires (vāsanas), without which the fire dies out. Chitta in that pure state becomes a source of enlightenment.

14. Patanjali evolved eight stages on the path of realisation, which are dealt with in the next chapter. Chitta in a state of dullness is purified through yama, niyama and āsana through which the mind is spurred to activity. Āsana and Prāṇāyāma bring the wavering mind to a state of some stability. The disciplines of prāṇāyāma and Pratyāhāra make the chitta attentive and focus its energy. It is then restrained in this state by dhyāna and samādhi. As it progresses the higher stages of Yoga become predominant, but the preceding stages which lay the foundation should be neither ignored nor neglected.

15. Before exploring the unknown 'Ātmā', the sādhaka has to learn about his known body, mind, intellect and ego. When he knows the 'known' in its totality, these merge into the 'unknown' like rivers merging into the sea. At that moment he experiences the highest state of joy (ānanda).

16. First, Yoga deals with health, strength and conquest of the body. Next, it lifts the veil of difference between the body and the mind. Lastly, it leads the sādhaka to peace and unalloyed purity.

17. Yoga systematically teaches man to search for the divinity within himself with thoroughness and efficiency. He unravels himself from the external body to the self within. He proceeds from the body to the nerves, and from the nerves to the senses. From the senses he enters into the mind, which controls the emotions. From the mind he penetrates into the intellect, which guides reason. From the intellect, his path leads to the will and thence to consciousness (chitta). The last stage is from consciousness to his Self, his very being (Ātmā).

18. Thus, Yoga leads the sādhaka from ignorance to knowledge, from darkness to light and from death to immortality.

Chapter 2

Stages of Yoga

1. The stages of Yoga are eight: yama, niyama, āsana, prāṇāyāma, pratyāhāra, dhāraṇā, dhyāna and samādhi. They are all integrated, but for the sake of convenience they are dealt with as independent components.

2. A tree has roots, trunk, branches, leaves, bark, sap, flowers and fruits. Each one of these components has a separate identity, but each component cannot by itself become a tree. It is the same with Yoga. As all the parts put together become a tree, so all the eight stages put together form Yoga. The universal principles of Yama are the roots and the individual disciplines of Niyama form the trunk. Āsanas are like various branches spreading in different directions. Prāṇāyāma, which aerates the body with energy, is like the leaves which aerate the entire tree. Pratyāhāra prevents the energy of the senses flowing outwards, just as the bark protects a tree from decay. Dhāraṇā is the sap of the tree that holds the body and intellect firm. Dhyāna is the flower ripening into the fruit of samādhi. Even as the fruit is the highest development of a tree, the realisation of one's true self (ātma-darśana) is the culmination of the practice of Yoga.

3. Through the eight stages of Yoga, the sādhaka develops understanding of his own self. He proceeds step by step from the known – his body – to the unknown. He proceeds from the outer envelope of the body – the skin – to the mind. From the mind (manas), he goes to the intellect (buddhi), the will (saṁkalpa), discriminating consciousness (viveka-khyāti or prajñā), conscience (sad-asad-viveka) and lastly the Self (Ātmā).

Yama

4. Yama is a collective name for universal moral commandments. These commandments are eternal, irrespective of class, time and place. These great vows (mahāvratas) are non-violence (ahimsā), truth (satya), non-stealing (asteya), continence (brahmacharya) and non-covetousness (aparigraha). Non-violence is withdrawal from the infliction of any type of injury, whether physical or mental, in thought or deed. When hatred and animosity are abandoned, an all-embracing love remains. The yogi is ruthlessly truthful and honest with himself, and whatever he thinks or speaks turns out to be true. He controls his desires and reduces his wants, so that he becomes richer without stealing and things come to him without his

asking. Continence (brahmacharya) is enjoined in all matters of sex, whether in imagination or in fact. This discipline brings in its wake virility and the ability to see divinity in all forms without sexual arousal. One should not desire things that are not necessary to maintain life, for desire is followed by avarice which leads to sorrow if one cannot get what one wants. When desires multiply, right conduct is destroyed.

Niyama

5. Niyamas are the rules for self-purification, namely, purity (śaucha), contentment (santoṣa), austerity (tapas), study of the scriptures (svādhyāya) and surrender to the Lord of all our actions (Īśvara praṇidhāna). The yogi knows that his body and senses are susceptible to desires, which prejudice the mind, so he observes these principles. Purity is of two kinds, internal and external, and both must be cultivated. The latter means purity of behaviour and habits, cleanliness of person and surroundings. The former is the rooting out of six evils, namely, passion (kāma), anger (krodha), greed (lobha), infatuation (moha), pride (mada), malice and envy (mātsarya). This eradication is achieved by occupying the mind with good constructive thoughts, leading to divinity. Contentment reduces desires, makes one cheerful and gives balance of mind. Austerity enables one to discipline the body and to endure hardship and adversity, thus directing the mind towards the Self within. Study here is the education of oneself by searching for truth and self-realisation. Finally it is the surrender of all our actions to the Lord and abiding entirely in His will. Thus the niyamas are the virtues which calm the disturbed mind, leading towards peace both within and around the sādhaka.

Āsanas

6. Before dealing with the āsanas, it is essential to know about puruṣa and prakṛti. Puruṣa (literally 'person') is the universal psychic principle, which though unable to perform any action by itself, animates and vitalises nature (prakṛti or the producer), the universal physical principle, which through its three qualities and evolutionary powers (guṇas) produces intellect (buddhi) and mind (manas).

Puruṣa and prakṛti acting together stir the material world to activity. Both are limitless, without beginning or end. Prakṛti consists of five gross elements (pancha mahābhūtas) namely, earth (pṛthvi), water (ap), fire (tejas), air (vāyu) and ether (ākāśa). Their five subtle counterparts (tanmātras) are smell (gandha), taste (rasa), form (rūpa), touch (sparśa) and sound (śabda). These gross elements and their counterparts merge with the three qualities and evolutionary powers (guṇas) of prakṛti, namely, illumination (sattva), activity (rajas) and dormancy (tamas) to form the cosmic intellect (mahat). Ego (ahaṁkāra), intellect (buddhi) and mind (manas) form consciousness (chitta), the individual counterpart of mahat.

Mahat is the unevolved primary germ of nature or productive principle whence all phenomena of the material world are developed. There are five organs of perception (jñānendriyas) – ears, nose, tongue, eyes and skin – and five senses of action (karmeñdriyas) – legs, arms, speech, excretary and reproductive organs. Prakṛti, the five gross elements, their five subtle counterparts, the ego, intellect and mind, the five organs of perception, the five organs of action and puruṣa make up the twenty-five basic elements (tattvas) of sāṁkhya philosophy. A pitcher cannot be made without a potter, nor can a house without a mason. Creation cannot take place without puruṣa, the Primeval Force, coming into contact with the tattvas. All existence revolves around puruṣa and prakṛti.

7. Life is a combination of the body, organs of perception and action, mind, intellect, ego and soul. The mind acts as a bridge between the body and the soul. The mind is imperceptible and intangible. The self fulfils its aspirations and pleasures through the mind acting as a mirror and the body as an instrument of enjoyment and attainment.

8. According to the Indian system of medicine (Āyurveda) the body is made up of seven constituent elements (dhātus) and three humours (doṣas). The seven elements are so called because they sustain the body. They are chyle (rasa), blood (rakta), flesh (māṁsa), fat (medas), bones (asthi), marrow (majjā) and semen (śukra). These keep the body immune from infection and diseases.

9. Chyle is formed by the action of gastric juices on food. Blood produces flesh and refreshes the entire body. Flesh protects the bones and produces fat. Fat lubricates and brings firmness to the body. Bones uphold the body and produce marrow. Marrow gives strength and produces semen. Semen not only procreates but, according to the ancient texts, in its subtle state flows throughout the subtle body in the form of certain vital energy.

10. The three humours (doṣas) of wind (vāta), bile (pitta) and phlegm (ślesma), when evenly balanced give perfect health. Imbalances in them cause diseases. The subtle or vital energy called wind prompts breathing, movement, action, excretion and procreation. It co-ordinates the functions of different parts of the body and human faculties. Bile creates thirst and hunger. It digests food and converts it into blood, keeping the body temperature constant. Phlegm lubricates the joints and muscles and helps to heal wounds. Mala is the waste matter, solid, liquid or gaseous. Unless it is excreted, diseases set in, disturbing the balance of the three humours.

The Kośas

11. According to Vedanta philosophy, there are three frames or types of body (śarīra) enveloping the soul. They consist of five inter-penetrating and inter-dependent sheaths (kośas).

The three śarīras are: (a) sthūla, the gross frame or the anatomical sheath, (b) sūkṣma, the subtle frame, consisting of the physiological, the psychological and intellectual sheaths, and (c) kāraṇa, the so-called casual frame – the spiritual sheath.

The sthūla śarīra is the sheath of nourishment (annamaya kośa).

The physiological (prāṇamaya), the psychlogical (manomaya) and the intellectual (vijñānamaya) sheaths make up the subtle body (sūkṣma śarīra).

Prāṇamaya kośa includes the respiratory, circulatory, digestive, nervous, endocrine, excretory and genital systems. Manomaya kośa affects the functions of awareness, feeling and motivation not derived from subjective experience. Vijñānamaya kośa affects the intellectual process of reasoning and judgement derived through subjective experience.

The kāraṇa śarīra is the sheath of joy (ānandamaya kośa). The experience of being aware of it is felt by the sādhaka when he wakes after a deep refreshing sleep and when he is totally absorbed in the object of his meditation.

The skin encloses all the sheaths and bodies. It should be firm and sensitive to the slightest movement. All the sheaths are inter-mingled on their different levels from the skin to the Self.

Aims in Life (Puruṣārthas)

12. Man has four aims in his life; dharma, artha, kāma and mokṣa. Dharma is duty. Without this and ethical discipline, spiritual attainment is impossible.

Artha is the acquisition of wealth for independence and higher pursuits in life. It cannot give lasting joy; nevertheless, a poorly nourished body is a fertile ground for worries and diseases.

Kāma means the pleasures of life, which depend largely on a healthy body. As the *Kaṭhopaniṣad* says, the 'self' cannot be experienced by a weakling.

Mokṣa is liberation. The enlightened man realises that power, pleasure, wealth and knowledge pass away and do not bring freedom. He tries to rise above his sāttvic, rājasic and tāmasic qualities and so escape from the grasp of the guṇās.

13. The body is the abode of Brahman. It plays a vital part in attaining the four-fold aims of life. The sages knew that though the body wears out, it serves as an instrument to attain realisation and, as such, it has to be kept in good condition.

14. Āsanas purify the body and mind and have preventive and curative effects. They are innumerable, catering to the various needs of the muscular, digestive, circulatory, glandular, nervous and other systems of the body.

They cause changes at all levels from the physical to the spiritual. Health is the delicate balance of body, mind and spirit. By practising āsanas the sādhaka's physical disabilities and mental distractions vanish and the gates of the spirit are opened.

Āsanas bring health, beauty, strength, firmness, lightness, clarity of speech and expression, calmness of the nerves and a happy disposition. Their practice can be compared to the growth of a mango tree. If the tree has grown sound and healthy, its essence is to be found in its fruit. Likewise, the essence distilled from practising āsanas is the spiritual awakening of the sādhaka. He is free from all dualities.

Āsanas

15. There is a popular misconception that both āsanas and prāṇāyāma should be practised together from the time Yoga-sādhanā is begun. It is the author's experience that if a novice attends to the perfection of the postures, he cannot concentrate on breathing. He loses balance and the depth of the āsanas. Attain steadiness (sthiratā) and stillness (achalatā) in āsanas before introducing rhythmic breathing techniques. The range of bodily movements varies from posture to posture. The less the range of movement, the smaller will be the space in the lungs and the breathing pattern will be shorter. The greater the range of bodily movement in āsanas, the greater will be the lung capacity, and the deeper the breathing pattern. When Prāṇāyāma and āsanas are done together, see that the perfect posture is not disturbed. Until the postures are perfected, do not attempt prāṇāyāma. One soon realises that when āsanas are well performed, prāṇāyāmic breathing automatically sets in.

Prāṇāyāma

16. Prāṇāyāma is a conscious prolongation of inhalation, retention and exhalation. Inhalation is the act of receiving the primeval energy in the form of breath, and retention is when the breath is held in order to savour that energy. In exhalation all thoughts and emotions are emptied with breath: then, while the lungs are empty, one surrenders the individual energy, 'I', to the primeval energy, the Ātmā.

The practice of Prāṇāyāma develops a steady mind, strong will-power and sound judgement.

Pratyāhāra

17. This is a discipline to bring the mind and senses under control. The mind plays a dual role. On one hand it seeks to gratify the senses, and on the other, to unite with the Self. Pratyāhāra quietens the senses and draws them inwards, leading the aspirant to the Divine.

Dhāraṇa, Dhyāna and Samādhi

18. Dhāraṇa is concentration on a single point, or total attention on what one is doing, the mind remaining unmoved and unruffled. It stimulates the

inner awareness to integrate the ever-flowing intelligence, and releases all tensions. When it continues for a long time it becomes meditation (dhyāna), an indescribable state that has to be experienced to be understood.

19. When the state of dhyāna is maintained for a long time without interruption it merges into samādhi, where the sādhaka loses his individual identity in the object of meditation.

20. In samādhi, the sādhaka loses consciousness of his body, breath, mind, intelligence and ego. He lives in infinite peace. In this state, his wisdom and purity, combined with simplicity and humility, shine forth. Not only is he enlightened, but he illumines all those who come to him in search of truth.

21. Yama, Niyama, Āsana and Prāṇāyāma are essential parts of the Yoga of action (karma). They keep the body and mind healthy for performing all acts that please God. Prāṇāyāma, Pratyāhāra and Dhāraṇa are parts of the Yoga of knowledge (jñāna). Dhyāna and samādi help the sādhaka to merge his body, mind and intelligence in the ocean of the Self. This is the Yoga of devotion and love (bhakti).

22. These three streams of jñāna, karma and bhakti flow into the river of Yoga and lose their identity. Thus the path of Yoga alone takes every type of sādhaka, from the dull (mūḍha) to the restrained (niruddha), towards freedom and beatitude.

Chapter 3

Prāṇa and Prāṇāyāma

1. It is as difficult to explain Prāṇa as it is to explain God. Prāṇa is the energy permeating the universe at all levels. It is physical, mental, intellectual, sexual, spiritual and cosmic energy. All vibrating energies are prāna. All physical energies such as heat, light, gravity, magnetism and electricity are also prāṇa. It is the hidden or potential energy in all beings, released to the fullest extent in times of danger. It is the prime mover of all activity. It is energy which creates, protects and destroys. Vigour, power, vitality, life and spirit are all forms of prāṇa.

2. According to the Upaniṣads, prāṇa is the principle of life and consciousness. It is equated with the real Self (Ātmā). Prāṇa is the breath of life of all beings in the universe. They are born through and live by it, and when they die their individual breath dissolves into the cosmic breath. Prāṇa is the hub of the Wheel of Life. Everything is established in it. It permeates the life-giving sun, the clouds, the winds (vāyus), the earth (pṛthvi), and all forms of matter. It is being (sat) and non-being (asat). It is the source of all knowledge. It is the Cosmic Personality (the puruṣa) of Sāṁkhya philosophy. Therefore the Yogi takes refuge in prāṇa.

3. Prāṇa is usually translated as breath, yet this is only one of its many manifestations in the human body. If breathing stops, so does life. Ancient Indian sages knew that all functions of the body were performed by five types of vital energy (prāṇa-vāyus). These are known as prāṇa (here the generic term is used to designate the particular), apāna, samāna, udāna and vyāna. They are specific aspects of one vital cosmic force (vital wind), the primeval principle of existence in all beings. God is one, but the wise designate Him by various names, and so it is with prāṇa.

4. Prāṇa moves in the thoracic region and controls breathing. It absorbs vital atmospheric energy. Apāna moves in the lower abdomen and controls the elimination of urine, semen and faeces. Samāna stokes the gastric fires, aiding digestion and maintaining the harmonious functioning of the abdominal organs. It integrates the whole of the human gross body. Udāna, working through the throat (the pharynx and the larynx), controls the vocal chords and the intake of air and food. Vyāna pervades the entire body, distributing the energy derived from food and breath through the arteries, veins and nerves.

5. In prāṇāyāma, the prāṇa-vāyu is activated by the inward breath and the apāna-vāyu by an outward breath. Udāna raises the energy from the lower spine to the brain. Vyāna is essential for the function of prāṇa and apāna as it is the medium for transferring energy from the one to the other.

6. There are also five subsidiary divisions known as upaprāṇas or upavāyus, namely, nāga, kūrma, kṛkara, devadatta and dhanaṁjaya. Nāga relieves pressure on the abdomen by belching. Kūrma controls the movements of the eye-lids to prevent foreign matter entering the eyes; it also controls the size of the iris, thereby regulating the intensity of light for sight. Kṛkara prevents substances passing up the nasal passages and down the throat by making one sneeze or cough. Devadatta causes yawnings and induces sleep. Dhanaṁjaya produces phlegm, nourishes and remains in the body even after death and sometimes inflates a corpse.

7. According to Āyurveda, vāta, which is one of the three humours (doṣa), is another name of prāṇa. Charaka Saṁhitā explains the functions of vāta in the same manner as Yoga texts explain prāṇa. The only perceptible expression of the functioning of prāṇa is felt in the movements of the lungs activated by inner energy, causing respiration.

Chitta and Prāṇa

8. Chitta and prāṇa are in constant association. Where there is chitta there prāṇa is focused, and where prāṇa is there chitta is focused. The chitta is like a vehicle propelled by two powerful forces, prāṇa and vāsanā (desires). It moves in the direction of the more powerful force. As a ball rebounds when struck to the ground, so is the sādhaka tossed according to the movement of prāṇa and chitta. If breath (prāṇa) prevails, then the desires are controlled, the senses are held in check and the mind is stilled. If the force of desire prevails, the breathing becomes uneven and the mind gets agitated.

9. In the third chapter of *Haṭha Yoga Pradīpikā*, Swātmārāma states that as long as the breath and prāṇa are still, the chitta is steady and there can be no discharge of semen (śukra). In time the sādhaka's increased vigour is sublimated for higher and nobler pursuits. He then attains the state of ūrdhva-retas (ūrdhva = upwards; retas = semen), one who has sublimated his sexual energy and his chitta to merge in pure consciousness.

Prāṇāyāma

10. 'Prāṇa' means breath, respiration, life, vitality, energy or strength. When used in the plural, it denotes certain vital breaths or currents of energy (prāṇa-vāyus). 'āyāma' means stretch, extension, expansion, length, breadth, regulation, prolongation, restraint or control. 'Prāṇāyāma' thus means the prolongation of breath and its restraint. The Śiva Saṁhitā calls it

vāyu sādhana (vāyu = breath; sādhana = practice, quest). Patanjali in his *Yoga Sūtras* (Ch. 2, Sūtras 49–51) describes prāṇāyāma as the controlled intake and outflow of breath in a firmly established posture.

11. Prāṇāyāma is an art and has techniques to make the respiratory organs to move and expand intentionally, rhythmically and intensively. It consists of long, sustained subtle flow of inhalation (pūraka), exhalation (rechaka) and retention of breath (kumbhaka). Pūraka stimulates the system; rechaka throws out vitiated air and toxins; kumbhaka distributes the energy throughout the body. The movements include horizontal expansion (dairghya), vertical ascension (āroha) and circumferential extension (viśālata) of the lungs and the rib cage. The processes and techniques of prāṇāyāma are explained in later chapters.

This disciplined breathing helps the mind to concentrate and enables the sādhaka to attain robust health and longevity.

12. Prāṇāyāma is not just automatic habitual breathing to keep body and soul together. Through the abundant intake of oxygen by its disciplined techniques, subtle chemical changes take place in the sādhaka's body. The practice of āsanas removes the obstructions which impede the flow of prāṇa, and the practice of prāṇāyāma regulates that flow of prāṇa throughout the body. It also regulates all the sādhaka's thoughts, desires and actions, gives poise and the tremendous will-power needed to become a master of oneself.

Chapter 4

Prāṇāyāma and the Respiratory System

'As long as there is breath in the body, there is life. When breath departs, so too does life. Therefore, regulate the breath.'
(*Hatha Yoga Pradīpikā* – Ch.2:Ś.3.)

1. During normal inhalation, an average person takes in about 500 cubic centimetres of air; during deep inhalation the intake of air is about six times as great, amounting to almost 3000 cubic centimetres. The capacities of individuals vary according to their constitution. The practice of prāṇāyāma increases the sādhaka's lung capacity and allows the lungs to achieve optimum ventilation.

2. The second chapter of the *Haṭha Yoga Pradīpikā* deals with prāṇāyāma. The first three verses state: 'Being firmly established in the practice of āsanas, with his senses under control, the yogi should practice prāṇāyāma as taught by his Guru, observing moderate and nutritious diet. When the breath is irregular, the mind wavers; when the breath is steady, so is the mind. To attain steadiness, the yogi should restrain his breath. As long as there is breath within the body, there is life. When breath departs, life also departs. Therefore, regulate the breath.'

3. The practice of prāṇāyāma helps to cleanse the nāḍīs, which are tubular organs of the subtle body through which energy flows. There are several thousand nāḍīs in the body and most of them start from the areas of the heart and the navel. Prāṇāyāma keeps the nāḍīs in a healthy condition and prevents their decay. This in turn brings about changes in the mental attitude of the sādhaka. The reason for this is that in prāṇāyāma breathing starts from the base of the diaphragm on either side of the body near the pelvic girdle. As such, the thoracic diaphragm and the accessory respiratory muscles of the neck are relaxed. This in turn helps to relax the facial muscles. When the facial muscles relax, they loosen their grip over the organs of perception, namely, the eyes, ears, nose, tongue and skin, thereby lessening the tension in the brain. When tension there is lessened, the Sādhaka attains concentration, equanimity and serenity.

Why So Many Prāṇāyāmas?

4. Numerous āsanas have been evolved to exercise various parts of the anatomy – muscles, nerves, organs and glands – so that the entire organism works in a healthy and harmonious manner. Human environments, constitutions, temperaments and states of health and mind vary, and different āsanas help in different situations to alleviate human ills and develop harmony. Many types of Prāṇāyāmas have been devised and evolved to meet the physical, mental, intellectual and spiritual requirements of the sādhakas under fluctuating conditions.

Four Stages of Prāṇāyāma

5. The *Śiva Saṁhitā* discusses the four stages (avasthā) of prāṇāyāma in its third chapter. These are: (a) commencement (ārambha), (b) intent endeavour (ghaṭa), (c) intimate knowledge (pariçhaya) and (d) consummation (niṣpatti).

6. In the ārambha stage, the sādhaka's interest in prāṇāyāma is awakened. In the beginning he is hasty and by reason of his exertion and the speed with which he wants results, his body trembles and he perspires. When by perseverence he continues his practice, the tremors and perspiration cease and the sādhaka reaches the second stage of ghaṭāvasthā. Ghaṭa means a water pot. The body is compared to a pot. Like an unbaked earthen pot, the physical body wears away. Bake it hard in the fire of prāṇāyāma to gain stability. In this stage the five kośas and the three śarīras are integrated. After this integration, the sādhaka reaches the parichayāvasthā, where he obtains intimate knowledge of prāṇāyāma practices and of himself. By thîs knowledge he controls his qualities (guṇas) and realises the causes of his actions (karma). From the third stage, the sādhaka goes forth towards niṣpatti avasthā, the final stage of consummation. His efforts have ripened, the seeds of his karma are burnt out. He has crossed the barriers of the guṇas and becomes a guṇātīta. He becomes a jīvanmukta – a person who is emancipated (mukta) during his lifetime (jīvana) by the knowledge of the Supreme Spirit. He has experienced the state of ecstasy (ānanda).

Respiratory System

7. To enable the reader to have a clear picture of how prāṇāyāma benefits the body, it is essential to have some idea of the respiratory system. This is discussed below.

8. It is known that the basic energy needs of the human body are met predominantly by oxygen plus glucose. The former aids in the process of elimination by oxidising the waste matter, while glucose supplied with oxygen nourishes the body cells in the flow of respiration.

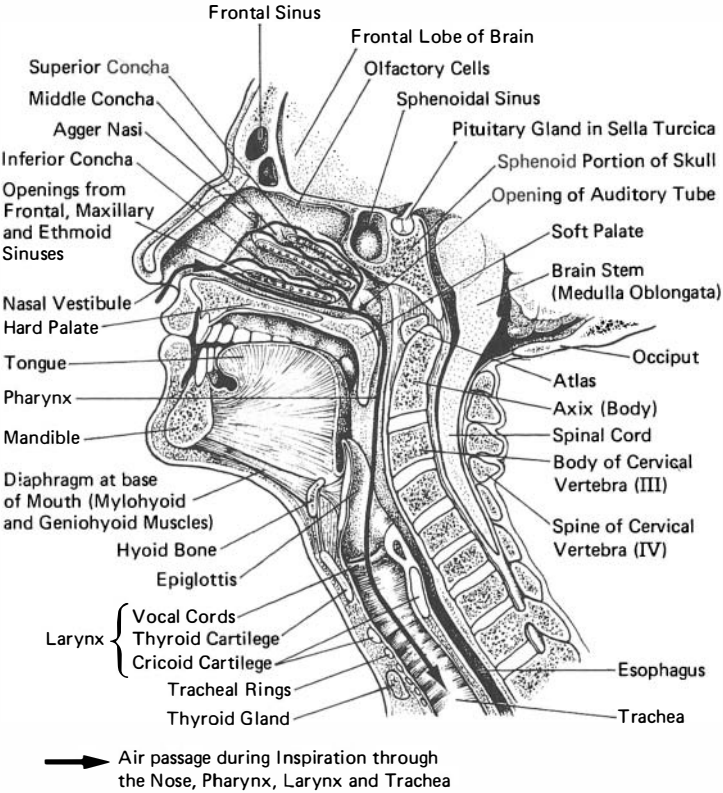


Fig. 1

9. The purpose of prāṇāyāma is to make the respiratory system function at its best. This automatically improves the circulatory system, without which the processes of digestion and elimination would suffer. Toxins would accumulate, diseases spread through the body and ill-health becomes habitual.

10. The respiratory system is the gateway to purifying the body, mind and intellect. The key to this is prāṇāyāma.

11. Respiration is essential for sustaining all forms of animal life from the single-celled amoeba to man. It is possible to live without food or water for

Sterno Hyoid (Insp)
Sternocleido Mastoid (Insp)
Trapezius (Insp)
Rib I
Clavicle
Subclavius (Insp)
Pectoralis Minor (Insp)
Sternum
Latissimus Dorsi (Insp)
Internal Intercostals
External and Internal Intercostals
Rectus Abdominis (Exp)
Scalenus Medius (Insp)
Scalenus Anterior (Insp)
Sternal Head of Pectoralis Major (Insp, if arms are fixed)
Serratus Anterior (Insp)
External Oblique (Exp)
Abdominal Muscles –
External Oblique, Internal Oblique, Transversus Abdominis –
(Expiration and, during Pranayamic breathing, Early Inspiration)

Fig.2

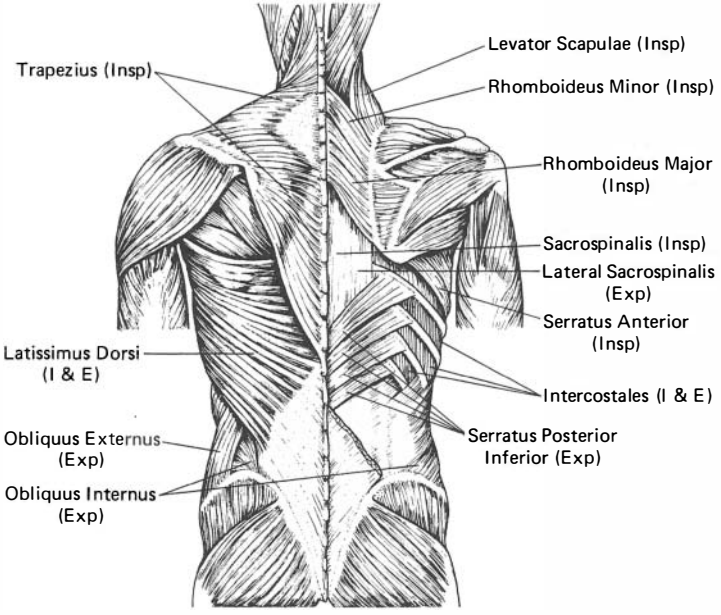
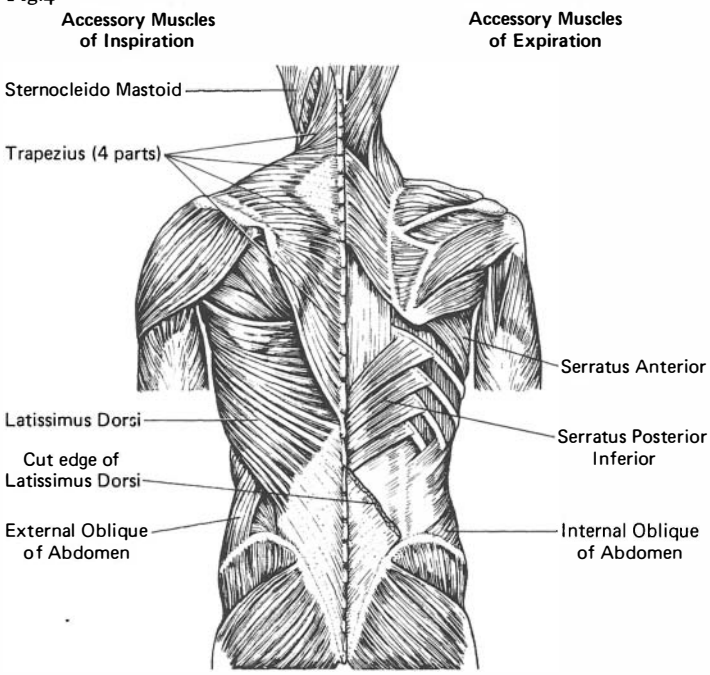


Fig.3

a few days, but when respiration ceases so does life. In the *Chāndogyopaniṣad* it is said: 'Even as the spokes are fastened to the hub, so on this life breath, all is fastened. Life moves with the life breath, which gives life to a living creature. Life breath it one's father, . . . one's mother, . . . one's brother, . . . one's sister, and one's teacher, . . . the Brahman. . . . Verily, he who sees this knows and understands this becomes the excellent speaker.' (S. Radhakrishnan: *The Principal Upaniṣads*, VII, 15, 1–4.)

12. The *Kuaṣitaki Upaniṣad* says 'One can live deprived of speech, for we see the dumb; one deprived of sight, for we see the blind; of hearing, for we see the deaf; and of mind, for we see the childish; one can live without arms and legs, for thus we see. But now it is the breathing spirit alone, the intelligence-self that seizes hold of this body and makes it rise up. This is the all obtaining in the breathing spirit. What is the breathing spirit, that is the intelligence-self. What is intelligence-self, that is the breathing spirit, for together they live in this body and together they go out of it.' (S. Radhakrishnan: *The Principal Upaniṣads*, III, 3.)

Fig.4



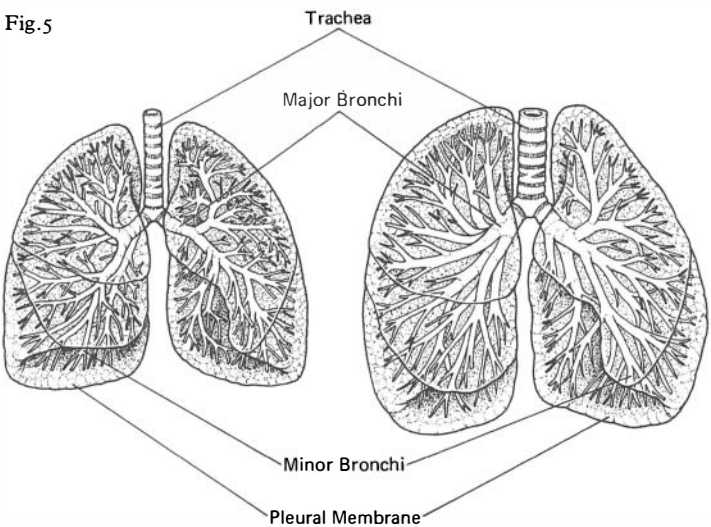
13. Breathing starts with independent life outside the mother and ends when life ceases. When the child is still in the womb its oxygen is supplied through its mother's blood, and its lungs are not required to function. When it is born, the first breath of life is started by command from the brain.

14. During most of one's life, the depth and rate of breathing are self-regulated through the nervous system to meet the purposes of breathing, to supply in a regulated and controlled way the fresh oxygen which is constantly needed by the cells and to discharge the carbon dioxide accumulated in them.

15. Most of us assume that because breathing is usually automatic, it is beyond our active control. This is not true. In prāṇāyāma by arduous training of the lungs and nervous system, breathing can be made more efficient by changing its rate, depth and quality. The lung capacity of great athletes, mountain climbers, and yogis is far greater than that of ordinary men, allowing them to perform extraordinary feats. Better breathing means a better and healthier life.

16. The act of breathing is so organised that the lungs are normally inflated sixteen to eighteen times a minute. Fresh air containing life-giving oxygen is sucked into them, and gases containing carbon dioxide from the body tissues are sent out in exchange through the breathing passages. The

Fig.5



rhythmic inflation of the soft, honey-combed bellows of the lungs is maintained by the movements of the rib-cage and diaphragm. The latter in turn are driven or powered by impulses sent down by the respiratory centre in the brain to the relevant muscles through the nerves. Thus the brain is the instigator through which the respiration and the three mental functions of thought, will and consciousness are regulated.

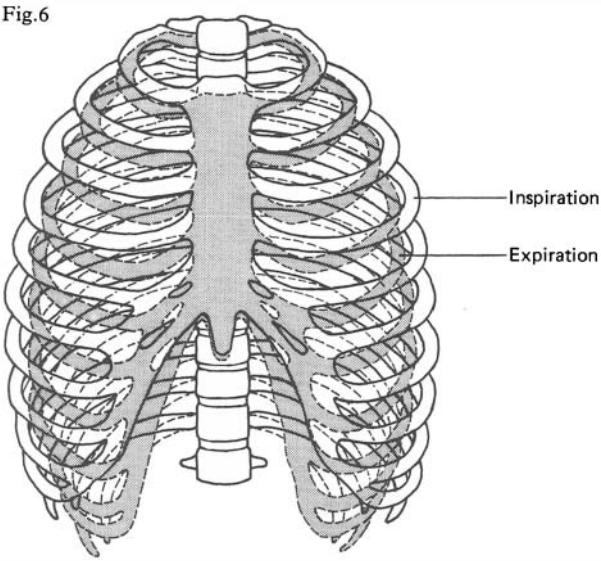
17. The breathing cycle consists of three parts: inhalation, exhalation and retention.

Inhalation is an active expansion of the chest by which the lungs are filled with fresh air. Exhalation is a normal and passive recoil of the elastic chest wall by means of which the stale air is exhaled and the lungs are emptied. Retention is a pause at the end of each inhalation and exhalation. These three form one cycle of breathing. The breathing affects the heart rate. During the prolonged holding of breath, a slowing of the heart rate is observed, which ensures increased rest to the heart muscle.

18. Respiration may be classified into four types:

(a) High or clavicular breathing, where the relevant muscles in the neck mainly activate the top parts of the lungs.
(b) Intercostal or midbreathing, where only the central parts of the lungs are activated.
(c) Low or diaphragmatic breathing, where the lower portions of the lungs are activated chiefly, while the top and central portions remain less active.
(d) In total or prāṇāyāmic breathing, the entire lungs are used to their fullest capacity.

Fig.6



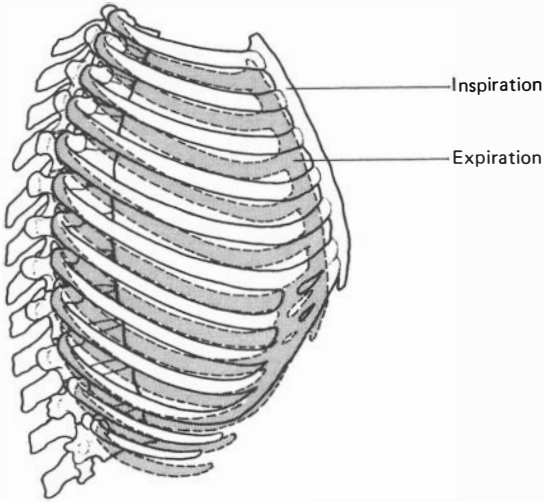


Fig. 7

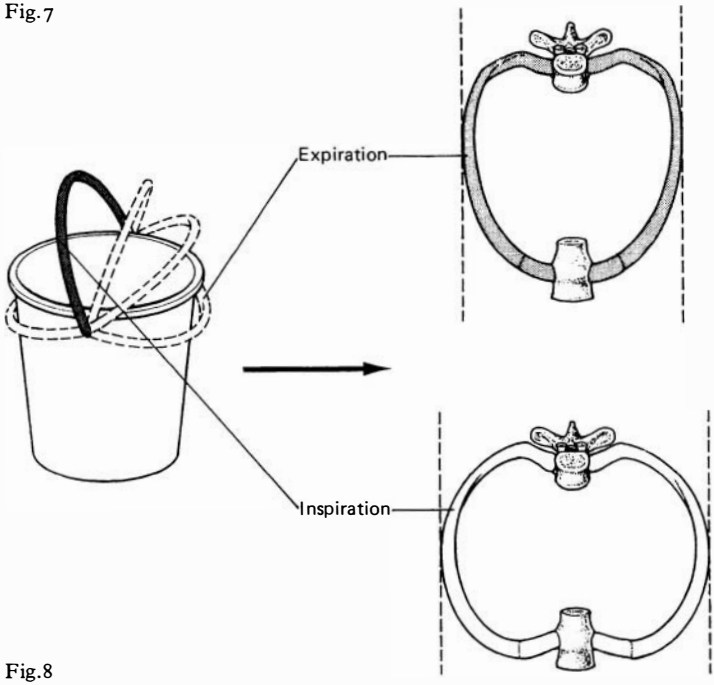


Fig. 8

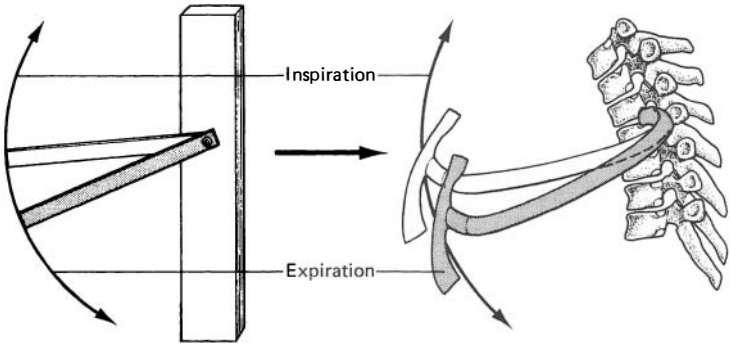


Fig.9

In prāṇāyāmic inspiration, diaphragmatic contraction is delayed until after the conscious contraction of the muscles of the anterior and lateral abdominal wall. These muscles are diagonally connected to the ribcage above and the pelvis below. This action lowers and stabilises the dome-shaped diaphragm which originates at the lower rib margin; it pushes up the abdominal organs and increases the capacity of the thorax. This prepares the diaphragm for a subsequent contraction of maximum extent and efficiency by reducing the centripetal pull. This minimises interference with the next action of the sequence, the elevation and expansion of the lower ribcage in ascending upwards. This is accomplished by the vertical pull of the diaphragm followed by the sequential activation of the intercostal muscles to allow the fullest caliper-like movements of the floating ribs, bucket-handle like movements of the individual ribs, elevation and full circumferential expansion of the ribcage as a whole from its

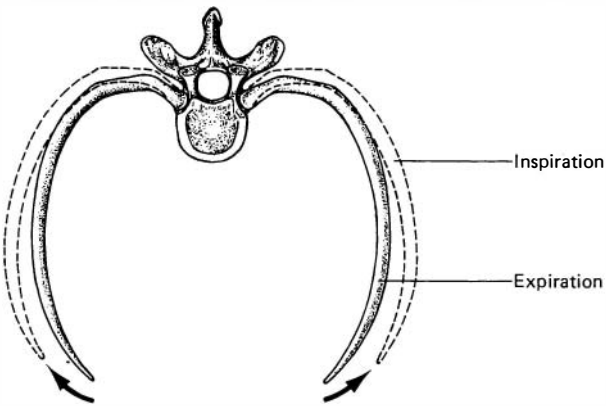


Fig.10

origin at the spine. Finally the highest intercostals and the muscles connecting the upper ribs, sternum and clavicles to the neck and skull are contracted, enabling the upper part of the lungs to be filled. Then the already expanded thoracic cavity expands further forwards, upwards and sideways.

Upward Movement of Upper Thoracic Wall during Inspiration

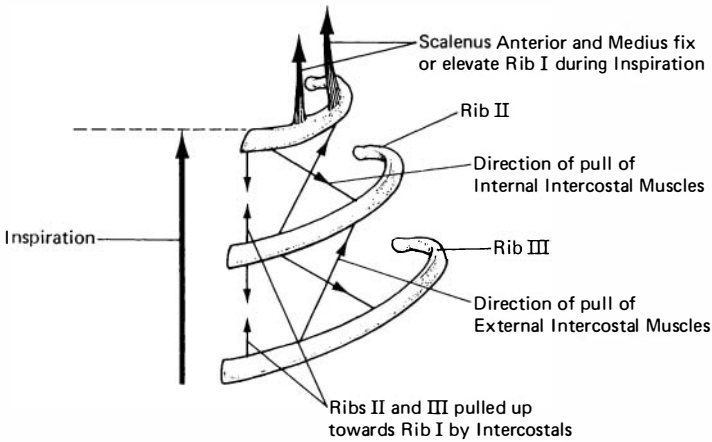


Fig. 11

Downward Movement of Lower Thoracic Wall during Forced Exhalation

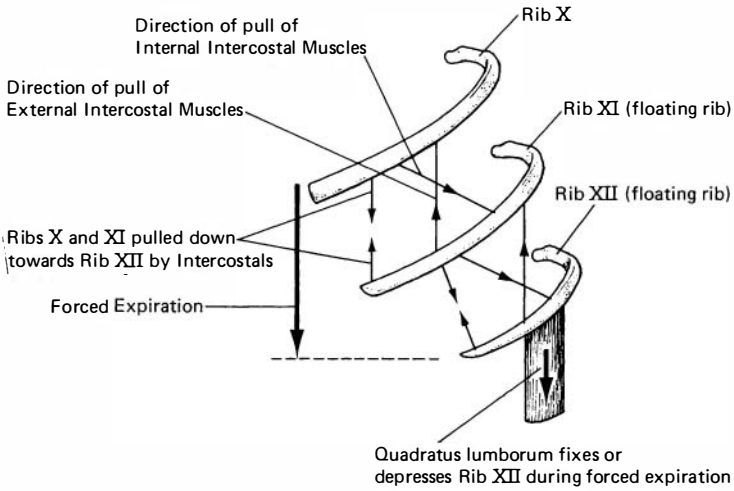


Fig. 12

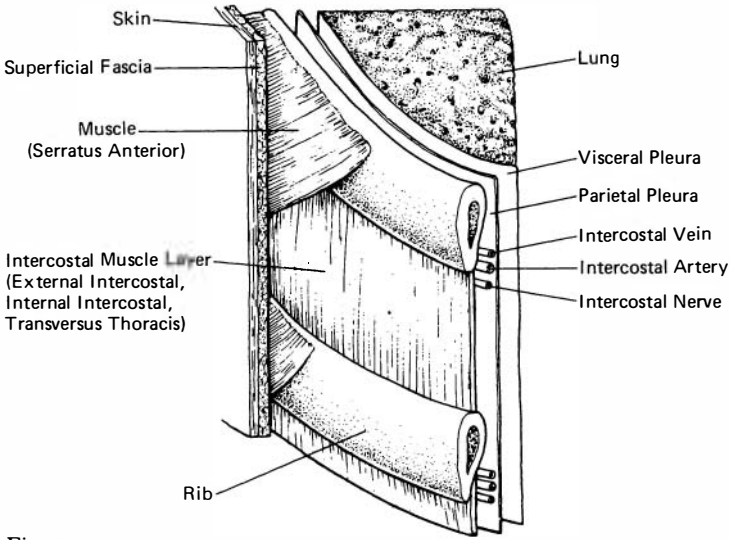


Fig. 13

19. This series of movements of the abdomen, chestwall and neck, in which each step of the sequence prepares the ground for the next, results in a maximum filling of the lungs, to create space for the incoming air to reach every corner of each lung.

20. The sādhaka must first direct his body-conscious awareness specifically and intelligently at the lower anterior abdominal wall just above the pelvis. To accomplish this, he has to move the lower abdominal wall towards the spine and against the diaphragm as if massaging from the skin to the muscles and muscles to the inner organs. This sense of active conscious contraction is associated with visible movements of the abdominal wall from the surface skin to its deepest layers, and can be directed at will. After that, direct your attention to expand the lateral and posterior regions of the chest. Elevate the lower chest wall simultaneously expanding the top chest wall with its skin and muscles. The diaphragm gradually and smoothly resumes its domed shape as it starts to relax towards the end of inspiration. During exhalation the dome moves up again. It is active at the start of expiration to encourage a smooth slow start to the elastic recoil of the lungs.

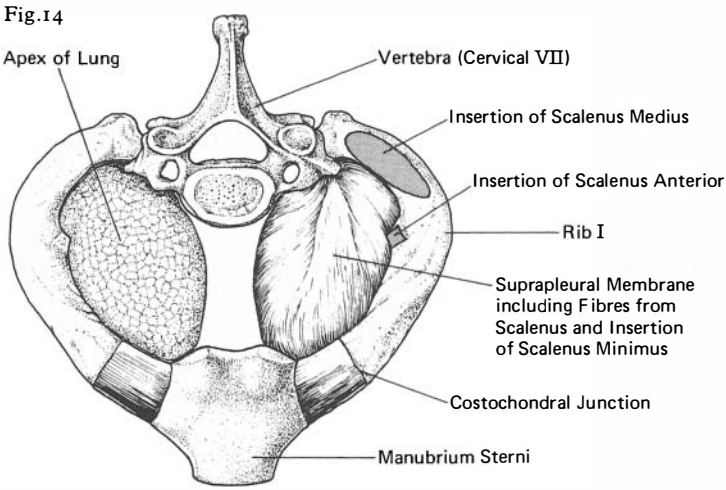
21. The fresh oxygen which is sucked in percolates the minute sacs (the alveolar sacs) which form the basic unit of the lungs. The membranes round these alveoli convey this oxygen into the blood stream and then the

carbon dioxide from the blood into the air of the lungs for its disposal through exhalation. The blood with fresh oxygen is carried by arteries from the left side of the heart to cells in every nook and corner of the body, thus replenishing their store of life-giving oxygen. The waste products (mainly the carbon dioxide) thrown out by each sac are then taken by the venous blood stream from the right side of the heart to the lungs for disposal. The heart pumps this blood through the body at an average rate of seventy times per minute. Hence to breathe properly we need the smooth co-ordination of all the relevant parts of the body, the power or controlhouse (the nervous system), the bellows (the lungs), the pump (the heart) and the plumbing system (the arteries and veins), besides the driving motor of the rib cage and the diaphragm.

The Chest

22. The chest is the cage formed by the ribs in which the lungs and heart are located. It is shaped like a truncated cone, narrow at the top and widening below. The top is closed off by the muscles of the neck attached to the clavicles. The wind-pipe (trachea) passes through it on its way from the throat to the lungs. This truncated cone is slightly flat from front to back. Its bony surfaces include the thoracic part of the vertebral column in the midline at the back and the breast plate in the front. It has twelve pairs of flattened ribs which curve across the gap between the spine at the back and the breastbone in front to form semicircular bridges on each side. The spaces between the ribs are filled by internal and external intercostal muscles. There are, in addition, muscles joining the twelfth rib to the pelvis

Fig.14



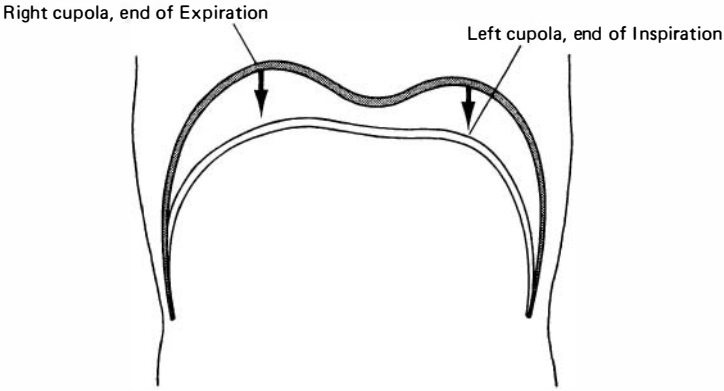


Fig. 15

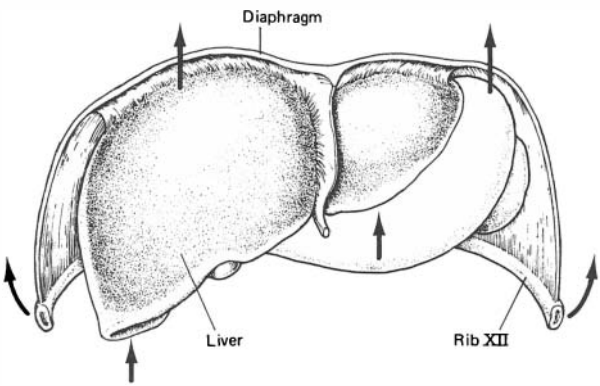
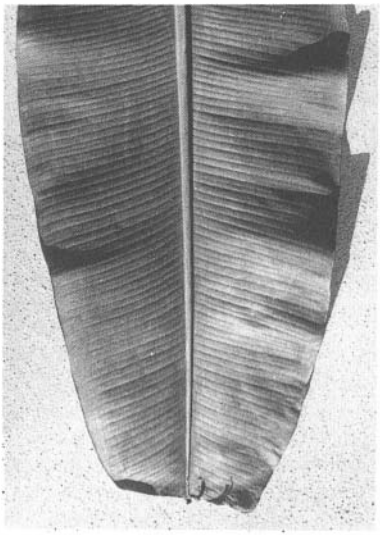


Fig. 16

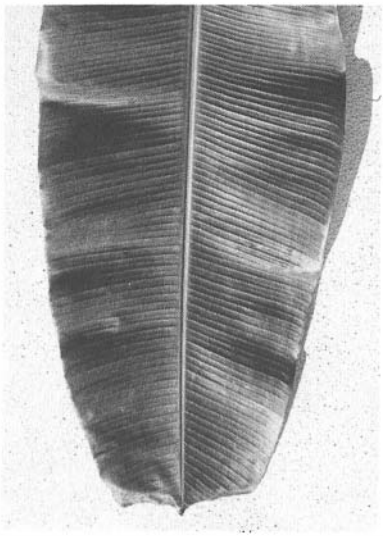
and the first one to the cervical spine. There are eleven pairs of muscles in all. The expansion and contraction of the chest are controlled by these muscles and the diaphragm. The thoracic dorsal area is like the broad mid-section of a banana leaf, the spine being the stem, the evenly spaced ribs being the veins and the tail bone the thin end of the leaf (Pls 1 & 2).

The Lungs and the Bronchial Tree

23. The right and left lungs differ in shape and capacity. In most of us the bulk of the heart, which is about the size of a fist, is on the left side. Consequently, that lung is smaller. It is divided into two lobes, one above the other, whereas the right lung has three lobes. (Fig. 5)



Pl. 1



Pl. 2

24. The lungs are covered with a membrane called the pleura and due to their shape expand rather like the bladder of a football.

25. The dome of the right diaphragm is higher than the left. Beneath it is the liver, the largest solid abdominal organ, less compressible and depressible than the stomach and spleen lying below the left diaphragm. In full inhalation, when attempting to fill the lungs, most people can feel a sense of increased resistance below the right side of the diaphragm, where the liver is, when their attention is drawn to the area. In order to equalise the filling of both lungs from base and side, special effort and attention must be directed to diaphragmatic and chest wall movements on the right side.

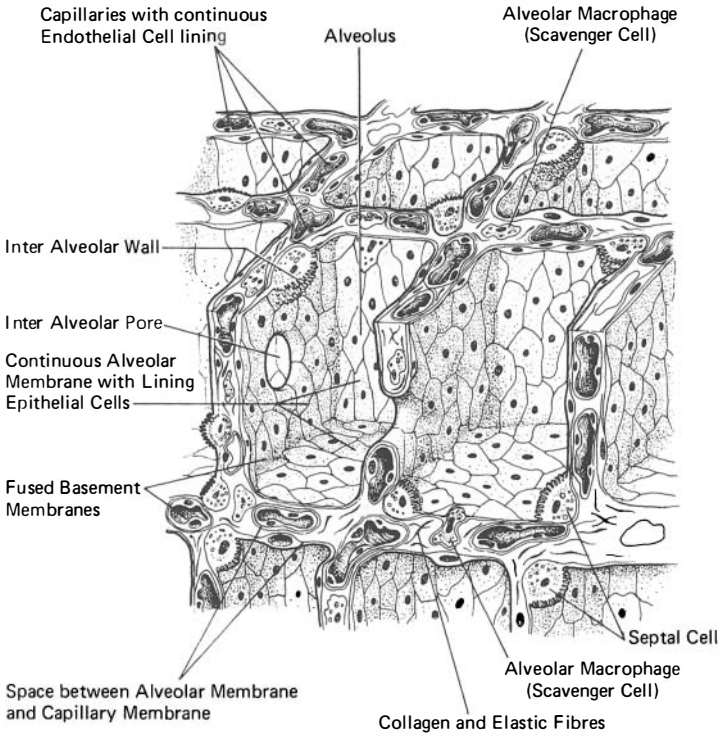
26. The bronchial system, connecting the windpipe and the alveoli, is in the thoracic cage. It resembles an inverted tree with its roots in the gullet, while the branches spread out downwards towards the diaphragm and the side walls of the chest cavity.

27. The windpipe in the throat is a tube about four inches long and less than an inch wide, which branches out into two primary bronchi, one leading into each lung. Both then branch out into numerous tiny air-passages called the bronchioles. At the end of each of these bronchioles are the alveoli, the tiny air sacs clustered like bunches of grapes, some 300

million lining each lung, their surface covers about eighty to one hundred square yards – forty to fifty times that of the human skin.

28. These alveoli are small, multiple sac-like chambers with an incomplete lining of cells. The gap between the cells (the intestitial space) is filled with fluid. Around the outer wall of the alveoli lie minute blood vessels (the capillaries). Exchange of gases takes place between the alveoli and the red blood cells and plasma of the blood via the fluid in the alveoli or intestitial space.

29. The air in the alveoli contains more oxygen and less carbon dioxide than the blood passing through the capillaries in the lungs. During the exchange of oxygen and carbon dioxide, the molecules of oxygen diffuse into, and carbon dioxide out of, the blood.



Fine Structures of Pulmonary Air Sacs Showing the Membranes across which Gases Exchange between Air and Blood.

Fig. 17

The Spine

30. The spine should be kept firm like the trunk of a tree. The spinal cord is protected by thirty-three vertebrae. The seven vertebrae in the neck are called cervical. Below them are the twelve dorsal or thoracic vertebrae which are connected to the ribs, forming a cage to protect the lungs and the heart. The ten top ribs on either side are joined in front to the inner side of the breastbone, but not the two floating ribs below. The floating ribs are so called, as they are not anchored to the breastbone. Below the dorsal are the lumbar vertebrae and lower still the sacrum and coccyx, both formed of fused vertebrae. The lowest coccygeal vertebra curls forward.

The Breastbone

31. The breastbone has three parts. In breathing, the top and bottom should be kept perpendicular to the floor. Use it to act as a support for lifting the side ribs like the handle of a bucket, and so create more space through the expansion of the lungs sideways and upwards.

32. The lungs open sideways and space for expansion is created with the help of the intercostal muscles. Keep the interior intercostal muscles at the back firm. If the skin at the back does not co-ordinate with the intercostal muscles, breathing becomes shallow, reducing the intake of oxygen, causing physical weakness and lack of bodily resistance.

The Skin

33. As a drummer tightens the skin of his drum to get resonance and a violinist tightens his strings to get clarity of sound, the yogi adjusts and stretches the skin of his torso to create maximum response from the intercostal muscles to aid the respiratory process when practising prāṇāyāma.

34. The floating ribs, not being fixed in front to the sternum expand like a pair of calipers to create more space in the chest. Laterally, the thick middle ribs can also expand laterally, thus widening and lifting the rib-cage. This does not affect the top ribs. To fill the uppermost reaches of the lungs requires training and attention. Learn to use the upper inner intercostal muscles and the top part of the sternum. Expand the rib-cage from the inner frame outwards, as this will stretch the intercostal muscles.

The Diaphragm

35. The diaphragm is a large dome-shaped muscle-like partition which separates the thoracic cavity from the abdominal one. Anchored all around the circumference of the lower thoracic cage, it is attached at the back to the lumbar vertebrae, at the sides to the lower six ribs and in the front to the dagger-shaped cartilage of the breastbone. Above it are the heart and lungs and below it the liver on the right and the stomach and spleen on the left.

Accessory Muscles

36. The respiratory muscles of the throat, torso, spine and abdomen are the accessories used in breathing, which is ordinarily dominated by the diaphragm. Besides the muscles already described, those of the neck, especially the sternomastoids and the scalenus, play their parts. They contribute very little to quiet breathing, but become active when the rate or depth is increased and rigid when the breath is held. The use of accessory respiratory muscles varies from one individual to another. It also varies from time to time in the same person, depending on how powerfully he exerts in his breathing and how efficiently and how tensely.

37. We all breathe, but how many of us do so correctly, with attention? Bad posture, an ill-shaped or caved-in chest, obesity, emotional disorders, various lung troubles, smoking and uneven use of the respiratory muscles, lead to improper breathing, below one's capacity. We are aware of the discomfort and disability which then arises. Many subtle changes take place in our body as a result of poor breathing and bad posture, leading to heavy breathing, inadequate pulmonary function and aggravation of heart disease. Prāṇāyāma can help to prevent these disorders and help to check or cure them, so that one can live fully and well.

38. As light radiates from the disc of the sun, so air is spread through the lungs. Move the chest up and out. If the skin over the centre of the breastbone can move vertically up and down and it can expand from side to side circumferentially, it shows that the lungs are being filled to their maximum capacity.

Chapter 5

Nāḍīs and Chakras

1. The word nāḍī is derived from nād meaning a hollow stalk, sound, vibration and resonance. Nāḍīs are tubes, ducts or channels which carry air, water, blood, nutrients and other substances throughout the body. They are our arteries, veins, capillaries, bronchioles and so on. In our so-called subtle and spiritual bodies, which cannot be weighed or measured, they are channels for cosmic, vital, seminal and other energies as well as for sensations, consciousness and spiritual aura. They are called by different names in accordance with their functions. Nāḍikās are small nāḍīs and nāḍīchakras are ganglia or plexuses in all three bodies – the gross, subtle and causal. The subtle or causal bodies are not yet recognised by scientists or the medical profession.

2. It is said in the *Varāhopaniṣad* (V, 54/5) that the nāḍīs penetrate the body from the soles of the feet to the crown of the head. In them is prāṇa, the breath of life and in that life abides Ātmā, which is the abode of Śakti, creatrix of the animate and inanimate worlds.

3. All nāḍīs originate from one of two centres, the kandasthāna – a little below the navel – and the heart. Though Yoga texts agree about their starting points, they vary about where some of them end.

Nāḍīs Starting from Below the Navel

4. Twelve digits above the anus and the genital organs and just below the navel, there is an egg-shaped bulb called the kanda. From it 72,000 nāḍīs are said to spread throughout the body, each branching off into another 72,000. They move in every direction and have countless outlets and functions.

5. The *Śiva Saṁhitā* mentions 350,000 nāḍīs, of which fourteen are stated to be important. These and a few others are listed with their functions in the given table below. The three that are most vital are the suṣumṇā, iḍā and pingalā.

6. The suṣumṇā, which runs through the centre of the spine, is split at the root and terminates at the crown of the head in the thousand-petalled lotus (sahasrāra), which is the seat of fire (agni). The *Varāhopaniṣad* (V, 29, 30) describes it as blazing and shining (jvalanti), and as being sound incarnate

Table of Nāḍīs Starting from the Kanda Below the Navel

Sl No.	*Nāḍī*	*Place in body*	*Terminus*	*Function*
1.	Suṣumṇā	Centre of spine	Crown of head	Agni. Fire (sattva), illumination
2.	Iḍā	Left of 1	Left nostril	Chandra Cooling (tamas), inertia
3.	Pingalā	Right of 1	Right nostril	Sūrya Burning (rajas) action
4.	Gāndhāri	Behind 2	Left eye	Seeing
5.	Hastijihvā	In front of 2	Right eye	Seeing
6.	Pūṣā	Behind 3	Right ear	Hearing
7.	Yaśasvini	Before 3 – Between 4 and 10	Left ear and Left big toe	
8.	Ālambusā	Bifurcates mouth and anus.		
9.	Kuhū	In front of 1		Evacuation
10.	Sarasvati	Behind 1	Tongue	Controls speech and keeps all abdominal organs free from disease
11.	Vāruṇi	Between 7 and 9	Flows throughout body	Evacuates urine
12.	Viśvodhari	Between 5 and 9		Absorbs food
13.	Ṕayasvinī	Between 6 and 10	Right big toe	
14.	Saṁkhinī	Between 4 and 10	Genital organs	Carries the essence of food
15.	Śubhā			
16.	Kauśiki		Big toes	
17.	Śūrā		Between eyebrows	
18.	Rāka			Creates hunger and thirst; collects mucus at sinuses.
19.	Kūrma			Stabilises body and mind
20.	Vijñāna Nāḍīs			Vessels of consciousness

(nādarūpinī). It is also called the 'Supporter of the Universe' (Viśvadhāriṇī: viśva = universe, dhāriṇī = supporter), the brahmanāḍī and the aperture of Brahma (Brahmarandhra). It is illumination (sattva). It gives delight to the sādhaka when prāṇa enters it and swallows time.

Nāḍīs Starting from the Heart

7. According to the *Kaṭhopaniṣad* (VI 16, 17) and *Praśnopaniṣad* (III, 6), the Ātmā, which is said to be the size of a thumb, dwells within the heart, from which a hundred and one nāḍīs radiate. In the *Chāndogyopaniṣad* (III, 12,4) it is said that as the outer cover of man is his physical body, his inner core (hṛdayam) is the heart (VIII 3.3), wherein abides the Ātmā. It is also called the antarātma (soul, heart or mind). Antaḥkaraṇa (source of thought, feeling and consciousness) and chidātmā (faculty of reasoning and consciousness).

8. Here the heart stands for both the physical and the spiritual one. All the vital breaths or winds (vāyus) are established there and do not go beyond it. It is here that the prāṇa stimulates actions and activates intelligence (prajña). The intelligence becomes the source of thinking, imagination and will. When the mind is controlled and the intellect and heart are united, the self is revealed. (*Śvetāśvataropaniṣad* IV 17.)

9. From each of these 101 nāḍīs emanate one hundred subtler nāḍīs, each of which branches off into another 72,000. If there is harmony between the five winds (vāyus) (namely, prāṇa, apāna, udāna, vyāna and samāna) and these nāḍīs, then the body becomes a heaven on earth; but if there is disharmony, it becomes a battle ground of diseases.

10. Of the 101 nāḍīs, only the chitrā splits into two parts at the root of the suṣumṇā. One part of the chitrā moves within it, extending upwards to the aperture (randhra) of Brahma at the crown of the head above the sahasrāra chakra. This is the gateway to the Supreme Spirit (Parabrahman). The other part of chitrā moves downwards towards the generative organ for discharge of semen. It is said that at the time of death, yogis and saints consciously leave through the Brahmarandhra. Since the aperture is in the spiritual or causal body (kāraṇa śarīra), it cannot be seen or measured. When prāṇa rises upwards, via the chitrā through the chakras, it takes with it the radiance (ojas), a creative energy latent in semen. The chitrā is transformed into the Brahma nādī or parā (supreme) nāḍī. Then the sādhaka becomes one who has sublimated his sexual appetite (an ūrdhvareta) and is free from all desire.

Dhamani and Sira

11. Nāḍīs, dhamanis and siras are tubular organs or ducts within the physical and subtle bodies conveying energy in different forms. The word

'dhamani' is derived from 'dhamana', meaning a pair of bellows. The nearest analogy is an orange. Its rind represents the gross (sthūla), the membranes represent the subtle (sūkṣma), and the segments, containing the juicy buds, the causal (kāraṇa) bodies respectively. The nāḍīs carry air, the dhamani carry blood, and the siras distribute the vital seminal energy throughout the subtle body.

12. Āyurveda is the science of life and longevity. According to its texts, which deal with ancient Indian medicine, siras start from the heart. They carry blood (rakta) and seminal vitality (ojas) from and to the heart. Siras are thicker at the heart and become thinner as they branch out like the veins of a leaf. Seven hundred of them are considered important. They are divided evenly into four categories, each of which caters for one of the humours: wind (vāta) for proper functioning of the body, bile (pitta) for harmonising the organs, phlegm (kapha) for free movement in the joints, and blood (rakta), which circulates oxygen and its own form of vital energy.

Nāḍīs and Circulation

13. The *Śiva Saṁhitā* (V 52–55) states that when food is digested, the nāḍīs carry the best part to nourish the subtle body (sūkṣma śarīra), the middle part to the gross body (sthūla śarīra), and discharge the inferior part in the form of faeces, urine and sweat.

14. The food that is consumed is turned into chyle, which is carried through certain ducts known in Āyurvedic texts as srotas – a synonym for nāḍīs. Their functions are wide, for they also carry the vital energy or breath known as prāṇa, water, blood and other material to various tissues, marrow and ligaments, as well as discharge semen, urine, faeces and sweat.

15. In breathing, nāḍīs, dhamanis and siras perform the dual function of absorbing vital energy from the in-coming air and throwing off the resultant toxins. The in-breath moves through the windpipe to the lungs, on into the bronchioles (dhamanis) and then to the alveoli (siras). The blood takes up the energy from the oxygen and percolates it into the dhamanis with the help of prāṇa in the nāḍīs. The percolation transforms the seminal fluid into vital seminal energy (ojas) and discharges it into the siras, which distribute it to revitalise the body and the brain. The siras then discharge used-up energy and gathered toxins such as carbon dioxide into the dhamanis and through them into the windpipe, to be breathed out.

16. The *Varāhopaniṣad* (V 30) calls the body a 'jewel' filled with essential ingredients (ratna pūrita-dhātu). In Prāṇāyāma the essential ingredient (dhātu), called blood, is enriched and refined like a jewel as it absorbs the various energies. The nāḍīs, dhamanis and siras also convey smells,

flavours (essence of food), forms, sounds and intelligence (jñāna). Yoga helps them to function properly by keeping all these channels pure, the body immune from diseases and the intelligence keen, so that the sādhaka can get to know his body, mind and soul (*Varāhopaniṣad*, V 46–9).

17. Some nāḍīs, dhamanis and siras may correspond to arteries, veins and capillaries of the respiratory and circulatory systems. They may also be nerves, channels and ducts of the nervous, lymphatic, glandular, digestive and genito-urinary systems of the physical and physiological body. Others carry vital energy (prāṇa) to the mental body, intellectual energy (vijñāna) to the intellectual body, and spiritual energy to the causal or spiritual body (soul). The terminating point of each nāḍī is to be found in follicle, cell or hair. They function as inlets and outlets of various energies. In all, 5.9 billion of them flow in the gross, subtle and causal bodies. No wonder it is said that the body is full of nāḍīs.

Kuṇḍalinī

18. Kuṇḍalinī is divine cosmic energy. The word is derived from 'kuṇḍala', meaning a ring or coil. The latent energy is symbolised as a sleeping serpent with three and a half coils; it has its tail in its mouth, which faces downwards. It lies at the hollow base of the suṣumṇā, two digits below the genital area and two above the anus.

19. The three coils represent the three states of mind (avasthā), namely awake (jāgrat), dreaming (Svapna) and in deep sleep (suṣupti). There is a fourth state, turīya, combining and transcending the others, which is represented by the last half-coil. It is attained in samādhi.

20. The *Haṭha Yoga Pradīpikā* (III.1) states that as Ādi Śeṣa, the Lord of Serpents, supports the universe, so kuṇḍalini upholds all the disciplines of Yoga.

21. The energy which passes through the iḍā, pingalā and suṣumṇā is called bindu, literally a point having no parts or no magnitude. These three nāḍīs represent respectively the nāḍīs of the moon, the sun and fire. Before the word 'kuṇḍalini' came into vogue, 'agni' (fire) was used to represent the divine power which purifies and rises upwards like fire. Through the discipline of Yoga the direction of the mouth of the coiled serpentine energy is made to turn upwards. It rises like steam through the suṣumṇā via the chitrā (emanating from the heart) till it reaches the sahasrāra. When the creative energy (śakti) of kuṇḍalinī is awakened, iḍā and piṅgala merge within the suṣumnā. (*Śiva Saṁhitā*, V 13.)

22. Metal is refined by burning out of the dross. By the fire of yogic discipline, the sādhaka burns up within himself the impurities of desire,

anger, greed, infatuation, pride and envy. Then his intellect becomes refined. The cosmic energy latent within him is then awakened by the grace of God and the guru. (*Haṭha Yoga Pradīpikā*, III.2.). As this rises, the sādhaka gets more and more in tune with the Divine. He becomes free from attachment towards fruits of action (karma mukta) and unattached to life (jīvana mukta).

23. According to Tāntric texts, the object of Prāṇāyāma is to arouse the latent power (śakti) called kuṇḍalinī, the divine cosmic energy in our bodies, lying at the base of the spinal column in mūlādhāra chakrā, the nervous plexus situated in the pelvis above the anus at the root of the spine. This energy has to be aroused and made to ascend through the suṣumṇā from the mūlādhāra chakra to the thousand-petalled lotus (sahasrāra) in the head, the net-work of nerves in the brain. After piercing the intervening chakras, it finally unites with the Supreme Soul. This is an allegorical way of describing the tremendous seminal vitality which is obtained by the practice of uḍḍīyāna, mūla bandhās (Ch. 13) and self-restraint. It is a symbolic way of describing the sublimation of sexual energy.

24. When the kuṇḍalinī reaches the sahasrāra, the sādhaka has no feeling of his own separate identity and nothing exists for him. He has crossed the barriers of time and space, and becomes one with the universe.

Chakras

25. 'Chakra' means a wheel, a ring. Chakras are flying wheels, radiating energy, located at vital centres along the spine, connecting the nāḍīs to the various sheaths (kośas).

26. As antennae pick up radio waves and transform them into sound through receiving sets, chakras pick up cosmic vibrations and distribute them throughout the body in the nāḍīs, dhamanis and siras. The body is a counterpart of the universe, a microcosm within the macrocosm on the gross, subtle and spiritual levels.

27. According to Yoga texts, two other important types of energy pervade the body, that from the sun radiating through the pingalā nāḍī, and from the moon through the iḍā nāḍī. Both these currents criss-cross at the chakras, the vital centres along the suṣumṇā, the nāḍī of fire in the spinal cord.

28. To conserve the energies generated within the body and to prevent their dissipation, āsanas and mudrās (seals), Prāṇāyāmas and bandhās (locks) were prescribed. The heat so generated causes the kuṇḍalinī to uncoil. The serpent lifts its head, enters the suṣumṇā and is forced up through the chakras one by one to the sahasrāra.

29. The generation and distribution of prāṇa in the human system may be compared to that of electrical energy. The energy of falling water or rising steam is made to rotate turbines within a magnetic field to generate electricity. The electricity is then stored in accumulators and the power is stepped up or down by transformers which regulate the voltage or current. It is then transmitted along cables to light cities and run machinery. Prāṇa is like the falling water or rising steam. The thoracic area is the magnetic field. The breathing processes of inhalation, exhalation and retention of breath act like the turbines, while the chakras represent the accumulators and transformers. The energy (ojas) generated by prāṇa is like electricity. It is stepped up or down by the chakras and distributed throughout the system along the nāḍīs, dhamanis and siras, which are the transmission lines. If the power generated is not properly regulated it will destroy the machinery and the equipment. It is the same with prāṇa and ojas, for they can destroy the body and the mind of the sādhaka.

30. The main chakras are: (1) mūlādhāra (mūla = source, ādhāra = support, vital part), situated in the pelvis above the anus; (2) svādhiṣṭhāna (seat of a vital force), situated above the organs of generation; (3) maṇipūraka, situated in the navel; (4) sūrya, the sun; and (5) manas (mind), between the navel and the heart; (6) anāhata (heart), in the cardiac area; (7) viśuddhi (pure), in the pharyngeal region; (8) ājñā (command), between the eyebrows; (9) Soma, the moon in the centre of the brain; (10) lalāṭa, at the top of the forehead; and (11) sahasrāra, which is called the thousand-petalled lotus in the brain. The most important of them are mūlādhāra, svādhiṣṭhāna, maṇipūraka, anāhata, viśuddhi, ājñā and sahasrāra.

31. The mūlādhāra chakra is the seat of the element of earth (pṛthvi tattva) and of smell. It is the base of the annamaya kośa, the body of nourishment, connected with the absorption of food and the evacuation of faeces. When this chakra is activated, the sādhaka becomes firm in vitality and ready to sublimate his sexual energy (ūrdhvarētas)

32. The svādhiṣṭhāna chakra is the seat of the element of water (ap) and of taste. When it is activated, the sādhaka becomes free from disease and acquires vibrant health. Feeling no fatigue, he becomes friendly and compassionate.

33. The maṇipūraka chakra is the seat of the element of fire (agni), and when it is activated the sādhaka obtains calmness even in adverse circumstances.

34. The svādhiṣṭhāna and the maṇipūraka chakras are the foundations of the Prāṇamaya kośa, the physiological body. Both have to move together,

co-ordinating their functions during inhalation and exhalation in Prāṇāyāma.

35. The sūrya chakra, commonly known as the solar plexus, lies between the navel and the diaphragm. It keeps the abdominal organs healthy and increases the lifespan.

36. The manas chakra lies between the sūrya and the anāhata. It is the seat of emotion, igniting imagination and creativity, and can be stabilised by Prāṇāyāmas involving retention of the breath.

37. The anāhata chakra lies in the region of the physical and the spiritual heart. It is the element of air (vāyu) and of touch.

38. The manas and the anāhata chakras represent the psychological body (manomaya kośa). When activated, they strengthen the heart, develop adoration (bhakti) and knowledge (jñāna). They free the sādhaka from sensual pleasures and make him follow the path of spirituality.

39. The viśuddhi chakra, in the region of the throat above the chest, and at the base of the neck, is the element of ether (ākāśa). It represents the intellectual body (vijñānamaya kośa). When it is activated, the sādhaka's power of understanding increases. He becomes intellectually alert. His speech becomes distinct, clear and fluent.

40. The ajñā chakra represents the abode of joy (ānandamaya kośa). When it is activated, the sādhaka gains perfect control over his body and develops a spiritual aura.

41. Soma chakra regulates the temperature of the body.

42. When the lalāṭa chakra is activated, the sādhaka becomes the master of his destiny.

43. The sahasrāra chakra, also called sahasrāra dala (dala = a body of troops, a large number) is the seat of the Supreme Spirit (Parabrahaman) at the end of the Brahma nāḍī or suṣumṇā.

44. When the kuṇḍalinī energy reaches the sahasrāra, the sādhaka has crossed all barriers and becomes an emancipated soul (siddha). This state is referred to in the *Ṣaṭ Chakra Nirūpaṇa* (Verse 40) as the State of Void (Śūnya Deśa).

Chapter 6

Guru and Śiṣya

1. The guru (teacher) and his pupil (śiṣya) are together concerned with spiritual knowledge (Brahma-vidyā). The guru first studies his pupil and discusses what the pupil knows, while the pupil studies the guru and the subject he is being taught. The next step for the pupil is prolonged ascetic practice (tapas) until the knowledge has been fully absorbed. In time wisdom (prajñā), the fruit of first-hand experience, matures and the guru and śiṣya explore it together.

2. The Sanskrit word guru is derived from the two roots 'gu' meaning darkness and 'ru' light. As a teacher of sacred knowledge he removes the darkness of ignorance and leads his pupil towards enlightenment and truth. He is also one from whom we learn right conduct or under whom one studies how to lead a good life. Free from hatred, he has searched widely for truth. He puts his spiritual knowledge into practice. He is not content with the theoretical level only. He shows by example what he has experienced and lives up to what he preaches. A guru should be (a) clear in his perception and knowledge, (b) regular in spiritual practice (anuṣṭhāna), (c) constant and determined in study (abhyāsa), (d) free from desire for the fruits of his actions (karma phala thyāgi or vairāgya), and (e) pure in what he does to guide his pupils in the true essence of knowledge (paratattva). He shows them how to turn their senses and intelligence inwards, so that they learn to explore themselves and to reach the source of their own being (Ātmā). The guru is the bridge between the individual (jīvātmā) and God (Paramātmā).

3. The classical examples of the guru-śiṣya relationship are those mentioned in the *Kaṭhopaniṣad* and in the *Bhagavad Gītā*. In the former, Yama, the God of Death gives spiritual knowledge to the earnest seeker Nachiketā, who with unhesitating courage faces death. In the latter, Śri Kṛṣṇa removes the doubts and dejection of the mighty bowman Arjuna, whose unerring aim and spirit of humility led him to the highest goal of life.

4. The strength and energy of a robber named Ratnākara were diverted by the sage Nārada towards God. The robber ultimately became the sage Vālmīki, the author of the epic *Rāmāyaṇa*. By way of parable the *Rāmāyaṇa* compares the human body to Laṅkā, the island kingdom of Rāvaṇa,

the ten-headed demon king with an inflated ego. The ten heads are the organs of knowledge and action, whose desires have no bounds; like the ocean around the island, Sītā, the individual soul or prakṛti, is kept confined in Aśokavana, Rāvaṇa's pleasure garden. Sītā is dejected and full of sorrow at the forced separation from her Lord, Rāma, and thinks of him constantly. Rāma sends his messenger Hanumān, son of Vāyu (the vital wind), to console Sītā and raise her flagging spirit. Hanumān helps to destroy Rāvaṇa, the ego, and to reunite Sītā and Rāma (prakṛti and puruṣa; jīvātmā and Paramātmā). As Hanumān brought about the reunion of Sītā and Rāma, prāṇāyāma brings about the reunion of the sādhaka with his Ātmā.

5. Initially the guru brings himself down to the level of his pupil, whom he encourages and gradually lifts up by precept and example. This is followed by teaching adjusted to the pupil's fitness and maturity until the latter becomes as fearless and independent as his guru. Like a mother cat holding a blind and helpless kitten in her mouth, he first checks the movements of his pupil, leaving him with little initiative. In the next stage, he allows him the same freedom that a mother monkey does when her baby first releases its grip on her fur, for she keeps it close to her. In the first stage, the pupil is under the unquestionable discipline of the guru; in the second stage he surrenders his will completely. In the third stage, like the fish with unwinking eyes he becomes both skilful and clean in thought, word and deed.

6. Pupils are of three categories – dull, average and intense or superior. The dull pupil has little enthusiasm, being sensual, unstable and cowardly. He is unwilling to shed his negative qualities or to work hard for self-realisation. The second type of pupil is a waverer, equally attracted towards worldly matters as by the spiritual, sometimes giving weight to the one and sometimes to the other. He knows what is the highest good, but lacks courage and determination to hold on steadfastly. He needs strong treatment to correct his fickle nature of which the guru is aware. The intense or superior pupil has vision, enthusiasm and courage. He resists temptations and has no hesitation in casting off qualities which take him away from his goal. He therefore becomes stable, skilful and steady. The guru is always alert to find a way to guide his intense pupil to realise his highest potential until he becomes a realised soul (siddha). The guru is always happy with his pupil, who may eventually surpass him.

7. A worthy pupil finds his guru by the grace of God. Satyakāma-Jābāli, who confessed that he was not aware of his parentage, was accepted as a pupil by the sage Gautama, who was impressed by his innocence and truthfulness. Śvetaketu proudly returned home after years of study, but

failed to answer when his father Uddālaka asked him what had made a huge tree grow from a tiny seed. When with due humility Śvetaketu confessed his ignorance, his father accepted him as a pupil and gave him spiritual knowledge. A disciple should hunger after spiritual knowledge and self-control. He should practise constantly with attention and possess great endurance.

8. Spiritual training (sādhana) has nothing to do with theoretical study, but it leads to a new way of life. Just as sesame seeds are crushed to yield oil and wood ignited to bring out its latent heat, so must the pupil be unswerving in his practice to bring out the knowledge latent within him and find his own identity. When he realises that he is a spark of the Divine Flame burning throughout the universe, then all his past impressions (saṁskāras) are burnt out, and he becomes enlightened. He is then a guru in his own right.

Chapter 7

Food

1. The *Mahānārāyaṇopaniṣad* (79–15) describes food (anna) as the primary requisite without which man cannot develop his anatomical body to the spiritual level. It is stated that the sun radiates heat which evaporates water. The vapour becomes clouds from which rain falls to the earth. Man tills the earth and produces food which, when consumed, creates the energy that maintains vigour. Vigour engenders discipline, which develops the faith that gives knowledge; knowledge bestows learning, which brings composure that creates calmness; calmness establishes equanimity, which develops memory that induces recognition; recognition brings judgement, which leads to the realisation of the 'Self'.

2. The body needs food containing the right balance of carbohydrates, proteins, fats, vitamins and mineral salts. Water is needed to help digestion and assimilation. Food in the form of nourishment is finally assimilated in various forms throughout the body.

3. Food should be wholesome, palatable and congenial to the body, and should not be eaten merely to gratify the senses. It is broadly divided into three kinds – sāttvic, rājasic and tamasic. The first promotes longevity, health and happiness; the second produces excitement, and the third creates disease. Rājasic and tāmasic food make the consciousness dull and impede spiritual progress. It is the duty of the sādhaka to find out by trial and experience which is suitable for him.

4. Whereas it is true that character is influenced by food, it is equally true that the practice of Prāṇāyāma changes the eating habits of the sādhaka. Man's temperament is influenced by his diet because what he eats affects the functioning of the mind. Sāttvic vegetarian food, however, may be taken by tyrants with disturbed minds, full of hatred, yet they remain rājasic or tāmasic. In the same way noble characters (like the Buddha or Jesus) may not be affected by the type of food offered to them or by those persons who give it, though they would normally be regarded as tāmasic. It is the state of mind of the eater that is important. Yet a diet consisting of sāttvic food only will help the practitioner to maintain a clear and unwavering mind.

5. The body is the abode of the individual self (jīvātmā). If it were to perish from lack of food the 'self' would leave it just like a tenant who refuses to reside any longer in a dilapidated house. The body therefore, has to be protected to house the 'Self'. To neglect this body leads to death and destruction of the 'Self'.

6. According to the *Chāndogyopaniṣad* (VI 7.2) solid food, fluids and fats which fuel the body are each split up into sixteen parts on consumption. Food is divided into three of these; the grossest becomes faeces, the medium becomes flesh, and the subtlest becomes the mind, in the ratio of 10/16, 5/16 and 1/16 respectively. With fluids, the grossest becomes urine, the medium becomes blood and the subtlest becomes energy (prāṇa). Similarly with fats, the grossest ingredient becomes bone, the medium becomes marrow and the subtlest speech (vāc). Śvetaketu lived on fluid for fifteen days and lost his power of thinking, but regained it as soon as he ate solid food again; his power of speech diminished when he went without fats. This experience revealed to him that the mind is the product of food, energy of fluids and speech of fats.

7. The *Haṭha Yoga Pradīpikā* (11.14) says that during his practice of prāṇāyāma the sādhaka has to eat pounded rice cooked in milk and clarified butter. When well established in prāṇāyāma, he may choose the food congenial to him and his practice.

8. Do not eat when saliva does not flow, for this indicates that the body does not need more food. Both the quantity and quality of food should be moderated. Chosen food might appear to be dainty and delicious, but it may not be good for the sādhaka. It may have high nutritive value and yet it may develop toxins affecting progress in prāṇāyāma. When one is really hungry or thirsty, food is immediately absorbed into the system and becomes nourishing. Water by itself can always quench thirst. Real thirst chooses no other drink but water. Restrain artificial hunger and thirst. Yoga texts prescribe that the sādhaka should fill half his stomach with solid food, one-fourth with fluids and keep one-fourth empty for the free flow of breath.

9. Do not eat when emotionally disturbed. While dining, talk well and eat wisely. When a noble frame of mind prevails while eating, all but poisonous food is sāttvic.

10. The fire of digestion is lit by the energy that arises from respiration. Moderate and nourishing food is essential to maintain vigour, strength and alertness. Avoid fasting.

11. According to *Taittirīya Upaniṣad*, food is Brahman. It is to be respected, not derided or abused.

Chapter 8

Obstacles and Aids

1. The sādhaka must be aware of the obstacles which disturb his prāṇāyāma practice consciously or unconsciously. He should avoid distractions and lead a disciplined life to prepare his body and mind.

2. Patanjali gives a list of obstacles to yogic practices. They are: sickness (vyādhi), lack of mental disposition (styāna), doubt about one's practices (saṁśaya), insensibility (pramāda), laziness (ālaysa), sensuality or rousing of desire when sensory objects possess the mind (avirati), false or invalid knowledge (bhrānti-darśana), failure to attain continuity of thought or concentration (alabhdha-bhūmikatva), instability to continue the practice due to slackness and failure (anavasthitattva), pain (duḥkha), despair (daurmansya), unsteadiness of the body (angamejayatva) and breathing (śvāsa-praśvāsa). (*Yoga Sūtra*, I 30/31). These either originate in man or are due to natural calamities and accidents. Man-made afflictions, brought about by over-indulgence and lack of discipline, affect the sādhaka's body and mind. Their cures are laid down in Yoga texts.

3. It may be noted that out of thirteen obstacles to yogic practices mentioned by Patanjali, only four deal with the physical body, namely, sickness, laziness, unsteadiness of the body and respiration. The remaining nine obstacles deal with the mind. The sage mentioned the stage of āsanas to enable the sādhaka to get rid of the obstacles affecting the physical body, before he was ready to tackle the mental obstacles by the practice of prāṇāyāma.

4. The *Haṭha Yoga Pradīpikā* (I 16) mentions the six destroyers of yoga practices; over-eating, over-exertion, useless talk, undisciplined conduct, bad company and restless inconstancy. According to the *Bhagavad Gītā* (VI 16) Yoga is not for those who gorge themselves, starve or sleep or stay awake too much. The *Yoga Upaniṣads* include bad physical posture and self-destroying emotion, like lust, anger, fear, greed, hatred and jealousy.

5. To continue and maintain his training, the pupil needs faith, virility, memory, meditation (samādhi) and acute insight (prajña). (*Yoga Sūtras*, I 20.)

6. To overcome these obstacles, Patanjali offered the four-fold remedy of friendliness and feeling at one with all that is good, compassion with devoted action to relieve the misery of the afflicted; delight at the good work done by others and avoidance of disdain for or feeling superior to the victims of vice. The *Haṭha Yoga Pradīpikā* prescribes enthusiasm, daring, fortitude, true knowledge, determination and a feeling of detachment, of being in the world but not of it, as the means to overcome the obstacles in the path of Yoga.

7. By moderation in eating and resting, by regular working hours and by the right balance between sleeping and waking, Yoga destroys all pain and sorrow, says the *Bhagavad Gītā* (VI 17). Yoga is working wisely and living a skilful, active life in harmony and moderation. What the sādhaka needs most is single-minded, devoted practice (*Yoga Sūtra*, I 32).

Chapter 9

The Effects of Prāṇāyāma

1. Āsanas improve the blood circulation throughout the body, including the head, trunk and limbs.

2. Those appropriate for legs and arms keep the circulatory system active. The arterial, capillary, venous and lymphatic circulation is stimulated by the rhythmic contraction and relaxation of the muscles which act as pumps by the opening up of new and unused vascular beds. This allows efficient supply and utilisation of energy and promotes a remarkable resistance to disease.

3. Although āsanas produce similar effects in the trunk, prāṇāyāma affects rhythmic expansion of the lungs, creating the proper circulation of the bodily fluids within the kidneys, stomach, liver, spleen, intestines, skin and other organs, as well as the surface of the torso.

4. The lungs are directly concerned with the disposal of carbon dioxide in the venous blood and preventing ammonia, ketones and aromatic amines from building up to toxic levels. The lungs need to be kept clean and free from bacterial diseases by an efficient circulation of blood and lymph. Prāṇāyāma helps here by keeping the lungs pure and by increasing the flow of fresh blood.

5. The functions of the liver depend on hepatic arterial current bringing in waste substances to be chemically altered so that they can be excreted in the bile and urine. It also depends on portal venous circulation to bring in blood from the stomach and small intestine to be filtered and processed to remove toxins and bacterial products. The liver also has an active lymphatic circulation and supplies scavenger cells (macrophages) which wander in the blood lymph, picking up solid wastes, foreign cells and their products for breakdown or storage. All these activities are stimulated by prāṇāyāma.

6. In the kidneys, production of urine is dependent upon the continuous filtration of large volumes of arterial blood through the renal cortex. This flow is susceptible to conflicting demands and is often too low. Tendencies to shunt blood away from the renal cortex are countered by auto-regulation

of flow by the local small arteries. This process depends on proper intra-renal pressures and hence will be aided by Prāṇāyāma in achieving the correct position, shape and state of tension in the kidneys. Internal massage by phasic activity in the abdominal and back muscles will stimulate renal lymph flow, so essential to keeping the organ healthy.

7. The rhythmic use of the diaphragm and abdominal muscles in prāṇāyāma directly stimulates the peristaltic and segmenting movements of the intestines, as well as promoting intestinal circulation. Thus, it helps the intestine in its functions of absorbing food materials and disposing of solid wastes, mainly unabsorbed food and the products of our friendly bacteria, the colonic flora, as well as those containing the residue of secretions from the liver (bile), pancreas and intestines.

8. The spleen, just under the left diaphragm, acts as a filter to purify the circulating blood of worn-out oxygen-carrying red cells. Much of the splenic blood circulation is within lymphatic structures and is stimulated by prāṇāyāma.

9. Prāṇāyāma helps to maintain the flow of pure blood, which tones the nerves, brain, spinal cord and cardiac muscles, thus maintaining their efficiency.

10. The sweat glands act as accessory micro-kidneys, especially when stimulated by prāṇāyāma.

11. According to yogic texts, regular practice of Prāṇāyāma prevents and cures diseases. Improper practice, however, may cause asthma, cough, hyper-tension, pain in the heart, ears and eyes, dryness of the tongue and hardness of the bronchioles. (*Haṭha Yoga Pradīpikā*, II 16–17.)

12. Prāṇāyāma purifies the nāḍīs, protects the internal organs and cells, and neutralises lactic acid, which causes fatigue, so that recovery is quick.

13. Prāṇāyāma increases digestion, vigour, vitality, perception and memory. It frees the mind from the grasp of the body, sharpens the intellect and illumines the self.

14. An erect spine can be compared to a cobra which has lifted its hood. The brain is the hood and the organs of perception are the fangs, while bad thoughts and desires are the poison glands. Practice of prāṇāyāma quietens the upsurge of the senses and desires. Thus the mind becomes sacrosanct or free of thoughts (nirviṣaya). The sādhaka's words, thoughts and deeds become clean and pure. He maintains firmness (achalatā) in the body and steadiness (sthirathā) in his intellect.

15. Practice alone brings strength and knowledge. Daily practice ensures success and perfect consciousness, which purge the sādhaka from the fear of death. (*Śiva Saṁhita*, IV 17/18.)

16. The sādhaka experiences a state of serenity. He no longer thinks of the past, nor fears the future, but remains ever in the present. When he has mastered prāṇāyāma while sitting in padmāsana, he is ready to become a liberated soul says the *Haṭha Yoga Pradīpikā* (I 49).

17. As wind drives away smoke and impurities from the atmosphere and its inherent quality is to burn and purify the area, prāṇāyāma is a divine fire which cleanses the organs, senses, mind, intellect and ego.

18. As the rising sun slowly disperses the darkness of night, prāṇāyāma removes the impurities and refines the sādhaka and prepares his body and mind to become fit for concentration (dhāraṇa) and meditation (dhyāna)—*Patanjali Yoga Sūtra*, II 52, 53.

19. Prāṇāyāma is the window of the 'Self'. That is why it is called the great austerity (mahā tapas) and the true knowledge of the Self (Brahma-vidyā).

Section II

The Art of Prāṇāyāma

Chapter 10

Hints and Cautions

1. As Ādi Śeṣa, the Lord of the serpents, is the supporter of Yoga (*Haṭha Yoga Pradīpikā*, III 1), so Prāṇāyāma is the heart of Yoga. Yoga is lifeless without Prāṇāyāma.

2. The normal rate of breathing is fifteen times a minute and 21,600 times in every twenty-four hours. However, the number varies according to one's way of life, health and emotional state. Since prāṇāyāma lengthens the time taken by each in and out breath, thereby slowing down the process of ageing, its practice leads to a longer life.

3. In old age, the respiratory function decreases, due to the contraction of the air cells of the lungs, which take in less oxygen. Prāṇāyāma will help to normalise their size and make the red corpuscles circulate in all parts of the body, infusing life and vigour throughout. By its practice even old people can delay the ageing process.

4. The body is the field (kṣetra) of righteousness (dharma) and also of tribulation (kuru). It is the former when used for good and the latter when for bad. It is the field and the Self is the knower (kṣetrajña) thereof. Prāṇāyāma is the bond between the two.

5. Breathing in prāṇāyāma should always be through the nose, except where otherwise stated as in Ch. 24.

Qualifications for Fitness

6. Mastery of the alphabet leads to mastery of the language. Prāṇāyāma is the root of spiritual knowledge, knowledge of the Self (Ātma jñāna).

7. Mastery in prāṇāyāma is the next step after āsanas have been mastered. There is no short-cut.

8. Āsanas bring elasticity to the fibres of the lungs for better performance of prāṇāyāma.

9. The overall length of the nerves in the body is about 6000 miles. Their functions being supremely delicate, extra care and attention are needed to

keep them clean and clear. Repeated performance, with greater duration of each āsana in many varieties, keeps the nervous system clean and clear, thus aiding an uninterrupted flow of energy (prāṇa) while doing prāṇāyāma.

10. Bad and poorly performed postures lead to shallow breathing and low endurance.

11. If the body is neglected or pampered, it becomes a treacherous ally. Discipline the body by āsanas and the mind by prāṇāyāma. This is a sure step to self-realisation, which frees you from the dichotomy of pleasure and pain.

12. As food is essential to sustain the body, the proper intake of air must be provided for the lungs to maintain the life force (prāṇa).

13. Before attempting prāṇāyāma, learn how to move the intercostal muscles correctly, also the pelvic and thoracic diaphragm, by practising the relevant āsanas.

14. Empty the bladder and bowels before starting prāṇāyāma. Constipated persons can practice prāṇāyāma, as the bowels cannot be damaged in the same way as the bladder.

15. A trainer of tigers, lions or elephants studies their habits and moods and then puts them through their paces slowly and steadily. He treats them with kindness and consideration lest they turn on him and maim him. It is the same with the sādhaka. A pneumatic tool can cut through the hardest rock. If not used properly, it may destroy both the tool and the user. Study your breathing carefully and proceed step by step, for if you practise prāṇāyāma hastily or too forcibly, you may well harm yourself.

16. Practise at a fixed time each day and in the same posture. Occasionally, the same set of prāṇāyāma creates uneasiness. Be quick to switch over to a breathing pattern more conducive to the body and mind, and soothing to the nerves and brain, so that they are rejuvenated and refreshed. Prāṇāyāma should not become a blind routine.

17. Analyse and mould the breath with thorough understanding, clarity and wisdom.

Place

18. Choose a secluded, clean, airy place, free from insects, and practise during quiet hours.

19. Noise creates restlessness, disturbance and anger. Avoid prāṇāyāma at such times.

Cleanliness

20. One does not enter a temple with a dirty body or mind. Before entering the temple of his own body, the yogi observes the rules of cleanliness.

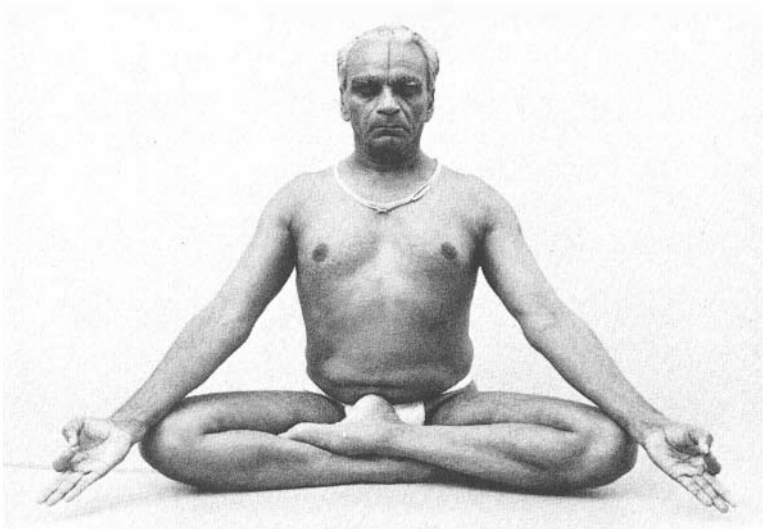
Time

21. Yoga texts insist that one should complete eighty cycles of prāṇāyāma four times a day in the early morning, noon, evening and at midnight, which not everyone can do. However, a minimum of fifteen minutes per day is essential, but this is not long enough for a devoted sādhaka. (One cycle of prāṇāyāma consists of inhalation, internal retention, exhalation and external retention.)

22. The best time for practice is the early morning, preferably before sunrise, when industrial pollution is at its lowest, and the body and brain are still fresh. If mornings are unsuitable, prāṇāyāma may be practised after sunset, when the air is cool and pleasant.

Posture

23. Prāṇāyāma is best practised while sitting on the floor on a folded blanket. Study Ch. 11 on the art of sitting. The postures suitable are siddhāsana, swastikāsana, bhadrāsana, vīrāsana, baddhakoṇāsana and padmāsana (Pls 3 to 14). However any other posture will do provided the back is kept erect from the base of the spine to the neck and perpendicular to the floor.



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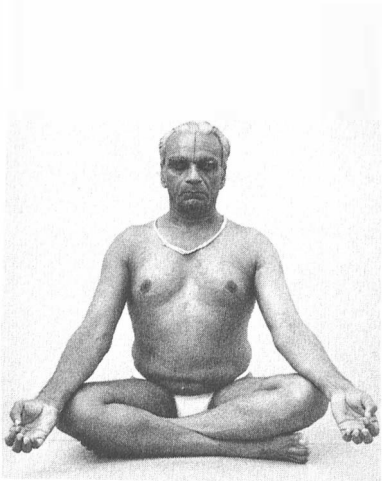

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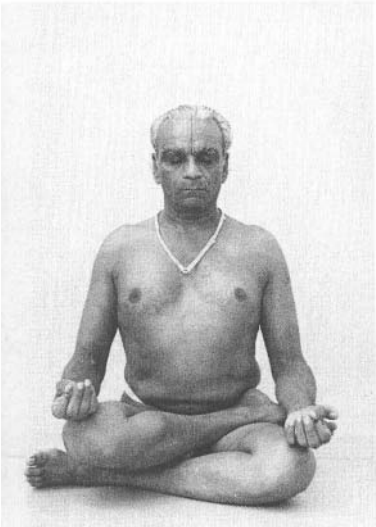

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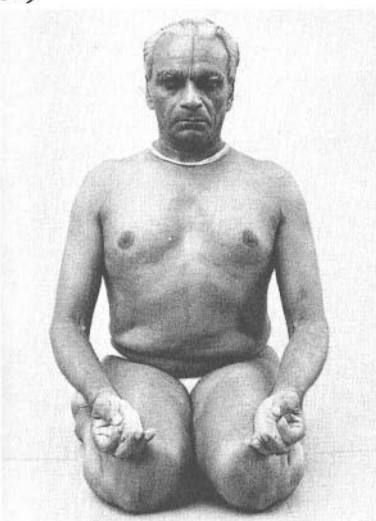

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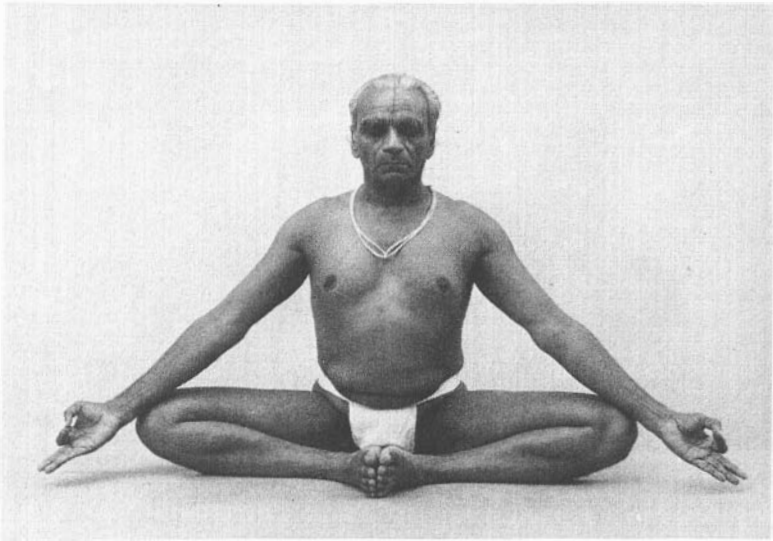
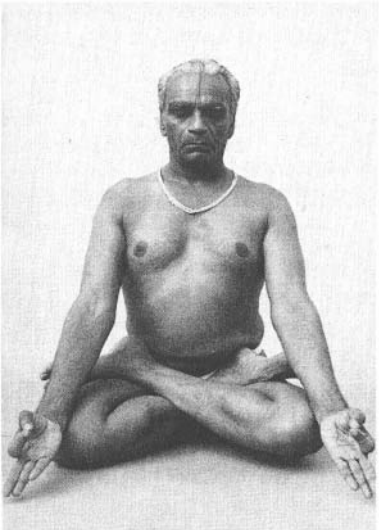


Pl. 11

Pl. 12



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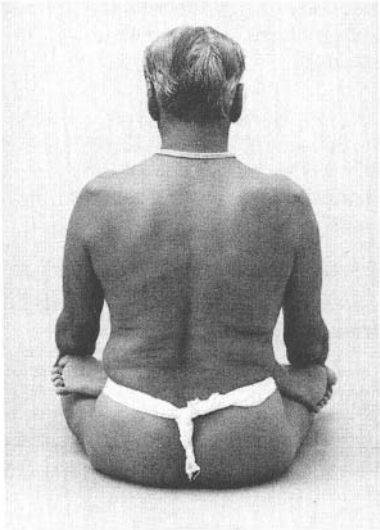


Pl. 14

Body

24. As an earthen pot must be baked in a furnace before it is used to store water, so should the body be baked by the fire of āsanas to experience the true effulgence of prāṇāyāma.

25. The body is tāmasic, the mind rājasic and the Self sāttvic. Develop body intelligence to the level of the mind through āsanas. Then raise both body and mind to the level of the Self through prāṇāyāma for the prāṇa to move throughout the body. This in turn keeps the body agile, the mind steady and the Self attentive.

26. The body is like a pit in which breath snakes in and out of the body. The chitta is the snake-charmer who entices the breath and acquires control over it.

Spine

27. The spine in man can be compared to an Indian lute (vīṇa). The gourd is the head from which sound is produced. The nose is the bridge which controls the sound vibrations caused by inhalation and exhalation. The resonance depends upon the tautness of the strings. If they are loose no sound is produced; if they are too tight there is no vibration and they may even snap. String tension is adjusted to produce the required resonance,

intensity and pitch. In the same way, the nāḍīs and nerves in the spinal column have to be positioned so that the breath can move with rhythm and harmony.

28. Adjust the spine from the base, vertebra by vertebra, as if you were building a brick wall. Keep the right and left sides of the spinal column parallel by moving them independently and rhythmically in line with the central spine. In prāṇāyāma the front of the spine is more dynamic than the back.

Ribs
29. Move simultaneously the back ribs in, the side ones forward and the front ones upwards together.

Legs and Shoulders
30. Keep the arms passive. Do not tighten or lift them up or backwards. If they are tight, pins and needles and numbness result. This also happens at the start in any unaccustomed posture and disappears when you get established in it.

Nails
31. Pare the nails so that they do not hurt the delicate nasal skin while doing digital Prāṇāyāma.

Saliva
32. Saliva flows at the beginning of Prāṇāyāma. Swallow it after breathing out, but before breathing in, and never while holding the breath. Do not stiffen or press the tongue against the teeth and palate, but keep it and the throat passive.

Eyes and Ears
33. Prāṇāyāma should be practised with closed eyes and āsanas with open eyes.

34. Close the eyes gently and look down within at the heart without hardening the eye-balls. This inner observation or feeling is most revealing.

35. If the eyes are kept open, a burning sensation results, you feel irritable and restless and the mind is distracted.

36. Open your eyes for a split second once in a while to check your posture and correct any unevenness.

37. Keep the inner ears alert but passive. They are the windows of the mind. Tune them to the vibrations of inhalation and exhalation and to the soundless state of retention.

Skin

38. The skin performs two important functions, absorption and elimination. It absorbs and gives out heat, acting as a thermostat to keep the body temperature even. It also helps to eliminate organic and inorganic salts.

39. Skin is a source of perception. Maintain a constant and coherent communication between its movement with the inner awareness throughout your practices.

40. Keep the skin of the trunk active and dynamic and that of the skull, face, legs and arms soft and passive.

41. Perspiration appears at the start but disappears in due course.

Brain

42. Keep the brain receptive and observant. Use it to induce the lungs to act without becoming involved in the action; for if it does it cannot at the same time watch the process of breathing.

43. Prāṇāyāma is tāmasic when the trunk and spine are dull and rājasic when the brain is involved. Only when the torso is firm, the brain receptive and the self attentive, is prāṇāyāma sāttvic.

44. Memory is a friend if you use it for progress and refinement in your practice. It is a hindrance when you brood over and repeat past experiences. See new light each time in your practice.

45. Practice and surrender of desire are the wings of prāṇāyāma which take the sādhaka to higher spheres of knowledge and to the realisation of the Self (Ātmā).

46. Master samavṛtti prāṇāyāma (equal duration of inhalation, exhalation and retention) before attempting viṣama vṛtti (breathing with different ratios and duration of the three types). See Ch. 18 for details.

47. Never do āsanas immediately after prāṇāyāma. There is no harm in practising prāṇāyāma after āsanas. Prāṇāyāma, however, cannot be performed well after strenuous āsanas. It is advisable to practice both at different times. Mornings for the former and evenings for the latter are ideal.

48. Do not practise when the mind or body are dull or depressed. For mental distress or disturbances perform āsanas described in *Light on Yoga* and śavāsana for physical exhaustion (see Ch. 30). Then resume prāṇāyāma.

49. Do not perform internal retention (antara kumbhaka) when the brain is highly sensitised, as it may suffer injury from sudden disturbances, nor before you go to sleep, as it keeps you awake. Instead, perform prāṇāyāma without retention of breath or pensive external retention (bāhya kumbhaka), for both induce sleep, the latter being a cure for insomnia (see Chs 19, 20: Stage II in lying positions, and 21).

50. Do not perform prāṇāyāma in haste nor when the lungs are congested.

51. Do not talk or walk immediately after prāṇāyāma, but relax in śavāsana for a time before attending to other activities.

52. Do not practise just after meals or when hungry, in which case a cup of tea or milk will do. An interval of four to six hours is necessary between meals and prāṇāyāma, but you can eat half an hour after practice.

53. Do not allow mistakes to take deep root, but watch for and eradicate them by training and experience.

54. Do not attempt retention (kumbhaka) at a tender age, but start at sixteen or eighteen years, otherwise your face will become prematurely old.

55. Stop prāṇāyāma for the day the moment heaviness and tightness are felt in the lungs or when the sound of your breathing becomes harsh or rough.

56. Faulty practice tenses the facial muscles, shakes the mind and invites disease. Irritability, heaviness and restlessness are the symptoms.

57. Prāṇāyāma helps to regulate one's conduct and energy perfectly.

58. When prāṇāyāma is performed properly diseases disappear and a radiant state of well-being, enlightenment and serenity is experienced.

59. Correct practice reduces the craving for worldly pleasures and leads towards the realisation of the Self, freeing the sādhaka from domination by the senses.

Prāṇāyāma for Women

60. During pregnancy, women can do all prāṇāyāma except kapāla-bhāti, bhastrikā, viṣamavṛtti prāṇāyāma, antara kumbhaka with long duration,

and bāhya kumbhaka with uḍḍīyāna. The following prāṇāyāmas are, however, very beneficial: ujjāyī, viloma, sūrya bhedana, chandra bhedana and nāḍī śodhana.

61. One month after delivery start both āsanas and prāṇāyāma as for a beginner and gradually increase the timings and variations.

62. The practice of prāṇāyāma is safe during the menstrual period. But uḍḍīyāna must be avoided.

Note

63. When heat is generated in the body due to practising āsanas and prāṇāyāma, stop for the day. Apply oil to the body, head, heels and soles and rub it in. After a while, take a hot bath and then do śavāsana for about fifteen minutes. The body will then be cool and fit for practice the next day.

Chapter 11

The Art of Sitting in Prāṇāyāma

How to Sit

1. In the *Bhagavad Gītā* (VI 10–15) Kṛṣṇa explains to Arjuna how a yogi should practise to purify himself:

'10. In a secret place, in solitude, let the yogi be constantly in harmony with his soul, master of himself, free from hope and worldly possessions.
'11. Let him find a spot which is clean and pure and sit on a seat that is firm, neither too high nor too low, covered with layers of cloth, deer-skin and with sacred (kuśa) grass.
'12. Seated there, let him practise Yoga for self-purification, with a concentrated mind, and with his organs of perception and action under control.
'13. With his body, neck and head erect, immovable and still, with his vision indrawn, his sight fixed as if at the tip of his nose.
'14. With soul at peace and fearless, firm in the vow of Brahmacharya, let him rest, with a vigilant controlled mind absorbed in Me as the Supreme.
'15. The yogi, whose mind is ever under his control, always striving to unite with the Self, attains the peace of Nirvāṇa – the Peace Supreme that rests in Me.'

2. Without giving anatomical details, the above quotation describes the traditional method of sitting for meditation (dhyāna). The Self (Ātmā) is no doubt beyond purity and impurity, but it gets caught by the desires and by the mind. Lord Kṛṣṇa says, 'As fire is covered by smoke and a mirror by dust, as an embryo is enveloped by the womb, so is the Self (Ātmā) engulfed in desires generated by the senses and by the mind'. (*Bhagavad Gītā*, III 38.) So keep the body firm as a mountain peak, and the mind still and steady as an ocean, for meditation (dhyāna). The moment the body loses its own intelligence or firmness, the intelligence of the brain loses its power of clarity, both in action and receptivity. When the body and the brain are well balanced, pure intellectual illumination (sāttvic prajña) is experienced.

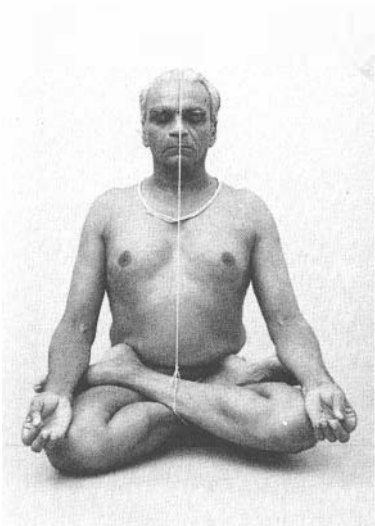
3. In meditation, the head and neck are held erect and perpendicular to the floor, whereas in prāṇāyāma chin-lock (jālandhara bandha) is performed. This prevents strain on the heart, keeps the brain passive and enables the mind to experience inner silence (see Ch. 13).

4. In the art of sitting for meditation (dhyāna) the aim is to sit straight, with the spine upright and the back ribs and muscles firm and alert. Therefore, position the body so that if a vertical line is drawn from the centre of the head to the floor, then the centre of the crown, the bridge of the nose, the chin, the hollow between the collar-bones, the breastbone, navel and pubic symphysis are in alignment (Pl. 15).

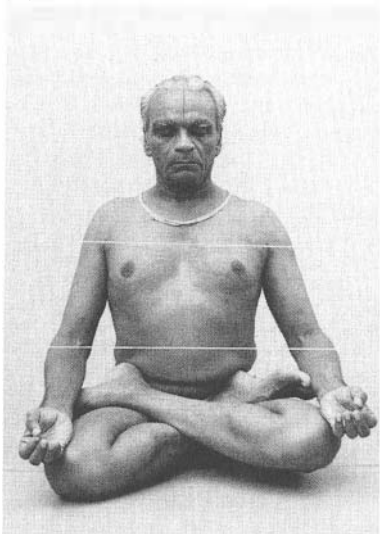
5. On the other hand, the eye-brows, ears, tops of the shoulders, collar-bones, nipples, floating ribs and pelvic bones at the hip joints should be kept parallel to each other (Pl. 16). Finally keep the mid-point between tops of the shoulder-blades in perpendicular with the sacrum to avoid body tilt.

6. In prāṇāyāma the first essentials are to learn how to sit correctly with the head down, so that the body remains straight and steady, and how the maximum amount of air can be taken into the lungs to oxygenate the blood. Keep the height of the spinal column the same throughout the practice.

Pl. 15



Pl. 16



7. Be continuously alert and adjust the body to a correct alignment throughout the practice, whether it be inhalation (pūraka), exhalation (rechaka) or retention of the breath (kumbhaka).

8. Just as an interior decorator arranges a room to make it spacious, so does the sādhaka create maximum space in his torso to enable his lungs to expand fully in prāṇāyāma. His capacity to do so increases with practice.

9. According to the *Bhagavad Gītā* the body is called the field (kṣetra) or abode of the Self (Ātmā) and the Self as the Knower of the Field (kṣetrajña), who watches what takes place when the body has been cultivated by Prāṇāyāma. Prāṇāyāma is the bridge between the body and the Self.

10. In order to cultivate the requisite field of activity in the torso, the first thing to bear in mind is how to sit. Unless the seat is firm, the spine will sink and give way, the diaphragm will not function properly and the chest will cave in, making it difficult to fill the lungs with life-giving air.

11. Here an attempt is made to describe in detail the technique of sitting for prāṇāyāma by dividing the body into four areas, namely: (a) the lower limbs, that is the buttocks and pelvis, hips, thighs, knees, shins, ankles and feet; (b) the torso; (c) the arms, hands, wrists and fingers; (d) the neck, throat and head. Be firm in the areas of buttocks and pelvis, which are the foundation for correct sitting.

12. When practising prāṇāyāma, one normally sits on the ground in a posture, such as siddhāsana, swastikāsana, bhadrāsana, vīrāsana, baddhakoṇāsana or pedmāsana (Pls 3 to 14). In all of them see that the spine and the ribs resemble the broad middle portion of a banana leaf (see Pl. 2), the spine being the stem and the evenly-spaced ribs the veins. The tailbone is like the end of the leaf. These postures have been described in *Light on Yoga.*

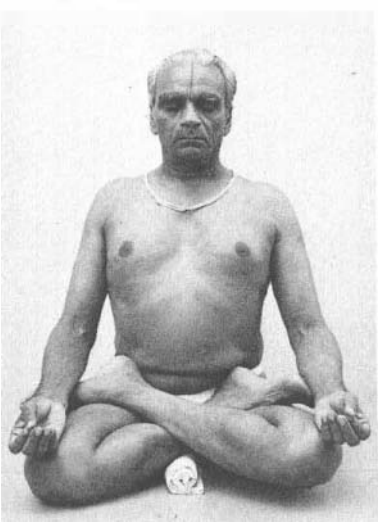
13. Although a number of postures are in use, in my experience padmāsana is the king of them all for the practice of prāṇāyāma or meditation (dhyāna). It is the key to success in both cases. In it, all the four areas of the body mentioned above are evenly balanced (as in Para. 11) and the brain rests correctly and evenly on the spinal column, giving psychosomatic equilibrium.

14. The spinal cord passes through the spinal column. In padmāsana, the adjustment and alignment of the spinal column and the ridges on either side move uniformly, rhythmically and simultaneously. The prāṇic energy flows evenly, with proper distribution throughout the body.

15. In siddhāsana the top part of the spine is more stretched than its other parts, while in vīrāsana it is the lumbar area that is more stretched. Some of these postures may be more comfortable, but for accuracy and efficacy padmāsana is the best of them all. In padmāsana the thighs are lower than the groin, the lower abdomen is kept stretched, with maximum space between the pubis and the diaphragm, enabling the lungs to expand fully. For those using padmāsana, particular attention should be paid to the three important joints of the lower body – the hips, knees and ankles – which have to move effortlessly.

PADMĀSANA

16. Sit on the base of the pelvis after doing padmāsana. Rest both buttocks evenly on the floor. If you sit more on one than the other, the spine will be uneven. Press the thighs down to the floor, bringing the thigh bones deeper into the hip sockets. Stretch the skin of the quadriceps towards the knees. This creates freedom round the knees to move diagonally and circularly from the top of the outer to the bottom of the inner knees. Bring the hamstring muscles closer in order to lessen the distance between the thighs. Then the anus and the genitals will not rest on the floor (Pl. 13). The line of gravity here is a very small area of the perineum between the anus and the genitals. The upward stretch of the spine begins from here and the body is simultaneously lifted upwards and sideways from the inner frame of the pelvis. Try and keep the top and bottom of the pubic areas perpendicular. If this is difficult, sit with the buttocks resting on a rolled blanket (Pls 17–18). In padmāsana both knees will not rest evenly on the floor (Pl. 13).



Pl.17

Pl. 18

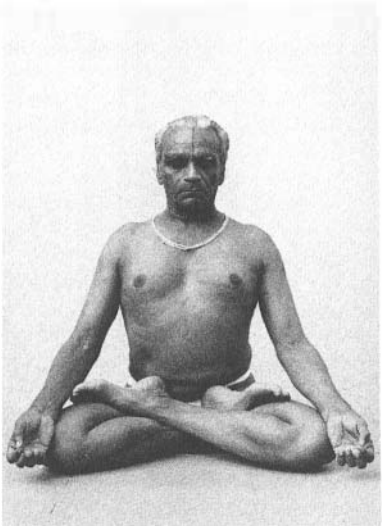
17. Do not turn the soles of the feet up to the ceiling, but keep them facing the side walls (Pl: incorrect 19 and correct 20). Stretch the metatarsals (the insteps), by turning the big toes towards the little ones, then the arches of the feet remain firm. If either arch drops, then the buttocks and the anus lose their grip, the trunk inclines and the spine sags in the middle, disturbing the whole balance of the torso. Do not spread out the knees or deliberately press them to touch the floor (Pl. 21 and 22). Any such attempt will only disturb the centre of gravity. Later, due to regular practice, though the knee remains above the ground one does not feel it. In order to get evenness in balance on the hips, it is advisable to rest the knee which is above the ground on a rolled towel (Pl. 23). Change the crossing of the legs on alternate days to get evenness in balance (Pl. 24).

The Torso

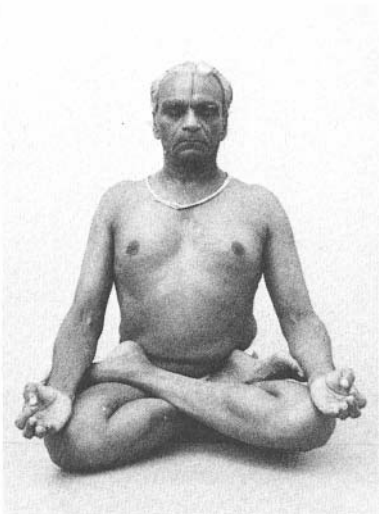
18. The torso or the trunk plays the most important part in the practice of prāṇāyāma. Keep the torso vigorously active, legs and arms dormant as if asleep, and the area from the neck to the crown of the head in a pure state of alert calmness. The trunk acts like a bridge between the static legs and arms and the alert but calm mind.

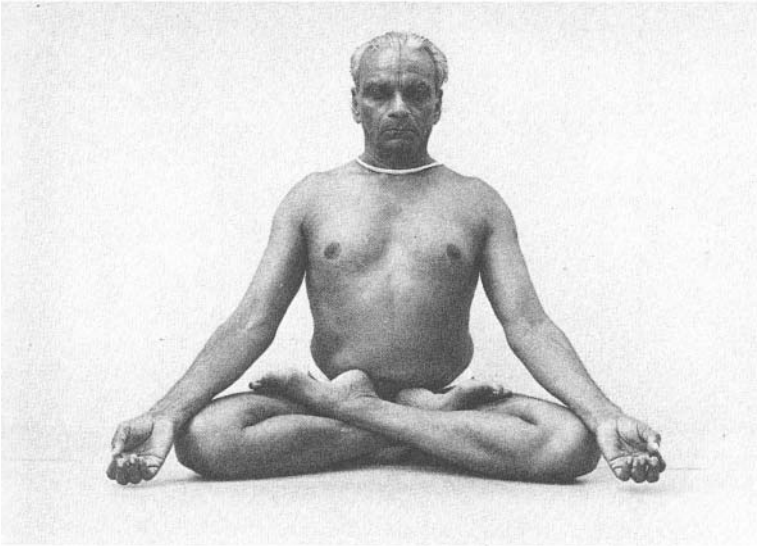
19. The torso will collapse if the spinal and intercostal muscles lose their grip, or if the vertebrae are not fully stretched. The muscles from the armpits to the hips, in front, in the back and on either side, are the keys. They

Pl. 19



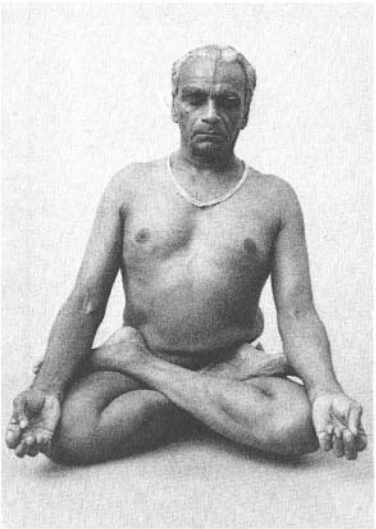
Pl.20





Pl.21

Pl.22



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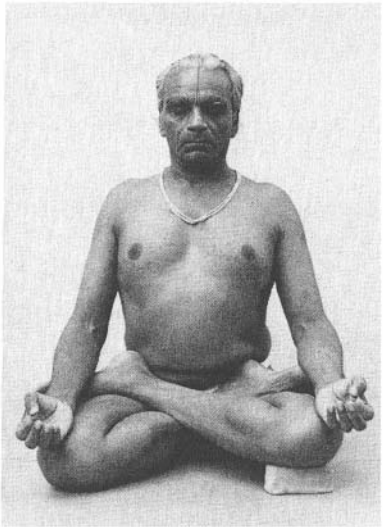

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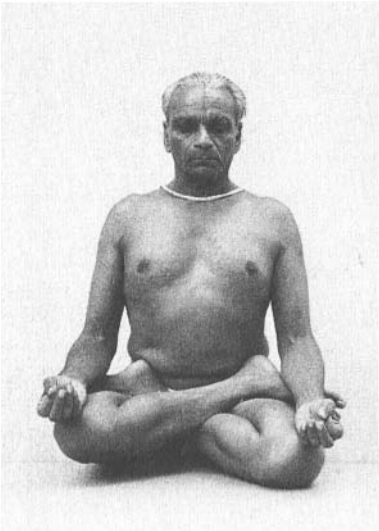

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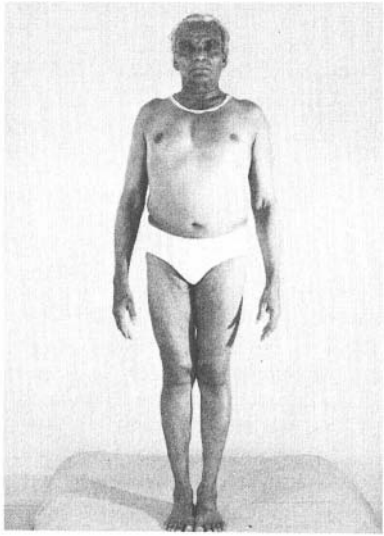


are anchored at the top to the collar-bones and shoulders, and at the bottom to the pelvis and the hip bone. Keep the back firm. Adjust the spine from the base to the top, that is, from the coccyx to the cervical vertebrae. Stretch the spinal column not only from the centre, but also from the left and right sides as well.

20. Keep the area of the navel passive and perpendicular to the floor. Narrow the area of the waist by lifting it up on either side. When lifting it up take care not to tighten it. Emotions, particularly fear, cause this area to become hard or tight, which affects the diaphragm and consequently breathing. When this area is passive the mind and the intellect stay serene. Then the body, mind and intellect are united with the Self.

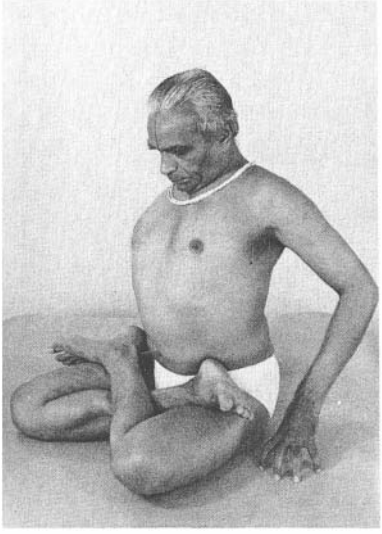
21. In tāḍāsana (Pl. 25) (see *Light on Yoga*) space is created from the base of the pubis to the navel and the area there is kept flat. In sitting positions simulate the tāḍāsana stretch. Always stretch from the frontal spine. Stretch all the way up from the anus to the pubis, to the navel, to the diaphragm, to the sternum and finally to the hollow of the collar-bones. If the pubis collapses, the purity of the sitting posture vanishes and the practice loses precision. When the chest is stretched correctly the lungs function efficiently and more oxygen flows into the system. Any blockages in the subtle channels (nāḍīs) of prāṇic energy are removed and the energy which is drawn in through inhalation flows freely through the system. As

the disc of the sun emits rays of light uniformly in all directions, so the Self radiates the vital energy of the inhaled breath in all the corners of the lungs when the sternum is well lifted and stretched.

22. Remember that extension cultivates the field which brings freedom, freedom brings precision, which in turn creates purity and this leads to divine perfection.

23. To find out whether you are sitting correctly or not, slightly bend the tips of the thumbs and separated fingers and press them lightly, gently and evenly on the floor beside the buttocks. Place the nails perpendicularly to the floor (Pls, side view 26, front view 27, back view 28). If the forefingers press down too hard, the head tilts forwards; if the little fingers, then the body tilts backwards. If the fingers of one hand press the floor more than the fingers of the other, the body tilts to the side where the pressure is more (Pl. 29). An even but steady pressure on the thumbs, middle and little fingers, and light pressure on the other fingers keeps the body upright. Do not jerk the shoulders or lift them up while pressing the fingers. Without lifting the knees, raise the buttocks slightly from the floor (Pl. 30), tighten the buttock muscles, tuck in the tail-bone and then place the buttocks on the floor. Those who cannot raise the buttocks with the tips of the fingers can do so by placing the palms on the floor as in Pl. 31.

Pl.26



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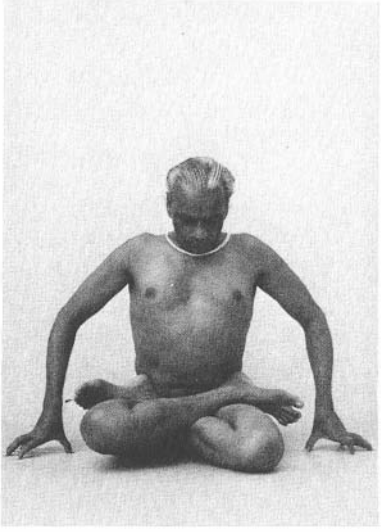

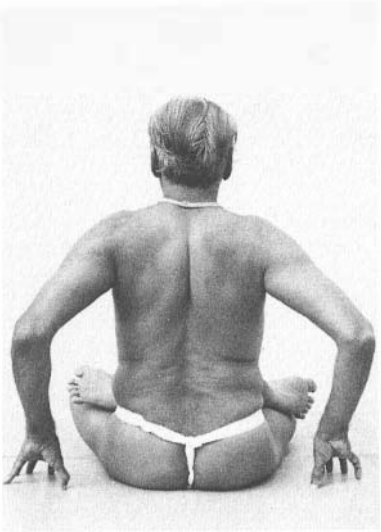

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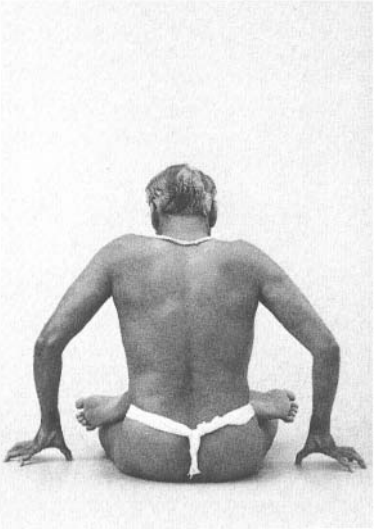
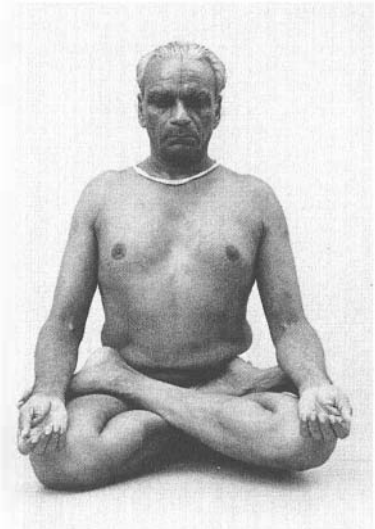


Pl.29

Pl.30

Pl.31



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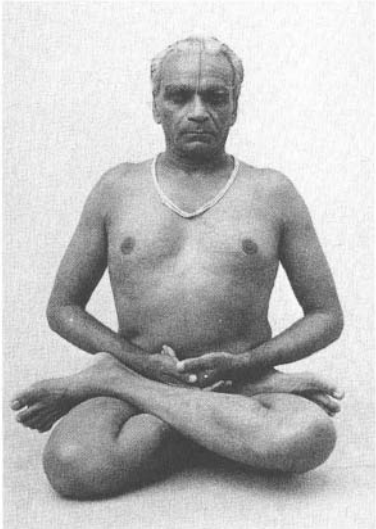


Pl.33

24. Lift the hands from the floor and rest the back of the wrists on the knees (Pl. 32) or left palm over the right on the lap and vice-versa (Pl. 33). This change of hands helps the back muscles to get a harmonious stretch. Do not straighten the arms at the elbows as this makes you lean forward (Pl. 34).

Three Crucial Spots

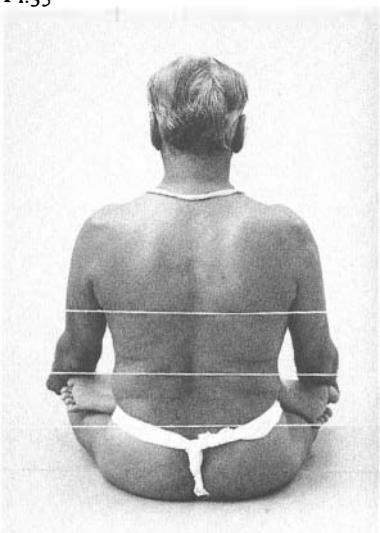
25. Remember the following three crucial spots in the body:

(i) the perineum between the anus and the genitals;
(ii) the sacrum and the first lumbar vertebra;
(iii) ninth thoracic vertebra at the back, and the centre of the breastbone in front (Pl. 35 and Fig. 18).

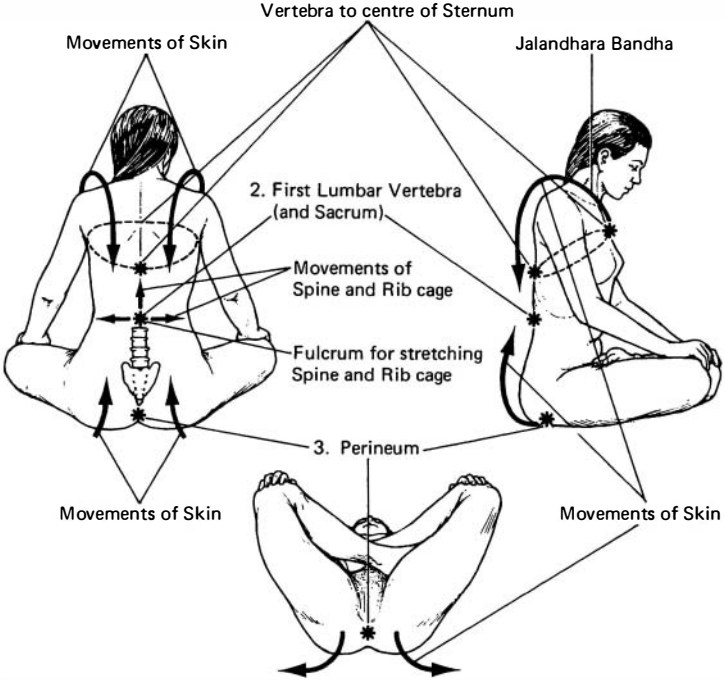
When the posture is correct, the skin from the back of the neck and shoulders moves down towards the base and that from the buttocks and hips stretches upwards. The maximum tension is felt at the first lumbar vertebra where these two opposing movements meet. The thoracic vertebra at the back and the centre of the breastbone in the front are lifted towards the chin, while the chin is bent downwards as in jālandhara bandha. The upward stretch of the skin at the centre of the breastbone helps the chin to bend down so that it rests in the notch between the collar-bones. The first lumbar is used as a fulcrum for stretching the spine vertically and opening the chest sideways to maintain the strength of the four pillars of the body

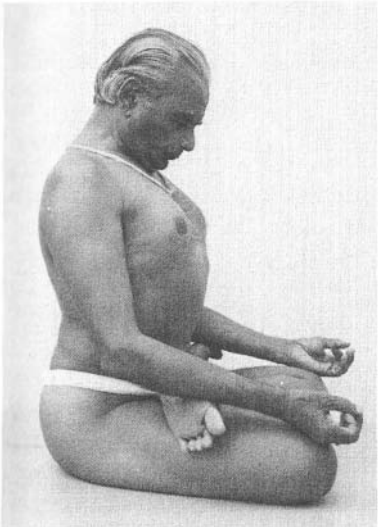
Pl.34

Pl.35



Three Crucial Spots





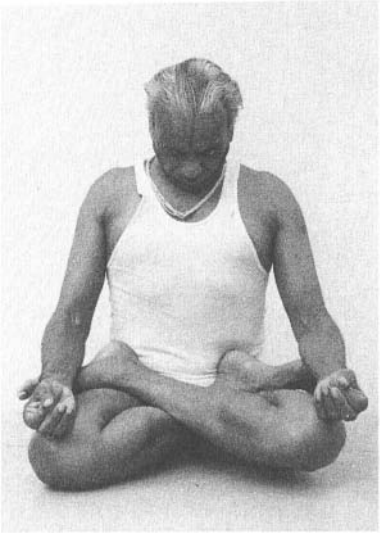
Pl.36

(corners of the torso) on either side. If the dorsal or the lumbar spine sags, the lungs do not expand properly. Only the correct movement and stretch of the skin at the back, the sides and the front of the torso enables the top lobes of the lungs to be filled.

Skin of the Torso

26. Like a bird spreading its wings in flight, keep the shoulder-blades down and open them away from the spine. Then the skin there moves down and the back of the armpits are slightly lower than the front ones. This prevents the back from drooping. The skin of the front is stretched sideways on each side as the breasts are lifted away from the armpits (Pl. 36).

27. The inner and the outer intercostal muscles inter-connect the whole rib cage and control diagonal cross-stretches. It is commonly understood that the action of the inner intercostal muscles is expiratory and the action of the outer intercostal muscles is inspiratory. Normal deep breathing techniques differ from that of prāṇāyāma techniques. In prāṇāyāma, the inner-intercostal muscles at the back initiate inspiration and the outer intercostal muscles at the front initiate expiration. In internal retention (see Ch. 15) the sādhaka has to balance evenly and fully the muscles of the chest wall throughout to release tension in the brain. The muscles and skin at the back must act in unison, as if interwoven, both in prāṇāyāma as well as in meditation (dhyāna).



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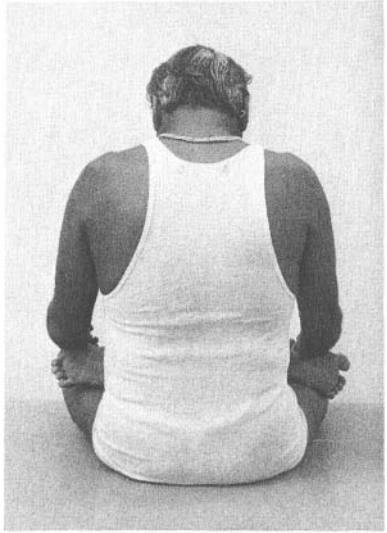
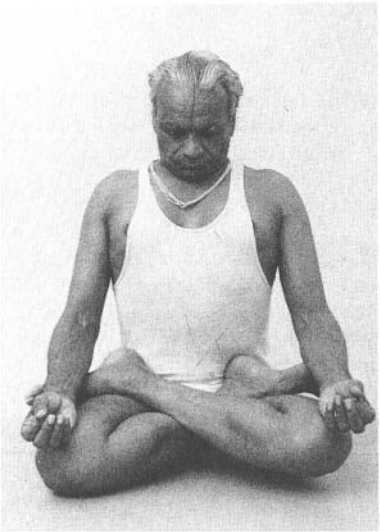
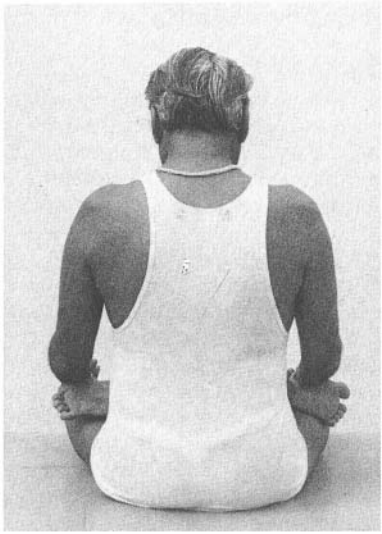


Pl.38

Pl.39



Pl.40



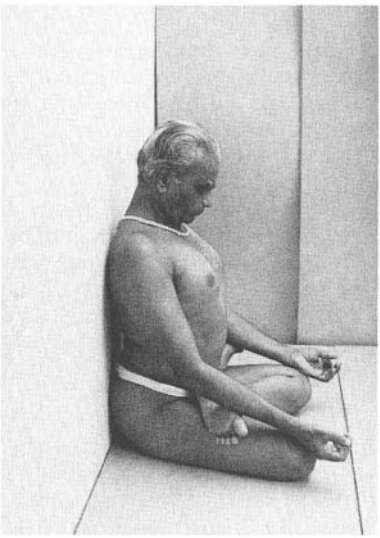
28. The tautness or the slackness of the skin of the trunk indicates emotional stability or the lack of it, and shows whether a person has achieved serenity and tranquillity of mind. If the skin at the top of the chest near the collar-bones caves in and sags, the person is a victim of his emotions. A firm chest is a sign of stability. If the chest and diaphragm are not kept steady and the activity of the skin is not co-ordinated with the movements of the back muscles, no serenity in breathing will be felt. If they are activated in co-ordination, courage comes to inspire the mind.

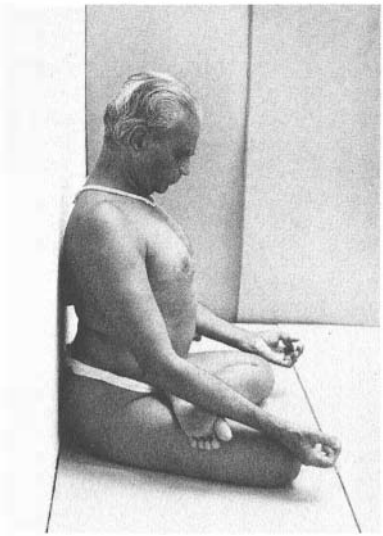
29. In the art of sitting, the back moves forward to meet the chest. Watch your clothing, for if your back touches the cloth, the movement is wrong, whereas if the front touches it is correct (faulty, Pls 37 and 38; correct, Pls 39 and 40).

30. Beginners may sit near a wall, tucking the buttocks close to it. Keep the base of the sacrum and the top of the shoulder-blades touching the wall. When the shoulders touch the wall the base of the sacrum tends to move away from the wall (Pl. 41). If this occurs, readjust the position (Pl. 42). Stretch the shoulder-blades outwards. To get the correct position, place between them, just behind the breastbone, a cake of soap, a piece of wood of a similar size, or a small rolled towel (Pl. 43).

Pl.41

Pl.42





Pl.43

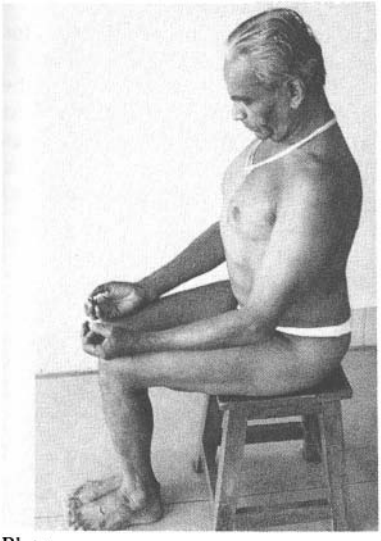
31. Jerky movements are a sign of fatigue, loss of attention or want of confidence. If they occur, do not waste time on prāṇāyāma, but practise āsanas, which develop the lungs and quieten the nerves.

32. At the beginning adjustments for correct movements cause pain and discomfort, but with time and with regular practice these disappear. Practice for the day should be stopped when the pain or discomfort becomes severe and unbearable. This is a sign that the torso is correctly positioned for the practice of prāṇāyāma.

33. Learn to distinguish between the right and the wrong types of pain. The right pain occurs only while prāṇāyāma is being practised and disappears immediately after śavāsana. If the pain persists it is of the wrong type and will continue to irritate the sādhaka, whereas the right type acts like a real friend, teaching fresh adjustments and adaptations, continually moulding the brain as well as the body.

Inability to Sit on the Floor

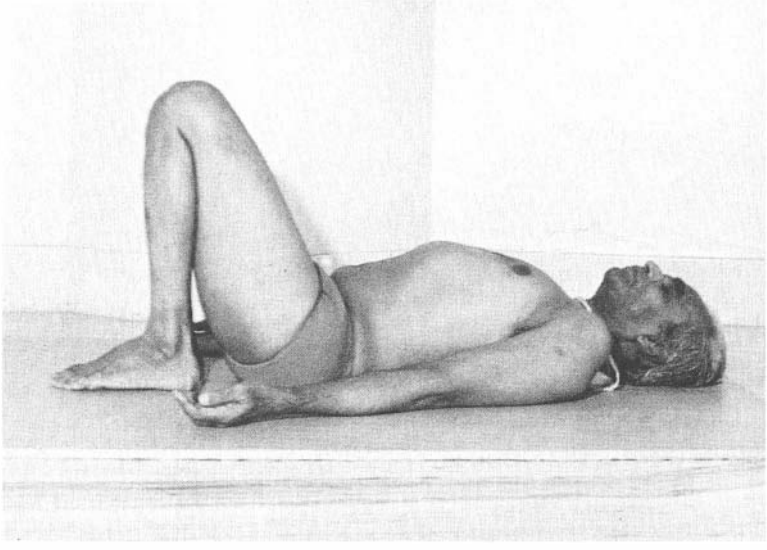
34. If through age, weakness or infirmity, sitting on the floor is impossible, a chair or stool may be used. But keep the feet flat on the floor, the thighs parallel with each other and parallel to the floor, and shins perpendicular to it (Pls 44 and 45). Keep the arms and legs relaxed, and free of all tensions, following all the points of this chapter as far as possible.



Pl.44

Pl.45

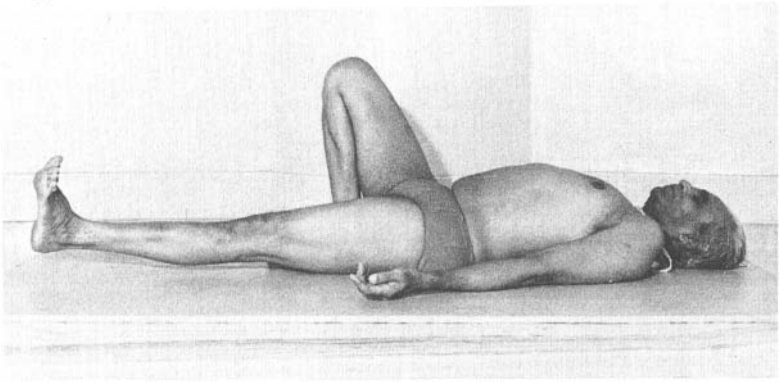
Pl.46



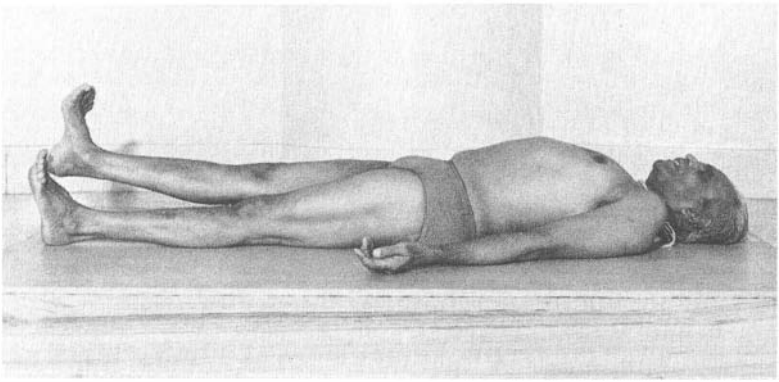
Numbness in the Feet

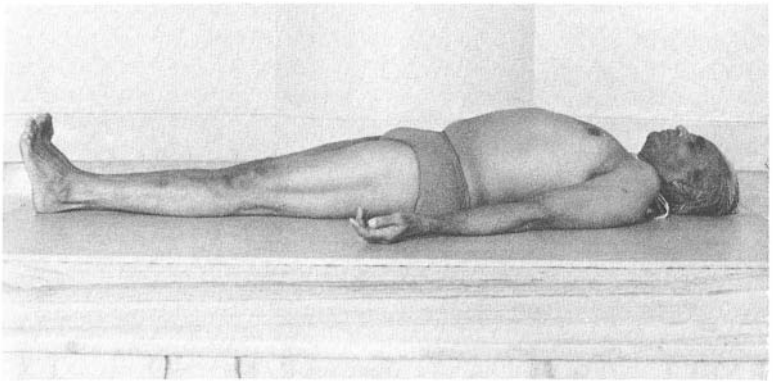
35. Sitting in any posture for prāṇāyāma causes numbness in the feet, for sitting in one position restricts the flow of blood. Correction, however, is easy. Do śavāsana for two or three minutes with bent knees, keeping the heels near the buttocks (Pl. 46). Then straighten the legs in turn (Pl. 47 and 48). Stretch the calf muscles, the back of the knees, heels, arches, with toes pointing to the ceiling (Pl. 49). Remain there for a while and then drop the feet to the sides (Pl. 50). This will make the blood circulate in the legs and the numbness of the feet will disappear.

Pl.47



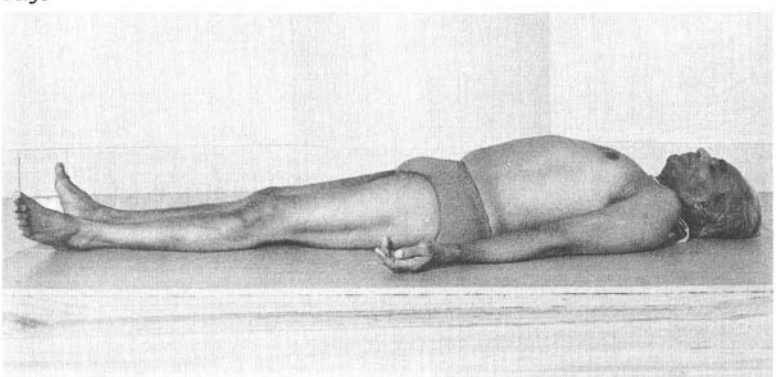
Pl.48





Pl.49

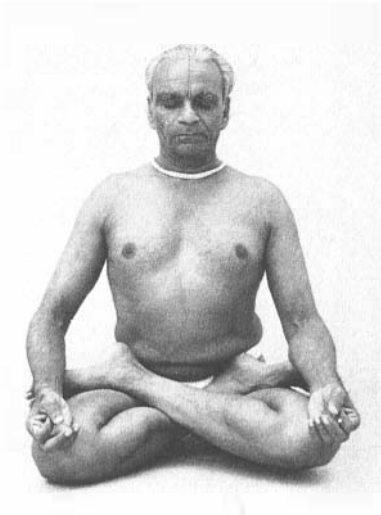
Pl.50



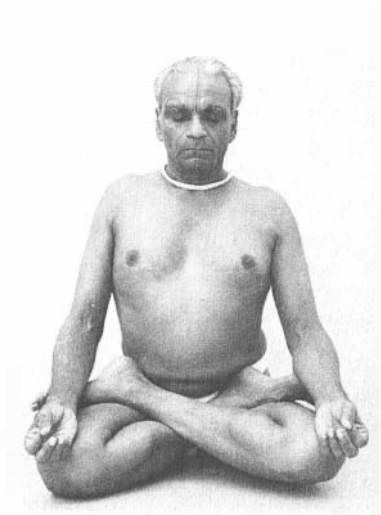
Arms and Shoulders

36. Spread the shoulders away from the neck on either side. Take them down as low as possible away from the lobes of the ears, and keep them parallel to the floor. The skin at the front of the armpits faces upwards, that at the back downwards. The shoulders tend to move up towards the ears during the practice of prāṇāyāma. Consciously and continually adjust them. This brings the elbows closer to the ground and ensures that the stretch and length of the upper arms at the front and back is even. Do not spread the elbows or move them up towards the shoulders (Pls 51 and 52).

37. The adjustment of the lower arms and placement of the fingers on the nostrils for certain types of prāṇāyāma are discussed in detail in Ch. 22.



Pl.51



Pl.52

Head and Throat

38. Except when lying down, never keep the head erect; form a chinlock, so that the crown of the head does not go up, but remains undisturbed throughout the practice of prāṇāyāma. This clears the subtle passages of the two nāḍīs at the sides of the bridge of the nose. Constriction at the bridge of the nose, stiffness of the throat and tightness around the back of the neck indicate that the head position is wrong. In order to correct the head position, release the inner tensions of the throat, relax the area of the upper lip and bring the eye-balls down.

39. Relax the skin of the skull and keep the nerves passive, so that the brain remains quiet and stable. Never tighten or raise the skin over the temples. Do not compress the lips, but keep them relaxed and passive with the corners soft.

Tongue

40. Keep the tongue passive and relaxed, resting on the lower palate. See that its tip does not touch the upper palate or the teeth. Do not clench the jaws nor move the tongue while inhaling, exhaling or holding the breath. If the tongue moves, saliva will flow. However, when you begin practising Prāṇāyāma saliva will flow and accumulate. Do not worry, but swallow it before taking a fresh breath. If you keep the tongue passive, the flow will stop gradually.

Nose

41. The nose regulates the flow and sound of breath. Keep the tip of the nose and the bridge between the eye-brows pointing to the sternum without tilting the head to the side. The tip of the nose tends to rise during inhalation, so be attentive and keep the bridge down deliberately. If the bridge or the tip of the nose moves up, the sound of breathing will be rough.

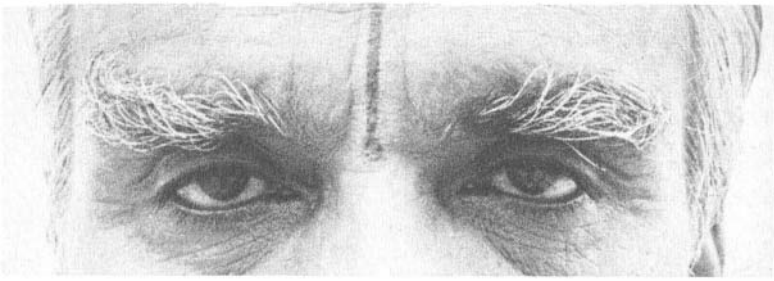
Eyes and Ears

42. The eyes control the fluctuations of the brain; the ears of the mind. They are the rivers that take the brain and the mind to the sea of the soul. Prāṇāyāma should be practised with eyes closed and motionless and ears receptive to the sound of breathing. Close the eyes gently, applying slight pressure on the pupils with the upper eye-lids, while keeping the lower lids passive. The eyes will then be soft. Do not let them harden and dry. Move the upper eye-lids towards the outer corners of the sockets, thus easing any tension of the skin at the inner corners near the bridge of the nose. Keep the pupils steady and equidistant from the bridge. Release the tension of the skin from the centre of the forehead, as this relieves the creases between the eye-brows and keeps the area passive.

43. At first it is difficult to master the art of sitting, for the body tilts unconsciously. Therefore, periodically open the eyes for a fraction of a second and check whether the body has sagged, the head is up or down or tilted to one side. Next, check tension in the throat and tautness of the facial skin, particularly around the temples. Lastly, find out whether the eyes are flickering or steady. Then adjust the body and head to correct positions, relax the throat and keep the eyes passive. When the muscles there relax so does the skin. The upper lips and the nostrils influence the working of the senses and organs. Relax the area of the upper lip, for this helps the facial muscles to relax and the brain too. While practising prāṇāyāma in a sitting position, if the skin around the temples moves towards the ears, it means that the brain is under pressure; if it moves towards the eyes, then the brain is at rest. In recumbant positions, the skin around the temples moves towards the ears and not towards the eyes.

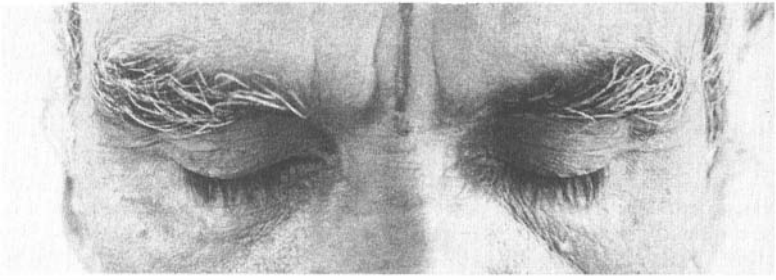
44. Direct the vision inwards as if looking with closed eyes at something behind. It will seem as if the eyes are wide open, though the vision is directed inwards (Pls. 53 and 54). The pupils tend to move up and down as you breathe in and out. Try to stop this as their movement tends to create activity in the brain.

45. Dullness sets in once the eye-lids are loose; the moment the pupils start to flicker distraction arises. If the upper eye-lids contract, thoughts flicker like a flame in the wind. None of this takes place when completely relaxed.



Pl.53

Pl.54



46. If the eye-lashes do not meet, the brain is active and does not relax. If there is tension at the arch of the brows, the hair at this point will bristle as when angry; but if the brows are flat, the brain is at rest.

47. Keep the ear apertures level to each other and equidistant from the top of the shoulders. The ears must listen to the sound of breathing and feel light throughout practice. Do not clench the jaws as this will harden the area around the ears and block them, giving a sense of heaviness and itching inside.

48. Pay particular attention to the spot where the subtle energy channels (nāḍīs) from the eyes, ears and lungs criss-cross in the centre of the brain behind and between the eyes. This is the centre from which these energies are controlled. (See Ch. 5). This is where breath control starts.

Brain

49. The brain is a computer and an instrument of thinking. The mind has feeling, but not the brain. Since the brain controls the functions of the body and the organs of sense, it should be kept motionless. In Prāṇāyāma, it is the

inducer, not the actor but a witness. The lungs are the actors, the brain is the director.

50. If the sitting posture is correct, firm, steady and evenly balanced, the emotions are held in check. The brain feels light as if floating. Then no tension is felt there and hence no waste of energy. If there is an upward lift of the frontal brain, irritability and tensions are felt; if tilted to one side, the other side feels heavy, disturbing its equilibrium.

51. Intellectuals tend to be arrogant. Intelligence, like money, is a good servant but a bad master. When practising prāṇāyāma, the yogi bows his head low, adjusting the position of the front in relation to the back of the skull in order to make himself humble and without pride in his intellectual attainments.

52. The yogis know that the brain is the seat of acquiring objective knowledge (vidyā), while the mind (manas) is where subjective knowledge (buddhi) is experienced. Manas is the outer envelope, buddhi its content. Manas is located at the heart centre, where the emotional upheavals take place.

53. While both emotions and the intellect are silent and do not fluctuate, the yogi first experiences tranquillity of the senses followed by that of the mind. This is followed by the rarer and maturer experience of spiritual tranquillity, which frees him from worldly thoughts and cares. He becomes aware of the rare, pure state of being, a total awareness, the divine state in man. In it the finite merges in the infinite. This is samādhi, the endless goal of the yogi.

Chapter 12

The Art of Preparing the Mind for Prāṇāyāma

When the breath is steady or unsteady, so is the mind, and with it the yogi. Hence, the breath should be controlled.
Haṭha Yoga Pradīpikā Ch. II.2.

1. The tree of life is said to have its roots above and its branches below, and so it is with man, for his nervous system has its roots in his brain. The spinal cord is the trunk descending through the spinal column, while the nerves run down from the brain into the spinal cord and branch off throughout the body.

2. The art of sitting for prāṇāyāma is explained in detail in Ch. 11, which concerns the mental preparation the sādhaka needs for the practice of prāṇāyāma.

3. The arteries, veins and nerves are channels (nāḍīs) for circulating and distributing energy throughout the body. The body is trained by practice of āsanas, which keep the channels free from obstruction for the flow of the prāṇa. Energy does not radiate throughout the body if the nāḍīs are choked with impurities. If the nerves are entangled, it is impossible to remain steady, and if steadiness cannot be achieved the practice of prāṇāyāma is not possible. If the nāḍīs are disturbed, one's true nature and the essence of things cannot be discovered.

4. The practice of āsanas strengthens the nervous system, and the practice of śavāsana soothes ruffled nerves. If the nerves collapse so does the mind. If the nerves are tense, so is the mind. Unless the mind is relaxed, silent and receptive, prāṇāyāma cannot be practised.

5. In its search for peace the modern world has become interested in the benefit of meditation and the ancient art of prāṇāyāma. Both disciplines are fascinating at first, but as time passes it is apparent that they are not only very difficult to learn but that they are very tedious and repetitive, because progress is very slow. On the other hand, the practice of āsanas is fascinating and absorbing throughout, as the intelligence is focused and recharged in various parts of the body. This creates a feeling of exhilar-

ation. In prāṇāyāma attention is initially on the two nostrils, sinus passages, thorax, spine and diaphragm. Thus the intelligence cannot be diverted to the other parts of the body. Thus prāṇāyāma cannot become absorbing until body and mind are trained to receive the flow of breath; months or years may pass without much progress, yet by sincere and unwavering efforts, and by perseverance, the sādhaka's mind becomes receptive to the regulated flow of breath. Then he starts to experience the beauty and fragrance of prāṇāyāmas, and after years of practice he will appreciate its subtlety.

6. For the practice of prāṇāyāma there are two essentials, a stable (achala) spine, and a still (sthira) but alert mind. Bear in mind, however, that those who practice excessive backward bends may have an elastic spine, but it does not remain stable for long; others, who practice excessive forward stretches, may have a stable spine but not a still and alert mind. In backward bends, the lungs are stretched, whereas they do not expand in forward bends. The sādhaka has to strike a balance between the two, so that the spine remains stable and the mind stays alert and unwavering.

7. The practice of prāṇāyāma should not be mechanical. The brain and the mind should be kept alert, to correct and adjust the body position and the flow of breath from moment to moment. One cannot practise prāṇāyāma by force of will; hence, there should be no regimentation. Complete receptivity of the mind and intellect are essential.

8. In prāṇāyāma the relationship between chitta (mind, intellect and ego) and breath is like that between a mother and her child. Chitta is the mother and prāṇa is the child. As a mother cherishes her child with love, care and sacrifice, chitta should cherish prāṇa.

9. Breath is like a turbulent river, which, when harnessed by dams and canals, will provide abundant energy. Prāṇāyāma will teach the sādhaka how to harness the energy of breath to provide vitality and vigour.

10. However, the *Haṭha Yoga Pradīpikā* (Ch. 2, 16–17) gives warning: as a trainer tames a lion, an elephant or a tiger slowly, so should the sādhaka acquire control over his breath gradually, otherwise it will destroy him. By the proper practice of Prāṇāyāma, all diseases are cured or controlled. Improper practice, however, gives rise to all sorts of respiratory ailments, like cough, asthma, pains in the head, eyes and ears.

11. Steadiness of mind and breath interact and makes the intellect steady too. When it does not waver, the body becomes strong and the sādhaka is filled with courage.

12. The mind (manas) is the lord of the sense organs (indriyas), as the breath is of the mind. The sound of the breath is its lord and when that sound is maintained uniformly the nervous system quietens down. Then the breath flows smoothly, preparing the sādhaka for meditation.

13. The eyes play a predominant part in the practice of āsanas, and the ears in prāṇāyāma. By being fully attentive and using one's eyes, one learns āsanas and proper balance in the poses. They can be mastered by the will, to which the limbs can be made subservient. Prāṇāyāma, however, cannot be performed in this way. During its practice the eyes are kept closed and the mind concentrated on the sound of breathing; while the ears listen to the rhythm, the flow and nuances of the breath are regulated, slowed and smoothened.

14. In āsanas there is endless variety, because of the number of different postures and movements, and attention changes while performing them. In prāṇāyāma there is monotony. The reasons are: first, the sādhaka has to practise in one position only; second, he has to maintain a continuous and unwavering sound in breathing. It is like practising scales in music before learning melody and harmony.

15. While practising āsanas, the movement is from the known gross body to the unknown subtle one. In prāṇāyāma, the movement is from the subtle breath within to the gross body without.

16. As ashes and smoke obscure a burning, smouldering piece of wood, impurities of the body and the mind cover the soul of the sādhaka. Just as the breeze clears the ashes and smoke, and the wood blazes forth, so the divine spark in the sādhaka shines out when by the practice of prāṇāyāma his mind becomes free of impurities and fit for meditation.

Chapter 13

Mudrās and Bandhās

1. In order to follow the techniques of Prāṇāyāma, it is necessary to know something about mudrās and bandhās. The Sanskrit word mudrā means a seal or a lock. It denotes positions which close the body apertures, and where the fingers are held, together with special hand gestures.

2. Bandhā means bondage, joining together, fettering or catching hold. It also refers to a posture in which certain organs or parts of the body are gripped, contracted and controlled.

3. When electricity is generated, it is necessary to have transformers, conductors, fuses, switches and insulated wires to carry the power to its destination; otherwise the current would be lethal. When prāṇa is made to flow in the yogi's body by the practice of prāṇāyāma, it is equally necessary for him to employ bandhās to prevent the dissipation of energy and to carry it to the right places without damage. Without the bandhās, prāṇāyāma practice disturbs the flow of prāṇa and injures the nervous system.

4. Out of the several mudrās mentioned in Haṭha-yoga texts, jālandhara, uḍḍīyāna and mūla bandhā are essential to prāṇāyāma. They help to distribute energy and prevent its waste through hyper-ventilation of the body. They are practised to arouse the sleeping kuṇḍalinī and direct its energy up through the suṣumṇā channel during prāṇāyāmas. Their use is essential for experiencing the state of samādhi.

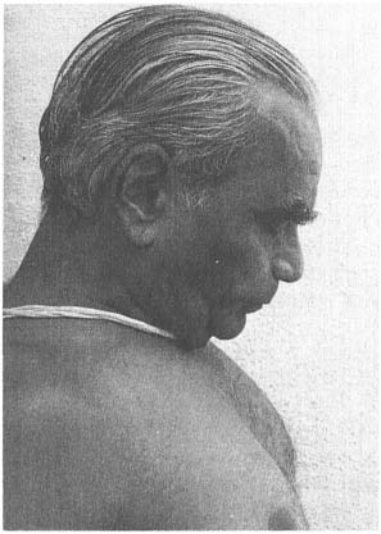
JĀLANDHARA BANDHA

5. The first bandha the sādhaka should master is jālandhara bandha, jāla meaning a net, a web or a mesh. It is mastered while performing sarvāngāsana and its cycle, during which the sternum is kept pressed against the chin.

Technique

(a) Sit in a comfortable position like siddhāsana, swastikāsana, bhadrāsana, vīrāsana, baddhakōṇāsana or padmāsana (see Pls 3 to 14).

(b) Keep the back erect. Lift the sternum and the front part of the rib cage.



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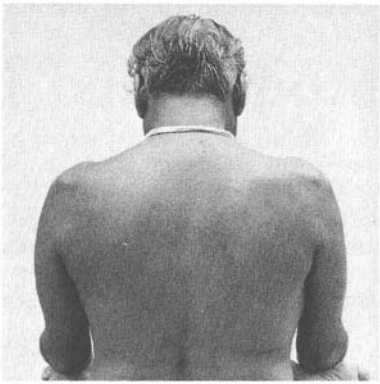


Pl.56

(c) Without tensing, stretch the sides of the neck and move the shoulder-blades into the body; keep the thoracic and cervical spine concave and bend the head forwards and downwards from the back of the neck towards the chest.

(d) Do not constrict the throat or strain the neck muscles. It should not be forced forward, downward or tensed back (Pls 55 and 56). Keep the neck and throat muscles soft.

(e) Bring the head down so that the point and both sides of the jaw-bone rest evenly in the notch between the collar-bones on the front wall of the chest (Pls 57 and 58).

(f) Do not stretch the chin more to one side or the other (Pl. 59). Also do not tilt the neck to one side (Pl. 60), which may cause pain and strain that continue for a long time. As elasticity is gained, the neck bends down increasingly.

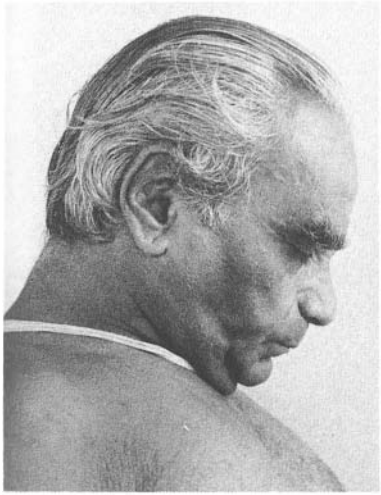
(g) Do not force the chin to the chest as in Pl. 55, but lift the chest to meet the descending chin as in Pl. 58.

(h) Keep the centre of the head and chin in alignment with the middle of the sternum, the navel and the perineum (Pl. 61).

(i) Do not cave in the ribs, while resting the chin on the chest (Pl. 62).

(j) Relax the temples and keep the eyes and ears passive (Pl. 57).

(k) This is jālandhara bandha.



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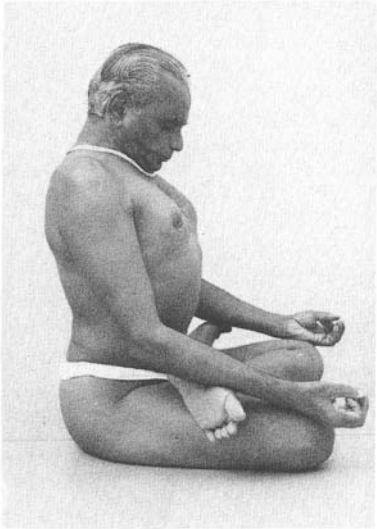

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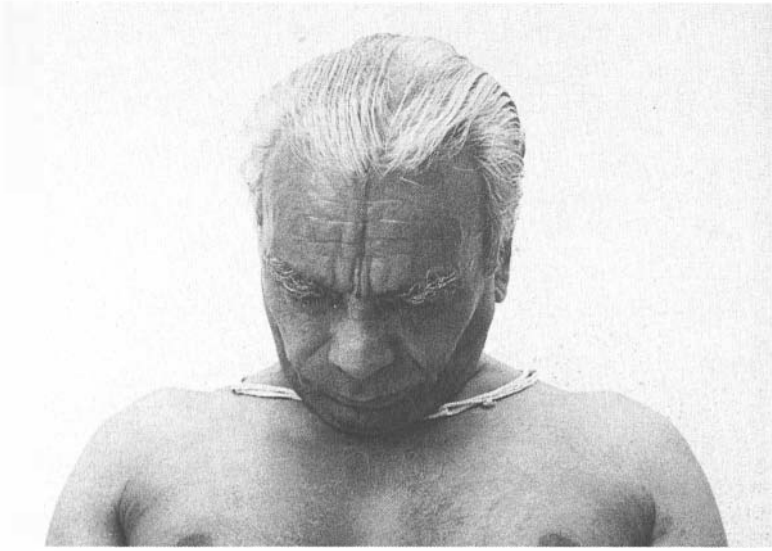
Pl.59



Pl.60

Pl.61

Pl.62

Effects

The solar plexus is situated at the centre of the trunk. According to Yoga, it is the seat of the digestive fire (jāṭharāgni), which burns food and creates heat. The lunar plexus is in the centre of the brain and creates coolness. By performing jālandhara bandha, due to the lock of the nāḍīs around the neck, the cool energy of the lunar plexus is not allowed to flow down or to be dissipated by the hot energy of the solar plexus. In this way the elixir of life is stored and life itself is prolonged. The bandha also presses the iḍā and piṅgalā channels and allows the prāṇa to pass through suṣumṇā.

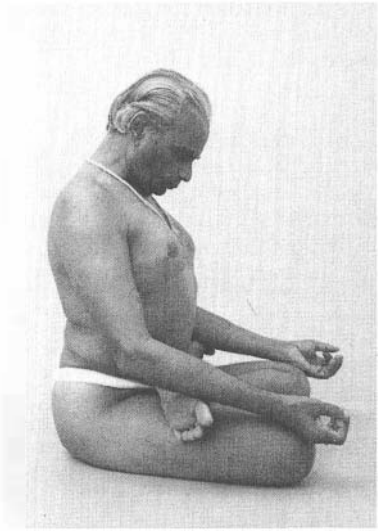
The jālandhara bandha clears the nasal passages and regulates the flow of blood and prāṇa (energy) to the heart, head and the endocrine glands in the neck (thyroid and para-thyroid). If prāṇāyāma is performed without jālandhara bandha, pressure is immediately felt in the heart, brain, eyeballs and in the inner ear. This may lead to dizziness.

It relaxes the brain and also humbles the intellect (manas, buddhi and ahaṁkāra).

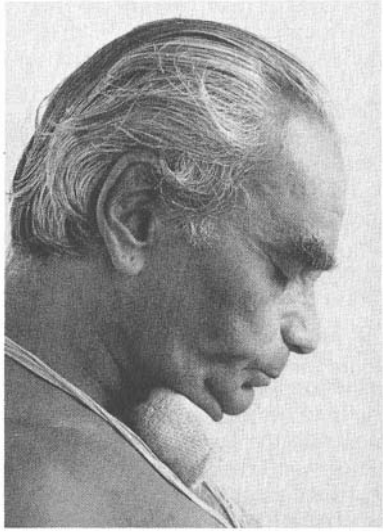
Note

Those with stiff necks should keep the head as far down as possible without undue discomfort (Pl. 63), or roll a piece of cloth and place it on the top of the collar-bones (Pls 64 and 65). Hold it by lifting the chest rather than by pressing down with the chin (see Pl. 57). This releases tension in the throat and breathing becomes comfortable.

Pl.63



Pl.64



Pl.65

UḌḌĪYĀNA BANDHA

6. Uḍḍīyāna, which means flying up, is an abdominal grip. In it the prāṇa or energy is made to flow up from the lower abdomen towards the head. The diaphragm is lifted from the lower abdomen up into the thorax, pulling the abdominal organs back and up towards the spinal column.

Technique

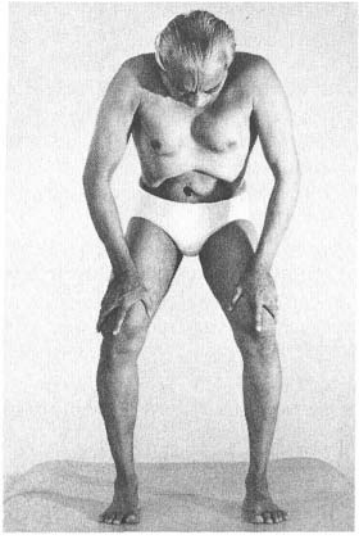
First master uḍḍīyāna in the standing position as explained below. Only then introduce it into Prāṇāyāma practices while sitting during bāhya kumbhaka (the interval between complete exhalation and the start of inhalation). Never do uḍḍīyāna during Prāṇāyāma until you have mastered the latter, nor during antara kumbhaka (the holding of breath during the interval between complete inhalation and the start of exhalation), as it will strain the heart.

(a) Stand in tāḍāsana (Pl. 25).
(b) Spread the legs about a foot apart.
(c) Stoop slightly forward with bent knees, spread the fingers and grip the middle of the thighs with the hands.
(d) Bend the arms slightly at the elbows and lower the chin as far down as possible into jālandhara bandha.
(e) Inhale deeply and then exhale quickly so that the air is expelled from the lungs in a rush.

(f) Hold the breath without inhalation. Pull the whole abdominal region back towards the spine and lift it upwards (Pl. 66). Never hollow the chest during uḍḍīyāna practice.
(g) Raise the lumbar and dorsal spine forwards and upwards. Squeeze the abdominal organs towards the spine and press them against it.
(h) Maintain the abdominal grip, lift the hands from the thighs and rest them a little higher on the pelvic rim for a still firmer contraction.
(i) Straighten the back without loosening the abdominal grip or raising the chin up (Pl. 67).
(j) Hold the grip as long as you can, from ten to fifteen seconds. Do not try to hold it beyond your endurance, but gradually increase the time as it becomes comfortable.
(k) First relax the abdominal muscles without moving the chin and the head. If they move, strain is at once felt in the region of the heart and temples.
(l) Allow the abdomen to return to its normal position. Then inhale slowly (Pl. 68).
(m) Do not inhale during the processes described in Paras (f) to (k).
(n) Take a few breaths, then repeat the cycle in Paras (a) to (k) not more than six to eight times at a stretch. Increase the duration of the grip or the number of cycles as your capacity increases, or do so under the personal supervision of an experienced teacher or a guru.
(o) The cycles should be performed once a day only.
(p) When firmness is achieved in practice of uḍḍīyāna, gradually introduce it in various types of prāṇāyāma, but only while holding your breath after exhalation (bāhya kumbhaka).

Note:
(i) Practise on an empty stomach only.
(ii) Do not squeeze the abdomen until the breath has been expelled.
(iii) If strain is felt on the temples or if the intake of breath is laboured, this means that the uḍḍīyāna has been done beyond capacity.
(iv) Never inhale until the grip of uḍḍīyāna is released and the abdominal organs are brought to their original relaxed state.
(v) Do not constrict the lungs while the abdominal organs are compressed.

Effects
It is said that through uḍḍīyāna bandha the great bird prāṇa is forced to fly up through the suṣumṇā nāḍī, the main channel for the flow of nervous energy, which is situated inside the spinal column (mērudaṇḍa). It is the best of bandhās, and he who constantly practises it, as taught by his guru, becomes young again. It is said to be the lion that kills the elephant named death. It should be performed only during the interval between a complete exhalation and a fresh inhalation. It exercises the diaphragm and



Pl.66

Pl.67

Pl.68

Pl.69

abdominal organs. The lift of the diaphragm gently massages the muscles of the heart, thereby toning them. It tones the abdominal organs, increases the gastric fire and eliminates toxins in the digestive tract. As such it is also called śakti chālana prāṇāyāma.

MŪLA BANDHA

7. Mūla means root, source, origin, or cause and basis, or foundation. It refers to the principal region between the anus and the genitals. Contract the muscles of this area, and lift them vertically towards the navel. Simultaneously, the lower anterior abdomen below the navel is pressed backwards and upwards towards the spine. The downward course of apāna vāyu is changed and then made to flow up to unite with the prāṇa vāyu, which has its seat in the region of the chest.

Mūla bandha should be attempted first in internal retention after inhalation (antara kumbhaka). There is a difference between the abdominal grips in uḍḍīyāna and in mūla bandha. In the former the entire region from the anus to the diaphragm is pulled back towards the spine and lifted up. But in the latter only the perineal and lower abdominal area between the anus and navel is contracted, pulled back to the spine and lifted up towards the diaphragm (Pl. 69).

The practice of contracting the anal sphincter muscles (aśvini mudrā) helps one to master mūla bandha. Aśva means a horse. This mudrā is so called because it suggests the staling of a horse. It should be learnt while doing various āsanas, especially tāḍāsana, śīrṣāsana, sarvāngāsana, ūrdhva dhanurāsana, uṣtrāsana and paśchi mottanāsana. (See *Light on Yoga*).

There is a grave danger in attempting to learn the uḍḍīyāna and mūla bandhās by oneself. Improper performance of the former will cause involuntary discharge of semen and loss of vitality, while that of the latter will seriously weaken the practitioner, who will lack virility. Even the correct performance of mūla bandha has its own dangers. It increases sexual retentive power, which the practitioner is tempted to abuse. If he succumbs to this temptation, all his dormant desires may be aroused and become lethal like a sleeping serpent stirred by a stick. With the mastery of the three bandhās, the yogi is at the cross-roads of his destiny, one road leading to bhoga (the enjoyment of worldly pleasures) and the other to Yoga or union with the Supreme Soul. The yogi, however, feels greater attraction for his creator. Normally, the senses open outwards and are attracted to objects and follow the path of bhoga. If this direction is changed, so that they turn inwards, then they follow the path of Yoga. The yogi's senses are turned inwards to meet the Source of all Creation. It is when the aspirant has mastered the three bandhās, that the guidance of a guru is most essential, for under proper guidance this increased power is sublimated to higher and nobler pursuits. The practitioner is then known

as a celibate (ūrdhvareta). Having mastered the sexual urge naturally but not by force, he stops dissipating his virility. He is fully potent yet a master of himself (bhava vairagī). He then acquires moral and spiritual power, which will shine forth like the sun.

While practising mūla bandha, the yogi attempts to reach the true source or mūla of all creation. His goal is the complete restraint or bandha of the chitta which includes the mind (manas), the intellect (buddhi) and the ego (ahaṁkāra).

Chapter 14

The art of Inhalation (Pūraka) and Exhalation (Rechaka)

1. Inhalation (pūraka) is the intake of cosmic energy by the individual for his growth and progress. It is the path of action (pravṛtti mārga). It is the Infinite uniting with the finite. It draws in the breath of life as carefully and as gently as the fragrance of a flower might be indrawn and distributes it evenly throughout the body.

2. While performing āsanas, the mind and breath of the sādhaka are like those of an enthusiastic child, ever ready to invent, create and show its skill, whereas in practising prāṇāyāma the breath is like an infant child demanding special attention and care from its mother. As the mother loves her child and devotes her life to its well-being, so the consciousness has to foster the breath.

3. To understand this art, it is essential to know its methodology, what is right and wrong and what is gross and subtle. Then one can experience the essence of prāṇāyāma. It is helpful to note that the relationship between consciousness (chitta) and breath (prāṇa) should be like that between a mother and her child. But before this can happen the lungs, the diaphragm and the intercostal muscles must be trained and disciplined by āsanas so that the breath moves rhythmically.

4. The action of the consciousness in respiration is like that of a mother absorbed in watching her child at play. Though outwardly passive, she is mentally alert, observing him minutely while remaining completely relaxed.

5. When the mother first sends her child to school, she accompanies him, holding his hand to guide his way, emphasising the importance of being friendly with his future school-mates and of studying his lessons. She submerges her own identity in attending to her child until he gets accustomed to school life. So also has the consciousness to transform itself

into the same condition as the flow of breath, following it like a mother and guiding it to rhythmic flow.

6. The mother trains the child to walk and cross the streets cautiously. In the same way, the consciousness has to guide the flow of breath through the respiratory passages for absorption into the living cells. As the child gains confidence and becomes adjusted to school, the mother then leaves him when he reaches the gate. Similarly, when the breath moves with rhythmic precision, chitta observes its movements and unites it with the body and the Self.

7. In inhalation, the sādhaka attempts to transform his brain into a receiving and distributing centre for the flow of energy (prāṇa).

8. Do not inflate the abdomen while inhaling as this prevents the lungs from expanding fully. Breathing in or out must be neither forcible nor quick, for strain of the heart or damage to the brain may result.

9. Exhalation (rechaka) is the breath that goes out after inhalation. It is the expiration of impure air or the expulsion of carbon-dioxide. The outgoing breath feels warm and dry and the sādhaka senses no fragrance.

10. Exhalation is the outflow of the individual energy (jīyātmā) to unite with the cosmic energy (Paramātmā). It quietens and silences the brain. It is the surrender of the sādhaka's ego to and immersion in the Self.

11. Exhalation is the process by which the energy of the body gradually unites with that of the mind, merges into the soul of the sādhaka and dissolves into cosmic energy. It is the path of return from the peripheries of the body towards the source of consciousness known as the path of renunciation (nivṛtti mārga).

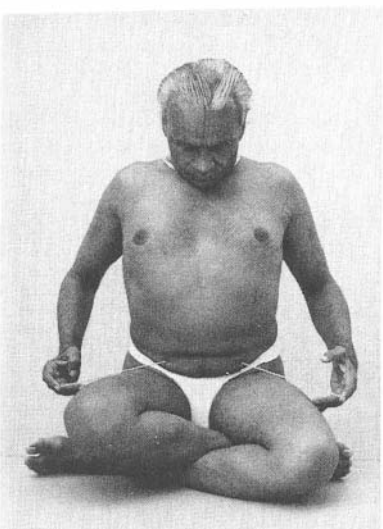
12. Hold the chest high with consiousness and lead the outgoing breath steadily and smoothly.

13. Inhale and exhale systematically with close attention to the rhythmic pattern of breath, as a spider symmetrically weaves its web and moves to and fro along it.

14. For some persons inhalation is longer than exhalation, whereas for others it is exhalation that is longer. This is due to the challenges we have to face in life and our responses to them, which change the flow of breath and the pressure of the blood. Prāṇāyāma aims to eradicate these disparities and disturbances in the flow of breath as well as in blood pressure, and to make one unperturbed and unattached to one's own personality.

Technique for Inhalation (Pūraka).

(a) Sit in any comfortable posture.
(b) Raise the spine along with the chest, floating ribs and navel and keep it erect.
(c) Now bring the head down as far as you can. (Pls 63 or 64). When elasticity is achieved at the back of the neck, perform jālandhara bandha (Pl. 57).
(d) According to Yoga, the mind (manas), which is the source of the emotions, is located in the region between the navel and the heart. Keep the back in constant contact with the emotional centre. Stretch the front of the body up and out without losing contact with the centre of consciousness.
(e) During inhalation, expand the chest up and out, without tilting forwards, backwards or sideways.
(f) Do not tense or jerk the dome of the diaphragm, but keep it relaxed. Start inhalation from the base of the diaphragm. The key point for starting deep inhalation is from the navel band, down below the floating ribs on either side (Pl. 70).
(g) Keep the lungs passive and non-resistant during inhalation in order to receive and absorb the incoming energy. While inhaling, fill the lungs fully with complete attention. Synchronise the movement of the breath evenly with the interior expansion of the lungs.



Pl.70

(h) As a jug is filled from the bottom to the top, so fill the lungs from their base to the brim. Fill them to the top of the collar-bones and the inner armpits.

(i) Special care and attention are needed to train an under-developed person, before the lungs can receive the full intake of breath. So explore carefully to stretch their nerve fibres.

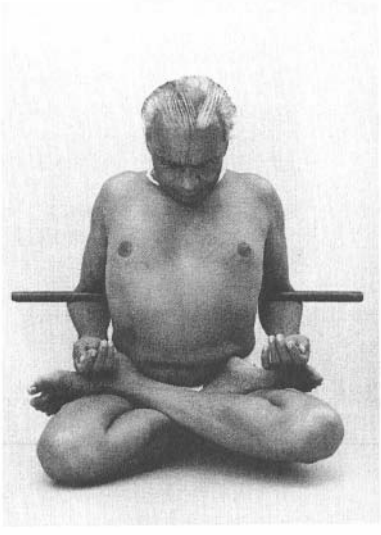
(j) The bronchial tubes reach from the trachea to the periphery of the lungs, where they branch off into numerous bronchioles. See that each inhalation reaches to the very tip of the bronchioles.

(k) The in-breath is absorbed by the living cells in the body, as water is absorbed into the soil. Feel this absorption and the exhilarating sensation of percolation of the cosmic energy (prāṇa) that follows.

(l) The energy of inhalation enters from the nose and is received by the causal frame or the spiritual body. In inhalation the consciousness (chitta) ascends from the navel (maṇipūraka chakra) to the top of the chest (viśuddhi chakra). The sādhaka has to maintain throughout a single unifying contact between the causal and subtle frames of the body (see Ch. 2) and the consciousness ascending from its source. This contact unifies the body, breath, consciousness and the Self. Then the body (kṣetra) and the Ātmā (kṣetrajña) become one.

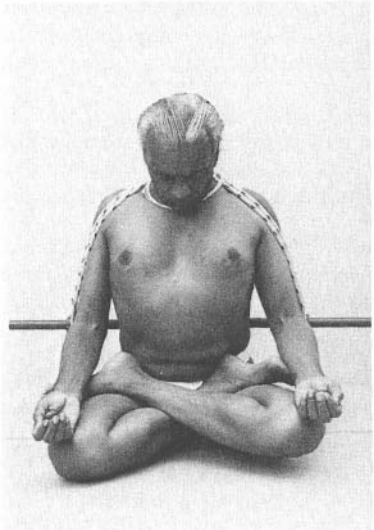
(m) Each pore of the skin of the trunk should act as the eye of intelligence (jñāna chakṣu) for absorbing prāṇa.

Pl.71



Pl.72

Pl.73



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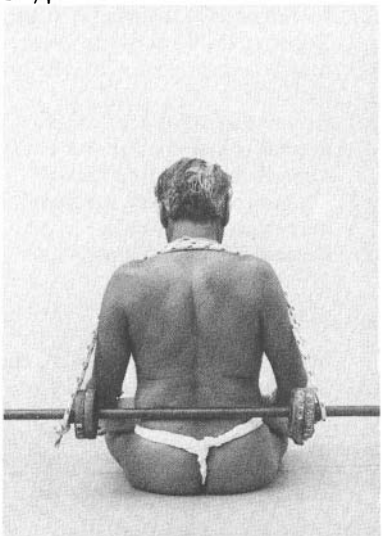


(n) If the inhalation is too pronounced the skin of the palms feels gritty. Regulate the breath so as to keep the skin of the palms soft throughout.
(o) If the shoulders are raised during inhalation, the upper areas of the lungs are not expanded fully and the nape of the neck becomes taut. Watch this tendency of the upward lift and bring the shoulders down immediately (Pl. 52). In order to keep them down and the chest up, take a rod or weights and use them as shown in Pls 71 to 74.
(p) Relax the throat. Rest the tongue on the floor of the lower jaw without touching the teeth.
(q) Keep the eyes closed and relaxed, but the inner vision active (Pl. 54). When inhaling the eyes tend to turn up (Pl. 95); avoid this.
(r) See that the ears, the facial muscles and the skin on the forehead remain relaxed.
(s) The right method of inhalation removes sluggishness, stimulates and energises the body and the mind.

Technique for Exhalation (Rechaka)

(a) Follow Paras (a) to (d) regarding the techniques for inhalation.
(b) In inhalation the body acts as an instrument for receiving energy in the form of breath. In exhalation it becomes dynamic, acting as an instrument for the slow release of breath. Retain the grip of the intercostal muscles and the floating ribs throughout. Without this grip, steady and smooth exhalation is not possible.

(c) In exhalation, the source or the starting point is the top of the chest. Without losing the grip there, exhale slowly but completely till the breath is emptied at a level below the navel. Here the body merges with the Self.

(d) As you discharge the outgoing breath, retain the lift not merely of the central spinal column but also on its left and right side, keeping the torso firm like a tree trunk.

(e) Do not shake or jerk the body, for this disturbs the flow of breath, the nerves and the mind.

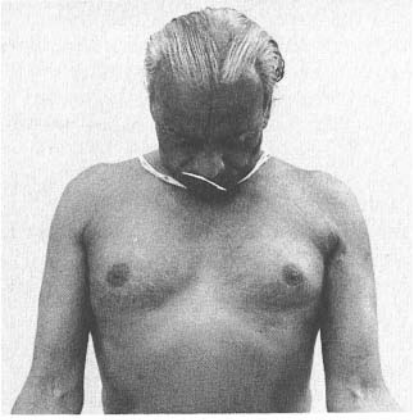
(f) Release the breath slowly and smoothly without collapsing the chest. If exhalation is rough, it is an indication that the attention on the grip of the body and the observation of the flow of breath have been lost.

(g) In inhalation, the skin of the torso becomes taut, in exhalation it becomes soft without losing the grip on the inner structural body.

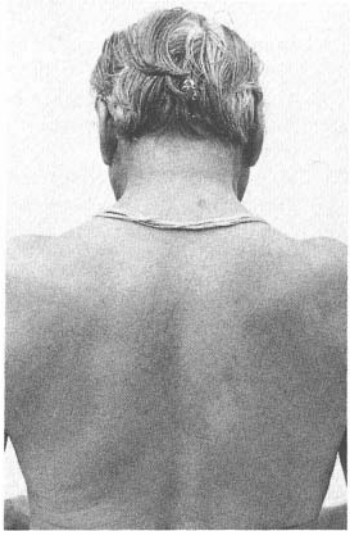
(h) The skin of the chest and of the arms should not touch closely at the armpits (Pl. 75). There should be freedom and space (Pl. 76) without undue widening of the arms (Pls 51 and 52).

(i) Exhalation is the art of calming the nerves and the brain. This creates humility and the ego becomes quiet.

Pl.75



Pl.76



Chapter 15

The Art of Retention (Kumbhaka)

1. Kumbha means a pot which can be full or empty. Kumbhaka is of two types. It is either (a) a pause between an in and an out breath or (b) between an out and an in breath. It is the art of retaining the breath in a state of suspense.

2. It also means the withdrawal of the intellect from the organs of perception and action, to focus on the seat of the Ātmā (puruṣa), the origin of consciousness. Kumbhaka keeps the sādhaka silent at the physical, moral, mental and spiritual levels.

3. Retention of breath in kumbhaka should not be misinterpreted as re-tension of the brain, the nerves and the body to hold the breath. Re-tensioning leads to hyper-tension. Kumbhaka has to be done with the brain relaxed so as to re-vitalise the nervous system.

4. When the breath is stilled in kumbhaka, the senses are stilled and the mind becomes silent. Breath is the bridge between the body, the senses and the mind.

5. Kumbhakas are performed in two ways: sahita and kevala. When the breath is held intentionally and deliberately, this is sahita. Sahita kumbhaka is the pause in breathing (a) after full inhalation before commencing exhalation (antara or pūraka kumbhaka), or (b) after complete exhalation prior to starting inhalation (bāhya or rechaka kumbhaka). Kevala means 'by itself' or 'absolute'. Kevala kumbhaka is the pause in breathing unaccompanied by pūraka or rechaka, as when an artist is totally absorbed in his art or a devotee is breathless with adoration. This state is often preceded by body tremors and fear like that of a man on the point of being overwhelmed by the unexpected. Patience and perseverance will overcome this feeling. Kevala kumbhaka is instinctive and intuitive. In this state one is completely absorbed in the object of one's devotion and isolated from the world, experiencing a feeling of joy and peace which passes understanding. One is in tune with the Infinite. (*Haṭha Yoga Pradīpikā*, II. 71.)

6. Antara kumbhaka is the holding of the Lord in the form of cosmic or universal energy, which is merged into the individual energy. It is a state wherein the Lord (Paramātmā) is united with the individual soul (jīvātmā).

7. Bāhya kumbhaka is the state in which the yogi surrenders his very self, in the form of his breath, to the Lord and merges with the Universal Breath. It is the noblest form of surrender, as the yogi's identity is totally merged with the Lord.

8. In the *Bhagavad Gītā* (IV, 29/30) Kṛṣṇa explains to Arjuna the different kinds of sacrifices (yajñas) and of yogis. Kumbhaka prāṇāyāma is one of these yajñas and has three categories: inhalation-retention, exhalation-retention (both of which are sahita kumbhaka) and absolute retention (kevala kumbhaka). The yogi's body is the sacrificial altar, the in-flow of breath (pūraka) is the oblation and the out-flow (rechaka) is the fire. Kumbhaka is the moment when the oblation of pūraka is consumed in the fire of rechaka, and the oblation and the flame become one. The yogi acquires the knowledge of how to control his breathing (prāṇāyāma vidyā). The upper part of the thorax is the abode of the inflowing breath (prāṇa), and the lower part of the outgoing breath (apāna). When the two unite in the intake of breath, this is the state of pūraka kumbhaka. When apāna comes in contact with the prāṇa and flows out in exhalation, the empty state is the rechaka kumbhaka. Absorbing this knowledge by experience, the yogi makes Prāṇāyāma vidyā a part of his wisdom (buddhi), to which he finally offers his knowledge, his wisdom, his very life breath and his 'Self' as oblation (Ātmāhuti). This is the state of kevala kumbhaka, or absolute surrender, in which the yogi is absorbed in adoration of the Lord.

9. As a mother protects her child from every catastrophe, consciousness (chitta) protects the body and breath. The spine and torso are active and dynamic like a child and the chitta is alert and protective like a mother.

10. In kumbhaka the vibration in the body is like that of a locomotive stationary under steam, its driver alert and ready to start, but relaxed. Similarly, the prāṇa vibrates in the torso, but the chitta is kept relaxed and ready to let go or let in the breath.

11. The sensitivity, the grip and stretch of the skin on the trunk is like that of a disciplined child, who is both bold and cautious.

12. The length of time that the breath is held may be compared with that of traffic signals. If one passes the red light, accidents may occur. So also in kumbhaka, if one goes beyond one's capacity, the nervous system will be damaged. Tension in the body and brain indicates that the chitta cannot hold the prāṇa in kumbhaka.

13. Do not retain the breath by force of will. The moment the brain becomes tense, the inner ears hard and the eyes red, heavy or irritable, one is exceeding one's capacity. Watch for these warning signs, which indicate that the danger point is near.

14. The aim of kumbhaka is to restrain the breath. While breath is being held, speech, perception and hearing are controlled. The chitta in this state is free from passion and hatred, greed and lust, pride and envy. Prāṇa and chitta become one in kumbhaka.

15. Kumbhaka is the urge to bring out the latent divinity in the body, the abode of Ātman.

The Technique of Antara Kumbhaka

(a) Do not attempt to hold your breath after inhalation (antara kumbhaka) before mastering deep in and out breathing (pūraka and rechaka). Do not attempt to hold it after exhalation (bāhya kumbhaka) before mastering antara kumbhaka.
(b) Mastery means artistic adjustment by disciplined refinement and control of the movement of breath. Equalise the length of your in and out breathing before attempting kumbhaka. Read Ch. 13 on the bandhās thoroughly before starting kumbhaka.
(c) Learn to do antara kumbhaka by slow degrees. Start by holding the breath for only a few seconds without losing grip on the inner body. Watch the condition of the body, the nerves and the intellect. It takes some time before you can understand, experience and retain the precise inner grip over the intercostal muscles and diaphragm in the kumbhaka.
(d) When starting to learn internal retention (antara kumbhaka) allow some time to elapse after each kumbhaka. This enables the lungs to revert to the normal, natural and fresh condition before making another attempt. For instance, three or four cycles of normal or deep breathing should follow one cycle of kumbhaka until the session is over.
(e) If beginners perform internal retention after each inhalation, it will strain the lungs, harden the nerves and make the brain tense, and progress will be exceedingly slow.
(f) As you improve, shorten the interval between the cycles of normal breathing and antara kumbhaka.
(g) Increase the time you hold your breath in internal retention without exceeding your capacity.
(h) If the rhythm of inhalation and exhalation is disturbed by holding the breath, it shows that you have exceeded your capacity; therefore, reduce the length of internal retention. If the rhythm is undisturbed, then your practice is correct.

(i) Knowledge of the bandhās is essential for the proper practice of kumbhaka. They act as safety valves for distributing, regulating and absorbing energy, and prevent its dissipation. An electric motor burns out if its voltage is allowed to rise too high. Similarly, when the lungs are full and the energy in them is not checked by the bandhās, they will be damaged, nerves will be frayed and the brain made unduly tense. This will not happen if one practises jālandhara bandha.

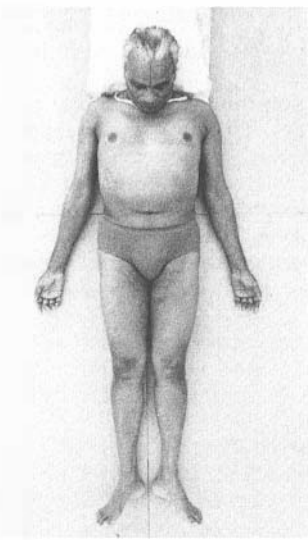
(j) Never do antara kumbhaka while standing, as you may lose your balance and fall.

(k) When in a reclining position, place pillows under the head to keep it higher than the torso, so that no strain is felt in the head (Pl. 77).

(l) Beginners need pay no attention to uḍḍīyāna bandha and mūla bandha until they have mastered the rhythm of breathing. Advanced pupils should do all the bandhās after mastering them individually while holding their breath.

(m) Do not raise the bridge of the nose in internal retention. If it moves up, the brain is caught up in the movement; it cannot then watch the trunk (Pl. 78).

(n) Throughout the practice of Prāṇāyāma, pivot the head and the cervical spine forwards and downwards and the erect dorsal spine and sternum (Pl. 76). This helps the brain and cervical spinal-cord to move towards the sternum and relax the forehead. This makes the energy of the brain descend to the seat of the Self.



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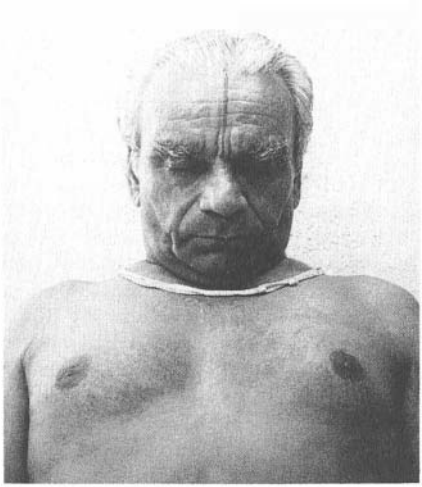


Pl.78

(o) Throughout each internal retention, keep a firm grip on the diaphragm and abdominal organs. There is a tendency, whether unconscious or deliberate, to tighten and loosen them in order to hold the breath longer. Avoid this as it dissipates energy.

(p) If strain is felt in the lungs or heart, exhale, and take a few normal or deep breaths. This refreshes the lungs to restart antara kumbhaka. If you continue after having felt the strain, you disturb the harmonious functioning of both the body and the intellect. This leads to mental imbalance.

(q) When you are able to hold the breath in internal retention for a minimum of ten to fifteen seconds you may introduce mūla bandha. In the initial stages do mūla bandha at the end of inhalation and retain it throughout retention.

(r) In internal retention, pull the abdominal organs in and up, and simultaneously bring the lower spine forward (Pl. 69). Keep the trunk firm and the head, arms and legs relaxed throughout.

(s) Maintain the lift of the spine from the sacroiliac region and base of the liver and stomach throughout.

(t) Move the outer and inner spinal column forwards and upwards, rhythmically and evenly. As the spine moves anteriorly, roll the skin with it into the torso.

(u) If the skin of your chest slackens over the ribs, it is a sign that the breath has leaked from the lungs unawares.

(v) Do not overstretch or hollow the chest. Raise it in front, at the back and on both sides evenly. Hold the inner frame of the ribs firm and keep the outer body light. This will balance the body evenly and increase the duration of kumbhaka.

(w) See that the back and front intercostal muscles and the inner and outer layers on the sides move independently and uniformly.

(x) Adjust the skin of the armpits from back to front. Do not press the skin around the armpits of the chest but lift it up. If the skin of the armpits or the shoulders move up, this is a sign of tension. Release the skin and bring it down.

(y) At the end of inhalation (pūraka) and the start of retention (kumbhaka) the sādhaka experiences a spark of divinity. He feels the oneness of body, breath and self. In this state there is no awareness that time is passing. The sādhaka experiences freedom from cause and effect. He should retain this state throughout kumbhaka.

(z) The volatile contents of a well-sealed bottle do not leak, though the bottle be shaken. The vital energy of the sādhaka does not escape when kumbhaka is done with the bandhās. The trunk is sealed at the base by contracting the anus and the perineum and lifting them up from Mūlādhāra. The sādhaka then becomes full of vigour (tejas) and lustre (ojas).

The Technique of Bāhya Kumbhaka

(a) Bāhya kumbhaka (retention of breath after complete exhalation) is of two kinds, pensive or dynamic. When pensive, it is practised without uḍḍīyāṇa. It is performed to keep oneself quiet and can be done at any time, even after meals. When dynamic, it is done with uḍḍīyāṇa bandha, which massages the abdominal organs and heart and prevents dissipation of energy.

(b) Start by practising pensive external retention cycles. Then concentrate on external retention with uḍḍīyāna bandha.

(c) At the beginning, after each dynamic external retention, allow some time to elapse for the lungs and the abdominal organs to become normal.

(d) External retention with uḍḍīyāna should never be forced. If forced, one gasps, loses one's grip on the abdominal organs and feels a dryness in the lungs.

(e) Start external retention with uḍḍīyāna very gradually and maintain the grip of uḍḍīyāna for the same length of time in each cycle. Do six to eight cycles a day.

(f) Do a few cycles of normal or deep breething and one external retention with uḍḍīyāna. For instance, three or four cycles of normal breathing may be followed by one external retention with uḍḍīyāna. Repeat the sequence, reducing the number of cycles of normal breathing as stability is gained by practice.

(g) While practising, follow the techniques given in paragraphs b, d, e, f, h, l, m, p, s, t, u and w of the techniques of antara kumbhaka, substituting 'bāhya kumbhaka' for the words 'antara kumbhaka' wherever they occur.

(h) As one uses tweezers to remove a thorn and feels freedom from pain at once, use the intelligence as the tweezers to remove faulty grips and movements which act as thorns in practice.

(i) As the eyelids act instinctively to prevent foreign matter entering the eyes, the sādhaka should be always alert to prevent false grips, movements and habits entering into his practice of prāṇāyāma.

(j) Kumbhaka that reddens the face, burns the eyes and causes irritability is faulty. Never do kumbhaka with open eyes. Do not practice it if you have heart or chest problems, or when you are unwell.

(k) The body is the kingdom. The skin is its frontier. Its ruler is the Ātman, whose all-seeing eye (jñāna chakṣu) watches every detail during prāṇāyāma.

(l) Mountain torrents dislodge rocks and gouge out canyons, yet when the energy of the flowing water is stilled and balanced against that of the rocks, each loses its separate identity. The result is a lake, reflecting the serene beauty of the mountains around. Emotions are the torrents, while the steady intellect forms the rock. In kumbhaka both are evenly balanced and the soul is reflected in its pristine state.

(m) Consciousness (chitta) wavers with the breath while kumbhaka stills and frees it from desires. The clouds disperse and the self shines like the sun.

(n) After practice of prāṇāyāma and kumbhaka relax in śavāsana (see Ch. 30).

Chapter 16

Grades of Sādhakas

1. Sādhakas are divided into three main groups in accordance with the progress they achieve in the practice of prāṇāyāma: These categories are: low (adhama), in which the breathing is coarse and rough; average (madhyama), in which it is half-soft, and high (uttama), in which it is soft and fine.

2. These groups are again sub-divided to show their subtle differences. Beginners are split into the lowest of the 'low' (adhamādhama), average among the 'low' (adhamamadhyama), and the best among the 'low' (adhamōttama). The 'average' (madhyama) and the 'high' (uttama) groups are similarly divided. But the final goal of every sādhaka is to join the highest of the 'high' (uttamōttama).

3. A beginner in prāṇāyāma (adhama) uses physical strength and lacks rhythm and poise. His body and brain are rigid, while his breath is forceful, jerky and superficial. An average (madhyama) sādhaka has some control in the art of sitting and a greater lung capacity than the beginner. He lacks the skill to maintain a steady posture or to breath rhythmically. His practice is moderate, whereas that of the more perfect (uttama) sādhaka is disciplined; he sits erect and aware. His lungs are capable of sustaining prāṇāyāma for a longer time. His breath is rhythmic, soft and subtle, while his body, mind and intellect are poised. He is always ready to adjust his posture and to correct his own mistakes.

4. Very often, understanding and practice do not go together. One sādhaka may be better able to understand, while another may have better skill in practice. In each case, he has to develop uniformity in skill and intelligence and use them harmoniously for the better practice of prāṇāyāma.

5. Patanjali mentions the important part played in prāṇāyāma by place (deśa), time (kāla) and condition (saṁkhyā), whether internal or external, for the sādhaka. They may be regulated, lengthened or made subtle (*Yoga Sūtras* II, 50). His torso is the place, his age is the time, and his condition is the slow steady balance and even flow of his breathing.

6. The beginner may use the top of his lungs only, while the average performer will be concerned with his diaphragm or navel, and the adept

with his pelvic region. One has to learn to involve the whole torso when practising prāṇāyāma.

7. Time represents the length of each inhalation and exhalation, and circumstances the controlled flow and subtlety of the breath.

8. Condition represents the number and length of the in-breaths, retentions, out-breaths and second retentions. The sādhaka has to determine their number and length for a given day and must keep to a regular schedule. The soft and delicate flow of breath in each cycle is the ideal condition (saṁkhyā).

9. The sādhaka may complete a cycle lasting ten seconds, another of twenty and a third of thirty. He may practise on three levels, the purely physical one, using his body as an instrument, the emotional one, using only his mental faculties, or the intellectual one, controlling his breath with intelligence. A beginner may reach perfection if his cycle is very short but soft and fine; on the other hand, an adept who takes pride in the length of his cycle, which is coarse and rough, is reduced to the level of a beginner.

10. The sādhaka should develop steadiness in the body, keep his mind and emotions in balance and his intellect sober. Then he is able to observe the subtle flow of his breath and feel its absorption within his system. His body, breath, mind, intellect and self become one and lose their individual identity. The knowable, the knower and the knowledge become one. (*Yoga Sūtra*, 1, 41.)

11. A musician is lost in his ecstasy while displaying all the subtleties of the rāga (musical note, melody and harmony) in which he has specialised and experiences supreme consciousness. He may or may not be aware that his experience is shared by his audience. This is the quest of the sound (nādānusandhāna). The sādhaka likewise is lost in his ecstasy, but, his experience of prāṇāyāma is purely subjective. He alone listens to the subtle and soft sound of his own breathing and enjoys the absolute soundless state of kumbhaka. This is the quest of the Self (Ātmānusandhāna).

12. The intake of breath (pūraka) is the absorption of cosmic energy; inhalation-retention (antara kumbhaka) is the union of the Universal Self with the individual self; the outflow (rechaka) is the surrender of the individual energy, followed by exhalation-retention (bāhya kumbhaka), in which the individual and the Universal Self are merged. This is the state of nirvikalpa samādhi.

Chapter 17

Bīja Prāṇāyāma

What is Japa?

1. Though the soul is free from cause and effect, joy and sorrow, it is caught up with the turbulent activity of the mind. The purpose of mantra japa is to check and focus the disturbed mind upon a single point and is linked to a single thought. Mantra is a vēdic hymn or musical verse, the repetition of which is japa or a prayer. This has to be done with sincerity, love and devotion, which develops the relationship between man and his Maker. When restricted to between one and twenty-four syllables it becomes a seed (bīja) mantra, the key word which unlocks his soul. The illumined guru, who has earned the grace of God, initiates and gives the key word to his deserving śiṣya, which unlocks the latter's soul. This is the seed for the śiṣya to study himself and to get himself initiated into all aspects of Yoga.

2. The mind takes the form of its thoughts and is shaped so that good thoughts make a good mind and evil thoughts a bad one. Japa (the repetition of a mantra) is used to disengage the mind from idle talk, jealous ideas and tale-bearing, so that the mind turns towards thoughts about the soul and God. It is the focusing of a wandering agitated mind upon a single thought, act or feeling.

3. Mantras are given for repeated continuous utterance, with reason, purpose and object. Constant repetition (japa) of a mantra with reflection upon its meaning (artha-bhāvana; artha = meaning, bhāvana = reflection) brings illumination. By such constant repetition and reflection, the thoughts of the sādhaka are churned, cleansed and clarified. He sees his soul reflected in the pool of his mind.

4. This japa transforms the sādhaka and transmutes his ego, thereby making him humble. He attains inner quietness and becomes one who has conquered his senses (jitēndriyan).

5. During the practice of prāṇāyāma, repeat the mantra, mentally synchronising its silent flow without moving the mouth or the tongue. This keeps the mind attentive and helps to increase the length of the three processes in breathing – inhalation, exhalation and retention. The flow of breath and the growth of the mind become smooth and steady.

6. The practice of prāṇāyāma is of two kinds: sabīja (with seed) and nirbīja (without seed). Sabīja prāṇāyama includes the repetition of a mantra and is taught to four types of sādhakas, with varying stages of mental development, mūḍha, kṣipta, vikṣipta, and ekāgra (see Ch. 2).

7. The mantra should not be repeated quickly in order to complete a cycle of prāṇāyāma. It should be rhythmic, pacing the flow of breath equally in inhalation, exhalation and retention. Then the senses are silent. When perfection is achieved, the sādhaka becomes free and pure without the support of the mantra.

8. Nirbīja prāṇāyāma is taught to the fifth type of sādhaka, the one with the highest mental development, known as niruddha. It is done without the support of a mantra, wherein the sādhaka breathes, lives and experiences the state known as 'that thou art' (tattvam asi).

9. Sabīja, like a seed, sprouts thoughts, ideas and visions, while nirbīja, which is like a roasted seed, does not. Sabīja has a beginning and an end; it has shape, form and connotations, like lamp and light and light and flame. Nirbīja has no conditions, no beginning and no end.

10. Sabīja prāṇāyāma turns the mind and intellect of the sādhaka to the Lord, the seed of omniscience and the source of all being. The word that expresses Him is the mystic syllable ĀUṀ (praṇava). The Lord has been described by Patanjali as one who is untouched by the cycles of action and reaction, cause and effect, affliction and pleasure.

11. It is said in the *Chāndogya-Upaniṣad* that Prajāpati (the Creator) brooded on the worlds created by him. From them issued the three Vēdas – Ṛg, Yajur and Sāma. From these, when brooded upon, came the three syllables: bhuḥ (earth), bhuvaḥ (atmosphere) and svaḥ (sky). From them, when they had been brooded upon, issued the syllable ĀUṀ. As leaves are held together by a branch, so is all speech held together by ĀUṀ.

12. ĀUṀ conveys concepts of omnipotence and universality. It contains everything that is auspicious as well as awe-inspiring. It is a symbol of serenity and majestic power. ĀUṀ is the everlasting spirit, the highest aim. When its connotations are fully known, all longings are fulfilled. It is the surest means of salvation and the supreme help. It connotes the fullness of human life, thought, experience and worship. It is the immortal sound. Those who enter and take refuge in it become immortal.

13. The Upaniṣads mention various triads of the soul, worshipped by the use of threefold ĀUṀ. In the realm of sex it symbolises the feminine,

masculine and neuter sexes, as well as their creator, who is beyond the sexes. With power and light, ĀUṀ symbolises fire, wind and sun, as well as the generator of these sources of power and light. In the form of the Lord, the symbol is worshipped as Brahmā, the creator, Viṣṇu, the protector, and Rudrā, the destroyer, synthesising the forces of all life and matter. As time, ĀUṀ stands for the past, the present and the future, together with the Almighty, who is beyond the reach of time. As thought, it represents the mind (manas), intellect or understanding (buddhi), and the self or ego (ahaṁkāra). The word ĀUṀ also represents the three states (guṇās) of illumination (sattva), activity (rajas), and inertia (tamas), and also anyone who has become free of them, a guṇātīta.

14. The three letters A, U and M, together with the dot over the M, are symbols of man's search for truth along the three paths of knowledge, action and devotion, and the evolution of a great soul into one who has achieved poise of the soul and whose intellect has attained a state of stability – a sthitaprajña. If he follows the path of wisdom (jñāna-mārga), his desires (ichhā), actions (kriyā) and learning (vidyā) are all under his control. If he follows the path of action (karma-mārga), he will undergo austere penance (tapas) to attain his goal in life, self study (svādhyāya), and then dedicate the fruits of his actions to the Lord (Īśvara-praṇidhāna). If he follows the path of devotion (bhakti-mārga), he will be immersed in hearing the Lord's name (Śravaṇa), meditating upon His attributes (Manana), and thinking of His glory (Ṅididhyāsana). His state is one beyond that of sleep (nidrā), dream (svapna) or awakening (jāgṛti), for though his body is at rest as if in sleep, his mind is seemingly in a dream and his intellect is fully alert; he is in the fourth transcendental state, the turīyāvasthā.

15. One who has realised the manifold meanings of ĀUṀ becomes free from the shackles of life. His body, breath, senses, mind, intellect and the syllable ĀUṀ are fused together.

16. ĀUṀ is the word that all the Vēdas glorify, and all self-sacrifice expresses. It is the goal of all sacred studies and the symbol of holy life. Fire is latent in dried wood and it can be generated by friction again and again. Even so, the latent divinity in the sādhaka is stirred into manifestation by the word ĀUṀ. By rubbing his intelligent awareness against the sacred word ĀUṀ, he sees the hidden divinity within himself.

17. By meditating upon ĀUṀ, the sādhaka remains steady, pure and faithful, and becomes great. As a cobra sheds its old skin, so he sheds all evil. He finds the peace of the Supreme Spirit, where there is no fear, dissolution or death.

18. Since the word ĀUṀ is one of supreme and majestic power, its force has to be diffused by adding it to the name of a deity, and making the combination into a mantra as a bīja for the practice of Prāṇāyāma, as for instance, eight syllables 'ĀUṀ NAMŌ NĀRĀYAṆĀYA' or five syllables 'ĀUṀ NAMAḤ ŚIVĀYA' or twelve syllables 'ĀUṀ NAMŌ BHAGAVATE VĀSUḌEVĀYA' or GĀYATRI MANTRA with twenty-four syllables.

Chapter 18

Vṛtti Prāṇāyāma

1. Vṛtti means action, movement, a course of conduct or method.

2. There are two types of vṛtti prāṇāyāmas: Samavṛtti and Viṣamavṛtti. It is the former if the length of time in each inhalation, exhalation and retention of breath is the same, and it is the latter if the length is altered and varied.

SAMAVṚTTI PRĀṆĀYĀMA

3. Sama means equal, identical or in the same manner. In samavṛtti prāṇāyāma an attempt is made to achieve uniformity in the duration of all the four processes of breathing, namely, inhalation (pūraka), retention (antara kumbhaka), exhalation (rechaka) and retention (bāhya kumbhaka). If the duration of pūraka is say five seconds or ten seconds, it should be the same in rechaka and kumbhakas.

4. Start samavṛtti prāṇāyāma, conforming only to even duration of inhalation (pūraka) and exhalation (rechaka).

5. Achieve uniformity in length of time, maintaining the perfect soft rhythm in pūraka and rechaka.

6. Only then, attempt retention of breath after inhalation (antara kumbhaka). At first you will not be able to maintain the same length of time for internal retention as for pūraka and rechaka.

7. Start the internal retention gradually. At first the ratio of time between the three processes should be kept at $1:\frac{1}{4}:1$. Slowly increase the proportions to $1:\frac{1}{2}:1$. When this is firmly established, increase to $1:\frac{3}{4}:1$. When this becomes easy, then increase the proportion of antara kumbhaka to the ratio of $1:1:1$.

8. Do not attempt to restrain the breath after full exhalation (bāhya kumbhaka) until you have achieved this ratio.

9. Then start external retention (bāhya kumbhaka) gradually. At the beginning, keep the ratio of time for in-breath, internal retention, out-

breath and external retention at 1 : 1 : 1 : $\frac{1}{4}$. Slowly increase the proportions to 1 : 1 : 1 : $\frac{1}{2}$. After this is firmly established, attempt 1 : 1 : 1 : $\frac{3}{4}$ and lastly increase the proportions to achieve the ratio of 1 : 1 : 1 : 1.

10. First practice internal retention (antara kumbhaka) separately, interspacing one antara between three or four cycles of normal breathing. Repeat the antara cycle five or six times. When this becomes easy and comfortable, decrease the interspacing. When this comes with ease, do pūraka, antara kumbhaka and rechaka without interspersion.

11. When the uniform ratio of pūraka, antara kumbhaka and rechaka is maintained with ease, introduce bāhya kumbhaka once in three or four cycles.

12. Gradually decrease the number of cycles between. Then perform pūraka, antara kumbhaka, rechaka and bāhya kumbhaka without interspersion.

VIṢAMAVṚTTI PRĀṆĀYĀMA

13. Viṣama means irregular. Viṣamavṛtti Prāṇāyāma is so-called because the duration of pūraka, antara kumbhaka, rechaka and bāhya kumbhaka are varied. This leads to interrupted rhythm, and the difference in ratio creates difficulty and danger for the pupil unless he is gifted with strong nerves and good lungs.

14. First start with inhalation, antara kumbhaka and exhalation only in the ratio of 1 : 2 : 1. Increase the ratios gradually to 1 : 3 : 1, and then to 1 : 4 : 1. Then adjust and adopt the ratio to 1 : 4 : 1$\frac{1}{4}$; 1 : 4 : 1$\frac{1}{2}$; 1 : 4 : 1$\frac{3}{4}$ and 1 : 4 : 2. When this is mastered, and only then, add bāhya kumbhaka gradually in the ratio of 1 : 4 : 2 : $\frac{1}{4}$; 1 : 4 : 2 : $\frac{1}{2}$; 1 : 4 : 2 : $\frac{3}{4}$; and 1 : 4 : 2 : 1. These four ratios constitute one cycle of viṣamavṛtti prāṇāyāma.

15. At first the pupil will find it hard to maintain rhythm during rechaka, bāhya kumbhaka and pūraka, as gasping will ensue. But it all eases with long and uninterrupted practice.

16. In viṣamavṛtti prāṇāyāma the ideal ratio is as follows: in full inhalation takes five seconds the breath is held (antara kumbhaka) for twenty seconds, exhalation takes ten seconds, and bāhya kumbhaka five seconds, the ratio being 1 : 4 : 2 : 1.

17. When this has been achieved, reverse the process. Inhale for ten seconds, hold for twenty seconds and exhale for five seconds, the ratio being

2 : 4 : 1. Then add bāhya kumbhaka 2 : 4 : 1 : $\frac{1}{4}$, and gradually increase the duration of bāhya kumbhaka ratio to 2 : 4 : 1 : $\frac{1}{2}$, 2 : 4 : 1 : $\frac{3}{4}$ and 2 : 4 : 1 : 1.

18. The length of time can be varied. For instance, if inhalation is twenty seconds, retention ten seconds and exhalation five seconds, minimise bāhya kumbhaka to $2\frac{1}{2}$ seconds, so as to make the ratio 4 : 2 : 1 : $\frac{1}{2}$.

19. The length of time can be varied in viṣamavṛtti prāṇāyāma in different ratios, as for instance, 1 : 2 : 4 : $\frac{1}{2}$; 2 : 4 : $\frac{1}{2}$: 1; 4 : $\frac{1}{2}$: 2 : 1; $\frac{1}{2}$: 1 : 4 : 2. The permutations and combinations in viṣamavṛtti prāṇāyāma are numerous and no mortal can perform all possible combinations in his or her lifetime. An example of such permutations and combinations is given in the note on sūrya and chandra bhedana prāṇāyāmas in Ch. 27.

Note

20. The path of viṣamavṛtti prāṇāyāma is fraught with danger. So do not practise it on your own without the personal supervision of an experienced guru.

21. Due to different ratios for inhalation, inhalation-retention, exhalation and exhalation-retention, all the systems of the body, especially the respiratory organs, the heart and nerves are overtaxed and strained. This may cause tension in the brain and in the blood vessels, which in turn may create hypertension, restlessness and irritation.

22. This caution with regard to samavṛtti prāṇāyāma and the practice of kumbhakas applies with greater force to the viṣamavṛtti prāṇāyāma. Remember Svātmārama's words in his *Haṭha Yoga Pradīpikā*, that prāṇa should be tamed more gradually than lions, elephants and tigers; otherwise it will kill the practitioner.

Section III

The Techniques of Prāṇāyāma

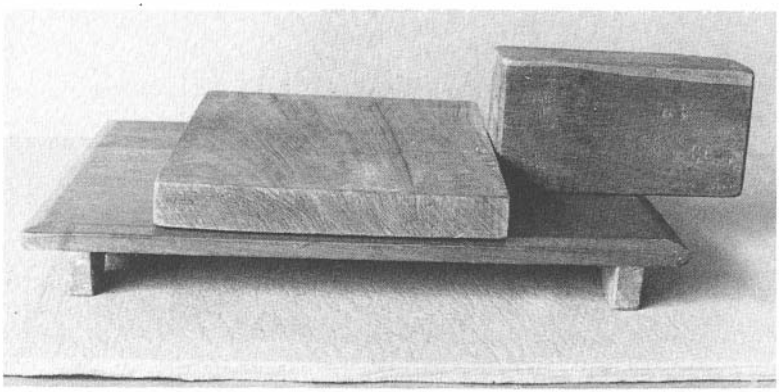
Chapter 19

Ujjāyī Prāṇāyāma

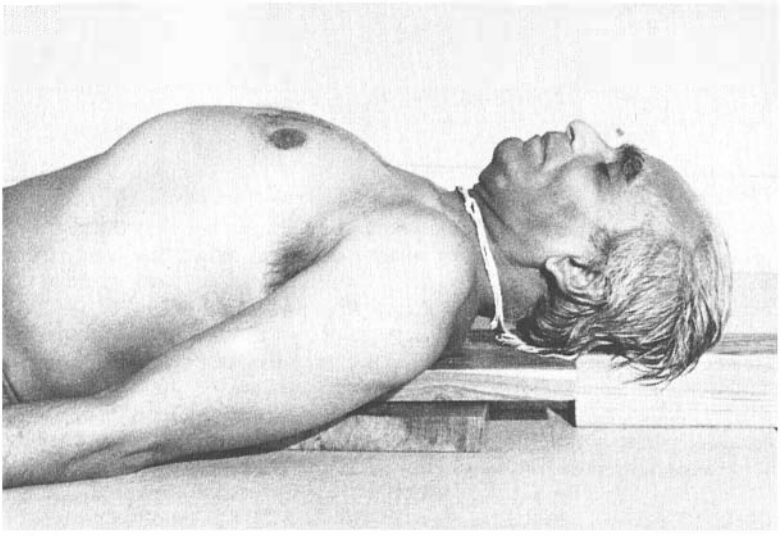
The prefix 'uḍ' means upwards or expanding. It also conveys the sense of pre-eminence and power. 'Jaya' means conquest or success, and, from another point of view, restraint. In ujjāyī the lungs are fully expanded, with the chest thrust out like that of a mighty conqueror.

All stages of this prāṇāyāma except those with retentions (kumbhaka) may be done at any time. However, if the heart feels heavy, full or painful, or the diaphragm is hard, and if you are agitated or the heart-beat is abnormal, lie down after laying two wooden planks on the floor, (each about one foot square and $1\frac{1}{2}$ inches thick) on top of each other. Rest the back on the planks, with your buttocks below them and arms stretched downwards. (Pls 79 to 81). You can also lie with a bolster as in Pl. 82. Keep the weight on the legs for comfort and relaxation, as shown in Pl. 83. Two cushions may be used instead of planks (Pl. 84). If the legs cannot be stretched out, because of infirmity or disease, bend the knees and rest the lower legs on a bolster or a stool (Pls 85 and 86).

When the back is thus rested, the pelvic muscles initiate inhalation. This relieves any tension and softens the diaphragm. The lungs and the respiratory muscles function smoothly and breathing becomes deep. The practice of this prāṇāyāma brings amazing relief to patients with enlarged ventricles and congenital heart defects. Moreover, it stills the fears that beset heart patients who are afraid to make the least movement lest they aggravate their condition.



Pl.79



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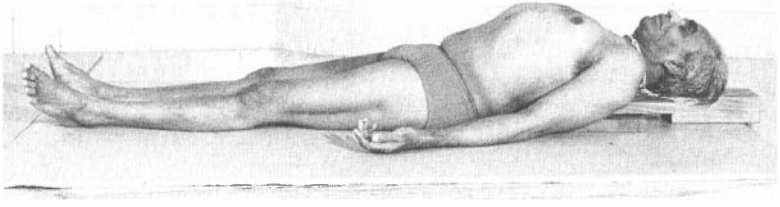
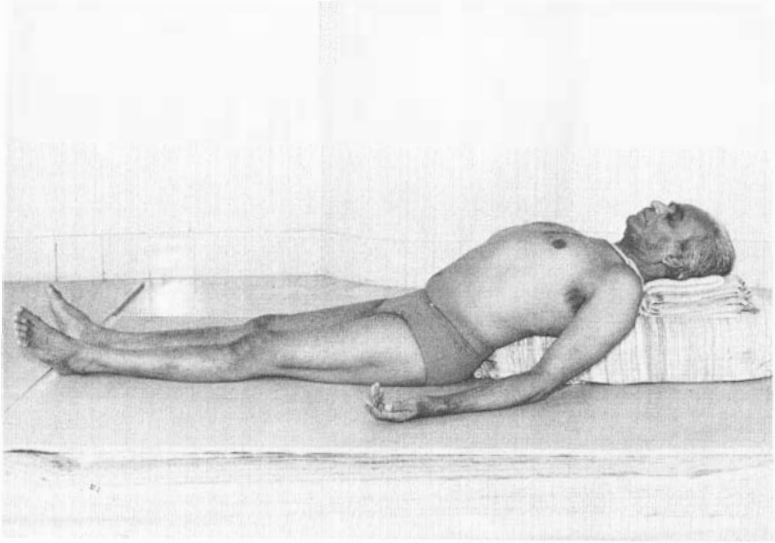
Pl.81





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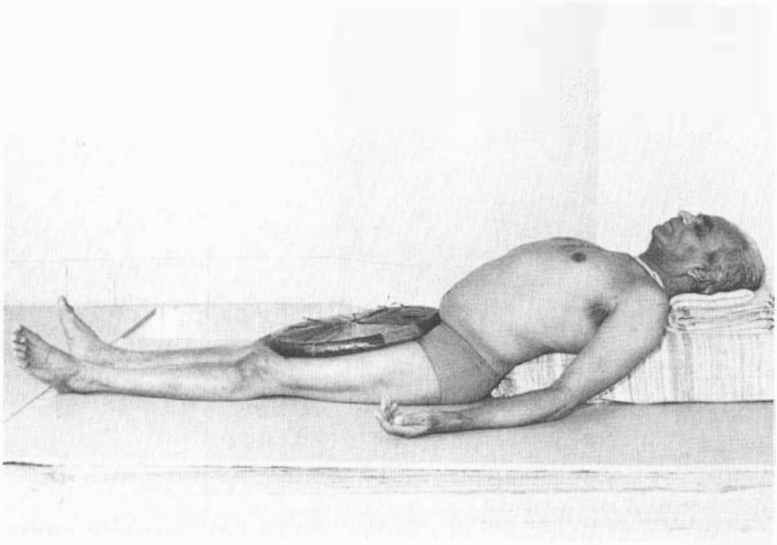
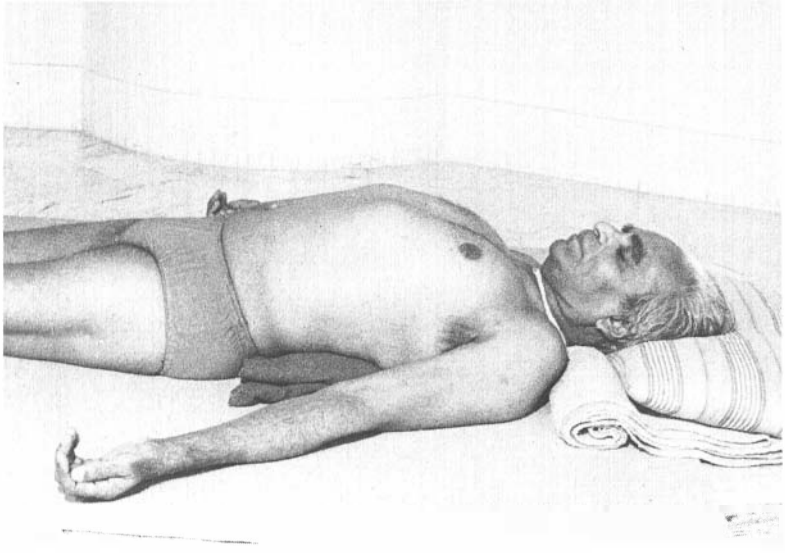
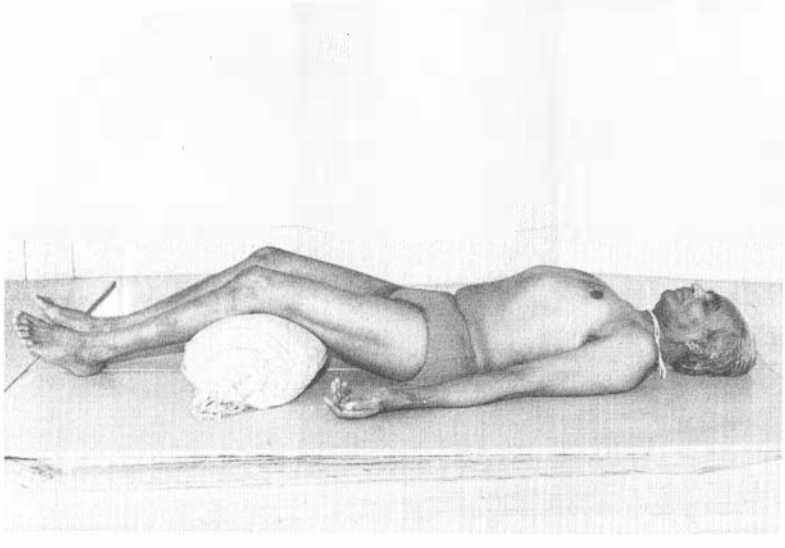
Pl.83

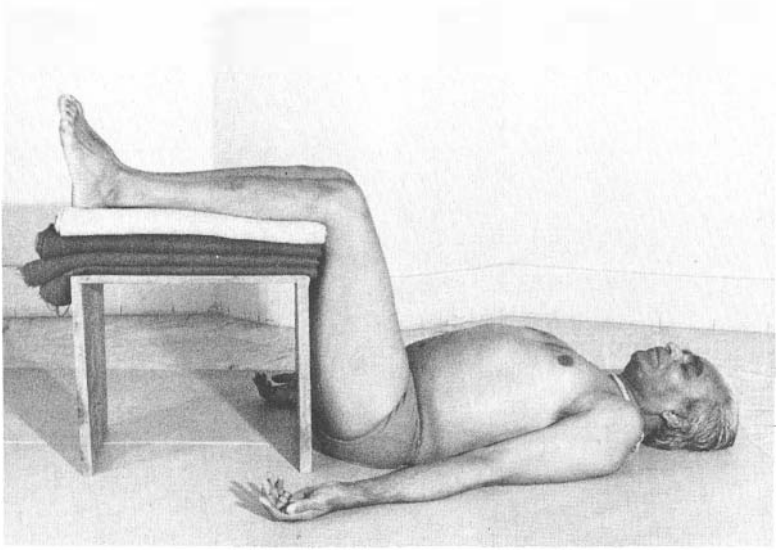




Pl.84

Pl.85





Pl.86

Note

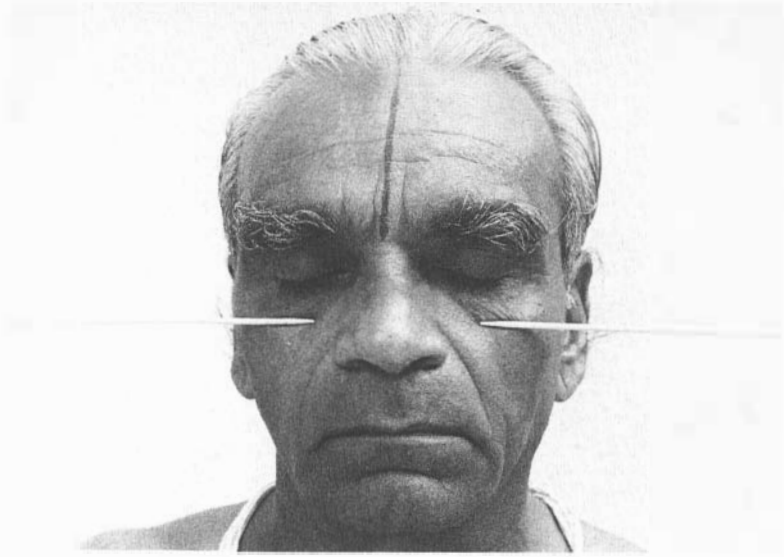
1. All stages of all prāṇāyāmas begin with exhalation (rechaka) and end with inhalation (pūraka). First, you must breathe out whatever tidal air remains in the lungs, then start prāṇāyāma. Do not end it with exhalation, as this strains the heart, but take a normal inhalation at the end of each stage of prāṇāyāma. Do not use force.

2. The passages for in and out breaths differ in the sinus areas. In inhalation the breath touches the inner surface of the sinus passages at the bottom (Pl. 87). In exhalation it touches the outer surface at the top (Pl. 88).

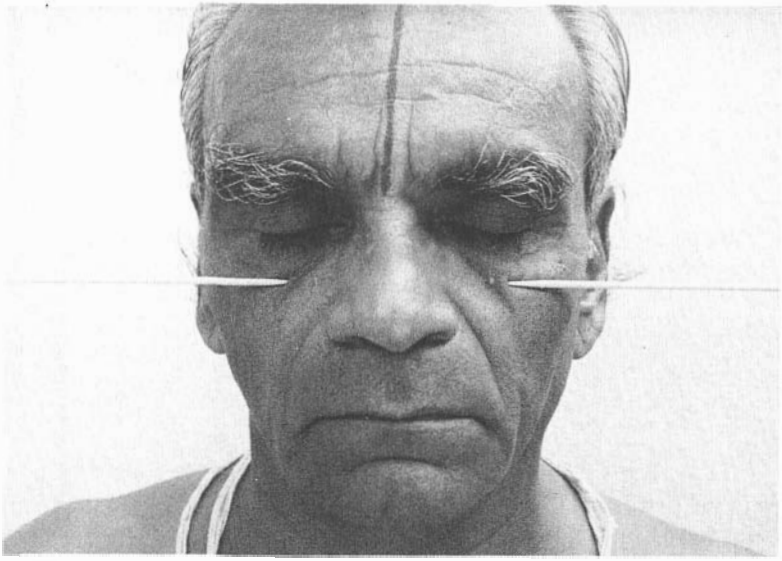
3. All inhalations are made with a sibilant sound 'ssss' and all exhalations with aspirate 'hhhh'.

4. When sitting for prāṇāyāma in the initial stages, use a support as explained in Ch. 11, Para. 30 (Pls 42 and 43).

5. Though śavāsana is suggested at the end of each prāṇāyāma, if you want to do more than one stage or different prāṇāyāmas in succession, it should be done only at the end of the practice.



Pl.87



Pl.88

STAGE I

This preparatory stage trains one in the art of being aware of sensations in the lungs; it leads to even breathing.

Technique

1. Spread a blanket, folded lengthwise, on the floor. Over it, at the head and exactly in line with the edge, lay another blanket folded three or four times so that it fits the back of the head and trunk (Pl. 89).

2. Lie flat on the back on the folded blanket, keeping the body in a straight line. Do not cave in the rib-cage. Close the eyes and lie quietly for a minute or two (Pl. 50). Cover the eyes with a soft cloth for quick relaxation of the facial muscles (Pl. 90).

3. Breathe normally. Consciously observe and feel the flow of breath throughout.

4. As you breathe in, make sure that both lungs fill evenly. Feel the chest expand upwards and outwards. Synchronise the two movements.

5. Breathe out quietly, emptying the lungs evenly on both sides. Correct it if the lungs move unevenly.

6. Continue in this way for ten minutes, keeping the eyes closed throughout.

Effects

The above practice makes one attentive, invigorates the nerves, loosens any hardness in the lungs and prepares them for deep breathing.

STAGE II

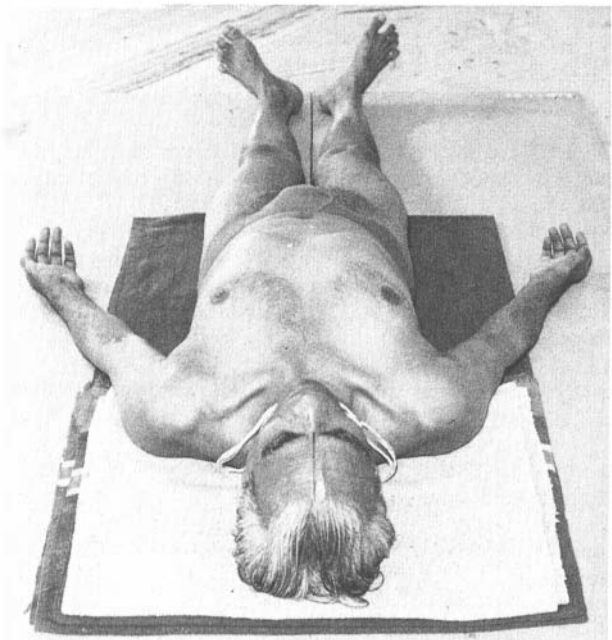
This preparatory stage trains one to lengthen the duration of each out-breath and to learn the art of exhalation.

Technique

1. Lie down, following the instructions given in Paras 1 and 2 of Stage I (Pl. 89).

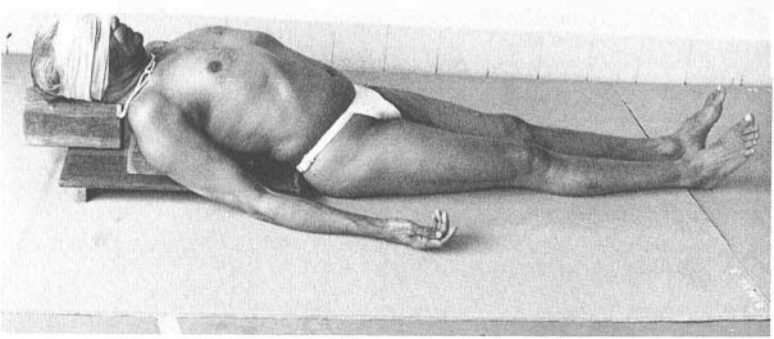
2. Close the eyes without tensing the eye-balls, keep them passive and receptive, and direct the gaze inwards (Pl. 54).

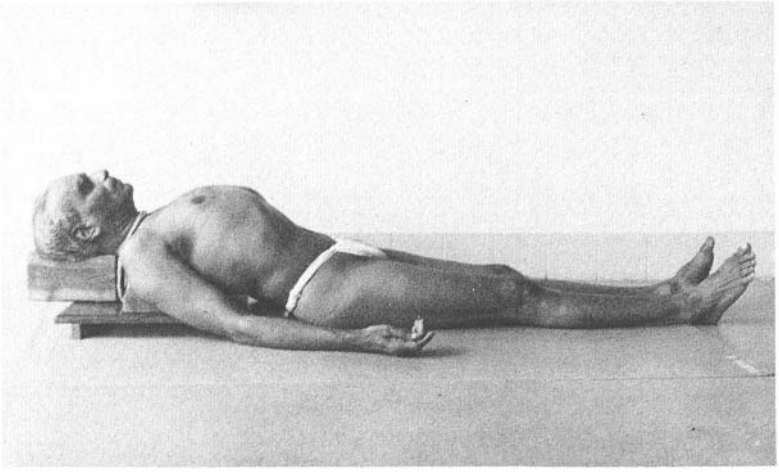
3. Keep the inner ears alert and receptive.



Pl.89

Pl.90





Pl.91

4. First exhale quietly until lungs feel empty, but without pressing down upon the abdominal organs (Pl. 91).

5. Inhale normally through the nose. This is inhalation (pūraka).

6. Exhale slowly, deeply and steadily until the lungs feel empty. This is exhalation (rechaka).

7. Continue for ten minutes and then relax.

The emphasis here is on slow, deep and steady exhalation.

Effects

This stage soothes the nerves and calms the brain. Its slow, steady and deep exhalations are ideal for sufferers from cardiac disorders and hypertension.

STAGE III

This preparatory stage trains one to lengthen the duration of each in-breath and to learn the art of inhalation.

Technique

1. Lie, as described in Stage I, Paras 1 and 2. Then follow the instructions given in Stage II, Paras 2 to 4.

2. Relax the diaphragm and stretch it sideways while you breathe in, without inflating the abdomen (Pl. 92). To prevent this, do not allow the diaphragm to roll or to move above the floating ribs (Pls 93 and 94).

3. Take a slow, deep, steady and sibilant in-breath carefully through the nose. Make sure that both lungs fill evenly.

4. Listen to the sound attentively, and maintain its rhythm throughout.

5. Fill the lungs completely till the sound of inhalation becomes inaudible.

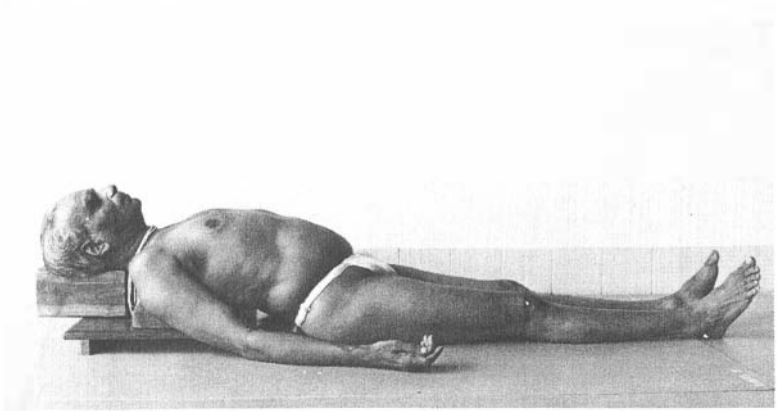
6. Deep inhalation tends to move the eye-balls up (Pl. 95). Consciously draw them down and gaze into the lungs (see Pl. 54).

7. At the start of exhalation immobilise the diaphragm, then breathe out slowly but not deeply. Here the out-breath will be slightly longer than normal.

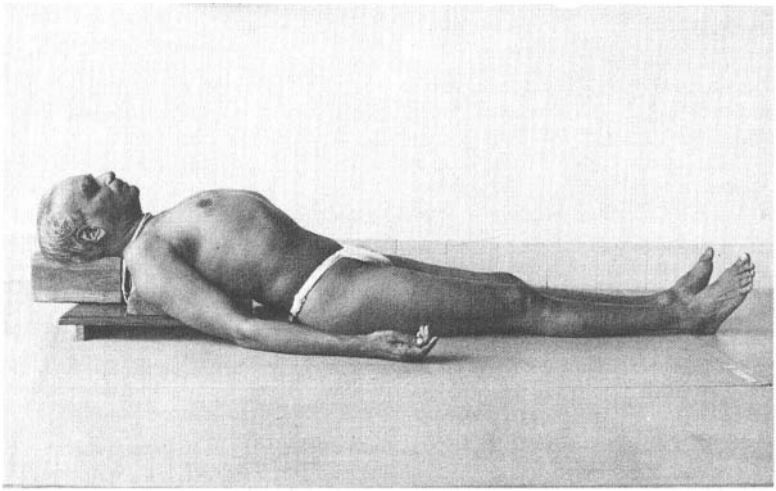
8. Continue in the same way for ten minutes, then relax.

The emphasis here is on slow, deep and steady inhalations. Once more, listen to the sound and maintain its rhythm throughout. In order to get better rhythmic deep breathing, it is advisable to use two planks for the back, as described at the beginning of this chapter (see Pls 80 to 86).

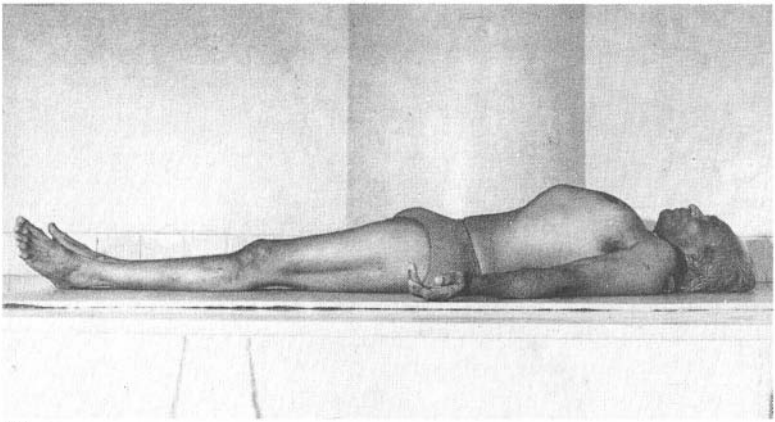
Effects
This preliminary practice is good for those suffering from low blood pressure, asthma and depression. It invigorates the nervous system and instils confidence.



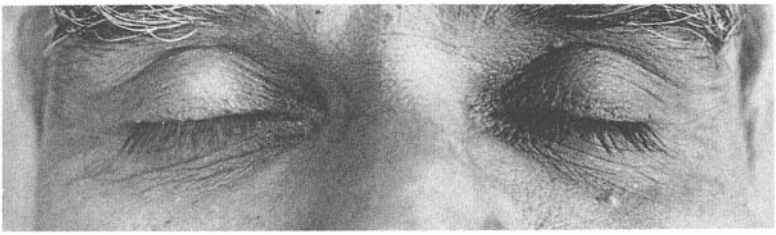
Pl.92



Pl.93



Pl.94



Pl.95

STAGE IV

This preparatory stage trains one to prolong the length of each in-breath and out-breath. This helps to master the arts of deep inhalation and deep exhalation.

Technique

1. Lie, as described in Stage 1, Paras 1 and 2. Then follow the instructions given in Stage II, Paras 2 to 4.

2. Now breathe in, following the techniques given in Paras 2 to 5 of Stage III.

3. Grip the diaphragm and release it gradually, exhaling slowly, deeply and steadily until the lungs feel empty.

4. This completes one cycle. Repeat such cycles for ten to fifteen minutes, then relax.

Effects

This stage gives energy, soothes the nerves and tones them. Stages I to IV are preparatory to ujjāyī prāṇāyāma, performed while lying down.

STAGE V

The breathing here is similar to that in Stage I but is done while sitting. It trains one in the art of observation and leads to even breathing.

Technique

1. Sit in padmāsana, siddhāsana, swastikāsana or vīrāsana, or in any convenient and comfortable position.

2. Sit quietly for a while, keeping the back and the spinal column firm, but the spinal muscles soft and mobile for adjusting the torso. The firmness of the spine has to be evenly balanced with the mobility of the back muscles, which expand and contract with the flow of in and out breaths. The absorption of the breath should synchronise with the mobility of the back muscles. The slower their movement, the better the absorption of the breath.

3. Lower the head towards the trunk and lift up the inner frame of the chest towards the descending chin. Rest the chin in the notch just above the breastbone. This is the chin-lock (jālandhara bandha) (Pl. 57). If you cannot do it completely, keep the head down as low as you can without strain and continue the practice (Pl. 63).

4. Keep the arms down and rest the back of the wrists on the knees (Pl. 32) or join the tip of the index finger of each hand with the tip of the thumb and keep the other fingers extended (jñāna mudra) (Pl. 13).

5. Do not tense the eye-balls as in Pl. 95, but keep them passive as well as receptive. Close the eyes and direct the gaze inwards (Pl. 54).

6. Keep the inner ears alert and receptive.

7. First exhale quietly as far as possible, without pressing down upon the abdominal organs (Pls 96 and 97). Note the dots on the torso, which show skin movements for out-breath, in-breath and retention.

8. Follow the techniques given in Paras 3 to 6 of Stage I, observing the flow of breath. Do this for ten minutes and then rest in śavāsana (Pl. 182) for a few minutes.

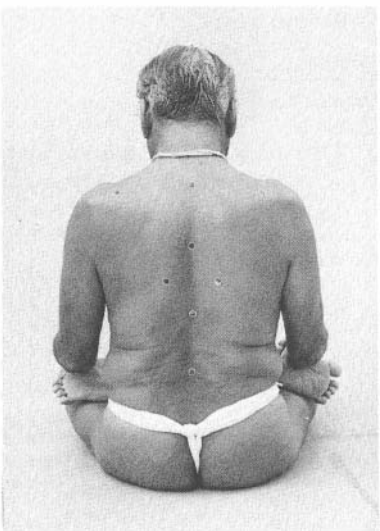
STAGE VI

Here, the breathing is similar to that in Stage II, but done while sitting. It trains one to lengthen the duration of each out-breath and to learn the art of exhalation.

Technique

1. Sit in any comfortable position, following the techniques given in Paras 1 to 7 of Stage V. Exhale whatever breath is in the lungs (Pl. 96).

Pl.96



Pl.97

2. Inhale normally through the nose.

3. Exhale slowly, deeply and steadily until the lungs feel empty.

4. Attend to the posture while exhaling and listen carefully to aspirate sound of the breath. Maintain its rhythm and smoothness throughout.

5. This completes one cycle. Repeat such cycles for ten minutes, inhale, then rest in śavāsana (Pl. 182).

The emphasis here is on slow, deep and steady exhalations.

STAGE VII

The breathing here is similar to that in Stage II, but performed while sitting. It trains one to lengthen the duration of each in-breath and to learn the art of inhalation.

Technique

1. Sit in any comfortable position, following the techniques given in Paras 1 to 7 of Stage V and exhale (Pl. 96).

2. Take a slow, deep in-breath carefully through the nose, following the techniques given in Paras 3 to 7 of Stage III.

3. Breathe out slowly but not deeply, making the exhalation slightly longer than normal.

4. This completes one cycle. Repeat such cycles for ten minutes, inhale and then rest in śavāsana (Pl. 182).

Stages V to VII are preparatory to ujjāyī prāṇāyāma practices, done in a sitting position.

STAGE VIII

Now begin ujjāyī prāṇāyāma proper, with deep in and out breaths.

Technique

1. Sit in any comfortable position, following the techniques given in Paras 1 to 7 of Stage V and exhale whatever breath is in the lungs (Pl. 96).

2. Take a slow, deep, steady in-breath through the nose.

3. Listen to the sibilant sound of the breath. Control, adjust and synchronise its flow, tone and rhythm. The flow is controlled by the resonance of the sound, and the tone by the flow. This is the key to success in prāṇāyāma.

4. Fill the lungs from the bottom to the top, right up to the collar-bones. Consciously try to channel the breath to the remotest parts of the lungs (Pls, front view, 98; back view, 99; side view, 100).

5. Be continuously aware of the inflow of breath.

6. As you breathe in, your body, lungs, brain and consciousness should be receptive rather than active. Breath is received as a divine gift and should not be drawn in forcefully.

7. Do not inflate the abdomen as you inhale. Keep the diaphragm below the ribs throughout. Observe this in all types of prāṇāyāma. If the diaphragm is lifted above the floating ribs, the abdomen gets inflated instead of the chest.

8. The movements described in Paras 4, 6, and 7 above are made by drawing the entire abdominal area from the pubis to the breastbone

Pl.98

Pl.99

Pl. 100

towards the spine, and then up towards the head. This automatically massages the internal organs.

9. In deep inhalation, the inner intercostal muscles at the front are lifted up. Just before exhalation, there is a further lift of these muscles, which prepares one before breathing out.

10. Now begins the process of deep exhalation, in which the trunk and diaphragm play an active role.

11. Maintain the lift of the intercostal muscles along with that of the diaphragm, and start exhalation. Allow the breath to go out slowly, deeply and steadily.

12. After a few seconds the grip of the trunk relaxes by itself gradually, until the lungs have been passively emptied. Maintain a continuous awareness during the out-flow of breath.

13. This completes one cycle. Repeat for ten to fifteen minutes keeping the eyes closed and the limbs relaxed. Inhale and then lie down and rest in śavāsana (Pl. 182).

14. Inhale with warmth, elation and joy as if you are receiving the life force

as a gift from God. Exhale with a sense of gratitude, silently expressing your humbleness as a surrender to the Lord.

15. At each inhalation and exhalation there is a fractional pause when the muscles of the torso adjust themselves. Learn to be aware of this.

Effects
This prāṇāyāma aerates the lungs, soothes and tones the nervous system. As a result of the deep respiratory action, the blood carries the supply of life-giving energy to the minutest parts of the tissues. It reduces phlegm, relieves pain in the chest, and the voice becomes melodious.

STAGE IX

This is a stage for beginners, introducing retention of the breath when the lungs are full. It is a deliberate internal retention (sahita antara kumbhaka).

Technique
1. Sit in any comfortable position following the techniques given in Paras 1 to 7 of Stage V, and exhale (Pl. 96).

2. Breathe in and hold the breath. Keep the trunk firm and alert. (Pls: front view, 101; back view, 102; side view, 103).

3. Do not raise the bridge of the nose or the eyes or the head throughout retention (Pl. 78).

4. Feel the breath percolating to the remotest pores of the skin of the torso and become aware of the process.

5. After a few seconds, this awareness begins to lose its grip. The moment this happens, exhale normally. This is one cycle, so practise ten to fifteen of them.

6. If any fatigue is felt during this practice, these cycles may be alternated with normal breathing.

7. When this practice becomes easy, intensify it until you can comfortably hold the breath for ten to fifteen seconds at a time. To increase the length of retention, lift the diaphragm towards the lungs, hold it firmly, and draw the abdomen in and up towards the spine. Then hold the breath without raising the bridge of the nose (Pl. 78).

8. If hardness is felt in the lungs, or tension in and around the temples or in the head, it is a sign that you are exceeding your capacity; if so, reduce the

length of the internal retention. The transition from the latter to exhalation should be smooth.

9. Breathe out slowly, without losing control of the trunk, diaphragm, and lungs. After completing the practice take a few deep breaths and then rest in śavāsana (Pl. 182).

Note
Internal retention may also be done while lying down, keeping pillows below the head to simulate jālandhara bandha (Pl. 77).

Effects
The practice of sahita antara kumbhaka develops harmony between the breath and the lungs, and between the nerves and the mind. If correctly performed, it induces a dynamic state in which the body feels filled to the brim with energy. It increases one's capacity for work, removes despair and creates hope. Through the creation of energy, it invigorates the nervous system and develops endurance. It is ideal for those who suffer from low blood pressure, languor, laziness and doubt.

However, antara kumbhaka is not advisable for those suffering from high blood pressure, hyper-tension and cardiac disorders.

STAGE X

This is a stage for beginners, introducing retention of the breath when the lungs are empty. It is called deliberate external retention (sahita bāhya kumbhaka).

Technique
1. Sit in any comfortable position, following the techniques described in Paras 1 to 7 of Stage V, and exhale whatever breath is in the lungs (Pl. 96).

2. Breathe in normally and out steadily and slowly, emptying the lungs as far as possible without straining.

3. Remain passive and hold the breath as long as possible (Pl. 96), then inhale normally. This is one cycle. Repeat ten to twelve of them or continue for ten minutes.

4. Constriction in the abdomen, pressure at the temples or gasping for air indicate that you have reached your capacity in external retention (bāhya kumbhaka); in which case reduce the length of the retention. The transition to inhalation should be smooth. If any fatigue is felt during this practice, cycles of this stage may be alternated with normal breathing.

5. Take a few deep breaths and lie down in śavāsana (Pl. 182).

Note
External retention may also be done while lying down, keeping pillows under the head (Pl. 77).

Effects
Bāhya kumbhaka is especially good for people who are overtense or suffering from high blood pressure, as it relieves nervous tension. It brings about a passive state, a feeling of quietness, as if one were an empty vessel floating on water. However, it is not advisable for those suffering from depression, malancholia and low blood pressure.

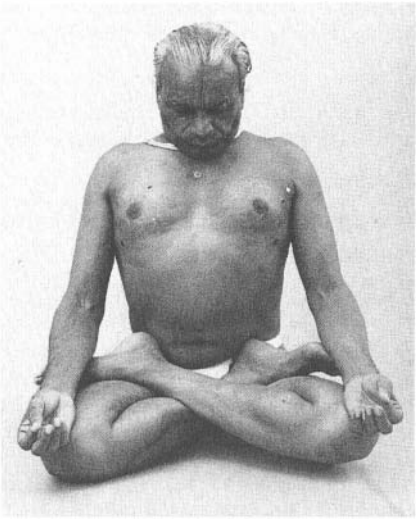
STAGE XI

This is internal retention (antara kumbhaka) for advanced students.

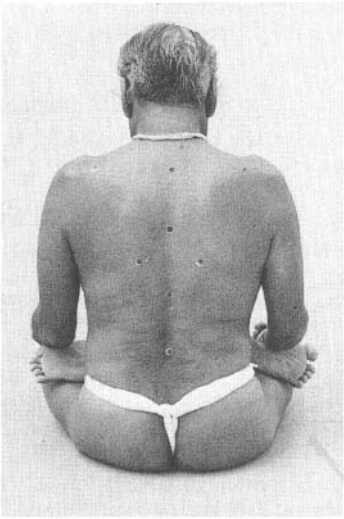
Technique
1. Sit in any comfortable position, following the techniques described in Paras 1 to 7 of Stage V, and exhale (Pl. 96).

2. Take a strong, deep breath without any force, jerk or harshness, keeping the trunk alert.

Pl. 101



Pl. 102



Pl. 103

3. Hold the breath for ten to fifteen seconds (Pls 101 and 103).

4. In a few moments the body loses its grip. To maintain this grip, raise the side ribs. Now contract the lower trunk from the pubis, perineum and anus and lift it up towards the chest along with the spine. This is mūla bandha (Pl. 69).

5. This lift of the torso creates tension in the head. Lower the head from the base of the back of the neck. This gives a better jālandhara bandha and relieves tension in the head.

6. Feel the breath percolating to the remotest pores of the skin of the torso, arousing awareness everywhere.

7. Keep the eyes, ears and tongue passive, and the brain quiet.

8. If the duration of retention is too long, the throat feels strained and the facial muscles and temples become taut. This means that you are losing your grip. So, recharge the energy of the torso as instructed in Para. 4 above.

9. If tension is still felt in the head and trunk and the face feels flushed, it means you are not maintaining the correct grip or have exceeded your

capacity. This may lead to injury to the nervous system. In which case, do not continue the retention.

10. Breathe out normally or deeply without losing grip on the trunk, diaphragm and the lungs.

11. This is one cycle of retention. Practise ten to twelve such cycles, maintaining the same awareness throughout as in the first cycle. Since the capacity for retention varies with individuals, it is not possible to mention the duration of breath retention. It is advisable to do internal retention after an interval of three or four breaths.

12. After completing the practice, inhale and lie in śavāsana (Pl. 182).

In this stage the emphasis is on retention of breath rather than on in and out breath.

Effects
This stage is good for persons suffering from dullness, nausea, and physical fatigue. It keeps the body warm, removes phlegm, and creates exhilaration and confidence. It leads to better concentration. Faulty practice causes irritation, throbbing, short temper and exhaustion.

STAGE XII

This is external retention (bāhya kumbhaka) for advanced students.

Technique
1. Sit in any comfortable position, following the techniques given in Paras 1 to 7 of Stage V, and exhale (Pl. 96).

2. Breathe in normally, and out steadily and strongly. Empty the lungs as far as you can without force, jerk or harshness.

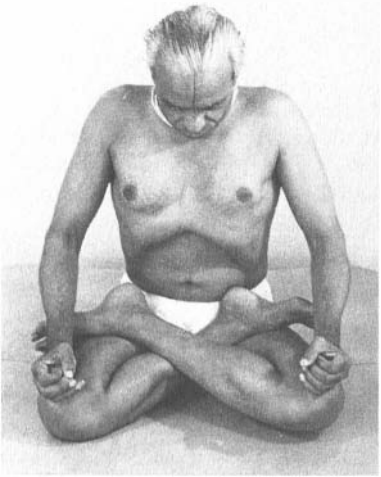
3. When exhalation is complete do not inhale, but pause and draw in the entire abdominal area back towards the spine and up towards the chest. This is uḍḍīyāna bandha (Pl. 104).

4. Retain this grip as long as you can. When tension is felt, relax the abdomen, bring it to normal and then breathe in.

5. This is one cycle. Repeat eight to ten such cycles, then inhale and lie in śavāsana (Pl. 182).

6. As the practice improves, increase the duration of retention after

Pl. 104



exhalation. The duration varies with each individual. Watch your own capacity to increase it.

7. Never breathe in during uḍḍīyāna bandha, as this may make you gasp and strain the heart.

8. At the beginning it is advisable to do external retention after an interval of three or four deep breaths.

Effects
This stage cleanses the abdominal organs and prevents their prolapse.

STAGE XIII

This advanced stage combines both internal (antara) and external (bāhya) retentions (kumbhakas) with two or three in and out breaths.

Technique
1. Here, first exhale (Pl. 96).

2. Breathe in deeply. After full inhalation, retain the breath (antara kumbhaka) for ten seconds (Pl. 101).

3. Breathe out deeply. After full exhalation, hold the breath (bāhya kumbhaka) with uddīyāna bandha for five seconds (Pl. 104) and inhale deeply. This completes one cycle.

4. Exhale, and take two or three deep in and out breaths. Then repeat the cycles of kumbhakas, followed again by two or three deep in and out breaths.

5. Do five to six cycles, ending with inhalation. Then lie down in śavāsana (Pl. 182).

Table of Ujjāyī Prāṇāyāma

Stage	*Pūraka*		*Antara Kumbhaka*		*Rechaka*		*Bāhya Kumbhaka*	
	N	*D*	*No MB*	*MB*	*N*	*D*	*No UB*	*UB*
Lying:								
I	√				√			
II	√					√		
III		√			√			
IV		√				√		
Sitting:								
V	√				√			
VI	√					√		
VII		√			√			
VIII		√				√		
IX	√		AFS		√			
X	√					√	ALAP	
XI		SD		10–15 sec	N or D			
XII	√					SD		ALAP
XIII		SD		10–15 sec	N or D			ALAP

AFS = A few seconds
ALAP = As long as possible
D = Deep
MB = Mūla bandha
N = Normal
UB = Uḍḍīyāna bandha
SD = Strong deep

Chapter 20

Viloma Prāṇāyāma

Loma means hair, the 'vi' denotes disjunction or negation. Viloma means anti-hair or against the natural order of things.

In viloma prāṇāyāma inhalation or exhalation is not a continuous process, but one that is interrupted by several pauses. For instance, if one complete inhalation were to take fifteen seconds, then in viloma it would be interrupted every two or three seconds, thus bringing the length of the in-breath to twenty-five or thirty seconds. Similarly, with interrupted exhalation the out-breath is lengthened from twenty-five to thirty seconds. This prāṇāyāma may be compared to climbing up or down a tall ladder, with a pause at each step. The techniques given below are in nine stages.

STAGE I

This stage is an introduction to interrupted in-breathing (pūraka) in a lying position. It is suitable for beginners and invalids, or when suffering from fatigue, weakness, strain or low blood pressure.

Technique

1. Lie quietly for a few minutes as in ujjāyī Stage I, preferably using planks or cushions as explained at the beginning of Ch. 19.

2. Follow the techniques given in Paras 2, 3 and 4 of ujjāyī, Stage II, and exhale whatever breath is in the lungs (Pl. 91).

3. Now start with interrupted inhalation, as follows. Inhale for two or three seconds, pause, and hold the breath for two or three seconds and do this again. To pause, the diaphragm is lightly immobilised. When you breathe in again, do not let the diaphragm loose after each pause. Continue in this way until the lungs are completely full, which may involve four or five pauses. No strain should be felt throughout the practice.

4. Now exhale slowly and deeply, as in ujjāyī, Stage II, gradually releasing the grip of the diaphragm.

5. This completes one cycle of viloma, Stage I. Repeat them for seven to ten minutes, or for as long as you do not feel fatigue; breathe normally two or three times, then rest in śavāsana (Pl. 182).

STAGE II

This is an introduction to interrupted out-breath (rechaka) when lying down. It is suitable for beginners, weak persons and invalids, or when suffering from fatigue, strain, high blood pressure or a heart complaint.

Technique

1. Lie quietly for a few minutes as in ujjāyī Stage I, then follow the techniques given in Paras 2, 3 and 4 of ujjāyī Stage II. Exhale whatever breath is in the lungs (Pl. 91).

2. Take a long deep breath without any pause, as in ujjāyī, filling the lungs completely, but do not over-strain.

3. Exhale for two or three seconds, pause, hold the breath for two or three seconds and repeat. Continue in this way until the lungs feel completely emptied, which may involve four or five pauses. Gradually release the grip on the abdomen.

4. This completes one cycle of viloma Stage II. Repeat them for seven to ten minutes or for as long as fatigue is not felt. Inhale, then do śavāsana (Pl. 182).

Effects

This practice brings a feeling of ease and lightness to the body.

STAGE III

This stage is a combination of Stages I and II, in a lying down position.

Technique

1. Lie quietly for a few minutes as in ujjāyī Stage I, then follow the techniques given in Paras 2, 3 and 4 of ujjāyī Stage II, and exhale (Pl. 91).

2. Now start interrupted inhalation as described in Para. 3 of Stage I above.

3. Hold the breath for a second or two.

4. Now start interrupted exhalation, following the techniques given in Para. 3 of Stage II above, gradually releasing the grip on the diaphragm.

5. This completes one cycle of viloma, Stage III. Repeat them for eight to twelve minutes or for as long as no strain is felt. Inhale, then rest in śavāsana (Pl. 182).

STAGE IV

This stage is an introduction to interrupted in-breathing (pūraka) in a sitting position. It is suitable for beginners.

Technique

1. Sit in any comfortable position, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Exhale without strain. (Pl. 96).

2. Now start interrupted inhalation, as follows: Inhale for two or three seconds, pause and hold the breath for two or three seconds; again inhale for two or three seconds, pause and hold the breath for two or three seconds. To pause, the diaphragm is lightly gripped. Do not let the diaphragm loose when you breathe in again after each pause. Continue in this way until the lungs are completely full, which may involve four or five pauses. No strain should be felt throughout.

3. Gently draw the abdominal organs towards the spine and up. Then exhale slowly and deeply, as in ujjāyī, Stage VI, gradually releasing the grip on the abdomen.

4. This completes one cycle of viloma, Stage IV. Repeat such cycles for seven to ten minutes, or for as long as you do not feel fatigue. Breathe normally two or three times, then rest in śavāsana (Pl. 182).

Effects

The effects are similar to those of Stage I.

STAGE V

This stage is an introduction to interrupted out-breaths (rechaka) in a sitting position. It is suitable for beginners of normal health.

Technique

1. Sit in any comfortable position, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Exhale without strain (Pl. 96).

2. Take a long, deep breath at one stretch, without any pauses. Fill the lungs to the brim.

3. Now start interrupted exhalation as in Stage II but immobilising the diaphragm, as follows: Exhale for two seconds, pause, grip the diaphragm and hold the breath for two or three seconds and repeat. Continue in this way until the lungs feel completely emptied, which may take four or five pauses. Allow the grip on the diaphragm to release gradually.

4. This completes one cycle of viloma Stage V. Repeat them for eight to ten minutes or for as long as no strain is felt. Take two or three normal breaths, then lie in śavāsana (Pl. 182).

Effects
This practice brings a feeling of exhilaration and calmness.

STAGE VI

This stage is a combination of Stages IV and V, done when sitting.

Technique
1. Sit in any comfortable position, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Exhale without straining (Pl. 96).

2. Now start interrupted inhalation, following the technique of Para. 2 of Stage IV above.

3. Hold the breath for two or three seconds. Grip the abdomen, then start interrupted exhalation, following the technique of Para. 3 of Stage V above.

4. This completes one cycle of viloma, Stage VI. Repeat for ten to fifteen minutes or for as long as no strain is felt. Take two or three breaths, then lie in śavāsana (Pl. 182).

Effects
This develops endurance and a sense of exhilaration.

STAGE VII

Here internal retention (antara kumbhaka) is introduced, following an interrupted in-breath. It is for intermediate and more intensive students who have acquired some strength and stability in their practice.

Technique
1. Sit in any comfortable position, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Exhale deeply, without straining (Pl. 96).

2. Start interrupted inhalation, as described in Para. 2 of Stage IV above.

3. Now hold the breath for ten to fifteen seconds. This is internal retention (antara kumbhaka) (Pl. 101). Grip the diaphragm, then exhale slowly and deeply, gradually relaxing the hold of the diaphragm.

4. This completes one cycle of viloma, Stage VII. Repeat them for fifteen to twenty minutes or longer, as long as no fatigue or strain is felt. Take two or three breaths, then lie in śavāsana (Pl. 182).

Effects
This stage helps those suffering from low blood pressure. The lungs cells are aerated, elasticity is created in the lungs, and the art of deep breathing is learnt with precision, ease and comfort.

STAGE VIII

Here external retention (bāhya kumbhaka) is introduced, followed by an interrupted out-breath. It is for students who have acquired strength and stability in their practice.

Technique
1. Sit for some time, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Slowly exhale until the lungs feel empty, without straining (Pl. 96).

2. Take a long deep breath without any pause. Fill the lungs completely, but do not over strain.

3. Hold the breath for two to three seconds.

4. Now do interrupted exhalation, as described in Para. 3 of Stage V above.

5. Hold the breath for five or six seconds before inhaling.

6. This completes one cycle of viloma, Stage VIII. Repeat for fifteen to twenty minutes, or for as long as you do not feel fatigue. Take two or three normal breaths, then lie in śavāsana (Pl. 182).

Effects
This rests the nerves and soothes the brain.

STAGE IX

This stage combines Stages VII and VIII, including (a) interrupted in and out breaths, (b) internal and external retentions, and (c) the bandhās. It is only for advanced students who have practiced Yoga for many years.

Technique
1. Sit in any comfortable position, following the techniques given in Paras

1 to 7 of ujjāyī, Stage V. Exhale until the lungs feel empty, without straining (Pl. 96).

2. Start interrupted inhalation as described in Para. 2 of Stage IV.

3. Then hold the breath with mūla bandha for ten to fifteen seconds or for as long as you can (Pl. 101).

4. Now start interrupted exhalation as described in Para. 3 of Stage V.

5. When the lungs feel empty, hold the breath for five or six seconds. Perform uḍḍīyāna bandha as described in Para. 3 of Stage XII of ujjāyī, but take care not to overstrain (Pl. 104).

6. This completes one cycle of viloma, Stage IX. Repeat them for fifteen to twenty minutes or for as long as you do not feel fatigue. Take two or three normal breaths, then lie in śavāsana (Pl. 182).

Effects
This stage combines the effects of Stages VII and VIII.

Table of Viloma Prāṇāyāma

Stage	*Pūraka*	*Antara Kumbhaka*		*Rechaka*	*Bāhya Kumbhaka*	
	No PP	*No MB*	*MB*	*No P P*	*No UB*	*UB*
Lying:						
I	√			√		
II	√			√		
III	√			√		
Sitting:						
IV	√			√		
V	√			√		
VI	√			√		
VII	√	10–15 sec		√		
VIII	√			√	5–6 sec	5–6 sec
IX	√		10 sec	√		

MB = Mūla bandha
P = Pauses
UB = Uḍḍīyāna bandha

Chapter 21

Bhrāmarī, Mūrchhā and Plāvinī Prāṇāyāma

BHRĀMARĪ PRĀṆĀYĀMA

Bhramara means a large black bumble-bee and this prāṇāyāma is so called because during exhalation a soft humming sound like that of a bumble-bee is made. The best time to perform it is in the silence and quiet of the night. Bhrāmarī prāṇāyāma may be done in two stages, one lying, one sitting.

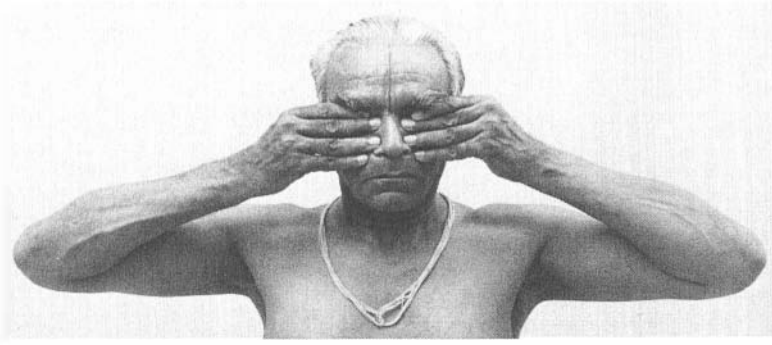
Technique

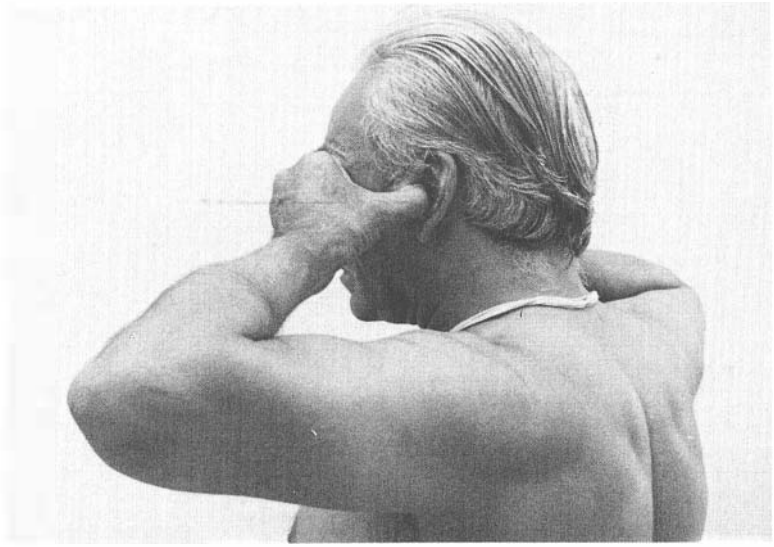
Here deep inhalations are done as in Ujjāyī Prāṇāyāma and deep exhalations with a humming or murmuring sound. However, it is not advisable to hold the breath (kumbhakas) in this prāṇāyāma. Bhrāmarī may also be done while performing ṣaṇmukhī mudrā without jālandhara bandha, as there is no retention of breath here.

SANMUKHI MUDRĀ (Pls 105 and 106)

Raise the hands to the face and the elbows to the level of the shoulders. Place the thumb-tips in the ear-holes to keep out external sounds. If the thumb-tips cause pain, reduce the pressure or push the tragi (the small protuberances at the entrance of the ears) over the ear-holes and press them in.

Pl. 105





Pl. 106

Use the fore and middle fingers to close the eyes gently. The middle-finger tips draw the upper lids down, and the fore-finger tips cover the remaining space above to keep out the light.

Press the nostrils with the ring finger-tips to narrow the nasal passages for slow, steady, rhythmic and subtle breathing. Keep the little fingers on the upper lips to feel the flow of breath.

The sādhaka can hear the inner sound as the ears are closed by the thumbs. Through pressure on the eye-balls, he also sees various colours of dazzling light, sometimes steady like that of the sun. If it is difficult to hold ṣaṇmukhī mudrā, then wrap a cloth round the head and over the ears and temples (Pl. 107).

After completing practice of bhrāmarī prāṇāyāma, inhale, then do śavāsana (Pl. 182).

Note

Kumbhakas can be attempted, wrapping a cloth round the head with jālandhara bandha in all the other Prāṇāyāmas (Pl. 108).

Effects

The humming sound induces sleep and is good for persons suffering from insomnia.

Pl. 107

Pl. 108

MŪRCHHĀ PRĀṆĀYĀMA

Mūrchhā means a state of swoon. This prāṇāyāma is done as in ujjāyī and the internal retention is held till faintness is felt. It makes the mind inactive and brings sensual tranquillity.

PLĀVINĪ PRĀṆĀYĀMA

Plāva means swimming or floating. Very little is known of this prāṇāyāma. It is said to help the sādhaka to float on water with ease.

Mūrchhā and plāvinī prāṇāyāma are no longer in vogue.

Table of Bhrāmarī Prāṇāyāma

Stage		*Pūraka* *N*	*Pūraka* *D*	*Rechaka* *DHS*	*Ṣaṇmukhī mudrā*
Lying:					
I	A	√		√	
	B	√		√	√
II	A		√	√	
	B		√	√	√
Sitting:					
III	A	√		√	
	B	√		√	√
IV	A		√	√	
	B		√	√	√

D = Deep
HS = Humming sound
N = Normal

Chapter 22

Digital Prāṇāyāma and the Art of Placing the Fingers on the Nose

THE NOSE

1. The nose is a cone-shaped chamber, supported by bone and cartilage, lined on the outside by skin and on the inside by mucous membranes, while the nostrils are supported and partitioned by the septum. The inner sides of the nostrils are irregular and connected by small holes to the sinuses in the skull.

2. Air entering the nostrils is filtered and passed down the wind-pipe to the lungs. The flow is slowed down slightly when air enters the wider passages halfway up the nose. The sides of the nasal chamber in the skull are lined by three whorled and porous bones called conchae. Shaped like the wings of a bird, they cause the air currents to spiral so that they brush the mucous membrane lining in complex and variable patterns. Pressure from the thumb and two fingers on the nose widens or narrows the nasal passages. This helps to control the shape, direction and flow of these currents. The close attention required to monitor this flow develops inner awareness. This awareness is also enhanced by learning to hear the subtle vibrations set up by the air flow. Hence the important part played by the ears in prāṇāyāma.

3. The air currents also influence the organs of smell through the ethmoid bone at the base of the skull. This bone is perforated for the filaments of the olfactory nerve which stimulates the limbic system of the brain concerned with transforming perception into feeling.

4. Inhaled air circulates over the areas of the mucous membranes (the mucosa). Unless these function efficiently, breathing is strained and irregular. They may be congested by changes of atmosphere, or their secretion affected by various factors such as tobacco, smoke, infections, emotional states and so on. The flow of air is diverted periodically from one nostril to the other due to changes in the blood circulation, as well as

through injury, disease or a cold. Such changes alter the shape and size of the nose, the nostrils and the nasal passages.

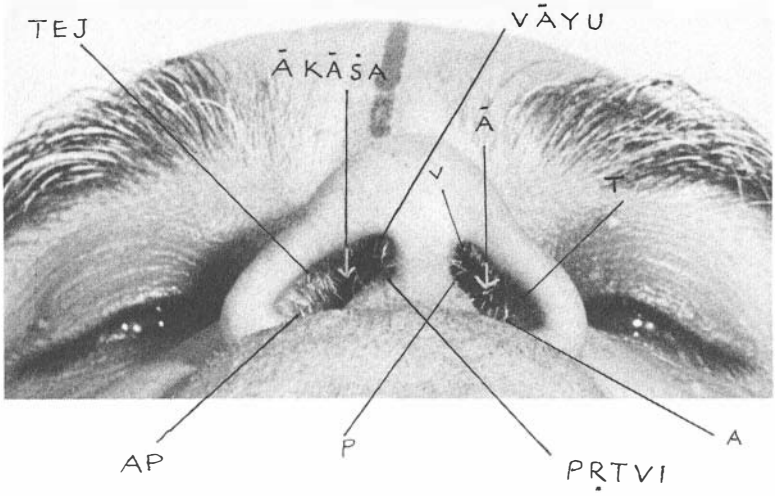
5. Muscles attached to the cartilages are accessories which dilate or compress the nostrils. Being part of the muscle system of the face connected with the lips and eye-brows they can express emotional states like anger, disgust or danger and reveal inner personality.

6. According to *Śiva Svarodaya*, a Yoga text, the five basic elements of earth (pṛthvi), water (ap), light (tejas), air (vāyu) and ether (ākaśa) are located in the nose (Pl. 109). In prāṇāyāma, the flow of vital energy (prāṇa) in the breath contacts these elements, when it passes over or through their sites and influences the behaviour of the practitioner. These sites or areas shift every few minutes or so. For instance when the current of air brushes the earth site in the right nostril, it brushes the water site in the left nostril. The pattern is:

Right nostril	Left nostril
Earth	Water
Water	Fire
Fire	Air
Air	Ether
Ether	Earth

The shift from one site to the other is gradual. Many years of practice are needed to locate and distinguish the sites or areas of the five elements or energies and when and where the air is in touch with each nostril. It may

Pl. 109



take less time to locate the above areas under an experienced teacher. Precise and sensitive adjustments with the thumb and the ring and little fingers of the right hand on the nose will make the breath flow simultaneously over the same location in both nostrils creating clarity in the brain and stability in mind. The text further explains that the best and ideal time for meditation (dhyāna) is when the breath flows in the central part of both the nostrils – the ether element.

THE ART OF FINGERING

7. The training required of a sādhaka for prāṇāyāma may be compared to that for becoming a master musician. Kṛṣṇa the divine cowherd, charmed the gopis and conquered their hearts by playing his flute, manipulating it and creating a world of mystic sounds. In his practice of prāṇāyāma, the sādhaka subdues and conquers his senses by 'playing' on his nostrils, delicately fingering them to manipulate breath patterns as if playing the flute.

There are several openings in wind instruments, but only two in the nose, so that the sādhaka requires greater dexterity than the flautist to control the infinitely fine and subtle tones and shades of his breath.

A good musician studies the construction, shape, stops, and other characteristics of his instrument, as well as the atmospheric changes that affects it. By constantly practising with his fingers, he trains their virtuosity for delicate adjustments, and his ears to listen for the minutest variation in sound and learns to co-ordinate the skill of his fingers with his ears. Only then can he begin to capture the strains – the tone, the pitch, the resonance and the cadence – of the music.

The sādhaka also studies the shape and construction of his nostrils, the texture of their outer skin, the peculiar characteristics of his own nose, such as the width of the nasal passages, deviation of the septum and the like, as well as the atmospheric changes affecting the texture of the skin and dryness or otherwise in the passages. He regularly practises the movements of his wrist and fingers till he becomes dexterous and is able to refine them. He adjusts the finger-tips over the outer nasal skin surface covering the sites of the five elements (earth, water, fire, wind and ether) in the nostrils. These five sites act as stops. He adjusts the flow, rhythm and resonance of breath by narrowing or widening the nasal passages at these locations by delicate fingering and by attentively listening to the sound of the breath which he modulates and corrects.

The door-keepers of a temple sanctum (dvārapālas) regulate the stream of devotees, the fingers regulate the volume and flow of breath, and by narrowing the passages filter out impurities during respiration.

Due to controlled inhalation through the narrowed nasal passages, the

lungs have more time to absorb oxygen, whilst in controlled exhalation unused oxygen is re-absorbed and waste matter is ejected.

By narrowing the nasal passages through digital control the sādhaka develops greater sensitivity and awareness. By practising ujjāyī and viloma Prāṇāyāmas, the sādhaka's knowledge of prāṇāyāma deepens while his body derives practical knowledge through what it has experienced.

In the practice of prāṇāyāma by digital control the sādhaka unites his theoretical with practical knowledge. This co-ordination kindles his knowledge until it bursts into the flame of intelligence, which is full of resolution and energy vyavasāyātmika buddhi).

8. Prāṇāyāma may be broadly divided into two categories:

(a) When there is no digital control over the nostrils.
(b) When the thumb and two fingers of the right hand are used to regulate and control the flow of breath through the nose. This is called digitally controlled prāṇāyāma. Moreover, this prāṇāyāma is of two types:
   (i) Inhalation and exhalation are practised on both sides of the nostrils, partially closing them to learn to use pressure and balance on the thumb and fingers for an even flow of breath from both nostrils (Pl. 110).
   (ii) Wherein one nostril is kept blocked with the finger tips, while the breath is made to flow from the thumb side and vice versa. For example, if the breath is drawn from the right side, the ring and little fingers should be made to close the left nostril without

Pl. 111

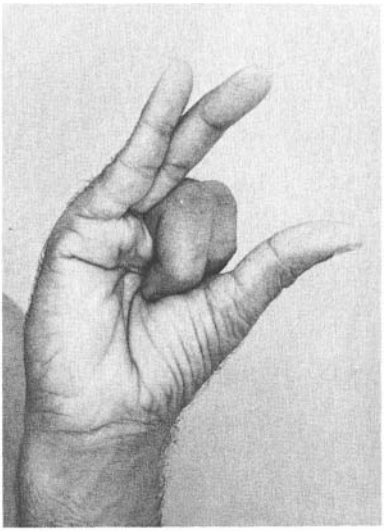
Pl. 110

Pl. 112

disturbing the position of the septum (Pl. 111) and vice versa (Pl. 112). Care is taken that the breath should not flow in the blocked nostril.

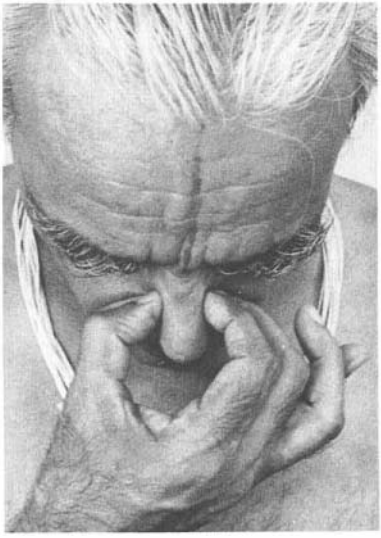
In the first category (a) only the physical body is involved. The second (b) is a more advanced Prāṇāyāma in which the passage of air is regulated manually with skill and subtlety and delicate control of the fingers.

Pl. 113

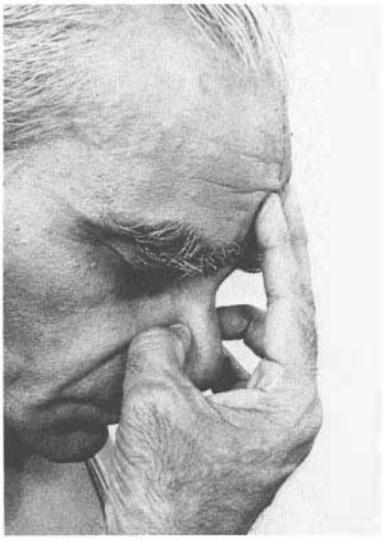


Pl. 114

Pl. 115



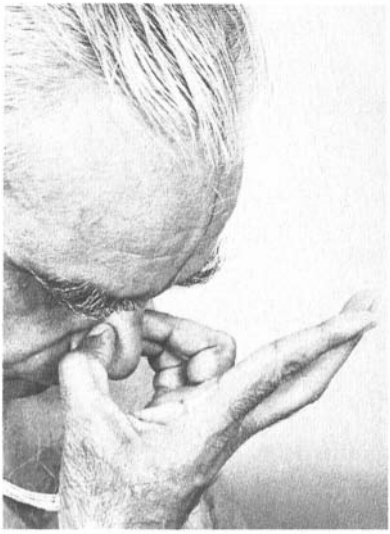
Pl. 116



9. In ancient India, as in most of the older civilisations, the auspicious and ritual ceremonials were performed with the right hand. All left-handed actions and ceremonials were regarded as being sinister. Hence the left hand may only be used in prāṇāyāma if the right hand or arm is out of action (Pl. 113).

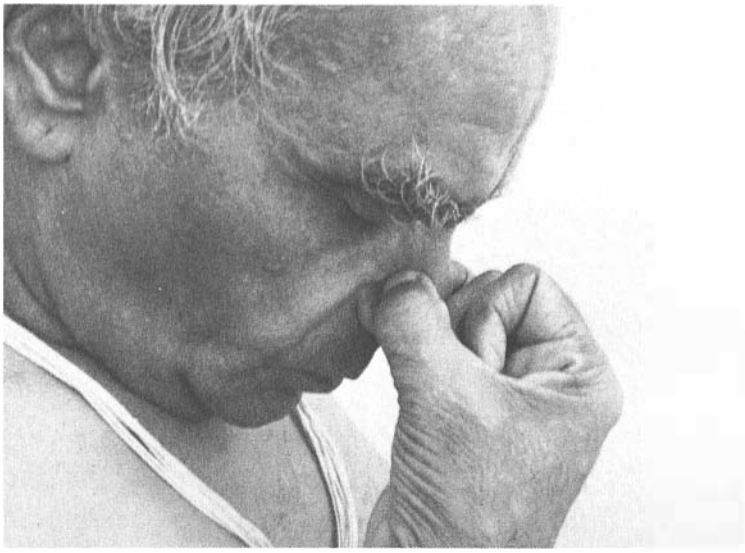
10. Yoga texts like *Gheranḍa Saṁhita* recommend the use of the thumb, ring and little fingers of the right hand on the nose without defining their correct placement (Pl. 114). They stress that the fore and middle fingers are not to be used. If the fore and middle fingers were used, the forearm and wrist would tilt and become heavy (Pl. 115). Moreover, correct and accurate pressure could not be applied to the nostrils since the nose would pull the fingers down and accuracy in the performance of prāṇāyāma would be lost. Similarly keeping the fore and middle fingers on the centre of the forehead (Pl. 116) or extended outwards (Pl. 117) would create varying pressures on the thumb, ring and little fingers, which in turn would create uneven curvature of the digits and irregular flow of breath.

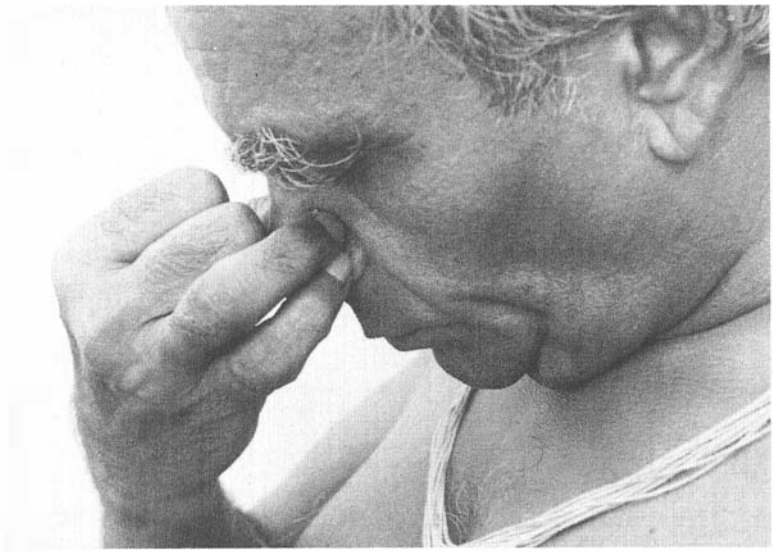
11. If the fore and middle fingers are folded into the hollow of the palm, the thumb rests on the right side of the nose (Pl. 118) and the ring and little fingers on the left (Pl. 119), while the wrist is placed centrally (Pl. 120). This enables the thumb, ring and little fingers to move on either side smoothly and freely, while the palm is balanced evenly there as well. The



Pl. 117

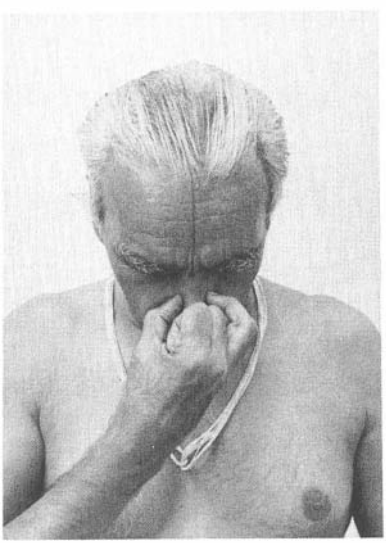
Pl. 118



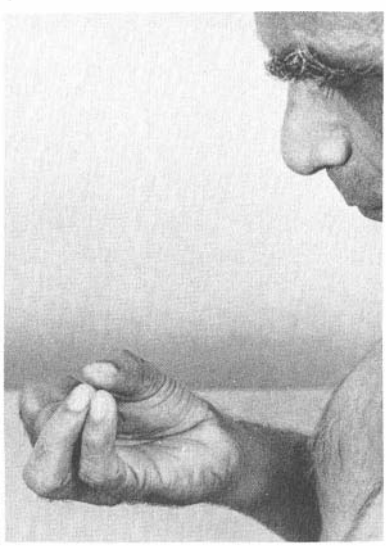


Pl. 119

Pl. 120



Pl. 121



nerves and muscles of the middle portion of the right forearm make it the crucial place for the digital control of the breath through the nostrils. From here the middle portion of the right forearm, movements of the wrist and the fingers are regulated.

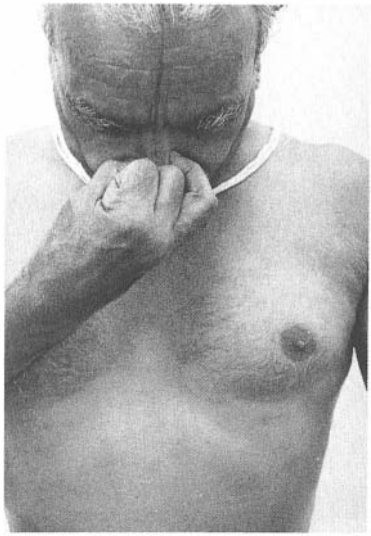
12. When seated to practise digital or manual prāṇāyāma, see that the shoulders are level and parallel to the floor and that the chin rests in the notch between the collar-bones (Pl. 57).

13. Resting the left hand on the left knee, bend the right arm at the elbow without tightening the biceps, forearm or wrist (Pls 121 and 122). Stability, skill and sensitivity are required for controlling the width of the nasal passages, but not strength or tension.

14. Do not allow the flexed right hand to touch the chest (Pl. 123). Do not close the armpits. Do not allow the arms to press upon the chest. Keep the shoulders down and the arms passive and light, except for the tips of the thumb, ring and little fingers (Pl. 120).

15. Flex and fold the tips of the fore and middle fingers into the hollow of the palm (Pl. 124). This brings about the proper adjustment of the tips of the ring and little fingers against the tip of the thumb, creating space between the fingers and the thumb. This makes the palm soft.

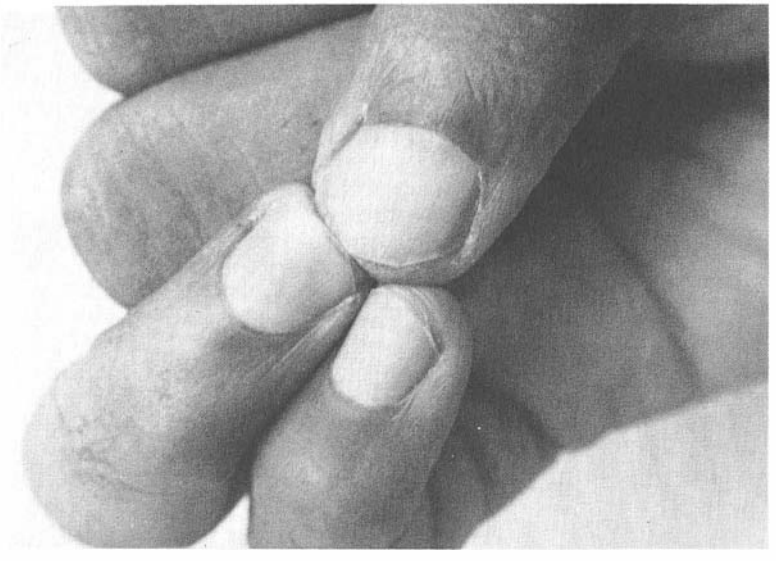
Pl. 122



Pl. 123

Pl. 124

Pl. 125



Pl. 126

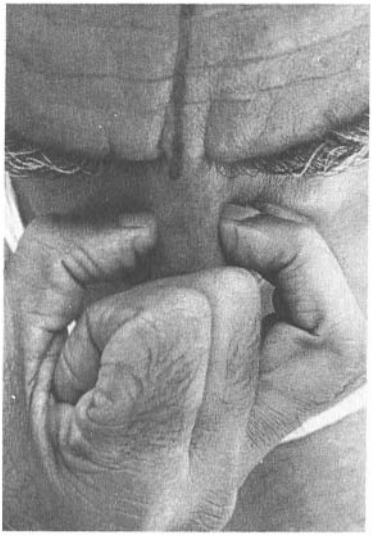
Pl. 127

16. The individual widths of the tips of the ring and little fingers are much less than that of the thumb. To equalise them curve the fingers to meet the thumb, join their tips, keeping space between the knuckles (Pl. 125). If this is difficult, place a round object, such as a cork, about half an inch wide, between the knuckles (Pl. 126). The fingers will then become accustomed to their new position. The centre of the thumb should lie opposite the joined tips of the two fingers (Pl. 127). Normally the skin of the thumb tip is harder and thicker than that of the two finger tips. Press the thumb tip lightly against the tips of the ring and little fingers to make it soft.

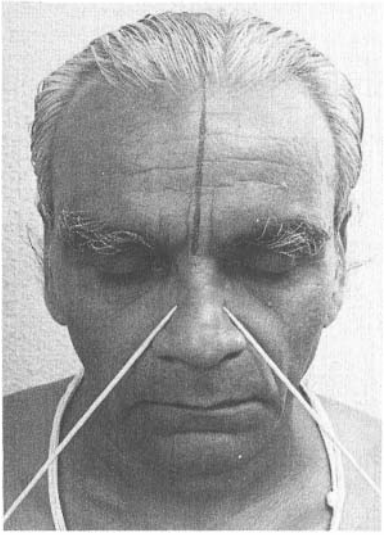
17. Raise the right wrist until the tips of the thumb and the ring and little fingers are opposite the nose. Keep the front of the wrist away from the chin, and bring the tips of the thumb and of the ring and little fingers horizontally against the nostrils (Pl. 128).

18. Between the nasal bone and the cartilage there are tiny inverted V-shaped notches. The skin below the V-shaped notches of the nose is concave. The tips of the thumb and digits are convex in shape. Therefore, place the thumb and digits to rest there evenly as shown in Pl. 129. Keep the walls of the nasal passages parallel with the septum, using pressure from the top and bottom corners of the thumb and of the finger-tips throughout the practice of prāṇāyāma. Never keep the fingers on the nostrils as shown in Pl. 130, but gently rotate the tips on the root of the nose towards the nostrils to feel the passage of the breath (Pls 131 and 132). Partially close the passage of both nostrils to measure in them the even flow of breath (see Pl. 110). If the digits are not steady, the flow of breath becomes uneven, creating strain on the nervous system and heaviness in the brain cells. Fine adjustment of the digital tips is necessary to widen or narrow the nasal passages from moment to moment to suit individual requirements. The widening or narrowing of the nasal passages by digital control may be compared to the fine adjustment of the aperture of the iris of a camera lens for correct exposure of a colour film. If the aperture adjustment is inaccurate, the result will not show correct rendering of colours. Similarly, if the apertures of the nasal passages are not manipulated with subtlety, the results of prāṇāyāma will be distorted. The correct adjustment of nasal passages will control the flow of breath from the external, measurable area of the nostrils to the immeasurable depth within.

19. In digitally controlled Prāṇāyāma the thumb and opposing fingers of the right hand are manipulated like a pair of calipers (Pl. 127). Control is by the tips of the thumb on the right nostril and those of the ring and little fingers on the left nostril. These three digits are those used for the practice of prāṇāyāma for the best results.

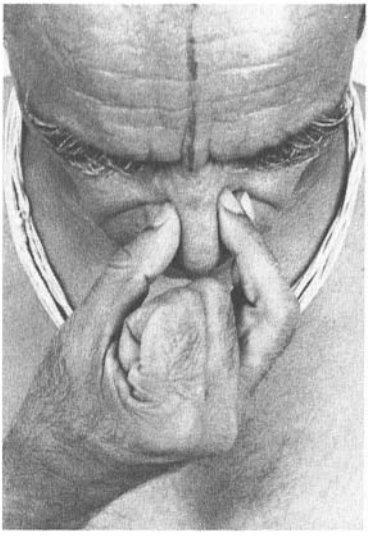


Pl. 128

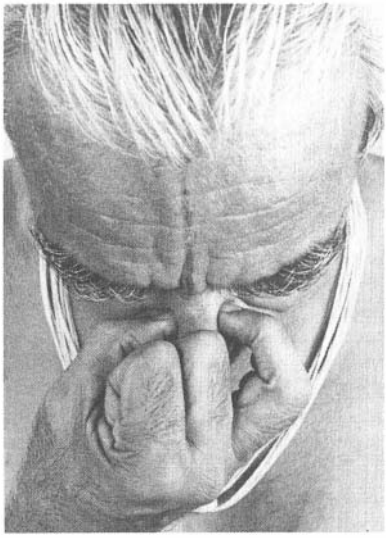


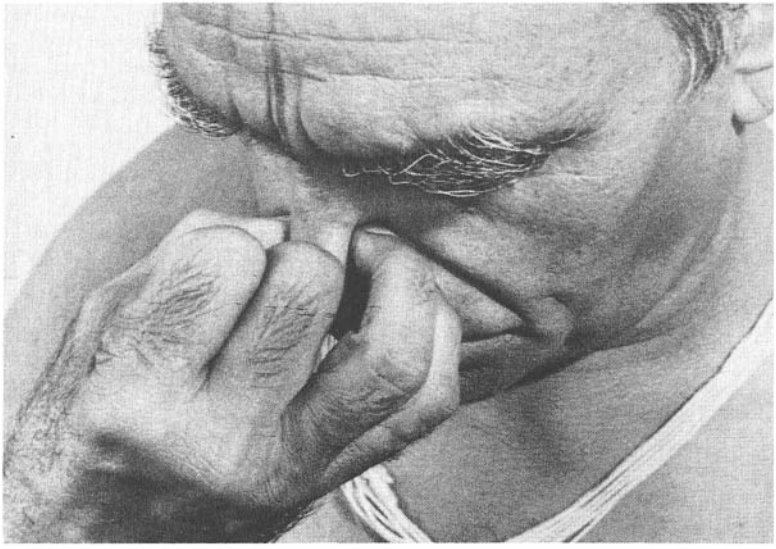
Pl. 129

Pl. 130



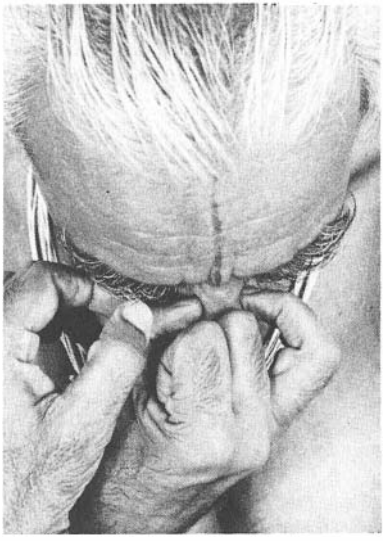
Pl. 131



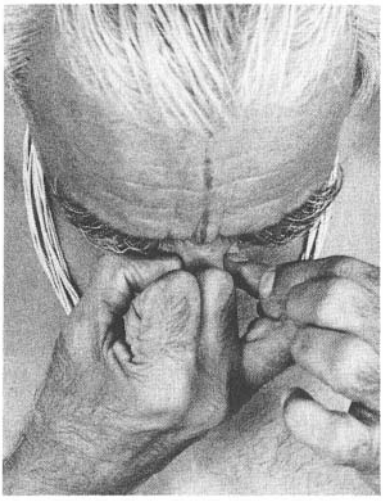


Pl. 132

Pl. 133



Pl. 134



20. Normally the skin of the nose is softer than that of the tips of the thumb and the fingers. The tips get further tensed when the fingers are placed on the nose. To reduce this tension, pull back the skin of the fingers of the right hand, from the tips to the knuckles, with the left hand (Pls 133 and 134). See that the skin of the nostrils and of the finger-tips are equally soft. This makes the membranes passive and receptive. Then the in-and-out flow of breath moves smoothly, softly and in fine form over the membranes. This receptivity in the membranes helps the thumb and fingers to learn, feel, check, control and prolongate the flow of breath as well as the duration of time. For the smooth and soft flow of the breath over the membranes, adjust the digits on the nasal skin delicately.

21. The softer and more sensitive the skin of the finger-tips, the more accurately can the breath be controlled. The passage in each nostril is widened or narrowed by very light sensitive pressure so as to regulate the flow of breath and the subtle forms of energy associated with it.

22. Do not pinch or irritate the nose (Pl. 135), nor move the position of the septum (Pl. 136). This not only disturbs the flow of breath on the sides of the nose, but also makes the chin lean to the stronger side. Do not jerk the fingers or the thumb. They should be subtle and at the same time mobile enough to make the fine adjustments needed to broaden or narrow the nasal passages.

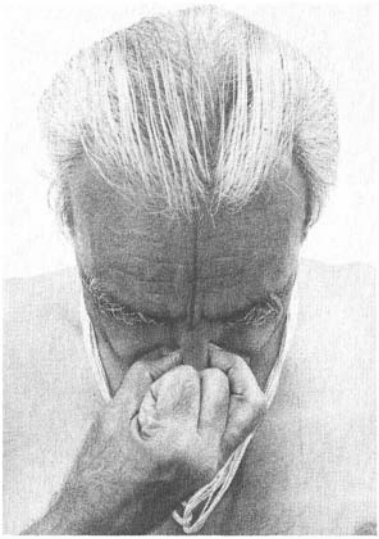
23. Whenever dryness or irritation is felt on the membranes, lighten the finger pressure on them without losing the contact that makes the blood flow. This keeps the skin of the nose and of the finger-tips fresh, clean and sensitive. Sometimes, if it is sticky, one may have to pull the outer skin of the nose down with the left hand (Pls 137 and 138).

24. See that the chin does not move to the right as you bring your hand up to your nostrils.

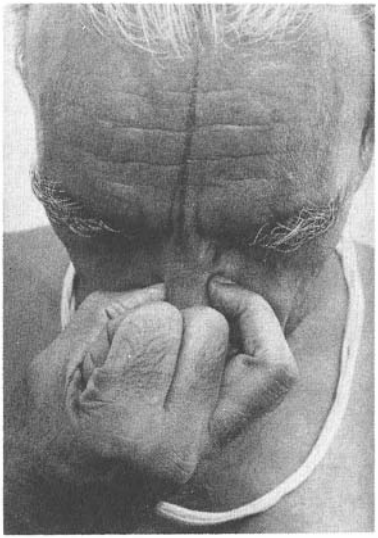
25. Those using the right hand tend to lean the chin and head towards the right while changing the finger pressures from left to right. Those who use the left hand may lean them towards the left. Learn to keep the middle of the chin in line with the middle of the sternum.

26. During inhalation the flow of air through the nasal membranes moves upwards, and in exhalation downwards. Unconsciously the digits follow the breath. Adjust and move the fingers against the current of breath.

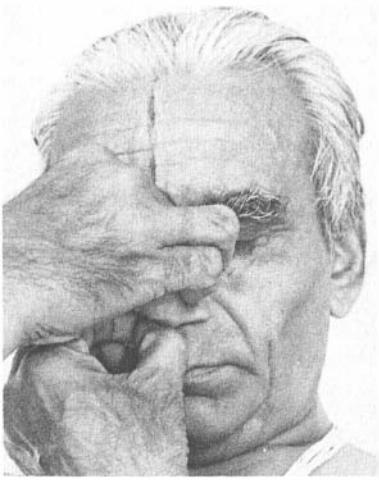
27. In prāṇāyāma the breath enters the nose at the centre by the sides of the septum, gliding effortlessly over it and then moving down to the lungs. It



Pl. 135

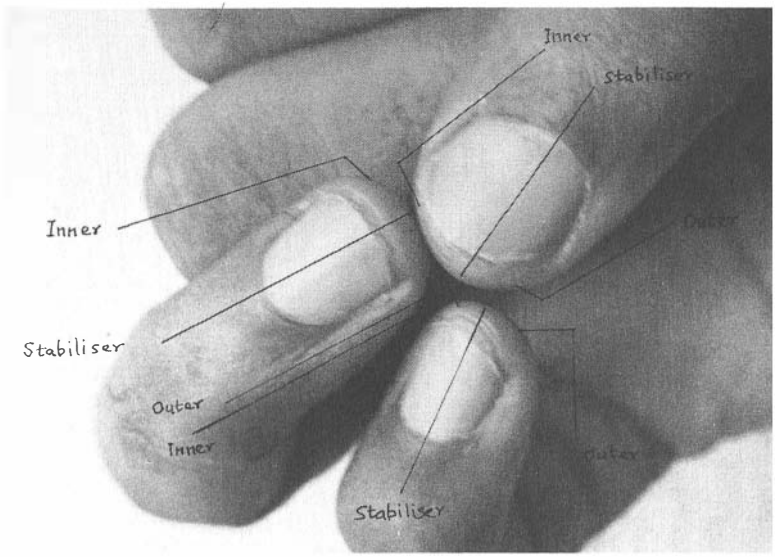


Pl. 136



Pl. 137

Pl. 138



Pl. 139

leaves by the outerside of the nostrils near the cheeks. Use the tip of the thumb and digits differently for inhalation and exhalation.

28. Divide the tips into three portions, outer, middle and inner (Pl. 139). During inhalation the inner finger-tip is used to control the incoming breath, the middle to stabilise it and prevent vibration, and the outer to channel it into the bronchi.

29. In inhalation the top part of the digital tip is pressed lightly to narrow the passage at the root of the nose. The digital manipulation required here may be compared to diverting water from a reservoir to surrounding fields. Air acts as the reservoir and the finger-tips as the sluice gates through which water passes into irrigation channels, the bronchi. The flow is controlled by the sluice gates, which break the force of the current and stabilise the level of water in the channel. The channels branch off into irrigation ditches to take the water into the fields for crops. The bronchi branch off into bronchioles to take the inhaled air into the furthermost corners of the alveoli.

30. In exhalation, the outer digital tips are used for control, the middle for stabilising and breaking the force, and the inner for channeling the breath. In exhalation, if the narrow tips of the digits are used as in inhalation, there

will be a choking sensation. Lighten the pressure of the outer tips of the digits and make the inner ones narrow and steady. This will smooth the outflow of beath. Exhalation may be likened to the flow of a river to the sea. The flow of breath from the alveoli is like the flow of water in the mountain streams that merge into rivulets, the bronchioles. The rivulets join the tributaries and finally a great river spreads into a delta to meet the sea. The air in the bronchioles flows into the bronchi and thence into the nasal cavity, the delta, to merge into the ocean of the atmosphere.

31. If the sound of the breath is rough, or if the breathing is quick, it is because the nasal passages are too wide. The flow will become smoother if the passage be narrowed. If the flow is correct and even, soft vibration will be felt by the finger-tips. Listen to the resonant sound of breath and refine it. If the sound is not resonant, but harsh, it is a sign that the finger-tips are vertical to the nostrils (see Pl. 130). Adjust them at once to face the nostrils horizontally.

32. Act with perfect understanding between the finger tips and the nasal membranes. Touch, balance and sustained pressure, by the finger tips tracing the flow of breath will alone lead to perfection in digital Prāṇāyāma.

33. As we gently take in the delicate fragrance of a flower, practise Prāṇāyāma as if drawing in the fragrance of the air.

34. If inhalation is longer than exhalation it indicates that the nasal passages were more blocked during inhalation than exhalation. To adjust and increase the length of time occupied in exhalation and inhalation, gently lessen digital pressure during inhalation, but increase it for exhalation and vice-versa. After achieving equality in both over a period of time, narrow the nasal passages to make respiration deep and long as well as smooth and subtle. Too much or no digital pressure makes the finger-tips insensitive. Correct sensitivity can be achieved only by training and experience.

35. Measure the smoothness and length of time taken by the first inhalation and try to maintain it when you breathe out. The same applies when you increase the duration, for rhythm and balance is the secret of Yoga.

36. We unconsciously breathe the prayer 'So 'haṁ': 'He (Sah) the Immortal Spirit am I (Ahaṁ) in respiration.' Inhalation flows with the sound of 'Sah' and exhalation with 'Ahaṁ'. This unconscious prayer (japa) is said without realising its meaning (artha) and feeling (bhāvana). When Prāṇāyāma is practised, listen to this prayer with meaning and feeling when this realisation becomes nādānusandhāna (nāda = sound,

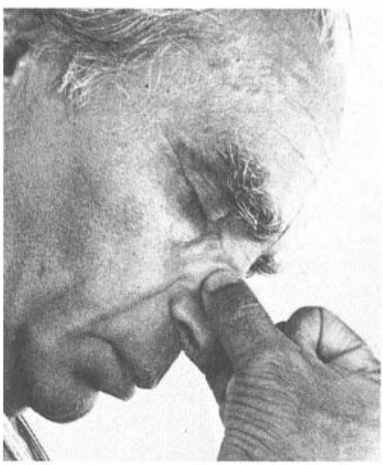
anusandhāna = quest) in which the sādhaka gets absorbed in the sound of his own breath. This enables him to receive the incoming breath as life's elixir and a blessing from the Lord, and the outgoing breath as his surrender to Him.

37. Keep the eyes, jaws, cheeks and the skin around the temples soft and relaxed. Do not raise the eye-brows when inhaling.

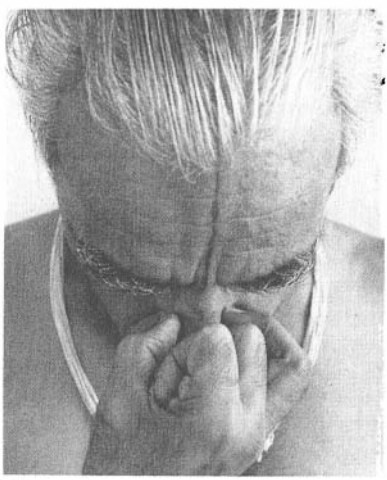
38. Forceful in and out breathing fosters the ego. If the flow is smooth and almost inaudible to the sādhaka, he will be filled with humility. This is the beginning of self-culture (Ātma-sādhana).

39. If the bone in your nose has been broken or the septum is not straight, adjust the digits somewhat differently. Find the opening of the nasal passage near the bone and keep the finger tips on the skin just above the opening. If the bend or deviation is to the right, the middle tip of the thumb should be moved up (Pl. 140); if to the left, then move the tip of the ring finger (Pl. 141).

40. The ala nisi are the fleshy curved parts at the tip of the nose which flare and dilate the nostrils. Sometimes the skin there is very soft, with the result that the nostrils get blocked at the slightest pressure. If you feel this has happened to the left nostril, insert the little finger to dilate it (Pl. 142); but if to the right nostril, move the inner tip of the thumb up towards the root of the nose (Pl. 140).

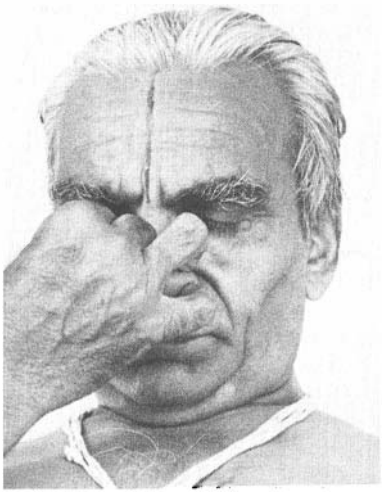


Pl. 140



Pl. 141

Pl. 142



41. If the nasal skin feels very dry, lift it with the finger tips and gently push it towards the septum as you breathe in. If the nostrils feel dry, ease the pressure on the nostrils. If the digital tips do not react to the flow of breath, stop practice for the day.

42. Measure the extent and fineness of the breath at the start. When the volume or the length of breath begins to vary or when the outer nostrils become hard and rough, stop practice for the day.

43. Never practise digital prāṇāyāma during headache, or when worried, anxious or restless, nor when the nose is blocked or running, when you have a fever or immediately afterwards. At such times practise śavāsana (Pl. 182), inhaling normally, exhaling slowly and deeply.

Chapter 23

Bhastrikā and Kapālabhāti Prāṇāyāma

BHASTRIKĀ PRĀṆĀYĀMA

Bhastrikā means bellows: air is forcibly drawn in and out as if using a pair of bellows. In all other types of prāṇāyāma inhalation sets the pace, the pattern and the rhythm for exhalation, but in bhastrikā exhalation sets the force and the pace. Here both out and in-breaths are vigorous and forceful. The sound is like that made by a blacksmith's bellows.

STAGE I

The nostrils are kept open throughout.

Technique

1. Sit in any comfortable position, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Exhale whatever breath is in the lungs (Pl. 96).

2. Take a short, strong breath and expel it with a quick strong blast. Repeat this and you will find the second in-breath quicker and more forceful than the first one, due to the forceful character of the preceding out-breath.

3. One quick in and out breath, taken together, completes one blast of bhastrikā.

4. Do four to eight such blasts at a stretch to complete one cycle, ending with an out-breath.

5. Now take a few slow and deep breaths as in ujjāyī, or if you wish you may hold your breath within, with mūla bandha, for five to eight seconds (Pl. 101). Then exhale slowly and deeply as in ujjāyī. This rests the lungs and the diaphragm and prepares them for fresh blasts of bhastrikā.

6. Repeat cycles of bhastrikā blasts interspersed with ujjāyī, with or without retention, three or four times. Then take a deep breath and lie in śavāsana (Pl. 182).

7. As stamina improves, the number of blasts in each cycle, as well as the number of cycles, may be increased. However, immediately the tone of the breathing changes, stop at once.

STAGE II

Both nostrils are kept partially closed throughout.

Technique

1. Sit in any comfortable position, following the techniques of Paras 1 to 7 of ujjāyī, Stage V. Exhale whatever breath is in the lungs (Pl. 96).

2. Bring the right hand to the nostrils as explained in Paras 12 to 22 in Ch. 22 on digital prāṇāyāma.

3. Partially close both nostrils with the tips of the thumb, ring and little fingers. Make sure that both sides of each nostril are even (Pl. 110).

4. Now perform bhastrikā blasts following the techniques given in Paras 2 to 7 of Stage I above.

5. Repeat five or six times, take a few deep breaths, then lie in śavāsana (Pl. 182).

STAGE III

Here bhastrikā is done through alternate nostrils, with interspersion of ujjāyī breaths. Advanced students may do this without the interspersions.

Technique

1. Sit in any comfortable position, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Exhale whatever breath is in the lungs (Pl. 96).

2. Bring the right hand to the nostrils as explained in Paras 12 to 22 of Ch. 22 on digital prāṇāyāma.

3. With the help of digital control, block the left nostril completely and the right one partially (Pl. 111).

4. Inhale and exhale through the right nostril vigorously, doing four to eight blasts at a stretch, making sure the pressure is the same with each blast. See that no breath escapes from the left nostril and end with a blast of out-breath.

5. Now block the right nostril, partially open the left (Pl. 112) and breathe vigorously through it with the same number of blasts as on the right and keeping the same pressure for each blast. See that no breath escapes from the right nostril. End the blast with an out-breath.

6. These two together complete one cycle of Stage III.

7. Repeat them on both sides three or four times, take a few deep breaths and then lie in śavāsana (Pl. 182).

8. If you cannot do several cycles at a stretch, then after each cycle take a few breaths as in ujjāyī to rest the lungs.

STAGE IV

In stage III one cycle of bhastrikā blasts is done through the right nostril, the other from the left. In this stage the in-and-out blasts are done through alternate nostrils; that is, if the in-breath is done from the right, then the out-breath is from the left and then the other way round. Four or five such blasts form one half-cycle. The other one starts with an in-breath from the left and is followed by an out-breath from the right, with an equal number of blasts. These two make one cycle of Stage IV.

Technique

1. Sit in any comfortable position, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Exhale whatever breath is in the lungs (Pl. 96).

2. Bring the right hand to the nostrils as explained in Paras 12 to 22 in Ch. 22 on digital prāṇāyāma.

3. Block the left nostril, half-open the right (Pl. 111) and take a quick strong in-breath through it. Quickly close the right nostril, half-open the left and breath out quickly and vigorously through it (Pl. 112). Do four or five blasts in quick succession. This forms the first half-cycle.

4. Now do the other half-cycle, repeating the same procedure as above, but breathing in from the left and out through the right. This completes the second half-cycle. Do an equal number of blasts as above, maintaining the same rhythm, tone and volume throughout.

5. Do three to four such full cycles, take a few breaths of ujjāyī to rest the lungs, and then rest in śavāsana (Pl. 182).

KAPĀLABHĀTI PRĀṆĀYĀMA

Some call kapālabhāti a prāṇāyāma, while others call it a kriyā (kapāla means skull and bhāti means light or lustre). This is similar to bhastrikā but milder. In it inhalation is slow and exhalation vigorous, but there is a split second of retention after each out-breath. Do kapālabhāti instead of bhastrikā if the latter proves too strenuous.

Kapālabhāti may be divided into stages similar to bhastrikā, and practised accordingly.

Effects of Bhastrikā and Kapālabhāti

Both these activate and invigorate the liver, spleen, pancreas and abdominal muscles, and improve digestion. They drain the sinuses and stop the nose running. They also create a feeling of exhilaration.

Notes and cautions

1. Bhastrikā generates prāṇa to activate the entire body. Just as too much stoking burns out the boiler of an engine, too long a practice of bhastrikā endangers the lungs and wears out the system, since the breathing process is so forceful.

2. As soon as the sound diminishes, stop and start afresh or reduce the number of blasts and cycles, or stop for the day.

3. Stop the practice the moment irritation or strain is felt.

4. Do not practise if the sound of the out-breath is incorrect or if the blasts fail to come. Any force will lead to injury or a nose-bleed.

5. Persons with weak constitutions and poor lung capacity should not attempt bhastrikā or kapālabhāti, since they may damage the blood vessels or brain.

6. They should not be performed by the following:
(a) Women, since the vigorous blasts may cause prolapse of the abdominal organs and of the uterus while the breasts may sag.
(b) Those suffering from ear or eye complaints (such as pus in the ear, a detached retina, or glaucoma).
(c) Persons with high or low blood pressure.
(d) Those suffering from bleeding of the nose, or throbbing or aching of the ears. If this happens, stop immediately for some days. Then try again and, if any of these signs recur, these practices are not for you.

7. Many people misconceive that bhastrikā prāṇāyāma awakens the kuṇḍalinī śakti. The authoritative books have said the same regarding

many Prāṇāyāmas and āsanas, but this is far from true. There is no doubt that bhastrikā and kapalabhāti refresh the brain and stir it to activity, but if people perform them because they believe that they awaken the kuṇḍalinī, disaster to body, nerves and brain may result.

Table of Bhastrikā Prāṇāyāma

Stage I	PR	PR	PR	PR	P	R	P	R	or	PR	PR	PR	PR	P	AK	R
(ON)	BH	BH	BH	BH	U	U	U	U		BH	BH	BH	BH	U	MB	U
Stage II	PR	PR	PR	PR	P	R	P	R	or	PR	PR	PR	PR	P	AK	R
(BNPC)	BH	BH	BH	BH	U	U	U	U		BH	BH	BH	BH	U	MB	U
Stage III	PR	PR	PR	PR	PR	PR	PR	PR	PR	PR	PR	PR	or	P	AK	R
(RNPC/	BH	BH	BH	BH	BH	BH	BH	BH	U	U	U	U		U	MB	U
LNPC)	RR	RR	RR	RR	LL	LL	LL	LL								
Stage IV	PR	PR	PR	PR	PR	PR	PR	PR	P	R	P	R	or	P	AK	R
(RNPC/	BH	BH	BH	BH	BH	BH	BH	BH	U	U	U	U		U	MB	U
LNPC)	RL	RL	RL	RL	LR	LR	LR	LR								

AK	=	Antara kumbhaka
BH	=	Bhastrikā (pūraka short strong, rechaka quick strong)
BNPC	=	Both nostrils partially closed
LNPC	=	Left nostril partially closed
MB	=	Mūla bandha
ON	=	Open nostrils
PR	=	Pūraka, rechaka
RNPC	=	Right nostril partially closed
R	=	Right
L	=	Left
U	=	Ujjāyī

Chapter 24

Śītalī and Śītakārī Prāṇāyāma

In these two prāṇāyāmas inhalation is done through the mouth and not the nostrils without the jālandhara bandha.

ŚĪTALĪ PRĀṆĀYĀMA

This prāṇāyāma cools the system, hence the name.

STAGE I

In this stage, inhalation is through the curled tongue, while retention and exhalation are done as in ujjāyī.

Technique

1. Sit in any comfortable position, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Exhale whatever breath is in the lungs (Pl. 96).

2. Keep the head level. Open the mouth and form the lips into an O.

3. Push out the tongue and curl it lengthwise so that its shape resembles a fresh curled leaf about to open (Pl. 143).

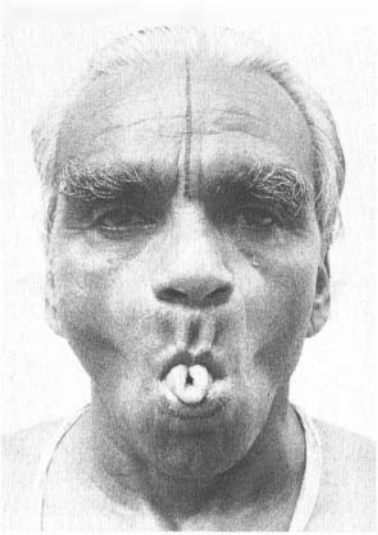
4. Stretch the curled tongue further out (Pl. 144) and draw in air through it as if drinking with a straw, and fill the lungs completely. The breath is moistened by passing through the curl of wet tongue.

5. After a full in-breath, withdraw the tongue and close the mouth.

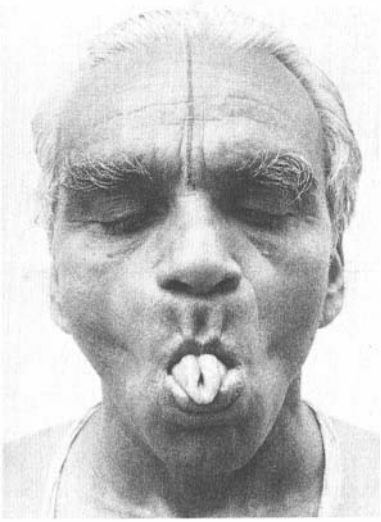
6. Lower the head and perform jālandhara bandha (Pl. 57). Hold the breath for five to ten seconds, with or without mūla bandha (Pl. 101).

7. Exhale as in ujjāyī.

8. This completes one cycle of śītalī. Repeat them for five to ten minutes at a stretch. At the end of the last one, inhale normally through both nostrils and then lie in śavāsana (Pl. 182).



Pl. 143



Pl. 144

STAGE II

In this stage inhalation is done as above, but exhalation is done with both nostrils partially closed.

Technique

1. Sit in any comfortable position, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Exhale whatever breath is in the lungs (Pl. 96).

2. Now inhale, following all the techniques in Paras 2 to 6 of Stage I above (Pl. 144) and ending with mūla bandha (Pl. 69).

3. Bring the right hand to the nostrils, as explained in Paras 12 to 22 of Ch. 22 on digital prāṇāyāma.

4. Partially close both nostrils with the tips of the thumb, the ring and little fingers, keeping the pressure even on both nostrils so that the walls of the nasal passages remain parallel to the septum (Pl. 110).

5. Exhale slowly, steadily and completely, without strain. Adjust the fingers on the nostrils delicately to control the volume and to regulate the flow of the out-breath evenly on both sides.

6. When the lungs feel completely empty, lower the hand and rest it on the knee.

7. This completes one cycle. Repeat for five to ten minutes. At the end of the last cycle, inhale normally through both nostrils, then lie down in śavasana (Pl. 182).

STAGE III

Here inhalation is done as in Stages I and II, and exhalation through alternate nostrils, keeping one side blocked and the other partially closed.

Technique

1. Sit in any comfortable position, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Exhale deeply (Pl. 96).

2. Now inhale, following the techniques in Paras 2 to 6 of Stage I above (Pl. 144) and ending with internal retention and mūla bandha (Pl. 101).

3. Bring the right hand to the nostrils as explained in paras 12 to 22 of Ch. 22 on digital prāṇāyāma.

4. Block the left nostril completely, partially close the right (Pl. 111) and exhale slowly, steadily and completely through it without straining.

5. When the lungs feel completely empty, lower the hand and rest it on the knee. Inhale again, as in paras 2 to 6 of Stage I.

6. Bring the right hand to the nose and block the right nostril completely, partially close the left one (Pl. 112) and exhale slowly, steadily and completely without straining. Then lower the hand.

7. This completes one cycle. Repeat for five to ten minutes. At the end of the last cycle, inhale normally with open nostrils, then lie down in śavāsana (Pl. 182).

ŚĪTAKĀRĪ PRĀNĀYĀMA

Śītakārī is that which causes cold. It is a variation of śītalī prāṇāyāma.

Technique

Follow the same techniques and stages of śītalī as described above, but without curling the tongue. The lips are kept slightly apart and the tip of the tongue protrudes only slightly, but is kept flat.

Śītakārī, like śītalī, is performed in three stages, following the same techniques as in all stages of śītalī.

Effects

These two prāṇāyāmas are exhilarating. They cool the system and soothe the eyes and ears. They are beneficial in cases of low fever and biliousness. They activate the liver and spleen, improve digestion and relieve thirst. They are beneficial to halitosis. These prāṇāyāmas may be done by the sādhaka, even when the nostrils are blocked.

Table of Śītalī and Śītakārī Prāṇāyāma

Śītalī

Stage	*Pūraka*		*Antara kumbhaka*		*Rechaka*
	Head	*Straight*	*JB*		
	D	*CT*	*No MB*	*MB*	*D*
I	√	√	Either (MB 5–10 sec)		ON
II	√	√		√	BNPC
III	√	√		√	ANPC

Śītakārī

Stage	*Pūraka*		*Antara Kumbhaka*		*Rechaka*
	Head	*Straight*	*JB*		
	D	*FT*	*No MB*	*MB*	*D*
I	√	√	Either (MB 5–10 sec)		ON
II	√	√		√	BNPC
III	√	√		√	ANPC

ANPC = Alternate nostrils partially closed
BNPC = Both nostrils partially closed
D = Deep
CT = Curled tongue
FT = Flat tongue
JB = Jālandhara bandha
MB = Mūla bandha
ON = Open nostrils

Chapter 25

Anuloma Prāṇāyāma

'Anu' means 'along with', or in orderly succession, and 'loma' is hair or in natural order. Here the fingers control the nostrils to discharge delicately the flow of the out-going breath.

Master the techniques of ujjāyī and viloma Prāṇāyāma before attempting anuloma.

In anuloma, inhalation is done through open nostrils, with or without pauses, and with mūla bandha in the advanced stages. Exhalation is done either with both nostrils partially open or alternatively with one nostril completely blocked and the other partially closed; uḍḍīyāna is used in the advanced stages.

In all stages, the in-breath is shorter than the out-breath, the emphasis being on delicate prolongation of the latter.

This prāṇāyāma, as well as those that follow, are done only when sitting, especially in an āsana, as explained in Ch. 11.

STAGE Ia

In this stage a deep inhalation is made with open nostrils, followed by a deep exhalation with both nostrils partially closed. This is to prolong the length of exhalation, to train the finger-tips to control both nostrils evenly, and to refine the flow of the out-breath.

Technique

1. Sit in any āsana, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Exhale whatever breath is in the lungs (Pl. 96).

2. Inhale deeply through both nostrils until the lungs are full (Pl. 98).

3. Hold the breath for a second or two in order to bring the right hand to the nostrils, as explained in Paras 12 to 22 of Ch. 22 on digital prāṇāyāma.

4. Now begins the process of digitally controlled exhalation.

5. Partially open both nostrils with the tips of the thumb and fingers, making the inner walls of the nasal passages parallel to and equidistant from the septum (Pl. 110).

6. Keep the pressure evenly on both sides so that the nostrils are ready to discharge the subtle flow of the out-breath evenly.

7. Exhale slowly, carefully and deeply, without using any force.

8. Keep the fingers firm and sensitive to adjust the nostrils and to monitor and equalise the volume of out-flow on each side.

9. When the lungs are completely empty, lower the right hand and rest it on the knee.

10. This completes one cycle. Repeat them for fifteen to twenty minutes. Inhale with open nostrils, then lie in śavāsana (Pl. 182).

Effects
This prāṇāyāma cleanses the nasal passages.

STAGE Ib

In this stage deep inhalation is done with open nostrils; exhalation is through alternate nostrils, keeping one completely blocked and the other partially open. Here each nostril is trained to develop awareness and sensitivity independently during exhalation.

Remember to keep the walls of the nasal passages parallel to the septum, even if they are both partially closed or blocked on one side and partially open on the other side.

Technique
1. Sit in any āsana, following the technique given in Paras 1 to 7 of ujjāyī, Stage V. Exhale (Pl. 96).

2. Inhale, following the techniques given in Paras 2 and 3 of Stage Ia (Pl. 98).

3. Now the process of exhalation through the right nostril starts. Block the left nostril completely with the tips of the ring and little fingers, without altering the position of the septum.

4. Partially open the right nostril with the tip of the thumb, keeping its inner wall parallel to the septum (Pl. 111).

5. Breathe out slowly and carefully through the partially open right nostril. Control the smooth out-flow of breath with the help of the thumb-tip, and see that no breath escapes through the left nostril.

6. When the lungs feel completely empty, lower the right hand and rest it on the right knee.

7. Now inhale deeply through open nostrils until the lungs are completely full, and hold the breath for a second or two (Pl. 98).

8. Now starts the process of exhalation through the left nostril. Bring the right hand to the nostrils. With the tip of the thumb block the right nostril completely, without altering the position of the septum.

9. With the tips of the ring and little fingers, open the left nostril partially, keeping its inner wall parallel to the septum (Pl. 112).

10. Breathe out slowly and completely through the partially open left nostril. Control the smooth out-flow of breath with the help of the two finger-tips. See that no breath escapes through the right nostril.

11. When the lungs feel empty, lower the right hand and rest it on the knee.

12. This completes one cycle. Repeat them for fifteen to twenty minutes. Inhale, then lie in śavāsana (Pl. 182).

Effects
This prāṇāyāma is exhilarating and good for controlling hyper-tension and high blood pressure.

STAGE IIa

This stage is similar to that of Ia; with the introduction of internal retention (antara kumbhaka), and is for intermediate students.

Technique
1. Sit in any āsana, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Exhale whatever breath is in the lungs (Pl. 96).

2. Inhale, following the techniques given in Para. 2 of Stage Ia. (Pl. 98).

3. When the lungs are full, hold the breath for ten to fifteen seconds or for as long as you can (Pl. 101).

4. Now exhale, following the techniques of Paras 5 to 8 of Stage Ia (Pl. 110), then lower the right hand.

5. This completes one cycle. Repeat them for ten to fifteen minutes. Inhale, then lie in śavāsana (Pl. 182).

Effects
This sharpens inner awareness and concentration.

STAGE IIb

This stage is similar to Ib, but with the introduction of internal retention (antara kumbhaka).

Technique
1. Sit in any āsana, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Exhale deeply (Pl. 96).

2. Inhale, following the technique given in Para. 2 of Stage Ia (Pl. 98).

3. When the lungs are full, hold the breath for fifteen to twenty seconds, or for as long as you can (Pl. 101).

4. Now exhale through the right nostril, as in Paras 3 to 5 of Stage Ib (Pl. 111).

5. When the lungs are completely empty, lower the right hand and rest it on the knee.

6. Now inhale deeply with open nostrils as in Para. 2 above, till the lungs are full (Pl. 98).

7. Hold the breath for the same length of time as in Para. 3 above (Pl. 101).

8. Exhale through the left nostril, following the techniques given in Paras 8 to 10 of Stage Ib (Pl. 112). Then lower the right hand.

9. This completes one cycle. Repeat them for ten to fifteen minutes. Inhale, then lie in śavāsana (Pl. 182).

Effects
This leads to fine control and lengthening of exhalation.

STAGE IIIa

This is similar to Stage Ia, with the introduction of pensive external retention (bāhya kumbhaka without uḍḍīyāna).

Technique
1. Sit in any āsana, following the same techniques as in Paras 1 to 7 of ujjāyī, Stage V. Exhale (Pl. 96).

2. Inhale, following the technique given in Para. 2 of Stage Ia (Pl. 98).

3. Now start exhalation through partially opened nostrils, as described in Paras 4 to 8 of Stage Ia (Pl. 110).

4. When the lungs feel completely empty, lower the right hand and rest it on the knee. Remain passive without inhalation for five seconds. This is pensive external retention (Pl. 96).

5. This completes one cycle. Repeat them for ten to fifteen minutes. Inhale through open nostrils, then lie in śavāsana (Pl. 182).

Effects
This cleanses the nasal passages and creates quietness and calmness in the sādhaka.

STAGE IIIb

This is similar to Stage Ib, with the introduction of pensive external retention (bāhya kumbhaka without uḍḍīyāna).

Technique
1. Sit in any āsana, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V, and exhale (Pl. 96).

2. Inhale, following the technique given in Para. 2 of Stage Ia (Pl. 98).

3. Now exhale through the right nostril, as explained in Paras 3 to 5 of Stage Ib (Pl. 111).

4. When the lungs feel completely empty, lower the right hand and rest it on the knee. Remain passive (without inhalation) for five seconds (Pl. 96).

5. Then inhale deeply through open nostrils, as described in Para. 2 above (Pl. 98).

6. Now starts the process of exhalation through the left nostril, as explained in Paras 8 to 10 of Stage Ib (Pl. 112).

7. When the lungs feel empty, lower the right hand and remain passive (Pl. 96) for five seconds.

8. This completes one cycle. Repeat them for ten to fifteen minutes, ending with an in-breath. Then lie in śavāsana (Pl. 182).

Effects
This takes the sādhaka towards inner awareness, leading to finer control of exhalation.

STAGE IVa

Bandhās are introduced in these two stages: internal retention with mūla bandha and external retention with uḍḍīyāna bandha.

Technique
1. Sit in any āsana, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Exhale (Pl. 96).

2. Inhale, following the technique given in Para. 2 of Stage Ia (Pl. 98).

3. When the lungs are full, hold the breath with mūla bandha for ten to twelve seconds, or for as long as you can (Pl. 101).

4. Exhale slowly, following the techniques given in Paras 5 to 8 of Stage Ia (Pl. 110), releasing the abdominal grip gradually.

5. When the lungs feel empty, lower the right hand and rest it on the knee. Then do external retention with uḍḍīyāna bandha for five to six seconds (Pl. 104).

6. Release the uḍḍīyāna grip.

7. This completes one cycle. Repeat such cycles for fifteen to twenty minutes. Inhale, then lie in śavāsana (Pl. 182).

Effects
This creates endurance, makes the mind reflective and prepares the sādhaka for dhyāna.

STAGE IVb

This is similar to Stage Ib, with the introduction of bandhās as in Stage IVa.

Technique
1. Sit in any āsana, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Exhale (Pl. 96).

2. Inhale, following the technique given in Para. 2 of Stage Ia (Pl. 98).

3. When the lungs are full, hold the breath with mūla bandha (Pl. 101) as described in Para. 3 Stage IVa.

4. Exhale through the right nostril, keeping the left one blocked (Pl. 111); follow the techniques given in Paras 3 to 5 of Stage Ib, relaxing the abdominal grip gradually.

5. When the lungs feel completely empty, lower the right hand and rest it on the knee. Then do external retention with uḍḍīyāna for five to six seconds (Pl. 104).

6. Release the uḍḍīyāna grip, then inhale deeply with open nostrils, as in Para. 2 above (Pl. 98).

7. Hold the breath with mūla bandha for ten to fifteen seconds (Pl. 101) or for the same length of time as in Para. 3 above.

8. Now exhale through the left nostril (Pl. 112), keeping the right completely blocked, following the techniques given in Paras 8 to 10 of Stage Ib.

9. When the lungs feel completely empty, lower the right hand and do external retention with uḍḍīyāna for five to six seconds (Pl. 104).

10. Release the uḍḍīyāna grip.

11. Two inhalations with open nostrils, two internal retentions with mūla bandha, two exhalations through alternate nostrils and two external retentions with uḍḍīyāna constitute one cycle. Repeat them for ten to fifteen minutes, ending with inhalation. Then lie in śavāsana (Pl. 182).

Effects
As this stage is intense, so are the effects.

STAGES Va to VIIIb

In all the following stages from V to VIII, use viloma techniques for inhalations and anuloma ones for exhalations.

STAGE Va

This stage is similar to Stage Ia above, of which the techniques of exhalation should be followed, but an interrupted inhalation with pauses as in viloma, Stage I should be substituted for in-breath.

STAGE Vb

This stage is similar to Ib, but with interrupted in-breaths with pauses.

STAGES VIa and VIb

These stages are similar to IIa and IIb respectively, except that the inhalations are interrupted by pauses.

STAGES VIIa and VIIb

These stages are similar to IIIa and IIIb respectively, except that the inhalations are interrupted by pauses.

STAGES VIIIa and VIIIb

These stages are similar to IVa and IVb respectively, except that the inhalations are interrupted by pauses.

Effects of Stages V to VIII

These stages are more intense than the preceding Prāṇāyāmas and their effects are correspondingly intense and efficacious. Stage VIII is the most intensive of all. It requires great strength, application, persistence, endurance and determination.

Table of Anuloma Prāṇāyāma

Stage		*Pūraka*		*Antara Kumbhaka*		*Rechaka*		*Bāhya Kumbhaka*	
		U	*V*	*No MB*	*MB*	*BNPC*	*ANPC*	*No UB*	*UB*
I	A	√				√			
	B	√					√		
II	A	√		10–15 sec		√			
	B	√		10–15 sec			√		
III	A	√				√		5 sec	
	B	√					√	5 sec	
IV	A	√			10 sec	√			5–8 sec
	B	√			10 sec		√		5–8 sec
V	A		√			√			
	B		√				√		
VI	A		√	10 sec		√			
	B		√	10 sec			√		
VII	A		√			√		5 sec	
	B		√				√	5 sec	
VIII	A		√		10 sec	√			5–8 sec
	B		√		10 sec		√		5–8 sec

ANPC = Alternate nostrils partially closed
BNPC = Both nostrils partially closed
MB = Mūla bandha
UB = Uḍḍīyāna bandha
U = Ujjāyi
V = Viloma

Chapter 26

Pratiloma Prāṇāyāma

Prati means opposite or against and loma means hair. Pratiloma therefore implies going against the natural order. It is the converse of anuloma. Here, the nostrils are controlled for inhalation and narrowed by the finger-tips to enable the in-breath to flow with delicacy.

In all 'a' stages inhalation is drawn through both partially open but controlled nostrils and in 'b' stages it takes place through alternate nostrils. All exhalations are done with open nostrils as in ujjāyī.

In this prāṇāyāma the in-breath lasts longer than the out-breath, the emphasis being on the slow, delicate prolongation of each in-breath. Anuloma and pratiloma prāṇāyāma are the foundations for viṣama vṛitti prāṇāyāma and a stepping stone to advance in this art.

STAGE Ia

In this stage inhalation is done through narrowly open but controlled nostrils and is followed by exhalation through open nostrils. This is to train the finger-tips in even control of both nostrils for the fine and delicate flow of inhalation.

Technique

1. Sit in any āsana, following the techniques given in Paras 1 to 7 to ujjāyī, Stage V. Exhale (Pl. 96).

2. Bring the right hand to the nostrils as explained in Paras 12 to 22 of Ch. 22 on digital prāṇāyāma.

3. Control both nostrils with the tips of the thumb and fingers, making the nasal passages as narrow as possible and parallel to the septum (Pl. 110).

4. Keep an even pressure on both sides of the nostrils so as to make the two passages even in width. Do not disturb the septum. Now the nostrils are ready to receive the flow of the in-breath.

5. Inhale slowly, carefully and deeply, without using any force. Feel the air as it enters the nasal passages. Keep the fingers firm and sensitive, adjusting their tips evenly on both sides of the nostrils to observe, guide and equalise the volume and the smooth in-flow of air.

6. When the lungs are completely full, hold the breath for a second or two, then lower the right hand and rest it on the right knee.

7. Exhale with open nostrils slowly, steadily and smoothly till the lungs feel completely empty.

8. This completes one cycle. Repeat the cycle for ten to fifteen minutes or for as long as you feel no strain. After completing the last cycle, inhale with open nostrils, then lie in śavāsana (Pl. 182).

Effects
This is effective for removing sluggishness and moodiness.

STAGE Ib

In this stage inhalation is done through digitally controlled alternate nostrils, followed by deep exhalation with open nostrils. The aim is to create intelligence and develop awareness in order to refine and lengthen the flow of the in-breath in each nostril. This prepares the sādhaka for nāḍī śodhana prāṇāyāma.

Technique
1. Sit in any āsana, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Exhale (Pl. 96).

2. Bring the right hand to the nostrils as explained in Paras 12 to 22 of Ch. 22 on digital prāṇāyāma.

3. Block the left nostril completely with the tips of the ring and little fingers, without altering the position of the septum.

4. Control the right nostril with the tip of the thumb and make the passage as narrow as possible as in Pl. 111. This decreases the velocity and volume of the in-breath, and refines its tone.

5. Keep the inner wall of the right passage parallel to the septum.

6. Now inhale slowly, deeply and as delicately as possible through the partially open but controlled right nostril, till the lungs are completely full. Hold the breath for a second or two.

7. Lower the hand and rest it on the knee. Exhale slowly, softly, steadily and delicately with open nostrils until the lungs feel empty.

8. Again raise the hand to the nose and inhale through the left nostril, following the techniques given in Paras 2 to 6 above, but block the right nostril and breathe through the left (Pl. 112).

9. Lower the hand and rest it on the knee. Exhale as in Para. 7.

10. This completes one cycle. Repeat them for ten to fifteen minutes. After completing the last cycle, inhale through open nostrils, then lie in śavāsana (Pl. 182).

Effects
This develops tremendous sensitivity in the nasal membranes and dexterity in the finger-tips.

STAGE IIa

In this stage inhalation is donc through controlled and narrowly open nostrils. This is followed by internal retention with blocked nostrils and mūla bandha, then exhalation is through open nostrils.

Technique
1. Sit in any āsana, following the techniques of Paras 1 to 7 of ujjāyī, Stage V. Exhale (Pl. 96).

2. Bring the right hand to the nostrils and inhale, following the techniques given in Paras 3 to 5 of Stage Ia above (Pl. 110).

3. When the lungs are completely full, block both nostrils with the centres of the tips of the thumb and of the fingers (Pl. 145), not allowing any air to escape. Hold the breath with mūla bandha (Pl. 69) for fifteen to twenty seconds or for as long as you can.

4. Lower the right hand and rest it on the right knee.

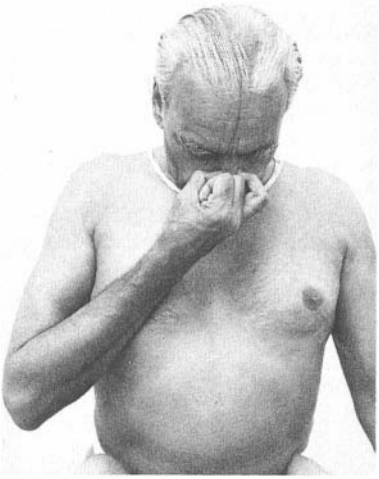
5. Exhale with open nostrils softly, slowly, steadily and smoothly till the lungs feel completely empty.

6. This completes one cycle. Repeat them for fifteen to twenty minutes, or for as long as you feel no strain. After completing the last cycle, inhale through open nostrils, then lie in śavāsana (Pl. 182).

STAGE IIb

This is similar to Stage Ib, with the addition of internal retention with mūla bandha, as in Stage IIa.

Pl. 145



Technique

1. Sit in any āsana, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Exhale (Pl. 96).

2. Bring the right hand to the nostrils. Now inhale, following the techniques given in Paras 3 to 6 of Stage Ib above (Pl. 111).

3. After full inhalation, block both the nostrils (Pl. 145) and hold the breath with mūla bandha (Pl. 69) for fifteen to twenty seconds or as long as you can.

4. Lower the right hand to the knee. Exhale with open nostrils softly, slowly, steadily and smoothly till the lungs feel completely empty.

5. Again raise the right hand to the nose and block the right nostril completely, but control the left one and open it partially (Pl. 112).

6. Inhale through the left nostril, following the techniques in Paras 4 to 6 of Stage Ib, reading left for right and vice versa.

7. At the end of inhalation, hold the breath as in Para. 3 above.

8. Then lower the right hand and exhale slowly as in Para. 4 above.

9. Two inhalations done through alternate nostrils, two internal retentions with blocked nostrils and with mūla bandha, and two exhalations with open nostrils complete one cycle. Repeat them for fifteen to twenty minutes, or for as long as you feel no strain. After completing the last cycle, inhale through open nostrils, then lie in śavāsana (Pl. 182).

Effects of Stages IIa and IIb
These stages teach the sādhaka accurate finger placement for retentions. As the nostrils are completely blocked, no tension is felt in the head and facial muscles.

STAGE IIIa

This is similar to Stage IIa, with the introduction of external retention performed with uḍḍīyāna bandha.

Technique
1. Sit in any āsana following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Exhale (Pl. 96).

2. Bring the hands to the nostrils as explained in Paras 12 to 22 of Ch. 22 on digital prāṇāyāma.

3. Inhale, following the techniques given in Paras 3 to 5 of Stage Ia above (Pl. 110).

4. Exhale with open nostrils slowly, steadily and smoothly until the lungs feel completely empty.

5. Then do external retention with uḍḍīyāna for ten to fifteen seconds, or for as long as you can (Pl. 104). Finally, release the uḍḍīyāna grip.

6. One inhalation, one exhalation and one external retention with uḍḍīyāna bandha completes one cycle. Repeat them for ten to fifteen minutes, or for as long as you feel no strain. After the last cycle, inhale through open nostrils, then lie in śavāsana (Pl. 182).

STAGE IIIb

This is similar to Stage IIb, with the addition of external retention and uḍḍīyāna bandha as in Stage IIIa.

Technique

1. Sit in any āsana, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Exhale whatever breath is in the lungs (Pl. 96).

2. Bring the right hand to the nostrils as explained in Paras 12 to 22 of Ch. 22 on digital prāṇāyāma.

3. Block the left nostril completely and inhale through the controlled and partially open right nostril (Pl. 111), following the techniques given in Paras 4 to 6 of Stage Ib above.

4. Lower the hand, rest it on the knee, and exhale with open nostrils, slowly, steadily and smoothly, until the lungs feel completely empty.

5. Now do external retention with uḍḍīyāna for ten to fifteen seconds, or for as long as you can (Pl. 104), then release the grip.

6. Raise the right hand to the nostrils, blocking the right completely and the left partially (Pl. 112). Inhale slowly, delicately and deeply through the left nostril, following the techniques given in Paras 4 to 6 of Stage Ib, but reading right for left and vice versa.

7. Lower the hand, rest it on the knee and exhale as in Para. 4 above.

8. When the lungs feel completely empty, do external retention with uḍḍīyāna bandha for ten to fifteen seconds, or for the same length of time as before (Pl. 104). Then release the grip.

9. Two inhalations (once through each nostril), two exhalations with open nostrils, and two external retentions with uḍḍīyāna bandha complete one cycle of this Stage. Repeat them for ten to fifteen minutes according to your capacity. At the end of the last cycle inhale with open nostrils, then lie in śavāsana (Pl. 182).

Effects of Stages IIIa and IIIb

With the addition of strengthening the abdominal muscles and organs, the effects are similar to those of Stages IIa and IIb.

STAGE IVa

This is a stage for highly advanced students. It is a combination of Stages IIa and IIIa, in which both internal retention with mūla bandha and external retention with uḍḍīyāna bandha are practised alternately.

Technique

1. Sit in any āsana, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Exhale (Pl. 96).

2. Bring the right hand to the nostrils as described in Paras 12 to 22 of Ch. 22 on digital prāṇāyāma.

3. Inhale through partially open nostrils, as described in Paras 3 to 5 of Stage Ia above (Pl. 110).

4. When the lungs are full, block the nostrils and do internal retention with mūla bandha for fifteen to twenty seconds (Pl. 69), or for as long as you can, as explained in Para. 3 of Stage IIa (Pl. 145).

5. Lower the right hand and rest it on the knee.

6. Exhale with open nostrils softly, steadily, slowly and smoothly until the lungs feel completely empty.

7. Then do external retention with uḍḍīyāna for ten to fifteen seconds, or for as long as you can (Pl. 104). Finally release the grip.

8. Again repeat the process of inhalation, internal retention with mūla bandha, exhalation and external retention with uḍḍīyāna bandha as stated above.

9. One inhalation, one internal retention with mūla bandha, one exhalation and one external retention with uḍḍīyāna bandha completes one cycle. Repeat them according to your ability. After completing the last cycle, inhale through open nostrils and lie in śavāsana (Pl. 182). If any strain is felt, stop practice for the day.

STAGE IVb

This stage is more strenuous and complicated than the previous one. It combines Stages IIb and IIIb, but with internal retention with mūla bandha and external retention with uḍḍīyāna performed with each in and out breath respectively.

Technique

1. Sit in any āsana, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Exhale (Pl. 96).

2. Bring the right hand to the nostrils as explained in Paras 12 to 22 of Ch. 22 on digital prāṇāyāma.

3. Inhale, following the techniques given in Paras 3 to 6 of Stage Ib above (Pl. 111).

4. After full inhalation, do internal retention with mūla bandha as in Para. 3 of Stage IIb (Pl. 145).

5. Lower the right hand and exhale as in Para. 4 of Stage IIb.

6. When the lungs feel completely empty, do external retention with uḍḍīyāna for ten to fifteen seconds, or for as long as you can (Pl. 104).

7. Again bring the right hand to the nostrils and inhale through the left as in Para. 6 of Stage IIIb (Pl. 112).

8. When the lungs are full, hold the breath with mūla bandha for the same length of time as in Para. 4 above (Pl. 145).

9. Lower the hand and exhale as in Para. 5 above.

10. When the lungs feel completely empty, do external retention with uḍḍīyāna as in Para. 6 above (Pl. 104). Then release the grip and repeat.

11. Two inhalations (one through the right and another through the left nostril), two internal retentions with mūla bandha, two exhalations with open nostrils, and external retentions with uḍḍīyāna bandha, complete one cycle. Repeat them according to your capacity. After completing the last cycle, inhale normally through open nostrils and lie down in śavāsana (Pl. 182). If any strain is felt, stop prāṇāyāma practice for the day.

Effects of Stages IVa and IVb
These intense stages combine the effects of Stages IIa and IIb, and IIIa and IIIb.

Note
It is possible to combine viloma Prāṇāyāma techniques with those of pratiloma, that is, to introduce pauses during inhalations, exhalations or both. However, such combinations are not recommended since they cause undue strain and reduce the sensitivity of the nasal membranes and the dexterity of the finger-tips.

Table of Pratiloma Prāṇāyāma

Stage		Pūraka		Antara Kumbhaka	Rechaka	Bāhya Kumbhaka
		BNPC	*ANPC*	*MB*	*ON*	*UB*
I	A	√			√	
	B		√		√	
II	A	√		15–20 sec	√	
	B		√	15–20 sec	√	
III	A	√			√	10–15 sec
	B		√		√	10–15 sec
IV	A	√		15–20 sec	√	10–15 sec
	B		√	15–20 sec	√	10–15 sec

ANPC = Alternate nostrils partially closed
BNPC = Both nostrils partially closed
MB = Mūla bandha
ON = Open nostrils
UB = Uḍḍīyāna bandha

Chapter 27

Sūrya Bhedana and Chandra Bhedana Prāṇāyāma

SŪRYA BHEDANA PRĀṆĀYĀMA

Sūrya is the sun, and bhid, the root of bhedana, means to pierce or pass through.

In sūrya bhedana prāṇāyāma all inhalations are done through the right nostril and all exhalations through the left. Prāṇic energy in all inhalations is channelled through the pingalā or sūrya nāḍī and in all exhalations through the īḍā or chandra nāḍī.

In sūrya bhedana the flow of breath is digitally controlled and the lungs absorb more energy from the in-breath.

STAGE I

This stage consists of deep inhalation through the right nostril and deep exhalation through the left.

Technique

1. Sit in any āsana following the techniques given in Paras 1 to 7 of ujjāyī, Stage V. Exhale deeply (Pl. 96).

2. Bring the right hand to the nostrils as explained in Paras 12 to 22 of Ch. 22 on digital prāṇāyāma.

3. Block the left nostril completely with the tips of the ring and little fingers, without disturbing the septum. Partially close the right nostril with the right thumb, keeping the inner wall of the outer right nostril parallel to the septum (Pl. 111).

4. Inhale slowly, carefully and deeply through the partially closed right nostril, without using force, until the lungs are completely full.

5. Completely block the right nostril, without disturbing the septum. Release the pressure on the left nostril and open it partially (Pl. 112).

6. Exhale slowly, steadily and deeply through the partially open left nostril, till the lungs feel empty.

7. This completes one cycle. Repeat for ten to fifteen minutes, inhale with open nostrils, then lie in śavāsana (Pl. 182).

8. As the practice improves, make the nasal apertures narrower by carefully manipulating the finger-tips to prolong the flow of breath.

STAGE II

This stage is similar to Stage I, with the addition of internal retention with mūla bandha, blocking both nostrils.

Technique

1. Sit in any āsana, following the techniques of Paras 1 to 7 of ujjāyī, Stage V. Exhale deeply (Pl. 96).

2. Inhale through the right nostril, slowly, deeply and fully, following the techniques of Paras 2, 3 and 4 of Stage I (Pl. 111).

3. Then block both nostrils and do internal retention with mūla bandha for fifteen to twenty seconds (Pl. 145), not allowing any air to escape. Gradually increase the length by five seconds. When this becomes stabilised without disturbing the flow and the smoothness of the in and out breaths, lengthen the duration of retention. In this way the sādhaka trains himself to attain his maximum capacity.

4. Now exhale slowly, steadily and deeply through the partially opened left nostril, till the lungs feel completely empty (Pl. 112).

5. This completes one cycle. Repeat for ten to fifteen minutes, inhale with open nostrils, then lie in śavāsana (Pl. 182).

STAGE III

This stage is similar to Stage I, with the addition of external retention with uḍḍīyāna.

Technique

1. Sit in any āsana, following the techniques of Paras 1 to 7 of ujjāyī, Stage V. Exhale whatever breath is in the lungs (Pl. 96).

2. Inhale through the right nostril, slowly, deeply and fully, following the techniques of Paras 2, 3 and 4 of Stage I (Pl. 111).

3. Completely block the right nostril, partially release the left and exhale through it slowly and deeply (Pl. 112), following the techniques given in Paras 5 and 6 of Stage I.

4. When the lungs feel completely empty, block both the nostrils and do external retention with uḍḍīyāna bandha to your capacity without strain (Pl. 146).

5. External retention takes longer to master than the internal one. Hence, gradually increase the duration of external retention by one or two seconds. When this becomes stabilised, continue increasing the length of retention without disturbing the flow and the smoothness of the in and out breaths.

6. This completes one cycle. Repeat for ten to fifteen minutes, inhale with open nostrils, then lie in śavāsana (Pl. 182).

STAGE IV

This stage combines Stages II and III. It is for highly advanced students and should be attempted only after perfecting Stages II and III.

Technique

1. Sit in any āsana, following the techniques of Paras 1 to 7 of ujjāyī, Stage V. Exhale whatever breath is in the lungs (Pl. 96).

Pl. 146

2. Inhale, following the techniques given in Paras 2 and 3 of Stage II (Pl. 111), ending with mūla bandha (Pl. 145).

3. Then exhale, following the techniques given in Paras 3 and 4 of Stage III (Pl. 112) and ending with uḍḍiyāna bandha (Pl. 146).

4. Do retentions at the end of each inhalation as well as each exhalation, starting with shorter retentions and gradually increasing their length as the lung capacity develops. Do not exceed eight to ten seconds in uḍḍīyāna bandha.

5. This completes one cycle. Practise as many cycles as you comfortably can without strain, or for ten to fifteen minutes. Inhale with open nostrils, then lie in śavāsana (Pl. 182).

Effects of Sūrya Bhedana Prāṇāyāma
This increases heat in the body and digestive power. It soothes and invigorates the nerves and cleanses the sinuses. It is good for persons suffering from low blood pressure.

CHANDRA BHEDANA PRĀNĀYĀMA

This prāṇāyāma has been described in *Yoga Chūdāmaṇi Upaniṣad* (95–97) without mentioning the name chandra bhedana, but giving only the method.

Chandra is the moon. In chandra bhedana prāṇāyāma all inhalations are done through the left nostril (Pl. 112) and all exhalations through the right (Pl. 111). Prāṇic energy in all inhalations is channelled through the īḍā or chandra nāḍī. All exhalations pass through the pingalā or sūrya nāḍī.

Chandra bhedana is done in four stages, similar to those of sūrya bhedana.

Technique
Follow the same techniques as are given in all the stages of sūrya bhedana, reading the word 'right' for 'left' and vice versa. Complete the practice with śavāsana (Pl. 182).

Effects
The effects are similar to those of sūrya bhedana, except that this prāṇāyāma cools the system.

Notes for Sūrya and Chandra Bhedana Prāṇāyāma
1. Sometimes the passages of the two nostrils have not the same width. In that case the digital pressure has to be adjusted. In other cases one nostril is

all but completely blocked (for example, if there is a polypus or if the nose has been fractured), while the other is clear. If this happens, inhale through the clear side and exhale as best as you can through the blocked side. In course of time, due to digital manipulation, the blocked nostril becomes clear and inhalation through it becomes possible.

2. If the cartilage of the nasal bone is not straight, learn to manipulate the cartilage of the septum up and towards the nasal bone. Then the blocked passage opens and digital prāṇāyāma is possible (Pls 140 and 141).

3. Never perform sūrya bhedana and chandra bhedana prāṇāyāma on the same day.

4. In both prāṇāyāmas interrupted (viloma) breathing may be incorporated, bringing the number of possible stages to sixteen. The possible number of permutations and combinations is however enormous:

Stage V: Interrupted inhalation, long exhalation
VI: Long inhalation, interrupted exhalation
VII: Interrupted inhalation, interrupted exhalation
VIII: Interrupted inhalation, internal retention, long exhalation
IX: Long inhalation, internal retention, interrupted exhalation
X: Interrupted inhalation, internal retention, interrupted exhalation
XI: Interrupted inhalation, long exhalation, external retention
XII: Long inhalation, interrupted exhalation, external retention
XIII: Interrupted inhalation, interrupted exhalation, external retention
XIV: Interrupted inhalation, internal retention, long exhalation, external retention
XV: Long inhalation, internal retention, interrupted exhalation, external retention
XVI: Interrupted inhalation, internal retention, interrupted exhalation, external retention

Table of Sūrya Bhedana Prāṇāyāma

Stage	*Pūraka*	*Antara Kumbhaka*	*Rechaka*	*Bāhya Kumbhaka*
	RN	*MB*	*LN*	*UB*
I	√		√	
II	√	15–20 sec	√	
III	√		√	ALAP
IV	√	15–20 sec	√	8–10 sec

Table of Chandra Bhedana Prāṇāyāma

Stage	*Pūraka*	*Antara Kumbhaka*	*Rechaka*	*Bāhya Kumbhaka*
	LN	*MB*	*RN*	*UB*
I	√		√	
II	√	15–20 sec	√	
III	√		√	ALAP
IV	√	15–20 sec	√	8–10 sec

ALAP = As long as possible
LN = Left nostril
MB = Mūla bandha
RN = Right nostril
UB = Uḍḍīyāna bandha

Chapter 28

Nāḍī Śodhana Prāṇāyāma

Nāḍī is a tubular organ for the passage of prāṇa or energy carrying cosmic, vital, seminal and other energies, as well as sensation, intelligence and consciousness in the causal, subtle and physical bodies (see Ch. 5 for details). Śodhana means purifying or cleansing. The term nāḍī śodhana means the purification of the nerves. A slight obstruction in the nervous system may cause great discomfort and even paralyse a limb or organ.

The *Haṭha Yoga Pradīpikā* (II, 6–9, 19–20), *Śiva Samhitā* (III, 24, 25), *Gheraṇḍa Samhitā* (V, 49–52) and *Yoga Chūdāmaṇi Upsaniṣad*(V. 98–100) describe a type of Prāṇāyāma which cleanses the nāḍīs. The texts mention the technique and describe its beneficial effects, specifically stating that they are 'due to cleansing of the nāḍīs' (nāḍī śodhanāt').

Though all Yoga texts describe various types of prāṇāyāma by their titles, yet none mention the name of chandra bhedana or nāḍī śodhana' prāṇāyāma.

This prāṇāyāma, described in detail below, combines the technique of exhalation (rechaka) as in anuloma, and of inhalation (pūraka) as in pratiloma prāṇāyāma. It also has another unique feature: The cycle of sūrya bhedana prāṇāyāma consists of inhalation through the right nostril and exhalation through the left, while in chandra bhedana inhalation is through the left nostril and exhalation through the right. Nāḍī śodhana prāṇāyāma combines both these into one cycle. The process has been described in the texts quoted above.

The brain is divided into two hemispheres, the left controlling the right side of the body, and the right the left. Again, it is said that the brain has two parts, the more primitive or back brain at the base of the skull, which is considered to be the contemplative brain, the seat of wisdom, while the frontal one is the active and calculating brain that deals with the external world.

The yogis realised the various disparities in the structures of the brain, lungs and other parts of the body. They adopted āsanas for even development, equal extension and attention to both sides of the body. They discovered and introduced nāḍī śodhana prāṇāyāma for the prāṇa of the in and out breaths to pass through each nostril in turn, thus revitalising both the hemispheres of the brain as well as the front and the back. By thus

changing the sides for inhalation and exhalation, the energy reaches the remotest parts of the body and brain through the nāḍīs criss-crossing the chakras. The sādhaka gains the secret of even and balanced action in all the quarters of the brain, and thus experiences peace, poise and harmony.

Nāḍī śodhana prāṇāyāma requires constant meticulous attention and firm determination. Its energies have to be chanelled into disciplining the breath with refinement and sensibility, so that breath, body and mind can be spiritualised.

Nāḍī śodhana prāṇāyāma is one of delicate adjustments. The brain and the fingers must learn to act together in channelling the in and out breaths while in constant communication with each other. The brain should not be dull, hard and insensitive, otherwise the fingers will be rough, broad and not sensitive enough to refine the flow of breath. The brain and the fingers must be alert to perceive any alteration in the rhythm or disturbance in the flow of breath. This study helps to adjust the fingers on the outer nostrils and make them passive, thus allowing the correct amount of breath to pass in and out. If the fingers lose their sensitivity, the brain sends a message to recall them to attention. If the brain is inattentive, the fingers lose their awareness and allow a larger volume of breath to flow through the nostrils, which alerts the brain once more.

During the processes of inhalation and exhalation the sound, resonance and flow of breath have to be constantly measured and adjusted with minute attention and delicate manipulation of the top and bottom ends of the nasal passages. This helps the sādhaka to trace the exact path of the flow of breath through the nostrils and to focus attention on balancing the finger-tips correctly on the relevant locations. If the sound is rough, then the brain is active elsewhere and the finger-tips insensitive. If the breath is smooth, the brain is quiet and watchful, and the finger-tips are sensitive. Feel the cool, moist fragrance of the inhalation and the hot exhalation, which is without fragrance. This sensitivity should be developed, as without it the practice of Prāṇāyāma is mechanical and ineffective.

Nāḍī śodhana prāṇāyāma, therefore, is the most difficult, complex and refined of all prāṇāyāmas. It is the ultimate in sensitive self-observation and control. When refined to its subtlest level it takes one to the innermost self. Hence this prāṇāyāma, by its fine concentration and minute attention leads first to dhāraṇa, and then to dhyāna.

Do not attempt nāḍī śodhana until your nasal membranes develop sensitivity and your fingers dexterity by practising the Prāṇāyāmas described earlier.

The inner corners of the tips of the fingers are used during inhalation to channel the in-breath, and the outer corners are used during exhalation to channel the out-breath. However, do not release the pressure on the outer corners during inhalation and on the inner corners during exhalation (see Paras 28 to 30 of Ch. 22 on digital prāṇāyāma (Pl. 139).

The fingers are kept on the nostrils throughout.

In the advanced stages of nāḍī śodhana prāṇāyāma, kumbhakas (internal as well as external retentions) and bandhās are introduced.

As nāḍī śodhana is a highly contemplative prāṇāyāma, pay special attention to lowering the head more by gently pulling the nose downwards; do not disturb the fingers on the nostrils, nor lose contact with the nasal bone. While the head is being lowered, the chest caves in unconsciously. Do not allow this to happen. Remain alert and move the chest up as the head comes down.

This further lowering of the head will make the sādhaka realise whether or not the lungs are filled to the brim. If the tops of both feel empty, draw in more breath to fill them completely.

When the head is gently brought down and the chest is lifted up, the calculative frontal brain becomes silent and the contemplative back brain becomes active.

During internal retention, if the sādhaka feels a disturbance in the state of silence it means that his capacity for retention is over, or the chin has moved up, or some breath has escaped unnoticed through the blocked nostrils. If any of these are felt, draw the breath in again, lower the head further and then hold the breath. This makes the sādhaka's body dynamic and his mind contemplative. His pride is humbled and his intellect surrenders to his Self (Ātmā). On the other hand, external retention done with uḍḍīyāna makes the sādhaka's body as well as his mind dynamic, vibrant and alert, whereas external retention without uḍḍīyanā makes both of them quiet and contemplative.

STAGE Ia

Here both nostrils are kept partially open in inhalation and exhalation.

Technique

1. Sit in any āsana, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V.

2. Bring the right hand to the nostrils as explained in Paras 12 to 22 of Ch. 22 on digital prāṇāyāma, and narrow both the nasal passages with the thumb, ring and little fingers (Pl. 110). Exhale completely through the narrowly open, but controlled nostrils.

3. Now inhale, but do not disturb the width of the passages; keep the septum and the fingers stable to prevent the head from tilting.

4. Maintain an even flow of breath in both nostrils, synchronising it with the movement of the chest. The breath should be soft, slow and smooth. Fill the lungs to the brim.

5. Then hold the breath for a second or two in order to adjust the fingers for exhalation.

6. Exhale softly, slowly and smoothly, maintaining an even rhythm. Synchronise the flow of the exhalation with release of the extension and expansion of the rib-cage. In other words, do not allow the chest to collapse suddenly.

7. As practice improves, narrow the passages more and more, so that the breath flows finer and finer. The narrower the passages the better the control of the breath.

8. One inhalation and one exhalation completes one cycle. Repeat for ten to fifteen minutes and end with an in-breath. Lower the hand, raise the head and then lie in śavāsana (Pl. 182).

Effects
This exhilarating prāṇāyāma trains the fingers and nasal membranes to become more and more sensitive for finer adjustment. The mind is engaged in concentrating on the fingers, the nasal passages and the breath, and so becomes one-pointed.

STAGE Ib

This stage is a combination of sūrya bhedana and chandra bhedana prāṇāyāma, without retentions. Here, the in and out breaths are done through alternate nostrils, which are digitally controlled.

Technique
1. Sit in any āsana, following the techniques given in Paras 1 to 7 of ujjāyi, Stage V.

2. Bring the right hand to the nostrils as explained in Paras 12 to 22 of Ch. 22 on digital prāṇāyāma.

3. Block the left nostril completely, without disturbing the septum or the passage on the right. Narrow the right nostril, bringing its outer portion closer towards the septum, without disturbing the position of the nose (Pl. 111).

4. Exhale through the right nostril.

5. Inhale through it slowly and steadily, without disturbing the width of its passage. Keep the septum and the fingers stable. Do not allow any breath to enter through the left nostril.

6. Maintain a fine flow of breath through the right nostril, synchronising it with the movements of the chest.

7. When the lungs are full, block the right nostril completely, without moving the septum or the left nostril.

8. Hold the breath for a second or two to prepare and adjust the fingers for exhalation.

9. Exhale slowly and steadily through the left nostril, synchronising the flow of out-breath with the gradual release of the extension and expansion of the rib-cage (Pl. 112).

10. When the lungs feel completely empty, hold the breath for a second to prepare and adjust the fingers for inhalation through the left nostril.

11. Block the right nasal passage without disturbing the septum or the passage on the left, and narrow the left passage (Pl. 112).

12. Now inhale through the left nostril as described in Paras 4 and 6 above, but reading the word 'right' for 'left' and vice versa.

13. When the lungs are full, block the left nostril completely, without disturbing the septum or the passage on the right.

14. Hold the breath for a second or two as in Para. 8 above.

15. Exhale through the right nostril (Pl. 111) as described in Para. 9 above. See that no breath escapes through the left nostril.

16. When the lungs feel completely empty, hold the breath for a second or two, to prepare and re-adjust the fingers for inhalation, then repeat from Para. 3 above.

17. The breath sequence is as follows: (a) exhale whatever breath is in the lungs through the right nostril; (b) breathe in through the right nostril; (c) out through the left; (d) in through the left; (e) out through the right; (f) in through the right; (g) out through the left, and so on.

18. The cycle commences at (b) and ends at (e). Repeat for ten to fifteen minutes, ending with inhalation through the right nostril. Then lie in śavāsana (Pl. 182).

Effects

Since the work of delicate fingering and narrowing of passages requires concentration, the practice of this stage prepares the sādhaka for dhāraṇā.

STAGE IIa

This stage is similar to stage Ia, with the addition of internal retention with mūla bandha.

Technique

1. Sit in any āsana, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V.

2. Inhale, following the techniques given in Paras 2 to 4 of Stage Ia (Pl. 110).

3. Block both nostrils completely to prevent escape of breath, and hold the breath for twenty seconds with mūla bandha (Pl. 145).

4. Re-adjust the fingers for exhalation following the technique given in Para. 6 of Stage Ia to empty the lungs.

5. If the flow, rhythm or timings for in and out breaths are disturbed, it means you have exceeded your capacity, or have allowed breath to escape during retention. If the former reduce the time of retention, if the latter make sure that both nostrils are properly blocked during retention.

6. One inhalation, one internal retention and one exhalation complete one cycle. Repeat for ten to fifteen minutes, ending with inhalation. Lower the hand, raise the head and lie in śavāsana (Pl. 182).

STAGE IIb

This stage is similar to Stage Ib, with the addition of internal retention and mūla bandha.

Technique

1. Sit in any āsana, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V.

2. Bring the right hand to the nostrils as described in Paras 12 to 22 of Ch. 22 on digital prāṇāyāma.

3. Block the left nostril. Partially open the right, make it as narrow as you can (Pl. 111), and inhale through it, following all the instructions given in Paras 3 to 6 of Stage Ib.

4. When the lungs are full, block both nostrils and hold the breath with mūla bandha for twenty seconds (Pl. 145).

5. Adjust the fingers for exhalation through the left nostril. Block the right nostril, partially open the left and make the passage as narrow as you can (Pl. 112).

6. Exhale through the left nostril and empty the lungs as described in Para. 9 of Stage Ib. No breath should escape through the right nostril.

7. When the lungs feel completely empty, hold the breath and proceed as in Paras 10 to 11 of Stage Ib to prepare for inhalation through the left nostril.

8. Now inhale through the left nostril as described in Paras 3 to 5 above, but reading the word 'right' for 'left' and vice versa.

9. When the lungs are full, block both nostrils and hold the breath as in Para. 4 above (Pl. 145).

10. Adjust the fingers for exhalation through the right nostril, following the techniques given in Para. 5 above, but reading the word 'right' for 'left' and vice versa.

11. Exhale through the right nostril as in Para. 9 of Stage Ib. No breath should escape through the left nostril.

12. When the lungs feel completely empty, hold the breath for a few seconds, re-adjust the fingers, then repeat from Para. 3 above.

13. The breath sequence is as follows: (a) exhale whatever breath is in the lungs through the right nostril; (b) breathe in through the right nostril; (c) internal retention with mūla bandha; (d) breathe out through the left nostril; (e) in through the left; (f) internal retention with mūla bandha; (g) breathe out through the right nostril; (h) in through the right and so on.

14. The cycle commences at (b) and ends at (g). Repeat for ten to fifteen minutes, ending with an in-breath through the right. Then lie in śavāsana (Pl. 182).

Effects
This stage prepares the sādhaka for dhyāna.

STAGE IIIa

This stage is similar to Stage Ia, with the addition of external retention with uḍḍīyāna.

Technique

1. Sit in any āsana, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V.

2. Bring the right hand to the nostrils and narrow both the nasal passages with the thumb, ring and little fingers and exhale through both nostrils narrowly closed (Pl. 110).

3. Inhale, following the techniques of Paras 3 and 4 of Stage Ia above.

4. Then exhale, following the techniques of Paras 5 and 6 of Stage Ia.

5. When the lungs feel empty, block both nostrils and do external retention with uḍḍīyāna for fifteen seconds, or for as long as you can (Pl. 146).

6. Release the uḍḍīyāna grip, readjust the fingers and follow the processes of inhalation and exhalation as described in Paras 3 and 4 above. Then repeat an external retention with uḍḍīyāna.

7. Here the sequence of breath is: (a) exhale deeply through both nostrils; (b) breathe in through both passages; (c) out through both; (d) external retention with uḍḍīyāna; (e) breathe in through both passages; (f) out through both; (g) external retention with uḍḍīyāna; and so on.

8. One inhalation, one exhalation and one external retention with uḍḍīyāna complete one cycle of this stage. Repeat for ten to fifteen minutes, ending with inhalation. Then lie down in śavāsana (Pl. 182).

STAGE IIIb

This stage is similar to Stage Ib, with the addition of external retention with uḍḍīyāna.

Technique

1. Sit in any āsana, following the techniques given in Paras 1 to 7 of ujjāyī, Stage V.

2. Bring the right hand to the nostrils as explained before and inhale, following the techniques given in Paras 3 to 6 of Stage Ib (Pl. 111).

3. When the lungs are full, block the right nostril and hold the breath for a second as explained in Paras 7 and 8 of Stage Ib.

4. Exhale through the left nostril as described in Para. 9 of Stage Ib (Pl. 112). No breath should escape through the right nostril.

5. When the lungs feel empty, block both nostrils and do external retention with uḍḍīyāna for fifteen seconds, or for as long as you can (Pl. 146).

6. Then release the uḍḍīyāna grip, block the right nostril, and readjust the fingers for inhalation through the left (Pl. 112).

7. Narrow the passage of the left nostril and inhale slowly, softly and smoothly.

8. When the lungs are full, readjust the fingers. Block the left nostril and exhale through the right (Pl. 111).

9. When the lungs feel empty, block both nostrils, and do external retention with uḍḍīyāna for fifteen seconds, or for the same length of time as before (Pl. 146). Then release the uḍḍīyāna grip.

10. Readjust the fingers for inhalation through the right nostril, blocking the left completely and repeat the sequence.

11. The breath sequence is as follows: (a) exhale deeply through the right nostril; (b) breathe in through the right nostril; (c) out through the left; (d) external retention with uḍḍīyāna; (e) breathe in through the left; (f) out through the right; (g) external retention with uḍḍīyāna; (h) breathe in through the right, and so on.

12. The cycle starts at (b) and ends at (g). Repeat for ten to fifteen minutes, starting with exhalation and ending with inhalation through the right nostril. Then lie down in śavāsana (Pl. 182).

Effects

Due to the uḍḍīyāna grip, the abdominal organs are revitalised, and the apāna vāyu unites with the prāṇa vāyu to improve the assimilation of food and distribution of energy throughout the body.

STAGE IVa

This is an advanced prāṇāyāma. It combines Stages IIa and IIIa.

Technique

1. Sit in any āsana following the techniques given in Paras 1 to 4 of Stage Ia above.

2. When the lungs are completely full, block both nostrils and do internal retention with mūla bandha for twenty seconds (Pl. 145).

3. Readjust the fingers for exhalation, and exhale following the technique given in Para. 6 of Stage Ia.

4. When the lungs feel empty, block both nostrils. Do external retention with uḍḍīyāna for fifteen seconds (Pl. 146).

5. Then release the uḍḍīyāna grip and inhale as in Para. 1.

6. The breath sequence is as follows: (a) exhale through both nostrils; (b) breathe in through both nostrils; (c) internal retention with mūla bandha; (d) breathe out through both nostrils; (e) external retention with uḍḍīyāna; (f) breathe in through both nostrils; and so on.

7. Here the cycle commences at (b) and ends at (e). Repeat for ten to fifteen minutes, ending with inhalation. Then lie in śavāsana (Pl. 182).

STAGE IVb

This is the most advanced prāṇāyāma in the series. It is a combination of Stages IIb and IIIb with retention after each in and out breath.

Technique

1. Sit in any āsana following the techniques given in Paras 1 to 6 of Stage Ib, keeping the left nostril blocked (Pl. 111).

2. When the lungs are completely full, block both nostrils and do internal retention with mūla bandha for twenty, twenty-five or thirty seconds (Pl. 145).

3. Readjust the fingers for exhalation, block the right nostril and keep the left narrow (Pl. 112). Exhale through the left nostril, making the passage as narrow as you can, following the technique of Para. 9 of Stage Ib.

4. When the lungs feel empty, block both nostrils and do external retention with uḍḍīyāna for fifteen seconds (Pl. 146). Then release the uḍḍīyāna grip, and readjust the fingers for inhalation.

5. Now block the right nostril and narrow the left (Pl. 112). Inhale slowly, softly and smoothly through the left.

6. When the lungs are completely full, block both nostrils and do internal retention with mūla bandha for twenty to thirty seconds (Pl. 145).

7. Prepare for exhalation and readjust the fingers. Block the left nostril. Release the grip of the thumb-tip and narrow the right nostril (Pl. 111). Exhale until the lungs are empty.

8. When the lungs feel empty, block both nostrils and do external retention and uḍḍīyāna for fifteen seconds (Pl. 146). Then release the uḍḍīyāna grip and readjust the fingers for inhalation.

9. Block the left nostril and inhale through the right as described in Para. 1 above, and continue in the same way.

10. The breath sequence is: (a) exhale through the right nostril; (b) breathe in through the right nostril; (c) internal retention with mūla bandha; (d) breathe out through the left nostril; (e) external retention with uḍḍīyāna; (f) in through the left nostril; (g) internal retention with mūla bandha; (h) out through the right nostril; (i) external retention with uḍḍīyāna; (j) in through the right nostril, and so on.

11. The cycle in this stage commences at (b) and ends with (i). Repeat for ten to fifteen minutes, ending with inhalation through the right nostril. Then lie down in śavāsana (Pl. 182).

Effects

The practice of mūla and uḍḍīyāna bandhās during retentions cleanses and strengthens the sādhaka's nerves to withstand the vicissitudes of life and prepares him for dhyāna.

In nāḍī śodhana prāṇāyāma, due to the deep penetration of prāṇa, the blood receives a larger supply of oxygen than in other types of prāṇāyāma. The nerves are calmed and purified, and the mind becomes still and lucid.

Its practice keeps the body warm, destroys diseases, gives strength and brings serenity.

The vital energy drawn in from the cosmic energy through inhalation passes close to vital chakras and feeds the glands. The respiratory control centre of the brain is stimulated and becomes fresh, clear and tranquil. The light of intelligence is lit simultaneously in the brain as well as in the mind. This leads to right living, right thinking, quick action and sound judgement.

Table of Nāḍī Śodhana Prāṇāyāma

Stage		*Pūraka BNPC*	*Antara Kumbhaka MB*	*Rechaka BNPC*	*Bāhya Kumbhaka UB*
I	A	√		√	
II	A	√	20 sec	√	
III	A	√		√	15 sec
IV	A	√	20 sec	√	15 sec

Stage		*Pūraka RN*	*AK*	*Rechaka LN*	*BK*	*Pūraka LN*	*AK*	*Rechaka RN*	*BK*
I	B	√		√		√		√	
II	B	√	20 sec	√		√	20 sec	√	
III	B	√		√	15 sec	√		√	15 sec
IV	B	√	20 sec	√	15 sec	√	20 sec	√	15 sec

AK = Antara kumbhaka
BK = Bāhya kumbhaka
BNPC = Both nostrils partially closed
LN = Left nostril
MB = Mūla bandha
RN = Right nostril
UB = Uḍḍīyāna bandha

Part Two

Freedom and Beatitude

Chapter 29

Dhyāna (Meditation)

1. Dhyāna means absorption. It is the art of self-study, reflection, keen observation, or the search for the Infinite within. It is the observation of the physical processes of the body, study of mental states and profound contemplation. It means looking inwards to one's innermost being. Dhyāna is the discovery of the Self.

2. When the powers of the intellect and the heart are harmoniously blended, this is dhyāna. All creativity proceeds from it, and its good and beautiful results benefit mankind.

3. Dhyāna is like deep sleep, but with a difference. The serenity of deep sleep comes as a result of unconsciously forgetting one's identity and individuality, whereas meditation brings serenity which is alert and conscious throughout. The sādhaka remains a witness (sākṣī) to all activities. Chronological and psychological time have no existence in deep sleep or in total absorption. In sleep the body and mind recover from wear and tear and feel fresh upon waking. In meditation the sādhaka experiences illumination.

4. Dhyāna is the full integration of the contemplator, the act of contemplation and the object contemplated upon becoming one. The distinction between the knower, the instrument of knowledge and the object known vanishes. The sādhaka becomes vibrant, alert and poised. He becomes free from hunger, thirst, sleep and sex as well as from desire, anger, greed, infatuation, pride and envy. He is unassailable by the dualities of body and mind, or mind and self. His vision reflects his true self like a well-polished mirror. This is Ātma-Darśana, the reflection of the Soul.

5. Jesus said that man does not live by bread alone, but by every word that proceeds out of the mouth of God. Pondering upon the meaning of life, man is convinced that there dwells within his soul a force or light far greater than himself. Yet in his walk of life he is beset by many cares and doubts. Being caught in the environment of artificial civilisation he develops a false sense of values. His words and actions run counter to his thoughts. He is bewildered by these contradictions. He realises that life is full of opposites – pain and pleasure, sorrow and joy, conflict and peace. Seeing these

polarities, he strives to attain a balance between them and to find s state of stability so that he can experience freedom from pain, sorrow and conflict. In his search he discovers the three noble ways of word (jñāna), work (karma) and worship (bhakti), which teach him that his inner light is the only guide leading to mastery over his own life. To reach this inner light he turns to meditation or dyhāna.

6. To have a clear notion of the true natures of man, of the world and of God, the sādhaka should study the sacred books (Śāstras). Then he can distinguish the real from the unreal. Knowledge of these three truths (tattva traya) – the soul (chit), the world (achit) and God (Iśvara) – is essential for him who seeks liberation. Such knowledge gives him insight into life's problems and their solution, and strengthens his spiritual sādhana. Yet knowledge acquired by reading alone will not lead to liberation. It is by having courage and unshakable faith in the teachings contained in the sacred books and by putting them into practice till they become a part of his daily life that the sādhaka gains freedom from the domination of his senses. Knowledge of the sacred books and sādhana are the two wings by which the sādhaka flies towards liberation.

7. Man is drawn between two paths: one drags him downwards towards fulfilment of voluptuous desires and sense gratifications, leading to bondage and destruction; the other guides him upwards towards purity and realisation of his inner Self. Desires fog his mind and veil his true Self. It is the mind alone which leads to bondage or to liberation. It is his reason or intelligence which either controls his mind or allows itself to be dominated.

8. An untrained mind flies aimlessly in all directions. The practice of meditation brings it to a state of stability and then directs it to proceed from imperfect knowledge to perfection. The sādhaka's mind and intelligence work as an integrated team led by his will-power. He finds harmony between his thoughts, speech and actions. His stilled mind and intelligence burn like a lamp in a windless place with simplicity, innocence and illumination.

9. Man has great potentialities that lie dormant within him. His body and mind are like fallow land lying untilled and unsown. A wise farmer ploughs his land (kśetra), provides it with water and fertiliser, plants the best seeds, carefully tends the crops and ultimately reaps a good harvest. To the sādhaka, his own body, mind and intellect are the field which he ploughs with energy and right action. He sows with the finest seeds of knowledge, waters it with devotion and tends them with unrelenting spiritual discipline to reap the harvest of harmony and peace. He then becomes the wise owner (kśetrajña) of his field, and his body becomes a sacred place. The

germination of the seeds of good thoughts (savichāra), planted by sound logic (savitaraka), brings clarity to his mind and wisdom to his intellect (sāṣmita). He becomes an abode of joy (ānanda) as his whole being is filled with the Lord.

10. The journey to the moon and outer space demanded years of rigorous training and discipline, deep study, research and preparation. The inward journey of man to reach his inner Self demands the same type of relentless effort. Years of discipline and long uninterrupted practice of the moral and ethical principles of yama and niyama, training of the body by āsanas and prāṇāyāma, restraint of the senses by pratyāhāra and dhāraṇā, ensure the growth of the mind and of inner awareness – dhyāna and samādhi.

11. Dhāraṇa (derived from the root dhṛ, meaning to hold, or concentration) is like a lamp which is covered and does not light up the area outside. When the cover is removed, the lamp lights up the whole area. This is dhyāna, which is the expansion of consciousness. Then the sādhaka acquires a unified mind and maintains a dynamic unfading awareness in its pristine purity. Like oil in seeds and fragrance in flowers, the soul of man permeates his whole body.

12. The lotus is symbolic of meditation. It symbolises purity. Its quiet beauty has given it a prime place in Indian religious thought. It is connected with most of the Hindu deities and their seats in the chakras. The stage of meditation is like that of a lotus bud hiding its inner beauty while awaiting transformation into a full blown lotus. As the bud opens to reveal its resplendent beauty, so also the sādhaka's inner light is transformed and transfigured by meditation. He becomes an enlightened soul (siddha) and an inspired sage. He lives in the eternal now – the present, without yesterdays and tomorrows.

13. This state of the sādhaka is one of passivity known as manolaya (manas meaning mind, and laya, meaning absorption or merging). He has fully marshalled his intelligence (prajñā) and energy (prāṇa) to prevent the intrusion of external thoughts. His state is full of dynamic alertness. When both the internal and external thoughts are stilled and silenced, there is no waste of physical, mental or intellectual energy.

14. Dhyāna is a subjective experience of an objective state. It is difficult to describe the experience in words, for words are inadequate to do so. The delight experienced at the first bite of a delicious mango is indescribable. So it is with meditation. In meditation there is no seeking or searching, as the soul and goal have become one. The nectar of infinity must be tasted, the abundant grace of the Lord within must be experienced. Then the

individual soul (jivātmā) becomes one with the Universal Soul (Paramātmā). The sādhaka experiences the fullness sung by the *Upaniṣads:* That is full; this is full. Fullness comes out of fullness. Even after fullness is taken from the full, fullness yet remains.

SABĪJA OR SAGARBHA DHYĀNA

15. In meditation chanting of mantras is sometimes given to the beginner to steady his wandering mind and to keep him away from worldly desires. At first the mantra has to be recited aloud, then it is said mentally; lastly comes silence. This is known as sabīja or sagarbha dhyāna (bīja meaning seed, garbha meaning embryo). Sitting in meditation without reciting mantras is known as nirbīja or agarbha dhyāna. (The prefixes 'nir' and 'a' denote the absence of something, and mean without, see Ch. 17.)

16. Before proceeding to the techniques of dhyāna, one should be careful to differentiate between the emptiness and tranquillity of the senses on the one hand, and the illumination and serenity of the spirit on the other. Meditation (dhyāna) has three categories: sāttvic, rājasic and tāmasic. In the Uttara Kāṇḍa of the epic *Rāmāyāna* it is told that King Rāvaṇa and his two brothers Kumbhakarṇa and Vibhīśaṇa spent many years in acquiring sacred knowledge. Kumbhakarṇa's effort made him fall into a death-like torpor, for his meditation had been tāmasic. Rāvaṇa became engulfed in amorous pursuits and ambitions, for his had been rājasic. Only Vibhīśaṇa remained truthful and righteous and abstained from sin, for his meditation had been sāttvic.

Technique

1. Meditation is the technique of inter-penetrating the five sheaths (kośas) of the Sādhaka to blend them into one harmonious whole.

2. The body is known as the city of Brahmā (Brahmapuri) with nine gates. These gates are the eyes, ears, nostrils, mouth, anus and the reproductive organ. Some add the navel and the crown of the head and say that the body has eleven gates. All these have to be closed in meditation. The city is controlled by the ten winds (vāyus), five organs of perception (jñānendriyas), five organs of action (karmendriyas) and seven chakras or inner chambers. As pearls are strung together on a thread to make a necklace, so have the chakras to be connected to the self to make an integrated person.

3. In meditation, the brain has to be well balanced in relation to the spine. Any unevenness in its position disturbs the quietness of meditation. The energies of the left and the right hemispheres of the brain have to be brought to the centre. The thinking activity of the brain ceases. Just as one

withdraws energy from a particular limb or part of the body to make it passive, so also the flow of energy to the brain must be reduced and directed towards the heart – the seat of the soul. The key to the technique of meditation lies in keeping the brain as a passive observer.

4. The various preparatory techniques of yama, niyama, āsana and prāṇāyāma mould the body and mind, pacify and balance them. In a steady and stable posture, free from physical and mental disturbances, an even circulation of arterial and venous blood, lymphatic and cerebro-spinal fluid is maintained through the head and spinal column. Stimulation is kept minimal and as symmetrical as possible. This evenness of circulation and stimulation allows the brain and mind to attain a unification of knowledge and experience.

5. The brain is divided into three main portions: the cerebral cortex, the hypothalamus and the cerebellum. The cerebral cortex functions in the process of thinking, speech, memory and imagination. The hypothalamus regulates the activities of the internal organs and imprints emotional reactions of pleasure and pain, joy and sorrow, contentment and disappointment. The cerebellum is the centre of muscular co-ordination. The back brain is regarded as that which functions in meditation; it is the seat of wisdom and clarity.

6. The art of sitting correctly and silently is essential to achieve physical and mental harmony while practising meditation.

7. Any comfortable position may be assumed for sitting, though padmāsana (Pl. 13) is ideal.

Alignment of the Body

8. Without performing the jālandhara bandha, follow correctly the instructions given in Ch. 11 on the Art of Sitting.

9. Raise the front and back portions of the body evenly, attentively and rhythmically, without jerking.

10. Keep the spine erect and the chest lifted up. This slows down the flow of breath, lessens the activity of the brain and leads to the cessation of all thoughts.

11. Keep the body alert, with razor-sharp awareness. Keep the brain passive, sensitive and silent, like the thin end of a leaf, which shakes even in a gentle breeze.

Pl. 147

Pl. 148

12. Collapse of the body brings intellectual dullness and a distracted mind disturbs the steadiness of the body. Avoid both.

The Head

13. Keep the crown of the head parallel to the ceiling without tilting the head to the right or the left, forwards or backwards, up or down.

14. If the head is down, the sādhaka is brooding on the past, the mind is dull and tāmasic. If it moves up, he is wandering in the future, which is rājasic. When the head is held level, he is in the present, and this is a pure (sāttvic) state of mind.

Eyes and Ears

15. Close the eyes and look within. Shut your ears to outward sounds. Listen to the inner vibrations and follow them until they merge in their source. Any absent-mindness or lack of awareness in the eyes and ears creates fluctuations in the mind. The closure of the eyes and ears directs the sādhaka to meditate upon Him who is verily the eye of the eye, the ear of the ear, the speech of speech, the mind of the mind and the life of life.

16. Flex the arms at the elbows, raise the hands and fold the palms in front of the chest with the thumbs pointing towards the sternum. This is called ātmānjali or hṛdayānjali mudrā (Pls: front view 147, and side view 148).

17. Intelligence oscillating between the head and the heart creates multiple thoughts. When the mind oscillates, press the palms to bring back the attention of the mind on the Self. If the pressure of the palms becomes loose, it is a sign that the mind is wandering. Again join them firmly to recollect the Self.

18. Dhyāna is the integration of the body, mind, intelligence, will, consciousness, ego and the self. The body is the external layer of the mind, mind of the intelligence, intelligence of the will, will of consciousness, consciousness of the 'I' or ego and the 'I' of the pure Self (Ātmā). Dhyāna is the process of inter-penetration of all these sheaths, a merging of all that is known into unknown, or of the finite into the Infinite.

19. The mind acts as the subject and the Self object; yet in reality the Self is the subject. The end of meditation is to make the mind submerge in the Self so that all seeking and searching comes to an end. Then the sādhaka experiences his own universality, timelessness and fullness.

20. Stay in meditation for as long as you can, without allowing the body to collapse. Then do śavāsana (Pl. 182).

Notes

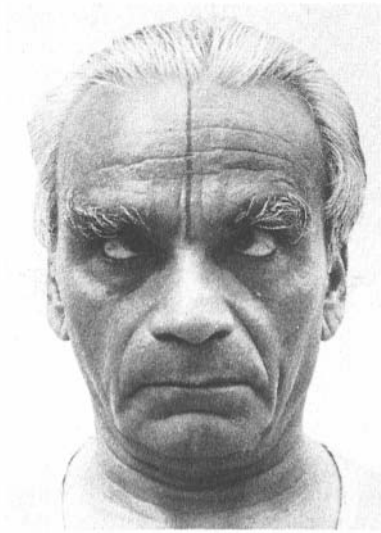
1. Do not sit for meditation immediately after doing āsanas and prāṇāyāma. Only those who can sit steadily for a long period can do prāṇāyāma and dhyāna together. Otherwise the limbs will ache and disturb mental equilibrium.

2. The best time to meditate is when one is fresh in body and mind, or at the time of going to bed when one feels peaceful.

3. Do not allow the eyes to look upwards, for this leads to retention of breath and creates tension in the nerves, muscles, blood vessels, head and brain.

4. Only people who are easily dejected or distressed and who have dull or weak minds are advised to direct the gaze at the centre between the eyebrows (Pls 149 and 150) with closed eyes for short periods of time. This should be done four or five times during meditation, with an interval between each attempt. This practice brings about mental stability and intellectual sharpness. However, people with hyper-tension should not follow this procedure.

5. Stop meditation the moment the body starts swaying forwards, backwards or sideways or if faintness is felt. Do not persist when this happens, as



Pl. 149

Pl. 150

it means that the time for meditation is over for the day. If you persist, it may lead to mental imbalance.

Effects of Meditation

1. In meditation the mind traces its origin and comes to rest there as a child rests on the lap of the mother. The yogi, having found his own resting place and spiritual haven, sees the underlying reality around and within him.

2. Meditation abolishes the polarity between the analytical dominant consciousness of the front brain and the receding sub-consciousness or unconsciousness of the back brain. It controls and slows down certain automatic physical functions which normally stimulate the brain, such as intestinal contractions, breathing, and the heart beat. All external stimuli

which normally disturb human consciousness through the various sense organs are cut off as the nine gates of the body are closed in dhyāna.

3. In meditation mind and matter are fused. This fusion burns out all distracting thoughts. The sādhaka becomes dynamic, creative and supremely attentive. He has inexhaustible reserves of energy and engages himself in bettering humanity.

4. He experiences a new dimension wherein his senses and his chitta become crystal clear. He sees things as they are and is free from prejudices and delusions. This is the Jāgṛtāvasthā, a state of watchful awareness. His soul is awake, but his senses are under control. He is full of knowledge (prajñā), understanding, precision, freedom and truth. Illumined by the divine fire within, he radiates joy, unity and peace.

5. The sādhaka progressively attains the seven states of higher consciousness. These are right desire (śubhechhā), right reflection (vichāraṇā), disappearance of the mind (tanumānasā), self-realisation (sattavāpatti), non-attachment (aśaṁsakta), non-perception of objects (padārthābhāva), and the experience of a state which is beyond words. It is the sum total of all knowledge: knowledge (jñāna) of the body (śarīra), breath (prāṇa), mind (manas) and intelligence (vijñāna); knowledge gained by experience (ānubhāvika), by digesting the various sentiments and flavours that life offers (rasātmaka), and knowledge of the Self (Ātmā-jñāna).

6. His senses are drawn in. His thoughts are pure. Free from attachment and delusions, he has become stable and a jīvana-mukta (free from the bondages of life).

The state of a jīvana-mukta is described thus in the *Bhagavad Gītā* (Chapter XVIII, 53–56): 'He has left behind him vanity, violence and arrogance. He has gone beyond lust, anger and greed. He has become selfless and tranquil – he is fit to be one with the Eternal. He who dwells with the Eternal and is tranquil in spirit, neither grieves nor desires. His love is the same for all creation; he has supreme love for the Lord.'

Chapter 30

Śavāsana (Relaxation)

1. Śava in Sanskrit means a corpse, and āsana a posture. Thus śavāsana is a posture that simulates a dead body, and evokes the experience of remaining in a state as in death and of ending the heart-aches and the shocks that the flesh is heir to. It means relaxation, and therefore recuperation. It is not simply lying on one's back with a vacant mind and gazing, nor does it end in snoring. It is the most difficult of yogic āsanas to perfect, but it is also the most refreshing and rewarding.

2. A perfect śavāsana needs perfect discipline. It is easy to relax for a few minutes, but to do so without physical movement or without wavering of the intellect requires long training. At the start of a prolonged stay in śavāsana is not only very uncomfortable to the brain, but makes the body feel like a piece of dry, dead wood. Pricking sensations are felt on the skin along the limbs and they grow more acute if the pose is continued.

Rhythm

3. When śavāsana is well performed the breath moves like a string holding the pearls of a necklace together. The pearls are the ribs which move slowly, very steadily and reverently, reverent because when one is in that precise state, the body, the breath, the mind and the brain move towards the real self (Ātmā), like a spider returning to the centre of its web. At this juncture a state of samahita chitta (equanimity of the mind, the intellect and the self) is felt.

4. In the beginning, the ribs do not relax, the breath is rough and uneven, while the mind and intellect waver. The body, the breath, the mind and the intellect are not united with the Ātmā or the Self. For correct śavāsana there must be unity of the body, the breath, the mind and the intellect where the Self holds the reins. All four bow down respectfully to the Ātmā. Then the chitta (that is, manas, buddhi and ahaṁkāra or ego, which is the state that ascertains that 'I know') becomes samahita chitta, in which the mind, the intellect and the ego are balanced. This is a state of stillness.

5. This state is achieved by controlled discipline of the body, the senses and the mind. It should not, however, be mistaken for silence. In stillness there is rigidity due to force of will. Here the attention is focused to keep

the consciousness (chitta) still (dhāraṇa), whereas in silence that attention is expanded and released (dhyāna) and the will is submerged in the Ātmā. This subtle distinction between stillness and silence can be known only by experience. In śavāsana the attempt is to achieve silence in all the five sheaths or kośas: the annamaya (anatomical), the Prāṇamaya (physiological, the manomaya (mental or emotional), the vijñānamaya (intellectual) and the ānandamaya (the body of bliss), which envelope the person from the skin to the self.

6. A star pulsates with energy and the energy is translated into light rays, which may take many light-years to reach human eyes on earth. The Ātman is like such a star and it transmits and imprints its likes and desires on the mind. These latent desires, like stellar energy translated into light, may resurface to the mind level, breaching the silence.

7. First, learn to achieve the silence of the body. Then control the subtle movements of the breath. Next learn about the silence of the mind and the emotions and then of the intellect. From there proceed to learn and study about the silence of the Self. It is not until then that the ego or small self (ahaṁkāra) of the practitioner can merge with his self (Ātman). The fluctuations of the mind and the intellect cease, the 'I' or ego disappears and Śavāsana provides an experience of unalloyed bliss.

Stages of Consciousness

8. Yoga teaches four main states of consciousness. The three normal ones are the state of deep sleep or spiritual ignorance (suśupti), the dreamy or indolent state (svapna) and lastly the state of watchfulness or awareness (jāgṛta). There are varying stages between them. The fourth (turīya) has a different dimension in which the sādhaka is spiritually illumined. Some call it the Eternal Now, beyond space and time. Others call it the soul becoming one with the Creator. This can be experienced in perfect śavāsana when the body is at rest as in deep sleep, the senses as in a dream but the intellect alert and aware. Such perfection, however, is rarely achieved. The sādhaka is then born anew or emancipated (siddha). His soul sings the words of Śankarācharya:

> I was, I am, I shall be, so why fear birth and death?
> Whence pangs of thirst and hunger? I have no life no breath.
> I am neither mind nor ego, can delusion or sorrow grind me?
> I am but the instrument, can actions free or bind me?

Techniques

1. It is necessary to describe in great detail the technique for practising śavāsana. However, a beginner need not be discouraged about mastering the details. When first learning to drive a car, he gets confused. Yet with

help from an instructor he gradually learns to master the intricacies until they all become instinctive. It is the same with śavāsana, except that the working of the human body is more intricate than that of any car.

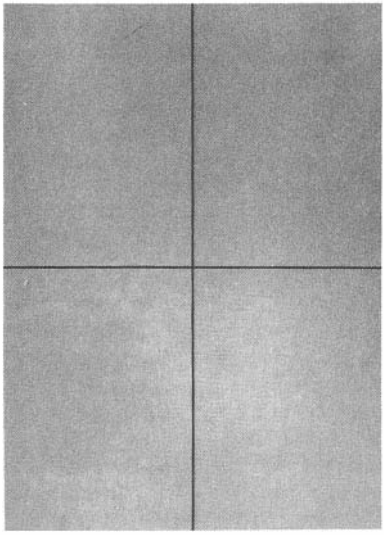
2. Śavāsana is difficult to learn as it involves stilling the body, the senses and the mind while keeping the intellect alert. The seeker approaches it by studying the various aspects of his being – the body, the senses, the mind, the intellect and the Self. Scholastic knowledge is not enough. Correct practice is essential to master śavāsana.

3. Before starting the practice remove constricting garments, belts, glasses, contact lenses, hearing aids and so on.

Time and Place

4. Although śavāsana can be done at any time, it is advisable to do it during the quiet hours. In large cities and industrial areas it is difficult to find an atmosphere free from smoke, smog or chemical pollution. Choose a clean level place, free from insects, noise and unpleasant smells. Do not practice on a hard floor, or on an unyielding surface or on a soft mattress, as the body sinks into it unevenly.

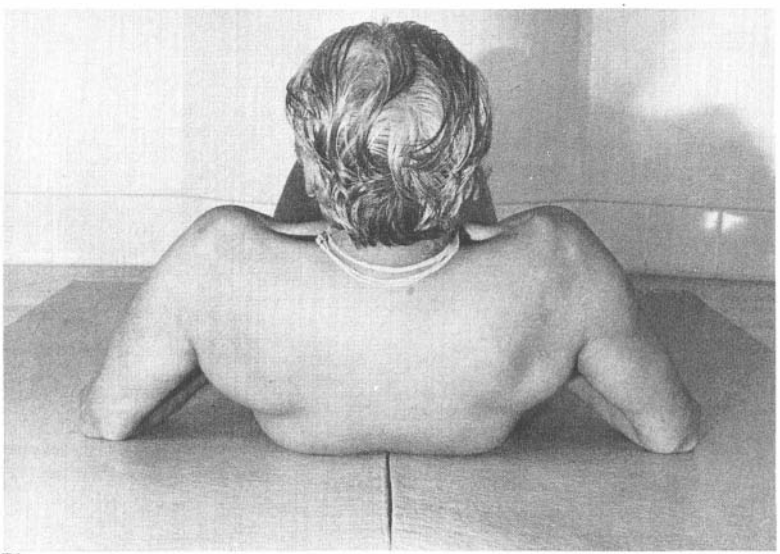
Pl. 151



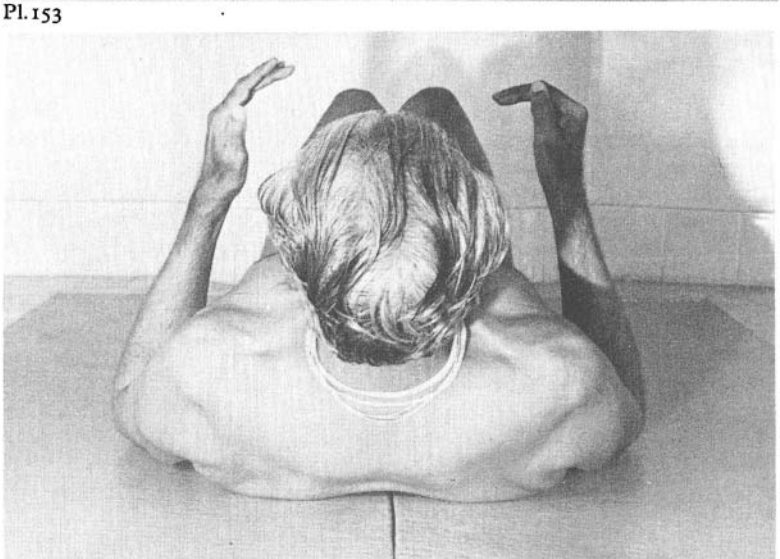
Pl. 152

Alignment

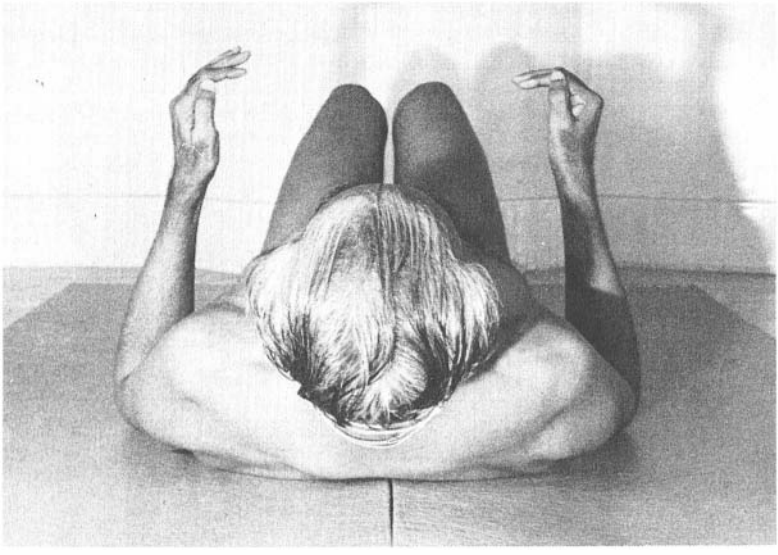
5. Śavāsana is performed lying down full length on the back on a blanket spread on the floor. Draw a straight line there to position the body correctly (Pl. 151). Sit on the drawn line with the knees drawn up and the feet together. (Pl. 152). Gradually lower the back vertebra by vertebra along



Pl. 153



Pl. 154



Pl.155

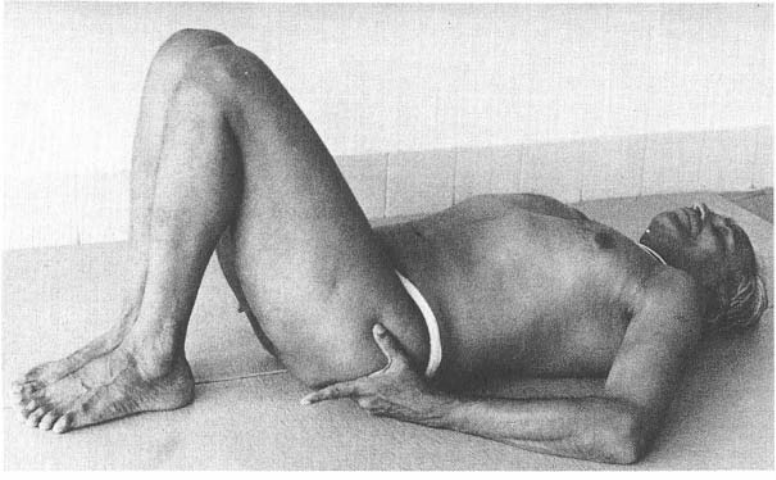
the drawn line on the floor or on the blanket. Place the body accurately so that the middle of the spine lies exactly on the straight line drawn on the floor or blanket (Pls 153 to 155).

6. Press the feet on the floor, lift the hips as well as the sacroiliac region, and with your hands, move the flesh and the skin from the back of the waist down towards the buttocks (Pl. 156).

7. First adjust the back of the body. Then adjust the head from the front. The reason for adjusting the head from the front is that from birth the back of the head becomes uneven, because babies lean to one side, with the result that one side of the head gets more compressed than the other. Hence it is important to adjust the head from the front and feel it from the back (Pls 157 and 158). Then extend first one leg and then the other fully. (See Pls 47–49). Join both the heels and knees. The joined heels, knees, crotch, centre of the coccyx, the spinal column and base of the skull should rest exactly on the straight line (Pl. 159). Then adjust the front of the body, keeping the centre of the eyebrows, the bridge of the nose, chin, sternum, navel and centre of the pubis in line.

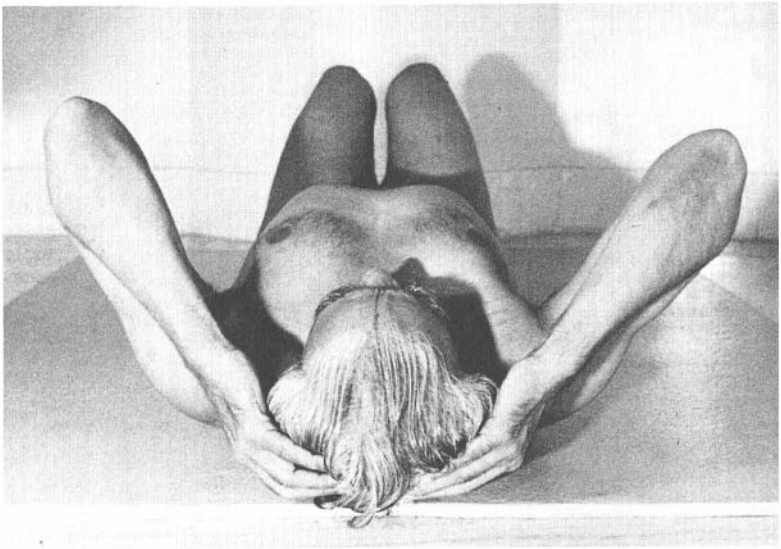
Balance

8. To prevent any tilt of the body keep it straight and level. To check the



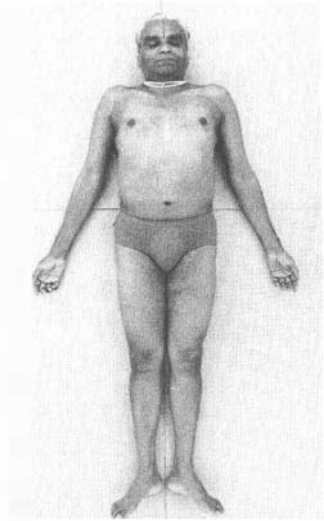
Pl. 156

Pl. 157



Pl. 158

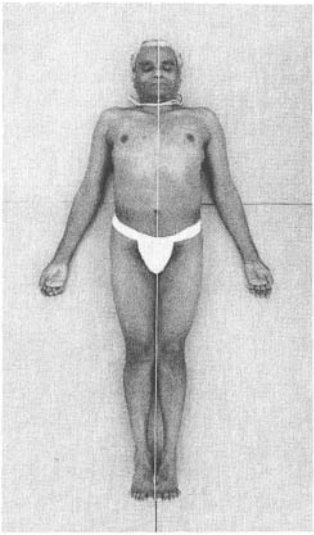
Pl. 159



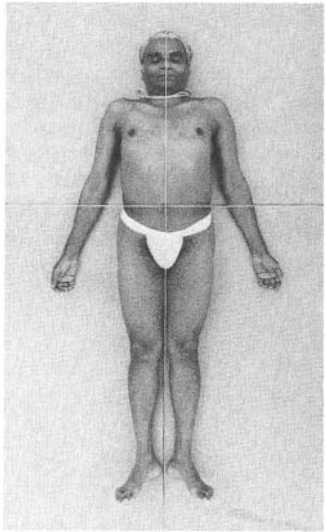
former draw an imaginary line straight along the centre of the forehead, eye-brows, root of the nose, middle of the lips, chin, throat and sternum, centre of the diaphragm, navel and pubis, and then through the space between the inner sides of the thighs, knees, calves, ankles and heels. Then check that the body is level, starting with the head, keeping the two ears, outer corners of the eyes, the lips and the base of the jaw-bone parallel to the floor (Pls 160 and 161). Finally stretch and adjust the back of the neck, so that it is centrally placed on the floor (Pl. 162).

Torso

9. Pin the apex (inner point) of each shoulder blade to the floor (Pls 163 and 164). Roll the skin of the top chest from the collar-bones towards the shoulder blades and adjust the back to rest perfectly on the blanket (Pl. 165). See that the dorsal and lumbar areas of the spine rest evenly on either

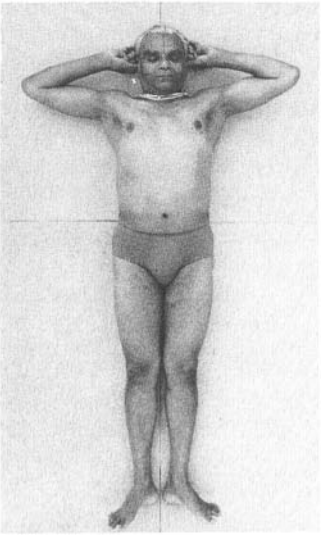


Pl. 160

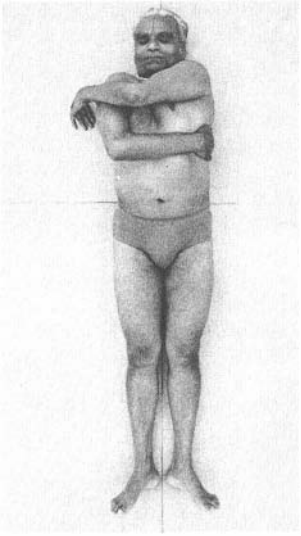


Pl. 161

side and that the ribs spread out uniformly. About ninety-nine per cent of people do not rest evenly on both buttocks, but rest on one of them. Rest the centre of the sacrum on the floor so that the buttocks relax evenly. Draw a line between the nipples, floating ribs (Pls 160 and 161) and pelvic bones to keep them parallel to the floor.

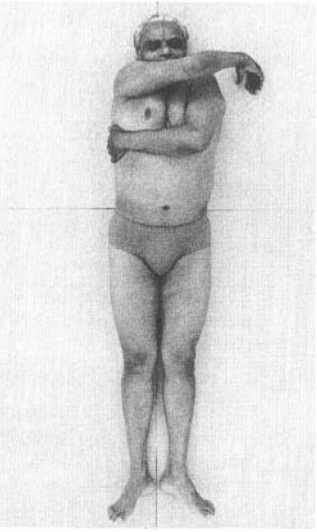


Pl. 162

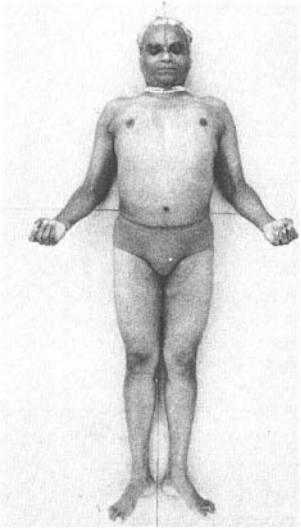


Pl. 163

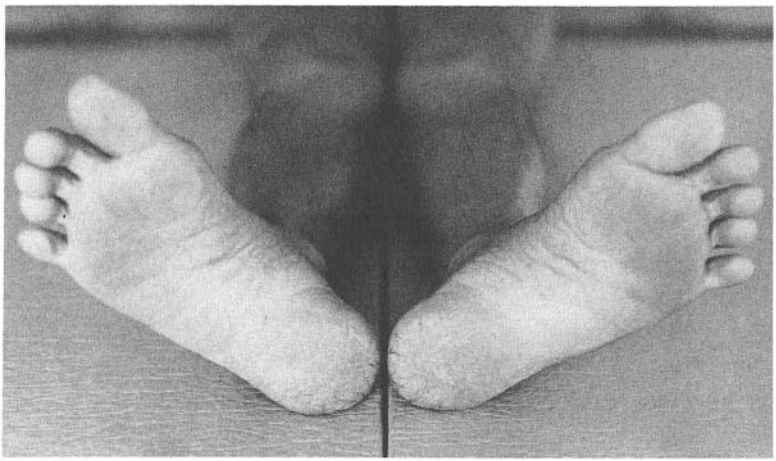
Pl. 164



Pl. 165

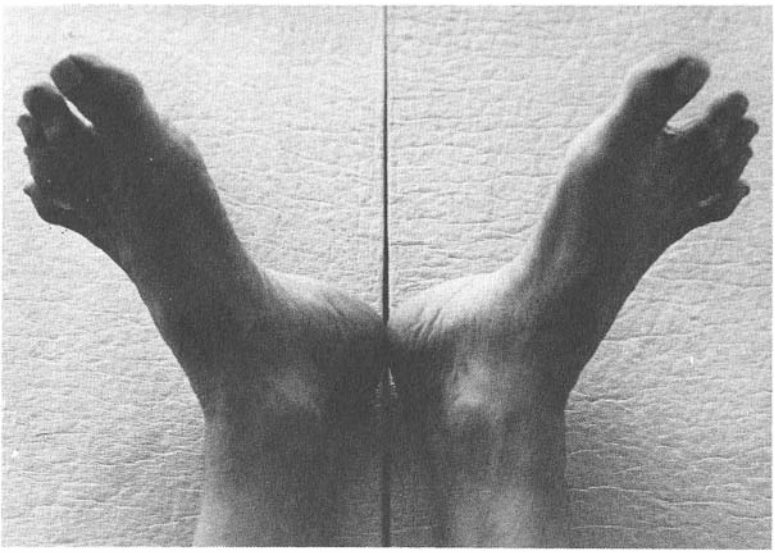


Pl. 166

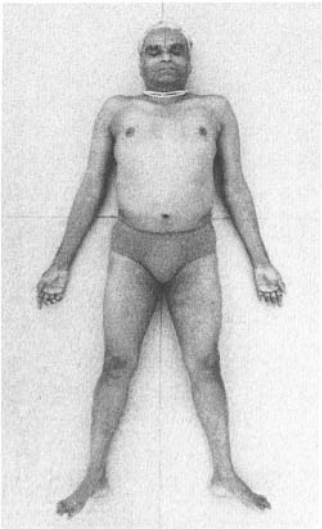


Feet

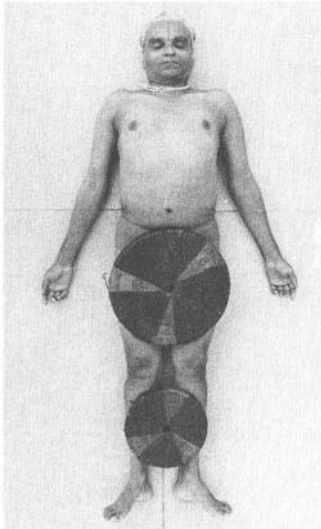
10. Keep the feet together and stretch the outer edges of the heels (Pl. 160); then let the feet fall outwards evenly (Pl. 166). The big toes should feel weightless and non-resistant (Pl. 167). It is wrong to force the little toes to touch the floor. Persons with stiff legs may keep their feet about a yard apart, as this will enable them to keep the back rested on the floor (Pl. 168). Keep the back outer corner of the knees touching the floor. If they cannot rest use a folded blanket or pillow behind them (Pl. 85). If the legs do not feel relaxed, place weights on the upper thighs (25 to 50 lbs) (Pl. 169). This removes tension or hardness in the muscles and keeps the legs quiet.



Pl. 167



Pl. 168



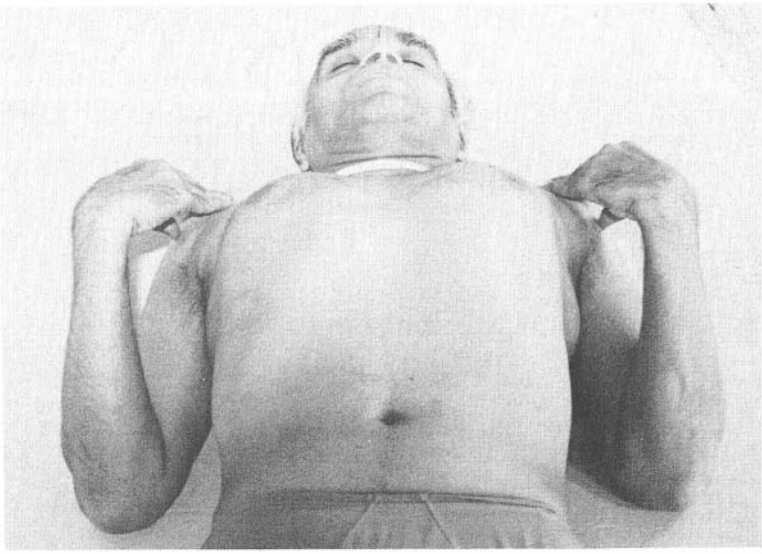
Pl. 169

Hands

11. Keep the hands away from the body, forming an angle of fifteen to twenty degrees at the armpits. Bend the arms at the elbows, touching the shoulder tops with the fingers (Pl. 170). Extend the triceps at the back portion of the upper arms and take the elbows as far as you can towards the feet. Keep the whole upper arms with the outer edges of the shoulders and elbows on the floor (Pl. 171). Do not disturb the elbow points. Lower the forearms. Extend the hands from the wrists to the knuckles, palms facing upwards (Pls 172 and 173). Keep the fingers passive and relaxed, with the backs of the middle fingers touching the floor up to the first knuckles (Pl. 174). See that the median plane of the arms, elbows, wrists and palms are in contact with the floor. If the arms are kept close to the body and the body does not rest properly, and hardness is felt in the arms or in the muscles of the trunk at the back, spread the arms to the level of the shoulders (Pl. 175). The feeling of lying on the floor should be as though the body is sinking into Mother Earth.

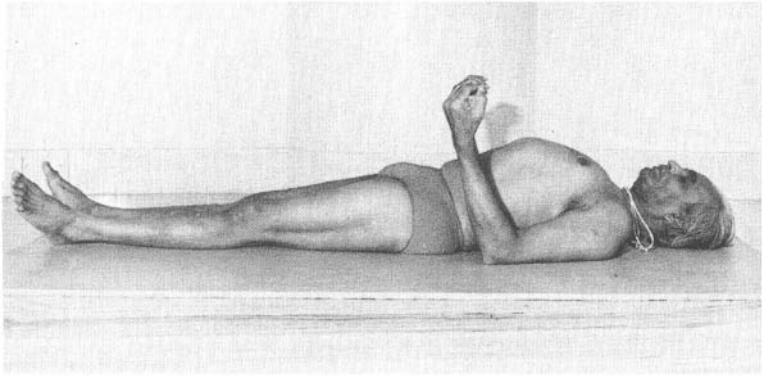
Unconscious Tensions

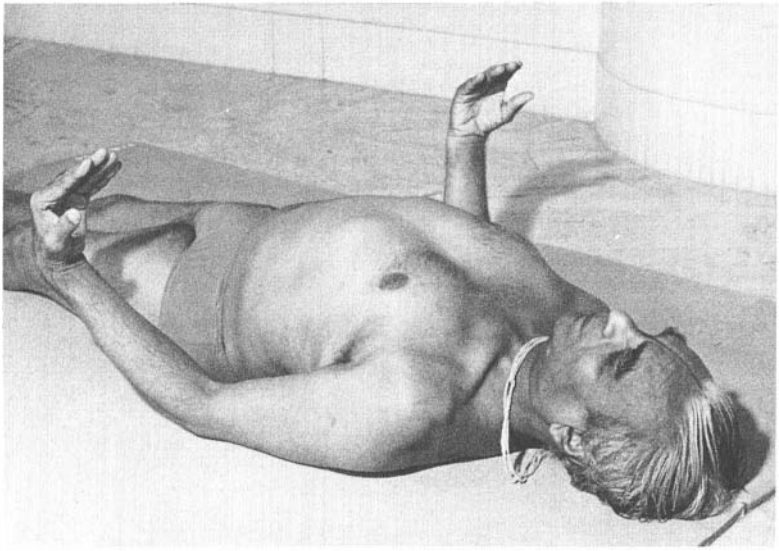
12. One may be unaware of tension in the palms, the fingers, the soles of the feet or the toes (Pls 176 and 177). Watch for and release this tension when and where it occurs and drop these parts back to their correct positions.



Pl. 170

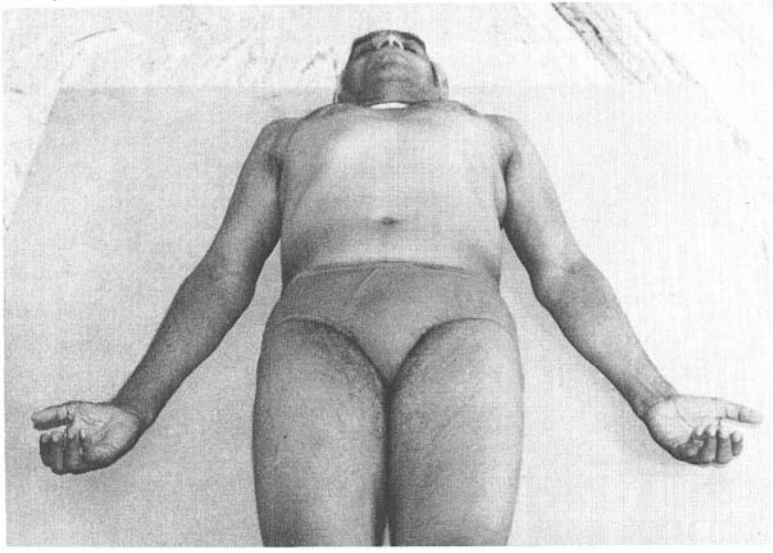
Pl. 171





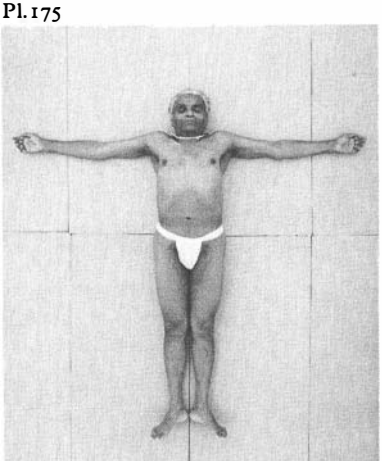
Pl. 172

Pl. 173

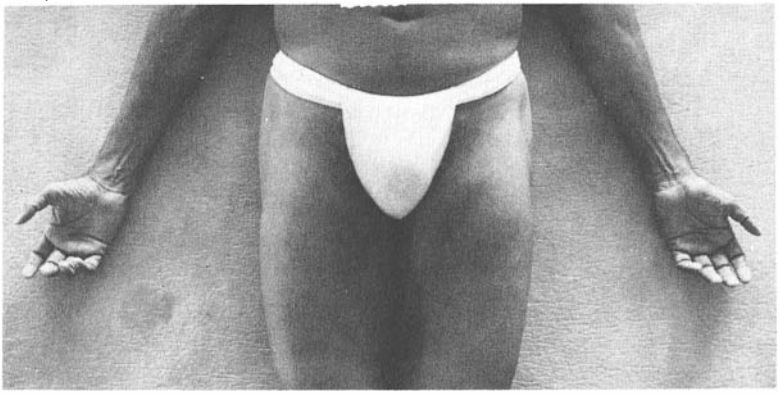


Pl. 174

Pl. 175



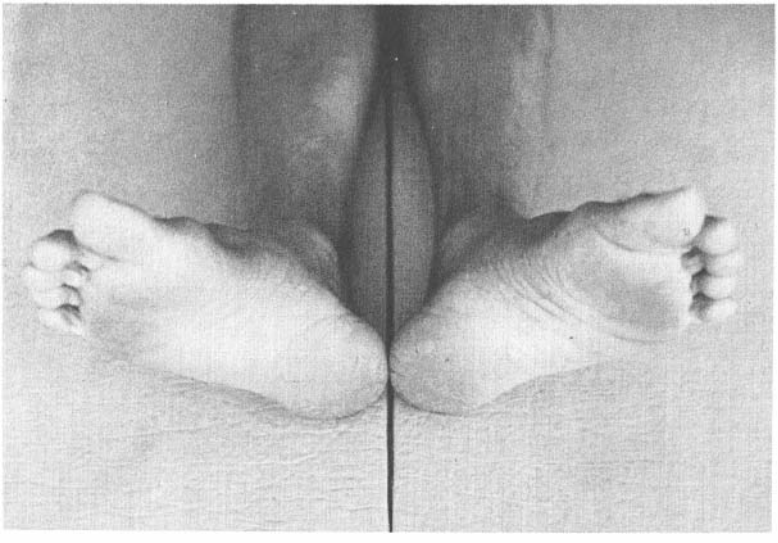
Pl. 176



Removal of Tension

13. First, learn to relax the back of the body from the trunk to the neck, arms and legs. Next relax the front of the body from the pubis to the throat, where emotional upheavals take place, and then from the neck to the crown of the head. In this way learn to relax the entire body.

Pl. 177



14. Experience the feeling of non-existence or emptiness in the pits of the arms, the inner pits of the groins, diaphragm, lungs, spinal muscles and the abdomen. The body then feels like a discarded stick. In correct śavāsana the head feels as if it has shrunk.

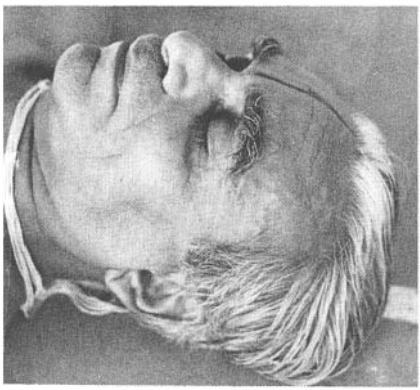
15. Learn to silence the tissues of the physical body before dealing with the mind. The gross physical body (annamaya kośa) should be brought under control before one proceeds to quieten the subtler mental (manomaya) and intellectual bodies (vijñānamaya kośas).

16. Complete serenity of the body is the first requisite, and it is the first sign of attaining spiritual tranquillity. There is no emancipation of the mind unless there is a feeling of serenity in all parts of the body. Silence in the body will bring about silence in the mind.

The Senses

17. *Eyes.* In śavāsana the sādhaka turns his gaze inwards and looks within himself. This introspection prepares him for pratyāhāra, the fifth of the eight steps of Yoga, where the senses are withdrawn inwards, and he begins the journey to the source of his being, his Ātmā.

18. The eyes are the windows of the brain. Each has lids, which act as shutters. The iris surrounding the pupil serves as an automatic regulator of the amount of light reaching the retina. The iris reacts automatically to the intellectual and emotional states of the person. By closing the lids he can shut out all that is outside and become aware of what is within. If he closes them too tightly the eyes are squeezed causing colours, lights and shadows to appear and distract him. Gently move the upper lids towards the inner corners of the eyes. This relaxes the skin just above them and creates space



Pl. 178

between the eyebrows. Treat the eyes gently like petals of a flower. Raise the eyebrows just enough to release any tightness of the skin in the forehead (Pl. 178).

19. *Ears.* These play an important part both in śavāsana and in Prāṇāyāma. While the eyes are kept passive, the ears should be quiet and receptive. Tension or relaxation in either affects the mind in the same way and vice versa. The seat of the intellect is in the head, while the mind is rooted in the heart. When there are thought waves, the inner ears lose their receptivity. By careful training, the process can be reversed and the ears can send messages back to stop the fluctuations so that the mind will quieten. If the eyes are kept tense the ears become blocked, and if they are relaxed so are the ears.

20. *Tongue.* Keep the root of the tongue passive as in sleep and resting on the lower palate. Any movement or pressure of the tongue on the teeth or upper palate indicates a fluctuating mind. If it moves to one side, the head does the same, making total relaxation difficult. Keep the corners of the lips relaxed by stretching them sideways.

21. *Skin.* The skin which covers the body provides the structure for what is perhaps the most important of the senses. The five organs of knowledge are the eyes, ears, nose, tongue and skin. The subtle primary elements of light, colour, sound, smell, taste and touch (the tanmātras) leave their impressions on the organs of sense. These in turn send messages to the brain and receive them back for response and challenge. The nerves controlling the senses are relaxed by releasing the tension from the facial muscles, while the brain is freed from contact with the organs of knowledge. Pay special attention to the areas of the temples, the cheekbones and the lower jaw. This will enable you to sense a feeling of quietness between the upper palate and the root of the tongue. In śavāsana the muscles relax and the pores of the skin shrink and the relevant nerves are at rest.

Breathing

22. See that the breath flows evenly on either side of the nostrils. Start by inhaling normally, but exhale softly, deeply and longer. For some, deep inhalation creates disturbance in the head and trunk, with tautness in the legs and arms. For them normal inhalations with deep and soft exhalations are recommended. This quietens the nerves and the mind. For those who become restless the moment śavāsana is attempted, they should perform deep, slow and prolonged in and out breaths until quietness is attained. The moment quietness is felt, they should stop deep breathing and let the breath flow by itself. When the art of exhalation is perfected, one feels as if the breath is oozing from the pores of the skin on the chest, which is a sign of

perfect relaxation. Each out-breath takes the sādhaka's mind towards his own self and purges his brain of all its tensions and activities. Exhalation is the best form of surrender by the sādhaka of his all – his breath, life and soul – to his Creator.

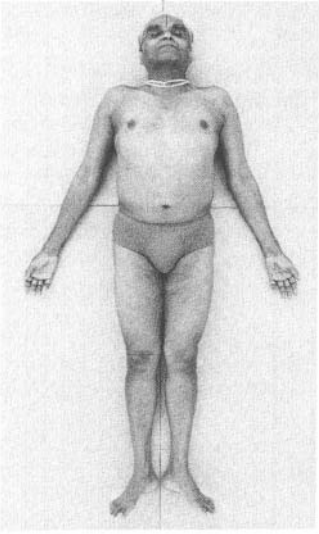
Head

23. Make sure that the head is straight and parallel to the ceiling. If it tilts up (Pl. 179) the mind dwells in the future. If down (Pl. 180), it broods in the past. If it leans to one side (Pl. 181), the innner ear (the vestibular apparatus, utricle saccule and semi-circular canals) follows. This affects the mid-brain and one tends to fall asleep and lose awareness. Learn to keep the head level with the floor so that the mind remains always in the present (Pl. 182). Correction of any tilt will help to bring that balance (samatva) between the two hemispheres of the brain and the body which is one of the gateways to divinity.

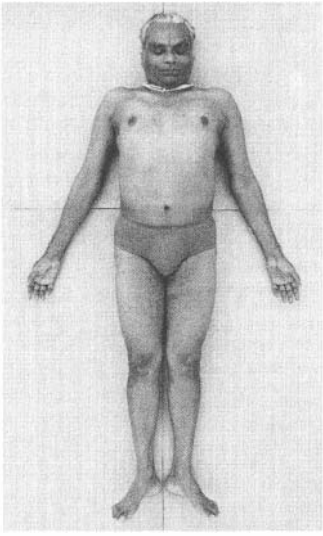
24. At the beginning the chin moves up and down unconsciously in respiration. Check this by consciously keeping the back of the head parallel to the floor by stretching it from the neck towards the back of the crown (Pl. 182).

Brain

25. If the brain or mind is tense, so is the skin and vice versa. Learn to discipline yourself from the pores of the skin to the Self as well as the other



Pl. 179



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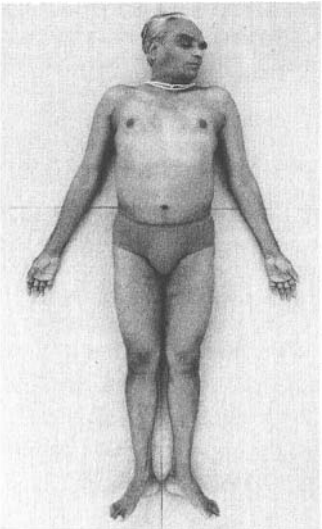
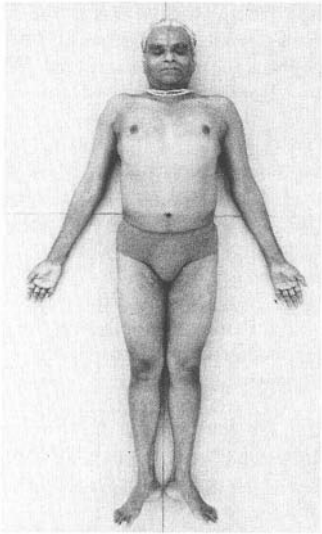


Pl. 181



Pl. 182

way round. The total energy of the body, the mind and the intelligence should submerge in the Self. Use the will to quieten the mind and the intellect. Ultimately sublimate the will.

26. As long as the senses are active, the Ātmā remains dormant. When they are stilled and silenced, it shines forth as the clouds of desires are dispersed. Like the darting movements of a fish in the water of a pond are the movements of the mind and intellect (buddhi) – both within and without the body. When the water is unruffled, the image reflected therein is unbroken and still. When the waverings of the mind and the intellect are stilled, the image of the Self (Ātmā) rises undisturbed to the surface, free of desires. This desireless state of simplicity and purity is known as kaivalyāvasthā.

27. The aim in śavāsana is to keep the body at rest, the breathing passive, while the mind and intellect are gradually sublimated. When fluctuations take place internally and externally, mental and intellectual energies are wasted. In śavāsana the internal or emotional upheavals in the mind are stilled, bringing about a state of manolaya (manas meaning mind and laya meaning immersion). Then the mind, free from fluctuations, dissolves and merges in the self, like a river in the sea. It is a negative state of passivity, described in the Yoga texts as 'empty' (śūnyāvasthā), a merging of one's

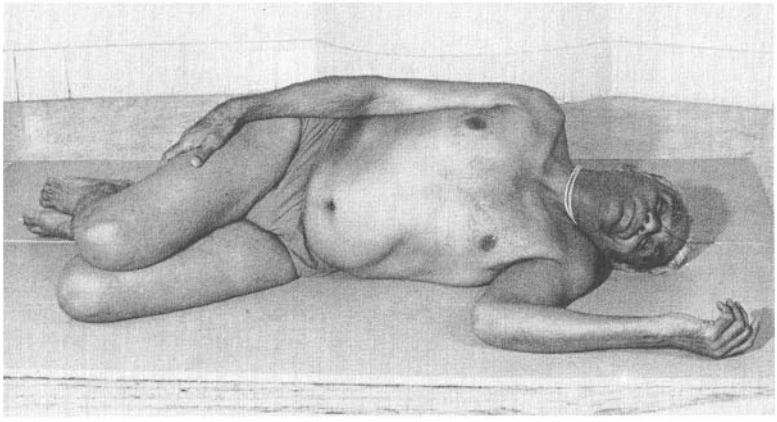
identity at the emotional level. Then the sādhaka prevents the incoming thoughts which distract and dissipate his intellectual energy. At this level he experiences a state of clarity where the intellect is in full command and does not allow invading thoughts to disturb it. This state is known as an aśūnyavāsthā (A meaning not, sūnya meaning empty). When he gets mastery over mind and brain, he reaches a new positive state beyond both manolaya and amanaskatva, which is pure being.

28. Manolaya or śūnyāvasthā may be compared to the new moon, where the moon, though rotating round the earth, is not visible. The states of amanaskatva or aśūnyāvasthā may be compared to the full moon, reflecting the light of the sun, the Ātmā. In both śūnyāvasthā or aśūnyāvasthā, the sādhaka's body, mind and intellect are well balanced and radiate energy. He attains equipoise between the two tides of emptiness of emotion and fullness of intellect.

29. To achieve this state, the sādhaka must develop discrimination. This in turn will lead to clarity and enable him to relax better. When clarity is gained, doubts vanish, bringing illumination. His being then gets merged in the Infinite (Paramātmā). This is the experience of the sādhaka, the nectar of śavāsana.

30. Practise śavāsana for some ten to fifteen minutes to experience a sense of timelessness. The slightest thought or movement will break the spell and you are once more in the world of time, with a beginning and an end.

31. Getting back to normal from a successful śavāsana requires time. Between two breaths and two thoughts there is a varying gap of time, as there is between an active and a passive state. Śavāsana being a passive



Pl. 183

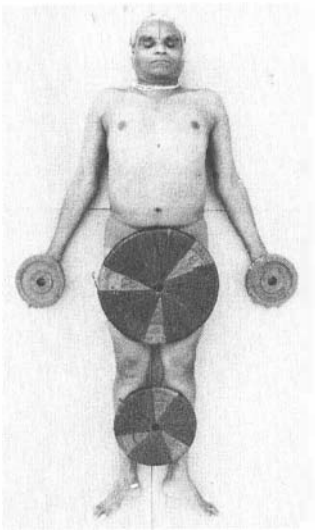
state, the sādhaka should remain a silent observer until normal activity creeps into the brain and body. After successful śavāsana the nerves feel shrunken on returning to normal, while the back of the brain seems dry and heavy and the front empty. Therefore do not raise your head quickly, as you may black out or feel heavy. Gradually and gently open your eyes, which are at first unfocused. Remain in that state for a while. Then bend the knees, turn the head and body to one side (Pl. 183) and stay for a minute or two in that position. Repeat this on the other side. As a result you will feel no strain when getting up.

Special Precautions

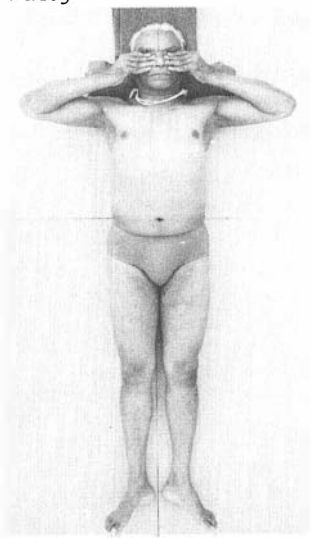
Those suffering from hyper-tension, high blood pressure, heart disease, emphysema or restlessness should lie on wooden planks and place pillows under the head (Pls 80–82).

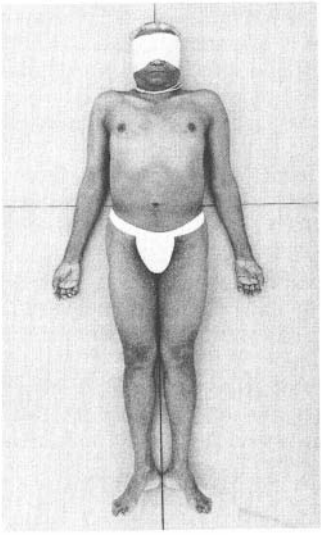
Tense and restless people should place weights (of about 50 lbs) on their upper thighs and 5 lbs on the palms. (Pl. 184). They should do śaṇmukhi mudrā (Pl. 185) or wrap a long soft and thin piece of folded cloth about three inches wide around the head and over the eyes and temples. Start from the eye-brows, without blocking the nose; tuck in the ends, either at the temple above or at the sides of the nose below. The cloth should be neither too tight nor too loose (Pl. 186). When the brain is active, movements of the temples and tension in the eye-balls will push the cloth

Pl. 184

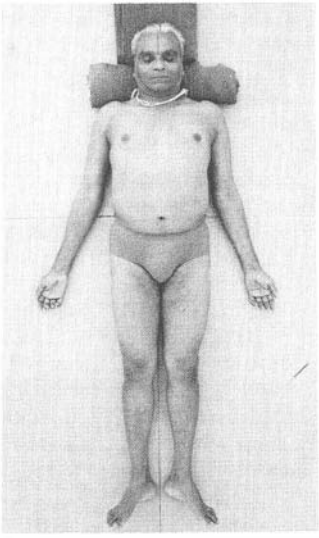


Pl. 185



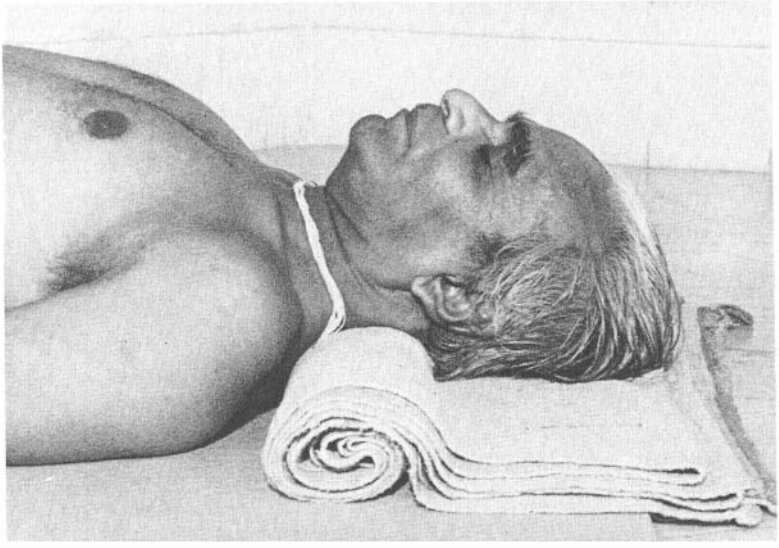


Pl. 186



Pl. 187

Pl. 188

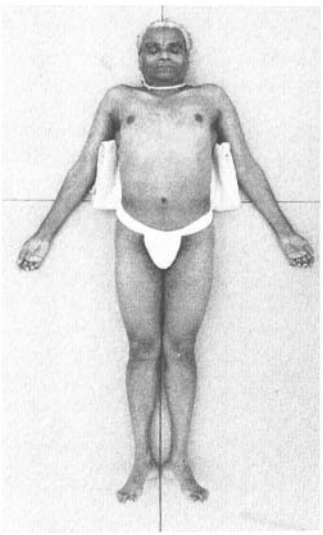


outwards. When the skin there relaxes, you no longer feel to be in contact with the cloth. This is a sign that the brain is beginning to relax.

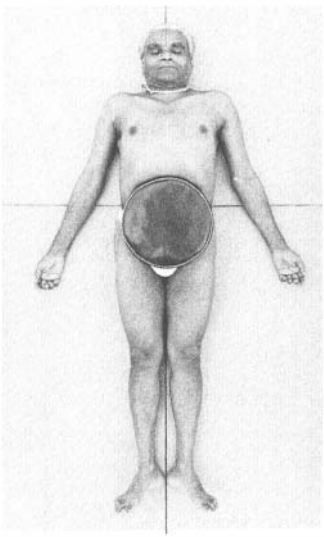
Those with painful necks, due to cervical spondylitis or sprain, will find it difficult to stretch the back of the neck and to rest comfortably. They should insert a towel or a folded cloth between the base of the neck and skull as illustrated (Pls 187 and 188).

Highly nervous people, or those suffering from loss of confidence, should lie in śavāsana, directing the gaze at the middle of the eye-brows (trāṭaka) (Pl. 149), close the eyes and gaze inwardly (Pl. 150). They should breathe deeply, holding the breath for a second or two after each inhalation. They should practise śavāsana only after doing sarvāngāsana, which are described in *Light on Yoga*. The deep inhalation and exhalation enable such persons to relax, after which they need no longer focus the gaze between the eye-brows nor concentrate on deep breathing.

If the gap between the floor and the waist is too great, use a soft pillow or a folded blanket to fill it. This support rests the lumbar back (Pl 189). Persons with backache should keep a weight (25–50 lbs) on the abdomen. This eases the pain (Pl. 190).



Pl. 189



Pl. 190

Effect

In correct śavāsana there is minimum wastage of energy and maximum recuperation. It refreshes the whole being, making one dynamic and creative. It banishes fear (bhaya) of death and creates fearlessness (abhaya). The sādhaka experiences a state of serenity and inner oneness.

Appendix

Prāṇāyāma Courses

Prāṇāyāma is here divided into five groups: preparatory, primary, intermediate, advanced and highly intense courses. This series of prāṇāyāmas is given for daily practice, with indication of the time it may take to gain some control in all courses. The mastering of each stage depends upon the sādhaka's dedication to the art and devotion to the practice.

First the courses are divided for easy reference before dealing with week-to-week practices.

1. PREPARATORY COURSE	STAGES
(a) Ujjāyī prāṇāyāma	I to VII
(b) Viloma prāṇāyāma	I and II

2. PRIMARY COURSE	
(a) Ujjāyī prāṇāyāma	VIII to X
(b) Viloma prāṇāyāma	III to V
(c) Anuloma prāṇāyāma	Ia and Ib Va and Vb
(d) Pratiloma prāṇāyāma	Ia and Ib
(e) Sūrya bhedana prāṇāyāma	I
(f) Chandra bhedana prāṇāyāma	I

3. INTERMEDIATE COURSE	
(a) Ujjāyī prāṇāyāma	XI
(b) Viloma prāṇāyāma	III, VI and VII
(c) Anuloma prāṇāyāma	IIa and IIb VIa and VIb
(d) Pratiloma prāṇāyāma	IIa and IIb
(e) Sūrya bhedana prāṇāyāma	II
(f) Chandra bhedana prāṇāyāma	II
(g) Nāḍī śodhana prāṇāyāma	Ia and Ib

4. ADVANCED COURSE

(a)	Ujjāyī prāṇāyāma	XII
(b)	Viloma prāṇāyāma	VIII
(c)	Anuloma prāṇāyāma	IIIa, IIIb VIIa, VIIb
(d)	Pratiloma prāṇāyāma	IIIa, IIIb
(e)	Sūrya bhedana prāṇāyāma	III
(f)	Chandra bhedana prāṇāyāma	III
(g)	Nāḍī śodhana prāṇāyāma	IIa, IIb

5. HIGHLY INTENSE COURSE

(a)	Ujjāyī prāṇāyāma	XIII
(b)	Viloma prāṇāyāma	IX
(c)	Anuloma prāṇāyāma	VIII
(d)	Pratiloma prāṇāyāma	IV
(e)	Sūrya bhedana prāṇāyāma	IV
(f)	Chandra bhedana prāṇāyāma	IV
(g)	Nāḍī śodhana prāṇāyāma	IIIa, IIIb IVa, IVb

Śītalī and śitakārī may be done with or without digital control, as well as with or without internal and external retention, for a few minutes once in a while. It is advisable during hot weather to do them before sunrise or after sunset, and when one feels over-heated.

Bhrāmārī and mūrchha may be done merely to learn the method, since their effects are covered by the other major prāṇāyāmas given in table form.

Kapālabhāti and bhastrikā are dealt with in the text. Any one of them may be added to the daily practices for a few minutes just to cleanse the nostrils and to refresh the brain, adjusting the stages in a way congenial to the body and to the nostrils.

Limited time has been given to retentions (kumbhakas) but none for in- and out-breaths; this is because on one day the sādhaka can concentrate on increasing the length of time for the in and out breaths, on other days for internal and on some for external retentions.

When sufficient control has been acquired, vṛtti prāṇāyāma ratios may be attempted, but only at the sādhaka's own risk.

COURSE ONE (PREPARATORY)

Weeks	*Prāṇāyāma*	*Stages*	*Time in Minutes*
1 and 2	Ujjāyī	I and II	7–8 each
3 and 4	Ujjāyī	II and III	8 ,,
5 and 6	Ujjāyī	II and III	5 ,,

Week	*Prāṇāyāma*	*Stages*	*Time in Minutes*
	Viloma	I and II	5 each
7 and 8	Ujjāyī	I, II, III	5 ,,
	Viloma	I and II	5 ,,
9 and 10	Ujjāyī	IV and V	5 ,,
	Viloma	IV	5 ,,
	Viloma	I	5 ,,
11 and 12	Ujjāyī	V and VI	5 ,,
	Viloma	IV	10 ,,
13 to 15	Ujjāyī	V, VI, VII	5 ,,
	Viloma	II	10 ,,
16 to 18	Ujjāyī	VI and VII	5 ,,
	Viloma	I and II	5 ,,
19 to 22	Repeat and consolidate, and get accustomed to the series.		
23 to 25	Ujjāyī	VI and VII	8 ,,
	Viloma	IV and V	8 ,,

Important stages in Course One:

Ujjāyī II, III, IV, VI and VII.
Viloma I and II.

COURSE TWO (PRIMARY)

26 to 28	Ujjāyī	VIII	10
	Viloma	III	10
29 to 31	Ujjāyī	IX	10
	Anuloma	Ia	10
	Viloma	II	5
32 to 34	Viloma	III	5–8
	Anuloma	Ib	5–8
	Ujjāyī	IX	5
35 to 38	Anuloma	Ia	10
	Pratiloma	Ia	10
	Ujjāyī	IV	as long as you can
39 to 42	Ujjāyī	X	8–10
	Anuloma	Ib	6–8
	Pratiloma	Ib	6–8
	Viloma	III	as long as you can
43 to 46	Repeat and consolidate the above stages.		
47 to 50	Repeat important stages from Course One and practise whatever you can from Course Two according to the time at your disposal.		

Weeks	*Prāṇāyāma*	*Stages*	*Time in Minutes*
51 to 54	Anuloma	Va	5
	Pratiloma	Ia	5
	Sūrya bhedana	I	10
55 to 58	Anuloma	Vb	5
	Pratiloma	Ib	10
	Chandra bhedana	I	5
59 to 62	Repeat Course Two and consolidate, adjusting the practice according to the time at your disposal.		

Important stages in Course Two:

Ujjāyī X, viloma III, anuloma Ib, pratiloma Ib, sūrya bhedana I and chandra bhedana I.

COURSE THREE (INTERMEDIATE)

63 to 67	Viloma	III	5
	Ujjāyī	XI	5–8
	Viloma	VI	5
	Anuloma	IIa	5
	Pratiloma	IIa	5
	Anuloma	VIa	5
	Sūrya bhedana	II	5
	Chandra bhedana	II	5

Here the sādhaka may do one day ujjāyī XI, anuloma IIa, pratiloma IIa, and sūrya bhedana II on one day, and the others on alternate days.

68 to 72	Viloma	VII	5
	Anuloma	IIb	6–8
	Pratiloma	IIb	6–8
	Nāḍī śodhana	Ia	10
73 to 75	Ujjāyī	VIII	5
	Anuloma	VIb	6
	Pratiloma	II	6
	Nāḍī śodhana	Ib	10

If Anuloma is done one day, Pratiloma may be done on the next day.

76 to 80	Anuloma	IIb	10
	Pratiloma	IIb	10
	Sūrya bhedana	II	10
	Chandra bhedana	II	10
	Nāḍī śodhana	II	10

If anuloma, sūrya bhedana and nāḍī śodhana are done on the first day, do the rest on the second, and so on.

81 to 85 Consolidate the practice.

Weeks	*Prāṇāyāma*	*Stages*	*Time in Minutes*
Important stages in Course Three:			
	Ujjāyī XI, viloma VII, anuloma I Ib, pratiloma I Ib, sūrya bhedana II, chandra bhedana II and nāḍī śodhana II.		
86 to 90	Do important prāṇāyāmas from Courses One, Two and Three.		

Now begin practising one stage at a stretch every day, so that each division in Courses One, Two and Three are learnt well before proceeding to the Advanced Course. For example:

91 to 120

First Week

Monday	Ujjāyī	VIII	20–25
Tuesday	Sūrya bhedana	I	20–25
Wednesday	Anuloma	Ib	20–25
Thursday	Viloma	I and II	20–25
Friday	Pratiloma	Ib	20–25
Saturday	Nāḍī śodhana	Ib	20–25
Sunday	Viloma	II	20–25

Second Week

Monday	Chandra bhedana	I	20–25
Tuesday	Anuloma	IIa	20–25
Wednesday	Pratiloma	IIb	20–25
Thursday	Ujjāyī	X	20–25
Friday	Nāḍī śodhana	Ib	20–25
Saturday	Viloma	Vb	20–25
Sunday	Viloma	III	20–25

Third Week

Monday	Sūrya bhedana	II	20–25
Tuesday	Chandra bhedana	II	20–25
Wednesday	Viloma	VII	20–25
Thursday	Anuloma	Vb	20–25
Friday	Pratiloma	Ia	20–25
Saturday	Nāḍī śodhana	Ia	20–25
Sunday	Ujjāyī	X	20–25

Now each sādhaka may prepare his or her own schedule for the succeeding days, until all the Prāṇāyāmas given in the three courses have been covered, then start again with the first week given above. Make sure each principal prāṇāyāma is represented every week, and do not repeat any stages in any three consecutive weeks. Rest on Sundays or do a simple and restful prāṇāyāma.

If you find that a scheduled prāṇāyāma does not seem right on a particular day, choose another from the same week.

If for physical reasons you are unable to do any prāṇāyāmas in the three courses, prepare your own schedule out of those which you can do.

With regard to the few minor prāṇāyāmas where it has been said that they should only be done for a few minutes, do not attempt to do these for twenty to twenty-five minutes stated here. They may however, be done, by way of experiment, on the last Saturday of every month for not more than five minutes.

COURSE FOUR: ADVANCED

Weeks	*Prāṇāyāma*	*Stages*	*Time in Minutes*
121 to 125	Sūrya bhedana	I	5
	Ujjāyī	XII	10
	Viloma	VIII	10
126 to 130	Chandra bhedana	I	5
	Anuloma	IIIa	10
	Pratiloma	IIIa	10
	Viloma	VIII	5
131 to 136	Anuloma	VIIa	10
	Nāḍī śodhana	IIa	10
	Viloma	VIII	5
137 to 142	Sūrya bhedana	II	10
	Nāḍī śodhana	IIb	15
143 to 148	Chandra bhedana	II	10
	Nāḍī śodhana	Ib	15
149 to 155	Sūrya bhedana	III	10
	Anuloma	IIIb	8
	Pratiloma	IIIb	8
156 to 160	Chandra bhedana	III	10
	Anuloma	VIIb	8
	Pratiloma	IIIa	8
	Nāḍī śodhana	IIb	8–10

Important stages in Course Four:

	Anuloma IIIb, pratiloma IIIb, sūrya bhedana III, chandra bhedana III and nāḍī śodhana IIb.
161 to 170	Repeat all the important prāṇāyāmas of the above courses.

COURSE FIVE: HIGHLY INTENSE

171 to 175	Nāḍī śodhana	Ib	8–10
	Ujjāyī	XIII	10
	Anuloma	VIIIa	10

Weeks	*Prāṇāyāma*	*Stages*	*Time in Minutes*
176 to 180	Viloma	IX	10
	Pratiloma	IVa	10
181 to 185	Nāḍī śodhana	IIIa	10
	Anuloma	VIIIb	10
	Ujjāyī	XII (lying)	8
186 to 190	Sūrya bhedana	IV	10
	Nādī śodhana	IIIb	15
	Ujjāyī	II (lying)	10
191 to 195	Chandra bhedana	IV	10
	Pratiloma	IVb	10
	Viloma	II (lying)	8–10
196 to 200	Nāḍī śodhana	IVa	10
	Nāḍī śodhana	IVb	10
	Ujjāyī	II (lying)	10

Important stages in Course Five:

Sūrya bhedana IV, chandra bhedana IV, and nāḍī śodhana IVb.

WEEKLY PRACTICE

The cycles or sequences may be altered as desired.

Monday	Nāḍī śodhana	Ib	15–20
	Ujjāyī	XI	15–20
	Śavāsana		10
Tuesday	Viloma	V and VI	15–20
	Sūrya bhedana	II and III	15–20
	Śavāsana		10
Wednesday	Nāḍī śodhana	IIb	15–20
	Anuloma	VIIb	15–20
	Śavāsana		10
Thursday	Chandra bhedana	II and III	15–20
	Pratiloma	IIIb	15–20
	Śavāsana		10
Friday	Ujjāyī	VIII	20
	Nāḍī śodhana	IVb	20
	Śavāsana		10
Saturday	Viloma	VII	10
	Nāḍī śodhana	Ib	20
	Śavāsana		10

After finishing the main prāṇāyāma, bhastrikā may be done before śavāsana for two or three minutes, with or without blocking the nasal passages.

Glossary

A	Negative particle meaning 'non', as in non-violence.
Abhaya	Freedom from fear.
Abhiniveśa	Instinctive clinging to life and the fear that one may be cut off from all by death.
Achala	Immovable.
Achalatā	Immovability.
Achit	That which is not 'chit' (chit = the animating principle of life).
Adhama	The lowest, the meanest.
Adhamādhama	The lowest of the low.
Adhamamadhyama	The lowest of the middling.
Ādhāra	A support.
Ādi Śeṣa	The primeval serpent, said to have a thousand heads, and represented as forming the couch of Viṣṇu or as supporting the entire world on his head.
Agarbha dhyāna	Garbha means a foetus, an embryo. Dhyāna means meditation. Dhyāna is the seventh stage of Yoga mentioned by Patanjali. In meditation a beginner is given a mantra (sacred thought or prayer) to bring his wandering mind to a state of steadiness and to keep him from worldly desires. This is known as sabīja or sagarbha (sa = with; bīja = seed; garbha = embryo) dhyāna. Sitting in meditation without recitation of mantras is known as nirbīja or agarbha dhyāna. The prefixes 'nir' and 'a' denote absence of something, and 'a' means without.
Agni	Fire or digestive faculty.
Ahaṁkāra	Ego or egoism; literally 'the I-maker', the state that ascertains 'I know'.
Ahiṁsā	Non-violence. The word has not merely the negative and restrictive meaning of 'non-killing' or 'non-violence', but the positive and comprehensive meaning of 'love embracing all creation'.
Āhuti	Offering an oblation to a deity, any solemn rite accompanied with oblations.
Ājñā chakra	The nervous plexus situated between the eyebrows, the seat of command (ājñā = command).

Ākāśa — The sky, ether (considered as the fifth element), free space.

Alabhdha bhūmikatau — Failure to attain firm ground or continuity in practice, feeling that it is not possible to see reality.

Ālambusā nāḍī — Name of one of the nāḍīs, which are tubular organs of the subtle body through which energy flows. Ālambusā is said to connect the mouth and the anus.

Ālasya — Idleness, sloth, apathy.

Amanaskatva — The aim of Yoga is to sublimate the mind and the intellect gradually. When fluctuations take place internally and externally, mental and intellectual energies get wasted. When the internal or emotional upheavals of the mind are stilled, the state experienced is that of manolaya (manas = mind; laya = immersion), where the mind is free from fluctuations, dissolves and merges in the Self, like a river in the sea, a merging of one's identity at the emotional level. Where the intellect is in full command and does not allow invading thoughts to disturb it, the state experienced is that of amanaskatva, of being without the organ of desires or thoughts. It is a state of intellectual clarity. (Amanaskatva = A state (tva) of being without the organ of desires or thoughts (amanaska).

Ānanda — Happiness, joy, bliss.

Ānandamaya kośa — The sheath (kośa) of joy (ānanda) enveloping the soul.

Anāhata chakra — The nervous plexus situated in the cardiac region.

Anna — Food (in general). Also, food as representing the lowest form in which the Supreme Soul is manifested.

Annamaya kośa — The gross material body, the sthūla (gross) śarīra (frame), which is sustained by food, and which is the outer vesture or wrapper or sheath of the soul. It is also the material world, the coarsest or lowest form in which Brahma is considered as manifesting itself in worldly existence.

Anavasthitattva — Inability to continue the practices, feeling that it is no longer necessary, since the aspirant believes he has reached the highest state of samādhi.

Antaḥkaraṇa — The heart, soul, the seat of thought and feeling, the thinking faculty, mind, conscience. (anta = last or extreme point, final limit; karaṇa = an organ of sense, an instrument or means of action.)

Antara — The interior, inside, internal.

Aṅtara kumbhaka — Suspension of breath after full inhalation.

Antarātmā	The inmost spirit or soul; the inherent supreme spirit or soul residing in the interior of man.
Ānubhavika jñāna	Knowledge (= jñāna) gained by experience (= anubhava).
Anuloma	Anu means with, along with or connected. Anuloma means 'with the hair' (loma), with the grain, along with the current, regular. In a natural order.
Anuloma prāṇāyāma	In anuloma prāṇāyāma, inhalation is done through both nostrils and exhalation is done alternately through either nostril.
Anusandhāna	Close scrutiny, examination; also suitable connection.
Ap	Water, one of the five elements of creation.
Apāna vāyu	One of the vital airs (vāyu) which move in the sphere of the lower abdomen and control the function of elimination of urine and faeces.
Aparigraha	Freedom from hoarding or collecting.
Ārambhāvasthā	The state (= avasthā) of commencement (= ārambha). This is the first state of prāṇāyāma mentioned in the *Śiva Saṁhitā*.
Arjuna	A Pāndava prince, the mighty bowman and hero of the epic *Mahābhārata*.
Āroha	Ascent, rising, elevation.
Artha	Meaning, sense, signification, import. Also, wealth as one of the objects of human pursuit.
Artha bhāvanam	A feeling of devotion or faith (bhāvanā) arising as a result of contemplation upon the meaning (artha) of a mantra or name of the Lord.
Aśaṁsakta	Indifferent (= asakta) to praise or revilement (= śaṁs).
Āsana	Posture, the third stage of Yoga.
Asat	Non-existent, unreal.
Asmitā	Egoism.
Aśokavana	The grove of Aśoka trees in Laṅkā, where the demon king Rāvaṇa had kept captive Sītā, who remained loyal to her husband Rāma.
Asteya	Non-stealing.
Aśūnya	Not (A) empty (śunya). Fulfilled.
Aśūnyāvasthā	A state (= avasthā) of clarity where the intellect is in full command and does not allow invading thoughts to disturb it.
Asthi	A bone.
Ātmā	The Supreme Soul or Brahman.
Ātma darśana	Seeing (darśana) oneself (Ātmā) as being a part of the Supreme Soul. A vision (darśana) of the Self (= Ātmā).
Ātmāhuti	An oblation of oneself. Self-sacrifice.

Ātma jaya	The conquest of oneself.
Ātma jñāna	Self-knowledge, spiritual knowledge, knowledge of the soul or the Supreme Spirit. True wisdom.
Ātmānjali mudrā	Folding the palms in front of the chest in salutation to the soul within.
Āuṁ	Like the Latin word *Omne*, the Sanskrit word Āuṁ means 'all' and conveys the concepts of omniscience, omnipresence and omnipotence.
Āuṁ namo Nārāyaṇāya	Since the word Āuṁ is one of great power, it is recommended that its power be diluted, by adding to it
Āuṁ namaḥ Śivāya	the names of deities like Nārāyaṇa or Śiva, to enable the seeker to repeat it and grasp its true significance.
Avasthā	State or condition of the mind.
Avidyā	Ignorance, especially in the spiritual sense.
Avirati	Sensuality.
Āyāma	Length, expansion, extension. It also conveys the idea of restraint, control and stopping.
Āyurvēda	The science of health or medicine.
Baddha Koṇāsana	One of the postures recommended for the practice of prāṇāyāma or dhyāna.
Bāhya kumbhaka	Suspension of breath after full exhalation, where the lungs are completely empty.
Bandha	Bondage or fetter. It means a posture where certain organs or parts of the body are contracted and controlled.
Bhadrāsana	One of the postures recommended for the practice of Prāṇāyāma or dhyāna.
Bhagvad-Gītā	The Song Divine, the sacred dialogues between Kṛṣṇa and Arjuna. It is one of the source books of Hindu philosophy, containing the essence of the *Upaniṣads*.
Bhakti	Worship, adoration.
Bhakti mārga	The way or path to salvation through adoration of a personal God.
Bhastrikā	A bellows used in a furnace. Bhastrikā is a type of prāṇāyāma where air is forcibly drawn in and out or blasted as in a furnace.
Bhava vairāgya	Absence of worldly desires.
Bhāvanā	A feeling of devotion or faith.
Bhāvanam	Perception, faith, understanding.
Bhaya	Fear.
Bhedana	Piercing, breaking through, passing through.
Bhrāmara	A large black bee.
Bhrāmarī	A type of prāṇāyāma where during exhalation a soft humming sound like the murmuring of a bee is made.

Bhrānti-darśana Erroneous (bhranti) vision or knowledge (darśana); delusion.

Bhuḥ The earth, the first of the three worlds, the other two being ether and the sky or heaven. It is also a mystic word, one of the first giving rise to speech.

Bhuvaḥ The atmosphere or ether, the second of the three worlds, the one immediately above the earth. It is also a mystic word, one of the first in the creation of speech.

Bīja A seed or germ.

Bīja mantra In meditation the chanting of mantras is sometimes given to the beginner to bring his wandering mind to a state of steadiness and keep him away from worldly desires. A bīja mantra is a mystic syllable with a sacred prayer repeated mentally during prāṇāyāma or dhyāna, and the seed thus planted in the mind germinates into one-pointedness.

Bindu A drop, small particle, a dot, a point.

Brahmachary a A life of celibacy, religious study and self-restraint.

Brahman The Supreme Being, the cause of the universe, the all-pervading spirit of the universe.

Brahma nāḍī Another name for suṣumṇa-nāḍī, the main channel of energy running through the centre of the spinal column. When prāṇa (energy) enters it, it takes the seeker to Brahman, the final beatitude. Hence the name.

Brahmapurī The city (purī) of Brahman, the human body.

Brahmarandh ra The aperture (randhra) in the crown of the head through which the soul is said to leave the body on death.

Brahma vidyā The knowledge of the Supreme Spirit.

Buddhi Intellect, reason, discrimination, judgement.

Chakra Literally, a wheel or circle. Energy (prāṇa) is said to flow in the human body through three main channels (nāḍīs), namely, suṣumṇā, pingalā and iḍa. Suṣumṇā is situated inside the spinal column. Pingalā and iḍā start respectively from the right and left nostrils, move up to the crown of the head and course downwards to the base of the spine. These two nāḍīs intersect with each other and also with the suṣumṇā. These junctions of the nāḍīs are known as chakras or the fly-wheels which regulate the body mechanism. The important chakras are: (a) mūlādhāra (mūla = root, source; ādhāra = support, vital part) situated in the pelvis above the anus; (b) svādhiṣṭhāna (sva = vital force, soul; adhiṣṭhāna = seat or abode) situated above the organs of generation; (c)

maṇipūraka (maṇipūra = navel) situated in the navel; (d) manas (= mind) and (e) sūrya (= the sun), situated in the region between the navel and the heart; (f) anāhata (= unbeaten), situated in the cardiac area; (g) viśuddhi (= purity), situated in the pharyngeal region; (h) ājñā (= command) situated between the eyebrows; (i) soma (= the moon), situated in the centre of the brain; (j) lalāṭa (= forehead), which is at the top of the forehead; and (k) sahasrāra (sahasra = thousand) which is called the thousand-petalled lotus in the cerebral cavity.

Chakṣu The eye.

Chāndogyopaniṣad One of the principal *Upaniṣads.*

Chandra The moon.

Chandra bhedana Chandra is the moon. Bhedana, derived from the root 'bhid', means to pierce, to break or pass through. In chandra bhedana prāṇāyāma the breath is inhaled through the left nostril, and prāṇa passes through the iḍā or chandra nāḍī and is then exhaled through the right nostril, which is the path of the pingalā or sūrya nāḍī.

Charaka Saṁhitā A treatise on the Indian system of medicine.

Chidātmā The thinking principle or faculty, pure intelligence, the Supreme Spirit.

Chit Thought, perception, intellect, mind. The soul, spirit, the animating principle of life. Universal consciousness.

Chitta The mind in its total or collective sense, being composed of three categories: (a) mind (manas) having the faculty of attention, selection and rejection; (b) reason (buddhi), the decisive state which determines the distinction between things, and (c) ego (ahaṁkāra), the I-maker.

Chitrā nāḍī One of the nāḍīs emanating from the heart, through which the creative energy (śakti) of Kuṇḍalinī passes to reach the sahasrāra.

Dairghya Horizontal expansion.

Dala A large number.

Darśana A vision, discernment. Also, a system of philosophy.

Devadatta vāyu One of the vital airs which provides for the intake of extra oxygen in a tired body by causing a yawn.

Dhamana Blowing as with a bellows.

Dhamanī A tubular organ or duct within the physical or subtle body conveying energy in different forms.

Dhanaṁjaya vāyu One of the vital airs which remains in the body even after death and sometimes bloats a corpse.

Dhāraṇā Concentration or complete attention. The sixth stage of Yoga mentioned by Patanjali.

Dharma Derived from the root 'dhṛ', meaning to uphold, maintain, support, sustain; dharma means religion, law, moral merit, righteousness, good works. It is the code of conduct that sustains the soul and produces virtue, morality or religious merit, leading towards the development of man. It is regarded as one of the four ends of human existence.

Dharma Kṣetra Name of a plain, the scene of the great battle between the Kauravas and the Pāṇḍavas in the Mahābhārata War. It is the battlefield where Kṛṣṇa expounded the *Bhagvad Gītā* to the Pāndava prince Arjuna and urged him to do his duty as a warrior.

Dhātu An element. A humour or affection of the body like vāta (= wind), pitta (= bile) and kapha (phlegm).

Dhyāna Meditation. The seventh stage of Yoga mentioned by Patanjali.

Dvāra-pāla Guardian or keeper (pāla) of the gate (dvāra).

Dveṣa Hatred, enmity.

Doṣa A fault or defect, a noxious quality, disorder of the three humours of the body.

Ekāgra (Eka = one; agra = foremost). Fixed on one object or point only; closely attentive, where the mental faculties are all focused on a single point.

Gandha Smell.

Gāndhārī nāḍī Name of one of the nāḍīs said to be located behind the idā nāḍī, terminating near the left eye, regulating the function of sight.

Garbha A foetus or an embryo.

Gautama Name of the propounder of the Nyāya system of philosophy.

Ghaṭa A large earthen water pot.

Ghaṭāvasthā The second stage (avasthā) of prāṇāyāma discussed in the *Śiva Saṁhitā*, where the body like an earthen pot (ghaṭa) has to be baked hard in the fire of prāṇāyāma to gain stability.

Gheraṇḍa Saṁhitā A classical work on haṭha yoga.

Gu First syllable in the word 'guru', meaning darkness.

Guṇa A quality, an ingredient or constituent of nature. One of the three constituents of cosmic substance (prakṛti), illuminating (sattva), activating (rajas) and restraining (tamas).

Guṇātīta — One who is freed from and gone beyond or has crossed the three guṇas of sattva, rajas and tamas.

Guru — Spiritual preceptor, one who illumines the darkness of spiritual doubt.

Hanumān — A powerful monkey chief of extraordinary strength and prowess, whose exploits are celebrated in the epic *Rāmāyaṇa*. He was the son of Aṅjanā and Vāyu, the god of wind. He is regarded as one of the immortals in the Hindu pantheon and a master of prāṇāyāma and a champion of athletes.

Hastijihvā nāḍī — Name of one of the nāḍīs, located in front of the iḍā nāḍī, terminating near the right eye, regulating the function of sight.

Haṭha yoga — The way towards realisation through rigorous discipline.

Haṭha-yoga-pradīpikā — A celebrated text book on Haṭha Yoga written by Swātmārāma.

Hiraṇyagarbha — Name of Brahman, as born from a golden egg (hiraṇya = gold; garbha = embryo, egg). It also means the soul invested by the subtle body (sūkṣma = subtle; śarīra = body).

Hṛdayam — The heart, soul, mind. The interior or essence of anything.

Hṛdayāṅjali mudrā — Folding of hands in front of the heart in respectful salutation to the dweller within.

Ichhā — Wish, desire, will.

Iḍā nāḍī — A nāḍi or channel of energy starting from the left nostril, then moving to the crown of the head and thence descending to the base of the spine. In its course it conveys lunar energy and is therefore called chandra nāḍī (channel of lunar energy).

Īśvara — The Supreme Being. God.

Īśvara praṇidhāna — Dedication to the Lord of one's actions and one's will.

Jābāli — Name of a sage, son of Jābālā, a serving woman. As a boy he had confessed that he was not aware of his parentage and was accepted by the sage Gautama, who was impressed by his innocence and truthfulness. Gautama named him Satyakāma-Jābāli (satyakāma = lover of truth; Jābāli = son of Jābālā).

Jāgṛta — Awake, watchful.

Jāgṛtāvasthā — The state (avasthā) of watchfulness, awareness.

Jāgṛti — Watchfulness, awareness.

Jāla — A net, lattice. Also a collection, number, mass.

Jālandhara bandha Jālandhara is a posture where the neck and throat are extended and the chin is rested in the notch between the collar-bones at the top of the breastbone, stimulating the pharyngeal plexus.

Jitēndriya One who has conquered his passions or subdued his senses.

Jīva A living being, a creature. An individual soul, as distinguished from the universal soul.

Jīvana mukta A person who is emancipated during his lifetime by true knowledge of the Supreme Spirit.

Jīvātmā The individual or personal soul.

Jñāna Sacred knowledge derived from meditation on the higher truths of religion and philosophy, which teaches a man how to understand his own nature.

Jñāna chakṣu The eye (chakṣu) of intelligence, the mind's eye, the intellectual vision (as opposed to the eye of the flesh).

Jñāna mārga The path of knowledge by which man finds realisation.

Jñāna mudrā The gesture of the hand where the index finger and the thumb tip are brought in contact, while the remaining three fingers are kept extended. The gesture is the symbol of knowledge (jñāna). The index finger is the symbol of the individual soul, the thumb signifies the Supreme Universal, and the union of these two symbolises true knowledge.

Jñānendriya The senses of knowledge, hearing, touch, sight, taste and smell.

Kaivalyāvasthā Kaivalya is perfect isolation, exclusiveness or detachment of the soul from matter, identification with the Supreme Spirit. Kaivalyāvasthā is the state (= avasthā) of final emancipation or beatitude.

Kāla Time.

Kāla chakra The wheel of time.

Kāma Desire, lust.

Kanda A bulbous root, a knot. The kanda is of a round shape of about four inches, situated about twelve inches above the anus and near the navel, where the three main nāḍīs – suṣumṇā, iḍā and pingalā – unite and separate. It is covered as if with a soft white piece of cloth.

Kandasthāna The place or position of the kanda.

Kapāla Skull.

Kapāla-bhāti Kapāla = skull; bhāti = light. Kapāla-bhāti is a process of clearing the sinuses. It is a milder form of bhastrikā prāṇāyāma.

Kapha Phlegm.

Kāraṇa śarīra The inner rudiment of the body (śarīra), the causal (=kāraṇa) frame. It is the spiritual sheath of joy (ānandamaya kośa). The experience of being aware of it is felt when one is totally absorbed in the object of one's meditation or awakes from refreshing sleep.

Kośa A sheath, a case. According to Vedantic philosophy, there are three types of body (śarīra) enveloping the soul. These three types or frames of the body consist of five inter-penetrating and inter-dependent sheaths or cases (kośas). The five kośas are: (a) annamaya or anatomical sheath of nourishment; (b) prāṇamaya or physiological sheath, including the respiratory and other systems of the body; (c) manomaya or psychological sheath, affecting awareness, feeling and motivation not derived from subjective experience; (d) vijñānamaya or intellectual sheath, affecting the process of reasoning and judgement derived from subjective experience; and (e) ānandamaya, or the spiritual sheath of joy. Annamaya kośa forms the sthūla śarīra, the gross body. The prāṇāyāma, manomaya and vijñānamaya kośas form the sūkṣma śarīra, the subtle body. The ānandamaya kośa forms the kāraṇa śarīra, the causal body.

Karma Action.

Karma mārga The way of an active man towards realisation through action.

Karma mukta One who is liberated from the results or fruits of action.

Karma phalatyāgi One who has abandoned or renounced (tyāgi) the fruits or rewards (phala) of action (karma) done in life.

Karmendriya Organs (indriya) of action, of excretion, generation, hands, feet and speech.

Kaṭhopaniṣad One of the principal *Upaniṣads* in verse and in the form of a dialogue between the seeker Nachiketā and Yama, the god of Death.

Kausiki nāḍī One of the nāḍīs, terminating at the big toes.

Kauṣitaki Upaniṣad One of the *Upaniṣads*.

Kevala kumbhaka When the practices of kumbhaka (respiratory processes) become so perfect that they are instinctive, they are known as kevala (pure or simple) kumbhaka.

Kriyā An expiatory rite, a cleansing process.

Kṛkara vāyu One of the five subsidiary vāyus, which, by making one sneeze or cough, prevent substances passing up the nasal passages and down the throat.

Krodha Anger.

Kṛṣṇa The Lord of all Yogas (Yogeśvara). The most celebrated hero in Hindu mythology. The eighth incarnation of Viṣṇu.

Kṣetra The body regarded as the field of activity.

Kṣetrajña The husbandman. The knower of the body, the soul.

Kṣipta Distracted, neglected.

Kuhū Name of one of the nāḍīs, said to be located in front of the suṣumṇā, and its function is to evacuate faeces.

Kulāla chakra The wheel (chakra) of a potter (kulāla).

Kumbha A water pot, a pitcher, a chalice.

Kumbhaka Kumbhaka is the interval of time or retention of breath after full inhalation or after full exhalation. The imagery of the lungs being completely full or completely empty like a full or empty water pot.

Kumbhakarṇa Pitcher-eared. The name of a gigantic demon, brother of Rāvaṇa, ultimately slain by Rāma. He practised most rigid austerities to humiliate the gods. Brahmā was about to grant him a boon, when the gods requested Saraswatī, goddess of speech to sit on his tongue and deflect it. When Kumbhakarṇa went to Brahmā, instead of asking Indrapada (the status of *Indra*, the king of gods) he asked Nidrapada (the *status* of sleep = nidra), which was readily granted. His effort made him fall into death-like torpor, for his meditation and austerities had been tāmasic.

Kuṇḍalinī The kuṇḍalini (kuṇḍala = the coil of a rope; kuṇḍalini = a coiled female serpent) is divine cosmic energy. The force or energy is symbolised by a coiled and sleeping serpent lying dormant in the lowest nerve centre at the base of the spinal column, the mūlādhāra chakra. This latent energy has to be aroused and made to ascend the main spinal channel, the suṣumṇā piercing the chakras right up to the sahasrāra, the thousand-petalled lotus in the head. Then the yogi is in union with the Supreme Universal Soul.

Kūrma nāḍī Name of one of the subsidiary nāḍīs, whose function is to stabilise the body and the mind.

Kūrma vāyu It is the name of one of the subsidiary vital airs whose function is to control the movements of the eyelids to prevent foreign matter or too bright a light entering the eyes.

Kuru Kṣetra Name of an extensive plain near Delhi, the scene of the Mahābhārata War between the Kauravas and the

Pāṇḍavas. The human body is compared to this field of conflict between the powers of evil and of good, or between self-interest and duty.

Lalāṭa chakra — Lalāṭa means the forehead. The lalāṭa chakra is located at the top of the forehead.

Laya — Dissolution; absorption of the mind or devotion.

Lobha — Greed.

Loma — Hair

Mada — Pride, lust.

Madhyama — Middling, average, mediocre.

Mahānārāyaṇo-paniṣad — Name of one of the *Upaniṣads*.

Mahā tapas — Great (mahā) austerities (tapas).

Mahā vidyā — Great knowledge, exhalted knowledge.

Mahā vṛata — A great vow or fundamental duty.

Mahat — The unevolved primary germ of the productive principle whence all phenomena of the material world are developed. In Sāṅkhya philosophy, it is the great principle, the intellect (distinguished from manas), the second of the twenty-five elements or tattvas recognised by the Sāṅkhyas.

Majjā — Marrow.

Māṁsa — Flesh.

Manana — Reflection, meditation.

Manas — The individual mind, having the power and faculty of attention, selection and rejection. The ruler of the senses.

Manas chakra — Nervous plexus situated between the navel and the heart.

Maṇipūraka chakra — The nervous plexus situated in the region of the navel.

Manojñāna — Knowledge of the working of the mind and emotions.

Manomaya kośa — One of the sheaths (kośa) enveloping the soul. The manomaya kośa affects the functions of awareness, feeling and motivation not derived from subjective experience.

Manolaya — Manolaya (manas = mind; laya = immersion) is the state where the internal or emotional upheavals of the mind are stilled. Then the mind, free from fluctuations, dissolves and merges in the self, like a river in the sea, losing its individual identity.

Medas — Fat.

Mīmāṁsā — Examination. Also systems of Indian philosophy. Pūrva mīmāṁsā deals with the general conception of the Deity, but stresses the importance of action

(karma) and rituals. Uttara mīmāṁsā accepts God on the basis of the Vēdas, but lays special stress on spiritual knowledge (jñāna).

Mokṣa — Liberation; final emancipation of the soul from recurring births.

Mudrā — A seal; a sealing posture.

Mukta — Liberated.

Mukti — Release, liberation, final absolution of the soul from the chain of birth and death.

Mūla — The root, base.

Mūla bandha — A posture where the body from the anus to the navel is contracted and lifted towards the spine.

Mūlādhāra chakra — Nervous plexus situated in the pelvis above the anus at the base or root of the spine; the main support of the body.

Mūrchhā prāṇāyāma — A type of prāṇāyāma where breath is held almost to the point of swooning (mūrchhā).

Nachiketa — Name of the seeker and one of the principal characters in the Kaṭhopaniṣad. His father Vājaśravas wanted to give away all his possessions so as to acquire religious merit. Nachiketa felt puzzled when his father started giving away old and barren cattle and asked him again and again: 'To whom will you give me?'. His father said: 'I give you to Yama (the God of Death)'. Nachiketa went to the realm of Death and obtained three boons, the last of which was the knowledge of the secret of life after death. Yama tried to divert Nachiketa from obtaining his wish by offering the greatest earthly pleasures, but Nachiketa was not swayed from his purpose and ultimately Yama gave him the knowledge desired.

Nāda — Inner mystical sound.

Nādānusandhāna — Anusandhāna is examination, planning, arrangement or suitable connection. Nādānusandhāna is close scrutiny of the sound of rhythmic patterns of breath during the practice of prāṇāyāma and total absorption in the sound, like a master musician in his music.

Nāḍī — A tubular organ of the subtle body through which energy flows. Nāḍīs are ducts or channels which carry air, water, blood, nutrients and other substances throughout the body. They channel cosmic, vital, seminal and other energies as well as sensations, consciousness and spiritual aura.

Nāḍī chakra — Ganglia or plexuses in the gross, subtle and causal bodies.

Nāḍīkā — Small nāḍī.

Nāḍī śodhana prāṇāyāma — Prāṇāyāma done for the purification or cleansing of the nāḍīs. It is the highest and most difficult type of prāṇāyāma.

Nāga vāyu — One of the five subsidiary vāyus which relieves abdominal pressure by belching.

Nārada — Name of a divine sage. He is represented as a messenger between the gods and men. He is said to be the inventor of the lute (vīṇā). He was a great devotee of Viṣṇu and author of the *Bhakti Sūtras* (Aphorisms on Divine Love) and also a code of laws which goes by his name.

Nididhyāsana — Profound and repeated meditation, constant musing.

Nidrā — Sleep.

Nirbīja — Bīja is a seed or germ. A bīja mantra is a mystical syllable or sacred prayer repeated mentally during prāṇāyāma or dhyāna to bring the wandering mind to a state of steadiness. With practice the seed planted in the mind germinates into one-pointedness. Gradually the practice becomes nirbīja (nir = without; bīja = seed) there the practitioner does not have to resort to the bīja mantra.

Nirbīja dhyāna — Dhyāna, where the practitioner does not have to resort to the bīja mantra.

Nirbīja prāṇāyāma — Prāṇāyāma, where the practitioner does not have to resort to the bīja mantra.

Nirvāṇa — Eternal bliss; liberated from existence.

Nirviṣaya — Without sensuality.

Niruddha — Restrained, checked, controlled.

Niṣpatti — Perfection, ripeness.

Niṣpatti avasthā — The state of perfection or ripeness. Consummation.

Nivṛtti mārga — The path of realisation by abstaining from worldly acts, and being uninfluenced by worldly desires.

Niyama — Self-purification by discipline. The second stage of Yoga mentioned by Patanjali.

Nyāya — A system of Indian philosophy stressing logic and primarily concerned with the laws of thought relying on reason and analogy.

Ojas — Vitality, lustre, splendour.

Padārthābhāva — Non-existence or absence (abhāva) of things or objects (padārtha). The absence of the phenomenal creation. The final emancipation of the puruṣa or soul (the

twenty-fifth tattva) from the bonds of worldly existence – the fetters of phenomenal creation – by conveying the correct knowledge of the twenty-four other tattvas and by properly discriminating the soul from them.

Padmāsana The lotus pose, sitting cross-legged on the floor with the spine erect. The pose is ideal for practice of prāṇāyāma and dhyāna.

Parabrahman The highest or supreme (para) spirit (Brahman).

Paramātmā The supreme (parama) spirit (Atmā).

Paratattva Beyond (para) the elements or primary substances (tattva); the Supreme Universal Spirit, which is beyond the material world, pervading the universe.

Parichaya Acquaintance, intimacy, frequent repetition. Intimate knowledge.

Parichayāvasthā The stage of intimate knowledge (parichaya). This is the third stage of Prāṇāyāma mentioned in the *Śiva Saṁhitā*.

Patanjali Name of a philosopher, the propounder of Yoga philosophy, the author of the *Yoga Sūtras*. He created serenity of mind by his work on Yoga, clarity of speech by his work on grammar, and purity of body by his work on medicine. He is the reputed author of the *Mahābhāśya*, the great commentary on Pāṇini's Sūtras on grammar.

Payaswini nāḍī Name of one of the nāḍīs, terminating at the right big toe. It is said to be located between the pūṣā (which is behind the pingalā nāḍī) and the saraswati nāḍī (which is behind the suṣumṇā nāḍī).

Pingala nāḍī A nāḍī or channel of energy, starting from the right nostril, then moving to the crown of the head and thence downwards to the base of the spine. As the solar energy flows through it, it is also called the sūrya nāḍī. Pingalā means tawny or reddish.

Pitta Bile, one of the humours of the body, the other two being vāta (wind) and kapha (phlegm).

Plāvini prāṇāyāma Plāvana means swimming, overflowing, flooding. Plāvini Prāṇāyāma is said to help one to float or swim. Except for the name there is hardly any mention of this type of prāṇāyāma in the Yoga texts.

Prajñā Intelligence, wisdom.

Prajāpati The Lord of created beings.

Prakṛti Nature, the original source of the material world, consisting of the three qualities, sattva, rajas and tamas.

Pramāda Indifference, insensibility.

Prāṇa Breath, respiration, life, vitality, wind, energy, strength. It also connotes the soul.

Prāṇa jñāna The knowledge of breath and life.

Prāṇa vāyu The vital air which pervades the entire human body. It moves in the region of the chest.

Prāṇāmaya kośa The physiological (prāṇāmaya) sheath (kosá), which along with the psychological (manomaya) and the intellectual (vijñānamaya) sheaths make up the subtle body (sūksma śarīra) enveloping the soul. The prāṇāmaya kośa includes the respiratory, circulatory, digestive, endocrine, excretory and genital systems.

Praṇava Another word for the sacred syllable ĀUṀ.

Prāṇāyāma Rhythmic control (āyama) of breath. The fourth stage of Yoga. It is the hub around which the wheel of Yoga revolves.

Prāṇāyāma vidyā Knowledge, learning, lore or science (vidyā) of Prāṇāyāma.

Praśṇopaniṣad Name of one of the major *Upaniṣads.*

Pratiloma prāṇāyāma Pratiloma means against the hair, against the grain, against the current. In this type of prāṇāyāma inhalation is controlled digitally through either nostril alternately, followed by exhalation through open nostrils.

Pratyāhāra Withdrawal and emancipation of the mind from the domination of the senses and sensual objects. The fifth stage of Yoga.

Ratnākara The ocean, producer of jewels. Also the name of a robber who later became the sage Vālmīki, celebrated author of the epic *Rāmāyaṇa.* One day the robber held up the sage Nārada, whom he asked on pain of death to deliver up his possessions. Nārada told the robber to go home and ask his wife and children if they were ready to become his partners in the innumerable iniquities which he had committed. The robber went home and returned chastened at hearing their unwillingness to become his partners in sin. Nārada told the robber to repeat the name of Rāma, but when the robber declined, requested him to repeat 'marā' (which is Rāma inverted) continuously and then disappeared. Ratnākara kept on repeatedly saying 'marā' and became so absorbed in it and in thinking of Rāma that his body was covered up with ant-hills (vālmīka). Nārada returned and got the robber-turned-saint out,

and as he came out of the shell of ant-hills, he was called Vālmīki. When Sītā was pregnant and abandoned he gave her shelter in his hermitage and brought up her twin sons, later restoring them all to Rāma.

Rāvaṇa — Name of the demon king of Laṅkā, who abducted Sītā, wife of Rāma, and was consequently slain by Rāma. Rāvaṇa was highly intellectual and had prodigious strength. He was an ardent devotee of Śiva and well versed in the Vēdas, and is reputed to have given the accents to the Vēdic texts so that they have remained unchanged.

Rechaka — Exhalation; emptying of the lungs.

Retus — Semen.

Ṛg Vēda — Name of the first of the four *Vēdas*, the sacred books of the Hindus.

Ru — The second syllable in the word 'guru', meaning light.

Rudra — Formidable, terrible. Also, name of Śiva.

Sa — A prefix. Compounded with nouns, it forms adjectives and adverbs in the sense of (a) with, together with, along with, accompanied by, having; (b) similar, like; (c) same.

Śabda — Sound, word.

Sabīja — Bīja is a seed or germ. Sabīja means accompanied by a seed. In prāṇāyāma and dhyāna the chanting or mental repetition of a bīja mantra, a sacred prayer, is given to the beginner to bring his wandering mind to a steady condition.

Sabīja dhyāna — Dhyāna performed with the mental repetition of a sacred prayer.

Sabīja prāṇāyāma — Prāṇāyāma performed with the mental repetition of a sacred prayer.

Sad-asad-viveka — Discrimination (viveka) between the true (sad) and the untrue (asad).

Sādhaka — A seeker, an aspirant.

Sādhanā — Practice, quest.

Sagarbha dhyāna — Garbha is a foetus or embryo. Sagarbha dhyāna is meditation practised together with a sacred prayer, which like an embryo germinates in the mind and brings it to a state of steadiness.

Sahasrāra chakra — The thousand petalled lotus in the cerebral cavity.

Sahasrāra dala — 'Dala' means a heap, a large number, a detachment or a body of troops. Sahasrāra dala is another name for sahasrāra chakra.

Sahasrāra nāḍī This nāḍī is the seat of the Supreme Spirit, and the gateway to it.

Sahita kumbhaka 'Sahita' means 'accompanied by' or 'attended by' or 'together with'. An intentional suspension of breath.

Śakti Power, energy, capacity, strength, representing the power of consciousness to act. Śakti is portrayed as the female aspect of the Ultimate Principle and deified as the wife of Śiva.

Sākṣi A witness or seer. The Supreme Being which sees but does not act.

Sāma Vēda Name of one of the four Vēdas, containing priestly chants.

Samādhi A state in which the aspirant is one with the object of his meditation, the Supreme Spirit pervading the universe, where there is a feeling of unutterable joy and peace. The eighth and highest stage of Yoga.

Samahita chitta The state wherein the mind, intellect and ego are evenly balanced and well disposed. A well-balanced personality.

Samavṛtti prāṇāyāma Of equal movement or duration in inhalation, exhalation and suspension of breath in Prāṇāyāma.

Samkalpa Intention, mental resolve, determination.

Śamkhiṇī nāḍī Name of a nāḍī, located between the iḍā and the suṣumṇā, terminating at the genital organs. Its function is to carry the essence of food.

Saṁkhyā Number, enumeration, calculation.

Sāṁkhya One of the schools of Hindu philosophy, founded by Kapila, giving a systematic account of cosmic evolution. It is so-called because it enumerates twenty-five tattvas (categories). These are: Puruṣa (cosmic spirit), Prakṛti (cosmic substance), Mahat (cosmic intelligence), Ahaṁkara (individuating principle), Manas (cosmic mind), indriyas (ten abstract sense-powers of cognition and of action), tanmātras (five subtle elements – sound, touch, form, flavour and odour, which are the subtle objects of the sense powers) and mahābhūtas (five sense particulars – the great elements of ether (space), air, fire, water and earth).

Saṁśaya Doubt.

Samskāra Mental impression of the past.

Samyama Restraint, check, control.

Śankarāchārya A celebrated teacher of the doctrine of Advaita (non-dualism). Within a short life span of about thirty-two years he wrote authoritative commentaries, numerous philosophical poems, and founded four monasteries

(mathas), at Śṛṅgeri in the south, Badrināth in the north, Puri in the east, and Dwārkā in the west.

Ṣanmukhī mudra — A sealing posture where the apertures in the head are closed and the mind is directed inwards to train it for meditation.

Sanskṛt — A refined language.

Santoṣa — Contentment.

Saraswatī — Goddess of learning and speech. Also, name of a nāḍī located behind the suṣumṇā, terminating at the tongue, controlling speech and keeping the abdominal organs free from disease.

Śarīra — The body enveloping the soul. According to Vedantic philosophy there are three frames or types of the body (śarīra), consisting of five inter-penetrating and inter-dependent sheaths (kośas). The three śarīras are: (a) sthūla, the gross frame, consisting of the anatomical sheath of nourishment (annamaya kośa); (b) sūkṣma, the subtle frame, consisting of the physiological sheath (prāṇāmaya kośa including the respiratory, circulatory, digestive, nervous, endocrine, excretory and genital systems), the psychological sheath (manomaya kośa, affecting the functions of awareness, feeling, and motivation not derived from subjective experience), and the intellectual sheath (vijñānamaya kośa, affecting the intellectual processes of reasoning and judgement derived through subjective experience); and (c) the kāraṇa, the causal frame, consisting of the spiritual sheath of joy (ānandamaya kośa).

Śarīra jñāna — Knowledge of the body. One of the benefits of meditation is a thorough grasp of the three frames or types of the body (śarīra) and the five sheaths (kośas).

Sarvāngāsana — Sarvānga (sarva = all, whole, entire, complete; anga = limb or body) means the entire body or all the limbs. In this posture (āsana) the whole body benefits from its performance, hence the name.

Sāsmita — With (sa) egoism (asmitā). Sāsmita samādhi is one of the types of profound meditation where the ego of the aspirant is not completely forgotten.

Śāstra — Any manual or compedium of rules, any book or treatise, especially religious or scientific treatise, any sacred book or composition of divine authority. The word śāstra is normally found after the word denoting the subject of the book or is applied collectively to departments of knowledge, for example, Yoga śāstra, a

	work on Yoga philosophy or the body of teaching on the subject of Yoga.
Sat	Being, real, truth, Brahman, or the Supreme Spirit.
Sat-Chakra-Nirūpaṇa	Name of a Yoga text dealing with kuṇḍalinī śakti and its arousal from the mūlādhāra to reach the sahasrāra, piercing the six (ṣat) chakras on its way up.
Sattva	The illuminating, pure and good quality of everything in nature.
Sattvapatti	Self-realisation.
Sāttvic prajña	Illuminated wisdom
Satya	Truth.
Satyakāma Jābāla	Name of a sage. See Jābāli.
Śava	A dead body, a corpse.
Śavāsana	The pose of the dead. In this āsana the object is to simulate the dead. Once life has departed, the body remains still and no movements are possible. By remaining motionless for some time, and by keeping the mind still while one is fully conscious, one learns to relax. This conscious relaxation invigorates and refreshes both body and mind. It is harder to keep the mind still than the body. Hence this apparently easy posture is one of the most difficult to master.
Savichāraṇā	Right (sa) reflection (vichāraṇā)
Savitarka	Sound or right (sa) reasoning, logic or deliberation (vitarka).
Setu-Bandha-sarvāngāsana	Setu means a bridge. Setu bandha means construction of a bridge. In this position, the body is arched and supported on the shoulders at one end and heels at the other. The arch is supported by the hands at the waist.
Siddha	A sage, seer or prophet; also a semi-divine being of great purity and holiness.
Siddhāsana	In this sitting posture the legs are crossed at the ankles, the body is at rest and the erect back keeps the mind attentive and alert. This āsana is recommended for the practice of Prāṇāyāma and for meditation.
Siddhi	Accomplishment, success. It also means superhuman powers.
Sirā	A tubular organ in the body distributing vital seminal energy throughout the subtle body.
Śiṣya	A pupil, a disciple.
Sītā	Name of the wife of Rāma, the heroine of the epic *Rāmāyāṇa*.
Śitakāri and Śitalī	Types of prāṇāyāma which cool the system.
Śiva saṁhitā	A classical text book on Hatha yoga.

Śleṣma	Phlegm.
Smṛti	Memory, a code of law.
Soma	The moon.
Soma chakra	A nervous plexus located in the centre of the brain.
Soma nāḍī	Another name for iḍā nāḍī, which in its course conveys lunar energy and is therefore called chandra or soma nāḍī (channel of lunar energy).
Śucha	Cleanliness, purity.
Sparśa	The subtle element (tanmātra) of touch.
Srota	A rapid stream. Also a canal of nutriment in the body.
Śravaṇa	Hearing, the first stage of self-culture.
Sthiratā	Firmness, steadiness, stability, fortitude, constancy, fixity.
Sthita prajña	Firm in judgement or wisdom, free from any hallucination.
Sthūla śarīra	The gross (sthūla) body (śarīra), the material or perishable body which is destroyed at death.
Styāna	Langour, sloth.
Śubha	Good, virtuous, auspicious.
Śubhechhā	Good desire or intention (ichhā).
Śukra	Semen, virile.
Śūnya	Empty, void, lonely, desolate, non-existent, blank, zero.
Śūnya deśa	A desolate or lonely place. The state of aloneness.
Śūnyāvasthā	The state (avasthā) when the internal and emotional upheavals are stilled. It is a negative state of passivity, when the mind is empty (śūnya) and, free from fluctuations, dissolves and merges in the self, losing its identity like a river in the sea.
Śūrā nāḍī	Name of a nāḍī located between the eye-brows.
Sūrya	The sun.
Sūrya bhedana prāṇāyāma	Piercing or passing through (bhedana) the sun. Here the inhalation is done through the right nostril, from where the pingalā nāḍī or Sūrya nāḍī starts. Exhalation is done through the left nostril, from where the iḍā nāḍī or chandra nāḍī starts.
Sūrya chakra	Nervous plexus situated between the navel and the heart.
Sūrya nāḍī	The nāḍī of the sun. Another name for pingalā nāḍī.
Suṣumṇā nāḍī	The main channel of energy situated inside the spinal column.
Suṣupti-avasthā	The state of the mind in dreamless sleep.
Svādhiṣṭhana chakra	The nervous plexus situated above the organs of generation.

Svādhyāya	Education of the self by study of divine literature.
Svaḥ	The sky.
Svapnāvasthā	The state of the mind in a dream.
Svātmārāma	Author of *Haṭha Yoga Pradīpikā*, a classical text book on Haṭha Yoga.
Śvāsa-praśvāsa	Heaving and sighing.
Śvetaketu	Son of the sage Uddālaka, who gave him instruction concerning the key to all knowledge. Their dialogue forms part of *Chāndogya Upaniṣad*.
Śvetāśvetaropaniṣad	Name of one of the principal Upaniṣads.
Swastikāsana	Sitting cross-legged, with back erect. One of the postures for the practice of Prāṇāyāma or dhyāna.
Tāḍāsana	A standing pose where one stands firm and erect as a mountain (tāḍa).
Taittirīyopaniṣad	Name of one of the principal Upaniṣads.
Tamas	Darkness or ignorance, one of the three qualities or constituents of everything in nature.
Tāmasic	Having the quality of darkness or ignorance (tamas).
Tanmātra	The subtle elements, namely, the essence of sound (śabda), touch (sparśa), form (rūpa), flavour (rasa) and odour (gandha). They are subtle objects of the sense powers (indriyas), namely, the powers of hearing (śrota), feeling (tvak), seeing (chakṣu), tasting (rasanā) and smelling (ghrāṇa).
Tanumānasā	Disappearance of the mind.
Tapas	A burning effort which involves purification, self-discipline and austerity.
Tattva	'Thatness'. The true or first principle, an element or primary substance. The real nature of the human soul or the material world and the Supreme Universal Spirit pervading the universe.
Tattva-traya	The three essential elements, namely, (a) being (sat), (b) non-being (asat) and (c) the supreme being, the Creator of all (Iśvara).
Tejas	Lustre, brilliance, majesty.
Trāṭaka	Gazing fixedly at an object.
Turīyāvasthā	The fourth state of the soul, combining yet transcending the other three states of waking, dreaming and sleeping – the state of samādhi.
Tyāgi	One who renounces.
Uddālaka	Name of a sage who instructed his son Śvetaketu concerning the key to all knowledge. The instruction forms part of the *Chāndogyopaniṣad*.

Udāna vāyu — One of the vital airs which pervades the human body, filling it with vital energy. It dwells in the thoracic cavity and controls the intake of air and food.

Uḍḍīyāna — One of the bandhās (locks or seals). Here the diaphragm is lifted high up the thorax and the abdominal organs are pulled back towards the spine. Through the uḍḍīyāna the great bird prāṇa (life) is forced up to fly through the suṣumṇa nāḍī.

Ujjāyī — A type of prāṇāyāma in which the lungs are fully expanded and the chest is puffed out like that of a proud conqueror.

Upa-prāṇa vāyu — These are five subsidiary (upa) vital airs (prāṇa vāyu). They are: nāga, which relieves abdominal pressure by belching; kūrma, which controls the movements of the eyelids to prevent foreign matter or too bright a light entering the eyes; kṛkara, which prevents substances passing up the nasal passages and down the throat forcing one to sneeze or cough; devadatta, which provides intake of extra oxygen in a tired body by causing a yawn; and dhaṅanjaya, which remains in the body even after death and sometimes bloats up a corpse.

Upaniṣads — The word is derived from the prefixes 'upa' (near) and 'ni' (down), added to the root 'sad' (to sit). It means sitting down or near a guru to receive spiritual instruction. The Upaniṣads are the philosophical portion of the Vēdas, the most ancient sacred literature of the Hindus, dealing with the nature of man and the universe and the union of the individual soul or self with the Universal Soul.

Ūrdhva — Raised, elevated, tending upwards.

Ūrdhva-retus — (Ūrdhva = upwards; retus = semen). One who lives in perpetual celebacy and abstains from sexual intercourse. One who has sublimated sexual desire.

Uttama — Best, excellent, first, highest.

Uttamōttama — Most excellent, first amongst the best, highest of the high.

Uttara-kāṇḍa of Rāmāyaṇa — The sequel to *Rāmāyaṇa*, the celebrated epic story of Rāma.

Uttara mīmāṁsa — One of the systems of Indian philosophy, which accepts God on the basis of the Vēdas, but lays special stress on spiritual knowledge (jñāna).

Vāc — Speech.

Vairāgya — Absence of worldly desires.

Vaiśeṣika — One of the six systems of Indian philosophy founded by Kanāda. It is so-called because it teaches that knowledge of the nature of reality is obtained by knowing the special properties (viśeṣa) or essential difference which distinguish nine eternal realities or substances (dravyas). These are: earth (pṛthvī), water, (ap), fire (tejas), air (vāyu), ether (ākaṣa) time (kāla), space (dik), self (ātman) and mind (manas).

Vālmīki — Name of the author of the celebrated epic *Rāmāyaṇa*. See Ratnākara.

Varàhopaniṣad — Name of one of the Upaniṣads dealing with nāḍīs.

Vāruṇī nāḍī — Name of one of the nāḍīs which flows throughout the body. Its function is the evacuation of urine.

Vāsanā — Desire, inclination, longing.

Vāta — Wind.

Vāyu — The wind, the vital airs.

Vāyu sādhanā — Practice or quest (sādhanā) of vital airs (vāyu). Another name for prāṇāyāma.

Vēda — The sacred scriptures of the Hindus, classified as revealed literature (śruti), consisting of four collections called Ṛgvēda – hymns to gods, sāmavēda – priests' chants, yajurvēda – sacrificial formulae in prose, and Atharvavēda – magical chants. They contain the first philosophical insights and are regarded as the final authority. Each Vēda has broadly two divisions, namely, mantras (hymns) and brāhmaṇa (precepts). The latter include āraṇyaka (theology) and upaniṣads (philosophy).

Vedanta — Literally, the end (anta) of the Vēdas, popular name for the system of Indian philosophy called Uttara Mīmāṁsa, meaning the last investigation of the Vēdas, because its central theme is the philosophical teachings of the Upaniṣads. These teachings concern the nature and relationship of three principles, namely, the Ultimate Principle (Brahman), the world (jagat) and the individual soul (jīvātmā) and also includes the relationship between the Universal Soul (Paramātmā) and the individual soul.

Vibhīśaṇa — Name of the brother of Rāvaṇa, who told the latter that his conduct in abducting Rama's wife Sītā was unrighteous, and that she should be restored to her husband. Failing to persuade Rāvaṇa, Vibhīśaṇa left and joined Rāma in his battle against Rāvaṇa. After Rāvaṇa was slain, Vibhīsaṇa was crowned as the King of Laṅka. He

	is regarded as a model of upright conduct and one whose meditation practices were sāttvic.
Vichāraṇā	Examination, investigation, discussion, consideration.
Vidyā	Knowledge, learning lore, science.
Vijñāna	Knowledge, wisdom, intelligence, understanding, discrimination. It also means worldly knowledge derived from worldly experience as opposed to knowledge of Brahma or Supreme Spirit.
Vijñāna nāḍī	Vessels of consciousness.
Vijñānamaya kośa	The sheath of intelligence enveloping the soul, affecting the process of reasoning and judgement derived from subjective experience.
Vikṣipta	Agitated state of mind brought about by distraction, confusion or perplexity.
Viloma prāṇāyāma	Viloma means against the hair (loma), against the current, against the order of things. The particle 'v' denotes negation or privation. In viloma prāṇāyāma the inhalation or exhalation is not one continuous process, but is done gradually with several pauses.
Vīrāsana	Vīra means a hero, warrior or champion. This sitting posture is done by keeping together the knees, spreading the feet and resting them by the side of the hips. The pose is good for meditation and prāṇāyāma.
Viṣama vṛtti prāṇāyāma	Viṣama means irregular and difficult. Viṣama vṛtti prāṇāyāma is so called because the same length of time for inhalation, retention and exhalation is not maintained. This leads to interruption of rhythm and the difference in ratio creates difficulty and danger for the pupil.
Viśālatā	Extension, space, breadth, width.
Viṣṇu	The second deity of the Hindu trinity.
Viśuddhi chakra	The nervous plexus in the pharyngeal region.
Viśvodharī nāḍī	Name of one of the nāḍīs, having the function of absorption of food.
Viveka	Judgement, discrimination.
Viveka khyāti	The knowledge or faculty (khyāti) of discrimination.
Vṛtti	A course of action, behaviour, mode of being, condition or mental state.
Vṛtti prāṇāyāma	Vṛtti Prāṇāyāma are of two types – sama vṛtti prāṇāyāma and viṣama vṛtti prāṇāyāma. In the former an attempt is made to achieve uniformity in the duration of all three processes of respiration, namely, inhalation, retention and exhalation in any type of prāṇāyāma. In viṣama vṛtti prāṇāyāma there is a difference in

ratio of inhalation, retention and exhalation, leading to interrupted rhythm.

Vyādhi — Sickness, disease, illness.

Vyāna vāyu — One of the vital airs, which pervades the entire body and circulates the energy derived from food and breathing all over the body.

Vyavasāyātmaka-Buddhi — Industrious and persevering intellect.

Yājñavalkya — Name of a sage and author of a code of laws. He was spiritual preceptor to King Janaka. The dialogue between Yājñavalkya and his wife Gārgī forms a part of the *Bṛhadāraṇyaka Upaniṣad.*

Yajur Vēda — Name of one of the four Vēdas, which form the sacred scriptures of the Hindus.

Yama — The god of death, whose dialogue with the seeker Nachiketā forms the basis of the Kaṭhopaniṣad. Yama is also the first of the eight limbs of Yoga. Yamas are universal moral commandments or ethical principles transcending creeds, countries, age and time. These are non-violence (ahimsā), truth (satya), non-stealing (asteya), continence (brahmacharya), and non-coveting (aparigraha).

Yaśasvinī nāḍī — Name of one of the nāḍīs.

Yoga — Union, communion. The word 'Yoga' is derived from the root 'Yuj' meaning to join, to yoke, to concentrate one's attention on. It is one of the six systems of Indian philosophy collated by the sage Patanjali. Yoga is the union of our will to the will of God, a poise of the soul, which enables one to look evenly at life in all its aspects. The chief aim of Yoga is to teach the means by which the human soul may be completely united with the Supreme Spirit pervading the universe and thus secure absolution.

Yoga Chuḍāmaṇi Upaniṣad — Name of one of the Yoga Upaniṣads.

Yoga Sūtra — The classical work on Yoga by Patanjali. It consists of terse aphorisms on Yoga and it is divided into four parts dealing respectively with deep meditation (samādhi), the means (sādhana) by which Yoga is attained, the powers (vibhūti) the seeker comes across in his quest, and the state of absolution (kaivalya).

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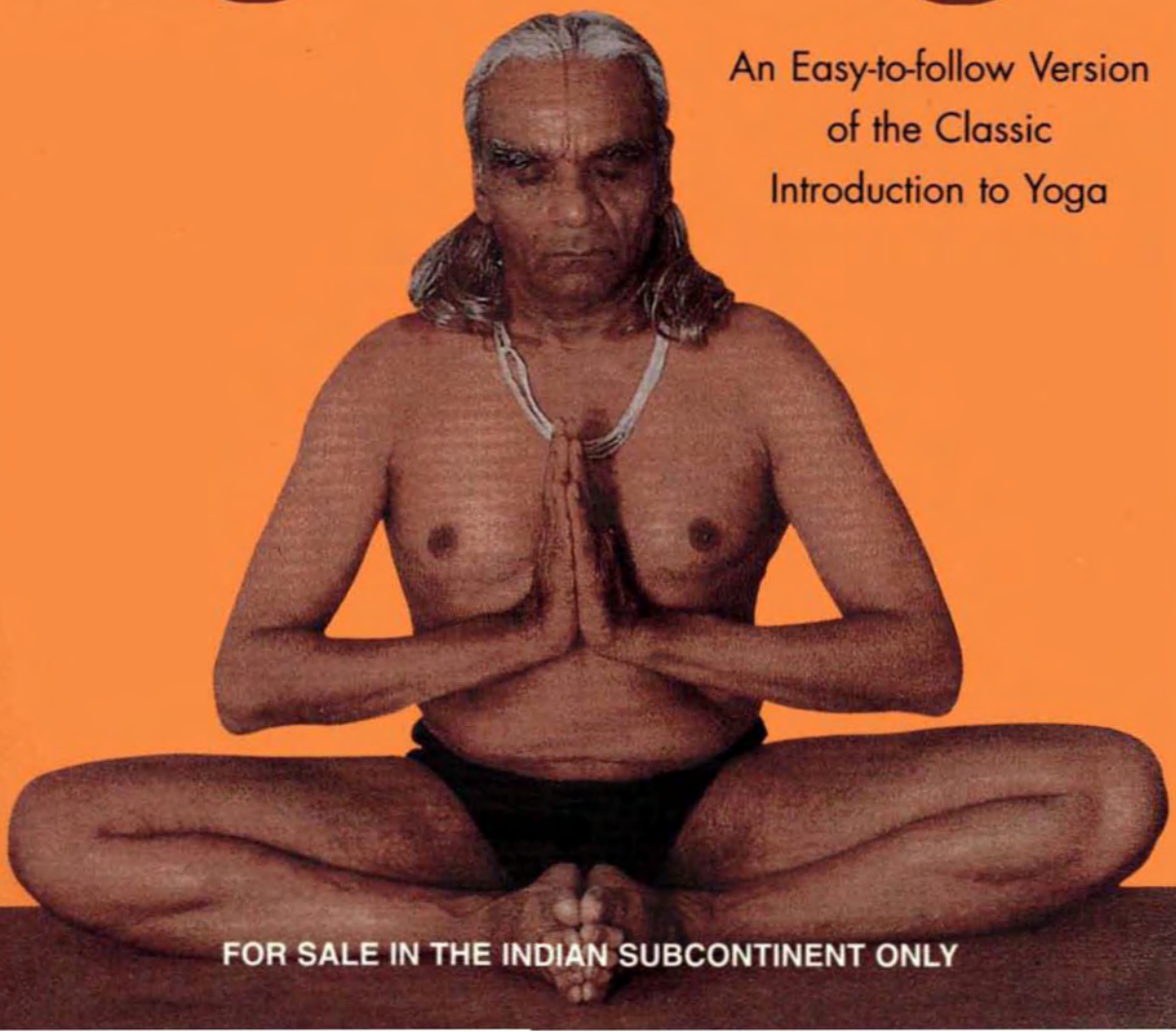

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PART II

Yogāsanas

HINTS AND CAUTIONS

THE REQUISITES

1. Without firm foundations a house cannot stand. Without the practice of the principles of yama and niyama, which lay down firm foundations for building character, there cannot be an integrated personality. Practice of āsanas without the backing of yama and niyama is mere acrobatics.

2. The qualities demanded from an aspirant are discipline, faith, tenacity, and perseverance to practice regularly without interruptions.

CLEANLINESS AND FOOD

3. Before starting to practise āsanas, the bladder should be emptied and the bowels evacuated. Topsy-turvy poses help bowel movements. If the student is constipated or it is not possible to evacuate the bowels before the practice of āsanas, start with Śīrṣāsana and Sarvāngāsana and their variations. Attempt other āsanas only after evacuation. Never practice advanced āsanas without having first evacuated the bowels.

BATH

4. Āsanas come easier after taking a bath. After doing them, the body feels sticky due to perspiration and it is desirable to bathe some fifteen minutes later. Taking a bath or a shower both before and after practising āsanas refreshes the body and mind.

FOOD

5. Āsanas should preferably be done on an empty stomach. If this is difficult, a cup of tea or coffee, cocoa or milk may be taken before doing them. They may be practised without discomfort one hour after a very light meal. Allow at least four hours to elapse after a heavy meal before starting the practice. Food may be taken half an hour after completing the āsanas.

TIME

6. The best time to practise is either early in the morning or late in the evening. In the morning āsanas do not come easily as the body is stiff.

The mind, however, is still fresh but its alertness and determination diminish as time goes by. The stiffness of the body is conquered by regular practice and one is able to do the āsanas as well. In the evening, the body moves more freely than in the mornings, and the āsanas come better and with greater ease. Practice in the morning makes one work better in one's vocation. In the evening it removes the fatigue of the day's strain and makes one fresh and calm. Do all the āsanas in the morning and stimulative āsanas (like Śīrṣāsana, Sarvāngāsana and their variations and Paśchimottānāsana) should be practised in the evening.

SUN

7. Do not practise āsanas after being out in the hot sun for several hours.

PLACE

8. They should be done in a clean airy place, free from insects and noise.

9. Do not do them on the bare floor or on an uneven place, but on a folded blanket laid on a level floor.

CAUTION

10. No undue strain should be felt in the facial muscles, ears and eyes or in breathing during the practice.

CLOSING OF THE EYES

11. In the beginning, keep the eyes open. Then you will know what you are doing and where you go wrong. If you shut your eyes you will not be able to watch the requisite movements of the body or even the direction in which you are doing the pose. You can keep your eyes closed only when you are perfect in a particular āsana for only then will you be able to adjust the bodily movements and feel the correct stretches.

MIRROR

12. If you are doing the āsanas in front of a mirror, keep it perpendicular to the floor and let it come down to ground level, for otherwise the poses will look slanting due to the angle of the mirror. You will not be able to observe the movements of placing the head and shoulders in the topsy-turvy poses unless the mirror reaches down to the floor. Use a mirror without a frame.

THE BRAIN

13. During the practice of āsanas, it is the body alone which should be active while the brain should remain passive, watchful and alert. If they are done with the brain, then you will not be able to see your own mistakes.

BREATHING

14. In all the āsanas, breathing should be done through the nostrils only and not through the mouth.

15. Do not restrain the breath while in the process of the āsana or while staying in it. Follow the instructions regarding breathing given in the technique sections of the various āsanas as described hereafter.

ŚAVĀSANA

16. After completing the practice of āsanas always lie down in Śavāsana for at least 10 to 15 minutes, as this will remove fatigue.

ASANAS AND PRĀṆĀYĀMA

17. Read carefully the hints and cautions for the practice of prāṇāyāma before attempting it (see Part III). Prāṇāyāma may be done either very early in the morning before the āsanas or in the evening after completing them. If early in the morning, prāṇāyāma may be done first for 15 to 30 minutes: then a few minutes of Śavāsana, and after allowing some time to elapse during which one may be engaged in normal activities, practise āsanas. If, however, these are done in the evening, allow at least half an hour to elapse before sitting for prāṇāyāma.

SPECIAL PROVISIONS FOR PERSONS SUFFERING FROM DIZZINESS OR BLOOD PRESSURE

18. Do not start with Śīrṣāsana and Sarvāngāsana if you suffer from dizziness or high blood pressure. First practise Paśchimottānāsana Uttānāsana, and Adho Mukha Śvānāsana before attempting topsy-turvy poses like Śīrṣāsana and Sarvāngāsana and after doing these poses repeat Paśchimottānāsana, Adho Mukha Śvānāsana and Uttānāsana in that order.

19. All forward bending poses are beneficial for persons suffering from either high or low blood pressure.

SPECIAL WARNING FOR PERSONS AFFECTED FROM PUS IN THE EARS OR DISPLACED RETINA

20. Those suffering from pus in the ears or displacement of the retina should not attempt topsy-turvy poses.

SPECIAL PROVISIONS FOR WOMEN

21. *Menstruation:* Avoid āsanas during the menstrual period. But if the flow is in excess of normal, Upaviṣṭha Koṇāsana, Baddha Koṇāsana, Vīrāsana, Jānu Śīrṣāsana, Paśchimottānāsana and Uttānāsana will be beneficial. On no account stand on your head nor perform sarvāngāsana, during the menstrual period.

22. *Pregnancy:* All the āsanas can be practised during the first three months of pregnancy. All the standing poses and the forward bending āsanas may be done with mild movements, for at this time the spine should be made strong and elastic and no pressure be felt on the abdomen. Baddha Koṇāsana and Upaviṣṭha Koṇāsana may be practised throughout pregnancy at any time of the day (even after meals, but not forward bending immediately after meals) as these two āsanas will strengthen the pelvic muscles and the small of the back and also reduce labour pains considerably. Prāṇāyāma without retention (kumbhaka) may be practised throughout pregnancy, as regular deep breathing will help considerably during labour.

23. *After delivery:* No āsanas should be done during the first month after delivery. Thereafter they may be practised mildly. Gradually increase the course as mentioned in the Appendix. Three months after delivery all āsanas may be practised with comfort.

EFFECTS OF ĀSANAS

24. Faulty practice causes discomfort and uneasiness within a few days. This is sufficient to show that one is going wrong. If you cannot find the fault yourself, it is better to approach a person who has practised well and get his guidance.

25. The right method of doing āsanas brings lightness and an exhilarating feeling in the body as well as in the mind and a feeling of oneness of body, mind and soul.

26. Continuous practice will change the outlook of the practiser. He will discipline himself in food, sex, cleanliness and character and will become a new man.

27. When one has mastered an āsana, it comes with effortless ease and causes no discomfort. The bodily movements become graceful. While performing āsanas, the student's body assumes numerous forms of life found in creation – from the lowliest insect to the most perfect sage – and he learns that in all these there breathes the same Universal Spirit – the Spirit of God. He looks within himself while practising and feels the presence of God in different āsanas which he does with a sense of surrender unto the feet of the LORD.

TECHNIQUE AND EFFECTS OF ĀSANAS

(After the name of each āsana, there is a number with an asterisk. These numbers before an asterisk indicate the intensity of the āsana; the lower the number, the easier the āsana, the higher the number, the more difficult the āsana.)

1| *Tāḍāsana*

(also called Samasthiti)

ONE*

Tāda means a mountain. Sama means upright, straight, unmoved. Sthiti is standing still, steadiness. Tāḍāsana therefore implies a pose where one stands firm and erect as a mountain. This is the basic standing pose.

TECHNIQUE

1. Stand erect with the feet together, the heels and big toes touching each other. Rest the heads of metatarsals on the floor and stretch all the toes flat on the floor.

2. Tighten the knees and pull the knee-caps up, contract the hips and pull up the muscles at the back of the thighs.

3. Keep the stomach in, chest forward, spine stretched up and the neck straight.

4. Do not bear the weight of the body either on the heels or the toes, but distribute it evenly on them both.

5. Ideally in Tāḍāsana the arms are stretched out over the head, but for the sake of convenience, one can place them by the side of the thighs. In this case, keep the arms parallel with the body. The fingers together and pointing downwards. Each of the standing poses described below can then be followed easily, starting with the pupil standing in Tāḍāsana with palms by the side of the thighs.

EFFECTS

People do not pay attention to the correct method of standing. Some stand with the body weight thrown only on one leg, or with one leg turned completely sideways. Others bear all the weight on the heels, or on the inner or outer edges of the feet. This can be noticed by watching where the soles and heels of the shoes wear out. Owing to our faulty method of standing and not distributing the body weight evenly on the feet, we acquire specific deformities which hamper spinal elasticity. Even if the feet are kept apart, it is better to keep the heel and toe in a line parallel to the median plane and not at an angle. By this method, the hips are contracted, the abdomen is pulled in and the chest is brought forward. One feels light in body and the mind acquires agility. If we stand with the body weight thrown only on the heels, we feel the centre of gravity changing; the hips become loose, the abdomen protrudes,

1

the body hangs back and the spine feels the strain and consequently we soon feel fatigued and the mind becomes dull. It is therefore essential to master the art of standing correctly.

2| *Utthita Trikoṇāsana*

THREE*

Utthita means extended, stretched. Trikoṇa (tri = three; koṇa = angle) is a triangle. This standing āsana is the extended triangle pose.

TECHNIQUE

1. Stand in Tāḍāsana. (Plate 1)

2. Inhale deeply and with a jump spread apart the legs sideways 3 to 3½ feet. Raise the arms sideways, in line with the shoulders, palms facing down. Keep the arms parallel to the floor. (Plate 2)

3. Turn the right foot sideways 90 degrees to the right. Turn the left foot slightly to the right, keeping the left leg stretched from the inside and tightened at the knee.

4. Exhale, bend the trunk sideways to the right, bringing the right palm near the right angle. If possible, the right palm should rest completely on the floor. (Plates 3 and 4)

5. Stretch the left arm up (as in the illustration), bringing it in line with the right shoulder and extend the trunk. The back of the legs, the back of the chest and the hips should be in line. Gaze at the thumb of the outstretched left hand. Keep the right knee locked tight by pulling up the knee-cap and keep the right knee facing the toes.

6. Remain in this position from half a minute to a minute, breathing deeply and evenly. Then lift the right palm from the floor. Inhale and return to position 2 above.

7. Now, turn the left foot sideways 90 degrees to the left, turn the right foot slightly to the left, keep both knees tight and continue from position 2 to 6, reversing all processes. Inhale and come to position 2. Hold the posture for the same length of time on the left side.

8. Exhale, and jump, coming back to Tāḍāsana. (Plate 1)

EFFECTS

This āsana tones up the leg muscles, removes stiffness in the legs and hips, corrects any minor deformity in the legs and allows them to develop evenly. It relieves backaches and neck sprains, strengthens the ankles and develops the chest.

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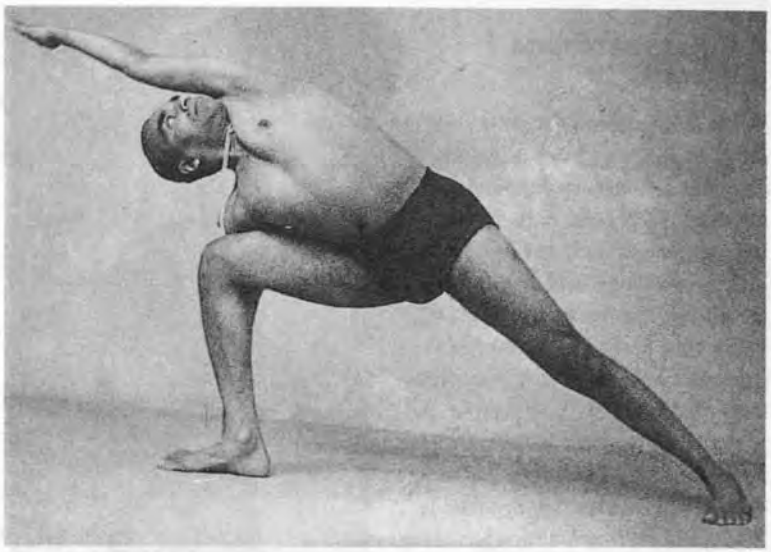
3| *Utthita Pārśvakoṇāsana*

FOUR*

Pārśva means side or flank. Koṇa is an angle. This is the extended lateral angle pose.



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6

TECHNIQUE

1. Stand in Tāḍāsana. (Plate 1) Take a deep inhalation and with a jump spread the legs apart sideways 4 to 4½ feet. Raise the arms sideways, in line with the shoulders, palms facing down. (Plate 2)

2. While exhaling slowly, turn the right foot sideways 90 degrees to the right, and the left foot slightly to the right, keeping the left leg stretched out and tightened at the knee. Bend the right leg at the knee until the thigh and the calf form a right angle and the right thigh is parallel to the floor.

3. Place the right palm on the floor by the side of the right foot, the right armpit covering and touching the outer side of the right knee. Stretch the left arm out over the left ear. Keep the head up. (Plates 5 and 6)

4. Tighten the loins and stretch the hamstrings. The chest, the hips and the legs should be in a line and in order to achieve this, move the chest up and back. Stretch every part of the body, concentrating on the back portion of the whole body, specially the spine. Stretch the spine until all the vertebrae and ribs move and there is a feeling that even the skin is being stretched and pulled.

5. Remain in this pose from half a minute to a minute, breathing deeply and evenly. Inhale and lift the right palm from the floor.

6. Inhale, straighten the right leg and raise the arms as in position 1.

7. Continue with exhalation as in positions 2 to 5, reversing all processes, on the left side.

8. Exhale and jump back to Tāḍāsana. (Plate 1)

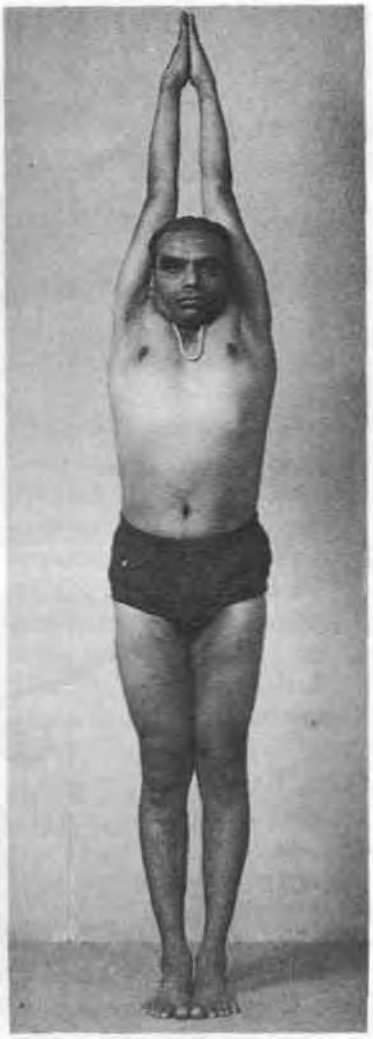
EFFECTS

This āsana tones up the ankles, knees and thighs. It corrects defects in the calves and thighs, develops the chest and reduces fat round the waist and hips and relieves sciatic and arthritic pains. It also increases peristaltic activity and aids elimination.

4| *Vīrabhadrāsana I*

THREE*

Dakṣa once celebrated a great sacrifice, but he did not invite his daughter Satī nor her husband Śiva, the chief of the gods. Satī, however, went to the sacrifice, but being greatly humiliated and insulted threw herself into the fire and perished. When Śiva heard this he was gravely provoked, tore a hair from his matted locks and threw it to the ground. A powerful hero named Vīrabhadra rose up and awaited his orders. He was told to lead Śiva's army against Dakṣa and destroy his sacrifice. Vīrabhadra and his army appeared in the midst of Dakṣa's assembly like a hurricane and destroyed the sacrifice, routed the other gods and priests and beheaded Dakṣa. Śiva in grief for Satī withdrew to Kailās and plunged into meditation. Satī was born again as Umā in the house of Himālaya. She strove once more for the love of Śiva and ultimately won his heart. The story is told by Kālidāsa in his great poem Kumāra saṁbhava *(The Birth of the War-Lord). This āsana is dedicated to the powerful hero created by Śiva from his matted hair.*



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TECHNIQUE

1. Stand in Tāḍāsana. (Plate 1)

2. Raise both arms above the head; stretch up and join the palms. (Plate 7)

3. Take a deep inhalation and with a jump spread the legs apart sideways 4 to 4½ feet.

4. Exhale, turn to the right. Simultaneously turn the right foot 90 degrees to the right and the left foot slightly to the right. (Plate 8) Flex the right knee till the right thigh is parallel to the floor and the right shin perpendicular to the floor, forming a right angle between the right thigh and the right calf. The bent knee should not extend beyond the ankle, but should be in line with the heel.

5. Stretch out the left leg and tighten at the knee.

6. The face, chest and right knee should face the same way as the right foot, as illustrated. Throw the head up, stretch the spine from the coccyx and gaze at the joined palms. (Plate 9)

7. Hold the pose from 20 seconds to half a minute with normal breathing.

8. Repeat on the left side as in positions 4 to 6, reversing all processes.

9. Exhale and jump back to Tāḍāsana. (Plate 1)

All standing poses are strenuous, this pose in particular. It should not be tried by persons with a weak heart. Even people who are fairly strong should not stay long in this āsana.

EFFECTS

In this pose the chest is fully expanded and this helps deep breathing. It relieves stiffness in shoulders and back, tones up the ankles and knees and cures stiffness of the neck. It also reduces fat round the hips.

5| *Vīrabhadrāsana II*

ONE*

TECHNIQUE

1. Stand in Tāḍāsana. (Plate 1)

2. Take a deep inhalation, and with a jump spread the legs apart sideways 4 to 4½ feet. Raise the arms sideways in line with the shoulders, palms facing down. (Plate 2)

3. Turn the right foot sideways 90 degrees to the right and the left foot slightly to the right, keeping the left leg stretched out and tightened at the knee. Stretch the hamstring muscles of the left leg.

4. Exhale and bend the right knee till the right thigh is parallel to the floor, keeping the right shin perpendicular to the floor, thus forming a right angle between the right thigh and the right calf. The bent knee should not extend beyond the ankle, but should be in line with the heel. (Plate 10)

10

5. Stretch out the hands sideways, as though two persons are pulling you from opposite ends.

6. Turn the face to the right and gaze at the right palm. Stretch the back muscles of the left leg fully. The back of the legs, the dorsal region and the hips should be in one line.

7. Stay in the pose from 20 seconds to half a minute with deep breathing. Inhale and return to position 2.

8. Turn the left foot sideways 90 degrees to the left and the right foot slightly to the left, flex the left knee and continue from positions 3 to 6 on the left side, reversing all processes.

9. Inhale, again come back to position 2. Exhale and jump back to Tāḍāsana. (Plate 1)

EFFECTS

Through this pose the leg muscles become shapely and stronger. It relieves cramp in the calf and thigh muscles, brings elasticity to the leg and back muscles and also tones the abdominal organs.

Mastery of the standing poses prepares the pupil for the advanced poses in forward bending, which can then be acquired with ease.

11

12

6| *Pārśvōttānāsana*

SIX*

Pārśva means side or flank. Uttāna (ut = intense, and tān = to extend, stretch, lengthen) means an intense stretch. The name implies a pose in which the side of the chest is stretched intensely.

TECHNIQUE

1. Stand in Tāḍāsana. (Plate 1) Inhale deeply and stretch the body forward.

2. Join the palms behind the back and draw the shoulders and elbows back.

3. Exhale, turn the wrists and bring both palms up above the middle of the back of the chest, the fingers at the level of the shoulder-blades. You are doing 'namaste' (the Indian gesture of respect by folding the hands) with your hands behind your back. (Plate 11)

4. Inhale and with a jump spread the legs apart sideways 3 to 3½ feet. Stay in this position and exhale.

5. Inhale and turn the trunk to the right. Turn the right foot 90 degrees sideways to the right keeping the toes and heel in a line with the trunk; turn the left foot with the leg 75 to 80 degrees to the right and keep the left foot stretched out and the leg tightened at the knee. Throw the head back. (Plate 12)

6. Exhale, bend the trunk forward and rest the head on the right knee. Stretch the back and gradually extend the neck until the nose, then the lips and lastly the chin touch and then rest beyond the right knee. (Plate 13) Tighten both the legs by pulling the knee-caps up.

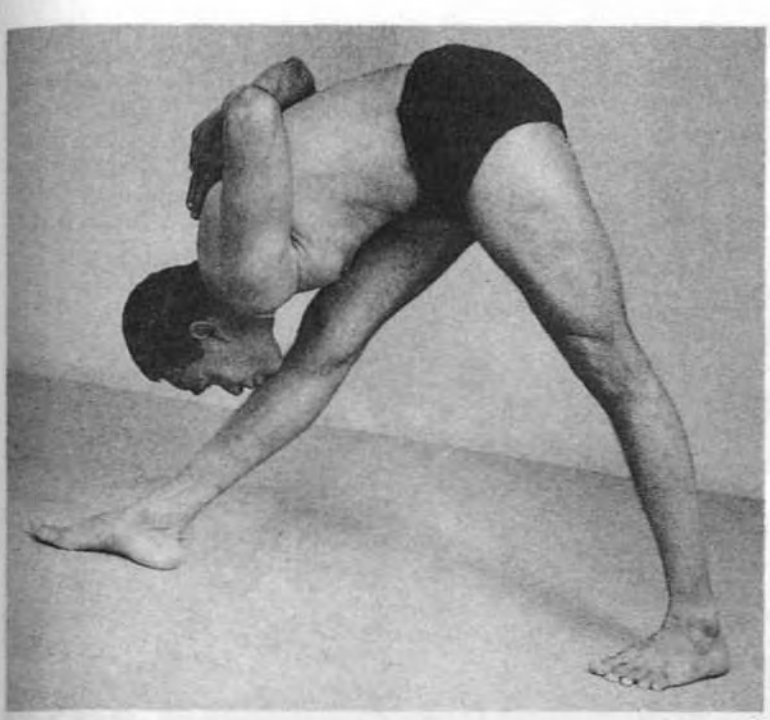
7. Stay in the pose from 20 seconds to half a minute with normal breathing. Then slowly move the head and trunk towards the left knee by swinging the trunk round the hips. At the same time turn the left foot 90 degrees towards the left and the right foot 75 to 80 degrees to the left. Now raise the trunk and head as far back as you can, without bending the right leg. This movement should be done with one inhalation.

8. Exhale, bend the trunk forward, rest the head on the left knee and gradually extend the chin beyond the left knee by stretching the neck as in position 6.

9. After holding the pose from 20 seconds to half a minute with normal breathing, inhale, move the head to the centre and the feet to their original position so that the toes point forward. Then raise the trunk up.

10. Exhale and jump back to Tāḍāsana (Plate 1), releasing the hands from the back.

11. If you cannot fold the hands together behind the back, just grip the right wrist and follow the above technique. (Plate 14)



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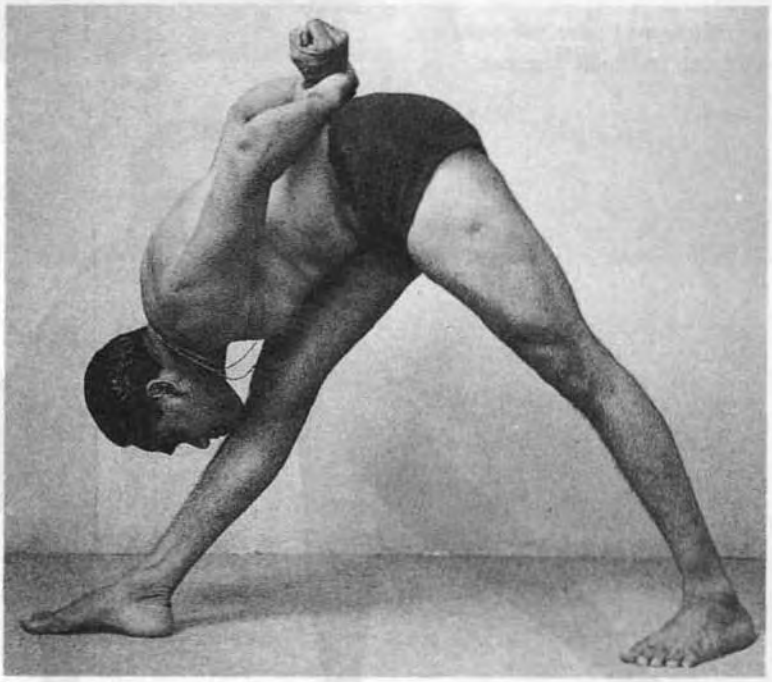
EFFECTS

This āsana relieves stiffness in the legs and hip muscles and makes the hip joints and spine elastic. While the head is resting on the knees, the abdominal organs are contracted and toned. The wrists move freely and any stiffness there disappears. The posture also corrects round and drooping shoulders. In the correct pose, the shoulders are drawn well back and this makes deep breathing easier.



14

7| *Prasārita Pādottānāsana*

FOUR*

Prasārita means expanded, spread, extended. Pāda means a foot. The pose is one where the expanded legs are stretched intensely.

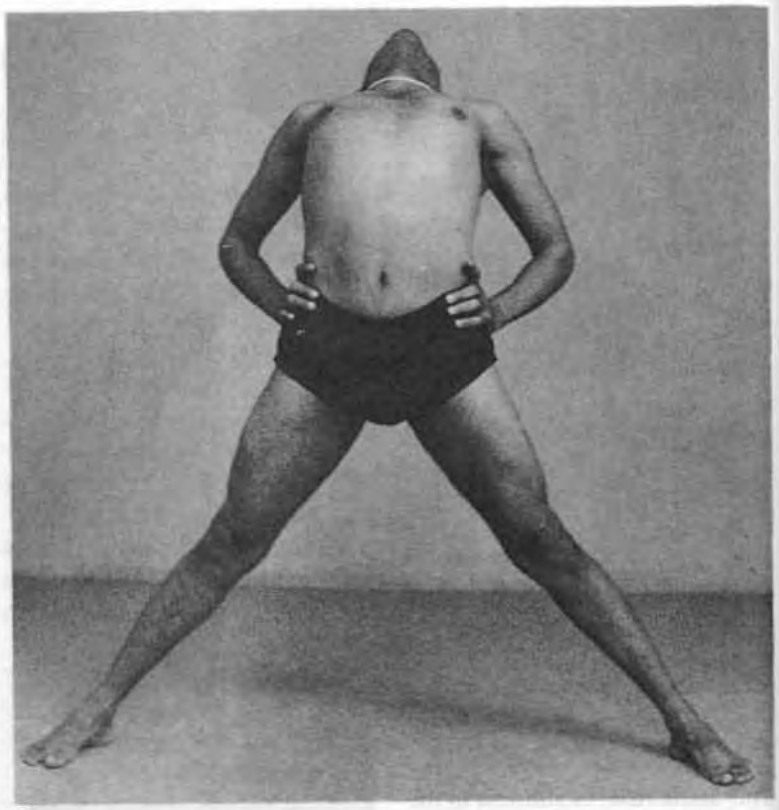
TECHNIQUE

1. Stand in Tāḍāsana. (Plate 1)

2. Inhale, place the hands on the waist and spread the legs apart 4½ to 5 feet. (Plate 15)

3. Tighten the legs by drawing up the knee-caps. Exhale, and place the palms on the floor in line with the shoulders between the feet. (Plate 16)

4. Inhale and raise the head up, keeping the back concave.



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5. Exhale, bend the elbows and rest the crown of the head on the floor, keeping the weight of the body on the legs. (Plates 17 and 18) Do not throw the body weight on the head. Both feet, both palms and the head should be in a straight line.

6. Stay in the pose for half a minute, breathing deeply and evenly.

7. Inhale, raise the head from the floor and straighten the arms at the elbows. Keep the head well up by making the back concave as in position 4. (Plate 16)

8. Exhale and stand as in position 2. (Plate 15)

9. Jump back to Tāḍāsana. (Plate 1)

17

18

EFFECTS

In this pose the hamstring and abductor muscles are fully developed, while blood is made to flow to the trunk and the head. People who cannot do Sīrṣāsana (Plate 90) can benefit from this pose, which increases digestive powers.

All the standing poses described above are necessary for beginnings. As the pupil advances he attains better flexibility and then the standing poses can be dispensed with, though it is advisable to do them once a week. All these standing poses help to reduce the body weight.

8| *Uṣṭrāsana*

THREE*

Uṣṭra means a camel.

TECHNIQUE

1. Kneel on the floor, keeping the thighs and feet together, toes pointing back and resting on the floor.

2. Rest the palms on the hips. Stretch the thighs, curve the spine back and extend the ribs. (Plate 19)

3. Exhale, place the right palm over the right heel and the left palm over the left heel. If possible, place the palms on the soles of the feet.

4. Press the feet with the palms, throw the head back and push the spine towards the thighs, which should be kept perpendicular to the floor.

5. Contract the buttocks and stretch the dorsal and the coccyx regions of the spine still further, keeping the neck stretched back. (Plate 20)

6. Remain in this position for about half a minute with normal breathing.

7. Release the hands one by one and rest them on the hips. (Plate 19) Then sit on the floor and relax.

EFFECTS

People with drooping shoulders and hunched backs will benefit by this āsana.

The whole spine is stretched back and is toned. This pose can be tried conveniently by the elderly and even by persons with spinal injury.

19

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21

9| *Pādāṅguṣṭhāsana*

THREE*

Pāda means the foot. Aṅguṣṭha is the big toe. This posture is done by standing and catching the big toes.

TECHNIQUE

1. Stand in Tāḍāsana. (Plate 1) Spread the legs a foot apart.

2. Exhale, bend forward and hold the big toes between the thumbs and the first two fingers, so that the palms face each other. Hold them tight. (Plate 21)

3. Keep the head up, stretch the diaphragm towards the chest and make the back as concave as possible. Instead of stretching down from the shoulders, bend forward from the pelvic region to get the concave shape of the back from the coccyx.

4. Keep the legs stiff and do not slacken the grip at the knees and toes. Stretch the shoulder-blades also. Take one or two breaths in this position.

22

5. Now exhale, and bring the head in between the knees by tightening and pulling the toes without lifting them off the floor. (Plate 22) Remain in this pose for about 20 seconds, maintaining normal breathing.

6. Inhale, come to position 2 (Plate 21), release the toes and stand up. Return to Tāḍāsana. (Plate 1)

10| *Pādahastāsana*

SIX*

Pāda means the foot. Hasta means the hand. This posture is done by bending forward and standing on one's hands.

TECHNIQUE

1. Stand in Tāḍāsana. (Plate 1) Spread the legs a foot apart.

2. Exhale, bend forward and without bending the legs at the knees insert the hands under the feet so that the palms touch the soles. (Plate 23)

3. Keep the head up and make the back as concave as possible. Do not slacken the grip at the knees and take a few breaths in this position.

4. Now exhale, and move the head in between the knees by bending the elbows and pulling the feet up from the palms. (Plate 24) Stay in the pose for about 20 seconds with normal breathing.

5. Inhale, raise the head and come back to position 2 (Plate 23), with the head well up. Take two breaths.

6. Inhale, stand up and return to Tāḍāsana. (Plate 1)

23

24

EFFECTS OF PĀDĀNGUṢṬHĀSANA AND PĀDAHASTĀSANA

The second āsana is more strenuous than the first, but the effects of both are the same. The abdominal organs are toned and digestive juices increase, while the liver and spleen are activated. Persons suffering from a bloating sensation in the abdomen or from gastric troubles will benefit from practising these two āsanas.

Slipped spinal discs can only be adjusted in the concave back position as in Plates 21 and 23. Do not bring the head in between the knees if you have a displaced disc. I have experimented with persons suffering from slipped discs and the concave back position proved a boon to them. It is imperative to get guidance from a guru (master) before trying this pose, because it may not be possible to achieve the concave back position immediately. One has to master other minor poses before attempting this one.

11| *Uttānāsana*

EIGHT*

Ut is a particle indicating deliberation, intensity. The verb tān means to stretch, extend, lengthen out. In this āsana, the spine is given a deliberate and an intense stretch.

TECHNIQUE

1. Stand in Tāḍāsana (Plate 1), keeping the knees tight.

2. Exhale, bend forward and place the fingers on the floor. Then place the palms on the floor by the side of the feet, behind the heels. Do not bend the legs at the knees.

3. Try to hold the head up and stretch the spine. Move the hips a little forward towards the head so as to bring the legs perpendicular to the floor.

4. Remain in this position and take two deep breaths.

5. Exhale, move the trunk closer to the legs and rest the head on the knees. (Plate 25)

6. Do not slacken the grip at the knees, but pull the knee-caps well up. Hold this position for a minute with deep and even breathing.

7. Inhale and raise the head from the knees, but without lifting the palms from the floor as in position 3.

8. After two breaths, take a deep inhalation, lift the hands from the floor and come back to Tāḍāsana. (Plate 1)

25

EFFECTS

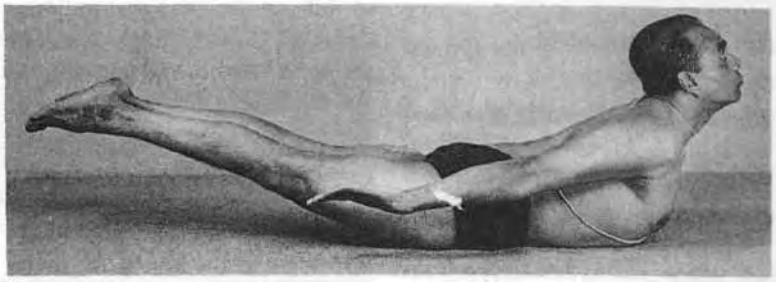
This āsana cures stomach pains and tones the liver, the spleen and the kidneys. It also relieves stomach pain during menstrual periods. The heart beats are slowed down and the spinal nerves rejuvenated. Any depression felt in the mind is removed if one holds the pose for two minutes or more. The posture is a boon to people who get excited quickly, as it soothes the brain cells. After finishing the āsana, one feels calm and cool, the eyes start to glow and the mind feels at peace.

Persons who feel heaviness in the head, flushing or any discomfort while attempting Śīrṣāsana (Plate 90), should do Uttānāsana first; then they will be able to do Śīrṣāsana (the head stand) with comfort and ease.

12| *Śalabhāsana*

ONE*

Śalabhā means a locust. The pose resembles that of a locust resting on the ground, hence the name.



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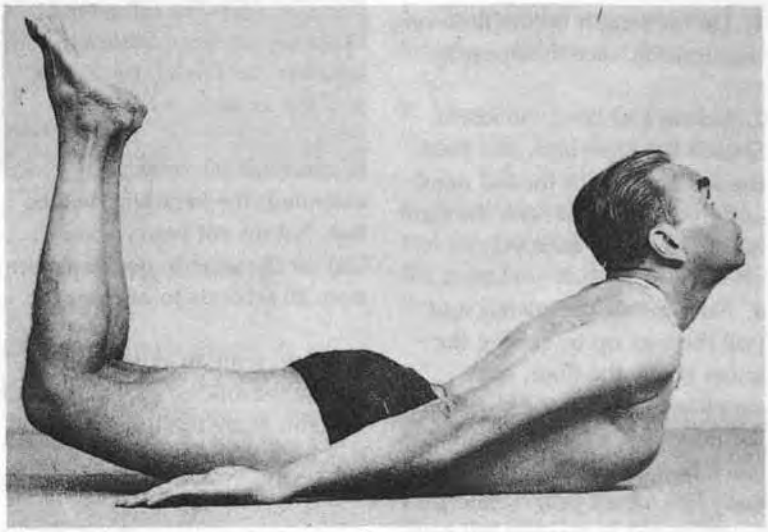

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TECHNIQUE

1. Lie full length on the floor on the stomach, face downwards. Stretch the arms back.

2. Exhale, lift the head, chest and legs off the floor simultaneously as high as possible. The hands should not be placed and the ribs should not rest on the floor. Only the abdominal front portion of the body rests on the floor and bears the weight of the body. (Plate 26)

3. Contract the buttocks and stretch the thigh muscles. Keep both legs fully extended and straight, touching at the thighs, knees and ankles.

4. Do not bear the weight of the body on the hands but stretch them back to exercise the upper portion of the back muscles.

5. Stay in the position as long as you can with normal breathing.

6. In the beginning it is difficult to lift the chest and the legs off the floor, but this becomes easier as the abdominal muscles grow stronger.

EFFECTS

The pose aids digestion and relieves gastric troubles and flatulence. Since the spine is stretched back it becomes elastic and the pose relieves pain in the sacral and lumbar regions. In my experience, persons suffering from slipped discs have benefited by regular practice of this āsana without recourse to enforced rest or surgical treatment. The bladder and the prostate gland also benefit from the exercise and remain healthy.

A variation of the pose may also be tried to relieve aches in the lower part of the back. Here, the legs are bent at the knees and the thighs are kept apart while the shins are kept perpendicular to the floor. Then with an exhalation, the thighs are lifted off the floor and brought closer together until the knees touch, the shins still being kept perpendicular. (Plate 27)

13| *Dhanurāsana*

FOUR*

Dhanu means a bow. The hands here are used like a bowstring to pull the head, trunk and legs up and the posture resembles a bent bow.

TECHNIQUE

1. Lie full length on the floor on the stomach, face downwards.

2. Exhale and bend the knees. Stretch the arms back and hold the left ankle with the left hand and the right ankle with the right hand. Take two breaths.

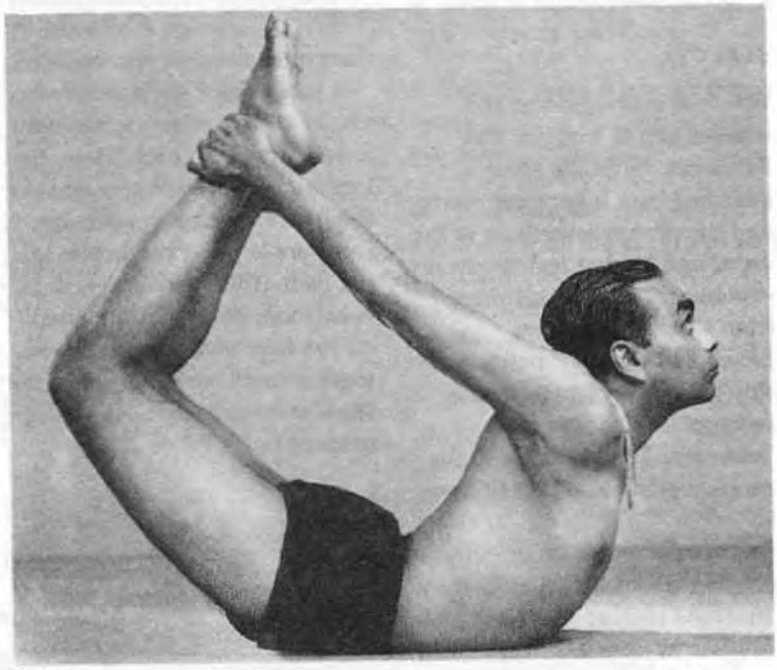
3. Now exhale completely and pull the legs up by raising the knees above the floor, and simultaneously lift the chest off the floor. The arms and hands act like a bow-string to tauten the body like a bent bow. (Plate 28)

4. Lift up the head and pull it as far back as possible. Do not rest either the ribs or the pelvic bones on the floor. Only the abdomen bears the weight of the body on the floor.

5. While raising the legs do not join them at the knees, for then the legs will not be lifted high enough. After the full stretch upwards has been achieved, join together the thighs, the knees and the ankles.

6. Since the abdomen is extended, the breathing will be fast, but do not worry about it. Stay in the pose to your capacity from 20 seconds to one minute.

7. Then, with an exhalation, release the ankles, stretch the legs straight, bring the head and the legs back to the floor and relax.



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EFFECTS

In this posture the spine is stretched back. Elderly people do not normally do this, so their spines get rigid. This āsana brings back elasticity to the spine and tones the abdominal organs. In my experience, persons suffering from slipped discs have obtained relief by the regular practice of Dhanurāsana and Śalabhāsana (Plate 26) without being forced to rest or to undergo surgical treatment.

14| *Chaturaṅga Daṇḍāsana*

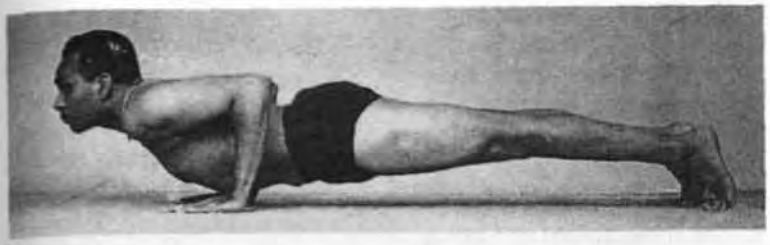
ONE*

Chatur means four. Aṅga means a limb or a part thereof. Daṇḍa means a staff. Lie flat on the floor, face down and take the weight of the body on the palms and toes, exhale and keep the body parallel to the floor, stiff as a staff. The four limbs supporting the body are the hands and feet. The pose is similar to dips in western gymnastics.

TECHNIQUE

1. Lie flat on the floor, face downwards.

2. Bend the elbows and place the palms by the side of the chest. Keep the feet about a foot apart.



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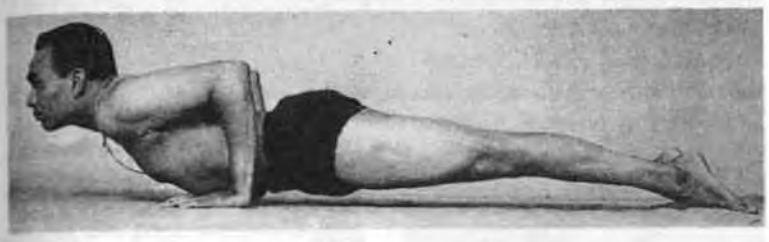

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3. With an exhalation, raise the whole body a few inches above the floor, balancing it on the hands and the toes. (Plate 29) Keep the body stiff as a staff, parallel to the floor from head to heel and the knees taut. Stay for some time with normal breathing.

4. Then gradually extend the whole body forward so that the feet rest on the upper portion of the toes on the floor. (Plate 30)

5. Stay in the pose for about 30 seconds with normal or deep breathing. The movement may be repeated several times. Then relax on the floor.

EFFECTS

The pose strengthens the arms and the wrists develop mobility and power. It also contracts and tones the abdominal organs.

15| *Bhujaṅgāsana I*

ONE*

Bhujanga means a serpent. In this posture, lie flat on the floor, face downwards, lift the body up from the trunk and throw the head back like a serpent about to strike.

TECHNIQUE

1. Lie on the floor face downwards. Extend the legs, keeping the feet together. Keep the knees tight and the toes pointing.

2. Rest the palms by the side of the pelvic region.

3. Inhale, press the palms firmly on the floor and lift the body up from the trunk until the pubis is in contact with the floor and stay in this position with the weight on the legs and palms. (Plate 31)

4. Contract the anus and the buttocks, tighten the thighs.

5. Maintain the pose for about 20 seconds, breathing normally.

6. Exhale, bend the elbows and rest the trunk on the floor. Repeat the pose two or three times and then relax.

EFFECTS

The posture is a panacea for an injured spine and in cases of slight displacement of spinal discs the practice of this pose replaces the discs in their original position. The spinal region is toned and the chest fully expanded.

31

16| *Ūrdhva Mukha Śvānāsana*

ONE*

Ūrdhva Mukha means having the mouth upwards. Śvāna means a dog. The pose resembles a dog stretching itself with the head up in the air, hence the name.

TECHNIQUE

1. Lie on the floor on the stomach, face downwards.

2. Keep the feet about one foot apart. The toes should point straight back. Place the palms on the floor by the side of the waist, the fingers pointing to the head.

3. Inhale, raise the head and trunk, stretch the arms completely and push the head and trunk as far back as possible, without resting the knees on the floor.

4. Keep the legs straight and tightened at the knees, but do not rest the knees on the floor. The weight of the body rests on the palms and toes only. (Plate 32)

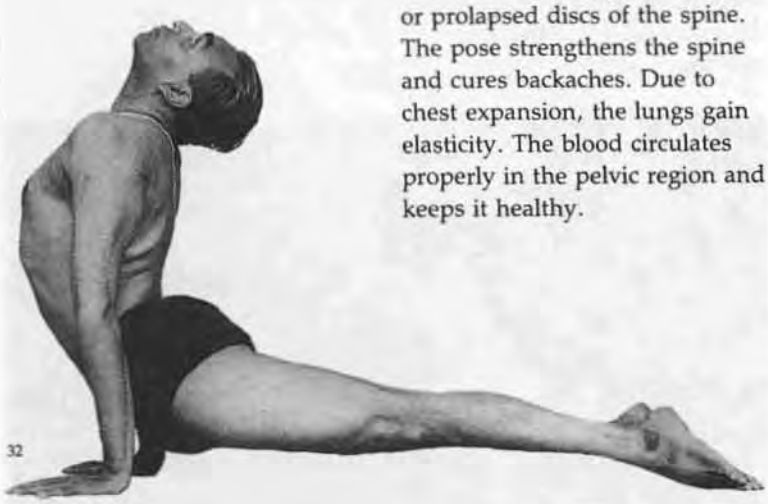
5. The spine, thighs and calves should be fully stretched, and the buttocks contracted tight. Push the chest forward, stretch the neck fully and throw the head as far back as possible. Stretch also the back portions of the arms.

6. Stay in the pose from half a minute to a minute with deep breathing.

7. Bend the elbows, release the stretch and rest on the floor.

EFFECTS

The pose rejuvenates the spine and is specially recommended for people suffering from a stiff back. The movement is good for persons with lumbago, sciatica and those suffering from slipped or prolapsed discs of the spine. The pose strengthens the spine and cures backaches. Due to chest expansion, the lungs gain elasticity. The blood circulates properly in the pelvic region and keeps it healthy.



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17| *Adho Mukha Śvānāsana*

FIVE*

Adho Mukha means having the face downwards. Śvāna means a dog. The pose resembles a dog stretching itself with head and forelegs down and the hind legs up, hence the name.

TECHNIQUE

1. Lie full length on the floor on the stomach, face downwards. The feet should be kept one foot apart.

2. Rest the palms by the side of the chest, the fingers straight and pointing in the direction of the head.

3. Exhale and raise the trunk from the floor. Straighten the arms, move the head inwards towards the feet and place the crown of the head on the floor, keeping the elbows straight and extending the back. (Side view: Plate 33. Back view: Plate 34)

4. Keep the legs stiff and do not bend the knees but press the heels down. The heels and soles of the feet should rest completely on the floor, while the feet should be parallel to each other, the toes pointing straight ahead.

5. Stay in the pose for about a minute with deep breathing. Then with an exhalation lift the head off the floor, stretch the trunk forward and lower the body gently to the floor and relax.

33

EFFECTS

When one is exhausted, a longer stay in this pose removes fatigue and brings back the lost energy. The pose is especially good for runners who get tired after a hard race. Sprinters will develop speed and lightness in the legs. The pose relieves pain and stiffness in the heels and helps to soften calcaneal spurs. It strengthens the ankles and makes the legs shapely. The practice of this āsana helps to eradicate stiffness in the region of the shoulder-blades, and arthritis of the shoulder joints is relieved. The abdominal muscles are drawn towards the spine and strengthened. As the diaphragm is lifted to the chest cavity the rate of the heart beat is slowed down. This is an exhilarating pose.

Those who are afraid to do Śīrṣāsana (Plate 90) can conveniently practise this position. As the trunk is lowered in this āsana it is fully stretched and healthy blood is brought to this region without any strain on the heart. It rejuvenates the brain cells and invigorates the brain by relieving fatigue.

Persons suffering from high blood pressure can do this pose.

34

18| *Daṇḍāsana*

TWO*

Daṇḍa means a staff or rod.

TECHNIQUE

Sit on the floor with the legs stretched in front. Place the palms on the floor by the hips, the fingers pointing to the feet. Stretch the hands straight and keep the back erect. (Plate 35)

35

19| *Paripūrṇa Nāvāsana*
TWO*

Paripūrṇa means entire or complete. The posture here resembles that of a boat with oars, hence the name.

TECHNIQUE

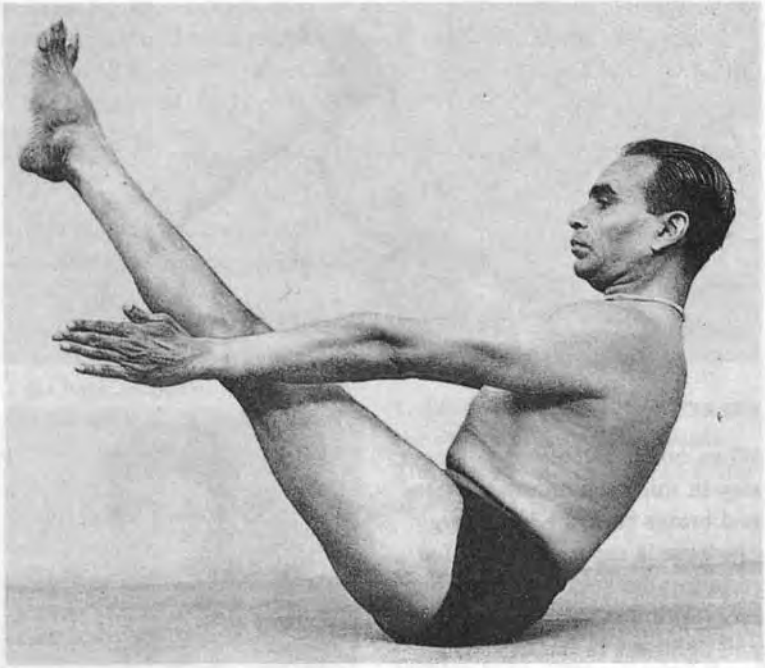
1. Sit on the floor as in Daṇḍāsana (18 above).

2. Exhale, recline the trunk slightly back and simultaneously raise the legs from the floor and keep them stiff as a poker with the knees tight and the toes pointing forwards. Balance is maintained only on the buttocks and no part of the spine should be allowed to touch the floor, from which the legs should be kept at an angle of 60 to 65 degrees. The feet are higher than the head and not level with it as in Ardha Nāvāsana. (Plate 37)

3. Remove the hands from the floor and stretch the arms forward, keeping them parallel to the floor and near the thighs. The shoulders and the palms should be on one level, and the palms should face each other. (Plate 36)

4. Stay in the pose for half a minute, with normal breathing. Gradually increase the time to one minute. One feels the effect of the exercise after only 20 seconds.

5. Then exhale, lower the hands, rest the legs on the floor and relax by lying on the back.



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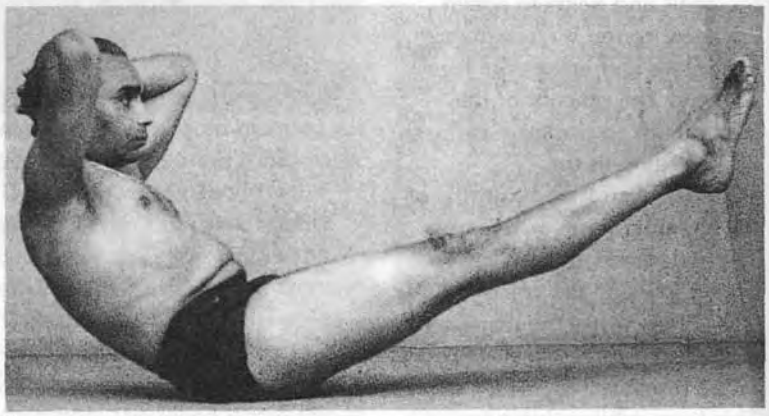


37

EFFECTS

This āsana gives relief to persons who feel a bloating sensation in the abdomen due to gas and also to those suffering from gastric complaints. It reduces fat around the waistline and tones the kidneys.

20| *Ardha Nāvāsana*

TWO*

Ardha means half. Nāva is a ship, boat or vessel. This posture resembles the shape of a boat, hence the name.

TECHNIQUE

1. Sit on the floor. Stretch the legs out in front and keep them straight. (Plate 35)

2. Interlock the fingers and place them on the back of the head just above the neck.

3. Exhale, recline the trunk back and simultaneously raise the legs from the floor, keeping the thighs and knees tight and the toes pointed. The balance of the body rests on the buttocks and no part of the spine should be allowed to touch the floor. (Plate 37) One feels the grip on the muscles of the abdomen and the lower back.

4. Keep the legs at an angle of about 30 to 35 degrees from the floor and the crown of the head in line with the toes.

5. Hold this pose for 20 to 30 seconds with normal breathing. A stay for one minute in this posture indicates strong abdominal muscles.

6. Do not hold the breath during this āsana, though the tendency is always to do it with suspension of breath after inhalation. If the breath is held, the effect will be felt on the stomach muscles and not on the abdominal organs. Deep inhalation in this āsana would loose the grip on the abdominal muscles. In order to maintain this grip, inhale, exhale and hold the breath and go on repeating this process but without breathing deeply. This will exercise not only the abdominal muscles but the organs also.

7. The difference between Ardha Nāvāsana and Paripūrṇa Nāvāsana should be noted; in the latter, the legs are moved higher and the distance between them and the stomach is less than in the former.

EFFECTS

The effects of Ardha Nāvāsana and that of Paripūrṇa Nāvāsana (Plate 36) differ due to the position of the legs. In Paripūrṇa Nāvāsana the exercise is effective on the intestines; whereas, Ardha Nāvāsana works on the liver, gall bladder and spleen.

In the beginning, the back is too weak to bear the strain of the pose. When power to retain this pose comes, it indicates that the back is gaining strength. A weak back is a handicap in many ways, especially to women as they need strong backs for child-bearing. These two āsanas coupled with lateral twistings of the spine will help to strengthen the back.

The importance of having a healthy lower back can be realized if we watch old people when they sit down, get up and walk, for consciously or unconsciously they support their backs with their hands. This indicates that the back is weak and cannot withstand the strain. As long as it is strong and needs no support, one feels young though advanced in age. The two āsanas bring life and vigour to the back and enable us to grow old gracefully and comfortably.

21| *Siddhāsana*

ONE*

Siddha means a semi-divine being supposed to be of great purity and holiness, and to possess supernatural faculties called siddhis. Siddha means also an inspired sage, seer or prophet.

'The Siddhas say that as among niyamas, the most important is not to harm anyone, and among the yamas a moderate diet, so is Siddhāsana among the āsanas.'

'Of the 84 lacs of āsanas, one should always practise Siddhāsana. It purifies 72,000 nāḍīs. (Nāḍīs are channels in the human body through which nervous energy passes.)

'The yogin practising contemplation upon Ātman and observing a moderate diet, if he practises Siddhāsana for twelve years, obtains the yoga siddhis.' (Ātman means the Self and the supreme Soul. Siddhīs are supernatural faculties.)

'When Siddhāsana is mastered, the Unmanī Avasthā (Samādhi) that gives delight follows without effort and naturally.'

The soul has three avasthās or conditions which are included in a fourth. They are waking, dreaming, sleeping and what is called Turīya.

'The first condition is that of wakefulness, where the self is conscious of the common world of gross objects. It enjoys gross things. Here the dependence of body is predominant. The second condition is that of dreaming, where the self enjoys subtle things, fashioning for itself a new world of forms from the material of its waking experience. The spirit is said to roam freely unfettered by the bonds of the body. The third condition is that of sound sleep, where we have neither dreams nor desires. It is called suṣupti. In it the soul is said to become temporarily one with Brahman and to enjoy bliss. In deep sleep we are lifted above all desires and freed from the vexations of spirit. . . . The soul is divine in origin, though clogged with the flesh. In sleep it is said to be released from the shackles of the body and to regain its own nature. . . . But this (that is, the eternal dreamless sleep) is likely to be confused with sheer unconsciousness. . . . The highest is not this dreamless sleep, but another, a fourth state of the soul, a pure intuitional consciousness where there is no knowledge of objects internal or external. In deep sleep the spirit dwells in a region far above the changeful life of sense in absolute union with Brahman. The turīya condition brings out the positive aspect of the negative emphasized in the condition of deep sleep.'

Radhakrishnan in Philosophy of the Upanishads.

This fourth condition has been thus described in the Māṇḍūkya Upanishad as follows:

'The fourth, say the wise, is not subjective experience, nor objective experience, nor experience intermediate between the two, nor is it a negative condition which is neither consciousness nor unconsciousness. It is not the knowledge of the senses, nor is it relative knowledge, nor yet inferential knowledge. Beyond the senses, beyond understanding, beyond all expression, is the fourth. It is pure unitary consciousness, wherein all awareness of the world and of multiplicity is completely obliterated. It is the supreme good. It is One without a second. It is the Self. Know it alone!'

'Rāja-Yoga, Samādhi, Unmanī, Manomanī, Immortality, Concentration, Śūnyāśūnya (void and yet non-void), Parama Pāda (the Supreme State), Amanaska (suspended operation of the mind), Advaita (non-duality), Nirālamba (without support), Niraṅjana (pure), Jīvanmukti (emancipated state), Sahajāvasthā (natural state) and Turīyā (literally the Fourth), all mean the same thing. As a grain of salt thrown into water unites and becomes one with it, a like union between the Mind and the Ātman is Samādhi. When Praṇa and Manas (mind) are annihilated (absorbed), the state of harmony then arising is called Samādhi.'

Haṭha Yoga Pradīpikā,
chapter IV, verses 3 to 6.

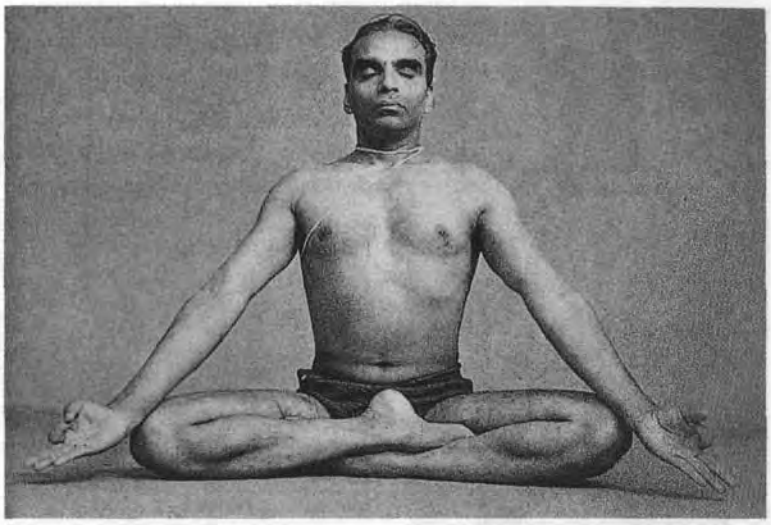
There is no āsana like Siddha, no kumbhaka like Kevala, no mudrā like Khecharī, and no laya (absorption of the mind) like Nāda.

(Khecharī Mudrā, literally roaming through space, is described in the Gheranda Saṁhitā *as follows in verses 25 to 28 of the third chapter:*

'Cut the lower tendon of the tongue and move the tongue constantly; rub it with fresh butter, and draw it out (to lengthen it) with an iron instrument. By practising this always, the tongue becomes long and when it reaches the space between the eyebrows, then Khecharī is accomplished. Then (the tongue being lengthened) practise turning it up and back so as to touch the palate, till at

length it reaches the holes of the nostrils opening into the mouth. Close those holes with the tongue (thus stopping inspiration), and gaze on the space between the eyebrows. This is called Khecharī. By this practice there is neither fainting, nor hunger, nor thirst, nor laziness. There comes neither disease, nor decay, nor death. The body becomes divine.')

(Nāda is the inner mystical sound. Verses 79 to 101 of the fourth chapter describes it in great detail with a variety of similes. Yoga is defined as control over the aberrations of the mind. In order to control the mind it is necessary that it should first be absorbed in concentration of some object, then it is gradually withdrawn from that object and made to look within one's own self. This is where the yogi is asked to concentrate upon the inner mystical sounds. 'The mind is like a serpent, forgetting all its unsteadiness by hearing Nāda, it does not run away anywhere.' Gradually as Nāda becomes latent so does the mind along with it. 'The fire, catching the wood, is extinguished along with it (after burning it up); and so the mind also, working with Nāda, becomes latent along with it.')



38

TECHNIQUE

1. Sit on the floor, with legs stretched straight in front. (Plate 35)

2. Bend the left leg at the knee. Hold the left foot with the hands, place the heel near the perineum and rest the sole of the left foot against the right thigh.

3. Now bend the right leg at the knee and place the right foot over the left ankle, keeping the right heel against the pubic bone.

4. Place the sole of the right foot between the thigh and the calf of the left leg.

5. Do not rest the body on the heels.

6. Stretch the arms in front and rest the back of the hands on the knees so that the palms face upwards. Join the thumbs and the forefingers and keep the other fingers extended. (Plate 38).

7. Hold this position as long as you can, keeping the back, neck and head erect and the vision indrawn as if gazing at the tip of the nose.

8. Release the feet and relax for some time. Then repeat the pose for the same length of time, now placing the right heel near the perineum first and then the left foot over the right ankle as described above.

EFFECTS

This posture keeps the pubic region healthy. Like Padmāsana (Plate 53), it is one of the most relaxing of āsanas. The body being in a sitting posture is at rest, while the position of the crossed legs and erect back keeps the mind attentive and alert. This āsana is also recommended for the practice of prāṇāyāma and for meditation.

From the purely physical point of view, the āsana is good for curing stiffness in the knees and ankles. In it the blood circulates in the lumbar region and the abdomen, and this tones the lower region of the spine and the abdominal organs.

39

40

22| *Vīrāsana*

ONE*

Vīra means a hero, warrior, champion. This sitting posture is done by keeping the knees together, spreading the feet and resting them by the side of the hips.

The pose is good for meditation and prāṇāyāma.

TECHNIQUE

1. Kneel on the floor. Keep the knees together and spread the feet about 18 inches apart.

2. Rest the buttocks on the floor, but not the body on the feet. The feet are kept by the side of the thighs, the inner side of each calf touching the outer side of its respective thigh. Keep the toes pointing back and touching the floor. Keep the wrists on the knees, palms facing up, and join the tips of the thumbs and forefingers. Keep the other fingers extended. Stretch the back erect. (Back view: Plate 42. Front view: Plate 43)

3. Stay in this position as long as you can, with deep breathing.

4. Now interlock the fingers and stretch the arm straight over the head, palms up. (Plate 44)

5. Stay in this position for a minute with deep breathing.

6. Exhale, release the fingerlock, place the palms on the soles, bend forward and rest the chin on the knees. (Plate 45)

7. Stay in this position for a minute with normal breathing.

8. Inhale, raise the trunk up, bring the feet forward and relax.

9. If you find it difficult to perform the pose as described above, try placing the feet one above the other and rest the buttocks on them. (Plate 39) Gradually move the toes further apart, separate the feet (Plates 40 and 41) and bring them to rest outside the thighs. Then, in time the buttocks will rest properly on the floor and the body will not rest on the feet.

EFFECTS

The pose cures rheumatic pains in the knees and gout, and is also good for flat feet. Due to the stretching of the ankles and the feet, proper arches will be formed. This, however, takes a long time and requires daily practice of the pose for a few minutes for several months. Those suffering from pain in the heels or growth of calcaneal spurs there will get relief and the spurs will gradually disappear.

The pose can even be done immediately after food and will relieve heaviness in the stomach.

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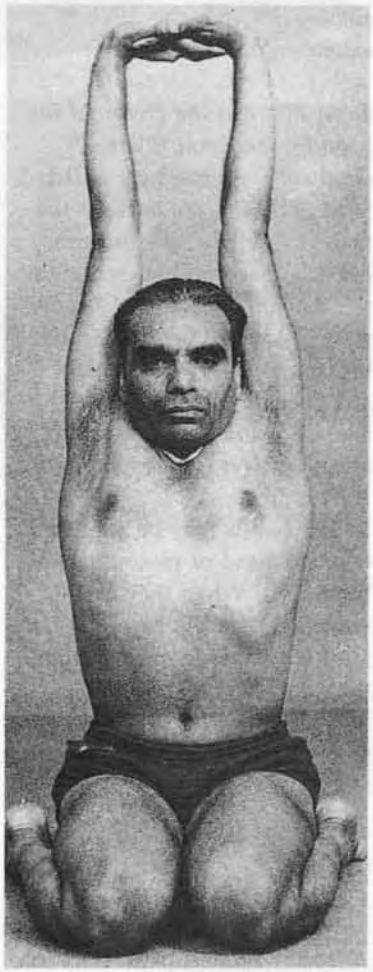


44

23| *Supta Vīrāsana*

TWO*

Supta means lying down. In this āsana one reclines back on the floor and stretches the arms behind the head.

TECHNIQUE

1. Sit in Vīrāsana. (Plate 43)

2. Exhale, recline the trunk back and rest the elbows one by one on the floor. (Plate 46)

3. Relieve the pressure on the elbows one after the other by extending the arms.

4. At first rest the crown of the head on the floor. (Plate 47) Gradually rest the back of the head and then the back on the floor. (Plate 48) Take the arms over the head and stretch them out straight. (Plate 49) Hold this pose as long as you can while breathing deeply. Then place the arms beside the trunk, press the elbows to the floor and sit up again with an exhalation.

5. The hands may be stretched over the head or placed beside the thighs. When they are stretched over the head, do not raise the shoulder-blades from the floor.

6. Beginners may keep the knees apart.

46

47

48

49

EFFECTS

This āsana stretches the abdominal organs and the pelvic region. People whose legs ache will get relief from holding this pose for 10 to 15 minutes and it is recommended to athletes and all who have to walk or stand about for long hours. It can be done after meals and if before retiring at night the legs feel rested next morning. Several of my pupils who were cadets at the National Defence Academy after long route marches found great relief by combining this āsana with Sarvāngāsana I. (Plate 102)

50

24| *Baddha Koṇāsana*

THREE*

Baddha means caught, restrained. Koṇa means an angle. In this posture, sit on the floor, bring the heels near the perineum, catch the feet and widen the thighs until the knees touch the floor on either side. This is how Indian cobblers sit.

51

TECHNIQUE

1. Sit on the floor with the legs stretched straight in front. (Plate 35)

2. Bend the knees and bring the feet closer to the trunk.

3. Bring the soles and heels of the feet together and catching the feet near the toes, bring the heels near the perineum. The outer sides of both feet should rest on the floor, and the back of the heels should touch the perineum.

4. Widen the thighs and lower the knees until they touch the floor.

5. Interlock the fingers of the hands, grip the feet firmly, stretch the spine erect and gaze straight ahead or at the tip of the nose. (Plate 50) Hold the pose as long as you can.

6. Place the elbows on the thighs and press them down. Exhale, bend forward, rest the head, then the nose and lastly the chin on the floor. (Plate 51) Hold this position from half a minute to a minute with normal breathing.

7. Inhale, raise the trunk from the floor and come back to position 5. (Plate 50)

8. Then release the feet, straighten the legs and relax.

52

25 *Padmasana*

FOUR*

Padma means a lotus. This is the lotus posture, one of the most important and useful āsanas. It is the posture for meditation and the Buddha is often depicted in it.

Verse 48 of the first chapter of the Hatha Yoga Pradīpikā *describes the posture and the practice of breath control while seated in it thus:*

'Assuming Padmasana and having placed the palms one upon another, fix the chin firmly upon the breast and contemplating upon Brahman, frequently contract the anus and raise the apana up; by similar contraction of the throat force the prana down. By this he obtains unequalled knowledge through the favour of Kundalinī (which is roused by this process).'

Kundalinī is the Divine Cosmic Energy in bodies. It is symbolized by a coiled and sleeping serpent in the lowest bodily centre at the base of the spinal column. This latent energy has to be awakened and made to go up the spine to the brain through Suṣumnā Naḍi, a channel through which nervous energy passes, and through the six chakras, the subtle centres in the body, the fly-wheels in the nervous system of the human machine. The awakening of Kundalinī is discussed in detail in Arthur Avalon's (Sir John Woodroffe's) book entitled The Serpent Power.

This is one of the basic postures and is often used in the variations of Śīrṣāsana and Sarvangāsana.

EFFECTS

The pose is specially recommended for those suffering from urinary disorders. The pelvis, the abdomen and the back get a plentiful supply of blood and are stimulated. It keeps the kidneys, the prostate and the urinary bladder healthy. It is well known that diseases of the urinary tract are rarely found among the Indian cobblers and the reason for that is that they sit all day in this pose.

It relieves sciatic pain and prevents hernia. If practised regularly, it relieves pain and heaviness in the testicles.

The pose is a blessing to women. Coupled with Sarvāngāsana I (Plate 102) and its cycle (Plates 113 to 125) it checks irregular menstrual periods and helps the ovaries to function properly. It is found that pregnant women who sit daily in this pose for a few minutes will have much less pain during delivery and will be free from varicose veins. (It is recommended for pregnant women in Dr Grantly Dick Reed's book *Childbirth Without Fear*.)

Along with Padmāsana (Plate 53) and Vīrasana (Plate 43) this āsana is recommended for Prāṇāyāma practice and for meditation. When sitting in meditation in this pose the palms should be folded in front of the chest (Plate 52), but to do this with the back erect requires practice. This asana can be done without fear even after meals as long as the head is not rested on the floor.

TECHNIQUE

1. Sit on the floor with the legs straight. (Plate 35)

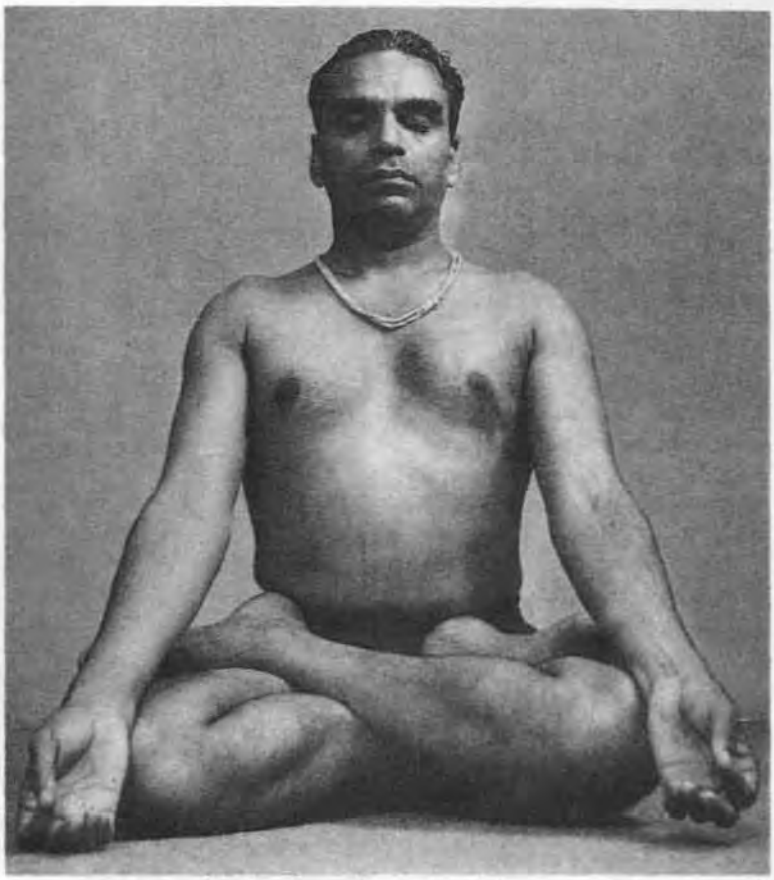
2. Bend the right leg at the knee, hold the right foot with the hands and place it at the root of the left thigh so that the right heel is near the navel.

3. Now bend the left leg, and holding the left foot with the hands place it over the right at the root, the heel being near the navel. The soles of the feet should be turned up. This is the basic Padmāsana pose. (Plate 53)

4. People not used to sitting on the floor seldom have flexible knees. At the start they will feel excruciating pain around the knees. By perseverance and continued practice the pain will gradually subside and they can then stay in the pose comfortably for a long time.

5. From the base to the neck the spine should remain erect. The arms may be stretched out, the right hand being placed on the right knee and the left hand on the left knee. The forefingers and the thumbs are bent and touch each other.

6. Change the leg position by placing the left foot over the right thigh and the right foot over the left thigh. This will develop the legs evenly.



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EFFECTS

After the initial knee pains have been overcome, Padmāsana is one of the most relaxing poses. The body being in a sitting posture, it is at rest without being sloppy. The position of the crossed legs and the erect back keeps the mind attentive and alert. Hence it is one of the āsanas recommended for practising prāṇāyāma (breath control).

On the purely physical level, the pose is good for curing stiffness in the knees and ankles. Since the blood is made to circulate in the lumbar region and the abdomen, the spine and the abdominal organs are toned.

26| *Parvatāsana*

FOUR*

Parvata means a mountain. In this variation of Padmāsana the arms are stretched over the head with the fingers interlocked.

TECHNIQUE

1. Sit in Padmāsana. (Plate 53)

2. Interlock the fingers, and stretch the hands vertically up over the head. Keep the head bent forward with the chin on the breast bone.

3. Stretch the arms up from the latissimus dorsi (near the floating ribs at the back) and the shoulder-blades. The palms should face upwards. (Plate 54)

4. Hold the pose for a minute or two with deep and even breathing. Change the crossing of the legs and the interlock of the fingers and repeat the pose, keeping the back erect.

EFFECTS

The āsana relieves rheumatic pains and stiffness in the shoulders. It helps draw free movement and to develop the chest. The abdominal organs are drawn in and the chest expands fully.

54

27| *Matsyāsana*

FIVE*

Matsya means a fish. This posture is dedicated to Matsya the Fish Incarnation of Viṣṇu, the source and maintainer of the universe and of all things. It is related that once upon a time the whole earth had become corrupt and was about to be overwhelmed by a universal flood. Viṣṇu took the form of a fish and warned Manu (the Hindu Adam) of the impending disaster. The fish then carried Manu, his family and the seven great sages in a ship, fastened to a horn on his head. It also saved the Vedas from the flood.

TECHNIQUE

1. Sit in Padmāsana. (Plate 53)

2. Lie flat on the back with the legs on the floor.

3. Exhale, arch the back by lifting the neck and the chest, take the head back and rest the crown on the floor. Drag the head further back by holding the crossed legs with the hands and increase the back arch. (Plate 55)

4. Now take the hands from the legs, bend the arms, hold the elbows with the hands and rest the forearms on the floor behind the head. (Plate 56)

5. Stay in this position from 30 to 60 seconds while breathing deeply.

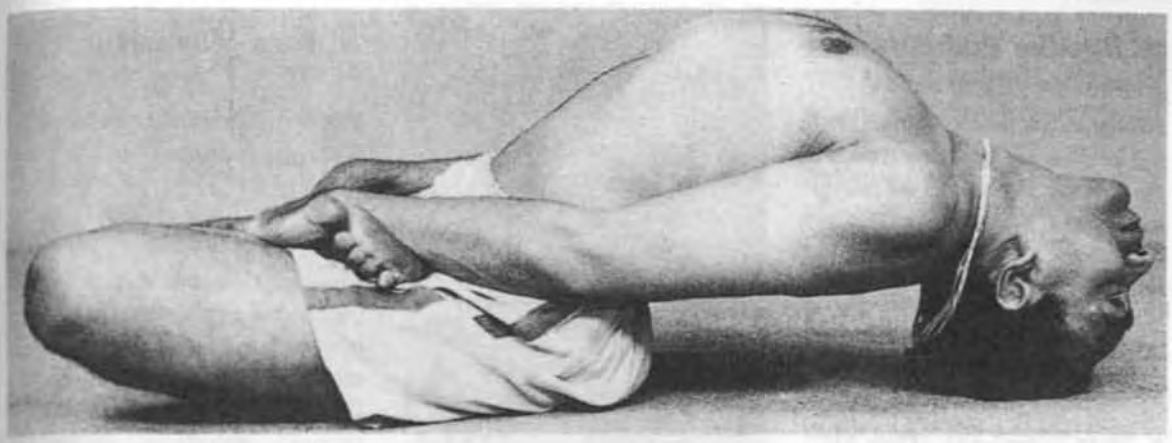
6. Rest the back of the head on the floor, lie flat on the back, inhale and then come up to Padmāsana, release the legs and relax.

7. Recross the legs the other way and repeat the pose for the same length of time.

8. If positions 3 and 4 are difficult to achieve, lie flat on the back with the arms stretched straight over the head. (Plate 57)

EFFECTS

The dorsal region is fully extended in this posture and the chest is well expanded. Breathing becomes fuller. The thyroids benefit from the exercise due to the stretching of the neck. The pelvic joints become elastic. The āsana relieves inflamed and bleeding piles.



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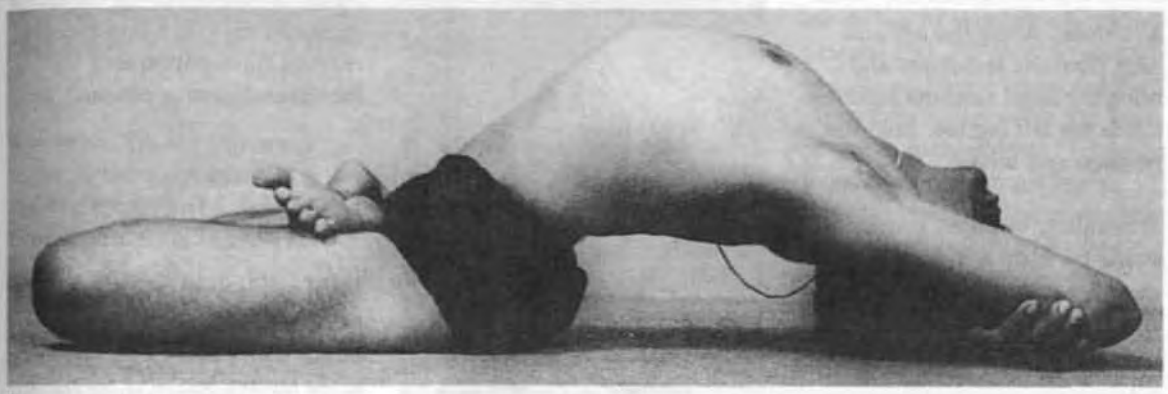

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28| *Baddha Padmāsana*

SIX*

Baddha means caught, restrained. In this position the hands are crossed at the back and the big toes are caught from behind. The body is caught between the crossed legs in front and the crossed hands behind, hence the name.

TECHNIQUE

1. Sit in Padmāsana. (Plate 53)

2. Exhale, swing the left arm back from the shoulders and bring the hand near the right hip. Catch the left big toe, hold the position and inhale.

3. Similarly, with an exhalation, swing the right arm back from the shoulder, bring it near the left hip and catch the right big toe. (Front view: Plate 58. Back view: Plate 59)

4. If the toes are difficult to catch stretch the shoulders back, so that the shoulder-blades are brought near each other. A little practice in swinging the arms back with an exhalation will enable one to catch the big toes.

5. If the right foot is placed over the left thigh and then the left foot over the right thigh, catch the left big toe first and then the right big toe. If, on the other hand, the left foot is placed over the right thigh first and then the right foot over the left thigh, catch the right big toe first and then the left big toe. Catch first the big toe of the foot which is uppermost.

58

59

6. Throw the head as far back as possible and take a few deep breaths.

7. Inhale deeply, and then with an exhalation bend the trunk forward from the hips and rest the head on the floor, without releasing the toes from the hand grip. Bending the head forward in Baddha Padmāsana (Plate 58) and touching it on the floor is called:

29| *Yoga Mudrāsana*

SIX*

This āsana is especially useful in awakening Kuṇḍalinī.

EFFECTS

Crossing the hands behind the back expands the chest and increases the range of shoulder movement. Yoga Mudrāsana (Plate 60) intensifies the peristaltic activity and pushes down the accumulated waste matter in the colon and thereby relieves constipation and increases digestive power.

30| *Mahā Mudrā*

FIVE*

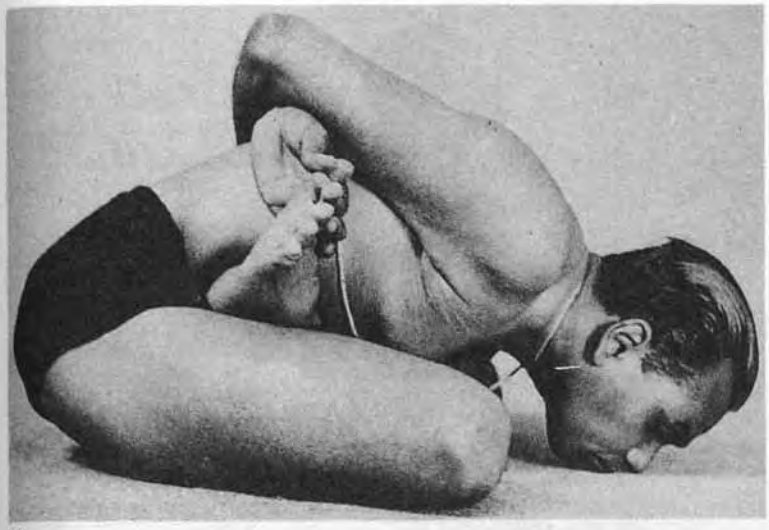
Mahā means great or noble. Mudrā means shutting, closing or sealing. In this sitting posture the apertures at the top and bottom of the trunk are held fast and sealed.

TECHNIQUE

1. Sit on the floor with the legs stretched in front. (Plate 35)

2. Bend the left knee and move it to the left, keeping the outer side of the left thigh and the left calf on the floor.

3. Place the left heel against the inner side of the left thigh near the perineum. The big toe of the left foot should touch the inner side of the right thigh. The angle between the extended right leg and the bent left leg should be a right angle of 90 degrees.



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4. Stretch the arms forward towards the right foot and hook the big toe with the thumbs and forefingers.

5. Lower the head to the trunk until the chin rests in the hollow between the collar bones just above the breast-bone.

6. Keep the spine fully stretched and do not allow the right leg to tilt to the right.

7. Inhale completely. Tighten the entire abdomen from the anus to the diaphragm. Pull the abdomen back towards the spine and also up towards the diaphragm.

8. Relax the abdominal tension, then exhale, again inhale and hold the breath, maintaining the abdominal grip. Hold this posture as stated above from one to three minutes. (Plate 61)

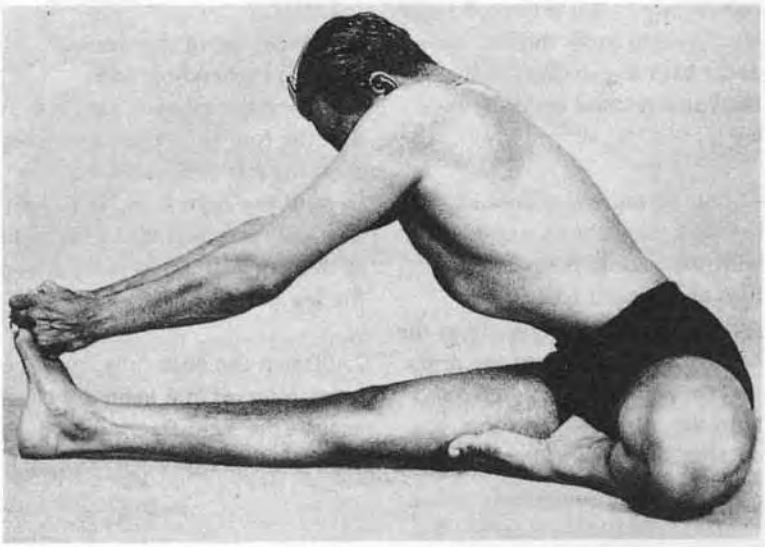
9. Relax the abdominal tension, exhale, raise the head, release the hands and straighten the bent leg.

10. Repeat on the other side, keeping the left leg straight and the right one bent for an equal length of time.

EFFECTS

This āsana tones the abdominal organs, the kidneys and adrenal glands. Women suffering from a prolapsed womb find relief as it pulls the womb up to its original position. Persons suffering from spleen ailments and from enlargement of the prostate gland will benefit by staying in this pose longer. It cures indigestion.

'This Mahāmudrā destroys death and many other pains. 'There is nothing that one cannot eat or has to avoid (if one has practised it). All food regardless of taste and even when deadly poisonous is digested.' 'He who practices Mahāmudrā, overcomes consumption, leprosy, piles, enlargement of the spleen, indigestion and other complaints of long duration.' (*Haṭha Yoga Pradīpikā*, chapter 3, verses 14, 16 and 17.)



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31| *Jānu Śīrṣāsana*

FIVE*

Jānu means the knee. Śīrṣa is the head. In this posture sit with one leg stretched out on the ground and the other bent at the knee. Then catch the extended foot with both the hands and place the head on that knee.

TECHNIQUE

1. Sit on the floor, with legs stretched straight in front. (Plate 35)

2. Bend the left knee and move it to the left, keeping the outer side of left thigh and the left calf on the floor.

3. Place the left heel against the inner side of the left thigh near the perineum. The big toe of the left foot should touch the inner side of the right thigh. The angle between the two legs should be obtuse. Do not keep the left knee in line with the left thigh at a right angle to the extended right leg. Try and push the left knee as far back as possible, so that the body is stretched from the bent leg.

4. Extend the arms forward towards the right foot and hold it with the hands. First catch the toes of the right foot, then gradually catch the sole, then the heel and finally extend the arms and catch the wrist of one hand with the other, beyond the outstretched foot. (Plate 62)

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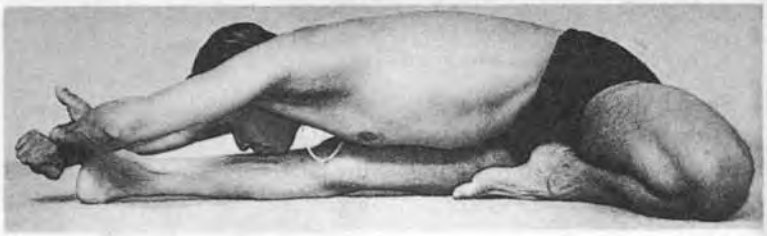


63

5. Keep the right leg stretched throughout by tightening the knee. See that the back of the right knee rests on the floor.

6. Exhale, move the trunk forward by bending and widening the elbows, and rest first the forehead, then the nose, then the lips and lastly the chin beyond the right knee. (Plate 63) The right foot will tilt to the right in the beginning. Do not allow the leg to tilt.

7. Stretch the back fully, pull the trunk forward and keep the chest against the right thigh.

8. Stay in this position with deep breathing from half a minute to a minute. One can also do the pose holding the breath after each exhalation.

9. Inhale, raise the head and trunk, straighten the arms and gaze up for a few seconds, extending the spine and trying to make it concave. (Plate 62)

10. Release the hand grip on the right foot, straighten the left leg and come back to position 1.

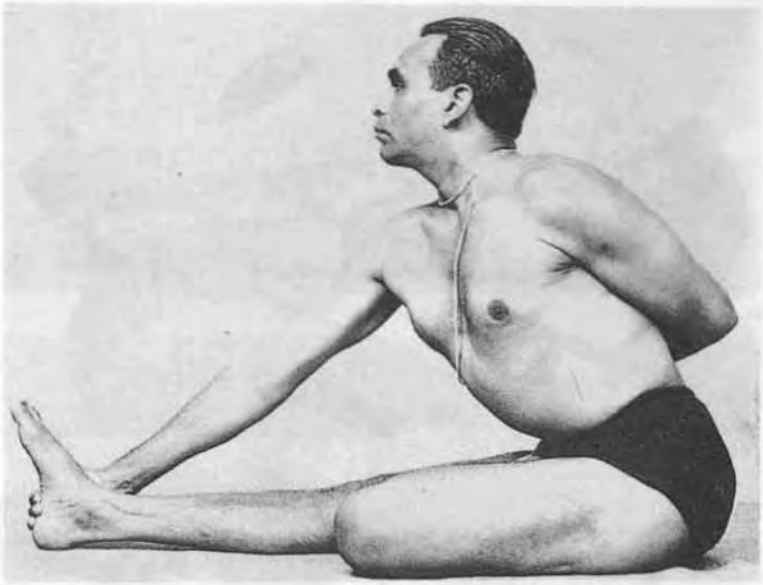
11. Repeat the pose keeping the left leg stretched out and bending the right leg at the knee. Stay in the pose for the same length of time on both the sides.

EFFECTS

This āsana tones the liver and the spleen and thereby aids digestion. It also tones and activates the kidneys, the effect on which can be felt while one is performing the pose as explained above.

Persons suffering from enlargement of the prostate gland will benefit by staying longer in this pose. They should practice this āsana along with Sarvāngāsana. (Plate 102)

The pose is also recommended for people suffering from low fever for a long time.



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32| *Ardha Baddha Padma Paschimottānāsana*

EIGHT*

Ardha means half, baddha means caught, restrained and padma a lotus. Paschimottānāsana (Plate 81) is the posture where the back of the whole body is intensely stretched.

TECHNIQUE

1. Sit on the floor, with the legs stretched straight in front. (Plate 35)

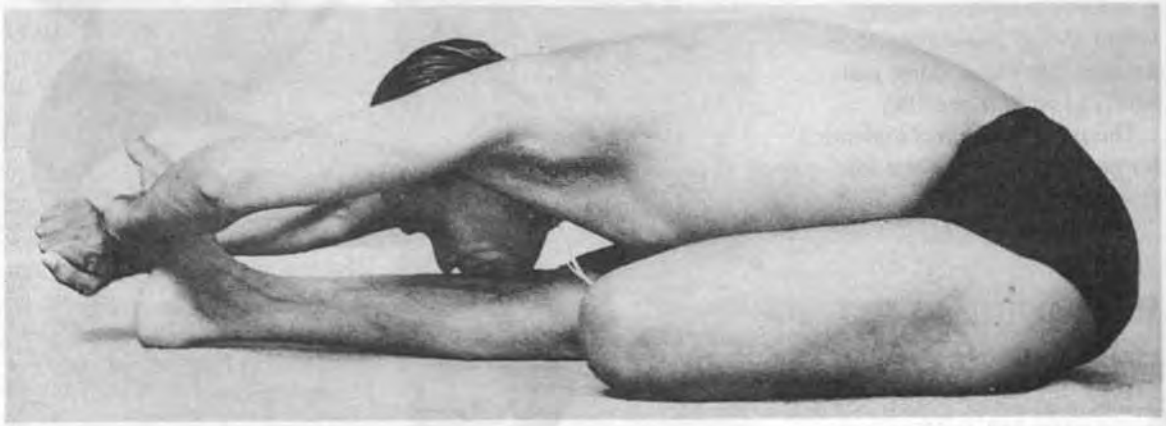
2. Bend the left leg at the knee, and place the left foot over the right thigh. The left heel should press the navel and the toes should be stretched and pointing. This is the half lotus posture.

65

3. Bring the left arm round the back from behind and with an exhalation catch the big toe of the left foot. If the toe cannot be grasped easily, swing back the left shoulder.

4. After holding the left big toe, move the bent left knee nearer to the extended right leg. Stretch the right arm forward and catch the right foot with the right hand, the palm touching the sole. (Plates 64 and 65)

66



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5. Inhale, stretch the back and gaze up for a few seconds, without releasing the grip on the left big toe.

6. Exhale, move the trunk forward by bending the right elbow outwards. Rest the forehead, then the nose, then the lips and lastly the chin on the right knee. (Plate 66)

7. In the initial stages, the knee of the extended leg will be lifted off the floor. Tighten the thigh muscles and rest the entire back of the extended right leg on the floor.

8. Stay in this position from 30 to 60 seconds, breathing evenly.

9. Inhale, raise the head and trunk, release the hands, straighten the left leg and come to position 1.

10. Repeat the pose on the other side, keeping the left leg stretched out on the ground, bending the right knee and placing the right foot on the left thigh. Stay for the same length of time on both sides.

11. If you cannot hold the toe with the hand from behind, hold the extended leg with both hands and follow the above techniques. (Plate 67)

EFFECTS

Due to the half lotus pose, the knees become flexible enough to execute the full lotus pose. While placing the chin on the knee of the extended leg, the bent knee is brought close to the stretched leg. This gives a good pull to the navel and abdominal organs. Blood is made to flow round the navel and the genital organs. The navel is considered to be a nerve centre, and the Svādhiṣṭhāna Chakra, one of the purificatory fly-wheels in the human nervous system, is situated there. This chakra corresponds to the hypo-gastric plexus. The pose is recommended for persons with rounded and drooping shoulders.

33| *Triaṅgā Mukhaikapda Paschimottānāsana*

FIVE*

Trianga means three limbs or parts thereof. In this posture the three parts are the feet, knees and buttocks. Mukhaikapāda (a compound of three words, mukha = face, eka = one, and pāda = leg or foot) corresponds to the face (or mouth) touching one (extended) leg. In Paschimottānāsana (Plate 81) the back of the whole body is intensely stretched.

68

69

TECHNIQUE

1. Sit on the floor, with the legs stretched straight in front. (Plate 35)

2. Bend the right leg at the knee and move the right foot back. Place the right foot by the side of the right hip joint, keep the toes pointing back and rest them on the floor. The inner side of the right calf will touch the outer side of the right thigh.

3. Balance in this position, throwing the weight of the body on the bent knee. In the beginning, the body tilts to the side of the outstretched leg, and the foot of the outstretched leg also tilts outwards. Learn to balance in this position, keeping the foot and toes stretched and pointing forward.

4. Now hold the left foot with both the palms, gripping the sides of the sole. If you can, then extend the trunk forward and hook the wrists round the outstretched left foot. (Plate 68) Take two deep breaths. It usually takes several months before one can hook the wrists in this way, so do not despair after the first few attempts.

5. Join the knees, exhale and bend forward. Rest first the forehead, then the nose, next the lips and ultimately the chin on the left knee. (Plate 69) To achieve this, widen the elbows and push the trunk forward with an exhalation.

6. Do not rest the left elbow on the floor. In the beginning, one loses balance and topples over to the side of the extended leg. The trunk should, therefore, be slightly bent towards the side of the bent leg and the weight of the body should be taken by the bent knee.

7. Stay in this position from half a minute to a minute, breathing evenly.

8. Inhale, raise the head and trunk, release the hands, straighten the right leg and come to position 1.

9. Repeat the pose on the other side, keeping the right leg stretched out on the ground, bending the left knee and placing the left foot by the left hip joint. Stay for the same length of time on both sides.

EFFECTS

This āsana is recommended for persons suffering from dropped arches and flat feet. It cures sprains in the ankle and the knee, and any swelling in the leg is reduced.

Along with Jānu Śīrṣāsana (Plate 63) and Ardha Baddha Padma Paschimottānāsana (Plate 66), this āsana tones the abdominal organs and keeps them free from sluggishness. We abuse our abdominal organs by over-indulgence or by conforming to social etiquette. Abdominal organs cause a majority of diseases and ancient sages emphasized that their health was essential for longevity, happiness and peace of mind. These forward bending āsanas keep the abdominal organs healthy and in trim. Apart from keeping the muscles in shape, they work on the organs as well.

34| *Marīchyāsana I*

FIVE*

This āsana is dedicated to the sage Marīchi, son of the Creator, Brahmā. Marīchi was the grandfather of Sūrya (the Sun God).

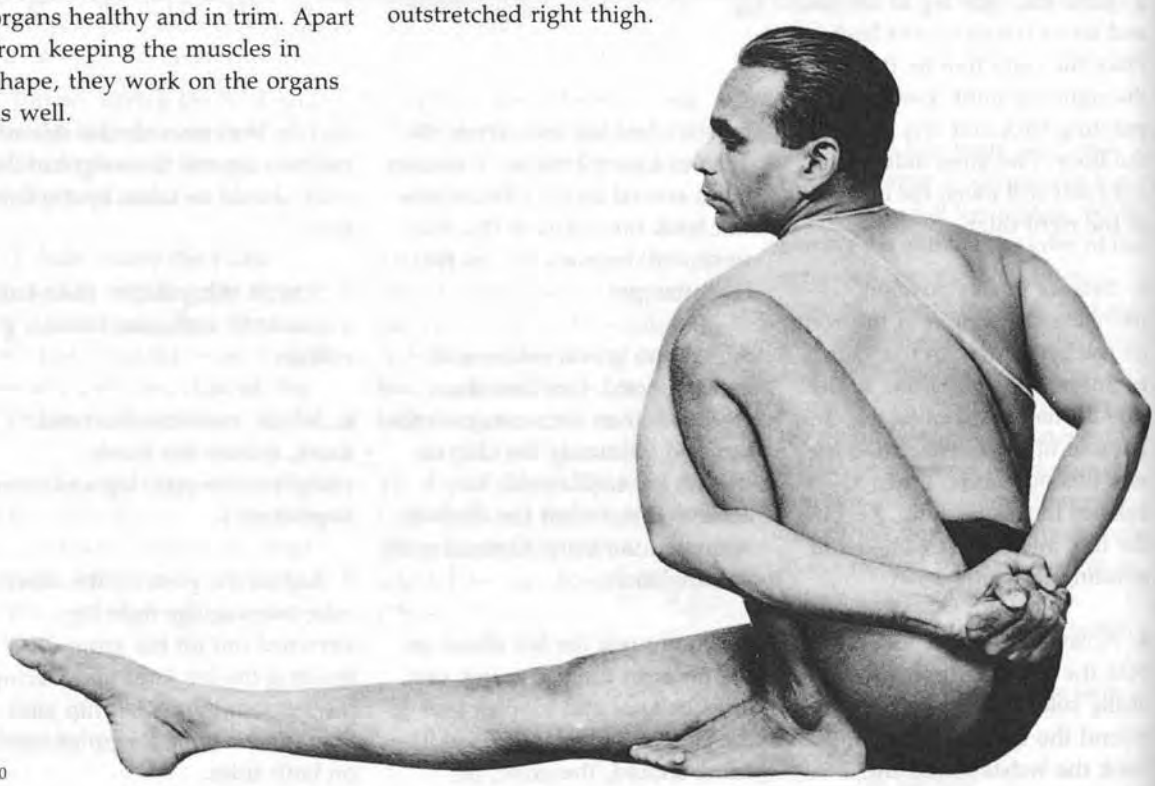
TECHNIQUE

1. Sit on the floor with the legs stretched straight in front. (Plate 35)

2. Bend the left knee and place the sole and heel of the left foot flat on the floor. The shin of the left leg should be perpendicular to the floor and the calf should touch the thigh. Place the left heel near the perineum. The inner side of the left foot should touch the inner side of the outstretched right thigh.

3. Stretch the left shoulder forward till the left armpit touches the perpendicular left shin. Turn the left arm round the left shin and thigh, bend the left elbow and throw the left forearm behind the back at the level of the waist. Then move the right hand behind the back and clasp the left hand with the right at the wrist or vice versa. If that is not possible then clasp the palms or the fingers. (Plate 70)

4. Now, turn the spine to the left, keeping the outstretched right leg straight. Remain in this position gazing at the outstretched right big toe and take a few deep breaths.



5. Exhale, and bend forward. Rest the forehead, then the nose, next the lips and lastly the chin on the right knee. (Plate 71) While in this position, keep both shoulders parallel to the floor and breathe normally. Stay in the pose for about 30 seconds and see that the back of the entire extended leg rests on the floor throughout.

6. Inhale, raise the head from the right knee (Plate 70), release the hands, straighten the left leg and come to position 1.

7. Repeat the pose on the other side for an equal length of time.

EFFECTS

The fingers gain in strength by the practice of this āsana. In the preceding āsanas (namely, Jānu Śīrṣāsana (Plate 63), Ardha Baddha Padma Paschimottānāsana (Plate 66) and Triang Mukhaikapāda Paschimottānāsana (Plate 69) the abdominal organs are made to contract by gripping a leg with the hands. In this pose the hands do not hold the legs. To bend forward and to rest the chin on the knee of the extended leg the abdominal organs have to contract vigorously. This creates a better circulation of blood round the abdominal organs and keeps them healthy. In the beginning it is very difficult to bend forward at all after gripping both hands behind the back, but it comes with practice. The dorsal region of the spine is also exercised in this pose.

NOTE

The four poses, Jānu Śīrṣāsana, Ardha Baddha Padma Paschimottānāsana, Triang Mukhaikapāda Paschimottānāsana and Marīchyāsana I, are preparatory poses for the correct Paschimottānāsana. (Plate 81) It is difficult for many to get a good grip on the feet in Paschimottānāsana even after several attempts. These four āsanas give one sufficient elasticity in the back and legs so that one gradually achieves the correct Paschimottānāsana (Plate 81) as described later. Once this is done with ease, these four āsanas can be practised once or twice a week instead of daily.

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35| *Upaviṣṭha Koṇāsana*

NINE*

Upaviṣṭha means seated. Koṇa means an angle.

TECHNIQUE

1. Sit on the floor with the legs stretched straight in front. (Plate 35)

2. Move the legs sideways one by one and widen the distance between them as far as you can. Keep the legs extended throughout and see that the back of the entire legs rests on the floor.

3. Catch the big toes between the respective thumbs and index and middle fingers.

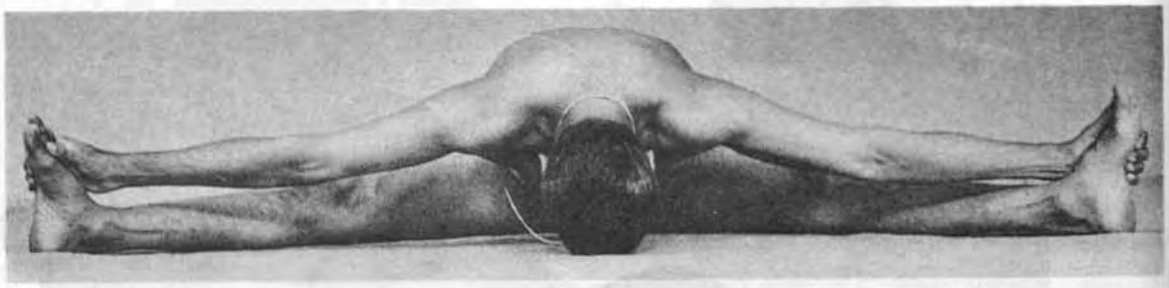
4. Keep the spine erect and extend the ribs. Pull the diaphragm up and hold the pose for a few seconds with deep breaths. (Plate 72)

72

5. Now clasp the feet with the hands. Exhale, bend forward and rest the head on the floor. (Plate 73) Then extend the neck and place the chin on the floor.

6. Then, try to rest the chest on the floor. (Plate 74) Stay in this position from 30 to 60 seconds with normal breathing.

7. Inhale, raise the trunk off the floor (Plate 72) and release the hold on the feet, bring them together and relax.



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EFFECTS

The āsana stretches the hamstrings and helps the blood to circulate properly in the pelvic region and keeps it healthy. It prevents the development of hernia of which it can cure mild cases and relieves sciatic pains. Since the āsana controls and regularizes the menstrual flow and also stimulates the ovaries, it is a boon to women.

36| *Paschimottānāsana (also called Ugrāsana or Brahmacharyāsana)*

SIX*

Paschima literally means the west. It implies the back of the whole body from the head to the heels. The anterior or eastern aspect is the front of the body from the face down to the toes. The crown of the head is the upper or northern aspect while the soles and heels of the feet form the lower or southern aspect of the body. In this āsana the back of the whole body is intensely stretched, hence the name.

Ugra means formidable, powerful and noble. Brahmacharya means religious study, self-restraint and celibacy.

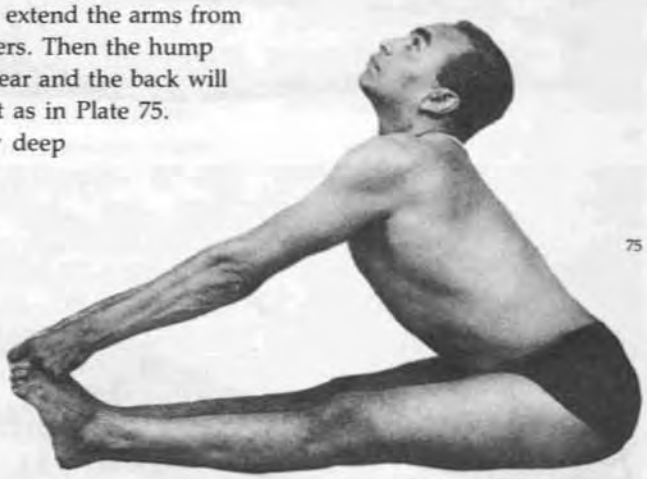
TECHNIQUE

1. Sit on the floor with the legs stretched straight in front. Place the palms on the floor by the side of the hips. Take a few deep breaths. (Plate 35)

2. Exhale, extend the hands and catch the toes. Hold the right big toe between the right thumb and the index and middle fingers and likewise the left big toe. (Plate 75)

3. Extend the spine and try to keep the back concave. To start with the back will be like a hump. This is due to stretching the spine only from the area of the shoulders. Learn to bend right from the pelvic region of the back and also to extend the arms from the shoulders. Then the hump will disappear and the back will become flat as in Plate 75. Take a few deep breaths.

4. Now exhale, bend and widen the elbows, using them as levers, pull the trunk forward and touch the forehead to the knees. (Plate 76) Gradually rest the elbows on the floor, stretch the neck and trunk, touch the knees with the nose and then with the lips. (Plate 77)



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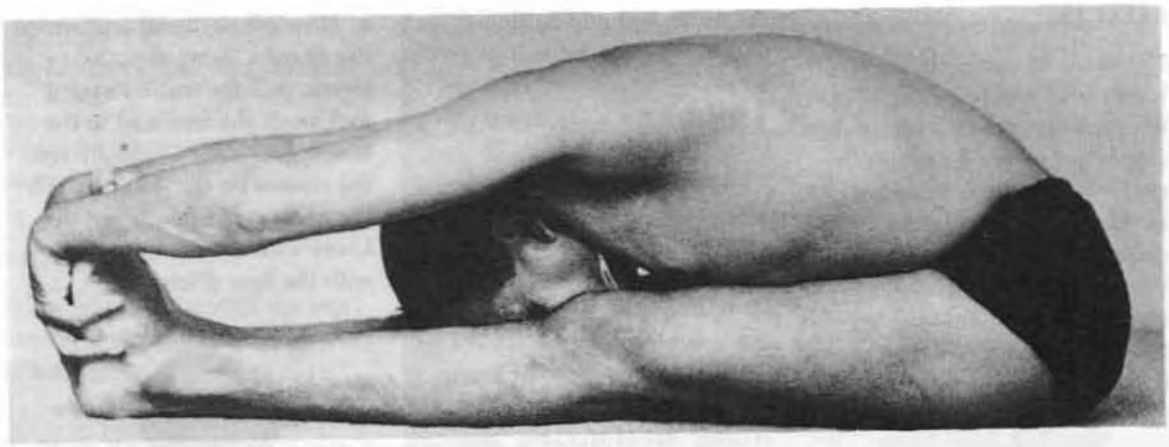

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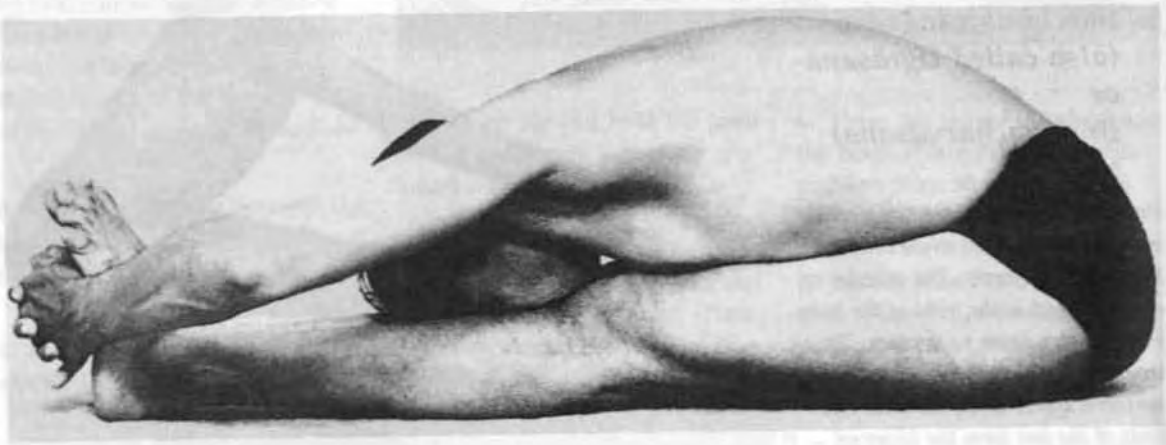

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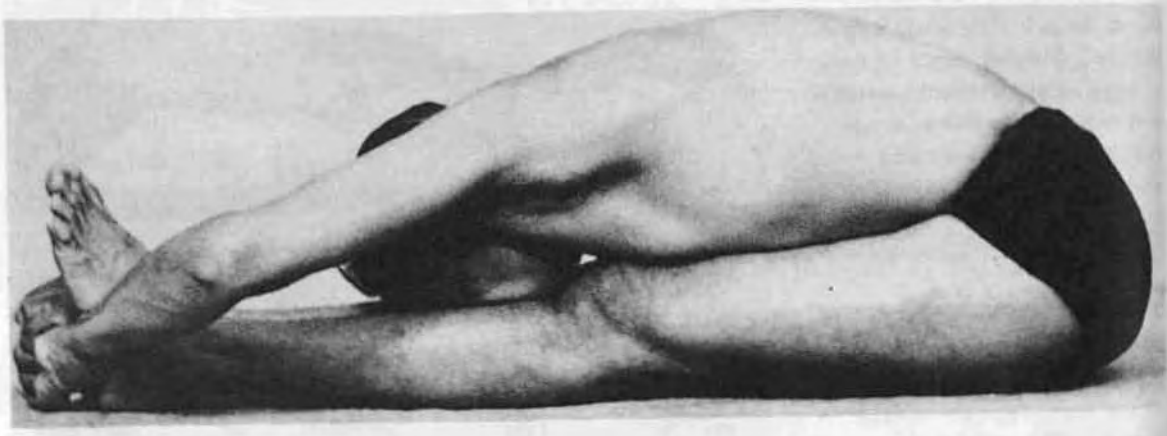

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5. When this becomes easy, make a further effort to grip the soles and rest the chin on the knees. (Plate 78)

6. When this also becomes easy, clasp the hands by interlocking the fingers and rest the chin on the shins beyond the knees. (Plate 79)

7. When position 6 becomes easy, grip the right palm with the left hand or the left palm with the right hand beyond the outstretched feet exhale and rest the chin on the shins beyond the knees. (Plate 80)

8. If position 8 also becomes easy, hold the right wrist with the left hand or the left wrist with the right hand and rest the chin on the shins beyond the knees. (Plate 81)

9. See that the back of the legs at the knee joints rests firmly on the ground. In the initial stages the knees will be lifted off the floor. Tighten the muscles at the back of the thighs and pull the trunk forward. Then the back of the knee joints will rest on the floor.

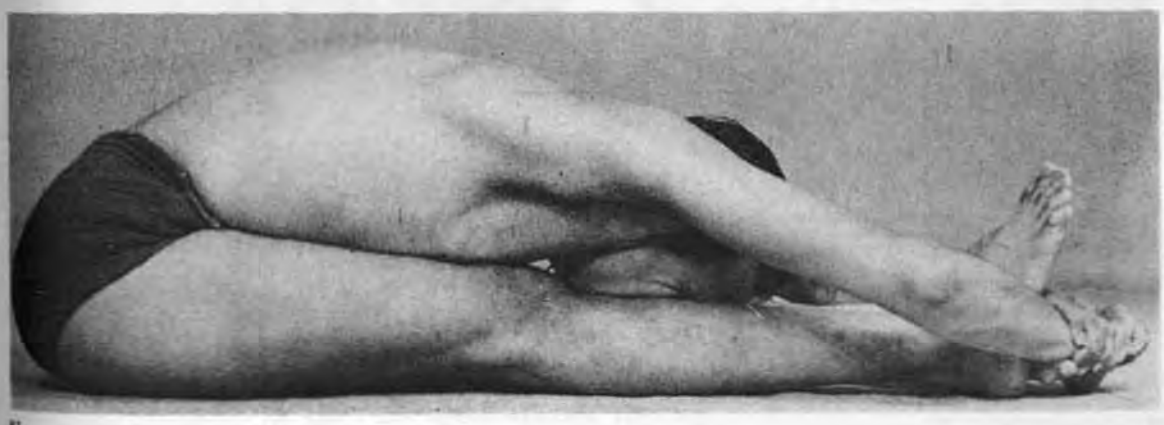
10. Try and stay in whichever of the above positions you can achieve from 1 to 5 minutes, breathing evenly.

11. Inhale, raise the head from the knees and relax.

EFFECTS

This āsana tones the abdominal organs and keeps them free from sluggishness. It also tones the kidneys, rejuvenates the whole spine and improves the digestion.

The spines of animals are horizontal and their hearts and below the spine. This keeps them healthy and gives them great power of endurance. In humans the spine is vertical and the heart is not lower than the spine, so that they soon feel the effects of exertion and are also susceptible to the heart diseases. In Paschimottānāsana the spine is kept straight and horizontal and the heart is at a lower level than the spine. A good stay in this pose massages the heart, the spinal column and the abdominal organs, which feel refreshed and the mind is rested. Due to the extra stretch given to the pelvic region more oxygenated blood is brought there and the gonad glands absorb the required nutrition from the blood. This increases vitality, helps to cure impotency and leads to sex control. Hence, this āsana was called Brahmacharyāsana. Brahmacharya means celibacy and a Brahmachāri is one who has controlled the sex appetite.



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37| *Pūrvottānāsana*

ONE*

Pūrva literally means the East. It means the front of the whole body from the forehead to the toes. Uttāna means an intense stretch. In this posture, the whole front of the body is stretched intensely.

TECHNIQUE

1. Sit on the floor with the legs stretched straight in front. Place the palms on the floor by the hips, with the fingers pointing in the direction of the feet. (Plate 35)

2. Bend the knees and place the soles and heels on the floor.

3. Take the pressure of the body on the hands and feet, exhale and lift the body off the floor. Straighten the arms and the legs and keep the knees and elbows tightened. (Plate 82)

4. The arms will be perpendicular to the floor from the wrists to the shoulders. From the shoulders to the pelvis, the trunk will be parallel to the floor.

5. Stretch the neck and throw the head as far back as possible.

6. Stay in this posture for one minute, breathing normally.

7. Exhale, bend the elbows and knees, lower the body to sit on the floor and relax.

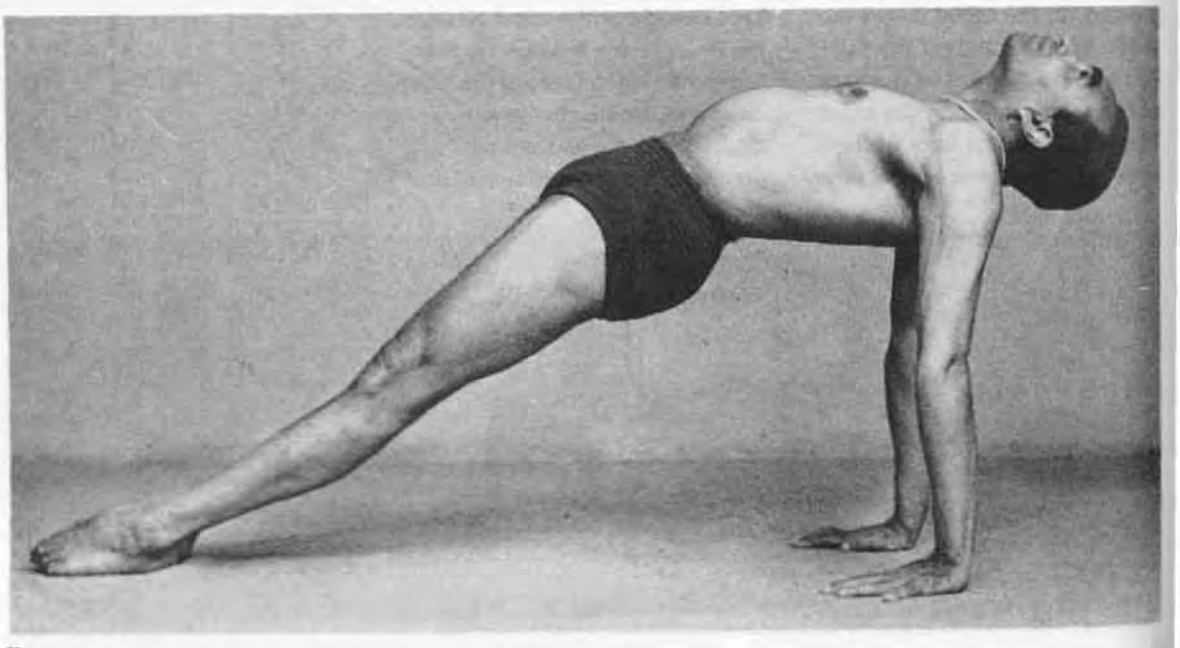
EFFECTS

This posture strengthens the wrists and ankles, improves the movement of the shoulder joints and expands the chest fully. It gives relief from the fatigue caused by doing other strenuous forward bending āsanas.

38| *Sālamba Śīrṣāsana I*

FOUR*

Sālamba means with support. Śīrṣa means the head. This is the head stand pose, one of the most important Yogi āsanas. It is the basic posture. It has several variations, which are described later as the Śīrṣāsana cycle. Its mastery gives one balance and poise, both physically and mentally. The technique of doing it is given at length in two parts; the first is for beginners, the second for those who can remain balanced in the pose. Attention is specially directed to the hints on Śīrṣāsana given after the two techniques.

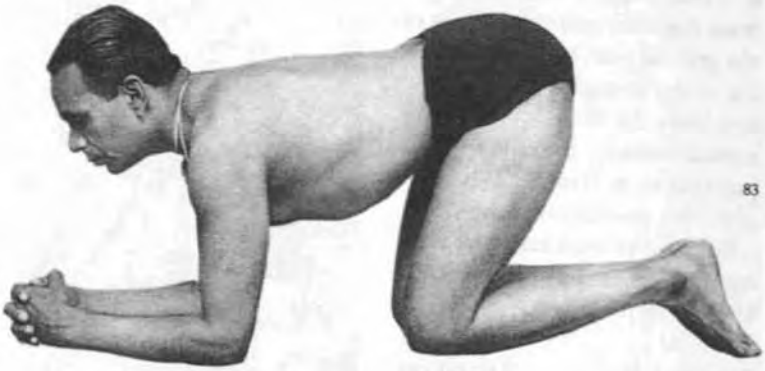


TECHNIQUE FOR BEGINNERS

1. Spread the blanket fourfold on the floor and kneel near it.

2. Rest the forearms on the centre of the blanket. While doing so take care that the distance between the elbows on the floor is not wider than the shoulders.

3. Interlock the fingers right up to the finger-tips (Plate 83), so that the palms form a cup. Place the sides of the palms near the little fingers on the blankets. While going up on to your head or balancing, the fingers should be kept tightly locked. If they are left loose, the weight of the body falls on them and the arms ache. So remember to lock them well.



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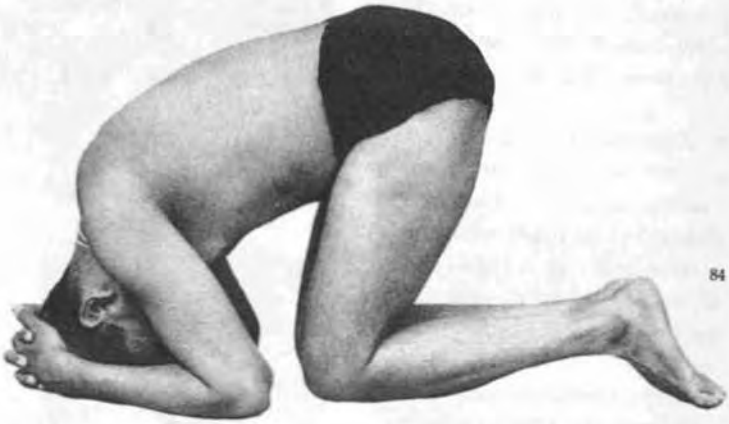

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4. Rest the crown of the head only on the blanket, so that the back of the head touches the palms which are cupped. (Plate 84) Do not rest the forehead nor the back but only the crown of the head on the blanket. To do this move the knees towards the head.

5. After securing the head position, raise the knees from the floor by moving the toes closer to the head. (Plate 85)

85

6. Exhale, take a gentle swing from the floor and lift the legs off the ground with bent knees. Take the swing in such a way that both feet leave the floor simultaneously, to come to position as in Plate 86. When once this position is secured, follow the various stages of the leg movements as in Plates 87, 88 and 89, step by step.

7. Stretch the legs and stand on the head, keeping the whole body perpendicular to the floor. (Front view: Plate 90. Back view: Plate 91. Side view: Plate 96)

8. After staying in the final position to capacity, from one to five minutes, flex the knees and slide down to the floor in the reverse order as in Plates 89, 88, 87, 86, 85, 84 and raise head from the floor.

9. A beginner must have the assistance of a friend or do the āsana against a wall. While practising against a wall, the distance between it and the head should not be more than 2 or 3 inches. If the distance is greater, the spine will curve and the stomach will protrude. The weight of the body will be felt on the elbows and the position of the head may change. The face will appear to be flushed and the eyes either strained or puffed. It is, therefore, advisable for a beginner to do the head stand in a corner where two walls meet, placing the head some 2 to 3 inches from either wall.

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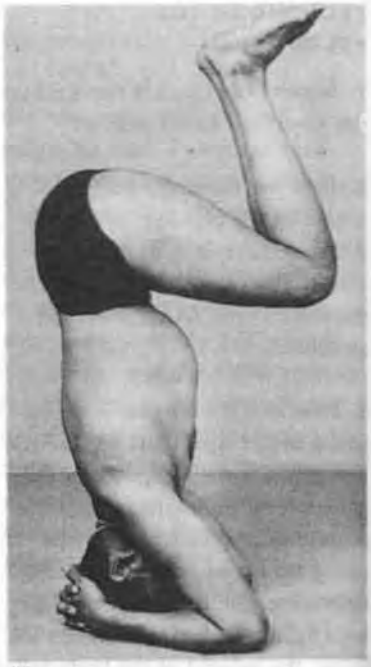

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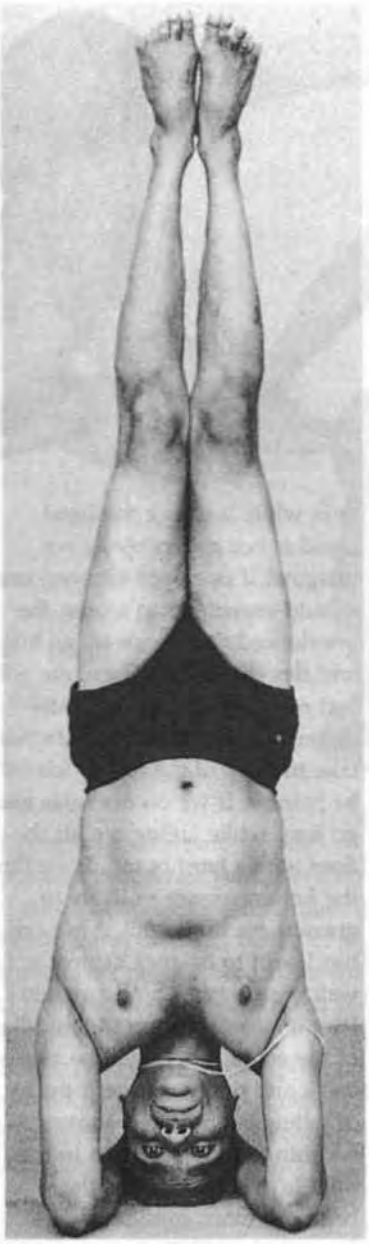
10. While doing the head stand against a wall or in a corner, the beginner should exhale, swing the legs up, support the hips against the side of the wall and move the feet up. In a corner, he can touch the heels to either side of the walls. He should then stretch the back vertically up, gradually leave the support of the wall and learn to master the balance. While coming down, he can rest the feet and hips against the wall, slide down and kneel, resting his knees on the floor. The movements of coming down and going up should be done with an exhalation.

11. The advantage which the beginner has of balancing in a corner is that his head and legs will be in the right angle formed by the walls, and he will be sure of his right position. This will not be the case if he balances against a straight wall. For while his balance is insecure he may sway from the wall, or his body may tilt or swing to the stronger side, while his legs may rest against the wall with a bend either at the waist or the hips. The beginner will not be in a position to know that he has tilted to one side, much less to correct it. In time he may learn to balance on the head, but by habit his body may still tilt or his head may not be straight. It is as hard to correct a wrong pose in the head stand as it is to break a bad habit. Moreover this wrong posture may well lead to aches and pains in the head, neck, shoulders and back. But the two walls of a corner will help the beginner to keep the āsana symmetrical.



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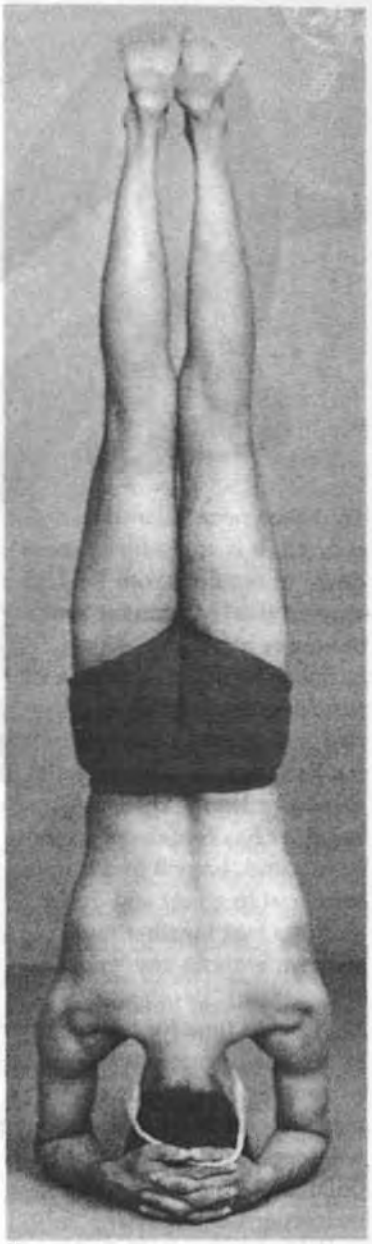

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12. When once balance is secured, it is advisable to come down to the floor with the legs straight (that is, without bending the knees at all) and with a backward action of the hips. At first, it is not possible to go up and come down without bending the legs, but the correct method should be learnt. Once the beginner has confidence in the head stand, he will find it more beneficial to go up and down with the legs together and straight, without any jerks.

13. It takes time for the beginner to become oriented to his surroundings while he is balancing on his head. Everything will seen at first to be completely unfamiliar. The directions and instructions will appear confusing and he will find it an effort to think clearly or to act logically. This is due to fear of a fall. The best way to overcome fear is to face with equanimity the situation of which one is afraid. Then one gets the correct perspective, and one is not frightened any more. To topple over while learning the head stand is not as terrible as we imagine. If one overbalances, one should remember to loosen the interlocked fingers, relax, go limp and flex the knees. Then one will just roll over and smile. If the fingers are not loosened they will take the jerk of the fall which will be painful. If we do not relax and go limp while falling we hit the floor with a hard bump. If we flex the knees, we are unlikely to graze them in the fall. After one has learnt to balance against a wall or in a corner, one should try the head stand in the middle of the room. There will be a few spills and one must learn the art of falling as indicated above. Learning to do Śīrṣāsana in the middle of a room gives the beginner more confidence.

TECHNIQUE FOR THOSE WHO CAN BALANCE EIGHT*

1. Follow the technique described for beginners from positions 1 to 4.

2. After securing the head position, stretch the legs straight by raising the knees from the floor. Move the toes nearer to the head and try to press the heels to the floor, keeping the back erect. (Plate 92)

3. Stretch the dorsal or middle region of the spine and stay in this position for about 30 seconds while breathing evenly.

4. Exhale, raise the heels and take the toes off the floor with a backward movement of the hips. Raise both legs simultaneously, keeping them poker stiff. (Plate 93) Take a breath.

5. Again with an exhalation move the legs up until they are parallel to the floor. This position is called:

39| Ūrdhvā Daṇḍāsana

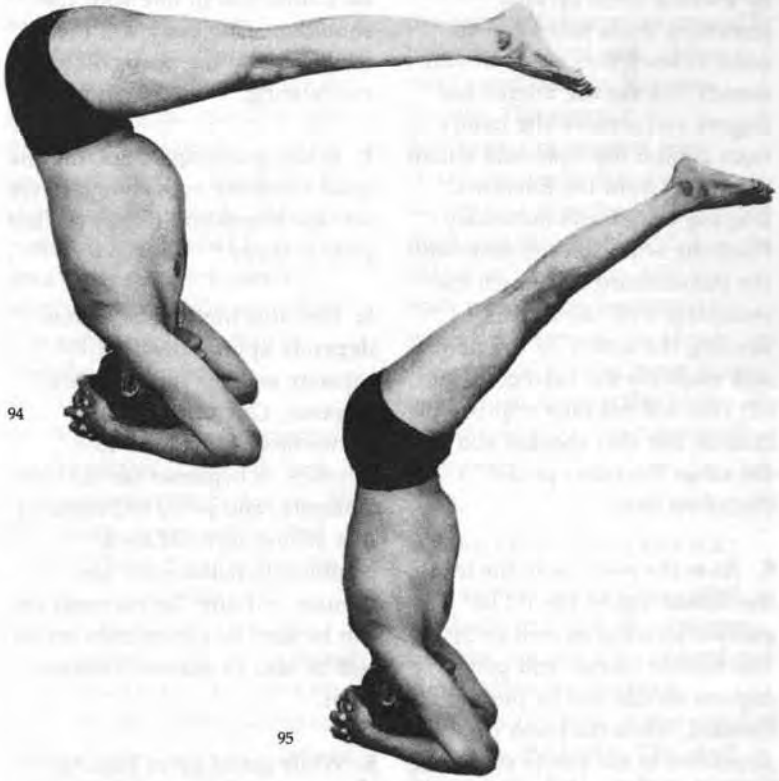
EIGHT*

(Ūrdhvā = up, daṇḍ = a staff)
Stay in this position for 10 seconds with normal breathing.

6. Exhale, move the legs up as in Plate 95, and then pull them up to the vertical position. (Side view: Plate 96) Stay in this pose from 1 to 5 minutes while breathing evenly.

7. Come down gradually, observing the above technique in a reverse order. (Plates 95, 94, 93 and 92) Rest the feet on the floor, bend the knees (Plate 84) and raise the head from the floor or blanket. (Plate 83)

8. While coming down, it is advisable to stay in Ūrdhvā Daṇḍāsana according to capacity up to one minute while breathing normally. In this position, the neck and trunk will not be perpendicular to the floor but will sway slightly backwards. The neck, shoulders and spine will be put to a very great strain and in the initial stages one cannot stay with the legs parallel to the floor for more than a few seconds. The stay will become longer as the neck, shoulders, abdomen and spine become stronger.



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95

HINTS ON ŚĪRṢĀSANA

1. In Śīrṣāsana the balance alone is not important. One has to watch from moment to moment and find out the subtle adjustments. When we stand on our feet, we need no extra effort, strength or attention, for the position is natural. Yet the correct method of standing affects our bearing and carriage. It is, therefore, necessary to master the correct method as pointed out in the note on Tāḍāsana. In Śīrṣāsana also, the correct position should be mastered, as a faulty posture in this āsana will lead to pains in the head, neck and back.

2. The whole weight of the body should be borne on the head alone and not on the forearms and hands. The forearms and hands are to be used only for support to check any loss of balance. In a good pose you feel a circle, about the size of an Indian rupee, of the head in contact with the blanket on the floor.

3. The back of the head, the trunk, the back of the thighs and the heels should be in a line perpendicular to the floor and not inclined to one side. The throat, chin and breast-bone should be in one line, otherwise the head will tilt to one side or move forward. As regards the interlocked hands behind the head, the palms should not be stuck into the head. The upper and the lower sides of the palms should be in a line, otherwise the crown of the head will not rest on the floor correctly.

4. The elbows and the shoulders should be in a line and the elbows should not be widened. The shoulders should be kept as high above the floor as possible

by moving them up and stretching them sideways. In order to learn the correct shoulder stretch, release the interlocked fingers and remove the hands from behind the head and widen the wrists from the forearms, keeping the elbows stationary. Place the wrists on the floor with the palms facing up, touch the shoulders with the fingers, keeping the wrists on the floor and maintain the balance. (Plate 97) This will not only improve the balance but also prepare you for the other Śīrṣāsana poses described later.

5. As to the position of the trunk, the dorsal region should be pushed forward as well as up. The lumbar (waist) and pelvic regions should not be pushed forward, while the trunk from the shoulders to the pelvis should be kept perpendicular. If the pelvic area juts forward, it means that you are bearing the weight of the body not on the head alone but also on the elbows for you have not stretched the dorsal region (the chest) correctly. When viewed from the side, the body from the neck to the heels should appear straight.

6. As far as possible try and join the thighs, knees, ankles and toes. Stretch the legs fully, especially the back of the knees and thighs. If the legs swing back tighten the knees and the lower median portion of the abdomen above the pubes. This will keep the legs perpendicular. Keep the toes pointing up. If the legs swing forward, stretch the dorsal region and push the pelvic area slightly back until it is in line with the shoulders. The body will then feel light and the pose will be exhilarating.

7. While going up or holding the head stand the eyes should never become bloodshot. If they do, the pose is faulty.*

8. The time limit for Śīrṣāsana depends upon individual capacity and the time at one's disposal. One can hold it comfortably from 10 to 15 minutes. A beginner can do it for 2 minutes and go up to 5 minutes. It is always difficult for a beginner to balance for one minute, but once he succeeds he can be sure that from then on he will be able to master Śīrṣāsana soon.

9. While going up or coming down, move both legs together, inch by inch. All the movements should be done with exhalation. Inhale while waiting in a position. The effect of going down and coming up straight without bending the legs at the knees is that harmonious slow movement is gained and the flow of blood to the head is controlled. The face does not flush from jerky and fast movements, as the flow of blood to the waist and the legs is also controlled.

* I have taught this pose to a lady of 65 who was suffering from glaucoma. Now she finds the eyes are completely rested and the pain in them is much lessened. Medical examination revealed that the tension in the eyeballs had decreased. I am mentioning this to prove the value of the correct head stand.

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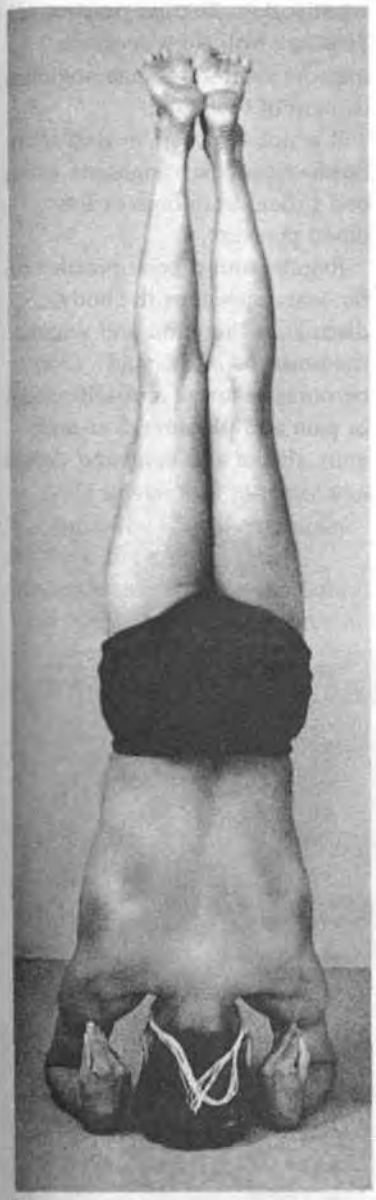

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Then there is no danger of losing balance from giddiness or numbness of the feet when one stands up immediately after the head balance. In course of time the whole movement of going up, staying and coming down should become as effortless as possible. In a perfect Śīrṣāsana your body feels completely stretched and at the same time you experience a feeling of complete relaxation.

10. It is always safe to perfect Sarvāngāsana (Plate 102) first before attempting Śīrṣāsana. If the standing poses described earlier (Plates 1 to 18) and the various movements of Sarvangāsana and Halāsana (Plates 108 to 125) are mastered first, Śīrṣāsana will come without much effort. If these elementary āsanas have not been mastered, the period taken to learn Śīrṣāsana will be longer.

11. After one has learnt to balance in Śīrṣāsana, however, it is preferable to perform Śīrṣāsana first before practising any other āsana. This is because one cannot balance or hold the head stand if the body is exhausted by doing other poses or if the breathing becomes fast and shaky. Once the body is tired or the breathing is not free and easy, the body will shake and it will be difficult to maintain the balance. It is always better to do Śīrṣāsana first when one is fresh.

12. Śīrṣāsana should always be followed by Sarvāngāsana and its cycle. It has been observed that people who devote themselves to Śīrṣāsana alone without doing the Sarvāngāsana poses are apt to lose their temper over trifling things and become irritated quickly. The practice of Sarvāngāsana coupled with Śīrṣāsana checks this trait. If Sarvāngāsana is the Mother, then Śīrṣāsana may be regarded as the Father of all āsanas. And just as both parents are necessary for peace and harmony in a home, so the practice of both these āsanas is essential to keep the body healthy and the mind tranquil and peaceful.

EFFECTS OF ŚĪRṢĀSANA

The ancient books have called Śīrṣāsana the king of all āsanas and the reasons are not hard to find. When we are born, normally the head comes out first and then the limbs. The skull encases the brain, which controls the nervous system and the organs of sense. The brain is the seat of intelligence, knowledge, discrimination, wisdom and power. It is the seat of Brahman, the soul. A country cannot prosper without a proper king or constitutional head to guide it; so also the human body cannot prosper without a healthy brain.

The *Bhagavad-Gītā* says: 'Harmony (sattva), mobility (rajas), inertia (tamas), such are the qualities, matter-born; they bind fast, O great armed one (Arjuna), the indestructible dweller in the body.' (Fourteenth Discourse, verse 5) All these qualities stem from the brain, and sometimes one quality prevails and sometimes the others. The head is the centre of sattvic

qualities which control discrimination; the trunk of Rājasic qualities which control passion, emotion and actions; and the region below the diaphragm of tāmasic qualities which control sensual pleasures like the enjoyment of food and drink, and the thrills and pleasures of sex.

Regular practice of Śīrṣāsana makes healthy pure blood flow through the brain cells. This rejuvenates them so that thinking power increases and thoughts become clearer. The āsana is a tonic for people whose brains tire quickly. It ensures a proper blood supply to the pituitary and pineal glands in the brain. Our growth, health and vitality depend on the proper functioning of these two glands.

People suffering from loss of sleep, memory and vitality have recovered by the regular and correct practice of this āsana and have become fountains of energy. The lungs gain the power to resist any climate and stand up to any work, which relieves one from colds, coughs, tonsillitis, halitosis (foul breath) and palpitations. It keeps the body warm. Coupled with Sarvāngāsana movements (Plates 108 to 125), it is a boon to people suffering from constipation. Regular practice of Śīrṣāsana will show marked improvement in the haemoglobin content of the blood.

It is not advisable to start with Śīrṣāsana and Sarvāngāsana when one suffers from high or low blood pressure.

Regular and precise practice of Śīrṣāsana develops the body, disciplines the mind and widens the horizons of the spirit. One becomes balanced and self-reliant in pain and pleasure, loss and gain, shame and fame and defeat and victory.

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40| *Sālamba Sarvāngāsana I*

TWO*

Ālamba means a prop, a support and sa together with or accompanied by. Sālamba, therefore means supported or propped up. Sarvānga (Sarva = all, whole, entire, complete; anga = limb or body) means the entire body or all the limbs. In this pose the whole body benefits from the exercise, hence the name.

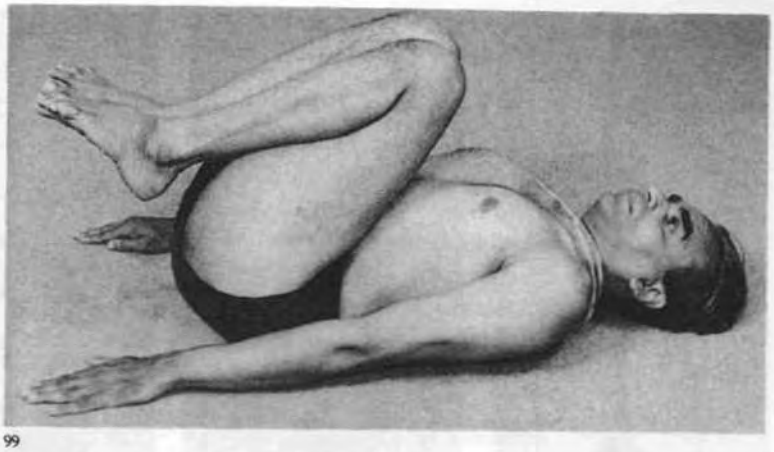
TECHNIQUE FOR BEGINNERS

1. Lie flat on the back of the carpet keeping the legs stretched out, tightened at the knees. Place the hands by the side of the legs, palms down. (Plate 98) Take a few deep breaths.

2. Exhale, bend the knees and move the legs towards the stomach till the thighs press it. (Plate 99) Take two breaths.

3. Raise the hips from the floor with an exhalation and rest the hands on them by bending the arms at the elbows. (Plate 100) Take two breaths.

4. Exhale, raise the trunk up perpendicularly supported by the hands until the chest touches the chin. (Plate 101)



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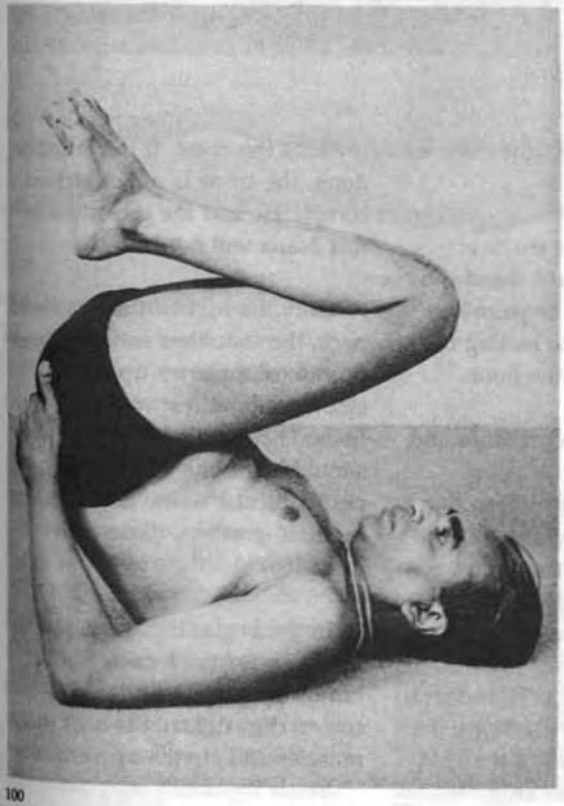
5. Only the back of the head and the neck, the shoulders and the backs of the arms up to the elbows should rest on the floor. Place the hands in the middle of the spine as in Plate 101. Take two breaths.

6. Exhale and stretch the legs straight with the toes pointing up. (Front view: Plate 102. Back view: Plate 103)

7. Stay in this position for 5 minutes with even breathing.

8. Exhale, gradually slide down, release the hands, lie flat and relax.

9. If you cannot do the āsana without support use a stool and follow the technique. See Plate 104.



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103

104

TECHNIQUE FOR ADVANCED PUPILS

1. Lie flat on the back on the carpet.

2. Keep the legs stretched out, tightened at the knees. Place the hands by the side of the legs, palms down. (Plate 98)

3. Take a few deep breaths. Exhale slowly and at the same time raise both legs together and bring them at a right angle to the body. (Plate 105) Remain in this position and inhale, keeping the legs steady.

4. Exhale, again raise the legs further up by lifting the hips and back from the floor, pressing the palms gently against the floor as in Plate 106.

5. When the whole trunk is raised off the ground, bend the elbows and place the palms on the back of the ribs, resting the shoulders well on the floor.

6. Utilize the palm pressure and raise the trunk and legs up vertically as in Plate 107 so that the breast-bone presses the chin to form a firm chinlock. The contraction of the throat and pressing the chin against the breast-bone to form a firm chinlock is known as Jālandhara Bandha. Remember to bring the chest forward to touch the chin and not to bring the chin towards the chest. If the latter is done, the spine is not stretched completely and the full effect of this āsana will not be felt.

7. Only the back of the head and neck, the shoulders and the upper portion of the arms up to the elbows should rest well on the floor. The remainder of the body should be in one straight line, perpendicular to the floor. This is the final position. (Side view: Plate 108)

8. In the beginning, there is a tendency for the legs to swing out of the perpendicular. To correct this, tighten the back thigh muscles and stretch up vertically.

105

9. The elbows should not be placed wider than the shoulders. Try and stretch the shoulders away from the neck and also to bring the elbows close to each other. If the elbows are widened, the trunk cannot be pulled up properly and the pose will look imperfect. Also see that the neck is straight with the centre of the chin resting on the sternum. In the beginning, the neck moves sideways and if this is not corrected, it will cause pain and injure the neck.

106

10. Remain in this pose for not less than 5 minutes. Gradually increase the time to 15 minutes; this will have no ill effects.

11. Release the hands, slide to the floor, lie flat and relax.

As the weight of the whole body is borne on the neck and shoulders and as the hands are used to support the weight this āsana is called Sālamba Sarvāngāsana. In Sarvāngāsana there are various movements which can be done in addition to the basic pose described above.

107

108

EFFECTS

The importance of Sarvāngāsana cannot be over-emphasized. It is one of the greatest boons conferred on humanity by our ancient sages. Sarvāngāsana is the mother of āsanas. As a mother strives for harmony and happiness in the home, so this āsana strives for the harmony and happiness of the human system. It is a panacea for most common ailments. There are several endocrine organs or ductless glands in the human system which bathe in blood, absorb the nutriments from the blood and secrete hormones for the proper functioning of a balanced and well developed body and brain. If the glands fail to function properly, the hormones are not produced as they should be and the body starts to deteriorate. Amazingly enough many of the āsanas have a direct effect on the glands and help them to function properly. Sarvāngāsana does this for the thyroid and parathyroid glands which are situated in the neck region, since due to the firm chinlock their blood supply is increased. Further, since the body is inverted the venous blood flows to the heart without any strain by force of gravity. Healthy blood is allowed to circulate around the neck and chest. As a result, persons suffering from breathlessness, palpitation, asthma, bronchitis and throat ailments get relief. As the head remains firm in this inverted position, and the supply of the blood to it is regulated by the firm chinlock, the nerves are soothed and headaches – even chronic ones – disappear. Continued practice of this āsana eradicates common colds and other nasal disturbances. Due to the soothing effect of the pose on the nerves, those suffering from hypertension, irritation, shortness of temper, nervous breakdown and insomnia are relieved. The change in bodily gravity also affects the abdominal organs so that the bowels move freely and constipation vanishes. As a result the system is freed from toxins and one feels full of energy. The āsana is recommended for urinary disorders and uterine displacement, menstrual trouble, piles and hernia. It also helps to relieve epilepsy, low vitality and anaemia. It is no over-statement to say that if a person regularly practises Sarvāngāsana he will feel new vigour and strength, and will be happy and confident. New life will flow into him, his mind will be at peace and he will feel the joy of life. After a long illness, the practice of this āsana regularly twice a day brings back lost vitality. The Sarvāngāsana cycle activates the abdominal organs and relieves people suffering from stomach and intestinal ulcers, severe pains in the abdomen and colitis.

People suffering from high blood pressure should not attempt Sālamba Sarvāngāsana unless they do Halāsana (Plate 113) first and can stay in it for not less than 3 minutes.

Do not perform Sarvāngāsana during menstruation.

Halāsana is described on the following pages.

THE SARVĀNGĀSANA CYCLE

These various movements can be practised at one stretch after staying in Sarvāngāsana (Plate 102) from 5 to 10 minutes or more according to capacity; do them for 20 to 30 seconds at a time each side except Halāsana, which should last from 3 to 5 minutes at a stretch.

41| *Halāsana*

FOUR*

Hala means a plough, the shape of which this posture resembles, hence the name. It is a part of Sarvāngāsana I and a continuation thereof.

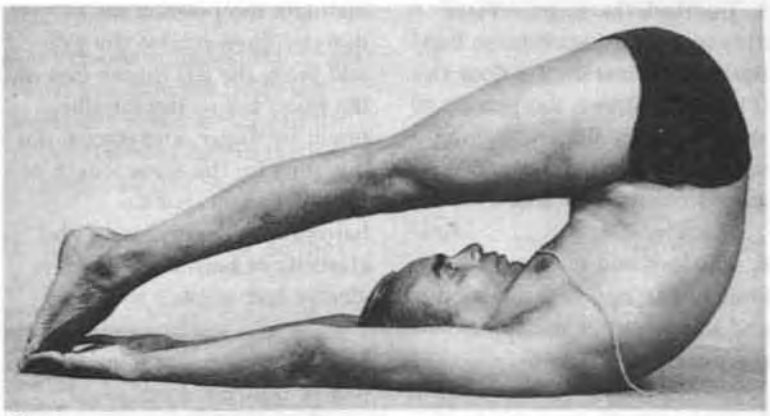
TECHNIQUE

1. Do Sālamba Sarvāngāsana (Plate 103) with a firm chinlock.

2. Release the chinlock, lower the trunk slightly, moving the arms and legs over the head and resting the toes on the floor. (Plate 109)

3. Tighten the knees by pulling up the hamstring muscles at the back of the thighs and raise the trunk. (Plate 110)

4. Stretch the arms on the floor in the direction opposite to that of the legs. (Plate 111)



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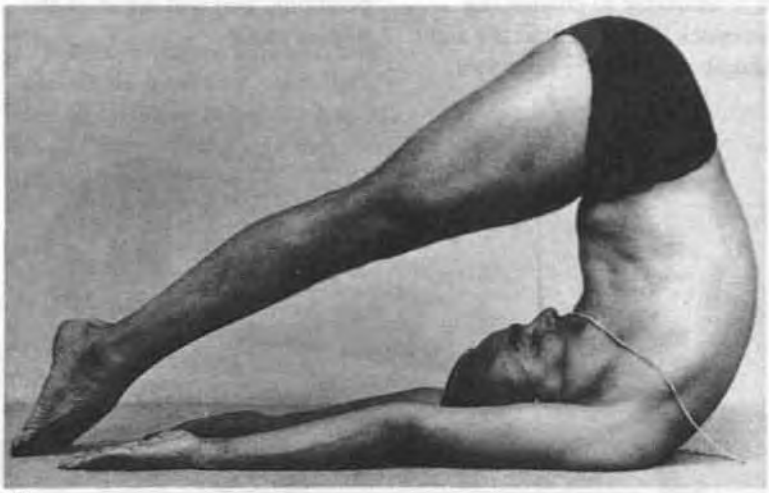

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111

5. Interlock the fingers (Plate 112) and turn the wrists so that the thumbs rest on the floor. (Plate 113) Stretch the palms along with the fingers, tighten the arms at the elbows and pull them from the shoulders.

6. The legs and the hands are stretched in opposite directions and this stretches the spine completely.

7. While interlocking the fingers, it is advisable to change the interlock. Suppose that the right thumb touches the floor first, maintain the position for a minute. Then release the grip and bring the left thumb first on the floor, follow the interlock, finger by finger, and stretch out the arms for the same length of time. This will lead to harmonious development and elasticity of both the shoulders, elbows and wrists.

8. In the beginning interlocking will be difficult. By gradual practice of the above mentioned positions, you will interlock the fingers easily.

9. In the beginning it is also difficult to keep the toes firmly on the floor behind the head. If you lengthen the timing and stretch of Sarvāngāsana (Plate 102) before going into Halāsana, the toes will remain longer on the floor.

10. Remain in the attainable pose from one to five minutes with normal breathing.

11. Release the hands. Raise the legs up to Sarvāngāsana and gradually slide down to the floor. Lie flat on the back and relax.

112

113

EFFECTS

The effect of Halāsana is the same as that of Sarvāngāsana. (Plate 102) In addition, the abdominal organs are rejuvenated due to contraction. The spine receives an extra supply of blood due to the forward bend and this helps to relieve backache. Cramps in the hands are cured by interlocking and stretching the palms and fingers. People suffering from stiff shoulders and elbows, lumbago and arthritis of the back find relief in this āsana. Griping pain in the stomach due to wind is also relieved and lightness is felt immediately.

The pose is good for people with a tendency for high blood pressure. If they perform Halāsana first and then Sarvāngāsana, they will not feel the rush of blood or the sensation of fullness in the head.

Halāsana is a preparatory pose to Paschimottānāsana. (Plate 81) If one improves in Halāsana, the resulting mobility of the back will enable one to perform Paschimottānāsana well.

NOTE

For persons suffering from high blood pressure the following technique is recommended for doing Halāsana before they attempt Sālamba Sarvāngāsana.

1. Lie flat on the back on the floor.

2. Exhale, slowly raise the legs to a perpendicular position and stay there breathing normally for about 10 seconds.

3. Exhale, bring the legs over and beyond the head and touch the toes on the floor. Keep the toes on the floor and the legs stiff at the knees.

4. If you have difficulty in keeping the toes on the floor, then place a chair or a stool behind the head and rest the toes on it.

5. If the breathing becomes heavy or fast do not rest the toes on the floor, but on a stool or chair. Then fullness or pressure is not felt in the head.

6. Extend the arms over the head, keep them on the floor and stay in this position with normal breathing for 3 minutes.

7. Throughout the āsana, gaze at the tip of the nose with the eyes shut.

42| *Karṇapīdāsana*

ONE*

Karṇa means the ear. Pīda means pain, discomfort or pressure. This is a variant of Halāsana and can be done along with it.

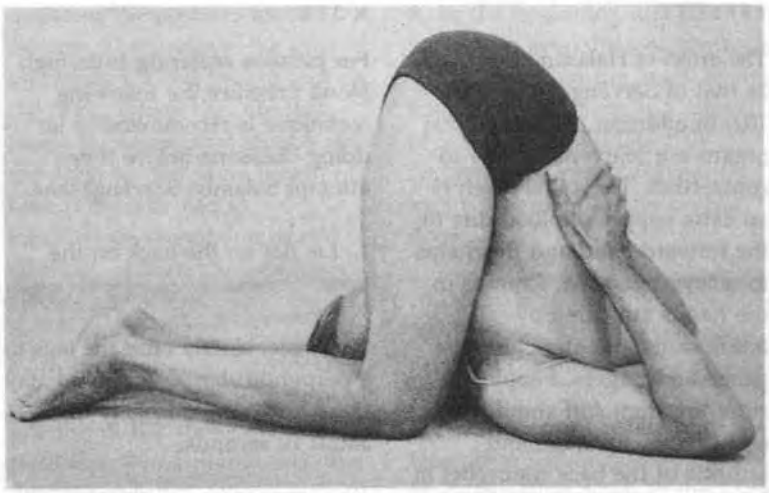
TECHNIQUE

1. Do Halāsana (Plate 113) and after completing the time limit for that pose, flex the knees and rest the right knee by the side of the right ear and the left knee by the side of the left.

2. Both knees should rest on the floor, pressing the ears.

3. Keep the toes stretched out and join the heels and toes. Rest the hands either on the back of the ribs (Plate 114a), or interlock the fingers and stretch out the arms (Plate 114b).

4. Remain in this position for half a minute or a minute with normal breathing.



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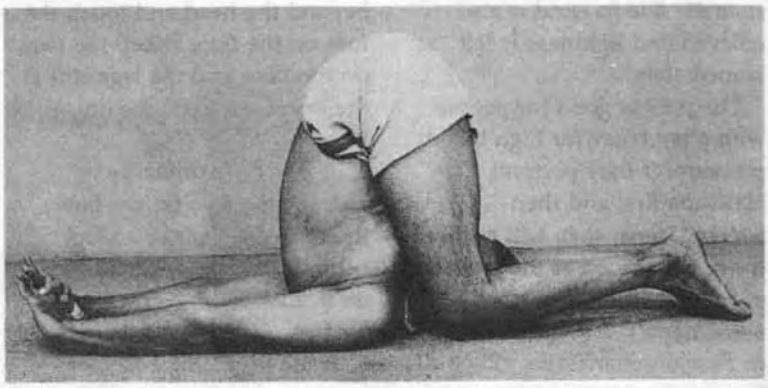


114B

EFFECTS

This āsana rests the trunk, heart and legs. The spine is stretched more while bending the knees, and this helps the circulation of blood round the waistline.

43| *Supta Koṇāsana*

TWO*

Supta means lying down and koṇa an angle. It is a variation of Halāsana in which the legs are spread apart.

TECHNIQUE

1. From Karṇapīdāsana (Plates 114a, 114b), stretch the legs straight and spread the legs as far apart as you can.

2. Pull the trunk up and tighten the knees.

3. Hold the right toe with the right hand and the left toe with the left one. Keep the heels up. After gripping the toes, move the dorsal region of the spine still further up and extend the hamstring muscles. (Plate 115).

4. Stay in the pose from 20 to 30 seconds with normal breathing.

EFFECTS

This pose tones the legs and helps to contract the abdominal organs.

115

44| *Pārśva Halāsana*

FOUR*

In Halāsana (Plate 114) both the legs rest behind the head. In this pose they rest sideways on one side of and in line with the head. This is the lateral plough pose.

TECHNIQUE

1. Do Supta Koṇāsana (Plate 115) and come back to Halāsana.

2. Place the palms on the back of the ribs.

3. Move both the legs as far as you can to the left.

4. Tighten both knees, raise the trunk up with the help of the palms and stretch the legs. (Plate 116)

5. Remain in this position for half a minute with normal breathing.

6. Exhale, move the legs to the right until they are in line with the head and hold the pose for half a minute. Do not disturb the position of the chest and trunk when the legs are moved. The chest and trunk should remain as in Sarvāngāsana or Halāsana.

116

EFFECTS

In this āsana, the spine moves laterally and becomes more elastic. The colon, which is inverted during the movements, is exercised properly and elimination will be complete. People suffering from acute or chronic constipation which is the mother of several diseases derive great benefit from this āsana. If rubbish is dumped outside our house we feel sick. How much more so when waste matter which creates toxins is allowed to accumulate in our own system? If this waste matter is not eliminated, diseases will enter the body like thieves and rob us of health. If the bowels do not move freely, the mind becomes dull and one feels heavy and irritable. This āsana helps us keep the bowels free and thereby win the prize of health.

45| *Eka Pāda Sarvāngāsana*

FIVE*

Eka means one, single. Pāda means the foot. In this variation of Sarvāngāsana, one leg is on the floor in Halāsana, while the other is in a vertical position along with the trunk.

TECHNIQUE

1. Do Sālamba Sarvāngāsana I. (Plate 102)

2. Keep the left leg up in Sarvāngāsana. Exhale and move the right leg down to the floor to Halāsana. (Plate 117) It should remain stiff and straight and not bend at the knee. If it is not possible to touch the floor, lower the leg as far as possible.

3. While resting the right leg on the floor, the left knee should be kept taut and not allowed to tilt sideways. The left leg should be kept straight, facing the head.

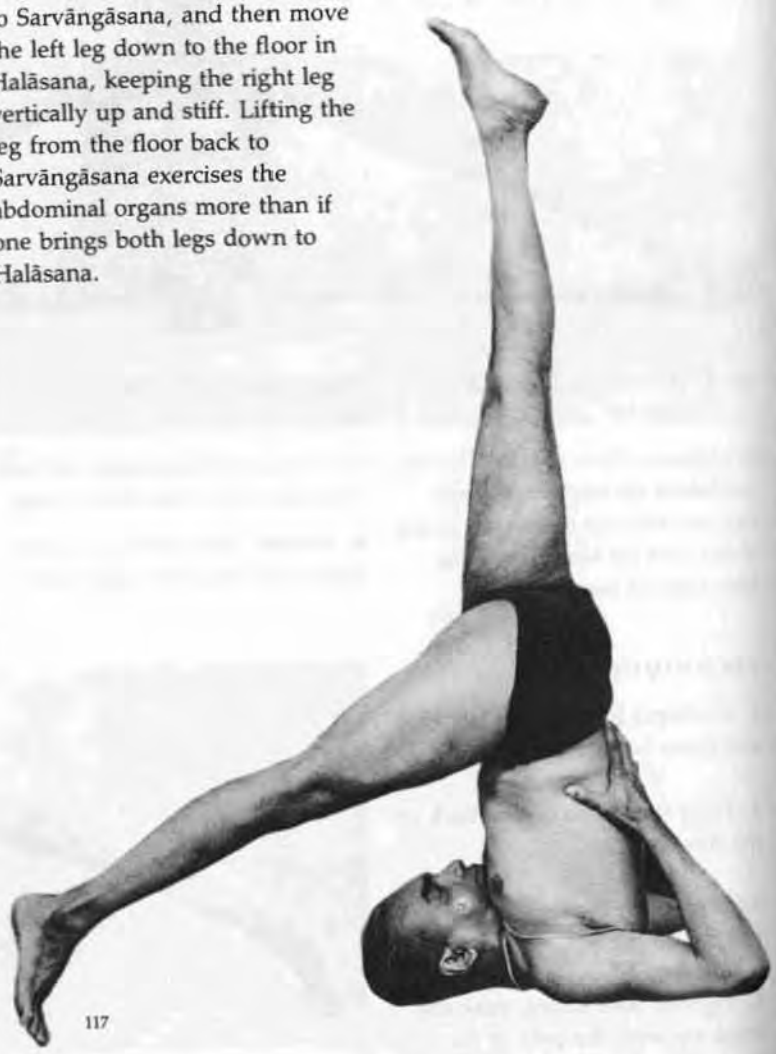
4. Stay in the pose for 20 seconds maintaining normal breathing.

5. Exhale, lift the right leg back to Sarvāngāsana, and then move the left leg down to the floor in Halāsana, keeping the right leg vertically up and stiff. Lifting the leg from the floor back to Sarvāngāsana exercises the abdominal organs more than if one brings both legs down to Halāsana.

6. Stay on this side for the same length of time.

EFFECTS

This āsana tones the kidneys and the leg muscles.



117

46| *Pārśvaika Pāda Sarvāngāsana*

SIX*

Pārśva means the side. In Eka Pāda Sarvāngāsana (Plate 117) the lower leg rests behind the head, whereas here it rests sideways in line with the trunk.

TECHNIQUE

1. Perform Eka Pāda Sarvāngāsana on both sides as described above and come back to Sarvāngāsana.

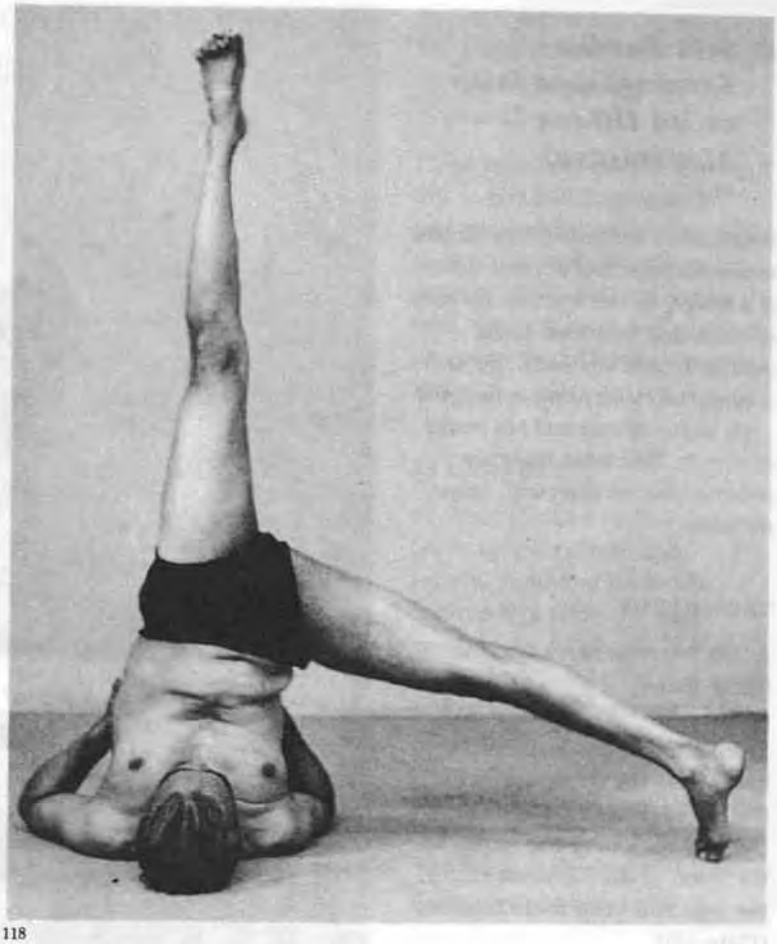
2. Exhale, move the right leg down sideways to the floor until it is in line with the trunk. (Plate 118) Keep the right leg straight and stiff and do not bend it at the knee. If it is not possible to touch the floor, lower the leg as far as possible.

3. The left leg which is vertically up should be kept straight and not allowed to tilt to the right. The ribs should be lifted with the palms to expand the chest fully.

4. Remain in the pose for 20 seconds with normal breathing, exhale, and go back to Sarvāngāsana. Repeat with the other leg for the same length of time and return to Sarvāngāsana.

EFFECTS

This pose relieves constipation and also tones the kidneys.



118

47| *Setu Bandha Sarvāngāsana (also called Uttāna Mayūrāsana)*

TEN*

Setu means a bridge and Setu Bandha means the formation or construction of a bridge. In this position, the body is arched and supported on the shoulders, soles and heels. The arch is supported by the hands at the waist.

Ut means intense and tān means to stretch. This āsana resembles a stretched peacock (Mayūra), hence the name.

TECHNIQUE

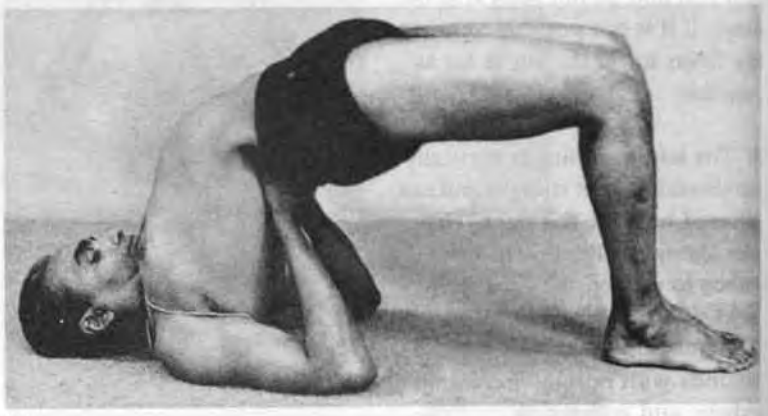
1. Do Sālamba Sarvāngāsana. (Plate 102)

2. Rest the palms well on the back, raise the spine up, bend the knees (Plate 119) and throw the legs back over the wrists to the floor. (Plate 120) Stretch out the legs and keep them together. (Plate 121)

3. The whole body forms a bridge, the weight of which is borne by the elbows and the wrists. The only parts of the body in contact with the ground will be the back of the head and neck, the shoulders, the elbows and the feet. Stay in the pose from half a minute to a minute with normal breathing.

4. It is possible to lessen the pressure on the elbows and the wrists by stretching the spine towards the neck, keeping the heels firmly on the ground.

119



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121

EFFECTS

This āsana gives the spine a backward movement and removes the strain on the neck caused by the other various movements of Sarvāngāsana.

A healthy and flexible spine indicates a healthy nervous system. If the nerves are healthy a man is sound in mind and body.

48| *Ūrdhva Padmāsana in Sarvāngāsana*

FOUR*

Ūrdhva means above, high. Padma means a lotus. In this Sarvāngāsana variation, the legs, instead of being kept straight up, are bent at the knees and crossed so that the right foot rests on the left thigh and the left foot on the right thigh as in the lotus pose. (Plate 53)

TECHNIQUE

1. From Sālamba Sarvāngāsana, bend the legs at the knees and cross them. First place the right foot over the left thigh, and then the left foot over the right thigh.

2. Stretch the crossed legs vertically up, move the knees closer to each other and the legs as far back as possible from the pelvic region. (Plate 122)

3. Stay in this pose from 20 to 30 seconds with deep and even breathing.

122

4. Uncross the legs, return to Sālamba Sarvāngāsana and repeat the pose by first placing the left foot over the right thigh and then the right foot over the left thigh. Stay for an equal length of time in all these positions as in the earlier ones.

49| *Piṇḍāsana in Sarvāngāsana*

FIVE*

Piṇḍa means embryo or foetus. In this variation of Sarvāngāsana which is a continuation of the earlier posture, the bent crossed legs are brought down until they rest on the head. The posture resembles that of an embryo in the womb, hence the name.

TECHNIQUE

1. From Ūrdhva Padmāsana in Sarvāngāsana (Plate 122), exhale, bend and lower the crossed legs from the hips towards the head.

2. Rest the legs over the head. (Plate 123)

3. Remain in this position from 20 to 30 seconds with normal breathing and go back to Ūrdhva Padmāsana in Sarvāngāsana.

123

50| *Pārśva Piṇḍāsana in Sarvāngāsana*

EIGHT*

Pārśva means the side or flank. In this Piṇḍāsana variation of the earlier pose, both the bent knees are moved sideways and placed on the floor on the same side of the trunk. This is the lateral embryo pose in Sarvāngāsana.

TECHNIQUE

1. After staying in Piṇḍāsana (Plate 123) turn the hips sideways to the right, exhale and lower both knees to the floor. The left knee should be by the side of the right ear. (Plate 124)

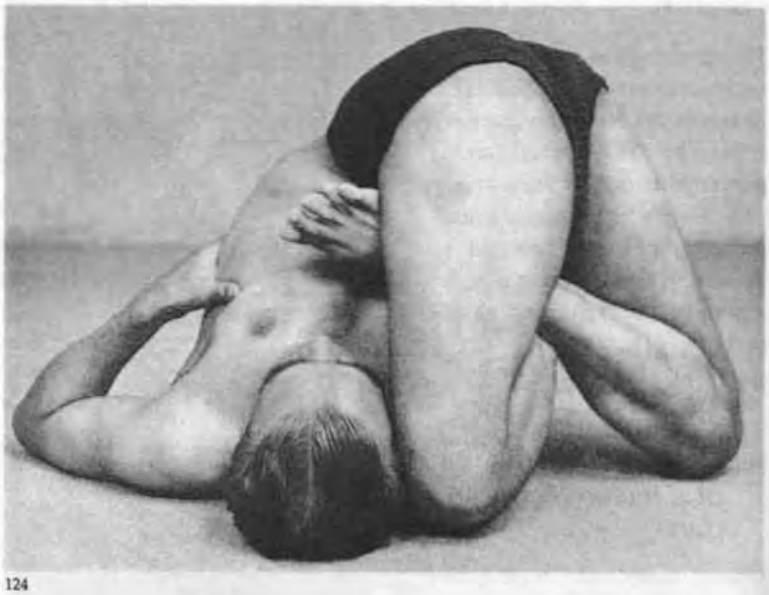
2. The left shoulder will be raised off the floor in the beginning. Push the shoulder against the floor and press the left hand firmly against the back. If this is not done, you will lose balance and roll over to one side.

3. Due to the lateral twist, breathing will be fast and difficult as the diaphragm is pressed in this position.

4. The knee near the ear will not rest on the floor to start with, but only after long practice.

5. Stay in this position for 20 to 30 seconds, with normal breathing.

6. Exhale, come up from the right side and move the crossed legs over to the left, so that the left foot will be near the left ear. (Plate 125) Stay here also for the same length of time.



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125

7. Go back to Ūrdhva Padmāsana. (Plate 122) Release the lotus pose by uncrossing the legs and return to Sālamba Sarvāngāsana.

8. Now change the position of the crossed legs. Cross the legs again by putting the left foot over the right thigh first and then the right foot over the left thigh instead of the other way as done earlier.

9. Repeat the movements again on both the sides as described earlier.

EFFECTS OF ŪRDHVA PADMĀSANA AND PĀRŚVA PINḌĀSANA MOVEMENTS IN SARVĀNGĀSANA

The change of crossing the legs brings equal pressure on both sides of the abdomen and colon and relieves constipation. For those suffering from chronic constipation a longer stay in Pārśva Pinḍāsana is recommended, and one minute on each side will prove most efficacious. Griping pain in the stomach is relieved by these poses.

Persons with extremely flexible knees, can easily perform these positions. It is, however, difficult for many people to cross the legs in Padmāsana. For them a longer stay in Pārśva Halāsana (Plate 116) – (there also the spine and trunk get a lateral twist but the legs remain straight) – is recommended.

In all these positions breathing at first will be fast and laboured. Try to maintain normal breathing.

NOTE

The spine is given the forward, lateral and backward movements in these variations of Sarvāngāsana. In Halāsana, Eka Pāda Sarvāngāsana, Karṇa Pīdāsana and Pinḍāsana the spine moves in the forward direction. In Pārśvaika Pāda Sarvānga, Pārśva Halāsana and Pārśva Pinḍāsana the spine moves laterally. In Setu Bandha it is given a backward movement. These movements tone the spine on all sides and keep it healthy.

It is related that in the Krita Age (the first Age of the Universe) a host of Dānavās (giants and demons) became invincible in battle under the leadership of Vṛtra and scattered the Devas (or Gods) in all directions. Realizing that they could not regain their power until Vṛtra was destroyed, the gods appeared before their Grandsire, Brahmā, the creator. Brahmā instructed them to consult Viṣṇu who asked them to obtain the bones of a sage called Dadhīcha, from which to make a demon-slaying weapon. The gods appeared before the sage and begged the boon according to Viṣṇu's advice. The sage renounced his body for the benefit of the gods. From the spine of Dadhīcha was fashioned Vajra, the thunderbolt, which Indra the king of the gods hurled and slew Vṛtra.

The story is symbolical. The Dānavās represent the tāmasic qualities in men and diseases. The Devas represent health, harmony and peace. To destroy the tāmasic qualities and the diseases due to them and to enjoy health and happiness, we have to make our spines strong as a thunderbolt like the spine of Dadhīcha. Then we shall enjoy health, harmony and happiness in abundance.

51| *Jaṭara Parivartanāsana*

FIVE*

Jaṭara means the stomach, the belly. Parivartana means turning or rolling about, turning round.

TECHNIQUE

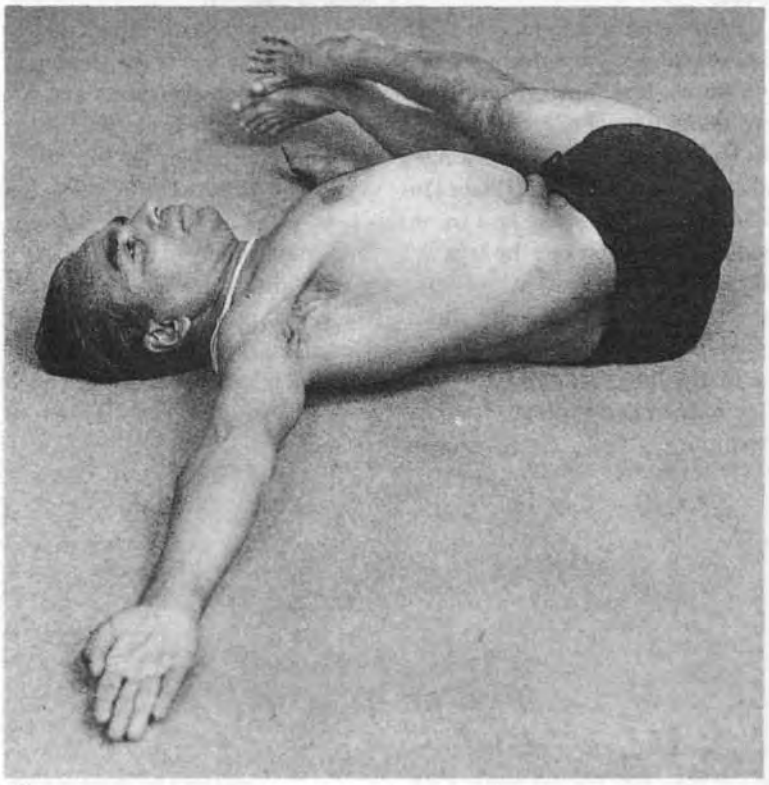
1. Lie flat on the back on the floor. (Plate 98)

2. Exhale, raise both legs together until they are perpendicular to the floor. They should remain poker stiff, so do not bend them at the knees. (Plate 105)

3. Stretch out both arms sideways in line with the shoulders, so that the body resembles a cross.

4. Remain in this position for a few breaths. Then exhale, and move both the legs sideways (Plate 126) down towards the floor to the left until the toes of the left foot almost touch the finger-tips of the outstretched left hand. (Plate 127) Try and keep the back well on the floor. In the initial stages, the right shoulder will be lifted off the floor. To prevent this ask a friend to press it down, or catch hold of a heavy piece of furniture with the right hand when the legs are turned sideways to the left.

126



127

5. Both legs should go down together, the knees being kept tight throughout. As far as possible keep the lumbar portion of the back on the floor and turn the legs only from the hips. When the legs are near the outstretched left hand, move the abdomen to the right.

6. Stay in the pose for about 20 seconds, keeping the legs stiff throughout. Then move the still stiffened legs slowly back to the perpendicular with an exhalation.

7. Remain with the legs perpendicular for a few breaths and then repeat the movements by lowering the legs to the right and turning the abdomen to the left. (Plate 128) Stay here also for the same length of time and with an exhalation, come back to the perpendicular legs position and then gently lower the legs to the floor (Plate 98) and relax.

128

EFFECTS

This āsana is good for reducing excess fat. It tones and eradicates sluggishness of the liver, spleen and pancreas. It also cures gastritis and strengthens the intestines. By its regular practice all the abdominal organs are kept in trim. It helps to relieve sprains and catches in the lower back and the hip region.

52| *Supta Pādāngusṭhāsana*

THIRTEEN*

Supta means lying down. Pāda is the foot. Anguṣṭha means the big toe. Hence the name.

TECHNIQUE

1. Lie flat on the back, stretch both legs and keep the knees tight. (Plate 98)

2. Inhale, raise the left leg from the floor until it is perpendicular. Keep the right leg stretched fully on the floor and rest the right hand on the right thigh.

3. Raise the left arm and catch the left big toe between the thumb and the fore and middle fingers. (Plate 129) Take 3 or 4 deep breaths.

4. Exhale, raise the head and trunk from the floor, bend the left arm at the elbow and pull the left leg towards the head without bending it at the knee. Pull the leg down, lift the head and trunk up together and rest the chin on the left knee. (Plate 130) Stay in this position for about 20 seconds, keeping the right leg fully stretched straight along the floor while breathing normally.

5. Inhale, move the head and trunk back to the floor and the left leg back to the perpendicular. (Plate 129) This completes the first movement.

6. Exhale, release the toe grip, rest the left leg on the floor beside the right one and keep the left hand on the left thigh.

7. Take a few deep inhalations and then repeat on the right, substituting the word 'left' for the word 'right'.

EFFECTS

The legs will develop properly by the practice of this āsana. Persons suffering from sciatica and paralysis of the legs will derive great benefit from it. The blood is made to circulate in the legs and hips where the nerves are rejuvenated. The pose removes stiffness in the hip joints and prevents hernia. It can be practised by both men and women.

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53| *Bharadvājāsana*

ONE*

Bharadvāja was the father of Droṇa, the military preceptor of the Kauravas and Pāṇḍavas, who fought the great war described in the Mahābhārata. This āsana is dedicated to Bharadvāja.

TECHNIQUE

1. Sit on the floor with the legs stretched straight in front. (Plate 35)

2. Flex the knees, move the legs back and bring both feet to the right side beside the hip.

3. Rest the buttocks on the floor, turn the trunk about 45 degrees to the left, straighten the right arm and place the right hand on the outer side of the left thigh near the left knee. Insert the right hand underneath the left knee, the palm touching the floor.

4. Exhale, turn the left arm from the shoulder behind the back, bend the left elbow and with the left hand clasp the right upper arm above the right elbow.

5. Turn the neck to the right and gaze over the right shoulder. (Plates 131 and 132)

6. Hold the position for half a minute with deep breathing.

7. Loosen the hand grip, straighten the legs and repeat the pose on the other side. Here, bring both the feet beside the left hip, turn the trunk to the right, straighten the left arm, place the left palm underneath the right knee and catch the left upper arm near the elbow with the right hand from behind the back. Stay there for an equal length of time.

EFFECTS

This simple āsana works on the dorsal and lumbar regions of the spine. People with very stiff backs find the other lateral twisting positions extremely difficult. This pose helps to make the back supple. People with arthritis will find it very beneficial.

54| *Marīchyāsana II*

TEN*

This is one of the sitting lateral twisting postures.

TECHNIQUE

1. Sit on the floor with the legs stretched straight in front. (Plate 35)

2. Bend the left knee, place the sole and heel of the left foot flat on the floor. The shin of the left leg should be perpendicular to the floor and the calf should touch the thigh. Place the left heel near the perineum. The inner side of the left foot should touch the inner side of the outstretched right thigh.

3. With an exhalation, turn the spine about 90 degrees to the left, so that the chest goes beyond the bent left thigh and bring the right arm over the left thigh. (Plate 133)

4. Place the right shoulder beyond the left knee and stretch the right arm out forwards by turning the spine still more to the left and stretching the region at the back of the right floating ribs. (Plate 134) Take two breaths.

5. With an exhalation, twist the right arm round the left knee, flex the right elbow and place the right wrist at the back of the waist. Inhale and hold the pose.

6. Exhale deeply and turn the left arm from the shoulder behind the back. Either clasp the left hand behind the back with the right hand or vice versa. (Plates 135 and 136) In the beginning, one finds it difficult to twist the trunk sideways, but with practice, the armpit touches the bent knee. After one has twisted the arm round the knee, one also finds it difficult to clasp the fingers of one hand with the other. Gradually one learns to clasp the fingers, then the palm and lastly to hold the hand at the wrist behind the back.

133

134

7. The right arm should lock the left bent knee tightly. There should be no space between the right armpit and the bent left knee.

8. After clasping the hands at the back, turn the spine still more to the left by tugging at the clasped hands.

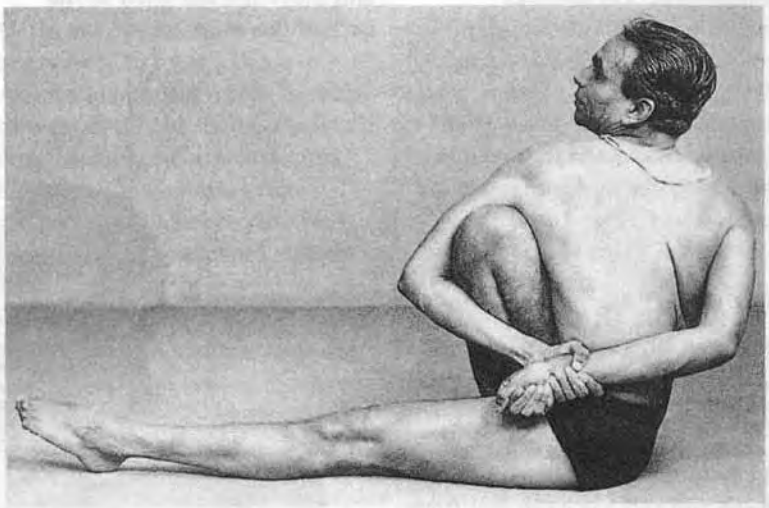
9. The whole of the outstretched right leg should remain straight and securely on the floor, but you will not be able to achieve this to start with. Tighten the muscles of the outstretched thigh so that the knee-cap is pulled up towards the thigh and also tighten the muscles of the calf of the outstretched leg. Then the leg will remain firm and extend on the floor.

135

10. Stay in this position from half a minute to a minute with normal breathing. The neck may be turned either way to gaze at the toes of the extended leg on the floor or to look over the shoulder.

11. Unclasp the hands at the back and turn the trunk back to its original position. Lower the bent leg and extend it fully on the floor.

12. Then repeat the pose on the other side. This time bend the right knee and place the right foot firmly on the floor so that the right heel touches the perineum and the inner side of the right foot touches the outstretched left thigh. Turn the trunk about 90 degrees to the right so that the left armpit touches the bent right knee. With an exhalation, twist the left arm round the right knee and bring the left hand to the back of the waist. Then throw the right arm behind the back from the shoulder and flexing the right elbow, bring the right hand to the left hand and clasp them. Turn still more to the right and gaze at either the toes of the outstretched left leg or over the right shoulder. Stay on this side also for the same length of time. Unclasp the hands, turn the trunk back to normal, stretch the right leg on the floor and relax.



136

EFFECTS

By the regular practice of this āsana, splitting backaches, lumbago and pains in the hips disappear rapidly. The liver and the spleen are contracted and so are toned and cease to be sluggish. The muscles of the neck gain power. Sprains in the shoulder and displacement of the shoulder joints are relieved and the shoulder movements become free. The intestines also benefit from this āsana. Its effects will be less on lean persons, for whom there are better poses described later. It also helps to reduce the size of the abdomen.

55| *Ardha Matsyendrāsana*

EIGHT*

Ardha means half. In the Haṭha Yoga Pradīpikā, *Matsyendra is mentioned as one of the founders of Haṭha Vidyā. It is related that once Lord Śiva went to a lonely island and explained to his consort Pārvati the mysteries of Yoga. A fish near the shore heard everything with concentration and remained motionless while listening. Śiva, realizing that the fish had learnt Yoga, sprinkled water upon it, and immediately the fish gained divine form and became Matsyendra (Lord of the Fishes) and thereafter spread the knowledge of Yoga.*

TECHNIQUE

1. Sit on the floor, with the legs stretched straight in front. (Plate 35)

2. Bend the left knee and join the thigh and calf; raise the seat from the floor, place the left foot under the buttocks and sit on the left foot so that the left heel rests under the left buttock. The foot used as the seat should be kept horizontal on the floor, the outer side of the ankle and the little toe of the foot resting on the ground. If the foot is not so placed, it will be impossible to sit on it. Balance securely in this position.

3. Then bend the right knee and lifting the right leg from the floor, place it by the outer side of the left thigh so that the outer side of the right ankle touches the outer side of the left thigh on the floor. Balance in this position, keeping the right shin perpendicular to the floor. (Plate 137)

4. Turn the trunk 90 degrees to the right until the left armpit touches the outer side of the right thigh. Bring the armpit over the right knee. (Plate 138) Exhale, stretch the left arm from the shoulder and twist it round the right knee. Bend the left elbow and move the left wrist to the back of the waist.

137

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5. The left arm should lock the bent right knee tightly and there should be no space between the left armpit and the bent right knee. To achieve this, exhale and move the trunk forward. Stay in this position and take 2 breaths.

6. Now exhale deeply and swing back the right arm from the shoulder, bend the right elbow, move the right hand behind the waist and either clasp it with the left hand or vice versa. At first you will be able to catch a finger or two. With practice it will be possible to catch the palms and then the wrists behind the back.

7. The neck may be turned to the left and the gaze directed over the left shoulder (Plate 139), or to the right, and the gaze fixed at the centre of the eyebrows. (Plate 140) The spinal twist will be greater if the neck is turned to the left than when to the right.

8. As the diaphragm is squeezed by the spinal twist, the breathing will at first become short and fast. Do not be nervous. After some practice the pose can be held from half a minute to a minute with normal breathing.

9. Release the hands, remove the right foot from the floor and straighten the right and then the left leg.

10. Repeat the pose on the other side and hold it for the same length of time. Here, bend the right leg and sit on the right foot so that the right heel is under the right buttock. Place the left leg over the right leg and rest the left foot on the floor so that the outer side of the left ankle touches the outer side of the right thigh on the floor. Turn the trunk 90 degrees to the left, placing the right armpit over the left knee and twist the right arm round the left knee. Flex the right elbow and move the right hand behind the waist. Hold the pose and take 2 breaths. Again exhale completely and swing the left arm back from the shoulder, bend the left elbow and clasp the hands behind the back at the wrist. Then release and relax.

11. In the beginning it may not be possible to twist either arm round the opposite knee. In that case try and hold the opposite foot, keeping the arm straight at the elbow. It also takes time to clasp the hands behind the back. Gradually, the backward stretch of the arms will increase, and one will be able to catch at first the fingers, next the palms, then the wrist and as the pose is mastered even the forearms above the wrists. Beginners who find it difficult to sit on the foot can sit on the floor.

139

140

EFFECTS

By the practice of this āsana, one derives the benefits mentioned under Marīchyāsana III. (Posture 54 and Plate 135) But here as the range of movement is more intensified, the effects will also be greater. In Marīchyāsana III the upper part of the abdomen is squeezed. Here the lower part of the abdomen has the benefit of the exercise. The prostate and bladder are not enlarged if one practises regularly.

56| *Ūrdhva Dhanurāsana*

SEVEN*

Ūrdhva means upwards. Dhanu means a bow. In this posture the body is arched back and supported on the palms and soles.

TECHNIQUE

1. Lie flat on the back on the floor. (Plate 48)

2. Bend and raise the elbows over the head, and place the palms under the shoulders. The distance between the palms should not be wider than the shoulders and the fingers should point towards the feet.

3. Bend and raise the knees, then bring the feet nearer until they touch the hips. (Plate 141)

4. Exhale, raise the trunk and rest the crown of the head on the floor. (Plate 142) Take two breaths.

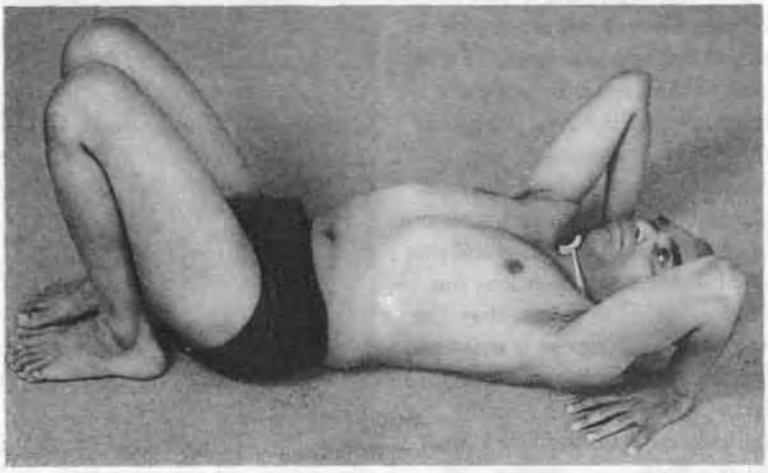
5. Now exhale, lift the trunk and head and arch the back so that its weight is taken on the palms and the soles. (Plate 143)

6. Stretch the arms from the shoulders until the elbows are straightened, at the same time pulling the thigh muscles up. (Plate 144)

7. To get a better stretch, exhale and pull the thigh muscles still higher by lifting the heels off the floor. (Plate 145) Extend the chest, stretch up the sacral region of the spine until the abdomen is taut as a drum and then lower the heels to the floor, maintaining the stretch of the spine.

8. Remain in this position from half a minute to a minute, with normal breathing.

9. With an exhalation, lower the body to the floor by bending the knees and elbows.



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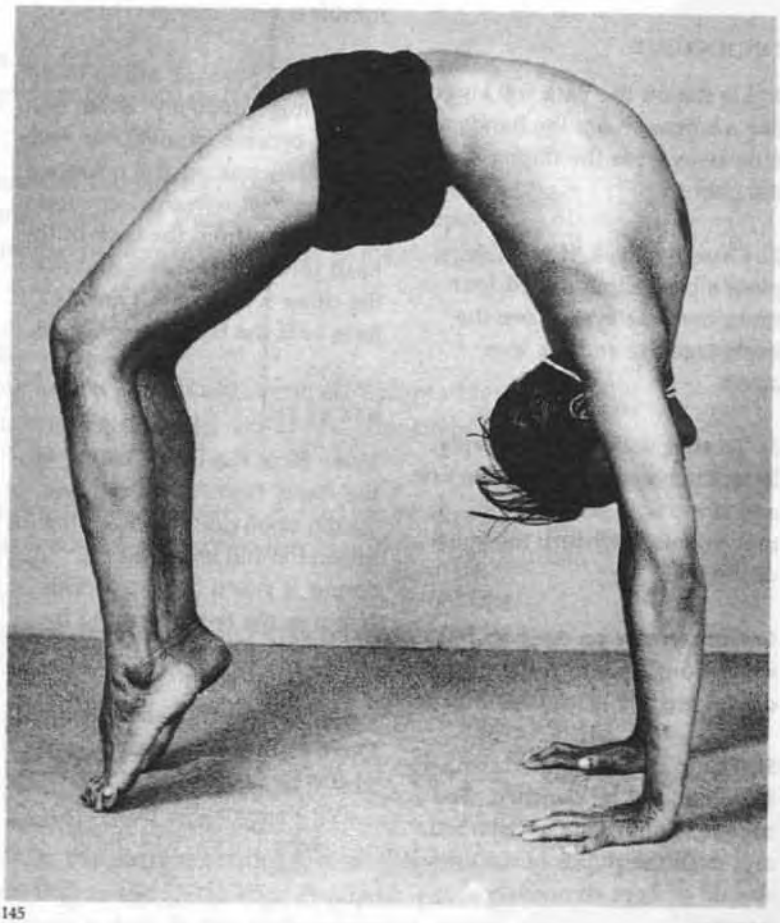
EFFECTS

This āsana is the beginning of the advanced and difficult back-bending poses. It tones the spine by stretching it fully and keeps the body alert and supple. The back feels strong and full of life. It strengthens the arms and wrists and has a very soothing effect on the head. It gives one great vitality, energy and a feeling of lightness.



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57| Śavāsana (also called Mṛtāsana)

Śava or Mṛta means a corpse. In this āsana the object is to imitate a corpse. Once life has departed, the body remains still and no movements are possible. By remaining motionless for some time and keeping the mind still while you are fully conscious, you learn to relax. This conscious relaxation invigorates and refreshes both body and mind. But it is much harder to keep the mind than the body still. Therefore, this apparently easy posture is one of the most difficult to master.

146

TECHNIQUE

1. Lie flat on the back full length like a corpse. Keep the hands a little away from the thighs, with the palms up.

2. Close the eyes. If possible place a black cloth folded four times over the eyes. Keep the heels together and the toes apart.

3. To start with breathe deeply. Later the breathing should be fine and slow, with no jerky movements to disturb the spine or the body.

4. Concentrate on deep and fine exhalations, in which the nostrils do not feel the warmth of breath.

5. The lower jaw should hang loose and not be clenched. The tongue should not be disturbed, and even the pupils of the eyes should be kept completely passive.

6. Relax completely and breath out slowly.

7. If the mind wanders, pause without any strain after each slow exhalation.

8. Stay in the pose from 15 to 20 minutes.

9. One is apt to fall asleep in the beginning. Gradually, when the nerves become passive, one feels completely relaxed and refreshed.

When well refreshed one feels energy flow from the back of the head towards the heels and not the other way round. One also feels as if the body is elongated.

EFFECTS

Verse 32 of the First Chapter of the *Haṭha Yoga Pradīpikā* states: 'Lying upon one's back on the ground at full length like a corpse is called Śavāsana. This removes the fatigue caused by the other āsanas and induces calmness of mind.'

Mṛtāsana is thus described in verse 11 of the Second Chapter of the *Gheraṇḍa Saṁhitā*:

'Lying flat on the ground (on one's back) like a corpse is called Mṛtāsana. This posture destroys fatigue, and quiets the agitation of the mind.'

'The mind is the lord of the Indriyas (the organs of senses); the Praṇa (the Breath of Life) is the lord of the mind.' 'When the mind is absorbed it is called Mokṣa (final emancipation, liberation of the soul); when Prāṇa and Manas (the mind) have been absorbed, an undefinable joy ensues.'

Verses 29 and 30, chapter IV,
Haṭha Yoga Pradīpikā.

To tame Prāṇa depends upon the nerves. Steady, smooth, fine and deep breathing without any jerky movements of the body soothes the nerves and calms the mind. The stresses of modern civilization are a strain on the nerves for which Śavāsana is the best antidote.

PART III

Prāṇāyāma

HINTS AND CAUTIONS

Read and digest thoroughly the following hints and cautions before attempting the prāṇāyāma techniques mentioned later.

QUALIFICATIONS FOR FITNESS

1. Just as post-graduate training depends upon the ability and discipline acquired in mastering the subject in which one graduated, so prāṇāyāma training demands mastery of āsanas and the strength and discipline arising therefrom.

2. The fitness of the aspirant for training and advancement in prāṇāyāma is to be gauged by an experienced Guru or teacher and his personal supervision is essential.

3. Pneumatic tools can cut through the hardest rock. In Prāṇāyāma the yogi uses his lungs as pneumatic tools. If they are not used properly, they destroy both the tool and the person using it. The same is true of prāṇāyāma.

CLEANLINESS AND FOOD

4. One does not enter a temple with a dirty body or mind. Before entering the temple of his own body, the yogi observes the rules of cleanliness.

5. Before starting prāṇāyāma practices the bowels should be evacuated and the bladder emptied. This leads to comfort in the bandhas.

6. Preferably prāṇāyāma should be practised on an empty stomach, but if this is difficult, a cup of milk, tea, coffee or cocoa may be taken. Allow at least six hours to elapse after a meal before practising prāṇāyāma.

7. Light food may be taken half an hour after finishing prāṇāyāma practices.

TIME AND PLACE

8. The best time for practice is in the early morning (preferably before sunrise) and after sunset. According to the *Haṭha Yoga Pradīpikā*, prāṇāyāma should be practised four times a day, in the early morning, noon,

evening and midnight, with 80 cycles at a time (chapter II, verse 11). This is hardly possible in the fast modern age. What is therefore recommended is to practice at least 15 minutes a day, but the 80 cycles are for intensely devoted practitioners, and not for the average householder.

9. The best seasons in which to start the practice are spring and autumn when the climate is equable.

10. Prāṇāyāma should be done in a clean airy place, free from insects. Since noise creates restlessness practice during quiet hours.

11. Prāṇāyāma should be practised with determination and regularity at the same time and place and in the same posture. Variation is permissible only in the type of prāṇāyāma practised, that is to say, if Sūrya Bhedana Prāṇāyāma is done one day, Śitalī may be done the next day and Bhastrikā be done on the third day. Nāḍī Sodhana Prāṇāyāma, however, should be practised daily.

POSTURE

12. Breathing in prāṇāyāma practices is done through the nose only, except in Śitalī and Śitakāri.

13. Prāṇāyāma is best done sitting on the floor on a folded blanket. The postures suitable are Siddhāsana, Vīrāsana, Padmāsana and Baddhakoṇāsana. Any other sitting posture may be taken provided the back is kept absolutely erect from the base of the spine to the neck and perpendicular to the floor. Some types, however, may be done in a reclining position as detailed later.

14. During practice no strain should be felt in the facial muscles, eyes and ears, or in the neck muscles, shoulders, arms, thighs and feet. The thighs and arms should be relaxed deliberately since they are unconsciously tensed during prāṇāyāma.

15. Keep the tongue passive or saliva will accumulate in the mouth. If it does, swallow it before exhalation (rechaka) and not while holding the breath (kumbhaka).

16. During inhalation and retention the rib cage should expand both forwards and sideways, but the area below the shoulder-blades and armpits should only expand forwards.

17. To start with there will be perspiration and trembling which will disappear in course of time.

18. In all the prāṇāyāma practices done in a sitting posture, the head should hang down from the nape of the neck, the chin resting in the

notch between the collar-bones on the top of the breast-bone. This chin-lock or Jālandhara Bandha should be used except where specifically stated in the techniques hereafter given.

19. Keep the eyes closed throughout as otherwise the mind will wander after outside objects and be distracted. The eyes, if kept open, will feel a burning sensation, and irritability.

20. No pressure should be felt inside the ear during the practice of prāṇāyāma.

21. The left arm is kept straight, the back of the wrist resting on the left knee. The forefinger is bent towards the thumb, its tip touching the tip of the thumb. This is the Jñāna Mudrā described later in the technique.

22. The right arm is bent at the elbow and the hand is kept on the nose to regulate the even flow of breath and to gauge its subtlety. This is felt through the tips of the ring and little fingers which control the left nostril and through the tip of the thumb which controls the right nostril. Details of the right hand position are discussed in the technique. In some methods of prāṇāyāma both the hands rest on the knees in the Jñāna Mudrā.

23. When a baby learns to walk by itself, the mother remains passive bodily, but alert mentally. In an emergency, as when the child stumbles, her body springs into action to save it from a fall. So also, in the practice of prāṇāyāma the brain is kept passive but alert. Whenever the organs of the body fail to work properly, the watchful brain sends messages of warning. The ear is told to listen for the proper sound of the breath (which is described below). The hand and nose are told to observe the sensitivity of the breath flowing through the nasal passages.

24. It may be asked that if the brain is required to send warnings to the senses, how can one concentrate on prāṇāyāma? A painter absorbed in his work notes various details like perspective and composition, the colour tones and shades, the foreground and background and the strokes of the paint-brush all at once. A musician playing a melody watches his finger movements and sound patterns, the tuning of the instrument and its pitch. Though the artist and the musician are both observing and correcting the details, they are concentrating on their work. So also the yogi observes details like time, posture and an even breath rhythm, and is alert and sensitive to the flow of prāṇa within him.

25. As a careful mother teaches her child to walk carefree, so the careful mind of the yogi teaches the senses to be carefree. By continued practice of prāṇāyāma the senses become free of obsession for the things they once pined for.

26. Each should measure his own capacity when doing prāṇāyāma and not exceed it. This may be gauged as follows: suppose one can with comfort inhale and exhale for 10 seconds each in rhythmic cycles for a given length of time, say 5 minutes. If there is any change in the rhythm in which the period of inhalation decreases, to say 7 or 8 seconds, one has reached one's capacity. To go beyond this point, strains the lungs unduly and brings in its wake a host of respiratory diseases.

27. Faulty practice puts undue stress on the lungs and diaphragm. The respiratory system suffers and the nervous system is adversely affected. The very foundation of a healthy body and sound mind is shaken by faulty practice of prāṇāyāma. Forceful and strained inhalation or exhalation is wrong.

28. Evenness of breathing leads to healthy nerves and so to evenness of mind and temper.

29. Āsanas should never be practised immediately after prāṇāyāma. If prāṇāyāma is done first, allow an hour to elapse before starting āsanas, for the nerves which are soothed in prāṇāyāma are liable to be ruffled by the bodily movement of the āsanas.

30. Prāṇāyāma, however, may be done not less than 15 minutes after mild practice of āsanas.

31. Strenuous āsanas cause fatigue. When exhausted do not practise prāṇāyāma in any sitting posture, as the back cannot stay erect, the body trembles and the mind becomes disturbed. Deep breathing as in Ujjāyī done in a reclining position relieves fatigue.

32. When deep, steady and long breathing cannot be maintained rhythmically, stop. Do not proceed further. The rhythm should be gauged from the nasal sound produced in inhalation ('ssssssa' which sounds like a leak in a cycle tube) and exhalation (the aspirate 'huuuuuuuuum' sound). If the volume of the sound is reduced, stop.

33. Try to achieve an even ratio in inhalation (puraka) and exhalation (rechaka). For example, if one is for 5 seconds during a given continuous cycle, the other should be for the same time.

34. The Ujjāyī and Nāḍī Śodhana types of prāṇāyāma are the most beneficial ones which can be practised by pregnant women, preferably in Baddhakoṇāsana. During pregnancy, however, the breath should never be held without the guidance of an experienced teacher.

35. After completing any prāṇāyāma practice always lie down on the back like a corpse in Śavāsana (Plate 146) for at least 5 to 10 minutes in silence. The mind should be completely switched off and every limb and

sense organ completely passive as if dead. Śavāsana after prāṇāyāma refreshes both the body and the mind.

KUMBHAKAS

36. Thorough mastery of inhalation (puraka) and exhalation (rechaka) is essential before any attempt is made to learn antara kumbhaka (retention following inhalation).

37. Bāhya kumbhaka (restraint following exhalation) should not be tried until antara kumbhaka has become natural.

38. During the practice of kumbhaka there is a tendency to draw in air as well as to tighten and loosen the diaphragm and abdominal organs for the sake of increasing the period of retention. This is unconscious and unintentional. Care should be taken to avoid it.

39. If it is found difficult to hold the breath (khumbaka) after each inhalation or exhalation, do some cycles of deep breathing and then practise kumbhakas. For instance, 3 cycles of deep breathing may be followed by one cycle of kumbhaka. Then there should be another 3 cycles of deep breathing followed by a second cycle of kumbhaka, and so on.

40. If the rhythm of inhalation or exhalation is disturbed by holding the breath, lessen the duration of kumbhaka.

41. Persons suffering from eye or ear trouble (like glaucoma and pus in the ear) should not attempt to hold the breath.

42. Sometimes constipation occurs in the initial stages following upon the introduction of kumbhaka. This is temporary and will disappear in due course.

43. The normal rate of breaths per minute is 15. This rate increases when the body is upset by indigestion, fever, cold and cough, or by emotions like fear, anger or lust. The normal rate of breathing is 21,600 breaths inhaled and exhaled every 24 hours. The yogi measures his span of life not by the number of days, but of breaths. Since breathing is lengthened in prāṇāyāma, its practice leads to longevity.

44. Continuous practice of prāṇāyāma will change the mental outlook of the practitioner and reduce considerably the craving of his senses for worldly pleasures like smoking, drinking and sexual indulgence.

45. In the practice of prāṇāyāma the senses are drawn inwards and in the silence of the kumbhaka the aspirant hears his inner voice calling: 'Look within! The source of all happiness is within!' This also prepares him for the next stage of yoga, pratyāhāra, which leads to freedom from the domination and tyranny of the senses.

46. Since the eyes are kept closed throughout the practice of prāṇāyāma, the passage of time is noted by the mental repetition (japa) of a sacred word or name. This repetition of the sacred words or names is the seed (bīja) planted in the yogi's mind. This seed grows and makes him fit for dhyāna or concentration, the sixth stage of Yoga. Ultimately it produces the fruit of samādhi, where there is experience of full consciousness and supreme joy, where the yogi merges with the Maker of the Universe and feels what he can never express – yet cannot entirely conceal. Words fail to convey the experience adequately, for the mind cannot find words with which to describe it. It is a feeling of that peace which passeth all understanding.

TECHNIQUE AND EFFECTS OF PRĀṆĀYĀMA

58| *Ujjāyī Prāṇāyāma*

The prefix ud attached to verbs and nouns, means upwards or superiority in rank. It also means blowing or expanding. It conveys the sense of pre-eminence and power.

Jaya means conquest, victory, triumph or success. Looked at from another viewpoint it implies restraint or curbing.

Ujjāyi is the process in which the lungs are fully expanded and the chest puffed out like that of a proud conqueror.

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TECHNIQUE

1. Sit in any comfortable position like Padmāsana (Plate 53), Siddhāsana (Plate 38) or Vīrāsana (Plate 43).

2. Keep the back erect and rigid. Lower the head to the trunk. Rest the chin in the notch between the collar-bones just above the breast-bone. (This is the Jālandhara Bandha. Jāla means a net, web, lattice or a mesh.)

3. Stretch the arms out straight and rest the back of the wrists on the knees. Join the tips of the index fingers to the tips of the thumbs, keeping the other fingers extended. (This position or gesture of the hand is known as the Jñāna Mudrā, the symbol or seal of knowledge. The index finger symbolizes the individual soul and the thumb the Universal Soul. The union of the two symbolizes knowledge.)

4. Close the eyes and look inwards. (Plate 147)

5. Exhale completely.

6. Now the Ujjāyi method of breathing begins.

7. Take a slow, deep steady breath through both nostrils. The passage of the incoming air is felt on the roof of the palate and makes a sibilant sound (sa). This sound should be heard.

8. Fill the lungs up to the brim. Care should be taken not to bloat the abdomen in the process of inhalation. (Observe this in all types of Prāṇāyāma.) This filling up is called puraka (inhalation).

9. The entire abdominal area from the pubes up to the breast-bone should be pulled back towards the spine.

10. Hold the breath for a second or two.

11. Exhale slowly, deeply and steadily, until the lungs are completely empty. As you begin to exhale, keep your grip on the abdomen. After two or three seconds of exhalation, relax the diaphragm gradually and slowly. While exhaling the passage of the outgoing air should be felt on the roof of the palate. The brushing of the air on the palate should make an aspirate sound (ha). This exhalation is called rechaka.

12. Wait for a second before drawing a fresh breath. This waiting period is called bāhya kumbhaka.

13. The process described from para. 7 to para. 12 completes one cycle of Ujjāyi Prāṇāyāma.

14. Repeat the cycles for five to ten minutes keeping the eyes closed throughout.

15. Lie on the floor for Śāvāsana. (Plate 146)

16. Ujjāyi Prāṇāyāma may be done without the Jālandhara Bandha even while walking or lying down. This is the only prāṇāyāma which can be done at all times of the day and night.

EFFECTS

This type of prāṇāyāma aerates the lungs, removes phlegm, gives endurance, soothes the nerves and tones the entire system. Ujjāyi without kumbhaka, done in a reclining position, is ideal for persons suffering from high blood pressure or coronary troubles.

59| *Sūrya Bhedana Prāṇāyāma*

Sūrya is the sun. Bhedana is derived from the root bhid meaning to pierce, to break or pass through.

In Sūrya Bhedana Prāṇāyāma, the breath is inhaled through the right nostril. In other words the prāṇa passes through the Piṅgāla or Sūrya nāḍī. A kumbhaka is then performed and the breath is then exhaled through the left nostril which is the path of the Idā nāḍī.

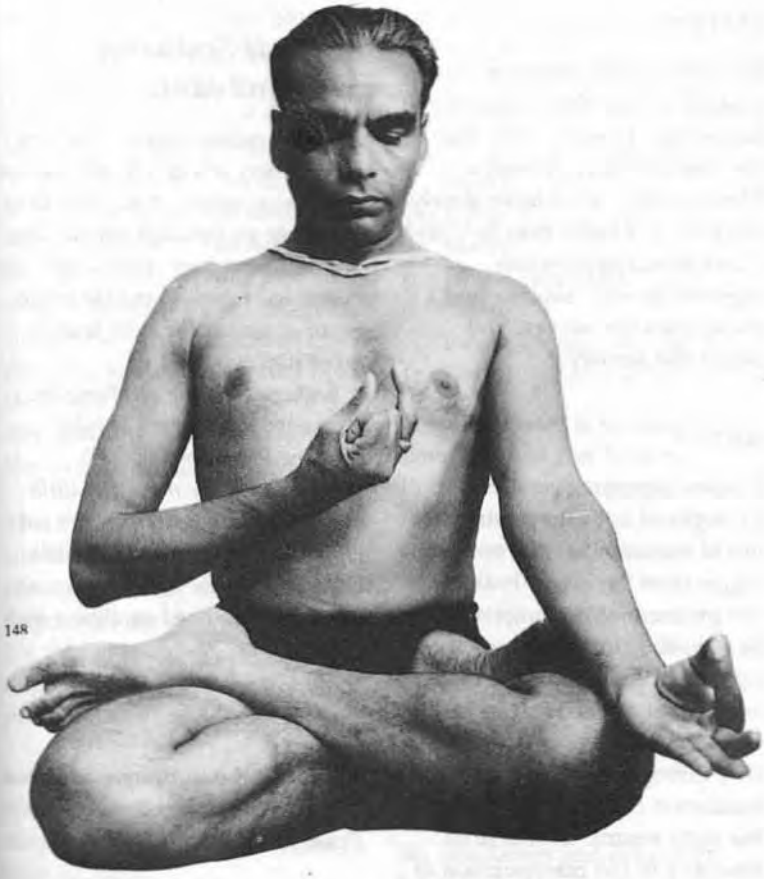
TECHNIQUE

1. Sit in any comfortable position like Padmāsana (Plate 53), Siddhāsana (Plate 38) or Vīrāsana (Plate 43).

2. Keep the back erect and rigid. Lower the head to the trunk. Rest the chin in the notch between the collar-bones just above the breast-bone. (This is Jālandhara Bandha.)

3. Stretch the left arm. Rest the back of the left wrist on the left knee. Perform Jñāna with the left hand (as stated in stage 3 of the technique of Ujjāyi).

4. Bend the right arm at the elbow. Bend the index and middle fingers towards the palm, keeping them passive. Bring the ring and little fingers towards the thumb. (Plate 148)



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5. Place the right thumb on the right side of the nose just below the nasal bone, the ring and little fingers on the left side of the nose just below the nasal bone, just above the curve of the fatty tissue of the nostrils above the upper jaw.

6. Press the ring and the little finger to block the left side of the nose completely.

7. With the right thumb, press the fatty tissue on the right side so as to make the outer edge of the right nostril parallel to the lower edge of the cartilage of the septum.

8. The right thumb is bent at the top joint and the tip of the thumb is placed at a right angle to the septum. (Plate 149)

9. Now inhale slowly and deeply controlling the aperture of the right nostril with the tip of the thumb nearer the nail. Fill the lungs to the brim (puraka).

10. Then block the right nostril so that both are now blocked.

11. Hold the breath for about 5 seconds (antara kumbhaka).

12. Keeping the right nostril completely blocked, open the left nostril partially and exhale through it slowly and deeply (rechaka).

13. During the exhalation regulate the rhythmic flow of air from the left nostril by adjusting pressure with the ring and little fingers, so that the outer edge of the left nostril is kept parallel to the septum. The pressure should be exerted from the inner sides of the tips of the fingers (away from the nails).

14. This completes one cycle of Sūrya Bhedana Prāṇāyāma. Continue with more cycles at a stretch from 5 to 10 minutes, according to capacity.

15. All the inhalations in Sūrya Bhedana are from the right nostril and all the exhalations from the left nostril.

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16. Throughout the process, the passage of air is felt at the tips of the fingers and the thumbs and in the nasal membranes where pressure is applied. The passage of air makes a sound similar to air escaping from a cycle tube. This sound should be maintained constant throughout by varying pressure on the nostrils.

17. The eyes, temples, eyebrows and the skin on the forehead should remain completely passive and show no sign of strain.

18. The mind should be absorbed completely in listening to the proper sound of the passage of air and in maintaining a proper rhythm in breathing.

19. Each inhalation and exhalation should last for the same length of time.

20. The inhalation and the exhalation should not be forced. An even and slow rhythm should be maintained throughout.

21. Lie down in Śavāsana after completing prāṇāyāma. (Plate 146)

EFFECTS

By reason of the pressure on the nostrils, in this Prāṇāyāma the lungs have to work more than in the case of Ujjāyi. In Sūrya Bhedana they filled more slowly, steadily, and fuller than in Ujjāyi. Sūrya Bhedana increases digestive power, soothes and invigorates the nerves, and cleans the sinuses.

NOTE

It often happens that the passages of both the nostrils are not of the same width, one being bigger than the other. In that case the pressure of the fingers has to be adjusted. In some cases the right nostril is completely blocked while the left one is clear. In that case, inhalation may be done only through the left nostril, while exhalation is done only through the right nostril. In course of time due to the manipulation of the fingers the right nostril clears and inhalation through it becomes possible.

Persons suffering from low blood pressure will derive benefit but those with high blood pressure or heart trouble should not hold their breath after inhalation (antara kumbhaka) whilst practising this prāṇāyāma.

60| *Nāḍī Śodhana Prāṇāyāma*

Nāḍī is a tubular organ of the body like an artery or a vein for the passage of prāṇa or energy. A nāḍī has three layers like an insulated electric wire. The innermost layer is called sirā, the middle layer damanī and the entire organ as well as the outer layer is called nāḍī.

Śodhana meaning purifying or cleansing, so the object of Nāḍī Śodhana Prāṇāyāma is the purification of the nerves. A little obstruction in a water pipe can cut off the supply completely. A little obstruction in the nerves can cause great discomfort and paralyse a limb or organ.

TECHNIQUE

1. Follow the technique in paras 1 to 8 of Sūrya Bhedana Prāṇāyāma. (Plate 149)

2. Empty the lungs completely through the right nostril. Control the aperture of the right nostril with the inner side of the right thumb, away from the nail.

3. Now inhale slowly, steadily and deeply through the right nostril, controlling the aperture with the tip of the right thumb near the nail. Fill the lungs to the brim (puraka). During this inhalation the left nostril is completely blocked by the ring and little fingers.

4. After full inhalation, block the right nostril completely with the pressure of the thumb and release the pressure of the ring and little fingers on the left nostril. Readjust them on the outer edge of the left nostril and keep it parallel to the septum. Exhale slowly, steadily and deeply through the left nostril. Empty the lungs completely. The pressure should be exerted from the inner sides of the tips of the ring and little fingers (away from the nails) (rechaka).

5. After full exhalation through the left nostril, change the pressure on it by adjusting the fingers. In the changed position, the tips of the ring and little fingers nearer the nails exert the pressure.

6. Now inhale through the left nostril slowly, steadily and deeply, filling the lungs to the brim (puraka).

7. After full inhalation through the left nostril, block it and exhale through the right nostril, adjusting the pressure of the right thumb on the right nostril as stated in para. 2 above (rechaka).

8. This completes one cycle of Nāḍī Śodhana Prāṇāyāma. Here the rhythm of breathing is as follows:

(a) Exhale through the right nostril.
(b) Inhale through the right nostril.
(c) Exhale through the left nostril.
(d) Inhale through the left nostril.
(e) Exhale through the right nostril.
(f) Inhale through the right nostril.
(g) Exhale through the left nostril.
(h) Inhale through the left nostril.
(i) Exhale through the right nostril.
(j) Inhale through the right nostril . . . and so on.

Stage (a) above is the preparatory one. The first real Nāḍī Śodhana Prāṇāyāma cycle starts at stage (b) and ends at stage (e). The second cycle starts at stage (f) and ends at stage (i). Stage (j) is the safety measure in order to prevent gasping, breathlessness and strain on the heart.

9. Do 8 to 10 cycles at a stretch as described above. This may take 6 or 8 minutes.

10. Inhalation and exhalation from each side should take the same time. In the beginning the duration will be unequal. Persevere until equality is achieved.

11. After achieving mastery over the equal duration and precision over inhalation and exhalation on either side an attempt may be made to retain breath (antara kumbhaka) after inhaling.

12. This precision is only achieved after long practice.

13. Retention should not disturb the rhythm and equality of inhalation and exhalation. If either are disturbed curtail the period of retention or hold the breath on alternate cycles.

14. Do not attempt to hold the breath after exhalation (bāhya kumbhaka) until you have mastered retention after inhalation (antara kumbhaka).

15. Retention and the lengthening of inhalation and exhalation should only be attempted with the help and under the guidance of an experienced Guru.

16. Always conclude by lying down in Śavāsana. (Plate 146)

EFFECTS

The blood receives a larger supply of oxygen in Nāḍī Śodhana than in normal breathing, so that one feels refreshed and the nerves are calmed and purified. The mind becomes still and lucid.

NOTE

In the beginning the body perspires and shakes, while the thigh and arm muscles become tense. Such tension should be avoided.

Persons suffering from high blood pressure or heart trouble should never attempt to hold their breath (kumbhaka). They can practise Nāḍī Śodhana Prāṇāyāma without retention (kumbhaka) with beneficial effect.

Persons suffering from low blood pressure can do this prāṇāyāma with retention after inhalation (antara kumbhaka) *only*, with beneficial effects.

61| *Viloma Prāṇāyāma*

Loma means hair. The particle vi is used to denote negation or privation. Viloma thus means against the hair, against the grain, against the natural order of things.

In Viloma Prāṇāyāma inhalation or exhalation is not one uninterrupted continuous process, but is interrupted by several pauses. For instance, if continuous inhalation to fill the lungs or continuous exhalation to expel the air were to take 15 seconds in each case, in Viloma there would be a pause of about 2 seconds after every third second of inhalation or of exhalation. The process of inhalation or of exhalation is thus lengthened to 25 seconds. The technique given below is in two stages, which are distinct.

TECHNIQUE: STAGE I

1. Viloma Prāṇāyāma can be done either in a sitting posture or while lying down.

2. If done when seated, keep the back erect, lower the head to the trunk so that the chin rests in the notch between the collar-bones on the top of the breast-bone. This is Jālandhara Bandha. Keep the hands in Jñāna Mundra (see p. 119, para 21).

3. Inhale for 2 seconds, pause for 2 seconds holding the breath, again inhale for 2 seconds, again pause for 2 seconds holding the breath, and continue like this until the lungs are completely full.

4. Now hold the breath for 5 to 10 seconds (antara kumbhaka) according to capacity.

5. Exhale slowly and deeply as in Ujjāyi with an aspirate sound (huuuum).

6. This completes one cycle of the first stage of Viloma Prāṇāyāma.

7. Repeat 10 to 15 cycles of this first stage at a stretch.

STAGE II

8. Rest for a minute or two.

9. Then take a deep breath without any pauses as in Ujjāyi with a sibilant sound (ssssssssa), keeping the chin on the top of the breast-bone. Fill the lungs completely.

10. Hold the breath from 5 to 10 seconds (antara kumbhaka), keeping the Mūla Bandha grip.

11. Exhale for 2 seconds and pause for 2 seconds. Again exhale for 2 seconds, pause for 2 seconds and continue like this until the lungs are completely emptied.

12. This completes one cycle of the second stage of Viloma Prāṇāyāma.

13. Repeat the second stage of Viloma 10 to 15 times at a stretch.

14. This completes Viloma Prāṇāyāma.

15. Then lie down in Śavāsana. (Plate 146)

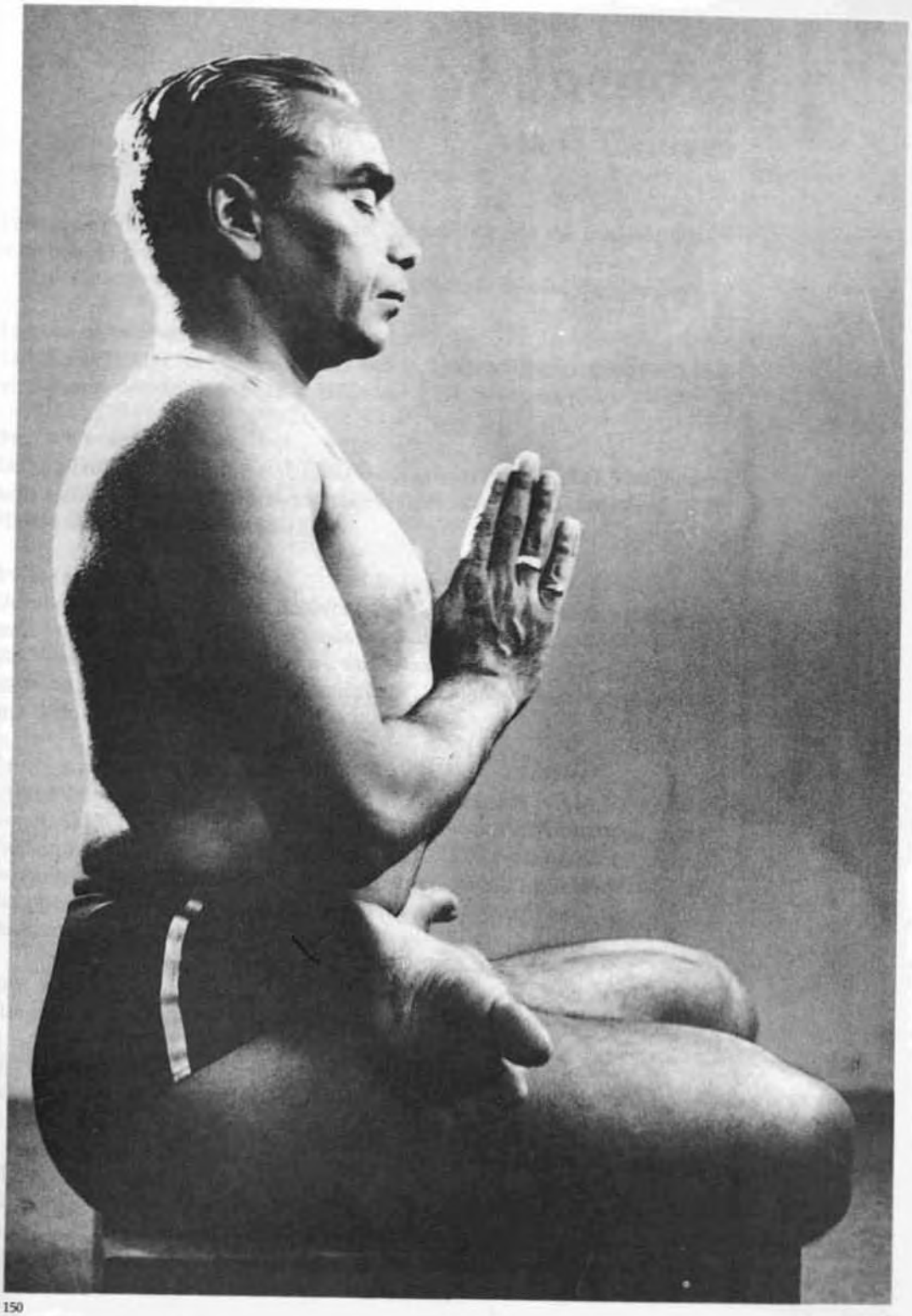
EFFECTS

Viloma Prāṇāyāma in the first stage helps those suffering from low blood pressure. In the second stage it benefits persons suffering from high blood pressure.

The second stage of Viloma should only be done when lying down by persons suffering from high blood pressure.

Those suffering from heart complaints should not attempt it until they have mastered the Nāḍī Śodhana and Ujjāyi Prāṇāyāmas.

As a wind drives smoke and impurities from the atmosphere, prāṇāyāma drives away the impurities of the body and the mind. Then, says Patañjali, the DIVINE FIRE within blazes forth in its full glory and the mind becomes fit for concentration (dhāraṇā) and meditation (dhyāna). (*Yoga Sutras*, chapter II, 52 and 53.) This takes a long time. By degrees is the darkness banished by the dawn.



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Appendix

Āsana Courses

I am giving the āsanas in a serial order for practice and the possible time it may take to gain control of them.

(The figures within the brackets after the āsanās denote the number.)

1st and 2nd week

Tādāsana (1); Utthita Trikoṇāsana (3 and 4); Utthita Pārśvakoṇāsana (5 and 6); Sālamba Sarvāngāsana (102); Halāsana (113); Savāsana (146).

3rd and 4th week

Utthita Trikoṇāsana (3 and 4); Utthita Pārśvakoṇāsana (5 and 6); Vīrabhadrāsana I and II (9 and 10); Pārśvottānāsana (13); Sālamba Sarvāngāsana (102); Halāsana (115); Śavāsana (146).

5th and 6th week

Utthita Trikoṇāsana (3 and 4); Utthita Pārśvakoṇāsana (5 and 6); Vırabhadrāsana I and II (9 and 10); Pārśvottānāsana (13); Prasārita Pādottānāsana (17); Stay ½ a minute on each side in all these āsanās. Paripūrna Nāvāsana (36); Sālamba Sarvāngāsana (102); Halāsana (113); Paschimottānāsana (81); Śavāsana (146).

7th and 8th week

Utthita Trikoṇāsana (3 and 4); Utthita Pārśvakoṇāsana (5 and 6); Vīrabhadrāsana I and II (9 and 10); Pārśvottānāsana (13); Prasārita Pādottānāsana (17); Pādānguṣṭhāsana (22); Pāda Hastāsana (24); Uttānāsana (25); Sālamba Sarvāngāsana (102); Halāsana (113); Karṇapīdāsana (114); Danḍāsana (35); Paripurṇa Nāvāsana (36); Ardha Nāvāsana (37); Paschimottānāsana (81); Poorvottānāsana (82); Savāsana (146).

9th week

Consolidate the āsanās and increase the length of stay in all of them.

10th week

Repeat all the āsanās and do Ujjāyī Prāṇāyāma (Section 58) without sitting in Siddhāsana (38) for 5 minutes and do Śavāsana (146) for 5 minutes.

11th and 12th week

Utthita Trikoṇāsana (3 and 4); Utthita Pārśvakoṇāsana (5 and 6); Vīrabhadrāsana I and II (9 and 10); Pārśvottānāsana (13); Prasārita Pādottānāsana (17) Pādānguṣṭhāsana (22); Pāda Hastāsana (24); Uttānāsana (25); Danḍāsana

(35); Paripūrna Nāvāsana (36); Ardha Nāvāsana (37); Mahā Mudrā (61); Jānu Śīrsāsana (63); Paschimottānāsana (81); Poorvottānāsana (82); Chaturanga Danḍāsana (30) Bhujangāsana (31); Śalabhāsana (26); Dhanurāsana (28) Urdhva Mukha-Śvānāsana (32); Uṣṭrāsana (20); Adho Mukha Śvānāsana (33); Baddha Koṇāsana (51); Sālamba Sarvāngāsana (102); Halāsana (113); Karṇapīdāsana (114); Supta Koṇāsana (115); Pārśva Halāsana (116); Savāsana (146) for 5 minutes; Ujjāyī Prāṇāyāma without retention (Section 58) in Siddhāsana (38) for 5 minutes.

13TH WEEK

Repeat. Do Ujjāyī Prāṇāyāma with inhalation retention (Section 58) in Siddhāsāna (38) or in Śavāsana (146).

14TH TO 18TH WEEK

(Observe the change in the order of the āsanās)
Sālamba Śīrṣāsana (90); Utthita Trikoṇāsana (3 and 4); Utthita Pārśvakoṇāsana (5 and 6); Vīrabhadrāsana I and II (9 and 10); Pārśvottānasana (13); Prasārita Pādottānāsana (17); Pādānguṣṭhāsana (22); Pāda Hastāsana (24); Uttānāsana (25); Mahā Mudrā (61); Jānu Śīrṣāsana (63); Ardha Baddha Padma Paschimottānāsana (66); Paschimottānāsana (81); Paripoorṇa Nāvāsana (36); Ardha Nāvāsana (37); Pūrvottanāsāna (82); Uṣṭrāsana (20); Śalabhāsana (26); Dhanurāsana (28); Chaturanga Danḍāsana (30); Bhujangāsana (31); Ūrdha Mukha Svānāsana (32); Adho Mukha Śvānāsana (33); Virāsana (42); Baddha Koṇāsana (51); Sālamba Sarvāngāsana (102); Halāsana (113); Karṇapīdāsana (114); Supta Koṇāsana (115); Pārśva Halāsana (116); Eka Pāda Sarvāngāsana (117); Pārśvaika Pāda Sarvāngāsana (118); Jatara Parivartanāsana (127 and 128); Śavāsana (146). Do Ujjāyī Prāṇāyāma (without inhalation retention) (Section 58) in Siddhāsana (38) or in Vīrāsana (42) or in Baddhakoṇāsana (50).

19TH AND 20TH WEEK

Repeat.

If you now find all the standing āsanās are easy enough, you can do them on alternate days or twice a week. The day you do not do the standing āsanās, devote your time to Ujjāyī Prānāyāma (Section 58) first without inhalation retention for 5 minutes and then with inhalation retention for 5 minutes and then with inhalation retention for 5 minutes.

21ST AND 23RD WEEK

Sālamba Sīrṣāsana (90); if possible Ūrdhva Danḍāsana (94); Sālamba Sarvāngāsana (102); Halāsana (113); Karṇapīdāsana (114); Supta Koṇāsana (115); Pārśva Halāsana (116); Ekapāda Sarvangāsana (117); Pārśvaika Pāda Sarvangāsana (118); Supta Pādānguṣṭhāsana (130); Jaṭara Parivartanāsana (127 and 128); Jānu Śīrṣāsana (63); Ardha Baddha Padma Paschimottānāsana (66); Triang Mukhaika-pāda Paschimottānāsana (69); Marichyāsana I (71); Paschimottānāsana (81); Upaviṣṭha Koṇāsana (74); Baddhakoṇāsana (51); Pūrvottānāsana (82); Bharadwājāsana (131 and 132); Virāsana (42);

Chaturangadaṇḍāsana (30); Bhujangāsana (31); Ūrdhva Mukha Śvānāsana (32); Adho Mukha Śvānāsana (33); Śalabhāsana (26); Dhanurāsana (28); Uṣṭrāsana (20); Uttānāsana (25); Savāsana (146); Ujjāyī Prānāyāma (Section 58) without inhalation retention in Śavāsana for 5 minutes and with inhalation retention in Siddhāsana (38); or in Padmāsana (53); or in Vīrāsana (42) or in Baddha Koṇāsana (52).

23RD TO 25TH WEEK

Follow the serial order up to Padmāsana (53) as in the 21st week. Then Parvatāsana (54); Matsyāsana (56); Vīrāsana (42); Supta Vīrāsana (49); Bharadwājāsana (131 and 132); Marichyāsana II (135 and 136); Poorvottānāsana (82); Chaturanga Daṇḍāsana (30); Urdva Mukha Śvānāsana (32); Adho Mukha Śvānāsana (33); Salabhāsana (26); Dhanurāsana (28); Uṣṭrāsana (20); Ūrdhva Dhanurāsana (144); Śavāsana (146); then do Viloma Prāṇāyāma (Section 61) Stage I for 5 minutes and stage II for 5 minutes in Siddhāsana (38) or Padmāsana (53).

When you do the standing positions, eliminate the various movements of Sarvāngāsana cycle and do the rest. For some it is easy to get Padmāsana earlier than the stipulated period and for some it may take a little longer time to get mastery in the position.

26TH TO 30TH WEEK

Sālamba Śīrṣāsana (90); Ūrdhva Daṇḍāsana (94); Sālamba Sarvāngāsana (102); Halāsana (113); Karṇapīdāsana (114); Supta Koṇāsana (115); Pārśva Halāsana (116); Eka Pāda Sarvāngāsana (117); Pārśvaikapāda Sarvāngāsana (118); Ūrdva Padmāsana in Sarvāngāsana (122); Piṇḍāsana in Sarvāngāsana (123); Setu Bandha Sarvāngāsana (121); Jaṭara Parivartanāsana (127 and 128); Paripūrṇa Nāvāsana (36); Ardha Nāvāsana (37); Jānu Śīrṣāsana (63); Ardha Baddha Padma Paschimottānāsana (66); Triang Mikhaika Pāda Paschimottānāsana (69); Marichyāsana I (71); Paschimottānāsana (81); Upaviṣṭha Koṇāsana (74); Baddha Koṇāsana (51); Padmāsana (53); Parvatāsana (54); Baddha Padmāsana (58 and 59); Yoga Mudrāsana (60); Matyāsana (56); Vīrāsana (42); Supta Vīrāsana (49); Bharadwājāsana (131 and 132); Marichyāsana II (135 and 136); Ardha Matsyendrāsana (139 and 140); Adho Mukha Śvānāsana (33); Ūrdhva Mukha Śvānāsana (32); Chaturanga Daṇḍāsana (30); Śalabhāsana (26); Dhanurāsana (28); Bhujangāsana (31); Poorvottānāsana (82); Uṣṭrāsana (20); Ūrdhva Dhanurāsana (144) for 4 times; Śavāsana (146). Ujjāyī Prāṇāyāma with Antar Kumbhaka (inhalation retention Section 58) and Viloma Prāṇāyāma (Section 61) in Siddhāsana (38); or in Vīrāsana (42) or in Padmāsana (53).

31ST TO 32ND WEEK

Consolidate all the āsanās concentrating on perfection as well as timings. Stay in all the forward bendings for a minute on each āsanā and Paschimottānāsana for 5 minutes.

32ND TO 35TH WEEK

Follow the serial order up to Piṇḍāsana in Sarvāngāsana (123) as in the 26th week. Then Pārśva Piṇḍāsana in Sarvāngāsana (124 and 125) and continue the serial order from Setu Bandha Sarvāngāsana (121) as in the 26th week up to Śavāsana (146). Do Sūrya Bhedana Prāṇāyāma for 5 minutes and Nāḍi Śodhaṇa Prāṇāyāma 8 cycle only without retention. Sit in Dhyāna (Plate 150) for 3 to 5 minutes.

One Week Course

The following is a course which covers one week and will benefit the body and bring harmony to the mind.

FIRST DAY OF THE WEEK

Sālamba Sīrṣāsana (90) for 10 minutes; Ūrdhva Daṇḍāsana (94) for 1 minute; Sālamba Sarvāngāsana (10 minutes; Halāsana (113) for 5 minutes; Utthita Trikoṇāsana (3 and 4) for 30 seconds on each side; Utthita Pārśva Konāsana (5 and 6) for 30 seconds on each side; Virabhadrāsana I and II for 20 seconds on each side; Pārśvottānāsana (13) for 1 minute on each side; Prasārita Padottānāsana (17) for 1 minute; Pādānguṣṭāsana (22) for 30 seconds; Pāda Hastāsana (24) for 30 seconds; Uttānāsana (25) for 1 minute; Paschimottānāsana (81) for 5 minutes; Poorvottānāsana (82) for 30 seconds; Marīchyāsana II (135 and 136) for 30 seconds on each side; Ardha Matsyendrāsana (139 and 140) for 30 seconds on each side; Ūrdhva Dhanurāsana for 8 to 10 times staying 15 seconds each time; Śavāsana (146) for 5 minutes. Ūjjāyi Prāṇāyāma (with inhalation retention) (Section 58) for 15 minutes and meditation (150) to the capacity, in any āsana. Again Śavāsana (146) for 5 minutes.

SECOND DAY OF THE WEEK

Sālamba Śīrṣāsana (90) for 10 minutes; Ūrdhva Daṇḍāsana (94) from 30 seconds to 1 minute; Sālamba Sarvāngāsana (102) for 10 minutes; Halāsana (113) for 5 minutes; Jaṭara Parivartanāsana (127) for half a minute on each side; Supta Pādānguṣṭāsana (130) for 20 seconds on each side; Paripūrṇa Nāvāsana (36) for 1 minute; Ardha Nāvāsana (37) 20 to 30 seconds; Paschimottānāsana (81) for 5 minutes; Bharadwājāsana (131 and 132) for 30 seconds each side; Marīchyāsana II (135 and 136) for 30 seconds each side; Ardha Matyendrāsana (139 and 140) for 30 seconds on each side; Parvātāsana (54) for 1 minute; Vīrāsana (42) for 1 minute; Supta Vīrāsana (49) for 1 minute; Uṣṭrāsana (20 for 30 seconds; Śalabhāsana (26) for 20 to 30 seconds; Dhanurāsana (28) for 30 seconds; Urdhva Mukha Śvānāsana (32) for 20 to 30 seconds; Adho Mukha Śvānāsana (33) for 1 minute; Uttānāsana (25) for 1 to 2 minutes; Śavāsana (146) for 5 minutes and Sūrya Bhedana Prāṇāyāma (Section 59) in Padmāsana (53) or in Siddhāsana (38) or in Vīrāsana (42) for 5 minutes and Nādi Śodhana Prāṇāyāma without retention for 10 minutes and sit in Dhyāna (150) for 2 minutes. Again do Śavāsana (146) for 5 minutes.

THIRD DAY OF THE WEEK

Sālamba Śīrṣāsana (90) for 10 minutes, Ūrdhva Daṇḍāsana (94) for 1 minute; Sālamba Sarvāngāsana (102) for 10 minutes; Halāsana (113) for 5 minutes; Karṇapīdāsana (114) for 30 seconds; Supta Koṇāsana (115) for 30 seconds; Pārsva Halāsana (116) for 30 seconds on each side; Eka Pāda Sarvāngāsana (117) for 30 seconds on each side; Pārśvaikapada Sarvāngāsana (118) for 30 seconds on each side; Setu Bandha Sarvāngāsana (121) from 30 seconds to 2 minutes; Ūrdhva Padmāsana in Sarvāngāsana (122) for 30 seconds; Piṇḍāsana in Sarvāngāsana (123) for 30 seconds; Pārśva Piṇḍāsana in Sarvāngāsana (124) for 30 seconds on each side; Jaṭara Parivartanāsana (127 and 128) for 30 seconds on each side twice; Supta Pādāngusṭhāsana (130) for 30 seconds on each side; Marīchyāsana II (135 and 136) from 30 seconds to 60 seconds on each side; Ardha Matsyendrāsana (139 and 140) from 30 seconds to 60 seconds on each side; Paschimottānāsana (81) for 5 minutes; Śavāsana (146) for 5 minutes. Nādiśodhana Prāṇāyāma (Section 60) without Kumbhaka or retention 10 minutes, Sūrya Bhedana Prāṇāyāma (Section 59) 10 cycles; Dhyāna (150) for 5 minutes.

FOURTH DAY OF THE WEEK

Sālamba Śīrṣāsana (90) for 5 minutes; Ūrdhva Daṇḍāsana (94) for 1 minute; Sālamba Sarvāngāsana (102) for 5 minutes; Halāsana (113) for 5 minutes; Mahā Mudra (61) for 30 seconds on each side; Jānu Śīrṣāsana (63) for 1 minute on each side; Ardha Baddha Padma Paschimottānāsana (66 and 67) for 1 minute on each side; Trianga Mukhaika Pāda Paschimottānāsana (69) for 1 minute on each side; Marīchyāsana I (71) for 1 minute on each side; Upaviṣṭha Koṇāsana (74) for 1 minute; Vīrāsana (42) for 1 minute; Supta Vīrāsana for 1 minute; Baddha Padmāsana (58 and 59) for 1 minute; Yoga Mudrāsana (60) for 1 minute; Parvatāsana (54) for 30 seconds; Baddha Koṇāsana (51) for 1 minute; Paschimottānāsana (81) for 5 minutes; Ujjāyi Prāṇāyāma (Section 58) with inhalation retention to capacity for 8 times. Śavāsana (146) with Viloma Prāṇāyāma (Section 61) Stage I for 5 minutes.

FIFTH DAY OF THE WEEK

Sālamba Śīrṣāsana (90) for 10 minutes; Ūrdhva Daṇḍāsana (94) for 1 minute; Sālamba Sarvāngāsana (102) for 10 minutes; Halāsana (113) for 5 minutes; Paschimottānāsana (81) for 5 minutes; Bharadwājāsana (131 and 132) for 30 seconds on each side; Marīchyāsana II (135 and 136) for 30 seconds on each side; Ardha Matsyendrāsana (139 and 140) for 30 seconds on each side; Baddha Padmāsana (58 and 59) for 1 minute; Matsyāsana (56) for 30 seconds; Supta Vīrāsana (49) for 1 minute; Śalabhāsana (26) three times of 15 seconds duration; Dhanurāsana (28) for 20 seconds; Bhujangāsana (31) for 30 seconds; Ūrdhva Mukha Śvānāsana (32) for 30 seconds; Ūrdhva Dhanurāsana (144) for 15 times staying to capacity; Śavāsana (146) with Viloma Prāṇāyāma (Section 61) Stage I and Stage II for 5 minutes each. Dhyāna (150) for 5 minutes.

SIXTH DAY OF THE WEEK

Sālamba Śīrṣāsana (90) for 5 minutes; Utthita Trikoṇāsana (3 and 4) for 15 seconds on each side; Utthita Parśvakoṇāsana (5 and 6) for 15 seconds on each side; Vīrabhadrāsana I and II (9 and 10) for 10 seconds on each side; Pārśvottānāsana (13) for 10 seconds on each side; Prasārita Pādottānāsana (17) for 15 seconds; Uttānāsana (25) for 20 seconds; Sālamba Sarvāngāsana (102) for 5 minutes; Halāsana (113) for 5 minutes; Karṇapīdāsana (114) for 15 seconds; Suptakoṇāsana (115) for 15 seconds; Parśva Halāsana (116) for 15 seconds on each side; Ekapāda Sarvāngāsana (117) for 15 seconds on each side; Pārśvaikapāda Sarvāngāsana (118) for 15 seconds on each side; Setu Bandha Sarvāngāsana (121) for 1 minute; Ūrdhva Padmāsana and Piṇḍāsana in Sarvāngāsana (122 and 123) for 15 seconds; Pārśva Piṇḍāsana (124 and 125) for 15 seconds on each side; Jānu Sīrṣāsana (63); Ardha Baddha Padma Paschimottānāsana (66); Triang Mukhaikapāda Paschimottānāsana (69); Marīchyāsana I (71) all for 15 seconds on each side; Upaviṣtha Koṇāsana (74) for 15 seconds; Paripūrṇa Nāvāsana (36) for 30 seconds; Ardha Nāvāsana (37) for 30 seconds; Baddha Koṇāsana (51) for 30 seconds; Paschimottānāsana (81) for 1 minute; Poorvottānāsana (82) for 15 seconds; Vīrāsana (42) and Supta Vīrāsana (49) for 15 seconds each; Parvatāsana in Padmāsana (54) for 30 seconds; Marichyāsana II (135 and 136) for 30 seconds on each side; Ardha Matyendrāsana (139 and 140) for 30 seconds on each side; Ūrdhva Dhanurāsana (114) for 3 times to capacity; Śavāsana (146) for 5 minutes. Nādi Śodhana Prāṇāyāma (Section 60) 8 cycles with inhalation retention. Dhyāna (150) for 3 minutes.

On Sundays do Nādi Śodhana Prāṇāyāma (Section 60) for 15 minutes with inhalation retention and Viloma Prāṇāyāma (Section 61) Stages I and II for 10 minutes in Śavāsana (146).

If one finds the number of āsanās or the length of time to do them has increased one can adjust according to capacity and the time at one's disposal.

Do Śavāsana (146) after Prāṇāyāma. Do Antarkumbhaka (inhalation retention) only when you have mastered the art of deep inhalation and deep exhalation without any jerks.

Do not do the āsanās and Prāṇāyāma together. You may feel strained and fatigued.

If you do Prāṇāyāma in the mornings then āsanās can be done in the evenings or half an hour after the āsanās.

Never do āsanās immediately after Prāṇāyāma, but one can practise Prāṇāyāma after āsanās if one is still fresh.

Those who wish to prostrate to the Sun (Sūryanamaskar) and to develop the arms and chest, can do the following āsanās in sequence at first for six rounds, increasing the number according to capacity.

	Asanās	*Method of breathing*
1	Tāḍasana (1)	Inhalation
2	Uttānāsana (25)	Exhalation, inhalation with head up
3	Chaturanga Danḍāsana (30)	Exhalation
4	Ūrdhva Mukha Svanasana (32) and go back to	Inhalation
5	Chaturanga Danḍāsana (30)	Exhalation, inhale
6	Adho Mukha Śvānāsana (33) and from here jump to	Exhale
7	Uttānāsana (25) and then back to	Inhalation
8	Tāḍāsana (1)	Exhalation

Table of Asanas

The following table correlates the āsanas with the plates that illustrate them:

NAMES OF ĀSANAS, ETC.	INTERMEDIATE ĀSANAS PLATE NO.	FINAL ĀSANAS PLATE NO.
1. Tāḍāsana	—	1
2. Utthita Trikoṇāsana	2	3 and 4
3. Utthita Pārśvakoṇāsana	—	5 and 6
4. Vīrabhadrāsana I	7 and 8	9
5. Virabhadrāsana II	—	10
6. Pārśvōttānāsana	11 and 12	13 and 14
7. Prasārita Pādottānāsana	15 and 16	17 and 18
8. Ustrāsana	19	20
9. Pādānguṣṭhāsana	21	22
10. Pāda Hastāsana	23	24
11. Uttānāsana	—	25
12. Śalabhāsana	27	26
13. Dhanurāsana	—	28
14. Chaturanga Daṇḍāsana	29	30
15. Bhujangāsana	—	31
16. Ūrdhva Mukha Śvānāsana	—	32
17. Adho Mukha Śvānāsana	—	33 and 34
18. Daṇḍāsana	—	35
19. Paripūrṇa Nāvāsana	—	36
20. Ardha Nāvāsana	—	37
21. Siddhāsana	—	38
22. Vīrāsana	39 to 41	42 to 45
23. Supta Vīrāsana	46 to 48	49
24. Baddha Koṇāsana	50	51 and 52
25. Padmāsana	—	53
26. Parvatāsana	—	54
27. Matsyāsana	55 and 57	56
28. Baddha Padmāsana	—	58 and 59
29. Yaga Mudrāsana	—	60
30. Mahā Mudrā	—	61
31. Jānu Śīrṣāsana	62	63
32. Ardha Baddha Padma Paschimottānāsana	64 and 65	66 and 67

33. Triang Mukhaikapāda Paschimottānāsana	68	69
34. Marīchyāsana I	70	71
35. Upaviṣṭha Konāsana	72 and 73	74
36. Paschimottānāsana (or Urgrāsana or Brahmacharyāsana)	75 to 80	81
37. Pūrvottānāsana	—	82
38. Sālamba Śīrṣāsana	83 to 89 and 92 to 95, 97	90, 91 and 96
39. Ūrdhva Daṇḍāsana	—	94
40. Sālamba Sarvāngāsana	98 to 101 and 104 to 107	102, 103 and 108
41. Halāsana	109 to 112	113
42. Karṇapīdāsana	—	114
43. Supta Koṇāsana	—	115
44. Pārśva Halāsana	—	116
45. Eka Pāda Sarvāngāsana	—	117
46. Pārśvaika Pāda Sarvāngāsana	—	118
47. Setu Bandha Sarvāngāsana (or Uttāna Mayūrāsana)	119 and 120	121
48. Ūrdhva Padmāsana in Sarvāngāsana	—	122
49. Pindāsana in Sarvāngāsana	—	123
50. Pārśva Piṇḍāsana in Sarvāngāsana	—	124 and 125
51. Jaṭhara Parivartanāsana	126	127 and 128
52. Supta Pādānguṣṭhāsana	129	130
53. Bharadvājāsana	—	131 and 132
54. Marīchyāsana II	133 and 134	135 and 136
55. Ardha Matsyendrāsana	137 and 138	139 and 140
56. Ūrdhva Dhanurāsana	141 to 143 and 145	144
57. Śavāsana	—	146
Prānāyāma		
58. Ujjāyi	—	147
59. Sūrya Bhedana	148	149
60. Nāḍi Śodhana	—	—
61. Viloma	—	—
— Dhyāna	—	150

Glossary

A	Negative particle meaning 'non', as in non-violence.
Abhaya	Freedom from fear.
Abhiniveśa	Instinctive clinging to life and the fear that one may be cut off from all by death.
Abhyāsa	Constant and determined study or practice.
Ādhaḥ	Down, lower.
Adhāra	A support.
Adhimātra	Beyond measure, superior.
Adhimātratama	The supreme one, the highest.
Adho-mukha	Face downwards.
Ādīśvara	The primeval Lord; an epithet of Śiva.
Advaita	Non-duality of the Universal Spirit with the individual soul.
Āgama	Testimony or proof of an acceptable authority when the source of knowledge has been checked and found trustworthy.
Ahaṁkāra	Ego or egotism; literally 'the I-Maker', the state that ascertains 'I know'.
Ahimsā	Non-violence. The word has not merely the negative and restrictive meaning of 'non-killing or non-violence', but the positive and comprehensive meaning of 'love embracing all creation'.
Ajapa-mantra	Unconscious repetitive prayer. Every living creature unconsciously breathes the prayer 'So'ham' (Saḥ = He (the Universal Spirit), aham = am I) with each inward breath, and with each outgoing breath prays 'Haṁsah' (Aham = I am, Saḥ = He (the Universal Spirit)).
Akrodha	Freedom from anger.
Alabhdha-bhūmikatva	Failure to attain firm ground or continuity in practice, feeling that it is not possible to see reality.
Ālamba	Support.
Ālasya	Idleness, sloth, apathy.
Amanaska	The mind which is free from thoughts and desires.
Ananta	Infinite; a name of Viṣṇu as also of Viṣṇu's couch, the serpent Śeṣa.
Anavasthitattva	Instability to continue the practices feeling that it is not necessary to continue as he thinks that he has reached the highest state of Samādhi.

Aṅga	The body; a limb or a part of the body; a constituent part.
Aṅgamejayatva	Unsteadiness or tremor of the body.
Aṅgula	A finger; the thumb.
Aṅguṣṭha	The big toe.
Antara	Within; interior.
Antara Kumbhaka	Suspension of breath after full inhalation.
Antaranga Sādhanā	The inward quest of the soul by Prāṇāyāma and Pratyāhāra whereby the mind is brought under control and the senses are emancipated from the thraldom of objects of desire.
Antarātmā	The Supreme Soul residing in the heart of man.
Antarātmā Sādhanā	The innermost quest of the soul by means of Dhāranā (concentration), Dhyāna (meditation) and Samādhi.
Anumāna	An inference.
Apāna	One of the vital airs which move in the sphere of the lower abdomen and control the function of elimination of urine and faeces.
Aparigraha	Freedom from hoarding or collecting.
Apuṇya	Vice or demerit.
Ardha	Half.
Arjuna	A Pāṇḍava prince, the mighty bowman and hero of the epic Mahābhārata.
Āsana	Posture. The third stage of yoga.
Asmitā	Egotism.
Aṣṭa	Eight.
Aṣṭāṅga Yoga	The eight limbs of Yoga described by Patañjāli.
Asteya	Non-stealing.
Ātmā or *Ātman*	The Supreme Soul or Brahman.
Ātma Ṣaṭkam	A group of six verses written by Śankarāchārya describing the soul in the state of Samadhi.
Ātmīyatā	The feeling of oneness, as a mother's feeling for her children.
Auṁ	Like the Latin word 'Omne', the Sanskrit word 'Auṁ' means 'all' and conveys concepts of 'Omniscience', 'Omnipresence' and 'Omnipotence'.
Avasthā	State or condition of the mind.
Avatāra	Descent, advent or incarnation of God. There are ten avatāras of Viṣṇu: Matsya (the Fish); Kūrma (the Tortoise); Varāha (the Boar), Narasiṁha (the Man-lion); Vāmana (the Dwarf); Paraśurāma; Rāma (hero of the epic Rāmāyaṇa); Krishna (hero of the epic Mahābhārata who related the Bhagavad Gīta); Balarāma and Kalki.
Avidyā	Ignorance.
Avirati	Sensuality.
Āyāma	Length, expansion, extension. It also conveys the idea of restraint, control and stopping.

Baddha	Bound, caught, restrained, firm.
Bahiraṅga Sādhanā	The outward quest of the soul for its Maker. The first three stages of Yoga, namely, Yama, Niyama and Āsana, are the outward quest and keep the seeker in harmony with his fellow men and nature.
Bāhya Kumbhaka	Suspension of breath after full exhalation when the lungs are completely empty.
Bandha	Bondage or fetter. It means a posture where certain organs or parts of the body are contracted and controlled.
Bhagavad Gītā	The Song Divine, the sacred dialogues between Krishna and Arjuna. It is one of the source books of Hindu philosophy, containing the essence of the Upanishads.
Bhagavān	Lord; venerable, holy.
Bhakti	Worship, adoration.
Bhakti-mārga	The way or path to realization through adoration of a personal god.
Bharadvāja	A sage.
Bhaya	Fear.
Bhedana	Piercing, breaking through, passing through.
Bhoga	Enjoyment; an object of pleasure.
Bhoktṛ	One who enjoys or experiences.
Bhrānti-darśana	Erroneous (bhrānti) vision or knowledge (darśana), delusion.
Bhu	Land.
Bhūdāna	The donation of land.
Bhuja	The arm or the shoulder.
Bhujaṅga	A serpent, a snake.
Bhūmikatva	Firm ground.
Bīja	Seed or germ.
Bīja-mantra	A mystical syllable with a sacred prayer repeated mentally during prāṇāyāma, and the seed thus planted in the mind germinates into one-pointedness.
Brahmā	The Supreme Being, the Creator. The first deity of the Hindu Trinity entrusted with the work of creation of the world.
Brahma-vidyā	The knowledge of the Supreme Spirit.
Brahmachāri	A religious student vowed to celibacy and abstinence. One who is constantly moving (chārin) in Brahman (the Supreme Spirit); one who sees divinity in all.
Brahmacharya	A life of celibacy, religious study and self-restraint.
Brahman	The Supreme Being, the cause of the universe, the all-pervading spirit of the universe.
Brahmāṇḍa-prāna	The cosmic breath.
Buddhi	Intellect, reason, discrimination, judgement.

Chandra	The moon
Chatur	The number four.
Chitta	The mind in its total or collective sense, being composed of three categories: (a) Mind, having the faculty of attention, selection and rejection; (b) Reason, the decisive state which determines the distinction between things and (c) Ego, the I-maker.
Chitta-vikṣepa	Distraction, confusion, perplexity.
Chitta-vṛtti	Fluctuations of the mind. A course of behaviour, mode of being, condition or mental state.
Dadhīcha	A celebrated sage, who donated his bones to the gods. From these bones was fashioned the thunderbolt, with which Indra, the king of the gods, slew the demon Vṛtra.
Dakṣa	A celebrated prajāpati, a lord of created beings.
Dakṣiṇa	The right side.
Damanī	A layer with a nāḍī or channel for the passage of energy.
Dānava	A demon.
Daṇḍa	A staff.
Daurmanasya	Despair, dejection.
Deva	A god.
Devadatta	One of the vital airs which provides for the intake of extra oxygen in a tired body by causing a yawn.
Dhanu	A bow.
Dhāraṇā	Concentration or complete attention. The sixth stage of Yoga mentioned by Patañjali.
Dhasaṅjaya	One of the vital airs which remains in the body even after death, and sometimes bloats up a corpse.
Dhṛ	To hold, to support, to maintain.
Dhyāna	Meditation. The seventh stage of Yoga mentioned by Patañjali.
Droṇa	The preceptor of the Pāṇḍava and Kaurava princes in the arts of war, especially archery. He was the son of the sage Bharadvāja.
Duḥkha	Pain, sorrow, grief.
Dveṣa	Hate, dislike, repugnance.
Dwi-hasta	Two hands.
Eka	One, single, alone, only.
Eka-tattvābhyāsa	The study of the single element, the Supreme Spirit that pervades the innermost self of all beings.
Ekāgra	(Ek = one; agra = foremost.) Fixed on one object or point only; closely attentive, where the mental faculties are all focused on a single object.
Ekāgratā	One-pointedness.

Gaṇa	A troop of demigods, who were Śiva's attendants.
Gaṅgā	The river Ganges, the most sacred river in India.
Gheraṇḍa	A sage, the author of Gheraṇḍa-Saṁhitā, a classical work on Haṭha-yoga.
Gheraṇḍa-Saṁhitā	*See* above.
Gu	First syllable in the word 'Guru', meaning darkness.
Gulma	The spleen.
Guṇa	A quality, an ingredient or constituent of nature.
Guṇātīta	One who is freed from and gone beyond or crossed the three guṇas of Sattva, Rajas and Tamas.
Guru	Spiritual preceptor, one who illumines the darkness of spiritual doubt.
Ha	First syllable of the word 'Haṭha', which is composed of the syllables 'ha' meaning the sun, and 'ṭha' meaning the moon. The object of Haṭha-yoga is to balance the flow of solar and lunar energy in the human system.
Hala	A plough.
'Haṁsaḥ'	'I am He, the Universal Spirit', the unconscious repetitive prayer that goes on with each exhalation within every living creature throughout life.
Hanumān	A powerful monkey chief of extraordinary strength and prowess, whose exploits are celebrated in the epic Rāmāyana. He was the son of Aṅjana and Vāyu, the god of wind.
Hasta	The hand.
Haṭha	Force. The word 'hatha' is used adverbially in the sense of 'forcibly' or 'against one's will'. Haṭha-yoga is so called because it prescribes rigorous discipline, in order to find union with the Supreme.
Haṭha-vidyā	The science of Haṭha-yoga.
Haṭha-yoga	The way towards realization through rigorous discipline.
Hatha-yoga-pradīpikā	A celebrated textbook on Haṭha-yoga written by Svātmārāma.
Himālaya	The abode of ice and snow. Name of the mountain ranges on the northern borders of India.
Hiṁsā	Violence, killing.
Iḍā	A nāḍī, a channel of energy starting from the left nostril, then moving to the crown of the head and thence descending to the base of the spine. In its course it conveys lunar energy and so is called chandra nāḍī (channel of the lunar energy).
Indra	Chief of the gods. The god of thunder, lightning and rain.

Indriya	An organ of sense.
Indriya-jaya	Conquest, restraint or mastery of the senses by controlling desires.
Īśvara	The Supreme Being, God.
Īśvara-praṇidhāna	Dedication to the Lord of one's actions and one's will.
Jāgrata-avasthā	The complete awareness of the state of the mind.
Jālandhara-bandha	Jālandhara is a posture where the neck and throat are contracted and the chin is rested in the notch between the collar-bones at the top of the breast-bone.
Jamunā	A tributary of the Ganges.
Jānu	The knee.
Japa	A repetitive prayer.
Jatara-parivartana	An āsana, in which the abdomen is made to move to and fro.
Jaṭhara	The abdomen, stomach.
Jaya	Conquest, victory. It also means control, mastery.
Jīva	A living being, a creature.
Jīvana	Life.
Jīvana-mukta	A person who is emancipated during his lifetime by true knowledge of the Supreme Spirit.
Jīvana-mukti	The emancipated state.
Jīvātmā	The individual or personal soul.
Jñāna	Sacred knowledge derived from meditation on the higher truths of religion and philosophy, which teaches a man how to understand his own nature.
Jñāna-mārga	The path of knowlege by which man finds realization.
Jñāna-mudrā	The gesture of the hand where the tip of the index finger is brought in contact with the tip of the thumb, while the remaining three fingers are kept extended. The gesture is a symbol of knowledge (jñāna). The index finger is the symbol of the individual soul, the thumb signifies the Supreme Universal Soul, and the union of these two symbolizes true knowledge.
Jñānendriya	Hearing, touch, sight, taste and smell.
Kailāsa	A mountain peak in the Himālayas, considered as tne abode of Śiva.
Kaivalya	Final emancipation.
Kaivalya-pāda	The fourth and last part of Patañjāli's Yoga Sūtra, dealing with Absolution.
Kālidāsa	The most renowned dramatist and poet in Sanskrit literature, whose work 'Śakuṅtalā' is universally respected.
Kapila	A sage, the founder of the Sāankhya system, one of the six orthodox systems of Hindu philosophy.
Karma	Action.

Karma-mārga The way of an active man towards realization through action.

Karma-yoga The achievement of union with the Supreme Universal Soul through action.

Karmendriya Organs of excretion, generation, hands, feet and speech.

Karṇa The ear, also one of the heroes in the Mahābhārata.

Karṇa-pīdā Pressure around the ear.

Karuṇā Compassion, pity, tenderness. It also implies devoted action to alleviate the suffering of the afflicted ones.

Kaṭhopaniṣad One of the principal Upanishads in verse and in the form of a dialogue between the seeker Nachiketā and Yama, the god of Death.

Kauravas Descendants of Kuru, who fought the fratricidal Mahābhārata war with their cousins the Pāṇḍavas.

Kāyā The body.

Kāyika Relating to the body.

Kevala Whole, entire, absolute, perfect, pure.

Klésa Pain, anguish, suffering.

Koṇa An angle.

Krishṇa The most celebrated hero in Hindu mythology. The eighth incarnation of Viṣṇu.

Kṛkara Name of one of the subsidiary vital airs, whose function is to prevent substances going up the nasal passages and throat by bringing on sneezes and coughing.

Kṛta Name of first of the four ages of the world of men.

Kṣatriya A member of the warrior class.

Kṣipta Distracted, neglected.

Kumbha A water pot, a pitcher, a chalice.

Kumbhaka Kumbhaka is the interval of time or retention of breath after full inhalation or after full exhalation.

Kuṇḍalinī The Kuṇḍalinī (kuṇḍala = the coil of a rope; Kuṇḍalinī = a coiled female serpent) is the divine cosmic energy. This force or energy is symbolized as a coiled and sleeping serpent lying dormant in the lowest nerve centre at the base of the spinal column, the Mūlādhāra-chakra. This latent energy has to be aroused and made to ascend the main spinal channel, the Suṣumṇa piercing the chakras right up to the Sahasrāra, the thousand-petalled lotus in the head. Then the Yogi is in union with the Supreme Universal Soul.

Lac 100,000.

Laya Dissolution; absorption of the mind, devotion.

Laya-yoga The achievement of union with the Supreme Universal Soul through adoration or devotion.

Lobha Greed.

Loma Hair.

Madhyama	Middling, average, mediocre.
Mahā	Great, mighty, powerful, lofty, noble.
Mahābhārata	The celebrated epic composed by Vyāsa. It includes the Bhagavad Gītā.
Maharṣi	A great sage.
Maitri	Friendliness coupled with a feeling of oneness.
Man	To think.
Manas	The individual mind having the power and faculty of attention, selection and rejection. The ruler of the senses.
Mānasika	Of the mind, mental.
Manomanī	The state of samādhi.
Mantra	A sacred thought or a prayer.
Manu	Name of the father of the human race.
Mārga	A way, road, path.
Marīchi	Name of one of the sons of Brahmā. He was a sage and the father of Kaśyapa, q.v.
Matsya	A fish.
Matsyendra	One of the founders of Haṭha-yoga.
Moha	Delusion, infatuation.
Mokṣa	Liberation, final emancipation of the soul from recurring births.
Mṛdu	Soft, gentle, mild.
Mṛta	Dead, a corpse.
Mūdha	Perplexed, confounded, foolish, dull, stupid.
Muditā	Joy, delight.
Mudrā	A seal: a sealing posture.
Mukha	Face, mouth.
Mukta	Liberated.
Mukti	Release, liberation, final absolution of the soul from the chain of birth and death.
Muṇḍakopaniṣad	Name of a Upanishad dealing with the mystic syllable Auṁ.
Nachiketā	Name of the seeker and one of the principal characters in the Kaṭhopaniṣad. His father Vājaśravas wanted to give away all his possessions so as to acquire religious merit. Nachiketā felt puzzled and asked his father again and again: 'To whom will you give me?' His father said: 'I give you to Yama (the god of Death).' Nachiketā went down to the realm of Death and obtained three boons, the last of which was the knowledge of the secret of life after death. Yama tried to divert Nachiketā from obtaining his wish by offering the greatest earthly pleasures, but Nachiketā was not swayed from his purpose and ultimately Yama gave him the knowledge desired.
Nāda	Inner mystical sound.

Nāḍī — A tubular organ of the subtle body through which energy flows. It consists of three layers, one inside the other, like insulation of an electric wire. The innermost layer is called the 'sirā' and the middle layer 'damanī'. The entire organ as well as the outer layer is called 'nāḍī'.

Nāḍī-śodhana — The purification or cleansing of the nāḍīs.

Nāga — One of the subsidiary vital airs which relieves abdominal pressure, causing one to belch.

Nāva — A boat.

'Neti Neti' — 'Not This! Not this!' The experience of samādhi is not like other experiences, which can be described in words. About it the sages say 'It is not this! It is not this!', for speech fails to convey the feeling of joy and peace experienced in that state.

Nirālamba — Without support.

Niranjana — Unstained; free from falsehood, pure.

Nirodha — Restraint, suppression.

Niruddha — Restrained, checked, controlled.

Niyama — Self-purification by discipline. The second stage of yoga mentioned by Patañjāli.

Pāda — The foot or leg; also part of a book.

Pādāṅguṣṭha — The big toe.

Padma — A lotus.

Pāṇḍava — Name of any of the five sons of Pāṇḍu, the heroes in the Mahābhārata.

Paramapāda — The highest step, the supreme state, final beatitude.

Paramātmā — The Supreme Spirit.

Parigraha — Hoarding.

Paripūrṇa — Entire, complete.

Parivartana — Turning round, revolving.

Parivṛtta — Turned around, revolved.

Parivṛttaika-pāda — With one leg turned around.

Pārśva — The side, flank; lateral.

Parśvaika-pāda — With one leg turned sideways.

Parvata — A mountain.

Pārvati — A goddess, consort of Śiva, daughter of Himālaya.

Paśchima — West; the back of the whole body from head to heels.

Paśchimottana — Intense stretch of the back side of the body from the nape to the heels.

Patañjali — The propounder of Yoga philosophy. He was the author of the Yoga Sūtras, the Mahābhāśya (a classical treatise on grammar) and a treatise on medicine.

Pīḍā — Pain, suffering, pressure.

Piṇḍa — The foetus or embryo, the body.

Piṇḍa-prāṇa — The individual breath, as contrasted with the cosmic or Universal breath.

Piṅgalā	A nāḍī or channel of energy, starting from the right nostril, then moving to the crown of the head and thence downwards to the base of the spine. As the solar energy flows through it it is also called the sūrya-nāḍī. Piṅgalā means tawny or reddish.
Plīhā	The spleen.
Prajñā	Intelligence, wisdom.
Prajñātmā	The intelligential self.
Prakṛti	Nature, the original source of the material world, consisting of three qualities, sattva, rajas and tamas.
Pramāda	Indifference, insensibility.
Pramāṇa	A standard or ideal; authority.
Prāṇa	Breath, respiration, life, vitality, wind, energy, strength. It also connotes the soul.
Prāṇa-vāyu	The vital air which pervades the entire human body. It moves in the region of the chest.
Praṇava	Another word for the sacred syllable Auṁ.
Prāṇāyāma	Rhythmic control of breath. The fourth stage of yoga.
Praṇidhāna	Dedication.
Prasārita	Spread out, stretched out.
Praśvāsa	Expiration.
Pratyāhāra	Withdrawal and emancipation of the mind from the domination of the senses and sensual objects. The fifth stage of yoga.
Pratyakṣa	Direct evidence.
Puṇya	Virtue, merit, righteous, just, good.
Puraka	Inhalation.
Pūrṇatā	Fullness, perfection.
Pūrva	East. The front of the body.
Pūrvottana	The intense stretch of the front side of the body.
Rāga	Love, passion, anger.
Rāja	A king, a ruler.
Rāja-mārga	The royal road to self-realization through the control of the mind.
Rāja-yoga	The achievement of union with the Supreme Universal Spirit, by becoming the ruler of one's own mind by defeating its enemies. The chief of these enemies are: Kāma (passion or lust), krodha (anger or wrath), lobha (greed), moha (delusion), mada (pride) and matsara (jealousy or envy). The eightfold yoga of Patañjāli shows the royal road (rāja-mārga) for achieving this objective.
Rāja-yogī	One who has complete mastery over his mind and self. One who has conquered himself.
Rajas	Mobility or activity; one of the three qualities or constituents of everything in nature.
Rajo-guṇa	The quaity of mobility or activity.

Rechaka Exhalation, emptying of the lungs.
Ṛṣi An inspired sage.
Ṙu The second syllable in the word 'guru', meaning light.

Sādhaka A seeker, an aspirant.
Sādhanā Practice, quest.
Sādhana-pāda The second part of Patañjāli's Yoga Sūtras, dealing with the means.
Sahajāvasthā The natural state of the soul in samādhi.
Śalabha A locust.
Sālamba With support.
Sama Same, equal, even, upright.
Sama-sthiti Standing still and straight.
Samādhi A state in which the aspirant is one with the object of his meditation, the Supreme Spirit pervading the universe, where there is a feeling of unutterable joy and peace.
Samādhi-pāda The first part of Patañjali's Yoga Sūtras, dealing with the state of samādhi.
Samāna One of the vital airs, whose function is to aid digestion.
Saṁśaya Doubt.
Saṁskāra Mental impression of the past.
Śankarāchārya A celebrated teacher of the doctrine of Advaita.
Ṣaṇmukhī-mudrā A sealing posture where the apertures in the head are closed and the mind is directed inwards to train it for meditation.
Santoṣa Contentment.
Saraswatī A tributary of the Ganges. Also the name of the goddess of speech and learning, the consort of Brahmā.
Sarva All, whole.
Sarvāṅga The whole body.
Satī The daughter of Dakṣa Prajāpati. She immolated herself for the insult offered to her husband Śiva by her father, and was then reborn as the daughter of Himālaya and again won Siva as her husband. She was the mother of Kārtikeya (the god of war) and of Ganapati (the god of learning, wisdom and good luck).
Sattva The illuminating, pure and good quality of everything in nature.
Sattva-guṇa The quality of goodness and purity.
Śaucha Purity, cleanliness.
Śava A corpse, a dead body.
Setu A bridge.
Setu-bandha The construction of a bridge. Name of an āsana in which the body is arched.
Siddha A sage, seer or prophet; also a semi-divine being of great purity and holiness.

Sirā	A tubular organ in the body. *See* nāḍī.
Śirṣa	The head.
Śiṣya	A pupil, a disciple.
Śiva	Name of the third god of the Hindu Trinity, who is entrusted with the task of destruction.
Śiva-saṁhitā	A classical textbook on Haṭha-yoga.
Smrti	Memory, a code of law.
Śodhana	Purification, cleansing.
'Soham'	'He am I'; the unconscious repetitive prayer that goes on with every inhalation within every living creature throughout life.
Śoka	Anguish, distress, grief, sorrow.
Śraddhā	Faith, trust.
Steya	Theft, robbery.
Sthita-prajñā	One whose wisdom is firmly established and does not waver; one who is unmoved by the dualities of pleasure and pain, gain and loss, joy and sorrow, victory and defeat.
Sthiti	Stability.
Styāna	Languor, sloth.
Sukha	Happiness, delight, joy, pleasure, comfort.
Sumanasya	Benevolence.
Śunyāśūnya	The mind is in a state of void (Śūnya) and yet a state that is not void (aśūnya).
Supta	Sleeping.
Sūrya	The sun.
Sūrya-bhedana	Piercing or passing through (bhedana) the sun. Here the inhalation is done through the right nostril, from where the Piṅgalā-nāḍī or Sūrya-nāḍī starts. Exhalation is done through the left nostril, from where the Iḍā-nāḍī or Chandra-nāḍī starts.
Sūrya-nāḍī	The nāḍī of the sun. Another name for Piṅgalā-nāḍī.
Suṣumṇā	The main channel situated inside the spinal column.
Suṣupti-avasthā	The state of the mind in dreamless sleep.
Sva	One's own, innate, vital force, soul, self.
Svādhyāya	Education of the self by study of divine literature.
Śvāna	A dog.
Svapnāvasthā	The state of the mind in a dream.
Śvāsa	Inspiration.
Śvāsa-praśvāsa	Heaving and sighing.
Svātmārāma	The author of the Haṭha-yoga-pradīpikā, a classical textbook on Haṭha-yoga.
Tāḍa	A mountain.
Tamas	Darkness or ignorance, one of the three qualities or constituents of everything in nature.
Tamo-guṇa	The quality of darkness or ignorance.
Tan or *Tān*	To stretch, extend, lengthen out.

Tap — To burn, to blaze, to shine, to suffer pain, to be consumed by heat.

Tapas — A burning effort which involves purification, self-discipline and austerity.

'Tat twam asi' — 'Thou that art.' The realization of the real nature of man as being part of the divine, and of the divinity within himself, which liberates the human spirit from the confines of his body, mind, intellect and ego.

Tattva — The true or first principle, an element or primary substance. The real nature of the human soul or the material world and the Supreme Universal Spirit pervading the universe.

Tattva-jñāna — The knowledge of the true principle.

Tejas — Lustre, brilliance, majesty.

Ṭha — The second syllable of the word 'haṭha'. The first syllable 'ha' stands for the sun, while the second syllable 'ṭha' stands for the moon. The union of these two is Haṭha-yoga.

Tirieng — Horizontal, oblique, transverse, reverse and upside down.

Tri — Three.

Triaṅga — Three limbs.

Trikoṇa — A triangle.

Tṛṣṇā — Thirst, longing, desire.

Turīyāvasthā — The fourth state of the soul, combining yet transcending the other three states of waking, dreaming and sleeping state – the state of samādhi.

Ubhaya — Both.

Udāna — One of the vital airs which pervades the human body, filling it with vital energy. It dwells in the thoracic cavity and controls the intake of air and food.

Ugra — Formidable, powerful, noble.

Ujjāyi — A type of prāṇāyāma in which the lungs are fully expanded and the chest is puffed out.

Unmanī — The state of samādhi.

Upaniṣad — The word is derived from the prefixes 'upa' (near) and 'ni' (down), added to the root 'sad' (to siṭ). It means sitting down near a Guru to receive spiritual instruction. The Upanishads are the philosophical portion of the Vedas, the most ancient sacred literature of the Hindus, dealing with the nature of man and the universe and the union of the individual soul or self with the Universal Soul.

Upaviṣṭha — Seated.

Upekṣā — Disregard. Upekṣā is not only a feeling of disdain for a person who has fallen into vice or a feeling of

	indifference or superiority towards him. It is also a self-examination to find out how one would have behaved in like circumstances and also how far he is responsible for the state of the fallen one and to help him on to the right path.
Ūrdhva	Raised, elevated, tending upwards.
Ūrdhva-mukha	Face upwards.
Uṣṭra	A camel.
Ut	A particle, denoting intensity.
Uttāna	An intense stretch.
Utthita	Raised up, extended, stretched.
Vāchā	Speech.
Vāchika	Relating to speech, oral.
Vairāgya	Absence of worldly desires.
Vajra	A thunderbolt, the weapon of Indra.
Valli	A chapter of the Upanishads.
Vāma	The left side.
Vāsanā	A celebrated sage, author of several Vedic hymns.
Vāyu	The wind, the vital airs.
Veda	The sacred scriptures of the Hindus, revealed by the Supreme Being.
Vibhūti	Might, power, greatness.
Vibhūti-pāda	The third part of the Yoga Sūtras of Patañjāli, dealing with the powers that the yogi comes across in his quest.
Vidyā	Knowledge, learning, lore, science.
Vikalpa	Fancy, resting merely on verbal expression, without any factual basis.
Vikṣepa	Distraction, confusion, perplexity.
Vikṣipta	Agitated state of the mind.
Viloma	Against the hair, against the order of things. The particle 'vi' denotes negation or privation.
Viparyaya	A mistaken view, which is later observed to be such, after study.
Vīra	A hero, brave.
Vīrabhadra	A powerful hero created out of Śiva's matted hair.
Virochana	A demon prince, who was the son of Prahlāda and the father of Bali.
Vīrya	Vigour, strength, virility, enthusiasm.
Viṣama-vṛtti	Uneven or vehement movement while breathing.
Viṣṇu	The second deity of the Hindu trinity, entrusted with the preservation of the world.
Viśvāmitra	A celebrated sage.
Vitasti	A span.
Vṛkṣa	A tree.
Vṛt	To turn, to revolve, to roll on.

Vṛtti — A course of action, behaviour, mode of being, condition or mental state.

Vyādhi — Sickness, disease, illness.

Vyāna — One of the vital airs, which pervades the entire body and circulates the energy derived from food and breathing all over the body.

Yama — The god of death. Yama is also the first of the eight limbs or means of attaining yoga. Yamas are universal moral commandments or ethical disciplines transcending creeds, countries, age and time. The five mentioned by Patañjali are: non-violence, truth, non-stealing, continence and non-coveting.

Yoga — Union, communion. The word 'yoga' is derived from the root 'yuj' meaning to join, to yoke, to concentrate one's attention on. It is the union of our will to the will of God, a poise of the soul which enables one to look evenly at life in all its aspects. The chief aim of yoga is to teach the means by which the human soul may be completely united with the Supreme Spirit pervading the universe and thus secure absolution.

Yoga-mudrā — A posture.

Yoga Sūtra — The classical work on yoga by Patañjali. It consists of 185 terse aphorisms on yoga and it is divided into four parts dealing respectively with samādhi, the means by which yoga is attained, the powers the seeker comes across in his quest and the state of absolution.

Yogi or *Yogin* — One who follows the path of yoga.

Yoni-mudrā — Yoni means the womb or source and mudrā a seal. Yoni-mudrā is a sealing posture where the apertures of the head are closed and the aspirant's senses are directed within to enable him to find out the source of his being.

Yuga — An age.

Yuj — To join, to yoke, to use, to concentrate one's attention on.

Yukta — One who has attained communion with the Supreme Spirit pervading the universe.

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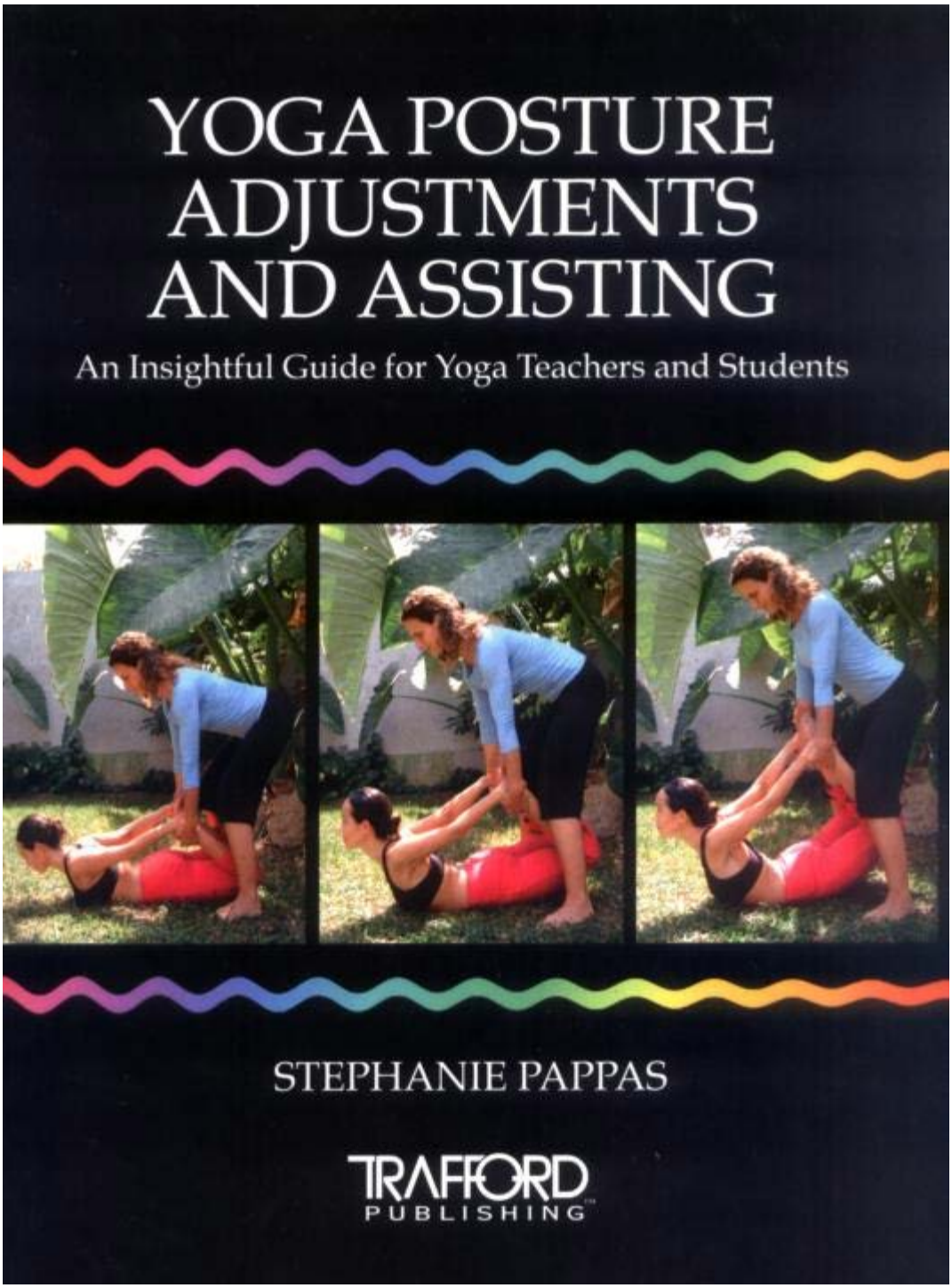
YOGA POSTURE ADJUSTMENTS AND ASSISTING

An Insightful Guide for Yoga Teachers and Students

STEPHANIE PAPPAS

TRAFFORD PUBLISHING™



Yoga Posture

Adjustments and

Assisting

An Insightful Guide for Yoga

Teachers and Students

TRAFFORD

DEDICATION

I would like to dedicate this book to all the yoga teachers who have graduated from the Devalila Yoga Teacher Training and other trainings I have given, and all the yoga and belly dance students who have attended my classes throughout the years. It is because of your openness, willingness, and receptivity that I have been able to share my experience of yoga, dance, and life, and in turn, learn so much from you all. I would also like to express my gratitude to my formal teachers of yoga, meditation and Buddhism: Sri Sri Ravi Shankar, His Holiness the 14ti, Dalai Lama, Osho, Perna Chodron, Kirin Mishra and Bobbie Ellis. A special thanks to Manuel Cano Diaz, my family, my friends Dori and Kirk, and the Devalila teacher graduates of 2004 for giving me the camera to make this book: John Feist, Jim Johnston, Carrie Colditz, Whitney Frith, Melissa Stern, Elizabeth Gill, and Katherine Doyle.

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"Things areas bad, and as good as they seem-there's no need to add anything extra."

-Buddha

Section I

Introduction to Yoga Posture

Adjustments and Assisting

Getting Started

Whether you are a new or experienced yoga teacher or student, you can reap the benefits of learning to give and receive yoga posture adjustments.

Receiving assistance in a yoga posture can be a wonderful experience. When my teacher first assisted me, I felt as if I were getting a great massage while doing my yoga practice. It was like a dream come true! Over time I experienced a big improvement in my range of motion and ability to relax in the postures. I was able to balance better and stretch much further after being assisted. Later when I practiced on my own, my body remembered where it had gone with the help of the teacher, and I went much deeper into the postures. In addition to the physical benefits, I felt nurtured, acknowledged, and grateful for the extra attention.

In this introductory section I explain the foundations of posture adjusting. This section should prepare you to perform the actual techniques in the second section. After reading the introductory section you can skip to any chapter in Section II containing the postures you want to work on.

In the third section I offer my replies to questions from yoga teachers and students that I have received over the years. I hope you find it thought provoking and refreshing.

So, get out your yoga mat and props, put on some music, and have fun exploring the yoga postures in a whole new way!

Language and Terms Used in this Book

In order to teach yoga posture adjustments to yoga teachers in training, I use some unique terms to describe the subtle movements and unusual body positions that are used. Review these terms before performing the techniques presented in Section II:

Assisting / Assist / Assistance

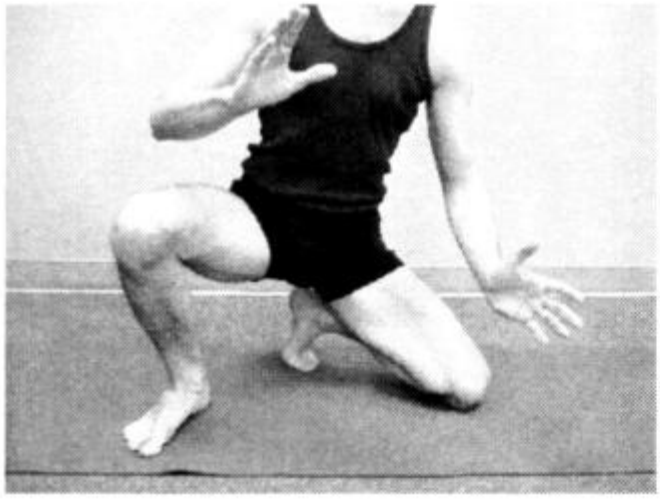
I define assisting, an assist, or giving assistance as the act of physically stretching, pressing, moving or touching someone while they are in a yoga posture. By my definition, assisting lasts a longer than an adjustment, and uses a deeper pressure. The aim of assisting is to take someone deeper in the pose, correct postural misalignments, and encourage exploration and greater movement.

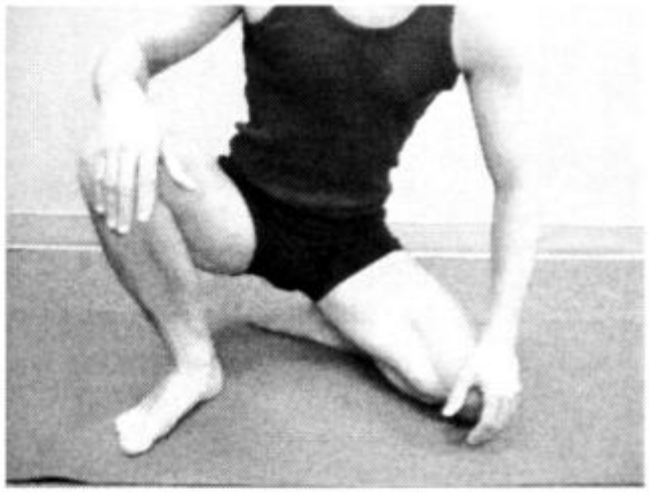
Adjusting

I define adjusting as the act of making a simple, short alteration or correction to a yoga posture. By my definition, adjusting is of a shorter duration than assisting and utilizes a lighter touch. The aim of adjusting is to encourage a small movement, a subtle awareness, a change in position, or a relaxation of a certain part of the body. The photos below show an adjustment of knee position in a warrior two pose.

The "Catcher's" Position

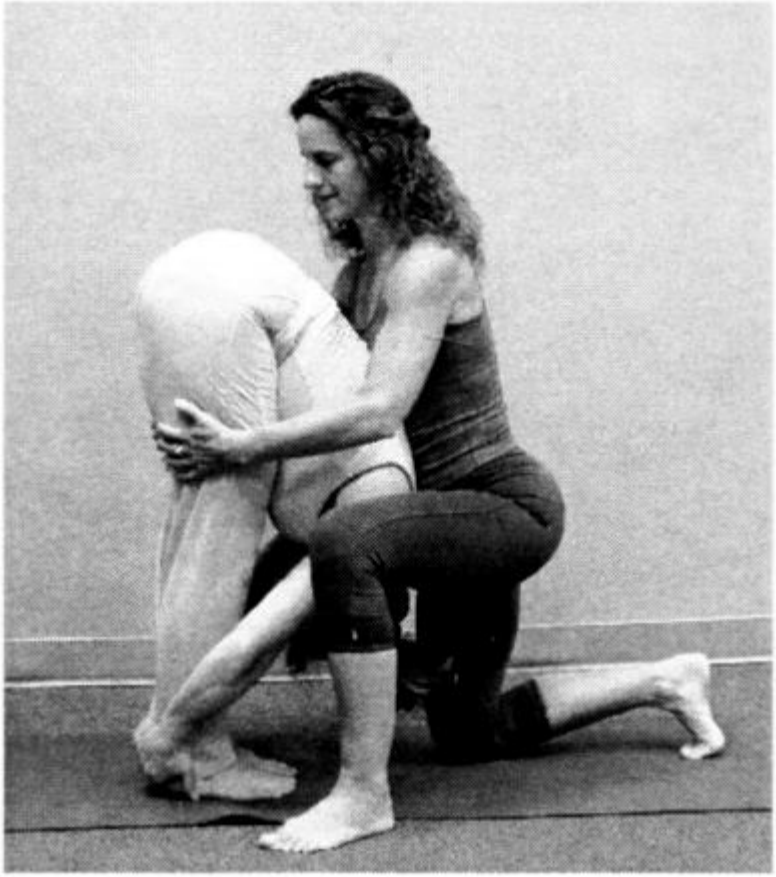
The "catcher's" position gives you leverage and stability when assisting people who are on the floor doing forward bending, twisting, and folding type postures. It looks like the position that some baseball catchers use at home base. It is a half squat position with one knee or the whole shin touching the floor. Your back foot can be positioned on the ball of the foot (left photo), or the top of the foot (right photo).





The "Marriage Proposal" Position

The "marriage proposal" position gives you stability when assisting people who are on the floor or standing in postures. It looks like the old-fashioned position for proposing marriage. In this position, one knee is on the floor and one knee is bent at a right angle. Your back foot can be positioned on the ball of the foot or the top of the foot.



"Opening the Refrigerator"

When you approach your refrigerator to get something you approach it head on with your hand naturally reaching out for the handle, right? Well, when you approach someone to assist or adjust, keep in mind the notion of opening your refrigerator. Your alignment and body mechanics are just as important as the person you are assisting.

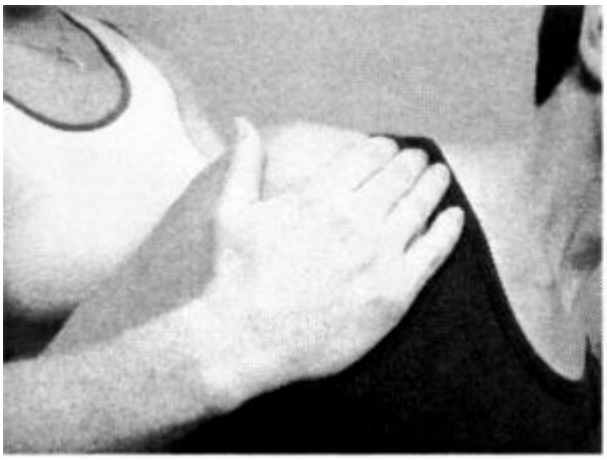
When people begin to practice assisting their tendency is to approach the person being assisted at an awkward angle, and usually from a position too far away from the body of the student. An unbalanced approach can create strain in your body and also make the assistance ineffective. Remember to approach the person in a direct fashion, keep your spine lengthened, and to apply pressure using your body weight. If you feel you are working hard, chances are you are using too much of your muscle strength and not enough leverage. The assistant on the left is using better body mechanics than the assistant on the right.

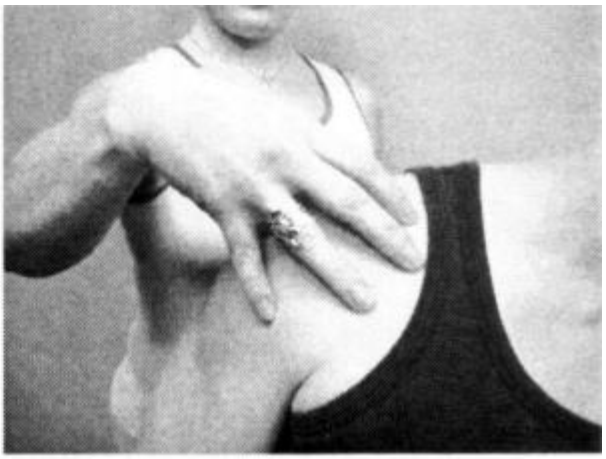
"Grounded" Stance

In a "grounded" stance your legs are wide apart, your feet are flat, and your knees are bent. A grounded stance feels stable and strong, and has a sense of balance. This stance is essential when assisting someone in a standing or balancing posture. The stance on the left below is more stable than the stance on the right.

No "Pokey" Hands

I use the word "pokey" to describe the way a person's fingers can feel on your body when they are using just the tips of their fingers instead of their whole hand. A pokey adjustment can feel like you are being prodded instead of touched. Remember to use your whole hand and have the intention of making solid contact with the body of your student. In the photo on the left the assistant is using a firm contact.





The "Edge"

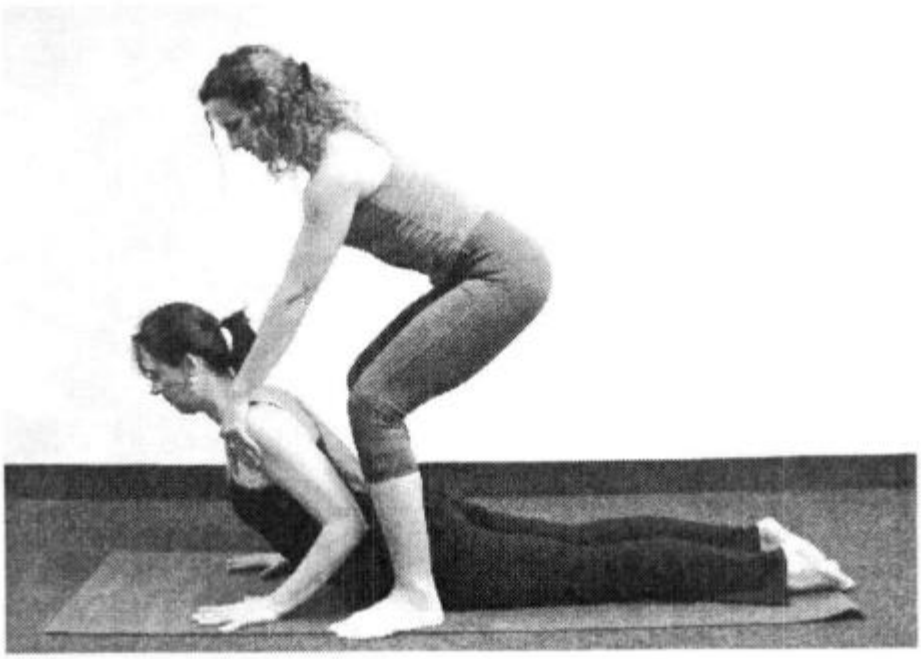
I refer to the "edge" as that time and place in the posture when you feel just enough sensation, but not too much. When you reach your edge, you should still be able to breathe deeply. Even though you are at your edge, you are not straining your body in the position, and the sensation you feel is somewhere between comfort and moderate discomfort.

The "Mound"

I refer to the "mound" as the area that protrudes around the lower inside edge of the scapula blade when someone is turning their torso and shoulders. The mound is an effective spot to place the heel of your hand when you are assisting someone in a revolving posture.

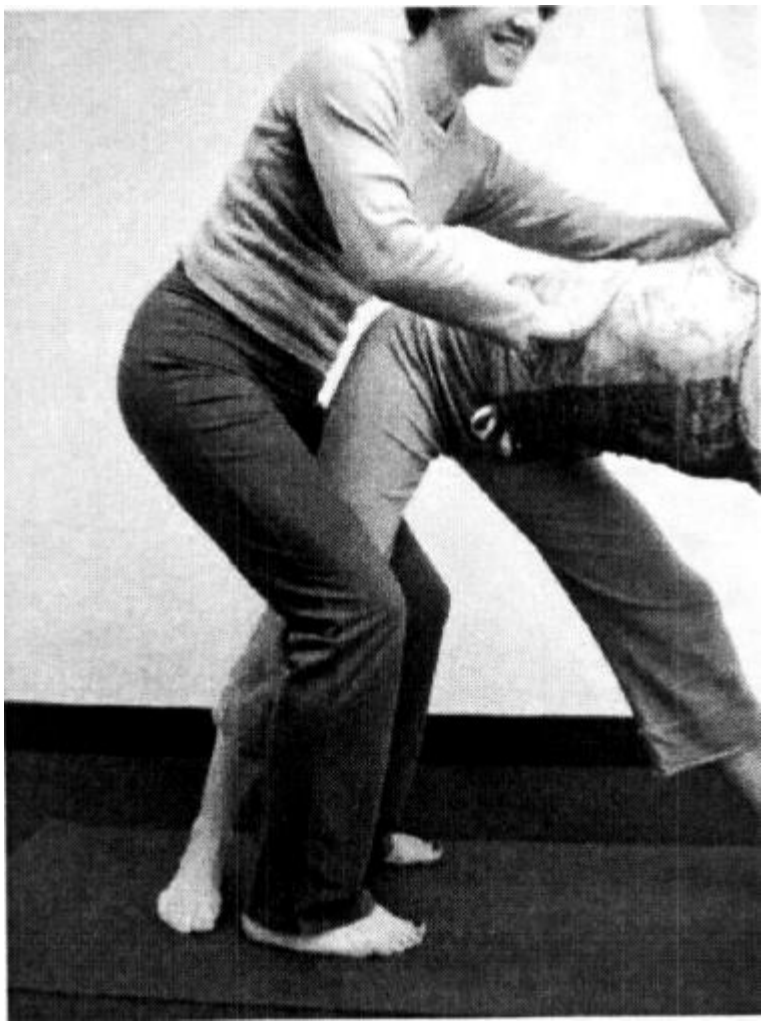
The "Straddle" Position

In the "straddle" position your legs are spread apart and you are standing over a part of the person's body. Straddling someone allows you to have better access to their body and get more leverage. When straddling someone you can assist them with less strain and a straighter spine.



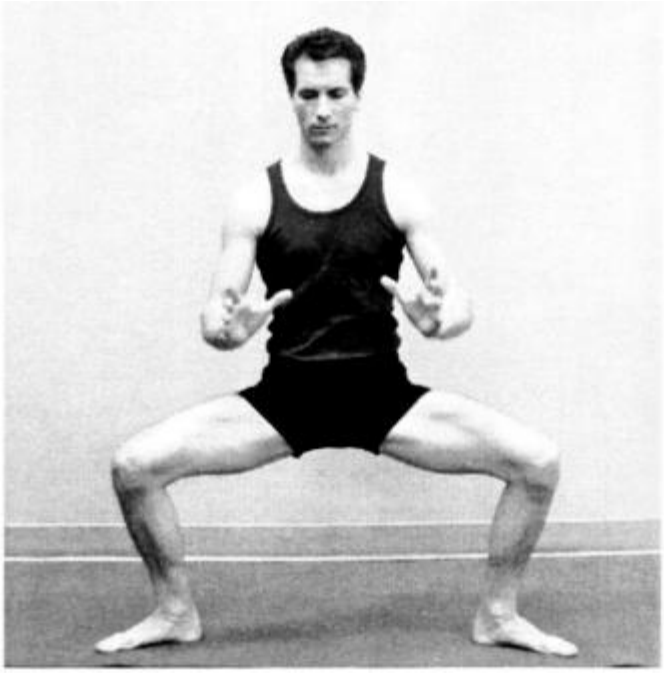
The "Skiers Squeeze" Position

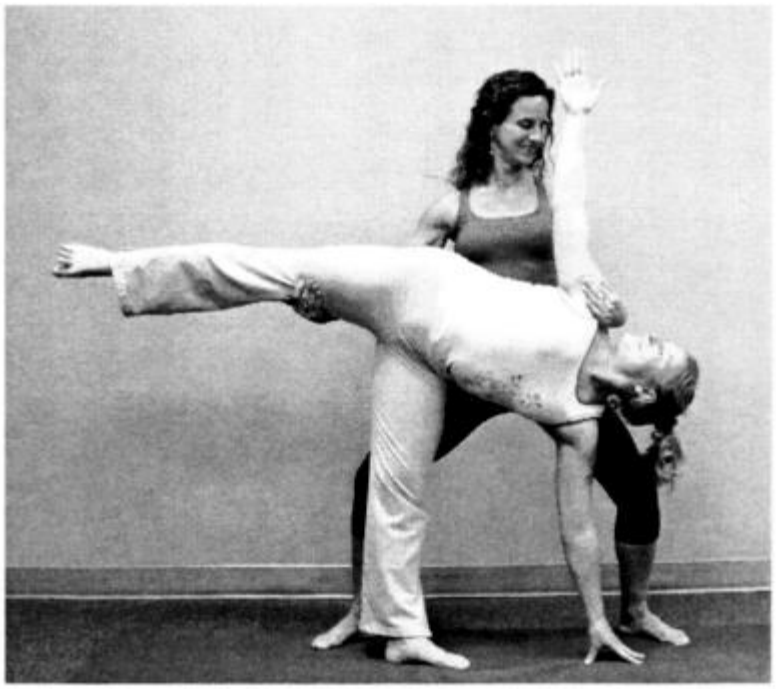
In the "skier's squeeze" position you are standing in a bent knee position with your feet fairly close together (as in chair pose or when you are skiing), and you are actively squeezing a person's leg with your inner thighs or knees. This position is a very effective way to stabilize the base of a standing pose.



The "Standing Squat" Position or "Horse" Stance

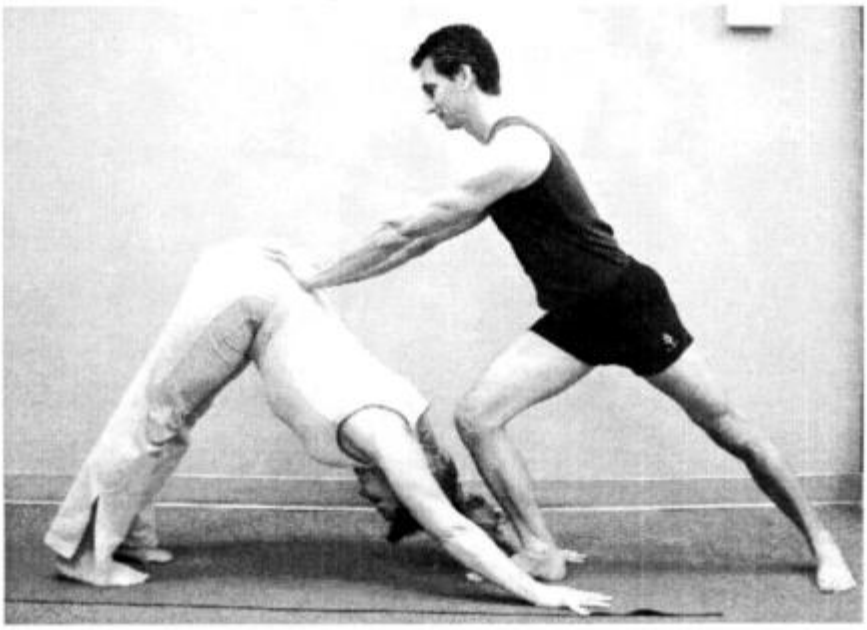
In the "horse" stance or "standing squat" position your legs are spread apart in a wide stance, and your knees are bent and in alignment with your feet. Your spine is erect and your feet are firmly planted on the floor. Your body feels like it is sinking downward toward the earth. Remember to keep your navel drawn in toward your spine. You may need to change the depth of the squat depending on the height of the person and the yoga pose they are performing. Use this stance to remain stable and balanced when you are assisting someone in a standing posture.





The "High or Low Lunge" Position

Assisting someone from a high or low lunge position gives you leverage and allows you to use your body weight instead of muscle force. In the lunge position you can work with gravity and utilize the strength of your legs to give a balanced, deep pressure. The top photo shows the low lunge position. The bottom photo shows the high lunge position.



"Opening a Jar"

When you open a jar you need to hold one end tightly while you pry the jar lid open, right? The same principle applies when you are assisting someone in a twisting pose. When you want to twist their torso or shoulders, you must steady the base of their body first (like you would the bottom of a jar), and then twist their torso (like you would the top of a jar). You can provide more support and movement if you apply this principle while assisting.

Adjusting and Assisting Tips

Here are some great tips for adjusting and assisting yoga postures in class or in private sessions. Remember that these are tips, not rules, and they may not apply certain situations. The posture adjustment you decide to give will depend on the person's needs and ability, your intuition, and your mood.

Ask Precise Questions

In order to receive specific feedback about your assistance you need to ask specific questions. It is

more effective to ask a person if they would like more or less pressure, rather than simply asking them if the pressure is okay. Your verbal interactions can be more extensive in private sessions. In classroom settings you have less time to talk. Honor a student's request even if you want to do something different. The feedback you get will allow you to quickly modify your actions to meet the needs of the person.

Keep Your Attention on the Breath

Listen to their breath while you are assisting. If you can't hear it, watch for it in the movements of their abdomen, sternum, shoulders and upper back. Listen to your own breath as well. Are you breathing? Adjust their posture in harmony with their breath. Sometimes you can encourage them to breathe more deeply by breathing in a slightly audible manner yourself (ujjayi breath). When you assist people in poses that twist or contract (like revolving or folding postures), it's best to apply more pressure on their exhalation. When you assist people in poses that expand and lift (like back bends), it's best to apply more pressure on the inhalation.

Adjust the Most Unsafe Misalignments First

Don't waste your time adjusting an insignificant part of their body when another part of their body is in a bad position that could cause injury in the short or long term. When you notice that several or many people in class are similarly misaligned, verbally correct them before trying to manually adjust everyone. When you feel it is necessary, have everyone come out of a posture, watch you demonstrate the correct alignment, and then perform the pose a second time.

Stabilize (Ground) Your Body before Assisting Someone

If you start to assist someone with an unstable posture yourself, there is more of a chance that the both of you may feel uneasy, and in certain circumstances you could both fall over. If you are not grounded, you are more likely to strain yourself and less likely to apply a deep, steady pressure.

Apply Pressure in the Correct Direction

Carefully observe the person in the posture and notice the direction in which they are moving (or want to move). Move them in the same direction. This may seem obvious, but in twisting poses there can be confusion.

Walk Away Gradually after Adjusting or Assisting

Make sure that the person in the pose is stable and balanced before you walk away. If you walk away abruptly after a deep assist, they may fall over. I like to leave one of my hands on their lower back as I move away from a standing pose. Sometimes all it takes is leaving one of your fingers in contact with their body to help them remain stable.

Explain Assisting to New Students before the Class Begins

When you start a new class, briefly discuss posture adjustments and assisting. If one or two new students join your ongoing class, explain assisting to them privately before the class begins. By explaining beforehand you can avoid possible confusion and misunderstandings.

Assess an Appropriate Duration for Your Assistance

The duration of your assistance depends greatly on the posture, the situation, and the student. In

a classroom setting, you can start by assisting for about 3-5 deep breaths if they are in a basic pose such as cobra or downward dog. In private sessions, you can assist them for several minutes or more. The time you spend also depends on the person's current needs and ability. Give them time to sink into the pose. Don't change your hand positions too quickly. There are times to assist, and not to assist. You will become more intuitive as you practice on people. Keep in mind these questions while assisting someone:

Are they going deeper and relaxing into the posture?

If they are, you may want to stay longer so that they can go even deeper. If they aren't, you may want to leave them alone. If you feel stiffness, resistance, or notice that their breath is shallow, encourage them to breathe a little deeper. You can also offer some type of yoga prop to help them relax into the posture.

Is my intention to give a light adjustment or a deep assist?

If your intention is to give a light directional adjustment (such as moving their foot or hand) then you may only need to be with them for a few seconds. If your intention is to give a deeper stretch, then you may need to be with them for a minute or more.

Is this student beginning, intermediate, or advanced?

The ability and needs of a student can vary from day to day, class to class. Sometimes you may want to spend more time with a beginner because they need help, and less time with an advanced student because they are familiar with the practice. At other times you may want to spend more time giving a deep assist to an advanced student, and less time making a short adjustment for a beginner. Your skills will improve as you get to know your students.

Be Conscious of Your Noise Level

Strike a balance between being too quiet and too noisy as you walk around the classroom. Try not to startle the students by approaching them too softly, but also don't walk around creating so much noise that your presence is a distraction. When you are in a private setting, avoid over talking.

Use Soft Verbal Instructions While Assisting in the Classroom

It is helpful to give soft verbal instructions when you are assisting someone so that they more clearly understand what you want them to do. Keep your voice low so that you don't distract the nearby students.

Some teachers ask permission every time they touch someone in class. I feel this is unnecessary and can be annoying to the students. With a new student you may want to ask their permission the first time you touch them, but I think it's it is more effective to discuss this before class begins.

Avoid Overcorrecting

No one likes to feel like they are doing something wrong-especially when they are trying something new. Correction is good, but overcorrecting can leave the student feeling like a failure or frustrated. Be compassionate when adjusting and try to put yourself in their shoes as much as possible.

Be Specific with Your Touch

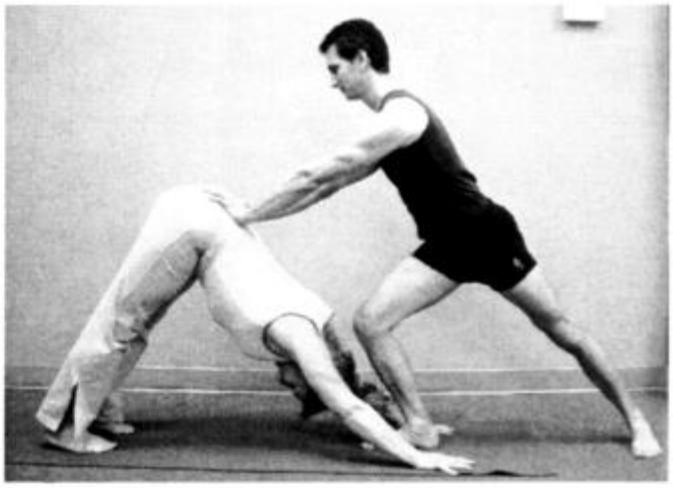
Be conscious of your hand placement while assisting someone. Avoid accidentally touching sensitive areas (groin, armpits, buttocks, breasts). Remember that some people may have ticklish spots unknown to you. I suggest that you refrain from random touches (petting, patting, stroking) that lack a specific intention to adjust the posture.

Keep Part of Your Attention on the Whole Class While Assisting

When you are assisting one person in a classroom setting, continue to observe the rest of the class and give them verbal instructions. Don't leave the class in the postures too long because you are busy helping one person.

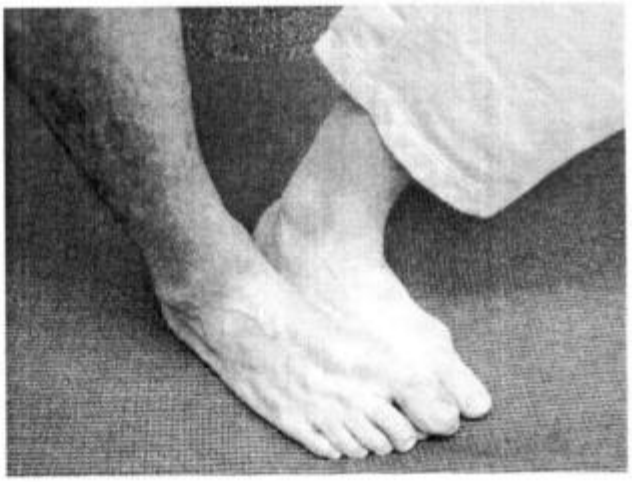
Stay Aware of Your Body Mechanics

Notice when your body is uncomfortable while assisting. Are you hunching over? Lean into the posture and not away from the posture. Use the strength of your feet and legs. The left photo is an example of ineffective body mechanics. The right photo is an example of effective body mechanics.



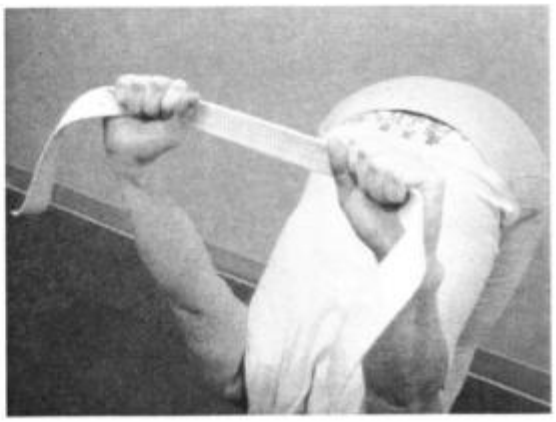
Use Creative Body Positions

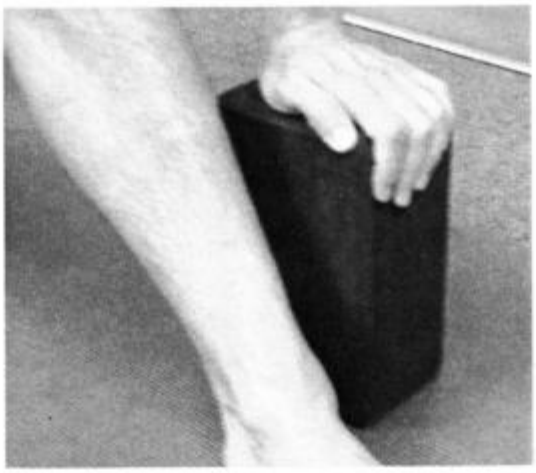
There are many ways to use your whole body or parts of your body while assisting. The photos below are examples of body positions involving the back, foot, shin, and ankles. I encourage you to experiment with the techniques in Section II, and you can invent your own positions once you become more familiar and comfortable with assisting.



Give Out Props: Blocks, Blankets, Pillows, Chairs and Straps

You can give out many types of props to help your students attain comfort and safety in the postures. Make props available before the start of the yoga pose if possible, or hand them out while the person is performing a pose. It is useful if you have enough props for everyone in the class. You can ask students to bring their own props to class as well. Make sure the props are readily accessible before you start your class or private session. Some ways to use props are demonstrated in the photos below:





Section II

Posture Adjustments and Assisting

Standing Postures

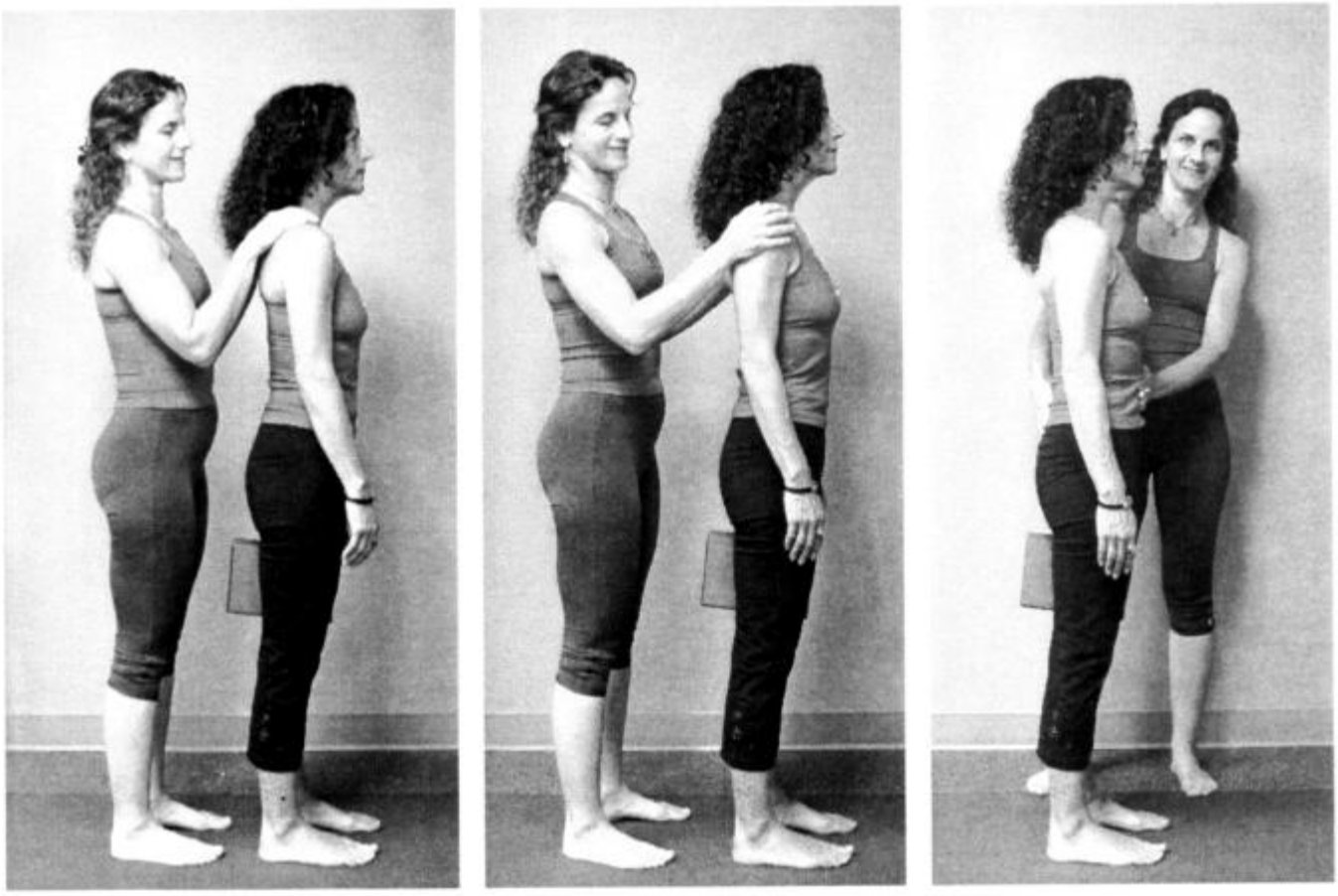
People generally find the standing poses more physically challenging and may not hold the postures for too long. This means you have less time to set up and apply the techniques. In the standing poses you act as a support and an anchor for the person in the pose. Standing poses can be tricky because of the balance component. Here are some points to remember when assisting someone in the standing poses presented in this chapter:

- Perform standing assists with a solid, grounded stance or you both may become unstable and could fall over. This can bring some laughs, but also some danger.
- Avoid throwing them off balance by coming up to them too close or too quick. With poses like dancer and tree for example, you are only standing an inch or two away from their body, or slightly touching.
- Stabilize the pose first in the legs or hips before taking the person deeper into the opening aspect of the pose.
- Back away slowly-gradually let them find their own balance and take their own weight.
- Leave one of your hands on their hip or sacrum as you back away from them so they don't fall over.
- Don't approach them so quietly that you startle them and they lose their equilibrium.
- Don't walk in front of them if they are focusing their eyes on a fixed point for balance.

Note: All the postures in the followin section should be performed for at least 20-30 seconds, but can be held for longer depending on the needs of the student.

"Take more risks for what you really want in life. Being comfortable does not necessarily bring happiness. Change is usually uncomfortable-it shakes us, and wakes us up. Go for the whole experience of life and open up to different aspects of yourself Life is a mystery! Maybe there is no resolution." -Stephanie Pappas, Devalila Yoga Teacher and Trainer

Mountain



"Being assisted allows me to experience a range of movement I never thought possible. I feel lighter, more spacious..."-Deana Stevens, Psy.D, Devalila Yoga Teacher

Assisting Steps for Mountain Pose

Stand behind the person and place your hands on the top of their shoulders while pressing downward to encourage them to lengthen their neck and relax their shoulders (as in the left photo). You can even give their shoulders a few firm squeezes.

Then, cup your hands around their upper arms (deltoids) and roll them backwards to encourage them to expand their chest (as in the middle photo).

Then, stand to the side of the person and gently press inward around the navel area with one hand, and press downward on the sacrum with the other hand to encourage awareness their pelvic alignment (as in the right photo).

Continue to observe their body in mountain pose and use gentle touch to encourage postural alignment in other areas such as neck, head, rib cage, and feet.

When you are finished, allow them to breath and experience mountain pose.

Yoga Prop Suggestions

Have them squeeze a yoga block between their mid to upper thighs to stabilize and engage the legs.

What You Might Say (to help the process)

"Spread your toes," "Firm the lower abs and bring your navel toward the spine," "Drop your tail bone," "Let your shoulders relax."

Arching Mountain

"Assisting helps the teacher feel the accomplishment of helping his/her student into a successful pose." - Eloise Sicora, Devalila Yoga Teacher, Pilates Teacher

Assisting Steps forArching Mountain Pose

Stand to one side of the person.

Place your open hand on their back between their shoulder blades and press upward to give a lifting/supportive sensation.

Simultaneously place your other hand and forearm across their arms and press them backwards into a gentle arch.

Deepen the assist on their exhalation.

Release your hands and allow them to return to a normal standing position.

Yoga Prop Suggestions

Have them squeeze a yoga block between their mid to upper thighs to stabilize and engage the legs.

Have them hold a yoga block between their hands to help engage the arms.

What You Might Say (to help the process)

"Breathe deeply into your upper chest," "Keep your neck long," "Tuck under the tail bone," "Let your shoulders drop down away from your ears."

Tree

"Breathe, just breathe and relax. The most extraordinary asana will flow through you and the class."-John Feddersen, Devalila Yoga Teacher

Assisting Steps for Tree Pose

Stand in a grounded stance behind the person almost touching them.

Carefully and slowly, place one hand on their front deltoid. Simultaneously, place your other hand on their inner knee or slightly above the inner knee of the bent leg.

Help them balance in the pose and then slightly draw their shoulder and knee backward to create an opening feeling in the front body and hip.

Allow their back body to touch your chest, ribs or stomach for support as they deepen in the pose.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Release your hands slowly, back away, and allow them to find their equilibrium.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them stand facing a wall, or sideways next to a wall, so they may touch it with their hand for balance.

What You Might Say (to help the process)

"Let your tailbone drop down,", "Press your foot firmly into your inner thigh," "Draw your navel inward," "Keep your hips parallel to the floor."

Chair

"When I was being assisted, I felt more secure and was able to experience the deeper posture without fear of losing my balance or injuring myself "

-Daniel Farrell, Devalila Yoga Teacher, Scientist

Assisting Steps for Chair Pose

Stand behind the person with slightly bent knees as in chair pose.

Guide their hips to sit onto your thighs and take some of the weight.

Use your free hands to depress their shoulders, draw in the rib cage, or tilt the pelvis to a neutral

position. Your action depends on how you perceive their alignment and where you notice they are holding tension.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Release your hands, and allow them to return to mountain position.

Yoga Prop Suggestions

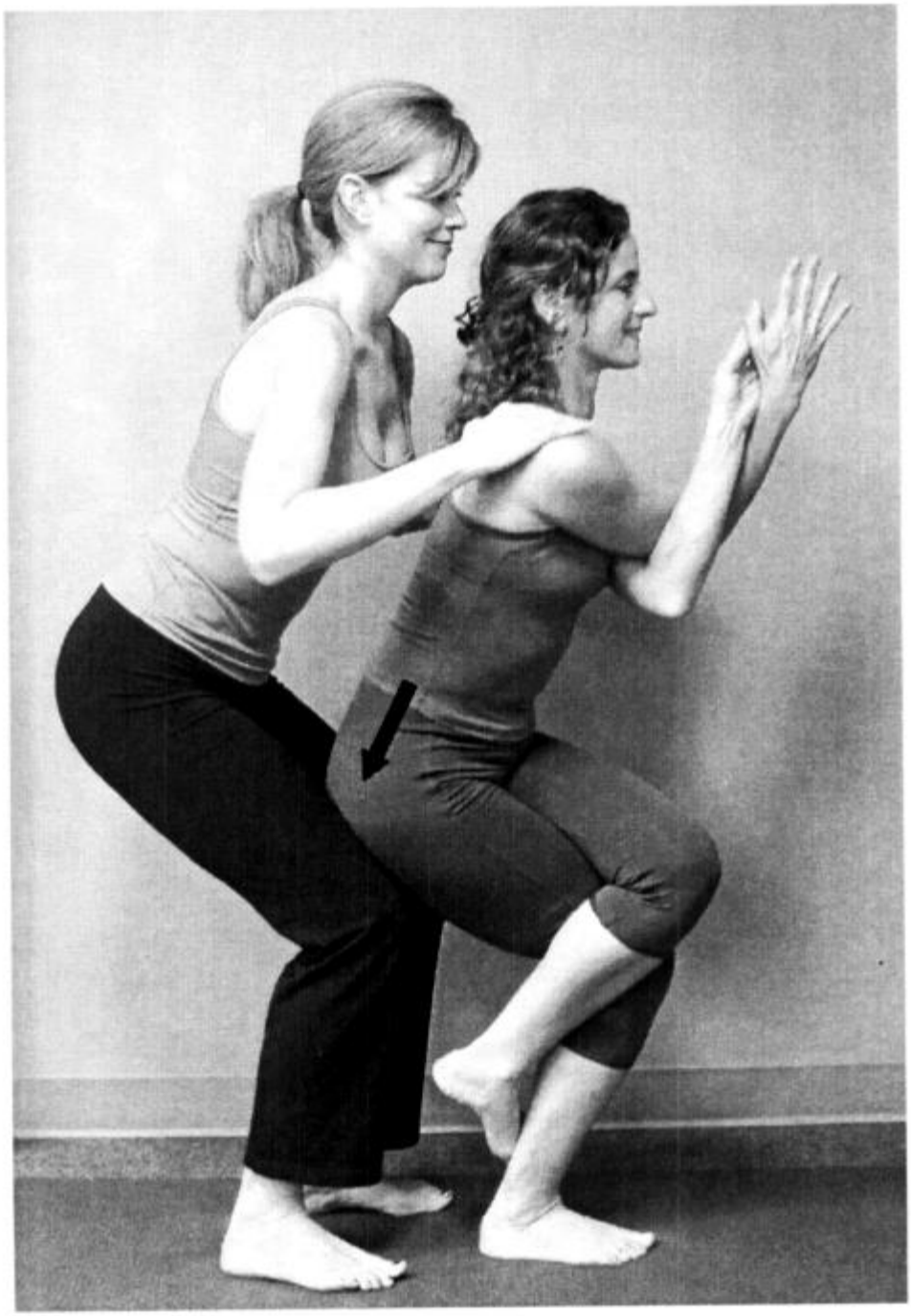
Have them squeeze a yoga block between their knees to stabilize and engage the legs.

Have them hold a yoga block between their hands to help engage the arms.

What You Might Say (to help the process)

"Relax your jaw, face and neck," "Soften your rib cage," "Draw navel inward toward your spine," "Lower back/sacrum finds a neutral position."

Eagle



"Being noticed in class is both a fear and an objective."

-Pawn Sharp, Devalila Yoga Teacher, Personal Trainer

Assisting Steps for Eagle Pose

Stand behind the person with slightly bent knees as in chair pose.

Guide their hips to sit onto your thighs to take some of the weight.

Use your free hands to depress their shoulders, draw in the rib cage, or tilt the pelvis to a neutral position. Your action depends on how you perceive their alignment and where you notice they are

holding tension.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Release your hands and allow them to return to a mountain pose.

Perform the assist on the other side.

Yoga Prop Suggestions

If they can't wrap their foot fully around the ankle, have them touch their big toe to the floor or stay in the chair pose leg position.

What You Might Say (to help the process)

"Squeeze your arms together," "Depress your shoulder blades," "Draw navel inward toward your spine," "Activate your inner thighs."

Standing Leg Extension (Front and Side)

"I just love touching people and being touched. It has always felt very natural to me."

-Stephanie Pappas, Devalila Yoga Teacher and Trainer

Assisting Steps for Standing Leg Extension Pose

Stand in a grounded stance behind the person almost touching them.

Carefully and slowly, cup one hand around their front upper arm and draw it slightly toward you.

Simultaneously, give support and lift under their outstretched leg (whether it's to the front or to the side) with your other hand.

Allow their back body to touch your chest, ribs or stomach for support as they deepen and balance in the pose.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Release your hands slowly, back away, and allow them to find their balance.

Perform the assist on the other side.

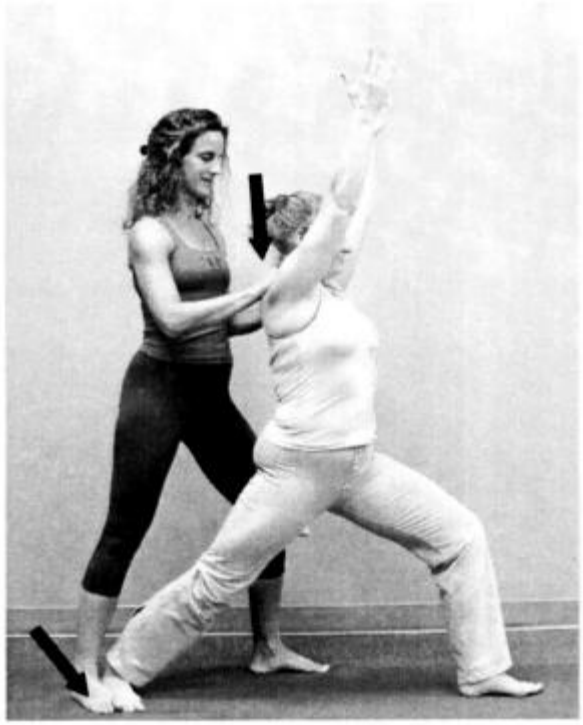
Yoga Prop Suggestions

Have them stand sideways next to a wall so they may touch it for balance with their free hand.

What You Might Say (to help the process)

"Keep your spine upright," "Hold the big toe firmly and lift," "Extend through both legs," "Draw your abdominal muscles firm and drawing inward," "Keep your hips parallel to the floor."

Warrior One



"Asa student, being assisted taught me to let go and accept help."

-A4rienne Yurinko, Devalila Yoga Teacher

Assisting Steps for Warrior One Pose

Stand behind the person as you anchor their back leg with the skiers squeeze position above their knee area (as in the top photo), or anchor their back foot down with your foot (as in the bottom photo).

Use your free hands to depress their shoulders, draw in the rib cage, or tilt the pelvis to a neutral position. Your action depends on how you perceive their alignment and where you notice they are

holding tension.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Release your hands, and allow them to return to mountain position.

Perform the assist on the other side.

Yoga Prop Suggestions

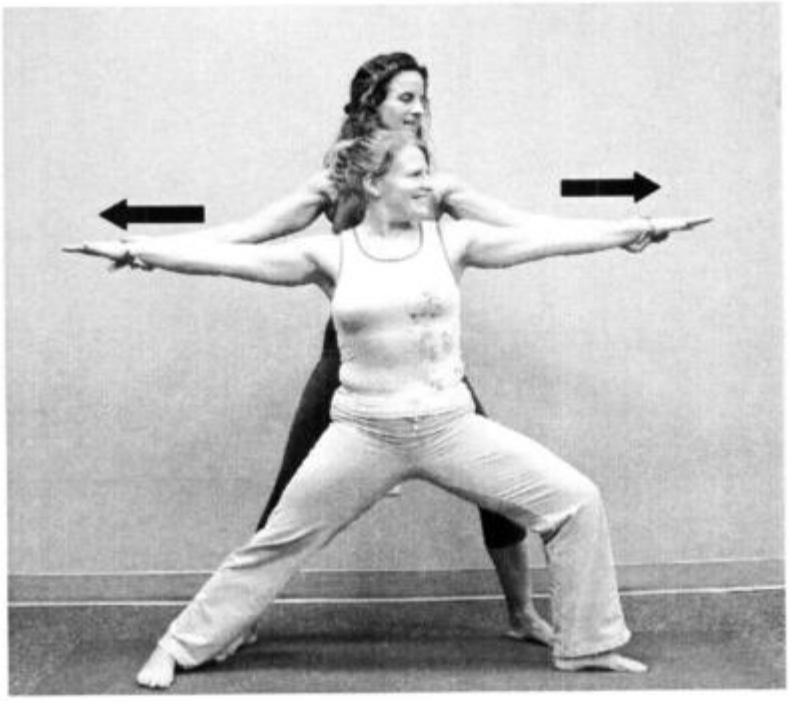
Have them press the outer edge of their back foot against a wall.

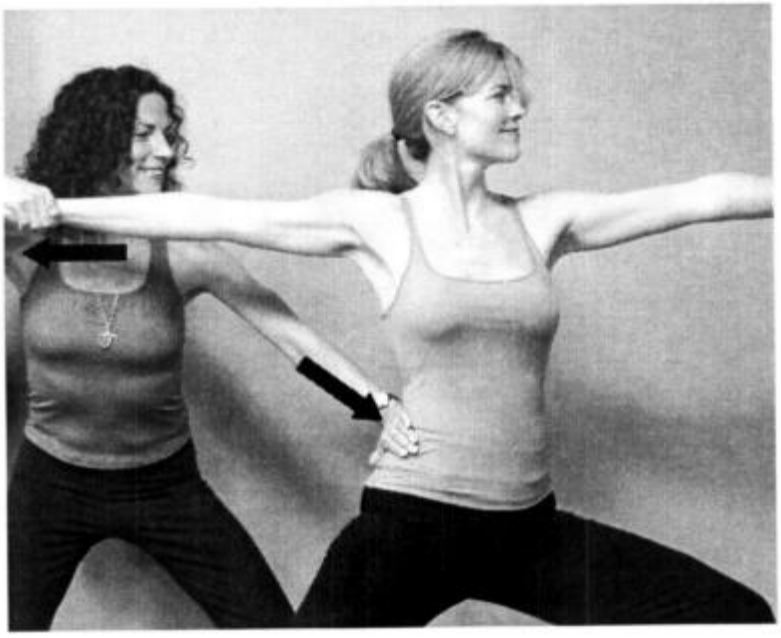
Have them hold a yoga block between their hands to help engage the arms.

What You Might Say (to help the process)

"Press both feet fully and firmly into the floor," "Turn your chest toward your front leg," "Drop tail bone down and navel inward," "Let your shoulders relax as you extend your arms."

Warrior Two-Option 1 Arm Stretch





"My yoga teacher training made me able to deal and accept life's challenges; all the while learning how to share all that I learned with my students."

-Martha Watson, Devalila Yoga Teacher

Assisting Steps for Warrior Two Pose (Arm Stretch)

Stand behind the person.

Hold near both their wrists using your thumb and index fingers.

Stretch their arms outward away from their body and maintain traction as they breathe deeply

into the upper chest (as in the top photo).

Align their arms in a "T" position and parallel to the floor.

Then, stand near their back leg and pull their back arm toward you while simultaneously pressing into their waist area to bring their torso into alignment with their pelvis (as in the bottom photo).

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Release your hands and allow them to return to mountain position, or perform a different assist for warrior two pose.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them press the outer edge of their back foot into a wall.

What You Might Say (to help the process)

"Breath deeply into your upper chest," "Reach out through your fingertips," "Soften the front rib cage," "Let your shoulders relax."

Warrior Two-Option 2 Hip Opening

"Being assisted helps with alignment and depth, and gives a good sense of body position."

-Daniel Farrell, Devalila Yoga Teacher, Scientist

Assisting Steps for Warrior Two Pose (Hip Opening)

Stand behind the person-practically in the same warrior stance.

Place your hand on their inner knee of the bent front leg.

Simultaneously place your other hand on the frontal pelvic crest of the hip of the back leg.

Draw the knee and hip backward toward you, but do not take the knee out of a vertical alignment with the ankle.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Release your hands, and allow them to return to a mountain position.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them press their back foot against a wall.

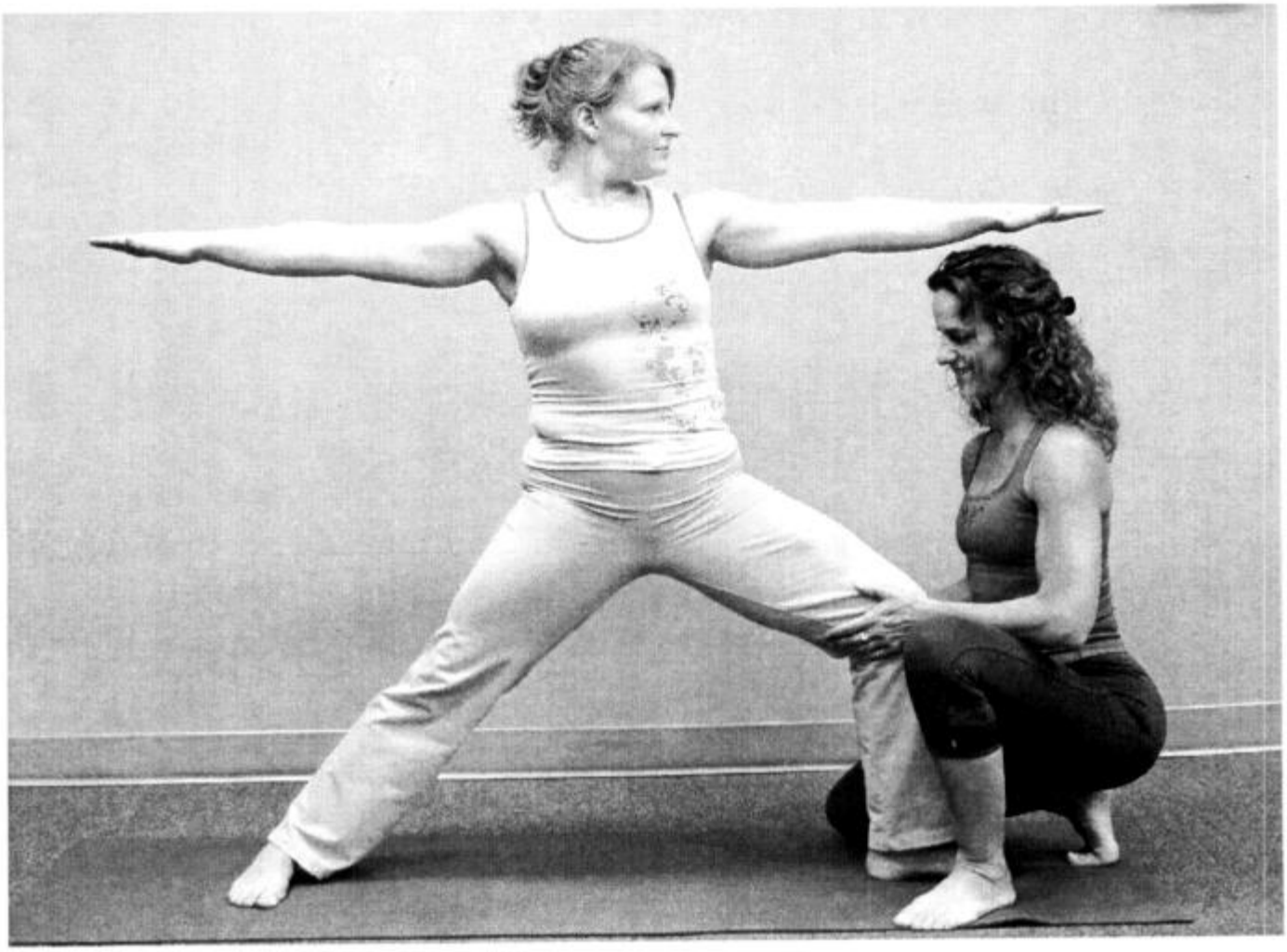
What You Might Say (to help the process)

"Drop your tail bone," "Press into all parts of your feet," "Lengthen the lower back," "Let your rib cage float above the hips."

"Assisting encourages the student by making a mental note of how to get the most of the pose when they perform on their own."

-Eloise Sicora, Devalila Yoga Teacher, Pilates Teacher

Warrior Two-Option 3 Knee Alignment



Assisting Steps for Warrior Two Pose (Knee Alignment)

Kneel in front of the person in the catcher's position.

Observe the alignment of their knee and ankle.

Use your hands to move their front knee into alignment with their ankle.

Encourage them to press firmly into both feet and keep the tail bone dropped.

Release your hands and allow them to return to a mountain position.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them press their back foot against a wall.

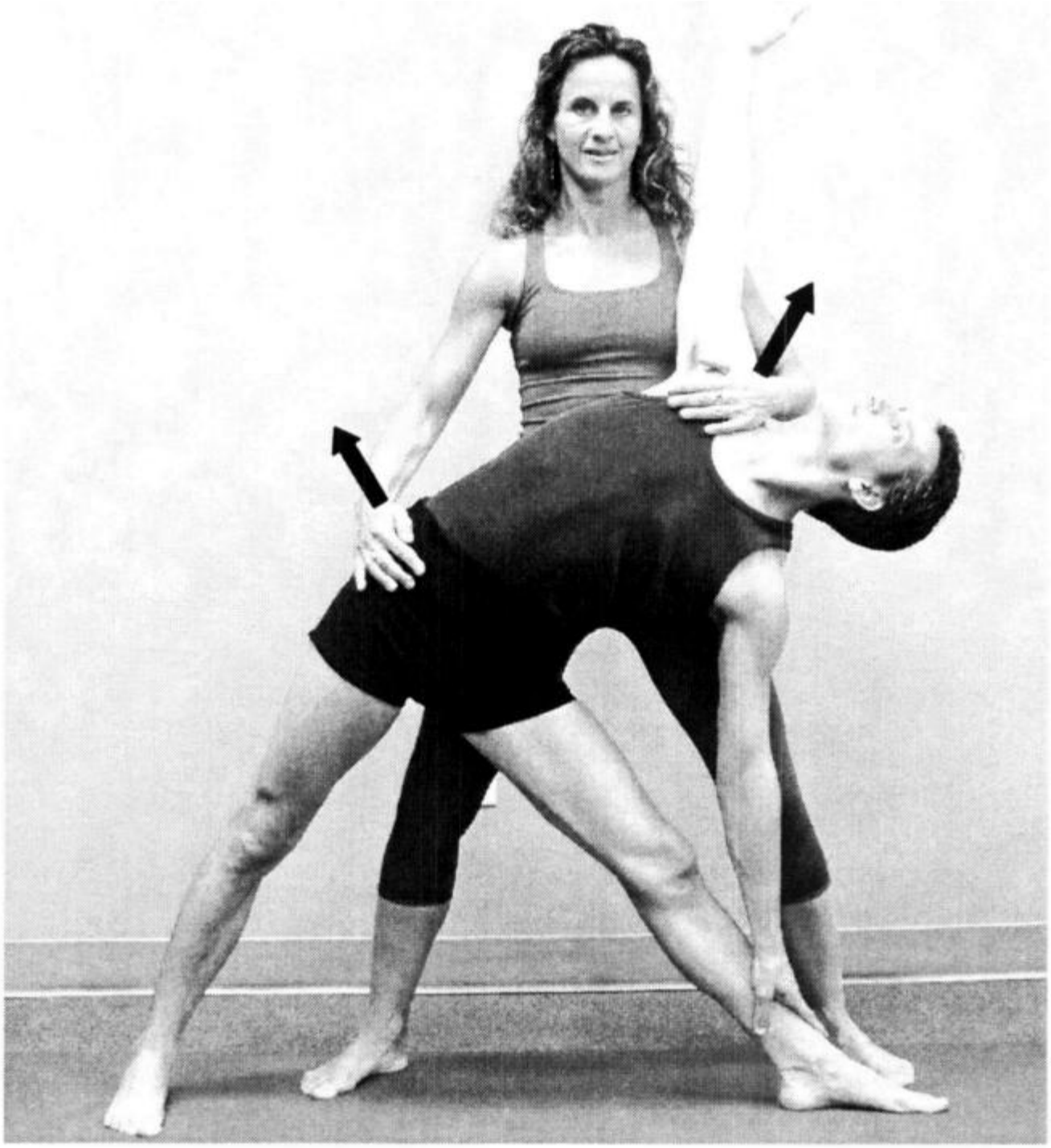
What You Might Say (to help the process)

"Keep equal weight in both feet," "Press into all parts of your feet," "Breathe into your lower back," "Turn your hips and torso away from your front leg."

"Yoga assisting can be a delicate matter fora male instructor. Always inform and request an okay with either gender to avoid impromptu reactions-unless it is a rescue."

-John Feddersen, Devalila Yoga Teacher

Triangle-Option 1 General Pose



Assisting Steps for Triangle Pose (General Pose)

Stand an inch or two behind their upper back in a wide stance.

Cup their upper shoulder (front deltoid) and upper hipbone (front iliac crest) and draw them toward you.

Let your body support them as they lean slightly back into you.

Stabilize the pose by using your whole hand and a firm stance.

Deepen the assist on their exhalation.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Let them find their balance before you back slowly away.

Remove your hand from their hip last. Allow them to stay in the pose, or return to an upright position.

Perform the assist on the other side.

Yoga Prop Suggestions

Put a yoga block under their lower hand for support (placed near the outside of their front knee, or where ever they can reach it).

What You Might Say (to help the process)

"Position your body as if next to a wall," "Relax your shoulders," "Firmly anchor your feet," "Keep your knee and big toe in alignment," "Firm your thighs."

Triangle-Option 2 Push Pull

Assisting Steps for Triangle Pose (Push Pull)

Stand behind their out-stretched front hand.

Lift your leg (the one closest to them) and place the outer edge of your foot into the crease of their upper thigh.

Hold their wrist area and the area above their elbow and gently pull their arm toward you.

Simultaneously press your foot into their thigh crease (your knee will extend).

Deepen the assist on their exhalation.

Stretch them in this position until they have reached out over their front foot as much as they can.

While keeping your balance, release your foot and guide their hand downward toward their front leg (or yoga block) in the full pose.

You can now perform another triangle assist while they are in the pose.

Perform the assist on the other side.

Yoga Prop Suggestions

Put a yoga block under their lower hand for support (placed near the outside of their front knee or where they can reach it).

Have them practice the pose with the back of their body next to a wall.

What You Might Say (to help the process)

"Reach your hand forward over your front foot," "Engage your thigh muscles," "Tuck under the tail bone," "Let the weight of your hips shift backward."

Triangle-Option 3 Turning the Neck

Assisting Steps for Triangle Pose (Turning the Neck)

While assisting in the general pose, cup their neck with your whole hand for support and gently turn their head to face up (as in the top photo), or stand in front of the crown of their head in a grounded stance (as in the bottom photo).

Cradle their neck/head with both your hands around the bottom ridge of the skull (occipital ridge).

Ask them to let their head get heavy in your hands.

Guide their neck/head into alignment with the rest of their spine if it is not already.

Gently turn their head to face up and at the same time use a little traction, drawing their neck towards your body.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Make sure their eyes are open and they are balanced before you release your hands and move away from them.

Perform the assist on the other side.

Yoga Prop Suggestions

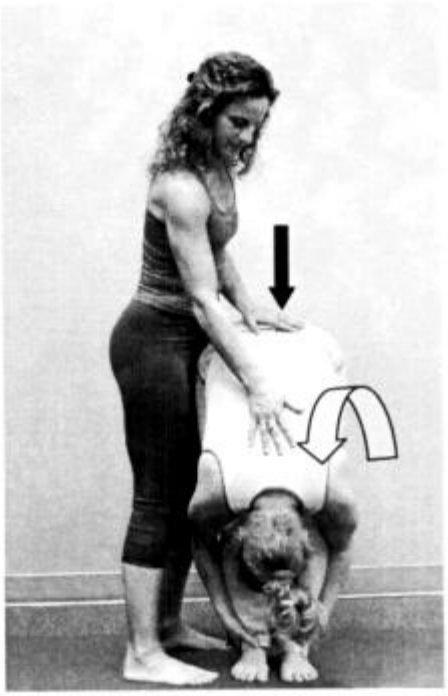
Put a yoga block under their lower hand for support (placed near the outside of their front knee or where they can reach it).

What You Might Say (to help the process)

"Relax your head backward in line with your spine," "Let your head get heavy."

Standing Forward Bend-Option 1

Back Pressure



"Just when you think you have gotten your deepest in a pose, you are astonished to Find that with assistance you can go even deeper." -Jessica Bayer, Devalila Yoga Teacher

Assisting Steps for Standing Forward Bend Pose (Back Pressure)

Stand alongside the person.

Place your open hand on their sacrum for stability.

Simultaneously place your other hand in the middle of their back between the lower edges of their scapula blades.

The hand on their sacrum just stabilizes their body while the other hand presses their back down into the forward bend.

Allow them to slightly bend their knees if their belly is far from their thighs.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Release your hands, and allow them to return to mountain position.

Yoga Prop Suggestions

Have them press their buttocks against a wall as they fold forward.

Have them squeeze a block between their inner thighs for alignment.

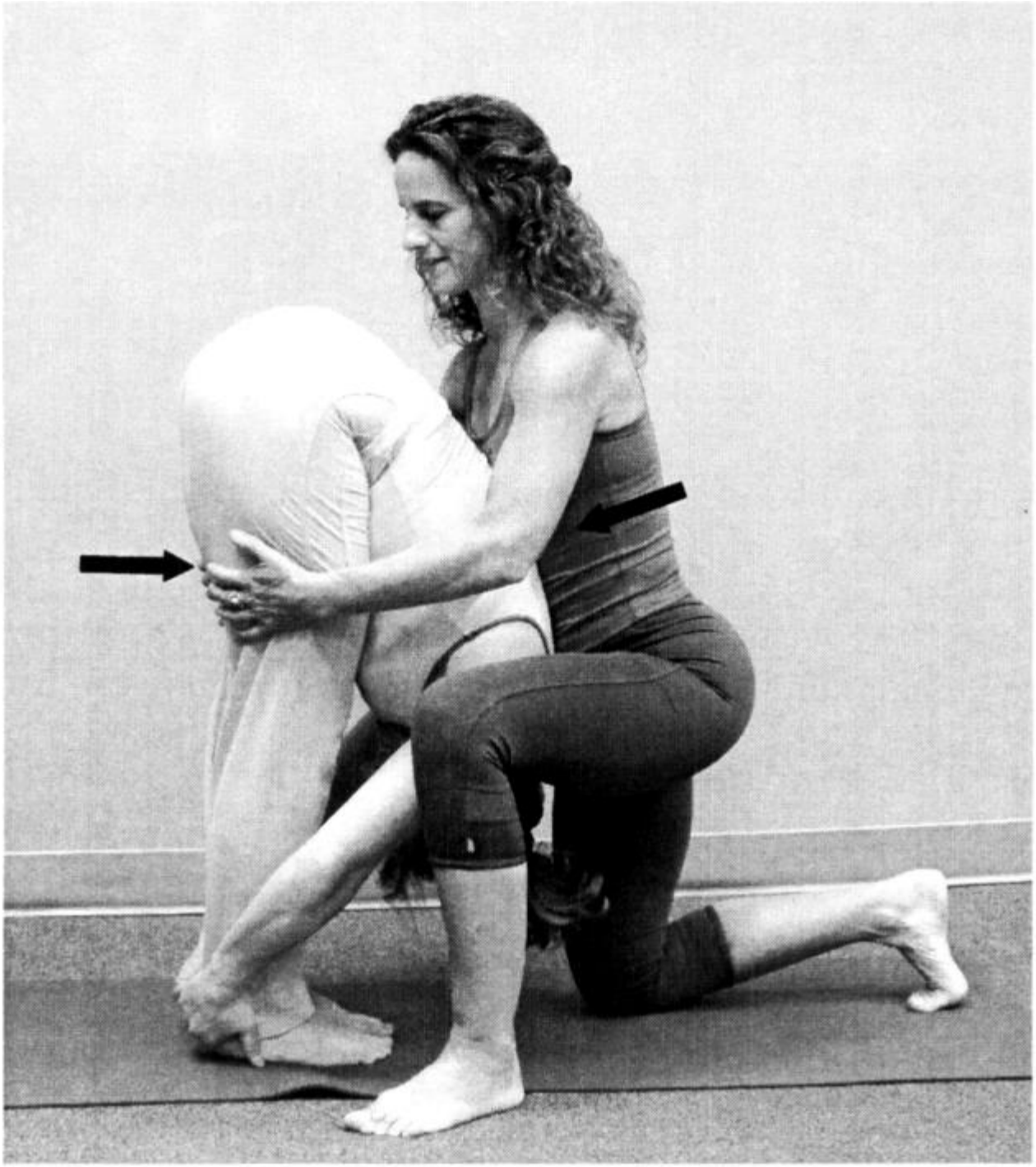
What You Might Say (to help the process)

"Bend your knees," "Lean your weight forward," "Let your torso and head hang loose."

"Be authentic in your own yoga way-from your heart."

-Carrie Colditz, Devalila Yoga Teacher

Standing Forward Bend-Option 2 Body Sandwich



Assisting Steps for Standing Forward Bend Pose (Body Sandwich)

Kneel in the marriage proposal position in front of the person's back.

Place your hands around their mid to upper hamstrings.

Simultaneously press your rib cage and belly onto their mid back.

Apply pressure between your hands and front body, sandwiching them in the forward fold.

Allow them to slightly bend their knees if their belly is far from their thighs.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Release your hands, stand up, and back away as they return to a mountain position.

Yoga Prop Suggestions

Have them press their buttocks against a wall as they fold forward.

Have them squeeze a block between their inner thighs for leg alignment.

What You Might Say (to help the process)

"Bend your knees," "Lean your weight into the balls of your feet," "Extend your exhale and bring your navel toward the spine," "Let your torso and head hang loosely."

"Yoga is a dance of opposites: suppleness and strength, relaxation and vigor, lifting and grounding, darkness and light, humor and seriousness, freedom and discipline."

-Stephanie Pappas, Devalila Yoga Teacher anc1 Trainer

Dancer

"Assisting leads students to self empowerment and shows them new possibilities in their bodies." -Carrie Colditz, Devalila Yoga Teacher

Assisting Steps for Dancer Pose

Stand to the side of the person with your body lightly touching their standing leg.

One of your hands is supporting the thigh of the leg that is in the air.

Simultaneously your other hand is supporting the triceps of the arm that is in the air.

Lift their arm and leg with your hands with equal leverage.

Make sure their hips are square and their bent knee does not flare out to the side.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Slowly release your hands and allow them to balance on their own.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them face a wall and touch it for balance.

Have them wrap a yoga tie around their ankle/foot if they cannot reach it with their hand.

What You Might Say (to help the process)

"Press your leg in the air away from your body," "Lift and expand your chest."

Half Moon One-Option 1 Sideways Stretch

Assisting Steps for Half Moon One Pose (Sideways Stretch)

Stand on the side opposite from where they are bending with your body touching their outer hip.

Reach one of your hands around their waist and draw it toward you.

With your other hand, simultaneously press their upper rib cage in the direction they are stretching.

Apply deeper pressure on the exhalation.

Allow them to rest their head on the lower arm if they feel strain in the neck.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Release your hands and back away as they return mountain position.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them hold a block between their hands to engage the arms.

Have them hold a yoga block between their thighs to engage the legs.

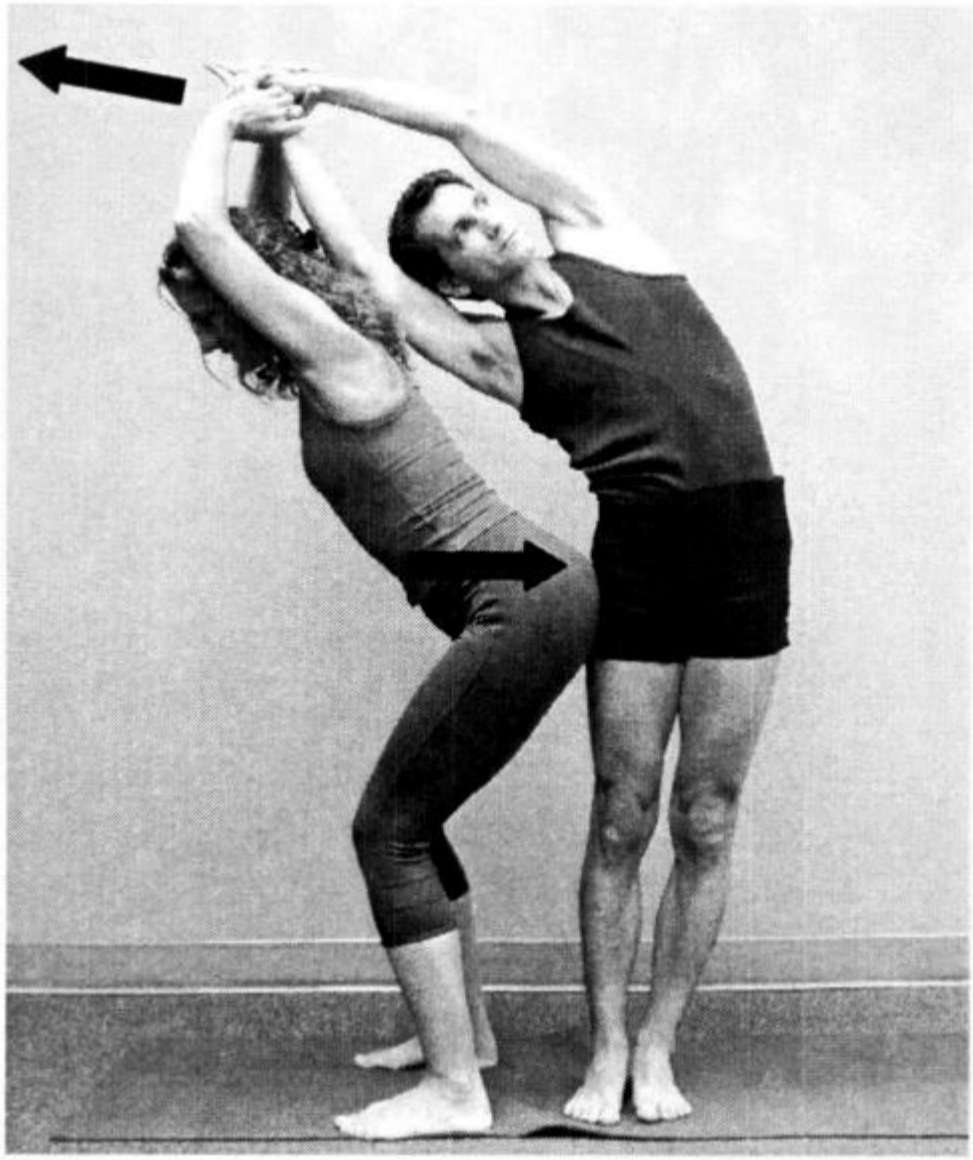
What You Might Say (to help the process)

"Reach your arms and extend the elbows," "Keep your head in alignment with your arms," "Elongate your waist area," "Breathe toward where you feel the most sensation."

"I feel that assisting and being assisted in the postures really helps us realize where we can go in the postures and how great it feels to be at our fullest expression of the pose. Now that I have learned what to do, it is an invaluable skill that I Will use when I am teaching."

-Jennifer Dedrick, Devalila Yoga Teacher

Half Moon One-Option 2 Arm Pull



Assisting Steps for Half Moon One Pose (Arm Pull)

Stand in a standing squat position under their outstretched arms.

Press your buttocks into their side hip area (if you and the student have a great difference in height, this assist may not be possible).

Reach above your head and pull their wrists forward with both of your hands.

Simultaneously, push your buttocks backward against their hip and pull their arms forward.

Apply more traction on their exhalation.

Allow them to rest their head on the lower arm if they feel strain in the neck.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Release your hands and move away as they return to mountain position.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them squeeze a block between their upper inner thighs to engage the legs.

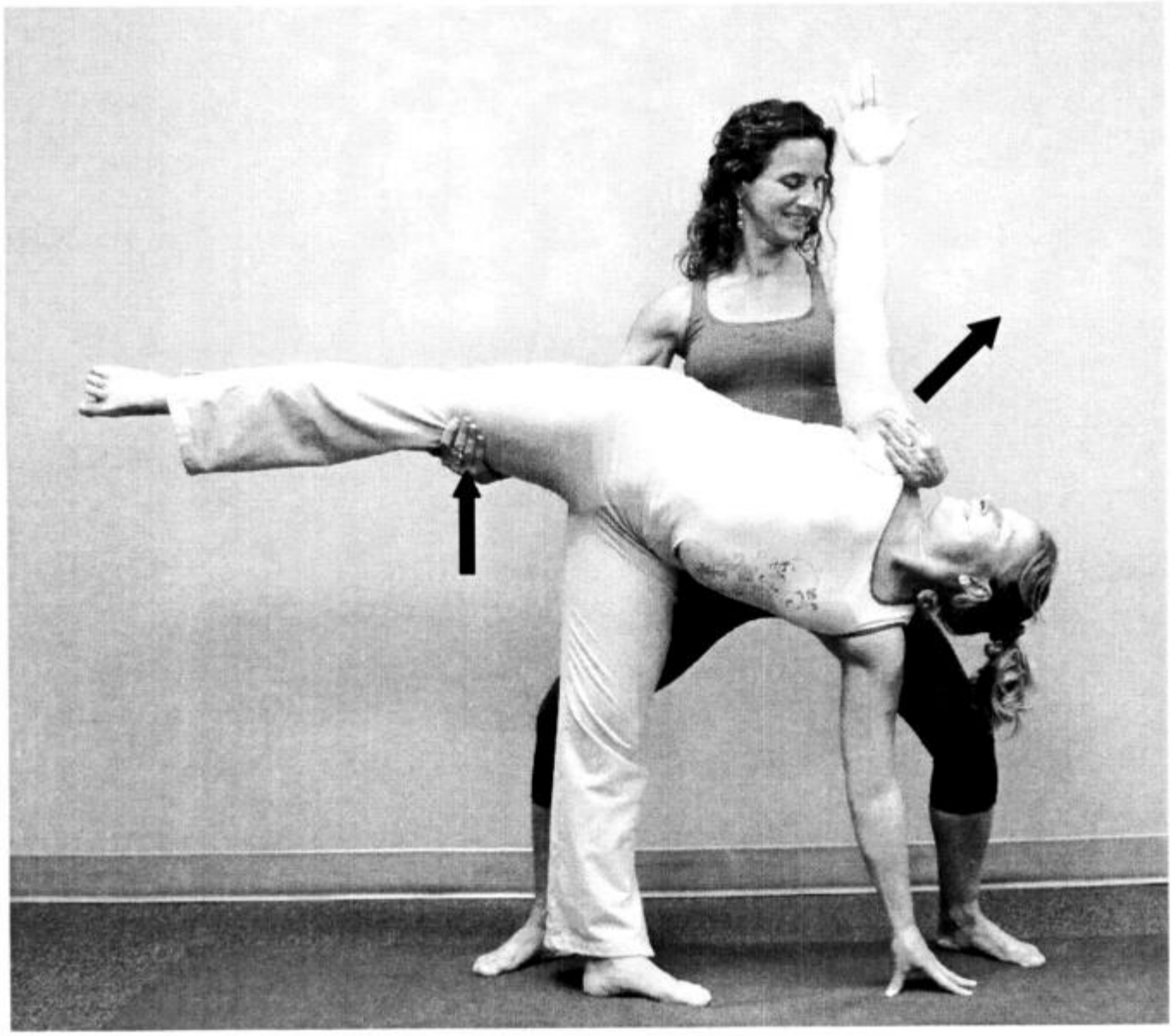
What You Might Say (to help the process)

"Reach your arms and extend your elbows," "Keep your head in alignment with your arms," "Elongate your waist area," "Activate your leg muscles."

"I love assistance. It has taught me to recognize each part of my body-those parts behind me that I cannot see, and that sometimes need to be put in place!"

-Dawn Sharp, Devalila Yoga Teacher, Personal Trainer

Half Moon Two



Assisting Steps for Half Moon Two Pose

Allow the student to get into the pose on their own as best they can.

Stand behind them with your belly or ribs (depends on their height) lightly touching their upper back around the scapula blades. Make sure your stance is wide and very stable.

Use one hand (the one nearest their leg) under the thigh that is in the air for support.

Cup your other hand (the one nearest their upper body) around the front deltoid of the arm that is in the air.

Simultaneously draw their shoulder toward your body and lift their leg toward a horizontal position in the air.

Let them lean their weight slightly backward against as if they were leaning against a wall.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours,

and listen for their breath.

Slowly release your hands, but remain standing there until they can balance on their own, and then back away.

Perform the assist on the other side.

Yoga Prop Suggestions

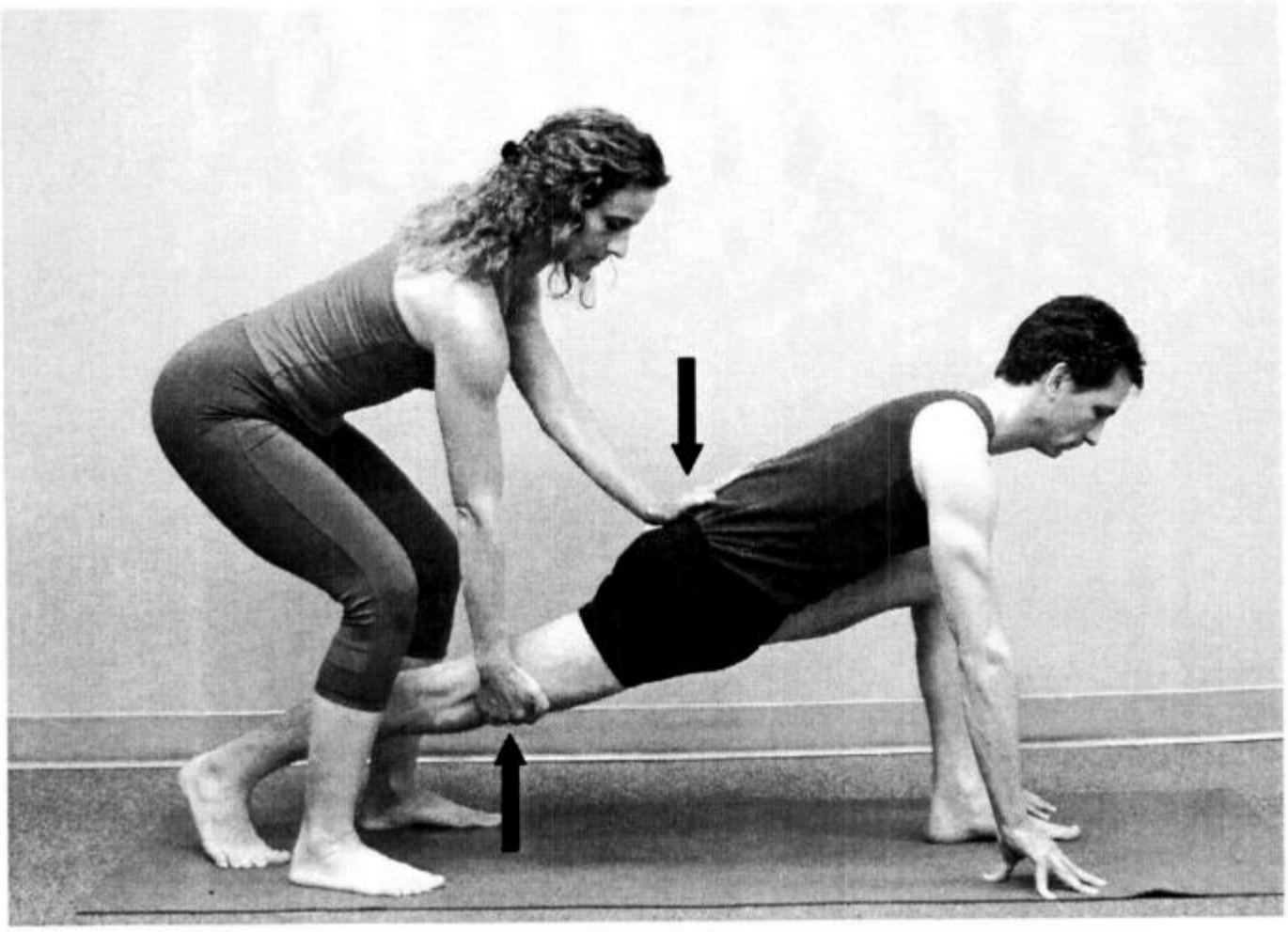
Have them place their lower hand on a yoga block.

Have them practice this pose against a wall.

What You Might Say (to help the process)

"Extend out from your navel area like a star fish," "Energize your leg in the air," "Keep your chest and hips opening," "If you feel off balance, look forward or down."

High Runner's Lunge



"When the student feels the difference in the pose from a careful assist, the usual result is a big smile- either internal or external."-John Feist, Devalila Yoga Teacher

Assisting Steps for High Runner's Lunge Pose

Straddle their back leg and bend your knees until you can reach their body.

Place one hand under their thigh above the knee area and lift upwards.

Simultaneously press down with your other hand on the middle of their sacrum.

Continue pressing down on the sacrum and lifting up on the back thigh.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Release your hands and allow them to bring their back leg forward and return to mountain position.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them place each of their hands on yoga blocks alongside their front foot.

What You Might Say (to help the process)

"Let your hips melt toward the floor," "Extend through your back heel," "Your front knee is positioned over your ankle," "Keep your spine and neck lengthening."

Pyramid

"Stefani taught me that the fun of yoga practice often comes when you fall and laugh."

-Ruby Hope, Yoga Teacher

Assisting Steps for Pyramid Pose

Straddle their back leg and bend your knees in the skier's squeeze position. Firmly squeeze and stabilize their back leg with your legs.

Place one hand on their back in between the shoulder blades and press down on their exhalation.

Simultaneously with your other hand draw their hip (of the forward leg) backward. This action

brings the pelvis into a more squared position.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Release your hands and back away as they return to mountain position.

Perform the assist on the other side.

Yoga Prop Suggestions

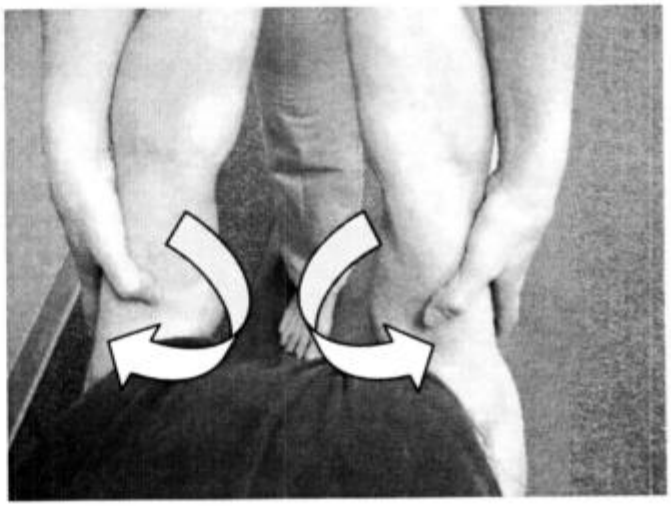
Have them place each of their hands on yoga blocks alongside their front leg.

What You Might Say (to help the process)

"Press firmly into both feet," "Bend your knee a bit if there is too much sensation," "Square your hips," "Let your torso relax over the front leg."

Standing Yoga Mudra-- Option 1

Shoulder Squeeze



Assisting Steps for Standing Yoga Mudra Pose (Shoulder Squeeze)

Stand in front of the person's back as they are in the pose.

Begin by rolling their front shoulders inward toward their spine (as in the top photo).

Then, reach over their outstretched arms and wrap your hands around their upper arms. Your thumbs are on the inside of the arms pointing downward (as in the bottom photos).

As they exhale, firmly roll their arms toward the outside. This action should draw their shoulder blades closer together.

Continue turning their arms outward (as if you were wringing two towels) as you simultaneously draw their arms toward you (as in the bottom left photo).

Allow them to slightly bend their knees if you see that they are rounding their lower back a lot, or their belly is very far from their thighs.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Release your hands and allow them to return to mountain position.

Yoga Prop Suggestions

Have them hold a yoga strap between their hands if they have difficulty interlacing their fingers.

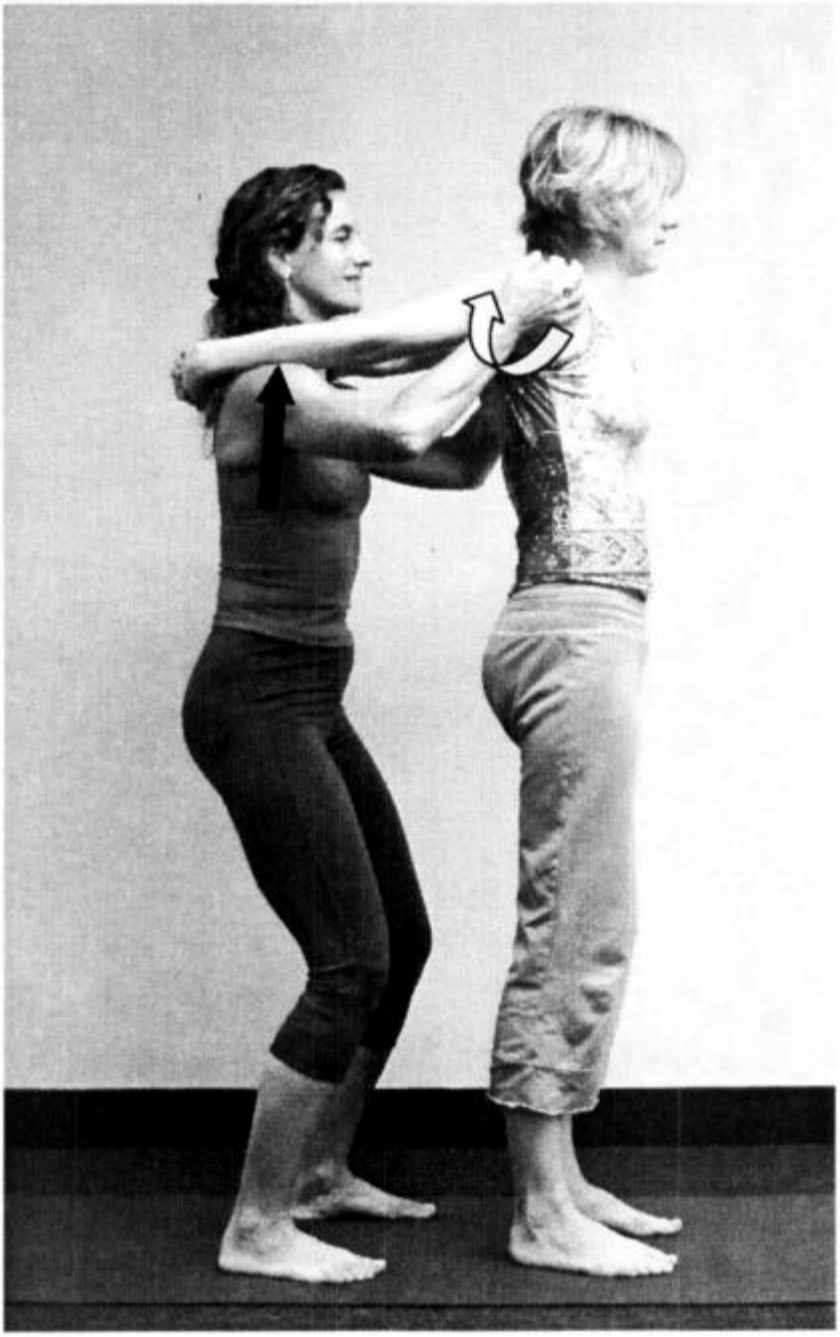
If balance is an issue, have them sit in a chair instead of standing up.

What You Might Say (to help the process)

"Bend your knees," "Squeeze your shoulder blades together," "Let your torso and head hang loose."

Standing Yoga Mudra- Option 2

Arm Stretch



"Cultivate an awareness of your students."

-Carrie Colditz, Devalila Yoga Teacher

Assisting Steps for Standing Yoga Mudra Pose (Arm Stretch)

Stand in back of the person while they are in the pose with their fingers interlaced.

Bend your knees and step underneath their arms and place their forearms on your shoulders (if this is not possible, attempt another assisting variation on this pose).

As you slowly begin to stand up straighter, their arms and chest get a deep stretch.

With your hands are cupping their shoulders (deltoid area), roll them inward toward their spine. This action should bring their shoulder blades closer together.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Deeply bend your knees, take their arms off your shoulders and back away as they return to mountain pose.

Yoga Prop Suggestions

Have them hold a yoga strap between their hands if they have difficulty interlacing their fingers.

What You Might Say (to help the process)

"Breathe deeply into your chest," "Squeeze your shoulder blades together," "Bring your front ribs inward."

"We don't touch each other much in our society. When my students tell me how much they love the assistance I give them, it i5 a 9 reat reminder that physical beings like to be touched."

-Dawn Sharp, Devalila Yoga Teacher, Personal Trainer

Extended Angle-Option 1 General Pose

Assisting Steps for Extended Angle Pose (General Pose)

Stand an inch or two away from the person in a wide stance behind their middle/upper back.

Cup their upper shoulder (front deltoid) and upper hipbone (front iliac crest) with your hands and draw their body toward you.

Use your body to support them if they lean backwards into you.

Deepen the assist on their exhalation.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Let them find their balance before you back away.

Remove your hand from their shoulder first, then their hip, and allow them to return to an upright

position.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them put their lower hand on a yoga block for support (placed near the inside or outside of their front shin).

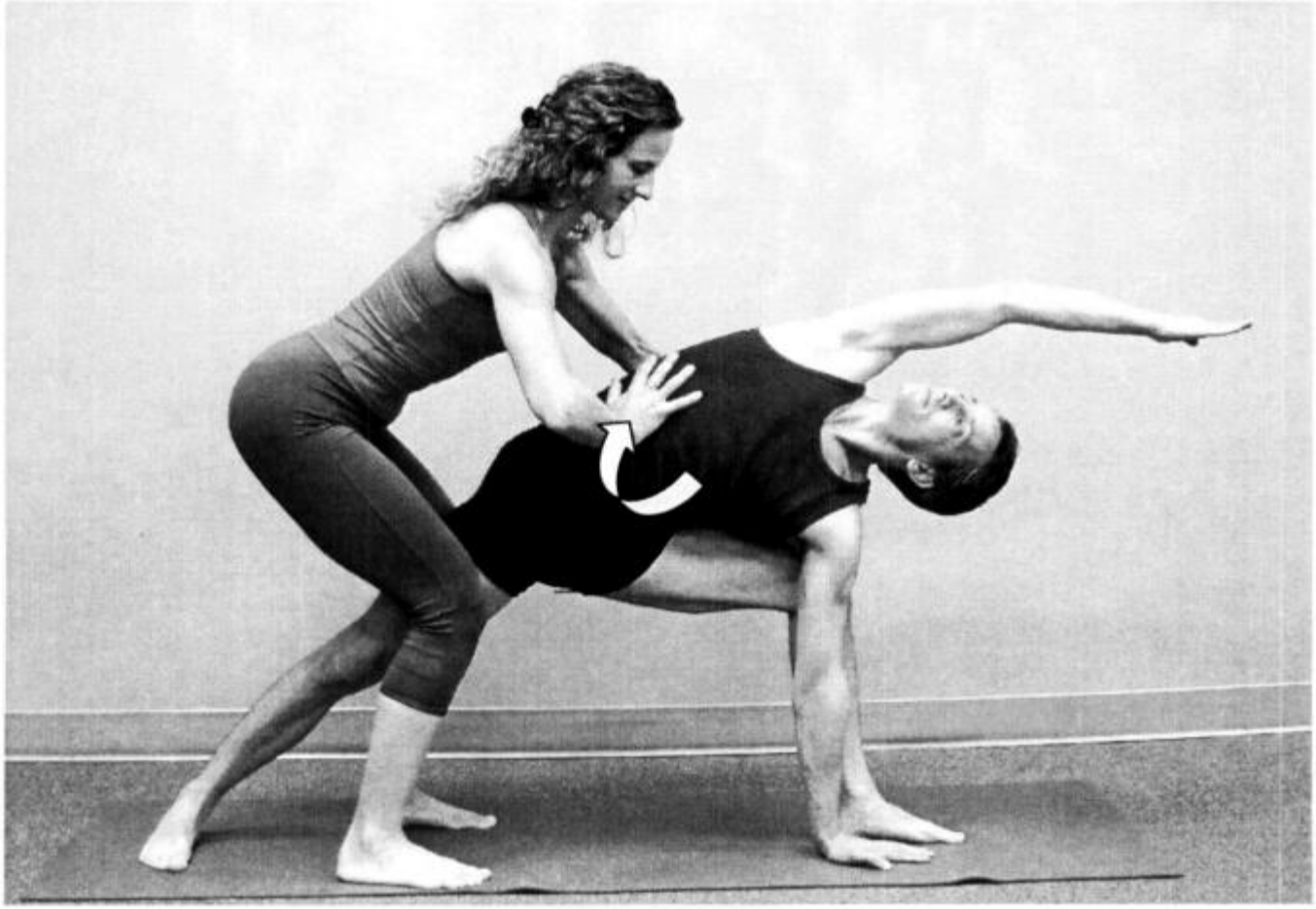
What You Might Say (to help the process)

"Position your body as if next to a wall," "Relax your shoulders," "Firmly anchor your feet," "Firm the buttocks muscles and tuck your tail bone," "Keep your knee and ankle in alignment pointing forward," "Firm your thighs."

"Ifthe assistant is stable and confident, the student may feel more secure and allow themselves to relax into the pose."

-Stephanie Pappas, Pevalila Yoga Teacher and Trainer

Extended Angle-Option 2 Torso Twist



Assisting Steps for Extended Angle Pose (Torso Twist)

Straddle their back leg and bend your knees in the skier's squeeze position. Firmly squeeze and stabilize their back leg with your legs.

Place one hand on the lower part of their scapula blade (the one that is closest to the floor). This hand will press the scapula in a downward direction.

Simultaneously place your other hand (fingers facing away from their navel) on their rib cage (the ribs that are facing the sky).

Twist their torso with both your hands, moving in a direction away from their navel.

Twist more deeply on their exhalation and intensify your grip on their back leg.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Release your hands and let them twist on their own. Slowly back away as they return to an upright position.

Perform the assist on the other side.

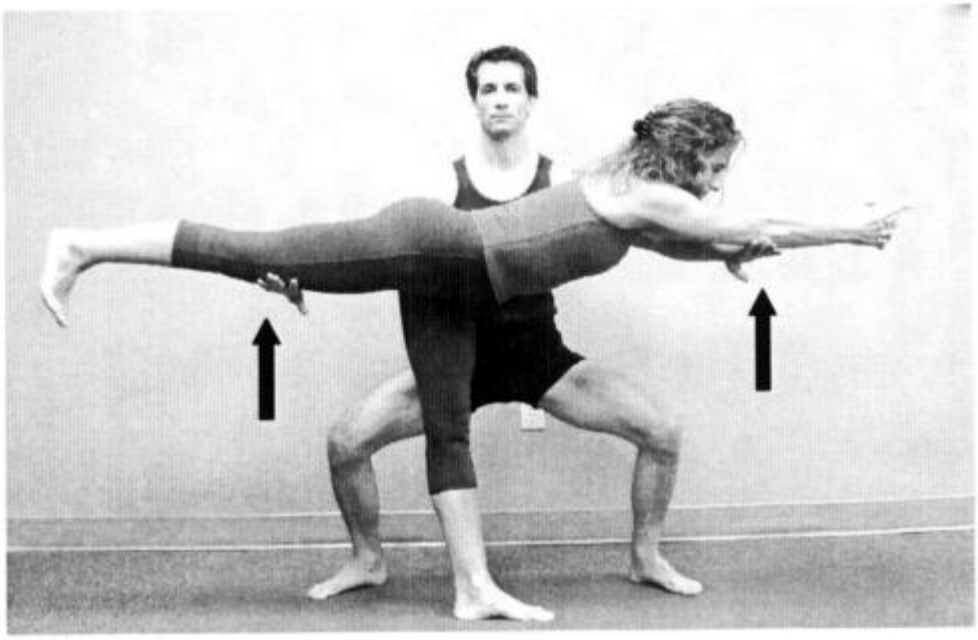
Yoga Prop Suggestions

Have them put their lower hand on a yoga block for support (placed near the inside or outside of their front shin).

What You Might Say (to help the process)

"Press firmly into both feet," "Tuck the tail bone under and firm the buttocks," "Open your chest and armpit toward the ceiling," "Press your bottom arm backward against your knee for leverage in the twist."

Warrior Three



"A student may remember a feather suggestion for weeks."

-Carrie Colditz, Devalila Yoga Teacher

Assisting Steps for Warrior Three Pose

Stand alongside the person in a horse stance near their standing leg (slightly in contact with their body).

Use one of your hands (back of your hand or palm) to support and lift the thigh of the leg that is in the air.

Simultaneously use your other hand (back of your hand or palm) to support and lift the arms that are in the air.

Without moving them off balance, lift their arms and leg with your hands so that their body is approaching a "T" position.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Slowly release your hands and back away.

Allow them to balance on their own before they return to mountain position.

Perform the assist on the other side.

Yoga Prop Suggestions

Allow them to face a wall or a chair and touch it for balance.

Have them press their back foot into a wall.

What You Might Say (to help the process)

"Extend your leg in the air," "Firm the standing leg," "Align your leg, arms, and your torso," "Bring your navel toward your spine as you exhale."

Standing Split-Option 1 Leg Lift

"What force in the lightest of touches."

-Carrie Col4itz, Devali1a Yoga Teacher

Assisting Steps for Standing Leg Split Pose (Leg Lift)

Stand alongside the person in a wide stance (on the side with the leg in the air).

Place one hand on the middle of their front thigh of the leg in the air. Place the other hand on the middle of their back between the shoulder blades.

Simultaneously press down on the middle of their back as you lift their standing leg higher.

Allow them to slightly bend the knee of the standing leg if you see that their belly is very far from their thighs.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Release your hands and back away as they bring their legs together and return to mountain position.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them place their lower hand(s) on a block(s) for support.

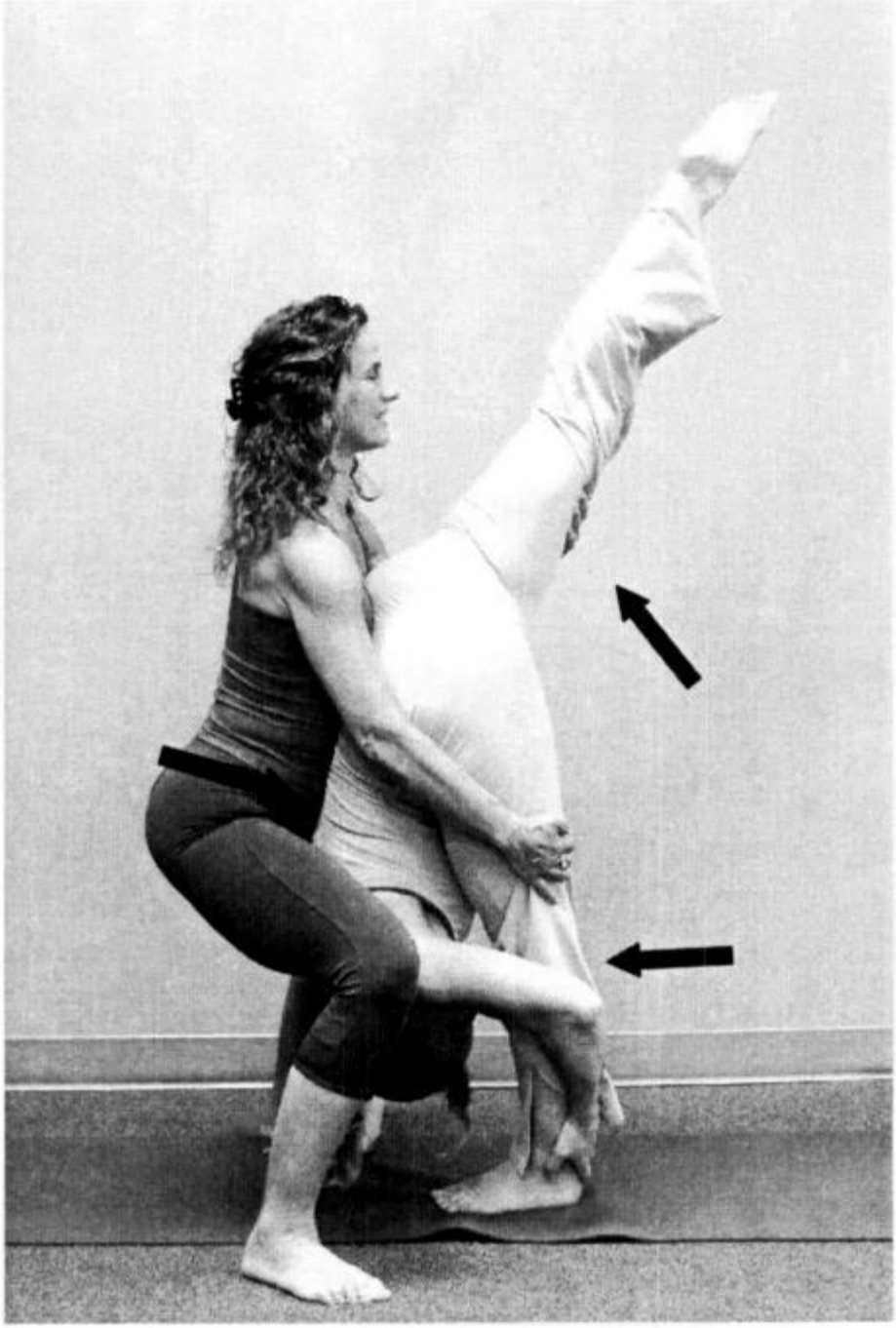
What You Might Say (to help the process)

"Reach your legs in equal and opposite directions," "Point your toes toward the ceiling," "Relax your neck."

"Yoga showed we the door to ultimate happiness and peace of body and mind."

-Varsha Patel, Pevalila Yoga Teacher

Standing Split-Option 2 Body Sandwich



Assisting Steps for Standing Leg Split Pose (Body Sandwich)

Stand in a deep squat position in front of the person's back.

Place one hand on the middle to upper hamstrings of their lower leg.

Place the other hand under the knee or thigh of their upper leg and apply a lift.

Simultaneously press your rib cage and belly onto the middle of their back as you pull their standing leg toward you.

Apply pressure between your hands and front body, sandwiching them in the standing split.

Allow them to slightly bend their knee if you see that their belly is very far from their thighs.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Release your hands, stand up, and back away as they bring their legs together and return to mountain position.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them place their lower hand(s) on a block(s) for support.

What You Might Say (to help the process)

"Reach your legs in equal and opposite directions," "Point your toes toward the ceiling."

Seated Forward Folding

Hip and Leg Postures

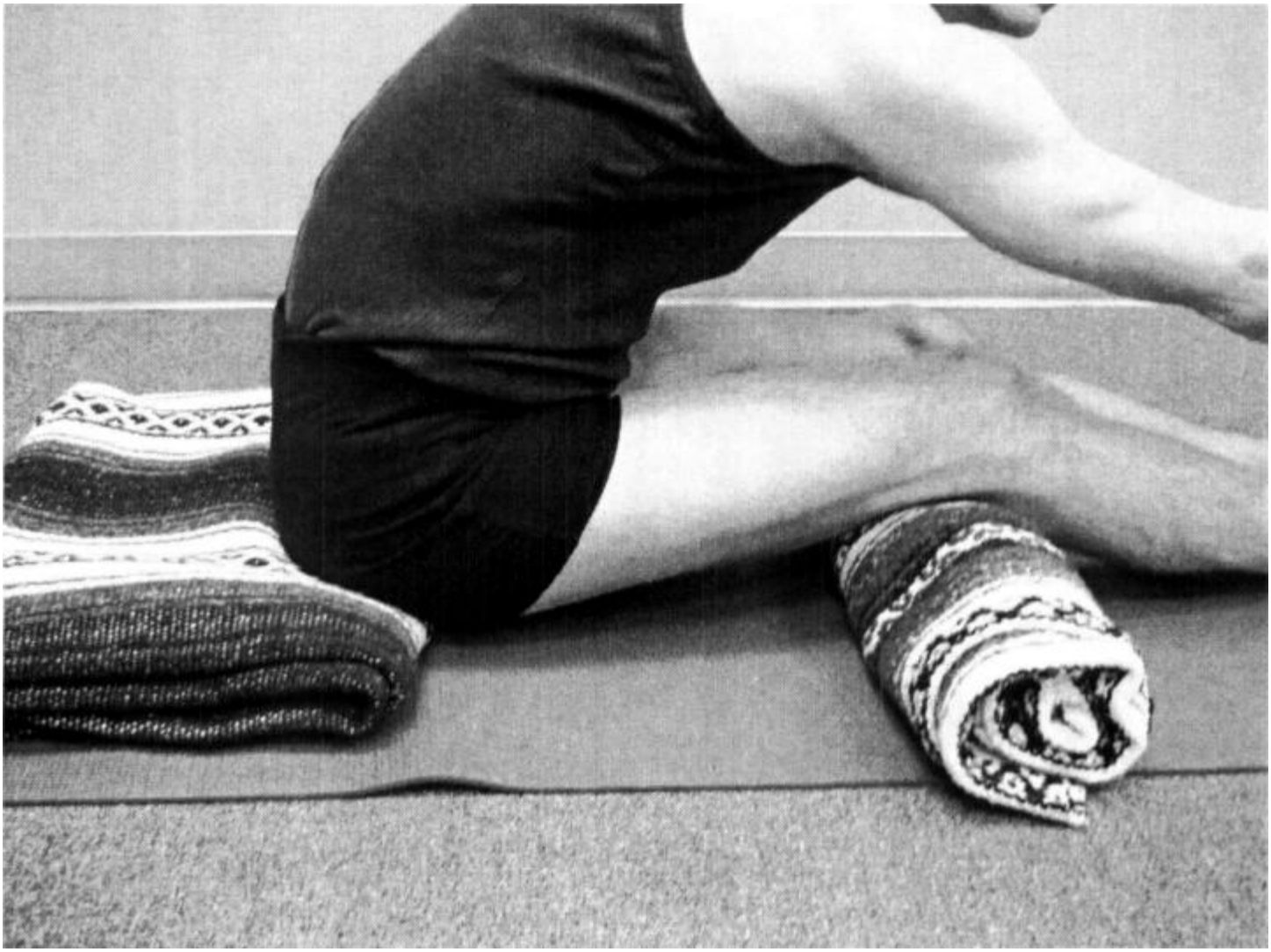
Seated posture adjustments are somewhat easier to perform because there is no risk of knocking the person over as there is in the standing postures, and you are working with gravity. Because the person is in a seated position, you have more time to set up and position yourself. The challenge of adjusting a seated forward fold pose is to know how much pressure to apply. You may have some apprehension in the beginning. With time and practice you will gain confidence about the level of pressure to apply. Here are some points to remember when assisting someone in the forward folding poses presented in this chapter:

- Have the person bend their knees a little or a lot when they have tight hamstrings.
- Have props handy and ready to give them for support under the knees, belly, or buttocks.
- If you are unsure of the appropriate amount of pressure to apply, ask for specific feedback.
- Don't force the student into the fold. If you feel resistance and they are not breathing, back off.
- Apply pressure gradually and in harmony with their breath.
- Apply deeper pressure on their exhalation.
- When pressing on their back or spine, use your whole hand.
- When pressing on their back or spine with both your hands, use equal pressure in both hands.

Note: All the postures in the following section should be performed for at least 30 seconds, but can be held for much longer depending on the needs and ability of the student.

"Just relax and let the pose find its expression in you..." -Joy Principe, C.P.A., Yoga Teacher

Seated Forward Fold-Props



"Assisting is about reminding a person that it's ok to let go and really enjoy the pose."

-Joy Principe, C.P.A., Yoga Teacher

Yoga Prop suggestions for Seated Forward Folding Poses

You can place a folded blanket or a pillow under your hips.

Remember to sit on the edge of the blanket or pillow and not directly in the middle of it.

You can place a rolled-up blanket, a round bolster, or small to medium size pillow under the knees to relax the hamstring muscles.

You can press your feet against a wall to give your legs an extra stretch.

If no props are available for under your hips you can roll up your yoga mat and sit on that.

If no props are available for under your knees you can slide your forearms under you knees for support, or simply keep your knees slightly bent.

Seated Forward Fold-Option 1

Rib Cage Li, fi and Press

Assisting Steps for Forward Fold Pose (Rib Cage Lift and Press)

Stand in a standing squat position close to the person's back with your feet near the outside of their hips.

Place your hands firmly around the sides of their middle/lower rib cage and trace your fingers around their ribs.

As they inhale, lift their rib cage up and slightly forward (as in the top photo).

As they exhale, press their rib cage down and slightly forward with equal pressure in both hands (as in the bottom photo).

Perform the lift and press several times, synchronizing your movements with their breath.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Release your hands, stand up, and back away as they roll up to a seated position.

Yoga Prop Suggestions

Have them put a pillow under their hips, belly, or knees for support.

Have them press their feet into a wall for a deeper leg stretch.

What You Might Say (to help the process)

"Relax your neck, arms and shoulders," "Reach your navel toward your thighs," "Let go and let gravity take you deeper into the fold."

"When the teacher is assisting you, breathe deeply and melt into the pose."

-Stephanie Pappas, Devalila Yoga Teacher and Trainer

Seated Forward Fold--option 2 Sacrum Tilt

"Help your students find joy in their practice."

-Carrie Colditz, Devalila Yoga Teacher

Assisting Steps for Forward Fold Pose (Sacrum Tilt)

Kneel in the catcher's position close to the person's back.

Place the heels of your hands firmly on their lower back/sacrum area with your fingers facing upward and slightly outward (it depends on what feels comfortable to you).

Maintain a continuous, even pressure downward and slightly forward on their sacrum.

As they breathe and relax in the pose, you can shift the position of your hands an inch or two (up, down or laterally) and continue applying pressure.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Release your hands, stand up, and back away as they roll up to a seated position.

Yoga Prop Suggestions

Have them put a pillow under their hips, belly, or knees for support.

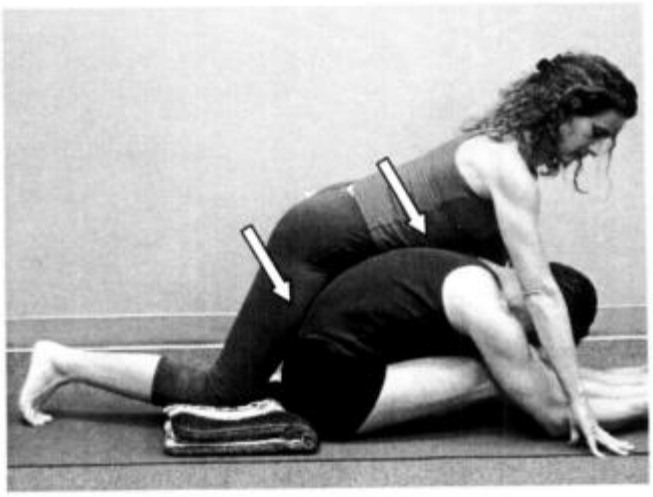
Have them press their feet into a wall for a deeper leg stretch.

What You Might Say (to help the process)

"Tilt your pelvis forward," "Press your hips toward the floor," "Reach your navel toward your thighs," "Keep your feet and legs together."

Seated Forward Fold-Option 3

Light Pressure



Assisting Steps for Forward Fold Pose (Light Pressure)

Kneel close to the person's back and place one of your feet near the outside of their thigh or knee (whichever feels more comfortable to you). Let your other leg extend backward into a low lunge position.

Place your hands firmly on their middle back in the area between or beneath the scapula blades.

As they inhale, ease up on the pressure.

As they exhale, press down and slightly forward with equal pressure in both hands.

If they can (or want to) go deeper, shift your weight forward and lean your rib cage, belly, and upper thigh onto their back (as in the bottom photo). Apply pressure with your whole body as they exhale.

Put your hands on the floor for balance.

Maintain the assist for as long as you feel is appropriate.

Return to an upright position and back away as they roll up to a seated position.

Yoga Prop Suggestions

Have them put a pillow under their hips, belly, or knees for support.

What You Might Say (to help the process)

"Relax your neck, arms, and shoulders," "Relax more as you exhale," Keep your feet flexed."

"After receiving assistance with the forward fold it was amazing to me how much deeper I could go in the pose on my own! It was as if I continued to feel hands lifting up my abdomen each time I took a breath, and on the releasing sinking me down."

-Michele Lawrence, Devalila Yoga Teacher

Seated Forward Fold-Option 4 Deep Pressure Using Torso and Hand

Assisting Steps for Forward Fold Pose (Deep Pressure Using Torso and Hand)

NOTE: Use this assist if the person still wants to go deeper after receiving the previous forward fold assists.

Place one of your feet near the outside of their thigh or knee. Let your other leg extend backward into a low lunge position.

Shift your weight onto your front foot and then lean your upper thigh, your belly, and lastly your ribs onto their back.

Simultaneously place your hand (or hands) on the floor alongside their legs for balance.

Apply more pressure on their exhale by lifting your back knee off the floor and leaning your weight forward and down onto their back.

When you feel balanced, use one of your hands to flex their feet forward.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Remove your hands, return to a kneeling position, and back away as they roll up to a seated position.

Yoga Prop Suggestions

Have them put a pillow under their hips or knees for support.

If they are really flexible have them hold onto a yoga block at the bottoms of their feet.

What You Might Say (to help the process)

"Relax completely, but keep your feet flexed," "Let go more as you exhale."

Seated Forward Fold-Option 5

Back-to-Back

Assisting Steps for Forward Fold Pose (Back-to-Back)

Sit down near their hips with your back facing theirs and your knees bent. Place your feet on the floor about hip width apart.

Place your hands flat on the floor behind you.

Lift your hips off the floor and place your low back/sacrum area onto their low back/sacrum area.

Slowly, press your back onto their back and maintain full contact and alignment.

As you lean backward over their body, adjust your hand position to maintain your balance and

stability.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Release by rolling your spine up starting with your head and ending with your low back. Slide your hips back down to the floor into a seated position as they roll up from the forward fold.

Yoga Prop Suggestions

Place a blanket between your back and their back to soften the bone to bone contact.

What You Might Say (to help the process)

"Do you want more or less pressure?" "Relax and deepen your breath as I lean my weight onto you."

"My yoga teacher's assistance resembles a parent helping a child getting on their feet in early years of life."

-Varsha Patel, Devalila Yoga Teacher

Child-Option 1 Sacrum Press

"I'm looking forward to introducing yoga to my daughter. I know she will love it especially since she experienced it in the womb!"

-Michele Roc{riguez, Devalila Yoga Teacher

Assisting Steps for Child's Pose (Sacrum Press)

Stand with bent knees close to the person's back and your feet hip width apart.

Place your hands firmly on their sacrum area with your fingers facing out to the sides. Your wrists are centered in the middle of their sacrum.

While keeping your arms straight, bend your knees more and press down onto their sacrum using your body weight.

Maintain equal pressure on their inhalation and exhalation.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours,

and listen for their breath.

Release your hands, stand up, and back away as they roll up to a seated position.

Yoga Prop Suggestions

Have them spread their knees apart or put a pillow under their belly for support.

Have them put a pillow or blanket between their hips and their feet.

What You Might Say (to help the process)

"Breathe deeply into your diaphragm and lower back," "Relax your shoulders."

"With the teacher's assistance during class, I was able to go beyond where I was in the pose and have a 'template' of what is possible for me to stretch into with further practice. This is a metaphor for life also."

-Madonna Alvarez, Devalila Yoga Student

Child--Option 2 Sacrum Press with Arm Stretch

Assisting Steps for Child's Pose (Sacrum Press with Arm Stretch)

Stand with bent knees close to the person's extended arms and let them hold onto your ankles

with a firm grip.

Reach over their back and place your hands firmly on their sacrum area with your fingers facing out to the sides. Your wrists are centered in the middle of their sacrum.

While keeping your arms straight, press down onto their sacrum using your body weight. Really lean forward as if you were going to do a push up with your shoulders almost over your wrists.

Step your feet backwards one at a time to give their arms a deeper stretch.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Bend your knees, release your hands and stand up straight. Ask them to release your ankles.

Yoga Prop Suggestions

Have them spread their knees apart, or put a pillow under their belly for support.

Have them put a pillow or blanket between their hips and their feet.

What You Might Say (to help the process)

"Breathe deeply into your diaphragm and lower back," "Hold firmly onto my ankles and relax your shoulders."

Head to Knee Fold

Assisting Steps for Head to Knee. Fold Pose

NOTE: You can perform the rib cage lift and press before doing the following steps.

Kneel close to the person's back in the catcher's position (or a standing squat position).

Place the heel of one your hands on their bent leg close to the leg crease, and apply pressure. Your fingers are pointing away from their groin area.

Place your other hand on the center of their back between the lower scapula blades, and gradually apply pressure with each exhalation.

Simultaneously apply pressure on both areas, but lighten the pressure on their back during the inhalation.

Maintain the assistance for as long as you feel is appropriate.

Release your hands, stand up, and back away as they roll up to a seated position.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them put a pillow under one or both knees for support.

Have them press their foot into a wall for a deeper leg stretch.

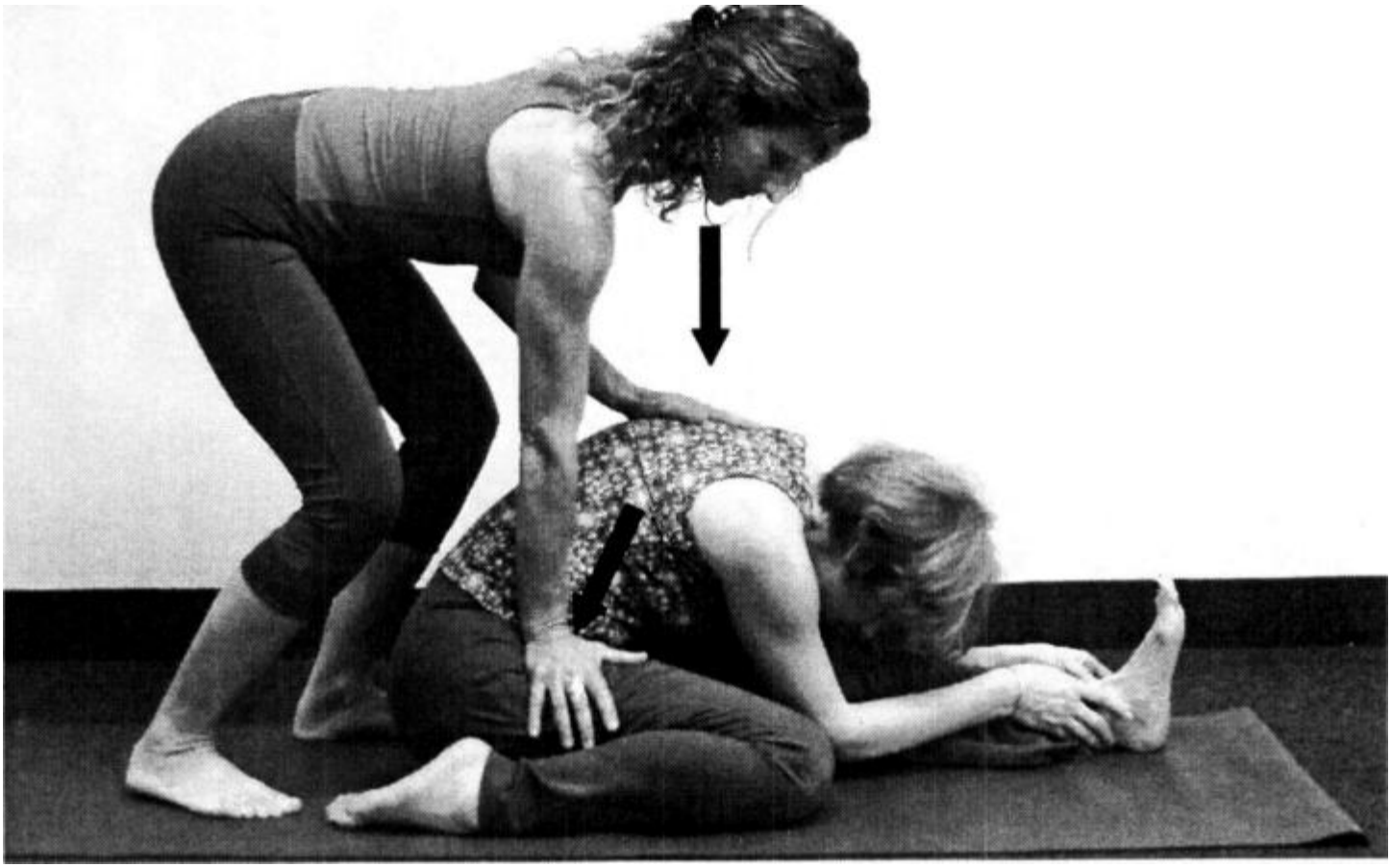
What You Might Say (to help the process)

"Relax your neck, arms, and shoulders," "Reach your navel toward your thighs."

"My yoga teacher training had an incredible impact on my life. On the one hand it softened me; on the other hand it made me stronger."

-Martha Watson, Devalila Yoga Teacher

Half Hero Fold



Assisting Steps Half Hero Fold Pose

NOTE: You can perform the rib cage lift and press before doing the following steps.

Stand in a standing squat position close to the person's back(or kneel in the catcher's position).

Place the heel of one of your hands on their bent leg close to the leg crease, and apply pressure. Your fingers are pointing away from their groin area.

Place your other hand on the center of their back between the lower scapula blades, and gradually apply pressure with each exhalation.

Simultaneously apply pressure on both areas, but lighten the pressure on their back during the inhalation.

Release your hands, stand up, and back away as they roll up to a seated position.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them put a pillow under the knee of the extended leg for support.

Have them press their foot into a wall for a deeper leg stretch.

What You Might Say (to help the process)

"Relax your neck, arms and shoulders," "Reach your navel toward your thighs."

Cobbler

"I really appreciate the willingness and openness of my students."

-Stephanie Pappas, Devalila Yoga Teacher and Trainer

Assisting Steps for Cobbler's Pose

NOTE: You can perform the rib cage lift and press before doing the following steps.

Kneel close to the person's back in the catcher's position (or a standing squat position).

Press the heels of your hands down on their legs (close to the thigh creases) and gradually apply pressure. Your fingers should be pointing away from the groin area.

Anchor their legs down with a steady pressure as they breathe and fold forward.

Maintain the assistance for as long as you feel is appropriate.

Release your hands, stand up, and back away as they roll up to a seated position.

Yoga Prop Suggestions

Have them put pillows under both knees for support.

Have them sit on the edge of a blanket or pillow.

If they are really flexible, have them press a yoga block between their feet.

What You Might Say (to help the process)

"Fold forward from your hip crease," "Reach your navel toward the floor," "Relax your neck and shoulders," "Press your heels together."

Seated Wide Spread Fold

Assisting Steps for Seated Wide Spread Fold Pose

Note: You can perform the rib cage lift and press before doing the following steps.

Kneel close to the person's back in the standing squat position (or a catcher's position).

Press the heels of your hands down on their legs (close to the thigh creases) and gradually apply pressure. Your fingers are pointing away from their groin area.

Anchor their legs down with a steady pressure as they breathe and fold forward.

Maintain the assistance for as long as you feel is appropriate.

Release your hands, stand up, and back away as they roll up to a seated position.

Yoga Prop Suggestions

Have them put a pillow under both knees for support.

Have them sit on the edge of a blanket or pillow.

What You Might Say (to help the process)

"Fold forward from your hip crease," "Reach your navel toward the floor," "Relax your neck and shoulders," "Flex your feet and engage your thighs."

Other Hip and Leg Postures

There are so many great leg and hip postures. In this chapter I decided to focus on some of the most common hip and leg postures (in addition to the forward folding postures shown in the previous chapter).

Here are some points to remember when assisting someone in the hip and leg poses in this chapter of the book. They are quite similar to the points in the previous chapter:

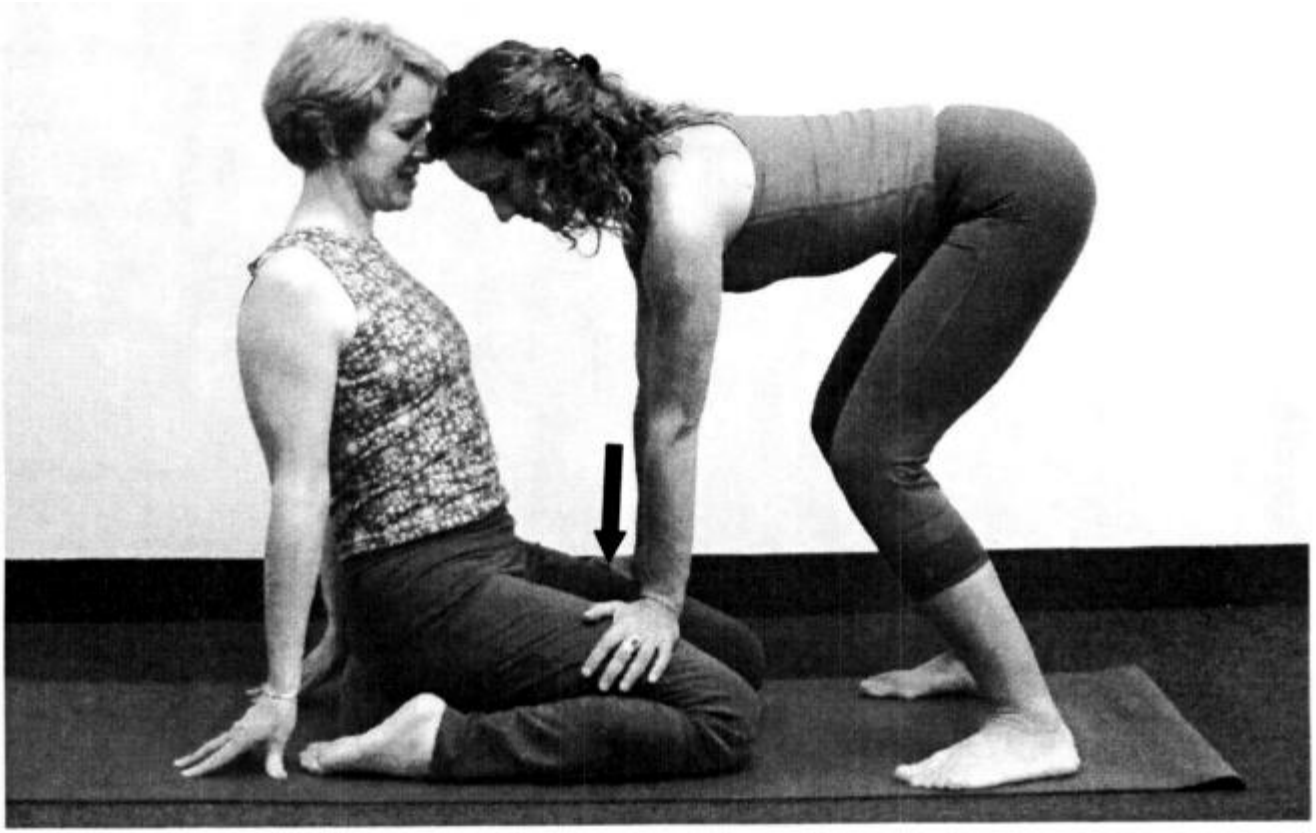
- Have the person bend their knees during a pose if they have tight hamstring muscles.
- Use yoga props to provide support and comfort to people who have tension in their lower back and hip muscles.
- Use your whole hand and not just your fingers during the posture adjustments.
- Use your body weight and gravity versus muscle strength when applying pressure.
- Find a balance between too much and too little pressure.
- Ask for specific feedback about the level of pressure they desire.
- Apply pressure gradually and in harmony with their breath.
- Deepen the pressure on their exhalation.

Note: All the postures in the following section should be performed for at least 30 seconds, but can be held for much longer depending on the needs and ability of the student.

"Learning yoga was a life changing event for me. it was a gift that I hope I can continue to share with others so they may find their own sense of peace and balance"

-Michele Rodriguez, Devalila Yoga Teacher

Hero



Assisting Steps for Hero Pose

Stand in front of the person's legs in a standing squat position.

Place your hands down on their thighs above the knee area.

Gradually press the heels of your hands down on their legs. Your fingers are pointing toward the outsides of the legs.

Slowly walk your hands up the thighs toward the thigh crease. Lean your weight into one hand and then the other, in a slow rocking motion.

Slowly walk your hands back down the thighs toward the knee area. Lean your weight into one hand and then the other, in a slow rocking motion.

Repeat the technique as many times as you feel is appropriate.

Release your hands, stand up, and back away as release the position of their legs.

Yoga Prop Suggestions

Have them sit on the edge of a blanket or pillow.

Have them kneel on a soft, flat blanket.

What You Might Say (to help the process)

"Align your heels with your big toes," "Spread your knees further apart if you have any knee pain," "Sit on a pillow if you feel any knee pain," "Sit up tall and keep your navel reaching toward your spine."

Heron

"Yoga practice increases our awareness of feelings and the whole range of human experiences. We are

nailed to the present moment and there is nowhere to hide."

-Stephanie Pappas, Devalila Yoga Teacher and Trainer

Assisting Steps for Heron Pose

Kneel close to the person's back in the marriage proposal position with the front of your thigh aligned with their spine so that you are supporting their back (as in the top photo).

You can also stand with your inner shin aligned with the spine, and use your hand to support their upper back (as in the bottom photo).

Use your other hand to hold the ankle of their outstretched leg and gradually draw it toward their torso.

Maintain the assistance for as long as you feel is appropriate.

Release your hand, stand, and back away as they release their leg to the floor.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them sit on the edge of a blanket or pillow.

What You Might Say (to help the process)

"Lengthen your spine, especially your lower back" "Relax your neck and shoulders," "Draw your leg toward you without leaning backwards."

Leg Cradle

"For me yoga is the most satisfying type of exercise imaginable."

-Amy Hentenaar, Yoga Student

Assisting Steps for Leg Cradle Pose

Kneel close to the person's back in the marriage proposal position with the front of your thigh aligned with their spine so that you are supporting their back (as in the top photo).

You can also stand with your inner shin aligned with the spine to support their upper back (as in the bottom photos).

Use your hands to pull the shin of their bent leg toward their torso.

Maintain the assistance for as long as you feel is appropriate.

Release your hands, stand up, and back away as they release the leg position.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them sit on the edge of a blanket or pillow.

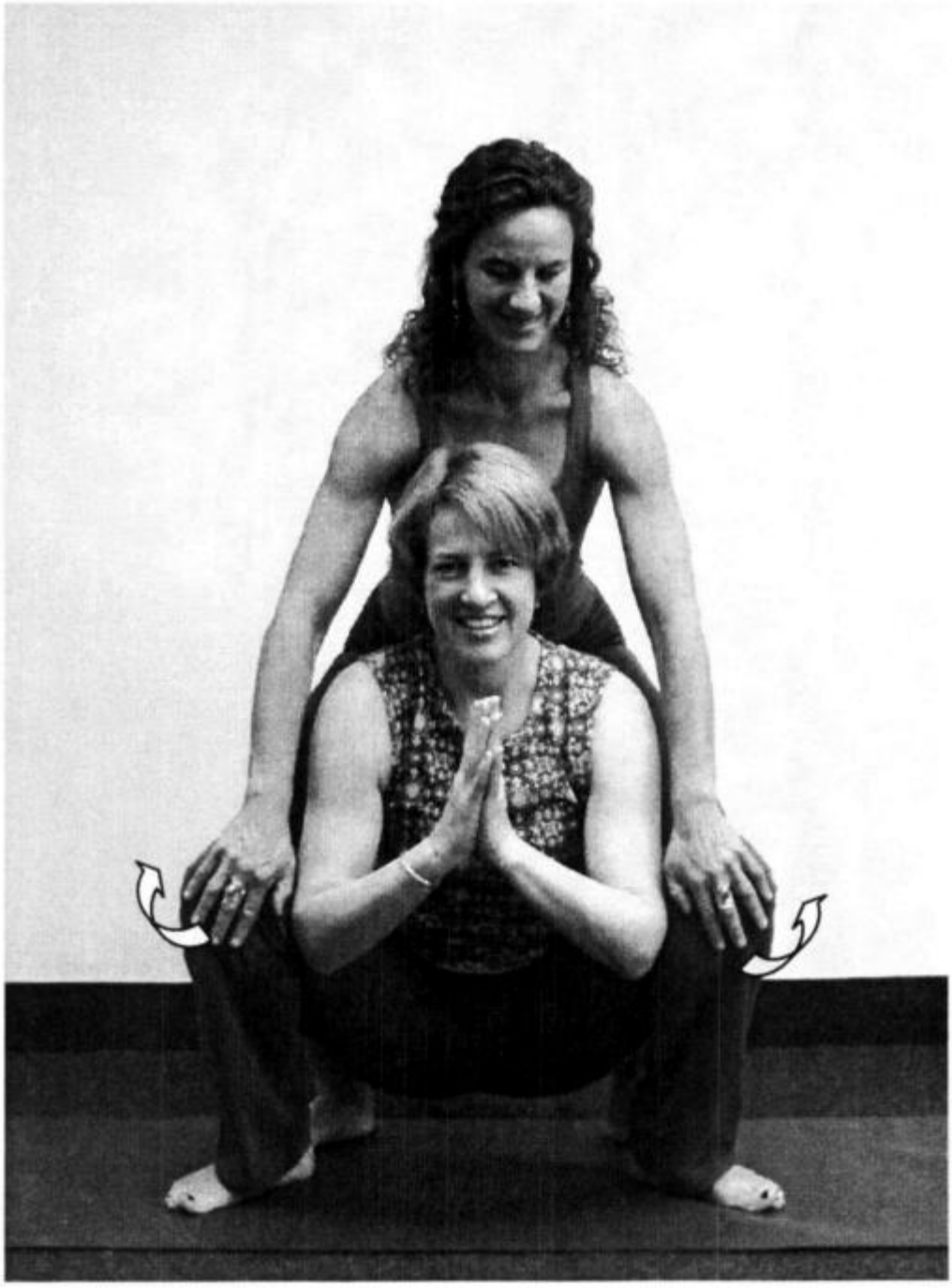
What You Might Say (to help the process)

"Lengthen your spine, especially your lower back," "Bring your shin toward your chest," "Draw your leg toward you without leaning backwards."

"To assist someone takes patience, centeredness and caring- without these qualities, it its just touching."

-Adrienne Yurinko, Devalila Yoga Teacher

Squat



"Not only does yoga offer the physical challenge of'perfecting' or refining the various movements and postures, but with the right instructor or 'facilitator' yoga provides a far more valuable mind-body-spirit connection." -Amy Hentenaar, Yoga Student

Assisting Steps for Squat Pose

Stand close to the person's back in a standing squat position.

Use your hands to slowly draw their knees backward without moving them out of alignment with their ankles.

Maintain the assistance for as long as you feel is appropriate.

Release your hands and back away as they return to a standing position.

Yoga Prop Suggestions

Have them sit on a yoga block or two.

Place a rolled up blanket, yoga mat, or yoga wedges under their heels (if their heels don't easily touch the ground).

What You Might Say (to help the process)

"Lengthen your spine, especially your upper back," "Press your elbows into your inner knees," "Drop your shoulders and open your chest area."

"it just feels right to have every bit of my body increasingly stretched in downward dog pose."

-Carrie Colc itz, Devalila Yoga Teacher

Downward Dog-Option 1 Sacrum Press

Assisting Steps for Downward Dog Pose (Sacrum Press)

Stand in front of the person in a lunge type position with your foot between their hands.

You can also stand in a standing squat position with your feet beside their hands.

Place the heels of your hands firmly down on their sacrum area with your fingers facing upward and slightly outward.

Press into your feet into the floor and lean your body weight forward without bending your arms.

Maintain a continuous, even pressure downward and slightly upward on their sacrum.

As they breathe and hold the pose, you can shift your hand position an inch or two (up, down, or laterally) and continue applying pressure.

Maintain the assistance for as long as you feel is appropriate.

Perform a different assist for downward dog pose, or release your hands and allow them to return to mountain position.

Yoga Prop Suggestions

Have them press their heels up on a wall.

Have them squeeze a yoga block between their thighs.

Have them place their hands on yoga blocks.

What You Might Say (to help the process)

"Breathe deeply into your upper chest and diaphragm," "Press down into your palms," "Look toward your navel," "Drop your shoulders away from your ears."

Downward Dog-Option 2 Leg Pull

Assisting Steps for Downward Dog Pose (Leg Pull)

Stand in a standing squat position in back of the person with your feet spread apart wider than theirs.

Wrap your hands firmly around the biggest part of their front thighs (as in the top photo), or cross one of your wrists over the other and reach through the inside of their thighs to hold onto the biggest part of their front thighs (as in the bottom photos).

Lean of all your weight backward into your hips as if you were sitting into a chair.

Keep your arms straight and allow your knees to bend more as you hold firmly onto their upper

thighs.

Maintain the assistance for as long as you feel is appropriate.

Perform a different assist for downward dog pose, or release your hands and allow them to return to mountain position.

Yoga Prop Suggestions

Have them squeeze a yoga block between their thighs.

Have them place their hands on yoga blocks.

What You Might Say (to help the process)

"Reach your hips toward the sky," "Press down into your palms," "Draw your knees caps up and firm your thighs," "Reach your heels toward the floor."

"Assisting is crucial to helping a student get the most from a pose."

-)ohn Feist, Devalila Yoga Teacher

Downward Dog-Option 3 Heel Press

"I have found that some people don't like to be corrected in a posture even if it is for their own good. They stiffen up and resist the assist." -John Feddersen, Devalila Yoga Teacher

Assisting Steps for Downward Dog Pose (Heel Press)

Stand in a deep squat position in back of the person with your feet spread apart wider than theirs.

Stretch their heels toward the floor by firmly squeezing them between your thumbs and index fingers (thumbs are on the outer heels) and pressing downward.

Keep your arms straight.

Sink your body weight downward toward the floor as you bend your knees more.

Maintain the assistance for as long as you feel is appropriate.

Perform a different assist for downward dog pose, or release your hands and allow them to return to mountain position.

Yoga Prop Suggestions

Have them squeeze a yoga block between their thighs.

Have them place their hands on yoga blocks.

What You Might Say (to help the process)

"Reach your hips toward the sky," "Press down into your palms," "Draw your knees caps up and firm your thighs," "Reach your heels toward the floor."

"A class is not supposed to be the same as a personal practice. Class is time for students to learn new poses and find ways to get deeper into poses than they may already be practicing."

-)ohn Feist, Devalila Yoga Teacher

Pigeon Preparation-Option s Sacrum Press

"I've lost my mind... thanks to yoga."

-John Feddersen, Devalila YogaTeacher

Assisting Steps for Pigeon Preparation Pose (Sacrum Press)

Straddle their back leg in a standing squat position with your feet about hip width apart.

Place your hands firmly on their sacrum area with your fingers facing out to the sides. Your wrists are centered in the middle of their sacrum.

Keep your arms straight and gently press down onto their sacrum using your body weight. This is a deep pose, so you may not need to apply too much pressure.

Maintain equal pressure on their inhalation and exhalation.

Maintain the assistance for as long as you feel is appropriate.

Release your hands and back away as they return to a seated position.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them rest their head on a pillow or block.

Have them put a pillow or blanket under the hip of their bent leg.

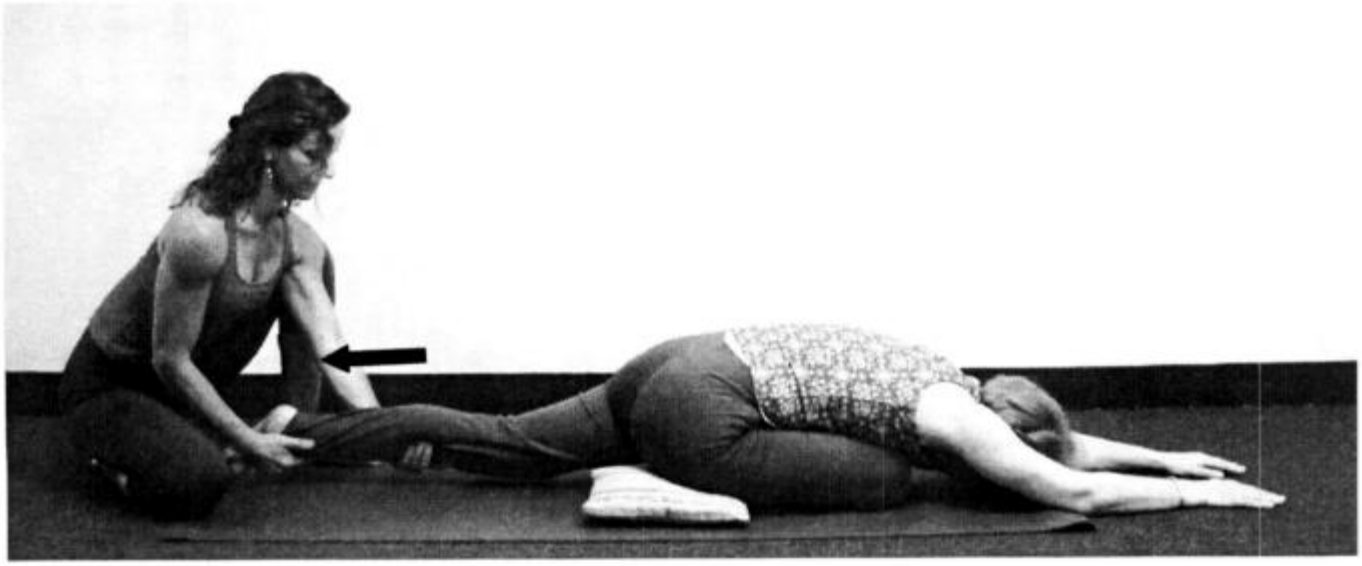
What You Might Say (to help the process)

"Breathe deeply into your hips and lower back," "Keep your hips squared," "Soften your shoulders."

"Life is not a fixed point, but a never ending flow of creation. Pare to open yourself to the power within and create the life you were meant to have."

-Elizabeth Gill, Devalila Yoga Teacher

Pigeon Preparation-Option 2 Leg Pull



"Yoga allows you to turn off the noise and really hear the truth."

-Lyn Vencus, Yoga 5tu4ent

Assisting Steps for Pigeon Preparation Pose (Leg Pull)

Kneel in the catcher's position close to their back foot.

Place one of your hands under their ankle and the other under the upper shin.

Lift their leg slightly and pull it toward you with a moderate force.

Maintain the assistance for as long as you feel is appropriate.

Release your hands, stand up, and back away as they return to a seated position.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them rest their head on a pillow or block.

Have them put a pillow or blanket under the hip of their bent leg.

What You Might Say (to help the process)

"Let your hips melt toward the floor," "Keep your hips squared," "Relax your shoulders."

Pigeon Preparation--Option 3

Diagonal Press

Assisting Steps for Pigeon Preparation Pose (Diagonal Press)

Stand with bent knees close to one side of the person's torso with your feet about hip width apart.

Place one of your hands on one side of their sacrum/upper buttocks and the other hand on the "mound" near their lower scapula blade. Your fingers are facing away from their spine.

While keeping your arms straight, gradually apply pressure onto their sacrum and shoulder using your body weight.

As you press down, aim your hands away from each other to give a diagonal stretch across their back. This is a deep pose, so you may not need to apply much pressure.

Change your hand position to the other shoulder and the other hip, and apply the same type of pressure described above.

Maintain the assistance for as long as you feel is appropriate. Lighten the pressure on their inhalation without losing contact with their body.

Release your hands and back away as they return to a seated position.

Have them switch legs and perform the assist on the other side.

Yoga Prop Suggestions

Have them put a pillow or blanket under the hip of the bent leg.

What You Might Say (to help the process)

"Breathe deeply into hips and lower back," "Keep your hips squared," "Relax your shoulders."

"There is nothing worse than a half-hearted assist. Don't rush. Take an extra breath and use conscious positioning to create a synergetic affect between you and the other person."

-John Fed4ersen, Devalila Yoga Teacher

Reclining Knee to Chest

"Assists are just as organic and innate as the postures themselves and have to be nurtured and explored just the same." -Kelly Smith, Yoga Teacher, Pilates Teacher

Assisting Steps for Reclining Knee to Chest Pose

Straddle the person's outstretched leg in a standing squat position.

Step forward into a lunge position with your front leg near their bent leg.

Place one of your hands on the knee or shin of their bent leg (your fingers facing their face), and your other hand on the largest part of the thigh of their lower leg (your fingers facing their foot).

On their exhalation gradually apply equal pressure on both their legs, but in the opposite direction.

Maintain the assistance for as long as you feel is appropriate. Lighten the pressure on their inhalation.

Release your hands, stand up, and back away as they release their bent leg.

Perform the assist on the other side.

Yoga Prop Suggestions

None

What You Might Say (to help the process)

"Draw your hip toward your chest," "Keep your neck and shoulders relaxed," "Reach your outstretched leg toward the floor."

Reclining Both Knees to Chest

"True peace is the knowledge that regardless of life's circumstances, all is eternally well."

-Elizabeth Gill, Devalila Yoga Teacher

Assisting Steps for Reclining Both Knees to Chest Pose

Straddle the person's hips in a standing squat position.

Place your hands below their knees or on their shins (your fingers facing their face).

For a deeper stretch, you can separate their legs and press your knees into their hamstrings just above their sit bones (as in the bottom photo). Use the balls of your feet for balance in this

variation.

On their exhalation, gradually apply pressure on both their knees using your body weight.

Maintain the assistance for as long as you feel is appropriate.

Release your hands, stand up, and back away as they return to a seated position.

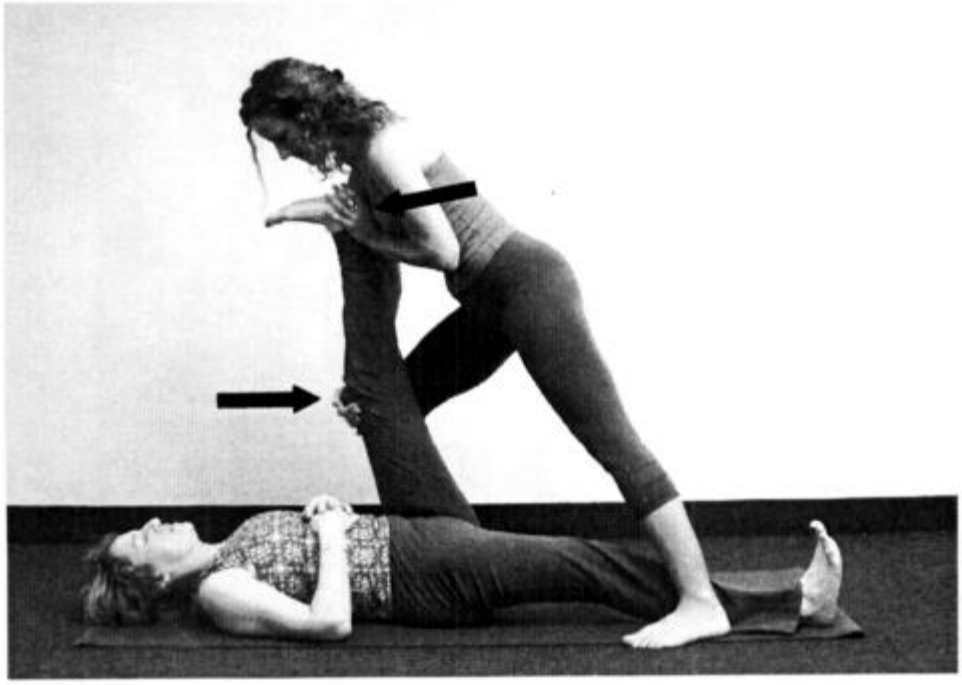
Yoga Prop Suggestions

None

What You Might Say (to help the process)

"Press your tail bone toward the floor," "Keep your neck and shoulders relaxed," "Draw your navel toward the floor on your exhalation."

Reclining Straight Leg Stretch



Assisting Steps for Reclining Straight Leg Stretch Pose

Straddle the person's extended leg in a standing squat position.

Step forward into a lunge position with your front leg near their raised leg.

Place one of your hands on the knee of their raised leg and the other hand on their heel/ankle.

On their exhalation, slowly press their heel toward their head and keep their knee straight with your other hand (as in the top photo).

For a deeper stretch, you can have them reach up and pull on their leg as you simultaneously

press the lower thigh toward the floor (as in the bottom photo).

Maintain the assistance for as long as you feel is appropriate.

Release your hands, stand up, and back away as they release their leg back to the floor.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them wrap a yoga tie around the foot of their raised leg and draw it toward their torso.

What You Might Say (to help the process)

"Breathe deeply into hips and lower back," "Keep your neck and shoulders relaxed," "Reach your outstretched leg toward the floor."

Arm and Abdominal Strength

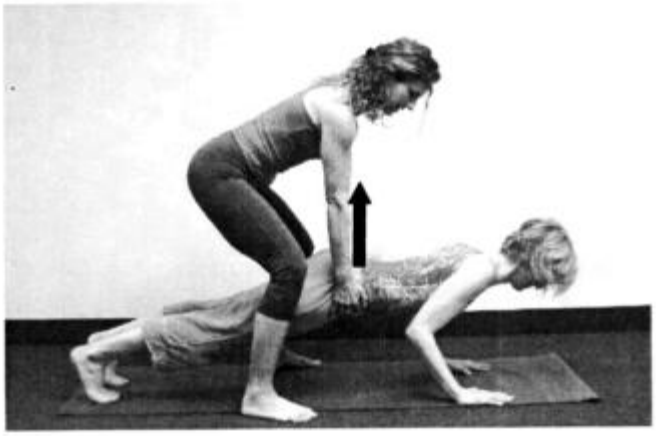
Postures

The arm and abdominal strength poses are generally held for a shorter length of time. In some of these poses, the person is required to balance with limited contact with the floor, so assisting them can lessen feelings of doubt and instability that may arise. Since our arms are obviously occupied in these postures, it helps to have another set of arms to provide support! In this chapter I selected poses that demand even more arm and abdominal strength than other yoga poses. Here are some points to remember when assisting someone in the arm and abdominal strength poses:

- Check for alignment between their wrist, elbow, and shoulder when their arms are in a straight position.
- Don't lift them up so much that they are hardly working in the pose, or that they fall over.
- Don't lift them so much that you create a strain or misalignment in their lower back.
- Have them use yoga blocks under their hands.
- Ensure that their entire hand is in contact with the ground (there are exceptions when yoga blocks are used).

Note: All the postures in thefollowing section should be performed for at least 20-30 seconds, but can be held for a bit longer depending on the needs of the student.

High Plank to Low Plank



"Your external life is an exact reflection of your internal circumstances. If you want to see a change in your world, be the change." -Elizabeth Gill, Devalila Yoga Teacher

Assisting Steps for High Plank to Low Plank Pose

Straddle the person's upper legs in a standing squat position.

Use your hands to lift or lower their hips so that they are aligned with their shoulders and torso. Their lower back should be in a neutral position.

As they lower into low plank pose (as in the bottom photos) bend your knees and continue supporting their hips with your hands.

Visually, check to see that their elbows are near their rib cage, and that their upper arms are parallel to the floor (as in the bottom photo). If you see a misalignment, verbally instruct them to adjust their body while you are supporting their hips.

When they are established in low plank pose, release your hands and let them balance in the pose.

Stand up and back away as they lower to the floor.

Yoga Prop Suggestions

Have them place their hands on yoga blocks for extra lift.

What You Might Say (to help the process)

"Firm your buttocks and abdominal muscles as you lower to the floor," "Keep your neck long," "Hug your arms toward your rib cage," "Reach through your heels."

Side Plank

Assisting Steps in Side Plank Pose

Stand behind the person's torso and hips in a standing squat position (as in the bottom photos), or kneel in the catcher's position (as in the top photo).

Place one of your palms under their thigh area and the other under the rib cage area.

Use your hands to lift (or lower) their hips so that they are aligned with their shoulders and torso. Their lower back should be in a neutral position.

Visually, check their shoulder, elbow, and wrist alignment. If you see a misalignment, verbally instruct them to release the pose and adjust their arm position.

Maintain the assistance for as long as you feel is appropriate.

When they are established in side plank pose, release your hands and let them balance on their own.

Stand up and back away as they lower to the floor.

Yoga Prop Suggestions

Have them place their bottom hand on a yoga block for extra lift.

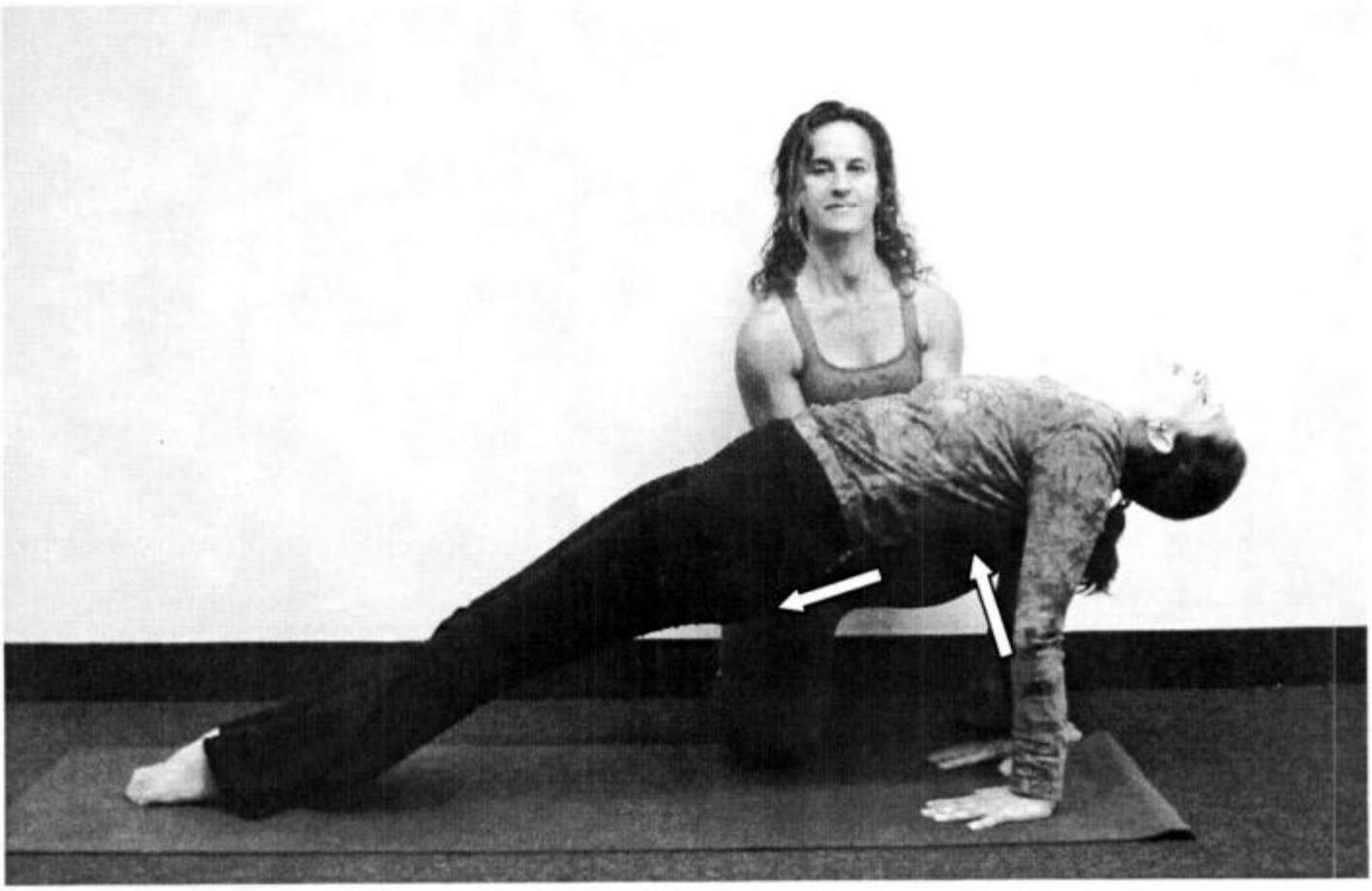
What You Might Say (to help the process)

"Squeeze your legs together," "Tuck your tailbone," "Lift your waist away from the floor," "Open your chest."

"My yoga practice has benefited every aspect of my life. By opening up and focusing on my breathing I become centered, let go of "stuff", and flow with the beauty of the moment."

-Lyn Vencus, Yoga Student

Upward Plank-Option 1 Support from Underneath



Assisting Steps for Upward Plank Pose (Support,from Underneath)

Kneel next to the person's torso and hips in the catcher's position.

Put one of your palms under their back between the scapula blades, and the other under the sacrum area.

Use your hands to lift their back and hips into the pose.

Tuck the pelvis slightly downward toward the tailbone as you lift upward.

Visually, check their shoulder, elbow, and wrist alignment. If you see a misalignment, verbally instruct them to release the pose and adjust their arm position.

Maintain the assistance for as long as you feel is appropriate.

When they are established in upward plank pose, release your hands and let them balance on their own.

Stand up and back away as they lower to the floor.

Yoga Prop Suggestions

Have them place their hands on yoga blocks.

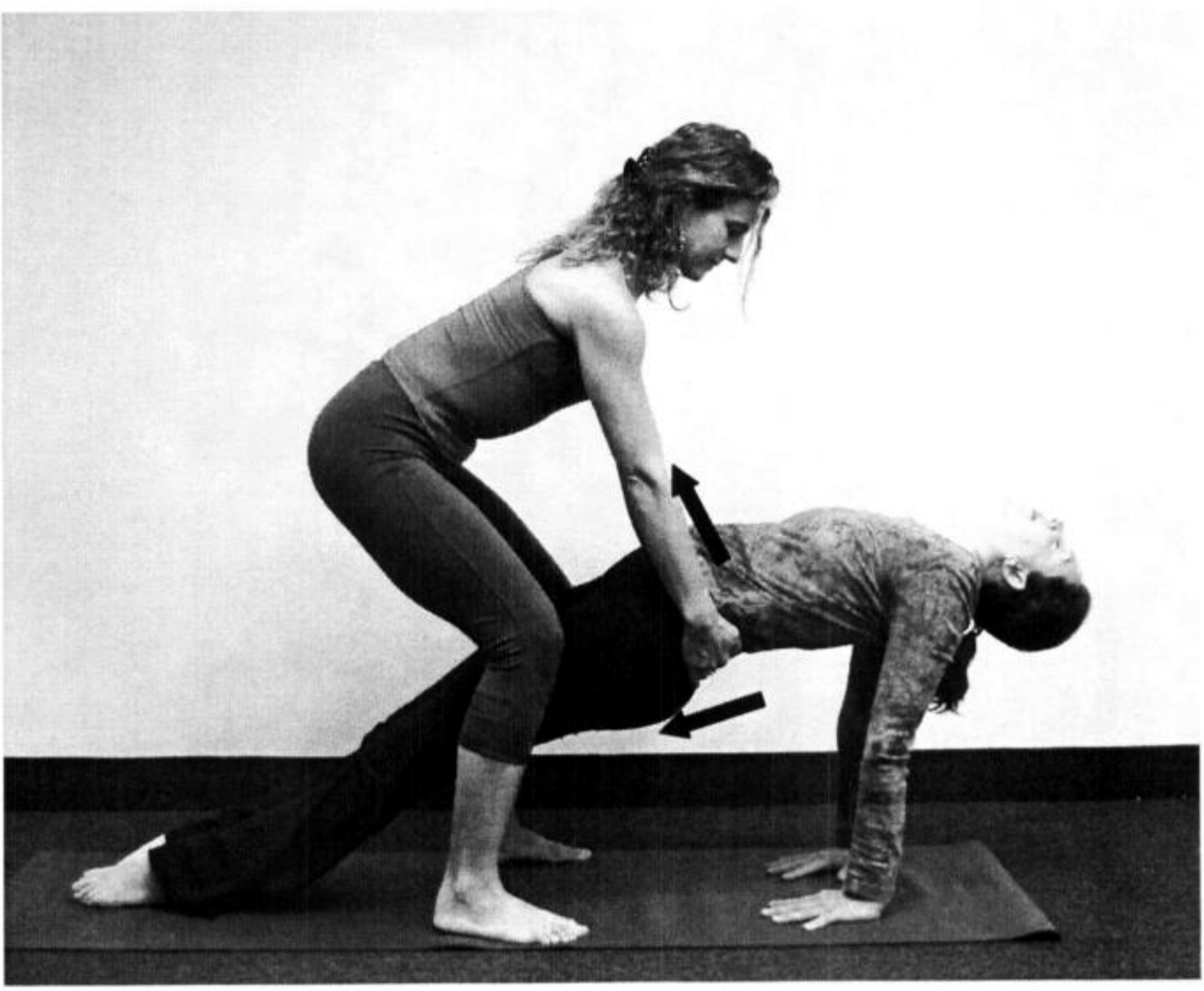
What You Might Say (to help the process)

"Squeeze your inner legs and feet together," "Tuck your tailbone and firm your buttocks," "Actively point your toes toward the floor," "Breathe deeply into your chest."

"Good yoga teachers are guides to a deeper experience that can be tapped into long afteir you leave the studio."

-Lyn Vencus, Yoga Student

Upward Plank-Option 2 Lift from Above



Assisting Steps for Upward Plank Pose (Liftfrom Above)

Straddle the person's upper legs in a standing squat position.

Use your hands to lift their hips so that they are aligned with their shoulders and torso.

Tuck the pelvis under as you lift the hips.

Visually, check their shoulder, elbow, and wrist alignment. If you see a misalignment, verbally instruct them to release the pose and adjust their arm position.

Maintain the assistance for as long as you feel is appropriate.

When they are established in upward plank pose, release your hands and let them balance on their own.

Stand up and back away as they lower to the floor.

Yoga Prop Suggestions

Have them place their hands on yoga blocks for extra lift.

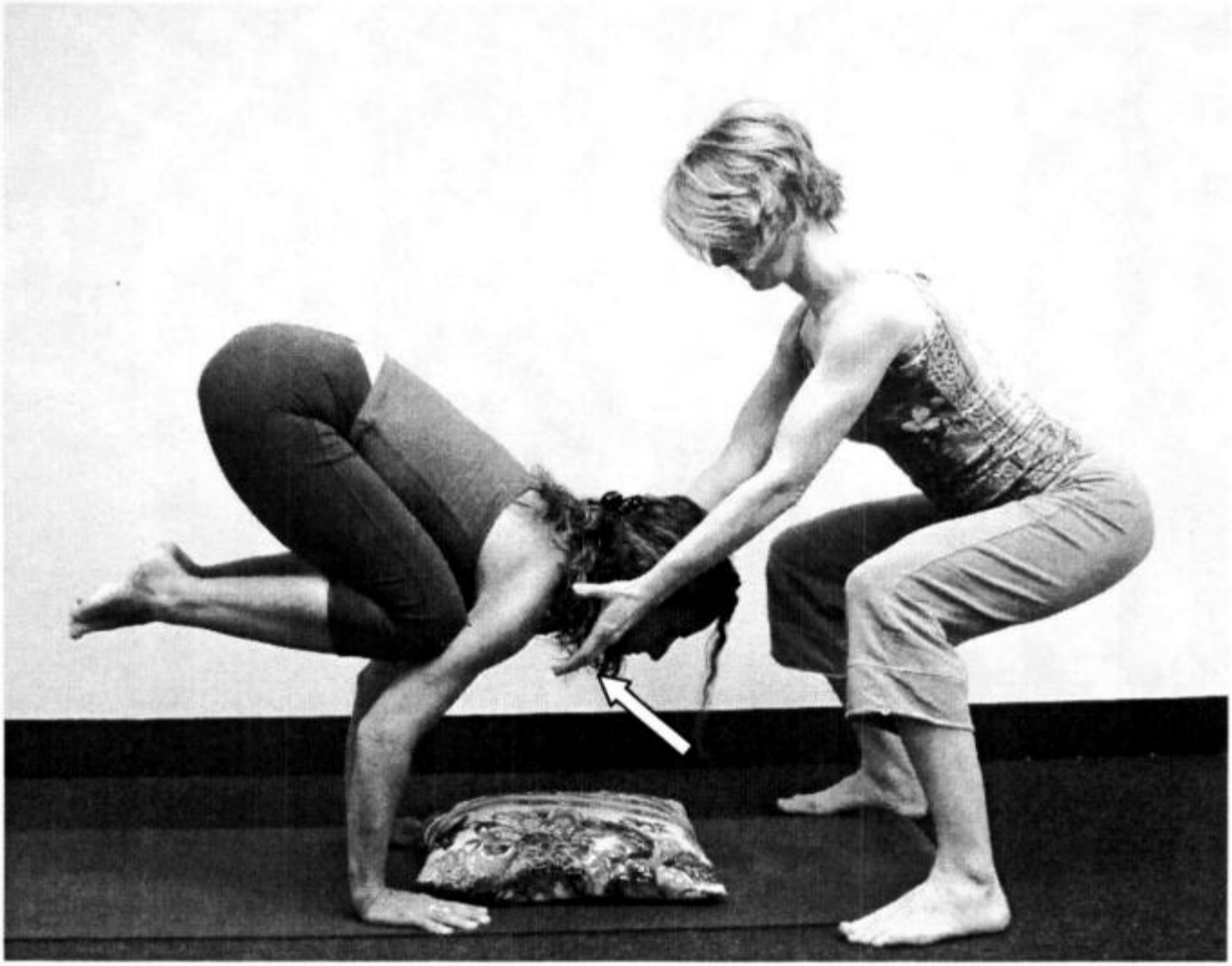
What You Might Say (to help the process)

"Firm your buttocks and tuck your tailbone," "Open your chest toward the sky" "Engage your legs."

"I love being assisted in the postures and receiving persona(attention. Yet sometimes in anticipation of the teacher's attention, I lose my concentration and fail to surrender to, or cooperate with, the instructor's assistance."

-John Feccjersen, Yoga Teacher

Crow



Assisting Steps for Crow Pose

Stand in front of the person's shoulders in a deep standing squat position.

Place your hands just under their shoulders or collar bone without touching them.

As they lean forward into crow pose, be ready to catch them with your hands if they fall.

Visually, make sure that their hands are positioned under their shoulders and that they are gazing forward.

When they are established in crow pose, move your hands and let them balance on their own.

Stand up and back away as they lower their feet to the floor.

Yoga Prop Suggestions

Place a pillow under their face to soften a possible fall forward.

Have them place their hands on yoga blocks for extra lift.

What You Might Say (to help the process)

"Really engage your abdominal muscles," "Keep your gaze forward," "Draw your feet toward your buttocks," "Let your body weight come forward as you lift your feet."

Side Crow

"The challenging postures remind us to have fun, stay focused, and let go of attachment to the results of

our efforts." -Stephanie Pappas, Devalila Yoga Teacher and Trainer

Assisting Steps for Side Crow Pose

Kneel in back of the person's legs in a catcher's position.

As their legs lift into side crow pose (as in the top photo), place your hands under or around their ankles and give them a slight lift.

If their legs are extending into full side crow pose (as in bottom photo), place your hands under knee and shin area and give them a slight lift.

Don't lift their legs too much or they may fall forward.

When they are established in side crow pose, release your hands and let them balance on their own.

Stand up and back away as they lower their feet to the floor.

Yoga Prop Suggestions

Place a pillow under their face to soften a possible fall forward.

Have them place their hands on yoga blocks for extra lift.

What You Might Say (to help the process)

"Really engage your abdominal muscles," "Keep your gaze forward," "Squeeze your legs together," "Let your chest lean forward as you lift your feet."

Boat

"Now matter how I am feeling before class starts I feel better after."

-Donna E. Poler, Devalila Yoga Student

Assisting Steps for Boat Pose

Kneel to the side of the person's body in a catcher's position.

As their legs and torso lift into boat pose, place one of your hands under their calves and the other under their upper back.

Apply a gradual and equal lift to both the legs and back as if you were closing a book. Too much

lift may tip them over in one direction or the other.

Maintain the assistance for as long as you feel is appropriate.

When they are established in boat pose, release your hands and let them balance on their own.

Stand up and back away as they lower their feet to the floor.

Yoga Prop Suggestions

Have them sit on a flat blanket as a cushion for their hips.

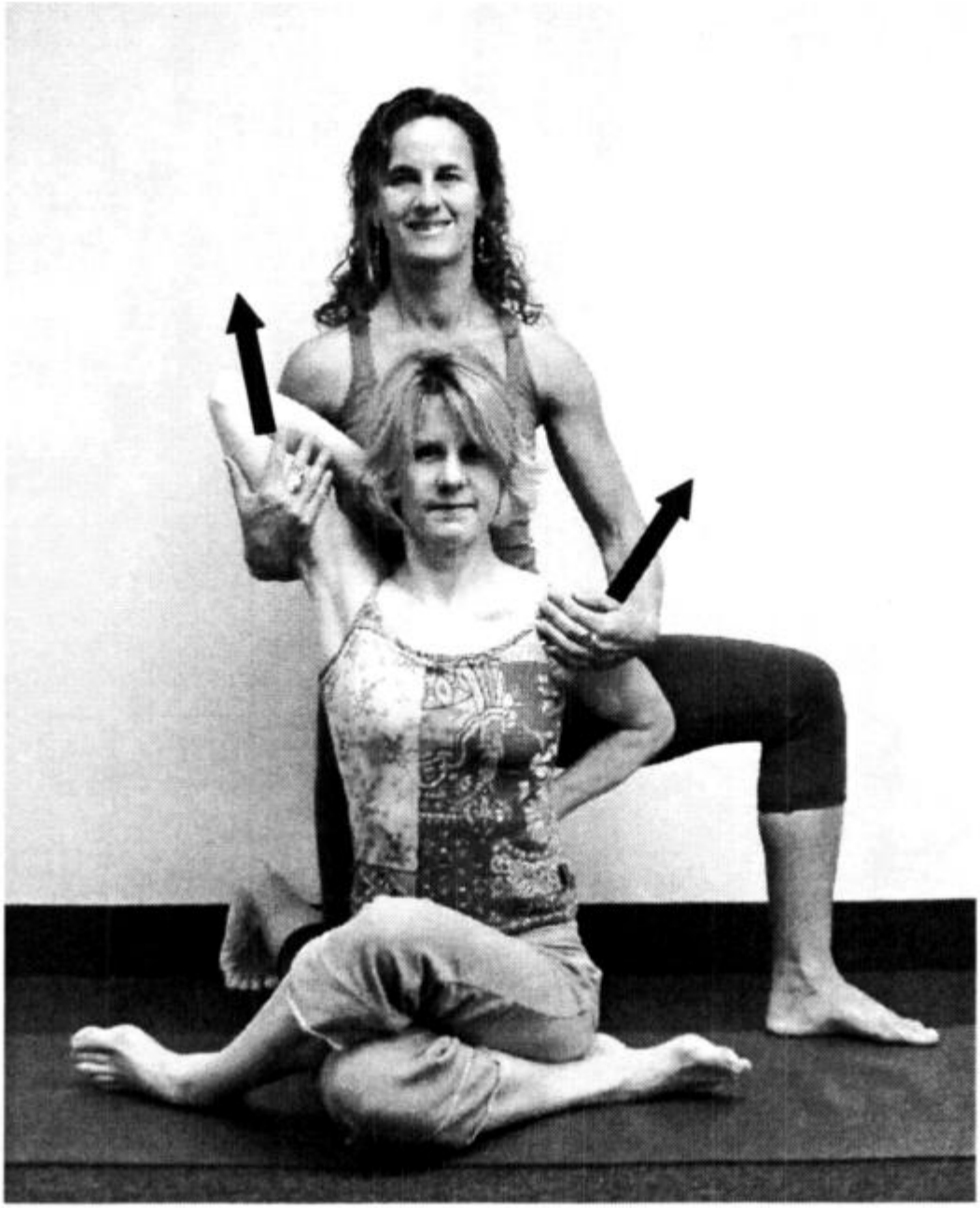
What You Might Say (to help the process)

"Bring your navel toward your spine," "Gaze toward your feet," "Squeeze your thighs together," "Lift your chest."

"Yoga shows me how to be stronger (emotionally or physically). I am grateful for whet I have in my life."

-Tea Rod key, Yoga Student

Cow Face Arm Stretch



Assisting Steps for Cow Face Arm Stretch Pose

Kneel close to the person's back in the marriage proposal position with the front of your thigh aligned with their spine and to support their back.

Use one of your hands to hold the underside of their top arm and gradually draw it toward you.

Use your other hand to cup the deltoid of the bottom arm and gradually draw it toward you.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Release your hands and allow them to switch sides.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them sit on the edge of a blanket or pillow.

What You Might Say (to help the process)

"Lengthen your spine, especially your low back," "Expand your chest," "Drop your shoulders away from your ears."

Twisting (Revolving) Postures

The revolving asanas are challenging and invigorating. They demand flexibility, balance and strength. Twists are my favorite postures to assist and be assisted in. Here are some points to remember when assisting someone in the twisting poses in this section of the book:

- Anchor the base of the pose (usually their legs) before deeply twisting their torso.
- Have them use yoga blocks to help balance in certain standing twists.
- Use your whole hand and not just fingers when you twist them.
- Apply pressure in the same direction that the twist is moving.
- Remember to apply deeper pressure on their exhalation, and lighten the pressure on their inhalation.

Note: All the postures in the following section should be performed for at least 30 seconds, but can be held for much longer depending on the needs of the student.

Seated Twist (Beginner Version)

Assisting Steps for Seated Twist Pose (Beginner Version)

Stand behind their back in a short standing lunge position (as in the middle photo) with your inner shin next to their spine.

You can also kneel facing their back in a catcher's position (as in the bottom photo).

Place one of your hands on the mound near their scapula blade. Press the shoulder in a forward direction (as in the top photo).

Simultaneously, cup your other hand around their front shoulder (deltoid area). Pull this shoulder toward you.

Twist their shoulders more on their exhalation and lighten the pressure on their inhalation. Keep your hands in contact with their body.

Release your hands and let them twist on their own before they return to a neutral seated position

Perform the assist on the other side.

Yoga Prop Suggestions

Have them sit on the edge of a blanket or pillow.

What You Might Say (to help the process)

"Twist deeper on your exhalation," "Get taller on your inhalation," "Lift up your lower back," "Keep your neck in alignment with the rest of your spine."

"There is yoga on the mat and off the mat. The real awakening happens when they become one." -Heidi Prewett, Devalila Yoga Teacher

Seated Twist (Advanced Version)

Assisting Steps for Seated Twist Pose (Advanced Version)

Sit behind their back with your legs spread wide.

Place one of your legs through the space made by their bent leg and press it down their thigh. Extend your other leg out near their low back.

Cup one of your hands around their shoulder that is leading the turn. Draw this shoulder toward you.

Simultaneously hug their other arm (the one that's holding their knee). Draw their arm and knee toward you.

Hug their whole upper body toward you. Twist their shoulders more on their exhalation.

Maintain the assistance for as long as you feel is appropriate.

Release your hands, slide your leg out of the hole, and let them twist on their own before returning to a neutral seated position.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them sit on the edge of a folded blanket or pillow.

What You Might Say (to help the process)

"Twist deeply from your navel up to your neck," "Keep your sit bones on the floor," "Open your chest more as you twist."

Chair Twist

"If you want to learn yoga, teach it!"

-Heidi Preweft, Devalila Yoga Teacher

Assisting Steps for Chair Twist Pose

Stand in a lunge position with your front leg touching their outer hips (on the opposite from which they are facing).

Place one of your hands on the mound near the lower part of their scapula blade. Press this shoulder in a downward direction.

Simultaneously place your other hand (fingers facing away from their navel) on their rib cage (the ribs that are facing the sky). Press the rib cage in the same direction as your other hand.

Twist their torso deeper on the exhalation as you stabilize your own legs.

Maintain the assistance for as long as you feel is appropriate.

Release your hands and then slowly back away as they return to mountain pose.

Perform the assist on the other side.

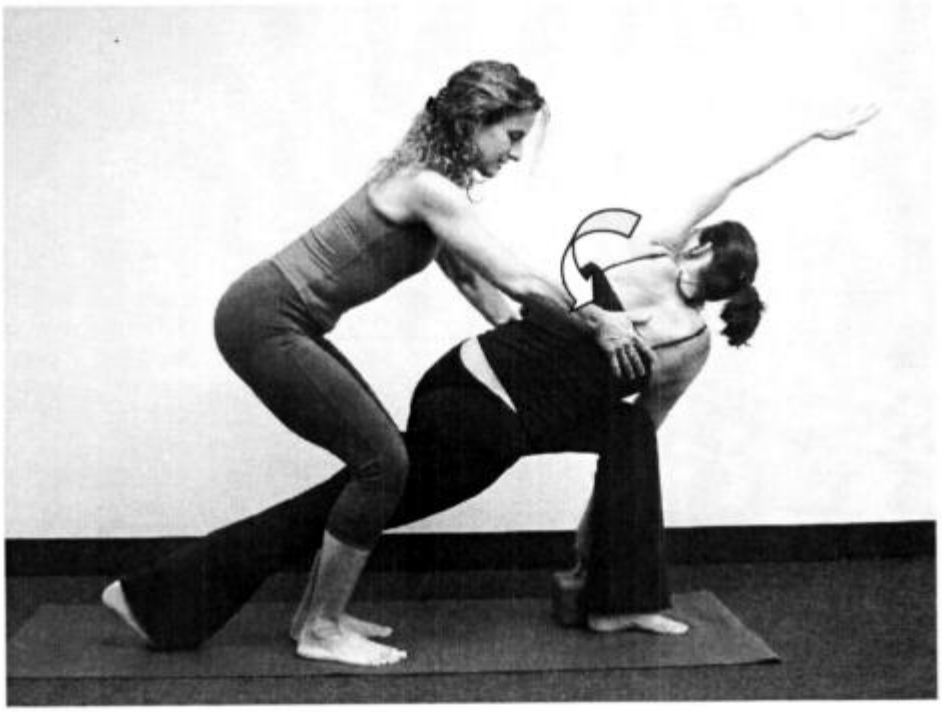
Yoga Prop Suggestions

None

What You Might Say (to help the process)

"Keep your knees together," "Twist deeper on your exhalation," "Open your chest toward the ceiling," "Press your bottom elbow into your outer thigh."

Revolving Extended Angle Pose



Assisting Steps for Revolving Extended Angle Pose

Straddle their back leg and bend your knees into the skier's squeeze position. Firmly squeeze their back leg with your legs.

Place one of your hands on the mound near the lower part of their scapula blade. Press this shoulder in a downward direction.

Simultaneously place your other hand (fingers facing away from their navel) on their rib cage (the ribs that are facing the sky). Press the rib cage in the same direction as your other hand.

Twist their torso on the exhalation as you reestablish your grip on their back leg.

Maintain the assistance for as long as you feel is appropriate.

Release your hands then slowly back away as they return to mountain pose.

Perform the assist on the other side.

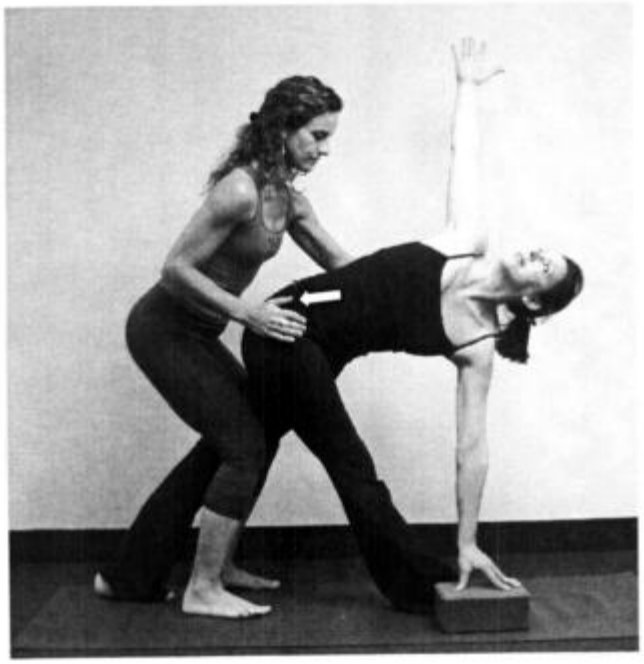
Yoga Prop Suggestions

Have them put their lower hand on a yoga block for support (placed near the inside or outside of their front shin).

What You Might Say (to help the process)

"Press firmly into both feet," "Lift your back knee toward the sky," "Open your chest and armpit toward the ceiling," "Press your bottom arm against your outer knee for leverage in the twist."

Revolving Triangle



Assisting Steps for Revolving Triangle Pose

Straddle their back leg and bend your knees into the skier's squeeze position. Firmly squeeze their back leg with your legs.

Place one of your hands on the mound near the lower part of their scapula blade. Press this shoulder in a downward direction.

Simultaneously place your other hand (fingers facing away from their navel) on their rib cage (the ribs that are facing the sky). Press the rib cage in the same direction as your other hand.

You can use your hand (that is on the rib cage) to pull the hip of the front leg toward you. This

action helps to square the hips (as in the bottom photo).

Twist their torso on the exhalation as you reestablish your grip on their back leg.

Maintain the assistance for as long as you feel is appropriate.

Release your hands then slowly back away as they return to mountain pose.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them put their lower hand on a yoga block for support (placed near the inside or outside of their front foot).

What You Might Say (to help the process)

"Press firmly into both feet," "Square your hips," "Open your chest and armpit toward the ceiling," "Keep your neck in alignment with the rest of your spine."

"Yoga is total transformation of mind and body; it connects you to the core of your heart and self-being."
-Chanchal Arora, Pevalila Yoga Teacher

Revolving Half Moon Two

Assisting Steps for Revolving Half Moon Two Pose

Stand behind the person with your belly or lightly touching their upper back. Make sure your stance is wide and very stable.

Use one of your hands (the one nearest their leg) to lift the thigh that is in the air.

Use your other hand (the one nearest their upper body) to cradle and lift the shoulder of the arm that is in the air.

Simultaneously draw their shoulder toward your body and lift their leg toward a horizontal position in the air.

Allow them lean their weight against you as if you were a wall.

Maintain the assistance for as long as you feel is appropriate.

Slowly release your hands, but remain standing there until they can balance on their own. Back away as they return to mountain pose.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them place their lower hand on one or two yoga blocks.

Have them practice this pose against a wall.

What You Might Say (to help the process)

"Keep your hips square," "Energize your leg in the air," "Open your chest and armpit toward the sky," "If you feel off balance, look down."

"Your students learn and appreciate more than you know."

-Carrie Colditz, Devalila Yoga Teacher

Revolving Head to Knee Fold

Assisting Steps for Revolving Head to Knee Fold Pose

Kneel close to the person's back in the catcher's position with your upper shin on top of their bent leg (to anchor it down).

Place one of your hands on the mound near the lower part of their scapula blade. Press this shoulder in a downward direction.

Simultaneously place your other hand (fingers facing away from their navel) on their rib cage (the ribs that are facing the sky). Press the rib cage in the same direction as the other hand.

Apply a deeper pressure on their exhalation, and lighten the pressure on their inhalation (without losing contact).

Maintain the assistance for as long as you feel is appropriate.

Release your hands, stand up, and back away as they return to a seated position.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them put pillows under their knees for support.

Have them press their outstretched foot into a wall for a deeper leg stretch.

What You Might Say (to help the process)

"Open your upper armpit toward the sky," "Reach your arm toward your outstretched leg," "Relax your head backward and look up."

Reclining Twist-Option 1 Diagonal Press

Assisting Steps for Reclining Twist Pose (Diagonal Press)

Kneel close to the person's upper hip in the catcher's position (as in the top photo), or stand in a standing squat position (as in the bottom photos).

Place one of your hands on their front shoulder area (deltoid). Press this shoulder down toward the floor.

Simultaneously place your other hand (fingers facing away from their navel) on the side of their thigh, towards the middle. Press their leg(s) down toward the floor in the opposite direction from the shoulder.

Apply deeper pressure on their exhalation, and lighten the pressure on their inhalation (without losing contact).

Maintain the assistance for as long as you feel is appropriate.

Release your hands, stand up, and back away as they switch sides.

Perform the assist on the other side.

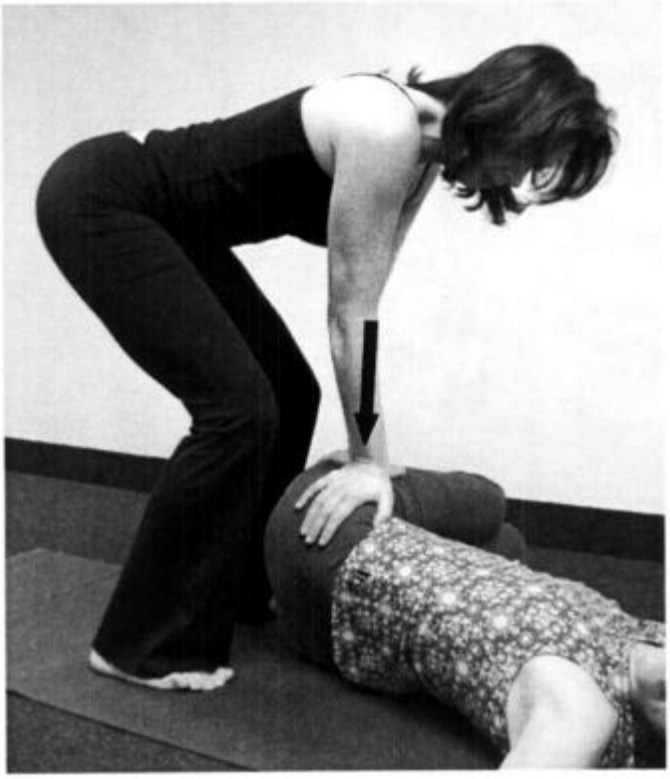
Yoga Prop Suggestions

Have them put a pillow under their bent knee(s) for support.

What You Might Say (to help the process)

"Relax your shoulders and back toward the floor," "Turn your head opposite direction from your knees," "Bring your knee closer to your ribs for a deeper stretch."

Reclining Twist-Option 2 Hip Pressure



"Getting out of the postures is as important as getting in."

-Chanchal Arora, Devalila Yoga Teacher

Assisting Steps for Reclining Twist Pose (Hip Pressure)

Stand in a standing squat position next to the person's hips.

Place both of your hands on their hip bone area with your fingers facing away from each other.

Apply pressure directly downward on their hips.

Bend your knees and sink your weight sink down toward the ground. Keep your arms straight.

Maintain the assistance for as long as you feel is appropriate.

Release your hands, stand up, and back away as they switch sides.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them put a pillow under their bent knee(s) for support.

What You Might Say (to help the process)

"Relax your shoulders and back toward the floor," "Bring your knee(s) closer to your ribs for a deeper stretch."

"When you first learn yoga you may think you know something-then you realize the practice is deeper and more mysterious than you thought. It just keeps changing!"

-Stephanie Pappas, Devalila Yoga Teacher and Trainer

Reclining Twist-Option 3 Arm Pull

Assisting Steps for Reclining Twist Pose (Arm Pull)

Stand in a standing squat position next to the person's hips. Put your leg (the one closest to their knee) into the crease of their bent knee and move it toward their torso.

Reach down and take hold of the wrist of their arm nearest to the bent knee.

Lift their arm and shoulder straight up until their shoulder comes off the floor (this action aligns their hips with their shoulders).

Place their arm back to the floor.

Now perform the reclining twist diagonal press.

Maintain the assistance for as long as you feel is appropriate.

Release your hands, stand up, and back away as they switch sides.

Perform the assist on the other side.

Yoga Prop Suggestions

Have them put a pillow under their bent knee for support.

What You Might Say (to help the process)

"Relax your shoulders and back toward the floor," "Breathe deeply into your lower back," "Soften your rib cage."

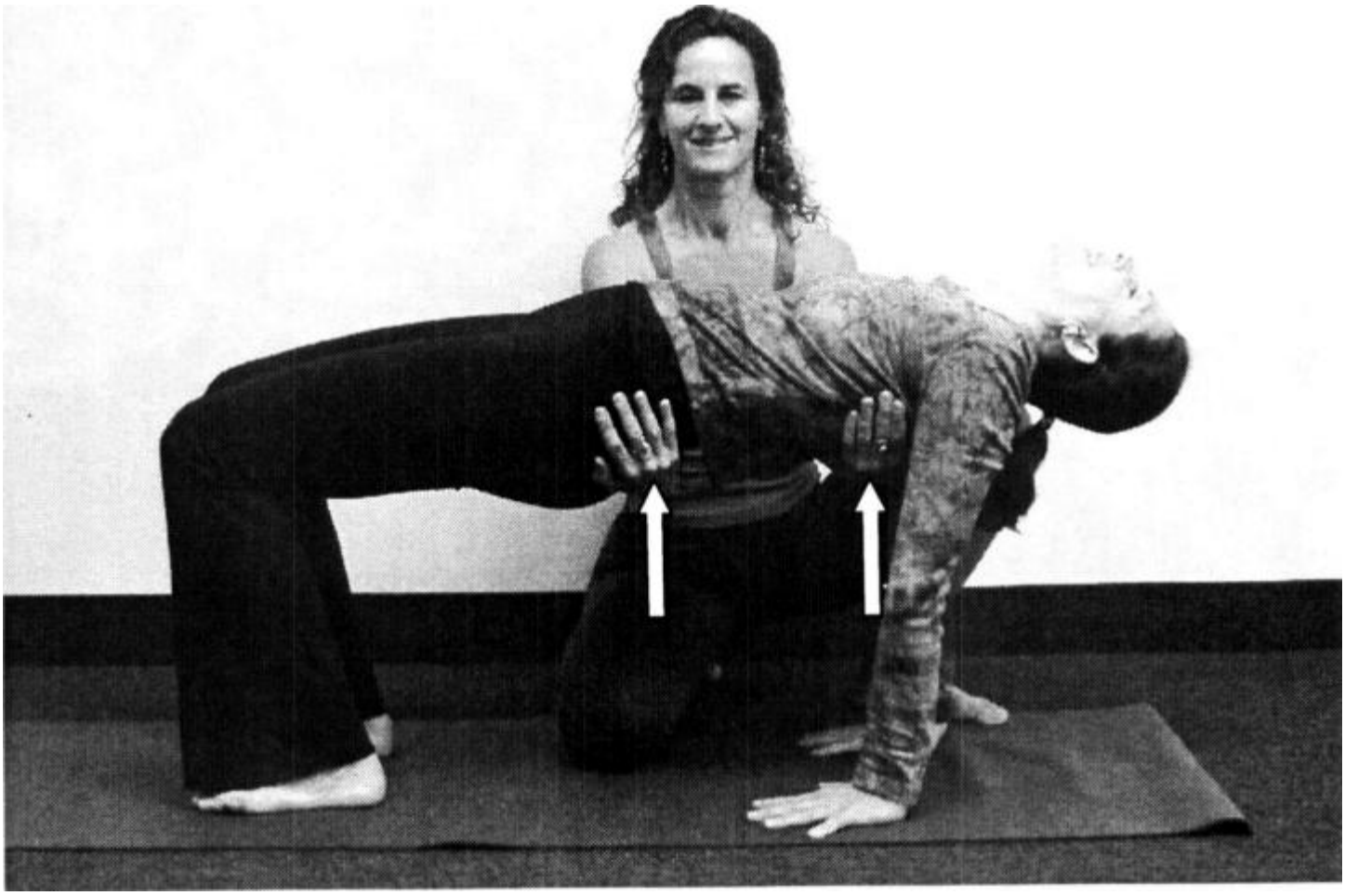
When you help someone with back bending postures that lift up, you lessen the burden of gravity on their body, and allow them to feel light, open and lengthened in their spine. Here are some points to remember when assisting someone in the supine back bending postures:

- Tuck their pelvis under when you are lifting them so that they don't over arch their low back.
- Remind the student to keep their legs and buttocks firm to help support their lower back.
- Remind the student to draw the navel inward to help support their lower back.
- Remind them not to jut their rib cage out of alignment with their hips.

Note: All the postures in the following section should be performed for at least 30 seconds, but can be held for much longer depending on the needs of the student.

Table Top-Option 1

Support from Underneath



"When my teacher touches me....I lust melt."

-Anonymous, Devalila Yoga Teacher, PA

Assisting Steps for Table Top Pose (Support From Underneath)

Kneel to the side of the person's body in a catcher's position.

As they lift into table top pose, place one of your arms (or hands) under their sacrum area and the other under their upper back with your fingers facing away from you.

Slowly lift up their back with both arms.

Maintain the assistance for as long as you feel is appropriate.

When they are established in table top pose, release your hands and let them hold the pose.

Stand up and back away as they lower their hips to the floor.

Yoga Prop Suggestions

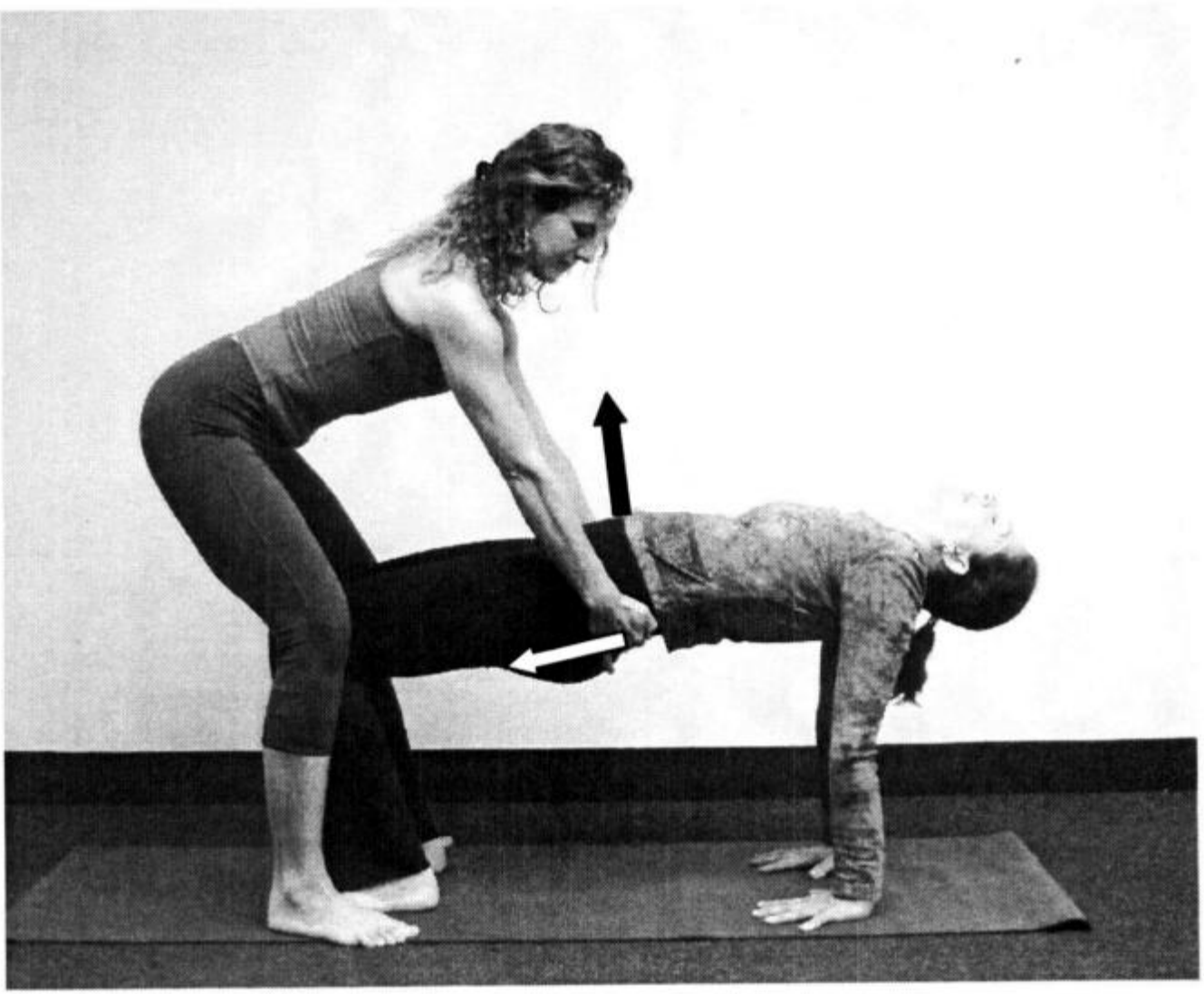
Have them squeeze a yoga block between their knees to help engage their legs.

What You Might Say (to help the process)

"Engage your buttocks muscles," "Find a comfortable position for your neck," "Press down into your big toe joints," "Pull your navel toward your spine," "Lift and open your chest."

"When my teacher comes around to gently guide me into the correct position, I realize what the pose is supposed to feel like, and I can finally understand the relationship between the breath and the pose."

-Laurel Collins, Devalila Yoga Student



"We come into the work} alone, but we also leave this world alone too. lust be okay with yourself." - Barbara Kulasinski, Photographer, Yoga Student

Assisting Steps for Table Top Pose (Pelvic Lift from Above)

Straddle the person's knees in a standing squat position and apply a gentle pressure inward on their knees with your legs.

As they lift into table top pose, place your hands under their sacrum area with your fingers facing each other.

Lean your weight backward as if you were sitting into a chair and lift their back while you simultaneously tilt their pelvis under.

Maintain the assistance for as long as you feel is appropriate.

When they are established in table top pose, release your hands and let them hold the pose.

Stand up and back away as they lower hips to the floor.

Yoga Prop Suggestions

Have them squeeze a yoga block between their knees to help engage their legs.

What You Might Say (to help the process)

"Point your feet directly forward, or even a little pigeon-toed," "Firm your leg muscles," "Pull your navel toward your spine," "Lift and open your chest."

Bridge Formation

Assisting Steps for Bridge Formation Pose

Straddle the person's knees in a standing squat position and apply a gentle pressure inward on their knees with your legs (as in the top photo).

If the person is taller than you are, stand in a lunge position with your front foot alongside their hip area (as in the bottom photo).

As they lift up into bridge formation pose, place your hands under their sacrum area with your fingers facing each other.

Lean your weight backwards, and lift up their back with both of your hands. Simultaneously pull

their hips toward you to help them lengthen their low back.

Maintain the assistance for as long as you feel is appropriate.

When they are established in the pose, release your hands and let them hold the pose.

Stand up and back away as they lower their hips to the floor.

Yoga Prop Suggestions

Have them squeeze a yoga block between their knees to help engage their legs.

Place a flat folded blanket under their shoulders to create space under the cervical spine.

What You Might Say (to help the process)

"Push into your feet," "Firm your buttocks muscles," "Shimmy your shoulders under your body," "Draw your navel toward your spine," "Breathe deeply and expand your chest."

"Yoga inspires me to be me."

-Tea Rod key, Yoga Student

Camel-Option 1 Chest Li, ft

Assisting Steps for Camel Pose (Chest Lift)

Straddle the person's hips in a standing squat position and apply a gentle pressure inward on their hips with your legs.

After they have arched back into camel pose, cradle their scapula bones with both hands (your finger tips are near their spine).

Lift their upper back with both hands, and at the same time stretch their scapula bones away from their spine.

Encourage them to breathe deeply into their chest and relax their shoulders.

Maintain the assistance for as long as you feel is appropriate.

When they are established in camel pose, release your hands and let them hold the pose.

You can lift them all the way up to a kneeling position when they are finished, or simply back away and allow them to return to a kneeling position on their own.

Yoga Prop Suggestions

Have them kneel on a flat folded blanket as a cushion.

What You Might Say (to help the process)

"Keep your thighs strong and moving forward," "Firm your buttocks muscles," "Expand your chest," "Breathe through your mouth if you need to."

Camel-Option 2 Foot Push

"The inner silence that you can experience in yoga clears your perception. You emerge with a greater ability to listen and communicate from a space of love."

-Stephanie Pappas, Devalila Yoga Teacher and Trainer

Assisting Steps for Camel Pose (Foot Push)

Sit behind the person's feet and put your hands behind you for support as you lean backwards.

Lift one of your feet in the air and place the ball of your foot between their scapula blades (as in the top photo).

After they arch backward into camel pose, carefully push the ball of your foot up into their back. Ask them for feedback about the placement of your foot and make any adjustments to the position.

As they breathe in the pose you can apply more pressure, but ensure that their hands stay in contact with their feet.

Maintain the assistance for as long as you feel is appropriate.

Release your foot and allow them to hold the pose on their own.

Sit up and back away as they return to an upright kneeling position.

Yoga Prop Suggestions

Have them place a flat folded blanket under their knees as a cushion.

What You Might Say (to help the process)

"Activate your thigh muscles," "Firm your buttocks muscles," "Let your shoulders relax toward the floor," "Relax your neck as much as possible."

Fish

Assisting Steps for Fish Pose

Straddle the person's waist or hip area in a standing squat position.

Bend your knees and slide your hands under their upper back with your fingers near their spine.

Press into your legs, and slowly lift up their back with both hands. As you lift, also stretch the scapula blades away from their spine.

Encourage them to breathe deeply into their chest and relax their neck. Lift more on their inhalation.

When they are established in fish pose, remove one of your hands and gently tilt their forehead toward the floor and continue to lift with your other hand (as in the bottom photo).

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Slowly slide your hands out from underneath their back, and move away as they lower themselves to the floor.

Yoga Prop Suggestions

Place a flat folded blanket or a pillow under the top of their head.

Place a pillow under their upper back.

Place a rolled up blanket under the length of their spine.

What You Might Say (to help the process)

"Press down into your elbows," "Relax your shoulders toward the floor," "Lift your chest."

Wheel-Option 1 Holding Teacher's Ankles

Assisting Steps for Wheel Pose (Holding Teacher's Ankles)

Ask the student to get into the ready position for wheel pose (as in the top photo).

Stand about one foot (the distance may vary depending on their arm length) behind the person's shoulders in a standing squat position.

Instruct the student to hold firmly onto your ankles with their thumbs on your inner ankle. Their elbows are facing the sky and bent at about a 45 degree angle.

Bend down and reach your hands over their armpits and grab onto their scapula bones with your fingers facing their spine.

Lift their body off the floor with the strength of your legs

Instruct them to push their hands into your ankles.

As they lift further off the floor, support their shoulders with your hands.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

To release the pose, tell them to bring their chin toward their chest as you bend your knees and lower them to the floor.

Yoga Prop Suggestions

Have them squeeze a yoga block between their knees to help engage their legs.

What You Might Say (to help the process)

"Tuck your tail bone under," "Push strongly into my ankles," "Lean your weight into your feet and legs," "Breathe deeply and expand your chest."

"Sometimes, no matter how carefully I describe what they should be doing or feeling, an assist is worth several thousand words."

-John Feist, Devalila Yoga Teacher

Wheel--Option 2 Two People Assisting

Assisting Steps for Wheel Pose (Two People Assisting)

Allow the student to lift up into wheel pose on their own. Both assistants will then perform their parts simultaneously.

Assistant 1 (on the left): Straddle the person's feet in a standing squat position, and if necessary, apply a gentle pressure inward on their knees with your legs.

Place your hands under their sacrum area with your fingers facing each other.

Lean your weight backwards, and pull their sacrum toward you to help lengthen their low back.

Assistant 2 (on the right): Straddle the person's hands in a standing squat position.

Reach your hands over their armpits and grab onto their scapula blades with your fingers facing their spine.

Lift their body away from the floor using the force of your legs.

Maintain the assistance for as long as you feel is appropriate. Stay aware of their body and yours, and listen for their breath.

Both assistants guide the person back to the floor, release your hands and back away.

Yoga Prop Suggestions

Have them squeeze a yoga block between their knees to help engage their legs.

What You Might Say (to help the process)

"Point your feet directly forward, or a little pigeon-toed," "Press your weight into your legs and feet," "Drop your shoulders away from your ears," "Draw your navel toward your spine," "Breathe deeply and expand your chest."

Back Bending Postures

(Prone/Face-Down)

Prone back bending postures require shoulder flexibility and back strength. Like the supine back bending postures, the person is working against gravity, but in the prone position there are more demands on the whole back and less on the legs. By assisting someone in the prone back bending postures you can really help them lift and open their chest. Here are some points to remember when assisting someone with the prone/face down back bending postures:

- Lift them gradually when you are taking them deeper into the back bend.
- Remind the person to keep their legs and buttocks firm, and draw their navel inward to afford safety to their lower back.
- Remind the person to drop their shoulders away from their ears and open the front of their chest.
- Encourage them to breathe fully into their chest and diaphragm.

Note: All the postures in the following section should be performed for at least 30 seconds, but can be held for much longer depending on the needs of the student.

Cat Stretch

"My yoga teacher encourages me to do and be my best, while also asking that I be kind and gentle to myself'-Donna E. Poler, Devalila Yoga Student

Assisting Steps for Cat Stretch Pose

Straddle the person's hips in a standing squat position.

As they flex their spine, use your hands to lift their waist and tilt their pelvis under (as in top photo).

As they extend their spine, use your hands to draw back their shoulders and promote chest expansion (as in bottom photo).

Repeat these two movements as they continue to contract and arch their back.

Maintain the assistance for as long as you feel is appropriate.

Stand up and back away as they return to a seated position.

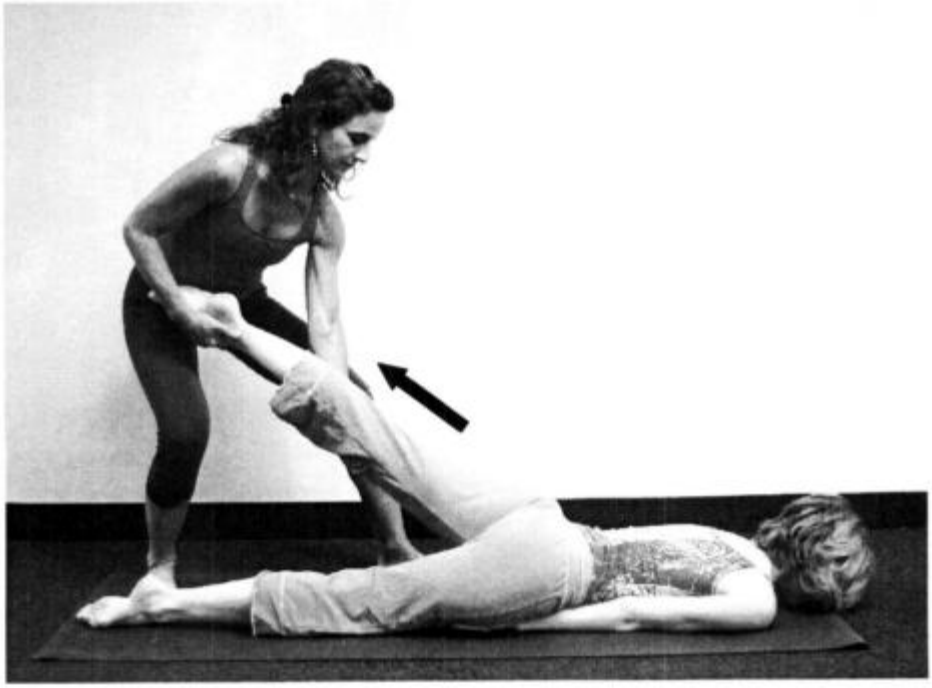
Yoga Prop Suggestions

Have them kneel on a flat folded blanket as a knee cushion.

What You Might Say (to help the process)

"Exhale and tuck your tailbone under," "Inhale and open your chest," "Press into your hands," "Let your spine move smoothly and fluidly."

Half Locust



"My teacher adeptly mixes deep spirituality with fun and a great workout for the body and mind."-Donna E. Poler, Devalila Yoga Student

Assisting Steps for Half Locust Pose

Stand to one side of the person's feet in a standing squat position.

As they lift one of their legs into half locust pose, place one of your hands under their knee area and your other hand under their ankle.

Use your hands to lift their leg and pull it toward you.

Maintain the assistance for as long as you feel is appropriate.

Slowly bring their leg to the floor and switch sides.

Perform the assist on the other side.

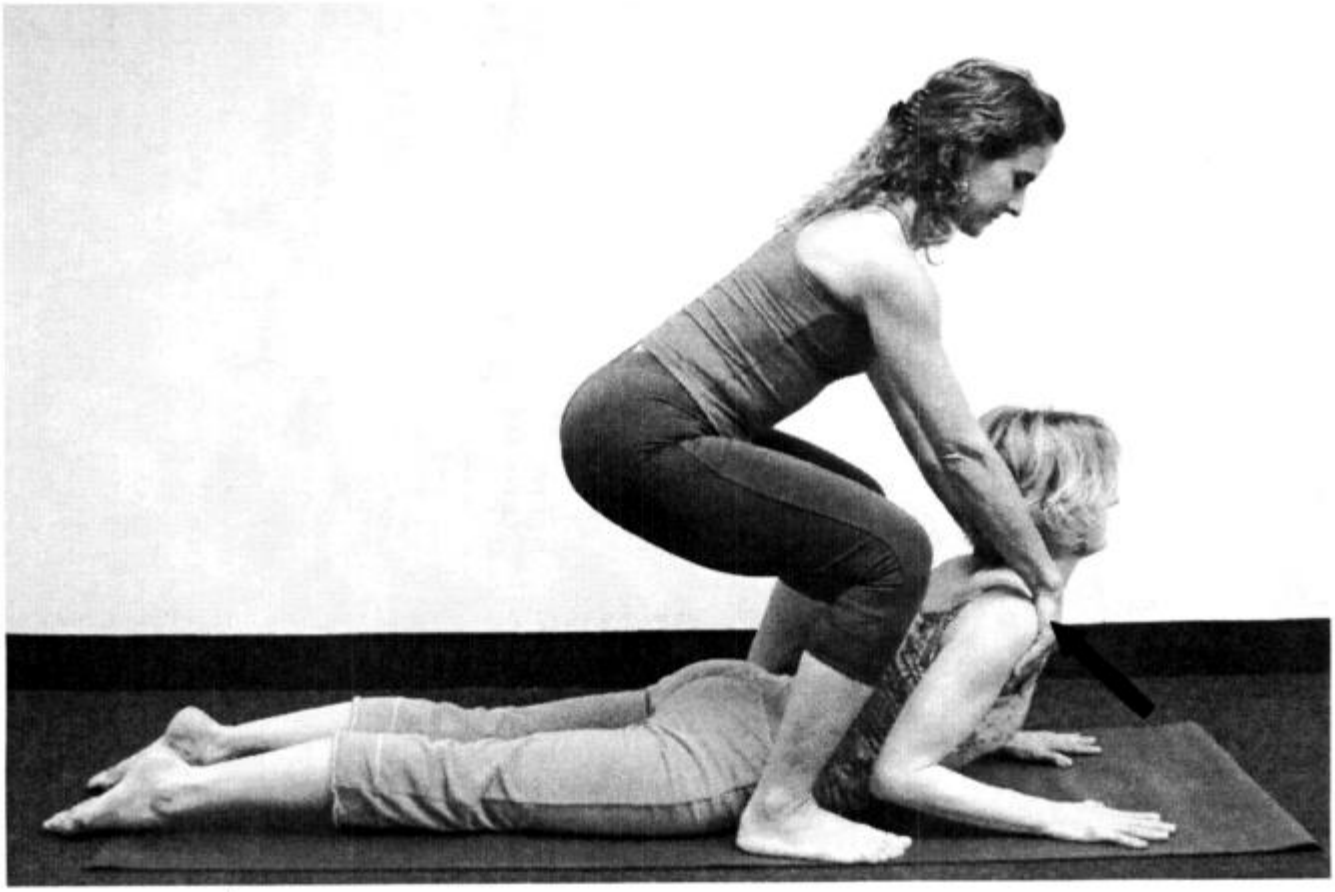
Yoga Prop Suggestions

Have them lie on a flat folded blanket as a hip cushion.

What You Might Say (to help the process)

"Point your toes and extend through your legs," "Keep your upper body relaxed," "Engage your buttocks muscles."

Cobra



"A little touch goes a long way!" -Kerrie Anczarki, Devalila Yoga Teacher, Kids Yoga Teacher

Assisting Steps for Cobra Pose

Straddle the person's hips in a standing squat position.

As they lift their spine into cobra pose, place your hands on the front of their shoulders and upper chest.

Use your hands to lift their body and draw back their shoulders.

Increase the lift on their inhalation.

Maintain the assistance for as long as you feel is appropriate.

Slowly release them back to the floor and step out of the straddle position.

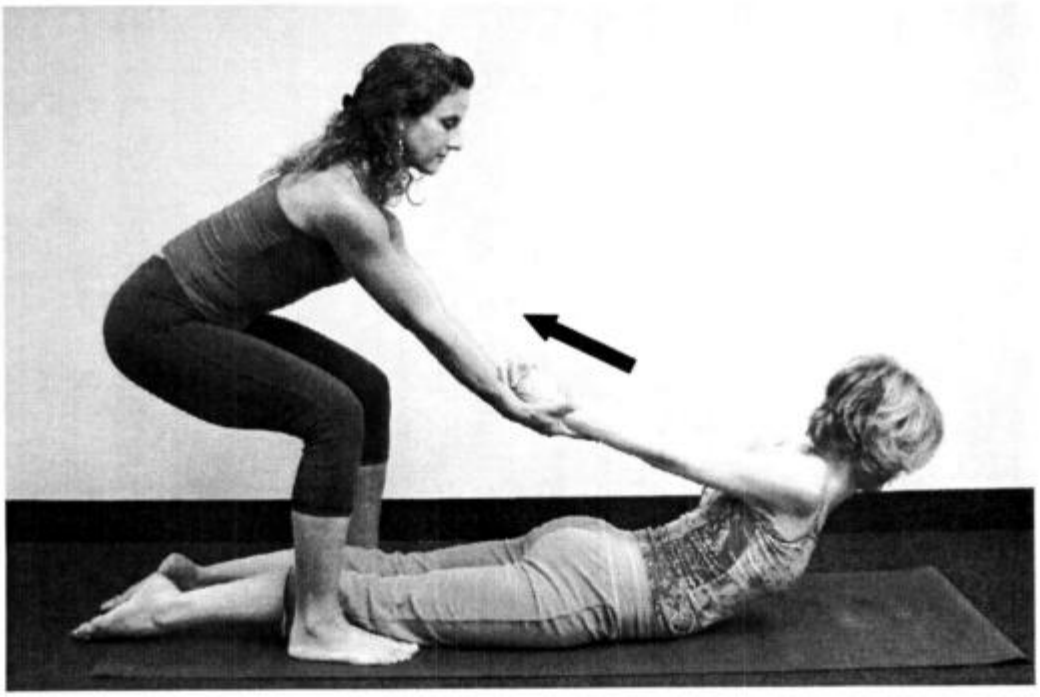
Yoga Prop Suggestions

Have them lie on a flat folded blanket as a hip cushion.

What You Might Say (to help the process)

"Keep your buttocks and legs firm," "Drop your shoulders away from your ears," "Hug your elbows toward your rib cage," "Press into your hands."

Snake



"With my yoga instructor assisting mein the posture, and with the 'up and over' breathing sense in my posture, my yoga posture was able to become deeper and more enjoyable."

-Carol Mauger, Yoga Teacher and Student

Assisting Steps for Snake Pose

Straddle the person's knees in a standing squat position.

As they lift their arms and back into snake pose, firmly hold onto their wrists or forearms.

Pull their arms toward you and sink your weight into your hips.

To take them even deeper into the pose, walk backward and sit down over their feet (as in the bottom photo).

Lift them more on their inhalation.

Maintain the assistance for as long as you feel is appropriate.

Slowly stand up and return them to the floor. Release your hands and step out of the straddle position.

Yoga Prop Suggestions

Have them lie on a flat folded blanket as a hip cushion.

What You Might Say (to help the process)

"Keep your buttocks and legs firm," "Drop your shoulders away from your ears," "Expand your chest."

Upward Dog

Assisting Steps for Upward Dog Pose

Straddle the person's hips in a standing squat position.

As they lift into upward dog pose, place your hands on the front of their shoulders and upper chest.

Use your hands to lift their body and draw their shoulders backward.

Lift them more on their inhalation.

To give them an extra stretch, rise up onto the balls of your feet, knock your knees inward, and

press your knees into their upper back (if your knees can reach).

Pull their chest open as you push your knees into their back.

Maintain the assistance for as long as you feel is appropriate.

Release your knees, slowly lower them to the floor, and step out of the straddle position.

Yoga Prop Suggestions

Have them place their hands on yoga blocks for extra lift.

What You Might Say (to help the process)

"Keep your buttocks and legs firm," "Drop your shoulders away from your ears" "Pull your hips toward your wrists," "Lift your knees away from the floor."

Bow

"Don't be shy to give your teacher or partner feedback-especially when you want them to change the level of pressure they are applying."

-Stephanie Pappas, Devalila Yoga Teacher and Trainer

Assisting Steps for Bow Pose

Straddle the person's knees in a standing squat position.

As they lift into bow pose, reach your hands around the outside of their wrists and hold onto their heels (as in the top photo).

Keep your arms straight and use your leg strength to lift their body up (as in the bottom photo).

Lift them more on their inhalation.

Maintain the assistance for as long as you feel is appropriate.

Slowly release them back to the floor, release their heels, and step out of the straddle position.

Yoga Prop Suggestions

Have them lie on a flat folded blanket as a hip cushion.

What You Might Say (to help the process)

"Reach your feet toward the sky," "Press your feet backward away from your hips," "Breathe deeply into your chest and diaphragm."

Inverted Postures

Inverted postures give us the opportunity to challenge our fears, turn our world upside down for awhile, and do something out of the ordinary with our bodies. Some people consider inversions to be the most beneficial of all yoga postures. It's extremely helpful and wise to assist someone when they are learning inversions. Here are some points to remember when assisting someone in inverted asanas:

- Never force someone into a headstand. If you have to help them too much, it may mean that their alignment is off. If their alignment is off, you don't want them up in a headstand. They may be able to "float" into a headstand if their body is properly aligned (see pages on "floating" into a headstand).

- Encourage the person to take their time, breathe, and stay very aware of cues from the assistant when learning inverted postures.

- Give the person plenty of verbal guidance when learning to invert since they probably won't be able to see you, and they may get physically disoriented.

0 Clear the practice area of objects and furniture.

- Perform inversions on a flat, stable surface.

- Offer folded blankets for under their shoulders in plow and shoulder stand postures.

- Check for adequate space between the wall and the person performing the pose (about 5-7 inches).

Note: All the postures in the followin section should be performed for at least 20-30 seconds, but can be held for a shorter or longer duration depending on the needs of the student.

Plow--Option 1 Beginner Variation

Assisting Steps for Plow Pose (Beginner Variation)

Stand about 1 foot behind the person's head.

As they lift their legs into plow pose, hold their heels and draw them toward you (as in the top photo).

While holding their heels, slowly walk backward and their hips will lift off the floor.

Instruct them to place their hands under their back or hips for balance.

Guide their feet toward the floor or toward a chair if they cannot touch the floor (as in the bottom photo).

Maintain the assistance until their feet touch something solid.

When they are established in the pose, release your hands and let them hold the pose.

You can now perform the pelvic lift adjustment described on the following pages.

Yoga Prop Suggestions

Have them place their feet on a chair, stool, or other yoga prop.

Have them place a flat folded blanket under their shoulders to create space under their cervical spine.

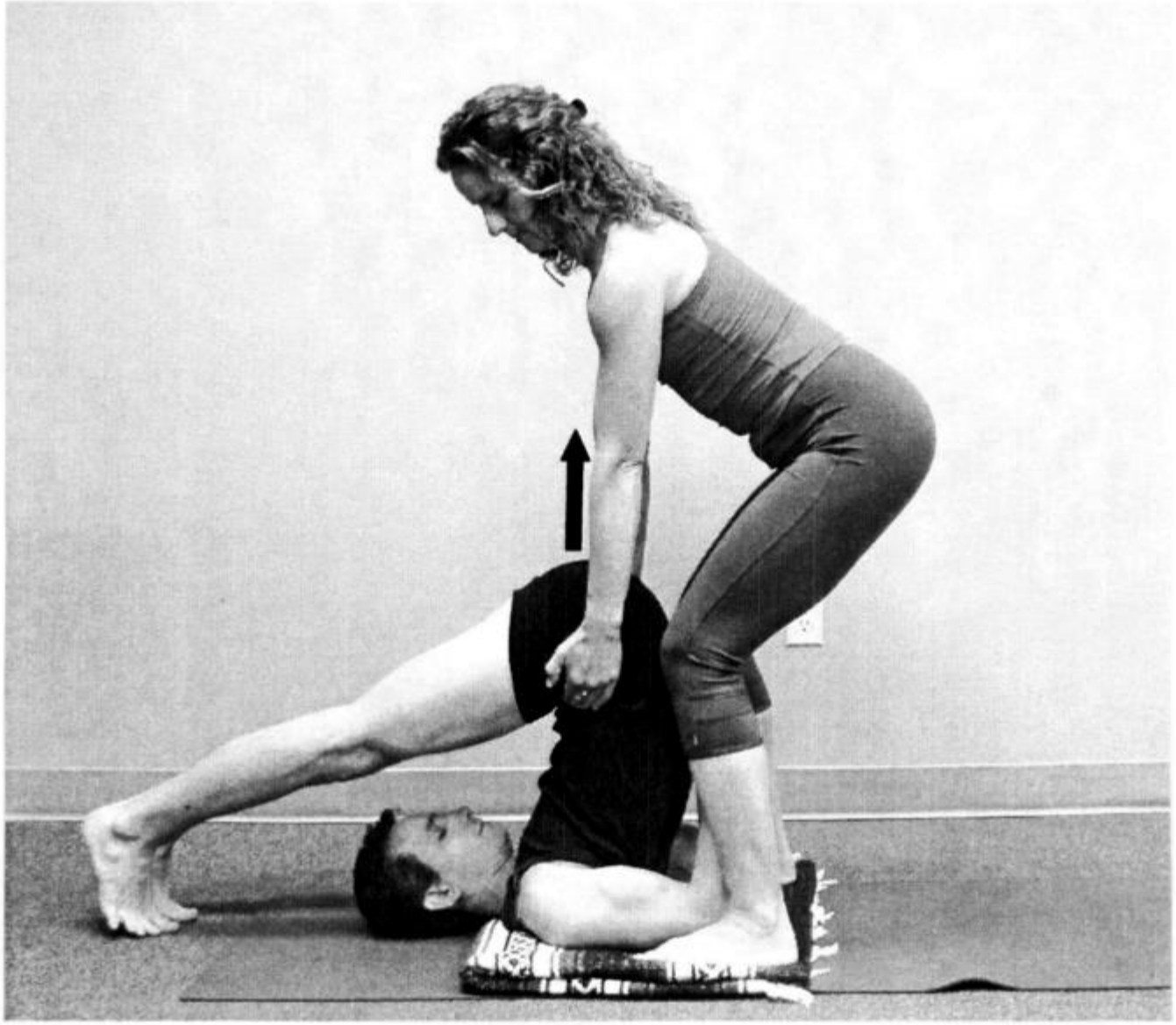
What You Might Say (to help the process)

"Let your knees bend if your hamstrings are tight," "Shimmy your shoulders under your body," "Support your back with your hands," "Relax your jaw and neck."

"The help of the teacher was verypositive and reinforcing, and I have been able to give this sense to reinforcement and affirmation to others."

-Carol Mauger, Yoga Teacher and Student

Plow-Option 2 Pelvic Li, f't



"The assistor is able to learn first hand the abilities and limitations of the assisted. This knowledge makes it possible to provide recommendations for an individual's future practice."

-Daniel Farrell, Devalila Yoga Teacher, Scientist

Assisting Steps for Plow Pose (Pelvic Lift)

Stand close behind the person's back in a standing squat position.

Place your fingers in the crease made by their bent legs.

Using your leg strength, lift their hips straight up with both hands and let them to roll their shoulders under their body.

Maintain the assistance for as long as you feel is appropriate.

Release your hands and let them hold the pose.

Back away as they roll their spine back to the floor.

Yoga Prop Suggestions

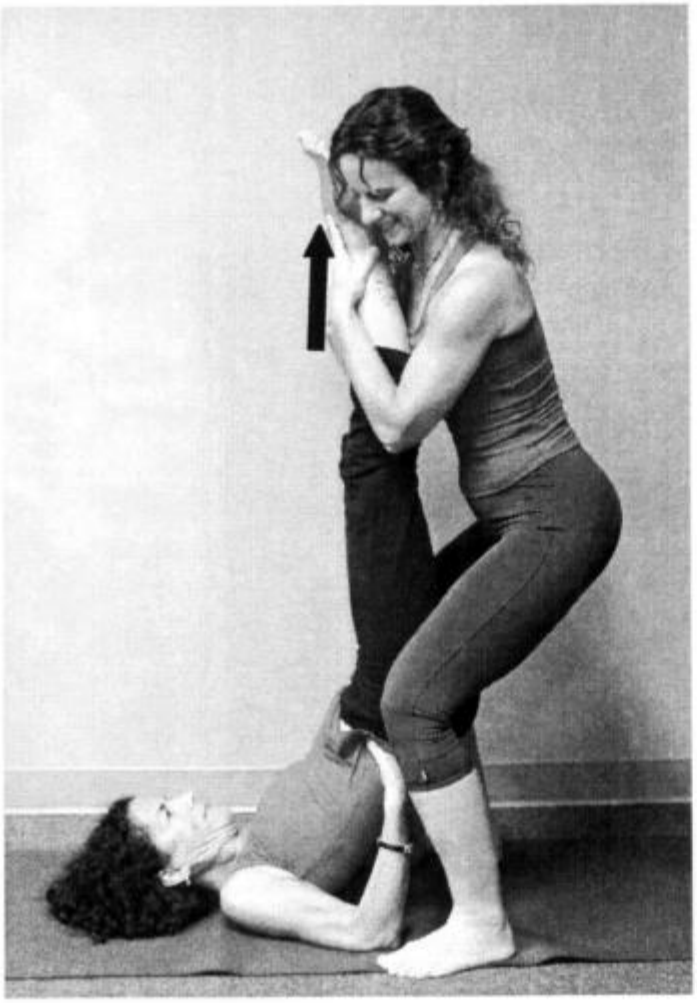
Have them place their feet on a chair, stool or other yoga prop.

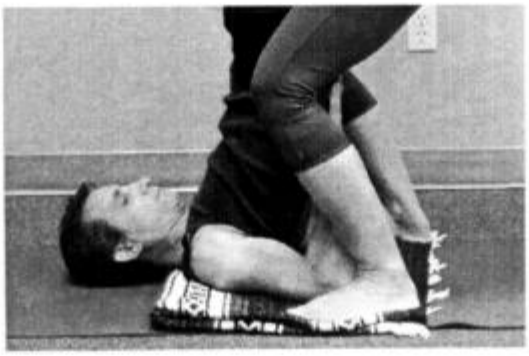
Have them place a flat folded blanket under their shoulders to create space under their cervical spine.

What You Might Say (to help the process)

"Move your tailbone away from your face," "Shimmy your shoulders under your body," "Lengthen your spine," "Breathe deeply into your upper back."

Shoulder Stand





"Possibly because of the number of ways assistance communicates (position, touch movement, real-time observation, sharing), awareness is focused and learning is rapid. It feels great and is reassuring." -Daniel Farrell, Devalila Yoga Teacher, Scientist

Assisting Steps for Shoulder Stand Pose

Stand close behind the person's back in a standing squat position with your feet near, or touching their elbows.

Place your hands and forearms around their shins.

Bend your knees and then gradually stand up straight as you simultaneously pull their legs toward

the sky.

Instruct them to roll their shoulders under as you nudge their elbows in with your feet.

Assist them for as long as you feel is appropriate.

When they are established in the pose, release your hands and let them balance on their own.

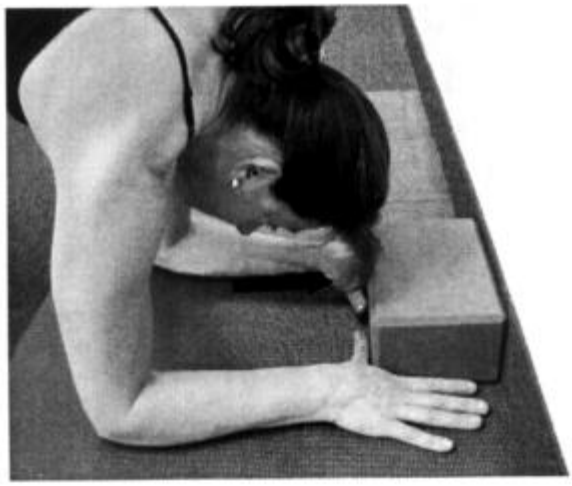
Yoga Prop Suggestions

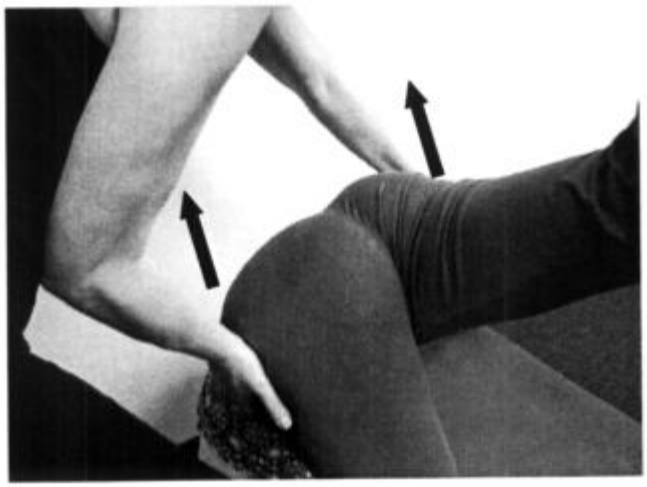
Have them place a flat folded blanket under their shoulders to create space under their cervical spine.

What You Might Say (to help the process)

"Reach your feet toward the sky," "Shimmy your shoulders under your body," "Engage the buttocks muscles," "Walk your hands up your back."

Forearm Stand





Assisting Steps for Forearm Stand Pose

Place a yoga block next to the wall.

Instruct them to press their thumbs on the front of the block, and their index fingers along the side of the block (as in the top photo).

Stand to one side of the person near their legs.

Place your hands in their thigh crease with your fingers facing each other (as in the middle photo).

Give their hips a gentle lift as they reach (or kick) their leading leg toward the wall (remember to

stay out of the way of their leg!).

You can also press their leading leg toward the wall (as in the bottom photo) as they kick up.

When they are established in the pose, release your hands and let them balance on their own.

Now your can perform the fist squeeze as described later in this chapter.

Yoga Prop Suggestions

Have them perform this pose in front of a wall.

Have them press a yoga block into the wall with their hands.

What You Might Say (to help the process)

"Point your toes toward the sky," "Press your shoulders down away from your ears," "Gaze between your hands."

Handstand--option 1 Kicking onto the Wall

"Inversions are so energizing! Let your teacher help you overcome your fears."

-Stephanie Pappas, Devalila Yoga Teacher and Trainer

Assisting Steps for Handstand Pose (Kicking onto the Wall)

Have them place their hands about 5-7 inches from the wall.

Stand to one side of the person near their legs (preferably the leg that will kick up first).

Place one hand one their low back for stability (optional).

Watch carefully as they prepare to kick their legs up-it can happen fast!

With your other hand(s), bring their kicking leg to the wall and then help the trailing leg toward the wall.

When both of their feet are touching the wall, release your hands and let them balance on their own.

Now you can perform the fist squeeze as described later in this section.

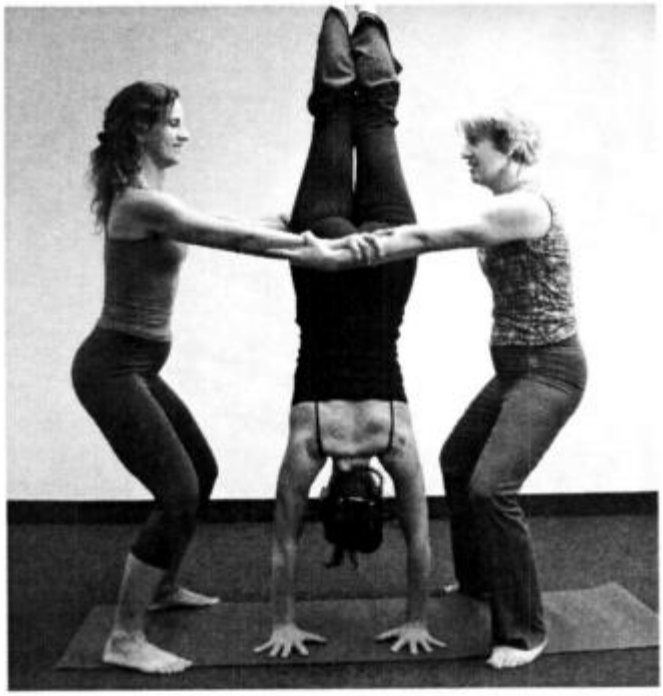
Yoga Prop Suggestions

Have them perform this pose in front of a wall.

What You Might Say (to help the process)

"Reach your toes toward the sky," "Keep your shoulders over your hands," "Squeeze your inner thighs together," "Firm your whole body."

Handstand--Option 2 Two People Spotting



Assisting Steps for Handstand Pose (Two People Spotting)

Two assistants will stand facing each other in standing squat positions.

Reach out toward each other with the same arm (the arm that is farthest away from the person) and hold each other's forearms.

Instruct the student to place their hands in the center of the floor between you (as in the top photo).

Watch carefully for the student's next move to kick their legs up.

When both of the student's legs are in the air, quickly reach out toward each other with your free arm and clasp each other's forearms. Enclose their legs between your arms.

Allow the student's legs or hips to rest against your arms, or vacillate between your arms as the find their balance.

When they are finished with the pose, release your hands, and allow them to return their feet to the floor.

Yoga Prop Suggestions

None

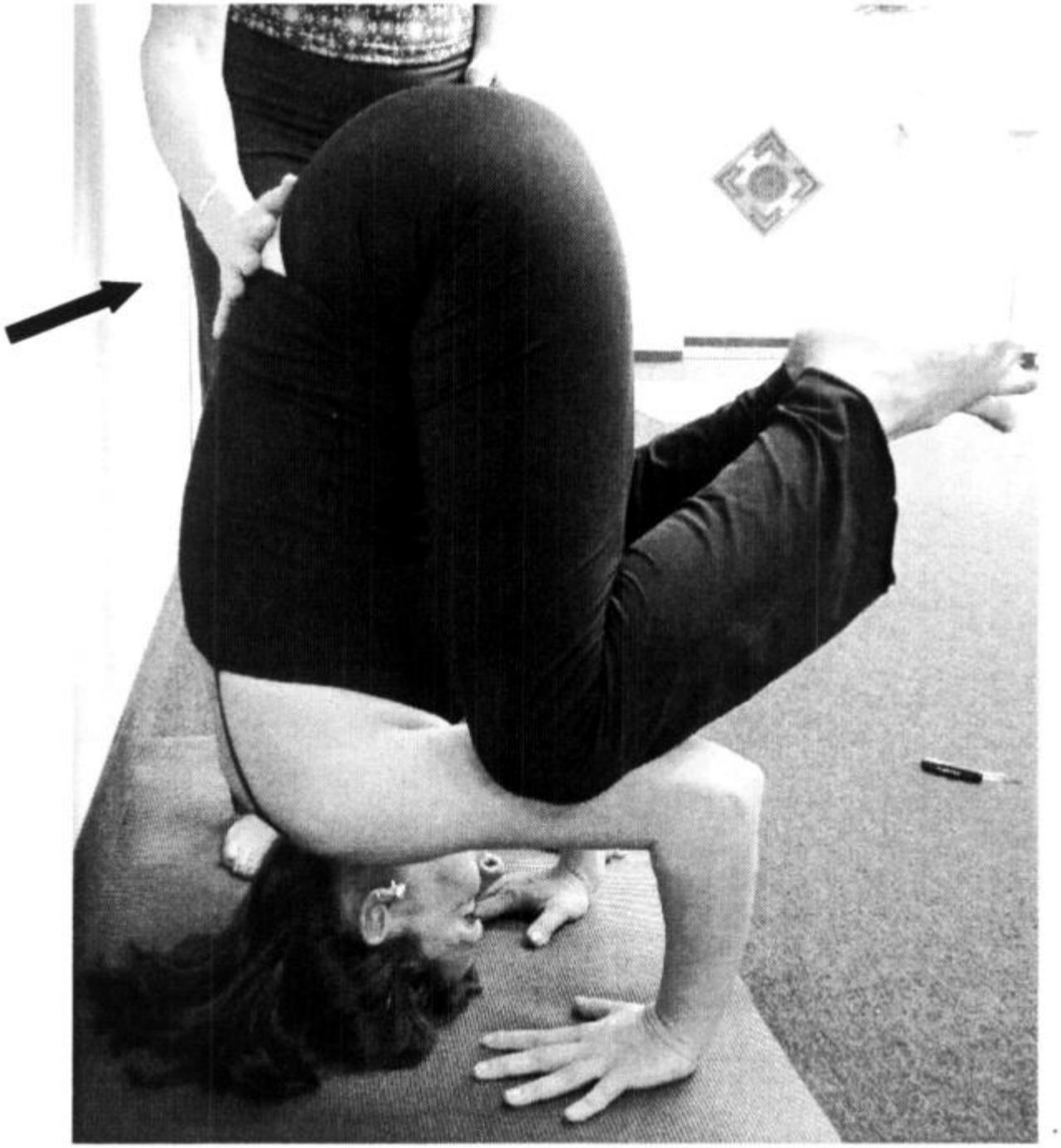
What You Might Say (to help the process)

"Point your toes a lot," "Pull your navel toward your spine," "Squeeze your inner thighs together," "Press your hands into the floor."

"You'll find some people will improve their breathing and better relax in a pose when you're very physically assisting."

-Carrie Colditz, Devalila Yoga Teacher

Headstand Preparation (Tripod)



"Yoga enables me to stretch in many areas of my life and to go with patience into places I have not been before."-Madonna Alvarez, Devalila Yoga Student

Assisting Steps for Headstand Preparation Pose (Tripod)

Stand or kneel on one side of the person near their shoulders.

Visually, assess their headstand set up alignment (see tips on "floating" into headstand) and verbally instruct them to make changes in their head or hand placement.

As they are in tripod position, place your hand on their sacrum and encourage them to tilt their pelvis back toward your hand.

Help them place their knees on their triceps.

Keep checking their alignment and give verbal feedback.

If their legs begin to "float" up, follow the instructions for headstand assisting.

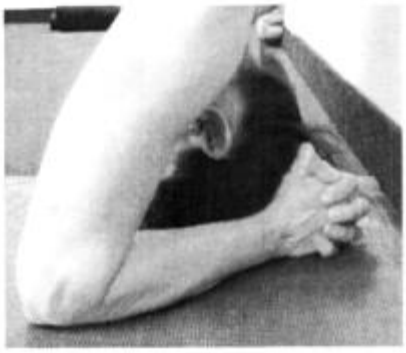
Yoga Prop Suggestions

Have them perform this pose in front of a wall.

What You Might Say (to help the process)

"Bring your feet toward your hips," "Bring your hips over your shoulders," "Press your shoulders down," "Gaze forward to the floor in front of you."

Headstand (Supported)



"I am 'taught' the assists in an 'ah-ha' moment when my own body is in a posture and something ignites. The assists grow from within me, so daily practice is my way to tending to that garden."

-Kelly Smith, Yoga Teacher, Pilates Teacher

Assisting Steps for Headstand Pose (Supported)

Stand to one side of the person near their legs.

Check their head and arm placement in the base of the pose and offer verbal corrections (as in the top photo).

Place your hands in the thigh crease made by their bent legs with your fingers facing each other.

Give their hips a gentle lift as they float their hips up into headstand pose (as in the middle photo).

Once their legs are extended upward you can hold their ankles with one hand and give a lift.

Place your other arm in front of their hips (as in the bottom photo).

Now your can perform the fist squeeze as described later in this chapter.

Yoga Prop Suggestions

Have them perform this pose in front of a wall.

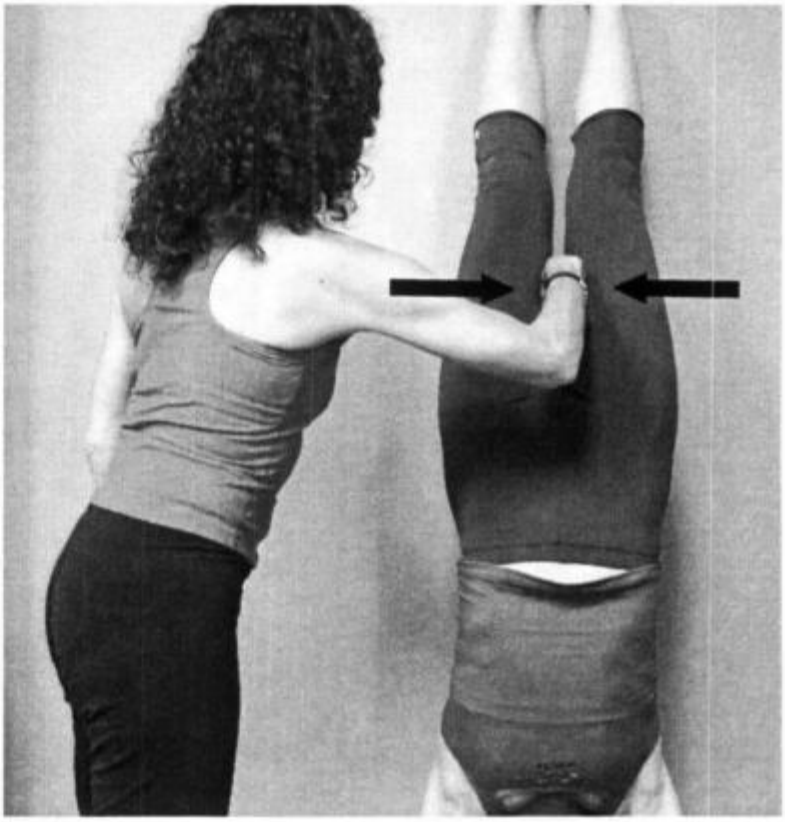
What You Might Say (to help the process)

"Push into your forearms," "Keep a firm hold on your head," "Press your shoulders down away from your ears," "Squeeze your inner thighs together."

"Stop thinking about how you feel. Close your eyes and feel how you feel."

-Heiii Prewett, Devalila Yoga Teacher

Inversions-Balancing with the Fist Squeeze



"When you teach, lust be yourself and share your experience. When you feel you don't want to teach, it's usually because you think you have to be someone other than who you are at the moment."

-Stephanie Pappas, Devalila Yoga Teacher and Trainer

Assisting Steps for the Fist Squeeze

NOTE: You can perform this adjustment on someone in an inversion such as handstand, forearm stand, or headstand.

Stand to one side or in front of the person near their legs.

Place one of your fists between their inner thighs (as in the right photo).

Instruct them to squeeze your fist with their legs and point their toes until they can balance on the own in the pose (without using the wall).

You can use your other hand to stabilize their legs (as in the left photo).

When they are steady in the pose, ask them to release your fist and let them balance on their

own or with the help of the wall.

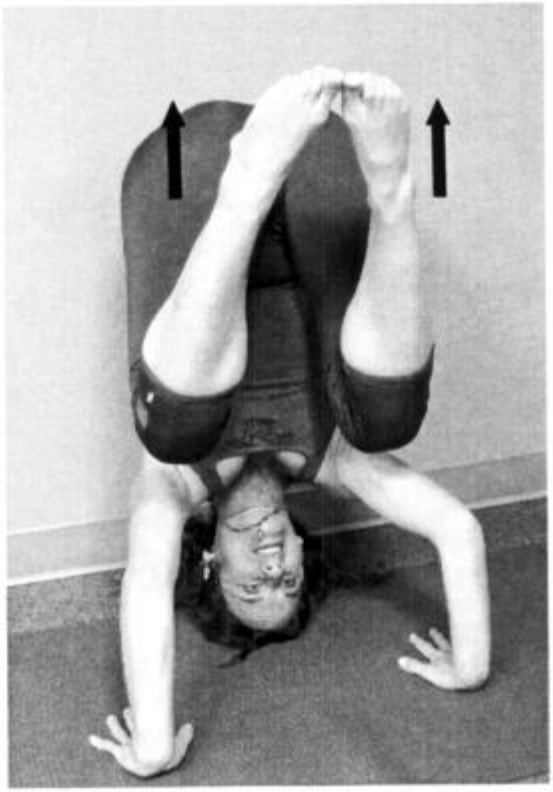
Yoga Prop Suggestions

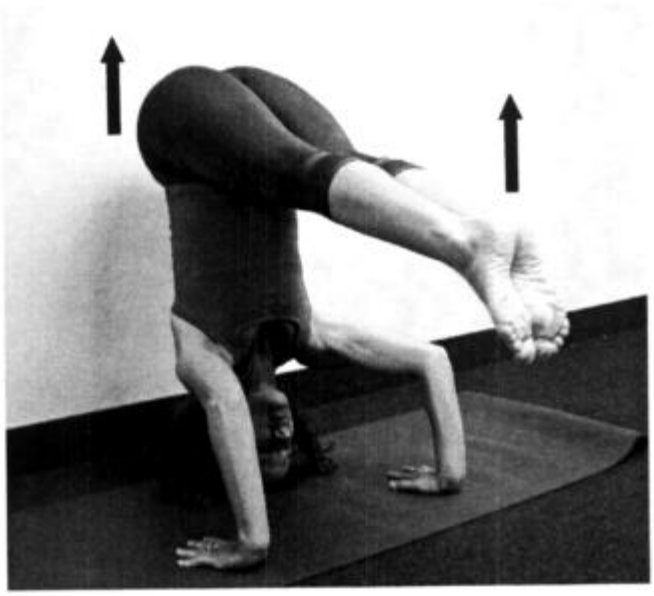
Have them perform this pose in front of a wall.

What You Might Say (to help the process)

"Point your toes a lot," "Engage your abdominal muscles," "Squeeze your inner thighs together."

"Floating" into Headstand





Tips on "Floating" into a Headstand Pose

Your hands and top of your head need to form a base like an equilateral triangle to create a solid foundation for your headstand.

If your head, neck, spine, pelvis and hips are in proper alignment in a headstand tripod preparation pose, then your legs may be able to "float"(as in the top photo) up into the full headstand pose.

Once you have established a solid base for your headstand, you can walk you feet inward toward your body until your hips stack over your shoulders.

Place your knees onto your triceps, firm your abdominal muscles, and bring your feet close to your hips.

At this point if your legs do not begin "floating" into the headstand, have the assistant check your alignment.

When your legs are straight it requires more abdominal strength to lift them into the headstand (as in the bottom photo). You may have to further develop your abdominal muscles to perform the straight leg variation.

Yoga Prop Suggestions

Perform this pose in front of a wall.

You can perform this pose outside on the grass on a flat surface.

Inverted postures should be performed with utmost care and proper alignment.

Use blankets under your shoulders in shoulder stand, and plow pose. Make sure the blankets are FLAT!

Use a chair or the wall as support with plow or shoulder stand poses especially if you have excess body weight, or stiffness in neck and shoulders.

Use a flat blanket or yoga mat under your head for headstands.

Do not kick into a headstand. If you need to kick, then this indicates that you are improperly aligned, or have insufficient strength to perform the asana. Build up your abdominal muscles and keep stretching your neck and shoulders.

Get accustomed to headstand by practicing tri-pod headstand position without lifting your legs.

Do not "hang-out" in a headstand with your legs leaning against the wall. Touch the wall with your feet periodically to help with balance.

When the vertebrae align (because the body is strong and ready) in a headstand the feet will naturally "float" up. Trust the float principle!

Never perform a headstand on an unstable surface such as a bed, pillow or cushion!

Do not perform inverted poses immediately after eating. Wait 2-4 hours after eating before inverting or practicing yoga.

Beginners should hold the posture for a short time (under a minute) until there is no difficulty in maintaining the pose (1 minute or more). The duration can be increased gradually over time.

When using your forearms as the base of a headstand or forearm stand, make sure you start out

with your elbows slightly closer than shoulder width apart. Elbows have a tendency to slide out during these poses and this can cause instability.

In a handstand pose, engage your legs, feet and inner thighs to lift upwards in the pose. Point your toes a lot.

Use the wall when first attempting headstand, handstand, forearm stand and scorpion poses.

"Aside from the many practical benefits of physically assisting a student in the poses, a gentle touch can begin to break down physical and emotional barriers."

-Melissa Stern, Devalila Yoga Teacher

Make sure to have a firm grip on your head in supported headstand pose. When the base of the pose is solid, the pose is steady!

Inverted poses should be followed by a resting pose until your heartbeat and breath return to normal. Child's pose is often suggested after a headstand. After resting in child's pose, return to an upright position like mountain pose (standing), or thunderbolt pose (kneeling).

Do not practice near objects, furniture, or anything that could hurt you if you fell.

I don't recommend closing your eyes during a headstand. Gaze to the floor in front of you, or at a point on the horizon.

If you fall out of an inversion remember to keep your body relaxed.

Use caution when practicing inversions if you have back or neck injuries, disc problems, or high blood pressure.

Some theories suggest avoiding inversions if you have detached retina, severe narrow angle glaucoma, osteoporosis, excess weight, you are pregnant, or you are menstruating.

If your eyes get bloodshot or you get broken blood vessels in your face after inverting, you may want to practice more gentle poses (downward dog, putting your legs up on a wall) until your body gets accustomed to inverting.

"When it feels like winter's dreary weight is separating you from where and who you would rather be, take a deep breath and realize that you will look back on this time remembering that you were actually running through summer's open pastures."

-Marc Savoie, Yoga Student

Sun Salutation Assisting Sequence

In this chapter I explain how you can dynamically assist someone as they move through the different postures of a traditional sun salutation sequence. If the person is a beginner, I suggest verbally instructing them in the poses as you are assisting them. If the person is already familiar with the sun salutation sequence, then you can simply let them move through the sequence at their own pace.

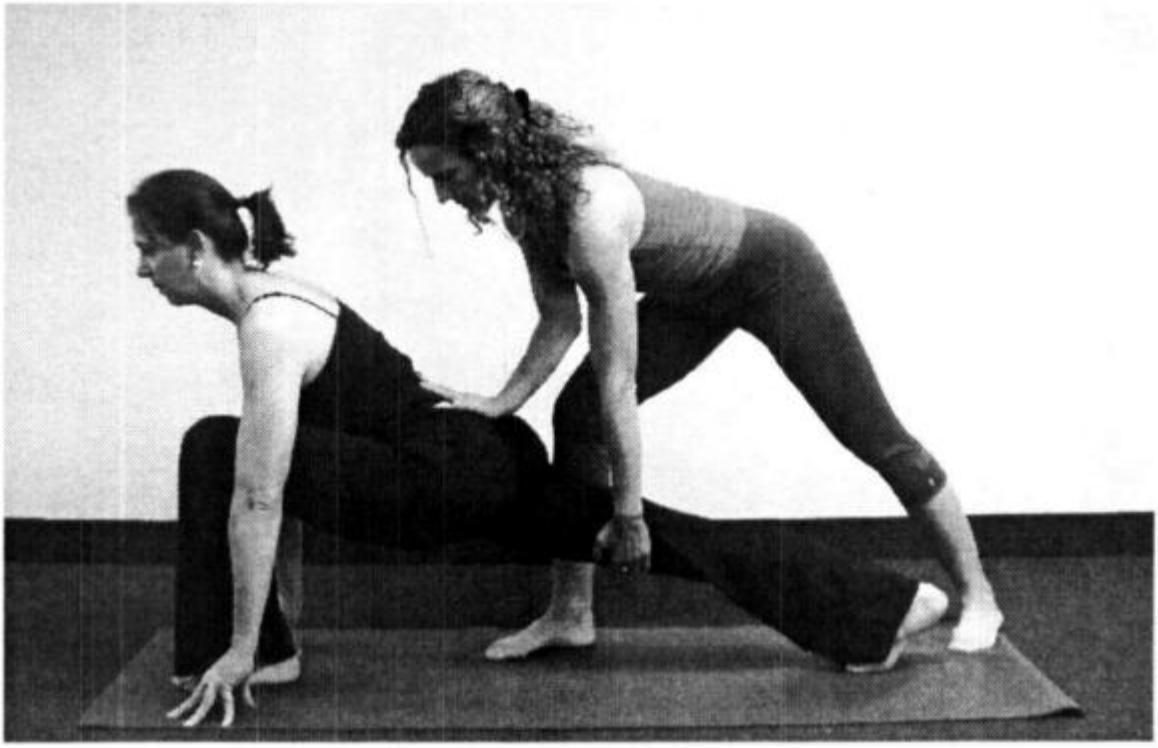
- Decide together ahead of time the approximate length of time, or number of breaths they will remain in each pose in the sequence.
- Remember to release the pressure when you sense they are about to move into another position.
- Remember to move out of their way as they transition from pose to pose.
- Anticipate and prepare your body position as they are transitioning from one pose to the next.

Position 1: Arching Mountain

Stand to their side and use one of you hands to lift their upper back between the shoulder blades. Use your other hand to press both their forearms backward. Release and let them move into the next position -forward fold.

Position 2: Forward Fold

Stand at the same side and move your hand (from their shoulder blades) down to rest on their sacrum as they fold forward. Use your other hand to press down on their back to help them stretch into the forward fold. Release and let them move into the next position-lunge.



Position 3: High Lunge (right leg back)

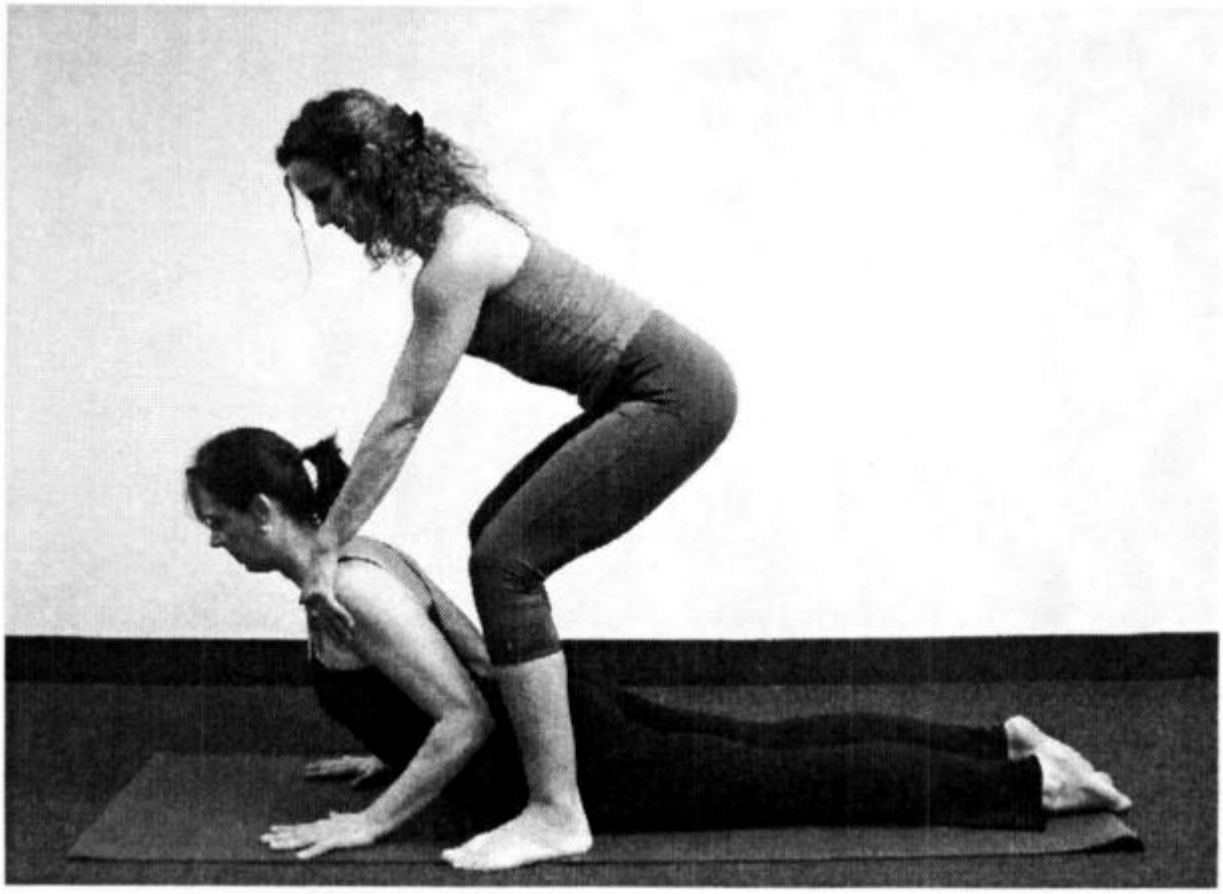
Position yourself in a low lunge position so that you can reach their body (you can also straddle their back leg). Simultaneously, press down in the center of their sacrum with one hand (your fingers are facing up), and lift their leg up with your other hand. Find a balance between pushing down on the sacrum and lifting up on the back leg. Release and let them move into the next position-high plank.

Position 4: High Plank

Straddle their legs around the thigh area. Lift their hips up or down in alignment with their legs and torso. Hold their hips up as they lower their body into the next poseCaterpillar.

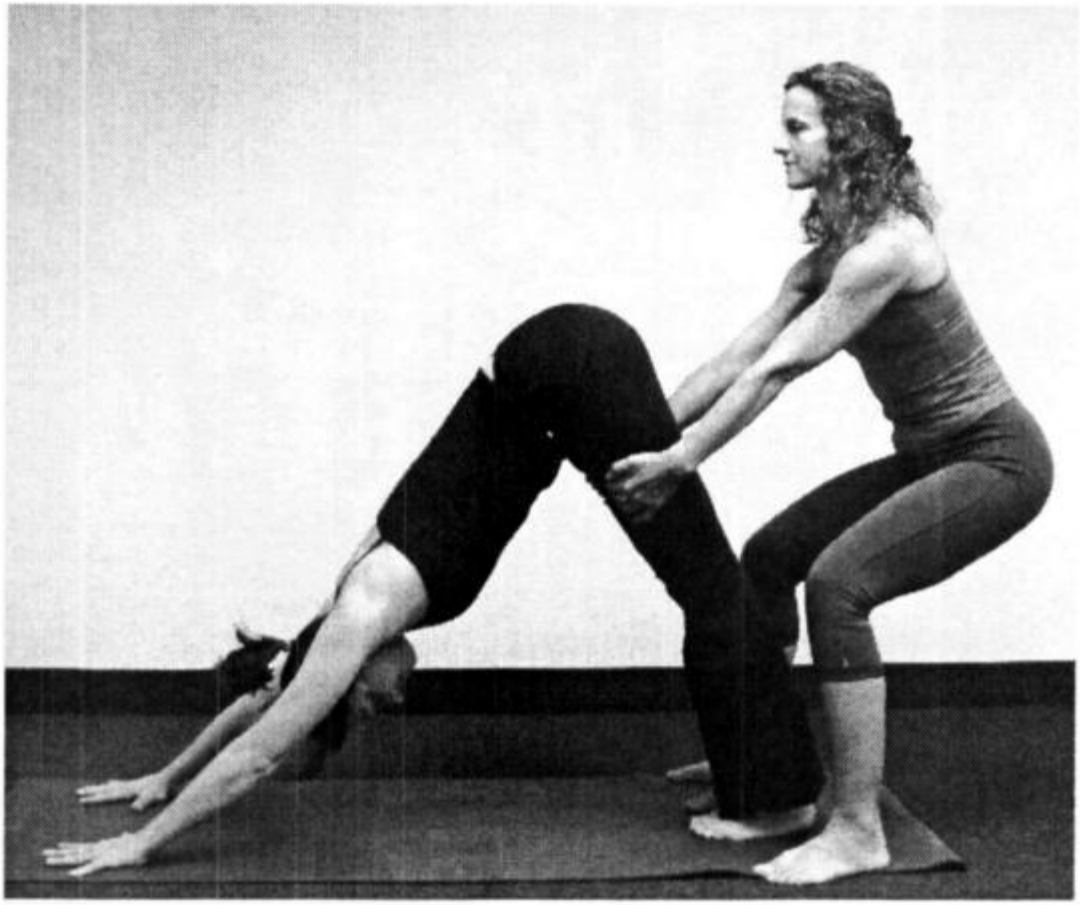
Position 5: Caterpillar

Stand in a deep squat position over their hips and press their elbows toward their body. Release and let them move into the next position-cobra.



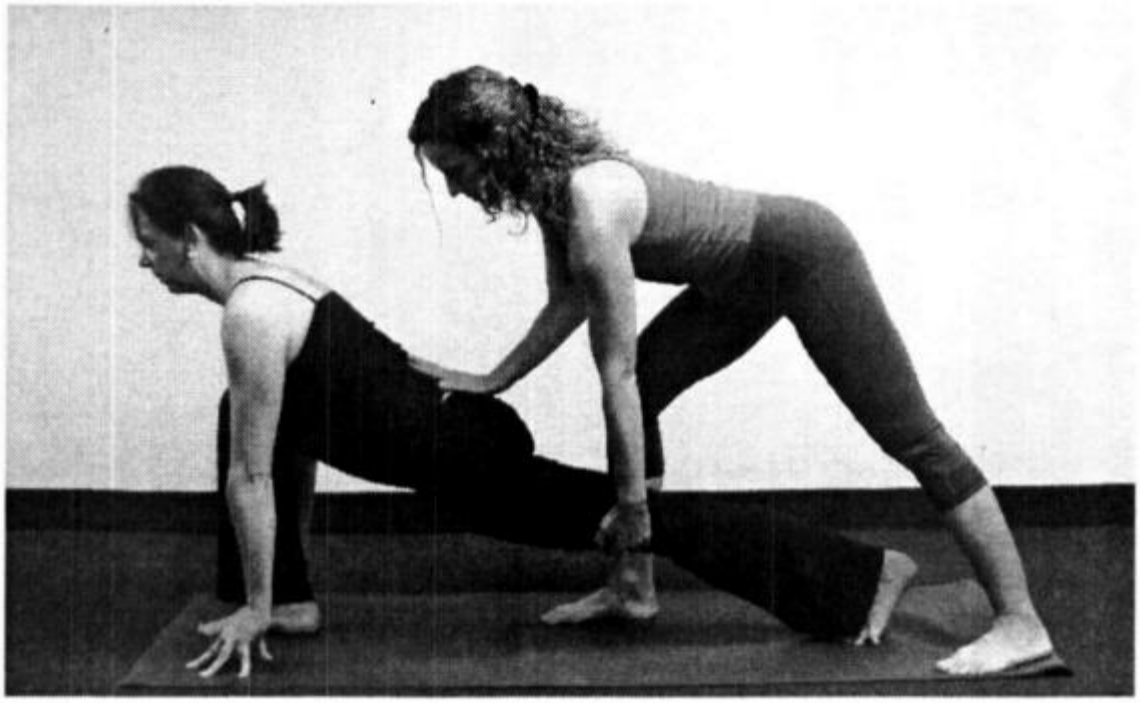
Position 6: Cobra

Move your hands onto the fronts of their shoulders and lift their body up. Release and let them move into the next position-downward dog.



Position 7: Downward Dog

Step backward and place your feet outside their feet as they press their hips up. Hold their upper thighs and sink your weight backward into a deep squat. Release and let them move into the next position-lunge.



Position 8: High Lunge (right leg forward)

Step into a low lunge position so that you can reach their body (you can also straddle their back leg). Simultaneously, press down in the center of their sacrum with one hand (your fingers facing up), and lift their leg up with your other hand. Find a balance between pushing down on the sacrum and lifting up on the back leg. Release and let them move into the next position-forward fold.

Position 9: Forward Fold

Stand to one side of the person and place your hand on their sacrum. Use your other hand to press down on their back to help them stretch deeper into the forward fold.

Release and let them move into the next position-arching mountain.

Position 1o: Arching Mountain

Use one of your hands to lift between their shoulder blades. Use your other arm to press both their extended arms backward. Release and let them move into a normal standing position.

Section III

Candid Replies to Questions

You Were Hesitant to Ask

Replies to Questions from

Yoga Teachers

In this section I would like to reflect upon some questions and concerns raised by yoga teachers. My hope is that after reading this section you will feel a greater sense self-acceptance and more connectedness with others on path of teaching yoga.

My responses in this section are based on 14 years of experience practicing and teaching yoga, and also on thousands of personal conversations and intimate discussions with hundreds of yoga teachers from all styles, backgrounds, and levels of experience.

Sometimes I feel conflicted. I teach all this spiritual stuff and appear so centered in class, but when I am alone I sometimes feel anxious, depressed, unhappy, and sad. Should I be teaching yoga?

Of course, you can still teach yoga. To me, yoga practice includes all that happens in life-including intense emotions. It seems to me that we find our inner wisdom through all of these experiences-pleasant or unpleasant. When I experience intense emotions, I work with them as I would work with a yoga posture.

I have often heard this question, and I wonder where teachers and students get such unrealistic, super human notions about yoga teachers. In my experience, the challenges and painful times in life make us more compassionate, authentic, and aware of our own habit patterns.

Maybe you can teach your class from a space of greater honesty and authenticity. Weave your personal life experiences into the class, and encourage your students to embrace the totality of who they are. Somewhere along the way, maybe you bought into someone else's ideas about what it means to be a yoga teacher. Think more about what you actually consider "spiritual".

I feel nervous before teaching and sometimes during the class. Is this normal? Is there anything I can do? Why do I feel this way?

In my experiences I have noticed different causes behind the feeling of nervousness.

There is a type of nervousness that comes when you are a new teacher and you are not that confident. This is bound to happen, but with more experience and practice it will diminish. Remember that you can use the breathing practices to relax and center yourself. Usually, once you start doing some postures the nervous feelings fade.

There is also the kind of nervousness that comes when you are stepping into unknown territory and sharing deeper parts of yourself with groups of people. I think this is actually a good sign-a sign that you have expressed yourself fully, openly, and with less censorship. When I really share myself and express myself in class, afterwards I sometimes feel vulnerable and uncomfortable.

There is another kind of nervousness that is more like excitement or exhilaration that you may experience while teaching. It is natural to feel this way when you love what you are doing, and truly feel the joy of sharing it. Most of the time your students really appreciate you and you can feel this positive energy in your body.

The last type of nervousness can manifest when we feel doubtful, fearful, or low self-esteem. There are certain times in life when we feel this way. It is just part of the journey, but we usually don't like this part. Do the best you can, and remember that most people have these feelings.

What do I do when I don't feel like teaching, but have made a commitment to teach?

This is a great question and so many teachers have shared this question with me.

Unless I am really sick, or have travel problems, I teach class anyway, despite my feelings. I know that feelings just keep changing and changing. Almost always, I feel better after I have taught a class. It is a good way to get out of our own selfabsorbed state.

Just keep showing up for your commitments, change them when you are ready, and do so in a way that also honors all the people involved. There were a few times when I felt ready to leave a particular class or venue; so I fulfilled my commitment, and then stopped teaching the class.

The more interesting part of this situation is that you can go deeper into what you are feeling and what's behind not feeling like teaching. Pay closer attention to the feelings and senses you are having in your body. While feeling the feelings, listen inwardly to any thoughts that come to your mind. You may get some new insights about your current life situation.

There are many reasons for not wanting to teach:

Sometimes we do not feel physically well.

We may be dealing with overwhelming emotional distress.

We have lost out enthusiasm for teaching at the moment.

There may be phases when we feel inadequate.

We might not be receiving adequate compensation for our time.

We may be going through a period of questioning the yoga practices.

We may feel that it is time to move on from the particular group or venue.

We may not like the environment in which we are teaching.

All of these experiences are valid and worth exploring.

A subtle reason for not wanting to teach could be that you feel you aren't quite being yourself. I had an experience teaching yoga at a spa on the beach in a tourist environment. The owner came to my classes, and at times wanted me to intentionally make the people sweat. This attitude was not in harmony with mine, so I eventually stopped teaching at this place. You have to be true to yourself and teach what is real for you. Even if no one else is teaching how you teach, you have to take a risk and be yourself. It may not be easy for you, but it is an opportunity to express yourself completely.

What do I do when I feel strong dislike for a student?

Does the student do something that feels dishonoring to you? Have you not spoken your true feelings or needs to them? Have you lost touch with your values or boundaries in some way? Is it possible to have a personal talk with this person or write to them about what you are feeling without placing blame or guilt?

I find that students can awaken personal issues that we have-they can push our buttons so to speak. You may consider working with a good therapist. It is important to deal with the feelings that arise from being with your students. I am not saying it is easy to take responsibility for your feelings, but it seems to be the healthiest thing to do. Remember that the student may be reflecting some aspect of the "shadow" side of your personality. I highly recommend the book, "The Dark Side of the Light Chasers," by Debbie Ford, if you would like to explore this concept further.

What can I do when I am sexually attracted to a student?

I would just let the feelings pass by, and I focus your attention back on the class. When the feelings are mutual between you and the student, then it may be best to decide together to terminate your professional relationship and pursue the personal relationship. In my experience, it's healthier to focus on one or the other, but not both at the same time.

What should I do if I have a physical problem while teaching class and I can't continue the class?

I would explain to the class what is happening (with as many or as few details as is comfortable for you). I would also refund their money, or give them credit toward a future class.

I have read in yogic texts and from certain teachers that a yoga teacher should be a vegetarian and live certain principles of a yogic life style. I don't feel I am living up to these standards. Should I be teaching yoga?

Question everything you hear and read. Learn to listen to your inner wisdom and make your decisions based on your deepest values. You may go through certain phases in your life. Keep noticing how you feel and what you are thinking. Most of the spiritual teachers I know have created their own rules to live by.

Sometimes I can't do my own yoga practice or meditate. Does this mean I shouldn't be a teacher?

You are a teacher. Your practice may go through different phases. I have been through years of intense practice, and times of none. I used to beat myself up for the times of not practicing. Now I recognize that we all express our spirituality in different ways at different times. What works for you? Are you practicing in a way that suits your style? Are you just following someone else's plan? Find your own unique way to practice. Listen and let it flow. Drop the guilt and have some fun.

I have a student that appears to be viewing my body sexually during class and I feel uncomfortable. What can I do?

I would address that person directly and immediately, face to face. Select your words carefully so that they won't feel you are blaming them. Remember that there is the possibility that you are projecting on them. If you still do not feel comfortable with their behavior after the conversation, I would politely ask them to leave the class.

What do I do if I have a student that makes too much noise or is disruptive in my class?

If the student is making noises as a form of emotional release, then I would allow them to continue making these sounds. If other class members are bothered by these sounds then they have to handle it in their own way. You can have an open discussion in class.

There are some situations where the disruption is physical in nature and could cause harm to other students. In this case, I would immediately speak to the student. If a student is making too many side comments or jokes, you may want to speak to them after class and suggest that they do this outside of class.

What can I do when a student won't stop performing poses in an unsafe way, and they won't follow my instructions?

If they won't stop or change their unsafe behavior after you have repeatedly attempted to correct them, then you should leave them alone and focus on other students. If they are doing something that puts another student in danger, then you should firmly ask them to stop or leave the class. Ultimately they are responsible for themselves. Have them sign a release form stating that you are not responsible for any injuries occurring in class.

I don't feel enthusiastic about teaching anymore. Should I quit? What can I do?

This can happen. You can take a break from teaching. You can do a workshop in something that inspires you (yoga or another subject). Maybe you are just teaching too much, or in places that don't like. Maybe you need to change your schedule. It is important to explore what you are experiencing and make some changes.

There are times when yoga teachers, like any other professional, want to change their job. Stay open to the changes.

What can I do if a student is doing their own practice during class and won't listen to any of my instructions?

This can be really distracting to the teacher and the other students! I would ask them to move to the rear of the room the next time they come to class. This way they are not such a distraction.

It is curious thing. If they won't listen to your instructions, I wonder why they are even in class. I would say maybe it is their big ego. I think they will eventually stop coming to your class anyway.

On the other hand, if they are just doing something different once in a while, I think this is good and I actually encourage this in my classes.

What can I do if a student talks too much after class and I find myself spending more time than I would like with them?

Get clearer on your personal boundaries. Be attentive, but don't get pulled into their neediness. Politely tell them that you would like to share with them, but another time would be better for you. Request that they call you at a specific time, or communicate with you via email. You can refer them to a good therapist if they just want to tell you all their problems, or you can refer them to another health care specialist if their concerns or questions are out of your field of knowledge.

I am a female teacher. What do I say if a female student invites me out after class and wants to befriends with me?

In the field of yoga I have not read any specific rules prohibiting friendships between teachers and students. Other professions have strict codes of conduct in this regard.

In my opinion, when the feeling is mutual and both people want to cultivate a friendship, then it can be pursued. Together, decide on a protocol for your relationship. Make sure you are both clear and understand what your roles are in the classroom.

Personally, I can report that some of my current best friends are previous yoga students. I have not had a bad experience cultivating a same sex friendship.

What can I do if a student of the opposite sex asks me outfor a date, or expresses interest in starting a relationship with me?

This is tricky. If the feeling is mutual, you both have to decide whether you want to pursue the

teacher-student relationship or the courtship. In my experience, it works better if it is one or the other.

When I substitute for other teachers I experience some negative energy from some of the students in their class. What can I do?

This can be uncomfortable. Do the best you can, be yourself, and teach in your own style. They are just accustomed to their own favorite teacher, and they are probably disappointed that he or she is not there for class. Do your job and focus your attention on the students who are more open and receptive. The negative vibes usually fade during the class as they focus on their yoga practice. If possible, don't take it too personally.

When other yoga teachers come to my class I feel they are judging me, and checking me out. I feel uncomfortable and self-conscious when this happens. What can I do?

Be friendly to them, be yourself, and just teach your class as you would normally teach it. If they are feeling competitive, then it is their issue to handle. If you are feeling competitive or doubtful about yourself, then it is your issue to explore.

I feel awkward when a certain friends or family members come to my yoga class. What can I do?

It can be awkward at first when someone we know from another part of our life sees us in a different light, or in a different role. In this situation, our own personal history is mixing with our professional life. In my experience it works best if the both of you can be in class in professional manner and mentally put aside the personal aspects of the relationship. Is their behavior in class inappropriate or disrespectful to you as a teacher? Maybe you need to talk with them about it.

At times I have gas pains, or have to release gas while teaching. It is uncomfortable and distracting. What can I do to prevent or deal with this?

Don't eat too much or too soon before class. Examine your diet with a qualified Ayurvedic practitioner or nutrition specialist. Use the bathroom before you teach class, and go out for a bathroom break if you really need it. Otherwise, attempt to let it out silently, or maybe open the windows and light incense!

When a student regularly or occasionally farts in class and other people in the class laugh, should I address it or just ignore it?

It depends on the situation and the atmosphere in your class. Usually I just ignore it and focus on what we are doing in class. There have been a few occasions where I have made appropriate comments.

What if I find it hard to teach when I am menstruating? I feel like I would rather just be alone or rest.

This is a common experience with female teachers I know. Sometimes we have to just get a substitute to teach for us. Sometimes we can let the class flow from the mood we are in. Maybe your class can have a different tone then it usually does (perhaps a more inward focus or a slower pace).

I have some students that seem disinterested in what I have to say and look all around the room when I am talking. I find this uncomfortable, is there anything I can do?

Focus on the students that look interested. If you focus on the disinterested students, your energy may be affected. If this behavior happens on a regular basis, I would have a private talk with them to find out what they are experiencing. Avoid using language that could suggest that you are blaming or judging them.

When I have been emotionally unstable some people have said, "You are a yoga teacher, shouldn't you be beyond that already?" I feel uncomfortable, and it seems as if they are projecting an image on me. Itow should I respond?

You could respond with some questions back to them. Ask them about how they view yoga teachers. Maybe they think yoga teachers are super human and somehow immune to human suffering. Maybe they expect the yoga practices to stop emotions. It could be an interesting discussion. I would make sure by the time the conversation was over that they had a better understanding of my definite humanness. I would tell them that I am in the process of deepening my understanding of life as I go through the ups and downs just like everyone else.

I noticed a student crying during class. Should I talk to them, comfort them, or just let them be?

That depends on the student, the class, your relationship, and the type of crying. You may want to check in with them after class. If they are crying intensely, I would approach them and ask if I can help in some way. In certain cases just the simplest act of just bringing them a tissue is enough to acknowledge their tears. I have had students ask me after class if this is normal. I always tell them that it is normal and healthy to cry.

If I can't do a certain posture, should I teach it anyway?

You can teach a posture to the best of your ability even if you can't perform it in its full expression. You can use props to help you demonstrate. If you can step someone else through the posture safely, then it is probably alright to teach it. If you feel uncomfortable with the pose and you can't demonstrate it or explain it well, then don't I don't recommend teaching it.

Replies to Questions from

Yoga Students

We can experience so many different types of thoughts and feelings while we are in a yoga class, or practicing on our own. There are times when our experiences can raise big or small questions in our minds. Sometimes insights come from our own direct life experience, and sometimes they come from hearing about the experiences of others. In this section I hope that my comments may provide some insight into questions you may have. I aspire to lighten your load, heighten your awareness, and provoke more questions in you.

Sometimes I feel self-conscious in yoga class. Is this normal?

I think it's normal. Be patient with yourself. I know very few people who haven't felt self-conscious at one time or another. I suggest that you go a little deeper into the sensations that accompany the self-consciousness. What is going on in your mind? I have had this experience at times and found that the feelings dissolved over time as I became more comfortable with myself, the yoga practice, and the teacher.

I feel that I am infatuated, and maybe even in love with my teacher. Should I approach him/her? What should I do with these feelings?

I think it is common to feel loving feelings toward someone who is a positive force in your life, cares for you, and shows an interest in your greater well-being. It is good to communicate your

feelings if you feel the need, and at the same time keep the reality of the situation in mind. I think it is important stay unattached to the results of your communication with the teacher. Remember to respect the professional boundaries of the teacher.

Even though I know yoga is not about competition I find myself looking at other students and comparing myself. I don't want to do this, but it happens anyway. Do you have any suggestions?

This is a very honest question. I have noticed many students doing this in class. I have experienced this too, and I am sure that most of us have felt competitive in life in one scenario or another. Well, at least you are aware of it! So when you catch yourself doing it, just bring your focus once again to your body, your breath, or the feelings behind your impulse to be competitive. It is all part of the process of yoga. We are becoming more aware of our habits, tendencies and mental patterns. Certain mind-body types have this tendency more than others. If you are curious, read more about the "pitta" body type in Ayurveda.

Sometimes I feel like the teacher is reading my mind and making comments directly to me. I am imagining things?

On one level we are all connected, and your time in a yoga class can be a very personal and unique experience. I think it is normal for the teacher to be aware of what is happening with you and the other students. It may be that many people in the class are having a similar experience and the teacher is picking up on it. Sometimes your teacher will be more in tune than other times. You can accept the comments as a gift and appreciate the mystery of the experience, but I wouldn't take it too personally.

Once in a while I feel angry with the teacher for making us do certain things in class. Why?

There are different reasons why you may feel angry: the teacher may be overzealous or lack empathy, you may be pushing yourself too hard, you may be physically over-heated, you may be angry at something else, or you may be picking up on someone else's anger.

In the first case, the teacher may be pushing you too hard in class, or not instructing to your level of ability. Once a student told me that they felt angry because a teacher asked the class to perform headstands, but did not offer any instruction for how to build into a headstand for the students who were unfamiliar with the techniques. If this is the case, I would suggest speaking to the teacher after class and offer some suggestions.

You may feel angry because you are not honoring your body and resting when you need to if the class is getting too challenging. Listen to your own needs and body signals.

If you have the type of body that gets over-heated easily and the room or climate is too hot, you may find yourself feeling irritated. I definitely have experienced this! Certain types of vigorous hot yoga classes may not be good for your body type. For more information on this, read about Ayurveda and the pitta body type according to Ayurveda.

I want the teacher to notice me when I do a pose well. Is this my ego?

Yes and no. I think we learn to look for outside approval when we are young. We want to be good students and children. We look to others for validation and feedback. Wanting feedback for what we are doing is a natural thing. We are dynamic beings and get information about ourselves from the world around us. I notice that our minds, however, can be a little out of control with the approval seeking.

You can become more aware of your motives behind the desire. Why do you want the teacher to

notice you in a pose? Do you have this tendency in other aspects of your life as well? Can you bring your attention back to yourself when you catch it happening? It is all good juicy stuff to use for increased selfawareness and empathy toward others.

I notice sexual feelings arising in my body during class. Is this from the postures?

It is possible. I have found that the postures definitely stimulate our bodies physically and energetically in many ways. Maybe you were feeling sexual before class and just became more aware of it? Sexuality is part of our human nature. Feelings can arise anywhere, anytime.

Notice if you are intentionally provoking or seeking some experience from class. Be honest with yourself.

There are certain people in class that repel me and I don't want to be next to them in class. Is it okay for me to move my mat? I feel "un-yogic".

Do what feels right to you about your placement in class, and also notice if you are projecting your judgments onto the person. I think it is natural to be attracted to some people and repelled by others in life. Is there something you can learn about yourself from the experience? How are you like them? Have you ever been like them? You never know.. .they could end up being your best friend.

I sometimes have problems with gas when I do yoga. Do you have any advice?

Most books and professionals suggest refraining from yoga practice 2-4 hours after eating. If you are practicing yoga soon after eating you may be upsetting your digestive system.

Some of the postures put pressure on the colon and small intestines, and help to relieve excess gas. This is great for you, but not so great for your classmates! There always seems to be that moment of uncertainty with accidental farting. We wonder if we should excuse ourselves, or act as if it didn't happen. If you are in a yoga class, I think it's probably best to ignore it.

You may also want to look more closely at your diet, and investigate food allergies/food sensitivities you may have. It may be time for some type of digestive cleansing regime.

I have a lot of nasal discharge during breathing practices. Is this common?

Certain vigorous pranayama practices like bhastrika or kapalabhati can release mucous from your sinuses. Bring tissues with you to class. If it needs to flow, then let it flow!

I sometimes cry during or after class. Do other people experience this? Jr thought yoga was supposed to make you feel good and happy!

To me, the yoga practice is about feeling more, not less. Maybe you just didn't have time to notice the feelings before. I have experienced crying in class and after class, and so have many other teachers and students that I know. We are becoming more aware of our body, thoughts, and feelings. Sometimes we cry because we are touched by something said or felt in class, and sometimes we are just feeling sad.

Sometimes I feel like modifying a posture or doing a different posture than the teacher is suggesting. Is this okay?

In some styles of yoga this is okay, and in some it is not. In my classes, I encourage the students to listen to their own body wisdom and modify the posture if necessary. If you are performing lots of postures that are different from what the teaching is instructing, then I would suggest going to the back of the room so that your actions don't disturb the teacher or the other students.

I find myself comparing myself to the teacher and sometimes I feel inadequate and jealous. How can I get over this?

It is natural to respect and admire your teacher. If these feelings are coming up, I suggest putting the focus back on yourself, your uniqueness, and your good qualities. I have compared myself to the teacher at times when I doubted myself. Investigate what else you want to do in your life and how to develop or express your creative talents.

Is it okay to leave during a class if you really find you don't want to be there?

Yes, I think so. I have done that a few times. It may mess with the teacher's mind, but they will handle it. If you have a long term relationship with the teacher, you may want to call them and share your experience.

I really appreciate my teacher and would like to give a gift. Is this appropriate?

I think it is appropriate if there are no hidden motives behind your gift, and if you are not attached to any results of giving the gift. When my students have given me gifts from a sincere place, I was able to openly receive them.

I find it hard to focus when I practice yoga on my own. Is this common? What can help me practice alone?

This is such a common question! I think it's partially because the yoga practice is unfamiliar to us at the beginning and it naturally takes us awhile to cultivate new habits and hobbies in life. Also, if you are unfamiliar with spending time alone, then it may be even more challenging. If you are practicing at home, create or find a space with few distractions. I find it easier to practice when I am outside in a natural setting. Try playing some music and dance freely before doing the more formal practices. Give yourself small, manageable goals in the beginning. For example, agree to just practice one or two postures per day and see what happens.

I can't meditate. My mind never shuts up. What am I doing wrong?

Where did thinking get such a bad rap in meditation and yoga practices? From what I can tell, part of the mind's nature is to think. Sometimes thinking is interesting, fun and motivating. Sure, when the mental chatter is out of control it can be quite unpleasant and even stressful. Meditation is awareness of all and everything we do-including thinking. Don't make an enemy of your mind. It is part of you. Become aware of the thoughts and be gentle on the mind. It is part of the meditation process to keep noticing what is happening.

When the teacher comes over to assist me I feel distracted, singled-out, and I can't relax. Do you have any suggestions help me get the most out of the personal attention I am getting?

Focus on your breath. Focus on what you are feeling. Let go and let them move you. Over time you will get used to the attention and not take it so personally.

If I smoke, drink and eat meat does this mean that I am a bad yoga practitioner, or shouldn't practice yoga?

In my opinion, you are not a bad yogi/yogini, and by all means keep practicing if you like to practice. How you live and what you do is personal. If you don't like doing these things and you feel they are harming you, then work at changing your behavior. All experiences are part of life.

There is another student in the class that breathes heavily and makes emotional noises which distract me. What should I do?

I would pick the farthest spot away from that person. Often the teacher can't do anything about

because every student has a right to be there and express themselves freely. Maybe you could reframe the situation and view it as a way to deepen your concentration.

Sometimes I feel dizzy when I get up from a pose. Is there something wrong with me?

This could be a result of a rapid change in blood pressure when you get up. Maybe you didn't eat enough that day. When your head is below your body for period of time in a pose, stand up very slowly and gradually.

I feel guilty if I don't practice regularly. Do you have any comments?

I love this question. I have felt this too! It is so interesting how we can feel guilty for not doing a practice that is designed to create more freedom and expression in life!

Remember, there is no one watching. Set reasonable goals for yourself and relax when you don't reach them. Whose rules are you trying to follow? Maybe those rules don't work for your unique being at this point in time. You will probably enjoy the practice more and do it more if you let go of what you think you "should" be doing.

I feel ashamed of my body and have a negative self-image. Will this improve by practicing yoga?

I have observed that yoga practices improve people's self-image, but I can't say for sure that they will for you. I certainly don't think practicing yoga can hurt your self-image. You may want to investigate the thought patterns and mental conditioning you have regarding your body and self-image. Meditation is a great way to catch those thoughts in action. Maybe you can seek out an experienced counselor or therapist with experience in this area.

About the Author

Stephanie (a.k.a. Stefani) Ann Pappas has been practicing and teaching yoga since 1992, and is a registered 500 hour level yoga teacher with Yoga Alliance. Stephanie began directing yoga teacher trainings in 1999. In 2002, she founded the Devalila Yoga Teacher Training program, a registered 200 hour level training with Yoga Alliance, and has certified over 100 teachers. She is also a massage therapist, interfaith minister, ESL teacher, and aspiring musician.

Stephanie has practiced different forms of movement throughout of her life including gymnastics, running, hiking, mountain biking, and martial arts. Her current focus is yoga and belly dancing. She holds regular belly dance classes for women, yoga classes, and yoga teacher trainings in the U.S.A in New Jersey, and in Mexico. Stephanie offers yoga and belly dance practice DVDs, and is the co-author of 9 other books on yoga. She continues to wonder about life, love, and relationships.

Stephanie is available for classes, workshops, and seminars worldwide.

You can contact Stephanie through her website www.devalilayoga.com

This is the first comprehensive guide for yoga teachers and yoga students providing all the details on how to adjust or assist someone while they are performing a yoga posture. With yoga's recent worldwide popularity, this book is invaluable to millions who teach and practice yoga. The book goes beyond just the physical aspects of yoga—it deals honestly with some touchy matters that affect yoga teachers and students alike. The book's clear instructions and generous supply of photos make it easy for yoga teachers to learn how to adjust or assist their students. Yoga students can use this book to enhance their personal practice by working with a partner. Yoga Posture Adjustments and Assisting: An Insightful Guide for Yoga Teachers and Students demonstrates and explains adjusting techniques for over 65 postures and contains over 200 photos. You can learn:

- How to adjust or assist someone who is performing a yoga posture
- How to perform the yoga adjustments using effective body mechanics and leverage
- Multiple variations for adjusting a posture
- How to use yoga props
- Verbal cues to help your yoga student or partner
- Ways to accommodate different body types
- How to safely take your students deeper into the yoga postures

The book also features a thought provoking section on how to navigate the physical, mental, and emotional challenges of being a yoga teacher or yoga student. It candidly discusses topics such as:

- Dealing with difficult emotions before, during, or after class
- Coping with thoughts that can surface during yoga class or home practice
- Managing expectations and judgments about ourselves, our teachers, and our students
- Dealing with unusual situations in the classroom
- Handling competitiveness, jealousy, nervousness

The international yoga community will greatly benefit from this book.

Stephanie (a.k.a. Stefani) Ann Pappas has been practicing and teaching yoga and meditation since 1992. She is the founder and director of the Devalila Yoga Teacher Training, a registered 200 hour level training with the Yoga Alliance. Stephanie has certified over 100 teachers in North America. She is also a massage therapist, Interfaith Minister, belly dance teacher, and ESL teacher.

Visit her website at www.devalilayoga.com

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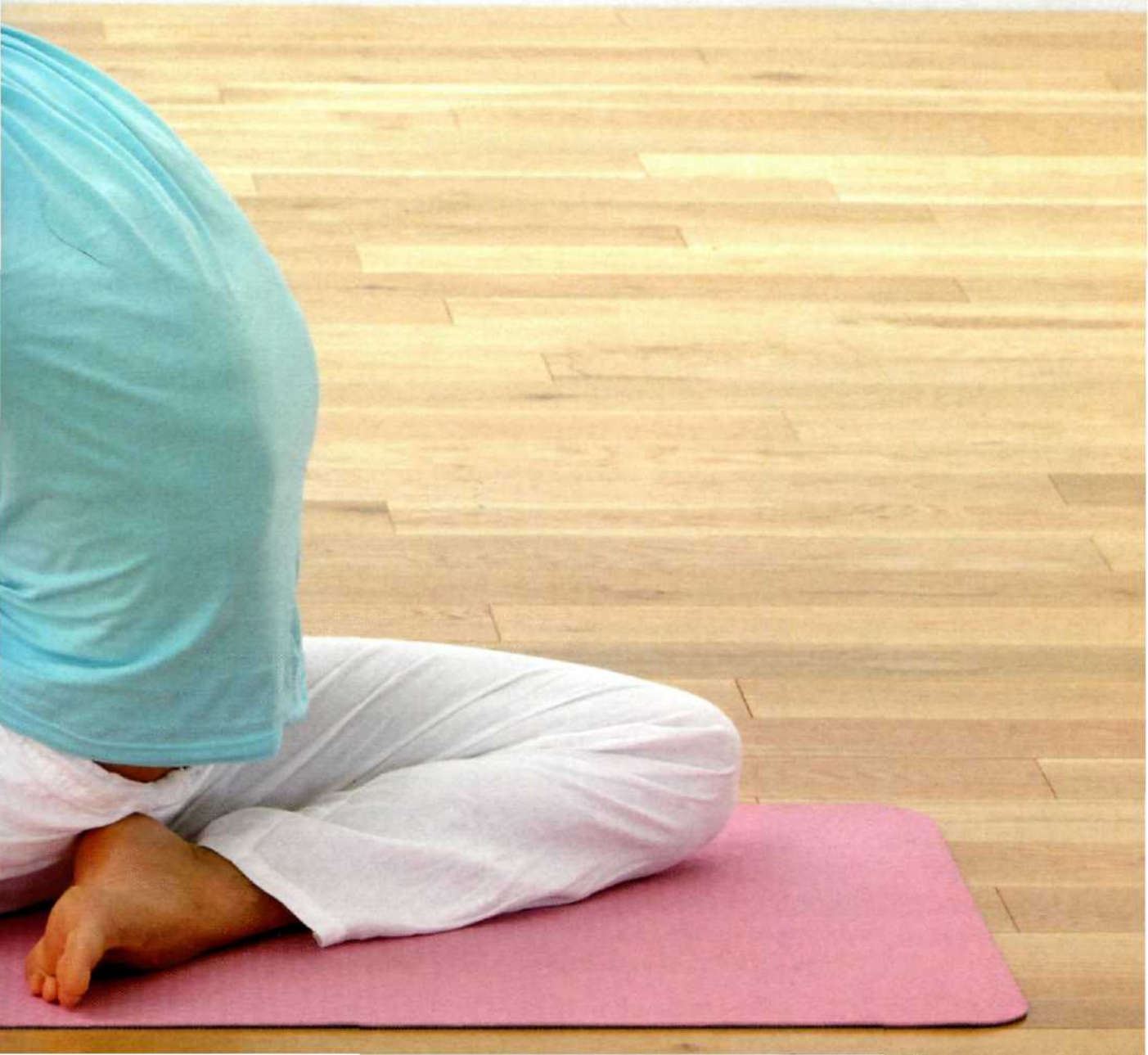
Introduction



An ancient guide to healthy living

Yoga is a centuries-old guide to healthy living developed by ancient Indian sages. With its unique blend of physical exercises, psychological insight, and philosophy, it can help you to bring your body, mind, and spirit into better balance. Yoga takes a holistic approach to life, enabling you to experience complete equilibrium inside and out.

Yoga for everyone

For centuries, yoga was open only to people who were ready to search for a teacher in India, and traditionally it only appealed to those willing to forego the life of a "householder", renouncing the world and living in seclusion. H.H. Swami Sivananda (1887–1963) and Swami Vishnudevananda (1927–1993) were among the first of the Indian yoga masters to make yoga accessible to anyone, no matter their background, age, or status, or where in the world they lived. In doing so, they helped to bring yoga to the West.

Swami Sivananda

Sri Swami Sivananda was a practising doctor who was eager to do all he could to relieve human misery. In a search to ease his patients' physical and mental discomfort, he decided to look within himself. He began his quest by becoming a swami – a wandering monk – and after long years of secluded practice in the Himalayas, he attained mastery in yoga and meditation. Swami Sivananda went on to found the Divine Life Society in Rishikesh, in the Himalayas. Here, he trained students from many countries and various religions in a synthesis of the key paths of yoga, encompassing Hatha and Raja Yoga, Karma Yoga, Bhakti Yoga, and Jnana Yoga (see pp10–11). He also wrote more than 200 books in English explaining the most complex aspects of yoga in simple, practical terms.

Swami Vishnudevananda and the West

Swami Vishnudevananda was a close disciple of Swami Sivananda and an adept in the practice of Hatha and Raja Yoga (see p10). In 1957, Swami Sivananda commanded him to, "Go to the West, people are waiting".

"Yoga is a science perfected by the ancient seers of India, not of India merely, but of humanity as a whole. It is an exact science. It is a perfect, practical system of self-culture."

Swami Sivananda

With no means of support other than his faith and a remarkable energy, Swami Vishnudevananda travelled to North America, Europe, and many other parts of the world, where he became a pioneer in yoga, spreading the teachings of his master.

Swami Vishnudevananda founded the International Sivananda Yoga Vedanta Centres at the heart of many of the world's capital cities. Here, people are able to learn yoga as they go about their daily lives. Swami Vishnudevananda also established several ashrams (yoga retreats) in beautiful natural settings around the globe, from the forested mountains of Canada to Paradise Island in the Bahamas. He promoted yoga vacation programmes, which offer people an opportunity to learn the yogic disciplines while enjoying a healthy and relaxing holiday.

After experiencing a vision during meditation, Swami Vishnudevananda felt compelled to start up a campaign for world peace, which became known as T.W.O., True World Order. It adopted the mottos, "United we live – divided we perish" and "Cross man-made borders with flowers and love, not with bombs and guns". Swami Vishnudevananda learnt how to pilot a small plane and flew over many of the world's conflict zones, showering them with flowers and leaflets promoting the universal love taught by all the world's great religions. Two memorable flights took him over the Suez canal during the Sinai War in 1971 and over the Berlin Wall from West Germany to East Germany in 1983.

Teacher training

As part of his vision of yoga for world peace, Swami Vishnudevananda taught the first yoga teachers' training course in the West, in 1969. As well as offering a broad study of yoga philosophy, psychology, and teaching techniques, the four-week residential programme focused on an intense personal practice of yoga and meditation. It is even more popular today than during Swami Vishnudevananda's lifetime. Since the training course was founded, more than 25,000 graduates from all walks of life and every continent have taken the yoga teachings of Swami Vishnudevananda and Swami Sivananda back into their own communities.

The defining feature of this approach to yoga is its simplicity: regardless of age, physique, and walk of life, anyone can benefit from this step-by-step guide to asana (exercise), pranayama (breathing), relaxation, diet, positive thinking, and meditation. These key teachings are outlined in the chapters of this book to help you, too, to experience this ancient way of bringing balance into every aspect of your life.

A JOURNEY BEGINS
Shortly before his departure to the West, Swami Vishnudevananda stands beside his master, Swami Sivananda.

TRAINING THE TEACHERS
An asana class during a teachers' training course in Nassau, The Bahamas. Swami Vishnudevananda works with a student.

PIONEERING WORK
Swami Vishnudevananda was one of the first Indian master yogis to spread the teaching of yoga across the western world.

What is yoga?

Traditionally, there are four paths of yoga. Although each of them is a complete discipline in itself, it is best not to follow one path only. Combining the four practices helps the emotional, intellectual, and physical aspects of your life to develop in harmony.

The four paths of yoga

Of the four yogic paths, in the West only one is generally well-known and widely practised – the physical and mind-focusing path of Hatha and Raja Yoga, which includes postures and breathing exercises.

HATHA AND RAJA YOGA This is the yogic path of body and mind control. It is best known for its practical aspects, particularly its asanas (postures) and pranayama (breathing exercises). This path teaches ways of controlling the body and mind, including silent meditation, and its practices gradually transform the energy of the body and mind into spiritual energy. This path suits people who are looking for inner and outer transformation.

KARMA YOGA This is the yogic path of action and you practise it when you act selflessly, without thinking about success or reward. This path is valued for purifying the heart and reducing the influence of the ego on your words, actions, and interaction with others. Practising Karma Yoga is the best way to prepare yourself for silent meditation (see p204). It suits people with an active, outgoing temperament.

BHAKTI YOGA This is the yogic path of devotion. It involves prayer, worship, and ritual, including chanting and singing devotional songs, and those who practise it eventually come to experience God as the embodiment of love. This yogic path has great appeal for people who are emotional by nature.

JNANA YOGA This is the yogic path of wisdom or knowledge, and it involves studying the philosophy of Vedanta – one of the six classical Indian philosophies. It teaches ways to examine the self and analyse human nature. The goal of this form of yoga is to recognize the Supreme Self in yourself and in all beings. This path is best suited to intellectual people, and is considered by many to be the most challenging path.

HATHA AND RAJA YOGA IN ACTION
This path includes the practice of asanas. Each asana requires a specific balance of posture, breathing, and relaxation.

The eight steps of Hatha and Raja Yoga

This path was codified by the ancient sage Patanjali in his *Yoga Sutras* as an eight-step training system for body and mind, which he called Ashtanga Yoga (in Sanskrit, ***ashta*** is "eight" and ***anga*** "division" or "limb"). The steps purify body and mind until enlightenment occurs.

1 YAMA Sets out the actions from which yogis should restrain. It advocates living a life of non-violence and truthfulness, sublimating sexual energy, not stealing, and not accepting gifts or bribes.

2 NIYAMA Details the actions a yogi should do. It advocates external and internal cleanliness, contentment, self-discipline, study of spiritual literature, and devotion to God. Together, the yamas and niyamas form a highly moral code of ethical conduct. Following them makes the mind more positive and purifies it, ready for deep meditation.

3 ASANA The third step relates to posture. The 12 basic asanas and their variations prepare the body for the meditative poses that are used in steps 6, 7 and 8 (see below).

4 PRANAYAMA The fourth step concerns control of *prana* or life energy. This is achieved by doing deep-breathing exercises, which include practising breath retention (see pp182–5).

5 PRATYAHARA Steps 3 and 4 project the practitioner into a world of intense inner perception. Step 5 teaches how to stabilize this withdrawal of the senses as a preparation to concentration.

6 DHARANA In this step, concentration, the mind is fixed on an imaginary or real object to the exclusion of other thoughts. This is the key practice in all yoga meditation techniques (see pp200–204).

7 DHYANA Step 6 leads to step 7, meditation. This uninterrupted flow of thought waves has been compared to oil flowing in an unbroken, stream from one container to another.

8 SAMADHI The final step happens effortlessly as, during meditation, the mind is absorbed into Absolute Consciousness, beyond all the usual states of waking, dreaming, and deep sleep (p198).

"You can have calmness of mind at all times by the practice of yoga. You can have restful sleep. You can have increased energy, vigour, vitality, longevity, and a high standard of health. You can turn out efficient work within a short space of time. You can have success in every walk of life."

Swami Sivananda

The yogic path to well-being

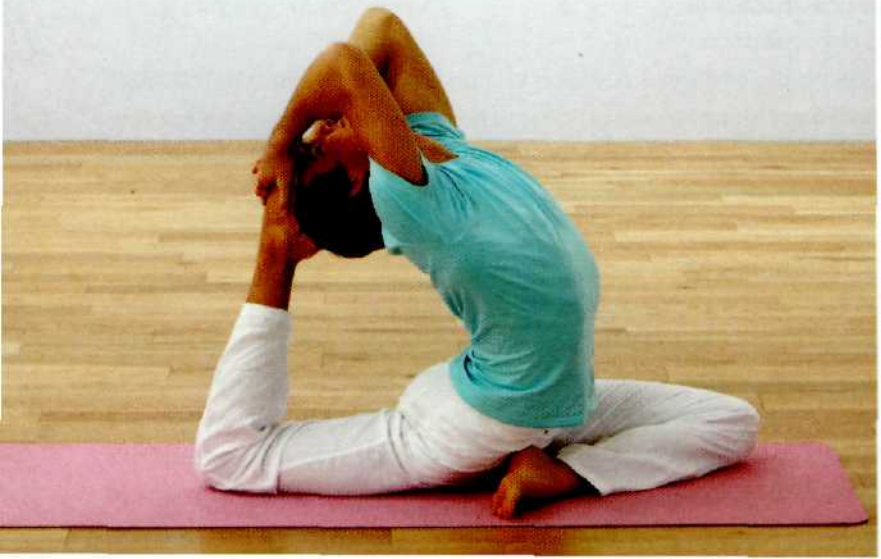
Swami Vishnudevananda taught five easy principles of yoga, all of which are explained in different chapters in this book. They bring together the often-complex philosophies and teachings of India's ancient yogis in a form that is easy to understand and simple to adapt to everyday life, wherever you live in the world.

The five principles of yoga

If you follow these five easy principles, said Swami Vishnudevananda, you will improve your physical and mental health and deepen your connection with the spiritual aspects of life.

Proper exercise

Asanas (see pp42-169) rejuvenate the whole body. They work primarily on the spine and central nervous system. The spine gains in strength and flexibility, and circulation is stimulated, bringing nutrients and oxygen to all the cells of the body. Asanas increase motion in the joints and flexibility in muscles, tendons, and ligaments. They massage internal organs, boosting their function.

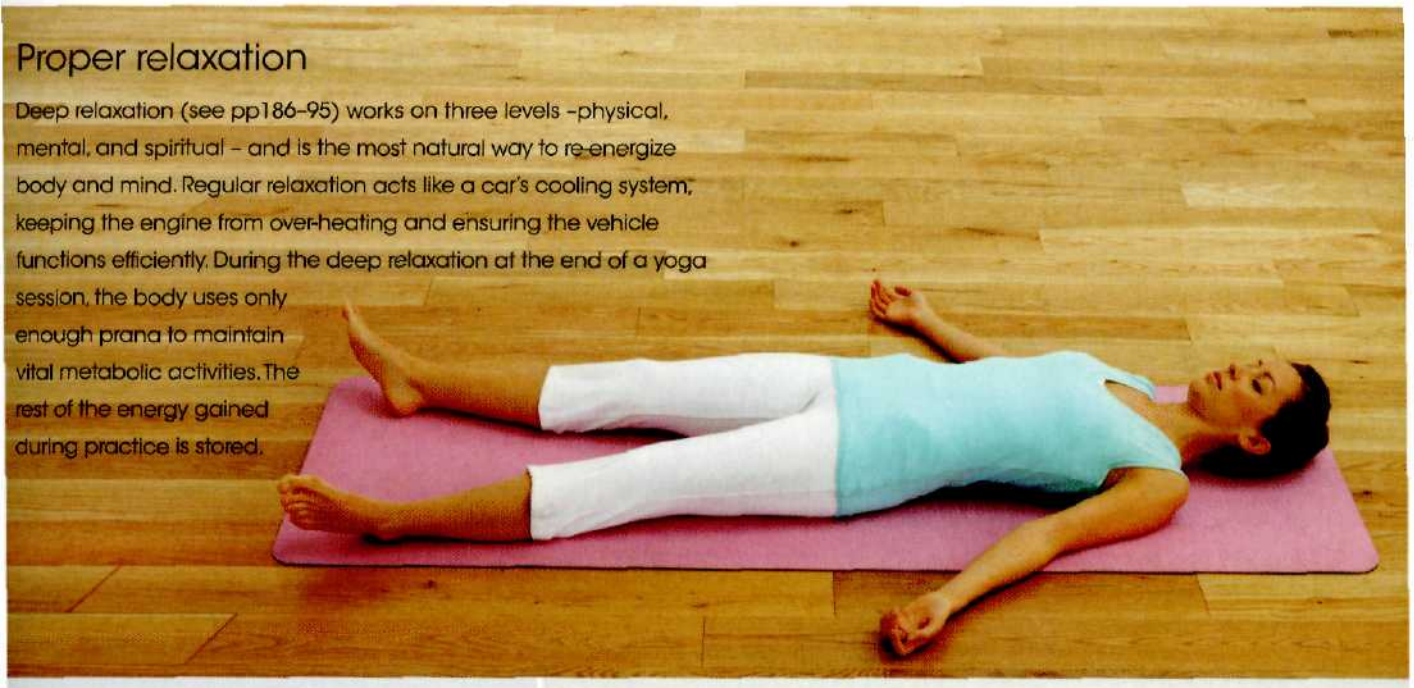


Proper breathing

Pranayama (see pp176-85) stimulates the energy reserves of the solar plexus, revitalizing body and mind. Regulating the breath helps to store prana, laying down reserves of strength and vitality. Deep, conscious breathing helps to conquer depression and stress, and controlling prana - by controlling the breath - can relieve symptoms of illness in a similar way to acupuncture.

Proper relaxation

Deep relaxation (see pp186–95) works on three levels –physical, mental, and spiritual – and is the most natural way to re-energize body and mind. Regular relaxation acts like a car's cooling system, keeping the engine from over-heating and ensuring the vehicle functions efficiently. During the deep relaxation at the end of a yoga session, the body uses only enough prana to maintain vital metabolic activities. The rest of the energy gained during practice is stored.

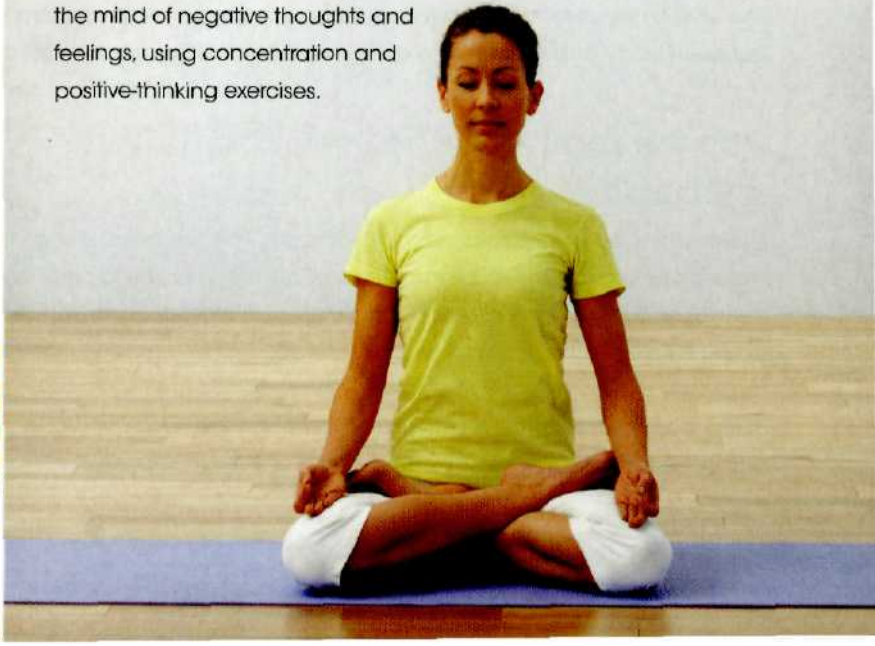


Proper diet

The yogic attitude to food (see pp208–249) is eat to live, not live to eat. Yogis choose foods with a positive effect on body and mind, and least negative effects on the environment and other creatures. A lacto-vegetarian diet is recommended – grains, pulses, fruits and vegetables, nuts, seeds, and dairy products – including plenty of plants. Fresh and unrefined foods are thought best, prepared simply, to preserve maximum nutrients.

Positive thinking and meditation

Positive thinking and meditation (see pp196–207) are the yogic keys to peace of mind. Meditation techniques calm the mind and enhance focus. Regular meditation promotes physical and spiritual, as well as mental, well-being. Before meditation, yoga practitioners clear the mind of negative thoughts and feelings, using concentration and positive-thinking exercises.



The Hatha Yoga Pradipika

The oldest surviving of the texts on Hatha Yoga, the *Hatha Yoga Pradipika* is said to have been written down by Swatmarama Yogi in the 15th century, although it is derived from earlier sources. Despite being more than five centuries old, the advice given in this manual on postures, breathing exercises, and the philosophy of yoga is still relevant today, whether you are a beginner or a more experienced practitioner.

Selected extracts

These six extracts from the *Hatha Yoga Pradipika* – which translates as "Light on Hatha Yoga" – have been selected to inspire your practice. Commentaries suggest how to apply them to deepen your experience of yoga.

Swatmarama Yogi, having saluted his own teacher, gives out the Hatha Vidya [knowledge] solely for the attainment of Raja Yoga. I 2

This passage stresses the importance of thinking of your practice as a way of controlling the mind – this is the path of Hatha and Raja Yoga (see p10). Many in the West regard asanas as a form of physical exercise only, but practising them in this way is not to be recommended. It is impossible to master the mind without first controlling its physical counter-part, the body. This is what we seek to do when practising postures. The connection between body and mind is one of the most fascinating aspects of yoga.

Asanas make one firm, free from disease, and light of limb. I 17

This explains how beneficial *asana* practice is. The "firmness" is seen in many ways, including improved alignment, increased resistance to heat and cold, hunger and thirst, and greater capacity for self-healing. Lightness of limb does not mean only physical weight (although asana practice does help maintain an ideal weight), but the ability of asanas to raise the vibratory level of the body's energy. This is seen in movement: if someone with a large frame practises asanas, a new lightness appears in their movements.

Moderate diet is defined to mean taking pleasant and sweet food, leaving one-fourth of the stomach free, and offering the act up to Siva. I 58

Here, we are told that a moderate, nutritious, and light diet is key to success in yoga. Easily digested, fresh vegetarian foods, simply cooked, are thought to be a good source of prana, or life force. Swami Sivananda advised that the way to be always happy is always to feel a little hungry.

When the breath wanders, i.e., is irregular, the mind is also unsteady, but when the breath is still, so is the mind, and the yogi lives long. So one should restrain the breath. II 2

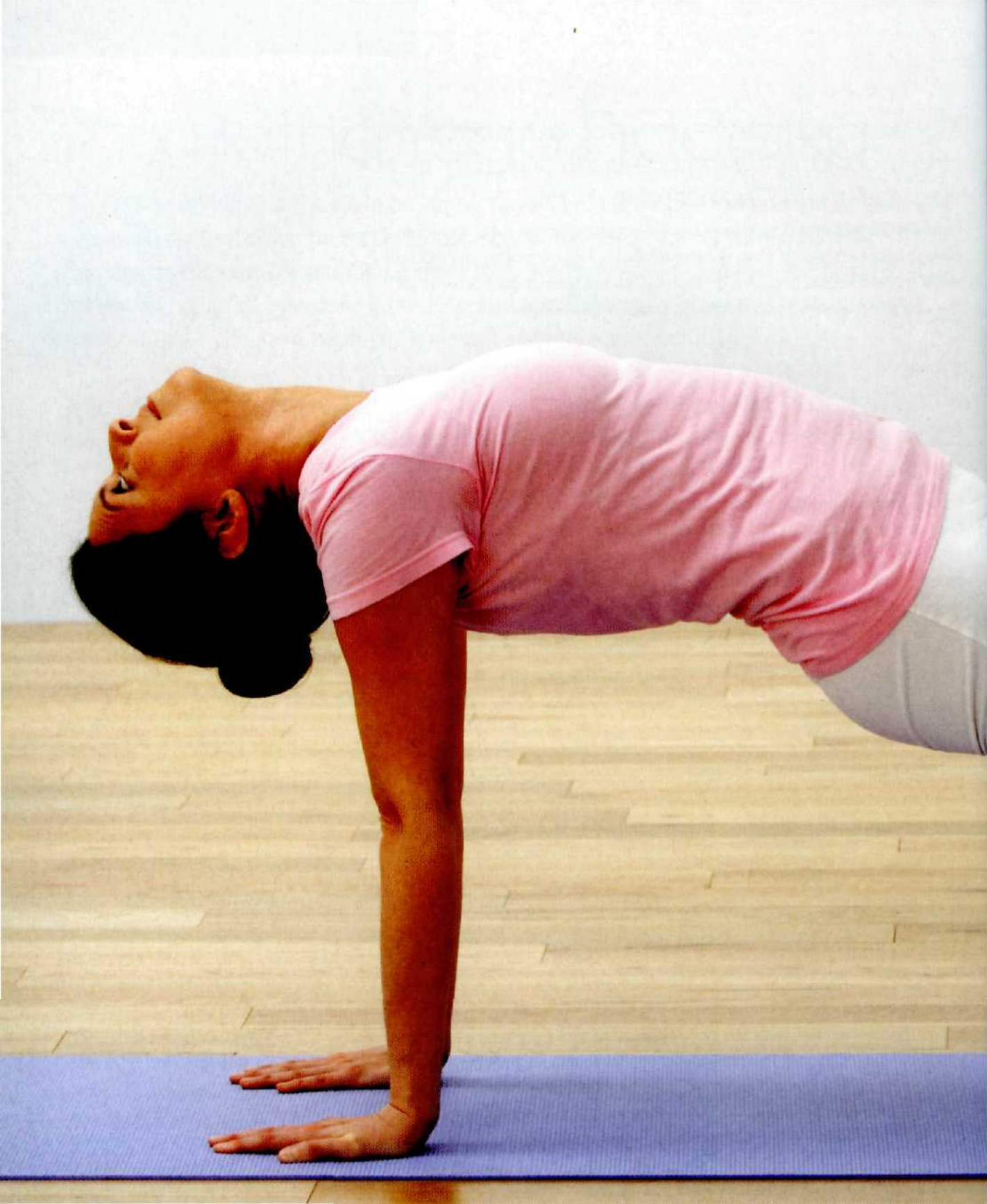
Breath control is central to yoga: the term *Hatha* means "union of the sun (*Ha*) and the moon (*Tha*)", where sun and moon refer to inhalation and exhalation respectively. Both asanas and pranayama provide excellent training for the breath, which increases vital energy, fine-tunes the nervous system, and eventually leads to control of the mind.

He should gradually inhale the breath and as gradually exhale it. He should also restrain it gradually. II 18

This highlights the real hallmark of an accomplished practitioner of yoga. Strength and flexibility in postures are not by themselves a sign of progress. A smooth, rhythmical, balanced breath is. But never make any violent effort to control the breath in your yoga practice; this strains the nervous system.

The Yogi succeeds by cheerfulness, perseverance, courage, true knowledge, firm belief in the words of the guru, and by abandoning bad company. I 16

Making yoga practice your own by having the right "knowledge" and "firm belief" (of the five principles, see pp12–13) opens the door to new friendships with like-minded people. The purpose of yoga is to shift your life force from a dormant or static state to a dynamic state. This requires perseverance, self-discipline, and courage.



The Benefits of Yoga

Boosting self-healing

The human body is superbly intelligent. It manages to maintain an intricate physiological balance day and night, through every stage of life. Practising yoga helps the body to maintain this complex balance, which boosts your capacity for self-healing.

The study of physiology shows that the nervous and the endocrine systems (see pp34–7) ensure that the body's other major systems, such as the digestive and respiratory systems, all cooperate in an "intelligent" way. The result is "homeostasis", derived from Greek and meaning "remaining the same". When homeostasis is achieved, there is perfect balance between the various body functions and, as long as the body has a regular supply of food and water and is not over-taxed physically, it tends naturally towards self-healing. Ancient yogis described a different but equally complex system of homeostasis in the body, based on a finely tuned balance of the five elements: earth, water, fire, air, and "ether" or space (see right). When these elements are in equilibrium, again body and mind tend towards self-healing.

The causes of disease

Why, then, does the body succumb to illness, even in parts of the world where there is no scarcity of food or water and where people do not have to do hard physical labour? According to yoga, the chief cause of disease lies in difficult emotions, such as anxiety, desire, anger, hatred, and jealousy. These disturb the body's natural balance and can lead to unhealthy lifestyle choices, from overeating to smoking. These, in turn, are factors in many diseases common in modern societies, from heart disease to diabetes.

Balancing the emotions

Practising positive thinking and meditation (see pp196–207) makes it less likely that you will be affected by negative emotions and the lifestyle choices they lead to. But it is easier to meditate and think positive if you first pay attention to the body, practising yoga asanas, or postures (see pp42–169), pranayama, or breathing exercises (see pp176–85), and relaxation (see pp186–95). You can also support your health by eating well (see pp208–49).

All these elements come together in yoga. In fact, the Sanskrit word *yoga* means "union". Practising yoga helps the body to find its natural balance and teaches the mind to be a responsible and intelligent driver of the body.

The five elements

Traditional yogic texts describe the body as a "food sheath" (*anayamaya kosha*), made up of five elements. We maintain health by constantly adjusting the body to bring it into harmony with these five elements.

Earth Bones, muscles, and skin contain this element. Asanas move the earth element in all possible directions.

Water Mainly relates to blood. Asanas improve circulation, balance blood pressure, and strengthen the heart.

Fire Seen in the 36–39°C (97–102°F) range of internal temperatures that the body can survive. Practising yoga adapts the body to climatic change.

Air Yoga improves the circulation of air in the body. Breathing exercises increase the exchange of gases in the lungs, while asanas boost blood circulation, ensuring proper oxygen and carbon dioxide levels in every cell.

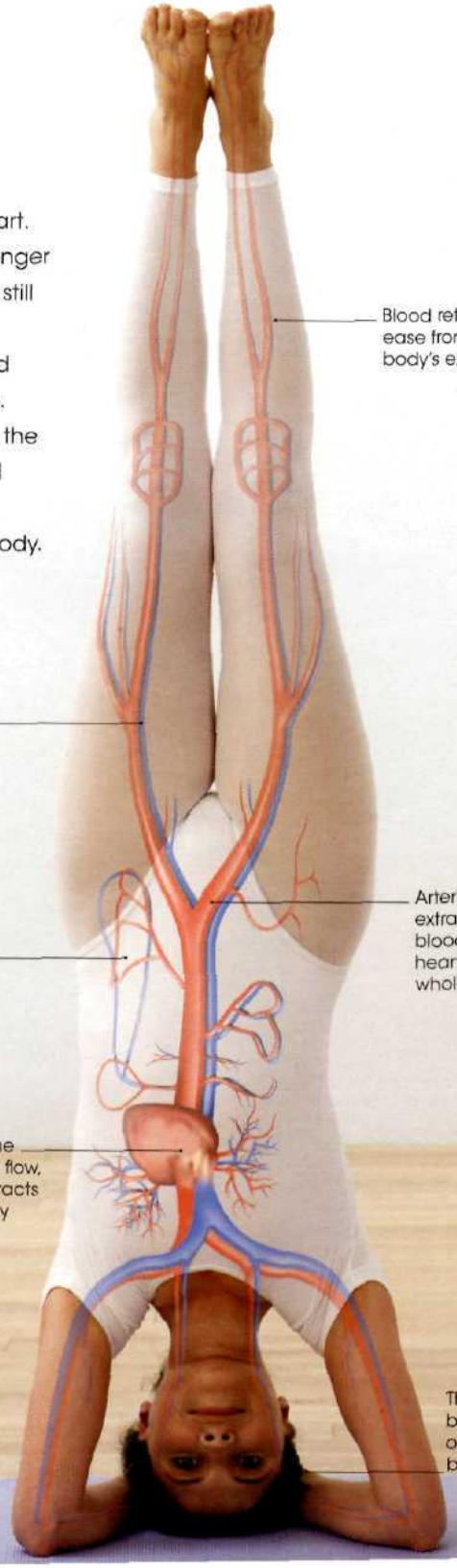
Ether, or Space This is the almost empty space at the core of matter, as described by quantum physics. It is here that prana (see p178) – invisible vital energy – circulates. Yoga postures allow prana to flow freely and breathing exercises increase its vibratory level.

Benefits for the heart

Modern science is now discovering the many health benefits that classical yoga postures bring to mind and body. Among the most important benefits discovered so far is the effect of yoga on the heart.

All physical exercise promotes better blood circulation and a stronger heart. Although yoga is gentler than most other types of exercise, it still provides a good cardiac workout. In addition, when you practise inverted poses, such as Headstand (see pp62–75) or Shoulderstand (see pp76–9), your heart benefits from a unique form of stimulation.

In these inverted, or upside-down, poses, the pull of gravity draws the blood from the legs and lower trunk back to the heart. This boosted blood flow stretches the heart muscle, which then contracts more powerfully, pumping an increased amount of blood to the whole body.



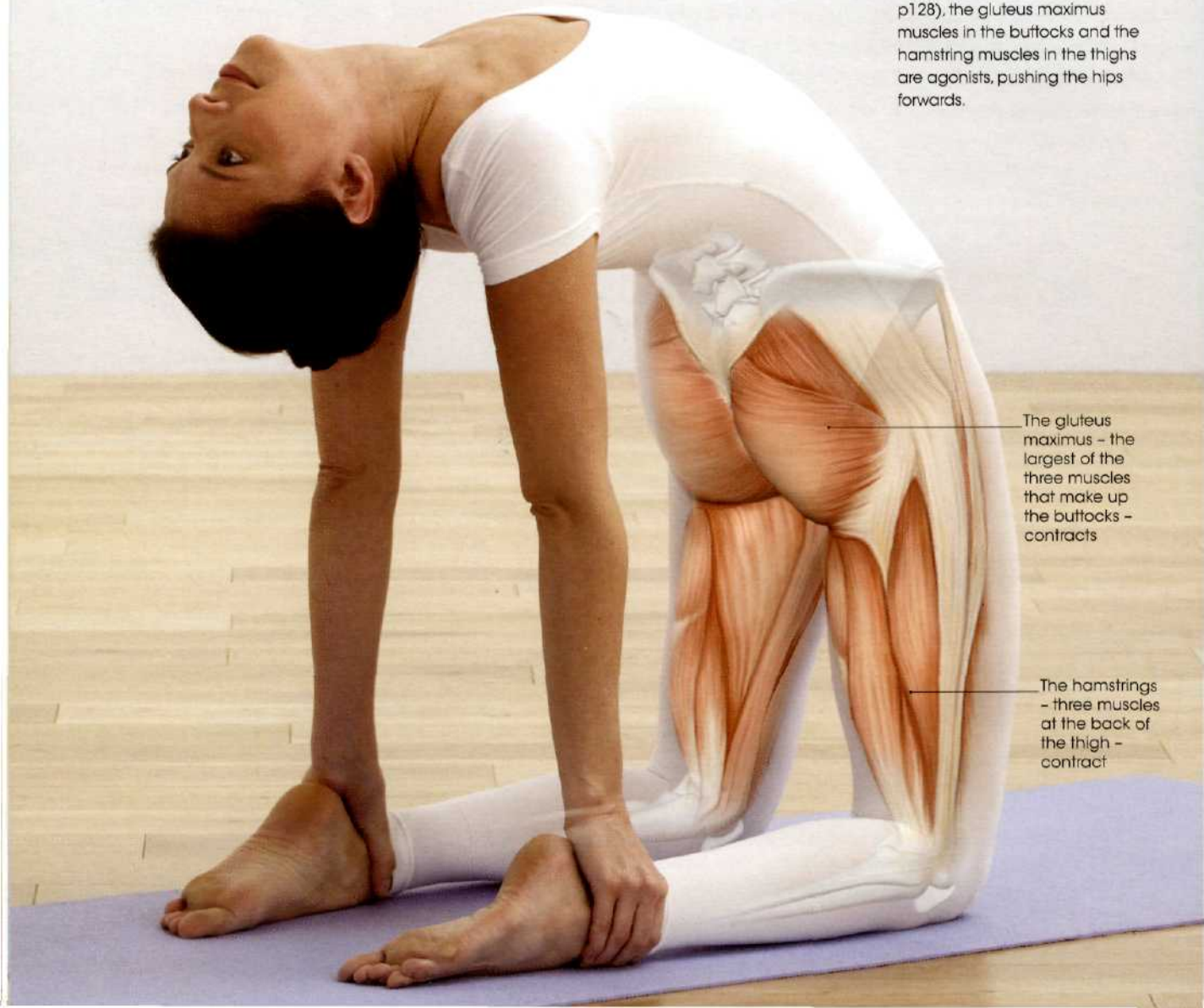
INVERSIONS FOR HEALTH

In inverted poses, such as Headstand, there is increased blood flow back to the heart. This gives you an effortless cardiac workout.

Muscles and movement

Asanas promote health by increasing the range of motion in the joints, keeping the body mobile. At most joints, muscles are arranged in opposing pairs; movement takes place when one muscle contracts, or shortens, while the other relaxes and lengthens.

AGONISTS CAUSE MOVEMENT
In Camel (shown here and on p128), the gluteus maximus muscles in the buttocks and the hamstring muscles in the thighs are agonists, pushing the hips forwards.



Contraction and relaxation

AGONIST MUSCLES A muscle is called an "agonist" when its contraction causes movement in a joint. For example, in Camel, the contraction of the gluteus maximus acts as an agonist, causing the movement of the thigh in the hip joint. If the gluteus maximus is not strong enough to contract fully, you will lack full range of movement in the hip joint.

ANTAGONIST MUSCLES A muscle is an "antagonist" when its role in a movement is to relax, or stretch. In Camel, the iliopsoas (hip-flexor muscles) act as antagonists. If they do not stretch enough, even if the agonist (e.g. gluteus maximus) contracts strongly, you will not succeed in having a completely mobile hip joint.

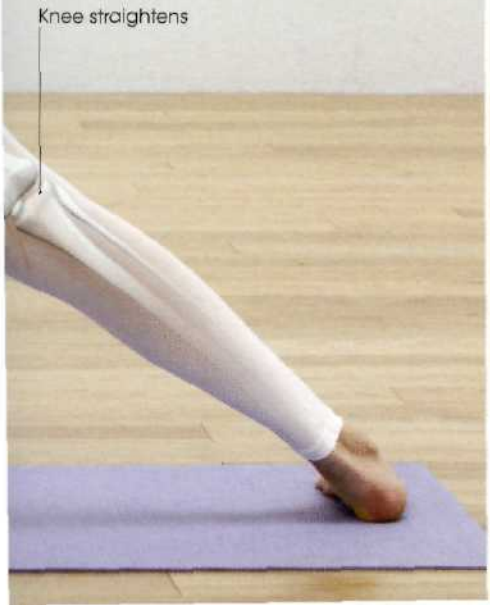
ANTAGONISTS RELAX
In Camel, the strong iliopsoas muscles at the hips work as antagonists: the hips move forwards only if these can relax and stretch.

ISOMETRIC CONTRACTION Usually, a muscle shortens when it contracts. But in this form of movement, a muscle contracts without shortening. For example, in the variation Triangle with Bent Knee (see below and p168), the quadriceps (front thigh muscle) of the bent leg contracts strongly. In most cases, this would extend the knee and straighten the leg, but with isometric contraction, the knee remains bent while the thigh muscles contract strongly in order to resist the pull of gravity.

ISOMETRIC RESISTANCE
In this Triangle variation, isometric contraction causes the muscles of the left thigh to resist the pull of gravity, without creating any movement in the knee.

ISOTONIC CONTRACTION

In this form of muscle contraction, a muscle shortens, causing a movement in the joint. For example, in Shoulderstand (shown here and on p78), the biceps contract, causing the elbows to bend. This is the most common form of muscle contraction.

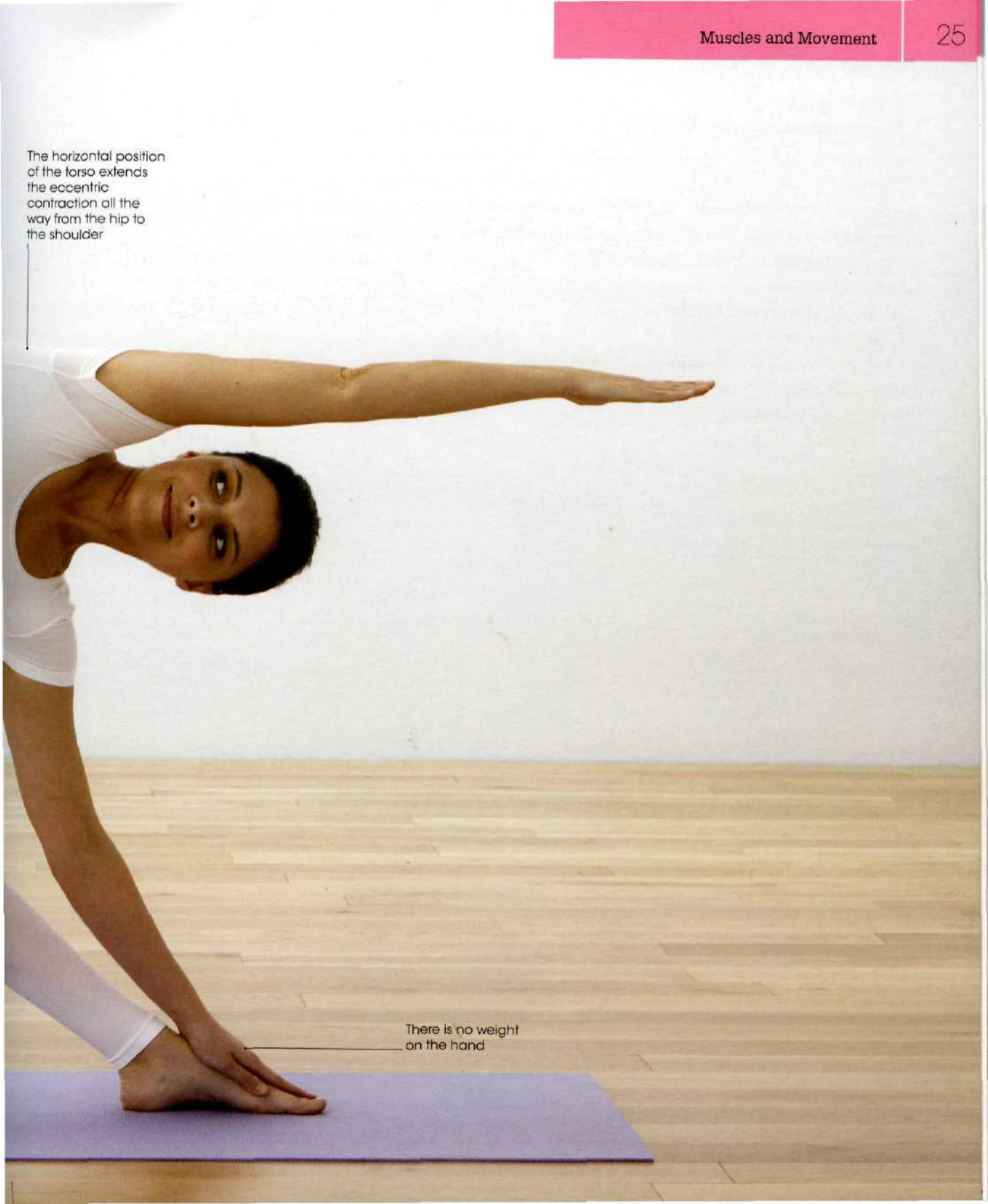


ISOTONIC FLEXION
In Shoulderstand, an isotonic contraction of the biceps muscles in the upper arms creates a flexion, or bend, in the elbows. This allows you to push your torso and legs up into the inverted pose.

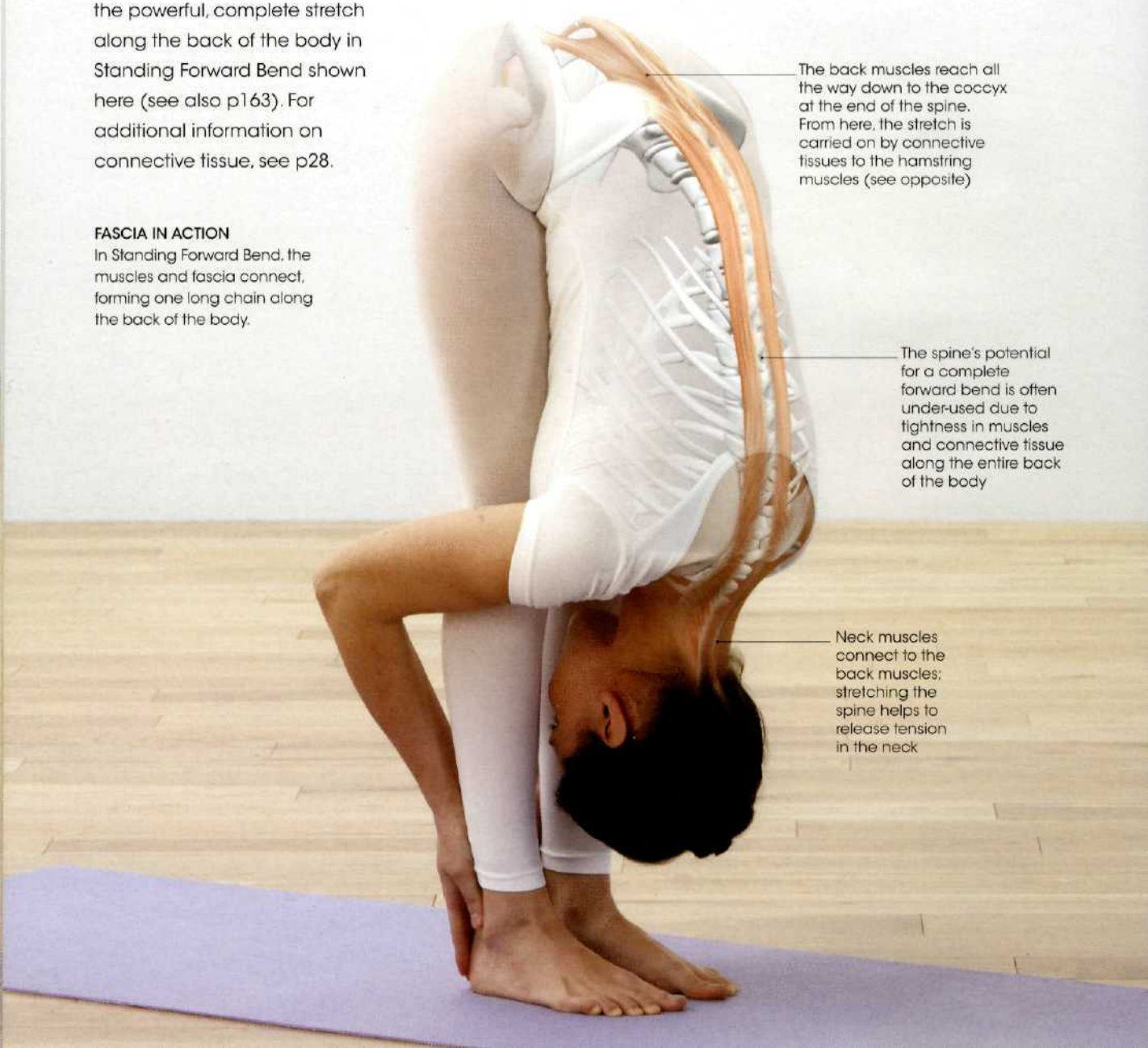
ECCENTRIC CONTRACTION This form of muscular contraction occurs when a muscle contracts and stretches at the same time. In the basic Triangle (shown here and p165), the lateral (sideways) flexion of the spine creates a deep stretch in the iliopsoas muscles in the pelvis. At the same time, the trunk is held parallel to the floor and the lower arm is not allowed to support the body weight. This forces the iliopsoas muscle fibres to contract as they are stretching.

Proper eccentric contraction requires good body awareness, which is one reason why Triangle and its variations are practised at the end of a yoga session.

ECCENTRIC MOVEMENT
In Triangle pose, the upper iliopsoas muscle in the pelvis is being stretched by the lateral movement, while simultaneously contracting to stabilize the asana.


The horizontal position of the torso extends the eccentric contraction all the way from the hip to the shoulder
There is no weight on the hand

STRETCHING FROM FOOT TO HEAD Muscles do not only cause or prevent movement in specific joints (see agonist and antagonist, pp20–1). They can also be arranged in long chains, which transmit either a muscle stretch or a muscle contraction from one end of the body to the other. These chains are created by a special form of connective tissue called "fascia". Fascia surrounds every muscle cell and each muscle as a whole. It also connects one muscle with another. Fascia is what allows the powerful, complete stretch along the back of the body in Standing Forward Bend shown here (see also p163). For additional information on connective tissue, see p28.



FASCIA IN ACTION
In Standing Forward Bend, the muscles and fascia connect, forming one long chain along the back of the body.

STRETCHING FOR MOBILITY
The Forward Bend stretches the hamstrings, helping to prevent lower back pain. The calf muscles provide "push-off" power for walking; because they are connected, when the hamstrings are stretched, the calf muscles stretch, too, which keeps them supple.

Aligning the posture

Most people don't have well-aligned posture. Practising asanas focuses on strengthening and stretching key muscles. This will help to improve gradually any faulty alignment, particularly in the upper and lower back.

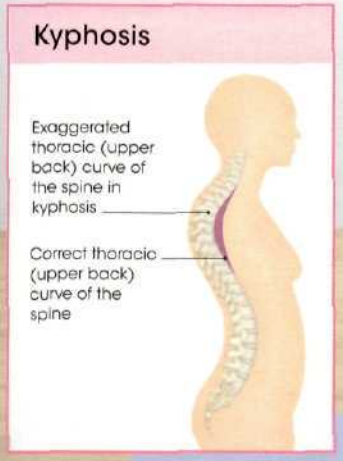
How the body benefits

Aligning your posture involves improving the balance between muscle length and muscle strength. Yoga does this perfectly, because when you hold an asana and then practise its counterpose, the major muscles on the front and back of the body are both stretched and strengthened. This creates tone as well as flexibility. Yoga asanas also have a positive effect on the muscles' connective tissue, or fascia (see pp26-7). Muscles are elastic: after they stretch or contract, the fibres return to their original length. Fascia, however, is plastic not elastic, which means that only if enough pressure is applied, will it change its form and it will not revert to its previous shape when the pressure is removed. Constant repetition of certain movements or body positions, such as always carrying a bag on one shoulder or hunching in front of a computer, fixes the connective tissue into a belt-like, non-elastic structure, causing postural problems. When you hold an asana for longer than a minute, this hardened connective tissue starts to be remodelled, bringing your posture back into proper alignment.

GOOD ALIGNMENT
When someone who has correct posture stands beside a plumb line, the ankles, knees, hips, and ears are aligned perfectly, stacked one above the other in a straight line.

Corrective asanas for kyphosis

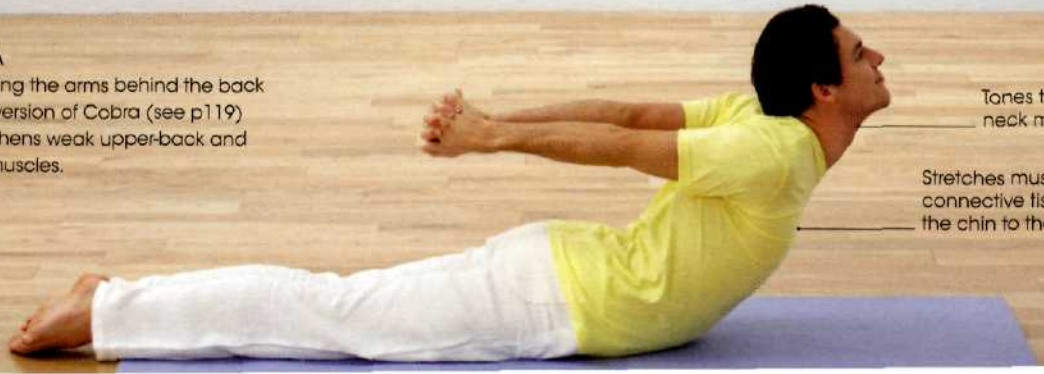
Kyphosis, or an exaggerated curve of the spine in the upper back, is a common problem of postural alignment, which is exacerbated by slouching or spending long hours hunching forwards over a computer. These specific asanas gently help to bring the spine into alignment.



BOW
In kyphosis, the shoulders round forwards. Bow (see p135) counteracts this by pulling the shoulders backwards and opening the chest.

FISH
This pose (see p93) stretches out the shortened muscles in the shoulders and upper chest, and also eases hardened connective tissue, or fascia, in the shoulder and chest area.

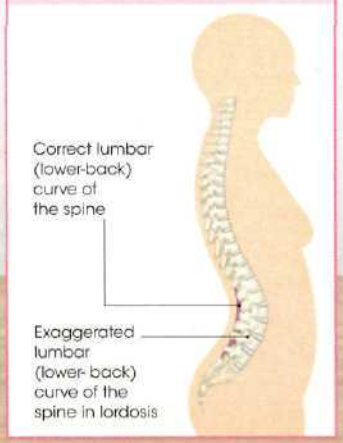
COBRA
Extending the arms behind the back in this version of Cobra (see p119) strengthens weak upper-back and neck muscles.

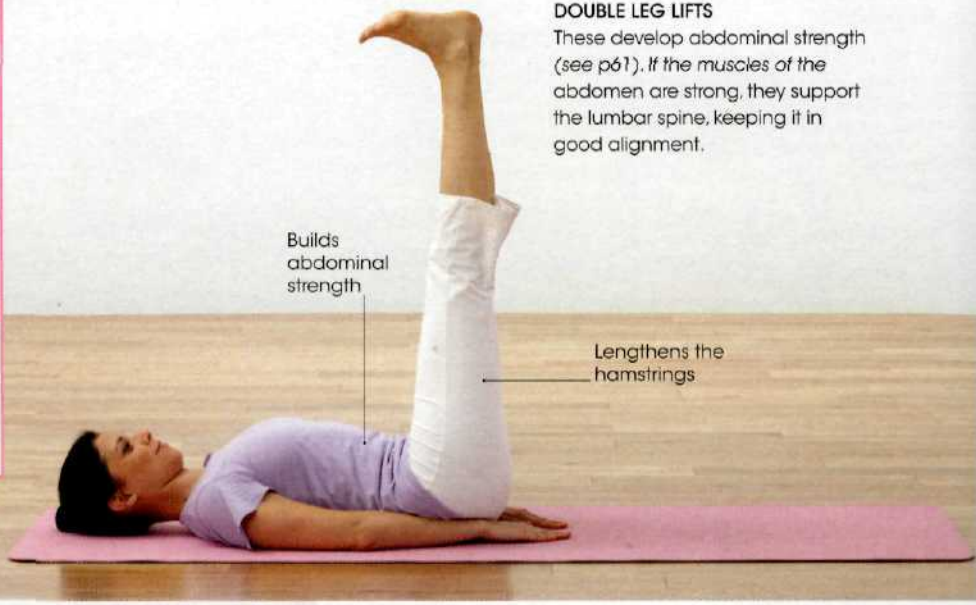


Corrective asanas for lordosis

In this condition, the muscles of the abdomen tend to be weak, and the hamstrings and lower back muscles have become shortened. Connective tissue (see pp26–7) along the back of the legs and back has hardened. These poses help to strengthen and lengthen the muscles and soften the tissue.

Lordosis

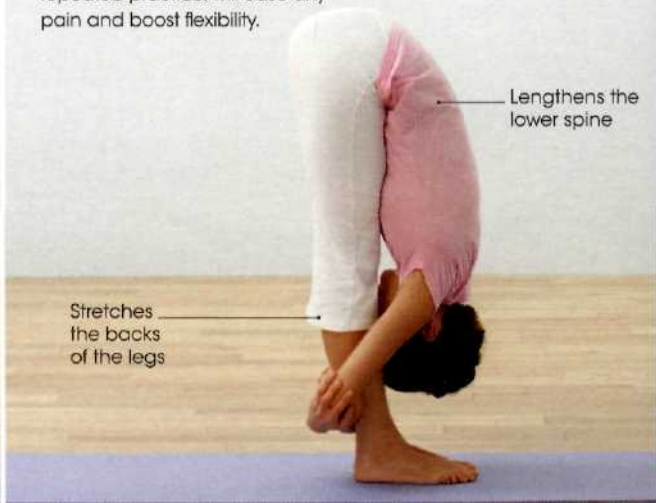




DOUBLE LEG LIFTS
These develop abdominal strength *(see p61). If the muscles of the* abdomen are strong, they support the lumbar spine, keeping it in good alignment.

SITTING FORWARD BEND
This pose (see p99) gives a deep stretch to the muscles of the back of the body, which have become shortened. Try to hold the pose for some time, stretching slowly and gradually. As long as any pain that comes from the natural stretch can be dissolved by rhythmical abdominal breathing and relaxation, it is safe to remain in the posture. Any other pain should be taken as a warning sign not to take the stretch too far.

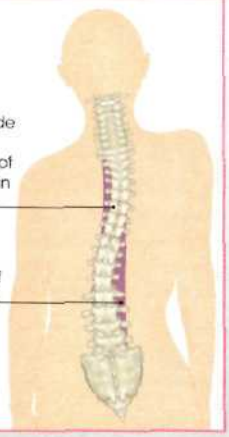
STANDING FORWARD BEND
Another stretch to lengthen the whole of the back of the body (see p163). As you stretch, use slow, controlled breathing and consciously relax. This, together with repeated practice, will ease any pain and boost flexibility.



Corrective asanas for scoliosis

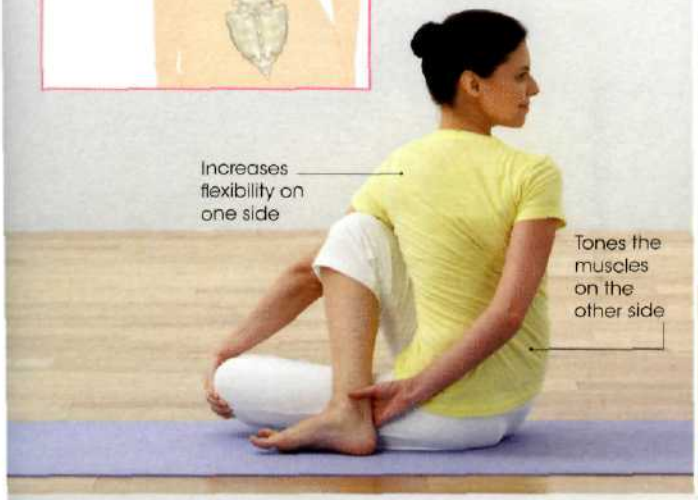
When the spinal muscles diagonally opposite each other are shortened on one side and overstretched on the other, it leads to scoliosis. For example, the left side of the lumbar and the right side of the thoracic spine could be pulled out of alignment. Holding asanas to the right and left rebalances the muscles.

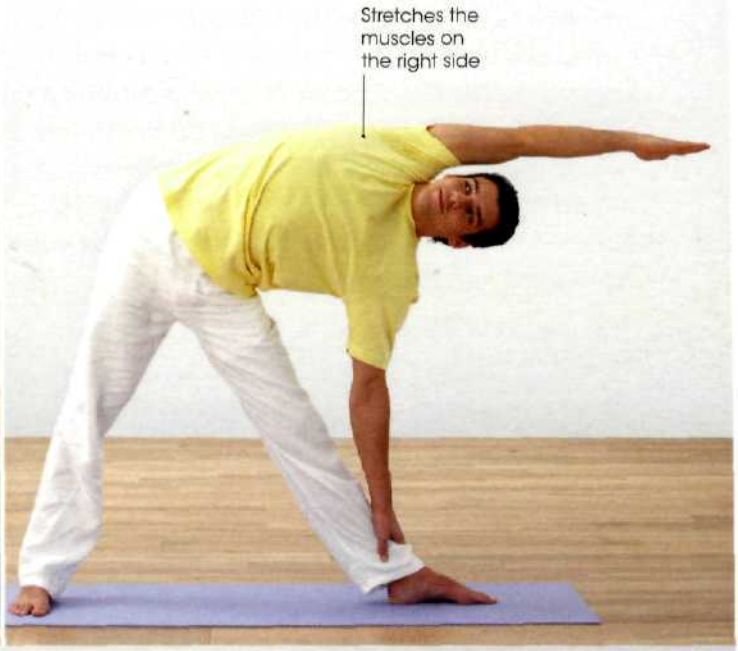
Scoliosis



HALF SPINAL TWIST
Hold this pose (see p148), and all other poses on this page, for the same length of time on each side. This ensures stretching and strengthening in all the required areas.

TRIANGLE
Asanas such as Triangle (see p165) that are practised to the right and left sides restore the correct balance of flexibility and strength to the muscles on either side of the spine. They also help to soften hardened connective tissue.





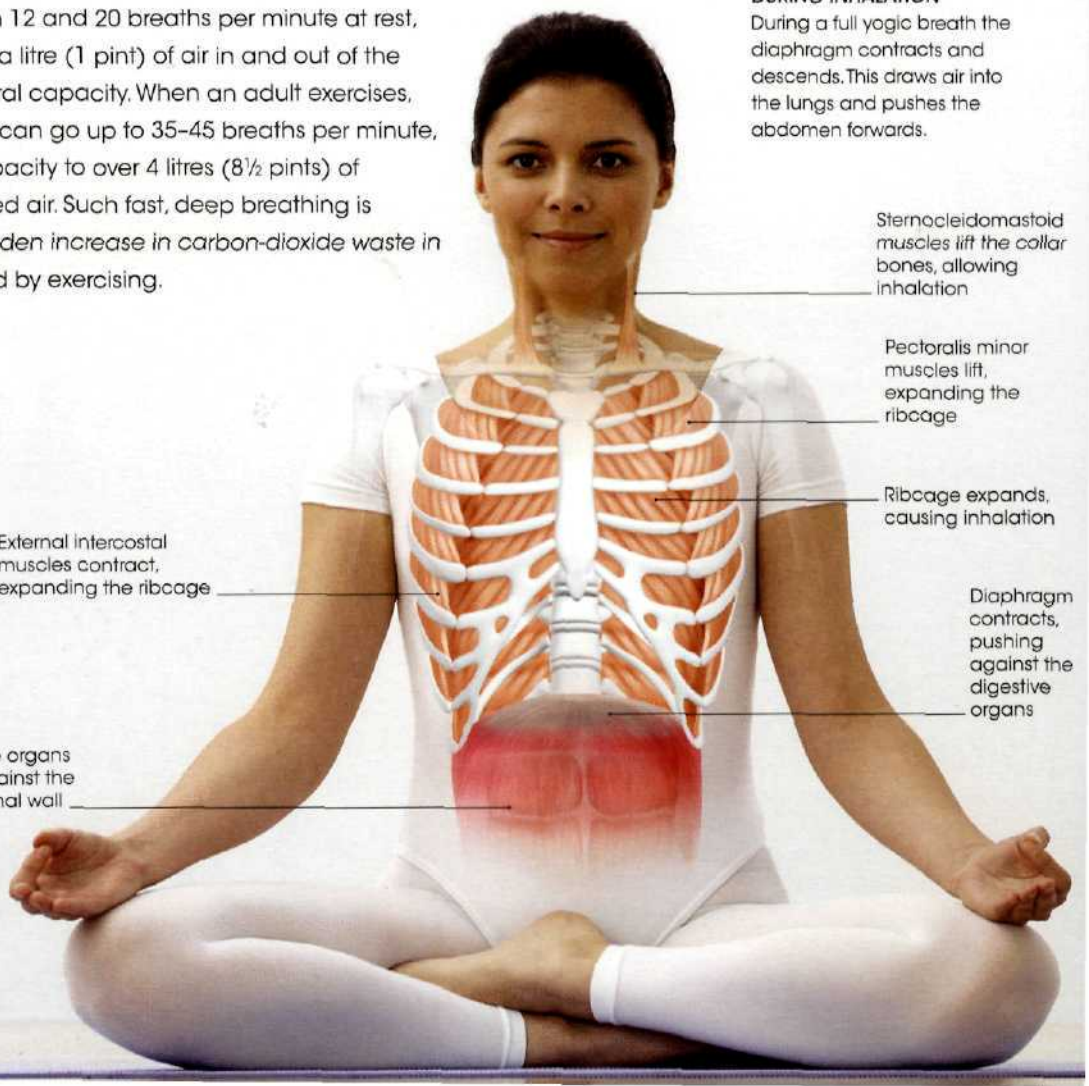
LATERAL BEND WITH TWIST
Lateral stretches such as Lateral Bend with Twist (see p107) help to restore the balance of shortened muscles on diagonally opposite sides of the spine. Always move slowly into the pose to overcome gradually any inherent resistance in the muscles.

The breath of life

Breathing is like no other body function because it connects us with our environment. Plants take in carbon dioxide and give off oxygen, while human beings and animals inhale oxygen-rich air and exhale air high in carbon dioxide. Yoga breathing exercises help to increase the gas exchange in the lungs and in all the cells of the body.

Involuntary breathing

Most of the time we breathe involuntarily, thanks to respiratory-control centres located in the brain. An average adult respiratory rate varies between 12 and 20 breaths per minute at rest, moving about half a litre (1 pint) of air in and out of the lungs – this is the vital capacity. When an adult exercises, the respiratory rate can go up to 35–45 breaths per minute, increasing vital capacity to over 4 litres (8½ pints) of inhaled and exhaled air. Such fast, deep breathing is *prompted by a sudden increase in carbon-dioxide waste in* the muscles caused by exercising.



Voluntary breath control

Yoga emphasizes voluntary breath control. During asana practice, breathing slows to 10–12 breaths per minute. In relaxation and meditation, you breathe only 6–8 times per minute, and you take just 3–6 breaths per minute during Alternate Nostril Breathing (see pp182–3). All respiratory training in yoga emphasizes complete exhalation in order to eliminate maximum amounts of stale air and allow a deeper inhalation.

In this way, freshly inhaled oxygen-rich air mixes with lesser amounts of stale air than in involuntary breathing, making more oxygen available to nourish every cell. During pranayama, oxygen levels in the blood are higher when you inhale and much lower when you retain your breath. Studies by the Russian medical researcher Dr Arkadi F. Prokop suggest that exposure to alternating high and low levels of oxygen promotes cell rejuvenation, speeding up the renewal of mitochondria – the microscopic power plants in every cell. Many asanas create pressure on the chest and abdomen. Performing a complete yogic breath (see p181) against such resistance strengthens the respiratory muscles and helps you to breathe with greater awareness in daily life.

DURING EXHALATION
The diaphragm relaxes and moves up, pushing air out of the lungs and allowing the abdomen to move back in.

Supporting the nervous system

Yoga works on the nervous system, keeping it in balance so that you feel better able to deal with the unavoidable stresses that are part of daily life. The order of the 12 basic poses (see pp42–169) and the focus on posture, breathing, and relaxation in each asana help the nervous system function, leading to a sense of complete relaxation and rejuvenation.

What is the autonomic nervous system?

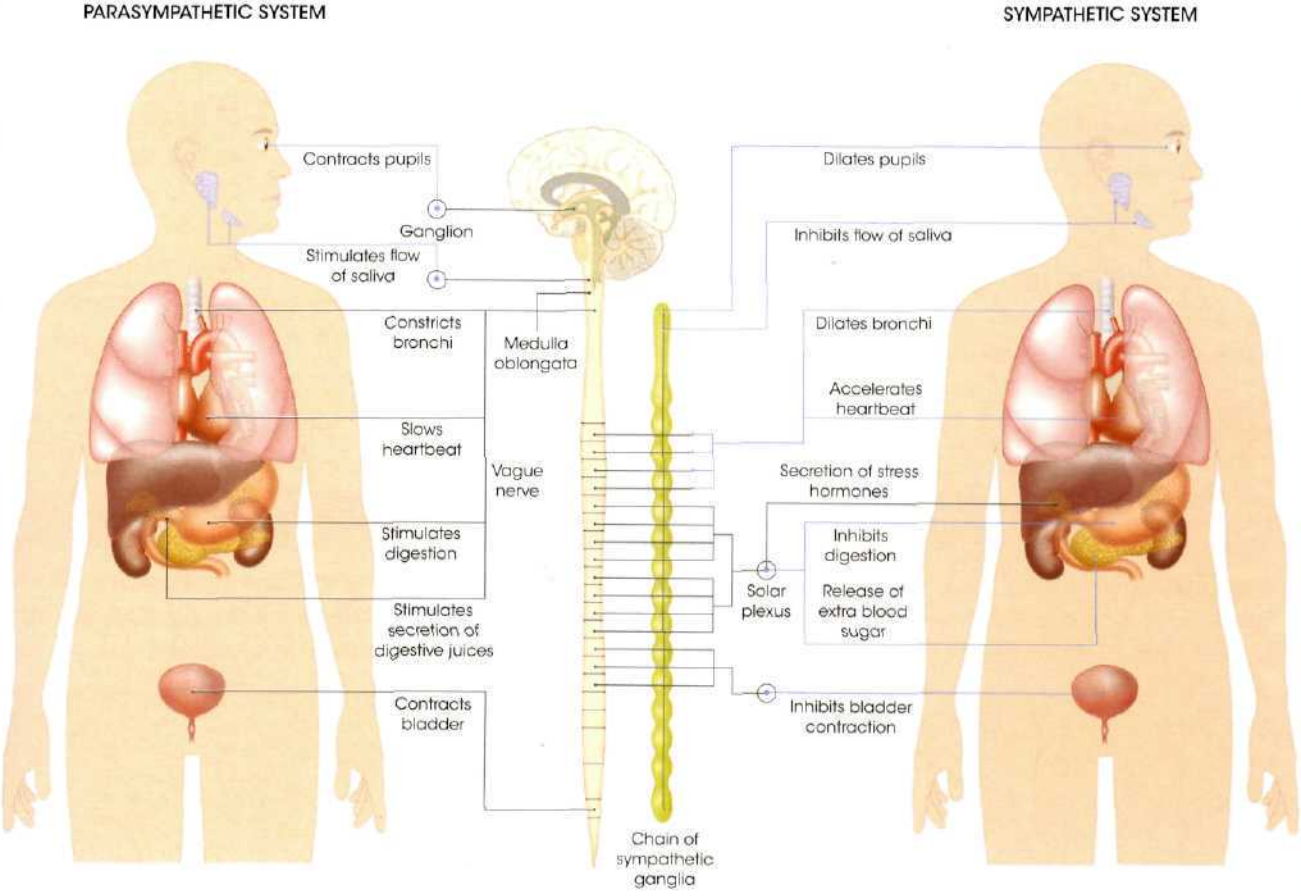
The autonomic nervous system fine-tunes the activities of the vital organs of the body, such as the heart, as well as the respiratory, digestive, and endocrine systems (see p37). It also governs homeostasis (see p18). This system functions involuntarily, ensuring that nerves transmit messages between the brain and organs, muscles, and glands, through the central nervous system in the brain and spinal cord. The autonomic nervous system is divided into two: the sympathetic and parasympathetic systems.

THE SYMPATHETIC NERVOUS SYSTEM This branch of the autonomic nervous system sends out nerve impulses, in response to perceived physical or psychological danger, that trigger the release of hormones including adrenaline and noradrenaline. These prepare the body for fighting the danger or fleeing from it (the "fight or flight response") by stimulating an increase in heart rate and blood pressure, diverting blood to the skeletal muscles, and slowing the digestion and kidney function, among other reactions. These stress responses continue until the body fights or runs away or the parasympathetic nervous system becomes dominant. If the responses are not dispelled, over time they can damage the body and mind.

THE PARASYMPATHETIC NERVOUS SYSTEM The other branch of the autonomic nervous system promotes rest, energy conservation, and the absorption of nutrients to maintain good health. It also supports the regular functioning of the cardiovascular, digestive, and excretory systems among other vital processes, and acts as an antidote to the "fight or flight" response. *Practising yoga asanas (see pp42–169), pranayama (see pp176–85), and* meditation (see pp196–207) activates this "rest and repair" branch of the autonomic nervous system.

Sympathetic and parasympathetic activity

The two systems work in a complementary way. As the brain anticipates danger, the sympathetic neurons in the spinal cord release chemical nerve transmitters. These trigger target organs, muscles, and glands to prepare to deal with stress by reacting as shown below. When the parasympathic nerves are stimulated, they gradually cancel these responses.



THE AUTONOMIC NERVOUS SYSTEM
The sympathetic system is important because it primes us to deal with stressful situations, promoting alertness and quick-thinking. When the parasympathetic system is in action after a period of sympathetic activity, it provides optimum conditions for good health.

Yoga to balance the nervous system

Structuring your asana practice in the following way can help to restore the balance between the sympathetic and parasympathetic nervous systems.

SUN SALUTATION At the beginning of your asana session, practise Sun Salutations (see pp50–7) to start reducing sympathetic nerve impulses.

ALTERNATE MUSCLE STRETCHING AND RELAXATION Then practise asanas that focus mostly on flexibility (see pp58–115), followed by appropriate relaxation poses. Alternating the slight muscle pain of stretching with relaxation stimulates the parasympathetic nervous system, helping you to relax.

ALTERNATE MUSCLE CONTRACTION AND RELAXATION Now you will do mostly short, intense muscle contractions (see pp116–69), followed by conscious relaxation to prompt "rest and repair" impulses in the parasympathetic system.

FINAL RELAXATION During final relaxation (see pp192–3), your body is flooded with parasympathetic nerve impulses. When you return to a stressful environment your sympathetic nerve impulses may be stimulated again, but thanks to the strength of the parasympathetic "rest and repair" impulses you experience in your asana practice, they will have little effect on you.

Muscle stretching and relaxation

Notice how any pain you feel in the muscles during the stretches disappears completely during the complementary relaxation pose. You are literally stretching the stress away.

LEG STRETCH
Hold the stretch (see p59) at a point at which you feel slight pain.

RELAXING IN CORPSE POSE
Practise slow breathing (see p181) as you relax (see p188).

Muscle contraction and relaxation

Some asanas demand more dynamic muscle work. When followed immediately by an appropriate relaxation pose, you stimulate the parasympathetic nervous system.

BOAT
Strongly contract the muscles of the buttocks and lower back (see p124).

RELAXING ON THE FRONT
Let go of the contraction and let your body sink into the floor (see p190).

Yoga and the endocrine system

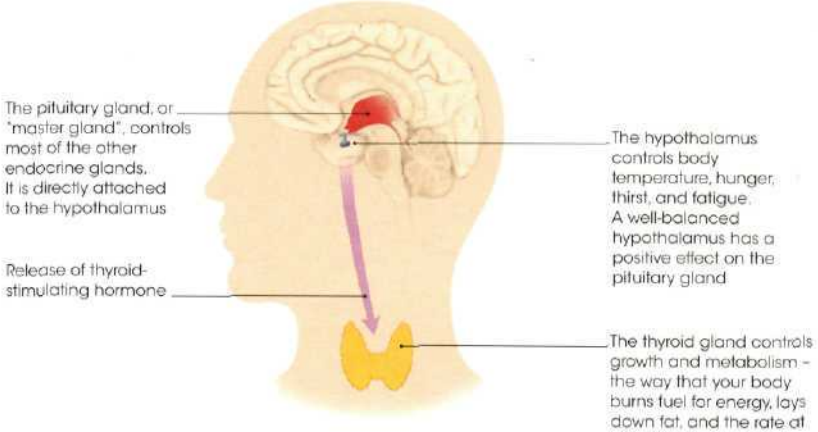
The endocrine glands secrete hormones into the blood stream. These chemical "messengers" reach every cell of the body. They initiate and regulate many body functions. Yoga helps to keep this body system in good shape.

What does it do?

The main endocrine gland is the pituitary gland in the brain. Other glands include the pineal, also in the brain, which produces melatonin to control the sleep-wake cycle, and the thyroid in the neck, which releases hormones regulating growth and metabolism. At the back of this gland is the parathyroid, which promotes calcium absorption. The thymus at the top of the chest regulates immunity; the adrenals on top of each kidney oversee fluid balance, fat distribution, and stress hormones. The pancreas, an organ, regulates blood-sugar levels and the ovaries or testes release sex hormones.

Benefits for the brain

Practising asanas helps to bring balance to the brain and, through the pituitary gland, to the whole body. In certain asanas, such as Headstand, extra blood circulates to the brain, nourishing it with oxygen and nutrients. This improves the working of the hypothalamus.



SHOULDERSTAND
When you hold this pose (see p78), you increase the blood circulation in the thyroid gland in the neck, which promotes a healthy metabolism.

Yoga and relaxation

Yoga teaches you how to achieve deep muscle relaxation, first by following a muscle contraction in one asana with complete muscular relaxation in its complementary resting pose. Second, by using autosuggestion in final relaxation (see pp192–4), asking each part of the body in turn to relax until you experience a feeling of total release.

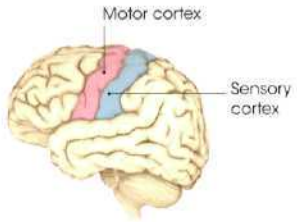
A strong muscle contraction requires a large number of nerve impulses to command muscle fibres to shorten; complete relaxation requires the fewest nerve impulses to be directed to the fibres. These processes seem opposed, but the more you relax before moving into an asana, the more efficiently you will be able to focus on muscle contraction, and the deeper you will be able to breathe. Follow the asana with its relaxation pose; then the complete release of the contraction plus slow breathing stimulates deep relaxation.

Using autosuggestion

To achieve deep muscle relaxation in final relaxation (see pp192–4), lie comfortably, then create a mental picture of the muscles of the body in turn, and send them a mental command to relax, which travels via impulses from the motor cortex in the brain. The command is followed quickly by a feeling of relaxation.

Location of cortexes

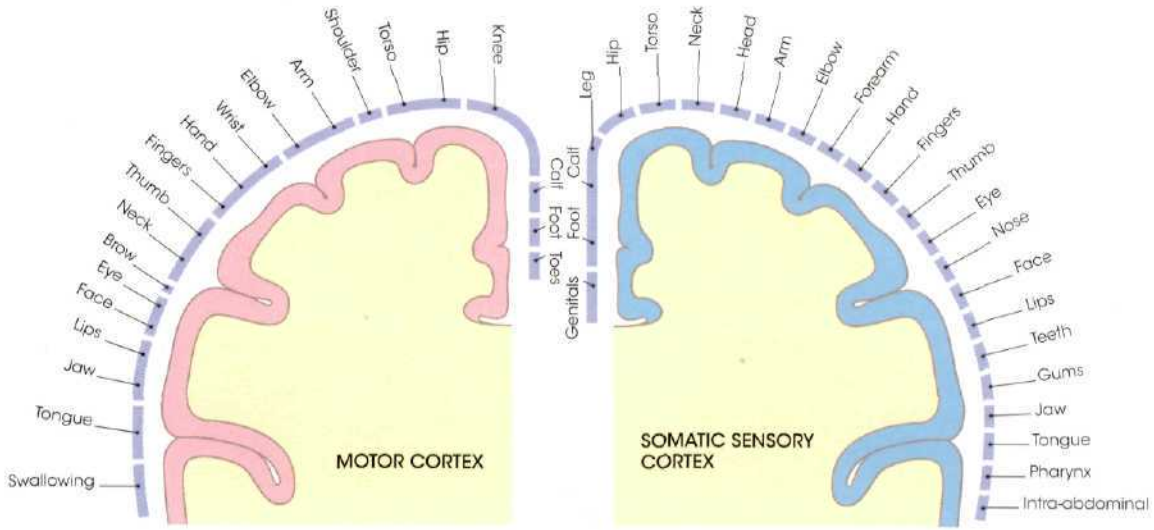
The motor cortex and the somatic sensory cortex sit alongside each other in the brain



COMPLETE RELAXATION
Working from your feet to your head, you can use step-by-step muscle relaxation with autosuggestion to achieve a sense of deep relaxation.

Brain mapping

The sequence of autosuggestion during relaxation is "mapped" in the motor cortex (see location in the brain, opposite). The sensation of relaxation that follows corresponds to the "map" of the somatic sensory cortex. Although there is no direct motor control to the intra-abdominal organs, the autosuggestion reaches the target organ via the subconscious mind.



One pose, many benefits

Asanas work on many body systems simultaneously. Gaining a better understanding of how some of these benefits complement each other can bring you one step closer to understanding the Sanskrit word *yoga*, which translates as "union". Here, we look at the benefits a single asana can bring to many parts of the body and the mind.

Effects on the body

Practising this variation of Triangle pose (see p167) benefits all ten body systems, from the skeletal to the reproductive, but these in particular:

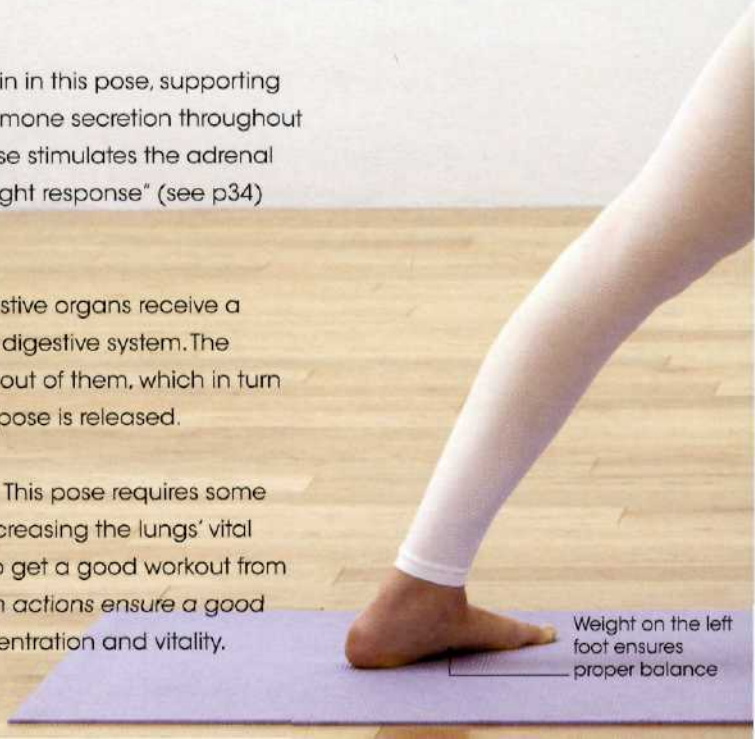
MUSCULAR SYSTEM The muscles at the front of the thighs contract to keep the leg stable, while those at the back of the thighs extend. Balancing muscle strength with length maintains mobility in the joints. Repeating the pose to both sides promotes good posture by working the spine evenly.

NERVOUS SYSTEM The spine, containing the central nervous system, receives a good stretch along its length, which benefits communication between the spinal nerves and the brain. The cerebellum controls smooth movement, proper alignment, and stable posture.

ENDOCRINE SYSTEM Blood flows easily to the brain in this pose, supporting the pituitary gland (see p37), which regulates hormone secretion throughout the body. More specifically, the pressure of the pose stimulates the adrenal gland. This helps to ensure its role in the "fight or flight response" (see p34) and in processing food and regulating energy.

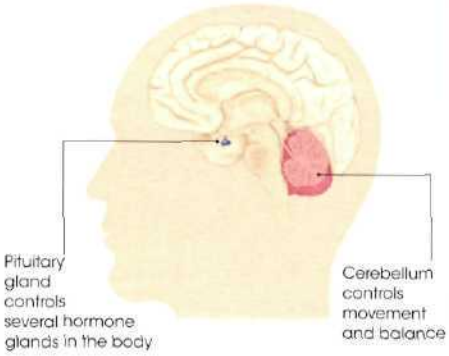
DIGESTIVE SYSTEM As the trunk revolves, the digestive organs receive a massage, which stimulates the functioning of the digestive system. The pressure on the organs pushes stagnating blood out of them, which in turn draws fresh blood supply into this area, once the pose is released.

CARDIOVASCULAR AND RESPIRATORY SYSTEMS This pose requires some exertion, working the muscles of the heart and increasing the lungs' vital capacity (see p32–3). The respiratory musces also get a good workout from working against the compression of the twist. Both actions ensure a good supply of oxygen to the brain, encouraging concentration and vitality.



What happens in the brain

The pose activates the cerebellum to maintain balance. It also massages the adrenal glands on top of the kidneys, whose function is controlled by the pituitary gland in the brain.



Massage of the adrenal glands helps deal with stress

Massage of the digestive system makes it work more efficiently

Eccentric muscle contraction on the left side of the back keeps the torso aligned horizontally

Rotation of the spine tones the spinal nerves and improves their communication with the brain

The cerebellum is stimulated into controlling balance

The pituitary gland controls the secretions of the adrenal gland

The left hip rotates inwards

The hamstring muscles of the right leg stretch deeply

The right hip rotates outwards

TRIANGLE POSE

As well as the benefits on the various body systems, this asana enhances balance and spatial awareness.

Proper Exercise

What is proper exercise?

The twelve basic postures, or asanas, should be practiced in a specific order. The aim is to promote good health and to awaken the subtle energy – prana (see p178) – in your body. After you have finished your yoga practice, you will feel a profound sense of physical and emotional wellbeing.

A logical sequence

The sequence of twelve basic asanas are specially designed to help your body and mind to reap the greatest possible benefits. They should be followed in the order given in this book and you should practise them at every session. Also take care to follow any breathing instructions given as well as the guidelines for relaxation poses in between asanas.

INITIAL RELAXATION Always begin with relaxation in Corpse Pose (see p46) to focus your mind and prevent you from being distracted by the demands of everyday life. Continue with Easy Sitting Pose (see p47). This gives you a firm sitting position for performing the Eye and Neck Exercises (see pp48–9), as well as the breathing exercises (see pp180–5). Next comes the Sun Salutation (see pp50–7), which stimulates the heart and the circulation of the blood. It also serves as a general warm-up for the poses that follow.

THE FIRST HALF OF YOUR PRACTICE After the Sun Salutation, you move on to asanas that focus mostly on muscle stretching. The stretching is always followed by relaxation of the muscles. In addition, the inverted poses of this first part of your practice increase the blood supply to the head, which improves the function of the brain and the thyroid gland.

THE SECOND HALF OF YOUR PRACTICE From Cobra onwards (see p116), the asanas focus more on muscle strengthening. This is done by contracting then relaxing the muscles. In addition, poses such as Bow (see pp134–43), Half Spinal Twist (see pp144–9), and Peacock (see pp154–61) exert more pressure on your inner organs. This helps to detoxify the tissues and increase their blood supply.

FINAL RELAXATION Practise final relaxation lying in Corpse Pose (see pp192–3). *Never omit this essential part of your practice. When you relax in this position,* your voluntary muscles and your internal organs relax completely. Final relaxation also helps you to absorb all the benefits of the asanas you have just practised.

When to practice

You can schedule your yoga practice anytime from early morning to late evening. The most important considerations are:

- You should not eat 2–3 hours before you practise.
- Except late in the evening, you should have a wholesome meal or snack shortly after you practise.
- Taking a shower before you practise is advantageous, but a shower is not recommended immediately after, as it neutralises prana (see p178).
- Choose a time when you will not be distracted by phone calls.

From beginner to advanced

The step-by-step instructions in this book guide you from beginner level, through intermediate to advanced. If you are a beginner, you may find that, to start with, you can only manage a few of the steps leading up to the final pose. If this is the case, do not worry and do not force yourself on to the next step. It is not a competition. In yoga, there are benefits for mind and body at every step. When you reach the final pose, look at the illustration showing the common faults in the pose. You may be doing some or all of these. As you practise the pose, try and be aware of your mistakes and do your best to correct them.

Pose and counterpose

Many poses have a counterpose – one that moves the spine and other joints in the opposite direction. So, having performed Shoulderstand (see pp76–8), which gives you a forward bend, Fish (see pp92–3), which is another basic asana in its own right, provides you with a backward bend a little later on in your practice.

Clothing and equipment

Loose cotton clothing that enables you to move easily is ideal. You will also need a rubber mat for practising asanas, and a pillow when you practise the easy sitting position (see p47). You may also like to cover yourself with a thin blanket during final relaxation (see pp192–3).

THE ASANAS AND THEIR VARIATIONS
Most of the twelve basic asanas also have variations. Some variations are poses in their own right, such as Wheel (see pp140–3). Other variations lead on from the basic pose, but take you into more advanced positions, such as this Shoulderstand variation, Arms on Floor (see p79).

Initial Relaxation

Each step of your yoga session demands a fine-tuning of your nervous system. That is why you should always prepare yourself for your asana practice with at least five minutes of complete

Corpse Pose

Lie flat on your back with your arms and legs apart and your eyes closed. Shake out your shoulders to release any tension in them. Slowly roll your head from side to side a couple of times, lowering one ear towards the ground, then the other. Bring your head back to the centre. Lie still as you concentrate on your breath, using the deep abdominal breathing technique described below.

Deep Abdominal Breathing

Place both hands on your abdomen with your fingers apart. Try to breathe rhythmically, with an inhalation lasting 3–5 seconds and an exhalation of the same length. Feel your body becoming heavy and relaxed with each exhalation.

As you inhale, feel your abdomen and hands rising.

As you exhale, feel your abdomen and hands sinking.

relaxation in Corpse Pose, using Deep Abdominal Breathing. Following that, sit in Easy Sitting Pose for 2 minutes, in readiness for the Eye and Neck Exercises (see pp48–9).

Easy Sitting Pose

Sit in a simple, cross-legged position to prepare for the Eye and Neck exercises. This position gives you a very firm, stable base and helps to keep your energy centred.

Sitting on a cushion will help if you have any tension in your knees or lower back.

Keep the head erect

Keep the shoulders even but relaxed

Bring the tips of the thumb and index finger together in the classical "Chin Mudra" position (see p204)

Straighten the back

Rest the back of the hand on the knee

Cross the legs

Eye Exercises

In our modern world, the eyes are subjected daily to computer and TV screens, fast-moving traffic, and artificial light. Yogic eye exercises are both relaxing and strengthening for the eyes.

1 Keeping your back and neck straight and your head still, look upwards as high as you can, and then look downwards. Repeat at least 10 times, then close and relax your eyes for about 30 seconds.

2 Opening your eyes wide, look as far to the right as you can, and then look to the left. Repeat at least 10 times, then close and relax your eyes for 30 seconds.

3 Move your eyes diagonally by looking from the upper right-hand corner to the lower left and back again. Repeat 10 times, then repeat the exercise by looking from the top left corner to the bottom right. Close and relax the eyes.

4 Roll your eyes clockwise in wide circles. Start slowly and gradually increase speed until you are moving your eyes as fast as you can. Make at least 10 circles, then close your eyes for a moment. Now repeat counter-clockwise. Close and relax your eyes.

Relaxing the eyes

To soothe and relax your eyes after the exercises, use warm hands cupped over your eyes to provide heat and darkness.

WARMING THE HANDS
When you have finished the eye exercises, rub your hands together vigorously until the friction between them warms up your palms.

CUPPING THE EYES
Gently cup your hands over your closed eyes, without touching the eyelids. Keep them there for about 30 seconds.

Neck Exercises

These exercises aim to release any tension in the neck, shoulders, and upper back. While performing these exercises, only move your head and neck, not your back and shoulders.

1 Start in the Easy Sitting Position (see p47), with your back straight and your chest erect. Slowly bring your head forwards towards the chest to give the back of your neck a good stretch.

2 After a few moments slowly lift your head and extend your neck as far back as possible.

3 Lower your right ear close to your right shoulder, then repeat on the other side. Keep both shoulders level throughout. Repeat the exercise 5–10 times.

4 Turn your head to the right side. Contract the muscles on the right side of your neck, and feel the stretch on the left side. Repeat on the opposite side. Repeat the exercise 5–10 times.

5 Drop your chin to the chest and rotate your head clockwise 2–3 times. Bring your head to the centre and start again, performing 2–3 times in a counter-clockwise direction.

CAUTION Some people cannot extend their neck far. If you feel any dizziness or too much pressure on your neck, extend less until you feel comfortable. Repeat the exercise 5–10 times.

Sun Salutation

All Levels

At the start of Sun Salutation, you need to be standing at the front of your mat. This leaves room behind you for the subsequent steps. Observe how the movements involve counter-stretches –

At a glance

BENEFITS

PHYSICAL

- Gently increases the blood circulation.
- Thoroughly recharges the solar plexus despite being a physical workout.
- Stretches and strengthens dozens of muscles throughout the body.
- Quickly brings flexibility to the spine and the limbs.
- Regulates the breathing.
- Increases the respiratory capacity.

MENTAL

- Gives a clear sense of being in one place in the present moment, thanks to its symmetrical, circular sequence of movements.
- Looking up and down into space allows the mind to expand.
- The increased and detailed body awareness brings greater detachment. The body is seen as the vehicle of the mind and the soul.

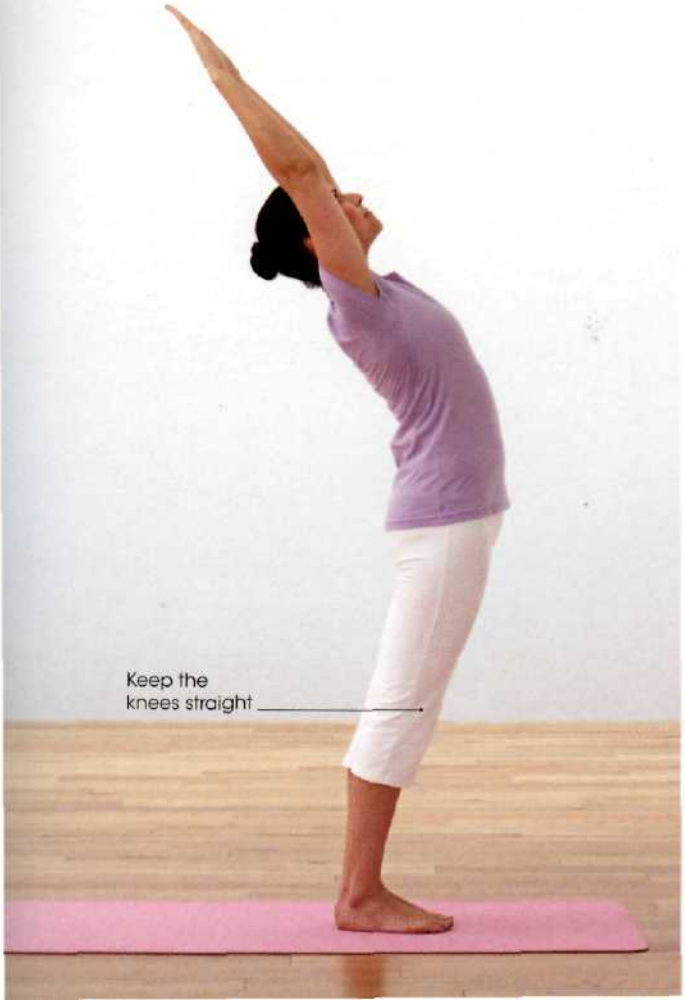
1 Exhale as you bring your palms together in front of your chest in Prayer Position.

Transition to Step 2

Start to inhale as you stretch your arms up next to your ears, palms facing forwards. Avoid tension in the neck as you raise your shoulders.

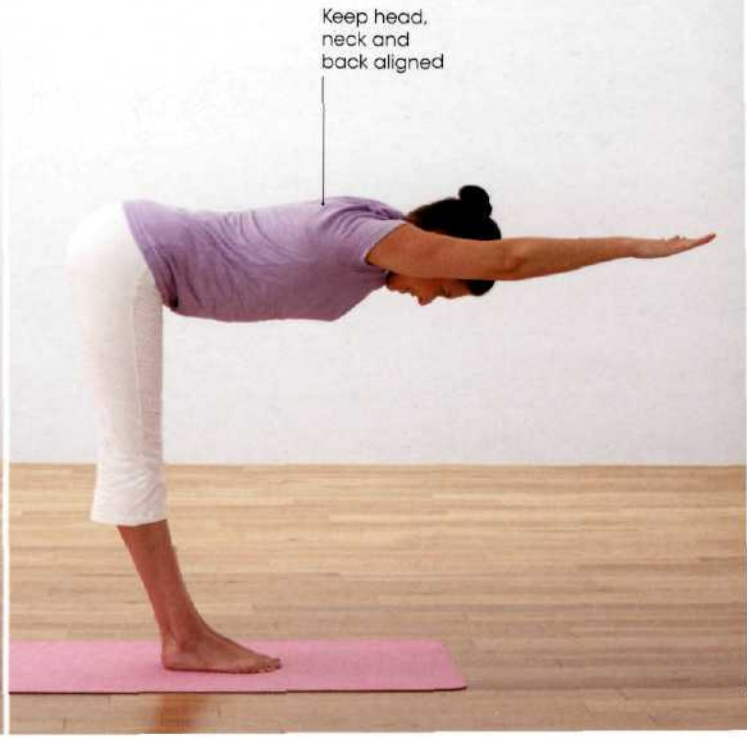
a backward bend followed by a forward bend, which is followed by another backward bend. These movements promote great flexibility in the spine and are beneficial to all levels of practitioner.

2 As you continue inhaling, take the weight onto your heels, look upwards, and arch your arms, head, and chest backwards. Stretch your chest and abdomen.



Transition to Step 3

Start to exhale as you bend forwards from the waist, keeping your legs straight. Use your back muscles to bring your spine, head, and arms into a horizontal line.

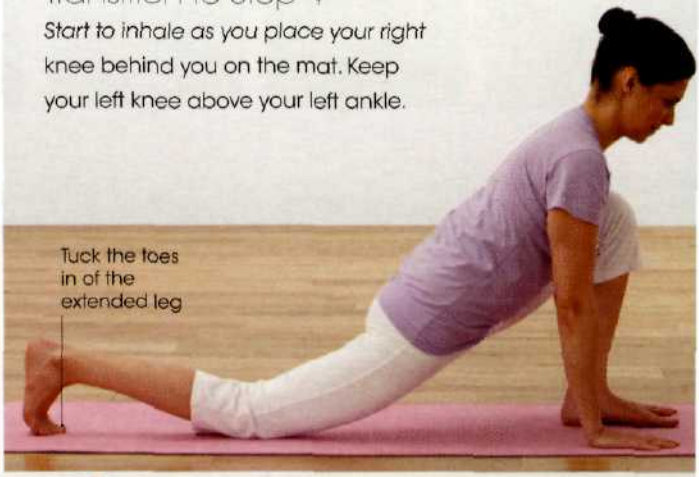


Sun Salutation
(continued)

3 As you continue *exhaling, bend forwards* as far as possible. Try to bring your hands to the mat, aligning your toes and fingers. If necessary, bend your knees until your head touches them.

Transition to Step 4

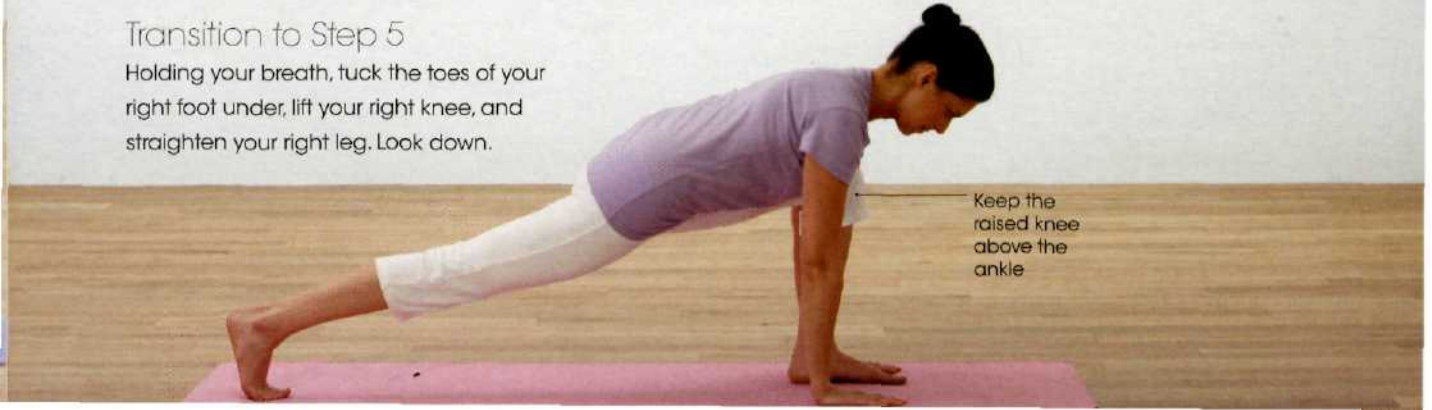
Start to inhale as you place your right knee behind you on the mat. Keep your left knee above your left ankle.



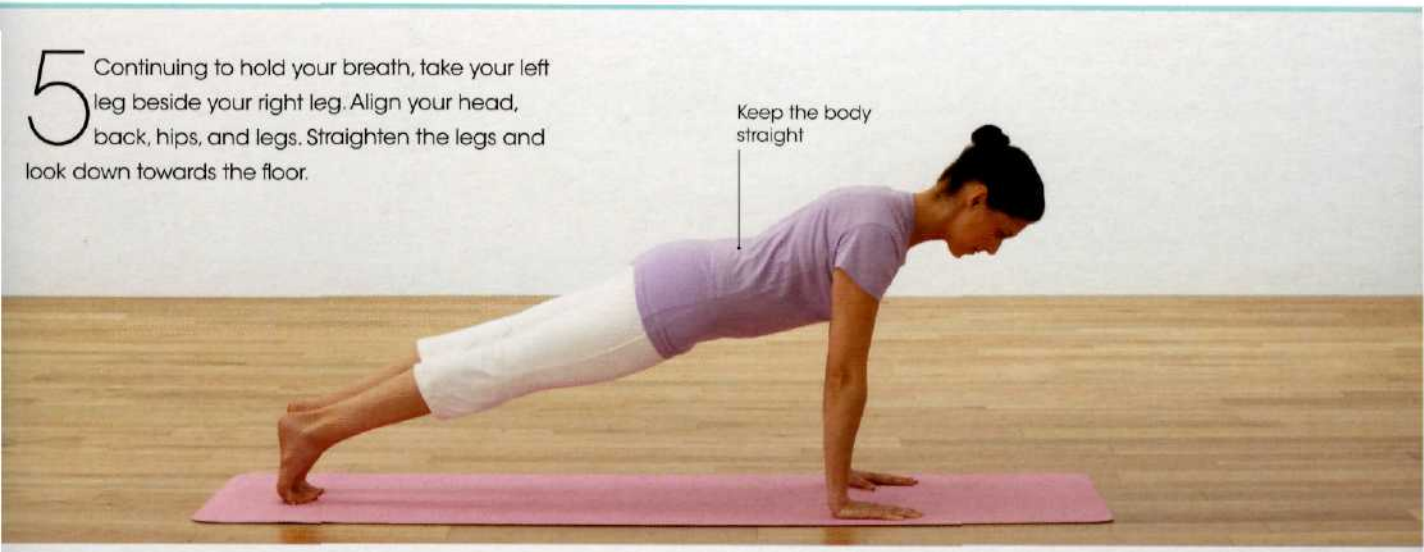
4 As you continue inhaling, stretch your right foot. Try to keep your hands on the mat. Look up and keep your mouth closed. Avoid twisting your hips.

Transition to Step 5

Holding your breath, tuck the toes of your right foot under, lift your right knee, and straighten your right leg. Look down.

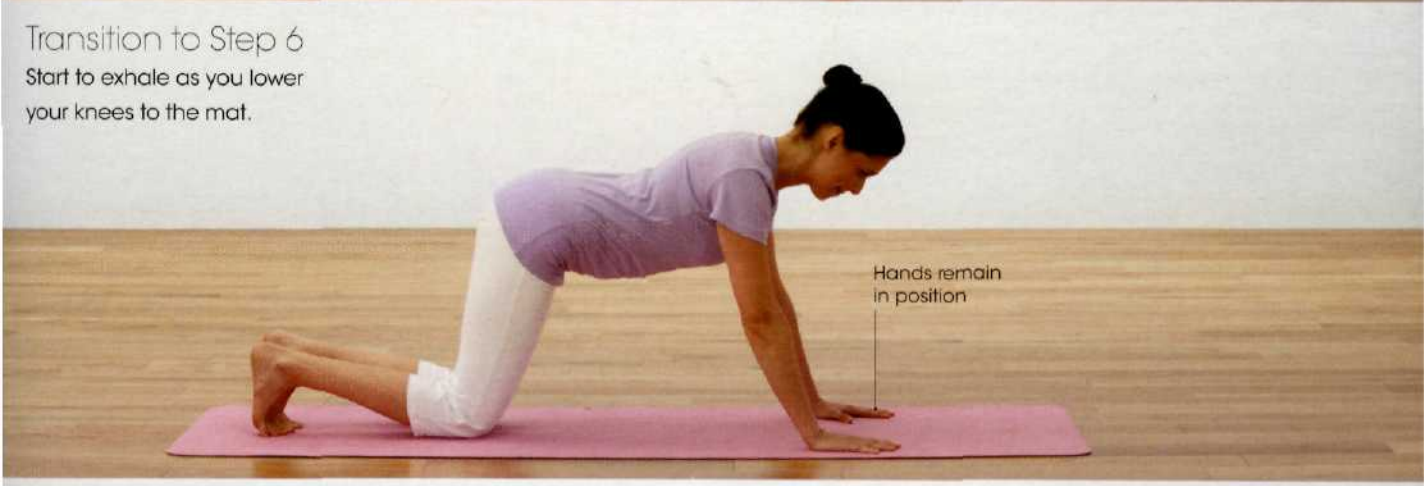


5 Continuing to hold your breath, take your left leg beside your right leg. Align your head, back, hips, and legs. Straighten the legs and look down towards the floor.



Transition to Step 6

Start to exhale as you lower your knees to the mat.



6 Continuing to exhale, lower your chest and align your shoulders with your fingertips. Take your forehead to the mat, keeping your hips raised.

Sun Salutation
(continued)

Transition (a) to Step 7

Start to inhale and, keeping your chest, hands, and forehead in position, lower your hips to the mat. Stretch out your legs and feet.

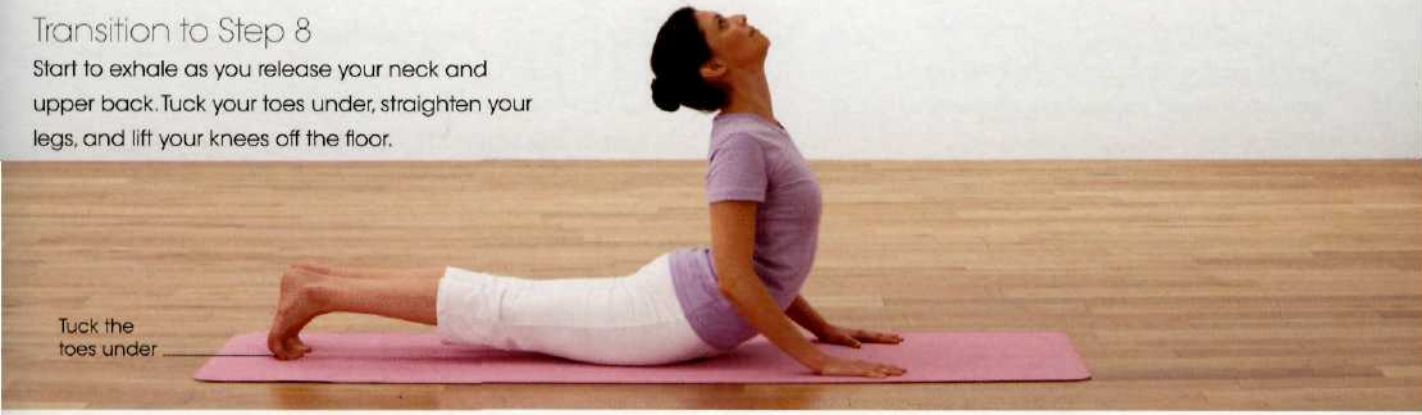
Transition (b) to Step 7

As you continue inhaling, lift your head and shoulders. Keep your chest on the floor, elbows close to your body, and shoulder blades pulled together. Look up.

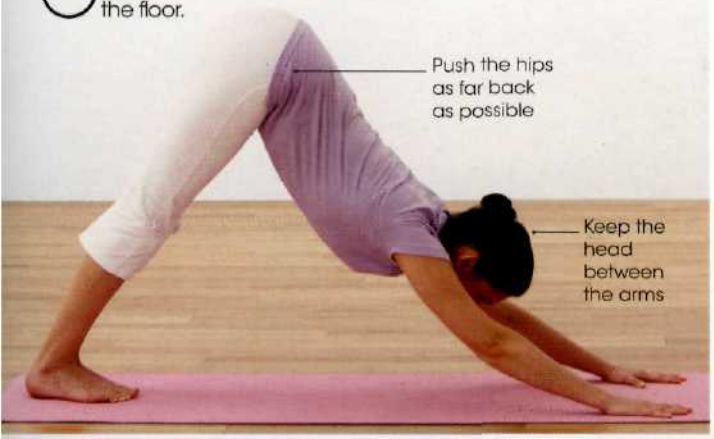
7 Continue inhaling, arch your head and upper spine backwards, keeping your hips on the mat and your shoulders away from your ears. Look up.

Transition to Step 8

Start to exhale as you release your neck and upper back. Tuck your toes under, straighten your legs, and lift your knees off the floor.



8 Continue inhaling, lift your hips, straighten your arms, and push your body backwards. Look at the floor.



Transition to Step 9

Start to inhale as you step forwards with your right leg, bringing your right foot between your hands and your right knee above your right ankle. Lower your left knee to the mat.

9 As you continue inhaling, stretch your left foot backwards. Try to keep your hands flat on the mat. Look up and extend your neck and upper back. Keep your hips level. Keep your mouth closed.

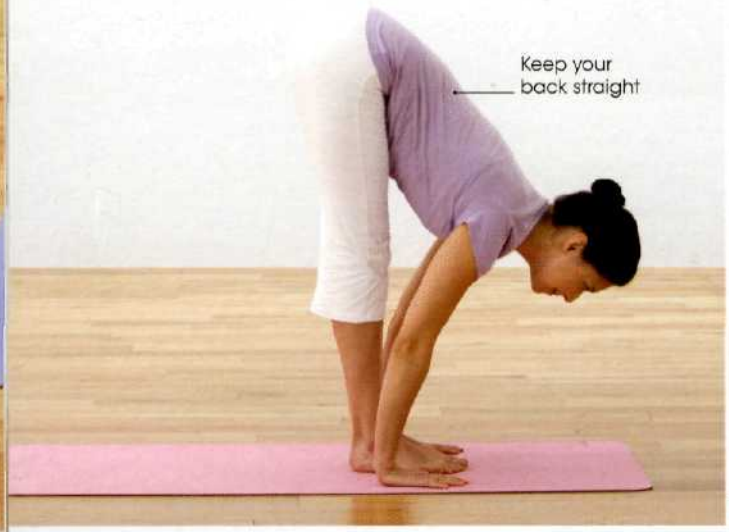
Sun Salutation
(continued)

Transition to Step 10

Start to exhale as you bring your left leg forwards to meet the right, aligning your toes and fingertips and keeping your knees straight. Bend forwards from the waist, but try not to bend your upper back. Look to the floor in front of you.

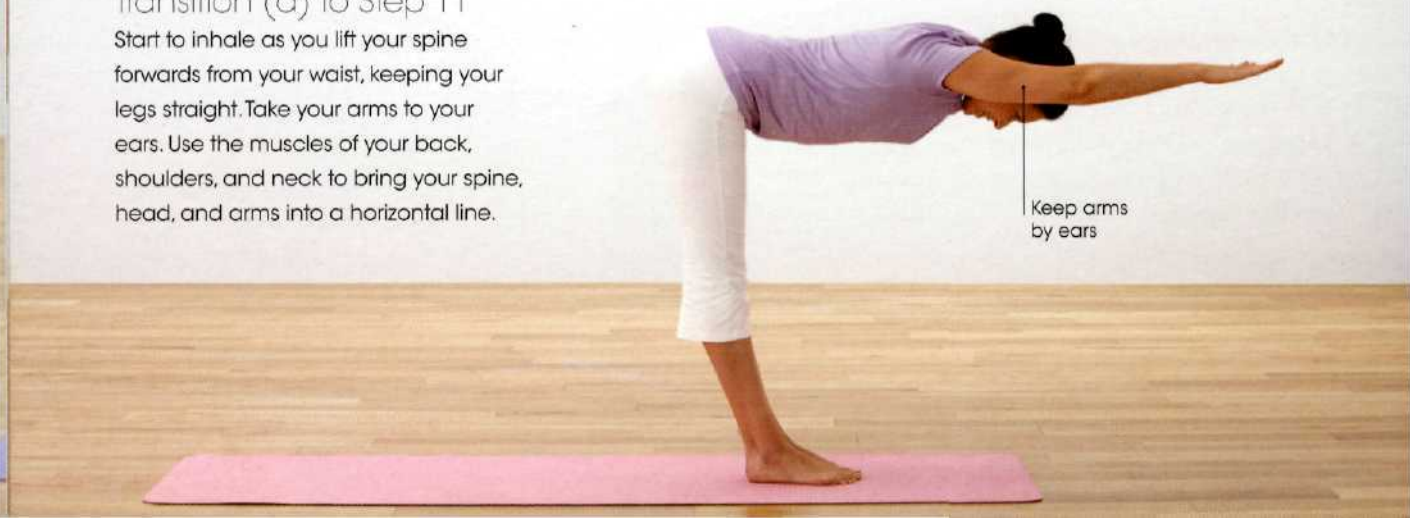
10

As you continue exhaling, bend forwards as much as possible, stretching the muscles of your legs and lower back. If necessary, bend your knees until you can touch them with your head.



Transition (a) to Step 11

Start to inhale as you lift your spine forwards from your waist, keeping your legs straight. Take your arms to your ears. Use the muscles of your back, shoulders, and neck to bring your spine, head, and arms into a horizontal line.



Transition (b) to Step 11

Continuing to inhale, stretch your arms up to your ears, palms facing forwards. As you lift your shoulders, avoid any tension in the neck.

11

Still continuing to inhale, take your weight onto your heels and look upwards as you arch your arms, head, and chest backwards. Stretch the muscles of your chest and abdomen.

12

Exhale as you lower your arms next to your body. Keep your spine upright and look straight ahead. Take a long inhalation, then continue with a second Sun Salutation, starting at Step 1. This time take your left knee to the mat in Step 4 and your right knee to the mat in Step 9.

Single Leg Lifts
All Levels

Single Leg Lifts improve the flexibility of the hamstring and calf muscles, which in turn helps prepare for the stretching of the back muscles in the various forward-bending asanas.

Single Leg Lift
Beginner

1 Lie flat on your back with your legs together, arms next to your body, and palms face down.

2 Inhale and raise your left leg, keeping your knee straight, toes towards your head. Exhale and lower your leg to the starting position. Repeat up to 5 times on each side, then continue with Head to Knee Raise or Deep Stretch Single Leg Lift.

Head to Knee Raise
Beginner

1 Starting from Single Leg Lift Step 2 (see above), with an exhalation, bend your left leg, and clasp your hands around your left knee, pushing your left thigh firmly against your abdomen.

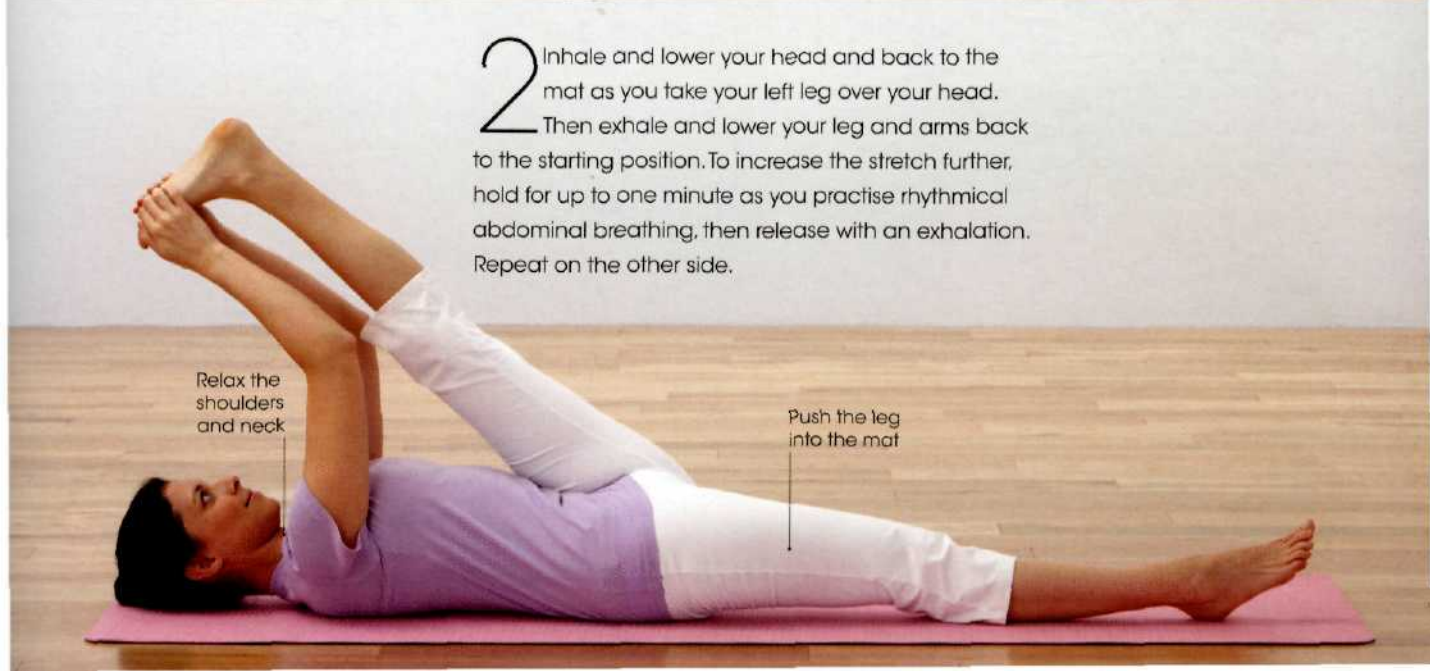
2 With an inhalation, lift your head and try to *bring your forehead against your left knee.* With an exhalation, lower your head, arms, and leg. Repeat on the opposite side. Practise up to three Head to Knee Raises on each side.

Deep Stretch Single Leg Lift

Intermediate

1 Starting from Single Leg Lift Step 2 (see opposite), with an exhalation, take hold of your left leg or foot with both hands, lift your back off the mat, and try to bring your chest and head close to the raised leg.

2 Inhale and lower your head and back to the mat as you take your left leg over your head. Then exhale and lower your leg and arms back to the starting position. To increase the stretch further, hold for up to one minute as you practise rhythmical abdominal breathing, then release with an exhalation. Repeat on the other side.



Double Leg Lifts

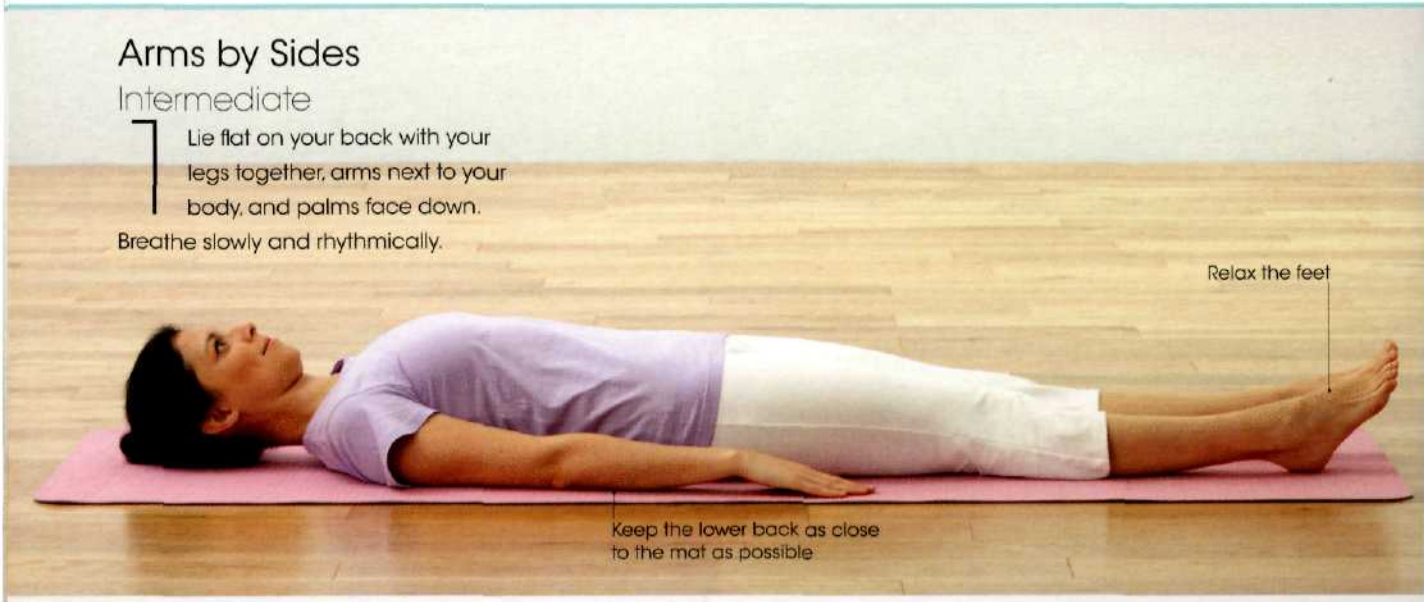
Intermediate and Advanced

These Double Leg Lifts provide abdominal strength, which is needed for many asanas,such as Headstand (see pp62–71). After doing Single then Double Leg Lifts, relax in Corpse Pose (see p188).

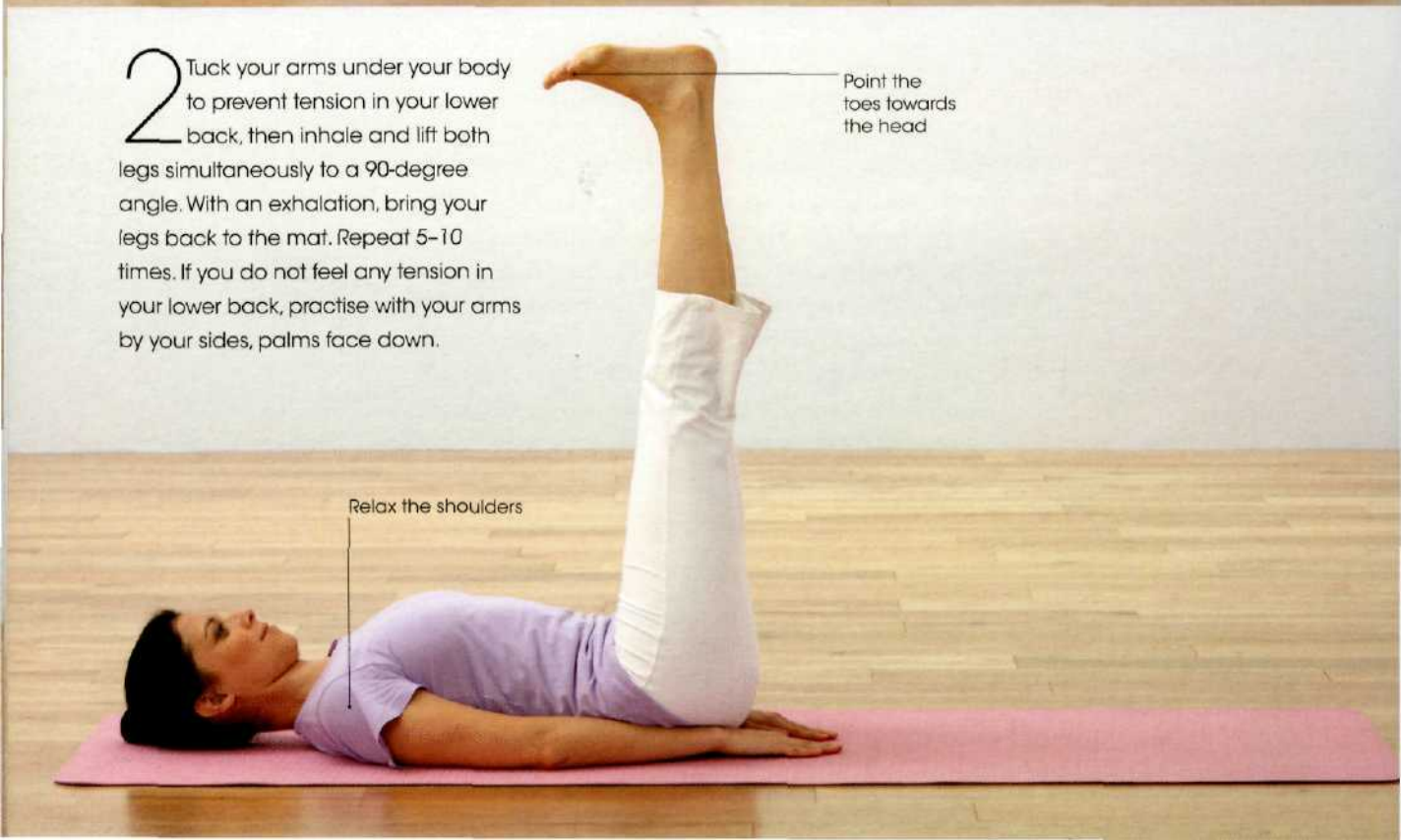
Arms by Sides

Intermediate

1 Lie flat on your back with your legs together, arms next to your body, and palms face down. Breathe slowly and rhythmically.



2 Tuck your arms under your body to prevent tension in your lower back, then inhale and lift both legs simultaneously to a 90-degree angle. With an exhalation, bring your legs back to the mat. Repeat 5–10 times. If you do not feel any tension in your lower back, practise with your arms by your sides, palms face down.



Arms Overhead

Advanced

1 Lie flat on your back, extend your arms on the floor behind you, and catch hold of your elbows. Breathe slowly and rhythmically.

2 Inhale and lift both legs simultaneously to a 90-degree angle. With an exhalation, lower your legs, but do not bring your heels to the floor. Repeat 5–10 times.

1 Headstand
Sirshasana

Known as "King of Asanas", Headstand is a powerful pose for both body and mind. Balance in Headstand requires coordination of the impulses received in the brain from the inner ear, the skin of the arms and hands, the eyes, and various muscles and joints. Relax afterwards in the counterpose, Child's Pose (see p191).

BENEFITS

PHYSICAL
- Creates a stronger heartbeat.
- Relieves varicose veins.
- Reduces pressure in the lower back.
- Helps to build muscle strength in the shoulder girdle.
- Improves coordination of the body's voluntary and involuntary functions.

MENTAL
- Improves memory and concentration.
- Improves body-mind coordination.
- Enhances intellectual capacities.

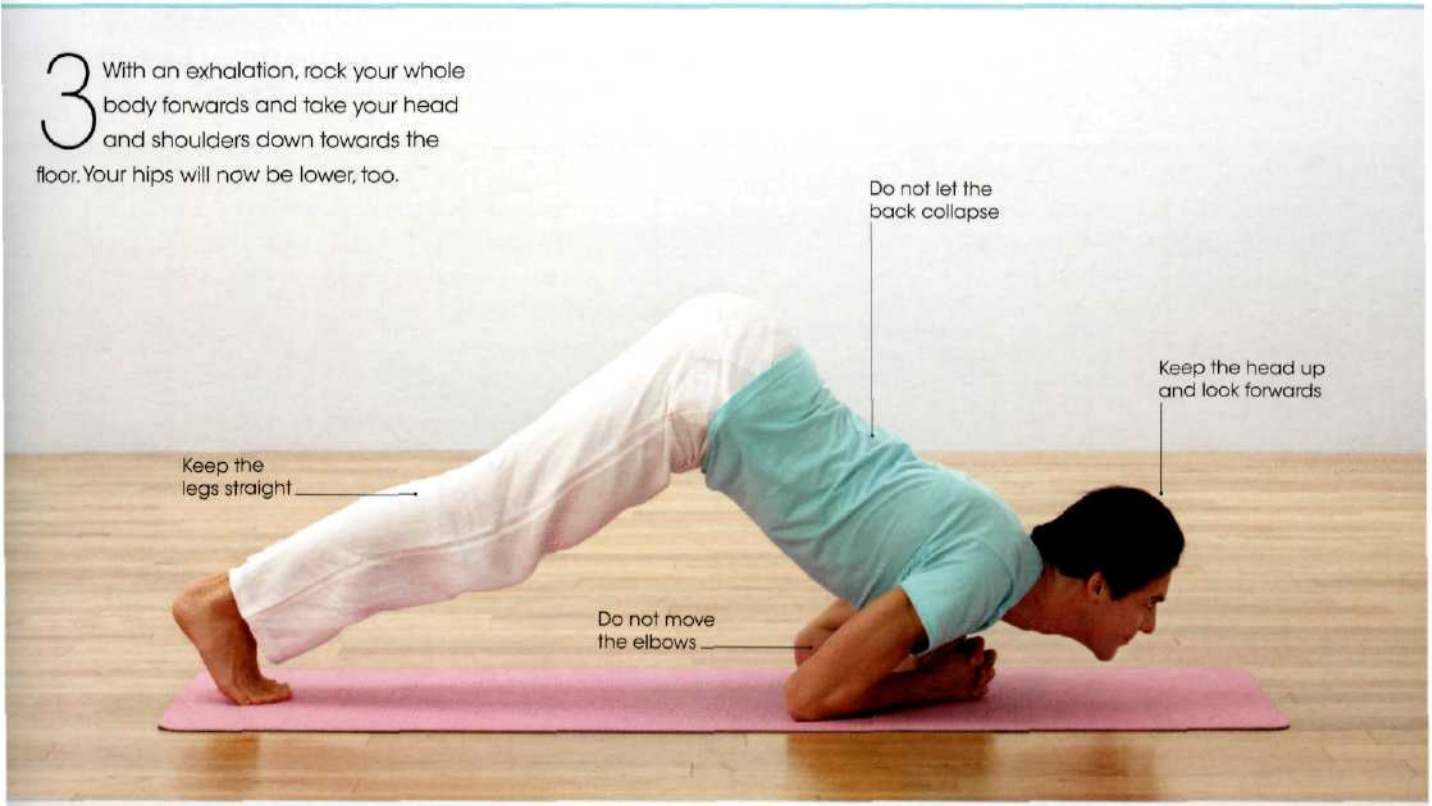
CAUTION Do not practise Headstand: if you suffer from high blood pressure; during menstruation; if you suffer from eye conditions such as detached retina or glaucoma; if you have any inflammation in the head area; if you suffer from neck pain due to an accident or other causes. If in doubt, consult your doctor.

Dolphin
Preparatory Exercise for All Levels

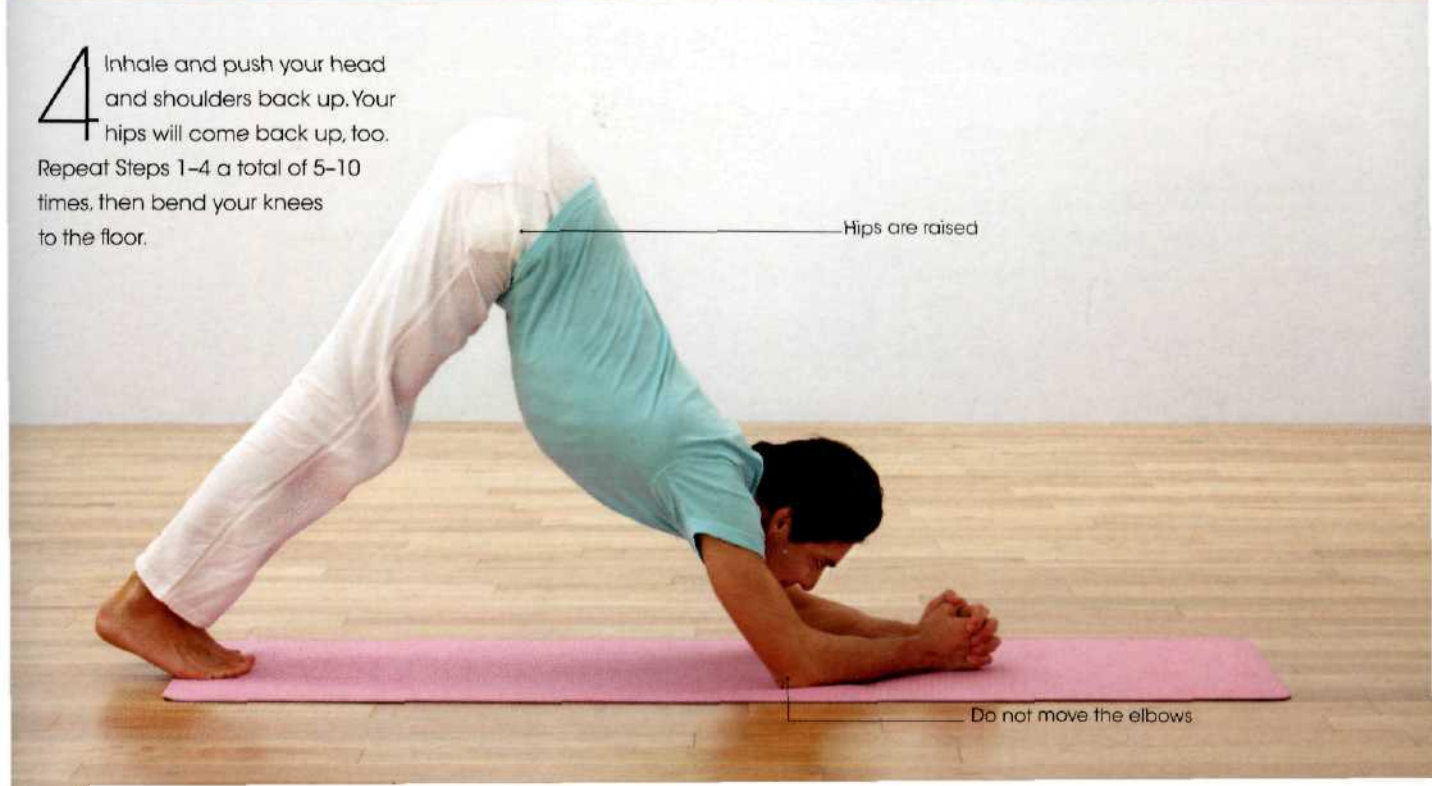
1 This exercise prepares you physically and mentally for Headstand. From a kneeling position, lean forwards and place your arms about 20cm (8in) away from your knees on the floor in front of you. Firmly interlock your fingers and close your palms.

2 Without moving your feet away from your arms, inhale and raise your hips.

3 With an exhalation, rock your whole body forwards and take your head and shoulders down towards the floor. Your hips will now be lower, too.



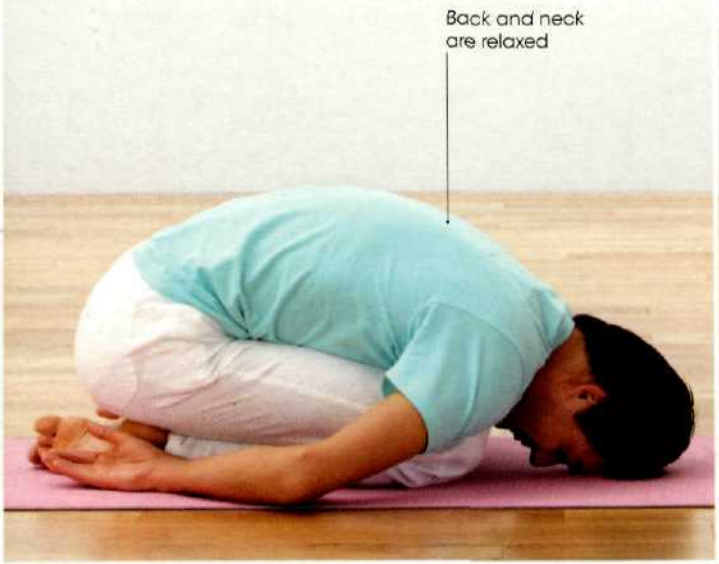
4 Inhale and push your head and shoulders back up. Your hips will come back up, too. Repeat Steps 1–4 a total of 5–10 times, then bend your knees to the floor.



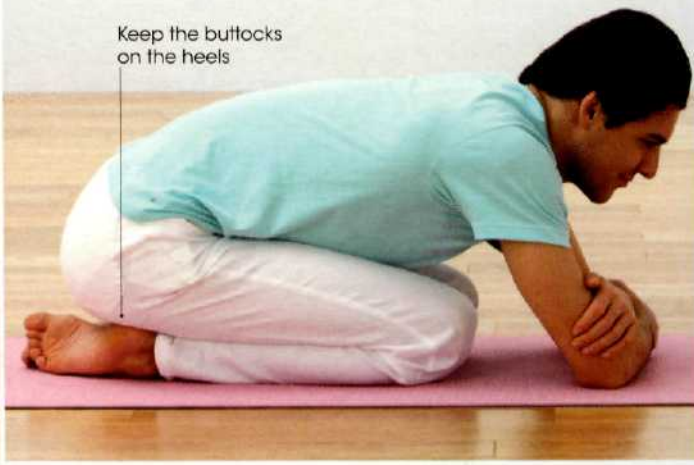
Headstand
Beginner

Think: "my arms are my legs". These are the instructions that Swami Vishnudevananda used to help students to focus on the tripod base formed by their elbows and hands in this pose.

STARTING POSITION Relax in Child's Pose (see p191) for a few moments before you practise Headstand.

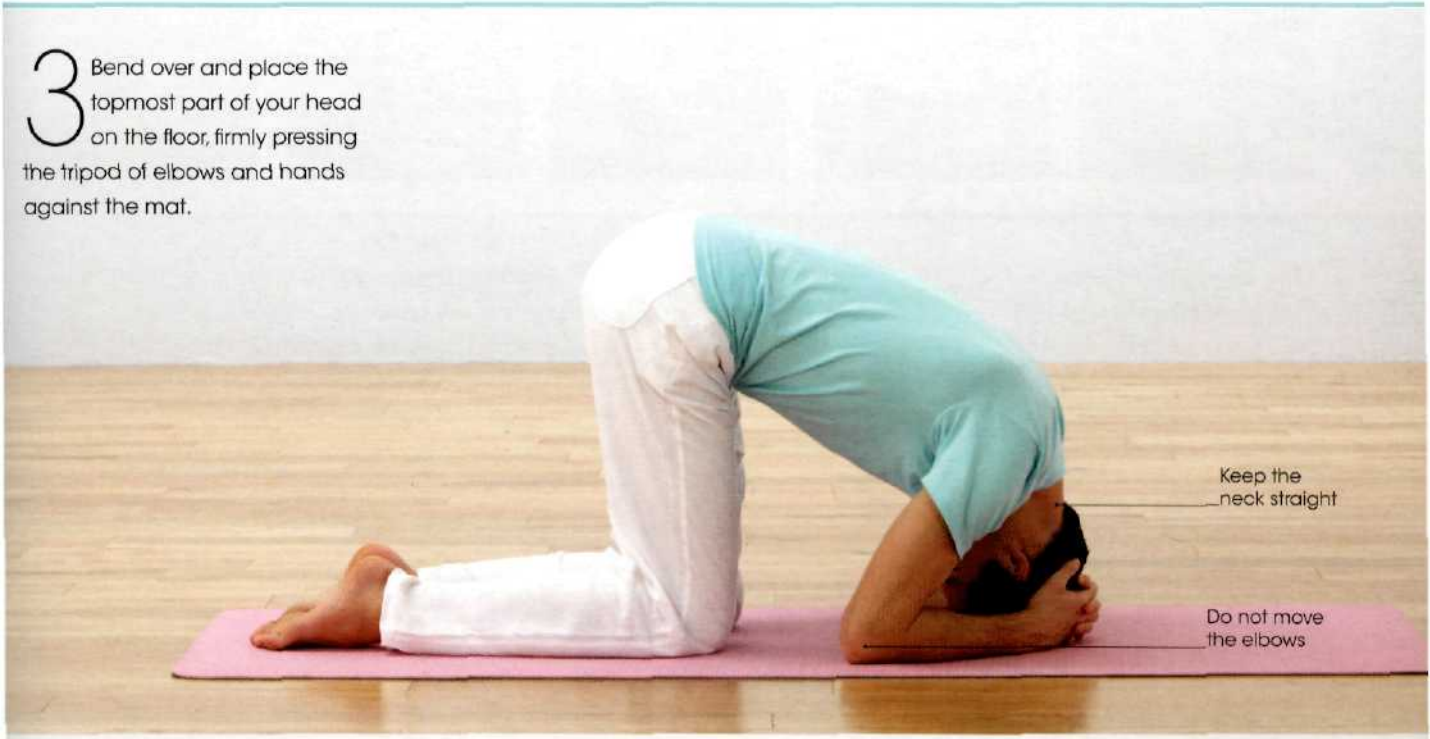


1 Lean forwards, clasping each hand around the opposite elbow and placing your arms about 20cm (8in) away from your knees on the floor in front of you.

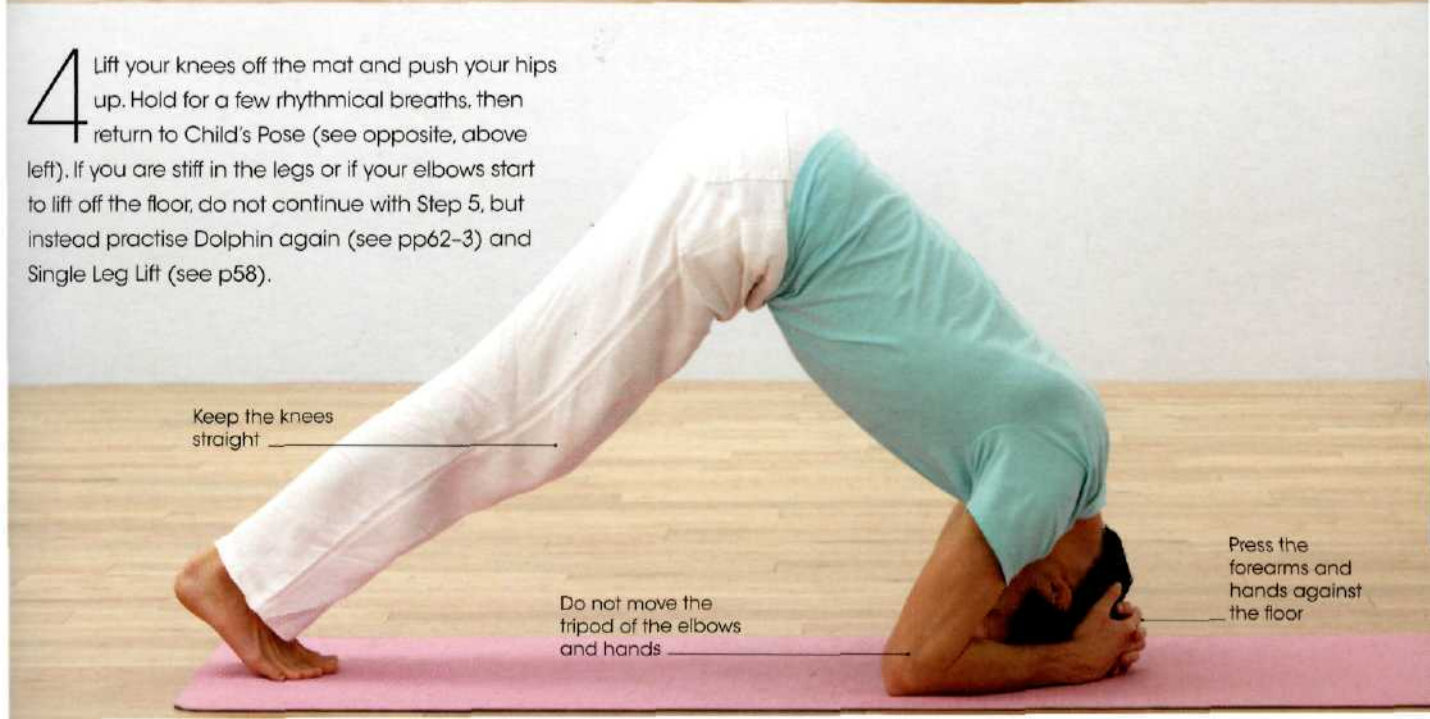


2 Without changing the position of your elbows, interlock your fingers, keeping your palms open. Your hands and elbows provide the firm tripod base for your Headstand.

3 Bend over and place the topmost part of your head on the floor, firmly pressing the tripod of elbows and hands against the mat.



4 Lift your knees off the mat and push your hips up. Hold for a few rhythmical breaths, then return to Child's Pose (see opposite, above left). If you are stiff in the legs or if your elbows start to lift off the floor, do not continue with Step 5, but instead practise Dolphin again (see pp62–3) and Single Leg Lift (see p58).



Headstand

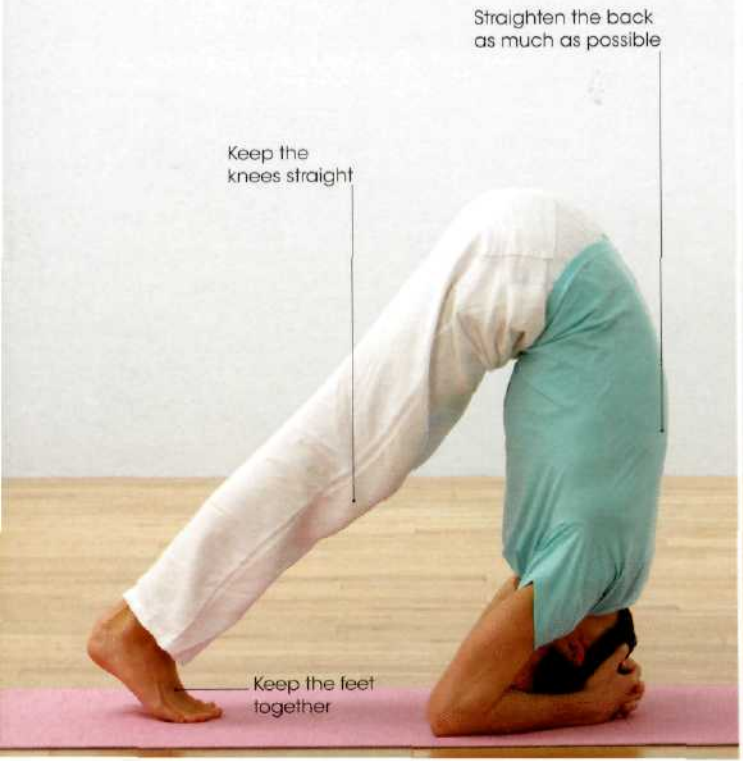
Intermediate and advanced

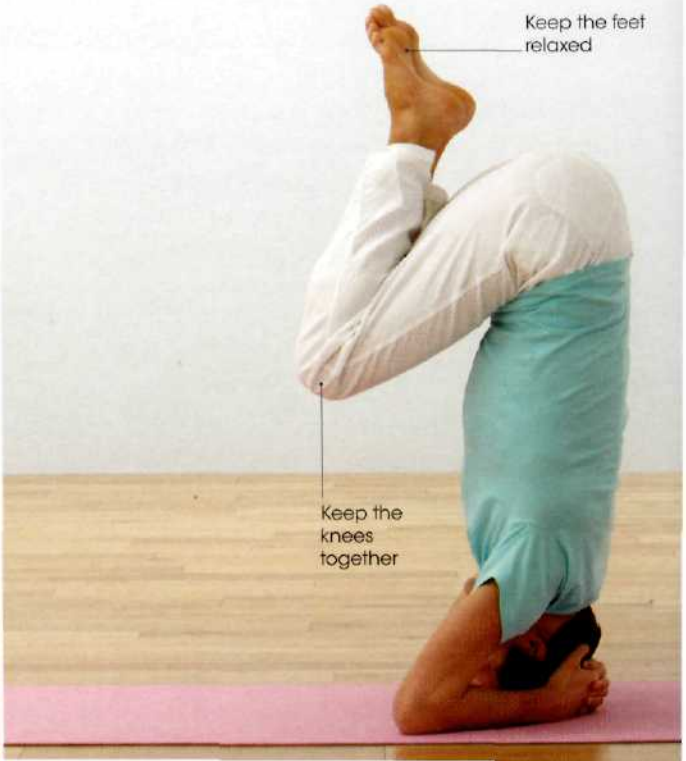
You should not practise Headstand against a wall. The secret of success in this pose is to focus on the tripod base formed by your elbows and hands, and on the point of balance in your lower back.

Start with

5 Starting from Headstand Step 4, and keeping your legs straight, walk your toes as close to your head as possible. Do not allow your back to collapse.

6 Breathing slowly and rhythmically, bend your legs and use your lower back muscles to pull your legs and pelvis up, until you are firmly balanced on your tripod base. Occasional contraction of your abdominal muscles will prevent you from falling over.





"Sirshasana [Headstand] invigorates, energises, and vivifies. It is a true blessing and a nectar. You will find real pleasure and exhilaration of spirit in this asana."

Swami Sivananda

7 Continue to breathe rhythmically. Firmly press the tripod of elbows and hands against the floor. Focus on the point of balance in your lower back, then slowly start lifting your knees until your thighs are vertical and your feet are behind you.

8 To come into the full pose, extend your knees and take your legs straight up. Avoid any tension in your legs and feet. Hold for 1–5 minutes, then come down by following Steps 7–1, in that order. Relax in Child's Pose (see p191) for at least 6 deep breaths, then lie in Corpse Pose (see p188) for 1 minute.

COMMON FAULTS

Headstand
Variations

Each of these Headstand variations helps you to improve your balance, coordination, and powers of concentration. Move carefully until, in the end, your legs move as freely as if they were arms.

Start with

Starting position p64

1

2

3

4

Legs to the Sides
Advanced

Starting from Headstand Step 8, with an exhalation, open your legs to the sides and let gravity pull them down towards the floor. Hold for up to 1 minute with deep, rhythmical breathing.

Legs to Front and Back
Advanced

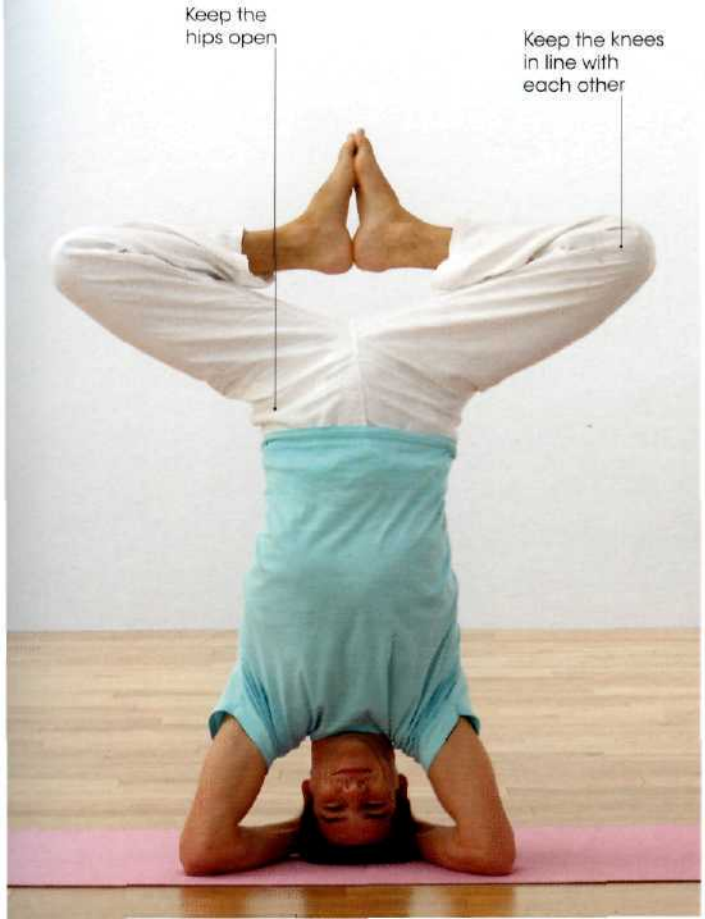
Starting from Headstand Step 8, with an exhalation, slowly take one leg forwards and the other leg equally far back. Change legs. If your Headstand is well balanced, you can alternate your legs in a flowing rhythm, with deep, rhythmical breathing for up to 1 minute.

After each variation, bring your legs back together into Headstand Step 8, then either practise another variation or come down by doing Steps 7–1 in that order. Relax afterwards in Child's Pose (see p191).

Knees Bent to the Sides

Advanced

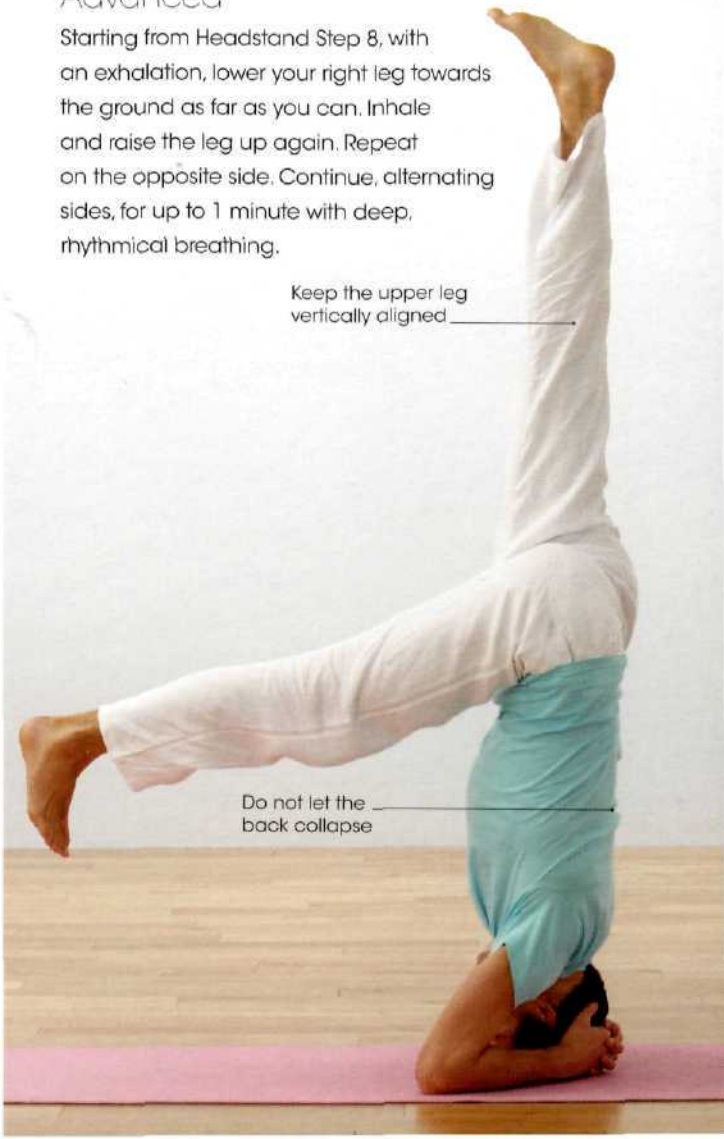
Starting from Headstand Step 8, with an exhalation, bend your knees to the sides and carefully bring the soles of your feet together. Hold for up to 1 minute with deep, rhythmical breathing.



One Leg to the Ground

Advanced

Starting from Headstand Step 8, with an exhalation, lower your right leg towards the ground as far as you can. Inhale and raise the leg up again. Repeat on the opposite side. Continue, alternating sides, for up to 1 minute with deep, rhythmical breathing.



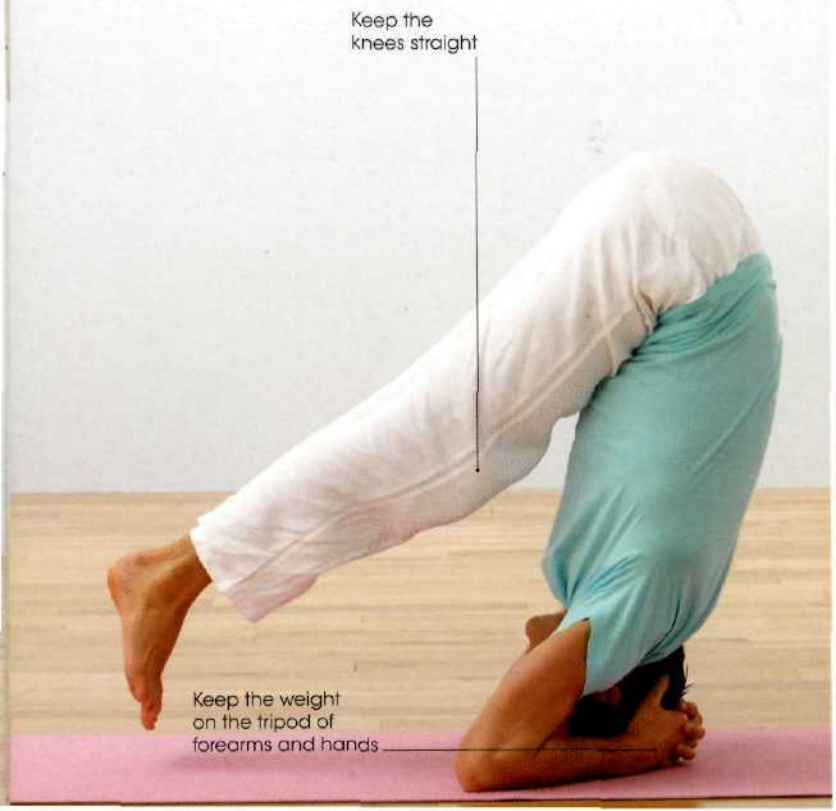
Headstand
Variations (continued)

These advanced variations teach you to bend and twist in Headstand. Movements of the spine like these give your back an excellent workout – even while you are on your head.

Start with

Both Legs to the Ground
Advanced

Starting from Headstand Step 8, with an exhalation and keeping your legs together, lower them in a controlled manner as far as possible towards the floor. With the next inhalation, bring the legs back up. Repeat the movement up to 5 times.



Lotus Headstand
Advanced

Starting from Headstand Step 8, with an exhalation, bring your legs into Lotus (see p114). Hold for up to 1 minute, breathing rhythmically, then uncross your legs, cross them the other way, and hold for up to 1 minute more.

After each variation, bring your legs back together into Headstand Step 8, then either practise another variation, or come down by doing Steps 7–1 in that order. Relax afterwards in Child's Pose (see p191).

Twisted Lotus Headstand

Advanced

Starting from Lotus Headstand (see opposite), with an exhalation, twist your spine to one side. After a few breaths, slowly twist to the other side. Undo your legs, cross them the other way, and repeat.

Forward Bend Lotus Headstand

Advanced

Starting from Lotus Headstand (see opposite), with an exhalation, start bending forwards from the hips. Hold for 3 breaths, with each exhalation trying to bend a little lower. Inhale and come back up into Lotus Headstand. Repeat twice more.

Scorpion
Advanced

Once you feel secure in Headstand and can hold it for at least 2 minutes, you can attempt Scorpion. Get used to arching your body backwards. You will soon be balancing in Scorpion.

Start with

Starting position p64

1

2

3

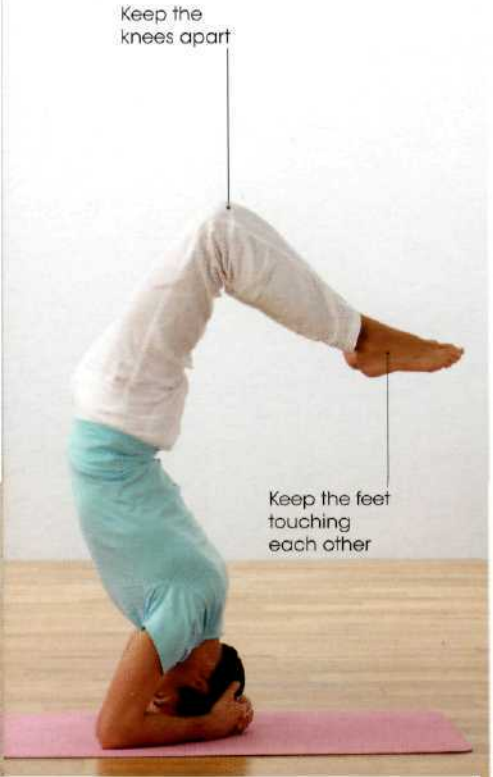
4

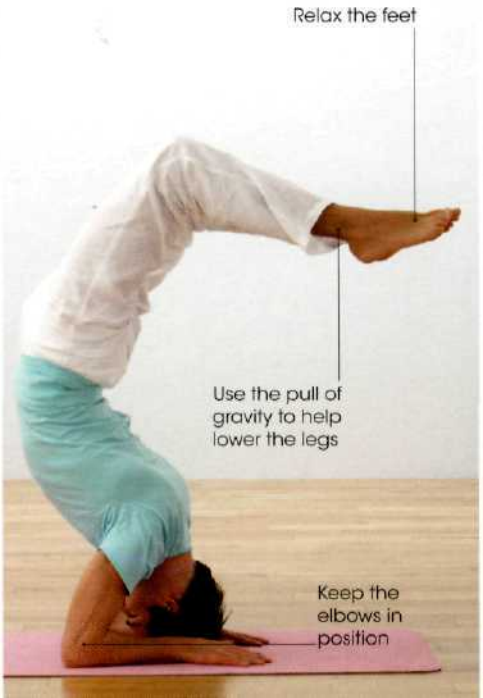
9 Starting from Headstand Step 8, press down on the tripod base formed by your elbows and hands. With an exhalation, bend your body backwards as you push your hips forwards.

10 Staying firm in your forearms and shoulders, and breathing deeply and rhythmically, separate your hands to about shoulder-width apart. Place your palms flat on the floor either side of your head.

11 To come into the full pose, with an inhalation, lift your head and find your balance on your forearms. Hold the pose for up to 30 seconds.

Stable Base Keep the forearms almost parallel to each other and the fingers spread as widely as possible.



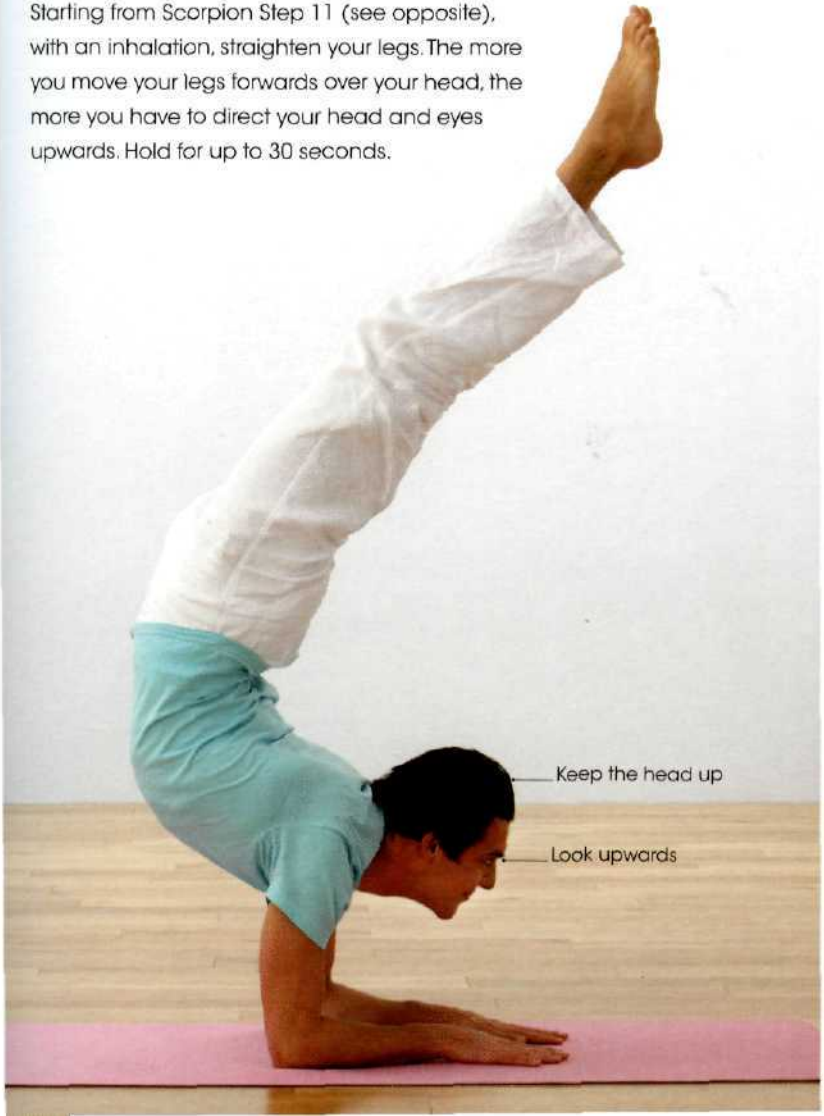


After practising Scorpion or its variations, return to Headstand Step 8, then either practise another variation, or come down by doing Steps 7–1 in that order. Relax afterwards in Child's Pose (see p191).

Straight Legs

Variation

Starting from Scorpion Step 11 (see opposite), with an inhalation, straighten your legs. The more you move your legs forwards over your head, the more you have to direct your head and eyes upwards. Hold for up to 30 seconds.



Feet to Head

Variation

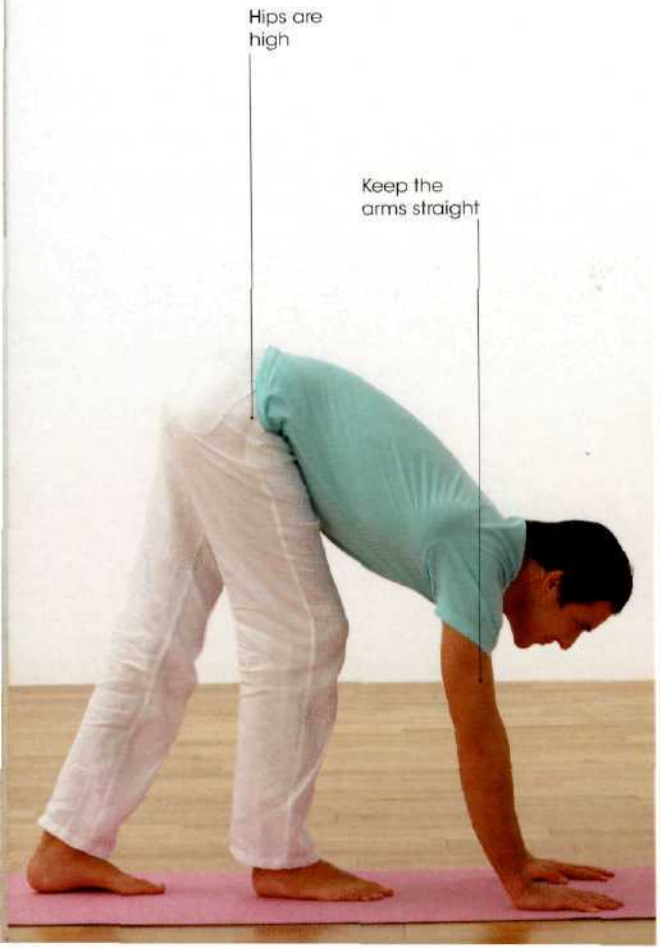
Starting from Scorpion Step 11 (see opposite), with a series of strong exhalations, bend your spine and legs until your feet touch your head. Keep your knees apart to reduce the pressure on your lower back. Hold for up to 30 seconds.

Handstand
Advanced

Handstand offers all the benefits of Headstand. Practise it against a wall until you are confident enough to balance on your hands and arms. Relax afterwards in Child's Pose (see p191).

1 *Step one foot in front of the other,* then bend forwards and place both hands firmly on the mat, about shoulder-width apart. Keep your back straight and make sure that you do not allow your head to drop.

2 *On an exhalation,* swing your left leg up, followed by your right leg. This involves a pulling motion on your upper leg as you swing it up, and a pushing motion on your lower leg as you jump into position. Stay firm in your arms and hands.



3 Keep both legs together as you balance in the full pose. Hold the pose for a few breaths, then come down by bringing one leg at a time to the floor.

Scorpion Handstand

Variation

Starting from Handstand Step 3 (see left), bend your spine and legs to bring your feet towards your head. If you are very flexible, you should be able to touch your head with your feet. Come out of the pose by raising your feet back into Handstand, then bringing one leg at a time down to the floor.

2 Shoulderstand
Sarvangasana

The pressure of the chin against the chest and the inversion of the body in Shoulderstand create the energy flow of Hatha yoga – the union in the solar plexus of the ascending "Ha", or sun, energy with the descending "Tha", or moon, energy. Always practise Fish (see pp92–3) as the counterpose, then relax in Corpse Pose for at least 8 breaths.

BENEFITS

PHYSICAL

- Tones and revitalizes the thyroid and parathyroid glands. This improves and balances the metabolism of literally every cell in the body.
- Improves the blood supply to the roots of the spinal nerves.
- Stretches away any stress held in the shoulder and neck area.
- Relieves the pain of varicose veins.

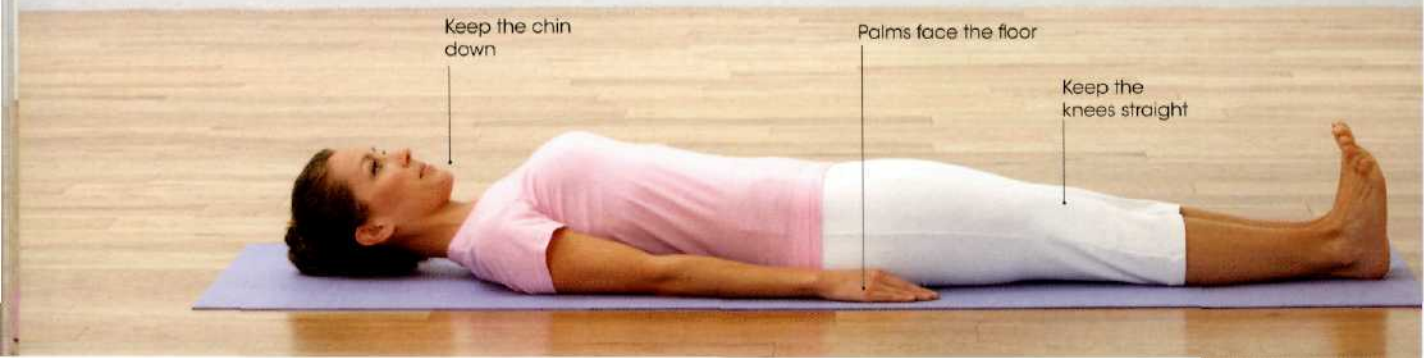
MENTAL

- Stimulates cheerfulness and helps to cure depression.
- Helps to relieve mental sluggishness and promotes clear thinking.

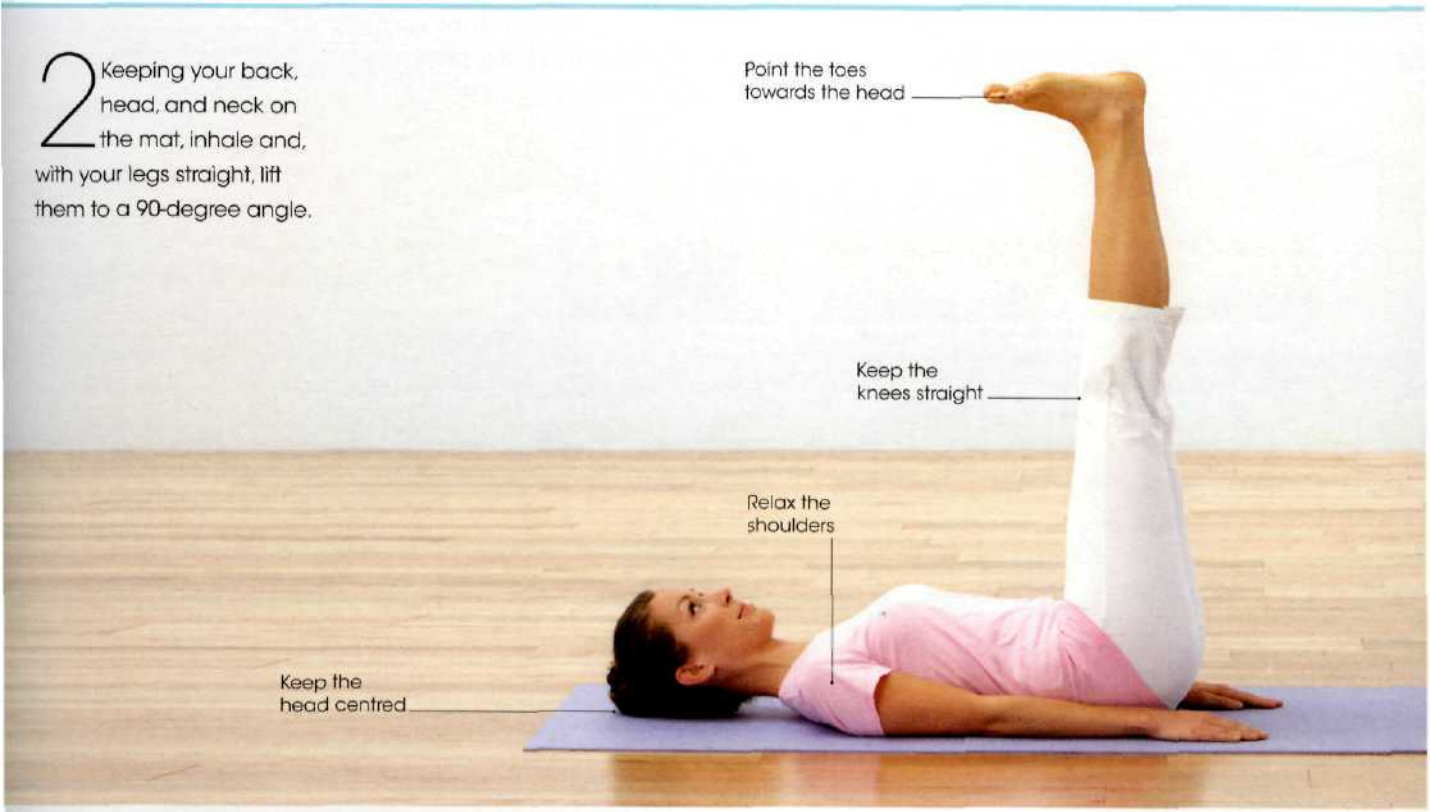
CAUTION If you suffer from high blood pressure, do not hold the pose for more than 30 seconds. If you have a slipped disc or other painful neck condition, practise only as far as Step 3.

Shoulderstand
Beginner

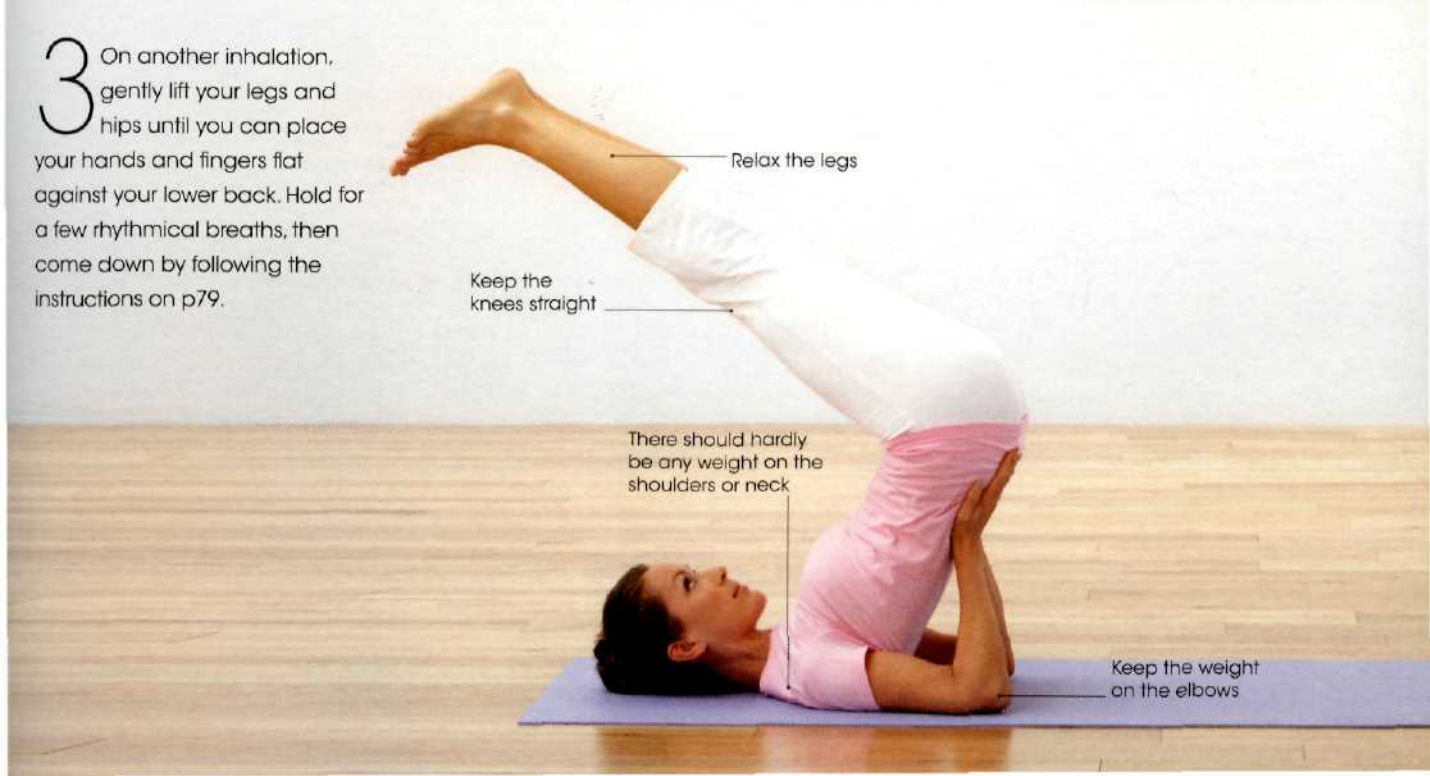
1 Lie flat on your back with your legs together, arms next to your body, and palms touching the mat. Breathe rhythmically in your abdomen.



2 Keeping your back, head, and neck on the mat, inhale and, with your legs straight, lift them to a 90-degree angle.



3 On another inhalation, gently lift your legs and hips until you can place your hands and fingers flat against your lower back. Hold for a few rhythmical breaths, then come down by following the instructions on p79.



Shoulderstand

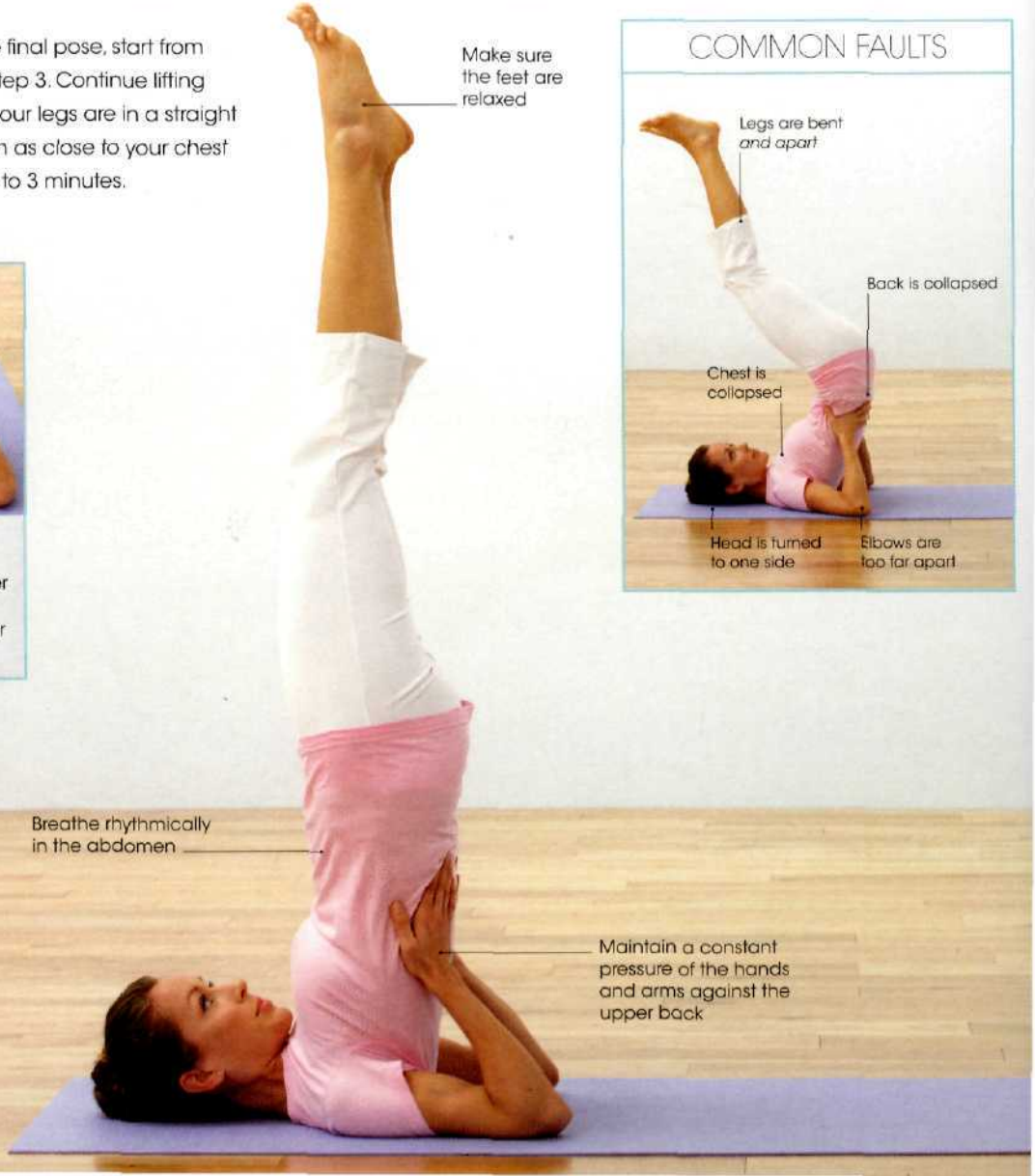
Intermediate and Advanced

As you progress in Shoulderstand, the more you will be able to align the legs, hips, and back, making it easier to hold the pose, since the back muscles will not need to work so hard against gravity.

Start with

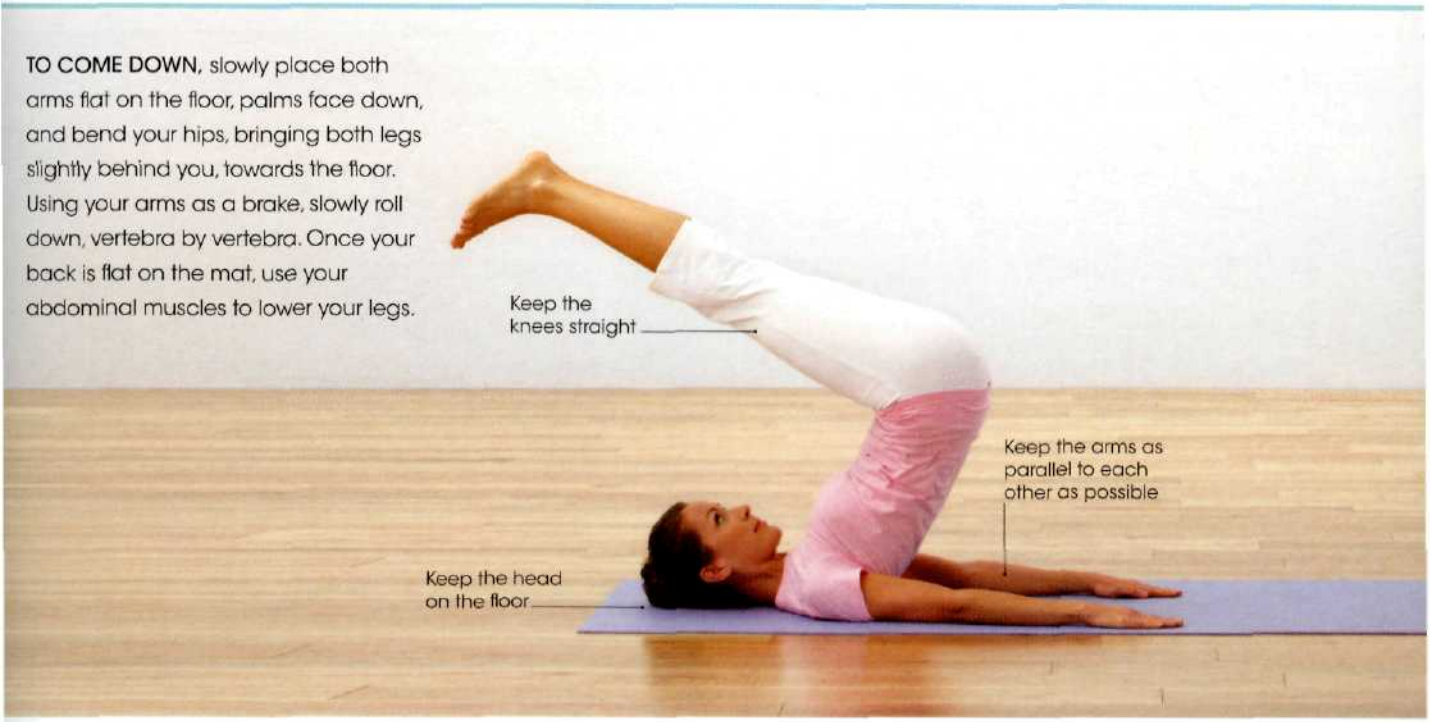
4 To come into the final pose, start from Shoulderstand Step 3. Continue lifting your body until your legs are in a straight line, and bring your chin as close to your chest as possible. Hold for up to 3 minutes.

Hand Position Take your hands as close as possible to your shoulder blades, with your arms as parallel to each other as possible.



COMMON FAULTS

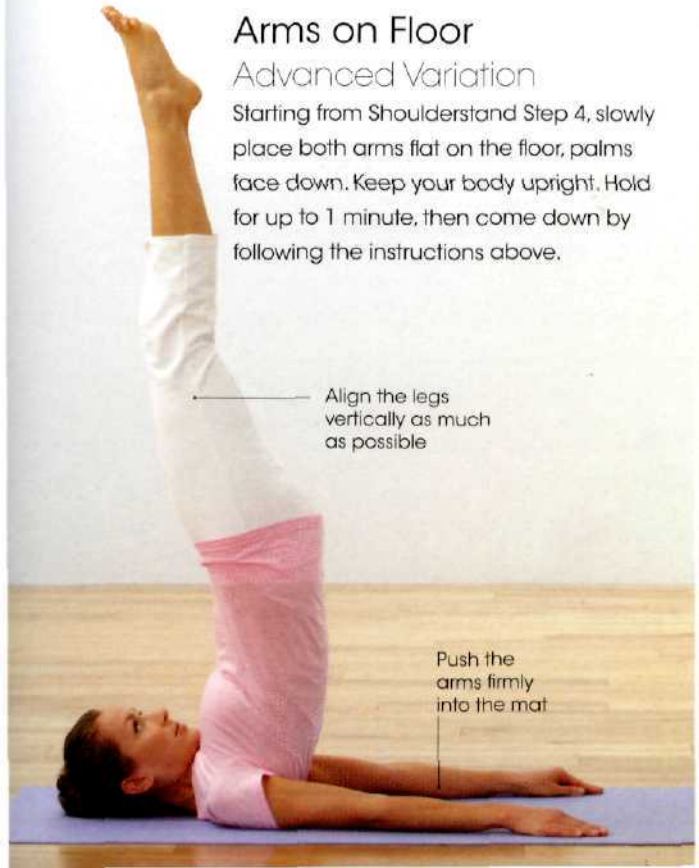
TO COME DOWN, slowly place both arms flat on the floor, palms face down, and bend your hips, bringing both legs slightly behind you, towards the floor. Using your arms as a brake, slowly roll down, vertebra by vertebra. Once your back is flat on the mat, use your abdominal muscles to lower your legs.



Arms on Floor

Advanced Variation

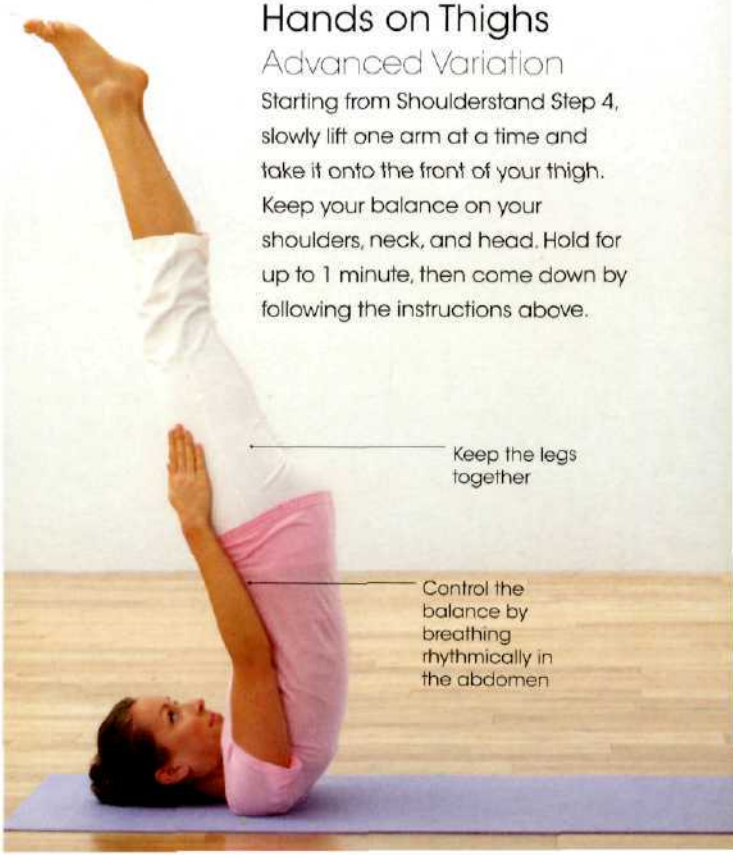
Starting from Shoulderstand Step 4, slowly place both arms flat on the floor, palms face down. Keep your body upright. Hold for up to 1 minute, then come down by following the instructions above.



Hands on Thighs

Advanced Variation

Starting from Shoulderstand Step 4, slowly lift one arm at a time and take it onto the front of your thigh. Keep your balance on your shoulders, neck, and head. Hold for up to 1 minute, then come down by following the instructions above.



3 Plough
Halasana

Plough is a natural continuation of the forward-bending movement that you will have done in Shoulderstand (see pp76–9). The shape you make in this pose, with your feet and hands on the floor, resembles a plough. This asana helps to keep the whole spine youthful. Relax afterwards in Corpse Pose (see p188) for at least 8 breaths.

BENEFITS

PHYSICAL

- Stretches the back of the body completely, which mobilizes the entire spine.
- Loosens tight hamstrings.
- Stretches the deep and superficial muscles of the back.
- Increases the blood supply to the nerves of the spine.
- Releases tension in the shoulder and neck muscles.
- Helps improve the flexibility of the shoulder joint.
- Improves digestion and helps to overcome constipation by placing pressure on the abdominal area.

MENTAL

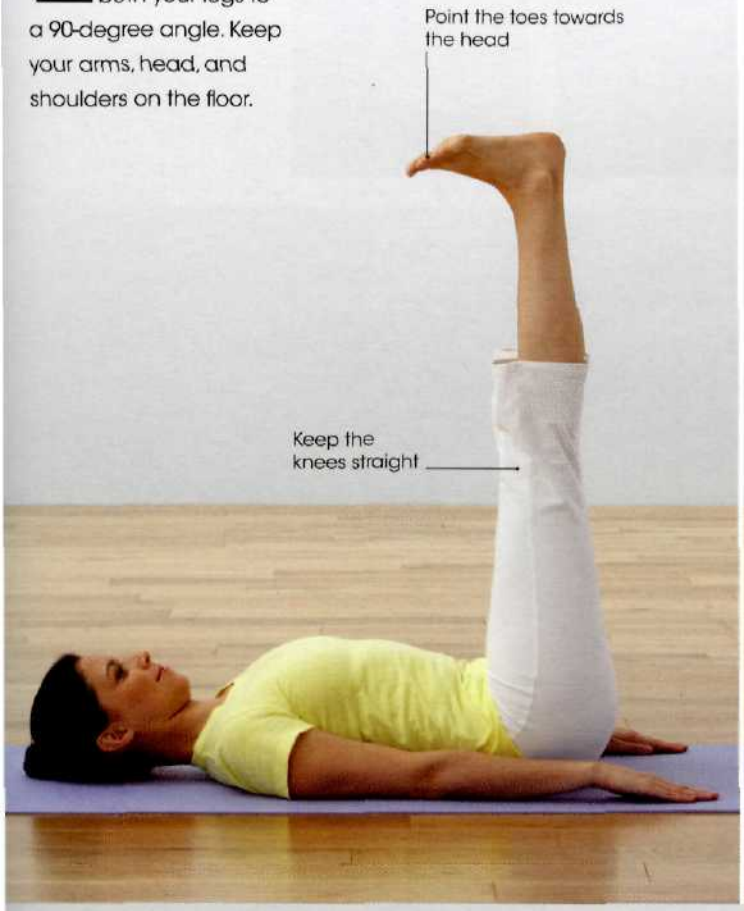
- By teaching you how to breathe and relax while there is pressure on the front of your body, Plough helps you cope better with any claustrophobia, stress, or sense of being overwhelmed by a lack of space in your daily life.

CAUTION If you are suffering from an acute slipped disc, you should consult your doctor or physiotherapist before starting this exercise.

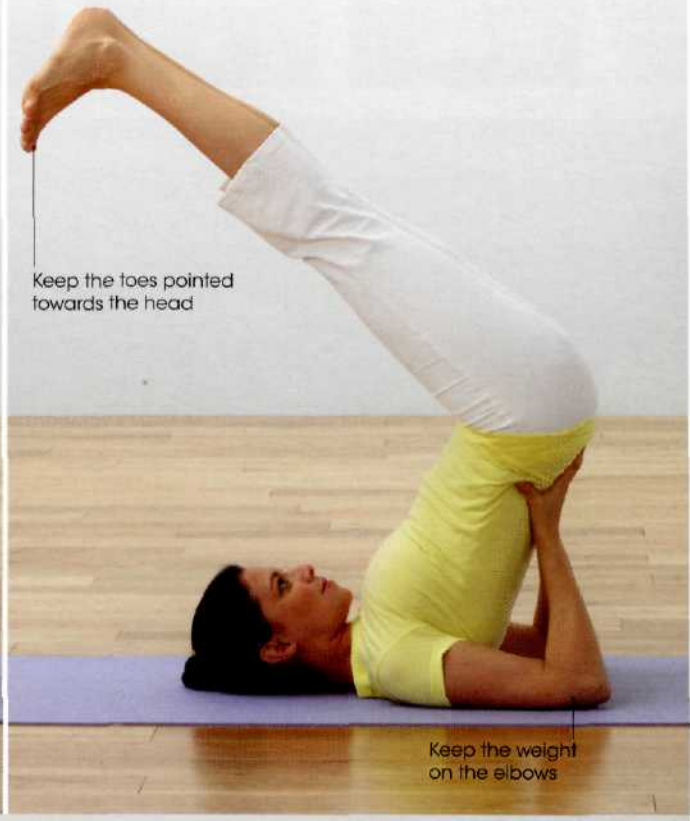
Plough
Beginner

1 Lie flat on your back with your legs together, arms next to your body, and palms face down on the mat.

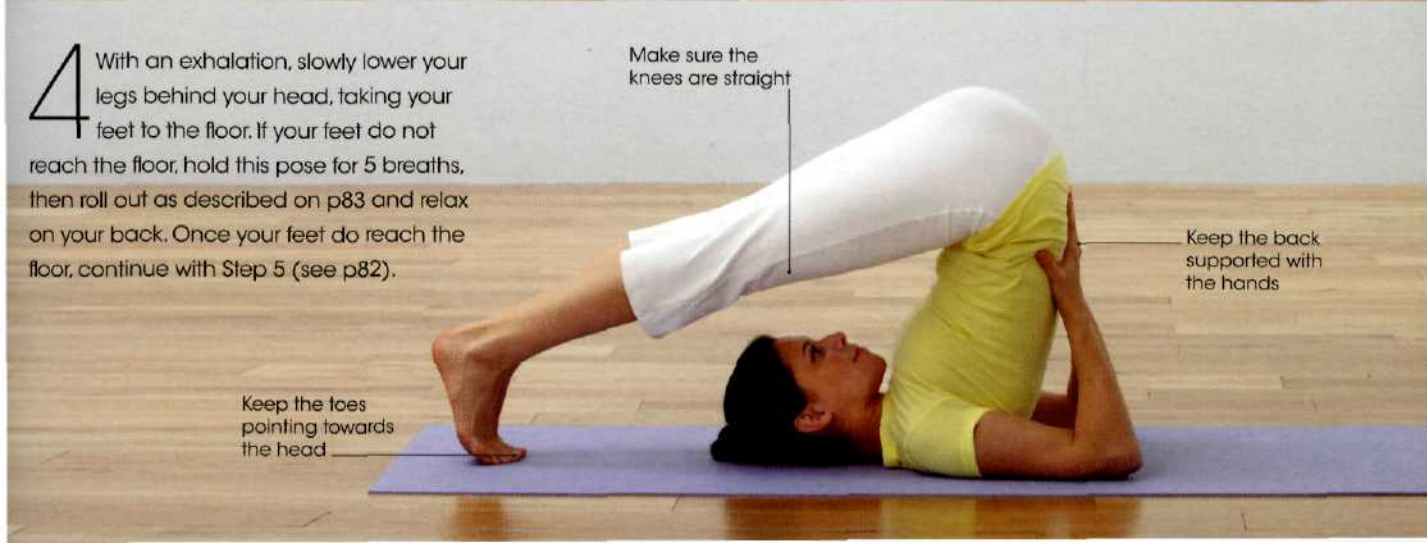
2 With an inhalation, slowly start lifting both your legs to a 90-degree angle. Keep your arms, head, and shoulders on the floor.



3 With another inhalation, lift your legs and hips until you can place your hands against your lower back.



4 With an exhalation, slowly lower your legs behind your head, taking your feet to the floor. If your feet do not reach the floor, hold this pose for 5 breaths, then roll out as described on p83 and relax on your back. Once your feet do reach the floor, continue with Step 5 (see p82).



Plough

Intermediate and advanced

At the intermediate level of Plough, you hyperextend your arms as you place them on the floor. This increases your flexibility, not only in your hips and back, but also in your shoulder girdle.

Start with

5 Starting from Plough Step 4, with your toes touching the floor, extend your arms flat on the floor behind your back, palms down.

Try to keep the spine straight

Keep the arms as close to each other as possible

6 To come into the full pose, interlock your fingers and press both palms firmly against each other. Hold for up to 1 minute.

Focus on slow, rhythmical, abdominal breathing

Feel the shoulder blades moving closer to each other

COMMON FAULTS

Legs are apart

Back is collapsed

Knees are bent

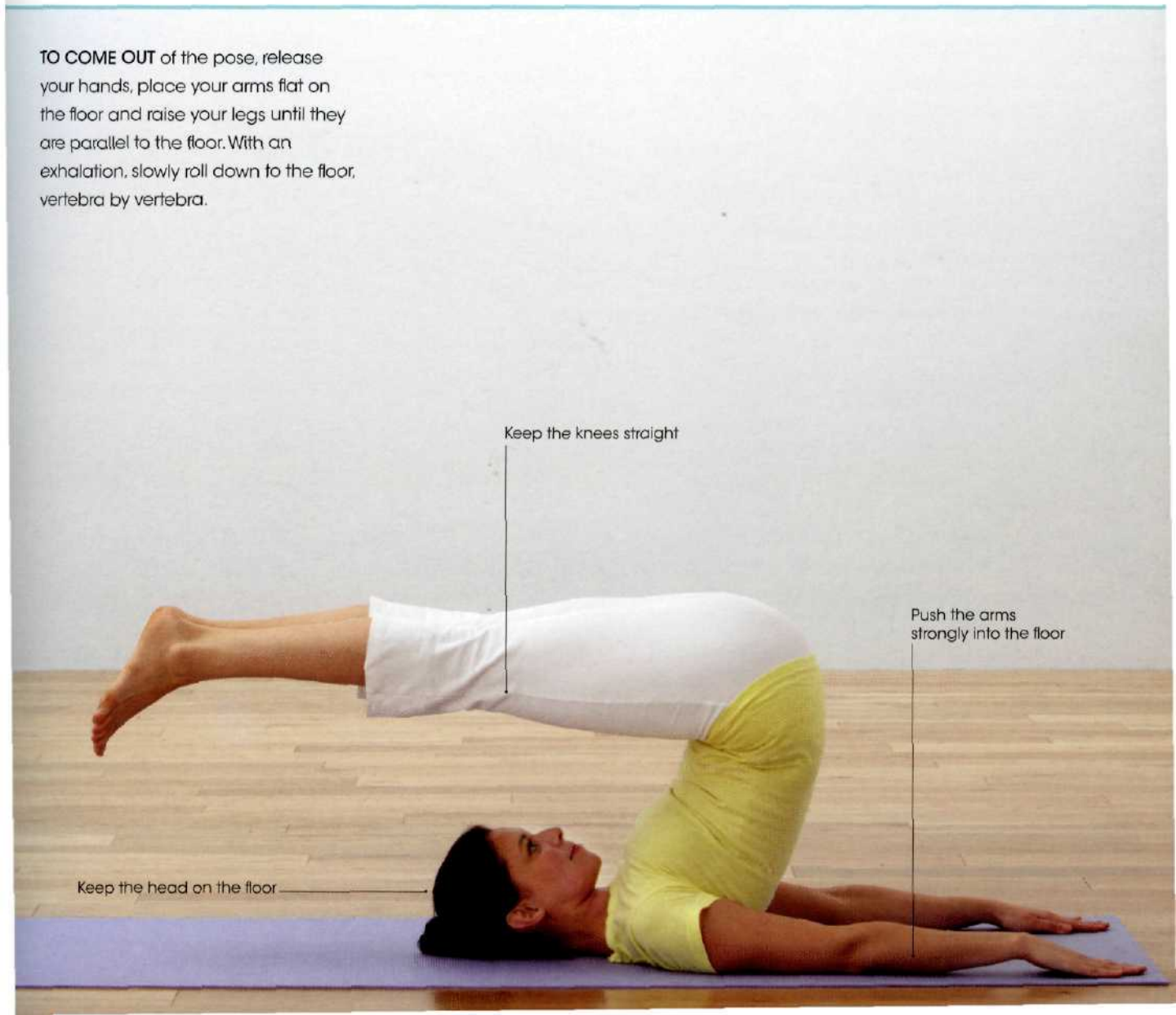
Arms are far apart

Hands are not clasped

Toes do not point towards the head

*"Never behold life physically.
Understand it psychically,
and realize it spiritually."* Swami Sivananda

TO COME OUT of the pose, release your hands, place your arms flat on the floor and raise your legs until they are parallel to the floor. With an exhalation, slowly roll down to the floor, vertebra by vertebra.



Plough
Variations

As well as working the hips and giving the upper back even more of a stretch, these Plough variations give the solar plexus a powerful massage – as long as you keep up your rhythmical breathing.

Start with

Feet Apart
Beginner

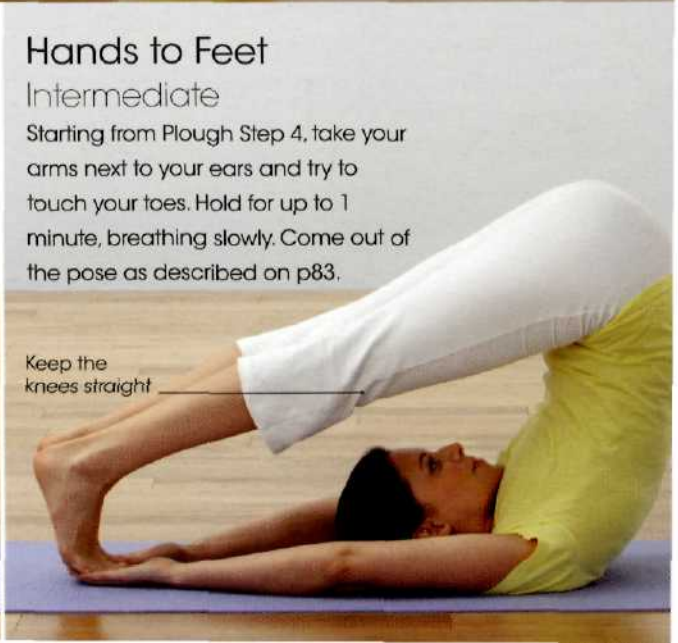
Starting from Plough Step 4, take your legs as far apart as possible. Extend your hands flat on the floor behind you, palms face down. Hold for up to 1 minute, then raise your legs until they are parallel to the floor. Come out of the pose as described on p83.

Arm Wrap
Intermediate

Starting from Feet Apart (see above), lower your knees next to your ears. Bring your arms over your knees and take your hands to your ears. Hold for up to 1 minute, breathing slowly, then come out of the pose as described on p83.

Hands to Feet
Intermediate

Starting from Plough Step 4, take your arms next to your ears and try to touch your toes. Hold for up to 1 minute, breathing slowly. Come out of the pose as described on p83.

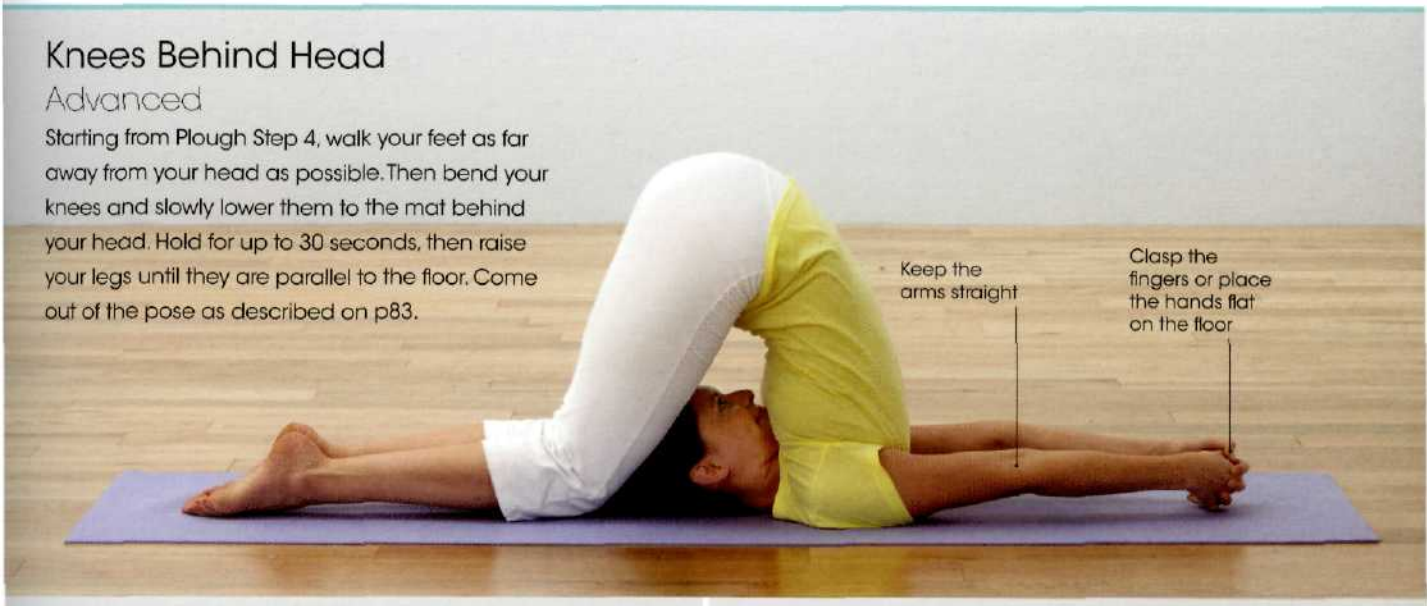


"The self-effort of today becomes the destiny of tomorrow. Self-effort and destiny are one and the same." Swami Sivananda

Knees Behind Head

Advanced

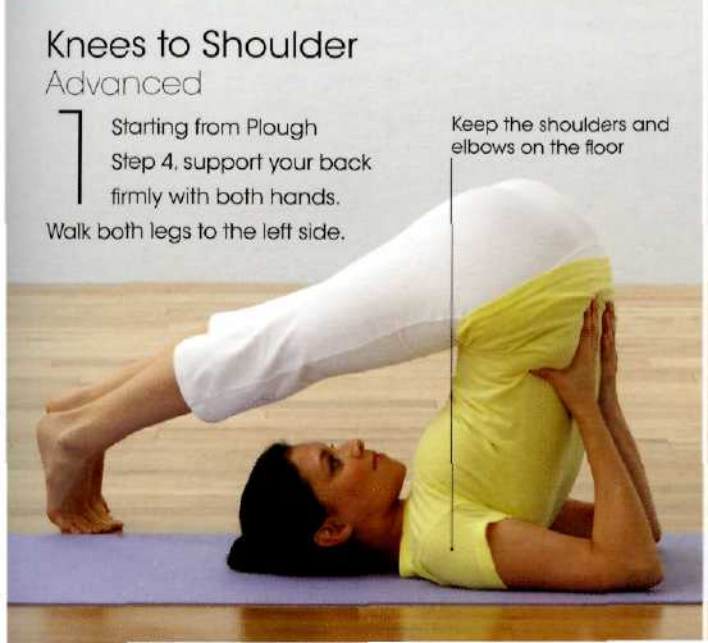
Starting from Plough Step 4, walk your feet as far away from your head as possible. Then bend your knees and slowly lower them to the mat behind your head. Hold for up to 30 seconds, then raise your legs until they are parallel to the floor. Come out of the pose as described on p83.



Knees to Shoulder

Advanced

1 Starting from Plough Step 4, support your back firmly with both hands. Walk both legs to the left side.



2 Take both knees to the floor next to your left ear. Hold for up to 30 seconds, breathing slowly, then straighten your legs and bring your feet back to the centre. Repeat on the other side. Come out of the pose as described on p83.

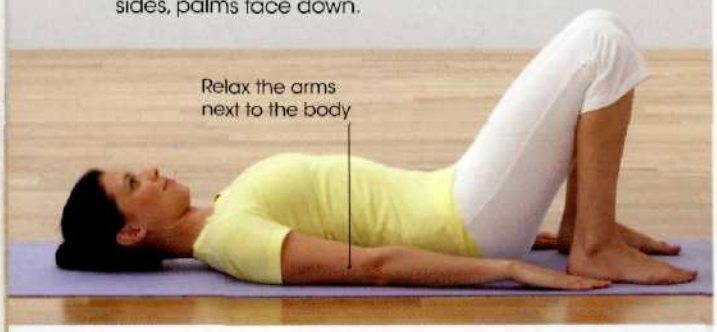
Bridge

All levels

Bridge improves both the flexibility and strength of your spine. Steps 2–4 also provide an excellent training programme for strengthening your wrists. Relax afterwards in Corpse Pose (see p188).

Beginner

1 Lie on your back, with your feet and legs about 50cm (20in) apart, your knees bent, and your feet flat on the floor. Place your arms by your sides, palms face down.



2 Catch firmly hold of your ankles, inhale, and push up your hips.

3 Release your hands and place them flat on your back, as close to your shoulder blades as possible. Point your fingers towards your lower back and place your thumbs on your sides. Breathe slowly and deeply. Continue with Step 4 or come out by releasing your hands and lowering your hips.

Intermediate

4 Come into the full pose by walking your feet farther away. Hold for up to 30 seconds, breathing deeply. Come out of the pose by walking your feet back towards your body, then release your hands and lower your hips.

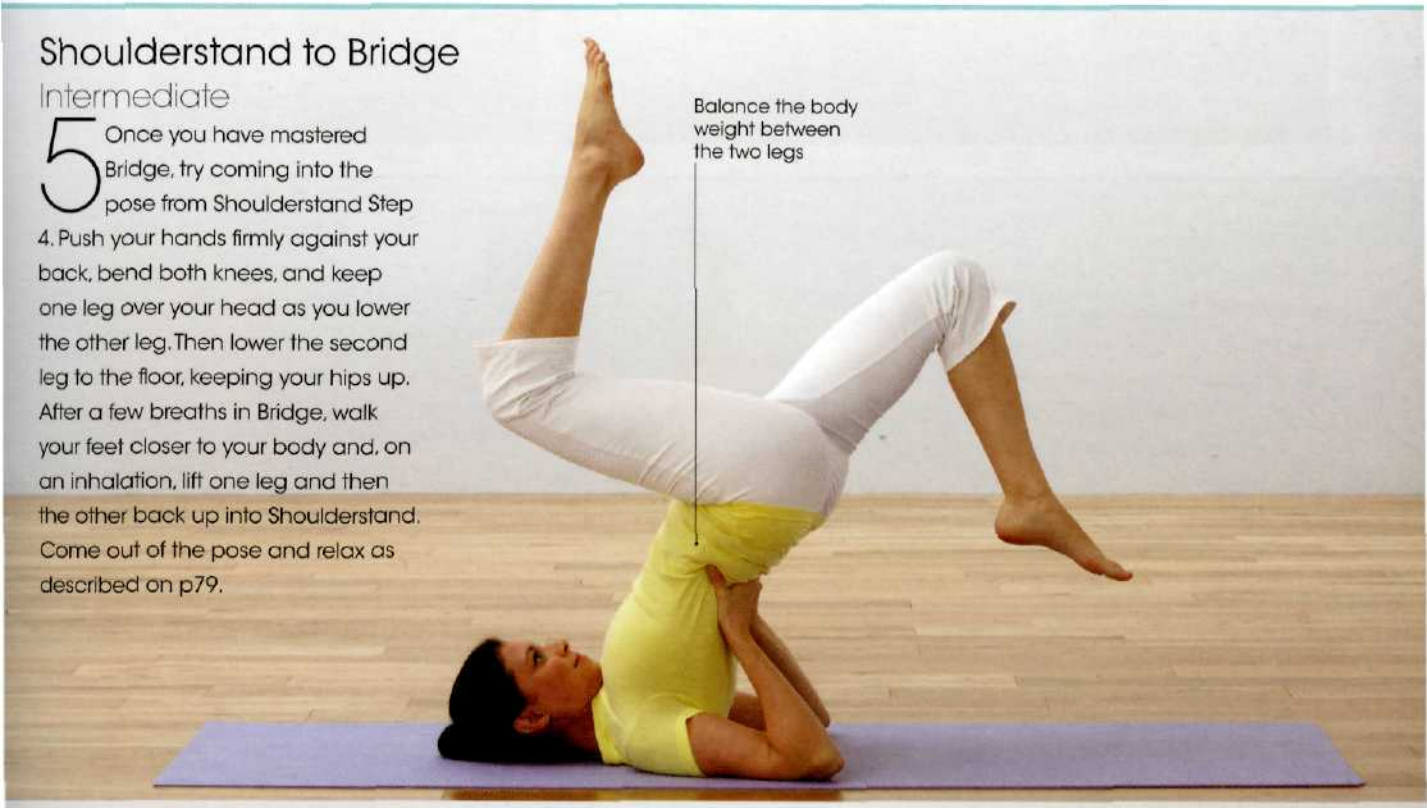
COMMON FAULTS

Start with

Shoulderstand to Bridge

Intermediate

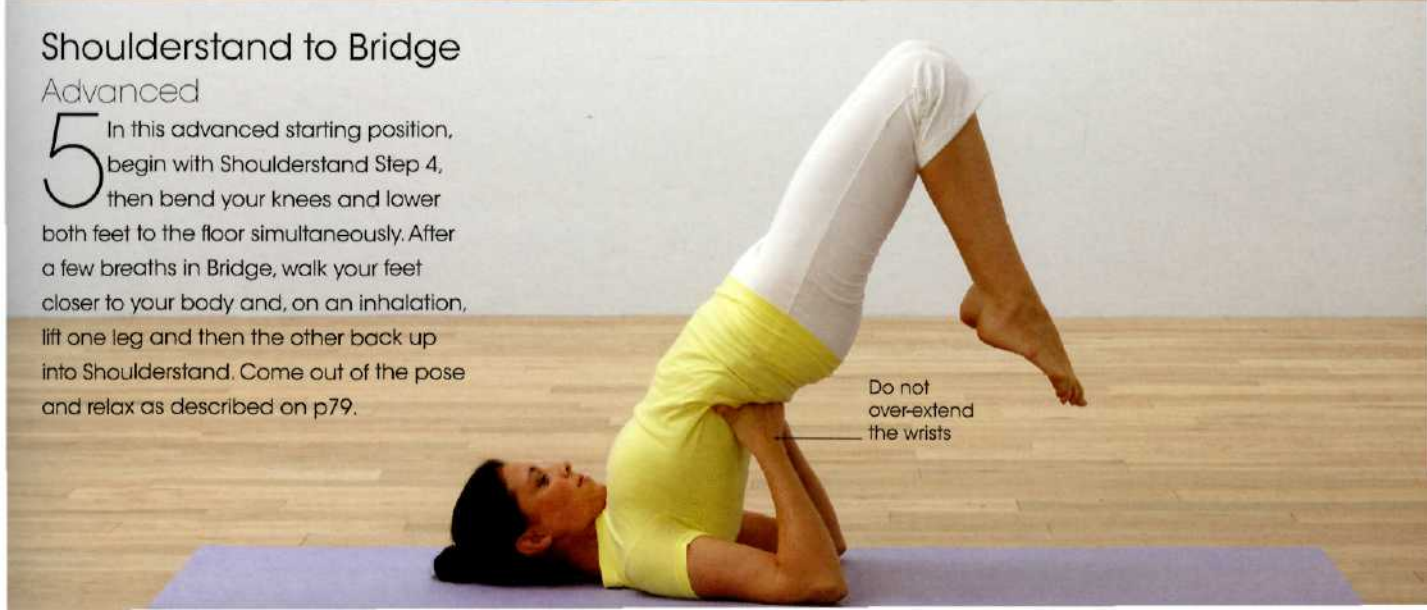
5 Once you have mastered Bridge, try coming into the pose from Shoulderstand Step 4. Push your hands firmly against your back, bend both knees, and keep one leg over your head as you lower the other leg. Then lower the second leg to the floor, keeping your hips up. After a few breaths in Bridge, walk your feet closer to your body and, on an inhalation, lift one leg and then the other back up into Shoulderstand. Come out of the pose and relax as described on p79.



Shoulderstand to Bridge

Advanced

5 In this advanced starting position, begin with Shoulderstand Step 4, then bend your knees and lower both feet to the floor simultaneously. After a few breaths in Bridge, walk your feet closer to your body and, on an inhalation, lift one leg and then the other back up into Shoulderstand. Come out of the pose and relax as described on p79.



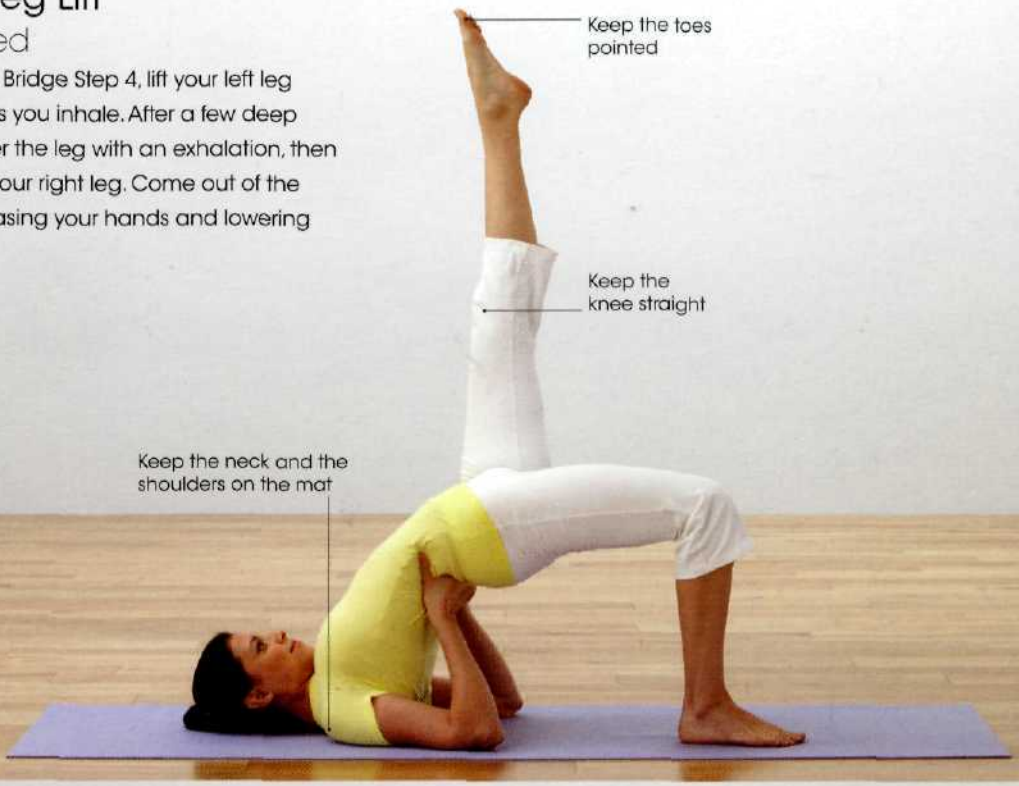
Bridge
Variations

After you have practised these advanced Bridge variations, you should go back into Shoulderstand (see pp76–9) for up to 30 seconds before relaxing in Corpse Pose (see p188).

Start with

Single Leg Lift
Advanced

Starting from Bridge Step 4, lift your left leg straight up as you inhale. After a few deep breaths, lower the leg with an exhalation, then repeat with your right leg. Come out of the pose by releasing your hands and lowering your hips.



Legs Straight
Advanced

Starting from Bridge Step 4, bring your legs and feet together, then walk your feet away until your legs are completely straight. Hold for up to 30 seconds, breathing deeply. Come out of the pose by walking your feet closer to your body, releasing your hands, and lowering your hips.

Start with

Half Lotus Bridge

Advanced

5 Starting from Shoulderstand Step 4, bend your left leg and use your right hand to pull your left foot closer to your hip.

6 Support your back with both hands and slowly bring your right foot down to the floor. Hold for up to 30 seconds, then try to kick back up into Shoulderstand. If you cannot do this, lower your left foot to the floor, release your hands, lower your hips, then inhale and return to Shoulderstand Step 4. Repeat on the opposite side. If you can kick back up into Shoulderstand, come out of the pose as described on p79. Otherwise release your hands and lower your hips.

Shoulderstand Cycle

Intermediate

The Shoulderstand Cycle is an excellent exercise for strengthening the muscles of the arms, the back, the abdomen, and the wrists. It also helps you to improve your alignment in Shoulderstand.

Start with

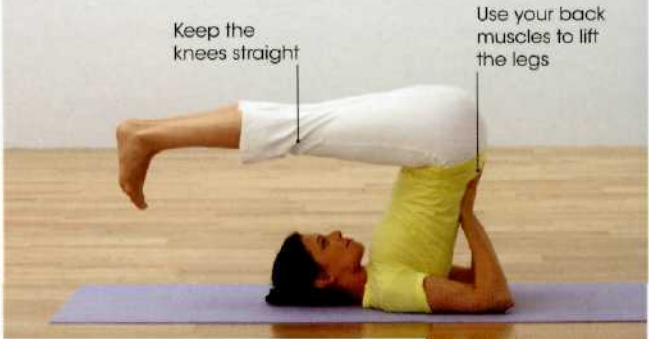
5 Starting with Shoulderstand Step 4, position your arms and hands firmly.

Hand Position Take your hands as close as possible to your shoulder blades, with your arms as parallel to each other as possible.

6 On an exhalation, come into Single Leg Plough by lowering your left leg over your head until your toes reach the floor. Inhale and bring your leg back. Repeat, lowering your right leg.

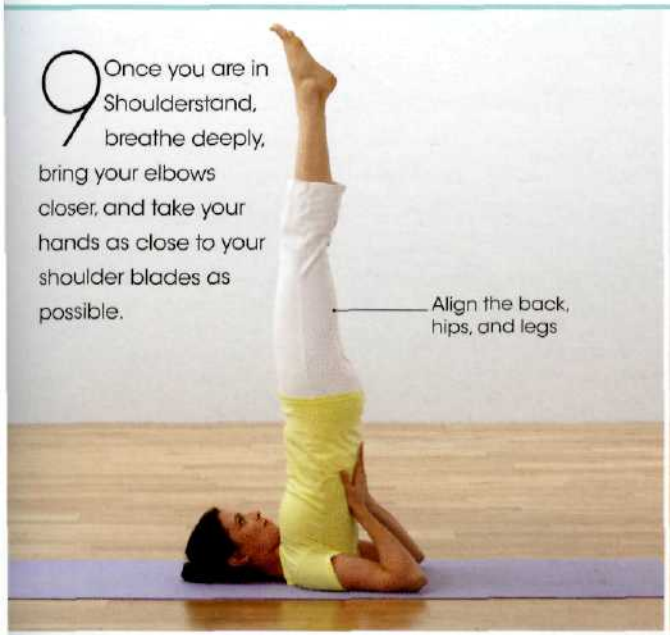
7 On an exhalation, transition into Plough by lowering both legs over your head until your toes reach the floor.

8 Come back into Shoulderstand by lifting both legs simultaneously on an inhalation. If you find this difficult, you may move your hips forwards slightly, then lift your legs. This lessens the impact of the weight of your legs on your back muscles.



*"Health is Wealth.
Peace of Mind is Happiness.
Yoga shows the Way."* *Swami Vishnudevananda*

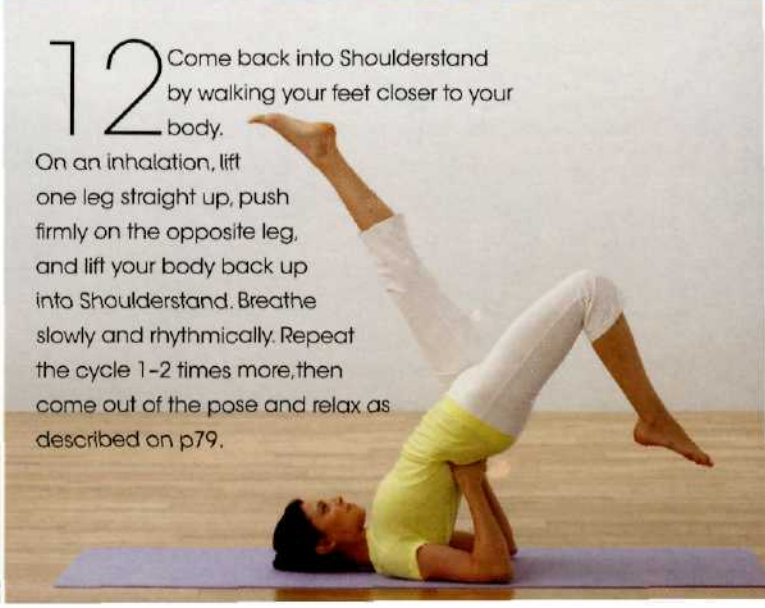
9 Once you are in Shoulderstand, breathe deeply, bring your elbows closer, and take your hands as close to your shoulder blades as possible.



10 Transition into Bridge by bending both knees and keeping one leg over your head as you lower the other leg to the floor.

11 In Bridge, continue supporting your back. With your legs still apart, walk your feet farther away. Breathe rhythmically.

12 Come back into Shoulderstand by walking your feet closer to your body. On an inhalation, lift one leg straight up, push firmly on the opposite leg, and lift your body back up into Shoulderstand. Breathe slowly and rhythmically. Repeat the cycle 1-2 times more, then come out of the pose and relax as described on p79.



4 Fish
Matsyasana

Fish bends your spine in the opposite direction to Shoulderstand (see pp76–9) and is the counterpose to the Shoulderstand cycle. Spend at least half as much time doing Fish as you spend doing Shoulderstand. After you have practised Fish, you will find that you experience a much deeper relaxation in the resting position of Corpse Pose (see p188).

BENEFITS

PHYSICAL
- Relieves stiffness in the neck and shoulders.
- Corrects any tendency to round the shoulders.
- Strengthens the arm muscles.
- Expands the rib cage.
- Helps to tone the nerves of the neck and back area.
- Together with Shoulderstand, helps to improve the functioning of the thyroid and parathyroid glands.
- Improves the capacity of the lungs.
- Decongests the lungs.
- Relieves asthma.

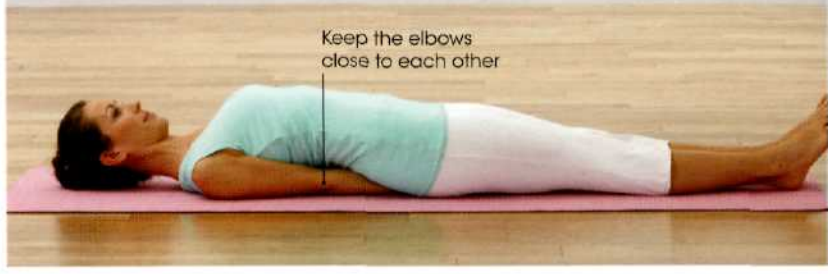
MENTAL
- The wide opening of the rib cage reduces the pressure on the abdomen and recharges the solar plexus. This helps to overcome depression.

CAUTION If the hyper-extension of the neck causes any discomfort or dizziness, do not practise the posture or practise it for only a few breaths.

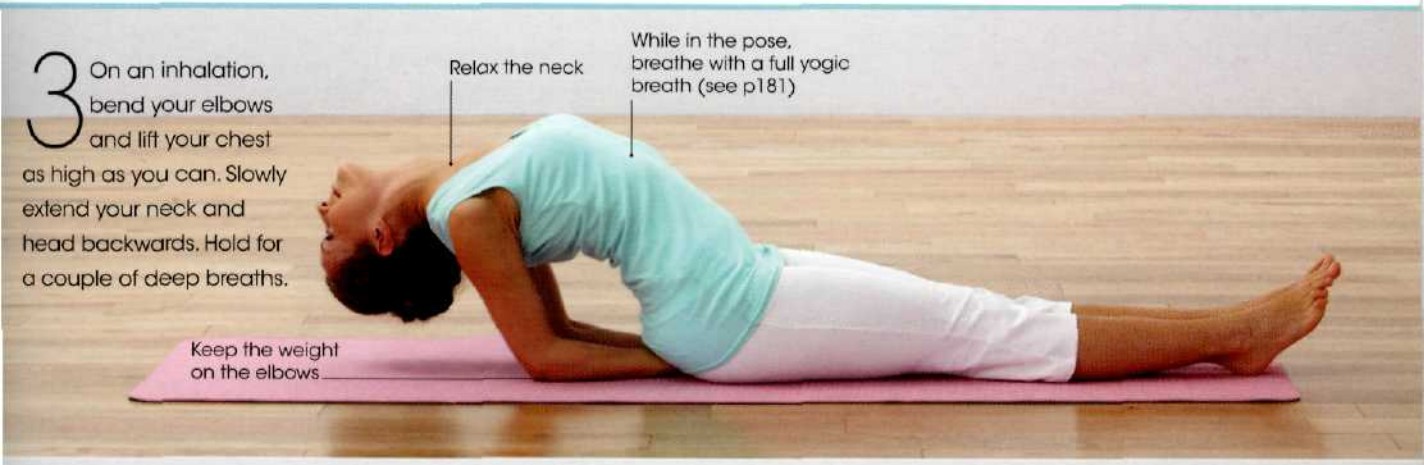
Fish
All Levels

1 Lie flat on your back with your legs together, arms next to your body, palms face down on the mat.

2 Place your arms under your body, bringing your hands, palms still facing down, as close to your thighs as possible. Continue to keep your legs together. If you are stiff in your neck and shoulders, continue practising Steps 1 and 2.

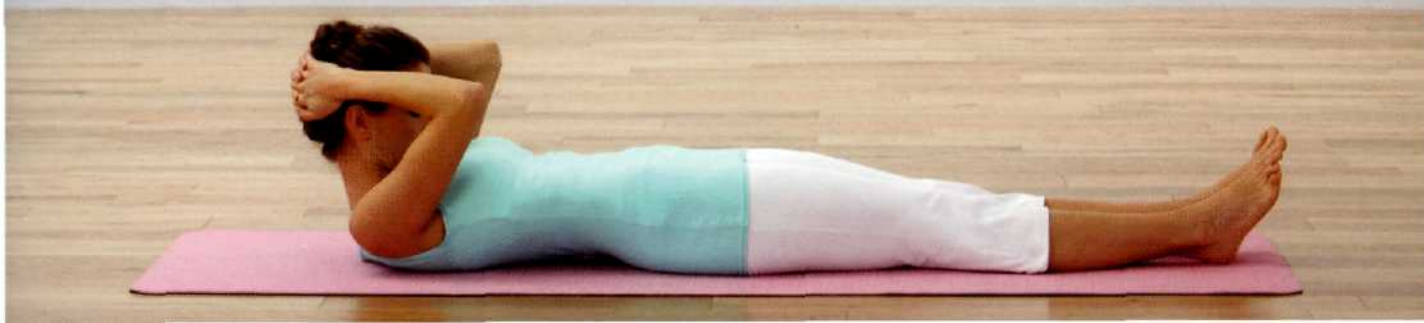


3 On an inhalation, bend your elbows and lift your chest as high as you can. Slowly extend your neck and head backwards. Hold for a couple of deep breaths.



4 If you can manage Step 3, try to come into the full pose. Keep as much weight as possible on your elbows and slowly lower the top of your head to the floor. Hold the pose for half the time that you spent in Shoulderstand (see pp76–9). Come out of the pose by following Steps 3, 2, and 1 in that order.

NECK STRETCH After Fish, practise this pose to release any tension in your neck. With your fingers interlocked behind your head and your forearms close to your ears, inhale and lift your head, pushing your chin into your chest. On an exhalation, slowly lower your head back to the mat. Repeat 2 times. Relax for 1–2 minutes in Corpse Pose (see p188).

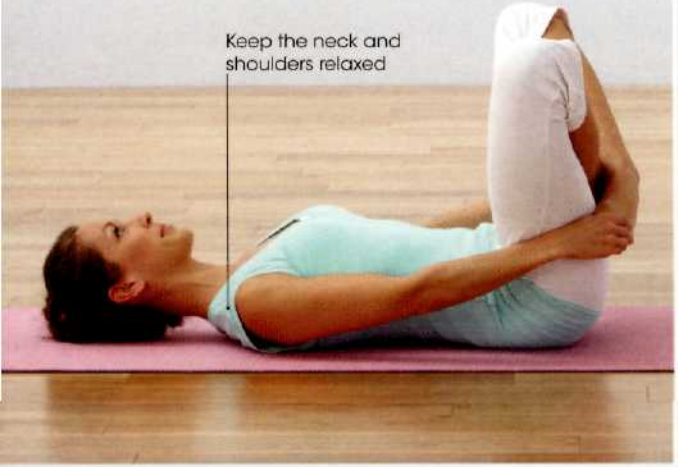


Fish
Variations

Cross-legged Fish adds a deep thigh stretch, while Lotus Fish gives you a stable base, allowing you to intensify the backward bend. End each pose with the Neck stretch (see p93).

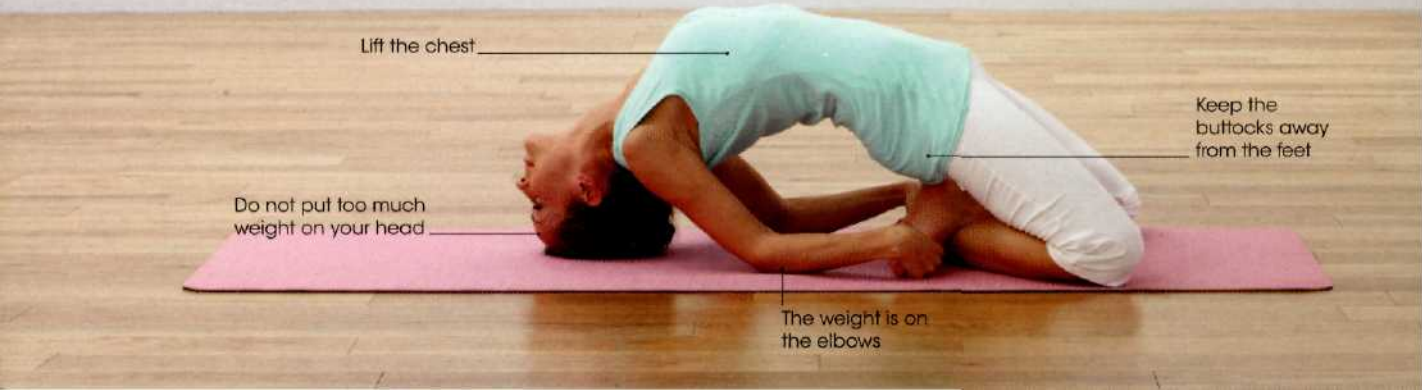
Cross-legged Fish
Intermediate

1 Lie on your back, cross your legs, and catch hold of your feet. Keep your head on the mat.

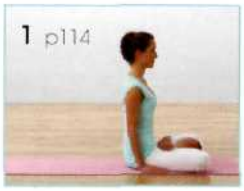


2 Keeping hold of your feet, slowly lower your knees towards the floor as far as possible by extending your thighs.

3 On an inhalation, firmly push on your elbows and move your hips up and forwards, bringing your knees as close to the floor as possible. On another inhalation, lift your chest and bring the top of your head to the floor. Hold for up to 1 minute, then inhale, push your chest higher, and extend your neck. On an exhalation, lower your back to the floor and uncross your legs. Next time you practise this pose, cross your legs the opposite way.



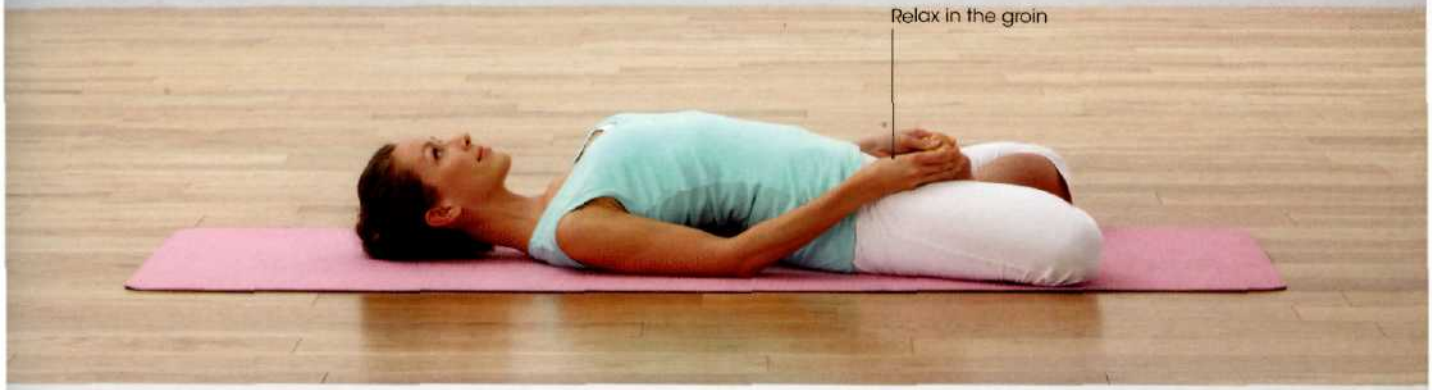
Start with



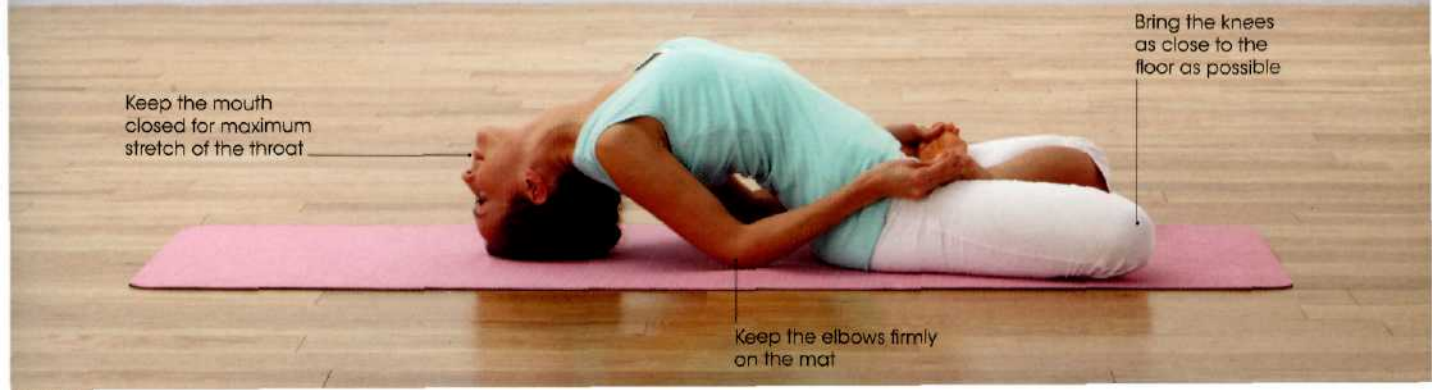
Lotus Fish

Advanced

2 Starting from Lotus final position, slowly lie back on the mat. Place your elbows close to your body and try to catch hold of your toes. Alternatively, place your hands on top of your hips.



3 On an inhalation, bend your elbows and push your chest up. Slowly extend your neck until the top of your head is touching the floor. Hold for up to 1 minute, then inhale, push your chest higher, and extend your neck. On an exhalation, lower your back to the floor and uncross your legs. Next time you practise this pose, position your legs in Lotus in the opposite order.



5 Forward Bend
Paschimotanasana

This pose can be very meditative. If you put equal emphasis on posture, breathing, and relaxation in your practice, this will balance the stimulation provided by the muscle stretches with your body's quiet awareness of the pull of gravity. After Forward Bend, practice Inclined Plane as a counterpose (see p100), then relax in Corpse Pose (see p188).

BENEFITS

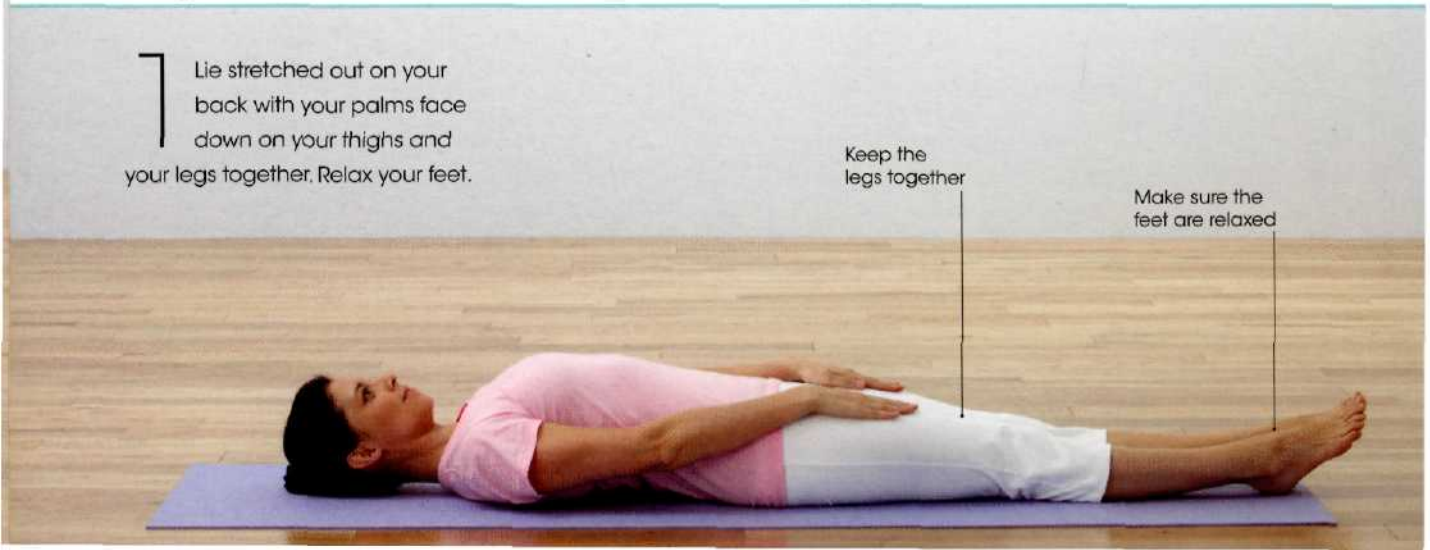
PHYSICAL
- Stretches the posterior muscles completely from toes to neck.
- Reduces fat by putting pressure on the abdomen.
- Massages the liver, kidneys, and pancreas.
- Alleviates constipation.
- Relaxes the back muscles.
- Helps control diabetes.
- Calms and soothes the entire nervous system.

MENTAL
- This pose requires conscious control to align toes, knees, and neck correctly, and conscious letting go, by allowing gravity to pull the spine into the pose.

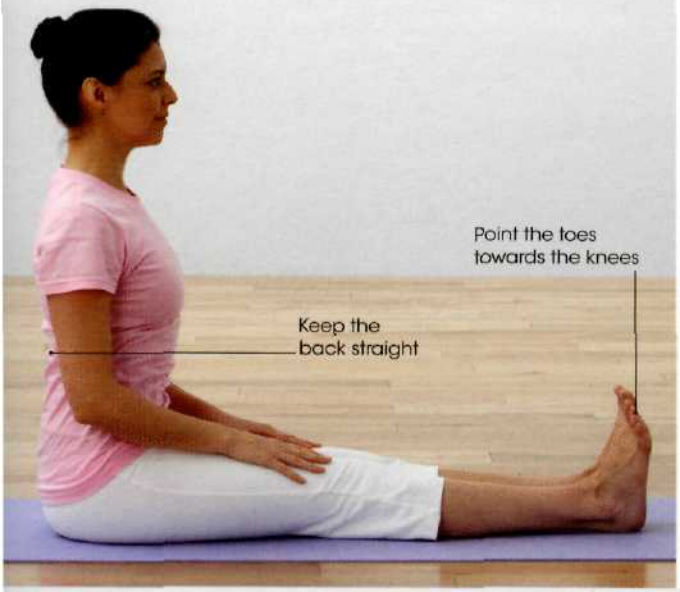
Achieving control with detachment is a benefit that can be applied to daily life, as well as in the practice of meditation.

Forward Bend
Beginner

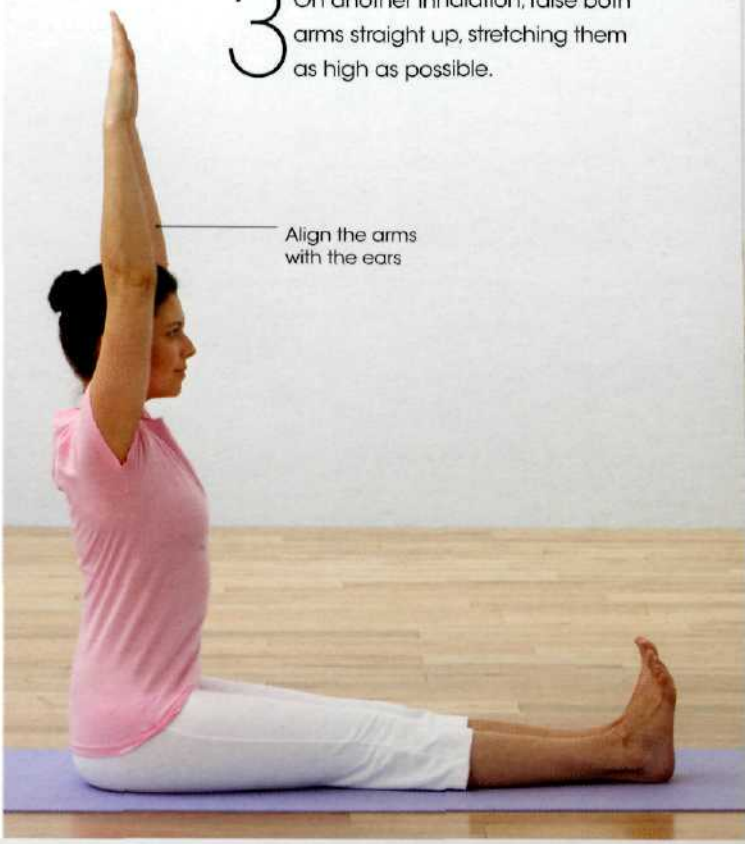
1 Lie stretched out on your back with your palms face down on your thighs and your legs together. Relax your feet.



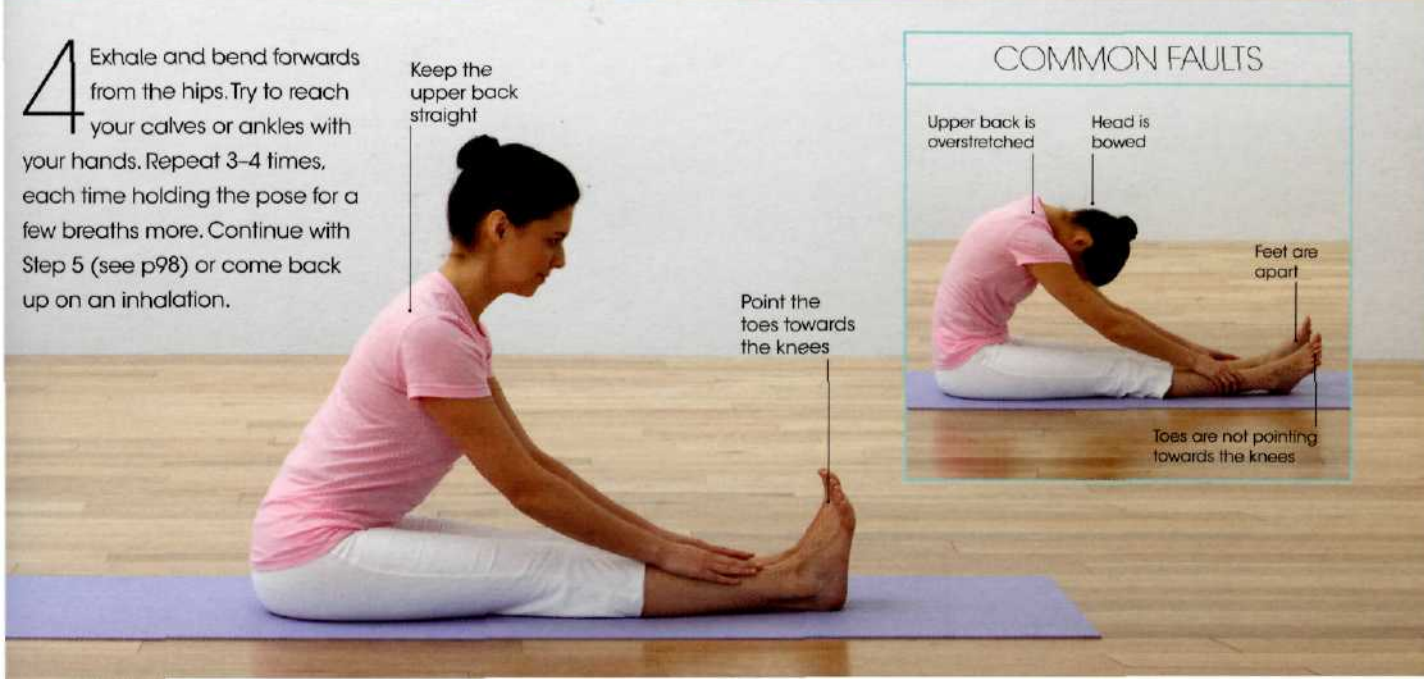
2 On an inhalation, sit up straight with your legs stretched out in front of you. Keep your head, neck, and back in a straight line.



3 On another inhalation, raise both arms straight up, stretching them as high as possible.



4 Exhale and bend forwards from the hips. Try to reach your calves or ankles with your hands. Repeat 3–4 times, each time holding the pose for a few breaths more. Continue with Step 5 (see p98) or come back up on an inhalation.



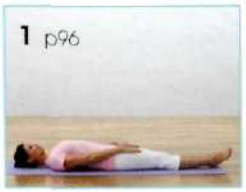
COMMON FAULTS

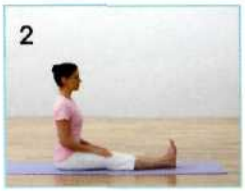
Forward Bend

Intermediate and Advanced

Progress in Forward Bend depends on how much you can lengthen the hamstring muscles at the back of your legs, which then allows the pelvis to tilt forwards at the hip joint.

Start with





Intermediate

5 Starting from Forward Bend Step 4, if your hands reach your feet, take hold of your big toe in the Classical Foothold (see right).

The Classical Foothold Wrap your index finger around your big toe and place your thumb on top of your toe. Point your other toes towards your knees. Keep the other three fingers curled into your palm.

Keep the back, neck, and head aligned

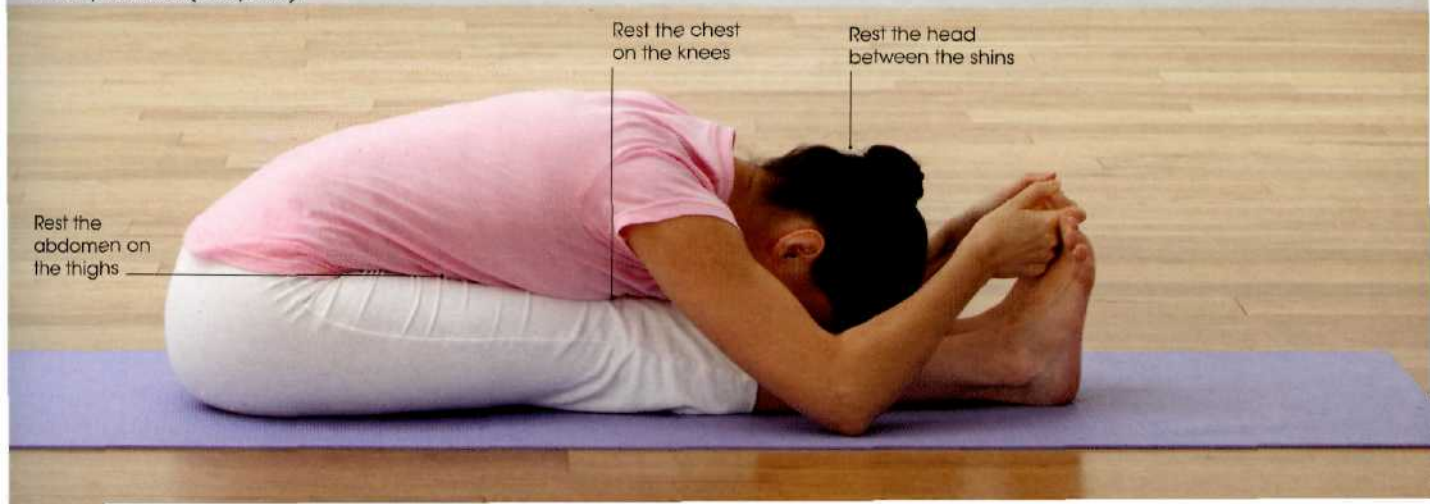
Keep the arms straight

Bend from the hips and lower back

6 On an exhalation, stretch your spine further forwards. Bend your elbows to help you stretch your spine. Repeat 3–4 times, each time holding the pose for a few breaths more. Continue with Step 7 or come back up on an inhalation.

Advanced

7 If you are able to stretch forwards, come into the full pose. On an exhalation, bend farther forwards until your elbows touch the mat and your forehead is resting on your legs. Hold for 1–5 minutes, then come back up on an inhalation. Next, practise Inclined Plane (see p100), then relax with deep abdominal breathing (see p46) for 1–2 minutes in Corpse Pose (see p188).

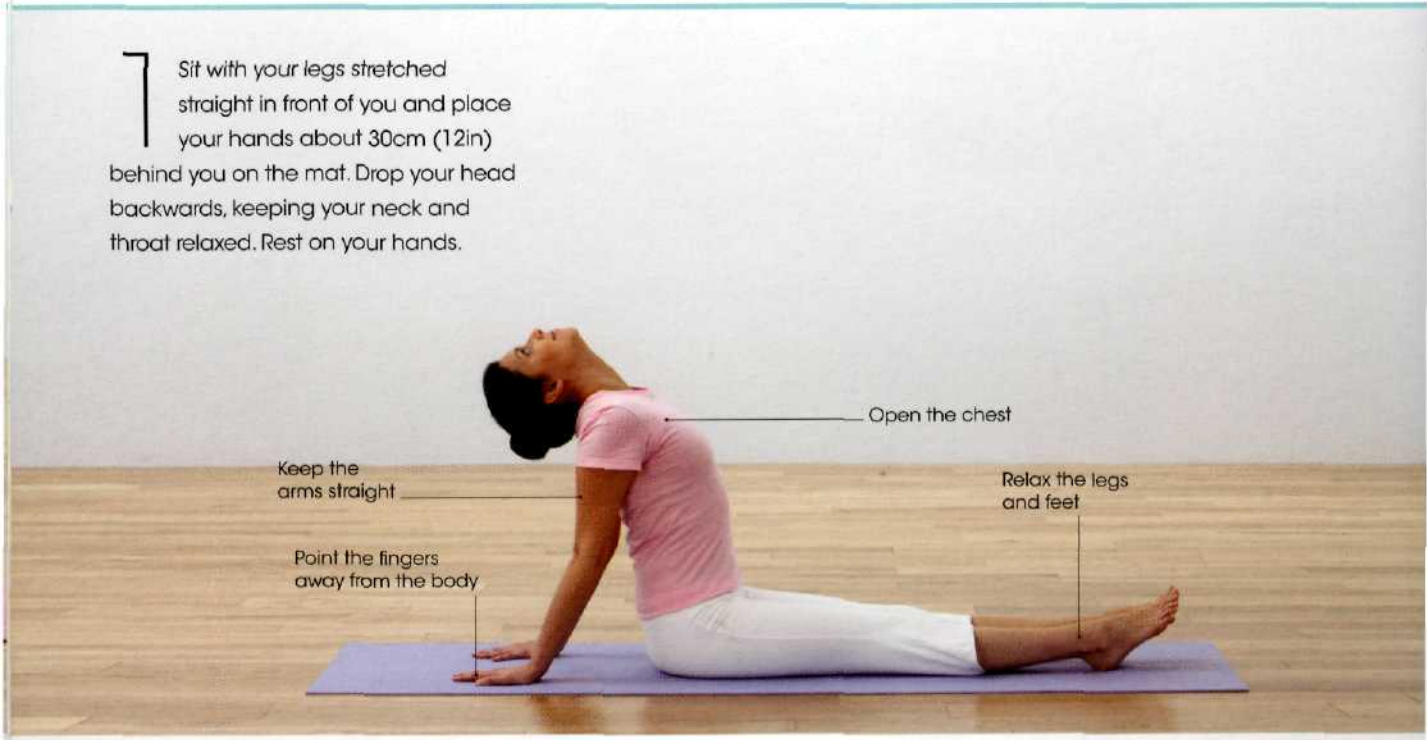


Inclined Plane

All Levels

When you have practised Forward Bend (see pp96–9), practise Inclined Plane as the counterpose. It will help to strengthen the muscles of your arms, legs, and back. Relax afterwards in Corpse Pose (see p188).

1 Sit with your legs stretched straight in front of you and place your hands about 30cm (12in) behind you on the mat. Drop your head backwards, keeping your neck and throat relaxed. Rest on your hands.



2 Inhale and lift your hips as high as possible. Hold your breath as you gently push your feet into the floor. Exhale and return to Step 1. Repeat twice more. Once you are accustomed to the pose, try to hold it, breathing rhythmically, for up to 30 seconds. Come down by bringing your hips back to the floor.

One Leg Up

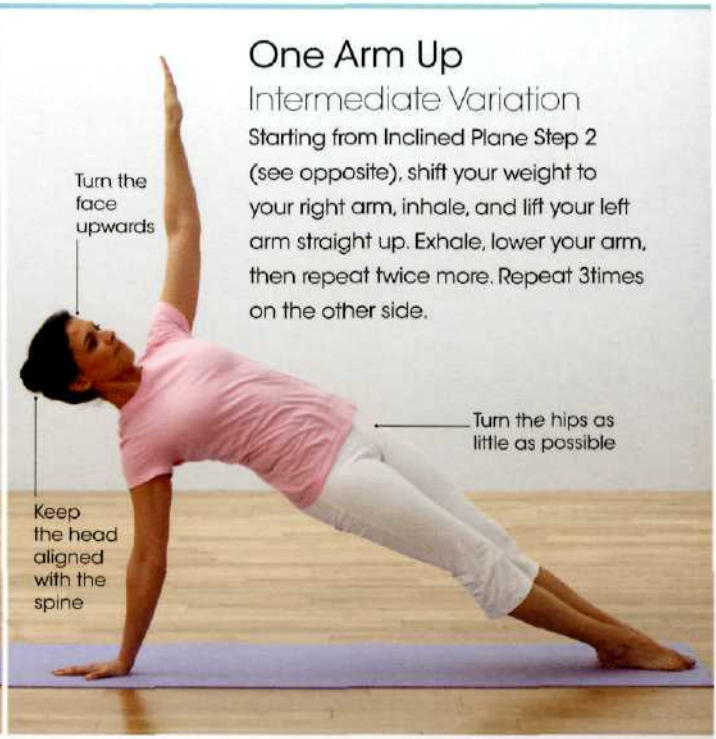
Intermediate Variation

Starting from Inclined Plane Step 2 (see opposite), inhale and lift your left leg straight up. Exhale and lower your leg, then repeat twice more. Repeat 3 times on the other side.

One Arm Up

Intermediate Variation

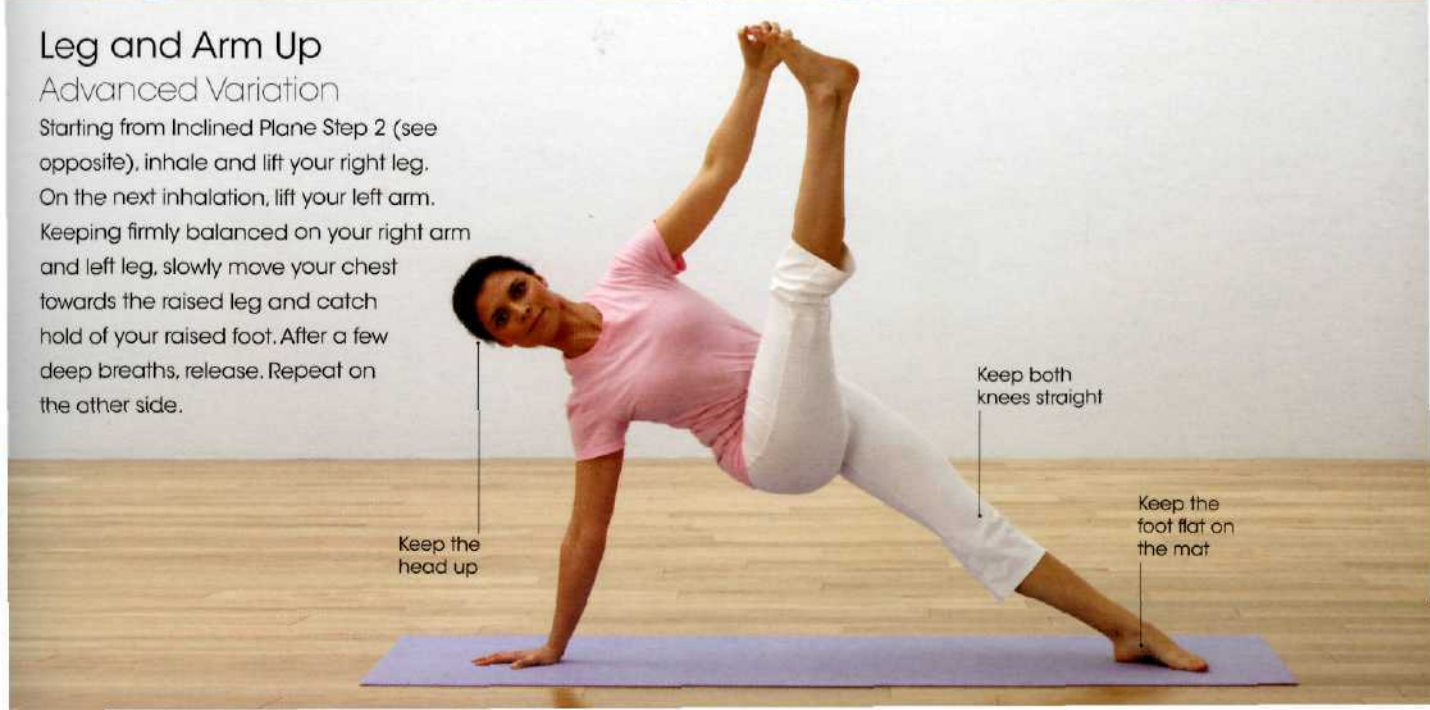
Starting from Inclined Plane Step 2 (see opposite), shift your weight to your right arm, inhale, and lift your left arm straight up. Exhale, lower your arm, then repeat twice more. Repeat 3times on the other side.



Leg and Arm Up

Advanced Variation

Starting from Inclined Plane Step 2 (see opposite), inhale and lift your right leg. On the next inhalation, lift your left arm. Keeping firmly balanced on your right arm and left leg, slowly move your chest towards the raised leg and catch hold of your raised foot. After a few deep breaths, release. Repeat on the other side.



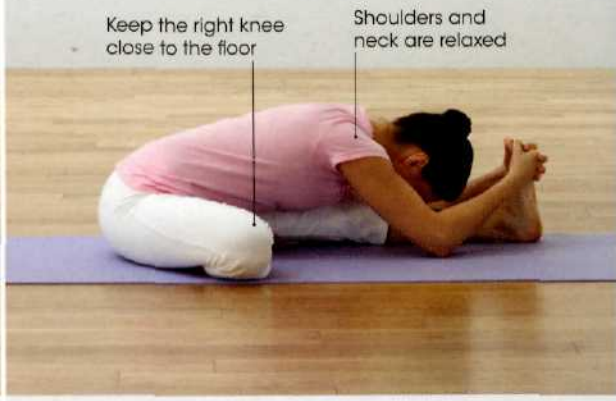
Forward Bend
Variations

When practising Forward Bend variations, practise the counterpose – Inclined Plane (see p100) – between each variation and after you practise your last variation, then relax in Corpse Pose (see p188).

Single Leg Forward Bend
Beginner

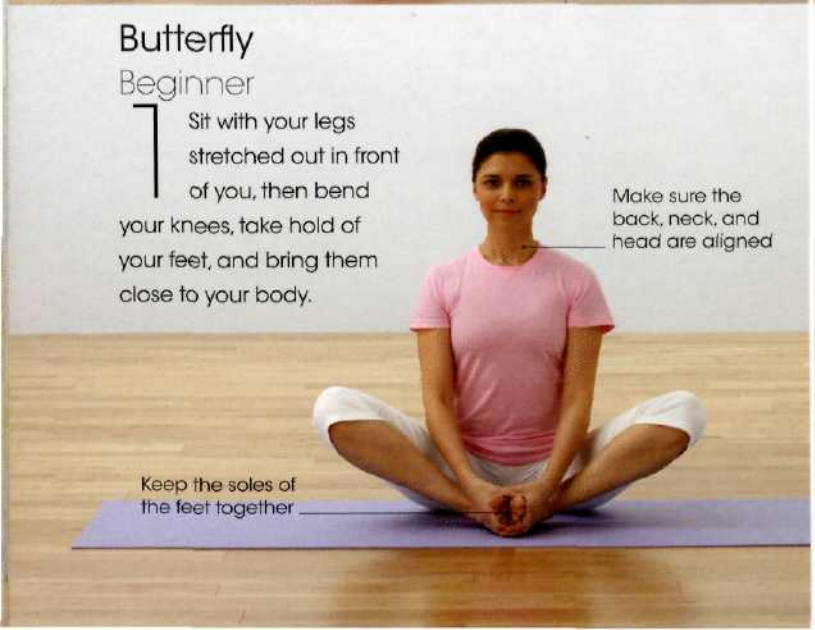
1 Sit with your legs stretched out in front of you, then bend your right knee and place the sole of your right foot against your left thigh. Inhale and raise your arms over your head.

2 Exhale, bend from the waist over your left leg, and place your hands on your leg, ankle, or foot. With each exhalation, let your spine move forwards. Aim to rest your abdomen on your thigh, your chest on your knee, and your head on your shin. Hold the pose for 1–3 minutes. Release and repeat on the other side.

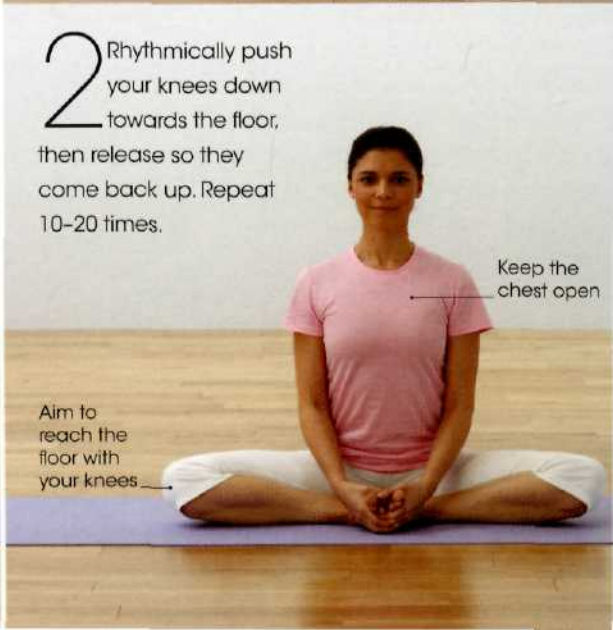


Butterfly
Beginner

1 Sit with your legs stretched out in front of you, then bend your knees, take hold of your feet, and bring them close to your body.



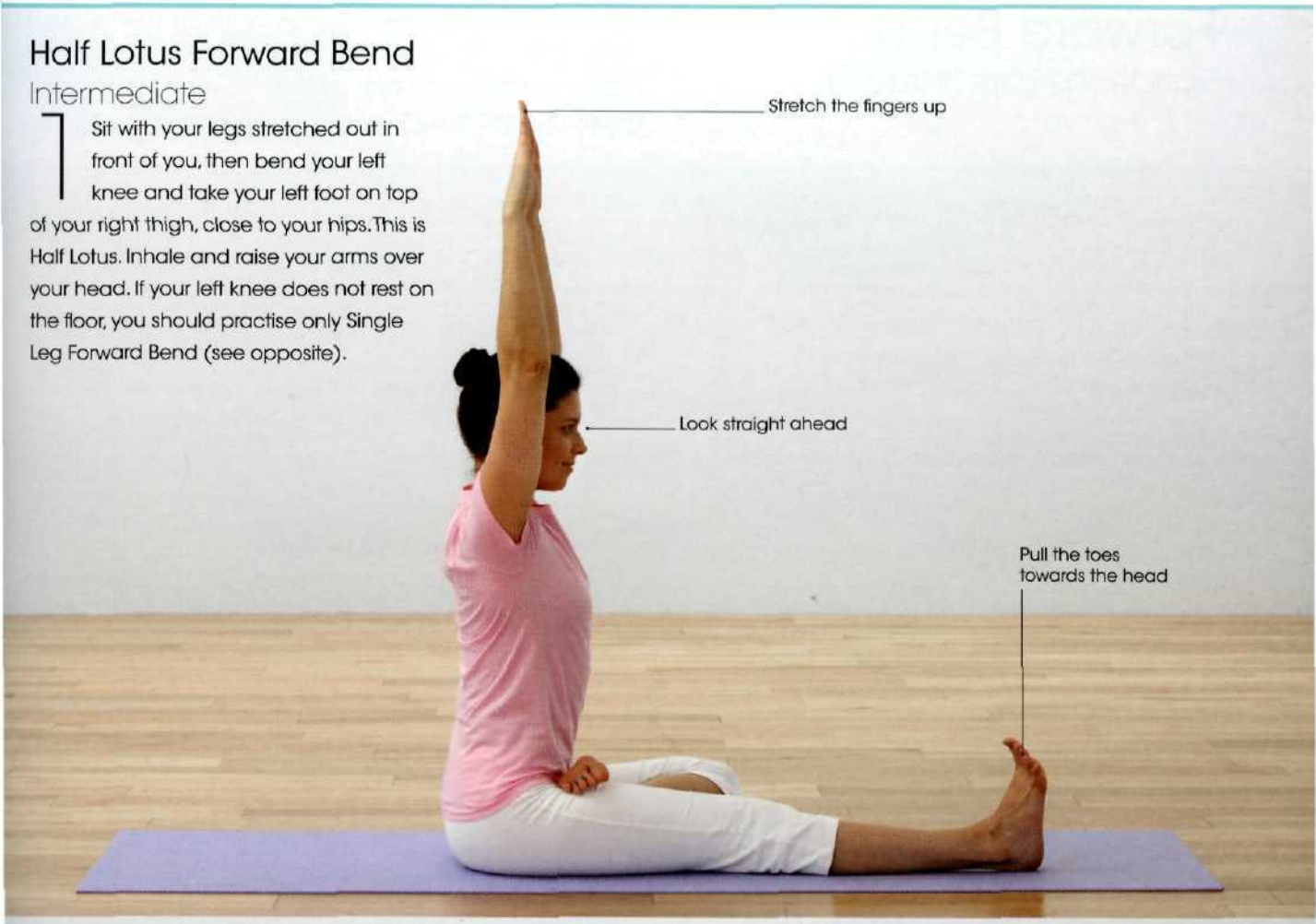
2 Rhythmically push your knees down towards the floor, then release so they come back up. Repeat 10–20 times.



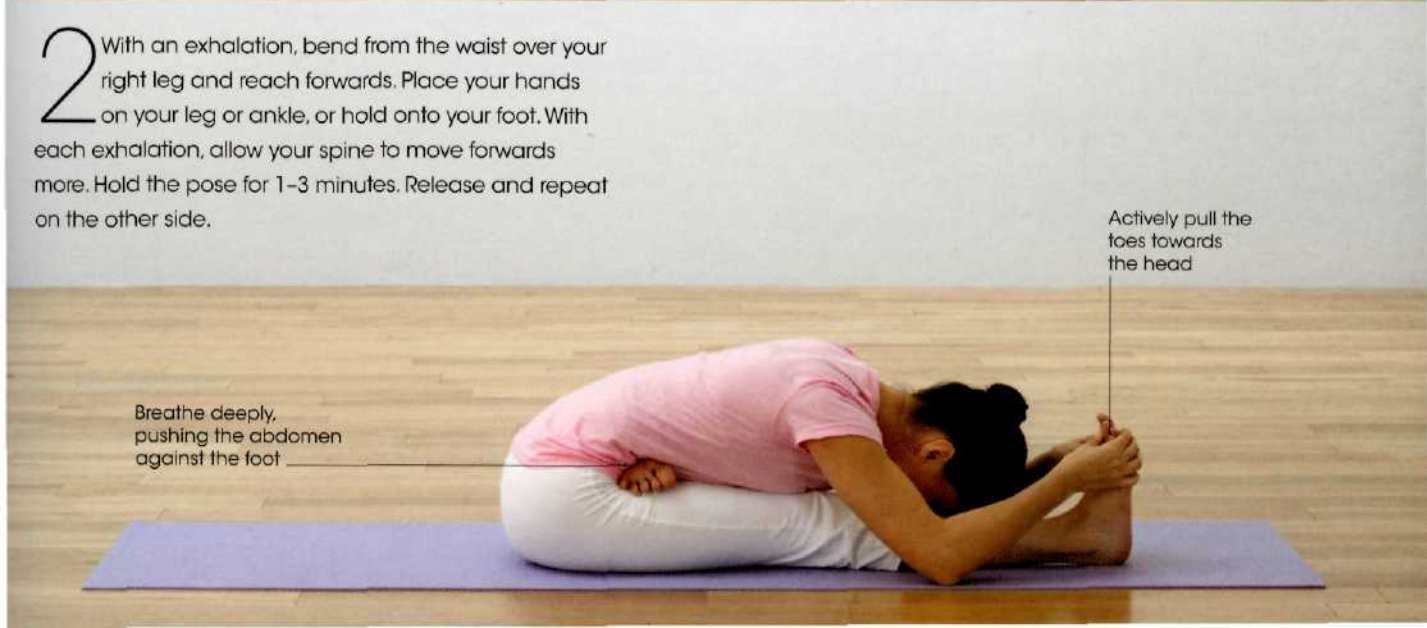
Half Lotus Forward Bend

Intermediate

1 Sit with your legs stretched out in front of you, then bend your left knee and take your left foot on top of your right thigh, close to your hips. This is Half Lotus. Inhale and raise your arms over your head. If your left knee does not rest on the floor, you should practise only Single Leg Forward Bend (see opposite).



2 With an exhalation, bend from the waist over your right leg and reach forwards. Place your hands on your leg or ankle, or hold onto your foot. With each exhalation, allow your spine to move forwards more. Hold the pose for 1–3 minutes. Release and repeat on the other side.

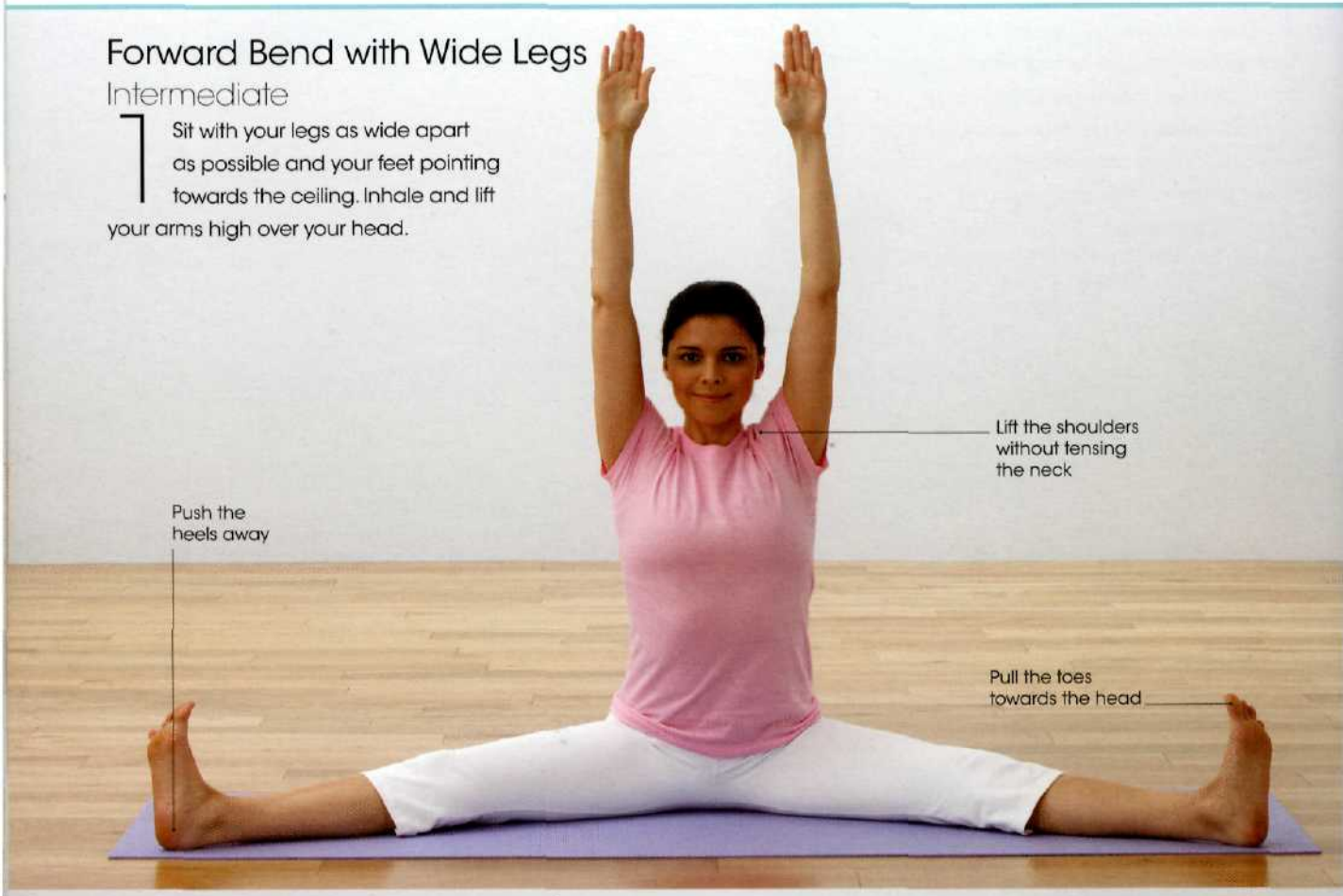


Forward Bend
Variations (continued)

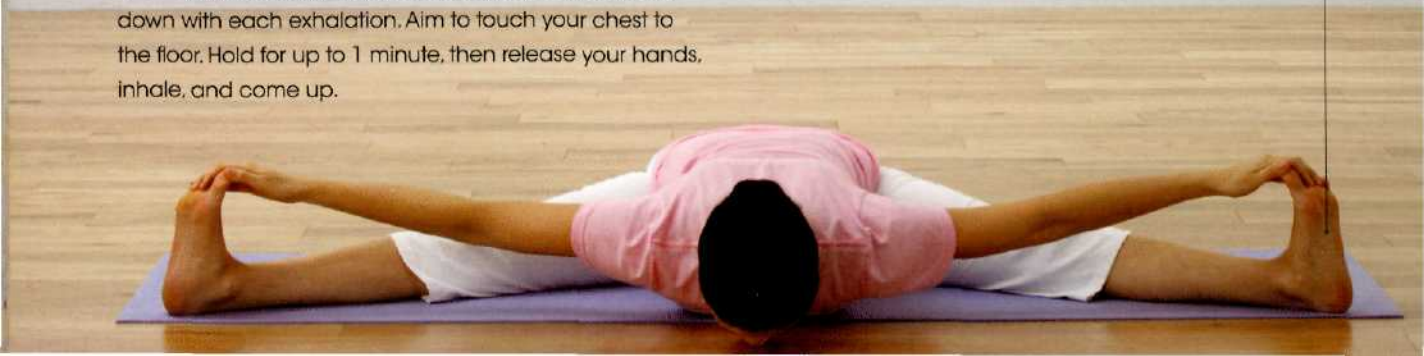
These Forward Bend variations work on the flexion, abduction, and external rotation of the hip joints. They will make everyday sitting, standing, and walking much easier.

Forward Bend with Wide Legs
Intermediate

1 Sit with your legs as wide apart as possible and your feet pointing towards the ceiling. Inhale and lift your arms high over your head.



2 Exhale and bend forwards from your waist. Hold your calves, ankles, or toes. Straighten your back with each inhalation; bend farther forwards and down with each exhalation. Aim to touch your chest to the floor. Hold for up to 1 minute, then release your hands, inhale, and come up.



Start with

Bound Half Lotus Forward Bend

Advanced

2 Starting from Half Lotus Forward Bend Step 1, bring your left arm behind your back and hold your left foot. Exhale, bend from the waist, and reach forwards to hold the toes of your right foot. Hold the pose for up to 1 minute. Release and repeat on the other side.

Straight Arm Forward Bend

Advanced

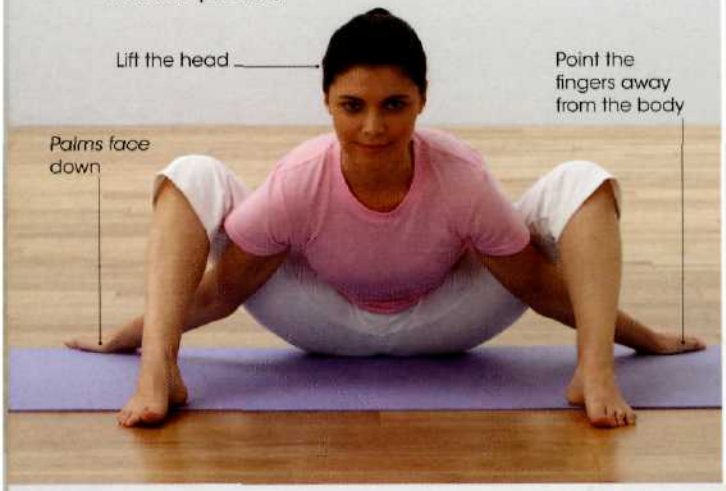
Sitting with your legs outstretched, inhale, raise your arms, then exhale and bend forwards. Put your hands in Prayer Position (see p50) and place your hands, wrists, or forearms on your toes. Hold for up to 1 minute, then release.

Forward Bend
Variations (continued)

These Forward Bend variations are good examples of how asanas prepare you for the meditative sitting poses (see p203). They help you to gain the necessary flexibility, strength, and balance.

Tortoise
Advanced

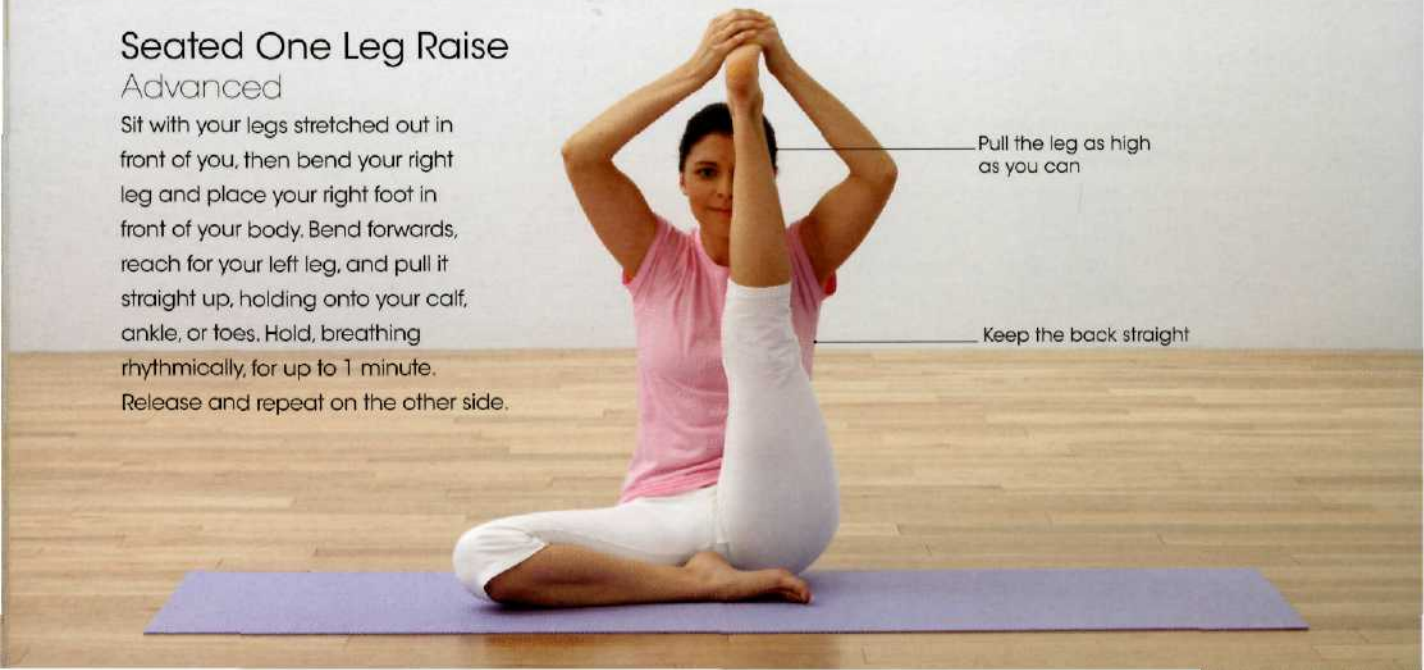
1 Sit with legs apart, knees bent, and feet flat on the floor, as close to your body as possible. Bend forwards and place your arms under your bent knees, reaching as far back as possible.



2 With an exhalation, bend forwards from the waist until your chin, forehead, or chest touches the floor. Push your heels forwards and straighten your knees as much as possible. Hold, breathing rhythmically, for up to 1 minute, then slide your legs closer to you until you can take your arms out from underneath your knees.

Seated One Leg Raise
Advanced

Sit with your legs stretched out in front of you, then bend your right leg and place your right foot in front of your body. Bend forwards, reach for your left leg, and pull it straight up, holding onto your calf, ankle, or toes. Hold, breathing rhythmically, for up to 1 minute. Release and repeat on the other side.



Start with

Seated Two Leg Raise

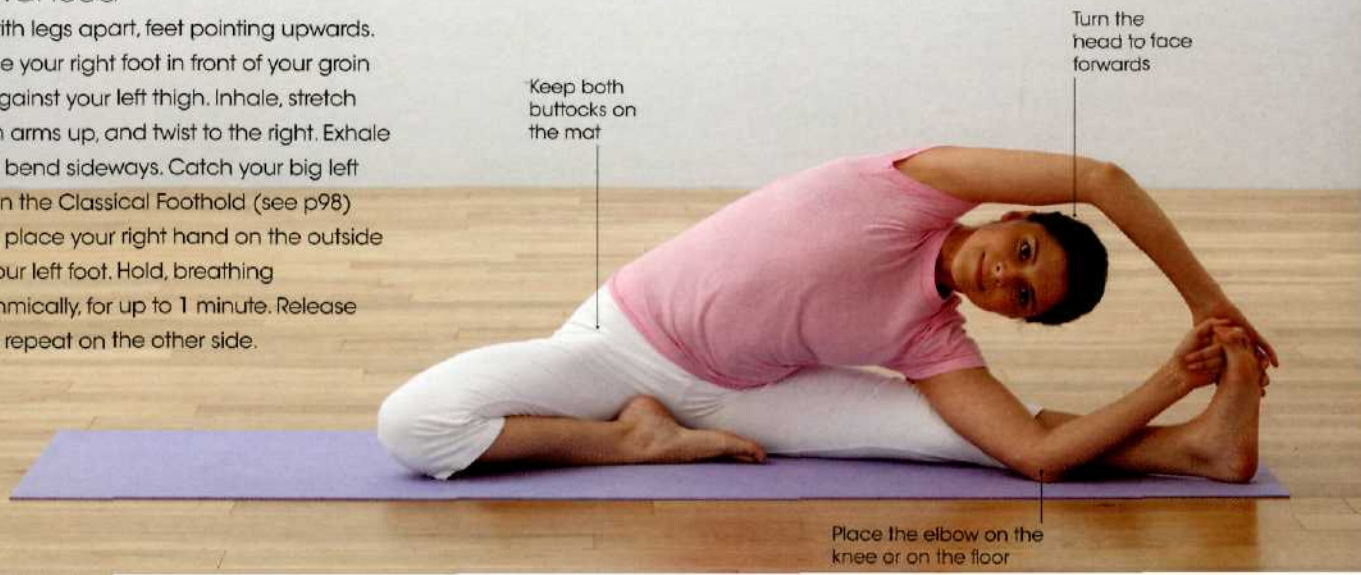
Advanced

2 Before beginning, make sure there is enough space behind you in case you lose your balance and roll backwards. Starting from Butterfly Step 1, inhale and pull both legs straight up in front of you. Clasp your calves, ankles, or toes. Hold, breathing rhythmically, for 30 seconds, then release.

Lateral Bend with Twist

Advanced

Sit with legs apart, feet pointing upwards. Place your right foot in front of your groin or against your left thigh. Inhale, stretch both arms up, and twist to the right. Exhale and bend sideways. Catch your big left toe in the Classical Foothold (see p98) and place your right hand on the outside of your left foot. Hold, breathing rhythmically, for up to 1 minute. Release and repeat on the other side.



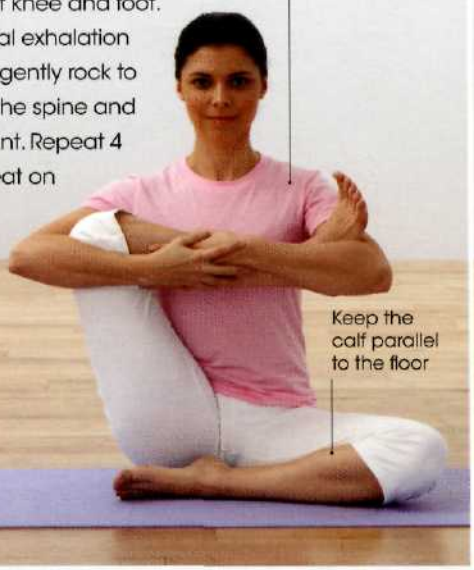
One Foot to Head

All levels

Try these challenging poses according to your level of ability. Rest afterwards in Corpse Pose (see p188) so the muscles of your pelvis and lower back can relax completely.

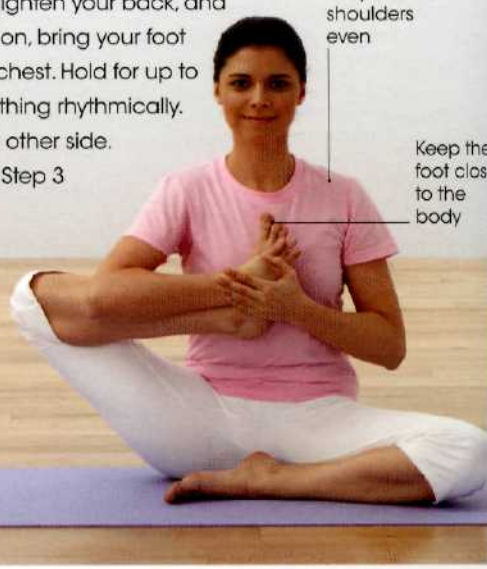
Beginner

1 Starting from a sitting position, bring your left foot close to your body. Lift your right leg and cradle your right knee and foot. With a rhythmical exhalation and inhalation, gently rock to and fro to twist the spine and open the hip joint. Repeat 4 times, then repeat on the other side. Continue with Step 2 or relax.



Intermediate

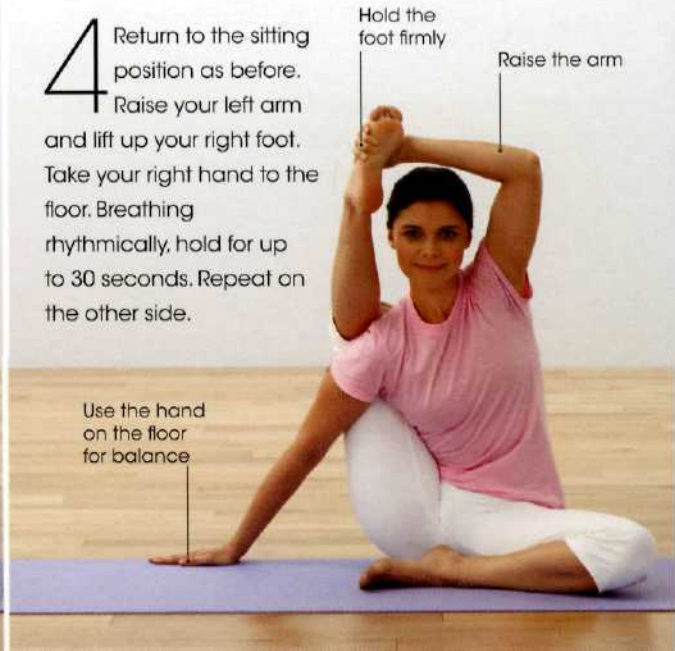
2 Return to the sitting position as before, then pull your right foot into the middle of your chest. On an inhalation, straighten your back, and on an exhalation, bring your foot closer to your chest. Hold for up to 1 minute, breathing rhythmically. Repeat on the other side. Continue with Step 3 or relax.



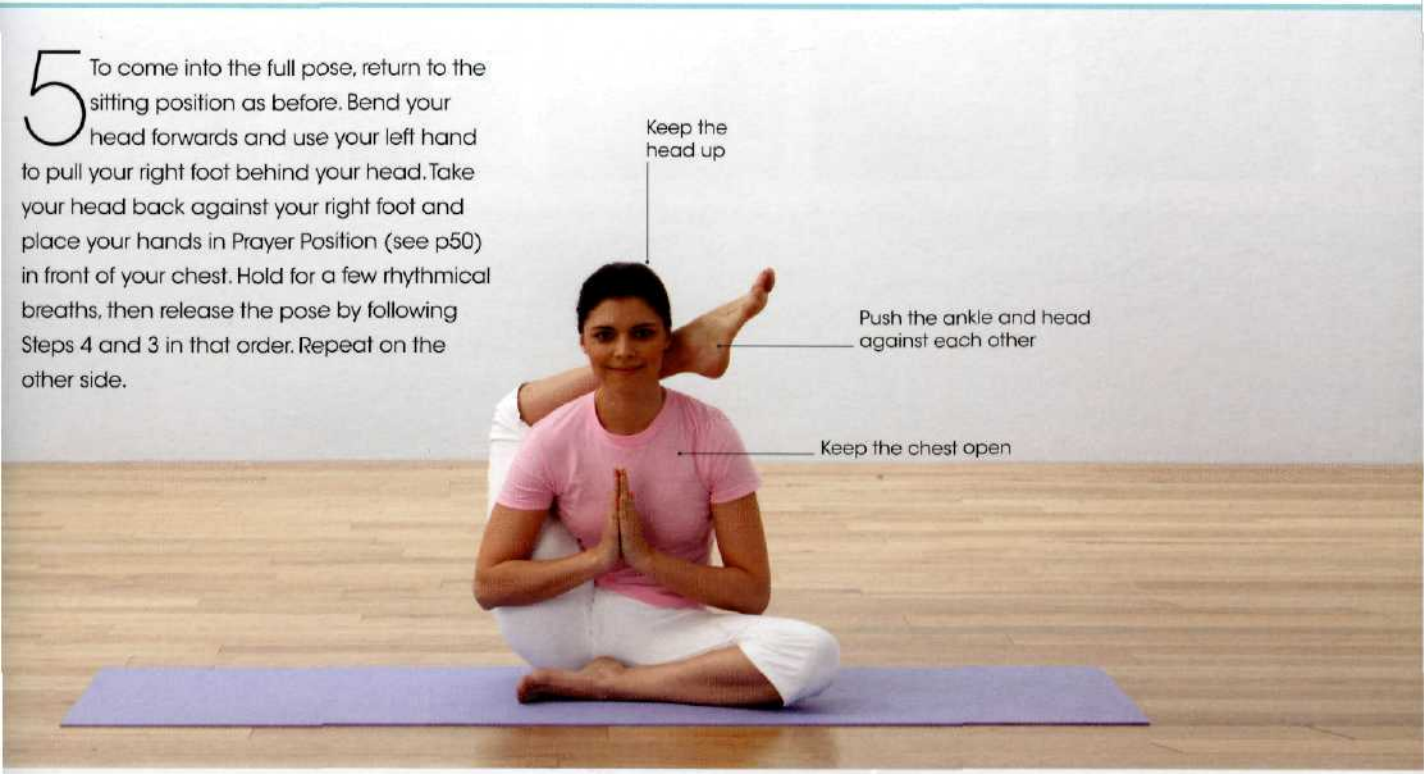
Advanced

3 Return to a sitting position with your left foot close to your body. Use both hands to pull your right knee over your right shoulder. Breathing deeply, hold for up to 1 minute. Repeat on the other side.

4 Return to the sitting position as before. Raise your left arm and lift up your right foot. Take your right hand to the floor. Breathing rhythmically, hold for up to 30 seconds. Repeat on the other side.



5 To come into the full pose, return to the sitting position as before. Bend your head forwards and use your left hand to pull your right foot behind your head. Take your head back against your right foot and place your hands in Prayer Position (see p50) in front of your chest. Hold for a few rhythmical breaths, then release the pose by following Steps 4 and 3 in that order. Repeat on the other side.



Lying Down Leg Behind Head

Advanced Variation

Starting from One Foot to Head Step 5 (see above), stretch out your left leg and slowly lie down on the mat. Hold for a few rhythmical breaths, then take your right foot with your right hand, and carefully release your right leg. Repeat on the other side.

Both Legs Behind Head

Advanced Variation

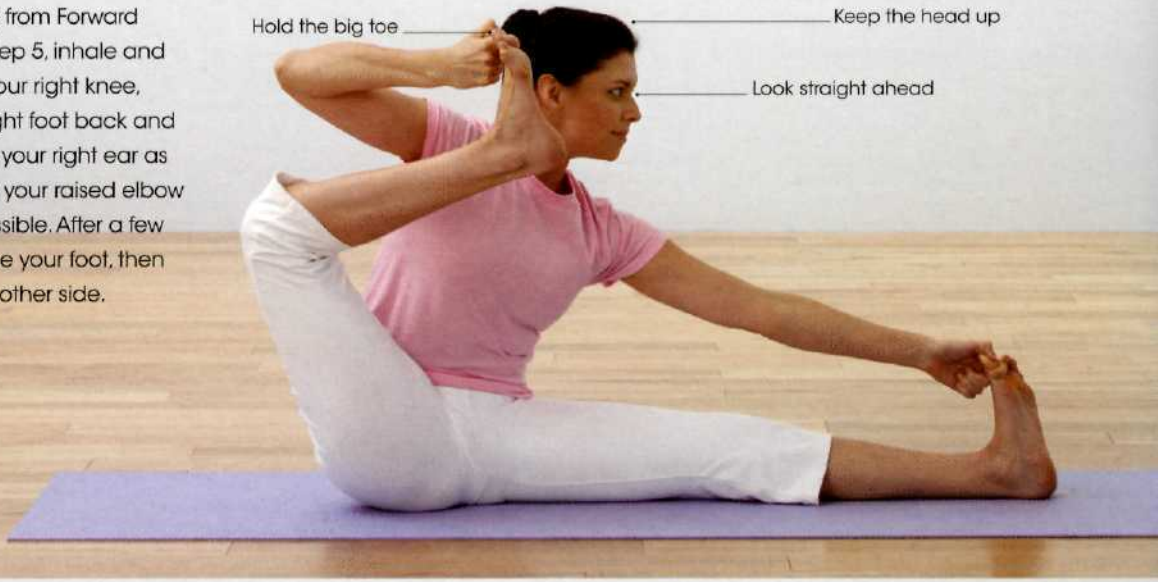
Starting from Lying Down Leg Behind Head (see left), take your left foot behind your head. Lock your left foot with the right. Clasp your hands under your lower back. Hold for a few rhythmical breaths, then unlock your feet and roll out of the pose. Repeat on the other side.

Shooting Bow
Advanced

These variations will help you improve your Forward Bend (see pp96–9). After practising Shooting Bow, return to Forward Bend step 5, then practise Inclined Plane (see p100), then relax in Corpse pose (see p188).

Start with

6 Starting from Forward Bend Step 5, inhale and bend your right knee, pulling your right foot back and up as close to your right ear as possible. Keep your raised elbow as high as possible. After a few breaths, release your foot, then repeat on the other side.



Diagonal Shooting Bow
Variation

Starting from Forward Bend Step 5, take your left arm on top of your right so each hand is holding the opposite foot. Inhale and pull your left foot towards your right ear. After a few breaths, release your leg, then repeat, crossing your arms the other way and pulling your right foot towards your left ear.

"Asanas give strength. Pranayama gives lightness of body. Meditation gives perception of the Self and leads to freedom or final beatitude." Swami Sivananda

Straight Leg Shooting Bow

Variation

Starting from Forward Bend Step 5, inhale and take your right leg straight up. Keep hold of the other foot. After a few breaths, release and repeat on the other side.

Splits
Advanced

Splits and its variations open up the hip and shoulder joints, as well as the solar plexus area in the abdomen, allowing prana (see pp178) to flow. Relax afterwards in Corpse Pose (see p188).

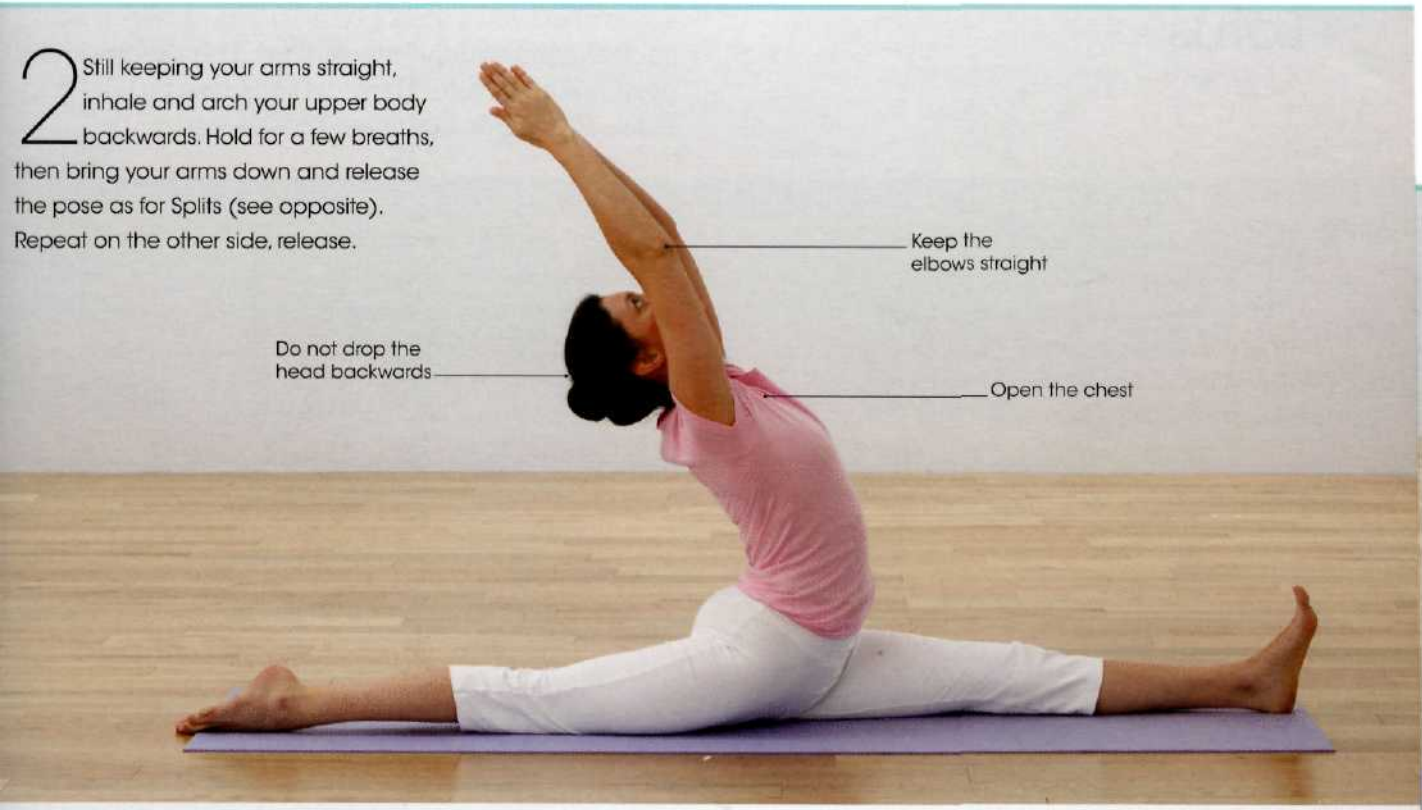
Splits

Kneel down and take your left leg forwards Breathe slowly as you place your hands either side of your body to help you balance, then straighten your right leg behind and push your left heel farther away to deepen the split. If you are flexible enough to sit down, take your hands into Prayer Position (see p50) in front of your chest. Hold for a few breaths then, pressing your hands against the mat, release the pose by bending both legs. Repeat on the other side.

Crescent Splits
Variation

1 Starting from Splits (see above), with an inhalation, take your arms straight up *beside your ears. Keep your balance by* using rhythmical breathing and looking at a point in front of you.

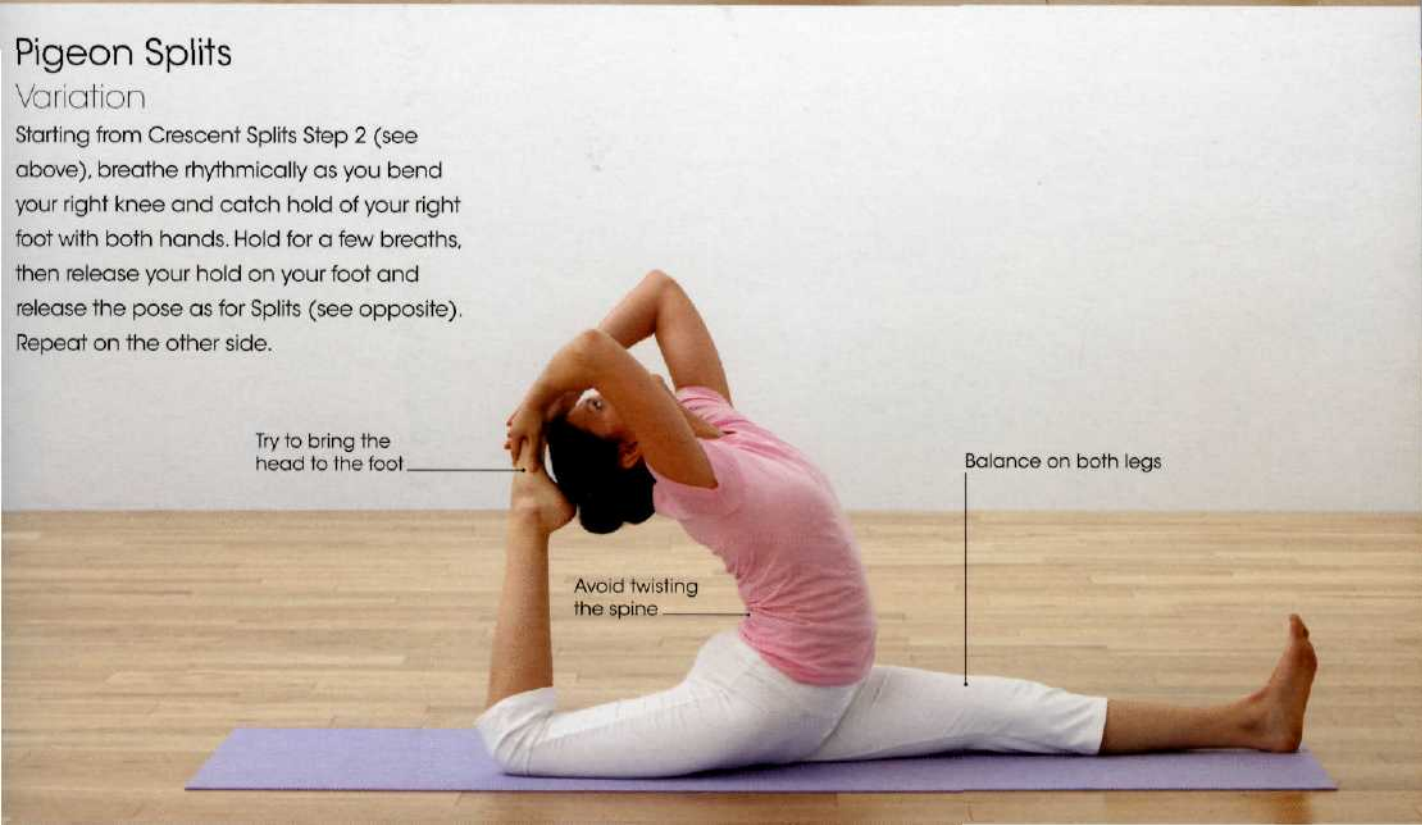
2 Still keeping your arms straight, inhale and arch your upper body backwards. Hold for a few breaths, then bring your arms down and release the pose as for Splits (see opposite). Repeat on the other side, release.



Pigeon Splits

Variation

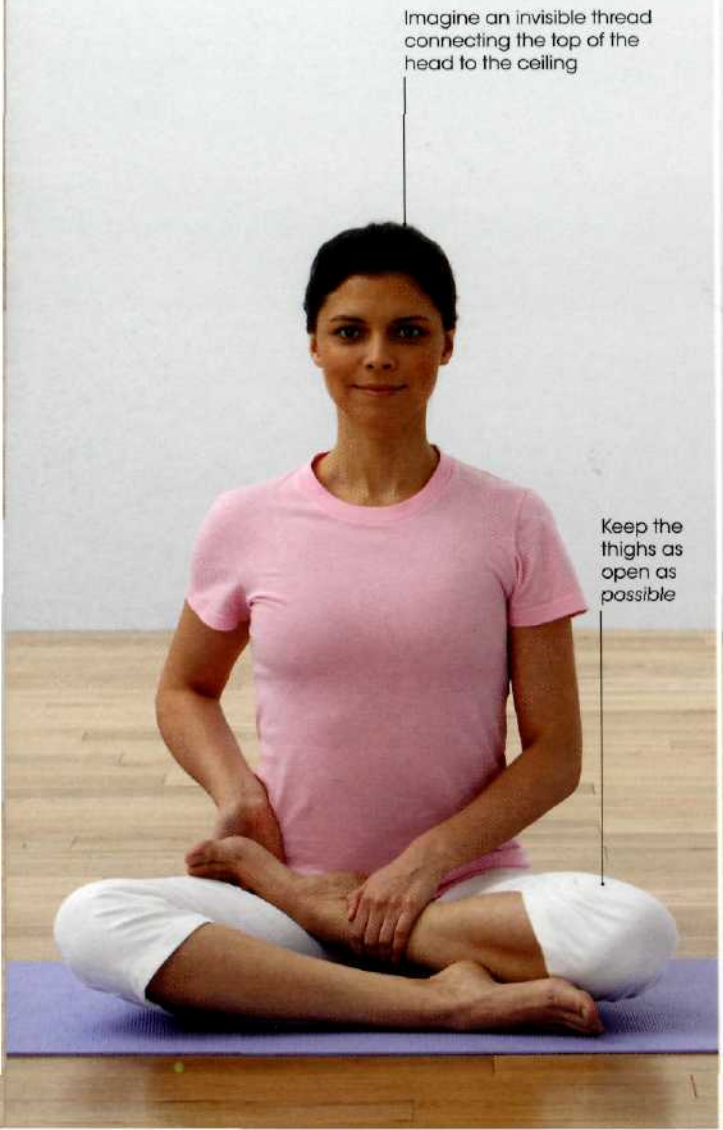
Starting from Crescent Splits Step 2 (see above), breathe rhythmically as you bend your right knee and catch hold of your right foot with both hands. Hold for a few breaths, then release your hold on your foot and release the pose as for Splits (see opposite). Repeat on the other side.



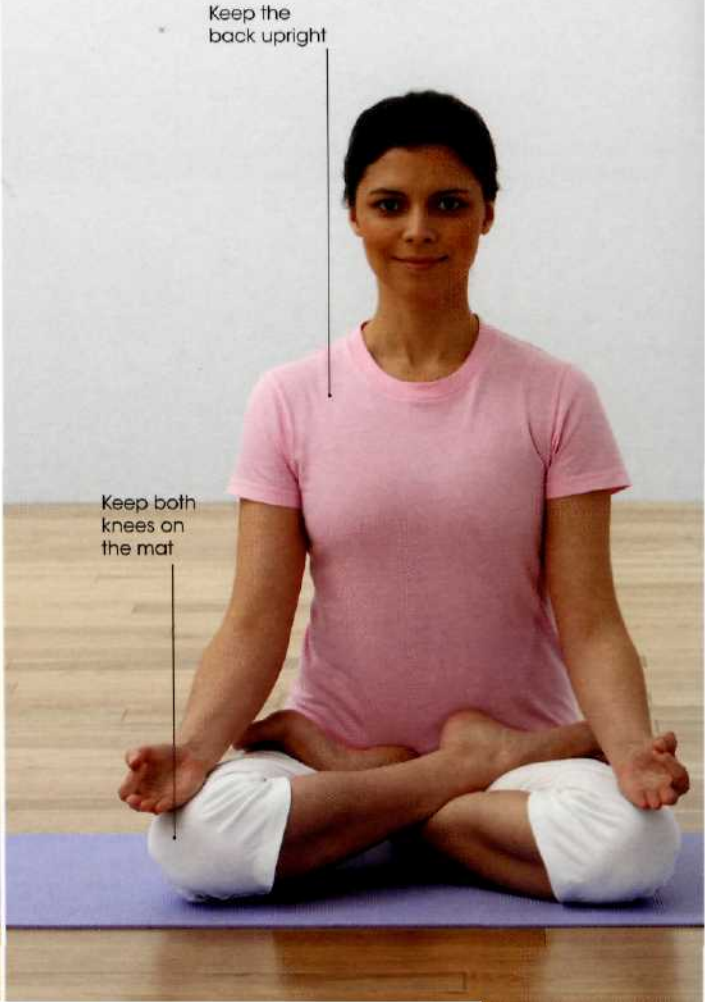
Lotus
Advanced

Lotus gives you a stable base so you can keep your back aligned without much effort. The various Lotus positions allow a free flow of prana (see pp178–9). Relax afterwards in Corpse Pose (see p188).

1 Sit cross-legged, then lift your left foot on top of your right thigh, taking the foot as close to your right hip as possible. If necessary, place a small pillow under your sitting bones. Breathe slowly and meditatively.



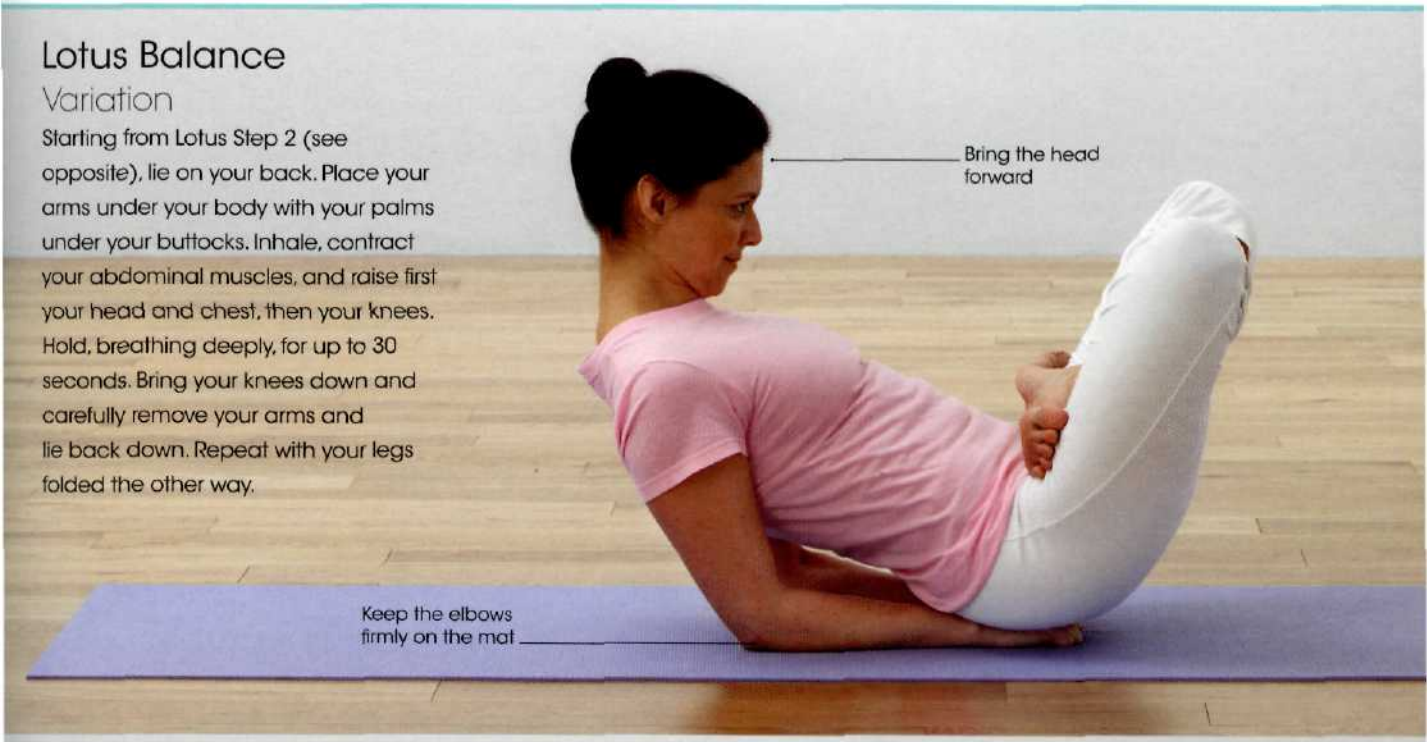
2 Lift your right foot on top of your left thigh and rest your hands on your knees in Chin Mudra position (see p204). Hold the pose, breathing slowly and meditatively, for 1 minute, then release first the right foot, then the left. Repeat with your legs folded the other way.



Lotus Balance

Variation

Starting from Lotus Step 2 (see opposite), lie on your back. Place your arms under your body with your palms under your buttocks. Inhale, contract your abdominal muscles, and raise first your head and chest, then your knees. Hold, breathing deeply, for up to 30 seconds. Bring your knees down and carefully remove your arms and lie back down. Repeat with your legs folded the other way.



Lying Fish

Variation

Starting from Lotus Step 2 (see opposite), lie on your abdomen. Fold your arms and rest your forehead on them. Hold, breathing very slowly and quietly, for up to 1 minute. Come out of the pose by pushing on your elbows and swinging your legs forwards to return to Lotus Step 2. Unfold your legs, then repeat with your legs folded the other way. Release and relax in Child's Pose (see p191).

6 Cobra
Bujangasana

Like a cobra with its hood raised, in Bhujangasana you arch your head and trunk gracefully upwards. Backward bending against the pull of gravity is the most efficient way to develop a strong back. After Cobra you can either relax on your abdomen (see p190) or stretch back into the counterpose, Child's Pose (see p191).

BENEFITS

PHYSICAL

- Tones the deep and superficial muscles of the back.
- Increases the blood supply to the ligaments of the spine and the vertebrae.
- Removes any tension from overworked back muscles.
- Relieves kyphosis – exaggerated thoracic curvature (see p29).
- Massages the abdominal organs.
- Combats constipation.
- Tones the ovaries and uterus and alleviates menstrual problems.

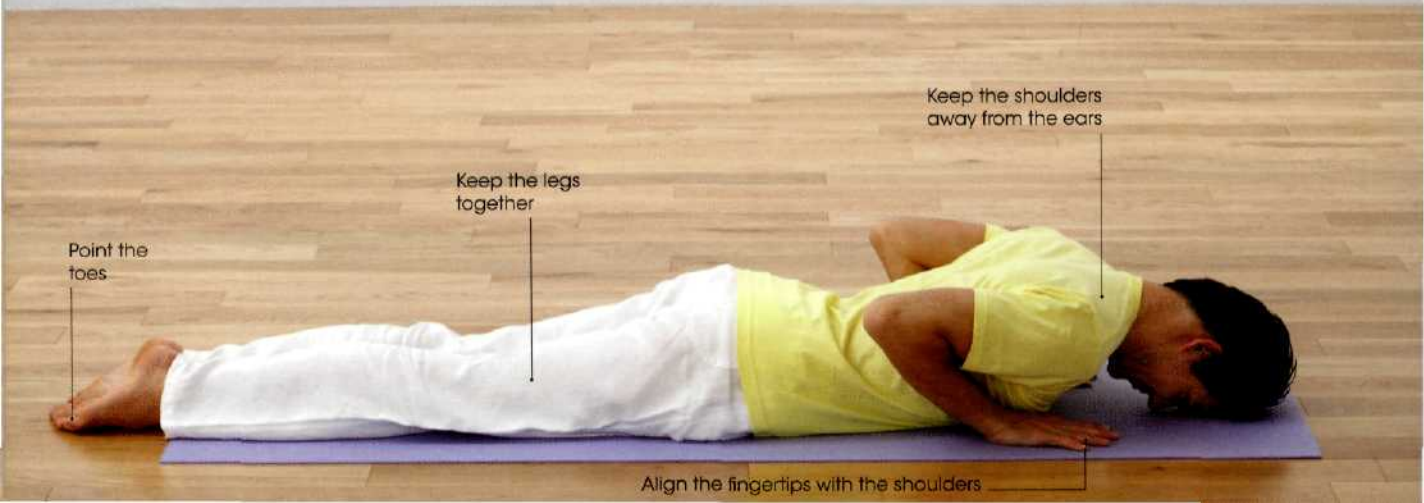
MENTAL

- By requiring you to focus fully on contracting the muscles in your neck and upper back, Cobra helps to develop your powers of concentration.

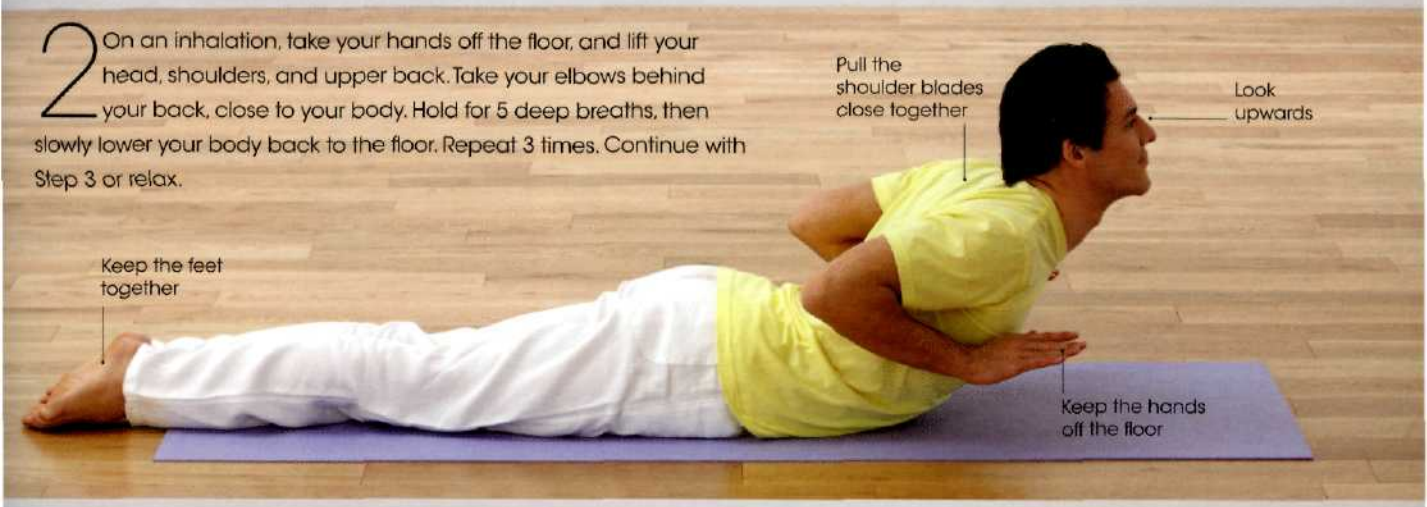
Cobra
Beginner and Intermediate

Beginner

1 Lie on your abdomen, keeping your legs straight and your toes together. Point your toes, take your forehead to the mat, and bring your hands alongside your chest, palms face down.



2 On an inhalation, take your hands off the floor, and lift your head, shoulders, and upper back. Take your elbows behind your back, close to your body. Hold for 5 deep breaths, then slowly lower your body back to the floor. Repeat 3 times. Continue with Step 3 or relax.



Intermediate

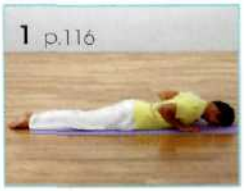
3 On an inhalation, lift your head and pull your shoulder blades in towards each other. Keep your chest on the floor.

4 On the next inhalation, lift your head farther and raise your chest off the floor. Keep pulling your shoulder blades together. Hold for up to 30 seconds, then slowly lower your body back to the floor. Repeat, then either continue with Step 5 (see p118) or relax.

Cobra
Advanced

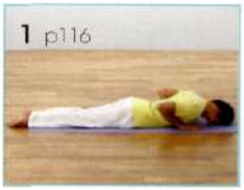
Working at a desk encourages rounded shoulders and a collapsed chest, which impairs breathing and depresses your mood. Daily practice of Cobra, at any level, can help to rectify these problems.

Start with



5 To come into the full pose, start from Cobra Step 4. On an inhalation, arch your head, neck, and upper back as much as possible. Keep your legs together and make sure that your shoulder blades are pulled backwards and away from your ears. Hold for up to 1 minute, then lower your body back to the floor. Take a few deep breaths, then repeat.

Start with

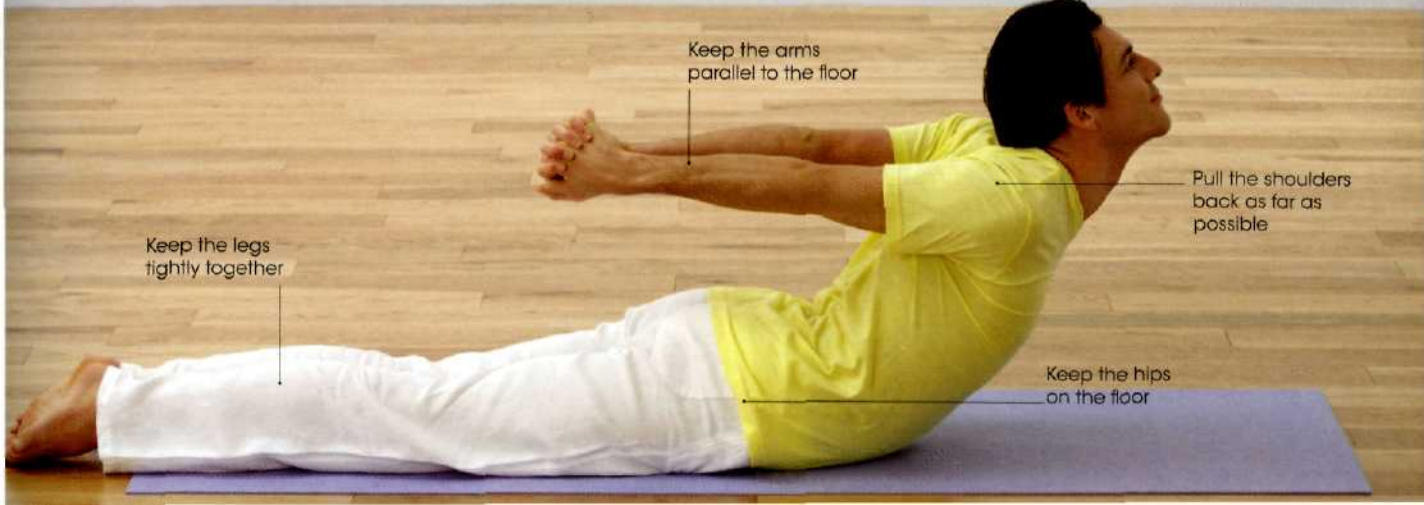


Hands Clasped

Intermediate Variation

2 Starting from Cobra Step 1, take your arms behind your back, straighten them, and clasp your hands together.

3 With an inhalation, lift your head, arms, and chest off the floor. Hold for up to 30 seconds, then lower your body back to the floor. Take a few deep breaths, then repeat.



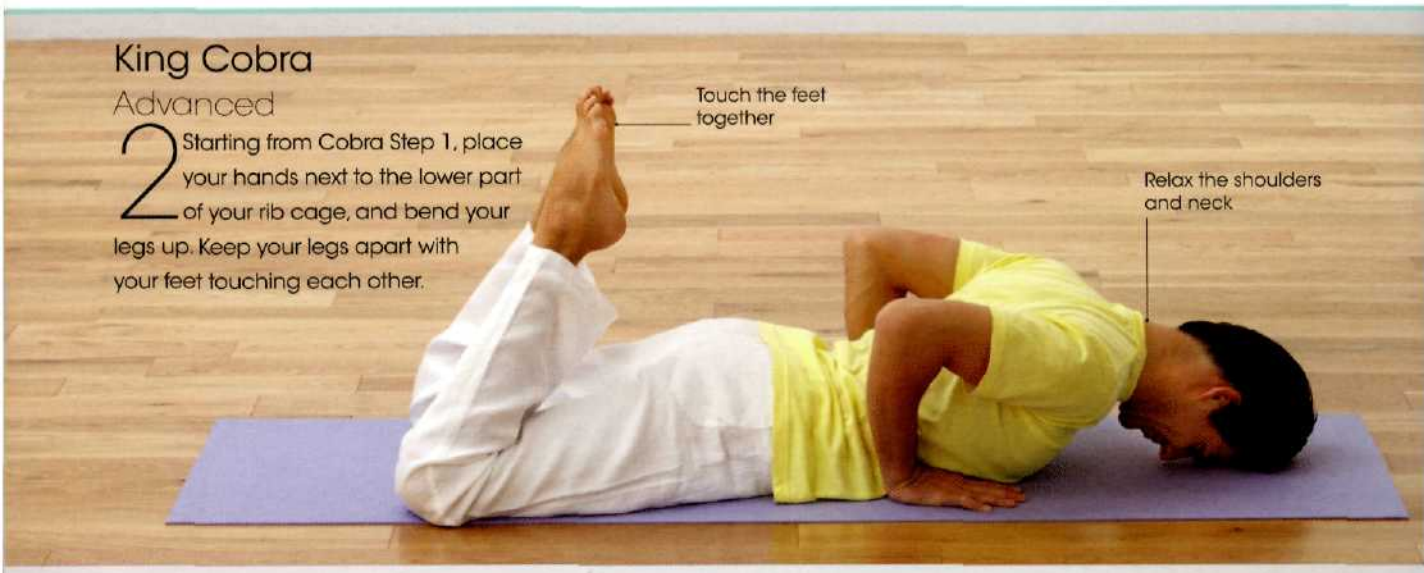
Cobra
Variations (continued)

King Cobra majestically combines contraction of your neck and of the muscles of your upper back with a complete backward bend of your spine. An added benefit is an increase in your lung capacity.

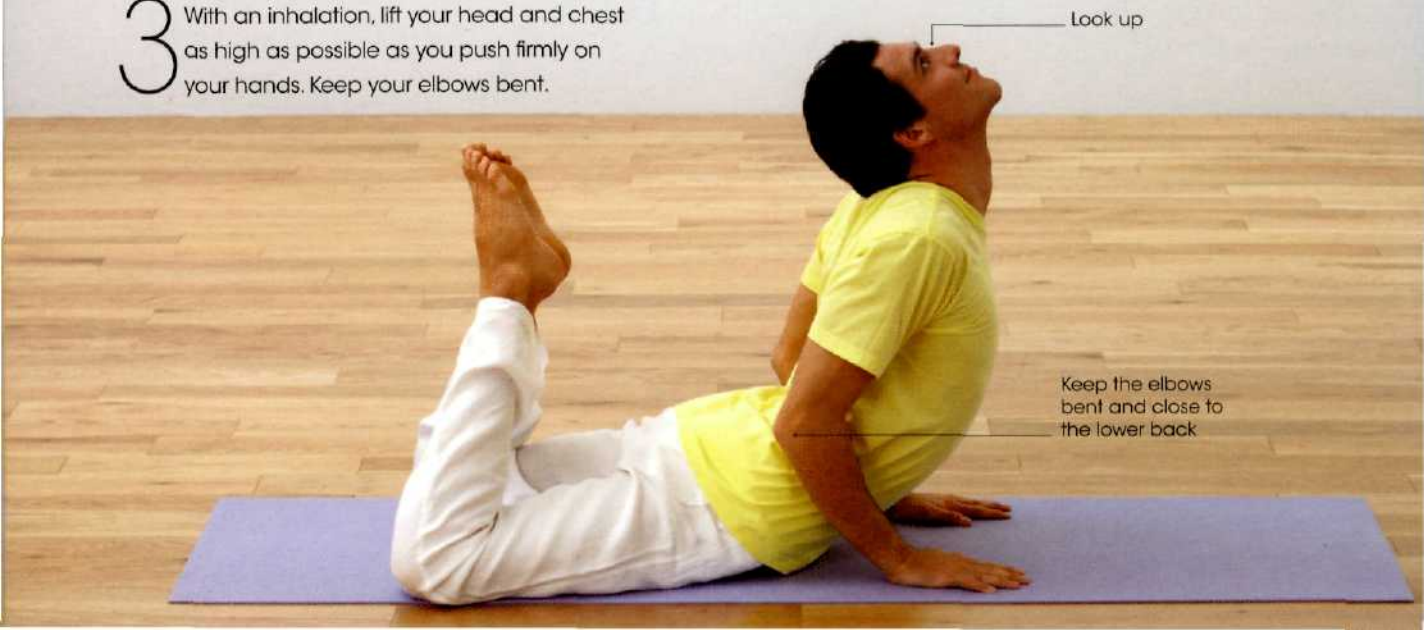
Start with

King Cobra
Advanced

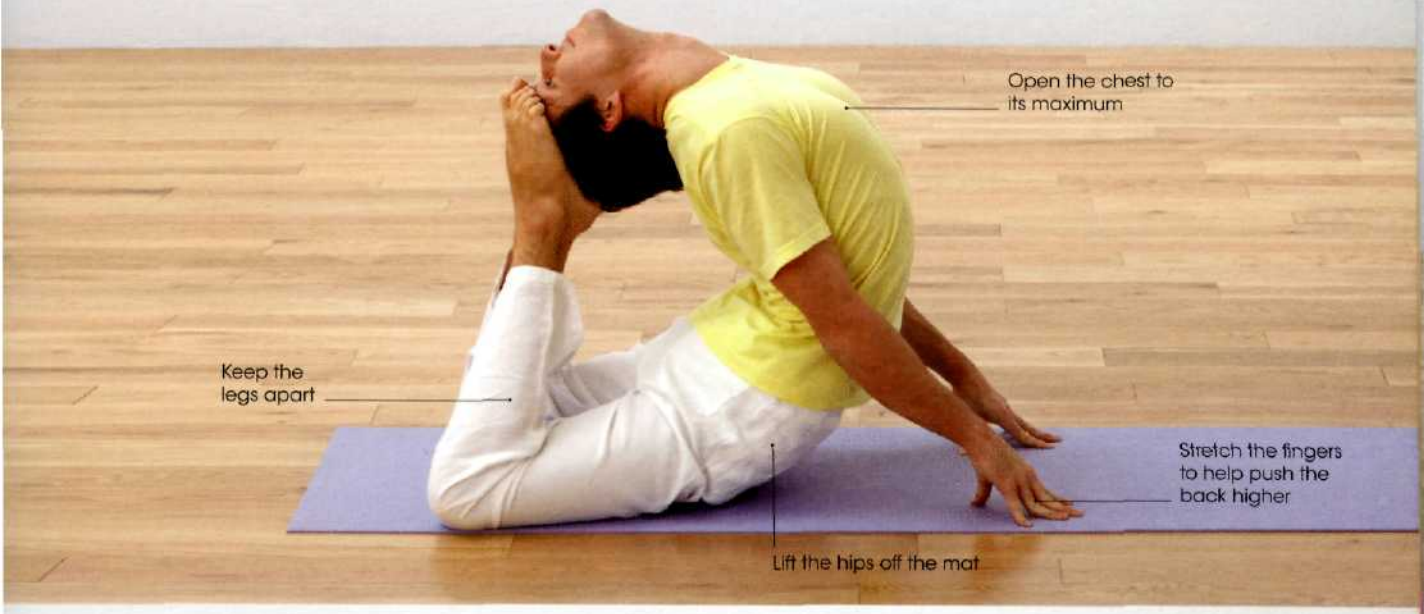
2 Starting from Cobra Step 1, place your hands next to the lower part of your rib cage, and bend your legs up. Keep your legs apart with your feet touching each other.



3 With an inhalation, lift your head and chest as high as possible as you push firmly on your hands. Keep your elbows bent.



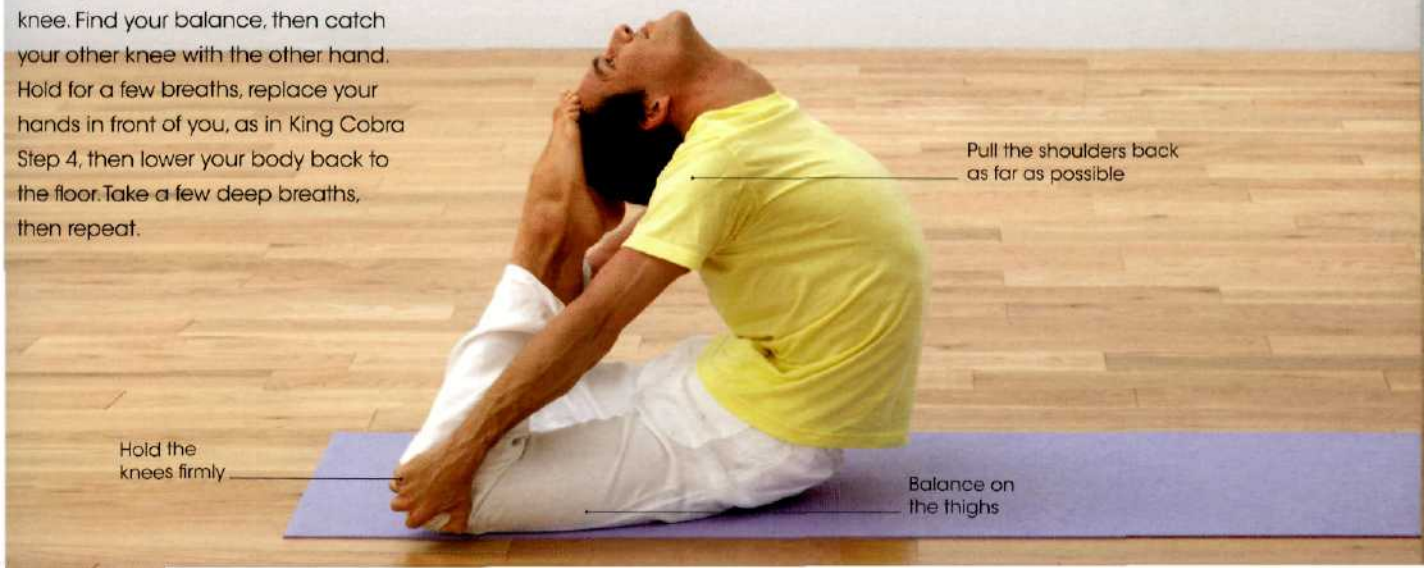
4 With another inhaltion, lift your head and chest even higher. Straighten your arms completely and bring your feet to your head. Hold for up to 30 seconds, then take your feet from your head, and lower your body back to the floor. Take a few deep breaths, then repeat.



King Cobra Knee Hold

Advanced

Starting from King Cobra Step 4 (see above), lift one hand and catch your knee. Find your balance, then catch your other knee with the other hand. Hold for a few breaths, replace your hands in front of you, as in King Cobra Step 4, then lower your body back to the floor. Take a few deep breaths, then repeat.



7 Locust
Salabhasana

Unlike the other asanas, which are done slowly, you achieve Locust by making a single powerful muscle contraction, similar to that of a locust jumping. This simultaneously brings together thought, breath, movement, and prana – vital energy (see p178). After Locust, stretch back into Child's Pose (see p191) or relax on your front (see p190).

BENEFITS

PHYSICAL
- Strengthens the muscles of the arms, shoulders, abdomen, lower back, thighs, and legs.
- Tones the liver, pancreas, and kidneys.
- Improves the appetite.
- Relieves constipation.

MENTAL
- Of all the asanas, this pose is the one that works most on developing will power. According to Swami Vishnudevananda, exercising will power makes one's thoughts pure and powerful and is the main goal of the practice of asanas. Strong will power also lifts your energy levels from inertia (tamas, see p212) to harmony (satva, see p212).

Locust
Beginner and Intermediate

Beginner

1 Lie on your abdomen with your legs outstretched, heels together, arms under your body, and chin forward on the mat. Place your hands in one of the hand positions (see right), depending on which you find most comfortable. Hand position A is the classical position for this pose.

Hand position A
Interlock the fingers and keep the thumbs together.

Hand position B
Clench the fists and keep the thumbs together.

Point the toes

2 Beginners should move slowly. With a long inhalation, contract your lower back and gradually raise your left leg. Hold your breath and the position as long as it is comfortable. Exhale and lower your leg, then repeat 2 more times. Repeat 3 times on the other side. Continue with Step 3 or relax.

Keep the knee straight

Relax the lower leg

Intermediate

3 To come into the full pose, on a quick, strong inhalation, contract your lower back, push on your arms, and swing both legs up as high as possible. Hold your breath as long as is comfortable, then exhale and lower your legs. Repeat 2 more times.

COMMON FAULTS

Point the toes

Keep the legs straight

Relax the face

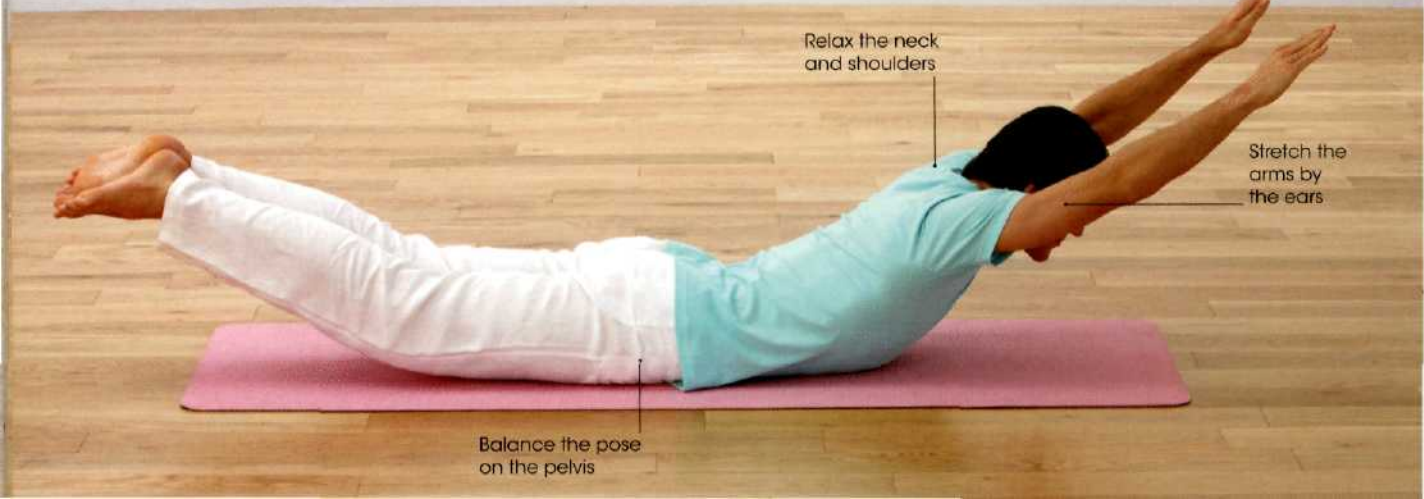
Locust
Variations

The Boat variations are very efficient. You contract your back muscles strongly without putting much pressure on your vertebrae. For maximum benefit, go into and come out of these poses very slowly.

Boat
Beginner

1 Lie face down on the mat with your arms stretched out in front of you and your feet extended behind. Rest your forehead on the floor and breathe deeply in your abdomen. Exhale completely.

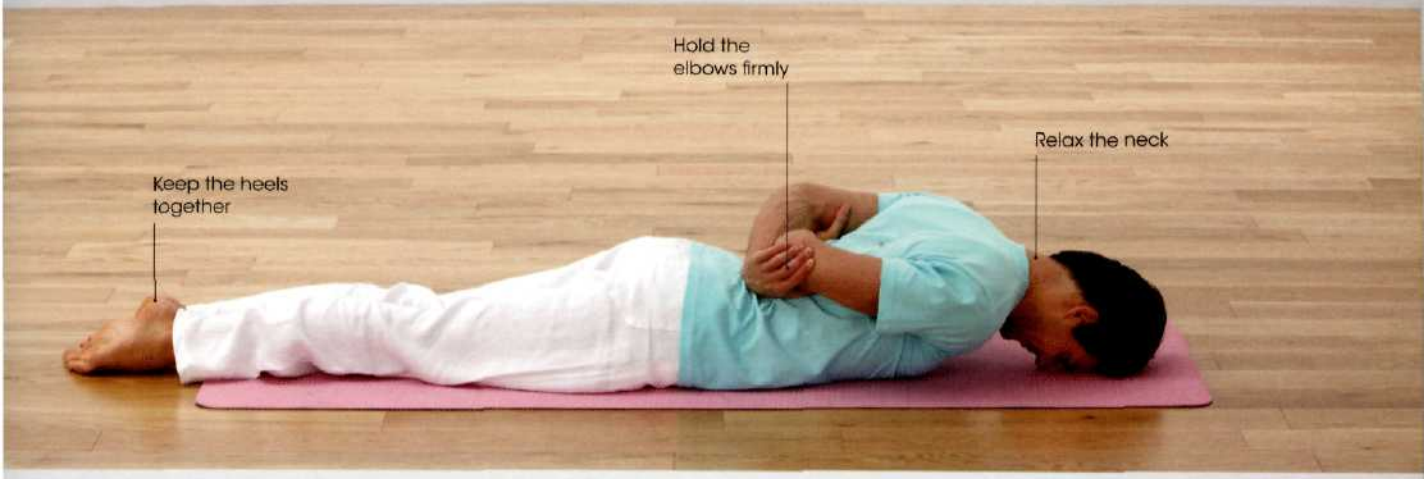
2 On an inhalation, simultaneously lift both your arms and legs as high as possible. You may hold your breath or take a few deep breaths in your abdomen. Exhale and release. Repeat up to 3 times.



Boat with Interlock

Beginner

1 Lie face down on the mat with your feet extended behind you and your forehead on the floor. Take your arms behind your back and hold onto your elbows. Exhale completely.



2 On an inhalation, lift your legs, head, and chest as high as possible. You may hold your breath or take a few deep breaths. Exhale and release.

Repeat up to 3 times.

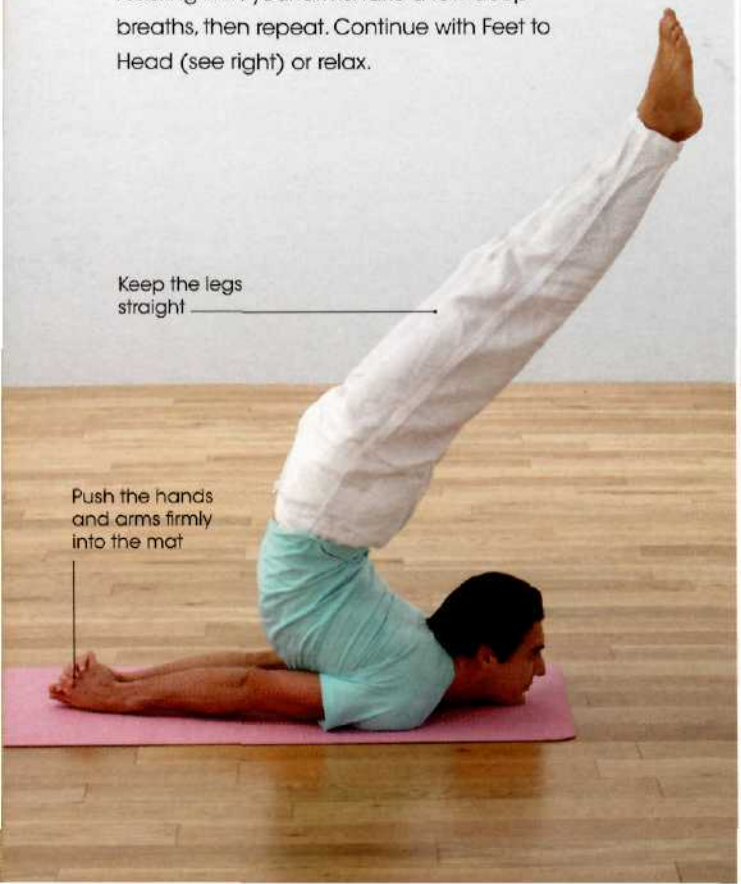
Locust
Variations (continued)

These Locust variations require regular practice. This will enable you to contract your lower back muscles fast and strongly enough to bring your legs up higher than in Intermediate Locust.

Start with

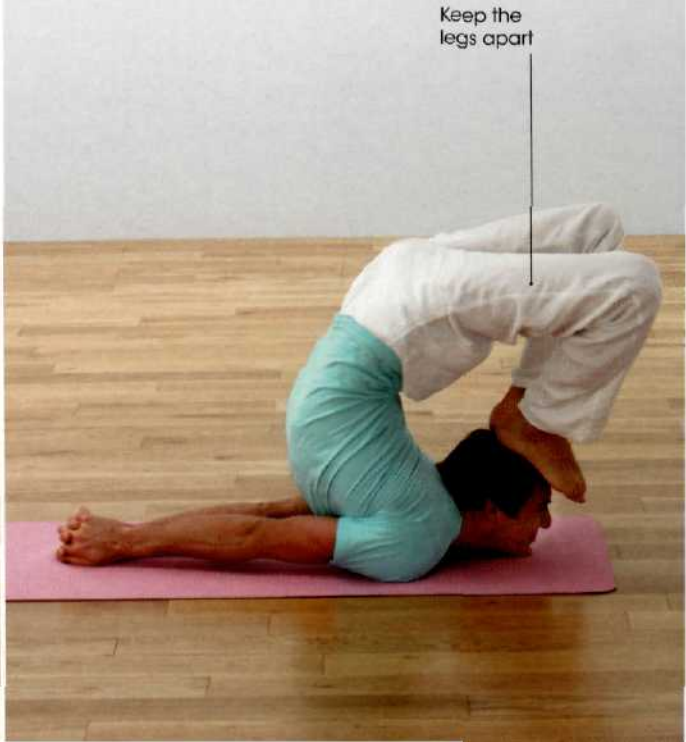
High Legs
Advanced

3 Starting from Locust Step 3, inhale and swing your legs up as quickly as you can, adding a strong push with your arms against the floor. Hold for a few breaths, then come out of the pose by slowly releasing the contraction of your back and resisting with your arms. Take a few deep breaths, then repeat. Continue with Feet to Head (see right) or relax.



Feet to Head
Advanced

Starting from High Legs (see left), focus on taking long exhalations as you bend your knees and lower your feet as close to your head as possible. Hold for a few breaths, then come out of the pose by slowly releasing the contraction of your back and resisting with your arms. Take a few deep breaths, then repeat.



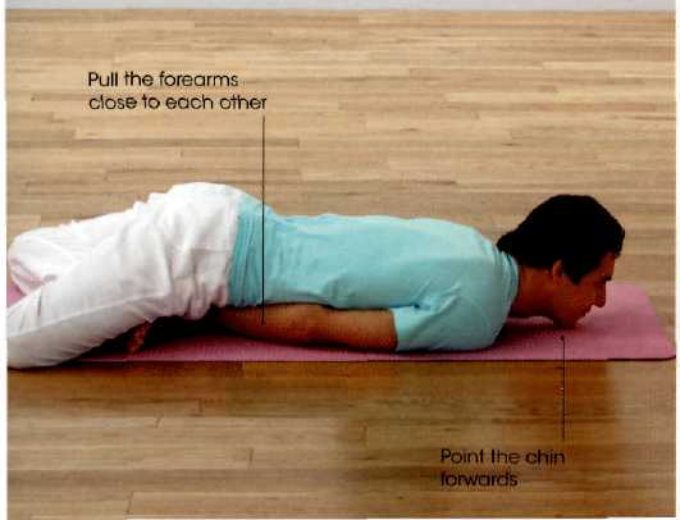
Locust in Lotus

Advanced

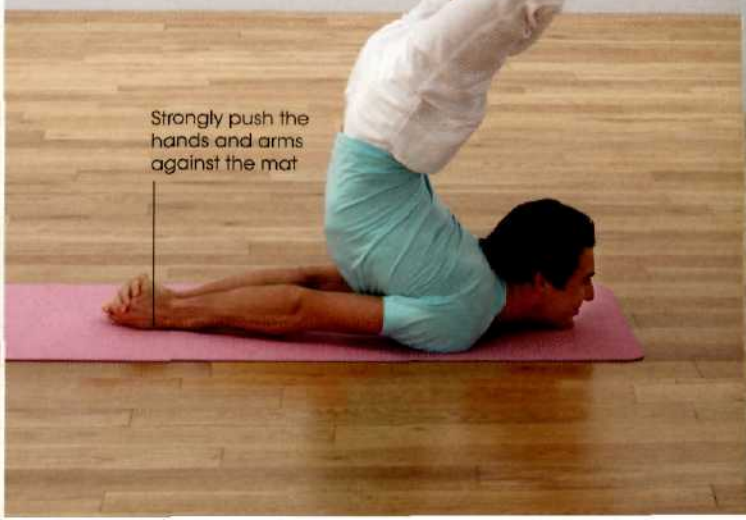
1 Start by sitting in Lotus (see p114). Take a few complete yogic breaths (see p181).

2 Leaning forwards, take your hands onto the floor in front of you and come up onto your knees. Walk your hands forwards until your hands are beneath your shoulders. Breathe slowly and rhythmically.

3 Without releasing your legs, gently lower yourself into a lying position with your arms under your body. Place your hands in one of the hand positions shown on p122, whichever is the most comfortable. Exhale completely.



4 Inhale and swing your legs up as quickly and as high as possible. Use the strength of your arms and of your lower back to come up. Hold the pose for a few breaths, then come out by slowly releasing the contraction of your back and resisting with your arms. Repeat, crossing your legs the other way.



Camel

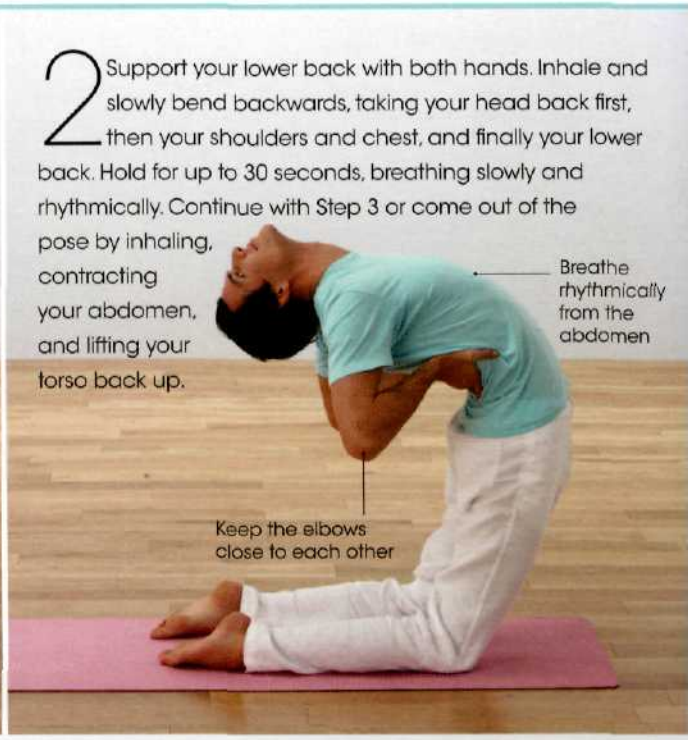
Beginner and Intermediate

Camel stretches your chest and throat muscles while also strengthening your hamstrings and the muscles of your buttocks. Relax in Child's Pose (see p191) for at least 8 breaths afterwards.

Beginner

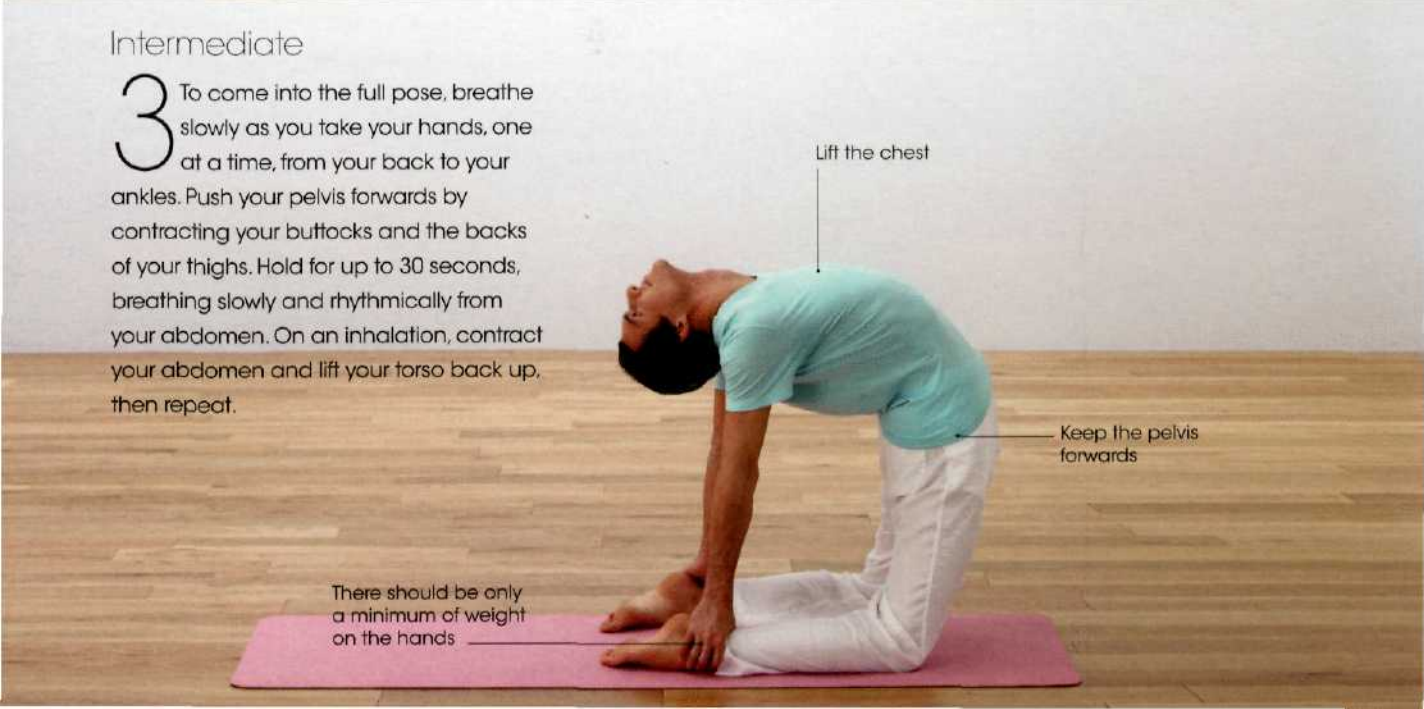
1 Kneel on the mat with your knees and feet hip-width apart, arms by your sides. Breathe slowly and rhythmically.

2 Support your lower back with both hands. Inhale and slowly bend backwards, taking your head back first, then your shoulders and chest, and finally your lower back. Hold for up to 30 seconds, breathing slowly and rhythmically. Continue with Step 3 or come out of the pose by inhaling, contracting your abdomen, and lifting your torso back up.



Intermediate

3 To come into the full pose, breathe slowly as you take your hands, one at a time, from your back to your ankles. Push your pelvis forwards by contracting your buttocks and the backs of your thighs. Hold for up to 30 seconds, breathing slowly and rhythmically from your abdomen. On an inhalation, contract your abdomen and lift your torso back up, then repeat.



Diamond

Intermediate and Advanced

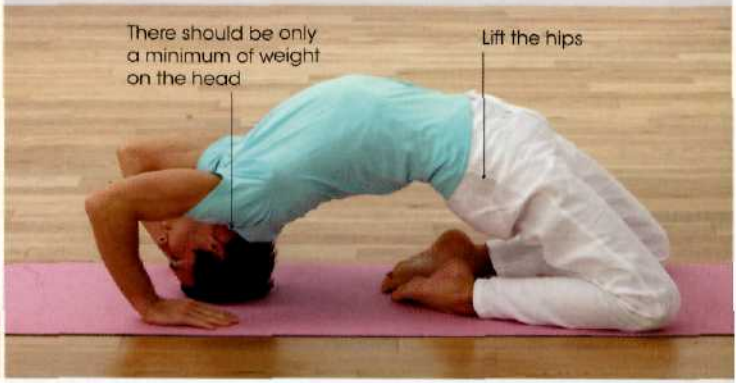
Diamond is a complete backward bend, which gives a wonderful stretch to the front of the body and revitalizes the area of the solar plexus. Relax in Child's Pose (see p191) afterwards.

Intermediate

1 Kneel, then sit between your heels, taking your arms behind you. Slowly lower your body onto your elbows, then come into a lying position with your arms behind your head, each hand clasping the opposite elbow. Hold for up to 30 seconds, breathing slowly and rhythmically in your abdomen. Continue with Step 2 or come out of the pose by placing your elbows next to your lower back and pushing yourself up. Then extend your legs in front of you.

Advanced

2 Place your palms flat on the mat as close to your shoulders as possible. Inhale, push on your arms, and place the top of your head on the floor.

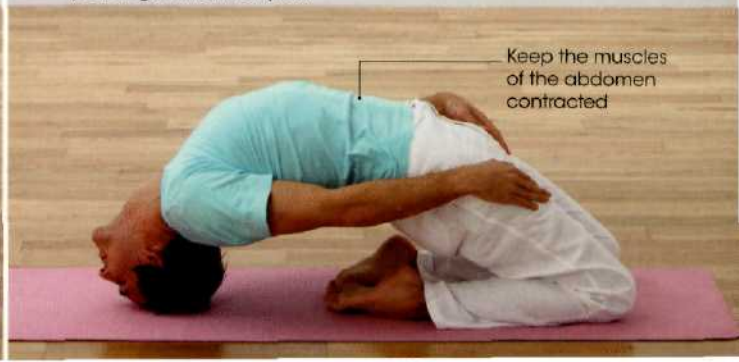


3 To come into the full pose, with a deep inhalation and another push of your arms, take your head closer to your feet. Move your hands to your feet and push your elbows firmly into the ground. Hold for up to 30 seconds, then release by walking your hands away from your body and lowering your neck to the mat. Repeat, then push yourself up by placing your elbows next to your lower back. Extend your legs in front of you.

Hands on Thighs

Advanced Variation

Starting from Diamond Step 2, with an inhalation, slowly lift one arm at a time and place your hands on your thighs so you are balancing on your head and legs. Hold for a few breaths, then release by returning to Diamond Step 2, then lower your neck to the mat. Repeat, then push yourself up by placing your elbows next to your lower back. Extend your legs in front of you.



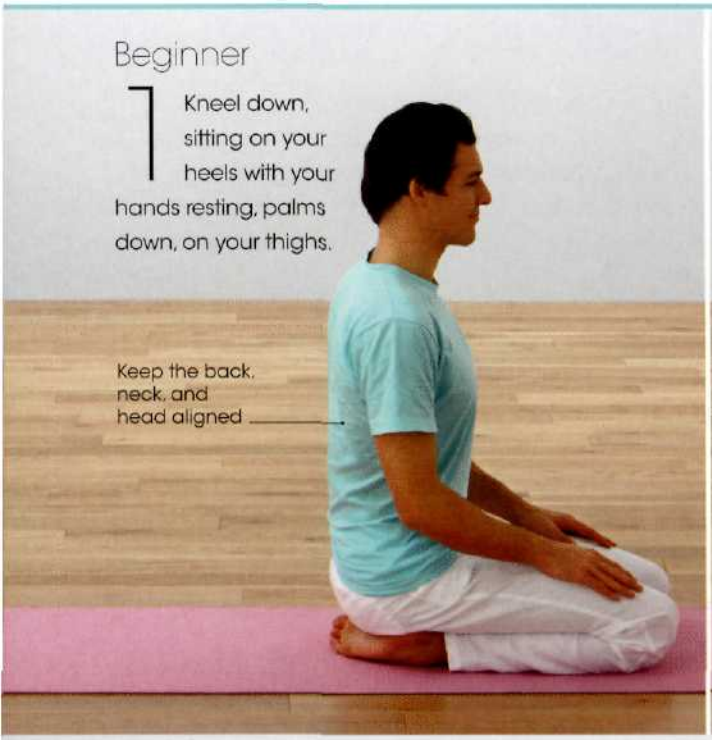
Pigeon

All levels

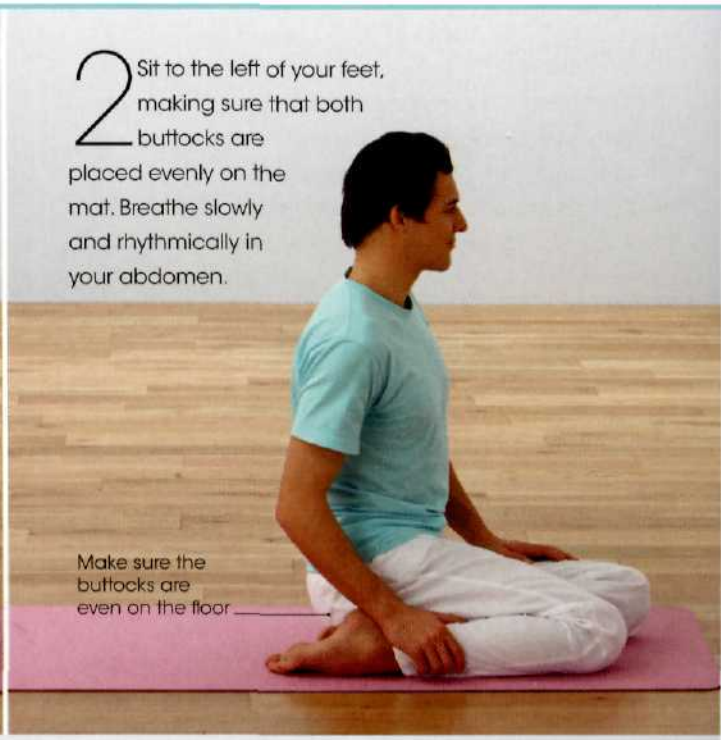
Holding onto your foot by extending your arms over your head in a sitting position is a thrilling experience. It stretches your spine completely. Relax afterwards in Child's Pose (see p191).

Beginner

1 Kneel down, sitting on your heels with your hands resting, palms down, on your thighs.



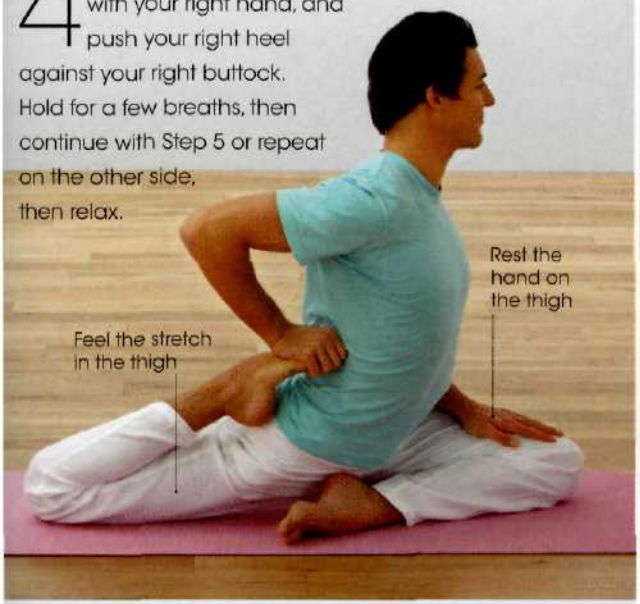
2 Sit to the left of your feet, making sure that both buttocks are placed evenly on the mat. Breathe slowly and rhythmically in your abdomen.



3 Continuing to breathe rhythmically in your abdomen, extend your right leg behind you, along the floor with your toes pointed. Support yourself with your hands to help keep the spine upright. Keep your left foot in front of your right hip. Hold for a few breaths, then continue with Step 4 or release your legs, repeat on the other side, then relax.

Intermediate

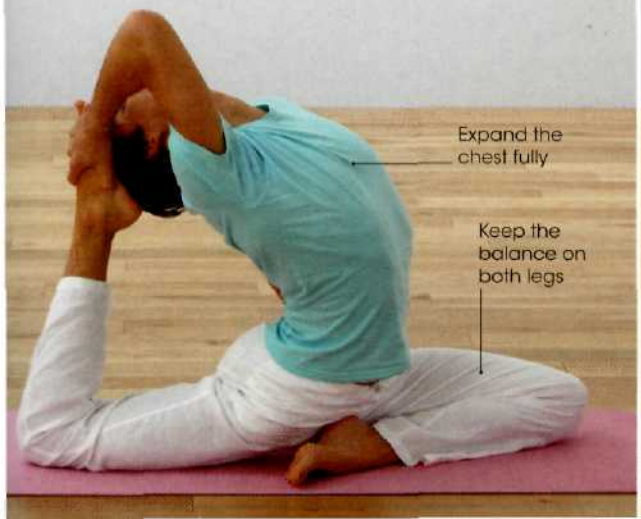
4 Bend your right knee, reach back with your right hand, and push your right heel against your right buttock. Hold for a few breaths, then continue with Step 5 or repeat on the other side, then relax.



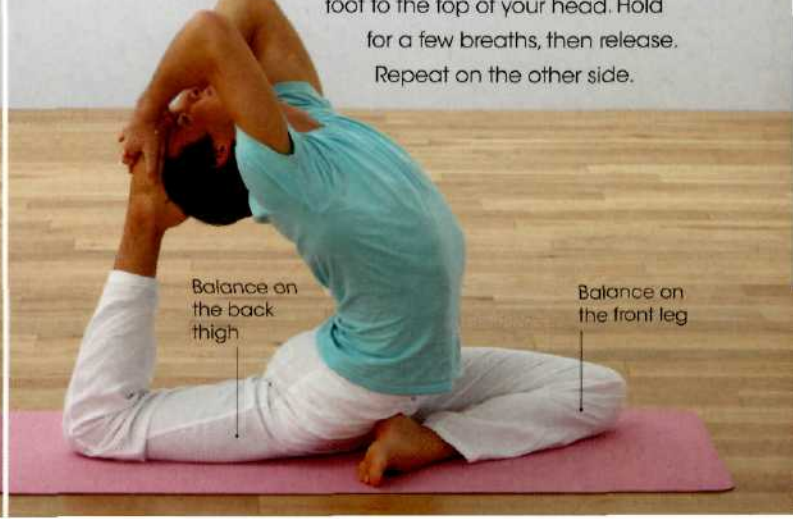
Advanced

5 Catch the inner edge of your right foot with your right hand. Place your left hand on the floor next to your left hip to help you balance. Keep your breath flowing rhythmically.

6 Taking your head back, pull your right foot close to your shoulder with your right hand. Continuing to breathe rhythmically, turn your right elbow upwards. Stabilize yourself with your left hand on the mat.



7 To come into the full pose, breathe rhythmically to help you balance, bring your left arm over your head, and place your left hand next to your right hand on your right foot. Try to bring your right foot to the top of your head. Hold for a few breaths, then release. Repeat on the other side.



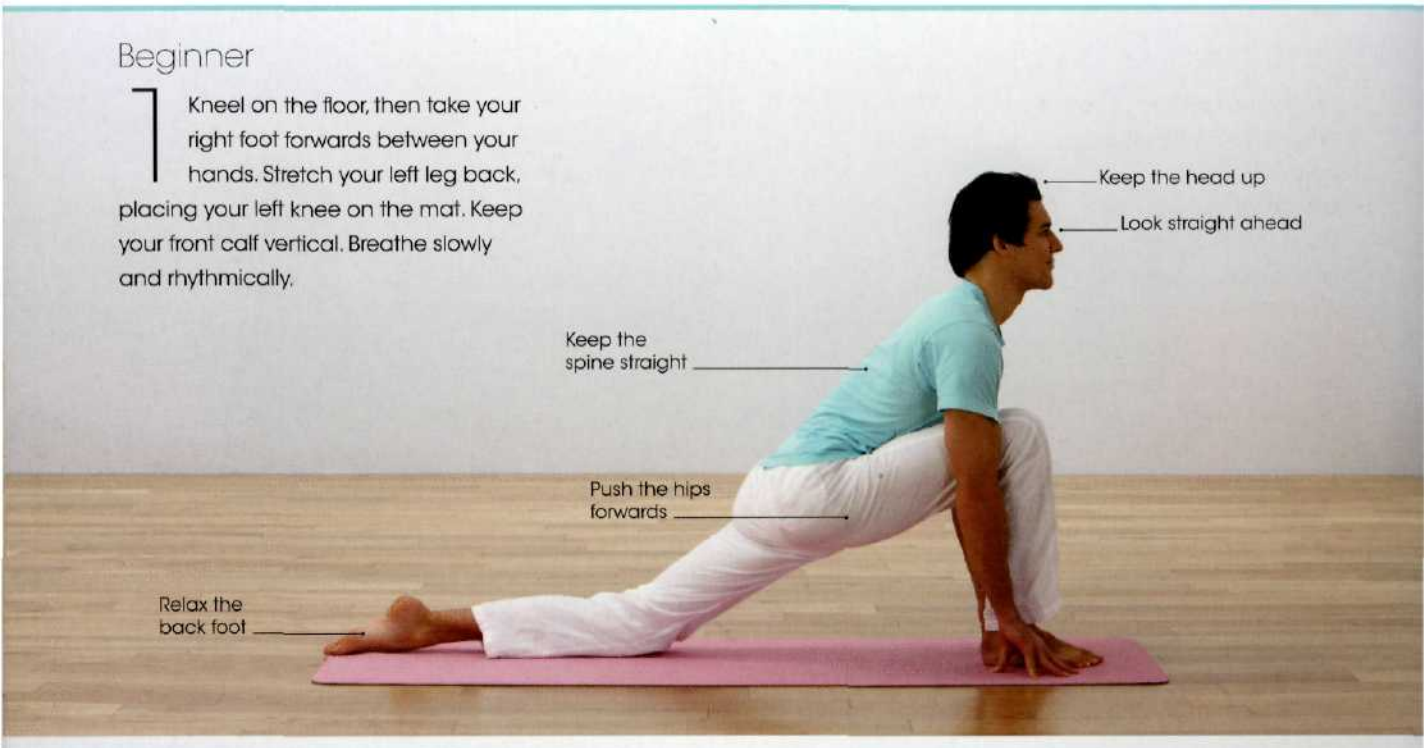
Crescent Moon

All Levels

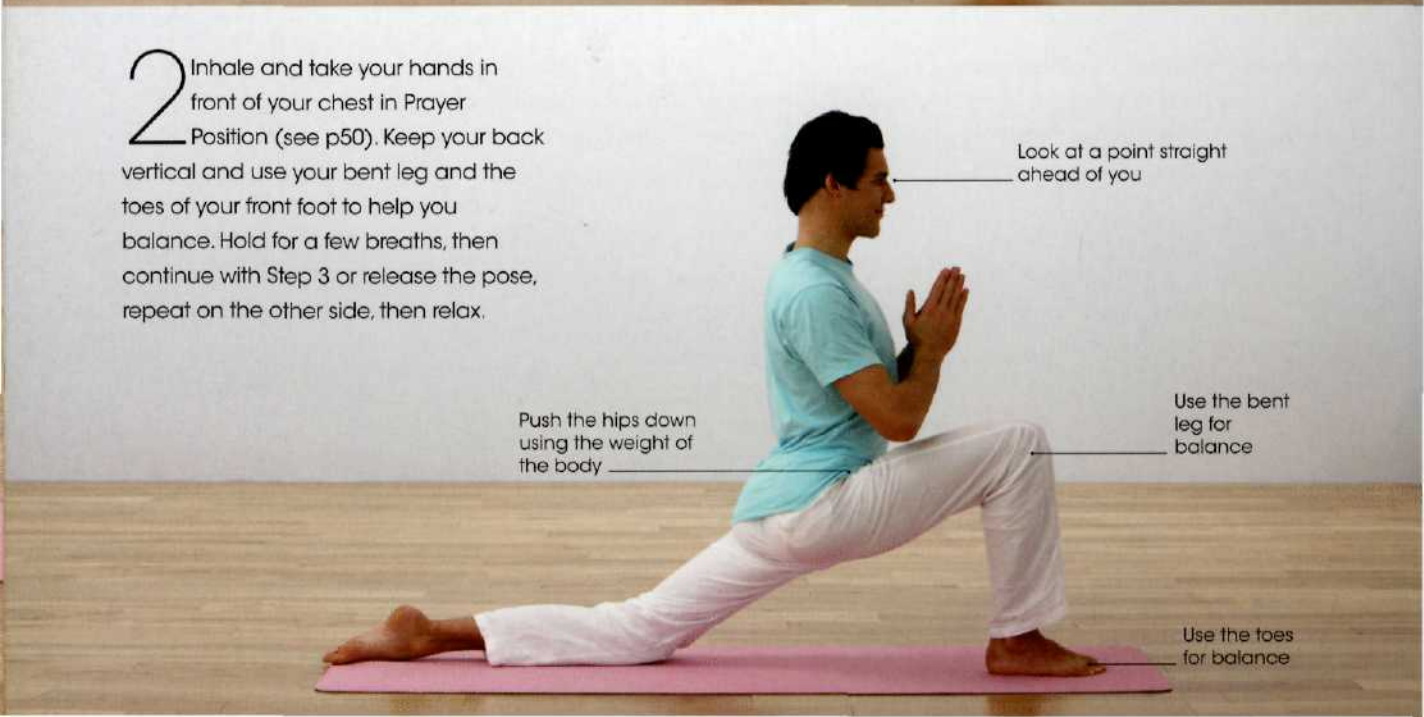
This asana stretches the hip flexors (iliopsoas) in the pelvis, which are often shortened due to our sedentary lifestyle, and cause stiffness in the lower back. Relax afterwards in Child's Pose (see p191).

Beginner

1 Kneel on the floor, then take your right foot forwards between your hands. Stretch your left leg back, placing your left knee on the mat. Keep your front calf vertical. Breathe slowly and rhythmically.

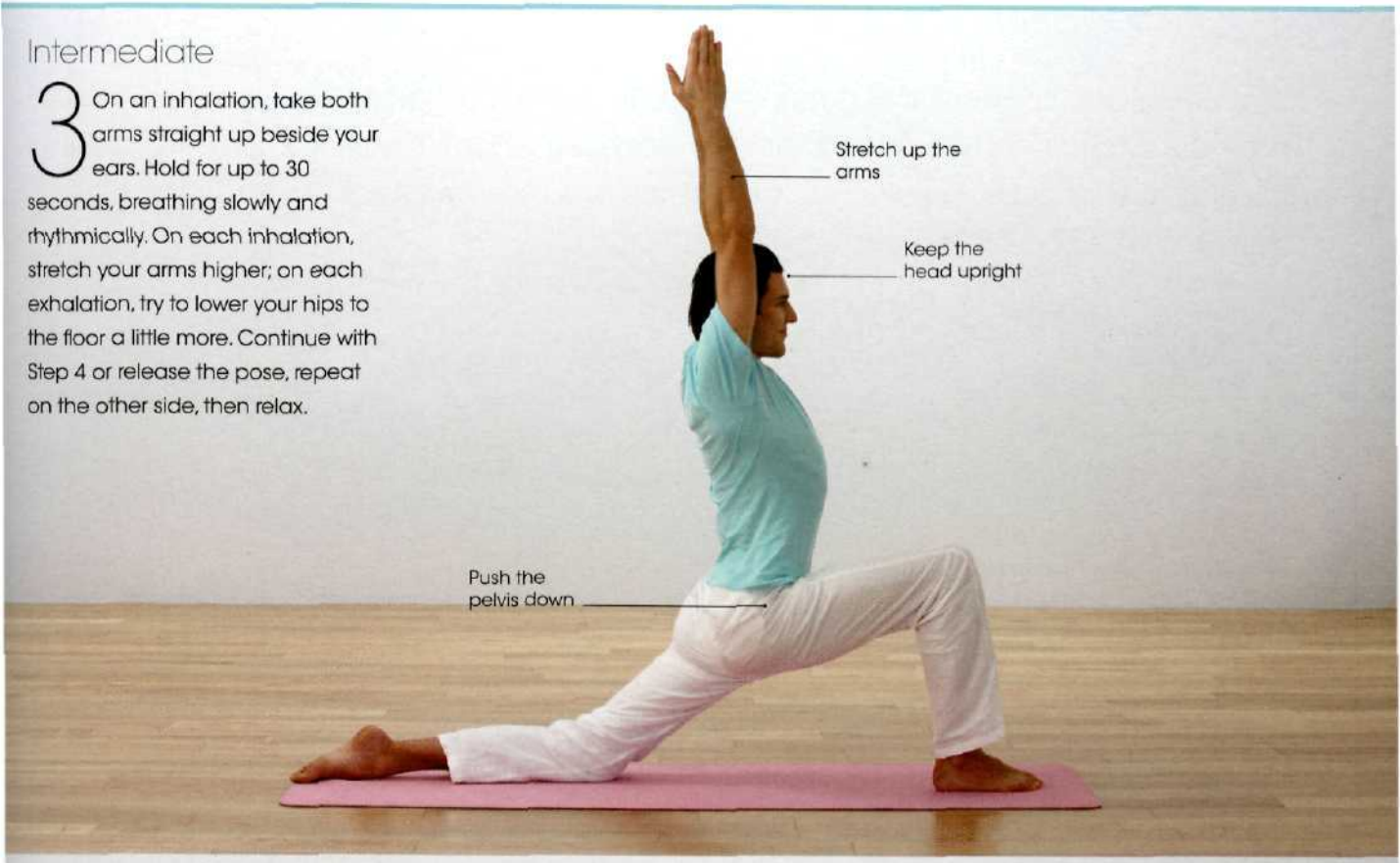


2 Inhale and take your hands in front of your chest in Prayer Position (see p50). Keep your back vertical and use your bent leg and the toes of your front foot to help you balance. Hold for a few breaths, then continue with Step 3 or release the pose, repeat on the other side, then relax.



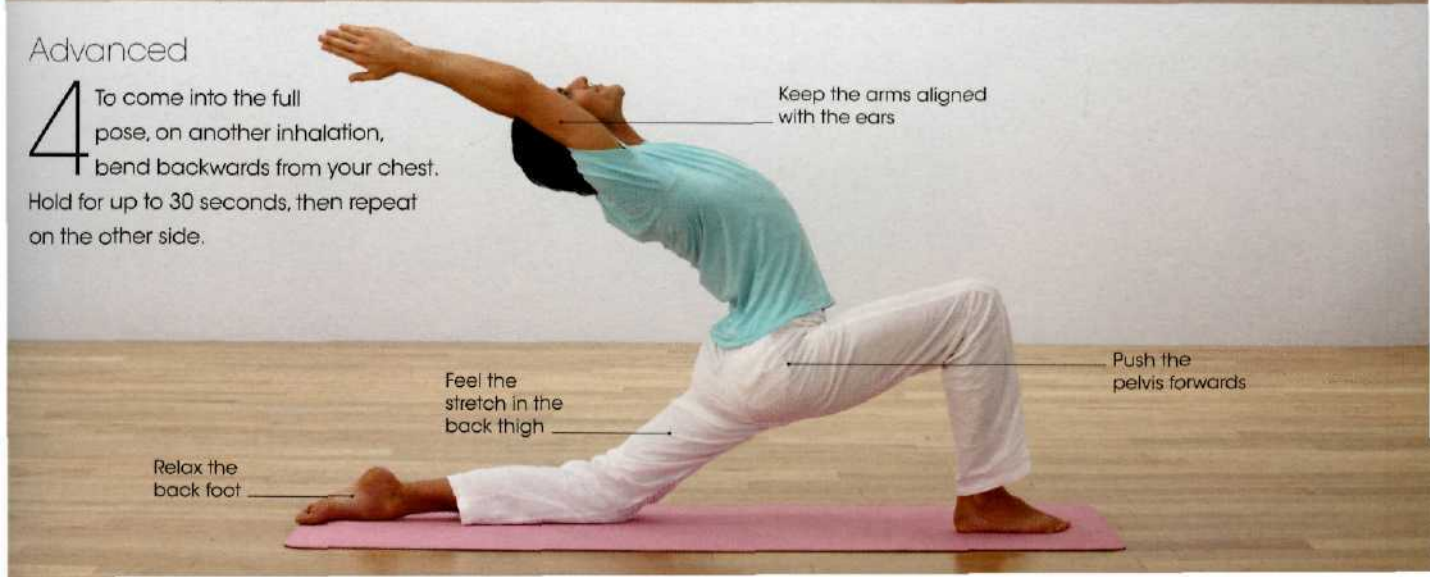
Intermediate

3 On an inhalation, take both arms straight up beside your ears. Hold for up to 30 seconds, breathing slowly and rhythmically. On each inhalation, stretch your arms higher; on each exhalation, try to lower your hips to the floor a little more. Continue with Step 4 or release the pose, repeat on the other side, then relax.



Advanced

4 To come into the full pose, on another inhalation, bend backwards from your chest. Hold for up to 30 seconds, then repeat on the other side.



8 Bow
Dhanurasana

Bow combines the benefits of Cobra (see pp116–18) and of Locust (see pp122–3). In this pose, the muscles of the legs and back are activated to form the shape of a bow, while the arms are stretched passively like the string of a bow. Relax afterwards in the counterpose, Child's Pose (see p191) for 8 breaths.

BENEFITS

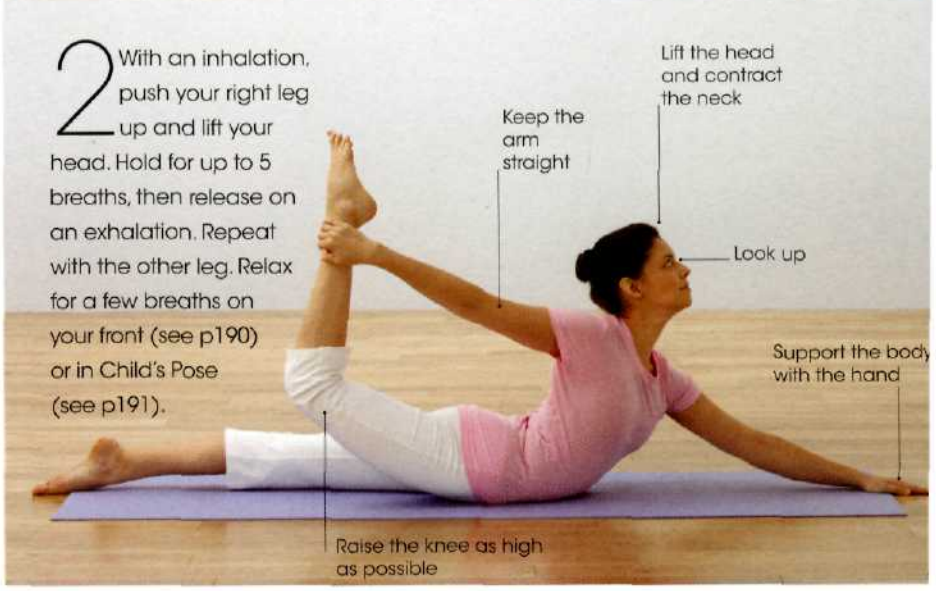
PHYSICAL
- Tones the muscles of the back.
- Maintains the elasticity of the whole spine.
- Counteracts kyphosis – excessive curvature of the upper back (see p29).
- Strengthens the quadriceps muscles in the front of the thighs.
- Alleviates gastrointestinal disorders.
- Energizes digestion.
- Relieves constipation.
- Energizes the female reproductive system.

MENTAL
- Counteracts mental sluggishness and laziness.

Bow
Beginner

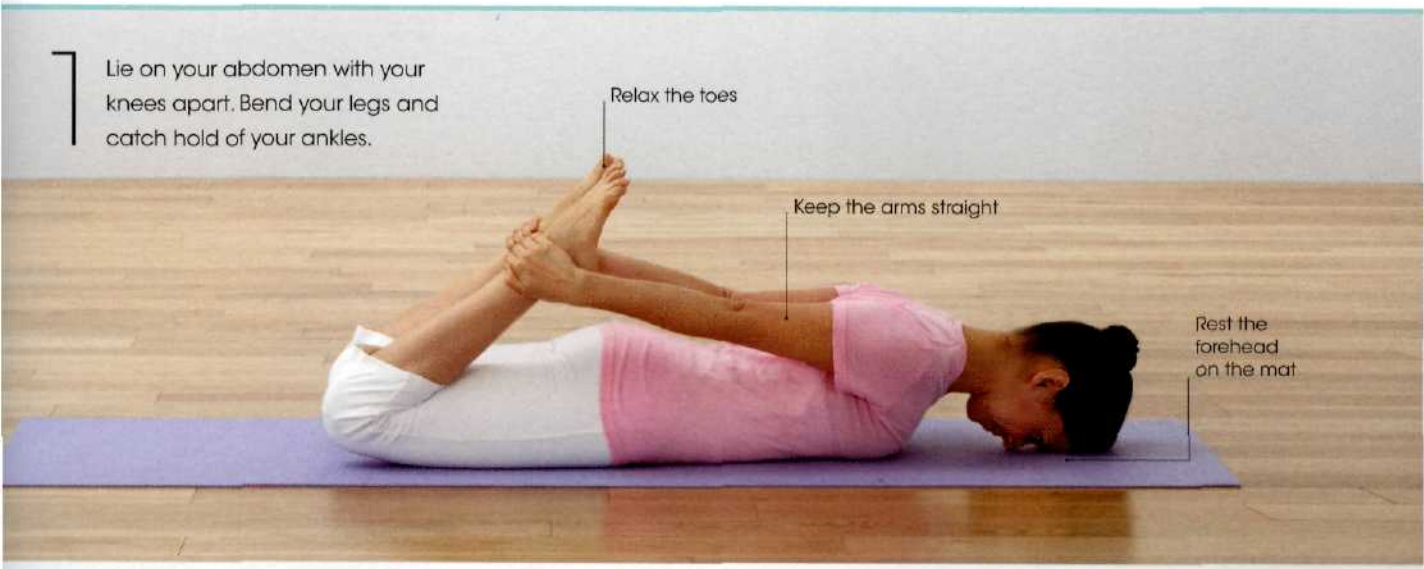
1 Lie on your abdomen with both legs and arms stretched out. Bend your right leg and catch hold of your right ankle with your right hand.

2 With an inhalation, push your right leg up and lift your head. Hold for up to 5 breaths, then release on an exhalation. Repeat with the other leg. Relax for a few breaths on your front (see p190) or in Child's Pose (see p191).



Bow
Intermediate

1 Lie on your abdomen with your knees apart. Bend your legs and catch hold of your ankles.



2 To come into the full pose, on an inhalation, push your feet up until your knees come as high off the mat as possible. Lift your head and contract your neck. Hold for 3–6 breaths, then exhale, release your feet, and lower your knees and forehead back to the mat.

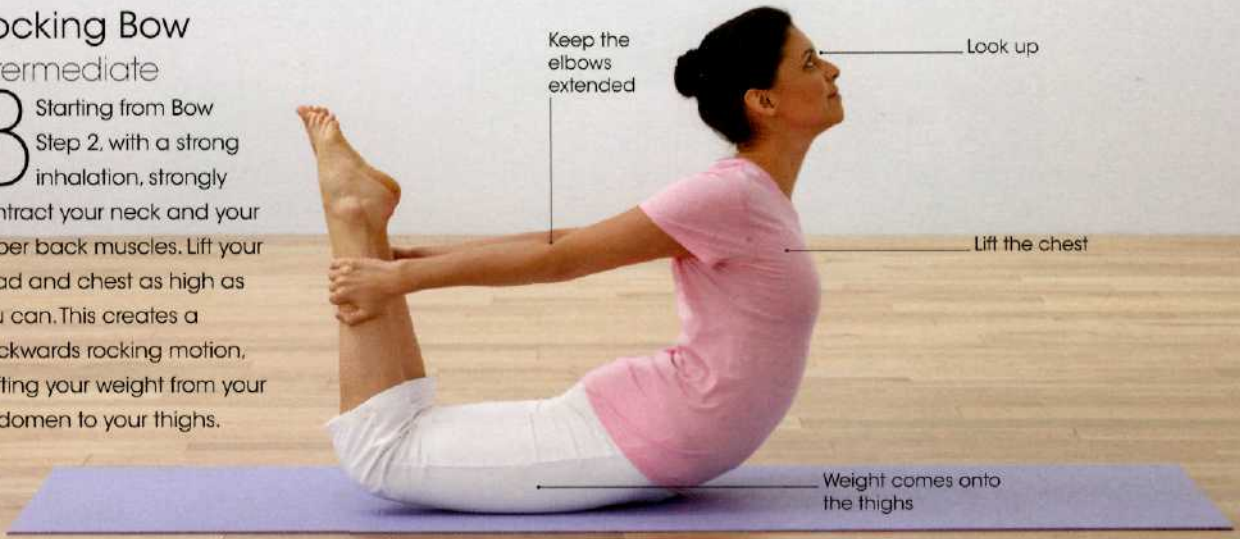
Bow
Variations

These variations bring complete flexibility to the shoulder joints, but require flexible hip and chest muscles. After you have practised them, stretch back into Child's Pose (see p191) to relax.

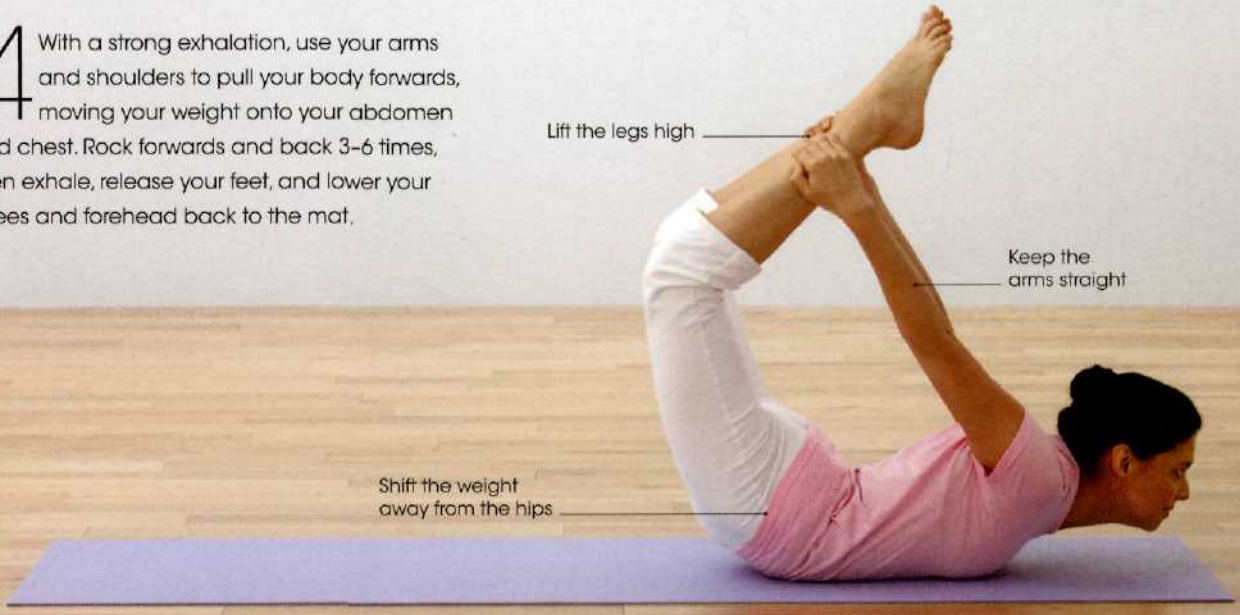
Start with

Rocking Bow
Intermediate

3 Starting from Bow Step 2, with a strong inhalation, strongly contract your neck and your upper back muscles. Lift your head and chest as high as you can. This creates a backwards rocking motion, shifting your weight from your abdomen to your thighs.



4 With a strong exhalation, use your arms and shoulders to pull your body forwards, moving your weight onto your abdomen and chest. Rock forwards and back 3–6 times, then exhale, release your feet, and lower your knees and forehead back to the mat.

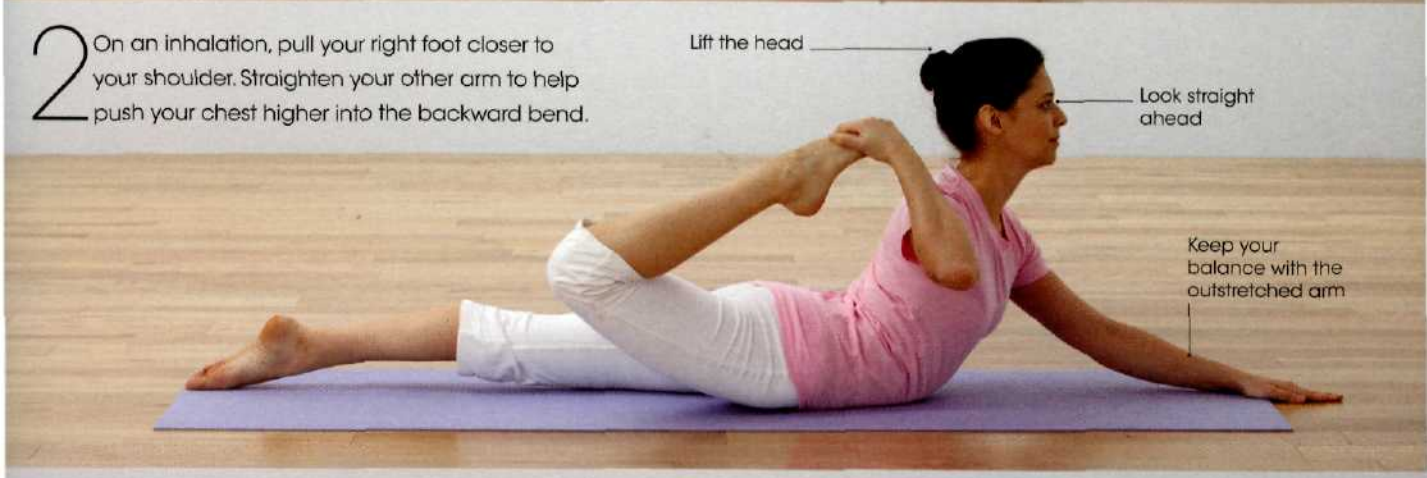


One-handed Bow

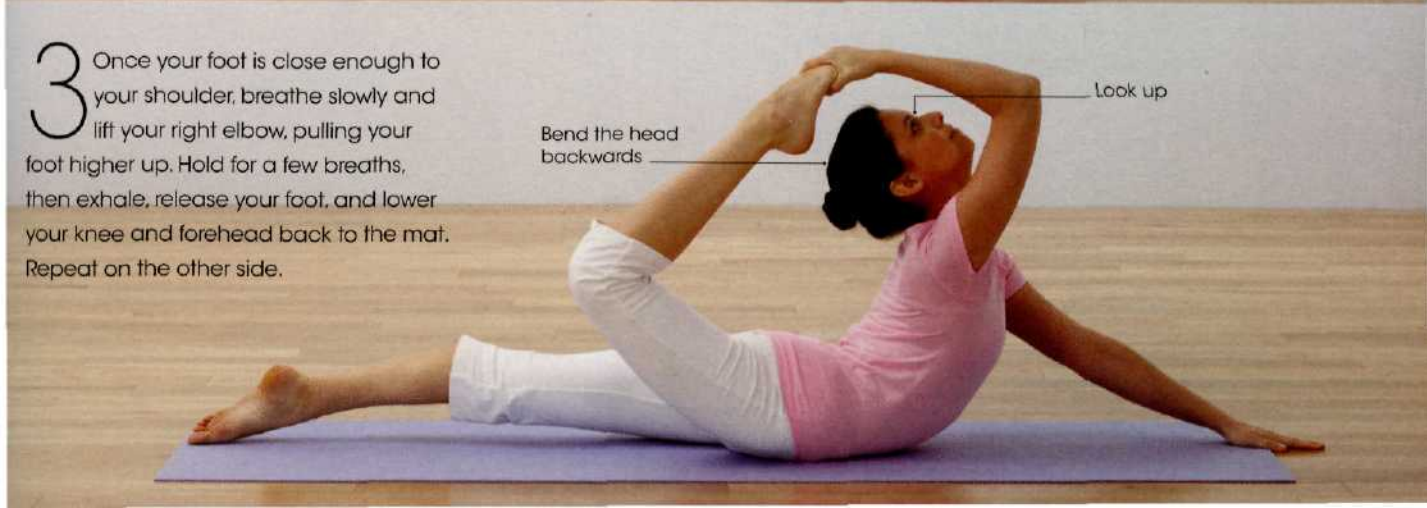
Advanced

1 Lie on your abdomen, supporting yourself with your bent left arm. Bend your right leg and catch your right foot just below your big toe with your right hand. Keep your left foot stretched behind you.

2 On an inhalation, pull your right foot closer to your shoulder. Straighten your other arm to help push your chest higher into the backward bend.



3 Once your foot is close enough to your shoulder, breathe slowly and lift your right elbow, pulling your foot higher up. Hold for a few breaths, then exhale, release your foot, and lower your knee and forehead back to the mat. Repeat on the other side.

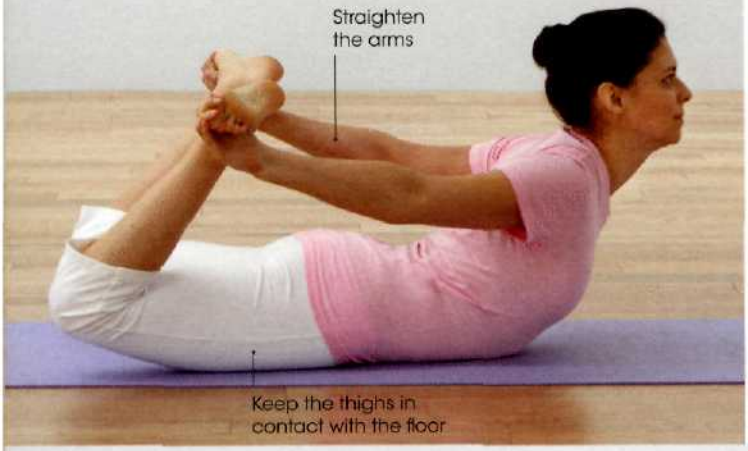


Bow
Variations (continued)

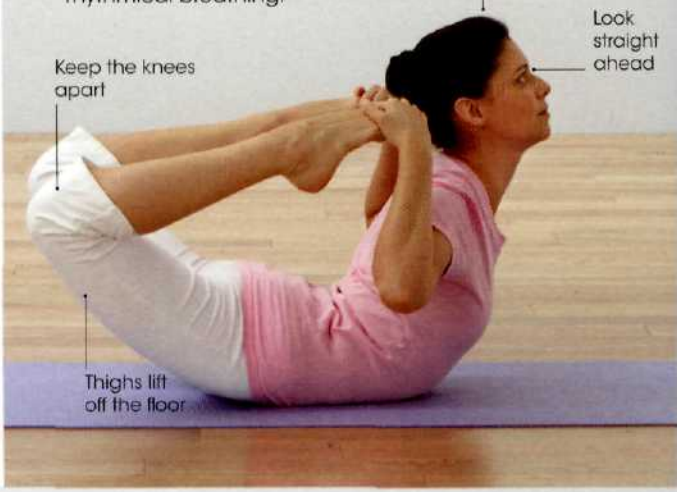
Complete Bow is a truly dynamic pose, to be attempted when you can do One-handed Bow (see p137). It gives you a powerful anterior stretch, all the way from your throat to your knees.

Complete Bow
Advanced

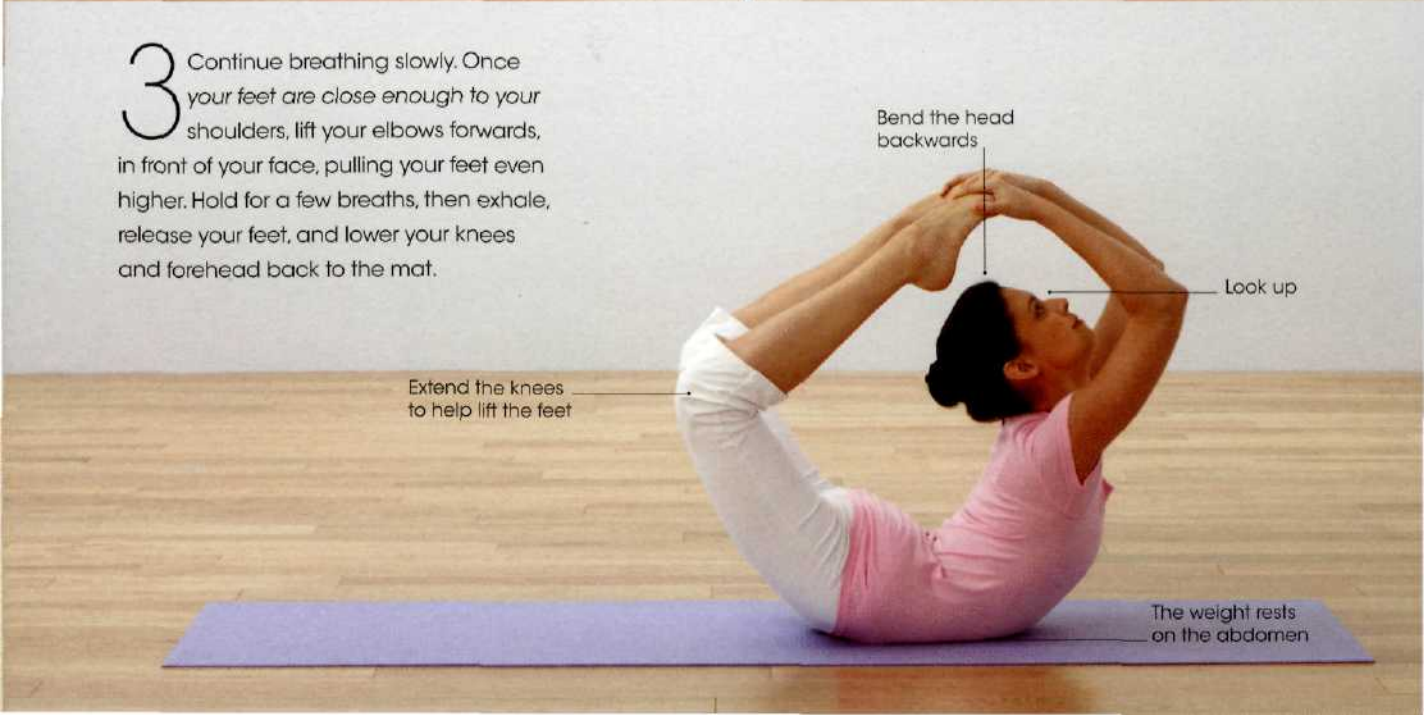
1 Lying on your abdomen, bend both legs and catch hold of each foot, placing your fingers around your big toes and the tops of your feet. Breathe deeply and slowly.



2 Rotate your shoulders as you bend your elbows and pull your feet as close to your shoulders as possible. Your thighs will come off the ground. Focus on rhythmical breathing.



3 Continue breathing slowly. Once *your feet are close enough to your* shoulders, lift your elbows forwards, in front of your face, pulling your feet even higher. Hold for a few breaths, then exhale, release your feet, and lower your knees and forehead back to the mat.



Feet to Head

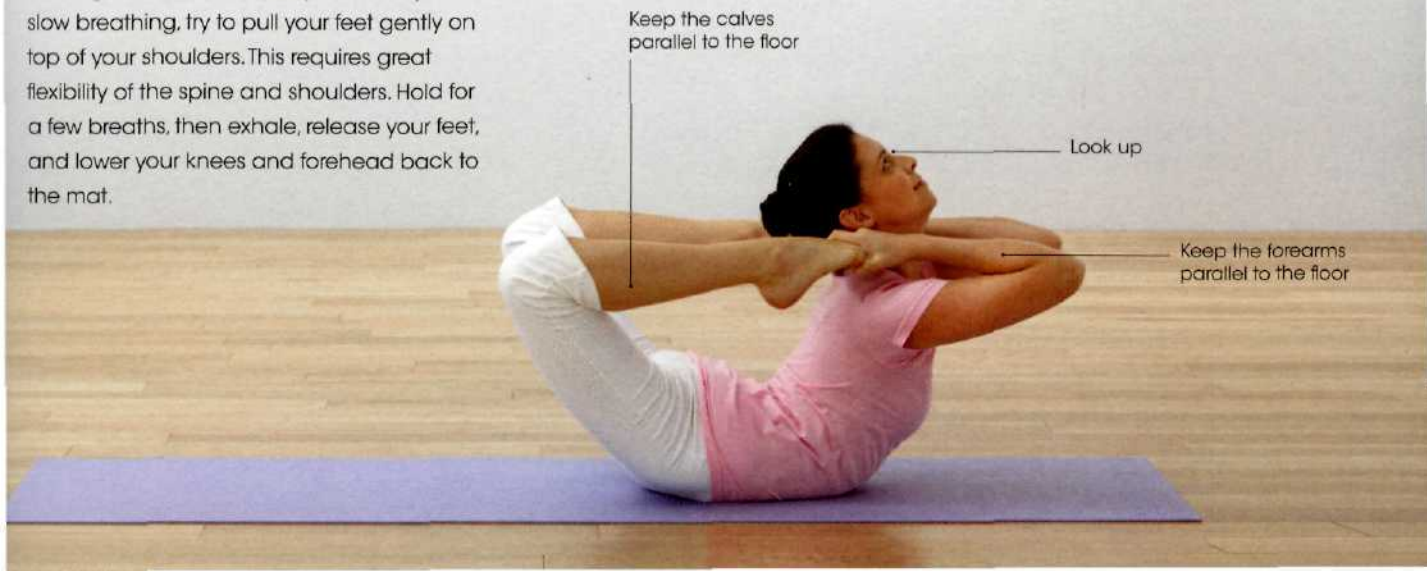
Advanced

Starting from Complete Bow Step 3 (see opposite), breathe slowly and rhythmically as you continue gently pulling your feet until they touch your forehead. Hold for a few breaths, then exhale, release your feet, and lower your knees and forehead back to the mat.

Feet to Shoulders

Advanced

Starting from Feet to Head (see above), with slow breathing, try to pull your feet gently on top of your shoulders. This requires great flexibility of the spine and shoulders. Hold for a few breaths, then exhale, release your feet, and lower your knees and forehead back to the mat.



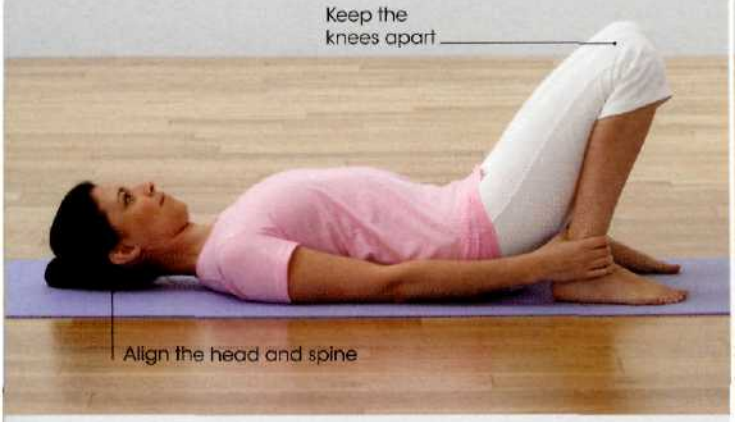
Wheel

All Levels

Wheel requires muscle length and strength; holding it with deep rhythmical breathing is a sign that you are making good progress in your asanas. Relax afterwards on your back with bent knees (see p189).

Beginner

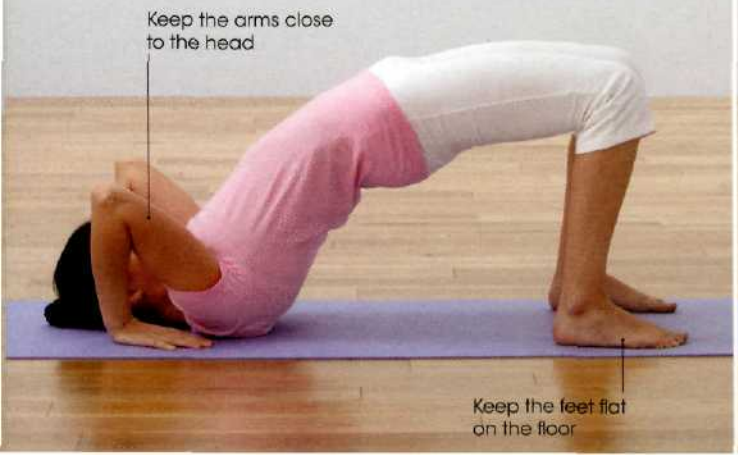
1 Lie on your back with your knees bent and your feet a hip-width apart and flat on the mat. Hold your ankles. Breathe deeply and rhythmically.



2 Keep your head, shoulders, and feet on the floor as you inhale and lift your hips up as high as possible. Hold for a couple of deep, rhythmical breaths, then continue with Step 3 or lower your hips back to the floor and relax.

Intermediate and Advanced

3 Still breathing deeply and rhythmically, continue lifting your hips and take your hands next to your ears, with your fingers facing your shoulders. Keep your feet parallel to each other.



4 Inhale, push on your hands, lift your head, and gently place the top of your head on the floor. Your elbows should be pointing backwards and your arms bent.

5 To come into the full pose, on the next inhalation, straighten your arms to lift your torso. If you find it difficult to straighten your arms, try balancing on your toes; then, once your arms are straight, lower your heels. Hold for a few breaths, then come out of the pose by bending your arms and following Steps 3, 2, and 1 in that order. Make sure you release the pose before it becomes too tiring, so you have the strength to lower your neck safely back to the floor. Repeat this sequence 1–2 more times.

Breathe with a full yogic breath

Extend the legs as much as possible

Look towards the mat

Feet are flat on the floor and parallel to each other

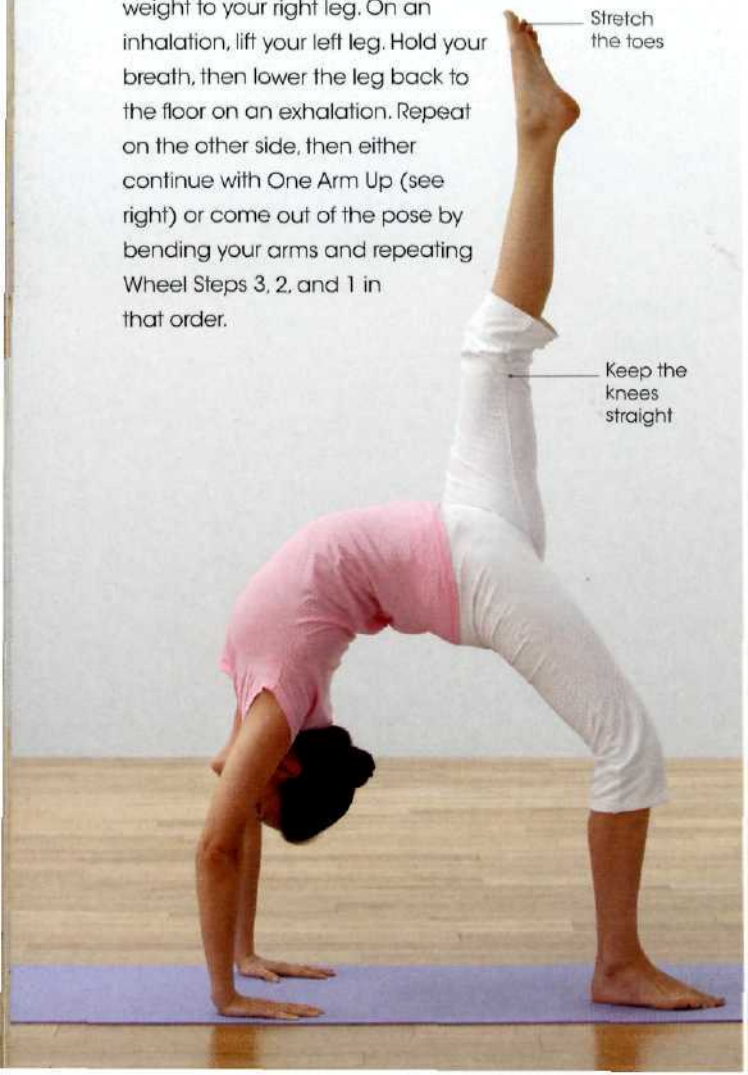
Wheel
Variations

These advanced Wheel variations are best practised with another person or a teacher standing next to you, ready to hold your hips in case you start falling to one side.

Start with

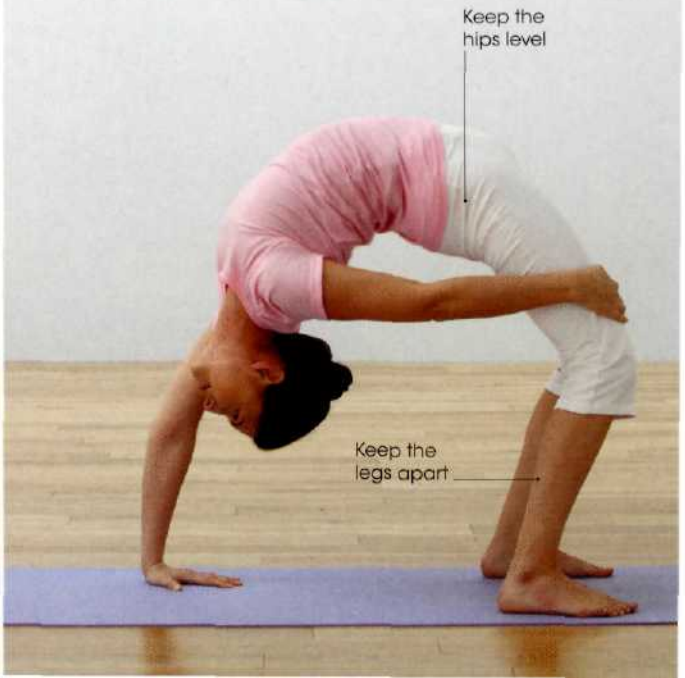
One Leg Up
Advanced

Starting from Wheel Step 5, shift your weight to your right leg. On an inhalation, lift your left leg. Hold your breath, then lower the leg back to the floor on an exhalation. Repeat on the other side, then either continue with One Arm Up (see right) or come out of the pose by bending your arms and repeating Wheel Steps 3, 2, and 1 in that order.



One Arm Up
Advanced

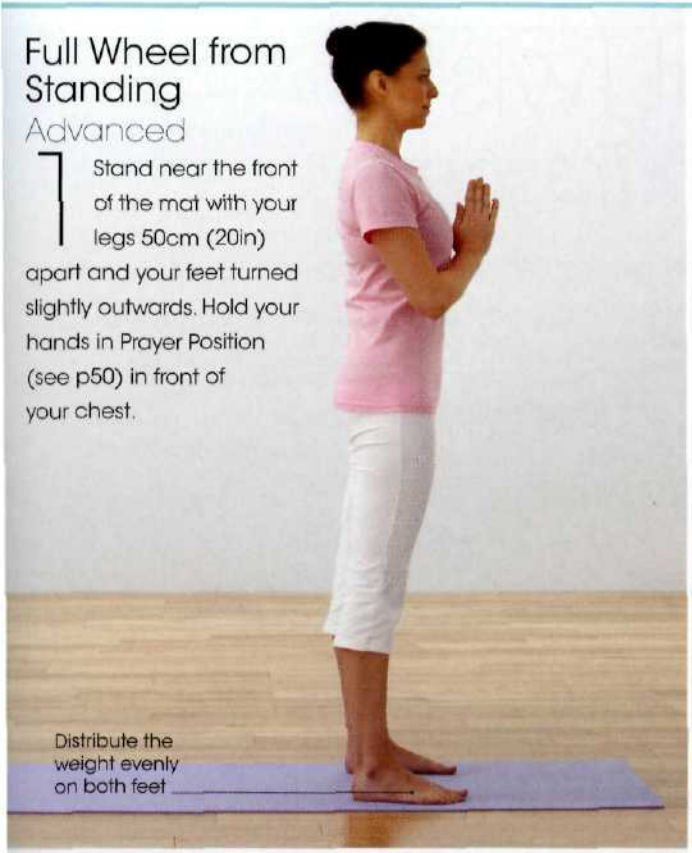
Starting from Wheel Step 5, shift your weight to your left arm. Inhale and lift your right arm, then place your right hand on your right thigh, fingers turned inwards. Hold your breath for a few seconds, then, on an exhalation, lower your right arm back to the floor. Repeat on the other side, then come out of the pose by bending your arms and repeating Wheel Steps 3, 2, and 1 in that order.



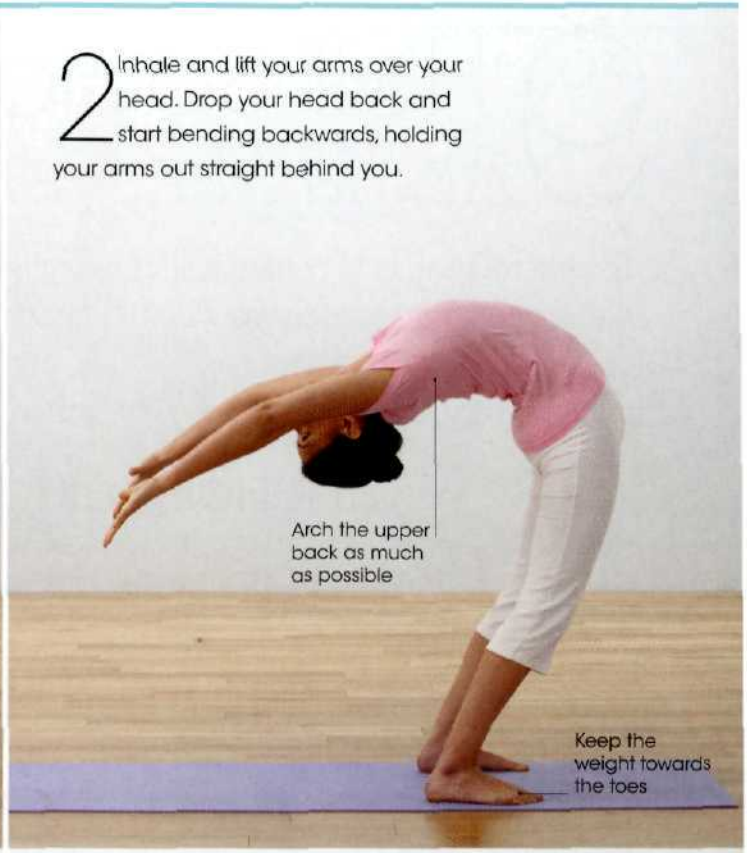
Full Wheel from Standing

Advanced

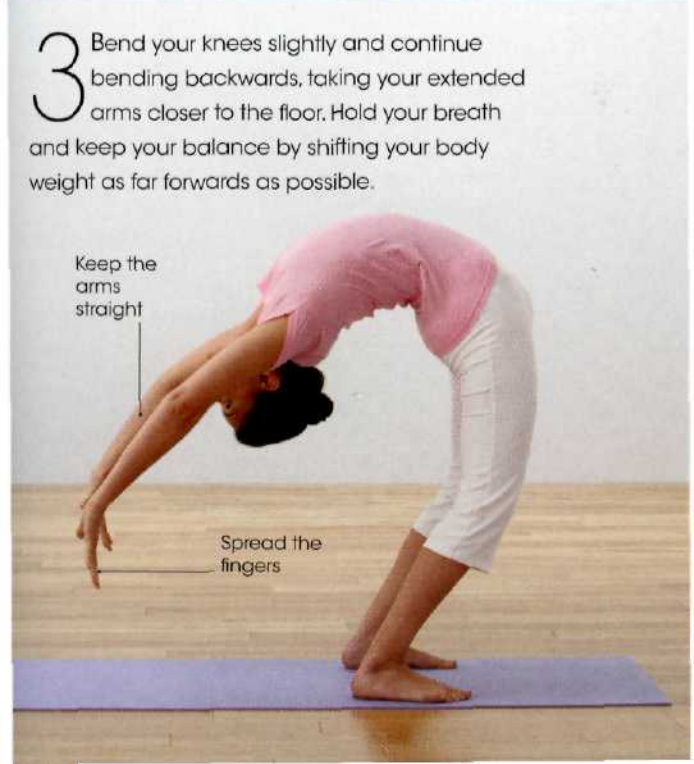
1 Stand near the front of the mat with your legs 50cm (20in) apart and your feet turned slightly outwards. Hold your hands in Prayer Position (see p50) in front of your chest.



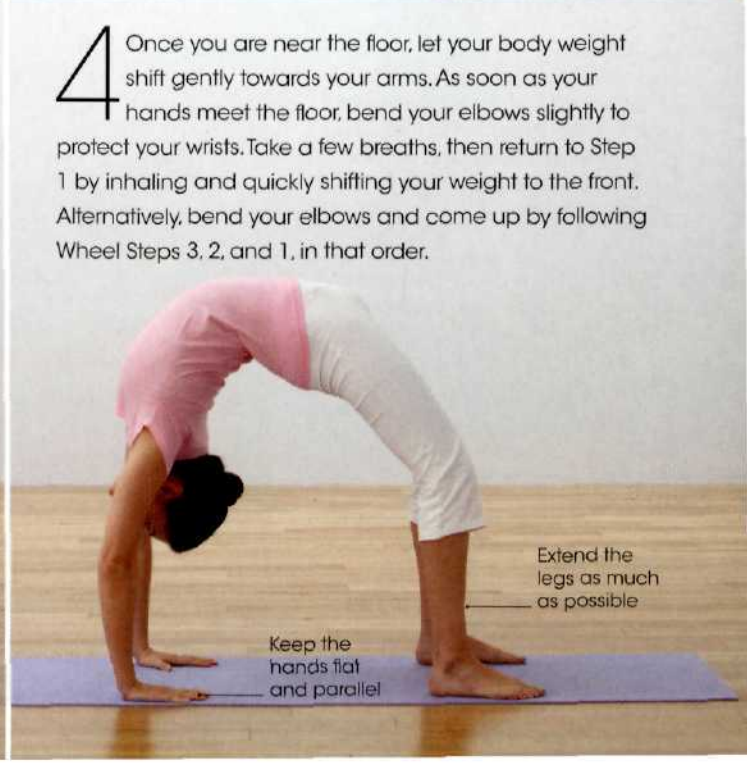
2 Inhale and lift your arms over your head. Drop your head back and start bending backwards, holding your arms out straight behind you.



3 Bend your knees slightly and continue bending backwards, taking your extended arms closer to the floor. Hold your breath and keep your balance by shifting your body weight as far forwards as possible.



4 Once you are near the floor, let your body weight shift gently towards your arms. As soon as your hands meet the floor, bend your elbows slightly to protect your wrists. Take a few breaths, then return to Step 1 by inhaling and quickly shifting your weight to the front. Alternatively, bend your elbows and come up by following Wheel Steps 3, 2, and 1, in that order.



9 Half Spinal Twist
Ardha Matsyendrasana

Lateral rotation is very important for achieving complete flexibility of the spine. These various twisting asanas work on the rotation of all the vertebrae, as well as on rotation of the hip joint. You should follow each of them with Child's Pose (see p191) as a relaxing counterpose. This asana is named after the great yogic sage, Matsyendranath.

BENEFITS

PHYSICAL

- Helps to improve the flexibility of the spine.
- Helps to tone the roots of the spinal nerves.
- Helps to energize the gastrointestinal system.
- Enhances the functioning of the large intestine.
- Improves the appetite.

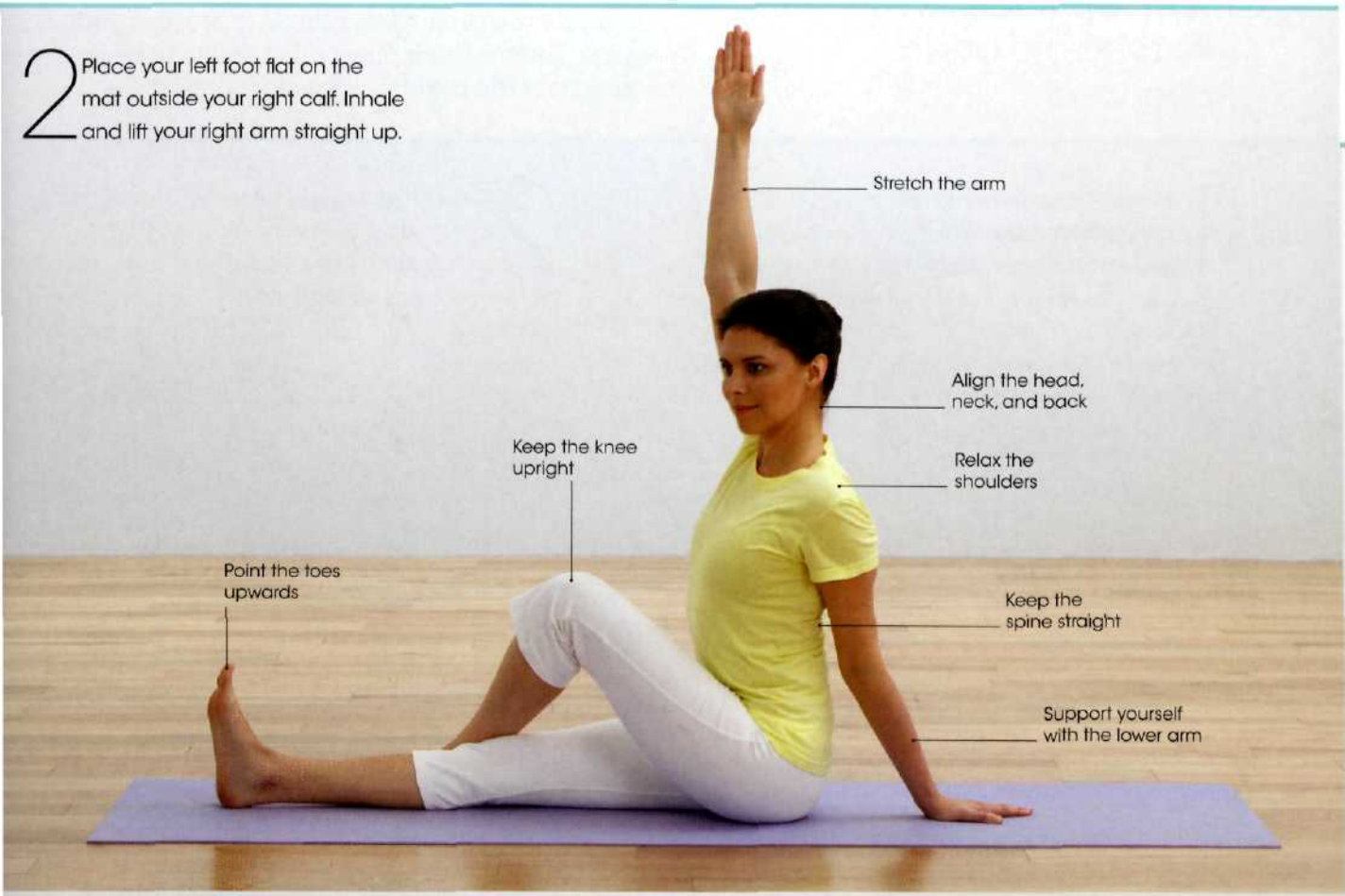
MENTAL

- Rotation or twisting of the spine is not a common movement in daily life. By exploring this unusual movement, your mind will also become more flexible and adaptable.

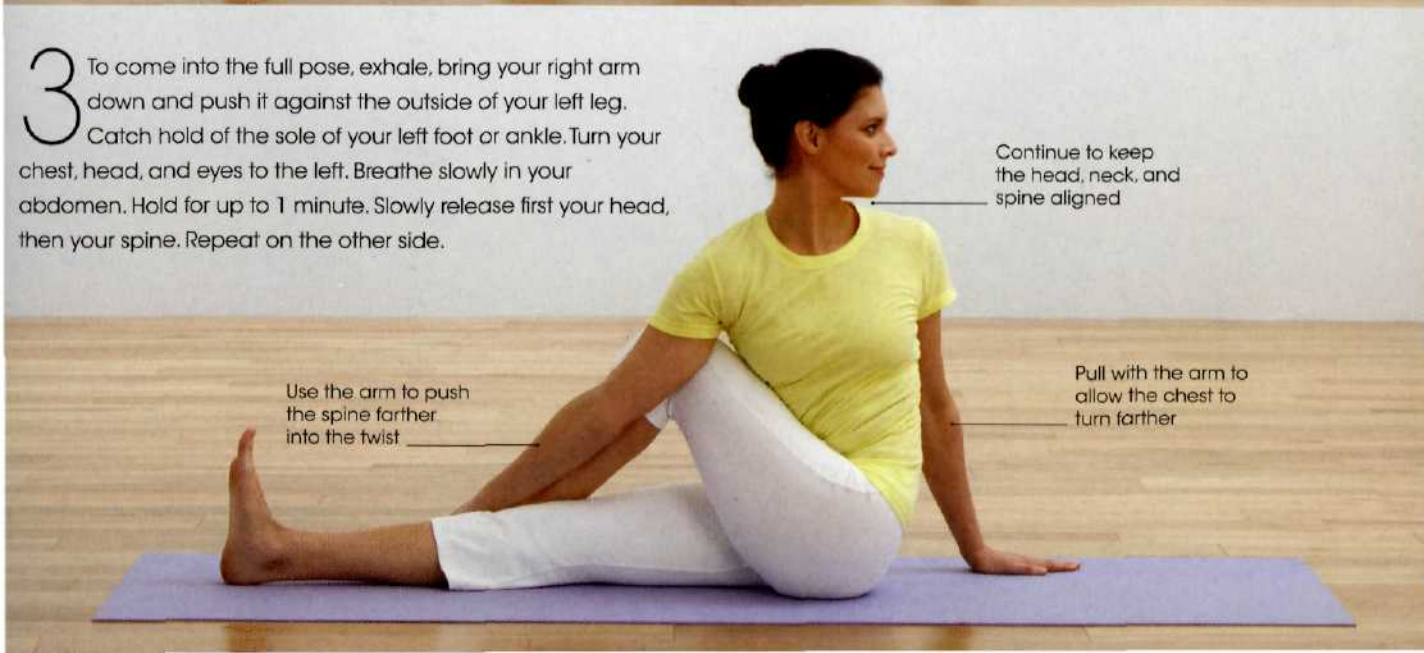
Half Spinal Twist
Beginner

1 Sit with your legs extended straight in front of you and take both arms behind your back. Place your hands palms down, with your fingers pointing backwards. Breathe rhythmically in the abdomen.

2 Place your left foot flat on the mat outside your right calf. Inhale and lift your right arm straight up.



3 To come into the full pose, exhale, bring your right arm down and push it against the outside of your left leg. Catch hold of the sole of your left foot or ankle. Turn your chest, head, and eyes to the left. Breathe slowly in your abdomen. Hold for up to 1 minute. Slowly release first your head, then your spine. Repeat on the other side.



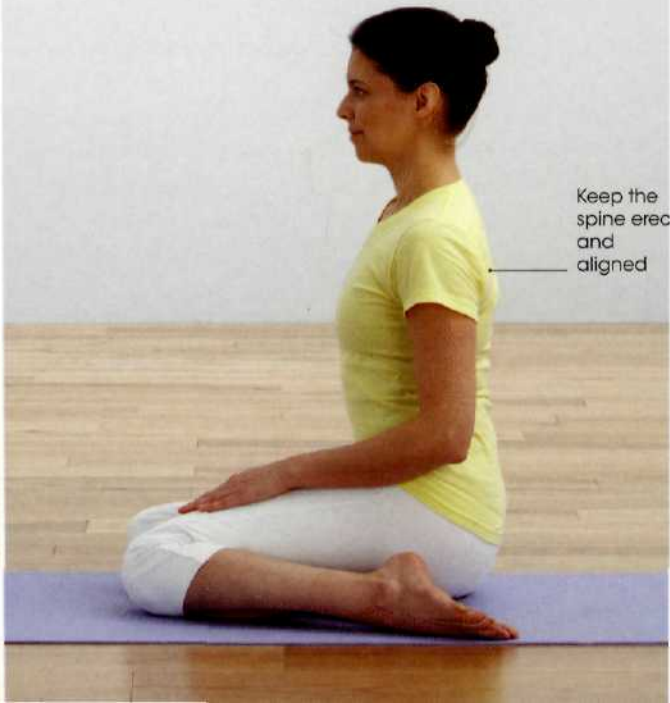
Half Spinal Twist

Intermediate and Advanced

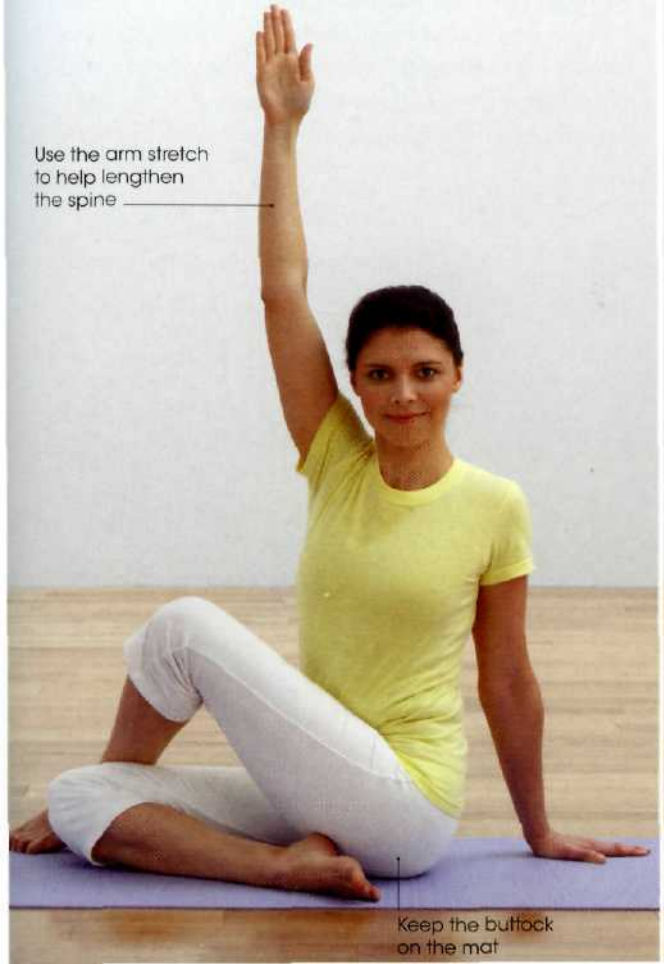
The lumbar area does not twist easily, so you need to rotate the cervical and thoracic areas of your spine. Keeping your chest open and your neck straight is the best basis for a good twist.

1 Start by sitting on your heels and placing your palms face down on your thighs.

2 Keeping with your palms on your thighs, adjust yourself so you are sitting to the right of your feet, with your buttocks evenly on the floor.



3 Take your left foot over your right thigh, placing it flat on the mat close to your knee. Support your body with your left arm behind your back. Inhale and lift your right arm straight up.



4 To come into the full pose, exhale, bring your right arm down, and push it against the outside of your left knee as you try to catch hold of the sole of your left foot or your left ankle. Turn your chest, head, and eyes to the left. Breathe slowly in your abdomen. Hold the pose for up to one minute. Slowly release first your head, then your spine. Repeat on the other side, then either practise the variations (see pp148–9) or relax.

COMMON FAULTS

Half Spinal Twist
Variations

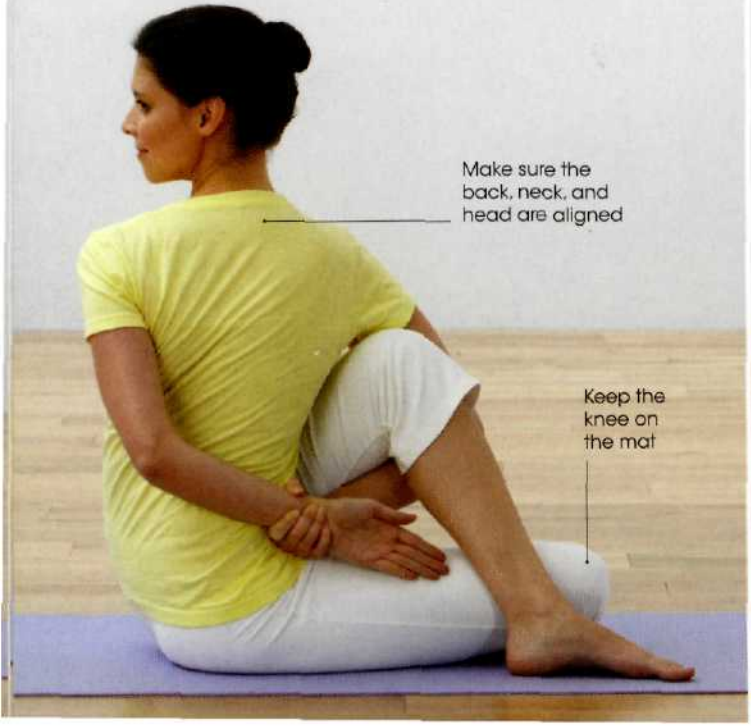
These variations increase both the rotation of the spine and the stretch in the abductor muscles on the outside of your thighs. Only practise them if you can keep your back, neck, and head upright.

Start with

Wrist Grasp
Advanced

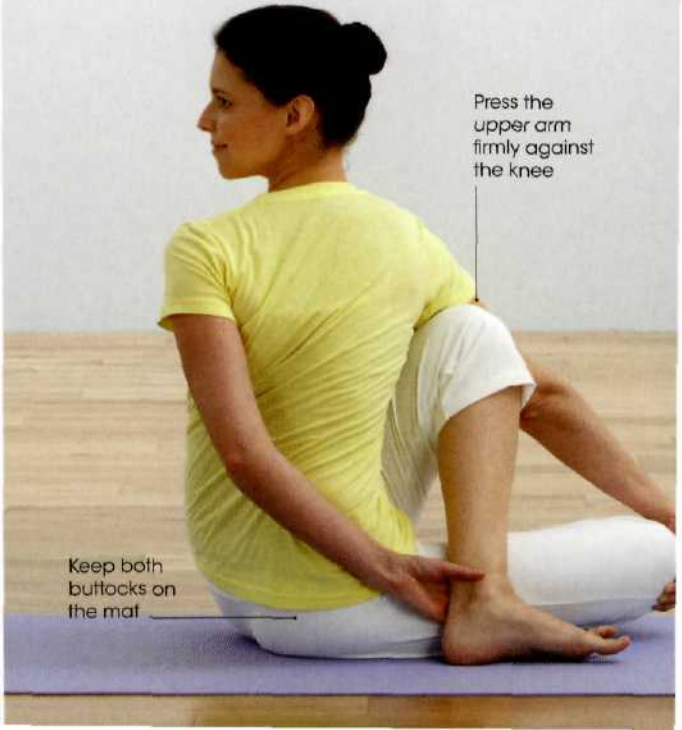
Starting from Intermediate Half Spinal Twist Step 3, take your right arm through the space between your left knee and your right leg. Hold your left hand or wrist. Hold with slow abdominal breathing for up to 2 minutes. Repeat on the other side.

Front view This view shows clearly the full opening of the chest in the pose.



Ankle Clasp
Advanced

Starting from Wrist Grasp (see left), take your left foot closer to your hip. Place your left arm against your back, and try to hold your left ankle. Hold your right knee with your right hand and use your right arm as a lever to help you to twist to the left. Breathe slowly and hold for up to 2 minutes. Repeat on the other side.



Start with

Full Spinal Twist

Advanced

This is Purna Matsyendrasana or Full Spinal Twist. Starting from Lotus Step 2, lift your left leg and catch hold of your left foot with your right hand. Keep your left arm behind your back. Turn your head to the left and look over your left shoulder. Hold for up to 1 minute with rhythmical breathing. Slowly release first your head, then your spine. Repeat on the other side.

10a Crow *Kakasana*

Strengthening the arms and the shoulder girdle is a main concern in any physical exercise programme. Instead of using weights, the Yogis developed balancing asanas such as Crow and its variations. In these, the body weight shifts from the feet, legs, and hips to the hands, arms, and shoulders. Relax afterwards in Child's Pose (see p191).

BENEFITS

PHYSICAL

- Helps to develop strength and flexibility in the wrists.
- Strengthens the tricep muscles.
- Strengthens the shoulder muscles.
- The variations further strengthen the muscles of the legs, hips, and back.

MENTAL

- When you are practising this pose, you have to evaluate how much of your body weight you can place on your arms and hands. If you place too little weight on them, you will not be able to lift your feet off the floor. After a period of testing and hesitation, one concentrated, determined movement will lift you into the pose. Crow therefore helps to develop your determination as well as your powers of concentration.

Crow

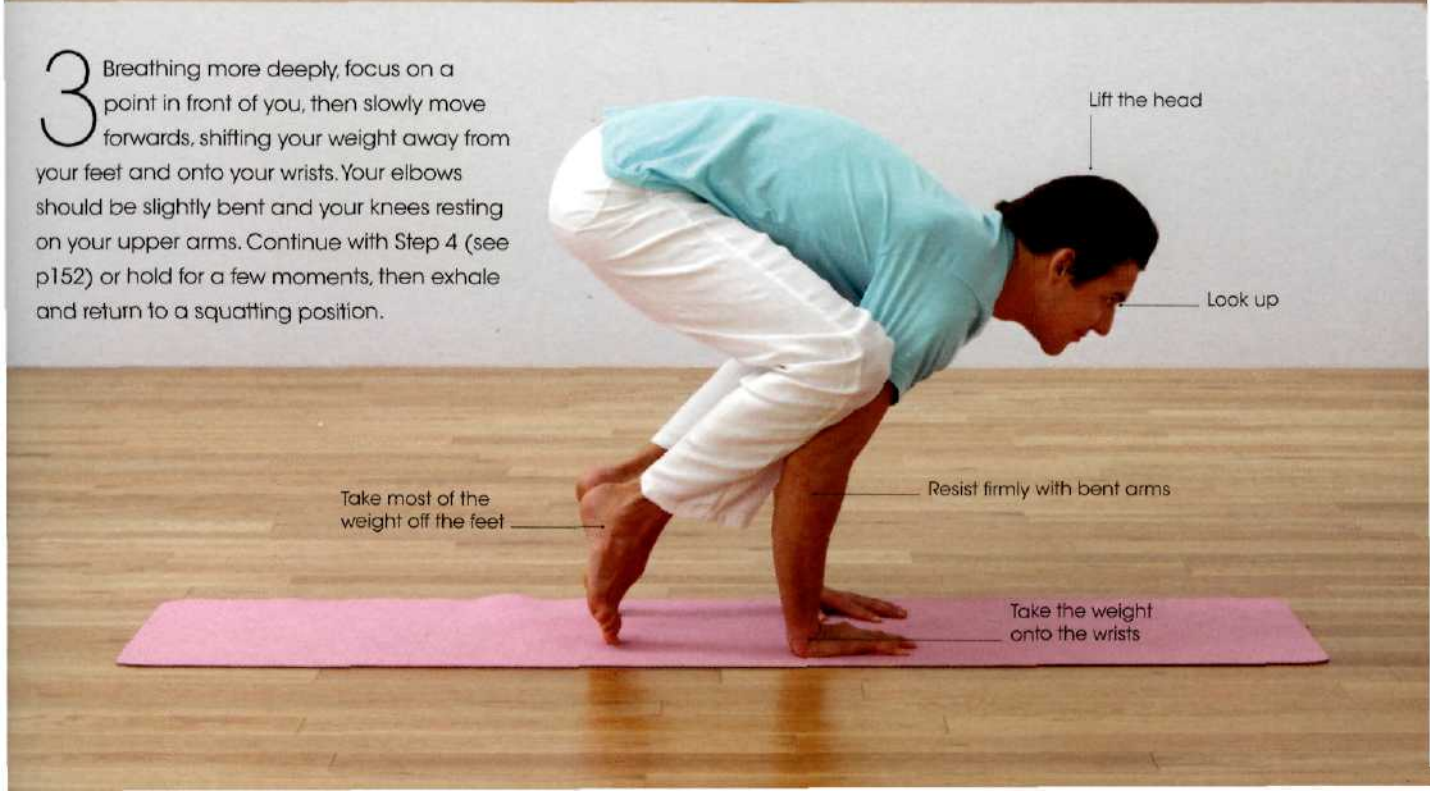
Beginner

1 Sit in a squatting position with your legs and feet apart. Taking your shoulders in front of your knees, place your palms on the mat in front of you. Keep your arms slightly bent and adopt the correct position for your hands and elbows (see inset). Breathe slowly and rhythmically.

Hand and Elbow Position
Spread your fingers wide apart, turn your wrists inwards, and bend your elbows outwards.

2 Come up onto your toes, lifting your hips, and keeping your knees pressed firmly against your upper arms. Continue breathing rhythmically in the abdomen.

3 Breathing more deeply, focus on a point in front of you, then slowly move forwards, shifting your weight away from your feet and onto your wrists. Your elbows should be slightly bent and your knees resting on your upper arms. Continue with Step 4 (see p152) or hold for a few moments, then exhale and return to a squatting position.



Crow

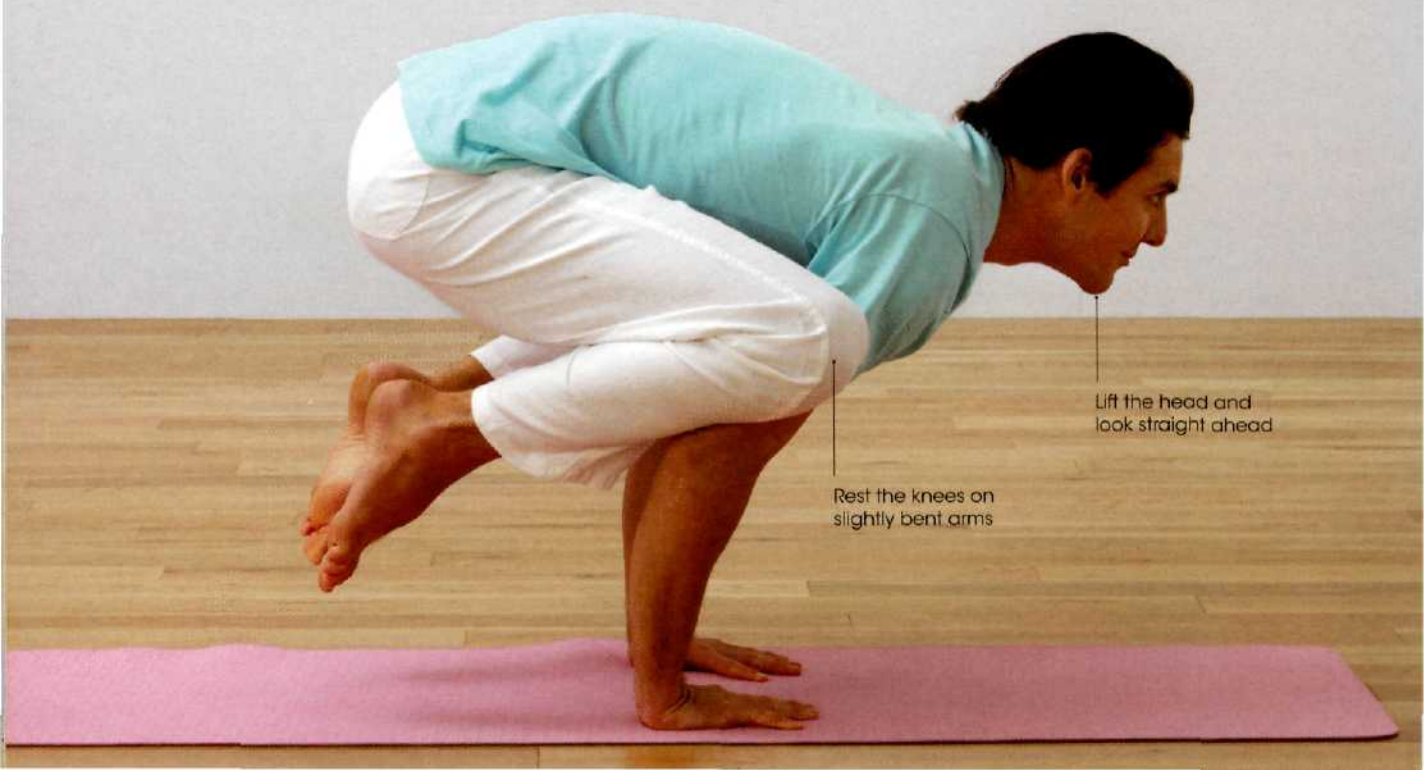
Intermediate and Advanced

The Crow variation (see right) is far simpler to perform than it looks. What you need is a very steady base to support the weight of your legs. Side Crow also helps to develop lateral balancing.

Start with

4 If your wrists are strong enough, come into the full pose. Starting from Crow Step 3, inhale, hold your breath, then slowly move your weight farther forwards until your feet lift off the floor. Balance for a few moments, then exhale, and return to Step 2. Once you can achieve the full pose, hold it as you breathe rhythmically for up to 30 seconds.

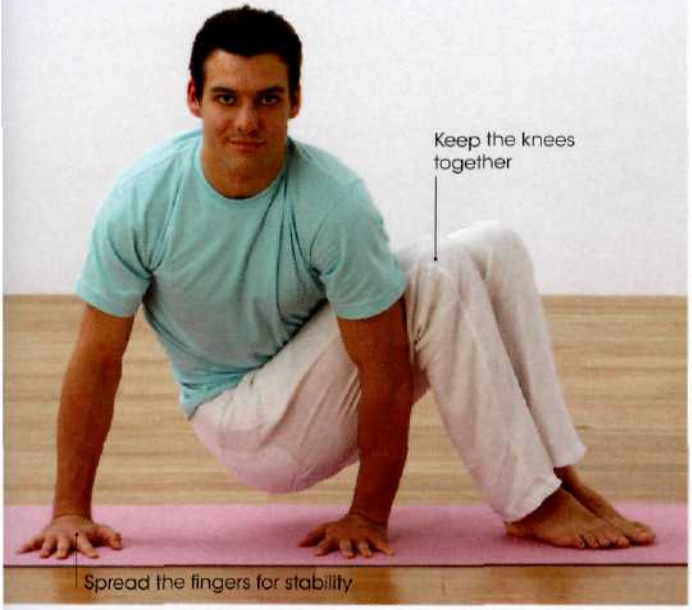
COMMON FAULTS



Side Crow

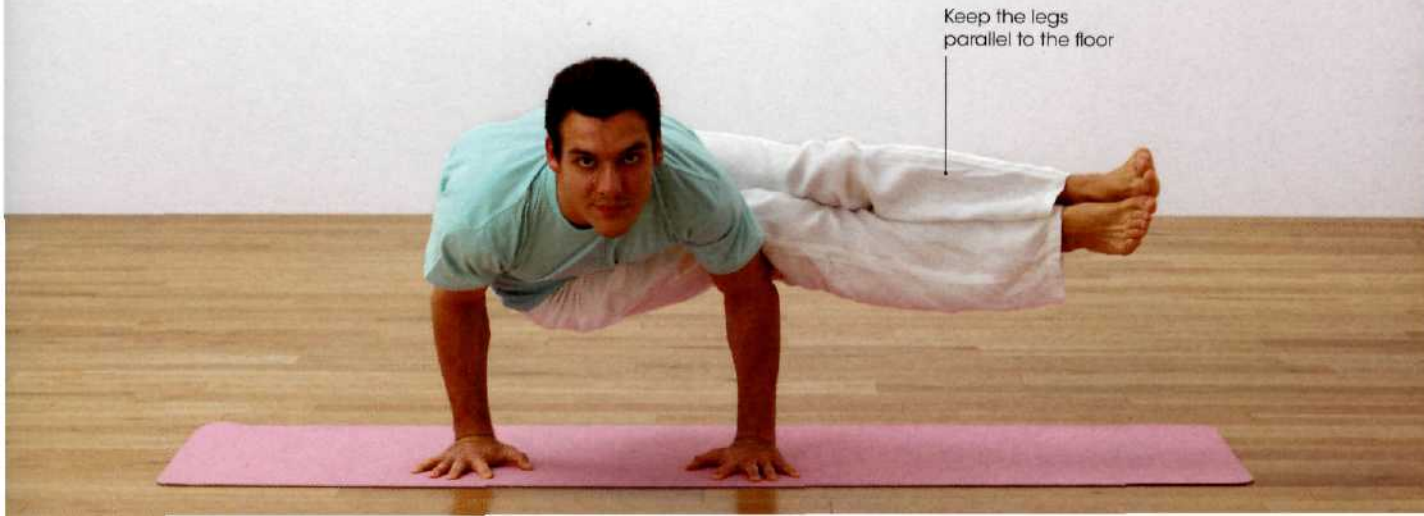
Advanced Variation

1 Starting from a kneeling squat, place both hands flat on the floor, 50cm (20in) apart, to the right of your legs. Walk both feet to the left.



2 Make sure your feet are 50cm (20in) from your left hand and in line with your hands. Bend your knees and take your legs onto the top of your left elbow, inhale and hold your breath as you shift your weight forwards until your feet come off the floor.

3 Breathing deeply and rhythmically, shift the weight of your head, torso, feet, and legs forwards as you slowly extend your legs. Hold for as long as deep rhythmical breathing allows you, then bend your knees and come back to a kneeling squat. Repeat on the other side.



10b Peacock *Mayurasana*

When you are practising this pose, your body resembles a peacock with its feathers spread out behind. It is an excellent balancing exercise. In addition, with just a few seconds' work, you will have strengthened many of the muscles in your body and will have toned your lungs and abdominal organs. Relax afterwards in Child's Pose (see p191).

BENEFITS

PHYSICAL

- Strengthens the muscles of the legs, arms, back, abdomen, shoulders, and neck.
- Tones the lungs.
- Tones the abdominal organs.
- Helps to overcome constipation.
- Gives the whole body a powerful tonic.

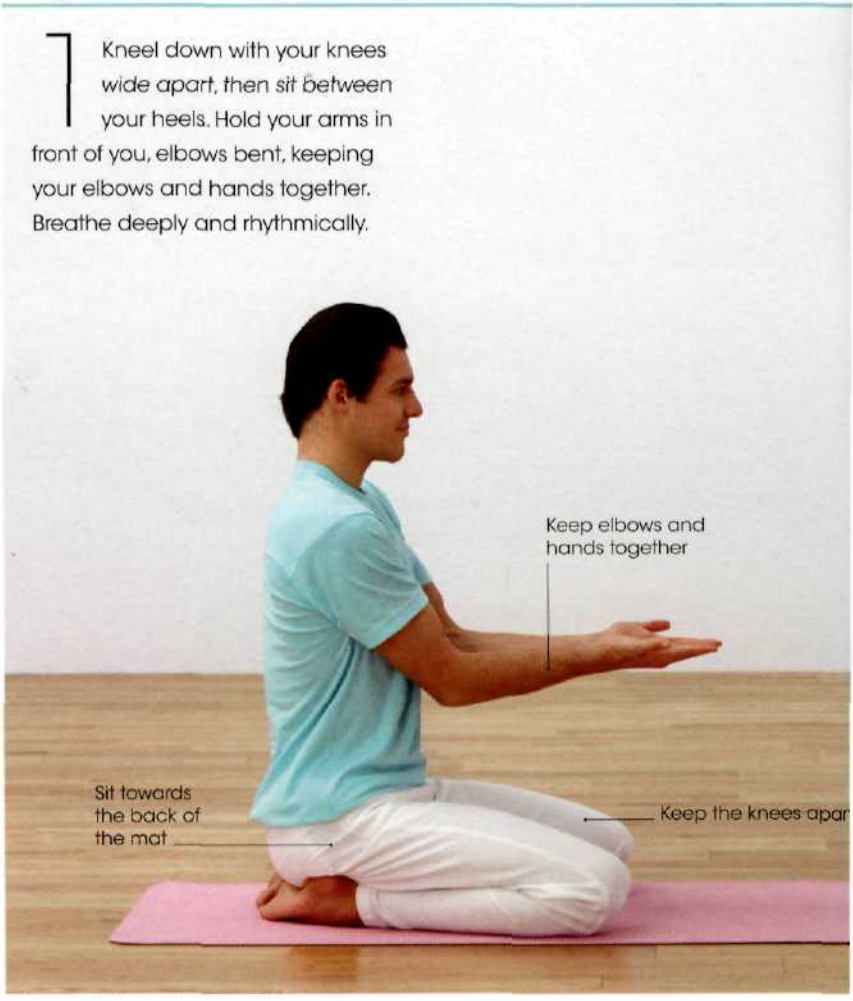
MENTAL

- The strong muscular effort, deep breathing, and keen concentration required for this pose help to overcome sluggishness (*tamas*; see p212) as well as hyperactivity (*rajas*; see p212).

Peacock

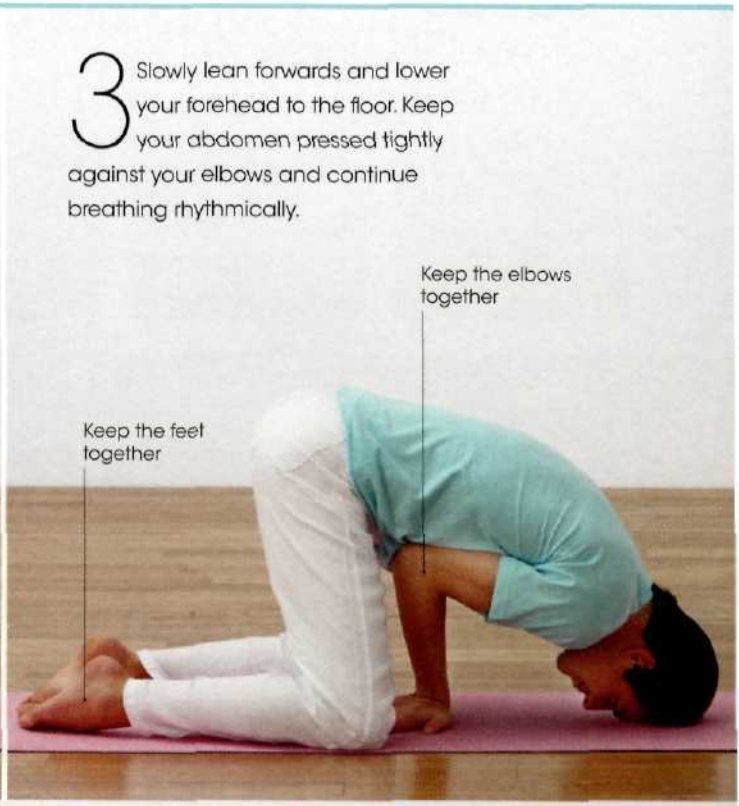
Beginner

1 Kneel down with your knees wide apart, then sit between your heels. Hold your arms in front of you, elbows bent, keeping your elbows and hands together. Breathe deeply and rhythmically.

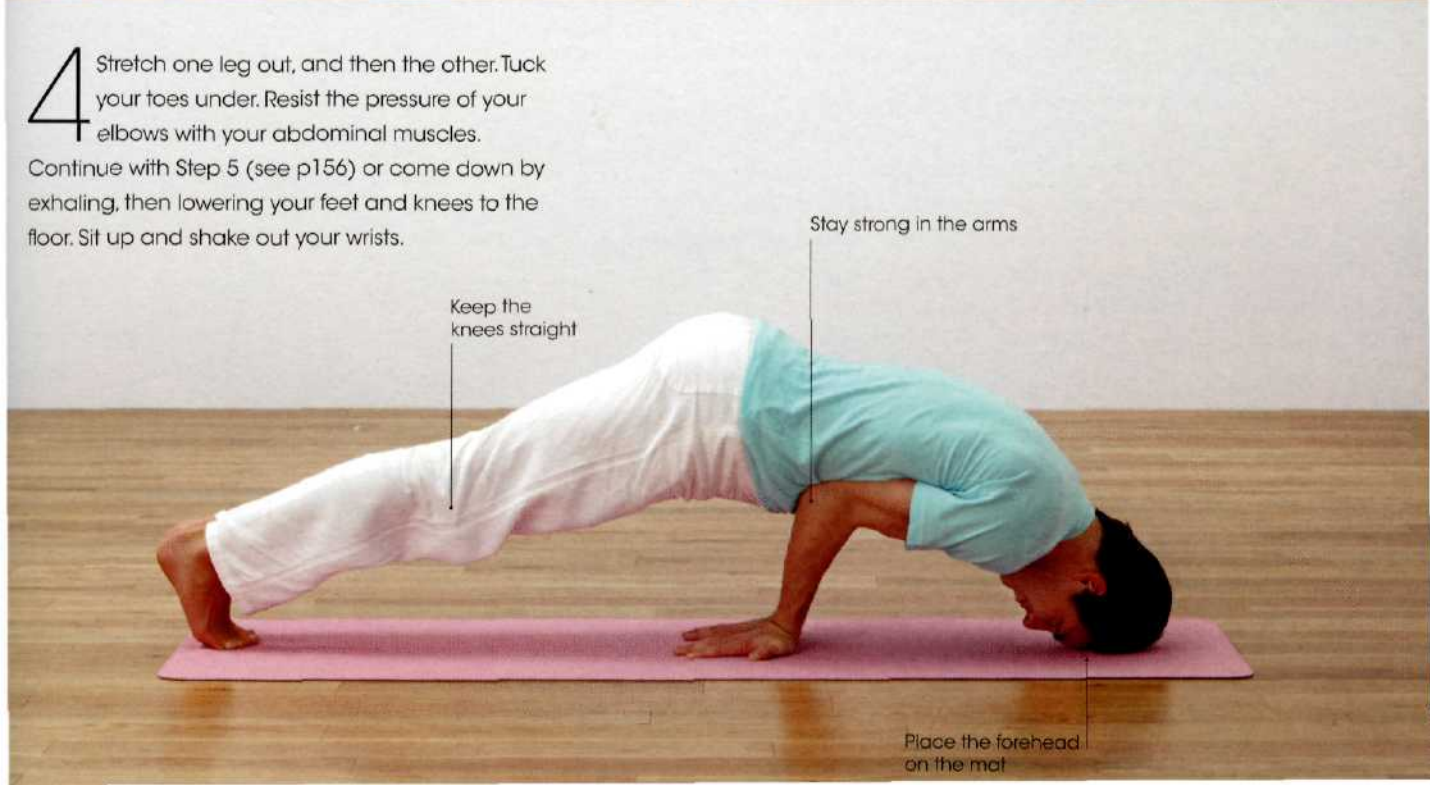


2 Lean forwards, lifting your hips and placing your palms on the mat close to your knees, fingers pointing backwards. Keeping your elbows together, place your upper abdomen against them. For some women this may be difficult, in which case, keep your elbows farther apart.

3 Slowly lean forwards and lower your forehead to the floor. Keep your abdomen pressed tightly against your elbows and continue breathing rhythmically.



4 Stretch one leg out, and then the other. Tuck your toes under. Resist the pressure of your elbows with your abdominal muscles. Continue with Step 5 (see p156) or come down by exhaling, then lowering your feet and knees to the floor. Sit up and shake out your wrists.



Peacock

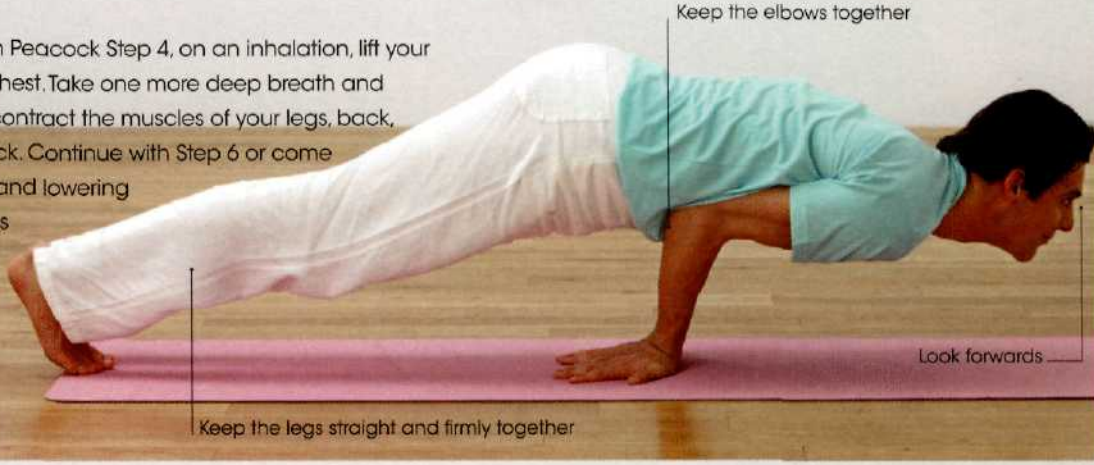
Intermediate and Advanced

Each asana acts on specific pressure points of the body, allowing the release of pent-up prana, or vital energy (see p178). Peacock helps prana to circulate from the solar plexus throughout the whole body.

Start with

Intermediate

5 Starting from Peacock Step 4, on an inhalation, lift your head and chest. Take one more deep breath and prepare to contract the muscles of your legs, back, abdomen, and neck. Continue with Step 6 or come down by exhaling and lowering your feet and knees to the floor. Sit up and shake out your wrists.



Advanced

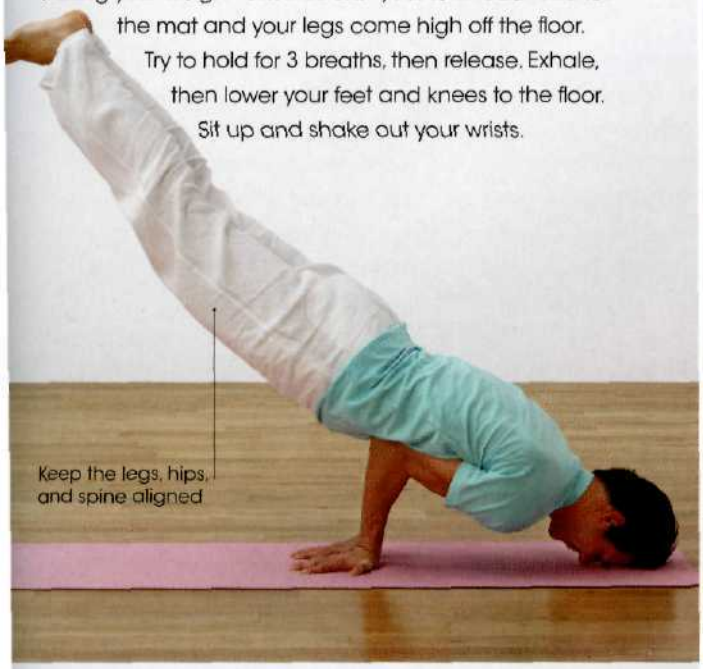
6 To come into the final pose, after the deepest possible inhalation, hold your breath, make your body stiff, and tiptoe forwards until your legs come off the floor. Exhale, then lower your feet and knees to the floor. Sit up and shake out your wrists.

COMMON FAULTS

Head to Floor

Advanced Variation

Starting from Peacock Step 6 (see opposite), continue shifting your weight forwards until your forehead touches the mat and your legs come high off the floor. Try to hold for 3 breaths, then release. Exhale, then lower your feet and knees to the floor. Sit up and shake out your wrists.

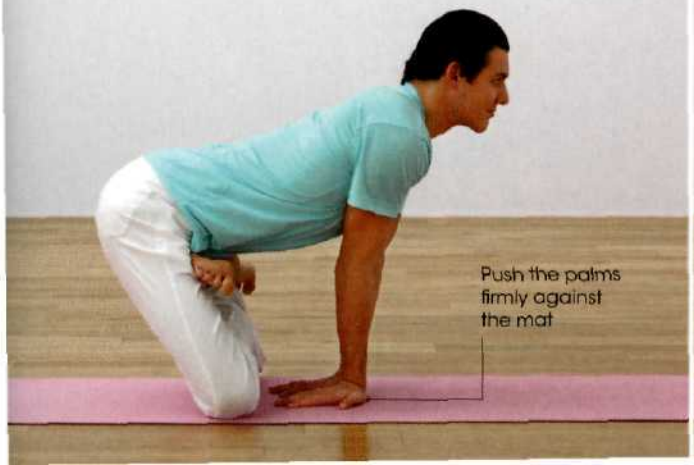


Lotus Peacock

Advanced Variation

1 Sit cross-legged; come into Lotus (see p114) by lifting your left foot onto the top of your right thigh, then your right foot onto the top of your left thigh.

2 Move your body forwards until you are balancing on your knees. Place your palms flat, with your fingers pointing towards your legs.



3 Bend your elbows and place them against your abdomen. Inhale and move your body forwards, lifting your head and chest together with your bent legs. Hold for up to 3 breaths, then come down by following Steps 2 and 1 in that order. Repeat with your legs crossed the other way.

Standing Balances

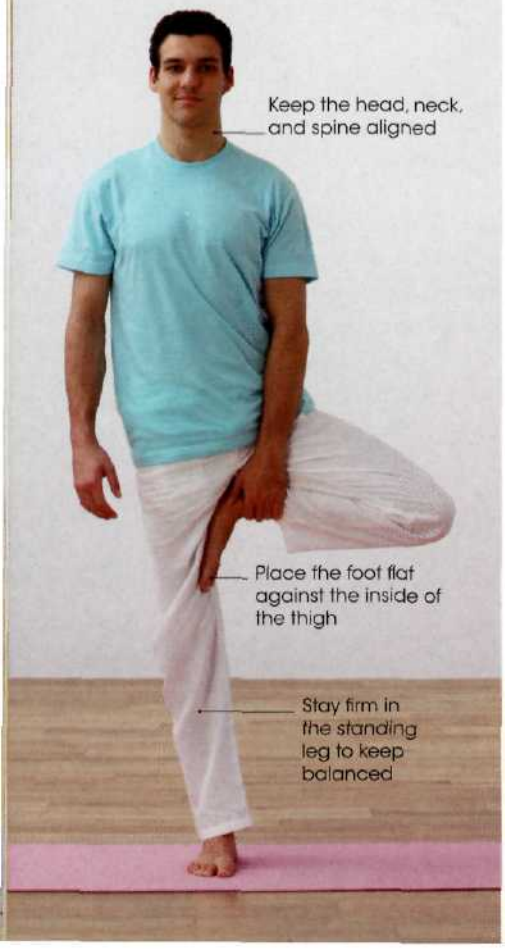
All levels

Standing on one leg demands concentration and single-mindedness rather than physical prowess. To help you find your point of balance, alternate your weight between your heel and toes.

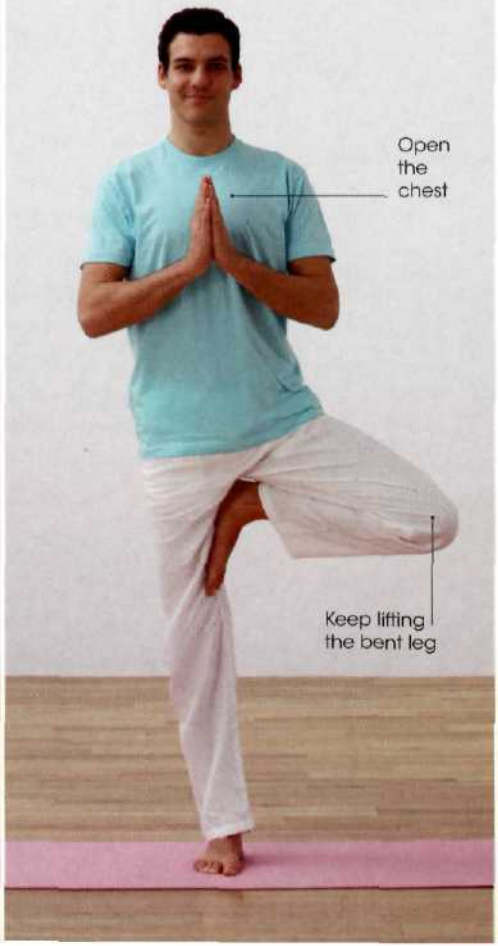
Tree

Beginner

1 Stand up straight, focusing on a spot in front of you for balance. Breathe slowly from your abdomen. Lift your left foot and place it against your right thigh. Point your left knee outwards.



2 When you feel secure in your balance, *release the hold on your* foot and place your hands in Prayer Position (see p50) in front of your chest. Keep up the rhythmical breathing.



3 With an inhalation, slowly lift *your arms. Hold the pose for* up to 1 minute. Release, then repeat on the other side. Practise another standing asana (see pp159–69) or go directly to final relaxation (see pp192–3).

Half Lotus Tree
Intermediate Variation

1 Stand up straight, focusing on a spot in front of you to help you keep your balance. Lift your left foot and place it on top of your right thigh in Half Lotus. Release your hold on your foot and take your arms alongside your body. Press firmly into the foot of the standing leg.

2 Slowly lift your arms. Hold for up to 1 minute, breathing rhythmically, then release and repeat on the other side. Practise another standing asana (see pp159–69) or go directly to final relaxation (see pp192–3).

Eagle
Intermediate

Stand with both knees slightly bent. Place your right knee on top of your left knee and lock your left foot behind your right calf. Place your left upper arm inside your right elbow and bring your palms together in front of your face. Hold for up to 30 seconds, breathing rhythmically. Release and repeat on the other side. Practise another standing asana (see pp160–69) or go directly to final relaxation (see pp192–3).

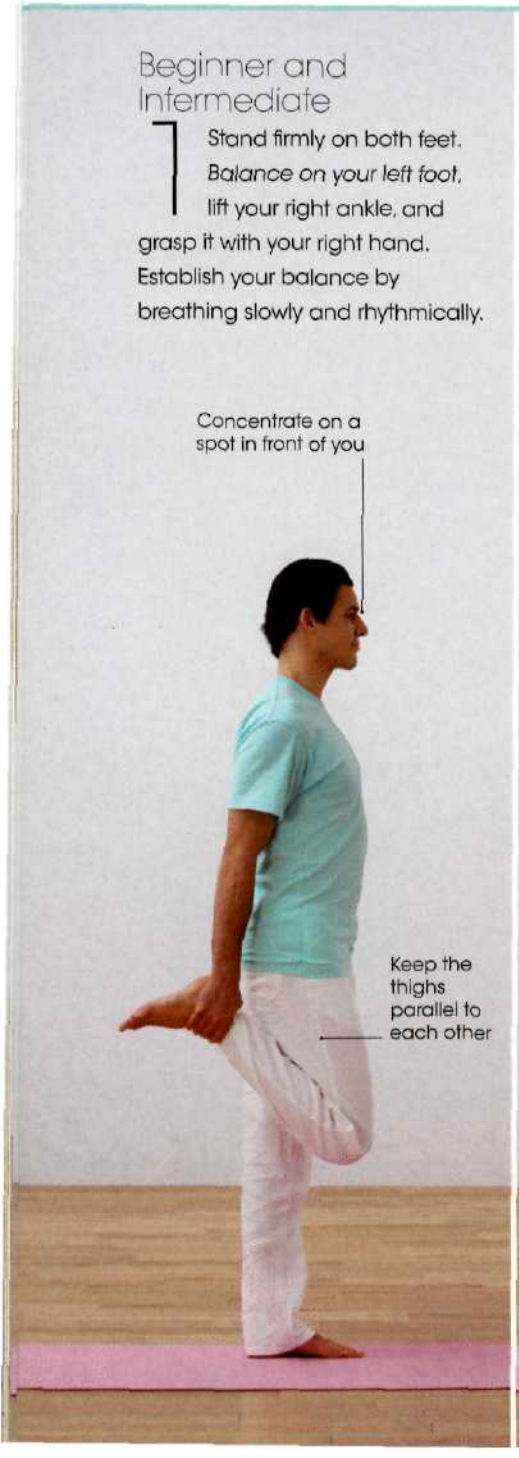
Dancing Lord Siva

All Levels

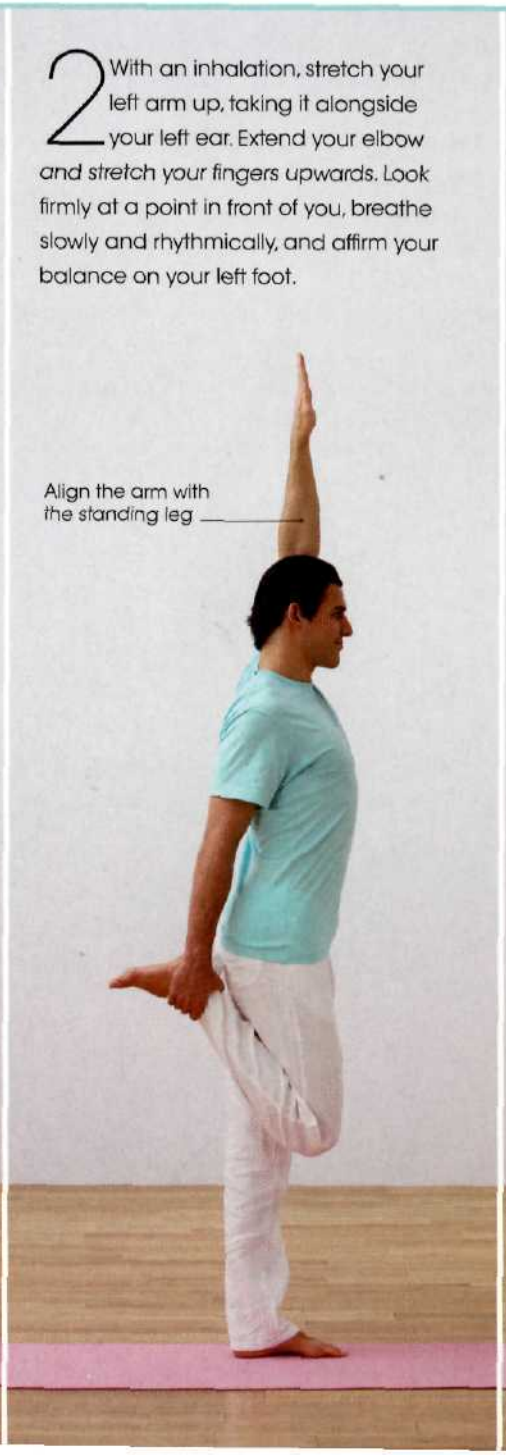
Focusing on the vertical position of the leg and arm on one side of the body creates a stable base. Then you can easily develop the backward bending movement on the other side of the body.

Beginner and Intermediate

1 Stand firmly on both feet. *Balance on your left foot,* lift your right ankle, and grasp it with your right hand. Establish your balance by breathing slowly and rhythmically.



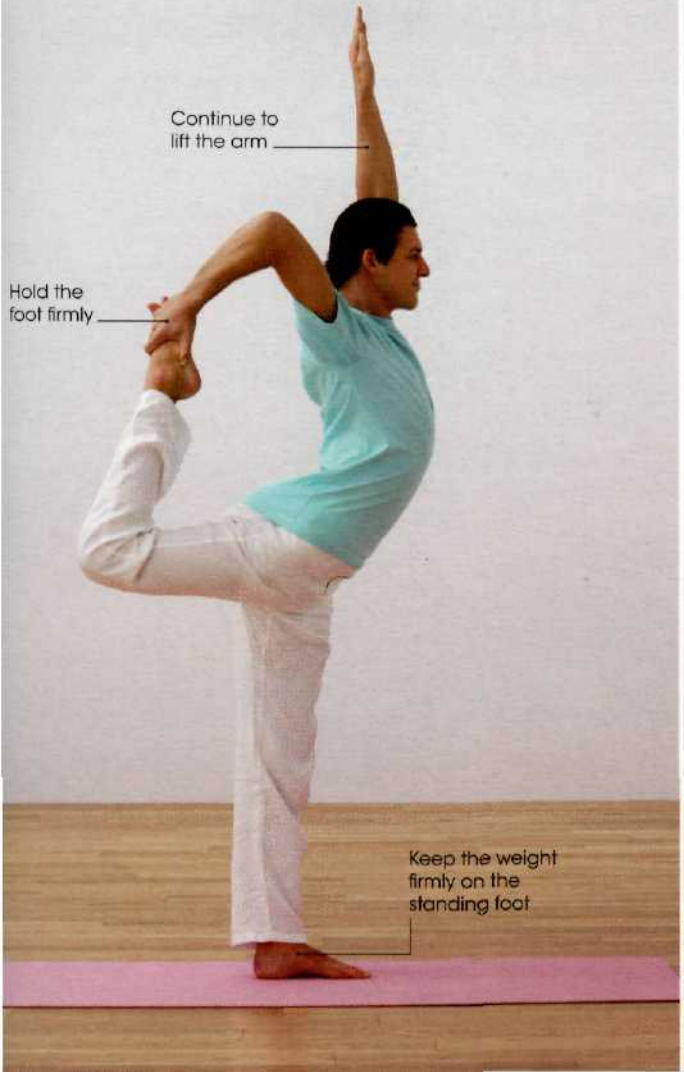
2 With an inhalation, stretch your left arm up, taking it alongside your left ear. Extend your elbow *and stretch your fingers upwards.* Look firmly at a point in front of you, breathe slowly and rhythmically, and affirm your balance on your left foot.



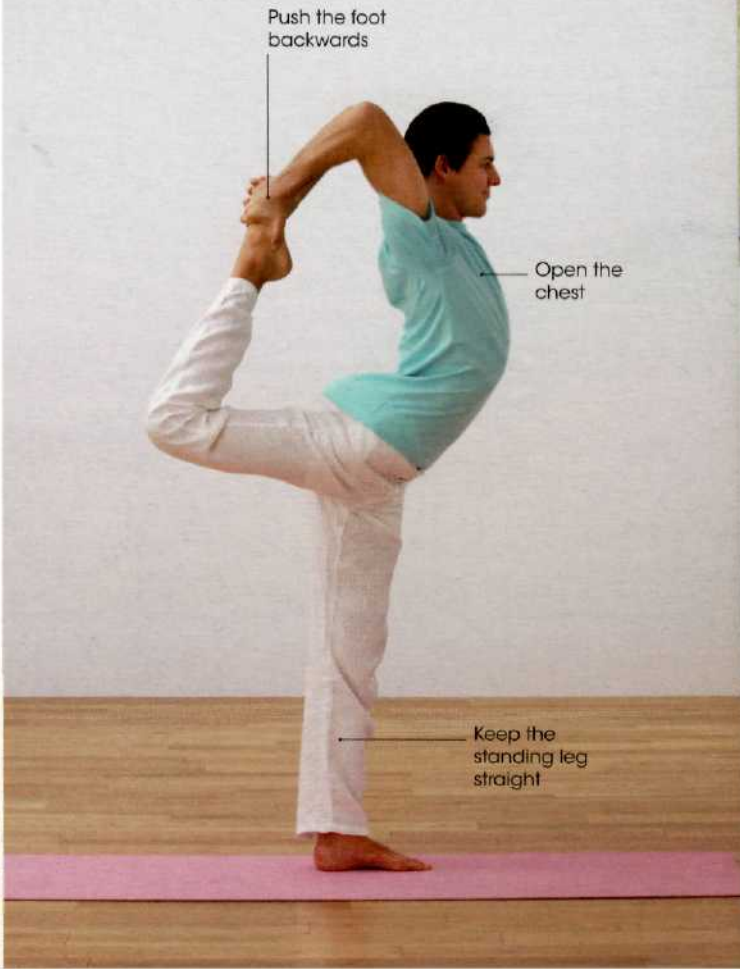
3 Push your right foot backwards as you lean slightly forwards with your upper body. Breathe deeply and rhythmically. Hold for up to 30 seconds, then release and repeat on the other side. Continue with Step 4 (see opposite), or practise Standing Forward Bend (see pp162–3) or Triangle (see pp164–9), or go directly to final relaxation (see pp192–3).

Advanced

4 Starting from Dancing Lord Siva Step 3, pull your right foot close to your right shoulder until you can lift your elbow. Rotate your wrist so you are holding the upper part of your foot. Breathe deeply and rhythmically. Hold for up to 30 seconds, then release and repeat on the other side.



5 To come into the full pose, bring your left arm over your head and lower your left hand to place it on your right foot so that you are holding your foot with both hands. Hold the pose for up to 30 seconds, breathing deeply and rhythmically. Release and repeat on the other side. Practise Standing Forward Bend (see pp162–3) or Triangle (see pp164–9), or go directly to final relaxation (see pp192–3).



11 Standing Forward Bend
Pada Hasthasana

If you notice that your legs are stiff from too much sitting on chairs, practise this Standing Forward Bend. Using the pull of gravity, this pose quickly lengthens the muscles and ligaments of the entire posterior face of your body – from your heels to the middle of your back. It also prepares you for the next asana, Triangle (see pp164–9).

BENEFITS

PHYSICAL
- Lengthens the muscles in the legs, hips, and lower back.
- Moderately increases the blood supply to the brain.
- Progressively trims the waist when accompanied by proper diet.
- Helps to overcome constipation.

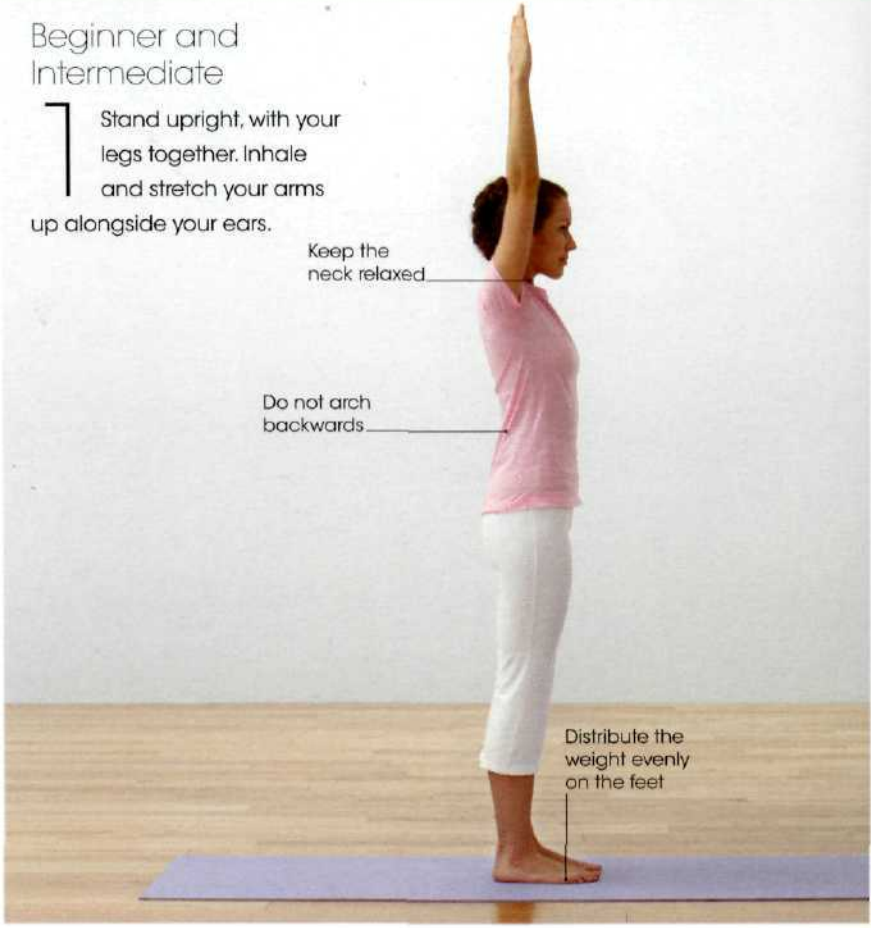
MENTAL
- The stimulation of the spine, the activated sense of balance, and the extra blood supply to the brain produced by this pose all bring relief from tamas, a state of low energy characterized by sluggishness, inertia, sleepiness, forgetfulness, and depression (see p212).

CAUTION If the backs of your knees are over-extended, you should focus on keeping your knees straight without pushing them backwards.

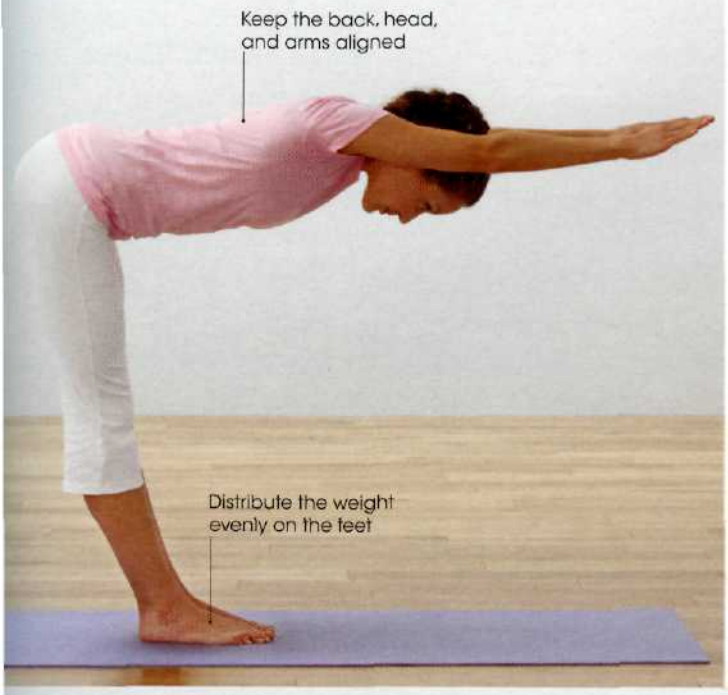
Standing Forward Bend
All Levels

Beginner and Intermediate

1 Stand upright, with your legs together. Inhale and stretch your arms up alongside your ears.



2 Exhale and bend forwards from the hips so that you make a horizontal line with your arms and upper body.



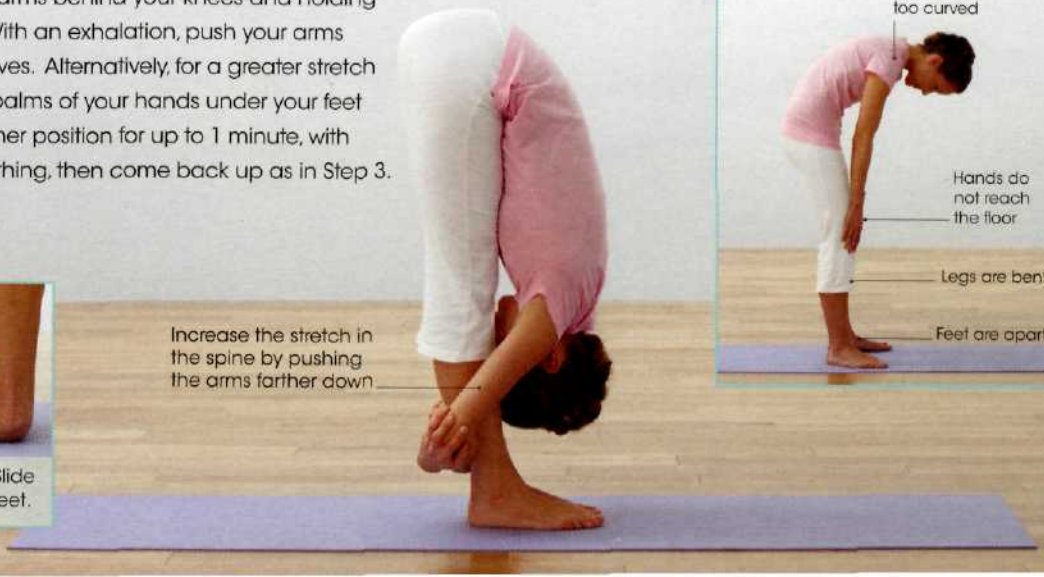
3 Continue exhaling and bending forwards. Catch hold of your ankles or calves, or hold onto your big toes in the Classical Foothold (see below). Hold for up to 1 minute with slow rhythmical breathing. Continue with Step 4 or inhale and come back up, with your arms and head hanging, then return to standing.

Classical Foothold Wrap the index finger around the big toe and place the thumb underneath it. Curl the remaining three fingers against the palm.

Advanced

4 If you can hold your toes, come into the full pose by bringing your arms behind your knees and holding your elbows. With an exhalation, push your arms down along your calves. Alternatively, for a greater stretch in the legs, slide the palms of your hands under your feet (see below). Hold either position for up to 1 minute, with slow rhythmical breathing, then come back up as in Step 3.

Alternative Foothold Slide the palms under the feet.



COMMON FAULTS

12 Triangle
Trikonasana

Triangle is a unique asana. Its lateral bend stretches and strengthens several muscles on the side of the body at the same time. It also helps with balance. It is the last of the twelve basic asanas in the cycle. After you have practised Triangle, end your session with final relaxation (see pp192–3) in order to reap all the benefits of your practice.

BENEFITS

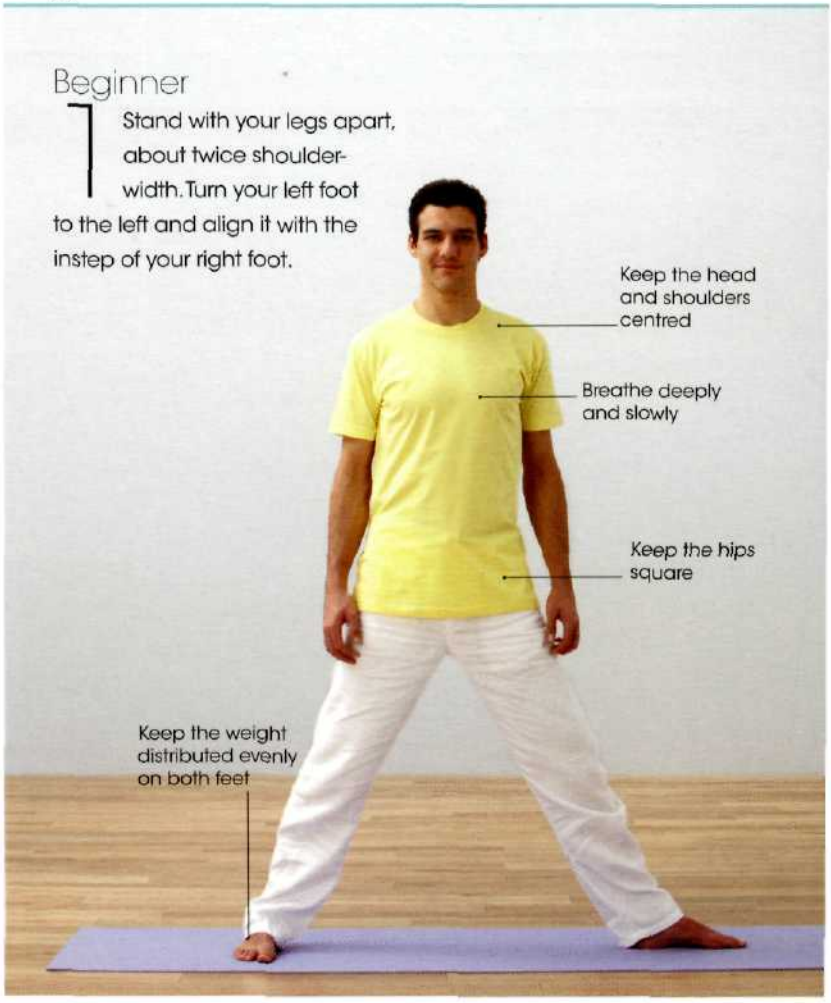
PHYSICAL

- Increases the sideways mobility of the lumbar and thoracic areas of the spine.
- Strengthens and lengthens the muscles of the legs and back.
- Tones the spinal nerves.
- Tones the abdominal organs.
- Improves the movement of food through the intestines and so invigorates the appetite.

MENTAL

- *Working the muscles of the legs and* back while still breathing calmly in the abdomen and consciously trying to relax presents both a physical and a mental challenge. Triangle can teach you how to face a challenging task while staying mentally calm and detached.
- Strengthens concentration and mental determination.

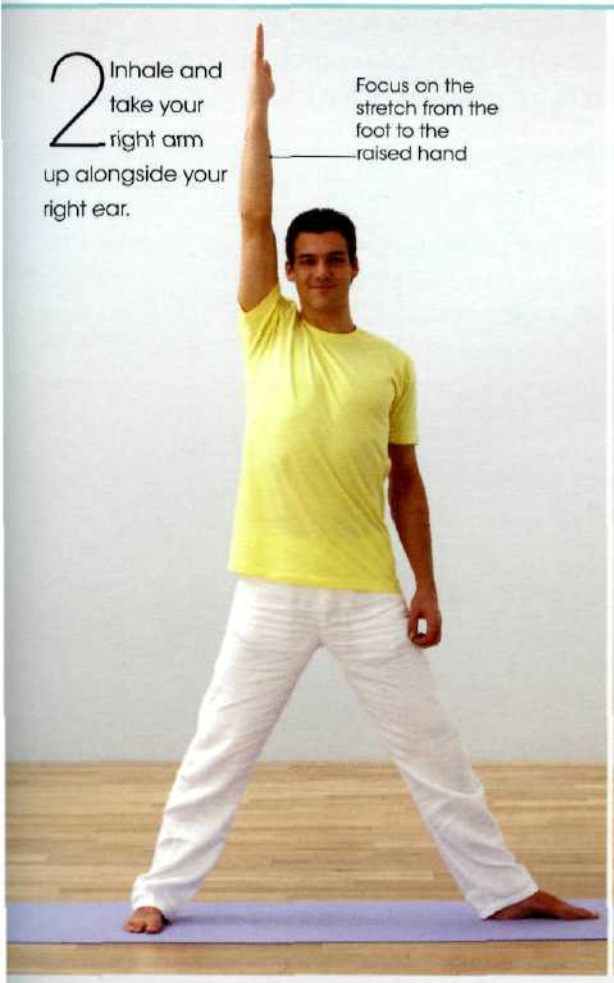
Triangle
Beginner and Intermediate



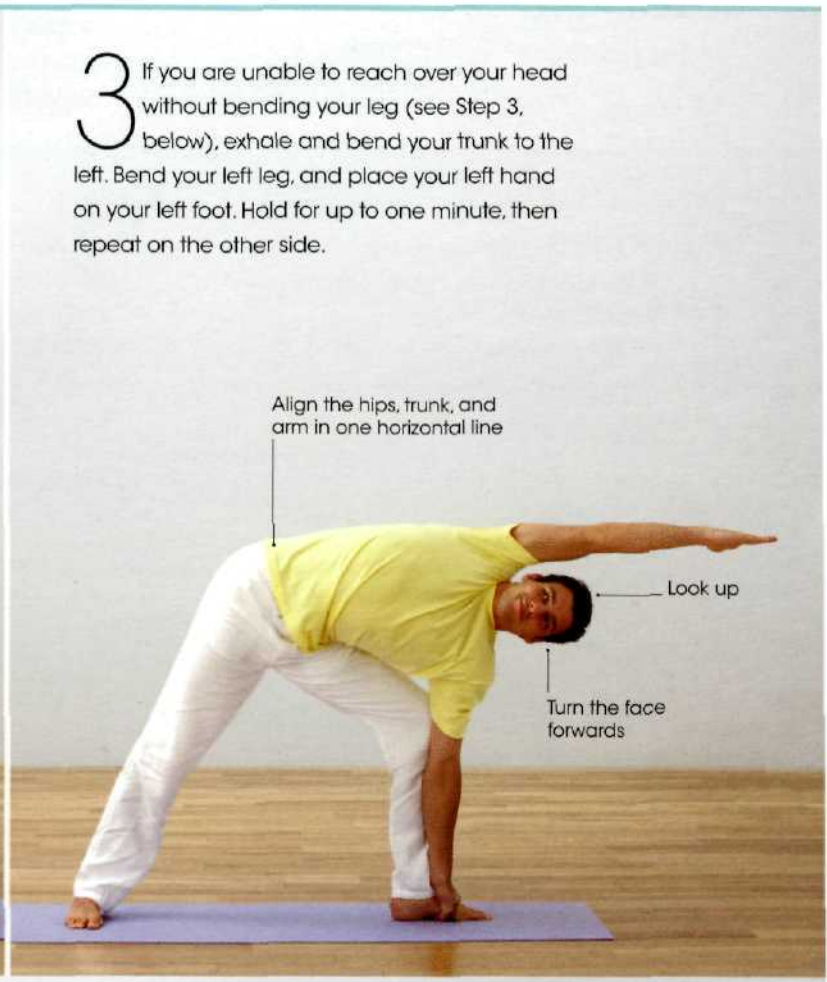
Beginner

1 Stand with your legs apart, about twice shoulder-width. Turn your left foot to the left and align it with the instep of your right foot.

2 Inhale and take your right arm up alongside your right ear.

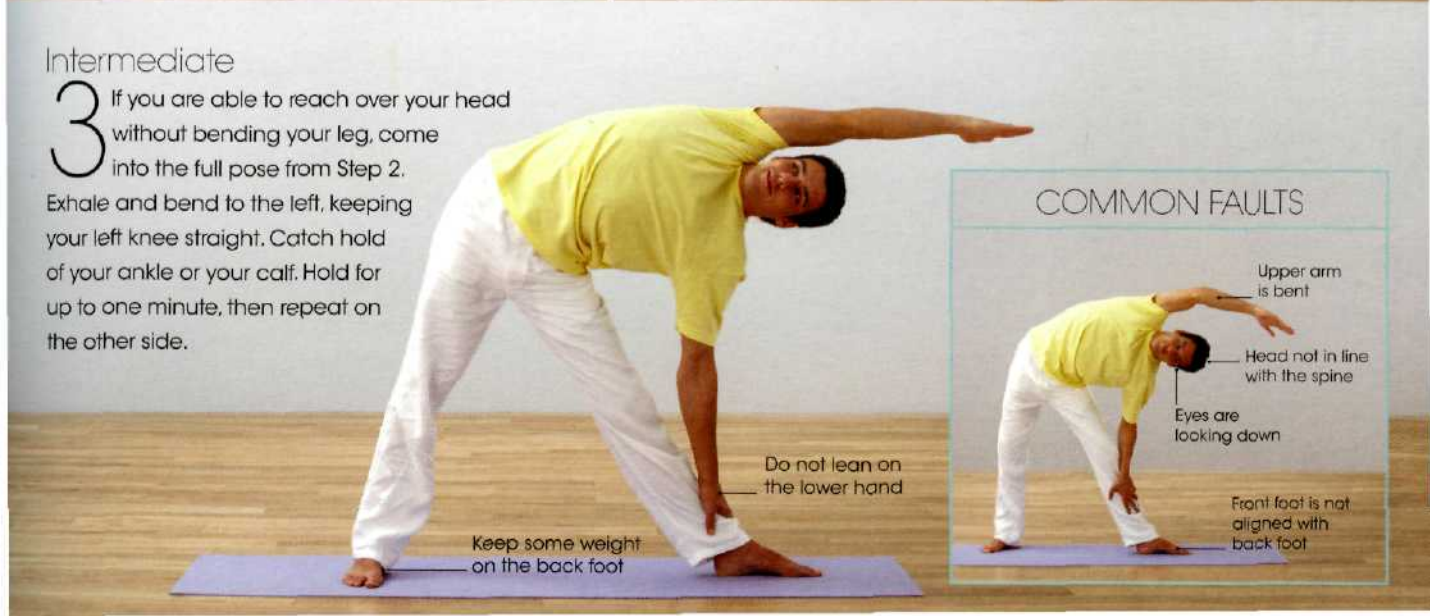


3 If you are unable to reach over your head without bending your leg (see Step 3, below), exhale and bend your trunk to the left. Bend your left leg, and place your left hand on your left foot. Hold for up to one minute, then repeat on the other side.



Intermediate

3 If you are able to reach over your head without bending your leg, come into the full pose from Step 2. Exhale and bend to the left, keeping your left knee straight. Catch hold of your ankle or your calf. Hold for up to one minute, then repeat on the other side.



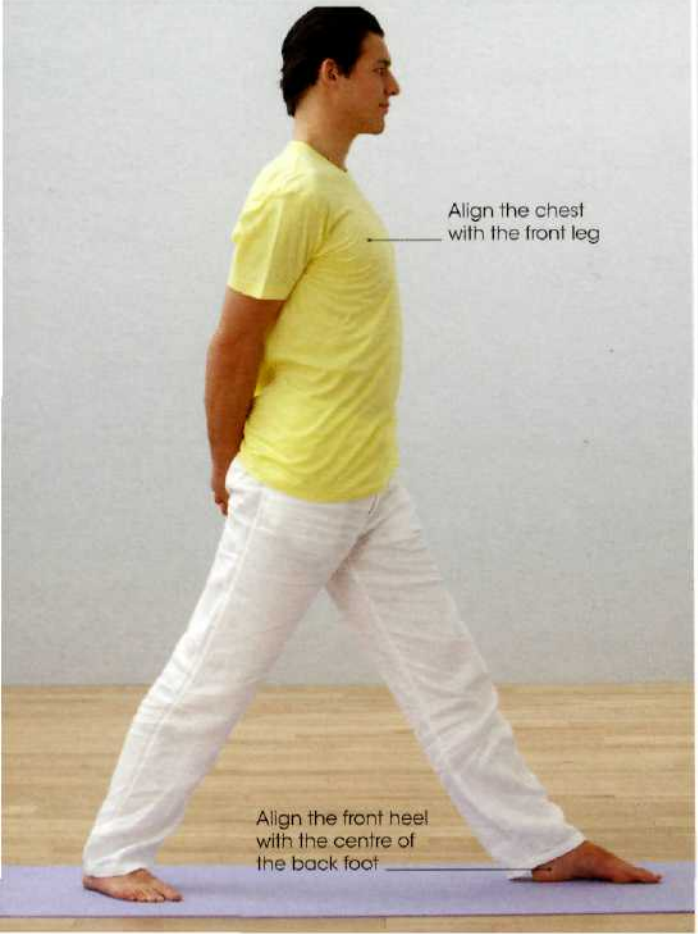
Triangle
Variations

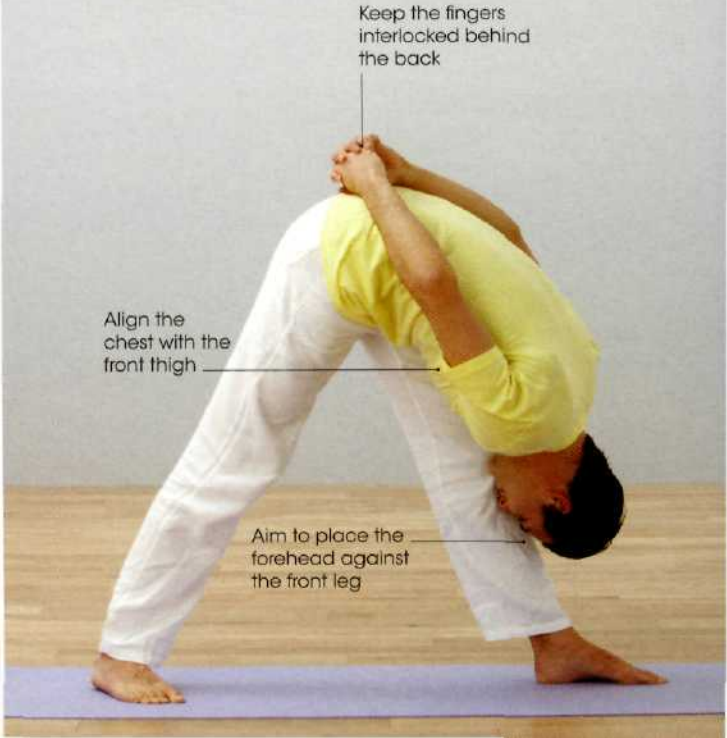
These variations add first a hip rotation and then a spinal twist to the lateral bend that you do when you practise Triangle. This combination of movements gives your back a complete workout.

Simple Hip Twist
Beginner

1 Stand with your legs about twice shoulder-width apart. Turn your left foot to the left and your right foot slightly in. Interlock your fingers behind your back. Inhale deeply.

2 With an exhalation, bend your body over your left leg, bringing your forehead to your left knee. Breathe rhythmically, holding for up to 1 minute, then repeat on the other side.



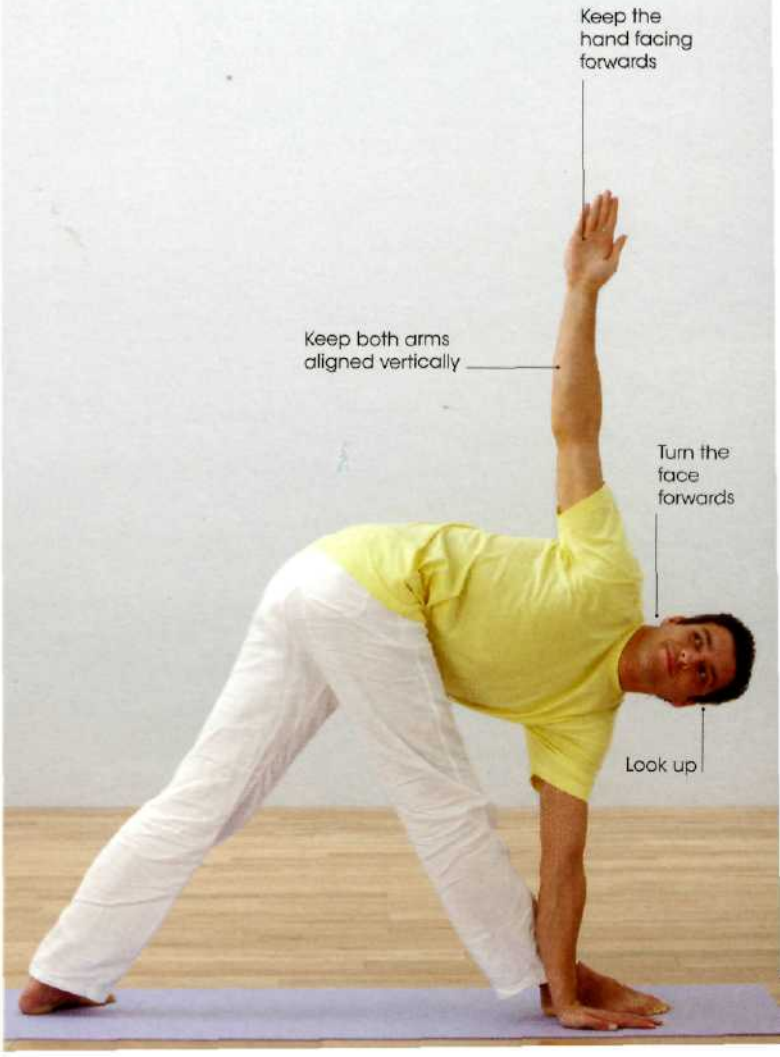


Triangle with Spinal Twist

Intermediate

1 Stand with your legs about twice shoulder-width apart. Turn your right foot to the right and your left foot slightly in. Lift your arms parallel to the floor and twist your body as far as possible to the right. Inhale deeply.

2 With an exhalation, twist and bend your body from the waist. Place your left hand either on top of your right ankle or flat on the floor outside your rightfoot. Raise your right arm straight upwards and look up at it. Breathe rhythmically, holding for up to 1 minute, then repeat on the other side.

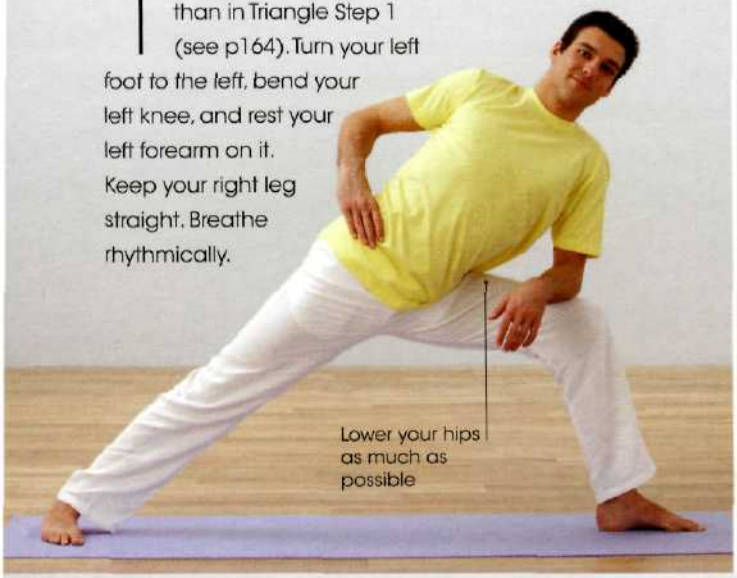


Triangle
Variations (continued)

These variations give special attention to stretching and strengthening the pelvic girdle. The isometric contraction of the quadriceps muscles provides an intense workout for the thighs.

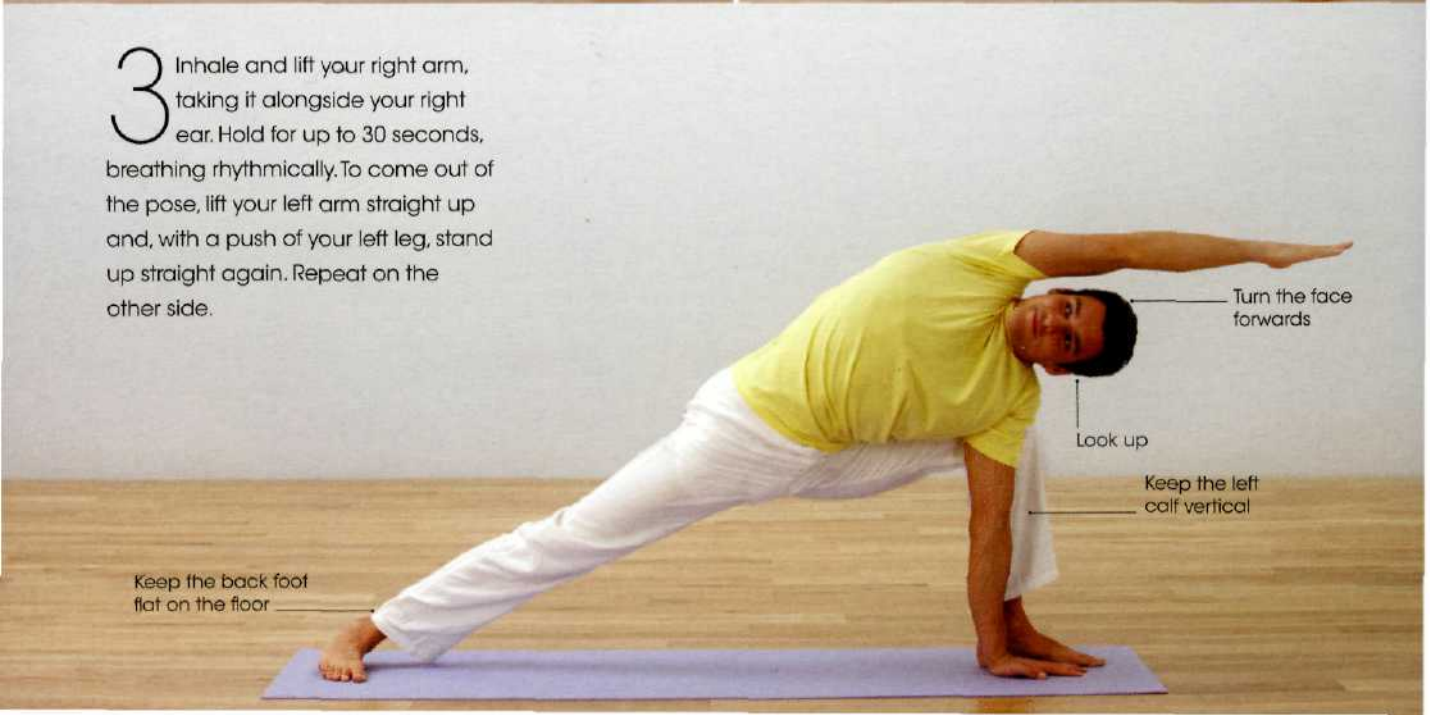
Triangle with Bent Knee
Intermediate

1 Stand with your legs farther apart than in Triangle Step 1 (see p164). Turn your left foot to the left, bend your left knee, and rest your left forearm on it. Keep your right leg straight. Breathe rhythmically.



2 Turn your torso to the left, exhale, and place both palms on the floor, parallel to each other, and to the inside of your left foot.

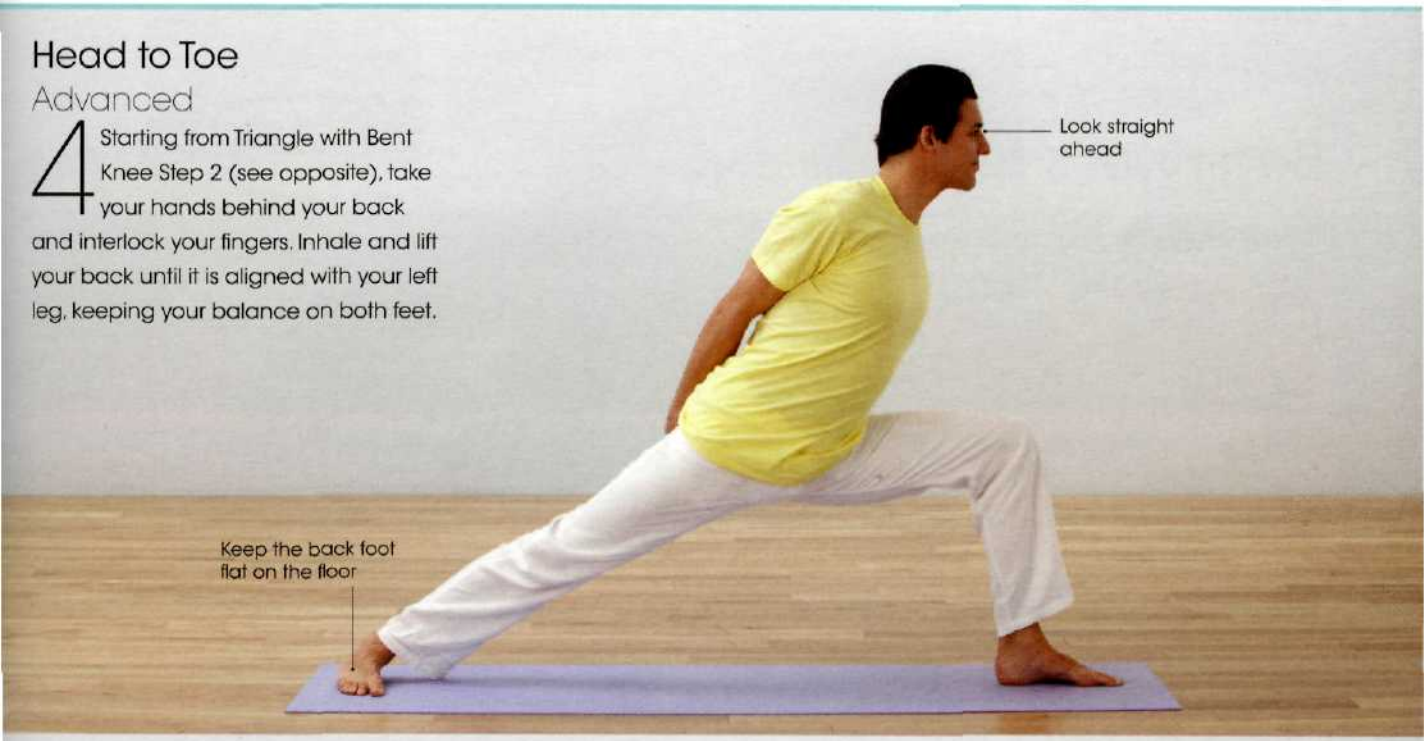
3 Inhale and lift your right arm, taking it alongside your right ear. Hold for up to 30 seconds, breathing rhythmically. To come out of the pose, lift your left arm straight up and, with a push of your left leg, stand up straight again. Repeat on the other side.



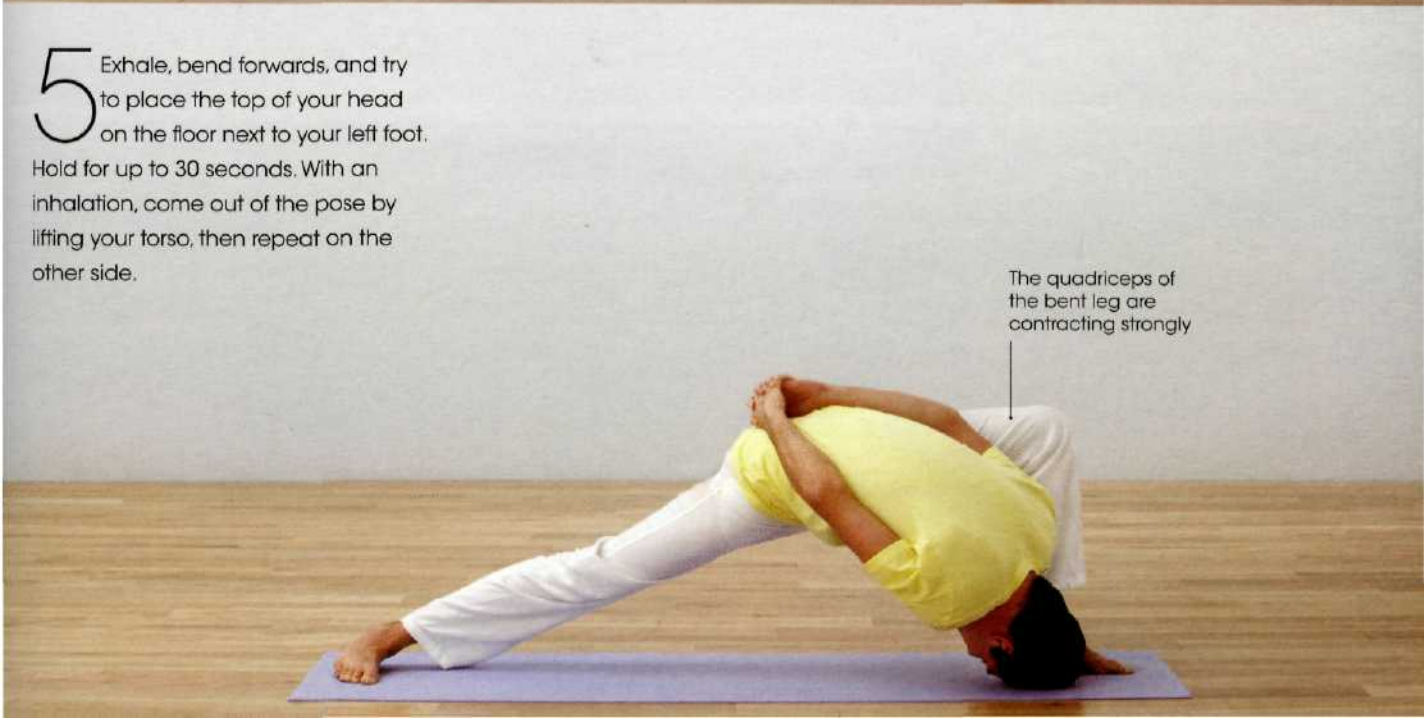
Head to Toe

Advanced

4 Starting from Triangle with Bent Knee Step 2 (see opposite), take your hands behind your back and interlock your fingers. Inhale and lift your back until it is aligned with your left leg, keeping your balance on both feet.



5 Exhale, bend forwards, and try to place the top of your head on the floor next to your left foot. Hold for up to 30 seconds. With an inhalation, come out of the pose by lifting your torso, then repeat on the other side.



Sequences

The sequences in this section offer routines suitable for beginner, intermediate, and advanced levels; at each level there is a 20-, 40-, and 60-minute sequence. Remember to always rest in Corpse Pose (see p46) before you begin.

Beginner's sequences

KEY: CORPSE POSE/CHILD'S POSE/RELAX ON FRONT
– Relax in one of these poses after the exercise

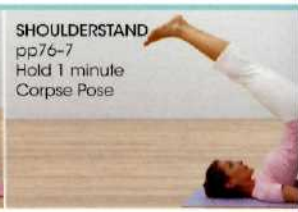
20 Minutes

DEEP ABDOMINAL BREATHING
p46
1 minute

SUN SALUTATION
pp50–7
Repeat x 4
Corpse Pose

HEAD TO KNEE RAISE p58
Repeat x 3 each side, Corpse Pose

SHOULDERSTAND
pp76–7
Hold 1 minute
Corpse Pose



40 Minutes

DEEP ABDOMINAL BREATHING
p46
1 minute

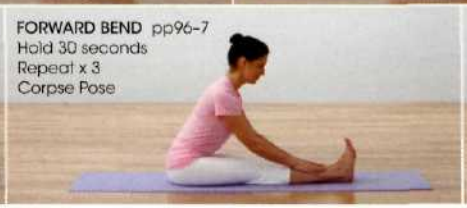
FULL YOGIC BREATH
p181
10 breaths

KAPALA BHATI
pp184–5
2 rounds
Corpse Pose

SUN SALUTATION
pp50–7
Repeat x 4
Corpse Pose

NECK STRETCH
p93
Repeat x 2
Corpse Pose

FORWARD BEND pp96–7
Hold 30 seconds
Repeat x 3
Corpse Pose



INCLINED PLANE p100
Hold 30 seconds
Corpse Pose

60 Minutes

DEEP ABDOMINAL BREATHING
p46
1 minute

ALTERNATE NOSTRIL BREATHING
p182
5 rounds to count of 4–16–8
Corpse Pose

SUN SALUTATION
pp50–7
Repeat x 4
Corpse Pose

DOUBLE LEG LIFT: ARMS BY SIDES
p60
Repeat x 5
Corpse Pose

SHOULDERSTAND
pp76–7
Hold 1 minute
Corpse Pose

BRIDGE
p86
Hold 30 seconds
Corpse Pose

FISH
pp92–3
Hold 1 minute

NECK STRETCH
p93
Repeat x 2
Corpse Pose

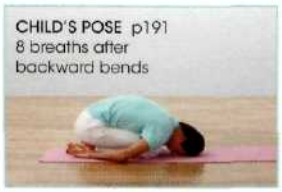
COBRA
pp116–17
Hold 5 breaths
Repeat x 3
Relax on front

LOCUST
pp122–3
Hold 20 seconds each leg
Relax on front

BOW
p134
Hold 20 seconds each side
Relax on front, then Child's Pose

Resting Poses

CORPSE POSE p46, 8 breaths between poses, 6–10 minutes in Final relaxation (see pp192–3)


CHILD'S POSE p191
8 breaths after backward bends

RELAX ON FRONT p190
8 breaths after backward bends

PLOUGH WITH FEET APART p84
Hold 1 minute
Corpse Pose

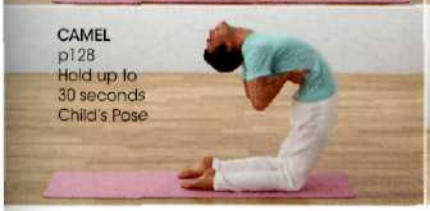
FISH
pp92–3
Hold 30 seconds

NECK STRETCH p93
Repeat x 2
Final relaxation, about 6 minutes

SINGLE LEG LIFT
p58
Repeat x 6
each side
Corpse Pose

SHOULDERSTAND
pp76–7
Hold 1 minute
Corpse Pose

FISH
pp92–3
Hold 1 minute


CAMEL
p128
Hold up to
30 seconds
Child's Pose

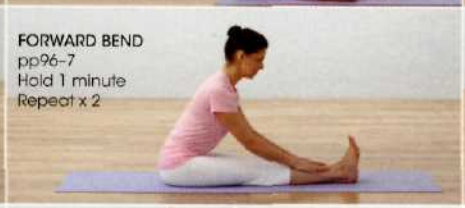
TRIANGLE
pp164–5
Hold 20 seconds
each side
Corpse Pose
Final Relaxation
10 minutes

DOLPHIN
pp62–3
Repeat x 4
Child's Pose

SHOULDERSTAND
pp76–7
Hold 1 minute

PLOUGH WITH FEET APART
p84
Hold 1 minute

SINGLE LEG FORWARD BEND
p102
Hold 1 minute each side

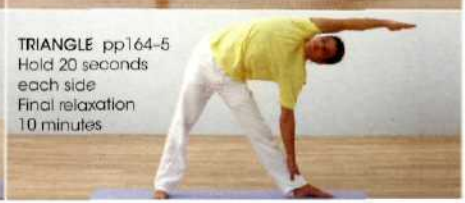

FORWARD BEND
pp96–7
Hold 1 minute
Repeat x 2

INCLINED PLANE
p100
Hold 30
seconds
Corpse Pose

HALF SPINAL TWIST
pp144–5
Hold 30 seconds
each side
Child's Pose

TREE
p158
Hold 20 seconds
each side

STANDING
FORWARD
BEND
pp162–3
Hold 1 minute


TRIANGLE pp164–5
Hold 20 seconds
each side
Final relaxation
10 minutes

Intermediate sequences

KEY: CORPSE POSE/CHILD'S POSE/RELAX ON FRONT – Relax in one of these poses after the exercise

Resting Poses

CORPSE POSE *p46, 8 breaths* relaxation between poses, 6–10 minutes Final relaxation (see pp192–3)

CHILD'S POSE p191
8 breaths after backward bends

RELAX ON FRONT p190
8 breaths after backward bends

HEADSTAND pp64–7
Hold 1 minute
Child's Pose

SHOULDERSTAND p76–8
Hold 1 minute
Corpse Pose

FISH pp92–3
Hold 30 seconds

NECK STRETCH p93
Repeat x 2
Corpse Pose

40 Minutes

KAPALA BHATI pp184–5
1 round

ALTERNATE NOSTRIL BREATHING p182
4 rounds to count of 5–20–10
Corpse Pose

SUN SALUTATION pp50–7
Repeat x 6
Corpse Pose

DEEP STRETCH SINGLE LEG LIFT pp58–9
Hold 30 seconds each side, Corpse Pose

FORWARD BEND: WITH WIDE LEGS p104
Hold 1 minute

FORWARD BEND pp96–9
Hold 1 minute

INCLINED PLANE p100
Hold 30 seconds

60 Minutes

KAPALA BHATI pp184–5
3 rounds

ALTERNATE NOSTRIL BREATHING pp182
5 rounds count of 5–20–10
Corpse Pose

SUN SALUTATION pp50–7
Repeat x 10
Corpse Pose

HEADSTAND: KNEES BENT TO THE SIDES p69
Hold 1 minute
Child's Pose

FISH pp92–3
Hold 1 minute
Corpse Pose

SHOOTING BOW p110
Hold 30 seconds each side

FORWARD BEND pp96–9
Hold 2 minutes

BOW: ROCKING BOW p136
Rock 8 times back and forth
Child's Pose

HALF SPINAL TWIST: WRIST GRASP p148
Hold 1 minute each side
Child's Pose

STANDING FORWARD BEND pp162–3
Hold 1 minute

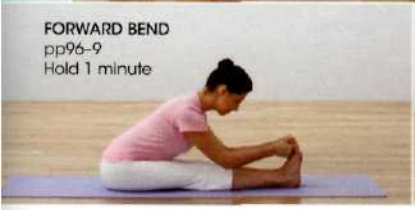
20 Minutes

DEEP ABDOMINAL BREATHING
p46
1 minute

KAPALA BHATI
pp184–5
1 round

SUN SALUTATION
pp50–7
Repeat x 4
Corpse Pose

FORWARD BEND
pp96–9
Hold 1 minute



INCLINED PLANE p100
Hold 15 seconds
Repeat
x 2

HALF SPINAL TWIST
pp144–5
Hold 30 seconds
each side
Final relaxation
6 minutes

HEADSTAND
pp64–7
Hold 1
minute
Corpse Pose

SHOULDERSTAND
pp76–8
Hold 1 minute

PLOUGH: ARM WRAP
p84
Hold 1 minute

CROSS-LEGGED FISH p94
Hold 30 seconds
Corpse Pose

INCLINED PLANE:
ONE LEG UP p101
Hold 30 seconds each side
Corpse Pose

CRESCENT
MOON
pp132–3
Hold 1 minute

TRIANGLE WITH SPINAL TWIST
p167
Hold 30 seconds each side
Final relaxation 10 minutes

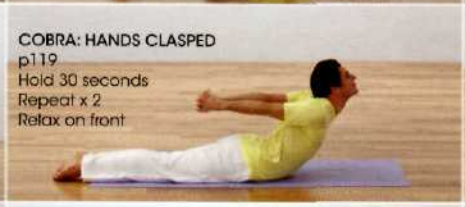
SHOULDERSTAND
pp76–8
Hold 2 minutes

PLOUGH
pp80–2
Hold 1 minute

BRIDGE: SINGLE
LEG LIFT p88
Hold 30 seconds
each side
Corpse Pose

INCLINED PLANE:
ONE ARM UP p101
Hold 30 seconds
each side
Corpse Pose

COBRA: HANDS CLASPED
p119
Hold 30 seconds
Repeat x 2
Relax on front



LOCUST
pp122–3
Hold 30 seconds
Repeat x 2
Relax on front

CROW
pp150–2
Hold 30 seconds
Repeat x 2
Child's Pose

TRIANGLE
pp164–5
Hold 1 minute
each side

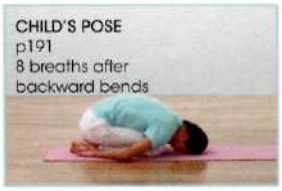
TRIANGLE: SIMPLE
HIP TWIST
p166
Hold 30 seconds
each side
Final relaxation
10 minutes

Advanced sequences

KEY: CORPSE POSE/CHILD'S POSE/RELAX ON FRONT – Relax in one of these poses after the exercise

Resting Poses

CORPSE POSE p46, 8 breaths between exercises, 6-10 minutes
Final relaxation (see pp192–3)


CHILD'S POSE
p191
8 breaths after backward bends

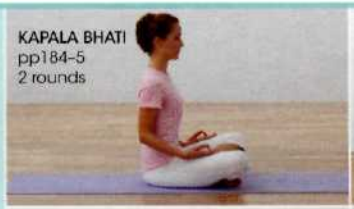
RELAX ON FRONT p190
8 breaths after backward bends

PLOUGH: ARM WRAP
p84
Hold 30 seconds

PLOUGH: KNEES BEHIND HEAD
p85
Hold 30 seconds

LOTUS FISH p95
Hold 30 seconds
Corpse Pose

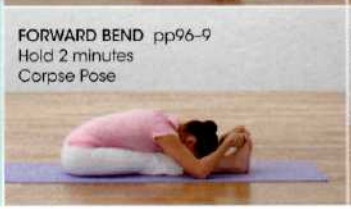
40 Minutes


KAPALA BHATI
pp184–5
2 rounds

SUN SALUTATION
pp50–7
Repeat x 6
Corpse Pose

LOTUS HEADSTAND
p70
Hold 1 minute

TWISTED LOTUS HEADSTAND
p71
Hold 15 seconds each side


FORWARD BEND pp96–9
Hold 2 minutes
Corpse Pose

CRESCENT SPLITS
p112–13
Hold 30 seconds each side

KING COBRA pp120–1
Hold 30 seconds

ROCKING BOW p136
Practise 30 seconds
Child's Pose

60 Minutes

KAPALA BHATI
pp184–5
3 rounds

ALTERNATE NOSTRIL BREATHING
p182
5 rounds to count of 6–24-12
Corpse Pose

SUN SALUTATION
pp50–7
Repeat x 8
Corpse Pose

HEADSTAND
pp64–7
Hold 3 minutes
Child's Pose

LOTUS FISH
p95
Hold 2 minutes
Corpse Pose

STRAIGHT ARM FORWARD BEND p105
Hold 3 minutes

LATERAL BEND WITH TWIST p107
Hold 1 minute each side

FULL SPINAL TWIST
p149
Hold 30 seconds each side

LOTUS PEACOCK
p157
Hold 1 minute

DANCING LORD SIVA pp160–1
Hold 1 minute each side

TRIANGLE: HEAD TO TOE p169
Hold 1 minute each side
Final relaxation
8 minutes

20 Minutes

SUN SALUTATION
pp50–7
Repeat x 4
Corpse Pose

HEADSTAND
pp64–7
Hold 1 minute

SCORPION: FEET TO HEAD
p73
Hold 30 seconds
Child's Pose

SHOULDERSTAND
pp76–8
Hold 1 minute

TORTOISE p106
Hold 1 minute
Corpse Pose

COMPLETE BOW
p138
Hold 30 seconds
Child's Pose

TRIANGLE WITH SPINAL TWIST
p167
Hold 30 seconds each side
Final relaxation 5 minutes

FORWARD BEND LOTUS HEADSTAND p71
Hold 15 seconds
Child's Pose

SHOULDERSTAND
p76–8
Hold 2 minutes

PLOUGH
pp80–3
Hold 1 minute

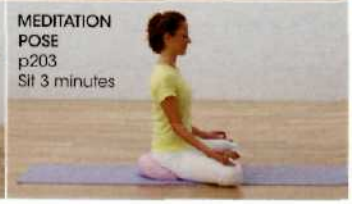
LOTUS FISH p95
Hold 1 minute
Corpse Pose

HALF SPINAL TWIST: ANKLE CLASP
p148
Hold 1 minute
each side

SIDE CROW p153
Hold 30 seconds each side

TRIANGLE WITH BENT KNEE p168
Hold 1 minute
each side
Final relaxation
8 minutes

MEDITATION POSE
p203
Sit 3 minutes



SHOULDERSTAND: HANDS ON THIGHS
p79
Hold 3 minutes

PLOUGH: KNEES TO SHOULDER
p85
Hold 1 minute each side

BRIDGE: LEGS STRAIGHT
p88
Hold 1 minute

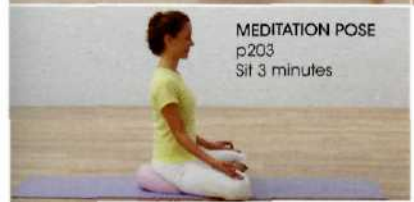
WHEEL: ONE LEG UP
p142
Hold 30 seconds
each side

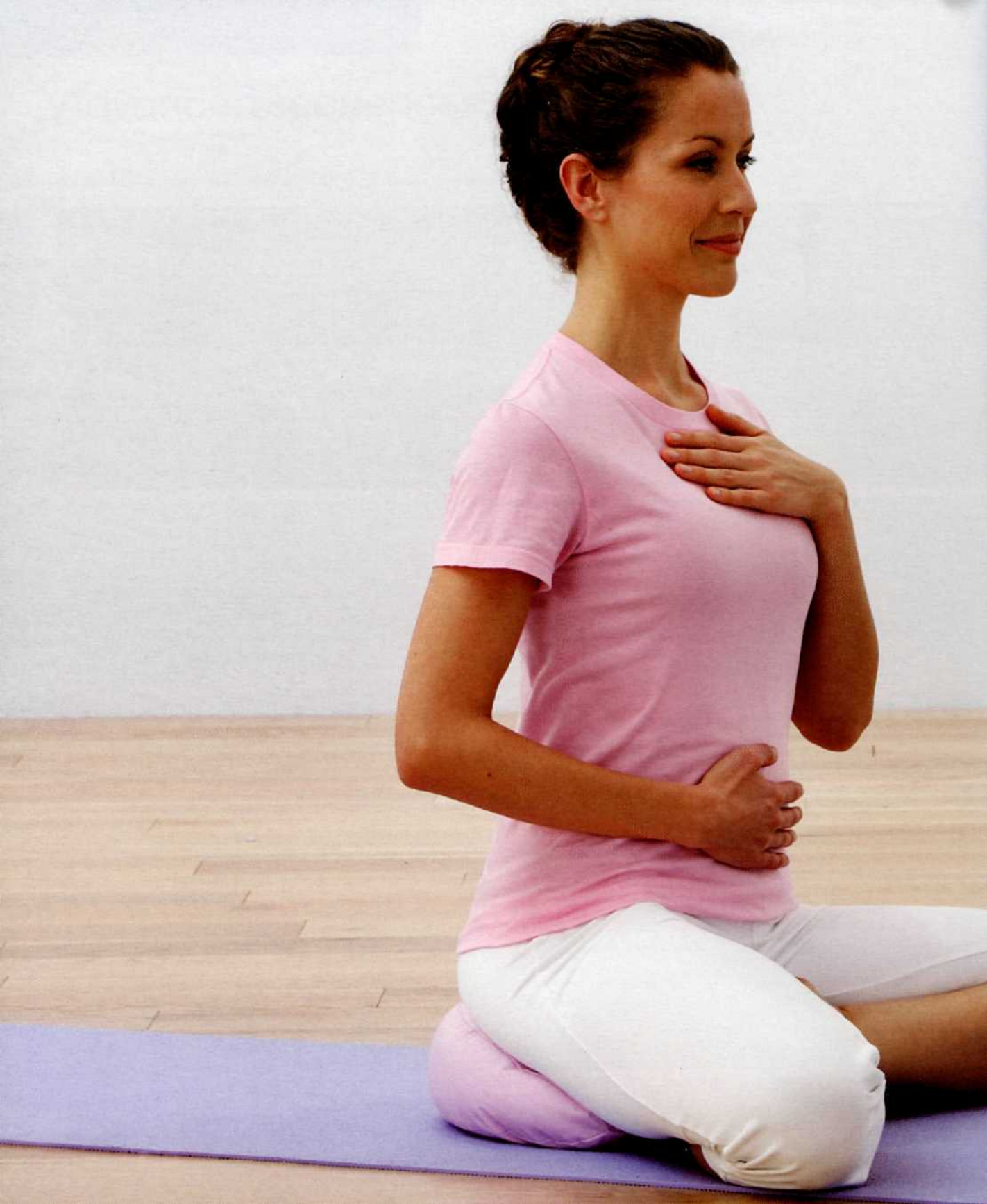
DIAGONAL SHOOTING BOW p110
Hold 30 seconds
each side
Corpse Pose

LOCUST: HIGH LEGS
p126
Hold 30 seconds

DIAMOND
p129
Hold 1 minute
Child's Pose

MEDITATION POSE
p203
Sit 3 minutes





Proper Breathing

Pranayama

In the yogic tradition, the breath is seen as the outward manifestation of prana, or vital energy. Gaining control of the breath by practising breathing exercises – pranayama – increases the flow of prana through the body, which literally recharges body and mind. Aim to practise pranayama for up to 30 minutes daily, before or after asana practice.

Circulation of prana

According to the ancient yogic texts, prana circulates through the body in a network of 72,000 astral energy channels, or *nadis*. These not only permeate every part of the body, but also create an extensive energy field, or aura, around it. When you perform asanas, you apply pressure to points where important nadis cross. This works like acupressure, unblocking vital energy.

Strengthening the flow of prana

Yoga breathing exercises focus specifically on opening two major nadis – the *pingala* nadi and the *ida* nadi – and strengthening the flow of prana in them. The pingala nadi corresponds to the right nostril and left hemisphere of the brain, and the ida nadi to the left nostril and right brain. In the mystical language of yoga, the pingala nadi is warming and corresponds to *Ha*, or the sun; the ida is cooling and corresponds to *Tha*, or the moon. The final step of the eight-fold path of Hatha and Raja Yoga (see p11) comes about when there is perfect balance between these two nadis. The most important nadi, however, is the *sushumna*, which corresponds to the spinal cord. When the pingala and ida nadis are in balance, the sushumna opens, allowing vital energy to flow upwards and spiritual enlightenment to occur.

Training the respiratory muscles

Although the language and imagery of pranayama may appear quite mystical, in practice its effects are concrete. Whether you are a beginner or a more advanced yoga practitioner, pranayama trains the respiratory muscles, develops use of your lungs' full capacity, and improves your body's supply of oxygen while reducing its carbon dioxide levels. It also helps to relax and strengthen your nervous system, calm the mind, and improve concentration.

Begin your pranayama practice by lying in Corpse Pose (see p46) for 2–3 minutes. After your practice, relax in Corpse again to release any tension in the hips or lower back from sitting cross-legged.

What is prana?

Prana, or vital energy, is found in all forms of life, from mineral to mankind, where its force controls and regulates every part of the body. Although prana is in all forms of matter, it is not matter. It is the energy that animates matter.

Prana is in the air, but it is not oxygen, nor any of its chemical constituents. It is in food, water, and sunlight, and yet it is not vitamin, heat, or light. Food, water, and air are only the media through which prana is carried. We absorb prana through the food we eat, the water we drink, and the air we breathe.

The easiest way to control prana is to regulate the breath – pranayama. Every part of the body can be filled with prana and when we do this, the entire body is under our control.

CHAKRAS AND NADIS

Seven energy centres, known as chakras, are located in the astral or subtle body along the sushumna nadi. This is an energy channel which corresponds to the central canal of the spinal cord. Each chakra corresponds to an element and can be activated by the prana which is drawn from the ida and pingala nadis into the sushumna nadi.

Preparatory exercises

Abdominal breathing is the essential preparatory technique to master before beginning any pranayama proper. This is the first stage on the road to the Full Yogic Breath, which teaches you how to make full use of your lungs' capacity. Once you can comfortably practise this, you are ready for the pranayama exercises on pp182–85.

Abdominal Breathing

Learning how to breathe deeply using your abdomen is one of the keys to pranayama. Practise it first when you relax in Corpse Pose (see p46) in preparation for your asana practice, and repeat it when you lie in Corpse Pose before your pranayama session. For several minutes, focus on slow, rhythmical breathing and the movement of your abdomen.

During Abdominal Breathing, the diaphragm draws air into and expels it from the lowest – and largest – part of the lungs. In order for the diaphragm to move freely, your abdominal muscles must be completely relaxed, so practise for a few minutes.

"If your body is strong and healthy with much prana, you will have a natural tendency to produce health and vitality in those close to you."

Swami Vishnudevananda

Practising Abdominal Breathing

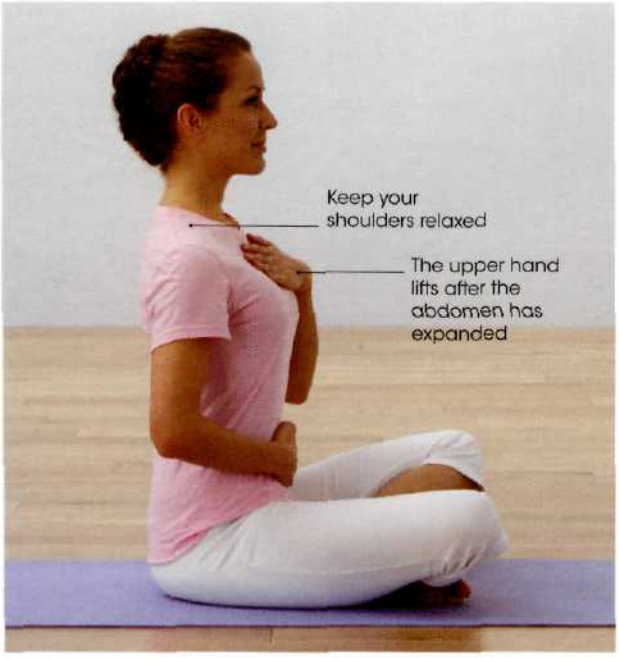
Lie in Corpse Pose (see p46), palms on your abdomen and fingers apart. As you breathe, feel the movement between your first rib, your navel, and your hips. Notice movement in the back of your body, too, around the kidneys and the lower back, and below your waist.

INHALATION
Inhale for five seconds. As your abdomen expands, notice how your hands rise and your fingers draw apart.

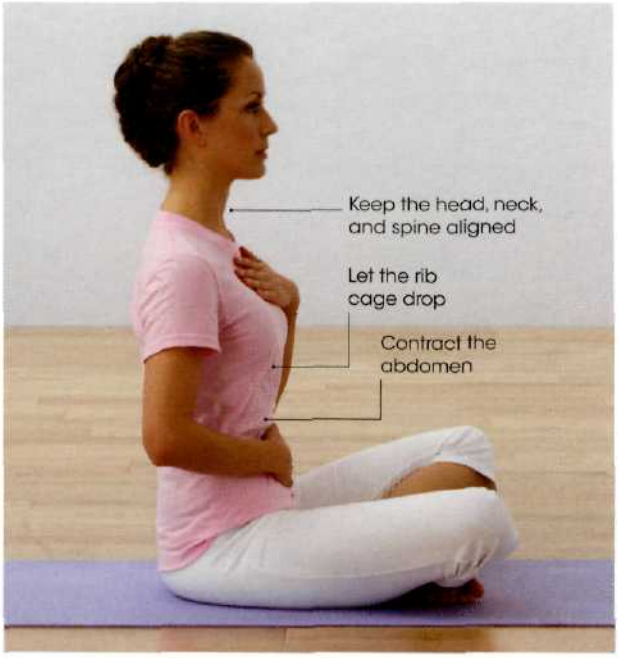
EXHALATION
Exhale for five seconds. Notice your hands moving down and fingers coming together. Repeat the in- and out-breaths for two minutes.

Practising Full Yogic Breath

Positioning your hands on your abdomen and chest helps you learn to contract and relax the respiratory muscles in the correct order. If you find it easier, begin with a few breaths in Corpse Pose (see p46) before sitting up. Breathe very slowly throughout.



INHALATION
Sit in a comfortable, cross-legged position and place one hand on your chest and the other on your abdomen. As you inhale, gradually expand the abdomen, then raise and open the rib cage, and finally lift the collar bones.



EXHALATION
Begin the exhalation by relaxing the abdomen, then lower the rib cage, and finally slightly contract the abdomen to actively empty the lungs. Repeat the inhalations and exhalations in this way for about two minutes.

Full Yogic Breath

This complete breath makes full use of your respiratory muscles. Learning to fill and empty the lungs to their maximum in a relaxed and controlled manner has a multitude of uses. It improves your muscle strength as you move into, hold, and release an asana. And when you perform a few cycles of the Full Yogic Breath during the short relaxation period between one asana and the next, it helps quickly to replenish the oxygen you have used while practising the asana. The muscle control you develop in the Full Yogic Breath – from the pelvis right up to the skull – also improves your awareness of spinal alignment in an asana. You might like to perform a few full yogic breaths as a quick pick-me-up at work, too, to help replenish your energy levels and quickly restore concentration.

Alternate Nostril Breathing

This is an excellent exercise for balancing the nervous system. Practising it can calm you down when you feel hyperactive, stimulate you when you feel lethargic, and centre you when you feel distracted. The prolonged exhalations release tension, the deep inhalations draw prana into the solar plexus and, when you retain the breath, prana is directed to the area of the third eye, bringing about mental poise.

How to practise

Pranayama should feel pleasant and never stressful. Beginners will find the ratio of inhalation to retention and exhalation in the complete technique too challenging, so start with Single Nostril Breathing before progressing through the levels. You will feel the benefits, no matter which level you practise at.

Single Nostril Breathing

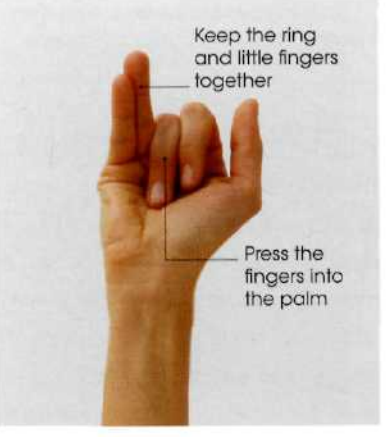
Place your right hand in front of your face in Vishnu Mudra (see below, right). Close your right nostril with your thumb (see opposite). Inhale for three seconds and exhale for six seconds through your left nostril. This is one round. Practise up to ten rounds. Repeat on the other nostril: close your left nostril with your ring finger, and inhale and exhale through your right nostril. Practise ten rounds on each side regularly over a few weeks. Gradually increase the ratio of the exhalation to the inhalation – first inhale for four seconds and exhale for eight, then lengthen the ratio to 5:10, and finally to 6:12.

Simple Alternate Nostril Breathing

After mastering the 6:12 ratio of Single Nostril Breathing, move on to simple Alternate Nostril Breathing. Closing your right nostril with your thumb, inhale through your left nostril for four seconds, close your left nostril with your ring finger, open your right nostril and exhale through it for eight seconds. Inhale through your right nostril for four seconds, then exhale through your left nostril for eight seconds. Practise up to ten rounds. Gradually increase the inhalation:exhalation ratio to 5:10, then to 6:12, and finally to 7:14.

Alternate Nostril Breathing with Retention

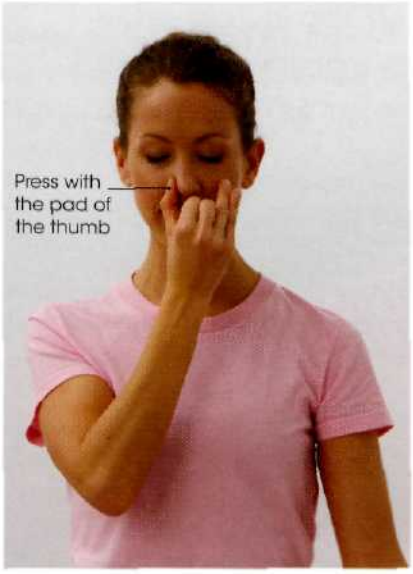
Once you have mastered the 7:14 ratio of the simple Alternate Nostril Breathing, move on to Alternate Nostril Breathing with Breath Retention. Inhale through your left nostril for four seconds, close the nostril (see opposite), hold your breath for 8 seconds, then exhale through your right



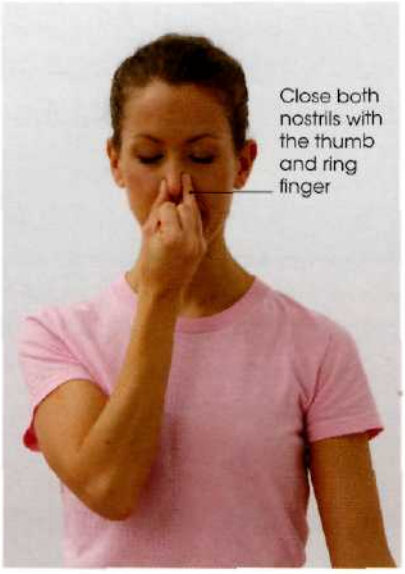
VISHNU MUDRA
Hold your right hand with the palm facing you and fold the first and second fingers into the palm. Try to keep your thumb and ring and little fingers straight.

Positioning the hand

Using a *mudra*, or energetic seal, like Vishnu Mudra (see opposite) helps to contain prana within the body, but is useful on a purely physical level, too, providing a tangible aid to concentration.



BREATHING THROUGH THE LEFT NOSTRIL
With your right hand in Vishnu Mudra (see opposite), close the right nostril with your thumb; inhale through the left nostril.



BREATH RETENTION
To retain your breath, close both nostrils with the thumb and the ring finger.

BREATHING THROUGH THE RIGHT NOSTRIL
Close the left nostril with your ring finger, and exhale through the right nostril.

nostril for eight seconds. Then inhale through your right nostril for four seconds, hold your breath for eight seconds and exhale through your left nostril for eight seconds. Practise up to ten rounds. Increase the inhalation: retention:exhalation ratio to 5:10:10, then to 6:12:12, and finally to 7:14:14.

Complete Alternate Nostril Breathing

As you improve, try a longer breath retention – complete Alternate Nostril Breathing. Inhale through your left nostril for four seconds, hold the breath for sixteen seconds, and exhale through the right nostril for eight seconds. Then inhale through the right nostril for four seconds, hold the breath for eight seconds, and exhale through the left nostril for sixteen seconds. Practice up to ten rounds. Increase the inhalation:retention:exhalation ratio to 5:20:10, then to 6:24:12, and finally to 7:28:14.

Kapala Bhati

Literally translated as "shining skull", this exercise cleanses the respiratory passages, including the nasal passages in the head. It is one of the *kriyas*, or organ-cleansing exercises of Hatha and Raja Yoga (see pp10–11). Kapala Bhati also increases the capacity of the lungs, stimulates blood circulation, and gives a gentle massage to the heart. People who have asthma often find it helpful.

How to practise

Kapala Bhati consists of a series of short and active exhalations, alternated with passive, relaxed inhalations. The intense expulsions of stale air from the lungs increase the uptake of oxygen into the blood (see pp32–3), which can be felt especially in the brain. This makes Kapala Bhati an excellent way to improve your concentration, whether you are practising meditation or need a quick mental boost at work.

This exercise is best practised during a morning pranayama or meditation session; do not practise it late in the evening, since it activates the nervous system and may prevent you from falling asleep. If you are a beginner, do not try Kapala Bhati until you feel completely at ease practising Alternate Nostril Breathing with Breath Retention (see pp182–3).

Intermediate level

Sit with your legs crossed and your hands in Chin Mudra (see p204) and take a few slow, deep abdominal breaths. Notice the abdomen moving out as you inhale and in as you exhale. Then start a series of ten rhythmic, short, active exhalations (see opposite). After each active exhalation, let a gentle, passive in-breath just happen. The time taken for one exhalation and inhalation should be about two seconds.

After ten of these "pumps" out and in, take two slow full yogic breaths (see p181). Then inhale comfortably to 80 per cent of your capacity and hold the breath, according to your ability, for 20–60 seconds. Exhale slowly, with control. This is one round. After a few relaxed breaths, practise two more rounds.

Advanced level

Using the same technique, gradually increase the number of times you "pump" out and in per round to 50. You can speed up the rate at which you breathe, but never faster than one second for one exhalation and inhalation. As you become more relaxed and focused, try to hold the breath during the

Avoiding hyperventilation

When you practise Kapala Bhati for the first time, you may feel dizzy. This is caused by hyperventilation. If this happens, stop immediately, lie on your back and relax. Once the dizziness has gone, check whether you were making one of the following mistakes, and take the remedying action set out below.

The chest or collar bones move: Check that only your abdomen is moving during both exhalations and inhalations.

Your abdomen is not moving in when you exhale: Check that your abdomen is actively contracting and moving inwards every time you exhale.

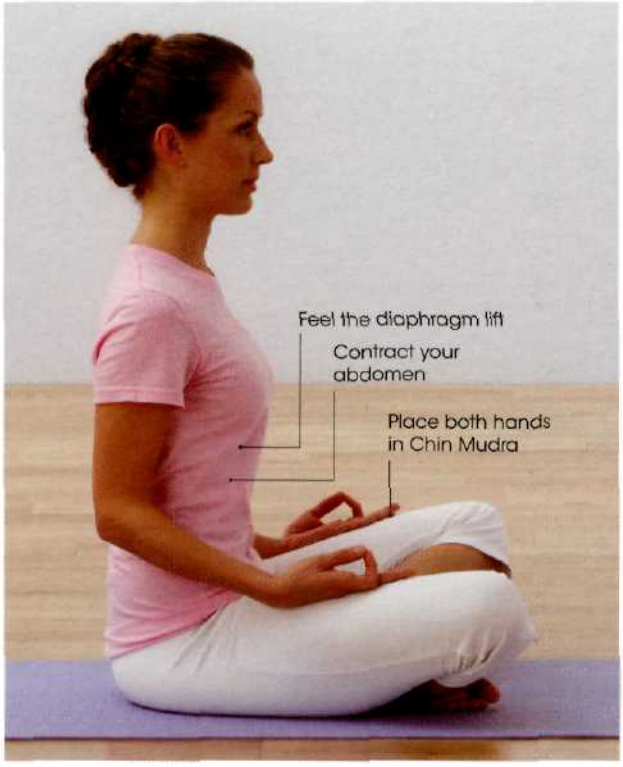
You are inhaling too deeply or you are actively pushing out your abdomen: Inhale passively so that the abdomen simply moves forwards into its neutral position.

You are pumping too fast: You should reduce the speed of the pumping to 2 seconds for one inhalation and exhalation.

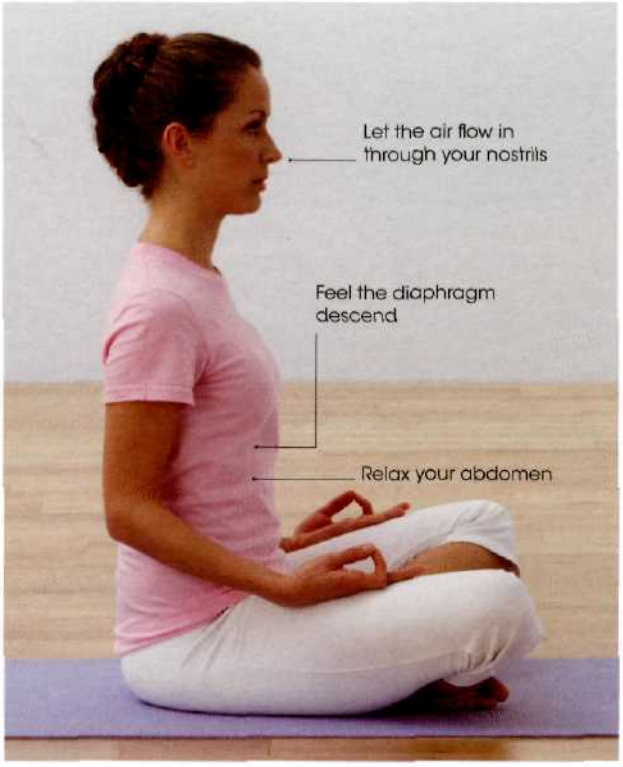
retention for up to 90 seconds. While you are holding your breath, focus on the third-eye area between your eyebrows. While you hold your breath, you may feel a pleasant warmth around your abdomen. This is the activated prana in your solar plexus. With each round of practice, the solar plexus recharges further, and prana starts moving up the spine. After sustained practice, you will find that the movement of prana is in accordance with how focused you are. The energy literally moves to where your thoughts go, which is why you should focus on the third eye.

Inhaling and exhaling

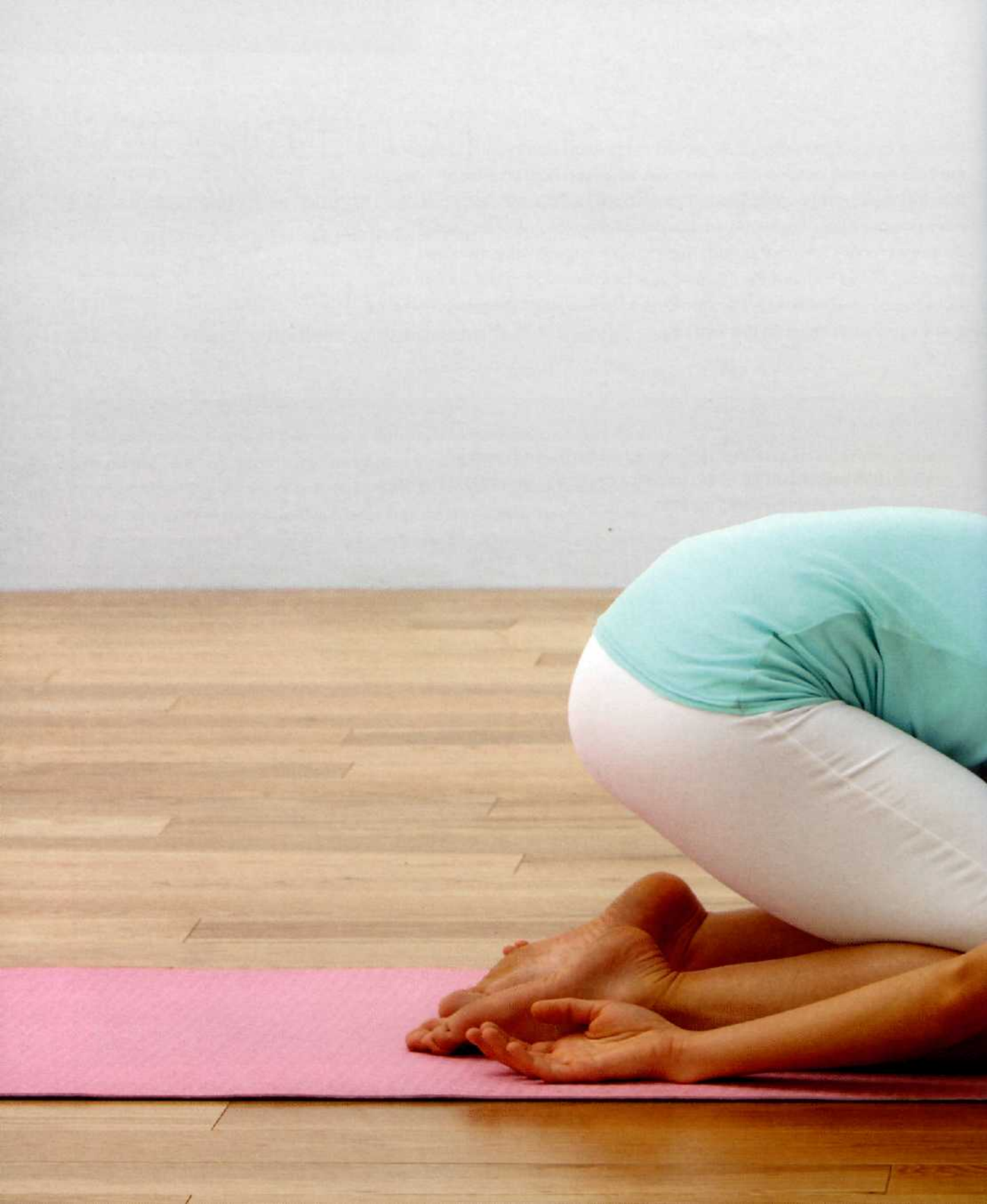
It is important to get the "pumping" technique right in this powerful exercise. Emphasize the exhalation; if you do this correctly, it creates a vacuum and the in-breath happens naturally, without requiring any effort.



ACTIVE EXHALATION
To actively exhale, firmly contract your abdomen and feel your diaphragm lift to push the air out of your lungs forcefully through both nostrils.



PASSIVE INHALATION
To exhale passively, simply release the abdomen. Feel the diaphragm descend and the air rush in. Do not try to take a breath; let the inhalation come easily, by itself.



Proper Relaxation

Relaxation between asanas

Take time to relax between one asana and the next – this allows the body to absorb the effects of the pose and be reinvigorated. Relax for a minimum of 8 deep breaths, but for no more than 2 minutes, so the body stays warm to progress to the next pose.

Why relax?

When you are performing postures, you can observe how the asana practice contains its own, in-built rhythmical alternation between effort and relaxation. In some asanas, your muscles are first stretched and then relaxed; in others, they are contracted and then relaxed (see p36). Relaxing between asanas confirms this pattern of effort and release in your nervous system, so that by the time you reach the final relaxation (see pp192–3), your nervous system is so well balanced that you will be able to relax simply by visualizing yourself relaxed – in other words, by using autosuggestion (see p194).

Relaxing on your back

Corpse Pose is the preferred position for relaxation between most asanas – exceptions are for backward bends and inversions. If you find this pose uncomfortable, use the alternative pose on the opposite page.

CORPSE POSE

To get into Corpse Pose, follow the instructions for the initial relaxation (see p46). Take at least 8 deep, rhythmical breaths as you lie in Corpse, and notice the effects of the pose you have just completed on your body and mind. Then progress to the next asana. If you find Corpse uncomfortable, try the alternative positions opposite.

Alternative supine position

You may be uncomfortable lying on your back if you are unable to relax fully the muscles of the lower back. If this is the case, try the exercise below. After some practice, you will find that you can lie more comfortably in Corpse Pose to relax between asanas.

When Corpse Pose is uncomfortable

Bringing your knees towards your chest releases tension in the lower back. You can then drop your feet to the floor and practise the relaxation between asanas with your knees bent and your feet hip-width apart.

HUGGING THE KNEES

1 Bend both legs and bring your knees towards your chest. Wrap your arms around your knees, and hold onto one wrist with the other hand. This gives the lower back a gentle stretch and releases tension around that part of the spine.

FEET ON FLOOR

2 Place your feet flat on the floor, about 20cm (8in) from your buttocks and relax your arms to the sides, with the palms facing upwards and the fingers completely relaxed. Take at least 8 deep, rhythmical breaths before progressing to the next asana.

"In order to regulate and balance the work of the body and mind, it is necessary to economize the energy produced by the body. This is the main purpose of learning how to relax."

Swami Vishnudevananda

Relaxing on your front

After asanas such as Cobra (see pp116–21) and Locust (see pp122–33), and variations performed from a prone position – lying on your abdomen – relax on your front before moving on to the next asana (see below). As you relax, notice the effect of the pose you have just performed on your body and mind, and feel the respiratory movement in your abdomen.

Relaxing on your abdomen

Turning your legs in these prone relaxation positions creates rotation in the hip joints, which helps the muscles in the legs to relax. If your body feels tense or you get cramp in the feet in the basic position, try the alternative position (see below).

BASIC POSITION

Lie on your front with your arms folded in front of you and your hands one on top of the other. Turn your head to one side and rest it on your hands. This releases tension in the neck and shoulders and makes breathing more comfortable. The "pillow" formed by your hands takes any pressure away from your cheeks. Keep your legs slightly apart and turn your toes inwards. Take at least 8 deep, rhythmical breaths before progressing to the next asana.

ALTERNATIVE POSITION

Lie on your front with your arms folded in front of your head and your hands one on top of the other. Turn your head to one side and rest it on your hands. Keep your legs slightly apart and turn your toes inwards. Bend one knee and take the leg out to the side, towards your arm – this is Baby Krishna Pose. Keep your extended leg, your spine, and your head aligned. Take at least 8 deep, rhythmical breaths before progressing to the next asana.

Following Headstand (see pp62–75), Half Spinal Twist (see pp144–9), and any backward-bending asanas, relax in Child's Pose (see below). Child's Pose is good for relaxing the head and shoulders and gently stretching out the spine, which invigorates the nervous system. This pose also brings a refreshing flow of blood to the brain, for a rejuvenating effect before you move on to practise the next pose.

"We should not confuse relaxation with laziness. In infancy the child relaxes naturally; some adults possess this power of relaxation. Such persons are noted for their endurance, strength, vigour, and vitality."

Swami Vishnudevananda

Relaxing in a forward bend

The slight forward bend in Child's Pose gives your back and the muscles around your hips a soothing stretch. If you find it difficult to sit on your heels or your forehead does not reach the floor, practise the variation (see below).

CHILD'S POSE

Sit on your heels and lean forwards until your forehead comes to the floor. Extend your arms alongside your legs and rest your hands beside your feet, palms facing upwards. Take at least 8 deep, rhythmical breaths before progressing to the next asana.

CHILD'S POSE VARIATION

Sit on your heels with your knees slightly apart, lean forwards, and fold your arms on the floor in front of you, hands one on top of the other. Rest your forehead on your folded arms. Take at least 8 deep, rhythmical breaths before progressing to the next asana.

Final Relaxation

At the end of every yoga session, you should practise a final relaxation lasting 15–20 minutes. This will bring about complete physical, mental, and spiritual relaxation, which is a key experience of yoga.

1 Inhale and lift your right leg 10cm (4in) off the mat. Hold your breath for a few seconds, tense your leg, then exhale and allow your leg to drop. Repeat with the left leg.

2 Inhale and lift both arms 10cm (4in) off the mat. Hold your breath for a few seconds, tense your arms, then exhale and allow your arms to drop to the mat.

3 Inhale and lift your hips and buttocks off the mat. Hold your breath for a few seconds, tense your buttocks, then exhale and release.

4 Inhale and lift your chest off the mat. Hold your breath for a few seconds, tense your shoulder blades, then exhale and release.

Following the sequence

Your blood pressure and body temperature will drop during final relaxation so, depending on the season, you may like to cover yourself loosely with a blanket before you begin. Follow Steps 1–8 below to achieve a comfortable Corpse Pose, then use the physical, mental, and spiritual relaxation exercises on pages 194–5 in the suggested order. Then slowly stretch and sit for a minute cross-legged to end your practice with the mantra "OM".

5 Inhale and pull your shoulders towards your ears. Hold your breath for a few seconds, then exhale and release your shoulders.

6 Inhale and squeeze the muscles of your face tightly together. Hold your breath for a few seconds, then exhale and release.

7 Inhale, open your mouth, stick your tongue out, and look to your forehead. Hold your breath for a few seconds, then exhale and release.

8 With an inhalation, slowly roll your head to one side; with an exhalation, roll it to the other side. End by bringing your head back to centre.

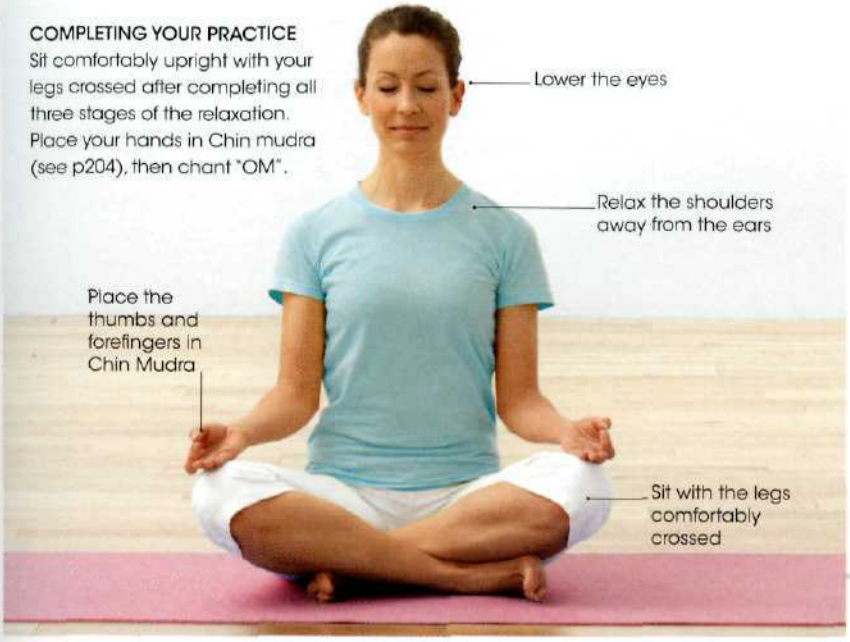
Complete yogic relaxation

Yogic relaxation has three aspects: physical relaxation, mental relaxation, and spiritual relaxation. As you lie in Corpse Pose for your final relaxation (see pp192–3), practise the thought-focusing exercises below to relax body, mind, and spirit.

Part 1: Physical relaxation

Take a few slow, rhythmic breaths using your abdomen (see p180). Then follow this exercise in autosuggestion for five to ten minutes. Have a clear mental picture of your feet, think about the downward pull of gravity, then send a mental command to your feet by silently saying, "I am relaxing my feet, I am relaxing my feet, my feet are relaxed." Move up the body; each time clearly visualize the area you are focusing on, think about the pull of gravity and your rhythmic breathing, then send a command to relax to your ankles, calves, knees and thighs, hips and buttocks, abdomen and chest, lower back, middle back, shoulders and neck, hands and fingers, arms, mouth and

PHYSICAL RELAXATION
Each time you move on consciously to relax another part of the body, make sure you have a clear mental picture of that area before tuning your thoughts into the downward pull of gravity and the rhythmical flow of your breath. Finally, give the mental command to relax by silently repeating the phrase beginning "I am relaxing...".



"During spiritual relaxation the Yogi identifies himself with the all-pervading, all-powerful, all-peaceful and joyful self within himself, the real source of knowledge and strength"

Swami Vishnudevananda

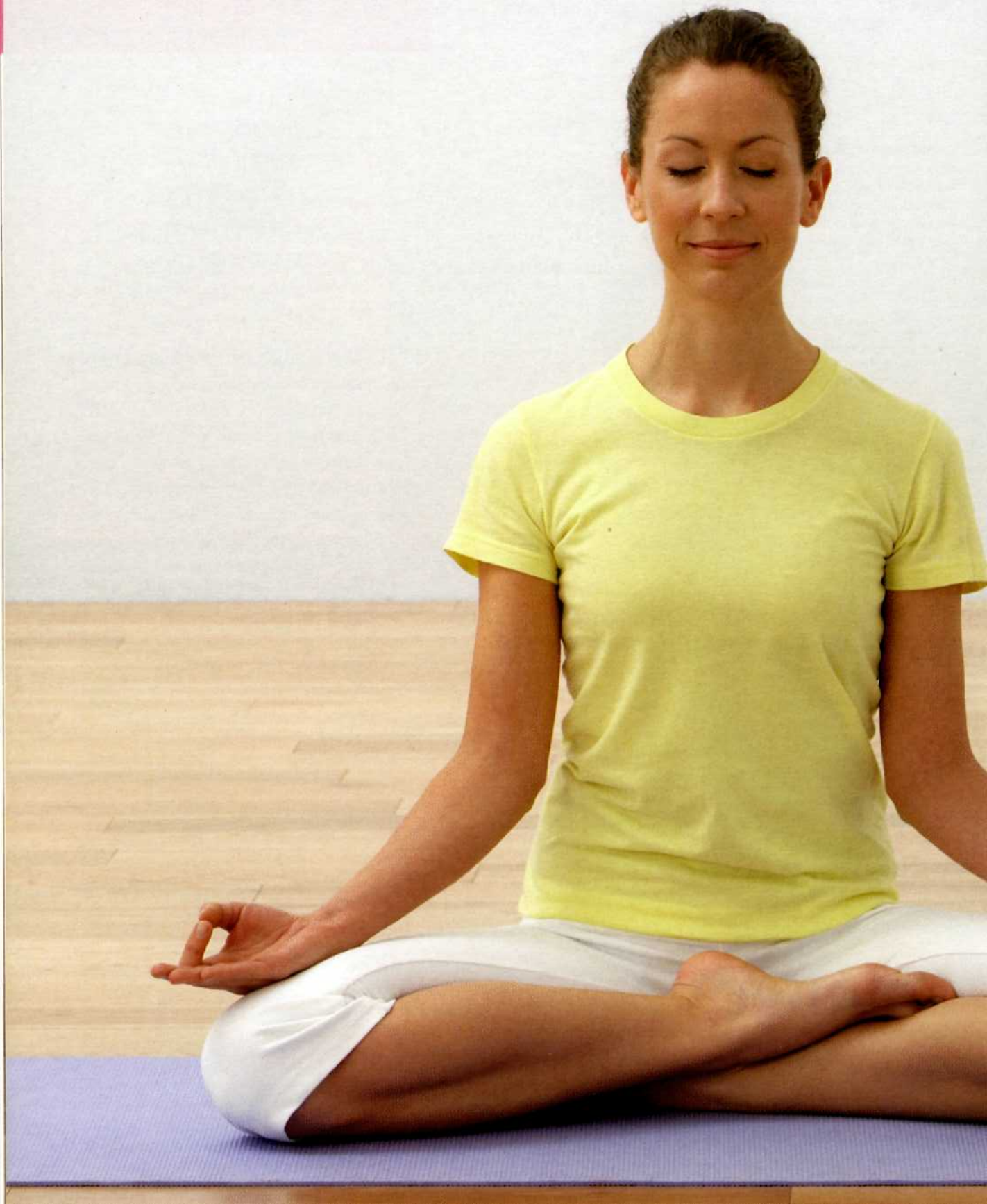
eyes, facial muscles and scalp. Finally, relax your internal organs. Again, visualize the area, breathe slowly, and send the command to relax to one organ at a time: kidneys, liver, intestines, bladder, pancreas, stomach, heart, lungs, and brain. Your subconscious mind conveys the command.

Part 2: Mental relaxation

The mind is always moving between the past and the future, and in the present it is constantly pulled by the five senses. It needs to relax, so practise this mental relaxation for about two minutes. Continue abdominal breathing, this time inhaling and exhaling for five seconds each. The speed and rhythm of your breath and your thought waves are intimately linked. Start to observe the flow of air moving in and out of your nostrils. Soon your mind will be calm; if you sense it becoming active, focus on your breathing until it quietens.

Part 3: Spiritual relaxation

Complete spiritual relaxation is possible only if your thoughts have a carefree focus, so now visualize a calm lake, unruffled by waves. Picture the still water resting on your inner self, which is timeless and unchanging. Continue for five to eight minutes. Then take a few deep breaths, slowly move your legs and arms, and give your whole body a good stretch. Finally, spend a minute sitting cross-legged and chant the mantra "OM". Now you will be able to hold this sense of relaxation and focus for several hours.



Positive Thinking and Meditation

Why meditate?

Meditation lies at the heart of any yoga practice. Once you feel comfortable practising the asanas and breathing exercises, you will feel more relaxed in your body. Then, it will seem like a natural step to pay more attention to your mind by practising meditation. This brings about greater mental and emotional balance and, eventually, inner peace.

Physical benefits

During meditation, the distractions of the world around you disappear and the parasympathetic nervous system (see pp34–5) gently brings about a sense of relaxation and balance. Your heartbeat and respiratory rate slow and your internal organs are rested. Research shows that meditation stimulates the immune system, too, promoting health and protecting against illness.

Adepts of yoga have long recognized that the vibrations generated by thoughts and emotions affect every cell in the body – and that negative thoughts can impede the cells' capacity for regeneration and homeostasis (see p206). The focus in meditation on positive and harmonious thoughts, therefore, is thought to promote health and well-being at a cellular level.

Mental benefits

Ancient yogis aptly compared an unfocused mind to a crazy, drunken monkey, jumping from one thought to the next in a never-ending cycle. It's all but impossible to stop the mind leaping from one thought to another. During meditation, you simply learn how to focus on the present. This prevents your mind from dwelling on the past or worrying about the future.

As your mind becomes more focused, confusion gives way to clarity. You find that you can face the conflicts that disturb your mental peace and you discover creative, positive solutions to those conflicts. This brings about a greater feeling of self-control, inner satisfaction, and sense of purpose.

What is more, you not only experience these benefits during meditation practice. They spill over into the rest of the day, helping you to concentrate better at work and play. By encouraging emotional balance and more patience and understanding, meditation also improves your relations with those around you. You will become less irritated by other people's habits, more understanding, and better able to accept their limitations.

The ultimate goal of meditation

Ancient yogic scriptures describe the goal of meditation as *samadhi*, or cosmic consciousness.

In this state of calm understanding, the illusion of ego (the feeling that you are separate from the world) vanishes. Everything dissolves into one consciousness, or Supreme Self. In this state, you might think, "I am not my body or my mind. My mind is only my story, and I am not my story. My body does not separate me from others. I am never alone, but always one with all." All negative emotions and limiting ideas about your body and inner self vanish, setting you free from discontent. You become aware of the purpose of life and, ultimately, lose fear of death.

Experienced yogis aim to be in this state at all times, living life as one unbroken meditation. As a beginner, start by shaking free the deep-rooted habit of identifying with everything in your mind. This takes practice, but as the saying goes, every journey of a thousand miles starts with a single step.

Spiritual benefits

As your meditation practice deepens, you will gain glimpses of a state of being that you have probably never experienced before. You may feel as if life's clouds have dissipated and you can see more blue sky. You will have a sense of greater inner space, well-being, positivity, and a real feeling of trust in the goodness of life. You will start to realize that beyond the familiar world of thoughts and emotions lies a whole new realm of consciousness. Your sense of yourself will expand beyond an awareness of your body and your mind and, ultimately, you will experience a feeling of unity with everything around you.

Meditation is so powerful that its benefits extend far beyond the person who is meditating. Yogis believe that the powerful vibrations of peace that emanate from an experienced meditator have a positive effect on everyone that person comes into contact with – and that, in the end, they influence the whole world. And so making your mind peaceful through meditation is the most positive thing you can do to contribute to world peace.

"Meditation is 'the cessation of mental activities'. When your thoughts reduce by just 20 per cent, you will experience relief and a sense of self-control."

Swami Sivananda

SITTING TO MEDITATE

When you sit to practise meditation, your physical body is the first to relax. Once you feel settled, the mind begins to slow down, bringing the object of your concentration into sharper focus.

The art of concentration

Before you can learn to meditate, you have to be able to concentrate the mind. We can all concentrate to some degree, but the way we live and work today – constantly on call thanks to mobile technology and immersed in a sound-bite culture – means that many of us have only a short attention span. Practising the simple exercises on these pages will help to lengthen your attention span and enhance your ability to concentrate, which can boost the memory and benefit your psychological health.

What is concentration?

Concentration means attending fully to one thought or object for a substantial length of time. You are concentrating when you become engrossed in a book, eat without thinking about work, or forget about your home life when in the office. The ability to concentrate is not only essential for meditation, it is key to success in any endeavour, and once you have trained yourself to concentrate effectively, you can use the skill in many other areas of life. For example, being able to shut out other thoughts and not make haphazard or hasty decisions will make you more effective at work.

LOSE YOURSELF IN A BOOK
Read two or three pages of a book, giving them your full attention. Then test your concentration by stopping at the end of a page. How much do you remember of the story? Can you classify, group, or compare the facts you have been reading about?

CONTEMPLATE NATURE
During the day, concentrate on the sky. Feel your mind expand as you reflect on its vast expanse. At night, concentrate on the moon or stars. By the sea, focus on waves. Or shift your gaze between objects near and far, such as a nearby tree and distant mountain.

LISTEN TO A SOUND
Listen carefully to the ticking of a watch. When your mind wanders, bring it back to the sound. How long can you concentrate on that sound? Or listen to a prominent sound for a while, without reacting to it. Then shift your attention to other sounds, one by one.

The benefits of concentration

Practising concentration has many benefits. It can strengthen "thought-currents" – how we connect thoughts and ideas in the brain – making it easier to grasp difficult, complex, or confusing concepts. It also clarifies ideas, so you can express yourself more clearly. Concentration exercises energize the mind, boosting efficiency at work and in other tasks, while building will-power and the ability to influence other people positively. They also bring about serenity, insight, and cheerfulness.

"Emotional balance maintained in all activities is the true sign of progress..."

Swami Sivananda

Practical exercises

The exercises below provide an easy way to start developing your ability to concentrate. Initially, train your mind to concentrate on external objects, such as a book, sound, or something in nature, from waves on the ocean to stars in the sky. As you progress, you will be able to concentrate on more subtle subjects, such as an inner sound or an abstract idea. While practising, notice how aware you are of the various qualities of the experience when the mind is focused. Then note how difficult it is to assimilate an experience with an unfocused mind. When your mind wanders – which it will do often – remind it to come back to contemplation of the object or quality you are focusing on. Gradually lengthen your practice until you can concentrate for half an hour.

FOCUS ON A FLOWER

Sit comfortably with your eyes closed. Imagine a garden with many flowers. Gradually, bring your attention to a single flower. Visualize its colour and explore its other qualities, such as texture, shape, and scent. Concentrate on the flower's qualities for as long as possible.

REFLECT ON AN IDEA

Relax your body and mind and think about a quality, such as compassion. Imagine how you could express it in your life. Think of great people who embodied it. Ask the quality to fill your heart, then to flow out to the whole world. Think of yourself as perfectly compassionate.

CANDLE CONTEMPLATION

Sit cross-legged in a dark room with a lighted candle at eye-level, an arm's distance away. Watch your breath for 2–3 minutes. Then look at the flame for 1 minute. Try not to blink. Close your eyes and visualize the flame between your eyebrows for a minute.

Practising meditation

Meditation is a state of relaxed awareness. Swami Vishnudevananda used to say that it is not possible to teach someone how to achieve this state, any more than it is possible to teach someone how to sleep. However, the more care and attention you give to your preparation for meditation, the more positive the results will be. This preparation can be divided into two parts: first become comfortable with physical meditation, then focus your mind with mental meditation (see p204).

Physical meditation

If you get the atmosphere right for meditation, the purity of the space will be so tangible that at times of stress you can sit in your meditation space, practise for half an hour, and experience great comfort and relief.

PLACE It's best to set aside a special room for meditation, but if this is not possible, try to separate one portion of a room to use for your practice. Keep it clean and tidy, and make a focal point by placing a candle and a spiritually uplifting picture at eye level in front of the place you sit for meditation. Gazing at the steady candle flame before starting a meditation practice helps to concentrate your mind and turn it inwards. Burning incense can also help to create a meditative mood. You will need a clean mat or folded woollen blanket to sit on. Many yogis like to place it to face North or East to take advantage of favourable magnetic vibrations. With repeated practice, the vibrations created during meditation will build a magnetic aura. Within six months, the peace and purity of the atmosphere should be tangible.

TIME The best times for meditation are at dawn and dusk, when the atmosphere is thought to be charged with a special spiritual force. At dawn, in the quiet hours after sleep, the mind is especially clear and unruffled. If this hour is tricky, practise at dusk or just before going to bed. Alternatively, find a time when you are free from daily activities and your mind can be calm.

HABIT Practise every day at the same time. As your subconscious mind gets *accustomed to the regularity, you will find it easier to settle and focus. Start* with 15 to 20 minutes, building up to one hour (aim for at least 30 minutes). It is better to meditate every day for 30 minutes than once a week for two hours.

"Feel the silence, hear the silence, touch and taste the silence. Silence is the music of your soul."

Swami Vishnudevananda

SITTING POSITION Sit on the floor to meditate, in a position that you can maintain comfortably, keeping your spine and neck straight but not tense. You do not have to sit in the classic Lotus posture – a simple, cross-legged pose makes a firm base, or you can sit in Half-lotus pose (see below). Sitting on a cushion helps the thighs to relax and brings the knees closer to the ground. In all these sitting positions, the legs make a triangular pattern. This shape contains the energy raised during meditation rather than allowing it to disperse in all directions.

If you can't sit on the floor easily, sit on a comfortable chair with your ankles crossed. Do not lie down to meditate – you will relax too completely and may fall asleep. Choose one of the three hand positions shown on p204.

BREATHING Once you are sitting comfortably, relax your body as much as possible, especially the muscles of the face, neck, and shoulders. Broaden your chest and lift your rib cage to encourage Abdominal Breathing (see p180), which brings oxygen to the brain. Then inhale and exhale rhythmically for about 3 seconds each, slowing your breath to an imperceptible rate. Notice how your breath becomes lighter and completely silent.

Sitting positions

Whichever position you choose, make sure it is comfortable – you should be able to sit with a straight spine without fidgeting for up to 30 minutes. If you find these poses too stressful on your hips or knees, sit on a chair. Then choose a hand position (see p204).

CROSS-LEGGED POSE
Sit comfortably upright and bend your knees, crossing one shin in front of the other. Try to relax your knees towards the floor.

HALF-LOTUS POSE
Sit comfortably with your legs wide and bend one knee, bringing the sole against your groin. Place the opposite foot on top of the bent leg.

LOTUS POSE
Sit with crossed legs. Raise your front leg and place the top of the foot on the opposite thigh. Carefully lift the other foot onto the other thigh.

Hand positions

Once you are sitting comfortably, lift your spine and relax your shoulders. Rest your hands in one of these hand gestures, or *mudras*, to keep the arms and shoulders relaxed and to focus your prana, or vital energy.

CHIN MUDRA
Rest the backs of your palms on your knees or thighs and join the tips of your thumbs and forefingers. Extend the other fingers.

CUPPED HANDS
Turn both palms to face upwards in front of your groin and gently cup the back of your right hand in your left palm.

CLASPED HANDS
Turn both palms to face upwards in front of your groin and interlink your fingers, resting one thumb on top of the other.

Mental meditation

Follow these meditation techniques to stabilize your mental energy and to focus your mind. But first, simply allow your mind to wander. If, initially, you are too eager to control your mind, you might develop a headache.

GIVE THE MIND SPACE Focus deeply on your breathing to give your mind space. Then watch your mind closely. Be patient and compassionate with it: developing a trusting relationship with your mind ensures its co-operation.

DISASSOCIATE If your mind wanders, watch it objectively, as if watching a film. Just observe your thoughts for a few minutes and they will diminish.

CONCENTRATION POINT Bring your awareness to a *chakra* (see p179). If you relate easily to others, focus on the heart centre (*anahata* chakra), at the centre of your chest. If you are analytical, focus on the self-awareness centre (*ajna* chakra), between your eyebrows. Aim to keep this focus for life.

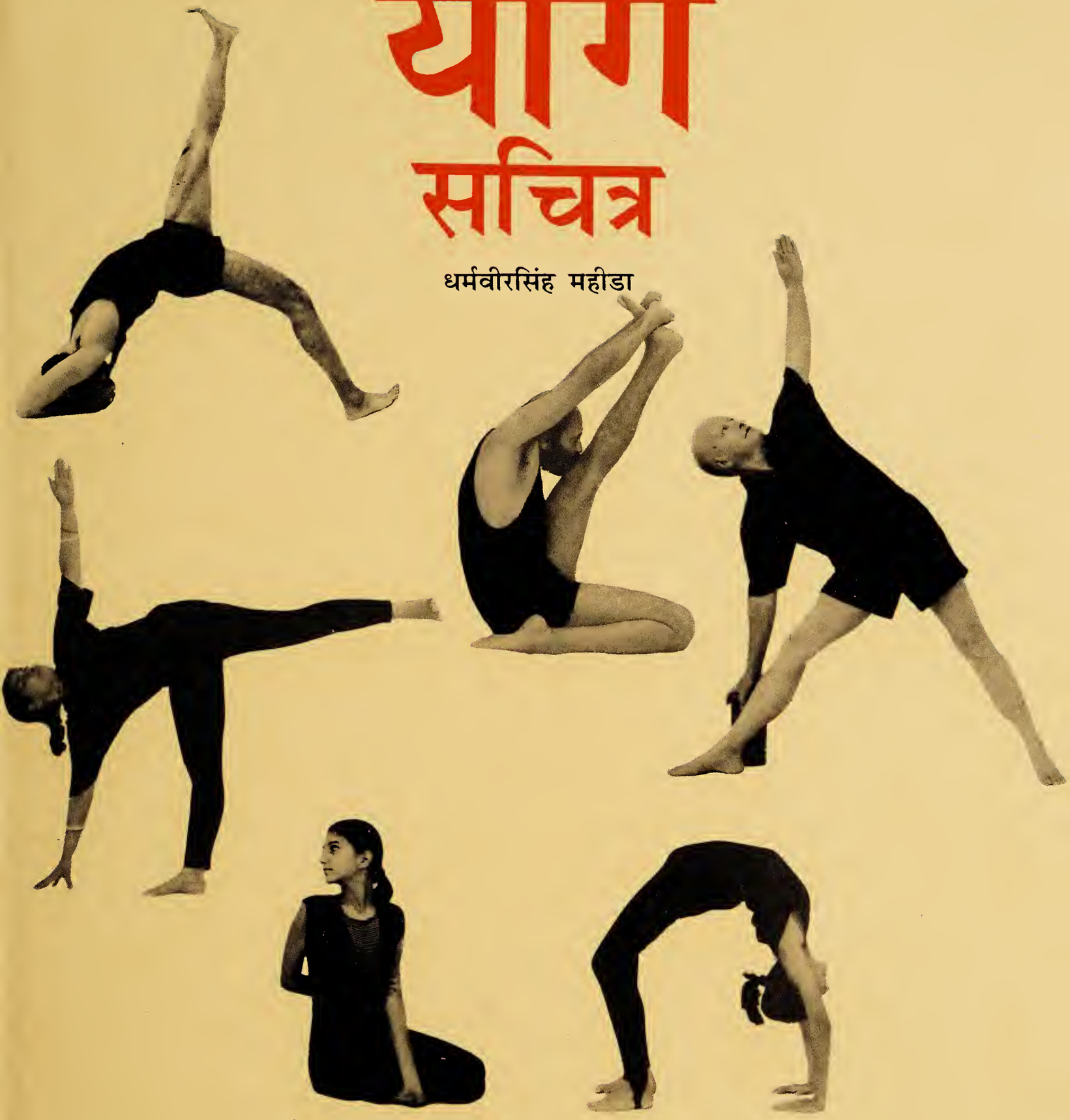
CONCENTRATION OBJECT Focus on a symbol; try something concrete, such as the sun or sky, or a positive quality, like love or compassion. Or try a mantra, such as "OM". Repeat the sound mentally, in time with your breath.

"During meditation, we watch our mind without expectation. Sustained attention combined with detachment ultimately unveils the ocean of wisdom that lies within"

Swami Vishnudevananda

योग सचित्र

धर्मवीरसिंह महीडा



भूमिका : डा० कर्ण सिंह

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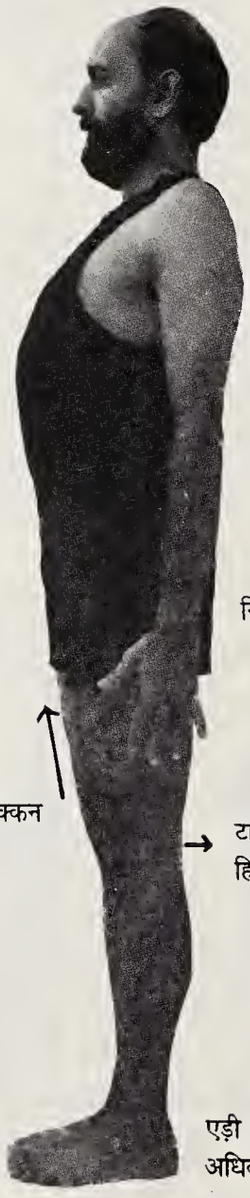
प्रारंभिक/मध्यवर्ती मुद्राएं

इन मुद्राओं का अभ्यास अच्छी तरह किया जाना चाहिए जिससे दूसरे आसनों के अभ्यास के पूर्व आप में अभ्यास की अच्छी आदतें आ जाएं। अंगों तथा जोड़ों को संयोजित करते समय विशेष मांसपेशियों को तानने अथवा ढीला करने के जरिए आप अपनी शरीर-रचना से परिचित होते जाएंगे। इसके बाद आसनों में चाहे खड़े होने, आगे झुकने, मुड़ने या पीछे झुकने की मुद्रा आपको करनी पड़े, आपका अंग-संचालन सही रहता है।

ताड़ासन

हम घंटों खड़े रहते हैं लेकिन यह नहीं सोचते कि क्या हम सही ढंग से खड़े हैं। गलत ढंग से खड़े होने के चलते पीठ के निचले हिस्से, कूल्हों और घुटनों के जोड़ों की उप-अस्थियों पर इकतरफा दबाव पड़ता है। ताड़ासन से हम सही ढंग से खड़ा होना सीखते हैं और इससे भंगिमा ठीक रहती है।



नौसिखियों के लिए

पीठ दीवार से सटाएं

वृक्षासन

वृक्षासन में खड़े होने का अभ्यास करने से लगातार खड़े होने की क्षमता बढ़ती है। इससे शरीर में संतुलन और सधाव आ जाता है। बांहों को फैलाने से रीढ़ को उभारने में सहायता मिलती है। इससे गर्दन तथा कंधों की अकड़न घटती है।

नौसिखियों के लिए

पीठ दीवार से सटी रहे

उत्कटासन

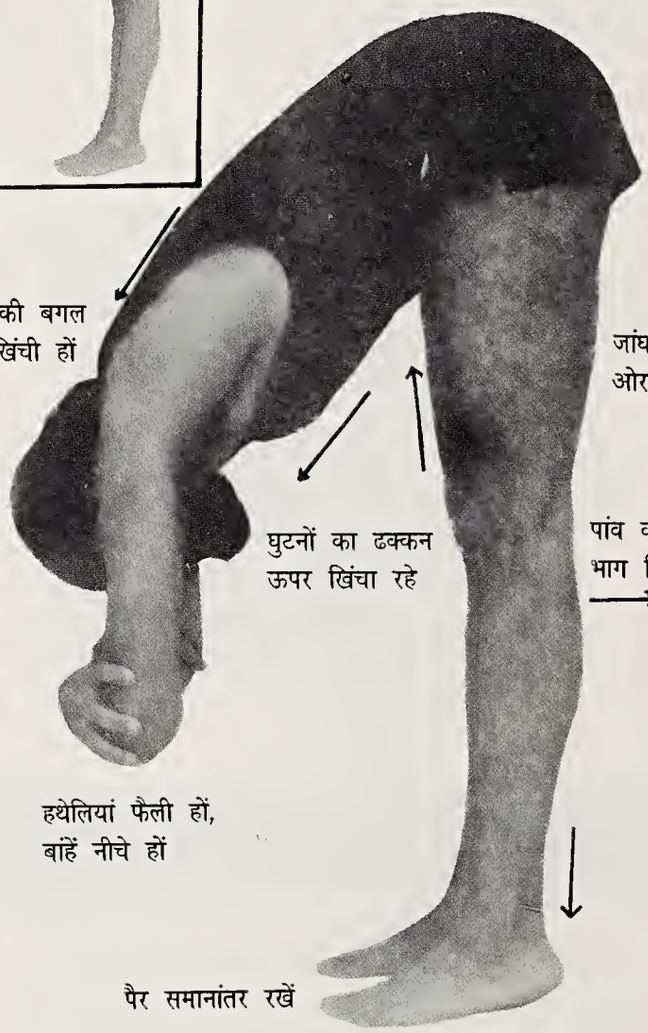
उत्कटासन टखनों तथा पिंडली की मांसपेशियों को मजबूत करता है। रीढ़ में उठान आता है, छाती फैलती है तथा इससे गर्दन तथा कंधों के तनाव में कमी आती है।

नौसिखियों के लिए

पीठ दीवार से सटी रहे

उत्तानासन

यह रीढ़ के ऊपरी हिस्से को तानता है क्योंकि यह पीठ के निचले हिस्से तथा गर्दन/कंधा-क्षेत्र की अकड़न को कम करता है। मुड़े हाथ जब फर्श की ओर ले जाए जाते हैं तो छाती के किनारे तन जाते हैं। साधक जब इस मुद्रा में थोड़ी देर तक रहता है तो घुटने के पिछले हिस्से में काफी खिंचाव होता है। इस खिंचाव के चलते शुरूआत में दर्द होता है। लेकिन इससे घबराना नहीं चाहिए क्योंकि वहां की पेशियां काफी मजबूत होती हैं और वे पांवों, घुटनों तथा रीढ़ के निचले हिस्से के संचालन में महत्वपूर्ण भूमिका अदा करती हैं। इसमें चूंकि सिर का स्तर हृदय से नीचे आ जाता है, तंतु-पट में खिंचाव आ जाता है। इससे यह तब बहुत लाभदायक मुद्रा साबित होती है जब ताड़ासन, वृक्षासन जैसे खड़े होकर करने वाले आसन करें।



टखने को पकड़ना

हाथ पांव के पीछे

हथेली पांव के नीचे

पांव ईंट पर रखें

एक टांग
पद्मासन में हो

पांव बेंच पर रखें

उत्तानासन

नौसिखियों के लिए

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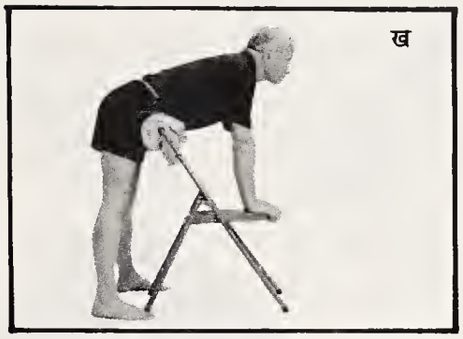


उरु-मूलों को कुर्सी पर टिकाएं

पलंग के किनारे पर गर्दन

कुहनी स्टूल पर रखें

माथा पलंग पर

फंसी उंगलियां पीछे

पीठ दीवार से सटी हो

अधोमुख श्वानासन

उत्तानासन की तरह यह भी पिंडलियों, घुटने की पीछे की नसों तथा बाह्य और आंतरिक रीढ़, बांहों तथा कंधों को तानता है। इस तानने की प्रक्रिया में विभिन्न जोड़ों की अकड़न ढीली हो जाती है। इस आसन को शीर्षासन की प्रारंभिक मुद्रा भी कहा जाता है। अगर इसे किसी सहारे के साथ पांच से दस मिनट तक किया जाए तो आसन के बाद ताजा होने में सहायता मिलती है। तंतु-पट सांस लेने में अधिक हवा भर लेता है जिससे दिल पर दबाव घट जाता है। इससे पाचन तंत्र मजबूत होता है और आंतों में भरी गैस को बाहर निकालने में सहायता करती है।

हाथ बेंच पर

कुहनी पर पट्टी

हाथ गोल किए गए कंबल पर उंगलियां दीवार पर दबाव देती

उल्टी मुड़ी उंगलियां

अधोमुख श्वानासन

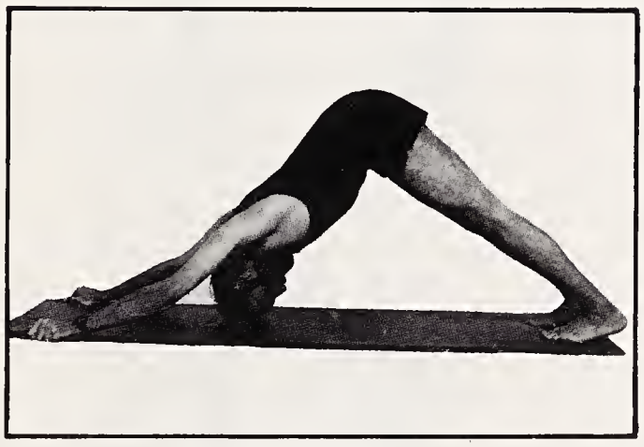
नौसिखियों के लिए

पलंग के किनारे पर हाथ

पांव बेंच के ऊपर

नौसिखियों के लिए

कुर्सी पर



चटाई का किनारा पकड़कर

पद्धति

अंगूठा और तर्जनी दीवार तक

एड़ी को दीवार से लगाएं
और फर्श को दबाएं

→

अधोमुख वृक्षासन

यह गर्दन तथा कंधा-क्षेत्र में तनाव ढीला करता है तथा कंधों, बांहों और कलाइयों को मजबूत बनाता है। इन हिस्सों में रक्त संचार बढ़ जाता है। इस मुद्रा से रीढ़ में खिंचाव आता है जिससे वह दूसरे आसनों को करने के पूर्व अनुकूल हो जाता है।

हाथ की स्थितियां

पद्धति

अधोमुख वृक्षासन

नौसिखियों के लिए

गलियारे या चौखट में

अन्य तरीके

वीरासन की तरह
झुके पांव

नौसिखियों के लिए दीवार
पर पांव चढ़ाने का तरीका

रस्सी में बंधी कुहनी

उत्थित हस्त पादांगुष्ठासन

यह पांव के पीछे की अति महत्वपूर्ण पेशियों पर असर वैसे ही डालता है जैसे उत्तानासन में वर्णित किया गया है। कूल्हे से लेकर कुहनी तक पूरी शरीर-रचना में ऐसी चुस्ती आ जाती है कि कूल्हे के जोड़ की अकड़न जाती रहती है। अगर इस आसन में पूरा वक्त दिया जाए तो दूसरे खड़े होकर और आगे झुककर करने वाले आसनों में आसानी रहती है। जिनकी रीढ़ के निचले हिस्से और घुटनों में दर्द रहता है, इस आसन को नियमित रूप से करें।

एड़ी का पिछला हिस्सा सीढ़ी पर

खिड़की की छड़ पर एड़ी

सुप्त पादांगुष्ठासन

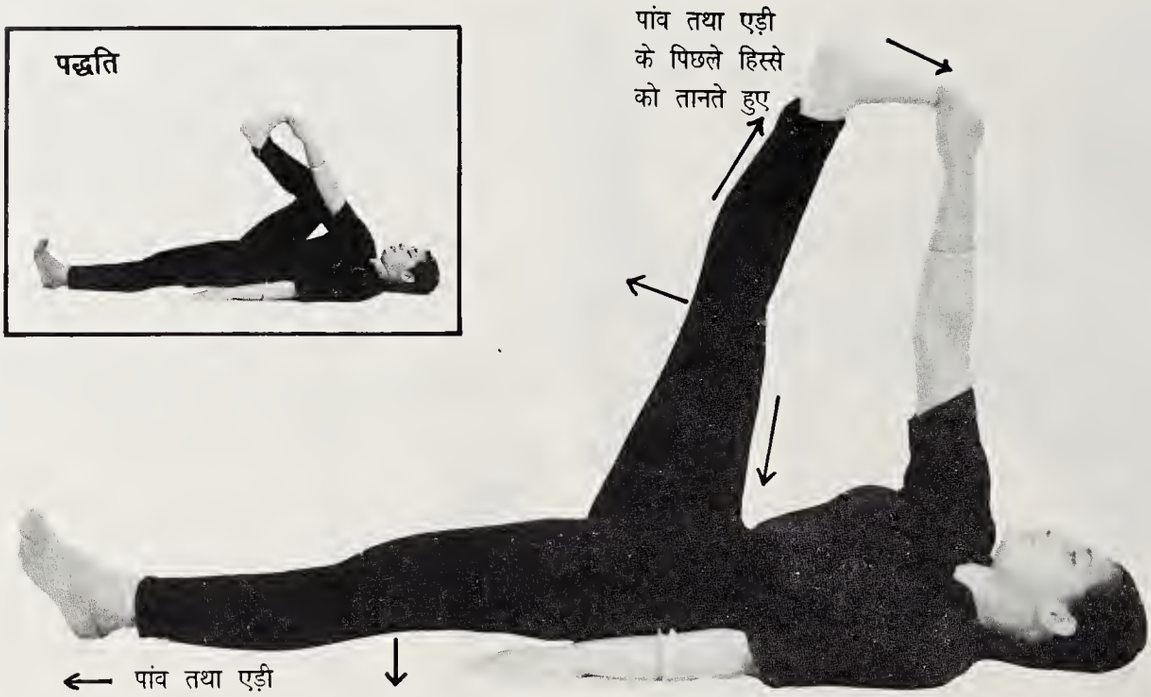
यह पांव के पीछे की अति महत्वपूर्ण पेशियों पर वैसे ही असर डालता है जैसे उत्तानासन में वर्णित किया गया है। कूल्हे से लेकर कुहनी तक पूरी शरीर-रचना में ऐसी चुस्ती आ जाती है कि कूल्हे के जोड़ की अकड़न जाती रहती है। अगर इस आसन में पूरा वक्त दिया जाए तो दूसरे खड़े होकर और आगे झुककर करने वाले आसनों में आसानी रहती है। जिनके शरीर के निचले हिस्से और घुटनों में दर्द रहता है, इस आसन को नियमित रूप से करें।

पद्धति

पांव बगल की दीवारों पर

पट्टी/रस्सी की सहायता
से पांव दीवार पर

सुप्त पादांगुष्ठासन



डाइनिंग टेबुल के
सहारे उठा पांव

एक पांव दीवार से
लगा, दूसरा सीधा

छाती के नीचे दबी पट्टी

पांव को पट्टी/रस्सी
के सहारे खींचना

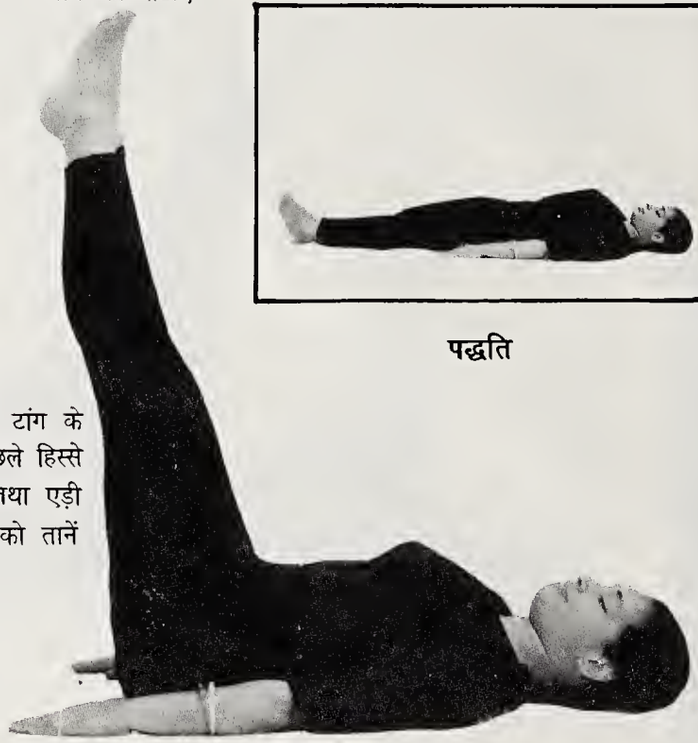
नावासन

यह पेट तथा अधोपीठ को मजबूत बनाता है और जठराग्नि को बढ़ाता है और भूख को तेज करता है। जठराग्नि बढ़ने से पाचन शक्ति बढ़ जाती है।

उर्ध्व प्रसारित पादासन

यह बहुत अच्छा व्यायाम है जिससे पेट और अधोपीठ मजबूत होती है, पाचन शक्ति बढ़ जाती है तथा कमर के हिस्से में जमा होती वसा घटने लगती है। पेट के सिकुड़ने से अंदरूनी अंग तथा अंतड़ियां चुस्त हो जाती हैं। *चेतावनी : जिन्हें निचली रीढ़ में दर्द की या स्नायविक तनाव की शिकायत हो अथवा जिन महिलाओं को स्त्री-रोग हो, उन्हें ये आसन नहीं करने चाहिएं।* इस आसन के पूरा होने के तुरंत बाद कोई स्थिर आसन जैसे सुप्त वीरासन, विपरीत दंडासन या सेतुबंध सर्वांगासन करना चाहिए ताकि कुछ मिनटों तक तंतु-पट में खिंचाव आए।

पद्धति



जठर परिवर्तनासन

पद्धति

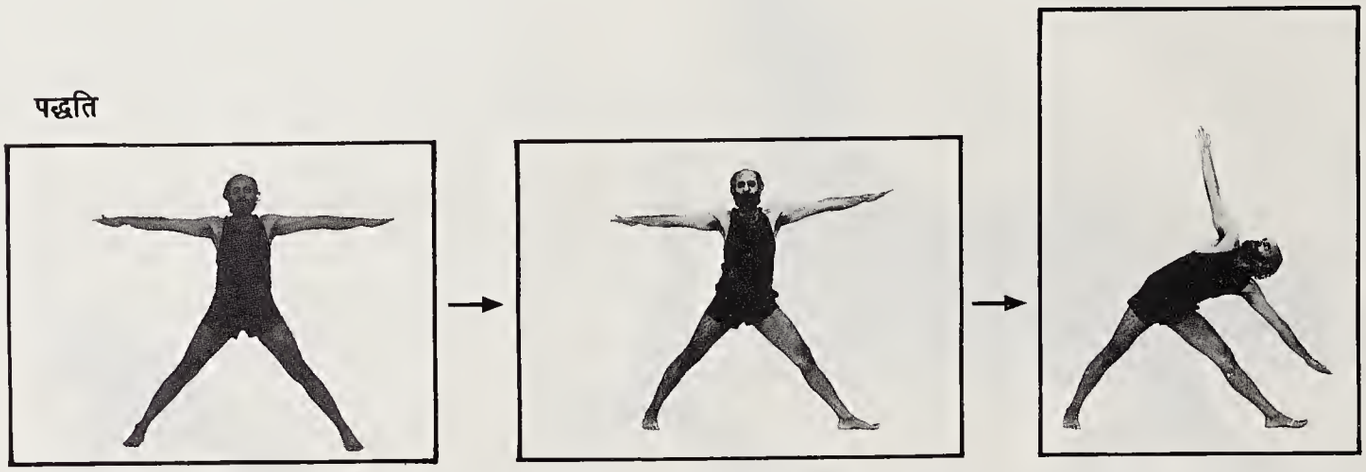
खड़ी मुद्राएं

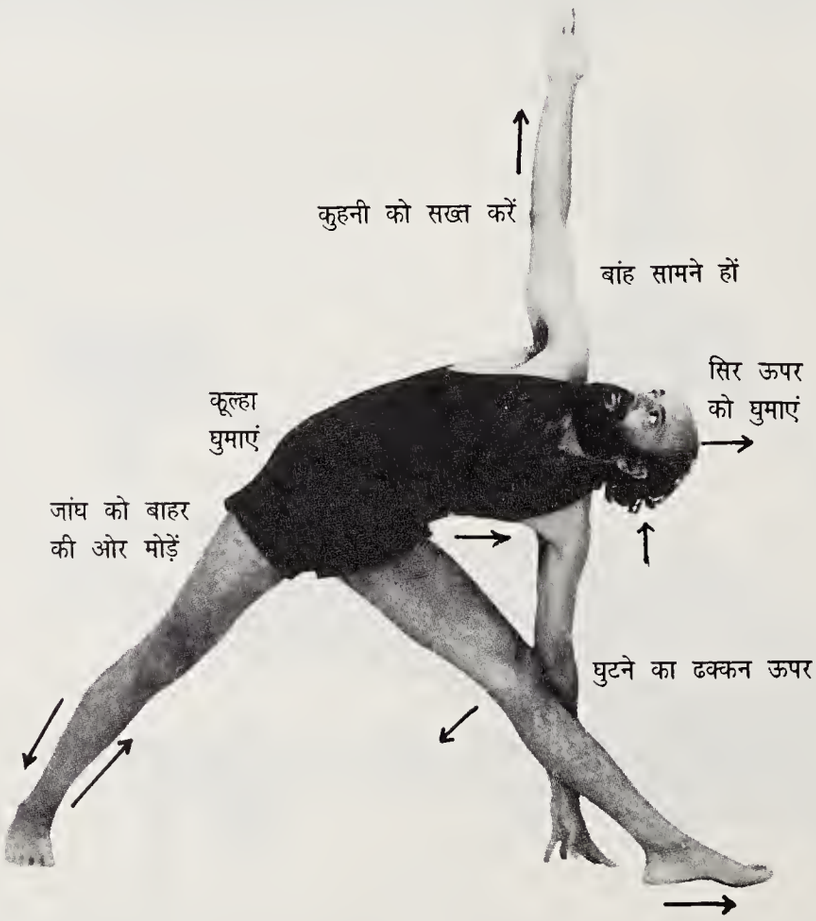
योग प्रणाली की शक्ति इन्हीं आसनों पर आधारित है। ये शरीर के विभिन्न अंगों तथा जोड़ों को फैलाते हैं, शक्तिशाली बनाते हैं और उन्हें जागृत कर देते हैं। इस प्रक्रिया में पूरी शरीर-रचना को संतुलित कर देते हैं। गलत संचालन, गलत आदतों तथा एक ओर झुके रहने के चलते मांसपेशियों में जो असंतुलन पैदा होता है, इन आसनों से वे भी ठीक हो जाते हैं। रीढ़ की मांसपेशियां, अंग तथा संबंधित जोड़ काफी आगे झुकने, पीछे झुकने या संचालन वाले आसनों को करने के लिए तैयार हो जाते हैं। अच्छा यह है कि इन मुद्राओं को पहले दीवार के सहारे करें।

त्रिकोणासन

शीर्षासन को योगासनों का राजा कहा जाता है तो त्रिकोणासन को योगासनों का मंत्री कहा जाना चाहिए। वैसे तो यह सरल दीखता है, लेकिन इसमें कंपन के साथ जो गतिशीलता अंतर्निहित है, वह अनुभव किये जाने योग्य है। इस आसन को दुहराने के वक्त भी इसका अनुभव नया जैसा ही लगता है। दोनों टांगों में घुटनों के ऊपर की पेशियों तथा पांव के पीछे की पेशियों में खिंचाव होने से साधक को महसूस होता है कि उसके दोनों पांवों में शरीर की ठोस आधारशिला बनाई जा रही है। घुटनों, कूल्हों, कंधों, कुहनियों, कलाइयों और पूरी रीढ़ में अच्छा खिंचाव होता है और इससे साधक की मुद्रा सहज, प्राकृतिक संरचना वाली हो जाती है।

पद्धति





पिछली टांग की तरफ का दृश्य

त्रिकोणासन

अन्य तरीके

ऊपरी हाथ की उंगलियां
नीचे की ओर, पैर का अंगूठा
ऊपर दीवार पर

पूरा तलवा दीवार पर

पट्टी पीछे की ओर

पिछला पैर दीवार की ओर

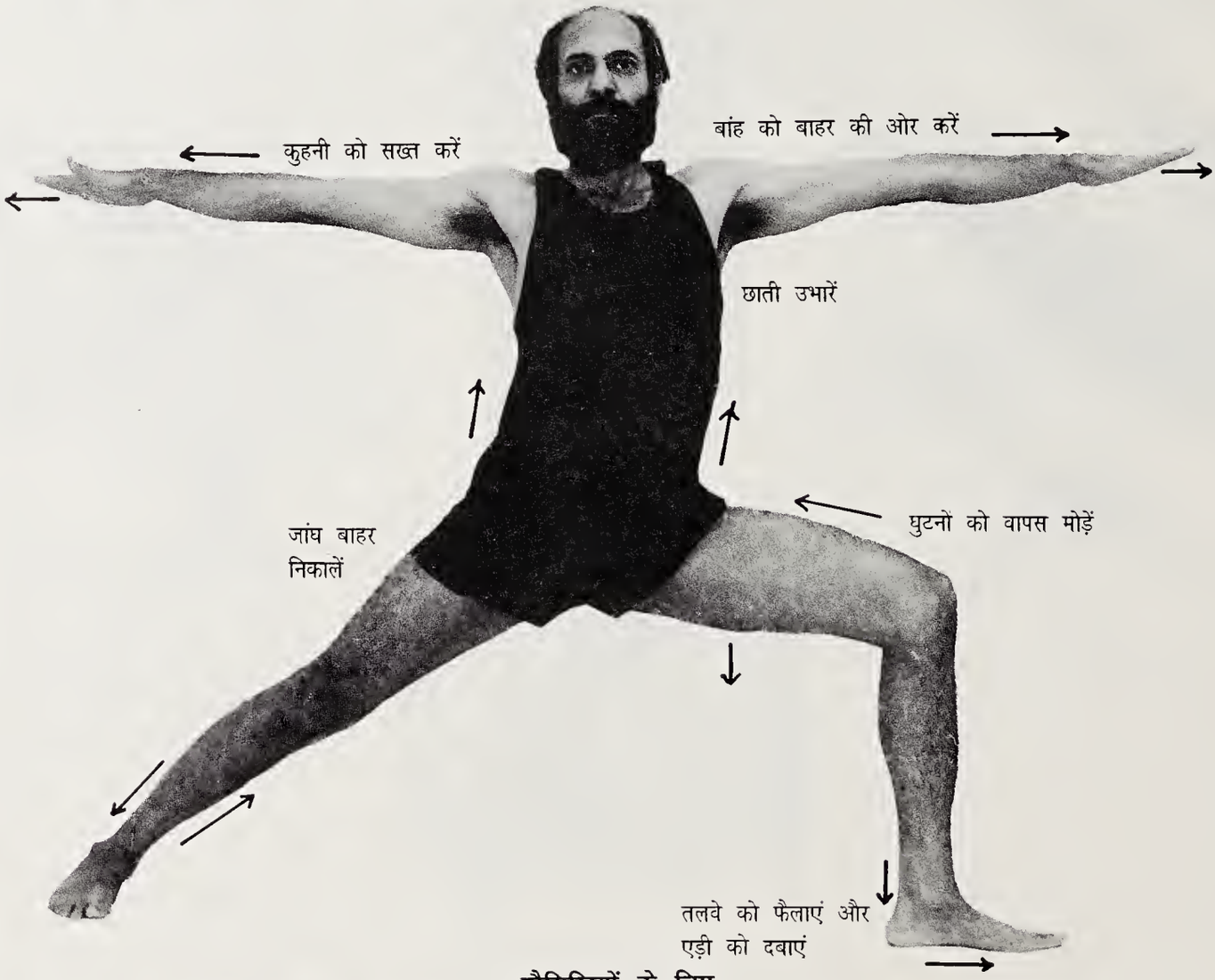
नौसिखियों के लिए

पलंग की ओर झुकते हुए

हाथ के नीचे ईंट और
पीठ दीवार की ओर

वीरभद्रासन II

इस आसन में रीढ़ काफी उभर जाती है, इसलिए टांगों और कंधों में गजब की शक्ति आ जाती है। कूल्हे के जोड़ की अकड़न भी जाती रहती है। तंतु-पट बहुत खुल जाता है, जिससे ऐसे कठिन आसन में अधिक आक्सीजन मिलने की समस्या भी हल हो जाती है।



नौसिखियों के लिए

दीवार की ओर उलटा झुककर पांव के पंजे दीवार पर रखें

जांघ कुर्सी पर

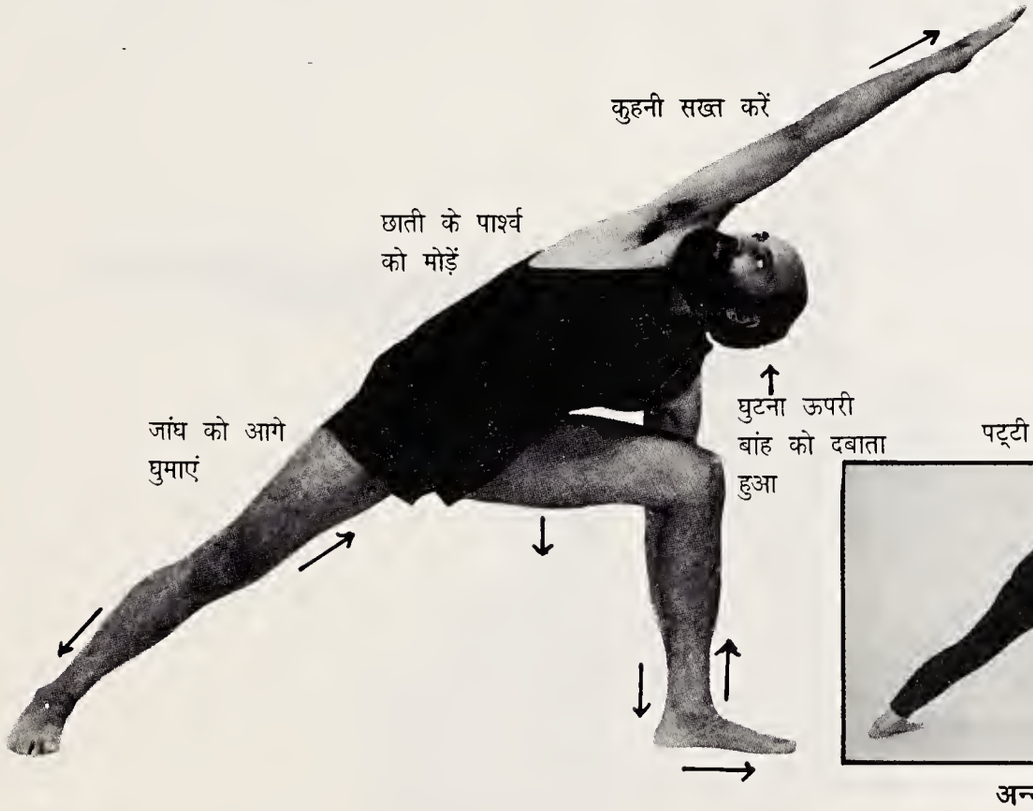
दीवार की तरफ झुकें

पिछला पांव दीवार पर

पार्श्व कोणासन

इस आसन में श्रोणी से नीचे का शरीर का हिस्सा पूर्व में दिए गए आसन जैसा ही रहता है। लेकिन रीढ़ के किनारे को तानने के चलते पीठ का ऊपरी हिस्सा जाग्रत हो जाता है। कूल्हे के पार्श्व इतने खिंच जाते हैं कि वहां वसा का जमाव नहीं हो पाता।

पद्धति



पट्टी पीछे से

अन्य प्रकार

नौसिखियों के लिए

दीवार की ओर झुकते हुए हाथ ईट पर

पलंग की ओर झुकते हुए

उंगली नीचे की ओर

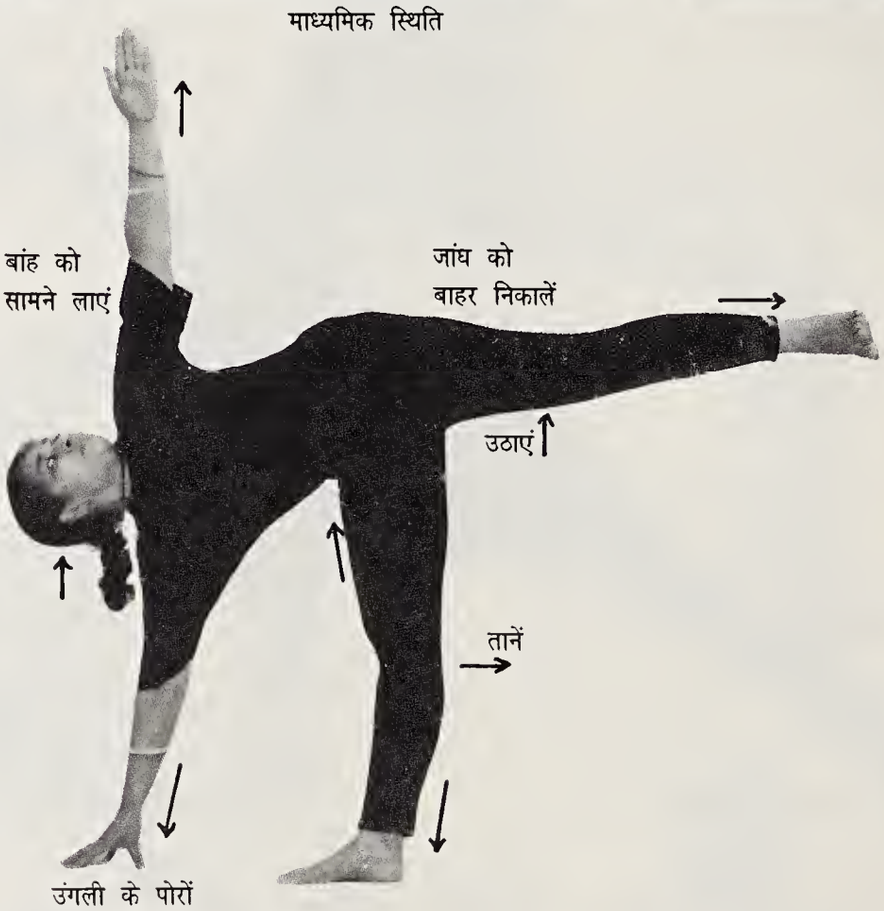
हाथ घुटनों के सामने पांव के पंजे दीवार पर

अर्ध चन्द्रासन

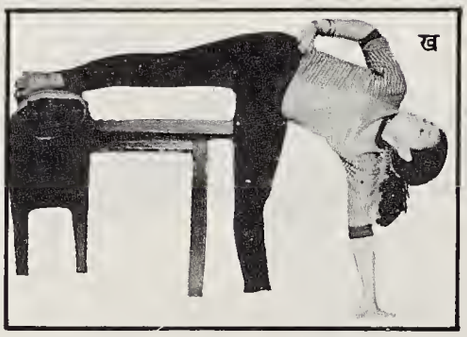
इस आसन में शरीर का वजन एक पांव पर ही आ जाता है जिससे इसकी पेशियां तो मजबूत होती ही हैं, साथ में कूल्हे और घुटनों के जोड़ भी मजबूत हो जाते हैं। यह कूल्हे में आई अकड़न को दूर करने वाले सर्वोत्तम आसनों में से एक है। पीठ के निचले हिस्से (अधोपीठ) को भी इससे आंराम मिलता है।

पद्धति

माध्यमिक स्थिति



दीवार की ओर झुकें
हाथ ईट पर रहे



पांव डाइनिंग टेबल पर

पलंग के सहारे झुकें

परिवृत्त त्रिकोणासन

इन मुद्राओं से रीढ़ में बगल से मरोड़ होता है जिससे टांगों, नितंबों, छाती के अगले तथा पिछले हिस्से, कंधों तथा हाथों की रीढ़ से जुड़ी पेशियां मजबूत हो जाती हैं। पेट की पेशियां तथा इस हिस्से के सभी अंग चुस्त हो जाते हैं।

पद्धति

दूसरे हाथ की
दिशा में घुमाएं

तना हाथ

छाती की बगल वाला
हिस्सा घुमाएं

पिछले पांव
को फैलाएं

पैर को अंदर
की ओर मोड़ें

परिवृत्त त्रिकोणासन

विभिन्न प्रकार

पट्टी पीछे हो

नौसिखियों के लिए

पीठ दीवार की ओर

पलंग पर झुकते हुए

पीठ दीवार की ओर
हाथ ईट पर

पलंग पर झुकते हुए

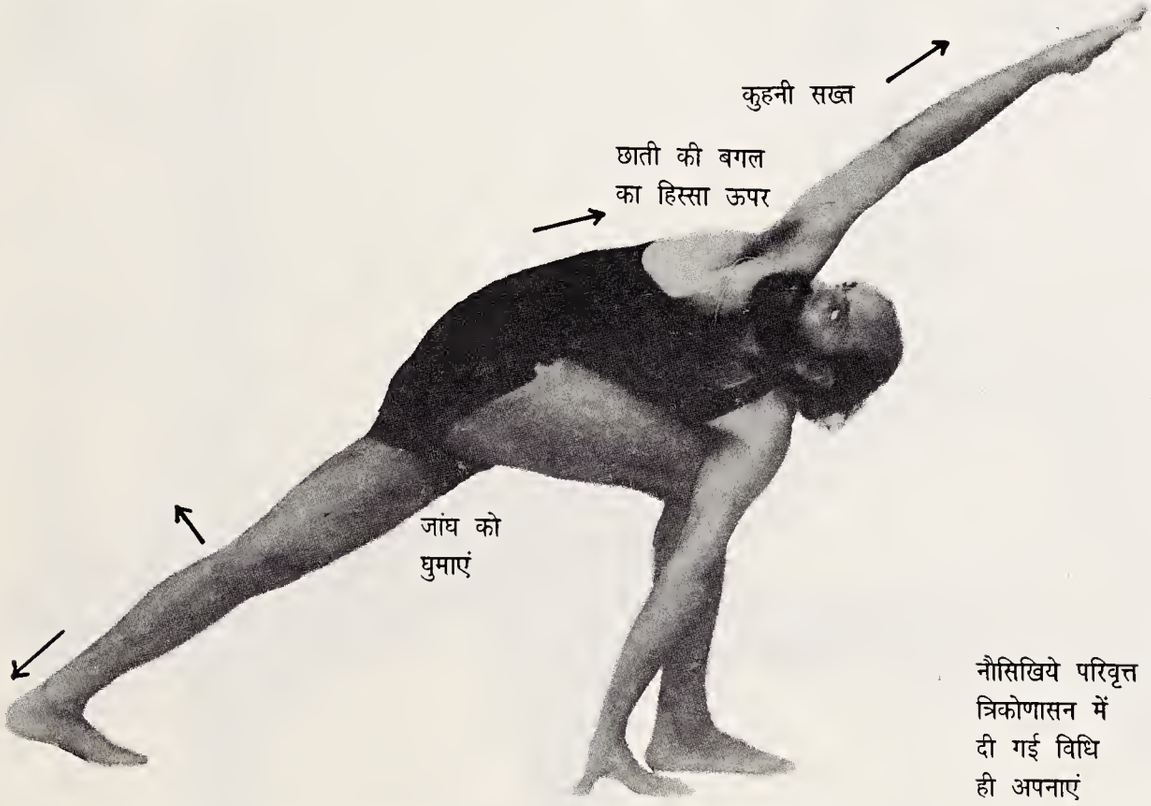
डाइनिंग टेबल का उपयोग

पलंग का उपयोग

परिवृत्त पार्श्वकोणासन

पद्धति

पीछे का दृश्य



नौसिखिये परिवृत्त
त्रिकोणासन में
दी गई विधि
ही अपनाएं

नौसिखियों के लिए

पलंग का उपयोग

दीवार का उपयोग

परिवृत्त अर्ध चन्द्रासन

पद्धति

बांह बाहर की ओर घुमाएं

नितंब सीधे रहें

घूमें

पिछला पांव तानें

फर्श को उंगलियों से दबाएं

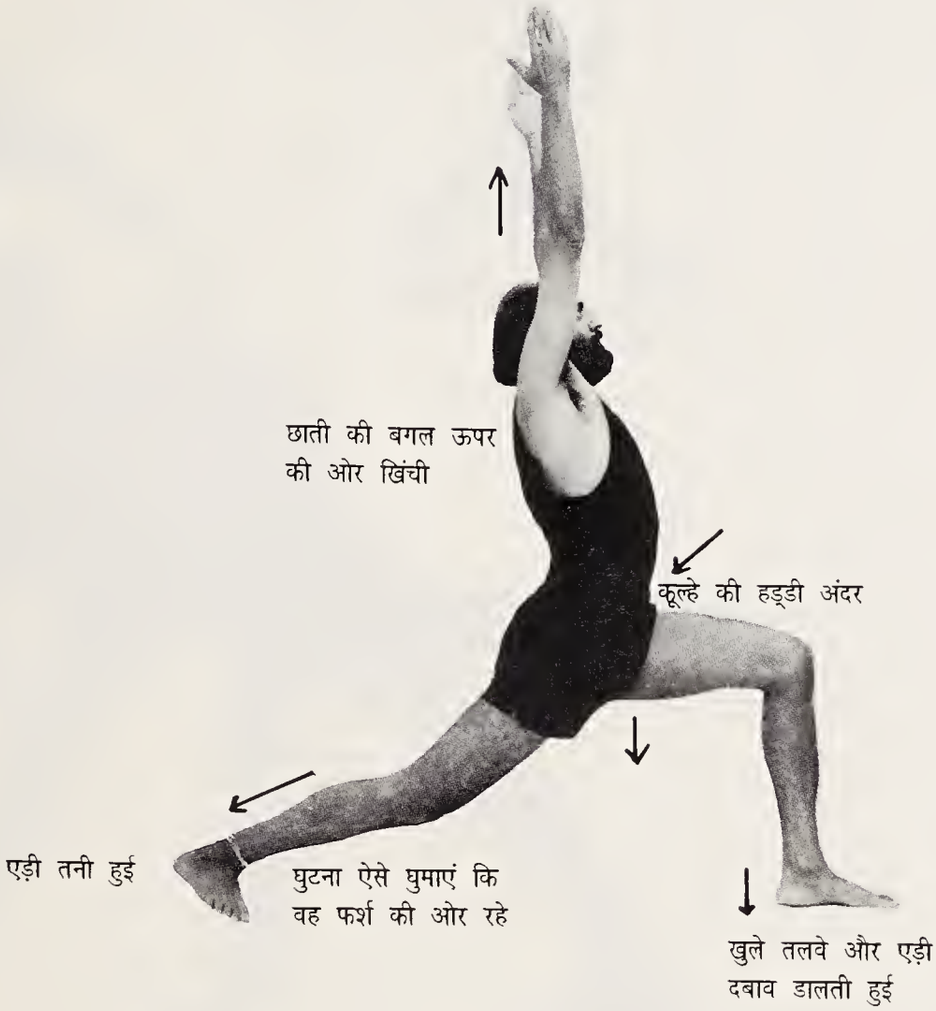
नौसिखियों के लिए

पिछला पांव दीवार पर
दीवार पर झुके हुए

वीरभद्रासन I

इस आसन का नामकरण न केवल एक योद्धा के नाम पर किया गया है, बल्कि इस आसन को करते समय आप एक योद्धा के रूप में भी महसूस करेंगे। टांग दृढ़ता से फर्श पर और हाथ के ऊपर होने के कारण सांस गहरी हो जाती है और शरीर ऊर्जा से भर जाता है।

पद्धति



जांघ कुर्सी पर

नौसिखियों के लिए

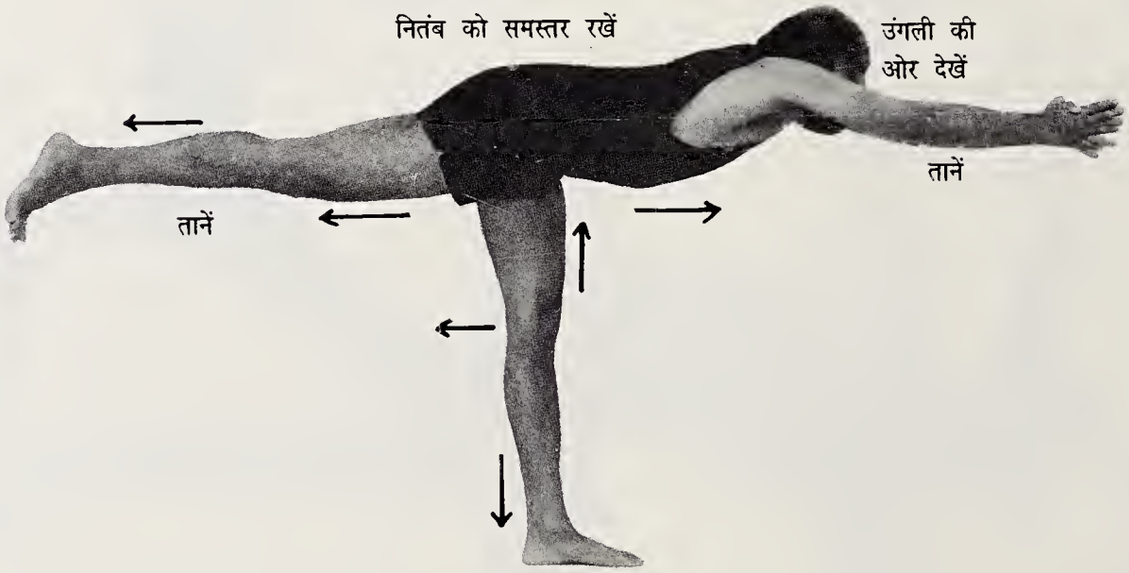
हाथ और पांव दीवार पर

ऊपरी बांह पर चढ़ी पट्टी

वीरभद्रासन III

यह पूर्व के आसन का ही विस्तार है। इस आसन से मन दृढ़ होता है जिसके बगैर संतुलन संभव नहीं है। इसमें पूरा शरीर उंगली के पोर से लेकर तने पांव के पंजे तक तन जाता है। सौंदर्य की दृष्टि से भी यह संतुलित आसन है।

पद्धति



हाथ दीवार को धक्का दें

हाथ स्टूल/कुर्सी पर
पिछला पांव दीवार पर

पार्श्वोत्तानासन

इसके लाभ उत्तानासन जैसे ही हैं। पिछले पांव की ओर काफी तानकार, रीढ़ को बगल की ओर बढ़ाया जा सकता है। पीछे ले जाकर हथेलियों/हाथों को मोड़ने से गर्दन, कंधा तथा कलाइयों को आराम मिलता है। टांग के पीछे की महत्वपूर्ण पेशियों को भी इससे शक्ति मिलती है। कूल्हों के जोड़ भी संचालित हो जाते हैं।

पद्धति

हाथ जुड़े हुए

कुहनी ऊपर

नितंब उसी लाइन में

जांघ को अंदर घुमाएं

पिछला पांव तानें

पिछला पांव अंदर मोड़ें

एड़ी से फर्श दबाएं

पीछे ले जाकर हाथ जोड़ें

पीछे ले जाकर हाथ सटाएं

पीछे ले जाकर हाथ जोड़ें

पार्श्वोत्तानासन

नौसिखियों के लिए

सिर और हाथ पलंग पर

हाथ ईंट पर और
सिर ऊपर उठा

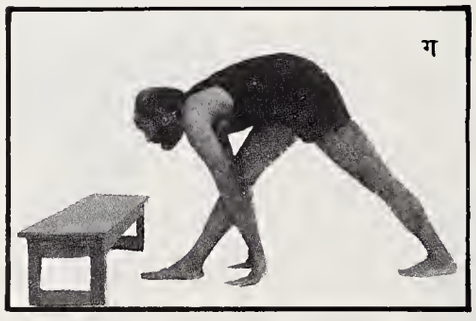
विभिन्न प्रकार

हाथ फर्श पर

पीछे ले जाए गए हाथ जुड़े हुए

हाथ बेंच पर

पीछे ले जाकर हाथ जोड़ने का तरीका



हाथ पांव के पीछे और सिर उठा हुआ

प्रसारित पादोत्तानासन

यह उत्तानासन पांव फैलाकर किया जाता है। टांग की पीछे की तरफ की पेशियां तथा रीढ़ के निचले हिस्से से जुड़ी पेशियां तन जाती हैं। कूल्हों की अकड़न तथा दर्द में आराम मिलता है। हृदय, पाचन, गर्दन तथा कंधे में उत्तानासन से जो लाभ पहुंचता है, वे सब लाभ भी इस आसन से होते हैं।

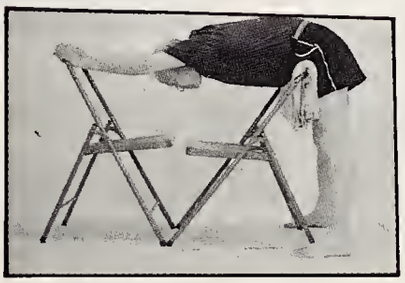
पांव के बाहरी किनारे को दबाएं

पार्श्व का दृश्य

हाथ/सिर फर्श पर

हाथ से फर्श दबाएं

क



दो कुर्सियों पर रखकर ऊपरी शरीर को तानें

ख

हाथ स्टूल पर

प्रसारित पादोत्तानासन

दीवार को ठेलना

विभिन्न प्रकार

दीवार/फर्श पर हाथों की स्थिति

हाथ फर्श पर,
सिर ऊपर उठा

ईट खड़ी, सिर ऊपर उठा

ठुड्डी पलंग पर

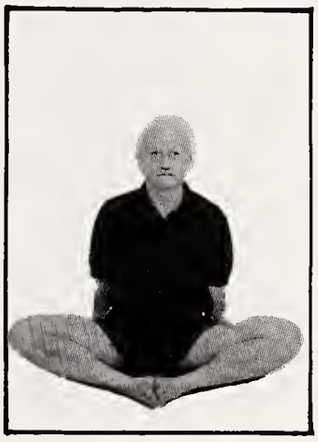
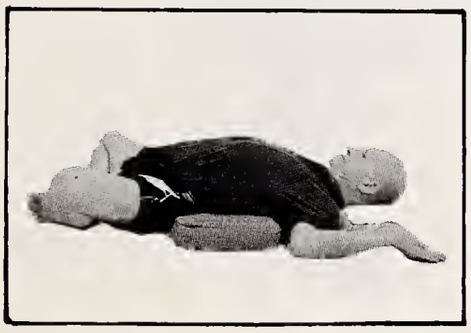
पलंग के
किनारे पर

ऊंपरी शरीर बिस्तर या तकिये पर फैला हुआ

ऊपरी शरीर डाइनिंग टेबुल पर फैला हुआ

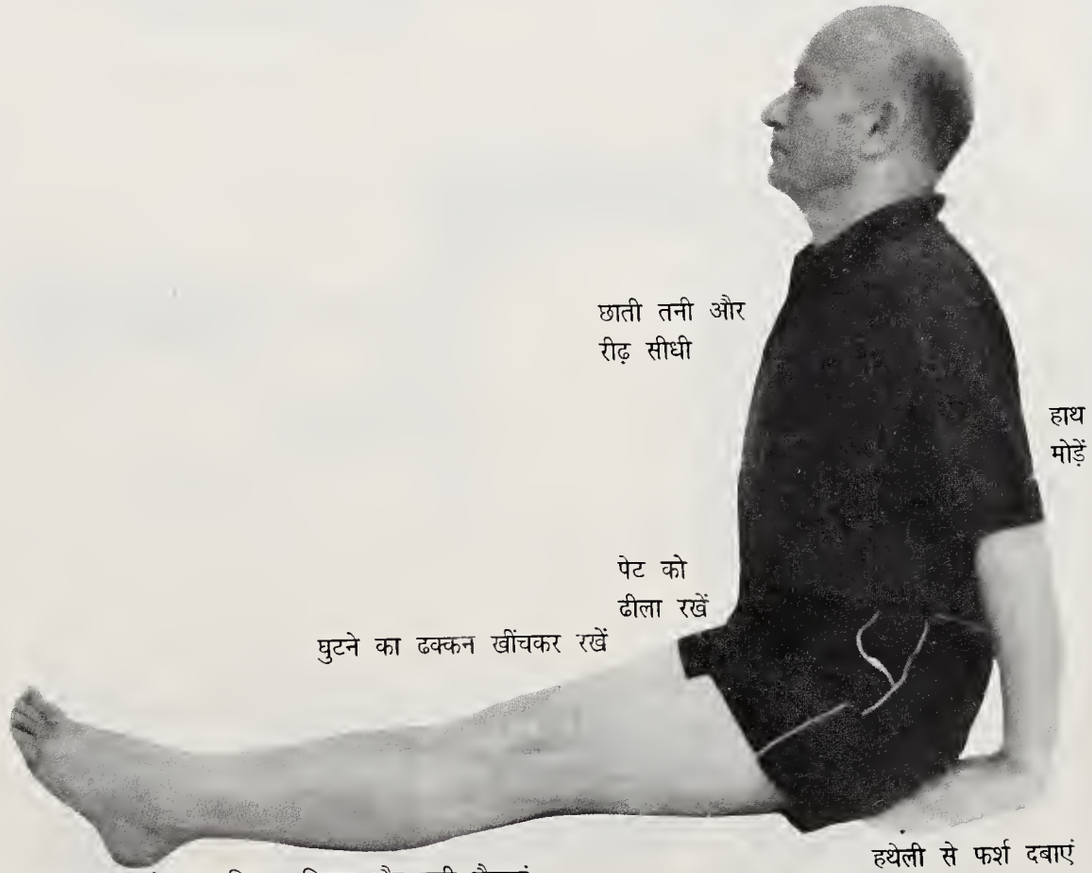
स्वास्थ्य-लाभ के आसन

व्यायाम के दौरान शरीर एकपक्षीय अंग संचालन और परिश्रम से गुजरता है तो इसे फिर से सामान्य होने की जरूरत आ पड़ती है। व्यायाम से जुड़ी पेशियों तथा हृदय की पेशियों को रक्त की रासायनिक संरचना में स्थायित्व लाकर फिर से जाग्रत और ऊर्जावान करने की आवश्यकता होती है। इन आसनों में टांगों को आराम मिलता है क्योंकि पेशियों का तनाव/खिंचाव फिर से संतुलित हो जाता है। चित होकर किये जाने वाले आसनों में रीढ़ को आराम मिलता है। छाती फैल जाती है जिससे गहरी सांस चलने लगती है और जल्दी ही दिल की धड़कन सामान्य हो जाती है। ये आसन व्यायाम के बीच में भी किये जा सकते हैं। शरीर का ऊपरी हिस्सा नीचे और निचला हिस्सा ऊपर हो, ऐसे आसनों को अगर किसी चीज की मदद से काफी देर तक किया जाए तो शरीर जल्दी ही फिर से ऊर्जावान हो जाता है।

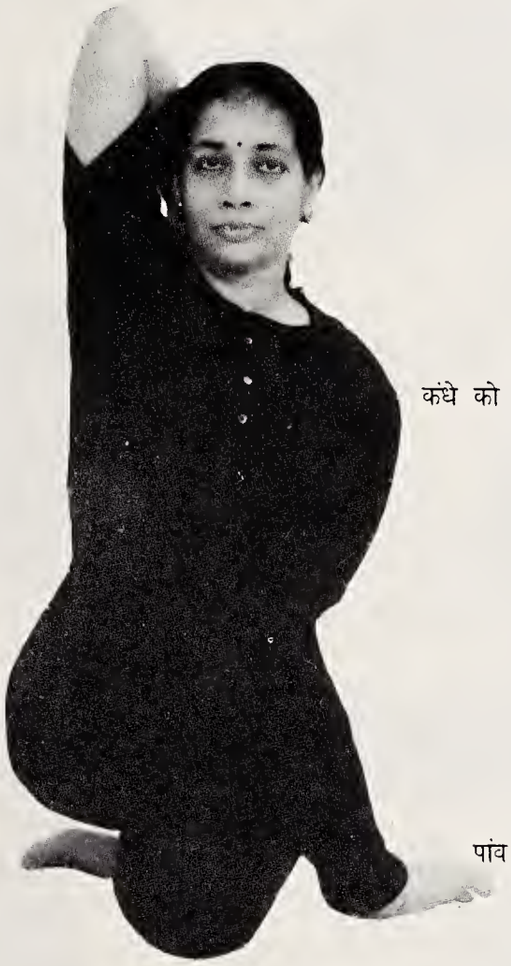
दंडासन

जैसे ताड़ासन से हम खड़े होने की मुद्रा सीख चुके हैं, वैसे ही दंडासन से हम बैठने की मुद्राएं सीख सकते हैं। इससे बिना कंधे उचकाये या झुकाये सीधे बैठने का ढंग सीखा जा सकता है। इसमें हमें कूल्हे से लेकर पंजों तक टांगों तथा पैरों को तानने तथा उनका संचालन करने का ढंग आत्मसात कर लेना चाहिए क्योंकि इसी के आधार पर एक या दोनों पांव सामने फैलाकर शरीर को आगे मोड़ने या झुकाने की क्रिया कर सकते हैं।



गोमुखासन

इससे कूल्हे के जोड़ों, कलाई, कंधों, कुहनी और उंगलियों की अकड़न जाती रहती है।



कंधे को पीछे दबाएं

पांव उलटा करें

कुहनी को पीछे दबाएं

नौसिखियों के लिए

पट्टी के उपयोग का तरीका

वीरासन

व्यायाम के बाद सामान्य होने के लिए यह सर्वश्रेष्ठ आसनों में से एक है क्योंकि इससे टांगों को अच्छा आराम मिलता है। अगर साधक काफी अरसे तक खड़ा रहा हो, पैदल चला हो, साइकिल चलाता रहा हो, खेलता रहा हो या खड़े होकर करने वाला आसन करता रहा हो तो इस आसन से टांगें फिर से स्फूर्ति से भर जाती हैं। इसके बाद दुबारा व्यायाम भी किया जा सकता है। आप चाहें तो अन्य काम करते समय भी इस आसन में बैठने की आदत डाल सकते हैं। इससे कुहनी, घुटने और कूल्हे सामान्य हो जाते हैं और जोड़ों में होने वाली समस्याओं से छुटकारा मिल जाता है। विभिन्न प्रकार से बैठकर इस आसन को करने से उंगलियां, कलाइयां, कुहनियां, कंधे या गर्दन के जोड़ों में सुघरता आ जाती है। यह प्राणायाम के लिए भी अच्छी मुद्रा है।

नौसिखियों के लिए

कुहनी उठाकर रीढ़ सीधी करना

पीछे ले जाकर हाथ तानना

ऊंचाई पर बैठना

उंगलियां फंसी हुई और हथेलियां छत की ओर

आगे झुकना

नौसिखियों के लिए

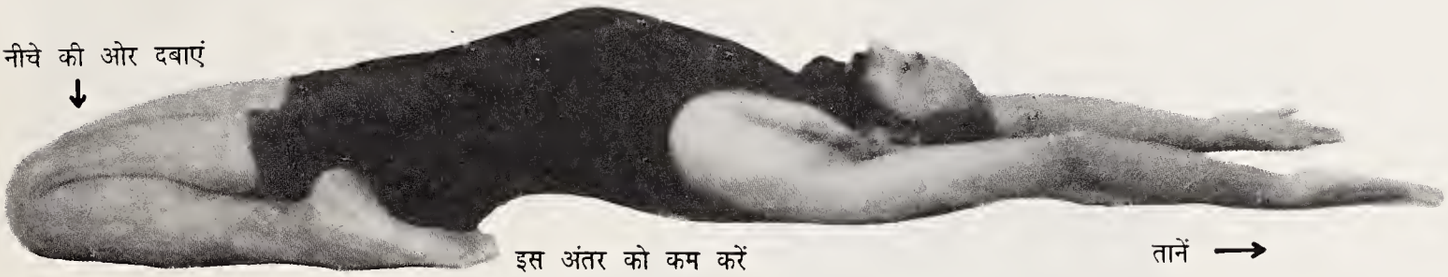
पट्टी का उपयोग करते हुए

पलंग पर बैठे हुए, पंजे नीचे रखें अगर टखने या घुटने में दर्द हो

पीछे ले जाकर हाथ जोड़ें

सुप्त वीरासन

यह वीरासन ही है मगर इसे लेटकर किया जाता है जिसके चलते रीढ़ को आराम मिलता है, पेट और तंतु-पट तन जाते हैं जिससे सांस के जरिए आक्सीजन जाने की मात्रा बढ़ जाती है और इससे शरीर तेजी से सामान्य हो जाता है। इस आसन को खाना खाने के बाद भी किया जा सकता है। आगे मुड़कर ही इस आसन को समाप्त करें।



ऊपरी पीठ ईट पर

नौसिखियों के लिए

रीढ़ को किसी ऊंची चीज का सहारा दें

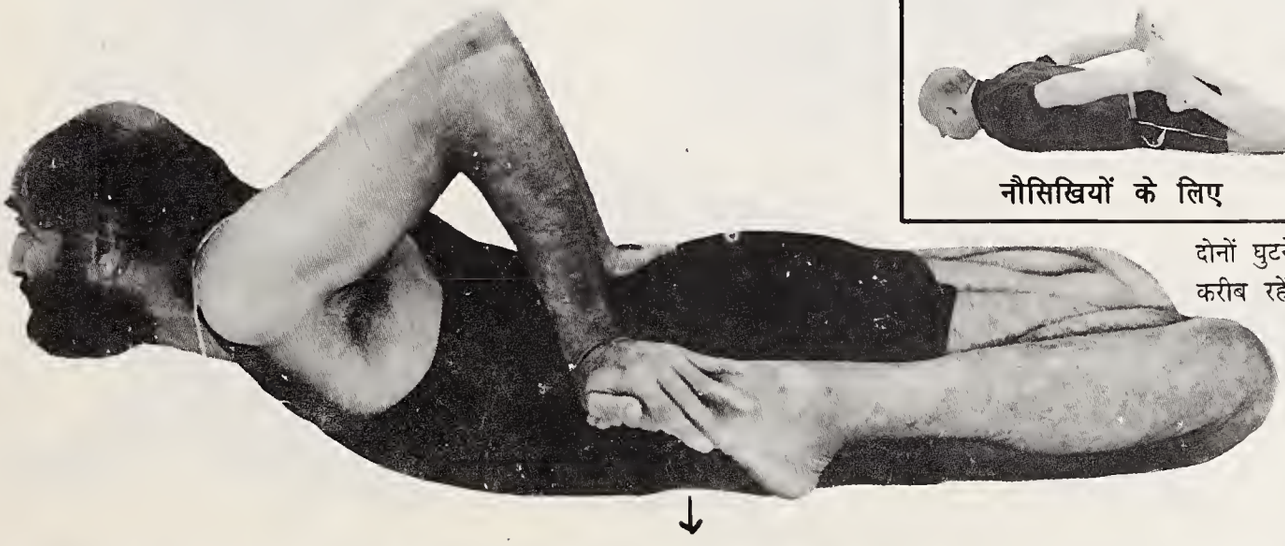
ईट लेटी हो

ईट खड़ी हो

भेकासन

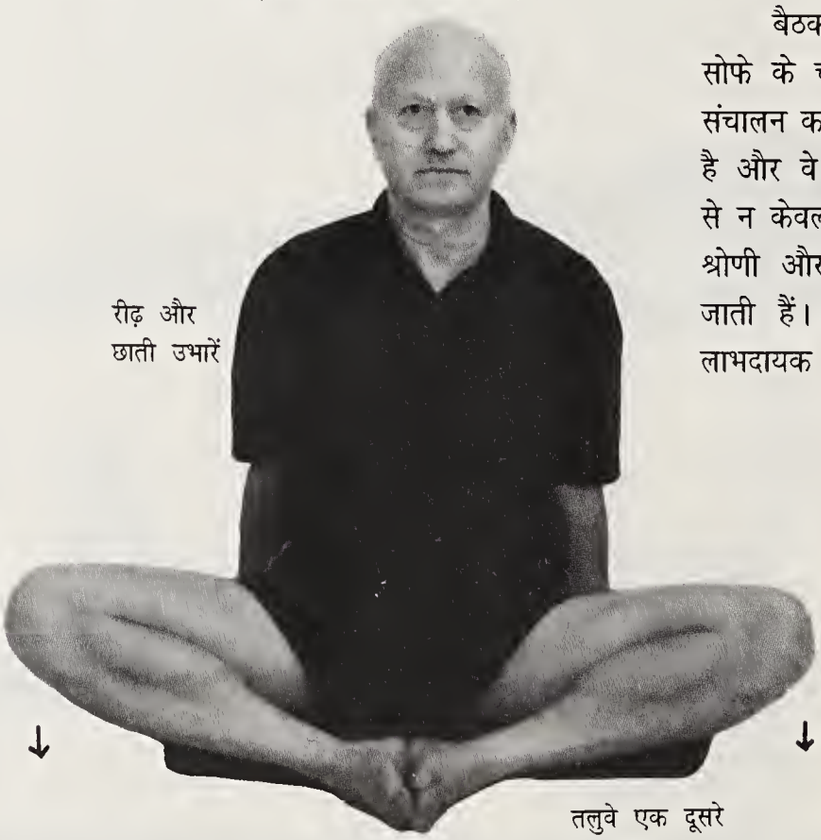
इस आसन में घुटने और कुहनी का संचालन प्राकृतिक दिशा में खूब होता है। इसके अभ्यास से घुटनों की समस्या से बचा जा सकता है। अगर इस आसन के अभ्यास के बाद भी दर्द रहता है तो 'योग-चिकित्सा' वाले अध्याय में इस आसन की दी गई विधि से आसन करें। खिलाड़ियों के लिए सुप्त वीरासन और भेकासन आवश्यक आसन हैं। चाहे तो एक बार में एक ही टांग से आसन करें।

नौसिखियों के लिए



बद्धकोणासन

बैठकर किये जाने वाले आसनों की श्रृखला में ही यह आसन भी आता है। इसे भोजन के बाद भी किया जा सकता है। रीढ़ को आराम मिलने के बाद गैस बाहर निकल जाती है। यह श्रोणी के किनारों को तान देता है जिससे लंबी सांस चलने लगती है तथा उस हिस्से में रक्त संचार बढ़ जाता है। निचली पीठ में दर्द को भी इससे आराम मिलता है।



बैठकर काम करने वाली जीवन-शैली या कुर्सी और सोफे के चलते हमारे कूल्हों और घुटनों के जोड़ों का संचालन कम हो जाता है जिसकी वजह से अकड़न होती है और वे रोगों से प्रभावित हो जाते हैं। इस आसन से न केवल घुटना और कूल्हा स्वस्थ हो जाता है बल्कि श्रोणी और उदर से संबंधित बीमारियां भी ठीक हो जाती हैं। यह आसन महिलाओं के लिए भी बहुत लाभदायक है।

नौसिखिये पहले ऊंचाई पर बैठें
उरु-मूल घुटनों से ऊपर हो

पट्टी का उपयोग

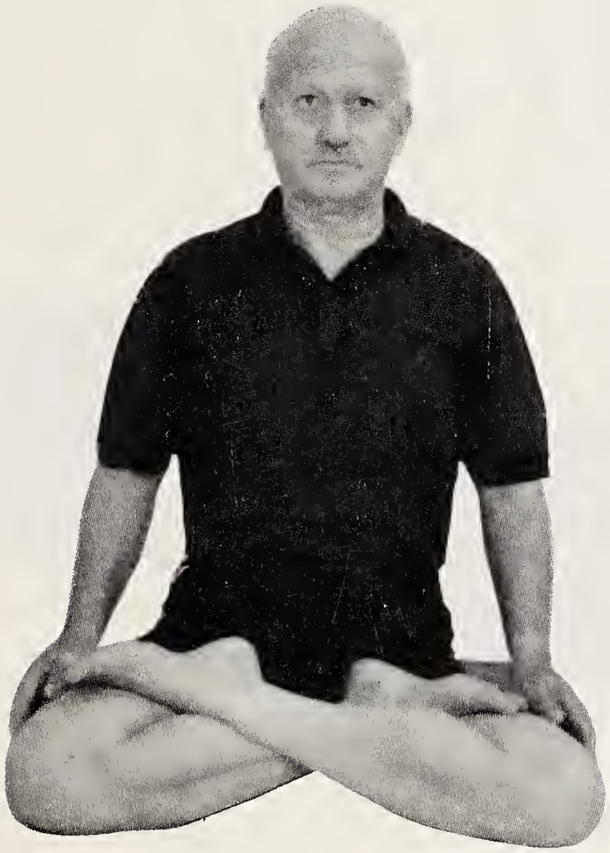
सुप्त बद्धकोणासन

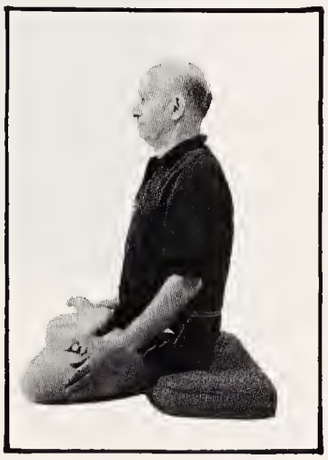
तकिया पीठ के नीचे

नितंब तकिये के किनारे

पद्मासन

हर कोई इस मुद्रा में बैठकर ध्यान या प्राणायाम करने का सपना देखता है। लेकिन मैं कुछ ऐसे लोगों को भी जानता हूं जो इस आसन को करने की कोशिश में अपने घुटने तोड़ बैठे। अगर आप इसे कर पाते हैं तो दोनों टांगों की स्थिति अदल-बदलकर समान समय तक आसन करें। अगर आप इसे नहीं कर पाते हैं तो नीचे छपे फोटो में दिये गए विभिन्न प्रकारों तथा 'योग-चिकित्सा' वाले अध्याय में दी गई विधि का अनुसरण करें। धीमे-धीमे लगातार अभ्यास से आप इसे करने लगेंगे। इस आसन में रीढ़ सीधी तनी रहती है। इससे छाती और तंतु-पट व उदर खुल जाते हैं जिससे लंबी सांस लेने में सहूलियत होती है। कुहनी, घुटनों तथा कूल्हे के जोड़ों का संचालन सुधर जाता है। इस आसन की समाप्ति के बाद एक अजीब संवेदन का एहसास होता है। यह आसन शीर्षासन, सर्वांगासन तथा विपरीत दंडासन (सहारे के साथ) और सेतुबंध सर्वांगासन के दौरान भी किया जा सकता है।





ऊंचाई पर बैठें

पद्धति

पेट के बल आगे झुकें

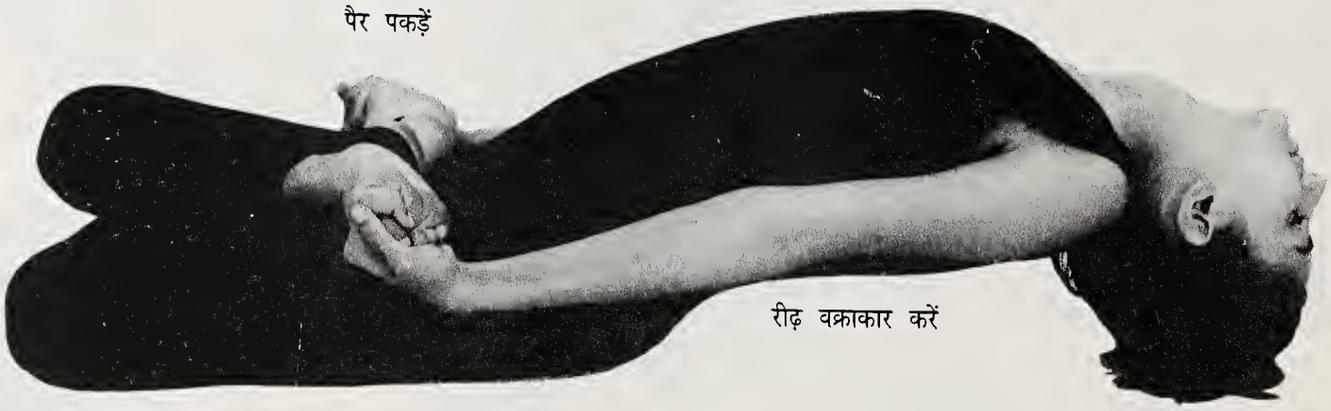
विभिन्न प्रकार

आगे झुकना

मत्स्यासन

शरीर का मध्य भाग योग की दृष्टि से बहुत महत्वपूर्ण है। यह आसन उसी भाग यानी श्रोणी तथा उदर को शक्तिशाली बनाता है और पीठ की भी अच्छी कसरत हो जाती है।

पद्धति



नौसिखियों के लिए

केवल एक टांग ही ऊपर उठाएं

चक्र मुद्राएं

इन आसनों में पूरी रीढ़ को हाथों के सहारे पार्श्विक मरोड़ दिया जाता है। हाथों की स्थिति कंधों को ज्यादा खुले संचालन में सहायता करती है जिससे गर्दन के तनाव में कमी आती है। आज के जमाने में लोग बैठकर काम करते हैं इसलिए अधिकांश लोगों को कंधे तथा गर्दन के भाग में तनाव महसूस होता है। कुर्सी पर बैठकर करने वाली भी कुछ मुद्राएं सुझाई गई हैं। इन्हें काम के दौरान थोड़ी देर की छुट्टी में भी किया जा सकता है। इन मुद्राओं से उदर के क्षेत्र के अंगों तथा अंतड़ियों की एक प्रकार से मालिश हो जाती है। टांगों की विभिन्न मुद्राओं से कूल्हों, घुटनों, कुहनियों, पीठ के निचले हिस्से की अकड़न कम हो जाती है।

भरद्वाजासन

नौसिखियों के लिए

कुर्सी पर

कुर्सी के पांव को पकड़ना

कुर्सी की सीट को पकड़ना

पीछे का दृश्य

पाशासंन

सामने का दृश्य

एड़ी फर्श पर

कंधे को पीछे ले जाएं

नौसिखियों के लिए

दीवार के किनारे हों तथा
एड़ियां ऊंचाई पर हों

पीछे का दृश्य

मरिच्यासन II

पद्धति

हथेली/कलाई पकड़ें

नौसिखियों के लिए

बगल की दीवार के सहारे

पिछला हाथ कुर्सी पर
पांव दीवार पर और कमर
गावतकिये पर

अर्ध मत्स्येंद्रासन

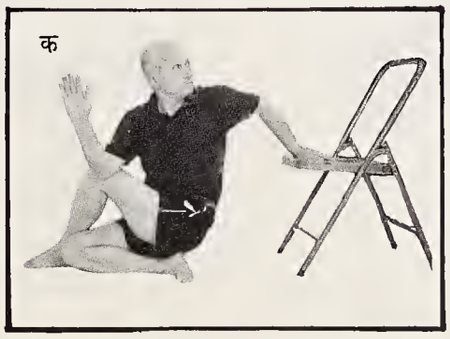
बैठने का दृश्य

निर्देश :

पांव की स्थिति को छोड़कर बाकी सभी पुराने निर्देशों का ही अनुसरण करें

नौसिखियों के लिए

बगल की दीवार पर



पिछला हाथ कुर्सी पर

पीछे ले जाकर
कलाइयों को पकड़ें

आगे झुकने की मुद्राएं

ये आसन सरल और निष्क्रिय जैसे दीखते हैं लेकिन इसमें गजब की गतिशीलता अंतर्निहित होती है। इसमें पूरा शरीर, कई जोड़ और मांसपेशियों के विभिन्न समूह सक्रिय रूप से भाग लेते हैं। पहले बताए गए आसनों की तरह ही इनमें पाचन शक्ति का सुधार होता है जिससे जठराग्नि बढ़ जाती है। ऊपरी पीठ की मांसपेशियां आम तौर पर निष्क्रिय रहती हैं लेकिन इन आसनों से वे भी जाग्रत हो जाती हैं। इस प्रक्रिया में कूल्हों, घुटनों तथा कुहनियों की अकड़न खत्म हो जाती है। आगे झुकने वाली सभी मुद्राओं से मन शांत होता है तथा हृदय की गति धीमी हो जाती है। इन आसनों का अभ्यास स्त्रियां माहवारी के दिनों में भी कर सकती हैं।

आगे झुकने की मुद्राएं

जानुशीर्षासन

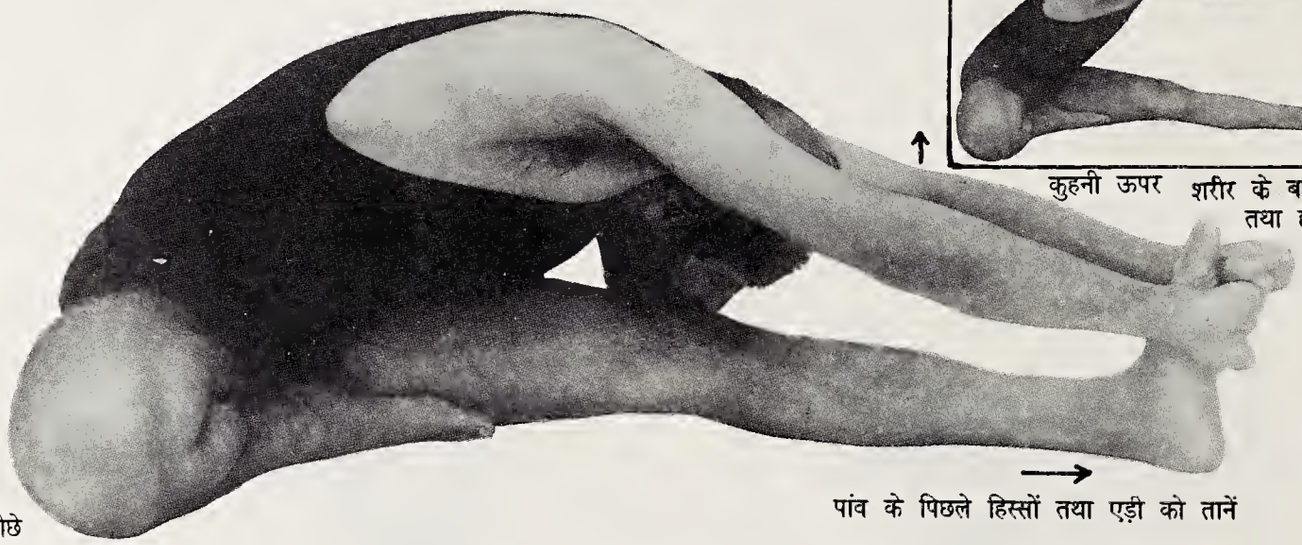
पांव पकड़ना

नौसिखिये अगर अपने पांव तक नहीं पहुंच पाते हैं तो पट्टी/रस्सी का इस्तेमाल सभी झुकने वाली मुद्राओं में करें

पद्धति

कुहनी ऊपर

शरीर के बगल वाले हिस्से को आगे फैलाएं



शरीर के बगल वाले हिस्से तथा हाथों को फैलाने के लिए तैयार करें

घुटना पीछे

पांव के पिछले हिस्सों तथा एड़ी को तानें

नौसिखियों के लिए

कुर्सी का उपयोग

हाथ तानें तथा चेहरा ऊपर

विभिन्न प्रकार

झुकते और मुड़ते हुए

ईंट और लकड़ी के तख्ते के सहारे

त्रिअंग मुखैकपाद पश्चिमोत्तानासन

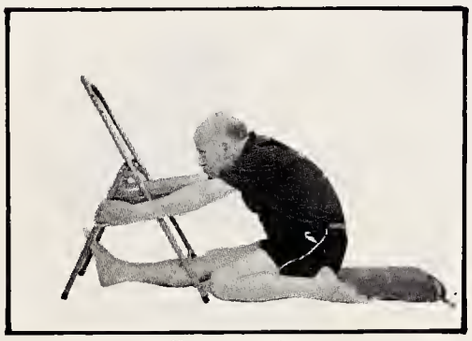
तानें →

एक टांग वीरासन में

कंबल के साथ आसन
करने का पीछे से दृश्य

कंबल के साथ आसन
करने का पार्श्व-दृश्य

नौसिखियों के लिए

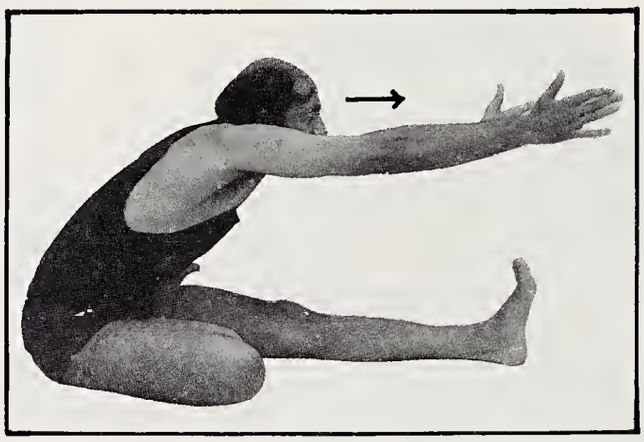


कुर्सी का उपयोग

हाथ तना हुआ, चेहरा ऊपर

अर्ध बद्ध पद्म पश्चिमोत्तानासन

पद्धति



आगे झुकने की तैयारी

एक पांव पद्मासन में

नौसिखियों के लिए

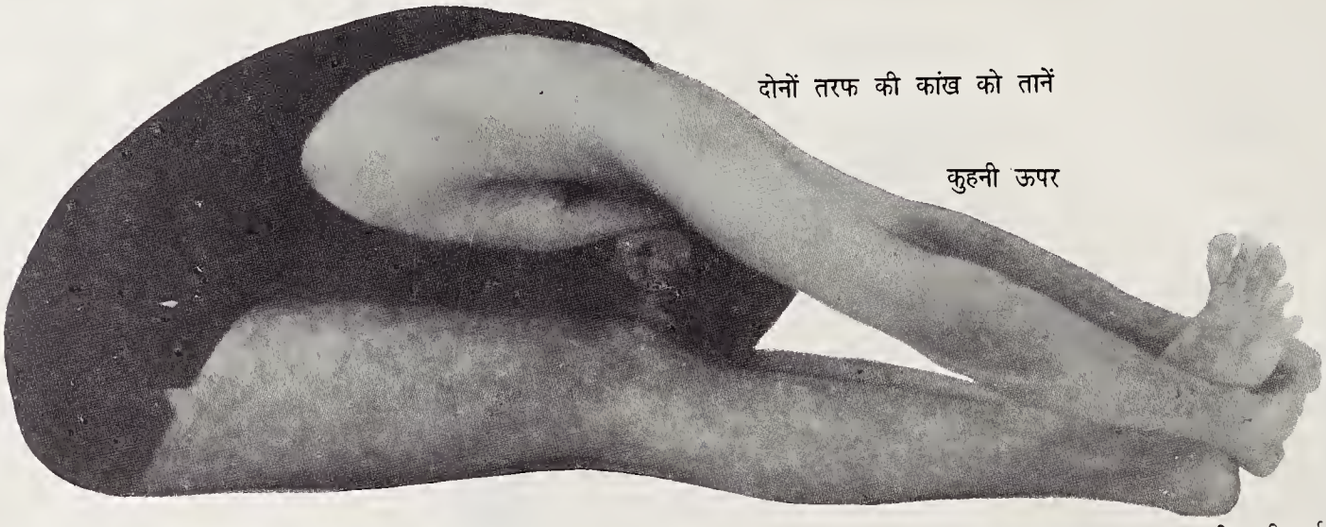
कुर्सी का सहारा

हाथ तना, चेहरा ऊपर

मरिच्यासन 1

ठुड्डी घुटने पर

पश्चिमोत्तानासन

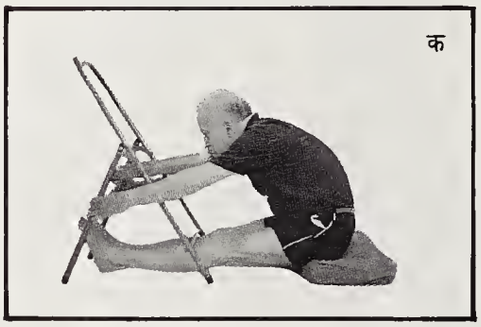


दोनों तरफ की कांख को तानें

कुहनी ऊपर

टांग का पिछला भाग तथा एड़ी तनी हुई

नौसिखियों के लिए



कुर्सी का सहारा लेकर

हाथ सीधे
चेहरा ऊपर

ईट तथा तख्ते
के साथ

एड़ी बेंच पर

बेंच के किनारे
पर बैठकर

उपविष्ट कोणासन

हाथ तने हुए तथा
चेहरा ऊपर उठा

पलंग के किनारे पर

हाथों के साथ आगे
की ओर नीचे झुकें

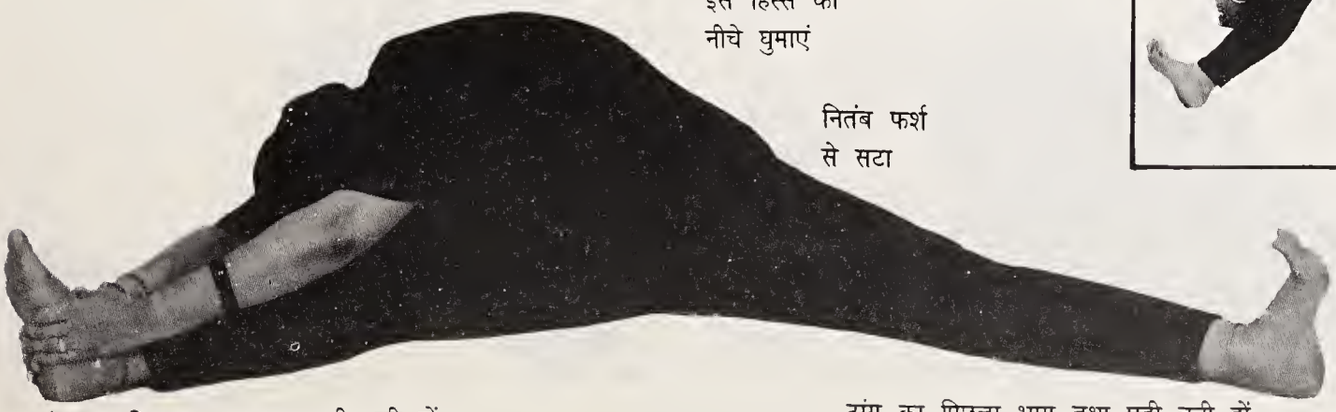
माथा फर्श छुए

टांग का पिछला भाग
तथा एड़ी तनी

पार्श्व उपविष्ट कोणासन

इस हिस्से को
नीचे घुमाएं

नितंब फर्श
से सटा



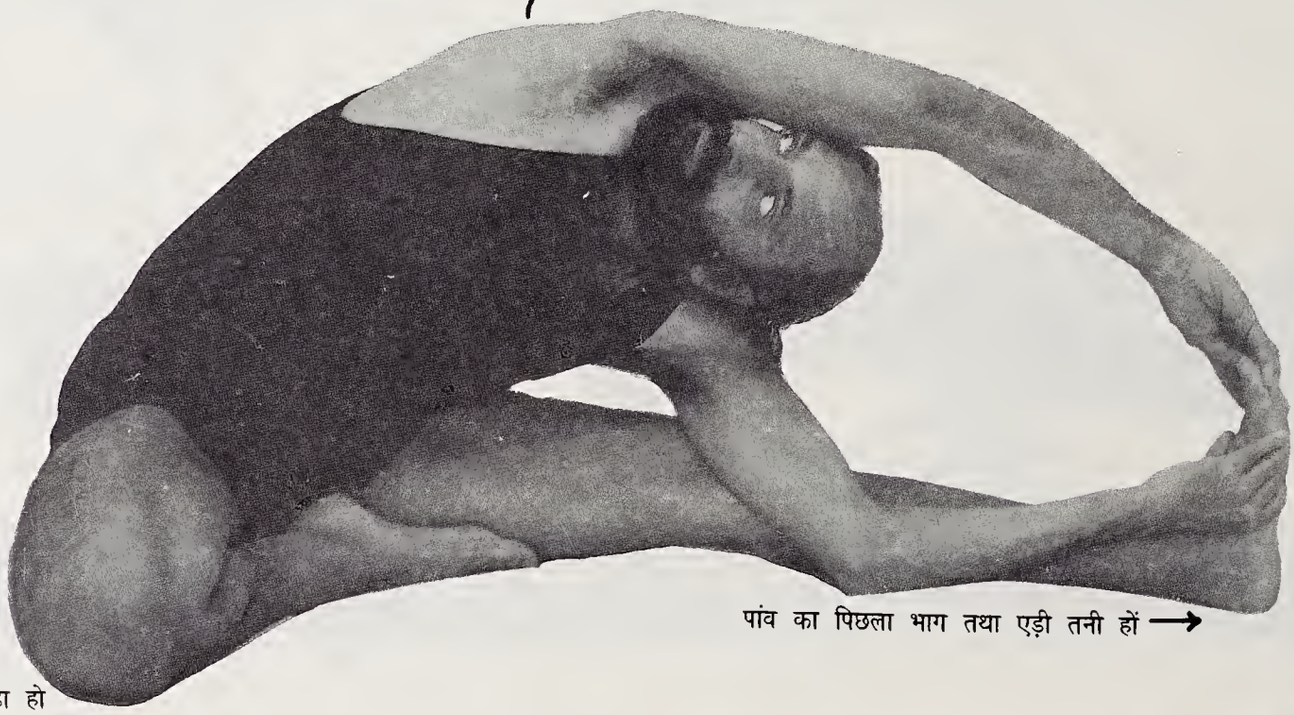
टांग का पिछला भाग तथा एड़ी तनी हों

टांग का पिछला भाग तथा एड़ी तनी हों

परिवृत्त जानु शीर्षासन

पद्धति

इस हिस्से को घुमाएं



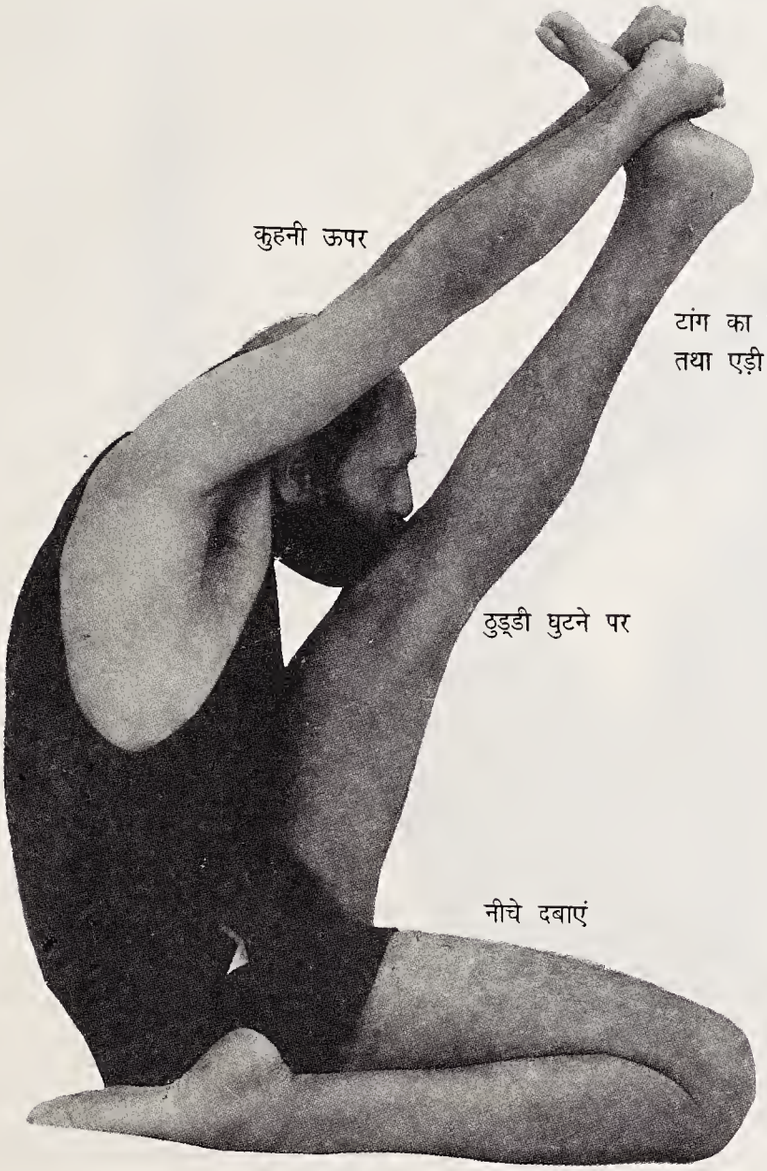
पांव का पिछला भाग तथा एड़ी तनी हों ⟶

घुटना पीछे मुड़ा हो

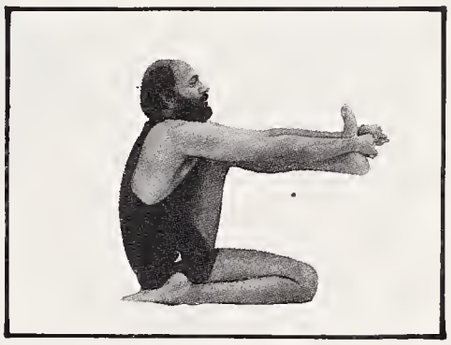
नौसिखियों के लिए

पीठ दीवार के सहारे

क्रौंचासन



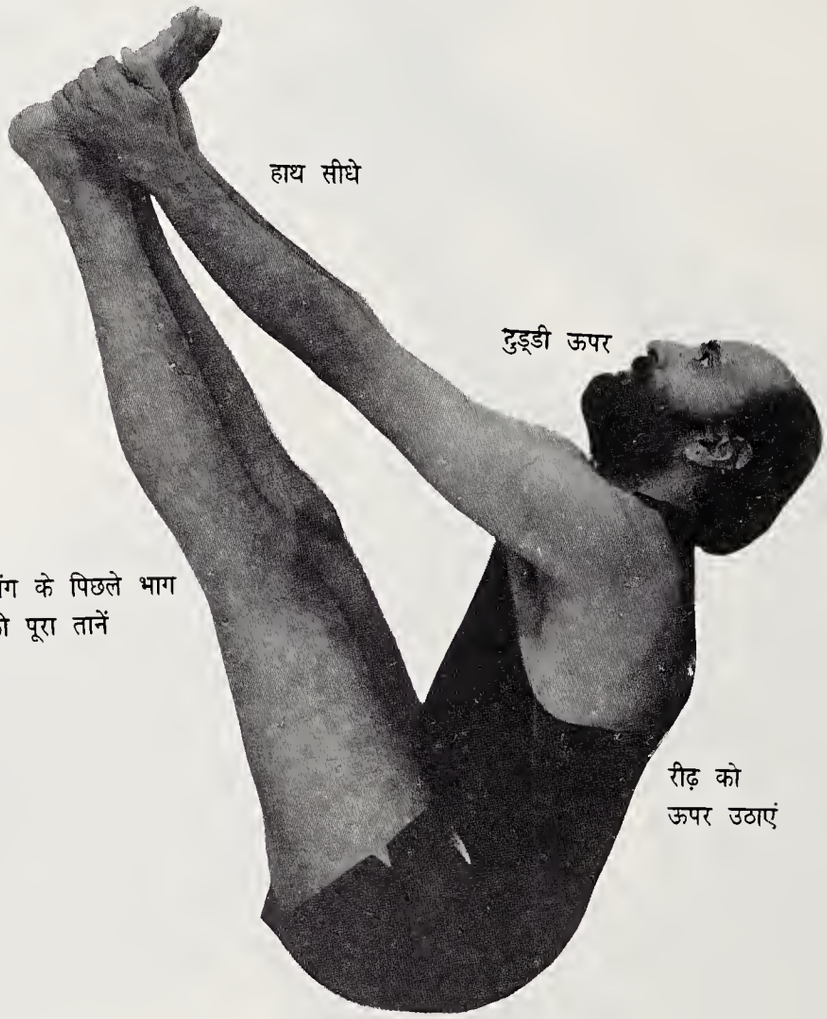
पद्धति



नौसिखियों के लिए

पट्टी का उपयोग करें
नितंब तकिये पर

उभय पादांगुष्ठासन



नौसिखियों के लिए

गलियारे में

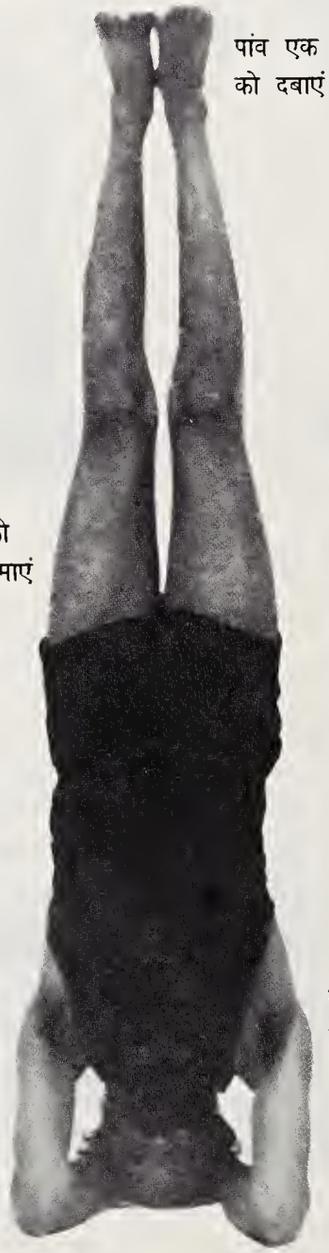
पट्टी के सहारे

सिर के बल वाली मुद्राएं

शीर्षासन

एक एक्यूप्रैशर विशेषज्ञ जापानी महिला योग सीखने आई थीं। उनसे मैंने हंसी में पूछा--बुद्धि कैसे बढ़ाई जा सकती है? उन्होंने राय दी कि शीर्षासन और अधिक करना चाहिए। बाद में उन्होंने और भी स्पष्ट किया कि जिस कला का अभ्यास वह करती हैं, वह भारतीय मूल की ही है। ऐसा लगता है कि हमारे शरीर में स्थित मर्मस्थानों का ज्ञान हम भूल चुके हैं।

पद्धति



शीर्षासन

इसे आसनों का राजा भी कहा जाता है। इस आसन में पूरा शरीर क्रियाशील हो जाता है। इसमें दो कनिष्ठा उंगलियां कंबल में धंसी रहती हैं और वे कंधों को अच्छी तरह ऊपर उठाने में सहायता देती हैं। पूरे क्रियाशील पंजे और एड़ियां पूरी रीढ़ को ऊपर उठाने में सहायता करती हैं। सभी जानते हैं कि शिराओं में रक्त उल्टी दिशा में बहे तो उसका बहुत अच्छा प्रभाव रक्त-संचार और हृदय पर पड़ता है। शरीर का तापक्रप भी बहुत नियंत्रित हो जाता है। यह शरीर को सर्दी में गर्म और गर्मी में सर्द रखता है। विलोम अवस्था में गुरुत्वाकर्षण का प्रभाव शरीर के अंगों पर अच्छा असर डालता है क्योंकि उन अंगों को संभालने वाली पेशियों का व्यायाम हो जाता है। उससे उन अंगों का विस्थापन नहीं होता। अंतड़ियों में भरी गैस ऊपर की ओर बढ़ती है, अंतड़ियों की पेशियां चुस्त हो जाती हैं जिससे पाचन शक्ति बढ़ती है और कब्ज की शिकायत नहीं रहती।

चेतावनी : शीर्षासन के तुरंत बाद कम से कम उतनी ही देर तक सर्वांगासन किया जाना चाहिए। शीर्षासन के बाद मस्तिष्क की शिराओं में तनाव बचा रह जाता है, इस तनाव को सर्वांगासन के द्वारा ही सामान्य किया जा सकता है। जिनकी गर्दन में कोई बीमारी है, वे इस आसन को दो कुर्सियों की सहायता से ही करें।

दोनों कुहनियों के बीच की दूरी मापने की पद्धति

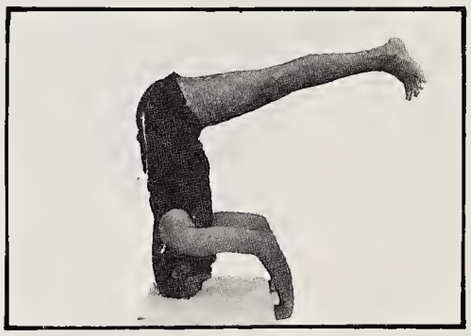
पट्टी के सहारे

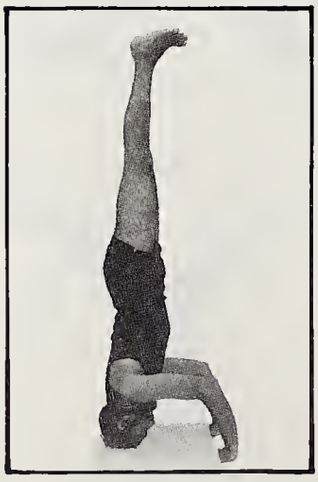
विभिन्न प्रकार

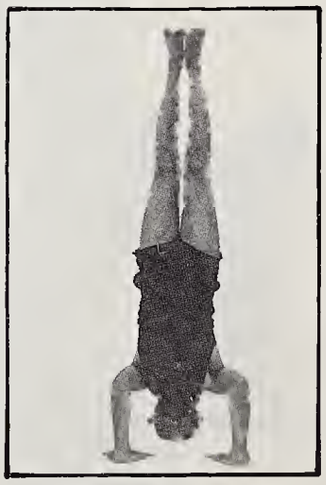
शीर्षासन

विभिन्न प्रकार

खुली हथेलियों वाले प्रकार





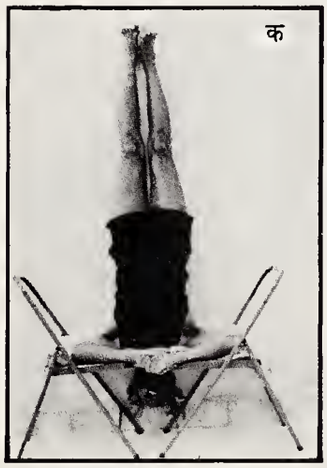


शीर्षासन

नौसिखियों के लिए पद्धति

दीवार के सहारे

पद्धति



कंधे दो
कुर्सियों पर

नौसिखियों के लिए पद्धति

गलियारे या चौखट
के भीतर

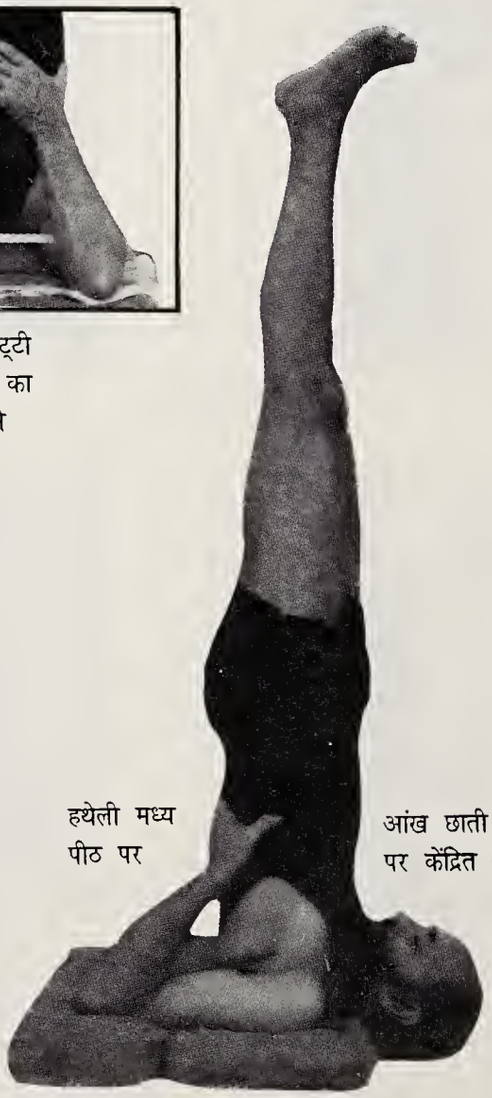
सर्वांगासन

इस आसन को शीर्षासन की बहन कहा जाता है। गर्दन तथा कंधों की स्थिति अलग-अलग होती है। जलंधर बंध सांस ऐसे लेने लगता है कि फेंफड़ों के उन हिस्सों में भी, जिन्हें आक्सीजन नहीं मिल पाती, सांस पहुंचने लगती है। इस आसन के अभ्यास को कुछ सप्ताह तक नियमित रूप से करने के बाद ही धीरे-धीरे शीर्षासन का अभ्यास शुरू करें। *चेतावनी : गर्दन में दर्द की शिकायत वाले लोगों को कंधे और कुहनी को समुचित ऊंचाई पर रखना चाहिए।*

पद्धति

पैर एक-दूसरे से सटे हों

पीठ तथा पट्टी की व्यवस्था का दृश्य पीछे से



हथेली मध्य पीठ पर

आंख छाती पर केंद्रित करें

ऊपरी बांह को बाहर निकालें

सर्वांगासन

पद्धति

आसन पूरा हो
तो नीचे खिसकें
↓
या हलासन करें

पलंग के सहारे

एड़ियां दीवार पर

पंजे दीवार पर

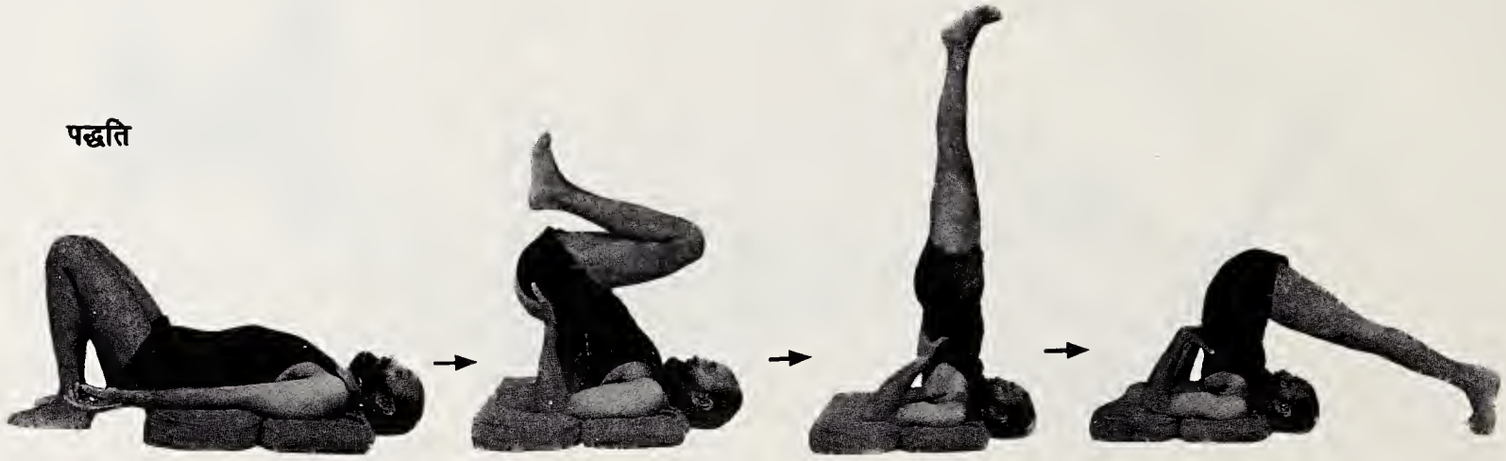
पांव पर पट्टियां

विभिन्न प्रकार

हलासन

सांस को फेंफड़े के पीछे ले जाने की प्रक्रिया का प्रभाव इस आसन में तेज हो जाता है। यह पीठ के निचले हिस्से को आराम पहुंचाता है तथा इससे उदर पर हल्का दबाव पड़ता है जिससे पाचन तंत्र क्रियाशील हो जाता है। इस आसन से मानसिक शांति मिलती है तथा हृदय की गति धीमी हो जाती है। अर्ध हलासन का अभ्यास कुछ सप्ताह तक किया जाना चाहिए तथा टांगों की ऊंचाई को धीरे-धीरे घटाया जाना चाहिए।

पद्धति



नौसिखियों के लिए पद्धति

कंधों को और ऊंचा उठाएं

हलासन

विभिन्न प्रकार

अर्ध हलासन

टांगें पलंग पर

टांगें पलंग पर फैलाएं

सर्वांगासन के बाद

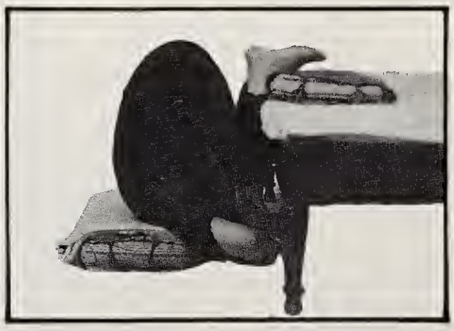
झुकी टांगें

कर्ण पीड़ासन

टांगों को मोड़ने के कारण इस आसन में पीठ और गर्दन को और भी आराम मिलता है।

विभिन्न प्रकार

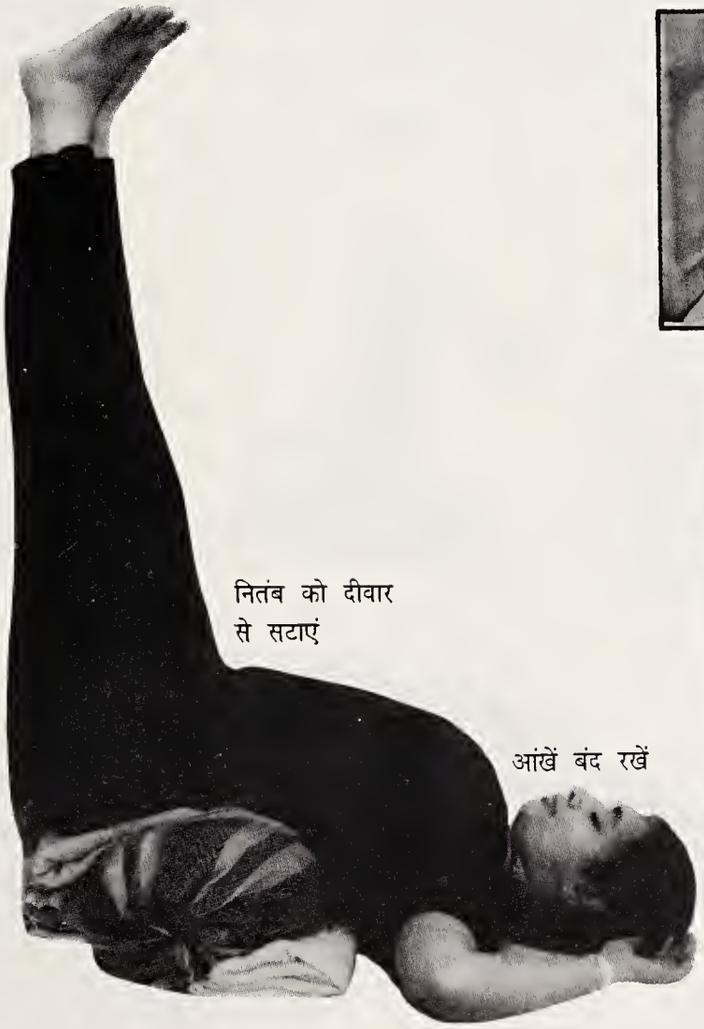
नौसिखियों के लिए



विपरीत करणी

यह आसन मुद्राओं की श्रेणी में आता है। छाती के फूलने से सांस की गति धीमी पड़ जाती है। तंतु-पट कोमल ही बना रहता है क्योंकि इसमें न कोई खिंचाव आता है, न ही इस पर दबाव पड़ता है। जहां तक रक्त-संचार तथा हृदय का संबंध है, इस आसन में भी विलोम आसनों के सभी लाभ हैं।

पद्धति



यह पूर्ण विश्राम की मुद्रा है

पद्धति

गावतकिये को नीचे लगाने के लिए शरीर को ऊपर उठाएं

नौसिखियों के लिए

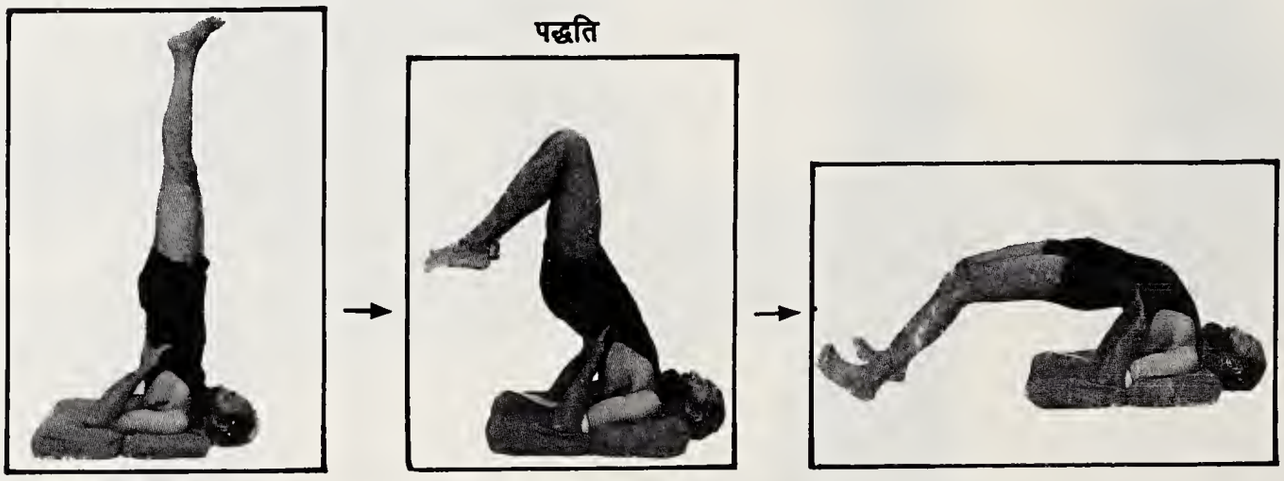
टांगें मुड़ी

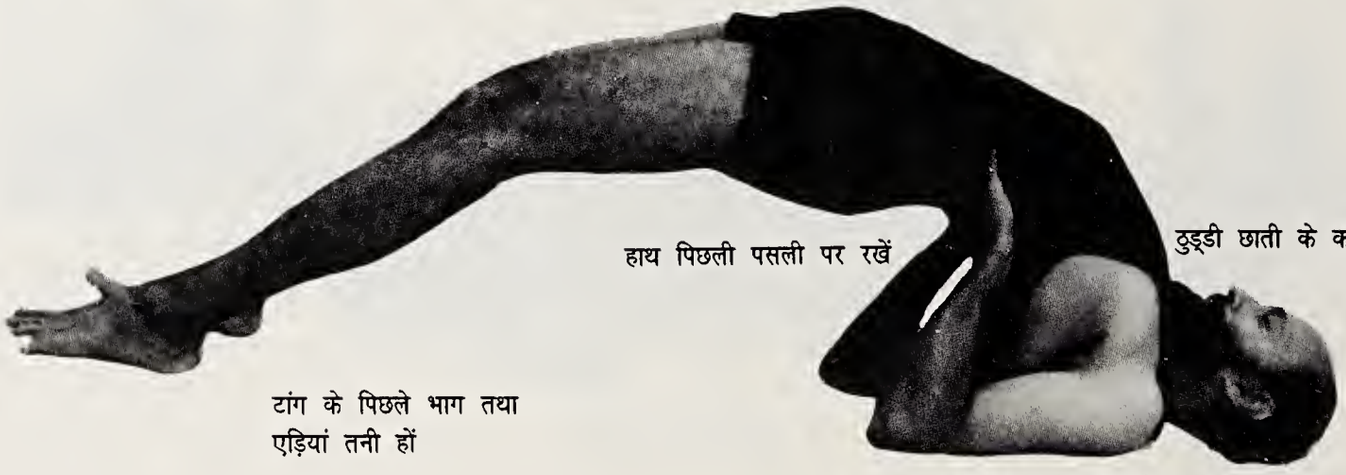
टांगें सीधी

सेतुबंध सर्वांगासन

इस आसन का सबसे बड़ा लाभ यह है कि इससे रीढ़ में लचीलापन आता है। आपके खड़े होने के ढंग में काफी सुधार आ जाता है। रीढ़ संबंधी कई बीमारियां दूर हो जाती हैं। इससे छाती फूल जाती है। फेंफड़े में हवा जाने की मात्रा बढ़ जाती है जिससे उदर, तंतु-पट और श्रोणी में भरपूर खिंचाव आता है। सांस की गति धीमी हो जाती है जिससे आक्सीजन के शरीर के अंदर जाने तथा कार्बन डाई-आक्साइड के बाहर निकलने की दर सुधर जाती है जिसके चलते रक्त की रासायनिक संरचना बेहतर हो जाती है। पूर्व में वर्णित जलंधर बंध प्रभाव से इसमें और लाभ पहुंचता है। बुढ़ापे के चलते मध्य रीढ़ झुक जाती है लेकिन इस आसन से इससे बचाव होता है क्योंकि हृदय को अधिक स्थान मिल जाता है। आश्चर्य की बात यह है कि निचली रीढ़ के मुड़ने के बावजूद इस क्षेत्र में विस्तार होता है। इसके नाम 'सर्वांगासन' से ही यह स्पष्ट है कि यह सभी आंतरिक अंगों तथा अंतड़ियों को क्रियाशील कर देता है।

पद्धति





नौसिखियों के लिए

पलंग तथा तकिये
के सहारे

एक पांव को पट्टी/
रस्सी से खींचना

सेतुबंध सर्वांगासन

अनुत्रिक (coccyx) पर
खड़ी ईट का उपयोग

पंजों से दीवार पर दबाव

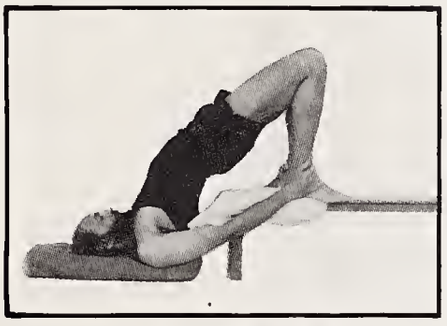
पैर दीवार पर

एक पांव उठाकर भी यह आसन
सरलता से किया जा सकता है

एक पांव उठाकर

नौसिखियों के लिए

बेंच पर



आसन समाप्त करने के
लिए नितंब ऊपर उठाएं
ताकि पीठ में दर्द न रहे

आसन समाप्त होने के
बाद आगे झुकें

विभिन्न प्रकार

बद्धकोणासन में

पद्मासन में

पीछे झुकने की मुद्राएं

शरीर का सौंदर्य सर्वश्रेष्ठ रूप में पीछे झुकने वाले आसनों में झलकता है। इसमें छाती फैल जाती है जिससे हृदय को और जगह मिल जाती है। फैली छाती में अधिक हवा जा पाती है जो श्रोणी के दूरस्थ हिस्सों तक पहुंच जाती है। आसन समाप्ति के तुरंत बाद रक्त संचार का भारी प्रवाह तने उदर, तंतु-पट, उदर क्षेत्र के अन्य अंगों तथा अंतड़ियों पर होता है। पीछे झुकने वाले आसनों में अंगों को क्रियाशील बनाया जाए तो रीढ़ फैलती है तथा रीढ़ की पेशियों में शक्ति बढ़ती है। गर्दन तथा कंधों को तनाव से फौरन मुक्ति मिलती है। इनमें कठिन मुद्राओं वाले आसनों के अभ्यास के पूर्व हल्के आसनों का अभ्यास करना चाहिए। आगे तस्वीरों में ऐसे कई आसन दर्शाए गए हैं। सही चुने हुए ऐसे आसनों को कुछ चीजों की सहायता से करने पर बहुत अच्छा महसूस होता है। रुद्ध ऊर्जा केंद्र धीरे-धीरे खुलते जाते हैं। कहा तो यह भी जाता है कि वृक्क (किडनी) स्थित विषाणुओं से भी छुटकारा पाया जा सकता है। बहरहाल, इनके अभ्यास से रीढ़ में लचीलापन तो आ ही जाता है।

उर्ध्वमुख श्वानासन

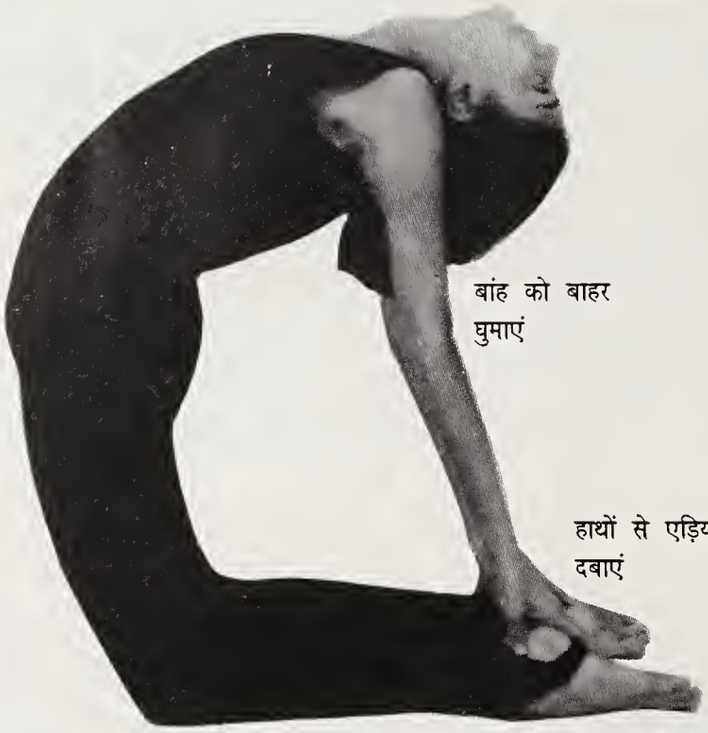
नौसिखियों के लिए

उदर को सहारा देने के लिए
पलंग पर तकिया रखें

कुहनियां मुड़ी रखकर
तैयारी करें

→

उष्ट्रासन



बांह को बाहर घुमाएं

हाथों से एड़ियां दबाएं

फर्श पर दबाव दें

कुहनी पलंग पर तथा सिर गावतकिए पर

नौसिखियों के लिए

धनुरासन

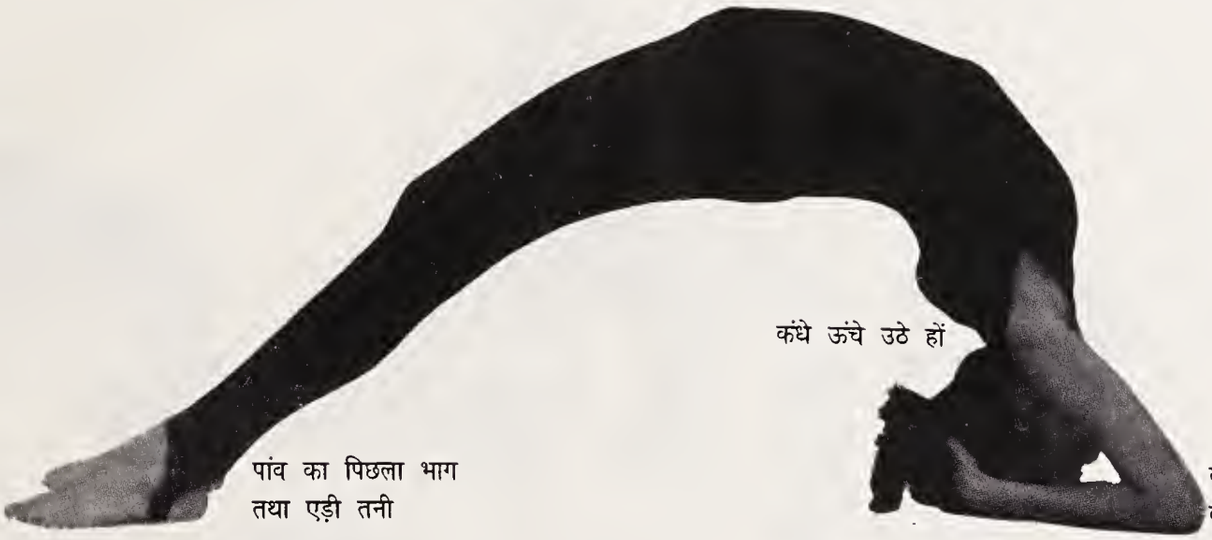
घुटनों को आपस में सट्टाकर रखें

दूसरा प्रकार

एक तरफ झुकते हुए

विपरीत दंडासन

पद्धति



नौसिखियों के लिए पद्धति

कुर्सी के अंदर से

पिछले पांव पकड़ें

विभिन्न प्रकार

विपरीत दंडासन

विभिन्न प्रकार

पलंग पर बद्धकोण
आसन का अभ्यास

पलंग पर पद्मासन
का अभ्यास

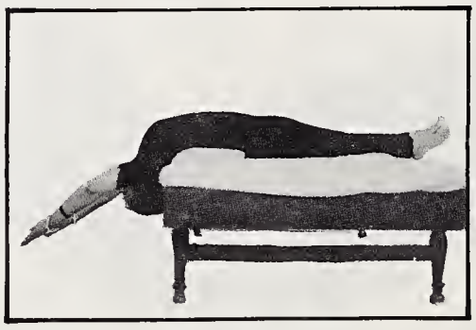
कुहनी दीवार पर

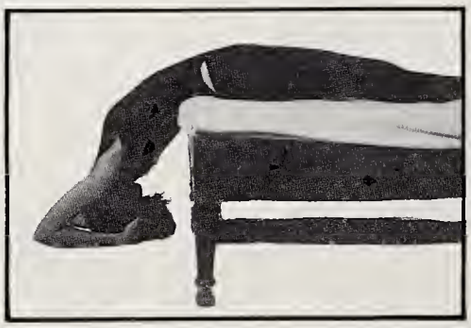
पैर पलंग पर

कुर्सी की टांगों को पकड़ना

मध्य रीढ़ कुर्सी के
पिछले हिस्से पर

कुहनी दीवार पर -
ऊपर का दृश्य





पलंग से

एक पाद विपरीत दंडासन

दूसरा प्रकार

कुर्सी पर रहकर
पट्टी खींचना

तीसरा प्रकार

पलंग पर रहकर
पट्टी खींचना

उर्ध्व धनुरासन

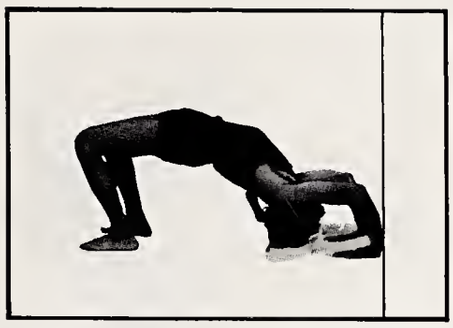
पद्धति

प्रकार

पांव पलंग पर

सीधी कुहनी दीवार के सहारे

उर्ध्व धनुरासन



कलाई को दीवार के सहारे रखकर
अभ्यास की तैयारी करें

घुटने दीवार से सटे

एक टांग उठाकर
दीवार पर रखें

कुर्सी की बैक रेस्ट पर

पैर बेंच पर

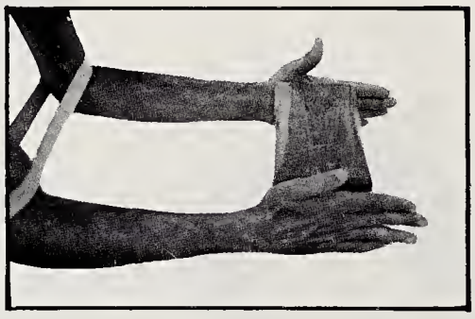
पद्धति

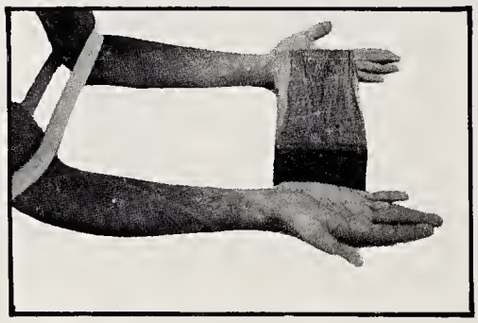
पिंच मयूरासन

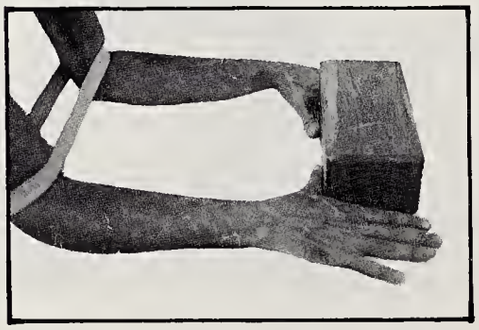
कंधों को दीवार
से दूर ले जाएं

हाथ और कुहनी से
फर्श पर दबाव दें

ईंट तथा पट्टी के सहारे



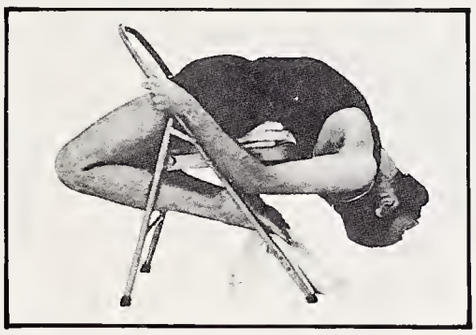




ईंट तथा पट्टी के सहारे आसन
करने में हाथ की विभिन्न स्थितियां

कपोतासन

बेंच और तकिये के सहारे



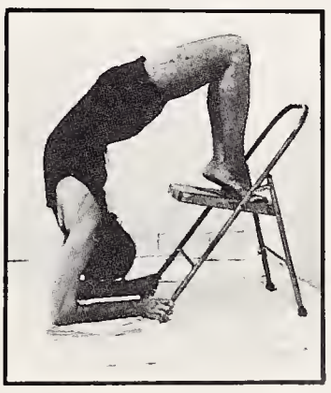
कुर्सी के सहारे

ठुड्डी व पंजा गद्दे पर रखें

वृश्चिकासन

अभ्यास की पद्धति

दीवार से सटे

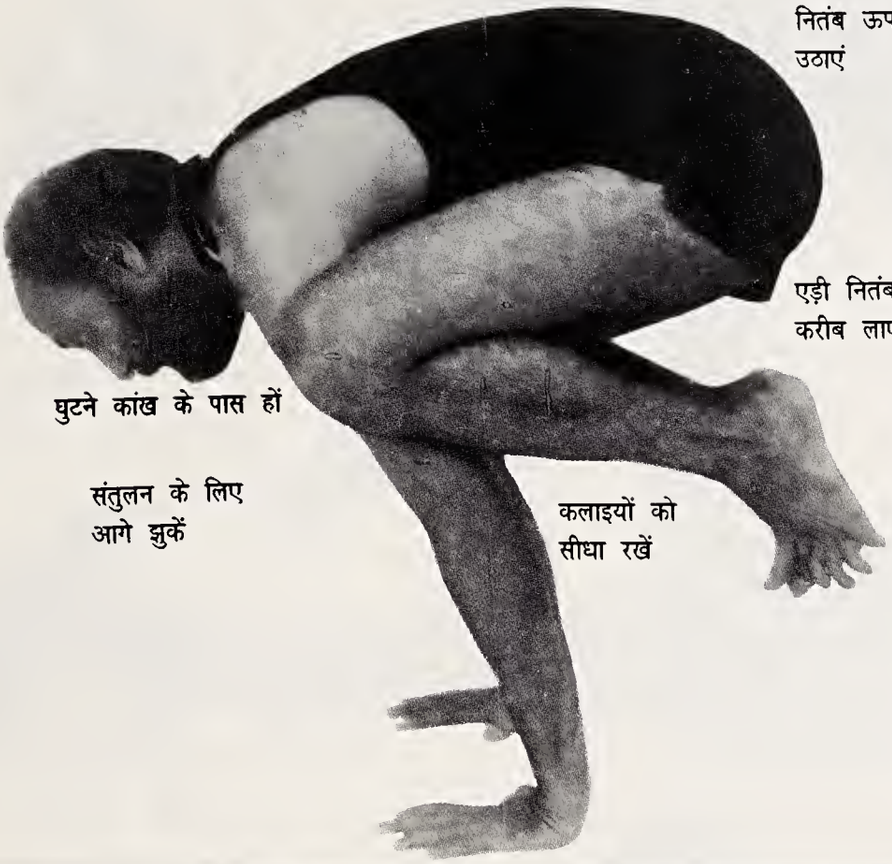


कुर्सी पर

संतुलन की मुद्राएं

इन आसनों से उदर, कंधे, हाथ तथा कलाइयां सीधी हो जाती हैं। उदर में खिंचाव पाचन शक्ति को बढ़ाता है। योगी अपने ही शरीर भार का उपयोग भारोत्तोलन के लिए कर लिया करते थे।

बकासन

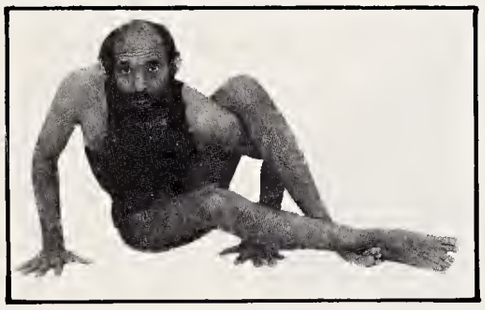


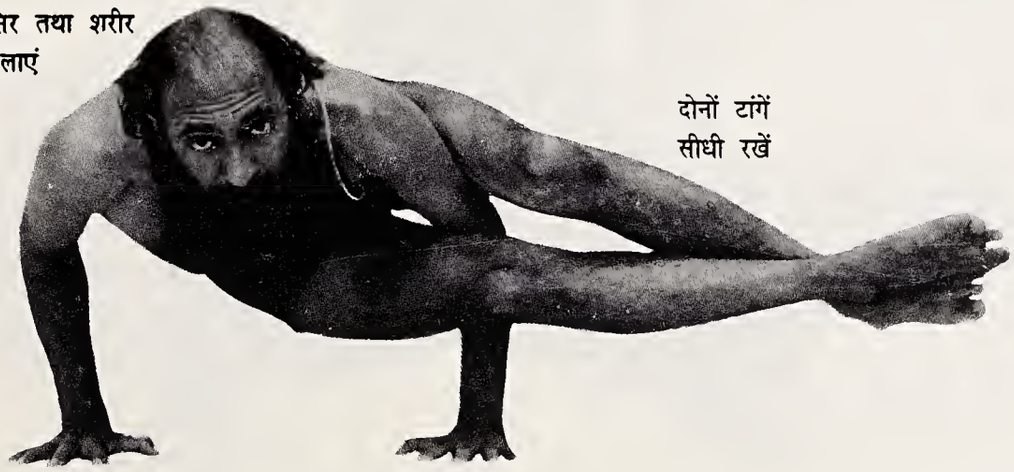
पद्धति

पांव ईट पर, सिर के लिए तकिया रखें ताकि असंतुलन से बचें

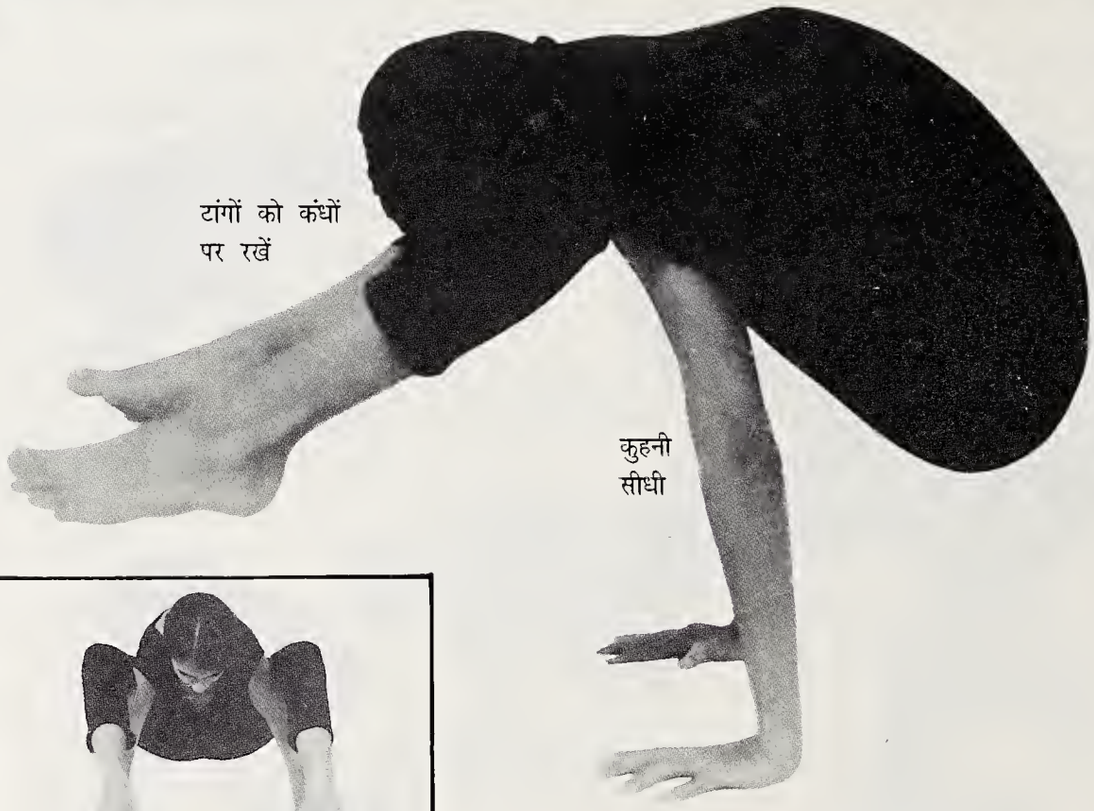
अष्ट वक्रासन

पद्धति





भुजपीड़ासन



पद्धति

तोलासन

शवासन

मेरे एक परिचित ने एक बार मुझसे गर्व से कहा कि वह नियमित योगाभ्यास करते हैं। आगे पूछने पर उन्होंने बताया कि वह रोज शवासन का अभ्यास करते हैं। मेरा विश्वास है कि ऐसा योगासन करने वाले वह अकेले नहीं हैं। ऐसा लगता है कि न केवल शवासन, बल्कि पूरे योग के बारे में गलत धारणा लोगों में बनी हुई है। योग की अवधारणा के बारे में पहले भी विस्तार से स्पष्ट किया जा चुका है। शवासन तो आसनों एवं प्राणायाम के अभ्यास के बाद किया जाता है। आसनों के दरम्यान जोड़ सख्त हो जाते हैं, पेशियां सिकुड़ जाती हैं तथा तनाव से भर जाती हैं, जिससे ऊर्जा का मुक्त प्रवाह बाधित हो जाता है। फलतः स्नायु शिराएं मस्तिष्क को लगातार संकेत भेजने लगती हैं। जोड़ों को संचालित कर तथा पेशियों को फैलाकर आसन स्नायुओं तथा स्नायु केंद्रों को आराम पहुंचाते हैं, जिससे मस्तिष्क शांत हो जाता है। वैसे पारंपरिक शवासन तो फर्श या कालीन पर लेटकर किया जाता है। लेकिन उसे एक तकिये के सहारे भी किया जा सकता है।

शवासन की समाप्ति के बाद एक करवट में कुछ देर आराम करें,

1. जबड़े को ढीला करें,
2. आंख बंद कर आंख की पुतली को पैर की तरफ निदेशित करें
3. ऊपरी तालू पर जीभ का दबाव कम करें

उदर को ढीला करें

टांगों को ढीला करने से पहले एड़ी तथा टांग के पिछले हिस्से को तानें

हथेली खुली छत की ओर हो

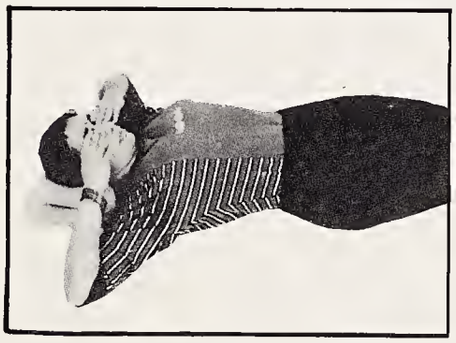
बांहों को बाहर निकालें।

रीढ़, सिर, गर्दन को सहारा दिया जा सकता है। इससे कम शक्ति लगानी पड़ती है।

षणमुखी मुद्रा

हमारे मस्तिष्क का तनाव अनेक स्नायुओं तथा आंख के आसपास की पेशियों को प्रभावित करता है। इन स्नायुओं को इसके दबाने से आराम मिलता है। पेशियों पर पड़ने वाला आरामदायक प्रभाव मस्तिष्क को शांत कर देता है। इस सरल किंतु अद्भुत मुद्रा के जरिये सिरदर्द तथा आंखों के तनाव को कम या खत्म किया जा सकता है। यहां उंगलियों के जरिये सांस को नियंत्रित करने के लिए की जाने वाली पद्धति का विवेचन नहीं किया जा रहा है क्योंकि इससे कई जटिलताएं पैदा हो जाती हैं। फिर भी इसके साथ अंगूठे से कानों को बंद कर शोर को रोकने का कार्य भी किया जा सकता है।

बैठे हुए इसे किसी और की मदद से किया जा सकता है।



लेटकर अभ्यास का तरीका

प्रस्तावित साप्ताहिक योजना

एक के बाद एक आसन करते जाने में अपना समय नष्ट मत करें। एक आसन में ही अधिक समय लगायें। इन आसनों में छः मिनट या उससे अधिक समय लगता है। अभ्यास स्थल पर कोई घड़ी अवश्य होनी चाहिए। शुरूआत में आप कोई आसान आसन चुन लें और बाद में उस आसन की विभिन्न मुद्राएं करते जाएं।

सोमवार	**पृष्ठ**	**मिनट**
उत्तानासन तथा खंड एक की कुछ मुद्राएं	17-26	10
खड़े होकर किये जाने वाले आसन	28-42	20
विश्राम के आसन	44-50	10
विलोम के आसन, जिनका समापन सेतुबंध या विपरीत करणी से हो	68-79	20

मंगलवार	**पृष्ठ**	**मिनट**
उत्तानासन तथा खंड एक की कुछ मुद्राएं	17-26	10
पीछे झुकने वाले आसन	81-88	20
विश्राम के आसन	44-50	10
विलोम के आसन, जिनका समापन सेतुबंध या विपरीत करणी से हो	68-79	20

बुधवार		
अधोमुख श्वानासन तथा खंड एक की कुछ मुद्राएं	17-26	10
खड़े होकर किये जाने वाले आसन	28-42	20
विश्राम के आसन	44-50	10
विलोम के आसन जिनका समापन सेतुबंध या विपरीत करणी से हो	68-79	20

गुरुवार		
उत्तानासन तथा खंड एक के कुछ आसन	17-26	10
मुड़ने तथा आगे झुकने के आसन	52-55	20
विश्राम के आसन	44-50	10
विलोम के आसन जिनका समापन सेतुबंध या विपरीत करणी से हो	68-79	20

शुक्रवार	पृष्ठ	मिनट	रविवार	पृष्ठ	मिनट
अधोमुख वृक्षासन तथा खंड एक के कुछ आसन	17-26	15	अधोमुख वृक्षासन तथा खंड एक के कुछ आसन	17-26	15
खड़े होकर किये जाने वाले आसन	29-42	20	पीछे झुकने वाले आसन	81-88	20
विश्राम के आसन	44-50	10	विश्राम के आसन	44-50	10
विलोम के आसन जिनका समापन सेतुबंध या विपरीत करणी से हो	68-79	20	विलोम के आसन जिनका समापन सेतुबंध या विपरीत करणी से हो।	68-79	20

अगर आपके पास समय अधिक हो तो झुकने वाले या मुड़ने वाले आसनों को दुहराएं, पहले एक तरफ होकर करें फिर दूसरी तरफ या तस्वीरों में दिये गये विभिन्न प्रकारों को करें। साप्ताहिक छुट्टी या अवकाश के दिन जब आपके पास अधिक समय हो तब एक या डेढ़ घंटे आसन करने की योजना का अनुसरण करें।

ऊपर दी गई योजना से कोई भी यह समझ सकता है कि आरंभिक तथा माध्यमिक मुद्राओं के जरिये शरीर को गर्माने का काम उचित रूप से पूरा हो जाता है। इसके बाद खंड दो में दिये गये खड़े होकर किये जाने वाले आसनों, खंड सात में पीठ झुकाने वाले आसनों तथा खंड आठ में दिये गये संतुलन वाले आसनों अथवा पांचवें अध्याय में दिये गये गतिशील आसनों को किया जा सकता है।

खंड दो में दिये गये विश्राम वाले आसनों को अंतराल में या कभी भी किया जा सकता है क्योंकि इनके लिए शरीर को गर्माने की जरूरत नहीं पड़ती। इन्हें भोजन के बाद या टी.वी. देखते समय भी किया जा सकता है।

विलोम वाले आसन शरीर को फिर से ऊर्जावान बनाते हैं तथा पूरी प्रणाली को पुनर्व्यवस्थित करते हैं। इसीलिए उन्हें अंत में किया जा सकता है।

शवासन/ षणमुखी मुद्रा उपयुक्त आसनों की समाप्ति के बाद ही करें।

प्रस्तावित साप्ताहिक योजना

एक के बाद एक आसन करते जाने में अपना समय बर्बाद मत करें। एक आसन में ही अधिक समय लगाएं। इन आसनों में करीब 20 मिनट का समय लगेगा। कृपया अभ्यास स्थान पर कोई घड़ी अवश्य रखें। शुरूआत में आप कोई आसान आसन चुन लें और बाद में उस आसन की विभिन्न मुद्राएं करते जाएं।

सोमवार	पृष्ठ	मिनट
उत्तानासन	17	1
अधोमुख श्वानासन	19	1
अधोमुख वृक्षासन	21	1/2
त्रिकोणासन	29	2
पार्श्वकोणासन	31	2
अर्ध चंद्रासन	32	2
परिवृत्त त्रिकोणासन	34	2
विपरीत दंडासन	84	3
सर्वांगासन	73	5
हलासन	74	2

मंगलवार	पृष्ठ	मिनट
उत्तानासन	17	1
अधोमुख श्वानासन	19	1
अधोमुख वृक्षासन	21	1/2
मुड़ने वाले आसन (कोई दो)	52-55	8
सर्वांगासन	73	3
हलासन	74	2
सेतुबंध	79	2

बुधवार	पृष्ठ	मिनट
उत्तानासन	17	1
उत्थित हस्त पादांगुष्ठासन	23	2
अधोमुख श्वानासन	19	1
त्रिकोणासन	29	2
वीरभद्रासन II	30	2
पार्श्वकोणासन	31	2
वीरभद्र I	37	2
पार्श्वोत्तानासन	31	2
प्रसारित पादोत्तानासन	42	1
सर्वांगासन	73	3
हलासन	74	2

गुरुवार		
अधोमुख श्वानासन	19	1
उत्थित हस्त पादांगुष्ठासन	23	2
अधोमुख वृक्षासन	21	1/2
आगे झुकने के आसन	58-66	10
वीरासन	46	1
सर्वांगासन	73	3
सेतुबंध	79	2

शुक्रवार		
अधोमुख वृक्षासन	21	1/2
अधोमुख श्वानासन	19	1
उत्तानासन	17	1
त्रिकोणासन	29	2
वीरभद्रासन II	30	1
पार्श्वकोणासन	31	2
अर्ध चंद्रासन	32	2
परिवृत्त त्रिकोणासन	34	2
सर्वांगासन	73	3
हलासन	74	2
सेतुबंध	79	2

शनिवार		
अधोमुख श्वानासन	19	1
सुप्त पादांगुष्ठासन	24	3
उत्तानासन	17	1
अधोमुख वृक्षासन	21	1
उर्ध्व मुख श्वानासन	81	1
उष्ट्रासन	82	2
धनुरासन	82	1
विपरीत दंडासन	84	3
सर्वांगासन	73	3
हलासन	74	3

अगर आपके पास समय अधिक हो तो झुकने या मुड़ने वाले आसनों को दुहराएं। पहले एक तरफ होकर करें फिर दूसरी तरफ या तस्वीरों में दिये गये विभिन्न प्रकारों को करें। साप्ताहिक छुट्टी या अवकाश के दिन जब आपके पास अधिक समय हो तो तब एक या डेढ़ घंटे आसन करने की योजना का अनुसरण करें। कृपया ध्यान दें कि यह छोटा कार्यक्रम दोपहर के खाने में एक सैंडविच भी खा लेने जैसा है। आपके कुपोषित सेल स्वयं ही महसूस करने लगेंगे कि कुछ न मिल पाने से बेहतर है कि थोड़ा भी मिल जाए।

4. प्राणायाम का अभ्यास

प्राणायाम का महत्व

अगर आसनों के साथ-साथ प्राणायाम का अभ्यास नहीं किया जाए, तो योग का मूल उद्देश्य ही पूरा नहीं होता। आसन के उन्नत स्तर पर जब स्थिरता प्राप्त हो जाती है और चेतना का विस्तार पूरे शरीर में हो जाता है, तो योगी को महसूस होता है कि वह अपने प्राण को किसी चुने हुए चक्र की ओर चालित कर सकता है।

सामान्य स्तर पर चुने हुए प्राणायाम के अभ्यास के जरिये हम अपने स्व अथवा आंतरिक स्तर पर ब्रह्म संधान की यात्रा शुरू कर सकते हैं। लेकिन अति सामान्य स्तर पर हम सांस के माध्यम से श्वसन प्रणाली की पेशियों की अतिरिक्त कोशिकाओं (सेल) से संपर्क करने की कोशिश करते हैं। श्वसन प्रणाली की पेशियों के अतिरिक्त अन्य पेशियां भी तनावमुक्त हो जाती हैं, मन तथा संवेदनाएं शांत हो जाती हैं और आप अपने 'स्व' के निकट पहुंच जाते हैं।

यह समझ लेना आवश्यक है कि प्राणायाम के लक्ष्यों/उद्देश्यों को हम तब तक प्राप्त कर नहीं कर सकते जब तक हम नियम तथा यम का पालन करते हुए आसनों का अभ्यास कर शरीर को प्राणायाम के लिए तैयार नहीं कर लें।

प्राणायाम संवेदनशील स्नायु-तंत्र तथा श्वास-प्रणाली को लय में ला देता है जिससे हमारे मन में होने वाली बेतरतीब उथल-पुथल शांत हो जाती है। प्राणायाम के अभ्यास के जरिये रक्त की रासायनिक संरचना में परिवर्तन आता है जिससे मस्तिष्क तथा शरीर से जुड़ी विभिन्न नाड़ियों की सफाई हो जाती है। इस तरह से मस्तिष्क तथा शरीर की दूरस्थ कोशिकाओं को भी पोषण मिलने लगता है।

अभ्यास के लिए निर्देश

किस मुद्रा/स्थिति में बैठकर प्राणायाम किया जा सकता है ?

प्राणायाम किसी भी मुद्रा में किया जा सकता है बशर्ते कि रीढ़ सीधी रहे और बिना किसी झुकाव के उभरी रहे। तंतु-पट दबा हुआ न हो। मुद्रा ऐसी हो जिसमें पेशियों में किसी किस्म का तनाव न हो तथा उस मुद्रा में साधक बिना हिले-डुले कुछ मिनटों तक रह सकता है। नौसिखियों के लिए यह अच्छा होगा कि वे अपनी रीढ़ को कोई सहारा दें ताकि उनकी रीढ़-पेशियां थकें नहीं। कुर्सी पर बैठकर या पालथी पर बैठने की मुद्रा में, जैसा आगे बताया गया है, प्राणायाम कर सकते हैं।

किस स्थिति में अभ्यास किया जाना चाहिए ?

जब पेट तथा मूत्राशय साफ हो। आपको थका हुआ भी नहीं होना चाहिए।

भोजन कम से कम चार घंटे पहले किया गया हो अथवा नाश्ता किए एक-दो घंटे हो गए हों। आप सुबह, दोपहर, या शाम को अभ्यास कर सकते हैं लेकिन रात में सोने के पहले प्राणायाम न करें। विश्राम के कुछ आसन करने के बाद भी प्राणायाम का अभ्यास किया जा सकता है।

अभ्यास के लिए अनुदेश

इस अध्याय में दी गई मुद्राओं में से किसी एक का चुनाव करें।

प्राणायाम के पहले शवासन की तकनीक का अच्छा अभ्यास रहना चाहिए। शवासन से शरीर के किसी जोड़ अथवा पेशी में तनाव नहीं रह जाता। इसमें जीभ ऊपरी तालू पर दबाव न दे, आंखें बंद हों तथा पुतली नीचे की ओर हो तथा चेहरे की पेशियों में तनाव न हो—इन बातों का ध्यान रखा जाना चाहिए। इसके अलावा चुनी हुई मुद्रा में जो अनुदेश दिए गए हैं, उनका पालन करें।

आप किसी से कह भी सकते हैं कि वह प्राणायाम करते समय आपको अनुदेश पढ़कर सुनाता जाए।

महसूस करना सीखें

श्वास-प्रश्वास को नियंत्रित करने की प्रक्रिया आरंभ करने से पहले आपको पहले अपनी सांस को महसूस करना सीखना चाहिए कि कितनी हवा सांस के जरिये अंदर गई और आपकी सामान्य श्वास प्रक्रिया में कितनी हवा फेंफड़ों में जाती है। इसी तरह श्वास छोड़ने की शुरूआत का बिंदु कौन-सा होता है, इसकी गहराई कितनी है, इसकी लंबाई क्या है और इसका स्वाभाविक आयतन क्या है।

महसूस करने की इस प्रक्रिया में ही आप जान पाएंगे कि कैसे और किस दिशा में तंतु-पट तथा पसली संचालित होती है।

जब आप घरेलू सामानों की सहायता से स्थिर आसन कर रहे हों, इस दौरान भी महसूस करने का अभ्यास किया जा सकता है। अगर आप थके हुए हों या मौसम अनुकूल नहीं हो तो कुछ देर शवासन में सो जाइए। इसमें असामान्य कुछ भी नहीं है।

पहला व्यायाम

महसूस करने वाले अभ्यासों के बाद आप क्रमशः प्राणायाम का पहला अभ्यास शुरू करें। सामान्य श्वास के अंत में तंतु-पट पर हल्का जोर देते हुए श्वास छोड़ें। इससे उपयोग में आ चुकी, बची हुई हवा बाहर निकल जाती है और फेंफड़े में जाती हवा के लिए और जगह बन जाती है। श्वास छोड़ने के बाद वाले व्यायाम को दुहराने के पहले एक-दो बार सामान्य ढंग से सांस लें।

प्राणायाम के सभी अभ्यास श्वास छोड़ने के अभ्यास के बाद ही शुरू होते हैं।

प्रारंभ में इसके लिए 10-15 मिनट का वक्त काफी है। उज्जयि या विलोम प्राणायाम के अभ्यास तक पहुंचने के पहले कुछ दिनों तक किसी तरह का बल न लगाएं। तंतु-पट को ढीला रखें। प्राणायाम के अभ्यास के दौरान एक लय बनाए रखें।

उज्जयि प्राणायाम

प्रकार क : गहरा श्वास (पूरक) तथा सामान्य रूप से श्वास छोड़ना

प्रकार ख : सामान्य श्वास तथा गहरे रूप से श्वास छोड़ना

प्रकार ग : गहरा श्वास लेना तथा गहरे रूप से श्वास छोड़ना

इसी मुद्रा में बैठे-बैठे कुछ देर तक सामान्य रूप से श्वास लें। जब स्थिरता आ जाए तभी अपनी पसंद के प्रकार वाला प्राणायाम करें।

उज्जयि के प्रत्येक चक्र के प्रारंभ में सामान्य रूप से श्वास के दो चक्र होने चाहिएं।

कभी श्वास नहीं रोकें।

श्वास फेंफड़ों के किनारे पहुंचे।

प्राणायाम का समापन करने के लिए कुछ देर तक सामान्य रूप से श्वास लेने के बाद कुछ देर तक गद्दे पर सीधे लेटे रहें।

विलोम प्राणायाम

विलोम का अर्थ होता है—प्राकृतिक अवस्था के विपरीत। कई दौरों में बाधित रूप से श्वास लिया जाए तथा बाधित रूप से (रुक-रुककर) श्वास छोड़ा जाए तो इसे विलोम प्राणायाम का चक्र कहते हैं।

इस मुद्रा को शुरू करने से पहले कुछ देर सामान्य रूप से श्वास लें तथा श्वास छोड़ें।

I. (क) दो-तीन चरणों में श्वास लें, उसके बाद फिर श्वास लें ताकि फेंफड़े भर जाएं।

(ख) गहरे रूप से श्वास धीरे-धीरे छोड़ें जैसे उज्जयि प्राणायाम होता है। इससे विलोम का एक चक्र पूरा हो जाता है। फेंफड़ों को आराम देने के लिए प्रत्येक चक्र के बाद सामान्य रूप से भी श्वास लें और छोड़ें।

II. (क) फेंफड़ों से हवा निकालने के बाद सामान्य रूप गहरी सांस लें।

(ख) दो-तीन चरणों में श्वास छोड़ें, रुकें, फिर श्वास लें। रुकें तथा तब तक श्वास छोड़ें जब तक फेंफड़े पूरी तरह खाली न हो जाएं।

विलोम के प्रत्येक चरण के बाद कुछ चरणों तक सामान्य रूप से श्वास लें और छोड़ें।

आप अपनी क्षमता के अनुसार प्रत्येक प्रकार के प्राणायाम को कुछ चरणों तक करें। आप जितने चरणों में इसे करें, प्रत्येक चरण में श्वास की मात्रा बराबर होनी चाहिए। प्राणायाम पूरा करने के बाद कुछ देर तक शवासन में लेटें।

विलोम प्राणायाम से श्वास छोटी रहने की समस्या से

छुटकारा मिल जाता है। यह प्राणायाम उन महिलाओं के लिए विशेष उपयोगी हैं जो तनावग्रस्त और परेशान रहती हैं।

आगे के अभ्यास में विकास

शरीर में जाने वाले श्वास को शरीर के अलग-अलग हिस्सों--श्रोणी, निचला तंतु-पट, मध्य तंतु-पट, निचली छाती तथा ऊपरी छाती--में बांट दें। विलोम श्वास लेने या छोड़ने के समय हर बार रुकें, श्वास को इन हिस्सों में एक बार ऊपर से नीचे, फिर नीचे से ऊपर की ओर फैलाएं। इस तरह के कई प्रकारों की संभावनाएं बनती हैं। योगी लोग अपनी इच्छा के अनुसार प्राण को किसी चक्र में केन्द्रित कर लेते हैं, यह उसी का प्रारंभिक रूप है।

कुंभक

विभिन्न प्राणायामों में क्रम से यह तीसरा है लेकिन सबसे महत्वपूर्ण है। इसके कई प्रकार हैं और उनके भी अनेक प्रकार हैं लेकिन हम यहां दो मूल कुंभकों पर ही अपने को सीमित करेंगे।

1. अंतर कुंभक : श्वास लेने के बाद श्वास रोकना,
2. बाह्य कुंभक : श्वास छोड़ने के बाद श्वास लेना

अंतर कुंभक :

अनुदेश :

1. बैठकर करें : कुंभक का प्रभाव तब और बढ़ जाता है जब साथ में जलंधर बंध भी किया जाए। इसे लेटकर नहीं किया जा सकता।
2. इस मुद्रा में बैठ जाएं--कुछ देर तक उज्जयि करें, उसके बाद विलोम के कुछ चक्र पूरे करें।
3. श्वास पूरी तरह छोड़ें और गहरा श्वास लें फिर इसके जलंधर बंध के साथ रुकें।
4. शुरू में श्वास ज्यादा देर तक न रोकें।
5. श्वास छोड़ने के पहले जलंधर बंध धीमे से खोल दें।
6. दो-तीन बार ऐसा करने के बाद पूरी प्रक्रिया को दुहराएं।
7. इस प्राणायाम को समाप्त करने या दूसरा प्राणायाम करने के पहले कुछ देर शवासन में सीधे लेटे रहें।

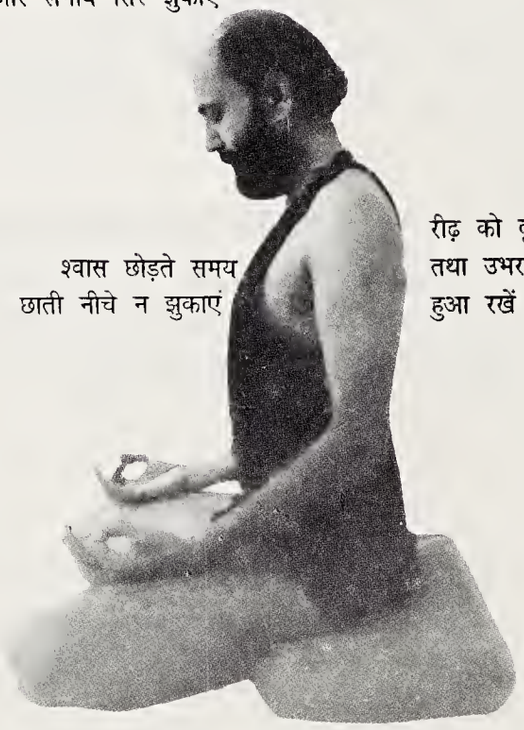
बाह्य कुंभक

अनुदेश :

1. और 2 (ऊपर वर्णित) का पालन करें।
3. जलंधर बंध के साथ श्वास रोकने की शुरूआत करने से पहले श्वास छोड़ने का कार्य कई चरणों में करें।
4. रुकें।
5. जलंधर बंध को थोड़ा खोलें और धीमे से श्वास लें।
6. इसे दुहराने के पहले दो-तीन बार श्वास लें और छोड़ें।
7. इस प्राणायाम को समाप्त करने या दूसरा प्राणायाम करने से पहले कुछ देर शवासन में लेटे रहें।

प्राणायाम (मुद्राएं)

बिना जोर लगाये सिर झुकाएं

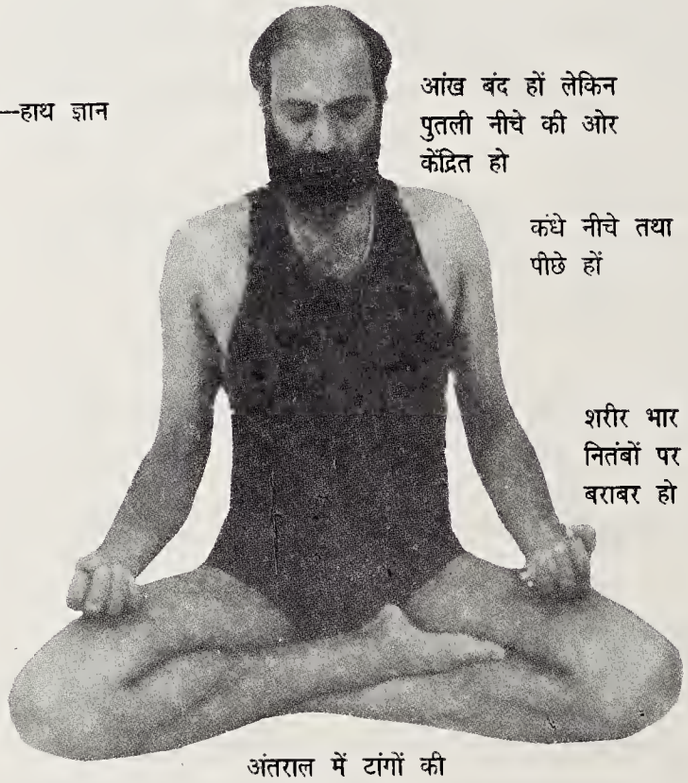


रीढ़ को दृढ़, सीधा तथा उभरा हुआ रखें

श्वास छोड़ते समय छाती नीचे न झुकाएं

गद्दा इतना ऊंचा हो कि उरु-मूल घुटनों से ऊपर रहे

सिद्धासन—हाथ ज्ञान मुद्रा में

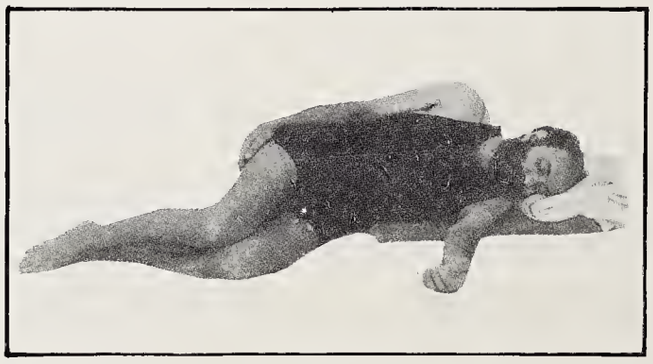


आंख बंद हों लेकिन पुतली नीचे की ओर केंद्रित हो

कंधे नीचे तथा पीछे हों

शरीर भार दोनों नितंबों पर बराबर हो

अंतराल में टांगों की स्थिति बदलते रहें



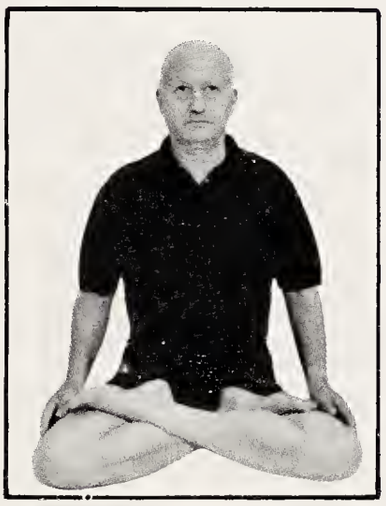
शवासन के बाद कुछ देर एक करवट में लेटें

प्राणायाम मुद्राएं

नौसिखियों के लिए

पलंग के सहारे

दीवार के सहारे



पद्मासन

गद्दा इतना ऊंचा हो कि उरु मूल घुटनों से ऊपर रहे।

नौसिखियों के लिए

सुखासन

पलंग के सहारे
वीरासन

पार्श्व-दृश्य

5. गतिशील योग

आधुनिक स्वास्थ्यकर कार्यक्रमों का दावा है कि शरीर को गतिशील क्रियाशीलता तथा व्यायाम की जरूरत पड़ती है--युवाओं, खिलाड़ियों तथा एथलीटों के लिए यह जरूर सच है।

वास्तव में अधिकांश गतिशील व्यायामों के मुकाबले गतिशील आसन अधिक परिपूर्ण है। समस्या यह है कि ये गतिशील आसन आजकल प्रचलन में नहीं रह गए हैं। इसीलिए लोग इनके बारें में जानते भी नहीं हैं।

वैसे प्रत्येक स्थिर आसन में भी आधारभूत गतिशीलता का तत्व मौजूद होता है। आसन की शुरूआत से लेकर समाप्ति तक विभिन्न मुद्राएं बनाना, मुद्राओं में बने रहना तथा फिर सामान्य मुद्रा में आना—इन सभी में एक प्रकार की गतिशीलता तो है ही। शारीरिक लय और सुघड़ता के साथ, सचेतन रूप से सौंदर्यात्मक संतुलन के साथ ये क्रियाएं की जाती हैं।

गतिशील योग में समझने वाली बात यह है कि गतिशील योग प्रारंभ (यानी ताड़ासन, शीर्षासन तथा दंडासन) से एक आसन तक पहुंचा जा सकता है और उस आसन में बिना रहे फिर खड़े होने वाली मुद्रा में वापस आ जाया जाता है। इसी को बार-बार किया जाता है।

हां, इसमें कोई झटका नहीं लगता, न ही किसी अंग का अप्राकृतिक अंग-संचालन होता है। इसमें श्वास भी नहीं रोका जाता।

गतिशील योग से शरीर के अंगों का समग्र संचालन होता है, लचीलापन आता है, शक्ति प्राप्त होती है और टिकाऊपन आता है। इसमें आश्चर्यजनक रूप से ऊर्जा की न्यूनतम खपत होती है, इसीलिए खेल के पहले खिलाड़ियों, एथलीटों के शरीर को गरमाने में बहुत उपयुक्त होता है। शरीर के रक्त में लैक्टिक एसिड की मात्रा बढ़ाए बगैर सभी मांसपेशियों को इससे गरमाया जा सकता है।

कई समूहों को सामूहिक प्रशिक्षण देने के लिए योगासन का चक्रीय कार्यक्रम डिजाइन किया जा सकता है। वस्तुतः यह व्यायाम का एक समग्र रूप है।

गतिशील मुद्राएं करने के पहले यह बिल्कुल जरूरी है कि स्थिर आसनों को करने का सही तरीका पहले सीखा जाए।

सूर्य नमस्कार चक्र बहुत लोकप्रिय है और वह भी इन्हीं आसनों की श्रेणी में ही आता है।

बच्चों के लिए योगासन

बच्चे सामान्य रूप से भी अत्यधिक क्रियाशील होते हैं स्थिर आसनों से वे आसनों के प्रति आकर्षित हों, इसके लिए नए आसान तरीके की जरूरत है। चुने हुए स्थिर तथा गतिशील आसन उन्हें मानसिक रूप से स्वस्थ तथा शारीरिक रूप से क्रियाशील रखते हैं।

कक्षा में बच्चे मजे से आसन करते हैं। वस्तुतः यह शिक्षकों के लिए चुनौती होती है कि खुद आसन करते हुए आसनों के बारे में कितनी तेजी से अनुदेश बच्चों को दे सकते हैं। यह आवश्यक है कि बच्चे आसनों के नाम भी जानें।

आठ वर्ष से अधिक उम्र के बच्चे आसनों का अभ्यास कर सकते हैं। चूंकि रीढ़ पर आसनों का समग्र रूप से प्रभाव अच्छा होता है, इसलिए न केवल उनका स्वास्थ्य सुधरता है, बल्कि उनका कद भी बढ़ता है।

उनके लिए पद्मासन या वीरासन में बैठना आसान होता है, इसलिए वे आराम से इस आसन में बैठ सकते हैं। चाहें तो इस आसन में बैठे-बैठे टी.वी. भी देख सकते हैं। जोड़ों के संचालन से जो नुकसान होता है, उसकी भरपाई आसानी से हो सकती है। इतना ही नहीं, यदि कम उम्र में ही आसनों का अभ्यास शुरू कर दिया जाए, तो शारीरिक रचना के दोषों को भी आसनों से ठीक किया जा सकता है। इससे उनका मस्तिष्क एकाग्र होता है और उनका आत्मविश्वास भी बढ़ता

है। माता-पिता की ओर से बच्चों के लिए सर्वोत्तम उपहार योगासन करने की प्रेरणा हो सकती है। अगर माता-पिता भी आसन करने लगें, तो यह उस परिवार का सामूहिक स्वास्थ्य कार्यक्रम बन जाता है।

प्राणायाम बच्चों के उपयुक्त नहीं है।

30 से 40 मिनट तक आसन करना बच्चों के लिए काफी है। एक-एक बच्चे को अकेले आसन सिखलाना कठिन होता है। बच्चे आसन में रुचि लेते रहें, इसके लिए आवश्यक है कि उन्हें समूह में सिखलाया जाए तथा उनकी रुचि बनाए रखने के लिए नए-नए रंजक और सुगम तरीके से अपनाए जाएं।

खिलाड़ियों तथा एथलीटों के लिए योग

यह सर्वविदित है कि खेल तथा एथलेटिक्स में कुछ मांसपेशी-समूहों का ही उपयोग होता है। जिन मांसपेशियों का उपयोग अधिक होता है, वे सिकुड़ी रहती हैं। जब कि उन्हीं के सहयोगी अंग तनाव में रहते हैं। योगासन इन मांसपेशियों को ढीला कर देता है और संतुलन ला देता है। साथ ही शरीर-रचना को अपनी मूल अवस्था में वापस लाने में भी सहायता करता है।

यह सब जानते हैं कि योगासन के दरम्यान स्थिर भार, शक्ति बढ़ाता है क्योंकि शरीर तथा उन अंगों के भार का उपयोग शक्ति प्राप्त करने के लिए किया जाता है। अगर अधिक देर तक अभ्यास किया जाए तो कुछ आसन शक्तिवान बनाने के लिए बहुत उपयोगी हैं।

लेकिन खिलाड़ी को पहले से जो उपयोगी सिद्ध हो चुका व्यायाम कराया जा रहा हो, उसकी जगह ये आसन नहीं ले सकते। इसीलिए शारीरिक प्रशिक्षण के दौरान कुछ विश्राम वाले आसन जरूर किए जा सकते हैं।

कुछ स्थिर आसन, टांगों की मांसपेशियों को ढीला करने वाली मुद्राएं तथा गतिशील योग, जैसे—सूर्य नमस्कार, बगैर ऊर्जा नष्ट किए शरीर को गरमाने में उपयोगी सिद्ध हुए हैं।

सभी प्रकार के खेलों के लिए पूरी बांह का संतुलन तथा कुहनी का संतुलन, उत्तानासन तथा अधोमुख श्वानासन का अभ्यास क्रमशः जोड़ा जा सकता है।

एथलीट अथवा खिलाड़ियों की असली कुशलता लघु पेशी-समूहों पर निर्भर करती है, यहां आसन इन पेशियों को अनुकूलित करने, पुनर्स्वस्थ बनाने और विकसित करने में विशेष भूमिका अदा कर सकते हैं। एक भ्रम व्याप्त है कि आसनों से शरीर में सिर्फ लचीलापन आता है। आसनों के जरिये लचीलापन और शरीर रचना में पुनर्संयोजन से जोड़ों में शक्ति आती है जिससे उन जोड़ों के आसपास की पेशियों में भी मजबूती आती है तथा उनके आहत होने की संभावना कम हो जाती है। शरीर के अंगों के समग्र संचालन से शरीर और भी क्षमतावान हो जाता है। खेल का मौसम न होने पर भी खिलाड़ी आसनों के अभ्यास के जरिये अपनी पेशियों को सक्रिय रख सकते हैं।

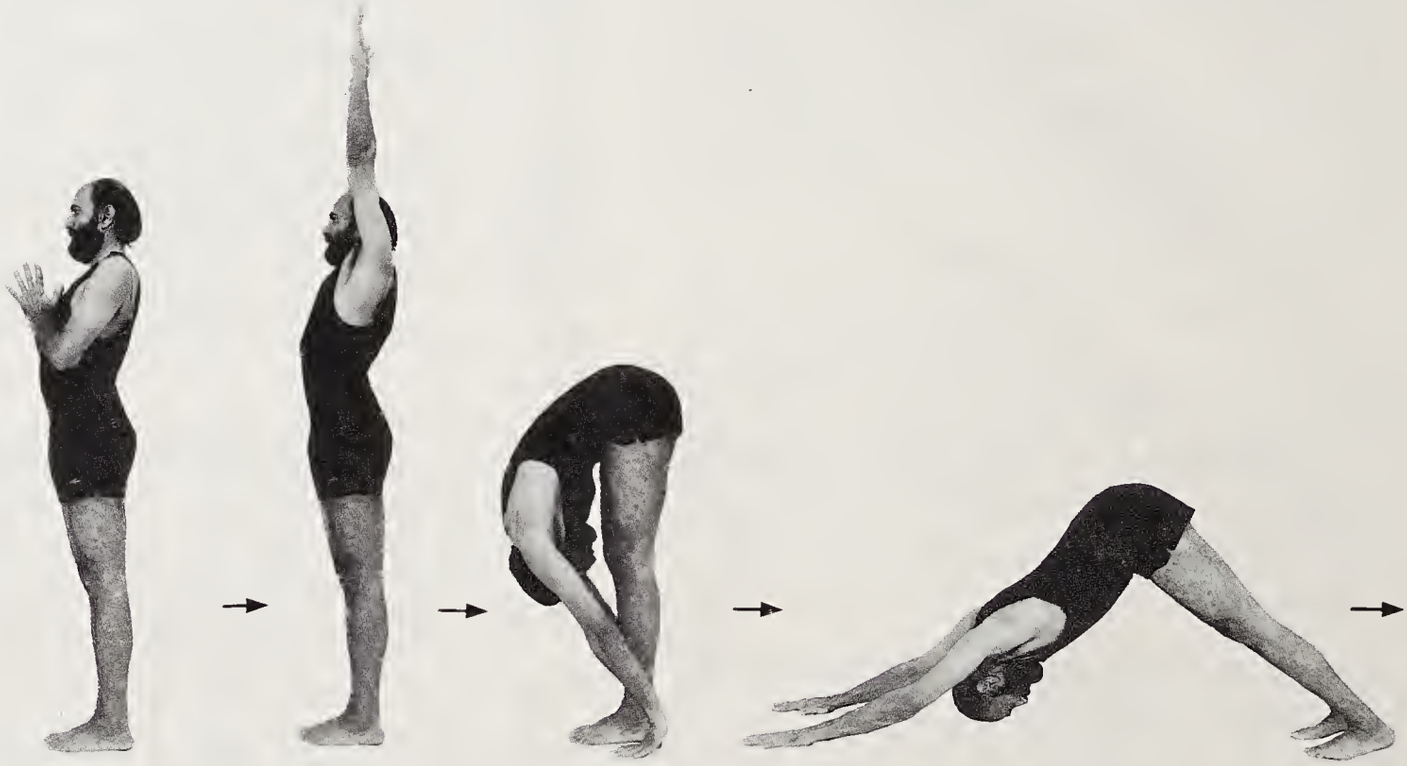
आज के खेलों की प्रतियोगी दुनिया में सबसे जरूरी है कि जल्दी से विश्राम कर शक्ति फिर से बटोर ली जाए। थोड़े समय में शक्ति फिर से बटोरने का आसन जैसा जरिया और कोई नहीं है। कुछ चुने हुए आसन इसके लिए सर्वाधिक उपयुक्त हैं। खड़े होकर करने वाले विलोम या वे जिनमें सिर हृदय से नीचे स्तर पर हो तथा पसली और तंतु-पट काफी खुले हों, ऐसे आसन यदि किसी सामान के सहारे किए जाएं तो फिर सर्वाधिक लाभ पहुंचता है।

हृदय की पेशियों पर दबाव के घट जाने से हृदय के धड़कने की गति धीमी हो जाती है, छाती फैल जाती है, श्वास गहरा हो जाता है। फेंफड़ों में आक्सीजन, कार्बन-डाई-आक्साइड की आवाजाही की दर बेहतर हो जाती है जिससे रक्त की रासायनिक संरचना जल्द ही सामान्य हो जाती है।

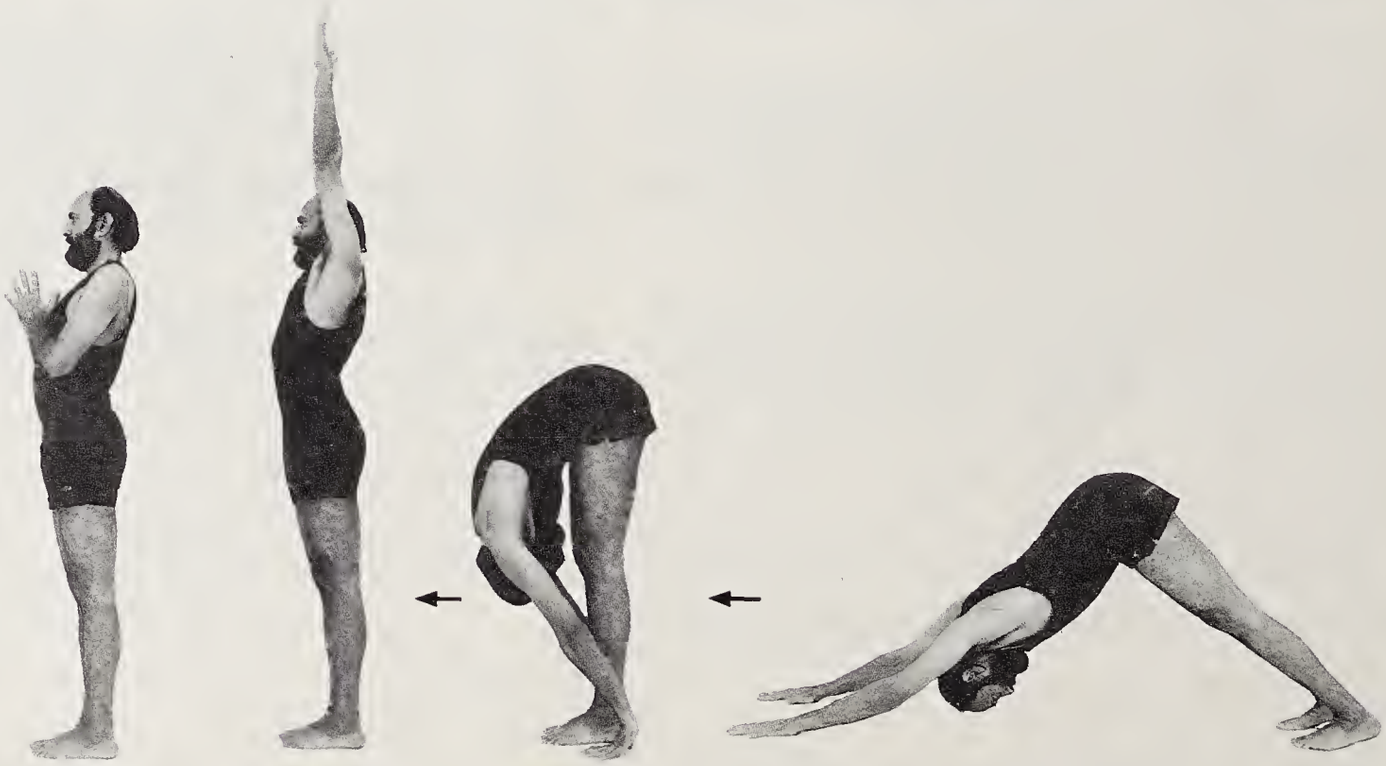
यह ध्यान रहे कि पीठ पर लेटकर शवासन करने से मिलने वाला विश्राम उतना प्रभावशाली नहीं होता जितना विश्राम वाले अन्य आसन होते हैं।

सूर्य नमस्कार

यह बहुत लोकप्रिय आसन शृंखला है। इसे सम व्यायाम कहा गया है तथा इसके अनेक लाभ गिनाए गए हैं। फिर भी यह उन्हीं के लिए उपयुक्त है जो गतिशील व्यायाम के आदी रहे हों।



नमस्कारासन उर्ध्व हस्तासन उत्तानासन चलें या पीछे की ओर उछलें अधोमुख श्वानासन



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सूर्य नमस्कार

बहुत-से लोग मानते हैं कि यदि रोज सूर्य नमस्कार का अभ्यास किया जाए तो अन्य आसन करने की आवश्यकता नहीं होती। यह सच है लेकिन तब, जब कम से कम 108 बार यह आसन किया जाए। इसका समग्र प्रभाव जरूर पड़ता है लेकिन यह किसी आसन कार्यक्रम की जगह नहीं हो सकता।

पहले तय करें कि कितनी बार यह आसन रोज करेंगे। फिर इसको कीजिये। इसके लिए दृढ़ निश्चय चाहिए। बाद में धीरे-धीरे इसकी संख्या बढ़ाएं। शरीर को गरमाने के लिए इस आसन को कुछ बार करना काफी होता है।

सूर्य नमस्कार करने का अनुभव, विशेषकर आसन के बाद ताजगी के अहसास का वर्णन करना कठिन है।

ऊर्ध्व मुख श्वानासन

चतुरंग दंडासन

उर्ध्व मुख श्वानासन

गतिशील योग (एक व्यक्ति के लिए)

'आसनों का अभ्यास' अध्याय में दर्शाये गये आसनों को ठीक से सीखने के बाद ही इन गतिशील आसनों को सीखने की कोशिश करनी चाहिए।

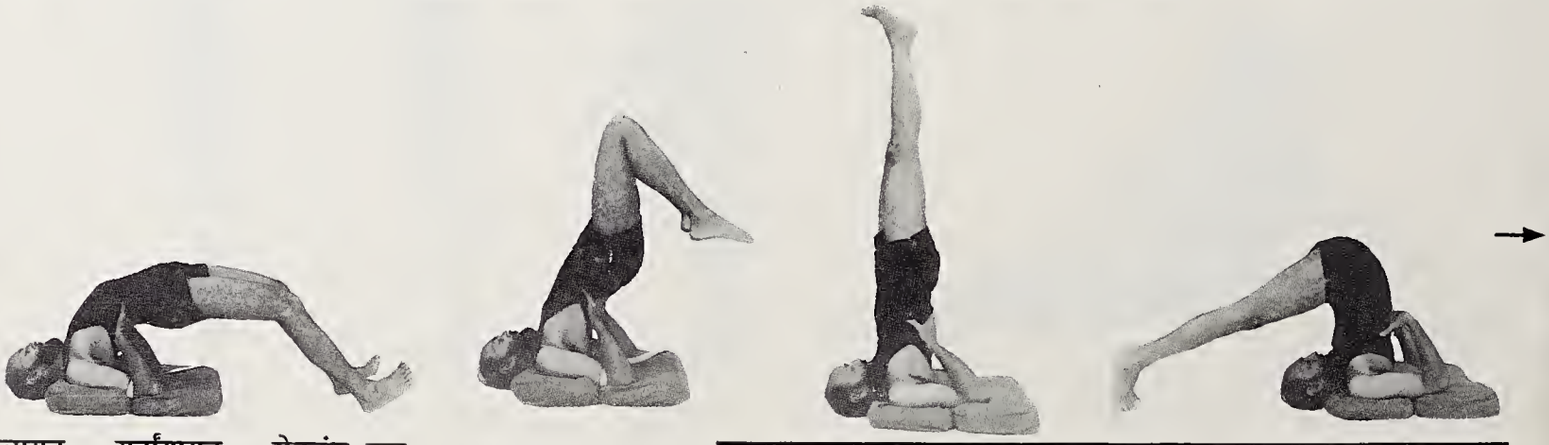
इन आसनों को अपनी क्षमता के अनुसार कई बार दुहराना चाहिए। श्वास लयबद्ध और सामान्य रहे।

सभी गतिशील आसनों के अंत में पर्याप्त समय तक विश्राम के अथवा विलोम आसन अवश्य करने चाहिएं।

पीछे झुकते हुए फर्श तक पहुंचना
ताड़ासन - उर्ध्व धनुरासन - ताड़ासन चक्र

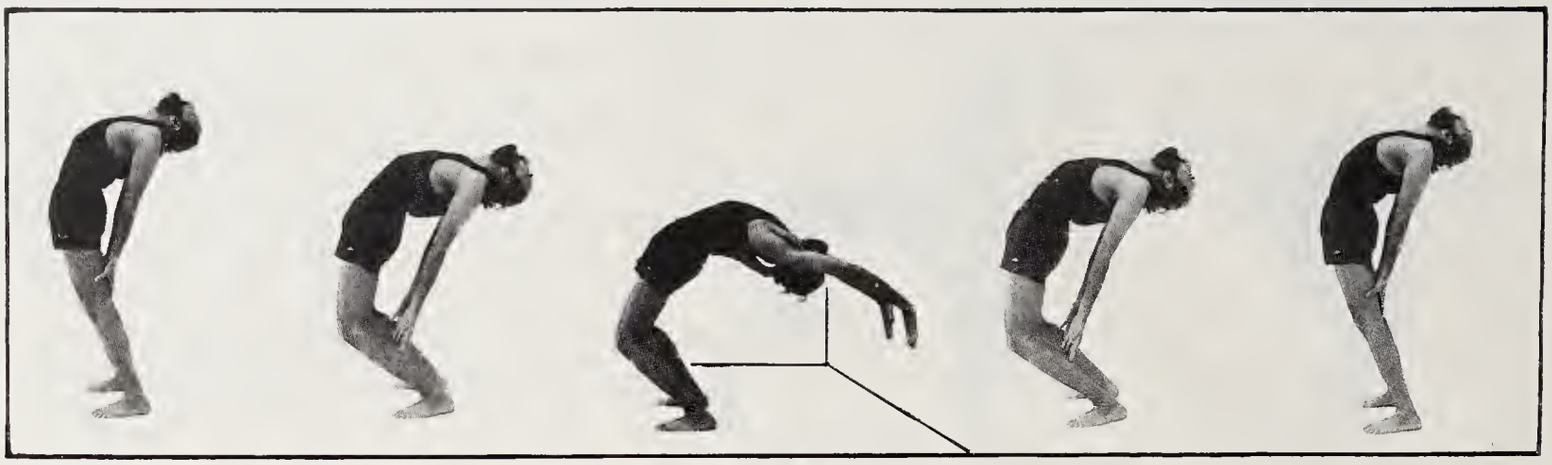
पश्चिमोत्तानासन - हलासन चक्र

शीर्षासन - बकासन चक्र

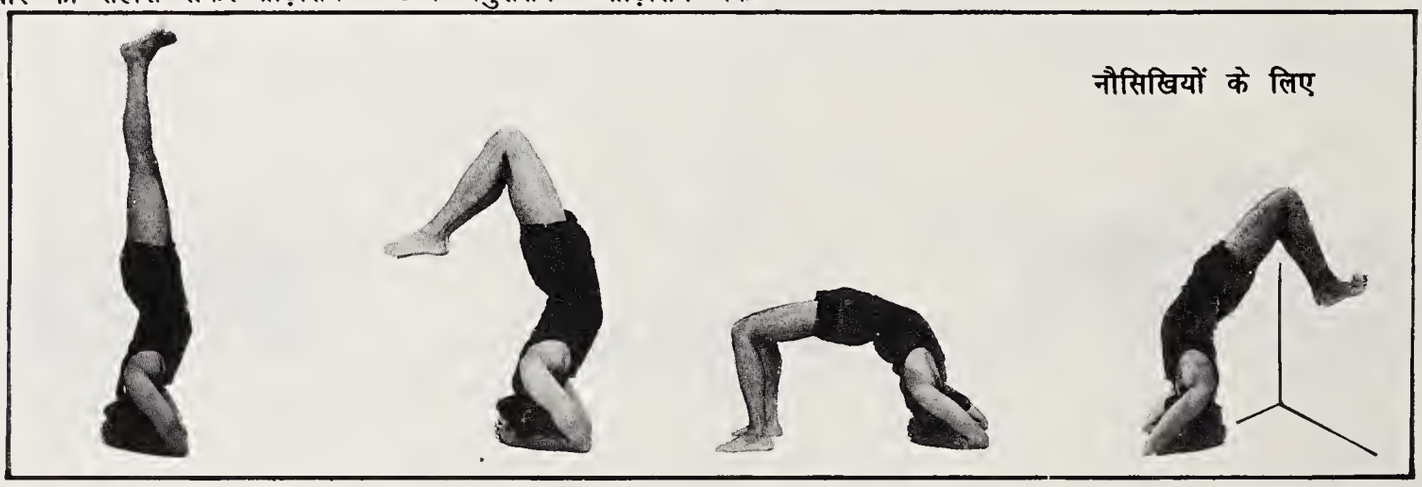


हलासन - सर्वांगासन - सेतुबंध चक्र

गतिशील योग



दीवार का सहारा लेकर ताड़ासन - उर्ध्व धनुरासन - ताड़ासन चक्र



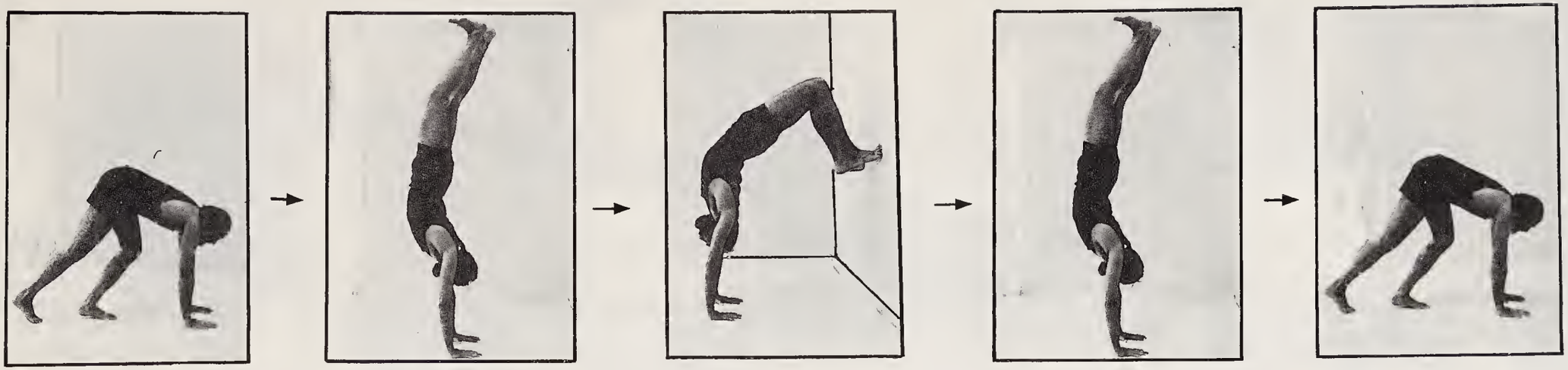
शीर्षासन - विपरीत दंडासन चक्र

टांगें दीवार पर

शार्षासन - उर्ध्व धनुरासन चक्र

नौसिखियों के लिए
टांगों को दीवार पर रखने का अभ्यास करें

गतिशील योग



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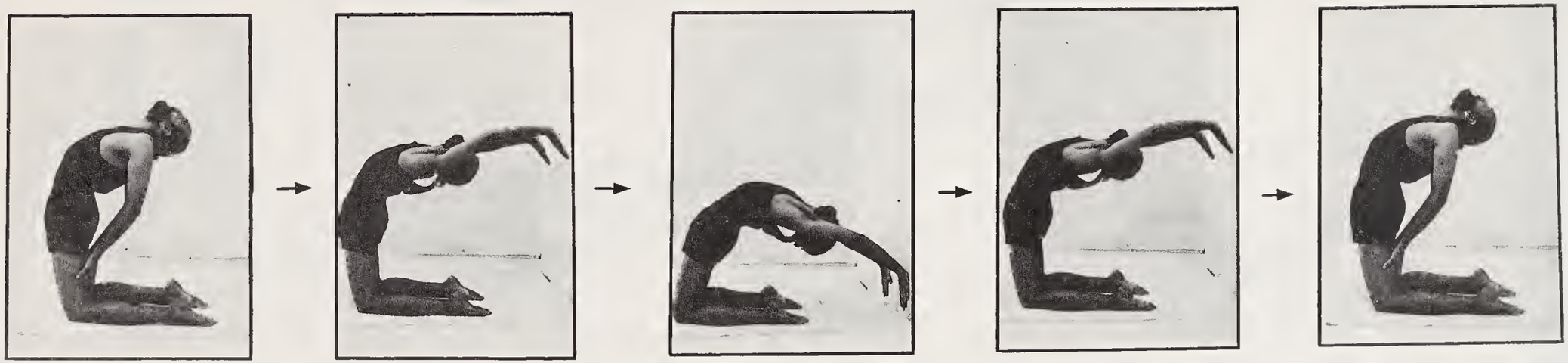

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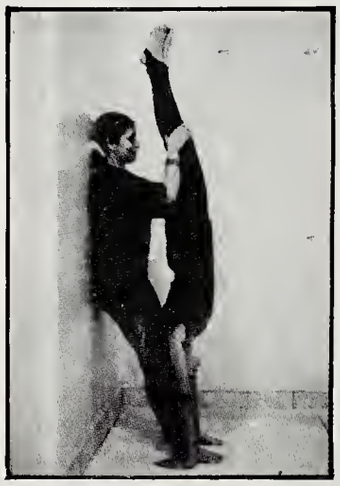
गतिशील योगासन (समूह के लिए)

टांगों को पकड़कर उत्तानासन

उत्थित हस्त पादांगुष्ठासन



कंधों को सहारा देते हुए अधोमुख वृक्षासन

कंधों को सहारा देते हुए पिंच मयूरासन

कंधों की अकड़न दूर करते हुए

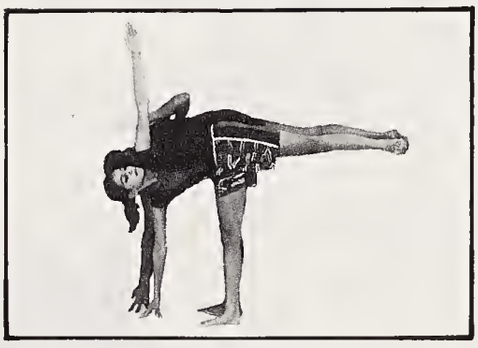
तानना

जोड़ी या समूह द्वारा अभ्यास

त्रिकोणासन

वीरभद्रासन II

पार्श्वकोणासन



अर्धचंद्रासन

अर्धचंद्रासन

परिवृत्त त्रिकोणासन

परिवृत्त पार्श्वकोणासन

जोड़ी या समूह द्वारा अभ्यास

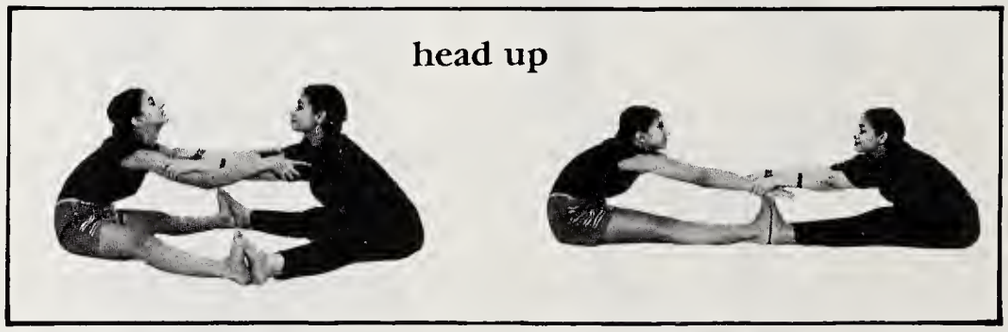
परिवृत्त अर्धचंद्रासन

प्रसारित पादोत्तानासन

पार्श्वोत्तानासन

वीरभद्रासन I

वीरभद्रासन III



उपविष्ट कोणासन

पश्चिमोत्तानासन

पश्चिमोत्तानासन
सिर नीचे

उभय पादांगुष्ठासन

जोड़ी या समूह द्वारा अभ्यास

उर्ध्व धनुरासन में पीछे झुकना
और पलटना

उष्ट्रासन

पार्श्व दृश्य

पीछे का दृश्य

विपरीत दंडासन

उर्ध्व धनुंरासन

6. रस्सी के सहारे स्थिर और गतिशील आसन

बिना किसी झटके या ऊर्जा खोए हुए आसनों तथा संबंधित मुद्राओं को करने में रस्सी विविध रूप से उपयोगी है।

अगर आप एक उत्साही साधक बनना चाहते हैं, तो रस्सी के सहारे आसन अवश्य करें। तस्वीरों को देखने से इसकी पद्धति साफ समझ में आ जाएगी।

तस्वीरों में रस्सी की उपयुक्त ऊंचाई तथा दो रस्सियों के बीच की दूरी स्पष्ट दर्शाई गई है। उन्हें जाली, खिड़की, दीवार में लगी कुंडी में भी बांधा जा सकता है। नाइलोन की रस्सी सबसे अच्छी होती है, क्योंकि वह झूलने के बाद सिकुड़ती नहीं है। रस्सी के छोरों पर जिमनास्टिक वाला छल्ला या विशेष प्रकार की गांठें बांधी जा सकती हैं। 'आसनों का अभ्यास' अध्याय में दर्शाए गए आसनों को सही तरीके से करने को, रस्सियां आसान बना देती हैं। चूंकि इसमें गिरने का खतरा नहीं होता, इसलिए संतुलन बनाए रखना आसान होता है। इससे जो ऊर्जा बचती है, उसका सर्वाधिक उपयोग झुकने या तानने वाली मुद्राओं में किया जाता है।

रस्सियों के सहारे हम गतिशील संचालन में भी संतुलन रखना सीख जाते हैं। इसलिए संचालन को बढ़ाते हुए हमें इन मुद्राओं को बार-बार दुहराना चाहिए।

श्वास को लयात्मक और स्थिर रखना चाहिए, वरना आपको थोड़ी देर बाद नींद आने लगेगी।

रस्सी की ऊंचाई और चौड़ाई दर्शाते हुए।

रस्सी के सहारे

उत्तानासन

अधोमुख श्वानासन

प्रसारित पदोत्तानासन

उत्तानासन झूलते हुए

उभय पादांगुष्ठासन

अधोमुख श्वानासन
झूलते हुए

उत्तानासन से कंधों की
अकड़न दूर करते हुए

रस्सी के सहारे (क्रमशः)

ऊपर बंधी रस्सी से झूलते हुए अधिकतम आगे और पीछे झुकते हुए

ऊपर बंधी रस्सी और बांहों के सहारे पीछे झुकना

रस्सी के सहारे (क्रमशः)

नीचे बंधी रस्सी तथा टांगों के सहारे पीछे झुकते हुए

ऊपर बंधी दुहरी रस्सियों
के सहारे हाथों तथा टांगों
को सीधा रखते हुए झुकना

रस्सी के सहारे (क्रमशः)

त्रिकोणासन

वीरभद्रासन II

परिवृत्त त्रिकोणासन

अर्धचंद्रासन

वीरभद्रासन I

पार्श्वोत्तानासन

परिवृत्त जानुशीर्षासन

पार्श्वकोणासन

रस्सी के सहारे (क्रमशः)

गतिशील संचालन

पीछे झुकने के बाद घुटने दीवार पर

फैलने के साथ पीछे झुकना

एक रस्सी दूसरे में डालते हुए

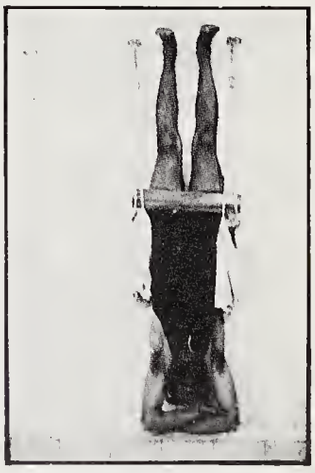
रस्सी के सहारे (क्रमशः)

उत्थित हस्त पादांगुष्ठासन

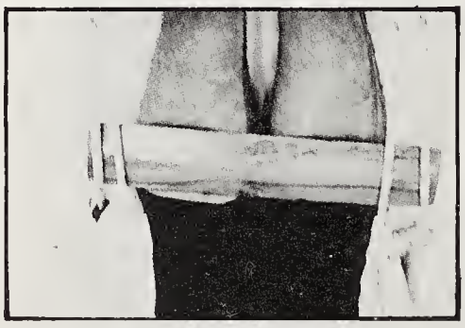
सुप्त पादांगुष्ठासन

पद्धति

बद्ध कोणासन में



शीर्षासन में
सीधी टांगें



तख्ते के साथ

7. विभिन्न रोगों की योग-चिकित्सा

विभिन्न रोगों से ग्रस्त लोगों को मैं पिछले दस वर्षों से योग के विभिन्न पहलुओं के बारे में सिखला रहा हूं। जैसे-जैसे अच्छे परिणाम आने लगे और तकलीफ या दर्द में कमी से लाभान्वित लोग आभार व्यक्त करने लगे, त्यों-त्यों मैं प्रेरित होता गया।

पुस्तक में दर्शाई गई आसनों की पद्धति और उनका क्रम आर.आई.एम.वाई.आई. इंस्टीट्यूट के योगाचार्य बी.के.एस. आयंगर के साथ काम करने और मेरे शैक्षिक अनुभव का सुफल है। बीमारियों के दौरान मुझे कई चिकित्सकों के साथ काम करने का मौका मिला है और इस क्रम में उनके साथ विवेचना कर मैंने अपने को औषधि विज्ञान में शिक्षित किया है। वे मेरे पास योग सीखने आते हैं क्योंकि इससे उनको लाभ पहुंचता है और मैं मानव शरीर की जटिलताओं को सीख चुकने के चलते उनको उन्हीं की मेडिकल शब्दावली में समझा लेता हूं। इसके अतिरिक्त मैं खुद कंधों, घुटनों तथा कूल्हों के रोग, सर्वाइकल स्पोंडिलाटिस तथा ऑस्टो आर्थराइटिस का मरीज हूं। आसनों के नियमित अभ्यास के जरिये ही मैं अपने को इतना स्वस्थ रख पाता हूं कि कभी भी क्रिकेट मैच खेल सकूं या केदारनाथ की 15 किलोमीटर वाली कठिनतम यात्रा पर कभी भी निकल सकूं।

आसन और प्राणायाम के विभिन्न अंगों पर पड़ने वाले अच्छे प्रभाव की विवेचना पहले ही की जा चुकी है लेकिन 'आसनों का अभ्यास' वाले अध्याय में दिए गए अनुदेशों, नुक्तों तथा सावधानियों को ध्यान से पढ़ें।

आसन तथा प्राणायाम के अभ्यास के साथ-साथ बीमारी को ध्यान में रखते हुए आयुर्वेद के अनुसार सही भोजन तथा दिनचर्या का होना आवश्यक है।

अतिरिक्त सावधानियां

आसन करने के 24 घंटे पहले कोई दर्दनाशक दवा न लें।

दर्द से डरें नहीं, दर्द को सहना सीखिए। दर्द दो तरह का होता है—अनुकूल दर्द और प्रतिकूल दर्द। अनुकूल दर्द आपको आसन और करने के लिए प्रेरित करेगा।

यह बहुत जरूरी है कि आप डाक्टर के साथ सलाह कर रोग को सही तरह पहचान लें।

घरेलू सामानों के साथ आसन करने से भी इलाज की प्रक्रिया आसन हो जाती है। आपके शरीर में अकड़न कितनी है, इसको ध्यान में रखकर आसन तथा उसके विभिन्न प्रकारों में से चुनाव हो। उसके बाद आराम से आसन करें। महत्वपूर्ण यह है कि आसन की मुद्रा में अधिक देर तक रहा जाए और इस अवधि को बढ़ाया जाए।

रोग, आसन और उनका क्रम

नोट : प्रत्येक आसन के बाद कोष्ठक में दी गई संख्या पृष्ठ संख्या है। अक्षर आसन के प्रकार को बतलाता है। पहले नौसिखियों के लिए सुझाए गए आसन के प्रकार का ही अभ्यास करें।

पेट का दर्द : डकार में परेशानी, उबकाई, उल्टी या गैस (वात)। महिलाएं अध्याय II के अंत में उल्लिखित मासिक धर्म के संदर्भ में भी देखें। सुप्त वीरासन (47), सुप्त बद्धकोणासन (48), अधोमुख श्वानासन (19), विपरीत दंडासन (85), सेतुबंध (79), विपरीत करणी (77)।

अम्ल पित्त : आप पृष्ठ 128 में दिए गए साप्ताहिक कार्यक्रम के अनुरूप अभ्यास करें।

आगे झुकने वाले या मुड़ने वाले आसनों का अभ्यास

अधिक किया जाना चाहिए। प्राणायाम I तथा II का अभ्यास किया जाना चाहिए।

रक्ताल्पता : बीच-बीच में विश्राम के आसन करते हुए पृष्ठ 96 पर दिये गये कार्यक्रम के अनुसार अभ्यास करें। प्राणायाम I, II तथा III का अभ्यास नियमित रूप से करना चाहिए।

हृदयशूल : देखें हृदय।

कुहनी : पृष्ठ 130 पर दिये गये कार्यक्रम के अनुसार अभ्यास करें।

चिंता : देखें तनाव।

गठिया : शरीर के किसी अंग, जैसे--उंगलियों, कलाइयों, हाथों या कंधों का इलाज नहीं किया जा सकता। सभी अंगों का इलाज एक साथ करना होगा, ताकि उन अंगों का संचालन सही हो तथा उनमें रक्त संचार बढ़े।

दमा : इसमें स्वास्थ्य की स्थिति को देखकर ही आसनों का कार्यक्रम बनाया जा सकता है। अगर आप अपने को स्वस्थ महसूस करते हैं तो आप नौसिखियों के लिए दिये गये कार्यक्रम के अनुसार आसनों--विशेषकर छाती को खोलने वाले आसनों—का अभ्यास कर सकते हैं। अगर आप खूब स्वस्थ न हों तो इस क्रम का अभ्यास करें : तकिये के सहारे सेतुबंध (126-ड) पलंग/गावतकिये के सहारे (127-थ) विपरीत दंडासन (85), पलंग मोड़ (126-ट), सर्वांगासन (73), प्राणायाम—उज्जयि, रीढ़ को सहारा देकर विलोम करें।

एथरोक्योटिकस : देखें हृदय।

रक्तचाप : उच्च रक्त चाप के मामले में आसन के अभ्यास की शुरूआत स्थिर आसनों से करें। क्रम यह रखें--तकिये के सहारे (126-ड), पलंग/गावतकिये के सहारे (127-थ), सुप्त वीरासन (47), या सुप्त बद्ध कोणासन (48), अधोमुख श्वानासन (19), आगे झुकने वाले आसन (58-62), सेतुबंध (79), सर्वांगासन (73), अर्ध हलासन (75), विपरीत करणी (77)।

नोट : यह सर्वविदित है कि अगर आपके शरीर की पेशियां इतनी मजबूत हैं कि आप दैनिक जीवन सुचारु रूप से चला सकें तो आपके हृदय पर से कार्य का अतिरिक्त भार घट जाता है। लेकिन व्यायाम की प्रक्रिया हृदय पर अधिक जोर देने वाली न हो। इसलिए खड़े होकर किये जाने वाले आसन अधिक उपयुक्त हैं क्योंकि वे शरीर पर समग्र प्रभाव डालते हैं। एक दिन छोड़कर उन आसनों से अभ्यास किया जा सकता है जिन्हें दीवार, तकिये, पलंग या कुर्सी के सहारे किया जा सकता है। अधिक जोर नहीं लगाना चाहिए तथा श्वास सामान्य रहना चाहिए। बीच-बीच में विश्राम वाले आसन भी किये जाने चाहिएं।

प्राणायाम : उज्जयि तथा विलोम (कुंभक प्राणायाम नहीं करें)।

खांसी : नौसिखियों के लिए सुझाए गए आसन क्रम का अभ्यास करें, बाद में लंबी अवधि के लिए आसन का अभ्यास करें। आगे झुकने वाले आसन वैसे ही सिर ऊपर उठाकर करें जैसे तस्वीरों में दर्शाया गया है।

प्राणायाम : तीनों प्रकार के प्राणायामों के अभ्यास से काफी लाभ पहुंचेगा।

पैर की सूजन : सूजन के बाद पैर के पंजे अंदर मुड़ जाते हैं। ईंट पर पांव रखकर (127-य) पंजे को दीवार पर (127-भ), त्रिकोणासन (29), वीरभद्रासन II (30), पार्श्वकोणासन (31), वीरासन (46) तथा विलोम आसनों के अभ्यास से पंजों में नई जान आ जाती है।

सही किस्म के जूते पहनने तथा जूतों को कम पहनने से भी लाभ होता है, इसलिए यह जरूरी है।

शीत कफ : सभी आसन किये जा सकते हैं लेकिन विलोम आसनों पर अधिक जोर देना चाहिए और उन्हें अधिक देर तक करना चाहिए। जलंधर बंध वाले सर्वांगासन, हलासन तथा सेतुबंध से काफी लाभ पहुंचता है।

प्राणायाम शीत के दुष्प्रभावों से हमें बचाता है क्योंकि इससे जठराग्नि नियमित होती है।

संग्रहणी (कोलाइटिस) : उत्तानासन (17), अधोमुख श्वानासन (19), सभी विलोम आसन, नावासन (25), जठर परिवर्तनासन (26), विश्राम के सभी आसन, विपरीत दंडासन (84), सेतुबंध (79), प्राणायाम—उज्जयि तथा विलोम।

कब्ज : देर तक अधोमुख श्वानासन (19), शीर्षासन (71), उत्तानासन (17), खड़े होकर किए जाने वाले आसन, सुप्त वीरासन (47), सुप्त बद्ध कोणासन (48), विपरीत दंडासन (85), सर्वांगासन (73), अर्ध हलासन (75), सेतुबंध (79), विपरीत करणी (77)।

प्राणायाम—उज्जयि तथा विलोम।

खिन्नता (डिप्रैशन) : सभी आसन लाभदायक हैं। रीढ़ की स्थिति को देखते हुए मुड़ने वाले सारे स्थिर आसन करने पर खास जोर देना चाहिए। बाद में खड़े होकर किए जाने वाले आसन भी धीरे-धीरे शुरू किए जाएं। शुरूआत में विलोम तथा विश्राम वाले आसनों से मदद मिलती है।

अतिसार (पेचिश) : विश्राम वाले सभी आसन, विलोम आसन और पीछे झुकने वाले सभी आसन।

आगे झुकने वाला कोई आसन न करें।

पाचन में गड़बड़ी : खड़े होकर करने वाले सभी आसन, आगे झुकने वाले आसन (58-62), नावासन (25), जठर परिवर्तनासन (26), विलोम के आसन, मोड़ (52-55), विश्राम के आसन। प्राणायाम—उज्जयि, विलोम तथा कुंभक।

स्थानच्युति (डिस्क प्रोलैप्स) : पृष्ठ 129 पर दिये गये क्रम के अनुसार अभ्यास करें।

नशाखोरी : देखें खिन्नता।

टेनिस-गोल्फ के खिलाड़ियों जैसी कुहनी की बीमारी : अधोमुख श्वानासन (19), अधोमुख वृक्षासन (21), पिंच मयूरासन (88), त्रिकोणासन (29), पार्श्वकोणासन (31), उर्ध्व धनुरासन (87), बकासन (92), वीरासन (46), गोमुखासन (45), विश्राम के आसन।

आंखों में तनाव : शवासन (93), षणमुखी मुद्रा (93)।

चौरस पांव (फालेन आर्चेस) (फ्लैट फुट) : अधोमुख श्वानासन (19), ईंट पर पैर (127-य), त्रिकोणासन (29), वीरासन (46), सुप्त वीरासन (47), भेकासन (47), शीर्षासन और सर्वांगासन के विभिन्न प्रकार (71 और 73), सुप्त पादांगुष्ठासन (24)।

थकान : विश्राम के सभी आसन। सहारे के साथ विलोम के सभी आसन तथा उनमें अधिक देर तक रहना, शवासन (93)।

उंगलियों में गठिया, वात : पृष्ठ 130 पर दिये गये क्रम के अनुसार आसन करें।

गैस बनना : आराम पाने के लिए विश्राम तथा विलोम वाले सभी आसन करें। विश्राम के आसन भोजन के तुरंत बाद किये जा सकते हैं।

सुन्न पड़ गये कंधे : पृष्ठ 130 में दिये गये निर्देश - क्रम से आसन का अभ्यास करें।

उदर प्रदाह (गैस्ट्राइटिस) : देखें गैस बनना।

गठिया : देखें गठिया-वात।

हृदय शूल : पृष्ठ 128 में दिए गए निर्देश का अभ्यास करें।

उच्च अम्लता : देखें अम्ल पित्त।

उच्च तनाव : देखें उच्च रक्तचाप।

अनिद्रा : विलोम तथा विश्राम के सभी आसन सहारा लेकर करें, शवासन तथा षणमुखी मुद्रा, प्राणायाम—उज्जयि तथा विलोम।

ध्यान दें : इसका अभ्यास रात में नहीं करना है।

घुटनों में दर्द, गठिया तथा जोड़ों की अकड़न : पृष्ठ 130 में दिए गए आसनों का अभ्यास करें।

टांग में दर्द : पृष्ठ 130 में दिए गए क्रम से आसनों का अभ्यास करें।

रीढ़ का धंसना (लोर्डोसिस) : पृष्ठ 129 पर दिए गए क्रम से आसन करें।

कटि वात : पृष्ठ 130 पर दिए गए क्रम से आसन करें।

फेंफड़े : देखें खांसी।

रजोनिवृत्ति : उत्तानासन (17), अधोमुख श्वानासन (19), प्रसारित पादोत्तानासन (42), आगे झुकने के आसन (58-62), सुप्त बद्धकोणासन, सुप्त वीरासन (48, 47), मत्स्यासन, विपरीत दंडासन (50, 85), सर्वांगासन (73), अर्धहलासन, सेतुबंध (75, 79), विपरीत करणी (77), शवासन और षणमुखी मुद्रा (93), प्राणायाम—उज्जयि तथा विलोम।

आधा सीसी : देखें सिरदर्द।

बंद नाक : देखें शीत।

गर्दन में दर्द तथा अकड़न : पृष्ठ 130 पर दिये गये क्रम से आसन करें।

अस्थि संधि शोथ (आस्टियो आर्थराइटिस) : देखें गठिया।

पक्षाघात : सहारा लेकर किये जाने वाले आसन ऐसे रोगियों के लिए वरदान हैं। शुरू में किसी व्यक्ति से भी सहायता लेनी पड़ सकती है लेकिन आगे चलकर शारीरिक चिकित्सा स्वयं करनी चाहिए। सभी आसन लाभप्रद हैं और प्रभावित अंगों को फिर से प्राणवान बनाते हैं, लेकिन यह इस पर भी निर्भर करता है कि आप कितना अभ्यास करते हैं। आसनों का क्रम वही रखें जो साप्ताहिक कार्यक्रम में सुझाया गया है।

श्रोणी में दर्द : देखें गैस बनना।

माहवारी में दर्द : देखें रजोनिवृत्ति (पृ. 10 पर)।

भय : देखें खिन्नता।

पोलियो : देखें पक्षाघात।

गर्भ : दो-तीन महीनों का गर्भ हो तो पृष्ठ 25, 26, 92, 93 पर दिये गये आसनों को छोड़कर आसनों के सामान्य कार्यक्रम वाले सभी आसनों से लाभ उठाया जा सकता है।

यदि गर्भ तीन महीने से अधिक का हो तो आठवें महीने तक निम्नलिखित आसन करना सुरक्षित होगा : त्रिकोणासन (29), पार्श्वकोणासन (31), अर्ध चंद्रासन (32), वीरभद्रासन I (37), पार्श्वोत्तानासन (40), प्रसारित पादोत्तानासन (42), वीरासन (46), सुप्त बद्धकोणासन (48), सर्वांगासन (73), अर्धहलासन (75), विपरीत करणी, शवासन (77, 93)।

प्राणायाम—उज्जयि और अगर कोई परेशानी न हो तो विलोम भी करें।

आसनों के इस क्रम से टांगों, रीढ़ की पेशियों तथा पीठ की पेशियों में शक्ति आ जाती है लेकिन पेट कोमल ही बना रहता है। चिंता के चलते तनाव में प्राणायाम से कमी आ जाती है।

सावधानी : अभ्यास के समय कभी भी पेट पर दबाव नहीं पड़ना चाहिए।

गठिया वात : देखें गठिया।

नितम्ब शून्य (साइटिका) : पृष्ठ 129 पर दिये गये क्रम से आसन करें।

कंधा : पृष्ठ 130 पर दिये गये क्रम से आसन करें।

बंद नासिका : देखें बंद नाक।

स्थान च्युत चक्रिका (स्लिप्ड डिस्क) : पृष्ठ 129 पर दिये गये क्रम से आसन करें।

रीढ़ में परेशानी, यथा—टेढ़ा होना, अपक्षय (अस्थि संधि वात, अस्थि सुसरिता), रीढ़ की हड्डी का धंसना (लार्डोसिस), कूबड़पन (काइफोसिस), रीढ़-वक्रता (सोलियोसिस), रीढ़ की पेशियों की परेशानी, मेरुदंड सूजन तथा कमर की सूजन : देखें पृष्ठ 129 पर दिया गया साप्ताहिक कार्यक्रम।

खेल में लगी चोट और खिंचाव : योगासन से न केवल जोड़ों में गति आती है बल्कि यह आसपास वाली पेशियों को भी चुस्त बनाता है। अगर किसी जोड़ या पेशी में घाव होता है, तो आप उसके घाव को भरने में प्रकृति की सिर्फ मदद कर सकते हैं और सबसे अच्छी मदद यह होगी कि शरीर के प्रभावित अंग में रक्त को अधिक से अधिक पहुंचाया जाए। यह इसके रूप के अनुसार शरीर को तानने तथा सहारे के साथ विलोम आसन करके तथा इस आसन में अधिक देर तक रहकर किया जा सकता है।

आसन का अभ्यास करने से शरीर के उन अंगों की पेशियों में भी चुस्ती आती है जहां चोट नहीं पहुंची है। शवासन और प्राणायाम से पेशियां तथा नाड़ियां सामान्य हो जाती हैं और इससे रक्त की रासायनिक संरचना में सुधार आता है।

मानसिक भारीपन : विश्राम और विलोम के सभी आसन।

शवासन और षणमुखी मुद्रा।

प्राणायाम—उज्जयि तथा विलोम।

पंजों के लिए : पृष्ठ 130 पर दिये गये क्रम से आसन करें।

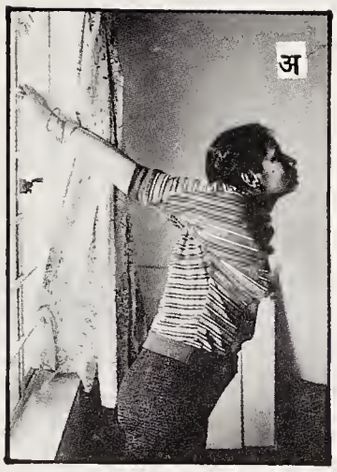
नाड़ियों में सूजन : अगर रोग प्रारंभिक चरण में है तभी यह ठीक हो सकता है। लेकिन रोग और न बढ़े, इसके लिए ये आसन किये जा सकते हैं :

उत्थित हस्त पादांगुष्ठासन (22), सुप्त पादांगुष्ठासन (24), त्रिकोणासन (29), पार्श्वकोणासन (31), विश्राम के आसन तथा सभी विलोम आसन।

इसके लिए पृष्ठ 130 पर घुटनों के लिए दर्शाए आसन भी करें।

योग चिकित्सा

गर्दन तथा कंधों के लिए



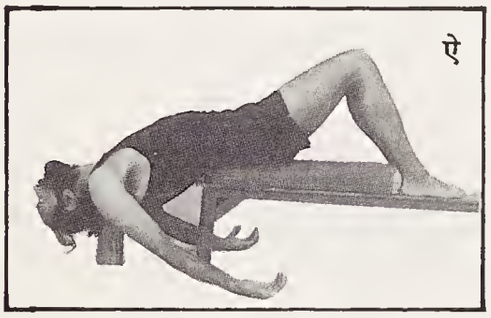
ग्रिल पकड़कर उल्टा
हाथ तानना

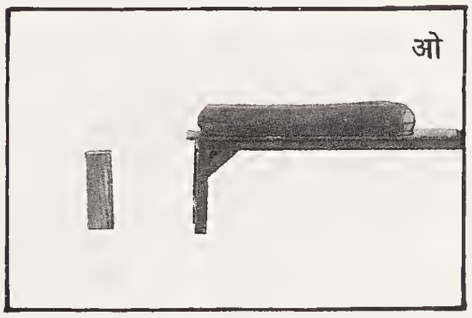
ग्रिल में बंधी रस्सी या पट्टी तथा हाथ
को पीछे ले जाकर अंगूठों को सटाना

एक हाथ दीवार पर तथा दूसरे
हाथ से कंधों को घुमाना

फंसी उंगलियों को खींचना

पलंग के किनारे
से झूलता सिर





कंधों के बीच रखी ईंट

कुर्सी के बैक रेस्ट के
सहारे हाथों को जोड़ना

पीछे का दृश्य

ऊपरी बांह पर पट्टी तथा हाथों से कुर्सी की सीट को खींचना

योग चिकित्सा

निचली रीढ़ के लिए

ऊंचे स्टूल के सहारे उत्तानासन

उभरी पीठ

धंसी पीठ

दीवार की ओर खड़े होकर मुड़ना

सीधे लेटकर टांगों को स्टूल या कुर्सी पर रखना

एक पांव मोड़ें

दोनों पांव मोड़ें

पवन मुक्तासन

डाइनिंग टेबल से झूलते हुए

पलंग के किनारे मुड़ते हुए

पलंग से नीचे झूलते हुए

हृदय रोग के लिए

तकियों के सहारे सेतुबंध

आसान सेतुबंध

योग चिकित्सा

हृदय रोग के लिए

पलंग पर माथा टिकाएं

माथे पर पट्टी बांधें

खुली छाती को रीढ़ से सहारा दें

घुटनों की तकलीफ के लिए

गावतकिये पर पैर की कमान हड्डियां

गावतकिये पर रखकर घुटनों को नीचे दबाएं

हाथों को घुटनों के पीछे रखकर दीवार के सहारे उकड़ू बैठना

जांघ तथा पेशी के बीच पैर

पैर को पकड़कर घुटनों को घुमाते हुए नीचे लाना

घुटनों के पीछे बेलन

पंजा दीवार पर

गोल किया कंबल घुटनों के पीछे रखकर टांग को नीचे लाना

पंजा ईंट पर

हृदय रोग तथा उच्च तनाव वालों के लिए आसनों का साप्ताहिक कार्यक्रम

प्रत्येक आसन के मामले में नौसिखियों के लिए सुझाए गए प्रकार का अभ्यास पहले करें। इस कार्यक्रम की शुरूआत करने के पहले अपने डाक्टर से परामर्श कर लें। अध्याय 3 में दिये गये विश्राम के आसनों को बीच-बीच में करते रहना चाहिए।

सोमवार	**पृष्ठ**	**मिनट**
क्रॉस पिलो	126 ड	5
पलंग के किनारे पर लेटना	127 थ	5
विपरीत दंडासन	84	5
उत्तानासन	17	3
अधोमुख श्वानासन	19	5
मरोड़ (घुमाव)	52-55	10
सुप्त बद्धकोणासन	48	10
सेतुबंध	79	8
सर्वांगासन	73	5-10
अर्ध हलासन	75	5-10
विपरीत करणी	77	5-10
प्राणायाम—उज्जयि तथा विलोम		

नोट : ये स्थायित्व तथा विश्राम के आसन हैं। इनको करने के बाद अच्छा महसूस हो तो दूसरे आसन भी करने चाहिएं। आसनों की यह शृंखला करते समय माथे पर पट्टी (पृ. 127) बंधी रखी जा सकती है। इससे नाड़ियां शांत रहती हैं।

मंगलवार	**पृष्ठ**	**मिनट**
क्रॉस पिलो	126 ड	5
पलंग के किनारे पर लेटना	127 थ	5
विपरीत दंडासन	84	5
त्रिकोणासन	29	5
पार्श्वकोणासन	31	5
अर्धचंद्रासन	32	5
उत्तानासन	17	3
अधोमुख श्वानासन	19	5
मरोड़ (घुमाव)	52-55	10
सुप्त बद्धकोणासन	48	10
सेतुबंध	79	8
सर्वांगासन	73	5-10
अर्ध हलासन	75	5-10
विपरीत करणी	77	5-10
प्राणायाम—उज्जयि तथा विलोम		

बुधवार	**पृष्ठ**	**मिनट**
क्रॉस पिलो	126 ड	5
पलंग के किनारे पर लेटना	127 थ	5
विपरीत दंडासन	84	5
उत्तानासन	17	3
अधोमुख श्वानासन	19	5
आगे मुड़ना	58-62	15
मरोड़ (घुमाव)	52-55	10
सुप्त बद्धकोणासन	48	10
सेतुबंध	79	8
सर्वांगासन	73	5-10
अर्ध हलासन	75	5-10
विपरीत करणी	77	5-10
प्राणायाम—उज्जयि तथा विलोम		5-10

गुरुवार	**पृष्ठ**	**मिनट**
क्रॉस पिलो	126 ड	5
पलंग के किनारे पर लेटना	127 थ	5
विपरीत दंडासन	84	5
खड़े होकर करने वाले आसन	28-42	20
उत्तानासन	17	3
अधोमुख श्वानासन	19	5
मरोड़ (घुमाव)	52-55	10
सुप्त बद्धकोणासन	48	10
सेतुबंध	79	8
सर्वांगासन	73	5-10
अर्ध हलासन	75	5-10
विपरीत करणी	77	5-10
प्राणायम—उज्जयि तथा विलोम		

शुक्रवार	**पृष्ठ**	**मिनट**
क्रॉस पिलो	126 ड	5
पलंग के किनारे पर लेटना	127 थ	5
विपरीत दंडासन	84	5
मरोड़ (घुमाव)	52-55	10
उत्तानासन	17	3
अधोमुख श्वानासन	19	5
सुप्त बद्धकोणासन	48	10
सेतुबंध	79	8
सर्वांगासन	73	5-10
अर्ध हलासन	75	5-10
विपरीत करणी	77	5-10
प्राणायाम—उज्जयि तथा विलोम		

रविवार	**पृष्ठ**	**मिनट**
क्रॉस पिलो	126 ड	5
पलंग के किनारे पर लेटना	127 थ	5
विपरीत दंडासन	84	5
आगे झुकना	58-62	15
उत्तानासन	17	3
अधोमुख श्वानासन	19	5
मरोड़ (घुमाव)	52-55	10
सुप्त बद्धकोणासन	48	10
सेतुबंध	79	8
सर्वांगासन	73	5-10
अर्ध हलासन	75	5-10
विपरीत करणी	77	5-10
प्राणायाम—उज्जयि तथा विलोम		

निचली रीढ़ के लिए

प्रत्येक आसन के मामले में नौसिखियों के लिए सुझाए गए प्रकार का अभ्यास पहले करें। इस कार्यक्रम की शुरूआत करने से पहले अपने डाक्टर से परामर्श कर लें। कृपया पृष्ठ 126 में दिये गये आसनों का भी अनुसरण करें। ऐसे सभी आसन जिनमें झुकने या मरोड़ में एक करवट का ही उपयोग किया जाता है, उसे कम से कम दो-तीन बार करें।

पहले दो-तीन सप्ताह में	**पृष्ठ**
भरद्वाजासन	52
मरिच्यासन	54
उत्तानासन	17
वीरभद्र II	30
पार्श्वकोणासन	31
त्रिकोणासन	29
परिवृत्त त्रिकोणासन	34
सुप्त पादांगुष्ठासन (देर तक)	24
प्रसारित पादोत्तानासन	42
(दो कुर्सियों अथवा पलंग के सहारे) (5 मिनट)	
सेतुबंध	79
भरद्वाजासन	52
मरिच्यासन	54
प्राणायाम--उज्जयि तथा विलोम	

3 से 10 सप्ताह	**पृष्ठ**
भरद्वाजासन	52
उत्तानासन	17
वीरभद्र II	30
पार्श्वकोणासन	31
त्रिकोणासन	29
अर्धचंद्रासन	32
परिवृत्त त्रिकोणासन	34
पलंग के सहारे मरोड़ (घुमाव)	126 ट
उर्ध्वमुख श्वानासन	81 अ
सुप्त पादांगुष्ठासन (सीधा)	24
सुप्त पादांगुष्ठासन (करवट)	
अधोमुख श्वानासन	19
प्रसारित पादोत्तानासन	42 घ, च
अर्ध हलासन (5-10 मिनट)	75
सेतुबंध (5-10 मिनट)	79
भरद्वाजासन	52
मरिच्यासन	54
प्राणायाम--उज्जयि तथा विलोम	

10 सप्ताह से अधिक	**पृष्ठ**
भरद्वाजासन	52
मरिच्यासन	54
उत्तानासन	17
खड़े होकर किये जाने वाले सभी आसन	29-42
('आसनों का अभ्यास' अध्याय में दिया क्रम ही अपनाएं)	
वीरासन या सुप्त बद्धकोणासन	46/48
उत्थित या सुप्त पादांगुष्ठासन	23/24
विपरीत दंडासन	84/85
प्रसारित पादोत्तानासन	42
सर्वांगासन (5-10 मिनट)	73
अर्ध हलासन (5-10 मिनट)	75
सेतुबंध (5-10 मिनट)	79
प्राणायाम--उज्जयि तथा विलोम	

विकल्प	**पृष्ठ**
भरद्वाजासन	52
मरिच्यासन	54
उत्तानासन	17
अधोमुख श्वानासन	19
उत्थित हस्त पादांगुष्ठासन	23
सुप्त बद्धकोणासन (10 मिनट)	48
विपरीत दंडासन	84/85
उर्ध्व धनुरासन (गतिशील योग सहित) (अध्याय 5 व 6)	87
प्रसारित पादोत्तानासन	42
अर्ध हलासन (5-10 मिनट)	75
विपरीत करणी (10 मिनट)	77
प्राणायाम--उज्जयि तथा विलोम	

आगे झुकने वाले आसनों को धीरे-धीरे बाद में शुरू किया जा सकता है और मुद्राओं के अन्य प्रकार भी किये जा सकते हैं।

सर्वाइकल/कंधों की तकलीफ के लिए

प्रत्येक आसन के मामले में नौसिखियों के लिए सुझाये गये प्रकार का अभ्यास पहले करें। इस कार्यक्रम की शुरूआत करने से पहले डाक्टर से परामर्श कर लें। आसनों के अभ्यास का समय इसलिए नहीं दिया गया है, क्योंकि ये आसन एक के बाद एक करके दुहराए जाने हैं।

पहले तीन सप्ताह	**पृष्ठ**
भरद्वाजासन	52
मरिच्यासन	54
अधोमुख वृक्षासन	21
उत्तानासन	17
अधोमुख श्वानासन	19
त्रिकोणासन	29
पार्श्वकोणासन	31
परिवृत्त त्रिकोणासन	34
प्रसारित पादांगुष्ठासन	42
वीरासन	46
उर्ध्वमुख श्वानासन	81
धनुरासन	82
उष्ट्रासन	82
आसन के सभी प्रकार	125

10वें सप्ताह से अधिक	
भरद्वाजासन	52
मरिच्यासन	54
अधोमुख वृक्षासन	21
उत्तानासन	17
अधोमुख श्वानासन	19
खड़े होकर किये जाने वाले आसन	
वीरासन	46
विपरीत दंडासन	84
उर्ध्व धनुरासन	87
उर्ध्वमुख श्वानासन	81
सर्वांगासन	73
अर्ध हलासन	75
सेतुबंध	79
आसन के सभी प्रकार	125
भरद्वाजासन पुनः	52

एकांतर	
अधोमुख श्वानासन	19
उत्तानासन	17
अधोमुख श्वानासन	19
अधोमुख वृक्षासन	21
बैठकर मरोड़ (घुमाव) वाले आसन	52-55
आगे झुकने वाले	58-66
कुर्सी के सहारे शीर्षासन	71
सर्वांगासन	73
हलासन	74
सेतुबंध	79
आसन के सभी प्रकार	125

4 से 9 सप्ताह	**पृष्ठ**
भरद्वाजासन	52
मरिच्यासन	54
अधोमुख वृक्षासन	21
उत्तानासन	17
अधोमुख श्वानासन	19
त्रिकोणासन	29
पार्श्वकोणासन	31
परिवृत्त त्रिकोणासन	34
प्रसारित पादांगुष्ठासन	42
वीरासन	46
आसन के सभी प्रकार	125
विपरीत दंडासन	84
सर्वांगासन	73
अर्ध हलासन	75
सेतुबंध	79
भरद्वाजासन पुनः	52

घुटनों की तकलीफों के लिए दैनिक कार्यक्रम

प्रत्येक आसन के मामले में नौसिखियों के लिए सुझाये गये प्रकार का अभ्यास पहले करें। वैसे कार्यक्रम की शुरूआत करने से पहले डाक्टर से सलाह कर लें।

आसन	**पृष्ठ**	**समय**
उत्कटासन	15	1-2 मिनट
त्रिकोणासन	29	4
पार्श्वकोणासन	31	4
सुप्त पादांगुष्ठासन	24	10
तथा/या उत्थित हस्त पादांगुष्ठासन	23	10
सुप्त बद्धकोणासन	48	5-10
वीरासन	46	5-10
आसन के सभी प्रकार	127	

अगर इसमें दर्द न हो तो आम कार्यक्रम में दर्शाये गये आसन भी किये जा सकते हैं।

विलोम वाले आसन घुटनों की तकलीफों में फायदेमंद होते हैं। क्योंकि बेहतर रक्त संचार से तकलीफ शीघ्र दूर होने लगती है।

8. बंधों, मुद्राओं और क्रियाओं के बारे में

ऊंचे स्तर के योगाभ्यास के दौरान ऊर्जा का बिखराव रोकने के लिए बंध का प्रयोग किया जाता है।

उच्च स्तर के योगाभ्यास के दौरान कुंडलिनी जागृत करने या प्राण को विशेष चक्र की ओर उन्मुख करने के लिए मानसिक पेशियों को बंध (बंद) करने का अभ्यास किया जाता है और इसके साथ ही मुद्राओं का भी अभ्यास होता है।

सरल मुद्राएं कई हैं : ज्ञान मुद्रा, विपरीत करणी मुद्रा, जलंधर बंध और षणमुखी मुद्रा। इनका अभ्यास सरल आसनों तथा प्राणायामों के साथ किया जा सकता है।

क्रिया शरीर की अंदरूनी सफाई को कहते हैं। इनका लोकप्रिय नाम षट् क्रिया—नेमि, नौलि, बस्ति, धौति, त्राटक तथा कपाल आदि। ये आयुर्वेद में वर्णित पंच कर्म के समतुल्य हैं :

वमन - उल्टी के जरिये इलाज।

विरेचन - पेट साफ करने के जरिये इलाज।

निरूच - सूखे तथा जड़ी-बूटियों के सत का एनीमा।

अनुवसन - तैलीय एनीमा।

शिवो विरेचन - नासिका तथा सिर के भाग के अन्य छिद्रों के जरिये सफाई।

आध्यात्मिक साधकों तथा रोग का इलाज कराने वालों के लिए इस तरह की सफाई बहुत महत्वपूर्ण है, लेकिन अगर यह सफाई किसी विशेषज्ञ के निर्देश और पर्यवेक्षण में न हो तो इससे स्थायी हानि पहुंच सकती है।

एक बात और कि यह भी विश्वास किया जाता है कि यदि दैनिक जीवन में यमों और नियमों का अभ्यास किया जाए तो उपयुक्त क्रियाओं के अभ्यास की कोई जरूरत नहीं है।

आसन और प्राणायाम हमारी शारीरिक और रासायनिक सफाई कर देने के लिए अपने में पर्याप्त हैं। आसनों तथा प्राणायामों की सबसे बड़ी शक्ति यह है कि वे रोग निरोधक हैं।

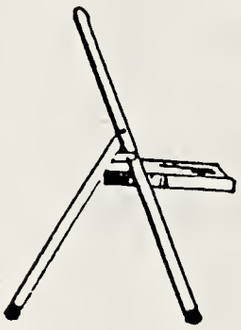
अगर जीवन में संतुलन रहे और किसी भी अतिरेक से काम न लिया जाए तो सफाई करने वाली क्रियाओं को सीखने और उनके अभ्यास की आवश्यकता नहीं पड़ती।

परिशिष्ट

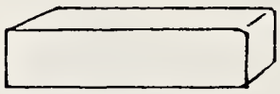
सहायक सामग्री का विवरण

छह फुट लंबी पट्टी

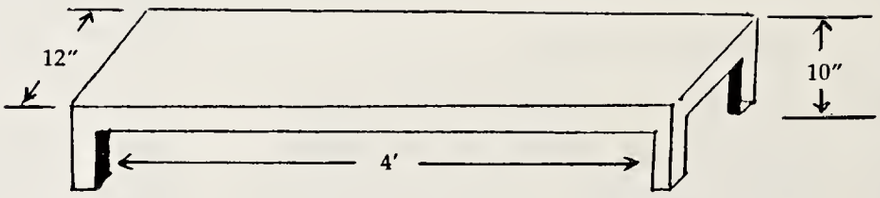
कुर्सी—औसत आकार की (फोल्डिंग)



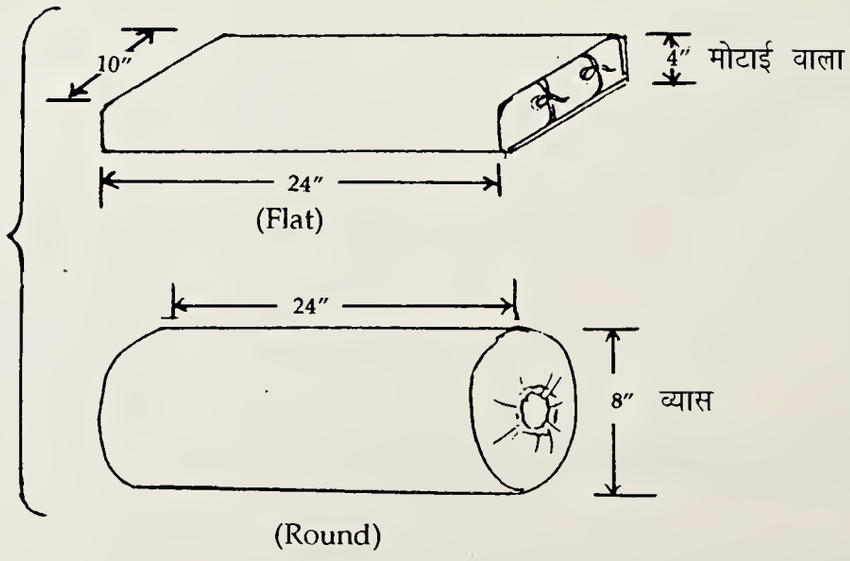
लकड़ी की ईंट – स्टैंडर्ड आकार



बेंच



गावतकिया (बहुत सख्त न हो)



यह पुस्तक योग पर अपनी तरह की एक अलग पुस्तक है जिसमें न केवल योगासनों के सही तरीके ही दर्शाए गए हैं बल्कि शारीरिक रूप से अस्वस्थ और कमजोर व्यक्तियों के लिए समान रूप से लाभकारी योग के व्यावहारिक और सरल तरीकों को चित्रों सहित विस्तार से बताया गया है। ये योगासन सिर्फ कसरत करने वालों के लिए ही नहीं, बल्कि प्रत्येक व्यक्ति के लिए हैं।

630 से अधिक चित्रों के माध्यम से योगासन की प्रत्येक मुद्रा और भेद इस पुस्तक में दर्शाए गए हैं। मार्गदर्शन के लिए पुस्तक में साप्ताहिक योजना समाहित की गई है।

'योग-चिकित्सा' का खंड, लेखक के आधुनिक चिकित्सकों के साथ विचार-विमर्श तथा उनके दस वर्षों के अपने निजी अनुभवों पर आधारित हैं। विभिन्न बीमारियों के लिए बताए गए आसन और प्राणायाम बहुत-से व्यक्तियों को स्वस्थ बनाने में सहायक हो सकते हैं।

नौजवानों को पूरी तरह स्वस्थ बनाए रखने के लिए 'गतिशील योग' और 'गतिशील सामूहिक योगासन' जैसी नई अवधारणाओं का भी इस पुस्तक में उल्लेख किया गया है।

अन्य सहभागी

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yoga for a new you

RELAXED

ENERGETIC

YOUNG

CONFIDENT

yoga for a new you

yoga for a new you

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introduction

The holistic practices of yoga work on the physical, mental, emotional, and spiritual planes, enabling you to relieve stress, boost energy levels, feel more confident, and look and feel younger for longer.

The appeal of yoga is universal and timeless. Its combination of physical postures, breathing practices, relaxation, meditation, and lifestyle guidance is a tried-and-tested practical method of achieving all-around good health. Yoga does not seek to offer a quick fix, but provides a long-term program for living positively and mindfully.

For many people yoga becomes a life-long journey of self-discovery, bringing peace of mind and inner happiness. Unlike many forms of exercise, yoga is suitable for everyone. It is not competitive like most other aspects of life; you work with yourself as you are. Regular practice develops self-acceptance, which in turn leads to personal growth. Whatever your age or level of fitness, yoga is a safe form of exercise for everyone, provided you work within your limits.

About the book

Yoga for a New You consists of four sections: *Relaxed*, *Energetic*, *Young,* and *Confident*. Each section offers advice, techniques, postures, and programs that will guide you and help you achieve your goals.

Relaxed will show you ways to relieve stress and focus with quiet, easy-paced yoga techniques that decrease anxiety and help you respond effectively to the ups and downs of everyday life. Here yoga's holistic practices will allow you to reconnect with your real self and develop an inner calm and balance

that enable you to manage stress effectively. By learning to observe the body objectively you can become truly aware of how you feel, and more able to understand what is happening in times of stress.

Energetic has practical yoga techniques and programs to harness mental and physical energy, boosting your stamina and enabling you to effectively manage your life and to live more positively. Sometimes energy becomes blocked, resulting in low levels of energy or an imbalance between physical, mental, and emotional energies. The central purpose of yoga is to enable us to experience the limitless life-energy that is the core of our being.

Young will help you tone, strengthen, and improve posture and mental agility with gentle techniques that promote a flexible mind and body. *Young* will help you to live more actively and mindfully, allowing you to retain your vitality and stay young at heart as you get older. Yoga can guide you to make changes that will help maintain a youthful outlook on life and give you peace of mind.

Confident explains how certain yoga postures can mobilize your core strength, and help you achieve mental clarity and face any situation with dignity and grace. It will help you to develop self-awareness on a physical, mental, and emotional level. Such awareness offers liberation from low self-esteem and a firm foundation on which to build self-confidence. Yoga promotes confidence and assuredness, allowing you to be comfortable and at ease with yourself. It gives unlimited access to the relaxed and respectful understanding that underpins self-confidence.

How yoga can help

Yoga for a New You will help you to develop a positive relationship with the world and with yourself, allowing life-energy to flow more freely through you. Through the practice of yoga you will learn how to slow down and get back in touch with the natural rhythms of your body, mind, and spirit. It will allow you to maintain a sensitive awareness of how things actually are, and what you really want out of life.

before you start

Always try to practice yoga in the right spirit. Following the general guidance given here will help you practice with awareness and respect for your body's strengths and weaknesses.

Try to make a particular "time for me" every day to practice yoga. A few minutes every day is better than a whole hour once or twice a week.

Always practice on an empty stomach. Allow three hours to elapse after a large meal, two hours after a light meal, and one hour after a snack before starting your yoga practice. Wear comfortable clothes that do not restrict your movement or breathing. Practice on a mat or other nonslip surface, and make sure you have enough space around you to extend.

JOINING A CLASS

Practicing yoga regularly in a class with the expert guidance of an experienced yoga teacher can be invaluable when building self-confidence. Making such a commitment can help you develop your skills and abilities, and enhance the qualities of relaxation and ease. In addition, mutual respect between student and teacher promotes self-esteem.

Act "kindly" toward yourself as you practice. Looking after yourself is very important. Never push the body into discomfort or strain, as this is counterproductive. To begin with, you may feel some stiffness for a day or two, but it should soon pass.

Support from a teacher

When you are learning to manage stress, you will find it easier if you make a commitment to attend a regular suitable yoga class. You will need to check in your local area to find the right sort of class for you. Organizations that can help are listed on p.495. There are many different styles available. Some emphasize physical movement and postures; some are more meditative in type.

It is hard to overestimate the value of expert guidance from a qualified yoga teacher. You may want to take up the option of beginning with some individual classes with a qualified yoga therapist before you join a general class. If you want to begin to practice at home between classes, your teacher will be able to advise you what to do.

YOGA AND COMMON MEDICAL CONDITIONS

- If you have high blood pressure (HBP), a heart condition, glaucoma, or a detached retina, do not let your head stay below your heart.
- If you have HBP or a heart condition, hold strong standing and prone postures for a short time only. In addition, for HBP, keep your arms below your head.
- If you have low blood pressure (LBP), come up slowly from inverted poses.
- If you have a back problem or sciatica, avoid bending and twisting movements that provoke pain or other symptoms (for example, tingling or numbness in the leg). Keep your knees bent in forward bends.
- If you have a hernia, or have had recent abdominal surgery, do not put strong pressure on the abdomen.
- If you have arthritis, mobilize joints to their maximum pain-free range, but rest them if they are inflamed.
- If you have arthritis of the neck or other neck problems, do not tilt the head back in backbends and be cautious with sideways and twisting neck movements.
- During menstruation, energy levels may be lower than usual, and you may need to practice more gently. Avoid inversions and postures that put strong pressure on the pelvic area.

relaxed

being relaxed

The appeal of yoga is universal and timeless. Its holistic practices allow you to reconnect with your real self and develop an inner calm and balance that enable you to manage stress effectively.

Your body can tolerate enormous variation in living conditions, including extremes of temperature, humidity, and altitude. It is made up of millions of cells, organized into complex organs and systems, which cooperate with one another to provide a stable internal environment in which the cells can survive, whatever is going on in the outside world.

Throughout life, the body continually responds to events and activities as required. Whether you are asleep, exercising, or even standing on your head, the body will adjust your heart rate, blood pressure, and breathing to maintain this all-important internal stability.

Any factor that threatens to overwhelm or destabilize this balance is called a stressor, and the resulting effect on the body is known as stress. Stressors can affect the body in different ways. Physical stressors

HEALTH CONCERNS

If a health practitioner has advised you not to over-exert yourself physically, or if you have any other health concerns, seek advice from a qualified yoga therapist or teacher (see p.495) before using this book. Page 9 provides basic advice for some common medical conditions and, where appropriate, "Take Care" advice and "Alternatives" are given for individual practices. If you are pregnant, or have recently given birth, ask a suitably qualified yoga teacher which practices would be appropriate for you.

include extremes of climate and altitude, bodily injury, exercise, and lack of sleep. Psychological factors, such as fear, grief, and anxiety, also activate the stress response.

Positive stressors

Not all stressors are detrimental to the body. We need a certain amount of stimulation to stay healthy and active. Children who are deprived of play with others and who receive little or no cuddling often become adults with physical, behavioral, and psychological problems. Stressors provide stimulus, without which our minds and bodies would sink into inertia and depression.

The right amount of stress can actually enhance performance. Most public performers recognize the benefit of just enough "stage nerves," and sports people know the importance of the "adrenalin rush" in enabling them to compete to the best of their ability.

Enjoyable events and activities may also trigger stress responses. Research has shown that getting married or going on vacation can be almost as stressful as losing your job or moving home.

For optimum, all-around health you need to experience the right amount of the right types of stressors. In addition, you need to know how to cope with stressor overload or with exposure to unpleasant stressors.

Acute and chronic stress

Stress can be acute or chronic. Our bodies are designed to be able to deal with an acutely stressful situation by activating the "fright, fight, or flight" (FFF) reaction. FFF is a reflex multisystem response produced by the sympathetic part of the nervous system. It prepares the body for the possible need to either fight or run away from danger.

The rate and depth of breathing increases. The heart rate rises, while the heart pumps more strongly. Blood is quickly redirected to the brain and muscles, and away from areas such as the skin and digestive tract, where normal function can be safely suspended during the emergency. The pupils dilate to be able to see better, and the whole body is put

on a state of alert by the outpouring of the hormone adrenalin from the adrenal glands into the circulation. Adrenalin production also affects the secretion of many other hormones, coordinating the multisystem effect.

When the acute situation is over, the FFF reaction dies away. The normal state of balance is restored quite quickly, and any sense of reaction or tiredness soon disappears.

Regular exposure to too many stressors produces a more chronic state of affairs, with the FFF reaction remaining partially and continuously activated. In this state, adrenalin levels in the blood are higher than normal, and the individual feels constantly on edge, gradually less and less able to cope, and more and more exhausted.

Negative stressors

Stressors can affect the body, the mind, and the spirit. The body is put under stress if you live in a harsh environment, with marked swings of temperature and humidity, or at high altitude. Fortunately, most of us do not have this problem.

Facing the rush-hour crush morning and evening every weekday can increase your physical stress levels considerably.

Many of us do regularly experience less extreme physical stressors, such as exposure to city air pollution and environmental toxins. Uncomfortable working conditions, such as poorly designed seating or working night shifts, also affect significant numbers of people, as does crowded and unreliable public transportation.

Mental stresses are more common than physical ones. Today's high-tech communication systems have contributed to the development of a

faster pace of life than humankind has experienced in its entire history. Leisure time – "time for me" – can be almost impossible to find, and when a break does present itself, you may find that you have become unable to switch off and relax.

The experience of chronic stress can lead over time to a sense of dis-spiritedness. It is easy nowadays to feel that you are on a treadmill, with no respite from the daily grind.

Being in such a situation can lead to psychological illnesses, such as anxiety and depression. The effect of high levels of stress hormones, such as adrenalin and cortisol, disrupts normal physiological functions, leaving the body vulnerable to a host of physical ailments. High blood pressure, infections, allergies, skin rashes, and digestive problems are only some of the conditions made worse by chronic overstress.

Factors affecting stress levels

Modern lifestyles certainly contribute to the buildup of chronic stress. Most people work, either as employees or in self-employment. Many employees

SIGNS OF OVERSTRESS

Chronic overstress produces numerous physical, mental, and emotional signs.

- Muscle tension in the neck and shoulders causes pain and stiffness.
- Muscle tension in the scalp and jaw results in headaches and face pain. Migraines are common, as are episodes of teeth grinding at night, nail biting, fidgeting, and foot tapping.
- The heart beats faster, the breathing becomes shallow, and you sweat.
- Digestive problems produce heartburn, irritable bowel syndrome (IBS), and bowel disturbances.
- You feel driven and under constant pressure. You suffer tiredness, anxiety, depression, continual worrying, and an overactive mind that is never still.
- Attacks of insomnia add an overlying element of physical tiredness, while the inability to switch off upsets sleep patterns even more.
- Panic attacks may occur, stimulating the release of even more adrenaline. The appetite can become disturbed, and increased alcohol intake can lead to alcohol dependence.
- Smoking, which many use in an attempt to de-stress, only makes matters worse by saturating the body with toxins and damaging the lungs and blood vessels.

are subject to regular performance scrutiny, with deadlines and sales targets to achieve. Salaries may contain a bonus element that can be acquired only through extra working hours. For those in management, added responsibilities increase the pressure.

Many people, especially women, are "multitasking," juggling careers with home and family responsibilities in addition to work commitments. This can require an almost super-human ability to plan, prioritize, and carry out numerous tasks, usually several at once. No wonder many women feel that during the years spent raising their families they are always tired, and always cross!

Lifestyle events can produce unbearable stressors. Events such as bereavement, divorce, moving home, having a baby, and changing jobs each result in considerable stress. If more than one of these significant events occurs within a short period, you may well become overstressed.

Many of us lead sedentary lives. Sometimes this is by choice, but often it is because we just cannot find the time to exercise. The body is designed to be used: without regular exercise it becomes stiff and weak.

Equally, too much exercise can be as stressful as too little. Exercise addiction, in which the body is pushed to its limits too often, has become some people's way of coping with stress. This may be connected with the desire to look like a celebrity role model, but it reveals a deep inner dissatisfaction. Unfortunately, the overall effect is to increase stress levels, not reduce them.

You can unwittingly increase your stress level by adopting poor standing and sitting postures. Sitting for long periods at work or in the car does not help; nor does standing and walking, carrying shopping bags, school bags, or toddlers, especially all at once. Such physical stressors can cause pain and tension in the neck, shoulders, and lower back.

Your mental or emotional state can affect your stress levels markedly. When faced with forthcoming examinations or an interview, you can put so much pressure on yourself to do well that you overstress yourself.

Medical conditions, especially those causing pain or chronic discomfort, increase stress levels in the sufferer. Arthritis, ME, fibromyalgia, irritable bowel syndrome, and similar conditions can make the everyday tasks of life more difficult to perform, adding to the pressure.

Modern global communications mean that most people become aware of natural and man-made disasters almost as soon as they happen, even when they are thousands of miles away. Graphic images and heart-rending interviews act as marked stressors, especially when you feel powerless to do anything.

Restoring the balance

When you are being bombarded by numerous stressors, you must review your lifestyle and determine to change it where necessary. However, before you can change the way you live, you must become aware of how you actually feel. Stress can mask the information being sent to the brain by the thousands of sensory nerve endings situated all over the body. In this way, you progressively lose touch with yourself. Consequently, you do not notice tiredness until it becomes exhaustion, or muscle tension until it becomes unbearable.

When you reach this point, it is imperative that you learn how to slow down, to get back in touch with the natural rhythms of the body,

Incorporating regular exercise, such as bicycling, into your routine helps keep you fit and more able to deal with stress.

mind, and spirit. By learning to observe the body objectively, you can become truly aware of how you feel, and more able to understand what is happening at times because of stress.

When you are able to really get in touch with yourself, the symptoms of stress begin to reduce. Panic attacks, and other manifestations of stress, subside, and you feel they are no longer controlling you.

How can yoga help?

Yoga is the age-old lifestyle system that reconnects you with your real self. It then maintains that sensitive awareness of how things actually are, and what you really want out of life. Yoga works at all levels of the individual – through the body, mind, and spirit simultaneously.

Gentle, enjoyable stretches and asanas (traditional yoga postures) ease out muscle tensions and limber the joints, while at the same time maintaining the general health of the body. Relaxation techniques further help the body let go of tension and become re-energized.

In yoga, working with the breath is an integral part of the practice – the breath acts as a link between the body and mind. Simple breathing practices encourage quietness of mind and teach the "thinking" parts of the mind to relax and rest. These

Simple breathing practices, using a mudra (symbolic hand gesture), can help you to centre yourself, restoring peace of mind and inner calm during stressful situations.

practices lead to the development of simple meditation, which deepens the experience of inner calm. This sense of tranquility and balance is then carried into everyday life to enable you to manage and do well in the most stressful situations.

Unlike most other aspects of life, yoga is noncompetitive; you work with yourself as you are. Regular practice develops self-acceptance, which in turn leads to personal growth. Many other stress-relieving practices, such as reflexology and massage, although valuable, require someone else to provide the service; with yoga, you take responsibility for yourself and your practice.

As you become accustomed to regular yoga practice, you will find you begin to live yoga on a daily basis. Your whole attitude to life changes; you no longer find yourself exasperated by the habits or actions of colleagues or family members. You are able to stay calm when events do not work out as you hoped, and you are much more able to cope with day-to-day problems and find satisfactory solutions.

HOW TO USE THIS SECTION

Relaxed is divided into three sub-sections. **Foundations** provides guidance on practicing yoga and some basic breathing and preliminary stretches. Familiarize yourself with these first before moving on to **Building Blocks**. This contains a selection of postures and breathing practices, as well as a simple meditation and relaxation technique. Work through these postures gradually, selecting one or two to work on at a time, rather than trying to do them all in one session. Look at the photographs first to get a feel for the shape of the posture. Then follow the accompanying step-by-step instructions. If you find a posture difficult, work on the preliminary steps first or try the alternative, if one is given.

Programs combines selected postures and other practices in a series of short yoga programs designed for particular situations and needs. Make sure you understand how to do the postures first before trying these programs.

Yoga is traditionally learned from a teacher, and you will benefit from going to a class, if you are not already doing so. Organizations that can help you find a qualified teacher are listed on page 495.

the basics

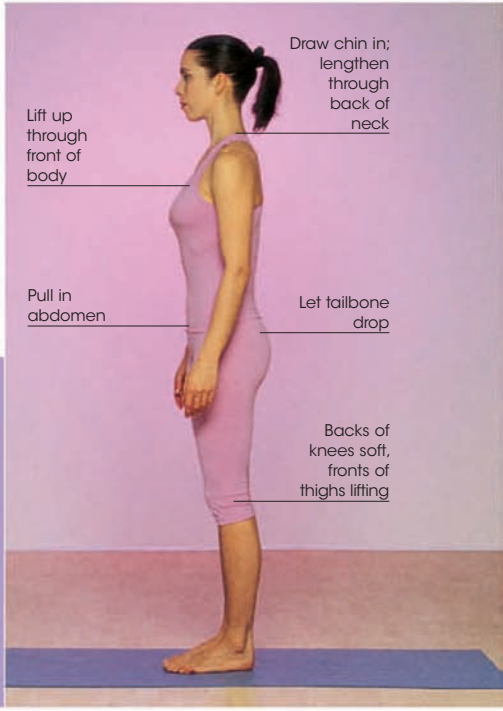
In yoga, basic standing, sitting, and lying-down positions are important in their own right, helping you develop stability and awareness of the benefits of alignment for your posture and breathing, and for the free flow of energy. They also provide the foundations on which other postures are developed.

In addition, being able to sit comfortably and steadily is important for breathing practices and also for meditation, helping you remain focused without distractions from physical tensions. Lying down is often used to develop body and breath awareness, and to relax and allow your body to absorb the beneficial effects of other yoga practices.

If you find it impossible to achieve the full posture, it can be very helpful to use a prop, such as a block or cushion, to make sure you do not strain your body.

STANDING

Stand up straight with your feet parallel, hip-width apart, and your ears, tops of shoulders, hips, and ankles in line. Press your feet into the ground and lift up through your body. Broaden across the top of the chest. Feel balanced in every direction, as if your head is suspended by a thread from the ceiling. Look straight ahead, relax, and breathe easily.



SITTING CROSS-LEGGED

This posture is good for breathing practices. Cross your shins with the feet under the opposite knee. Position yourself on the front edge of your sitting bones, with the spine long and the head erect. Relax the shoulders. If your knees are higher than your hips, sit on a block.

KNEELING

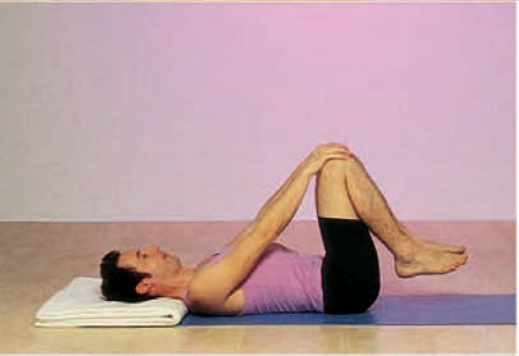
If you find sitting cross-legged uncomfortable, try kneeling. Sit on your heels with the tops of your thighs facing the ceiling. Or position your knees and feet hip-width apart and sit on blocks, a folded blanket, or a bolster. Keep your spine long and your head erect, the shoulders and neck relaxed.

LYING ON BACK

Lie with your legs stretched out, hip-width apart. Relax the legs, and allow the feet and legs to roll out. Place your arms away from the body, the backs of the hands on the floor. Relax the neck and rest the center of the back of the head on the floor.

USING A PILLOW

Pillows can be used to support different parts of the body. Here one is shown supporting the thigh while sitting cross-legged, This allows the inner and the outer thigh muscles to relax and the hips to open farther, helping the student to stay in the posture longer without being distracted by discomfort.



USING A BLANKET

When lying supine, the back of the neck should be long, with the chin a little down toward the chest, and not pointing up to the ceiling. If you find it difficult to keep the neck long, place a folded blanket under the head and neck for additional support.

USING A TOWEL

Kneeling positions can put strain on stiff ankles. To relieve this, roll up a towel firmly and place it between the ankles and the floor. A folded towel can also be used under bony parts of the feet or ankles, especially if you are working on a hard floor.

USING A CHAIR

Chairs can be used to modify postures. Shown here is a version of the Forward Bend. You can also use a chair for breathing or meditation practices if sitting or kneeling on the floor is uncomfortable. Sit toward the front of the chair, with the soles of the feet flat on the floor, hands on thighs.

USING A BELT

A nonstretchy webbing belt or luggage strap can help you to release a stiff neck or tight shoulders. Looping a belt around the feet in some sitting postures, such as forward bends, can also help you lift the breastbone and lengthen the spine while keeping the shoulders relaxed.

USING A FOAM BLOCK

A firm foam block will help if you find it difficult to lengthen the spine in sitting postures, as it optimizes the tilt of the pelvis. Sit toward the front of the block, not in the middle of it. If you do not have a block, use a telephone directory or small, firm cushion.

foundations

This section shows you some basic standing, sitting, and lying postures. It provides breath-with-movement exercises to loosen your body and help you deepen the connection with the breath. Breathing and centering techniques are given to bring awareness to your practice.

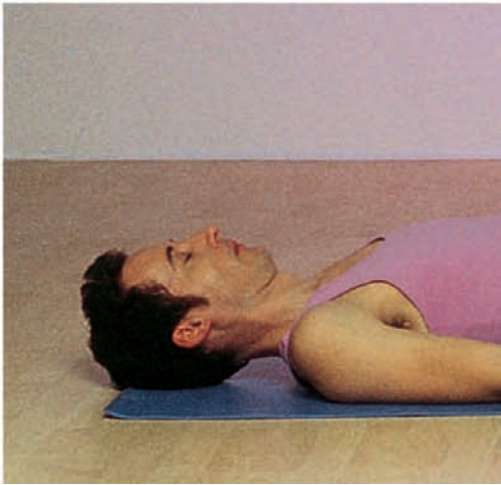
centering

Learning how to be centered is a fundamental aspect of yoga practice. It enables you to connect with your breath, becoming refreshed and re-energized from the quietness that lies within you.

In everyday life your attention is turned outward as you relate to the people and events around you. This can result in your energy being sapped, leaving you feeling tired and tense. The practice of centering enables you to balance your daily life with periods of quiet. You can practice centering lying on your back, sitting, or standing. Find somewhere quiet where you will not be disturbed, and make yourself comfortable.

becoming centered

1 If you choose to lie down, lie on your back, let your legs and feet roll out, and position your arms slightly away from your body. Keep the back of the neck long, drawing the chin gently down toward the chest. If you prefer to sit cross-legged or to stand, lift the breastbone a little and relax the shoulders.

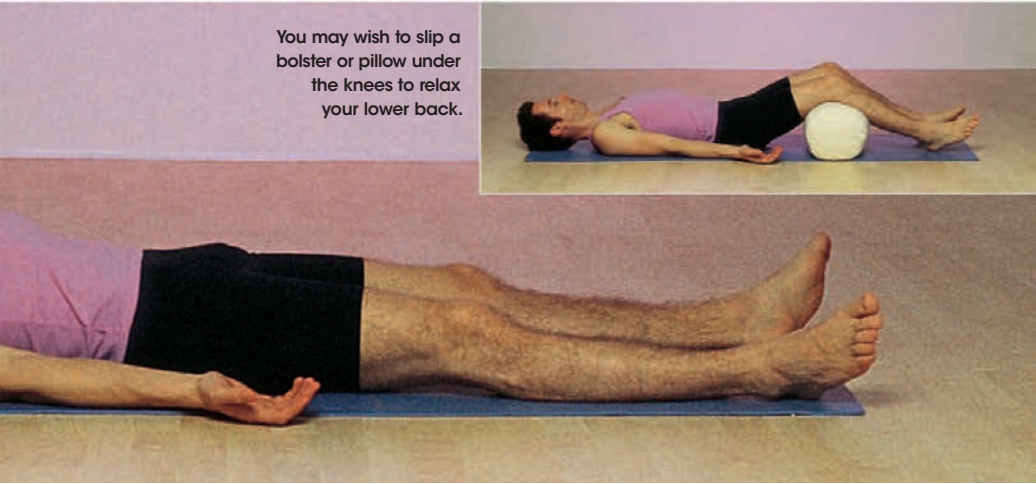


2 Close the eyes gently. Relax the scalp. Relax the face and release any tension in the jaw. Turn your attention inward, and get in touch with your body and how it feels. Begin to notice the gentle movement of the body with the breath. Feel the sensations within your body that result from these movements.

3 Be aware that you are not making the breath happen; neither are you controlling it in any way. Rather, you are trusting the body to breathe just as you do while you are asleep. Let your breath settle into a slow, deep, natural rhythm. Observe it flowing in and out of your body.

4 Let your attention be with your breath and the sensations in the body for a little while. You will find even a few breaths like this helpful, or you can practice for several minutes.

5 When you notice that your attention has wandered and you are thinking of something else, gently draw your awareness back to your breath, without analysis or judgment. It does not matter if your thoughts stray often at first. All you have to do is keep bringing your attention back to the breath each time it happens. The mind soon gets used to focusing lightly on the breath without strain. All it takes is a little practice.



You may wish to slip a bolster or pillow under the knees to relax your lower back.

basic breathing

There is a fundamental connection between the breath and your physical, mental, and emotional states. By working with the breath, you will be able to let go of stress in any situation.

Breathing provides oxygen for the metabolic processes from which we derive the energy to move, think, and feel, and carries away carbon dioxide, the main waste product of our metabolism. Physical tension in the respiratory muscles between and within the ribs can cause tightness in the chest, and even chest pain. Relaxed breathing techniques will release tension from the whole of the upper body, including the neck and shoulders. This will improve your ability to adjust your breathing to meet changing requirements.

The breath also provides a powerful link between mind and body. By controlling your breathing patterns – for example, the rhythm and depth of breathing, the length of the out-breath, and the balance between right and left nostrils – you can influence your physical, mental, and emotional states.

Good breathing habits

Yoga encourages breathing through the nose, full use of the diaphragm, a slow, smooth breathing pattern, and coordination of movement and breath. Opening movements, such as back bends, are practiced on an in-breath, and closing movements, such as forward bends, on the out-breath.

The breathing practice opposite will help develop awareness of the action of respiratory muscles and encourage good breathing habits. It can be done standing, lying down, or sitting as well as kneeling.

sitting sectional breathing

Sectional breathing helps release muscle tension associated with poor breathing habits. After completing Step 3, combine all three steps to produce full, continuous in-breaths and out-breaths.

1 Kneel comfortably with your palms resting on your abdomen, the middle fingers just touching. Breathe into your hands, feeling the abdomen swell out and the fingers move apart as you breathe in. Then feel the abdomen sink back as you exhale. Take six even breaths.

2 Bring your hands to your ribcage, with your fingers to the front and thumbs on the back ribs. Feel the ribs expand into the hands on the in-breath and relax back inward as you exhale. Take six breaths, breathing into the sides of the chest.

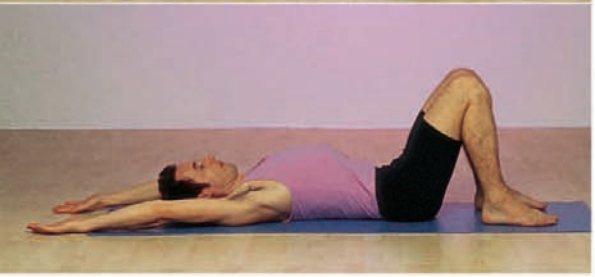
3 Place your fingers on your collarbones, in front of your shoulders. Breathe in, feeling the fingers and shoulders rise up toward the head, and the top of the chest expand. As you breathe out, feel the fingers sink back down with the chest. Take six breaths.

breath with movement

These simple postures are designed to deepen your connection with your breath as well as gently move your joints. Each movement is timed to match the length of the breath.

supine arms over head

1 Lie with your knees bent and your feet on the floor. Place the feet and knees hip-width apart, arms alongside the body with the palms down. Connect with your breath. As you breathe in, bring the arms slowly and smoothly up and back behind the head.



2 Soften the elbows and relax the shoulders, so that the arms are on the floor behind your head by the time you have completed the in-breath. As you breathe out, slowly return the arms to the starting position alongside the body. Repeat for six to eight breaths.

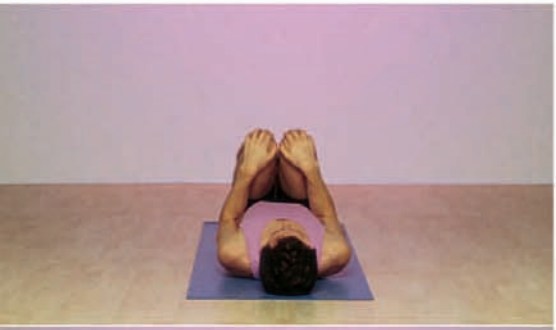
supine nurturing

1 Lie on your back. Draw the knees up and place one hand on each kneecap, with the fingers pointing toward the feet, the knees together. Relax your shoulders. As you breathe in, send the knees away from you.

2 As you breathe out, draw the knees in toward the chest, bending your arms. Keep the shoulders relaxed and the neck long throughout.

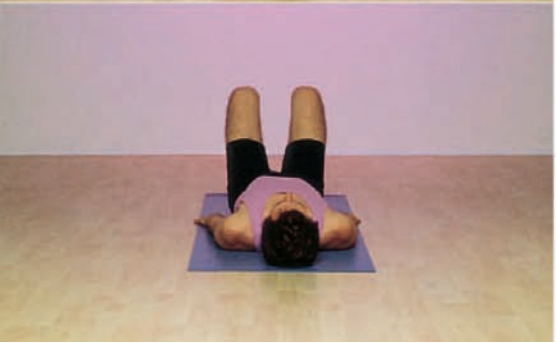
3 As you breathe in, straighten your arms enough to send the knees away from you. Continue these movements, coordinated with the breath, for 10 to 12 breaths. This simple moving posture is one of the best for relieving stress. It also eases the back and hips when you have been sitting for long periods.

supine legs up arms out



1 Lie on your back with the knees bent. Draw up the knees and place one hand over each kneecap, the fingers pointing toward the feet. Relax the shoulders and draw the chin a little down toward the chest, so that the back of the neck is long.

2 As you breathe in, take the arms out to the floor at shoulder height. At the same time, take the feet up toward the ceiling. Keep the feet together and the knees slightly bent.



3 As you breathe out, bring your legs back down slowly and place your hands on your kneecaps again. Repeat for six to eight breaths. Find a comfortable breathing rate and let your movements be governed by the breath. Then bring the feet to the floor, arms each side of the body.

supine twist

1 Lie with the knees bent, the feet together on the floor close to the hips. Position the arms away from the body at an angle of about 45 degrees. Relax the shoulders.

2 As you breathe out, slowly let the knees sink over to the left. Your hips will roll so you are now lying more on the left hip. Turn the head to the right. Relax the feet. As you breathe in, slowly return to the starting position.

3 As you breathe out, slowly let the knees sink over to the right, turning the head to the left. Keep the shoulders and feet relaxed. As you breathe in, slowly return to the starting position. Repeat the sequence for six to eight breaths. Feel the quietening effects as you work with the breath.

standing arm stretches

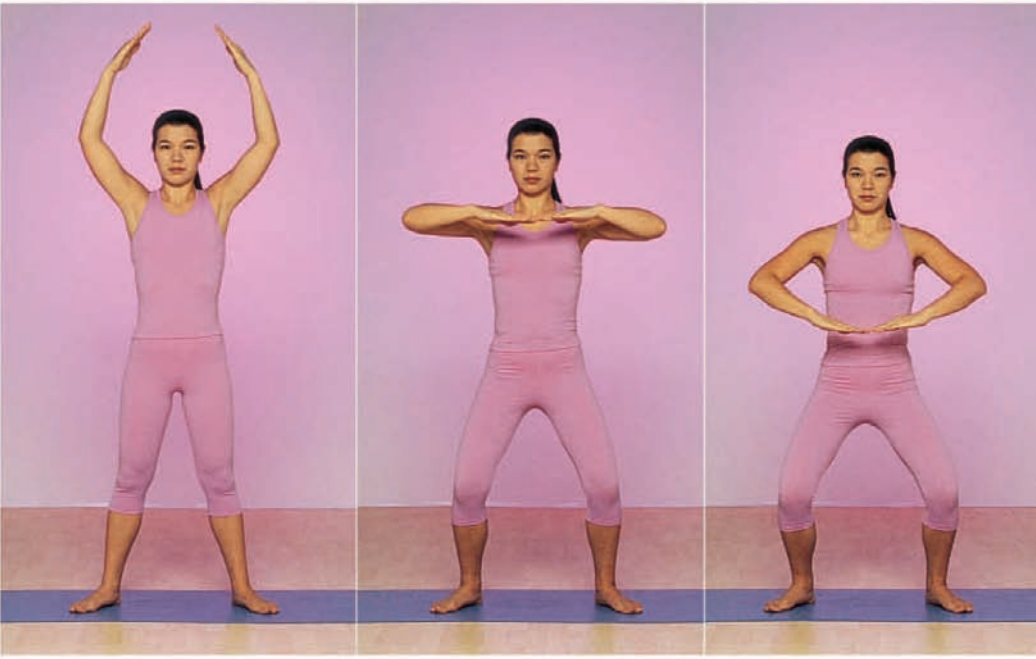
1 Stand, feet together. Become aware of the flow of the breath. Clasp your hands and place them over the breast bone. Keep the elbows and shoulders relaxed.

2 As you breathe in, turn the palms out and stretch them away from you, straightening the elbows. As you breathe out, return to the starting position. Repeat twice.

3 As you breathe in, turn the palms out and stretch them up away from you at an angle of 45 degrees, keeping the shoulders relaxed. As you breathe out, return to the starting position. Repeat twice.

4 As you breathe in, turn the palms away and stretch them right up vertically, keeping the shoulders relaxed. As you breathe out, return to the starting position. Repeat twice more, then unclasp the hands.

french press stretch



1 Stand with the feet more than hip-width apart and the toes turned out. As you breathe in, stretch the arms out to the sides, palms up, and circle them up to almost meet above your head.

2 Imagine you have in front of you a huge French press plunger. As you breathe out, bring your arms in front of your chest until your fingers touch. Bend slightly at the knees and begin to push down with your hands.

3 Continue to push down the imaginary plunger until your hands are level with your waist. Then repeat four to six times, coordinating the actions with the breathing.

neck stretches

1 These gentle movements ease out muscle tension in the neck and shoulders. Sit cross-legged on the floor or on an upright chair. Lift the breastbone and relax the shoulders.

2 Allow the head to come forward slowly under its own weight, bringing the chin down toward the chest. Keep the breastbone up. Stay in this position for several breaths.

3 Allow the head to roll slowly to the left until the ear is over the shoulder. Stay for several breaths, then return to the midline position and repeat on the right. Return to the starting position.

4 Lift the chin slowly toward the ceiling, keeping the back of the neck long. Feel the stretch in all parts of the neck, hold for a few breaths, and return to the starting position.

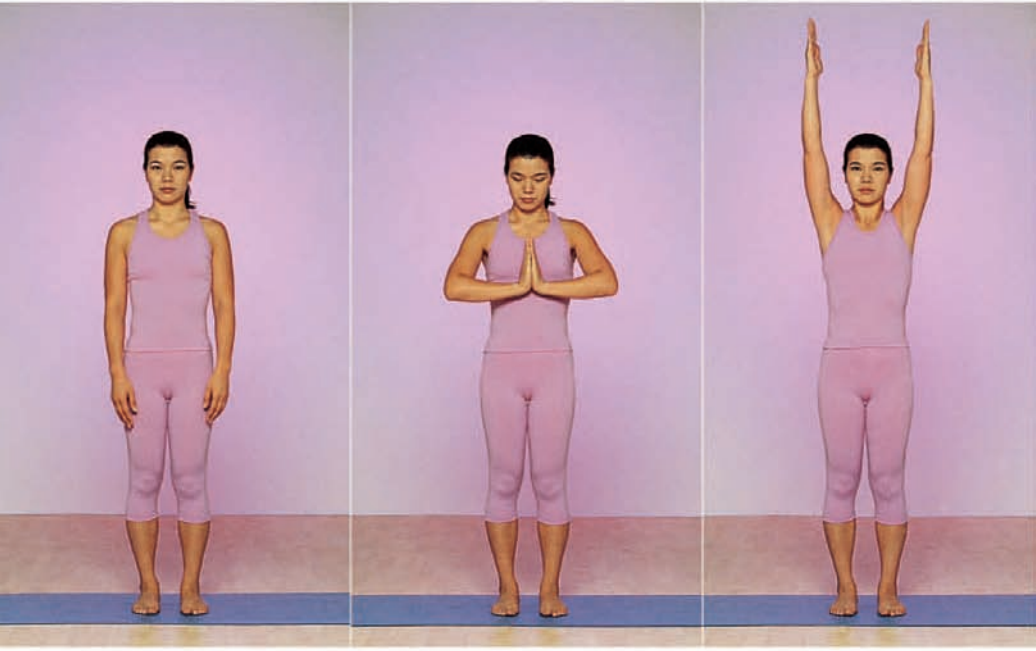
5 Looking straight ahead, slowly send the chin forward, keeping it parallel to the floor. Hold for a few breaths. Keep the shoulders relaxed throughout.

6 Slowly draw the chin back as far as you comfortably can, keeping it parallel to the floor. Hold for a few breaths, and then return to the starting position.

7 Keeping the shoulders relaxed, slowly turn the head to look over the left shoulder as far as you comfortably can. Hold for several breaths.

8 Return to the starting position, then turn the head to look over the right shoulder as far as you comfortably can. Hold for several breaths.

standing upward stretch

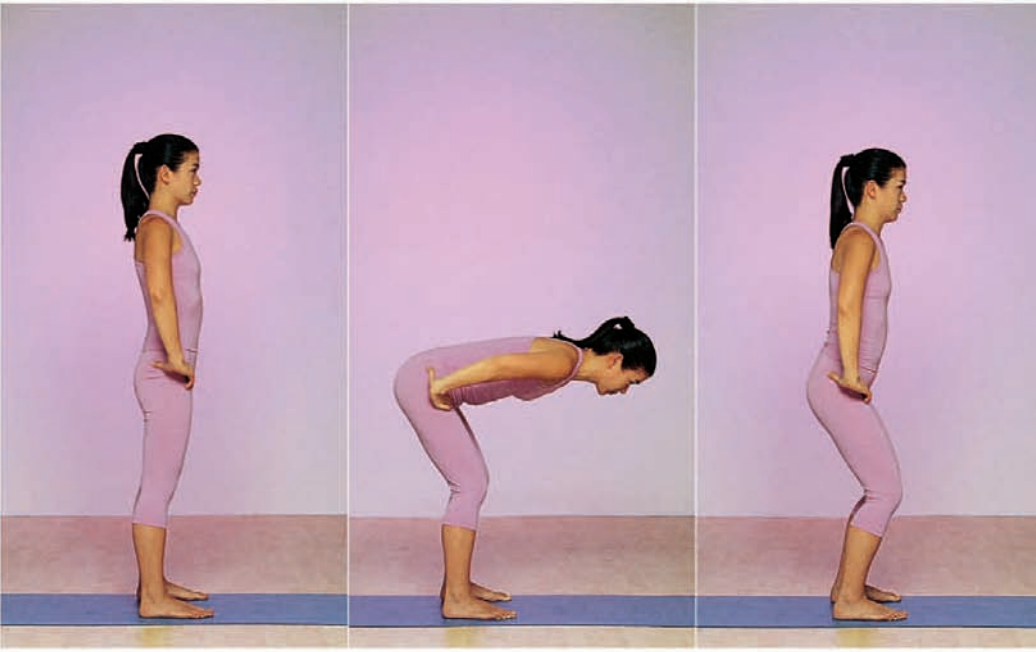


1 Stand with the feet parallel and a little apart. Rock a bit on your feet to balance your body weight evenly. Feel balanced and grounded, letting your weight pass into the floor.

2 Gently lift the kneecaps up a little, relax the shoulders, and lift up the breastbone. Bring the palms together in front of the heart. Look down at the floor past your hands.

3 Slowly stretch the arms up above your head, the palms facing one another. On an in-breath, lift up the chest and stretch. On the out-breath, bring the arms down and let them relax.

half forward bend

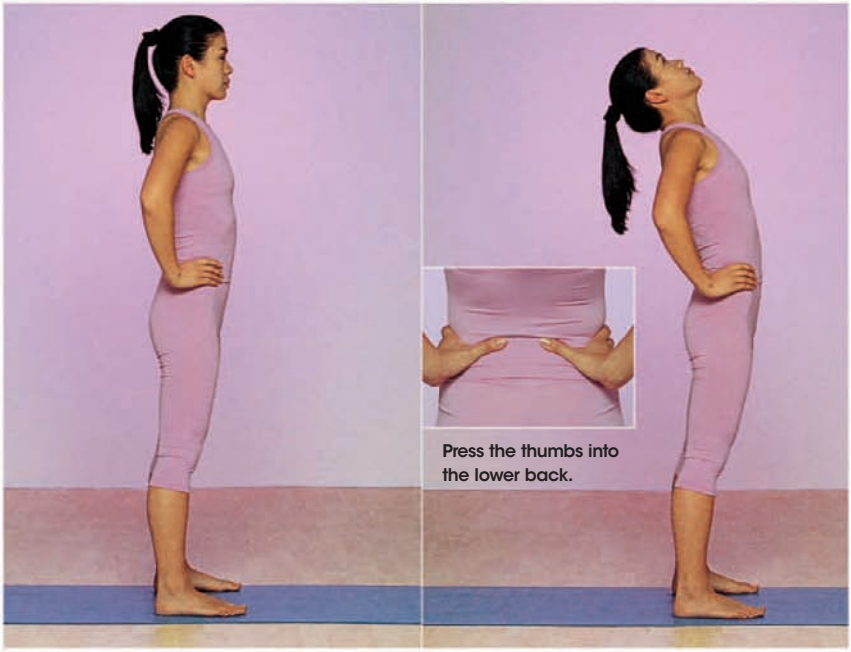


1 Stand with the feet hip-width apart, the inside edges of the feet parallel. Take your hands to the crease at the top of the leg, where the leg joins the body. Your hip joints lie behind your hands.

2 Lift the breastbone up away from the floor, to lengthen the front of the body. On an out-breath, stretch forward with a straight back until your upper body is parallel to the floor. Look down.

3 Bend the knees when you feel the stretch in the backs of the legs. Connect with your breath for several breaths. On an in-breath, come up slowly with knees bent, and return to Step 1.

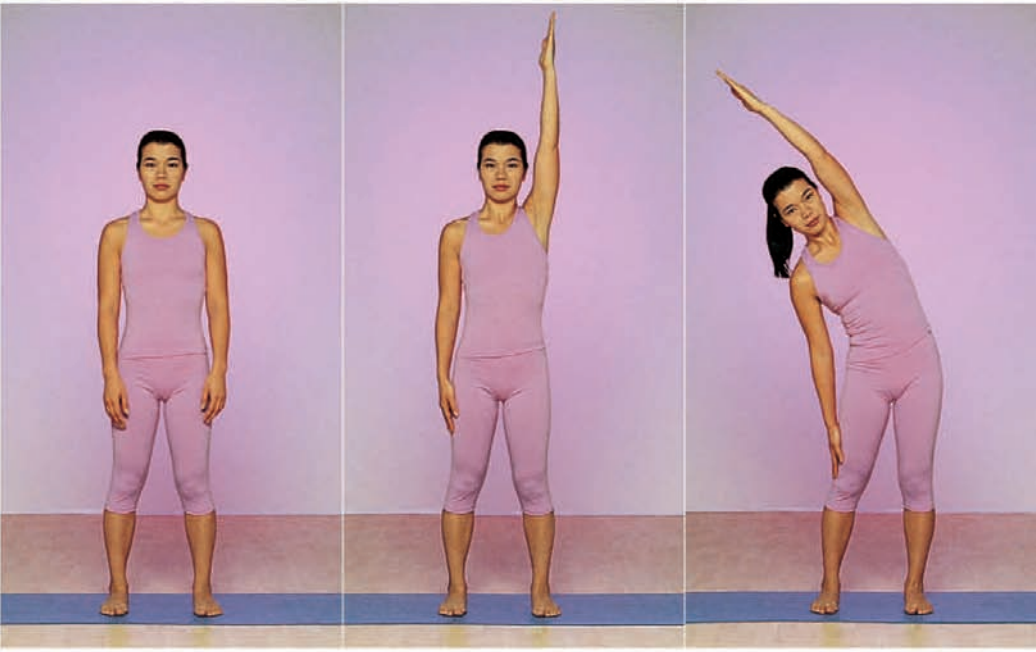
standing back arch



1 Stand with the feet hip-width apart and the inside edges of the feet parallel, the hands on the hips. Take the hands back a little, so the thumbs rest against the lower back, a few inches apart. Now roll the shoulders back to open up the chest. Tuck the chin in.

2 Begin to lift the breastbone up away from the floor. As you lift, feel the upper body arching back. Now lift the chin to look toward the ceiling and breathe for several breaths. Keep lifting the breastbone. Slowly release the pose by lifting the breastbone as you return to an upright position.

standing side stretch



1 Stand with your feet parallel and hip-width apart, your arms down by your sides. If you have back problems, place your right hand on your hip.

2 As you breathe in, raise the left arm up beside your head, fingers reaching up to the ceiling, shoulders relaxed down away from the ears. Try to bring the raised arm to touch the left ear.

3 Reach up and out to the right on an out-breath. Hold, then return to an upright position on an in-breath. Circle the arm back down on the out-breath. Repeat on the other side.

building blocks

This section presents a variety of postures and other yoga practices to calm body, mind, and spirit. Stay in the postures only for as long as you are able to hold them steadily and comfortably, breathing evenly. Listen to your body as you practice, and you will make steady progress.

eagle

This posture opens and stretches across the upper back, neck, and shoulders, releasing tension in these areas. The arms represent the eagle's folded wings and the fingers represent the feathers.

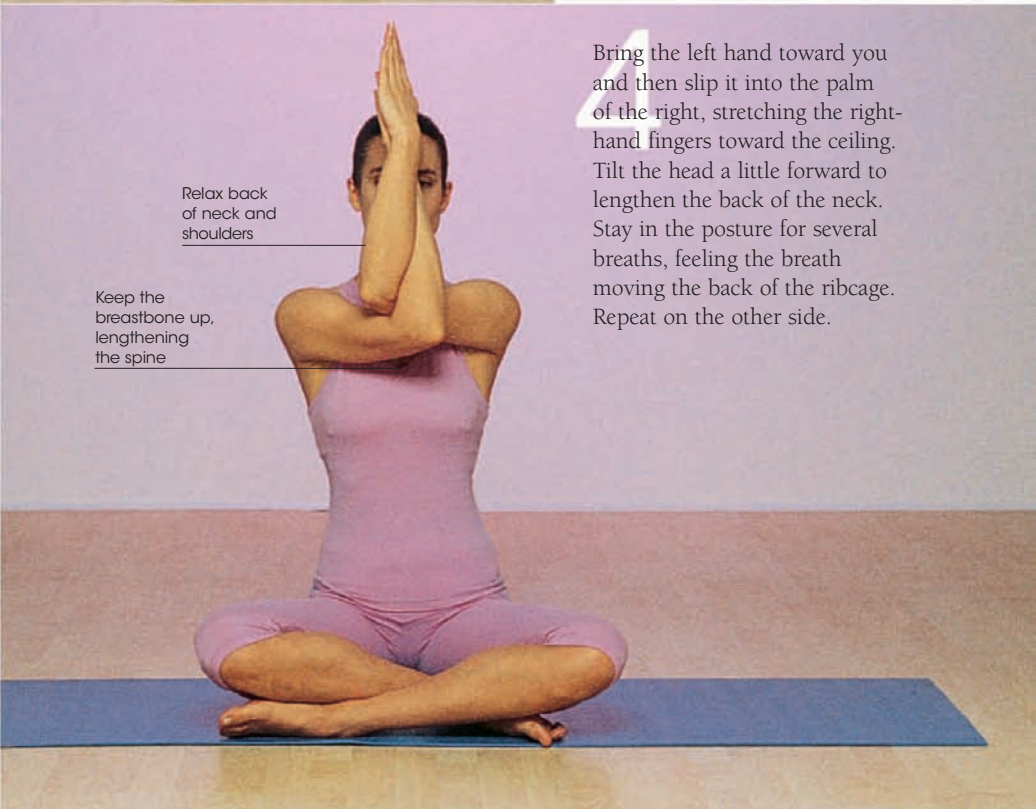
1 Sit cross-legged on the floor (use a foam block or small pillow, if necessary), hands on knees. Lift the breastbone and relax the shoulders. Bring both arms up in front of you, palms facing each other. Bend the elbows and hold them at shoulder height and shoulder-width apart, so each arm forms a right angle.

2 Lower the left elbow a little and send the left hand away from you slightly. As you breathe in, bring the arms toward and past each other, hooking the left elbow under the right one.

TAKE CARE

- If you have neck problems, tilt the head a little forward.
- If you have stiff shoulders, do not strain to achieve the final position.

3 Breathing out, bring the backs of the forearms and the backs of the hands toward each other directly in front of your face. Bring them as close together as you can without straining your shoulders. Now let the breath flow in and out naturally.



4 Bring the left hand toward you and then slip it into the palm of the right, stretching the right-hand fingers toward the ceiling. Tilt the head a little forward to lengthen the back of the neck. Stay in the posture for several breaths, feeling the breath moving the back of the ribcage. Repeat on the other side.

COW

This posture stretches across the front of the body, opening the armpits and releasing tension in the neck and shoulders. As the breath is in the ribcage, the posture has an overall energizing effect.

1 Assume the basic kneeling position. Lift the breastbone and relax the shoulders. Take the left arm up the back, positioning the back of the hand between the shoulder blades, or as high as it will comfortably reach. To help position the left hand, reach behind you with the right hand and, holding onto the left elbow, draw it toward the trunk.

2 Breathing in, raise the right arm vertically. Lift the ribs on the right side of the chest, open the armpit, and stretch the hand to the ceiling.

TAKE CARE

If you find one side easier than the other, practice the stiffer side before the "good" side, then repeat on the stiffer side again.

3 Bend the elbow of the right arm and lower the right hand down your back. Breathing out, hook the two hands together, then relax the neck. Hold the pose for several breaths, feeling the front of the ribcage moving with the breath. Release your hands and repeat with the left arm in the raised position.

Front view

ALTERNATIVE

If the hands do not make contact, use a belt. Hold it in the right hand and lower it down behind you, reaching up for it with the left hand. When both hands are holding the belt, gather it in until the hands are comfortably close, and relax the neck.

forward bend

Forward-stretching postures have a quietening effect on the mind. In the Forward Bend, you bend at the hips, keeping the back straight and the sitting bones lifting up to help release tight hamstrings.

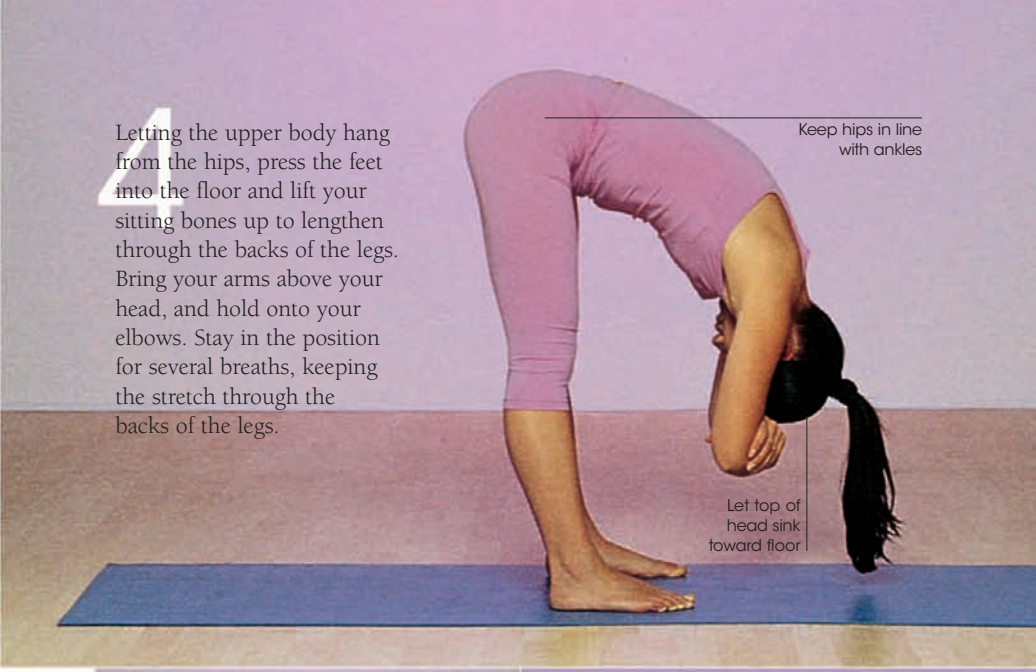
1 Stand with the feet hip-width apart and parallel. Take your hands to the crease at the tops of the legs at the point where they join the torso.

2 Lift the breastbone up away from the floor to lengthen the front of the body. As you breathe out, fold forward from the hips, bending slightly at the knees.

3 With your knees still bent, let the spine relax and lengthen as gravity pulls the head and upper body down toward the floor. Breathe easily.

4

Letting the upper body hang from the hips, press the feet into the floor and lift your sitting bones up to lengthen through the backs of the legs. Bring your arms above your head, and hold onto your elbows. Stay in the position for several breaths, keeping the stretch through the backs of the legs.



5

Bend your knees. Put your hands on your hips and come up halfway, lengthening through the upper spine. On an in-breath, come up to the basic standing position, hinging from the hips and keeping your back straight.

ALTERNATIVE

If you have HBP, glaucoma, or a detached retina, do a Half Forward Bend, resting your hands on the back of a chair. Keep the abdomen pulled back toward the spine and the chest lifted.

tree

In Tree, not only is the body balanced, but the mind becomes quiet and relaxed, too. This posture strengthens the leg muscles and promotes good alignment of the spine.

1 Stand up straight with your feet a little apart, your weight evenly distributed over both feet, and your arms by your sides.

2 Inhaling, bring the sole of the right foot against the inside of the standing leg just below the knee. Take the knee out to the side, to open the hip joint on that side.

3 As you breathe out, lift the breastbone up and relax the shoulders. Bring the palms together in front of your chest. Stop here if you have arthritis in the knees.

Make sure fronts of both hips face directly forward

Take knee back without twisting hips

4 If you feel balanced, lift the foot and place the sole against the top of the inside of the standing leg. Breathing in, stretch your arms up above the head, keeping the palms together. Relax the shoulders and the face. To stay balanced, fix your gaze on a vertical line, such as the edge of a door. Breathe easily for several breaths, then release the pose. Pause and repeat on the other side.

TAKE CARE

If bringing the palms together creates tension in the neck or shoulders, keep the hands shoulder-width apart above the head.

ALTERNATIVE

If your balance is poor, stand against a wall for support or hold onto the back of a chair, as shown. Holding the ankle of the raised leg may also be helpful.

side warrior

This standing posture not only strengthens the body, but also enables you to become aware of the boundless reserves of inner strength that lie within you. Stay balanced and focused throughout.

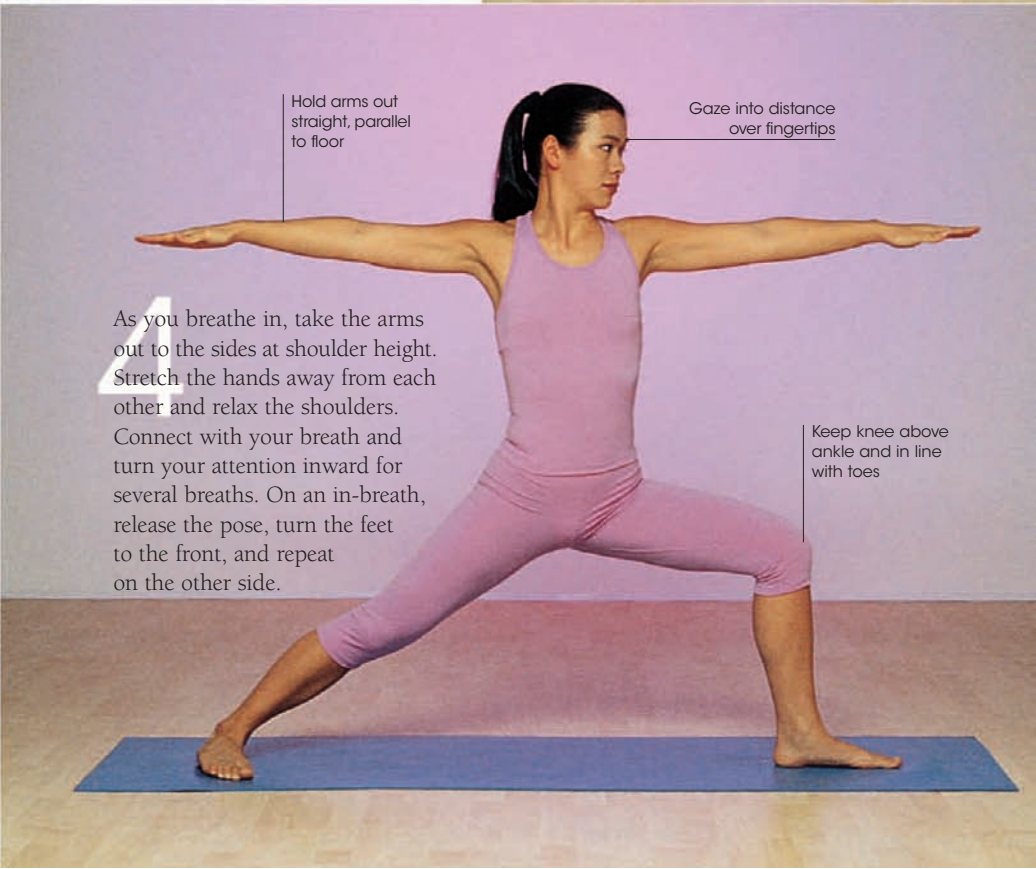
1 Stand with your feet about 3 ft (1 m) apart, the inside edges of the feet parallel, your hands on your waist, and your shoulders relaxed. Look straight ahead.

2 As you breathe in, turn the toes of the right foot in a little and turn all of the left leg out from the hip 90 degrees. Keep your upper body facing front.

TAKE CARE

- If you have HBP or a heart condition, hold for a short time only.
- Proceed cautiously if you have back problems.

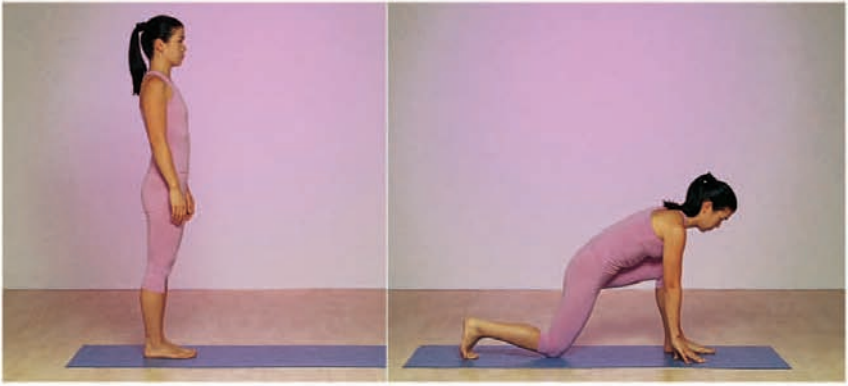
3 Breathing out, bend the left knee and let your hips sink toward the floor. Align the knee with the ankle to make a right angle with the leg. Turn your head to the left, but keep the shoulders facing the front.



4 As you breathe in, take the arms out to the sides at shoulder height. Stretch the hands away from each other and relax the shoulders. Connect with your breath and turn your attention inward for several breaths. On an in-breath, release the pose, turn the feet to the front, and repeat on the other side.

lunge warrior

Lunge Warrior provides a powerful stretch through the back of the leg, thigh, and hip, extends the spine, and opens the chest. Feel the energy building as you breathe deeply into the ribcage.



1 Stand up straight, feet hip-width apart, arms by your sides. Move onto all fours, keeping your toes curled under. Place your hands beneath the shoulders and knees beneath the hips.

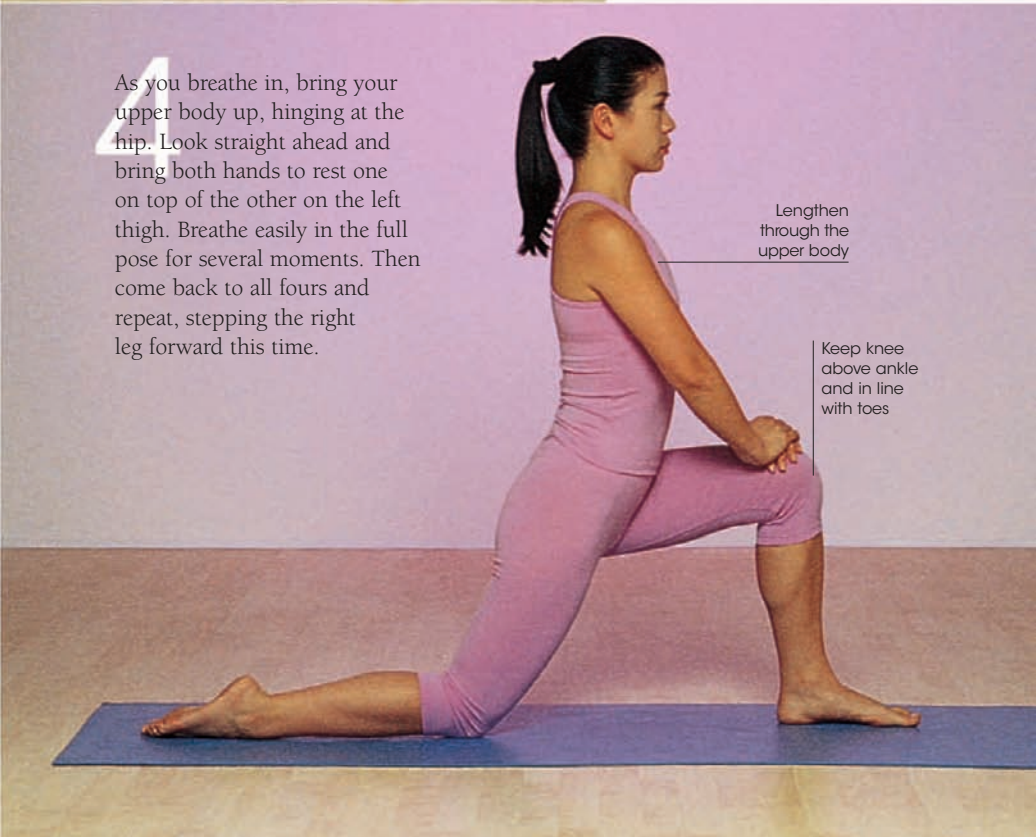
2 As you exhale, take your left leg forward between your hands, so that your knee is directly above the heel of your left foot. Rest your upper body on the left thigh. Press your fingertips into the floor.

TAKE CARE

If you have back problems, do not go beyond Step 2 to begin with.

3 Keeping your fingers steepled, raise your head a little to look slightly farther ahead. Untuck the toes of your right foot, so that the top of the foot is resting on the floor.

4 As you breathe in, bring your upper body up, hinging at the hip. Look straight ahead and bring both hands to rest one on top of the other on the left thigh. Breathe easily in the full pose for several moments. Then come back to all fours and repeat, stepping the right leg forward this time.



downward dog

One of the great classical yoga postures, Downward Dog works and stretches the whole body, releasing tension and quietening the mind as it balances the upper and lower body.

1 Begin on all fours, hands under the shoulders, feet and knees hip-width apart. Lift each hand in turn and place the heel of the hand where the fingertips were, to reposition your hands one hands-length forward, as shown. Tuck the toes under.

2 On an out-breath, come up on your toes and lift your hips up and back. Keeping your knees bent, push your hands against the floor to send your weight back toward your feet. Lengthen through the spine.

TAKE CARE

If you have back problems, keep the knees bent throughout or do the Alternative (right).

Lengthen through back

Keep knees soft

3 Stretch your sitting bones up to the ceiling and bring the heels toward the floor. Let your head hang and your neck relax. Only straighten the knees if you can do so without rounding the back. Breathe naturally for several breaths in this pose.

4 On an out-breath, lower the knees to the floor and, keeping your hands still, sit back on your heels in Hare (see p.85). Relax the arms and stay for a few breaths. Feel the stretch through the spine.

ALTERNATIVE

If you have HBP, a detached retina, or glaucoma, do the pose with your hands against a wall or on a chair.

cobra

Cobra extends the spine, strengthening the muscles in the back and stretching the front of the body. It also opens the chest, strengthens the diaphragm, and releases tension in the shoulders.

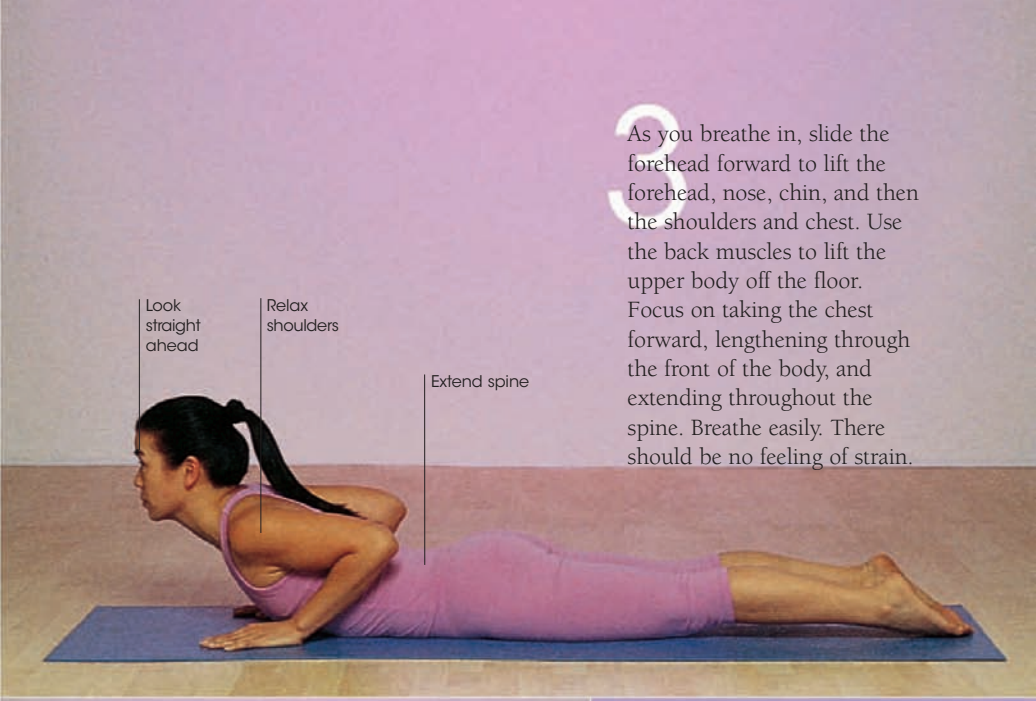
1 Lie on your front, forehead on the floor and feet hip-width apart. Let your arms lie down by your sides, palms facing up. Stretch the feet away along the floor.

2 Place your hands under the shoulders and spread your fingers, middle finger pointing forward. Keep the elbows close to the body and tuck your tailbone under. Roll the shoulders back.

TAKE CARE

- Avoid if you have facet joint problems in the spine.
- If you have arthritis in the neck, keep the head in line with the spine.

3 As you breathe in, slide the forehead forward to lift the forehead, nose, chin, and then the shoulders and chest. Use the back muscles to lift the upper body off the floor. Focus on taking the chest forward, lengthening through the front of the body, and extending throughout the spine. Breathe easily. There should be no feeling of strain.



4 Repeat the pose once or twice, resting in between with your forehead on the floor and your arms beside you, palms facing up. Then rest with the head turned to one side.

ALTERNATIVE

If you are stiff in the shoulders or have a rounded upper spine (kyphosis), you may prefer to place your hands beside your face and keep your forearms on the floor as you lift up the upper body.

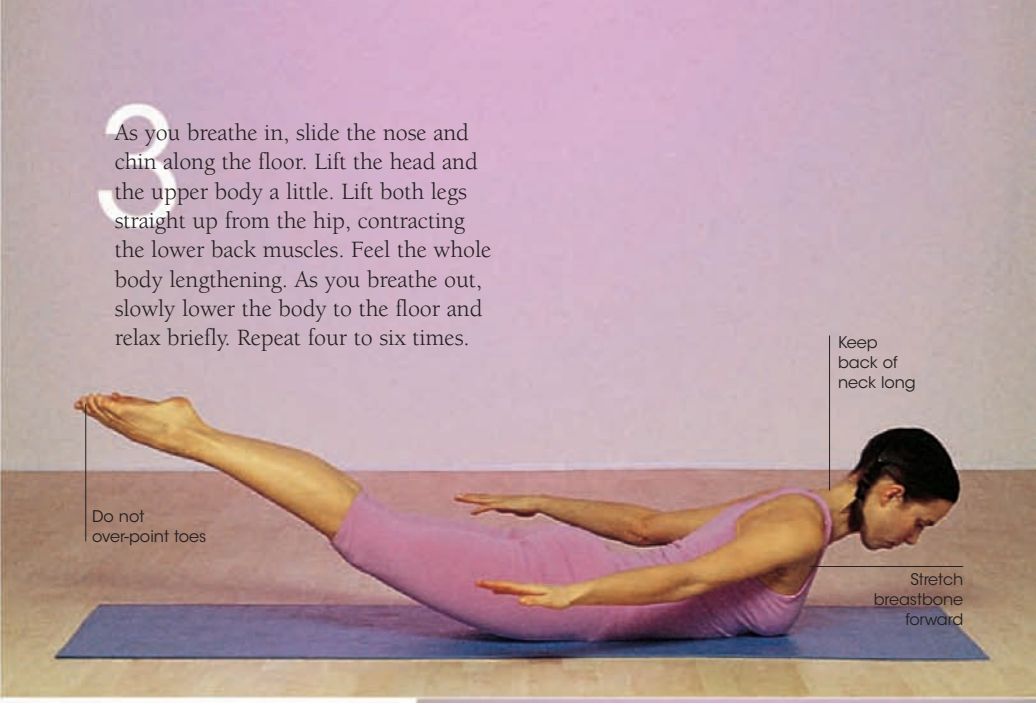
locust

This back-arching posture stretches the whole body and raises the spirits. It provides a balanced strengthening of the back muscles. Practice with the breath to avoid strain and keep the mind focused.

1 Lie on your front with your forehead on the floor, your feet a little apart, and your arms by your sides. Relax completely for a few breaths.

2 Breathing out, stretch the feet away from you along the floor. Stretch the arms up and back behind you like wings. Keep your forehead pressed on the floor.

3 As you breathe in, slide the nose and chin along the floor. Lift the head and the upper body a little. Lift both legs straight up from the hip, contracting the lower back muscles. Feel the whole body lengthening. As you breathe out, slowly lower the body to the floor and relax briefly. Repeat four to six times.



4 On the final lowering of the body, turn the head to one side and relax the body completely. Be aware of the lower back rising and falling with the breath.

TAKE CARE

Avoid this pose if you have a peptic ulcer, hernia, or spinal facet joint problems.

half bow

The Half Bow posture works the back, while gently stretching the front thigh and hip-flexor muscles. It is a good forerunner to the full Bow and has an invigorating, energizing effect.

1 Lie on your front with your forehead on the floor, your feet a little apart, and your arms by your sides, palms facing up.

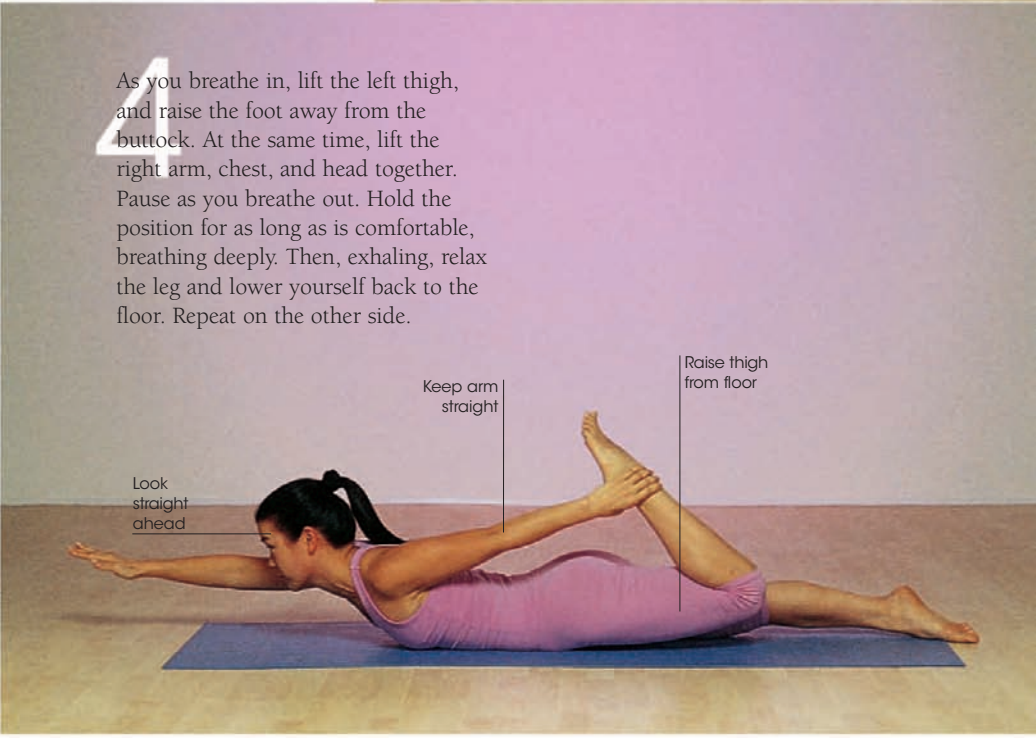
2 As you breathe in, stretch your right arm above your head, palm facing the floor. Point the fingers away from the body. Keep resting your forehead on the floor.

TAKE CARE

- If you have HBP, heart disease, or a hernia, do not hold final position.
- If you have back problems, stop if symptoms are provoked.

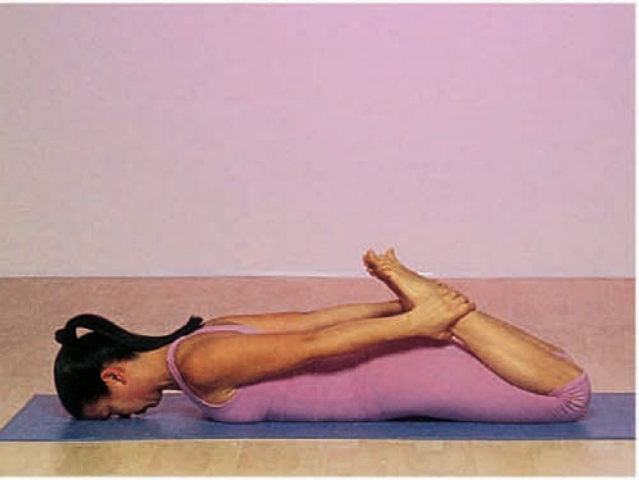
3 Exhaling, bend your left leg so that your calf touches your thigh, and take hold of the front of the ankle with your left hand. Continue to keep your forehead on the floor.

4 As you breathe in, lift the left thigh, and raise the foot away from the buttock. At the same time, lift the right arm, chest, and head together. Pause as you breathe out. Hold the position for as long as is comfortable, breathing deeply. Then, exhaling, relax the leg and lower yourself back to the floor. Repeat on the other side.



bow

Bow strengthens and tones the back and abdominal muscles, and extends the spine. It also opens the chest, stimulating deep breathing, and results in an increased sense of wellbeing.

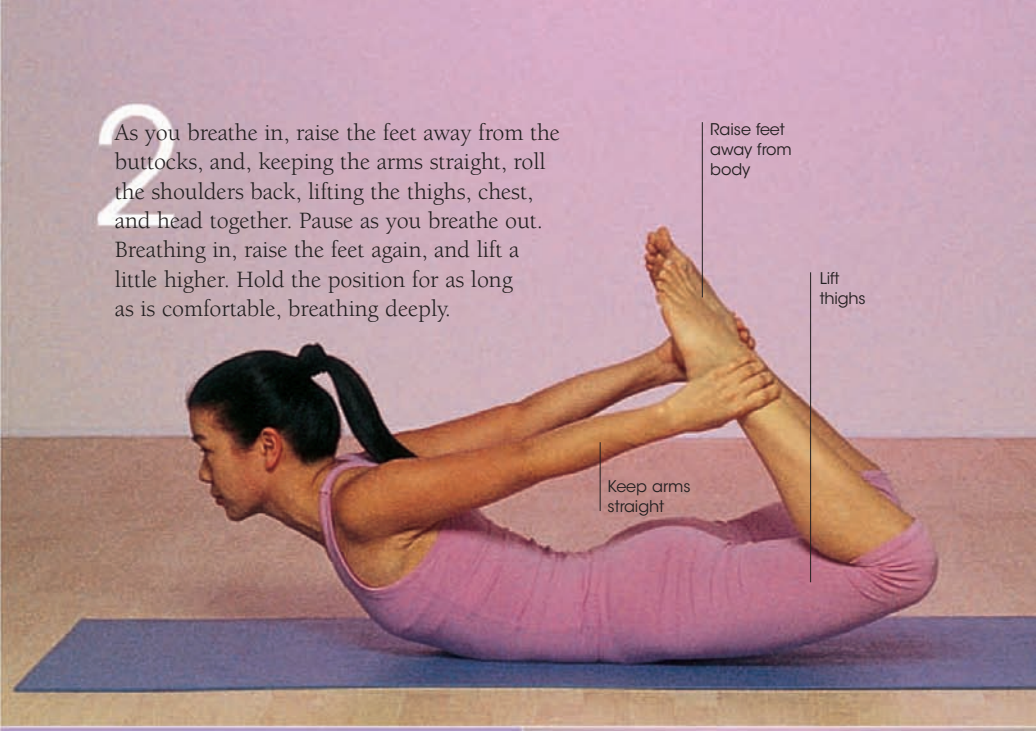


1 Lie on your front, with your legs and feet together, and your arms by your sides, palms facing up. Rest your forehead on the floor. As you breathe out, bend both legs so that the calves touch the thighs. At the same time, reach back with your arms and take hold of the fronts of the ankles.

TAKE CARE

Avoid if you have heart problems, HBP, a hernia, or back problems; start with Half Bow (see p.62).

2 As you breathe in, raise the feet away from the buttocks, and, keeping the arms straight, roll the shoulders back, lifting the thighs, chest, and head together. Pause as you breathe out. Breathing in, raise the feet again, and lift a little higher. Hold the position for as long as is comfortable, breathing deeply.



ALTERNATIVE

If you cannot reach your ankles with your hands without straining, use a belt. Wrap it around the ankles and hold the ends with both hands. Draw your chest up as you lift your thighs and raise your feet.

3 On an out-breath, relax the legs and lower your body to the floor. Fold your arms and rest for a few breaths with your head turned to one side, resting on the backs of your hands.

sun salute

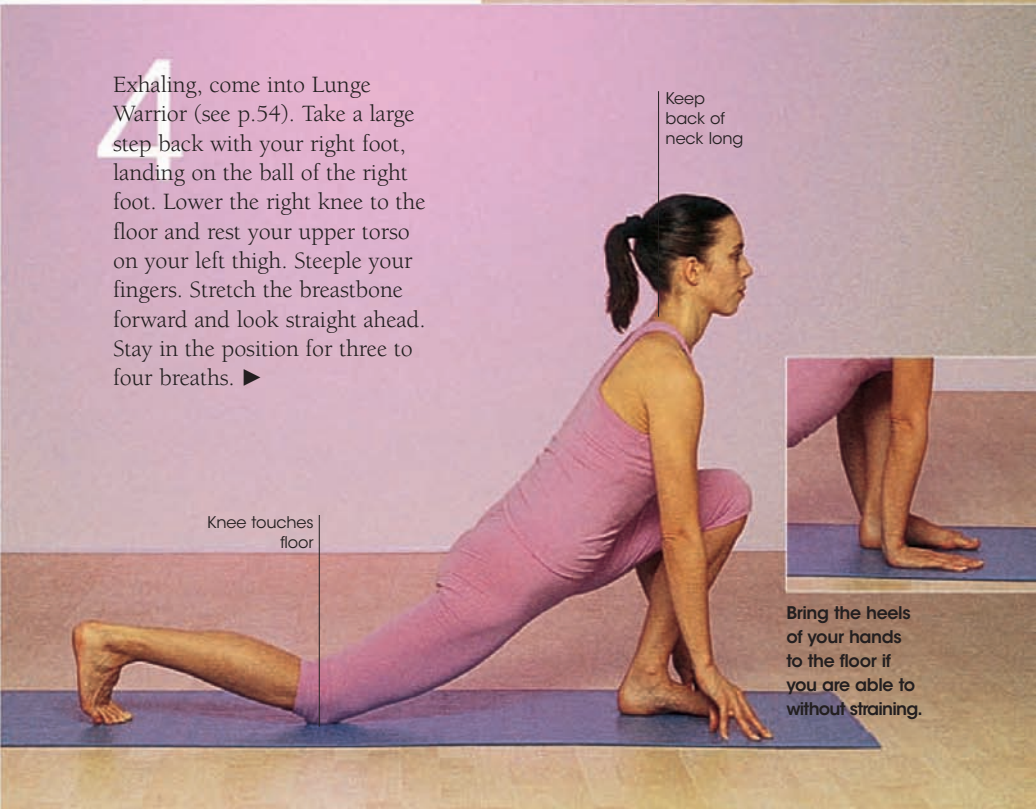
This dynamic sequence energizes the whole body. Try to make the sequence flowing by coordinating movement with breath. After completing the sequence, repeat on the other side of the body.

1 Stand up straight with your feet together and your palms pressed together in prayer position in front of your chest. Look straight ahead. Center yourself and then inhale fully.

2 As you breathe in, take your arms out to the sides of your body, turning the palms out, and lift both arms up above your head. Bring your palms together and lift up the breastbone. Open your chest as you look up at your hands. Do not let the head fall back and keep the shoulders relaxed.

3 Breathing out, fold forward from the hips over bent legs into a relaxed Forward Bend (see p.48). Bend your arms above your head and hold at the elbows. Let the torso hang. Stay in this position for three to four breaths.

4 Exhaling, come into Lunge Warrior (see p.54). Take a large step back with your right foot, landing on the ball of the right foot. Lower the right knee to the floor and rest your upper torso on your left thigh. Steeple your fingers. Stretch the breastbone forward and look straight ahead. Stay in the position for three to four breaths. ▶



Bring the heels of your hands to the floor if you are able to without straining.

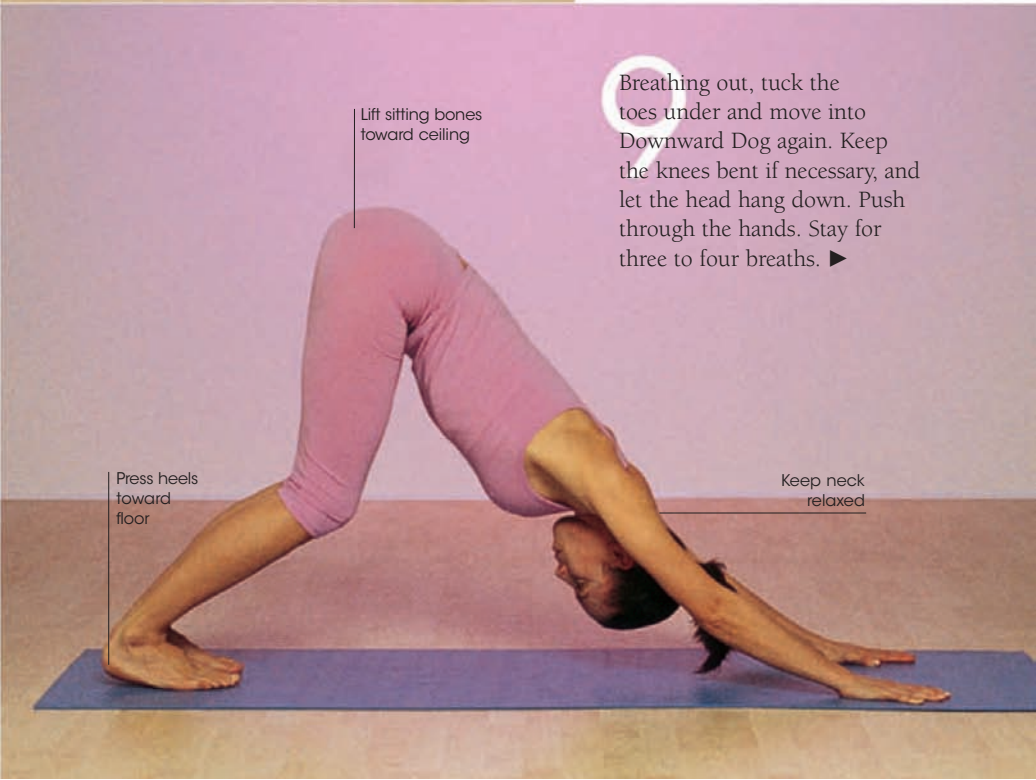
5 Exhale as you step the left foot back to come into Downward Dog (see p.56). Press your heels toward the floor and bend the knees if necessary. Do not force your heels onto the floor. Let your head hang, your neck relax. Stay in the pose for three to four breaths.

6 On an out-breath, bring your knees to the floor, and keeping your hands still, move into Hare (see p.85). Rest in this pose for three to four breaths.

7 Breathing in, bring your body forward and lift your legs and torso off the floor, tucking your toes under. Your hands should be directly beneath your shoulders. Maintain a straight line with your body and legs. Look down at the floor. Hold the position and breathe out.

8 Breathing in, lower yourself to the floor into Cobra (see p.58). Keep the hands directly underneath the shoulders and the elbows tucked in. Focus on taking the chest forward, lengthening through the front of the body, and extending throughout the spine.

9 Breathing out, tuck the toes under and move into Downward Dog again. Keep the knees bent if necessary, and let the head hang down. Push through the hands. Stay for three to four breaths. ▶



10

Inhale as you step the left foot forward between your hands to come back into Lunge Warrior (see p.54). Steeple your fingers if you need more room to bring the foot forward, or take two steps if you are very stiff. Stay for three to four breaths.

Look straight ahead

Lengthen through spine

Let knee rest on floor

11

As you exhale, bring your right foot forward to join the left foot and come into an easy Forward Bend with bent legs (see p.48). Bend your arms above your head and hold onto the elbows. Relax in this position for three to four breaths.

12 Breathing in, roll the body up slowly, keeping the knees bent until you are completely upright. Breathe out once when you are standing up straight.

13 Breathing in, circle your arms out to the sides and then over your head. Bring the palms together and look up at your hands. Lift the breastbone, but do not bend backward.

14 Breathing out, bring your arms down in front of your chest in prayer position. Look straight ahead and breathe easily for a few minutes. Repeat the sequence on the other side.

bridge

Bridge is a back-arching posture that also opens the chest and releases neck and shoulder tension. It is especially soothing if practiced moving on the out-breath only.

1 Lie on your back with your knees pulled up and your feet hip-width apart. Allow a hand's length of space between the hips and the heels. Have the arms alongside the body with the palms facing down. Draw the chin a little down toward the chest, to lengthen the back of the neck.

2 Breathe in, feeling the length of your back on the floor. As you breathe out, push your feet against the floor to lift the hips and then the back off the floor as far as you comfortably can. Make sure your feet are directly beneath the knees, especially if you have knee problems.

TAKE CARE

If you have neck problems, make sure the back of the neck stays long throughout.

3 Hold the pose and breathe in. As you breathe out, lower your back to the floor one vertebra at a time, bringing the upper, middle, and lower back to the floor before the hips. Repeat the sequence for six to eight breaths, moving on the out-breaths only.

Feet hip-width apart, directly under knees

Keep neck relaxed

4 When you have completed the practice, draw the knees in toward the chest and wrap the arms around the knees. Relax the shoulders. Rock slowly from side to side and feel your back moving against the floor.

ALTERNATIVE

If you have a back problem, try taking the feet a little farther away from the hips when you begin, and lift only the hips off the floor, not the whole back.

legs up the wall

Inverted postures can be particularly restorative, and you do not need to be able to do a Headstand to reap the benefits of inversion. Try Legs up the Wall first if you are new to inverted postures.

1 Sit up straight with your left hip against a wall. Place your hands on your thighs and breathe easily for a few moments. Draw the knees up.

2 Lean over on to your right elbow and place the left hand against the wall. Swivel your trunk through 90 degrees so that your legs are against the wall and your hips close to the base of it.

TAKE CARE

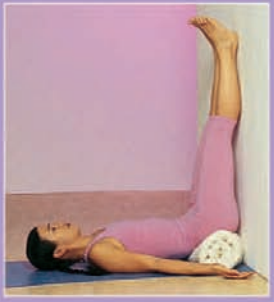
- If you have HBP, Legs up the Wall is the only suitable inverted posture.
- If you have LBP, come out of any inverted postures really slowly.

3 Bend your elbows and bring your hands to rest on your stomach. Relax the legs up the wall and stay quietly in this position, observing the flow of the natural breath for two to three minutes.

Keep legs together

Draw chin towards chest to lengthen back of neck

4 Separate the feet, and let your arms rest by your sides, palms up, for a few breaths. To come out of the pose, draw the knees over the chest and roll over to one side. Stay in this position for a few breaths before sitting up. Once sitting, wait for a few breaths before standing up.



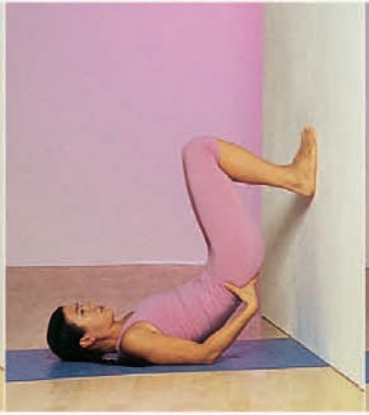
ALTERNATIVE

Place a soft bolster or cushion under the hips if your back is not comfortable when flat on the floor.

half shoulder stand

This gentle version of Shoulder Stand is restorative, quietening the mind while resting the legs and lower body. By using a wall for support, it is easy to learn how to do this inversion.

1 Sit with your left hip against a wall. Move into Legs up the Wall (see p.74).



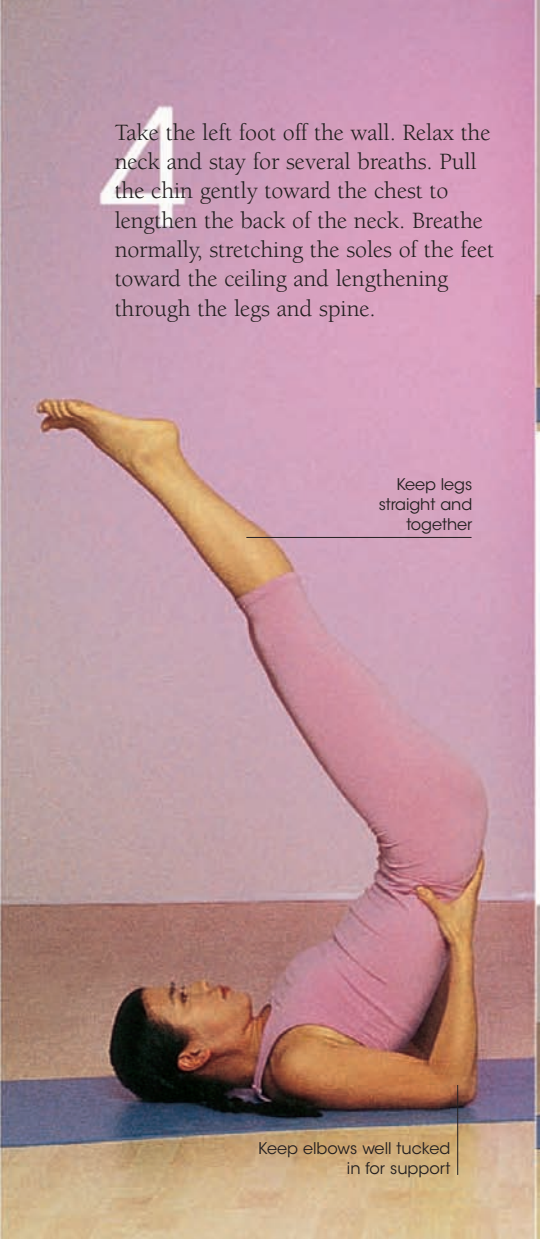
2 Place the feet against the wall and push, raising the hips. Bring the hands to the backs of the hipbones.

3 Lift the heels from the wall and raise the hips higher. Take the right foot off the wall and bring over your head.

TAKE CARE

If you have HBP, a heart condition, a detached retina, glaucoma, neck problems, or are overweight, do Legs up the Wall (see p.74).

4 Take the left foot off the wall. Relax the neck and stay for several breaths. Pull the chin gently toward the chest to lengthen the back of the neck. Breathe normally, stretching the soles of the feet toward the ceiling and lengthening through the legs and spine.



5 Bend your right knee to bring the sole of your right foot back to the wall. Then bring your left foot to the wall. Lower your spine to the floor, keeping the back supported as you come down. Take your arms out to the side.

6 To come out of the pose, draw the knees over the chest and roll onto your right side. Stay with the head down for several breaths. Sit up slowly, particularly if you have LBP.

easy fish

This posture opens the hips and shoulders, while supporting the back. Easy Fish provides an excellent counterstretch for the back and the neck after doing the Half Shoulder Stand (see p.76).

1 Lie on your back with your legs outstretched and your feet hip-width apart. Place your arms by your sides, palms facing down. Look up at the ceiling.

2 Pull up the knees and place the soles of your feet flat on the floor close to the hips. Lengthen the back of the neck by drawing the chin down a little toward the chest.

3

Cross your feet at the ankles, and allow the knees to drop out to the sides – right knee to the right side, left knee to the left – so that you are lying in a cross-legged position. Let the hip joints relax and open. Do not overarch the back.

4

Bring your arms up and clasp your hands to cradle the head. Let the elbows sink to the floor. Observe the natural rise and fall of the abdomen with the breath for several breaths. Uncross the ankles, cross them the other way, and stay for several more breaths. To come out of the pose, bring the knees back together and slide the feet away.

ALTERNATIVE

If you have lower back pain, sacroiliac problems, or simply stiff hips, support either or both legs by tucking a bolster or pillow under the thighs. Then let the thighs relax down onto the support.

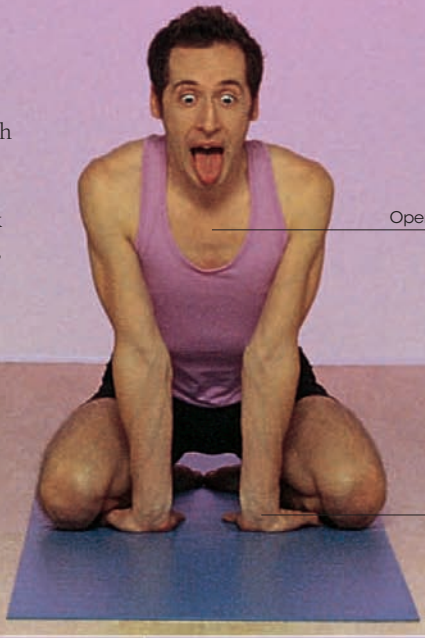
roaring lion

Roaring Lion posture is a great stress reliever. It stretches the face, jaw, and throat, while simultaneously releasing any sense of being under pressure, whether from the demands of work or home.

1 Begin on all fours, the hands directly under the shoulders, the feet and knees about hip-width apart. Spread your fingers and look down.

2 Sit back on your heels with the knees wider than the hips and the feet close together. Position the hands on the floor inside the knees, and turn the hands so that the heels of the hands point forward. Lift the breastbone and look slightly forward.

3 Breathe in deeply. As you breathe out, open your mouth wide and stretch the tip of the tongue down to the chin. Open the eyes wide and look up, as you exhale with a soft, continuous "haaaa" sound. The sound should be soft, not harsh or unduly loud, and should last the length of the exhalation. If your throat feels rough afterward, you are practicing too strongly.



4 As you breathe in, slowly pull in the relaxed tongue, relax the face, and close the mouth. Breathe normally for a few breaths, feeling the effects, then repeat two or three times.

ALTERNATIVE

If you have knee problems or painful wrists, sit on a chair. Lean forward, the hands placed lightly on the thighs.

cat

Cat is practiced slowly, with the movements initiated from the tailbone. It works the back, easing out tension and strengthening the muscles. Learn the positions first, then link them to the breath.

1 Kneel on all fours, hands under the shoulders and knees under the hips. Push the hands into the floor to prevent the shoulders from sagging. Look down at the floor.

2 As you breathe in, begin to lift the tailbone up away from the floor, so that the lower back dips toward the floor. Continue to lift the tailbone and feel first the middle of the back dip, then the upper back. Look at the floor about 3 ft (1 m) in front of you.

3 As you breathe out, start to lower the tailbone toward the floor. Feel the lower back rise, then the middle, and finally the upper back. Let the head hang, relaxing the neck. Alternate these two positions several times, feeling the ripplelike waves of movement spread from the base of the spine to the neck.

Keep back of neck long

Tops of feet on floor

4 On an out-breath, sit back on your heels with your arms in front. Slowly circle the hands at the wrists a few times in each direction to ease them after this weight-bearing posture.

ALTERNATIVE

If one or both your wrists are painful when your hands are bearing your weight or if you have weak wrists, support the body by placing one or both forearms on blocks.

cat balance

This variation of the Cat pose is unusual in that it stretches the body diagonally. It also encourages balance and a sense of focus. Keep the spine and pelvis in a neutral position throughout.

1 Kneel on all fours, the knees beneath the hips, the feet and knees a little apart. Look down at the floor. Spread the fingers and hold the neck in line.

2 On an in-breath, lift the left leg and stretch it out behind you. Do not look up as this tightens the neck. Pause for a few breaths to get your balance.

3 On an in-breath, slowly take the right arm out in front, parallel to the floor. Stretch the raised hand and foot away from each other. Breathe easily. Slowly release the pose and repeat, stretching out the right leg and the left arm.

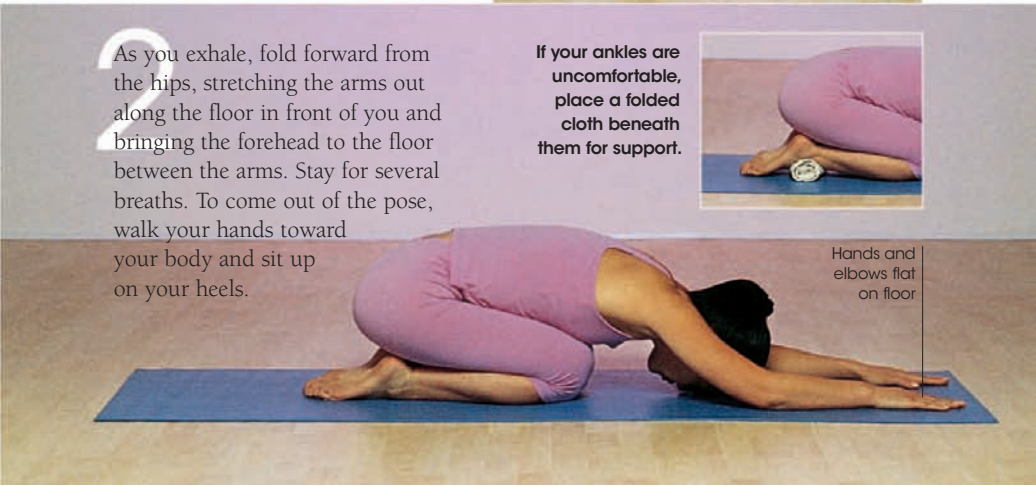
hare

Hare gently stretches the back, hips, knees, and ankles. It is a restorative pose that helps you develop a deep sense of calm by taking your attention inward. (For alternatives, see Child, p.87.)

1 Kneel and sit back on your heels, looking straight ahead. Bring the breastbone up and relax the shoulders. Let your arms hang on each side of the body. Lengthen through the spine. Breathe in.

2 As you exhale, fold forward from the hips, stretching the arms out along the floor in front of you and bringing the forehead to the floor between the arms. Stay for several breaths. To come out of the pose, walk your hands toward your body and sit up on your heels.

If your ankles are uncomfortable, place a folded cloth beneath them for support.



child

Child is a deeply calming pose that gently stretches the spine and postural muscles in the back, while taking your attention inward. It is a good posture for developing breath awareness.

1 Kneel and sit back on your heels. Keep the breastbone up and the shoulders relaxed. Allow your arms to hang down on each side of your body. Lengthen through the spine and look straight ahead. Breathe in.

2 As you exhale, fold forward, tucking the chin in to bring the head to the floor. Let the weight of the arms pull the shoulders gently toward the floor. Stay for several breaths. To come out of the pose, bring the palms of your hands to the floor and push up slowly.

Feel stretch across upper back

ALTERNATIVES

If your knees are uncomfortable, place a small pillow between the hips and the heels to lift the hips a little. If you find it difficult to bring your head to the floor, rest it on your two fists, one on top of the other. If you have HBP, a detached retina, glaucoma, or back problems, rest your head on the seat of a chair.

seated forward stretch

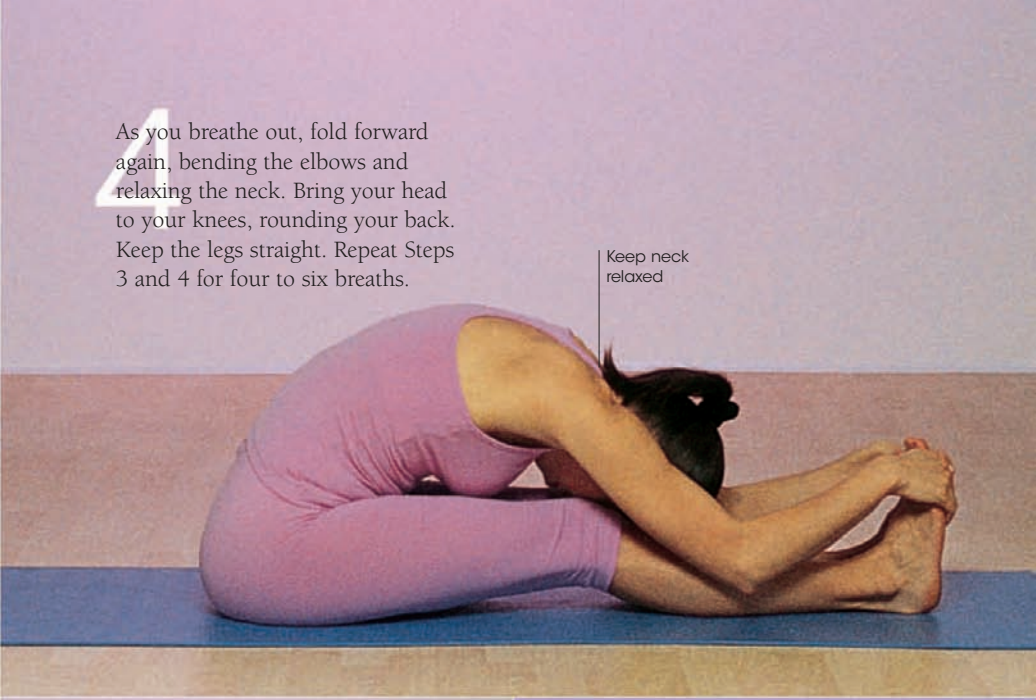
This posture has marked quietening effects and is often used in yoga therapy to reduce stress. It encourages flexibility in the spine and hamstrings, and allows you to focus on inner awareness.

1 Set a firm pillow or bolster close by. Sit with your legs straight out in front of you, feet together. Let your hands rest lightly on your thighs. Look straight ahead and take a few breaths to center yourself.

2 Breathing out, lift the breastbone and lengthen the spine. Relax the shoulders. Stretch forward from the hips and hold the toes, ankles, or shins, depending on your level of flexibility.

3 As you breathe in, lift up the breastbone and lengthen the spine, keeping hold of the toes. Keep the legs and arms straight, and look straight ahead.

4 As you breathe out, fold forward again, bending the elbows and relaxing the neck. Bring your head to your knees, rounding your back. Keep the legs straight. Repeat Steps 3 and 4 for four to six breaths.



5 Place a firm pillow, bolster, or folded blanket on your legs below your knees. Relax forward over the support and hold for a farther four to six breaths. Be aware of the flow of the natural breath.

ALTERNATIVE

If you have back problems, a hernia, or tight hamstrings, do not strain to reach toes. Place a pillow under the knees.

cobbler

Cobbler pose opens the hips, while lengthening the spine upward. Practiced with the breath, it is one of the most quietening of all yoga postures, and a wonderful stress reliever.

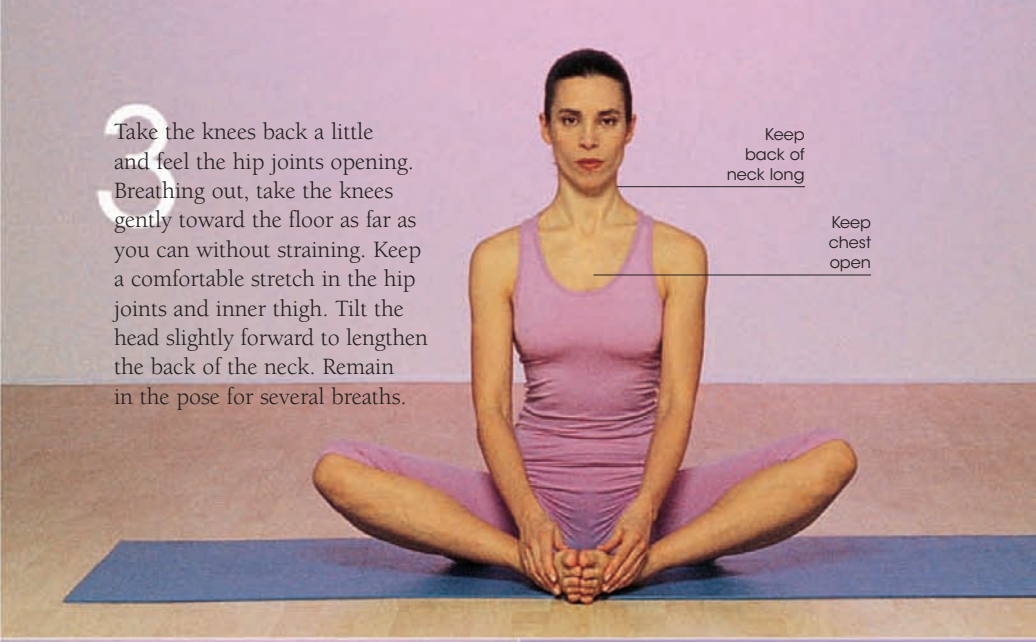
1 Sit with your legs stretched out in front of you. Place your hands on the floor on either side of your body and lean back a little. Bend the knees and swing the soles of your feet together on the floor in front of you.

2 Reach forward and clasp the hands around the feet. Breathing in, sit up straight, lifting the breastbone and lengthening the spine upward. Look straight ahead.

TAKE CARE

- If your back rounds, sit on a foam block or small cushion.
- If you have stiff hips, place a pillow under each thigh for support.

3 Take the knees back a little and feel the hip joints opening. Breathing out, take the knees gently toward the floor as far as you can without straining. Keep a comfortable stretch in the hip joints and inner thigh. Tilt the head slightly forward to lengthen the back of the neck. Remain in the pose for several breaths.



4 To come out of the pose, release the feet and pull the knees together. Place your hands on your knees and roll the legs from side to side several times to ease the hips.

ALTERNATIVE

If you find it difficult to sit up straight while holding onto the feet, use a belt looped around the feet. Hold onto the belt near to the feet, so the shoulders are gently pulled down.

kneeling stretch sequence

This is a calming sequence that helps you unwind and balance your energy. It is especially beneficial at the end of a stressful day, when it will refresh your mind and body, enabling you to enjoy the evening.

1 Kneel and sit back on your heels, your arms by the sides of your body. As you breathe out, fold forward into Child (see p.86), bringing the upper body onto the thighs.

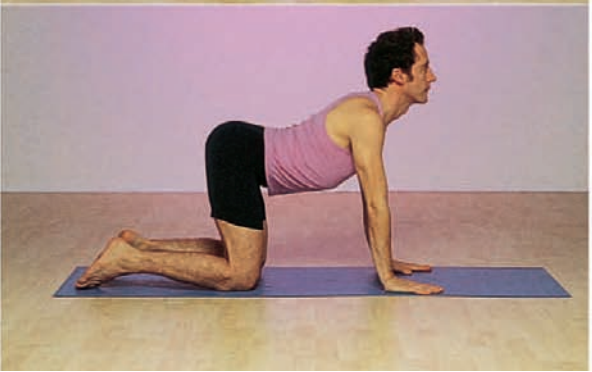
2 Breathe in and come back up to sitting on your heels. Let your arms hang down by the sides of your body. Look straight ahead. Breathe out.

TAKE CARE

- Take your time to learn the sequence, matching it to the breathing pattern.
- Practice within your natural breathing capacity, gradually developing slow, rhythmic breathing.

3 Breathing in, come up onto your knees. At the same time, raise the arms up above the head. Soften the elbows as the arms come up, palms facing forward, shoulders relaxed. Look straight ahead.

4 Breathing out, curl the tailbone under and bring the hips down toward the heels, stopping before you reach them. Let the hands come lightly to the floor in front of you and the head hang in a kneeling Forward Bend.



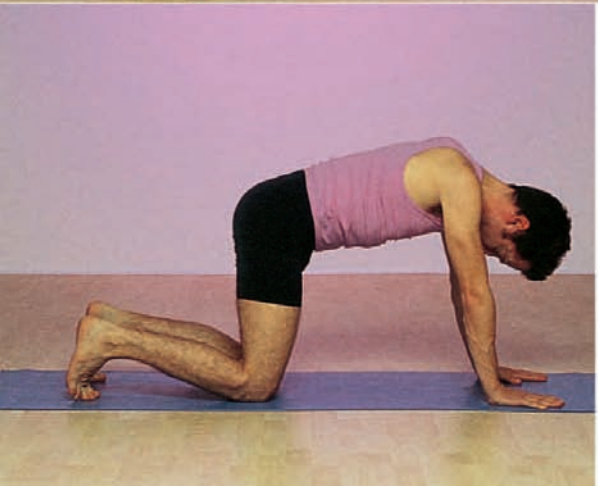
5 Breathing in, bring the head and chest up, so that you are in an all-fours position. Stretch the breastbone forward and bring the tailbone up, letting the back sink down into the first part of Cat (see p.82). ▶

Lift up sitting bones

Keep backs of legs soft

Push through your hands

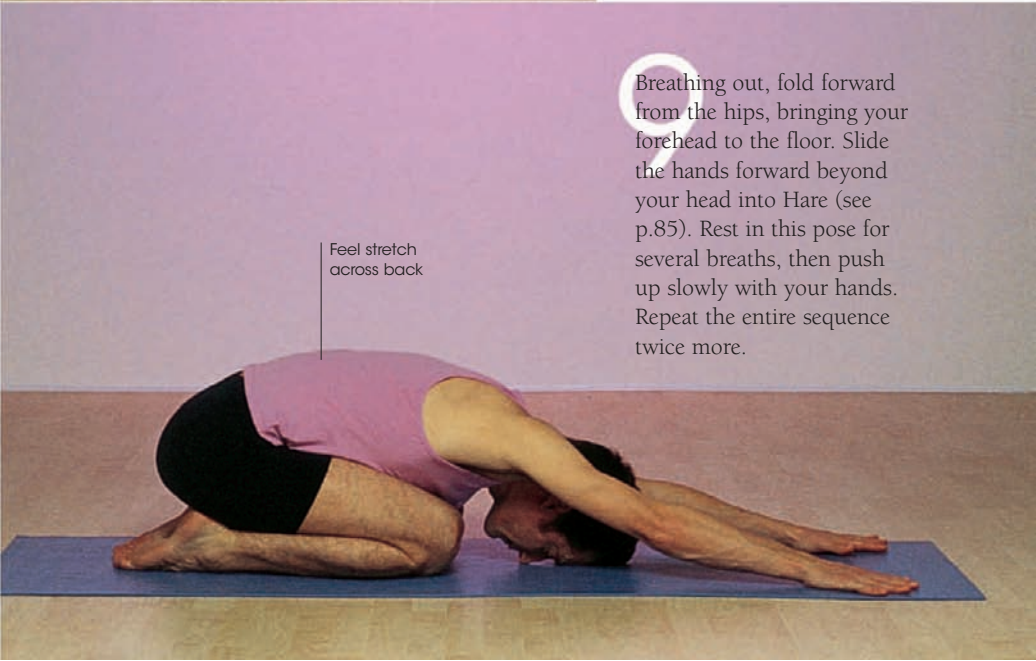
6 Breathing out, tuck the toes under and come into Downward Dog (see p.56), keeping the knees bent and the heels off the floor. Lengthen the neck and look back at your knees. Take one breath in.



7 Breathing out, come back onto all fours, your knees directly underneath your hips. Look down at the floor. Breathe in.

8 Breathing out, come back up to kneeling, sitting on your heels. Let your arms hang down by your sides. Look straight ahead and take a breath in.

9 Breathing out, fold forward from the hips, bringing your forehead to the floor. Slide the hands forward beyond your head into Hare (see p.85). Rest in this pose for several breaths, then push up slowly with your hands. Repeat the entire sequence twice more.



sitting twist

Sitting twists help to maintain flexibility in the back while easing out muscle tension. This posture is also very stress-relieving because it helps you connect with your breath at a deep level.

1 Sit on a foam block or small cushion, with the legs straight out in front of you and the feet together. Lift the breastbone and lengthen the spine upward. Relax the shoulders and look straight ahead.

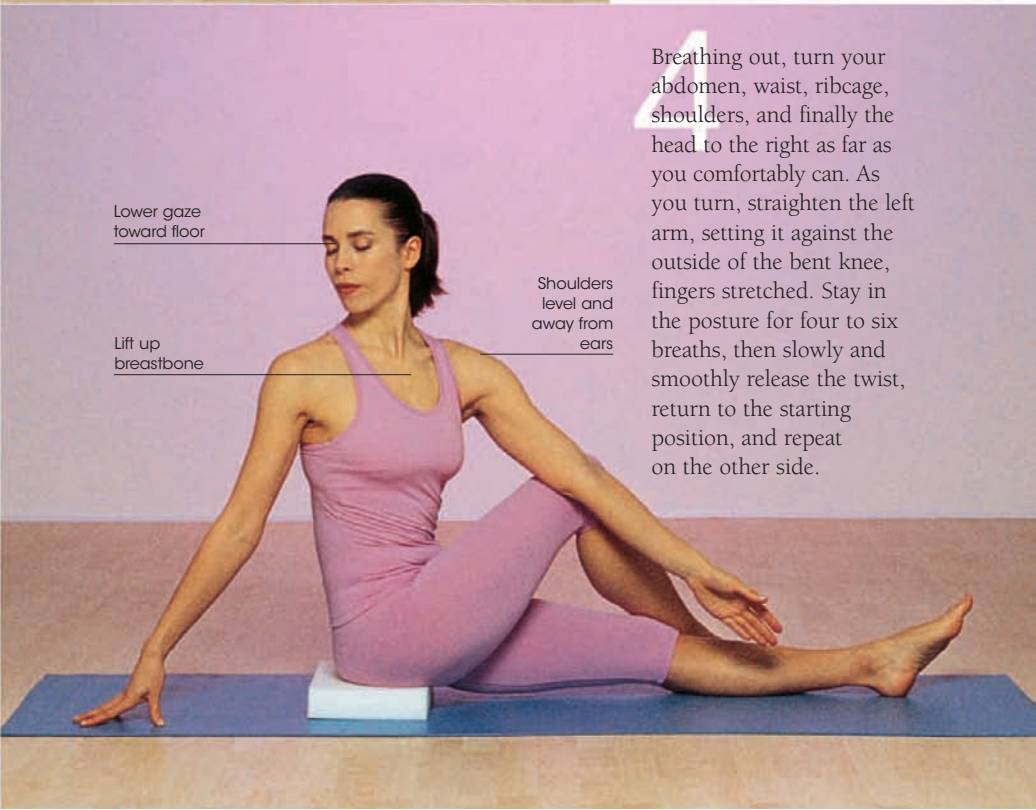
2 Place your hands under the right knee and pull the knee up. Flex the left foot and stretch the heel of the left leg away from you. Continue to look straight ahead.

TAKE CARE

Twist within comfortable limits. It is important to turn the neck last, avoiding any sense of strain in this area.

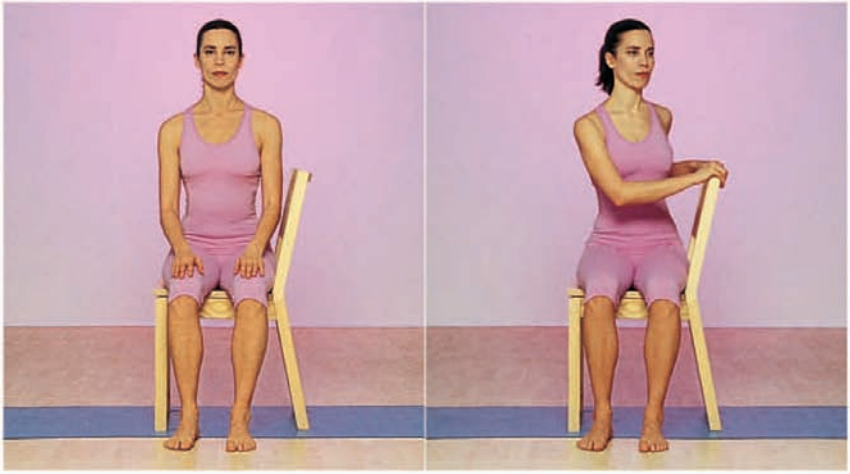
3 Take the right foot across the left leg, setting it down beside the left calf. Clasp both hands over the bent knee and lengthen the spine. Bring the fingers of the right hand to the floor behind you. Breathe in as you lengthen through the upper body.

4 Breathing out, turn your abdomen, waist, ribcage, shoulders, and finally the head to the right as far as you comfortably can. As you turn, straighten the left arm, setting it against the outside of the bent knee, fingers stretched. Stay in the posture for four to six breaths, then slowly and smoothly release the twist, return to the starting position, and repeat on the other side.



chair twist

Tension in the neck, shoulders, and lower back may set in toward the end of the day after spending hours at your desk. Break up the day and release the tension by doing the Chair Twist in your office.



1 Sit sideways on the chair, with your feet on the ground. If the chair is too high, place a telephone directory or similar book under your feet. Place your hands on your thighs and look straight ahead.

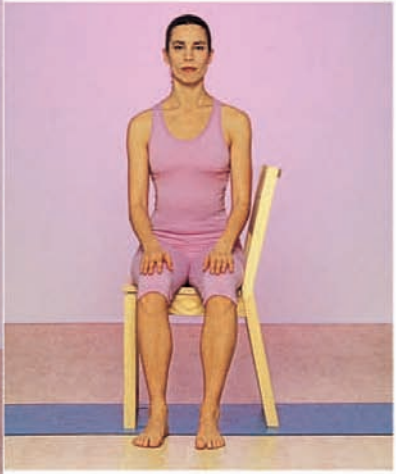
2 Lift up the breastbone and take hold of the back of the chair with both hands. Relax the shoulders. Look down slightly. Breathing out, begin to turn the upper body toward the back of the chair, starting with the stomach.

Relax shoulders

Turn as far as you can comfortably twist

Feet flat on floor

3 Still breathing out, turn the waist, rib cage, and shoulders, keeping the breastbone up and shoulders relaxed. Finally, turn the head as far as it will comfortably go. Relax the face and connect with the breath for several breaths.



4 On an out-breath, slowly release the pose and come back to the starting position. Swivel around on the chair to face the opposite direction and practice the posture on the other side.

TAKE CARE

Turn each part of the trunk only to your maximum comfortable limit: there should be no strain at any time.

breathing practices & mudras

Breathing practices improve your awareness of the breath and are particularly useful in quietening the mind for meditation. Mudras are traditional hand gestures that help you to center yourself.

The breathing practices described on these four pages will help improve your breath awareness and encourage calmness and mental clarity. They are generally practiced after doing some yoga postures, or some simple stretching. Physical movement helps loosen up the body, so that it is easier for you to be relaxed during the breathing practices. You might like to use a mudra in conjunction with a breathing practice to improve its effectiveness.

Audible breath

A simple but effective breathing practice to begin with is known as audible breath. This practice helps to make the breath smooth and even, calms and centers the mind, and is a proven stress reliever. It can also be used during posture work to help you to remain focused.

Begin with the preliminary practice described below. When you have gotten a feel for this, try to

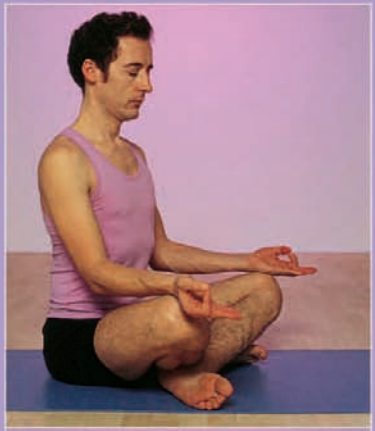
Breathe through the mouth. Slightly close the throat and make a sighing "Ahhhh" sound as you breathe in and a sighing "Haaa" sound as you breathe out.

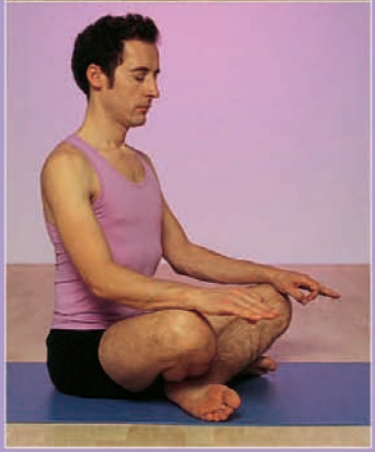
achieve the same sound in the throat while breathing with your mouth closed. It helps to think that you are breathing through a hole in the front of the throat. Breathe smoothly and evenly, and keep your awareness on the breath. The sound of the breath can be subtle; only you need hear it.

Using mudras

There are many mudras, or hand gestures, used in yoga practice. The centering mudra shown on this page (see right) helps you to quieten quickly when you are feeling stressed. This enables you to break the stress cycle effortlessly, making you feel much calmer within minutes. Practicing this mudra also acts to remind you of the link between the individual and universal consciousness – that we are all interconnected, never unsupported.

The centering mudra can be very helpful at any time of the day, whatever your situation. It can be used in an unobtrusive way at work, socially, and at times of stress, with the hands in any convenient position – they do not have to be supported.





MUDRA FOR CENTERING

Bring the tip of each index finger and thumb together lightly. Rest the hands on the thighs or the knees. During the day, have the palms facing up, and after dark have them facing down.

alternate nostril breathing

Breathing through alternate nostrils has a balancing effect on the mind, body, and emotions. As you practice the breathing, let go of any tension in the body. If you are left-handed, adapt the instructions below to suit. Do several rounds. When you are comfortable with the practice, begin to lengthen the out-breath until it is twice as long as the in-breath.

1 Sit cross-legged on the floor. Lift the breastbone and relax the shoulders. Take your right hand and separate the index and middle fingers from the thumb and the ring and little finger. Place the index and middle fingers in the center of the forehead.

2 Connect with your natural breath. Close the right nostril with your thumb and breathe in through the left nostril.

3 Close the left nostril with your ring and little finger and open the right. Breathe out through the right, then breathe back in through the right. Close the right nostril, open the left, and breathe out through that. This completes one round.

sounds breathing

This practice uses the vibrational power of sound to relax the body and mind, and helps to make the breath smooth and even. Once you are familiar with the practice, you can do it without making a sound. Inhale, and as you exhale soundlessly, simply visualize the "ahhhh," "ohhhh," and "mmmm" sounds for the length of each out-breath.

1 Sit cross-legged and close your eyes. Lift the breastbone and relax the shoulders. Inhale and, as you breathe out, make the sound "ahhhh." Feel the vibrations in the abdomen. Repeat twice more.

2 Breathe in and, as you breathe out, make the sound "ohhhh" for the length of the out-breath. This time, feel the vibrations in the chest. Repeat this sound twice more.

3 For the length of the next out-breath, make the sound "mmmm." As you do so, feel the vibrations in the throat and the head. Repeat this sound twice more. Be aware of the stillness within, then open your eyes.

meditation

Meditation is a practice that allows the mind to quieten, giving a lasting sense of inner peace and harmony. It helps keep your mind clear throughout the day and can aid sleep at night.

Sit in a comfortable but alert way, either cross-legged on the floor (using a block, pillow, or blanket if you prefer) or upright in a chair. Bring the index finger and thumb of each hand together and rest the hands on your knees or thighs. This is the mudra that allows you to center yourself more effectively and connects you to the universal consciousness (see p.101).

PRACTICAL MATTERS

- Choose a posture that you will be able to sustain easily for some time; for example, sitting cross-legged, kneeling, or sitting upright on a chair.
- Make sure the temperature of the room is comfortable. You may need to put on some warmer clothes if you have been doing posture work.

Scan the body, letting go of any tension you are holding (in your face, neck, shoulders, upper body, hips, legs, and feet). Close your eyes and let your breath settle into an easy, regular rhythm. Do not try actively to shut out any noises or other sensations. Let them exist, and withdraw your senses from them as you focus on your breath. Be aware of the coolness of the air in the openings of the nostrils as you breathe in and the warmth of the air there as you breathe out.

To begin with, thoughts will inevitably arise and sensations will distract you. You cannot force the mind to be empty. But do not let yourself react to these disturbances.

Observe them objectively as they come into the mind and let them go as you continue to focus on the breath. Do not let yourself be carried away on a train of thought.

Using visualization

Bring your awareness to your natural breath. As you draw the breath in, visualize the breath entering your body through the base of your spine and moving gently up the spine until it fills your lungs. As you breathe out, visualize the breath flowing back down the spine and leaving the body.

Visualize the breath as a fine mist or as a soft white light. Alternatively, if you find visualization difficult, simply focus on the sense of movement as the breath passes up and down the spine. You may like to say to yourself "up" as you breathe in, and "down" as you breathe out.

Let the practice be easy, without any sense of strain. If you notice that your mind has wandered, gently bring it back to "seeing" the flow of the breath up and down the spine. After two to three minutes you will notice that you are feeling quietly energized and calmer than before.

Practice this visualization meditation for up to 10 minutes, then open your eyes. Once you are accustomed to the practice, you will be able to use it in any situation and posture – sitting or standing, eyes open or closed, and the hands relaxed in any comfortable position.

relaxation

Stress affects the mind and the body equally. It can be difficult for a busy mind to quieten directly, but when you learn to relax the body, you will find your mind soon settles and becomes calm.

Relaxation is a skill that improves with regular practice, as the body and mind become accustomed to releasing tension.

There are two relaxation practices described on the next four pages. The instant relaxation practice can be used at any time of the day or night, anywhere, sitting or standing. For the 10-minute relaxation practice, you will need to lie down in a place where you are guaranteed privacy and quiet for at least 10 minutes. It provides a deep relaxation and is ideal when you have plenty of time.

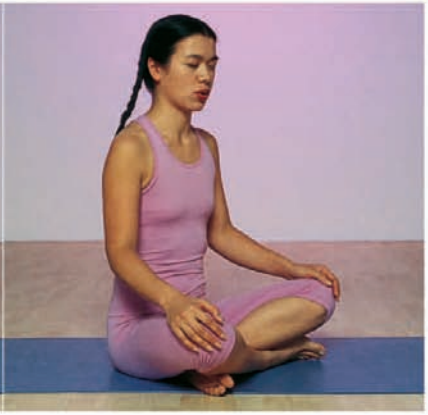
Relaxation benefits

Use the instant relaxation technique (see opposite) whenever you feel stress building up during the day. Once you have learned this simple and unobtrusive practice, you will also find it extremely useful to try in specific situations, for example, just before a high-pressure meeting, interview, or presentation.

Lying down in deep relaxation for ten minutes or so allows you to recharge your batteries and let go of any feeling of being under pressure. Many people find it especially beneficial to practice deep relaxation at the end of their yoga session, to reinforce the restorative and regenerative benefits. Try to make sure you will not be disturbed. Loosen any tight clothing and wear a sweater or cover yourself with a blanket: the body loses heat as the blood vessels in the skin relax.

instant relaxation

It is invaluable to be able to relax at any time, in any situation. Using this simple technique, you will quickly learn to be composed and stress-free, no matter what is going on around you. Repeat this instant relaxation practice as soon as you begin to feel any tension building up again.



1 Sit cross-legged on the floor, your hands resting on your knees. Close your eyes. Turn your attention inward and become aware of the flow of the natural breath. Breathe in through the nose as you take your awareness to your jaw.

2 Breathe out in an even stream through slightly pursed lips, softly "blowing the breath away" and with it the stress in your jaw. With the next in-breath, be aware of the shoulders, and then blow out the tension with the out-breath. On the next in-breath, focus on the hands. As you breathe out, let them become passive. Move your awareness between these areas for several breaths, keeping each one relaxed and soft.

10-minute relaxation

Try recording this guided relaxation, or ask a friend to read it to you slowly. This allows you to relax to the deepest level. Lie on your back with your legs outstretched, feet more than hip-width apart. Let the feet roll out. (If you have lower back problems, keep your knees bent.) Ease the shoulders down to the floor. Take the arms away from the body and turn the inner elbows and palms up to the ceiling. Lengthen the back of the neck, bringing the chin toward the chest. Close the eyes. Let the body become still.

Scanning the body

Take your awareness around each part of the right side of the body. Be aware of the thumb, fingers, palm of right hand, back of hand, wrist, lower arm, elbow, upper arm, shoulder, armpit, right side of chest, right side of waist, right hip, right thigh, kneecap, back of knee, shin, calf muscle, ankle, heel, sole of foot, top of foot, toes.

Now take your attention to the left side of the body. Be aware of the thumb, fingers, palm of the left hand, back of hand, wrist. Be aware of the lower arm, elbow, upper arm, shoulder, armpit, left side of chest, left side of waist, left hip. Now be aware of the left thigh, kneecap, back of knee, shin, calf muscle, ankle, heel, sole of foot, top of foot, toes.

Take your awareness to the back of the body. Be aware of the back of the head, back of the neck, backs of shoulders, left shoulder blade, right shoulder blade, middle of back, lower back, left buttock, right buttock, back of left thigh, back of right thigh, back of left knee, back of right knee, left calf, right calf, left heel, right heel, sole of left foot, sole of right foot.

Take your attention to the top of your head. Now to the front of the body. Be aware of the forehead, left eyebrow, right eyebrow, space between eyebrows, left eyelid, right eyelid, left eyeball, right eyeball. Be aware of the bridge of the nose, left nostril, right nostril, left cheekbone, right cheekbone, upper lip, inside the mouth – teeth, gums, tongue – the lower lip, chin, under the chin, front

of throat, left side of neck, right side of neck, left collarbone, right collarbone, left side of chest, right side of chest, front of chest, abdomen. Now be aware of the whole body.

Focusing inwards

Turn your attention inward and feel how tranquil your body has become. Become aware of the quietness of your breath, which does not disturb the stillness of your body as it flows gently in and out. Stay with your breath for a little while, and as you do, experience the sense of inner quietness, inner peace – feel connected with your inner self at the deepest level. Stay in this relaxing posture for two to 10 minutes.

Coming out

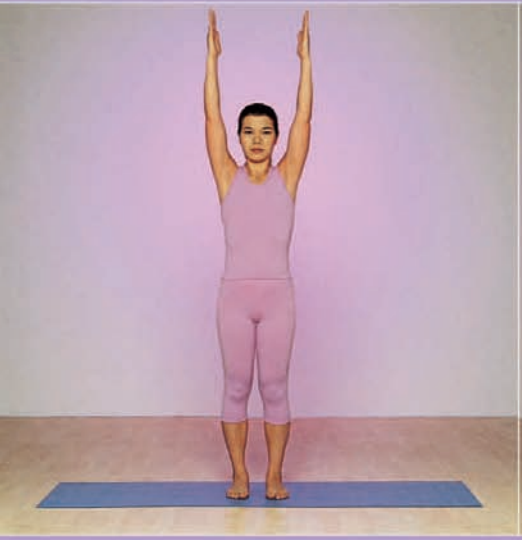
When you are ready, draw your awareness outward again. Be aware of the floor beneath you, the room around you, the sounds that you can hear. Begin to breathe a little more deeply, then start slowly to move the fingers and toes, ankles, arms, and legs. Shrug the shoulders, move the neck, face, and scalp. Take the arms back behind the head and stretch out the body right to the fingertips and down to the heels and toes. Now draw the knees over the chest, wrap the arms around the knees, relax the shoulders, and rock slowly from side to side, feeling your back move against the floor. Now roll over to the right and sit up slowly.

programs

Here are eight programs for those times in the day when you need to de-stress. Remember to take time to center yourself before doing them and time to absorb their effects afterward. Their benefits will be greatly enhanced if you remember that yoga is also about lifestyle and attitude.

1 preparing for the day

Early morning is the traditional time for yoga practice. Take a few moments to become centered first. This will enable you to develop a sense of calm that will help see you through any stresses in the day ahead. You may feel stiff after sleep, so work gently to open up tight areas, letting your energy flow easily around the body.

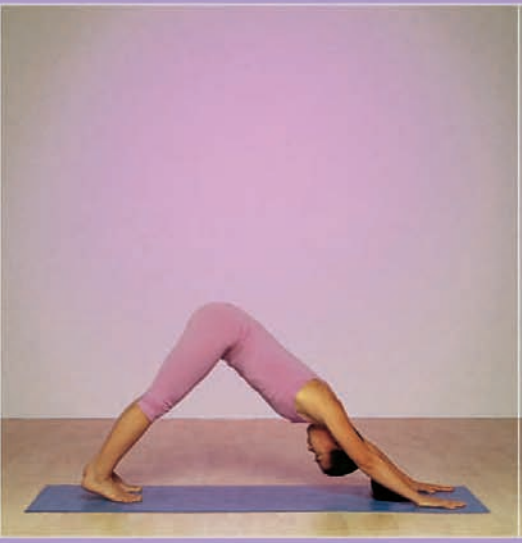


1 Standing Upward Stretch (see p.38)

2 French Press Stretch (see p.35)

3 **Standing Side Stretch** (see p.41)

4 **Half Forward Bend** (see p.39)



5 **Downward Dog** (see pp.56–57)

6 **Cat** (see pp.82–83)

2 work-time stretch

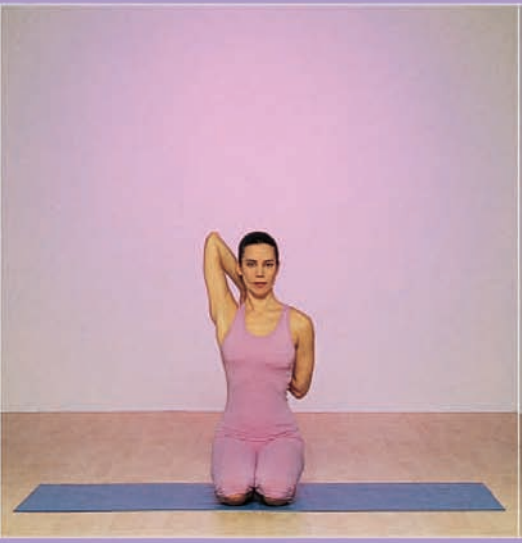
Working indoors in an office environment can make you feel in need of a good stretch. This program does not require you to get down on the floor; you can stand or sit on an upright chair. The postures may be used together during a short break, but are equally effective practiced separately at intervals during your working hours.

1 Standing Arm Stretches (see p.34)

2 Standing Back Arch (see p.40)

3 **Forward Bend using a chair** (see p.49)

4 **Eagle** (see pp.44–45)

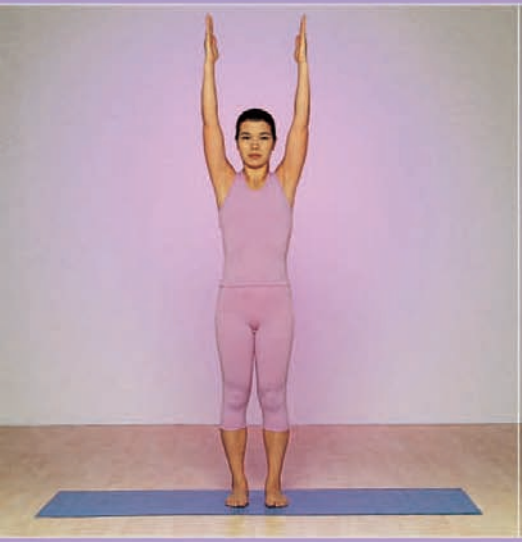


5 **Cow** (see pp.46–47)

6 **Chair Twist** (see pp.98–99)

3 courage booster

Challenging situations at work sometimes cause stress levels to rocket. An important interview or giving a presentation can deplete your reserves, leaving you exhausted. This program will boost your energy and build confidence, so that you appear calm and perform well when it counts. Try to find somewhere quiet to practice.



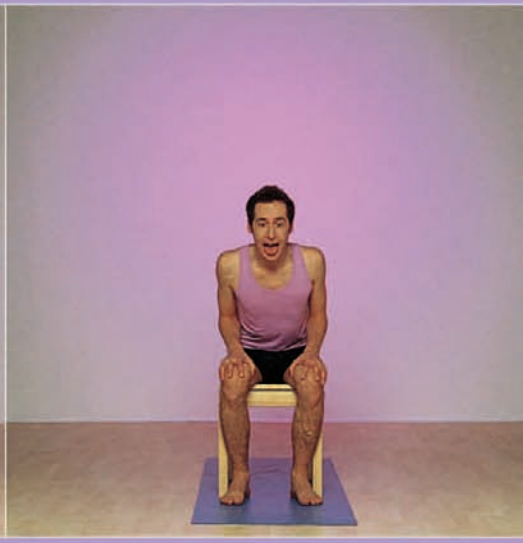
1 Standing Upward Stretch (see p.38)

2 Side Warrior (see pp.52–53)

3 **French Press Stretch** (see p.35)

4 **Eagle** (see pp.44–45)

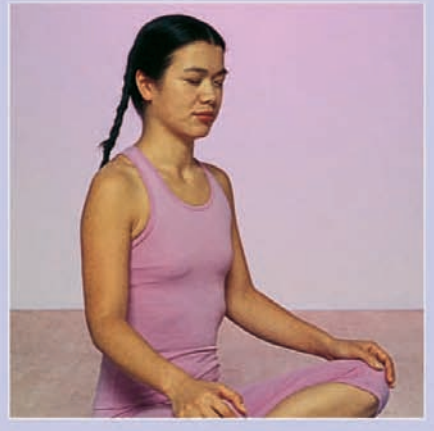
5 **Tree** (see pp.50–51)



6 **Roaring Lion** (see pp.80–81)

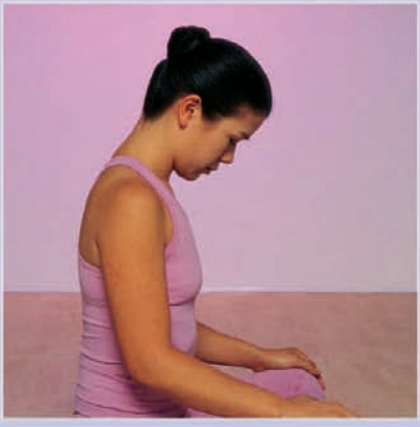
4 survival tactics

Sometimes it all gets too much – something triggers a sudden increase in your stress levels. This program is designed for such emergencies! These practices use your breath to enable you to become focused and centered, so you relax and regain your poise. Memorize the sequence, ready to recall when the need arises.



1 Instant Relaxation (see p.107)

2 Centering Mudra (see p.101)



3 **Neck Stretches** (see pp.36–37)

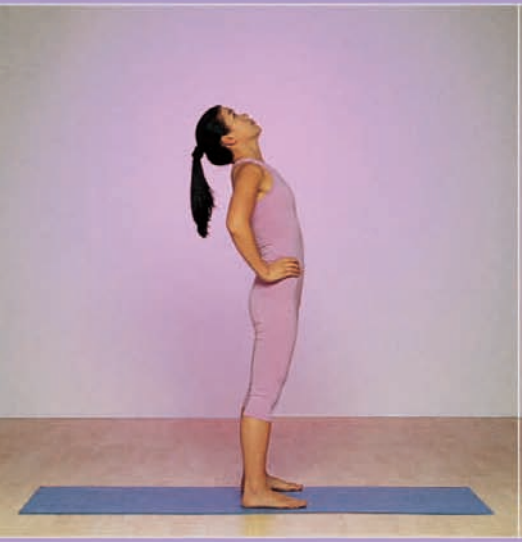
4 **Audible Breath** (see p.100)

5 **Alternate Nostril Breathing** (see p.102)

6 **Sounds Breathing** (see p.103)

5 after-work energizer

After work can sometimes be the only time you have to socialize with your friends; however, by the end of the day, it can be hard to find the energy to enjoy yourself. This program is designed to help you to let go of work problems, create some vitality, and still have enough time to freshen up before you leave the office!



1 Standing Back Arch (see p.40)

2 Standing Arm Stretches (see p.34)

3 **Side Warrior** (see pp.52–53)

4 **French Press Stretch** (see p.35)

5 **Forward Bend** (see pp.48–49)

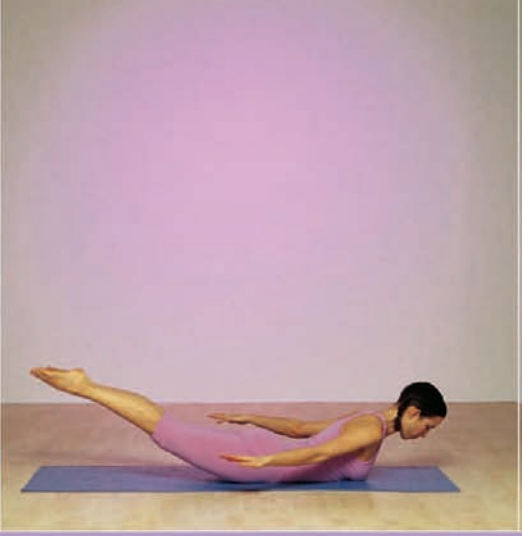
6 **Chair Twist** (see pp.98–99)

6 evening pick-me-up

This program can be used to prepare you for the evening ahead when you have access to floor space and comfortable clothing. Back-arching postures release stress and raise your energy levels, helping you let go of the work of the day; the simple inversion restores your sense of inner calm while resting the legs.

1 **Bridge** (see pp.72–73)

2 **Cobra** (see pp.58–59)



3 **Locust** (see pp.60–61)

4 **Half Bow** (see pp.62–63)

5 **Cobbler** (see pp.90–91)

6 **Legs up the Wall** (see pp.74–75)

7 evening relaxer

If you are not going out for the evening, do this gentle, slow yoga practice at home, which will help you unwind and cast off all the accumulated stress of the day. These postures, practiced in harmony with the breath, are time-honored ways of relieving physical tension and releasing feelings of being under pressure.

1 Supine Arms Over Head (see p.30)

2 Supine Legs Up Arms Out (see p.32)

3 **Easy Fish** (see pp.78–79)

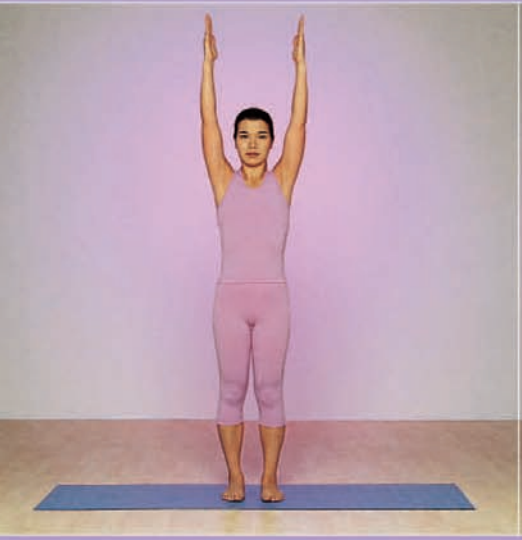
4 **Supine Twist** (see p.33)

5 **Cat** (see pp.82–83)

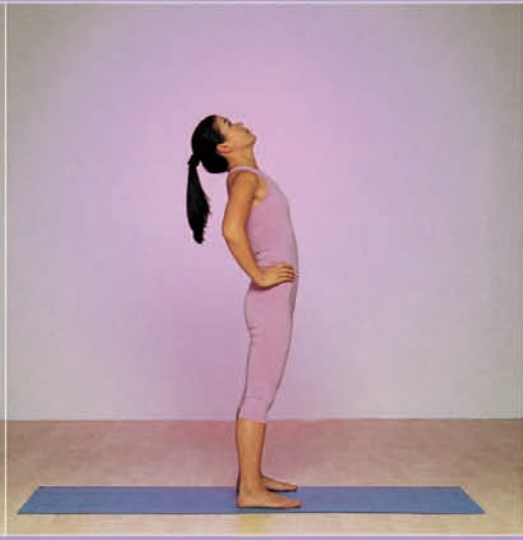
6 **Seated Forward Stretch** (see pp.88–89)

8 weekend invigorator

Always try to build in some regular yoga time at the weekend. This program provides a longer practice, incorporating a balanced series of postures to open and stretch every part of your body. As you practice, you will feel your energy flowing more freely, while your general sense of wellbeing is enhanced and the mind calmed.



1 Standing Upward Stretch (see p.38)



2 Standing Back Arch (see p.40)

3 **Standing Side Stretch** (see p.41)

4 **Lunge Warrior** (see pp.54–55)

5 **Side Warrior** (see pp.52–53)

6 **Tree** (see pp.50–51) ▶

7 **Downward Dog** (see pp.56–57)

8 **Forward Bend** (see pp.48–49)

9 **Cobra** (see pp.58–59)

10 **Locust** (see pp.60–61)

11 **Child** (see pp.86–87)

12 **Half Shoulder Stand** (see pp.76–77)

13 **Seated Forward Stretch** (see pp.88–89)

14 **10-Minute Relaxation** (see pp.108–109)

energetic

boosting energy

The appeal of yoga is universal and timeless. Its holistic practices work on the physical, mental, emotional, and spiritual planes, boosting your energy levels and helping you live more positively.

Yoga is a tried-and-tested practical method of achieving all-around good health. It does not seek to offer a quick fix, but provides a long-term program for living positively. Its combination of physical postures, breathing practices, relaxation, meditation, and lifestyle guidance can help you stay physically fit and mentally alert, and live more positively and mindfully. For many people, yoga becomes a lifelong journey of self-discovery, bringing peace of mind and inner happiness.

Unlike some forms of exercise, yoga is suitable for everyone. Whatever your age or level of fitness, yoga is a very safe form of exercise provided you work within your limits. However, please read through the text in the box below, entitled "Health Concerns," before you begin, since some yoga practices can be physically demanding.

HEALTH CONCERNS

If a health practitioner has advised you not to overexert yourself physically, or if you have any other health concerns, seek advice from a qualified yoga therapist or teacher (see p.495) before using this book. Page 9 provides basic advice for some common medical conditions and, where appropriate, "Take Care" advice and "Alternatives" are given for individual practices. If you are pregnant, or have recently given birth, ask a suitably qualified yoga teacher which practices would be appropriate for you.

Life is energy

Human beings are complex energy systems, with energy processes taking place at physical, mental, emotional, and spiritual levels. The simplest form of energy is metabolic. This derives from the food we eat and the air we breathe. There is also vital energy – feeling glad to be alive and bursting with health.

For many people, vital energy is no more than an expression of the collective physical energies generated by the way mind and body work together. But for others it is the secret ingredient that makes the difference. In yoga, this vital energy is known as *prana*, the embodiment of the universal life force that flows everywhere and through everything – the "intelligence" behind creation.

Symptoms of low energy

Whatever you believe, everyone accepts that feeling good does not depend simply on how much energy you possess, but also on whether it is flowing freely. Sometimes energy becomes blocked, resulting in low levels of energy or an imbalance between physical, mental, and emotional energies.

High energy levels give you a zest for life that makes you physically active, positive-thinking, and emotionally robust.

If you are suffering from low levels of energy, you may find that, while you can cope with your normal day-to-day routine, anything that requires a little more effort tires you quickly. You may lack strength or stamina. Or you may have a general feeling of being physically "out of sorts" in which you wake up feeling tired.

Reduced energy levels may be expressed in poor postural habits and a lack of spring in your step. You may find that you are more

susceptible to colds and other minor ailments. In extreme cases, you may find that virtually everything you do tires you or leaves you feeling weak.

Mentally, you may find that your concentration levels are so low that you find it difficult to keep your mind on your work, or to read a book or watch television without becoming distracted or bored. Remembering things and making decisions may be more difficult. You may find it difficult to raise much enthusiasm for doing anything at all.

At an emotional level, symptoms of low energy include becoming more easily irritated and upset, and more susceptible to anger, fear, jealousy, or envy. You may find yourself more critical of the world, your family, and your friends, and find it harder to accept change. As such negative emotions take hold, you become less able to laugh and to participate in and enjoy life. You become easily dragged down by events, tending to see problems rather than opportunities in new situations. Such feelings themselves drain you of energy.

Causes of low energy

The causes of low or out-of-balance energy levels are many and varied. There may be a single, identifiable cause, but more often there will be several factors contributing to your lack of energy, including:

- underlying medical conditions
- unbalanced diet
- sedentary lifestyle
- sleep deprivation
- stressful life situations.

Underlying medical conditions

Low energy levels may indicate an underlying medical problem. Conditions commonly associated with fatigue include depression, anxiety, and insomnia. Recovering from viral illnesses, anemia, low thyroid gland function, breathing problems such as severe asthma and hyperventilation, uncontrolled diabetes, and chronic pain (for example, back pain or arthritis) can also cause fatigue.

Prolonged fatigue may also be associated with more serious illnesses, so consult your doctor if you are worried.

Unbalanced diet

A well-balanced diet is essential to high energy levels. Nutritional inputs must keep pace with the demands of metabolism, and both undereating and overeating can adversely affect energy levels. So can eating over-processed food, and foods that contain many artificial additives and/or salt, sugar, or added flavorings. Consuming excessive quantities of foods that are potentially addictive, such as those containing caffeine and alcohol, also leads to energy imbalances.

Sedentary lifestyle

Anyone who has been incapacitated in some way for any length of time will know how quickly muscle mass and stamina can deteriorate through lack of activity. However, it does not necessarily take an accident or illness to reduce your strength and stamina.

A sedentary lifestyle, often accompanied by poor postural habits, can adversely affect digestive processes, reduce respiratory capacity, place increased strain on the cardiovascular system, and cause muscle imbalances and weakness. In addition, inactivity can cause mental dullness, leading to a vicious circle of mental and physical fatigue.

Sleep deprivation

Sleep deprivation is a common problem (eight hours' sleep is about the right amount for most people). Unless a sleep debt is made up in the

YOGA AND EATING

Yoga encourages you to eat moderately and simply, to eat natural, fresh foods as far as possible, and to pay attention to how you eat. The guidelines below will help you become more aware of your eating habits. They will also help you digest food more effectively.

- Eat freshly prepared meals.
- Do not eat until the last meal has been digested (up to three hours).
- Avoid distractions while eating, such as reading the newspaper or watching television.
- Do not eat when you are angry or upset about something.
- Take small mouthfuls and chew well.
- Do not drink large amounts of water (or other fluids) during meals.
- Drink plenty of water at other times.

following days, the debt grows. So, while you may superficially become used to an inadequate sleep regime, your immune system and the body's repair and "battery recharging" mechanisms suffer. This can result in poor reaction times, concentration, memory, and physical performance, and in poor judgment and frequent mood swings.

Our body rhythms can be upset by lifestyles that deviate strongly from the powerful sleep regulating stimuli of sunrise and nightfall. Shift workers are often affected, feeling drowsy at work and unable to sleep when they get home. At worst, digestive, cardiovascular, emotional, and mental problems may result.

Stressful life situations

Long hours spent at your workplace or heavy workloads, particularly if the work involves repetitive or boring tasks, can be draining both mentally and physically.

Bringing up a young family can be challenging, and combining it with a busy job inevitably adds to the pressures. Many people are continually working against the clock, trying to fit in as many tasks as possible. This can sap energy and result in a dependency on stimulants, such as nicotine, to help get through the day, and on alcohol to wind down at the end of it. The benefits of these substances are fleeting and the adverse effects long term.

In addition, financial worries, strained relationships, feeling lonely, and other personal problems can all reduce energy reserves, fostering a negative approach to life in general.

How yoga can help

The central purpose of yoga is to enable us to experience the limitless life energy that is the core of our being. Normally this is impossible because we are too enmeshed in the web of our daily lives. We tend to be too preoccupied with our desires, our attachment to objects and people, our prejudices and dislikes, and with the physical, mental, and emotional stresses that flow from them.

The way to overcome this limited way of living is to be able to "let go." Patanjali, a great yoga sage who lived

over 2,000 years ago, described it as being able to "still the thought waves of the mind". Bringing the mind to a state of quiet calm is not easy, but it can be done by practicing the physical postures, breathing practices, relaxation, concentration, and meditation that together comprise the practice of yoga.

Practicing the physical postures brings improvements in cardiovascular endurance, muscle strength, flexibility, balance and coordination, and body reaction times. Gradually, your self-esteem and your life energy improve. Simply by regularly practicing the postures, you become generally more alive both physically and mentally.

Patanjali taught that we must change the habitual ways we think and act. He offered guidance on how we should relate to other people and to the world around us with a set of maxims (interpreted below). They will help you live more positively, allowing life energy to flow more freely through you.

MAXIMS FOR LIVING

A positive relationship with the world and with yourself was of fundamental importance to Patanjali. Try to live by his

In your relationship with the world around you, you should:

- Avoid causing harm; endeavor to be compassionate.
- Be honest in all your thoughts, words, and actions.
- Never steal from others. This applies not only to possessions, but also to wasting other people's time, energy, and goodwill.
- Be faithful and selfless in all your personal relationships.
- Avoid acquiring or holding on to material things (or people) for the sake of it, or for selfish reasons.

In relation to yourself, you should work to:

- Develop purity in mind, body, and spirit – inner and outer cleanliness.
- Pursue simplicity in life, and try to make the most of whatever life brings.
- Develop physical and mental resolve (through yoga practices) to withstand difficulties and disappointments in life.
- Learn to identify with your inner self rather than with your habitual ways of acting and seeing situations.
- Accept that there is more to life than the material world, and be respectful of the intelligence underpinning life.

personal observances designed to encourage a healthy, positive approach to life. In essence, he taught mindfulness: "being with what is." This means giving all of your attention to whomever you are with or whatever you are doing, and not allowing yourself to be carried away by some distracting train of thought or letting your emotions cloud your sense of judgment.

New approach to life

Because most of us are used to living in ways that put our egos, our desires and attachments, our prejudices, and our hopes and fears at the center, letting go and acting in a selfless manner is difficult. And it is not just a question of the actions themselves, but the spirit in which they are done; we need to enjoy our selfless actions, not do them grudgingly.

If you are able to let go of negative attitudes and emotions, rather than giving way to them or suppressing them; if you respect others, show compassion, and learn to follow your heart, then you will find that your energy levels naturally rise. And you will become less susceptible to being worn down by the negativity of others. These are not changes that can be achieved overnight. You must work at them consistently, trying to be more objective and more discriminating, and to consciously cultivate positive attitudes.

Take one of Patanjali's principles of behavior and attitude (see "Maxims for Living," p.137), and

Go for a walk in the country or by the sea and reflect on your attitudes and behavior toward others. Meditate on the beauty and the stillness of nature.

observe how close you get to it in your thoughts, intentions, and actions during the course of a day. The next day, make a positive effort to behave in accordance with the same principle, and observe the difference in the way you feel when you do. Work your way through all the maxims in this fashion. Provided you work with determination and are not discouraged by setbacks, you will find yourself gradually becoming more aware, more mindful, more energized – and happier!

Trying to be more in tune with nature and finding more time for yourself can help, too. Paying attention to, and appreciating, the world around you, and marvelling at the wonders of nature, can be especially helpful in enabling you to appreciate the intelligence underlying the universe, and to be less self-centered. Last, if you can spend time in the countryside or open spaces, away from the activity, noise, and pollution of modern society, you can benefit energetically simply from the quietness and the improved quality of the air you breathe.

HOW TO USE THIS SECTION

Energetic is divided into three sub-sections. **Foundations** provides guidance on doing yoga and some basic breathing and preliminary stretches. Familiarize yourself with these first before moving on to **Building Blocks**. This contains a selection of postures and breathing practices, as well as a simple meditation and relaxation technique. Work through these postures gradually, selecting one or two to work on at a time, rather than trying to do them all at once. Look at the photographs first to get a feel for the overall shape of the posture. Then follow the accompanying step-by-step instructions carefully. If you find a posture difficult to do, try the alternative, if one is given.

Programs combines selected postures and other practices in a series of short yoga programs designed for particular situations and needs. Make sure that you understand how to do the postures first before trying these programs.

Yoga is traditionally learned from a teacher, and you will benefit from going to a class, if you are not already doing so. Organizations that can help you find a qualified teacher are listed on page 495.

the basics

In yoga, basic standing, sitting, and lying down positions are important in their own right, helping you to develop stability and awareness of the benefits of alignment for your posture, your breathing, and for the free flow of energy. They also provide the foundations from which other postures are developed.

In addition, being able to sit comfortably and steadily is important for breathing practices and also for meditation, helping you remain focused without distractions from physical tensions. Lying down is often used to develop body and breath awareness, and to relax and let your body absorb the beneficial effects of other yoga practices.

If you find it impossible to achieve the full posture, it can be very helpful to use a prop, such as a block or cushion, ensure that you do not strain your body.

STANDING

Stand up straight with your feet parallel, hip-width apart, and your ears, tops of shoulders, hips, and ankles in line. Press your feet to the ground and lift upwards through your body. Broaden across the top of the chest. Feel yourself balanced in every direction, head as if suspended by a thread from the ceiling. Look straight ahead, relax, and breathe easily.

EASY SITTING

This basic posture is good for breathing practices. Cross your shins with each foot under the opposite calf or knee. Position yourself on the front edge of your sitting bones, with the spine long and the head erect. Relax the shoulders. If your knees are higher than your hips, sit on a block or another support.

ADVANCED SITTING

If you are fairly flexible, this is a more stable position for prolonged sitting (for example, in meditation). Sit with your legs spread. Bring the sole of your left foot against the inside of your right thigh and your right foot on to, or in front of, your left calf, with the heels touching. Your knees should be resting on the floor. Do not strain to sit in the posture.

KNEELING

Try this position if you find basic cross-legged sitting uncomfortable. Sit on your heels with the tops of your thighs facing the ceiling. Alternatively, if you are going to stay longer, position your knees and feet hip-width apart and sit on blocks, a folded blanket, or a bolster. Keep your spine long and your head erect, with the shoulders and the neck relaxed.

LYING ON BACK

Lie with your legs stretched out, feet hip-width apart. Allow the feet and legs to roll out. Place your arms away from the body, backs of the hands on the floor. Relax the neck and rest the center of the back of the head on the floor.

LYING WITH LEGS BENT

If you feel any discomfort in your lower back when lying flat, having your legs bent can be a good alternative. Keep your feet hip-width apart and let the knees rest against each other.

LYING ON FRONT

Between prone postures you might like to relax by lying on your front. Keep your feet hip-width apart and use the backs of your hands as a pillow on which to rest your turned head. Let the legs relax and the heels fall outwards.

USING BELTS AND BLOCKS

Belts and blocks can be used in a wide variety of situations as supports and stabilizers to help you practice postures effectively without straining yourself. For example, in forward-bending movements – as shown here – using a belt helps protect the back if you have tight hamstrings or tight hips.

USING PILLOWS

Pillows can be used to support different parts of the body. Here they are shown supporting the thighs in Supine Butterfly (see p.216), allowing the inner and the outer thigh muscles to relax, the hips to open farther, and the person to stay in the posture longer without being distracted by discomfort.

USING A CHAIR

Chairs can be used to modify postures. Shown here is a version of Child (see p.198) for someone with HBP. A chair can also be used for breathing or meditation practices if sitting or kneeling on the floor is uncomfortable. Sit toward the front of the chair, with the soles of the feet flat on the floor (or block), hands resting on the thighs or in the lap.

foundations

This section provides advice for those new to yoga. It includes basic standing, sitting, and lying positions; preliminary practices to bring awareness to your yoga practice, and breathe-and-stretch exercises to loosen the body and help coordinate breath with movement.

centering

Take a few minutes before starting your yoga practice to settle the mind and body by focusing on the here and now. This technique is known as centering, and helps develop awareness and mindfulness.

You can center yourself by standing, sitting, or lying down quietly for a few minutes in a comfortable position. Simply observe your breath, letting it settle into a quiet, natural rhythm. As you do so, the activity in your mind will lessen. However, if your body is stiff and your muscles tense, you will find the following lying down centering relaxation practice helpful before starting to do the postures.

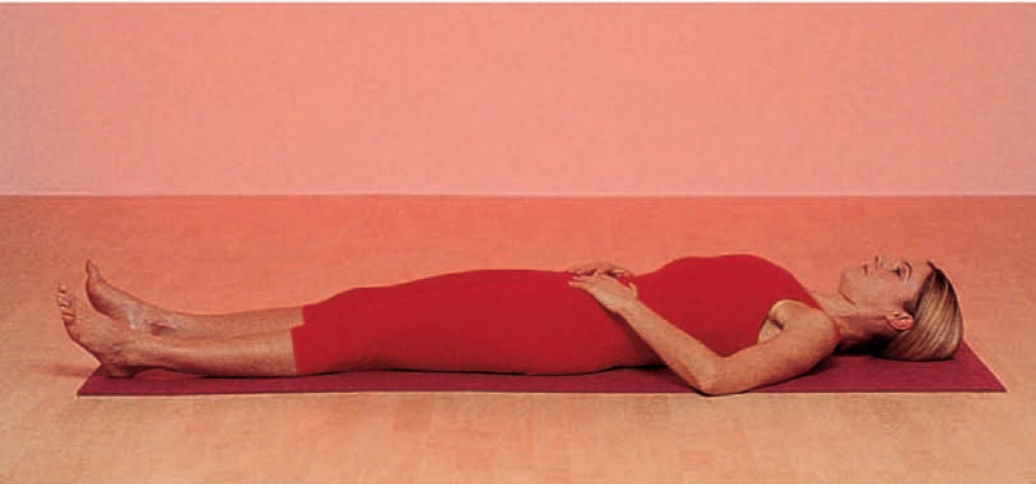
lying down centering

1 Lie on the floor with your knees bent, feet hip-width apart. Place your arms away from the sides of the body, the backs of the hands on the floor, and the fingers gently curling inward. Position the center of the back of the head on the floor, and relax the neck. If your neck feels strained, try placing a small support (for example, a block, thin pillow, or folded blanket) underneath your head.

2 Allow your lower back to sink toward the floor. Slide your feet along the floor to stretch the legs out. Let the legs relax and the feet fall outward. (If you feel discomfort in your back, keep your knees bent.) Close your eyes. Be aware of how balanced your body feels. Are the different parts of the body sinking into the floor equally, or are there tensions or restrictions in some areas?

3 Slowly take your attention to each part of your body, starting with the feet and working upward through the lower legs, upper legs, hips, buttocks, hands, lower arms, upper arms, chest, lower back, shoulders, neck, and face. Ask each part of the body to relax and allow them all to release down into the floor. Become aware of your breath and make sure you are breathing through your nostrils. Do not try to control the breath or change it in any way; simply observe its movement in and out of the body. Let your breath settle into a slow, deep, natural rhythm. Each time you breathe out be aware of letting go. Feel the body "sinking" into the floor, while at the same time it is supported by the floor.

4 Bring your attention to your out-breath. Allow it to become a little longer than your in-breath. Now count down 10 out-breaths. The breath should remain calm and unhurried as you count. When you reach zero, gently turn the head from side to side three times. Then, on an in-breath, stretch your arms up to the ceiling and then behind you. Stretch through to the fingertips as you press your lower back to the floor and your heels gently toward the wall in front of you. Relax into the stretch for a few breaths. Then, on an out-breath, bring your arms back down to your sides, or to rest on your abdomen, and let go completely. Gently turn onto one side of your body, pause for a moment, then slowly sit or stand up.



basic breathing

There is a fundamental connection between the breath and your physical, mental, and emotional states. The breath is the pathway for *prana* – "the breath behind the breath" – to enter the body.

Breathing provides oxygen for the metabolic processes from which we derive the energy to move, think, and feel, and carries away carbon dioxide, the main waste product of metabolism. Physical tension in the respiratory muscles between and around the ribs can cause tightness in the chest, and even chest pain. Relaxed breathing techniques will release tension from the whole of the upper body, including the neck and shoulders. This will improve your ability to adjust your breathing to meet changing requirements.

The breath also provides a powerful link between mind and body. By controlling your breathing patterns – for example, the rhythm and depth of breathing, the length of the out-breath, and the balance between right and left nostrils – you can influence your physical, mental, and emotional states.

Good breathing habits

Yoga encourages breathing through the nose, full use of the diaphragm, a slow, smooth breathing pattern, and coordination of movement and breath. In the poses, opening movements, such as backbends, are usually done on an in-breath and closing movements, such as forward bends, on an out-breath.

The breathing practice opposite will help develop awareness of the respiratory muscles and encourage good breathing habits. It can also be done standing or lying down.

sitting sectional breathing

Sectional breathing helps unlock energy blocks associated with poor breathing habits. After completing Step 3, combine all three steps to produce full, continuous in-breaths and out-breaths.

1 Sit comfortably with your palms resting on your abdomen, the middle fingers just touching. Breathe into your hands, feeling the abdomen swell out and the fingers move apart as you breathe in. Then feel the abdomen sink back as you exhale. Take six even breaths.

2 Bring your hands to your ribcage, with your fingers to the front and thumbs on the back ribs. Feel the ribs expand into the hands on the in-breath and then relax back inward as you exhale. Take six breaths, keeping the abdomen as still as possible.

3 Rest the fronts of your fingers just below your collar bones. Breathe in, feeling the top of the chest expand and the fingers and shoulders rise up toward the head. As you breathe out, feel the fingers sink back down. Take six breaths.

breathe and stretch

The following exercises work on coordinating movement with the breath, and stretching tight muscles. Being aware of your breath as you move will allow energy to flow more freely through your body.

up and down stretch

1 Assume the basic standing position (see p.140) with your feet parallel and about hip-width apart. Looking straight ahead, take several full breaths.

2 On an in-breath, sweep your arms slowly out to the side and up above your head. Bring your palms together, fingers pointing toward the ceiling. Continue to look straight ahead.

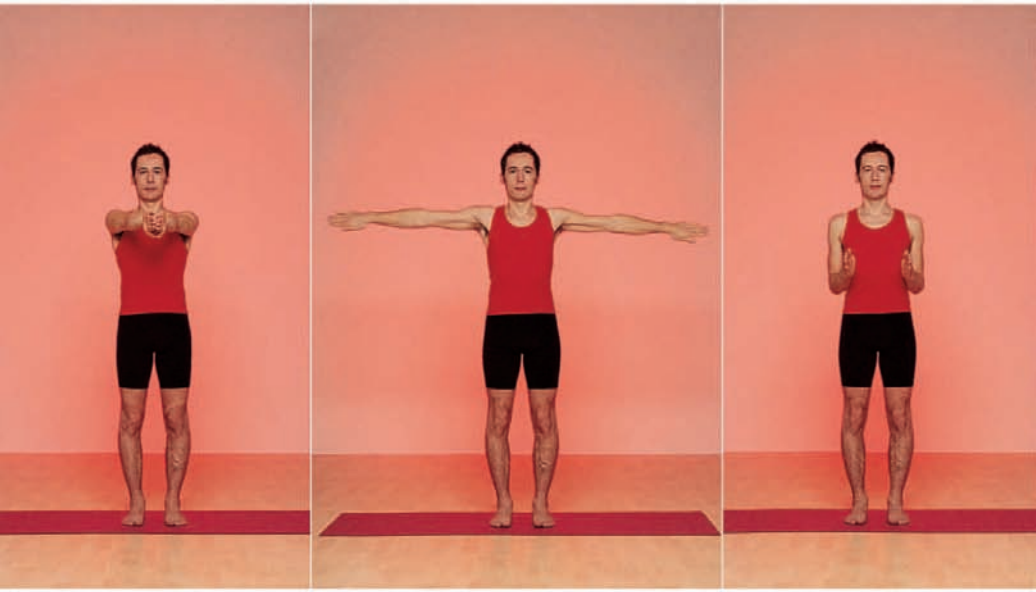
3 As you breathe out, fold the arms backward, bringing your palms together and hands down your back so that your fingers point toward the floor. At the same time, stretch your elbows toward the ceiling.

4 Interlock your fingers. As you breathe in, straighten out the arms again, stretching the palms of the hands up toward the ceiling.

5 Breathe out, sweeping your arms out to the sides and down. Breathe in as you take your arms back toward the wall behind you, interlocking the fingers again behind your back. Open your chest and hold in your abdomen.

6 Breathe out as you fold forward from the hips, with knees bent. Stretch the backs of the hands toward the ceiling. Come back up as you breathe in, stretching the arms back again. Lower the arms to the sides on the out-breath. Repeat the sequence several times.

swimming breaststroke

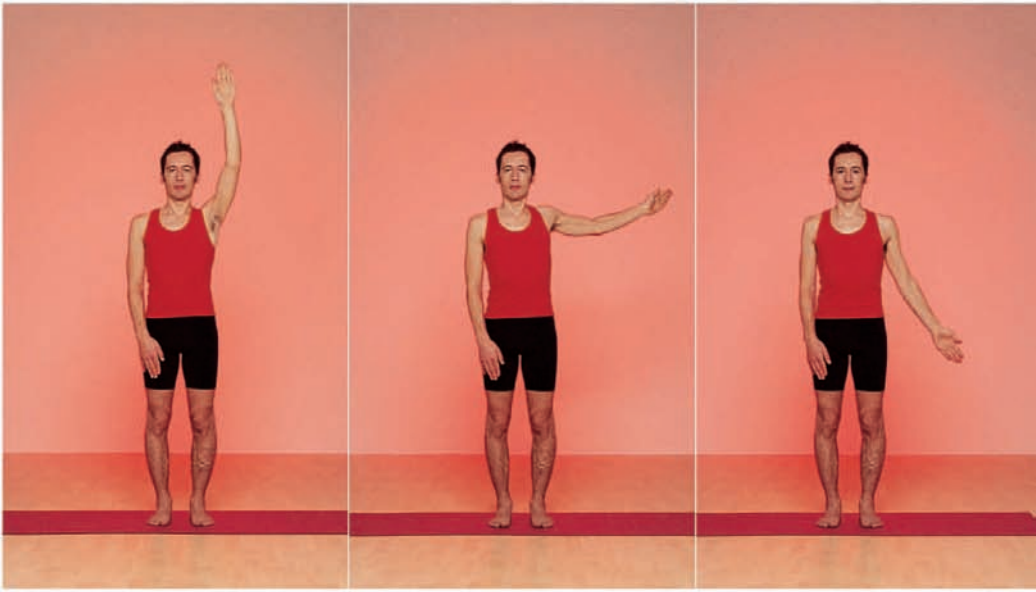


1 Stand up straight, feet parallel and hip-width apart. Stretch your arms forward at shoulder level, palms together. Take two or three breaths, then, on an in-breath, turn your palms out to bring the backs of the hands together.

2 As you breathe out, sweep the arms out to the side, then back and down to your sides in a circular motion, mimicking the arm movement of the breaststroke.

3 Keeping the elbows close to the sides of the body, stretch the arms forward and bring the palms together on the in-breath. Repeat the sequence several times, keeping the movement smooth and flowing.

swimming backstroke



1 Stand up tall, feet parallel and hip-width apart. Place the palms of your hands on the fronts of your thighs. Let the breath settle into a regular rhythm. As you breathe in, bring your left arm forward and up toward the ceiling.

2 Continue in a circular motion, bringing your left arm behind you, as though swimming the backstroke. Press the right palm against the thigh to stop the body from twisting. Keep looking straight ahead of you.

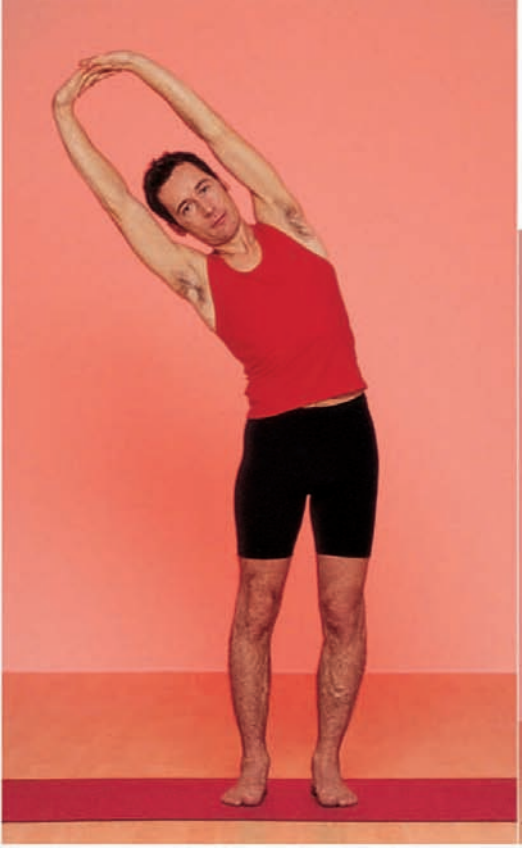
3 Bring the arm down and forward. On the out-breath, circle the right arm back and down in the same way. Repeat several times. Then breathe in as you circle the right arm back and breathe out as you circle the left arm.

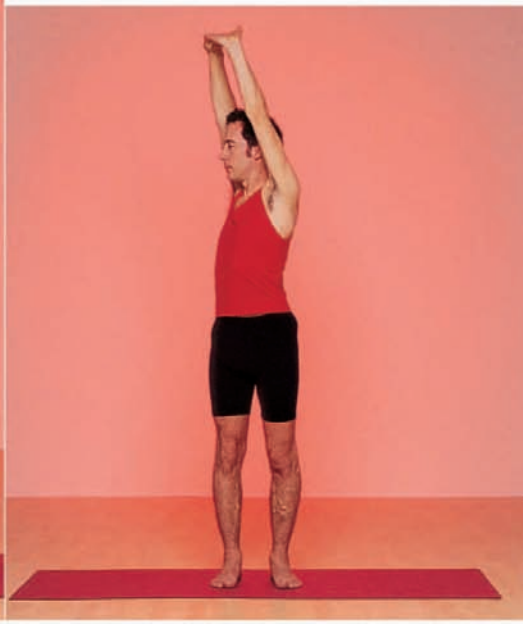
side bend and twist

1 Assume the basic standing position, feet hip-width apart. Bring the hands together in front of the body and interlock the fingers. Take several breaths.

2 On an in-breath, roll the hands up the front of the body to bring them just above the head, with the palms facing the ceiling.

3 As you breathe out, stretch your palms toward the ceiling, keeping the shoulders down away from the ears. Lengthen through the arms.





4 Breathe in, then, as you breathe out, bend to the right, hinging at the waist. Breathe in as you come back up to the center. As you breathe out, bend to the left, and breathe in as you come back up again.

5 Breathe out as you twist to the right, keeping the palms pushing towards the ceiling. Breathe in as you come back to face the front. Breathing out, twist to the left and come back to face the front again on the in-breath. Lower your arms in front of you as you breathe out, keeping the fingers interlocked. Repeat the entire sequence twice.

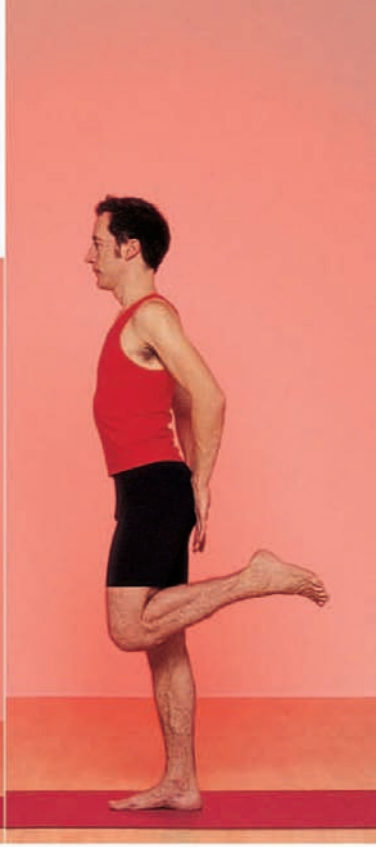
one-legged stretch

1 From the basic standing position, raise your right knee toward your chest and clasp your hands around the shin. Ease the knee toward the chest and take three slow, deep breaths.

2 Slide the right hand down to the foot and lower the knee. Press the heel against the right buttock. Place your left hand on the right hip. Take three breaths as you press the right hip forward against your left hand.

3 Stretch the left arm up beside the head. Take three breaths. Keeping the bent knee in line with the straight leg, release the right foot and slowly lower it to the floor. Repeat with the left leg.

knee lifts and kicks

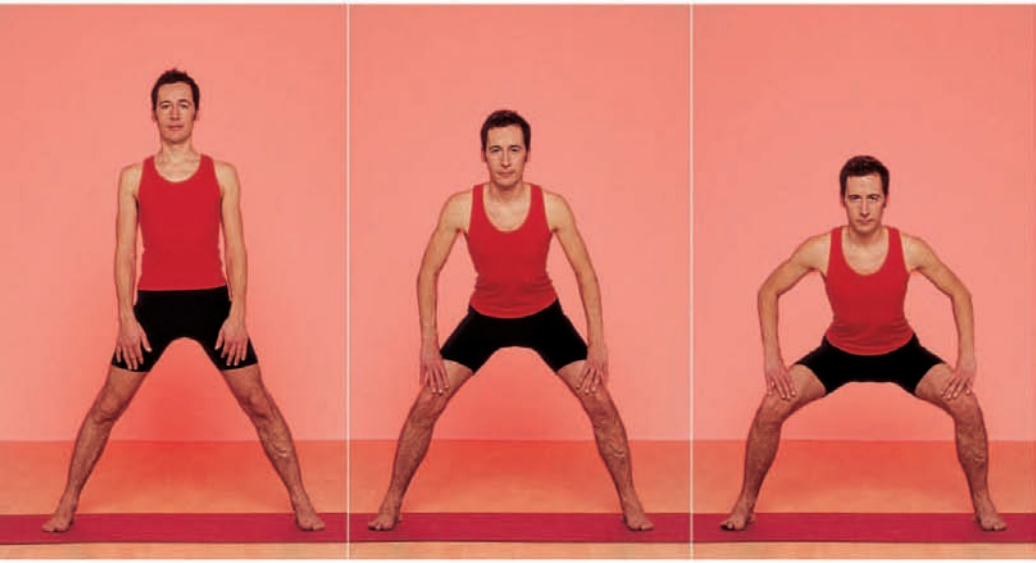


1 Assume the basic standing position, feet hip-width apart. Hold both hands out in front of you at waist level, palms facing the floor, elbows against the sides of your body. Let your breath settle into a smooth rhythm.

2 Alternately lift the right and left knee to touch the palms of the hands. Do not lower the arm or bend forward to meet the knee as it comes up. Start slowly, and gradually increase your speed.

3 Rest the backs of your hands on the buttocks. Alternately kick each leg back to touch the palm of the hand with the heel. Start slowly, gradually increasing speed. Repeat Steps 2 and 3 until slightly out of breath.

wide-legged squat



1 Stand upright with your legs about 3–4 ft (90–120 cm) apart, feet turned out a little, and knees in line with the toes. Look straight ahead.

2 Bend the knees slightly and bring your hands onto the insides of your thighs, just above your knees. Spread the fingers slightly and place the thumbs on the outside of the thighs. Take a breath in.

3 As you exhale, take your hips back as though you were going to sit down. Keep your spine long and do not let your hips sink below your knees. Come back up on the in-breath. Repeat slowly up to 10 times.

wide-legged lunge

1 Stand with your knees slightly bent and your hands resting on the insides of your thighs just above the knees. Spread the fingers slightly and place the thumbs on the outside of the thighs. Take several breaths.

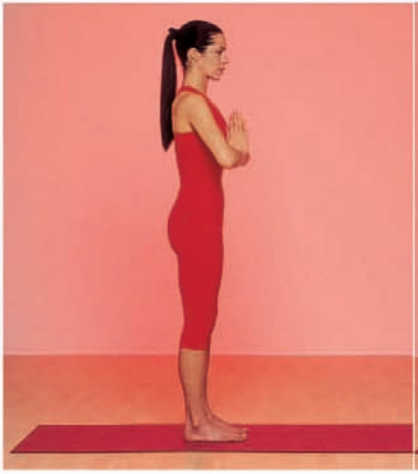
2 As you breathe out, lunge to the right, bending the right knee and straightening the left leg. Then lunge to the left as you breathe in. Repeat slowly up to 10 times, breathing out as you go to the left and in as you go to the right. Feel the stretch on the insides of the thighs. Make sure the bent knee stays in line with the toes.

building blocks

This section presents a selection of postures and other yoga practices to revitalize your body, mind, and spirit. Stay in the postures only for as long as you are able to hold them steadily and comfortably, breathing evenly. Listen to your body as you practice and you will soon feel the benefits.

forward bend

Take the weight off your shoulders and allow the spine to stretch with this calming posture. Keep the feet rooted and the sitting bones lifting up to help stretch tight hamstrings. Come out slowly and carefully.



1 Assume the basic standing position (see p.140). Then bring the palms together in front of your chest in prayer position. Take several breaths, feeling yourself growing taller and becoming more relaxed.

2 As you breathe out, fold forward from the hips, bending your knees at the same time. Place your fingertips on the floor. Let the upper body rest on the thighs and keep the back long. Breathe easily.

Keep sitting bones lifting

Keep backs of knees soft

Top of head sinks to floor

3 Press the soles of your feet to the ground and lift your sitting bones to the ceiling, lengthening through the backs of the legs. Stay for several breaths, using the out-breath to go deeper into the stretch. Bend your knees again.

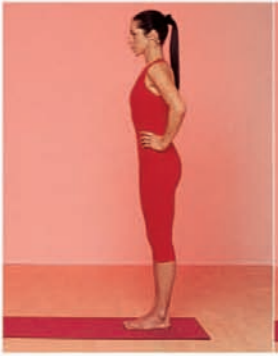
4 Put your hands on your hips and come up halfway on an in-breath. Lengthen through the spine on the out-breath. On an in-breath, hinging from the hips and keeping your back straight, come all the way up.

ALTERNATIVE

If you have HBP, a heart condition, glaucoma, or a detached retina, do a Half Forward Bend, resting your hands on the back or seat of a chair. Keep the abdomen gently pulled back towards the spine and the chest lifted. If you have lower back pain or sciatica, keep your knees bent.

warrior

This strong standing pose builds strength in the legs and back. Keep the tailbone dropping as you lift out of the hips toward the hands. Breathe evenly, remaining balanced and focused throughout.



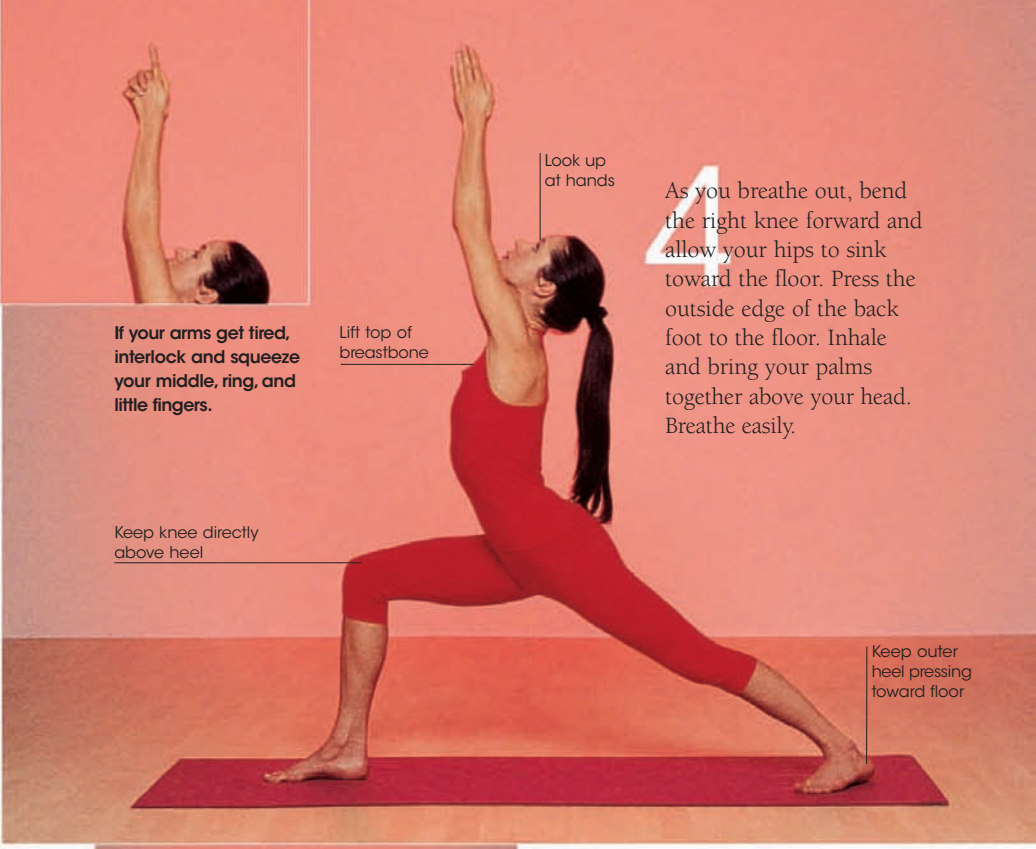
1 Stand with your feet together. Place your hands on your hips. Focus on your breath.

2 Pivoting on your heel, turn your left foot out about 45 degrees. Lift upward out of your hips as you breathe in.

3 As you exhale, take a large step forward with the right foot. Square the hips to the front, adjusting the position of your back foot if necessary. Take a breath in.

TAKE CARE

• If you have back problems, be cautious as you move into the final position. • Don't look up if you have neck problems. • If you have HBP or a heart condition, hold for a short time and keep your hands on your hips.



If your arms get tired, interlock and squeeze your middle, ring, and little fingers.

4 As you breathe out, bend the right knee forward and allow your hips to sink toward the floor. Press the outside edge of the back foot to the floor. Inhale and bring your palms together above your head. Breathe easily.

5 On an in-breath, straighten the right leg. Turn 90 degrees to come into a wide-legged position. Step your feet together and lower your arms. Repeat the sequence, turning the right foot out at Step 2 and stepping forward with the left foot at Step 3.

lunge warrior

Lunge Warrior provides a powerful stretch through the thigh and hip of the back leg, extends the spine, and opens the chest. Feel the energy building as you breathe deeply into the ribcage.

1 Begin on all fours with the hands directly beneath the shoulders and the knees beneath the hips. With fingers spread, press the palms to the floor, stretch through the arms, and bring the shoulders away from the ears.

2 As you exhale, take your right leg forward between your hands, so your knee is directly above the heel of your right foot. If necessary, come up onto your fingertips.

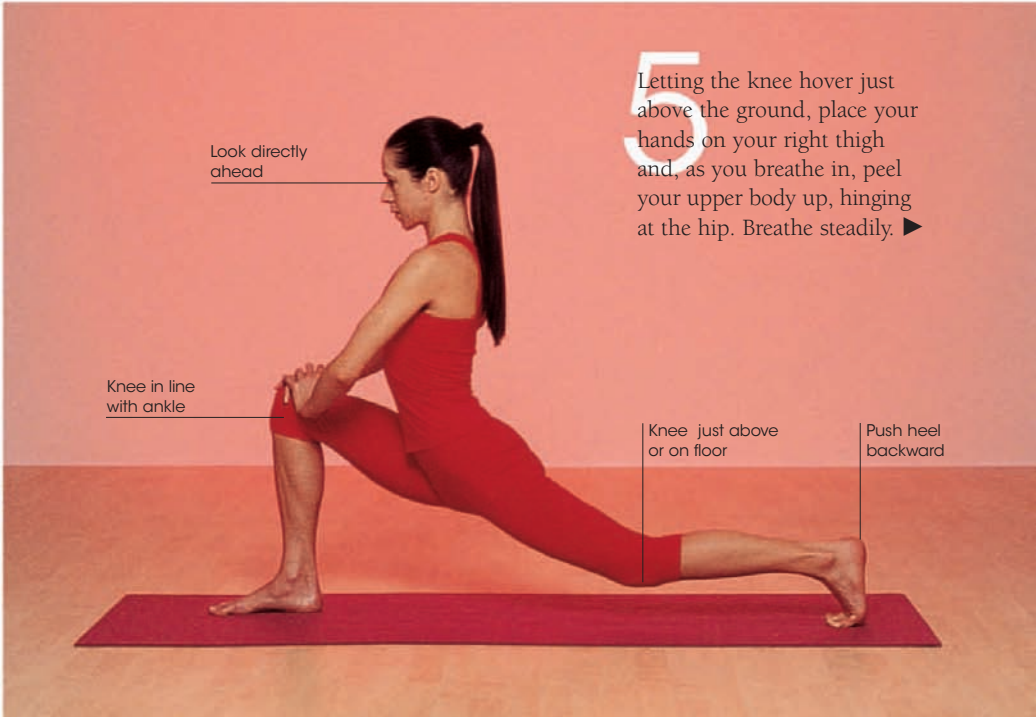
TAKE CARE

- If you have back problems, stop at Step 3 or 4 to begin with.
- Do not take the neck back at Step 6 if you have neck problems.
- If you have heart problems or HBP, stop at Step 4 or 5 and hold the position briefly.

3 Tuck the toes of the left foot under and step the foot back a little. Let the right buttock sink toward the floor. Raise your head to look at the floor in front of you.

4 As you breathe in, extend the left heel backward and, for a stronger stretch, bring the knee off the floor. Lengthen through the upper body and look straight ahead.

5 Letting the knee hover just above the ground, place your hands on your right thigh and, as you breathe in, peel your upper body up, hinging at the hip. Breathe steadily. ▶



6 For a stronger version of the full pose, raise the arms above the head and press the palms of the hands together. Look up at your hands.

Keep your knee on the floor if you find the raised position too strong.

7 On an out-breath, fold forward and lower your hands to the floor on each side of your right foot. Bring your left knee to the floor. Gaze at the floor slightly ahead.

8 Come onto the front of your left foot. Look down at the floor and move your hips back to stretch through the back of the right leg. You may need to let your hands slide back as you move the hips back.

9 On an out-breath, take your right foot back to come into an all-fours position again. Your wrists should be positioned directly below your shoulders and your knees aligned with your hips. Look down at the floor.

10 Keeping your hands still, sit back on your heels on an out-breath, feeling the stretch through the spine. Relax the arms and stay for several breaths. Repeat Steps 1 to 9 on the left side of the body.

downward dog

This calming inversion balances the upper and lower body. Keep your weight moving up and back, your shoulders broad and soft, as you stretch from the base of your fingers to your sitting bones.

1 Sit on your heels with your legs hip-width apart. Fold your body forward on an out-breath. Stretch your arms forward and spread the fingers.

2 Breathing in, come up onto all fours, with the knees beneath the hips, the feet hip-width apart, and the hands shoulder-width apart. Press the palms into the floor and stretch through the arms. Tuck your toes under.

3 On an out-breath, lift your hips up and back. Keeping your knees bent, take your weight back toward your feet to lengthen through the spine. If your shoulders are tight, take your hands farther forward or your feet back to lengthen through the spine.

4 Keep the hips lifting up and back. Slide the shoulder blades down the back to keep the neck free and take your heels towards the floor as you lengthen through the backs of the legs. Breathe evenly in the posture, then lower the knees to the floor and return to the starting position on an out-breath.

ALTERNATIVES

If you have HBP, a heart condition, glaucoma, or a detached retina, do the posture with your hands resting on a chair seat or back. If you have a back problem, do the posture cautiously with your knees bent throughout.

crocodile

This challenging static posture uses muscles in the arms, back, abdomen, and legs to keep the body balanced and still. In the posture, stay focused and visualize the body floating above the floor.

1 Start on all fours with your knees beneath your hips, your hands a little in front of your shoulders, and your feet hip-width apart. Look down. Take several breaths.

2 On an out-breath, bend your arms and lower your upper body towards the floor. Stop when your chest is a few inches above the floor. Keep your elbows tucked in close to the side of your body.

TAKE CARE

If you are very overweight, or have HBP or a heart condition, hold the full pose for a short time only or try the alternative posture (right).

3 Breathing in, tuck your toes under and lift your knees off the floor. Take the top of your chest forward, so that your elbows are above your wrists. Pull your abdomen back toward the spine, so your whole body is parallel to the floor. Step your feet back if you need to.

4 To come out of the pose, lower the knees back to the floor on an out-breath. Then slowly lower the rest of the body to the floor. Rest with your head on the backs of your hands. Come back into the all-fours position and repeat the sequence once.

ALTERNATIVE

If you cannot hold your body parallel to the floor in the final position without straining, practice with your knees on the floor until you are stronger.

upward dog

This posture gives a powerful upward lift through the front of the body, extending the spine and opening the chest to encourage ribcage breathing. It gives you a feeling of strength and vitality.

1 Start on your hands and knees, arms shoulder-width apart, feet and knees a little apart. Spread your fingers, with the middle finger pointing directly ahead. Take several breaths.

2 Breathe in deeply and, as you breathe out, allow your hips to sink forward and down. Keep your arms straight, insides of elbows facing each other, and look straight ahead. Roll the shoulders back and down.

TAKE CARE

- If you have HBP or a heart condition, hold the posture for short time only.
- Stretch forward cautiously if you have a hernia, or have had recent abdominal surgery, or suffer back pain.

3 Tuck your tailbone under and breathe in. As you exhale, take your chest forward and press the fronts of your feet to the floor, bringing your lower legs off the floor if you are able to. Look directly forward, breathing steadily into the ribcage. Stay for several breaths.

Chest moving forward between arms

Relax shoulders away from ears

Press tops of feet into floor

4 To come out of the pose, bend the arms to lower yourself to the floor. Lie on your front, arms beside your body, palms facing up, resting with your head turned to the side.

sun salute

This dynamic sequence energizes the whole body system. Focus on coordinating movement with breath and making the sequence fluid. Repeat three times at first, building up in multiples of three.

1 Stand up straight with your feet together, and your palms together in prayer position in front of your chest. Look straight ahead. Center yourself and then inhale fully.

2 As you exhale, open the palms and lower your hands to bring the arms to the sides of the body. Gently stretch the fingers toward the floor.

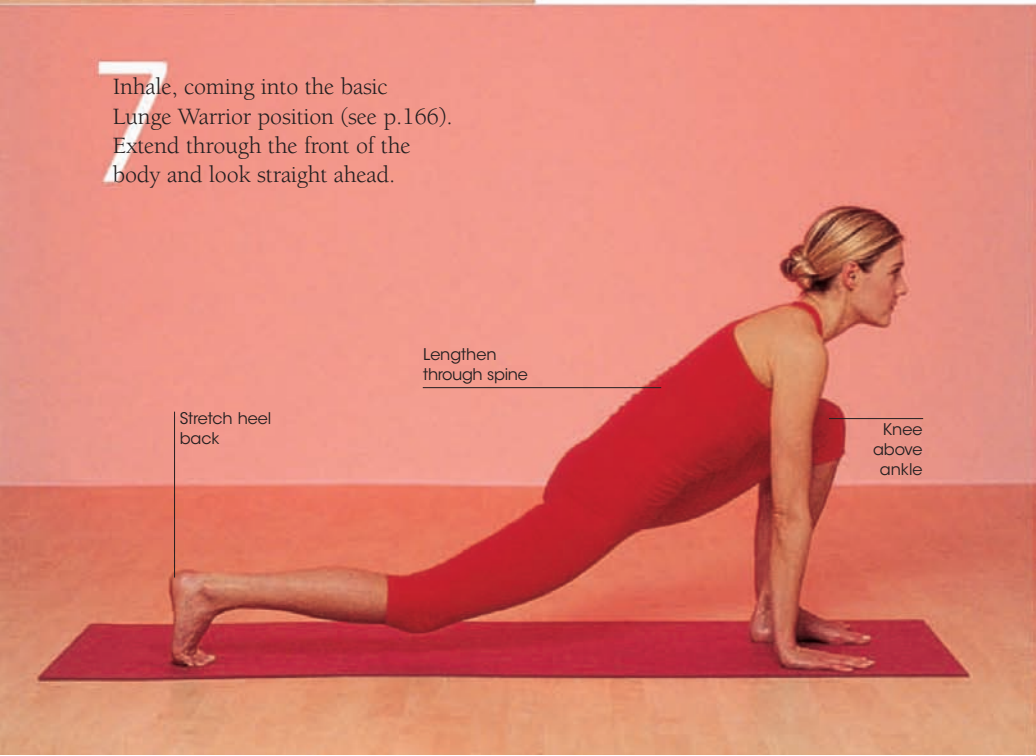
3 As you inhale, turn the palms out and circle your arms out to the side and up above your head. Bring your palms together and stretch up as you slightly arch backward. Look up at your hands.

4 Exhale, bending at the knees and hinging forward from the hips into a relaxed Forward Bend (see p.162). Place your hands (or fingertips, if less flexible) on the floor.

5 Inhale as you lengthen through the backs of the legs and through the spine, drawing your upper body away from your thighs. Look at the floor slightly ahead of you. ►

6 Exhale, bending at the knees, and take a large step back with your right foot. Land on the ball of the right foot. Your upper torso is resting on your left thigh. Look down at the floor.

7 Inhale, coming into the basic Lunge Warrior position (see p.166). Extend through the front of the body and look straight ahead.



8 Exhale as you step the left foot back to come into Downward Dog (see p.170). Press your heels toward the floor, but do not force them to the floor. If necessary, keep your knees bent.

9 Holding the breath out, lower yourself into Crocodile (see p.172). Keep your heels pushing back and your abdomen drawn back toward your spine. (For an alternative way of moving from Step 8 to Step 10, see p.181.)

10 Inhale as you come into Upward Dog (see p.174). Roll over on to the fronts of your feet, extending through the front of the body and lifting the breastbone. Look up toward the ceiling. ▶

Lift sitting bones toward ceiling

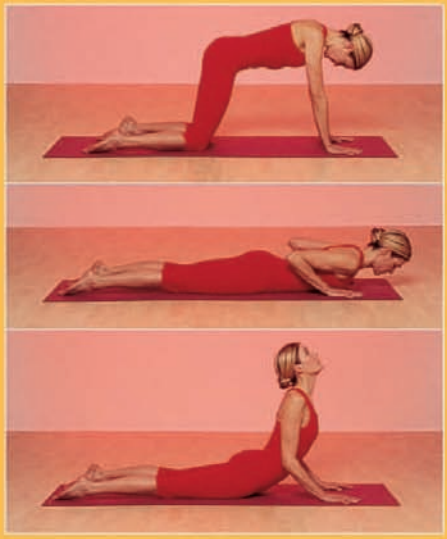
11 Exhale as you move the hips back and up into Downward Dog. Roll or step back onto the soles of the feet. Look towards your shins. If you need to, rest in this position for a few breaths.

12 Inhale as you step the right foot forward between your hands to move back into Lunge Warrior, coming up onto your fingertips if you need to. If you are very stiff, you may need to take two steps forward.

13 As you exhale, bring your left foot forward to join the right foot and come into an easy Forward Bend, with bent legs if necessary. Relax your shoulders and neck.

14 Inhale to come up, keeping your knees bent. As you lift up, circle your arms out to the side and bring the palms together above your head, arching the back slightly. Look up at your hands.

15 Exhale as you lower your arms to bring the palms in front of the chest in prayer position. Lower the head to look directly ahead. Repeat the sequence, taking the left leg back at Step 6. This constitutes one round.



ALTERNATIVE SUB-SEQUENCE

If you find the movements from Step 8 to 10 too strong, try the following more gentle version.

- From Downward Dog, hold the breath out and bring your knees to the floor to come onto all fours.
- Without breathing in, lower yourself to the floor with the hands underneath the shoulders, and the elbows tucked in.
- As you inhale, lift the head and shoulders and extend the top of the chest forward to come into modified Upward Dog with the fronts of the legs on the floor.

triangle

This side-bending posture helps to increase hip-joint flexibility and opens the chest. Feel the energy radiating out from the core of your body. Do not worry if your lower hand is a long way from the floor.

1 Stand with your feet 3 ft (1 m) or more apart, palms together in front of your chest. Look forward. As you breathe in, sweep your arms up and out to the side at shoulder level.

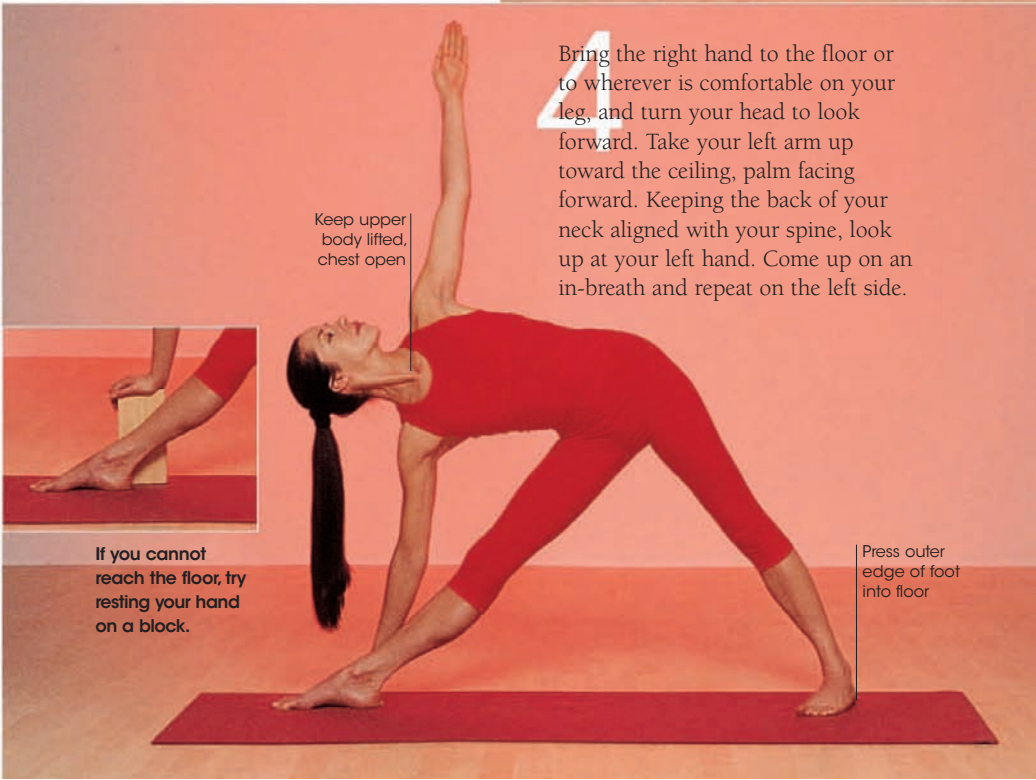
2 Turn your left heel out a little and rotate the right leg out until your toes point to the side. Drop the left arm onto the leg and stretch the right arm up. Take several breaths.

TAKE CARE

- If you have back problems, rest front arm higher up the leg.
- Do not turn your head to look up at your hand if you have neck problems.

3 As you breathe out, reach out sideways over the right leg. At the same time, slide your left hand up to bring the palm against the small of your back. Look along your right arm. Feel your spine lengthen, your chest and hips open to the front.

4 Bring the right hand to the floor or to wherever is comfortable on your leg, and turn your head to look forward. Take your left arm up toward the ceiling, palm facing forward. Keeping the back of your neck aligned with your spine, look up at your left hand. Come up on an in-breath and repeat on the left side.



If you cannot reach the floor, try resting your hand on a block.

bent-knee side bend

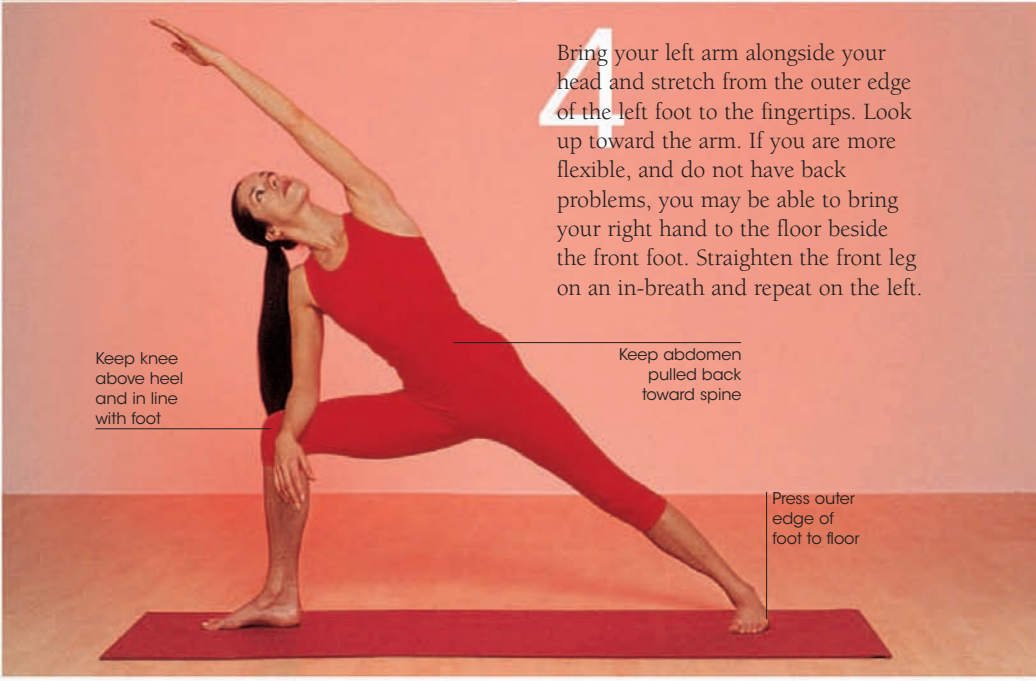
This sideways-bending posture gives an invigorating stretch through the upper side of the body, while opening the hips and the chest. Keep the back leg strong, and the front hip, knee, and foot in line.

1 Stand with your feet about 3 ft (1 m) or more apart, palms together in front of your chest. As you breathe in, sweep your arms up and out to the sides at shoulder level, palms facing the floor. Turn your left heel out slightly, and rotate the right leg and foot 90 degrees to the right.

2 Breathe in deeply; then, as you exhale, bend the right knee to the side until the knee is above the heel. Turn the upper torso to look along the right arm and feel your tailbone dropping toward the floor. Hold, taking a couple of breaths.

3 On an exhalation, bend to the right, bringing the right forearm to rest on the right thigh. Bring the palm of the left hand on to your sacrum. Open the chest to the front and press the outside edges of the feet to the floor. Look down at your right knee.

4 Bring your left arm alongside your head and stretch from the outer edge of the left foot to the fingertips. Look up toward the arm. If you are more flexible, and do not have back problems, you may be able to bring your right hand to the floor beside the front foot. Straighten the front leg on an in-breath and repeat on the left.



TAKE CARE

• Look straight ahead if you have neck problems. • Keep your forearm on the thigh and your hand on your back if you have HBP.

runner's stretch

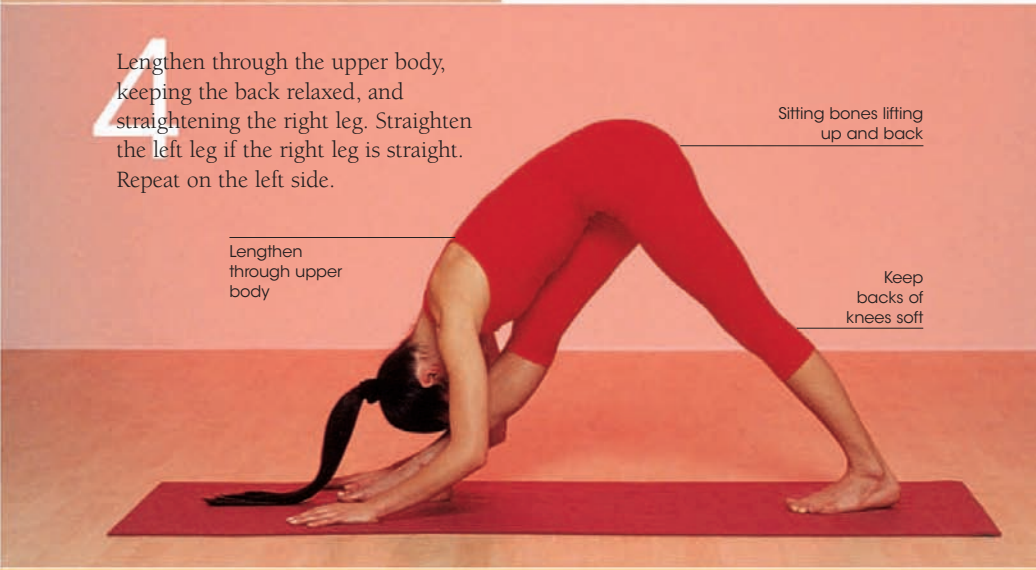
Called Runner's Stretch because it works particularly on the hamstrings and calf muscles of the leading leg, this posture also massages and helps tone your digestive organs with every breath.

1 Start in the all-fours position, hands shoulder-width apart, fingers spread and pointing forward. Step your right leg forward, bringing the sole of the foot to rest between your hands, so that the knee is directly above the heel. Look down at the floor.

2 Lengthen your upper body forward over the right thigh. Come on to the ball of your left foot and, as you breathe in, lift your left knee away from the floor. Keep the palms of your hands flat on the floor.

3 As you breathe out, lift the sitting bones up and back, and lengthen through the back of the right leg, keeping the left knee bent.

4 Lengthen through the upper body, keeping the back relaxed, and straightening the right leg. Straighten the left leg if the right leg is straight. Repeat on the left side.



ALTERNATIVE

If you find the stretch too intense, or if you have back problems, HBP, a heart condition, glaucoma, or a detached retina, do the posture using a chair. Hold onto the seat of a chair as you bend forward. If necessary, keep the left leg bent to protect the back.

lunge twist

This posture combines a twist for the spine with a wide arm stretch to help relieve backaches and stiffness in the shoulders. Focus on breathing smoothly and on broadening across the top of the chest.

1 Start on your hands and knees, your arms shoulder-width apart. Spread your fingers, with the middle finger pointing directly ahead. Look down at the floor.

2 Bring the right foot forward and place between the hands, so the knee is directly above the ankle and the heels of the hands align with the ankle. Lengthen through the upper body.

TAKE CARE

- Twist cautiously if you have back problems or a hernia.
- If you have neck problems, do not look up.
- Rest the upper hand on the thigh of the bent leg if you have HBP.

3 On an out-breath, take the right arm out to the side and up toward the ceiling. Turn your head to look at the right hand. Press the left hand to the floor, extend the right hand up, and open the chest.

Gaze at fingertips

Chest opening

Keep knee above heel and in line with foot

Palm or fingertips on floor

4 To come out from the pose, lower your right hand to the floor again and stretch through the back of the right leg. Then come back to the all-fours position. Repeat the sequence on the left side.

wide leg forward bend

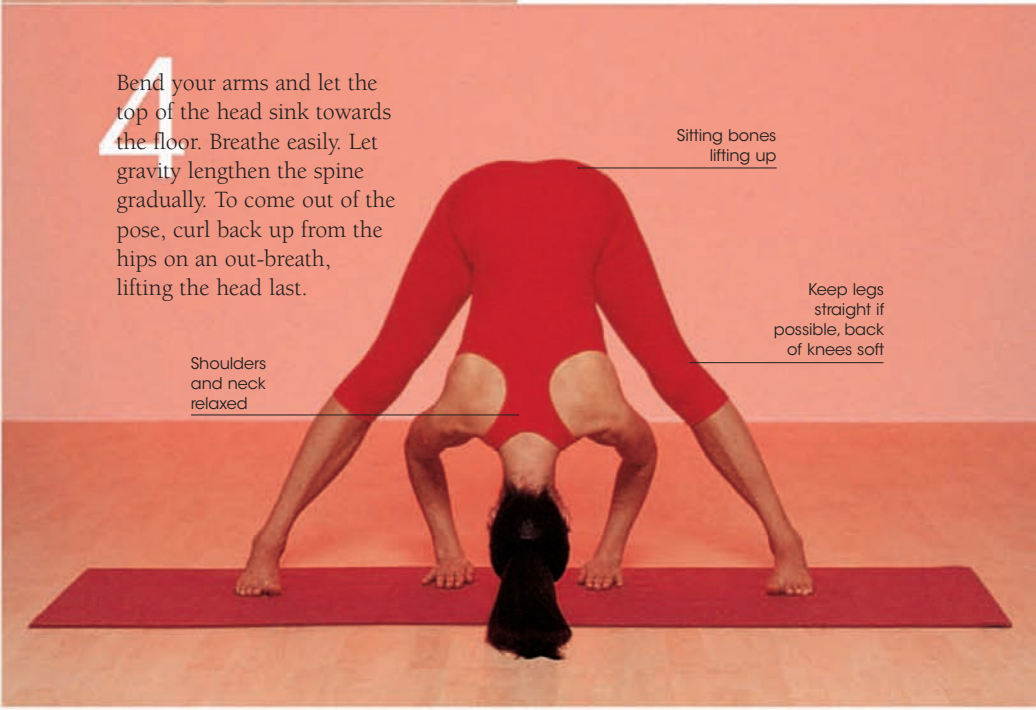
This posture provides an invigorating stretch to the backs of the legs and inner thighs. It also reverses the effect of gravity on the upper body, easing out the back, and calming the mind.

1 Stand with your legs 3 ft (1 m) or so apart, hands on hips, and feet facing forward. Look straight ahead. Draw the muscles in the fronts of the thighs up and out. Lift the breastbone. Breathe in.

2 As you breathe out, hinge forward and down from the hips, keeping the spine long. If you have a back problem, bend your knees before bending forward. Look down.

3 Still breathing out, bring your hands to the floor directly below the shoulders. Breathe in, pressing your hands into the floor to lengthen through the arms and back.

4 Bend your arms and let the top of the head sink towards the floor. Breathe easily. Let gravity lengthen the spine gradually. To come out of the pose, curl back up from the hips on an out-breath, lifting the head last.



TAKE CARE

• If you have back problems, keep the knees bent and/or use a chair for support. • Bend forward halfway, using a chair, if you have HBP, a heart condition, glaucoma, or a detached retina.

side-bending sequence

This dynamic side-bending sequence can help you feel calm, centered, and invigorated. Try taking three breaths in each stage of the sequence to help the body open and the mind let go.

1 Stand with your feet together, hands in prayer position in front of your chest. Standing up tall, take a little time to center yourself, breathing easily and gently pressing the heels of the hands together.

2 Step your feet 3 ft (1 m) or more apart. Then sweep your arms up and out to shoulder level, palms facing down. The arms should feel active, the shoulders relaxed.

3 Turn the left heel out and rotate the right leg so the toes face the end of the mat. As you breathe in, raise the right arm and arch to the left, opening the right side of the body. Lower the left arm to rest on the left leg.

4 As you breathe out, reach out to the side with the right arm, and bring the left hand onto the lower back. Lengthen through the trunk. Look along the right arm.

5 Bring the right hand onto the right leg, as close to the ankle as you find comfortable. Press the left hand gently against the back to help open the chest. Keep the hips as open as possible. Extend through the spine, with the top of the head moving to the side wall. Look forward. ▶

6 Breathing out, bend the right knee over the heel. Bring the right forearm onto the right thigh and rest it there. Stretch the left arm alongside the head. Keep the hips open and turn the head to look up at the arm.

7 On the out-breath, lower your left arm and bring your hands to the floor on each side of, and parallel to, the right foot. Simultaneously, pivot on the ball of your left foot to come into Lunge Warrior (see p.166).

8 Take a step forward with the left foot to come into Runner's Stretch (see p.186). Keeping the left knee bent, stretch through the back of the right leg as much as you find comfortable. Lengthen through your upper body as you fold forward. Visualize your sitting bones moving up and back toward the top of the wall behind you. Keep your back relaxed and your hands on the floor.

Stretch through fingertips

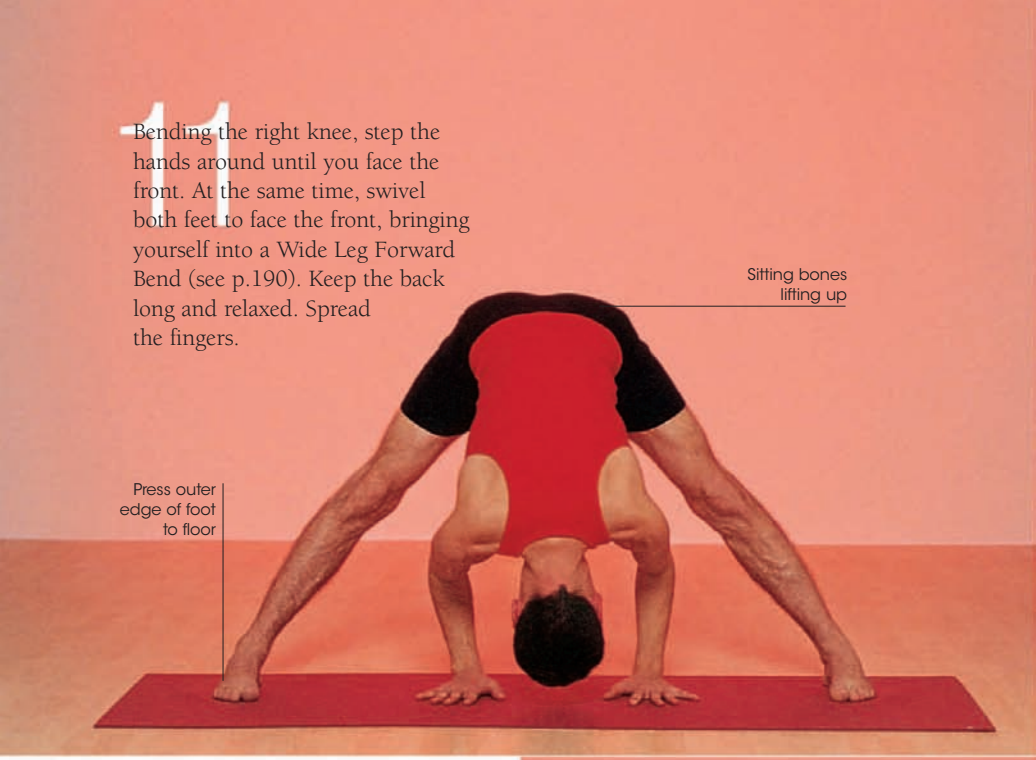
9 Bend your right knee again and bring your left knee to the floor, coming onto the front of the left foot. As you breathe in, sweep the right arm up toward the ceiling and open your chest to the right side. Look up toward the hand.

Create space between shoulders

10 Bring the right hand back to the floor on an out-breath. Come onto the ball of the left foot and move back into Runner's Stretch. Remember to lift the sitting bones up and back while keeping the upper body soft. ▶

11

Bending the right knee, step the hands around until you face the front. At the same time, swivel both feet to face the front, bringing yourself into a Wide Leg Forward Bend (see p.190). Keep the back long and relaxed. Spread the fingers.



12

Bend your knees and bring your hands onto your hips. As you breathe in, keeping the back relaxed, slowly uncurl your body to come up. Stack the vertebrae up one at a time, finally raising the head to face the front and straightening the legs.

13

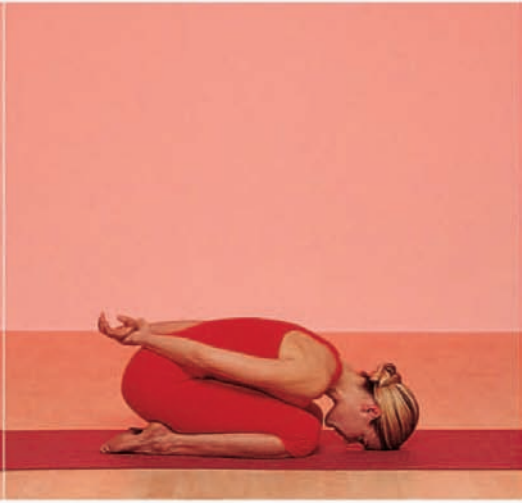
Pressing into the outside edges of the feet, rotate the thigh bones out. Press the elbows a little toward the back wall. Open and lift the chest, broadening across the front of the shoulders. Look straight ahead. Take a couple of breaths.

14

Step the feet together, bringing the palms together in front of the chest. Repeat the whole sequence, working on the left side of the body. Then stand quietly with your eyes closed for a short while and experience the energy and the stillness.

child

Child is a restorative pose that gently stretches the spine and postural muscles in the back, while taking your attention inwards. It is a good posture for developing breath awareness.



1 Kneel and sit back on your heels, looking straight ahead. With your hands behind your back, hold one wrist with the other hand. Lengthen through the spine. Breathe in.

2 As you exhale, fold forward over the knees, hinging from the hips. Bring your forehead to the floor. (Rest your forehead on a block or other support if this is difficult.)

3 Bring your arms to the floor alongside the body, or, as shown, beside the head. Rest in the pose, focusing on breathing quietly and steadily. Child can also be done dynamically (if you do not suffer from epilepsy), moving alternately between Step 1 and 2 with the breath five to 10 times.

Be aware of breath in back ribs

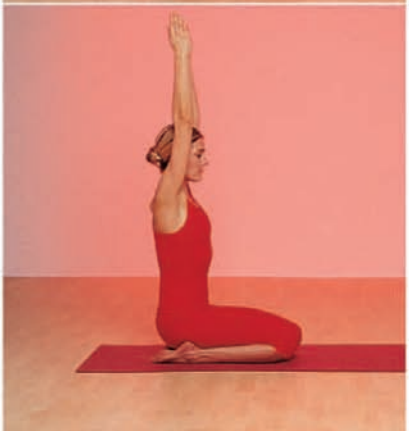
ALTERNATIVE

If you have back problems, HBP, glaucoma, or a detached retina, do not bring the head to the floor. Instead, rest your head on your hands with your forearms on the seat of a chair.

hare

Like Child, Hare is a restorative pose; it stretches the spine and helps relieve stiffness in the shoulder girdle. Try to let the spine lengthen and the shoulders relax on the out-breath.

1 Sit up straight, sitting back on your heels. Press your hands into the mat on each side of your torso, fingers pointing forward. Lengthen through the spine and look straight ahead.



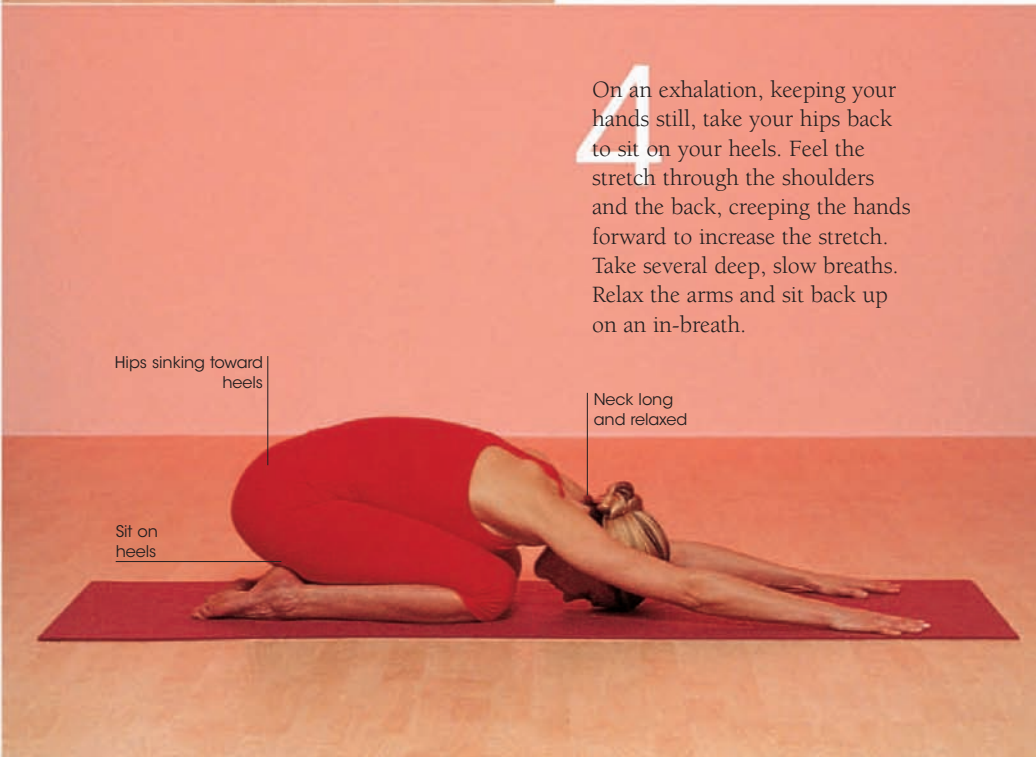
2 On an in-breath, circle your arms out to the sides of your body and up above your head. Lower them on the out-breath, and raise them again on the in-breath.

TAKE CARE

If you have back problems, glaucoma, or a detached retina, stretch forward with your hands on a chair.

3 As you exhale, lower your arms forward to come onto your hands and knees. Your hands should be shoulder-width apart and your knees under your hips.

4 On an exhalation, keeping your hands still, take your hips back to sit on your heels. Feel the stretch through the shoulders and the back, creeping the hands forward to increase the stretch. Take several deep, slow breaths. Relax the arms and sit back up on an in-breath.



camel

Feel the energy surge through your upper body in this invigorating, back-bending posture. Lift up through the front of the body and let the tailbone drop as you arch back, to create space in the spine.

1 Kneel with the body upright and the legs hip-width apart. Press the hands against the thighs, tuck the tailbone under, and draw the abdomen in. Lift the breastbone, relax the shoulders.

2 Place your hands on your hips. As you breathe in, lift the chest, take the elbows back, and look up toward the ceiling. Exhale and hold the position as you continue to breathe steadily.

TAKE CARE

- Be very cautious going beyond Step 2 if you have back problems, a hernia, recent abdominal surgery, HBP, or heart disease.
- If you have neck problems, do not take your head back at Step 4.

3 As you breathe in, circle your right arm forward and up beside your head, and as you exhale, circle it back down to your right heel. Repeat with the left arm.

4 Keeping the thighs perpendicular, lengthen the front of the body as you slowly arch back to touch your heels. Hold for three to five breaths. Breathe in, release the hands, and come back up to kneeling upright.

ALTERNATIVE

If your body is stiff, do not try to bring your arms right down to your heels. Instead, position a chair over your feet and lean back to hold onto its legs as far down as is comfortable.

shoulder stand
against a wall

A rejuvenating posture that reverses the effects of gravity on the body and stimulates the brain's balance centers. You may need to use a blanket under the shoulders (see p.208) to keep the neck free.

1 Sit up straight alongside a wall with your knees bent and your left hip against the wall. Take several breaths to centre yourself.

2 Swivel around, supporting yourself with your hands, to lie on your back with your buttocks against the wall and your legs up the wall. Draw your shoulders away from your ears.

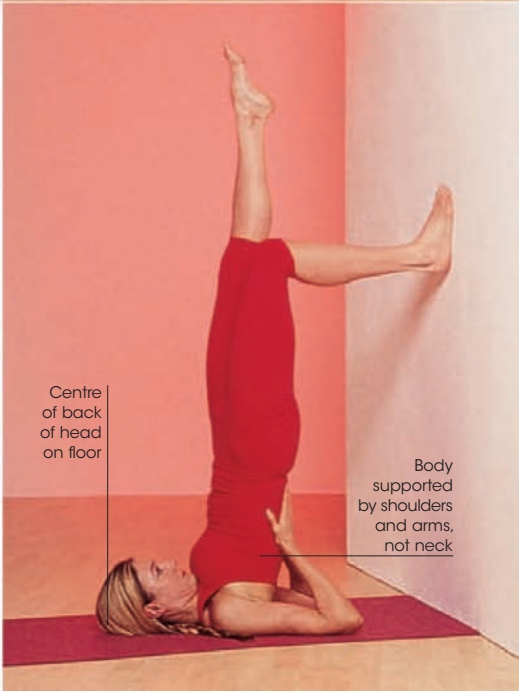
TAKE CARE

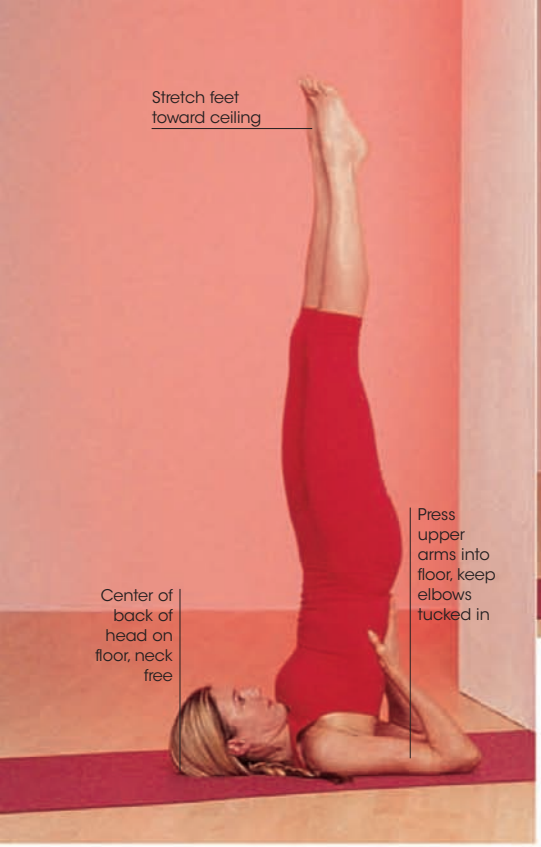
- Stop at Step 2 if you are seriously overweight or menstruating, or have neck problems, HBP, a heart condition, or a detached retina.
- If you have back problems, lie with your knees bent over a chair.

3 Bend your knees to bring the soles of the feet against the wall. Breathe in and push against the wall to lift your bottom off the floor. Support your back with your hands.

4 Keep pushing against the wall to lengthen through the front of the body until your back and thighs are perpendicular. If you feel any discomfort in the neck, come down and seek advice before trying again.

5 Make sure you are breathing easily. Lift the left leg away from the wall and point the foot straight up to the ceiling. Bring it back to the wall and do the same with the right leg. ▶





6 Bring one leg and then the other away from the wall to come into a Full Shoulder Stand. Slide your hands closer to your shoulders to help keep the body upright. Hold for about 30 seconds to start with, increasing the time as you become more familiar with the pose. Breathe normally, stretching the feet toward the ceiling and lengthening through the body.

7 To come out of the pose, bend your left knee to bring the sole of your left foot back to the wall. Keep stretching up through the spine. Continue to support your back with your hands.

8 Bend your right knee to bring your right foot to the wall. Breathing normally, start to lower your spine to the floor, keeping the back supported as you come down.

9 When your lower back is on the floor, take your arms out to the side and stay in the position for a few breaths with your legs stretched up the wall.

10 On an out-breath, roll over onto your right side with your knees bent. Stay there for a short while, breathing easily. Try Easy Fish (see p.212) before moving on to practice any other postures.

full shoulder stand

If you find Shoulder Stand Against a Wall easy, try the full version. In the final position, focus on lifting up through the spine and stretching the legs up. Keep relaxed and breathe smoothly and deeply.

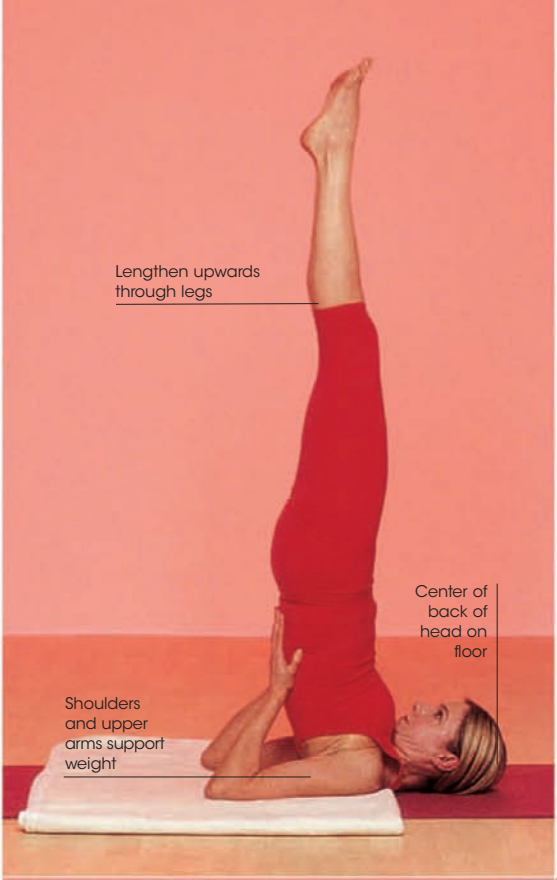
1 Lie on a folded blanket with your knees bent and your arms by your side, palms facing down. The back of the head and neck should be off the blanket.

2 On an inhalation, bend your knees over your chest and swing the legs up. Press strongly into the floor with your hands and forearms.

3 Bring your hands up to support your back, keeping your upper arms on the floor. Press your hands into the back to bring your weight onto the tops of your shoulders, making sure your neck is free and relaxed.

TAKE CARE

• As for Shoulder Stand Against a Wall. • When using a blanket, make sure the tops of the shoulders line up with the edge of the blanket and the neck is off the blanket and free.



4 Pushing your upper arms and elbows into the floor, slide your hands toward your shoulders to bring your upper body vertical. Slowly straighten your legs toward the ceiling and bring the elbows closer together. Breathe easily. Stay only for a short time to begin with.

5 On an exhalation, bend the knees toward the head and roll down, supporting the back with the hands. You may need to let your head and shoulders come off the floor as you roll down.

6 Come into a relaxed sitting Forward Bend with knees bent, as shown here, or simply lie on your back with your knees bent for a few breaths.

plow

A soothing pose, Plow combines some of the benefits of an inversion with a strong stretch through the upper back and the back of the legs. Avoid altogether if you have neck problems.

1 Lie on your back with your knees bent, feet hip-width apart. Place your arms beside your body, palms facing down. Take several breaths.

2 On an inhalation, bend the knees over the chest and swing the legs up. Press strongly into the ground with your hands and forearms.

3 Bring your hands up to support your back, keeping your upper arms on the floor as for Full Shoulder Stand (see p.208). Bring your weight onto the tops of your shoulders, making sure your neck is free and relaxed. Stretch your legs back and bring your feet to the floor.

4

Lengthen up through your spine and stretch your arms out along the floor behind you with the fingers interlocked. Stay in the pose for a short while to begin with, breathing quietly. Then bend the legs again and, supporting your back, roll out as for Full Shoulder Stand.

Lift tailbone

Pull elbows together

TAKE CARE

- If you are seriously overweight, or are menstruating, have HBP, a heart condition, or a detached retina, stop at Step 3; relax and breathe easily.
- Lie on your back with knees bent over a chair if you have back problems.

ALTERNATIVE

If you cannot reach the floor with your feet, bend your knees toward your forehead or practice with your thighs resting on a chair, as shown. Support your back with your hands.

easy fish

This posture provides an excellent counterstretch for the back and the neck after doing the Full Shoulder Stand (see p.208). Easy Fish stretches the front of the body, opens the chest, extends the spine, and strengthens the upper arms.

1 Sit up straight with your legs stretched out in front of you, feet together. Place your arms down by your sides. Look straight ahead. Push into the hands to lengthen through the upper body.

2 Lean back on your forearms with your elbows positioned underneath your shoulders, fingers pointing forward. Keep looking straight ahead.

Pull abdomen back toward spine

Broaden across front of shoulders

Keep legs straight and firmly on floor

3 Stretch your toes away. Breathing in, press your forearms down and open your chest toward the ceiling. Slowly take your head back to look up at the ceiling, arching your back gently. Breathe deeply into the chest.

TAKE CARE

- Keep the head in line with your spine if you have neck problems.
- Do not arch the back excessively if you have back problems.

4 To come out of the pose, bring your head forward, then press into the forearms and hands to sit up. Fold forward, resting your forehead on your knees. If you need to, bend your knees.

sitting forward stretch

This energy-balancing posture encourages flexibility in the spine and stretches the hamstrings, while allowing the mind to settle on your inner awareness as you relax forwards.

1 Sit with your feet stretched out in front of you. Press your hands into the floor at the sides of your hips to bring yourself onto your sitting bones. Then bring the sole of your right foot onto the inside of your left thigh, close to the groin.

2 Allow the right knee to sink to the floor. Bring your right hip forward to align yourself with your left leg. If your knee is a long way off the floor, support it with a pillow. As you breathe in, bring your arms up beside your head. Look straight ahead.

3 As you breathe out, hinge forward from the hips. Keep the back long and your gaze straight ahead. Bring your hands onto your leg. Breathe in, lengthening through the spine.

4 As you breathe out, lengthen forward again and, if you are able to, hold on to your left foot. Bend the elbows to gently bring the upper body closer to the leg without straining the back. Relax, breathing easily. Sit up slowly on an in-breath and repeat on the other side.

ALTERNATIVE

If you have tight hamstrings, inflexible hips or back, or a hernia, try sitting on a block, or place a folded blanket under the bent leg as you reach forward. If necessary, hold onto a belt that is looped around the foot, to avoid straining your back.

supine butterfly

This relaxing posture can help release tension in the abdomen and pelvic area, and relieve period pains. The benefits are enhanced by practicing Abdominal Breathing (see p.225) in the pose.

1 Lie on your back with your legs stretched out and your arms away to the sides of the body, the backs of the hands on the floor. Lengthen through the back of your neck.

2 Bend your knees, sliding your feet close to your buttocks. Feel yourself broadening across the top of the chest as you draw the shoulders down away from the ears.

3 Bring the soles of the feet together and take the knees out to the sides. Press the soles together to help release the hips. Then allow the knees to sink toward the floor. Relax, breathing into the lower abdomen. To come out of the pose, bring the knees back together and slide the feet away.

Soles of feet together

Do not force knees to floor

ALTERNATIVE

Do not try to force the knees to the floor. If your knees do not reach the floor, or if you suffer from sacroiliac back pain, support the legs with pillows or folded blankets. To focus on Abdominal Breathing, try placing your hands on the abdomen.

kneeling stretch sequence

This is a calming sequence that helps you unwind and balance your energy. It is especially beneficial at the end of a stressful day, when it will refresh your mind and body, enabling you to enjoy the evening.

1 Sit back on your heels and hold on to your right wrist with your left hand. Lengthening through the spine and back of the neck, look straight ahead. Take several breaths with your eyes closed to center yourself. Breathe in.

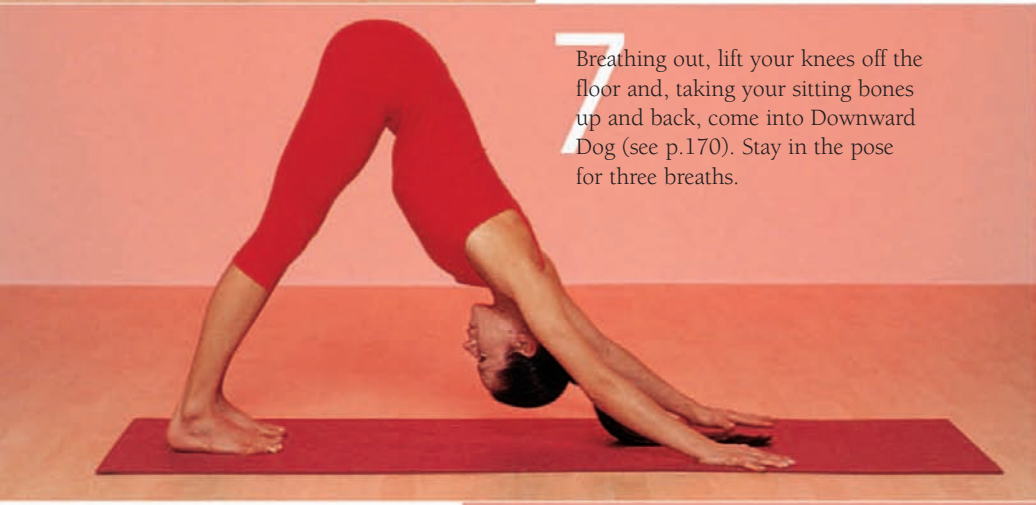
2 As you breathe out, fold forward to bring the upper body on to the thighs. Breathe in and come back up to sitting. Then, as you breathe out, fold forward again.

3 Breathing in, sit up. At the same time, circle your arms out to the side and up above your head. Look up at your fingertips.

4 Keeping your arms raised, fold forward on the out-breath. With your arms out in front, in line with your shoulders, gently stretch through the spine.

5 As you breathe in, come up onto all fours. Make sure your legs are hip-width apart and your wrists in line with your shoulders. Breathe out, then breathe in and tilt the tailbone up, taking the top of the chest forward as you look directly to the front. ▶

6 Breathe out. Then, as you breathe in, tuck your toes under. Make sure the insides of your elbows are facing each other, your hands are parallel, and your fingers point forward. Look straight ahead.



7 Breathing out, lift your knees off the floor and, taking your sitting bones up and back, come into Downward Dog (see p.170). Stay in the pose for three breaths.

8 Breathing out, come down into an all-fours position again. Lengthen through the arms and keep the shoulders down away from the ears. Look down at the floor. Breathe in and come onto the front of the feet.

9 Keeping your hands still, take the hips back to sit on your heels as you breathe out. Stretch through the spine and relax the forearms to the floor.

10 On the in-breath, sit up, keeping the back straight. Bring your arms behind you, and hold your right wrist with your left hand. Lift though the spine and the front of the body, broadening across the top of the chest.

11 Breathing out, fold forward over the thighs to bring the forehead to the floor. Bring your arms down by your sides, palms up. Relax in this position, breathing quietly, for one or two minutes before sitting up.

sitting twist

This simple spinal twist encourages spinal flexibility, helps relieve stiffness in the shoulders and neck, and stretches respiratory muscles. Close your eyes and focus awareness on sensations within the body.

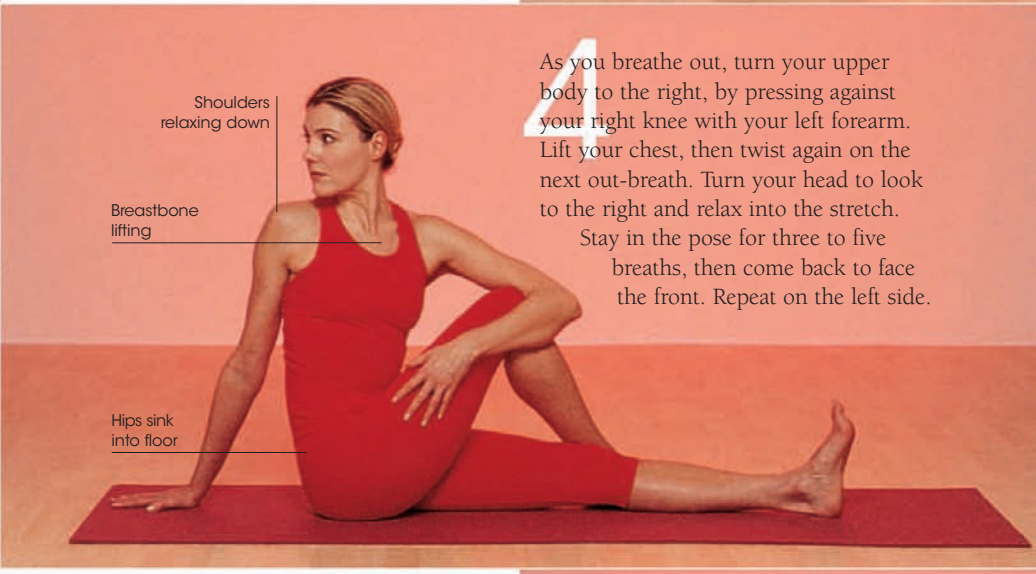
1 Sit up straight with your feet stretched out in front of you. Pressing down with your hands, make sure you are sitting toward the front edge of your sitting bones. If you have tight hamstrings, sit on a block.

2 Draw your right foot up beside your left knee and place it on the outside of the left knee. Clasp the shin with both hands and pull against it to lengthen through the spine and the front of the body.

TAKE CARE

Twist with caution if you have back problems, or a hernia, or have had recent abdominal surgery.

3 Take your right hand to the floor behind you and hook your left arm around your right knee. Facing forward, breathe in as you lengthen through the upper body.



4 As you breathe out, turn your upper body to the right, by pressing against your right knee with your left forearm. Lift your chest, then twist again on the next out-breath. Turn your head to look to the right and relax into the stretch.

Stay in the pose for three to five breaths, then come back to face the front. Repeat on the left side.

5 If you are more flexible, you may find it more effective to bring the back of the left arm onto the outside of the right knee. As you breathe out, keep the arm straight and pressing against the leg. Stretch the fingertips toward the floor to turn to the side.

breathing practices

The following breathing practices can be done simply to improve your awareness of the breath, but they are also particularly useful in helping to quiet the mind for meditation (see p.230).

The breathing practices described on the following six pages will help improve your breath awareness and encourage calmness and mental clarity. They are generally practiced after doing some yoga postures or some simple stretching. They help loosen up the body, so that it is easier for you to be relaxed during the breathing practices.

The practices of Mock Inhalation (see p.226) and Forced Exhalation (see p.228) are best learned with a teacher. If you have any problems, be sure to seek help.

Audible breath

A simple practice, audible breath helps make the breath smooth and even. It calms and centers the mind, and helps you to let go of tension. It can be practiced for its own sake and also during posture work, to help you remain focused.

To begin the practice, breathe through the mouth. Slightly closing the throat, make a gentle sighing "Ahhhh" sound as you breathe in and a sighing "Haaaa" sound as you breathe out.

When you have gotten a feel for this, try to achieve the same sound in the throat while breathing with your mouth closed. It may help to imagine that you are breathing through a hole in the front of the throat. Breathe smoothly and evenly, and keep your awareness on the breath. The sound of the breath can be quite subtle; only you need to hear it.

supine abdominal breathing

This practice relaxes the body and the mind, and is good for letting go of tension. Be aware of how easily the breath flows, and of the feeling of calm alertness in the mind at the end of the practice.

1 Lie on your back with your knees bent, feet about hip-width apart. Allow your breath to settle into a smooth, natural rhythm. Then become aware of the rise and fall of the abdomen as you breathe in and out. Focus on the out-breath and very gradually allow it to become longer than the in-breath.

2 Make the out-breath slower and more complete by drawing the abdomen back toward the spine as you exhale. Relax as you breathe in, allowing the abdomen to swell out. Breathe like this for a while.

3 Emphasize the out-breath more by drawing up the pelvic floor muscles (as if stopping yourself from urinating). Now, as you breathe in, keep the abdomen and pelvic floor gently contracted. Feel the breath in the ribcage. As you exhale, emphasize the contraction. After a while, relax and let the breath return to normal.

mock inhalation

This practice increases awareness of the diaphragm in breathing and increases its strength and flexibility. It involves taking a full exhalation, and then closing the throat (as if you were holding your breath) and expanding the ribs as if breathing in – a "mock inhalation."

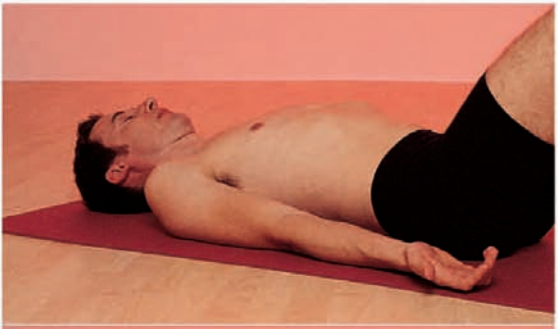
You can do mock inhalation lying on your back (see right) or standing (see below). Do three rounds of the practice, following the instructions detailed at right carefully. Breathe normally for about 20 seconds between each round. After you have completed the practice, feel the quality of the breath. If your first normal in-breath is rushed, practice mock inhalation more gently.

TAKE CARE

- Avoid if you have HBP or active inflammation or bleeding in the abdominal region.
- This practice is best avoided during menstruation, as it creates strong negative pressures in the abdomen.

ALTERNATIVE

Stand with your legs about hip-width apart, your knees slightly bent. Lean forward a little way, rounding your back slightly. Rest your hands lightly on your thighs, your elbows slightly out to the side. Follow Steps 2 and 3 shown at right.



1 Lie on the floor with your knees bent, arms away from the side of the body, palms up. Allow the breath to settle into a natural, regular rhythm.

2 Breathe in deeply, allowing the abdomen to swell out. Then breathe out completely, drawing the abdomen back toward the spine at the same time.

3 Relax the abdomen, close the throat, and simultaneously expand the chest, without breathing in, to suck the abdomen up under the ribcage. Hold until you need to breathe in. To breathe in, relax the ribs first, open the throat, and, contracting the abdominal muscles slightly, let the breath flow in, in a slow, controlled way.

forced exhalation

This practice involves a forced exhalation and a passive in-breath. The intense focus on the out-breath helps clear the mind of distractions and balance the nervous system.

Do three rounds, following the instructions at right carefully, and breathing naturally for about 20 seconds between each rounds. Maintain the same number of exhalations in each round. At the end of the third round, exhale completely and allow a short, natural pause with the breath held out. The next in-breath should be smooth and unhurried. Sit quietly, let the breath be free, and be aware of the smoothness and quietness of the breath and the mind.

During the practice, maintain a steady, even rhythm – slow down if necessary. Never try to keep going if you get out of breath. As you become more familiar with the practice, you can increase the number of exhalations per round.

BLOWING OUT THE CANDLE

This preliminary practice will help you get the feel for the correct action of the abdomen in Forced Exhalation. Rest your right hand on the abdomen and bring your left hand in front of you. Imagine that there is a candle in front of your left hand. Take half a breath in and try to blow it out. Feel the abdomen sharply contract away from your hand and then automatically relax back toward it.

Repeatedly try to blow out the candle. Then try with the mouth closed, by exhaling sharply through the nostrils.

1 Sit cross-legged, spine and head erect, with your hands resting on your thighs, palms facing up. Close your eyes. Let the breath settle into a regular rhythm, emphasizing the out-breath.

2 Breathe in halfway and then exhale forcibly by sharply pulling the abdomen in. Immediately allow the abdomen to relax, so the in-breath is effortless and completely passive.

3 Repeatedly exhale, forcibly in this way up to a maximum of 10 times. This constitutes one round. Then breathe normally for 20 seconds.

ALTERNATIVE

Sit or stand. Take a full breath in. Breathe out through the mouth in short, rapid puffs, with a brief pause between each puff, until the lungs are empty. Close your mouth and allow a natural pause with the breath held out. Then breathe in slowly and smoothly.

TAKE CARE

- If you become dizzy or breathless during the practice, stop, take a break, then try more slowly and less forcefully.
- If both nostrils are congested, you are menstruating, you have HBP, or you suffer from epilepsy, do the alternative, above.

meditation

Meditation involves silencing the mind and realizing the vital energy that constitutes the core of our being. Regular meditation has great restorative powers, helping to bring your energies into balance.

We cannot meditate by seeking to shut out the world around us or by completely ignoring our senses, thoughts, or emotions. But we can progressively let go of them, so that they do not cloud our consciousness, our awareness.

Sit comfortably in a basic sitting position (see p.141) with your head, neck, and spine erect. If you are more flexible, sit as shown opposite, with your thumb and index finger together in the mudra symbolizing the link between individual and universal energy. Be aware of your surroundings. Close your eyes and be aware of sounds and other sensations, like the touch of the air on your skin. Let the world be there without reacting to it. Become aware of your body. As you breathe out, let go of tension – in your face, your neck, your shoulders, your arms, and your legs. Be aware of your breath, which is your constant connection with the world around you. Be aware of the breath in the nostrils as you breathe in and out. Be aware of it passing through the nostrils and down

PRACTICAL MATTERS

- Choose a time when you can remain undisturbed for at least 15 minutes.
- Choose a room (or outdoor space) that is quiet, uncluttered, and not cold.
- Choose a posture – sitting or kneeling on the floor or sitting in a chair – that you will be able to sustain easily for some time.

the back of the throat to the chest as you breathe in. Feel it rising up from the chest through the back of the throat and out through the nostrils as you breathe out.

Then become aware of the space inside your head, your throat, and your neck. Be aware of the space in the right side of the chest, in the left side. Be aware of the space in the right shoulder, right arm, right hand; in the left shoulder, left arm, left hand; the space in the right hip, right leg, right foot; in the left hip, left leg, left foot. Be aware of the space above and below the navel, at the base of the spine, and in the pelvis.

Be aware of the space in the whole body. Be aware of space around the body, and the infinite space beyond. Be aware of yourself as a center of consciousness – with no separation between inside and outside. Stay with this awareness. Slowly become aware once more of your breath, your body, your surroundings.

relaxation

At the end of your yoga session, stay quiet for a while to reinforce the restorative and regenerative benefits. This simple relaxation practice will take about 15 to 20 minutes. Make sure you are warm enough.

Lie on the floor, with your knees bent and your arms away from the body. Become aware of your body and how it feels. Lift your hips slightly and extend your tailbone toward your feet, and then lower the hips again, easing out the lower back. Slide your feet along the floor to stretch your legs out (unless this incurs lower back pain, in which case keep your knees bent).

Allow the legs and feet to roll outward. Tuck in your chin and then release it to bring the center of the back of your head onto the floor. If your neck feels uncomfortable like this, try resting it on a pillow or folded blanket.

Now relax your body part by part, starting with your toes and ending with your head. There is no need to do anything active, just take your attention to each part of the body in turn: feet, legs, hips, hands, arms, shoulders, torso, neck, head. Close your eyes and mouth. Be still.

Bring your attention to your breath and let it settle into a natural, regular rhythm. Do not try to breathe in any particular way; simply observe the movement of the breath in and out of the body. As you breathe in, the abdomen gently rises and as you breathe out, it sinks back down again. Gradually allow the out-breath to become a little longer than the in-breath, and be aware that as you breathe out, the body becomes a little more relaxed, a little heavier, seeming to sink into the floor.

Keeping your focus on the breath, count your breaths up to 20 and then back down again. One is an in-breath, two an out-breath, and so on. On the way down from 20, when you reach 10, only count your out-breaths until you reach zero. If you are distracted by thoughts, sounds, or other sensations, return to the breath and the counting.

When you reach zero, let go of the focus on the breath and be aware of the space in front of your eyes; the stillness and the silence. Notice how quiet the breath is, how quiet the mind is. Everything you hear and feel is taking place within your consciousness – you are aware of everything, but there is no need to focus on anything. You are wholly in the present moment – just being. Enjoy this feeling of peace and quiet for as long as it lasts.

Become aware of your body again, the floor beneath you, and the walls around you. Be aware of sounds outside and inside the room. Wriggle your toes and fingers, your hands and your feet. Take one or two deep breaths to bring more energy into the body, and then stretch your arms over your head and give a long sigh. Turn onto your right side and stay there with your eyes closed for a few moments, and then slowly sit up and open your eyes.

programs

Here are seven programs for those times in the day when you need a quick lift. Remember to take time to center yourself before doing them and time to absorb their effects afterward. Their benefits will be greatly enhanced if you remember that yoga is also about lifestyle and attitude.

1 start the day right

Liven yourself up before breakfast with Sectional Breathing (see p.149) or Mock Inhalation (see p.226), some breathe-and-stretch exercises (see p.150), followed by these postures. For a more dynamic start to the day, do the Sun Salute (see p.176) before the postures. Early morning is also a good time for Meditation (see p.230).

1 **Triangle** (see pp.182–183)

2 **Wide Leg Forward Bend** (pp.190–191)

3 **Lunge Warrior** (see pp.166–169)

4 **Downward Dog** (see pp.170–171)

5 **Hare** (see pp.200–201)

6 **Sitting Twist** (see pp.222–223)

2 midmorning boost

Instead of grabbing a coffee, cigarette, or cookie, try these postures. In the workplace you may be able to find a quiet space to do them. If not, some breathe-and-stretch exercises (see p.150) can be done at your desk. If time is really short, Audible Breath (see p.224) or Forced Exhalation (see p.228) will leave you energized, your mind clear.

1 Warrior (see pp.164–165)

2 Bent-Knee Side Bend (pp.184–185)

3 **Upward Dog** (see pp.174–175)

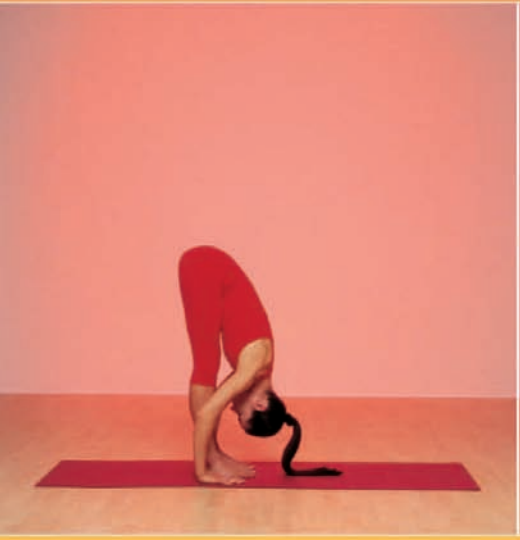
4 **Hare** (see pp.200–201)

5 **Camel** (see pp.202–203)

6 **Sitting Twist** (see pp.222–223)

3 evening recharge

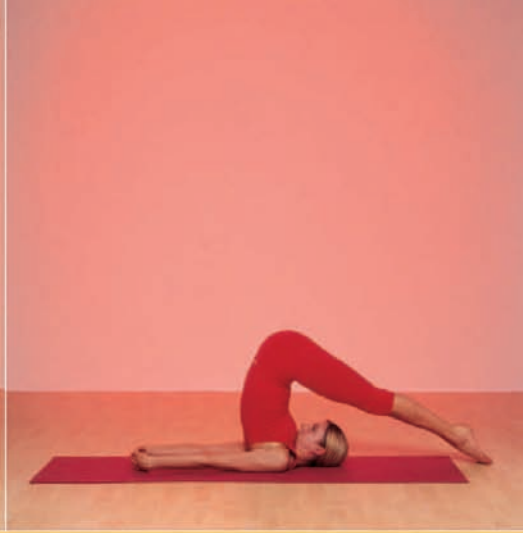
After a hard day at work or a long day with the children, stretch out those tired muscles and stiff joints with these postures. Do some breathe-and-stretch exercises (see p.150) first, and practice Abdominal Breathing (see p.225) while in Supine Butterfly (see p.216), then relax. Early evening is also a good time to practice Meditation (see p.230).



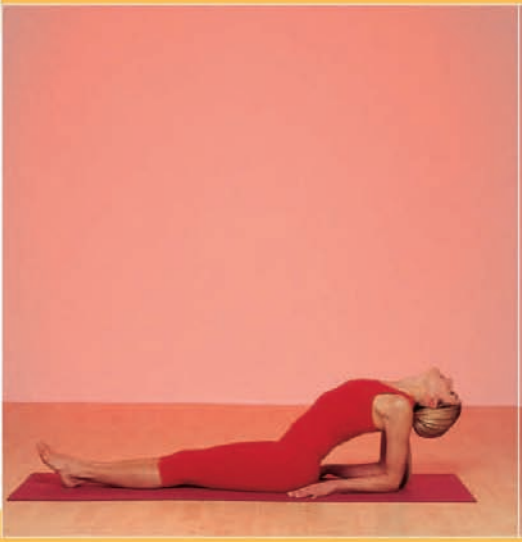
1 Forward Bend (see pp.162–163)

2 Downward Dog (see pp.170–171)

3 **Lunge Twist** (see pp.188–189)



4 **Plow** (see pp.210–211)



5 **Easy Fish** (see pp.212–213)

6 **Supine Butterfly** (see pp.216–217)

4 prepare for the next day

Here is a routine to stretch the body gently and counter the pull of gravity just before going to bed. In bed, do Abdominal Breathing (see p.225) first, then relax, repeating the following affirmation: *"My energy is strong"* (with palms on abdomen, then on ribcage, then fingers on top of breastbone); *"I am ready for life"* (arms out to side).

1 Triangle (see pp.182–183)

2 Wide Leg Forward Bend (pp.190–191)

3 **Shoulder Stand Against a Wall** (pp.204–207)

4 **Easy Fish** (see pp.212–213)

5 **Sitting Forward Stretch** (see pp.214–215)

6 **Sitting Twist** (see pp.222–223)

5 midweek boost

Here is a strong sequence to pick you up when your energy starts to flag in the middle of the week. Start with Sectional Breathing (see p.149) and some breathe-and-stretch exercises of your choice (see p.150). Then do the postures shown here. Try using Audible Breath (see p.224) throughout the program.

1 Warrior (see pp.164–165)

2 Runner's Stretch (see pp.186–187)

3 **Crocodile** (see pp.172–173)

4 **Downward Dog** (see pp.170–171)

5 **Upward Dog** (see pp.174–175)

6 **Hare** (see pp.200–201)

6 weekend energizer

Here is an invigorating routine that will set you up for the whole weekend. Integrate the postures with breathe-and-stretch exercises (see p.150), Sun Salute (see p.176), and the Kneeling Stretch sequence (see p.218). Add some breathing practices (see p.224) and the relaxation practice (see p.232) for a longer session.

1 Forward Bend (see pp.162–163)

2 Triangle (see pp.182–183)

3 **Lunge Twist** (see pp.188–189)

4 **Camel** (see pp.202–203)

5 **Full Shoulder Stand** (see pp.208–209)

6 **Sitting Forward Stretch** (see pp.214–215)

7 long journey reviver

To reduce the stress of long journeys, take frequent breaks during trips to breathe and stretch or to center yourself. At the end of a long journey, the Side-Bending sequence (see p.192), the Kneeling Stretch sequence (see p.218) and the following postures will all help you to unwind. End the program with the relaxation practice (see p.232).

1 Forward Bend (see pp.162–163)

2 Lunge Warrior (see pp.166–169)

3 **Downward Dog** (see pp.170–171)

4 **Camel** (see pp.202–203)

5 **Sitting Twist** (see pp.222–223)

6 **Supine Butterfly** (see pp.216–217)

young

staying young

The holistic practices of yoga work on the physical, mental, emotional, and spiritual planes, helping you live more positively and actively, and enabling you feel and look younger for longer.

The continuing improvements that are being made in medical science, health care, and living conditions mean that people today are living longer than at any time in the past. A man born in the US at the start of the 21st century has a life expectancy of about 75 years, while a woman can expect to live to about 80 – this is nearly twice as long as someone born in the mid-19th century. Because we now live longer, we have become more concerned about growing old. There is a desire to hold back the passage of time, to find ways of staying young so that we can enjoy our longer lives to the full.

Yoga can help us achieve this goal through its holistic approach to healthy living. Its combination of physical postures, breathing practices, relaxation, meditation, and lifestyle guidance can help you to stay physically fit, mentally alert, as well

HEALTH CONCERNS

If a health practitioner has advised you not to over-exert yourself physically, or if you have any other health concerns, seek advice from a qualified yoga therapist or teacher (see p.495) before using this book. Page 9 provides basic advice for some common medical conditions and, where appropriate, "Take Care" advice and "Alternatives" are given for individual practices. If you are pregnant, or have recently given birth, ask a suitably qualified yoga teacher which practices would be appropriate for you.

Practicing yoga regularly will nourish your mind, body, and spirit, helping to keep you fit and healthy, and making you feel and look younger than your years.

as help you to live more positively and more mindfully. By practicing yoga, you will be able to retain your vitality as you get older, and stay young at heart.

Unlike some forms of exercise, yoga is suitable for everyone. Whatever your age or level of fitness, yoga is a very safe form of exercise, provided you work within your limits. However, please read through the text below left, entitled "Health Concerns," before you begin your practice, because some yoga practices can be physically demanding.

What is aging?

Aging is a natural process, but there are different ways of looking at it. First, there is the passage of time itself: chronological aging. Then there are the physical changes that take place: biological aging. Finally, there is the matter of how we see ourselves: psychological aging.

Chronological age is often a poor guide to how old a person looks or feels. Everyone knows people who seem incredibly young for their age and others who almost seem to have been born old.

Biological aging follows a fairly predictable course. Our bodies tend, naturally, to be in prime condition when we are in our 20s. From then on, there is a slow, initially imperceptible but nevertheless inevitable, process of decline from that peak. Some of the key physical changes are noted below:

HORMONES AND MENOPAUSE

Generally speaking, our hormonal systems show comparatively few major changes with age. The big exception is the sharp fall in estrogen levels in the female body at the menopause, which typically occurs between 45 and 55.

The majority of physical side-effects experienced in the run up to menopause, such as hot flashes, night sweats, headaches, joint and muscle pains, and fatigue, are transitory (although they may not seem so at the time!), and very few women experience all of them. However, there are two important long-term side-effects. The first is that falling estrogen levels have been linked to osteoporosis; in extreme cases this can cause spinal curvature, the collapse of spinal vertebrae, and an increased risk of fractures. The second important side-effect is the loss of the relative protection from heart disease and strokes that women enjoy while their ovaries are still producing estrogen.

There is a great deal a woman can do for herself to help minimize the side-effects of menopause. She can eat a balanced diet and have a healthy, moderately active lifestyle that incorporates yoga practice.

- From about the age of 30, bones start to become thinner, and there is a gradual loss of density and strength as the body's ability to absorb calcium declines.
- As early as 20, joint flexibility starts to decline as ligaments become less elastic, and for many, daily wear and tear on joint surfaces leads to arthritic changes later in life, which further inhibit joint mobility.
- In our 30s, muscle size, strength, and flexibility start to decline. Tolerance for exercise diminishes, and recovery from injuries takes longer and is less complete.
- Changes to heart muscle and blood vessels make the cardiovascular system progressively less efficient in responding to the demands of exercise. Cardiovascular disease rates rise sharply after the age of 50.
- Loss of lung tissue elasticity and lung damage, caused by, for example, pollutants, reduce respiratory capacity and exercise performance. Ribcage rigidity and poor breathing habits often compound these changes. Chronic bronchitis and other chronic obstructive airway

diseases affect about 17 percent of men and 8 percent of women in the 40–65 age group.

• All our senses are affected with age; we become more far-sighted from about 40 on, less able to hear high-frequency sounds, and our sense of balance becomes less sure.

• By the age of 65 we have lost about 10 percent of the brain cells we had as a young adult. Short-term memory tends to suffer first; for example being unable to repeat telephone numbers and recall events that happened only recently. Our reflexes also become slower.

• The immune system gradually becomes less efficient at combating disease, and we become more susceptible to viruses and bacterial infections. Rates for many types of cancer start to rise after the age of 50.

Why do we age?

Biological aging occurs primarily because, as the years pass, our body's cells become less and less efficient. The genetic material within each cell suffers increasing damage, which the cell finds harder and harder to repair. The activity of special molecules, known as free radicals, is believed to be particularly important in causing cell damage. Many free radicals are produced as a result of natural chemical processes in the body, but environmental pollution, smoking, and (possibly) additives in foodstuffs are also important influences. The body has excellent defenses against free radicals, but as you grow older, they become less effective.

Although biological aging is inevitable, the pace of changes varies enormously between individuals. To some extent, it depends on your genes; some people have more robust defense and repair mechanisms than others. Genetic factors also play a part in many age-related conditions, such as high blood pressure, coronary heart disease, osteoarthritis, late-onset diabetes, and some cancers. But hereditary predisposition does not imply inevitability. Lifestyle factors, such as the extent to which you exercise, whether or not you smoke, the quality of your diet, staying mentally alert, and how you handle stress, have a very important

role in determining the pace at which your body ages. The same is true of environmental factors. To give a very simple example, the rate at which your skin ages is greatly influenced by how much you are exposed to the sun and to environmental pollutants.

Your psychological age can be affected by your chronological age – but only if you let it – and by how your body has fared with time. But your attitudes can also have a powerful influence on how you age physically. If you think of yourself as old simply because you have reached a certain age, you are more likely to age more rapidly physically as well as mentally. Attitude is all-important. A positive outlook on life, a cheerful disposition, feeling good about yourself, appreciating the world and other people, having goals, and having a flexible attitude can all help you to stay young at heart.

How can yoga help?

Yoga can make an important contribution to helping people stay feeling young and healthy.

Many studies in recent years have highlighted the benefits of moderate exercise: improved aerobic endurance, balance, and coordination; stronger muscles, increased flexibility, and better reaction time; and an overall

Yoga can bring a sense of inner calm, which will help you to face life's many challenges positively, and to get more out of life as the years pass.

feeling of physical and mental well-being. Medical advice is that you should exercise moderately for a minimum of 30 minutes a day. Three sets of 10 minutes is just as good as 30 minutes, and for those who lead sedentary lives, this approach may be better when first practicing yoga.

Yoga's combination of physical postures and breathing and relaxation practices helps to nourish all the systems in our body. Its mix of moving and held postures is particularly suited to relieving muscular tension and increasing flexibility, muscular strength, and joint mobility. Weight-bearing poses can help to maintain strong bones. Improved posture leads to a more positive and youthful self-image.

Yoga can be used to develop aerobic stamina through dynamic sequences, such as the Sun Salute (see p.324). It is also completely compatible with other activities that provide cardiovascular exercise, such as walking, dancing, and swimming. Yoga encourages you to respect your body by eating healthily and making sure you get enough rest.

Lifestyle changes

Yoga is not just a particular form of physical exercise. The fundamental aim is to enable you to find the calm, quiet core of your being – to "still the thought waves of the mind," as Patanjali, a great yoga master, put it so well more than 2,000 years ago. All yoga practices, and in particular breathing practices and meditation, can help you to let go of physical, mental, and emotional distractions.

Bringing yoga into your daily life encourages you to live in the present, to be with "what is" and, as a consequence, to be able to see more clearly and act mindfully, giving your full attention to whatever you are doing or to whoever you are with.

To do this, you need to be prepared to examine your habitual patterns of behavior. For example, how often do you label and categorize yourself and other people in agist terms and act according to preconceived stereotypes? How often do you give in to negative emotions, such as anger, fear, and envy? Do you have a tendency to cling to the past and what might have been for too

long, or live hoping (or fearing) about what the future might bring?

Yoga encourages you to let go of these energy-sapping attitudes and emotions and replace them with more positive attitudes. For example, treating other people with respect and compassion; being honest with yourself; shunning feelings of jealousy and being content with the simple things in life, rather than always seeking to possess more.

Women and yoga

Developing a positive approach to life, as advocated by yoga, keeping active through physical yoga practices, and finding your calm center through relaxation and meditation can be particularly helpful for women in the run up to and during menopause.

For many women, menopause can be a potentially dispiriting time. Aside from the physical side-effects

MAXIMS FOR LIVING

A positive relationship with the world and with yourself was of fundamental importance to Patanjali. Try to live by his maxims (interpreted below). They will help you to live more positively, allowing life energy to flow more freely through you.

In your relationship with the world around you, you should:

- Avoid causing harm; endeavor to be compassionate.
- Be honest in all your thoughts, words, and actions.
- Never steal from others. This applies not only to possessions but also to wasting other people's time, energy, and goodwill.
- Be faithful and selfless in all your personal relationships.
- Avoid acquiring or holding on to material things (or people) for the sake of it, or for selfish reasons.

In relation to yourself, you should work to:

- Develop purity in mind, body, and spirit – inner and outer cleanliness.
- Pursue simplicity in life, and try to make the most of whatever life brings.
- Develop physical and mental resolve (through yoga practices) to withstand difficulties and disappointments in life.
- Learn to identify with your inner self rather than with your habitual ways of acting and seeing situations.
- Accept that there is more to life than the material world, and be respectful of the intelligence underpinning life.

(see p.254), menopause can be emotionally challenging. If it is seen as an unambiguous signal of a loss of role in life – that is, the loss of ability to conceive – and of embarking on the downward path of aging, then the experience and long-term effects are likely to be negative. If, on the other hand, women refuse to accept this stereotype imposed by society, and menopause is viewed as simply another stage in a life that has many years yet to run, it can provide opportunities for increased independence and new directions. The experience is then more likely to be positive, and not a milestone in the aging process.

The right attitude

Having the willpower to exercise regularly is not easy for many people, and changing attitudes, as advocated by yoga, can be even more challenging. But it is possible to make these changes, and the benefits of doing so in terms of increased vitality, peace of mind, and maintaining a youthful outlook on life, make it well worth the effort.

HOW TO USE THIS SECTION

Young is divided into three sub-sections. **Foundations** provides guidance on doing yoga and some basic breathing and preliminary stretches. Familiarize yourself with these first before moving on to **Building Blocks**. This contains a selection of postures and breathing practices, as well as a simple meditation and relaxation technique. Work through these postures gradually, selecting one or two to work on at a time, rather than trying to do them all in at once. Look at the photographs first to get a feel for the overall shape of the posture. Then follow the accompanying step-by-step instructions carefully. If you find a posture difficult to do, work on the preliminary steps first or try the alternative, if one is given.

Programs combines selected postures and other practices in a series of short yoga programs designed for particular situations and needs. Make sure you understand how to do the postures first before trying these programs.

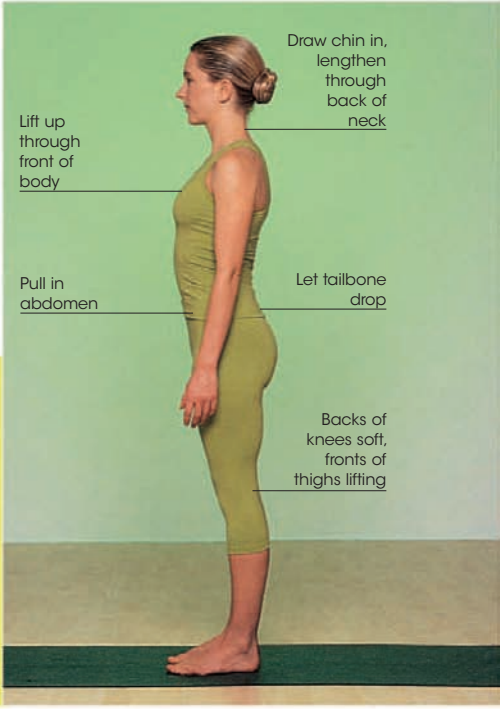
Yoga is traditionally learned from a teacher, and you will benefit from going to a class, if you are not already doing so. Organizations that can help you find a qualified teacher are listed on page 495.

the basics

At the beginning of every posture, and linking some of them, is a basic standing, sitting, or lying position. Some examples of each, together with the use of some props, are shown here. If your body is not very flexible, or if you have problems with your balance, it can be very helpful to use a prop, such as a block, belt, or pillow, to make sure you do not strain your body.

Good posture

The basic standing position can be regarded as a posture in itself, encouraging stability and awareness. Learning how to stand well can also help with postural problems. Sitting comfortably, with your spine and head erect, is essential when doing breathing practices and meditation, enabling you to remain focused throughout. Being comfortable when lying down is crucial for relaxation.



STANDING

Stand up straight with your feet parallel, hip-width apart, and your ears, tops of shoulders, hips, and ankles in line. Press your feet to the ground to lift upwards through the body. Broaden across the top of the chest. Feel balanced in all directions, with your head held as if it is suspended by a thread from the ceiling. Look ahead, relax, and breathe easily.

EASY SITTING

This basic posture is good for breathing practices. Cross your shins with each foot under the opposite knee. Position yourself on the front edge of your sitting bones, with the spine long and the head erect. Allow the hips to relax. If your knees are higher than your hips, sit on a block or another support.

KNEELING

If you find basic cross-legged sitting uncomfortable, sit on your heels with the tops of your thighs facing the ceiling. If you are going to be kneeling for a long time, place your knees and feet hip-width apart and sit on blocks, a folded blanket, or a bolster. Keep your spine long and head erect. Rest your hands on your thighs or in your lap.

LYING ON BACK

This posture is commonly used for relaxation. Lie on your back with your feet about hip-width apart, feet relaxing out, your arms slightly away from the sides of your body with the palms facing up, and the center of the back of your head resting on the floor.

FOAM BLOCK

If your hips are stiff or your back tends to collapse when you are sitting, a foam block may help, as in Sitting Stretch (see p.340). If your neck is uncomfortable when you are lying on your back, you may find it useful to have a block as a support under your head.

BELT

One of the most common uses for a belt is as an extension of the arms to help you avoid straining your back. In preliminary stretch, Hip Opener 3 (see p.283), use a belt to help keep the spine long and the shoulders relaxed as you take your knees toward the floor.

PILLOW

A pillow can be used instead of a block to sit on or to rest your head on. It can also be used as a support to help relieve muscular tension. In Sitting Stretch (see p.340) a pillow could be placed under the bent knees to help relieve tension in the inner thigh muscles.

BOLSTER

A bolster can support you in various ways. For example, resting the upper body on a bolster in this wide-legged version of Child (see p.339) is very relaxing. Lying on your back with a bolster under the knees can be helpful if you have back problems.

BLANKET

A blanket can be used to keep warm in meditation and relaxation, and as a support, for example in the preparatory stage for Shoulder Stand Against a Wall, as shown here. A folded blanket, 3 ft (1 m) square, is positioned under the shoulders, so that in the final pose (see p.331) the shoulders are at the edge of the blanket but the neck is off it.

CHAIR

Apart from being used to sit on, a chair can be used to modify postures to provide support for different parts of the body. For example, in Plow (see p.336), you can use a chair if you lack the flexibility to take your feet to the floor. A chair can also be used for support if your balance is poor (see Tree on p.303).

foundations

This section shows you basic standing, sitting, and lying postures. It provides breathe-and-stretch exercises to loosen your body and help you coordinate breath with movement. Breathing and centering practices are also given, bringing awareness to your yoga practice.

centering

When you practice yoga, your attention needs to be on the present moment. Centering is a simple technique to help you let go of distracting thoughts and emotions and bodily tensions.

You can center yourself by standing, sitting, or lying down quietly for a few minutes in a comfortable position. Simply observe your breath, letting it settle into a quiet, natural rhythm. As you do so, the activity in the mind will lessen. However, if your body is stiff and your muscles tense, you might find it helpful to do the supine centering relaxation practice detailed below before undertaking any postures.

becoming centered

1 Lie on the floor with your knees bent, feet hip-width apart. Place your arms away from the sides of the body, the backs of the hands on the floor, and the fingers gently curling inward. Position the center of the back of the head on the floor, and relax the neck. If your neck feels strained, try placing a small support (for example, a block, or thin pillow) under your head.

2 Allow your lower back to sink toward the floor. Slide your feet along the floor to stretch the legs out. Let the legs relax and the feet fall out. (If you feel discomfort in your back, keep your knees bent.) Close your eyes. Be aware of how balanced your body feels. Are the different parts of the body sinking into the floor equally or are there tensions or restrictions in some areas?

3 Slowly take your attention to each part of your body and let it relax. Start with the feet and work slowly up through the lower legs, upper legs, hips, buttocks, hands, lower arms, upper arms, chest, back, shoulders, neck, and face. Feel each part of the body releasing down to the floor in turn. Then become aware of your breath. Make sure you are breathing through your nostrils. Do not try to control the breath or change it in any way; simply observe its movement in and out of the body. Let the breath settle into a slow, deep, natural rhythm. Each time you breathe out, be aware of letting go. Feel the body "sinking" into the floor, but at the same time feel that it is supported by the floor.

4 Bring your attention to your out-breath. Allow it to become a little longer than your in-breath. Now count 10 out-breaths. The breath should remain calm and unhurried as you count. When you reach zero, gently turn the head from side to side three times. Then, on an in-breath, stretch your arms up and over your shoulders to the floor behind you. Stretch through to the fingertips, and press your lower back to the floor and your heels gently toward the wall in front of you. Relax into the stretch for a few breaths. Then, on an out-breath, bring your arms back down to your sides. Let go completely. Slowly turn onto one side of your body, pause for a few breaths, then slowly sit or stand up.

basic breathing

Breathing well is of fundamental importance to our physical, mental, and emotional health. In yoga, the breath is how vital energy – "the breath behind the breath" – enters the body.

Breathing provides oxygen for the metabolic processes from which we derive the energy to move, think, and feel. It also carries away carbon dioxide, the main waste product of metabolism. Physical tension in the respiratory muscles between and around the ribs can cause tightness in the chest, and even chest pain. Relaxed breathing techniques will release tension from the whole of the upper body, including the neck and shoulders. This will improve your ability to adjust your breathing to meet changing requirements.

The breath also provides a powerful link between mind and body. By controlling your breathing patterns – for example, the rhythm and depth of breathing, the length of the out-breath, and the balance between the right and left nostrils – you can influence your physical, mental, and emotional states.

Good breathing habits

Yoga encourages breathing through the nose, full use of the diaphragm, a slow, smooth breathing pattern, and coordination of movement and breath. Opening movements, such as back bends, are practised on an in-breath, and closing movements, such as forward bends, on an out-breath.

The breathing practice on the next page will help develop awareness of the action of respiratory muscles and encourage good breathing habits. It can be done standing or sitting, as well as lying down.

sectional breathing

Sectional breathing helps unlock energy blocks associated with poor breathing habits. After completing Step 3, combine all three steps to produce full, continuous in-breaths and out-breaths.

1 Lie down with your knees bent, your palms resting on the abdomen. Breathe into your hands, feeling the abdomen swell out and the fingers move apart as you breathe in. Then, feel the abdomen sink back as you exhale. Take six even breaths.

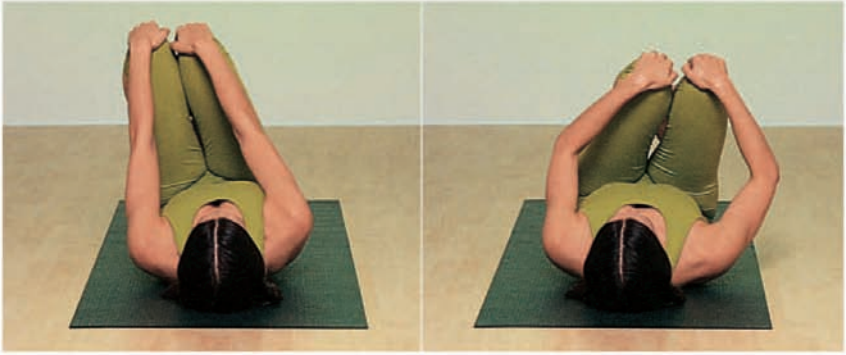
2 Bring your hands to your lower ribs, with your fingers to the front and thumbs on the back ribs. Feel the ribs expand into the hands on the in-breath and relax back inward as you exhale. Take six breaths like this.

3 Place your fingers on the collarbones, in front of your shoulders. Breathe in and feel the top of the chest expand and the fingers rise up toward the head. As you breathe out, feel the chest and fingers sink back down. Take six breaths like this.

preliminary stretches

These gentle stretches will help ease stiff muscles and joints before you go on to more demanding postures. They will also help you become more aware of coordinating movement with breath.

knee circling



1 Lie on your back with your knees bent, legs together. Lift your feet off the floor and place your hands on your knees. Breathing easily, circle the knees clockwise. Keep the circles small to begin with and the movement slow and smooth.

2 Keeping the breath and upper body relaxed, slowly make the circles larger as the back muscles release. After a while, change direction. Start with large circles and gradually make them smaller. Release the feet back to the floor. Relax.

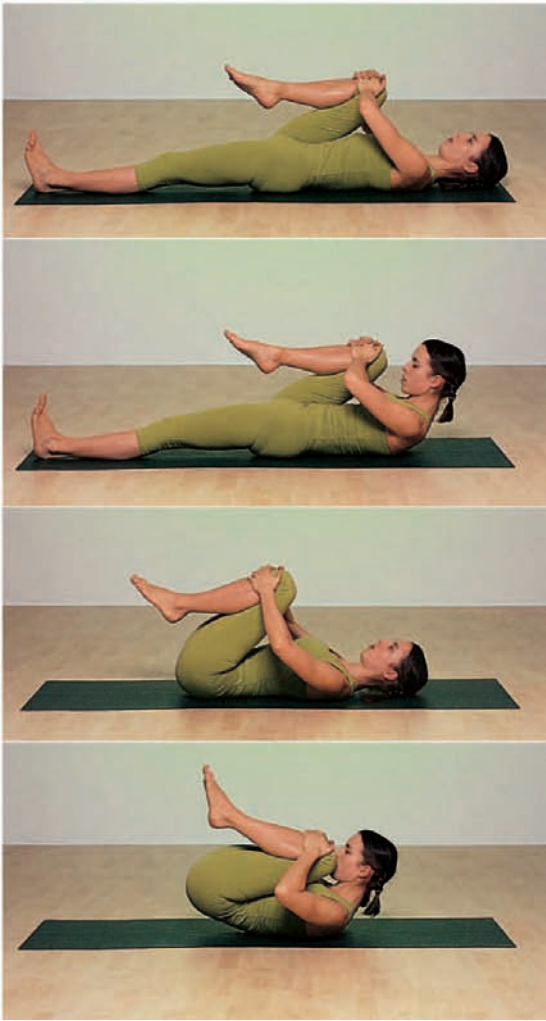
head to knee

1 Lie on your back. Bring your right knee over the chest and clasp your hands just below the knee. Keeping the shoulders relaxed, ease the knee toward the chest on the out-breath.

2 Push the left heel away. On an out-breath, draw the abdomen in, tuck in the chin, and lift the head and shoulders off the floor. Breathe easily. After several breaths, lower the head to the floor and release the leg. Repeat with the left leg.

3 Bring both knees over the chest. If you have a back problem, do this one knee at a time, or stay with Step 1 or 2. Clasp the hands just below both knees, and keep the shoulders down away from the ears.

4 On an out-breath, draw the abdomen in and lift the head toward the knees. Breathe into the lower abdomen and exhale fully. Stay for several breaths, then lower your head slowly to the floor and release the knees. Relax.



hamstring stretch

1 Lie on the floor with the legs stretched out in front. Lengthen the legs away from the hips and push through the heels.

2 Bring the right knee over the chest and clasp the shin with both hands. Slowly ease the knee closer to the chest on the out-breath. Push the left heel away.

3 Slide your hands to the back of the thigh. Extend the leg up, pressing the heel away from you. Breathe easily as you lengthen through the back of the leg. If your knee remains bent, try the alternative (see opposite).

4 If Step 3 is easy, slide the hands toward the foot. On an out-breath, ease the straight leg toward the chest. Hold the position, breathing easily. Bend the knee again and lower your leg to the floor. Repeat on the left.

alternative hamstring stretch

1 If your hamstrings are tight, bring the right knee over the chest and loop a belt around the sole of your foot, holding opposite ends of the belt on each side of the leg.

2 Extend the leg toward the ceiling. If your knee remains bent, allow the leg to come away from the upper body until it is straight. Push the heel away from you to lengthen through the back of the leg and feel the slight resistance against the belt.

3 Breathe easily, keeping the shoulders relaxed. On an out-breath, lift the arms and draw the belt toward your head, increasing the stretch through the back of the leg. Hold for several breaths. Bend the knee again to come out of the pose. Repeat on the left.

arm slide

1 Lie with your knees bent. Take your arms out to the side at shoulder level, palms facing up. Breathe easily, then breathe in deeply and exhale fully, drawing the abdomen back toward the spine. Keep the abdomen held in as you continue to breathe in and out.

2 On an in-breath, slide your right arm up toward your head and your left arm down beside your hip. Let the breath guide the movement, and try to keep the back of the hand and the forearm touching the floor all the way. Pause briefly.

3 As you breathe out, slide the arms in the opposite direction so the left arm is now beside the head and the right arm at your side. Again, pause briefly. Repeat up to 10 times, then reverse the sequence: breathe in as you take the left arm up beside the head and the right arm down to the side. To finish, relax the abdomen, stretch your legs out, bring both arms down, and breathe freely.

hip lift

1 Lie on your back with the knees bent, hip-width apart, and heels beneath the knees. Lengthen through the back of the neck and have the center of the back of your head on the floor. Place your arms by your sides, palms facing down. Draw the shoulders away from the ears. Take several deep breaths.

2 On an in-breath, press your feet into the floor and lift the hips off the floor, bringing your weight onto your shoulders but keeping the neck free. As you exhale, take your tailbone toward your knees. Lift again on the in-breath and extend on the out-breath. Then hold, breathing into the abdomen. Keep the legs strong.

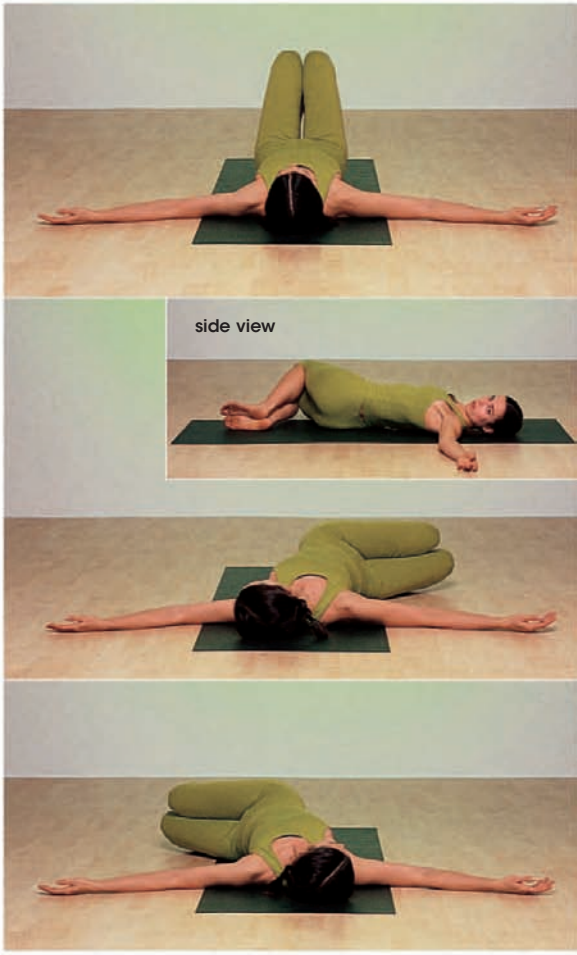
3 Come down slowly on an out-breath or, to take the pose farther, interlock your fingers behind your back and stretch the backs of the hands towards your feet. Hold the hips higher than the chest, the knees parallel, and your heels beneath the knees. Breathe deeply. To come out, release the hands and, on an out-breath, lower the back to the floor, one vertebra at a time. Relax for a few breaths.

lying twist

1 Lie on your back with your knees bent, legs and feet together, and arms out to the side at shoulder level, with the palms facing up. If there is any discomfort in your neck, place a block or thin pillow under your head. Breathe easily.

2 As you exhale, let your knees drop to the right, keeping the knees and inner ankles together, and the outside of your right foot on the floor. At the same time, turn your head to the left and press the left shoulder into the floor. Do not worry if your knees do not reach the floor. Never try to force them down.

3 On an inhalation, bring the knees and head slowly back to face the ceiling. On the out-breath take the knees to the left and the head to the right. In the twist, relax and focus on the movement of the breath in your abdomen and ribcage.



joint mobilization

TOES

Rise up and down on your toes a few times. Then roll onto the front of one foot to gently press the toes into the floor. Hold for a few breaths, then repeat with the other foot.

ANKLES

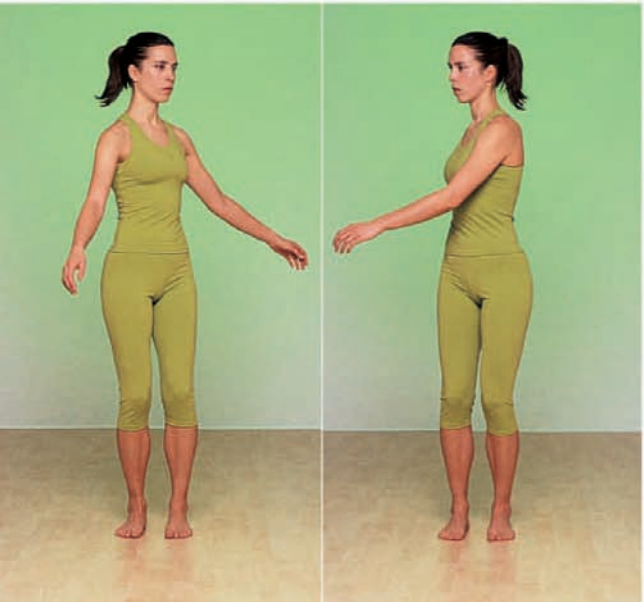
Lift one foot off the floor and rotate it gently in both directions, describing large circles with the big toe. Repeat with the other foot. Keep the supporting leg as still as possible.

KNEES

Stand with the feet and legs together. Bend the knees and hold onto the kneecaps with your fingers pointing down. Rotate your knees 10 to 20 times clockwise and then 10 to 20 times counterclockwise.

HIPS

With the feet about hip-width apart and your hands on your hips, circle the hips clockwise and then counterclockwise 10 to 20 times each way. Try to keep your knees still.

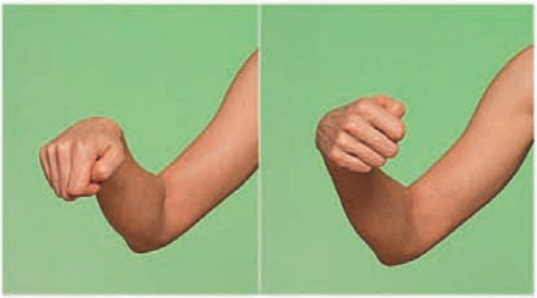


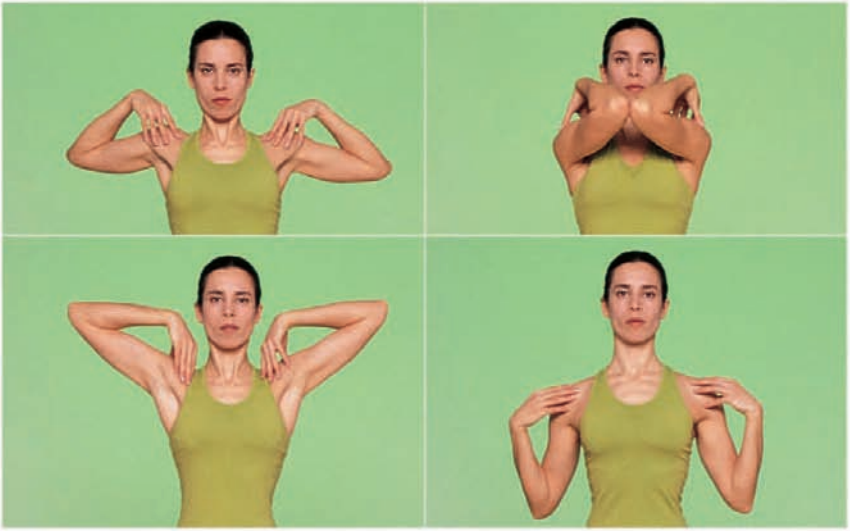
TORSO

Stand with your feet hip-width or more apart. Swing the arms freely from side to side, allowing the upper body to turn with the arms. Start with small, slow movements and then allow them to become larger and faster as the momentum builds. Build up cautiously if you have back problems.

WRISTS

Make fists with both hands, tucking the thumbs in. Holding the arms out in front of you and keeping them still, circle hands and wrists clockwise and counter-clockwise up to 10 times. Make the circles as smooth and as large as possible.



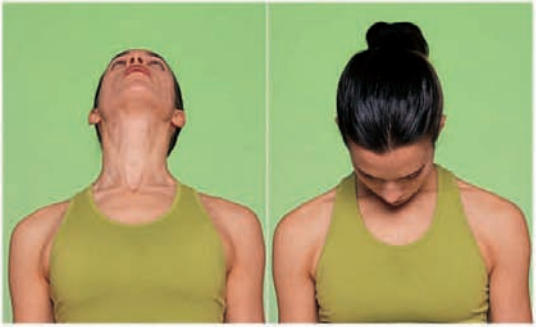


SHOULDERS

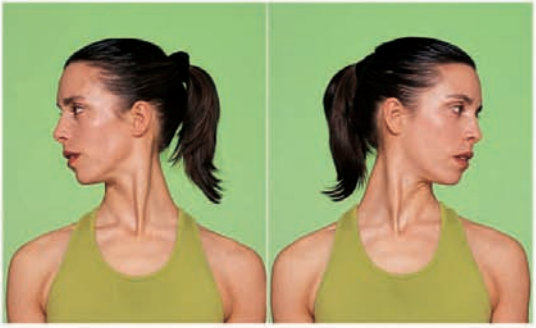
Standing, bring your fingertips onto your shoulders. As you breathe in, bring the elbows together in front of you and, keeping them together, lift them up. As you exhale, circle the elbows out, back, and down. On the in-breath, bring them forward and together again, and repeat Steps 2 to 4 five to 10 times.

NECK

Stand or sit looking straight ahead, and draw your chin in slightly. On an out-breath, take your right ear slowly towards your right shoulder. Hold for three slow breaths. Feel the stretch. Come back up on the in-breath. Repeat on the left side.



On an out-breath, take your chin toward the ceiling (but do not arch the neck back). Hold for three breaths. Come back on the in-breath. Then lower your chin toward your chest on the out-breath. Hold for three breaths. Come back up on the in-breath.



On the out-breath, turn your head slowly to the right, keeping your gaze at the same level throughout. Stay for three breaths. Come back to center on the in-breath and repeat on the left. Come back to center on an in-breath and breathe easily.

hip opener 1

1 Lie on your back with your legs stretched out, arms by your sides. On an in-breath, draw your right leg up, sliding your foot along the floor until it is close to your buttock.

2 Bring the sole of the right foot against the left inner thigh as you lower the right knee toward the floor, pressing down gently with your right hand, if you need to. Use your left hand to help keep your left hip on the floor.

3 Keeping your left buttock on the floor, relax with your arms out to the side and breathe easily. To come out, raise the knee to vertical again on an in-breath and slide the foot along the floor to stretch the leg out. Repeat on the left side.

4 To extend the final position, bring the palms of your hands together on your chest and stretch the arms over your head. To come out, lower the arms to the side first, and then raise the knee and slide the leg away.

hip opener 2

1 Lie on your back with the knees bent and hip-width apart. With your arms by your side, draw the shoulders down away from your ears. Make sure the center of the back of your head is on the floor.

2 Bring your right leg across your left thigh, so that the ankle joint clears the leg. Gently push the right knee away from you with your right hand. Hold your right foot steady with the left hand.

3 Bend the left leg toward you as you continue to push gently against the right knee with the right hand. Slowly swinging the left lower leg up and down will increase the stretch through the right buttock.

4 For a stronger stretch, slide the right hand between the legs and pull the left shin toward you with both hands (alternatively, use a belt). Stay relaxed and breathe easily. Release slowly and repeat on the left.

hip opener 3

1 Sit with your legs stretched out. Press down onto the hands on each side of the hips to lengthen through the spine. If you cannot keep your legs straight, sit on a block.

2 Bring the soles of the feet together and pull them up as close to the groin as you can. Hold the feet with the hands. Breathe in and lengthen through the spine.

3 As you exhale, allow the knees to sink out to the side and down. If you are less flexible, try pressing down gently on the inner thighs with your hands. Breathe easily.

4 If you are more flexible, open the soles of the feet to the ceiling to bring the knees closer to the floor. To come out of the pose, raise the knees and stretch the legs out.

building blocks

These postures and practices will help release your inner strength and vitality. Work through them slowly, but not all at once! Become familiar with the steps and overall shapes, and then focus on becoming balanced and at ease while you practice them.

standing side stretch

This quietly powerful sideways stretch for the upper body tones the postural and respiratory muscles, stimulating ribcage breathing and improving concentration. It is a good stretch to do at the office.

1 Stand up tall with your feet hip-width apart, arms by your sides, and shoulders relaxing down away from your ears. Look straight ahead and take several breaths.

2 On an in-breath, turn your right arm out, initiating the movement from the shoulder, so the whole arm turns, not just the hand.

3 Continuing to breathe in, extend the arm out to the side and up beside your head. Reach up for two or three breaths, keeping your weight balanced on both legs.

Arm extending up and out to side

Create space between hip and ribs

Weight balanced evenly on both legs

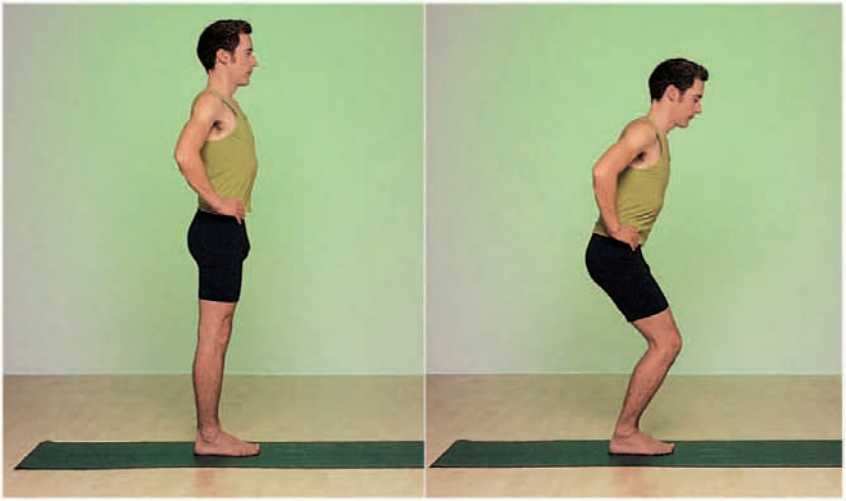
4 On an out-breath reach up and out to the left, keeping your head close to your arm. Press down through the sole of your right foot to stay balanced. Stay for several breaths, creating space between the top of the right hip and the ribs with each out-breath. Come back up on an in-breath and lower your arm on the out-breath. Repeat on the left side.

ALTERNATIVE

Sitting on a chair, circle your right arm up beside your head. Hold onto the seat with your left hand and lean to the right. At the same time, extend your right arm to the left. Stay for several breaths. Repeat on the left side.

lightning bolt

This energizing posture helps tone the back and the abdominal muscles. It develops flexibility in the hips, knees, and ankles, and helps keep the legs young and strong.



1 Stand with your feet together and your hands on your hips. Looking straight ahead, lift the top of the breastbone and breathe deeply.

2 On an out-breath, bend the knees and "sit back." Tuck the tailbone down, keeping your back long and your head in line with your body. Breathe deeply.

If it is hard to keep your arms extended with the palms together, interlock your middle, ring, and little fingers.

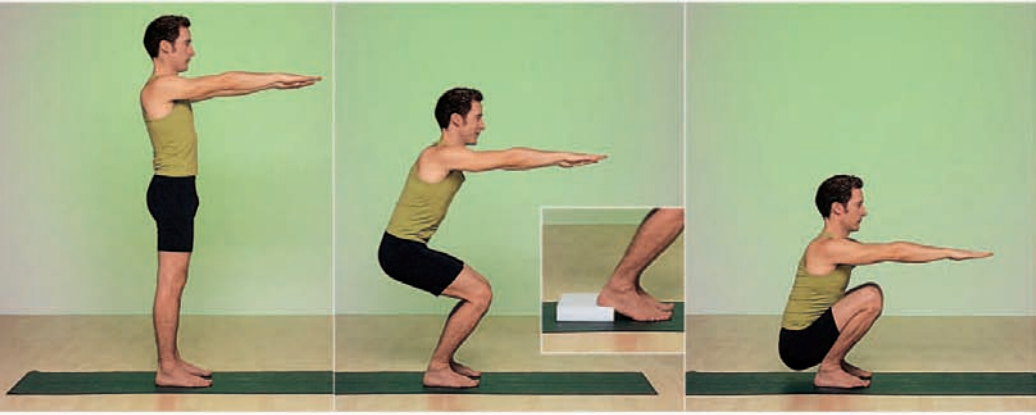
3 On an in-breath, sweep your arms out to the side and above your head, and bring the palms together. Keeping your hips moving back and down, stretch up through your back and arms. Stay for several breaths. To come out, breathe in, straighten the legs, and lower the arms.

TAKE CARE

- If you suffer from back pain, proceed cautiously.
- Keep your hands on your hips and hold the pose for a short time only if you have HBP or a heart condition.

full squat

Challenge the postural restrictions resulting from a life of sitting on chairs and promote flexibility in the hips, knees, and ankles. The squat also provides an invigorating stretch for the spine.



1 Stand with feet hip-width apart. Stretch the arms forward and breathe easily.

2 On an out-breath, bend your knees and start to "sit back." Keep your back long. If your heels lift off the floor, place a block under them.

3 Continue to "sit back," keeping your knees over your feet until you are squatting. Let your tailbone drop, keep lifting your breastbone, and breathe easily.

4

To work more strongly, interlock the fingers and stretch the palms above your head. Breathe steadily. To come out, breathe in deeply, press the heels down firmly, straighten the legs, and lower the arms.

TAKE CARE

- If you have back pain, proceed cautiously.
- Stop at Step 2 or do the alternative, using a chair if you have arthritic knees and hips, or are seriously overweight.
- Stop at Step 3 if you have HBP or suffer from a heart condition.

ALTERNATIVE

Rest your hands lightly on the back of a chair, table, or ledge to help you balance and stay in control as you "sit back" and as you come back up.

forward bend

Allow yourself to relax and let your spine release with this calming posture. Keep the feet rooted and the sitting bones lifting to help stretch tight hamstrings. Come out of the pose slowly.

1 Stand with your feet hip-width apart. Bring the palms together in front of your chest. Draw the abdomen in and take a few breaths. Feel yourself broaden across the top of the chest and grow taller.

2 As you breathe out, bend your knees and fold forward from the hips. Keep your back as long as possible.

3 With your knees still bent, bring your fingers to the floor. Allow the spine to relax and lengthen as gravity pulls your head and upper body toward the floor.

4 Letting the upper body hang from the hips, press the feet into the floor and lift your sitting bones up to lengthen through the backs of the legs. Breathing easily, stay for several breaths, keeping the stretch through the backs of the legs. ▶

TAKE CARE

- Proceed with caution and keep your knees bent if you suffer from back pain.
- Do the Alternative pose (see p.294) if you have HBP, heart disease, glaucoma, or a detached retina.

5 Bend both knees again and place your hands on your hips. On an in-breath, come up halfway, so that your upper body is parallel to the floor. Exhale and feel yourself lengthening through the spine.

6 On an in-breath, come all the way up, pivoting through the hip joints and keeping the back straight. As you breathe out, straighten your legs.

7 Slide your hands to the backs of your hips. As you breathe in, arch the back, opening the chest and lifting the chin (unless you have a neck problem). Stay for two more breaths, then straighten up again.

ALTERNATIVE

If you have HBP, heart disease, glaucoma, or a detached retina, do a Half Forward Bend using a chair. Pull the abdomen in gently, and keep the breastbone lifted and your head in line with the spine. Lengthen through the spine and the legs. Come back up on an in-breath, with the knees bent and a straight back.

forward bend & back arch

Ideal for the office, this combined forward and back bend helps relieve tension in the back. It also encourages a full out-breath to leave you feeling revitalized and focused.

1 Sit up straight on a chair with the feet hip-width apart, the soles flat on the floor (place a block under your feet if you need to). Rest your hands on your kneecaps. Take several breaths.

2 Breathe in deeply. Then, as you exhale, lower your head to fold forward over the thighs, allowing your back to round.

3 As you breathe in, press your hands against your knees and lift your head, arching your back as you come back up. Repeat the sequence freely in a smooth flowing motion.

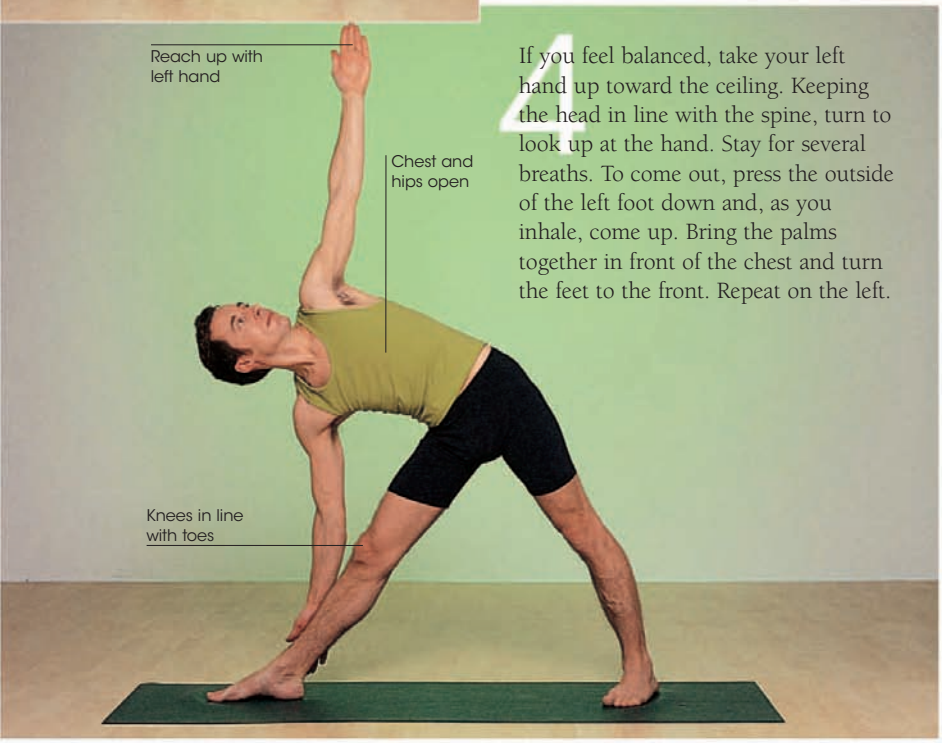
triangle

This posture builds strength and stability in the lower body and helps open the hips. Focus on your breath and feel the rejuvenating energy radiating out from your core through the arms, legs, and spine.

1 Start with your feet 3 ft (1 m) or more apart and your palms together, in front of your chest. On an in-breath, sweep your arms up and out to the sides at shoulder level. Relax the shoulders as you stretch through to the fingertips.

2 Turn your left heel out slightly and rotate the right leg from the hip until the toes point to the side. On an out-breath, reach out to the right and place the left palm on the back of the hips. Breathe in and push gently on the back to keep the left shoulder rotating back.

3 Exhaling, extend sideways to place your hand on your leg. Look forward. Take a few breaths as you press down through the outer edges of the feet to keep the hips open. Let the spine lengthen and the chest open.



4 If you feel balanced, take your left hand up toward the ceiling. Keeping the head in line with the spine, turn to look up at the hand. Stay for several breaths. To come out, press the outside of the left foot down and, as you inhale, come up. Bring the palms together in front of the chest and turn the feet to the front. Repeat on the left.

TAKE CARE

• HBP or heart disease: stop at Step 3. • Back problems: proceed with caution. • Neck problems: do not look up at hand.

side warrior

This traditional posture promotes strength in the lower limbs and lower back, and flexibility in the hips. Use it when you need to feel strong and confident, balanced and focused.

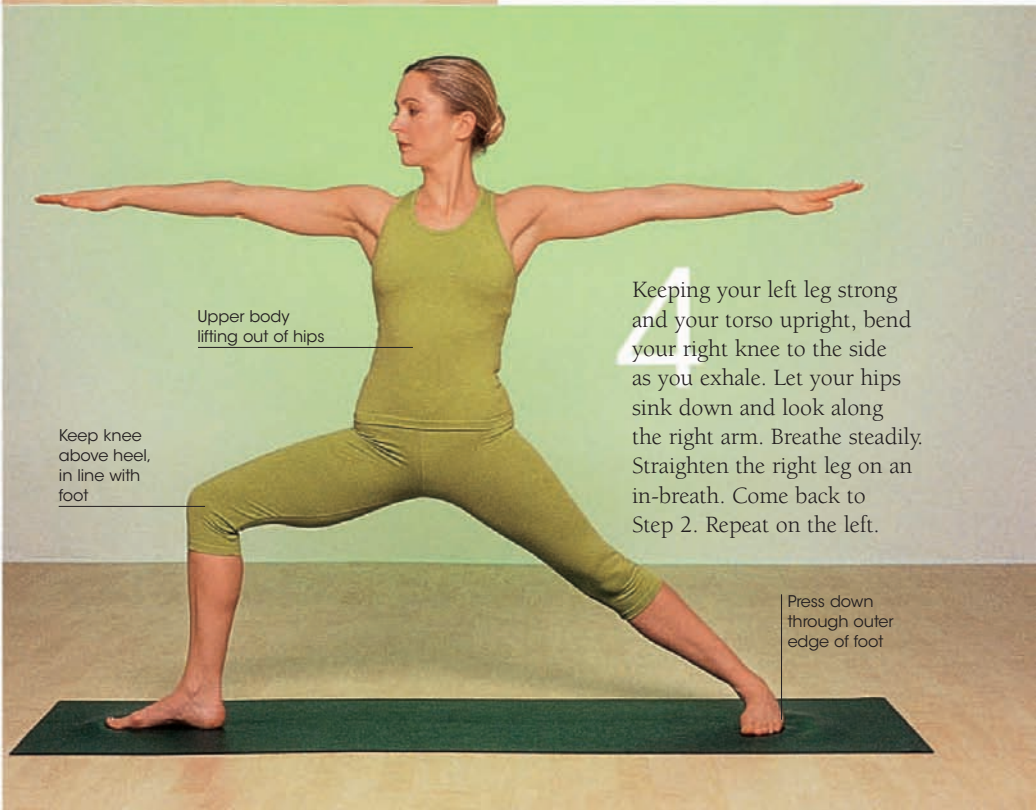
1 Stand with your feet together and bring your palms together, the thumbs touching the breastbone. With each in-breath, feel yourself lifting up through the body.

2 Step your feet 3 ft (1 m) or more apart. Keep the toes pointing forward. Press the outside edges of the feet down and feel the thigh bones rotate out. Let the tailbone drop. Breathe steadily.

TAKE CARE

• If you have HBP, or heart problems, stay in the posture for a short time only. • Proceed cautiously if you suffer from back pain.

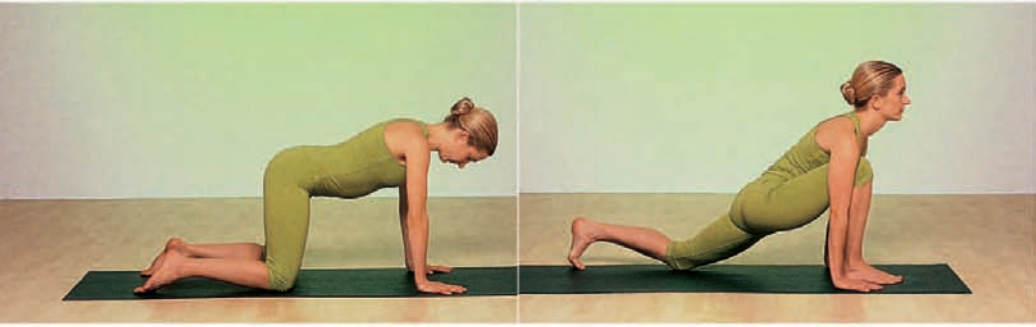
3 On an in-breath, sweep your hands up and out to the sides. Stretch through the arms and let the shoulders relax down. Pivot on the ball of the left foot to turn the heel out a little. Pivoting on the right heel, turn the right leg out, so the toes point to the side. Take several breaths and make sure you are balanced.



4 Keeping your left leg strong and your torso upright, bend your right knee to the side as you exhale. Let your hips sink down and look along the right arm. Breathe steadily. Straighten the right leg on an in-breath. Come back to Step 2. Repeat on the left.

lunge warrior

In addition to providing a powerful stretch through the thigh and hip of the back leg, this pose extends the spine and opens the chest. Feel the vitality of the posture as you breathe deeply into the ribcage.



1 Begin on all fours, with the knees beneath the hips and the feet hip-width apart. Press the palms to the floor and stretch through the arms, bringing the shoulders away from the ears. Take several breaths.

2 On an in-breath, step the right foot forward between your hands (you may need to come on to your fingertips). Come onto the ball of your left foot. With your right knee directly above the heel, stretch through the upper body and look ahead. Breathe easily.

TAKE CARE

- If you have back problems, stop at Step 2 to begin with, if necessary.
- Do not hold the final position for long if you have HBP or heart problems.

3 Keeping the hips level, allow the front of the left hip to sink forward and down. Bring the hands onto the right thigh and lift the torso slowly away from the thigh. Push the left heel away and let the knee hover just above the floor. (If this is too difficult, keep the knee on the floor.) Breathe deeply into the lower ribs.

Knee directly above heel

Heel pushing back

4 To come out, bring the left knee to the floor again and take the hips back to stretch through the back of the right leg. Slide your hands and right foot back to come into the all-fours position. Repeat on the left.

tree

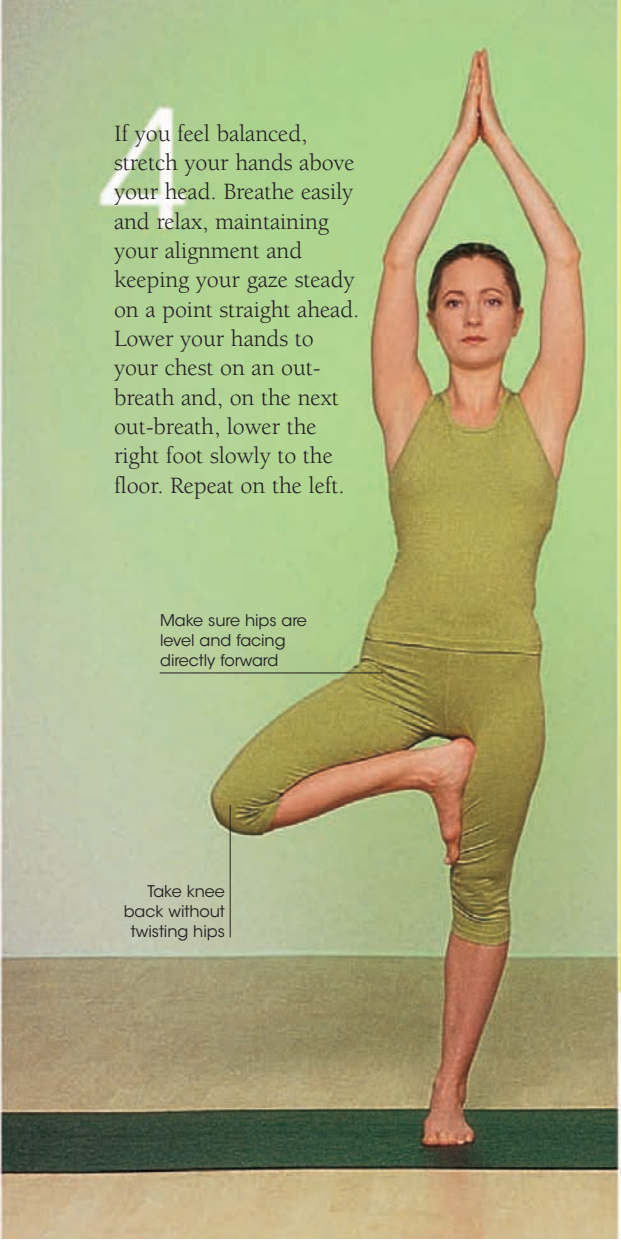
Learning to maintain your balance in postures like Tree will help you keep a balance in life. Make sure you are firmly grounded by keeping the supporting leg strong and the foot firmly rooted.

1 Stand with your feet together, arms by your side. Balancing on your left leg, bring the sole of your right foot onto the inside of the left calf. Press the left foot to the floor.

2 Slide the right foot up the inside of the left thigh. With the knee turned out, press your foot firmly against the leg. If you cannot keep the foot here, leave it as shown in Step 1.

3 Bring the palms together in front of the chest and keep the left leg strong. Look straight ahead and breathe evenly. Let the tailbone drop and lift the top of the breastbone.

4 If you feel balanced, stretch your hands above your head. Breathe easily and relax, maintaining your alignment and keeping your gaze steady on a point straight ahead. Lower your hands to your chest on an out-breath and, on the next out-breath, lower the right foot slowly to the floor. Repeat on the left.



ALTERNATIVES

If your balance is poor, try facing a wall to aid concentration, or hold onto a chair to steady yourself. If you have arthritic hips or knees, or suffer from back problems, try the alternative pose shown above or leave the foot below the knee as in Step 1.

half moon

A more advanced balancing posture that calls for strength in both legs and the back, and flexibility in the hips. Use a block and the wall to help you find your balance without fear of falling over.

1 Stand close to a wall with your left foot turned slightly in and right foot parallel to the wall. Have a block a little away from your right foot.

2 On an out-breath, bend the right knee and, taking a small step in with the left foot, place your right hand on the block and rest your left hand on the front of your left hip.

TAKE CARE

- Avoid completely if you have back pain and the pose provokes symptoms.
- If you have neck problems, keep looking forward in the final pose.
- If you have HBP, or heart problems, keep your left hand on your hip.

3 While straightening the right leg, raise the left leg parallel to the floor. Breathe in as you press down through the right foot, open the chest to the front, and rotate the left hip up and back. Relax the abdomen.

4 Stretch the left arm up toward the ceiling. Turn the head to look up at the left hand. Stay for several breaths without leaning against the wall. Come back up on an in-breath as you bend the right knee and lower the left leg. Repeat on the left side.

Relax abdomen

Knee in line with toes

Arch faces floor

Keep weight on supporting leg, not arm

crow

This weight-bearing posture for the wrists and arms requires you to stay focused, physically and mentally. Think of yourself as being as light as a bird, poised for flight, as you come into the balance.

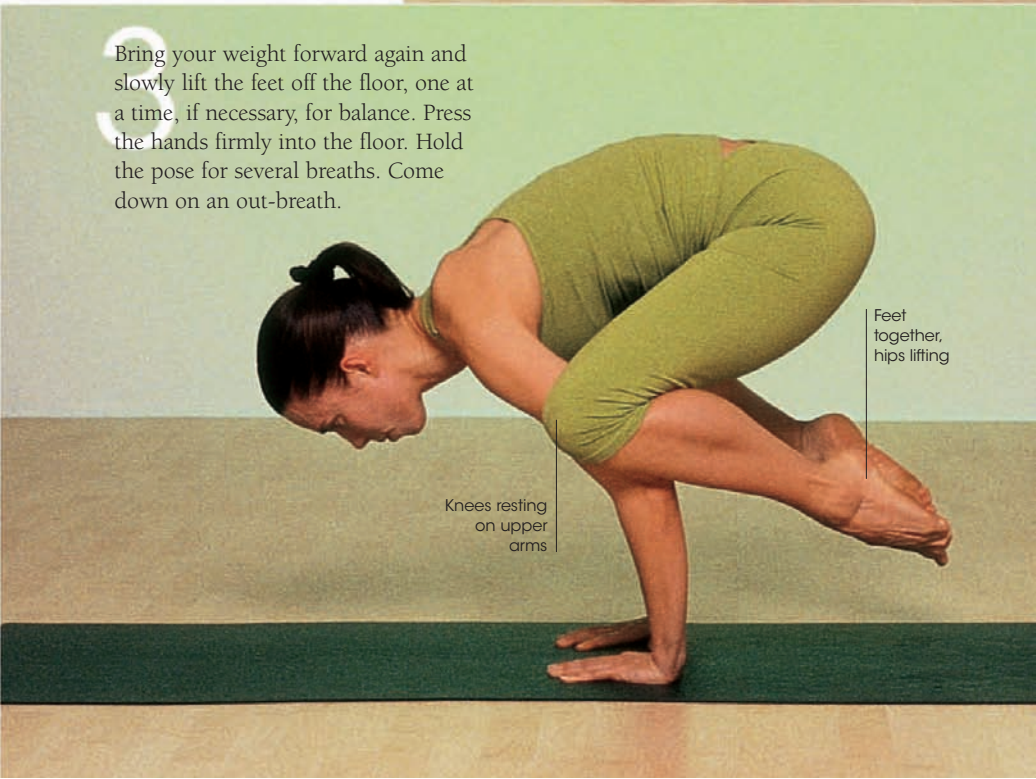
1 Come into a squatting position, with the feet and knees shoulder-width apart, either by doing the Full Squat (see p.290) or by walking your hands back from an all-fours position. Bring the arms forward in front of the knees and place the hands on the floor with the fingers spread. Have the elbows bent and turned out.

TAKE CARE

- If you suffer back pain, avoid this pose if it provokes symptoms.
- If you have HBP, or heart problems, hold the final position only briefly.
- Stop at Step 2 if you have arthritis in wrists, glaucoma, or a detached retina.

2 Focus your gaze on a point on the floor and breathe in deeply. Rising up on your toes, bring your weight forward over your hands as you exhale. Repeat several times to find your point of balance.

3 Bring your weight forward again and slowly lift the feet off the floor, one at a time, if necessary, for balance. Press the hands firmly into the floor. Hold the pose for several breaths. Come down on an out-breath.



cat

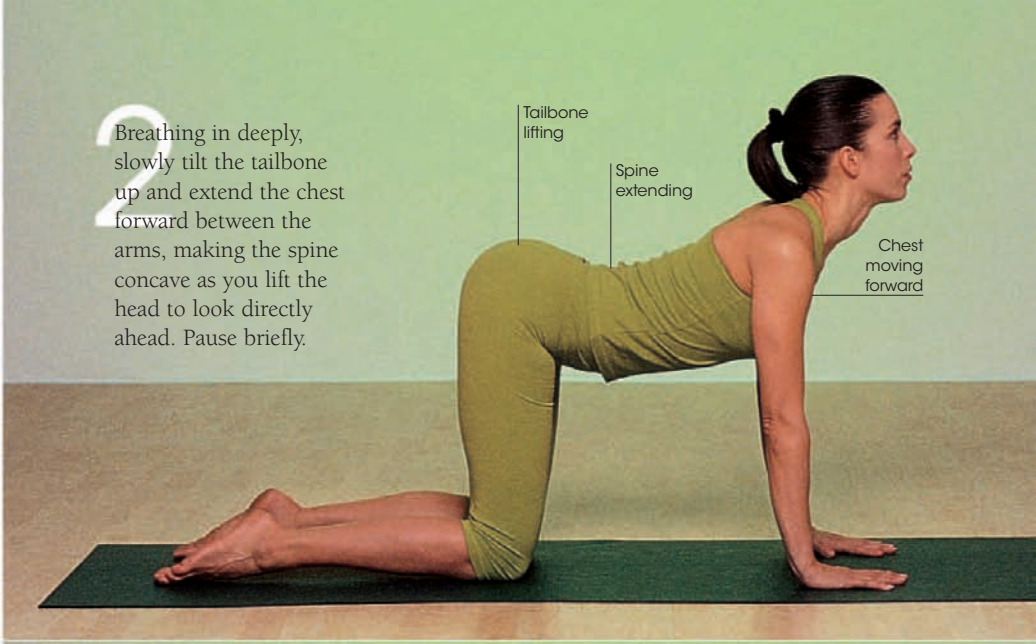
It is often said that you are as young as your spine. Keep your spine strong and flexible by arching your back like a cat. Focus on initiating the movement with your tailbone.

1 Start on all fours, with your knees under the hips. Keep the shoulders, elbows, and wrists in line, and the fingers spread. Bring the insides of the elbows to face each other, and lengthen through the arms as you bring the shoulders away from the ears. Keep the back in a relaxed straight line from the hips to the back of the head. Breathe easily.

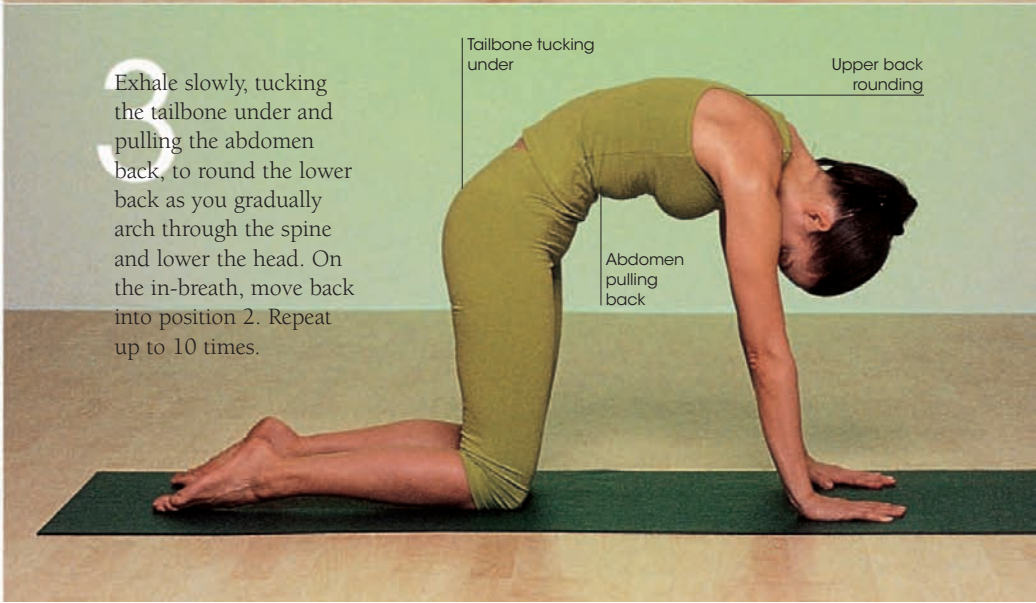
TAKE CARE

- If your knees, hurt, try placing a folded towel under them.
- If you suffer from back pain, do the posture slowly to avoid provoking symptoms.

2 Breathing in deeply, slowly tilt the tailbone up and extend the chest forward between the arms, making the spine concave as you lift the head to look directly ahead. Pause briefly.



3 Exhale slowly, tucking the tailbone under and pulling the abdomen back, to round the lower back as you gradually arch through the spine and lower the head. On the in-breath, move back into position 2. Repeat up to 10 times.



cat balance

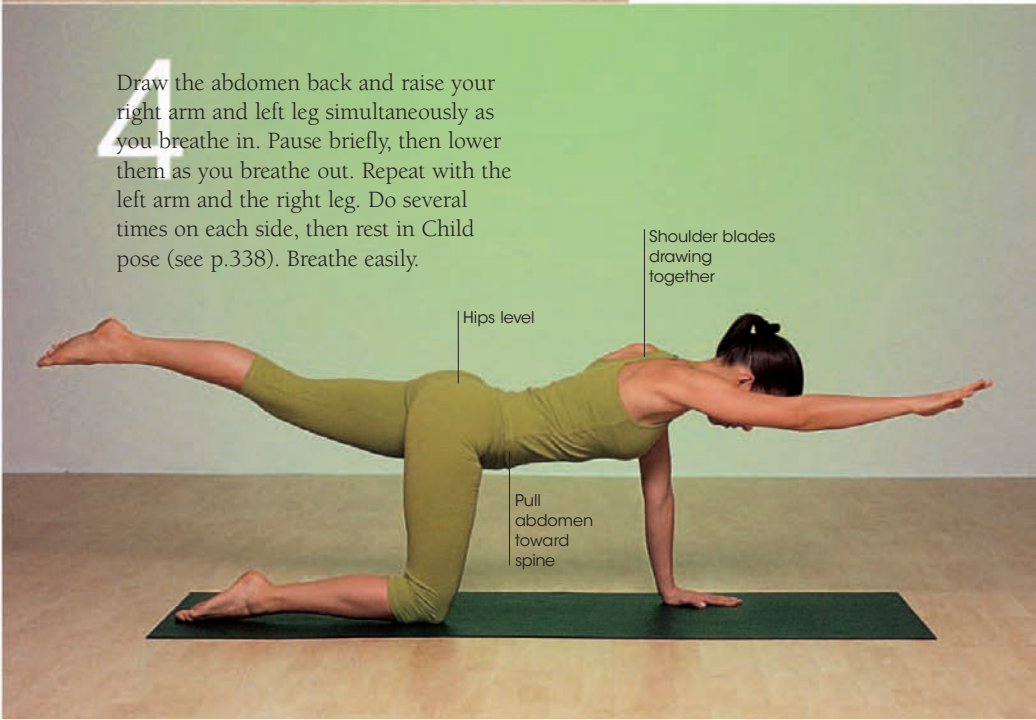
This balance helps to develop stability in the hip and shoulder joints while stretching the body diagonally. Try to keep the back level, and be careful not to slump to one side.

1 Start on all fours, with your knees under the hips. Keep the shoulders, elbows, and wrists in line, and the fingers spread. Bring the insides of the elbows to face each other, and lengthen through the arms as you bring the shoulders away from the ears. Keep the back in a relaxed straight line from the hips to the back of the head. Breathe easily.

2 Pull the abdomen back toward the spine and, as you breathe in, raise and stretch the right arm forward at shoulder height. Keep both shoulders level. Pause briefly, then lower as you breathe out. Repeat with the left arm. Do this several times on each side. Breathe easily.

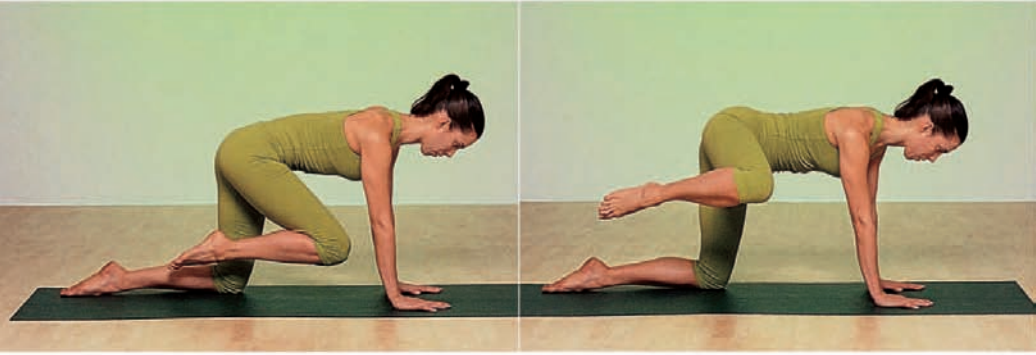
3 Pull the abdomen back and breathe in as you stretch the right leg back, pointing the toes away from you. Keep the hips level. Pause briefly, then lower the leg as you breathe out. Repeat with the left leg. Do this several times on each side. Breathe easily.

4 Draw the abdomen back and raise your right arm and left leg simultaneously as you breathe in. Pause briefly, then lower them as you breathe out. Repeat with the left arm and the right leg. Do several times on each side, then rest in Child pose (see p.338). Breathe easily.



cat circles

Combining balance with leg movements, this posture keeps the hip joints moving freely while strengthening the hip-stabilizing muscles. It also brings awareness and energy to the pelvic region.



1 Start from the basic all-fours position (see Cat, p.308). Pull the abdomen in toward the spine, and as you breathe in, bring the knee forward toward the chest. Look down.

2 Continuing to breathe in and keeping the abdomen drawn in, start the circle by bringing the knee out to the side. Keep the hips as level as possible and the eyes looking down at the floor.

TAKE CARE

Make sure you keep the circles within the pain-free range of movement in the joint if you suffer from arthritis.

3 As you exhale, continue circling the knee out and back to bring it pointing directly behind you, level with the hip and with the toes pointing toward the ceiling.

Back neutral

Shoulders level

Knee in line with hip

4 As you breathe in again, bring your knee forward to complete the circle. Repeat several times, keeping the circular movement flowing and even. Try to keep the shoulders and the left hip still. Repeat with the left leg.

downward dog

This calming inversion, in which you stretch from the base of your fingers and the heels of your feet to your sitting bones, balances the upper and lower body, while strengthening the wrists, arms, and legs.

1 Sit on your heels, with your knees and feet hip-width apart. Slide your hands forward to come into the position shown. Spread the fingers.

2 Come up on all fours. Check that the hands are shoulder-width apart and ahead of the shoulders. Tuck your toes under. Take several breaths.

3 Take a deep breath in. Tilt your tailbone up, and as you exhale, press down with the base of the fingers and the balls of the feet to bring your knees off the floor, and lift your hips up and back, keeping your knees bent.

Spine long

Hips moving up and back

Shoulders away from ears

Neck and head relaxed

4 Continue to press down through your hands and feet and lengthen the spine. Pull the abdomen back toward the spine and breathe deeply as you lengthen through the backs of your legs and take your heels toward the floor. Stay for several breaths, then lower the knees back to the floor on an out-breath, and relax.

ALTERNATIVE

If you have HBP, heart problems, glaucoma, or a detached retina, from the basic standing position (see p.260), hinge forward from the hips and place your hands on the seat or back of a chair. Lengthen through the backs of the legs and stretch through the spine.

TAKE CARE

If you have back problems and/or tight hamstrings, keep your knees bent in the final posture.

cobra

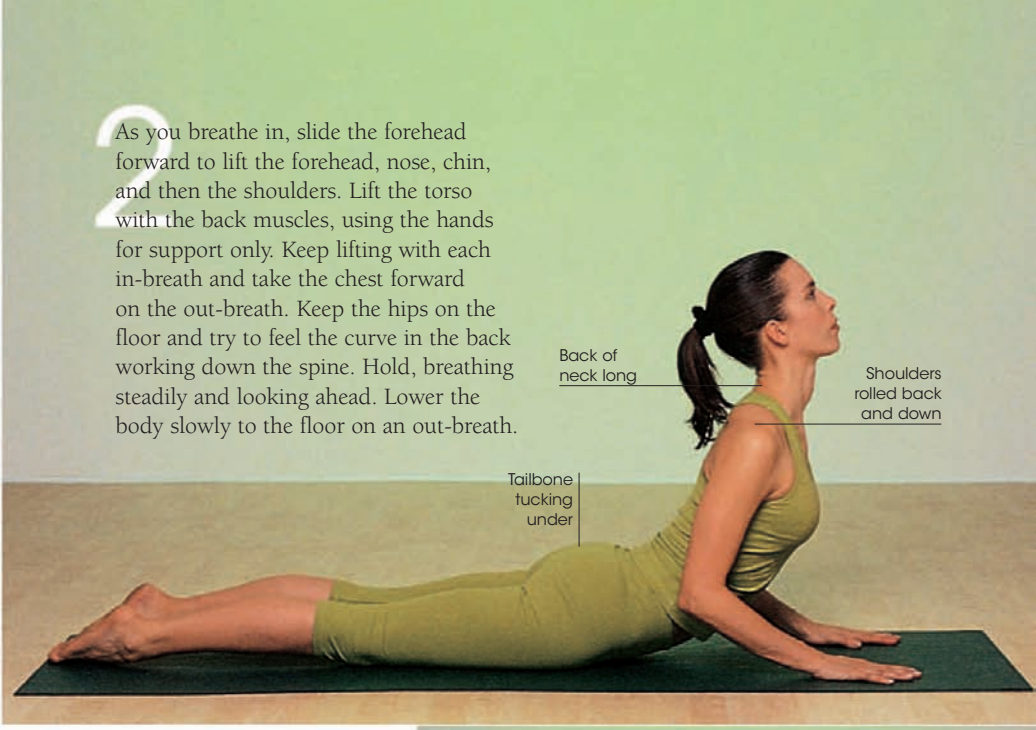
In this invigorating posture, you rise up like a cobra, extending the spine, strengthening the back muscles, and stimulating circulation to the spinal region. As the chest opens, feel the energy rising.

1 Lie on your front, forehead on the floor and feet hip-width apart. Place your hands under the shoulders and spread your fingers, the middle finger pointing forward. Keep the elbows close to the body and tuck your tailbone under.

ALTERNATIVE

If you have HBP, heart disease, a hernia, or back or neck problems, start with your forearms on the floor, your hands beside your head. Press the elbows down as you lift the head and shoulders away from the floor on an in-breath. Lower on the out-breath.

2 As you breathe in, slide the forehead forward to lift the forehead, nose, chin, and then the shoulders. Lift the torso with the back muscles, using the hands for support only. Keep lifting with each in-breath and take the chest forward on the out-breath. Keep the hips on the floor and try to feel the curve in the back working down the spine. Hold, breathing steadily and looking ahead. Lower the body slowly to the floor on an out-breath.



3 Rest with your head turned to one side on folded arms for a few breaths, then repeat once.

TAKE CARE

- If you have stiff shoulders or a rounded upper spine (kyphosis), try the alternative first (left) and then Snake (see p.318).
- If you have arthritis of the neck, keep the head in line with the spine.

snake

The benefits of this posture are generally the same as for Cobra, but taking the arms back helps with stiffness in the shoulders and the mid-back. Feel the spine lifting away from the floor a vertebra at a time.

1 Lie on your front with your forehead on the floor and the feet hip-width apart. Have your arms at your sides, palms up. Breathe easily.

2 Rest your arms on your back and interlock the fingers. As you breathe in, lift your head, roll your shoulders back, and stretch the hands toward your feet.

TAKE CARE

- Proceed cautiously if you have back problems.
- If you have neck problems, do not look up.
- Do not hold the posture if you have HBP, heart disease, or a hernia.

3 Use your back muscles to lift yourself higher on the in-breath. Lift your arms away from your back, with your hands still stretching back. Look straight ahead and hold for several breaths, breathing steadily.

4 Lower yourself slowly to the floor on an out-breath. Relax for a short while with your head turned to one side and resting on your folded arms. Repeat once.

locust

This invigorating posture strengthens the lower back muscles and stretches the front of the body. Be sure to breathe steadily in the final position, and do not strain to lift your legs a long way from the floor.

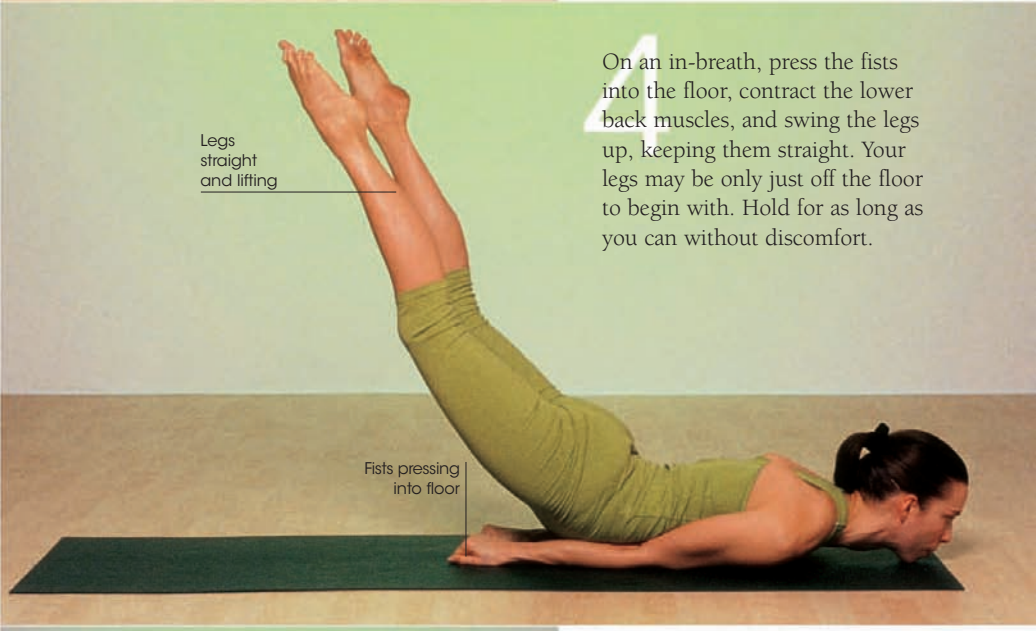
1 Lie on your front with your legs together, your arms by your sides with palms facing down, and your chin on the floor. Take several breaths to prepare yourself.

2 Breathing in, raise your right leg as far as you comfortably can while keeping it straight, keeping your left hip on the floor. Keep the upper body relaxed. Hold for several breaths, then lower on an out-breath. Do on the left and then once more on both sides. (This Step is known as Half Locust.)

TAKE CARE

Stop at Step 2 if you have HBP, heart disease, lower back pain, a peptic ulcer, or a hernia.

3 If Half Locust was easy for you, return to the starting position, but this time make fists with your hands and place them under the groin.



4 On an in-breath, press the fists into the floor, contract the lower back muscles, and swing the legs up, keeping them straight. Your legs may be only just off the floor to begin with. Hold for as long as you can without discomfort.

5 Lower the legs back to the floor on an out-breath and relax with your head turned to one side and resting on your folded arms. Repeat once.

bow

In this pose, the front of the body is stretched like a bow that is about to be fired. It encourages full use of the lungs and has a powerful rejuvenating effect.

1 Lie face down with your legs together and your arms by your sides. Stretch the toes away and relax the shoulders. Take several breaths.

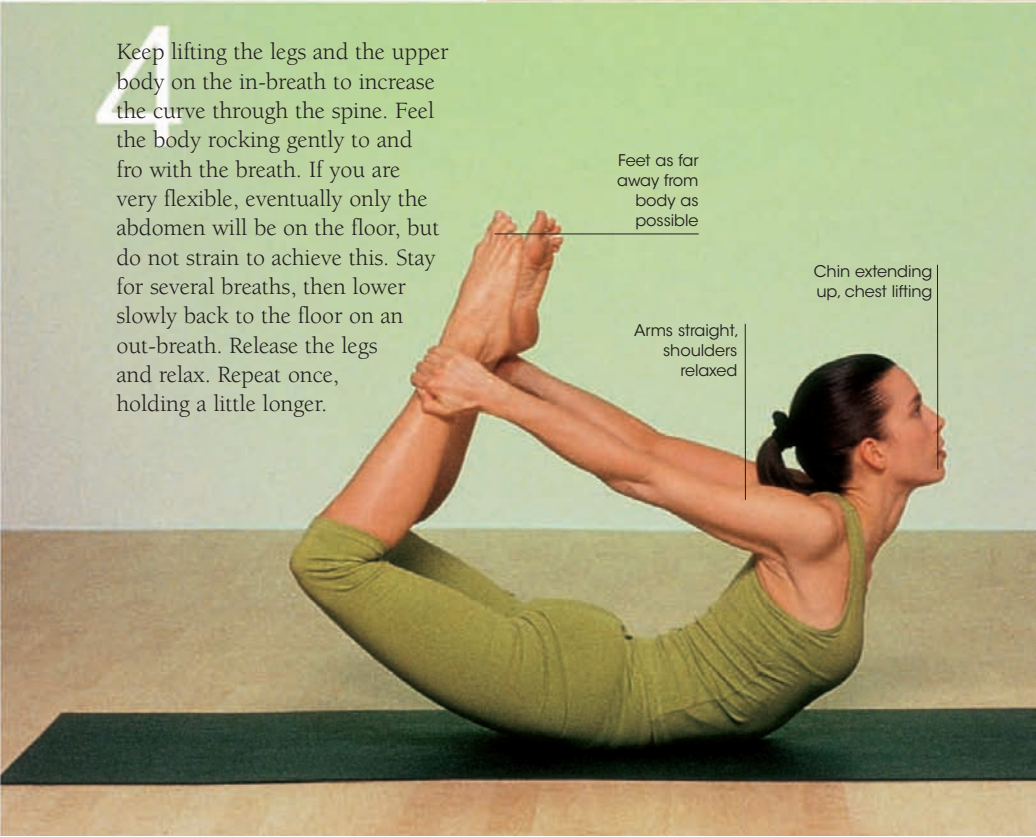
2 Bend your knees to bring your feet toward your hips. Reach back with your arms, one at a time, to hold onto your ankles. (If you cannot reach, loop a belt around each ankle.)

TAKE CARE

If you have HBP, heart disease, a hernia, or back pain, stop at Step 3 and do not hold; avoid altogether if you feel any symptoms.

3 Keep the arms straight, and as you breathe in, lift your knees and push your feet away from you, bringing your head and shoulders away from the floor at the same time. Pause as you breathe out, then lift the legs a little higher on the in-breath.

4 Keep lifting the legs and the upper body on the in-breath to increase the curve through the spine. Feel the body rocking gently to and fro with the breath. If you are very flexible, eventually only the abdomen will be on the floor, but do not strain to achieve this. Stay for several breaths, then lower slowly back to the floor on an out-breath. Release the legs and relax. Repeat once, holding a little longer.

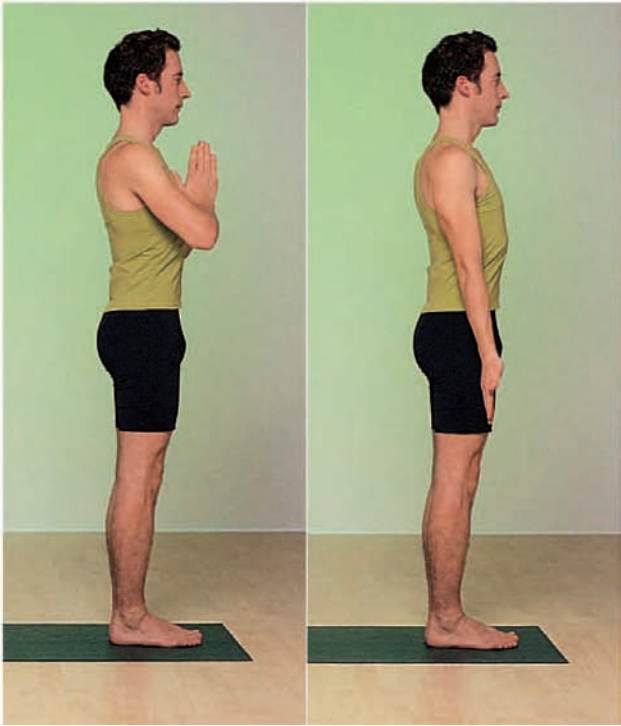


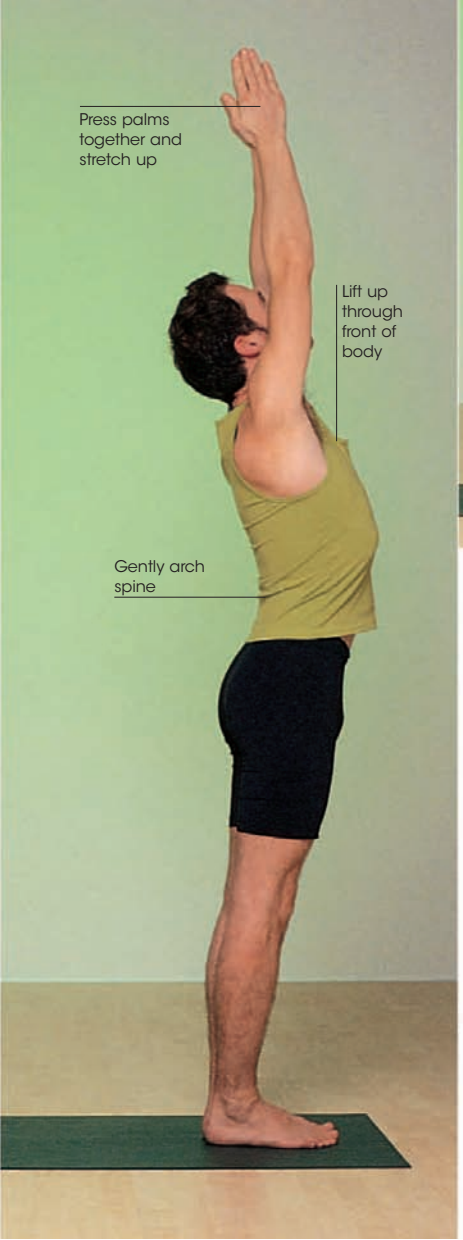
sun salute

Made up of some of the postures described earlier, this dynamic sequence stimulates and balances your entire body. Once you are able to practice several rounds fluidly, you will feel years younger!

1 Stand with your feet together and bring your palms together in front of your chest. Look straight ahead and take several breaths, lifting up through the body on the in-breath.

2 On an exhalation, open your hands and lower your arms to the side of the body, with the palms facing forward.





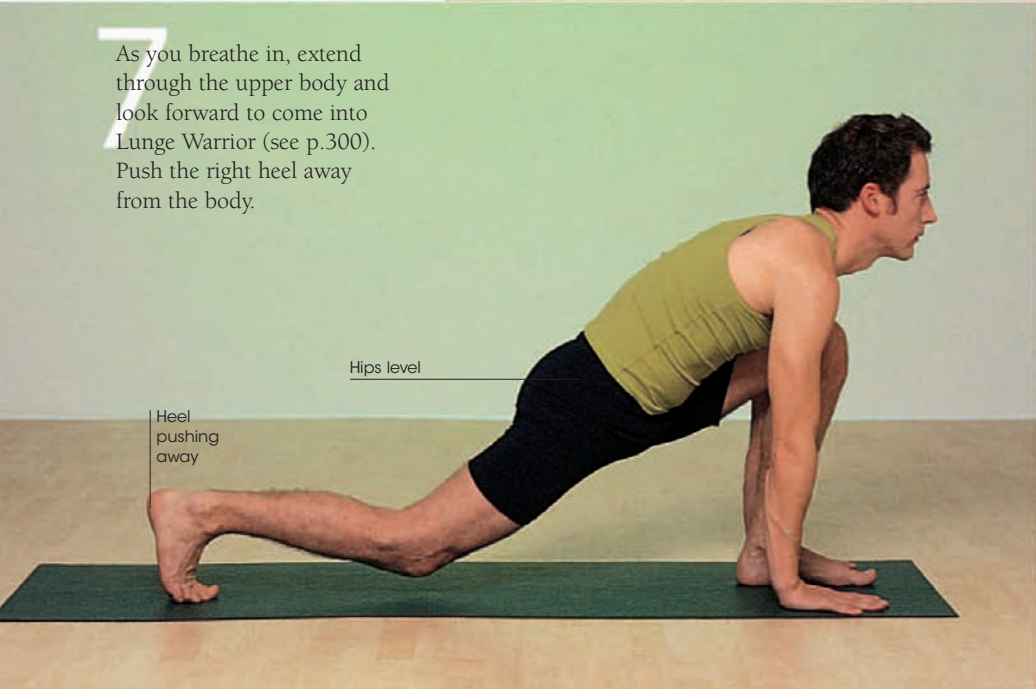
3 As you breathe in, take the arms out to the side and circle them up to bring the palms together above the head. Look up at the hands and arch the back slightly.

4 As you exhale, bend the knees and fold forward from the hips, bringing the palms (or the fingertips) to the floor in a relaxed Forward Bend (see p.292).

5 Breathe in, lengthening through the backs of the legs and the spine, drawing the upper body away from the thighs. Keep your arms as straight as possible. Look at the floor. ▶

6 As you breathe out, bend the knees and take a large step back with the right foot. Keep looking at the floor.

7 As you breathe in, extend through the upper body and look forward to come into Lunge Warrior (see p.300). Push the right heel away from the body.



8 Breathe out as you step back with your left foot to come into Downward Dog (see p.314). Lengthen through your arms, back, and legs. If necessary, keep your knees slightly bent.

9 Holding the breath out, lower your knees and then your upper body to the floor. Stretch your toes back to come onto the front of your feet.

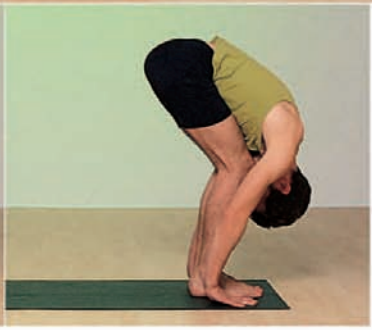
10 Breathing in, come into Cobra (see p.316). Extend through the front of the body, lifting the breastbone forward and up. Roll the shoulders back and down, and look straight ahead. ▶

Sitting bones lifting up and back

11 Tuck the toes under, and as you breathe out, lift the hips to move back into Downward Dog again. If you wish, stay for two or three breaths, and bend your knees if you need to.

Shoulders away from ears

Insides of elbows facing each other



12 As you breathe in, step the right foot forward between the hands to come into Lunge Warrior again. Look straight ahead.

13 Breathe out, bringing your left foot forward to join the right foot, and come into an easy Forward Bend with bent legs. Have the upper body close to the thighs.

14 As you breathe in, come up, keeping your knees bent and back long, and circling your arms out to the side to bring the palms together above the head. Straighten the legs.

15 As you breathe out, lower your hands to your chest and look straight ahead. Breathe easily. Repeat the entire sequence on the left side to complete one full Sun Salute.

ALTERNATIVES

- Depending on your flexibility, you may find that you need to be on your fingertips, rather than on your palms, for example, when you move back or forward into Lunge Warrior (Steps 7 and 12).
- You may find that you need to keep your back knee on the floor in Lunge Warrior.

shoulder stand
against a wall

This rejuvenating posture reverses the effects of gravity on the body, and helps bring calm and clarity to the mind. Many people find a folded blanket under the shoulders helps keep the neck free.

1 Sit sideways against a wall on a folded blanket, 3 ft (1 m) square, with your left hip touching the wall. Breathe easily.

2 Swivel onto your back and stretch the legs up the wall. Your shoulders should be positioned near the edge of the blanket.

3 Bend your knees and push the soles of your feet against the wall to lift yourself up. Support the back with your hands. Your neck is off the blanket.

TAKE CARE

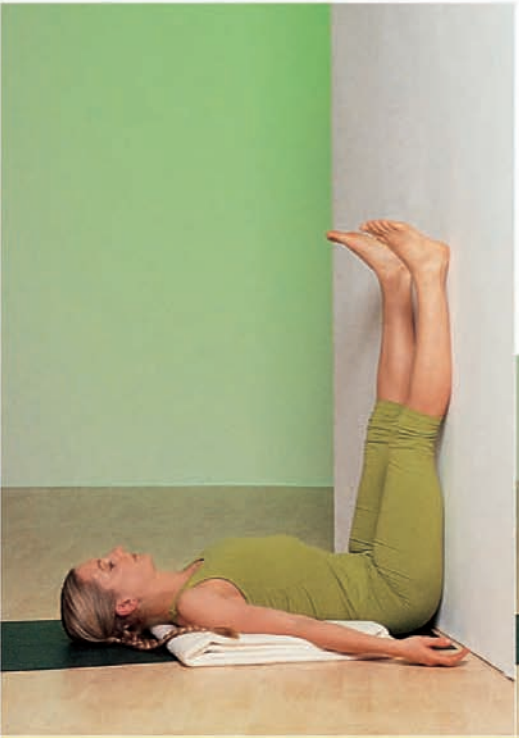
- If you have HBP, a heart condition, a detached retina, glaucoma, neck problems, are very overweight or menstruating, do the alternative (see p.333).
- If you have LBP, come out of any inverted posture very slowly.

4 Breathing steadily, keep pushing and lifting to make the back more upright. Make sure the center of the back of the head is on the floor. Lift one leg away from the wall. If you feel any discomfort in the neck or head, do not try to adjust your head, but come down and seek advice from a teacher.

5 Lift the other leg away to come into Shoulder Stand, supporting your weight on your shoulders and upper arms. Slide your hands higher up your back, press down through the upper arms, and stretch your trunk and legs up. Breathing normally, hold the position for about 30 seconds. You can gradually increase the time that you hold the position as you become more experienced. ▶

6 To come out of the pose, bend your left knee to bring the sole of your left foot back to the wall. Keep stretching up through the spine and continue to support your back with your hands.

7 Bend your right knee to bring your right foot to the wall. Breathing normally, start to lower your spine slowly to the floor, keeping the back supported as you come down.



8 When your lower back is on the floor, take your arms out to the side and stay in the position for a few breaths with your legs stretched up the wall.

9 On an out-breath, bend your knees over the chest and roll over onto your side. Stay for a short while before sitting up.

ALTERNATIVE

Lying with your legs up the wall is the only safe inversion if you have HBP, a heart condition, a detached retina, glaucoma, neck problems, or are seriously overweight. It is also advised during menstruation when taking your legs apart can help to relieve tension in the lower abdomen/pelvic region.

shoulder stand

If you find Shoulder Stand Against a Wall easy, try this version. In the final position, focus on lifting up through the spine and stretching the legs up. Keep relaxed, and breathe smoothly and deeply.

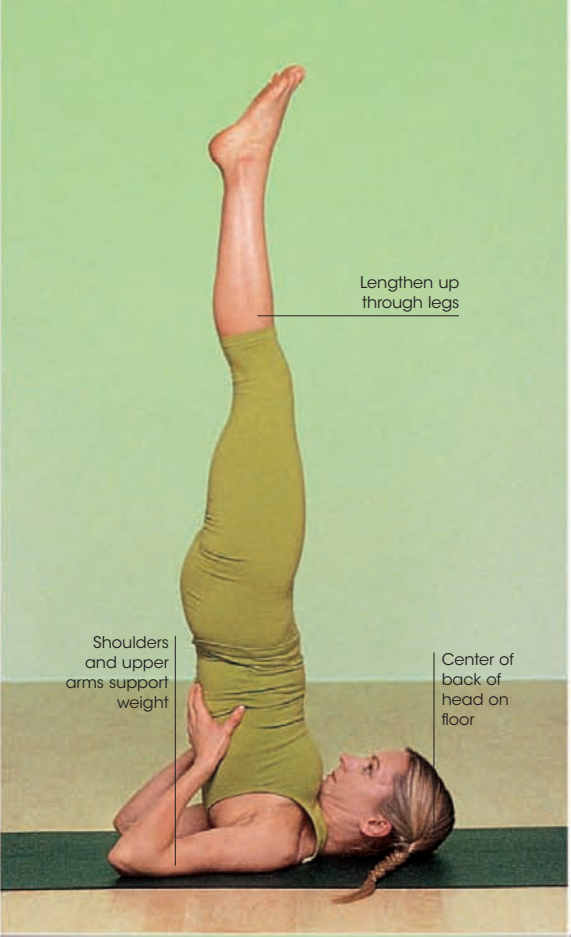
1 Lie on your back with your knees bent and arms by your side, palms down. Make sure the center of the back of the head is on the floor.

2 Inhale, then, bending your knees over your chest, press your arms to the floor and swing your hips up. At the same time, bring your hands up to support your hips. Exhale.

3 Bring your hands on to your back, keeping your upper arms on the floor. Press your hands into the back to bring your weight onto the tops of your shoulders. Make sure your neck is free and relaxed.

TAKE CARE

- As for Shoulder Stand Against a Wall (see p.330).
- A blanket can be helpful, keeping the neck free.



4 Pushing your upper arms and elbows into the floor, slide your hands down toward your shoulders to make your upper body vertical. Slowly straighten your legs toward the ceiling and bring the elbows closer together. Breathe easily. Hold the position for a short time only to begin with.

5 On an exhalation, bend the knees toward the head and roll down, supporting yourself with your hands. You may need to let your head and shoulders come off the floor as you roll down.

6 Keep rolling forward to sit up, and relax over the bent knees, as shown here. If you prefer, lie down for a few breaths.

plow

Plow provides a strong forward stretch to the spine and the back of the legs. It can be done on its own, as shown here, or from Shoulder Stand (see p.334). Be careful not to strain the neck.

1 Lie on your back with your knees bent and feet hip-width apart. Place the arms at your side, palms facing down. Take several breaths.

2 Inhale; then, bending your knees over your chest, press your arms down on the floor and swing your hips up. Bring your hands up to support your hips, then exhale.

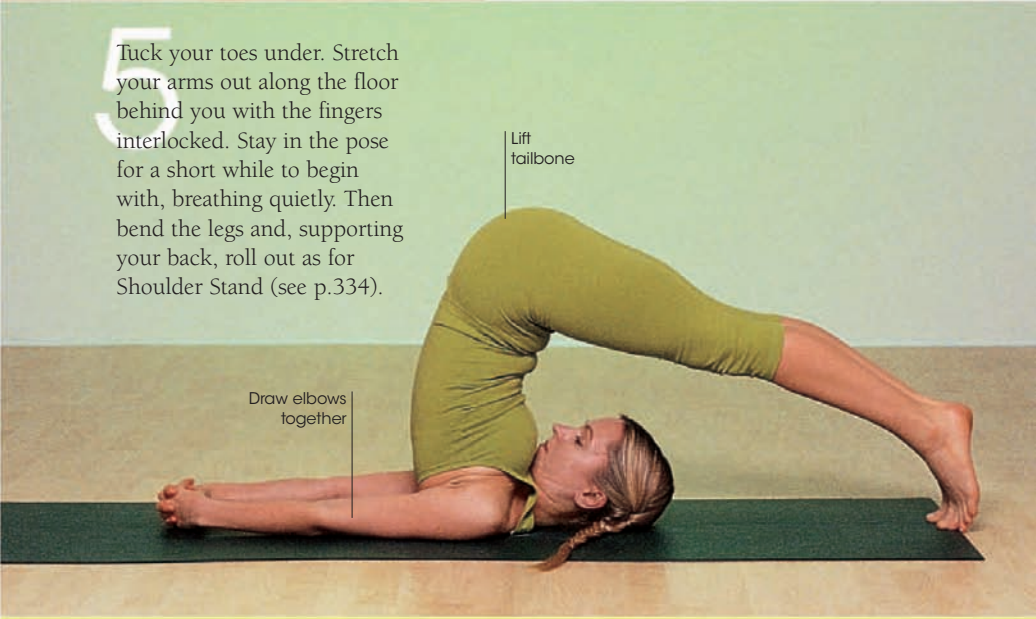
3 Bring your hands onto your back, keeping the upper arms on the floor, as for Shoulder Stand (see p.334). Bring your weight onto the tops of your shoulders, making sure the neck is free and relaxed. Stretch your legs back.

TAKE CARE

- As for Shoulder Stand Against a Wall (see p.330).
- Do not turn your neck from side to side.

4 Bring your toes to the floor, while supporting the back with your hands. Keep lifting up through the back and lengthen through the legs.

5 Tuck your toes under. Stretch your arms out along the floor behind you with the fingers interlocked. Stay in the pose for a short while to begin with, breathing quietly. Then bend the legs and, supporting your back, roll out as for Shoulder Stand (see p.334).



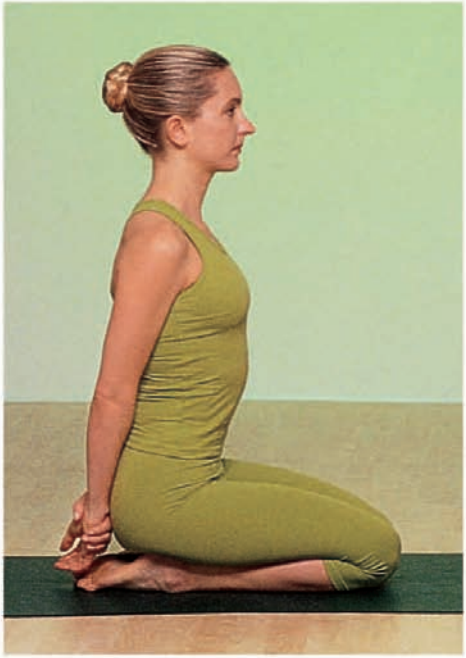
ALTERNATIVES

If you cannot reach the floor with the feet, bend the knees toward your head. Alternatively, have a chair positioned behind your head and let your legs rest on the chair, while supporting your back with your hands.

child

This restorative pose, which develops breath awareness, gently stretches the spine while taking your attention inward. Done as a moving pose, Child strengthens the spinal and abdominal muscles.

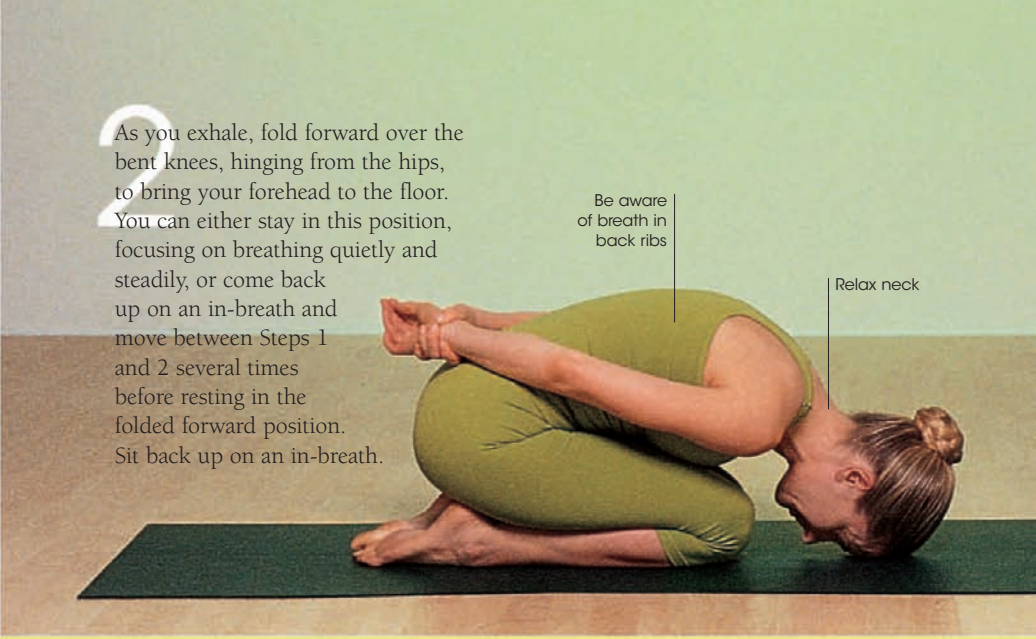
1 Kneel and sit back on your heels. Look straight ahead. Place your hands behind your back and hold one wrist with the other hand. Lengthen through the spine. Breathe in.



TAKE CARE

- If you have HBP, glaucoma, a detached retina, or back problems, support your forehead on several blocks or kneel in front of a chair and rest your head on your forearms on the seat.
- Do not move back and forth in the pose if you suffer from epilepsy.

2 As you exhale, fold forward over the bent knees, hinging from the hips, to bring your forehead to the floor. You can either stay in this position, focusing on breathing quietly and steadily, or come back up on an in-breath and move between Steps 1 and 2 several times before resting in the folded forward position. Sit back up on an in-breath.



ALTERNATIVES

- If you cannot reach the floor easily with your forehead, support it on your fists, as shown, or on a block.
- If your bottom lifts away from your heels, place a pillow between it and your legs.
- For a very relaxed Child, have your knees apart and lie over a bolster with your head to one side.

sitting stretch sequence

This simple stretching sequence focuses your attention on the breath. It encourages ribcage breathing, leaving you feeling more alive and alert. Repeat the sequence with the legs crossed the opposite way.

1 Sit cross-legged with your hands resting on your knees. Look straight ahead. Roll the shoulders back and down. Breathe easily.

2 Place your hands behind you, the fingers pointing away from the body. Lean back, lifting the chest. Look slightly upward. Take three full breaths. Come forward again and roll the shoulders back and down.

TAKE CARE

- If you have back problems, omit Step 3 or avoid posture altogether.
- If you have HBP or a heart condition, hold Step 5 for one breath only.

3 Place your hands on the floor in front of you and stretch forward. Slide the hands as far forward as is comfortable for you. Lower your head and take three slow, full breaths.

4 Come back up on the in-breath. Bring your hands back to the knees and roll your shoulders back and down again.

5 Interlock your fingers and, breathing in, stretch the arms above your head. Hold for three breaths.

6 Lower the arms. Roll the shoulders back and down, and sit breathing quietly for a while.

sitting twist

This pose encourages spinal flexibility, helps relieve neck and shoulder stiffness, and encourages ribcage breathing. In the final position, look to the side or close your eyes and focus on sensations within the body.

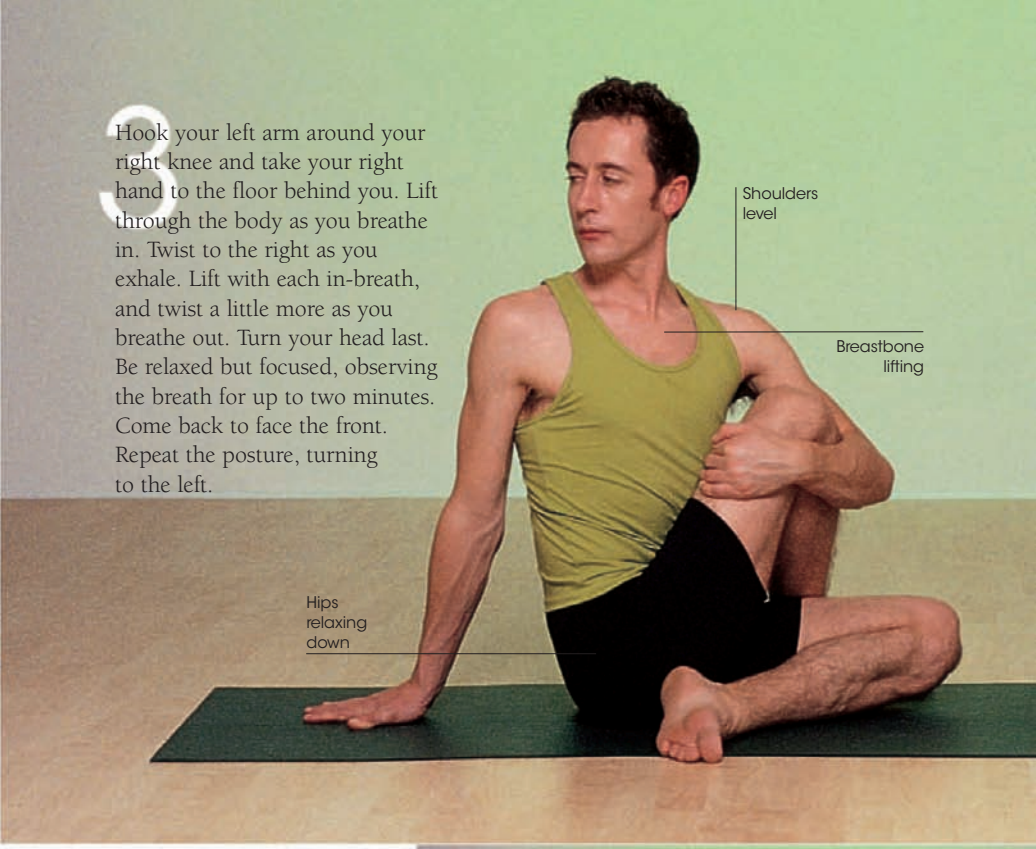
1 Sit with your feet stretched out in front. (If you need to, sit on a block.) Press the hands into the floor and slide your hips back to bring yourself onto the front of your sitting bones. Stretch through the legs.

2 Pull up the right leg and slide your left foot to the outside of your right hip. Place the right foot against the outside of the left thigh. (If this is too difficult, keep the left leg stretched forward.) Pull against the shin to sit up taller.

TAKE CARE

Make sure both sitting bones are on the floor or a block in Step 2.

3 Hook your left arm around your right knee and take your right hand to the floor behind you. Lift through the body as you breathe in. Twist to the right as you exhale. Lift with each in-breath, and twist a little more as you breathe out. Turn your head last. Be relaxed but focused, observing the breath for up to two minutes. Come back to face the front. Repeat the posture, turning to the left.



4 To extend the posture, bring the left arm onto the outside of the right thigh and stretch the fingertips toward the floor as you breathe out.

breathing practices

The following breathing practices will improve your breath awareness and help balance the mind and body. They are particularly useful in helping to quieten the mind for meditation (see p.350).

Breathing practices balance the energy flow within the body, encouraging calm and mental clarity. They also help tone respiratory muscles and keep respiratory passages clear. They are generally practiced after doing some yoga postures or simple stretching exercises. These loosen up the body, releasing any stiffness and tension, and making it easier to be still during the breathing practices. Breath awareness is crucial to learning to observe thoughts, feelings, and patterns of behavior.

Audible breath

Audible breath encourages awareness of the smooth, regular flow of the breath. It is normally practiced sitting and helps quieten the mind, fostering a calm, centered state, helpful for meditation. But it can also be used during posture work to help you stay focused.

To begin the practice, sit comfortably cross-legged or kneeling (see p.261) and breathe through the mouth. Closing the throat slightly, make an "Ahhhh" sound as you breathe in, and a sighing "Haaa" sound as you breathe out.

When you are relaxed doing this, make the same sound in the throat but with your mouth closed. Keep your jaw relaxed. It may help to imagine that you are breathing through a hole in the front of your throat. Breathe easily, focusing on the smooth flow of the breath.

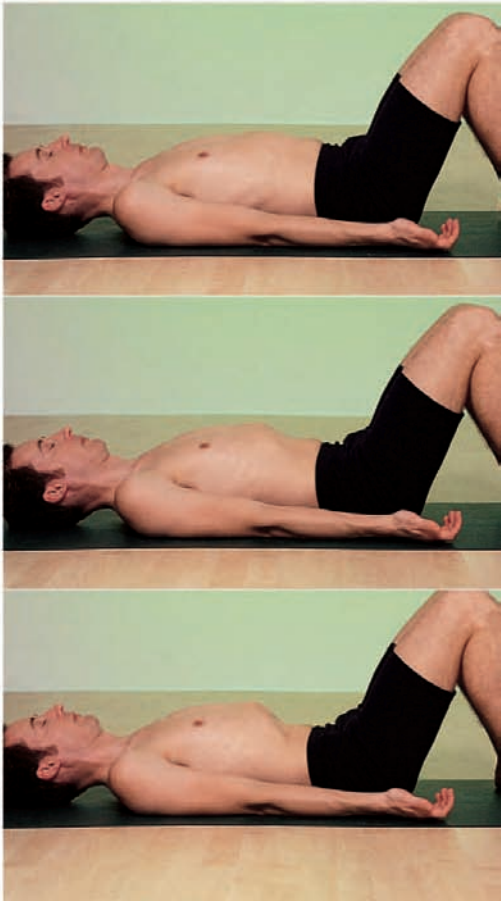
supine abdominal breathing

This practice relaxes the body and the mind, and is good for letting go of tension. Be aware of how easily the breath flows, and feel the calm alertness in the mind once you have completed the practice.

1 Lie on your back with your knees bent and resting against each other, and feet hip-width apart Allow your breath to settle into a smooth, natural rhythm. Become aware of the rise and fall of the abdomen as you breathe. Focus on the out-breath, and allow it to become a little longer than the in-breath.

2 Gradually make the out-breath more complete, by slowly pulling the abdomen back toward the spine as you exhale. As you inhale, let the abdomen swell out. Repeat several times. Then, each time you exhale, pull up the pelvic floor tightly (as if stopping yourself from urinating).

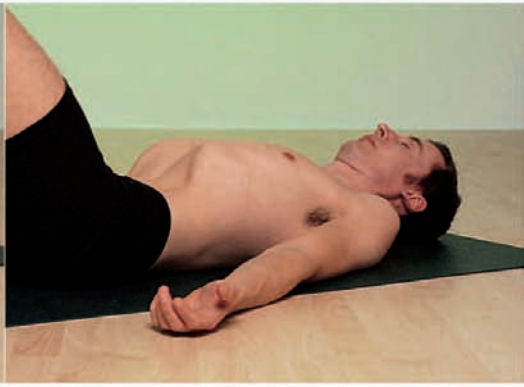
3 As you breathe in, keep the abdomen and pelvic floor slightly contracted, and gently reinforce the contractions as you breathe out. Feel the in-breath in the ribcage. Take several breaths like this, then relax the abdomen and pelvic floor and let the breath be completely free. It should feel quiet and relaxed.



mock inhalation

This practice increases awareness of the diaphragm in breathing, and increases its strength and flexibility. The quality of the breath after the practice makes it a great way to start the day and to prepare for meditation. It involves making a full exhalation, and then closing the throat (as if you were holding your breath) and expanding the ribs as if breathing in – a "mock inhalation." Practice in the lying position first. If the first in-breath after the practice feels rushed, try a smaller "mock inhalation" at Step 3. The technique is simple, but a teacher can help you make sure you get it right. Seek advice if you have any problems.

1 Lie on the floor with your knees bent, arms away from the side of the body, and palms facing up. Close the eyes and allow the breath to settle into a natural, regular rhythm.



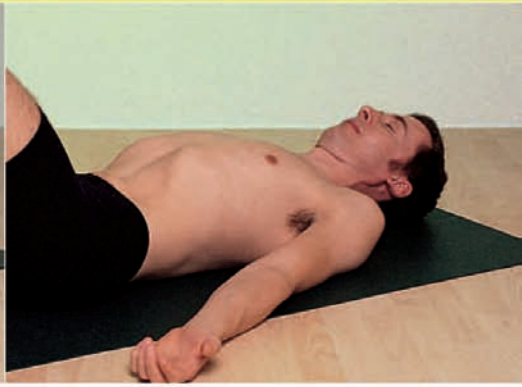
2 Allow the breath to become deeper and make the out-breath longer. Breathe in fully, expanding the rib cage and letting the abdomen swell. Exhale completely, pulling the abdomen in fully.

TAKE CARE

- Avoid the practice if you have HBP or active inflammation or bleeding in the abdominal region.
- This practice is best avoided during menstruation because it creates strong negative pressures in the abdomen.

ALTERNATIVE

Stand with your legs about hip-width apart and your knees slightly bent. Lean forward a little way, rounding the back slightly. Rest your hands lightly on your thighs, your elbows out to the side. Follow Steps 2 to 4 below.

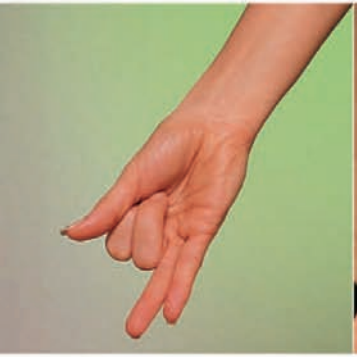


3 Holding your breath out, relax the abdomen. Simultaneously, expand the chest, without breathing in, to suck the abdomen in and up, forming a hollow at the base of the ribs. Hold until you feel the natural impulse to breathe in.

4 To breathe in, relax the ribs, open the throat, and, contracting the abdomen slightly, allow the breath to flow in smoothly. Repeat twice more, breathing normally for about 20 seconds between each round.

alternate nostril breathing

This practice balances the flow of energy within you. Practice the technique shown below, then try this. Take three breaths through the left nostril, then three through the right. Then breathe in through the left and out through the right for three breaths. Next breathe in through the right and out through the left for three breaths. Then take three breaths through both nostrils, focusing your awareness of the breath on the point between your eyebrows. Finally, sit quietly, letting the breath flow freely.



1 Fold in the first two fingers of the right hand, as shown. The thumb is used to close the right nostril, the ring finger to close the left. Press gently against the side of the nose.

2 Start by breathing through the left nostril, closing the right with the thumb. The breath should be smooth and quiet with a natural pause between the in-breath and the out-breath.

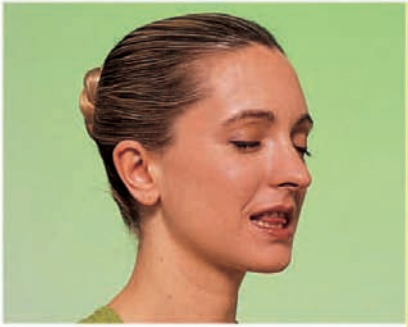
3 To switch to the right nostril, first close the left with the ring finger, then release the thumb. To breathe through the left again, first close the right, then open the left. Practice switching from side to side.

cooling breath

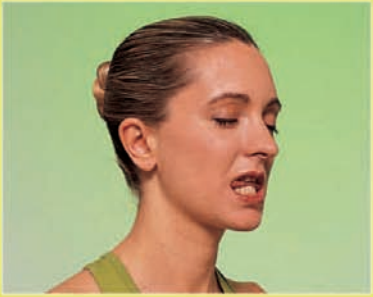
Breathing through the nostrils is emphasized in yoga, but in Cooling Breath you breathe in through the mouth. As you suck in the air, it makes a hissing sound and produces an "icy" cooling effect in the mouth. This provides a focus for your awareness, and calms the body and the mind. At the end of the in-breath, close your mouth and exhale through both nostrils. The practice is very beneficial when you are overheating physically or emotionally. There are two ways of positioning the tongue, as described below.

TAKE CARE

- As the incoming air is not filtered by the nose in Cooling Breath, practice only where the air quality is good.
- Avoid this practice if you have asthma or other respiratory conditions, or sensitive teeth.



Have your teeth slightly apart and the tongue between them. With eyes closed, slowly suck the air in. It will make a hissing noise, and cool the tongue and roof of the mouth.



ALTERNATIVE

In this version, the tongue is folded up against the roof of the mouth. Breathe in slowly and deeply through the teeth. You will be able to feel the coolness on the tongue, gums, and roof of the mouth.

meditation

Regular meditation has great restorative powers, helping bring your energies into balance. It helps to keep your mind clear throughout the day and can aid sleep at night when previously it was elusive.

Sit in a comfortable but alert way. Scan the body, letting go of any tension you are holding (in your face, neck, shoulders, upper body, hips, legs, and feet). Close your eyes and let your breath settle into an easy, regular rhythm. Do not try actively to shut out sounds and other sensations; just let them be there and let your senses withdraw from them as you focus on your breath. Be aware of the coolness of the air at the tip of the nostril as you breathe in and the warmth of the air there as you exhale.

To begin with, thoughts will inevitably arise and sensations will distract you. You cannot force the mind to be empty, but do not let yourself react to these disturbances. Observe them objectively as they come into the mind and let them go as you continue to focus on the breath. Do not let yourself be carried away on a train of thought.

If you find focusing on the breath difficult, use the simple mantra "So Ham." "So Ham" means "I am That" (the universal life force). Silently say "So" as you breathe in and "Ham" as you breathe out.

PRACTICAL MATTERS

- Choose a time when you can remain undisturbed for at least 15 minutes.
- Choose a room (or space outdoors) that is quiet, uncluttered, and not cold.
- Choose a posture – sitting or kneeling on the floor or sitting in a chair – that you will be able to sustain easily for some time.

Eventually, if you practice meditation regularly, you may find that you can dispense with the focus on the breath or the mantra, and just sit quietly but alertly, observing the stillness and the feeling of space. You will be able to let yourself "be" in the present moment, with no thought of the future or the past.

If you can find this quiet, peaceful state, you may like to ask yourself the following three questions:

"Who is the 'I' that is observing this stillness?"

"What is the nature of the 'I' that is observing this stillness?"

"Where is the 'I' that is observing this stillness?"

Do not try to answer the questions, just let your awareness answer for you. You may come to realize that the "I" that is observing is not your ego but simply a "center of consciousness," or limitless energy.

relaxation

Relaxing at the end of a yoga session gives the body and mind a chance to absorb the benefits of your practice. More generally, relaxation techniques can be used anywhere, anytime, to "let go."

Progressive relaxation

Lying down is the best position for relaxation because it provides the greatest relief for the spine from the pressure of gravity. Try this practice after a yoga session, or whenever you have 10 to 20 minutes to spare. Wear warm clothes and/or cover yourself with a blanket. Try recording this guided relaxation, or ask a friend to read it to you slowly.

Lie with your knees bent, feet hip-width apart, arms away from your body, and backs of hands on the floor. Have the center of the back of your head on the floor. (If your neck is uncomfortable in this position, place a block or pillow under your head.) Stretch through your arms to your fingertips, then let the arms and shoulders relax. Unless you have a back problem, stretch your legs out. Flex your toes toward you, then let go, so that the feet and legs relax outward. Be aware of your surroundings, then close your eyes.

Be aware of the back of your head and let it sink down. Let your eyes feel heavy beneath the eyelids. Relax your jaw so the teeth part slightly. Smile a little to relax your face. Swallow and let your neck relax. Relax your right hand and arm, your right shoulder, the right side of your trunk. Relax your right hip and buttock, your right leg and foot. Then do the same on the left: hand and arm, shoulder, left side of trunk, left hip, buttock, leg, and foot. Feel that your body is now relaxed from

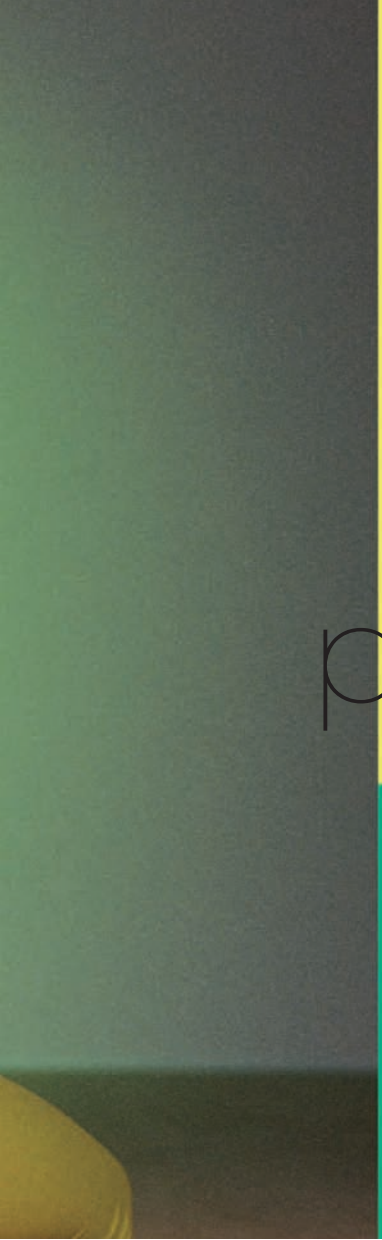
your waist to your feet, from your chest to your feet, from the top of your head to your feet.

Become aware of your breath. Observe it entering and leaving the body. As you breathe in, the chest and abdomen gently rise; as you breathe out they sink back down. Be aware of a sensation of expansion and lightness as you breathe in, of letting go as you breathe out. Then, just be aware of breathing out and letting go. Enjoy the quiet and calm.

When you are ready, become aware again of the ground beneath you, the touch of the air on your skin. Be aware of sounds outside the room, then inside. Gently move your fingers and toes. Take one or two deeper breaths, then stretch and yawn or sigh. Turn onto your right side. Stay for a few breaths with your eyes closed, then slowly sit up. Open your eyes.

Instant relaxation

If lying down is not possible or time is short, try the following: Squeeze your eyes tightly, clench your teeth, tense your shoulders, clench your fists and buttocks, tense your legs and clench your toes. Hold your whole body as tightly as possible for a count of three, then let go completely. Repeat twice. Then breathe easily.



programs

Here are seven programs to help you feel young and more alive. Remember to centre yourself and do some preliminary stretches first, and to relax afterward. Maximize the benefits with breathing and meditation, and adjust your lifestyle if you need to.

1 strong heart & lungs

These postures will help stretch and strengthen muscles used in breathing, and strengthen your heart. Focus on breathing deeply and evenly in the postures. Improve your breath awareness with breathing basics (see p.268) and breathing practices (see p.344), and increase your aerobic endurance with the Sun Salute (see p.324).

1 Triangle (see pp.296–297)

2 Lunge Warrior (see pp.300–301)

3 **Cat** (see pp.308–309)

4 **Cobra** (see pp.316–317)

5 **Downward Dog** (see pp.314–315)

6 **Shoulder Stand** (see pp.334–335)

2 digestive system energizer

Here are six postures that together will stretch, massage, and relax your abdominal muscles, bringing energy to the digestive system. Complement them with mock inhalation (see p.346), abdominal breathing (see p.345), and relaxation (see p.352). A balanced diet and eating calmly will help maximize the benefits of the program.

1 **Standing Side Stretch** (see pp.286–287)

2 **Forward Bend** (see pp.292–293)

3 **Half Locust** (see p.320)

4 **Bow** (see pp.322–323)

5 **Child** (see pp.338–339)

6 **Sitting Twist** (see pp.342–343)

3 develop a healthy spine

This program encourages spinal alignment and flexibility, strengthens postural muscles, and improves blood supply to the spinal region. Complement it with the Sun Salute (see p.324), supine abdominal breathing (see p.345), and relaxation (see p.352). Develop your postural awareness throughout the day, and be positive.

1 **Full Squat** (see pp.290–291)

2 **Tree** (see pp.302–303)

3 **Cat** (see pp.308–309)

4 **Cobra** (see pp.316–317)

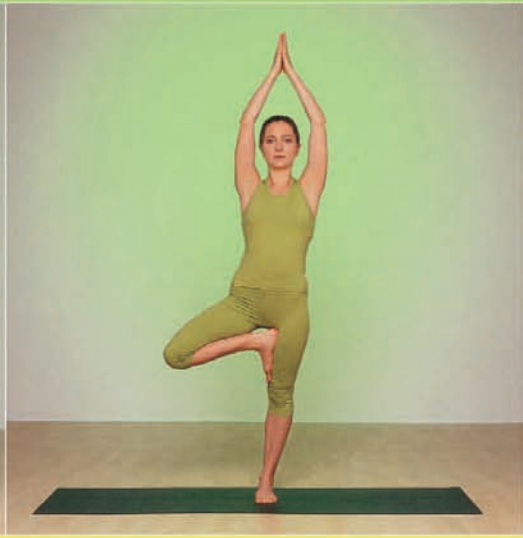
5 **Downward Dog** (see pp.314–315)

6 **Sitting Twist** (see pp.342–343)

4 for balance & concentration

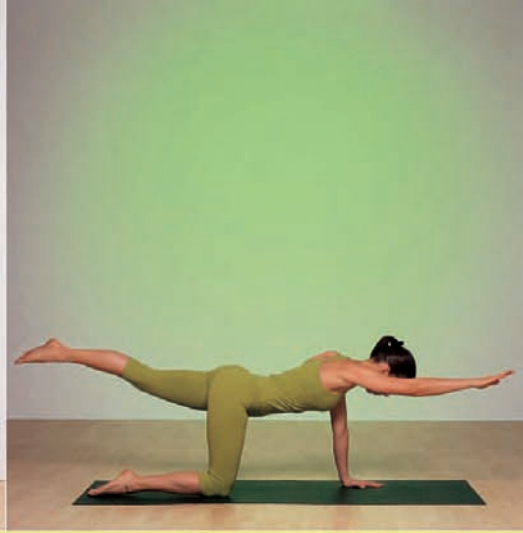
Complete the postures shown on these two pages to keep your brain relaxed but alert. Focus on keeping the body and the mind as still as possible while you practise. Keep your breath slow and even throughout. Complement the program with alternate nostril breathing (see p.348) and meditation (see p.350).

1 **Standing Side Stretch** (see pp.286–287)



2 **Tree** (see pp.302–303)

3 **Half Moon** (see pp.304–305)



4 **Cat Balance** (see pp.310–311)

5 **Crow** (see pp.306–307)

6 **Shoulder Stand** (see pp.334–335)

5 to ease menopause

Warrior and Locust are energizing postures, Half Moon helps relieve pelvic congestion and encourages balance, while Shoulder Stand is rejuvenating and may help hot flushes. Downward Dog and Child are calming. Complement these postures with breathing practices (see p.348), meditation (see p.350), a healthy lifestyle, and adequate rest.

1 **Side Warrior** (see pp.298–299)

2 **Half Moon** (see pp.304–305)

3 **Downward Dog** (see pp.314–315)

4 **Locust** (see pp.320–321)

5 **Shoulder Stand** (see pp.334–335)

6 **Child** (see pp.338–339)

6 releasing hips & shoulders

If your day involves long hours standing or sitting hunched over a desk or steering wheel, try these postures to help loosen the hips and shoulders, and ease discomfort. Start the program with some preliminary stretches (see p. 270) and end with the progressive relaxation practice (see p.352) to help make it even more effective.

1 **Cat** (see pp.308–309)

2 **Cat Circles** (see pp.312–313)

3 **Triangle** (see pp.296–297)

4 **Snake** (see pp.318–319)

5 **Sitting Stretch Sequence** (see pp.340–341)

6 **Sitting Twist** (see pp.342–343)

7 boost your immunity

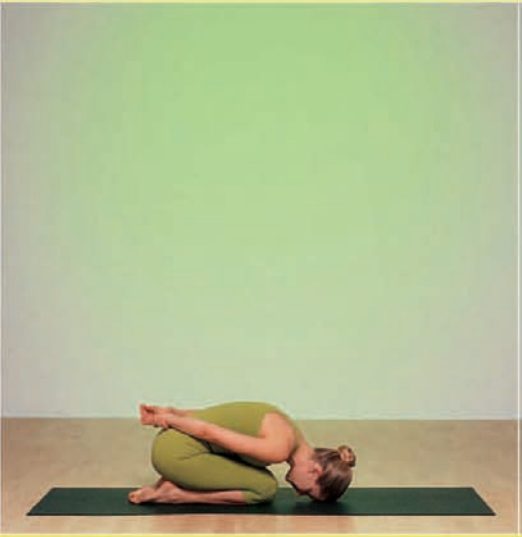
Keeping your vitality depends on a healthy immune system, which benefits from moderate exercise and regular sleep. This program can help bring energy to the immune system. Complement it with sectional breathing (see p.269), alternate nostril breathing (see p.348), and progressive relaxation (see p.352).

1 **Forward Bend** (see pp.292–293)

2 **Downward Dog** (see pp.314–315)

3 **Cobra** (see pp.316–317)

4 **Bow** (see pp.322–333)



5 **Child** (see pp.338–339)

6 **Shoulder Stand** (see pp.334–335)

confident

feeling confident

To practise yoga is to develop self-awareness on a physical, mental, and emotional level. Such awareness offers liberation from low self-esteem and a firm foundation on which to build self-confidence.

Practising yoga gives you the time and the techniques to become aware of aspects of yourself that you tend to overlook in everyday life. At a physical level, yoga teaches you to be aware of your breathing patterns, and of areas of tension or tiredness in your muscles and joints. At a mental and emotional level, yoga helps you to notice your patterns of thought, to be aware of the effects of your attitudes and habits, and to understand your worries and concerns. Yoga is a practical tool that helps you to become self-aware.

This self-awareness is the basis of self-respect. When you begin to respect yourself, you start to build your self-confidence. Yoga nourishes and strengthens the body, mind, and spirit. In practising it regularly, you will become more aware of your real needs, and grow to recognize your own abilities, attitudes, preferences,

HEALTH CONCERNS

If a health practitioner has advised you not to over-exert yourself physically, or if you have any other health concerns, seek advice from a qualified yoga therapist or teacher (see p.495) before using this book. Page 9 provides basic advice for some common medical conditions and, where appropriate, "Take Care" advice and "Alternatives" are given for individual practices. If you are pregnant, or have recently given birth, ask a suitably qualified yoga teacher which practices would be appropriate for you.

and habits. Yoga promotes confidence and assuredness, enabling you to be comfortable and at ease with yourself. It gives unlimited access to the relaxed and respectful understanding that underpins self-confidence.

Unlike some forms of exercise, yoga is suitable for everyone. Whatever your age or level of fitness, yoga is a very safe form of exercise, provided you work within your limits. However, please read through the text in the box below-left, entitled "Health Concerns," before you begin, as some yoga practices can be physically demanding.

Vitality, good health, and emotional wellbeing are all rooted in the easeful self-confidence which yoga practice develops.

Causes of low self-esteem

All too often the erosion of confidence and self-esteem begins with unfavorable comparisons with other people or with an idealized, unrealistic notion of who you think you are or ought to be. Then the spiral of self-criticism and self-recrimination begins, and you lose touch with the reality of your own strengths and weaknesses. You build for yourself a punishing self-image based on harsh expectations.

You may come to feel permanently anxious and dissatisfied: everything you do or say, even the way you sleep and eat, does not feel good enough. This is a debilitating burden to carry around with you everywhere, and although your lack of confidence may be psychological and emotional, it can manifest its heaviness in many physical symptoms.

DEALING WITH OTHER PEOPLE'S BEHAVIOR

Sometimes it may appear that the cause of poor self-confidence is another person or the relationship that you have with another person. It is true that there are certain individuals in whose company you may feel buoyant and confident, and others whose very presence makes you feel nervous and inadequate. But this is not to say that other people hold the key to your own self-confidence. You must find your own inner ease and balance, so that you can meet with equilibrium whatever responses you receive in daily life.

If you are involved in relationships with people who persistently seem to make you feel bad about yourself, you owe it to yourself to explore the reasons for this. It may be that you cannot practically avoid dealing with these people, and so you need to learn how to return always to your sense of inner strength and balance in your interactions with them. It may be also that you need to find ways to end relationships that are truly harmful, or in which the power imbalances are severely damaging. While yoga is a valuable help during such change, you may also need the support of a counselor or therapist to address these issues.

For example, you may begin to assume poor sitting or standing postures, or you may be uncomfortable when you lie down to rest. If your body remains in a state of constant discomfort and tension for long enough, your self-confidence can become further eroded, blocking energy and making you tired, irritable, and cross with yourself.

Low energy levels can also be related to poor nutrition and inadequate breathing. Poor breathing habits can also make it hard to maintain concentration. A distracted mind is characterized by an inability to remain in the present and can become full of self-deprecatory fears and self-accusatory anxieties that may be projected into the future. These kinds of thoughts are every bit as dangerous to self-esteem as the tyrant of negative self-image.

There are a number of lifestyle habits that can erode self-esteem. Over-consumption of caffeine can reduce your ability to concentrate and impair your sleep, leading to self-criticism and depression. The use of nicotine, alcohol, marijuana, and

other recreational drugs can make it difficult to be honest with yourself, and without real honesty there can be no firm ground for self-confidence. It is worth investigating the rhythms and patterns of your daily life to check for unnecessary and avoidable items of conflict, stress, and energy depletion that can diminish your sense of self-worth. For example, maybe that exhausting daily 10- minute ride in a bus crammed with bad-tempered commuters could be more productively replaced with an enjoyable 30-minute walk?

How yoga can help

Kindness is the best first aid for a wounded self-image. Compassionate awareness gives you freedom from the dictates of negative self-image because it helps you to recognize what really is the best and most comfortable way for you to be. By consistent repetition of some simple yoga practices, you can effectively reinforce the habit of kindly self-awareness that will eventually eradicate the root causes of self-recrimination and poor self-esteem. The yoga practices in this book all use breath as a way to understand and develop the interaction between body, mind, and emotions. The practices teach how the focus of your mind can alter your breath, and how the change in the breath can help you to communicate more intelligently with your body. Once the body begins to respond, you enter a "positive feedback loop": the sense of wellbeing that you experience physically has a profound impact on your emotional and mental states. These in turn influence your breath, which promotes a further deepening into ease with the physical body, which makes you feel even better about yourself.

It is an expanding spiral of joy that is deeply practical and very simple. It works to counter the downward spirals of depression and poor self-image, and creates an openhearted ease of confidence and positive self-image that is transformatory. Others notice the positive benefits of your yoga practice and are more positive in their behavior to you, affirming your transformation from without.

The four essential qualities

The yoga practices in this section are designed to promote ease, develop balance, build strength, and sharpen focus. They work with the physical body and breath to access the calm confidence that comes from a more gentle way of living.

Promoting ease

At the heart of a healthy sense of self-confidence is an ease with yourself, a sense of compassion for who you are. To mobilize the energy and strength that comes from developing balance, strength, and focus, you need to establish a comforting confidence in understanding who you are.

Above all, the practice of Full Yogic Breath promotes ease. It helps you to unlearn poor breathing habits and allows you to take full advantage of the lungs' capacity to draw in vitality and confidence with every breath. When you use this practice in your yogic poses, you release farther and deeper into the work of self-transformation and build stronger foundations for self-esteem. When you focus on the exhalation in the Humming Breath, you tell yourself you can be easeful and relaxed with who you are. Resting in this ease is the time to let destructive habits and self-criticism pass away, and to use the sound vibrations to nurture and nourish the newly emerging, confident, and powerful self. The relaxation poses – Corpse and Reverse Corpse – together with Resting Crocodile and Hare all teach you about surrender and easeful rest in the moment.

Developing balance

Without steady balance there is no firm ground on which to develop a sense of self-worth. When you have balance, you can be still or move with poise, reflecting a balanced state of mind and emotions.

You can work toward mental and emotional equanimity by developing coordinated balance in the physical body, by linking the breath with the body, and by learning to maintain physical poise in positions that you would not have to do in everyday life (for example, when you stand on your head or shoulders). When you

develop balance in your body through yoga, you are better able to withstand the challenges and difficulties of life.

Alternate Nostril Breath, Psychic Triangle Breath, and the Breath Balancing pose all teach how to become self-observant, attentive, and patient as you notice a slow but steady change. These practices develop wonder and compassion, for every inhalation and every exhalation links us to the source of life, and to the potential for unbounded confidence, power, and trust.

The more physically demanding balances such as Headstand, Tree, and Dancer require and promote clarity of purpose and perseverance. It takes consistent repetition to master

YOGA PRACTICES FOR THE FOUR QUALITIES

The four qualities of ease, balance, strength, and focus together will help you develop self-confidence. The key postures promoting each quality are listed below. An easeful and balanced foundation is the basis for strength and focus.

Ease
Corpse (see p.381)
Full Yogic Breath (see p.387)
Resting Crocodile (see p.418)
Hare (see p.438)
Spinal Twist & Spinal Twist 2 (see p.454, 456)
Humming Breath (see p.462)

Balance
Yogic Rock and Roll (see p.393)
Tree (see p.404)
Dancer (see p.406)
Snake (see p.416)
Camel (see p.432)
Headstand (see p.450)
Alternate Nostril Breathing (see p.459)
Psychic Triangle Breath (see p.458)
Breath Balancing (see p.463)

Strength
Stirring the Pot (see p.396)
Triangle (see p.402)
Boat (see p.408)
Stoking the Fire (see p.460)
Shining the Skull (see p.461)
Invocation of Energy (see p.464)

Focus
Bow and Arrow (see p.400)
Thunderbolt (see p.426)
Philosopher (see p.428)
Roaring Lion (see p.430)
Concentrated Gazing (see p.466)
Gesture of Consciousness (see p.468)
Gesture of Knowledge (see p.469)
Inner Silence Meditation (see p.470)
Deep Relaxation (see p.472)

these postures, but in practicing them, you develop the clarity of focus to see through negative self-image, and build the perseverance necessary to grow surely in self-confidence.

Building strength

The power to remain poised and balanced in self-esteem requires strength. The strength to remain balanced is a supple strength that enables you to adapt to situations while retaining the power to stand your ground if necessary. The core of physical strength is in the abdomen: the abdominal muscles support the work of the back muscles to hold you upright, and the "fire in your belly" generates the energy for you to accomplish what you need to do.

The most effective yogic practices for developing abdominal strength are the breathing practices Shining the Skull and Stoking the Fire. Combined with Boat, Triangle, and Stirring the Pot, they enable you to develop a core of strength that is truly empowering. When you then practice the Invocation of Energy, you can understand that the world is full of powerful energy available to give, take, and share with each other.

Sharpening focus

Clarity of focus is crucial to self-esteem. To feel confident in yourself you need to be able to focus both within and without. Internal focus is necessary to understand clearly your

As you develop physical strength and balance, you acquire the emotional equilibrium to feel truly confident.

strengths and weaknesses, and to be compassionate about yourself. External focus is necessary so that you can respond effectively to the situations in which you find yourself, whatever they may be.

Using the focus of the eye in yoga postures helps to sharpen the focus of the mind's eye, to develop clarity of purpose that is at the heart of self-confidence. It is the practice of Concentrated Gazing that most simply and directly teaches the single-pointed gaze. Although, for the most part, the focus of the gaze is an external object, for some of the time the eyes are closed, allowing the inner eye to develop its capacities, too. The Inner Silence Meditation develops this capacity still further, strengthening the concentration of your attention.

The elegant sitting poses – Thunderbolt and Philosopher – provide a physical expression for the focusing of attention, while the simple mudras, or hand gestures, provide subtle but profound physical signs that give further encouragement for the settling of the mind into concentrated awareness.

HOW TO USE THIS SECTION

Confident is divided into three sub-sections. **Foundations** provides guidance on doing yoga and some basic breathing and preliminary stretches. Familiarize yourself with them first before moving on to **Building Blocks**. This contains a selection of postures and breathing practices, as well as a simple meditation and relaxation technique. Work through these postures gradually, selecting one or two to work on at a time, rather than trying to do them all at once. Look at the photographs first to get a feel for the overall shape of the posture. Then follow the accompanying step-by-step instructions carefully. If you find a posture difficult to do, work on the preliminary steps first or try the alternative, if one is given.

Programs combines selected postures and other practices in a series of short yoga programs designed for particular situations and needs. Make sure that you understand how to do the postures first before trying these programs.

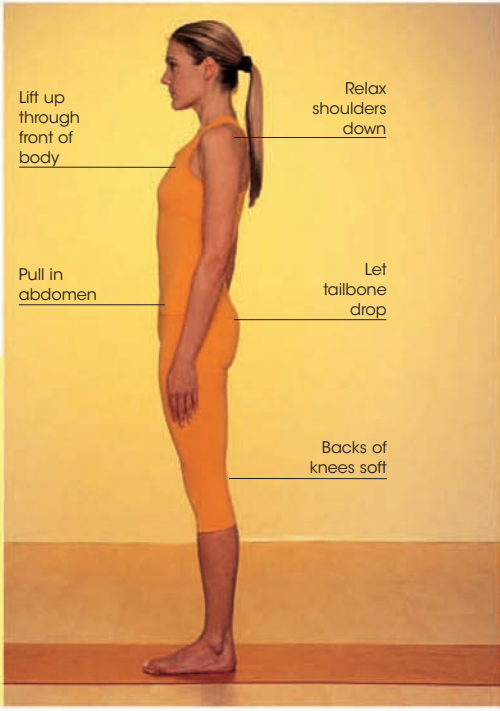
Yoga is traditionally learned from a teacher, and you will benefit from going to a class, if you are not already doing so. Organizations that can help you find a qualified teacher are listed on page 495.

the basics

In yoga, basic standing, sitting, and lying-down positions are important in their own right, helping you develop stability and awareness of the benefits of alignment for your posture and breathing, and for the free flow of energy. They also provide the foundations on which other postures are developed.

In addition, being able to sit comfortably and steadily is important for breathing practices and also for meditation, helping you remain focused without distractions from physical tensions. Lying down is often used to develop body and breath awareness, and to relax and allow your body to absorb the beneficial effects of other yoga practices.

If you find it impossible to achieve the full posture, it can be very helpful to use a prop, such as a block or cushion, to make sure you do not strain your body.



STANDING

Stand up straight with your feet parallel, hip-width apart, and your ears, tops of shoulders, hips, and ankles in line. Press your feet into the ground and lift up through your body. Broaden across the top of the chest. Feel balanced in all directions, your head as if suspended by a thread from the ceiling. Look straight ahead, relax, and breathe easily.

EASY SITTING

This basic posture is good for breathing practices. Cross your shins with the feet under the opposite knee. Position yourself on the front edge of your sitting bones, with the spine long and the head erect. Allow the hips to relax. If your knees are higher than your hips, sit on a block or another support.

KNEELING

Try this position if you find basic cross-legged sitting uncomfortable. Sit on your heels with the tops of your thighs facing the ceiling. Alternatively, if you are going to stay longer, position your knees and feet hip-width apart and sit on blocks, a folded blanket, or a bolster. Keep your spine long and head erect. Rest your hands on your thighs or in your lap.

LYING

Lie on your back to relax at the end of a session or between postures. Lie with your legs stretched out, hip-width apart, feet and legs relaxing out, arms away from your sides, and backs of the hands on the floor. Rest the center of the back of the head on the floor. If you feel any discomfort in your lower back, bend your knees. This is known as Corpse pose.

FOAM BLOCK

A firm foam block will help if your hips are stiff or you find it difficult to lengthen the spine in sitting postures, because it optimizes the tilt of the pelvis. If your neck is uncomfortable when you are lying on your back, you may find it useful to have a block as a support under your head.

PILLOW

A pillow can be used instead of a block to sit on or to rest your head on. It can also be used as a support to help relieve muscular tension. When kneeling, a pillow can be placed under the bent knees to help relieve tension in the inner thigh muscles.

ROLLED TOWEL

Kneeling positions can put strain on stiff ankles. To relieve this, roll up a towel firmly and place it between the ankles and the floor. A folded towel can also be used under bony parts of the feet or ankles, especially if you are working on a hard floor.

WOODEN BLOCK

Blocks can be used in a wide variety of situations as supports and stabilizers to help you practice postures effectively without straining yourself. If using a block in the Chandra sequence (see left and p.447) or Triangle (see p.402), consider the block as an extension of your arm, and position it carefully so that your final posture maintains alignment. Check the placing of the block before you move into your posture.

FOLDED BLANKET

A blanket can be used for support in sitting, kneeling, and inverted postures, and to keep warm in relaxation and meditation. In a state of deep relaxation, the body temperature can drop considerably, so it is wise to cover up with a blanket before you start practicing your relaxation technique.

foundations

This section provides advice for those new to yoga. It includes some basic breathing techniques. It also contains breath-with-movement stretching exercises to loosen the body and help you deepen the connection with the breath.

basic breathing

There is a fundamental connection between the breath and your physical, mental, and emotional states. In yoga, the breath is how vital energy – "the breath behind the breath" – enters the body.

Breathing well is of fundamental importance for health. Breathing provides oxygen for the metabolic processes from which we derive the energy to move, think, and feel and carries away carbon dioxide, the main waste product of metabolism. Physical tension in the respiratory muscles between the ribs can cause tightness in the chest, and even chest pain. Relaxed breathing techniques will release tension from the whole of the upper body, improving your ability to adjust your breathing to meet changing requirements.

The breath also provides a powerful link between mind and body. By controlling your breathing patterns – for example, the rhythm and depth of breathing, the length of the out-breath, and the balance between right and left nostrils – you can influence your physical, mental, and emotional states.

Good breathing habits

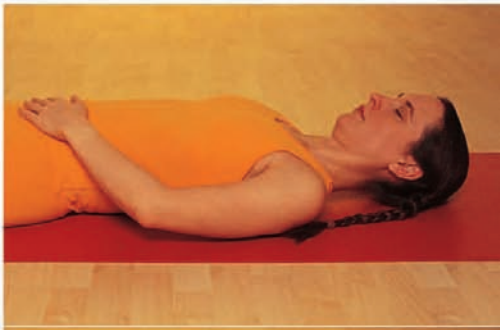
Yoga encourages breathing through the nose, full use of the diaphragm, a slow, smooth breathing pattern, and coordination of movement and breath. Opening movements, such as back bends, are practised on the in-breath, and closing movements, such as forward bends, on the out-breath.

Full Yogic Breath (see opposite) helps develop awareness of the action of respiratory muscles and encourages good breathing habits. It is essential to building self-esteem, and can be done lying down, standing, or sitting.

full yogic breath

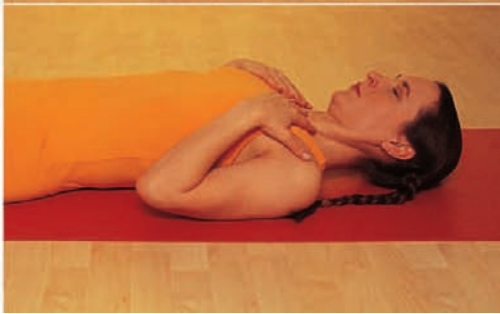
This breathing practice induces calm, harmonizing breath and body. After completing Step 3, combine all three steps to produce full, continuous in- and out-breaths. This is called the complete breath. Do five rounds.

1 Lie on your back with your palms resting on your abdomen, the middle fingers just touching. Breathe into your hands, feeling the abdomen swell out and the fingers move apart as you breathe in. Then feel the abdomen sink back as you exhale. Repeat three times. This is abdominal breathing.



2 Bring your hands to your ribcage, with your fingers to the front and thumbs on the back ribs. On the in-breath, feel the ribs expand into the hands as the chest swells out. As you exhale, let the chest deflate and the hands sink down. Repeat three times like this.

3 Place your fingers on your collarbones, in front of your shoulders. Breathe in, and feel the the top of the chest expand and the fingers rise up toward the head. As you breathe out, feel the chest and fingers sink back down. Repeat three times like this.



breath with movement

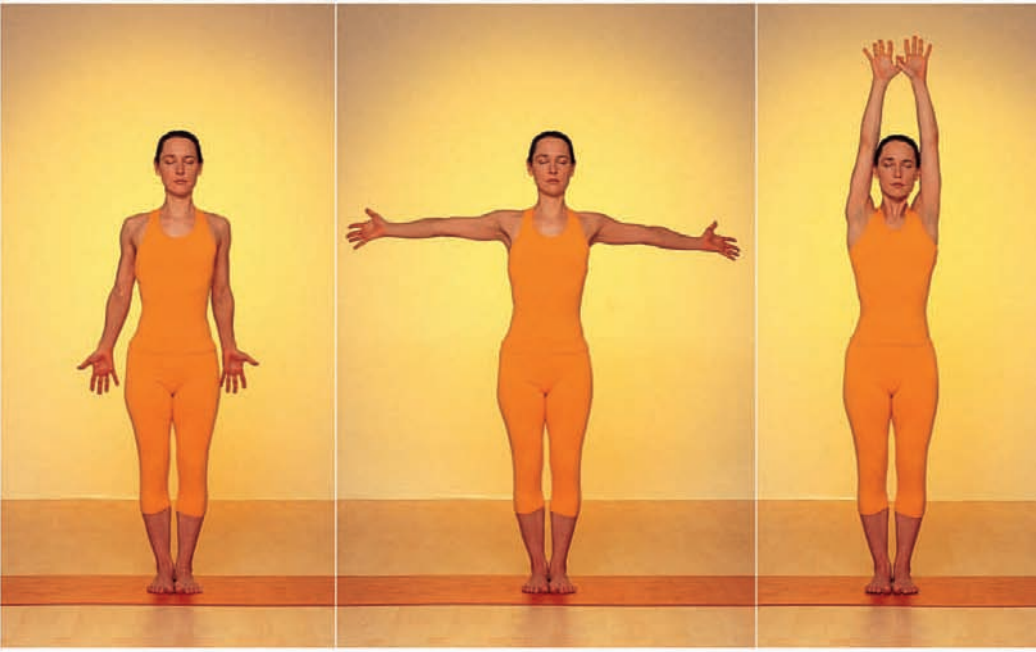
These simple postures are designed to deepen your connection with your breath, as well as gently move your joints. Each movement is timed to match the length of the breath.

arm stretch 1

1 Practise the complete breath (see p.387) five times. Then, on an inhalation, raise the arms in front of you to shoulder height. Have the wrists, elbows, and shoulders in line, and the arms shoulder-width apart. Exhale.

2 On the next inhalation, extend the arms up directly above the head. Imagine a vertical line from your fingers to your ankles, aligning wrists, ears, and shoulders. Exhaling, return the arms to horizontal. Repeat the movement five times.

arm stretch 2

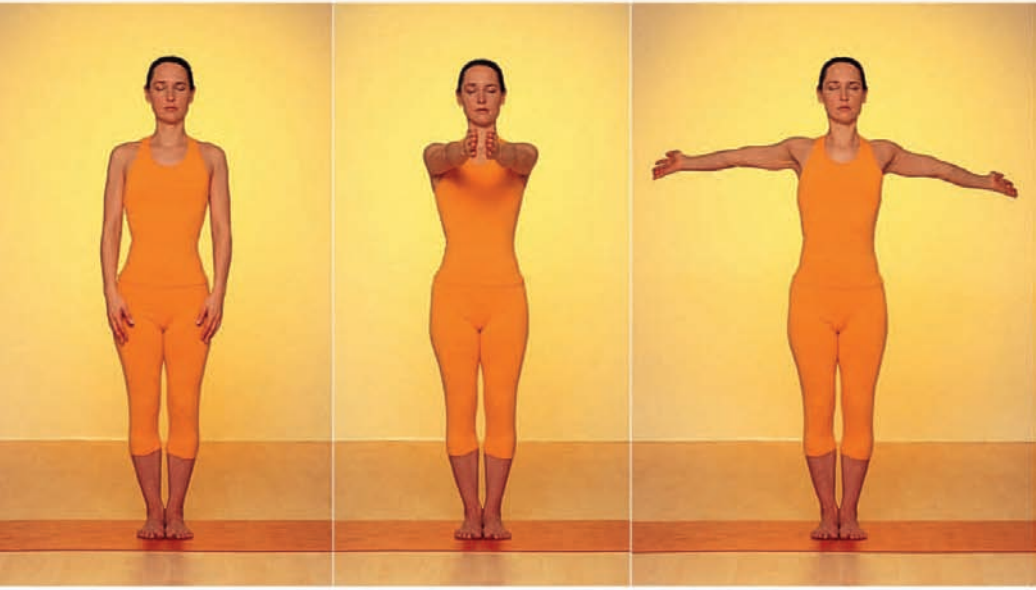


1 Stand with your feet together. As you exhale, turn the palms to face the front and pull the arms back, drawing the shoulder blades toward each other behind. Take a complete breath.

2 Starting to inhale, raise the arms up to shoulder height and out to the sides, extending the stretch right up to the fingertips. Keep the palms of the hands facing forward.

3 Still inhaling, extend the arms above your head, keeping them behind your ears. Feel the chest open. Exhale, lowering the arms by the sides, palms facing the front. Repeat the movement five times.

arm stretch 3

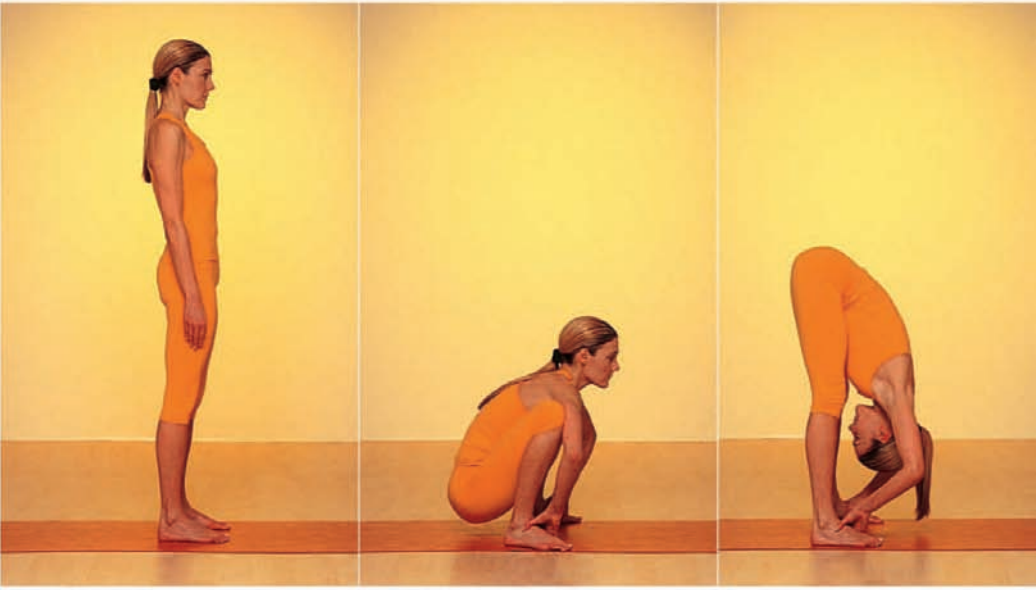


1 Stand up straight, feet together. Close your eyes. On an out-breath, release the shoulders down away from the ears. Let the palms rest on the thighs. Take a complete breath (see p.387), feeling it move through the body.

2 On an inhalation, let the arms float up to shoulder height. Turn the hands so the palms are facing each other and bring them close enough together to be able to feel the heat from each palm without the hands touching. Exhale.

3 As you inhale, open the arms out wide to the sides. Keep moving the arms back until you complete your inhalation with a fully open chest. Return to Step 2 as you exhale. Repeat Steps 2 and 3 seven times with your eyes closed.

energy-releasing pose



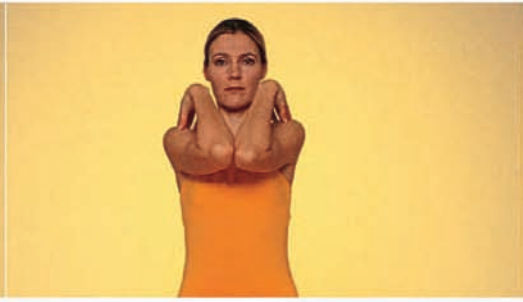
1 This practice develops synchronization between breath and movement, releasing energy and building strength. Stand with your feet hip-width apart, toes pointing forward, arms by your side. Look straight ahead and breathe in.

2 As you exhale, bend your knees and squat, tucking your fingers under the instep of each foot. Inhale, lengthening the spine and neck to look up. Point the elbows out and keep the tops of your thighs close to the lower belly.

3 As you exhale, straighten your legs, lifting your bottom toward the ceiling. Let your head hang down low so you can look between your calves. Keep the hands under the feet. Repeat Steps 2 and 3 five to seven times.

elbow circling

1 Breathing in, stretch out the arms in front of you. Turn the palms up, bend the elbows, and rest the fingers on the shoulders. Breathing out, let the elbows drop down to the waist.



2 On the next in-breath, lift the elbows out in front of your body at shoulder height, keeping the fingers on the shoulders. Pull the elbows toward each other until they touch.

3 Still breathing in, lift the elbows higher in front of you, pointing them up toward the ceiling. Make sure the elbows do not separate.

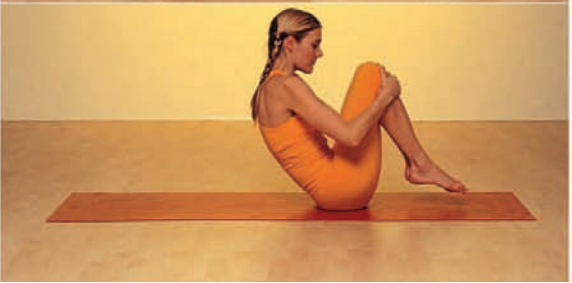
4 As you breathe out, let the elbows separate and move the arms out at shoulder height. Roll the elbows back and down in a circular motion. Repeat Steps 2 to 4 three to seven times.

yogic rock and roll

1 Lie on your back and take a complete breath (see p.387). On an in-breath, bend the knees and bring them up on each side of the abdomen. Hold a knee with each hand and rock to one side.

2 Breathing out, roll your body over to the other side. Roll from side to side like this several times. Then center your body.

3 As you breathe in, rock back gently along the length of the spine. Keep your back rounded and your legs tucked on each side of your abdomen.



4 As you breathe out, rock forward along the length of the spine. Rock back and forth like this several times. Finally, on an out-breath, come up to sitting.

pulling the rope

1 Sit with the legs straight out in front a little over hip-width apart. Keep the spine straight and lift up from the hips. Place your hands just above your knees. Flex your feet. Look straight ahead.

2 On an inhalation, reach your right hand up as high as it will go, and a little in front, as if to grab hold of an imaginary bell rope. Keep the arm straight and look up at the hand. Straighten and lift the left arm as if to hold the rope lower down.

3 On an exhalation, move the right hand down as if pulling the rope. Keep a stretch right through to the hand and move the trunk forward from the hips. Repeat Steps 2 and 3 on the left side. Then alternate right and left five to seven times.

rowing the boat

1 Sit with legs together, straight out in front. Push the heels away and lift up from the hips. Take an abdominal breath. Hold the arms out in front at shoulder level and make two fists as if holding the handles of a pair of oars. Exhale.

2 On an inhalation, lean back as far as you find comfortable, pulling the imaginary pair of oars. Bend the elbows and tuck them down into the waist. Feel the stretch in the abdomen.

3 On an exhalation, move the body forward as far as you can, reaching the arms straight out over the toes. Feel the stretch in the lower back. Repeat Steps 2 and 3 five to seven times, moving with the breath.

stirring the pot

1 Sit up straight, your legs in front as far apart as is comfortable. Sit forward on your sitting bones and extend your arms straight out in front, at shoulder height. Interlock your fingers so the right thumb is on top.

2 Imagine that you are holding a huge wooden spoon and that there is an enormous pot of oatmeal placed between your heels. Exhale as you move forward from the hips, keeping your arms at shoulder height.

3 Still exhaling, move your body and arms over your right foot. This is the beginning of a circular motion as you stir the imaginary pot of oatmeal between your heels.

4 Continue in a clockwise direction. Inhale as you lean back, still moving from the hips, until your hands are positioned over your right thigh.

5 Still leaning back and breathing in, move your body to the left, bringing your hands over your left thigh. Feel the stretch in the pelvis and abdomen.

6 Breathing out, move your body forward so your hands are over your left foot. This completes one circle. Repeat the circular motion 10 times clockwise. Pause, resting your arms, and repeat 10 times, with the left thumb on top, in a counter-clockwise direction.

building blocks

This section presents a variety of postures and other yoga practices to promote awareness and develop self-confidence. Stay in the postures only for as long as you are able to hold them steadily and comfortably, breathing evenly. Listen to your body as you practice.

bow and arrow

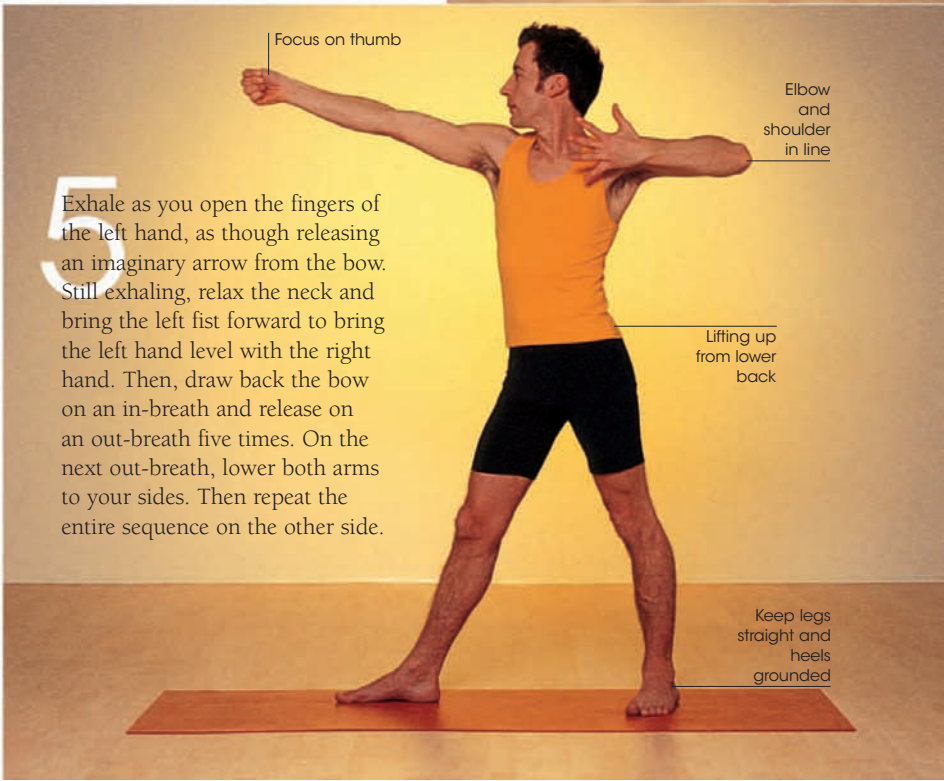
Promoting balanced strength, clear focus, and an open heart, this posture works deep into the muscles around the neck and shoulder blades to release tension and relieve stiffness and cramp.

1 Stand with your feet shoulder-width apart, arms by your sides. Step the right foot forward 2 ft (60 cm). Turn the left foot out 45 degrees.

2 Clench your right hand and, inhaling, raise your right arm up and out above shoulder level, over the right foot. Gaze at the right thumb.

3 Tuck the thumb of the left hand into the palm and wrap the fingers around it. Exhaling, raise the left arm to bring the left hand up against the inside of the right wrist.

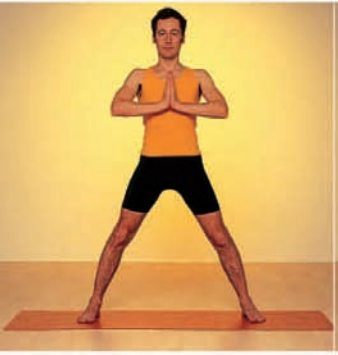
4 On the next inhalation, slowly bend the left elbow as you draw the left hand back to your chin and then behind the left ear, as though drawing on a bow. Tense the muscles in both arms. Exhale, and then take a breath in.



5 Exhale as you open the fingers of the left hand, as though releasing an imaginary arrow from the bow. Still exhaling, relax the neck and bring the left fist forward to bring the left hand level with the right hand. Then, draw back the bow on an in-breath and release on an out-breath five times. On the next out-breath, lower both arms to your sides. Then repeat the entire sequence on the other side.

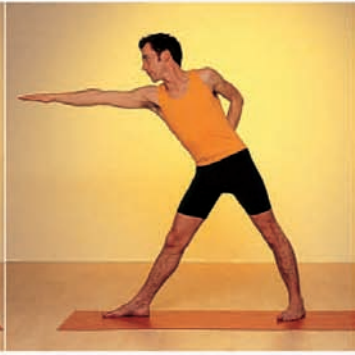
triangle

Triangle builds physical strength, lifts the spirits, improves emotional confidence, and promotes balance. It stretches spine and abdomen, strengthens legs and feet, and promotes flexibility in the hips.



1 Stand with your feet about 3 ft (1 m) apart and bring your palms together in front of your chest. Exhale.

2 As you breathe in sweep your arms out to the side at shoulder height. Turn your right foot so the toes point to the side. Turn your left heel out.

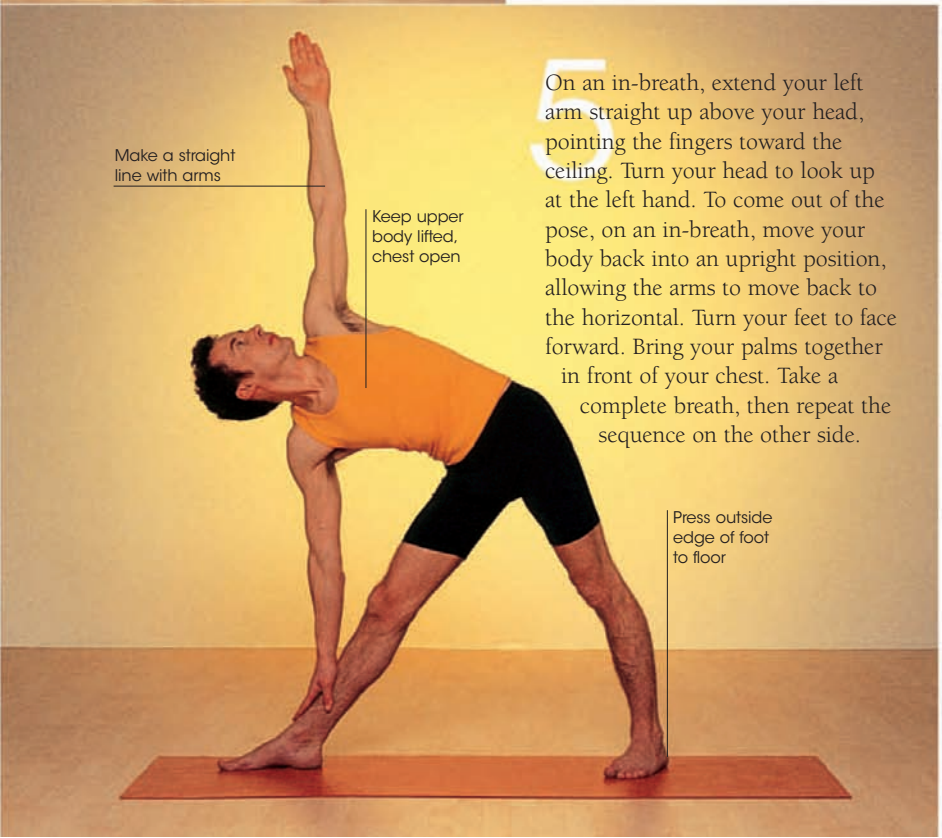


3 As you exhale, reach out with the right arm, extending it as far as it will go. Bend the left arm and rest the palm of the hand in the small of the back.

TAKE CARE

- If you have back problems, rest front arm higher up the leg.
- Do not turn your head to look up at your hand if you have neck problems.

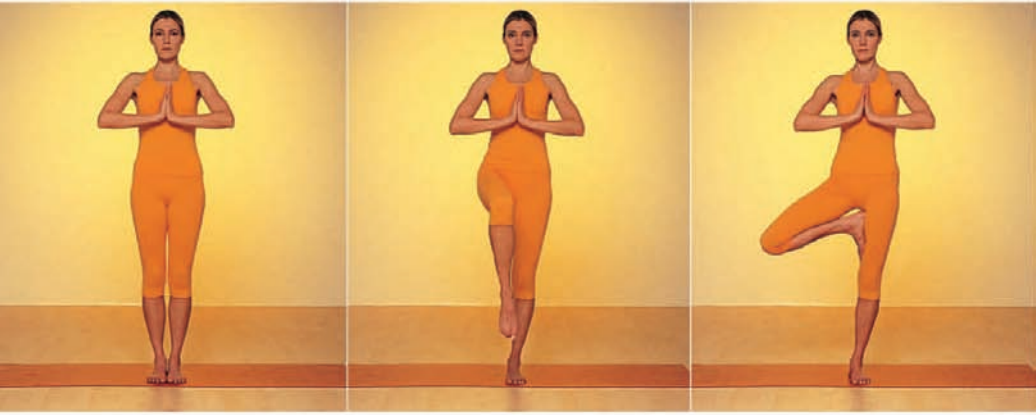
4 Still breathing out, lower the right arm to rest on the thigh and then slide it down the right leg. Keep the weight on the outside edges of your feet. Look at your right foot.



5 On an in-breath, extend your left arm straight up above your head, pointing the fingers toward the ceiling. Turn your head to look up at the left hand. To come out of the pose, on an in-breath, move your body back into an upright position, allowing the arms to move back to the horizontal. Turn your feet to face forward. Bring your palms together in front of your chest. Take a complete breath, then repeat the sequence on the other side.

tree

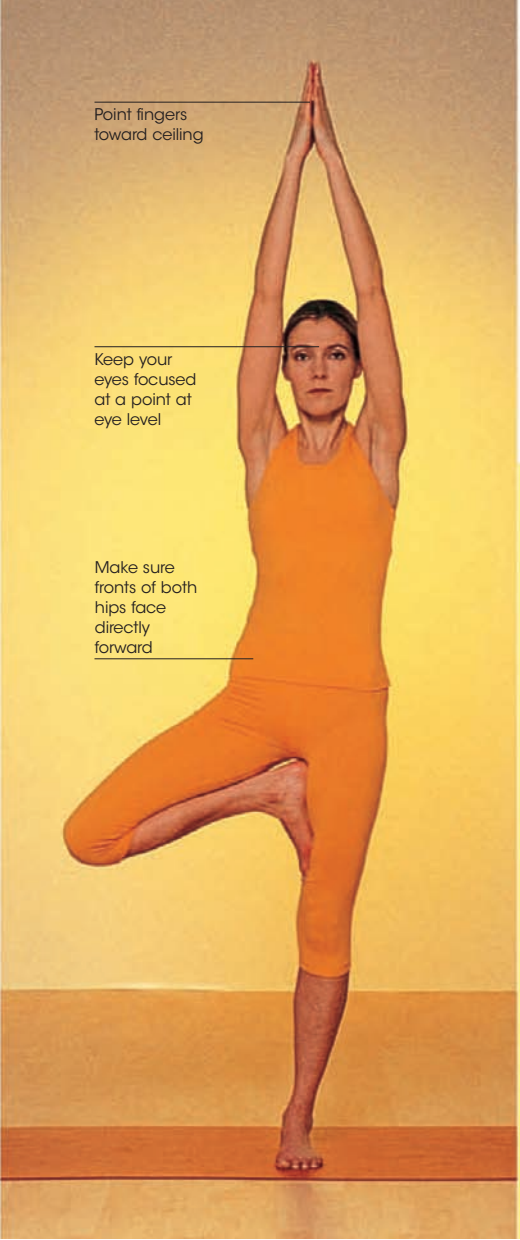
An elegant balance, this posture promotes concentration and develops strength in the legs and feet. Coordinating the quietening of mind and body, Tree pose is an effective antidote to anxiety.



1 Stand with your legs and feet together. Bring your arms in front of your chest and push the heels of your hands firmly together, thumbs against chest. Inhale.

2 Exhale as you sink your weight into the left foot. On the next in-breath, raise the right knee up in front of you as high as it will comfortably go.

3 Turn the right knee out to the right side, and bring the sole of the right foot onto the inside of the left thigh. Keep your palms together. Take a complete breath.



4 If you feel balanced, on the next inhalation, raise the hands up above the head, keeping the palms together and holding your focus on a point straight ahead. Take a complete breath. To come out of the pose, on an exhalation, bring the arms back down to your sides and lower your right foot to the floor. Take a few rounds of breath, then repeat the pose on the other side.

ALTERNATIVE

If you find it difficult to balance in the full pose, try bringing the sole of your right foot to rest just below the knee. If you have HBP, do not raise your arms above your head. Avoid the pose if you have arthritis in the knees or back problems.

dancer

This strong and energizing practice opens the chest and promotes excellent coordination and balance. The pose of the Dancer develops focus together with strength of mind and body.

1 Stand with your legs together, arms by your sides. Look straight ahead. Press the tip of the left thumb against the tip of the left index finger, to make a circle. Exhale.

2 Bend the right knee and take the right foot behind you, catching hold of it with your right hand. Hold the foot close to the right buttock. Take a breath in.

3 On the next outbreath, slowly raise the right knee behind you to a comfortable height, still holding the foot. Keep your balance steady and your eyes focused.

Lengthen spine

Move knee up and back

Keep left leg straight

4 On the next in-breath, raise the left hand to at least chin height. Focus the gaze on the hand. Breathe fully and easily for three rounds. To come out of the pose, on an out-breath, lower your left arm to your side, release your right foot, and lower the knee, and then the foot. Repeat on the other side.

TAKE CARE

- Be careful not to collapse the back in the full pose: keep the back lengthened.
- Raise the knee behind you only as high as is comfortable.

ALTERNATIVE

If you find it difficult to raise the knee behind you in the full pose without losing balance, practice with the knees side-by-side. Work slowly to bring the heel close to the buttock, feeling the stretch in the thigh.

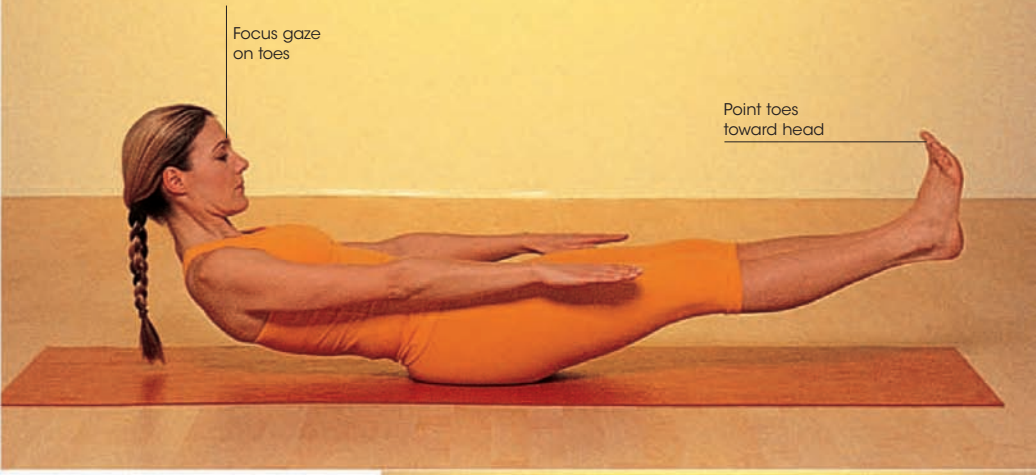
boat

An instant energizer that builds strength, promotes confidence, and develops concentration, Boat pose strengthens abdominal, back, and leg muscles, boosts circulation, and helps eliminate anxiety.

TAKE CARE
Avoid this practice if you have HBP, a heart condition, slipped disk, or sciatica.

1 Lie on your back, with your arms by your sides, shoulders well away from your ears, and palms down. Have your legs straight and together. Observe the rise and fall of the abdominal breath (see p.387).

2 Keeping your focus on the abdomen, take a deep breath in and hold it inside as you raise your arms, shoulders, head, trunk, and legs up about 4 in (10 cm) off the ground. Keeping your arms and legs straight, extend your hands toward the toes and draw the toes in toward your head. Keep the hands and feet at roughly the same height as you balance on your buttocks.



3 When you are ready to exhale, slowly lower the legs, trunk, and head back onto the floor. Rest with arms and legs by your sides to release all body tension. Repeat three to five times.

downward dog

An invigorating stretch, Downward Dog strengthens the limbs and relieves tightness in the back and shoulders. This classic inversion is a powerful energy booster.

1 Begin on all fours, the hands directly under the shoulders, the feet and knees hip-width apart. Look slightly ahead. Take a breath in.

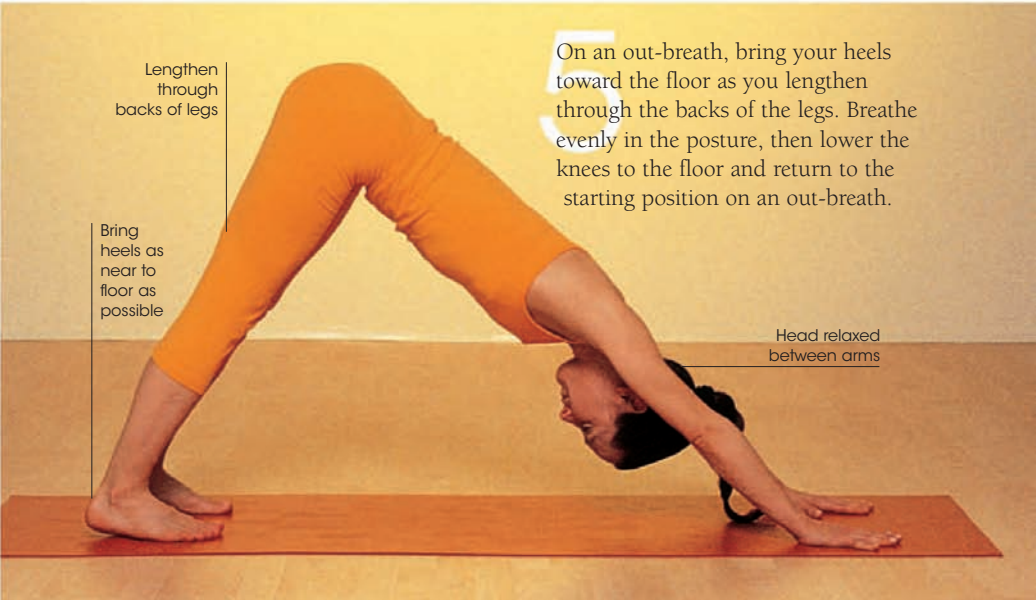
2 Maintaining the position of your hands and knees, lift your feet and tuck your toes under. Continue to look at the floor slightly ahead.

TAKE CARE

- If you have a back problem, do the posture cautiously with your knees bent throughout.
- If you have HBP, a heart condition, glaucoma, or a detached retina, do the posture with your hands on a chair.

3 On an out-breath, lift your hips up and back. Keeping your knees bent, push your hands against the floor to send your weight back toward your feet. Lengthen through the spine. Let your head hang between your arms.

4 Straighten your legs, coming up onto your toes as you lift your sitting bones up toward the ceiling. Lengthen through your back and keep your neck relaxed and your head hanging. Take a breath in.



5 On an out-breath, bring your heels toward the floor as you lengthen through the backs of the legs. Breathe evenly in the posture, then lower the knees to the floor and return to the starting position on an out-breath.

lunge warrior

A powerful and poised practice, Lunge Warrior promotes flexibility in the hips and opens the hips and thighs. It also encourages steady focus and stability of balance.

1 Stand up straight, feet together, arms by your side. Bring your palms together in front of your chest.

2 As you breathe out, fold your body forward from the hips, bending the knees slightly. Place your palms on the floor on each side of your feet. Take a breath in.

3 As you breathe out, bend the knees, and take a large step back with your right foot. Land on the ball of the right foot. Rest your upper body on your left thigh. Look slightly ahead.

Look ahead

Knee in line with ankle

Heel pushes backward

4 As you breathe in, extend the right heel backward, and for a stronger stretch, bring the knee off the floor. Lengthen through the upper body and look straight ahead. Breathe steadily. Step the right foot forward, come back up to standing, and repeat on the other side.

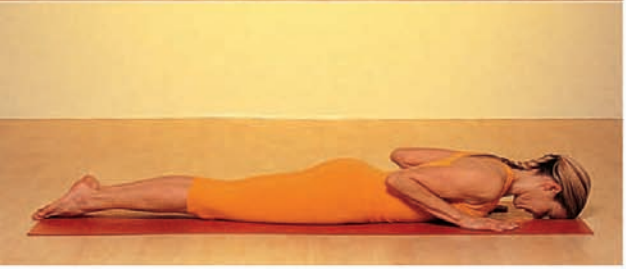
ALTERNATIVE

If you have back problems, HBP, or a heart condition, do not lift your right knee off the ground in the full pose. Allow the weight of the hips to sink down and through into the grounded knee.

cobra

Cobra extends the spine, strengthening the back muscles and opening the chest. It is a valuable posture for developing a sense of power and grace, boosting self-confidence.

1 Lie on your front, forehead on the floor and feet together with heels touching. Let your arms lie down by your sides, palms facing down. Exhale.

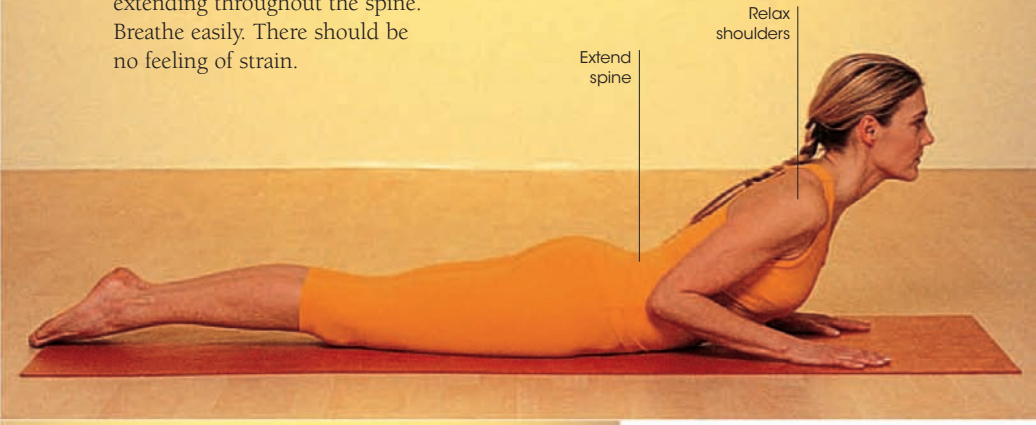


2 Place your hands under the shoulders, spread your fingers, middle finger pointing forward. Keep the elbows close to the body and tuck your tailbone under.

TAKE CARE

- Avoid if you have facet joint problems in the spine.
- If you have arthritis in the neck, keep the head in line with the spine.

3 As you breathe in, slide the forehead forward to lift the forehead, nose, chin, and then the shoulders and chest. Use the back muscles to lift the upper body off the floor. Focus on taking the chest forward, lengthening through the front of the body and extending throughout the spine. Breathe easily. There should be no feeling of strain.



4 Repeat the pose once or twice, then relax for a few minutes. Bring your arms forward, and fold one under the other. Turn your head to one side and rest your face on your forearms. Close your eyes.

snake

This backward bend stretches the front of the body, opens the chest, and promotes easeful movement in the upper back. Taking the arms back helps relieve stiffness in the shoulders and the mid-back.

1 Lie flat on your front with your forehead on the floor and your arms by your sides, palms facing down. Have your legs straight, your heels together. Exhale.

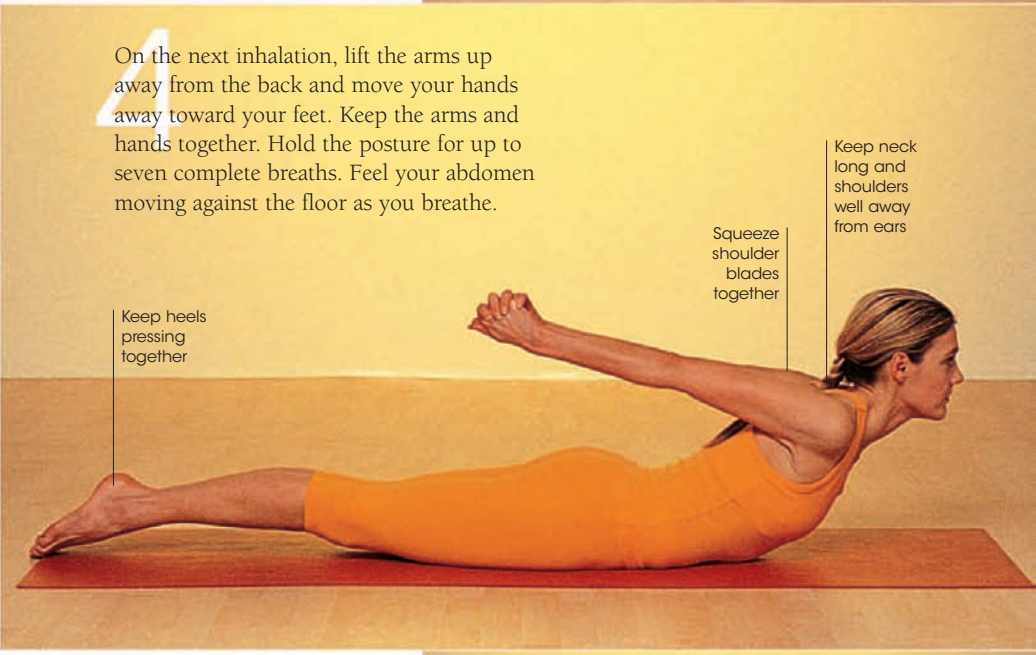
2 Breathing in, lift your arms up and bring them behind your back. Move your elbows as close together as you can. Place the palms of your hands together and interlock the fingers. Roll your shoulders down and back away from your ears, squeezing your shoulder blades together. Exhale.

TAKE CARE

Do not practice this posture if you have a peptic ulcer or a hernia.

3 As you breathe in, lift your head and raise the front of your chest up away from the floor. Look straight ahead. Exhale.

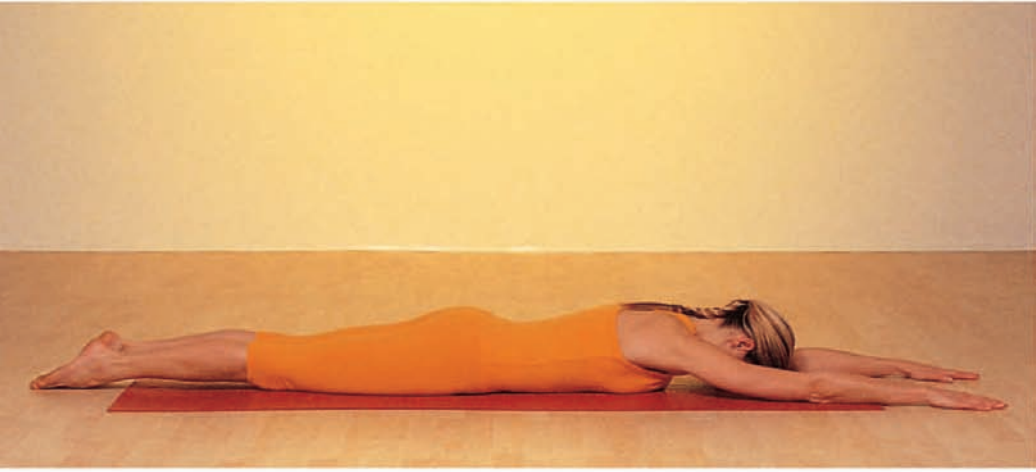
4 On the next inhalation, lift the arms up away from the back and move your hands away toward your feet. Keep the arms and hands together. Hold the posture for up to seven complete breaths. Feel your abdomen moving against the floor as you breathe.



5 On an exhalation, slowly lower the arms down onto the back, tuck in the chin, and rest the forehead on the floor.

resting crocodile

Resting Crocodile is a healing posture for many types of back pain, including slipped disc, sciatica, and lower back pain. It also encourages full and complete breathing.

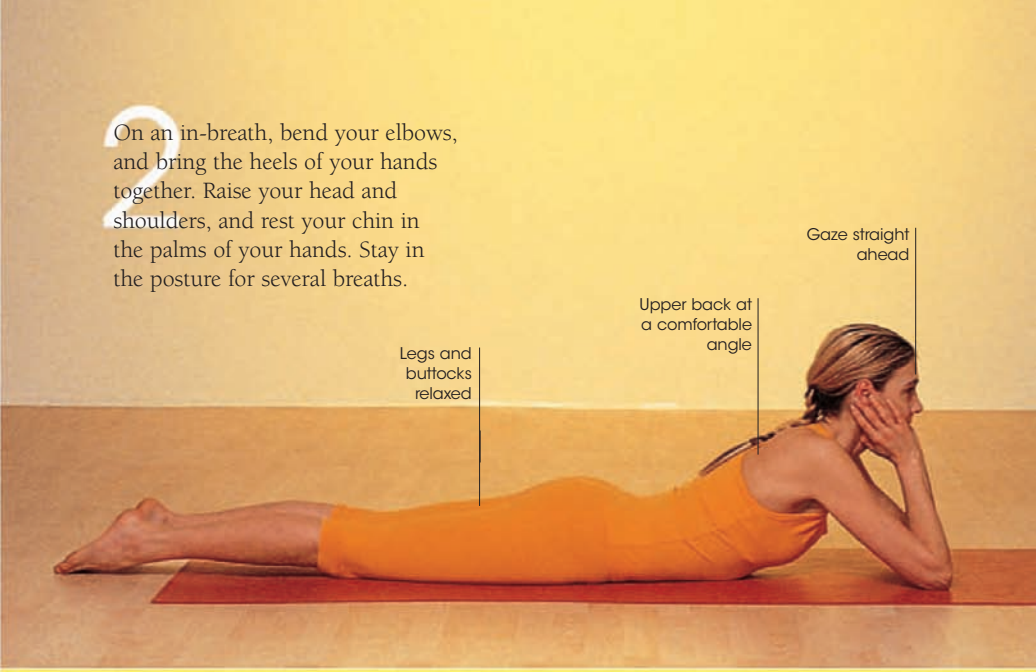


TAKE CARE

- Let your feet and ankles relax. Point toes in toward each other or out to the sides.
- Feel the abdomen moving against the floor as you inhale.

1 Lie flat on your front, your feet hip-width apart and your arms outstretched above your head. Rest your forehead on the floor. This is known as the Reverse Corpse pose.

2 On an in-breath, bend your elbows, and bring the heels of your hands together. Raise your head and shoulders, and rest your chin in the palms of your hands. Stay in the posture for several breaths.



ALTERNATIVES

Take your elbows wider apart to spread the upper back and neck. Move your elbows further in front to lessen the angle of the curve in your back. Bring the elbows closer to the body to increase the angle of the curve in your back.

sun salute

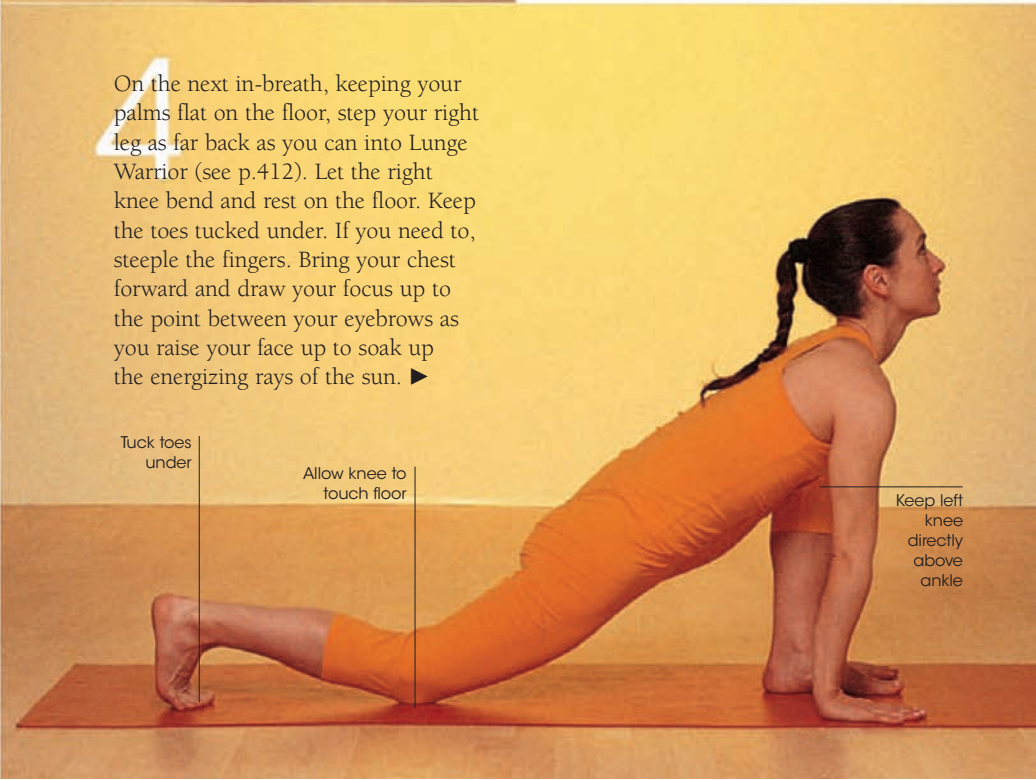
The Sun Salute synchronizes breath with movement and promoting fluidity, endurance, strength, and adaptability. Best practiced early in the day, it harmonizes and energizes the whole body system.

1 Stand tall, with feet together and chest lifted. Inhale. On the out-breath, bring the palms of the hands together in the center of the chest in prayer position. Breathe into the heart space.

2 On the next in-breath, lift your hands over the head, straightening the arms, and turn the palms to face the sun in front of you. Lean back a little. Open the chest with your in-breath to feel strong and confident.

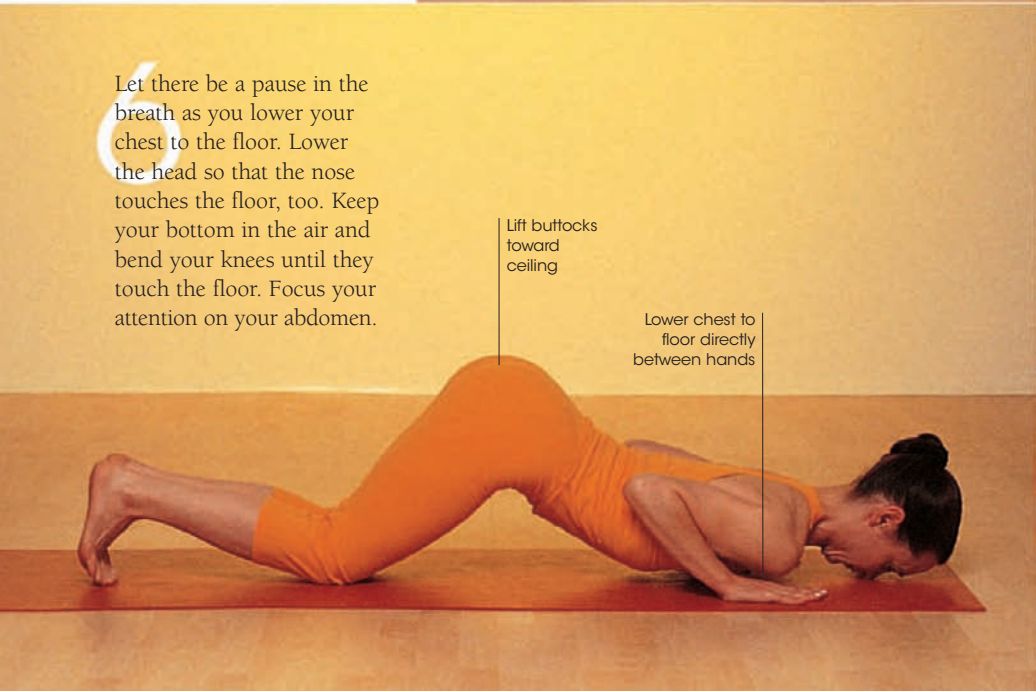
3 Exhaling, bend forward from the hips into a Forward Bend. Keep a long spine and bend your knees if you need to. Maintain a sense of one continuous line from the bottom of your spine to the tips of your fingers. Bring the hands flat on the floor on each side of your feet, fingers pointing forward. Tuck your head into your shins. Be soft.

4 On the next in-breath, keeping your palms flat on the floor, step your right leg as far back as you can into Lunge Warrior (see p.412). Let the right knee bend and rest on the floor. Keep the toes tucked under. If you need to, steeple the fingers. Bring your chest forward and draw your focus up to the point between your eyebrows as you raise your face up to soak up the energizing rays of the sun. ▶

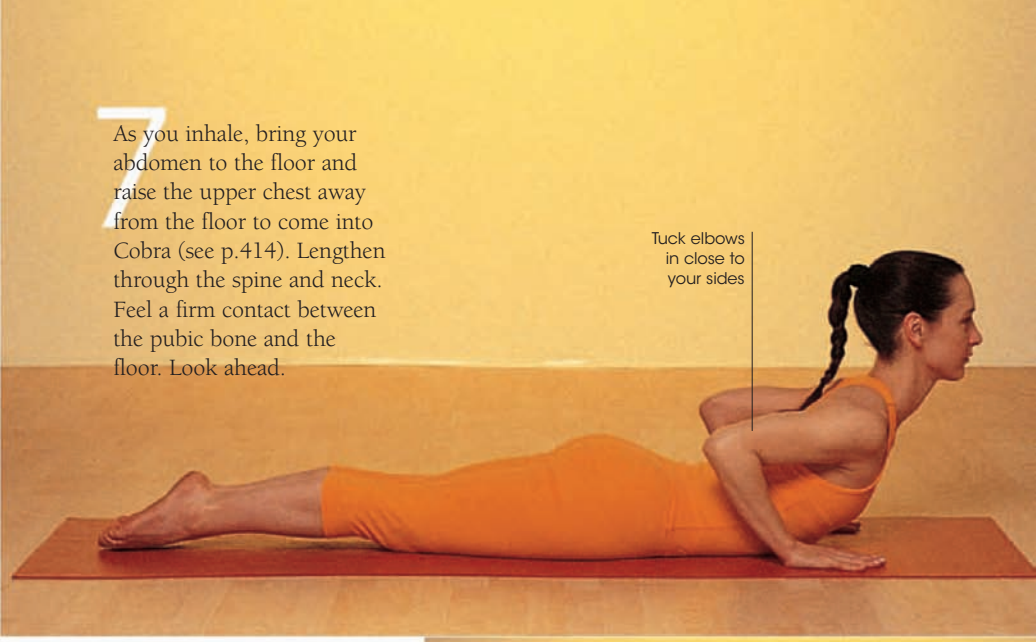


5 On the next exhalation, bring your left foot back to join your right, straighten your knees, and swing your tailbone up high. Straighten your arms and lift your shoulders back away from your ears. Lift up on your toes, and then lengthen through the backs of the legs to bring the heels down toward the floor into Downward Dog (see p.410).

6 Let there be a pause in the breath as you lower your chest to the floor. Lower the head so that the nose touches the floor, too. Keep your bottom in the air and bend your knees until they touch the floor. Focus your attention on your abdomen.

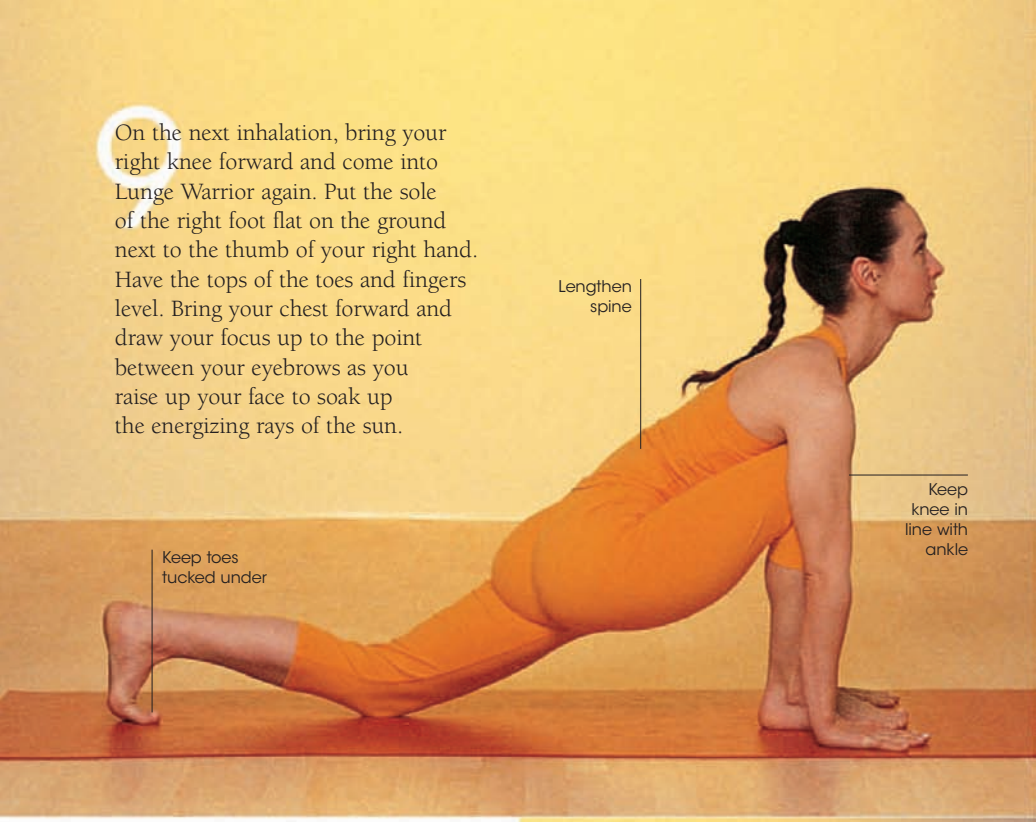


7 As you inhale, bring your abdomen to the floor and raise the upper chest away from the floor to come into Cobra (see p.414). Lengthen through the spine and neck. Feel a firm contact between the pubic bone and the floor. Look ahead.



8 On the next exhalation, come into Downward Dog again. Tuck your toes under, straighten your knees, and swing your tailbone up high. Straighten your arms and move your shoulders back away from your ears. Lift up on your toes, and then lengthen through the backs of the legs to bring the heels down toward the floor. Let your head hang down between your arms. Relax the neck. ▶

9 On the next inhalation, bring your right knee forward and come into Lunge Warrior again. Put the sole of the right foot flat on the ground next to the thumb of your right hand. Have the tops of the toes and fingers level. Bring your chest forward and draw your focus up to the point between your eyebrows as you raise up your face to soak up the energizing rays of the sun.



10 On the next exhalation, come back into a Forward Bend, bringing your left foot forward to join your right. Keep your hands flat on the floor, fingers pointing forward, and bend your knees if you need to. Have your head tucked into your shins and keep the focus of your attention at the base of your spine. Be soft, accepting of where you are able to be in the pose.

11 On the next in-breath, bend your knees and start to lift your body back up to standing, pivoting from the hips and keeping neck in line with spine.

12 Continuing to breathe in, bring your arms up above your head. Keeping the arms straight and long, lean back a little and open your chest to feel strong and confident.

13 On the next in-breath, bring the palms together above the head. Breathing out, lower them until they come to the center of the chest. Breathe into the heart space.

thunderbolt

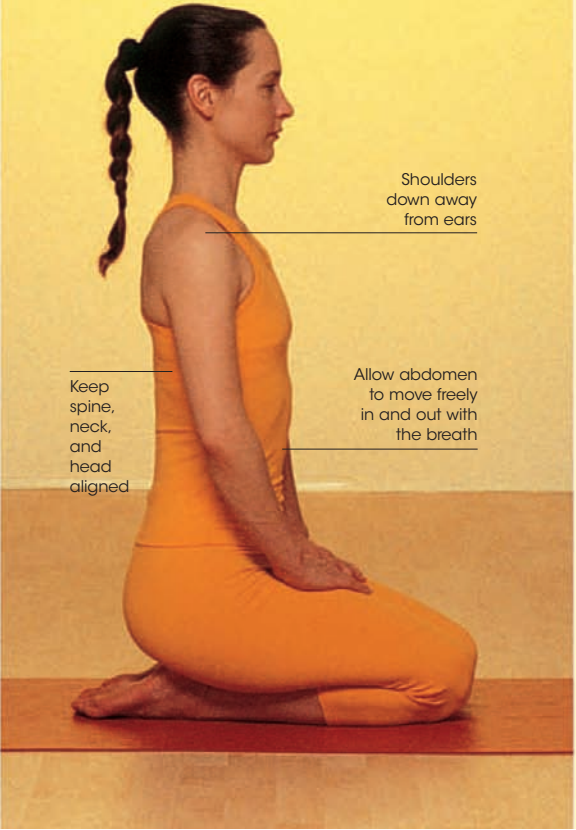
This useful meditation posture aligns the spine, neck, and head, and promotes flexibility in the ankles and feet. The quiet that it brings to the body is conducive to digestion.

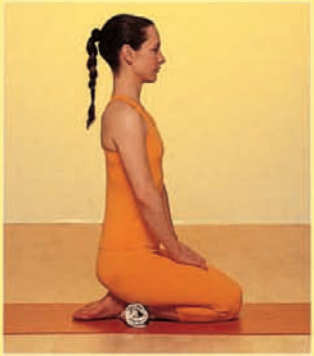
1 Stand with your feet together and arms by your sides. Look straight ahead. Inhale.

2 As you exhale, keeping your knees together, lower them forward and down to the floor.

3 With your thighs vertical, bring the big toes together and the heels apart. Untuck the toes so the tops of the feet are on the floor. Keep the spine straight. Inhale.

4 As you exhale, lower your buttocks onto the feet and let your heels touch the sides of your hips. Place your hands just above your knees, palms down. Breathe evenly for a few minutes. To come out of the posture, tuck the toes under and lift the knees up off the floor. On an inhalation, return to standing.





ALTERNATIVES

If you find that your ankles ache, tuck a rolled blanket in the front of the ankle joint, between ankle and floor. If you have varicose veins or knee problems, try tucking a rolled blanket between your knees and your calves. If you feel any discomfort in the thighs, separate the knees slightly.

philosopher

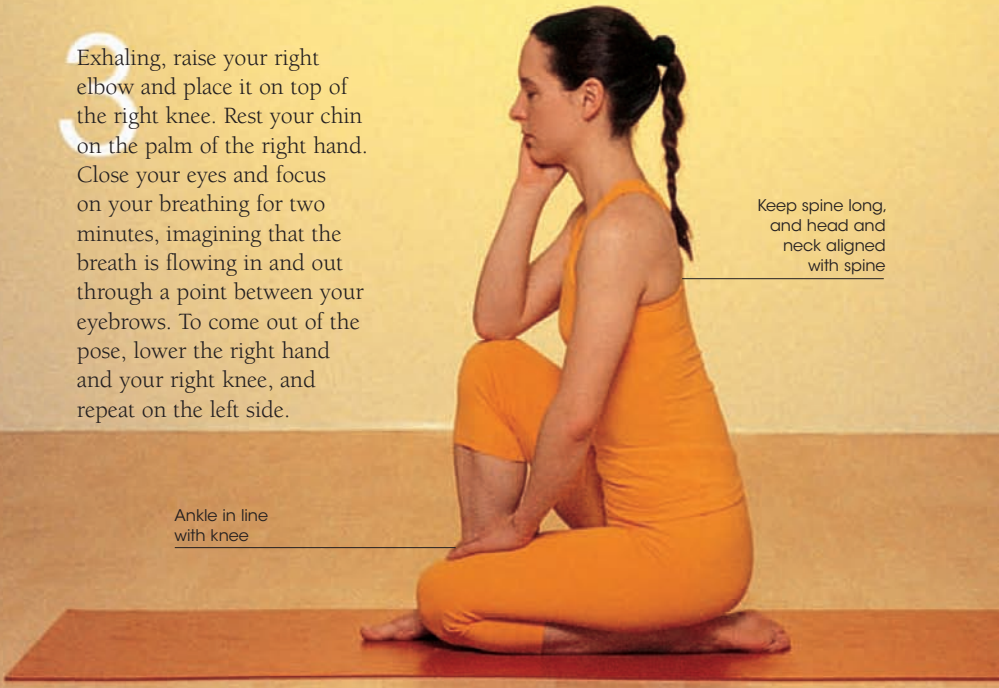
A rapid route to physical and mental relaxation, this pose develops the powers of concentration and enables clarity of thought. It encourages a quiet, contemplative self-confidence.

1 Start by kneeling in Thunderbolt pose (see p.426) with your knees together and the palms of your hands resting on your thighs. Sit back on your heels and straighten your spine. Look straight ahead. Take a complete breath. As you exhale, settle your weight down. Let your awareness travel within.

TAKE CARE
Keep the spine and neck extended, feeling a continuous line from the tailbone to the top of the head.

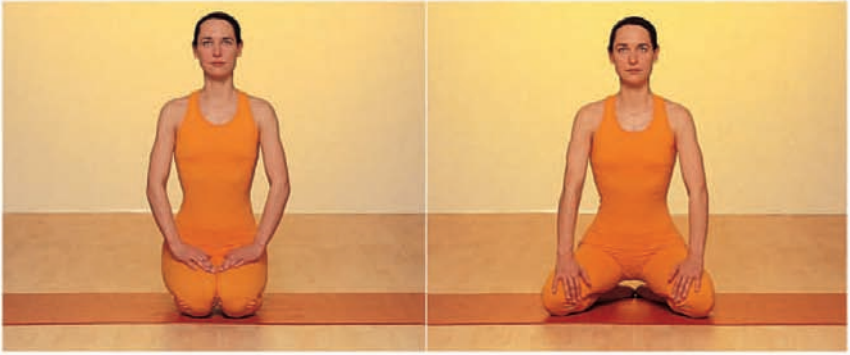
2 Inhale as you lift up the right knee, and put the sole of the right foot flat on the floor to the inside of the left knee, bringing the right ankle directly underneath the right knee.

3 Exhaling, raise your right elbow and place it on top of the right knee. Rest your chin on the palm of the right hand. Close your eyes and focus on your breathing for two minutes, imagining that the breath is flowing in and out through a point between your eyebrows. To come out of the pose, lower the right hand and your right knee, and repeat on the left side.



roaring lion

A potent antidote to introversion, this pose promotes a beautiful voice and gives you the confidence to use it. It stretches the face, jaw, and throat and releases tension in the chest.



1 Kneel in Thunderbolt (see p.426) with your knees together and the palms of your hands on your thighs. If possible, face the sun. Inhale.

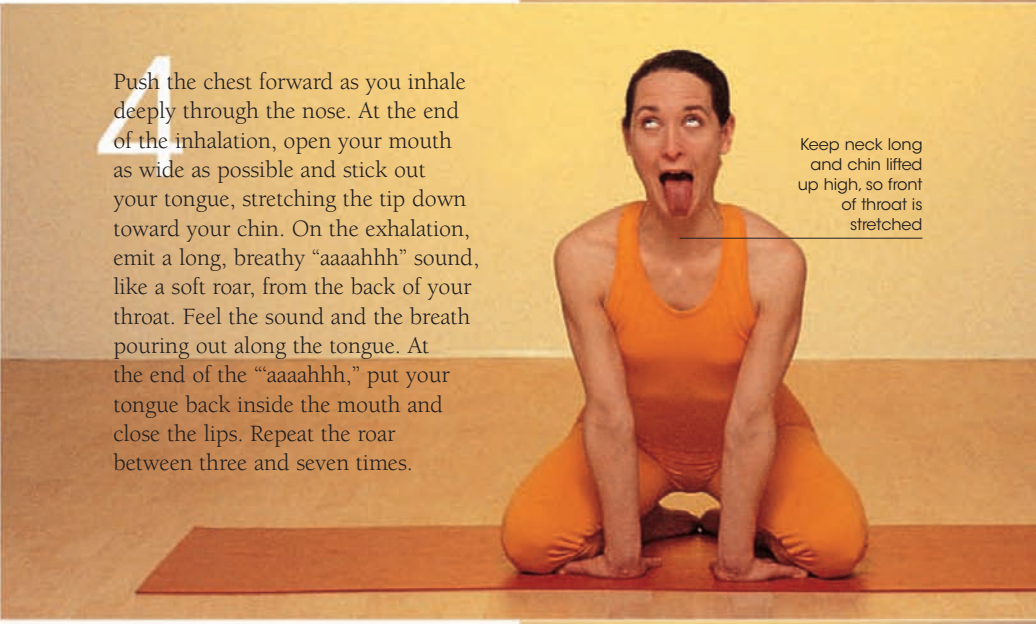
2 Exhale as you move your knees about 18 in (45 cm) apart. Spread out your fingers just above your knees, keeping your thumbs closest to your body.

TAKE CARE

- When you are comfortable with the practice, you may do up to 20 repetitions.
- If you have knee problems or painful wrists, sit on a chair. Lean forward, the hands placed lightly on the thighs.

3 Place your palms flat on the floor in between your knees with your fingers pointing back toward your body. Inhale. Lower your shoulders and keep your spine long and straight as you lean forward slightly. Exhale.

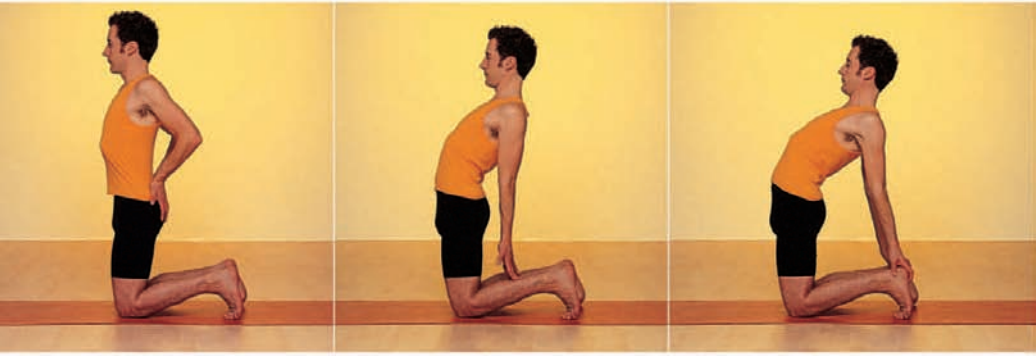
4 Push the chest forward as you inhale deeply through the nose. At the end of the inhalation, open your mouth as wide as possible and stick out your tongue, stretching the tip down toward your chin. On the exhalation, emit a long, breathy "aaaahhh" sound, like a soft roar, from the back of your throat. Feel the sound and the breath pouring out along the tongue. At the end of the "aaaahhh," put your tongue back inside the mouth and close the lips. Repeat the roar between three and seven times.



5 When you have completed your chosen number of rounds, release the hands and, on an exhalation, fold forward from the hips to bring your forehead to the floor and arms beside your body. Stay for several breaths.

camel

Energizing and revitalizing, this powerful backward bend requires and promotes confidence and trust. It stretches the front of the body and opens the chest, relieving tension in the upper back.



1 Kneel with knees hip-width apart. Tuck the toes under. Place your palms on the buttocks. Breathe in.

2 Keeping the spine extended, slowly move the hands down your thighs until they reach the shins.

3 Push the chest forward with an out-breath and grasp the heels. Draw the shoulder blades together behind you, opening the chest.

TAKE CARE

- If you have HBP, heart disease, back problems, hernia, or have had recent abdominal surgery, do not go beyond Step 2.
- If you have neck problems, do not take head back at Step 4.

4 When you feel balanced, with your weight shared evenly between the knees and hands, point the chin up to the ceiling, keeping the back of the neck long. Stay in the pose for three breaths. To come out of the pose, slowly move the chin down and the hands back up the legs to the buttocks. On an inhalation, release the hands and return to the vertical position.

Do not drop weight of head back

Keep chest and abdomen moving rhythmically while breathing easily

Shoulders down from ears and spine extended

Thighs as vertical as possible

5 On an exhalation, fold forward into Child (see p.436) and lengthen the spine. Breathe into the abdomen and feel it moving against the thighs. Rest in this pose for a few minutes.

cat

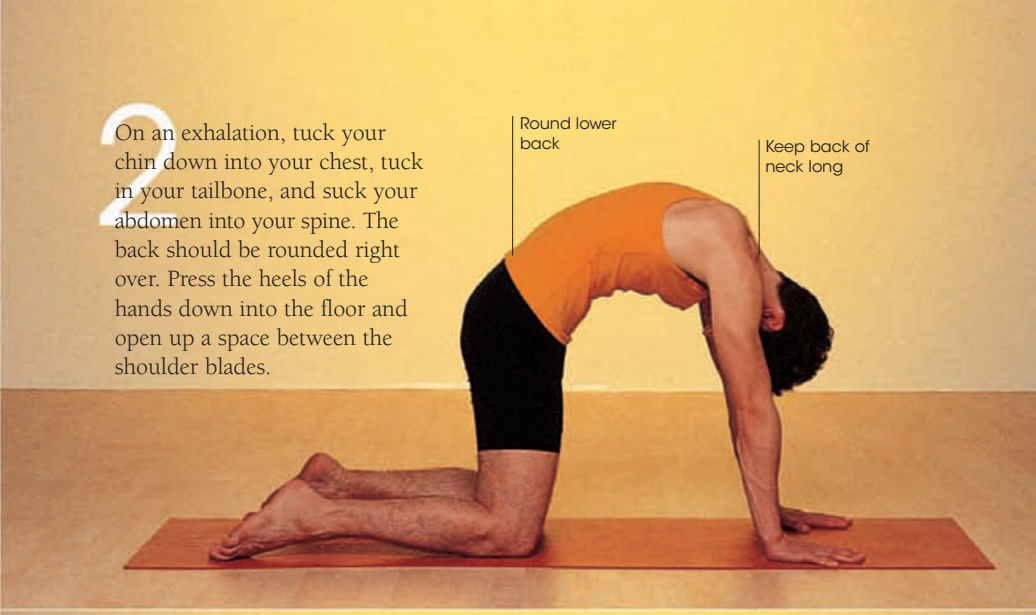
Synchronizing breath and movement, Cat pose creates a strong link between mind and body. It eases tension in the spine and develops a full and effective yogic breath (see p.387).

1 Start in the all-fours position, with the palms flat on the floor directly under the shoulders and the fingers well spread and pointing forward. Push the hands into the floor to prevent the shoulders from sagging. Look down at the floor. Take an in-breath.

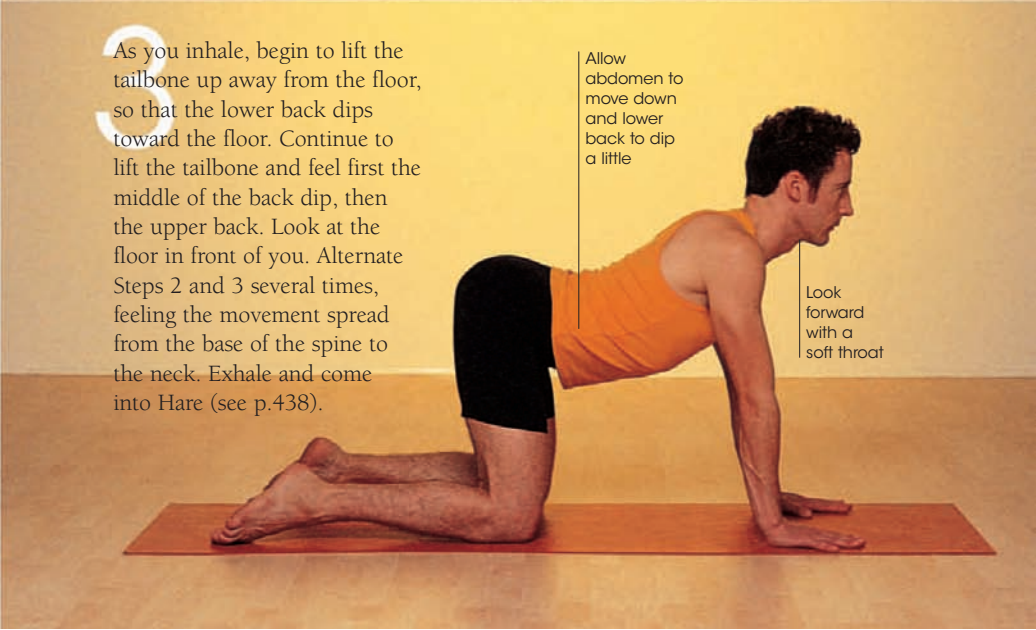
TAKE CARE

If you have weak wrists, support the body by placing one or both forearms on a pile of blocks or books.

2 On an exhalation, tuck your chin down into your chest, tuck in your tailbone, and suck your abdomen into your spine. The back should be rounded right over. Press the heels of the hands down into the floor and open up a space between the shoulder blades.



3 As you inhale, begin to lift the tailbone up away from the floor, so that the lower back dips toward the floor. Continue to lift the tailbone and feel first the middle of the back dip, then the upper back. Look at the floor in front of you. Alternate Steps 2 and 3 several times, feeling the movement spread from the base of the spine to the neck. Exhale and come into Hare (see p.438).



child

Quietening and calming, Child pose provides a long stretch through the spine and easeful rest for shoulders and neck. It is excellent for developing awareness of the abdominal breath (see p.387).

1 Kneel and sit back on your heels. Let your arms hang down on each side of the body. Lengthen through the spine and look straight ahead. Breathe in.

2 As you breathe out, fold forward slowly from the hips. Keep your buttocks on your heels and your arms by your sides.

TAKE CARE

• If you cannot sit on your heels, place a pillow beneath the buttocks. • If you find it difficult to bring your head to the floor, rest it on two fists, one on top of the other. • If you have HBP, a detached retina, glaucoma, or back problems, rest your head on the seat of a chair.

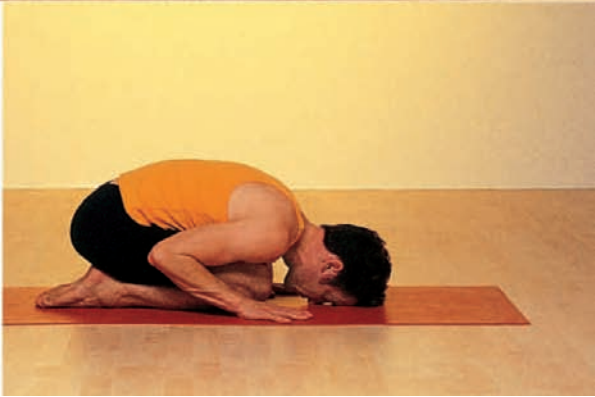
3 Continue to fold forward, tucking the chin in to bring the forehead to the floor. Allow the weight of the arms to pull the shoulders gently toward the floor. Stay for several breaths.

Rounded back opens space between shoulders

Neck soft with weight of head supported on floor

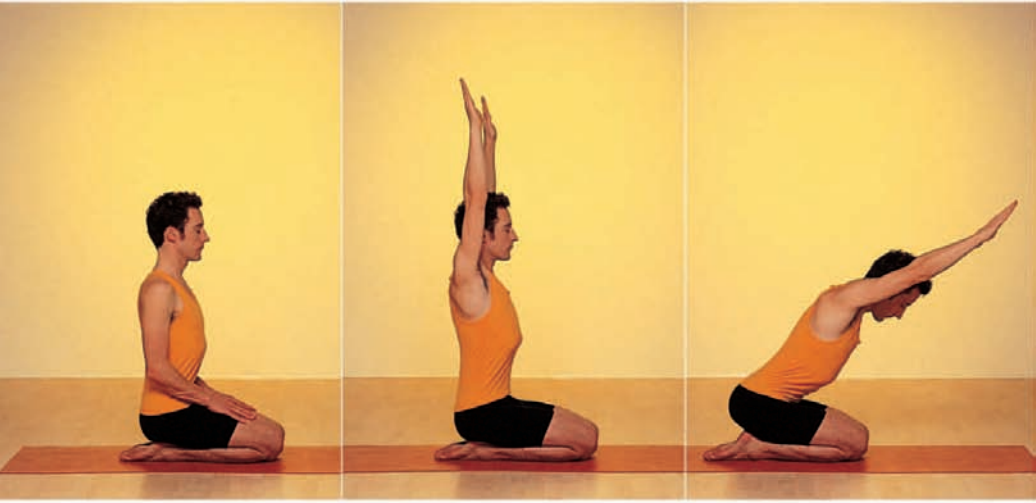
Tailbone sinks down on heels

4 To come out of the pose, on an in-breath, bring the palms of your hands to the floor and begin to push up slowly. Gradually come back up to kneeling, your arms by your side, back straight.



hare

This peaceful pose is soothing and quietening, providing relief from harsh self-criticism and anger. It also stretches the back and helps encourage good alignment of the spine.

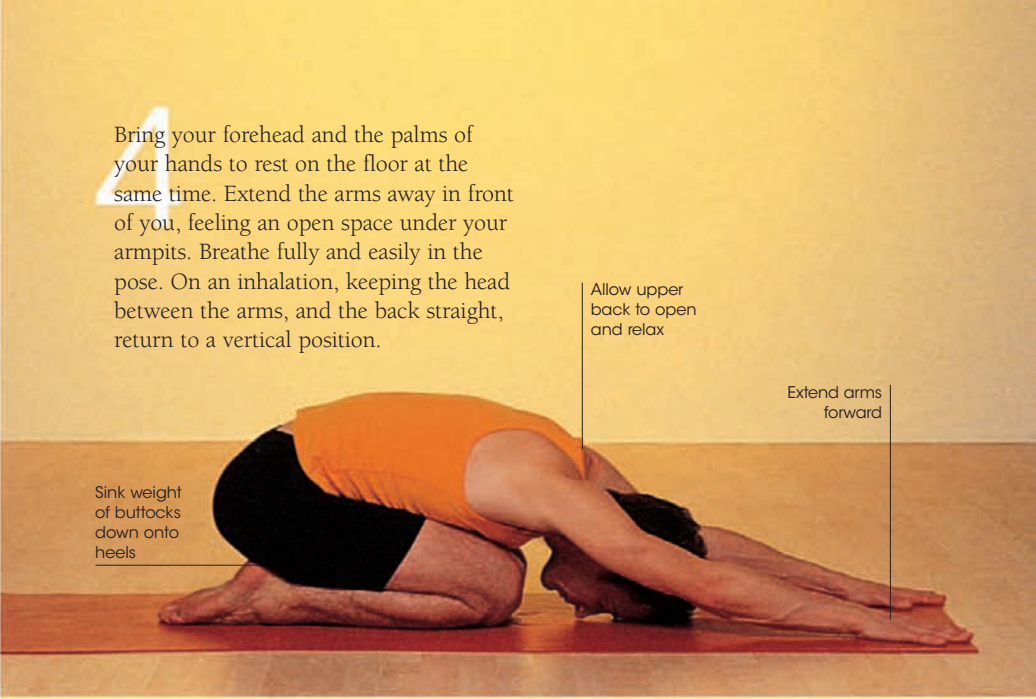


1 Sit in Thunderbolt pose (see p.426). Keep your back long and rest the palms of your hands on the thighs.

2 Inhale as you raise your arms above the head. Make a straight line from fingertips to the base of the spine.

3 Exhale as you fold forward from the hips, extending the fingertips forward as you come down.

4 Bring your forehead and the palms of your hands to rest on the floor at the same time. Extend the arms away in front of you, feeling an open space under your armpits. Breathe fully and easily in the pose. On an inhalation, keeping the head between the arms, and the back straight, return to a vertical position.



ALTERNATIVES

If you find it uncomfortable to keep your knees together, allow them to come a little apart. If you are not comfortable sitting back on your heels, place a pillow between your heels and your buttocks. If you have HBP, a detached retina, glaucoma, or back problems, stretch forward with your hands on the seat of a chair.

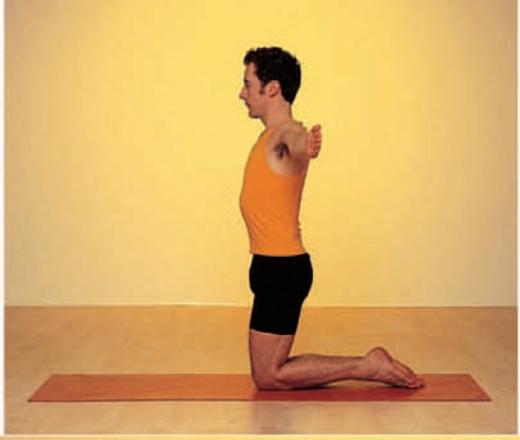
chandra sequence

Requiring and promoting balance and strength, this sequence encourages fluidity of movement and sustained self-awareness. It energizes and releases the pelvic area.

1 Start in Thunderbolt (see p.426). Bring the arms in front of your chest and press the heels of the hands together in prayer position. Exhale.

2 Inhale as you rise up onto the knees, keeping your back straight and your hands in front of you in prayer position.

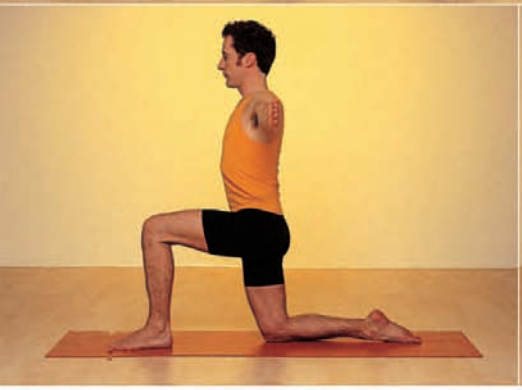
3 As you breathe out, straighten your arms out in front of you, palms still pressed together, fingers pointing away from the body.



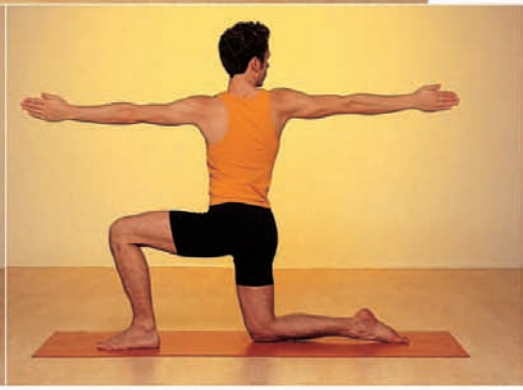
4 As you inhale, open your arms wide to the sides at shoulder height, keeping your arms straight.

5 Exhale as you step the left foot forward. Form a 90-degree angle, so the left knee is directly over the left ankle. Keep the arms spread wide. Take a breath in. ▶

6 Exhale as you turn your torso, head, and outstretched arms to the left. Look along the length of the left arm now extended behind you.



7 Keeping both arms held out straight and at shoulder height, breathe in as you return to the front. Look directly in front of you.



8 Exhale as you turn your torso, head, and outstretched arms to the right. Look along the length of the right arm. Keep both arms straight and at shoulder height.

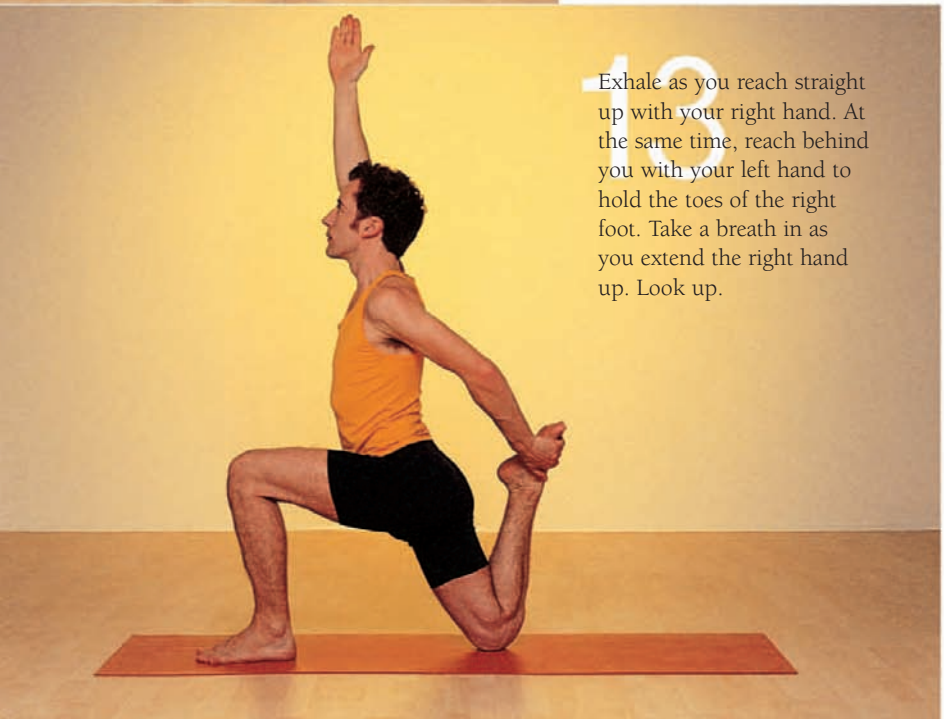
9 Keeping both arms straight and at shoulder height, inhale as you return to the front. Look directly in front of you.

10 Exhale as you bend at the waist to bring the left arm down to touch the floor with your fingertips. Stretch the right arm up, keeping a long straight line from the right fingertips to the left. Look up at the right hand. Take a breath in as you return to the centre, keeping the arms wide.

11 Exhale as you bend at the waist to bring the right arm down to touch the floor with your fingertips. Stretch the left arm up, keeping a straight line from the left fingertips to the right. Look up at the left hand. Come back to Step 9 on the in-breath. ▶

12

Exhale as you reach straight up with your left hand. At the same time, reach behind with your right hand to hold the toes of the right foot and pull the foot up toward the right buttock. Inhale as you extend the left hand up. Look up at the left hand. Release the right foot back to the floor and lower the left hand on an exhalation. Take a breath in.



13

Exhale as you reach straight up with your right hand. At the same time, reach behind you with your left hand to hold the toes of the right foot. Take a breath in as you extend the right hand up. Look up.

14 Release the right foot back to the floor and lower the right hand on an exhalation. Inhale. Exhale as you step your left foot back to return to Thunderbolt pose.

15 Bend at the waist to come down onto all fours. Have the palms flat on the floor directly under the shoulders, with the fingers spread and pointing forward. Inhale fully as you look forward and slightly up, lengthening through the whole spine as it dips slightly in Step 3 of Cat (see p.435).

16 On an exhalation, tuck your chin down into your chest, tuck in your tailbone, and suck your abdomen up to your spine in Step 2 of Cat. Press the heels of the hands down into the floor and open up a space between your shoulder blades. Inhale and look forward to come back to Step 15. ▶

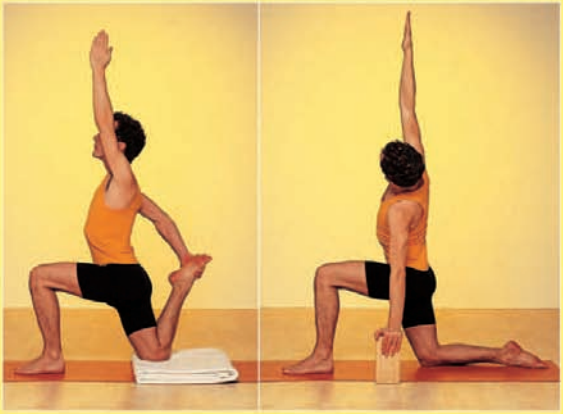
17 Exhale as you tuck your toes under and swing your tailbone up into Downward Dog (see p.410). Keep the elbows and knees strong and arms and legs straight.

18 Inhale as you raise the left leg up behind you, flexing the foot. Keep your neck relaxed and let your head hang between your arms.

19 Exhale as you place your left foot back on the floor, returning to Downward Dog. Take a full breath.

20 Inhale as you raise the right leg up behind you, flexing the foot. Exhale as you place your foot back on the floor. Breathe in.

21 Exhale as you bend your knees and lower your head to the floor, coming into Hare (see p.438). On an in-breath, come back up into Thunderbolt and repeat the sequence on the other side.



ALTERNATIVES

- If your knee feels uncomfortable in Steps 12 and 13, place a folded blanket beneath it. Have the blanket in place at the start of the sequence.
- If it is difficult to touch the floor in Steps 10 and 11 without losing balance, position a wooden block so you can rest the heel of your hand on it.

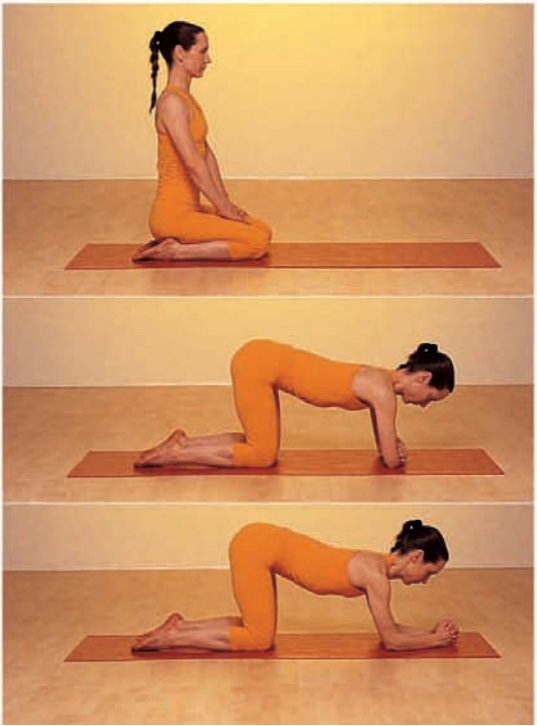
dolphin

The Dolphin pose is a vital part of the preparation for Headstand (see p.450). Until you can comfortably do 10 repetitions of this posture, you should not attempt to do Headstand.

1 Kneel on the floor with your hands resting lightly on your thighs and your buttocks resting on your heels. Inhale and then fold forward on an out-breath.

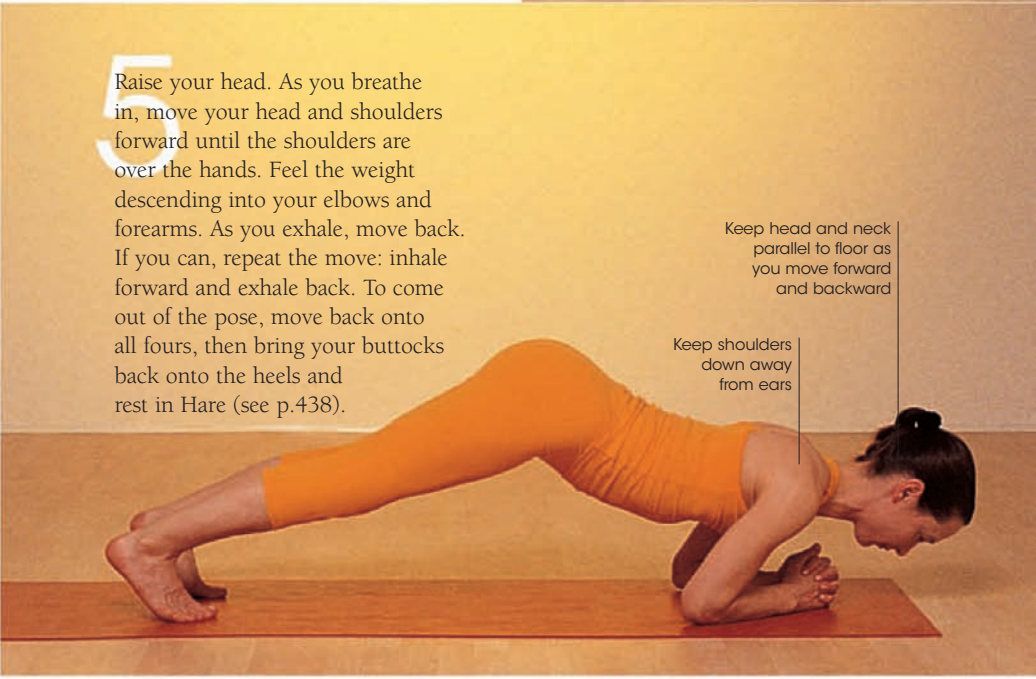
2 Inhale as you come on to your knees and elbows. Place your elbows under your shoulders and clasp each elbow with a hand.

3 Keeping the elbows still, slide your hands forward and interlock your fingers. Lift your shoulders back and down.



4 Breathing in, tuck your toes under and straighten your legs, so your buttocks lift and you feel the weight resting on your elbows and forearms. Keep your fingers interlocked.

5 Raise your head. As you breathe in, move your head and shoulders forward until the shoulders are over the hands. Feel the weight descending into your elbows and forearms. As you exhale, move back. If you can, repeat the move: inhale forward and exhale back. To come out of the pose, move back onto all fours, then bring your buttocks back onto the heels and rest in Hare (see p.438).



TAKE CARE

- Avoid Dolphin if you have HBP, heart disease, glaucoma, or a detached retina.
- Avoid the pose if you are menstruating.

headstand

This is the "king" of all yoga postures, rejuvenating every system in the body, and promoting a unique perspective on the world. It is best learned initially with the guidance of a qualified yoga teacher.

1 Kneel on the floor with your hands on your thighs. Place a folded nonslip mat in front of you. Inhale.

2 On an exhalation, bring your elbows to the mat, shoulder-distance apart. Push them into the mat.

3 Keeping your elbows still, interlock your fingers and rest your wrists on the mat. Roll your shoulders back and down.

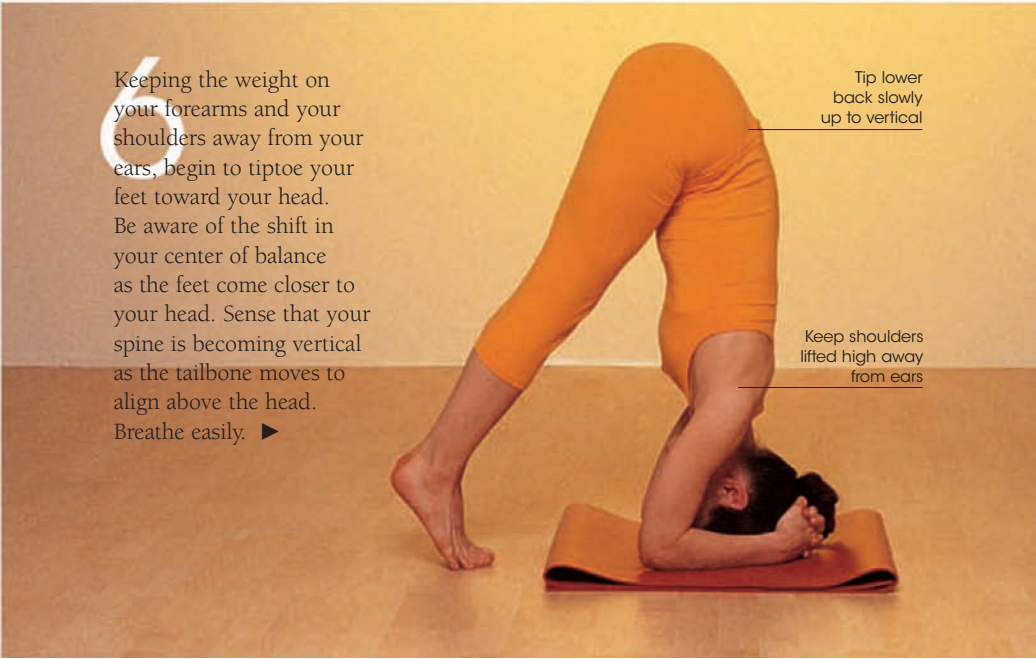
TAKE CARE

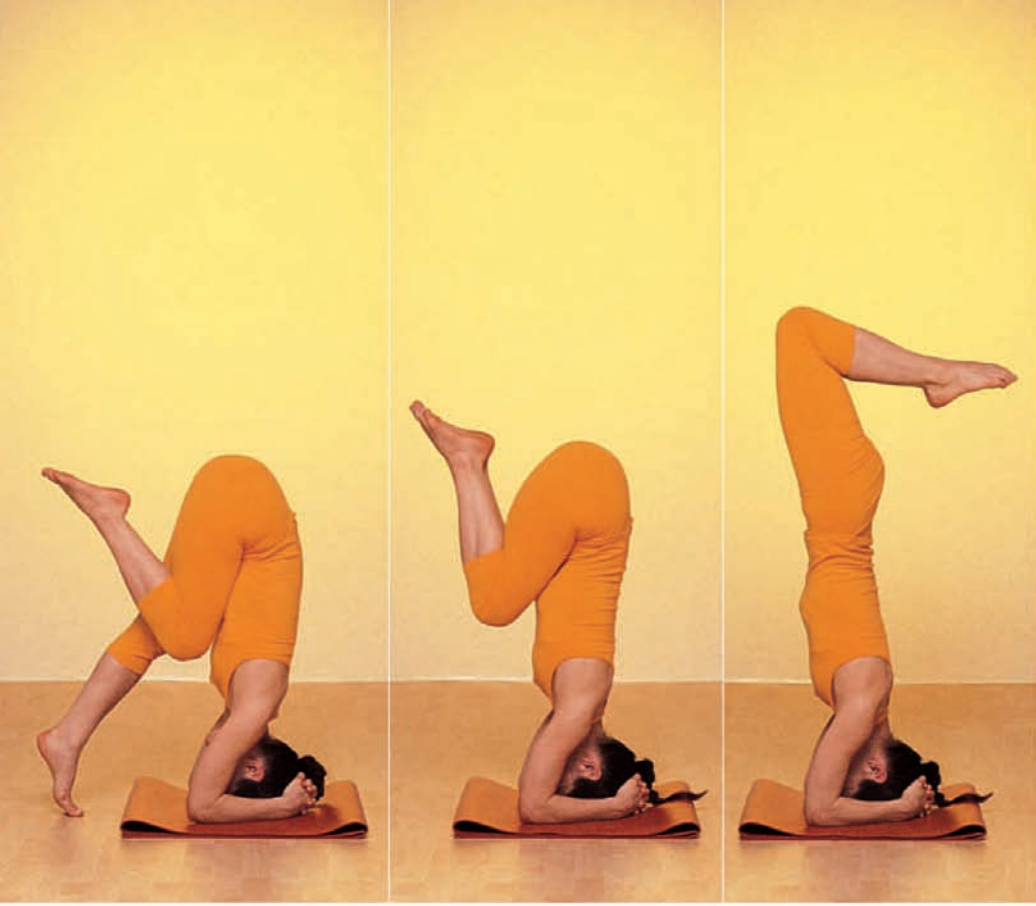
Avoid if you have HBP, heart disease, glaucoma, a detached retina, other problems with your eyes or ears, congestion, or neck problems, if you are very overweight, or if you are menstruating.

4 Bring the crown of your head to the floor and cradle the back of your head in the palms of your interlocked hands. Inhale.

5 On an exhalation, lift shoulders back and down away from your ears. Tuck toes under and straighten your legs, so you feel your weight resting now on your elbows and forearms. Lift your buttocks high.

6 Keeping the weight on your forearms and your shoulders away from your ears, begin to tiptoe your feet toward your head. Be aware of the shift in your center of balance as the feet come closer to your head. Sense that your spine is becoming vertical as the tailbone moves to align above the head. Breathe easily. ▶





7 At the point when you feel the weight of your body shifting, pick one foot up from the floor, keeping the knee tucked in. Breathe freely like this.

8 Pick up the other foot. Stay in this position with the knees tucked in while you breathe easily and adjust yourself to the inversion.

9 When you feel confident and balanced, slowly lift the knees up, first to hip height, then above the hips. Allow the breath to flow easily.

10

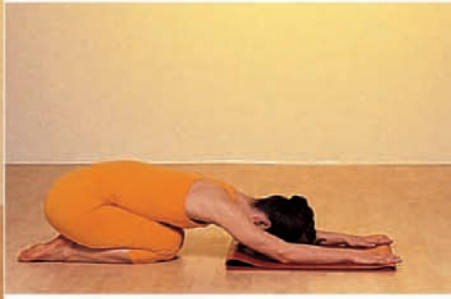
Straighten the legs completely only when you can confidently maintain the balance.

Breathe easily

Keep shoulders up away from neck

11

To come out of the posture, slowly tuck the knees down into the abdomen as in Step 8. Pause, then lower the feet, one at a time, to the floor.

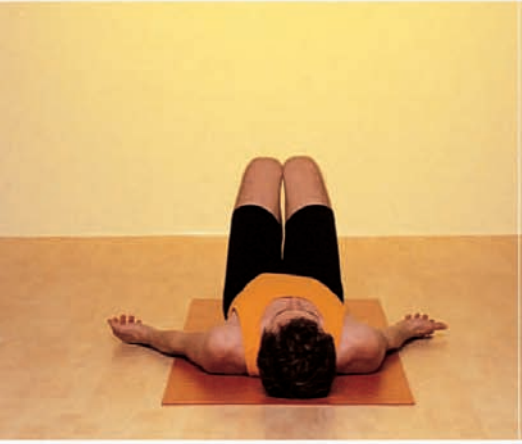


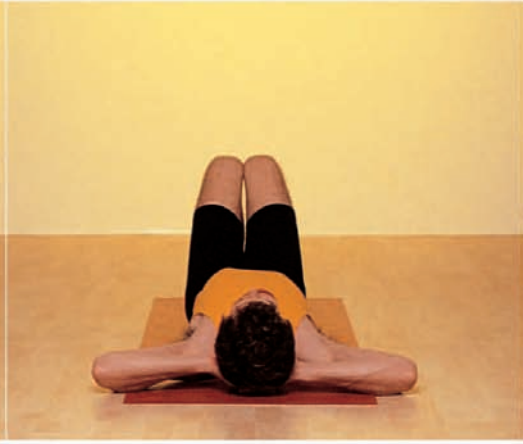
12

Bring the buttocks back on to the heels. Exhale completely and rest in Hare (see p.438) with the forehead on the mat.

spinal twist

Restful and refreshing, this simple twist stretches the abdominals and helps relieve stiffness caused by prolonged sitting. It also opens the chest and promotes flexibility in the hips.



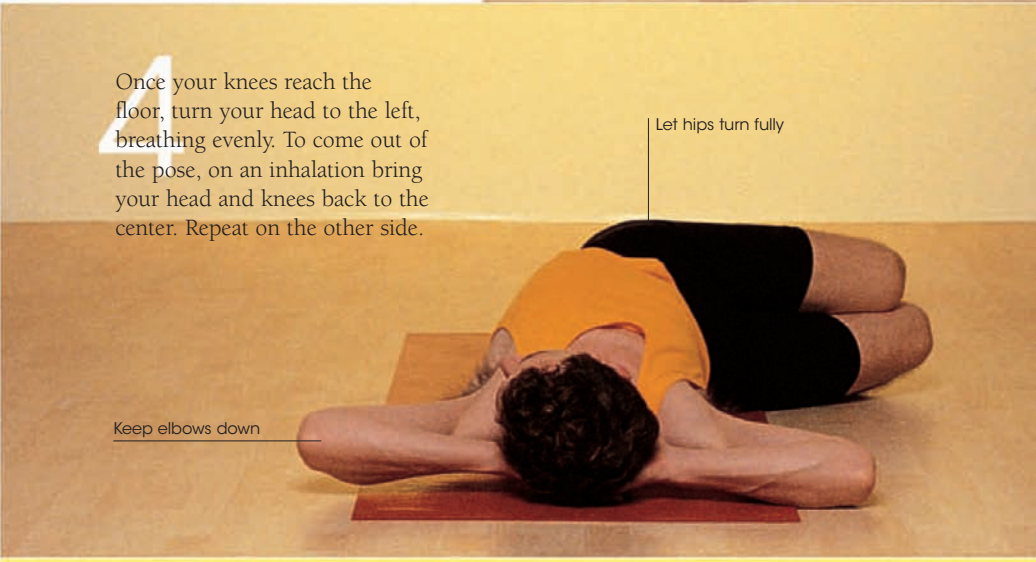


1 Lie on the floor with your knees bent and the soles of your feet flat. Keep the knees together and the back of your waist flat on the floor.

2 Clasp your hands behind the back of your head and let your elbows open out wide to the sides. Check that your chin is tucked in. Breathe into the abdomen.

3 On an exhalation, let your knees drop down toward the floor on the right-hand side, keeping them together as they are lowered down.

4 Once your knees reach the floor, turn your head to the left, breathing evenly. To come out of the pose, on an inhalation bring your head and knees back to the center. Repeat on the other side.

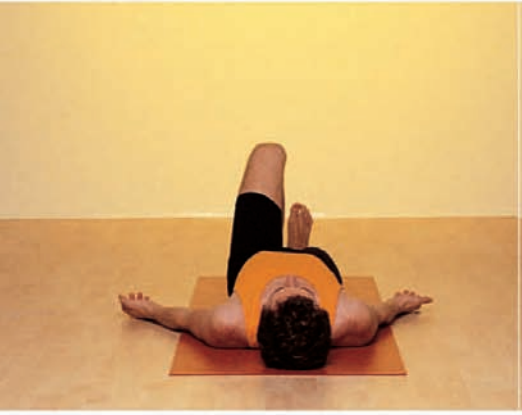


ALTERNATIVE

If your elbows do not reach the floor, take your arms out to the sides at shoulder level. Feel the contact between the shoulder blades and the floor. Keep chest open.

spinal twist 2

This pose has the same benefits as Spinal Twist (see p.454), stretching the abdominals and relieving stiffness caused by prolonged sitting. It also frees blocked energy in the shoulders and hips.

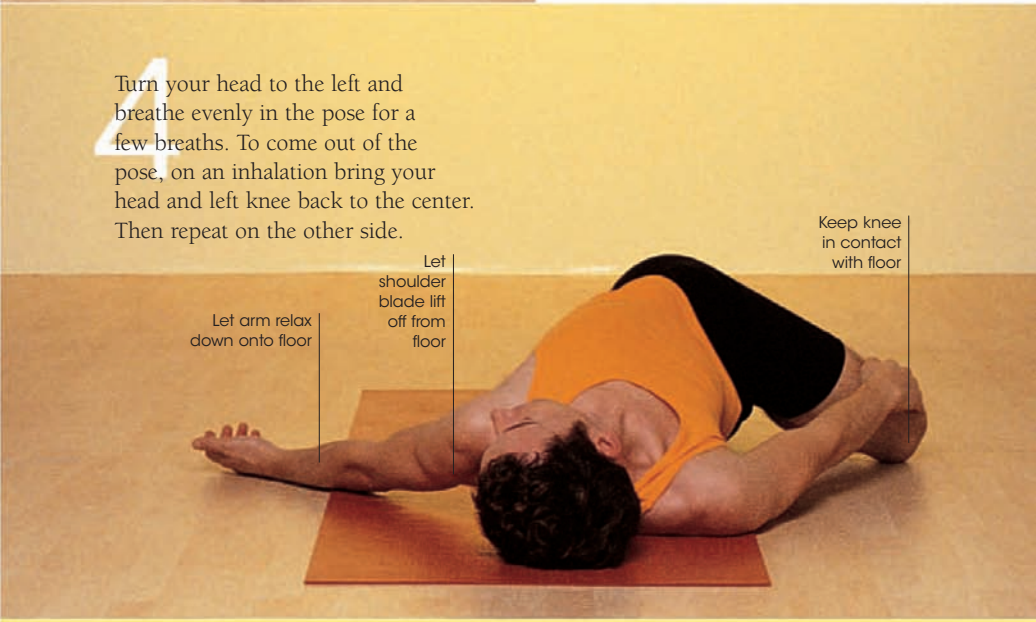


1 Lie on the floor with your legs stretched out, your knees and ankles together, and your arms stretched out to the sides, palms facing up. Bend your left knee and tuck the toes of your left foot under the back of your right knee.

2 Move your right arm across your body and place the palm of your right hand on your left thigh just above the knee. Breathe into the abdomen.

3 On an exhalation, allow your left knee to move across the body to drop down toward the floor. Once the knee reaches the floor, let it rest there, with your hand on top.

4 Turn your head to the left and breathe evenly in the pose for a few breaths. To come out of the pose, on an inhalation bring your head and left knee back to the center. Then repeat on the other side.



ALTERNATIVE

To work the shoulder girdle more strongly, practice maintaining contact between the shoulder blades and the floor. This will probably mean that your knee will not reach the floor, so hold it in position with your hand.

breathing practices

The following breathing practices can be practiced on their own to improve your awareness of the breath, but they are particularly useful as preparatory practices before meditation (see p.470).

The breathing practices described here will help improve your breath awareness and encourage calmness and mental clarity. They are generally practiced after doing some yoga postures or simple stretching. Physical movement helps loosen up the body, so that it is easier to be relaxed during the breathing practices. Breath awareness is the crucial first step toward moving your attention within and learning to observe thoughts, feelings, and patterns of behavior.

Incorporating a mudra

You might like to use a mudra, or hand gesture, in conjuction with one of the breathing practices to improve its effectiveness. There are many mudras used in yoga practice. Two – the Gesture of Consciousness and the Gesture of Knowledge – are shown on pp.468–469. They also help to remind you of the link between the individual and universal consciousness – that we are all interconnected, never unsupported.

When you are familiar with Alternate Nostril Breathing (see opposite), try visualizing the movement of the breath without using the hands whenever you need to center yourself. Called Psychic Triangle Breathing, this can be useful when you need to re-establish confidence in a public place.

Stoking the Fire (see p.460) and Shining the Skull (see p.461) are best learned with a teacher. If you have any problems, be sure to seek help.

alternate nostril breathing

Breathing through alternate nostrils has a balancing effect on the mind, body, and emotions. Begin by observing the breath and then practicing the complete breath (see p.387). Do several rounds.

1 Sit comfortably. Lift the breastbone and relax the shoulders. Fold the little finger of the right hand into the palm. Keep the index and middle fingers straight and let the tip of the ring finger be opposite the thumb.

2 Raise your right hand to your face. Rest the index and middle fingers of the right hand between the eyebrows. Close the left nostril with your ring finger and breathe in through the right nostril.

3 Close the right nostril with the thumb and open the left. Breathe out through the left nostril, then breathe back in through it. Close the left nostril, open the right, and breathe out through that. This completes one round.

stoking the fire

This practice, which should be done on an empty stomach, develops great power in the abdominal muscles, promoting excellent digestion, increasing vitality, and helping to overcome depression and lethargy.

1 Stand with the feet hip-width apart. Bend the knees slightly and rest the heels of your hands on the thighs. Breathe evenly. Extend each inhalation and exhalation, so that you can feel the abdominal muscles "squeezing" the exhalation out. At the end of the next breath out, do not breathe in. Squeeze the muscles in a little tighter.

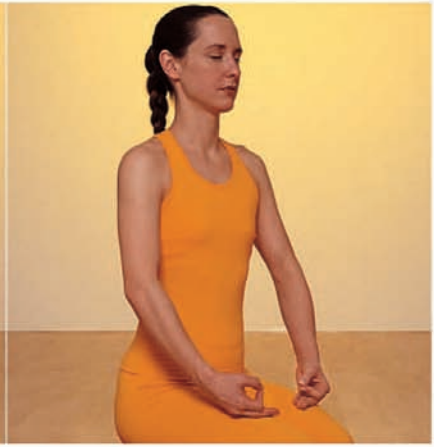
2 Release the muscles, letting the belly flop forward. Then pull the abdominal muscles sharply back in, and release them. Repeat, squeezing in and letting go of the muscles until you need to breathe in.

TAKE CARE

• If you experience dizziness or breathlessness, stop, take a break, then try more slowly and less forcefully. • Avoid if you have HBP or epilepsy, during menstruation, or if both nostrils are congested.

shining the skull

Like Stoking the Fire (see opposite), this practice should only be done on an empty stomach. It develops great power in the abdominal muscles, aids digestion, and increases vitality. Above all, it promotes clarity of mind.



1 Kneel with the hands on the knees in the Gesture of Consciousness (see p.468). Feel the movement of the abdomen as you breathe in and out. At the end of an inhalation, draw the abdominal muscles in quickly and forcefully. This expels the air through the nose; the exhalation is felt and heard as the air leaves the nostrils.

2 Immediately allow the abdomen to release into softness, so that the inhalation happens all by itself. Repeat three to five times.

TAKE CARE

The same as for Stoking the Fire (see opposite).

humming breath

Humming breath is an antidote to stress, anger, and anxiety. It also induces a profound sense of calm, lowers blood pressure, and relieves insomnia. It strengthens the voice and promotes a relaxing inner peace.

1 Sit comfortably with a straight spine in whichever of the sitting postures you prefer – Thunderbolt (see p.426) is a good basic position. Close your eyes and establish a complete breath (see p.387).

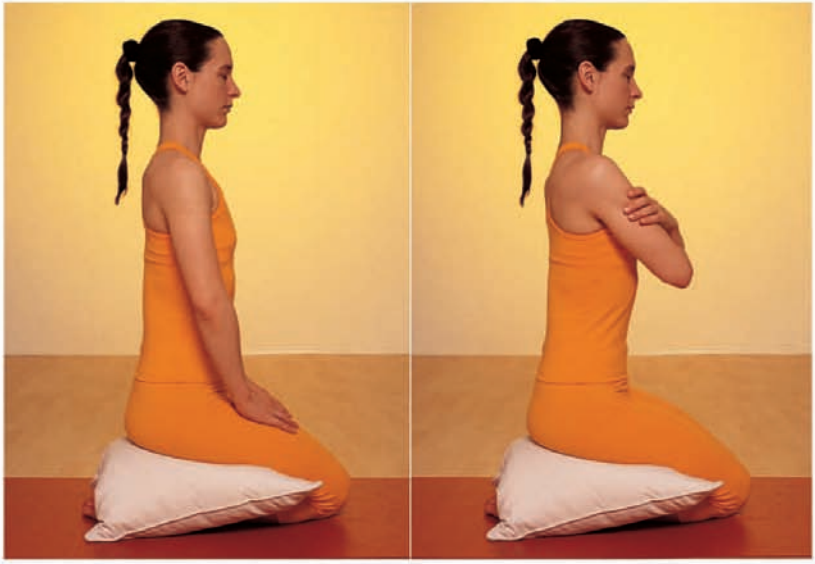
2 As you inhale, bend the elbows and draw them out wide at shoulder height. Block your ears with the heels of your hands. Keep the mouth closed, jaw relaxed, and teeth slightly apart as you breathe out, resonating a deep soft humming sound.

3 Allow the sound to fade at the end of the exhalation. Breathe normally. This is one round. Repeat five times. Keep your hands in position throughout. At the end of the last round, rest your hands in the Gesture of Knowledge (see p.469).

breath balancing

This practice promotes even breathing, aids digestion, and is a fast and effective way to center yourself.

Just a couple of minutes of breath balancing creates a calm and attentive frame of mind.



1 Sit on your heels with a straight spine. If this is uncomfortable, place a pillow between the buttocks and heels. Lower the shoulders away from the ears. With the hands resting on the thighs, watch the breath for seven rounds as you establish a complete breath (see p.387).

2 When the breath is rhythmic, tuck the right thumb high into the left armpit and the left thumb into the right armpit. Close the eyes. Be aware of a triangular pattern of breath, as the air flows into the nostrils and up the sides of the nose to the tip of the triangle between the eyebrows.

invocation of energy

Also known as "the peace gesture," this is an effective way of increasing vitality, trust, and confidence. The practice involves synchronizing the breath with arm movements. It is a symbolic giving and receiving of energy, which creates a powerful sense of tranquility and acceptance.

1 Sit comfortably with your legs crossed. Close your eyes. Cup your hands and rest them, palms facing upward, in your lap. Breathe evenly for three rounds.

2 As the abdomen begins to expand on the next inhalation, separate the hands and move them up to a little in front of the abdomen, tips of the fingers pointing toward each other.

3 As the ribcage begins to expand on the next inhalation, lift your hands up to just in front of your chest, until they are level with your nipples.

4 At the next inhalation, feel the top of your lungs expand as you raise your hands up to the level of the collarbones.

5 Hold your breath in your lungs as you open out your arms and turn your palms to face up. Remain in this position for as long as you can comfortably retain the breath. On the exhalation, gradually move the hands back down to the lap. Relax and breathe normally.

concentration practices

Concentration practices develop mental focus, which is one of the key foundations of self-confidence. They also improve memory and can relieve anxiety, depression, and insomnia.

concentrated gazing

This practice begins by providing an external point of focus, and then shifts the attention to the after-image, which appears in the mind's eye. Withdrawing your attention to the internal world is a crucial step in acquiring the attentive self-awareness and quiet interior focus necessary to building self-esteem.

Use a comfortable seated position, such as Thunderbolt (see p.426), and place a candle at arm's length in front of you so that its flame will be precisely at eye level. With your head, neck, and spine aligned, place your hands in the Gesture of Knowledge (see p.469). Establish a rhythmic complete breath (see p.387) as you relax in your chosen seated posture.

Gradually increase the length of time you can gaze at the candle without blinking. Take it easy, and never strain the eyes. If you find that you become agitated by the rapidity or the nature of the thoughts and images passing through your mind, stop the practice and seek advice from a yoga teacher who has experience of its effects.

Developing mental focus and concentration takes time and patience, so, as you notice different thoughts or emotions, gently redirect your attention back to the object of your gaze.

PRACTICAL MATTERS

- Remove eyeglasses or contact lenses before starting the practice.
- Make sure the room is not drafty; otherwise, the flame of the candle will flicker and be distracting.

1 Let your gaze come to rest steadily on the flame at the tip of the candle wick. Allow your eyes to fix their gaze on this point without blinking or moving. Focus the awareness so completely on the flame that you are no longer consciously aware of your physical body.

Keep your gaze steady for as long as you can. When the eyes start to water or feel tired, gently close them. With the eyes closed, focus on the after-image of the candle flame that appears in the space in front of the closed eyes. Try to keep that image in place for as long as possible.

When the image begins to fade, open the eyes and look at the candle again. Keep the gaze focused for as long as you can, then close the eyes, focusing on the after-image of the candle. Repeat three or four times.

2 Rub your palms together vigorously until they feel warm, and cup the palms over your eyes. Feel the heat from the hands bathing the eyelids. Keeping the palms in place, open your eyes and look into the darkness within your cupped hands. When you are ready, lower your hands from your face.

TAKE CARE

- If you have epilepsy, do not focus on a candle flame, but instead use a fixed point, or an object or image of your choice.
- If you have severe eyestrain, myopia, astigmatism, or cataracts, use a black dot instead of a flame.
- If it is hard to focus on the flame at arm's length (because you are near- or far-sighted, for example), choose a distance at which you can focus easily, without straining the eyes.

using mudras

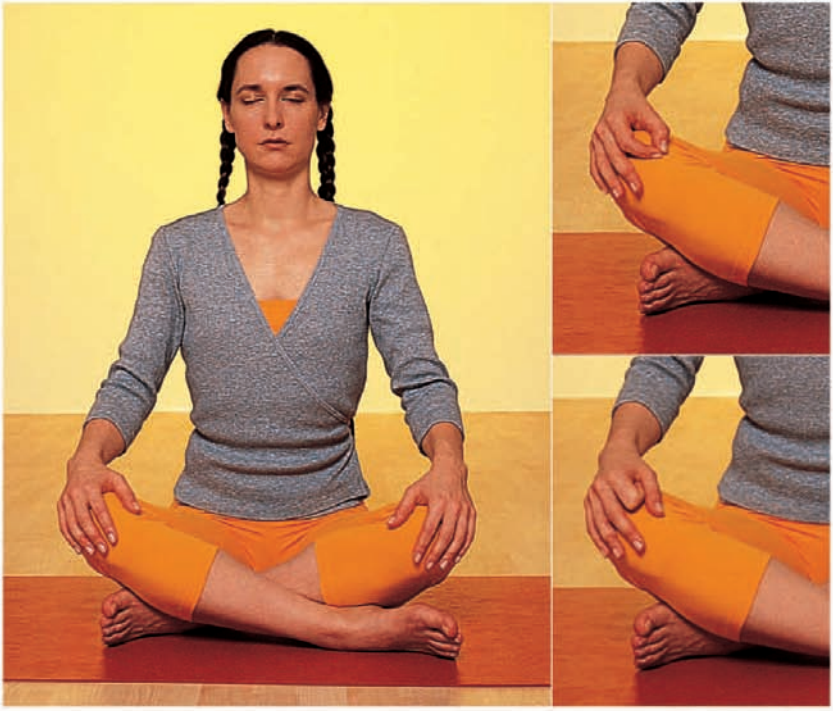
Mudras are traditional hand gestures that help you to center yourself. They help you quieten when you are feeling stressed, promoting a calm, meditative state of mind in which trust can be developed.

gesture of consciousness

Sitting cross-legged with your eyes closed, rest the backs of the hands on the knees or thighs, with the palms up. Bring the tip of each index finger to touch the tip of the thumb. Allow the rest of the fingers to be straight, but also relaxed and slightly apart from each other. Alternatively, tuck the tip of each index finger into the root of the thumb. You can also practice this mudra kneeling in Thunderbolt pose (see p.426).

gesture of knowledge

Sitting with legs crossed (or in Thunderbolt – see p.426) and eyes closed, rest the palms of the hands on the knees or the thighs. Bring the tip of the index finger to touch the tip of the thumb. Alternatively, tuck the tip of each index finger into the root of the thumb. Let the rest of the fingers be straight but still relaxed and slightly apart from one another. This is a more inward-looking gesture than the Gesture of Consciousness, and is suitable for deeper exploration of your attitudes and beliefs.



meditation

Meditation is a simple but profound practice that can bring about a state of focused attention and peace. Practiced often, it can teach you to observe and understand your thoughts and emotions.

inner silence meditation

This meditation practice takes about 15 minutes to complete. Sit in a comfortable position and close your eyes. Establish a Full Yogic Breath (see p.387). Rest your hands in the Gesture of Consciousness (see p.468).

PRACTICAL MATTERS

- Choose a time when you are certain that you will remain undisturbed for at least 15 minutes.
- Choose a room (or space outside) that is quiet, uncluttered, and not cold or drafty.
- Choose a posture – sitting in a chair, or sitting or kneeling on the floor – that you will be able to sustain easily for some time.

Let your awareness be with the sense of hearing. Listen to all the sounds. Start by bringing your attention to the loudest, then gradually draw the focus of your awareness in closer until you attend only to the quietest, closest sounds. Be aware of the sound of your own breath as it comes in and goes out.

Now shift the focus of your attention to the sense of touch. Become aware of the sensation of the breath passing into and out of the nostrils. Feel the cooler air coming in and the warmer air going out. Be aware of the different textures and temperatures that you can detect

through the sense of touch. Sense if there is any difference between what you can feel on covered and uncovered skin. Then return to feeling the passage of air in the nose.

Now give your full attention to the sense of smell. Be aware of any odors and aromas around you. Then shift your attention to the sense of taste. Be aware of the tongue inside the mouth. Notice if there are sweet, salty, bitter, hot, or astringent tastes. Give the sense of taste full attention.

Now focus your attention on the sense of sight. Look into the closed eyelids and be aware of whatever you may see there. Are there any colors or shapes? Are there patterns, or movement? Just blackness?

Now spend a few moments simply watching the patterns of your own thoughts as they arise and pass away. Sit and wait for the first thought, watch it until it passes away, and then wait for the next thought to arrive. Do not get caught up with your thoughts or try to follow them.

After a little while, return your attention to the sense of hearing, and become aware of the intimate sound of your own breath. Allow that breath to get a little louder, and use the sound of that breath as a bridge back to becoming aware of other sounds in the room. Then widen your awareness until you are aware of sounds out in the wider world. When you are ready, open your eyes.

relaxation

Relaxing at the end of a yoga session gives the body and mind a chance to absorb the benefits of your practice. Set aside 20 minutes and follow the Deep Relaxation practice described below.

deep relaxation

This is a shortened version of one of the most powerful systematic approaches to profound relaxation. The Sanskrit for this practice is *yoga nidra* with *sankalpa*, which translates as "yogic sleep with affirmation." In fact, it is only the body that sleeps while the mind remains alert.

Lie on the floor in Corpse pose (see opposite). Close your eyes and establish 11 rounds of the complete breath (see p.387). Feel yourself settling the body into a state of stillness. Become aware of the points of contact between body and floor.

Make a resolve to let the body take deep rest, while the mind remains alert and attentive. Then prepare to carry the mental attention around the body, visiting each part of the body in turn, as if the light of the mind's attention were to come to shine briefly on each body part.

Keeping absolutely still, now bring the mental attention to touch each part of your body in turn. Choose a circuit that you can remember and that covers every part of the body. Try scanning down from top to bottom, or working clockwise around the body, or from the edges to the center.

When you have touched each part of the body in turn with your mental attention, bring the focus of your

awareness back to the rhythm of the complete breath. Count 27 rounds of this, beginning at 27, and counting down to zero. If you lose count, start again.

When you get to the end of the last round of the complete breath, return to the resolve to let the body take deep rest, while the mind remains alert and attentive. Sense that the body is fully rested, and that the mind is alert and attentive. Then let your breath get a little noisier, until you can hear it clearly. Use the sound of the breath as the bridge back to a more everyday state of awareness. Stretch out through the fingers and toes, the hands and feet. Then stretch out through the whole body, roll over and sit up. When you feel ready, open your eyes.

Adding an affirmation

Once your are familiar with the sequence, you may want to make your own affirmation. Choose a simple, short, and positive statement about a direction you would like your life to take. Choose carefully, and make sure that you are happy with the affirmation before you work with it. When you feel you have the right affirmation, use it at the start and end of the relaxation practice.

programs

The following seven programs will help boost your confidence in a variety of situations: before an exam or interview, during change and disruption, at times of self-doubt, when feeling panicky, when facing a challenge, and when you need to develop your self-worth.

1 pre-interview boost

Remaining confident and relaxed during an interview can be a challenge. This sequence, practiced before you set out for the interview, develops the energy and focus to approach your meeting positively. The final two practices can also be repeated on the way to the interview to maintain confidence and clarity of focus.

1 Stoking the Fire (see p.460)

2 Shining the Skull (see p.461)

3 **Invocation of Energy** (see pp.464–465)

4 **Alternate Nostril Breathing** (see p.459)

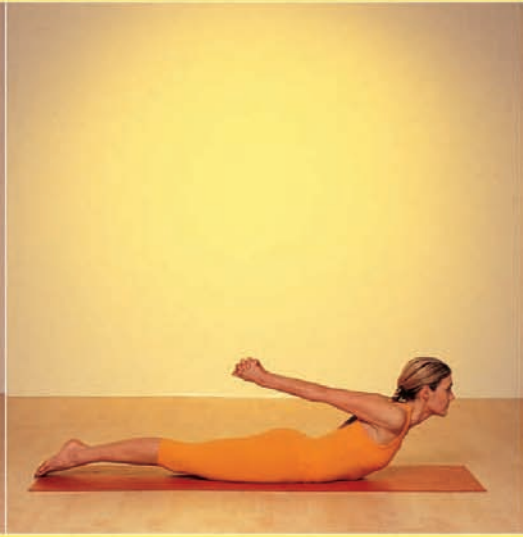
5 **Breath Balancing** (see p.463)

6 **Inner Silence Meditation** (see pp.470–471)

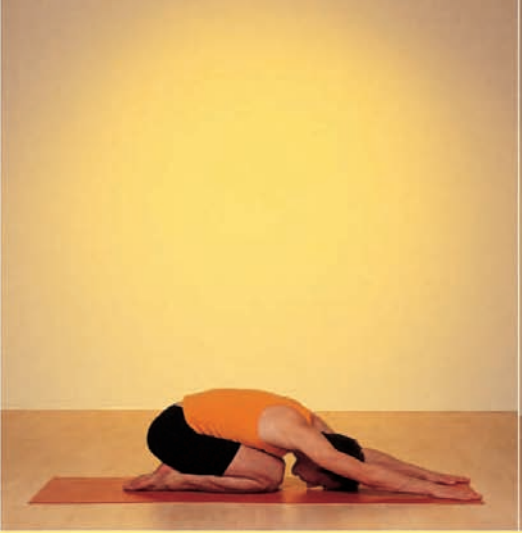
2 in times of change

This sequence enhances your ability to adapt to changes in all aspects of life. To deepen the effect, practice the complete breath (see p.387) in Reverse Corpse and abdominal breathing (see p.387) in Hare. Use a focused gaze during Snake and Triangle. Complete the program with a period of Inner Silence Meditation (see p.470).

1 Reverse Corpse (see p.418)



2 Snake (see pp.416–417)



3 **Hare** (see pp.438–439)

4 **Triangle** (see pp.402–403)

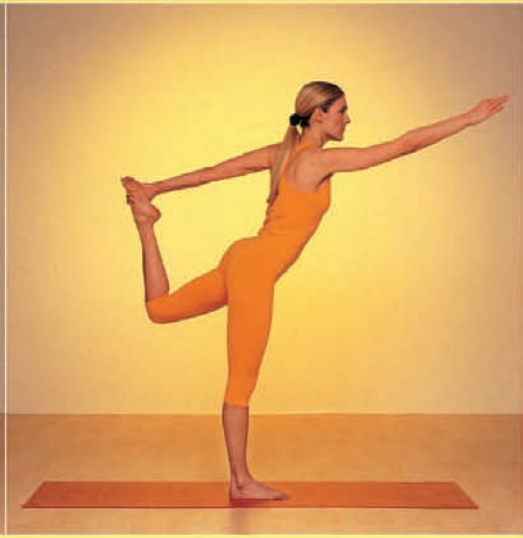
5 **Arm Stretch 3** (see p.390)

6 **Philosopher** (see pp.428–429)

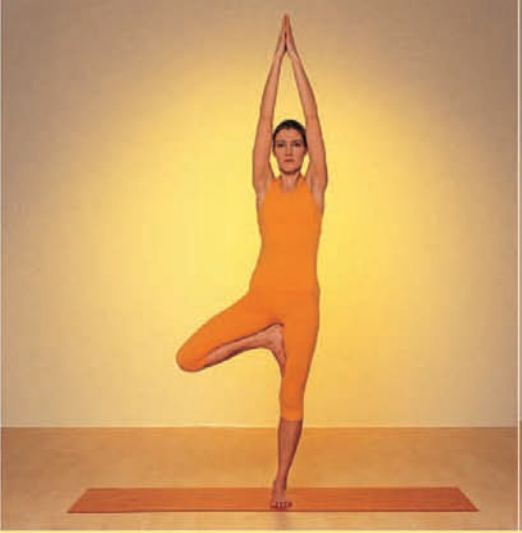
3 at low moments

If you feel depressed, this program can help shift blocked energy, lift your spirits, and restore self-esteem. Begin with a few rounds of Stoking the Fire (see p.460). Allow the complete breath (see p.387) to flow through the Dancer, Tree, and Camel. Conclude with a stabilizing two minutes of Alternate Nostril Breathing (see p.459).

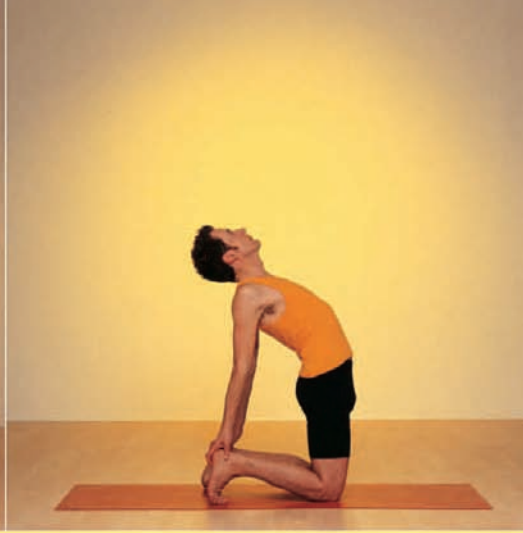
1 Stirring the Pot (see pp.396–397)



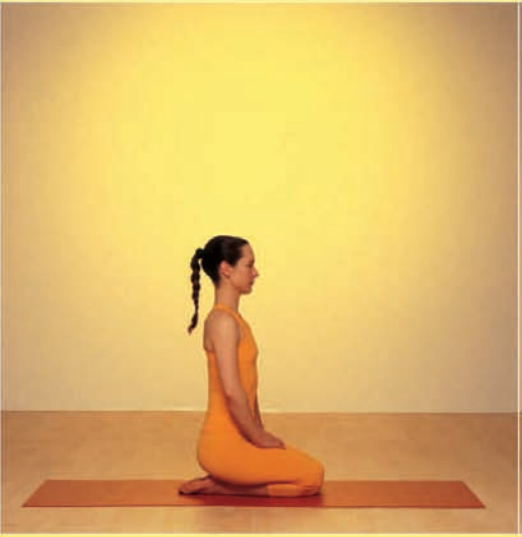
2 Dancer (see pp.406–407)



3 **Tree** (see pp.404–405)



4 **Camel** (see pp.432–433)

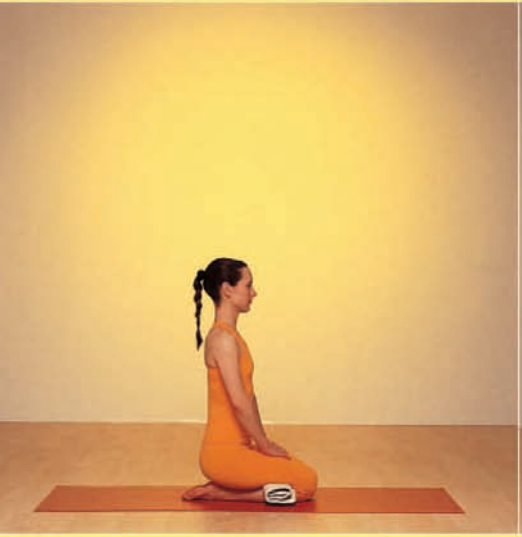


5 **Thunderbolt** (see pp.426–427)

6 **Yogic Rock and Roll** (see p.393)

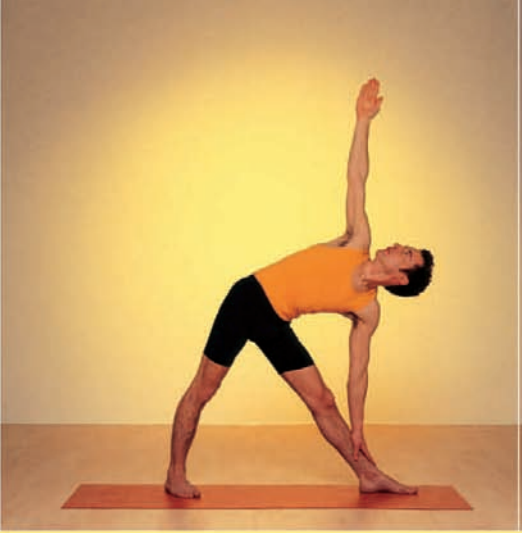
4 for balance & understanding

A balancing yoga program can help when your tolerance is challenged. Start with two minutes of the complete breath (see p.387). Then move through the postures, focusing on the breath. Complete the program with 27 rounds of Breath Balancing (see p.463) in Thunderbolt (see p.62), followed by Deep Relaxation (see p.472).



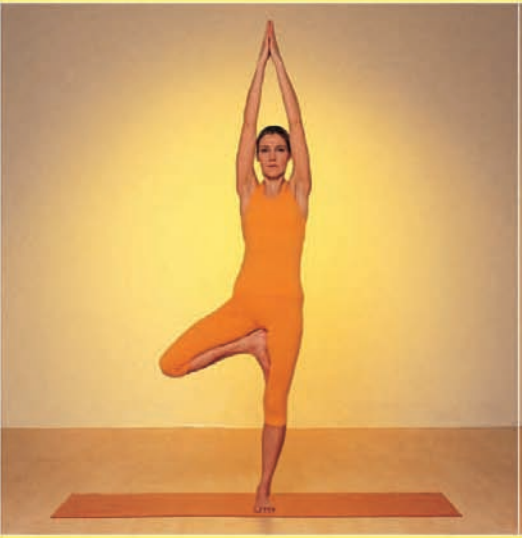
1 **Thunderbolt** (see pp.426–427)

2 **Philosopher** (see pp.428–429)



3 **Triangle** (see pp.402–403)

4 **Bow and Arrow** (see pp.400–401)



5 **Tree** (see pp.404–405)

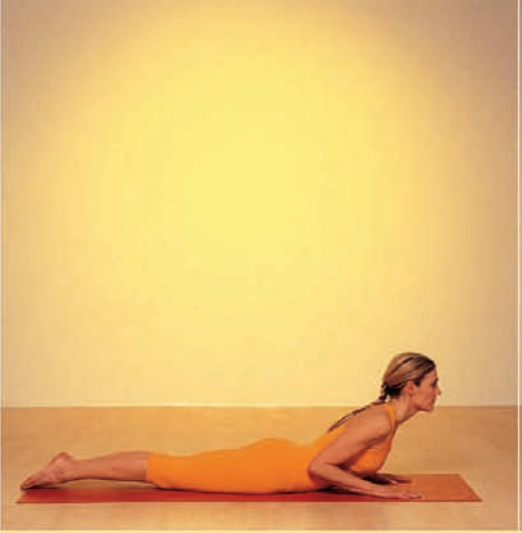
6 **Concentrated Gazing** (see pp.466–467)

5 for stability & ease

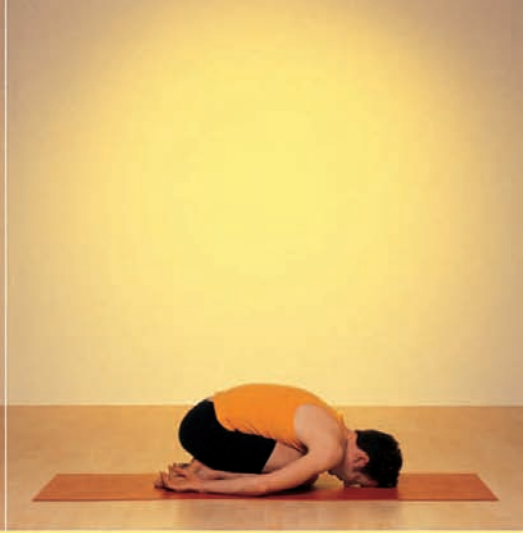
This sequence brings the focus within, developing easeful self-acceptance. Begin with 11 rounds of the complete breath (see p.387) in Thunderbolt. Then hold each posture for at least seven abdominal breaths (see p.387). Complete the program with 11 rounds of Humming Breath (see p.462), followed by Deep Relaxation (see p.472).

1 **Thunderbolt** (see pp.426–427)

2 **Hare** (see pp.438–439)



3 **Cobra** (see pp.414–415)



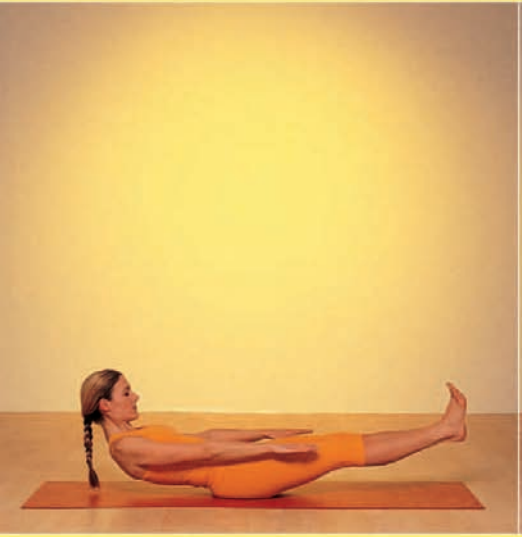
4 **Child** (see pp.436–437)

5 **Spinal Twist** (see pp.454–455)

6 **Resting Crocodile** (see pp.418–419)

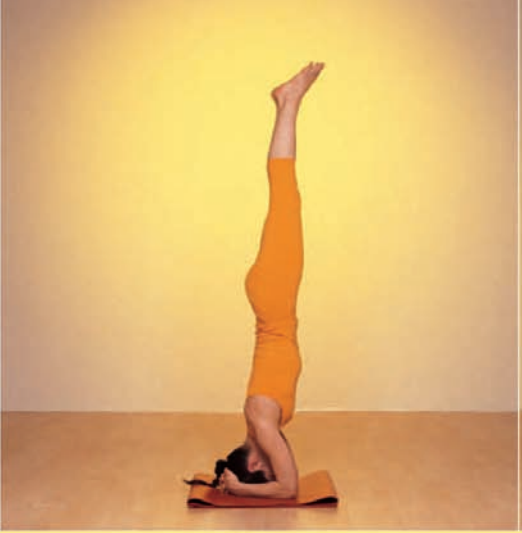
6 for courage

This program promotes strength and self-confidence to develop courage. Begin with seven rounds of the complete breath (see p.387). After Boat, do another 11 complete breaths before continuing with the postures. Conclude by quiet sitting in Thunderbolt (see p.426) and five rounds of Invocation of Energy (see p.464).

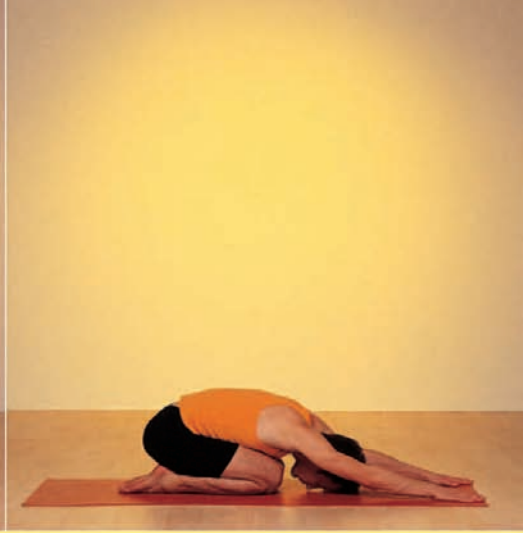


1 **Boat** (see pp.408–409)

2 **Corpse** (see p.381)

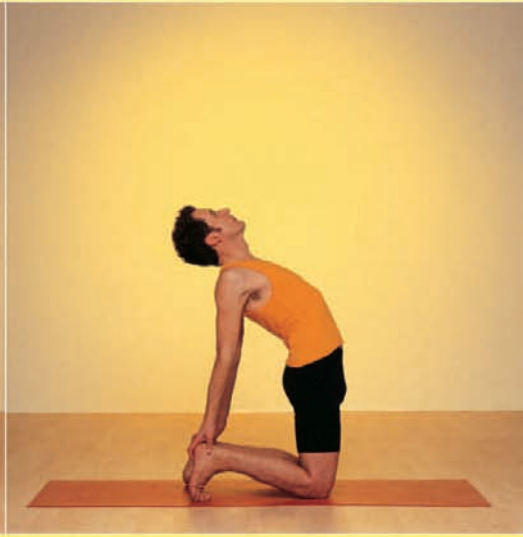


3 **Headstand** (see pp.450–451)



4 **Hare** (see pp.438–439)

5 **Lunge Warrior** (see pp.412–413)

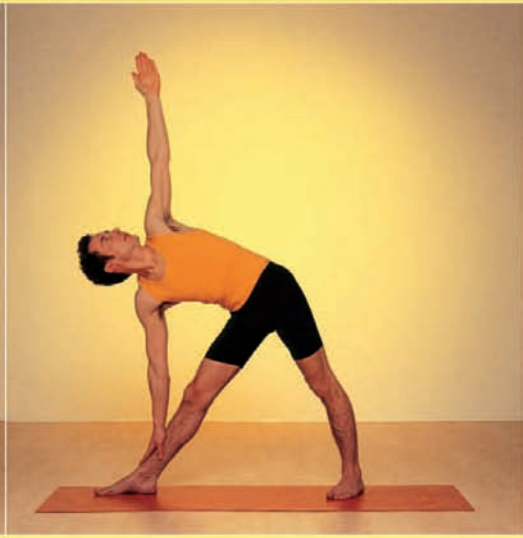


6 **Camel** (see pp.432–433)

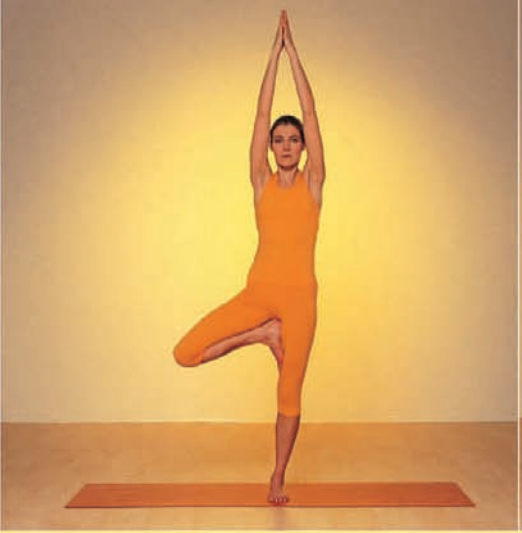
7 to develop self-worth

This program fosters compassionate self-acceptance and focused conviction. Take 11 rounds of the complete breath (see p.387) before you begin the postures, and another seven rounds after Boat. At the end of the program, do Inner Silence Meditation (see p.470), followed by Deep Relaxation (see p.472), using an affirmation.

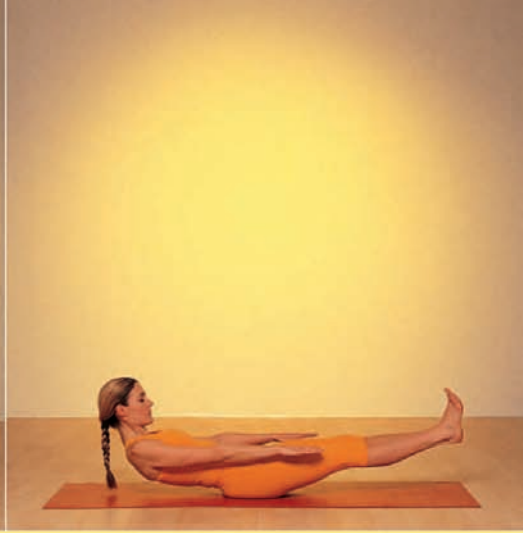
1 **Bow and Arrow** (see pp.400–401)



2 **Triangle** (see pp.402–403)



3 **Tree** (see pp.404–405)



4 **Boat** (see pp.408–409)

5 **Roaring Lion** (see pp.430–431)

6 **Philosopher** (see pp.428–429)

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Useful organizations

www.yogajournal.com
An interactive, in-depth yoga community website. Includes everything from postures to lifestyle advice, as well as a teachers' directory.

www.yogasite.com
A general source of information on yoga, with good links and a teachers' directory covering the United States, Canada, Australia, and other countries.

YOGA ALLIANCE
Tel: 888 921 9642;
Website: www.yogaalliance.org
Find an Yoga Alliance certified teacher or yoga center through this national Yoga Teacher's Registry

www.yogafinder.com
A directory listing yoga teachers, organizations, and events in the United States and other countries.

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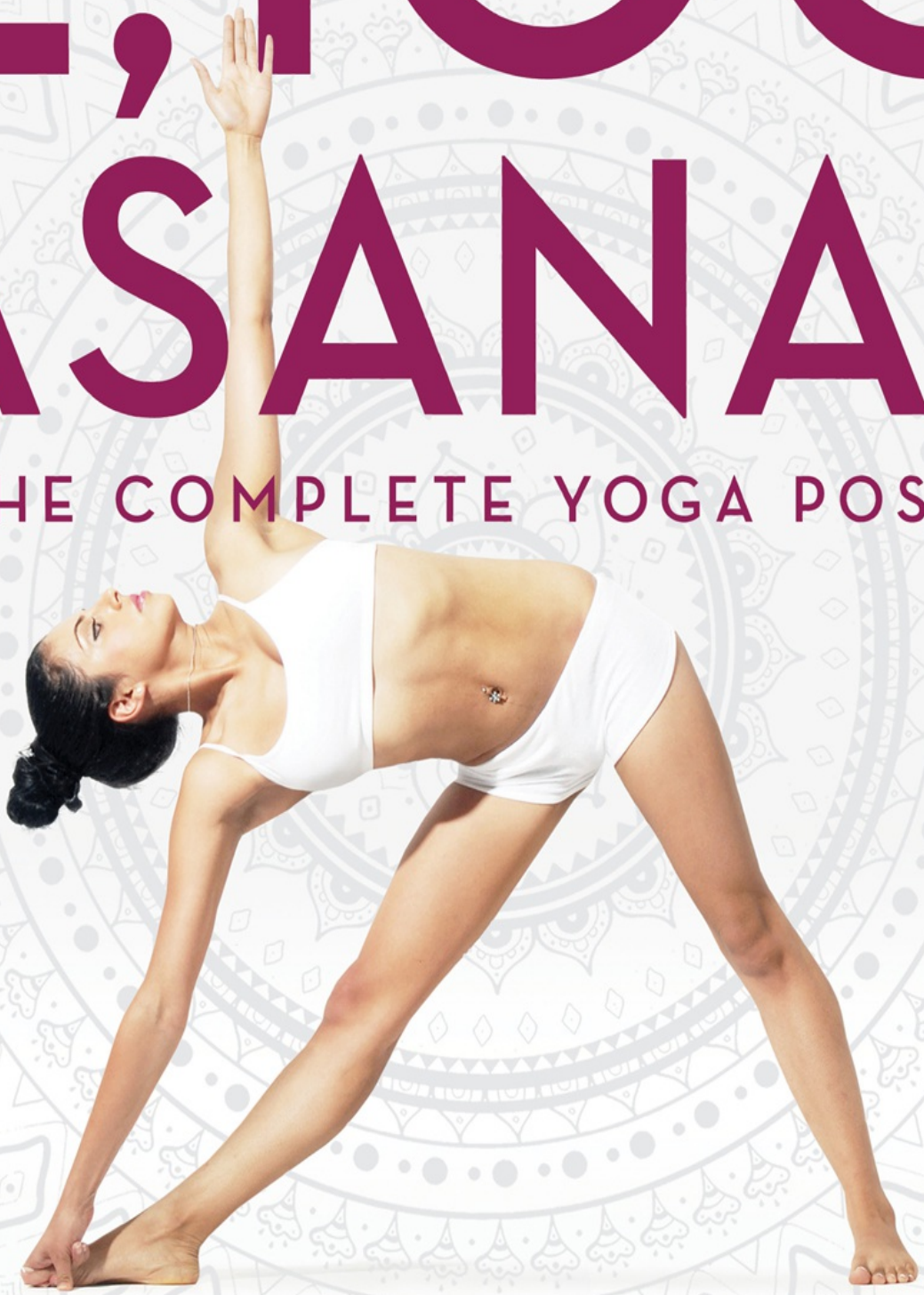

DANIEL LACERDA

FOUNDER OF MR. YOGA, INC.

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The Complete Yoga Poses

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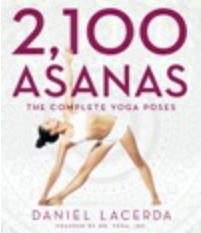

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Opening Prayer

Om

For the peaceful resolution
From the illusionary nature of dualistic existence,
I ground myself before the lotus feet of the gurus,
Who remind me that the light I search for is within me
Bringing stillness to the whirling of the cascading ego mind
I behold the awakened joy of my own Soul
Realizing the truth of pure radiance
That we are in fact the same
To the self-awakened gurus of the past, present, and future,
I salute

Om

Daniel Lacerda, Mr. Yoga

A MESSAGE FROM MR. YOGA

The ultimate goal of yoga is self-realization. You do not need to go to the mountaintop to find it or pay a teacher to show you the way. There are currencies that we exchange with one another that are much more valuable than money: kindness, selflessness, being one part of the greater good. Nor do you need to look outside yourself. If you have an open mind, a sincere desire to learn and to apply that knowledge on a daily basis, and the commitment to follow through on what you've begun, you can achieve self-realization.

Self-realization is the knowledge that we sentient beings are interconnected and that what we think, say, and do affects those around us. Burdened by the pressures and demands that exist outside of ourselves—of our jobs, bills, desire for status and for material possessions—we forget this. Self-realization is the ability to achieve freedom from these demands and to know that true happiness comes from fulfilling our own potential and from lifting up those around us without the thought of self-gain. Dedicating yourself to the regular practice of yoga can help bring you back to this place.

Yoga is, indeed, an excellent form of exercise that carries with it many immediate and long-term physical benefits from improved flexibility to stronger muscles and bones. However, yoga is not just about moving through the poses. Mindfulness plays an essential part in any dedicated yoga practice. If performed properly, yoga quiets the mind of all distracting thoughts from the outside world (*chittavritti*, meaning mind chatter), bringing you to a place of peace within. In turn, being mindful of your thoughts will allow you to be mindful of, and truly connected with, your body, thus completing the cycle of mental and physical health that will allow you to enjoy all the wonderful things that life has to offer.

For the past eleven years, I have dedicated my life to yoga, teaching an average of twenty-five classes seven days a week. I have done this to make a difference in the lives of my students. Now it's my pleasure to share this passion and dedication with you.

Namaste!

A HISTORY OF YOGA

Most of us know yoga as a set of poses performed in a gym or yoga studio setting. The majority of yoga styles practiced today were invented in the last quarter of the 20th century and are either a far cry from yoga's roots or have no authentic lineage.

If we really want to examine the roots of yoga, we need to go back to the Harrapan culture, dating back 3,500 years, when yoga was a meditative practice. According to some, around 1500 BCE, Harrapan culture was diminished due to Aryan invasion. Barbarians from Normandy introduced the caste system and enforced a set of religious rituals that involved blood sacrifice practices. Along with these religious practices came sacred scriptures called the Vedas, a large body of spiritual texts originating in India. The word "yoga" was first mentioned in the oldest of the Vedas, *Rig Veda*. It referred to the concept of discipline.

Fast forward to 800 BCE. The Upanishads, a collection of texts that contain some of the earliest concepts of Hinduism, prescribed the method of achieving enlightenment by studying under a teacher and dedicating one's life to a yoga practice. The Upanishads outlined two paths to enlightenment: Karma Yoga (selfless dedication to the service of others) and Jnana Yoga (intense study of spiritual writings). Around the 3rd century BCE, the *Maitrayaniya Upanishad* prescribed a six-step process to enlightenment, which included mastering *pranayama* (breath control), *pratyaharia* (sense withdrawal), *dhyana* (meditation), *dharana* (one-pointed concentration), *tarka* (self-reflection), and *samadhi* (absolute absorption) in order to unite the Atman (individual's spirit) and Brahman (universal spirit or source of creation). The sacred syllable *om* appeared in this particular Upanishad as a symbol of union between mind and breath.

At around the same time that *Maitrayaniya Upanishad* was introduced, *Bhagavad Gita* gained prominence. This scripture combined and mythological tales that later made their way into a celebrated collection of tales, *Mahabharata*. Three methods of devotion were outlined in *Bhagavad Gita*: Karma Yoga, Jnana Yoga, and Bhakti Yoga (devotion).

Compiled around 400 CE by Patanjali, *The Yoga Sutras* introduced the eight-fold path to yoga practice, which is considered to be the classical yoga manual and the foundation of many of today's yoga practices, particularly Ashtanga Yoga. We will hear more about this eight-fold path in The Eight Limbs of Yoga (here), which include *yama* (self-restraint) *niyama* (self-purification by self-restraint and discipline), *asana* (seat or posture), *pranayama* (control of breath), *pratyahara* (sense withdrawal), *dharana* (one-pointed concentration), *dhyana* (meditation), and *samadhi* (total absorption).

Around the 4th century CE, Tantra Yoga emerged. This new form of yoga celebrated the physical body as a vehicle to enlightenment. The philosophy behind Tantra Yoga can be summarized by the idea of uniting all the dualities within a human body (e.g., male and female; good and evil), which gave

Tantra a very sexual reputation. This is, however, a common misunderstanding, since Tantra practices extend far beyond sexuality.

Hatha Yoga was introduced in the 10th century CE. It combined the physicality and conscious intent of using bodily postures, or *asana* practice, and *pranayama* breath control for the goal of self-realization.

In 14th century CE, the Yoga Upanishads were introduced. One of these sacred texts, *Tejo Bindu Upanishad*, added seven more important parts of yoga practice on top of Patanjali's eight. They were as follows: *mula bandha* (root lock), balance, undisturbed vision, *tyaga* (abandonment), *mauua* (quiet), *desha* (space), and *kala* (time).

It was not until the 20th century that yoga gained any kind of popularity in Western Europe and North America. Swami Sivananda Saraswati was one of the first yogis to travel outside of India to spread the teachings of yoga to the West. He established yoga centers in North America at the time Swami Satchidananda also delivered an opening speech at the Woodstock Festival in 1969. However, T. Krishnamacharya is arguably the father of the yoga practice with which Westerners are familiar today. In the 1930s, he began teaching his students the Mysore vigorous sequences of yoga poses that emphasize strength and athletic ability. Students were only allowed to learn the next and more challenging pose after they had grasped the previous one. His three most prominent and influential students are Pattabhi Jois, Iyengar, and Indra Devi. Pattabhi Jois established Ashtanga yoga. It is one of the most popular types of yoga practiced in the West. Iyengar became successful by creating his own sequences of yoga poses, which were characterized by a focus on the alignment of the body and the use of various props. Indra Devi is considered the first famous yogini (female yoga master). Krishnamacharya also educated his son Desikachar in yoga. An engineer by training, Desikachar saw great value in studying yoga only when he was already a college graduate. Desikachar developed Vinyoga, which is a more therapeutic and less intense approach to physical practice, as compared to Ashtanga.

The 21st century presents us with an endless variety of yoga "styles" or "brands," such as Bikram Yoga, Power Yoga, Kundalini Yoga, and countless more. It is important to be open-minded, try as many styles and approaches as possible, and figure out what gives you the best results in terms of achieving both your physical and spiritual goals. There is no wrong way to achieve self-realization. Just make sure you are mindful, patient, practical, and consistent in your practice.

A Note on the Naming of Poses:

One of the ways that the distance from yoga's roots expresses itself in Western culture is in the naming of the poses. "Seated forward bend," "eagle pose," and "dolphin pose," for example, are all imprecise translations of the original Sanskrit name. *Garudasana*, for example, is widely known as eagle pose, but traditionally this pose was named in dedication to Garuda, who is a Hindu deity, portrayed as half-man and half-eagle. He is the charioteer of Lord Vishnu, who is part of the Holy Trinity in Hinduism. Knowing this history adds a whole new dimension to our understanding of the significance, philosophical depth, and essence of the pose, and can in turn enrich our practice.

The poses throughout this book are identified by both their English and Sanskrit names. The Englisl name is a direct translation of the Sanskrit, which sometimes differs from the more common Western name, also provided in the notes. For a literal translation of each part of the Sanskrit name, you may consult the glossary at the back of the book. The intention is to provide you with as much information about the name of the pose and its history as possible, so no matter what style of yoga you practice, you will have the most complete understanding of the names of the poses.

THE EIGHT LIMBS OF YOGA

The Yoga Sutras, also known as *The Eight Limbs (Ashtanga) of Raja (King) Yoga*, was the first fully developed and recorded system of yoga. Created by Patanjali around 400 CE, this system influences much of the yoga that is practiced today. Although most of the sutras were originally focused on mindfulness, the yoga practiced in the West today seems to focus more on the body. Somewhere along the way, it seems, we began to practice the movement of yoga in isolation from its original philosophies.

For those interested in truly integrating the mindfulness of yoga with its movement, I recommend that you read *The Eight Limbs of Yoga* in its entirety and digest it very slowly. Take time to reflect on it piece by piece so you can implement it into both your practice and your daily life. Wisdom is in the doing. The following, however, is a useful summary of *The Eight Limbs of Yoga*, which will introduce you to the basic concepts of the philosophy. A deep understanding of yoga philosophy and history will greatly enhance the benefits of your practice and put you on the path to mindfulness and self-realization.

There is a wonderful lesson in Buddhism that applies here:

Once, a very old king went to see an old hermit who lived in a bird's nest in the top of a tree. He asked the hermit, "What is the most important Buddhist teaching?" The hermit answered, "Do no evil, do only good. Purify your heart." The king expected to hear a long and detailed explanation. He protested, "Even a five-year-old child can understand that!" "Yes," replied the wise sage, "but even an eighty-year-old man cannot do it."

Your biggest obstacle to self-realization is you. As it says in the *Bhagavad Gita*, "The mind is restless and hard to control, but it can be trained by constant practice (*abhyasa*) and freedom from desire (*vairagya*). A man who cannot control his mind will find it difficult to attain this divine communion; but the self-controlled man can attain it if he tries hard and directs his energy by the right means."

Pantanjali's *Eight Limbs of Yoga* will help you form the necessary groundwork to get on the right track, but you must decide to confront your problems at their roots. Reading and intellectualizing is not enough. If you want to reap the full benefits of the yoga experience, implement the Eight Limbs into every aspect of your life. You must live it, breathe it, and engage this planet and its inhabitants with the lessons below.

The first and second limbs, ***Yama*** and ***Niyama***, form your foundation. Here, awareness and realization is established. *Yama* and *Niyama* lay the footing for everything to come. A serious student should be mindful of every limb, as each of these limbs need constant reflection. As you commit yourself to their study and practice, your depth of understanding for each limb will get deeper over time. In our world that perpetuates instant gratification, many people will take shortcuts and go

straight to the yoga poses. Others will go straight to meditation and neglect physical health. I highly recommend starting with Pantanjali's first two limbs. Your practice will be at its deepest and most fulfilling if the first two limbs are practiced at a high level. If the first two limbs are not practiced at a proficient level, the rest of the limbs will be performed at a more superficial and less effective level.

FIRST LIMB **Yama** (Self-Restraint)

The focus of the first limb is on being an ethical and moral person, and on improving your relationship with the outer world. These values are as important today as they were centuries ago. The *Yamas*, as they are referred to, are not meant to be a moral straitjacket, but instead are meant to help develop a greater awareness of one's place in the world. It is not a coincidence that this is the first limb of the practice. When taking steps to transform our inner world, our outer world becomes a total reflection of this effort. There are five *Yamas*:

1. *Ahimsa:* **Non-violence**
   Replace harmful thoughts, speech, and actions with that of loving kindness toward yourself and others.
2. *Satya:* **Truth to be expressed in thought, word, and action**
   Be honest in your thoughts, words, and actions toward yourself and others.
3. *Asteya:* **Non-stealing and non-covetousness**
   Curb desires for things that are not your own. Share the beauty of your thoughts, speech, actions, and material belongings to uplift others instead of stealing and hoarding them for yourself.
4. *Brahmacharya:* **Abstinence from sexual intercourse when not married, practicing monogamy and not having sexual thoughts about another person who is not your spouse**
   It is believed that a life built on celibacy and spiritual studies done by free will increases energy and zest for life. Celibacy may sound like an unrealistic goal today, but it may help to remember that brahmacharya is also about monogamy. When brahmacharya is fully realized in marriage, the sex lives of both partners improve because the level of trust and devotion deepens their connection. It is important that the sexual activity is an expression based on the highest level of mutual respect, love, selflessness, and wisdom.
5. *Aparigraha:* **Non-possessiveness or non-greediness**
   Replace the habit of hoarding with sharing. Do not take without giving back. If you want something, work for it. This builds appreciation for what you have. This will help minimize the insatiable desire to constantly consume. An appetite that is not wisely disciplined leads to personal ill health, financial debt or poor credit, and destruction of the planet's natural resources. The Greek god Apollo's motto, "Nothing in excess. All things in moderation," is a great way to describe *aparigraha*.

SECOND LIMB **Niyama** (Self-Purification by Self-Restraint and Discipline)

The second limb helps refine your spiritual path. Discipline and self-restraint lead to a more orderly and productive life. From the perspective of ancient yoga texts, life is extremely short and we need to make the most of it while we can. This limb gives us guidance. There are five Niyamas:

1. *Shaucha:* **Purity of body and mind**
   When you develop *shaucha* (cleanliness), unwholesome thoughts that lead to foul speech and a sick body are cleared. Purity starts with your mind. Speech and action follow. So, the second limb directs you to make a habit of consuming both food and mental stimuli that support well-being for yourself and the environment (humanity and the planet). This will allow destructive habits (hatred, greed, and delusion) to dissolve.
2. *Santosha:* **Contentment with what one has**
   When you achieve *santosha* (contentment), bonds to the material world are broken and authentic peace and happiness are established within. A lack of contentment is often based on a distorted perception of what one has versus what others have. You advance on the path to self-realization when you can be content with your lot, whether you sit on a throne of dirt or gold.
3. *Tapas:* **Self-discipline, sometimes associated with austerity, and being able to conquer the body and mind through mental control**
   Tapas literally means "heat" or "glow." This refers to a burning desire to accomplish one's goal despite what obstacles may appear. The commitment to achieving a goal, no matter how challenging it becomes, builds character. However, note that the highest level of *tapas* is to complete one's goal without a selfish motivation. When *tapas* is attained, laziness is overcome and willpower is developed for future use.
4. *Svadhyaya:* **Self-study that leads to introspection and a greater awakening of the soul and the source of creation; traditionally studied through Vedic scriptures**
   Svadhyaya (self-study) leads to a greater awakening of your true potential, the root of one's place in this world and how to live in harmony with the Earth and all its inhabitants.
5. *Ishvara pranidhana:* **The surrender to God**
   When you accept that all things come from a higher power, pride and egocentric behavior are turned into humility and devotion. This strengthens your practice of all the limbs leading up to *samadhi* (the eighth limb).

Asana and *Pranayama* are the third and fourth limbs, and they relate to health and longevity, which allow us more time to achieve the ultimate goal of yoga, Self-Realization or Enlightenment. The third and fourth limbs are important, as they prepare the body for meditation, which will be the key to calming your mind and discovering your true potential.

THIRD LIMB **Asana** (Seat or Posture)

Here is a question: If Gandhi is one of the greatest yogis of our time, does that mean he can touch his toes or bring his foot behind his head? The answer is that it doesn't matter. Gandhi's ability to

perform the *asanas* had very little to do with what he contributed to the world as a great yogi. The same applies to you. The practice of *asanas* is as much about training the mind as it is the body. How you approach your *asana* practice is often a reflection of how you approach life. Do you keep a sense of peace and calm when a challenge presents itself? Do you break down the impossible into smaller tasks, making the whole possible through commitment to and reflection on each of the parts? Do you overcome self-perceived limitations on your own or do you accept support from others?

Your practice of yoga poses should be characterized by two components: steadiness (*sthira*) and ease (*sukha*). Concentrating on the sound of your breath (*ujjayi*, the most commonly practiced breathing technique in yoga, see here), can provide the steadiness. If you lose your breath, it is most likely because you are pushing too hard; ease off the pose and let the pose cater to the breath.

There is no such thing as a perfect pose; let the poses come like the steps of a dance. Just like in dance, when we focus too much on the mechanics, we let go of the ability to enjoy the music. While the mechanics of alignment are important to prevent injury, never forget the final goal. Feel the music of life flow through you as you do each pose and your body will learn the moves naturally. There are more than enough postures to keep you busy for the rest of your life, so allow yourself to let go of ambition and enjoy the journey. Incorporating a combination of forward bends, backbends, twists, and inversions in your yoga session is optimal for health.

Remember, too, that *asanas* help prepare the mind and body for meditation, relieving tension and protecting the body from disturbances by purifying the nervous system.

FOURTH LIMB **Pranayama** (Control of Breath)

The English word "spirit" comes from the Latin *spiritus*, meaning "breath."

The breath and the mind are interconnected. Deep, rhythmic, and fluid breathing will energize yet calm the mind and body. Rapid, irregular, and strained breathing produces a chaotic and disturbed mind. A calm mind will give you the mental space to make better decisions and a life in which you take control instead of feeling like a victim of circumstances.

Breathing properly is fundamental to our very existence. Your brain feeds on oxygenated blood, which is supplied with every inhalation. If you are unable to draw oxygen into your body, you will become brain dead after a few minutes. On the other hand, proper exhaling helps expel carbon dioxide. If your ability to exhale were impaired, you would most likely die due to the toxic buildup of carbon dioxide and poison. Stress tends to negatively affect breathing patterns, which contributes to a chain of effects that cause wear and tear on both your body's nervous and immune systems. In fact, 90 percent of illness is stress-related and, for this reason, attention to breathing properly is, indeed, a matter of life and death.

FIFTH LIMB **Pratyahara** (Sense Withdrawal)

Our perception of reality is predominantly influenced by our sensory experience—what we see, feel,

hear, touch, and taste. *Pratyahara* refers to the withdrawal of the senses from external objects and our modern-day need for constant gratification from sensory stimuli. Our minds are constantly being pulled outward to evaluate all the information the senses bring in. Evaluation involves categorizing what has been perceived; often, we hold on to what we believe is desirable, push away what we believe is undesirable, and ignore what we believe to be neutral. *Pratyahara* gives our minds a moment to rest and teaches us to be free of the grasping and clinging to the things we enjoy and avoiding the undesirable.

When you throw a pebble into a pond, your reflection becomes distorted by the resulting ripples. Your mind works in very much the same way: Every thought creates a ripple that distorts the ability to see your true self clearly. Constantly disrupted by these ripples, you begin to believe that the distorted reflection is who you really are. Practicing *pratyahara* calms the mind, allowing you to see yourself clearly.

SIXTH LIMB **Dharana** (One-Pointed Concentration)

Asanas, *pranayamas*, and *pratyahara* help prepare us for meditation.

When the mind moves from experiencing random scattered thoughts to single one-pointed concentration, it can then find complete absorption in the present moment. By practicing one-pointed concentration, we clear the mind of all distracting thoughts. This can be achieved by focusing on your breath, counting, reciting mantras, or observing a candle flame or an image. Because we are constantly entangled in reliving past memories or living in anticipation of what is to come, it is very seldom that we live in the present moment. It is even less common to be mindful of the present moment with a calm and focused mind. However, this is crucial when trying to achieve self-realization. The power is in the now!

SEVENTH LIMB **Dhyana** (Meditation)

Just as there are many different types of yoga poses, there are many ways of meditating. Meditation is a form of inner contemplation that allows you to access a state of mind that has transcended the ego. This is a state of pure awareness of the present moment that is free of judgment. All meditation leads to a state of full awareness that does not discriminate or categorize things in a dualistic manner, which is to say the perception of what is good versus what is bad, beautiful versus ugly, pleasant versus unpleasant, etc. When we examine reasons behind such judgments, we find many of these beliefs are based on learned behavior, may vary from one culture to another, and have no fixed or concrete reality. With consistent reflection and an open mind, we can correct our biased perceptions. You will develop that part of you called "the Observer." Once grounded in a regular seated mediation, it is important to take it into a moving mediation throughout your daily life.

EIGHTH LIMB **Samadhi** (Total Absorption)

Samadhi occurs when the analytical mind becomes absent and at one with the object of meditation. The object of meditation can be whatever you are focusing on in your meditation that is used to

achieve one-pointed concentration. The word *om*, a deity, or a candle flame are all examples of objects of meditation. Total absorption involves the feeling of oneness with all creation, dissolving all lines between the act of meditation and the object being meditated upon.

It is the absorption in the present moment (*amanaska*) where dualistic thinking is transcended. Many are mistaken in believing *samadhi* is the final goal of yoga. It is but a temporary state of mind that we enter based on the conditions that we have nurtured to support it.

It's useful to remember that every moment in your life gives you an opportunity to practice the eight limbs. Learn at your own pace, but stay focused, be consistent, and enjoy the journey!

THE *UJJAYI* BREATH

Breath is an essential staple of every yoga practice. By focusing on the breath, a yogi is able to stay in the present moment. Since the breath is neutral, a yogi neither seeks to avoid it, nor is she eager to chase it. Proper and continuous breath helps clear the mind of distracting thoughts and to remain in the present moment with one-pointed concentration.

Deep, conscious breathing also slows down the heartbeat and activates the parasympathetic nervous response, which soothes the nervous system, and allows the muscles to relax into the stretches and stay strong in the strength-based yoga poses. Maintaining deep, fluid breathing will help transform your yoga practice into a moving meditation.

Ujjayi pranayama is one of the most commonly used breathing techniques in every yoga practice. *Ujjayi* means "victorious" in Sanskrit. When practicing this breathing technique, a yogi creates what can be described as the "ocean sound" in the back of the throat by gently squeezing the glottis (the opening between the vocal cords in the throat). You're aiming to create a breathy and whispery sound at the back of the throat. The sound is often compared to the sound Darth Vader makes when breathing! In order to practice *ujjayi* breath, first sit in a comfortable position. Inhale through the nose and, as you exhale, imagine you are trying to fog up a glass. Try to inhale with the same sound. Once you feel like you have an understanding of the *ujjayi* breath technique, seal your lips in order to prevent the throat from drying out. (A dry throat usually leads to coughing and drinking water, which distracts you from your yoga practice.) Inhale and exhale through the nose, while still maintaining the sensation in the throat of trying to fog up a glass.

Using breath to facilitate poses:

- Keep your breath deep and rhythmic.
- If your breathing becomes restricted or choppy, there is a good chance that you are pushing yourself unnecessarily. In this case, you should ease off the pose and return to a place that promotes smooth and fluid breathing.
- The body lifts up and lengthens on the inhale. For example, lift up from a forward bend into a mountain pose on the inhale, using the inhale to lengthen the limbs of the body and the spine. Use the exhales to go deeper into the pose.

THE *BANDHAS*

Bandha means "lock." *Bandhas* were traditionally believed to regulate the flow of life energy (*prana*) throughout the body. In contemporary yoga practice, *bandhas* serve a more practical purpose. They are contractions, or "body locks," that you can implement to help correct your posture or aid you in proper alignment.

There are three major *bandhas*: *mula bandha*, *uddiyana bandha,* and *jalandhara bandha*. The combination of all three *bandhas* is called *maha bandha*, or "the great lock."

Mula bandha refers to the triggering of the perineum muscle that is located between the genitals and the anus. *Mula* means "root," therefore *mula bandha* translates as "root lock." When this *bandha* is engaged, you will feel a slight pull on the inside of the thighs, similar to what you feel when trying to stop the flow of urine.

Uddiyana bandha means "flying/moving up." To engage this *bandha*, place three fingers below the belly button and pull your lower abdominal muscles slightly in and up. This will cause your pelvis to tilt forward slightly with an upward action, protecting the lower back and strengthening the lower abdominals.

Mula and *uddiyana bandhas* should be engaged throughout the yoga practice. Together they help correct the posture and create proper alignment, which will reduce the chance of injury.

Jalandara bandha is a chin lock. To practice this lock, bring the chin toward the clavicle bone while keeping your spine upright and moving your shoulder blades down the back. This *bandha* is rarely used, but can be found when engaged in *Dandasana*, Staff Pose.

THE *DRISHTIS*

Drishtis are the meditation gazing points to focus on while performing the poses. They are designed to aid with proper alignment, as well as to strengthen the focus on the present moment. While practicing we tend to look around, compare ourselves to others in the room, or look at the clock. This takes away from the focus on the internal aspects of the practice. *Drishtis* are meant help you look inward.

They are as follows:

1. *Nasagrai* or *Nasagre* (nose)
2. *Bhrumadhye* or *Ajna Chakra* (third eye, between the eyebrows)
3. *Nabhi, Nabhicakre,* or *Nabi Chakra* (belly button)
4. *Hastagrai* or *Hastagre* (hands)
5. *Padayoragrai* or *Padayoragre* (toes/feet)
6. *Parshva Drishti* (to the right)
7. *Parshva Drishti* (to the left)
8. *Angushtamadhye* or *Angushta Ma Dyai* (thumbs)
9. *Urdhva* or *Antara Drishti* (up to the sky)

Drishtis can be complicated to grasp at first. However, there are general guidelines for the gaze. It comes down to letting your eyes follow the direction of the stretch. For example, in backbends we look at our third eye in order to let the head roll back and deepen the backbend. Similarly, in seated forward bends, such as *Paschimottanasana* (Western Intense Stretch Pose), we gaze at the toes to lengthen the spine. The purpose of *drishtis* is not for you to become cross-eyed; they are a way to softly focus without intensely staring.

HOW TO APPROACH YOGA POSES

Yoga poses provide much more than a physical workout. Performing them builds character. Facing your fears and challenges that extend beyond your comfort zone with a sense of peace, calmness, and psychological equanimity will help you overcome your self-perceived limitations.

I find it helpful to think of every yoga pose as a prayer you do with your body. While you perform the pose, focus on what is good in your life with a feeling of gratitude. Being at one with your mind and body in this place of grace helps you transcend the ego, which helps you get closer to the ultimate goal of yoga, which is enlightenment.

Universal Alignment Cues

- Engage *mula* and *uddhiyana bandhas*.
- Engage the *ujjayi* breath and maintain deep conscious breathing all throughout the yoga session. If your breath is suffering, then back off a bit.
- Keep the chest open and shoulder blades down the back.
- Lengthen the body and limbs on the inhale, deepen the pose on the exhale.
- Avoid jerky and uncontrolled movements during the poses that are based on flexibility.
- Square your hips.
- Don’t let your knee go past your ankle when doing any kind of lunge.
- In Plank and the majority of arm balances, shoulders should be just over the fingertips.
- Even if you are intermediate or advanced, start with the beginner modifications in order to ensure proper form and get the blood into the targeted muscle as a warm-up.

Universal Flexibility Cues

- Hold flexibility for a minimum of 30 to 90 seconds.
- Stretch to the edge of comfort and stimulation without straining.
- Don’t overstretch to the point of pain; your muscles will tighten up in order to protect themselves and your flexibility will decrease.

RELAXATION AND MEDITATION

Relaxation

Corpse Pose (Shavasana)

(Shava in Sanskrit means "corpse")

After an intensive *asana* practice, the final resting yoga pose, Corpse Pose or *Shavasana,* helps deepen the connection between our physical body and mind and helps prepare both for meditation. *Shavasana* can be thought of as an awakening, giving us the time to contemplate the question "If I died today, would I be fully satisfied and content with what I accomplished in this lifetime?" Have you lived up to your full potential? Have you fully acknowledged the people in your life that are of great importance to you? Would you be able to pass on with no regrets?

1. Lie down on your back, shoulder blades tucked in, legs apart. Relax your arms and let your palms face the ceiling. Let your fingers naturally curl. Relax your body into a neutral, comfortable position.
2. Close your eyes. Let your jaw naturally separate as you relax your whole body as if it were sinking down to the floor. Release all tension from your body.
3. Without letting the mind wander, concentrate on your breathing to reach a deep state of conscious relaxation, both physically and mentally.

Meditation

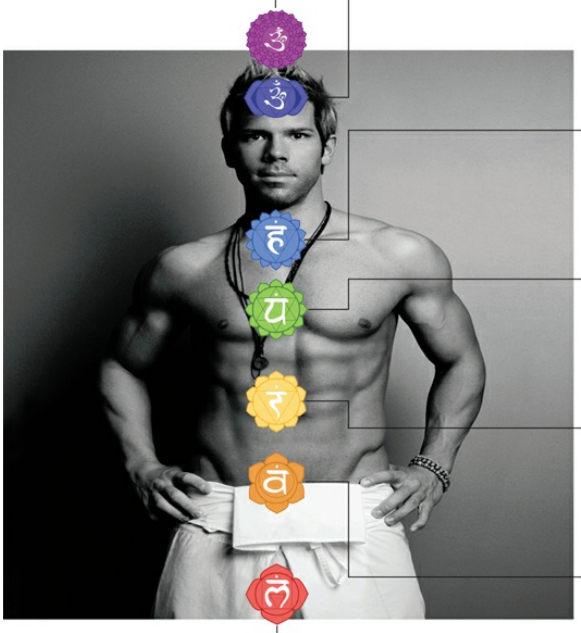
Easy Pose (Sukhasana), Seated Lotus Pose (Padmasana)

1. Start in Staff Pose (*Dandasana*), both legs extended in front of you. Grab onto your sitting bones and pull back the flesh to lengthen your legs and spine.
2. Sit in a cross-legged position that is comfortable. You can sit on a chair, in Easy Pose (*Sukhasana*), in Half Lotus (*Ardha Padmasana*), or Full Lotus (*Padmasana*). Press your sitting bones into the ground as you extend up through the spine. Lift the crown of your head up to the sky. Place one hand on top of the other and have the thumbs lightly touch. Gently close your eyes. Perform the 1:4:2 Healing Breath Zen Meditation as follows:

   Inhale for a count of 4 and feel your lower abdomen expand as you push it out. Hold and retain the air in your lungs for the count of 16. Exhale for a count of 8 as you squeeze the belly button back to the spine. Visualize the numbers as you count throughout the set. This will help develop what is called "one-pointed concentration." Your breathing must be so fine that it would not ruffle a feather. Each count should be one second long.

   After 10 breath cycles are performed, the exercise is finished. In an authentic yoga practice, the ego may not be permitted to intrude into the process. Don't "perform" the exercises as if you had an appreciative audience. This is your personal journey. Explore and express yourself while you gain the wonderful physical and mental benefits. This breathing technique is called Abdominal Breathing and should be maintained during the entire yoga practice.

A BRIEF SUMMARY OF *CHAKRAS*



7th	**Crown Chakra**/Thousand Petal or Spoked Wheel/*Sahasrara Chakra* **Location:** just above the crown of the head **Color:** encompasses all colors **Mantra Seed Syllable:** encompasses all sounds	**Element:** the ultimate reality of all truth **Number of Petals:** 1000 (symbolic for unlimited) **Focus:** detachment from ego and illusory nature of the material world, attaining the goal of yoga (self-realization).
6th	**Third Eye Chakra/**Rule or Command Wheel/*Ajna Chakra* **Location:** in the middle of the forehead, between the eyebrows **Color:** indigo **Mantra Seed Syllable:** *om*	**Element:** the universal mind **Number of Petals:** 12 **Focus:** intuition, decision-making, and the surrendering of egocentric intellect in favor of attaining nondualistic wisdom
5th	**Throat Chakra**/Especially Pure Wheel/ *Vishuddha Chakra* **Location:** throat **Color:** turquoise or blue **Mantra Seed Syllable:** *ham*	**Element:** ether/space **Number of Petals:** 16 **Focus:** self-expression and communication
4th	**Heart Chakra**/Wheel of the Unstruck or Singular Sound/*Anahata Chakra* **Location:** within the center of the chest **Color:** green **Mantra Seed Syllable:** *yam*	**Element:** air **Number of Petals:** 12 **Focus:** peace, love, and empathy
3rd	**Solar Plexus or Navel Chakra/**Wheel of the Jewel City/*Manipura Chakra* **Location:** solar plexus **Color:** yellow **Mantra Seed Syllable:** *ram*	**Element:** fire **Number of Petals:** 10 **Focus:** power, will, and self-esteem
2nd	**Sacral Chakra/**One's Own Self-Based Wheel/*Svadhisthana Chakra* **Location:** sacrum **Color:** orange **Mantra Seed Syllable:** *vam*	**Element:** water **Number of Petals:** 6 **Focus:** emotions, desires, and creativity
1st	**Root Chakra or Root Wheel/***Muladhara Chakra* **Location:** base of the spine **Color:** crimson **Mantra Seed Syllable:** *lam*	**Element:** earth **Number of Petals:** 4 **Focus:** physical survival, self-preservation, and security

In Sanskrit the word *chakra* can be translated into "wheel" or "turning." In the yogic interpretation, the *chakras* are based on the concept of a vortex and are visually portrayed as a lotus flower.

According to various Eastern yogic spiritual practices such as Hinduism and Tantric Buddhism, *chakras* are described as wheels or rings of energy found in the subtle (non-physical) body; the culmination of the mind, intelligence, and ego, which influences the gross physical body. Within this subtle body there are energy channels called *nadis* that carry the life force or vital energy (*prana*). The main *nadi* that runs through the *chakras* is called the *sushumna* (*brahma*) *nadi*. The *sushumna* joins two other important *nadis* (*ida* and *pingala*) together at the first and seventh *chakras*. The diameter of a singular *nadi* is believed to be no thicker than a thousandth of a hair's width and is located along the spine.

There are various opinions on how many *chakras* there are, but it is generally agreed that *chakras* spin in a "wheel-like" motion to draw in vital energy that creates a balance between the spiritual and physical body.

The earliest known recording of *chakras* dates back to the ancient Vedas (1700 BCE). The most popular *chakra* model used today is based on two Indian texts: *Shat-Cakra-Nirupana*, written by a Bengali yogi named Purnananda Swami in 1577, and the *Padaka-Panchaka*, written in the 10th century.

Chakras are activated in the following ways:
By stretching open the area where the *chakra* is located. For example, the throat *chakra* can be activated in Camel Pose (*Ushtrasana*). The head is rolled back so there is a stretch in the front of the throat.

By applying physical pressure on the area where the *chakra* is located. Throat *chakra*, for example, can be activated in Staff Pose (*Dandasana*). The Chin Lock (*Jaladhara Bandha*) is engaged by bringing the chin to the clavicle bone, therefore applying pressure to the throat area.

By combining the two methods above, throat *chakra* is activated in full version of Inverted Locust Pose (*Viparita Shalabhasana*). The head is rolling back, creating a stretch in the front of the throat. At the same time, the throat area is pressed to the floor, so there is physical pressure on that area.

BENEFITS AND CAUTIONS FOR 8 CONDITIONS

CONDITION

1. Headache & Migraine

Many headaches are caused by tension and stress. In yoga we breathe deeply and relax. The yoga practice stretches the tight muscles in the upper body, releases endorphins (a "feel good" hormone) and relaxes the mind. It helps release tension by increasing blood flow to the muscles, making the nervous system less agitated and reducing a chance of a headache or migraine.

Poses that put weight or pressure on the head and neck should be avoided. If you suffer from migraines, avoid poses that dramatically increase blood flow to the head. If your migraines are severe, avoid practicing yoga poses and lie down in a dark room.

BENEFICIAL POSES

Seated forward bends–Ex. Both Hands to Ankle Head to Knee Pose (*Dwi Hasta Kulpa Janu Shirshasana*) here. Seated forward bends release tension in the hamstrings and lower back and help prevent headaches caused by tension in the legs and lower back.

Seated twists–Ex. Half Root Lord of the Fishes Pose (*Ardha Mula Matsyendrasana*) here. Seated twisting poses can help prevent headaches caused by tension in the upper and lower back.

Hand position of the pose dedicated to Garuda–Ex. Hand Position of the Pose Dedicated to Garuda in Child's Pose (*Hasta Garudasana in Balasana*) here. Any pose with this hand position helps stretch the upper back and back shoulder heads and can help prevent headaches caused by tension in the muscles of the upper back.

Hand position of Cow Face Pose–Ex. Hand Position of Cow Face Pose in Bound Angle Pose (*Hasta Garudasana in Baddha Konasana*) here. Any pose with this hand position helps stretch the triceps, front shoulder heads, and rotator cuffs and can help prevent headaches caused by tension in the arms and shoulder muscles.

POSES TO APPROACH WITH CAUTION

Inversions–Ex. Peacock Feather Pose (*Picha Mayurasana*) here, Leg Position of One-Legged King Pigeon 1 Version B in Headstand 5 (*Pada Eka Pada Raja Kapotasana 1 B in Shirshasana 5*) here, and Leg Position of the Pose Dedicated to Garuda in Hands Bound Supported Whole Body Pose (*Pada Garudasana in Baddha Hasta Salamba Sarvangasana*), also known as Shoulderstand here. Avoid any intense inversions that require a lot of strength, as they increase the heart rate and blood flow to the head and may trigger headaches or migraines.

Backbends with feet and head on the floor–Ex. Bridge Pose (*Setu Bandhasana*) here. Avoid poses that put pressure on the head and neck, as they may trigger headaches or migraines.

CONDITION

2. Carpal Tunnel

To help prevent or alleviate carpal tunnel syndrome with yoga, you'll need to practice poses that strengthen and stretch the flexor muscles of the forearm, which are the muscles on the palm side of the forearm. Depending on the severity of your condition, you may want to start with poses that bear less weight on the wrist joint.

BENEFICIAL POSES

Poses that strengthen the wrist without straining it–Ex. Staff Pose (*Dandasana*) here. Stretching and gently strengthening the wrist and muscles of the forearm can help prevent or reduce carpal tunnel syndrome.

Poses with hands in the reverse prayer position–Ex. Hidden Lotus Pose (*Gupta Padmasana*) here and Reverse Prayer Mountain Pose (*Viparita Namaskar Tadasana*) here. These poses help stretch out the wrists, forearms, front shoulder heads, chest, and rotator cuffs. Releasing tension from these areas is helpful because muscles in the upper body are interconnected and carpal tunnel can be caused or worsened by a chain reaction of tense muscles.

Poses that have hands in prayer (Anjali Mudra)–Ex. Revolved Prayer Standing Rising Winc Relieving Pose (*Parivritta Namaskar Stiti Utthita Vayu Muktyasana*) here. Stretching the wrists and forearm muscles can promote blood flow and lessen tension in the area.

Poses with bound hands, palms facing out–Ex. Mountain Pose—Raised Bound Hands (*Tadasana Urdhva Baddha Hastasana*) here These poses help stretch the forearm muscles that are strained and tight in most people who have carpal tunnel syndrome.

POSES TO APPROACH WITH CAUTION

Arm balances with both feet off the floor–Ex. Crane Pose (*Bakasana*) here. These poses have the entire body weight resting on the wrists, which puts a great amount of strain on the carpal tunnel and may drastically worsen its symptoms.

Backbends with hands and feet on the floor–Ex. Upward Bow Pose (*Urdhva Dhanurasana*) here and Wild Thing Pose (*Chamatkarasana*) here. These poses are very hard on the wrists.

Backbends with straight arms–Ex. Upward Facing Dog (*Urdhva Mukha Shvanasana*) here. These poses put strain on the wrist joints because most of the upper body weight rests on the hands.

ADDITIONAL NOTES: There are some options to avoid pressure on the wrist while practicin Upward Facing Dog Pose (*Urdhva Mukha Shvanasana*) here or Downward Facing Dog (*Adho Mukha Shvanasana*) here. If you feel that these poses irritate the carpal tunnel, drop the knees to the floor and rotate the hands 45 degrees to the outside to take the pressure off the nerve. You may also experiment with placing props (rolled-up yoga mat, thin book, or slant board) under the heels of the palms to shift the weight to the knuckles and fingers to reduce the compression of the wrist.

CONDITION

3. Asthma

Yoga can help bring awareness to your breathing patterns and release tension from the neck, upper back, chest, and shoulders. Focus on developing full and complete breaths through seated mediation sitting in Easy Pose (*Sukhasana*) here. Since a symptom of asthma is short shallow breaths, developing control of the breath will help the body obtain the oxygen needed and help calm the body, preventing future attacks.

Some yoga poses may be strenuous to the respiratory system and could cause asthma attacks. It's recommended that you pace yourself, gradually raising your body temperature and gradually cooling down. Cold air can cause bronchi to contract and cause an asthma attack. Hot and humid air can cause dehydration and can also cause an asthma attack. Find a room with a comfortable temperature.

BENEFICIAL POSES

Poses on hands and knees–Ex. Going from Tiger Pose (*Vyaghrasana*) here to Unsupported Tiger Pose (*Niralamba Vyaghrasana*) here. Many people who suffer from asthma have tension in the upper back and chest from coughing during asthma attacks. Combining mild backbends with mild forward bends gently stretches the chest, upper back, and the neck, which can help reduce the symptoms of asthma worsened by tension in those areas.

Mild backbends–Ex. Fish Pose (*Matsyasana*) here. Mild backbends help open the chest and front shoulder heads and improve the quality of breathing.

Lion's Pose variations–Ex. Lion Pose Dedicated to an Avatar of Lord Vishnu in Garland Pose (*Narasimhasana in Malasana*) here. Lion's Pose variations can help release tension in the throat, neck, and jaw because you "roar" like a lion in these poses. They also can help push the stale air out of your lungs.

Seated meditation focusing on breathing–Ex. Lotus Pose (*Padmasana*) here. Bringing awareness to your breath and developing control can be useful during an asthma attack. It can also help prevent an attack from happening.

Inversions–Ex. Headstand 5 (*Shirshasana 5*), also known as Tripod Headstand here. Inversions help promote proper movement of the diaphragm during an exhalation. Since the majority of the body is upside down, gravity works with the exhalation, not against it.

POSES TO APPROACH WITH CAUTION

Inversions on the shoulders–Ex. Ear Pressure Pose (*Karnapidasana*) here. Inversions on the shoulders compress the neck and chest, especially when the knees are bent toward the head. This compression restricts your breathing and may cause an asthma attack.

Backbends on the chin and chest–Ex. Inverted Locust Pose (*Viparita Shalabhasana*) here. These poses compress the throat and restrict your breathing, and may cause an asthma attack.

Seated forward bends–Ex. Western Intense Stretch Pose (*Paschimottanasana*) here. These poses compress the lungs and restrict your breathing, and may cause an asthma attack.

Cardio-intense poses–Ex. Crocodile Pose (*Nakrasana*) here. Poses that require a lot of strength

and that are demanding on the cardiovascular system can cause shortness and shallowness of breath, and may cause an asthma attack.

Intense backbends–Ex. Little Thunderbolt Pose (*Laghuvajrasana*) here. These poses can be stimulating and cause shortness of breath if you have asthma. It is recommended to start with mild backbends and progress into deeper ones slowly, according to how your body feels.

Arm balances with both feet off the floor–Ex. Uneven Half Repose Pose Dedicated to Ashtavakra (*Vishama Ardha Shayana Ashtavakrasana*) here. These types of poses require a lot of strength and endurance and may cause shortness of breath.

CONDITION

4. Neck Pain

Yoga practice can help prevent and relieve neck pain. The combination of gentle stretches and strengthening movements can open up tight muscles in the body, increasing neck flexibility and rebalancing postural muscles. Simple and slow movements will lubricate the neck and increase its range of movement. Hold each pose for 30 to 90 seconds.

While it's important to strengthen and stretch the neck muscles in order to help prevent neck injury, if you already have a neck concern it's best not to aggravate it. Poses that are most strenuous for the neck are the ones that bear the majority of the body's weight on the head or neck.

BENEFICIAL POSES

Seated neck stretches–Ex. Easy Pose with Neck Stretch (*Sukhasana*) here. Neck pain can be caused by tension in the neck muscles. Stretching these muscles can help prevent or reduce neck pain.

Seated twists–Ex. Pose Dedicated to Bharadvaja 1 (*Bharadvajasana 1*) here. Muscles in the neck are connected to the muscles in the upper back. Seated twists increase the range of motion in the upper back and neck and can help prevent or reduce neck pain caused by tension in these areas.

Poses on hands and knees–Ex. Going from Tiger Pose (*Vyaghrasana*), modification knee to the forehead, here to Tiger Pose (*Vyaghrasana*), also known as Cat Tilt here, top. Rounding the back and then going into a mild backbend can help strengthen the neck muscles and stretch the front of the neck (in Dog Tilt) and the back of the neck (in Cat Tilt).

Hand position of the pose dedicated to Garuda–Ex. Hand Position of the Pose Dedicated to Garuda in Hero Pose (*Hasta Garudasana in Virasana*) here. Any pose with this hand position helps stretch the upper back and back shoulder heads and can help prevent neck pain caused by tension in the muscles of the upper back.

POSES TO APPROACH WITH CAUTION

Full inversions–Ex. Revolved Leg Position of One-Legged King Pigeon 1 Version B in Headstand 5 (*Parivritta Pada Eka Pada Raja Kapotasana 1 B in Shirshasana 5*) here, One-Legged Unsupported Whole Body Pose (*Eka Pada Niralamba Sarvangasana*), also known as Shoulderstand here Full inversions with the head on the floor put strain on the neck since the

majority of the body weight tends to rest on the head or neck. If you have a neck injury, it's best to avoid these.

Backbends with feet and head on the floor–Ex. Inverted Tip Toe Bow Pose (*Viparita Prapada Dhanurasana*), also known as Headstand Bow Pose (*Shirsha Dhanurasana*) here. Backbends with head and feet on the floor require a lot of neck strength and should be avoided if you have a neck concern.

CONDITION

5. High Blood Pressure

If you think you may be at risk or have already been diagnosed with high blood pressure, it is advisable to speak with your health care provider. Practicing yoga may help with blood pressure management since it combines the benefits of meditation, muscle relaxation, and strength training exercise. When practicing yoga poses, ensure that you are able to breathe comfortably and deeply. If you have any difficulty breathing, come out of the pose and rest or perform an easier version of the pose. If difficulty breathing persists, then consult your health care provider immediately.

BENEFICIAL POSES

Seated backbends–Ex. Hands Bound Lotus Pose (*Baddha Hasta Padmasana*) here. Seated backbends gently open the chest and improve the flow of oxygen to the lungs. They release tension in the chest and front shoulder heads often caused by stress and hunching over a computer on a daily basis. This can help lower high blood pressure that is a result of stress.

Seated twists–Ex. Revolved Easy Pose (*Parivritta Sukhasana*) here. Seated twists help release tension from the upper back and detoxify the body. This can help lower high blood pressure that is a result of tension in the upper back.

Supine forward bends–Ex. Reclining Both Hands to the Leg Pose (*Supta Dwi Hasta Padasana*) here. Supine forward bends stretch the hamstrings without increasing blood pressure, as opposed to standing forward bends where the head is below the heart. This can help lower high blood pressure that is a result of muscle tension of the lower back and legs.

POSES TO APPROACH WITH CAUTION

Inversions–Ex. Feet Spread Out Intense Stretch Pose 2 (*Prasarita Padottanasana 2*) here and Crane Pose in Headstand 5 Prep. (*Bakasana in Shirshasana 5 Prep.*) here. Inversions should be avoided if you have high blood pressure that is not controlled. They are very stimulating postures since the head is below the heart, which causes an increased demand for oxygen. These increase blood flow and heart rate, generating pressure to the blood vessels of the brain, and may cause blood pressure to rise dramatically.

Lunges with back knee off the floor–Ex. Revolved Son of Anjani (Lord Hanuman) Lunge Pose with Hands in Prayer (*Parivritta Anjaneyasana Namaskar*) here. These poses can require a lot of lower body strength if you are not used to practicing them. They can raise the heart rate and increase blood pressure.

Arm balances with both feet off the floor–Ex. Leg Position of Cow Face Pose in Pendant Pose (*Pada Gomukhasana in Lolasana*) here. These poses are demanding on the upper body and may increase heart rate, which can increase blood pressure.

Backbends with hands and feet on the floor–Ex. Elevated Both Legs Inverted Staff Pose (*Utthita Dwi Pada Viparita Dandasana*) here. Poses such as these can be demanding on the upper body and can elevate blood pressure by increasing heart rate.

CONDITION

6. Menstruation

During a period, uterine contractions can cause painful cramps in the lower abdomen and lower back. Yoga can help release endorphins to relax the body. Stretch out the lower body and back to help release the pain. Forward bends, inside hip openers, and gentle twists can help relieve the symptoms of menstruation.

Some are of the opinion that inversions can cause engorgement in the blood vessels of the uterus, which may increase blood flow, and should be avoided during a period. On the other hand, B.K.S. Iyengar's book *The Path to Holistic Health* recommends inversions during a period to reduce blood flow. You should listen to your own body and judge accordingly. If you are not feeling strong, engage in a slower-paced yoga pose practice.

BENEFICIAL POSES

Supine hip openers–Ex. Universal All-Encompassing Diamond Pose (*Vishvavajrasana*) here. Poses such as this open up the hips and groin and allow the lumbar spine to rest, which can help relieve the menstrual discomfort.

Low squats–Ex. One Leg Bound Garland Pose (*Eka Pada Baddha Malasana*) here. Practice poses such as this to stretch out the groin, the chest, and front shoulders. Releasing tension from those areas can help relieve menstrual discomfort.

Seated hip openers–Ex. One Legged King Pigeon Pose 1 Prep. (*Eka Pada Raja Kapotasana 1 Prep.*) here. Poses such as this help open up the hip and stretch the lower abdomen, which can help relieve menstrual discomfort due to tension in that area.

Backbends on the knees–Ex. Camel Pose (*Ushtrasana*) here. Poses such as this can help stretch out the lower abdomen and release tension from that region, which can help relieve menstrual discomfort.

Gentle seated twists–Ex. Easy Lord of The Fishes Pose Prep. (*Sukha Matsyendrasana Prep.*) here. Seated twists stimulate internal organs and can help relieve the symptoms of menstruation by gently encouraging the natural blood flow during menstruation.

POSES TO APPROACH WITH CAUTION

Arm balances with hands and feet on the floor–Ex. Four Limbed Staff Pose (*Chaturanga Dandasana*) here. Poses such as this are very demanding on the upper body and core, and may

worsen the symptoms of menstruation due to overstraining.

Arm balances with both feet off the floor–Ex. Pose Dedicated to Galava, One-Legged Variatio (*Eka Pada Galavasana*) here. These poses demand a lot of strength and may worsen the symptoms of menstruation due to overstraining.

High squats–Ex. Tip Toe Fierce Pose (*Prapada Utkatasana*) here. Poses such as this are demanding on the legs and core, and may worsen the symptoms of menstruation due to overstraining.

Backbends on hands and feet–Ex. Partridge Pose (*Kapinjalasana*) here. Intense backbends put a lot of strain on the body, because they engage the entire body. They may worsen the symptoms of menstruation due to overstraining.

CONDITION

7. Pregnancy

Don't engage in a vigorous yoga practice with jump-through and jump-back *Vinyasas*. Jumping is dangerous during pregnancy. Avoid hot yoga classes that can dangerously elevate your core temperature or cause dehydration. After giving birth, be mindful when going into deep stretches. The levels of relaxin (the hormone that loosens the muscles and joints to accommodate birth) in the body may still be high, increasing the danger of injury due to overstretching. If you had a C-section, make sure the wound heals properly. Avoid doing any intense twists or backbends, as they may interfere with healing of the wound.

BENEFICIAL POSES

Seated inner hip openers–Ex. Knees Spread Wide Hero Pose (*Prasarita Janu Virasana*) here. Poses such as this stretch out the inner hips without compressing the abdomen.

Wide-legged squats–Ex. Lotus Hand Seal in Upward Hands Pose Dedicated to Goddess Ka (*Padma Mudra Urdhva Hasta Kalyasana*) here. Wide-legged squats strengthen quadriceps (front of the thighs), hamstrings (back of the thighs), and glutes (buttocks) without putting pressure onto the abdomen.

Standing side bends–Ex. Extended Side Angle Pose (*Utthita Parshva Konasana*) here. Standing side bends stretch out the side of the torso and lower back while strengthening the legs without putting pressure onto the abdomen.

Poses on hands and knees–Ex. Tiger Pose (*Vyaghrasana*) here. Poses on hands and knees can be done during pregnancy because they do not compress the abdomen.

Mild backbends on the knees–Ex. Half Camel Pose (*Ardha Ushtrasana*) here. Mild backbends can be practiced during pregnancy since they don't compress the abdomen.

POSES TO APPROACH WITH CAUTION

Inversions–Ex. Repose Pose (*Shayanasana*) here. Don't do any inversions where your heart is above your head beyond the first trimester. Turning your body upside down creates pressure on

your internal organs and may be damaging to the developing fetus.

Forward bend twists–Ex. Two Hands Revolved Western Intense Stretch Pose (*Dwi Hasta Parivritta Paschimottanasana*) here. Don't do any forward bends or twists that compress the abdomen and squeeze the fetus and placenta.

Core poses–Ex. Revolved Boat Pose (*Parivritta Navasana*) here. Don't do strenuous core poses that compress the abdomen.

Prone poses–Ex. One-Legged Pose Dedicated to Siddhar Konganar (*Eka Pada Konganarasana*) here. Avoid prone poses since they put a lot of pressure on the abdomen.

Supine poses where the back is flat on the floor–Ex. Reclined Leg Position of Cow Face Pose (*Supta Pada Gomukhasana*) here. Supine poses with the back flat on the floor take out the natural curve in the lumbar spine that is present during pregnancy and can compress the fetus and placenta.

Intense backbends–Ex. One-Legged Pigeon Pose (*Eka Pada Kapotasana*) here. Intense backbends create too much stretch in the abdomen and should be avoided during pregnancy.

CONDITION

8. Menopause

Common symptoms of menopause such as hot flashes and mood swings can be alleviated with regular yoga pose practice. Focus on poses that open up the pelvic area as well as mediation to help control stress.

Avoid practicing hot yoga and avoid overexertion. Both can trigger menopause symptoms. It is recommended to avoid vigorous Sun Salutes, as they can increase body temperature and cause hot flashes.

BENEFICIAL POSES

Mild supine backbends–Ex. Bridge Whole Body Pose (*Setu Bandha Sarvangasana*) here. Mild backbends open up the chest and heart area. They can help balance blood pressure and hormonal secretions as well as help relieve mood swings and hot flashes.

Supine hip openers–Ex. Reclined Bound Angle Pose (*Supta Baddha Konasana*) here. These poses open up the chest, heart and pelvic areas. Blood flow is increased into the pelvic area and reproductive organs and that can help balance hormonal functions. These poses can help relieve high blood pressure, headaches, and breathing problems.

Supine thigh openers–Ex. Reclined Hero Pose (*Supta Virasana*) here. Poses such as this can help improve blood circulation in the ovarian region and stimulate the pelvic organs, which can help balance hormonal functions and relieve the symptoms of menopause.

POSES TO APPROACH WITH CAUTION

Backbends on hands and feet–Ex. Tip Toe One Hand Upward Bow Pose (*Prapada Eka Hasta Urdhva Dhanurasana*) here. Poses such as these can be too strenuous on the upper body (arms and shoulders). They can raise the body temperature and cause hot flashes.

Core poses–Ex. Boat Pose (*Navasana*) here. Avoid any vigorous core yoga poses, as it creates too much tension around the abdominal organs and may worsen the menopause symptoms.

Standing twists–Ex. Revolved Side Angle (*Parivritta Parshva konasana*) here. Avoid any intense twists, as it creates too much compression around the internal organs of the torso, which may worsen the menopause symptoms.

Inversions–Ex. Headstand 1 (*Shirshasana 1*) here. Avoid any full inversions, as they increase blood flow to the internal organs of the torso and raise heart rate which may cause hot flashes.

Standing Poses

MOUNTAIN POSE
SIDE BENDS
STANDING BACKBENDS
ONE LEG STANDING BALANCE
STANDING FORWARD BENDS
LEGS WIDE
DOWNWARD DOG
INTENSE SIDE STRETCH
TRIANGLE POSE
WARRIOR AND SIDE ANGLE POSES
LUNGES AND KNEELING POSES
SQUATS

MOUNTAIN POSE: HANDS BELOW THE HEAD

Mountain Pose

Tadasana

(tuh-DAHS-uh-nuh)

Also Known As: Equal Steady Standing, State of Balance (Samasthiti)
Modification: palms rotated forward
Pose Type: standing
Drishti Point: Nasagrai or Nasagre (nose)

Mountain Pose with Hands in Prayer

Tadasana Namaskar

(tuh-DAHS-uh-nuh nuh-muhs-KAHR)

Modification: hands in Anjali Mudra (Hands in Prayer); feet to the front, toes lifted
Pose Type: standing
Drishti Point: Nasagrai or Nasagre (nose)

Reverse Prayer Mountain Pose

Viparita Namaskar Tadasana

(vi-puh-REE-tuh nuh-muhs-KAR tuh-DAHS-uh-nuh)

Also Known As: Penguin Pose, Back of the Body Prayer Mountain Pose (Paschima Namaskara Tadasana)
Modification: feet rotated out
Pose Type: standing
Drishti Point: Nasagrai or Nasagre (nose)

Hands Bound Mountain Pose

Baddha Hasta Tadasana

(BUH-duh HUH-stuh tuh-DAHS-uh-nuh)

Pose Type: standing
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

MOUNTAIN POSE: HANDS ABOVE THE HEAD & TANDAVA AND LASYA DANCE MODIFICATIONS

Upward Salute Pose

Urdhva Hastasana

(OORD-vuh huh-STAHS-uh-nuh)

Also Known As: Volcano Pose
Modification: arms shoulder width apart
Pose Type: standing, mild backbend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Upward Salute Pose

Urdhva Hastasana

(OORD-vuh huh-STAHS-uh-nuh)

Also Known As: Volcano Pose
Modification: palms pressed together
Pose Type: standing, mild backbend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Mountain Pose—Raised Bound Hands

Tadasana Urdhva Baddha Hastasana

(tuh-DAHS-uh-nuh OORD-vuh BUH-duh huh-STAHS-uh-nuh)
Also Known As: Mountain Pose (Parvatasana)
Pose Type: standing
Drishti Point: Nasagrai or Nasagre (nose)

Mountain Pose

Tadasana
(tuh-DAHS-uh-nuh)
Modification: shoulder opener, intense version
Pose Type: standing
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Pose Inspired by Parvati's Graceful Dance

Lasyasana
(lahs-YAHS-uh-nuh)
Modification: both legs straight; one leg extended to the front, heel up; one arm up over the head reaching to the floor, other arm reaching up to the sky; deep backbend
Pose Type: standing, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

SIDE BENDS: FEET TOGETHER, ARMS UP OVER THE HEAD & TANDAVA AND LASYA DANCE MODIFICATIONS

Standing Crescent Pose

Indudalasana

(in-doo-duh-LAHS-uh-nuh)

Modification: grabbing onto the wrist of the top hand
Pose Type: standing, side bend
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Sideways Mountain Pose—Raised Bound Hands

Parshva Tadasana Urdhva Baddha Hastasana

(PAHRSH-vuh tuh-DAHS-uh-nuh OORD-vuh BUH-duh HUH-STAHS-uh-nuh)

Also Known As: Side Bending Pose (Parshva Bhangi)
Pose Type: standing, side bend

Drishti Point: Nasagrai or Nasagre (nose)

Revolved Upward Mountain Pose—Raised Bound Hands

Parivritta Urdhva Tadasana Urdhva Baddha Hastasana

(puh-ri-VRIT-tuh OORD-vuh tuh-DAHS-uh-nuh OORD-vuh BUH-duh HUH-STAHS-uh-nuh)

Also Known As: Side Bending Pose (Parshva Bhangi)
Pose Type: standing, side bend, backbend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

One-Legged Standing Crescent Pose

Eka Pada Indudalasana

(EY-kuh PUH-duh in-doo-LAHS-uh-nuh)

Modification: grabbing onto the wrist
Pose Type: standing one-legged balance, side bend
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Side Stretch Pose

Parshvasana

(pahrsh-VAH-suh-nuh)

Modification: fingers interlocked, palms pressed together
Pose Type: standing, side bend
Drishti Point: Nasagrai or Nasagre (nose), Urdhva or Antara Drishti (up to the sky)

Pose Inspired by Shiva's Vigorous Cycle of Life Dance

Tandavasana

(tahn-duh-VAHS-suh-nuh)

Modification: heels down, legs crossed, arms up over the head
Pose Type: standing, side bend, backbend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

TANDAVA AND LASYA DANCE MODIFICATIONS

Pose Inspired by Parvati's Graceful Dance

Lasyasana

(lahs-YAHS-uh-nuh)

Modification: legs crossed, knees bent; one hand on the hip, one arm over the head
Pose Type: standing, side bend
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Pose Inspired by Parvati's Graceful Dance

Lasyasana

(lahs-YAHS-uh-nuh)

Modification: front leg ankle stretch, both knees bent, legs crossed, one arm toward the opposite knee, other arm up over the head
Pose Type: standing, side bend
Drishti Point: Urdhva or Antara Drishti (up to the sky)

SIDE BENDS: ONE ARM UP OVER THE HEAD, OTHER ARM ALONG THE SIDE OF TORSO

One Hand Side Stretch Pose

Eka Hasta Parshvasana

(EY-kuh HUH-stuh pahrsh-VAH-suh-nuh)

Modification: one arm up over the head, other hand sliding down the leg
Pose Type: standing, side bend
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Swaying Palm Tree Pose

Tiryak Tala-Vrikshasana

(TIR-yuhk TAHL-uh-vrik-SHAHS-uh-nuh)

Pose Type: standing, side bend

Drishti Point: Hastagrai or Hastagre (hands)

How to Perform the Pose:

1. Begin by standing in Mountain Pose (*Tadasana*). Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Inhale; step your feet slightly wider than shoulder-distance apart with toes facing forward and feet parallel to each other. Expand your chest and hold your arms straight out to the sides, parallel to the floor.
3. Exhale as you side bend to the left, dropping your left hand either to the side of the left thigh or the left shin. (Avoid putting pressure on the knee joint.) Bring your right arm over head and bend it at the elbow.
4. Inhale as you rotate your chest up to the sky; do not collapse it forward. Feel the deep stretch on the right side of your torso as you look toward your right hand (Pose #1).
5. On your next exhale, try to reach your right arm over your head with fingertips pointing toward the floor (Pose #2).
6. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch. Exhale as you release the pose. Inhale as you press strongly into both feet to come up.
7. Exhale, come back to Mountain Pose (*Tadasana*), and repeat on the left side.

Modification: elbow of the top arm bent
1. mild version
2. intense version

tiryak = horizontally, sideways, obliquely, across

tala-vrikshasana = palm tree

1.

2.

Hands Bound Rising Standing Locust Pose

Baddha Hasta Utthita Stiti Shalabhasana

(BUH-duh HUH-stuh UT-ti-tuh STI-ti shuh-luh-BAHS-uh-nuh)

Also Known As: Baddha Hasta Utthita Nindra Shalabhasana
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Sun Salutation Pose—Raised Bound Hands

Surya Namaskarasana Urdhva Baddha Hastasana

SOOR-yuh nuh-muhs-kahr-AHS-uh-nuh OORD-vuh BUH-duh huh-STAHS-uh-nuh)

Pose Type: standing, backbend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Rising Standing Cobra Pose

Utthita Stiti Bhujangasana

(UT-ti-tuh STI-ti bu-juhng-AHS-uh-nuh)

Also Known As: Utthita Nindra Bhujangasana
Modification: toes down, hands on the front of the knees
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Sun Salutation Pose

Surya Namaskarasana

(SOOR-yuh nuh-muhs-kahr-AHS-uh-nuh)

Modification: palms facing up
Pose Type: standing, backbend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Sun Salutation Pose

Surya Namaskarasana

(SOOR-yuh nuh-muhs-kahr-AHS-uh-nuh-uh-nuh)

Modification: fingers interlocked, pointer fingers out
Pose Type: standing, backbend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Reverse Facing Intense Stretch Pose

Tiryang Mukhottanasana

(TEER-yuhng mu-ko-tahn-AHS-uh-nuh)

Also Known As: Full Wheel Pose (Purna Chakrasana)
Modification: grabbing onto the shins
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reverse Facing Intense Stretch Pose

Tiryang Mukhottanasana

(TEER-yuhng mu-ko-tahn-AHS-uh-nuh)

Modification: grabbing onto the front of the knees
Pose Type: standing, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

STANDING BACKBENDS: KNEES BENT

Standing Upward Facing Intense Ankle Stretch Bow Pose

Stiti Urdhva Mukgattana Kulpa Dhanurasana

(STI-ti OORD-vuh mu-ko-TAH-nuh KUL-puh duh-nur-AHS-uh-nuh)

Also Known As: Nindra Urdhva Mukgattana Kulpa Dhanurasana
Modification: hands to the heels
Pose Type: standing, backbend, balance
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE LEG STANDING BALANCE: KNEE BENT—HEEL TO THE SITTING BONES

One Hand to Foot Rising Standing One-Legged Frog Pose

Eka Hasta Pada Utthita Stiti Eka Pada Bhekasana

(EY-kuh HUH-stuh PUH-duh UT-ti-tuh STI-ti EY-kuh PUH-duh bey-KAHS-uh-nuh)

Also Known As: Eka Hasta Pada Utthita Nindra Eka Pada Bhekasana
Modification: grabbing onto the foot, arm crossed in front; foot toward the glutes
Pose Type: standing one-legged balance, binding
Drishti Point: Hastagrai or Hastagre (hands)

Lord of the Dance Pose

Natarajasana

(NAH-tuh-rahj-AHS-uh-nuh)

Modification: one hand to foot, foot toward the glutes
Pose Type: standing one-legged balance, backbend
Drishti Point: Hastagrai or Hastagre (hands)

Both Hands to Foot Rising Standing One-Legged Frog Pose

Dwi Hasta Pada Utthita Stiti Eka Pada Bhekasana

(dwi-huh-stuh PUH-duh UT-ti-tuh STI-ti EY-kuh PUH-duh bey-KAHS uh-nuh)

Also Known As: Dwi Hasta Pada Utthita Nindra Eka Pada Bhekasana
Pose Type: standing one-legged balance

Drishti Point: Nasagrai or Nasagre (nose)

ONE LEG STANDING BALANCE: KNEE BENT—HEEL TO THE SITTING BONES—HALF FORWARD BEND

Bowing with Respect Lord of the Dance Pose

Nantum Natarajasana

(NUHN-tum NAH-tuh-rahj-AHS-uh-nuh)

Modification: half forward bend, both hands to the back foot, foot toward the glutes
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Half Bound Bowing with Respect Lord of the Dance Pose

Ardha Baddha Nantum Natarajasana

(UHR-duh BUH-duh NUHN-tum NAH-tuh-rahj-AHS-uh-nuh)

Modification: grabbing onto the back foot with opposite hand
Pose Type: standing one-legged balance, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

Half Moon Bow Pose Prep.

Ardha Chandrachapasana Prep.

(UHR-duh CHUHN-druh-chahp-AHS-uh-nuh)

Modification: grabbing onto the back foot with the hand on the same side
Pose Type: standing one-legged balance, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Hand to Foot Revolved Half Moon Bow Pose

Hasta Pada Parivritta Ardha Chandrachapasana

(HUH-stuh PUH-duh puh-ri-VRIT-tuh UHR-duh CHUHN-druh-chahp-AHS-uh-nuh)

Also Known As: Lord of the Dance Pose Modification (Natarajasana)
Pose Type: standing one-legged balance, forward bend, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Half Bound Unsupported Bound One-Legged Intense Stretch Pose Prep.

Ardha Baddha Niralamba Baddha Eka Pada Uttanasana Prep.

(UHR-duh BUH-duh nir-ah-LUHM-buh BUH-duh EY-kuh PUH-duh ut-tahn-AHS-uh-nuh)

Also Known As: Lord of the Dance Pose Prep. Modification (Natarajasana Prep.) and Half Bound Unsupported Bound One-Legged Forward Bend Prep.
Modification: one hand to the floor
Pose Type: standing one-legged balance, forward bend, binding
Drishti Point: Hastagrai or Hastagre (hands), Nasagrai or Nasagre (nose)

ONE LEG STANDING BALANCE: KNEE BENT—HEEL TO THE SITTING BONES—FORWARD BEND

One Leg Stretched Upward Pose Prep.

Urdhva Prasarita Ekapadasana Prep.

(OORD-vuh pruh-SAH-ri-tuh EY-kuh-puh-DAHS-uh-nuh)

Modification: top leg bent, heel toward the glutes; both palms to the floor
Pose Type: standing one-legged balance, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet), Nasagrai or Nasagre (nose)

Unsupported Bound One Foot Intense Stretch Pose

Niralamba Baddha Eka Pada Uttanasana

(nir-ah-LUHM-buh BUH-duh EY-kuh PUH-duh ut-TAHS-uh-nuh)

Also Known As: Unsupported Bound One Foot Full Forward Bend
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

ONE LEG STANDING BALANCE: KNEE BENT—HALF FORWARD BEND

Revolved Half Moon Bow Pose

Parivritta Ardha Chandrachapasana

(puh-ri-VRIT-tuh UHR-duh CHUHN-druh-chahp-AHS-uh-nuh)

Pose Type: standing one-legged balance, backbend, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky), Padhayoragrai or Padayoragre (toes/feet), Hastagrai or Hastagre (hands)

Pose Dedicated to Yogi Gitananda

Gitanandasana

(geet-ah-nuhn-DAHS-uh-nuh)

Also Known As: Lord of the Dance Pose Modification (Natarajasana)
Modification: foot away from the head
Pose Type: standing one-legged balance, backbend, forward bend
Drishti Point: Hastagrai or Hastagre (hands)

Pose Dedicated to Yogi Gitananda

Gitanandasana

(geet-ah-nuhn-DAHS-uh-nuh)

Also Known As: Lord of the Dance Pose Modification (Natarajasana)
Modification: foot to the head
Pose Type: standing one-legged balance, backbend, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE LEG STANDING BALANCE: HANDS BOUND BEHIND THE BACK

Toppling Tree Pose

Patan Vrikshasana

(PUH-tuhn vrik-SHAHS-uh-nuh)

Modification: both knees bent
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Toppling Tree Pose

Patan Vrikshasana

(PUH-tuhn vrik-SHAHS-uh-nuh)

Modification: both legs straight
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE LEG STANDING BALANCE: KNEE BENT—FOOT TO THE ELBOW CREASE

Lord of the Dance Pose Prep.

Natarajasana Prep.

(NAH-tuh-rahj-AHS-uh-nuh)

Modification: foot to the elbow crease, arms open to the sides, elbows bent
Pose Type: standing one-legged balance, backbend
Drishti Point: Hastagrai or Hastagre (hands)

Prayer Lord of the Dance Pose

Namaskar Natarajasana

(nuh-muhs-KAHR NAH-tuh-rahj-AHS-uh-nuh)

Modification: foot to the elbow crease
Pose Type: standing one-legged balance, backbend
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Half Moon Bow Pose Prep.

Ardha Chandrachapasana Prep.

(URH-duh chuhn-druh-chahp-AHS-uh-nuh)

Modification: foot to the elbow crease
Pose Type: standing one-legged balance, backbend, forward bend
Drishti Point: Hastagrai or Hastagre (hands)

ONE LEG STANDING BALANCE: KNEE BENT BEHIND

Lord of the Dance Pose

Natarajasana

(NAH-tuh-rahj-AHS-uh-nuh)

Also Known As: Baby Dancer's Pose (Bala Natarajasana)
Modification: hand to the foot on the same side using an under-head grip, back knee bent
1. thigh parallel to the floor
2. thigh 45 degrees to the floor, half forward bend

Pose Type: standing one-legged balance, backbend
Drishti Point: Hastagrai or Hastagre (hands)

Hand Position of Mermaid Pose in Bowing With Respect

Lord of the Dance Pose

Hasta Naginyasana in Nantum Natarajasana

(HUH-stuh nuh-gin-YAHS-uh-nuh in nan-toom NAH-tuh-rahj-AHS-uh-nuh)

Pose Type: standing one legged balance, backbend, forward bend

Drishti Point: Nasagrai or Nasagre (nose) or Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

How to Perform the Pose:

1. Begin by standing in Mountain Pose (*Tadasana*). Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Inhale and bring your weight onto the left foot. Exhale as you bend your right knee, grab onto the right foot with your right hand, and bring your right heel to your right sitting bone. Keep your standing leg strong and straight by pulling the knee cap up and engaging the front thigh muscles (quadriceps). Keep your knees together.
3. On the next exhale, start pushing your right foot back and up to the sky, while tipping your torso forward.
4. Exhale as you bring the right foot to the right elbow crease and bend your right arm to keep the foot in place.
5. Inhale as you reach your left arm out in front of you. Exhale, bend the left elbow, and grab onto the right hand with your left hand (Pose #2). This is the arm position of Mermaid Pose (*Hasta Naginyasana*).
6. To deepen the shoulder stretch, on the next exhale start walking your left hand down your left forearm. Grab first onto the left elbow and then to your left tricep (Pose #1).
7. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch. Exhale as you release the pose, come back to Mountain Pose (*Tadasana*), and repeat on the right side.

hasta = hand

naga = great mythological snake

nantum = to bow with respect

Nataraj = name of Shiva as a cosmic dancer

1.

2.

Open Heart Lord of the Dance Pose

Anahata Chakra Natarajasana

(uhn-AH-huh-tuh CHUHK-ruh NAH-tuh-rahj-AHS-uh-nuh)

Modification: back knee bent, arms open to the sides, foot working toward the head
Pose Type: standing one-legged balance, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Lord of the Dance Pose

Natarajasana

(NAH-tuh-rahj-AHS-uh-nuh)

Modification: hand to opposite foot using an under-head grip, back knee bent
Pose Type: standing one-legged balance, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Lord of the Dance Pose

Natarajasana

(NAH-tuh-rahj-AHS-uh-nuh)

Modification: standing leg bent, heel to the floor; hand to the foot on the same side using an overhead grip, foot to the shoulder

Pose Type: standing one-legged balance, backbend

Drishti Point: Hastagrai or Hastagre (hands)

Lord of the Dance Pose

Natarajasana

(NAH-tuh-rahj-AHS-uh-nuh)

Also Known As: Lord of the Dance Pose 1 (Natarajasana 1)

Modification: both hands grabbing onto the back foot with overhead grip, foot away from the head

Pose Type: standing one-legged balance, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE LEG STANDING BALANCE: GRABBING ONTO THE BACK KNEE

Bound Lord of the Dance Pose

Baddha Natarajasana

(BUH-duh NAH-tuh-rahj-AHS-uh-nuh)

Also Known As: Yogi Yogananda Pose (Yoganandasana)
Modification: hand binding to the knee on the same side of the body; back foot away from the head
Pose Type: standing one-legged balance, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bound Lord of the Dance Pose

Baddha Natarajasana

(BUH-duh NAH-tuh-rahj-AHS-uh-nuh)

Modification: one hand binding to the knee on the same side of the body, other arm crossed in front of the neck
1. left side view
2. right side view

Pose Type: standing one-legged balance, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Bound Lord of the Dance Pose

Baddha Natarajasana

(BUH-duh NAH-tuh-rahj-AHS-uh-nuh)

Also Known As: Yogi Yogananda Pose (Yoganandasana)
Modification: hand binding to the inside of the thigh on the same side of the body, back foot away from the head
Pose Type: standing one-legged balance, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Supported Sideways Hand to Knee Lord of the Dance Pose

Salamba Parshva Hasta Janu Natarajasana

(sah-LUHM--buh PAHRSH-vuh HUH-stuh JAH-nu NAH-tuh-rahj-AHS-uh-nuh)

Pose Type: standing one-legged balance, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Unsupported Sideways Hand to Knee Lord of the Dance Pose

Niralamba Parshva Hasta Janu Natarajasana

(nir-ah-LUHM-buh-nuh PAHRSH-vuh HUH-stuh JAH-nu NAH-tuh-rahj-AHS-uh-nuh)

Pose Type: standing one-legged balance, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

ONE LEG STANDING BALANCE: KNEE BENT IN FRONT

Hand Bound Rising Standing Wind Relieving Pose Prep.

Baddha Hasta Utthita Stiti Vayu Muktyasana Prep.

(BUH-duh HUH-stuh UT-ti-tuh STI-ti VAH-yu muk-TYAHS-uh-nuh)

Also Known As: Baddha Hasta Utthita Nindra Vayu Muktyasana Prep.
Modification: knee of the standing leg bent; fingertips to elbows, arms parallel to the floor, knee of the lifted leg to the forearm
Pose Type: standing one-legged balance
Drishti Point: Nasagrai or Nasagre (nose)

Standing Rising One-Legged Chin to Knee Pose Prep.

Stiti Utthita Eka Pada Chibi Janu Shirshasana Prep.

(STI-ti UT-ti-tuh EY-kuh PUH-duh CHI-bi JAH-nu sheer-SHAHS-uh-nuh)

Also Known As: Nindra Utthita Eka Pada Chibi Janu Shirshasana Prep.
Modification: 1. arms wrapped around the shin 2. fingers interlocked over the shin
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

ONE LEG STANDING BALANCE: KNEE BENT IN FRONT—BINDING & TWISTS

Standing Rising Wind Relieving Pose

Stiti Utthita Vayu Muktyasana

(STI-ti UT-ti-tuh VAH-yu muk-TYAHS-uh-nuh)

Also Known As: Nindra Utthita Vayu Muktyasana; Standing Pose Dedicated to Marichi (Nindra Marichyasana)
Modification: standing up straight
Pose Type: standing one-legged balance, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

Revolved Prayer Standing Rising Wind Relieving Pose

Parivritta Namaskar Stiti Utthita Vayu Muktyasana

(puh-ri-VRIT-tuh nuh-muhs-KAHR STI-ti UT-ti-tuh VAH-yu mukTYAHS-uh-nuh)

Also Known As: Parivritta Namaskar Nindra Utthita Vayu Muktyasana
Modification: hands in Anjali Mudra (Hands in Prayer)
Pose Type: standing one-legged balance, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Bound Standing Rising Wind Relieving Pose

Parivritta Baddha Stiti Utthita Vayu Muktyasana

(puh-ri-VRIT-tuh BUH-duh STI-ti UT-ti-tuh VAH-yu muk-TYAHS-uh-nuh)

Also Known As: Parivritta Baddha Nindra Utthita Vayu Muktyasana
Modification: binding around the back of the thigh
1. foot on the knee
2. foot away from the knee

Pose Type: standing one-legged balance, forward bend, twist, binding
Drishti Point: Nasagrai or Nasagre (nose)

Revolved Bound Standing Rising Wind Relieving Pose

Parivritta Baddha Stiti Utthita Vayu Muktyasana

(puh-ri-VRIT-tuh BUH-duh STI-ti UT-ti-tuh VAH-yu muk-TYAHS-uh-nuh)

Also Known As: Parivritta Baddha Nindra Utthita Vayu Muktyasana
Modification: binding around the shin
Pose Type: standing one-legged balance, forward bend, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

ONE LEG STANDING BALANCE: BOTH KNEES BENT—BINDING & TWISTS

Revolved Bound Standing Rising Wind Relieving Pose Prep.

Parivritta Baddha Stiti Utthita Vayu Muktyasana Prep.

(puh-ri-VRIT-tuh BUH-duh STI-ti UT-ti-tuh VAH-yu muk-TYAHS-uh-nuh)

Also Known As: Parivritta Baddha Nindra Utthita Vayu Muktyasana Prep.
Modification: foot resting on the knee, standing leg bent
Pose Type: standing one-legged balance, forward bend, twist, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Pose Inspired by Shiva's Vigorous Cycle of Life Dance

Tandavasana

(tahn-duh-VAHS-uh-nuh)

Modification: knee to the opposite elbow, foot resting on the knee, standing leg bent, heel down
Pose Type: standing one-legged balance, forward bend, twist
Drishti Point: Nasagrai or Nasagre (nose), Hastagrai or Hastagre (hands)

Pose Inspired by Shiva's Vigorous Cycle of Life Dance

Tandavasana

(tahn-duh-VAHS-uh-nuh)

Modification: both arms straight, one forearm to the opposite knee, other arm straight up to the sky, both knees bent

Pose Type: standing one-legged balance, forward bend, twist

Drishti Point: Hastagrai or Hastagre (hands)

ONE LEG STANDING BALANCE: HEEL UP

Tip Toe Pose Inspired by Shiva's Vigorous Cycle of Life Dance

Prapada Tandavasana

(PRUH-puh-duh tahn-duh-VAHS-uh-nuh)

Modification: knee to the opposite elbow, foot resting on the knee, standing leg bent

Pose Type: standing one-legged balance, forward bend, twist

Drishti Point: Nasagrai or Nasagre (nose), Hastagrai or Hastagre (hands)

Tip Toe Pose Inspired by Parvati's Graceful Dance

Prapada Lasyasana

(PRUH-puh-duh lahs-YAHS-uh-nuh)

Modification: deep backbend, one arm reaching up to the sky, other arm reaching down to the floor; standing leg straight, other knee bent; foot to the inside of the knee of the opposite leg
Pose Type: standing one-legged balance, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Hastagrai or Hastagre (hands)

Intense Ankle Stretch Tip Toe Lord of the Dance Pose

Uttana Kulpa Prapada Natarajasana

(ut-TAHN-uh KUL-puh PRUH-puh-duh NAH-tuh-rahj-AHS-uh-nuh)

Also Known As: Tip Toe Pose Inspired by Parvati's Graceful Dance (Prapada Lasyasana)
Modification: standing leg bent, toes curled under, overhead grip, foot to the shoulder
Pose Type: standing one-legged balance, backbend
Drishti Point: Hastagrai or Hastagre (hands)

ONE LEG STANDING BALANCE: KNEE BENT IN FRONT, BINDING, FORWARD BENDS

Half Standing Wind Relieving Intense Stretch Pose 1 & 2 Prep.

Ardha Stiti Vayu Muktyuttonasana 1 & 2 Prep.

(UHR-duh STI-ti VAH-yu muk-tew-ton-AHS-uh-nuh)

Also Known As: Ardha Nindra Vayu Muktyuttonasana; Standing Wind Relieving Half Forward Bend
Modification: fingers interlocked on the knee, half forward bend
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

One Hand Bound Half Standing Wind Relieving Intense Stretch Pose

Eka Hasta Baddha Ardha Stiti Vayu Muktyuttonasana

(EY-kuh HUH-stuh BUH-duh UHR-duh STI-ti VAH-yu muk-tew-ton-AHS-uh-nuh)

Also Known As: Eka Hasta Baddha Ardha Nindra Vayu Muktyuttonasana; One Hand Bound Standing Wind Relieving Half Forward Bend
Modification: binding around the shin, palm to the rib cage, foot resting on the thigh of the standing leg
Pose Type: standing one-legged balance, forward bend, binding

Drishti Point: Hastagrai or Hastagre (hands)

Standing Wind Relieving Intense Stretch Pose 1

Stiti Vayu Muktyuttonasana 1

(STI-ti VAH-yu muk-tew-ton-AHS-uh-nuh)

Also Known As: Nindra Vayu Muktyuttonasana; Standing Wind Relieving Half Forward Bend 1
Modification: chin away from the shin, binding on the inside of the thigh
Pose Type: standing one-legged balance, forward bend, binding
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

ONE LEG STANDING BALANCE: KNEE BENT IN FRONT, BINDING, TWIST FORWARD BENDS

Standing Wind Relieving Intense Stretch Pose 2

Stiti Vayu Muktyuttonasana 2

(STI-ti VAH-yu muk-tew-ton-AHS-uh-nuh)

Also Known As: Nindra Vayu Muktyuttonasana; Standing Pose Dedicated to Sage Marichi (Nindra Marichyasana) and Standing Wind Relieving Full Forward Bend

Modification: chin away from the shin, binding around the shin
Pose Type: standing one-legged balance, forward bend, binding
Drishti Point: Padhayoragrai or Padayoragre (toes/feet)

Revolved Half Standing Wind Relieving Intense Stretch Pose

Parivritta Ardha Stiti Vayu Muktyuttonasana

(puh-ri-VRIT-tuh UHR-duh STI-ti VAH-yu muk-tew-ton-AHS-uh-nuh)

Also Known As: Parivritta Ardha Nindra Vayu Muktyuttonasana; Revolved Standing Wind Relieving Half Forward Bend
Pose Type: standing one-legged balance, forward bend, twist, binding
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

ONE LEG STANDING BALANCE: KNEE BENT IN FRONT—BACKBENDS

Hand to Knee Pose Inspired by Parvati's Graceful Dance

Hasta Janu Lasyasana

(HUH-stuh JAH-nu lahs-YAHS-uh-nuh)

Modification: arm up over the head and parallel to the floor
Pose Type: standing one-legged balance, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Hastagrai or Hastagre (hands)

ONE LEG STANDING BALANCE: KNEE BENT IN FRONT—BACKBENDS—GRABBING ONTO THE ANKLE

Standing One-Legged Hero Pose

Stiti Eka Pada Virasana

(STI-ti EY-kuh PUH-duh veer-AHS-uh-nuh)

Also Known As: Nindra Eka Pada Virasana; Standing One-Legged Thunderbolt Pose (Nindra Eka Pada Vajrasana)
Modification: hand grabbing onto the foot, heel toward the glutes, shin parallel to the floor, other arm up to the sky
Pose Type: standing one-legged balance
Drishti Point: Nasagrai or Nasagre (nose)

Hand to Foot Pose Inspired by Parvati's Graceful Dance

Hasta Pada Lasyasana

(HUH-stuh PUH-duh lahs-YAHS-uh-nuh)

Modification: arm up over the head reaching to the sky

Pose Type: standing one-legged balance, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Hastagrai or Hastagre (hands)

ONE LEG STANDING BALANCE: KNEE BENT, KNEES IN LINE, FORWARD BENDS

Hand to Ankle Half Standing Wind Relieving Intense Stretch Pose

Hasta Kulpha Ardha Stiti Vayu Muktyuttonasana

(HUH-stuh kul-puh UHR-duh STI-ti VAH-yu muk-tew-ton-AHS-uh-nuh)

Also Known As: Hasta Kulpha Ardha Nindra Vayu Muktyuttonasana; Knee to Ear Half Standing Wind Relieving Intense Stretch Pose (Janu Karna Ardha Nindra Vayu Muktyuttonasana) and Hand to Ankle Standing Wind Relieving Half For-ward Bend

Modification: one hand grabbing onto the ankle, knee to the temple; other arm up to the sky, elbow bent

Pose Type: standing one-legged balance, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Hand to Foot One-Legged Half Intense Stretch Pose

Hasta Pada Eka Pada Ardha Uttanasana

(HUH-stuh PUH-duh EY-kuh PUH-duh UHR-duh ut-tahn-AHS-uh-nuh)

Also Known As: Hand to Foot One-Legged Half Forward Bend
Modification: hand to the foot from the same side, heel to the sitting bone, other palm to the floor
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Hand to Foot One-Legged Intense Stretch Pose

Hasta Pada Eka Pada Uttanasana

(HUH-stuh PUH-duh EY-kuh PUH-duh ut-tahn-AHS-uh-nuh)

Also Known As: Hand to Foot One-Legged Full Forward Bend
Modification: hand to the foot on the same side, heel to the sitting bone; other palm to the floor
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

One-Legged Intense Stretch Pose 1

Eka Pada Uttanasana 1

(EY-kuh PUH-du ut-tahn-AHS-uh-nuh)

Also Known As: One-Legged Full Forward Bend 1
Modification: leg bent, heel to the sitting bone, knees together; fingertips to the floor, arms extended behind the foot
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

One-Legged Intense Stretch Pose 2

Eka Pada Uttanasana 2

(EY-kuh PUH-du ut-tahn-AHS-uh-nuh)

Also Known As: One-Legged Full Forward Bend 2
Modification: leg bent, heel to the sitting bone, knees together; fingertips to the floor, arms extended behind the foot
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Pose Inspired by Shiva's Vigorous Cycle of Life Dance

Tandavasana

(tahn-duh-VAHS-uh-nuh)

Modification: both knees bent, both elbows bent
Pose Type: standing one-legged balance
Drishti Point: Nasagrai or Nasagre (nose)

Pose Inspired by Shiva's Vigorous Cycle of Life Dance

Tandavasana

(tahn-duh-VAHS-uh-nuh)

Modification: standing leg straight; other knee bent, foot to the inside of the knee; one forearm to the opposite knee, other arm extended up to the sky
Pose Type: standing one-legged balance, twist
Drishti Point: Hastagrai or Hastagre (hands)

Pose Inspired by Shiva's Vigorous Cycle of Life Dance

Tandavasana

(tahn-duh-VAHS-uh-nuh)

Modification: standing leg straight, other knee bent at 90 degrees; both elbows bent, fingertips reaching to the sky; twisting to the outside of the body

Pose Type: standing one-legged balance, twist

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

ONE LEG STANDING BALANCE: KNEE BENT TO THE SIDE

Pose Inspired by Shiva's Vigorous Cycle of Life Dance

Tandavasana

(tahn-duh-VAHS-uh-nuh)

Modification: knee to the tricep on the same side; both elbows bent, one arm up over the head

Pose Type: standing one-legged balance, side bend

Drishti Point: Hastagrai or Hastagre (hands)

Pose Inspired by Shiva's Vigorous Cycle of Life Dance

Tandavasana

(tahn-duh-VAHS-uh-nuh)

Modification: standing leg straight, other knee bent, toes pointing away from the head; fingertips to the temples

Pose Type: standing one-legged balance

Drishti Point: Nasagrai or Nasagre (nose)

Extended Hand to Big Toe Pose 2 Prep.

Utthita Hasta Padangushtasana 2 Prep.

(UT-ti-tuh HUH-stuh puh-DAHNG-goosh-tahn-AHS-uh-nuh)

Also Known As: Extended Hand to Big Toe Pose B Prep. (Utthita Hasta Padangushtasana B Prep.)

Modification: knee bent

Pose Type: standing one-legged balance

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Easy Tree Pose Modification

Sukha Vrikshasana

(SOOK-uh vrik-SHAHS-uh-nuh)

Modification: hands on the hips

1. toes to the floor
2. foot to the calf muscle

Pose Type: standing one-legged balance

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Tree Pose with Hands in Prayer

Vrikshasana Namaskar

(vrik-SHAHS-uh-nuh nuh-muhs-KAHR)

Pose Type: standing one-legged balance

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs), Nasagrai or Nasagre (nose)

Reverse Prayer Tree Pose

Viparita Namaskar Vrikshasana

(vi-puh-REE-tuh nuh-muhs-KAHR vrik-SHAHS-uh-nuh)

Also Known As: Back of the Body Prayer Tree Pose (Paschima Namaskara Vrikshasana)
Pose Type: standing one-legged balance
Drishti Point: Nasagrai or Nasagre (nose)

Revolved Half Bound Tree Pose

Parivritta Ardha Baddha Vrikshasana

(puh-ri-VRIT-tuh UHR-duh BUH-duh vrik-SHAHS-uh-nuh)

Pose Type: standing one-legged balance, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Tree Pose with Hands in Prayer

Vrikshasana Namaskar

(vrik-SHAHS-uh-nuh nuh-muhs-KAHR)

Modification: backbend

Pose Type: standing one-legged balance, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Tree Pose

Vrikshasana

(vrik-SHAHS-uh-nuh)

Also Known As: Upward Hands Tree Pose (Urdhva Hasta Vrikshasana) or Pose Dedicated to Royal Sage Bhagiratha (Bhagirathasana)

Pose Type: standing one-legged balance, mild backbend

Drishti Point: Angusthamadhye or Angustha Ma Dyai (thumbs)

How to Perform the Pose:

1. Begin by standing in Mountain Pose (*Tadasana*). Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing. Find a still point on the floor to keep your gaze on. This will help you find and keep your balance.
2. Inhale and bring your weight onto the right foot. Exhale as you bend your left knee, and bring it out to the left side, opening the inside of your left hip. Keep your hips leveled and parallel to the floor (don't let your left hip go higher than your right). Keep the lower abdomen engaged to take out the compression (the arch) in the lower back.
3. Exhale as you place the sole of your left foot to the left calf muscle. Make sure the toes of your left foot are pointing to the floor.
4. On the next exhale, grab onto the left ankle with your left hand and slide the left foot up to the inside of your left thigh, keeping the toes of the left foot pointing to the floor. Avoid putting pressure on your right knee. Make sure to keep the left knee out to the side as you open the inside of your left hip.
5. Inhale as you reach both arms up over your head, fingertips pointing up to the sky. Keep them straight and shoulder-width apart. Make sure to lengthen your neck and keep your shoulder blades down your back.
6. Exhale and bring your gaze to your thumbs (Pose #1). You can experiment with rolling your head all the way back, feeling the stretch in the front of your neck (Pose #2).
7. If your shoulders are open, the neck is long, and your breathing is not constricted, you can bring your palms together on the exhale and look at your thumbs (Pose #3). With your palms pressed together, you can also experiment with rolling your head all the way back, feeling the stretch in the front of your neck (Pose #4).
8. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch. Exhale as you release the pose, come back to Mountain Pose (*Tadasana*), and repeat on the other side.

Modification: arms extended up over the head

1. arms shoulder width
2. arms shoulder width, head rolling back
3. palms together
4. palms together, head rolling back

vriksha = tree

1.

2.

3.

4.

Hand Position of Cow Face Pose in Tree Pose

Hasta Gomukhasana in Vrikshasana

(HUH-stuh go-muk-AHS-uh-nuh in vrik-SHAHS-uh-nuh)

Modification: Gomukhasana arms
Pose Type: standing one-legged balance
Drishti Point: Nasagrai or Nasagre (nose)

Hand Position of the Pose Dedicated to Garuda in Tree Pose

Hasta Garudasana in Vrikshasana

(HUH-stuh GUH-ru-duh-AHS-uh-nuh in vrik-SHAHS-uh-nuh)

Pose Type: standing one-legged balance
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Sideways Tree Pose

Parshva Vrikshasana

(PAHRSH-vuh vrik-SHAHS-uh-nuh)
Modification: side bend toward the bent knee
Pose Type: standing one-legged balance, side bend
Drishti Point: Hastagrai or Hastagre (hands)

Upward One Hand Half Bound Lotus Tree Pose

Urdhva Eka Hasta Ardha Baddha Padma Vrikshasana

(OORD-vuh EY-kuh HUH-stuh UHR-duh BUH-duh PUHD-muh vrik-SHAHS-uh-nuh)
Pose Type: standing one-legged balance, binding
Drishti Point: Nasagrai or Nasagre (nose)

Revolved Half Bound Lotus Tree Pose

Parivritta Ardha Baddha Padma Vrikshasana

(puh-ri-VRIT-tuh UHR-duh BUH-duh PUHD-muh vrik-SHAHS-uh-nuh)
Pose Type: standing one-legged balance, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Hand to Foot Hand to Knee Tree Pose

Hasta Pada Hasta Janu Vrikshasana

(HUH-stuh PUH-duh HUH-stuh JAH-nu vrik-SHAHS-uh-nuh)

Modification: grabbing onto the foot and the knee, knee to the outside
Pose Type: standing one-legged balance
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Hand to Foot Hand to Knee Tree Pose

Hasta Pada Hasta Janu Vrikshasana

(HUH-stuh PUH-duh HUH-stuh JAH-nu vrik-SHAHS-uh-nuh)

Modification: backbend, grabbing onto the foot and the knee, knee to the outside, looking straight ahead
Pose Type: standing one-legged balance, backbend
Drishti Point: Nasagrai or Nasagre (nose)

Hand to Foot Hand to Knee Toppling Tree Pose

Hasta Pada Hasta Janu Patan Vrikshasana

(HUH-stuh PUH-duh HUH-stuh JAH-nu PUH-tuhn vrik-SHAHS-uh-nuh)

Modification: grabbing onto the foot and the shin, knee to the outside
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

ONE LEG STANDING BALANCE: LEG STRAIGHT IN FRONT

Both Hands to Foot Pose

Dwi Hasta Padasana

(dwi-huh-stuh puh-DAHS-uh-nuh)

Also Known As: Raised Up Leg and Back Stretch Pose (Utthita Eka Pada Paschimottanasana), Standing Head to Knee Pose (Dandayamana-Janushirasana)
Modification: chin to the shin
Pose Type: standing one-legged balance, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Padayoragrai or Padayoragre (toes/feet)

Extended One Foot Pose

Utthita Ekapadasana

(UT-ti-tuh EY-kuh-puh-DAHS-uh-nuh)

Also Known As: Extended Hand to Big Toe Pose D (Utthita Hasta Padangushtasana D; found in Ashtanga Yoga System)
Modification: hands on the hips
Pose Type: standing one-legged balance
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Extended Hand to Big Toe Pose 1

Utthita Hasta Padangushtasana 1

(UT-ti-tuh HUH-stuh puhd-ahng-goosh-TAHS-uh-nuh)

Also Known As: Extended Hand to Big Toe Pose A (Utthita Hasta Padangushtasana A)
Modification: lifted leg in front of the body
Pose Type: standing one-legged balance
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Extended Pose Dedicated to Trivikrama—Conqueror of the Three Worlds (Vishnu)

Utthita Trivikramasana

(UT-ti-tuh tri-vi-kruh-MAHS-uh-nuh)

Also Known As: Extended Hand to Foot Stretch Pose (Utthita Hastha Pada Uttanasana)
Modification: knee away from the shoulder
Pose Type: standing one-legged balance
Drishti Point: Nasagrai or Nasagre (nose)

ONE LEG STANDING BALANCE: LEG STRAIGHT TO THE SIDE

Pose Dedicated to Trivikrama—Conqueror of the Three Worlds (Vishnu)

Trivikramasana

(tri-vi-kruh-MAHS-uh-nuh)

Also Known As: Leg to the Side Pose Dedicated to Trivikrama—Conqueror of the Three Worlds (Vishnu) (Parshva Pada Trivikramasana)
Modification: arm wrapping around the leg on the same side
Pose Type: standing one-legged balance
Drishti Point: Nasagrai or Nasagre (nose)

Rising Standing Sundial Pose

Utthita Stiti Surya Yantrasana

(UT-ti-tuh STI-ti SOOR-yuh yuhn-TRAHS-uh-nuh)
Also Known As: Utthita Nindra Surya Yantrasana
Modification: side bend
Pose Type: standing one-legged balance, side bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Pose Dedicated to Trivikrama—Conqueror of the Three Worlds (Vishnu)

Trivikramasana

(tri-vi-kruh-MAHS-uh-nuh)

Also Known As: Leg to the Side Pose Dedicated to Trivikrama—Conqueror of the Three Worlds (Vishnu) (Parshva Pada Trivikramasana)

Modification: both hands grabbing onto the leg, shoulder to the back of the knee, looking to the side

Pose Type: standing one-legged balance, twist

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Pose Dedicated to Trivikrama—Conqueror of the Three Worlds (Vishnu)

Trivikramasana

(tri-vi-kruh-MAHS-uh-nuh)

Also Known As: Leg to the Side Pose Dedicated to Trivikrama—Conqueror of the Three Worlds (Vishnu) (Parshva Pada Trivikramasana)

Modification: one hand grabbing onto the opposite foot, shoulder to the front of the knee, other arm straight out to the side, looking straight ahead

Pose Type: standing one-legged balance

Drishti Point: Nasagrai or Nasagre (nose)

Extended Hand to Big Toe Pose 2

Utthita Hasta Padangushtasana 2

(UT-ti-tuh HUH-stuh puhd-ahng-goosh-TAHS-uh-nuh)

Also Known As: Extended Hand to Big Toe Pose B (Utthita Hasta Padangushtasana B), Standing Leg Going to the Side Pose Prep. (Utthita Parshvasahita Prep.)

Pose Type: standing one-legged balance

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Half Bound Pose Dedicated to Trivikrama—Conqueror of the Three Worlds (Vishnu)

Ardha Baddha Trivikramasana *(UHR-duh BUH-duh tri-vi-kruh-MAHS-uh-nuh)*

Also Known As: Leg to the Side Half Bound Pose Dedicated to Trivikrama—Conqueror of the Three Worlds (Vishnu) (Parshva Pada Ardha Baddha Trivikramasana)

Modification: one arm wrapping around the leg on the same side, other arm behind the back, hand to the inside of the thigh

Pose Type: standing one-legged balance, binding

Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Bird of Paradise Pose

Svarga Dvijasana

(SVUHR-guh dwij-AHS-uh-nuh)

Pose Type: standing one-legged balance, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Revolved Extended Hand to Foot Pose

Parivritta Utthita Pada Hastasana

(puh-ri-VRIT-tuh UT-ti-tuh PUH-duh huh-STAHS-uh-nuh)

Also Known As: Revolved Hand to Big Toe Pose (Parivritta Hasta Padangushtasana)
Pose Type: standing one-legged balance, twist
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Revolved Bird of Paradise Pose

Parivritta Svarga Dvijasana

(puh-ri-VRIT-tuh SVUHR-guh dwij-AHS-uh-nuh)

Also Known As: Raised and Revolved Bound Leg Pose (Utthita Parivritta Baddha Padasana)
Pose Type: standing one-legged balance, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

ONE LEG STANDING BALANCE: BOTH LEGS STRAIGHT—BACKBEND

Lord of the Dance Pose

Natarajasana

(NAH-tuh-rahj-AHS-uh-nuh)

Modification: under-head grip with one hand on the same side; both legs straight
Pose Type: standing one-legged balance, backbend
Drishti Point: Hastagrai or Hastagre (hands)

Pose Dedicated to Yogi Yogananda

Yoganandasana

(yo-gah-nuhn-DAHS-uh-nuh)

Also Known As: Pose Dedicated to Vishnu Devananda (Vishnu Devanandasana)
Modification: both legs straight, grabbing onto the back leg with an under-head grip
Pose Type: standing one-legged balance, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Yogi Sivananda's Pose

Sivanandasana

(shiv-ah-nuhn-DAHS-uh-nuh)

Modification: grabbing onto the shin
Pose Type: standing one-legged balance, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE LEG STANDING BALANCE: BOTH LEGS STRAIGHT—FORWARD BEND

Pose Dedicated to Sage Sundaranandar

Sundaranandarasana

(sun-duh-RAH-nuhn-duh-RAHS-uh-nuh)

Modification: palms to the floor, forehead to the shin
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

One Leg Stretched Upward Pose

Urdhva Prasarita Ekapadasana

(OORD-vuh pruh-SAH-ri-tuh ey-kuh-puhd-AHS-uh-nuh)

Modification: one hand grabbing onto the ankle on the same side, palm of the other hand to the floor, head away from the shin
Pose Type: standing one-legged balance, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet) or Nasagrai or Nasagre (nose)

One Leg Stretched Upward Pose

Urdhva Prasarita Ekapadasana

(OORD-vuh pruh-SAH-ri-tuh ey-kuh-puhd-AHS-uh-nuh)

Modification: both hands grabbing onto the ankle, forehead to the shin
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose) if chin touches the shin

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Unsupported One Leg Stretched Upward Pose

Niralamba Urdhva Prasarita Ekapadasana

(nir-AH-luhm-buh OORD-vuh pruh-SAH-ri-tuh ey-kuh-puhd-AHS-uh-nuh)

Modification: arms straight along the sides of the torso, fingertips to the sky
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Padayoragrai or Padayoragre (toes/feet), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bound Unsupported One Leg Stretched Upward Pose

Baddha Niralamba Urdhva Prasarita Ekapadasana

(BUH-duh nir-AH-luhm-buh OORD-vuh pruh-SAH-ri-tuh ey-kuh-puhd-AHS-uh-nuh-uh-nuh)

Pose Type: standing one-legged balance, forward bend, binding

Drishti Point: Nasagrai or Nasagre (nose), Padayoragrai or Padayoragre (toes/feet), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE LEG STANDING BALANCE: LEG STRAIGHT TO THE SIDE—HALF FORWARD BEND

Bowing with Respect Extended Hand to Big Toe Pose 2

Nantum Utthita Hasta Padangushtasana 2

(NUHN-tum UT-ti-tuh HUH-stuh puhd-ahng-goosh-TAHS-uh-nuh)

Modification: forward bend, grabbing onto the big toe of the lifted leg; other arm extended to the side parallel to the floor

Pose Type: standing one-legged balance, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Bowing with Respect Both Hands Extended to Big Toes Pose 2

Nantum Utthita Dwi Hasta Padangushtasana 2

(NUHN-tum UT-ti-tuh DWI-huh-stuh puhd-ahng-goosh-TAHS-uh-nuh-uh-nuh)

Modification: forward bend, grabbing onto the big toes with both hands, leg lifted higher than the hip
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Bowing with Respect Half Bound Hand to Leg Pose

Nantum Ardha Baddha Hasta Padasana

(NUHN-tum UHR-duh BUH-duh HUH-stuh puhd-AHS-uh-nuh)

Modification: half forward bend
Pose Type: standing one-legged balance, forward bend, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE LEG STANDING BALANCE: STANDING KNEE BENT & STRAIGHT—FORWARD BEND

Bowing with Respect Bird of Paradise Pose Prep.

Nantum Svarga Dvijasana Prep.

(NUHN-tum SVUHR-guh dwij-AHS-uh-nuh)

Modification: 1. standing leg bent; other knee to the back of the shoulder, leg bent
2. standing leg bent; other knee to the back of the shoulder, leg straight

Pose Type: standing one-legged balance, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Bowing with Respect Bird of Paradise Pose

Nantum Svarga Dvijasana

(NUHN-tum SVUHR-guh dwij-AHS-uh-nuh)

Modification: half forward bend
Pose Type: standing one-legged balance, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

Benu Bird Pose 2

Benvasana 2

(ben-VAHS-uh-nuh)

Modification: both knees bent, chest toward the quadriceps, arms open to the sides
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

ONE LEG STANDING BALANCE: ONE LEG STRAIGHT TO THE BACK, HANDS TO THE FLOOR

Half One Leg Stretched Upward Pose

Ardha Urdhva Prasarita Ekapadasana

(UHR-duh OORD-vuh pruh-SAH-ri-tuh ey-kuh-puh-DAHS-uh-nuh)

Also Known As: One Leg Stretched Upwards Pose Prep. (Urdhva Prasarita Ekapadasana Prep.), Warrior 3 Prep. (Virabhadrasana 3 Prep.)
Modification: fingertips to the floor
Pose Type: standing, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One Leg Stretched Upward Pose Prep.

Urdhva Prasarita Ekapadasana Prep.

(OORD-vuh pruh-SAH-ri-tuh ey-kuh-puh-DAHS-uh-nuh)

Modification: standing leg bent, shoulder to the back of the knee, arms extended to the back
Pose Type: standing, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Moon Pose Prep.

Ardha Chandrasana Prep.

(UHR-duh chuhn-DRAHS-uh-nuh)

Modification: with yoga block prop, hand on the hip
Pose Type: standing one-legged balance, forward bend
Drishti Point: Hastagrai or Hastagre (hands)

Half Moon Pose

Ardha Chandrasana

(UHR-duh chuhn-DRAHS-uh-nuh)

Pose Type: standing one-legged balance, forward bend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

ONE LEG STANDING BALANCE: ONE LEG STRAIGHT TO THE BACK—HANDS OFF THE FLOOR

Warrior 3

Virabhadrasana 3

(VEER-uh buh-DRAHS-uh-nuh)

Also Known As: Bird Pose A (Dikasana A)
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Warrior 3

Virabhadrasana 3

(VEER-uh buh-DRAHS-uh-nuh)

Also Known As: Bird Pose B (Dikasana B)
Modification: arms extended to the back and parallel to the floor
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Reverse Prayer Warrior 3

Viparita Namaskar Virabhadrasana 3

(vi-puh-REE-tuh nuh-muhs-KAHR VEER-uh buh-DRAHS-uh-nuh)

Also Known As: Back of the Body Prayer Warrior 3 (Paschima Namaskara Virabhadrasana 3)
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Hand Position of the Pose Dedicated to Garuda in Warrior 3

Hasta Garudasana in Virabhadrasana 3

(HUH-stuh guh-ru-DAHS-uh-nuh in VEER-uh-buh-DRAHS-uh-nuh)
Pose Type: standing one-legged balance, forward bend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Half Lotus Warrior 3

Ardha Padma Virabhadrasana 3

(UHR-duh PUHD-muh VEER-uh-buh-DRAHS-uh-nuh-uh-nuh)
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Half Moon Pose

with Hands in Prayer

Ardha Chandrasana Namaskar

(UHR-duh chuhn-DRAHS-uh-nuh nuh-muhs-KAHR)

Pose Type: standing one-legged balance, forward bend

Drishti Point: 1. Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows) 2. Urdhva or Antara Drishti (up to the sky)

How to Perform the Pose:

1. Begin by doing Extended Triangle Pose (*Utthita Trikonasana*) with the left foot in front and your left hand to the floor outside the left foot (either on the fingertips or with the palm flat on the floor). Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Exhale as you slide your left palm out to the front while bending your left knee. Experiment with the distance to find your balance.
3. Inhale and lift your right foot off the floor until your right leg is parallel to the floor. Keep it straight and reaching away from your head. Straighten your standing left leg.
4. Exhale and rotate your chest to the side so that your shoulders stack one on top of the other.
5. On your next exhale, lift your left arm up off the floor and bring your hands into prayer at the center of your chest.
6. You can either find a gazing point on the floor that is not moving to help keep your balance (Pose #1) or challenge yourself by looking up to the sky (Pose #2).
7. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch. Exhale, lower your right foot to the floor, coming back into Extended Triangle Pose (*Utthita Trikonasana*), and repeat on the other side.

Modification:

1. looking down
2. looking up to the sky

ardha = half

chandra = moon

namaskar = greeting with hands in Anjali Mudra (hands in prayer)

1.

2.

Reverse Prayer Half Moon Pose

Viparita Namaskar Ardha Chandrasana

(vi-puh-REE-tuh nuh-muhs-KAHR UHR-duh chuhn-DRAHS-uh-nuh)

Also Known As: Back of the Body Prayer Half Moon Pose (Paschima Namaskara Ardha Chandrasana)

Pose Type: standing one-legged balance, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Bound Half Moon Pose

Baddha Ardha Chandrasana

(BUH-duh UHR-duh chuhn-DRAHS-uh-nuh)

Pose Type: standing one-legged balance, forward bend, binding

Drishti Point: Nasagrai or Nasagre (nose) or Padayoragrai or Padayoragre (toes/feet)

Revolved Bound Half Moon Pose

Parivritta Baddha Ardha Chandrasana

(vi-puh-REE-tuh BUH-duh UHR-duh chuhn-DRAHS-uh-nuh)

Modification: looking up to the sky
Pose Type: standing one-legged balance, forward bend, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Half Firelog Pose in Half Moon Pose Prep.

Ardha Agnistambhasana in Ardha Chandrasana Prep.

(UHR-duh uhg-ni-stuhm-BAHS-uh-nuh in UHR-duh chuhn-DRAHS-uh-nuh)

Modification: foot on top of the knee, palm to the lower back
Pose Type: standing one-legged balance, forward bend
Drishti Point: Hastagrai or Hastagre (hands)

Half Bound Lotus Half Moon Pose Prep.

Ardha Baddha Padma Ardha Chandrasana Prep.

(UHR-duh BUH-duh PUHD-muh UHR-duh chuhn-DRAHS-uh-nuh)

Modification: arm behind the back, binding to the inside of the thigh of the leg in Half Lotus

Pose Type: standing one-legged balance, forward bend, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Leg Position of Half Cow Face Pose in Half Moon Pose Prep.

Pada Ardha Gomukhasana in Ardha Chandrasana Prep.

(PUH-duh UHR-duh go-muk-AHS-uh-nuh in UHR-duh chuhn-DRAHS-uh-nuh)

Also Known As: One-Legged Cow Face Pose in Half Moon Pose Prep. (Eka Pada Gomukhasana in Ardha Chandrasana Prep.)
Pose Type: standing one-legged balance, forward bend, twist
Drishti Point: Hastagrai or Hastagre (hands)

ONE-LEGGED STANDING BALANCE: HALF LOTUS

Half Bound Lotus Intense Stretch Pose Prep.

Ardha Baddha Padmottanasana Prep.

(UHR-duh BUH-duh puhd-mo-tahn-AHS-uh-nuh)

Also Known As: Half Bound Lotus Half Forward Bend Prep., Half Lotus Half Intense Stretch Pose

(Ardha Padma Ardha Uttanasana), Half Lotus Half Forward Bend
Modification: half forward bend, fingertips of both hands to the floor
Pose Type: standing, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Half Bound Lotus Intense Stretch Pose Prep.

Ardha Baddha Padmottanasana Prep.

(UHR-duh BUH-duh puhd-mo-tahn-AHS-uh-nuh)
Also Known As: Half Bound Lotus Half Forward Bend
Modification: half forward bend
Pose Type: standing one-legged balance, forward bend, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Half Bound Lotus Intense Stretch Pose

Ardha Baddha Padmottanasana

(UHR-duh BUH-duh puhd-mo-tahn-AHS-uh-nuh)

Also Known As: Half Bound Lotus Full Forward Bend
Pose Type: standing one-legged balance, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

GARUDA LEGS

Pose Dedicated to Garuda

Garudasana

(guh-ru-DAHS-uh-nuh)
Also Known As: Eagle Pose
Modification: hands intertwined in front, low stance
Pose Type: standing one-legged balance
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Reverse Heart Chakra Seal in Leg Position of the Pose Dedicated to Garuda

Viparita Anahata Chakra Mudra in Pada Garudasana

(vi-puh-REE-tuh un-AH-huh-tuh chuh-kruh MU-druh in PUH-duh guh-ru-DAHS-uh-nuh)

Also Known As: Reverse Heart Chakra Seal in Leg Position of the Eagle Pose
Pose Type: standing one-legged balance
Drishti Point: Nasagrai or Nasagre (nose)

Pose Dedicated to Garuda

Garudasana

(guh-ru-DAHS-uh-nuh)

Also Known As: Eagle Pose
Modification: elbows to the knees
Pose Type: standing one-legged balance, forward bend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Leg Position of the Pose Dedicated to Garuda

Pada Garudasana

(PUH-duh guh-ru-DAHS-uh-nuh)

Also Known As: Leg Position of the Eagle Pose
Modification: arms straight out to the sides behind the back
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Revolved Bound Leg Position of the Pose Dedicated to Garuda

Parivritta Baddha Pada Garudasana

(puh-ri-VRIT-tuh BUH-duh PUH-duh guh-ru-DAHS-uh-nuh)
Also Known As: Revolved Bound Leg Position of the Eagle Pose
Pose Type: standing one-legged balance, forward bend, binding, twist
Drishti Point: Nasagrai or Nasagre (nose)

Hands Bound Leg Position of the Pose Dedicated to Garuda

Baddha Hasta Pada Garudasana

(BUH-duh HUH-stuh PUH-duh guh-ru-DAHS-uh-nuh)
Also Known As: Hands Bound Leg Position of the Eagle Pose
Pose Type: standing one-legged balance, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

ONE-LEGGED SQUATS: TWISTS

Revolved Half Standing Wind Relieving Intense Stretch Pose

Parivritta Ardha Stiti Vayu Muktyuttonasana

(puh-ri-VRIT-tuh UHR-duh STI-ti VAH-yu muk-tew-to-NAHS-uh-nuh)

Also Known As: Parivritta Ardha Nindra Vayu Muktyuttonasana; Revolved Standing Wind Relieving Half Forward Bend

Modification: knees together; elbow to the opposite knee, other arm extended to the back

Pose Type: standing one-legged balance, forward bend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Revolved Half Standing Wind Relieving Intense Stretch Pose with Hands in Prayer

Parivritta Ardha Stiti Vayu Muktyuttonasana Namaskar

(puh-ri-VRIT-tuh UHR-duh STI-ti VAH-yu muk-tew-to-NAHS-uh-nuh nuh-muhs-KAHR)

Also Known As: Parivritta Ardha Nindra Vayu Muktyuttonasana Namaskar; Revolved Standing Wind Relieving Half Forward Bend with Hands in Prayer

Modification: back leg crossed under the front leg

Pose Type: standing one-legged balance, forward bend, twist

Drishti Point: Nasagrai or Nasagre (nose)

Bound Revolved Half Standing Wind Relieving Intense Stretch Pose

Baddha Parivritta Ardha Stiti Vayu Muktyuttonasana

(BUH-duh puh-ri-VRIT-tuh UHR-duh STI-ti VAH-yu muk-tew-to-NAHS-uh-nuh)

Also Known As: Baddha Parivritta Ardha Nindra Vayu Muktyuttonasana; Bound Revolved Standing Wind Relieving Half Forward Bend

Pose Type: standing one-legged balance, forward bend, twist, binding

Drishti Point: Urdhva or Antara Drishti (up to the sky)

ONE-LEGGED SQUATS: KNEES IN LINE—HEEL TO THE SITTING BONES—GRABBING ONTO THE ANKLE

Revolved One Hand to Foot Half Standing Wind Relieving Intense Stretch Pose

Parivritta Eka Hasta Pada Ardha Stiti Vayu Muktyuttonasana

(puh-ri-VRIT-tuh EY-kuh HUH-stuh PUH-duh UHR-duh STI-ti VAH-yu muk-tew-to-NAHS-uh-nuh)

Also Known As: Parivritta Eka Hasta Pada Ardha Nindra Vayu Muktyuttonasana; Revolved One Hand to Foot Standing Wind Relieving Half Forward Bend
Modification: knees together; elbow to the opposite knee, other hand grabbing onto the ankle
Pose Type: standing one-legged balance, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Both Hands to Foot Half Standing Wind Relieving Intense Stretch Pose

Dwi Hasta Pada Ardha Stiti Vayu Muktyuttonasana

(DWI-huh-stuh PUH-duh UHR-duh STI-ti VAH-yu muk-to-NAHS-uh-nuh)

Also Known As: Dwi Hasta Pada Ardha Nindra Vayu Muktyuttonasana
Pose Type: standing one-legged balance, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One Hand to Foot Tip Toe Half Standing Wind Relieving Intense Stretch Pose

Eka Hasta Pada Prapada Ardha Stiti Vayu Muktyuttonasana

(EY-kuh HUH-stuh PUH-duh PRUH-puh-duh UHR-duh STI-ti VAH-yu muk-to-NAHS-uh-nuh)

Also Known As: Eka Hasta Pada Prapada Ardha Nindra Vayu Muktyuttonasana
Pose Type: standing one-legged balance, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Both Hands to Foot Tip Toe Half Standing Wind Relieving Intense Stretch Pose

Dwi Hasta Pada Prapada Ardha Stiti Vayu Muktyuttonasana

(DWI-huh-stuh PUH-duh PRUH-puh-duh UHR-duh STI-ti VAH-yu muk-to-NAHS-uh-nuh)

Also Known As: Dwi Hasta Pada Prapada Ardha Nindra Vayu Muktyuttonasana
Pose Type: standing one-legged balance, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE-LEGGED SQUATS: TWISTS—GRABBING ONTO THE FOOT, LEG STRAIGHT IN FRONT

One-Legged Pose Dedicated to Yogi Shankara

Eka Pada Shankarasana

(EY-kuh PUH-duh shunk-uhr-AHS-uh-nuh)

Modification: forehead to the shin
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Revolved One-Legged Pose Dedicated to Yogi Shankara

Parivritta Eka Pada Shankarasana

(puh-ri-VRIT-tuh EY-kuh PUH-duh shunk-uhr-AHS-uh-nuh)

Modification: twisting to the inside of the leg
Pose Type: standing one-legged balance, forward bend, twist, side bend
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved One-Legged Pose Dedicated to Yogi Shankara

Parivritta Eka Pada Shankarasana

(puh-ri-VRIT-tuh EY-kuh PUH-duh shunk-uhr-AHS-uh-nuh)

Modification: twisting to the outside of the leg
Pose Type: standing one-legged balance, forward bend, twist, side bend
Drishti Point: Urdhva or Antara Drishti (up to the sky)

ONE-LEGGED SQUATS: FOOT ON TOP OF THE KNEE

One-Legged Fierce Pose 1

Eka Pada Utkatasana 1

(EY-kuh PUH-duh ut-kuh-TAHS-uh-nuh)

Also Known As: One-Legged Prayer Fierce Pose (Eka Pada Namaskar Utkatasana)
Modification: hands in Anjali Mudra (Hands in Prayer)
Pose Type: standing one-legged balance
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

One-Legged Fierce Pose 2

Eka Pada Utkatasana 2

(EY-kuh PUH-duh ut-kuh-TAHS-uh-nuh)

Also Known As: Both Hands to Ankle One-Legged Fierce Pose (Dwi Hasta Kulpa Eka Pada Utkatasana)
Modification: both hands to the ankle
Pose Type: standing one-legged balance, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

One-Legged Fierce Pose 3

Eka Pada Utkatasana 3

(EY-kuh PUH-duh ut-kuh-TAHS-uh-nuh)

Also Known As: Arms Spread One-Legged Fierce Pose (Prasarita Hasta Eka Pada Utkatasana)
Modification: arms straight out to the sides, forward bend
Pose Type: standing one-legged balance, forward bend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

One-Legged Fierce Pose 4

Eka Pada Utkatasana 4

(EY-kuh PUH-duh ut-kuh-TAHS-uh-nuh)

Also Known As: Hands Bound One-Legged Fierce Pose (Baddha Hasta Eka Pada Utkatasana)
Modification: hands bound behind the back, forward bend
Pose Type: standing one-legged balance, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

ONE-LEGGED SQUATS: HALF LOTUS

Half Bound Lotus Fierce Pose

Ardha Baddha Padma Utkatasana

(UHR-duh BUH-duh PUHD-muh ut-kuh-TAHS-uh-nuh)

Modification: hips low
Pose Type: standing one-legged balance, binding
Drishti Point: Hastagrai or Hastagre (hands)

STANDING: FORWARD BEND—FOOT TO KNEE & FOOT TO ARMPIT

Baby Cradle Pose in Intense Stretch Pose

Hindolasana in Uttanasana

(hin-do-LAHS-uh-nuh in ut-tahn-AHS-uh-nuh)

Also Known As: Baby Cradle Pose in Full Forward Bend
Modification: foot behind the knee of the standing leg
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Standing Bound Yogic Staff Pose

Stiti Baddha Yoganandasana

(STI-ti BUH-duh yo-gah-nuhn-DAHS-uh-nuh)

Also Known As: Nindra Baddha Yoganandasana
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Yogic Staff Intense Stretch Pose

Yogadananda Uttanasana

(yo-gah-nuhn-duh ut-tahn-AHS-uh-nuh)
Also Known As: Yogic Staff Full Forward Bend
Pose Type: standing one-legged balance, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet), Nasagrai or Nasagre (nose)

STANDING HALF FORWARD BEND: LEGS CROSSED

Hand Position of the Pose Dedicated to Garuda in Sideways Half Intense Stretch Pose

Hasta Garudasana in Parshva Ardha Uttanasana

(HUH-stuh guh-ru-DAHS-uh-nuh in PAHRSH-vuh UHR-duh ut-tahn-AHS-uh-nuh)

Also Known As: Hand Position of the Pose Dedicated to Garuda in Sideways Legs Crossed Half Forward Bend

Modification: legs crossed

Pose Type: standing, forward bend, twist

Drishti Point: Hastagrai or Hastagre (hands)

STANDING HALF FORWARD BEND: ONE KNEE BENT

Reverse Prayer Uneven Legs Half Intense Stretch Pose

Viparita Namaskar Vishama Pada Ardha Uttanasana

(vi-puh-REE-tuh nuh-muhs-KAHR VISH-uh-muh PUH-duh UHR-duh ut-tahn-AHS-uh-nuh)

Also Known As: Back of the Body Prayer Uneven Legs Half Intense Stretch Pose (Paschima Namaskara Vishama Pada Ardha Uttanasana), Reverse Prayer Uneven Legs Half Forward Bend

Pose Type: standing, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Bound Uneven Legs Half Intense Stretch Pose

Baddha Vishama Pada Ardha Uttanasana

(BUH-duh VISH-uh-muh PUH-duh UHR-duh ut-tahn-AHS-uh-nuh)

Also Known As: Bound Uneven Legs Half Forward Bend
Pose Type: standing, forward bend, binding
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

STANDING HALF FORWARD BEND: ONE KNEE BENT—TWISTS & BINDING

Revolved Uneven Legs Half Intense Stretch Pose

Parivritta Vishama Pada Ardha Uttanasana

(puh-ri-VRIT-tuh VISH-uh-muh PUH-duh UHR-duh ut-tahn-AHS-uh-nuh)

Also Known As: Revolved Uneven Legs Half Forward Bend
Modification: one hand to the floor, other hand up to the sky; looking down
Pose Type: standing, forward bend, twist
Drishti Point: Hastagrai or Hastagre (hands)

Reverse Prayer Revolved Uneven Legs Half Intense Stretch Pose

Viparita Namaskar Parivritta Vishama Pada Ardha Uttanasana

(vi-puh-REE-tuh nuh-muhs-KAHR puh-ri-VRIT-tuh VISH-uh-muh PUH-duh UHR-duh ut-tahn-AHS-uh-nuh)

Also Known As: Back of the Body Prayer Revolved Uneven Legs Half Intense Stretch Pose (Paschima Namaskara Ardha Parivritta Uttanasana), Reverse Prayer Revolved Uneven Legs Half Forward Bend

Pose Type: standing, forward bend, twist

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Hands Bound Revolved Uneven Legs Half Intense Stretch Pose

Baddha Hasta Parivritta Vishama Pada Ardha Uttanasana

(BUH-duh HUH-stuh puh-ri-VRIT-tuh VISH-uh-muh PUH-duh UHR-duh ut-tahn-AHS-uh-nuh)

Also Known As: Hands Bound Revolved Uneven Legs Half Forward Bend

Pose Type: standing, forward bend, twist

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Bound Revolved Half Intense Stretch Pose

Baddha Parivritta Ardha Uttanasana

(BUH-duh puh-ri-VRIT-tuh UHR-duh ut-tahn-AHS-uh-nuh)

Also Known As: Bound Revolved Half Forward Bend
Pose Type: standing, forward bend, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

STANDING HALF FORWARD BEND: HANDS OFF THE FLOOR

Arms Extended Half Intense Stretch Pose

Utthita Hasta Ardha Uttanasana

(UT-ti-tuh HUH-stuh UHR-duh ut-tahn-AHS-uh-nuh)

Also Known As: Arms Extended Half Forward Bend
Modification: palms pressed together
Pose Type: standing, forward bend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs), Nasagrai or Nasagre (nose)

STANDING HALF FORWARD BEND: HANDS ON THE FLOOR

Half Foot Big Toe Pose

Ardha Padangushtasana

(UHR-duh puhd-ahng-goosh-TAHS-uh-nuh)

Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Sideways Half Intense Stretch Pose

Parshva Ardha Uttanasana

(PAHRSH-vuh UHR-duh ut-tahn-AHS-uh-nuh)

Also Known As: Sideways Half Forward Bend
Modification: fingers interlocked, palms to the floor on the outside edge of the foot
Pose Type: standing, forward bend, side bend, twist
Drishti Point: Hastagrai or Hastagre (hands)

STANDING HALF FORWARD BEND: HANDS ON THE FLOOR—HEELS UP

Tip Toe Half Intense Stretch Pose

Prapada Ardha Uttanasana

(PRUH-puh-duh UHR-duh ut-tahn-AHS-uh-nuh)

Also Known As: Tip Toe Half Forward Bend and Downward Facing Tree Pose Prep. (Adho Mukha Vrikshasana Prep.)

Pose Type: standing, forward bend

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Tip Toe Intense Stretch Pose

Prapada Uttanasana

(PRUH-puh-duh ut-tahn-AHS-uh-nuh)

Also Known As: Tip Toe Full Forward Bend

Modification: arms straight and pointing to the back, both arms on the inside of the legs

1. head up
2. forehead toward the shins

Pose Type: standing, forward bend

Drishti Point: 1. Bhrumadhye or Ajna Chakra (third eye, between the eyebrows) 2. Nasagrai or Nasagre (nose)

STANDING FULL FORWARD BEND: BALLET TOES

Intense Ankle Stretch Intense Stretch Pose 1

Uttana Kulpa Uttanasana 1

(ut-TAHN-uh KUL-puh ut-tahn-AHS-uh-nuh)

Also Known As: Intense Ankle Stretch Forward Bend
Modification: legs together
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Intense Ankle Stretch Intense Stretch Pose 2

Uttana Kulpa Uttanasana 2

(ut-TAHN-uh KUL-puh ut-tahn-AHS-uh-nuh)

Also Known As: Intense Ankle Stretch Forward Bend
Modification: scissor legs
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

STANDING FULL FORWARD BEND: ONE-LEGGED

Extended One Hand to Foot Intense Stretch Pose 1

Utthita Eka Hasta Pada Uttanasana 1

(UT-ti-tuh EY-kuh HUH-stuh PUH-duh ut-tahn-AHS-uh-nuh)

Also Known As: Extended One Hand to Foot Full Forward Bend 1
Modification: hand grabbing the foot on the same side
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Extended One Hand to Foot Intense Stretch Pose 2

Utthita Eka Hasta Pada Uttanasana 2

(UT-ti-tuh EY-kuh HUH-stuh PUH-duh ut-tahn-AHS-uh-nuh)

Also Known As: Extended One Hand to Foot Full Forward Bend 2
Modification: hand grabbing the foot on the opposite side
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

STANDING FULL FORWARD BEND: HANDS TO THE FLOOR & HANDS TO THE BACK OF THE LEGS

Intense Stretch Pose

Uttanasana

(ut-tahn-AHS-uh-nuh)

Also Known As: Full Forward Bend
Modification: palms to the floor, fingers pointing to the back
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Intense Stretch Pose

Uttanasana

(ut-tahn-AHS-uh-nuh)

Also Known As: Full Forward Bend and Standing Turtle Pose (Nindra Kurmasana)
Modification: feet hip width apart, grabbing onto the calves, elbows bent
Pose Type: standing, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Intense Stretch Pose

Uttanasana

(ut-tahn-AHS-uh-nuh)

Also Known As: Full Forward Bend and Locked Elbows Standing Intense Stretch Pose (Baddha Padahastasana)
Modification: grabbing onto triceps behind the calves
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

STANDING FULL FORWARD BEND: GRABBING ONTO THE FEET

Foot Big Toe Pose

Padangushtasana

(puh-ahng-goosh-TAHS-uh-nuh)

Pose Type: standing, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Hand Under Foot Pose

Pada Hastasana

(PUH-duh huh-STAHS-uh-nuh)

Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Intense Stretch Pose

Uttanasana *(ut-tahn-AHS-uh-nuh)*

Also Known As: Full Forward Bend
Modification: arms crossed, grabbing onto the outside edges of the feet, half forward bend
Pose Type: standing, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet) or Nasagrai or Nasagre (nose)

Forward Bend

Uttanasana

(ut-tahn-AHS-uh-nuh)

Also Known As: Full Forward Bend and Hands to Feet Pose Modification (Pada Hastasana)
Modification: feet hip width apart, arms crossed, grabbing onto the outside edges of the feet, elbows moving toward the feet
1. half forward bend
2. full forward bend
Pose Type: standing, forward bend
Drishti Point: 1. Padayoragrai or Padayoragre (toes/feet) 2. Nasagrai or Nasagre (nose)

STANDING FULL FORWARD BEND: UNSUPPORTED

Intense Stretch Pose

Uttanasana

(ut-tahn-AHS-uh-nuh)

Also Known As: Full Forward Bend

Modification: grabbing onto the triceps, swaying from side to side

Pose Type: standing, forward bend, side bend

Drishti Point: Nasagrai or Nasagre (nose)

Intense Stretch Pose

Uttanasana

(ut-tahn-AHS-uh-nuh)

Also Known As: Full Forward Bend and Unsupported Forward Stretch Pose (Niralamba Uttanasana)

Modification: arms straight out to the sides behind the back, forehead to the shins

Pose Type: standing, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Hands Bound Forward Bend Modification

Baddha Hasta Uttanasana

(BUH-duh HUH-stuh ut-tahn-AHS-uh-nuh)

Also Known As: Hands Bound Full Forward Bend and Unsupported Forward Stretch Pose (Niralamba Uttanasana)
Modification: knees bent, chest to the quadriceps
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

STANDING FULL FORWARD BEND: HANDS TO THE FLOOR—ARMS OPEN WIDE

Intense Stretch Pose

Uttanasana

(ut-tahn-AHS-uh-nuh)

Also Known As: Legs Crossed Full Forward Bend
Modification: legs crossed, forehead to the shins, hands to the floor in line with the feet, elbows bent
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Sideways Intense Stretch

Parshva Uttanasana

(PAHRSH-vuh ut-tahn-AHS-uh-nuh)

Also Known As: Sideways Full Forward Bend
Modification: one hand grabbing onto the opposite ankle, fingertips of the other hand to the floor
Pose Type: standing, forward bend, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Sideways Intense Stretch

Parshva Uttanasana

(PAHRSH-vuhut-tahn-AHS-uh-nuh)

Also Known As: Sideways Full Forward Bend and Sideward Forward Stretch (Parshva Bhaga Uttanasana)
Modification: fingers interlocked, palms to the floor on the outside edge of the foot
Pose Type: standing, forward bend, twist
Drishti Point: Nasagrai or Nasagre (nose)

Revolved Intense Stretch Prayer Pose

Parivritta Uttana Anjalyiasana

(puh-ri-VRIT-uh ut-TAHN-uh uhn-juhl-YAHS-uh-nuh)

Also Known As: Revolved Full Forward Bend Prayer Pose
Pose Type: standing, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Intense Stretch

Parivritta Uttanasana

(puh-ri-VRIT-tuh ut-tahn-AHS-uh-nuh)

Also Known As: Revolved Full Forward Bend
Modification: grabbing the outside edge of the feet, feet hip width apart
Pose Type: standing, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Intense Stretch

Parivritta Uttanasana

(puh-ri-VRIT-tuh ut-tahn-AHS-uh-nuh)

Also Known As: Revolved Full Forward Bend
Modification: feet wide; one hand grabbing onto the ankle, back of the other hand to the floor in front of the opposite foot
Pose Type: standing, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Intense Stretch

Parivritta Uttanasana

(puh-ri-VRIT-tuh ut-tahn-AHS-uh-nuh)

Also Known As: Revolved Legs Crossed Full Forward Bend
Modification: feet wide, legs crossed, feet flat on the floor
Pose Type: standing, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Firefly Pose 2 A

Tittibhasana 2 A

(ti-ti-BAHS-uh-nuh)

Also Known As: Intense Stretch Pose Stork Modification (Uttanasana), Standing Bound Arms Head Between Knees Pose (Utthita Baddha Hasta Janu Shirshasana)
Modification: arms wrapped around the legs, fingers interlocked behind the head
Pose Type: standing, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

Firefly Pose 2 B

Tittibhasana 2 B

(ti-ti-BAHS-uh-nuh)

Also Known As: Inverted Firefly Prayer Pose (Viparita Tittibha Anjali Asana)
Modification: hands in Anjali Mudra (Hands in Prayer)
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Complete Firefly Pose 2

Paripurna Tittibhasana 2

(puh-ri-POOR-nuh ti-ti-BAHS-uh-nuh)

Also Known As: Firefly Pose B (Tittibhasana B), Inverted Firefly Pose (Viparita Tittibhasana), Standing Firefly Pose Modification (Utthita Tittibhasana), Bound Firefly Pose, Standing Tortoise Pose (Nindra Kurmasana)

Modification: hands bound

Pose Type: standing, forward bend, binding

Drishti Point: Nasagrai or Nasagre (nose)

Firefly Pose 3 A Prep.

Tittibhasana 3 A Prep.

(ti-ti-BAHS-uh-nuh)

Modification: hands on the ankles, heels up

Pose Type: standing, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Firefly Pose 3 A

Tittibhasana 3 A

(ti-ti-BAHS-uh-nuh)

Also Known As: Firefly Pose C Prep. (Tittibhasana C Prep.)
Modification: hands on the ankles, one foot lifted
Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Firefly Pose 4 A

Tittibhasana 4 A

(ti-ti-BAHS-uh-nuh)

Also Known As: Firefly Pose D (Tittibhasana D), Standing Firefly Pose (Utthita Tittibhasana)
Modification: fingers interlocked in front of the ankles
Pose Type: standing, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

Firefly Pose 4 B

Tittibhasana 4 B

(ti-ti-BAHS-uh-nuh)

Also Known As: Inverted Both Legs Prayer Pose (Viparita DwiPada Anjaliasana)
Modification: hands in Anjali Mudra (Hands in Prayer)
Pose Type: standing, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Complete Firefly Pose 4

Paripurna Tittibhasana 4

(puh-ri-POOR-nuh ti-ti-BAHS-uh-nuh)

Also Known As: Inverted Bound Legs Pose (Viparita DwiPada Baddhasana)
Modification: hands bound
Pose Type: standing, forward bend, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Book Stand Pose

Grantadara

(gruhn-tah-DAH-ruh)

Also Known As: Chikkyasana
Modification: hands to the head, palms facing up, looking to the side
Pose Type: standing, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Revolved Feet Spread Mountain Pose

Parivritta Prasarita Pada Tadasana

(puh-ri-VRIT-tuh pruh-SAH-ri-tuh PUH-duh tuh-DAHS-uh-nuh)

Modification: arms straight out to the sides
Pose Type: standing, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Feet Spread Mountain Pose in Hero Succession Series

Prasarita Pada Tadasana in Vira Parampara

(pruh-SAH-ri-tuh PUH-duh tuh-DAHS-uh-nuh in VEER-uh puh-ruhm-puh-RAH)

Modification: backbend, hands on the calf muscles
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

LEGS WIDE: ARMS UP OVER THE HEAD

Easy Feet Spread Upward Hands Pose

Sukha Prasarita Pada Urdhva Hastasana

(SUK-kuh pruh-SAH-ri-tuh PUH-duh OORD-vuh huh-STAHS-uh-nuh)

Also Known As: Part of Hero Succession Series (Vira Parampara)
Modification: palms together, looking up
Pose Type: standing, mild backbend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Feet Spread Upward Hands Pose

Prasarita Pada Urdhva Hastasana

(pruh-SAH-ri-tuh PUH-duh OORD-vuh huh-STAHS-uh-nuh)

Also Known As: Equal Angle Pose (Sama Konasana)
Modification: legs open extremely wide; palms together, looking straight ahead
Pose Type: standing
Drishti Point: Nasagrai or Nasagre (nose)

Angle Pose

Konasana

(ko-NAHS-uh-nuh)

Also Known As: Triangle Pose (Konasana)
Modification: fingers interlocked, palms together; side bend
Pose Type: standing, side bend
Drishti Point: Urdhva or Antara Drishti (up to the sky), Nasagrai or Nasagre (nose)

Book Stand Pose with Upward Bound Hands

Grantadara Urdhva Baddha Hastasana

(gruhn-tah-DAH-ruh OORD-vuh BUH-duh HUH-STAHS-uh-nuh)

Also Known As: Chikkiasana Urdhva Baddha Hastasana
Modification: fingers interlocked, palms facing up, looking up
Pose Type: standing
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

KALI SQUAT: HEELS DOWN—ARMS UP OVER THE HEAD

Lotus Hand Seal in Upward Hands Pose Dedicated to Goddess Kali

Padma Mudra Urdhva Hasta Kalyasana

(PUHD-muh MU-druh OORD-vuh HUH-stuh kahl-YAHS-uh-nuh)

Modification: heels down; arms extended to the sky, fingertips open
Pose Type: standing
Drishti Point: Nasagrai or Nasagre (nose)

Sideways Hands Bound Pose Dedicated to Goddess Kali

Parshva Baddha Hasta Kalyasana

(PAHRSH-vuh BUH-duh HUH-stuh kahl-YAHS-uh-nuh)

Modification: side bend, fingers interlocked
Pose Type: standing, side bend
Drishti Point: Urdhva or Antara Drishti (up to the sky)

KALI SQUAT: HEELS DOWN—ARMS AT HEAD HEIGHT

Pose Dedicated to Goddess Kali

Kalyasana

(kahl-YAHS-uh-nuh)

Modification: elbows bent, palms facing the sky, heels down
Pose Type: standing
Drishti Point: Nasagrai or Nasagre (nose)

Hand Position of the Pose Dedicated to Garuda in Pose Dedicated to Goddess Kali

Hasta Garudasana in Kalyasana

(HUH-stuh guh-ru-DAHS-uh-nuh in kahl-YAHS-uh-nuh)

Pose Type: standing

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

KALI SQUAT: HEELS DOWN—ARMS BEHIND

Hands Bound Pose Dedicated to Goddess Kali

Baddha Hasta Kalyasana

(BUH-duh HUH-stuh kahl-YAHS-uh-nuh)

Modification: head rolling back, heels down

Pose Type: standing, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bound Pose Dedicated to Goddess Kali

Baddha Kalyasana

(BUH-duh kahl-YAHS-uh-nuh)

Pose Type: standing, binding

Drishti Point: Nasagrai or Nasagre (nose)

KALI SQUAT: HEELS DOWN—ONE ARM SIDE BENDS

Pose Dedicated to Goddess Kali

Kalyasana

(kahl-YAHS-uh-nuh)

Modification: one hand to the forehead, arm to the knee on the same side

Pose Type: standing

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Pose Dedicated to Goddess Kali

Kalyasana
(kahl-YAHS-uh-nuh)
Modification: one arm straight and parallel to the floor, other arm bent, palm facing up
Pose Type: standing
Drishti Point: Hastagrai or Hastagre (hands)

Sideways Pose Dedicated to Goddess Kali

Parshva Kalyasana
(PAHRSH-vuh kahl-YAHS-uh-nuh)
Modification: leaning to one side, one arm out to the side—elbow slightly bent, palm facing up, other hand to the face—palm down
Pose Type: standing, side bend
Drishti Point: Hastagrai or Hastagre (hands)

Sideways Half Bound Pose Dedicated to Goddess Kali

Parshva Ardha Baddha Kalyasana
(PAHRSH-vuh UHR-duh BUH-duh kahl-YAHS-uh-nuh)

Modification: forearm to the knee on the same side
Pose Type: standing, side bend, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Sideways Pose Dedicated to Goddess Kali

Parshva Kalyasana

(PAHRSH-vuh kahl-YAHS-uh-nuh)
Modification: one hand to the floor, other arm up to the sky
Pose Type: standing, side bend
Drishti Point: Hastagrai or Hastagre (hands)

KALI SQUAT: HEELS DOWN—FORWARD BEND

Bound Pose Dedicated to Goddess Kali

Baddha Kalyasana

(BUH-duh kahl-YAHS-uh-nuh)
Modification: forward bend

Pose Type: standing, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

Pose Dedicated to Goddess Kali

Kalyasana

(kahl-YAHS-uh-nuh)

Modification: forward bend, arms straight and parallel to the floor, palms together
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Pose Dedicated to Goddess Kali

Kalyasana

(kahl-YAHS-uh-nuh)

Modification: forward bend, arms crossed, hands to the floor
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

KALI SQUAT: HEELS DOWN—FORWARD BEND & FORWARD BEND TWISTS

Revolved Half Bound Pose Dedicated to Goddess Kali

Parivritta Ardha Baddha Kalyasana

(puh-ri-VRIT-tuh UHR-duh BUH-duh kahl-YAHS-uh-nuh)

Modification: arm under the opposite leg
Pose Type: standing, forward bend, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Pose Dedicated to Goddess Kali

Parivritta Kalyasana

(puh-ri-VRIT-tuh kahl-YAHS-uh-nuh)

Modification: hands to the knees
Pose Type: standing, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

KALI SQUAT: HEELS UP—ARM POSITIONS

Tip Toe Pose Dedicated to Goddess Kali

Prapada Kalyasana

(PRUH-puh-duh kahl-YAHS-uh-nuh)

Modification: head down, elbows bent, back of the hands on the knees
Pose Type: standing
Drishti Point: Nasagrai or Nasagre (nose)

Lotus Hand Seal in Upward Hands Tip Toe Pose Dedicated to Goddess Kali

Padma Mudra in Urdhva Hasta Prapada Kalyasana

(PUHD-muh MU-druh in OORD-vuh HUH-stuh PRUH-puh-duh kahl-YAHS-uh-nuh)

Pose Type: standing
Drishti Point: Nasagrai or Nasagre (nose)

Tip Toe Pose Dedicated to Goddess Kali

Prapada Kalyasana

(PRUH-puh-duh kahl-YAHS-uh-nuh)

Modification: one hand behind the back in reverse prayer, one elbow on the knee
Pose Type: standing
Drishti Point: Hastagrai or Hastagre (hands)

Reverse Prayer Tip Toe Pose Dedicated to Goddess Kali

Viparita Namaskar Prapada Kalyasana

(vi-puh-REE-tuh nuh-muhs-KAHR PRUH-puh-duh kahl-YAHS-uh-nuh)

Also Known As: Back of the Body Prayer Tip Toe Pose Dedicated to Goddess Kali (Paschima Namaskar Prapada Kalyasana)
Pose Type: standing
Drishti Point: Nasagrai or Nasagre (nose)

KALI SQUAT: HEELS UP—SIDE BENDS

Sideways Tip Toe Pose Dedicated to Goddess Kali

Parshva Prapada Kalyasana

(PAHRSH-vuh PRUH-puh-duh kahl-YAHS-uh-nuh)

Modification: one palm to the forehead, fingertips of the other hand to the floor
Pose Type: standing, side bend
Drishti Point: Urdhva or Antara Drishti (up to the sky)

KALI SQUAT: ONE HEEL UP, ONE HEEL DOWN

Sideways Uneven Tip Toe Pose Dedicated to Goddess Kali

Parshva Vishama Prapada Kalyasana

(PAHRSH-vuh VISH-uh-muh PRUH-puh-duh kahl-YAHS-uh-nuh)

Modification: side bend
Pose Type: standing, side bend
Dristhi Point: Padhayoragrai or Padayoragre (toes/feet)

KALI SQUAT: HEELS UP—FORWARD BENDS

Tip Toe Pose Dedicated to Goddess Kali

Prapada Kalyasana

(PRUH-puh-duh kahl-YAHS-uh-nuh)

Modification: forward bend, arms crossed, hands to the floor, fingertips pointing toward each other
Pose Type: standing, forward bend
Drishti Point: Hastagrai or Hastagre (hands)

Tip Toe Pose Dedicated to Goddess Kali

Prapada Kalyasana

(PRUH-puh-duh kahl-YAHS-uh-nuh)

Modification: forward bend, arms crossed, hands to the floor, fingertips pointing away from each other
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Tip Toe Pose Dedicated to Goddess Kali

Prapada Kalyasana

(PRUH-puh-duh kahl-YAHS-uh-nuh)

Modification: forward bend, hands to the floor, fingertips to the floor facing away from each other
Pose Type: standing, forward bend
Drishti Point: Hastagrai or Hastagre (hands)

Tip Toe Pose Dedicated to Goddess Kali

Prapada Kalyasana

(PRUH-puh-duh kahl-YAHS-uh-nuh)

Modification: forward bend, arms open wide
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

KALI SQUAT: HEELS UP—BINDING

Extended Side Revolved Hands Bound Half Pose Dedicated to Goddess Kali

Utthita Parshva Parivritta Baddha Hasta Ardha Kalyasana

(UT-ti-tuh PAHRSH-vuh puh-ri-VRIT-tuh BUH-duh HUH-stuh UHR-duh kahl-YAHS-uh-nuh)

Pose Type: standing, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Hands Bound Pose Dedicated to Goddess Kali

Baddha Hasta Kalyasana

(BUH-duh HUH-stuh kahl-YAHS-uh-nuh)

Modification: hands bound under the leg, heels down
Pose Type: standing, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

KALI SQUAT: HEELS UP—BINDING

Tip Toe Hands Bound Pose Dedicated to Goddess Kali

Prapada Baddha Hasta Kalyasana

(PRUH-puh-duh kahl-YAHS-uh-nuh)

Modification: hands bound under the leg
Pose Type: standing, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

Tip Toe Half Bound Pose Dedicated to Goddess Kali

Prapada Ardha Baddha Kalyasana

(PRUH-puh-duh UHR-duh BUH-duh kahl-YAHS-uh-nuh)

Modification: one arm bound under the leg, palm to the rib cage, other forearm to the floor
Pose Type: standing, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose), Angushtamadhye or Angushta Ma Dyai (thumbs)

LEGS WIDE: HALF FORWARD BEND

Half Feet Spread Out Intense Stretch Pose

Ardha Prasarita Padottanasana

(UHR-duh pruh-SAH-ri-tuh puhd-o-tahn-AHS-uh-nuh)

Also Known As: Feet Spread Out Half Forward Bend
Modification: legs straight, hands on the shins
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

LEGS WIDE: HALF FORWARD BEND, HANDS TO THE FLOOR—HEELS DOWN & HEELS UP

Half Feet Spread Out Intense Stretch Pose

Ardha Prasarita Padottanasana

(UHR-duh pruh-SAH-ri-tuh puhd-o-tahn-AHS-uh-nuh)

Also Known As: Feet Spread Out Half Forward Bend
Modification: 1. toes pointing straight ahead, palms flat on the floor 2. toes pointing slightly outward,

back of the hands to the floor, fingertips pointing toward each other
Pose Type: standing, forward bend
Drishti Point: Hastagrai or Hastagre (hands)

Tip Toe Half Feet Spread Out Intense Stretch Pose

Prapada Ardha Prasarita Padottanasana

(PRUH-puh-duh UHR-duh pruh-SAH-ri-tuh puhd-o-tahn-AHS-uh-nuh)
Also Known As: Tip Toe Feet Spread Out Half Forward Bend
Modification: toes pointing straight ahead, heels up, palms flat on the floor
Pose Type: standing, forward bend
Drishti Point: Hastagrai or Hastagre (hands)

LEGS WIDE: FULL FORWARD BEND—HANDS TO THE FLOOR

Feet Spread Out Intense Stretch Pose 1

Prasarita Padottanasana 1

(pruh-SAH-ri-tuh puhd-o-tahn-AHS-uh-nuh)

Also Known As: Feet Spread Out Intense Stretch Pose A (Prasarita Padottanasana A), Feet Spread Out Full Forward Bend A

Modification: palms to the floor, elbows bent at 90 degrees

Pose Type: standing, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Feet Spread Out Intense Stretch Pose 1

Prasarita Padottanasana 1

(pruh-SAH-ri-tuh puhd-o-tahn-AHS-uh-nuh)

Also Known As: Feet Spread Out Intense Stretch Pose A (Prasarita Padottanasana A), Feet Spread Out Full Forward Bend A

Modification: arms straight, palms to the floor, fingertips pointing away from the head

Pose Type: standing, forward bend

Drishti Point: Hastagrai or Hastagre (hands)

Feet Spread Out Intense Stretch Pose 4

Prasarita Padottanasana 4

(pruh-SAH-ri-tuh puhd-o-tahn-AHS-uh-nuh)

Also Known As: Feet Spread Out Intense Stretch Pose D (Prasarita Padottanasana D), Hands to Big Toes Feet Spread Out Full Forward Bend (Hasta Padangushta Prasarita Padottanasana)

Pose Type: standing, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

LEGS WIDE: FULL FORWARD BEND—ARMS BEHIND THE BACK

Feet Spread Out Intense Stretch Pose 2

Prasarita Padottanasana 2

(pruh-SAH-ri-tuh puhd-o-tahn-AHS-uh-nuh)

Also Known As: Feet Spread Out Intense Stretch Pose B (Prasarita Padottanasana B), Feet Spread Out Full Forward Bend

Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Feet Spread Out Intense Stretch Pose 5

Prasarita Padottanasana 5

(pruh-SAH-ri-tuh puhd-o-tahn-AHS-uh-nuh)

Also Known As: Reverse Prayer Feet Spread Out Full Forward Bend (Viparita Namaskar Prasarita Padottanasana)
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Feet Spread Out Intense Stretch Pose 3

Prasarita Padottanasana 3

(pruh-SAH-ri-tuh puhd-o-tahn-AHS-uh-nuh)

Also Known As: Feet Spread Out Intense Stretch Pose C (Prasarita Padottanasana C), Feet Spread Out Full Forward Bend, Hands Bound Wide Legs Forward Fold (Baddha Hasta Prasarita Padottanasana)

Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

LEGS WIDE: FULL FORWARD BEND—ARMS OPEN WIDE

Feet Spread Out Intense Stretch Pose 6

Prasarita Padottanasana 6

(pruh-SAH-ri-tuh puhd-o-tahn-AHS-uh-nuh)

Also Known As: Feet Spread Out Full Forward Bend 6
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Feet Spread Out Intense Stretch Pose 7

Prasarita Padottanasana 7

(pruh-SAH-ri-tuh puhd-o-tahn-AHS-uh-nuh)

Also Known As: Feet Spread Out Full Forward Bend 7
Pose Type: standing, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

LEGS WIDE: FULL FORWARD BEND—TWISTS

Revolved Half Feet Spread Out Intense Stretch Pose

Parivritta Ardha Prasarita Padottanasana

(puh-ri-VRIT-tuh UHR-duh pruh-SAH-ri-tuh puhd-o-tahn-AHS-uh-nuh)

Also Known As: Revolved Feet Spread Out Half Forward Bend
Modification: palm to the floor
Pose Type: standing, forward bend, twist
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Revolved Half Feet Spread Out Intense Stretch Pose

Parivritta Ardha Prasarita Padottanasana

(puh-ri-VRIT-tuh UHR-duh pruh-SAH-ri-tuh puhd-o-tahn-AHS-uh-nuh)

Also Known As: Revolved Feet Spread Out Half Forward Bend
Modification: forearm to the floor

Pose Type: standing, forward bend, twist
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Revolved Paying Homage Feet Spread Out Intense Stretch Pose

Parivritta Namasya Prasarita Padottanasana

(puh-ri-VRIT-tuh nuh-MUHS-ya pruh-SAH-ri-tuh puhd-o-tahn-AHS-uh-nuh)

Also Known As: Revolved Paying Homage Feet Spread Out Forward Bend
Modification: legs crossed, hand to the back foot, other arm extended to the sky
Pose Type: standing, forward bend, twist
Drishti Point: Hastagrai or Hastagre (hands)

Bound Revolved Feet Spread Out Intense Stretch Pose

Baddha Parivritta Prasarita Padottanasana

(BUH-duh puh-ri-VRIT-tuh pruh-SAH-ri-tuh puhd-o-tahn-AHS-uh-nuh)

Also Known As: Bound Revolved Feet Spread Out Full Forward Bend
Modification: arm straight, looking up
Pose Type: standing, forward bend, twist, binding

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Hands Bound Revolved Feet Spread Out Intense Stretch Pose

Baddha Hasta Parivritta Prasarita Padottanasana

(BUH-duh HUH-stuh puh-ri-VRIT-tuh pruh-SAH-ri-tuh puhd-o-tahn-AHS-uh-nuh)

Also Known As: Hands Bound Revolved Feet Spread Out Full Forward Bend
Pose Type: standing, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Paying Homage Feet Spread Out Intense Stretch Pose

Parivritta Namasya Prasarita Padottanasana

(puh-ri-VRIT-tuh nuh-MUHS-ya pruh-SAH-ri-tuh puhd-o-tahn-AHS-uh-nuh)

Modification: outside edges of the feet to the floor, legs crossed, forward bend, both hands on the back foot
Pose Type: standing, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Feet Spread Out Intense Stretch Pose

Parivritta Prasarita Padottanasana

(puh-ri-VRIT-tuh pruh-SAH-ri-tuh puhd-o-tahn-AHS-uh-nuh)

Also Known As: Revolved Feet Spread Out Full Forward Bend
Modification: grabbing onto the knee and the foot
Pose Type: standing, forward bend, side bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Feet Spread Out Intense Stretch Pose

Parivritta Prasarita Padottanasana

(puh-ri-VRIT-tuh pruh-SAH-ri-tuh puhd-o-tahn-AHS-uh-nuh)

Also Known As: Revolved Feet Spread Out Full Forward Bend
Modification: grabbing onto the ankles
Pose Type: standing, forward bend, side bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved to the Side Feet Spread Out Intense Stretch Pose

Parivritta Parshva Prasarita Padottanasana

(puh-ri-VRIT-tuh PAHRSH-vuh pruh-SAH-ri-tuh puhd-o-tahn-AHS-uh-nuh)

Also Known As: Revolved to the Side Feet Spread Out Full Forward Bend)
Modification: grabbing onto the foot with both hands
Pose Type: standing, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Downward Facing Dog Pose

Adho Mukha Shvanasana

(uh-DO MUK-uh shwa-NAHS-uh-nuh)

Pose Type: standing, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

How to Perform the Pose:

1. Start by lying on your stomach with your whole body flat on the floor. Place your palms on the floor at the bottom of your ribs with fingertips facing forward and elbows tucked in. Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Exhale as you engage your core and lift your torso off the floor, and straighten your arms, coming into a distinct upside-down V shape with your sitting bones up to the sky. Your feet should be in line with your sitting bones and your hands should be shoulder width apart.
3. Try to keep your legs as straight as possible while pressing the heels to the floor. You should feel a deep stretch in the back of your thighs (the hamstrings) and your calf muscles.
4. Inhale as you lengthen your spine, keeping your neck long and your shoulder blades down your back. Try not to round your lower back, keeping it long. Exhale as you press through your chest, moving it toward your thighs. You should feel a deep stretch in the back of your shoulders.
5. You can either keep your head off the floor (Pose #1) or bring your forehead to the floor (Pose #2) if your shoulders are open.
6. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch.
7. To come out of the pose, inhale as you rock into Plank Pose, and exhale as you bend your elbows into Four Limbed Staff Pose (*Chaturanga Dandasana*) and lower all the way down to the floor into the starting position.

Modification:

1. head off the floor
2. forehead to the floor

adho = downward

mukha = face

shvana = dog

1.

2.

DOWNWARD DOG: FOREARMS AND HEAD ON THE FLOOR

Downward Facing Pose Dedicated to Makara on the Head

Adho Mukha Shirsha Makarasana

(uh-DO MUK-uh SHEER-shuh muh-kuh-RAHS-uh-nuh)

Pose Type: forward bend, inversion, core

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

DOWNWARD DOG: KNEES BENT

Downward Facing Dog Pose

Adho Mukha Shvanasana

(uh-DO MUK-uh shwa-NAHS-uh-nuh)

Modification: knees bent, heels up

Pose Type: standing, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Downward Facing Dog Pose

Adho Mukha Shvanasana

(uh-DO MUK-uh shwa-NAHS-uh-nuh)

Modification: knees bent, heels up, spine in Cat Tilt, forehead toward the knees
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

DOWNWARD DOG: WIDE-LEGGED

Feet Spread Downward Facing Dog Pose

Prasarita Pada Adho Mukha Shvanasana

(pruh-SAH-ri-tuh PUH-duh uh-DO MUK-uh shwa-NAHS-uh-nuh)

Modification: heels down, palms down
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Tip Toe Feet Spread Downward Facing Dog Pose

Prapada Prasarita Pada Adho Mukha Shvanasana

(PRUH-puh-duh pruh-SAH-ri-tuh PUH-duh uh-DO MUK-uh shwa-NAHS-uh-nuh)

Modification: one palm on top of the other, fingertips to the floor, head above the arms
Pose Type: standing, forward bend
Drishti Point: Hastagrai or Hastagre (hands), Nasagrai or Nasagre (nose)

DOWNWARD DOG: ONE-LEGGED—KNEES TOGETHER

One-Legged Downward Facing Dog Pose

Eka Pada Adho Mukha Shvanasana

(EY-kuh PUH-duh uh-DO MUK-uh shwa-NAHS-uh-nuh)

Modification: back leg bent, knees together
Pose Type: standing, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Leg Position of the Half Cow Face Pose in Downward Facing Dog Pose

Pada Ardha Gomukhasana in Adho Mukha Shvanasana

(PUH-duh URH-duh go-muk-AHS-uh-nuh in uh-DO MUK-uh shwa-NAHS-uh-nuh)

Also Known As: Leg Position of the One-Legged Cow Face Pose in Downward Facing Dog Pose (Eka Pada Gomukhasana in Adho Mukha Shvanasana)

Pose Type: standing, forward bend

Drishti Point: Padayoragrai or Padayoragre (toes/feet)

DOWNWARD DOG: ONE-ARMED

Revolved Downward Facing Dog Pose

Parivritta Adho Mukha Shvanasana

(puh-ri-VRIT-tuh uh-DO MUK-uh shwa-NAHS-uh-nuh)

Pose Type: standing, forward bend, twist

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Hand to Knee One-Legged Downward Facing Dog Pose

Hasta Janu Eka Pada Adho Mukha Shvanasana

(HUH-stuh JAH-nu EY-kuh PUH-duh uh-DO MUK-uh shwa-NAHS-uh-nuh)

Modification: hand grabbing onto the opposite knee
Pose Type: standing one-legged balance, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Hand to Ankle One-Legged Downward Facing Dog Pose 1

Hasta Kulpa Eka Pada Adho Mukha Shvanasana 1

(HUH-stuh KUL-puh EY-kuh PUH-duh uh-DO MUK-uh shwa-NAHS-uh-nuh)

Modification: grabbing onto the ankle on the same side; back leg bent, knees together
Pose Type: standing one-legged balance, forward bend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Hand to Ankle One-Legged Downward Facing Dog Pose 2

Hasta Kulpa Eka Pada Adho Mukha Shvanasana 2

(HUH-stuh KUL-puh EY-kuh PUH-duh uh-DO MUK-uh shwa-NAHS-uh-nuh)

Modification: grabbing onto the ankle on the opposite side; back leg bent, knees together
Pose Type: standing one-legged balance, forward bend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

DOWNWARD DOG: ONE-LEGGED

One-Legged Downward Facing Dog Pose

Eka Pada Adho Mukha Shvanasana

(EY-kuh PUH-duh uh-DO MUK-uh shwa-NAHS-uh-nuh)

Modification: knee bent
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

One Leg to the Side Downward Facing Dog Pose

Parshva Eka Pada Adho Mukha Shvanasana

(PAHRSH-vuh EY-kuh PUH-duh uh-DO MUK-uh shwa-NAHS-uh-nuh)

Pose Type: standing, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

One-Legged Downward Facing Dog Pose

Eka Pada Adho Mukha Shvanasana

(EY-kuh PUH-duh uh-DO MUK-uh shwa-NAHS-uh-nuh)

Also Known As: One-Legged Downward Facing Dog Shoulder Press

Modification: bottom knee bent; elbows bent, fingertips to the floor

Pose Type: standing, forward bend

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

One-Legged Downward Facing Dog Pose

Eka Pada Adho Mukha Shvanasana

(EY-kuh PUH-duh uh-DO MUK-uh shwa-NAHS-uh-nuh)

Also Known As: One Leg Raised Up Downward Facing Dog Pose (Utthita Eka Pada Adho Mukha Shvanasana)

Modification: back leg straight and extended up to the sky
Pose Type: standing, forward bend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

DOWNWARD DOG: TWISTS

Uneven Legs Revolved Downward Facing Dog Pose 1

Vishama Pada Parivritta Adho Mukha Shvanasana 1

(VISH-uh-muh PUH-duh puh-ri-VRIT-tuh uh-DO MUK-uh shwa-NAHS-uh-nuh)
Modification: one knee bent, foot crossed over
Pose Type: standing, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Uneven Legs Revolved Downward Facing Dog Pose 2

Vishama Pada Parivritta Adho Mukha Shvanasana 2

(VISH-uh-muh PUH-duh puh-ri-VRIT-tuh uh-DO MUK-uh shwa-NAHS-uh-nuh)
Modification: both legs straight, one leg crossed over

Pose Type: standing, forward bend, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

[INTENSE SIDE STRETCH: STRAIGHT SPINE TO BACKBEND]

Upward Bound Hands Pose in Hero Succession Series

Urdhva Baddha Hastasana in Vira Parampara

(OORD-vuh BUH-duh huh-STAHS-uh-nuh in VEER-uh puh-ruhm-puh-RAH)
Modification: arms up to the sky, fingers interlocked, spine straight
Pose Type: standing
Drishti Point: Nasagrai or Nasagre (nose)

Hands Bound Pose in Hero Succession Series

Baddha Hastasana in Vira Parampara

(BUH-duh huh-STAHS-uh-nuh in VEER-uh puh-ruhm-puh-RAH)
Modification: grabbing onto the triceps behind the back
Pose Type: standing, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reverse Prayer Pose in Hero Succession Series

Viparita Namaskarasana in Vira Parampara

(vi-puh-REET-tuh nuh-muhs-kahr-AHS-uh-nuh in VEER-uh puh-ruhm-puh-RAH)

Also Known As: Back of the Body Prayer in Hero Succession Series (Paschima Namaskara in Vira Parampara)

Pose Type: standing, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Upward Bound Hands Pose in Hero Succession Series

Urdhva Baddha Hastasana in Vira Parampara

(OORD-vuh BUH-duh huh-STAHS-uh-nuh in VEER-uh puh-ruhm-puh-RAH)

Modification: deep backbend

Pose Type: standing, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Angusthamadhye or Angustha Ma Dyai (thumbs)

INTENSE SIDE STRETCH: HALF FORWARD BEND

Intense Side Stretch Pose Prep.

Parshvottanasana Prep.

(pahrsh-vo-tahn-AHS-uh-nuh)

Modification: arms straight out in front, palms pressed together
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Intense Side Stretch Pose Prep.

Parshvottanasana Prep.

(pahrsh-vo-tahn-AHS-uh-nuh)

Modification: one hand to the lower back, one arm extended out in front and parallel to the floor
Pose Type: standing, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Hastagrai or Hastagre (hands)

Intense Side Stretch Pose Prep.

Parshvottanasana Prep.

(pahrsh-vo-tahn-AHS-uh-nuh)

Modification: grabbing onto the triceps behind the back
Pose Type: standing, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Intense Side Stretch Pose Prep.

Parshvottanasana Prep.

(pahrsh-vo-tahn-AHS-uh-nuh)

Modification: arms open to the sides
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

INTENSE SIDE STRETCH: HALF FORWARD BEND—GRABBING ONTO ONE LEG

Intense Side Stretch Pose Prep.

Parshvottanasana Prep.

(pahrsh-vo-tahn-AHS-uh-nuh)

Modification: both hands on the shin on the front leg
Pose Type: standing, forward bend
Drishti Point: Padhayoragrai or Padayoragre (toes/feet)

Extended Both Hands to Foot Intense Side Stretch Pose

Utthita Dwi Hasta Pada Parshvottanasana

(UT-ti-tuh DWI-huh-stuh PUH-duh pahrsh-vo-tahn-AHS-uh-nuh)

Modification: toes of the front foot flexed in and lifted off the floor
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Intense Side Stretch Pose

Parshvottanasana

(pahrsh-vo-tahn-AHS-uh-nuh)

Modification: both hands grabbing onto the calf of the back leg
Pose Type: standing, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

INTENSE SIDE STRETCH: FULL FORWARD BEND—ARMS IN FRONT AND ARMS POINTING TO THE BACK

Intense Side Stretch Pose Prep.

Parshvottanasana Prep.

(pahrsh-vo-tahn-AHS-uh-nuh)

Modification: palms to the floor on either side of the front foot
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Intense Side Stretch Pose Prep.

Parshvottanasana Prep.

(pahrsh-vo-tahn-AHS-uh-nuh)

Also Known As: Hero Succession Series (Vira Parampara)
Modification: arms reaching to the back, fingertips to the floor
1. chin to the shin
2. forehead to the shin

Pose Type: standing, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet), Nasagrai or Nasagre (nose)

Intense Side Stretch Pose Prep.

Parshvottanasana Prep.

(pahrsh-vo-tahn-AHS-uh-nuh)

Modification: hands in Anjali Mudra (Hands in Prayer), arms wrapped around the front leg
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Revolved Intense Side Stretch Pose

Parivritta Parshvottanasana

(puh-ri-VRIT-tuh pahrsh-vo-tahn-AHS-uh-nuh)

Modification: hands in Anjali Mudra (Hands in Prayer), arms wrapped around the front leg, twist
Pose Type: standing, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Intense Side Stretch Pose

Parshvottanasana

(pahrsh-vo-tahn-AHS-uh-nuh)

Also Known As: Reverse Prayer Intense Side Stretch Pose (Viparita Namaskar Parsvottanasana), Back of the Body Prayer Intense Side Stretch Pose (Paschima Namaskara Parshvottanasana)

Pose Type: standing, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Hands Bound Intense Side Stretch Pose

Baddha Hasta Parshvottanasana

(BUH-duh HUH-stuh pahrsh-vo-tahn-AHS-uh-nuh)

Modification: both legs straight

Pose Type: standing, forward bend

Drishti Point: Padayoragrai or Padayoragre (toes/feet), Nasagrai or Nasagre (nose)

INTENSE SIDE STRETCH: FULL FORWARD BEND—ONE ARM IN FRONT—ONE ARM BEHIND

Uneven Legs Tip Toe Intense Side Stretch Pose

Vishama Pada Prapada Parshvottanasana

(VISH-uh-muh PUH-duh PRUH-puh-duh pahrsh-vo-tahn-AHS-uh-nuh)

Modification: 1. one arm stretched out to the back and up to the sky; other arm stretched out to the front, fingertips to the floor 2. both arms stretched out in front, fingertips to the floor

Pose Type: standing, forward bend

Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Intense Side Stretch Pose Prep.

Parshvottanasana Prep.

(pahrsh-vo-tahn-AHS-uh-nuh)

Modification: opposite arm wrapped around the front calf, chin to the shin
Pose Type: standing, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

TRIANGLE POSE

Extended Side Triangle Pose

Utthita Parshva Trikonasana

(UT-ti-tuh PAHRSH-vuh tri-ko-NAHS-uh-nuh)

Modification: top arm parallel to the floor
Pose Type: standing, forward bend, side bend
Drishti Point: Hastagrai or Hastagre (hands)

Extended Triangle Pose

Utthita Trikonasana

(UT-ti-tuh tri-ko-NAHS-uh-nuh)

Pose Type: standing, forward bend, side bend

Drishti Point: Angusthamadhye or Angustha Ma Dyai (thumbs)

How to Perform the Pose:

1. Begin by standing in Mountain Pose (*Tadasana*). Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Inhale and step your feet about elbow distance apart with toes facing forward and feet parallel to each other. Expand your chest and hold your arms straight out to the sides, parallel to the floor.
3. Keep your legs strong and straight by engaging your quadriceps and pulling the kneecaps up. Turn your left foot 90 degrees to the left. Turn your right foot as close to 45 degrees to the left as possible.
4. On your next exhale, reach over to the left as far as you can with good form and drop your left hand toward the left shin (or left foot or to the floor either on the inside or the outside of the left foot).
5. Reach your right arm up to the sky and look at your right thumb (the *drishti* point). Make sure that your chest is not collapsing down toward the floor by lengthening both arms, grabbing onto the big toe of your left foot with pointer finger and middle finger and thumb locked on top, and leaning back far enough so that your shoulders are stacked one on top of the other.
6. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch. Exhale as you release the pose. Inhale as you press strongly into both feet to come up.
7. Exhale, come back to Mountain Pose (*Tadasana*) and repeat on the other side.

Modification:

1. front view
2. back view

utittha = extended

tri = three

kona = angle

1.

2.

Half Bound Extended Triangle Pose

Ardha Baddha Utthita Trikonasana

(UHR-duh BUH-duh UT-ti-tuh tri-ko-NAHS-uh-nuh)

Pose Type: standing, forward bend, side bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

Bound Extended Triangle Pose

Baddha Utthita Trikonasana

(BUH-duh UT-ti-tuh tri-ko-NAHS-uh-nuh)

Modification: fingers interlocked on the inside of the thigh
Pose Type: standing, forward bend, side bend, binding
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Bound Extended Triangle Pose

Baddha Utthita Trikonasana

(BUH-duh UT-ti-tuh tri-ko-NAHS-uh-nuh)

Pose Type: standing, forward bend, side bend, binding, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Sideways Extended Triangle Pose

Parivritta Parshva Utthita Trikonasana

(puh-ri-VRIT-tuh PAHRSH-vuh UT-ti-tuh tri-ko-NAHS-uh-nuh)

Modification: grabbing onto both shins
Pose Type: standing, forward bend, side bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

TRIANGLE POSE: REVOLVED & BINDING

Revolved Triangle Pose

Parivritta Trikonasana

(puh-ri-VRIT-tuh tri-ko-NAHS-uh-nuh)

Also Known As: Revolved Intense Side Stretch Pose (Parivritta Parshvottanasana)
Modification: hands in Anjali Mudra (Hands in Prayer)
Pose Type: standing, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Triangle Pose

Parivritta Trikonasana

(puh-ri-VRIT-tuh tri-ko-NAHS-uh-nuh)
Pose Type: standing, forward bend, twist
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Revolved Bound Triangle Pose

Parivritta Baddha Trikonasana

(puh-ri-VRIT-tuh BUH-duh tri-ko-NAHS-uh-nuh)
Also Known As: Bound Leg Twisted Angle Pose (Baddha Pada Parivritta Konasana)
Pose Type: standing, forward bend, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Extended Side Angle Pose

Utthita Parshva Konasana

(UT-ti-tuh pahrsh-vuh-ko-NAHS-uh-nuh)

Pose Type: standing, side bend

Drishti Point: Hastagrai or Hastagrahe (hands)

How to Perform the Pose:

1. Begin by standing in Mountain Pose (*Tadasana*). Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Inhale and step your feet about wrist-distance apart with toes facing forward and feet parallel to each other. Expand your chest and hold your arms straight out to the sides parallel to the floor.
3. Keep your legs strong and straight by engaging your quadriceps and pulling the kneecaps up. Turn your left foot 90 degrees to the left. Turn your right foot 45 degrees to the left as much as possible.
4. Exhale and bend your left knee until your left thigh is parallel to the floor, coming into Warrior 2 Pose (Virabhadrasana 2).
5. On the exhale, bend to the left and drop your left elbow to the left thigh. Reach your right arm over your head and rotate your chest to the side until your right shoulder is on top of your left shoulder.
6. You can experiment with bringing your left palm to the floor on the inside of your left thigh or the outside of your thigh.
7. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch. Exhale as you release the pose. Inhale as you press strongly into both feet to come up.
8. Exhale, come back to Mountain Pose (*Tadasana*) and repeat on the right side.

Modification:

1. arm to the inside of the thigh
2. elbow on the thigh
3. arm to the outside of the thigh

utthita = extended, rising, risen

parsva = side

kona = angle

1.

2.

3.

Warrior 2

Virabhadrasana 2

(veer-uh-buh-DRAHS-uh-nuh)

Also Known As: Half Side Angle Pose (Ardha Parshva Konasana)
Pose Type: standing
Drishti Point: Hastagrai or Hastagre (hands)

SIDE ANGLE POSE

Extended Side Angle Pose Prep.

Utthita Parshva Konasana Prep.

(UT-ti-tuh pahrsh-vuh-ko-NAHS-uh-nuh)

Modification: back knee on the floor, palm to the floor on the inside of the front leg
Pose Type: standing, side bend
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Both Arms Extended Side Angle Pose Prep.

Dwi Hasta Utthita Parshva Konasana Prep.

(DWI-huh-stuh UT-ti-tuh pahrsh-vuh-ko-NAHS-uh-nuh)

Modification: back knee on the floor
Pose Type: standing, side bend
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Both Arms Extended Side Angle Pose

Dwi Hasta Utthita Parshva Konasana

(DWI-huh-stuh UT-ti-tuh pahrsh-vuh-ko-NAHS-uh-nuh)

Modification: back knee off the floor
Pose Type: standing, side bend
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Tip Toe Extended Side Angle Pose Prep.

Prapada Utthita Parshva Konasana Prep.

(PRUH-puh-duh UT-ti-tuh pahrsh-vuh-ko-NAHS-uh-nuh)

Modification: front heel lifted, fingertips to the floor on the inside of the leg, other arm resting on the side of the torso

Pose Type: standing, side bend

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Tip Toe Both Arms Extended Side Angle Pose

Prapada Dwi Hasta Utthita Parshva Konasana

(PRUH-puh-duh DWI-huh-stuh UT-ti-tuh pahrsh-vuh-ko-NAHS-uh-nuh)

Modification: back knee off the floor

Pose Type: standing, side bend

Drishti Point: Urdhva or Antara Drishti (up to the sky)

SIDE ANGLE POSE: BINDING

Half Bound Extended Side Angle Pose

Ardha Baddha Utthita Parshva Konasana

(UHR-duh BUH-duh UT-ti-tuh pahrsh-vuh-ko-NAHS-uh-nuh)

Modification: hand to the floor on the inside of the front leg
Pose Type: standing, side bend, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Bound Extended Side Angle Pose

Baddha Utthita Parshva Konasana

(BUH-duh UT-ti-tuh pahrsh-vuh-ko-NAHS-uh-nuh)

Modification: fingers interlocked on the inside of the front thigh
Pose Type: standing, side bend, binding
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Bound Extended Side Angle Pose

Baddha Utthita Parshva Konasana

(BUH-duh UT-ti-tuh pahrsh-vuh-ko-NAHS-uh-nuh)

Also Known As: Bound Arms Side Angle Pose (Baddha Hasta Parshva Konasana)

Pose Type: standing, side bend, binding, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Pose Dedicated to Vishvamitra Prep.

Vishvamitrasana Prep.

(VISH-vah-mi-TRAHS-uh-nuh)
Modification: knee bent wrapped around the tricep, grabbing onto the foot
Pose Type: standing, arm balance
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Pose Dedicated to Vishvamitra Prep.

Vishvamitrasana Prep.

(vish-vah-mi-TRAHS-uh-nuh)
Modification: knee bent, shin to the tricep
Pose Type: standing, arm balance
Drishti Point: Hastagrai or Hastagre (hands), Padayoragrai or Padayoragre (toes/feet)

SIDE ANGLE POSE: REVOLVED

Revolved Side Angle Pose Prep.

Parivritta Parshva Konasana Prep.

(puh-ri-VRIT-tuh pahrsh-vuh-ko-NAHS-uh-nuh)

Modification: one arm under the leg, hands in Anjali Mudra (Hands in Prayer),
1. back knee on the floor, looking up to the sky 2. back knee off the floor, looking down
Pose Type: standing, twist
Drishti Point: 1. Urdhva or Antara Drishti (up to the sky)
2. Padayoragrai or Padayoragre (toes/feet)

Revolved Side Angle Pose Prep.

Parivritta Parshva Konasana Prep.

(puh-ri-VRIT-tuh pahrsh-vuh-ko-NAHS-uh-nuh)

Modification: hands in Anjali Mudra (Hands in Prayer)

1. back knee on the floor, looking up to the sky
2. back knee off the floor, looking up to the sky

Pose Type: standing, twist

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Both Hands Free Revolved Side Angle Pose

Dwi Mukta Hasta Parivritta Parshva Konasana

(DWI muk-tuh HUH-stuh puh-ri-VRIT-tuh pahrsh-vuh-ko-NAHS-uh-nuh)

Modification: bottom hand off the floor, fingertips pointing in opposite directions

1. back knee on the floor
2. back knee off the floor

Pose Type: standing, twist, side bend

Drishti Point: Hastagrai or Hastagre (hands)

Revolved Side Angle Pose Prep.

Parivritta Parshva Konasana Prep.

(puh-ri-VRIT-tuh pahrsh-vuh-ko-NAHS-uh-nuh)

Modification: palm to the floor, other palm to lower back
Pose Type: standing, twist, side bend
Drishti Point: Hastagrai or Hastagre (hands) or Padhayoragrai or Padayoragre (toes/feet)

SIDE ANGLE POSE: REVOLVED BOUND

Revolved Side Angle Pose

Parivritta Parshva Konasana

(puh-ri-VRIT-tuh pahrsh-vuh-ko-NAHS-uh-nuh)

Modification: 1. palm to the floor, back knee on the floor 2. palm to the floor, back knee off the floor
Pose Type: standing, twist, side bend
Drishti Point: Hastagrai or Hastagre (hands)

Bound Revolved Side Angle Pose

Baddha Parivritta Parshva Konasana

(BUH-duh puh-ri-VRIT-tuh pahrsh-vuh-ko-NAHS-uh-nuh)

Also Known As: Hands Bound Revolved Side Angle Pose Prep. (Baddha Hasta Parivritta Parshva Konasana Prep.)
Modification: 1. back knee on the floor 2. back knee off the floor
Pose Type: standing, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

REVERSE WARRIOR

Both Arms Extended Reverse Warrior Pose Prep.

Dwi Hasta Utthita Viparita Virabhadrasana Prep.

(DWI-huh-stuh UT-ti-tuh vi-puh-REE-tuh vee-ruh-buh-DRAHS-uh-nuh)

Modification: back knee on the floor, arms straight, palms together
Pose Type: standing, backbend, side bend
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Tip Toe Both Arms Extended Reverse Warrior Pose

Prapada Dwi Hasta Utthita Viparita Virabhadrasana

(PRUH-puh-duh DWI-huh-stuh UT-ti-tuh vi-puh-REE-tuh vee-ruh-buh-DRAHS-uh-nuh)

Modification: arms straight, palms together
Pose Type: standing, backbend, side bend
Drishti Point: Bhrumadhye (third eye, between the eyebrows) or Hastagrai or Hastagre (hands)

Revolved Sideways Tip Toe Reverse Warrior Pose

Parivritta Parshva Prapada Viparita Virabhadrasana

(puh-ri-VRIT-tuh PAHRSH-vuh PRUH-puh-duh vi-puh-REE-tuh vee-ruh-buh-DRAHS-uh-nuh)

Modification: front heel up, one arm in front and parallel to the floor; other elbow bent, palm facing up, hand to the crown of the head
Pose Type: standing, backbend, twist, side bend
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Tip Toe Reverse Warrior Pose

Prapada Viparita Virabhadrasana

(PRUH-puh-duh vi-puh-REE-tuh vee-ruh-buh-DRAHS-uh-nuh)

Modification: front heel up, both elbows bent, one arm up over the head, other arm in front of the torso

Pose Type: standing, backbend

Drishti Point: Hastagrai or Hastagre (hands)

Half Bound Reverse Warrior Pose

Ardha Baddha Viparita Virabhadrasana

(UHR-duh BUH-duh vi-puh-REE-tuh vee-ruh-buh-DRAHS-uh-nuh)

Pose Type: standing, backbend, binding

Drishti Point: Hastagrai or Hastagre (hands)

Reverse Warrior Pose

Viparita Virabhadrasana

(vi-puh-REE-tuh vee-ruh-buh-DRAHS-uh-nuh)

Also Known As: Reverse Warrior Pose 2 (Viparita Virabhadrasana 2)

Modification: hand to the calf of the back leg; low lunge, low stance
Pose Type: standing, backbend
Drishti Point: Hastagrai or Hastagre (hands)

WARRIOR 1

Warrior 1 Prep.

Virabhadrasana 1 Prep.

(vee-ruh-buh-DRAHS-uh-nuh)
Modification: both legs straight, palms pressed together
Pose Type: standing
Drishti Point: Nasagrai or Nasagre (nose)

Warrior 1

Virabhadrasana 1

(vee-ruh-buh-DRAHS-uh-nuh)
Also Known As: Raised Arms Warrior Pose (Urdhva Hasta Veerasana), Hero Succession Series

(Vira Parampara)
Pose Type: standing
Drishti Point: Nasagrai or Nasagre (nose)

Warrior 1

Virabhadrasana 1

(vee-ruh-buh-DRAHS-uh-nuh)
Modification: arms out in front and parallel to the floor, palms facing the sky
Pose Type: standing
Drishti Point: Hastagrai or Hastagre (hands)

Bound Warrior 1

Baddha Virabhadrasana 1

(BUH-duh vee-ruh-buh-DRAHS-uh-nuh)
Modification: fingers interlocked on the inside of the front thigh
Pose Type: standing, binding
Drishti Point: Nasagrai or Nasagre (nose)

Warrior 1

Virabhadrasana 1

(vee-ruh-buh-DRAHS-uh-nuh)

Modification: arms up over the head and open to the sides; front leg, toes rotated out; deep backbend
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Open Heart Chakra Hands Bound Warrior

Anahata Chakra Baddha Hasta Virabhadrasana

(uh-NAH-huh-tuh CHUHK-ruh BUH-duh HUH-suh vee-ruh-buh-DRAHS-uh-nuh)

Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Raised Bound Hands in Warrior 1

Urdhva Baddha Hastasana in Virabhadrasana 1

(OORD-vuh BUH-duh huh-STAHS-uh-nuh in vee-ruh-buh-DRAHS-uh-nuh)

Modification: fingers interlocked deep backbend
Pose Type: standing, backbend
Drishti Point: Hastagrai or Hastagre (hands)

WARRIOR 1: FORWARD BEND—TO THE SIDE

Spread Out Hands Side Angle Pose

Prasarita Hasta Parshva Konasana

(pruh-SAH-ri-tuh HUH-stuh pahrsh-vuh-ko-NAHS-uh-nuh)

Also Known As: Down Dog Lunge Pose
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Hand Position of the Pose Dedicated to Garuda in Side Angle Pose

Hasta Garudasana in Parshva Konasana

(HUH-stuh guh-ru-DAHS-uh-nuh in pahrsh-vuh-ko-NAHS-uh-nuh)

Pose Type: standing, forward bend

Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Hand Position of Cow Face Pose in Side Angle Pose

Hasta Gomukhasana in Parshva Konasana

(HUH-stuh go-muk-AHS-uh-nuh in pahrsh-vuh-ko-NAHS-uh-nuh)

Pose Type: standing, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

WARRIOR 1: FORWARD BEND—ARMS BEHIND

Bowing Warrior with Hands in Prayer

Nama Virabhadrasana Namaskar

(NUH-muh vee-ruh-buh-DRAHS-uh-nuh nuh-muhs-KAHR)

Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Bowing Hands Bound Warrior

Nama Baddha Hasta Virabhadrasana

(NUH-muh BUH-duh HUH-stuh vee-ruh-buh-DRAHS-uh-nuh)

Modification: grabbing onto the triceps behind the back
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Bowing Reverse Prayer Warrior

Nama Viparita Namaskar Virabhadrasana

(NUH-muh vi-puh-REE-tuh nuh-muhs-KAHR vee-ruh-buh-DRAHS-uh-nuh)

Also Known As: Bowing Back of the Body Prayer Warrior (Nama Paschima Namaskara Virabhadrasana)

Pose Type: standing, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Bowing Hands Bound Warrior Pose

Nama Baddha Hasta Virabhadrasana

(NUH-muh BUH-duh HUH-stuh vee-ruh-buh-DRAHS-uh-nuh)

Also Known As: Warrior Veerastambana Pose (Veerastambanasana), Bound Hands Side Angle Pose (Baddha Hasta Parshva Konasana)

Pose Type: standing, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Bowing Hands Bound Warrior Pose

Nama Baddha Hasta Virabhadrasana

(NUH-muh BUH-duh HUH-stuh vee-ruh-buh-DRAHS-uh-nuh)

Also Known As: Bound Hands Side Angle Pose (Baddha Hasta Parshva Konasana)
Modification: arms bound around the front leg
Pose Type: standing, forward bend, binding
Drishti Point: Padhayoragrai or Padayoragre (toes/feet)

SIDE ANGLE POSE: HEAD BEHIND LEG

One Foot Behind the Head Side Angle Pose

Eka Pada Shirsha Parshva Konasana

(EY-kuh PUH-duh SHEER-shuh pahrsh-vuh-ko-NAHS-uh-nuh)

Modification: arms crossed in front of the chest
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

One Foot Behind the Head Side Angle Pose

Eka Pada Shirsha Parshva Konasana

(EY-kuh PUH-duh SHEER-shuh pahrsh-vuh-ko-NAHS-uh-nuh)

Modification: palms together, arms straight on the floor
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

One Foot Behind the Head Bound Side Angle Pose

Eka Pada Shirsha Baddha Parshva Konasana

(EY-kuh PUH-duh SHEER-shuh BUH-duh pahrsh-vuh-ko-NAHS-uh-nuh)

Pose Type: standing, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

[LUNGE: BACK KNEE ON THE FLOOR]

Equestrian Riding Horse Lunge Pose

Ashva Sanchalanasana

(UHSH-vuh suhn-chuh-luh-NAHS-uh-nuh)

Modification: back knee on the floor, hands to the floor on either side of the front foot, looking up to the sky

Pose Type: standing, forward bend

Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Equestrian Riding Horse Lunge Pose Prep.

Ashva Sanchalanasana Prep.

(UHSH-vuh suhn-chuh-luh-NAHS-uh-nuh)

Also Known As: Son of Anjani (Lord Hanuman) Lunge Pose Prep. (Anjaneyasana Prep.)

Modification: back knee on the floor, both hands on the front knee

Pose Type: standing

Drishti Point: Nasagrai or Nasagre (nose)

LUNGE: BACK KNEE ON THE FLOOR—FORWARD BEND

Hands Bound Extended Lizard Tail Lunge Pose

Baddha Hasta Uttana Pristhasana

(BUH-duh HUH-stuh ut-TAHN-uh prish-TAHS-uh-nuh)

Also Known As: Bowing Warrior Pose Prep. (Nama Virabhadrasana Prep.)
Modification: back knee on the floor, forehead to the floor
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Tip Toe Extended Lizard Tail Lunge Pose

Prapada Uttana Pristhasana

(PRUH-puh-duh ut-TAHN-uh prish-TAHS-uh-nuh)

Modification: back knee on the floor, shoulder to the back of the knee, one arm straight out in front, other arm straight to the back, forehead to the floor
Pose Type: standing, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Extended Lizard Tail Lunge Pose

Uttana Pristhasana

(ut-TAHN-uh prish-TAHS-uh-nuh)

Modification: back knee on the floor

1. forearms to the floor on the inside of the foot
2. forearms to the floor on either side of the foot

Pose Type: standing, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Unsupported Extended Lizard Tail Lunge Pose

Niralamba Uttana Pristhasana

(nir-AH-luhm-buh ut-TAHN-uh prish-TAHS-uh-nuh)

Also Known As: God Favour Seeking Sacrifice Ritual Pose (Yajnasana), Christ's Cross Pose
Modification: arms straight out to the sides
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Bound Extended Lizard Tail Lunge Pose

Baddha Uttana Pristhasana

(BUH-duh ut-TAHN-uh prish-TAHS-uh-nuh)

Also Known As: Bound God Favor Seeking Sacrifice Ritual Pose (Baddha Yajnasana), Bound Christ's Cross Pose)
Modification: back knee on the floor
Pose Type: standing, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

Hands Spread Out Extended Lizard Tail Lunge Pose

Prasarita Hasta Uttana Pristhasana

(pruh-SAH-ri-tuh HUH-stuh ut-TAHN-uh prish-TAHS-uh-nuh)

Also Known As: God Favour Seeking Sacrifice Ritual Pose (Yajnasana), Christ's Cross Pose
Modification: back knee on the floor, shin to the tricep
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

LUNGE: BACK KNEE ON THE FLOOR—BACKBEND—ARMS BEHIND THE BACK

Bound Hands Son of Anjani (Lord Hanuman) Lunge Pose

Baddha Hasta Anjaneyasana *(BUH-duh HUH-stuh uhn-juh-ney-AHS-uh-nuh)*

Also Known As: Open Heart Chakra Hands Bound Equestrian Riding Horse Pose (Anahata Chakra Baddha Hasta Ashva Sanchalanasana)
Modification: back knee on the floor, backbend, hands to the floor on the inside of the back knee
Pose Type: standing, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Son of Anjani (Lord Hanuman) Lunge Pose

Anjaneyasana *(uhn-juh-ney-AHS-uh-nuh)*
Also Known As: Open Heart Chakra Equestrian Riding Horse Pose (Anahata Chakra Ashva Sanchalanasana)
Modification: back knee on the floor, backbend, fingertips to the floor on either side of the back knee
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One Hand Son of Anjani (Lord Hanuman) Lunge Pose

Eka Hasta Anjaneyasana *(EY-kuh HUH-stuh uhn-juh-ney-AHS-uh-nuh)*
Also Known As: Equestrian Riding Horse Pose (Ashva Sanchalanasana)
Modification: back knee on the floor, one arm extended up over the head, other hand to the floor
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

LUNGE: BACK KNEE ON THE FLOOR—BACKBEND—ARMS UP OVER THE HEAD

Son of Anjani (Lord Hanuman) Lunge Pose

Anjaneyasana *(uhn-juh-ney-AHS-uh-nuh)*
Also Known As: Crescent Lunge Pose
Modification: front heel on the floor, back knee down, back toes curled in; arms shoulder width apart, fingertips up to the sky
Pose Type: standing, mild backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Tip Toe Son of Anjani (Lord Hanuman) Lunge Pose

Prapada Anjaneyasana *(PRUH-puh-duh uhn-juh-ney-AHS-uh-nuh)*
Also Known As: Tip Toe Crescent Lunge Pose
Modification: front heel off the floor, back knee down, back toes curled in; arms shoulder width apart, fingertips up to the sky
Pose Type: standing, mild backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Son of Anjani (Lord Hanuman) Lunge Pose

Anjaneyasana *(uhn-juh-ney-AHS-uh-nuh)*
Also Known As: Monkey Pose (Kapyasana), Crescent Lunge Pose
Modification: arms up over the head, back knee on the floor, palms pressed together
Pose Type: standing, mild backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Angusthamadhye or Angustha Ma Dyai (thumbs)

Standing Pose of the Heavenly Spirits Prep.

Stiti Valakhilyasana Prep. *(STI-ti VAH-luh-kil-YAHS-uh-nuh)*
Also Known As: Nindra Valakhilyasana; Son of Anjani (Lord Hanuman) Lunge Pose (Anjaneyasana), Crescent Lunge Pose)
Modification: back knee on the floor, arms up over the head, palms open to the sky, arms parallel to the floor
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Standing Pose of the Heavenly Spirits

Stiti Valakhilyasana *(STI-ti VAH-luh-kil-YAHS-uh-nuh)*
Also Known As: Nindra Valakhilyasana
Modification: back knee to the floor, grabbing the back heel with overhead grip
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

LUNGE: BACK KNEE ON THE FLOOR—TWISTS AND SIDE BENDS

Sideways Son of Anjani (Lord Hanuman) Lunge Pose

Parshva Anjaneyasana
(PAHRSH-vuh uhn-juh-ney-AHS-uh-nuh)
Modification: back knee on the floor; one hand to the inside of the opposite knee, other arm up over the head
Pose Type: standing, side bend, backbend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Revolved Paying Homage Lunge Pose

Parivritta Namasyasana

(puh-ri-VRIT-tuh nuh-muh-SYAHS-uh-nuh)

Also Known As: Curtsey Lunge

Modification: front leg crossed over to the side, opposite elbow over the front knee, back knee on the floor

Pose Type: standing, twist

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Revolved Son of Anjani (Lord Hanuman) Lunge Pose

Parivritta Anjaneyasana

(puh-ri-VRIT-tuh uhn-juh-ney-AHS-uh-nuh)

Modification: back knee on the floor, toes curled in; one hand to the floor, other arm up in the sky; twisting to the inside of the front knee

Pose Type: standing, twist

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Tip Toe Sideways Son of Anjani (Lord Hanuman) Lunge Pose

Prapada Parshva Anjaneyasana

(PRUH-puh-duh PAHRSH-vuh uhn-juh-ney-AHS-uh-nuh)

Modification: back knee on the floor, toes pointed to the back, one hand to the floor, other arm up in the sky, twisting to the outside of the front knee

Pose Type: standing, twist

Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Revolved Son of Anjani (Lord Hanuman) Lunge Pose

Parivritta Anjaneyasana

(puh-ri-VRIT-tuh uhn-juh-ney-AHS-uh-nuh)

Also Known As: Revolved Monkey Pose (Parivritta Anjaneyasana)

Modification: back knee on the floor

Pose Type: standing, twist

Drishti Point: Padhayoragrai or Padayoragre (toes/feet)

Tip Toe Revolved Son of Anjani (Lord Hanuman) Lunge Pose

Prapada Parivritta Anjaneyasana

(PRUH-puh-duh puh-ri-VRIT-tuh uhn-juh-ney-AHS-uh-nuh)

Pose Type: standing, twist

Drishti Point: Nasagrai or Nasagre (nose)

Horse Pose Prep.

Vatayanasana Prep.

(vah-tah-yuh-NAHS-uh-nuh)

Modification: back knee and foot on the floor

Pose Type: standing

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Fighting Warrior Pose 1

Yudhasana 1

(yu-DAHS-uh-nuh)

Pose Type: standing

Drishti Point: Hastagrai or Hastagre (hands)

Fighting Warrior Pose 2

Yudhasana 2

(yu-DAHS-uh-nuh)

Modification: back knee on the floor

Pose Type: standing

Drishti Point: Hastagrai or Hastagre (hands)

LUNGE: BACK KNEE ON THE FLOOR UNDER THE HIP SOCKET—FORWARD BEND

Half Equestrian Riding Horse Lunge Pose

Ardha Ashva Sanchalanasana

(UHR-duh UHSH-vuh suhn-chuh-luh-NAHS-uh-nuh)

Modification: spine in Cat Tilt, back knee down, toes pointing away from the head
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Tip Toe Bound Son of Anjani (Lord Hanuman) Lunge Pose

Prapada Baddha Anjaneyasana

(PRUH-puh-duh BUH-duh uhn-juh-ney-AHS-uh-nuh)
Modification: front leg bound, back knee on the floor, toes pointing away from the head
Pose Type: standing, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

One Foot Behind the Head Extended Lizard Tail Lunge Pose

Eka Pada Shirsha Uttana Pristhasana

(EY-kuh PUH-duh SHEER-shuh ut-TAHN-uh prish-TAHS-uh-nuh)
Modification: back knee under the hip, toes pointing away from the head
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

One Foot Behind the Head Extended Lizard Tail Lunge Pose

Eka Pada Shirsha Uttana Pristhasana

(EY-kuh PUH-duh SHEER-shuh ut-TAHN-uh prish-TAHS-uh-nuh)

Modification: legs working toward full vertical splits, toes of the back leg curled in
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

LUNGE: BACK KNEE ON THE FLOOR UNDER THE HIP SOCKET—BACKBEND

Son of Anjani (Lord Hanuman) Lunge Pose

Anjaneyasana

(uhn-juh-ney-AHS-uh-nuh)

Modification: deep backbend; chest open, arms to the side, elbows bent; back knee on the floor, toes pointing away from the head
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Tip Toe One Hand to Foot Son of Anjani (Lord Hanuman) Lunge Pose

Prapada Eka Hasta Pada Anjaneyasana

(PRUH-puh-duh EY-kuh HUH-stuh PUH-duh uhn-juh-ney-AHS-uh-nuh)

Modification: deep backbend; hand to the ankle on the same side
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Both Hands to Foot Son of Anjani (Lord Hanuman) Lunge Pose

Dwi Hasta Pada Anjaneyasana

(DWI-huh-stuh PUH-duh uhn-juh-ney-AHS-uh-nuh)

Modification: backbend
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Tip Toe Both Hands to Foot Son of Anjani (Lord Hanuman) Lunge Pose

Prapada Dwi Hasta Pada Anjaneyasana

(PRUH-puh-duh DWI-huh-stuh PUH-duh uhn-juh-ney-AHS-uh-nuh)

Modification: deep backbend, back knee on the floor, back toes curled in
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

LUNGE: BACK KNEE ON THE FLOOR—FOOT OFF THE FLOOR

One-Legged King Pigeon Pose 2 Prep.

Eka Pada Raja Kapotasana 2 Prep.

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: arms open wide and raised
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Half Bound Revolved One-Legged King Pigeon Pose 2 Prep.

Ardha Baddha Parivritta Eka Pada Raja Kapotasana 2 Prep.

(UHR-duh BUH-duh puh-ri-VRIT-tuh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Pose Type: standing, twist, binding

Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Tip Toe Extended Lizard Tail Lunge Pose Prep.

Prapada Uttana Pristhasana Prep.

(PRUH-puh-duh ut-TAHN-uh prish-TAHS-uh-nuh)

Modification: arms straight to semi-straight, back foot lifted off the floor

Pose Type: standing, forward bend

Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bound Revolved Side Angle Pose Prep.

Baddha Parivritta Parshva Konasana Prep.

(BUH-duh puh-ri-VRIT-tuh pahrsh-vuh-ko-NAHS-uh-nuh)

Also Known As: Bound Revolved Son of Anjani (Lord Hanuman) Lunge Pose Prep. (Anjaneyasana Prep.)
Modification: back knee bent, heel toward the sitting bone
Pose Type: standing, forward bend, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Foot to Knee Revolved Son of Anjani (Lord Hanuman) Lunge Pose with Hands in Prayer

Janu Pada Parivritta Anjaneyasana Namaskar

(JAH-nu PUH-duh puh-ri-VRIT-tuh uhn-juh-ney-AHS-uh-nuh nuh-muhs-KAHR)

Pose Type: standing, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

LUNGE: BACK KNEE ON THE FLOOR—GRABBING ONTO THE BACK FOOT

Tip Toe One-Legged King Pigeon Pose 2 Prep.

Prapada Eka Pada Raja Kapotasana 2 Prep.

(PRUH-puh-duh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: both hands grabbing onto the back foot with under-head grip
Pose Type: standing, mild backbend
Drishti Point: Nasagrai or Nasagre (nose)

Revolved One-Legged King Pigeon Pose 2 Prep.

Parivritta Eka Pada Raja Kapotasana 2 Prep.

(puh-ri-VRIT-tuh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: grabbing onto the back foot with the opposite hand using an under-head grip, twisting toward the front knee
Pose Type: standing, twist
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

One Hand in Prayer Revolved One-Legged King Pigeon Pose 2 Prep.

Eka Hasta Namaskar Parivritta Eka Pada Raja Kapotasana 2 Prep.

(EY-kuh HUH-stuh nuh-muhs-KAHR puh-ri-VRIT-tuh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: opposite hand to the back foot, other hand to the heart
Pose Type: standing, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

One Hand to Foot Extended Lizard Tail Lunge Pose

Eka Hasta Pada Uttana Pristhasana

(EY-kuh HUH-stuh PUH-duh ut-TAHN-uh prish-TAHS-uh-nuh)

Modification: forward bend, elbow to the floor, grabbing onto the back foot with opposite hand, heel to the glutes
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

LUNGE: BACK KNEE ON THE FLOOR—FOOT TO THE HIP SOCKET

Spear Pose Prep.

Kuntasana Prep.

(kun-TAHS-uh-nuh)

Modification: grabbing onto the foot with one hand, arm crossed over in front, other arm parallel to the floor, foot away from the hip

Pose Type: standing, twist

Drishti Point: Hastagrai or Hastagre (hands)

Spear Pose

Kuntasana

(kun-TAHS-uh-nuh)

Modification: grabbing onto the foot with one hand, arm crossed over in front, other hand to the knee, foot close to the hip

Pose Type: standing, twist

Drishti Point: Hastagrai or Hastagre (hands)

Both Hands Bound Revolved Spear Pose Prep.

Dwi Hasta Baddha Parivritta Kuntasana Prep.

(dwi HUH-stuh BUH-duh puh-ri-VRIT-tuh kun-TAHS-uh-nuh)

Pose Type: standing, twist, binding

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Spear Pose with Hands in Prayer

Kuntasana Namaskar

(kun-TAHS-uh-nuh nuh-muhs-KAHR)

Pose Type: standing

Drishti Point: Nasagrai or Nasagre (nose)

Half Bound Revolved Spear Pose Prep.

Ardha Baddha Parivritta Kuntasana Prep.

(UHR-duh-BUH-duh puh-ri-VRIT-tuh kun-TAHS-uh-nuh)

Modification: foot to the inside of the elbow
Pose Type: standing, twist, binding
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Spear Pose

Kuntasana

(kun-TAHS-uh-nuh)

Pose Type: standing
Drishti Point: Hastagrai or Hastagre (hands)

Hands Bound Ankle Stretch Pose

Baddha Hasta Kulpasana

(BUH-duh HUH-stuh kul-PAHS-uh-nuh)

Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

LUNGE: BACK KNEE ON THE FLOOR—HEAD BEHIND THE FRONT LEG, GRABBING ONTO THE BACK FOOT

One Foot Behind the Head Extended Lizard Tail Lunge Pose

Eka Pada Shirsha Uttana Pristhasana

(EY-kuh PUH-duh SHEER-shuh ut-TAHN-uh prish-TAHS-uh-nuh)

Modification: grabbing onto the foot with the opposite hand, back knee under the hips
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

One Foot Behind the Head Extended Lizard Tail Lunge Pose

Eka Pada Shirsha Uttana Pristhasana

(EY-kuh PUH-duh SHEER-shuh ut-TAHN-uh prish-TAHS-uh-nuh)

Modification: grabbing onto the foot with the opposite hand, chest and quadriceps on the floor
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

LUNGE: BACK KNEE ON FLOOR—ONE-LEGGED KING PIGEON 2

One-Legged King Pigeon Pose 2 Prep.

Eka Pada Raja Kapotasana 2 Prep.

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: back knee bent toward the glutes, front heel down; arms on the sides, spine straight
Pose Type: standing
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Tip Toe One-Legged King Pigeon Pose 2 Prep.

Prapada Eka Pada Raja Kapotasana 2 Prep.

(PRUH-puh-duh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: back knee bent toward the glutes, heel of the top foot up; hands on the hips, backbend
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged King Pigeon Pose 2

Eka Pada Raja Kapotasana 2

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: prep.—arms up over the head, back knee bent toward the glutes
Pose Type: standing, mild backbend
Drishti Point: Nasagrai or Nasagre (nose)

Tip Toe One-Legged King Pigeon Pose 2 Prep.

Prapada Eka Pada Raja Kapotasana 2 Prep.

(PRUH-puh-duh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: fingertips to the floor, front heel lifted
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Intense Ankle Stretch One-Legged King Pigeon Pose 2

Uttana Kulpa Eka Pada Raja Kapotasana 2

(ut-TAH-nuh kul-puh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: prep.—fingertips to the floor, front toes curled under
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

LUNGE: BACK KNEE ON FLOOR—ONE-LEGGED KING PIGEON 2

One-Legged King Pigeon Pose 2 Prep.

Eka Pada Raja Kapotasana 2 Prep.

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: 1. grabbing onto the foot on the same side
2. grabbing onto the foot with the hand on the same side, foot toward the hip
3. grabbing onto the foot with the opposite hand, foot twisted toward the opposite glute

Pose Type: standing, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Revolved One-Legged King Pigeon Pose 2

Parivritta Eka Pada Raja Kapotasana 2

(puh-ree-VRIT-tuh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Pose Type: standing, forward bend, twist

Drishti Point: Parsva Drishti (to the right), Parsva Drishti (to the left)

Mermaid Pose 2

Naginyasana 2

(nuh-gin-YAHS-uh-nuh)

Pose Type: standing, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

LUNGE: BACK KNEE ON FLOOR—ONE-LEGGED KING PIGEON 2—OVERHEAD GRIP

One-Legged King Pigeon Pose 2

Eka Pada Raja Kapotasana 2

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: grabbing onto the foot with the opposite hand, palm of the other hand to the floor on the side

1. foot to the head
2. heel to the forehead

Pose Type: standing, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged King Pigeon Pose 2

Eka Pada Raja Kapotasana 2

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: both hands grabbing onto the foot

1. foot to the head
2. heel to the forehead

Pose Type: standing, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Bound One-Legged King Pigeon Pose 2

Ardha Baddha Eka Pada Raja Kapotasana 2

(UHR-duh BUH-duh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Pose Type: standing, backbend, binding

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

LUNGE: BACK KNEE ON FLOOR—ONE-LEGGED KING PIGEON 2—FOOT TO THE BACK OF THE HEAD

Necklace Pose Prep.

Graivasana Prep.

(gr-eye-VAHS-uh-nuh)

Also Known As: Chain Pose (Gaivasana)
Modification: back foot to the back of the head, hands to the floor
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Necklace Pose Prep.

Graivasana Prep.

(gr-eye-VAHS-uh-nuh)

Also Known As: Chain Pose (Gaivasana)
Modification: back foot to the back of the head, hands in Anjali Mudra (Hands in Prayer)
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

LUNGE: BACK KNEE ON FLOOR—ONE-LEGGED KING PIGEON 2—ARM CROSSED OVER IN FRONT

Bound Hand to Foot Supported One-Legged King Pigeon Pose 2

Baddha Hasta Pada Salamba Eka Pada Raja Kapotasana 2

(BUH-duh HUH-stuh PUH-duh SAH-luhm-buh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: arm crossed in front of the neck, other hand to the floor
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bound Hand to Foot Unsupported One-Legged King Pigeon Pose 2

Baddha Hasta Pada Niralamba Eka Pada Raja Kapotasana 2

(BUH-duh HUH-stuh PUH-duh nir-AH-luhm-buh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: arm crossed in front of the neck, other arm straight out in front
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

LUNGE: FRONT LEG STRAIGHT—BACKBEND

Both Hands to Foot Son of Anjani (Lord Hanuman) Lunge Pose

Dwi Hasta Pada Anjaneyasana

(DWI-huh-stuh PUH-duh uhn-juh-ney-AHS-uh-nuh)

Modification: front leg straight

1. back knee on the floor
2. back knee off the floor

Pose Type: standing, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

2.

Gate Pose

Parighasana

(puh-ri-GAHS-uh-nuh)

Pose Type: standing, side bend

Drishti Point: Hastagrai or Hastagrahe (hands)

How to Perform the Pose:

1. Begin by standing on your knees with sitting bones lifted off the feet. (Make sure your knees are comfortable by rolling up the yoga mat a couple of times.) Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Exhale and extend your right leg straight out to the side with the right foot on the floor. You can either point the toes to the right (Pose #1) or point your toes straight ahead, lifting the arch and pressing the outside edge of the right foot to the floor (Pose #2).
3. Inhale as you expand your chest and hold your arms straight out to the sides, parallel to the floor.
4. On your next exhale, side bend to the right and bring your right hand onto your right shin (Pose #2), while extending your left arm over your head to the right with the palm facing down. Make sure your chest is rotated to face forward and not collapsing toward the floor. Look toward your right hand. You can also experiment with dropping your right palm to the floor on the inside of your right leg (Pose #1).
5. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch. Inhale as you come up and bring your right knee back to the floor by your left knee. Repeat on the other side.

Modification: bending to the opposite side of the bent knee on the floor
1. palm to the floor, toes of the straight leg pointing to the side
2. hand on the shin, toes of the straight leg pointing straight ahead

parigha = iron bar used for locking a gate

1.

2.

Gate Pose

Parighasana

(puh-ri-GAHS-uh-nuh)

Modification: bending to the side of the bent knee on the floor, hand to the floor on the outside of the bent leg, toes of the straight leg pointing straight ahead

Pose Type: standing, side bend

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Half Bound Gate Pose

Ardha Baddha Parighasana

(UHR-duh BUH-duh puh-ri-GAHS-uh-nuh)

Modification: bending to the side of the bent knee on the floor, forearm to the floor on the side of the bent leg, toes of the straight leg pointing straight ahead

Pose Type: standing, side bend, binding

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Gate Pose

Parighasana

(puh-ri-GAHS-uh-nuh)

Modification: bending to the opposite side of the bent knee on the floor, forearm to the floor, toes of the straight leg pointing to the side

Pose Type: standing, forward bend, side bend

Drishti Point: Hastagrai or Hastagre (hands)

ONE LEG STRAIGHT OTHER KNEE ON THE FLOOR: SIDE BEND & BINDING

Gate Pose

Parighasana

(puh-ri-GAHS-uh-nuh)

Modification: bending to the opposite side of the bent knee on the floor, palm to the top of the foot of the straight leg, toes of the straight leg pointing to the side

Pose Type: standing, forward bend, side bend

Drishti Point: Hastagrai or Hastagre (hands)

Gate Pose

Parighasana

(puh-ri-GAHS-uh-nuh)

Modification: bending to the opposite side of the bent knee on the floor, both hands to the top of the foot of the straight leg, toes of the straight leg pointing to the side

Pose Type: standing, forward bend, side bend

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Half Bound Gate Pose

Parivritta Ardha Baddha Parighasana

(puh-ri-VRIT-tuh UHR-duh BUH-duh puh-ri-GAHS-uh-nuh)

Modification: hand to the floor on the outside of the straight leg, rotating the chest to the sky, toes of the straight leg pointing to the side

Pose Type: standing, side bend, binding

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Bound Gate Pose

Parivritta Baddha Parighasana

(puh-ri-VRIT-tuh BUH-duh puh-ri-GAHS-uh-nuh)

Modification: toes of the straight leg flexed in, toes of the bent leg pointing away from the head
Pose Type: standing, forward bend, side bend, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Bound Half Lotus Gate Pose

Parivritta Baddha Ardha Padma Parighasana

(puh-ri-VRIT-tuh BUH-duh UHR-duh PUHD-muh puh-ri-GAHS-uh-nuh)

Modification: toes of the straight leg pointing to the side
Pose Type: standing, side bend, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

ONE LEG STRAIGHT OTHER KNEE ON THE FLOOR: TWISTS

Revolved Gate Pose

Parivritta Parighasana

(puh-ri-VRIT-tuh puh-ri-GAHS-uh-nuh)

Modification: forearm to the floor, hand grabbing onto the opposite foot, other arm straight up to the sky, toes of the straight leg pointed to the side, toes of the bent leg pointing away from the head

Pose Type: standing, forward bend, twist

Drishti Point: Hastagrai or Hastagre (hands)

Revolved Half Bound Gate Pose

Parivritta Ardha Baddha Parighasana

(puh-ri-VRIT-tuh UHR-duh BUH-duh puh-ri-GAHS-uh-nuh)

Modification: forearm to the floor, twisting toward the straight leg, toes of the straight leg pointing to the side

Pose Type: standing, forward bend, twist, binding

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Half Pose Dedicated to Lord Hanuman

Ardha Hanumanasana

(UHR-duh huh-nu-mahn-AHS-uh-nuh)

Also Known As: Pose Dedicated to Lord Hanuman Prep. (Hanumanasana Prep.)
Modification: back toes pointed away from the head, fingertips to the floor on the outsides of the straight leg
Pose Type: standing, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Half Pose Dedicated to Lord Hanuman

Ardha Hanumanasana

(UHR-duh huh-nu-mahn-AHS-uh-nuh)

Also Known As: Pose Dedicated to Lord Hanuman Prep. (Hanumanasana Prep.)
Modification: back toes curled in, toes of the straight leg flexed in, arms extended to the front, fingertips to the floor
Pose Type: standing, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Half Bound Half Pose Dedicated to Lord Hanuman

Ardha Baddha Ardha Hanumanasana

(UHR-duh BUH-duh UHR-duh huh-nu-mahn-AHS-uh-nuh)

Also Known As: Pose Dedicated to Lord Hanuman Prep. (Hanumanasana Prep.)
Modification: toes of the bent leg pointed away from the head
Pose Type: standing, forward bend, binding
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Half Pose Dedicated to Lord Hanuman

Ardha Hanumanasana

(UHR-duh huh-nu-mahn-AHS-uh-nuh)

Also Known As: Pose Dedicated to Lord Hanuman Prep. (Hanumanasana Prep.)
Modification: toes of the straight leg flexed in; hand grabbing onto the back foot on the same side, heel to the sitting bone
Pose Type: standing, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Half Lotus Half Pose Dedicated to Lord Hanuman

Ardha Padma Ardha Hanumanasana

(UHR-duh PUHD-muh UHR-duh huh-nu-mahn-AHS-uh-nuh)

Also Known As: Pose Dedicated to Lord Hanuman Prep. (Hanumanasana Prep.)
Modification: fingertips of both hands on the sides of the straight leg
Pose Type: standing, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

HORSE POSE: FORWARD BEND, BINDING & TWIST

Revolved Leg Position of Horse Pose with Hands in Prayer

Parivritta Pada Vatayanasana Namaskar

(puh-ri-VRIT-tuh PUH-duh vah-tah-yuh-NAHS-uh-nuh nuh-muhs-KAHR)

Pose Type: standing, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Half Lotus Extended Lizard Tail Lunge Pose

Ardha Padma Uttana Pristhasana

(UHR-duh PUHD-muh ut-TAHN-uh prish-TAHS-uh-nuh)

Modification: 1. palms to the floor, elbows bent 90 degrees
2. forearms to the floor
3. one forearm to the floor; other elbow to the floor, hand to the face

Pose Type: standing, forward bend

Drishti Point: 1 & 3. Nasagrai or Nasagre (nose)
2. Padhayoragrai or Padayoragre (toes/feet) and Angusthamadhye or Angushta Ma Dyai (thumbs)

Bound Half Lotus Extended Lizard Tail Lunge Pose

Baddha Ardha Padma Uttana Pristhasana

(BUH-duh UHR-duh PUHD-muh ut-TAHN-uh prish-TAHS-uh-nuh)

Pose Type: standing, forward bend, binding

Drishti Point: Padayoragrai or Padayoragre (toes/feet)

One Foot Behind the Head Bound Half Lotus Extended Lizard Tail Lunge Pose

Eka Pada Shirsha Baddha Ardha Padma Uttan Pristhasana

(EY-kuh PUH-duh SHEER-shuh BUH-duh UHR-duh PUHD-muh ut-TAHN-uh prish-TAHS-uh-nuh)

Pose Type: standing, forward bend, binding

Drishti Point: Urdhva or Antara Drishti (up to the sky)

HORSE POSE: SPINE STRAIGHT

Half Bound Revolved Leg Position of Horse Pose

Ardha Baddha Parivritta Pada Vatayanasana

(UHR-duh BUH-duh puh-ri-VRIT-tuh PUH-duh vah-tah-yuh-NAHS-uh-nuh)

Modification: wrist to the knee of the front leg
Pose Type: standing, binding
Drishti Point: Hastagrai or Hastagre (hands)

Horse Pose

Vatayanasana

(vah-tah-yuh-NAHS-uh-nuh)

Also Known As: Sea Horse Pose
Modification: 1. Front View
2. Side View
Pose Type: standing
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

ONE KNEE BENT TOWARD THE HIP: SPINE STRAIGHT

One-Legged Frog Pose in Camel Pose

Eka Pada Bhekasana in Ushtrasana

(EY-kuh PUH-duh bey-KAHS-uh-nuh in oosh-TRAHS-uh-nuh)

Modification: spine straight
Pose Type: standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Mermaid Arm Position in Half Camel Pose

Hasta Naginyasana in Ardha Ushtrasana

(HUH-stuh nuh-gin-YAHS-uh-nuh in UHR-duh oosh-TRAHS-uhna)

Modification: spine straight
Pose Type: standing (on the knees), mild backbend, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Revolved One-Legged Frog Pose in One-Legged King Pigeon 1 Version B

Parivritta Eka Pada Bhekasana in Eka Pada Raja Kapotasana 1 B

(puh-ri-VRIT-tuh EY-kuh PUH-duh bey-KAHS-uh-nuh in EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: fingertips to the floor in front
Pose Type: standing (on the knees), twist, binding
Drishti Point: Padhayoragrai or Padayoragre (toes/feet)

Half Bound Revolved One-Legged Frog Pose in One-Legged King

Pigeon 1 Version B

Ardha Baddha Parivritta Eka Pada Bhekasana in Eka Pada Raja Kapotasana 1 B

(UHR-duh BUH-duh puh-ri-VRIT-tuh EY-kuh PUH-duh bey-KAHS-uh-nuh in EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Pose Type: standing (on the knees), twist, binding
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

COW FACE POSE AND GARUDA ON THE KNEES

Leg Position of Cow Face Pose on the Knees

Janu Pada Gomukhasana

(JAH-nu PUH-duh go-moo-KAHS-uh-nuh)

Modification: hands on the hips
Pose Type: standing (on the knees)
Drishti Point: Nasagrai or Nasagre (nose)

Leg Position of Cow Face Pose on the Knees

Janu Pada Gomukhasana

(JAH-nu PUH-duh go-moo-KAHS-uh-nuh)

Modification: 1. one hand on the hip, other arm straight over the head, side bend
2. one arm crossed in front of the body, other arm over the head, elbow bent, side bend
Pose Type: 1. standing (on the knees)
2. standing (on the knees), side bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet), Hastagrai or Hastagre (hands)

KNEES ON THE FLOOR: LOTUS POSE

Half Pose Dedicated to Sage Goraksha

Ardha Gorakshasana

(UHR-duh go-rak-SHAHS-uh-nuh)

Modification: spine straight, one hand to the heart, other hand to the side of the thigh
Pose Type: standing (on the knees), balance
Drishti Point: Nasagrai or Nasagre (nose), Hastagrai or Hastagre (hands)

Pose Dedicated to Sage Goraksha

Gorakshasana

(go-ruhk-SHAHS-uh-nuh)

Also Known As: Yogic Seat Pose A (Yogapithasana A)
Modification: hands in Anjali Mudra (Hands in Prayer)
Pose Type: standing (on the knees), balance
Drishti Point: Nasagrai or Nasagre (nose), Hastagrai or Hastagre (hands)

LUNGE: BACK KNEE OFF THE FLOOR

Fighting Warrior Pose 2

Yudhasana 2

(yu-DAHS-uh-nuh)

Modification: back knee off the floor
Pose Type: standing
Drishti Point: Hastagrai or Hastagre (hands)

Son of Anjani (Lord Hanuman) Lunge Pose

Anjaneyasana

(uhn-juh-ney-AHS-uh-nuh)

Modification: arms open wide, forward bend, back knee bent and off the floor
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Son of Anjani (Lord Hanuman) Lunge Pose

Anjaneyasana

(uhn-juh-ney-AHS-uh-nuh)

Also Known As: Warrior 1 Modification (Virabhadrasana 1 Modification)
Modification: hands on the hips, back knee off the floor
Pose Type: standing
Drishti Point: Nasagrai or Nasagre (nose)

Equestrian Riding Horse Pose

Ashva Sanchalanasana

(UHSH-vuh suhn-chuh-luh-NAHS-un-nuh)

Pose Type: standing, forward bend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows) or Padhayoragrai or Padayoragre (toes/feet)

How to Perform the Pose:

1. Begin in Intense Stretch Pose (*Uttanasana*), also known as Full Forward Bend Pose. Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Inhale and bend your knees enough for your fingertips to touch the floor on the sides of the feet.
3. Exhale as you step your left foot to the back, keeping your toes curled in, your left knee off the floor and keep your left leg strong and straight. Make sure your right knee is on top of your right ankle to prevent wear and tear on your knee joint.
4. Rest your torso on your right thigh. Inhale as you lengthen your spine, stretching your body in two opposing directions: crown of the head moving to the front and the heel of the right foot pushing to the back. You can look at the toes of the right foot.
5. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch.
6. Exhale as you step your left foot to the front in line with your right foot, and repeat on the other side.

Modification: back knee off the floor, fingertips off the floor on either side of the front foot

ashva sanchala = horse, riding posture

Reverse Prayer Son of Anjani (Lord Hanuman) Lunge Pose

Viparita Namaskar Anjaneyasana

(vi-puh-REE-tuh nuh-muhs-KAHR uhn-juh-ney-AHS-uh-nuh)

Also Known As: Back of the Body Prayer Son of Anjani (Lord Hanuman) Lunge Pose (Paschima Namaskara Anjaneyasana)
Modification: back knee off the floor
Pose Type: standing
Drishti Point: Nasagrai or Nasagre (nose)

Son of Anjani (Lord Hanuman) Lunge Pose

Anjaneyasana

(uhn-juh-ney-AHS-uh-nuh)

Modification: palms together, thumbs to upper back, back knee off the floor
Pose Type: standing
Drishti Point: Nasagrai or Nasagre (nose)

Tip Toe One Hand Son of Anjani (Lord Hanuman) Lunge Pose

Prapada Eka Hasta Anjaneyasana

(PRUH-puh-duh EY-kuh HUH-stuh uhn-juh-ney-AHS-uh-nuh)

Modification: deep backbend, one arm up over the head; fingertips of the other hand to the floor, back knee off the floor

Pose Type: standing, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Son of Anjani (Lord Hanuman) Lunge Pose

Anjaneyasana

(uhn-juh-ney-AHS-uh-nuh)

Also Known As: Warrior 1 Modification (Virabhadrasana 1 Modification), Crescent Lunge Pose

Modification: hands up over the head and shoulder width apart, back knee off the floor

Pose Type: standing, mild backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One Hand Rising Standing Pose of the Heavenly Spirits

Eka Hasta Utthita Stiti Valakhilyasana

(EY-kuh HUH-stuh UT-ti-tuh STI-ti vah-luh-khil-YAHS-uh-nuh)

Also Known As: Eka Hasta Utthita Nindra Valakhilyasana; Son of Anjani (Lord Hanuman) Lunge Pose (Anjaneyasana)

Modification: grabbing the back ankle overhead on the same side, other hand to the floor, back knee off the floor

Pose Type: standing, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Rising Standing Pose of the Heavenly Spirits

Utthita Stiti Valakhilyasana

(UT-ti-tuh STI-ti vah-luh-khil-YAHS-uh-nuh)

Also Known As: Utthita Nindra Valakhilyasana; Son of Anjani (Lord Hanuman) Lunge Pose (Anjaneyasana)

Modification: grabbing the back ankle overhead with both hands, back knee off the floor

Pose Type: standing, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Extended Lizard Tail Lunge Pose

Uttana Pristhasana

(ut-TAH-nuh prish-TAHS-uh-nuh)

Modification: elbows to the floor on the inside of the front leg, back knee off the floor
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Pose Dedicated to Sage Punnakeesar Lunge

Punnakeesarasana

(pu-nuh-kee-suh-RAHS-uh-nuh)

Also Known As: Bound God Favor Seeking Sacrifice Ritual Pose (Baddha Yajnasana), Bound Christ's Cross Pose
Modification: back knee off the floor
Pose Type: standing, forward bend, binding
Drishti Point: Padhayoragrai or Padayoragre (toes/feet)

Extended Lizard Tail Lunge Pose

Uttana Pristhasana

(ut-TAH-nuh prish-TAHS-uh-nuh)

Modification: elbows bent at 90 degrees, palms to the floor, back knee off the floor
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Extended Lizard Tail Lunge Pose

Uttana Pristhasana

(ut-TAH-nuh prish-TAHS-uh-nuh)

Modification: forearms to the floor on either side of the front foot, back knee off the floor
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Tip Toe Extended Lizard Tail Lunge Pose

Prapada Uttana Pristhasana

(PRUH-puh-duh ut-TAH-nuh prish-TAHS-uh-nuh)

Modification: arms straight and reaching in the opposite directions, heel of the front leg up, top of the back foot to the floor, back knee off the floor

Pose Type: standing, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

LUNGE: BACK KNEE OFF THE FLOOR, BACK LEG STRAIGHT—TWISTS

Sideways Son of Anjani (Lord Hanuman) Lunge Pose

Parshva Anjaneyasana

(PAHRSH-vuh uhn-juh-ney-AHS-uh-nuh)

Modification: top of the back foot on the floor, back knee off the floor

Pose Type: standing, side bend, backbend

Drishti Point: Hastagrai or Hastagre (hands)

Revolved Son of Anjani (Lord Hanuman) Lunge Pose with Hands in Prayer

Parivritta Anjaneyasana Namaskar

(puh-ri-VRIT-tuh uhn-juh-ney-AHS-uh-nuh nuh-muhs-KAHR)

Modification: elbow over knee, back knee off the floor
Pose Type: standing, twist
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Revolved Son of Anjani (Lord Hanuman) Lunge Pose with Hands in Prayer

Parivritta Anjaneyasana Namaskar

(puh-ri-VRIT-tuh uhn-juh-ney-AHS-uh-nuh nuh-muhs-KAHR)

Modification: arm under the knee, back knee off the floor
Pose Type: standing, twist
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Bound Revolved Son of Anjani (Lord Hanuman) Lunge Pose

Baddha Parivritta Anjaneyasana

(BUH-duh puh-ri-VRIT-tuh uhn-juh-ney-AHS-uh-nuh)

Modification: back knee off the floor
Pose Type: standing, twist, binding
Drishti Point: Padhayoragrai or Padayoragre (toes/feet)

Revolved Son of Anjani (Lord Hanuman) Lunge Pose

Parivritta Anjaneyasana

(puh-ri-VRIT-tuh uhn-juh-ney-AHS-uh-nuh)

Modification: one hand to the floor, other arm up in the sky, twisting to the inside of the front knee, back knee off the floor
Pose Type: standing, twist
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Tip Toe Sideways Son of Anjani (Lord Hanuman) Lunge Pose

Prapada Parshva Anjaneyasana

(PRUH-puh-duh PAHRSH-vuh uhn-juh-ney-AHS-uh-nuh)

Modification: one hand to the floor, other arm up in the sky, twisting to the outside of the front knee, back knee off the floor

Pose Type: standing, twist

Drishti Point: Hastagrai or Hastagre (hands)

Revolved Paying Homage Lunge Pose

Parivritta Namasyasana

(puh-ri-VRIT-tuh nuh-muhs-YAHS-uh-muh)

Also Known As: Curtsey Lunge

Modification: front leg crossed over to the side, opposite elbow over the front knee, back knee off the floor

Pose Type: standing, twist

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

SIDE LUNGE: SITTING BONES LIFTED—ARMS BELOW HEAD

Extended Leg to the Side Squat Pose

Utthita Parshva Pada Upaveshasana

(UT-ti-tuh PAHRSH-vuh PUH-duh u-puh-vey-SHAHS-uh-nuh)

Also Known As: Plyo Side Lunge
Modification: high stance, fingers interlocked in front of the chest
Pose Type: standing
Drishti Point: Nasagrai or Nasagre (nose)

Tip Toe Extended Leg to the Side Squat Pose

Prapada Utthita Parshva Pada Upaveshasana

(PRUH-puh-duh UT-ti-tuh PAHRSH-vuh PUH-duh u-puh-vey-SHAHS-uh-nuh)

Modification: high stance; arms straight out to the sides, toes of the straight leg flexed in
Pose Type: standing
Drishti Point: Hastagrai or Hastagre (hands)

Extended Leg to the Side Squat Pose

Utthita Parshva Pada Upaveshasana

(UT-ti-tuh PAHRSH-vuh PUH-duh u-puh-vey-SHAHS-uh-nuh)

Modification: arms crossed in front of the chest, forward bend
Pose Type: standing, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Extended Leg to the Side Squat Pose

Utthita Parshva Pada Upaveshasana

(UT-ti-tuh PAHRSH-vuh PUH-duh u-puh-vey-SHAHS-uh-nuh)

Modification: leaning toward the bent leg, one arm straight to the side, fingertips flexed in; other elbow to the side, fingertips to the back of the head
Pose Type: standing, side bend
Drishti Point: Hastagrai or Hastagre (hands)

SIDE LUNGE: SITTING BONES LIFTED—ARMS ABOVE THE HEAD

Extended Leg to the Side Squat Pose

Utthita Parshva Pada Upaveshasana

(UT-ti-tuh PAHRSH-vuh PUH-duh u-puh-vey-SHAHS-uh-nuh)

Modification: side bend toward the straight leg, one arm parallel to the floor, other arm extended to the sky

Pose Type: standing

Drishti Point: Hastagrai or Hastagre (hands)

SIDE LUNGE: SITTING BONES LIFTED—HANDS TO THE FLOOR

Tip Toe Extended Leg to the Side Squat Pose

Prapada Utthita Parshva Pada Upaveshasana

(PRUH-puh-duh UT-ti-tuh PAHRSH-vuh PUH-duh u-puh-vey-SHAHS-uh-nuh)

Modification: one palm to the floor

Pose Type: standing, forward bend

Drishti Point: Hastagrai or Hastagre (hands)

Extended Leg to the Side Squat Pose

Utthita Parshva Pada Upaveshasana

(UT-ti-tuh PAHRSH-vuh PUH-duh u-puh-vey-SHAHS-uh-nuh)

Modification: both hands to the floor, side bending toward the straight leg
Pose Type: standing, forward bend, side bend
Drishti Point: Hastagrai or Hastagre (hands)

Intense Ankle Stretch Extended Leg to the Side Squat Pose

Uttana Kulpa Utthita Parshva Pada Upaveshasana

(ut-TAH-nuh kul-puh UT-ti-tuh PAHRSH-vuh PUH-duh u-puh-vey-SHAHS-uh-nuh)

Modification: both palms to the floor, arms crossed
Pose Type: standing, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

SIDE LUNGE: SITTING BONES ON THE FLOOR

Lotus Hand Seal Extended Leg to the Side Squat Pose

Padma Mudra Utthita Parshva Pada Upaveshasana

(PUHD-muh MU-druh UT-ti-tuh PAHRSH-vuh PUH-duh u-puh-vey-SHAHS-uh-nuh)

Modification: forward bend, forehead to the floor, arms extended in front
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Uneven Arms Extended Leg to the Side Squat Pose

Vishama Hasta Utthita Parshva Pada Upaveshasana

(VISH-uh-muh HUH-stuh UT-ti-tuh PAHRSH-vuh PUH-duh u-puh-vey-SHAHS-uh-nuh)

Modification: forward bend, one forearm to the floor, other hand to the face
Pose Type: standing, seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Revolved Extended Leg to the Side Squat Pose 1

Parivritta Utthita Parshva Pada Upaveshasana 1

(puh-ri-VRIT-tuh UT-ti-tuh PAHRSH-vuh PUH-duh u-puh-vey-SHAHS-uh-nuh)

Modification: both hands to the foot of the straight leg

Pose Type: standing, seated, forward bend, side bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Extended Leg to the Side Squat Pose 2

Parivritta Utthita Parshva Pada Upaveshasana 2

(puh-ri-VRIT-tuh UT-ti-tuh PAHRSH-vuh PUH-duh u-puh-vey-SHAHS-uh-nuh)
Modification: grabbing onto both feet
Pose Type: standing, seated, forward bend, side bend, twist
Drishti Point: Hastagrai or Hastagre (hands), Padayoragrai or Padayoragre (toes/feet)

SIDE LUNGE: SITTING BONES LIFTED—TWISTS AND BINDING

Extended Leg to the Side Squat Pose

Utthita Parshva Pada Upaveshasana

(UT-ti-tuh PAHRSH-vuh PUH-duh u-puh-vey-SHAHS-uh-nuh)
Modification: fingertips to the floor, toes of the straight leg flexed in
Pose Type: standing, forward bend

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Knee to Shoulder Extended Leg to the Side Squat Pose

Janu Bhuja Utthita Parshva Pada Upaveshasana

(JAH-nu BHU-juh UT-ti-tuh PAHRSH-vuh PUH-duh u-puh-vey-SHAHS-uh-nuh)

Modification: toes of the straight leg pointed
Pose Type: standing, forward bend, side bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Bound Extended Leg to the Side Squat Pose

Baddha Utthita Parshva Pada Upaveshasana

(BUH-duh UT-ti-tuh PAHRSH-vuh PUH-duh u-puh-vey-SHAHS-uh-nuh)

Modification: binding around the shin of the bent leg, toes of the straight leg flexed in
Pose Type: standing, side bend, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Half Bound Extended Leg to the Side Squat Pose

Parivritta Ardha Baddha Utthita Parshva Pada Upaveshasana

(puh-ri-VRIT-tuh UHR-duh BUH-duh UT-ti-tuh PAHRSH-vuh PUH-duh u-puh-vey-SHAHS-uh-nuh)

Modification: toes of the straight leg pointed
Pose Type: standing, side bend, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

SIDE LUNGE: SITTING BONE TO THE HEEL—ARMS HIGHER THAN HEAD LEVEL

Extended Leg to the Side Tip Toe Squat Pose

Utthita Parshva Pada Prapada Upaveshasana

(UT-ti-tuh PAHRSH-vuh PUH-duh PRUH-puh-duh u-puh-vey-SHAHS-uh-nuh)

Modification: toes of the straight leg to the floor
Pose Type: standing, forward bend
Drishti Point: Hastagrai or Hastagre (hands)

Extended Leg to the Side Tip Toe Squat Pose

Utthita Parshva Pada Prapada Upaveshasana

(UT-ti-tuh PAHRSH-vuh PUH-duh PRUH-puh-duh u-puh-vey-SHAHS-uh-nuh)

Modification: elbow to the knee of the bent leg, toes of the straight leg to the floor
Pose Type: standing, forward bend
Drishti Point: Hastagrai or Hastagre (hands)

Extended Leg to the Side Tip Toe Squat Pose

Utthita Parshva Pada Prapada Upaveshasana

(UT-ti-tuh PAHRSH-vuh PUH-duh PRUH-puh-duh u-puh-vey-SHAHS-uh-nuh)

Modification: side bend toward the straight leg, one arm parallel to the floor, other arm extended to the sky, toes of the straight leg pointed
Pose Type: standing, side bend
Drishti Point: Hastagrai or Hastagre (hands)

Extended Leg to the Side Tip Toe Squat Pose

Utthita Parshva Pada Prapada Upaveshasana

(UT-ti-tuh PAHRSH-vuh PUH-duh PRUH-puh-duh u-puh-vey-SHAHS-uh-nuh)

Modification: side bend toward the straight leg, arms extended to the side and straight, toes of the straight leg to the floor

Pose Type: standing, side bend

Drishti Point: Hastagrai or Hastagre (hands), Padayoragrai or Padayoragre (toes/feet)

Both Arms Extended Leg to the Side Tip Toe Squat Pose

Dwi Hasta Utthita Parshva Pada Prapada Upaveshasana

(DWI-huh-stuh UT-ti-tuh PAHRSH-vuh PUH-duh PRUH-puh-duh u-puh-vey-SHAHS-uh-nuh)

Modification: side bend toward the bent leg, toes of the straight leg to the floor

Pose Type: standing, side bend

Drishti Point: Urdhva or Antara Drishti (up to the sky)

SIDE LUNGE: SITTING BONE TO THE HEEL—HAND TO THE FLOOR

Extended Leg to the Side Tip Toe Squat Pose

Utthita Parshva Pada Prapada Upaveshasana

(UT-ti-tuh PAHRSH-vuh PUH-duh PRUH-puh-duh u-puh-vey-SHAHS-uh-nuh)

Modification: one hand on the knee, other hand to the floor, toes of the straight leg pointed
Pose Type: standing, forward bend
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Extended Leg to the Side Tip Toe Squat Pose

Utthita Parshva Pada Prapada Upaveshasana

(UT-ti-tuh PAHRSH-vuh PUH-duh PRUH-puh-duh u-puh-vey-SHAHS-uh-nuh)

Modification: one palm to the floor, other arm straight and parallel to the straight leg, toes of the straight leg to the floor
Pose Type: standing
Drishti Point: Padayoragrai or Padayoragre (toes/feet), Hastagrai or Hastagre (hands)

SIDE LUNGE: SITTING BONE TO THE HEEL—1 ARM OVERHEAD, OTHER HAND TO THE FLOOR

Extended Leg to the Side Tip Toe Squat Pose

Utthita Parshva Pada Prapada Upaveshasana

(UT-ti-tuh PAHRSH-vuh PUH-duh PRUH-puh-duh u-puh-vey-SHAHS-uh-nuh)

Modification: side bending toward the bent knee, one hand to the floor, other arm extended up over the head, toes of the straight leg to the floor

Pose Type: standing, side bend

Drishti Point: Hastagrai or Hastagre (hands)

Extended Leg to the Side Tip Toe Squat Pose

Utthita Parshva Pada Prapada Upaveshasana

(UT-ti-tuh PAHRSH-vuh PUH-duh PRUH-puh-duh u-puh-vey-SHAHS-uh-nuh)

Modification: side bending toward the straight leg, one hand to the floor, other arm extended up over the head, toes of the straight leg to the floor

Pose Type: standing, side bend

Drishti Point: Hastagrai or Hastagre (hands)

SIDE LUNGE: SITTING BONE TO THE HEEL—TWISTS & BINDING

Revolved Extended Leg to the Side Tip Toe Squat Pose with Hands in Prayer

Parivritta Utthita Parshva Pada Prapada Upaveshasana Namaskar

(puh-ri-VRIT-tuh UT-ti-tuh PAHRSH-vuh PUH-duh PRUH-puh-duh u-puh-vey-SHAHS-uh-nuh nuh-muhs-KAHR)

Modification: toes of the straight leg to the floor
Pose Type: standing, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Bound Extended Leg to the Side Tip Toe Squat Pose

Parivritta Baddha Utthita Parshva Pada Prapada Upaveshasana

(puh-ri-VRIT-tuh BUH-duh UT-ti-tuh PAHRSH-vuh PUH-duh PRUH-puh-duh u-puh-vey-SHAHS-uh-nuh)

Modification: toes of the straight leg to the floor
1. knee on the floor

2. knee off the floor
Pose Type: standing, twist, binding
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

CHAIR SQUAT: HIGH STANCE

Fierce Pose

Utkatasana

(OOT-kuh-TAHS-uh-nuh)
Also Known As: Chair Pose
Modification: palms pressed together, high squat
Pose Type: standing, mild backbend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Fierce Pose

Utkatasana

(OOT-kuh-TAHS-uh-nuh)

Also Known As: Chair Pose
Modification: hands shoulder width apart, low squat
Pose Type: standing
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

CHAIR SQUAT: HIGH STANCE—HANDS TO THE FLOOR

Wagtail Bird Pose Prep.

Khanjanasana Prep.

(kuhn-juh-NAHS-uh-nuh)

Modification: hands to the floor, palms facing up, feet together
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye/Ajna Chakra (third eye, between the eyebrows)

Intense Wrist Stretch Fierce Pose

Uttana Manibandha Utkatasana

(ut-TAH-nuh muh-ni-BUHN-duh OOT-kuh-TAHS-uh-nuh)

Also Known As: Intense Wrist Stretch Chair Pose
Modification: palms to the floor, fingertips facing the toes
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Wagtail Bird Pose

Khanjanasana

(kuhn-juh-NAHS-uh-nuh)

Also Known As: Shoulder Pressure Pose Prep. (Bhujapidasana Prep.)
Modification: shoulders to the back of the knees, fingertips to the heel
Pose Type: standing, forward bend
Drishti Point: Bhrumadhye/Ajna Chakra (third eye, between the eyebrows)

Intense Wrist Stretch Half Bound

Fierce Pose

Uttana Manibandha Ardha Baddha Utkatasana

(ut-TAH-nuh muh-ni-BUHN-duh UHR-duh OOT-kuh-TAHS-uh-nuh)

Also Known As: Intense Wrist Stretch Half Bound Chair Pose

Pose Type: standing, forward bend, binding

Drishti Point: Hastagrai or Hastagrahe (hands)

How to Perform the Pose:

1. Begin by standing in Mountain Pose (*Tadasana*). Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Exhale, bend your knees until your thighs are parallel to the floor, and drop both your hands to the floor. Rest your torso on top of your thighs.
3. Inhale as you externally rotate your right arm to point the fingertips of your right hand toward your feet.
4. On your next inhale, bring your left arm behind your back and your left hand to the inside of your right thigh. Try to seal the gap between your ribcage and your elbow.
5. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch.
6. Exhale as you release your left arm and bring your left hand to the floor. Repeat on the right side.

Modification: hand to the floor, fingertips pointing toward the toes

ut = intense

tan = to stretch, to extend

manibandha = wrist

ardha = half

baddha = bound

utkata = fierce

Elephant Old Form

Gaja Vadivu

(GUH-juh vah-dee-vuh)

Pose Type: standing, forward bend

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Hand Position of the Pose Dedicated to Garuda in Half Intense Stretch Pose

Hasta Garudasana in Ardha Uttanasana

(HUH-stuh guh-ru-DAHS-uh-nuh in UHR-duh ut-tahn-AHS-uh-nuh)

Also Known As: Hand Position of the Pose Dedicated to Garuda in Half Forward Bend

Modification: knees bent, feet hip width apart

Pose Type: standing, forward bend

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Hands Bound Ear Pressure Fierce Pose

Baddha Hasta Karnapida Utkatasana

(BUH-duh HUH-stuh kahr-nuh-PEE-duh ut-kuh-TAHS-uh-nuh)

Also Known As: Hands Bound Ear Pressure Chair Pose
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Hands Bound Revolved Fierce Pose

Baddha Hasta Parivritta Utkatasana

(Buh-duh HUH-stuh puh-ri-VRIT-tuh ut-kuh-TAHS-uh-nuh)

Also Known As: Hands Bound Revolved Chair Pose
Pose Type: standing, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

CHAIR SQUAT: HIGH STANCE—TWIST, ONE HAND TO THE FLOOR

Intense Wrist Stretch Revolved Half Bound Pose Dedicated to Yogi Shankara

Uttana Manibandha Parivritta Ardha Baddha Shankarasana

(ut-TAHN-uh muh-ni-BUHN-duh puh-ri-VRIT-tuh UHR-duh BUH-duh shuhng-kuhr-AHS-uh-nuh)

Pose Type: standing, forward bend, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Pose Dedicated to Yogi Shankara

Parivritta Sankarasana

(puh-ri-VRIT-tuh shuhng-kuhr-AHS-uh-nuh)

Pose Type: standing, forward bend, side bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

CHAIR SQUAT: HIGH STANCE—TWIST AND ELBOW OVER THE KNEE

Revolved Fierce Pose

Parivritta Utkatasana

(puh-ri-VRIT-tuh ut-kuh-TAHS-uh-nuh)

Also Known As: Revolved Chair Pose
Modification: feet wide apart, hands in Anjali Mudra (Hands in Prayer)
Pose Type: standing, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Fierce Pose

Parivritta Utkatasana

(puh-ri-VRIT-tuh ut-kuh-TAHS-uh-nuh)

Also Known As: Revolved Chair Pose
Modification: feet together, hands in Anjali Mudra (Hands in Prayer)
Pose Type: standing, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Fierce Pose

Parivritta Utkatasana

(puh-ri-VRIT-tuh ut-kuh-TAHS-uh-nuh)

Also Known As: Revolved Chair Pose
Modification: hands behind the head
Pose Type: standing, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Fierce Pose

Parivritta Utkatasana

(puh-ri-VRIT-tuh ut-kuh-TAHS-uh-nuh)

Also Known As: Revolved Chair Pose
Modification: arm wrapped under the knee, hands in Anjali Mudra (Hands in Prayer)
Pose Type: standing, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

One Hand Bound Revolved Fierce Pose

Eka Hasta Baddha Parivritta Utkatasana

(EY-kuh HUH-stuh BUH-duh puh-ri-VRIT-tuh ut-kuh-TAHS-uh-nuh)

Also Known As: One Hand Bound Revolved Chair Pose
Modification: 1. one hand to the heart
2. hand grabbing onto the biceps, other elbow over the opposite knee
Pose Type: standing, forward bend, twist, binding
Drishti Point: 1. Urdhva or Antara Drishti (up to the sky)
2. Padhayoragrai or Padayoragre (toes/feet)

Revolved One Leg Bound Fierce Pose

Parivritta Eka Pada Baddha Utkatasana

(puh-ri-VRIT-tuh EY-kuh PUH-duh BUH-duh ut-kuh-TAHS-uh-nuh)

Also Known As: Revolved One Leg Bound Chair Pose
Pose Type: standing, forward bend, twist, binding
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Revolved One Leg Bound Fierce Pose

Parivritta Eka Pada Baddha Utkatasana

(puh-ri-VRIT-tuh EY-kuh PUH-duh BUH-duh ut-kuh-TAHS-uh-nuh)

Also Known As: Revolved One Leg Bound Chair Pose
Modification: binding around one leg, hands bound overhead
Pose Type: standing, forward bend, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Both Legs Bound Fierce Pose

Parivritta Dwi Pada Baddha Utkatasana

(puh-ri-VRIT-tuh DWI-puh-duh BUH-duh ut-kuh-TAHS-uh-nuh)

Also Known As: Revolved Both Legs Bound Chair Pose
Pose Type: standing, forward bend, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

CHAIR SQUAT: HIGH STANCE HEELS UP—CHEST AWAY FROM QUADRICEPS

Tip Toe Fierce Pose 1

Prapada Utkatasana 1

(PRUH-puh-duh ut-kuh-TAHSuh-nuh)

Also Known As: Tip Toe Chair Pose 1
Modification: arms up over the head, fingers interlocked
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Tip Toe Fierce Pose 3

Prapada Utkatasana 3

(PRUH-puh-duh ut-kuh-TAHSuh-nuh)

Also Known As: Tip Toe Chair Pose 3
Modification: both elbows bent, one arm up in front, one arm down to the back
Pose Type: standing, forward bend
Drishti Point: Hastagrai or Hastagre (hands)

CHAIR SQUAT: HIGH STANCE HEELS UP—KNEES TO THE ARMPITS, VARIOUS HAND POSITIONS TO THE FLOOR

Crane Pose Prep.

Bakasana Prep.

(buhk-AHS-uh-nuh)

Modification: hands to the floor in front of the feet

1. fingertips to the floor
2. palms flat to the floor, arms shoulder width apart, fingertips pointing away from the head

Pose Type: standing, forward bend

Drishti Point: Hastagrai or Hastagre (hands), Nasagrai or Nasagre (nose)

Tip Toe Fierce Pose

Prapada Utkatasana

(PRUH-puh-duh ut-kuh-TAHS-uh-nuh)

Also Known As: Awkward Pose (Utkatasana)
Modification: arms out in front and parallel to the floor, sitting bones lifted off the heels
Pose Type: standing
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Tip Toe Fierce Pose 2

Prapada Utkatasana 2

(PRUH-puh-duh ut-kuh-TAHS-uh-nuh)

Also Known As: Tip Toe Chair Pose 2 and Tip Toe Diver's Pose
Modification: arms extended to the back, chest to the quadriceps, palms facing down
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Head to Knees Tip Toe Fierce Pose 2

Janu Shirsha Prapada Utkatasana 2

(JAH-nu SHEER-shuh PRUH-puh-duh ut-kuh-TAHS-uh-nuh)

Also Known As: Head to Knees Tip Toe Chair Pose 2 and Head to Knees Tip Toe Diver's Pose
Modification: knees together, arms straight out to the sides, forehead to the knees
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

CHAIR SQUAT: HIGH STANCE HEELS UP—BACK OF THE KNEE OVER THE SHOULDER

Unsupported Tip Toe Wagtail Pose 1

Niralamba Prapada Khanjanasana 1

(nir-ah-LUHM-buh PRUH-puh-duh kuhn-juh-NAHS-uh-nuh)

Modification: elbows bent, hands reaching to the front
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Unsupported Bound Tip Toe Wagtail Pose

Niralamba Baddha Prapada Khanjanasana

(nir-ah-LUHM-buh BUH-duh PRUH-puh-duh kuhn-juh-NAHS-uh-nuh)

Pose Type: standing, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

Supported Tip Toe Wagtail Pose

Salamba Prapada Khanjanasana

(sah-LUHM-buh PRUH-puh-duh kuhn-juh-NAHS-uh-nuh)

Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Unsupported Tip Toe Wagtail Pose 2

Niralamba Prapada Khanjanasana 2

(nirsah-LUHM-buh PRUH-puh-duh kuhn-juh-NAHS-uh-nuh)

Modification: fingertips reaching away from the head, palms pressed together, high stance
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

CHAIR SQUAT: HIGH STANCE—BALLET TOES FROM CHEST HIGH TO LOW—ARMS APART TO ARMS TOGETHER IN FRONT AND BACK

Intense Ankle Stretch Tip Toe Fierce Pose 3

Uttana Kulpa Prapada Utkatasana 3

(ut-TAH-nuh KUL-puh PRUH-puh-duh ut-kuh-TAHS-uh-nuh)

Also Known As: Intense Ankle Stretch Tip Toe Chair Pose 3
Modification: both elbows bent, one arm up in front, one arm down to the back
Pose Type: standing, balance
Drishti Point: Hastagrai or Hastagre (hands)

Revolved Intense Ankle Stretch Tip Toe Uneven Legs Half Intense Stretch Pose

Parivritta Uttana Kulpa Prapada Vishama Pada Ardha Uttanasana

(puh-ri-VRIT-tuh ut-TAH-nuh KUL-puh PRUH-puh-duh VISH-uh-muh PUH-duh UHR_duh ut-tahn-AHS-uh-nuh)

Also Known As: Revolved Intense Ankle Stretch Tip Toe Uneven Legs Half Forward Bend
Modification: fingertips off the floor
Pose Type: standing, balance, forward bend, twist
Drishti Point: Hastagrai or Hastagre (hands)

Intense Ankle Stretch Tip Toe Fierce Pose Prep.

Uttana Kulpa Prapada Utkatasana Prep.

(ut-TAH-nuh KUL-puh PRUH-puh-duh ut-kuh-TAHS-uh-nuh)

Also Known As: Intense Ankle Stretch Tip Toe Chair Pose Prep.
Modification: fingertips to the floor
Pose Type: standing, forward bend
Drishti Point: Hastagrai or Hastagre (hands)

Intense Ankle Stretch Tip Toe Fierce Pose 2

Uttana Kulpa Prapada Utkatasana 2

(ut-TAH-nuh KUL-puh PRUH-puh-duh ut-kuh-TAHS-uh-nuh)

Also Known As: Intense Ankle Stretch Tip Toe Chair Pose 2 and Intense Ankle Stretch Tip Toe Diver's Pose
Modification: arms extended to the back, chest to the quadriceps
Pose Type: standing, balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

CHAIR SQUAT: HIGH STANCE HEELS UP—ANKLES CROSSED, HANDS TO THE FLOOR

Revolved Tip Toe Pose

Parivritta Prapadasana

(puh-ri-VRIT-tuh pruh-puh-DAHS-uh-nuh)

Modification: ankles crossed, one arm to the back, other hand toward the floor in front of the feet
Pose Type: standing, forward bend, twist
Drishti Point: Hastagrai or Hastagre (hands)

Tip Toe Pose

Prapadasana

(pruh-puh-DAHS-uh-nuh)

Modification: ankles crossed, arms crossed, fingertips to the floor in front of the feet
Pose Type: standing, forward bend
Drishti Point: Hastagrai or Hastagre (hands)

Pendant Pose Prep.

Lolasana Prep.

(lo-LAHS-uh-nuh)

Modification: ankles crossed
Pose Type: standing, forward bend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs), Nasagrai or Nasagre (nose)

SQUAT: HEELS UP—LEGS CROSSED

Easy Leg Position of the Pose Dedicated to Garuda in Yoga Squat with Hands in Prayer

Sukha Pada Garudasana in Upaveshasana Namaskar

(SUK-kuh PUH-duh guh-ru-DAHS-uh-nuh in u-puh-veysh-AHS-uh-nuh nuh-muhs-KAHR)

Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Hastagrai or Hastagrahe (hands)

Easy Leg Position and Complete Arm Position of the Pose Dedicated to Garuda in Yoga Squat

Sukha Pada Paripurna Hasta Garudasana in Upaveshasana

(SUK-kuh PUH-duh puh-ri-POOR-nuh HUH-stuh guh-ru-DAHS-uh-nuh in u-puh-veysh-AHS-uh-nuh)

Pose Type: standing, forward bend

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Revolved Easy Leg Position of the Pose Dedicated to Garuda in Yoga Squat

Parivritta Sukha Pada Garudasana in Upaveshasana

(puh-ri-VRIT-tuh SUK-kuh PUH-duh guh-ru-DAHS-uh-nuh in u-puh-veysh-AHS-uh-nuh)

Modification: both knees off the floor, arms open wide and straight

Pose Type: standing, forward bend, twist

Drishti Point: Hastagrai or Hastagrahe (hands)

Revolved Easy Leg Position of the Pose Dedicated to Garuda in Yoga Squat

Parivritta Sukha Pada Garudasana in Upaveshasana

(puh-ri-VRIT-tuh SUK-kuh PUH-duh guh-ru-DAHS-uh-nuh in u-puh-veysh-AHS-uh-nuh)

Modification: bottom knee on the floor, arms open wide and straight
Pose Type: standing, forward bend, twist
Drishti Point: Hastagrai or Hastagrahe (hands)

Revolved Easy Leg Position of the Pose Dedicated to Garuda in Yoga Squat

Parivritta Sukha Pada Garudasana in Upaveshasana

(puh-ri-VRIT-tuh SUK-kuh PUH-duh guh-ru-DAHS-uh-nuh in u-puh-veysh-AHS-uh-nuh)

Modification: elbow over the opposite knee, other arm straight out to the side
Pose Type: standing, forward bend, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

SQUAT: HEELS UP—KNEES APART

Hand Position of the Pose Dedicated to Garuda in Half Tip Toe Hero Pose

Hasta Garudasana in Ardha Prapada Virasana

(HUH-stuh guh-ru-DAHS-uh-nuh in UHR-duh PRUH-puh-duh veer-AHS-uh-nuh)

Modification: one knee on the floor, one foot to the floor on the inside of the knee
Pose Type: standing, forward bend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Half Bound Hand to Foot Uneven Tip Toe Pose

Ardha Baddha Hasta Pada Vishama Prapadasana

(UHR-duh BUH-duh HUH-stuh PUH-duh VISH-uh-muh pruh-puh-DAHS-uh-nuh)

Modification: one hand crossed in front, grabbing onto the heel; other hand to the inner thigh on the opposite side
Pose Type: standing, forward bend, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Hand Position of the Pose Dedicated to Garuda in Half Lotus Tip Toe Pose

Hasta Garudasana in Ardha Padma Prapadasana

(HUH-stuh guh-ru-DAHS-uh-nuh in UHR-duh PUHD-muh pruh-puh-DAHS-uh-nuh)

Modification: 1. Both knees on the floor
2. One knee on the floor

Pose Type: standing

Drishti Point: 1. Angusthamadhye or Angustha Ma Dyai (thumbs)
2. Nasagrai or Nasagre (nose)

Tip Toe Pose

Prapadasana

(pruh-puh-DAHS-uh-nuh)

Also Known As: Noose Pose Prep. (Pasasana Prep.)
Modification: 1. fingertips to the floor on the outside of the knees
2. one hand to the heart, other hand to the floor
3. hands on the hips
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Hands Bound Tip Toe Pose

Baddha Hasta Prapadasana

(BUH-duh HUH-stuh pruh-puh-DAHS-uh-nuh)

Modification: arms straight out in front, palms facing out, chest to the quadriceps
Pose Type: standing, forward bend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Tip Toe Pose with Hands in Prayer

Prapadasana Namaskar

(pruh-puh-DAHS-uh-nuh nuh-muhs-KAHR)

Modification: knees together, chest to the quadriceps
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

SQUAT: HEELS UP—KNEES TOGETHER—ARMS HEAD LEVEL OR ABOVE HEAD

Tip Toe Pose

Prapadasana

(pruh-puh-DAHS-uh-nuh)

Also Known As: Garland Pose Prep. (Malasana Prep.), Full Squat Pose (Purna Utkatasana)
Modification: 1. arms straight out in front and parallel to the floor
2. arms up over the head, palms pressed together, elbows bent
Pose Type: standing
Drishti Point: Hastagrai or Hastagre (hands)
Drishti Point: 1. Hastagrai or Hastagrahe (hands)
2. Nasagrai or Nasagre (nose)

Half Bound Tip Toe Pose

Ardha Baddha Prapadasana

(UHR-duh BUH-duh pruh-puh-DAHS-uh-nuh)

Modification: one hand binding to the opposite hip behind the back, other arm straight and extended out to the side
Pose Type: standing, binding
Drishti Point: Nasagrai or Nasagre (nose)

SQUAT: HEELS UP—KNEES TOGETHER—KNEES SHOULDER LEVEL

Seated Tip Toe Pose

Upavishta Prapadasana

(u-puh-VISH-tuh pruh-puh-DAHS-uh-nuh)

Also Known As: Crouching Tip Toe Pose; Upavistha Prapadasana
Modification: elbows resting on the knees, fingers interlocked in front of the face
Pose Type: standing, forward bend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Hands Bound Seated Tip Toe Pose

Baddha Hasta Upavishta Prapadasana

(BUH-duh HUH-stuh u-puh-VISH-tuh pruh-puh-DAHS-uh-nuh)

Also Known As: Hands Bound Crouching Tip Toe Pose; Baddha Hasta Upavistha Prapadasana
Modification: arms away from the body
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Knees to the Shoulders Seated Tip Toe Pose

Janu Bhuja Upavishta Prapadasana

(JAH-nu BHU-juh u-puh-VISH-tuh pruh-puh-DAHS-uh-nuh)

Also Known As: Knees to the Shoulders Crouching Tip Toe Pose; Janu Bhuja Upavistha Prapadasana
Modification: 1. palms together to the floor
2. palms apart and to the floor, elbows bent
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Supported Seated Tip Toe Pose

Salamba Upavishta Prapadasana

(sah-LUHM-buh u-puh-VISH-tuh pruh-puh-DAHS-uh-nuh)

Also Known As: Supported Crouching Tip Toe Pose; Salamba Upavistha Prapadasana
Modification: fingertips to the floor in front of the feet
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Supported/Unsupported Intense Ankle Stretch Seated Tip Toe Pose

Salamba/Niralamba Uttana Kulpa Upavishta Prapadasana

(sah-LUHM-buh-/nir-ah-LUHM-buh ut-TAHN-uh KUL-puh u-puh-VISH-tuh pruh-puh-DAHS-uh-nuh)

Also Known As: Supported/Unsupported Intense Ankle Stretch Crouching Tip Toe Pose; Salamba/Niralamba Uttana Kulpa Upavistha Prapadasana
Modification: 1. hands to the floor by the hips
2. arms wrapped around the shins, grabbing onto the triceps
Pose Type: 1. standing, forward bend
2. standing, balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

SQUAT: HEELS UP—TWISTS

Tip Toe Easy Noose Pose Prep.

Prapada Sukha Pashasana Prep.

(PRUH-puh-duh SUK-kuh puh-SHAHS-uh-nuh)

Modification: elbow on the inside of the thigh, arms open wide
Pose Type: standing, twist
Drishti Point: Hastagrai or Hastagre (hands)

Uneven Legs One Hand to Foot Noose Pose

Vishama Pada Eka Hasta Pada Pashasana

(VISH-uh-muh PUH-duh EY-kuh HUH-stuh PUH-duh puh-SHAS-uh-nuh)

Modification: one heel up, one heel down
Pose Type: standing, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Extended Side Tip Toe Noose Pose

Utthita Parshva Prapada Pashasana

(UT-ti-tuh PAHRSH-vuh PRUH-puh-duh puh-SHAHS-uh-nuh)

Modification: one hand to the floor, other arm extended up over the head
Pose Type: standing, forward bend, twist
Drishti Point: Hastagrai or Hastagre (hands)

Tip Toe Noose Pose with Hands in Prayer

Prapada Pashasana Namaskar

(PRUH-puh-duh puh-SHAHS-uh-nuh nuh-muhs-KAHR)

Pose Type: standing, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

One Hand to the Foot Tip Toe Noose Pose

Eka Hasta Pada Prapada Pashasana

(EY-kuh HUH-stuh PUH-duh PRUH-puh-duh puh-SHAHS-uh-nuh)

Modification: one hand to the opposite heel, other hand binding to the opposite hip behind the back

1. right side view
2. left side view

Pose Type: standing, twist, binding

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Tip Toe Noose Pose Prep.

Prapada Pashasana Prep.

(PRUH-puh-duh puh-SHAHS-uh-nuh)

Modification: 1. binding around one leg with a strap
2. binding around one leg without a strap

Pose Type: standing, twist, binding

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Tip Toe Noose Pose

Prapada Pashasana

(PRUH-puh-duh puh-SHAHS-uh-nuh)

Modification: binding around both legs

Pose Type: standing, forward bend, twist, binding

Drishti Point: Nasagrai or Nasagre (nose)

SQUAT: HEELS DOWN—ARMS BELOW HEAD

Intense Wrist Stretch Garland Pose Prep.

Uttana Manibandha Malasana Prep.

(ut-TAH-nuh muh-ni-BUHN-duh mah-LAHS-uh-nuh)

Modification: heels down, knees together, palms to the floor, fingers facing the toes, chest to the quadriceps

Pose Type: standing, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Garland Pose with Hands in Prayer Prep.

Malasana Namaskar Prep.

(mah-LAHS-uh-nuh nuh-muhs-KAHR)

Modification: heels down

Pose Type: standing, forward bend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Garland Pose Prep.

Malasana Prep.

(mah-LAHS-uh-nuh)

Also Known As: Full Squat Pose (Purna Utkatasana)
Modification: knees together, heels down; arms straight out to the front, palms down
Pose Type: standing, forward bend
Drishti Point: Hastagrai or Hastagre (hands)

Arms Spread Out Garland Pose Prep.

Prasarita Hasta Malasana Prep.

(pruh-SAH-ri-tuh HUH-stuh mah-LAHS-uh-nuh)

Also Known As: Full Squat Pose (Purna Utkatasana), Flying Bird Pose (Khagasana)
Modification: knees together, heels down, arms straight out to the side
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

SQUAT: HEELS DOWN—ARMS ABOVE HEAD

Upward Hands Garland Pose Prep.

Urdhva Hasta Malasana Prep.

(OORD-vuh HUH-stuh mah-LAHS-uh-nuh)

Also Known As: Full Squat Pose (Purna Utkatasana)
Modification: knees together, hands to the sky
Pose Type: standing, forward bend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Easy Noose Pose

Sukha Pashasana

(SUK-kuh puh-SHAHS-uh-nuh)

Also Known As: Revolved Yoga Squat (Parivritta Upaveshasana)
Modification: heels down, shoulder between the knees, one palm flat on the floor, other arm straight out to the back
Pose Type: standing, forward bend, twist
Drishti Point: Hastagrai or Hastagre (hands)

Extended Side Noose Pose

Utthita Parshva Pashasana

(UT-ti-tuh PAHRSH-vuh puh-SHAHS-uh-nuh)

Modification: heels down, one hand to the floor, other arm extended up over the head
Pose Type: standing, forward bend, twist
Drishti Point: Hastagrai or Hastagre (hands)

SQUAT: HEELS DOWN—TWISTS

Noose Pose with Hands in Prayer

Pashasana Namaskar

(puh-SHAHS-uh-nuh nuh-muhs-KAHR)

Modification: heels down
Pose Type: standing, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Half Bound Noose Pose

Ardha Baddha Pashasana

(UHR-duh BUH-duh puh-SHAHS-uh-nuh)

Modification: heels down
Pose Type: standing, forward bend, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Noose Pose

Pashasana

(puh-SHAHS-uh-nuh)

Modification: heels down, binding with a strap
1. binding around one leg
2. binding around both legs

Pose Type: standing, forward bend, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Noose Pose

Pashasana

(puh-SHAHS-uh-nuh)

Modification: heels down, binding around both legs

1. side view
2. front view

Pose Type: standing, forward bend, twist, binding

Drishti Point: Urdhva or Antara Drishti (up to the sky)

ONE-LEGGED SQUAT: FOOT TO KNEE

One-Legged Tip Toe Pose

Eka Pada Prapadasana

(EY-kuh PUH-duh pruh-puh-DAHS-uh-nuh)

Also Known As: Half Bound Lotus Tip Toe Pose Prep. (Ardha Baddha Padma Padangushtasana Prep.)

Modification: 1. both hands to the floor on the sides

2. hands in Anjali Mudra (Hands in Prayer)

Pose Type: standing one-legged balance

Drishti Point: Nasagrai or Nasagre (nose)

One-Legged Tip Toe Pose

Eka Pada Prapadasana

(EY-kuh PUH-duh pruh-puh-DAHS-uh-nuh)

Also Known As: Half Bound Lotus Tip Toe Pose Prep. (Ardha Baddha Padma Padangushtasana Prep.)

Modification: 1. one hand on the hip, other hand to the floor

2. one hand on the hip, one arm up over the head

Pose Type: standing one-legged balance

Drishti Point: Nasagrai or Nasagre (nose)

Baby Cradle Pose with Hands in Prayer in One-Legged Garland Pose

Hindolasana Namaskar in Eka Pada Malasana

(hin-do-LAHS-uh-nuh EY-kuh PUH-duh mah-LAHS-uh-nuh)

Also Known As: Baby Cradle Pose with Hands in Prayer in One-Legged Yoga Squat (Hindolasana Namaskar in Eka Pada Upavesashana)

Pose Type: standing one-legged balance, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Baby Cradle Pose in One-Legged Tip Toe Pose 1

Hindolasana in Eka Pada Prapadasana 1

(hin-do-LAHS-uh-nuh in EY-kuh PUH-duh pruh-puh-DAHS-uh-nuh)

Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Half Yogic Staff Pose Prep. in One-Legged Tip Toe Pose

Ardha Yogadandasana Prep. in Eka Pada Prapadasana

(UHR-duh yo-guh-duhn-DAHS-uh-nuh in EY-kuh PUH-duh pruh-puh-DAHS-uh-nuh)

Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

ONE-LEGGED SQUAT: FOOT UNDER THE KNEE

Baby Cradle Pose in One-Legged Tip Toe Pose 2

Hindolasana in Eka Pada Prapadasana 2

(hin-do-LAHS-uh-nuh in EY-kuh PUH-duh pruh-puh-DAHS-uh-nuh)

Pose Type: standing one-legged balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Supported Revolved One-Legged Tip Toe Pose

Salamba Parivritta Eka Pada Prapadasana

(sah-LUHM-buh puh-ri-VRIT-tuh EY-kuh PUH-duh pruh-puh-DAHS-uh-nuh)

Modification: foot under the knee
Pose Type: standing one-legged balance, forward bend, twist
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

ONE-LEGGED SQUAT: FOOT TO KNEE & ONE KNEE OVER THE SHOULDER

Tip Toe Lord of the Fishes Pose

Prapada Matsyendrasana

(PRUH-puh-duh muhts-y-eyn-DRAHS-uh-nuh)

Pose Type: standing one-legged balance, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Supported One-Legged Tip Toe Pose

Salamba Eka Pada Prapadasana

(sah-LUHM-buh EY-kuh PUH-duh pruh-puh-DAHS-uh-nuh)

Modification: leg wrapped around the tricep, fingertips to the floor
Pose Type: standing one-legged balance
Drishti Point: Nasagrai or Nasagre (nose)

Supported One-Legged Tip Toe Pose

Salamba Eka Pada Prapadasana

(sah-LUHM-buh EY-kuh PUH-duh pruh-puh-DAHS-uh-nuh)

Modification: hands to the floor, shoulder to the back of the knee, other foot wrapped around the forearm

Pose Type: standing one-legged balance, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

ONE-LEGGED SQUAT: HALF LOTUS

Half Bound Lotus Tip Toe Pose

Ardha Baddha Padma Prapadasana

(UHR-duh BUH-duh PUHD-muh pruh-puh-DAHS-uh-nuh)

Also Known As: Half Bound Lotus Tip Toe Pose (Ardha Baddha Padma Padangushtasana)

Modification: 1. fingertips to the floor, other hand to the heart

2. binding, other hand to the heart

3. binding, other arm out to the side, parallel to the floor

Pose Type: 1. standing one-legged balance

2 & 3. standing one-legged balance, binding
Drishti Point: Nasagrai or Nasagre (nose)

Hand Position of the Pose Dedicated to Garuda in Half Lotus Tip Toe Pose

Hasta Garudasana in Ardha Padma Prapadasana

(HUH-stuh guh-ru-DAHS-uh-nuh in UHR-duh-PUHD-muh pruh-puh-DAHS-uh-nuh)
Modification: knee on the floor, forward bend
Pose Type: standing one-legged balance, forward bend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

ONE-LEGGED SQUAT: HALF LOTUS—HEEL DOWN

Half Lotus One-Legged Garland Pose

Ardha Padma Eka Pada Malasana

(UHR-duh PUHD-muh EY-kuh PUH-duh mah-LAHS-uh-nuh)

Also Known As: Half Lotus One-Legged Yoga Squat (Ardha Padma Eka Pada Upaveshasana)
Modification: arms parallel to the floor
Pose Type: standing one-legged balance
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Half Lotus Bound One-Legged Garland Pose

Ardha Padma Baddha Eka Pada Malasana

(UHR-duh PUHD-muh BUH-duh EY-kuh PUH-duh mah-LAHS-uh-nuh)

Also Known As: Half Lotus Bound One-Legged Yoga Squat (Ardha Padma Baddha Eka Pada Upavesasana)
Pose Type: standing one-legged balance, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

ONE-LEGGED SQUAT: ONE LEG STRAIGHT—HEEL UP & DOWN

Hand to Foot Pose Squatting Prep.

Hasta Padasana Prep.

(HUH-stuh puh-DAHS-uh-nuh)

Modification: leg straight and lifted off the floor, arms parallel to the floor
Pose Type: standing one-legged balance
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Hands to Foot Squatting Pose 1

Hasta Padasana 1

(HUH-stuh puh-DAHS-uh-nuh)

Also Known As: Pose Dedicated to Sage Marichi Modification (Marichyasana Modification)
Modification: both hands to the foot, heel down
Pose Type: standing one-legged balance
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Drishti Point: Nasagrai or Nasagre (nose) or Padhayoragrai or Padayoragre (toes/feet)

Revolved Supported Hand to Foot Pose Squatting

Parivritta Salamba Hasta Padasana

(puh-ri-VRIT-tuh SAH-luhm-buh HUH-stuh puh-DAHS-uh-nuh)

Modification: one hand to the floor
Pose Type: standing one-legged balance, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Hand to Foot to the Side Tip Toe Pose

Hasta Pada Parshva Prapadasana

(HUH-stuh PUH-duh PAHRSH-vuh pruh-puh-DAHS-uh-nuh)

Pose Type: standing one-legged balance
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Sundial Pose in One-Legged Garland Pose

Surya Yantrasana in Eka Pada Malasana

(SOOR-yuh yuhn-TRAHS-uh-nuh in EY-kuh PUH-duh mah-LAHS-uh-nuh)

Also Known As: Sundial Pose in One-Legged Yoga Squat (Surya Yantrasana in Eka Pada Upavesasana)

Pose Type: standing one-legged balance, forward bend, twist

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Extended Hand to Big Toe Pose in Half Tip Toe Hero Pose

Utthita Hasta Padangushtasana in Ardha Prapada Virasana

(UT-ti-tuh HUH-stuh puhd-ahng-goosh-TAHS-uh-nuh in UHR-duh PRUH-puh-duh veer-AHS-uh-nuh)

Pose Type: standing one-legged balance, forward bend

Drishti Point: Padayoragrai or Padayoragre (toes/feet)

ONE-LEGGED SQUAT: ONE LEG STRAIGHT—HEEL DOWN

Baby Grasshopper Pose

Bala Shalabhasana

(BUH-luh shuh-luh-BAHS-uh-nuh)

Also Known As: Baby Locust Pose
Modification: chest facing the floor, forearm on the floor
Pose Type: standing one-legged balance, forward bend, twist
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Hand to Foot Pose 2

Hasta Padasana 2

(HUH-stuh puh-DAHS-uh-nuh)

Modification: leg crossed over, one hand to the foot, other hand to the heart
Pose Type: standing one-legged balance, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet), Angushtamadhye or Angushta Ma Dyai (thumbs)

ONE-LEGGED SQUAT: LEG BEHIND THE HEAD

Supported One Foot Behind the Head Tip Toe Pose Prep. 1

Salamba Eka Pada Shirsha Prapadasana Prep. 1

(SAH-luhm-buh EY-kuh PUH-duh SHEER-shuh pruh-puh-DAHS-uh-nuh)

Modification: heel up, sitting bones lifted
Pose Type: standing one-legged balance, forward bend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Supported One Foot Behind the Head Tip Toe Pose Prep. 2

Salamba Eka Pada Shirsha Prapadasana Prep. 2

(SAH-luhm-buh EY-kuh PUH-duh SHEER-shuh pruh-puh-DAHS-uh-nuh)

Modification: hands to the floor
Pose Type: standing one-legged balance
Drishti Point: Nasagrai or Nasagre (nose)

One Foot Behind the Head Tip Toe Pose

Eka Pada Shirsha Prapadasana

(EY-kuh PUH-duh SHEER-shuh pruh-puh-DAHS-uh-nuh)

Also Known As: Tip Toe Balance Foot Behind The Head Pose (Padangushta Eka Pada Shirshasana), One Foot Behind the Head Tip Toe Pose (Eka Pada Shirsha Padangushtasana)

Pose Type: standing one-legged balance

Drishti Point: Nasagrai or Nasagre (nose)

SQUAT: HEELS DOWN—KNEES WIDE

Hand Position of the Pose Dedicated to Garuda in Garland Pose

Hasta Garudasana in Malasana

(HUH-stuh guh-ru-DAHS-uh-nuh in mah-LAHS-uh-nuh)

Also Known As: Hand Position of the Pose Dedicated to Garuda in Yoga Squat (Hasta Garudasana in Upaveshasana)

Pose Type: standing, forward bend

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Lion Pose Dedicated to an Avatar of Lord Vishnu in Garland Pose

Narasimhasana in Malasana

(nuh-ruh-sim-HAHS-uh-nuh in mah-LAHS-uh-nuh)

Also Known As: Lion Pose in Yoga Squat (Simhasana in Upaveshasana)
Modification: heels down
Pose Type: standing, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Bound Revolved Garland Pose

Ardha Baddha Parivritta Malasana

(UHR-duh BUH-duh puh-ri-VRIT-tuh mah-LAHS-uh-nuh)

Also Known As: Half Bound Revolved Yoga Squat (Ardha Baddha Parivritta Upaveshasana)
Modification: forearm on the knee
Pose Type: standing, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Bound Garland Pose

Baddha Malasana

(BUH-duh mah-LAHS-uh-nuh)

Also Known As: Bound Yoga Squat (Baddha Upaveshasana)
Pose Type: standing, binding
Drishti Point: Nasagrai or Nasagre (nose)

One Leg Bound Garland Pose

Eka Pada Baddha Malasana

(EY-kuh PUH-duh BUH-duh mah-LAHS-uh-nuh)

Also Known As: One Leg Bound Yoga Squat (Eka Pada Baddha Upaveshasana)
Modification: heels down, binding around one of the legs, knees open wide
Pose Type: standing, binding, forward bend
Drishti Point: Urdhva or Antara Drishti (up to the sky)

SQUAT: ONE HEEL UP, ONE HEEL DOWN—KNEES WIDE

Uneven Legs Garland Pose

Vishama Pada Malasana

(VISH-uh-muh PUH-duh mah-LAHS-uh-nuh)

Also Known As: Uneven Legs Yoga Squat (Vishama Pada Upaveshasana)
Modification: one knee higher than the other; fingertips of one hand to the floor, other elbow on the knee
Pose Type: standing, forward bend
Drishti Point: Hastagrai or Hastagre (hands)

Sideways Uneven Legs Garland Pose

Parshva Vishama Pada Malasana

(PAHRSH-vuh VISH-uh-muh PUH-duh mah-LAHS-uh-nuh)

Also Known As: Sideways Uneven Legs Yoga Squat (Parshva Vishama Pada Upaveshasana)
Modification: one heel up, one heel down, one arm up over the head into a side bend, back of the other hand on the floor
Pose Type: standing, forward bend, side bend

Drishti Point: Hastagrai or Hastagre (hands)

SQUAT: HEELS DOWN—KNEES WIDE, FORWARD BENDS

Garland Pose

Malasana

(mah-LAHS-uh-nuh)

Also Known As: Yoga Squat (Upaveshasana)
Modification: 1. hands in Anjali Mudra (Hands in Prayer)
2. arms straight out in front; palms down, head up
3. arms straight out in front; palms down, head down
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Hands Bound Garland Pose

Baddha Hasta Malasana

(BUH-duh HUH-stuh mah-LAHS-uh-nuh)

Also Known As: Hands Bound Yoga Squat (Baddha Hasta Upaveshasana)
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

SQUAT: HEELS DOWN—KNEES WIDE, FORWARD BENDS—BINDING

Garland Pose

Malasana

(mah-LAHS-uh-nuh)

Also Known As: Tortoise Pose Squat (Kurmasana Modification)
Modification: grabbing onto heels
1. head off the floor
2. forehead to the floor
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Garland Pose

Malasana

(mah-LAHS-uh-nuh)

Also Known As: Golden Belt Pose (Kanchyasana)
Modification: hands bound, heels down
Pose Type: standing, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

SQUAT: HEELS UP—KNEES WIDE, FORWARD BENDS—BINDING

Garland Pose

Malasana

(mah-LAHS-uh-nuh)

Modification: heels up, arms stretched out to the back, palms facing up, forehead to the floor
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Garland Pose

Malasana

(mah-LAHS-uh-nuh)

Also Known As: Golden Belt Pose (Kanchyasana)
Modification: heels up, hands bound
1. front view
2. side view
Pose Type: standing, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

Garland Pose

Malasana

(mah-LAHS-uh-nuh)

Modification: heels up, arms binding around the shins, hands between thighs and rib cage
Pose Type: standing, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

SQUAT: HEELS UP—KNEES WIDE, FORWARD BENDS—FOREARMS & ELBOWS ON THE FLOOR

Garland Pose

Malasana

(mah-LAHS-uh-nuh)

Modification: forehead to the floor, thumbs to the upper back
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Garland Pose

Malasana

(mah-LAHS-uh-nuh)

Modification: forearms to the floor
1. grabbing onto the triceps
2. forearms on the floor, palms pressed together

Pose Type: standing, forward bend
Drishti Point: 1. Nasagrai or Nasagre (nose)
2. Angusthamadhye or Angustha Ma Dyai (thumbs)

2.

Garland Pose

Malasana

(mah-LAHS-uh-nuh)

Pose Type: standing, forward bend

Drishti Point: 1 & 2. Angusthamadhye or Angustha Ma Dyai (thumbs) 3 & 4. Nasagrai or Nasagre (nose)

How to Perform the Pose:

1. Begin by standing in Mountain Pose (*Tadasana*). Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Exhale as you bend your knees, lift your heels, and drop your sitting bones to your heels.
3. Inhale as you open your knees out to the sides. Exhale as you drop your chest between your knees and lower your forearms to the floor. Your knees should end up on the outsides of your shoulders.
4. You can experiment with various arm positions. Start with your palms flat on the floor (Pose #1), then bring either one hand to your face (Pose #2) or both hands to your face (Pose #3) and then spread your fingers out (Pose #4).
5. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch.
6. To come out of the pose, inhale as you lift your chest and bring your knees together. Exhale as you press into your feet, straighten your legs, and come back to Mountain Pose (*Tadasana*).

Modification:

1. forearms and palms to the floor
2. one forearm and palm to the floor, other elbow to the floor hand to the face
3. both hands to the face, elbows on the floor
4. both hands to the face, fingers spread open in a Padma Mudra - Lotus Hand Seal elbows, on the floor

2.

3.

4.

Garland Pose

Malasana

(mah-LAHS-uh-nuh)

Also Known As: Full Squat Pose (Kunthasana)
Modification: hands wide, knees on top of the triceps
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Garland Pose

Malasana

(mah-LAHS-uh-nuh)

Modification: heels up
1. knees to the armpits; hands out to the sides, fingertips to the floor
2. forehead to the floor; elbows bent at 90 degrees, fingertips to the floor
3. forehead to the floor; hands off the floor, arms out to the sides

Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

SQUAT: HEELS UP—KNEES WIDE, ARMS TO THE FLOOR & BALLET TOES

Supported Tip Toe Pose

Salamba Prapadasana

(SAH-luhm-buh pruh-puh-DAHS-uh-nuh)

Modification: knees open, elbows and wrists together, fingertips touching the floor in front of the feet
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Intense Wrist Stretch Supported Tip Toe Pose

Uttana Manibandha Salamba Prapadasana

(ut-TAH-nuh muh-ni-BUHN-duh SAH-luhm-buh pruh-puh-DAHS-uh-nuh)

Modification: knees open wide; palms on the floor, fingertips toward the feet
Pose Type: standing, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Lion Pose Dedicated to an Avatar of Lord Vishnu in Tip Toe Pose

Narasimhasana in Prapadasana

(nuh-ruh-sim-HAHS-uh-nuh in pruh-puh-DAHS-uh-nuh)

Also Known As: Lion Pose in Tip Toe Pose (Simhasana in Prapadasana)
Modification: feet wide apart
Pose Type: standing, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Unsupported Intense Ankle Stretch Tip Toe Pose

Niralamba Uttana Kulpa Prapadasana

(nir-AH-luhm-buh ut-TAH-nuh KUL-puh pruh-puh-DAHS-uh-nuh)

Modification: hands on the knees
Pose Type: standing, balance
Drishti Point: Nasagrai or Nasagre (nose)

Supported Intense Ankle Stretch Tip Toe Pose

Salamba Uttana Kulpa Prapadasana

(SAH-luhm-buh ut-TAH-nuh KUL-puh pruh-puh-DAHS-uh-nuh)

Modification: fingertips to the floor
Pose Type: standing, balance
Drishti Point: Nasagrai or Nasagre (nose)

SQUAT: HEELS UP—KNEES WIDE, ARM MODIFICATIONS

Tip Toe Pose

Prapadasana

(pruh-puh-DAHS-uh-nuh)

Modification: knees open wide; palms together, elbows together
Pose Type: standing
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Tip Toe Pose

Prapadasana

(pruh-puh-DAHS-uh-nuh)

Modification: knees open wide, hands in Anjali Mudra (Hands in Prayer)
Pose Type: standing
Drishti Point: Nasagrai or Nasagre (nose)

One Hand in Reverse Prayer Tip Toe Pose

Eka Hasta Viparita Namaskar Prapadasana

(EY-kuh HUH-stuh vi-puh-REE-tuh nuh-muhs-KAHR pruh-puh-DAHS-uh-nuh)

Modification: knees open wide; one hand to the knee
Pose Type: standing
Drishti Point: Nasagrai or Nasagre (nose)

Upward Hands Tip Toe Pose

Urdhva Hasta Prapadasana

(OORD-vuh HUH-stuh pruh-puh-DAHS-uh-nuh)

Modification: knees open wide; arms extended up to the sky, head rolling back
Pose Type: standing, mild backbend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

SQUAT: HEELS UP—KNEES WIDE, KNEES ON THE FLOOR—ARM MODIFICATIONS

Reverse Prayer Root Lock Pose Prep.

Viparita Namaskar Mulabhandasana Prep.

(vi-puh-REE-tuh nuh-muhs-KAHR moo-luh-buhn-DAHS-uh-nuh)

Also Known As: Back of the Body Prayer Tip Toe Pose (Paschima Namaskara Prapadasana)
Modification: knees open wide; knees to the floor
Pose Type: standing
Drishti Point: Nasagrai or Nasagre (nose)

Root Lock Pose Prep.

Mulabhandasana Prep.

(moo-luh-buhn-DAHS-uh-nuh)

Also Known As: Tip Toe Pose Modification (Prapadasana Modification)
Modification: knees open wide; palms and elbows together; knees to the floor
Pose Type: standing
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Root Lock Pose Prep.

Mulabhandasana Prep.

(moo-luh-buhn-DAHS-uh-nuh)

Also Known As: Tip Toe Pose Modification (Prapadasana Modification)
Modification: knees open wide; elbows and ankles crossed; knees to the floor, fingertips to the floor
Pose Type: standing, forward bend
Drishti Point: Hastagrai or Hastagre (hands)

ROOT LOCK POSE

Root Lock Pose Prep.

Mulabhandasana Prep.

(moo-luh-buhn-DAHS-uh-nuh)

Also Known As: Twisted Feet Bound Angle Pose (Parivritta Pada Baddha Konasana)
Modification: fingertips to the floor behind the hips, sitting bones off the floor
Pose Type: standing, mild backbend

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Womb Staff Pose

Yoni Dandasana

(YO-ni duhn-DAHS-uh-nuh)

Also Known As: Root Lock Pose Modification (Mulabandhasana Modification)
Pose Type: seated
Drishti Point: Nasagrai or Nasagre (nose)

Root Lock Pose

Mulabhandasana

(moo-luh-buhn-DAHS-uh-nuh)

Also Known As: Perineal Contraction Pose (Mula Bandhasana)
Modification: palms up on the knees, head rolled back
Pose Type: seated, mild backbend
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Pose Dedicated to Sage Vamadeva 1

Vamadevasana 1

(vah-muh-dey-VAHS-uh-nuh)

Modification: both hands binding to the top foot
Pose Type: seated, twist, binding
Drishti Point: Parsva Drishti (to the right), Parsva Drishti (to the left)

Seated Poses

EASY POSE
ACCOMPLISHED ONE POSE
FIRE LOG POSE
HALF LOTUS AND LOTUS POSE
BOTH KNEES BENT
BOUND ANGLE POSE
STAR POSE
LEGS IN FRONT
HORIZONTAL SPLITS
LEGS STRAIGHT IN FRONT
GARUDA LEGS
LEG CRADLE
HEAD TO KNEE
HERO POSE
THUNDERBOLT POSE
ONE KNEE BENT (VARIATIONS)
COW FACE POSE
SAGE VAMADEVA'S POSE
ONE-LEGGED KING PIGEON POSE
VERTICAL SPLITS

Easy Pose

Sukhasana

(suk-AHS-uh-nuh)

Pose Type: seated, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

How to Perform the Pose:

1. Begin by sitting on the floor with both your legs straight out in front of you. Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Exhale as you bring your feet toward you and cross them at the ankles. Keep the soles of your feet flat on the floor and your knees in line with your shoulders.
3. Inhale, stretch your arms up to the sky to lengthen your spine, and exhale as you bring your elbows together on the inside of your knees.
4. Inhale as you open your palms up to sky with your fingertips pointing to the outsides. Exhale as you bring you thumbs and pointer fingers together.
5. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch.
6. Exhale as you release the pose, coming back to starting position with both your legs straight out.

Modification: knees in line with the shoulders, elbows to the inside of the knees

sukha = easy, lightness

Easy Pose

Sukhasana

(suk-AHS-uh-nuh)

Modification: knees to the chest, elbows to the outside of the knees, palms covering the face
Pose Type: seated, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Easy Pose

Sukhasana

(suk-AHS-uh-nuh)

Modification: knees high, forearms to the shins
Pose Type: seated
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Easy Pose

Sukhasana

(suk-AHS-uh-nuh)

Modification: elbows crossed, backs of both hands to the knees

Pose Type: seated, mild backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

EASY POSE: SPINE STRAIGHT

Easy Pose

Sukhasana

(suk-AHS-uh-nuh)

Modification: on the yoga block

Pose Type: seated

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Easy Pose

Sukhasana
(suk-AHS-uh-nuh)
Pose Type: seated
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bound Hands Easy Pose

Baddha Hasta Sukhasana
(BUH-duh HUH-stuh suk-AHS-uh-nuh)
Modification: arms in front, arms straight
Pose Type: seated
Drishti Point: Hastagrai or Hastagre (hands), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Embryo in the Womb Pose in Easy Pose

Garbha Pindasana in Sukhasana
(GUHR-buh pin-DAHS-uh-nuh in suk-AHS-uh-nuh)
Modification: grabbing onto the outside edges of the feet

Pose Type: seated, forward bend, core
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

EASY POSE: TWISTS & SIDE BENDS

Easy Pose

Sukhasana

(suk-AHS-uh-nuh)
Modification: neck stretch
Pose Type: seated
Drishti Point: Nasagrai or Nasagre (nose)

Revolved Easy Pose

Parivritta Sukhasana

(puh-ri-VRIT-tuh suk-AHS-uh-nuh)
Pose Type: seated, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Sideways Easy Pose

Parshva Sukhasana

(PAHRSH-vuh suk-AHS-uh-nuh)

Modification: one forearm to the floor, other arm extended up over the head
Pose Type: seated, side bend
Drishti Point: Hastagrai or Hastagre (hands)

Revolved Bound Easy Pose

Parivritta Baddha Sukhasana

(puh-ri-VRIT-tuh BUH-duh suk-AHS-uh-nuh)

Modification: elbow to the floor
Pose Type: seated, forward bend, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

ACCOMPLISHED ONE POSE

Accomplished One Pose

Siddhasana

(sid-DAHS-anna)

Modification: 1. one heel in front of the other
2. one foot tucked between the hamstring and the calf

Pose Type: seated

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Fire Log Pose

Agnistambhasana

(uhg-ni-stuhm-BAHS-anna)

Modification: 1. spine straight, fingertips to the floor behind the hips
2. leaning forward, palms on the floor by the thighs
Pose Type: 1. seated
2. seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Revolved Fire Log Pose

Parivritta Agnistambhasana

(puh-ri-VRIT-tuh uhg-ni-stuhm-BAHS-uh-nuh)

Modification: hands in Anjali Mudra (Hands in Prayer)
1. elbow to the knee
2. elbow to the foot
Pose Type: seated, forward bend, twist

Drishti Point: Urdhva or Antara Drishti (up to the sky); Parshva Drishti (to the right), Parshva Drishti (to the left)

Revolved Bound Fire Log Pose

Parivritta Baddha Agnistambhasana

(puh-ri-VRIT-tuh BUH-duh uhg-ni-stuhm-BAHS-uh-nuh)

Modification: one elbow to the sole of the top foot, other arm behind the back, hand to the inside of the thigh

Pose Type: seated, forward bend, twist, binding

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Fire Log Pose

Parivritta Agnistambhasana

(puh-ri-VRIT-tuh uhg-ni-stuhm-BAHS-uh-nuh)

Modification: forearms to the floor
Pose Type: seated, forward bend, twist
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Fire Log Pose

Agnistambhasana

(uhg-ni-stuhm-BAHS-uh-nuh)

Modification: forward bend, palms together, fingers spread wide; elbows and forehead on the floor
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

HALF LOTUS POSE

Half Lotus Pose

Ardha Padmasana

(UHR-duh puhd-MAHS-uh-nuh)

Modification: back of the hands on the knees
Pose Type: seated
Drishti Point: Nasagrai or Nasagre (nose)

Half Lotus Pose

Ardha Padmasana

(UHR-duh puhd-MAHS-uh-nuh)

Modification: Salute to the Buddha Mudra Hand Position: one palm facing up, fingertips of the other hand to the floor
Pose Type: seated
Drishti Point: Nasagrai or Nasagre (nose)

Reverse Prayer Revolved Half Lotus Pose

Viparita Namaskar Parivritta Ardha Padmasana

(vi-puh-REE-tuh nuh-muhs-KAHR puh-ri-VRIT-tuh UHR-duh puhd-MAHS-uh-nuh)

Also Known As: Back of the Body Prayer Revolved Half Lotus Pose (Paschima Namaskara Parivritta Ardha Padmasana)

Modification: top foot resting on the bottom knee

Pose Type: seated, twist

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Embryo in the Womb Pose in Half Lotus Pose

Garbha Pindasana in Ardha Padmasana

(guhr-buh-pin-DAHS-uh-nuh in UHR-duh puhd-MAHS-uh-nuh)

Modification: knees lifted toward the chest

Pose Type: seated, forward bend, core

Drishti Point: Nasagrai or Nasagre (nose)

LOTUS POSE: ARMS IN FRONT

Lotus Pose

Padmasana

(puhd-MAHS-uh-nuh)

Modification: back of the hands on the knees
Pose Type: seated
Drishti Point: Nasagrai or Nasagre (nose)

Lotus Pose

Padmasana

(puhd-MAHS-uh-nuh)

Modification: fingers interlocked, hands resting on the lap
Pose Type: seated
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

LOTUS POSE: ARMS BEHIND

Reverse Prayer Lotus Pose

Viparita Namaskar Padmasana

(vi-puh-REE-tuh nuh-muhs-KAHR puhd-MAHS-uh-nuh)

Also Known As: Back of the Body Prayer Lotus Pose (Paschima Namaskara Padmasana)
Modification: 1. fingertips pointing down
2. fingertips pointing up
Pose Type: seated
Drishti Point: Nasagrai or Nasagre (nose)

Bound Lotus Pose

Baddha Padmasana

(BUH-duh puhd-MAHS-uh-nuh)

Modification: both hands to one foot, one arm behind the back
Pose Type: seated, mild backbend, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bound Lotus Pose

Baddha Padmasana

(BUH-duh puhd-MAHS-uh-nuh)

Modification: both arms behind the back
Pose Type: seated, mild backbend, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Hands Bound Lotus Pose

Baddha Hasta Padmasana

(BUH-duh HUH-stuh puhd-MAHS-uh-nuh)

Modification: backbend
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Lotus Pose

Padmasana

(puhd-MAHS-uh-nuh)

Modification: palms to the floor behind the hips; fingertips facing forward, backbend
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

LOTUS POSE: FINGERS BOUND - BICEPS BY THE EARS

Raised Bound Hands Lotus Pose

Urdhva Baddha Hasta Padmasana

(OORD-vuh BUH-duh HUH-stuh puhd-MAHS-uh-nuh)

Also Known As: Seated Mountain Pose A (Parvatasana A)
Pose Type: seated, mild backbend
Drishti Point: Angushtamadhye (Thumbs)

Simple Yoga Seal

Laghu Yoga Mudra

(LUH-gu YO-guh MU-druh)

Also Known As: Seated Mountain Pose B (Parvatasana B)
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Sideways Simple Yoga Seal

Parshva Laghu Yoga Mudra

(PAHRSH-vuh LUH-gu YO-guh MU-druh)

Modification: fingers interlocked, palms facing out; arms straight to the side, forward bend
Pose Type: seated, forward bend, side bend
Drishti Point: Nasagrai or Nasagre (nose)

LOTUS POSE: TWISTS

Pose Dedicated to Siddhar Vaasamuni—Easy Version

Sukha Vaasamunvasana

(SUK-uh vah-sah-moo-NYAHS-uh-nuh)

Pose Type: seated, side bend, forward bend, twist

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Arms of Twist Dedicated to Sage Bharadvaja 2 in Revolved Lotus Pose

Hasta Bharadvajasana 2 in Parivritta Padmasana

(HUH-stuh buh-ruhd-vuhj-AHS-uh-nuh in puh-ri-VRIT-uh puhd-MAHS-uh-nuh)

Pose Type: seated, twist, binding

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Revolved Lotus Pose

Parivritta Padmasana

(puh-ri-VRIT-uh puhd-MAHS-uh-nuh)

Modification: hands in Anjali Mudra (Hands in Prayer)
Pose Type: seated, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

LOTUS POSE: SIDE BEND & TWISTS

Sideways Lotus Pose

Parshva Padmasana

(PAHRSH-vuh puhd-MAHS-uh-nuh)

Modification: forearm to the floor
Pose Type: seated, side bend
Drishti Point: Hastagrai or Hastagre (hands)

Revolved Western Intense Stretch Pose Lotus Pose

Parivritta Paschimottana Padmasana

(puh-ri-VRIT-uh puhsh-chi-mo-TAHN-nuh puhd-MAHS-uh-nuh)

Also Known As: Revolved Forward Bend Lotus Pose
Modification: shoulder to the floor, other arm extended to the sky
Pose Type: seated, forward bend, twist
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Pose Dedicated to Siddhar Vaasamuni—One Hand Modification

Eka Hasta Vaasamunvasana

(EY-kuh HUH-stuh [vah-sah-moo]-NYAHS-uh-nuh)

Pose Type: seated, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Pose Dedicated to Siddhar Vaasamuni

Vaasamunvasana

([vah-sah-moo-NYAHS-uh-nuh)

Pose Type: seated, forward bend, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

LOTUS POSE: FORWARD BEND

Yogic Seal Pose

Yoga Mudrasana

(YO-guh mu-DRAHS-uh-nuh)

Also Known As: Yoga Pose (Yogasana)
Modification: grabbing onto the wrist behind the back
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose) or Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Hands Bound Lotus Pose

Baddha Hasta Padmasana

(BUH-duh HUH-stuh puhd-MAHS-uh-nuh)

Also Known As: Yoga Seal (Yoga Mudra)
Modification: chin to the floor, forward bend
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose) or Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reverse Prayer Yogic Seal Pose

Viparita Namaskar Yoga Mudrasana

(vi-puh-REE-tuh nuh-muhs-KAHR YO-guh mu-DRAHS-uh-nuh)

Also Known As: Back of the Body Prayer Yogic Seal Pose (Paschima Namaskara Yoga Mudrasana)
Modification: forehead to the floor
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Yogic Seal Pose Prep.

Yoga Mudrasana Prep.

(YO-guh mu-DRAHS-uh-nuh)

Modification: 1. using a yoga strap
2. wrists crossed behind the back, reaching toward the feet

Pose Type: seated, forward bend, binding

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Sideways Yogic Seal Pose

Parshva Yoga Mudrasana

(PARHSH-vuh YO-guh mu-DRAHS-uh-nuh)

Also Known As: Sideways Bound Lotus Pose (Parshva Baddha Padmasana)
Modification: chin to the knee
Pose Type: seated, forward bend, binding, twist
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Yogic Seal Pose

Yoga Mudrasana

(YO-guh mu-DRAHS-uh-nuh)

Also Known As: Bound Lotus Pose (Baddha Padmasana)
Modification: 1. side view
2. front view
Pose Type: seated, forward bend, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

LOTUS POSE: EMBRYO IN THE WOMB POSE

Embryo in the Womb Pose

Garbha Pindasana

(guhr-buh pin-DAHS-uh-nuh)

Modification: arms wrapped around the legs
Pose Type: seated, forward bend, core
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Hand Position of the Pose Dedicated to Garuda in Yoga Pose A

Hasta Garudasana in Yogasana A

(HUH-stuh guh-ru-DAHS-uh-nuh in yo-GAHS-uh-nuh)

Pose Type: seated, forward bend, core
Drishti Point: Angushtamadhye or Angustha Ma Dyai (thumbs)

Embryo in the Womb Pose

Garbha Pindasana

(guhr-buh pin-DAHS-uh-nuh)

Pose Type: seated, forward bend, core

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows) or Nasagrai or Nasagre (nose)

BOTH KNEES BENT: BINDING & TWISTS

Bound Sundial Pose

Baddha Surya Yantrasana

(BUH-duh SOOR-yuh yuhn-TRAHS-uh-nuh)

Modification: both knees bent

Pose Type: seated, forward bend, binding

Drishti Point: Nasagrai or Nasagre (nose)

Revolved Pose Dedicated to Sage Marichi

Parivritta Marichyasana

(puh-ri-VRIT-tuh muh-ree-CHYAHS-uh-nuh)

Modification: twisting to the inside, foot to the thigh, binding under the leg
Pose Type: seated, forward bend, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Half Lord of the Fishes Pose 3

Ardha Matsyendrasana 3

(UH-ruh muhts-yeyn-DRAHS-uh-nuh)

Modification: looking to the back
Pose Type: seated, forward bend, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Pose Dedicated to Sage Marichi 4

Marichyasana 4

(muh-ree-CHYAHS-uh-nuh)

Modification: binding under the knee
Pose Type: seated, forward bend, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

BOTH KNEES BENT: BINDING & TWISTS—ARM THREADED UNDER

Half Pose Dedicated to Sage Agasthiyar

Ardha Agasthiyarasana

(UHR-duh uh-guhs-ti-yahr-AH-suh-nuh)

Modification: 1. one arm threaded through
2. full expression of the pose
Pose Type: 1. seated, forward bend, twist, binding
2. seated, forward bend, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky), Nasagrai or Nasagre (nose), or Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Revolved Half Pose Dedicated to Sage Agasthiyar

Parivritta Ardha Agasthiyarasana

(puh-ri-VRIT-tuh UHR-duh uh-guhs-ti-yahr-AH-suh-nuh)

Pose Type: seated, forward bend, binding, twist

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Pose Dedicated to Sage Agasthiyar

Agasthiyarasana

(uh-guhs-ti-yahr-AH-suh-nuh)

Modification: 1. prep. one arm threaded under the knee, fingertips of the other hand to the floor
2. full expression of the pose
Pose Type: seated, forward bend, binding
Drishti Point: 1. Hastagrai or Hastagre (hands)
2. Nasagrai or Nasagre (nose)

BOTH KNEES BENT: BINDING & TWISTS—KNEES TOGETHER

Seated Noose Pose Prep.

Upavishta Pashasana

(u-puh-VISH-tuh puh-SHAHS-uh-nuh)

Also Known As: Half Noose Pose (Ardha Pashasana), Upavistha Pashasana
Modification: 1. grabbing onto the knees
2. elbow over the opposite knee
Pose Type: seated, forward bend, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Seated Noose Pose Prep.

Upavishta Pashasana

(u-puh-VISH-tuh puh-SHAHS-uh-nuh)

Also Known As: Upavistha Pashasana
Modification: heels lifted; elbow over the opposite knee, hands in Anjali Mudra (Hands in Prayer)
Pose Type: seated, forward bend, twist, core
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Seated Noose Pose

Upavishta Pashasana

(u-puh-VISH-tuh puh-SHAHS-uh-nuh)

Also Known As: Upavistha Pashasana
Modification: binding around both legs under the knees
Pose Type: seated, forward bend, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Seated Noose Pose

Upavishta Pashasana

(u-puh-VISH-tuh puh-SHAHS-uh-nuh)

Also Known As: Upavistha Pashasana
Modification: binding around both shins
Pose Type: seated, forward bend, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Half Lord of the Fishes Pose

Ardha Matsyendrasana

UHR-duh muhts-yeyn-DRAHS-uh-nuh

Pose Type: seated, forward bend, side bend, twist

Drishti Point: Padhayoragrai or Padayoragre (toes/feet)

How to Perform the Pose:

1. Begin by sitting on the floor with both your legs straight out in front of you. Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Exhale as you bend the right knee toward your right shoulder and then bring it over your left leg so that your right foot is flat on the floor on the outside of your left shin.
3. Exhale and bend your left knee, bringing your left heel toward your right sitting bone. Keep the left knee and both your sitting bones evenly on the floor.
4. Exhale as you bring your right elbow to your right knee. Inhale as you bring your left arm up over your head and look towards your left foot (Pose #1).
5. To execute pose #2, exhale as you bring your left elbow over the right knee. Inhale as you bring your right arm up and exhale as you bend your right elbow and look over toward your right foot.
6. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch.
7. Inhale as you release the twist and exhale as you bring both your legs out in front of you. Repeat on the other side.

Modification: side bend twist:
1. elbow to the knee on the same side
2. elbow to the opposite knee

ardha = half

Matsyendra = a Hindu sage and one of the first teachers of Hatha yoga, a legend, king of the fish

1.

2.

Half Lord of the Fishes Pose

Ardha Matsyendrasana

(UHR-duh muhts-yeyn-DRAHS-uh-nuh)

Modification: backbend
Pose Type: seated, backbend, forward bend
Drishti Point: Hastagrai or Hastagre (hands)

Half Lord of the Fishes Pose

Ardha Matsyendrasana

(UHR-duh muhts-yeyn-DRAHS-uh-nuh)

Modification: twisting to the inside
1. grabbing onto the ankle
2. elbow over the knee

Pose Type: seated, forward bend, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Half Lord of the Fishes Pose

Ardha Matsyendrasana

(UHR-duh muhts-yeyn-DRAHS-uh-nuh)

Modification: twisting to the outside, elbow over the knee; palm of the other hand to the floor
Pose Type: seated, forward bend, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Half Lord of the Fishes Pose 1

Ardha Matsyendrasana 1

(UHR-duh muhts-yeyn-DRAHS-uh-nuh)

Modification: grabbing onto the ankle, other arm behind the back, hand to the inside of the thigh
Pose Type: seated, forward bend, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

BOTH KNEES BENT: BINDING FORWARD BEND & TWIST

Pose Dedicated to Sage Marichi 3 Prep.

Marichyasana 3 Prep.

(muh-ree-CHYAHS-uh-nuh)

Also Known As: Pose Dedicated to Sage Marichi B (Marichyasana B)
Modification: top foot to the bottom thigh, binding around the shin, nose to the knee
Pose Type: seated, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

Pose Dedicated to Sage Marichi 4 Prep.

Marichyasana 4 Prep.

(muh-ree-CHYAHS-uh-nuh)

Modification: sitting in a cross-legged position, one knee dropped to the side, foot by the sitting bones; other knee bent toward the shoulder, binding around the shin on the outside of the leg
Pose Type: seated, forward bend, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

BOTH KNEES BENT: BINDING & TWIST

Pose Dedicated to Sage Marichi 3 Prep.

Marichyasana 3 Prep.

(muh-ree-CHYAHS-uh-nuh)

Also Known As: Pose Dedicated to Sage Marichi B (Marichyasana B)
Modification: spine straight, bottom knee wrapped around the foot, fingers interlocked on the shin
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Pose Dedicated to Sage Marichi 3 Prep.

Marichyasana 3 Prep.

(muh-ree-CHYAHS-uh-nuh)

Also Known As: Pose Dedicated to Sage Marichi B Modification (Marichyasana B Modification)
Modification: bottom knee wrapped around the foot, binding under the thigh

Pose Type: seated, forward bend, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Pose Dedicated to Sage Marichi 3 Prep.

Marichyasana 3 Prep.

(muh-ree-CHYAHS-uh-nuh)
Also Known As: Pose Dedicated to Sage Marichi B Modification (Marichyasana B Modification)
Modification: knee wrapped around the foot, binding over the shin
Pose Type: 1. seated, forward bend, binding
2. seated, forward bend, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Half Lord of the Fishes Pose 1 Prep.

Ardha Matsyendrasana 1

(UHR-duh muhts-yeyn-DRAHS-uh-nuh)

Modification: foot under the knee, twisting to the outside
Pose Type: seated, forward bend, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

HALF LOTUS POSE: KNEE BENT TOWARD THE CHEST

Pose Dedicated to Sage Marichi Prep.

Marichyasana Prep.

(muh-ree-CHYAHS-uh-nuh)

Modification: prep.-—elbow to the knee on the same side, palm to the floor behind the hips
Pose Type: seated, forward bend
Drishti Point: Hastagrai or Hastagre (hands)

Pose Dedicated to Sage Marichi Prep.

Marichyasana Prep.

(muh-ree-CHYAHS-uh-nuh)

Modification: prep.—arms wrapping around the leg
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

HALF LOTUS POSE: BINDING & TWISTS—KNEE BENT TOWARD THE CHEST

Pose Dedicated to Sage Marichi 3

Marichyasana 3

(muh-ree-CHYAHS-uh-nuh)

Also Known As: Pose Dedicated to Sage Marichi B (Marichyasana B)
Modification: sitting up straight
Pose Type: seated, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

Pose Dedicated to Sage Marichi 3

Marichyasana 3

(muh-ree-CHYAHS-uh-nuh)

Also Known As: Pose Dedicated to Sage Marichi B (Marichyasana B)
Modification: full forward bend
Pose Type: seated, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

Pose Dedicated to Sage Marichi 4

Marichyasana 4

(muh-ree-CHYAHS-uh-nuh)

Also Known As: Pose Dedicated to Sage Marichi D (Marichyasana D)
Modification: sitting bones on the floor
Pose Type: seated, forward bend, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

LOTUS POSE: BINDING & TWISTS—KNEE BENT TOWARD THE CHEST

Full Lord of the Fishes Pose Prep.

Paripurna Matsyendrasana Prep.

(puh-ri-POOR-nuh muhts-yeyn-DRAHS-uh-nuh)

Modification: one palm to the floor behind the hips, grabbing onto the knee with the opposite hand
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Full Lord of the Fishes Pose

Paripurna Matsyendrasana

(puh-ri-POOR-nuh muhts-yeyn-DRAHS-uh-nuh)

Also Known As: Full Lord of the Fishes Pose (Poorna Matsyendrasana)
Pose Type: seated, forward bend, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

FOOT TO THE BACK: TWISTS—KNEE BENT TOWARD THE CHEST

Root Lord of the Fishes Pose Prep.

Mula Matsyendrasana Prep.

(MOOL-uh muhts-yeyn-DRAHS-uh-nuh)

Modification: heel to the perineum, other foot resting on the knee, fingertips to the floor by the hips
Pose Type: seated, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Half Root Lord of the Fishes Pose

Ardha Mula Matsyendrasana

(UHR-duh MOOL-uh muhts-yeyn-DRAHS-uh-nuh)

Modification: heel to the perineum, other foot resting on the knee, fingertips of one hand to the floor by the hips, other hand grabbing onto the opposite knee
Pose Type: seated, forward bend, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Root Lord of the Fishes Pose Prep.

Mula Matsyendrasana Prep.

(MOOL-uh muhts-yeyn-DRAHS-uh-nuh)

Modification: backbend, heel to the perineum, other foot resting on the knee, fingertips to the floor behind the hips

Pose Type: seated, backbend, forward bend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Pose Dedicated to Sage Marichi 6 Prep.

Marichyasana 6 Prep.

(muh-ree-CHYAHS-uh-nuh)

Also Known As: Pose Dedicated to Sage Marichi F (Marichyasana F)

Modification: opposite hand grabbing onto the foot, heel resting on the knee, other arm behind the back to the inside of the thigh, looking over the shoulder to the back

Pose Type: seated, forward bend, twist, binding

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Pose Dedicated to Sage Marichi 6 Prep.

Marichyasana 6 Prep.

(muh-ree-CHYAHS-uh-nuh)

Also Known As: Pose Dedicated to Sage Marichi F (Marichyasana F)
Modification: opposite hand grabbing onto the foot, foot flat to the floor, other arm behind the back to the inside of the thigh, looking toward the foot
Pose Type: seated, forward bend, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

BOUND ANGLE POSE: ARMS IN FRONT

Bound Angle Pose with Hands in Prayer

Baddha Konasana Namaskar

(BUH-duh ko-NAHS-uh-nuh nuh-muhs-KAHR)

Modification: hands in Anjali Mudra (Hands in Prayer)
Pose Type: seated
Drishti Point: Nasagrai or Nasagre (nose) or Hastagrai or Hastagre (hands)

Bound Angle Pose

Baddha Konasana

(BUH-duh ko-NAHS-uh-nuh)

Modification: fingertips touching the floor
Pose Type: seated
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bound Angle Pose

Baddha Konasana

(BUH-duh ko-NAHS-uh-nuh)

Modification: half forward bend, opening the soles of the feet up to the sky
Pose Type: seated, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BOUND ANGLE POSE: ARMS BEHIND

Bound Angle Pose

Baddha Konasana

(BUH-duh ko-NAHS-uh-nuh)

Modification: one hand to the knee; other hand behind, grabbing onto the bicep
Pose Type: seated, binding
Drishti Point: Nasagrai or Nasagre (nose)

Bound Hands Bound Angle Pose

Baddha Hasta Baddha Konasana

(BUH-duh HUH-stuh BUH-duh ko-NAHS-uh-nuh)

Modification: arms behind, grabbing onto the elbows
Pose Type: seated
Drishti Point: Nasagrai or Nasagre (nose)

Reverse Prayer Bound Angle Pose

Viparita Namaskar Baddha Konasana

(vi-puh-REE-tuh nuh-muhs-KAHR BUH-duh ko-NAHS-uh-nuh)

Also Known As: Back of the Body Prayer Bound Angle Pose (Paschima Namaskara Baddha Konasana)

Pose Type: seated

Drishti Point: Nasagrai or Nasagre (nose)

Hand Position of Cow Face Pose in Bound Angle Pose

Hasta Gomukhasana in Baddha Konasana

(HUH-stuh go-muk-AHS-uh-nuh in BUH-duh ko-NAHS-uh-nuh)

Pose Type: seated

Drishti Point: Nasagrai or Nasagre (nose)

BOUND ANGLE POSE: SIDE BEND & BINDING

Sideways Bound Angle Pose

Parshva Baddha Konasana

(PAHRSH-vuh BUH-duh ko-NAHS-uh-nuh)

Pose Type: seated, side bend
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Sideways Star Pose

Parshva Tarasana

(PAHRSH-vuh tahr-AHS-uh-nuh)

Pose Type: seated, side bend
Drishti Point: Hastagrai or Hastagre (hands)

Sideways Bound Leg Bound Angle Pose

Parshva Baddha Pada Baddha Konasana

(PAHRSH-vuh BUH-duh PUH-duh BUH-duh ko-NAHS-uh-nuh)

Modification: binding around one leg, arm wrapped around the shin
Pose Type: seated, forward bend, side bend, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

BOUND ANGLE POSE: HEELS CLOSE, FEET LIFTED, SITTING BONES LIFTED AND FORWARD BEND

Pose Dedicated to Sage Goraksha

Gorakshasana

(go-rahk-SHAHS-uh-nuh)

Modification: feet in Bound Angle Pose (Baddha Konasana), sitting on the heels
1. one hand to the centre of the chest, other hand to the floor behind the hips
2. hands in Anjali Mudra (Hands in Prayer)

Pose Type: seated, balance
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Equilibrium Bound Angle Pose 1

Tulya Baddha Konasana 1

(TUL-yuh BUH-duh ko-NAHS-uh-nuh)

Modification: feet lifted off the floor
Pose Type: seated, forward bend, core
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Equilibrium Bound Angle Pose 2

Tulya Baddha Konasana 2

(TUL-yuh BUH-duh ko-NAHS-uh-nuh)

Modification: sitting bones lifted off the floor
Pose Type: seated, forward bend, core
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bound Angle Pose

Baddha Konasana

(BUH-duh ko-NAHS-uh-nuh)

Modification: forward bend; arms straight to the front, palms down
Pose Type: seated, forward bend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs) or Nasagrai or Nasagre (nose)

BOUND ANGLE POSE: FORWARD BEND

Bound Angle Pose

Baddha Konasana

(BUH-duh ko-NAHS-uh-nuh)

Modification: 1. half forward bend
2. full forward bend, chin to the floor

Pose Type: seated, forward bend

Drishti Point: Nasagrai or Nasagre (nose) or Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bound Angle Pose

Baddha Konasana

(BUH-duh ko-NAHS-uh-nuh)

Modification: elbows bent and to the floor, forehead to the floor, palms together, fingers spread wide

Pose Type: seated, forward bend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows) or Nasagrai or Nasagre (nose)

STAR POSE

Easy Embryo in the Womb Pose

Sukha Garbha Pindasana

(SUK-uh GUHR-buh pin-DAHS-uh-nuh)

Modification: arms under the legs

1. hands to the feet
2. fingertips to the temples
3. hands to the sides; heels touching, feet to the sides

Pose Type: seated, forward bend, core

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Easy Embryo in the Womb Pose

Sukha Garbha Pindasana

(SUK-uh GUHR-buh pin-DAHS-uh-nuh)

Also Known As: Yoga Pose A Prep. (Yogasana A Prep.)
Modification: shins into armpits, hands in Anjali Mudra (Hands in Prayer)
Pose Type: seated, forward bend, core
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Star Pose

Tarasana

(tahr-AHS-uh-nuh)

Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Upward Star Pose

Urdhva Tarasana

(OORD-vuh tahr-AHS-uh-nuh)

Pose Type: seated, forward bend, core

Drishti Point: Padhayoragrai or Padayoragre (toes/feet) or Nasagrai or Nasagre (nose)

LEGS IN FRONT: KNEES BENT

Seated Eastern Intense Stretch Pose

Upavishta Purvottanasana

(u-puh-VISH-tuh poor-vo-TAHS-uh-nuh)

Also Known As: Reverse Plank Prep.; Upavistha Purvottanasana

Pose Type: seated, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One Hand Seated Eastern Intense Stretch Pose

Eka Hasta Upavishta Purvottanasana

(EY-kuh HUH-stuh u-puh-VISH-tuh poor-vo-TAHS-uh-nuh)

Also Known As: One Hand Reverse Plank Prep.; Eka Hasta Upavistha Purvottanasana
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Hastagrai or Hastagre (hands)

LEGS IN FRONT: KNEES BENT—LEGS OUTSIDE OF THE SHOULDERS

Seated Knee to Shoulder Pose

Upavishta Janu Bhujasana

(u-puh-VISH-tuh JAH-nu buj-AHS-uh-nuh)

Also Known As: Upavistha Janu Bhujasana
Modification: hands in Anjali Mudra (Hands in Prayer)
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Broken Wing Pose

Avabhinna Pakshakasana

(uh-vuh-BIN-uh puhk-shuh-KAHS-uh-nuh)

Pose Type: seated, forward bend

Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Tortoise Pose Prep.

Kurmasana Prep.

(koor-MAHS-uh-nuh)

Modification: grabbing onto the ankles

Pose Type: seated, forward bend

Drishti Point: Padhayoragrai or Padayoragre (toes/feet) or Nasagrai or Nasagre (nose)

Tortoise Pose Prep.

Kurmasana Prep.

(koor-MAHS-uh-nuh)

Modification: 1. arms straight
2. elbows bent

Pose Type: seated, forward bend

Drishti Point: Nasagrai or Nasagre (nose,) Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Sleeping Tortoise Pose Prep.

Supta Kurmasana Prep.

(SUP-tuh koor-MAHS-uh-nuh)

Modification: feet unhooked

Pose Type: seated, forward bend, binding

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Sleeping Tortoise Pose

Supta Kurmasana

(SUP-tuh koor-MAHS-uh-nuh)

Pose Type: seated, forward bend, binding

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

HORIZONTAL SPLITS: LEGS LIFTED—KNEES BENT

Half Upward Seated Angle Pose Prep.

Ardha Urdhva Upavistha Konasana Prep.

(UHR-duh OORD-vuh u-puh-VISH-tuh ko-NAHS-uh-nuh)

Modification: shoulders to the back of the knees, palms to the floor, knees bent
Pose Type: seated, forward bend, core
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Bound Legs in Half Pose Dedicated to Sage Koormamuni

Baddha Pada Ardha Koormamunyasana

(BUH-duh PUH-duh UHR-duh koor-muh-mun-YAHS-uh-nuh)

Pose Type: seated, forward bend, core, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

HORIZONTAL SPLITS: LEGS LIFTED

Half Upward Seated Angle Pose Prep. in One Hand to Foot Boat Pose

Ardha Urdhva Upavishta Konasana Prep. in Eka Hasta Pada Navasana

(UHR-duh OORD-vuh u-puh-VISH-tuh ko-NAHS-uh-nuh in EY-kuh HUH-stuh PUH-duh nuh-VAHS-uh-nuh)

Also Known As: Ardha Urdhva Upavistha Konasana Prep. in Eka Hasta Pada Navasana
Modification: one leg straight, back of the other knee to the shoulder
Pose Type: seated, forward bend, core
Drishti Point: Hastagrai or Hastagre (hands) or Padhayoragrai or Padayoragre (toes/feet)

Half Upward Seated Angle Pose

Ardha Urdhva Upavishta Konasana

(UHR-duh OORD-vuh u-puh-VISH-tuh ko-NAHS-uh-nuh)

Also Known As: Ardha Urdhva Upavistha Konasana
Modification: palms to the floor, one leg straight up to the sky; other foot to the floor, knee to the chest
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Upward Seated Angle Pose

Urdhva Upavishta Konasana

(UHR-duh OORD-vuh u-puh-VISH-tuh ko-NAHS-uh-nuh)

Also Known As: Urdhva Upavistha Konasana
Modification: arms open to the sides, triceps to the back of the knees
Pose Type: seated, forward bend, core
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

HORIZONTAL SPLITS: LEGS LIFTED & STRAIGHT

Seated Firefly Pose

Upavishta Tittibhasana

(u-puh-VISH-tuh ti-ti-BAHS-uh-nuh)

Also Known As: Upward Seated Angle Pose Prep. (Urdhva Upavishta Konasana Prep.), Pose Dedicated to Sage Koormamuni Prep. (Koormamunyasana Prep.), Upavistha Tittibhasana
Modification: palms to the floor, shoulders to the back of the knees
Pose Type: seated, forward bend, core
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Pose Dedicated to Sage Koormamuni

Koormamunyasana

(koor-muh-mun-YAHS-uh-nuh)

Modification: hands in Anjali Mudra (Hands in Prayer)
Pose Type: seated, forward bend, core
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Pose Dedicated to Sage Koormamuni—Bound Legs

Baddha Pada Koormamunyasana

(BUH-duh PUH-duh koor-muh-mun-YAHS-uh-nuh)

Modification: legs straight
Pose Type: seated, forward bend, core, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Hands to Feet Upward Seated Angle Pose

Pada Hasta Urdhva Upavishta Konasana

(PUH-duh HUH-stuh OORD-vuh u-puh-VISH-tuh ko-NAHS-uh-nuh)

Also Known As: Pada Hasta Urdhva Upavistha Konasana
Modification: grabbing onto the outside edges of the feet
Pose Type: seated, forward bend, core
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Urdhva or Antara Drishti (up to the sky)

Big Toe Upward Seated Angle Pose

Padangushta Urdhva Upavishta Konasana

(puhd-ahng-GOOSH-tuh OORD-vuh u-puh-VISH-tuh ko-NAHS-uh-nuh)

Also Known As: Padangushta Urdhva Upavistha Konasana
Modification: grabbing onto the big toes, arms parallel to the floor
Pose Type: seated, forward bend, core
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows) or Urdhva or Antara Drishti (up to the sky)

Upward Seated Angle Pose

Urdhva Upavishta Konasana

(OORD-vuh u-puh-VISH-tuh ko-NAHS-uh-nuh)

Also Known As: Urdhva Upavistha Konasana
Modification: palms to the floor, heels of the palms touching, fingertips pointing to the sides; feet lifted, toes pointed
Pose Type: seated, forward bend, core
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Urdhva or Antara Drishti (up to the sky)

HORIZONTAL SPLITS: FORWARD BEND

Tortoise Pose

Kurmasana

(koor-MAHS-uh-nuh)

Modification: 1. knees bent
2. legs straight
Pose Type: seated, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Equal Angle Pose

Samakonasana

(suh-muh-ko-NAHS-uh-nuh)

Modification: forward bend, forearms to the floor
Pose Type: seated, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Big Toe Seated Angle Pose

Padangushta Upavishta Konasana

(puhd-ahng-GOOSH-tuh u-puh-VISH-tuh ko-NAHS-uh-nuh)

Also Known As: Padangushta Upavistha Konasana
Modification: forward bend, chin to the floor
Pose Type: seated, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Equal Angle Pose

Samakonasana

(suh-muh-ko-NAHS-uh-nuh)

Modification: forward bend, arms crossed in front
Pose Type: seated, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Equal Angle Pose

Samakonasana

(suh-muh-ko-NAHS-uh-nuh)

Modification: forward bend, arms extended to the front
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Reverse Prayer Equal Angle Pose

Viparita Namaskar Samakonasana

(vi-puh-REE-tuh nuh-muhs-KAHR suh-muh-ko-NAHS-uh-nuh)

Also Known As: Back of the Body Prayer Equal Angle Pose (Paschima Namaskara Samakonasana)
Pose Type: seated, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Hands Bound Equal Angle Pose

Baddha Hasta Samakonasana

(BUH-duh HUH-stuh suh-muh-ko-NAHS-uh-nuh)

Modification: forward bend
Pose Type: seated, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

HORIZONTAL SPLITS: SPINE STRAIGHT

Seated Angle Pose

Upavishta Konasana

(u-puh-VISH-tuh ko-NAHS-uh-nuh)

Also Known As: Upavistha Konasana

Modification: mild version, backbend
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Seated Angle Pose

Upavishta Konasana

(u-puh-VISH-tuh ko-NAHS-uh-nuh)

Also Known As: Upavistha Konasana
Modification: 1. hands in Anjali Mudra (Hands in Prayer), toes flexed in
2. hands in reverse prayer, toes flexed in
Pose Type: seated
Drishti Point: Nasagrai or Nasagre (nose) or Hastagrai or Hastagre (hands)

Seated Angle Pose

Upavishta Konasana

(u-puh-VISH-tuh ko-NAHS-uh-nuh)

Also Known As: Upavistha Konasana
Modification: palms to the floor in front of the hips, heels of the palms touching, fingertips pointing to the side, straight spine, toes pointed
Pose Type: seated
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Equal Angle Pose

Samakonasana

(su-muh-ko-NAHS-uh-nuh)

Modification: hands on the knees, spine straight
Pose Type: seated
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Bound Equal Angle Pose

Baddha Samakonasana

(BUH-duh su-muh-ko-NAHS-uh-nuh)

Pose Type: seated, binding

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

HORIZONTAL SPLITS: TWISTS

Half Bound Seated Angle Pose

Ardha Baddha Upavishta Konasana

(UHR-duh BUH-duh u-puh-VISH-tuh ko-NAHS-uh-nuh)

Also Known As: Ardha Baddha Upavistha Konasana

Modification: toes pointed, one hand binding behind the back, fingertips of the other hand to the floor in front of the hips

Pose Type: seated, binding

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Revolved Half Bound Equal Angle Pose

Parivritta Samakonasana

(puh-ri-VRIT-tuh suh-muh-ko-NAHS-uh-nuh)

Modification: 1. toes pointed, both hands on one leg
2. toes flexed in, one hand to the leg, other hand to the floor

Pose Type: seated, twist, binding

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Revolved Bound Equal Angle Pose

Parivritta Baddha Samakonasana

(puh-ri-VRIT-tuh BUH-duh suh-muh-ko-NAHS-uh-nuh)

Modification: 1. toes pointed
2. toes flexed in

Pose Type: seated, twist, binding

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

HORIZONTAL SPLITS: SIDE BENDS

Sideways Equal Angle Pose

Parshva Samakonasana

(PAHRSH-vuh suh-muh-ko-NAHS-uh-nuh)

Modification: side bend, fingertips to the back of the head; elbow to the floor

Pose Type: seated, side bend

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Both Hands to Foot Revolved Seated Angle Pose

Dwi Hasta Pada Parivritta Upavishta Konasana

(DWI-huh-stuh PUH-duh puh-ri-VRIT-tuh u-puh-VISH-tuh ko-NAHS-uh-nuh)

Also Known As: Dwi Hasta Pada Parivritta Upavistha Konasana
Pose Type: seated, side bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

LEGS STRAIGHT IN FRONT: SPINE STRAIGHT & BACKBEND

Staff Pose

Dandasana

(duhn-DAHS-uh-nuh)

Pose Type: seated
Drishti Point: Nasagrai or Nasagre (nose), Padhayoragrai or Padayoragre (toes/feet)

Reverse Prayer Staff Pose

Viparita Namaskar Dandasana

(vi-puh-REE-tuh nuh-muhs-KAHR duhn-DAHS-uh-nuh)

Also Known As: Back of the Body Prayer Staff Pose (Paschima Namaskara Dandasana)
Pose Type: seated
Drishti Point: Padayoragrai or Padayoragre (toes/feet), Nasagrai or Nasagre (nose)

Staff Pose

Dandasana

(duhn-DAHS-uh-nuh)

Modification: 1. fingertips pointing to the heels
2. fingertips pointing away from the heels, head rolling back
Pose Type: seated, mild backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

LEGS STRAIGHT IN FRONT: FORWARD BEND

Western Intense Stretch Pose

Paschimottanasana

(puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Seated Forward Bend
Modification: grabbing onto the big toes
Pose Type: seated, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet), Nasagrai or Nasagre (nose)

Western Intense Stretch Pose

Paschimottanasana

(puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Seated Forward Bend
Modification: grabbing onto the balls of the feet
Pose Type: seated, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet), Nasagrai or Nasagre (nose)

Western Intense Stretch Pose

Paschimottanasana

(puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Seated Forward Bend
Modification: grabbing onto the wrist
Pose Type: seated, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet), Nasagrai or Nasagre (nose)

Western Intense Stretch Pose

Paschimottanasana

(puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Seated Forward Bend
Modification: palms down
Pose Type: seated, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet), Nasagrai or Nasagre (nose)

Bound Hands Western Intense Stretch Pose

Baddha Hasta Paschimottanasana

(BUH-duh HUH-stuh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Seated Forward Bend
Pose Type: seated, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet), Nasagrai or Nasagre (nose)

Reverse Prayer Western Intense Stretch Pose

Viparita Namaskar Paschimottanasana

(vi-puh-REE-tuh nuh-muhs-KAHR puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Back of the Body Prayer Western Intense Stretch Pose (Paschima Namaskara Paschimottanasana), Reverse Prayer Forward Bend

Pose Type: seated, forward bend

Drishti Point: Padayoragrai or Padayoragre (toes/feet), Nasagrai or Nasagre (nose)

LEGS STRAIGHT IN FRONT: TWISTS

Revolved Staff Pose

Parivritta Dandasana

(puh-ri-VRIT-tuh duhn-DAHS-uh-nuh)

Pose Type: seated, twist

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Revolved Upward One Arm Extended Hand to Foot Staff Pose

Parivritta Urdhva Eka Hasta Utthita Hasta Pada Dandasana

(puh-ri-VRIT-tuh OORD-vuh EY-kuh HUH-stuh UT-tu-tuh HUH-stuh PUH-duh duhn-DAHS-uh-nuh)
Pose Type: seated, forward bend, twist
Drishti Point: Hastagrai or Hastagre (hands)

One Hand Revolved Western Intense Stretch Pose

Eka Hasta Parivritta Paschimottanasana

(EY-kuh HUH-stuh puh-ri-VRIT-tuh puhsh-chi-mo-tahn-AHS-uh-nuh)
Also Known As: One Hand Revolved Seated Forward Bend
Modification: one hand to the foot
Pose Type: seated, forward bend, side bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Two Hands Revolved Western Intense Stretch Pose

Dwi Hasta Parivritta Paschimottanasana

(DWI-huh-stuh puh-ri-VRIT-tuh puhsh-chi-mo-tahn-AHS-uh-nuh)
Also Known As: Two Hands Revolved Forward Bend
Pose Type: seated, forward bend, side bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

LEGS STRAIGHT: ON THE SIDE & SCISSOR LEGS

Upward Side Infinity Pose

Urdhva Parshva Anantasana

(OORD-vuh PARSH-vuh uh-nuhn-TAHS-uh-nuh)

Pose Type: seated, side bend

Drishti Point: Urdhva or Antara Drishti (up to the sky)

One Leg Upward Hand to Knee Revolved Staff Pose

Urdhva Eka Pada Janu Hasta Parivritta Dandasana

(OORD-vuh EY-kuh PUH-duh JAH-nu HUH-stuh puh-ri-VRIT-tuh duhn-DAHS-uh-nuh)

Pose Type: seated, forward bend, twist

Drishti Point: Padayoragrai or Padayoragre (toes/feet)

One Leg Upward Hand to Foot Revolved Staff Pose

Urdhva Eka Pada Hasta Pada Parivritta Dandasana

(OORD-vuh EY-kuh PUH-duh HUH-stuh PUH-duh puh-ri-VRIT-tuh duhn-DAHS-uh-nuh)

Pose Type: seated, forward bend, twist

Drishti Point: Parsva Drishti (to the right), Parsva Drishti (to the left)

One Hand to Foot Archer's Pose

Eka Hasta Pada Akarna Dhanurasana

(EY-kuh HUH-stuh PUH-duh AH-kuhr-nuh duh-nur-AHS-uh-nuh)

Modification: both legs straight, knee behind the shoulder, other palm to the floor

Pose Type: seated, twist

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Bound Leg Archer's Pose

Baddha Pada Akarna Dhanurasana

(BUH-duh PUH-duh AH-kuhr-nuh duh-nur-AHS-uh-nuh)

Pose Type: seated, twist, binding

Drishti Point: Urdhva or Antara Drishti (up to the sky)

ONE LEG STRAIGHT, ONE LEG BENT

Archer's Pose Prep.

Akarna Dhanurasana Prep.

(AH-kuhr-nuh duh-nur-AHS-uh-nuh)

Modification: knee wrapping around the arm

Pose Type: seated, mild backbend

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Archer’s Pose

Akarna Dhanurasana

(AH-kuhr-nuh duh-nur-AHS-uh-nuh)

Modification: foot to the ear
Pose Type: seated, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Foot Behind the Head Pose

Eka Pada Shirshasana

(EY-kuh PUH-duh sheer-SHAHS-uh-nuh)

Also Known As: Foot Behind the Head Pose A (Eka Pada Shirshasana A)
Modification: leg straight
1. palms to the floor by the hips
2. hands in Anjali Mudra (Hands in Prayer)

Pose Type: seated
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Pose Dedicated to Skanda

Skandasana

(skuhn-DAHS-uh-nuh)

Also Known As: Foot Behind the Head Pose B (Eka Pada Shirshasana B)
Pose Type: seated, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

ONE LEG STRAIGHT, ONE LEG BENT: TWISTS

Easy Lord of the Fishes Pose Prep.

Sukha Matsyendrasana Prep.

(SUK-uh muhts-yeyn-DRAHS-uh-nuh)

Modification: one leg straight, arm wrapped around the bent knee
Pose Type: seated, forward bend, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Easy Lord of the Fishes Pose

Sukha Matsyendrasana

(SUK-uh muhts-yeyn-DRAHS-uh-nuh)

Pose Type: seated, forward bend, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

ONE LEG STRAIGHT, ONE LEG BENT: KNEE TO THE CHEST

Pose Dedicated to Sage Marichi 1 & 2 Prep.

Marichyasana 1 & 2 Prep.

(muh-ree-CHYAHS-uh-nuh)

Also Known As: Pose Dedicated to Sage Marichi A & C Prep. (Marichyasana A & C Prep.)
Modification: arms parallel to the floor in front of the chest
Pose Type: seated, forward bend
Drishti Point: Hastagrai or Hastagre (hands)

Pose Dedicated to Sage Marichi 1 & 2 Prep.

Marichyasana 1 & 2 Prep.

(muh-ree-CHYAHS-uh-nuh)

Also Known As: Pose Dedicated to Sage Marichi A & C Prep. (Marichyasana A & C Prep.)
Modification: both hands grabbing onto the foot of the straight leg
Pose Type: seated, forward bend
Drishti Point: Padhayoragrai or Padayoragre (toes/feet)

Revolved Pose Dedicated to Sage Marichi 1 Prep.

Parivritta Marichyasana 1 Prep.

(puh-ri-VRIT-tuh muh-ree-CHYAHS-uh-nuh)
Modification: twisting to the inside of the bent knee, elbow to the knee
Pose Type: seated, forward bend, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

ONE LEG STRAIGHT, ONE LEG BENT: KNEE TO THE CHEST—BINDING & TWIST

Pose Dedicated to Sage Marichi 1

Marichyasana 1

(muh-ree-CHYAHS-uh-nuh)
Also Known As: Pose Dedicated to Sage Marichi A (Marichyasana A)
Modification: 1. spine straight
2. half forward bend
3. full forward bend, nose to the shin
Pose Type: seated, forward bend, binding
Drishti Point: 1. Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)
2 & 3. Padhayoragrai or Padayoragre (toes/feet) or Nasagrai or Nasagre (nose)

Pose Dedicated to Sage Marichi 2 Prep.

Marichyasana 2 Prep.

(muh-ree-CHYAHS-uh-nuh)

Also Known As: Pose Dedicated to Sage Marichi C (Marichyasana C)
Modification: elbow over the bent knee
Pose Type: seated, forward bend, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Pose Dedicated to Sage Marichi 2 Prep.

Marichyasana 2 Prep.

(muh-ree-CHYAHS-uh-nuh)

Also Known As: Pose Dedicated to Sage Marichi C (Marichyasana C)
Modification: grabbing onto the knee of the straight leg
Pose Type: seated, forward bend, twist, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows) or Padhayoragrai or Padayoragre (toes/feet)

Pose dedicated to Sage Marichi 2

Marichyasana 2

(muh-ree-CHYAHS-uh-nuh)

Also Known As: Pose Dedicated to Sage Marichi C (Marichyasana C)
Pose Type: seated, forward bend, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

ONE LEG STRAIGHT & LIFTED, ONE LEG BENT

Seated Revolved Upward One Hand to Foot Pose

Upavishta Parivritta Urdhva Eka Pada Hastasana

(u-puh-VISH-tuh puh-ri-VRIT-tuh OORD-vuh EY-kuh PUH-duh huh-STAHS-uh-nuh)

Also Known As: Upavistha Parivritta Urdhva Eka Pada Hastasana
Modification: straight leg lifted, grabbing the foot with the opposite arm, other forearm on the floor
Pose Type: seated, forward bend
Drishti Point: Padhayoragrai or Padayoragre (toes/feet)

One Leg Extended Full Lord of the Fishes Pose

Utthita Eka Pada Paripurna Matsyendrasana

(UT-ti-tuh EY-kuh PUH-duh puh-ri-POOR-nuh muhts-yeyn-DRAHS-uh-nuh)

Pose Type: seated, forward bend, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

ONE LEG STRAIGHT, OTHER LEG CROSSED OVER: FOREARM & ELBOW TO THE FLOOR

Revolved Western Intense Stretch Pose Hand to Foot Side Infinity Pose

Parivritta Paschimottana Hasta Pada Parshva Anantasana

(puh-ri-VRIT-tuh puhsh-chi-mo-TAHN-uh HUH-stuh PUH-duh PAHRSH-vuh uh-nuhn-TAHS-uh-nuh)

Also Known As: Revolved Seated Forward Bend Hand to Foot Side Infinity Pose
Pose Type: seated, forward bend, twist
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs), Nasagrai or Nasagre (nose)

Revolved Western Intense Stretch Pose Uneven Arms Upward Side Infinity Pose

Parivritta Paschimottana Vishama Hasta Urdhva Parshva Anantasana

(puh-ri-VRIT-tuh puhsh-chi-mo-TAHN-uh VI-shuh-muh HUH-stuh OORD-vuh PAHRSH-vuh uh-nuhn-TAHS-uh-nuh)

Also Known As: Revolved Seated Forward Bend Uneven Arms Side Infinity Pose
Pose Type: seated, forward bend, twist
Drishti Point: Angushtamadhye or Angustha Ma Dyai (thumbs), Nasagrai or Nasagre (nose)

Revolved Western Intense Stretch Pose Bound Arms Upward Side

Infinity Pose

Parivritta Paschimottana Baddha Hasta Urdhva Parshva Anantasana

(puh-ri-VRIT-tuh puhsh-chi-mo-TAHN-uh BUH-duh HUH-stuh OORD-vuh PAHRSH-vuh uh-nuhn-TAHS-uh-nuh)

Also Known As: Revolved Seated Forward Bend Bound Arms Upward Side Infinity Pose
Modification: arms wrapped around the foot, elbows toward the floor
Pose Type: seated, forward bend, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

ONE LEG STRAIGHT, OTHER LEG CROSSED OVER: SIDE & BACKBEND

Upward Side Infinity Pose

Urdhva Parshva Anantasana

(OORD-vuh PAHRSH-vuh uh-nuhn-TAHS-uh-nuh)

Modification: top leg crossed over, outside edge of the foot to the floor
1. looking to the side
2. head rolling back

Pose Type: 1. seated, side bend, twist
2. seated, side bend, twist, backbend

Drishti Point: 1. Hastagrai or Hastagre (hands), Padhayoragrai or Padayoragre (toes/feet)
2. Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

1.
2.

HALF COW FACE POSE: FORWARD BEND & SIDE BEND

Half Cow Face Western Intense Stretch Pose Prep.

Ardha Gomukha Paschimottanasana Prep.

(UHR-duh GO-muk-uh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: One-Legged Cow Face Western Intense Stretch Pose (Eka Pada Gomukha Paschimottanasana), Half Cow Face Seated Forward Bend
Modification: half forward bend
Pose Type: seated, forward bend
Drishti Point: Padhayoragrai or Padayoragre (toes/feet), Nasagrai or Nasagre (nose)

Half Cow Face Western Intense Stretch Pose

Ardha Gomukha Paschimottanasana

(UHR-duh GO-muk-uh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: One-Legged Cow Face Western Intense Stretch Pose (Eka Pada Gomukha Paschimottanasana), Half Cow Face Seated Forward Bend

Modification: 1. grabbing onto the wrist, chin to the knee

2. chin to the knee, arms straight, palms down in front of the foot

Pose Type: seated, forward bend

Drishti Point: Padhayoragrai or Padayoragre (toes/feet), Nasagrai or Nasagre (nose)

Revolved Sideways Half Cow Face Western Intense Stretch Pose

Parivritta Parshva Ardha Gomukha Paschimottanasana

(puh-ri-VRIT-tuh PAHRSH-vuh EY-kuh PUH-duh GO-muk-uh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Revolved Sideways One-Legged Cow Face Western Intense Stretch Pose (Parivritta Parshva Eka Pada Gomukha Paschimottanasana), Revolved Sideways Half Cow Face Seated Forward Bend

Modification: top leg straight

Pose Type: seated, forward bend, side bend, twist

Drishti Point: Padhayoragrai or Padayoragre (toes/feet), Hastagrai or Hastagre (hands), Parshva

Drishti (to the right), Parshva Drishti (to the left)

Revolved Hand to Foot Sideways Half Cow Face Western Intense Stretch Pose

Parivritta Hasta Pada Parshva Ardha Gomukha Paschimottanasana

(puh-ri-VRIT-tuh HUH-stuh PUH-duh PAHRSH-vuh UHR-duh GO-muk-uh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Revolved Hand to Foot Sideways One-Legged Cow Face Western Intense Stretch Pose (Parivritta Hasta Pada Parshva Eka Pada Gomukha Paschimottanasana), Revolved Hand to Foot Sideways Half Cow Face Seated Forward Bend

Modification: bottom leg straight, looking up to the sky

Pose Type: seated, forward bend, twist

Drishti Point: Urdhva or Antara Drishti (up to the sky)

HALF COW FACE POSE: LEG LIFTED

Upward Half Cow Face Western Intense Stretch Pose

Urdhva Ardha Gomukha Paschimottanasana

(OORD-vuh UHR-duh GO-muk-uh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Upward One-Legged Cow Face Western Intense Stretch Pose (Urdhva Eka Pada Gomukha Paschimottanasana), Upward Half Cow Face Seated Forward Bend
Modification: bottom leg straight, grabbing onto the foot
Pose Type: seated, forward bend, core
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Urdhva or Antara Drishti (up to the sky)

Upward Half Cow Face Western Intense Stretch Pose

Urdhva Ardha Gomukha Paschimottanasana

(OORD-vuh UHR-duh GO-muk-uh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Upward One-Legged Cow Face Western Intense Stretch Pose (Urdhva Eka Pada Gomukha Paschimottanasana), Upward Half Cow Face Seated Forward Bend
Modification: top leg straight, grabbing onto both feet
Pose Type: seated, forward bend, core
Drishti Point: Padhayoragrai or Padayoragre (toes/feet)

Sundial Pose 2

Surya Yantrasana 2

(SOOR-yuh yuhn-trahn-AHS-uh-nuh)

Pose Type: seated, forward bend

Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Sundial Pose 1

Surya Yantrasana 1

(SOOR-yuh yuhn-trahn-AHS-uh-nuh)

Pose Type: seated, twist

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Upward Bound Hands Sundial Pose 1

Urdhva Baddha Hasta Surya Yantrasana 1

(OORD-vuh BUH-duh HUH-stuh SOOR-yuh yuhn-trahn-AHS-uh-nuh)

Pose Type: seated, twist, binding

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Downward Bound Hands Sundial Pose 1

Adho Baddha Hasta Surya Yantrasana 1

(uh-DO BUH-duh HUH-stuh SOOR-yuh yuhn-trahn-AHS-uh-nuh)

Pose Type: seated, forward bend, binding

Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE LEG STRAIGHT, ONE LEG BENT: HALF LOTUS & BINDING

Half Bound Lotus Western Intense Stretch Pose Prep.

Ardha Baddha Padma Paschimottanasana Prep.

(UHR-duh BUH-duh PUHD-muh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Half Bound Lotus Seated Forward Bend Prep.
Modification: arm extended to the sky
Pose Type: seated, binding
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Bound Lotus Western Intense Stretch Pose

Ardha Baddha Padma Paschimottanasana

(UHR-duh BUH-duh PUHD-muh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Half Bound Lotus Seated Forward Bend
Modification: 1. half forward bend
2. full forward bend
Pose Type: seated, forward bend, binding
Drishti Point: Padhayoragrai or Padayoragre (toes/feet), Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE LEG STRAIGHT, ONE LEG BENT: HALF LOTUS, TWISTS & BINDING

Revolved Half Bound Lotus Western Intense Stretch Pose

Parivritta Ardha Baddha Padma Paschimottanasana

(puh-ri-VRIT-tuh UHR-duh BUH-duh PUHD-muh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Revolved Half Bound Lotus Seated Forward Bend and Half Lord of the Fishes Pose (Ardha Matsyendrasana)
Modification: grabbing onto the big toe
Pose Type: seated, forward bend, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Half Lord of The Fishes Pose 2

Ardha Matsyendrasana 2

(UHR-duh muhts-yeyn-DRAHS-uh-nuh)

Also Known As: Sage Warrior Bharadvaja Prep. (Bharadvajasana Prep.)
Modification: 1. looking toward the foot
2. looking over the shoulder
Pose Type: seated, forward bend, twist, binding

Drishti Point: 1. Padhayoragrai or Padayoragre (toes/feet)
2. Parshva Drishti (to the right), Parshva Drishti (to the left)

ONE LEG STRAIGHT, ONE LEG BENT: HALF LOTUS—LEG LIFTED

Half Lotus Extended Hand to Big Toe Pose in Infinity Pose

Ardha Padma Utthita Hasta Padangusthasana in Anantasana

(UHR-duh PUHD-muh UT-ti-tuh HUH-stuh puhd-ahng-goosh-TAHS-uh-nuh in uhn-uhnt-AHS-uh-nuh)

Pose Type: seated, mild backbend
Drishti Point: Urdhva or Antara Drishti (up to the sky), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Lotus Extended Revolved Hand to Foot Pose in Infinity Pose

Ardha Padma Utthita Parivritta Pada Hastasana in Anantasana

(UHR-duh PUHD-muh UT-ti-tuh puh-ri-VRIT-tuh PUH-duh huh-STAHS-uh-nuh in uhn-uhnt-AHS-uh-nuh)

Modification: grabbing onto the foot on the opposite side
Pose Type: seated, mild backbend, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE LEG STRAIGHT, ONE LEG BENT: HALF LOTUS & BACKBEND—BINDING

Half Lotus Upward Infinity Pose

Ardha Padma Urdhva Anantasana

(UHR-duh PUHD-muh OORD-vuh uhn-uhnt-AHS-uh-nuh)

Pose Type: seated
Drishti Point: Urdhva or Antara Drishti (up to the sky), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Bound Lotus Infinity Pose

Ardha Baddha Padma Anantasana

(UHR-duh BUH-duh PUHD-muh uhn-uhnt-AHS-uh-nuh)

Modification: Arm 1: forearm to the floor
Arm 2: grabbing onto the foot
Pose Type: seated, mild backbend, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Bound Lotus Infinity Pose

Ardha Baddha Padma Anantasana

(UHR-duh BUH-duh PUHD-muh uhn-uhnt-AHS-uh-nuh)

Modification: Arm 1: elbow to the floor
Arm 2: hand to the hip socket
Pose Type: seated, mild backbend, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE LEG STRAIGHT, ONE KNEE BENT TO THE BACK: FORWARD BEND & TWIST

Three Limbed Face to Foot Western Intense Stretch Pose

Trianga Mukhaikapada Paschimottanasana

(tri-UHNG-uh muk-EYE-kuh-puh-duh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Three Limbed Face to Foot Seated Forward Bend
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Churning Pose

Chalanasana

(chuh-luh-NAHS-uh-nuh)

Pose Type: seated, forward bend, twist
Drishti Point: Hastagrai or Hastagre (hands)

ONE LEG STRAIGHT, ONE KNEE BENT TO THE BACK: TWIST, SIDE BEND & FORWARD BEND

Revolved Half Bound Half Hero Half Seated Angle Pose

Parivritta Ardha Baddha Ardha Vira Ardha Upavishta Konasana

(puh-ri-VRIT-tuh UHR-duh BUH-duh UHR-duh VEER-uh UHR-duh u-puh-VISH-tuh ko-NAHS-uh-nuh)

Also Known As: Parivritta Ardha Baddha Ardha Vira Ardha Upavistha Konasana
Konasana Modification: spine straight
Pose Type: seated, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Gate Pose

Parighasana

(puh-ri-GAHS-uh-nuh)

Modification: side bend toward the straight leg; grabbing onto the heel of the bent leg with both hands
Pose Type: seated, side bend, forward bend, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Gate Pose

Parighasana

(puh-ri-GAHS-uh-nuh)

Modification: seated: 1. palm to the floor by the ankle, other arm up over the head
2. elbow to the floor by the knee
3. both hands grabbing onto the foot, chest rotated up to the sky
Pose Type: 1 & 2. seated, side bend
3. seated, side bend, twist
Drishti Point: 1. Hastagrai or Hastagre (hands)
2 & 3. Urdhva or Antara Drishti (up to the sky)

Benu Bird Pose 1

Benvasana 1

(ben-VAHS-uh-nuh)

Modification: seated; sitting bone on the heel, forward bend; arms to the side and to the back
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

ONE LEG STRAIGHT, ONE KNEE BENT TO THE BACK: LEG LIFTED—BACKBEND

Reclined Half Hero Extended Hand to Foot Pose

Supta Ardha Vira Utthita Hasta Padasana

(SUP-tuh UHR-duh VEER-uh UT-ti-tuh HUH-stuh PUH-duhs-uh-nuh)

Modification: 1. right side view
2. left side view

Pose Type: seated, mild backbend, twist

Drishti Point: Urdhva or Antara Drishti (up to the sky), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE LEG STRAIGHT, ONE KNEE BENT TO THE BACK: LEG LIFTED

Heron Pose

Krounchasana

(crown-CHAHS-uh-nuh)

Modification: grabbing onto the wrist, toes pointed

Pose Type: seated, forward bend

Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Sundial Pose 3

Surya Yantrasana 3

(SOOR-yuh yuhn-TRAHS-uh-nuh)

Modification: foot turned to the back
Pose Type: seated, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Heron Pose

Parivritta Krounchasana

(puh-ri-VRIT-tuh crown-CHAHS-uh-nuh)

Also Known As: Revolved Sundial Pose 3 (Parivritta Surya Yantrasana 3)
Pose Type: seated, forward bend, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

[GARUDA LEGS: BACKBEND, TWIST, FORWARD BEND & BINDING](#)

Seated Leg Position of the Pose Dedicated to Garuda

Upavishta Pada Garudasana

(u-puh-VISH-tuh PUH-duh guh-ru-DAHS-uh-nuh)

Also Known As: Upavistha Pada Garudasana
Modification: backbend, one hand to the sky
Pose Type: seated, backbend
Drishti Point: Hastagrai or Hastagre (hands)

Revolved Hand to Foot Seated Leg Position of the Pose Dedicated to Garuda

Parivritta Hasta Pada Upavishta Pada Garudasana

(puh-ri-VRIT-tuh HUH-stuh PUH-duh u-puh-VISH-tuh PUH-duh guh-ru-DAHS-uh-nuh)

Also Known As: Parivritta Hasta Pada Upavistha Pada Garudasana
Pose Type: seated, forward bend, twist
Drishti Point: Hastagrai or Hastagre (hands)

Seated Leg Position of the Pose Dedicated to Garuda

Upavishta Pada Garudasana

(u-puh-VISH-tuh PUH-duh guh-ru-DAHS-uh-nuh)

Also Known As: Upavistha Pada Garudasana
Modification: forehead to the knee
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Revolved Seated Leg Position of the Pose Dedicated to Garuda

Parivritta Upavishta Pada Garudasana

(puh-ri-VRIT-tuh u-puh-VISH-tuh PUH-duh guh-ru-DAHS-uh-nuh)

Also Known As: Parivritta Upavistha Pada Garudasana
Modification: hands in Anjali Mudra (Hands in Prayer), one arm threaded through the legs
Pose Type: seated, forward bend, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Bound Revolved Seated Leg Position of the Pose Dedicated to Garuda

Baddha Parivritta Upavishta Pada Garudasana

(BUH-duh puh-ri-VRIT-tuh u-puh-VISH-tuh PUH-duh guh-ru-DAHS-uh-nuh)

Also Known As: Baddha Parivritta Upavistha Pada Garudasana
Pose Type: seated, forward bend, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

GARUDA LEGS: KNEES TO THE FLOOR ON THE SIDE

Seated Leg Position of the Pose Dedicated to Garuda in Upward Side Infinity Pose

Upavishta Pada Garudasana in Urdhva Parshva Anantasana

(u-puh-VISH-tuh PUH-duh guh-ru-DAHS-uh-nuh in OORD-vuh PAHRSH-vuh uhn-uhnt-AHS-uh-nuh)

Also Known As: Upavistha Pada Garudasana in Urdhva Parshva Anantasana
Modification: one hand to the floor, one arm extended out
Pose Type: seated, side bend
Drishti Point: Hastagrai or Hastagre (hands)

Seated Leg Position of the Pose Dedicated to Garuda in Upward Side Infinity Pose

Upavishta Pada Garudasana in Urdhva Parshva Anantasana

(u-puh-VISH-tuh PUH-duh guh-ru-DAHS-uh-nuh in OORD-vuh PAHRSH-vuh uhn-uhnt-AHS-uh-nuh)

Modification: palms flat on the floor, fingertips pointing away from the heels, backbend
Pose Type: seated, side bend, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BOTH KNEES BENT: ANKLES HOOKED—TWIST & SIDE BEND

Twist Dedicated to Sage Bharadvaja 3

Bharadvajasana 3

(buh-ruhd-vahj-AHS-uh-nuh)

Pose Type: seated, forward bend, twist
Drishti Point: Padhayoragrai or Padayoragre (toes/feet)

Sideways Twist Dedicated to Sage Bharadvaja 3

Parshva Bharadvajasana 3

(PAHRSH-vuh buh-ruhd-vahj-AHS-uh-nuh)

Modification: forearm to the floor
Pose Type: seated, mild backbend, side bend
Drishti Point: Hastagrai or Hastagre (hands)

[LEG CRADLE: ONE LEG STRAIGHT]

Baby Cradle Pose

Hindolasana

(hin-do-LAHS-uh-nuh)

Also Known As: One Foot Behind the Head Pose A & B Prep. (Eka Pada Shirshasana A & B Prep.)
Modification: leg straight
1. spine straight, front view
2. half forward bend, side view

Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Padhayoragrai or Padayoragre (toes/feet), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Baby Cradle Pose

Hindolasana

(hin-do-LAHS-uh-nuh)

Also Known As: One Foot Behind the Head Pose A Prep. (Eka Pada Shirshasana A Prep.)
Modification: leg straight, hands to the face
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

HEAD TO KNEE POSE: FORWARD BEND

Head to Knee Pose Prep.

Janu Shirshasana Prep.

(JAH-nu sheer-SHAHS-uh-nuh)

Modification: palms to the floor by the hips, spine straight
Pose Type: seated
Drishti Point: Nasagrai or Nasagre (nose), Padhayoragrai or Padayoragre (toes/feet)

Both Hands to Ankle Head to Knee Pose

Dwi Hasta Kulpa Janu Shirshasana

(DWI-huh-stuh KUL-puh JAH-nu sheer-SHAHS-uh-nuh)

Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Padhayoragrai or Padayoragre (toes/feet)

Both Hands to Foot Head to Knee Pose

Dwi Hasta Pada Janu Shirshasana

(DWI-huh-stuh PUH-duh JAH-nu sheer-SHAHS-uh-nuh)

Modification: 1. grabbing onto the foot; fingers interlocked, half forward bend
2. grabbing onto the wrist, half forward bend

Pose Type: seated, forward bend

Drishti Point: Padhayoragrai or Padayoragre (toes/feet), Nasagrai or Nasagre (nose)

HEAD TO KNEE POSE: HEEL UP—FORWARD BEND

Head to Knee Pose C Prep.

Janu Shirshasana C Prep.

(JAH-nu sheer-SHAHS-uh-nuh)

Also Known As: Half Root Lock Pose (Ardha Mula Bandhasana)
Pose Type: seated
Drishti Point: Nasagrai or Nasagre (nose), Padhayoragrai or Padayoragre (toes/feet), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Head to Knee Pose C

Janu Shirshasana C

(JAH-nu sheer-SHAHS-uh-nuh)

Modification: 1. half forward bend
2. full forward bend
Pose Type: seated, forward bend
Drishti Point: Padhayoragrai or Padayoragre (toes/feet), Nasagrai or Nasagre (nose)

HEAD TO KNEE POSE: TWISTS

Revolved Half Bound Angle Pose

Parivritta Ardha Baddha Konasana

(puh-ri-VRIT-tuh UHR-duh BUH-duh ko-NAHS-uh-nuh)

Modification: hand to the knee, other hand to the floor behind the hips for support
Pose Type: seated, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Revolved Half Bound Angle Pose

Parivritta Ardha Baddha Konasana

(puh-ri-VRIT-tuh UHR-duh BUH-duh ko-NAHS-uh-nuh)

Pose Type: seated, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Revolved Sideways Half Bound Angle Pose

Parivritta Parshva Ardha Baddha Konasana

(puh-ri-VRIT-tuh PAHRSH-vuh UHR-duh BUH-duh ko-NAHS-uh-nuh)

Modification: grabbing onto the big toe of the bent leg
Pose Type: seated, twist, side bend, binding
Drishti Point: Padhayoragrai or Padayoragre (toes/feet)

Revolved Half Bound Angle Pose

Parivritta Ardha Baddha Konasana

(puh-ri-VRIT-tuh UHR-duh BUH-duh ko-NAHS-uh-nuh)

Modification: looking back Arm 1: grabbing onto the outside edge of the opposite foot
Arm 2: grabbing onto the shin of the opposite leg behind the back
Pose Type: seated, forward bend, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

HEAD TO KNEE POSE—SIDE BENDS

Half Bound Angle Pose in Infinity Pose

Ardha Baddha Konasana in Anantasana

(UHR-duh BUH-duh ko-NAHS-uh-nuh in uhn-uhnt-AHS-uh-nuh)

Modification: elbow to the floor, head rolling back
Pose Type: seated, mild backbend, side bend, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Revolved Head to Knee Pose Prep.

Parivritta Janu Shirshasana Prep.

(puh-ri-VRIT-tuh JAH-nu sheer-SHAHS-uh-nuh)

Modification: grabbing onto the foot, other hand to the knee
Pose Type: seated, forward bend
Drishti Point: Padhayoragrai or Padayoragre (toes/feet)

Sideways Head to Knee Pose

Parshva Janu Shirshasana

(PAHRSH-vuh JAH-nu sheer-SHAHS-uh-nuh)

Also Known As: Sideways Half Bound Angle Pose (Parshva Ardha Baddha Konasana)
Pose Type: seated, side bend
Drishti Point: Hastagrai or Hastagre (hands)

Sideways Head to Knee Pose

Parshva Janu Shirshasana

(PAHRSH-vuh JAH-nu sheer-SHAHS-uh-nuh)

Also Known As: Sideways Half Bound Angle Pose (Parshva Ardha Baddha Konasana)
Modification: elbow to the floor on the inside of the leg, other hand on the hip
Pose Type: seated, forward bend, side bend
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Half Bound

Half Seated Angle Pose

Ardha Baddha Ardha Upavishta Konasana

(UHR-duh BUH-duh UHR-duh u-puh-VISH-tuh ko-NAHS-uh-nuh)

Also Known As: Ardha Baddha Ardha Upavistha Konasana

Pose Type: seated, side bend, binding

Drishti Point: Nasagrai or Nasagre (nose)

How to Perform the Pose:

1. Begin by sitting on the floor with both your legs straight out in front of you. Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Exhale as you bend your left knee and bring the sole of your left foot toward your right thigh.
3. On the next exhale, bring your right leg out to the right side, keeping it strong and straight by pulling up the kneecap and engaging the thigh muscles (quadriceps). Press your right toes and your right heel to the floor, lifting the right leg slightly on off the floor.
4. Inhale as you expand your chest and hold your arms straight out to the sides, parallel to the floor.
5. Exhale as you bend your left arm and reach your left hand behind the back to the inside of your right thigh to bind.
6. Inhale as you reach your right arm up to the sky. Exhale as you bend your right elbow and look toward your left knee.
7. Hold the pose for at least 30, and up to 90, seconds in order to receive full benefits of the stretch.
8. Inhale as you release the bind. Exhale as you bring both your legs straight out in front of you. Repeat on the other side.

Modification: side bend toward the bent knee

ardha = half

baddha = bound

ardha = half

upavishta = seated

kona = angle

Half Bound Sideways Head to Knee Pose

Ardha Baddha Parshva Janu Shirshasana

(UHR-duh BUH-duh PAHRSH-vuh JAH-nu sheer-SHAHS-uh-nuh)

Also Known As: Sideways Half Bound Angle Pose (Parshva Ardha Baddha Konasana)
Modification: 1. toes pointed
2. toes flexed in
Pose Type: seated, forward bend, side bend, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Head to Knee Pose

Parivritta Janu Shirshasana

(puh-ri-VRIT-tuh JAH-nu sheer-SHAHS-uh-nuh)

Modification: elbow to the floor
1. forearm to the floor, chest to the side
2. head on the knee, chest to the sky
Pose Type: seated, side bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Both Hands to the Head Sideways Head to Knee Pose

Dwi Hasta Shirsha Parshva Janu Shirshasana

(DWI-huh-stuh SHEER-shuh PAHRSH-vuh JAH-nu sheer-SHAHS-uh-nuh)

Also Known As: Sideways Half Bound Angle Pose (Parshva Ardha Baddha Konasana)
Modification: 1. slight side bend
2. elbow to the knee
3. elbow to the floor
Pose Type: seated, side bend
Drishti Point: Urdhva or Antara Drishti (up to the sky)

HEAD TO KNEE POSE: LEG LIFTED

Hands Free Sundial Pose 1

Mukta Hasta Surya Yantrasana 1

(MUK-tuh HUH-stuh SOOR-yuh yuhn-TRAHS-uh-nuh)

Modification: foot to thigh, fingertips of both hands to the floor
Pose Type: seated, forward bend, side bend, core
Drishti Point: Hastagrai or Hastagre (hands)

Sundial Pose 1

Surya Yantrasana 1

(SOOR-yuh yuhn-TRAHS-uh-nuh)

Modification: foot to thigh, grabbing onto the foot on the same side
Pose Type: seated, forward bend, side bend
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Unsupported Seated Revolved Upward One Hand to Foot Pose

Niralamba Upavishta Parivritta Urdhva Eka Pada Hastasana

(nir-AH-luhm-buh u-puh-VISH-tuh puh-ri-VRIT-tuh OORD-vuh EY-kuh PUH-duh huh-STAHS-uh-nuh)

Pose Type: seated, forward bend, twist, core
Drishti Point: Hastagrai or Hastagre (hands)

HERO POSE: TOES CURLED IN

Tip Toe Hero Pose

Prapada Virasana

(PRUH-puh-duh veer-AHS-uh-nuh)

Also Known As: Thunderbolt Pose (Vajrasana)
Modification: toes curled in, hands in Anjali Mudra (Hands in Prayer)
Pose Type: seated
Drishti Point: Hastagrai or Hastagre (hands) or Nasagrai or Nasagre (nose)

Tip Toe Hero Pose

Prapada Virasana

(PRUH-puh-duh veer-AHS-uh-nuh)

Also Known As: Thunderbolt Pose (Vajrasana)
Modification: head down, arms open wide
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

HERO POSE: SITTING ON THE HEELS

Hero Pose

Virasana

(veer-AHS-uh-nuh)

Also Known As: Thunderbolt Pose (Vajrasana)
Modification: arms to the sides; modified version for tight ankles
Pose Type: seated
Drishti Point: Nasagrai or Nasagre (nose)

HERO POSE: SITTING ON THE HEELS—HANDS ON THE KNEES

Hero Pose

Virasana

(veer-AHS-uh-nuh)
Also Known As: Thunderbolt Pose (Vajrasana)
Modification: hands on the knees, palms up
Pose Type: seated
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Lion Pose Dedicated to an Avatar of Lord Vishnu in Hero Pose

Narasimhasana in Virasana

(nuh-ruh-sim-HAHS-uh-nuh in veer-AHS-uh-nuh)

Also Known As: Lion Pose in Thunderbolt Pose (Simhasana in Vajrasana)
Modification: sitting on the heels
1. Cat Tilt
2. Dog Tilt

Pose Type: seated
1. forward bend
2. mild backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

HERO POSE: SITTING ON THE HEELS—ARMS UP & FORWARD BEND

Hero Pose—Raised Bound Hands

Virasana Urdhva Baddha Hastasana

(veer-AHS-uh-nuh OORD-vuh BUH-duh huh-STAHS-uh-nuh)

Also Known As: Thunderbolt Pose Raised Bound Hands (Vajrasana Urdhva Baddha Hastasana)

Modification: palms facing up
Pose Type: seated
Drishti Point: Nasagrai or Nasagre (nose)

Hero Pose

Virasana

(veer-AHS-uh-nuh)
Also Known As: Thunderbolt Pose (Vajrasana)
Modification: forward bending, ankles crossed, palms to the floor by the knees
Pose Type: seated, forward bend
Drishti Point: Angushtamadhye or Angustha Ma Dyai (thumbs), Nasagrai or Nasagre (nose)

Hand Position of the Pose Dedicated to Garuda in Hero Pose

Hasta Garudasana in Virasana

(HUH-stuh guh-ru-DAHS-uh-nuh in veer-AHS-uh-nuh)
Also Known As: Hand Position of the Pose Dedicated to Garuda in Thunderbolt Pose (Hasta Garudasana in Vajrasana)
Modification: 1. half forward bend

2. spine straight
Pose Type: 1. seated, forward bend
2. seated
Drishti Point: Angushtamadhye or Angustha Ma Dyai (thumbs)
1.
2.

HERO POSE: SITTING ON THE HEELS—KNEES OFF THE FLOOR

Hero Scale Pose with Hands in Prayer

Vira Tolasana Namaskar

(VEER-uh to-LAHS-uh-nuh nuh-muhs-KAHR)
Modification: hands in Anjali Mudra (Hands in Prayer)
Pose Type: seated, balance, core
Drishti Point: Nasagrai or Nasagre (nose) or Hastagrai or Hastagre (hands)

Hero Scale Pose

Vira Tolasana

(VEER-uh to-LAHS-uh-nuh)

Modification: grabbing onto the knees, Cat Tilt
Pose Type: seated, balance, core
Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

THUNDERBOLT POSE: SITTING BONES ON THE FLOOR—VARIOUS ARM POSITIONS

Hero Pose

Virasana

(veer-AHS-uh-nuh)

Also Known As: Thunderbolt Pose (Vajrasana)
Modification: sitting bones to the floor
Pose Type: seated
Drishti Point: Nasagrai or Nasagre (nose)

Both Hands to Feet Hero Pose

Dwi Hasta Pada Virasana

(DWI-huh-stuh PUH-duh veer-AHS-uh-nuh)

Also Known As: Both Hands to Feet Thunderbolt Pose (Dwi Hasta Pada Vajrasana)
Modification: sitting bones to the floor, arms crossed behind the back
1. back view
2. front view, mild backbend
Pose Type: 1. seated, binding
2. seated, mild backbend, binding
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One Arm Upward Hero Pose

Eka Urdhva Hasta Virasana

(EY-kuh OORD-vuh HUH-stuh veer-AHS-uh-nuh)

Also Known As: One Arm Upward Thunderbolt Pose (Eka Urdhva Hasta Vajrasana)
Pose Type: seated
Drishti Point: Hastagrai or Hastagre (hands)

Hero Pose—Raised Bound Hands

Virasana Urdhva Baddha Hastasana

(veer-AHS-uh-nuh OORD-vuh BUH-duh huh-STAHS-uh-nuh)

Also Known As: Thunderbolt Pose Raised Bound Hands (Vajrasana Urdhva Baddha Hastasana)
Modification: palms facing up
Pose Type: seated
Drishti Point: Nasagrai or Nasagre (nose)

Revolved Hero Pose

Parivritta Virasana

(puh-ri-VRIT-tuh veer-AHS-uh-nuh)

Also Known As: Revolved Thunderbolt Pose (Parivritta Vajrasana)
Pose Type: seated, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Pose Dedicated to Sage Bharadvaja 1

Bharadvajasana 1

(buh-ruhd-vuhj-AHS-uh-nuh)

Modification: ankles crossed, grabbing onto the bicep
Pose Type: seated, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Sideways Pose Dedicated to Sage Bharadvaja 1

Parshva Bharadvajasana 1

(PAHRSH-vuh buh-ruhd-vuhj-AHS-uh-nuh)

Modification: one arm crossed in front; other arm over the head, elbow bent

Pose Type: seated, side bend

Drishti Point: Hastagrai or Hastagre (hands)

Pose Dedicated to Bharadvaja 1

Bharadvajasana 1

(buh-ruhd-vuhj-AHS-uh-nuh)

Modification: 1. grabbing onto the inside of the hip with opposite hand, other hand on the knee, looking over the shoulder

2. grabbing onto the tricep of the opposite arm, looking over the shoulder

Pose Type: seated, twist, binding

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

THUNDERBOLT POSE: SITTING BONES ON THE FLOOR—KNEES OPEN WIDE

Lion Pose Dedicated to an Avatar of Lord Vishnu in Knees Spread Wide Hero Pose

Narasimhasana in Prasarita Janu Virasana

(nuh-ruh-sim-HAHS-uh-nuh in pruh-SAH-ri-tuh JAH-nu veer-AHS-uh-nuh)

Also Known As: Lion Pose (Simhasana)
Modification: sitting bones on the floor
Pose Type: seated, mild backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Knees Spread Wide Hero Pose

Prasarita Janu Virasana

(pruh-SAH-ri-tuh JAH-nu veer-AHS-uh-nuh)

Also Known As: Frog Pose (Mandukasana)
Modification: sitting bones off the floor
Pose Type: seated

Drishti Point: Nasagrai or Nasagre (nose)

Half Bound Revolved Knees Spread Wide Hero Pose

Ardha Baddha Parivritta Prasarita Janu Virasana

(UHR-duh BUH-duh puh-ri-VRIT-tuh pruh-SAH-ri-tuh JAH-nu veer-AHS-uh-nuh)

Pose Type: seated, twist, binding

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

THUNDERBOLT POSE: SITTING BONES ON THE FLOOR—FEET TURNED OUT

Complete Thunderbolt Pose

Paripurna Vajrasana

(puh-ri-POOR-nuh vuhj-RAHS-uh-nuh)

Pose Type: seated

Drishti Point: Nasagrai or Nasagre (nose)

Revolved Complete Thunderbolt Pose

Parivritta Paripurna Vajrasana

(puh-ri-VRIT-uh puh-ri-POOR-nuh vuhj-RAHS-uh-nuh)

Pose Type: seated, twist

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Western Intense Stretch Pose in Complete Thunderbolt Pose

Paschimottanasana in Paripurna Vajrasana

(puhsh-chi-mo-tahn-AHS-uh-nuh in puh-ri-POOR-nuh vuhj-RAHS-uh-nuh)

Also Known As: Seated Forward Bend in Complete Thunderbolt Pose

Modification: forward bend, toes turned out

Pose Type: seated, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Half Pose Dedicated to Sage Marichi in Revolved Half Thunderbolt Pose

Ardha Marichyasana in Parivritta Ardha Vajrasana

(UHR-duh muh-ree-CHYAHS-uh-nuh in puh-ri-VRIT-uh UHR-duh vuhj-RAHS-uh-nuh)

Modification: 1. looking straight ahead
2. looking over the shoulder

Pose Type: seated, forward bend, twist

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Half Bound Pose Dedicated to Sage Marichi in Half Thunderbolt Pose

Ardha Baddha Marichyasana in Ardha Vajrasana

(UHR-duh BUH-duh muh-ree-CHYAHS-uh-nuh in UHR-duh vuhj-RAHS-uh-nuh)

Pose Type: seated, forward bend, twist, binding

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

THUNDERBOLT POSE: SITTING BONES ON THE FLOOR—FEET TURNED OUT—ARMS UP OVER THE HEAD

Complete Thunderbolt Pose—Raised Bound Hands

Paripurna Vajrasana—Urdhva Baddha Hastasana

(puh-ri-POOR-nuh vuhj-RAHS-uh-nuh OORD-vuh BUH-duh huh-STAHS-uh-nuh)

Modification: 1. looking straight ahead

2. head rolling back

Pose Type: 1. seated

2. seated, mild backbend

Drishti Point: 1. Nasagrai or Nasagre (nose)

2. Angushtamadhye (thumbs)

1.

2.

Revolved Complete Thunderbolt Pose—Raised Bound Hands

Parivritta Paripurna Vajrasana—Urdhva Baddha Hastasana

(puh-ri-VRIT-tuh puh-ri-POOR-nuh vuhj-RAHS-uh-nuh OORD-vuh BUH-duh huh-STAHS-uh-nuh)

Pose Type: seated, twist

Drishti Point: Angushtamadhye (thumbs)

Sideways Complete Thunderbolt Pose—Raised Bound Hands

Parshva Paripurna Vajrasana—Urdhva Baddha Hastasana

(PAHRSH-vuh puh-ri-POOR-nuh vuhj-RAHS-uh-nuh OORD-vuh BUH-duh huh-STAHS-uh-nuh)

Pose Type: seated, side bend

Drishti Point: Angushtamadhye (thumbs)

One Hand Sideways Complete Thunderbolt Pose

Eka Hasta Parshva Paripurna Vajrasana

(EY-kuh HUH-stuh PAHRSH-vuh puh-ri-POOR-nuh vuhj-RAHS-uh-nuh)

Pose Type: seated, side bend

Drishti Point: Hastagrai or Hastagre (hands)

THUNDERBOLT POSE: SITTING BONES ON THE FLOOR—FEET TURNED OUT—ONE-LEGGED & FORWARD BENDS

Half Pose Dedicated to Sage Marichi in Half Thunderbolt Pose

Ardha Marichyasana in Ardha Vajrasana

(UHR-duh muh-ree-CHYAHS-uh-nuh in UHR-duh vuhj-RAHS-uh-nuh)

Modification: grabbing onto the knee with both hands

Pose Type: seated, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Half Pose Dedicated to Sage Marichi in Half Thunderbolt Pose

Ardha Marichyasana in Ardha Vajrasana

(UHR-duh muh-ree-CHYAHS-uh-nuh in UHR-duh vuhj-RAHS-uh-nuh)

Modification: palms to the floor in front of the hips
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Star Pose in Half Frog Pose

Ardha Tarasana in Ardha Mandukasana

(UHR-duh tahr-AHS-uh-nuh in UHR-duh muhn-doo-KAHS-uh-nuh)

Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Pose Dedicated to Virancha (Brahma) 1 Prep.

Viranchyasana 1 Prep.

(vir-uhn-CHYAHS-uh-nuh)

Pose Type: seated, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

[ONE KNEE BENT TO THE BACK: OTHER FOOT TO THE THIGH—SPINE STRAIGHT, TWIST & SIDE BEND]

Easy Pose Dedicated to Sage Bharadvaja 2 Prep.

Sukha Bharadvajasana 2 Prep.

(SUK-uh buh-ruhd-vuhj-AHS-uh-nuh)

Modification: neutral spine, back of the hands on the knees

Pose Type: seated

Drishti Point: Nasagrai or Nasagre (nose)

Easy Pose Dedicated to Sage Bharadvaja 2

Sukha Bharadvajasana 2

(SUK-uh buh-ruhd-vuhj-AHS-uh-nuh)

Modification: foot to the inside of the thigh
Pose Type: seated, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Sideways Easy Pose Dedicated to Sage Bharadvaja 2

Parshva Sukha Bharadvajasana 2

(PAHRSH-vuh SUK-uh buh-ruhd-vuhj-AHS-uh-nuh)

Modification: foot to the inside of the thigh, side bend
Pose Type: seated, side bend
Drishti Point: Hastagrai or Hastagre (hands)

ONE KNEE BENT TO THE BACK: OTHER FOOT TO THE THIGH—SIDE BEND

Easy One-Legged King Pigeon Pose 1

Sukha Eka Pada Raja Kapotasana 1

(SUK-uh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Pose Type: seated, side bend
Drishti Point: Hastagrai or Hastagre (hands)

Sideways Half Hero Half Bound Angle Pose

Parshva Ardha Vira Ardha Baddha Konasana

(PAHRSH-vuh UHR-duh VEER-uh UHR-duh BUH-duh ko-NAHS-uh-nuh)

Modification: forearm to the floor
Pose Type: seated, side bend
Drishti Point: Hastagrai or Hastagre (hands)

Half Hero Half Bound Angle Pose

Ardha Vira Ardha Baddha Konasana

(UHR-duh VEER-uh UHR-duh BUH-duh ko-NAHS-uh-nuh)

Modification: arm behind the back, hand to the hip; backbend

Pose Type: seated, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Twist Dedicated to Sage Bharadvaja 2

Bharadvajasana 2

(buh-ruhd-vuhj-AHS-uh-nuh)

Pose Type: seated, twist, binding

Drishti Point: Parsva Drishti (to the right), Parsva Drishti (to the left)

How to Perform the Pose:

1. Begin by sitting on the floor with both your legs straight out in front of you. Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Inhale as you lean over to the left side, bending your right knee and bringing your right knee, shin, and ankle to the floor. Your right heel should be close to your right hip to protect the knee and your right knee should be open slightly to the side.
3. Exhale as you bend your left knee and bring your left foot to your right hip socket in the Half Lotus (*Ardha Padmasana*), rotating the sole of your left foot up to the sky. Try to keep both knees on the floor.
4. Inhale as you expand your chest and hold your arms straight out to the sides, parallel to the floor.
5. Exhale as you twist to the left, bringing your left arm behind your back and grabbing your left foot with your left hand to bind. Grab onto the left knee with your right hand and look over your left shoulder (Pose #2).
6. Inhale as you lengthen your spine. Exhale as you bring the back of your left hand under your right knee (Pose #1). On the next exhale, look over your right shoulder to deepen the twist (Pose #3).
7. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch.
8. Inhale as you release the bind and look forward. Exhale as you bring both your legs straight out in front of you. Repeat on the other side.

Modification:

1. palm under the knee, twisting to the inside of the body
2. hand on the knee, twisting to the inside of the body
3. palm under the knee, twisting to the outside of the body

Bharadvaja = Pindola Bharadvaja was one of four Arhats asked by Buddha to stay on earth to propagate Buddhist law or Dharma

1.

2.

3.

Half Fire Log Pose in Half Bound Hero Pose

Ardha Agnistambhasana in Ardha Baddha Virasana

(UHR-duh uhg-ni-stuhm-BAHS-uh-nuh in UHR-duh BUH-duh veer-AHS-uh-nuh)

Modification: 1. grabbing onto the hip
2. grabbing onto the heel

Pose Type: seated, binding

Drishti Point: Nasagrai or Nasagre (nose), Hastagrai or Hastagre (hands)

Pose Dedicated to Sage Bharadvaja 2 Prep.

Bharadvajasana 2 Prep.

(buh-ruhd-vuhj-AHS-uh-nuh)

Modification: palms together, heels of the palms resting on the crown of the head, neutral spine

Pose Type: seated

Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Pose Dedicated to Sage Bharadvaja 2 Prep.

Bharadvajasana 2 Prep.

(buh-ruhd-vuhj-AHS-uh-nuh)

Also Known As: Root Lock Pose (Mula Bandhasana)
Modification: sitting on the heel, both hands grabbing onto the foot, neutral spine
Pose Type: seated, binding
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE KNEE BENT TO THE BACK: KNEE TO THE CHEST, BINDING, TWIST & BACKBEND

Pose Dedicated to Sage Marichi 5 & 6 Prep.

Marichyasana 5 & 6 Prep.

(muh-ree-CHYAHS-uh-nuh)

Also Known As: Pose Dedicated to Sage Marichi E & F Prep. (Marichyasana E & F Prep.)
Modification: spine straight
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Pose Dedicated to Sage Marichi 5

Marichyasana 5

(muh-ree-CHYAHS-uh-nuh)

Also Known As: Pose Dedicated to Sage Marichi E (Marichyasana E)
Pose Type: seated, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

Pose Dedicated to Sage Marichi 6

Marichyasana 6

(muh-ree-CHYAHS-uh-nuh)

Also Known As: Pose Dedicated to Sage Marichi F (Marichyasana F)
Pose Type: seated, forward bend, twist, binding
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

One-Legged King Pigeon Pose 3

Eka Pada Raja Kapotasana 3

(EY-kuh PUH-duh RAHJ-uh kuh-po-TAHS-uh-nuh)

Pose Type: seated, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

LEG CRADLE & FOOT TO THE KNEE

Baby Cradle Pose in Half Hero Pose

Hindolasana in Ardha Virasana

(hin-do-LAHS-uh-nuh in UHR-duh veer-AHS-uh-nuh)

Also Known As: Baby Cradle Pose in Half Thunderbolt Pose (Hindolasana in Ardha Vajrasana)

Pose Type: seated, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Baby Cradle Pose Prep.

Hindolasana Prep.

(hin-do-LAHS-uh-nuh)

Modification: palms to the floor behind the hips, heel of the bottom foot to the sitting bone
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Half Fire Log Pose in Half Yogic Staff Pose Prep.

Ardha Agnistambhasana in Ardha Yogadandasana Prep.

(UHR-duh uhg-ni-stuhm-BAHS-uh-nuh in UHR-duh yo-guh-duhn-DAHS-uh-nuh)

Pose Type: seated, forward bend, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Yogic Staff Pose Prep.

Yogadandasana Prep.

(yo-guh-duhn-DAHS-uh-nuh)

Modification: grabbing onto the foot with one hand
Pose Type: seated, forward bend
Drishti Point: Hastagrai or Hastagre (hands)

Yogic Staff Pose Prep.

Yogadandasana Prep.

(yo-guh-duhn-DAHS-uh-nuh)

Modification: grabbing onto the foot with both hands, foot to the chest
Pose Type: seated, forward bend
Drishti Point: Padhayoragrai or Padayoragre (toes/feet)

LEG CRADLE: FOOT TO THE HIP & HALF LOTUS

Baby Cradle Pose Prep.

Hindolasana Prep.

(hin-do-LAHS-uh-nuh)

Modification: both hands grabbing onto the foot, fingers interlocked
Pose Type: seated, forward bend
Drishti Point: Padhayoragrai or Padayoragre (toes/feet)

Baby Cradle Pose

Hindolasana

(hin-do-LAHS-uh-nuh)

Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Four Corner Pose

Chatushkonasana

(chuh-tush-ko-NAHS-uh-nuh)

Pose Type: seated, forward bend, binding
Drishti Point: Nasagrai or Nasagre (nose)

Half Lotus Baby Cradle Pose

Ardha Padma Hindolasana

(UHR-duh PUHD-muh hin-do-LAHS-uh-nuh)

Also Known As: Pose Dedicated to Virancha (Brahma) 1 or A Prep. (Viranchyasana 1 or A Prep.)
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

FOOT TO THE ARMPIT: BOTH KNEES BENT

Yogic Staff Pose with Hands in Prayer

Yogadandasana Namaskar

(yo-guh-duhn-DAHS-uh-nuh nuh-muhs-KAHR)

Pose Type: seated, forward bend

Drishti Point: Nasagrai or Nasagre (nose), Hastagrai or Hastagre (hands)

Yogic Staff Pose

Yogadandasana

(yo-guh-duhn-DAHS-uh-nuh)

Pose Type: seated, forward bend

Drishti Point: Nasagrai or Nasagre (nose), Hastagrai or Hastagre (hands)

Half Bound Fire Log Pose in Half Yogic Staff Pose Prep.

Ardha Baddha Agnistambhasana in Ardha Yogadandasana Prep.

(UHR-duh BUH-duh uhg-ni-stuhm-BAHS-uh-nuh in UHR-duh yo-guh-duhn-DAHS-uh-nuh)

Pose Type: seated, forward bend, twist, binding

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Bound Fire Log Pose in Half Yogic Staff Pose Prep.

Baddha Agnistambhasana in Ardha Yogadandasana Prep.

(BUH-duh uhg-ni-stuhm-BAHS-uh-nuh in UHR-duh yo-guh-duhn-DAHS-uh-nuh)

Pose Type: seated, forward bend, twist, binding

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Hands Bound Half Lotus Pose in Half Yogic Staff Pose Prep.

Baddha Hasta Ardha Padmasana in Ardha Yogadandasana Prep.

(BUH-duh HUH-stuh UHR-duh puhd-MAHS-uh-nuh in UHR-duh yo-guh-duhn-DAHS-uh-nuh)

Pose Type: seated, twist, binding

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Hands Bound Half Hero Pose in Half Yogic Staff Pose Prep.

Baddha Hasta Ardha Virasana in Ardha Yogadandasana Prep.

(BUH-duh HUH-stuh UHR-duh veer-AHS-uh-nuh in UHR-duh yo-guh-duhn-DAHS-uh-nuh)

Pose Type: seated, twist, binding

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

ONE LEG OVER THE SHOULDER: BOTH KNEES BENT

Sundial Pose 2 Prep.

Surya Yantrasana 2 Prep.

(SOOR-yuh yuhn-TRAHS-uh-nuh)

Modification: shoulder to the back of the knee, knee bent
Pose Type: seated, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

FOOT BEHIND THE HEAD

Pose Dedicated to Virancha (Brahma) 1

Viranchyasana 1

(vir-uhn-CHYAHS-uh-nuh)

Also Known As: Pose Dedicated to Virancha (Brahma) A (Viranchyasana A)
Pose Type: seated, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Seated Moonbird Pose

Upavishta Chakorasana

(u-puh-VISH-tuh chuh-kor-AHS-uh-nuh)

Also Known As: Upavistha Chakorasana
Pose Type: seated, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One Foot Behind the Head Pose

Eka Pada Shirshasana

(EY-kuh PUH-duh sheer-SHAHS-uh-nuh)

Modification: palms on the floor by the hips, knee bent toward the chest
Pose Type: seated, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Pose Dedicated to Virancha (Brahma) 1

Viranchyasana 1

(vir-uhn-CHYAHS-uh-nuh)

Also Known As: Pose Dedicated to Virancha (Brahma) A (Viranchyasana A)
Modification: hands in Anjali Mudra (Hands in Prayer)
Pose Type: seated
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

COW FACE POSE: SPINE STRAIGHT

Leg Position of Cow Face Pose

Pada Gomukhasana

(PUH-duh go-muk-AHS-uh-nuh)

Modification: hands on the top knee, one palm on top of the other
Pose Type: seated
Drishti Point: Nasagrai or Nasagre (nose)

Ganesh Seal in Leg Position of Cow Face Pose

Ganesh Mudra in Pada Gomukhasana

(guh-NEYSH MU-druh in PUH-duh go-muk-AHS-uh-nuh)

Pose Type: seated

Drishti Point: Nasagrai or Nasagre (nose)

Both Hands to Feet Leg Position of Cow Face Pose

Dwi Hasta Pada Gomukhasana

(DWI-huh-stuh PUH-duh go-mu-KAHS-uh-nuh)

Modification: arms crossed behind the back, grabbing onto the feet

1. back view
2. front view

Pose Type: seated, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Cow Face Pose

Gomukhasana

(go-mu-KAHS-uh-nuh)

Pose Type: seated

Drishti Point: Nasagrai or Nasagre (nose)

Leg Position of Cow Face Pose

Pada Gomukhasana

(PUH-duh go-mu-KAHS-uh-nuh)

Modification: elbows touching behind the head
Pose Type: seated
Drishti Point: Nasagrai or Nasagre (nose)

COW FACE POSE: FORWARD BEND

Leg Position of Cow Face Pose

Pada Gomukhasana

(PUH-duh go-mu-KAHS-uh-nuh)
Modification: hands in Anjali Mudra (Hands in Prayer), thumbs to third eye; elbows together
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose) or Angushtamadhye or Angustha Ma Dyai (thumbs)

Western Intense Stretch Pose in Leg Position of Cow Face Pose

Paschimottanasana in Pada Gomukhasana

(puhsh-chi-mo-TAHS-uh-nuh in PUH-duh go-mu-KAHS-uh-nuh)
Also Known As: Seated Forward Bend in Leg Position of Cow Face Pose and Long Horn Pose

(Dighasrngasana)
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Hand Position of the Pose Dedicated to Garuda in Leg Position of Cow Face Pose

Hasta Garudasana in Pada Gomukhasana

(HUH-stuh guh-ru-DAHS-uh-nuh in PUH-duh go-mu-KAHS-uh-nuh)
Modification: forward bend
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

COW FACE POSE: SIDE BEND

Sideways Leg Position of Cow Face Pose

Parshva Pada Gomukhasana

(PAHRSH-vuh PUH-duh go-mu-KAHS-uh-nuh)

Pose Type: seated, side bend

Drishti Point: Hastagrai or Hastagre (hands)

Hand to Foot Sideways Leg Position of Cow Face Pose

Hasta Pada Parshva Pada Gomukhasana

(HUH-stuh PUH-duh PAHRSH-vuh PUH-duh go-mu-KAHS-uh-nuh)

Pose Type: seated, side bend

Drishti Point: Hastagrai or Hastagre (hands)

Sideways Leg Position of Cow Face Pose

Parshva Pada Gomukhasana

(PAHRSH-vuh PUH-duh go-mu-KAHS-uh-nuh)

Modification: intense shoulder stretch

Pose Type: seated, side bend

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Hand to Foot Revolved Leg Position of Cow Face Pose

Hasta Pada Parivritta Pada Gomukhasana

(HUH-stuh PUH-duh puh-ri-VRIT-tuh PUH-duh go-mu-KAHS-uh-nuh)

Modification: grabbing onto the big toe, arm behind the back; other arm in front of the body, hand on the hip

Pose Type: seated, twist, binding

Drishti Point: Padayoragrai or Padayoragre (toes/feet)

COW FACE POSE: KNEES LIFTED TO THE CHEST

Upward Leg Position of Cow Face Pose

Urdhva Pada Gomukhasana

(OORD-vuh PUH-duh go-mu-KAHS-uh-nuh)

Modification: arms under the legs, knees lifted to the chest

Pose Type: seated, forward bend

Drishti Point: Padayoragrai or Padayoragre (toes/feet), Hastagrai or Hastagre (hands)

Upward Hands Upward Leg Position of Cow Face Pose

Urdhva Hasta Urdhva Pada Gomukhasana

(OORD-vuh HUH-stuh OORD-vuh PUH-duh go-mu-KAHS-uh-nuh)

Pose Type: seated, forward bend, core

Drishti Point: Hastagrai or Hastagre (hands), Nasagrai or Nasagre (nose)

Both Hands to Feet Upward Leg Position of Cow Face Pose

Dwi Hasta Pada Urdhva Pada Gomukhasana

(DWI-huh-stuh PUH-duh OORD-vuh PUH-duh go-mu-KAHS-uh-nuh)

Modification: grabbing the outside edges of both feet

Pose Type: seated, forward bend, core

Drishti Point: Nasagrai or Nasagre (nose)

COW FACE POSE: ELBOW & FOREARM ON THE FLOOR

Half Bound Sideways Easy Leg Position of Cow Face Pose

Ardha Baddha Parshva Sukha Pada Gomukhasana

(UHR-duh BUH-duh PAHRSH-vuh SUK-uh PUH-duh go-mu-KAHS-uh-nuh)

Modification: forearm to the floor, sitting on the bottom heel

1. front view
2. back view

Pose Type: seated, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Bound Sideways Easy Leg Position of Cow Face Pose

Ardha Baddha Parshva Sukha Pada Gomukhasana

(UHR-duh BUH-duh PAHRSH-vuh SUK-uh PUH-duh go-mu-KAHS-uh-nuh)

Modification: elbow to the floor
Pose Type: seated, backbend, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

SAGE VAMADEVA'S POSE: LEANING TO THE SIDE

Pose Dedicated to Sage Vamadeva Prep.

Vamadevasana Prep.

(vahm-uh-dey-VAHS-uh-nuh)

Modification: 1. palm flat on the floor, chest rotating up
2. one arm crossed over in front, hand grabbing onto the back foot; top hand to the head
Pose Type: seated, side bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Pose Dedicated to Sage Vamadeva

Vamadevasana

(vahm-uh-dey-VAHS-uh-nuh)

Modification: binding:
1. hand to the hip socket
2. hand to the knee

Pose Type: seated, side bend, twist, binding

Drishti Point: 1. Urdhva or Antara Drishti (up to the sky)
2. Padayoragrai or Padayoragre (toes/feet)

Revolved One-Legged King Pigeon Pose 1 Prep.

Parivritta Eka Pada Raja Kapotasana 1 Prep.

(puh-ri-VRIT-tuh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: grabbing onto the back foot

1. one arm crossed over, other arm to the side, elbow bent
2. arms crossed in front of the body, free hand to the opposite knee

Pose Type: seated, side bend, twist

Drishti Point: Hastagrai or Hastagre (hands), Parshva Drishti (to the right), Parshva Drishti (to the left)

Pose Dedicated to Sage Vamadeva 2

Vamadevasana 2

(vahm-uh-dey-VAHS-uh-nuh)

Pose Type: seated, twist

Drishti Point: Padayoragrai or Padayoragre (toes/feet)

ONE-LEGGED KING PIGEON: HIPS OFF THE FLOOR

One-Legged King Pigeon Pose 1 Version B

Eka Pada Raja Kapotasana 1 B

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Pose Type: standing (on the knees), backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Easy One-Legged King Pigeon Pose 1

Sukha Eka Pada Raja Kapotasana 1

(SUK-uh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: hips lifted off the floor, grabbing onto the foot on the opposite side with overhead grip

1. free arm extended to the front
2. free hand to the floor by the opposite knee

Pose Type: standing (on the knees), backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Easy One-Legged King Pigeon Pose 1

Sukha Eka Pada Raja Kapotasana 1

(SUK-uh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: hips off the floor; fingertips to the floor by the hips, foot touching the head
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

[ONE-LEGGED KING PIGEON: UNDER-HEAD GRIP]

One-Legged King Pigeon Pose 1 Prep.

Eka Pada Raja Kapotasana 1 Prep.

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: 1. back knee bent
2. grabbing onto the back foot with one arm on the same side

Pose Type: seated, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged King Pigeon Pose 1

Eka Pada Raja Kapotasana 1

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: one hand on the front knee on the same side, other hand pressing the back foot toward the hip

Pose Type: seated, backbend

Drishti Point: Nasagrai or Nasagre (nose), Hastagrai or Hastagre (hands)

One-Legged King Pigeon Pose 1

Eka Pada Raja Kapotasana 1

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: one hand on the back knee, one hand on the front knee; foot to the back of the head
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged King Pigeon Pose 1

Eka Pada Raja Kapotasana 1

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: foot to the opposite armpit
Pose Type: seated, backbend, twist
Drishti Point: Nasagrai or Nasagre (nose) or Hastagrai or Hastagre (hands)

Revolved One-Legged King Pigeon Pose 1

Parivritta Eka Pada Raja Kapotasana 1

(puh-ri-VRIT-tuh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: foot to the armpit on the same side
Pose Type: seated, backbend, twist
Drishti Point: Hastagrai or Hastagre (hands)

Revolved One-Legged King Pigeon Pose 1

Parivritta Eka Pada Raja Kapotasana 1

(puh-ri-VRIT-tuh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: foot under the chin
Pose Type: seated, backbend, twist
Drishti Point: Hastagrai or Hastagre (hands)

Pose of the Heavenly Spirits Prep.

Valakhilyasana Prep.

(vah-luh-kil-YAHS-uh-nuh)

Modification: under-head grip
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE-LEGGED KING PIGEON: OVERHEAD GRIP

One-Legged King Pigeon Pose 1

Eka Pada Raja Kapotasana 1

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: grabbing onto the foot with one hand on the same side, overhead grip; other hand resting on the front knee
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged King Pigeon Pose 1

Eka Pada Raja Kapotasana 1

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: grabbing onto the foot with both hands, overhead grip; heel of the back foot to the forehead

Pose Type: seated, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE-LEGGED KING PIGEON: ASYMMETRICAL ARMS—CROSS OVER & UNDER-HEAD/OVERHEAD GRIP

One Hand to Foot Bound One-Legged King Pigeon Pose 1

Eka Hasta Pada Baddha Eka Pada Raja Kapotasana 1

(EY-kuh HUH-stuh PUH-duh BUH-duh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: arm crossed over in front of the neck, other hand on the knee

Pose Type: seated, backbend

Drishti Point: Nasagrai or Nasagre (nose)

Both Hands to Feet Bound One-Legged King Pigeon Pose 1

Dwi Hasta Pada Baddha Eka Pada Raja Kapotasana 1

(DWI-huh-stuh PUH-duh BUH-duh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: arm crossed over in front of the neck
Pose Type: seated, backbend, binding
Drishti Point: Nasagrai or Nasagre (nose)

Mermaid Pose 1

Naginyasana 1

(nah-gin-YAHS-uh-nuh)

Pose Type: seated, backbend, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE-LEGGED KING PIGEON: ASYMMETRICAL ARMS—CROSS OVER & UNDER-HEAD/OVERHEAD GRIP

Both Hands to Feet Bound One-Legged King Pigeon Pose 1

Dwi Hasta Pada Baddha Eka Pada Raja Kapotasana 1

(DWI-huh-stuh PUH-duh BUH-duh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: grabbing onto the opposite foot with overhead grip
Pose Type: seated, backbend, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged King Pigeon Pose 1

Eka Pada Raja Kapotasana 1

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: one hand on the back knee, one hand grabbing onto the opposite foot with overhead grip
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE-LEGGED KING PIGEON: FOOT TO THE BACK OF THE HEAD

One-Legged King Pigeon Pose 1

Eka Pada Raja Kapotasana 1

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: grabbing onto the back knee with both hands under-head grip; foot to the back of the head

Pose Type: seated, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One Legged King Pigeon Pose 1

Eka Pada Raja Kapotasana 1

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Pose Type: seated, backbend

Drishti Point: Angusthamadhye or Angustha Ma Dyai (thumbs)

How to Perform the Pose:

1. Begin by sitting on the floor with both your legs straight out in front of you. Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Exhale and bend your left knee, keeping the knee on the floor, and slide the left heel toward the inside of your right thigh.
3. Inhale as you lean forward. Exhale, extend the right leg straight out behind you with your right thigh, knee, shin, and front of the right foot on the floor. Square your hips by pulling the left hip to the back and right hip to the front.
4. Inhale as you lengthen the spine, pressing both hands to the floor by your hips for support. Exhale as you let your head roll back into a backbend.
5. Exhale as you bend your right knee, bringing your right foot toward your head. Once your right foot touches your head, slide your right foot under the back of your head and fix it in place.
6. Inhale as you stretch both arms up over your head. Exhale as you bring your palms together, keeping your arms straight and strong (Pose #1). Push through your chest. You can experiment with interlocking your fingers and letting your pointer fingers and thumbs be straight. You can also bring your foot to the side of your head (Pose #2).
7. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch.
8. Exhale as you release the right foot from under your head and lower it to the floor. Inhale and straighten your spine. Exhale as you bring both your legs straight out in front of you. Repeat on the other side.

Modification: both arms extended to the sky
1. foot to the back of the head, palms together
2. foot to the side of the head, fingers interlocked, pointer fingers free

eka = one

pada = foot or leg

raja = king, royal

kapota = pigeon

1.

2.

Easy One-Legged King Pigeon Pose 1

Sukha Eka Pada Raja Kapotasana 1

(SUK-uh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: hips lifted, back leg straight, arms open wide
Pose Type: standing (on the knees), backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged King Pigeon Pose 1 Prep.

Eka Pada Raja Kapotasana 1 Prep.

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: hips off the floor, back leg straight; hands on the hips
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Upward Hands One-Legged King Pigeon Pose 1

Urdhva Hasta Eka Pada Raja Kapotasana 1

(OORD-vuh HUH-stuh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: hips off the floor, back leg straight; arms extended to the sky
Pose Type: seated, backbend
Drishti Point: Angushtamadhye or Angustha Ma Dyai (thumbs)

One-Legged King Pigeon Pose 1 Prep.

Eka Pada Raja Kapotasana 1 Prep.

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: back leg straight; palms facing up, back of the hand on the foot and the knee
Pose Type: seated, backbend
Drishti Point: Nasagrai or Nasagre (nose)

ONE-LEGGED KING PIGEON: BACK LEG STRAIGHT—FORWARD BEND & TWIST

One-Legged King Pigeon Pose 1

Eka Pada Raja Kapotasana 1

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: back leg straight; forward bend, forearms to the floor, foot and knee to the elbow creases

Pose Type: seated, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

One-Legged King Pigeon Pose 1

Eka Pada Raja Kapotasana 1

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: back leg straight; forehead to the floor, palms to the floor, elbows on top of the wrists

Pose Type: seated, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Hand Position of Cow Face Pose in One-Legged King Pigeon Pose 1

Hasta Gomukhasana in Eka Pada Raja Kapotasana 1

(HUH-stuh go-muk-AHS-uh-nuh in EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: back leg straight, forward bend with Gomukhasana Arms
Pose Type: seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Revolved One-Legged King Pigeon Pose 1

Parivritta Eka Pada Raja Kapotasana 1

(puh-ri-VRIT-tuh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)
Modification: twisting to the inside of the body, back leg straight; foot to the armpit
Pose Type: seated, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved One-Legged King Pigeon Pose 1

Parivritta Eka Pada Raja Kapotasana 1

(puh-ri-VRIT-tuh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)
Modification: twisting to the outside of the body, back leg straight; knee to the armpit
Pose Type: seated, forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

[VERTICAL SPLITS: SPINE STRAIGHT]

Pose Dedicated to Hanuman

Hanumanasana

(huh-nu-mahn-AHS-uh-nuh)

Also Known As: Pose Dedicated to Hanuman A
(Hanumanasana A)

Modification: hands in Anjali Mudra (Hands in Prayer)

1. side view
2. front view

Pose Type: seated

Drishti Point: Nasagrai or Nasagre (nose) or Hastagrai or Hastagre (hands)

2.

Upward Hands in

Pose Dedicated to Hanuman

Urdhva Hasta Hanumanasana

(OORD-vuh HUH-stuh huh-nu-mahn-AHS-uh-nuh)

Also Known As: Pose Dedicated to Hanuman B (Hanumanasana B)

Pose Type: seated, backbend

Drishti Point: Angusthamadhye or Angustha Ma Dyai (thumbs)

How to Perform the Pose:

1. Begin by standing on your knees with sitting bones lifted off the heels. Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Exhale, step your left foot to the front into a lunge. Keep your left knee on top of your left ankle and your right knee under your right hip.
3. Inhale as you slide your left foot out to the front, lifting your left toes off the floor until your left leg is straight.
4. Inhale and stretch your arms up to lengthen your spine. Exhale as you hinge forward from your hips, bringing your hands to the floor on either side of the left leg.
5. On your next exhale, start sliding your left foot out to the front and your right knee to the back, reaching your legs in two opposite directions, coming into a full vertical split. Keep your hips square by pulling your left hip back and your right hip forward.
6. Inhale and reach both your arms up to the sky. Exhale as you deepen the backbend by letting your head roll back and your arms reach in the direction of your back foot.
7. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch.
8. Inhale as you come out of the backbend. Exhale and place both your palms to the floor on the inside of the left leg. Inhale. As you exhale, swing your left leg back and bring your left knee to the floor by your right knee. Inhale and come up to the starting position with both knees on the floor. Repeat on the other side.

Modification: deep backbend

urdhva = upward

hasta = hand

Hanuman = Hindu Deity, Lord of the Monkeys

Hands Bound Pose Dedicated to Hanuman

Baddha Hasta Hanumanasana

(BUH-duh HUH-stuh huh-nu-mahn-AHS-uh-nuh)

Modification: forward bend

1. side view
2. front view

Pose Type: seated, forward bend

Drishti Point: Padayoragrai or Padayoragre (toes/feet), Nasagrai or Nasagre (nose)

VERTICAL SPLITS: TWISTS & SIDE BENDS

Revolved Pose Dedicated to Hanuman

Parivritta Hanumanasana

(puh-ri-VRIT-uh huh-nu-mahn-AHS-uh-nuh)

Pose Type: seated, twist

Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Revolved Sideways Pose Dedicated to Hanuman

Parivritta Parshva Hanumanasana

(puh-ri-VRIT-uh PAHRSH-vuh huh-nu-mahn-AHS-uh-nuh)

Modification: twisting to the inside of the body
Pose Type: seated, forward bend, twist, side bend
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Sideways Pose Dedicated to Hanuman

Parivritta Parshva Hanumanasana

(puh-ri-VRIT-uh PAHRSH-vuh huh-nu-mahn-AHS-uh-nuh)

Modification: twisting to the outside of the body
Pose Type: seated, forward bend, twist, side bend
Drishti Point: Urdhva or Antara Drishti (up to the sky)

VERTICAL SPLITS: BACK FOOT TOWARD THE HIP & MERMAID POSE

Revolved One-Legged King Pigeon Pose 4 Prep.

Parivritta Eka Pada Raja Kapotasana 4 Prep.

(puh-ri-VRIT-tuh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: 1. hand to the floor by the hip, other hand pressing the foot toward the hip
2. grabbing onto the big toe of the front foot on the same side, other hand pressing the back foot toward the hip

Pose Type: seated, backbend, twist

Drishti Point: Padayoragrai or Padayoragre (toes/feet), Parshva Drishti (to the right), Parshva Drishti (to the left)

Mermaid Pose 4

Naginyasana 4

(nuh-gin-YAHS-uh-nuh)

Pose Type: seated, backbend, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

VERTICAL SPLITS: BACK KNEE BENT—OVERHEAD GRIP & FOOT TO THE BACK OF THE HEAD

One-Legged King Pigeon Pose 4

Eka Pada Raja Kapotasana 4

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: one hand grabbing onto the back foot on the same side with overhead grip
Pose Type: seated, backbend
Drishti Point: Hastagrai or Hastagre (hands)

One-Legged King Pigeon Pose 4

Eka Pada Raja Kapotasana 4

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: one hand grabbing onto the back foot on the opposite side with overhead grip, foot reaching toward the head; other hand on the knee of the front leg

Pose Type: seated, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged King Pigeon Pose 4

Eka Pada Raja Kapotasana 4

(EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Also Known As: One-Legged Stretched Out King Pigeon Pose (Prasarita Pada Raja Kapotasana), Pose of the Lord Kailasha (Kailashasana), Saw Pose A (Kroukachasana A)

Modification: both hands grabbing onto the back foot with overhead grip

Pose Type: seated, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Foot to the Head One-Legged King Pigeon Pose 4

Shirsha Pada Eka Pada Raja Kapotasana 4

(SHEER-shuh PUH-duh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)

Also Known As: Hanuman Salutation Pose (Hanumana Namaskara)
Modification: both arms extended to the sky, back foot to the back of the head
Pose Type: seated, backbend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Core Poses

BOAT POSE

SIX TRIANGLES POSE

SUPINE POSES

Easy Boat Pose

Sukha Navasana

(SUK-uh nah-VAHS-uh-nuh)

Modification: knees bent, arms wrapped around the shins
Pose Type: core, seated
Drishti Point: Nasagrai or Nasagre (nose)

Easy Boat Pose

Sukha Navasana

(SUK-uh nah-VAHS-uh-nuh)

Modification: knees bent, grabbing the back of the thighs, toes touching the floor
Pose Type: core, seated
Drishti Point: Nasagrai or Nasagre (nose)

Easy Boat Pose

Sukha Navasana

(SUK-uh nah-VAHS-uh-nuh)

Modification: knees bent, arms wrapped around the back of the thighs, shins parallel to the floor

Pose Type: core, seated

Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Easy Boat Pose

Sukha Navasana

(SUK-uh nah-VAHS-uh-nuh)

Modification: grabbing onto the heels, toes touching the floor

Pose Type: core, seated

Drishti Point: Nasagrai or Nasagre (nose)

Easy Boat Pose

Sukha Navasana

(SUK-uh nah-VAHS-uh-nuh)

Modification: grabbing onto the outside edges of the feet, shins parallel to the floor

Pose Type: core, seated
Drishti Point: Nasagrai or Nasagre (nose)

Pendant Pose

Lolasana

(lo-LAHS-uh-nuh)

Modification: knees in front of chest, ankles crossed
Pose Type: core, arm balance
Drishti Point: Nasagrai or Nasagre (nose)

Boat Pose

Navasana

(nah-VAHS-uh-nuh)

Pose Type: core, seated

Drishti Point: Padhayoragrai or Padayoragre (toes/feet)

How to Perform the Pose:

1. Begin by sitting on the floor with both your legs straight out in front of you. Keep your hands on the floor at the sides of your hips for support. Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Exhale, bend your knees, and slide your feet toward your sitting bones. Keep your feet and knees together.
3. Inhale as you lengthen your spine. Engage your core and lean back. Make sure your spine is straight and your lower back is off the floor.
4. Exhale and lift your feet off the floor until your shins are parallel to the floor.
5. Once you have your balance, exhale and lift your arms off the floor, keeping them parallel to the floor.
6. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of pose.
7. Inhale as you release the pose by lowering your hands and feet to the floor. Exhale and slide your feet out in front until your legs are straight to come back to the starting position.

Variation: arms straight and parallel to the floor, knees bent, shins parallel to the floor

nava = boat

Easy Boat Pose

Sukha Navasana

(SUK-uh nah-VAHS-uh-nuh)

Modification: knees bent, ankles crossed, arms straight and parallel to the floor
Pose Type: core, seated
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Easy Boat Pose

Sukha Navasana

(SUK-uh nah-VAHS-uh-nuh)

Modification: knees bent, fingertips to the floor, toes touching the floor
Pose Type: core, seated
Drishti Point: Nasagrai or Nasagre (nose)

Easy Boat Pose

Sukha Navasana

(SUK-uh nah-VAHS-uh-nuh)

Modification: knees bent, fingertips to the floor, shins parallel to the floor

Pose Type: core, seated

Drishti Point: Padayoragrai or Padayoragre (toes/feet)

BOAT POSE: BOTH LEGS STRAIGHT

Supported Boat Pose

Salamba Navasana

(SAH-luhm-buh nah-VAHS-uh-nuh)

Modification: palms to the floor behind the hips

1. both legs straight, fingertips pointing toward the hips
2. both legs straight, both arms straight, fingertips pointing to the back

Pose Type: core, seated

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Padayoragrai or Padayoragre (toes/feet)

Supported Boat Pose

Salamba Navasana

(SAH-luhm-buh nah-VAHS-uh-nuh)

Modification: both arms wrapped around both legs, legs straight
Pose Type: core, seated
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Supported Boat Pose—One-Handed

Eka Hasta Salamba Navasana

(EY-kuh HUH-stuh SAH-luhm-buh nah-VAHS-uh-nuh)

Modification: both legs straight; one arm straight, fingertips to the sky; other arm wrapping behind the ankles of both legs
Pose Type: core, seated
Drishti Point: Urdhva or Antara Drishti (up to the sky) or Hastagrai or Hastagre (hands)

Supported Boat Pose

Salamba Navasana

(SAH-luhm-buh nah-VAHS-uh-nuh)

Modification: fingertips on the floor, pointing to the front
Pose Type: core, seated
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Supported Boat Pose

Salamba Navasana

(SAH-luhm-buh nah-VAHS-uh-nuh)

Modification: grabbing behind the knees, legs straight
Pose Type: core, seated
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Complete Boat Pose

Paripurna Navasana

(puh-ri-POOR-nuh nah-VAHS-uh-nuh)

Modification: arms straight and parallel to the floor, legs straight
Pose Type: core, seated
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Half Boat Pose

Ardha Navasana

(UHR-duh nah-VAHS-uh-nuh)

Modification: fingers interlocked behind the head
Pose Type: core, seated
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Boat Pose

Navasana

(nah-VAHS-uh-nuh)

Modification: palms and elbows together, elbows bent
Pose Type: core, seated
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Unsupported Boat Pose

Niralamba Navasana

(nir-AH-luhm-buh nah-VAHS-uh-nuh)

Modification: arms shoulder width apart
Pose Type: core, seated
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BOAT POSE: TWIST

Revolved Boat Pose with Hands in Prayer

Parivritta Navasana Namaskar

(puh-ri-VRIT-tuh nah-VAHS-uh-nuh nuh-muhs-KAHR)

Pose Type: core, seated, twist

Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Supported Boat Pose—One-Handed

Eka Hasta Salamba Navasana

(EY-kuh HUH-stuh SAH-luhm-buh nah-VAHS-uh-nuh)

Modification: both legs straight, ankles crossed; one arm straight, palm to the floor behind the hips; other arm wrapping behind the
ankles of both legs

Pose Type: core, seated

Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Revolved Supported Boat Pose—One-Handed

Parivritta Eka Hasta Salamba Navasana

(puh-ri-VRIT-tuh EY-kuh HUH-stuh SAH-luhm-buh nah-VAHS-uh-nuh)

Modification: both legs straight, ankles crossed; arms straight, fingertips to the floor behind the hips, one hand grabbing onto the heel

Pose Type: core, seated, twist

Drishti Point: Hastagrai or Hastagre (hands)

Revolved Supported Boat Pose—One-Handed

Parivritta Eka Hasta Salamba Navasana

(puh-ri-VRIT-tuh EY-kuh HUH-stuh SAH-luhm-buh nah-VAHS-uh-nuh)

Modification: one foot under the knee, other leg straight; one arm threaded under the bent leg, fingertips of the other hand on the floor

Pose Type: core, seated, twist

Drishti Point: Hastagrai or Hastagre (hands)

Revolved Supported Boat Pose

Parivritta Salamba Navasana

(puh-ri-VRIT-tuh SAH-luhm-buh nah-VAHS-uh-nuh)

Modification: ankles crossed, legs wrapped around the forearm
Pose Type: core, seated, twist
Drishti Point: Parshva (far to the right), Parshva (far to the left)

BOAT POSE: TWIST, SCISSOR LEGS

Revolved Boat Pose

Parivritta Navasana

(puh-ri-VRIT-tuh nah-VAHS-uh-nuh)

Modification: one leg over the shoulder, toes of the other leg to the floor
1. front view
2. back view

Pose Type: core, seated, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Boat Pose

Parivritta Navasana

(puh-ri-VRIT-tuh nah-VAHS-uh-nuh)

Modification: one leg over the shoulder, both legs straight

1. front view
2. back view

Pose Type: core, seated, twist

Drishti Point: Urdhva or Antara Drishti (up to the sky)

BOAT POSE: ONE LEG STRAIGHT, ONE LEG BENT

One-Legged Supported Boat Pose

Eka Pada Salamba Navasana

(EY-kuh PUH-duh SAH-luhm-buh nah-VAHS-uh-nuh)

Modification: one leg straight, one knee bent and dropped to the side for support
Pose Type: core, seated
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows) or Padayoragrai or Padayoragre (toes/feet)

One-Legged Supported Boat Pose

Eka Pada Salamba Navasana

(EY-kuh PUH-duh SAH-luhm-buh nah-VAHS-uh-nuh)

Modification: grabbing onto the back of the thighs for support; one leg straight, one leg bent—toes touching the floor
Pose Type: core, seated
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

One-Legged Unsupported Boat Pose

Eka Pada Niralamba Navasana

(EY-kuh PUH-duh nir-AH-luhm-buh nah-VAHS-uh-nuh)

Modification: one leg straight; one knee bent toward the chest, foot off the floor
Pose Type: core, seated
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

BOAT POSE: SCISSOR LEGS

One-Legged Supported Boat Pose—One-Handed

Eka Pada Eka Hasta Salamba Navasana

(EY-kuh PUH-duh EY-kuh HUH-stuh SAH-luhm-buh nah-VAHS-uh-nuh)

Modification: grabbing the outside edge of the foot with the opposite hand for support, leg straight, other arm up to the sky
1. other leg bent, toes touching the floor
2. other leg straight, foot off the floor

Pose Type: core, seated
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Padayoragrai or

Padayoragre (toes/feet)

BOAT POSE: ONE FOOT TO KNEE

Upward Half Firelog Western Intense Stretch Pose

Urdhva Ardha Agnistambha Paschimottanasana

(OORD-vuh UHR-duh uhg-ni-STUHM-buh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Upward Half Firelog Seated Forward Bend
Modification: 1. forehead to the shin
2. forehead away from the shin
Pose Type: core, seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Padayoragrai or Padayoragre (toes/feet)

Baby Cradle Pose in Boat Pose

Hindolasana in Navasana

(hin-do-LAHS-uh-nuh in nah-VAHS-uh-nuh)

Modification: foot of the bent leg to the back of the knee of the straight leg
Pose Type: core, seated, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Revolved Yogic Staff Boat Pose

Parivritta Yogadanda Navasana

(puh-ri-VRIT-tuh yo-guh-DUHN-duh nah-VAHS-uh-nuh)
Modification: both knees bent; one arm behind the back, grabbing onto the ankle; other arm grabbing the outside edge of the foot
Pose Type: core, seated, twist, binding
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Revolved Bound Yogic Staff Boat Pose

Parivritta Baddha Yogadanda Navasana

(puh-ri-VRIT-tuh BUH-duh yo-guh-DUHN-duh nah-VAHS-uh-nuh)
Modification: binding around the straight leg
Pose Type: core, seated, twist, binding
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Revolved Yogic Staff Boat Pose

Parivritta Yogadanda Navasana

(puh-ri-VRIT-tuh yo-guh-DUHN-duh nah-VAHS-uh-nuh)
Modification: foot to the triceps; one arm grabbing onto the heel of the straight leg, other arm open to

the side
Pose Type: core, seated, twist
Drishti Point: Hastagrai or Hastagre (hands)

BOAT POSE: ONE FOOT TO HIP SOCKET

Upward One-Legged Half Lotus Western Intense Stretch Pose

Urdhva Eka Pada Ardha Padma Paschimottanasana

(OORD-vuh EY-kuh PUH-duh UHR-duh PUHD-muh puhsh-chi-mo-tahn-AHS-uh-nuh)
Also Known As: Upward One-Legged Half Lotus Seated Forward Bend
Modification: one hand grabbing onto the big toe, one hand on the hip
Pose Type: core, seated, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Upward One-Legged Half Bound Lotus Western Intense Stretch Pose

Urdhva Eka Pada Ardha Baddha Padma Paschimottanasana

(OORD-vuh EY-kuh PUH-duh UHR-duh BUH-duh PUHD-muh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Upward One-Legged Half Bound Lotus Seated Forward Bend
Pose Type: core, seated, forward bend, binding
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Upward One-Legged Half Bound Lotus Western Intense Stretch Pose

Urdhva Eka Pada Ardha Baddha Padma Paschimottanasana

(OORD-vuh EY-kuh PUH-duh UHR-duh BUH-duh PUHD-muh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Upward One-Legged Half Bound Lotus Seated Forward Bend
Modification: grabbing onto the foot, hand between the calf muscle and the hamstring
Pose Type: core, seated, forward bend, binding
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Upward One-Legged Half Lotus Western Intense Stretch Pose

Urdhva Eka Pada Ardha Padma Paschimottanasana

(OORD-vuh EY-kuh PUH-duh UHR-duh PUHD-muh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Upward One-Legged Half Lotus Seated Forward Bend
Modification: 1. grabbing onto the wrist, hands over the foot

2. grabbing onto the foot, nose to the shin
Pose Type: core, seated, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet) or Nasagrai or Nasagre (nose)

BOAT POSE: GRABBING ONTO FEET/TOES

Big Toes Pose

Ubhaya Padangusthasana

(u-beye-uh puhd-ahng-goosh-TAHS-uh-nuh)
Modification: grabbing onto the big toes, toes flexed in
Pose Type: core, seated
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Upward Facing Western Intense Stretch

Urdhva Mukha Paschimottanasana

(OORD-vuh MUK-uh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Upward Facing Seated Forward Bend
Modification: grabbing onto the heels, arms straight
Pose Type: core, seated, forward bend, quadriceps to the chest
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Upward Facing Western Intense Stretch

Urdhva Mukha Paschimottanasana

(OORD-vuh MUK-uh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Upward Facing Seated Forward Bend
Modification: grabbing onto the heels
1. forehead away from the shins
2. forehead to the shins

Pose Type: core, seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Upward Facing Supported Western Intense Stretch

Urdhva Mukha Salamba Paschimottanasana

(OORD-vuh MUK-uh SAH-luhm-buh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Upward Facing Seated Forward Bend

Modification: arms reaching to the front, fingertips to the floor, 1. forehead away from the shins 2. forehead to the shins

Pose Type: core, seated, forward bend

Drishti Point: Padayoragrai or Padayoragre (toes/feet) or Nasagrai or Nasagre (nose)

Bound Hands Upward Facing Western Intense Stretch

Baddha Hasta Urdhva Mukha Paschimottanasana

(BUH-duh HUH-stuh OORD-vuh MUK-uh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Bound Hands Upward Facing Seated Forward Bend
Pose Type: core, seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Upward Facing Western Intense Stretch

Urdhva Mukha Paschimottanasana

(OORD-vuh MUK-uh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Upward Facing Seated Forward Bend
Modification: grabbing onto the ankles, forehead to the shins
Pose Type: core, seated, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Upward Facing Western Intense Stretch

Urdhva Mukha Paschimottanasana

(OORD-vuh MUK-uh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Upward Facing Seated Forward Bend
Modification: grabbing onto the outside edges of the feet, feet hip distance apart, toes pointed
Pose Type: core, seated, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

ARM BALANCE: SITTING BONES & FEET OFF THE FLOOR

Celibate Pose

Brahmacharyasana

(bruh-muh-chahr-YAHS-uh-nuh)

Also Known As: Lifted Up Staff Pose (Dandasana Utpluti)
Modification: fingers to the floor, thumbs pointing to the back
Pose Type: core, arm balance
Drishti Point: Nasagrai or Nasagre (nose)

[SIX TRIANGLES POSE]

Six Triangles Pose

Shatkonasana

(shuht-ko-NAHS-uh-nuh)

Modification: top foot on the bottom knee

1. fingertips to the temples
2. one forearm to the floor, other arm wrapped around the top knee
3. fingertips to the temples, elbow toward the top knee
4. one elbow to the floor, other elbow to the top knee on the same side

Pose Type: core, seated, twist

Drishti Point: 1. Urdhva or Antara Drishti (up to the sky)

2. Nasagrai or Nasagre (nose)
3. Nasagrai or Nasagre (nose)
4. Hastagrai or Hastagre (hands)

SUPINE: ONE LEG STRAIGHT, ONE LEG BENT

Half Wind Relieving Pose

Ardha Vayu Muktyasana

(UHR-duh VAH-yu muk-TYAHS-uh-nuh)

Also Known As: Wind-Relieving Pose (Pavana Muktasana)
Pose Type: core, supine
Drishti Point: Nasagrai or Nasagre (nose)

Revolved Half Wind Relieving Pose

Parivritta Ardha Vayu Muktyasana

(puh-ri-VRIT-tuh UHR-duh VAH-yu muk-TYAHS-uh-nuh)

Modification: one knee bent, one leg straight

Pose Type: core, supine, twist

Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye (third eye, between the eyebrows)

SUPINE: BOTH LEGS STRAIGHT "SCISSORS"

One-Legged Upward Extended Legs Pose

Eka Pada Urdhva Prasarita Padasana

(EY-kuh PUH-duh OORD-vuh pruh-SAH-ri-tuh puh-DAHS-uh-nuh)

Modification: 1. one arm extended to sky, other palm to the floor, head on the floor
2. one arm extended to sky, other palm to the floor, head and shoulders off the floor
3. fingers interlocked behind the back of the head, head and shoulders off the floor

Pose Type: core, supine

Drishti Point: Padayoragrai or Padayoragre (toes/feet)

SUPINE: BOTH LEGS STRAIGHT

Abdominal Lift Pose

Jatharasana

(jah-tuh-RAHS-uh-nuh)

Modification: head on the floor, palms down by the hips
Pose Type: core, supine
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Upward Extended Legs Pose

Urdhva Prasarita Padasana

(OORD-vuh pruh-SAH-ri-tuh puh-DAHS-uh-nuh)

Pose Type: core, supine

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Abdominal Lift Pose

Jatharasana

(jah-tuh-RAHS-uh-nuh)

Modification: head and shoulders off the floor, feet off the floor

Pose Type: core, supine

Drishti Point: Padayoragrai or Padayoragre (toes/feet)

SUPINE: BOTH LEGS STRAIGHT

Two-Legged Abdominal Lift Upward Extended Legs Pose

Dwi Pada Jathara Urdhva Prasarita Padasana

(DWI-puh-duh JAH-tuh-ruh OORD-vuh pruh-SAH-ri-tuh puh-DAHS-uh-nuh)

Modification: with a yoga block
Pose Type: core, supine
Drishti Point: Urdhva or Antara Drishti (up to the sky), Padayoragrai or Padayoragre (toes/feet)

Abdominal Lift Upward Facing Western Intense Stretch

Jathara Urdhva Mukha Paschimottanasana

(JAH-tuh-ruh OORD-vuh MUK-uh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Abdominal Lift Upward Forward Bend
Modification: head lifted off the floor, forehead to the shins
Pose Type: core, supine
Drishti Point: Nasagrai or Nasagre (nose)

Abdominal Lift Upward Facing Western Intense Stretch

Jathara Urdhva Mukha Paschimottanasana

(JAH-tuh-ruh OORD-vuh MUK-uh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Abdominal Lift Upward Forward Bend
Modification: head lifted off the floor, legs crossed modification
Pose Type: core, supine
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

SUPINE: ONE LEG STRAIGHT, ONE KNEE BENT

Revolved Stomach One Leg Extended Pose

Parivritta Jathara Utthita Eka Padasana

(puh-ri-VRIT-tuh JAH-tuh-tuh UT-ti-tuh EY-kuh puh-DAHS-uh-nuh)

Modification: foot to the elbow
Pose Type: core, supine, twist
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

SUPINE: GARUDA LEGS ON THE BACK

Reclining Abdominal Lift Pose Dedicated to Garuda

Supta Jathara Garudasana

(SUP-tuh JAH-tuh-ruh guh-ru-DAHS-uh-nuh)

Pose Type: core, supine

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Reclining Abdominal Lift Pose Dedicated to Garuda

Supta Jathara Garudasana

(SUP-tuh JAH-tuh-ruh guh-ru-DAHS-uh-nuh)

Modification: fingers to the temples, elbows to the knees

Pose Type: core, supine

Drishti Point: Urdhva or Antara Drishti (up to the sky), Padayoragrai or Padayoragre (toes/feet)

Abdominal Lift Pose Dedicated to Garuda

Jathara Garudasana

(JAH-tuh-ruh guh-ru-DAHS-uh-nuh)

Modification: palms to the floor, arms straight, sitting bones lifted off the floor
Pose Type: core, supine
Drishti Point: Urdhva or Antara Drishti (up to the sky), Padayoragrai or Padayoragre (toes/feet)

Revolved Stomach Reclining Pose Dedicated to Garuda

Parivritta Jathara Supta Garudasana

(puh-ri-VRIT-tuh JAH-tuh-ruh SUP-tuh guh-ru-DAHS-uh-nuh)

Modification: fingers to the temples, elbows out to the sides
Pose Type: core, supine, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

SUPINE: FULL LOTUS

Reclining Abdominal Lift Lotus Pose

Supta Jathara Padmasana

(SUP-tuh JAH-tuh-ruh puhd-MAHS-uh-nuh)

Modification: fingers to the temples, knees up to the sky
Pose Type: core, supine
Drishti Point: Nasagrai or Nasagre (nose)

Revolved Stomach Reclining Lotus Pose

Parivritta Jathara Supta Padmasana

(puh-ri-VRIT-tuh JAH-tuh-ruh SUP-tuh puhd-MAHS-uh-nuh)

Modification: fingers to the temples, elbows out to the sides
1. back view
2. front view

Pose Type: core, supine, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Abdominal Lift Lotus Pose

Jathara Padmasana

(JAH-tuh-tuh puhd-MAHS-uh-nuh)

Modification: palms on the floor, arms straight, sitting bones lifted off the floor
Pose Type: core, supine
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Unsupported Abdominal Lift Lotus Pose

Niralamba Jathara Padmasana

(nir-AH-luhm-buh JAH-tuh-tuh puhd-MAHS-uh-nuh)

Modification: arms extended in front, knees to the forearms

Pose Type: core, supine

Drishti Point: Nasagrai or Nasagre (nose)

Quadruped Poses

CHILD'S POSE

RABBIT POSE

COW POSE

ALL FOURS (VARIATIONS)

PLANK POSE

PLANK ON FOREARMS

FOUR LIMBED STAFF POSE

SIDE PLANK

Child's Pose

Balasana

(bah-LAHS-uh-nuh)

Also Known As: Child's Pose (Garbhasana)
Modification: arms extended to the back, palms up; toes pointed to the back
Pose Type: forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Child's Pose

Balasana

(bah-LAHS-uh-nuh)

Also Known As: Child's Pose (Garbhasana)

Modification: arms extended to the front, palms down; toes pointed to the back

Pose Type: forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Child's Pose

Balasana

(bah-LAHS-uh-nuh)

Modification: arms extended to the front, palms down; toes curled in
Pose Type: forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Hands to the Side Child's Pose

Parshva Hasta Balasana

(PAHRSH-vuh HUH-stuh bah-LAHS-uh-nuh)

Pose Type: forward bend, side bend
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Hand Position of the Pose Dedicated to Garuda in Child's Pose

Hasta Garudasana in Balasana

(HUH-stuh guh-ru-DAHS-uh-nuh in bah-LAHS-uh-nuh)

Pose Type: forward bend

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Child's Pose

Balasana

(bah-LAHS-uh-nuh)

Modification: knees open wide; palms pressed together, fingers spread wide, thumbs to the upper back

Pose Type: forward bend, mild backbend

Drishti Point: Nasagrai or Nasagre (nose)

CHILD'S POSE: TWISTS

Revolved Side Child's Pose

Parivritta Parshva Balasana

(puh-ri-VRIT-tuh PAHRSH-vuh bah-LAHS-uh-nuh)

Pose Type: forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Both Hands to Legs Bound Revolved Child's Pose

Dwi Hasta Pada Baddha Parivritta Balasana

(DWI-huh-stuh PUH-duh BUH-duh puh-ri-VRIT-tuh bah-LAHS-uh-nuh)

Pose Type: forward bend, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Leg Position of the Pose Dedicated to Garuda in Revolved Child's Pose

Pada Garudasana in Parivritta Balasana

(PUH-duh guh-ru-DAHS-uh-nuh in puh-ri-VRIT-tuh bah-LAHS-uh-nuh)

Modification: hands in Anjali Mudra (Hands in Prayer)
Pose Type: forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Revolved Child's Pose

Parivritta Balasana

(puh-ri-VRIT-tuh bah-LAHS-uh-nuh)

Also Known As: Turned Child's Pose (Parshva Balasana)
Modification: bottom arm straight out to the side; top arm bent at 90 degrees, palm to the floor overhead
Pose Type: forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

One Hand Bound Revolved Child's Pose

Eka Hasta Baddha Parivritta Balasana

(EY-kuh HUH-stuh BUH-duh puh-ri-VRIT-tuh bah-LAHS-uh-nuh)

Modification: grabbing onto the quadricep
Pose Type: forward bend, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

CHILD'S POSE: TWISTS & HALF LOTUS BINDING

Hand to Foot Revolved Side Child's Pose

Hasta Pada Parivritta Parshva Balasana

(HUH-stuh PUH-duh puh-ri-VRIT-tuh PAHRSH-vuh bah-LAHS-uh-nuh)

Modification: foot resting on the back of the knee
Pose Type: forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Both Hands to Feet Half Bound Lotus Revolved Child's Pose

Dwi Hasta Pada Ardha Baddha Padma Parivritta Balasana

(DWI-huh-stuh PUH-duh UHR-duh BUH-duh PUHD-muh puh-ri-VRIT-tuh bah-LAHS-uh-nuh)

Pose Type: forward bend, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Half Bound Lotus Revolved Child's Pose

Ardha Baddha Padma Parivritta Balasana

(UHR-duh BUH-duh PUHD-muh puh-ri-VRIT-tuh bah-LAHS-uh-nuh)

Modification: torso twisting to the outside of the body, hand binding to the foot
Pose Type: forward bend, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Half Bound Lotus Revolved Child's Pose

Ardha Baddha Padma Parivritta Balasana

(UHR-duh BUH-duh PUHD-muh puh-ri-VRIT-tuh bah-LAHS-uh-nuh)

Modification: torso twisting to the inside of the body, hand binding to the shin
Pose Type: forward bend, twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

CHILD'S POSE: TWISTS—ONE-LEGGED—BACK FOOT IN THE AIR

Equilibrium One-Legged Revolved Child's Pose with Hands in Prayer

Tulya Eka Pada Parivritta Balasana Namaskar

(TUL-yuh EY-kuh PUH-duh puh-ri-VRIT-tuh bah-LAHS-uh-nuh nuh-muhs-KAHR)

Modification: knee of the top leg bent
Pose Type: forward bend, twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Half Bow Pose in Equilibrium One-Legged Revolved Child's Pose

Ardha Dhanurasana in Tulya Eka Pada Parivritta Balasana

(UHR-duh duh-nur-AHS-uh-nuh in TUL-yuh EY-kuh PUH-duh puh-ri-VRIT-tuh bah-LAHS-uh-nuh)

Pose Type: forward bend, twist, backbend
Drishti Point: Hastagrai or Hastagre (hands)

Revolved Half Bow Pose in Equilibrium One-Legged Revolved Child's Pose

Parivritta Ardha Dhanurasana in Tulya Eka Pada Parivritta Balasana

(puh-ri-VRIT-tuh UHR-duh duh-nur-AHS-uh-nuh in TUL-yuh EY-kuh PUH-duh puh-ri-VRIT-tuh bah-LAHS-uh-nuh)

Pose Type: forward bend, twist, backbend

Drishti Point: Hastagrai or Hastagre (hands)

Half Bow Pose in Equilibrium One-Legged Revolved Child's Pose

Ardha Dhanurasana in Tulya Eka Pada Parivritta Balasana

(UHR-duh duh-nur-AHS-uh-nuh in TUL-yuh EY-kuh PUH-duh puh-ri-VRIT-tuh bah-LAHS-uh-nuh)

Modification: back heel toward the sitting bone

Pose Type: forward bend, twist, backbend

Drishti Point: Hastagrai or Hastagre (hands)

Equilibrium One-Legged Revolved Child's Pose

Tulya Eka Pada Parivritta Balasana

(TUL-yuh EY-kuh PUH-duh puh-ri-VRIT-tuh bah-LAHS-uh-nuh)

Modification: one leg straight, other knee bent, heel toward the sitting bone
Pose Type: forward bend, twist
Drishti Point: Hastagrai or Hastagre (hands)

Hands Bound

Rabbit Pose

Baddha Hasta Sasangasana

(BUH-duh HUH-stuh shuh-shahng-AHS-uh-nuh)

Pose Type: forward bend

Drishti Point: Nasagrai or Nasagre (nose) or Nabhi, Nabhicakre, or Nabi Chakra (belly button)

How to Perform the Pose:

1. Begin by sitting on your heels in Hero Pose (*Virasana*). Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Exhale and bend forward, letting the crown of your head touch the floor, and lift your sitting bones off your heels. Grab onto your heels with both your hands, keeping your arms on the outsides of your shins.
3. Exhale as you rock forward, bringing your forehead toward your knees. Feel the stretch in the upper back between your shoulder blades.
4. Inhale as you lift your hands off your heels and interlock your fingers behind your back. Try to press your palms together. Exhale and stretch your arms up to the sky behind your back. Feel the stretch in your front shoulder heads and your chest (Pose #1). You can experiment by leaving your sitting bones on the heels and moving your forehead away from your knees (Pose #2).
5. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch.
6. Inhale as you release the arms. Exhale as you straighten your spine, coming back to Hero Pose (*Virasana*).

Modification:

1. forehead to the knees, sitting bones lifted
2. forehead away from the knees, sitting bones to the heels

baddha = bound

hasta = hand

sasanga = rabbit

1.

2.

Rabbit Pose

Sasangasana

(shuh-shahn-GAHS-uh-nuh)

Also Known As: Rabbit Foot Pose
Pose Type: forward bend, inversion
Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

COW POSE ON THE HEAD: HALF LOTUS & GARUDA LEGS

Half Bound Lotus Cow Pose on the Head

Ardha Baddha Padma Shirsha Bitilasana

(UHR-duh BUH-duh PUHD-muh SHEER-shuh bee-til-AHS-uh-nuh)

Also Known As: Ardha Baddha Padma Shirsha Gavasana*
Modification: crown of the head to the floor
Pose Type: forward bend, inversion, binding
Drishti Point: Nasagrai or Nasagre (nose), Nabhi, Nabhicakre, or Nabi Chakra (belly button)

Reverse Prayer in Leg Position of the Pose Dedicated to Garuda in Cow Pose on the Head

Viparita Namaskar in Pada Garudasana in Shirsha Bitilasana

(vi-puh-REE-tuh nuh-muhs-KAHR in PUH-duh guh-ru-DAHS-uh-nuh in SHEER-shuh bee-til-AHS-uh-nuh)

Also Known As: Back of the Body Prayer Leg Position of the Pose Dedicated to Garuda in Cow Pose on the Head (Paschima Namaskara Pada Garudasana in Shirsha Bitilasana)

Pose Type: forward bend, inversion

Drishti Point: Nasagrai or Nasagre (nose), Nabhi, Nabhicakre, or Nabi Chakra (belly button)

COW POSE ON THE HEAD: HEELS TO THE SITTING BONES & HEELS TO THE OUTSIDE OF THE HIPS

Both Hands to the Legs Cow Pose on the Head

Dwi Hasta Pada Shirsha Bitilasana

(DWI-huh-stuh PUH-duh SHEER-shuh bee-til-AHS-uh-nuh)

Modification: heels toward the sitting bones

Pose Type: forward bend, inversion

Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

Both Hands to the Feet Cow Pose on the Head

Dwi Hasta Pada Shirsha Bitilasana

(DWI-huh-stuh PUH-duh SHEER-shuh bee-til-AHS-uh-nuh)

Modification: heels to the outside of the hips
Pose Type: forward bend, inversion
Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

ALL FOURS: NEUTRAL SPINE

Cow Pose

Bitilasana

(bee-til-AHS-uh-nuh)

Also Known As: Table Pose (Bharmanasana)
Pose Type: standing (hands and knees)
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Intense Wrist Stretch Cow Pose

Uttana Manibandha Bitilasana

(ut-TAHN-uh muh-ni-BUHN-duh bee-til-AHS-uh-nuh)

Also Known As: Table Pose Modification (Bharmanasana)
Pose Type: standing (hands and knees)
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One Hand Cow Pose

Eka Hasta Bitilasana

(EY-kuh HUH-stuh bee-til-AHS-uh-nuh)

Also Known As: Table Pose (Bharmanasana)
Pose Type: standing (hands and knees)
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Leg Position of the Pose Dedicated to Garuda in Cow Pose

Pada Garudasana in Bitilasana

(PUH-duh guh-ru-DAHS-uh-nuh in bee-til-AHS-uh-nuh)

Also Known As: Table Pose Modification (Bharmanasana)
Pose Type: standing (on hands and knees)
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs), Nasagrai or Nasagre (nose)

Lotus Pose in Cow Pose

Padmasana in Bitilasana

(puhd-MAHS-uh-nuh in bee-til-AHS-uh-nuh)

Also Known As: Table Pose Modification (Bharmanasana)
Pose Type: standing (on hands and knees)
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs), Nasagrai or Nasagre (nose)

ALL FOURS: NEUTRAL SPINE—ONE LEG EXTENDED TO THE BACK

Tiger Pose

Vyaghrasana

(vyah-GRAHS-uh-nuh)

Also Known As: Table Pose Modification (Bharmanasana)
Modification: neutral spine
Pose Type: standing (hands and knees)
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

One Hand One-Legged Cow Pose

Eka Hasta Eka Pada Bitilasana

(EY-kuh HUH-stuh EY-kuh PUH-duh bee-til-AHS-uh-nuh)

Also Known As: Cat Pose (Marjarasana), Balancing Table Pose Modification (Dandayamana Bharmanasana)
Modification: neutral spine
1. arm reaching to the front, opposite leg reaching to the back
2. arm reaching to the back, opposite leg reaching to the back

3. arm reaching to the back, leg reaching to the back on the same side
Pose Type: standing (hands and knees)
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

One Knee Cow Pose

Eka Janu Bitilasana

(EY-kuh JAH-nu bee-til-AHS-uh-nuh)

Also Known As: Unsupported Balancing Table Pose Modification (Niralamba Dandayamana Bharmanasana)
Pose Type: standing (on the knee), balance
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

ALL FOURS: NEUTRAL SPINE—ONE LEG EXTENDED TO THE BACK—HALF LOTUS

Downward Facing Pose Dedicated to Kashyapa

Adho Mukha Kashyapasana

(uh-DO MUK-uh kah-shyuh-PAHS-uh-nuh)

Modification: Leg 1: knee on the floor Leg 2: foot on the floor
Pose Type: arm balance, binding
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs), Nasagrai or Nasagre (nose)

Downward Facing Pose Dedicated to Kasyapa

Adho Mukha Kasyapasana

(uh-DO MUK-uh kah-shyuh-PAHS-uh-nuh)

Modification: Leg 1: knee on the floor Leg 2: foot off the floor
Pose Type: arm balance, binding
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

ALL FOURS: CAT TILT

Downward Facing Cat Pose

Adho Mukha Marjarasana

(uh-DO MUK-uh mahr-jah-RAHS-uh-nuh)

Modification: toes pointing away from the head
Pose Type: standing (on hands and knees), forward bend
Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

Downward Facing Cat Pose

Adho Mukha Marjarasana

(uh-DO MUK-uh mahr-jah-RAHS-uh-nuh)

Modification: arms straight to the front, fingertips to the floor; rocking back, toes curled in
Pose Type: standing (on hands and knees), forward bend
Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

Tiger Pose

Vyaghrasana

(vyah-GRAHS-uh-nuh)

Also Known As: Cow Pose Modification (Bitilasana)
Modification: knee to the forehead
Pose Type: standing (on hands and knees), forward bend
Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

Tiger Pose

Vyaghrasana

(vyah-GRAHS-uh-nuh)

Also Known As: Cow Pose Modification (Bitilasana)
Modification: knee to the shoulder on the same side
Pose Type: standing (on hands and knees), forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Tiger Pose

Vyaghrasana

(vyah-GRAHS-uh-nuh)

Also Known As: Cow Pose Modification (Bitilasana)
Modification: knee to the opposite tricep
Pose Type: standing (on hands and knees), forward bend, twist
Drishti Point: Nasagrai or Nasagre (nose)

Tiger Pose

Vyaghrasana

(vyah-GRAHS-uh-nuh)

Also Known As: Cow Pose Modification (Bitilasana)
Modification: shoulder to the back of the knee; back leg, toes curled in
Pose Type: standing (on hands and knees), forward bend
Drishti Point: Nasagrai or Nasagre (nose), Padayoragrai or Padayoragre (toes/feet)

Tiger Pose

Vyaghrasana

(vyah-GRAHS-uh-nuh)

Also Known As: Cow Pose Modification (Bitilasana)
Modification: one hand to the heart
1. back of the knee to the shoulder, leg bent
2. back of the knee to the shoulder, leg straight
Pose Type: standing (on hands and knees), forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Upward Facing Dog Pose Tilt

Urdhva Mukha Shvanasana Tilt

(OORD-vuh MUK-uh shvuh-NAHS-uh-nuh)

Pose Type: standing (on hands and knees), backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows

Tiger Pose

Vyaghrasana

(vyah-GRAHS-uh-nuh)

Also Known As: Balancing Table Pose Modification (Niralamba Dandayamana Bharmanasana)
Modification: one leg straight out, toes pointing away from the head
Pose Type: standing (on hands and knees), backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Unsupported Tiger Pose

Niralamba Vyaghrasana

(nir-AH-luhm-buh vyah-GRAHS-uh-nuh)

Also Known As: One-Legged Bow Pose from All Fours (Eka Pada Dhanurasana), Balancing Table Pose Modification (Dandayamana Bharmanasana)
Modification: grabbing onto the foot with under-head grip on the same side
Pose Type: standing (on hands and knees), backbend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Unsupported Tiger Pose

Niralamba Vyaghrasana

(nir-AH-luhm-buh vyah-GRAHS-uh-nuh)

Also Known As: One-Legged Bow Pose from All Fours (Eka Pada Dhanurasana), Balancing Table Pose Modification (Dandayamana Bharmanasana)
Modification: grabbing onto the shin with under-head grip on the opposite side
Pose Type: standing (on hands and knees), backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Unsupported Tiger Pose

Niralamba Vyaghrasana

(nir-AH-luhm-buh vyah-GRAHS-uh-nuh)

Also Known As: Balancing Table Pose Modification (Dandayamana Bharmanasana)
Modification: grabbing onto the foot with overhead grip on the same side, foot toward the head
1. toes pointing away from the head
2. toes curled in
Pose Type: standing (on hands and knees), backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Unsupported Tiger Pose

Niralamba Vyaghrasana

(nir-AH-luhm-buh vyah-GRAHS-uh-nuh)

Also Known As: Balancing Table Pose Modification (Dandayamana Bharmanasana)
Modification: grabbing onto the foot with overhead grip on the opposite side, foot away from the head, toes curled in
Pose Type: standing (on hands and knees), backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ALL FOURS: FOREARMS

Cow Pose

Bitilasana

(bee-til-AHS-uh-nuh)

Also Known As: Table Pose Modification (Bharmanasana)
Modification: forearms to the floor
Pose Type: standing (on forearms and knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Frog Pose in Cow Pose

Mandukasana in Bitilasana

(muhn-doo-KAHS-uh-nuh in bee-til-AHS-uh-nuh)

Also Known As: Frog Pose in Table Pose Modification (Mandukasana in Bharmanasana)
Modification: forearms to the floor, knees open wider than hips
Pose Type: standing (on forearms and knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Uneven Wounded Duck Pose Prep.

Vishama Pungu Karandavasana Prep.

(VISH-uh-muh pung-u kahr-uhn-duh-VAHS-uh-nuh)

Modification: one forearm to the floor, toes of both feet on the floor
Pose Type: standing (on forearms and feet), forward bend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Supported Tiger Pose

Salamba Vyaghrasana *(SAH-luhm-buh vyah-GRAHS-uh-nuh)*

Also Known As: Cow Pose Modification (Bitilasana)
Modification: forearm on the floor, one hand to the heart; back of the knee to the shoulder, leg straight
Pose Type: standing (on forearms and knees), forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Supported Tiger Pose

Salamba Vyaghrasana *(SAH-luhm-buh-nuh vyah-GRAHS-uh-nuh)*
Also Known As: Cow Pose Modification (Bitilasana)
Modification: forearm on the floor, grabbing onto the foot with under-head grip on the opposite side
Pose Type: standing (on forearms and knees), backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

ALL FOURS: FOREARMS—TWISTS

Hand to Leg Sideways Leg Position of Cow Face Pose in Cow Pose

Hasta Pada Parshva Pada Gomukhasana in Bitilasana
(HUH-stuh PUH-duh PAHRSH-vuh PUH-duh go-mu-KAHS-uh-nuh in bee-til-AHS-uh-nuh)
Modification: forearm to the floor
Pose Type: standing (on forearms and knees), twist
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Half Bound Sideways Leg Position of Cow Face Pose in Cow Pose

Ardha Baddha Parshva Pada Gomukhasana in Bitilasana

(UHR-duh BUH-duh PAHRSH-vuh PUH-duh go-mu-KAHS-uh-nuh in bee-til-AHS-uh-nuh)

Modification: forearm to the floor
Pose Type: standing (on forearms and knees), twist, binding
Drishti Point: Urdhva or Antara Drishti (up to the sky)

ALL FOURS: FOREARMS—HALF LOTUS

Half Lotus Cow Pose

Ardha Padma Bitilasana

(UHR-duh PUHD-muh bee-til-AHS-uh-nuh)

Also Known As: Half Lotus Table Pose Modification (Ardha Padma Bharmanasana)
Modification: forearms to the floor
Pose Type: standing (on forearms and knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Revolved Half Lotus Cow Pose

Parivritta Ardha Padma Bitilasana

(puh-ri-VRIT-uh UHR-duh PUHD-muh bee-til-AHS-uh-nuh)

Also Known As: Revolved Half Lotus Table Pose Modification (Parivritta Ardha Padma Bharmanasana)
Modification: forearm on the floor, other hand behind the back
Pose Type: standing (on forearms and knees), twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Half Bound Lotus Cow Pose

Ardha Baddha Padma Bitilasana

(UHR-duh PUHD-muh bee-til-AHS-uh-nuh)

Also Known As: Half Bound Lotus Table Pose Modification (Ardha Baddha Padma Bharmanasana)
Modification: forearm to the floor
Pose Type: standing (on forearms and knees), binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Revolved Half Lotus Cow Pose

Parivritta Ardha Padma Bitilasana

(puh-ri-VRIT-uh UHR-duh PUHD-muh bee-til-AHS-uh-nuh)

Also Known As: Revolved Half Lotus Table Pose Modification (Parivritta Ardha Padma Bharmanasana)

Modification: forearm on the floor, top arm up to the sky

1. back view
2. front view

Pose Type: standing (on forearms and knees), twist

Drishti Point: Hastagrai or Hastagre (hands)

PLANK POSE: ON THE FINGERTIPS & ARMS CROSSED

Extended Four Limbs Staff Pose

Utthita Chaturanga Dandasana

(UT-ti-tuh chuh-tur-UHNG-guh-uh duhn-DAHS-uh-nuh)

Also Known As: High Plank
Modification: on the fingertips
Pose Type: arm balance, core
Drishti Point: Nasagrai or Nasagre (nose)

Extended Four Limbs Staff Pose

Utthita Chaturanga Dandasana

(UT-ti-tuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Also Known As: High Plank
Modification: arms crossed
1. knees on the floor
2. knees off the floor

Pose Type: arm balance, core
Drishti Point: Nasagrai or Nasagre (nose)

PLANK POSE: LEG MODIFICATIONS

Extended Four Limbs Staff Pose

Utthita Chaturanga Dandasana

(UT-ti-tuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Also Known As: High Plank Modification
Modification: 1. knees on the floor
2. knees off the floor
Pose Type: arm balance, core
Drishti Point: Nasagrai or Nasagre (nose)

One-Legged Extended Four Limbs Staff Pose

Eka Pada Utthita Chaturanga Dandasana

(EY-kuh PUH-duh UT-ti-tuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Also Known As: One-Legged High Plank Modification
Modification: knee to the nose
Pose Type: arm balance, forward bend, core
Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

One-Legged Extended Four Limbs Staff Pose

Eka Pada Utthita Chaturanga Dandasana

(EY-kuh PUH-duh UT-ti-tuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Also Known As: One-Legged High Plank Modification
Modification: knee to the shoulder on the same side
Pose Type: arm balance, forward bend, core
Drishti Point: Nasagrai or Nasagre (nose)

One-Legged Extended Four Limbs Staff Pose

Eka Pada Utthita Chaturanga Dandasana

(EY-kuh PUH-duh UT-ti-tuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Also Known As: One-Legged High Plank Modification
Modification: foot wrapping around the calf muscle
Pose Type: arm balance, core
Drishti Point: Nasagrai or Nasagre (nose)

Revolved Extended Four Limbs Staff Pose

Parivritta Utthita Chaturanga Dandasana

(puh-ri-VRIT-tuh UT-ti-tuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Also Known As: Revolved High Plank Modification
Pose Type: arm balance, twist, core
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

PLANK POSE: ARM AND LEG MODIFICATIONS

One-Legged Extended Four Limbs Staff Pose

Eka Pada Utthita Chaturanga Dandasana

(EY-kuh PUH-duh UT-ti-tuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Also Known As: One-Legged High Plank Modification
Pose Type: arm balance, core
Drishti Point: Nasagrai or Nasagre (nose)

One Hand Extended Four Limbs Staff Pose

Eka Hasta Utthita Chaturanga Dandasana

(EY-kuh HUH-stuh UT-ti-tuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Also Known As: One Hand High Plank Modification
Pose Type: arm balance, core
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs), Nasagrai or Nasagre (nose)

One Hand Extended Four Limbs Staff Pose

Eka Hasta Utthita Chaturanga Dandasana

(EY-kuh HUH-stuh UT-ti-tuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Also Known As: One Hand High Plank Modification
Modification: hand to the heart
Pose Type: arm balance, core
Drishti Point: Angushtamadhye or Angushtha Ma Dyai (thumbs), Nasagrai or Nasagre (nose)

One Leg One Hand Extended Four Limbs Staff Pose

Eka Pada Eka Hasta Utthita Chaturanga Dandasana

(EY-kuh PUH-duh EY-kuh HUH-stuh UT-ti-tuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Also Known As: One Hand High Plank Modification
Pose Type: arm balance, core
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs), Nasagrai or Nasagre (nose)

Tree Pose in One-Legged Extended Four Limbs Staff Pose

Vrikshasana in Eka Pada Utthita Chaturanga Dandasana

(vrik-SHAHS-uh-nuh in EY-kuh PUH-duh UT-ti-tuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Also Known As: Tree Pose in One-Legged High Plank Modification
Modification: 1. knees on the floor
2. knees off the floor
Pose Type: arm balance, core
Drishti Point: Nasagrai or Nasagre (nose)

Extended Four Limbs Staff Pose

Utthita Chaturanga Dandasana

(UT-ti-tuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Also Known As: High Plank Modification

Modification: arms extended to the front, tops of the feet on the floor

1. knees on the floor
2. knees off the floor

Pose Type: arm balance, core

Drishti Point: Nasagrai or Nasagre (nose)

PLANK POSE: TWISTS

Leg to the Side Revolved One Hand Extended Four Limbs Staff Pose

Parshva Pada Parivritta Eka Hasta Utthita Chaturanga Dandasana

(PAHRSH-vuh PUH-duh puh-ri-VRIT-tuh EY-kuh HUH-stuh UT-ti-tuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Also Known As: Leg to the Side Revolved One Hand High Plank Modification

Modification: 1. back knee on the floor

2. back knee off the floor, knee bent
3. back knee off the floor, both legs straight
4. back knee off the floor, knee bent, toes of the straight leg pointed

Pose Type: arm balance, twist, core

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Revolved One Hand Extended Four Limbs Staff Pose

Parivritta Eka Hasta Utthita Chaturanga Dandasana

(puh-ri-VRIT-tuh EY-kuh HUH-stuh UT-ti-tuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Also Known As: Revolved One Hand High Plank Modification
Modification: 1. knees on the floor
2. knees off the floor
Pose Type: arm balance, twist, core
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Revolved Leg to the Side Extended Four Limbs Staff Pose

Parivritta Parshva Pada Utthita Chaturanga Dandasana

(puh-ri-VRIT-tuh PAHRSH-vuh PUH-duh UT-ti-tuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Also Known As: Revolved Leg to the Side High Plank Modification
Modification: leg sweeping under the torso
Pose Type: arm balance, twist, core
Drishti Point: Nasagrai or Nasagre (nose)

PLANK POSE: ONE LEG TO THE SIDE

Leg to the Side Extended Four Limbs Staff Pose

Parshva Pada Utthita Chaturanga Dandasana

(PAHRSH-vuh PUH-duh UT-ti-tuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Also Known As: Leg to the Side High Plank Modification
Modification: 1. back knee on the floor
2. back knee off the floor
Pose Type: arm balance, core
Drishti Point: Nasagrai or Nasagre (nose)

Upward One Leg to the Side Extended Four Limbs Staff Pose

Urdhva Parshva Eka Pada Utthita Chaturanga Dandasana

(OORD-vuh PAHRSH-vuh EY-kuh PUH-duh UT-ti-tuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Also Known As: Leg to the Side One-Legged High Plank Modification
Modification: back knee off the floor, other leg off the floor
Pose Type: arm balance, core
Drishti Point: Nasagrai or Nasagre (nose)

PLANK ON FOREARMS

Staff Pose Dedicated to Makara

Makara Dandasana

(MUH-kuh-ruh duhn-DAHS-uh-nuh)

Also Known As: Dolphin Plank Modification
Pose Type: forearm balance, core
Drishti Point: Nasagrai or Nasagre (nose), Angushtamadhye or Angushta Ma Dyai (thumbs)

One Hand Staff Pose Dedicated to Makara

Eka Hasta Makara Dandasana

(EY-kuh HUH-stuh MUH-kuh-ruh duhn-DAHS-uh-nuh)

Also Known As: One Hand Dolphin Plank Modification
Pose Type: forearm balance, core
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

One-Legged Staff Pose Dedicated to Makara

Eka Pada Makara Dandasana

(EY-kuh PUH-duh MUH-kuh-ruh duhn-DAHS-uh-nuh)

Also Known As: One-Legged Dolphin Plank Modification
Pose Type: forearm balance, core
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

PLANK ON ELBOW

Uneven Repose Staff Pose

Vishama Sayana Dandasana

(VISH-uh-muh SHUH-yuh-nuh duhn-DAHS-uh-nuh)

Also Known As: Uneven Elbow Plank Pose Modification
Modification: one hand to the face, one forearm to the floor
Pose Type: forearm/elbow balance, core
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Repose Staff Pose

Sayana Dandasana

(SHUH-yuh-nuh duhn-DAHS-uh-nuh)

Also Known As: Elbow Plank
Pose Type: elbow balance, core
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Leg Position of One-Legged King Pigeon 1 Version B in Repose Staff

Pose

Pada Eka Pada Raja Kapotasana 1B in Sayana Dandasana

(PUH-duh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh in SHUH-yuh-nuh duhn-DAHS-uh-nuh)

Pose Type: elbow balance, mild backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

PLANK ON FOREARMS: TWIST

Revolved One Hand Staff Pose Dedicated to Makara

Parivritta Eka Hasta Makara Dandasana

(puh-ri-VRIT-tuh EY-kuh HUH-stuh MUH-kuh-ruh duhn-DAHS-uh-nuh)

Also Known As: Revolved Dolphin Plank Modification

Modification: 1 & 2. knees on the floor, front and back view
3 & 4. knees off the floor, front and back view

Pose Type: forearm balance, twist, core

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

PLANK ON FOREARMS: UNEVEN LEG AND ARM POSITIONS

Uneven Staff Pose Dedicated to Makara

Vishama Makara Dandasana

(VISH-uh-muh MUH-kuh-ruh duhn-DAHS-uh-nuh)

Also Known As: Uneven Dolphin Plank Modification
Modification: one elbow bent at 90 degrees, other forearm to the floor, knees on the floor
Pose Type: arm/forearm balance, core
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Hand to the Leg Sideways Uneven Legs Staff Pose Dedicated to Makara

Hasta Pada Parshva Vishama Pada Makara Dandasana

(HUH-stuh PUH-duh PAHRSH-vuh VISH-uh-muh PUH-duh MUH-kuh-ruh duhn-DAHS-uh-nuh)

Also Known As: Hand to the Leg Sideways Dolphin Plank Modification
Pose Type: forearm balance, twist, core
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Uneven Staff Pose Dedicated to Makara

Vishama Makara Dandasana

(VISH-uh-muh MUH-kuh-ruh duhn-DAHS-uh-nuh)

Also Known As: Uneven Dolphin Plank Modification
Modification: one elbow bent at 90 degrees, other forearm to the floor, knees off the floor 1. left forearm on the floor, right arm at 90 degrees
2. right forearm on the floor, left arm at 90 degrees
Pose Type: arm/forearm balance, core
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

[FOUR LIMBED STAFF POSE: KNEES ON THE FLOOR]

Four Limbed Staff Pose

Chaturanga Dandasana

(chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Modification: knees on the floor
Pose Type: arm balance, core
Drishti Point: Nasagrai or Nasagre (nose)

One Hand Four Limbed Staff Pose

Eka Hasta Chaturanga Dandasana

(EY-kuh HUH-stuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Modification: knees on the floor

1. starting position
2. end position

Pose Type: arm balance, core

Drishti Point: Nasagrai or Nasagre (nose)

Lion Pose Dedicated to an Avatar of Lord Vishnu in Four Limbed Staff Pose

Narasimhasana in Chaturanga Dandasana

(nuh-ruh-sim-HAHS-uh-nuh in chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Also Known As: Lion Pose (Simhasana)

Modification: 1. on the fingertips

2. on the fists

Pose Type: arm balance, core

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Leg Position of One-Legged King Pigeon 1 Version B in Four Limbed Staff Pose

Pada Eka Pada Raja Kapotasana 1 B in Chaturanga Dandasana

(PUH-duh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh in chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Modification: bottom knee bent and on the floor; top leg straight—knee resting on the sole of the bottom foot

Pose Type: arm balance, core

Drishti Point: Nasagrai or Nasagre (nose)

Four Limbed Staff Pose

Chaturanga Dandasana

(chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Pose Type: arm balance, core

Drishti Point: Nasagrai or Nasagre (nose)

Crocodile Pose

Nakrasana

(nuh-KRAHS-uh-nuh)

Modification: feet and hands off the floor and up in the air

Pose Type: arm balance, core

Drishti Point: Nasagrai or Nasagre (nose)

Revolved Four Limbed Staff Pose

Parivritta Chaturanga Dandasana

(puh-ri-VRIT-tuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Pose Type: arm balance, twist, core

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

One-Legged Four Limbed Staff Pose

Eka Pada Chaturanga Dandasana

(EY-kuh PUH-duh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Pose Type: arm balance, core

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Upward One Leg to the Side Four Limbed Staff Pose

Urdhva Parshva Eka Pada Chaturanga Dandasana

(OORD-vuh PAHRSH-vuh EY-kuh PUH-duh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Pose Type: arm balance, core

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

FOUR LIMBED STAFF POSE: KNEE TO THE ARM

One-Legged Four Limbed Staff Pose

Eka Pada Chaturanga Dandasana

(EY-kuh PUH-duh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Modification: knee to the forearm
Pose Type: arm balance, forward bend, core
Drishti Point: Nasagrai or Nasagre (nose)

One-Legged Four Limbed Staff Pose

Eka Pada Chaturanga Dandasana

(EY-kuh PUH-duh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Modification: knee on top of the tricep
Pose Type: arm balance, forward bend, core
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

FOUR LIMBED STAFF POSE: ONE ARMED

One Hand Four Limbed Staff Pose

Eka Hasta Chaturanga Dandasana

(EY-kuh HUH-stuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Modification: hand to the heart
Pose Type: arm balance, core
Drishti Point: Hastagrai or Hastagre (hands) or Nasagrai or Nasagre (nose)

Hand to the Side Four Limbed Staff Pose

Parshva Hasta Chaturanga Dandasana

(PAHRSH-vuh HUH-stuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Modification: 1. knees on the floor
2. knees off the floor
Pose Type: arm balance, core
Drishti Point: Hastagrai or Hastagre (hands) or Nasagrai or Nasagre (nose)

One Hand to the Side Four Limbed Staff Pose

Parshva Eka Hasta Chaturanga Dandasana

(PAHRSH-vuh EY-kuh HUH-stuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Modification: one knee on the floor, other knee off the floor
Pose Type: arm balance, core
Drishti Point: Nasagrai or Nasagre (nose)

One Hand to the Side Four Limbed Staff Pose

Parshva Eka Hasta Chaturanga Dandasana

(PAHRSH-vuh EY-kuh HUH-stuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Modification: knees off the floor
Pose Type: arm balance, core
Drishti Point: Nasagrai or Nasagre (nose)

One Hand to the Side One-Legged Four Limbed Staff Pose

Parshva Eka Hasta Eka Pada Chaturanga Dandasana

(PAHRSH-vuh EY-kuh HUH-stuh EY-kuh PUH-duh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Modification: one knee on the floor
Pose Type: arm balance, core
Drishti Point: Hastagrai or Hastagre (hands)

FOUR LIMBED STAFF POSE: PUSH UPS

Diamond Four Limbed Staff Pose

Vajra Chaturanga Dandasana

(VAHJ-ruh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Modification: knees on the floor

1. start position
2. end position

Pose Type: arm balance, core

Drishti Point: Nasagrai or Nasagre (nose)

Diamond Four Limbed Staff Pose

Vajra Chaturanga Dandasana

(VAHJ-ruh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Modification: knees off the floor

1. start position
2. end position

Pose Type: arm balance, core

Drishti Point: Nasagrai or Nasagre (nose)

Hands Spread Wide Four Limbed Staff Pose

Prasarita Hasta Chaturanga Dandasana

(pruh-SAH-ri-tuh HUH-stuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Modification: knees on the floor

1. start position
2. end position

Pose Type: arm balance, core

Drishti Point: Nasagrai or Nasagre (nose)

Hands Spread Wide Four Limbed Staff Pose

Prasarita Hasta Chaturanga Dandasana

(pruh-SAH-ri-tuh HUH-stuh chuh-tur-UHNG-guh duhn-DAHS-uh-nuh)

Modification: knees off the floor

1. start position
2. end position

Pose Type: arm balance, core

Drishti Point: Nasagrai or Nasagre (nose)

SIDE PLANK: TOP LEG CROSSED OVER

Pose Dedicated to Sage Vasistha

Vasisthasana

(vuh-sish-TAHS-uh-nuh)

Also Known As: Side Plank Modification
Modification: top leg crossing over
1. arm alongside of the torso
2. arm extended up
Pose Type: arm balance, core
Drishti Point: Nasagrai or Nasagre (nose), Angushtamadhye or Angushta Ma Dyai (thumbs)

Pose Dedicated to Sage Vasistha

Vasisthasana

(vuh-sish-TAHS-uh-nuh)

Also Known As: Side Plank Modification
Modification: bottom knee to the floor
1. arm alongside of the torso
2. arm extended up
Pose Type: arm balance, core
Drishti Point: Angushtamadhye or Angushtha Ma Dyai (thumbs)

Pose Dedicated to Sage Vasishta

Vasishtasana

(vuh-sish-TAHS-uh-nuh)

Also Known As: Side Plank Modification

Modification: both knees bent, shin of the top leg on the inside of the knee of the bottom leg

1. bottom leg bent at 90 degrees
2. bottom leg slightly bent

Pose Type: arm balance, core

Drishti Point: Urdhva or Antara Drishti (up to the sky)

SIDE PLANK: LEGS STRAIGHT

Pose Dedicated to Sage Vasishta

Vasishtasana

(vuh-sish-TAHS-uh-nuh)

Also Known As: Side Plank Modification
Modification: both legs straight
1. arm alongside of the torso
2. arm extended up

Pose Type: arm balance, core
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

SIDE PLANK: BOTTOM LEG OFF THE FLOOR

Revolved Pose Dedicated to Sage Vasistha

Parivritta Vasisthasana

(puh-ri-VRIT-tuh vuh-sish-TAHS-uh-nuh)

Also Known As: Revolved Side Plank Modification
Modification: bottom knee bent, foot resting on the thigh of the top leg; the wrist of the top arm to the knee of the bottom leg
Pose Type: arm balance, twist, forward bend, core
Drishti Point: Hastagrai or Hastagre (hands)

Revolved Leg to the Side Pose Dedicated to Sage Vasistha

Parivritta Parshva Pada Vasisthasana

(puh-ri-VRIT-tuh PAHRSH-vuh PUH-duh vuh-sish-TAHS-uh-nuh)

Also Known As: Revolved Leg to the Side Plank Modification
Modification: both legs straight, bottom foot lifted off the floor, leg crossing over in front of the body
Pose Type: arm balance, twist, core
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs), Padayoragrai or Padayoragre

(toes/feet)

Hand to Foot Pose Dedicated to Sage Vasistha

Hasta Pada Vasisthasana

(HUH-stuh PUH-duh vuh-sish-TAHS-uh-nuh)

Also Known As: Hand to Foot Side Plank Modification
Modification: both legs straight; bottom leg crossing over in front of the body, foot in line with the center of the chest
Pose Type: arm balance, forward bend, core
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

SIDE PLANK: FOOT TO THE THIGH & HALF LOTUS

Tree Pose in Pose Dedicated to Sage Vasista

Vrikshasana in Vasishtasana

(vrik-SHAHS-uh-nuh in vuh-sish-TAHS-uh-nuh)

Also Known As: Tree Pose in Side Plank Modification

Modification: top foot to the inner thigh
Pose Type: arm balance, core
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Half Lotus Pose in Pose Dedicated to Sage Vasishta

Ardha Padmasana in Vasishtasana

(UHR-duh puhd-MAHS-uh-nuh in vuh-sish-TAHS-uh-nuh)
Also Known As: Half Lotus Pose in Side Plank Modification
Modification: bottom knee on the floor
Pose Type: arm balance, core
Drishti Point: Hastagrai or Hastagre (hands)

SIDE PLANK: TOP LEG OFF THE FLOOR

One Big Toe Pose Dedicated to Sage Vasishta

Eka Padangushta Vasisthasana

(EY-kuh puhd-ahng-GOOSH-tuh vuh-sish-TAHS-uh-nuh)

Also Known As: Big Toe Side Plank Modification
Modification: 1. bottom knee on the floor—leg bent, toes pointing to the back; on the fingertips
2. bottom knee off the floor; palm flat to the floor
Pose Type: arm balance, forward bend, core
Drishti Point: Urdhva or Antara Drishti (up to the sky), Padayoragrai or Padayoragre (toes/feet)

VISHVAMITRA'S POSE

Pose Dedicated to Vishvamitra

Vishvamitrasana

(vish-vuh-mi-TRAHS-uh-nuh)

Modification: knee on the floor, grabbing onto the outside edge of the foot
Pose Type: arm balance, side bend, twist, core
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Pose Dedicated to Vishvamitra

Vishvamitrasana

(vish-vuh-mi-TRAHS-uh-nuh)

Modification: arm alongside of the torso
Pose Type: arm balance, core
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Pose Dedicated to Vishvamitra

Vishvamitrasana

(vish-vuh-mi-TRAHS-uh-nuh)

Modification: knee off the floor, top arm straight and extended up to the sky
Pose Type: arm balance, side bend, core
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Pose Dedicated to Vishvamitra

Vishvamitrasana

(vish-vuh-mi-TRAHS-uh-nuh)

Modification: knee off the floor

1. grabbing onto the outside edge of the top foot
2. grabbing onto the ankle of the top leg

Pose Type: arm balance, side bend, twist, core

Drishti Point: Urdhva or Antara Drishti (up to the sky)

KALA BHAIRAVA'S POSE

Pose Dedicated to Shiva the Destroyer

Kala Bhairavasana

(KAH-luh beye-ruh-VAHS-uh-nuh)

Modification: 1. arm extended up
2. top hand to the inside of the bottom thigh

Pose Type: arm balance, core

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs), Padayoragrai or Padayoragre (toes/feet)

SIDE PLANK: TOP LEG OVERHEAD GRIP

Partridge Pose

Kapinjalasana

(kuh-pinj-uh-LAHS-uh-nuh)

Modification: overhead grip
1. bottom knee on the floor
2. bottom knee off the floor

Pose Type: arm balance, backbend, core

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

SIDE PLANK ON FOREARMS: KNEES ON THE FLOOR

Pose Dedicated to Sage Vasishta

Vasishtasana

(vuh-sish-TAHS-uh-nuh)

Also Known As: Dolphin Side Plank Modification
Modification: forearm on the floor, both knees to the floor
1. arm up to the sky
2. arm alongside the torso
Pose Type: forearm balance, core
Drishti Point: 1. Angushtamadhye or Angushta Ma Dyai (thumbs)
2. Nasagrai or Nasagre (nose)

SIDE PLANK ON FOREARMS: KNEES OFF THE FLOOR

Pose Dedicated to Sage Vasishta

Vasishtasana

(vuh-sish-TAHS-uh-nuh)

Also Known As: Dolphin Side Plank Modification
Modification: forearm on the floor, arm crossed over in front of the chest, looking down
Pose Type: forearm balance, twist, core
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Pose Dedicated to Sage Vasishta

Vasishtasana

(vuh-sish-TAHS-uh-nuh)

Also Known As: Dolphin Side Plank Modification
Modification: forearm on the floor, top hand on the hip
Pose Type: forearm balance, core
Drishti Point: Nasagrai or Nasagre (nose)

Pose Dedicated to Sage Vasistha

Vasishtasana

(vuh-sish-TAHS-uh-nuh)

Also Known As: Dolphin Side Plank Modification
Modification: forearm on the floor, top arm up to the sky
Pose Type: forearm balance, core
Drishti Point: Hastagrai or Hastagre (hands)

Pose Dedicated to Sage Vasishta

Vasishtasana

(vuh-sish-TAHS-uh-nuh)

Also Known As: Dolphin Side Plank Modification
Modification: forearm on the floor, top hand to the back of the head
Pose Type: forearm balance, core
Drishti Point: Nasagrai or Nasagre (nose)

SIDE PLANK ON FOREARMS: ONE LEG CROSSED OVER

Pose Dedicated to Sage Vasishta

Vasishtasana

(vuh-sish-TAHS-uh-nuh)

Also Known As: Dolphin Side Plank Modification
Modification: forearm on the floor; top leg crossed over, foot flat on the floor; top hand by the bottom hip socket
Pose Type: forearm balance, core
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Pose Dedicated to Sage Vasishta

Vasishtasana

(vuh-sish-TAHS-uh-nuh)

Also Known As: Dolphin Side Plank Modification
Modification: forearm on the floor; top leg crossed over, heel lifted; top arm extended up to the sky
Pose Type: forearm balance, core
Drishti Point: Hastagrai or Hastagre (hands)

Pose Dedicated to Sage Vasishta

Vasishtasana

(vuh-sish-TAHS-uh-nuh)

Also Known As: Dolphin Side Plank Modification
Modification: forearm on the floor; top leg crossed over, foot flat on the floor, bottom leg lifted off the floor, top hand on the hip
Pose Type: forearm balance, core
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Half Lotus Pose in Pose Dedicated to Sage Vasishta

Ardha Padmasana in Vasishtasana

(UHR-duh puhd-MAHS-uh-nuh in vuh-sish-TAHS-uh-nuh)

Also Known As: Half Lotus Pose in Dolphin Side Plank Modification
Modification: forearm on the floor, top arm extended up to the sky
Pose Type: forearm balance, core
Drishti Point: Hastagrai or Hastagre (hands)

SIDE PLANK ON FOREARMS: TOP LEG LIFTED

Pose Dedicated to Sage Vasishta

Vasishtasana

(vuh-sish-TAHS-uh-nuh)

Also Known As: Dolphin Side Plank Modification
Modification: forearm on the floor; top knee toward the top elbow, bottom knee on the floor; leg bent, toes pointing to the back
Pose Type: forearm balance, forward bend, core
Drishti Point: Hastagrai or Hastagre (hands)

Pose Dedicated to Sage Vasishta

Vasishtasana

(vuh-sish-TAHS-uh-nuh)

Also Known As: Dolphin Side Plank Modification
Modification: forearm on the floor; top knee toward the top elbow; bottom leg straight, knee off floor
Pose Type: forearm balance, forward bend, core
Drishti Point: Hastagrai or Hastagre (hands)

One Big Toe Pose Dedicated to Sage Vasishta

Eka Padangushta Vasishtasana

(EY-kuh puhd-ahng-GOOSH-tuh vuh-sish-TAHS-uh-nuh)

Also Known As: Big Toe Dolphin Side Plank Modification
Modification: forearm on the floor
1. knee bent
2. leg straight

Pose Type: forearm balance, forward bend, core
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

SIDE PLANK ON FOREARMS: BOTTOM LEG LIFTED

Revolved Leg to the Side Pose Dedicated to Sage Vasishta

Parivritta Parshva Pada Vasishtasana

(puh-ri-VRIT-tuh PAHRSH-vuh PUH-duh vuh-sish-TAHS-uh-nuh)

Also Known As: Revolved Leg to the Side Dolphin Side Plank Modification
Modification: forearm on the floor; both legs straight, bottom leg lifted in front of the body
Pose Type: forearm balance, twist, core
Drishti Point: Hastagrai or Hastagre (hands)

Revolved Pose Dedicated to Sage Vasishta

Parivritta Vasishtasana

(puh-ri-VRIT-tuh vuh-sish-TAHS-uh-nuh)

Also Known As: Revolved Dolphin Side Plank Modification
Modification: forearm on the floor; bottom knee bent, foot resting on the thigh of the top leg; the elbow of the top arm to the knee of the bottom leg
Pose Type: forearm balance, forward bend, twist, core
Drishti Point: Urdhva or Antara Drishti (up to the sky)

SIDE PLANK ON FOREARMS: TOP LEG UNDER-HEAD GRIP

Partridge Pose

Kapinjalasana

(kuh-pinj-uh-LAHS-uh-nuh)

Modification: forearm on the floor, under-head grip:
1. knee on the floor
2. knee off the floor

Pose Type: forearm balance, backbend, core
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

SIDE PLANK ON FOREARMS: HALF LOTUS & LOTUS

Half Lotus Pose in Pose Dedicated to Sage Vasistha

Ardha Padmasana in Vasishtasana

(UHR-duh puhd-MAHS-uh-nuh in vuh-sish-TAHS-uh-nuh)

Also Known As: Half Lotus Dolphin Side Plank Modification
Modification: forearm on the floor, bottom leg in half lotus, top knee bent, toes to the floor
Pose Type: forearm balance, core
Drishti Point: Hastagrai or Hastagre (hands)

Half Lotus One Big Toe Pose Dedicated to Sage Vasistha

Ardha Padma Eka Padangushta Vasisthasana

(UHR-duh PUHD-muh EY-kuh puhd-ahng-GOOSH-tuh vuh-sish-TAHS-uh-nuh)

Also Known As: Half Lotus Big Toe Dolphin Side Plank Modification
Modification: forearm on the floor
Pose Type: forearm balance, forward bend, core
Drishti Point: Padayoragrai or Padayoragre (toes/feet), Urdhva or Antara Drishti (up to the sky)

Half Lotus Half Bow Pose in Pose Dedicated to Sage Vasishta

Ardha Padma Dhanurasana in Vasishtasana

(UHR-duh PUHD-muh duh-nur-AHS-uh-nuh in vuh-sish-TAHS-uh-nuh)

Also Known As: Half Lotus Half Bow Pose in Dolphin Side Plank Modification
Modification: forearm on the floor, bottom leg in half lotus, grabbing onto the top foot with under-head grip
Pose Type: forearm balance, backbend, core
Drishti Point: Hastagrai or Hastagre (hands)

Lotus Pose in Pose Dedicated to Sage Vasishta

Padmasana in Vasisthasana

(puhd-MAHS-uh-nuh in vuh-sish-TAHS-uh-nuh)

Also Known As: Lotus Pose in Dolphin Side Plank Modification
Modification: forearm on the floor
Pose Type: forearm balance, core
Drishti Point: Hastagrai or Hastagre (hands)

SIDE PLANK ON THE ELBOWS

Pose Dedicated to Sage Vasishta

Vasishtasana

(vuh-sish-TAHS-uh-nuh)

Also Known As: Elbow Side Plank Modification
Modification: on the elbow; both legs straight, ankles crossed
Pose Type: elbow balance, core
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Pose Dedicated to Sage Vasishta

Vasishtasana

(vuh-sish-TAHS-uh-nuh)

Also Known As: Elbow Side Plank Modification
Modification: on the elbow; bottom leg straight; top leg crossed over, foot flat on the floor; fingertips of the top arm to the floor in front of the body
Pose Type: elbow balance, core
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Pose Dedicated to Sage Vasishta

Vasishtasana

(vuh-sish-TAHS-uh-nuh)

Also Known As: Elbow Side Plank Modification
Modification: on the elbow, top foot to the side of the bottom leg
Pose Type: elbow balance, core
Drishti Point: Nasagrai or Nasagre (nose)

Half Lotus Pose in Pose Dedicated to Sage Vasistha

Ardha Padmasana in Vasisthasana

(UHR-duh puhd-MAHS-uh-nuh in vuh-sish-TAHS-uh-nuh)

Also Known As: Half Lotus Pose in Elbow Side Plank Modification
Modification: on the elbow
Pose Type: elbow balance, core
Drishti Point: Hastagrai or Hastagre (hands)

Backbends

COW FACE POSE AND GARUDA ON KNEES

KNEES ON THE FLOOR

BACKBEND ON THE KNEES

BACKBEND

UPWARD BOW POSE

WILD THING POSE

COW FACE POSE AND GARUDA ON THE KNEES

Pose Dedicated to Garuda on the Knees

Janu Garudasana

(JAH-nu guh-ru-DAHS-uh-nuh)

Pose Type: standing (on the knees), backbend

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Leg Position of Cow Face Pose in Camel Pose

Pada Gomukhasana in Ushtrasana*

(PUH-duh go-moo-KAHS-uh-nuh in oosh-TRAHS-uh-nuh)

Modification: Gomukhasana legs modification

Pose Type: backbend, standing (on the knees)

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

KNEES ON THE FLOOR: LOTUS POSE

Half Pose Dedicated to Siddhar Kamalamuni

Ardha Kamalamunyasana

(UHR-duh KUH-muh-luhmoo-nyAHS-uh-nuh)

Also Known As: Upward Facing Lotus Pose (Urdhva Mukha Padmasana)
Modification: fingertips pointing to the back, thumbs pointing to the front, knees close to the hands
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE KNEE TO THE FLOOR: ONE LEG BENT & ONE LEG STRAIGHT UP TO THE SKY

One-Legged Camel Pose

Eka Pada Ushtrasana

(EY-kuh PUH-duh oosh-TRAHS-uh-nuh)

Modification: Leg 1: knee to the floor Leg 2: foot to the floor in semi-lunge position
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Camel Pose

Eka Pada Ushtrasana

(EY-kuh PUH-duh oosh-TRAHS-uh-nuh)

Modification: Leg 1: knee to the floor
Leg 2: sole of the foot to the quadricep
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Extended Hand to Big Toe Pose in Half Camel Pose

Utthita Hasta Padangushtasana in Ardha Ushtrasana

(UT-ti-tuh HUH-stuh puhd-AHNG-goosh-TAHS-uh-nuh in UHR-duh oosh-TRAHS-uh-nuh)

Modification: 1. toes pointed to the back
2. toes curled in
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

KNEES TO THE FLOOR: BACKBEND

Camel Pose Prep.

Ushtrasana Prep.

(oosh-TRAHS-uh-nuh)

Modification: 1. hands to the lower back
2. hands in Anjali Mudra (Hands in Prayer)
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Upward Salute Pose in Camel Pose

Urdhva Hastasana in Ushtrasana

(OORD-vuh huh-STAHS-uh-nuh in oosh-TRAHS-uh-nuh)

Also Known As: Pigeon Pose Prep. (Kapotasana Prep.)
Modification: palms together
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Angushtamadhye or Angushta Ma Dyai (thumbs)

Raised Bound Hands in Camel Pose

Urdhva Baddha Hastasana in Ushtrasana

(OORD-vuh BUH-duh huh-STAHS-uh-nuh in oosh-TRAHS-uh-nuh)

Modification: 1. hips pushed back
2. hips pushed forward
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

KNEES ON THE FLOOR: BACKBEND—HANDS TO THE HEELS AND TO THE FLOOR

Camel Pose

Ushtrasana

(oosh-TRAHS-uh-nuh)

Modification: 1. grabbing onto both ankles
2. palms to the heels, fingertips pointing to the back
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Pose Dedicated to King Nahusha

Nahushasana

(nuh-hu-SHAHS-uh-nuh)

Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One Hand Graceful Thunderbolt Pose

Eka Hasta Laghuvajrasana

(EY-kuh huh-stuh luh-gu-vuhj-RAHS-uh-nuh)

Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Pigeon Pose

Kapotasana

(kuh-po-TAHS-uh-nuh)

Also Known As: Sage Korakar Pose (Korakarasana), Graceful Thunderbolt Pose (Laghuvajrasana)
Modification: arms over the head, palms to the floor, feet toward the head
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

KNEES ON THE FLOOR: ONE ARM EXTENDED

Half Camel Pose

Ardha Ushtrasana

(UHR-duh oosh-TRAHS-uh-nuh)

Also Known As: One Arm Camel Pose (Eka Hasta Ustrasana)
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Hastagrai or Hastagre (hands)

Half Camel Pose

Ardha Ushtrasana

(UHR-duh oosh-TRAHS-uh-nuh)

Modification: arm crossed behind the back to the opposite leg

1. hand to the outside of the hip
2. hand to the inside of the knee

Pose Type: backbend, standing (on the knees)

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Hastagrai or Hastagre (hands)

Leg Position of the Pose Dedicated to Garuda in Half Camel Pose

Pada Garudasana in Ardha Ushtrasana

(PUH-duh guh-ru-DAHS-uh-nuh in UHR-duh oosh-TRAHS-uh-nuh}

Modification: one hand to the floor; other arm up, elbow bent

Pose Type: backbend, standing (on the knees)

Drishti Point: Hastagrai or Hastagre (hands), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Camel Pose

Ardha Ushtrasana

(UHR-duh-oosh-TRAHS-uh-nuh)

Modification: one foot to the armpit on the same side; opposite arm straight up over the head
Pose Type: backbend, standing (on the knees)
Drishti Point: Hastagrai or Hastagre (hands), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Bound Lotus Camel Pose

Ardha Baddha Padma Ushtrasana

(UHR-duh BUH-duh PUHD-muh oosh-TRAHS-uh-nuh)

Modification: free arm straight up over the head
Pose Type: backbend, standing (on the knees), binding
Drishti Point: Hastagrai or Hastagre (hands) or Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE KNEE BENT TOWARD THE HIP: BACKBEND

One-Legged Frog Pose in Camel Pose

Eka Pada Bhekasana in Ushtrasana

(EY-kuh PUH-duh bey-KAHS-uh-nuh in oosh-TRAHS-uh-nuh)

Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Mermaid Arm Position in Camel Pose

Hasta Naginyasana in Ushtrasana

(HUH-stuh nuh-gin-YAHS-uh-nuh in oosh-TRAHS-uh-nuh)

Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BACKBEND ON THE KNEES, HEAD AND SITTING BONES: BED POSE

Bed Pose

Paryankasana

(puhr-yuhng-KAHS-uh-nuh)

Also Known As: Reclined Thunderbolt Pose (Supta Vajrasana)
Modification: 1. head off the floor
2. crown of the head on the floor
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bed Pose

Paryankasana

(puhr-yuhng-KAHS-uh-nuh)

Also Known As: Reclined Thunderbolt Pose (Supta Vajrasana)
Modification: 1. hands in Anjali Mudra (Hands in Prayer), fingertips pointing to the sky
2. grabbing onto the forearms, arms to the floor up over the head
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BACKBEND ON THE KNEES AND HEAD: LITTLE THUNDERBOLT POSE

Little Thunderbolt Pose

Laghuvajrasana

(lluh-goo-vuhj-RAHS-uh-nuh)

Modification: 1. grabbing onto the knees, head off the floor
2. forehead to the floor, hands on the quadriceps
3. head to feet, grabbing onto the knees
Pose Type: backbend, standing (on the knees)

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Little Thunderbolt Pose

Laghuvajrasana

(luh-goo-vuhj-RAHS-uh-nuh)

Modification: back of the head on the floor, grabbing onto the knees
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BACKBEND ON THE KNEES AND HEAD: PIGEON POSE

Little Thunderbolt Pose Prep.

Laghuvajrasana Prep.

(luh-goo-vuhj-RAHS-uh-nuh)

Modification: crown of the head to the floor, arms in Headstand 5 (see here) position
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One Hand Pigeon Pose

Eka Hasta Kapotasana

(EY-kuh HUH-stuh kuh-po-TAHS-uh-nuh)

Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Pigeon Pose

Kapotasana

(kuh-po-TAHS-uh-nuh)

Modification: grabbing onto the ankles
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Pigeon Pose

Kapotasana

(kuh-po-TAHS-uh-nuh)

Modification: fingertips toward the knees, palms flat down
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

PIGEON POSE: ONE-LEGGED

One-Legged Pigeon Pose Prep.

Eka Pada Kapotasana Prep.

(EY-kuh PUH-duh kuh-po-TAHS-uh-nuh)

Modification: arms over the head palms to the floor, head away from the foot
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Pigeon Pose Prep.

Eka Pada Kapotasana Prep.

(EY-kuh PUH-duh kuh-po-TAHS-uh-nuh)

Modification: 1. knee bent, foot to the floor
2. leg straight, foot to the floor
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Pigeon Pose

Eka Pada Kapotasana

(EY-kuh PUH-duh kuh-po-TAHS-uh-nuh)

Modification: foot to the quadriceps
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Pigeon Pose

Eka Pada Kapotasana

(EY-kuh PUH-duh kuh-po-TAHS-uh-nuh)
Modification: leg straight
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

TOES CURLED IN: BACKBEND—SHOULDERS ON THE FLOOR & HEAD ON THE FLOOR

One-Legged Tip Toe Bridge Pose

Eka Pada Prapada Setu Bandhasana

(EY-kuh PUH-duh PRUH-puh-duh SEY-too buhn-DAHS-uh-nuh)
Modification: back of the head on the floor, arms up to the sky
1. knee bent, foot resting on the knee
2. leg straight and extended to the sky
Pose Type: supine, backbend
Drishti Point: Angushtamadhye or Angustha Ma Dyai (thumbs)

Tip Toe Bridge Pose

Prapada Setu Bandhasana

(PRUH-puh-duh SEY-too buhn-DAHS-uh-nuh)

Also Known As: Tip Toe Bed Pose (Prapada Paryankasana), Big Toe Bridge Pose (Padangushta Setu Bandhasana)

Modification: 1. grabbing onto the shins, elbows to the floor
2. grabbing onto the shins, arms straight
3. hands on the quadriceps, arms straight

Pose Type: backbend, standing (on the knees)

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

TOES CURLED IN: BACKBEND—HANDS TO THE FLOOR & TOE BALANCE

Thunderbolt Pose

Vajrasana

(vuhj-RAHS-uh-nuh)

Also Known As: Tip Toe Bed Pose Prep. (Prapada Paryankasana Prep.)
Modification: toes curled in, fingertips pointing away from the feet, intense backbend
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Tip Toe Camel Pose

Prapada Ushtrasana

(PRUH-puh-duh oosh-TRAHS-uh-nuh)

Modification: palms flat to the floor, fingertips pointing to the front
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Unsupported Tip Toe Camel Pose

Niralamba Prapada Ushtrasana

(neer-AH-luhm-buh PRUH-puh-duh oosh-TRAHS-uh-nuh)

Modification: knees lifted off the floor, hands in Anjali Mudra (Hands in Prayer)
Pose Type: standing, balance, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

TOES CURLED IN: BACKBEND—GRABBING ONTO THE HEELS & KNEES, HANDS ON THE FLOOR & HEAD TO THE HEELS

Tip Toe Camel Pose

Prapada Ushtrasana

(PRUH-puh-duh oosh-TRAHS-uh-nuh)

Modification: hands in Anjali Mudra (Hands in Prayer)
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Tip Toe Camel Pose

Ardha Prapada Ushtrasana

(UHR-duh PRUH-puh-duh oosh-TRAHS-uh-nuh)

Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Hastagrai or Hastagre (hands)

Tip Toe Camel Pose

Prapada Ushtrasana

(PRUH-puh-duh oosh-TRAHS-uh-nuh)

Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Tip Toe Camel Pose

Prapada Ushtrasana

(PRUH-puh-duh oosh-TRAHS-uh-nuh)

Modification: hands on the knees
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Tip Toe Pigeon Pose

Prapada Kapotasana

(PRUH-puh-duh kuh-po-TAHS-uh-nuh)

Also Known As: Big Toe Pigeon Pose (Padangushta Kapotasana)
Modification: arms straight up over the head, palms to the floor
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Hastagrai or Hastagre (hands)

Tip Toe Pigeon Pose

Prapada Kapotasana

(PRUH-puh-duh kuh-po-TAHS-uh-nuh)

Also Known As: Big Toe Pigeon Pose (Padangustha Kapotasana), Little Wheel Pose (Laghu Chakrasana)
Modification: arms up over the head, elbows bent, palms to the floor, forehead to the heels
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

TOES CURLED IN: BACKBEND—ARMS STRAIGHT, PALMS TOGETHER

Raised Bound Hands in Tip Toe Camel Pose

Urdhva Baddha Hastasana in Prapada Ushtrasana

(OORD-vuh BUH-duh huh-STAHS-uh-nuh in PRUH-puh-duh oosh-TRAHS-uh-nuh)

Modification: hips pushing back
Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Angushtamadhye or Angushta Ma Dyai (thumbs)

Tip Toe Pigeon Pose

Prapada Kapotasana

(PRUH-puh-duh kuh-po-TAHS-uh-nuh)

Also Known As: Big Toe Pigeon Pose (Padangushta Kapotasana), Full Camel Pose (Purna Ushtrasana), or Little Wheel Pose (Laghu Chakrasana)

Modification: 1. arms extended to the sky

2. arms parallel to the floor

Pose Type: backbend, standing (on the knees)

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Upward Bow Pose in Headstand 5

Urdhva Dhanurasana in Shirshasana 5

(OORD-vuh duh-nur-AHS-uh-nuh in sheer-SHAS-uh-nuh)

Pose Type: backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Upward Bow Pose with Leg Position of the Pose Dedicated to Garuda in Headstand 5

Urdhva Dhanurasana Pada Garudasana in Shirshasana 5

(OORD-vuh duh-nur-AHS-uh-nuh PUH-duh guh-ru-DAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Pose Type: backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Upward Tip Toe Bow Pose in One Hand Headstand 5

Urdhva Prapada Dhanurasana in Eka Hasta Shirshasana 5

(OORD-vuh PRUH-puh-duh duh-nur-AHS-uh-nuh in EY-kuh HUH-stuh sheer-SHAHS-uh-nuh)

Pose Type: backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Inverted Tip Toe Bow Pose

Viparita Prapada Dhanurasana

(vi-puh-REE-tuh PRUH-puh-duh duh-nur-AHS-uh-nuh)

Also Known As: Headstand Bow Pose (Shirsha Dhanurasana)

Pose Type: backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BACKBEND: HEADSTAND 1 ARM POSITION—KNEE/KNEES BENT

Upward Bow Pose in Headstand 1

Urdhva Dhanurasana in Shirshasana 1

(OORD-vuh duh-nur-AHS-uh-nuh in sheer-SHAHS-uh-nuh)

Pose Type: backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Upward Tip Toe Bow Pose in Headstand 1

Urdhva Prapada Dhanurasana in Shirshasana 1

(OORD-vuh PRUH-puh-duh duh-noor-AHS-uh-nuh in sheer-SHAHS-uh-nuh)

Pose Type: backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Inverted Staff Pose

Eka Pada Viparita Dandasana

(EY-kuh PUH-duh vi-puh-REE-tuh duhn-DAHS-uh-nuh)

Modification: knee of the bottom leg bent

Pose Type: backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BACKBEND: HEADSTAND 1 ARM POSITION—LEGS STRAIGHT

One-Legged Inverted Staff Pose

Eka Pada Viparita Dandasana

(EY-kuh PUH-duh vi-puh-REE-tuh duhn-DAHS-uh-nuh)

Also Known As: Inverted Staff Pose B (Viparita Dandasana B)
Modification: both legs straight
Pose Type: backbend, inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Two-Legged Inverted Staff Pose

Dwi Pada Viparita Dandasana

(DWI-puh-duh vi-puh-REE-tuh duhn-DAHS-uh-nuh)

Also Known As: Inverted Staff Pose A (Viparita Dandasana A)
Pose Type: backbend, inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BACKBEND: FOREARMS ON THE FLOOR, BOUND HANDS

Bound Arms Tip Toe Bound Wheel Pose

Baddha Hasta Prapada Chakra Bandhasana

(BUH-duh HUH-stuh PRUH-puh-duh CHUHK-ruh buhn-DAHS-uh-nuh)

Pose Type: backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bound Arms Both Legs Inverted Staff Pose

Baddha Hasta Dwi Pada Viparita Dandasana

(BUH-duh HUH-stuh DWI-puh-duh vi-puh-REE-tuh duhn-DAH-suh-nuh)

Pose Type: backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BACKBEND: FOREARMS ON THE FLOOR, HEELS DOWN

Bound Wheel Pose

Chakra Bandhasana

(CHUHK-ruh buhn-DAHS-uh-nuh)

Modification: forearms to the floor, heels down, fingertips touching the heels
Pose Type: backbend, inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bound Wheel Pose

Chakra Bandhasana

(CHUHK-ruh buhn-DAHS-uh-nuh)

Also Known As: Bound Wheel Pose (Bandha Chakrasana)
Modification: grabbing onto ankles
1. looking straight ahead
2. head rolling back
Pose Type: backbend, inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BACKBEND: FOREARMS ON THE FLOOR, HEELS LIFTED

Tip Toe Bound Wheel Pose

Prapada Chakra Bandhasana

(PRUH-puh-duh CHUCK-ruh buhn-DAHS-uh-nuh)

Pose Type: backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Uneven Tip Toe Bound Wheel Pose

Vishama Prapada Chakra Bandhasana

(VI-shuh-muh PRUH-puh-duh CHUCK-ruh buhn-DAHS-uh-nuh)

Pose Type: backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BACKBEND: FOREARMS ON THE FLOOR, ONE-LEGGED

One-Legged Inverted Staff Pose

Eka Pada Viparita Dandasana

(EY-kuh PUH-duh vi-puh-REE-tuh duhn-DAHS-uh-nuh)

Modification: forearms to the floor, head off the floor

Pose Type: backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bound Foot One-Legged Inverted Staff Pose

Baddha Pada Eka Pada Viparita Dandasana

(BUH-duh PUH-duh EY-kuh PUH-duh vi-puh-REE-tuh duhn-DAHS-uh-nuh)

Modification: forearms to the floor, head off the floor

Pose Type: backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Tip Toe Bound Foot One-Legged Inverted

Staff Pose

Prapada Baddha Pada Eka Pada Viparita Dandasana

(PRUH-puh-duh BUH-duh PUH-duh EY-kuh PUH-duh vi-puh-REE-tuh duhn-DAHS-uh-nuh)

Pose Type: backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

How to Perform the Pose:

1. Begin by lying flat on your back. Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing. Inhale and bring your hands under your shoulders with elbows bent and close to your head, with the fingertips pointing away from your head.
2. Exhale and bend your knees, keep your feet flat on the floor and slide your heels toward your sitting bones. Keep your feet in line with your sitting bones and parallel to each other with your toes pointing straight ahead.
3. Exhale as you lift your sitting bones and your back off the floor. Place the crown of your head onto the floor, balancing on your hands, head, and feet.
4. Exhale as you slide your right palm in the direction of your feet until your forearm is flat on the floor. On the next exhale, slide your left palm to meet your right. Interlock your fingers at the back of your head.
5. Exhale and lift your head off the floor.
6. On the next exhale, walk your feet toward your hands. Grab onto your left ankle with both hands.
7. Exhale as you lift your right foot off the floor, keeping your right leg strong and straight with toes pointing up to the sky.
8. Inhale and lift your left heel, coming onto the toes of the left foot, while holding onto the left toes with both hands. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch on the right side.
9. Inhale and lower the left heel to the floor, followed by the right foot. Exhale and grab onto the right ankle with both hands. On the following exhale, lift your left foot off the floor, keeping your left leg strong and straight with toes pointing up to the sky.
10. Inhale and lift your right heel, coming onto the toes of the right foot while holding onto the right toes with both hands. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch on the left side.
11. Inhale and lower your right heel to the floor, followed by your left foot. Exhale and lower your head to the floor. Exhale and tuck your chin to your chest and lower your spine to the floor, coming

out of the pose.

Modification: forearms to the floor, head off the floor

prapada = tip of the feet

baddha = bound

pada = foot or leg

eka = one

pada = foot or leg

viparita = inverted

danda = stick or staff

Foot to the Head One-Legged Inverted Staff Pose

Shirsha Pada Eka Pada Viparita Dandasana

(SHEER-shuh PUH-duh EY-kuh PUH-duh vi-puh-REE-tuh duhn-DAHS-uh-nuh)

Modification: forearms to the floor, head off the floor
Pose Type: backbend, inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

UPWARD BOW POSE

Upward Bow Pose

Urdhva Dhanurasana

(OORD-vuh duh-nur-AHS-uh-nuh)

Modification: heels down
Pose Type: backbend, inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Tip Toe Upward Bow Pose

Prapada Urdhva Dhanurasana

(PRUH-puh-duh OORD-vuh duh-nur-AHS-uh-nuh)

Pose Type: backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Elevated Both Legs Inverted Staff Pose

Utthita Dwi Pada Viparita Dandasana

(UT-ti-tuh DWI-puh-duh vi-puh-REE-tuh duhn-DAHS-uh-nuh)

Also Known As: Upward Bow Pose (Urdhva Dhanurasana)

Modification: head rolling back

Pose Type: backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Tip Toe One-Legged Upward Bow Pose

Prapada Eka Pada Urdhva Dhanurasana

(PRUH-puh-duh EY-kuh PUH-duh OORD-vuh duh-nur-AHS-uh-nuh)

Pose Type: backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Upward Bow Pose

Eka Pada Urdhva Dhanurasana

(EY-kuh PUH-duh OORD-vuh duh-nur-AHS-uh-nuh)

Also Known As: Two Limb Upward Bow Pose (Dwi Anga Urdhva Dhanurasana)

Modification: one hand to the thigh

Pose Type: backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Tip Toe One Hand Upward Bow Pose

Prapada Eka Hasta Urdhva Dhanurasana

(PRUH-puh-duh EY-kuh HUH-stuh OORD-vuh duh-nur-AHS-uh-nuh)

Pose Type: backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

[WILD THING POSE](#)

Wild Thing Pose

Chamatkarasana

(kuh-muht-kar-AHS-uh-nuh)

Modification: forearm to the floor
Pose Type: backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows) or Hastagrai or Hastagre (hands)
See the glossary for a more precise translation of chamatkarasana.

Wild Thing Pose

Chamatkarasana

(kuh-muht-kar-AHS-uh-nuh)

Pose Type: backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows) or Hastagrai or Hastagre (hands)

Wild Thing Pose

Chamatkarasana

(kuh-muht-kar-AHS-uh-nuh)

Modification: foot to inside of the thigh
Pose Type: backbend
Drishti Point: Hastagrai or Hastagre (hands)

Wild Thing Pose

Chamatkarasana

(kuh-muht-kar-AHS-uh-nuh)

Modification: grabbing the ankle with overhead grip on the same side
Pose Type: backbend, inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows) or Hastagrai or Hastagre (hands)

Wild Thing Pose

Chamatkarasana

(kuh-muht-kar-AHS-uh-nuh)

Modification: grabbing the ankle with overhead grip on the same side; other foot off the floor—knee bent

Pose Type: backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows) or Hastagrai or

Arm Balances

LOTUS POSE

PENDANT POSE

ONE LEG OVER THE SHOULDER

CRANE POSE

FIREFLY POSE

SCISSOR LEGS

GARUDA LEGS

PEACOCK AND SWAN POSES

Half Fire Log Celibate Pose

Ardha Agnistambha Brahmacharyasana

(UHR_duh uhg-ni-STUHM-buh bruh-muh-chahr-YAHS-uh-nuh)

Pose Type: core, arm balance

Drishti Point: Padayoragrai or Padayoragre (toes/feet)

One Leg Over Shoulder Pose

Eka Hasta Bhujasana

(EY-kuh HUH-stuh buj-AHS-uh-nuh)

Also Known As: Comfortable Bird Pose (Sukha Chakorasana)

Pose Type: core, arm balance

Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Moonbird Pose

Chakorasana

(chuh-kor-AHS-uh-nuh)

Pose Type: core, arm balance

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ARM BALANCE: LOTUS

Rooster Pose

Kukkutasana

(ku-ku-TAHS-uh-nuh)

Pose Type: arm balance, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Scales Pose

Tolasana

(to-LAHS-uh-nuh)

Modification: 1. fingertips pointing to the back, thumbs pointing to the front
2. palms flat on the floor, fingertips pointing to the front
Pose Type: arm balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Pose Dedicated to Sage Galava

Galavasana

(gah-luh-VAHS-uh-nuh)
Modification: 1. hips low
2. hips high
Pose Type: arm balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Upward Rooster Pose

Urdhva Kukkutasana

(OORD-vuh ku-ku-TAHS-uh-nuh)

Modification: 1. hips at shoulder height
2. hips higher than the shoulders

Pose Type: arm balance, forward bend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Angushtamadhye or Angushta Ma Dyai (thumbs)

Side Rooster Pose

Parshva Kukkutasana

(PAHRSH-vuh ku-ku-TAHS-uh-nuh)

Also Known As: Revolved Rooster Pose (Parivritta Kukkutasana), Wounded Rooster Pose (Pungu Kukkutasana)

Modification: 1. elbows bent

2. arms straight

Pose Type: arm balance, forward bend, twist

Drishti Point: Nasagrai or Nasagre (nose)

Pendant Pose

Lolasana

(lo-LAHS-uh-nuh)

Modification: ankles crossed

Pose Type: arm balance, forward bend, core

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs) or Nasagrai or Nasagre (nose)

Pendant Pose

Lolasana

(lo-LAHS-uh-nuh)

Pose Type: arm balance, forward bend, core

Drishti Point: Angusthamadhye or Angustha Ma Dyai (thumbs) or Nasagrai or Nasagre (nose)

How to Perform the Pose:

1. Begin by sitting on the floor with both your legs straight out in front of you. Keep your fingertips on the floor on the sides of your hips. Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Exhale and lean forward, lifting your sitting bones off the floor. Bend your right knee, sliding your foot back. On the next exhale, bend your left knee, sliding your left foot back to meet your right. Your left shin should end up on top of your right calf muscle. Sit on your heels with ankles crossed under your sitting bones.
3. Inhale and rock forward. Exhale, engage your core, pull your quadriceps toward your chest, and lift your knees and feet off the floor, balancing on your fingertips. Make sure your arms are strong and straight and your shoulders are on top of your fingertips.
4. Aim to hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the pose.
5. Inhale and lower your feet and knees to the floor. Exhale and bring both legs straight out in front of you. Repeat on the opposite side.

Modification: on the fingertips; ankles crossed

lola = pendant

Pendant Pose

Lolasana

(lo-LAHS-uh-nuh)

Modification: fingertips pointing to the back, thumbs pointing to the front
Pose Type: arm balance, forward bend, core
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Leg Position of Cow Face Pose in Pendant Pose

Pada Gomukhasana in Lolasana

(PUH-duh go-muk-AHS-uh-nuh in lo-LAHS-uh-nuh)

Modification: fingertips pointing to the back, thumbs pointing to the front
Pose Type: arm balance, forward bend, core
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Pose Dedicated to Viranchi (Brahma) 1 Prep.

Viranchyasana 1 Prep.

(vir-uhn-CHYAHS-uh-nuh)

Modification: back of the knee toward the shoulder
Pose Type: arm balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

One-Legged Crane 2 Prep.

Eka Pada Bakasana 2 Prep.

(EY-kuh PUH-duh buh-KAHS-uh-nuh)

Modification: both knees bent, back of one knee over the shoulder, other knee toward the chest
Pose Type: arm balance, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

One Foot Behind Head Crane Pose

Eka Pada Shirsha Bakasana

(EY-kuh PUH-duh SHEER-shuh buh-KAHS-uh-nuh)

Modification: 1. hips at shoulder height
2. hips at elbow height, head lifted

Pose Type: arm balance, forward bend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ARM BALANCE: CRANE POSE

Crane Pose

Bakasana

(buh-KAHS-uh-nuh)

Also Known As: Crow Pose (Kakasana)

Modification: elbows bent

Pose Type: arm balance, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Crane Pose

Bakasana

(buh-KAHS-uh-nuh)

Modification: 1. knees off the triceps
2. knees on the triceps

Pose Type: arm balance, forward bend

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs), Nasagrai or Nasagre (nose)

ARM BALANCE: SHOULDER PRESSURE POSE & FIREFLY POSE

Two-Handed Arm Balance

Dwi Hasta Bhujasana

(DWI-huh-stuh buj-AHS-uh-nuh)

Modification: 1. feet off the floor
2. toes touching the floor

Pose Type: arm balance, forward bend

Drishti Point: Nasagrai or Nasagre (nose), Padayoragrai or Padayoragre (toes/feet)

Shoulder Pressure Pose

Bhujapidasana

(buj-uh-peed-AHS-uh-nuh)

Also Known As: Shoulder Pressure Pose (Bhujapidasana A)

Modification: head off the floor

Pose Type: arm balance, forward bend

Drishti Point: Nasagrai or Nasagre (nose), Padayoragrai or Padayoragre (toes/feet)

Firefly Pose 1

Tittibhasana 1

(ti-ti-BAHS-uh-nuh)

Also Known As: Firefly Pose A (Tittibhasana A)
Modification: elbows bent, legs on top of the shoulders
Pose Type: arm balance, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), or Nasagrai or Nasagre (nose)

Firefly Pose 1

Tittibhasana 1

(ti-ti-BAHS-uh-nuh)

Also Known As: Firefly Pose A (Tittibhasana A)
Modification: arms straight, feet extended to the sky
Pose Type: arm balance, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows) or Nasagrai or Nasagre (nose)

Firefly Pose 1

Tittibhasana 1

(ti-ti-BAHS-uh-nuh)

Also Known As: Firefly Pose A (Tittibhasana A), Raised Tortoise Pose (Utthita Kurmasana)
Modification: arms straight, legs parallel to the floor
Pose Type: arm balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

ARM BALANCE: FIREFLY POSE

Firefly Pose

Tittibhasana

(ti-ti-BAHS-uh-nuh)

Also Known As: Raised Up Feet Spread Out Resting on the Arms Pose (Utthita Dwi Pada Vrishtasana)
Modification: elbows bent, legs on triceps, wide legged
1. side view
2. front view

Pose Type: arm balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Lifted Feet Spread Out Pose

Utthita Dwi Pada Vrishtasana

(UT-ti-tuh DWI-puh-duh vrish-TAHS-uh-nuh)

Modification: arms straight, heels of the palms touching, fingertips pointing to the sides
Pose Type: arm balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

One-Legged Crane 1

Eka Pada Bakasana 1

(EY-kuh PUH-duh buh-KAHS-uh-nuh)

Modification: knee to the tricep
Pose Type: arm balance, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

One-Legged Crane 1

Eka Pada Bakasana 1

(EY-kuh PUH-duh buh-KAHS-uh-nuh)

Modification: knee to the outside of the shoulder
Pose Type: arm balance, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

One-Legged Crane 2

Eka Pada Bakasana 2

(EY-kuh PUH-duh buh-KAHS-uh-nuh)

Modification: shin of the bent leg to the tricep
Pose Type: arm balance, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows) or Nasagrai or Nasagre (nose)

Pose Dedicated to Galava, One-Legged Modification

Eka Pada Galavasana

(EY-kuh PUH-duh gah-luh-VAHS-uh-nuh)

Pose Type: arm balance, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Dragonfly Pose 1

Maksikanagasana 1

(muhk-shi-kah-nah-GAHS-uh-nuh)

Also Known As: Stick Arm to the Side Grasshopper Pose (Parshva Bhuja Danda Salabhasana)
Pose Type: arm balance, forward bend, twist
Drishti Point: Nasagrai or Nasagre (nose)

Moonbird Pose

Chakorasana

(chuh-kor-AHS-uh-nuh)

Pose Type: arm balance, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Uneven One-Legged Crane 1

Vishama Eka Pada Bakasana 1

(VISH-uh-muh EY-kuh PUH-duh buh-KAHS-uh-nuh)

Modification: one forearm to the floor, other elbow bent at 90 degrees
Pose Type: arm/forearm balance, forward bend, inversion

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Arm to the Side Pose Dedicated to Sage Koundinya One-Legged Version 1

Parshva Hasta Eka Pada Koundinyasana 1

(PAHRSH-vuh HUH-stuh EY-kuh PUH-duh kown-din-YAHS-uh-nuh)

Modification: bottom knee bent

Pose Type: arm balance, forward bend, twist

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

ARM BALANCE: SCISSOR LEGS

Pose Dedicated to Sage Koundinya One-Legged Version 1 Prep.

Eka Pada Koundinyasana 1 Prep.

(EY-kuh PUH-duh kown-din-YAHS-uh-nuh)

Modification: ear to the floor, bottom knee bent

Pose Type: arm balance, forward bend, twist
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Pose Dedicated to Sage Koundinya One-Legged Version 1 Prep.

Eka Pada Koundinyasana 1 Prep.

(EY-kuh PUH-duh kown-din-YAHS-uh-nuh)

Modification: head on the floor
Pose Type: arm balance, forward bend, twist
Drishti Point: Nasagrai or Nasagre (nose)

Pose Dedicated to Sage Koundinya One-Legged Version 2

Eka Pada Koundinyasana 2

(EY-kuh PUH-duh kown-din-YAHS-uh-nuh)

Modification: 1. prep. back foot on the floor, toes curled in
2. back foot lifted
Pose Type: arm balance, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre

(nose)

ARM BALANCE: GARUDA LEGS

Revolved Leg Position of the Pose Dedicated to Garuda in Swan Pose

Parivritta Pada Garudasana in Hamsasana

(puh-ri-VRIT-tuh PUH-duh guh-ru-DAHS-uh-nuh in huhms-AHS-uh-nuh)

Pose Type: arm balance, forward bend, twist

Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Revolved Leg Position of the Pose Dedicated to Garuda in Uneven Swan Pose

Parivritta Pada Garudasana in Vishama Hamsasana

(puh-ri-VRIT-tuh PUH-duh guh-ru-DAHS-uh-nuh in VISH-uh-muh huhms-AHS-uh-nuh)

Modification: forearm to the floor
Pose Type: arm balance, forward bend, twist
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Revolved Leg Position of the Pose Dedicated to Garuda in Uneven Swan Pose

Parivritta Pada Garudasana in Vishama Hamsasana

(puh-ri-VRIT-tuh PUH-duh guh-ru-DAHS-uh-nuh in VISH-uh-muh huhms-AHS-uh-nuh)

Modification: elbow to the floor
Pose Type: arm balance, forward bend, twist
Drishti Point: Nasagrai or Nasagre (nose) or Padayoragrai or Padayoragre (toes/feet)

Two-Legged Pose Dedicated to Koundinya

Dwi Pada Koundinyasana

(DWI-puh-duh kown-din-YAHS-uh-nuh)

Pose Type: arm balance, forward bend, twist
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Uneven Two-Legged Pose Dedicated to Koundinya

Vishama Dwi Pada Koundinyasana

(VISH-uh-muh DWI-puh-duh kown-din-YAHS-uh-nuh)

Modification: one forearm to the floor, knees bent
Pose Type: arm balance, forward bend, twist
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Pose Dedicated to Ashtavakra Prep.

Ashtavakrasana Prep.

(uh-shtuh-vuh-KRAHS-uh-nuh)

Also Known As: Eight Angle Pose Prep.
Modification: feet unhooked
Pose Type: arm balance, forward bend, twist
Drishti Point: Nasagrai or Nasagre (nose)

ARM BALANCE: BOTH LEGS TO THE SIDE—ASHTAVAKRA'S POSE

Pose Dedicated to Ashtavakra

Ashtavakrasana

(uh-shtuh-vuh-KRAHS-uh-nuh)

Also Known As: Eight Angle Pose
Pose Type: arm balance, forward bend, twist
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Uneven Pose Dedicated to Ashtavakra

Vishama Ashtavakrasana

(VISH-uh-muh uh-shtuh-vuh-KRAHS-uh-nuh)

Also Known As: Uneven Eight Angle Pose
Modification: one forearm to the floor
Pose Type: arm/forearm balance, forward bend, twist
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Uneven Half Repose Pose Dedicated to Ashtavakra

Vishama Ardha Shayana Ashtavakrasana

(VISH-uh-muh UHR-duh shuh-yuh-nuh uh-shtuh-vuh-KRAHS-uh-nuh)

Also Known As: Uneven Half Repose Eight Angle Pose
Modification: one elbow to the floor, hand to the face
Pose Type: arm/elbow balance, forward bend, twist
Drishti Point: Nasagrai or Nasagre (nose)

ARM BALANCE: BOTH LEGS TO THE SIDE—KNEES BENT AND TOGETHER

Side Crane Pose

Parshva Bakasana

(PAHRSH-vuh buh-KAHS-uh-nuh)

Also Known As: Revolved Crane Pose (Parivritta Bakasana), Sideways Crow Pose (Parshva Kakasana)

Modification: 1. elbows bent

2. arms straight

Pose Type: arm balance, forward bend, twist

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Two-Legged Pose Dedicated to Koundinya Modification on the Fists

Mushti Dwi Pada Koundinyasana

(mush-ti DWI-puh-duh kown-din-YAHS-uh-nuh)

Modification: ankles crossed

Pose Type: arm balance, forward bend, twist

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Uneven Arms Side Crane Pose

Vishama Hasta Parshva Bakasana

(VISH-uh-muh HUH-stuh PAHRSH-vuh buh-KAHS-uh-nuh)

Pose Type: arm balance, forward bend, twist

Drishti Point: Nasagrai or Nasagre (nose)

ARM BALANCE: LOTUS PEACOCK

Bound Angle Pose in Peacock Pose

Baddha Konasana in Mayurasana

(BUH-duh ko-NAHS-uh-nuh in muh-yoor-AHS-uh-nuh)

Pose Type: arm balance

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Lotus Pose in Peacock Pose

Padmasana in Mayurasana

(puhd-MAHS-uh-nuh in muh-yoor-AHS-uh-nuh)

Pose Type: arm balance, hip opener

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Fist Lotus Peacock Pose

Mushti Padma Mayurasana

(mush-ti PUHD-muh muh-yoor-AHS-uh-nuh)

Pose Type: arm balance

Drishti Point: Nasagrai or Nasagre (nose)

[ARM BALANCE: PEACOCK AND SWAN]

Peacock Pose

Mayurasana

(muh-yoor-AHS-uh-nuh)

Modification: 1. feet lifted higher than the hip level
2. body parallel to the floor

Pose Type: arm balance

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Swan Pose

Hamsasana

(huhms-AHS-uh-nuh)

Also Known As: Swan Pose (Hansasana)
Pose Type: arm balance
Drishti Point: Nasagrai or Nasagre (nose)

One Hand Peacock Pose

Eka Hasta Mayurasana

(EY-kuh HUH-stuh muh-yoor-AHS-uh-nuh)

Also Known As: Wounded Peacock Pose (Pungu Mayurasana)
Pose Type: arm balance
Drishti Point: Nasagrai or Nasagre (nose)

Inversion Poses

DUCK POSE

DOLPHIN POSE

PEACOCK FEATHER POSE

BACKBENDS ON FOREARMS

HANDSTANDS (VARIATIONS)

HEADSTANDS (VARIATIONS)

SHOULDERSTAND (VARIATIONS)

PLOW POSE

Duck Pose

Karandavasana

(kahr-uhn-duh-VAHS-uh-nuh)

Also Known As: Baby Duck Pose
Modification: thumbs grabbing onto the biceps, fingers grabbing onto the triceps; knees to the armpits, feet together
Pose Type: forearm balance, inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Duck Pose

Karandavasana

(kahr-uhn-duh-VAHS-uh-nuh)

Also Known As: Baby Duck Pose
Modification: forearms to the floor, knees to the armpits, feet together
Pose Type: forearm balance, inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

DOLPHIN POSE

Downward Facing Pose Dedicated to Makara

Adho Mukha Makarasana

(uh-DO MUK-uh muh-kuh-RAHS-uh-nuh)

Also Known As: Dolphin Pose
Pose Type: forward bend, inversion, core
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Uneven Peacock Feather Pose

Eka Pada Vishama Picha Mayurasana

(EY-kuh PUH-duh VISH-uh-muh pich-chuh muh-yoor-AHS-uh-nuh)

Also Known As: Eka Pada Vishama Pincha Mayurasana
Pose Type: forearm balance, inversion, forward bend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Half Lotus Downward Facing Pose Dedicated to Makara

Ardha Padma Adho Mukha Makarasana

(UHR-duh PUHD-muh uh-DO MUK-uh muh-kuh-RAHS-uh-nuh)

Also Known As: Half Lotus Dolphin Pose
Modification: heel down
Pose Type: forward bend, inversion, core
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Leg Position of the Pose Dedicated to Garuda in Downward Facing Pose Dedicated to Makara

Pada Garudasana in Adho Mukha Makarasana

(PUH-duh guh-ru-DAHS-uh-nuh in uh-DO MUK-uh muh-kuh-RAHS-uh-nuh)

Also Known As: Leg Position of the Pose Dedicated to Garuda in Dolphin Pose
Pose Type: forward bend, inversion, core
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

PEACOCK FEATHER POSE

Peacock Feather Pose

Picha Mayurasana

(pich-chuh muh-yoor-AHS-uh-nuh)

Also Known As: Upright Scorpion Pose (Avakra Vrishchikasana), Pincha Mayurasana
Pose Type: forearm balance, inversion
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

One-Legged Peacock Feather Pose

Eka Pada Picha Mayurasana

(EY-kuh PUH-duh pich-chuh muh-yoor-AHS-uh-nuh)

Also Known As: Eka Pada Pincha Mayurasana
Pose Type: forearm balance, inversion, forward bend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

One-Legged Scorpion Pose

Eka Pada Vrishchikasana

(EY-kuh PUH-duh vrish-chi-KAHS-uh-nuh)

Modification: biceps in line with the ears

Pose Type: forearm balance, inversion, backbend
Drishti Point: Nasagrai or Nasagre (nose)

Pose Dedicated to Lord Hanuman in Peacock Feather Pose

Hanumanasana in Picha Mayurasana

(huh-nu-mahn-AHS-uh-nuh in pich-chuh muh-yoor-AHS-uh-nuh)

Also Known As: Hanumanasana in Pincha Mayurasana
Pose Type: forearm balance, inversion, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Stretched Out Scorpion Pose

Eka Pada Paripurna Vrishchikasana

(EY-kuh PUH-duh puh-ri-POOR-nuh vrish-chi-KAHS-uh-nuh)

Pose Type: forearm balance, inversion, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Scorpion Pose

Eka Pada Vrishchikasana

(EY-kuh PUH-duh vrish-chi-KAHS-uh-nuh)

Modification: forearms to the floor, foot away from the head
Pose Type: forearm balance, inversion, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BACKBENDS ON FOREARMS, LOTUS ON FOREARMS, AND ELBOW BALANCES

Inverted Puppy Dog Pose in Peacock Feather Pose

Viparita Shvanakasana in Picha Mayurasana

(vi-puh-REE-tuh shvuh-nuh-KAHS-uh-nuh in pich-chuh muh-yoor-AHS-uh-nuh)

Also Known As: Viparita Shvanakasana in Pincha Mayurasana
Modification: knees bent, backbend
Pose Type: forearm balance, inversion, backbend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Scorpion Pose

Vrishchikasana

(vrish-chi-KAHS-uh-nuh)

Modification: forearms to the floor, feet to the head
Pose Type: forearm balance, inversion, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Scorpion Pose

Eka Pada Vrishchikasana

(EY-kuh PUH-duh vrish-chi-KAHS-uh-nuh)

Modification: forearms to the floor, foot to the head, other leg parallel to the floor
Pose Type: forearm balance, inversion, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Upward Lotus Pose in Peacock Feather Pose

Urdhva Padmasana in Picha Mayurasana

(OORD-vuh puhd-MAHS-uh-nuh in pich-chuh muh-yoor-AHS-uh-nuh)

Also Known As: Raised Lotus Scorpion Pose (Urdhva Padma Vrishchikasana), Duck Pose (Karandavasana)

Pose Type: forearm balance, inversion

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Uneven Repose Pose

Vishama Shayanasana

(VISH-uh-muh shuh-yuh-NAHS-uh-nuh)

Modification: both knees bent

Pose Type: forearm/elbow balance, inversion, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Repose Pose

Shayanasana

(shuh-yuh-NAHS-uh-nuh)

Modification: both knees bent
Pose Type: elbow balance, inversion, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

HANDSTANDS: BOTH LEGS STRAIGHT

Feet Spread Intense Stretch Pose in Downward Facing Tree Pose

Prasarita Padottanasana in Adho Mukha Vrikshasana

(pruh-SAH-ri-tuh puh-do-tahn-AHS-uh-nuh in uh-DO MUK-uh vriks-SHAHS-anna)

Also Known As: Feet Spread Full Forward Bend Pose in Downward Facing Tree Pose, Prasarita Padottanasana in Adho Mukha Vrksasana
Pose Type: inversion, arm balance, forward bend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

One-Legged Downward Facing Tree Pose

Eka Pada Adho Mukha Vrikshasana

(EY-kuh PUH-duh uh-DO MUK-uh vrik-SHAHS-uh-nuh)

Also Known As: Eka Pada Adho Mukha Vrksasana
Pose Type: inversion, arm balance, forward bend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Downward Facing Tree Pose

Adho Mukha Vrikshasana

(uh-DO MUK-uh vrik-SHAHS-uh-nuh)

Also Known As: Adho Mukha Vrksasana
Modification: legs crossed
Pose Type: inversion, arm balance
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Seated Angle Pose in Downward Facing Tree Pose

Upavishta Konasana in Adho Mukha Vrikshasana

(u-puh-VISH-tuh ko-NAHS-uh-nuh in uh-DO MUK-uh vrik-SHAHS-uh-nuh)

Also Known As: Upward Spread Feet Pose A (Urdhva Prasarita Padasana A), Upavista Konasana in Adho Mukha Vrikshasana

Pose Type: inversion, arm balance

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Leg Position of the Pose Dedicated to Garuda in

Downward Facing Tree Pose

Pada Garudasana in Adho Mukha Vrikshasana

(PUH-duh guh-ru-DAHS-uh-nuh in uh-DO MUK-uh vrik-SHAHS-uh-nuh)

Also Known As: Pada Garudasana in Adho Mukha Vrksasana

Pose Type: inversion, arm balance

Drishti Point: Angusthamadhye or Angustha Ma Dyai (thumbs)

How to Perform the Pose:

1. Begin by standing in Mountain Pose (*Tadasana*). Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Exhale and hinge from the hips, coming into a forward bend, placing the palms on the floor on the outsides of your feet. Your hands should be shoulder width apart or slightly wider. Make sure your arms are straight and your shoulders are on top of your fingertips.
3. There are many ways to come into a handstand. When you start practicing handstands, make sure you can balance on your hands against the wall for at least 60 seconds. Then you can experiment with jumping into a handstand or lifting your legs using your core. Press strongly into your hands.
4. Once you find your balance in a Downward Facing Tree Pose (*Adho Mukha Vrikshasana*), also known as Handstand, exhale and bend your knees; cross your right leg over your left leg, hooking your right foot around your left calf muscle. Hold for 30, and up to 90, seconds to receive the full benefits of the stretch.
5. Inhale and bring your legs back to the straight position. Exhale and switch legs as you bend your knees and cross your left leg over your right leg, hooking your left foot around your right calf muscle. Hold for 30, and up to 90, seconds to receive the full benefits of the stretch.
6. Inhale and bring your legs back to the straight position. On the following inhale, lower your feet to the floor. Inhale as you come back to Mountain Pose (*Tadasana*).

pada = foot or leg

Garuda = Hindu Deity, half-man half-eagle, carrier of Lord Vishnu

adho = downward

mukha = facing

vriksha = tree

Frog Pose in Downward Facing Tree Pose

Mandukasana in Adho Mukha Vrikshasana

(muhn-doo-KAHS-uh-nuh in uh-DO MUK-uh vrik-SHAHS-uh-nuh)

Also Known As: Mandukasana in Adho Mukha Vrksasana
Pose Type: inversion, arm balance
Drishti Point: Nasagrai or Nasagre (nose) or Angusthamadhye or Angustha Ma Dyai (thumbs)

Bound Angle Pose in Downward Facing Tree Pose

Baddha Konasana in Adho Mukha Vrikshasana

(BUH-duh ko-NAHS-uh-nuh in uh-DO MUK-uh vrik-SHAHS-uh-nuh)

Also Known As: Baddha Konasana in Adho Mukha Vrksasana
Pose Type: inversion, arm balance
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Svastika Legs in Downward Facing Tree Pose

Pada Svastikasana in Adho Mukha Vrikshasana

(PUH-duh svuh-sti-KAHS-uh-nuh in uh-DO MUK-uh vrik-SHAHS-uh-nuh)

Also Known As: Pada Svastikasana in Adho Mukha Vrksasana
Modification: both knees bent, one knee bent toward the chest, other foot pointing to the back
Pose Type: inversion, arm balance, mild backbend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Scorpion Pose Prep.

Vrishchikasana Prep.

(vrish-chi-KAHS-uh-nuh)

Also Known As: Pose Dedicated to the Demon Taraka A (Tarakasana A)
Modification: knees bent, feet away from the head
Pose Type: inversion, arm balance, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Lotus Pose in Downward Facing Tree Pose

Ardha Padmasana in Adho Mukha Vrikshasana

(UHR-duh puhd-MAHS-uh-nuh in uh-DO MUK-uh vrik-SHAHS-uh-nuh)
Also Known As: Ardha Padmasana in Adho Mukha Vrksasana
Pose Type: inversion, arm balance
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

HANDSTAND, LEGS CROSSED: GARUDA LEGS & LOTUS

Leg Position of the Pose Dedicated to Garuda in Downward Facing Tree Pose

Pada Garudasana in Adho Mukha Vrikshasana

(PUH-duh guh-ru-DAHS-uh-nuh in uh-DO MUK-uh vrik-SHAHS-uh-nuh)
Also Known As: Pada Garudasana in Adho Mukha Vrksasana
Modification: arms bent at 90 degrees
Pose Type: inversion, arm balance
Drishti Point: Nasagrai or Nasagre (nose)

Upward Lotus Pose in Downward Facing Tree Pose

Urdhva Padmasana in Adho Mukha Vrikshasana

(OORD-vuh puhd-MAHS-uh-nuh in uh-DO MUK-uh vrik-SHAHS-uh-nuh)

Also Known As: Urdhva Padmasana in Adho Mukha Vrksasana
Pose Type: inversion, arm balance
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

HEADSTAND 1 ARM POSITION: LEG MODIFICATIONS

Headstand 1

Shirshasana 1

(sheer-SHAHS-uh-nuh)

Also Known As: Supported Headstand (Salamba Shirshasana*), Bound Hands Headstand A (Baddha Hasta Shirshasana A)
Modification: 1. back view
2. side view
Pose Type: inversion
Drishti Point: Nasagrai or Nasagre (nose)

One-Legged Headstand 1

Eka Pada Shirshasana 1

(EY-kuh PUH-duh sheer-SHAHS-uh-nuh)

Pose Type: inversion, forward bend

Drishti Point: Nasagrai or Nasagre (nose), Padayoragrai or Padayoragre (toes/feet)

Leg Contraction Knee Bend Pose in Headstand 1

Pada Akunchanasana in Shirshasana 1

(PUH-duh uh-kunch-uh-NAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Modification: one knee bent toward the chest

Pose Type: inversion, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Upward Staff Pose in Headstand 1

Urdhva Dandasana in Shirshasana 1

(OORD-vuh duhn-DAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Also Known As: Half Headstand Pose (Ardha Shirshasana), Headstand B (Shirshana B)
Pose Type: inversion, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

HEADSTAND 1 ARM POSITION: VARIOUS LEG POSITIONS

Svastika Legs in Headstand 1

Pada Svastikasana in Shirshasana 1

(PUH-duh svuh-sti-KAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Pose Type: inversion, mild backbend
Drishti Point: Nasagrai or Nasagre (nose)

Leg Position of One-Legged King Pigeon 1 Version B in Headstand 1

Pada Eka Pada Raja Kapotasana 1 B in Shirshasana 1

(PUH-duh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Modification: both knees bent, one knee to the sky, other foot to the knee
Pose Type: inversion, mild backbend
Drishti Point: Nasagrai or Nasagre (nose)

Feet to Head Pose

Shirsha Padasana

(SHEER-shuh puh-DAHS-uh-nuh)

Pose Type: inversion, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bound Angle Pose in Headstand 1

Baddha Konasana in Shirshasana 1

(BUH-duh ko-NAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Pose Type: inversion
Drishti Point: Nasagrai or Nasagre (nose)

Sideways Bound Angle Pose in Headstand 1

Parshva Baddha Konasana in Shirshasana 1

(PAHRSH-vuh BUH-duh ko-NAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Pose Type: inversion, side bend
Drishti Point: Nasagrai or Nasagre (nose)

Pose Dedicated to Hanuman in Headstand 1

Hanumanasana in Shirshasana 1

(huh-nu-mahn-AHS-uh-nuh in sheer-SHAH-suh-nuh)

Pose Type: inversion
Drishti Point: Nasagrai or Nasagre (nose)

Seated Angle Pose in Headstand 1

Upavishta Konasana in Shirshasana 1

(u-puh-VISH-tuh ko-NAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Also Known As: Upavista Konasana in Adho Mukha Vrikshasana, Upavista Konasana in Adho Mukha Vrksasana
Pose Type: inversion
Drishti Point: Nasagrai or Nasagre (nose)

Leg Position of the Pose Dedicated to Garuda in Headstand 1

Pada Garudasana in Shirshasana 1

(PUH-duh guh-ru-DAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Pose Type: inversion

Drishti Point: Nasagrai or Nasagre (nose)

HEADSTAND 1 ARM POSITION: LOTUS LEG POSITION

Upward Lotus in Headstand 1

Urdhva Padmasana in Shirshasana 1

(OORD-vuh puhd-MAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Modification: 1. back view

2. side view

Pose Type: inversion

Drishti Point: Nasagrai or Nasagre (nose)

Sideways Upward Lotus in Headstand 1

Parshva Urdhva Padmasana in Shirshasana 1

(PAHRSH-vuh OORD-vuh puhd-MAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Pose Type: inversion, twist

Drishti Point: Nasagrai or Nasagre (nose)

Embryo Pose in Headstand 1 Prep.

Pindasana in Shirshasana 1 Prep.

(pin-DAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Modification: thighs parallel to the floor
Pose Type: inversion, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Embryo Pose in Headstand 1

Pindasana in Shirshasana 1

(pin-DAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Modification: 1. knees to the triceps
2. knees to the chest
Pose Type: inversion, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

HEADSTAND 1 & 3 ARM POSITIONS: VARIOUS ARM AND LEG POSITIONS

One Hand Headstand 1

Eka Hasta Shirshasana 1

(EY-kuh HUH-stuh sheer-SHAHS-uh-nuh)

Modification: both knees bent toward the chest, one forearm on the floor

1. other arm straight, fingertips to the sky
2. other arm behind the back, fingertips pointing to the upper back

Pose Type: inversion, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Sideways Uneven Upward Staff Pose

Parshva Vishama Urdhva Dandasana

(PAHRSH-vuh VISH-uh-muh OORD-vuh duhn-DAHS-uh-nuh)

Modification: forearm to the floor in front of the face, palm down; legs parallel to the floor
Pose Type: inversion, forward bend, twist
Drishti Point: Hastagrai or Hastagre (hands)

Leg Contraction Pose in Headstand 3

Pada Akunchanasana in Shirshasana 3

(PUH-duh uh-kunch-AHS-uh-nuh in sheer-SHAHS-uh-nuh)

Modification: one leg straight and out to the side, other knee to the chest
Pose Type: inversion, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Leg Contraction Pose in Uneven Headstand (Fusion of Headstand 5 and Headstand 3 Arm Position)

Pada Akunchanasana in Vishama Shirshasana

(PUH-duh uh-kunch-AHS-uh-nuh in VISH-uh-muh sheer-SHAHS-uh-nuh)

Modification: one forearm to the floor, other elbow on top of the wrist, knee to the tricep on the same side

Pose Type: inversion, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

HEADSTAND 5 ARM POSITION: VARIOUS LEG POSITIONS

Leg Position of the Pose Dedicated to Garuda in Headstand 5

Pada Garudasana in Shirshasana 5

(PUH-duh guh-ru-AHS-uh-nuh in sheer-SHAHS-uh-nuh)

Pose Type: inversion

Drishti Point: Nasagrai or Nasagre (nose)

Leg Position of Cow Face Pose in Headstand 5

Pada Gomukhasana in Shirshasana 5

(PUH-duh go-muk-AHS-uh-nuh in sheer-SHAHS-uh-nuh)

Modification: bottom knee to the opposite tricep
Pose Type: inversion, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Headstand 5

Shirshasana 5

(sheer-SHAHS-uh-nuh)

Also Known As: Tripod Headstand
Pose Type: inversion
Drishti Point: Nasagrai or Nasagre (nose)

Frog Pose in Headstand 5

Mandukasana in Shirshasana 5

(muhn-doo-KAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Pose Type: inversion

Drishti Point: Nasagrai or Nasagre (nose)

Seated Angle Pose in Headstand 5

Upavishta Konasana in Shirshasana 5

(u-puh-VISH-tuh ko-NAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Also Known As: Tripod Headstand Same Angle Pose (Utripada Shirsha Samakonasana), Upavista Konasana in Shirshasana

Pose Type: inversion

Drishti Point: Nasagrai or Nasagre (nose)

Leg Position of One-Legged King Pigeon 1 Version B in Headstand 5

Pada Eka Pada Raja Kapotasana 1 B in Shirshasana 5

(PUH-duh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Modification: knee to the tricep on the same side, other knee resting on the foot

Pose Type: inversion, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Revolved Leg Position of One-Legged King Pigeon 1 Version B in Headstand 5

Parivritta Pada Eka Pada Raja Kapotasana 1 B in Shirshasana 5

(puh-ri-VRIT-tuh PUH-duh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Modification: knee resting on the foot

1. top leg straight
2. top knee bent at 90 degrees

Pose Type: inversion, forward bend, twist

Drishti Point: Nasagrai or Nasagre (nose)

Headstand 5 Prep.

Shirshasana 5 Prep.

(sheer-SHAHS-uh-nuh)

Modification: one knee to the tricep, other foot to the floor on the side
Pose Type: inversion, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Crane Pose in Headstand 5 Prep.

Bakasana in Shirshasana 5 Prep.

(buh-KAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Modification: knees on the triceps
Pose Type: inversion, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Side Crane Pose in Headstand 5

Parshva Bakasana in Shirshasana 5

(PAHRSH-vuh buh-KAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Modification: knees together, knee to the opposite tricep
Pose Type: inversion, forward bend, twist
Drishti Point: Nasagrai or Nasagre (nose)

Embryo in the Womb Pose in Headstand 5

Garba Pindasana in Shirshasana 5

(guhr-buh-pin-DAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Pose Type: inversion, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Side Rooster Pose in Headstand 5 Prep.

Parshva Kukkutasana in Shirshasana 5 Prep.

(PAHRSH-vuh ku-ku TAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Modification: crown of the head on the floor
Pose Type: inversion, forward bend, twist

Drishti Point: Nasagrai or Nasagre (nose)

HEADSTAND 5 ARM POSITION: VARIOUS ARM POSITIONS BASED ON HEADSTAND 5 & VARIOUS LEG POSITIONS

Baby Cradle Pose in Headstand 5

Hindolasana in Shirshasana 5

(hin-do-LAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Modification: Side 1: ankle to the inside of the elbow joint of the opposite arm, knee bent to the inside of the same arm, toes touching the floor.
Side 2: other knee bent to the side, heel toward the sitting bone

Pose Type: inversion, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

Baby Cradle Pose in Headstand 5

Hindolasana in Shirshasana 5

(hin-do-LAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Modification: Side 1: arm bent at 90 degrees, fingertips to the floor, knee to the elbow on the same side.
Side 2: arm bent at 90 degrees, palm flat on the floor, ankle to the inside of the elbow joint, toes lifted off the floor
Pose Type: inversion, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Extended Hand to Big Toe Pose in One Hand Headstand 5

Utthita Hasta Padangushtasana in Eka Hasta Shirshasana 5

(UT-ti-tuh HUH-stuh puhd-ahng-goosh-TAHS-uh-nuh in EY-kuh HUH-stuh sheer-SHAHS-uh-nuh)

Modification: Side 1: arm and leg straight out, grabbing onto the big toe.
Side 2: arm bent 90 degrees, knee resting on the tricep on the same side
Pose Type: inversion, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Hastagrai or Hastagre (hands)

One-Legged Crane Pose 1 in One Hand Headstand 5

Eka Pada Bakasana 1 in Eka Hasta Shirshasana 5

(EY-kuh PUH-duh buh-KAHS-uh-nuh in EY-kuh HUH-stuh sheer-SHAHS-uh-nuh)

Modification: Side 1: arm and leg straight out.
Side 2: arm bent 90 degrees, knee resting on the tricep on the same side
Pose Type: inversion, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Hastagrai or Hastagre (hands)

HEADSTAND 6 ARM POSITION: VARIOUS ARM POSITIONS BASED OFF HEADSTAND 6 & VARIOUS LEG POSITIONS

Extended Hand to Big Toe Pose in Uneven Headstand (Fusion of Headstand 5 and Headstand 6 Arm Position)

Utthita Hasta Padangushtasana in Vishama Shirshasana 5 & 6

(UT-ti-tuh HUH-stuh puhd-ahng-goosh-TAHS-uh-nuh in VISH-uh-muh sheer-SHAHS-uh-nuh)

Modification: Side 1: arm and leg straight out, grabbing onto the big toe
Side 2: arm bent 90 degrees, knee bent to the tricep on the same side
Pose Type: inversion, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet), Hastagrai or Hastagre (hands)

Crane Pose in Uneven Headstand (Fusion of Headstand 5 and Headstand 6 Arm Position)

Bakasana in Vishama Shirshasana 5 & 6

(buh-KAHS-uh-nuh in VISH-uh-muh sheer-SHAHS-uh-nuh)

Modification: Side 1: arm straight out, fingertips to the floor, knee to the tricep.
Side 2: arm bent 90 degrees, knee bent to the tricep on the same side

Pose Type: inversion, forward bend

Drishti Point: Hastagrai or Hastagre (hands)

Headstand 6

Shirshasana 6

(sheer-SHAHS-uh-nuh)

Also Known As: Hands Free Headstand (Mukta Hasta Shirshasana)

Pose Type: inversion

Drishti Point: Nasagrai or Nasagre (nose), Hastagrai or Hastagre (hands)

Upward Staff Pose in Headstand 6

Urdhva Dandasana in Shirshasana 6

(OORD-vuh duhn-DAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Modification: on the fingertips
Pose Type: inversion, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Hastagrai or Hastagre (hands)

HEADSTAND 7 ARM POSITION: VARIOUS ARM POSITIONS BASED OFF HEADSTAND 7 & VARIOUS LEG POSITIONS

Headstand 7A

Shirshasana 7A

(sheer-SHAHS-uh-nuh)

Also Known As: Spread Hands Headstand (Prasarita Hasta Shirshasana), Hands Free Headstand C (Mukta Hasta Shirshasana C)
Pose Type: inversion
Drishti Point: Nasagrai or Nasagre (nose)

Bound Angle Pose in Headstand 7B

Baddha Konasana in Shirshasana 7B

(BUH-duh ko-NAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Also Known As: Bound Angle Pose in Free Hands Headstand (Baddha Konasana in Mukta Hasta Shirshasana)

Pose Type: inversion

Drishti Point: Nasagrai or Nasagre (nose)

Leg Position of the Pose Dedicated to Garuda in Uneven Headstand (Fusion of Headstand 5 and Headstand 7 Arm Positions)

Pada Garudasana in Vishama Shirshasana 5 & 7A

(PUH-duh guh-ru-DAHS-uh-nuh in VISH-uh-muh sheer-SHAHS-uh-nuh)

Pose Type: inversion

Drishti Point: Nasagrai or Nasagre (nose)

Upward Lotus Pose in Headstand 7B

Urdhva Padmasana in Shirshasana 7B

(OORD-vuh puhd-MAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Also Known As: Supported Lotus Headstand Pose (Salamba Padma Shirshasana), Upward Lotus Pose in Spread Hands Headstand (Urdhva Padmasana in Prasarita Hasta Shirshasana), Upward Lotus in Hands Free Headstand (Urdhva Padmasana in Mukta Hasta Shirshasana)

Modification: 1. neutral spine

2. backbend

Pose Type: 1. inversion

2. inversion, backbend

Drishti Point: Nasagrai or Nasagre (nose)

HEADSTAND 8 & 5 ARM POSITIONS: LEG STRAIGHT OUT TO THE SIDE

Leg to the Side Revolved Uneven Headstand (Fusion of Headstand 5 and Headstand 8 Arm Positions)

Parshva Pada Parivritta Vishama Shirshasana 5 & 8

(PAHRSH-vuh PUH-duh puh-ri-VRIT-tuh VISH-uh-muh sheer-SHAHS-uh-nuh)

Modification: Side 1: arm bent at 90 degrees, palm flat on the floor, knee resting on the opposite elbow

Side 2: arm bent at 90 degrees, fingertips to the floor, leg straight out to the side

Pose Type: inversion, forward bend, twist
Drishti Point: Hastagrai or Hastagre (hands)

Leg to the Side One Hand Headstand 5

Parshva Pada Eka Hasta Shirshasana 5

(PAHRSH-vuh PUH-duh EY-kuh HUH-stuh sheer-SHAHS-uh-nuh)

Modification: Side 1: arm bent at 90 degrees, palm flat on the floor, knee resting on the same elbow
Side 2: arm straight, grabbing onto the shin of the leg, leg straight out to the side
Pose Type: inversion, forward bend
Drishti Point: Nasagrai or Nasagre (nose)

Leg to the Side Revolved One Hand Headstand 5

Parshva Pada Parivritta Eka Hasta Shirshasana 5

(PAHRSH-vuh PUH-duh puh-ri-VRIT-tuh EY-kuh HUH-stuh sheer-SHAHS-uh-nuh)

Modification: Side 1: arm bent at 90 degrees, palm flat to the floor, leg straight out to the side
Side 2: arm straight up to the sky, knee resting on the opposite tricep
Pose Type: inversion, forward bend, twist

Drishti Point: Hastagrai or Hastagre (hands), Nasagrai or Nasagre (nose)

Leg to the Side Revolved One Hand Headstand 8

Parshva Pada Parivritta Eka Hasta Shirshasana 8

(PAHRSH-vuh PUH-duh puh-ri-VRIT-tuh EY-kuh HUH-stuh sheer-SHAHS-uh-nuh)

Modification: Side 1: arm bent at 90 degrees, fingertips to the floor, leg straight out to the side
Side 2: arm straight out to the side, knee resting on the opposite tricep

Pose Type: inversion, forward bend, twist

Drishti Point: Hastagrai or Hastagre (hands), Nasagrai or Nasagre (nose)

HEADSTAND 8 ARM POSITION: VARIOUS LEG POSITIONS

Feet Spread Intense Stretch Pose in Headstand 8

Prasarita Padottanasana in Shirshasana 8

(pruh-SAH-ri-tuh puh-do-tahn-AHS-uh-nuh in sheer-SHAHS-uh-nuh)

Also Known As: Feet Spread Full Forward Bend in Headstand 8

Modification: fingertips on the floor

Pose Type: inversion, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Hastagrai or Hastagre (hands)

Revolved Leg Position of One-Legged King Pigeon 1 Version B in Headstand 8

Parivritta Pada Eka Pada Raja Kapotasana 1 B in Shirshasana 8

(puh-ri-VRIT-tuh PUH-duh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh in sheer-SHAHS-uh-nuh)
Modification: palms flat on the floor
Pose Type: inversion, forward bend, twist
Drishti Point: Nasagrai or Nasagre (nose), Hastagrai or Hastagre (hands)

Headstand 8

Shirshasana 8

(sheer-SHAHS-uh-nuh)
Modification: knees resting on the triceps, ankles crossed
1. hands apart, elbows touching, fingertips to the floor
2. hands together, elbows together, palms flat on the floor

Pose Type: inversion, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Hastagrai or Hastagre (hands)

HEADSTAND 2 ARM POSITION: LOTUS

Upward Lotus Pose in Headstand 2

Urdhva Padmasana in Shirshasana 2

(OORD-vuh puhd-MAHS-uh-nuh in sheer-SHAHS-uh-nuh)

Also Known As: Upward Lotus in Hands Bound Headstand (Urdhva Padmasana in Baddha Hasta Shirshasana)
Pose Type: inversion
Drishti Point: Nasagrai or Nasagre (nose)

[SHOULDERSTAND: BOTH LEGS STRAIGHT—DIFFERENT ARM POSITIONS]

Inverted Pose Dedicated to Mythological Khimi Karani Pond

Viparita Khimi Karanyasana

(vi-puh-REE-tuh kuh-HEE-mee kuh-ruh-NEE-uhs-uh-nuh)

Also Known As: Inverted Lake Seal (Viparita Karani Mudra), Half Whole Body Pose (Ardha Sarvangasana)

Pose Type: inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Supported Whole Body Pose

Salamba Sarvangasana

(SAH-luhm-buh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Shoulderstand

Pose Type: inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Hands Bound Supported Whole Body Pose

Baddha Hasta Salamba Sarvangasana

(BUH-duh HUH-stuh SAH-luhm-buh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Shoulderstand
Pose Type: inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Unsupported Whole Body Pose

Niralamba Sarvangasana

(nir-AH-luhm-buh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Shoulderstand
Pose Type: inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nabhi, Nabhicakre, or Nabi Chakra (belly button)

SHOULDERSTAND: ONE LEG UP, ONE LEG DOWN

Leg Contraction Pose in Supported Whole Body Pose

Pada Akunchanasana in Salamba Sarvangasana

(PUH-duh uh-kunch-AHS-uh-nuh in SAH-luhm-buh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Shoulderstand
Modification: one knee bent toward the forehead
Pose Type: inversion, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Supported Whole Body Pose

Eka Pada Salamba Sarvangasana

(EY-kuh PUH-duh SAH-luhm-buh suhr-vuhng-GAHS-uh-nuh)

Also Known As: One-Legged Plow Pose (Eka Pada Halasana), Shoulderstand
Pose Type: inversion, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Sideways Supported Whole Body Pose

Parshva Eka Pada Salamba Sarvangasana

(PAHRSH-vuh EY-kuh PUH-duh SAH-luhm-buh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Shoulderstand
Pose Type: inversion, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

SHOULDERSTAND: ONE LEG UP, ONE LEG DOWN—DIFFERENT ARM POSITIONS

One-Legged Unsupported Whole Body Pose

Eka Pada Niralamba Sarvangasana

(EY-kuh PUH-duh nir-AH-luhm-buh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Shoulderstand
Modification: both hands to the calf of the bottom leg
Pose Type: inversion, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Extended Hand to Big Toe Pose in Unsupported Whole Body Pose

Utthita Hasta Padangushtasana in Niralamba Sarvangasana

(UT-ti-tuh HUH-stuh puhd-ahng-goosh-tahn-AHS-uh-nuh in nir-AH-luhm-buh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Shoulderstand
Pose Type: inversion, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Unsupported Whole Body Pose

Eka Pada Niralamba Sarvangasana

(EY-kuh PUH-duh nir-AH-luhm-buh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Shoulderstand
Modification: both arms along the sides of the torso
Pose Type: inversion, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Bound Inverted Tortoise Pose

Ardha Baddha Viparita Kurmasana

(UHR-duh BUH-duh vi-puh-REE-tuh koor-MAHS-uh-nuh)

Pose Type: inversion, forward bend, binding

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

SHOULDERSTAND: GARUDA LEGS

Leg Position of the Pose Dedicated to Garuda in Hands Bound Supported Whole Body Pose

Pada Garudasana in Baddha Hasta Salamba Sarvangasana

(PUH-duh guh-ru-DAHS-uh-nuh in BUH-duh HUH-stuh SAH-luhm-buh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Shoulderstand

Modification: knees toward the forehead

Pose Type: inversion, forward bend

Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Leg Position of the Pose Dedicated to Garuda in Hands Bound Supported Whole Body Pose

Pada Garudasana in Baddha Hasta Salamba Sarvangasana

(PUH-duh guh-ru-DAHS-uh-nuh in BUH-duh HUH-stuh SAH-luhm-buh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Shoulderstand
Modification: legs extended toward the sky
Pose Type: inversion, forward bend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Leg Position of the Pose Dedicated to Garuda in Supported Whole Body Pose

Pada Garudasana in Salamba Sarvangasana

(PUH-duh guh-ru-DAHS-uh-nuh in SAH-luhm-buh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Shoulderstand
Pose Type: inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

SHOULDERSTAND: BOUND ANGLE & LOTUS

Bound Angle Pose in Whole Body Pose

Baddha Konasana in Sarvangasana

(BUH-duh ko-NAHS-uh-nuh in suhr-vuhng-GAHS-uh-nuh)

Also Known As: Shoulderstand
Pose Type: inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Upward Lotus in Whole Body Pose

Urdhva Padmasana in Salamba Sarvangasana

(OORD-vuh puhd-MAHS-uh-nuh in SAH-luhm-buh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Shoulderstand
Pose Type: inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Upward Lotus in Whole Body Pose

Urdhva Padmasana in Salamba Sarvangasana

(OORD-vuh puhd-MAHS-uh-nuh in SAH-luhm-buh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Shoulderstand
Modification: arms straight to the back, palms on the floor
Pose Type: inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Upward Lotus in Unsupported Whole Body Pose

Urdhva Padmasana in Niralamba Sarvangasana

(OORD-vuh puhd-MAHS-uh-nuh in nir-AH-luhm-buh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Shoulderstand
Pose Type: inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Inverted Ear Pressure Raised Up Lotus Pose

Viparita Karnapida Urdhva Padmasana

(vi-puh-REE-tuh kuhr-nah-PEED-uh OORD-vuh puhd-MAHS-uh-nuh)

Pose Type: inversion
Drishti Point: Nasagrai or Nasagre (nose)

SHOULDERSTAND: LOTUS—BACKBEND & FORWARD BEND

Intense Lotus Peacock Prep.

Uttana Padma Mayurasana Prep.

(ut-TAHN-uh PUHD-muh muh-yoor-AHS-uh-nuh)

Also Known As: Intense Front Body Stretching and Rejuvenating Lotus Pose (Purvottana Padma Sarvangasana)
Modification: knees off the floor, fists to the lower back
Pose Type: inversion, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Upward Lotus Pose in Whole Body Pose

Urdhva Padmasana in Sarvangasana

(OORD-vuh puhd-MAHS-uh-nuh in suhr-vuhng-GAHS-uh-nuh)

Also Known As: Shoulderstand
Modification: 1. thighs parallel to the floor, elbows bent
2. arms straight
Pose Type: inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Embryo Pose in Whole Body Pose

Pindasana in Sarvangasana

(pin-DAHS-uh-nuh in suhr-vuhng-GAHS-uh-nuh)

Also Known As: Inverted Embryo Pose (Viparita Pindasana), Embryo Pose in Plow Pose (Pindasana in Halasana), Shoulderstand

Pose Type: inversion, forward bend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

SHOULDERSTAND: LOTUS—KNEES ON THE FLOOR

Lotus Pose in Plow Pose

Padmasana in Halasana

(puhd-MAHS-uh-nuh in hul-AHS-uh-nuh)

Pose Type: inversion, forward bend

Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

Sideways Embryo Pose in Whole Body Pose

Parshva Pindasana in Sarvangasana

(PAHRSH-vuh pin-DAHS-uh-nuh in suhr-vuhng-GAHS-uh-nuh)

Also Known As: Side Embryo Pose (Parshva Pindasana), Embryo Pose in Plow Pose (Pindasana in Halasana), Shoulderstand

Pose Type: inversion, forward bend, twist

Drishti Point: Nasagrai or Nasagre (nose)

SHOULDERSTAND: EAR PRESSURE POSE—FEET ON THE FLOOR

Inverted Tortoise Pose

Viparita Kurmasana

(vi-puh-REE-tuh koor-MAHS-uh-nuh)

Modification: 1. grabbing onto the feet

2. palms to the floor, fingertips facing to the back

Pose Type: inversion, forward bend

Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

Bound Inverted Tortoise Pose

Baddha Viparita Kurmasana

(BUH-duh vi-puh-REE-tuh koor-MAHS-uh-nuh)

Pose Type: inversion, forward bend, binding
Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

SHOULDERSTAND: EAR PRESSURE POSE—FEET OFF THE FLOOR

Ear Pressure Pose Prep.

Karnapidasana Prep.

(kuhr-nah-pee-DAHS-uh-nuh)

Modification: knees to the temples, palms to the lower back
Pose Type: inversion, forward bend
Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

Ear Pressure Pose Prep.

Karnapidasana Prep.

(kuhr-nah-pee-DAHS-uh-nuh)

Modification: one hand to the lower back; other arm up over the head, elbow bent, fingertips to the floor; both knees bent, one knee to the elbow of the front arm, heel of the other foot toward the sitting bone

Pose Type: inversion, forward bend

Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

Ear Pressure Pose

Karnapidasana

(kuhr-nah-pee-DAHS-uh-nuh)

Modification: both knees bent, feet off the floor; arms straight behind the back and off the floor, palms up

Pose Type: inversion, forward bend, balance

Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

SHOULDERSTAND: EAR PRESSURE POSE—HEELS TO THE SITTING BONES, GRABBING ONTO THE SHINS

Ear Pressure Pose

Karnapidasana

(kuhr-nah-pee-DAHS-uh-nuh)

Modification: both heels to the sitting bones, grabbing onto the ankles, elbows bent
Pose Type: inversion, forward bend
Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

SHOULDERSTAND: EAR PRESSURE POSE—KNEES ON THE FLOOR—DIFFERENT ARM POSITIONS

Ear Pressure Pose

Karnapidasana

(kuhr-nah-pee-DAHS-uh-nuh)

Modification: palms to the lower back
Pose Type: inversion, forward bend
Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

Sideways Ear Pressure Pose

Parshva Karnapidasana

(PAHRSH-vuh kuhr-nah-pee-DAHS-uh-nuh)

Also Known As: Side Contraction Pose (Parshva Akunchanasana)
Modification: palms to the lower back
Pose Type: inversion, forward bend, twist
Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

Hands Bound Ear Pressure Pose

Baddha Hasta Karnapidasana

(BUH-duh HUH-stuh kuhr-nah-pee-DAHS-uh-nuh)

Modification: fingers interlocked
Pose Type: inversion, forward bend
Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

Shivalinga Pose

Lingasana

(ling-GAHS-uh-nuh)

Also Known As: Ear Pressure Pose (Karnapidasana)
Pose Type: inversion, forward bend
Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

Bound Hands Shivalinga Pose

Baddha Hasta Lingasana

(BUH-duh HUH-stuh ling-GAHS-uh-nuh)

Also Known As: Ear Pressure Pose (Karna Pidasana)
Pose Type: inversion, forward bend
Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

Ear Pressure Pose

Karnapidasana

(kuhr-nah-pee-DAHS-uh-nuh)

Modification: grabbing onto the heels
Pose Type: inversion, forward bend
Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

PLOW POSE: LEGS STRAIGHT AND TOGETHER—DIFFERENT ARM POSITIONS

Plow Pose

Halasana

(huh-LAHS-uh-nuh)

Modification: palms to the lower back, toes pointed to the front
Pose Type: inversion, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Plow Pose

Halasana

(huh-LAHS-uh-nuh)

Modification: fingers to the toes, palms up
Pose Type: inversion, forward bend
Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

Plow Pose

Halasana

(huh-LAHS-uh-nuh)

Modification: arms straight to the back, palms on the floor
Pose Type: inversion, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bound Hands Plow Pose

Baddha Hasta Halasana

(BUH-duh HUH-stuh huh-LAHS-uh-nuh)

Pose Type: inversion, forward bend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

PLOW POSE: LEGS TO THE SIDE & LEGS WIDE APART

Sideways Plow Pose

Parshva Halasana

(PAHRSH-vuh huh-LAHS-uh-nuh)

Modification: palms to the lower back

Pose Type: inversion, forward bend, twist

Drishti Point: Nabhi, Nabhicakre, or Nabi Chakra (belly button)

Hands Bound Feet Spread Wide Intense Stretch Pose in Plow Pose

Baddha Hasta Prasarita Padottanasana in Halasana

(BUH-duh HUH-stuh pruh-SAH-ri-tuh puh-do-tahn-AHS-uh-nuh in huh-LAHS-uh-nuh)

Also Known As: Hands Bound Feet Spread Wide Full Forward Bend in Plow Pose
Pose Type: inversion, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

PLOW POSE: ONE LEG STRAIGHT, ONE LEG BENT

One-Legged Elbow to Knee Plow Pose

Eka Pada Kurpara Janu Halasana

(EY-kuh PUH-duh kuhr-PAH-ruh JAH-nu hul-AHS-uh-nuh)

Modification: one hand to the lower back; other arm up over the head, elbow bent, fingertips to the floor; knees together, one leg straight; knee to the elbow, other knee bent, heel to the sitting bone
Pose Type: inversion, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclined Upward Foot Thunderbolt Pose

Supta Urdhva Pada Vajrasana

(SUP-tuh OORD-vuh PUH-duh vuhj-RAHS-uh-nuh)

Also Known As: Half Bound Lotus Pose in Whole Body Pose (Ardha Baddha Padmasana in Sarvangasana), Shoulderstand

Modification: 1. front side view

2. back side view

Pose Type: inversion, forward bend, binding

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Prone Poses

STOMACH ON THE FLOOR
CHEST FACING THE FLOOR
LOCUST POSE
SPHINX POSE
COBRA POSE
KING PIGEON POSE
UPWARD DOG POSE
COBRA POSE 2
BOW POSE
HALF LOTUS AND LOTUS BACKBENDS
SAGE GHERANDA'S POSE
BACKBENDS
CHIN AND CHEST ON THE FLOOR
CHEST AND KNEES ON THE FLOOR

Pose Dedicated to Makara—Prone Modification

Makarasana

(muh-kuh-RAHS-uh-nuh)

Also Known As: Crocodile Pose
Modification: whole body flat on the floor; arms straight out in front, palms together
Pose Type: prone
Drishti Point: Nasagrai or Nasagre (nose)

Side Corpse Pose

Parshva Shavasana

(PAHRSH-vuh shuh-VAHS-uh-nuh)

Pose Type: prone
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Downward Facing One Leg to the Side Pose

Adho Mukha Parshva Eka Padasana

(uh-DO MUK-uh PAHRSH-vuh EY-kuh puh-DAHS-uh-nuh)

Pose Type: prone

Drishti Point: Nasagrai or Nasagre (nose)

STOMACH ON THE FLOOR: ONE LEG STRAIGHT, ONE KNEE BENT—FOOT TO THE FLOOR ON THE SIDE

Intense Stretch Slithering Lizard Lunge Pose

Utthana Sarpa Godhasana

(ut-TAHN-uh SUHR-puh go-DAHS-uh-nuh)

Also Known As: Extended Lizard Tail Lunge Pose (Uttana Pristhasana)

Modification: foot to the elbow crease

Pose Type: prone

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Intense Stretch Slithering Lizard Lunge Pose

Utthan Sarpa Godhasana

(ut-TAHN-uh SUHR-puh go-DAHS-uh-nuh)

Also Known As: Extended Lizard Tail Lunge Pose (Uttana Pristhasana)
Modification: foot to the outside of the rib cage, arm binds around the leg
Pose Type: prone
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

STOMACH ON THE FLOOR: FROG POSE & LOTUS POSE

Frog Pose

Mandukasana

(muhn-doo-KAHS-uh-nuh)

Also Known As: Thavaliasana
Pose Type: prone
Drishti Point: Nasagrai or Nasagre (nose)

Lotus Staff Surrender Salutation Pose

Padma Danda Namaskarasana

(PUHD-muh DUHN-duh nuh-muhs-kahr-AHS-uh-nuh)

Modification: arms straight in front, palms down to the floor
Pose Type: prone
Drishti Point: Nasagrai or Nasagre (nose)

Hidden Lotus Pose

Gupta Padmasana

(GUP-tuh puhd-MAHS-uh-nuh)

Pose Type: prone, mild backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

CHEST FACING THE FLOOR: TWISTS

Downward Facing Twisted Stomach Pose

Adho Mukha Jatara Parivartanasana

(uh-DO MUK-uh JAHT-uh-ruh puh-ri-vuhr-tuh-NAHS-uh-nuh)

Modification: knees together, legs bent

Pose Type: prone, twist

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Downward Facing Twisted Stomach Pose

Adho Mukha Jatara Parivartanasana

(uh-DO MUK-uh JAHT-uh-ruh puh-ri-vuhr-tuh-NAHS-uh-nuh)

Modification: top leg straight, bottom knee bent

Pose Type: prone, twist

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Downward Facing Twisted Stomach Pose

Adho Mukha Jatara Parivartanasana

(uh-DO MUK-uh JAHT-uh-ruh puh-ri-vuhr-tuh-NAHS-uh-nuh)

Modification: legs straight

Pose Type: prone, twist

Drishti Point: Nasagrai or Nasagre (nose)

Pose Dedicated to St. Brighid of Kildare

Brighidasana

(bree-gid-AHS-uh-nuh)

Modification: bottom leg crossed under, looking straight ahead
Pose Type: prone, twist
Drishti Point: Nasagrai or Nasagre (nose)

CHEST FACING THE FLOOR: TWISTS—LEGS TO THE SIDE

Pose Dedicated to Sage Koundinya One-Legged Version 1—Prone Modification

Eka Pada Koundinyasana 1

(EY-kuh PUH-duh kown-din-YAHS-uh-nuh)

Modification: one arm straight to the side, bottom knee bent

Pose Type: arm balance, forward bend, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Pose Dedicated to Ashtavakra—Prone Modification

Ashtavakrasana

(uh-shtuh-vuh-KRAHS-uh-nuh)
Also Known As: Eight Angle Pose—Prone Modification
Modification: legs unhooked, bottom knee wrapped around the opposite forearm, top leg straight
Pose Type: arm balance, forward bend, twist
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Pose Dedicated to Ashtavakra—Prone Modification

Ashtavakrasana

(uh-shtuh-vuh-KRAHS-uh-nuh)
Also Known As: Eight Angle Pose—Prone Modification
Pose Type: arm balance, forward bend, twist
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

CHEST FACING THE FLOOR: TWIST & VERTICAL SPLITS

Svastika Legs in Downward Facing Twisted Stomach Pose

Pada Svastikasana in Adho Mukha Jatara Parivartanasana

(PUH-duh svuh-sti-KAHS-uh-nuh in uh-DO MUK-uh JAHT-uh-ruh puh-ri-vuhr-tuh-NAHS-uh-nuh)

Modification: one arm straight out in front, palm down to the floor; other elbow bent, temple resting on the forearm of the bent arm

Pose Type: prone, twist

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Downward Facing Pose Dedicated to Trivikrama—Prone Modification

Adho Mukha Trivikramasana

(uh-DO MUK-uh tri-vi-kruhm-AHS-uh-nuh)

Pose Type: prone

Drishti Point: Hastagrai or Hastagre (hands)

Bound Downward Facing Pose Dedicated to Trivikrama—Prone Modification

Baddha Adho Mukha Trivikramasana

(BUH-duh uh-DO MUK-uh tri-vi-kruhm-AHS-uh-nuh)

Modification: back leg bent—toes pointing to the sky
Pose Type: prone, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

LOCUST POSE: LEGS ON THE FLOOR, ARMS BEHIND

Cobra Pose 1

Bhujangasana 1

(buj-uhng-GAHS-uh-nuh)

Modification: palms lifted off the floor, elbows bent
Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Locust Pose

Shalabhasana

(shuh-luh-BAHS-uh-nuh)

Modification: arms straight, palms facing up by the hips; feet on the floor
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

LOCUST POSE: LEGS AND CHEST OFF THE FLOOR—ARMS BEHIND ON THE FLOOR

Locust Pose

Shalabhasana

(shuh-luh-BAHS-uh-nuh)

Also Known As: Locust Pose B (Shalabhasana B)
Modification: palms to the floor by the bottom of the ribs, elbows bent at 90 degrees
Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Locust Pose

Shalabhasana

(shuh-luh-BAHS-uh-nuh)

Also Known As: Locust Pose A (Salabhasana A)
Modification: palms to the floor by the hips, arms straight, legs and chest lifted
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

LOCUST POSE: LEGS AND CHEST OFF THE FLOOR—ARMS BEHIND

Fingers to Head Reverse Prayer Locust Pose

Anguli Shirsha Viparita Namaskar Shalabhasana

(UHNG-goo-lee SHEER-shuh vi-puh-REE-tuh nuh-muhs-KAHR shuh-luh-BAHS-uh-nuh)

Also Known As: Back of the Body Prayer Fingers to Head Locust Pose (Paschima Namaskara Anguli Shirsha Shalabhasana)

Modification: feet on the floor
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Pose Dedicated to Makara

Makarasana

(muh-kuh-RAHS-uh-nuh)
Also Known As: Crocodile Pose
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Locust Pose

Shalabhasana

(shuh-luh-BAHS-uh-nuh)
Modification: arms open wide, fingertips pointing to the toes
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Hands Bound Locust Pose

Baddha Hasta Shalabhasana

(BUH-duh HUH-stuh shuh-luh-BAHS-uh-nuh)

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

LOCUST POSE: LEGS AND CHEST OFF THE FLOOR—ARMS IN FRONT

Locust Pose

Shalabhasana

(shuh-luh-BAHS-uh-nuh)

Also Known As: Crocodile Pose (Makarasana), Boat Pose (Navasana)

Modification: both arms straight in front, palms facing down

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows) or Angushtamadhye or Angushta Ma Dyai (thumbs)

Hand Position of the Pose Dedicated to Garuda in Locust Pose

Hasta Garudasana in Shalabhasana

(HUH-stuh guh-ru-DAHS-uh-nuh in shuh-luh-BAHS-uh-nuh)

Pose Type: prone, backbend

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Inverted Locust Pose

Viparita Shalabhasana

(vi-puh-REE-tuh shuh-luh-BAHS-uh-nuh)

Modification: chin to the floor, legs lifted

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

LOCUST POSE: ONE LEG

Half Locust Pose

Ardha Shalabhasana

(UHR-duh shuh-luh-BAHS-uh-nuh)

Modification: hands to the floor by the hips, palms facing up, arms straight
Pose Type: prone, backbend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Hand Position of the Pose Dedicated to Garuda in Half Locust Pose

Hasta Garudasana in Ardha Shalabhasana

(HUH-stuh guh-ruh-DAHS-uh-nuh in UHR-duh shuh-luh-BAHS-uh-nuh)

Pose Type: prone, backbend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Half Locust Pose

Ardha Shalabhasana

(UHR-duh shuh-luh-BAHS-uh-nuh)

Also Known As: Crocodile Pose (Makarasana)
Modification: one arm straight to the front—palm facing down, other hand to the floor by the hip—palm down
Pose Type: prone, backbend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

One-Legged Frog Pose in Locust Pose

Eka Pada Bhekasana in Shalabhasana

(EY-kuh PUH-duh bey-KAHS-uh-nuh in shuh-luh-BAHS-uh-nuh)

Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows) or Hastagrai or Hastagre (hands)

Mermaid Pose in Locust Pose

Naginyasana in Shalabhasana

(nuh-gin-YAHS-uh-nuh in shuh-luh-BAHS-uh-nuh)

Pose Type: prone, backbend, binding

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

SPHINX POSE: BOTH AND ONE LEG STRAIGHT

Supported Cobra Pose

Salamba Bhujangasana

(SAH-luhm-buh buj-uhng-GAHS-uh-nuh)

Also Known As: Sphinx Pose or Crocodile Pose (Makarasana)

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Frog Pose

Eka Pada Bhekasana

(EY-kuh PUH-duh bey-KAHS-uh-nuh)

Modification: open ankles modification, heel to the floor by the hip socket
Pose Type: prone, backbend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Leg Extended Uneven Supported Cobra Pose

Utthita Pada Vishama Salamba Bhujangasana

(UT-ti-tuh PUH-duh VISH-uh-muh SAH-luhm-buh buj-ung-GAHS-uh-nuh)

Also Known As: Uneven Sphinx Pose
Modification: 1. knee bent 2. leg straight
Pose Type: prone
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

SPHINX POSE: BOTH KNEES BENT

Supported Cobra Pose

Salamba Bhujangasana

(SAH-luhm-buh buj-uhng-GAHS-uh-nuh)

Also Known As: Sphinx Pose or Crocodile Pose (Makarasana)
Modification: knees bent
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Feet to the Head Supported Cobra Pose

Shirsha Pada Salamba Bhujangasana

(SHEER-shuh PUH-duh SAH-luhm-buh buj-uhng-GAHS-uh-nuh)

Also Known As: Feet to the Head Sphinx Pose
Modification: toes to the forehead
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Feet to the Face Supported Cobra Pose

Mukha Pada Salamba Bhujangasana

(MUK-uh PUH-duh SAH-luhm-buh buj-uhng-GAHS-uh-nuh)

Also Known As: Feet to the Face Sphinx Pose
Modification: heels to the forehead
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Padayoragrai or Padayoragre (toes/feet)

Downward Facing Bound Angle Pose

Adho Mukha Baddha Konasana

(uh-DO MUK-uh BUH-duh ko-NAHS-uh-nuh)

Modification: forearms to the floor

1. top view
2. side view

Pose Type: prone, backbend

Drishti Point: Nasagrai or Nasagre (nose)

Hidden Lotus Pose

Gupta Padmasana

(GUP-tuh puhd-MAHS-uh-nuh)

Modification: hands to the face on the elbows

Pose Type: prone, backbend

Drishti Point: Nasagrai or Nasagre (nose)

[COBRA POSE](#)

Cobra Pose

Bhujangasana

(buj-uhng-GAHS-uh-nuh)

Modification: palms on the floor, elbows bent

1. mild backbend
2. intense backbend

Pose Type: prone, backbend

Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Cobra Pose

Bhujangasana

(buj-uhng-GAHS-uh-nuh)

Modification: 1. elbows bent, fingertips to the floor 2. arms straight, palms to the floor
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Cobra Pose

Bhujangasana

(buj-uhng-GAHS-uh-nuh)

Modification: palms on the floor, arms straight, head to the glutes
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

[KING PIGEON POSE: HANDS TO THE FLOOR]

Half King Pigeon Pose

Ardha Raja Kapotasana

(UHR-duh RAH-juh kuh-po-TAHS-uh-nuh)

Modification: palms to the floor, one foot to the head
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged One Hand King Pigeon Pose

Eka Pada Eka Hasta Raja Kapotasana

(EY-kuh PUH-duh EY-kuh HUH-stuh RAH-juh kuh-po-TAHS-uh-nuh)

Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Hastagrai or Hastagre (hands)

King Pigeon Pose

Raja Kapotasana

(RAH-juh kuh-po-TAHS-uh-nuh)

Modification: palms to the floor, feet away from the head
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

King Pigeon Pose

Raja Kapotasana

(RAH-juh kuh-po-TAHS-uh-nuh)

Modification: head touching the glutes, knees bent, feet away from the head
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Padayoragrai or Padayoragre (toes/feet)

King Pigeon Pose

Raja Kapotasana

(RAH-juh kuh-po-TAHS-uh-nuh)

Modification: palms to the floor, feet to the head
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

King Pigeon Pose

Raja Kapotasana

(RAH-juh kuh-po-TAHS-uh-nuh)

Modification: palms to the floor, feet to the shoulders
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

King Pigeon Pose

Raja Kapotasana

(RAH-juh kuh-po-TAHS-uh-nuh)

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

How to Perform the Pose:

1. Begin by lying flat on your stomach with your legs straight out behind you. Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Exhale and bring your forearms to the floor with your shoulders on top of your elbows. Inhale, lengthen your neck, roll your shoulder blades down, and feel the backbend in your upper back.
3. On the next exhale, press strongly into your hands and straighten your arms. Walk your hands as close as you can toward you.
4. Exhale and bend both your knees, reaching your feet toward your head.
5. Inhale and shift your weight to your left hand. Exhale, bring your right arm behind you, and grab onto your right knee. On the next exhale, bring your left arm behind you and grab onto your left knee.
6. Exhale as you push through your chest, keeping the backbend in the upper back and pressing your feet to the crown of your head (Pose #1).
7. To deepen the pose, exhale and bring your feet to your shoulders (Pose #2).
8. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch.
9. Inhale as you release the pose, letting go of your knees. Bring your hands to the front and lower your chest and feet to the floor.

Modification: grabbing onto the knees
1. feet to the head
2. feet to the shoulders

raja = king, royal

kapota = pigeon

1.

2.

King Pigeon Pose Prep.

Raja Kapotasana Prep.

(RAH-juh kuh-po-TAHS-uh-nuh)

Modification: one hand to the floor, other hand grabbing onto the knee
Pose Type: prone, backbend
Drishti Point: Nasagrai or Nasagre (nose)

King Pigeon Pose Prep.

Raja Kapotasana Prep.

(RAH-juh kuh-po-TAHS-uh-nuh)

Modification: both hands grabbing onto the knees
1. looking straight ahead
2. head rolling back

Pose Type: prone, backbend
Drishti Point: 1. Nasagrai or Nasagre (nose)
2. Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Feet to the Back King Pigeon Pose

Pada Paschima Raja Kapotasana

(PUH-duh PUHSH-chi-muh RAH-juh kuh-po-TAHS-uh-nuh)

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

[UPWARD DOG POSE: BOTH LEGS STRAIGHT]

Upward Facing Dog Pose

Urdhva Mukha Shvanasana

(OORD-vuh MUK-uh shvuh-NAHS-uh-nuh)

Modification: toes pointed to the back, knees on the floor

1. looking straight ahead
2. head rolling back

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Upward Facing Dog Pose

Urdhva Mukha Shvanasana

(OORD-vuh MUK-uh shvuh-NAHS-uh-nuh)

Modification: toes pointed to the back, knees off the floor

1. looking straight ahead
2. head rolling back

Pose Type: prone, backbend

Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

UPWARD DOG POSE: BOTH LEGS STRAIGHT—ONE LEG, ONE ARM, & TO THE SIDE

Uneven One-Legged Upward Facing Dog Pose

Vishama Eka Pada Urdhva Mukha Shvanasana

(VISH-uh-muh EY-kuh PUH-duh OORD-vuh MUK-uh shvuh-NAHS-uh-nuh)

Modification: both toes pointed
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Sideways Upward Facing Dog Pose

Parshva Urdhva Mukha Shvanasana

(PAHRSH-vuh OORD-vuh MUK-uh shvuh-NAHS-uh-nuh)

Pose Type: prone, backbend, side bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One Hand Upward Facing Dog Pose

Eka Hasta Urdhva Mukha Shvanasana

(EY-kuh HUH-stuh OORD-vuh MUK-uh shvuh-NAHS-uh-nuh)

Modification: toes pointed to the back

1. knees on the floor
2. knees off the floor

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

UPWARD DOG POSE: TOES CURLED IN

Upward Facing Dog Pose

Urdhva Mukha Shvanasana

(OORD-vuh MUK-uh shvuh-NAHS-uh-nuh)

Modification: toes curled in
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Sideways One-Legged Upward Facing Dog Pose

Parshva Eka Pada Urdhva Mukha Shvanasana

(PAHRSH-vuh EY-kuh PUH-duh OORD-vuh MUK-uh shvuh-NAHS-uh-nuh)

Modification: toes curled in
Pose Type: prone, backbend, twist
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Upward Facing Dog Pose

Eka Pada Urdhva Mukha Shvanasana

(EY-kuh PUH-duh OORD-vuh MUK-uh shvuh-NAHS-uh-nuh)

Modification: toes of the straight leg curled in; knee of the other leg bent, toes pointing up to the sky
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Big Toe Bow Pose in One-Legged Upward Facing Dog Pose

Ardha Padangushta Dhanurasana in Eka Pada Urdhva Mukha Shvanasana

(UHR-duh puhd-ahng-GOOSH-tuh duh-nur-AHS-uh-nuh in EY-kuh PUH-duh OORD-vuh MUK-uh shvuh-NAHS-uh-nuh)

Modification: grabbing onto the foot with overhead grip on the same side
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

UPWARD DOG POSE: TOES CURLED IN—LEGS CROSSED

Upward Facing Dog Pose

Urdhva Mukha Shvanasana

(OORD-vuh MUK-uh shvuh-NAHS-uh-nuh)

Modification: toes curled in, ankles crossed

1. knees on the floor
2. knees off the floor, looking straight ahead
3. knees off the floor, head rolling back

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Upward Facing Dog Pose

Eka Pada Urdhva Mukha Shvanasana

(EY-kuh PUH-duh OORD-vuh MUK-uh shvuh-NAHS-uh-nuh)

Modification: toes curled in, foot of the bent leg to the inside of the knee of the straight leg
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

UPWARD DOG POSE: ONE LEG BENT

Uneven One-Legged Upward Facing Dog Pose

Vishama Eka Pada Urdhva Mukha Shvanasana

(VISH-uh-muh EY-kuh PUH-duh OORD-vuh MUK-uh shvuh-NAHS-uh-nuh)

Modification: Leg 1: knee bent and on the floor, toes pointed to the sky Leg 2: straight and off the floor, toes pointed away
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Bow Pose in One-Legged Upward Facing Dog Pose

Ardha Dhanurasana in Eka Pada Urdhva Mukha Shvanasana

(UHR-duh duh-nur-AHS-uh-nuh in EY-kuh PUH-duh OORD-vuh MUK-uh shvuh-NAHS-uh-nuh)

Modification: grabbing onto the opposite foot with under-head grip
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Bow Pose in One-Legged Upward Facing Dog Pose

Ardha Dhanurasana in Eka Pada Urdhva Mukha Shvanasana

(UHR-duh duh-nur-AHS-uh-nuh in EY-kuh PUH-duh OORD-vuh MUK-uh shvuh-NAHS-uh-nuh)

Modification: under-head grip on the same side
Pose Type: prone, backbend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Pose Dedicated to Siddhar Konganar in One-Legged Upward Facing Dog Pose

Ardha Konganarasana in Eka Pada Urdhva Mukha Shvanasana

(UHR-duh kong-guh-nuh-RAHS-uh-nuh in EY-kuh PUH-duh OORD-vuh MUK-uh shvuh-NAHS-uh-nuh)

Modification: grabbing onto the knee with under-head grip on the same side—foot to the armpit

Pose Type: prone, backbend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

COBRA POSE: UNDER-HEAD GRIP

Half King Pigeon Pose in One-Legged Big Toe Bow Pose

Ardha Raja Kapotasana in Eka Pada Padangushta Dhanurasana

(UHR-duh RAH-juh kuh-po-TAHS-uh-nuh in EY-kuh PUH-duh puhd-ahng-GOOSH-tuh duh-nur-AHS-uh-nuh)

Modification: Hand 1: grabbing onto the knee on the same side.
Hand 2: grabbing onto the big toe of the opposite foot with overhead grip
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Cobra Pose

Bhujangasana

(buj-uhng-GAHS-uh-nuh)

Also Known As: Supported Cobra Pose (Alamba Bhujangasana), King Pigeon Pose Prep. (Raja Kapotasana Prep.)
Modification: grabbing onto the knees with under-head grip
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

COBRA POSE: OVERHEAD GRIP

Upward Facing Unsupported Cobra Pose

Urdhva Mukha Niralamba Bhujangasana

(OORD-vuh MUK-uh nir-AH-luhm-buh buj-uhng-GAHS-uh-nuh)

Pose Type: prone, backbend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Unsupported Complete Cobra Pose

Niralamba Paripurna Bhujangasana

(nir-AH-luhm-buh puh-ri-POOR-nuh buj-uhng-GAHS-uh-nuh)

Pose Type: prone, backbend

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Complete Cobra Pose

Paripurna Bhujangasana

(puh-ri-POOR-nuh buj-uhng-GAHS-uh-nuh)

Modification: 1. grabbing onto the shins with overhead grip
2. grabbing onto the knees with overhead grip
3. grabbing onto the shins with overhead grip, toes curled in

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BOW POSE: UNDER-HEAD GRIP—BOTH KNEES BENT

Bow Pose

Dhanurasana

(duh-nur-AHS-uh-nuh)

Modification: hands grabbing onto the ankles
1. on the inside of the ankles
2. on the outside of the ankles

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bow Pose

Dhanurasana

(duh-nur-AHS-uh-nuh)

Modification: legs bent at 90 degrees; ankles and knees together, toes pointed to the sky
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bow Pose

Dhanurasana

(duh-nur-AHS-uh-nuh)

Modification: legs bent at 90 degrees; ankles and knees together, toes flexed away from the head
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Sideways Bow Pose

Parshva Dhanurasana

(PAHRSH-vuh duh-nur-AHS-uh-nuh)

Pose Type: supine, prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged

Pose Dedicated to Siddhar Konganar

Eka Pada Konganarasana

(EY-kuh PUH-duh kong-guh-nuh-RAHS-uh-nuh)

Pose Type: prone, backbend

Drishti Point: Nasagrai or Nasagre (nose) or Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

How to Perform the Pose:

1. Begin by lying flat on your stomach with your legs straight out behind you. Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Exhale and bring your forearms to the floor with your shoulders on top of your elbows. Inhale, lengthen your neck, roll your shoulder blades down, and feel the backbend in your upper back.
3. On the next exhale, press strongly into your hands and straighten your arms.
4. Exhale and bend both your knees, reaching your feet toward your head.
5. On the next exhale, reach your right hand behind you and grab onto your right shin. Keep sliding your right hand until your right foot reaches your right armpit and your right hand rests on your right knee.
6. Inhale and reach your left arm up and over your head. Exhale and grab onto your left foot with your left hand, keeping your left elbow close to your ear.
7. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch.
8. Inhale, let go of your legs one by one, and lower your chest and feet to the floor to come back to the starting position. Repeat on the opposite side.

eka = one

pada = foot or leg

Konganar = one of the Siddhars

Little Bow Pose

Laghu Dhanurasana

(LUH-gu duh-nur-AHS-uh-nuh)

Pose Type: prone, backbend

Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Feet to the Head Little Bow Pose

Shirsha Pada Laghu Dhanurasana

(SHEER-suh PUH-duh LUH-gu duh-nur-AHS-uh-nuh)

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Pose Dedicated to Siddhar Konganar

Konganarasana

(kong-guh-nuh-RAHS-uh-nuh)

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BOW POSE: OVERHEAD GRIP—BOTH KNEES BENT

One Hand Both Feet Big Toe Bow Pose

Eka Hasta Dwi Pada Padangushta Dhanurasana

(EY-kuh HUH-stuh DWI-puh-duh puhd-ahng-GOOSH-tuh duh-nur-AHS-uh-nuh)

Modification: grabbing onto the toes of both feet with one hand, other palm to the floor

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Big Toe Bow Pose

Padangushta Dhanurasana

(puhd-ahng-GOOSH-tuh duh-nur-AHS-uh-nuh)

Modification: head rolling back

Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Big Toe Bow Pose

Padangushta Dhanurasana

(puhd-ahng-GOOSH-tuh duh-nur-AHS-uh-nuh)

Modification: 1. feet to the face
2. heels to the forehead
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One Hand One-Legged Big Toe Bow Pose

Eka Hasta Eka Pada Padangushta Dhanurasana

(EY-kuh HUH-stuh EY-kuh PUH-duh puhd-ahng-GOOSH-tuh duh-nur-AHS-uh-nuh)

Modification: 1. one hand grabbing onto the foot on the opposite side with overhead grip
2. with backbend

Pose Type: prone, backbend

Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One Hand One-Legged Big Toe Bow Pose

Eka Hasta Eka Pada Padangushta Dhanurasana

(EY-kuh HUH-stuh PUH-duh puhd-ahng-GOOSH-tuh duh-nur-AHS-uh-nuh)

Modification: one hand grabbing onto the foot on the same side with overhead grip

Pose Type: prone, backbend

Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Both Hand One-Legged Big Toe Bow Pose

Dwi Hasta Eka Pada Padangushta Dhanurasana

(DWI-huh-stuh EY-kuh PUH-duh puhd-ahng-GOOSH-tuh duh-nur-AHS-uh-nuh)

Modification: both hands grabbing onto the foot with overhead grip
Pose Type: prone, backbend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BOW POSE: OVERHEAD GRIP—ONE KNEE BENT, ONE LEG STRAIGHT AND OFF THE FLOOR

Pose Dedicated to Goddess Kamala

Kamalasana

(kuh-muh-LAHS-uh-nuh)

Also Known As: Upward Facing One-Handed Big Toe Boat Pose (Urdhva Mukha Eka Hasta Padangushta Navasana)
Modification: 1: grabbing onto the ankle

2. foot to the shoulder
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BOW POSE: CRISS-CROSS LEGS AND ARMS

Revolved Bow Pose

Parivritta Dhanurasana

(puh-ri-VRIT-tuh duh-nur-AHS-uh-nuh)
Pose Type: prone, backbend, twist
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Padhayoragrai or Padayoragre (toes/feet)

Bow Pose

Dhanurasana

(duh-nur-AHS-uh-nuh)

Modification: legs crossed
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Big Toe Bow Pose

Padangushta Dhanurasana

(puhd-ahng-GOOSH-tuh duh-nur-AHS-uh-nuh)

Also Known As: Difficult Bow Pose (Dur Dhanurasana)
Modification: one hand grabbing opposite ankle with under-head grip, other hand grabbing the opposite foot with overhead grip
1. one knee on the floor
2. both knees off the floor

Pose Type: prone, backbend
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Big Toe Bow Pose

Padangushta Dhanurasana

(puhd-ahng-GOOSH-tuh duh-nur-AHS-uh-nuh)

Modification: one foot toward the shoulder
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

HALF LOTUS BACKBENDS

Half Lotus Frog Pose

Ardha Padma Bhekasana

(UHR-duh PUHD-muh bey-KAHS-uh-nuh)

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Lotus Bow Pose

Ardha Padma Dhanurasana

(UHR-duh PUHD-muh duh-nur-AHS-uh-nuh)

Modification: both hands grabbing onto the ankle with under-head grip

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Lotus One Hand One-Legged Big Toe Bow Pose

Ardha Padma Eka Hasta Eka Pada Padangushta Dhanurasana

(UHR-duh PUHD-muh EY-kuh HUH-stuh EY-kuh PUH-duh puhd-ahng-GOOSH-tuh duh-nur-AHS-uh-nuh)
Modification: grabbing onto the foot with overhead grip on the same side, other hand to the floor
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

LOTUS BACKBENDS

Lotus Cobra Pose

Padma Bhujangasana

(PUHD-muh buj-uhng-GAHS-uh-nuh)
Modification: both hands to the floor, hips off the floor, arms straight
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Lion Pose Dedicated to an Avatar of Lord Vishnu

Narasimhasana

(nuh-ruh-sim-HAHS-uh-nuh)

Also Known As: Lion Pose (Simhasana)
Modification: full lotus leg position
1. elbows bent, fingers in lion claw
2. arms straight, palms flat on the floor
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One Hand Lotus Cobra Pose

Eka Hasta Padma Bhujangasana

(EY-kuh HUH-stuh PUHD-muh buj-uhng-GAHS-uh-nuh)

Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Lotus Cobra Pose

Padma Bhujangasana

(PUHD-muh buj-uhng-GAHS-uh-nuh)

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

[SAGE GHERANDA'S POSE: UNDER-HEAD GRIP]

Revolved Pose Dedicated to Sage Gheranda 1

Parivritta Ardha Gherandasana 1

(puh-ri-VRIT-tuh UHR-duh gey-ruhn-DAHS-uh-nuh)

Pose Type: prone, backbend, twist

Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Half Pose Dedicated to Sage Gheranda 1

Ardha Gherandasana 1

(UHR-duh gey-ruhn-DAHS-uh-nuh)

Pose Type: prone, backbend

Drishti Point: Nasagrai or Nasagre (nose)

Pose Dedicated to Sage Gheranda 5B

Gherandasana 5 B

(gey-ruhn-DAHS-uh-nuh)

Modification: under-head grip, grabbing onto the ankle, elbow on the floor instead of the forearm

Pose Type: prone, backbend, twist

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Pose Dedicated to Sage Gheranda 1B

Gherandasana 1 B

(gey-ruhn-DAHS-uh-nuh)

Modification: under-head grip
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Pose Dedicated to Sage Gheranda 6

Gherandasana 6

(gey-ruhn-DAHS-uh-nuh)

Modification: under-head grip
Pose Type: prone, backbend, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

SAGE GHERANDA'S POSE: OVERHEAD GRIP

Pose Dedicated to Sage Gheranda 5

Gherandasana 5

(gey-ruhn-DAHS-uh-nuh)

Pose Type: prone, backbend, binding

Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Pose Dedicated to Sage Gheranda 1

Gherandasana 1

(gey-ruhn-DAHS-uh-nuh)

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Pose Dedicated to Sage Gheranda 2

Gherandasana 2

(gey-ruhn-DAHS-uh-nuh)

Pose Type: prone, backbend, binding

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Pose Dedicated to Sage Gheranda 3

Gherandasana 3

(gey-ruhn-DAHS-uh-nuh)

Pose Type: prone, backbend, binding

Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Pose Dedicated to Sage Gheranda 4

Gherandasana 4

(gey-ruhn-DAHS-uh-nuh)

Modification: 1. back view

2. front view

Pose Type: prone, backbend, binding, twist

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BACKBENDS: GARUDA LEGS: UNDER-HEAD GRIP

Twined Legs Cobra Pose

Parivitta Pada Bhujangasana

(puh-ri-VRIT-tuh PUH-duh buj-uhng-GAHS-uh-nuh)

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Supported Twined Legs Cobra Pose

Salamba Parivid Pada Bhujangasana

(SAH-luhm-buh PUH-ri-vid PUH-duh buj-uhng-GAHS-uh-nuh)

Also Known As: Supported Twined Legs Sphinx Pose

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Leg Position of the Pose Dedicated to Garuda in One Hand Bow Pose

Pada Garudasana in Eka Hasta Dhanurasana

(PUH-duh guh-ru-DAHS-uh-nuh in EY-kuh HUH-stuh duh-nur-AHS-uh-nuh)
Modification: one forearm to the floor, one hand to the ankle, under-head grip
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BACKBENDS: GARUDA LEGS: OVERHEAD GRIP

Leg Position of the Pose Dedicated to Garuda in One Hand Big Toe Bow Pose

Pada Garudasana in Eka Hasta Padangushta Dhanurasana

(PUH-duh guh-ru-DAHS-uh-nuh in EY-kuh HUH-stuh puhd-ahng-GOOSH-tuh duh-nur-AHS-uh-nuh)
Modification: forearm to the floor
1. grabbing onto the top foot
2. grabbing onto the bottom foot
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Unsupported Leg Position of the Pose Dedicated to Garuda in One Hand Big Toe Bow Pose

Niralamba Pada Garudasana in Eka Hasta Padangushta Dhanurasana

(nir-AH-luhm-buh puh-ri-vid-PUH-duh guh-ru-DAHS-uh-nuh in EY-kuh HUH-tuh puhd-ahng-GOOSH-tuh duh-nur-AHS-uh-nuh)

Also Known As: One Handed Twined Legs Bow Pose (Eka Hasta Parivid Pada Dhanurasana)
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Leg Position of the Pose Dedicated to Garuda in Big Toe Bow Pose

Pada Garudasana in Padangushta Dhanurasana

(PUH-duh guh-ru-DAHS-uh-nuh in puhd-ahng-GOOSH-tuh duh-nur-AHS-uh-nuh)

Also Known As: Difficult Bow Pose (Dur Dhanurasana)
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

CHIN ON THE FLOOR & EAR ON THE FLOOR

One-Legged Inverted Locust Pose

Eka Pada Viparita Shalabhasana

(EY-kuh PUH-duh vi-puh-REE-tuh shuh-luh-BAHS-uh-nuh)

Pose Type: prone, backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Ear Pressure Staff Formidable Face Pose

Karnapida Danda Ganda Bherundasana

(kuhr-nah-PEED-uh DUHN-duh GUHN-duh bey-run-DAHS-uh-nuh)

Pose Type: prone, backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

CHEST ON THE FLOOR: BOTH LEGS STRAIGHT

Inverted Locust Pose

Viparita Shalabhasana

(vi-puh-REE-tuh shuh-luh-BAHS-uh-nuh)

Modification: 1. chin to the floor
2. chest to the floor, chin lifted off the floor

Pose Type: prone, backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Formidable Face Staff Pose

Danda Ganda Bherundasana

(DUHN-duh GUHN-duh bey-run-DAHS-uh-nuh)

Also Known As: Intense Stretch Locust Pose A (Uttana Shalabhasana A)
Pose Type: prone, backbend, inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Inverted Locust Pose

Viparita Shalabhasana

(vi-puh-REE-tuh shuh-luh-BAHS-uh-nuh)

Also Known As: Raised Locust Pose—Urdhva Shalabhasana)
Modification: arms straight on the floor, palms down, chin lifted off the floor
Pose Type: prone, backbend, inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

CHEST ON THE FLOOR: BOTH FEET TO HEAD

Formidable Face Pose

Ganda Bherundasana

(GUHN-duh bey-run-DAHS-uh-nuh)

Also Known As: Full Locust Pose (Purna Shalabhasana), Intense Stretch Locust Pose B (Uttana Shalabhasana B)

Modification: fingers pointing to the front of the body, feet to the head, chest on the floor 1. side view 2. front view

Pose Type: prone, backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Formidable Face Pose

Ganda Bherundasana

(GUHN-duh bey-run-DAHS-uh-nuh)

Modification: fingers pointing to the back

1. knees apart
2. knees together, chin lifted off the floor

Pose Type: prone, backbend, inversion

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Inverted Locust Pose

Viparita Shalabhasana

(vi-puh-REE-tuh shuh-luh-BAHS-uh-nuh)

Also Known As: Full Locust Pose (Purna Shalabhasana)
Modification: arms straight on the floor, palms down; feet to the head
Pose Type: prone, backbend, inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Formidable Face Pose

Ganda Bherundasana

(GUHN-duh bey-run-DAHS-uh-nuh)

Modification: feet to the head, grabbing onto both feet, chin off the floor
Pose Type: prone, backbend, inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

CHIN ON THE FLOOR: FULL LOTUS

Inverted Lotus Peacock Pose

Viparita Padma Mayurasana

(vi-puh-REE-tuh PUHD-muh muh-yoor-AHS-uh-nuh)

Pose Type: prone, backbend, inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Inverted Locust Pose with Lotus Legs

Padma Viparita Shalabhasana

(PUHD-muh vi-puh-REE-tuh shuh-luh-BAHS-uh-nuh)

Pose Type: prone, backbend, inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

CHEST ON THE FLOOR: FEET TO THE FLOOR

Inverted Locust Pose

Viparita Shalabhasana

(vi-puh-REE-tuh shuh-luh-BAHS-uh-nuh)

Modification: arms straight on the floor, palms down; feet toward the floor over the head, legs bent
1. heels up
2. heels down

Pose Type: prone, backbend, inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Formidable Face Pose

Ganda Bherundasana

(GUHN-duh bey-run-DAHS-uh-nuh)

Modification: feet on the floor, grabbing onto both ankles, chin off the floor
Pose Type: prone, backbend, inversion
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

CHEST AND KNEES ON THE FLOOR: KNEES UNDER THE HIPS

Intense Extended Puppy Dog Pose

Uttana Shvanakasana

(ut-TAHN-uh shvuh-nuh-KAHS-uh-nuh)

Also Known As: Heart Pose (Anahatasana Modification), Extended Dog Pose (Utthita Shvanasana)
Modification: 1. palms down to the floor 2. grabbing onto the heels
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Intense Extended Puppy Dog Pose

Uttana Shvanakasana

(ut-TAHN-uh shvuh-nuh-KAHS-uh-nuh)

Also Known As: Prayer Heart Pose (Namaskar Anahatasana), Extended Dog Pose (Utthita Shvanasana)

Modification: thumbs to the upper back

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Water Grove Pose

Nirakunjasana

(neer-uh--kunj-AHS-uh-nuh)

Also Known As: Heart Pose (Anahatasana Modification)
Modification: arms in front, elbows bent; palms together; chin off the floor; heels toward the sitting bones
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Angushtamadhye or Angushta Ma Dyai (thumbs)

Hands Bound Water Grove Pose

Baddha Hasta Nirakunjasana

(BUH-duh HUH-stuh neer-uh-kunj-AHS-uh-nuh)

Also Known As: Heart Pose (Anahatasana Modification)
Modification: heels toward the sitting bones
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Pose Dedicated to Goddess Arani Prep.

Aranyasana Prep.

(uh-rah-NYAHS-uh-nuh)

Also Known As: Dragon Pose

Modification: 1. hands underneath the shoulders, elbows tucked in

2. arms reaching toward the knees, palms up

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Pose Dedicated to Goddess Arani

Aranyasana

(uh-rah-NYAHS-uh-nuh)

Also Known As: Dragon Pose

Modification: 1. grabbing onto the shins

2. grabbing onto the hamstrings

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

CHEST AND KNEES ON THE FLOOR: KNEES UNDER THE HIPS—HALF LOTUS

Intense Extended Puppy Dog Pose

Uttana Shvanakasana

(ut-TAHN-uh shvuh-nuh-KAHS-uh-nuh)

Also Known As: Heart Pose (Anahatasana Modification), Extended Dog Pose (Utthita Shvanasana)
Modification: arms extended to the front
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Angushtamadhye or Angushta Ma Dyai (thumbs)

Half Lotus Intense Extended Puppy Dog Pose

Ardha Padma Uttana Shvanakasana

(UHR-duh PUHD-muh ut-TAHN-uh shvuh-nuh-KAHS-uh-nuh)

Also Known As: Half Lotus Heart Pose (Ardha Padma Anahatasana), Half Lotus Extended Dog Pose (Ardha Padma Utthita Shvanasana)

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Angushtamadhye or Angushta Ma Dyai (thumbs)

Half Bound Lotus Intense Extended Puppy Dog Pose

Ardha Baddha Padma Uttana Shvanakasana

(UHR-duh BUH-duh PUHD-muh ut-TAHN-uh shvuh-nuh-KAHS-uh-nuh)

Also Known As: Half Bound Lotus Heart Pose (Ardha Baddha Padma Anahatasana), Half Bound Lotus Extended Dog Pose (Ardha Baddha Padma Utthita Shvanasana)

Pose Type: prone, backbend, binding

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Angushtamadhye or Angushta Ma Dyai (thumbs)

Lotus Intense Extended Puppy Dog Pose

Padma Uttana Shvanakasana

(PUHD-muh ut-TAHN-uh shvuh-nuh-KAHS-uh-nuh)

Also Known As: Lotus Heart Pose (Padma Anahatasana), Lotus Extended Dog Pose (Padma Utthita Shvanasana)

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Angushtamadhye or Angushta Ma Dyai (thumbs)

Upward Hands Bound Lotus Pose in Pose Dedicated to Goddess Arani

Urdhva Baddha Hasta Padmasana in Aranyasana

(OORD-vuh BUH-duh HUH-stuh puhd-MAHS-uh-nuh in uh-rah-NYAHS-uh-nuh)

Also Known As: Dragon Pose, Upward Bound Hand Lotus Heart Pose (Urdhva Baddha Hasta Padma Anahatasana)

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Feet Spread Wide Pose in Inverted Locust Pose

Prasarita Padottanasana in Viparita Shalabhasana

(pruh-SAH-ri-tuh puh-do-tahn-AHS-uh-nuh in vi-puh-REE-tuh shuh-luh-BAHS-uh-nuh)

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

CHEST AND KNEES ON THE FLOOR: KNEES BEHIND HIPS—ARMS IN FRONT AND BEHIND THE BACK

Water Grove Pose

Nirakunjasana

(neer-uh-kunj-AHS-uh-nuh)

Also Known As: Heart Pose (Anahatasana Modification)

Modification: arms straight and crossed in front

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Water Grove Pose

Nirakunjasana

(neer-uh-kunj-AHS-uh-nuh)

Also Known As: Heart Pose (Anahatasana Modification)
Modification: chin and feet on the floor
1. knees on the floor
2. knees off the floor
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Eight Limbs Pose

Ashtangasana

(uhsh-tahng-AHS-uh-nuh)

Also Known As: Eight Point Bow Pose (Ashtanga Namaskara)
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reverse Prayer Water Grove Pose

Viparita Namaskar Nirakunjasana

(vi-puh-REE-tuh nuh-muhs-KAHR neer-uh-kunj-AHS-uh-nuh)

Also Known As: Back of the Body Prayer Water Grove Pose (Paschima Namaskara Nirakunjasana), Heart Pose Modification
Modification: toes curled in
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Hands Bound Water Grove Pose

Baddha Hasta Nirakunjasana

(BUH-duh HUH-stuh neer-uh-kunj-AHS-uh-nuh)

Also Known As: Heart Pose (Anahatasana Modification)
Modification: 1. knees on the floor, toes pointed to the back
2. knees on the floor, toes curled in
3. knees off the floor
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

CHEST AND KNEES ON THE FLOOR: KNEES BEHIND HIPS—ONE LEG STRAIGHT AND LIFTED—ARMS BEHIND THE HEAD

One-Legged Water Grove Pose

Eka Pada Nirakunjasana

(EY-kuh PUH-duh neer-uh-kunj-AHS-uh-nuh)

Also Known As: Heart Pose (Anahatasana Modification)
Modification: 1. forearms on the floor, toes pointed
2. palms to the floor by the rib cage, elbows bent, toes curled in
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Hands Bound One-Legged Water Grove Pose

Baddha Hasta Eka Pada Nirakunjasana

(BUH-duh HUH-stuh EY-kuh PUHD-uh neer-uh-kunj-AHS-uh-nuh)

Also Known As: Heart Pose (Anahatasana Modification)
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reverse Prayer One-Legged Water Grove Pose

Viparita Namaskar Eka Pada Nirakunjasana

(vi-puh-REE-tuh nuh-muhs-KAHR EY-kuh PUH-duh neer-uh-kunj-AHS-uh-nuh)

Also Known As: Back of the Body Prayer One-Legged Water Grove Pose (Paschima Namaskara Eka Pada Nirakunjasana), Heart Pose

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

CHEST AND KNEES ON THE FLOOR: KNEES BEHIND HIPS—ONE LEG STRAIGHT AND LIFTED—BOTTOM KNEE BENT

One-Legged Inverted Locust Pose Prep.

Eka Pada Viparita Shalabhasana Prep.

(EY-kuh PUH-duh vi-puh-REE-tuh shuh-luh-BAHS-uh-nuh)

Modification: forearms on the floor, knee of straight leg resting on the foot of the bottom leg

Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Revolved One-Legged Inverted Locust Pose Prep.

Parivritta Eka Pada Viparita Shalabhasana Prep.

(puh-ri-VRIT-tuh EY-kuh PUH-duh vi-puh-REE-tuh shuh-luh-BAHS-uh-nuh)

Modification: bottom leg bent, top leg straight, top knee resting on the sole of the bottom foot
Pose Type: forward bend, twist
Drishti Point: 1. Urdhva or Antara Drishti (up to the sky)
2. Hastagrai or Hastagre (hands)

Upward Bound Hands One-Legged Inverted Locust Pose

Urdhva Baddha Hasta Eka Pada Viparita Shalabhasana

(OORD-vuh BUH-duh HUH-stuh EY-kuh PUH-duh vi-puh-REE-tuh shuh-luh-BAHS-uh-nuh)

Also Known As: Flying Locust Pose (Uddayate Shalabhasana)
Modification: 1. knee of the straight leg resting on the foot of the bottom leg
2. bottom foot away from the top leg
Pose Type: prone, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

CHEST AND KNEES ON THE FLOOR: KNEES BEHIND HIPS—BOTH LEGS BENT—ARMS IN FRONT

One-Legged Water Grove Pose

Eka Pada Nirakunjasana

(EY-kuh PUH-duh neer-uh-kunj-AHS-uh-nuh)

Also Known As: Heart Pose (Anahatasana Modification)
Modification: both knees bent; arms straight out in front, palms down
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Angushtamadhye or Angushta Ma Dyai (thumbs)

Half Bow Pose in One-Legged Water Grove Pose

Ardha Dhanurasana in Eka Pada Nirakunjasana

(IUHR-duh duh-nur-AHS-uh-nuh in EY-kuh PUH-duh neer-uh-kunj-AHS-uh-nuh)

Also Known As: Heart Pose (Anahatasana Modification)
Modification: 1. right front side view
2. right back side view
Pose Type: backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Angushtamadhye or Angushta Ma Dyai (thumbs)

One-Legged Water Grove Pose

Eka Pada Nirakunjasana

(EY-kuh PUH-duh neer-uh-kunj-AHS-uh-nuh)

Also Known As: Heart Pose (Anahatasana Modification)
Modification: both knees bent
1. arms straight to the back, palms down
2. arms lifted off the floor
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bow Pose in One-Legged Water Grove Pose

Dhanurasana in Eka Pada Nirakunjasana

(duh-nur-AHS-uh-nuh in EY-kuh PUH-duh neer-uh-kunj-AHS-uh-nuh)

Also Known As: Heart Pose (Anahatasana Modification)
Modification: both hands grabbing the top foot with under-head grip; the knee of the bottom leg on the floor, toes pointing to the sky
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Bow Pose in One-Legged Water Grove Pose

Ardha Dhanurasana in Eka Pada Nirakunjasana

(UHR-duh duh-nur-AHS-uh-nuh in EY-kuh PUH-duh neer-uh-kunj-AHS-uh-nuh)

Also Known As: Heart Pose (Anahatasana Modification)
Modification: grabbing onto the foot on the opposite side, under-head grip; other hand to the lower back, palm up
Pose Type: prone, backbend, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

CHEST AND KNEES ON THE FLOOR: KNEES BEHIND HIPS—BOTTOM KNEE BENT—OVERHEAD GRIP

Big Toe Bow Pose in One-Legged Water Grove Pose

Padangushta Dhanurasana in Eka Pada Nirakunjasana

(puhd-ahng-GOOSH-tuh duh-nur-AHS-uh-nuh in EY-kuh PUH-duh neer-uh-kunj-AHS-uh-nuh)

Also Known As: Heart Pose (Anahatasana Modification)
Pose Type: prone, backbend

Drishti Point: Padayoragrai or Padayoragre (toes/feet), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One Leg to the Head Water Grove Pose

Eka Pada Shirsha Nirakunjasana

(EY-kuh PUH-duh SHEER-shuh neer-uh-kunj-AHS-uh-nuh)

Also Known As: Heart Pose (Anahatasana Modification)
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

CHEST AND KNEES ON THE FLOOR: KNEES BEHIND HIPS—BOTTOM KNEE BENT—UNDER-HEAD & OVERHEAD GRIP

One-Legged Inverted Locust Pose

Eka Pada Viparita Shalabhasana

(EY-kuh PUH-duh vi-puh-REE-tuh shuh-luh-BAHS-uh-nuh)

Modification: one palm to the floor at the bottom of the ribs, other arm straight, palm down; both

knees bent, knee of the top leg resting on the foot of the bottom leg
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One Hand to Foot Inverted Locust Pose

Eka Hasta Pada Viparita Shalabhasana

(EY-kuh HUH-stuh PUH-duh vi-puh-REE-tuh shuh-luh-BAHS-uh-nuh)

Modification: grabbing onto the top foot with the opposite hand; other arm straight, palm down to the floor; both knees bent, knee of the top leg resting on the foot of the bottom leg
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Both Hands to One Foot Inverted Locust Pose

Dwi Hasta Eka Pada Viparita Shalabhasana

(DWI-huh-stuh EY-kuh PUH-duh vi-puh-REE-tuh shuh-luh-BAHS-uh-nuh)

Modification: both hands grabbing the top foot with under-head grip; top knee resting on the sole of the bottom foot

Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One Foot to the Shoulder Inverted Locust Pose

Eka Pada Bhuja Viparita Shalabhasana

(EY-kuh PUH-duh buj-uh vi-puh-REE-tuh shuh-luh-BAHS-uh-nuh)

Modification: grabbing onto the toes of the top foot; the quadriceps of the top leg resting on the sole of the bottom foot
Pose Type: prone, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Supine Poses

SHOULDER ON THE FLOOR
TRICEPS ON THE FLOOR
ELBOW ON THE FLOOR
FOREARM ON THE FLOOR
EASTERN INTENSE STRETCH
BRIDGE POSES
HEAD AND SITTING BONES ON THE FLOOR
BOUND ANGLE POSE
KNEES BENT
HAPPY BABY POSE
ONE AND BOTH FEET BEHIND HEAD
HORIZONTAL SPLITS
ONE KNEE BENT TO THE BACK (VARIATIONS)
VERTICAL SPLITS
BOTH LEGS STRAIGHT AND TOGETHER
SUPINE LOTUS AND CORPSE POSE

Sideways Wind Relieving Pose

Parshva Vayu Muktyasana

(PAHRSH-vuh VAH-yu muk-TYAHS-uh-nuh)

Modification: palms together in front of the face, knees together
Pose Type: supine (on the side)
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Arms Raised Sideways Wind Relieving Pose

Urdhva Hasta Parshva Vayu Muktyasana

(OORD-vuh HUH-stuh PAHRSH-vuh VAH-yu muk-TYAHS-uh-nuh)

Pose Type: supine (on the side)
Drishti Point: Urdhva or Antara Drishti (up to the sky)

Sideways Wind Relieving Pose

Parshva Vayu Muktyasana

(PAHRSH-vuh VAH-yu muk-TYAHS-uh-nuh)
Modification: bottom leg straight; top knee bent, foot to the knee of the straight leg
Pose Type: supine (on the side)
Drishti Point: Nasagrai or Nasagre (nose)

Infinity Pose

Anantasana

(uhn-uhnt-AHS-uh-nuh)
Also Known As: Sleeping Vishnu Pose
Modification: top leg lifted in front of the body, bottom leg straight
Pose Type: supine (on the side), forward bend
Drishti Point: Nasagrai or Nasagre (nose), Padayoragrai or Padayoragre (toes/feet)

Infinity Pose

Anantasana

(uhn-uhnt-AHS-uh-nuh)
Also Known As: Sleeping Vishnu Pose

Modification: top leg straight and lifted; bottom leg bent, toes pointing to the back
Pose Type: supine (on the side)
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

SHOULDER ON THE FLOOR: TWISTS AND BINDING

Svastika Legs in Twisted Stomach Pose

Pada Svastikasana in Jatara Parivartanasana

(PUH-duh svuh-sti-KAHS-uh-nuh in JAH-tuh-ruh puh-ri-vuhrt-ahn-AHS-uh-nuh)
Modification: grabbing onto the back foot, heel toward the glutes
Pose Type: supine (on the side), twist
Drishti Point: Hastagrai or Hastagre (hands)

Revolved One-Legged King Pigeon Pose 1

Parivritta Eka Pada Raja Kapotasana 1

(puh-ri-VRIT-tuh EY-kuh PUH-duh RAH-juh kuh-po-TAHS-uh-nuh)
Modification: back knee bent, both hands to the back foot; front foot to hip socket

Pose Type: supine (on the side), twist
Drishti Point: Urdhva or Antara Drishti (up to the sky)

One-Legged Bound Infinity Pose

Eka Pada Baddha Anantasana

(EY-kuh PUH-duh BUH-duh uhn-uhnt-AHS-uh-nuh)

Also Known As: One-Legged Bound Sleeping Vishnu Pose
Modification: bottom leg bent, heel toward the glutes; top leg bent
Pose Type: supine (on the side), twist, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

SHOULDER ON THE FLOOR: HALF LOTUS BACKBEND—UNDER-HEAD & OVERHEAD GRIP

Sideways Half Lotus Bow Pose

Parshva Ardha Padma Dhanurasana

(PAHRSH-vuh UHR-duh PUHD-muh duh-nur-AHS-uh-nuh)

Modification: grabbing onto the bottom foot with both hands with under-head grip

Pose Type: supine (on the side), backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Sideways Half Lotus One-Handed Big Toe Bow Pose

Parshva Ardha Padma Eka Hasta Padangushta Dhanurasana

(PAHRSH-vuh UHR-duh PUHD-muh EY-kuh HUH-stuh puhd-ahng-GOOSH-tuh duh-nur-AHS-uh-nuh)

Modification: grabbing onto the bottom foot with overhead grip on the same side, top arm straight, fingertips to the sky
Pose Type: supine (on the side), backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Sideways Half Lotus Two-Handed Big Toe Bow Pose

Parshva Ardha Padma Dwi Hasta Padangushta Dhanurasana

(PAHRSH-vuh UHR-duh PUHD-muh DWI-huh-stuh puhd-ahng-GOOSH-tuh duh-nur-AHS-uh-nuh)

Modification: overhead grip, both hands grabbing onto the foot
Pose Type: supine (on the side), backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

SHOULDER ON THE FLOOR: FOOT TO THE THIGH, HALF LOTUS & LOTUS

Mermaid Pose in Infinity Pose

Naginyasana in Anantasana

(nuh-gin-YAHS-uh-nuh in uhn-uhnt-AHS-uh-nuh)

Also Known As: Mermaid Pose in Sleeping Vishnu Pose
Pose Type: supine (on the side), backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Sideways Half Lotus Bow Pose

Parshva Ardha Padma Dhanurasana

(PAHRSH-vuh UHR-duh PUHD-muh duh-nur-AHS-uh-nuh)

Modification: grabbing onto the top foot with the bottom hand; grabbing onto the bottom foot with top hand

1. front view
2. back view

Pose Type: supine (on the side), backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Hands Bound Lotus Pose in Infinity Pose

Baddha Hasta Padmasana in Anantasana

(BUH-duh HUH-stuh puhd-MAHS-uh-nuh in uhn-uhnt-AHS-uh-nuh)

Also Known As: Hands Bound Lotus Pose in Sleeping Vishnu Pose
Pose Type: supine (on the side), mild backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Hands Bound Infinity Pose

Baddha Hasta Anantasana

(BUH-duh HUH-stuh uhn-uhnt-AHS-uh-nuh)

Also Known As: Hands Bound Sleeping Vishnu Pose
Modification: 1. bottom leg bent, top leg straight and lifted; resting on the arms and the bent knee for support
2. bottom leg straight, top leg straight and lifted; arms lifted off the floor
Pose Type: supine (on the side), backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Hands Bound Half Lotus Pose in Infinity Pose

Baddha Hasta Ardha Padmasana in Anantasana

(BUH-duh HUH-stuh UHR-duh puhd-MAHS-uh-nuh in uhn-uhnt-AHS-uh-nuh)

Also Known As: Hands Bound Half Lotus Pose in Sleeping Vishnu Pose
Modification: 1. front view
2. back view
Pose Type: supine (on the side), backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

TRICEPS ON THE FLOOR: HAND TO THE HEAD—LEGS TOGETHER & LEGS APART

Infinity Pose

Anantasana

(uhn-uhnt-AHS-uh-nuh)

Also Known As: Sleeping Vishnu Pose
Modification: both legs straight and together; bottom leg on the floor
Pose Type: supine (on the side), side bend
Drishti Point: Padhayoragrai or Padayoragre (toes/feet)

Infinity Pose

Anantasana

(uhn-uhnt-AHS-uh-nuh)

Also Known As: Sleeping Vishnu Pose
Modification: legs straight, together and lifted off the floor
Pose Type: supine (on the side), core, side bend
Drishti Point: Nasagrai or Nasagre (nose)

Infinity Pose

Anantasana

(uhn-uhnt-AHS-uh-nuh)

Also Known As: Sleeping Vishnu Pose
Modification: both legs straight, top leg lifted, bottom leg on the floor
Pose Type: supine (on the side), core, side bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet), Urdhva or Antara Drishti (up to the sky)

Extended Hand to Big Toe Pose in Infinity Pose

Utthita Hasta Padangushtasana in Anantasana

(UT-ti-tuh HUH-stuh puhd-ahng-goosh-TAHS-uh-nuh in uhn-uhnt-AHS-uh-nuh)

Also Known As: Extended Hand to Big Toe Pose in Sleeping Vishnu Pose
Pose Type: supine (on the side), forward bend, side bend
Drishti Point: Nasagrai or Nasagre (nose)

Sundial Pose in Infinity Pose

Surya Yantrasana in Anantasana

(SOOR-yuh yuhn-TRAHS-uh-nuh in uhn-uhnt-AHS-uh-nuh)

Also Known As: Sundial Pose in Sleeping Vishnu Pose
Modification: 1. grabbing onto the heel on the outside of the calf
2. grabbing onto the heel on the inside of the calf
Pose Type: supine (on the side), forward bend, side bend
Drishti Point: Nasagrai or Nasagre (nose)

TRICEPS ON THE FLOOR: BOTH KNEES BENT

Infinity Pose

Anantasana

(uhn-uhnt-AHS-uh-nuh)

Also Known As: Sleeping Vishnu Pose
Modification: top knee to the top shoulder; both knees bent
Pose Type: supine (on the side), forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows) or Padhayoragrai or Padayoragre (toes/feet)

Bound Angle Pose in Infinity Pose

Baddha Konasana in Anantasana

(BUH-duh ko-NAHS-uh-nuh in uhn-uhnt-AHS-uh-nuh)

Also Known As: Bound Angle Pose in Sleeping Vishnu Pose
Modification: 1. top wrist on the top knee
2. top hand grabbing onto the top foot
Pose Type: supine (on the side), side bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows) or Hastagrai or Hastagre (hands)

TRICEPS ON THE FLOOR: BOTTOM LEG STRAIGHT—BACKBENDS

Half Frog Pose Prep. in Infinity Pose

Ardha Bhekasana in Anantasana

(UHR-duh bey-KAHS-uh-nuh in uhn-uhnt-AHS-uh-nuh)

Also Known As: Half Frog Pose Prep. in Sleeping Vishnu Pose
Modification: hand in beginner modification; neutral spine, top leg moving into a half-frog leg position

Pose Type: supine (on the side), mild backbend
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Half Bow Pose in Infinity Pose

Ardha Dhanurasana in Anantasana

(UHR-duh duh-nur-AHS-uh-nuh in uhn-uhnt-AHS-uh-nuh)

Also Known As: Half Bow Pose in Sleeping Vishnu Pose
Pose Type: supine (on the side), backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Big Toe Bow Pose in Infinity Pose

Ardha Padangushta Dhanurasana in Anantasana

(UHR-duh puhd-ahng-GOOSH-tuh duh-nur-AHS-uh-nuh in uhn-uhnt-AHS-uh-nuh)

Also Known As: Half Big Toe Bow Pose in Sleeping Vishnu Pose
Pose Type: supine (on the side), backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

TRICEPS ON THE FLOOR: ONE LEG STRAIGHT, OTHER FOOT TO THE HIP SOCKET

Infinity Pose

Anantasana

(uhn-uhnt-AHS-uh-nuh)

Also Known As: Sleeping Vishnu Pose
Modification: top foot to the hip socket, toes touching the floor; bottom leg straight on the floor
Pose Type: supine (on the side), side bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Half Lotus Pose in Infinity Pose

Ardha Padmasana in Anantasana

(UHR-duh puhd-MAHS-uh-nuh in anan-TAHS-annauhn-uhnt-AHS-uh-nuh)

Also Known As: Half Lotus Pose in Sleeping Vishnu Pose
Modification: bottom foot in half lotus, top leg lifted and straight
Pose Type: supine (on the side), side bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

TRICEPS ON THE FLOOR: HALF LOTUS & FULL LOTUS

Half Lotus Mermaid Pose in Infinity Pose

Ardha Padma Naginyasana in Anantasana

(UHR-duh PUHD-muh nuh-gin-YAHS-uh-nuh in uhn-uhnt-AHS-uh-nuh)

Also Known As: Half Lotus Mermaid Pose in Sleeping Vishnu Pose
Pose Type: supine (on the side), backbend, side bend
Drishti Point: Hastagrai or Hastagre (hands)

Lotus Pose in Infinity Pose

Padmasana in Anantasana

(puhd-MAHS-uh-nuh in uhn-uhnt-AHS-uh-nuh)

Also Known As: Lotus Pose in Sleeping Vishnu Pose
Pose Type: supine (on the side), side bend, knee, ankle opener
Drishti Point: Hastagrai or Hastagre (hands)

ELBOW ON THE FLOOR: BOTTOM LEG STRAIGHT, TOP LEG CROSSED OVER

Infinity Pose

Anantasana

(uhn-uhnt-AHS-uh-nuh)

Also Known As: Sleeping Vishnu Pose

Modification: elbow to the floor, top knee bent, leg crossed over in front of the body; bottom leg straight

1. palm of the top hand on the floor
2. top hand on the top knee

Drishti Point: Urdhva or Antara Drishti (up to the sky)

Infinity Pose

Anantasana

(uhn-uhnt-AHS-uh-nuh)

Also Known As: Sleeping Vishnu Pose
Modification: elbow to the floor, hands in Anjali Mudra (Hands in Prayer); top knee bent, foot by the hip, bottom leg straight
1. bottom leg on the floor
2. bottom leg lifted off the floor
Pose Type: 1. supine (on the side), side bend
2. supine (on the side), side bend, core
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Infinity Pose

Anantasana

(uhn-uhnt-AHS-uh-nuh)

Also Known As: Sleeping Vishnu Pose
Modification: top leg crossed over in front, toes on the floor; bottom leg bent, toes to the back; elbow to the floor, other arm straight fingertips to the sky
Pose Type: supine (on the side)
Drishti Point: Hastagrai or Hastagre (hands)

Half Lotus Pose in Infinity Pose

Ardha Padmasana in Anantasana

(UHR-duh puhd-MAHS-uh-nuh in uhn-uhnt-AHS-uh-nuh)

Also Known As: Half Lotus Pose in Sleeping Vishnu Pose
Modification: top leg in half lotus; bottom leg bent, heel to the sitting bone; elbow to the floor, other arm straight fingertips to the sky
Pose Type: supine (on the side)
Drishti Point: Hastagrai or Hastagre (hands)

Leg Position of the Pose Dedicated to Garuda in Infinity Pose

Pada Garudasana in Anantasana

(PUH-duh guh-ru-DAHS-uh-nuh in uhn-uhnt-AHS-uh-nuh)

Also Known As: Leg Position of the Pose Dedicated to Garuda in Sleeping Vishnu Pose
Modification: elbow to the floor, hands behind the head
Pose Type: supine (on the side)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

FOREARM ON THE FLOOR: ONE LEG CROSSED OVER & HALF LOTUS

Infinity Pose

Anantasana

(uhn-uhnt-AHS-uh-nuh)

Also Known As: Sleeping Vishnu Pose
Modification: top leg crossed over; forearm to the floor, top elbow resting on the top knee
Pose Type: supine (on the side)
Drishti Point: Hastagrai or Hastagre (hands)

Extended Hand to Big Toe Half Cow Face Western Intense Stretch in Infinity Pose

Utthita Hasta Padangushta Ardha Gomukha Paschimottanasana in Anantasana

(UT-ti-tuh HUH-stuh puhd-ahng-GOOSH-tuh UHR-duh go-MUK-uh puhsh-chi-mo-tahn-AHS-uh-nuh in uhn-uhnt-AHS-uh-nuh)

Also Known As: Extended Hand to Big Toe Half Cow Face Forward Bend in Infinity Pose, Extended Hand to Big Toe Half Cow Face Western Intense Stretch in Sleeping Vishnu Pose

Modification: forearm to the floor; top leg crossed over; grabbing onto the big toe of the bottom foot, leg off the floor

Pose Type: supine (on the side), forward bend

Drishti Point: Hastagrai or Hastagre (hands)

Half Lotus Pose in Infinity Pose

Ardha Padmasana in Anantasana

(UHR-duh puhd-MAHS-uh-nuh in uhn-uhnt-AHS-uh-nuh)

Also Known As: Half Lotus Pose in Sleeping Vishnu Pose

Modification: top foot to the bottom knee; top forearm to the top knee

Pose Type: supine (on the side), mild backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Lotus Extended Hand to Leg Pose in Infinity Pose

Ardha Padma Utthita Pada Hastasana in Anantasana

(UHR-duh PUHD-muh UT-ti-tuh PUH-duh huh-STAHS-uh-nuh in uhn-uhnt-AHS-uh-nuh)

Also Known As: Half Lotus Extended Hand to Leg Pose in Sleeping Vishnu Pose
Pose Type: supine (on the side), forward bend, mild backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

FOREARM ON THE FLOOR: TOP LEG STRAIGHT, BOTTOM FOOT TO THE THIGH

Half Bound Angle Pose in Infinity Pose

Ardha Baddha Konasana in Anantasana

(UHR-duh BUH-duh ko-NAHS-uh-nuh in uhn-uhnt-AHS-uh-nuh)

Also Known As: Half Bound Angle Pose in Sleeping Vishnu Pose
Modification: forearm to the floor

1. finger tips of the top arm to the floor in front of the abdomen, elbow bent
2. top arm straight and parallel to the top leg

Pose Type: supine (on the side), side bend

Drishti Point: Padayoragrai or Padayoragre (toes/feet), Hastagrai or Hastagre (hands)

EASTERN INTENSE STRETCH: SITTING BONES BELOW KNEES—ONE LEG OFF FLOOR & TWISTS

Tip Toe Half Eastern Intense Stretch Pose

Prapada Ardha Purvottanasana

(PRUH-puh-duh UHR-duh poor-vo-tahn-AHS-uh-nuh)

Also Known As: Tip Toe Half Reverse Plank Pose

Modification: prep—sitting bones below the knee level, on the fingertips

Pose Type: standing, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Eastern Intense Stretch Pose

Ardha Purvottanasana

(UHR-duh poor-vo-tahn-AHS-uh-nuh)

Also Known As: Half Reverse Plank
Modification: mild prep—sitting bones slightly off the floor, feet flat on the floor; palms flat on the floor, fingertips pointing to the heels
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Fire Log Pose in Half Eastern Intense Stretch Pose

Ardha Agnistambhasana in Ardha Purvottanasana

(UHR-duh uhg-ni-stuhm-BAHS-uh-nuh in UHR-duh poor-vo-tahn-AHS-uh-nuh)

Also Known As: Half Firelog Pose in Half Reverse Plank
Modification: prep—sitting bones slightly off the floor; elbows bent, fingertips pointing to the heels
Pose Type: standing, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Intense Ankle Stretch Pose in One-Legged Half Eastern Intense Stretch Pose

Uttana Kulpasana in Eka Pada Ardha Purvottanasana

(ut-TAHN-uh kul-PAHS-uh-nuh in EY-kuh PUH-duh UHR-duh poor-vo-tahn-AHS-uh-nuh)

Also Known As: Intense Ankle Stretch Pose in One-Legged Half Reverse Plank
Modification: knee bent toward the chest, fingertips pointing away from the heels
Pose Type: standing, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

Revolved Half Eastern Intense Stretch Pose

Parivritta Ardha Purvottanasana

(puh-ri-VRIT-tuh UHR-duh poor-vo-tahn-AHS-uh-nuh)

Also Known As: Revolved Half Reverse Plank Pose
Modification: opposite elbow to knee of the straight leg
Pose Type: arm balance, forward bend, twist
Drishti Point: Hastagrai or Hastagre (hands)

EASTERN INTENSE STRETCH: KNEES BENT

Half Eastern Intense Stretch Pose

Ardha Purvottanasana

(UHR-duh poor-vo-tahn-AHS-uh-nuh)

Also Known As: Reverse Table Top and Half Reverse Plank Pose
Modification: prep—knees bent and on top of the ankles, fingertips pointing away from the heels
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Uneven Leg Position of Cow Face Pose in Half Eastern Intense Stretch Pose

Vishama Pada Gomukhasana in Ardha Purvottanasana

(VISH-uh-muh PUH-duh go-muk-AHS-uh-nuh in UHR-duh poor-vo-tahn-AHS-uh-nuh)

Also Known As: Uneven Leg Position of Cow Face Pose in Reverse Table Top and Uneven Leg Position of Cow Face Pose in Half Reverse Plank
Modification: knees bent, fingertips pointing to the heels

Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Half Eastern Intense Stretch Pose

Eka Pada Ardha Purvottanasana

(EY-kuh PUH-duh UHR-duh poor-vo-tahn-AHS-uh-nuh)

Also Known As: One-Legged Reverse Table Top and One-Legged Half Reverse Plank Pose
Modification: prep—one knee bent, foot on the floor; other leg straight; knees in line, fingertips pointing to the heels
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Half Eastern Intense Stretch Pose

Eka Pada Ardha Purvottanasana

(EY-kuh PUH-duh UHR-duh poor-vo-tahn-AHS-uh-nuh)

Also Known As: One-Legged Reverse Table Top and One-Legged Half Reverse Plank
Modification: prep—both knees bent, top foot to the knee, fingertips pointing to the heels

Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Half Eastern Intense Stretch Pose in Pose Dedicated to Sage Vasistha on the Forearm

Eka Pada Ardha Purvottanasana in Vasishtasana

(EY-kuh PUH-duh UHR-duh poor-vo-tahn-AHS-uh-nuh in vuh-sish-TAHS-uh-nuh)

Also Known As: One-Legged Reverse Table Top in Pose Dedicated to Sage Vasistha on the Forearm, One-Legged Half Reverse Plank Top in Pose Dedicated to Sage Vasistha on the Forearm
Modification: both knees bent, foot to the knee
Pose Type: standing (on the forearm and the foot)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One Hand Half Eastern Intense Stretch Pose

Eka Hasta Ardha Purvottanasana

(EY-kuh HUH-stuh UHR-duh poor-vo-tahn-AHS-uh-nuh)

Also Known As: One Hand Reverse Table Top or One Hand Half Reverse Plank

Modification: knees bent, fingertips pointing away from the heels
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

EASTERN INTENSE STRETCH: LEGS STRAIGHT

Eastern Intense Stretch Pose

Purvottanasana

(poor-vo-tahn-AHS-uh-nuh)
Also Known As: Reverse Plank and Upward Plank Pose
Modification: legs straight, fingertips pointing to the heels
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Foot to the Side

Half Eastern Intense Stretch Pose

Parshva Eka Pada Ardha Purvottanasana

(PAHRSH-vuh EY-kuh PUH-duh UHR-duh poor-vo-tahn-AHS-uh-nuh)

Also Known As: Foot to the Side Reverse Table Top, Foot to the Side Half Reverse Plank and Foot to the Side Half Upward Plank Pose

Pose Type: standing, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

How to Perform the Pose:

1. Begin by sitting on the floor with both your legs straight out in front of you. Keep your hands on the floor on the sides of your hips with fingertips pointing toward your feet. Engage your *mula bandha*, *uddhiyana bandha*, and *ujjayi* breathing.
2. Exhale, bend your knees, and slide your feet toward your sitting bones. Keep your feet and knees hip-width apart.
3. On the next exhale, press into your hands and feet and lift your sitting bones off the floor. Your shoulders should be on top of your wrists, your knees on top of your ankles, and your torso and thighs parallel to the floor.
4. Exhale, straighten your right leg, and bring it out to the side, flexing the toes of your right foot out to the side. Hold the pose for at least 30, and up to 90, seconds in order to receive full benefits.
5. Inhale and bring your right leg back to the center in line with your left leg. Repeat on the other side. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch.
6. Inhale and lower your hips to the floor, coming back to the starting position.

Modification: one knee bent, other leg straight out to the side, fingertips pointing to the heels

parshva = side

eka = one

pada = foot or leg

ardha = half

purva = east, the front of the body

ut = intense

tan = to stretch, to extend

Feet Wide Eastern Intense Stretch Pose

Prasarita Pada Purvottanasana

(pruh-SAH-ri-tuh PUH-duh poor-vo-tahn-AHS-uh-nuh)

Also Known As: Feet Wide Reverse Plank and Feet Wide Upward Plank Pose
Modification: legs straight, toes flexed in, fingertips pointing to the heels
1. side view
2. front view
Pose Type: standing, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

EASTERN INTENSE STRETCH: FOREARMS ON THE FLOOR

Easy Fish Pose

Sukha Matsyasana

(SUK-uh muhts-YAHS-uh-nuh)

Also Known As: Eastern Intense Stretch Pose Prep. (Purvottanasana Prep.), Reverse Plank Prep.
Modification: head off the floor, forearms on the floor, legs straight
Pose Type: seated, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Eastern Intense Stretch Pose

Purvottanasana

(poor-vo-tahn-AHS-uh-nuh)

Also Known As: Reverse Plank on the Forearms and Upward Plank Pose on the Forearms
Modification: legs straight, forearms on the floor
Pose Type: standing (on the forearms), backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Easy Fish Pose

Sukha Matsyasana

(SUK-uh muhts-YAHS-uh-nuh)

Also Known As: Eastern Intense Stretch Pose Prep. (Purvottanasana Prep.), Reverse Plank Prep.
Modification: head off the floor, forearms to the floor; one leg straight, other knee bent, foot flat on the floor
1. straight leg on the floor

2. straight leg off the floor, toes flexed in
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

EASTERN INTENSE STRETCH: FOREARMS TO FLOOR—ONE LEG OFF FLOOR

Half Fire Log Pose in Easy Fish Pose

Ardha Agnistambhasana in Sukha Matsyasana

(UHR-duh uhg-ni-stuhm-BAHS-uh-nuh in SUK-uh muhts-YAHS-uh-nuh)
Also Known As: Eastern Intense Stretch Pose Prep. (Purvottanasana Prep.), Reverse Plank Prep.
Modification: forearms to the floor, head off the floor
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Easy Fish Pose

Sukha Matsyasana

(SUK-uh muhts-YAHS-uh-nuh)

Also Known As: Eastern Intense Stretch Pose Prep. (Purvottanasana Prep.), Reverse Plank Prep.
Modification: forearms to the floor, head off the floor, sole of the foot to the opposite knee
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Revolved Hand to Foot Pose in Half Eastern Intense Stretch Pose on the Forearm

Parivritta Hasta Padasana in Ardha Purvottanasana

(puh-ri-VRIT-tuh HUH-stuh puh-DAHS-uh-nuh in UHR-duh poor-vo-tahn-AHS-uh-nuh)

Also Known As: Revolved Hand to Foot Pose in Reverse Table Top, Revolved Hand to Foot Pose in Half Reverse Plank
Modification: forearm on the floor; grabbing onto the outside edge of the foot, leg straight
Pose Type: standing (on the forearm and the foot), twist
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

EASTERN INTENSE STRETCH: FOREARMS TO FLOOR—GRABBING ONTO TRICEPS—KNEES BENT

Hands Bound Easy Fish Pose

Baddha Hasta Sukha Matsyasana

(BUH-duh HUH-stuh SUK-uh muhts-YAHS-uh-nuh)

Modification: knees bent, feet to the floor
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Hands Bound Half Eastern Intense Stretch Pose

Baddha Hasta Ardha Purvottanasana

(BUH-duh HUH-stuh UHR-duh poor-vo-tahn-AHS-uh-nuh)

Also Known As: Hands Bound Reverse Table Top, Hands Bound Half Reverse Plank
Pose Type: standing (on the forearms), backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reverse Prayer One-Legged Easy Fish Pose

Viparita Namaskar Eka Pada Sukha Matsyasana

(vi-puh-REE-tuh nuh-muhs-KAHR EY-kuh PUH-duh SUK-uh muhts-YAHS-uh-nuh)

Also Known As: Back of the Body Prayer One-Legged Easy Fish Pose (Paschima Namaskara Eka Pada Sukha Matsyasana)

Modification: both knees bent, heel to the knee

Pose Type: seated, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Hands Bound One-Legged Half Eastern Intense Stretch Pose

Baddha Hasta Eka Pada Ardha Purvottanasana

(BUH-duh HUH-stuh EY-kuh PUH-duh UHR-duh poor-vo-tahn-AHS-uh-nuh)

Also Known As: Hands Bound One-Legged Reverse Table Top, Hands Bound One-Legged Half Reverse Plank

Modification: heel to the knee; grabbing onto the triceps

Pose Type: standing (on the forearms), backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

EASTERN INTENSE STRETCH: FOREARMS TO FLOOR—GRABBING ONTO THE TRICEPS

Hands Bound Easy Fish Pose

Baddha Hasta Sukha Matsyasana

(BUH-duh HUH-stuh SUK-uh muhts-YAHS-uh-nuh)

Modification: one leg straight to the floor; other knee bent, foot to the floor
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Hands Bound Easy Intense Leg Stretch

Baddha Hasta Sukha Uttana Padasana

(BUH-duh HUH-stuh SUK-uh ut-TAHN-uh puh-DAHS-uh-nuh)

Modification: knees bent at 90 degrees, feet off the floor
Pose Type: seated, backbend, core
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

EASTERN INTENSE STRETCH: ELBOWS ON THE FLOOR—HALF LOTUS

Half Lotus Easy Fish Pose

Ardha Padma Sukha Matsyasana

(UHR-duh PUHD-muh SUK-uh muhts-YAHS-uh-nuh)

Also Known As: Eastern Intense Stretch Pose Prep. (Purvottanasana Prep.), Reverse Plank Prep.
Modification: elbows to the floor, palms to the lower back; one leg in half lotus, other knee bent; heel up
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Lotus Half Eastern Intense Stretch Pose

Ardha Padma Ardha Purvottanasana

(UHR-duh PUHD-muh UHR-duh poor-vo-tahn-AHS-uh-nuh)

Also Known As: Half Lotus Reverse Table Top, Half Lotus Half Reverse Plank
Modification: elbows to the floor, palms to the lower back; one leg in half lotus, other knee bent; heel up
1. right side view

2. left side view
Pose Type: standing (on the elbows, knee and foot), backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BRIDGE: HEELS DOWN, SPINE ON THE FLOOR

Bridge Whole Body Pose Prep.

Setu Bandha Sarvangasana Prep.

(SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)
Modification: spine flat on the floor, palms down by the hips, heels down
Pose Type: supine
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclined Hands Bound Twisted Stomach Pose in Bridge Whole Body Pose Prep.

Supta Baddha Hasta Jatara Parivartanasana in Setu Bandha Sarvangasana Prep.

(SUP-tuh BUH-duh HUH-stuh JAH-tuh-ruh puh-ri-vuhrt-uhn-AHS-uh-nuh in SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: ear resting on a yoga block
Pose Type: supine, twist
Drishti Point: Parshva Drishti (to the right), Parshva Drishti (to the left)

Reclined Hands Bound One Leg Extended Pose in Bridge Whole Body Pose Prep.

Supta Baddha Hasta Utthita Eka Padasana in Setu Bandha Sarvangasana Prep.

(SUP-tuh BUH-duh HUH-stuh UT-ti-tuh EY-kuh puh-DAHS-uh-nuh in SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: arms straight in front, palms facing up
Pose Type: supine
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Reclined Half Bound Lotus Pose in Bridge Whole Body Pose Prep.

Supta Ardha Baddha Padmasana in Setu Bandha Sarvangasana Prep.

(SUP-tuh UHR-duh BUH-duh puhd-MAHS-uh-nuh in SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: grabbing onto the ankle
Pose Type: supine, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BRIDGE: HEELS DOWN, ARMS BEHIND THE BACK

Bridge Whole Body Pose

Setu Bandha Sarvangasana

(SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: palms to the floor, arms straight; feet in front of the knees
Pose Type: supine, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Uneven Bridge Whole Body Pose

Vishama Setu Bandha Sarvangasana

(VISH-uh-muh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Desk Pose Modification (Dwipadapitam)
Modification: palms down by the heel of the bent leg, other leg straight
Pose Type: supine, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bridge Whole Body Pose

Setu Bandha Sarvangasana

(SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Shoulder Pose (Kandharasana)
Modification: palms down by the heels
Pose Type: supine, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bridge Whole Body Pose

Setu Bandha Sarvangasana

(SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: palms to the lower back
Pose Type: supine, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BRIDGE: HEELS DOWN, ARMS OVERHEAD & BEHIND THE BACK

Bridge Whole Body Pose

Setu Bandha Sarvangasana

(SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Desk Pose Modification (Dwipadapitam)
Modification: arms straight to the floor over the head, palms facing up
Pose Type: supine, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bridge Whole Body Pose

Setu Bandha Sarvangasana

(SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Upward Bow Pose Prep. (Urdhva Dhanurasana Prep.)
Modification: palms under the shoulders, fingertips pointing to the heels
Pose Type: supine, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Upward Hands Bound Bridge Whole Body Pose

Urdhva Baddha Hasta Setu Bandha Sarvangasana

(OORD-vuh BUH-duh HUH-stuh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Desk Pose Modification (Dwipadapitam)
Pose Type: supine, backbend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Hands Bound Bridge Whole Body Pose

Baddha Hasta Setu Bandha Sarvangasana

(BUH-duh HUH-stuh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Pose Type: supine, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BRIDGE: HEELS DOWN, GRABBING ONTO THE ANKLES

Hand to Ankle Bridge Whole Body Pose

Hasta Kulpa Setu Bandha Sarvangasana

(HUH-stuh KUL-puh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Desk Pose Modification (Dwipadapitam)

Pose Type: supine, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Hand to Ankle Bridge Whole Body Pose

Hasta Kulpa Setu Bandha Sarvangasana

(HUH-stuh KUL-puh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Desk Pose Modification (Dwipadapitam)
Modification: arms crossed
Pose Type: supine, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BRIDGE: HEELS DOWN—ONE FOOT OFF THE FLOOR

One Hand to Ankle Bridge Whole Body Pose

Eka Hasta Kulpa Setu Bandha Sarvangasana

(EY-kuh HUH-stuh KUL-puh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: yoga block under the sitting bones; grabbing onto the ankle on the same side, top of the foot to the floor
Pose Type: supine, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One Hand to Ankle Bridge Whole Body Pose

Eka Hasta Kulpa Setu Bandha Sarvangasana

(EY-kuh HUH-stuh KUL-puh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: Arm 1: grabbing onto the ankle of the opposite leg Arm 2: grabbing onto the opposite arm

Pose Type: supine, backbend, binding

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Fire Log Pose in One-Legged Hands Bound Bridge Whole Body Pose

Ardha Agnistambhasana in Eka Pada Baddha Hasta Setu Bandha Sarvangasana

(UHR-duh uhg-ni-stuhm-BAHS-uh-nuh in EY-kuh PUH-duh BUH-duh HUH-stuh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: ankle on top of the knee heel down, toes of the top foot pointed

Pose Type: supine, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Bound Lotus One Hand to Ankle Bridge Whole Body Pose

Ardha Baddha Padma Eka Hasta Kulpa Setu Bandha Sarvangasana

(UHR-duh BUH-duh PUHD-muh EY-kuh HUH-stuh KUL-puh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Desk Pose Modification (Dwipadapitam)
Modification: heel down
Pose Type: supine, backbend, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BRIDGE: HEELS DOWN—ONE LEG TO THE SKY

One-Legged Bridge Whole Body Pose

Eka Pada Setu Bandha Sarvangasana

(EY-kuh PUH-duh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: palms down, arms straight on the floor; both knees bent
Pose Type: supine, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Bridge Whole Body Pose

Eka Pada Setu Bandha Sarvangasana

(EY-kuh PUH-duh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: palms down, arms straight on the floor; one leg up and straight, knees toward each other

Pose Type: supine, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Bridge Whole Body Pose

Eka Pada Setu Bandha Sarvangasana

(EY-kuh PUH-duh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Desk Pose Modification (Dwipadapitam)

Modification: palms down by the heel

Pose Type: supine, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Bridge Whole Body Pose

Eka Pada Setu Bandha Sarvangasana

(EY-kuh PUH-duh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Also Known As: Peacock Stretch Pose (Uttana Mayurasana)
Modification: palms to the lower back
Pose Type: supine, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Both Hands to Ankle One-Legged Bridge Whole Body Pose

Dwi Hasta Kulpa Eka Pada Setu Bandha Sarvangasana

(DWI-huh-stuh KUL-puh EY-kuh PUH-duh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: grabbing onto the ankle with both hands
Pose Type: supine, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Upward Hands Bound Tip Toe

Bridge Whole Body Pose

Eka Pada Urdhva Baddha Hasta Prapada Setu Bandha Sarvangasana

(EY-kuh PUH-duh OORD-vuh BUH-duh HUH-stuh PRUH-puh-duh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Pose Type: supine, backbend

Drishti Point: Angusthamadhye or Angustha Ma Dyai(thumbs)

How to Perform the Pose:

1. Begin by lying with your back flat on the floor. Keep your arms by the sides of your torso, hands by the sides of the hips, palms facing down. Engage your *mula bandha, uddhiyana bandha*, and *ujjayi* breathing.
2. Exhale, bend your knees, and slide your feet toward your sitting bones. Keep your feet flat on the floor, parallel to each other and in line with your sitting bones.
3. On the next exhale, push into your arms and feet and lift your hips off the floor until your thighs are parallel to the floor.
4. Inhale, interlock your fingers behind your back, and press your palms together. Exhale as you push through your chest and straighten the arms.
5. Exhale, bring your ankles and feet together. On the next exhale, lift your right leg, pointing your right toes up to the sky (Pose #2).
6. Exhale, bring your left heel up. Inhale, release your arms and bring them out in front of your chest. Exhale as you interlock your fingers, rotate your palms up to the sky and straighten the arms (Pose #1).
7. Hold the pose for at least 30, and up to 90, seconds in order to receive the full benefits of the stretch. Inhale, lower your right leg, and repeat on the opposite side.
8. On the next inhale, lower your spine to the floor and stretch the legs out in front of you, coming back to the starting position.

Modification: arms extended up to the sky, fingers interlocked, palms facing up, heel up

eka = one

pada = foot or leg

urdhva = upward

baddha = bound

hasta = hand

prapada = tip of the feet

setu = bridge, dam or dike

bandha = lock

sarvanga = the whole body

1.

2.

Tip Toe Bridge Whole Body Pose Prep.

Prapada Setu Bandha Sarvangasana Prep.

(PRUH-puh-duh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: spine flat on the floor, palms down by the hips, heels up
Pose Type: supine
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Tip Toe Bridge Whole Body Pose

Prapada Setu Bandha Sarvangasana

(PRUH-puh-duh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: palms down
Pose Type: supine, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Tip Toe Bridge Whole Body Pose

Prapada Setu Bandha Sarvangasana

(PRUH-puh-duh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: palms to the lower back

Pose Type: supine, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Hands Bound Tip Toe Bridge Whole Body Pose

Baddha Hasta Prapada Setu Bandha Sarvangasana

(BUH-duh HUH-stuh PRUH-puh-duh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Pose Type: supine, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Upward Hands Bound Tip Toe Bridge Whole Body Pose

Urdhva Baddha Hasta Prapada Setu Bandha Sarvangasana

(OORD-vuh BUH-duh HUH-stuh PRUH-puh-duh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Pose Type: supine, backbend

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

BRIDGE: HEELS UP—ONE LEG CROSSED OVER

Half Fire Log Pose in One-Legged Hands Bound Tip Toe Bridge Whole Body Pose

Ardha Agnistambhasana in Eka Pada Baddha Hasta Prapada Setu Bandha Sarvangasana

(UHR-duh uhg-ni-stuhm-BAHS-uh-nuh in EY-kuh PUH-duh BUH-duh HUH-stuh PRUH-puh-duh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: heel up; ankle on top of the knee, toes flexed in
Pose Type: supine, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Uneven Leg Position of Cow Face Pose in One-Legged Tip Toe Bridge Whole Body Pose

Vishama Pada Gomukhasana in Eka Pada Prapada Setu Bandha Sarvangasana

(VISH-uh-muh PUH-duh go-muk-AHS-uh-nuh in EY-kuh PUH-duh PRUH-puh-duh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: Arm 1: grabbing onto the foot of the opposite leg Arm 2: grabbing onto the opposite arm

Pose Type: supine, backbend, binding

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Bound Lotus One Hand to Ankle Tip Toe Bridge Whole Body Pose

Ardha Baddha Padma Eka Hasta Kulpa Prapada Setu Bandha Sarvangasana

(UHR-duh BUH-duh PUHD-muh EY-kuh HUH-stuh KUL-puh PRUH-puh-duh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: heel up

Pose Type: supine, backbend, binding

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BRIDGE: HEELS UP—ONE LEG EXTENDED TO THE SKY

One-Legged Tip Toe Bridge Whole Body Pose

Eka Pada Prapada Setu Bandha Sarvangasana

(EY-kuh PUH-duh PRUH-puh-duh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: palms down

Pose Type: supine, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Tip Toe Bridge Whole Body Pose

Eka Pada Prapada Setu Bandha Sarvangasana

(EY-kuh PUH-duh PRUH-puh-duh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: palms to the lower back

1. fingertips pointing to the heel
2. fingertips pointing to the head

Pose Type: supine, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Hands Bound Tip Toe Bridge Whole Body Pose

Eka Pada Baddha Hasta Prapada Setu Bandha Sarvangasana

(EY-kuh PUH-duh BUH-duh HUH-stuh PRUH-puh-duh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: leg straight and extended to the sky, heel up
Pose Type: supine, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BRIDGE: HEELS UP—ONE LEG EXTENDED TO THE SKY—"BALLET TOES"

Intense Ankle Stretch One-Legged Bridge Whole Body Pose

Uttana Kulpa Eka Pada Setu Bandha Sarvangasana

(ut-TAHN-uh KUL-puh EY-kuh PUH-duh PRUH-puh-duh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: palms to the lower back; both knees bent
Pose Type: supine, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Intense Ankle Stretch One-Legged Bridge Whole Body Pose

Uttana Kulpa Eka Pada Setu Bandha Sarvangasana

(ut-TAHN-uh KUL-puh EY-kuh PUH-duh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: palms to the lower back; top leg straight
Pose Type: supine, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One Hand One-Legged Tip Toe Bridge Whole Body Pose

Eka Hasta Eka Pada Prapada Setu Bandha Sarvangasana

(EY-kuh HUH-stuh EY-kuh PUH-duh PRUH-puh-duh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: lifted leg bent; palm to the lower back, heel up
Pose Type: supine, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BRIDGE: LEGS STRAIGHT—BACK OF THE HEAD TO THE FLOOR

Extended Hand to Big Toe Pose Intense Ankle Stretch One-Legged Bridge Whole Body Pose

Utthita Hasta Padangushtasana in Uttana Kulpa Eka Pada Setu Bandha Sarvangasana

(UT-ti-tuh HUH-stuh puhd-ahng-goosh-TAHS-uh-nuh in ut-TAHN-uh KUL-puh EY-kuh PUH-duh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Pose Type: supine, backbend, forward bend
Drishti Point: Padayoragrai or Padayoragre (toes/feet)

BRIDGE: LEGS STRAIGHT—BACK OF THE HEAD TO THE FLOOR

Complete Bridge Whole Body Pose

Paripurna Setu Bandha Sarvangasana

(puh-ri-POOR-nuh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: palms to the lower back
Pose Type: supine, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Complete Bridge Whole Body Pose

Eka Pada Paripurna Setu Bandha Sarvangasana

(EY-kuh PUH-duh puh-ri-POOR-nuh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: palms to the lower back
Pose Type: supine, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

HEAD AND SITTING BONES ON THE FLOOR: KNEES BENT

Half Fish Pose

Ardha Matsyasana

(UHR-duh muhts-YAHS-uh-nuh)

Modification: knees bent; feet flat on the floor, heels toward the sitting bones; palms down to the

floor by the heels, elbows to the floor
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Fish Pose

Ardha Matsyasana

(UHR-duh muhts-YAHS-uh-nuh)
Modification: knees bent
1. arms over the head, feet flat on the floor
2. hands by the navel, palms pressed together, fingertips pointing up, both feet in the tip toe position
3. hands by the navel, palms pressed together, fingertips pointing up; one foot in the tip toe position, other leg raised
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

HEAD AND SITTING BONES ON THE FLOOR: LEGS STRAIGHT

Fish Pose

Matsyasana

(muhts-YAHS-uh-nuh)

Modification: legs straight on the floor, elbows to the floor, palms down to the floor by the hips
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reverse Prayer Fish Pose

Viparita Namaskar Matsyasana

(vi-puh-REE-tuh nuh-muhs-KAHR muhts-YAHS-uh-nuh)

Also Known As: Back of the Body Prayer Fish Pose (Paschima Namaskara Matsyasana)
Modification: legs straight to the floor
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Intense Leg Stretch

Uttana Padasana

(ut-TAHN-uh puh-DAHS-uh-nuh)

Modification: legs straight on the floor, arms straight in front of the chest, palms pressed together
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

HEAD AND SITTING BONES ON THE FLOOR: ONE LEG STRAIGHT, ONE KNEE BENT

Fish Pose

Matsyasana

(muhts-YAHS-uh-nuh)

Modification: 1. one leg straight, other knee bent
2. one leg straight, other knee bent, bent leg crossed over

Pose Type: seated, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Bound Lotus Fish Pose

Ardha Baddha Padma Matsyasana

(UHR-duh BUH-duh PUHD-muh muhts-YAHS-uh-nuh)

Modification: sitting bones on the floor, palm to the floor by the hip

Pose Type: seated, backbend, binding

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Bound Lotus Fish Pose

Ardha Baddha Padma Matsyasana

(UHR-duh BUH-duh PUHD-muh muhts-YAHS-uh-nuh)

Modification: one arm straight up to the sky, other arm grabbing onto the inside of the thigh behind the back; leg straight

Pose Type: seated, backbend, binding

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

HEAD AND SITTING BONES ON THE FLOOR: HANDS AND FEET ON FLOOR—BINDING & GARUDA ARMS AND LEGS

Half Bound Lotus Half Fish Pose

Ardha Baddha Padma Ardha Matsyasana

(UHR-duh BUH-duh PUHD-muh UHR-duh muhts-YAHS-uh-nuh)

Modification: grabbing onto the foot with arm behind the back, fingertips of the other arm touching the floor overhead, elbow bent; knee of the free leg bent

1. heel down
2. heel up

Pose Type: seated, backbend, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Hastagrai or Hastagre (hands)

Intense Leg Stretch Pose Dedicated to Garuda

Uttana Pada Garudasana

(ut-TAHN-uh PUH-duh guh-ru-DAHS-uh-nuh)
Modification: fingertips and bottom foot to the floor
Pose Type: seated, backbend
Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

Reclined Bound Angle Pose

Supta Baddha Konasana

(SUP-tuh BUH-duh ko-NAHS-uh-nuh)

Modification: hands to the inner thighs, palms up
Pose Type: supine
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclined Bound Angle Pose

Supta Baddha Konasana

(SUP-tuh BUH-duh ko-NAHS-uh-nuh)

Also Known As: Bound Legs Fish Pose (Baddha Pada Matsyasana)
Modification: crown of the head to the floor, grabbing onto the shins, arms on top of the legs
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Fish Pose

Matsyasana

(muhts-YAHS-uh-nuh)

Modification: 1. palms up on the inside of the thighs
2. grabbing onto the big toes, elbows to the floor
3. grabbing onto the forearms, arms up over the head

Pose Type: seated, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

HEAD AND SITTING BONES ON THE FLOOR: LEGS AND ARMS OFF THE FLOOR

Reverse Prayer Intense Leg Stretch

Viparita Namaskar Uttana Padasana

(vi-puh-REE-tuh nuh-muhs-KAHR ut-TAHN-uh puh-DAHS-uh-nuh)

Also Known As: Back of the Body Prayer Intense Leg Stretch (Paschima Namaskara Uttana Padasana)

Modification: legs straight and off the floor, ankles crossed

Pose Type: seated, backbend, core

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Intense Leg Stretch

Uttana Padasana

(ut-TAHN-uh puh-DAHS-uh-nuh)

Modification: legs straight and off the floor; arms straight in front of the chest, palms pressed together

Pose Type: seated, backbend, core

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Intense Leg Stretch Pose Dedicated to Garuda

Uttana Pada Garudasana

(ut-TAHN-uh PUH-duh guh-ru-DAHS-uh-nuh)

Modification: legs and arms lifted off the floor

Pose Type: seated, backbend, core

Drishti Point: Angushtamadhye or Angushta Ma Dyai (thumbs)

BRIDGE POSE

Complete Bridge Whole Body Pose

Paripurna Setu Bandha Sarvangasana

(puh-ri-POOR-nuh SEY-tu BUHN-duh suhr-vuhng-GAHS-uh-nuh)

Modification: palms to the floor under the shoulders, fingertips pointing to the heels; elbows tucked in, shoulder width apart

Pose Type: supine, backbend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Vajra Cutter Sutra Bridge Pose

Vajracchedika Prajnaparamita Sutra Setu Bandhasana

(vahj-ruh-CHEY-di-kuh pruhj-NAH-puh-ruh-mi-TAH SU-truh SEY-tu buhn-DAHS-uh-nuh)

Modification: forehead to the floor, elbows splaying to the side, arms in “diamond” shape
Pose Type: standing (on the head and feet), backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bridge Pose

Setu Bandhasana

(SEY-tu buhn-DAHS-uh-nuh)

Modification: fingertips to the floor and pointing toward the heels
Pose Type: standing (on the head and feet), backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Bridge Pose

Setu Bandhasana

(SEY-tu buhn-DAHS-uh-nuh)

Modification: arms crossed in front of the chest, hands to the shoulders

Pose Type: standing (on the head and feet), backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Bridge Pose

Eka Pada Setu Bandhasana

(EY-kuh PUH-duh SEY-tu buhn-DAHS-uh-nuh)
Modification: fingertips pointing toward the heels, palms flat on the floor
Pose Type: standing (on the head and feet), backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BOUND ANGLE POSE & LOTUS: BACKBEND

Reclined Bound Angle Pose

Supta Baddha Konasana

(SUP-tuh BUH-duh ko-NAHS-uh-nuh)
Also Known As: Bound Legs Fish Pose (Baddha Pada Matsyasana)
Modification: crown of the head to the floor, grabbing onto the shins under the legs

1. elbows to the floor
2. arms straight, elbows off the floor

Pose Type: backbend, standing (on the knees)
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Intense Lotus Peacock

Uttana Padma Mayurasana

(ut-TAHN-uh PUHD-muh muh-yoor-AHS-uh-nuh)

Also Known As: Intense Front Body Stretching and Rejuvenating Lotus Pose (Purvottana Padma Sarvangasana), All Body Parts Lotus Pose (Sarvangasana Padmasana)
Modification: knees on the floor
Pose Type: supine, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BOTH KNEES BENT: ONE LEG CROSSED OVER

Eye of the Needle Pose

Sucirandrasana

(soo-chi-ruhn-DRAHS-uh-nuh)

Pose Type: supine, forward bend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclined Leg Position of Cow Face Pose

Supta Pada Gomukhasana

(SUP-tuh PUH-duh go-muk-AHS-uh-nuh)

Modification: knees to the chest, grabbing onto both feet

1. front view
2. side view

Pose Type: supine, forward bend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclined Twisting Fire Log Pose

Supta Parshva Agnistambhasana

(SUP-tuh PAHRSH-vuh uhg-ni-stuhm-BAHS-uh-nuh)

Pose Type: supine, forward bend, twist

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclined Leg Position of Half Cow Face Pose

Supta Pada Ardha Gomukhasana

(SUP-tuh PUH-duh UHR-duh go-muk-AHS-uh-nuh)

Modification: knees apart, top foot on the floor
1. one hand to the forehead, other hand on the top knee
2. grabbing onto the shoulders, arms crossed in front of the neck
3. one hand to the top ankle, other hand to the bottom foot
Pose Type: supine, forward bend, twist
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BOTH KNEES BENT: ONE LEG CROSSED OVER—KNEES TO THE FLOOR

Reclined Leg Position of Cow Face Pose

Supta Pada Gomukhasana

(SUP-tuh PUH-duh go-muk-AHS-uh-nuh)
Modification: knees to the floor
Pose Type: supine
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Universal All-Encompassing Diamond Pose

Vishvavajrasana
(vish-vuh-vuhj-RAHS-uh-nuh)
Also Known As: Double Diamond Pose
Modification: foot on top of the knee; hand to the sole of the back foot, other hand resting on the thigh of the front leg, looking straight ahead
Pose Type: supine, twist
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Revolved Universal All-Encompassing Diamond Pose

Parivritta Vishvavajrasana *(puh-ri-VRIT-tuh vish-vuh-vuhj-RAHS-uh-nuh)*
Also Known As: Revolved Double Diamond Pose

Modification: hand grabbing onto the foot; other hand grabbing onto the opposite knee, looking up to the sky
Pose Type: supine, forward bend, twist
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Revolved Universal All-Encompassing Diamond Pose

Parivritta Vishvavajrasana *(puh-ri-VRIT-tuh vish-vuh-vuhj-RAHS-uh-nuh)*
Also Known As: Revolved Double Diamond Pose
Modification: hand grabbing onto the ankle, arm under the thigh; other hand grabbing onto the ankle of the bottom leg, looking straight ahead
Pose Type: supine, forward bend, twist
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BOTH KNEES BENT: KNEES TOGETHER

Reclined Child's Pose

Supta Balasana

(SUP-tuh bah-LAHS-uh-nuh)

Also Known As: Pelvic Pose (Apanasana)
Modification: binding arms, grabbing onto the triceps
Pose Type: supine, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Wind-Relieving Pose

Vayu Muktyasana

(VAH-yuh muk-TYAHS-uh-nuh)

Also Known As: Wind Releaser Pose (Pavana Muktasana)
Modification: fingers interlocked on top of the shins
Pose Type: supine, forward bend, core
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Twisted Stomach Pose

Jatara Parivartanasana

(JAH-tuh-ruh puh-ri-vuhrt-uhn-AHS-uh-nuh)

Also Known As: Reclining Waist Pose Prep.(Supta Madhyasana), Sideways Wind Releaser Pose (Pavana Muktasana)
Modification: knees bent, arms straight out to the sides
Pose Type: supine, forward bend, twist
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE LEG STRAIGHT, ONE KNEE BENT

One-Legged Wind Relieving Pose

Eka Pada Pavana Muktasana

(EY-kuh PUH-duh puh-vuh-nuh muk-TAHS-uh-nuh)

Also Known As: Reclined Big Toe Pose A Prep. (Supta Padangushtasana A Prep.)
Modification: head on the floor, fingers interlocked on top of the shin
Pose Type: supine, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclining Tree Pose

Supta Vrikshasana

(SUP-tuh vrik-SHAHS-uh-nuh)

Also Known As: Reclined Big Toe Pose B Prep. (Supta Padangushtasana B Prep.)
Modification: hand to the bent knee, other hand along side of the torso, toes flexed in
Pose Type: supine
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

BOTH LEGS STRAIGHT: ONE LEG TO THE SIDE

Revolved Reclining Hand to Foot Pose

Parivritta Supta Hasta Padasana

(puh-ri-VRIT-tuh SUP-tuh HUH-stuh puh-DAHS-uh-nuh)

Modification: legs straight, grabbing onto the inside arch of the foot
Pose Type: supine, forward bend, twist
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclining Big Toe Pose 2

Supta Padangushtasana 2

(SUP-tuh puhd-ahng-goosh-TAHS-uh-nuh)

Pose Type: supine, forward bend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE LEG STRAIGHT, ONE KNEE BENT: TWIST

Reclined Lord of the Fishes Pose

Supta Matsyendrasana

(SUP-tuh muhts-yeyn-DRAHS-uh-nuh)

Also Known As: Revolving Reclined Big Toe Pose Prep. (Parivritta Supta Padangushtasana Prep.), Revolved Reclining Tree Pose (Parivritta Supta Vrikshasana)

Modification: knee bent at 90 degrees

Pose Type: supine, forward bend, twist

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

GARUDA LEGS: TWISTS

Sideways Reclining Leg Position of the Pose Dedicated to Garuda

Parshva Supta Pada Garudasana

(PAHRSH-vuh SUP-tuh PUH-duh guh-ru-DAHS-uh-nuh)

Modification: hand resting on the top knee, other arm to the floor along side the torso, looking to the side; arms straight out to the side, looking straight ahead

Pose Type: supine, twist

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Hastagrai or Hastagre (hands)

BOTH LEGS STRAIGHT AND TOGETHER: TWIST

Twisted Stomach Pose

Jathara Parivartanasana

(JAH-tuh-ruh puh-ri-vuhrt-uhn-AHS-uh-nuh)

Also Known As: Reclining Waist Pose (Supta Madhyasana)

Modification: legs and arms straight

Pose Type: supine, forward bend, twist

Drishti Point: Hastagrai or Hastagre (hands)

ONE LEG STRAIGHT, ONE KNEE BENT: LEG CRADLE & HALF HAPPY BABY POSE

Reclined Baby Cradle Pose

Supta Hindolasana

(SUP-tuh hin-do-LAHS-uh-nuh)

Modification: back leg straight
Pose Type: supine, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclined One Hand to Foot Pose

Supta Eka Hasta Padasana

(SUP-tuh EY-kuh HUH-stuh puh-DAHS-uh-nuh)

Pose Type: supine, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

HAPPY BABY POSE & ONE FOOT BEHIND THE HEAD

Happy Baby Pose

Sukha Balasana

(SUK-uh bahl-AHS-uh-nuh)

Also Known As: Happy Baby Pose (Ananda Balasana)
Modification: grabbing onto the big toes of the feet
Pose Type: supine, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclined Star Pose

Supta Tarasana

(SUP-tuh tah-RAHS-uh-nuh)

Pose Type: supine, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Padayoragrai or Padayoragre (toes/feet)

Happy Baby Pose

Sukha Balasana

(SUK-uh bahl-AHS-uh-nuh)

Also Known As: Happy Baby Pose (Ananda Balasana)
Modification: arms crossed, grabbing onto the outside edges of the feet
Pose Type: supine, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclined One Hand to Foot Pose

Supta Eka Hasta Padasana

(SUP-tuh EY-kuh HUH-stuh puh-DAHS-uh-nuh)

Modification: grabbing onto the back foot, heel to the sitting bone, toes pointed to the floor
Pose Type: supine, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclined One Hand to Foot One Leg Behind the Head Pose in Infinity Pose

Supta Eka Hasta Pada Eka Pada Shirshasana in Anantasana

(SUP-tuh EY-kuh-HUH-stuh PUH-duh EY-kuh PUH-duh sheer-SHAS-uh-nuh in uhn-uhnt-AHS-uh-nuh)

Modification: bottom knee to the floor, toes pointing up to the sky
Pose Type: supine, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One Leg Behind the Head in Infinity Pose

Eka Pada Shirshasana in Anantasana

(EY-kuh PUH-duh sheer-SHAHS-uh-nuh in uhn-uhnt-AHS-uh-nuh)

Modification: bottom heel toward the hip
Pose Type: supine, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

[ONE AND BOTH FEET BEHIND THE HEAD](#)

Pose Dedicated to Bhairava in Half Upward Facing Western Intense Stretch 2

Bhairavasana in Ardha Urdhva Mukha Paschimottanasana 2

(b-eye-ruh-VAHS-uh-nuh in UHR-duh OORD-vuh MUK-uh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Pose Dedicated to Bhairava in Half Upward Facing Forward Bend 2
Modification: 1. front view
2. back view
Pose Type: supine, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Hands Bound Yogic Sleep Pose

Baddha Hasta Yoganidrasana

(BUH-duh HUH-stuh yo-guh-ni-DRAHS-uh-nuh)

Modification: hands bound
Pose Type: supine, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

HORIZONTAL SPLITS

Reclined Angle Pose

Supta Konasana

(SUP-tuh ko-NAHS-uh-nuh)

Modification: back flat on the floor, feet lifted off the floor, grabbing onto the big toes
Pose Type: supine, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclined Angle Pose

Supta Konasana

(SUP-tuh ko-NAHS-uh-nuh)

Modification: back flat on the floor, toes to the floor, grabbing onto the outside edges of the feet
Pose Type: supine, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclined Angle Pose

Supta Konasana

(SUP-tuh ko-NAHS-uh-nuh)

Modification: back flat on the floor, feet lifted off the floor, arms straight out to the sides, palms down to the floor
Pose Type: supine
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Sideways Reclined Angle Pose

Parshva Supta Konasana

(PAHRSH-vuh SUP-tuh ko-NAHS-uh-nuh)

Modification: back flat on the floor, head turning to side Side 1: leg in the air; arm straight on the floor, palm facing up

Side 2: leg on the floor, grabbing onto the big toe

Pose Type: supine, twist

Drishti Point: Hastagrai or Hastagre (hands)

Revolved Half Bound Reclined Angle Pose

Parivritta Ardha Baddha Supta Konasana

(puh-ri-VRIT-uh UHR-duh BUH-duh SUP-tuh ko-NAHS-uh-nuh)

Modification: both legs straight Side 1: leg pointing to the sky; arm wrapping around the back, hand to the inside of the hip on the opposite side

Side 2: leg on the floor, opposite hand grabbing onto the foot

Pose Type: supine, twist, binding

Drishti Point: Hastagrai or Hastagre (hands), Padayoragrai or Padayoragre (toes/feet)

ONE LEG STRAIGHT TO THE SKY, ONE LEG CROSSED OVER

Upward Facing Western Intense Stretch

Urdhva Mukha Paschimottanasana

(OORD-vuh MUK-uh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Upward Facing Forward Bend
Modification: legs crossed, one arm threaded through the legs, other hand to the center of the chest
Pose Type: supine, forward bend, twist
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Padayoragrai or Padayoragre (toes/feet)

Reclined Hands Bound Pose Dedicated to Astavakra

Supta Baddha Hasta Ashtavakrasana

(SUP-tuh BUH-duh HUH-stuh uhsh-tuh-vuh-KRAHS-uh-nuh)

Also Known As: Reclined Hands Bound Eight Angle Pose
Modification: ankles crossed
Pose Type: supine, forward bend, twist, binding
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE KNEE BENT TO THE BACK, OTHER LEG STRAIGHT

One-Legged Reclined Hero Pose

Eka Pada Supta Virasana

(EY-kuh PUH-duh SUP-tuh veer-AHS-uh-nuh)

Modification: straight leg lifted, fingers interlocked on the back of the thigh
Pose Type: supine, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Reclined Hero Pose

Eka Pada Supta Virasana

(EY-kuh PUH-duh SUP-tuh veer-AHS-uh-nuh)

Modification: leg straight out to the side, grabbing onto the outside edge of the foot
Pose Type: supine, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Reclined Hero Pose

Eka Pada Supta Virasana

(EY-kuh PUH-duh SUP-tuh veer-AHS-uh-nuh)

Modification: leg straight on the floor, toes flexed in; arms straight out to the sides, palms facing up
Pose Type: supine
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

ONE KNEE BENT TO THE BACK, OTHER LEG BENT

One-Legged Reclined Hero Pose

Eka Pada Supta Virasana

(EY-kuh PUH-duh SUP-tuh veer-AHS-uh-nuh)

Modification: Leg 1: in Hero Pose (Virasana)
Leg 2: knee up to the sky, heel to the sitting bones; arms up over the head, palms facing up
Pose Type: supine
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

One-Legged Reclined Hero Pose

Eka Pada Supta Virasana

(EY-kuh PUH-duh SUP-tuh veer-AHS-uh-nuh)

Modification: Leg 1: in Hero Pose (Virasana)
Leg 2: knee toward the chest, toes flexed in; fingertips interlocked on top of the knee
Pose Type: supine, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Half Bound Angle Pose in One-Legged Reclined Hero Pose

Ardha Baddha Konasana in Eka Pada Supta Virasana

(UHR-duh BUH-duh ko-NAHS-uh-nuh in EY-kuh PUH-duh SUP-tuh veer-AHS-uh-nuh)

Modification: arms up over the head, palms facing upward
Pose Type: supine
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclined Hero Pose

Supta Virasana

(SUP-tuh veer-AHS-uh-nuh)

Also Known As: Bed Pose B (Paryankasana B)
Modification: arms up over the head, palms facing upward
Pose Type: supine
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

TOES TURNED OUT TO THE SIDE: ONE KNEE BENT TO THE BACK, OTHER LEG BENT

Reclined One-Legged Thunderbolt Pose

Supta Eka Pada Vajrasana

(SUP-tuh EY-kuh PUH-duh vuhj-RAHS-uh-nuh)

Modification: Leg 1: in Thunderbolt Pose (Vajrasana)
Leg 2: knee up to the sky, heel to the sitting bones; arms up over the head, fingers interlocked, palms facing out
Pose Type: supine
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclined One-Legged Thunderbolt Pose

Supta Eka Pada Vajrasana

(SUP-tuh EY-kuh PUH-duh vuhj-RAHS-uh-nuh)

Modification: Leg 1: in Thunderbolt Pose (Vajrasana)
Leg 2: knee up to the sky, sole of the foot to the thigh; arms up over the head, fingers interlocked, palms facing out

Pose Type: supine

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclined One-Legged Thunderbolt Pose

Supta Eka Pada Vajrasana

(SUP-tuh EY-kuh PUH-duh vuhj-RAHS-uh-nuh)

Modification: Leg 1: in Thunderbolt Pose (Vajrasana)
Leg 2: knee bent at 90 degrees, heel off the floor; arms up over the head, fingers interlocked, palms facing out

Pose Type: supine

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclined Complete Thunderbolt Pose

Supta Paripurna Vajrasana

(SUP-tuh puh-ri-POOR-nuh vuhj-RAHS-uh-nuh)

Modification: arms up over the head, fingers interlocked, palms facing out
Pose Type: supine
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

TOES TURNED OUT TO THE SIDE: ONE KNEE BENT TO THE BACK, OTHER LEG STRAIGHT & FOREARM POSES

Reclined One-Legged Thunderbolt Pose

Supta Eka Pada Vajrasana

(SUP-tuh EY-kuh PUH-duh vuhj-RAHS-uh-nuh)

Modification: leg straight to the floor, toes flexed in; arms up over the head, fingers interlocked, palms facing out

Pose Type: supine
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclined One-Legged Thunderbolt Pose

Supta Eka Pada Vajrasana

(SUP-tuh EY-kuh PUH-duh vuhj-RAHS-uh-nuh)

Modification: leg straight and lifted off the floor by using a Yoga strap
Pose Type: supine
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclined One-Legged Thunderbolt Pose

Supta Eka Pada Vajrasana

(SUP-tuh EY-kuh PUH-duh vuhj-RAHS-uh-nuh)

Modification: forearms to the floor in a backbend, one leg straight to the floor, toes flexed in, other leg in Thunderbolt Pose (Vajrasana)
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclined Complete Thunderbolt Pose

Supta Paripurna Vajrasana

(SUP-tuh puh-ri-POOR-nuh vuhj-RAHS-uh-nuh)

Modification: forearms to the floor in a backbend
Pose Type: seated, backbend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

VERTICAL SPLITS: SCISSOR LEGS—BOTH KNEES BENT & ONE KNEE BENT, ONE LEG STRAIGHT

Reclining Both Hands to the Leg Pose

Supta Dwi Hasta Padasana

(SUP-tuh DWI-huh-stuh puh-DAHS-uh-nuh)

Modification: elbows bent, triceps on the floor, fingers interlocked behind the back of the thigh Leg 1: slight knee bend, foot flat on the floor Leg 2: knee bent at 90 degrees, knee toward the chest
Pose Type: supine, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows) or Padayoragrai or

Padayoragre (toes/feet)

Reclining Half One Leg Extended Pose

Supta Ardha Utthita Eka Padasana

(SUP-tuh UHR-duh UT-ti-tuh EY-kuh puh-DAHS-uh-nuh)

Modification: palms flat to the floor on the sides.
Leg 1: straight up to the sky Leg 2: knee bent, foot flat to the floor, heel to the sitting bones
Pose Type: supine, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Padayoragrai or Padayoragre (toes/feet)

Reclining Both Hands to the Leg Pose

Supta Dwi Hasta Padasana

(SUP-tuh DWi-huh-stuh puh-DAHS-uh-nuh)

Modification: grabbing onto the calf muscle, elbows bent Leg 1: straight and toward the chest Leg 2: knee bent, foot flat to the floor
Pose Type: supine, forward bend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Padayoragrai or Padayoragre (toes/feet)

Reclining Both Hands to the Leg Pose

Supta Dwi Hasta Padasana

(SUP-tuh DWI-huh-stuh puh-DAHS-uh-nuh)

Modification: grabbing onto the calf muscle, elbows bent at 90 degrees, nose toward the shin Leg 1: straight and toward the chest Leg 2: knee bent, foot flat to the floor

Pose Type: supine, forward bend, core

Drishti Point: Padayoragrai or Padayoragre (toes/feet), Nasagrai or Nasagre (nose)

VERTICAL SPLITS: SCISSOR LEGS—BOTH LEGS STRAIGHT

Reclining One Leg Extended Pose

Supta Utthita Eka Padasana

(SUP-tuh UT-ti-tuh EY-kuh puh-DAHS-uh-nuh)

Modification: palms flat to the floor on the sides Leg 1: straight up to the sky Leg 2: straight out on

the floor, toes flexed in
Pose Type: supine, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Padayoragrai or Padayoragre (toes/feet)

Reclining Big Toe Pose 1

Supta Padangushtasana 1

(SUP-tuh puhd-uhng-goosh-TAHS-uh-nuh)
Modification: back flat on the floor
Pose Type: supine, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Padayoragrai or Padayoragre (toes/feet)

Reclining Big Toe Pose 1

Supta Padangushtasana 1

(SUP-tuh puhd-uhng-goosh-TAHS-uh-nuh)
Modification: head and shoulders off the floor, nose to the shin

Pose Type: supine, forward bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Nasagrai or Nasagre (nose)

Reclining Both Hands to the Leg Pose

Supta Dwi Hasta Padasana

(SUP-tuh DWI-huh-stuh puh-DAHS-uh-nuh)
Modification: head and shoulders off the floor, nose to the shin, toes pointed
Pose Type: supine, forward bend, core
Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclining One Hand to the Leg Pose

Supta Eka Hasta Padasana

(SUP-tuh EY-kuh HUH-stuh puh-DAHS-uh-nuh)
Modification: hand to opposite leg, head and shoulders off the floor, nose to the shin, toes flexed in
Pose Type: supine, forward bend, core

Drishti Point: Nasagrai or Nasagre (nose), Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Reclining One Leg Extended Pose

Supta Utthita Eka Padasana

(SUP-tuh UT-ti-tuh EY-kuh puh-DAHS-uh-nuh)

Modification: palms flat to the floor on the sides, head and shoulders off the floor, nose to the knee, bottom toes flexed in

Pose Type: supine, forward bend

Drishti Point: Nasagrai or Nasagre (nose)

BOTH LEGS STRAIGHT AND TOGETHER

Reclining Legs Extended Pose

Supta Utthita Padasana

(SUP-tuh UT-ti-tuh puh-DAHS-uh-nuh)

Modification: arms crossed in front of the chest

Pose Type: supine
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Padayoragrai or Padayoragre (toes/feet)

Reclining Legs Extended Pose

Supta Utthita Padasana

(SUP-tuh UT-ti-tuh puh-DAHS-uh-nuh)

Modification: arms straight up to the sky
1. arms and legs perpendicular to the floor
2. arms and legs slightly lowered toward the floor

Pose Type: supine
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Padayoragrai or Padayoragre (toes/feet), Hastagrai or Hastagre (hands)

Half Upward Facing Western Intense Stretch 2

Ardha Urdhva Mukha Paschimottanasana 2

(UHR-duh OORD-vuh MUK-uh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Half Upward Facing Forward Bend, Upward Facing Western Intense Stretch Pose 2 Prep. (Urdhva Mukha Paschimottanasana 2 Prep.)

Modification: grabbing onto the calf muscles

Pose Type: supine, forward bend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Padayoragrai or Padayoragre (toes/feet)

Upward Facing Western Intense Stretch 2

Urdhva Mukha Paschimottanasana 2

(OORD-vuh MUK-uh puhsh-chi-mo-tahn-AHS-uh-nuh)

Also Known As: Upward Facing Forward Bend 2

Pose Type: supine, forward bend

Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Padayoragrai or Padayoragre (toes/feet)

[SUPINE LOTUS & CORPSE POSE]

Reclining Lotus Pose

Supta Padmasana

(SUP-tuh puhd-MAHS-uh-nuh)

Also Known As: Fish Pose (Matsyasana)
Modification: back flat on the floor; arms up over the head, palms facing up
Pose Type: supine
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

Side Corpse Pose

Parshva Shavasana

(PAHRSH-vuh shuh-VAHS-uh-nuh)

Also Known As: Belly Twist (Jataraparivritti)
Modification: 1. head turned to the opposite side of feet
2. looking straight ahead
Pose Type: supine, side bend
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows), Hastagrai or Hastagre

(hands)

Corpse Pose

Shavasana

(shuh-VAHS-uh-nuh)

Also Known As: Dead Pose (Mrtasana)
Pose Type: supine
Drishti Point: Bhrumadhye or Ajna Chakra (third eye, between the eyebrows)

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GLOSSARY

A

adho mukha = having the face downward

agni = fire

ahimsa = nonviolence; the word has not merely the negative and restrictive meaning of "nonkilling or nonviolence," but the positive and comprehensive meaning of "love embracing all creation"; one of the *yamas*

ajna = to command

ajna chakra = energy or command *chakra*, energy center/the nerve plexus located between the eyebrows, the third eye, the seat of command, the sixth *chakra*

akarna = near the ear

akuncha = contraction or bend

alamba = a prop or support

anahata = unstruck

anahata chakra = spiritual heart *chakra*, energy center situated near the heart, the nervous plexus situated in the cardiac region, the fourth *chakra*

ananda = joy, happiness, bliss, ecstasy

ananta = infinite, without end; a name of Vishnu and also of Vishnu's couch, the serpent Sesa

anga = limb, points, step, the body; a limb or a part of the body; a constituent part

angushta (angula) = finger or digit, the thumb

anjali = hands held together as in prayer

anjali-mudra = the gesture of *anjali*

Anjaneya = son of Anjani (Hanuman's mother's maiden name is Anjani)

antara = within, interior

apanasana = pelvic floor yoga pose

aparigraha = non-greediness, freedom from greed, desire, hoarding or collecting; one of the *yamas*

Arani = Hindu Goddess of Fire

aranya = wild animal

asana = a physical posture, the third limb or stage of yoga, originally this meant "meditation posture" or "seat"

ashta (asta, astau) = eight

Ashtavakra = one having eight bends (crooked in eight places), in reference to a Hindu Sage who was born with eight physical deformities in his body, and went on to become a spiritual preceptor of King Janaka of Mitila

ashva (asva) = horse

ashva sanchala = horse, riding posture

asteya = nonstealing, freedom from avarice; one of the *yamas*

atman = individual soul, the true self, consciousness; the term Vedanta uses instead of *purusha*

avabhinna = broken

avatara = divine manifestation, descent, advent or incarnation of God. There are ten avataras of Vishnu: Matsya (the Fish), Kurma (the Tortoise), Varaha (the Boar), Narasimha (the Man-Lion) Vamana (the Dwarf), Parasurama, Rama (hero of the epic *Ramayana*), Krishna (hero of the epic *Mahabharata*, who related the *Bhagavad Gita*), Balarama, and Kalki

B

baddha = bound
baka = crane, heron, a wading bird
bala = young, childish, not fully grown
bandha = a bond, tying, energetic lock, contraction, bondage, or fetter; a posture in which certain organs or body parts are contracted and controlled
Benu = the mythological bird of ancient Egypt symbolic of rebirth and creation, also associated with the Sun
bhaga = strength
Bhagavad Gita = one of India's most beloved and sacred texts, the divine song of the Lord, the most influential of all *shastras*; the epic story of Arjuna, a warrior prince who confronts moral dilemmas through sacred dialogues with Krishna (one of Lord Vishnu's Avatars) and is led to a better understanding of reality by learning the teachings of Samkhya, Yoga, and Vedanta
Bhagavata Purana = also called Shrimad Bhagavatam, a *purana* that deals with devotion to the Supreme Being in the form of Lord Vishnu and describes some of the avatars of Vishnu, including Krishna
bhairava = terrible, gruesome, formidable; one of the fierce manifestations of Shiva
bhakti = devotion, worship or love; from *bhaj*, (to divide), the belief that there is an eternal divide between the Supreme Being and the world that cannot be overcome through knowledge, hence the Supreme Being must be met with an attitude of devotion
bhangi = position
Bharadvaja (Bharadwaja) = a Vedic *rishi*, great warrior described in the *Mahabharata*, Pindola Bharadvaja was one of four *arhats* asked by Buddha to stay on earth to propagate Buddhist law, or *dharma*
bharman = load, nourishment, care, burden, maintenance load
bheka = a frog
bherunda = terrible, frightful; it also means a species of a bird or a name of a yogi
bhuja = arm or shoulder
bhujanga (bhujagga) = serpent, snake
bhuja-pida = pressure on the arm or shoulder
bidala = cat
bija-mantra = a mystical syllable with a sacred prayer repeated mentally during *pranayama*, and the seed thus planted in the mind germinates into one-pointedness
bindu (bindhu) = seed, point, dot, the creative potency of anything where all energies are focused, the third eye
bitila = cow
Brahma = a five-headed first deity of the Hindu Trinity; the Supreme Being, the creator; responsible

for the creation of the world, he is the first being to appear at the dawn of each universe to create it based on its subconscious conditioning: the Brahma of the present universe is called Prajapati (progenitor), the predecessor of humankind

brahmachari = a religious student vowed to celibacy and abstinence; one who is constantly moving (*charin*) in *brahman* (The Supreme Spirit); one who sees divinity in all

brahmacharya = chastity or teacher of the soul, abstinence, a life of celibacy, religious study and self-restraint, recognition of Brahma in everything; one of the *yamas*

Brahman = the absolute, or divinity itself, infinite consciousness, universal soul, deep reality, the reality that cannot be reduced to a deeper layer; the Supreme Being, the cause of the Universe, the all-pervading spirit of the Universe

Buddha = enlightened one

C

chakora = a type of bird like a partridge (Greek partridge), moonbeam bird, said to feed on moonbeams

chakra = literally, a wheel or circle, the wheel of a wagon; metaphorically, psycho-energetic subtle centers of the subtle body in which energy flows, located along the spine, believed to transform cosmic energy into spiritual energy when activated. Energy (*prana*) is said to flow in the human body through three main channels (*nadis*), namely, *sushumna*, *pingala,* and *ida*; *sushumna* is situated inside the spinal column. *Pingala* and *ida* start respectively from the right and the left nostrils, move up to the crown of the head, and course downward to the base of the spine. These two *nadis* intersect with each other and also the *sushumna*. These junctions of the *nadis* are known as *chakras* of the flywheels, which regulate the body mechanism. The important *chakras* are: (a) *muladhara* (*mula* = root, source; *adhara* = support, vital part) situated in the pelvis, above the anus; (b) *svadhishtana* (*sva* = vital force, soul; *adhishtana* = seat of abode) situated above the organs of gestation; (c) *manipuraka* (*manipura* = navel) situated in the navel; (d) *manas* (mind) and (e) *surya* (the sun) which are situated between the navel and the heart; (f) *anahata* (= unbeaten) situated in the cardiac area; (g) *vishuddha* (= pure) situated in the pharyngeal region; (h) *ajna* (= command) situated between the eyebrows; (i) *sahasrara* (= a thousand) which is called a thousand-petaled lotus in the cerebral cavity; and (j) *lalata* (= forehead) which is at the top of the forehead.

chalana = to churn

chamatkara = delight or savoring; the refined pleasure that a connoisseur takes in a lovely poem, painting, or fine wine. Chamatkarasana is translated as "Wild Thing Pose" probably because the posture looks like someone who has just seen something so amazing and beautiful that they are "bowled over" or "blown away."

chandra (candra) = moon

chapa = bow, rainbow, arc

chatur (chatuari, chatura) = four

chatush = four times

chatushpada = quadruped

chikitsa = therapy

chitta = consciousness that comprises mind, intellect, the restraint of consciousness; a mind in its total or collective sense, being composed of three categories: (a) mind, having the faculty of attention, selection, and rejection; (b) reason, the decisive state which determines the distinction between things; and (c) ego, the I-maker, the aggregate of intellect (*buddhi*), egoity (*ahamkara*) and thinking agent (*manas*)

chittavritti (chitta-vritti, chitta vritti) = an imbalance of the mental state, fluctuations of the mind, movement of the consciousness; a course of behavior, mode of being, condition, or mental state

cibi = chin

D

dakshina = the right side

danda = stick, staff (refers to the spine)

dasha = ten

dhanu (dhanura) = bow

dharana = concentration, sixth limb of Ashtanga yoga, orienting the mind toward a single point

dhyana = generally translated as meditation, freedom from attachments, an ongoing stream of awareness from the meditator toward the object of meditation, and of information from the object toward the meditator; the seventh limb of Ashtanga yoga

dhyana-yoga = yoga of meditation

Diti = the mother of the demons, also called Daityas

drishti = focal point, perception or looking place, "view" or "sight": yogic gazing, such as at the tip of the nose or the spot between the eyebrows

dur = difficult

Durvasa = a very irascible, notoriously angry sage

dvija = twice-born

dwi (dve) = two

dwihasta = two hands

dwipada = two feet or legs

E

eka (ekam) = one

eka-pada (ekapada) = one leg, one-legged, one-footed

G

gaja = elephant

Galava = the pupil or son of Viswamitra

ganda = the cheek or side of the face including the temple

gandha = subtle earth element; quantum of (*tanmatra*) earth; smell

gandha-bherunda = a species of bird, also a two-headed mythological bird that embodies immense powers and destructive forces

garbha = an infant, womb, fetus

garbha kosha = uterus
garbha pinda (garbha-pinda) = fetus, embryo in the womb
Garuda = Hindu deity, half-man half-eagle, fierce bird of prey, vehicle (*vahana*) of Lord Vishnu, king of birds; Garuda is represented as a vehicle of Vishnu and as having a white face, an aquiline beak, red wings, and a golden body
gava = cow
Gheranda = author of *Gheranda Samhita*, an important text on Hatha Yoga which he taught to Chanda Kapali
Gheranda Samhita = a Tantric treatise describing Hatha Yoga written by the sage Gheranda in the 15th century
Gitananda = a well-known *yogi*, living in the 20th century CE
go = cow
godha = iguana
gomukha = cow face, face resembling a cow, cow head; it is also a kind of musical instrument, narrow at one end and broad at the other, like the face of a cow
Goraksha (Goraksha, Gorakshanath) = an 11th to 12th Century Hindu Nath*yogi*, one of Matsyendranath's two most important disciples; tending to or breeding cattle, cowherd
graiva = a chain worn around the neck of an elephant; necklace or collar
guru = "he who is heavy, weighty," a spiritual teacher or preceptor, one who illuminates the darkness of spiritual doubt, one who hands down a system of knowledge to a disciple; heavy one or dark/light, dispeller of darkness, one who helps to gain knowledge
guru-shishya parampara = the tradition of teaching dating back centuries, where a guru imparts his knowledge to his students

H

ha = first syllable of the word *hatha*, which is composed of the syllables *ha* (= sun) and *tha* (= moon); the object of Hatha Yoga is to balance the flow of solar and lunar energy in the human system
hala = plow
hamsa (hansa) = a swan; a metaphor for the soul; a vehicle of Lord Brahma; the name of the mantra by which *prakriti* permeates the universe; also refers to the breath as it moves within the body
Hanuman = a powerful monkey chief, a mythological entity, of extraordinary strength and prowess, whose exploits are celebrated in the epic *Ramayana*; he was the son of Anjana and Vayu, the god of wind, monkey-god, hero of *Ramayana*, egoless superhero and perfect devotee, who resembles a monkey leaping
hasta = hand
hastasana = forward stretch of the arms
hatha = force; the word *hatha* is used adverbially in the sense of "forcibly" or "against one's will"; Hatha Yoga is so called because it prescribes rigorous discipline in order to find union with the Supreme
hatha-vidya = the science of Hatha Yoga
Hatha Yoga = "Forceful Yoga," a major branch of yoga, developed by Goraksha and other adepts c.

1000–1100 CE, emphasizing the physical aspects of the transformative path, notably postures (*asana*), cleansing techniques (*shodhana*) and breath (*pranayama*); literally, sun/moon yoga (*ha* = sun, *tha* = moon), it emphasizes balancing the solar and lunar energy channels in the body. Hatha Yoga shifted the focus away from the mysticism and philosophy of the older Upanishadic types of yoga toward using the body as a tool; combines opposing forces to achieve balance, sighting the soul through the restraint of energy, yoga concerned with mastering control over the physical body as a path to enlightenment (self-realization)

Hatha Yoga Pradipika = a celebrated treatise on yoga compiled in the 12th century by the sage Svatmarama

himsa = violence, killing

Hindola = cradle or swing; also Hindu Religious Festival associated with baby Krishna being rocked in a decorated swing

I

ida = a *nadi*, a channel through which *prana* moves, starting from the left nostril, then moving to the crown of the head and then descending to the base of the spine on the left side; in its course it conveys lunar energy and so is called *chandra nadi,* "channel of the lunar energy"; associated with pale or blue (left/feminine)

Indra = ruler, lord of thunder, king of the heavens

indudala = crescent moon

Ishvara = God, the Supreme Being, Brahman, with form

ishvara pranidhana = one of the *niyamas*; centering on the divine, devotion or surrender to God, dedication to the Lord of one's actions and one's will

J

jalandhara bandha (jalandharabandha) = a *bandha* that locks the throat, chin lock; straightening the back of the neck by keeping your head straight while slightly receding your chin; a yoga pose where the neck and throat are contracted and the chin is rested in the notch between the collarbones at the top of the breast-bone

janu = knee

jatara = stomach, belly, or the interior of anything

jatara-parivartana = an action of an *asana* (yoga pose) in which the abdomen is made to move to and fro

Jnana Yoga = the emphasis is on questioning, contemplation, and meditation as a path to enlightenment, yoga that seeks to teach the identity of the individual self (*atman*) and the infinite consciousness (*brahman*)

K

kaka = crow

Kala Bhairava = Shiva in his terrible or gruesome form as Destroyer of the Universe

Kali = Hindu Goddess of Time and Change

Kamala = Hindu Goddess of Wealth, "One of the Lotus"
Kamalamuni = one of the 18 Siddhars believed to be over 4,000 years old
kanda = a bulbous root, a knot, egg, stem, stalk, trunk; the *kanda* is a round shape of about four inches situated twelve inches above the anus and near the navel, where the three main *nadis* (*sushumna*, *ida*, and *pingala*) unite and separate; it is covered as if with a soft white piece of cloth
kapala = skull
kapalabhati = bellow-like breathing technique with sharp, quick inhalations and exhalations; a cleansing ritual for the respiratory tract, lungs, and sinuses; skull shining
kapila = a sage or *rishi*, the founder of the Samkhya system, one of the six orthodox systems of Hindu philosophy, noted in the *Bhagavad Gita* and *Bhagavata Purana* as a manifestation of the Supreme Being
kapinjala = a kind of partridge, the *chataka* bird, which is supposed to drink only raindrops
kapota = dove, pigeon
kapya = monkey
karanda = duck
karani = making, doing
karma (karma law) = action, activity of any kind, including ritual acts; said to be binding only so long as engaged in a self-centered way; the law of cause and effect, or the movement toward balanced consciousness: everything that you do, say, or think has an immediate effect on the universe that will reverberate back to you in some way
karma yoga (karma-yoga) = yoga of action, path to enlightenment is through selfless acts and service to others, the achievement of union with the Supreme Universal Soul through action; in its original Vedic sense, Karma Yoga is any yoga that employs ritualistic action, such as *asana*, meditation, or *mantra*, to produce spiritual gain. The term excludes Jnana Yoga and Bhakti Yoga, which are thought to operate beyond spiritual gain
karna = the ear; also one of the heroes in the *Mahabharata*
karna-pida = pressure around the ear, blocked ears
Kashyapa = an ancient Hindu sage, husband of Aditi and Diti; he is one of the lords or progenitors of living things
khaga = bird
khanjana = a wagtail bird
Khimi Karani = mythological pond of milk in which Garuda drowned a snake to give birth to the Shami Tree
kona = angle
Konganar = one of the Siddhars, student of Siddhar Bogar
Koormamuni = Hindu Sage
Korakar = one of the 18 Siddhars, a well-known sage, author of works on philosophy, medicine, and alchemy
Koundinya (Kaundinya) = Hindu sage, Vedic scholar, and a descendant of Vasishta
kriya = act, action, cleansing
kriya yoga = the yoga of action and participation in life, preliminary yoga consisting of simplicity (*tapas*), the reading of sacred texts (*svadhyaya*), and acceptance of the existence of a Supreme Being (*ishvarapranidhana*); also, a Tantric mode of yoga using breath, *mantra*, and visualization.

krakacha = a saw
krounch (krouncha, krauncha) = heron
kukkuta = rooster, cock
kulpa = ankle
kundalini = a coiled female serpent; the divine cosmic energy, the obstacle that closes the mouth of *sushumna*; the rising of *shakti* in the *sushumna*; this force or energy is symbolized as a coiled and sleeping serpent lying dormant in the lowest nerve center at the base of the spinal column, the *muladhara-chakra*. This latent energy has to be aroused and made to ascend the main spinal channel, the *sushumna* piercing all the *chakras* right up to the *sahasrata*, the thousand-petaled lotus in the head. Then the *yogi* is in union with the Supreme Universal Soul.
Kundalini Yoga = a mode of yoga that focuses on the raising of the life force
kunja = grove, alcove
kunta = spear, lance
kurma (koorma) = a tortoise, it is also the name of one of the subsidiary vital airs whose function is to control the movements of the eyelids to prevent foreign matter or light that is too bright going into the eyes

L

laghu = little, small, simple; it also means "handsome"
lasya = beauty, happiness, and grace; also a dance performed by Goddess Parvati in response to her husband Shiva's *tandava*
Linga (Lingam, Shivalinga) = symbol of union and origin of all life associated with Lord Shiva and Goddess Shakti
lola = tremulous, dangling, pendant; charm, swing; swinging like a pendulum, moving to and fro

M

madhya (madya) = middle of the body, central
maha = great, mighty, powerful, lofty, noble
maha bandha = the great lock
maha mudra = the great seal
Mahabharata = the celebrated epic, the largest piece of literature created by humankind, authored by Rishi Vyasa and containing the *Bhagavad Gita*, dating to the first century BCE; *dharma shastra* (scripture dealing with right action), which comes to the conclusion that however hard you try, you can never be completely right
makara = a mythological sea creature, who is the vehicle of the river Goddess Ganga; a crocodile
makshika = fly
mala = a garland or a wreath, often of prayer beads or flowers
manas-chakra = nervous plexus situated between the navel and the heart
mandala = a circle ambulation, a circular drawing or design that exemplifies sacred geometry that draws your eye to the center and is used as a focal point while meditating; it also means a "collection," a division of Rig Veda
manduka = frog

manipuraka = a nervous plexus situated in the region of the navel; the third *chakra*, the navel *chakra*, the fire energy center, site of the sense of fear and apprehension

mantra = a mystical syllable designed to create and alter reality by influencing the vibrational patterns that make up creation; a sacred sound or phrase that has a transformative effect

Marichi = a sage, son of Brahma, the great-grandfather of Manu, the Vedic Adam and the father of humanity, the creator of the universe, and the father of Kasyapa

marjarai = cat

matsya = fish

Matsyendra = a Hindu sage and one of the first teachers of Hatha Yoga; a legend, king or lord of the fish

mayura = peacock

moksha (moksha) = liberation from bondage, final emancipation of the soul from recurring births

mrita (mrta, mritra) = dead, corpse

mudra = a seal; a pleasant hand gesture or seal posture; directs the life current (life energy) through the human body, usually a combination of *asana*, *pranayama*, and *bandha*

mukha = face

mukta = free, unbound, liberated

mukti = release, liberation, final absolution of the soul from the chain of birth and death

mula = root, foundation, bottom; a yoga pose where the body from the anus to the navel is contracted and lifted toward the spine

mula bandha (mula-bandha) = rectal lock, root lock; contraction of the pubococcygeus, a yoga pose where the body from the anus to the navel is contracted and lifted up and toward the spine

muladhara = root foundation, the name of the first *chakra*

muladhara chakra = the first *chakra*, the base *chakra*, the earth energy center situated at the root of the spine, nervous plexus situated in the pelvis above the anus at the base or root of the spine, the main support of the body that controls sexual energy

mushti = fist

mutra kosa = bladder

N

nabi = navel

nadi = river; nerve or conduit, channels that distribute energy from the *chakras* throughout the body, a tubular organ of the subtle body through which energy flows, subtle vibratory passages of psychospiritual energy; it consists of three layers, one inside the other, like insulation of an electric wire. The innermost layer is called the *sira* and the middle layer, *damani*. The entire organ as well as the outer layer is called *nadi*; they connect at special points of intensity (*chakras*).

naga = great mythological snake; one of the subsidiary vital airs that relieves abdominal pressure, causing one to belch

Nahusha = Hindu King of Aila Dynasty

nakra = crocodile

namaskar = greeting, worship, salutation with hands in prayer

namaste mudra = a *mudra* in which the hands are placed together in a prayerlike fashion to honor the

inner light
nantum = to bow with respect
nara = a man
Narasimha = an avatar of the Hindu god Vishnu in his fourth incarnation, often visualized as half-man, half-lion
nasika = nose
nata = actor, dancer, mime
Nataraj = name of Shiva as a cosmic dancer, the lord of the dancers
natya = dancing
nauka = boat
nava = boat
nava = nine
nidra = deep, dreamless sleep; the third state listed in the *Mandukya Upanishad.* The others are waking state (*jagrat*), dream (*susupt*), and consciousness (*turiya*); also the fourth fluctuation of the mind listed by Patanjali in *Yoga Sutra* I.6 (the others are correct cognition, wrong cognition, perceptualization, and memory).
nindra (nantra) = sage, praise, wonder
nindra (nitara) = standing firm, standing
nir = without
nira = water
niralamba = self-supported, independent, without support
niyama = self-restraint, personal observances, self-purification by discipline, the Vedic system of logic; the second stage or limb of Ashtanga Yoga mentioned by Patanjali; five personal disciplines, as defined by Patanjali in his *Yoga Sutras*: *shaucha, santosha, tapas, svadhyaya,* and ishvarapranidhana

O

om (aum) = the original *mantra* symbolizing the ultimate reality, the sacred syllable emitted by the Supreme Being, the sound that produces all other sounds and into which all other sounds return. Like the Latin word *omne*, the Sanskrit work *aum* means "all" and conveys concepts of Omnipotence, Omnipresence, and Omniscience.

P

pada = foot or leg; also a part of a book or text
pada-hasta = hand(s)-to-feet
padangushta = big toe
padma = lotus
pakshaka = wing
pakshi = bird
pancha = five
parampara = tradition, uninterrupted series, convention, a succession
parigha = iron bar used for locking, bolting, or shutting a gate

parigraha = hoarding, possessiveness
paripurna = full, entire, complete
parivartana = turning around, revolving
parivartana-pada = with one leg turned around
parivid = twined, twisted around
parivritta = revolved, turned around
parivritti = crossed or with a twist, turning, rolling
parshva = the side, flank, lateral
parshvaika = *parsva* (side) + *eka* (one)
parshvaika-pada = with one leg turned sideways
parvata = mountain
paryanka = a bed, a couch
pasa (pasha) = snare, trap, noose, fetter
paschima = the back of the whole body from head to heels, west side, western
paschimatana = intense stretch of the back side of the body from the nape to the heels
pakshya = being in or belonging to the wings
patan = to collapse
Patanjali = a sage, the author of the *Yoga Sutras*, a treatises on Sanskrit and *Ayurveda*; the founder of yoga, most likely lived between 200 BCE and 300 CE; a manifestation of the serpent of infinity
pavanamuktasana = wind release pose
perineum = the area between the thighs, behind the genitals, and in front of the anus
pichamayura = peacock with stretched feathers
pid = squeeze
pida = pain, discomfort, pressure
pincha = a feather of a tail, the chin
pinda = a fetus, an embryo in an early stage of gestation, ball, the body
pingala = a channel on the right side of the spine through which *prana* moves, associated with reddish color, a *nadi* or channel of masculine energy starting from the right nostril, then moving to the crown of the head and then downward to the base of the spine; as the solar energy flows through it, it is also called *surya-nadi*
pitam = stool, chair
plavana = jump through
pliha = the spleen
poorna = full
prana = breath, life, vitality, wind, energy, strength; connotes the soul, life force or inner breath; sometimes refers to anatomical or outer breath; vital upward energy current
pranayama = breath control, energy control through breathing, consisting of conscious inhalation (*puraka*), retention (*kumbhaka*), and exhalation (*rechaka*), breath extension, breathing exercises to harmonize the flow of life force; the fourth stage or limb of Ashtanga Yoga
prapada = tip of the feet
prasarita = spread, stretched out
pratyahara = internalization of the senses, independence from sensory stimuli; the fifth stage or limb of Ashtanga Yoga, withdrawal and emancipation of the mind from the domination of the senses and

sensual objects; withdrawal of the mind, mental detachment from the external world

prishta = back

Punakeesar (Punnakeesar) = one of the Siddhars, a *guru* of Machamuni (also referred to as Matsyendra)

pungu = Telugu word for "wounded"

purna = complete

purva = eastern

purvottana = intense stretch of the front side of the body

R

raja = king, royal

raja yoga (raja-yoga) = royal yoga; a term generally applied to the three higher limbs of Ashtanga Yoga, that is *dharana, dhyana,* and *samadhi*; the royal road to self-realization through the control of the mind. The achievement of union with the Supreme Universal Spirit by becoming the ruler of one's own mind by defeating its enemies, sighting the soul through a restraint of consciousness

raja-kapota (rajakapota) = king pigeon

Ramayana = literally, Rama's way; a famous ancient epic (*itihasa*) authored by Sage Valmiki that describes the life of Rama, an *avatar* of Lord Vishnu

Rig Veda = literally "Knowledge of Praise," it consists of 1,028 hymns and is the oldest known reference to *yoga* and possibly the oldest known text in the world

rishi = a Vedic seer, a liberated sage or saint, one who through suspension of the mind can see to the bottom of his heart

Ruchika (Richika, Ruschika) = name of a Hindu sage, dedicated to the grandfather of an incarnation of Vishnu

S

sa = with

sahaja = easy, natural

sahasrara chakra = energy center situated at the crown of the head, the thousand-petaled lotus in the cerebral cavity, the most important seventh *chakra* which, when uncoiled, brings the seeker to freedom

St. Brighid = known for establishing numerous monasteries

sakti = power

salamba = with support

sama = same, equal, even, upright

samadhi = "putting together": the ecstatic or state in which the mediator becomes one with the object of meditation, forgetting him/herself completely (the Supreme Spirit pervading the universe) where there is a feeling of unutterable joy and peace, absorption, ecstasy, enlightenment, self-realization; the state of meditation in which ego disappears and all becomes one; a state of absolute bliss; the eighth limb or stage of Ashtanga Yoga

samadhi yoga = yoga of absorption

samastiti = a state of balance

Sankarar = yogi from the eighth century BC
Sanskrit = the programming language used to write the operating system of the subtle body; the language of the gods
santosha (santosa) = contentment; one of the *niyamas*
sapta = seven
sarpa = serpent, snake
sarva = all, whole
sarvanga = all parts, the whole body
sasanga = rabbit
satya = truth; one of the yamas
Shesha = a celebrated serpent, said to have a thousand heads; Sesa is represented as the couch of Vishnu, floating on the cosmic ocean, or as supporting the world on his hoods; other names of Shesha are Ananta and Vasuki
setu = a bridge, dam, dike
setu-bandha = the construction of a bridge; name of an *asana* in which the body is arched
shalabha = grasshopper, locust
Shankara, Adi = world teacher, yoga master, propounder of Jnana Yoga and Advaita Vedanta; author of commentaries on the *Brahma Sutra*, the *Upanishads*, the *Bhagavad Gita* and thirty other texts; founder of ten monk orders and four large monasteries whose abbots today still carry the title Shankaracharya. His dates are disputed. Western academics often place him at 800 CE. Tradition places him at 1800 BCE. Also known as Shankaracharya or Shankara Bhagavatpada
shanti = peace
shat = six
shaucha = purity or inner and outer cleanliness; one of the *niyamas*
shava (shava) = corpse
shayana = bed, couch, sleeping
shirsha = head
Shiva (Siva) = the most Powerful God in Hinduism, the Destroyer, a name of the Supreme Being pure consciousness, Brahman with form
shvana (swana) = dog; inspiration
shvnaka = puppy dog
siddha = accomplished, fulfilled, perfected; a sage, seer, or prophet; also a semi-divine being of great purity and holiness, a perfected being, a yoga master who has become an immortal, ethereal being
siddhi = divine attribute, perfection, supernatural power, proof
simha = lion
Skanda = a name of Kartikeya, the god of war, general of the celestial army, Lord of War, second son of Lord Shiva and Godmother Uma Parvat
stamba = transition
steya = theft, robbery
sucirandra = threading the needle
sukha = ease, lightness, comfort, happiness, delight, joy, pleasure; literally, agreeable mental space
Sundaranandar = one of the eighteen Siddhars, author of numerous works on medicine

supta = lying down or sleeping, reclining, supine
surya = sun
surya yantra = sun dial
surya-chakra = nervous plexus situated between the navel and the heart
surya-nadi = the *nadi* of the Sun; another name for *pingala-nadi*
sushumna = the main *nadi* channel situated inside the spinal column, a hollow passageway between *pingala nadi* and *ida nadi* that runs through the spinal cord, and through which *kundalini* can travel once it is awakened
sutra = thread: a work consisting of aphoristic statements such as Patanjali's *Yoga Sutra*
sva = one's own, innate, vital force; soul, self
svadhyaya = education of self by study of divine literature, self-study, to study one's body, mind, intellect, and ego; one of the *niyamas*
svarga = heaven
svastika = good fortune
Svatmarama = the author of *Hatha-yoga-pradipika*, a classical textbook on Hatha Yoga
swadhishtana chakra = site of worldly desires, energy center located above the organ of generation
Swami Sivananda = a well-known *yogi* of the 20th century, founder of Sivananda Yoga
Swami Vishnu Devananda = a close disciple of Swami Sivananda

T

taal-vrksa = palm tree
tada = mountain, straight tree
tadasana-samasthiti = a state of balance; an even distribution of weight while standing
tan = stretch, lengthen out or extend
tana = to stretch out, extend
Tandava (Thandava) = sacred frantic dance representing the cosmic cycles of creation and destruction performed by the Hindu Deity Lord Shiva
tantra = thread on the loom
Tantra (Tantric) Yoga = this yoga is characterized by certain rituals designed to awaken the *kundalini*
tap = to burn, to blaze, to shine, to suffer pain, to be consumed by heat
tapa = austerity
tapas = a burning effort, glow, heat; austerity gained through the committed practice of yoga, self-discipline; practice with discipline, devotion and religiosity; one of the *niyamas*
tara = star
Taraka = a demon slain by Kartikeya, the god of war
tha = the second syllable of the word *hatha*; the first syllable *ha* stands for the sun, while the second syllable *tha* stands for the moon; the union of these two is represented in Hatha Yoga
thavali = frog in Tamil
tirieng = horizontal, oblique, transverse, reverse, upside down
tiryak= horizontally, sideways, obliquely, across
tiryang-mukha = backward facing
tittibha = a small bird living along the coastline; firefly; or insect

tola = balance, scale
tolana = weighing
tri (tri, tra) = three
tryanga = three limbs
trikona = three angle or triangle
Trivikrama = Vishnu in his fifth incarnation, The Dwarf *avatar* of Lord Vishnu, who with his three steps (*krama*) filled the earth, heaven and hell, the conqueror of three worlds
tulya = equilibrium, balance

U

ubhaya = both
uddayate = fly, soar, fly up
uddiyana = a fetter or bondage, a yogic abdominal lock; here the diaphragm is lifted high up the thorax and the abdominal organs by tilting your pelvic floor up and pulling your belly button back toward your spine; the *uddiyana-bandha,* the great bird *prana* (life), is forced to fly up through the *shushumna-nadi*; to fly up
ujjayi = a *pranayama* that produces sound in the throat with the inhalation, literally meaning "extended victory"; the lungs are fully expanded and the chest is puffed out, slow throat breathing
Upanishad = the word is derived from the prefixes *upa* (near) and *ni* (down) added to the root *shad* (to sit); it means sitting down near a *guru* to receive spiritual instruction. The *Upanishad* scriptures of ancient Hindu philosophy are the philosophical portion of the Vedas, the most ancient sacred literature of the Hindus, dealing with the nature of man and the universe and the union of the individual or self with the Universal Soul
upavishta (upavistha) = seated, sitting, with legs spread
urdhva (urdhwa) = upward, raised, elevated, inverted
urdhva-mukha = face upward
ushtra (ustra) = camel
ut = intense, a particle denoting intensity
utkata = fierce, powerful, exceeding the usual measure, excessive, squat
utpluti = lifting or pumping up
utripada = upright tripod
uttana = an intense stretch, upright
utthita = extended, risen or rising, raised up, stretched

V

Vaasamuni Siddhar = a disciple of Shiva
vadivu = old form; Gaja Vadivu is an animal posture from Kalari Yoga, a mystical tantric form of *yoga*, which stems from Kalarippayat
vajra = thunderbolt, Indra's weapon
Vajracchedika Prajnaparamita Sutra = Diamond Cutter Sutra, one of the *sutras* of Mahayana Buddhism focusing on non-attachment
vakra = bent, curved, crooked

Valakhilya = flying wise and virtuous companions, celestial beings; a class of divine personages of the size of a thumb, produced from the Creator's body, and said to precede the chariot of the sun
Valmiki = known as the father of Sanskrit classical poetry
vama = left side
Vamadeva = the name of the preserving aspect of the God Shiva
vamana = Vishnu in his fifth incarnation, when he was born as a dwarf to humble the demon king Bali
Vasishta = a celebrated sage, author of Yoga Vasistha; several Vedic hymns, most excellent, best, richest
vatayana = horse
vayu = air, vital force, wind, vital air
Vedas = the sacred scriptures of the Hindus, revealed by the Supreme Being
vibhuti = might, power, greatness
vimshati = twenty
vini = single movement
vinyasa = a steady flow of connected yoga *asanas* linked with breath, work in a continuous movement, going progressively, variation
viparita = reversed, inverted, turned
vira = a brave or eminent man, heroic, chief, hero
virabhadra = a legendary warrior, a powerful hero created out of Shiva's matted hair
Virancha (Viranchi) = one of the names of Lord Brahma
vishama = uneven, unequal
Vishnu (Vishnu, Narayana, Hari) = the second deity of the Hindu Trinity, All-Pervading essence of all beings, one who supports, Preserver God
vishuddhi chakra = seat of intellectual awareness, energy center situated behind the throat, the nervous plexus in the pharyngeal region
vishva = entire, whole
Vishvamitra = a celebrated Hindu Sage, ruler so impressed with Vasistha's knowledge and contentment that he became his disciple
vrischika = scorpion
vriksha = tree
vrishta = fallen or dropped as rain
vyaghra = tiger

Y

yajna = Hindu Sacrificial Ceremony
yama = ethical codes for daily life, self-restraint
Yama = the god of death; Yama is also the first of the eight limbs or means of attaining yoga. Yamas are universal ethical codes for daily life, self-restraint, and moral commandments or ethical disciplines transcending creeds, countries, age, and time. The five mentioned by Patanjali are: non-violence, truth, non-stealing, continence, and non-coveting
yantra = to sustain
yoga = union, communion, the path which integrates the body, senses, mind, and the intelligence with

the self, derived from "yuj", meaning to join or to yoke, to concentrate one's attention on. It is the union of our will to the will of God, a poise of the soul which enables one to look evenly at life in all its aspects. The chief aim of yoga is to teach the means by which the human soul may be completely united with the Supreme Spirit pervading the universe and thus secure absolution

yoga-mudra = a posture, a seal

yoga-nidra = the sleep of yoga, where the body is at rest as if in sleep while the mind remains fully conscious, though all its movements are stilled; *yoga-nidra* is also the name of an *asana*

Yogananda = a great yogi of the twentieth century

yogasana = yogic posture

Yoga Sutra (yoga-sutra) = a classical collection of aphorisms on the practice of yoga, attributed to the sage Patanjli. It consists of 185 terse aphorisms on yoga and it is divided into four parts dealing respectively with *samadhi*, the means by which yoga is attained, the powers the seeker comes across in his quest, and the state of absolution

yogi or yogini = one who follows the path of *yoga*, a student, a seeker of truth

yogic = an adjective describing things that are associated with *yoga*

yoni = the womb

yoni-mudra = womb or female seal or awakened *kundalini*, the sealing; the breeding place, and *mudra* is a seal; *yoni-mudra* is a sealing posture where the apertures of the head are closed and the aspirant's senses are directed within to enable him to find out the source of his being

yudha = from Yudhisthira, a legendary warrior mentioned in the ancient Hindu epic *Mahabharata*

yuj = to join, to yoke, to use, to concentrate one's attention on

yukti = union

* “Bitilisana” may also be translated as “Gavasana” in the following cow poses.

* “Ushtrasana” may also be spelled as “Ustrasana” in the following camel poses.

* “Shirshasana” may also be spelled as “Sirsasana” in the following headstand poses.

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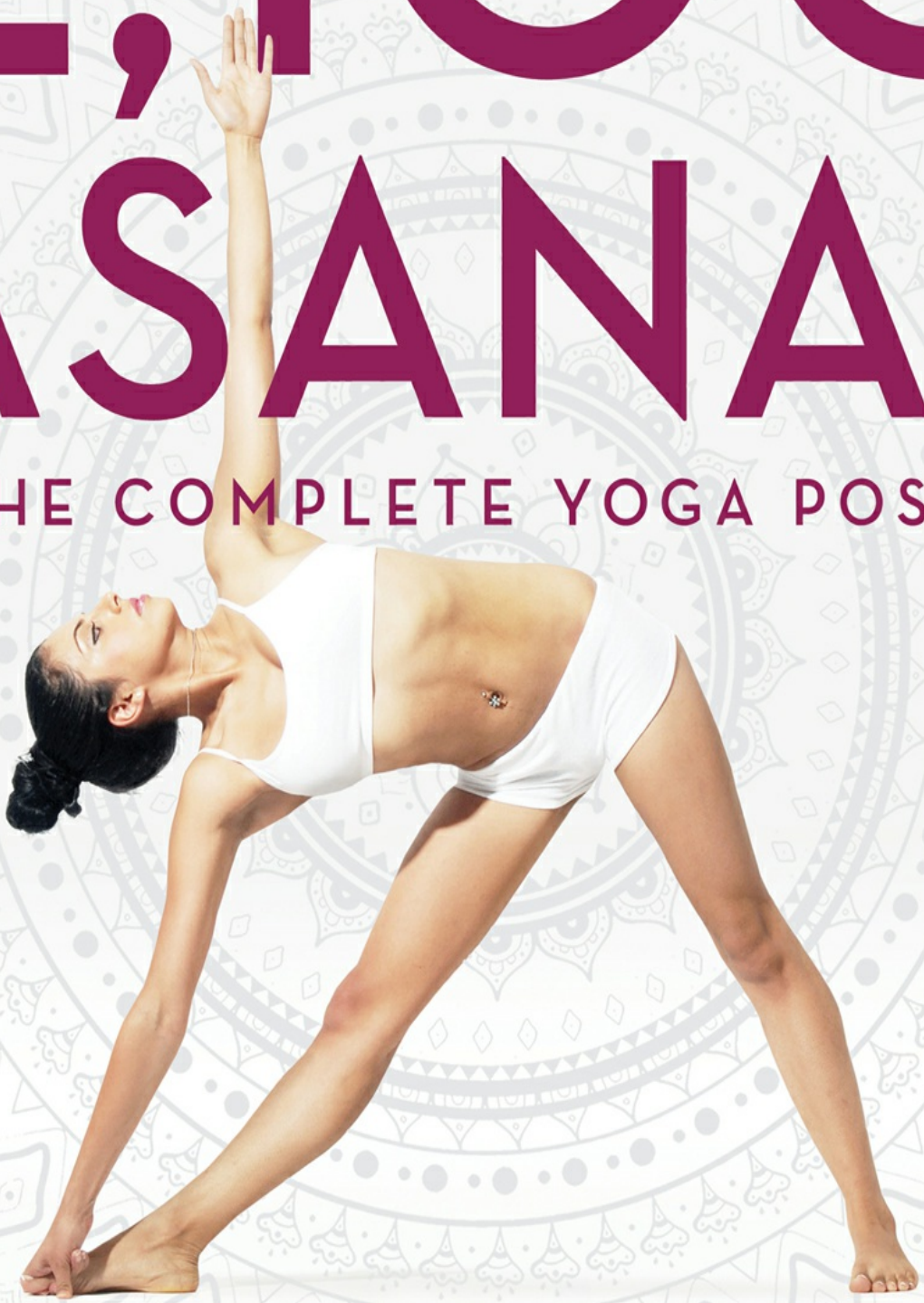

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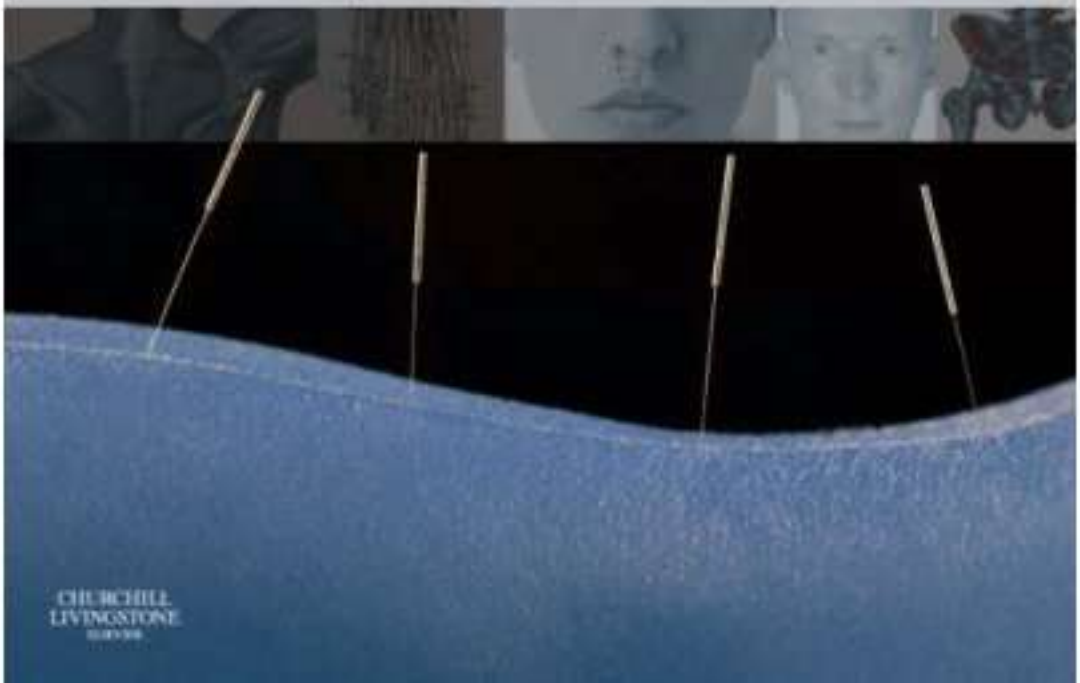
Atlas of Acupuncture



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Dedication

To my parents Paula and Alfons Focks who have always supported my siblings and me in finding and pursuing our own paths, with love and gratitude

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Preface

'An acupuncture point is located where it is located' – like veins, arteries or nerves, the location of acupuncture points may vary. Consequently, locating and stimulating acupuncture points is an individual process in each patient, similar to locating veins or arteries for puncture. The goal of this atlas is therefore to help acupuncture students and therapists find the correct location of acupuncture points. Ultimately, the exact location of an 'acupuncture hole' will be where it can be palpated, addressed energetically in a safe way, and – most importantly – where it will be therapeutically effective.

Acupuncture therapy requires not only the knowledge to locate individual points but also an understanding of the context of these points. This atlas therefore includes both a description of the individual points as well as the central idea – the channel system.

The core chapters 4, 5 and 6 contain single page portraits of all the channel points as well as extra points used in body acupuncture. The clearly structured page layout, complemented by pictograms, allows for quick access to the clinically relevant information for the location and indication of individual points. Clear step-by-step instructions guide the reader through the surrounding surface anatomy to the correct location of the point. Figures with the relevant anatomical structures, as well as drawings showing channel pathways pertaining to the relevant region of the body, provide a further practical aid for correct point location. The text and the photo details also contain information regarding other points located in the vicinity or points in comparable locations in other parts of the body. This not only draws attention away from the individual points to the larger anatomical orientation, but also fosters an understanding of the context between the location and the action of a given point.

Chapter 7 presents the channel points according to the anatomical region – including illustrations of anatomical overview as well as text/picture details. This format will deepen the understanding of the anatomical relationship between the channel points and complete this academic concept. Chapter 2 'Location Methods and Cun Measurements' and Chapter 3 'Anatomical Orientation' provide further support in locating the individual points. The modified illustrations in these chapters are based on the well-known Sobotta Atlas.

Chinese medicine practitioners work with the Qi and its flow. In this context the individual 'acupuncture hole' has both an anatomical and an energetic component and is an intrinsic part of the channel and vessel network, which provides an exchange between the body's Exterior and Interior. In this way Chapter 1 describes the network of channels and vessels, and Chapter 8 the point categories and point combinations, explaining them in terms of their effects with relation to channel energetics, and presenting them in a clearly defined and visually organised manner. Chapter 9 contains up-to-date information and data about the scientifically proven effects or otherwise of individual points.

I hope the new edition of this atlas will provide a valuable help to students and therapists alike in studying acupuncture and applying the information in clinical practice. I look forward to hearing your constructive criticism and ideas.

Claudia Focks, March 2008

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Claudia Focks, Rottweil, March 2008

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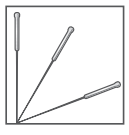
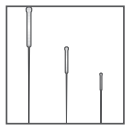
Pictogrammes



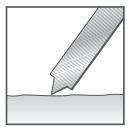
Angle of insertion: The angle of insertion recommended for a particular point (see figure below) is shown in colour. (Note that occasionally more than one angle is possible – this is signified by colouring as appropriate).



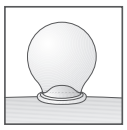
Depth of insertion: Shallow: up to 0.5 cun, **Medium:** 0.5–1 cun, **Deep:** >1 cun. (In some cases more than one depth is possible depending on the angle of insertion – this is signified by colouring as appropriate).

Caution! Organs and structures such as the eyes, nerves, blood vessels, peritoneum (symbolised by intestinal tissue) etc. that might be injured by needling a particular point are shown by a symbol together with a blue exclamation mark. A lightning bolt signifies a point that is painful when needled.

Moxibustion: In principle all points can be treated with moxibustion. The following options are pointed out: **Blue colour below moxa cigar:** moxibustion particularly recommended, **Question mark next to moxa cigar:** moxibustion questionable (contraindicated according to some classical texts, but contradictory information), **Moxa cigar crossed out:** moxibustion contraindicated.

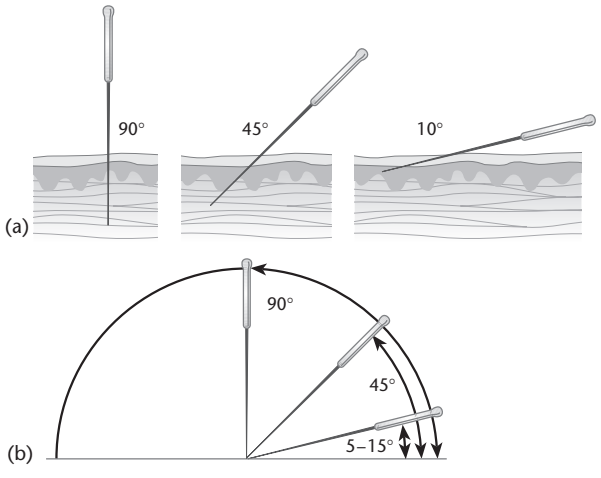


Bloodletting: In principle bloodletting may be applied to all points. **Neutral pictogramme:** bloodletting possible, **Blue droplet of blood:** bloodletting particularly recommended, **Blue question mark:** bloodletting questionable



Blue cup: Cupping particularly recommended.

Anatomical orientation: A blue hand signifies cases where anatomical structures are of particular importance for point location (for more detail ➞ chapter 3).



Angle of insertion
a) Angle of insertion and layers of tissue: All needles are inserted to the same 'depth' (=the same proportion of the needle is inserted into the tissue), but reaching different levels of tissue.
b) Angle of insertion: transverse (subcutaneously): 5–15°; oblique: 15–45°; perpendicular: 90°.

Point hierarchy (Chapters 4–6)

In the introductions to the channels (chapters 4–6) the importance of points are marked with the following symbols:
■■: very important, universal point
■■: important point
This hierarchy is of course subjective and influenced by the authors' clinical experience but has proved very helpful for beginners.

1 *Jing luo* (Channel and Network Vessel System)

Claudia Focks

1.1 Introduction

1.1.1 Two Models of Qi Flow in the Channels – Historical Overview

There exist essentially two views about the direction of the Qi flow in the channels, which are based on different understandings of the Qi movement within the body (→ Pirog 1995, Manaka 1995/2004). For a better understanding of either model, imagine a person extending his/her arms towards the sky (→ Figs. 1.1 and 1.2).

Centripetal circulation model

The centre of classical Chinese cosmology, which describes humans as standing between heaven (Yang) and earth (Yin), includes the mutual relationship, influence, and dependence between cosmos and man. Accordingly, early records of the pathways (→ see appendix) depict the (11/12) channels as pathways that originate at the extremities, flow towards the centre of the body and terminate either on the head or the torso. This is the distinguishing feature of the **centripetal circulation model** (→ Fig. 1.1).

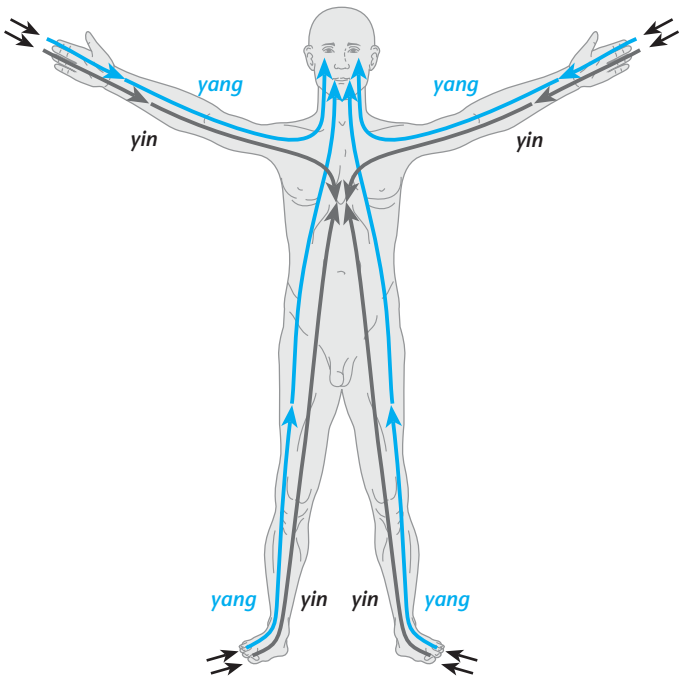


Fig. 1.1 Centripetal circulation model (modified according to Pirog 1996)

This model is also present in the theory of the five *shu*-Transporting points (→ 8.1.6). The macrocosmic Qi enters the body at the tips of the extremities and can be compared to the course of a river. It begins very dynamically as a well, spring and stream, expands to form a river and flows into the wide, deep sea at the elbows and the knees and then further to the internal organs via the channels.

According to this model, the functions of the channels can be compared to antennae, which receive the cosmic influence, transmitting it into the body. The Qi flow in the channels is always from distal (coming from the Exterior, entering at the tips of the extremities) to proximal (towards the centre, flowing towards the internal organs). Each channel connects man with a different part of the cosmos, which can be identified by a numerological structure. Thus a relationship was assumed between the eight extraordinary vessels and the eight trigrams of the *Yijing* (→ 1.7). The primary channels reflect the 12 earthly branches and the 10 heavenly branches. Since the early records only mention 11 channels (→ Appendix 2), they were counted as 10 channels on the arms and 12 channels on the legs. Later, the 12 primary channels were mainly associated with the 12 earthly branches – the 10 heavenly branches rather representing the Five Phases model (*note*: the earthly branches can be included in the latter as well).

Self-contained circulation model

In the course of the development of modern Chinese society, the idea of a close relationship between man and cosmos (as a heaven-earth-man model) became weaker. The channel system was now increasingly compared to phenomena created by man himself such as **canals** and **drainage ditches**. The importance of the original connection with the cosmos declined while that of relationships within society was on the rise. Chinese society became more complex, forming a self-contained unit. Similarly, the concept of the channels as a connection to the macrocosm was partially abandoned and the Qi flow is described as independent and self-contained (→ Fig. 1.2). According to this **self-contained circulation model**, Qi can flow forward as well as backward – from the outer extremities to the Interior of the body and from the Interior to the Exterior.

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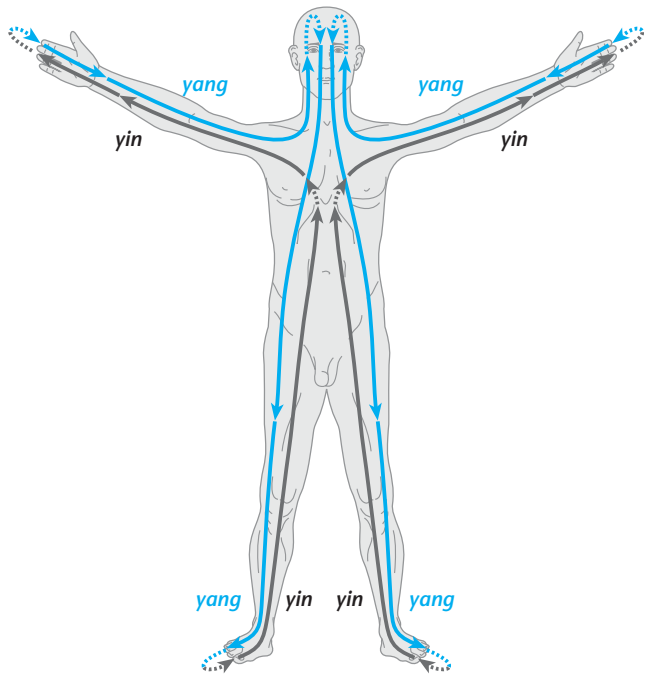

Fig. 1.2 Self-contained circulation model (modified according to Pirog 1996)

Thus the direction of the Qi flow in the primary channels can be from proximal to distal and vice versa, depending on the Yin/Yang polarity of the respective channel, as well as the respective extremity.

This second, probably more recent concept describes the Qi **as circulating continuously** through the body (→ Appendix 2): from the thorax to the hand, to the head, to the foot and back to the thoracic region. These ideas reflect the development of the Chinese civilisation, its agriculture and in particular its **water control** and water **storage** in reservoirs, drainage canals, ditches, etc., which largely form the foundation of the theory of the **channels as water conduits** circulating Qi and Blood. The connections among the channels are considered to be anastomoses (→ 1.2.2), which facilitate the ceaseless, circular flow of Qi from one channel to the next, allowing the exchange of the Qi flow with the Interior.

The self-contained circulation model can thus be described as follows:

- Hand Yin channels run from the thorax to the hand: **LU, HE, P**
- Hand Yang channels run from the hand to the head: **L.I., S.I., T.B.**
- Foot Yang channels run from the head to the foot: **ST, BL, G.B.**
- Foot Yin channels run from the foot to the thorax: **SP, KID, LIV**

More importance is attached to this model of Qi flow in the Western acupuncture tradition, which can in part explain the use of numbers in naming the acupuncture points, rather than names as in China.

However, the structure of this new circulatory model was probably also too rigid to sufficiently explain some of the effects of acpuncture. According to Pirog (1996), this might be the reason why the secondary channels, for example the sinew channels (→ 1.4) and the divergent channels (→ 1.3), with their rather primitive and natural pathways, were integrated into the channel and network vessel system (*jing luo*) in accordance with the **centripetal** circulation model.

Comparison of the two circulation models (modified according to Pirog 1996)

	Centripetal model	Self-contained model
Direction of Qi-flow	Always from distal to proximal	Either from proximal to distal or vice versa, depending on the polarity of the channel (Yin/Yang)
Origin of Qi	From outside the body. The distal end of the channel is open in order to receive cosmic Qi	Originates in the inside of the body. The distal end of the channels is connected to the channel that follows next.
Function of the channels	Transporting the Qi from the outer cosmos to the Interior of the body. Supporting the relationship between man and nature/ cosmos	Circulation of the Qi inside the body. Supporting man's relationship with himself

1.1.2 Overview of the Channel and Network Vessel System (*jing luo* System)

In *Ling Shu*, chapter 11, it says: 'Man lives, diseases occur … both the beginner and the experienced master always have to start with the channels and network vessels (*jing luo*).'

In Chinese Medicine, the *jing luo* are considered to be a network of channels and vessels in which the Qi and Blood (*xue*) flow. They are connected to the Organ systems (*zangfu*) and 'water' the whole organism, supplying the body with Qi and Blood (*xue*) on the surface (Exterior) and deep inside the body (Interior), above as well as below.

From a functional point of view, the channels and network vessels (*jing luo*) govern the distribution of Qi and Blood (*xue*), they regulate Yin and Yang and they protect the body. However, they also enable the spreading of diseases. Reactions to any disorders may therefore manifest along these channel pathways. These could be either disorders of the channels themselves, or external reflections of *zangfu* disorders. In clinical practice, the channels and network vessels (*jing luo*) can be utilised in order to send Qi to the diseased parts of the body (for an overview of the classification and nomenclature of the *jing luo* system → Fig. 1.3).

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a)

- *Jing luo* (channel and network vessels)
  - *Jing mai* (channels)
    - 12 *jing zheng* (primary channels)
      - *shou* (Hand)
        - 3 *yin*
          - *tai yin* LU channel
          - *shao yin* HE channel
          - *jue yin* P channel
        - 3 *yang*
          - *tai yang* S.I. channel
          - *shao yang* T.B. channel
          - *yang ming* L.I. channel
      - *zu* (Foot)
        - 3 *yin*
          - *tai yin* SP channel
          - *shao yin* KID channel
          - *jue yin* LIV channel
        - 3 *yang*
          - *tai yang* BL channel
          - *shao yang* G.B. channel
          - *yang ming* ST channel
    - 12 *jing bie* (divergent channels)
    - 12 *jing jin* (sinew channels)
    - 8 *qi jing ba mai* (extraordinary vessels)
      - *ren mai du mai*
      - *chong mai dai mai*
      - *yin qiao mai yang qiao mai*
      - *yin wei mai yang wei mai*
  - *Luo mai* (*luo*-vessels)
    - 12 *luo*-connecting vessels (begin at the extremities) — Spread from the primary channels
    - 4 *luo*-connecting vessels (begin at the torso)
      - 1 spreads from the SP primary channel (great *luo*-connecting vessel of the Spleen)
      - 2 spread from the extraordinary vessels (*ren mai* and *du mai*)
      - 1 spreads from a *fu*-Organ (great *luo*-connecting vessel of the Stomach)
    - Small *luo*-connecting vessels (superficial *luo*)
      - *sun luo* — Vertical branches of the *luo mai*
      - *fu luo* — Sub-branches of the *sun luo*
      - *xue luo* — Horizontal branches of the *fu luo*
    - 12 *pi bu* (cutaneous zones) — Superficial aspect of the *jing luo* system (channel and network vessel system), covering it towards the Exterior (outer layer)

b)

- 12 *jing zheng* (primary channels) = 6 *liu jing* (great channels)
  - 3 *yin* (*tai yin*, *shao yin*, *jue yin*)
    - 3 *shou* (Hand)
      - *tai yin* LU channel
      - *shao yin* HE channel
      - *jue yin* P channel
    - 3 *zu* (Foot)
      - *tai yin* SP channel
      - *shao yin* KID channel
      - *jue yin* LIV channel
  - 3 *yang* (*tai yang*, *shao yang*, *yang ming*)
    - 3 *shou* (Hand)
      - *tai yang* S.I. channel
      - *shao yang* T.B. channel
      - *yang ming* L.I. channel
    - 3 *zu* (Foot)
      - *tai yang* BL channel
      - *shao yang* G.B. channel
      - *yang ming* ST channel

Fig. 1.3 (a) Overview and classification of the *jing luo* system (channel and network vessel system); (b) the 12 primary channels and the six great channels *(liu jing)*

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1.1.3 Distribution and Organisation of the Channel and Network Vessel (*jing luo*) System

According to the law of the Exterior–Interior (*biao-li*) the 'Exterior' communicates with the 'Interior'.

Exterior (*biao*) corresponds to the skin, the muscles and the pathways of the channel and network vessel superficial (*jing luo*) system. The deeper pathways of the channels and the Organ systems (*zangfu*) are attributed to the Interior (*li*). A particular organisational structure within the *jing luo* system is necessary to safeguard the circulation of Qi and the communication between the Exterior and the Interior. In this respect, the extraordinary vessels play a special role. While they play a major role in coordinating and regulating the primary channels and the *jing luo* system in general, they do not directly connect the Interior and the Exterior. There is also no direct connection between the extraordinary vessels and the *zangfu*-Organs (see → 1.7 and Chapter 5).

Depth organisation of the *jing luo* system

Differing ideas exist regarding the depth at which the various channels and vessels are located within the body. The table below and Fig. 1.4 show the ideas according to Solinas et al. (1998) and Deadman et al. (1998) in a modified way. While these authors regard the deep, Interior pathways of the primary and divergent channels as the deepest channel structures, other authors attribute this role to the eight extraordinary vessels (for the eight extraordinary vessels, see → 1.7).

Overview over the possible location with regard to depth of the *jing luo* system

Levels	Channel system
Superficial levels (skin and muscles)	• 12 cutaneous regions • Superficial *luo*-connecting vessels (*xue luo, fu luo, sun luo*) • 12 sinew channels (*jing jin*)
Mid-levels	• 15/16 *luo*-connecting vessels (*luo mai*) • External pathways of the 12 primary channels • External pathways of the 12 divergent channels (*jing bie*) • Eight extraordinary vessels
Deep levels (*zangfu*-Organs)	• Deep (internal) pathways of the 12 primary channels • Deep (internal) pathways of the 12 divergent channels

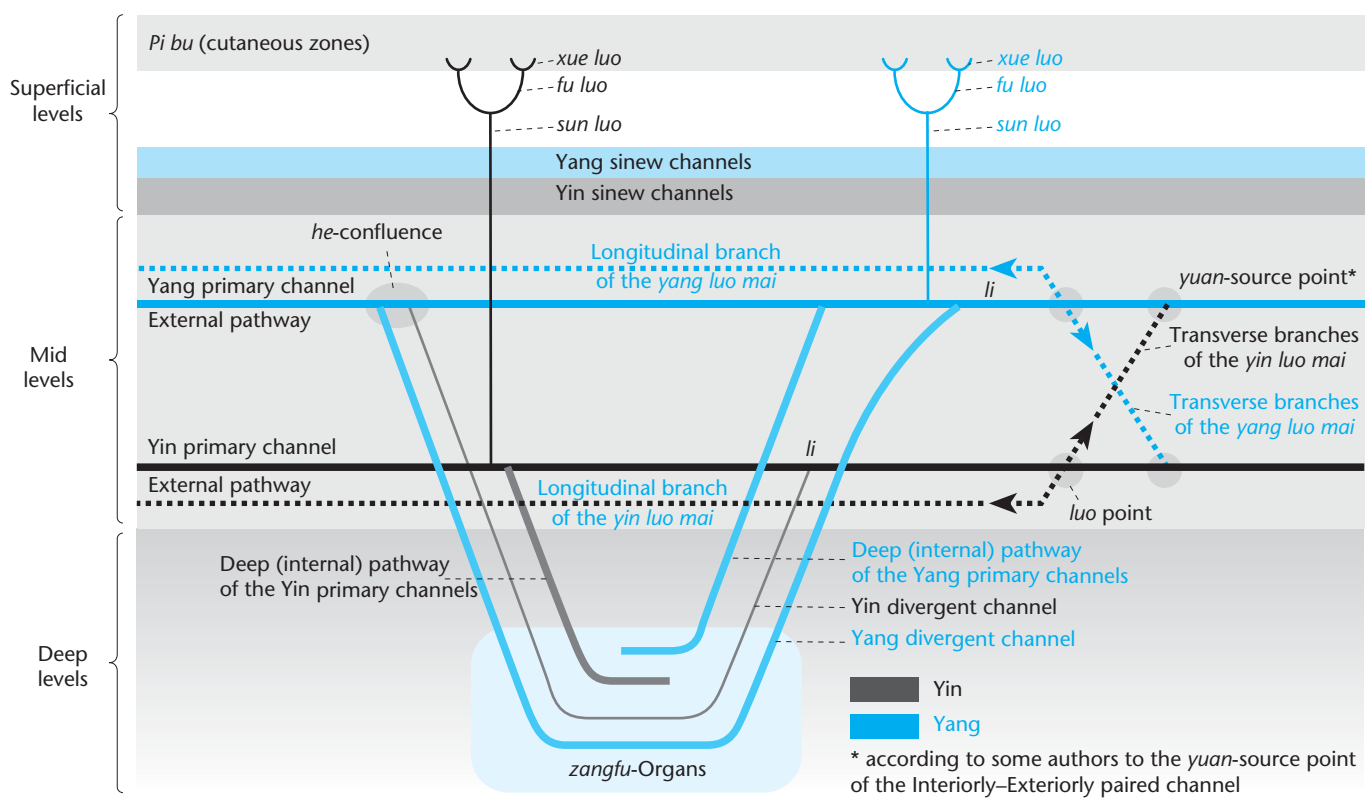

Fig. 1.4 Illustration of the possible organisation of the *jing luo* system (channel and network vessel system)

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Channel systems

Each primary channel, together with its pertaining 'secondary channels', forms a complex, multi-layered organisational unit, a 'system'. These systems comprise the various relationships and connections among each other as well as with the eight extraordinary vessels (→ 1.7, → Chapter 5). They support the harmonious regulation within the body. There are 12 channel systems (hand *taiyin*, hand *yangming*, etc.), each of which includes the following:

- a **primary channel** (*jing zheng*) (→ 1.2) with an external and internal pathway, which enters its pertaining *zangfu*-Organ
- a **divergent channel** (*jing bie*) (→ 1.3)
- a **sinew channel** (*jing jin*) (→ 1.4)
- a great ***luo*-connecting vessel** (*luo mai*) (→ 1.5).

In turn, the **cutaneous zones** (*pi bu*) (→ 1.6) wrap around the whole channel system.

1.1.4 Qi Circulation and the Channel System

What moves with and within the channels?

The channel system represents the 'pathway of the Qi'. In acupuncture many schools of thought work with the **True Qi** (***zhen qi***), which, according to Maciocia (1989), represents the final stage of a process of Qi refinement and transformation: the Gathering Qi (*zong qi*), acted upon by the Original Qi (*yuan qi*) as a catalyst, becomes True Qi (*zhen qi*), which manifests in its two aspects, the Defensive Qi (*wei qi*) and the Nutritive Qi (*ying qi*). According to Larre and Rochat de la Vallée (1986), the True Qi is regarded as the **sum of all Qi mechanisms and/or forms of Qi** in the body. In other words: if there is a balanced and harmonious flow in the channels, this can be called True Qi (*zhen qi*). It means that which circulates in the 'here and now'. The sum total of all forms of Qi in their correct alignment is called **Upright Qi** (***zheng qi***) and forms the counterpart to Evil Qi (*xie qi*), for example to pathogenic factors or counterflow Qi.

Forms of Qi

Essence (Qi) (*jing qi*)

The Essence (Qi) acts within the organism and, according to some authors, to some extent also in the extraordinary vessels (→ 1.7). It represents the combination of Early Heaven Essence inherited from the parents, which, according to many schools of thought, is stored in the Kidneys and has a relationship to the Life Gate (*mingmen*), and the Later Heaven Essence of the Middle Burner. They support and complement each other.

Original Qi (*yuan qi*)

The Original Qi (*yuan qi*) is often described as the **active form of Essence** (***jing***), circulating in the channels and spreading to the whole organism with the help of the Triple Burner. Like a catalyst, it is the dynamic driving force which wakens and sustains the functional activity of all organs and structures. It has a pre- and a postnatal component. Therefore its proper functioning is dependent on the supply of acquired Qi derived from water and food supplied by the Middle Burner. The Original Qi can be directly accessed and influenced at the *yuan*-source points (→ 8.1.1) or at the points **Ren-17** (*danzhong/shanzhong*), **Ren-12** (*zhongwan*) and **Ren-6** (*qihai*).

Gathering Qi (*zong qi*)

According to Larre and Rochat de la Vallée (1986), the Gathering Qi (*zong qi*) is formed in the centre of the thorax when the essences derived from respiration (Great Qi, *da qi*) meet with the food (*shui gu*, from Grain Qi (*gu qi*) and water) and are set in motion through ancestral mechanisms by the first postnatal breath. Like an 'engine', it dictates the rhythm and circulation, it controls respiration and it regulates the heartbeat. It does not circulate itself, but is like a 'Sea of Qi' that 'collects' in the centre of the thorax behind **Ren-17** (*danzhong/shanzhong*). This sea contains the water from all the rivers (e.g. the vessels), resembling an inexhaustible reservoir that does not overflow but redistributes all its water supplies.

Defensive Qi (*wei qi*)

The *wei qi* is the body's **Defensive Qi**. Thus it defends the body at the level of the skin, the fascia and the muscles. In relation to the Nutritive Qi (*Ying qi*), it is a more slippery and less pure form of Qi that moves dynamically and quickly through the body like a **guard**. Its root lies in the **Lower Burner**, where it is produced by the ***mingmen***-Fire (Life Gate fire), so that it has a considerable genetic or constitutional component. Essence (*jing*) and Original Qi (*yuan qi*), which are stored in the Lower Burner (according to many schools in the Kidneys), are involved in the formation of Defensive Qi (*wei qi*), therefore also playing a role in the defence against Exterior pathogens. Additionally, the *wei qi* is constantly being replenished with pure essence, formed from food by the Spleen and Stomach in the **Middle Burner**. It is dispersed throughout the body by the **Upper Burner**. Proper functioning of the *wei qi* therefore depends on all three Burners.

Nutritive Qi (*ying qi*)

The Nutritive Qi (*ying qi*) is the result of a purification and/or distillation process of pure, clear origin. Compared to Defensive Qi (*wei qi*), it is more Yin in nature. It **nourishes** the whole body and is its '**building substance**', thus often translated as 'constructive Qi' or 'building energy'.

Circulation of Defensive Qi (*wei qi*) and Nutritive Qi (*ying qi*)

Circulation of Defensive Qi (*wei qi*)

In chapter 43 of the *Su Wen* the *wei qi* is described as flowing 'outside of the *mai*' (the channels and vessels). However, it circulates in part along the channel pathways, moving in the space between the skin and the muscles – the ***cou li***.

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The *cou li* – often unsatisfactorily translated as 'pores' – are the striae or compartments between the skin and the muscles. They have the function of a gateway for the entry and exit of Qi and fluids and serve as protection against the invasion of Exterior pathogenic factors. According to Larre and Rochat de la Vallée (1986), the *cou li*, as the outermost of the wrappings of the Triple Burner, cover the whole body. They connect the surface of the body with its inner organs. This explains the effectiveness of acupuncture and other manual therapies for the treatment of internal disorders as well as showing up the presence of diseases of the inner organs on the Exterior of the body.

In the **superficial layers of the body**, the Defensive Qi (*wei qi*) circulates through the skin and the superficial musculature, warming, nourishing and strengthening them. Through these actions it supports the general defence against Exterior pathogenic factors, acting mainly in the realm of the sinew channels (*jing jin*) (→ 1.4). In the **deep layers of the body**, it plays an important role in the functioning of the 'diaphragm'. According to Larre and Rochat de la Vallée (1986), this represents not only a membranous barrier between the thorax and the abdomen, but can be regarded as a 'sac of membranes', including and connecting the peritoneum, the pleura and the pericardium. Nielsen (1995) interprets this 'network of caves' as the **inner aspect of the Triple Burner**, which connects with its **outer aspect, the *cou li***. Following this interpretation, the Defensive Qi (*wei qi*) would also be involved with the **mesenteric defence** and the protection of the inner organs.

According to chapter 75 of the *Ling Shu*, the **circulation of the Defensive Qi (*wei qi*)** is cyclical, changing from day to night and vice versa. At dawn, when the Yin Qi is exhausted, the Yang Qi pours itself from the eyes and the eyes are opened. As a result, the *wei qi* rises from the heel via the (Yin) *qiao mai* upwards to the eye to **BL-1** (*jingming*) and flows into the whole body like a waterfall by following the six great Yang channels – 'it moves 25 times in the Yang'. At dusk, when the Yang Qi is exhausted, the *wei qi* enters the Interior of the body and moves '25 times in the Yin', following the controlling cycle (*ke* cycle → 8.2.5): from the Kidneys to the Heart, from the Heart to the Lungs, from the Lungs to the Liver, from the Liver to the Spleen, and back to the Kidneys. Therefore the *wei qi* has a relationship with the sleep–wake rhythm: during sleep it withdraws deeper into the body – during daytime it circulates in the outer layers of the body. The two extraordinary vessels, the *yin qiao mai* and the *yang qiao mai* (→ 1.7, → Chapter 5), play an important role in this respect. If their cycle is blocked, the circulation of the *wei qi* will be interrupted and disorders will arise. The *yin qiao mai* ascends, while the *yang qiao mai* descends, both meeting at the eyes at **BL-1** (*jingming*) and forming a cycle, similar to the small heavenly cycle of the *ren mai* and *du mai*. If there is an excess of Yang Qi, this will be drained from the channels into the *yang qiao mai*, 'the eyes cannot close' and insomnia will occur. If there is an excess of Yin Qi, this will be drained from the channels into the *yin qiao mai*, 'the eyes cannot open' and somnolence will occur. In both cases, a relative disharmony develops between the two opponents.

Circulation of the Nutritive Qi (*ying qi*)

The Nutritive Qi (*ying qi*) circulates in the *mai*. The *mai* include both the primary channels (*jing mai*) and the secondary channels such as the Connecting Vessels (*luo mai*, *sun luo*), the divergent channels (*jing bie*), the extraordinary vessels and the Blood Vessels. Wherever there are channels and vessels, the *ying qi* will circulate. According to chapter 16 and 18 of the *Ling Shu*, the *ying qi* circulates constantly and continuously.

First circulation of the *ying qi* (→ Fig. 1.5)

The first circulation of the *ying qi* encompasses the 12 primary channels. The cycle **starts** at the **primary LU channel** and **ends** at the **primary LIV channel**, which in turn connects with the primary LU channel, thus closing the cycle (→ Fig. 1.5). The **Middle Burner** provides and **distributes** the *ying qi* throughout the whole body. According to some of the classics, the Grain Qi (*gu qi*) derived from food is only transformed into Nutritive Qi (*ying qi*) in the Lungs, not already in the Middle Burner. Since the internal pathway of the primary Lung channel begins in the Middle Burner, these two statements do not contradict each other in principle.

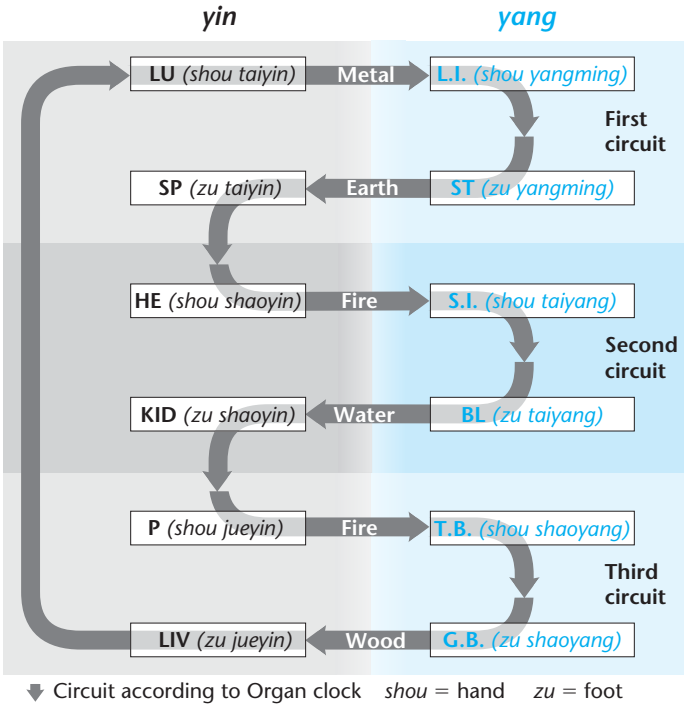

Fig. 1.5 First circulation of the Nutritive Qi (*ying qi*)

The **changes in Yin/Yang polarisation** – the changes from a Yin channel to a Yang channel and vice versa – always take place in the hand or the foot (also → 1.2.2). For example, the Yang energy potential rises from the Yin channel to the Yang channel, and then descends again from the Yang channel to the Yin channel (→ Fig. 1.6).

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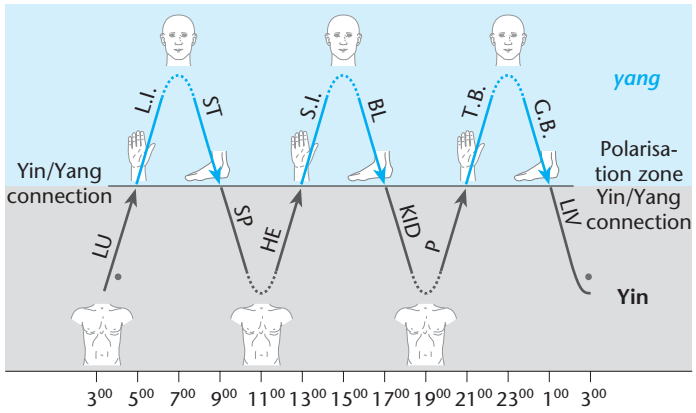

Fig. 1.6 Changes in Yin/Yang polarisation, shown as a sinus curve

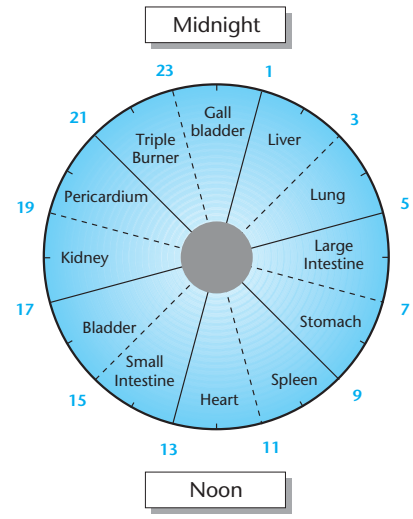

Fig 1.7 Organ Clock

First circulation of the Nutritive Qi (*ying qi*) and the Organ clock

The Nutritive Qi (*ying qi*) circulates in the 12 primary channels in a **circadian 24-hour rhythm** (→ Fig. 1.7) with each **Chinese hour**, named after one of the 'earthly branches', corresponding to two Western hours (→ expanded Organ clock, Fig. 1.8).

Each two-hour slot favours a particular channel, in other words: for two (Western) hours per day, **energy flow peaks** in a particular channel. During this period, the respective channel Qi increases, falling again during the following two hours. However, it will never fall below a particular level, so that there is always a certain portion of energy flowing continuously through the channels.

Example: The channel Qi of the primary Stomach channel will begin to appear more 'powerful', when the channel Qi of the Large Intestine is very strong. Therefore the 'high tide' of the Stomach channel takes place between 5–7 a.m., its peak is between 7–9 a.m. and its 'low tide' between 9–11 a.m. During the peak period of the Stomach channel, the channel on the opposite side of the Organ clock is at its lowest point (→ 8.3.7); while the Stomach channel is peaking, the Pericardium channel is at its lowest point.

In figure 1.8 the 'expanded Organ clock' with its 24-hour circulation through the 12 primary channels is shown in relation to the earthly branches and the hexagrams of the *Yijing*.

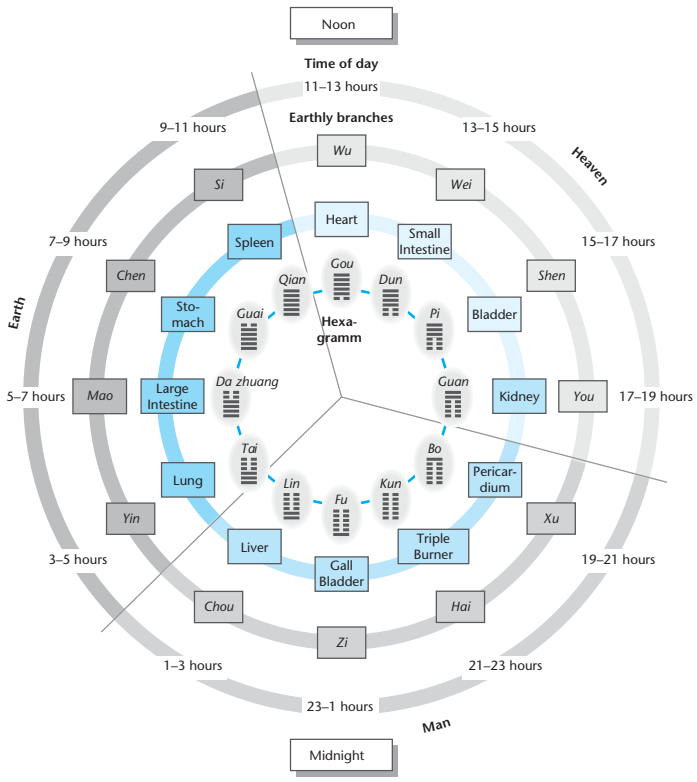

Fig. 1.8 Expanded Organ clock

Second circulation of the Nutritive Qi (*ying qi*)

According to chapter 16 of the *Ling Shu*, the Nutritive Qi (*ying qi*), after having circulated through the 12 primary channels, takes a deep pathway of the primary Liver channel, which originates at **LIV-14** (*qimen*), passes the Lungs, the posterior aspect of the neck, the inner nasal passages and reaches **Du-20** (*baihui*), then follows along the *du mai* on the back and the *ren mai* along the midline of the abdomen. At the approximate level of **Ren-22** (*tiantu*) the *ying qi* again reaches the Lung channel, which traverses the supraclavicular fossa (near **ST-12**). Here, a new circulation of the *ying qi* through the 12 primary channels starts at the beginning of the primary LU channel.

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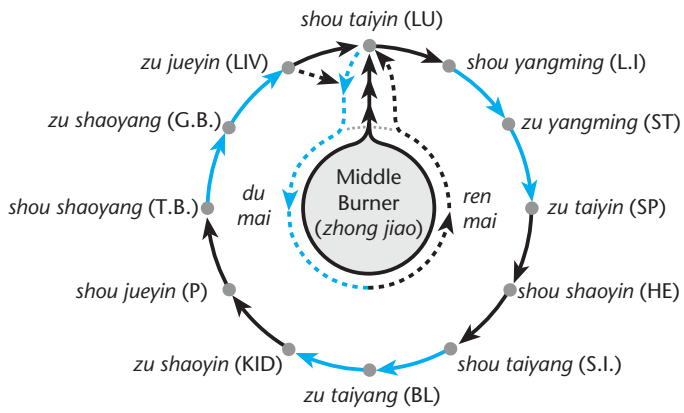

Fig. 1.9 First and second circulation of the Nutritive Qi (*ying qi*) with the Middle Burner

1.2 The 12 Primary Channels (*jing zheng*)

1.2.1 Background Information

Synonyms: Meridians, regular channels. '*zheng*' can be translated as 'mainly' (primary channels), but also relates to terms such as 'straight' and 'direct'.

Chinese terms for the channels

Meanings (also → 1.2.4, the six great channels (*liu jing*)

Tai: means greater, highest. The polarised energy (Yang or Yin) develops and reaches the maximum extent of its activity in the *taiyang* and *taiyin* channels. Here, the maximum extent of their respective polarity is reached and begins to fall again.

Shao: means less or younger. The polarised energy (Yang or Yin) is less in the *shaoyang* and *shaoyin* channels than in the *taiyang* or *taiyin* channels.

Ming: means clear, bright, radiant, shining (for more detail see → 1.2.4, the six great channels).

Jue: means 'absolute', 'at the end', 'exhausted', and according to Wiseman also 'inverted'. The polarised energy (Yin) in the *jueyin* channel represents the terminal phase of the Yin; here polarity changes to Yang.

Composition of the channel names

In the Chinese language, the name for each channel comprises

- the nature or **polarity of the energy** (Yin or Yang) that flows in the channel
- the **quality** or **intensity** (*tai*, *shao*, *jue*, *ming*) of the Yin or Yang energy and
- the **extremity** at which the channel originates or terminates.

Thus the Yin or Yang channels that begin or terminate at the hand carry the name of the primary hand channels (***shou*** *jing zheng*). The Yin and Yang channels that terminate or begin at the feet carry the name of the foot primary channels (***zu*** *jing zheng*) (→ Fig. 1.2).

1.2.2 Communication and Connections

Principle of the primary channel system

The 12 primary channels cover the body **bilaterally**. Each channel has its **individual regular course** with a deep, **internal** and a more superficial **external** pathway.

One can distinguish between Yin and Yang channels, which are Interiorly/Exteriorly paired. While each channel is connected with its pertaining *zang* or *fu* Organ, it is also connected with the Organ of its Interiorly/Exteriorly coupled channel.

All hand Yin channels begin in the region of the thorax and flow to the hand. All hand Yang channels start at the hands and travel to the head, where they meet the foot Yang channels. These descend down to the toes, where they meet the foot Yin channels, which ascend to the thorax and there meet the hand Yin channels.

For a better understanding of this model, imagine a person standing with his/her hands raised to the sky. In this position, all **Yin channels are ascending** (a **Yang phenomenon**), while all **Yang channels are descending** (a **Yin phenomenon**) (→ Fig. 1.10).

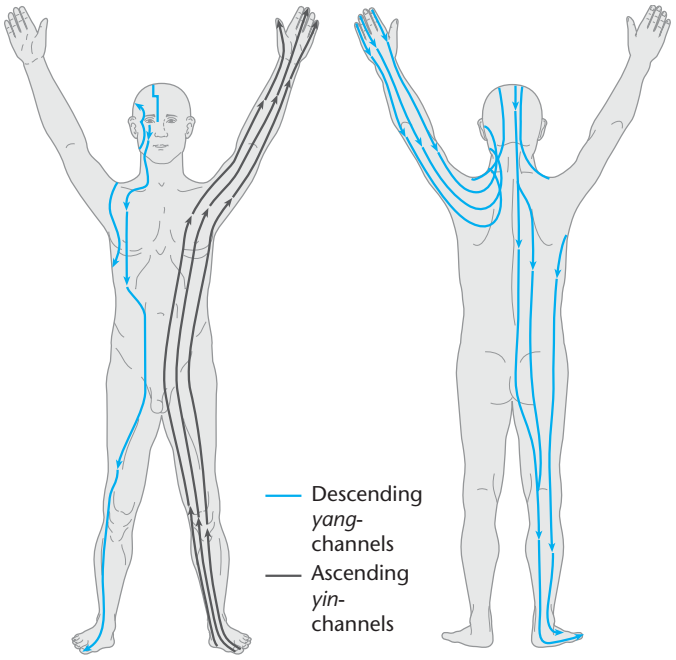

Fig. 1.10 Ascending and descending primary channels (according to Pirog 1996)

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Each channel is associated with its own specific pathological symptoms, which are an important diagnostic tool in clinical practice (for channel-specific pathologies see → chapter 4).

Communication between channels and *zangfu*-Organs

The **connections (anastomoses)** between the channels have the function of allowing communication within the channel system as well as between the channels and the Organ systems. This external/internal (*biao-li*) relationship comprises the following aspects:

Communication from the Interior to the Exterior

- The **internal pathways of the hand Yin channels** connect with their pertaining Organ as well as with their Yin/Yang-paired *fu*-Organ. They flow from the thoracic region to the Exterior and connect with their paired Yang channel at the finger tips or on the hand (→ Fig. 1.11 a).
- The **internal pathways of the foot Yang channels** connect with their pertaining *fu*-Organ as well as with their Yin/Yang-paired *zang*-Organ. They then flow from the centre of the body to its Exterior and connect with their paired Yin–channel at the foot (→ Fig. 1.11 b).

Communication from the Exterior to the Interior

- **Each hand Yang channel** begins on the hand, runs to the thoracic region, penetrates the thorax and connects in the Interior of the body with its pertaining *fu*-Organ and its Yin/Yang-paired *zang*-Organ (→ Fig. 1.11 c).
- **Each foot Yin channel** starts at the foot, penetrates the abdomen, reaches the Interior of the body and its pertaining *zang*-Organ as well as its Yin/Yang-paired *fu*-Organ (→ Fig. 1.11 d).

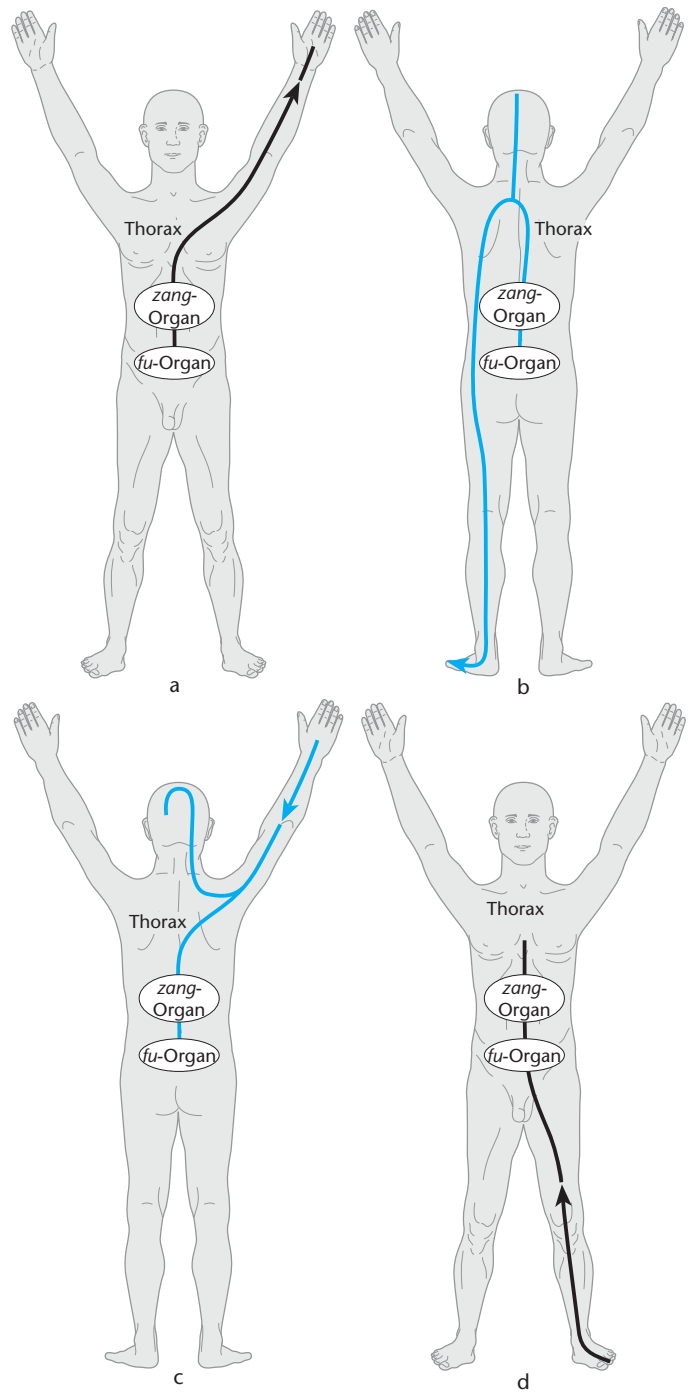

Fig. 1.11 Communication Interior → Exterior, hand-Yin channels (a). Communication Interior → Exterior, foot-Yang channels (b). Communication Exterior → Interior, hand-Yang channels (c). Communication Exterior → Interior, foot-Yin channels (d).

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Channel circuits

Within the primary channel system we can distinguish three circuits, each circuit comprising four primary channels. The trajectories of two of the channels in one circuit are located on the Yin side of the body, the more anterior side (Interior), and two are found on the Yang side, the more posterior side of the body (Exterior). The Stomach channel (foot *yangming*, for more detail ➞ 1.2.3) presents the exception to this rule. Despite its major part running along the anterior side of the body, it is considered a Yang channel (➞ Fig. 1.12 and 1.3).

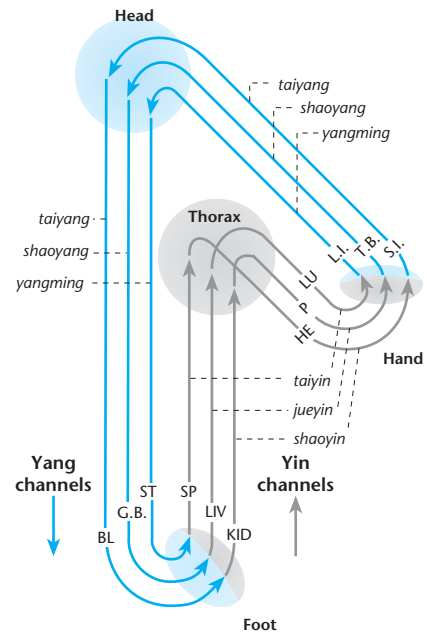

Fig. 1.12 Principle of the channel circuits

		First circuit			
Channel	**Time**	**Starts**	**Terminates**	**Hand/foot**	
LU	3–5 a.m.	Thorax	Finger tips	Hand (*shou*)	*taiyin*
L.I.	5–7 a.m.	Finger tips	Face	Hand (*shou*)	*yangming*
ST	7–9 a.m.	Face	Tips of the toes	Foot (*zu*)	*yangming*
SP	9–11 a.m.	Tips of the toes	Thorax (Heart)	Foot (*zu*)	*taiyin*
		Second circuit			
H	11 a.m.–1 p.m.	Thorax	Finger tips	Hand (*shou*)	*shaoyin*
S.I.	1–3 p.m.	Finger tips	Face	Hand (*shou*)	*taiyang*
BL	3–5 p.m.	Face	Tips of the toes	Foot (*zu*)	*taiyang*
KID	5–7 p.m	Tips of the toes	Thorax (Pericardium)	Foot (*zu*)	*shaoyin*
		Third circuit			
P	7–9 p.m.	Thorax	Finger tips	Hand (*shou*)	*jueyin*
T.B.	9–11 p.m.	Finger tips	Face	Hand (*shou*)	*shaoyang*
G.B.	11 p.m.–1 a.m.	Face	Tips of the toes	Foot (*zu*)	*shaoyang*
LIV	1–3 a.m.	Tips of the toes	Thorax (Lung)	Foot (*zu*)	*jueyin*

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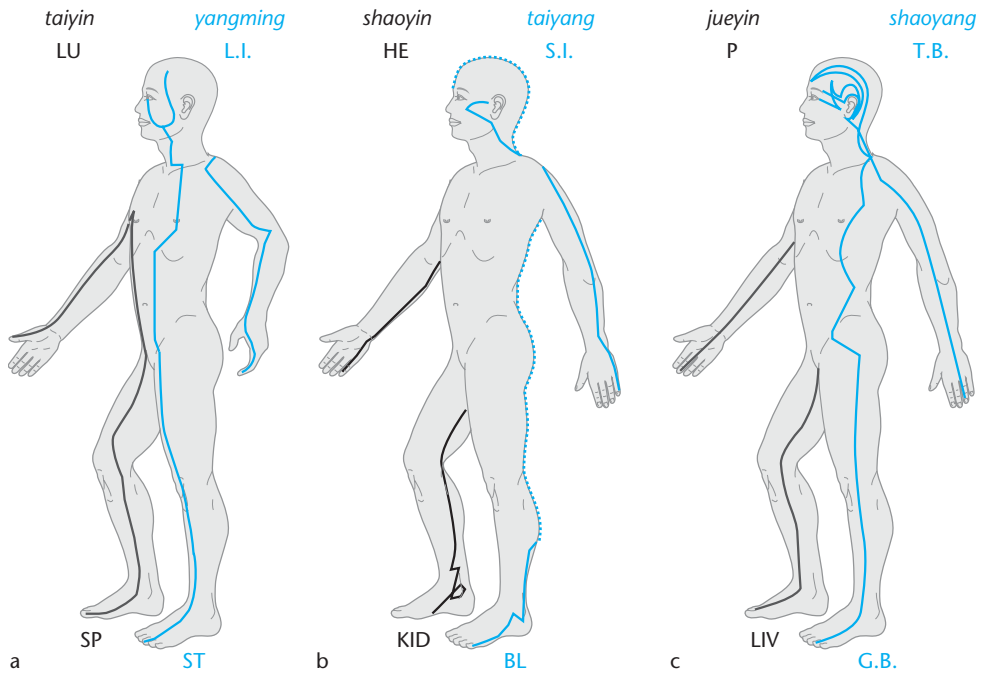

Fig. 1.13 Overview of the channel circuits

Connections among the primary channels

In order to ensure the continuous circulation (also see → 1.1.4) within the primary channel system, there need to be connections among the individual primary channels. Fig. 1.5 illustrates these in a schematic graphic overview.

According to some schools, the connections among the primary channels are facilitated by so-called entry/exit points. Various authors (for example Worsley, Jarrett, Pirog, Hicks et al., for more detail → 8.1.16) describe these as the shunting points between successive channels according to the Organ clock. The exit point marks the point on a channel from which the (internal) flow moves to a point (the entry point) on the channel that succeeds it on the Organ clock. There are some discrepancies regarding the location of the connections as described by the above authors and those described by Solinas et al. (1998), which are marked below as appropriate.

Yin–Yang connections

The connections – anastomoses – between the Yin and Yang channels are located on the hands and feet. The channels are most commonly connected at their respective final points, but sometimes also by branches separating from the main channel. These Yin–Yang connections are places where the Qi can change its polarity: Yin Qi becomes Yang Qi, and Yang Qi becomes Yin Qi. This creates a dynamic balance and allows for a better circulation of the Qi. The Yin–Yang connections follow the order of the basic structure of the circadian rhythm (24-hour cycle).

Hand Yin–Yang connections (→ Fig. 1.14)

The **hand Yin channels** are in most cases connected to the **hand Yang channels** at the tips of the fingers; sometimes they are connected on the hand by a branch that separates from the primary Yin channel and runs to the hand Yang channel:

FIRST CIRCUIT

LU channel (*shou taiyin*) ➡ L.I. channel (*shou yangming*)

LU-7 (*lieque*) ➡ **L.I.-1** (*shangyang*)

A branch separates from the primary LU channel at → **LU-7** (*lieque*) and travels to the primary L.I. channel at → **L.I.-1** (*shangyang*).

Note: According to Hicks et al. (2004, → 8.1.16) **L.I.-4** (*hegu*) is considered to be an entry point.

SECOND CIRCUIT

HE channel (*shou shaoyin*) ➡ S.I. channel (*shou taiyang*)

HE-9 (*shaoyang*) ➡ **S.I.-1** (*shaoze*)

THIRD CIRCUIT

P channel (*shou jueyin*) ➡ T.B. channel (*shou shaoyang*)

P-8 (*laogong*) ➡ **T.B.-1** (*guanchong*)

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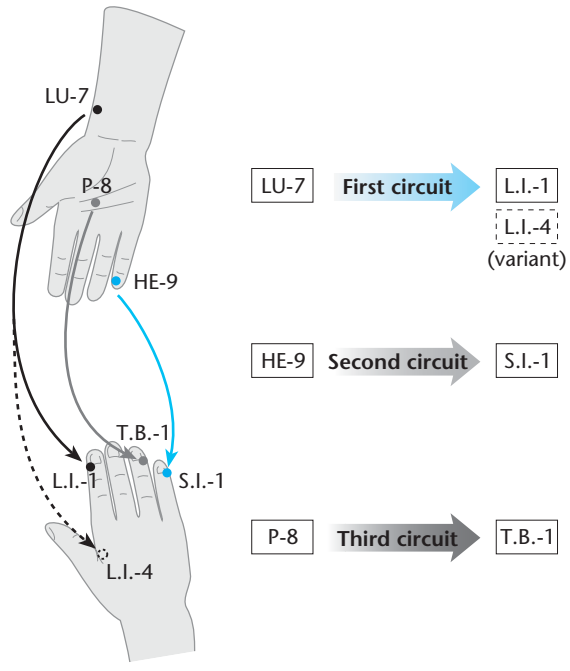

Fig. 1.14 Hand Yin–Yang connections (primary channels)

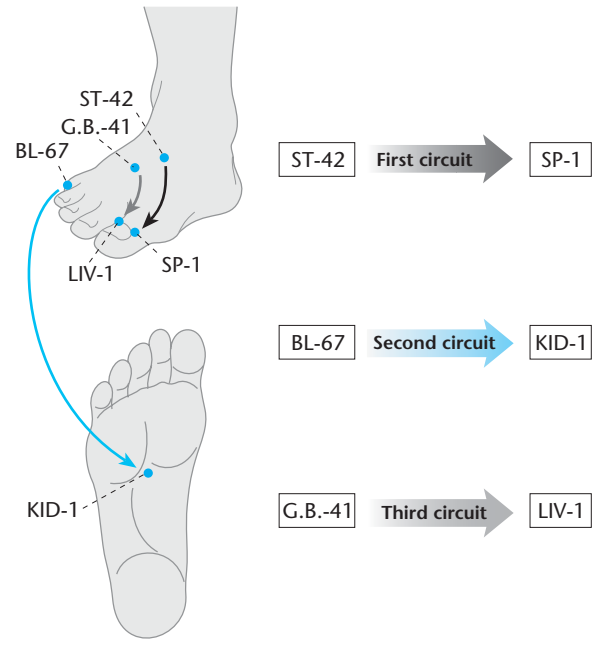

Fig. 1.15 Foot Yang–Yin connections (primary channels)

Foot Yang–Yin connections (→ Fig. 1.15)

The **foot Yang channels** are connected to the **foot Yin channels** at the toes by branches that separate from the primary Yang channels and run to the foot Yin channels (→ Fig. 1.15):

FIRST CIRCUIT

ST channel (*zu yangming*) ➡ SP channel (*zu taiyin*)

ST-42 (*chongyang*) ➡ **SP-1** (*yinbai*)

At → **ST-42** a branch separates from the primary ST channel and travels to → **SP-1**.

SECOND CIRCUIT

BL channel (*zu taiyang*) ➡ KID channel (*zu shaoyin*)

BL-67 (*zhiyin*) ➡ **KID-1** (*yongquan*)

THIRD CIRCUIT

G.B. channel (*zu shaoyang*) ➡ LIV channel (*zu jueyin*)

G.B.-41 (*zulinqi*) ➡ **LIV-1** (*dadun*)

On the instep of the foot, at → **G.B.-41**, a branch separates from the G.B. channel and travels to → **LIV-1**

Yang–Yang connections (→ Fig. 1.16)

The Yang–Yang connections between the primary channels are located on the **head**. They are rather superficial and follow the order of the channels within the **circadian cycle** (according to the Organ clock → Fig. 1.7). These connections support the communication between the hand Yang and foot Yang primary channels in the cranial region, which convey Qi of the same nature and quality (*yangming*, *taiyang*, *shaoyang*). They also mark the connections between the Yang axes, also referred to as hand–foot pairing (→ 1.2.3), and serve as a link between **above** and **below**.

FIRST CIRCUIT

L.I. channel (*shou yangming*) ➡ ST channel (*zu yangming*)

L.I.-20 (*yingxiang*) ➡ **ST-1** (*chengqi*)

SECOND CIRCUIT

S.I. channel (*shou taiyang*) ➡ BL channel (*zu taiyang*)

S.I.-18 (*quanliao*) ➡ **BL-1** (*yingming*)

THIRD CIRCUIT

T.B. channel (*shou shaoyang*) ➡ G.B. channel (*zu shaoyang*)

T.B.-23 (*sizhukong*) ➡ **G.B.-1** (*tongziliao*). Comment: according to Hicks et al. (2004, → entry/exit points, → 8.1.16) **T.B.-22** (*erheliao*) is considered an exit point.

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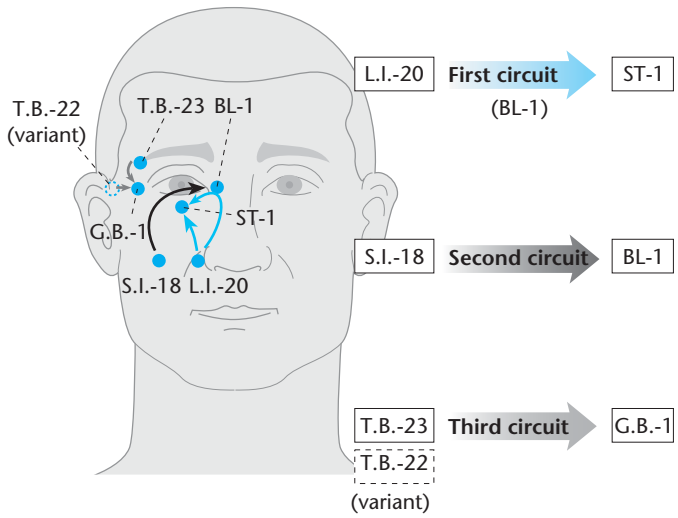

Fig. 1.16 Yang–Yang connections of the primary channels

Yin–Yin connections

The Yin–Yin connections between the primary channels are located in the **thoracic region** (Fig. 1.17).

In contrast to the more superficial Yang–Yang connections, they are located deep inside the body (internal pathways of the channels).

There are two types of Yin–Yin connection:

- the Yin axes connections or hand–foot pairings (*taiyin*, *jueyin*, *shaoyin*), which are **non-circadian** (do not flow according to the Organ clock) and
- the (deep) Yin–Yin connections, whose Qi flow follows the circadian rhythm of the Organ clock.

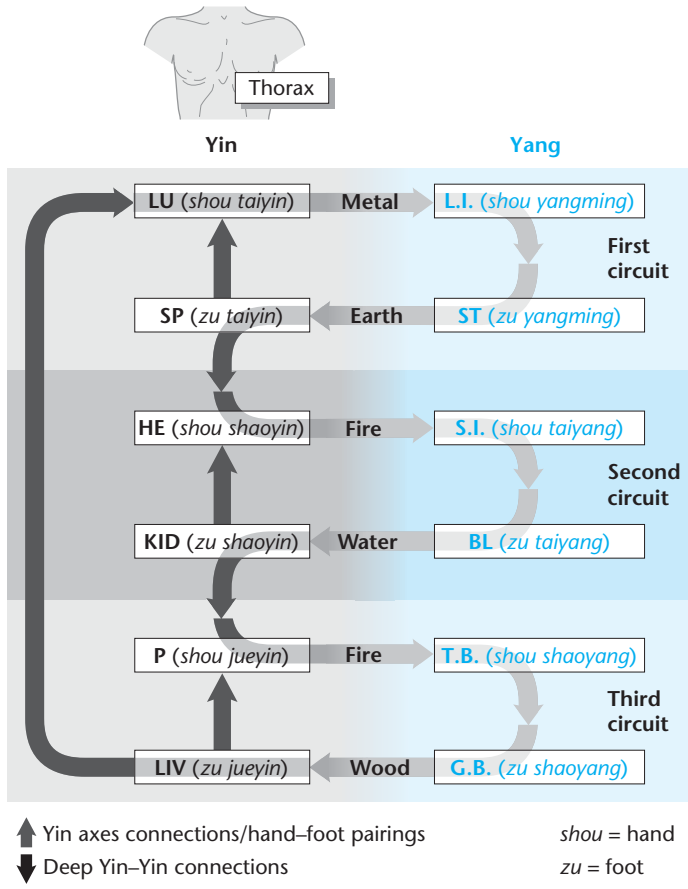

Fig. 1.17 Overview of the Yin–Yin connections (primary channels)

Connections of the Yin axes (hand–foot pairings)

These Yin–Yin connections support the communication between the hand Yin and the foot Yin channels, which convey Qi of the same quality (*taiyin*, *jueyin*, *shaoyin*) and serve as a link between **above** and **below**. Their Qi flow does **not follow the circadian rhythm** of the Organ clock (→ Fig. 1.17).

FIRST CIRCUIT

SP channel (*zu taiyin*) ➡ LU channel (*shou taiyin*)

SP-20 (*zhourong*) ➡ **LU-1** (*zhongfu*)

According to Solinas et al. (1998), a superficial branch separates from the primary SP channel at → **SP-20** and travels to the primary LU channel at → **LU-1**.

SECOND CIRCUIT

LIV channel (*zu jueyin*) ➡ P channel (*shou jueyin*)

LIV ➡ P

An internal branch ascends from the Liver, passes through the diaphragm, connects with the primary P channel below → **P-1** (*tianchi*).

THIRD CIRCUIT

KID channel (*zu shaoyin*) ➡ HE channel (*shou shaoyin*)

KID ➡ HE

An internal branch of the primary KID channel runs to the Liver, penetrates the diaphragm and spreads into the Lungs. From the

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Lung a branch travels to the Heart, where it connects with the primary HE channel.
Many authors give **HE-1** (*jiquan*) as the site of connection.

Deep Yin–Yin connections

These Yin–Yin connections facilitate the **circadian cycle** according to the Organ clock and mark the transitions of the channel circuits. They are located deep in the thorax area on the level of the *zang*-Organs.

CONNECTION OF THE FIRST AND SECOND CIRCUIT
SP channel (*zu taiyin*) ➡ HE channel (*shou shaoyin*)
SP ➡ HE
An internal branch of the primary SP channel spreads in the Heart and connects with the HE channel. Note: according to Hicks et al. (2004, → entry/exit points, → 8.1.16) **SP-21** is considered to be the exit point of the SP channel and **HE-1** the entry point of the HE channel.

CONNECTION OF THE SECOND AND THIRD CIRCUIT
KID channel (*zu shaoyin*) ➡ P channel (*shou jueyin*)
KID ➡ P
An internal branch of the primary KID channel travels to the Kidneys, then to the Liver, penetrates the diaphragm and spreads into the Lung. From the Lung, an internal branch runs to the Heart, where it meets the primary P channel and also reaches → **Ren-17** (*shanzhong/danzhong*). Note: according to Hicks et al. (2004, → entry/exit points → 8.1.16) **KID-22** is considered to be the exit point of the KID channel and **P-1** the entry point of the P channel.

CONNECTION OF THE THIRD AND FIRST CIRCUIT
LIV channel (*zu jueyin*) ➡ LU channel (*shou taiyin*)
LIV ➡ P
An internal branch of the LIV channel originates in the Liver, passes the diaphragm, spreads in the Lungs and connects with the LU channel through a network of branches. Note: according to Hicks et al. (2004, → entry/exit points → 8.1.16) **LIV-14** is considered to be the exit point of the LIV channel and **LU-1** the entry point of the LU channel.

1.2.3 The Six Great Channels (*liu jing*)

Based on the Yang–Yang and Yin–Yin connections (→ 1.2.2, → Fig. 1.16, → Fig. 1.17), primary channels of the same nature and quality can be divided into **six great channels** (*liu jing*) or **hand–foot pairings (or axes).** They represent the three great Yang channels and the three great Yin channels.

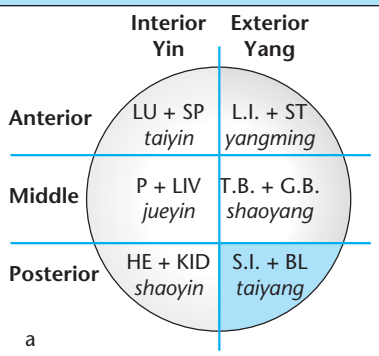
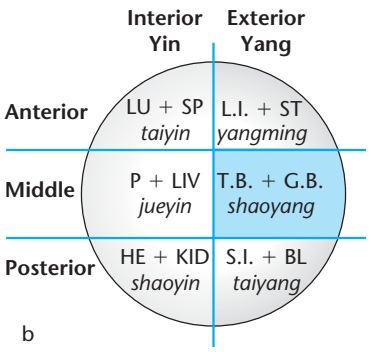
Channels	Trajectory		Amount of Qi and Blood
Exterior			
Yang channels (hand–foot pairings)			
taiyang **(S.I., BL)**	Latero-posterior aspect of the four extremities, posterior aspect of the head and body		Less Qi, more Blood **Qi < Blood**
shaoyang **(T.B., G.B.)**	Lateral aspect of the four extremities and torso		More Qi, less Blood **Qi > Blood**

Fig. 1.18 Overview of the six great channels (*liu jing*)

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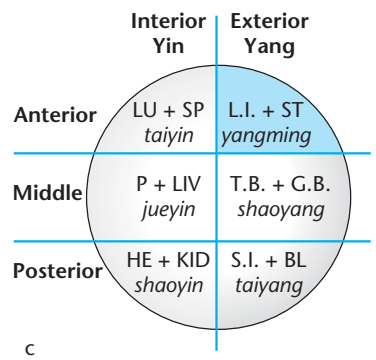
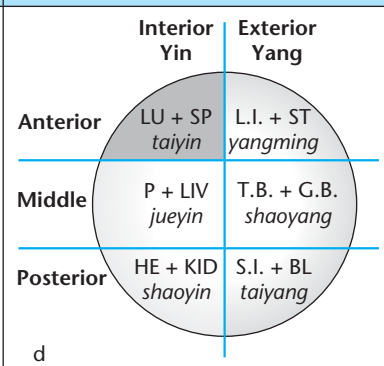
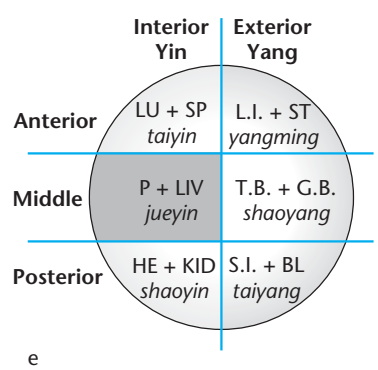
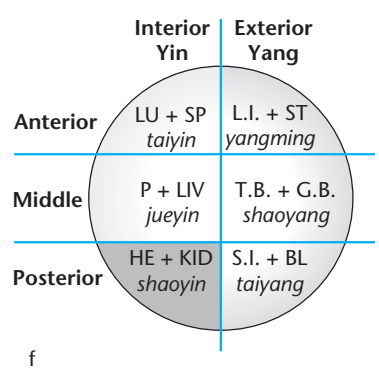
Yang channels (hand–foot pairings)			
yangming **(ST, L.I.)**	Latero-anterior aspect of the four extremities, frontal aspect of the head (face, forehead), anterior aspect of the trunk	 c	More Qi, more Blood **Qi = Blood**
Yin channels (hand–foot pairings)			
taiyin **(LU, SP)**	Medio-anterior aspect of the four extremities as well as the thorax and abdomen	 d	More Qi, less Blood **Qi > Blood**
jueyin **(P, LIV)**	Middle of the medial aspect of the four extremities as well as the thorax and abdomen	 e	Less Qi, more Blood **Qi < Blood**
shaoyin **(HE, KID)**	Medio-anterior aspect of the four extremities as well as the thorax and abdomen	 f	More Qi, less Blood **Qi > Blood**
Interior			

Fig. 1.18 (cont'd) Overview of the six great channels (*liu jing*)

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Names and functions of the six great channels (*liu jing*)

Tai means 'greater', 'highest'

The polarised energy (Yang or Yin) develops and reaches its maximum activity in the *taiyang* or *taiyin* channels. Here, **the maximum level of the respective polarity** is reached and begins to fall again. '*Taiyang* opens to the outside' means that it spreads to the Exterior (→ see comments below under *yangming*, also → Fig. 1.19).

Shao means 'less' or 'younger'

The polarised energy (Yang or Yin) is less in the *shaoyang* or *shaoyin* channels than in the *taiyang* or *taiyin* channels. This also manifests in their location: the *shaoyang* channels are located midway between the **inside** (or anterior aspect) and the **outside** (or posterior aspect) of the body, acting like a hinge. According to Larre and Rochat de la Vallée (1986), *shaoyang* should be translated as 'young Yang'. In their view it is positioned between the outside (the other two Yang channels) and the inside (the other three Yin channels).

Depending on the interpretation, the *shaoyin* channels are considered either to be located between the *taiyin* and the *jueyin* channels or to be the deepest of the six channels. Thus they are either seen as a hinge or as a fixed central point (for more detail see → Depth organisation of the channels).

Ming means 'clear', 'bright', 'radiant', 'shining'

'*Yangming* closes towards the inside – *yangming* contracts towards the inside.'

The *yangming* channel has some unique features. Based on its course alone, it is **not 'Yang'** like the other two Yang channels, but it develops as a Yang phenomenon within the Yin aspect of the body (partially anterior pathway of the ST channel).

The character for *ming* is composed of the radicals for the sun and the moon. The character for Yang also contains the sun radical. According to the *Su Wen*, the *yangming* is where the two Yang shine together. Thus, the two suns can be symbolically interpreted as a doubling of Yang energy. *Taiyang* and *shaoyang* are 'Yang' simply due to their physical location. *Yangming*, however, is 'Yang' due to the content of its stored energy. This raises the question as to why the *yangming* channel is so abundant, why it carries so much Qi and Blood. Pirog (1996) explains this fact based on embryonic development. The 'closing' of the *yangming*' can be equated with the image of a curled-up **embryo** (→ Fig. 1.19). Because of its contracting, 'closing' position, the energy of the *yangming* channel can be compared to the compressed energy in a pressure cooker. Thus the 'Yin' process of contracting towards the Interior results in producing Yang or, in other words, compression of the energy in the Interior.

This naturally compressed energy is utilised in clinical practice. The *yangming* channels, but especially the ST channel, can be accessed, either by massage or by acupuncture, to supply the whole body with the energy stored and accumulated here. By the same token, the *yangming* channels can be needled in order to drain excess Heat – a procedure comparable to a controlled release of steam from a pressure cooker.

Jue means 'absolute', 'at the end', 'exhausted' (also, according to Wiseman, 'to revert')

The polarised energy (Yin) in the *jueyin* channel represents the terminal phase of the Yin; here polarity changes to Yang (→ see below for more detail).

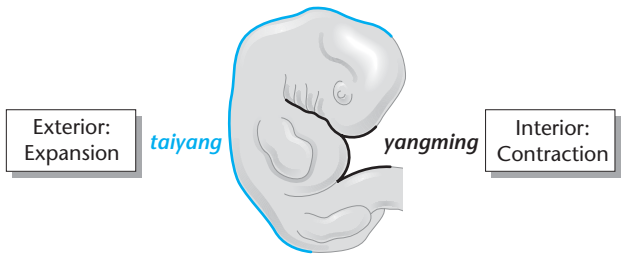

Fig. 1.19 Embryonic development of the *yangming* and *taiyang* channels (according to Pirog 1996)

The six great channels (*liu jing*): relationships and depth organisation

The systemic division of the channels into six levels or stages is mainly associated with the *Shang Han Lun*, a herbal classic. But according to Pirog (1996), this system can also be used as a paradigm for acupuncture, since it provides fundamental ideas regarding the functions of the points and channels as well as the relationships among the channels. It focuses particularly on changes of characteristics of the channel Qi, depending on which level it is acting within the body. The channels can be described as being stacked one upon each other, similar to layered rocks in a quarry. The depth of a channel or a point will be indicative of its function and significance. The postulate is that the more deeply a channel is located in the body, the more deep-seated its functions are and the more deep-seated illnesses it will be able to treat. They are not static, however. Depending on their location in the human body, they are indeed living structures with specific activities such as openers, closers, hinges or pivots, reflected in the meaning of the Chinese names. Fig 1.20 illustrates the arrangement of the six great channels from the outside to the inside, resembling the layers of an onion (→ Fig. 1.20).

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Nguyen Van Nghi (1996) compares the three Yin and three Yang channels to doors. The door (*taiyang* or *taiyin*) is closed to prevent the entry of unwelcome guests such as external pathogenic factors. But the door can also be opened to let in friends. Whether the door opens and closes well depends largely on the hinges (*shaoyang*, *shaoyin*). Only if the hinges function smoothly can the energy circulate adequately. The doorframe (or closing mechanism) (*yangming*, *jueyin*) closes towards the Interior; in other words, it protects and supports what is contained on the inside. (→ Fig. 1.21).

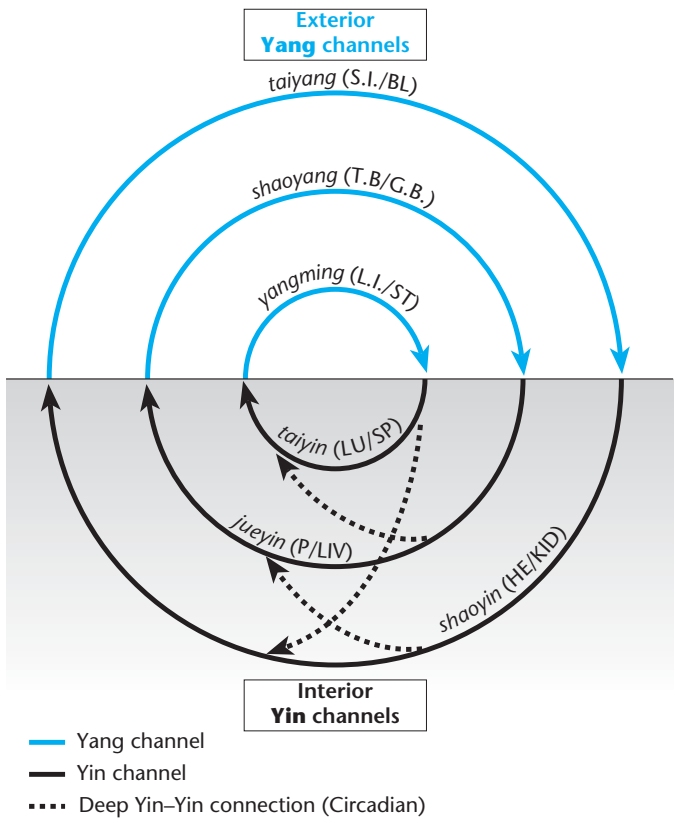

Fig. 1.20 Relationships of the three Yin and three Yang channels (according to Nguyen Van Nghi, 1996)

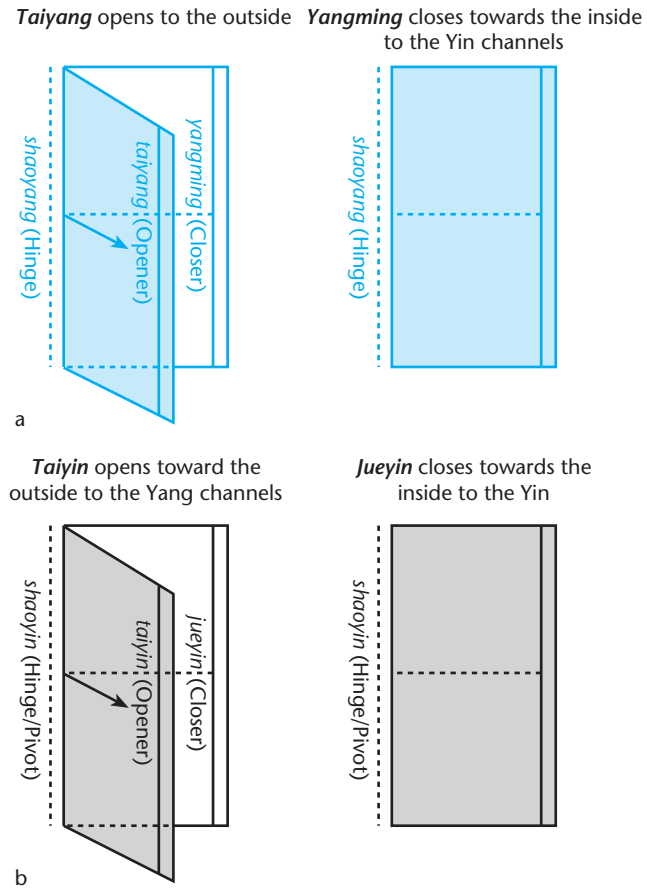

Fig. 1.21 The six great channels as opener, hinge and frame of a door

The literature is somewhat contradictory about which are the deeper of the six great channels, the *shaoyin* or the *jueyin* channels. Pirog (1996) has contributed an interesting theory in suggesting that the *shaoyin* channels occupy the deepest position in the body. They are located in such a medial location (near the middle of the body) that, when a person is standing in a normal position, the *shaoyin* channels are covered and not directly visible. According to Pirog, the *shaoyin* does not function like a hinge, but rather like a fixed pivot, similar to the axis of a mill wheel, which itself is immobile, but is able to cause movement. When the Qi has reached the deepest point of the *shaoyin*, and the 'Yin of the *jueyin* is exhausted', it has to revert. In other words: it has to return to a more superficial level on the outside or it has to transform into Yang. In that sense, it is the P and LIV channels that again start the flow of the Qi towards the Yang, from the inside to the outside and from below to above (→ Fig. 1.22).

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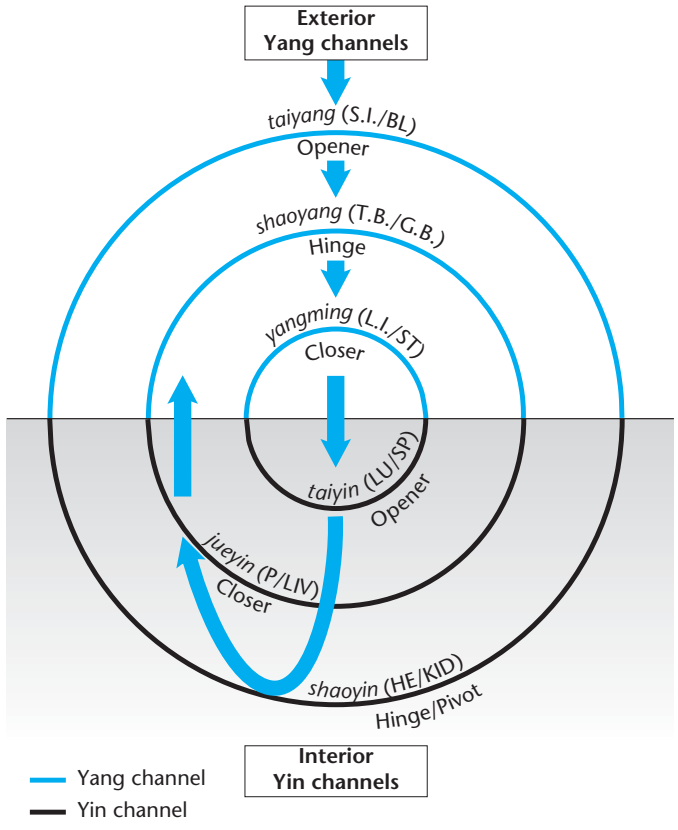

Fig. 1.22 Depth organisation of the six great channels (according to Pirog, 1996)

Confluent or connecting points of the six great channels (*liu jing*)

The **primary Yin channels** (*liu jing*) connect in the **thoracic region** (see also → Yin axes or hand–foot pairings → 1.2.2, Fig. 1.17). In contrast, the **primary Yang channels** connect in the **cranial region** (see also → Yang axes or hand–foot pairings → 1.2.2, Fig. 1.16). Many schools of thought suggest the connections of the channels of the same nature and quality at the following **six confluent points**:

Yin channels	**LU-1** (*zhongfu*), **P-1** (*tianchi*), **H-1** (*jiquan*)
Yang channels	**BL-1** (*jingming*), **G.B.-1** (*tongziliao*), **ST-1** (*chengqi*)

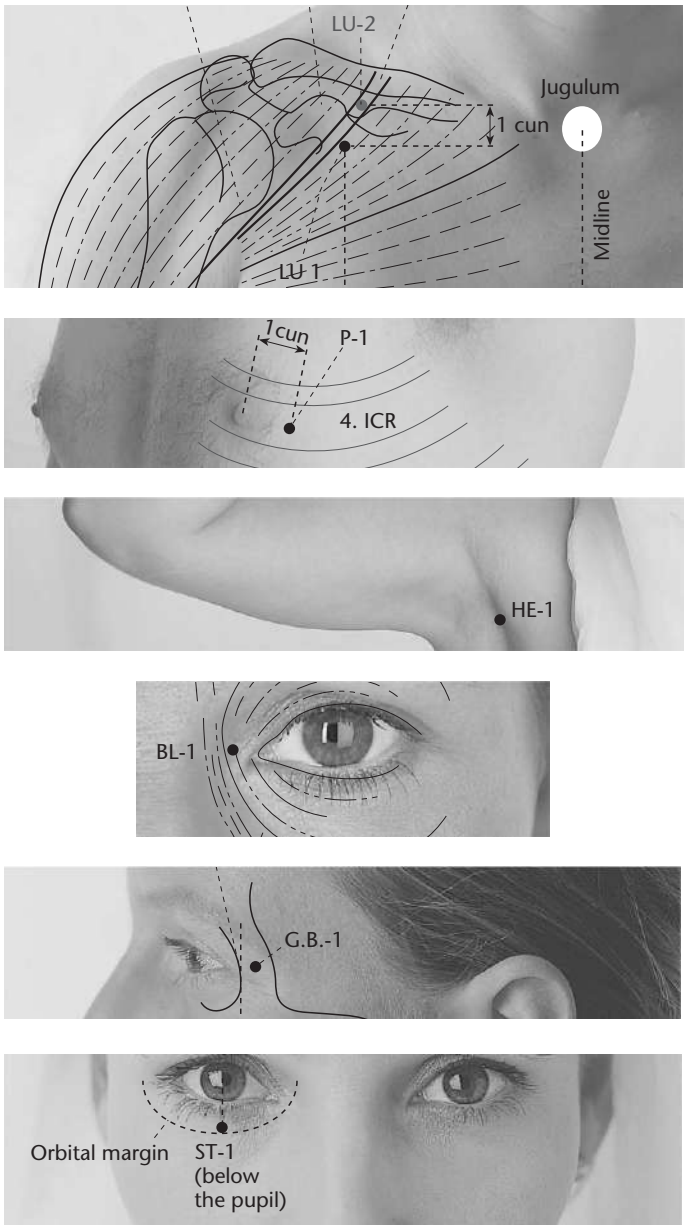

Fig. 1.23 Confluent points of the six great channels

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Starting and end points of the six great channels (*liu jing*)

Fig. 1.24 shows the starting and end points of the six great channels on the feet or hands respectively.

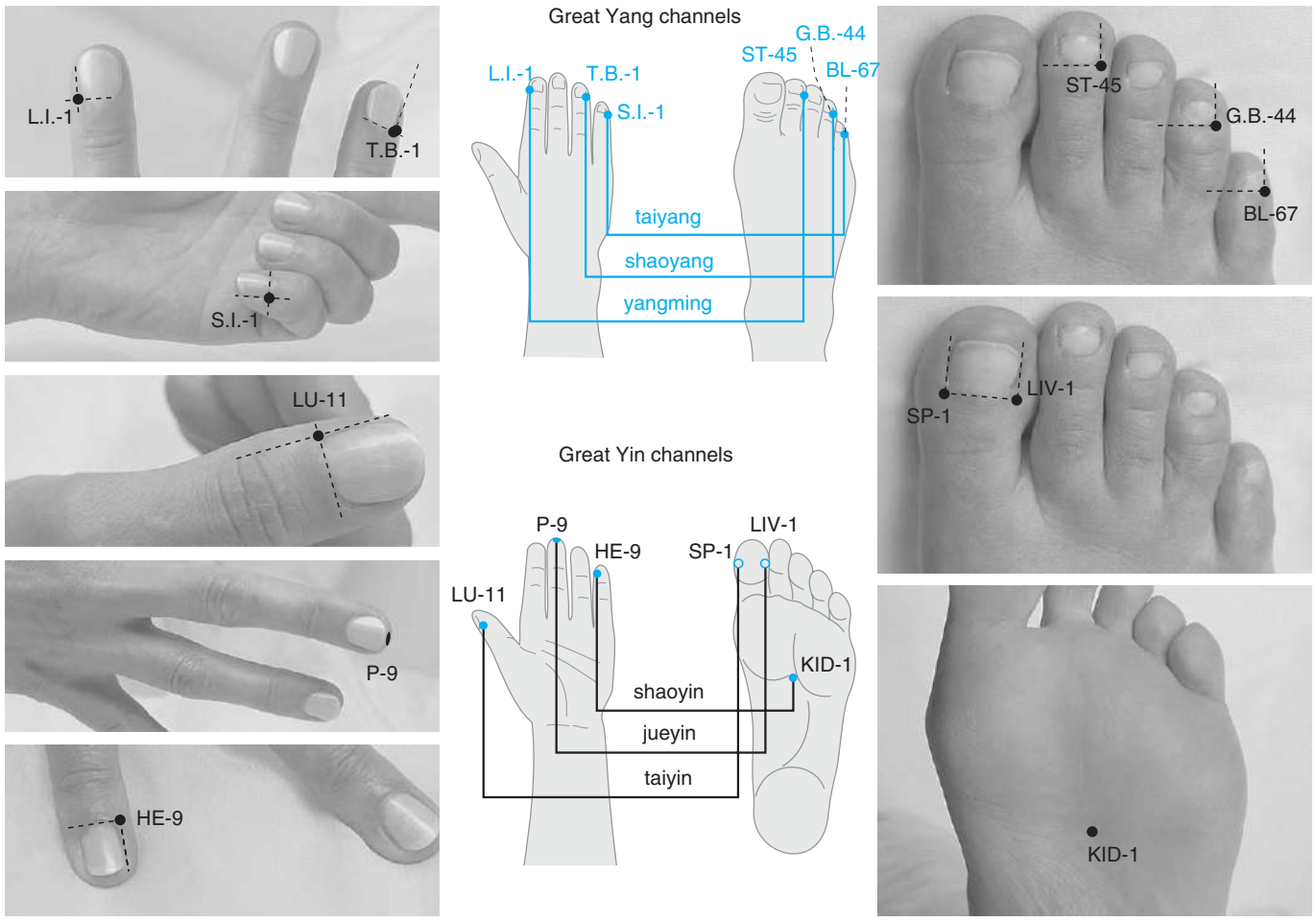

Fig. 1.24 Starting and end points of the *jiu jing*

Root points and binding points of the six great channels (*liu jing*)

According to Chapter 5 of the *Ling Shu*, each of the six great channels (*liu jing*) has a root point (*gen*) and a binding point (*jie*).

Root points (*gen*)

At the root point, the polarised energy (Yin/Yang) of a great channel is at its minimum – this point marks the end of the Yang or the beginning of the Yin. The root points are all located on the foot (→ Fig. 1.24).

Root points of the three Yang channels (→ Fig. 1.24)

These always represent the **terminal point** of each great **Yang** channel.

taiyang (S.I. ➡ BL)	**BL-67** (*zhiyin*)
shaoyang (T.B. ➡ G.B.)	**G.B.-44** (*zuqiaoyin*)
yangming (L.I. ➡ ST)	**ST-45** (*lidui*)

Root points of the three Yin channels (→ Fig. 1.24)

These always represent the **first point** of each great **Yin** channel.

taiying (SP ➡ LU)	**SP-1** (*yinbai*)
jueyin (LIV ➡ P)	**LIV-1** (*dadun*)
shaoyin (KID ➡ H)	**KID-1** (*yongquan*)

Binding points (*jie*)

The binding point is the point at which the polarised energy (Yin/Yang) of a great channel reaches its maximum level. It is at this point that the hand channel and the foot channel are connected.

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Binding points of the three Yang channels

These are the **switching points** of the great Yang channels (hand to foot) and are located in the **cranial region**.

taiyang (BL ➡ S.I.)	**BL-1** (*jingming*)
shaoyang (G.B. ➡ T.B.)	**T.B.-21** (*ermen*)*
yangming (ST ➡ L.I.)	**ST-1** (*chengqi*)**

Binding points of the three Yin channels

These are the **switching points** of the great Yin channels (foot to hand) and are located in the **thoracic or abdominal region**.

taiying (SP ➡ LU)	**Ren-12** (*zhongwan*)
jueyin (LIV ➡ P)	**Ren-18** (*yutang*)
shaoyin (KID ➡ H)	**Ren-23** (*lianqian*)

1.3 Divergent Channels (*jing bie*)

Synonyms: Channel divergence (Wiseman), separate pathways (Larre and Rochat de la Vallée).
Character: *bie* means diverging, separating, branching off. In this sense, the 12 divergent channels can be seen as branches of the primary channels.

General pathways of the divergent channels (→ Fig. 1.25)

The 12 bilateral divergent channels, which have no specific points of their own, are named after and are dependent on their corresponding primary channel.
They can be divided into **six great Yin and six great Yang pairs** and have their own system of six confluences (reunions): BL/KID, G.B./LIV, ST/SP, S.I./H, T.B./P, L.I./LU. According to Ramakers (course material, 2003) the divergent channels follow their own (non-cosmic) daily biorhythm:
BL ➡ G.B. ➡ ST ➡ S.I. ➡ T.B. ➡ L.I. ➡ KID ➡ LIV ➡ SP ➡ H ➡ P ➡ LU.
All divergent channels separate (*li*) from their corresponding primary channel on the extremities, except for the divergent T.B. channel, which branches off on the head. But many authors suspect that their pathways begin before the actual branching off. Based on this assumption, the divergent channels begin at the distal ends of the primary channels, running parallel to them, but as separate entities. The circulation in the divergent channels is of a centripetal nature (→ 1.1.1); in other words, the flow is always from a distal in a proximal direction, towards the trunk and the head. After separating from the primary channels, they enter deeper (*ru*) into the body and, after completing their internal pathway, they re-emerge close to the surface of the body (*chu*). The divergent channel pairs (Yin/Yang) pass together through the Interior of the body to join (*he*) their pertaining primary Yang channel in the occipital or cranial region. It is this joining of the courses that is referred to as the six confluences (or reunions) (*liu he*).

Pathways of the divergent Yin channels

After separating from their primary channels, they connect with their pertaining *zang*-Organ, then with the Interiorly-Exteriorly paired *fu*-Organ. They continue their flow in the upper half of the body together with their paired divergent Yang channel to join the paired primary Yang channel. In contrast to the divergent Yang channels, the divergent Yin channels will not return to their pertaining primary Yin channel after having completed their internal pathway (→ Fig. 1.25).

Pathways of the divergent Yang channels

After separating from their primary channels, the divergent Yang channels travel to their pertaining *fu*-Organ, then to the Interiorly-Exteriorly paired *zang*-Organ. They connect again with their pertaining primary channel and also with their Interiorly-Exteriorly paired divergent Yin channel in the upper half of the body (→ Fig. 1.25).

The divergent channels and the Heart

All divergent channels pass the thoracic region and the Heart, except for the divergent channels of the LU, L.I. and KID. According to Shima and Chase (2001), this means that all divergent channels passing the thorax will communicate with the True Qi (*zhen qi*), representing the synthesis of the Gathering Qi (*zong qi*) and Original Qi (*yuan qi*) (→ 1.1.4). They suggest that this hypothesis is in accordance with all the information available about the divergent channels, and explains furthermore why the divergent channels are so useful in the treatment of deep-seated Organ disorders as well as for disharmonies of the Defensive Qi (*wei qi*). It supports the image of a divergent channel as a fundamental axis between the Interior and the Exterior of the body. In the opinion of Shima and Chase (2001), the divergent channels are an invaluable connection to facilitate the return of the Defensive Qi (*wei qi*) to the Interior of the body and to transfer the fundamental inner Original Qi (*yuan qi*) to the periphery. In that respect the Original Yang (*yuan yang*) not only touches upon, but also strengthens the Defensive Yang (*wei-yang*).

* According to Nguyen Van Nghi (1996) and Solinas et al. (1998), this is G.B.-2 (*tinghui*)
** According to Nguyen Van Nghi (1996) and Solinas et al. (1998), this is ST-8 (*touwei*)

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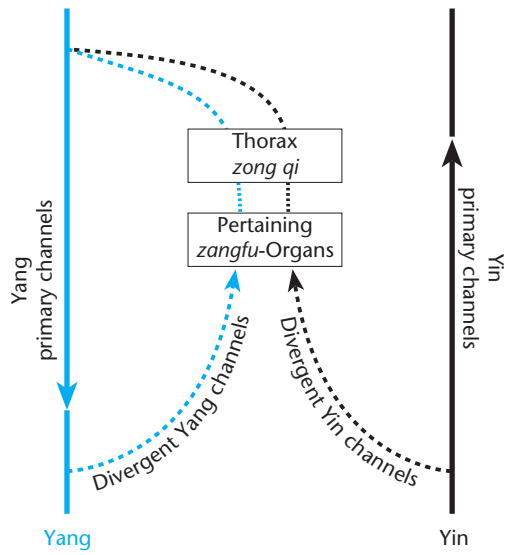

Fig. 1.25 Schematic illustration of the divergent channel pathways (according to Shima and Chase 2001)

Functions

The divergent channels reinforce the circulation of and communication between the primary channels in the Interior of the body. On the one hand, this is achieved due to their connection with the primary Yang channels (→ pathways). But their organisational structure also supplements the primary channels in a functional way – for example they also control areas of the body not covered by the primary channels. Thus points on the primary Yin channels can affect the head and face, in spite of their 'external' pathways ending in the thoracic region. This effect can be explained by the fact that the Yin divergent channels, after branching off from their pertaining primary Yin channel, pour into the Yang divergent channels flowing to the head. A deeper understanding of the trajectory and functions of the divergent channels will in turn lead to a better understanding of the clinical application of some commonly used acupuncture points. Since their pathway passes the Heart and thorax, the divergent channels further strengthen the connection to the Heart (→ explanations above). According to some schools, they can therefore also be used for the treatment of psychosomatic disorders. Many interpretations and variants exist regarding the pathways and clinical application of the divergent channels (for a good overview see → Shima and Chase 2001).

1.4 The 12 Sinew Channels (*jing jin*)

Synonyms and translations: muscle channels, muscular meridians/the muscles in connection with the meridians (Larre and Rochat de la Vallée), muscle regions, channel sinews.

Principles of the sinew channel system

The sinew channels mainly represent the muscles, sinews and ligaments located along the pathways of the primary channels and their pertaining connecting vessels. They do not have their own specific points and also no direct connection to the *zangfu*-Organs. The 12 bilateral sinew channels are connected to and named after their pertaining primary channel. Each sinew channel has its own pathway, which generally follows the trajectory of its pertaining primary channel. However, in contrast to the primary channels, the sinew channels always begin at the extremities, mostly separating from the primary channels at the *jing*-well points (→ 8.1.6) on the tips of the fingers and the toes. Their pathways always run from the extremities to the trunk or further to the head and face (→ centripetal circulation → 1.1.1). They cover a larger area than the primary channels, in the shape of a band and binding (*jie*) like a spindle at the joints and other areas of the body. This allows them to cover areas of the body which are not reached by the primary channels or the divergent channels. It further explains the actions of some of the points located on their pertaining primary channel. Under pathological conditions, the sinew channels will manifest as so-called *ashi*-points (*a shi xue*) or as trigger points.

Terms

Binding (*jie*) refers to spindle-shaped concentrations of the sinew channels, which tend to be located on the bigger muscles and joints (for more details on specific sinew channels see → Chapter 4).
The term *ju* (point of confluence, gathering) is used to signify an area where two or more sinew channels are bundled together. In the larger muscles, the Qi disperses or spreads (*san*), so that they can be divided into smaller muscle groups. The sinew channels connect (*luo*) the muscles, sinews and ligaments with the joints in order to facilitate mobility.

Rhythm of Qi flow

According to Ramakers (course material, 2003) the sinew channels are subject to their own daily rhythm of Qi flow:
BL ➡ G.B. ➡ ST ➡ S.I. ➡ T.B. ➡ L.I. ➡ SP ➡ LU ➡ LIV ➡ P ➡ KID ➡ HE.

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General pathways of the sinew channels (→ Fig. 1.26)

- The three hand Yang sinew channels (L.I./S.I./T.B.) flow from the finger tips towards the scapula, ascend to the ear and intersect with **G.B.-13** (*benshen*)
- The three foot Yang sinew channels (ST/BL/G.B.) run from the tips of the toes towards the head, join each other on the cheek and meet with **S.I.-18** (*quanliao*)
- The three hand Yin sinew channels (HE/P/LU) flow from the finger tips towards the thorax, joining within the thoracic musculature and meeting at **G.B.-22** (*yuanye*)
- The three foot Yin sinew channels (LIV/KID/SP) run from the tips of the feet towards the thorax, join each other in the genital region and, depending on the author, intersect in the area of **Ren-2** (*qugu*) or **Ren-3** (*zhongji*)

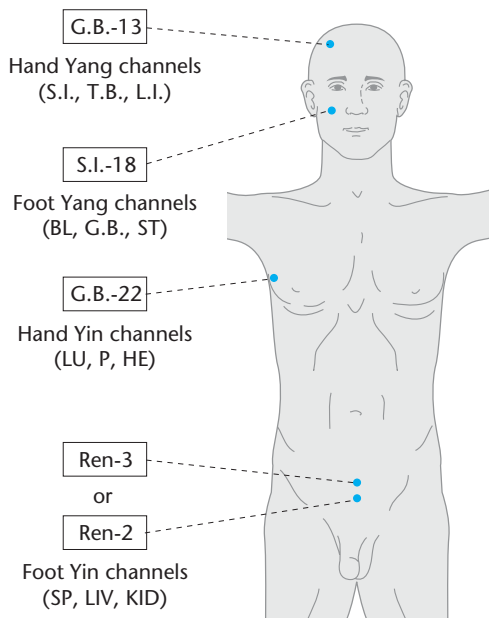

Fig. 1.26 Meeting points of the sinew channels

Functions

The main function of the sinew channels is to distribute Qi and Blood (*xue*) over the surface of the body as well as to integrate the muscles, sinews and ligaments with the joints. Generally, the sinew channels join groups of synergistic muscles, supporting their mobility and natural movement while also serving the function of integrating the surface of the body. At the same time they protect the bones and skeletal structure, linking the structures of the body.

Proper functioning of the muscles is dependent on the Spleen (*pi*) and the Liver (*gan*) and particularly on their Blood (*xue*). While the Yin (or material) aspect of the musculature, the 'flesh', is governed by the nourishing function of the Spleen, the functioning of the muscles and sinews is governed by the Liver. But the Liver is also connected to the mesenchymal structures of the body, especially those surrounding the organs. The sinew channels are not only composed of the muscular structures, but also of the mesenchymal formations, so that according to Larre and Rochat de la Vallée they are also involved in the structural aspect of the diaphragm as well as the thoracoabdominal serous membranes, in particular the pleura, peritoneum and pericardium. In the deeper parts of the body they act through the deep muscular fascia. One of the main functions of the sinew channels is that of a 'protective coat' that shields the body against attacks from the Exterior. In this respect the Defensive Qi (*wei qi*) is of particular importance ((→ 1.1.4): the muscle spindles are crossed by loose and diffuse flows of Qi, which also contain Defensive Qi (*wei qi*). Nutritive Qi (*ying qi*) is also present, particularly at the outer ends of the spindles (→ 1.1.4).

The sinew channels also have the task of barring access to the deeper channels. In other words, in a pathological situation, a deeper channel can only be reached if the resistance of the muscular layers can be broken. An important aim of Tuina therapy is to remove muscular tension. According to Larre and Rochat de la Vallée (1996), the sinew channels also play a role in psychosomatic disorders since they very effectively constitute the muscular carapace. The authors refer here to a bioenergetic interpretation of muscular tension.

Clinical and therapeutic importance

Disorders of the sinew channels will show the following symptoms along their pathway: muscular tension, pain, cramping, spasms, stiffness, but also paralyses, weakness and swellings of the muscles, tendons and ligaments. Any impairment of range of motion of the joints also indicates that the sinew channels are involved. In addition, each sinew channel also has its specific symptoms (→ chapter 4, individual channel descriptions).

The following factors can contribute to disorders of the sinew channels:

- *Bi* syndromes – external invasion of pathogenic Wind, Cold, Damp or Heat
- Traumatic injuries
- Muscle strain through over-use
- Muscle strain and contraction due to longstanding emotional and mental stress

While the sinew channels do not have their own specific points, they can easily be accessed by needling *ashi*-points, as well as through adjunctive therapies such as cupping, Tuina massage, plum blossom needling, moxibustion and *gua sha* (scraping technique). Distal points can also be used in treating disorders of the sinew channels.

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For traumatic injuries with limited range of motion, needling of distal points with simultaneous movement of the affected joint has proven to be very effective. The distal points (→ 8.2.1) can be chosen by first determining the affected area, then needling points in the corresponding area on the contralateral side.
For example, for a knee injury, the exact location of the pain is determined, then the corresponding point or area on the contralateral elbow is needled or massaged. Fig. 1.27 illustrates the areas that have been found to be effective. These areas are also referred to as reciprocal areas (for more detail also see → 8.2, 8.3).

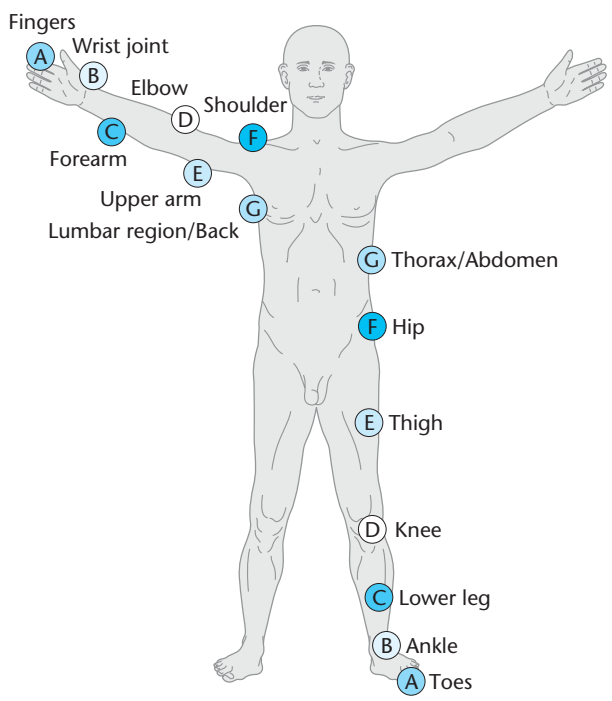

Fig. 1.27 Corresponding areas of the body

1.5 *Luo*-Connecting Vessels

Synonyms: secondary pathways (Larre and Rochat de la Vallée), network vessels, collaterals

Organisation

The *luo*-connecting vessels can be divided into 15/16 great *luo*-connecting vessels as well as into many smaller and more superficial *luo*-connecting vessels. Looking at the *luo*-connecting vessels altogether, they form a network that spans the entire body. And all *luo*-connecting vessels in turn connect with the great *luo*-connecting vessel of the Spleen (at → **SP-21**), which plays a major role within the network of the *luo*-connecting vessels (*Ling Shu*, Chapter 10). Together with the primary channel system, they form a network of vessels which distribute Qi and Blood not only within the body, but also to its surface (→ Fig. 1.3, 1.4).

The 16 great *luo*-connecting vessels

Traditionally there are 15 *luo*-connecting vessels, but if one includes the great *luo*-connecting vessel of the Stomach (*wei zhi da luo* or *xu li*), it raises the number to 16:

- 12 *luo*-connecting vessels (*luo mai*), related to the 12 primary channels and beginning at the extremities
- 4 *luo*-connecting vessels beginning at the thorax:
  - 2 *luo*-connecting vessels of the *ren mai* and *du mai*
  - 1 great *luo*-connecting vessel of the Spleen
  - 1 great *luo*-connecting vessel of the Stomach.

Except for the Great *luo*-connecting vessel of the Stomach (*xu li*) which originates in a *fu*-Organ, all other 15 *luo*-connecting vessels emerge at a specific point on their pertaining primary channel, the *luo*-connecting point (→ 8.1.2). 13 *luo*-connecting points are located on primary channels, two on extraordinary vessels (*ren mai* and *du mai*). The *luo*-connecting points are located on areas of the body, where the *luo*-connecting vessels that connect the Interiorly-Exteriorly pertaining channels with each other divide into smaller vessels. The 15/16 *luo*-connecting vessels thus fulfil a controlling function over all the other, smaller *luo*-connecting vessels. Each *luo*-connecting vessel has its own pathology according to its pertaining primary channel (→ introductions to the primary channels → Chapters 4 and 5).

Superficial *luo*-connecting vessels

The smaller superficial *luo*-connecting vessels are sub-branches of the 'great' *luo*-connecting vessels. They, in turn, are divided into the *sun luo*, vertical branches which are sometimes also referred to as tertiary branches or grandchild-vessels. The *sun luo* not only spread over the surface of the body, but also cover the internal Organs. The *sun luo* further divide into the more superficial *fu luo*. The *fu luo* again divide horizontally into small branches called the *xue luo* (blood vessel network).
Pathogenic factors tend to enter the body through the superficial *luo*-connecting vessels. By the same token, disorders such as Qi or Blood stagnation in a primary channel or an Organ may manifest in the *xue luo* as skin discolorations, spider veins, etc.

Clinical importance

The *luo*-connecting vessels can be accessed through superficial needling techniques as well as skin-sensitising techniques such as plum blossom needling, bloodletting, cupping, *gua sha* and moxibustion.

> New diseases are located in the primary channels; old (chronic) diseases lodge in the *luo*-connecting channels.

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1.6 Cutaneous Regions (*pi bu*)

Characteristics

The cutaneous regions form the most superficial aspect or outer cover of the primary channel system (*pi* = skin). According to Ramakers (course material, 2003), they can be compared to a 'big bag that holds everything together' and – besides the extraordinary vessels – they represent the oldest tissue in the body, which developed from the ectoderm. The cutaneous zones are not channels *per se*, but rather areas of skin connected to and covering the network of superficial channels and vessels. They are named after the six great channels (*liu jing* → 1.2.3) (Fig. 1.28).

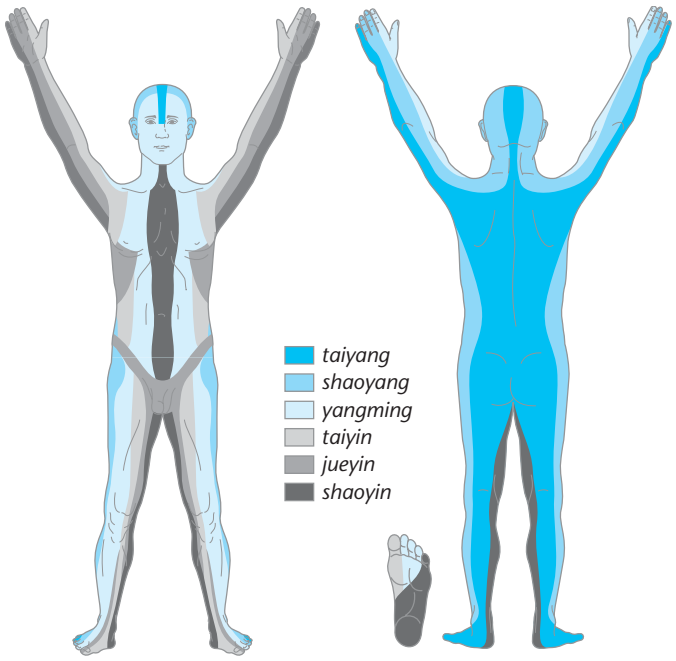

Fig. 1.28 Cutaneous zones (anterior and posterior aspect)

Functions

The cutaneous zones circulate Blood and Qi, especially Defensive Qi (*wei qi*), to the surface of the body and regulate the skin and pores, thus strengthening the body's defences. Proper functioning depends on the Lung Qi, which governs the skin, and the Defensive Qi (*wei qi*) (→ 1.1.4). Pathogenic factors can enter and exit the body through the cutaneous zones.

Clinical importance

Disorders of the primary channels and their pertaining *zangfu*-Organs may be reflected on the outside of the body by the cutaneous zones, for example pathological skin sensations, lesions or discolorations may occur. A bluish-greenish discoloration may indicate pain or obstructions, a reddish colour Heat and a pale-whitish colour deficiency or Cold. Therefore, the cutaneous zones can serve as a diagnostic tool for skin disorders or pain, specifically for chronic pain. Treatment techniques include superficial needling, plum blossom needling, cupping, massage, and *gua sha* (Chinese scraping technique). The author had good results in the treatment of chronic pain with the somatopic wrist/ankle acupuncture developed by Dr Zhang Xin Shu (→ JCM, No. 37,11/1991, → Focks and Hillenbrand 2003). The strictly subcutaneous needling used in this technique influences, of course, the cutaneous zones.

1.7 The Eight Extraordinary Vessels (*qi jing ba mai*)

Synonyms: Extraordinary meridians, Wondrous meridians
Meaning of *qi jing ba mai*:
Qi: extraordinary, strange, not paired, miraculous, wonderful
Jing: channels, meridians
Ba: eight (first differentiation)
Mai: vessels
The eight extraordinary vessels are not channels such as the *jing mai*, but they are – as the name implies – extraordinary. While they are often mentioned together with the primary channels (*jing mai* → Fig. 1.3), they still play a special role.

1.7.1 Theories about the Origin of the Extraordinary Vessels

The eight extraordinary vessels are often considered to be the deepest and most original structures of the body and channel system, developing very early on during the embryonic phase. They are considered to 'cover all of human activity' (Larre et al 1986). They also initiate all secondary functions and always remain operative. Therefore, their pathologies manifest with complex symptoms and include pre- and postnatal Essence problems. The *Nanjing* (Unschuld's translation, 1986) is the first to describe the extraordinary vessels as a complete system. Earlier records only mention them individually in the context of their respective functions.

Origins of the extraordinary vessels

In order for the manifestations of life to develop, the body requires structures that keep the rhythm of the Qi and its related processes in harmony and balance. The *Nanjing* introduces the concept of an energetic centre in the human body, the 'moving Qi between the Kidneys', which is often seen as connected with the *mingmen* and *qihai dantian* and is subject to the influences of the cosmic as well as of the prenatal and postnatal Qi.

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According to Matsumoto and Birch (1986), the 'moving Qi between the Kidneys' represents the *Taiji* of the body, the Great One, the origin of Yin and Yang. It is considered to be the root and origin of all human systems and structures and, according to some authors, it has a connection to the Original Qi (*yuan qi*) (→ 1.1.4). The *chong mai*, as the oldest vessel, is sometimes equated with the 'moving Qi'. The *ren mai* and *du mai* represent the basic division of the Yin and Yang in the body; in other words, they originate from the 'moving Qi' or *chong mai* as Yin and Yang branches. During the 'division', one movement ascends the front of the body (*ren mai*), the other movement the back (*du mai*).

Heaven and Earth have noon and midnight, the body has the *ren mai* and *du mai* as its polar axes. The *du mai*, *ren mai* and *chong mai* have different names, but in the end they are the same and have the same significance. The *chong mai* ensures the inseparability or unity of the *du mai* and *ren mai* – of Yin and Yang. If we tried to separate Yin and Yang, we would have to realise that they are an 'inseparable whole, a unit'.

Therefore, the extraordinary vessels function as a kind of matrix, which is the source of the energetic functioning and the cellular divisions in the body. This matrix is present from the moment of conception and organises the structuring of the embryonic development from the earliest stages.

Explanation of Fig. 1.29 (after Matsumoto and Birch)

In the beginning, there is the Great One, the *Taiji* (first level). At this level of 'no-form', the Great One begins to separate (second level) and becomes Yin and Yang (third level). At the fourth level, Yin and Yang separate twice (two branches):

- One branch **separates in a threefold way** to become the **Triple** Burner (*san jiao*) and its associated forms of Qi. Further separations lead to the formation of the **six** great channels (*liu jing* → 1.2), the **Five** Phases and **their source**, as well as the 12 primary channels.
- The other branch separates at the fourth level to form the **four** body areas (left, right, above, below) and then the **eight** extraordinary vessels.

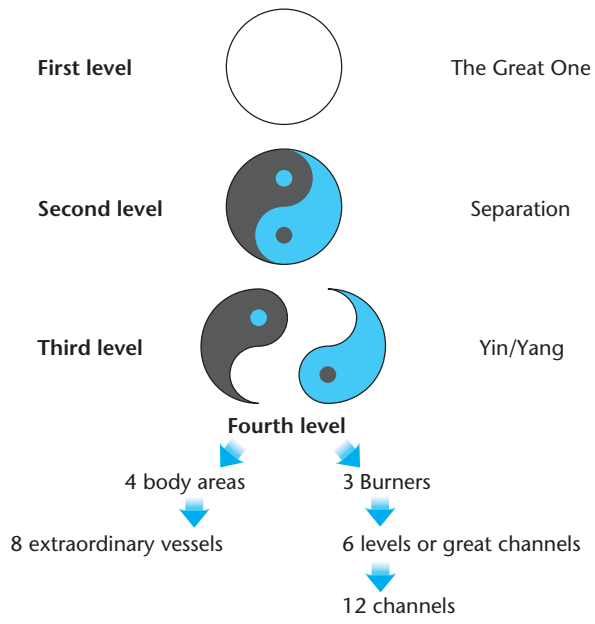

Fig. 1.29 Origin of the channels

Scars of the first cell division

Matsumoto and Birch (1986) comment on the work of Manaka and others, who interpret the extraordinary vessels with regard to embryonic development, regarding them as scars or 'lines of separation of the first cell divisions'.

The *du mai* and *ren mai* are the result of the first division of the fertilised egg, while the *dai mai* develops during the second division. At this stage, the embryo is essentially a torso, while the extremities and the more 'peripheral' extraordinary vessels – the *yang qiao mai* and the *yin qiao mai* as well as the *yang wei mai* and the *yin wei mai* – only form during subsequent divisions.

The eight extraordinary vessels and body structure

- According to Manaka et al (1995), a close connection exists between the eight extraordinary vessels and **body** structure/symmetry.
- The ***du mai*** and the ***ren mai*** separate the body **vertically** into **left** and **right**: the *ren mai* marks the anterior midline, the *du mai* ascends the posterior midline.
- The ***dai mai*** circles the waist **horizontally,** forming a **horizontal axis**. It separates **above** from **below** (→ Fig. 1.30 a).

In a further development of this idea, Manaka describes the division of the body into **eight areas,** using the structure of a topological octahedron for illustration. (→ Fig. 1.30 b). In this model, the eight extraordinary vessels directly relate to the lines 'separating' the faces of the octahedron:

- Due to their location on the anterior/posterior midline, the ***ren mai*** and the ***du mai*** separate the body into its right and left section.
- The ***dai mai*** separates above and below.
- The **G.B. and T.B. channels** compare to the anterior and posterior dividing lines at the lateral edges of the Yang aspect of the body.

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- The **P** and **SP channels** compare to the anterior and posterior dividing lines at the lateral edges of the Yin portion of the body.

The opening points of the extraordinary vessels, with the exception of **SP-4** (a point on the LIV channel would be more appropriate), represent this division:

- **P-6** and **T.B.-5** are the opening points of the *yin wei mai* and *yang wei mai* respectively
- **SP-4** and **G.B.-41** are the opening points of the *chong mai* and *dai mai* respectively.

These four channels divide the **anterior** and the **lateral** aspects of the body and connect the **upper** and **lower** parts, the four associated extraordinary vessels functioning accordingly. The *yin qiao mai* and the *yang qiao mai*, due to their connection to the KID and BL channels (opening points **KID-6** and **BL-62**) have a close relationship to the *ren mai* and *du mai*. Furthermore, the pathway of the KID channel is located close to the *ren mai* while the BL channel is close to the *du mai*.

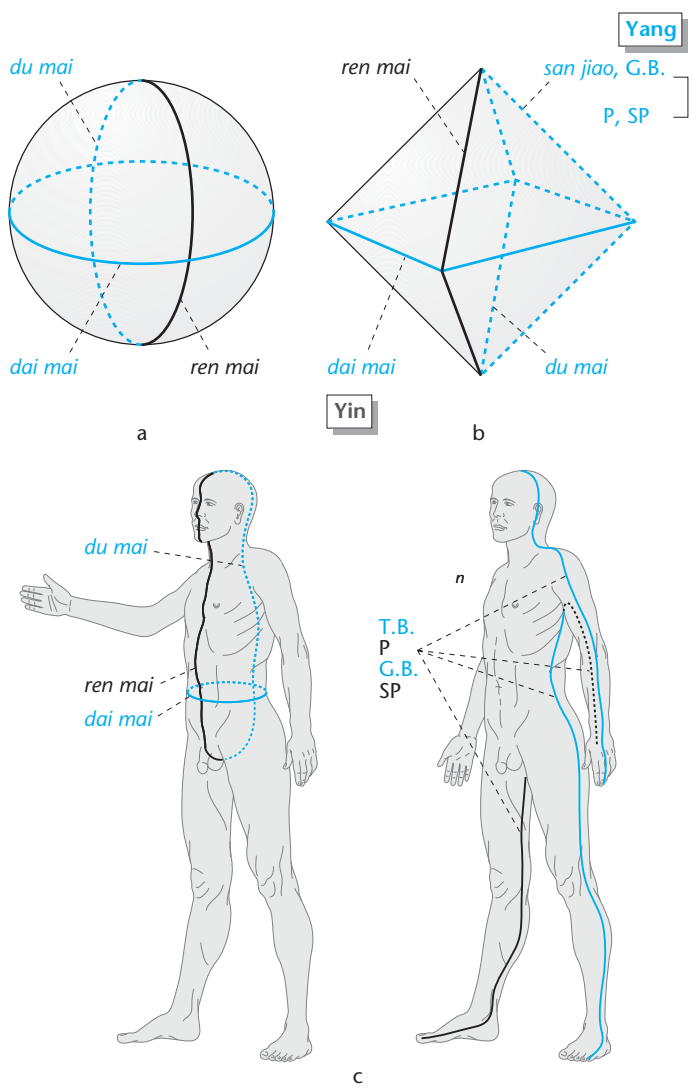

Fig. 1.30 Development of the octahedral structure based on body symmetry

1.7.2 Principles and Functions

'*The primary channels are the rivers, the extraordinary vessels are the lakes*.'

In some of the classics, the extraordinary vessels are compared to reservoirs, which store excess Yang, Yin, Qi or Blood, releasing it into the primary channel system in times of need. With the exception of the *ren mai* and *du mai* they do not have their own points, but they can be accessed through and are connected by points on the primary channels (see pathways of the primary channels → Chapter 5). All extraordinary vessels (with the exception of the *dai mai* with its horizontal trajectory) begin at the lower extremities or in the lower part of the torso and travel to the head. They can be activated by needling their opening and coupled points (differential therapy → 8.1.8).

Reservoir and compensation function

'*…when the network vessels (the primary channels) are filled to overflowing, none of the… conduits could seize any of their contents, and it is only then that the surplus contents of these vessels flow into the single conduit vessels (the extraordinary vessels)*' (*Nanjing*, translation by Unschuld 1986).

The *Nanjing* compares the extraordinary vessels to reservoirs, which are able to absorb a surplus of Qi and Blood in the primary channels, releasing them again during periods of deficiency. For example, if pathogenic factors penetrate the primary channel system, this excess can be absorbed by the extraordinary vessels. This will ensure that the *zangfu*-Organs remain unaffected. In that sense, the extraordinary vessels have a regulating compensation function.

Reproduction and fertility

The *chong mai* and the *ren mai* in particular, but also the *du mai*, play an important role in reproduction and fertility.

Connecting the primary channels

- The *chong mai*, also known as the '**sea of the 12 primary channels**', connects the primary ST and KID channels. It also strengthens the connection between the *ren mai* and the *du mai*.
- The *ren mai* as the **sea of Yin** connects all Yin channels
- The *du mai* as the **sea of Yang** connects all Yang channels at **Du-14** (*dazhui*).
- The *dai mai* circles the body at the waist and binds the vertical trajectories of all 12 primary channels in general, but especially the *chong mai*, the *ren mai* and the KID, LIV and SP channels.
- The *yin wei mai* **dominates the Interior** of the body and connects the KID, SP and LIV channels and the *ren mai*.
- The *yang wei mai* **controls the Exterior** of the body and connects the BL, G.B., T.B., S.I. and ST channels and the *du mai*.
- The *yin qiao mai* connects the KID and BL channels and controls balance.
- The *yang qiao mai* connects the BL, G.B., S.I., L.I. and ST channels and controls activity.

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In addition, the eight extraordinary vessels are regarded as **connecting channels for the extraordinary *fu*-**Organs.

Protection of the body

The *chong mai*, *ren mai* and *du mai* circulate the Defensive Qi (*wei qi*) in the thorax, abdomen and the back, and thus help to protect the body against external pathogenic factors. Due to their origin, they are also directly linked to the Kidneys, the pre-Heaven Qi and to the constitutional forces.

1.7.3 Comparison of the Eight Extraordinary Vessels with the Primary Channels

	Primary channels	Eight extraordinary vessels
Points, trajectory	Specific, bilateral points	Only the *ren mai* and *du mai* have their own points (and internal pathways); all other extraordinary vessels 'borrow' points from the primary channels. The four central vessels are unilateral (except for the *chong mai*, which also has a pathway on the extremities); the four peripheral vessels are bilateral.
Circulation	Continuously circulate *Nutritive Qi* and Blood	Circulate Essence Qi, Nutritive Qi and Defensive Qi, but according to some authors they do not have a continuous flow of Qi
Depth	Superficial, external pathway and a deeper, internal pathway; directly connected to their pertaining *zangfu*-Organs	Compared to the internal pathways of the primary channels they are more superficial, compared to the external pathways of the primary channels they are deeper. They have **no direct connection** to the *zangfu*-Organs, but their origin – especially of the four central vessels – lies deep within the body.
Connections	They connect the Exterior and Interior (through internal/ external pathways and through Yin/Yang channels) as well as above and below (hand–foot pairing, axes)	They do not connect the Interior with the Exterior, nor do they connect Yin and Yang.
Functions	Guide excess to the eight extraordinary vessels or to other secondary channels	Reservoir function: excess of Qi and Blood in the primary channels flows to the eight vessels and are stored there. In times of deficiency they are transported back into the primary channels.
Diagnosis	Diagnosis based on channel theory (meridian therapy), in TCM according to the *ba gang* (*zangfu*, pulse and tongue)	Diagnosis is characterised by specific arrays of symptoms and specific pulses.

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1.7.4 Pairing and Special Functions

The eight extraordinary vessels can be paired in several ways (→ Fig. 1.31):

- The central vessels and the peripheral vessels can be coupled to form Yin/Yang pairs
- Or a central vessel can be paired with a peripheral vessel. These pairs support particular regions and are very important in acupuncture therapy (→ Opening points 8.1.8).

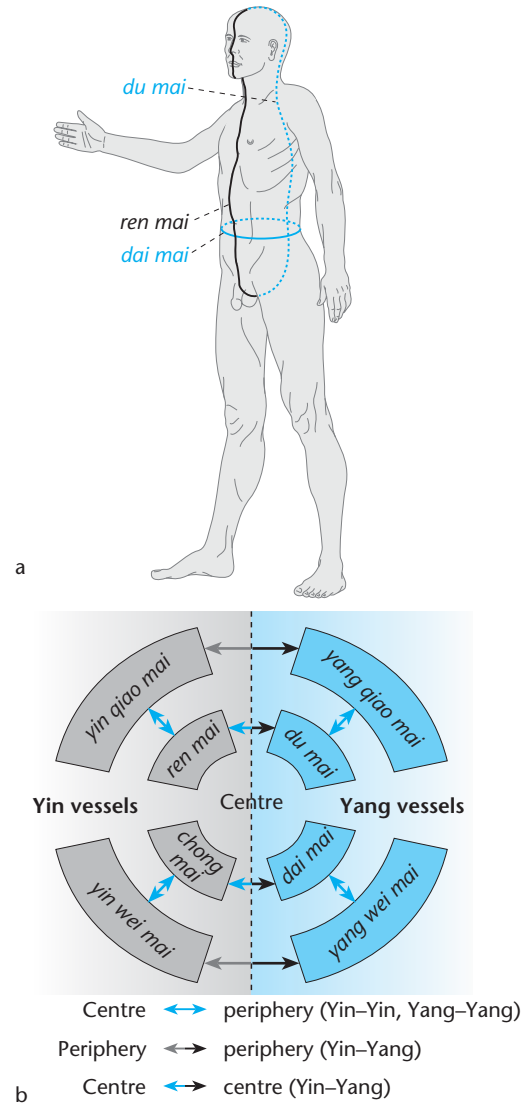

Fig. 1.31 Pairing of the extraordinary vessels (b, graphic overview modified according to Pirog 1996)

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Pairing according to Yin/Yang polarity

Pairing of the extraordinary vessels according to Yin/Yang polarity

Yin vessels	Yang vessels	Functions of the Yin/Yang pair	General functions – Centre/periphery
Central vessels (pathways on the head and torso)			
ren mai	*du mai*	The *du mai* can be considered to be the first manifestation of the Qi and Yang, the *ren mai* the first manifestation of the Blood and Yin. This pair **stores the Yin Qi and Yang Qi**.	**Functions:** Storage and distribution (of Yin and Yang). Foundation of the eight extraordinary vessels, stores Essence Qi, is responsible for the support of the internal organs and extraordinary *fu* organs, as well as for the fundamental body structures
chong mai	*dai mai*	The *chong mai* is like a harmonious connection between Yin and Yang, it expresses vitality and sets impulses. The *dai mai* encircles; it is like a container and prepares the circulation of Yin and Yang. The pair **circulates the Essence (*jing*) and Qi between the Yin and Yang regions of the body**.	
Peripheral vessels (pathways from the lower extremities to the torso)			
yin qiao mai	*yang qiao mai*	This pair **creates balance between Yin and Yang** (for example balance between Essence (*jing*) and Qi, Blood and Qi, left and right, Nutritive Qi and Defensive Qi, also on the outside – between day and night), controls and regulates the ascending (*yin qiao mai*) and descending (*yang qiao mai*) movement in the body, is responsible for balance and rhythm between Yin and Yang.	**Functions:** Balance, circulation and connection (of the Yin and Yang aspects). Provides contact between the distal regions of the body and the torso and head.
yin wei mai	*yang wei mai*	The *yin wei mai* governs the Interior (*li*), it organises and creates connections within the *Yin* aspects of the body. The *yang wei mai* governs the Exterior (*biao*), it organises within the Yang aspects of the body. This pair **connects the Yin and Yang respectively.** 'That which moves and circulates between the *Yin* channels is called the *yin wei* – that which moves between the Yang channels is called the *yang wei*.'	

Central–peripheral pairing

Here, a central vessel is combined with a peripheral vessel. This pairing probably refers to regions of the body which are traversed and supplied by the pair.

Central–peripheral pairing of the extraordinary vessels

Pair	Vessel	Relationship	Opening point	Coupling point	Supported regions
Pair 1	*chong mai*	father	SP-4	P-6	Heart, thorax, Stomach
	yin wei mai	mother	P-6	SP-4	
Pair 2	*du mai*	husband	S.I.-3	BL-62	Inner canthus of the eye, occiput, shoulders and back, S.I. and BL channels
	ren mai	wife	BL-62	S.I.-3	
Pair 3	*dai mai*	man	G.B.-41	T.B.-5	Lateral eye and temple region, ears, cheeks, occiput and shoulders
	yang wei mai	woman	T.B.-5	G.B.-41	
Pair 4	*ren mai*	host	LU-7	KID-6	Face, throat, thorax, Lungs, diaphragm, abdomen
	yin qiao mai	guest	KID-6	LU-7	

2 Location Methods and Cun Measurements

Claudia Focks

One of the basic prerequisites for any successful acupuncture treatment, besides a differential Chinese Medicine diagnosis and the relevant point selection, is the correct point location.

2.1 Location Methods for Body Acupuncture

There are various methods for locating acupuncture points:
Anatomical approach: many acupuncture points are situated at clearly defined anatomical locations, for example in depressions, at muscle and tendon insertions, in grooves, at joint clefts, at bony prominences, etc. With some experience, the palpating finger will often automatically 'fall' into the right depressions and holes.
Various anatomical structures and zones form the basis for point location. These are described in more detail in Chapter 3. We can distinguish between the following:

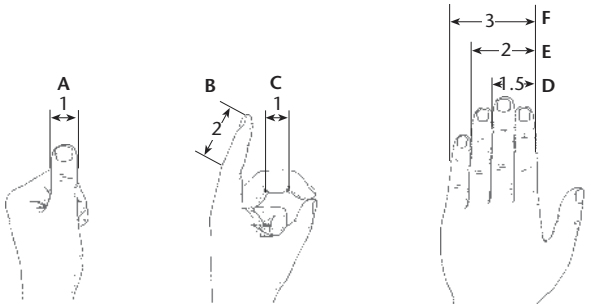
- **Fixed markers** are not affected by the body position or by movement. These include bony landmarks such as depressions or prominences of the skeletal system, but also the finger- and toenails, the nipples, the umbilicus, etc. Most of the proportional cun measurements (→ 2.2) rely on fixed markers.
- **Movable markers** often become more clearly defined with a particular body posture or movement (→ 2.3.2). For example, by flexing the elbow, the cubital crease becomes much more clearly visible to locate **L.I.-11** precisely. Equally, the most distal palmar crease becomes much more visible when making a loose fist, in order to locate **S.I.-3**. Other parameters that might determine the location of a point include changed skin consistency, sensitivity to pressure, puffiness or a resistant sensation when palpating gently with a finger.

Proportional measurements: When trying to locate points not situated at any prominent structures, Chinese Medicine applies the proportional cun measurement (→ 2.2).
Electric tools: These measure the electric resistance of the skin in order to find the correct location of the points. Generally, electric resistance is lower in the immediate area around the point. This method is especially used in auricular acupuncture, but it has not proved to be a practical method for body acupuncture.
Very point technique (after Gleditsch 2005): The needle is held loosely and guided in a 'dancing' fashion over the skin. When the correct point – the 'very point' – is found, the needle will 'catch' on to it and penetrate the skin as if out of its own volition.

2.2 Cun Measurements of the Body

In Chinese medicine, distances on the body are traditionally measured in cun. In contrast to the official Chinese cun (1 cun = 2.5 cm), the cun used in a medical context is a **proportional unit of measurement** that takes the individual proportions of each body into account.
This relative unit of measurement is defined either by using the width of a particular finger or fingers (finger cun) or by the distances between clearly defined landmarks of the body (body cun).
In clinical practice, many points can be located by using **finger cun** measurements (→ Fig. 2.1). It is important, however, to use the **patient's fingers**, not the practitioner's fingers, for reference. If the fingers of both the practitioner and the patient have approximately the same width, the width of the practitioner's fingers can be applied for point location. Otherwise, measurements have to be adapted to correct minor deviations, for example by adjusting the spaces (narrow or wide) between the practitioner's fingers when using finger cun measurements.
The **body or proportional cun** is based on the proportions of particular sections of the body, which are divided into a specific number of units (→ Fig. 2.3). In clinical practice, the measurement of these divisions can be quite cumbersome. Therefore, the spreading hands technique is commonly applied (Koenig and Wancura 1979/1983). It allows the practitioner to quickly determine the midpoint of a given distance (→ 2.3.3) and, combined with finger cun measurements and palpation, is in most cases sufficient for correctly locating a point. For point location on the abdomen, a prepared elastic tape can be useful for measuring proportional cun (→ 2.3.1).

Finger cun



A:
1 cun:
thumb

B:
2 cun:
index finger

C:
1 cun:
middle finger

D:
1.5 cun:
finger-width

E:
2 cun:
finger-width

F:
3 cun:
finger-width

Fig 2.1

A	1 cun as thumb measure	The width of the interphalangeal joint of the thumb at its widest point
B	2 cun as index finger measure	The distance of the two distal phalanges of the index finger
C	1 cun as middle finger measure	With the tip of the middle finger placed on the thumb, the distance between the ends of the creases of the interphalangeal joints of the middle finger
D	1.5 cun as two-finger measure	The width of the index and middle finger when placed closely together, at the level of the distal interphalangeal joints
E	2 cun as index, middle and ring finger measure	The width of the index, middle and ring finger when placed closely together, at the level of the distal interphalangeal joints
F	3 cun as four finger measure	The width of the four fingers when placed closely together, at the level of the distal interphalangeal joints (=1 hand-breadth)

Body cun or proportional cun – the most commonly used proportional distances

Tip for locating the end of the axillary fold: The anterior or posterior axillary fold defines the end of the axilla, forming a fold in the skin (both anteriorly and posteriorly), where the arm joins the thorax. The axillary fold is the reference point for any cun measurements on the upper arm (→ Figs 2.2, 2.3, LU-3 and LU-4), which can be found by asking the patient to adduct his/her arm and to insert his/her flat hand into the axilla. The end of the axillary fold points in a superior direction, terminating at the lower border of the pectoralis major muscle, which in this area extends to its insertion in the humerus, below the deltoid muscle. The end of the axillary fold may vary considerably, depending on the individual proportions, positioning of the arm and flexing of the muscles. It should therefore be located with the patient's arms hanging down in a relaxed way.

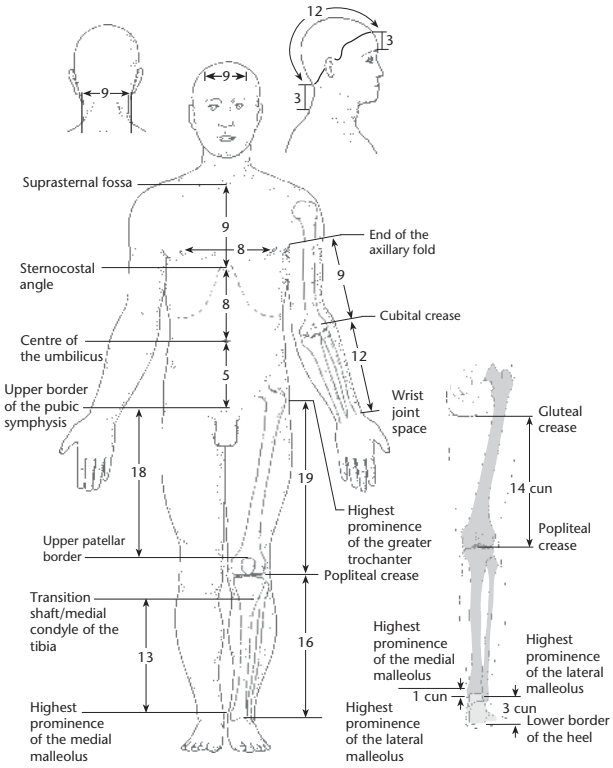


Fig. 2.2

Head		
Longitudinal	12 cun	From the anterior (→ 3.1.1) to the posterior hairline (→ 3.1.5)
	3 cun	From the midpoint of the eyebrows to the anterior hairline (→ 3.1.1)
	3 cun	From the lower border of the spinous process of C7 (→ 3.4.1) to the posterior hairline (→ 3.1.5)
	18 cun	From **Ex-HN-3** (***yintang***) to **Du-14**
Horizontal	9 cun	The distance between the mastoid processes (→ 3.1.4)
	9 cun	From corner to corner on the forehead (**ST-8** to **ST-8**)
Thorax and abdomen		
Longitudinal	9 cun	From the suprasternal depression (**Ren-22**) to the sternocostal angle (→ 3.5, xiphosternal synchondrosis)
	8 cun	From the sternocostal angle (→ 3.5, xiphosternal synchondrosis) to the centre of the umbilicus
	5 cun	From the centre of the umbilicus to the upper border of the pubic symphysis (→ 3.5)
Horizontal	8 cun	The distance between the two nipples
Laterally longitudinal	12 cun	From the end of the axillary fold to the tip of the free end of the 11th rib (**LIV-13**)
Back and lumbar region		
Both the spinous processes and the intercostal spaces are used for orientation. Main reference points are: the spinous process of C7, the inferior angle of the scapula (level with T7), the iliac crest (level with the spinous process of L4), the posterior superior iliac spine (PSIS) (level with S2 or the 2nd sacral foramen). Please note: the position of the patient (standing, sitting, lying) as well as individual anatomy and spinal structure (kyphosis, lordosis etc.) all influence the level of the vertebrae, which consequently may vary considerably in relation to other anatomical structures. For more detail → Chapter 3.		
Longitudinal	30 cun	From the spinous process of the T1 to the tip of the coccyx
Horizontal	3 cun	From the medial border of the scapula to the posterior midline (spinous processes), with the shoulder relaxed and hanging arms
Upper extremity		
Lateral	9 cun	From the end of the anterior axillary fold to the transverse cubital crease
	12 cun	From the transverse cubital crease to the wrist joint space (→ 3.3.3, transverse wrist crease)
Lower extremity		
Lateral	19 cun	From the highest prominence of the greater trochanter (→ 3.6) to the popliteal crease
	16 cun	From the popliteal crease to the highest prominence of the lateral malleolus (→ 3.6.2)
	14 cun	From **G.B.-34** (anterior and inferior to the head of the fibula) to the highest prominence of the lateral malleolus (→ 3.6.2)
	3 cun	From the highest prominence of the lateral malleolus (→ 3.6.2) to the lower border of the heel
Medial	18 cun	From the upper border of the pubic symphysis (3.5) to the upper border of the patella (→ 3.6.1)
	15 cun	From the medial end of the popliteal crease to the highest prominence of the medial malleolus (→ 3.6.2)
	13 cun	From the medial condyle of the tibia (→ 3.6.1, junction of the head and the shaft of the tibia) to the highest prominence of the medial malleolus (→ 3.6.2)
Dorsal	14 cun	From the gluteal crease to the popliteal crease
Difference between the medial and lateral malleolus		
	1 cun	Difference between the level of the highest prominence of the lateral and medial malleolus respectively (→ 3.6.2)

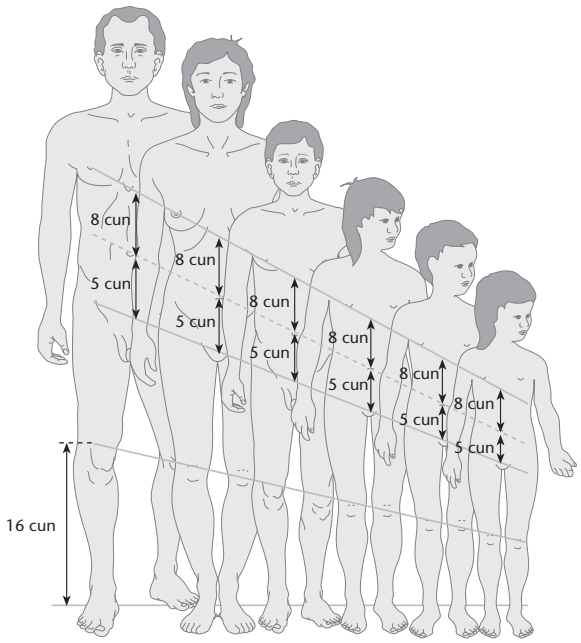


Fig. 2.3

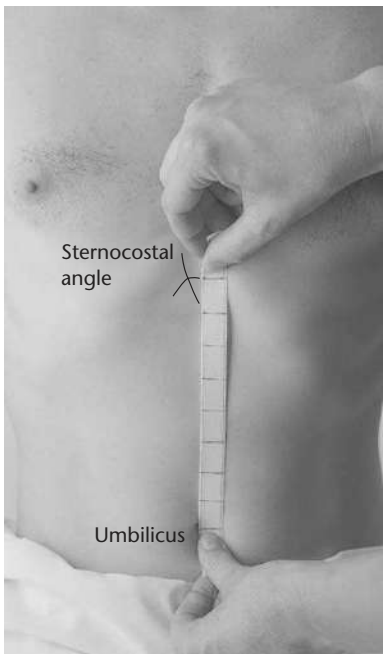


Fig. 2.4

2.3 Tips for Point Location

2.3.1 Elastic Tape

A marked elastic tape has proven a very useful tool for simplifying cun measurements and facilitating correct point location. It is especially recommended for measurements on the abdomen, the shape of which can vary considerably from patient to patient (Kitzinger 1995). An elastic tape, 1–2 cm wide and approximately 40 cm long, is marked at regular intervals of 2 cm, which can optionally be numbered from 1–20. The tape is placed onto the distance to be measured, stretching it according to the correct number of cun for that particular distance. This method allows the use of proportional cun for each individual patient.

Examples:

- For locating points on the upper abdomen, stretch the tape so that eight units cover the distance between the sternocostal angle and the centre of the umbilicus (→ Fig. 2.4).
- For locating points on the lower abdomen, stretch the tape so that five units cover the distance between the upper border of the pubic symphysis and the centre of the umbilicus (→ Fig. 2.5).

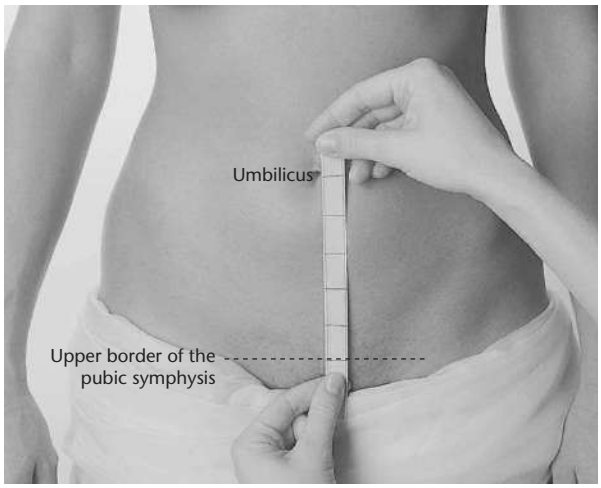


Fig. 2.5

2.3.2 Patient Positioning and Body Movements

To locate certain points, it can be very helpful to ask the patient to assume a particular position or to perform a specific movement.

Examples:

- For locating points on the **P** channel on the forearm, ask the patient to tightly press the thumb and little finger together. This will make the tendons more visible (→ Fig. 2.6)
- 'Tiger mouth grip' as location help for **LU-7** and **L.I.-6** (→ Fig. 2.7)
- For locating **L.I.-4**, ask the patient to press his/her thumb and index finger together. A muscle bulge will form; L.I.-4 is located on its highest point (→ Fig. 2.8).
- When turning the wrist joint from a pronated to a half-supinated position, the palpating finger will glide into a bony cleft just proximal to the styloid process of the ulna (**S.I.-6**, → fig 2.9).
- As the palpating finger glides along the skin, the skin bulge forming in front of it will 'arrest' the finger at the point to be located. This method is very useful for quick location of certain points such as **T.B.-5** or **P-6** (→ Fig. 2.10).

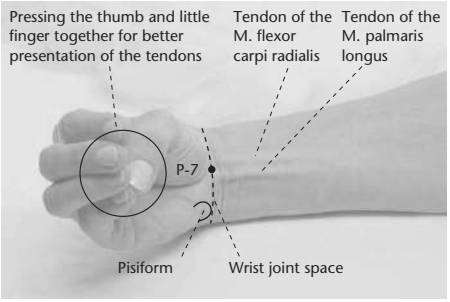


Fig. 2.6

Fig. 2.7

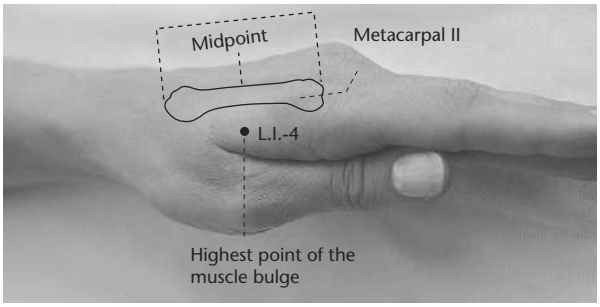


Fig. 2.8

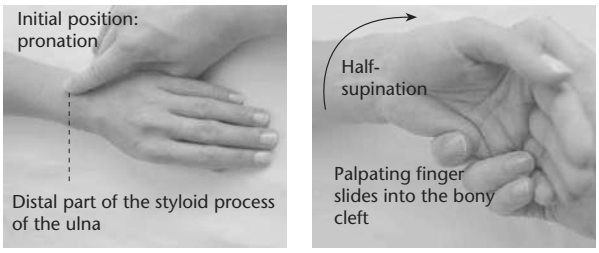


Fig. 2.9

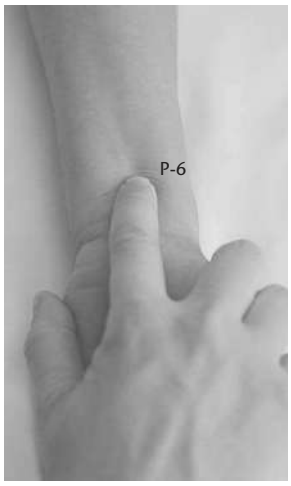


Fig. 2.10

2.3.3 Spreading Hands Technique According to König and Wancura

The spreading hands technique is particularly useful for quickly determining the midpoint of a given distance. For this purpose, the little fingers of each hand are placed on the endpoints of the distance to be measured. Both hands are then evenly spread over the distance. The thumbs are joined in the middle, indicating the midpoint of the distance.

Examples:

- To determine the midpoint of the 16 cun-distance between the popliteal crease and the prominence of the lateral malleolus, the little fingers are placed on both endpoints of this distance (→ Fig. 2.11)
- To locate **Du-20**, the hands are placed on the lateral aspects of the patient's head, with the little fingers touching the apices of the ears. The thumbs are then joined on the vertex of the head, and will be pointing to **Du-20** (→ Fig. 2.12).

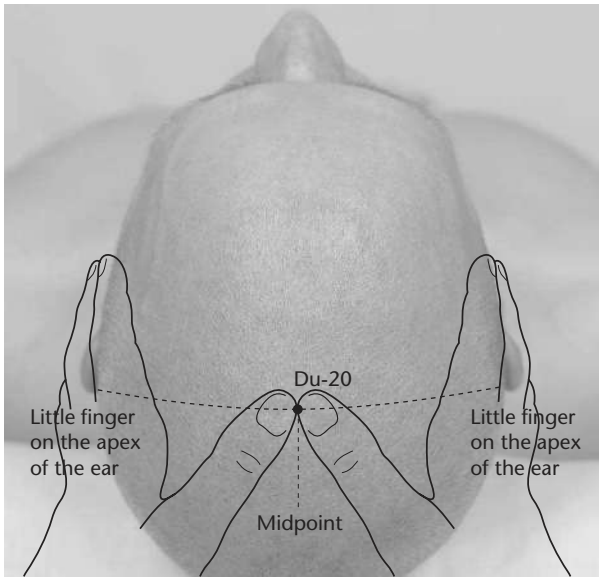


Fig. 2.12

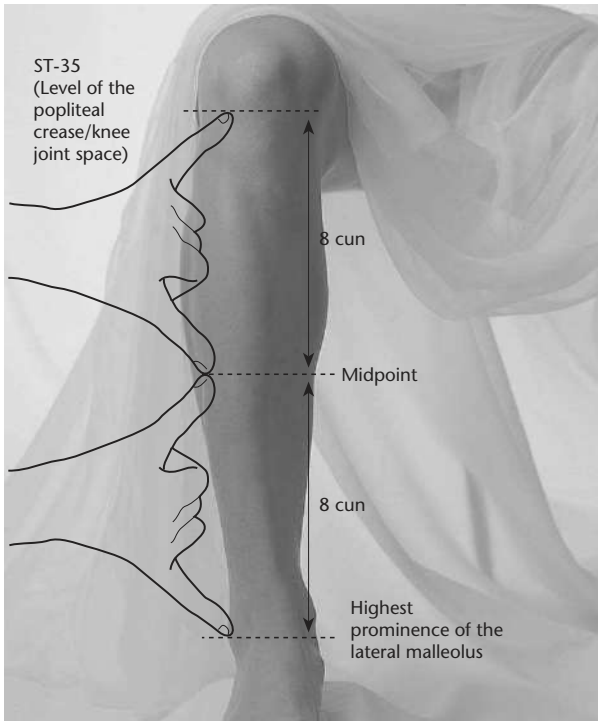


Fig. 2.11

3 Anatomical Orientation

Ulrich März

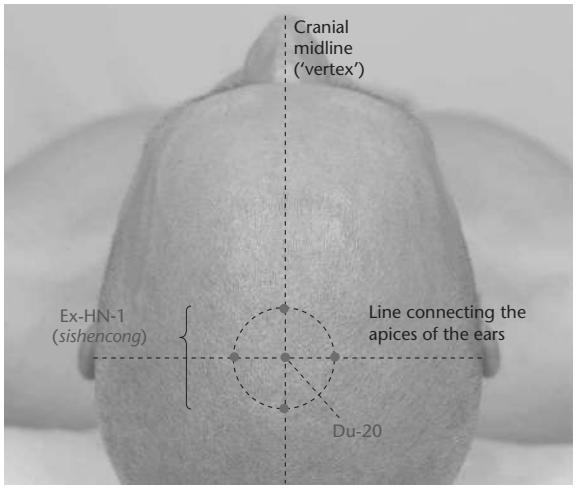


Fig. 3.1

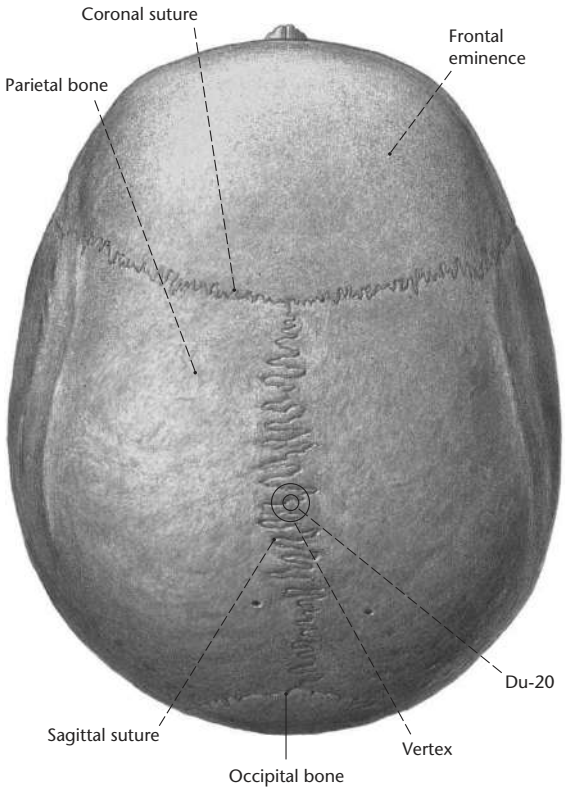


Fig. 3.2

3.1 Head

3.1.1 Vertex, Forehead and Supraorbital Region

Vertex (→ Figs 3.1, 3.2)

→ **Du-20** (*baihui*) is located at the junction of the cranial midline and an imaginary line connecting the apices of the ears. This point is at a distance of 5 cun from the anterior hairline and 7 cun from the posterior hairline, marking the highest point of the cranium ('vertex').

Please note: When locating **Du-20**, the patient's head should be in an upright position. Spreading hands technique (after König and Wancura, → Chapter 2): Place the hands on the lateral aspects of the patient's head, with the little fingers touching the apices of the ears. The thumbs are then joined at the cranial midline and will be pointing to → **Du-20** (*baihui*).

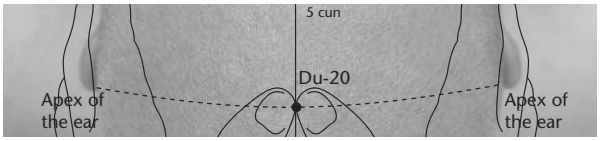


Fig. 3.3

Anterior hairline (→ Fig. 3.4)

The anterior hairline forms the superior border of the forehead and can vary considerably from person to person. The original line of hair growth is generally considered as the anterior hairline.
In men especially, the hairline may begin to recede early in life due to progressive baldness, so that the existing hairline may not be identical with the original line, which will now be located in an area not covered by hair. In these cases ask the patient to frown: the original hairline will be located superior to the wrinkled forehead, at the junction of the still slightly creased skin with the completely smooth skin. Points in this area are → **Du-20** to **Du-24**, **BL-3** to **BL-7, G.B.-4** to **G.B.-7, G.B.-13** to **G.B.-15, ST-8.**

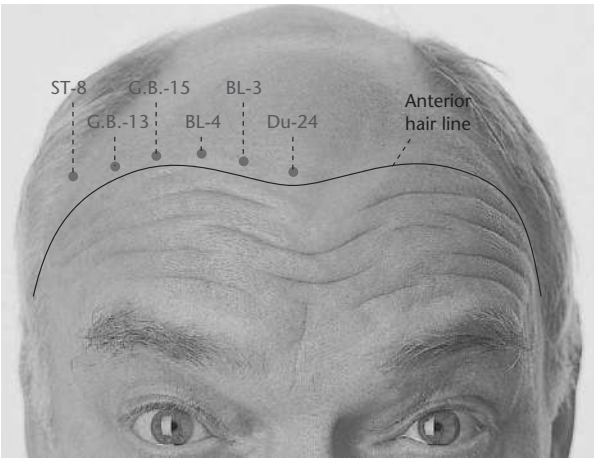


Fig. 3.4

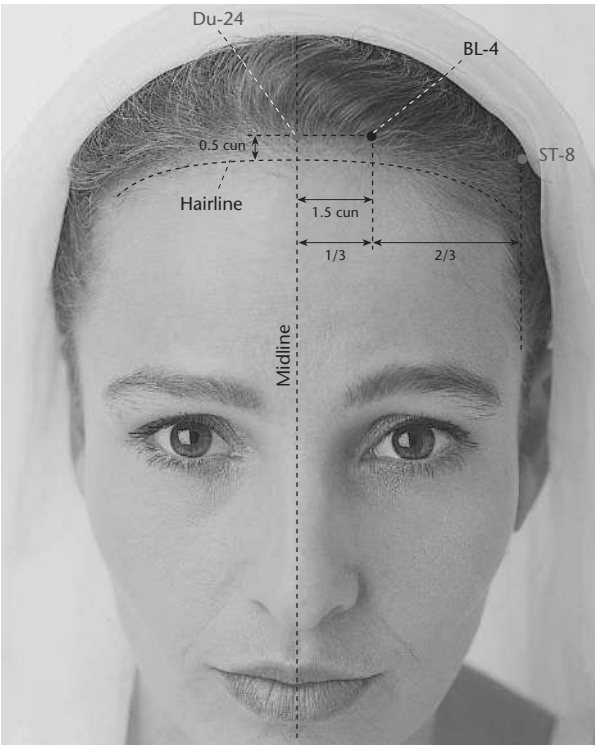


Fig. 3.5

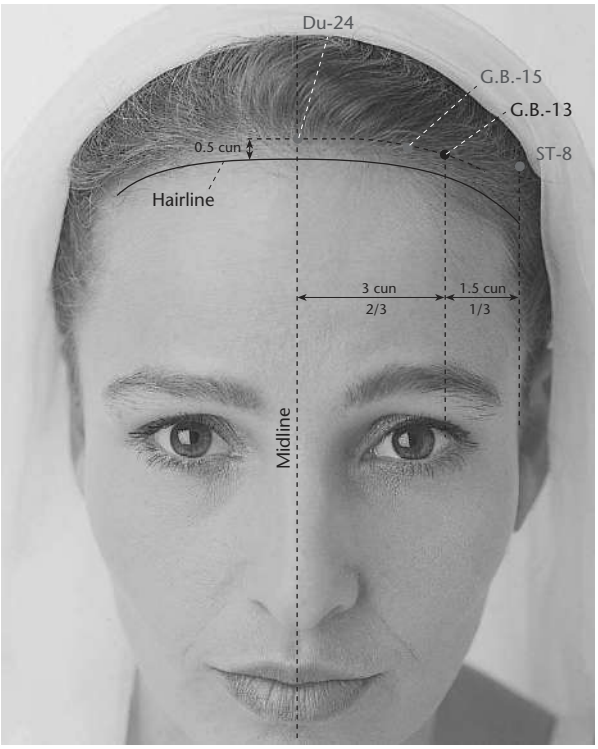


Fig. 3.6

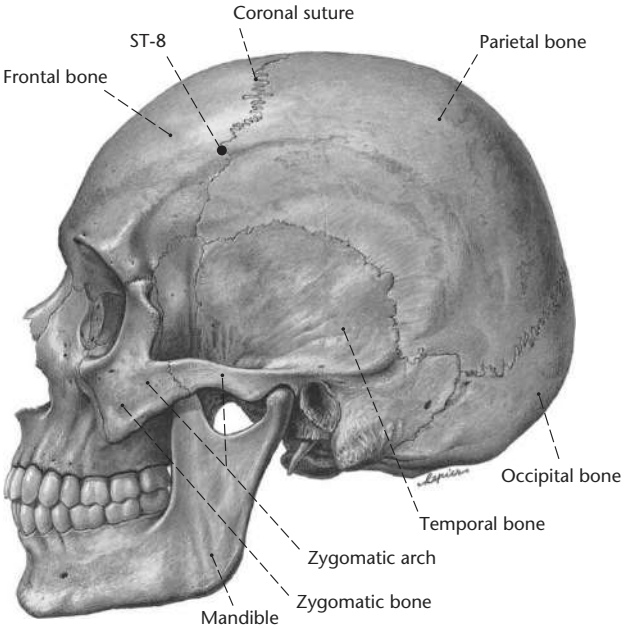


Fig. 3.7

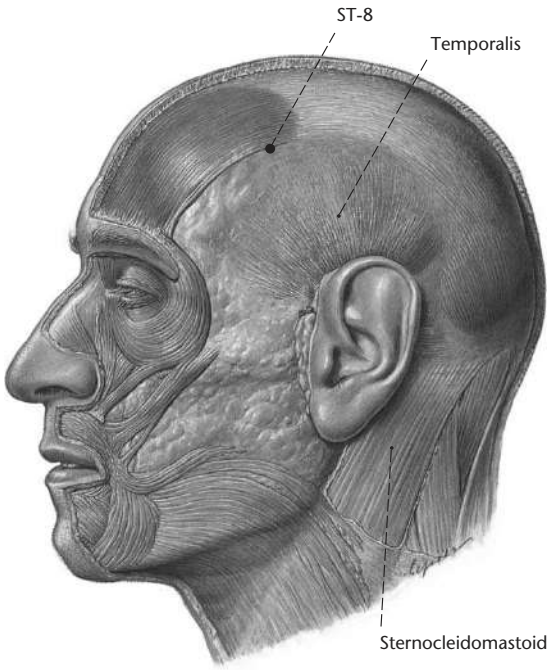


Fig. 3.8

Temporalis muscle and temporal corner of the forehead (→ Figs 3.7–3.9)

By asking the patient to firmly clench and release his/her teeth, the temporalis muscle can be palpated on the lateral aspect of the forehead. The corner between the forehead and the temples is marked by the junction of the anterior hairline with the temporal hairline, which tends to become more pronounced with a receding hairline.

→ **ST-8** is located in the centre of this area, at the insertion point of the temporalis muscle and 0.5 cun within the natural hairline. Often, the coronal suture can be palpated here.

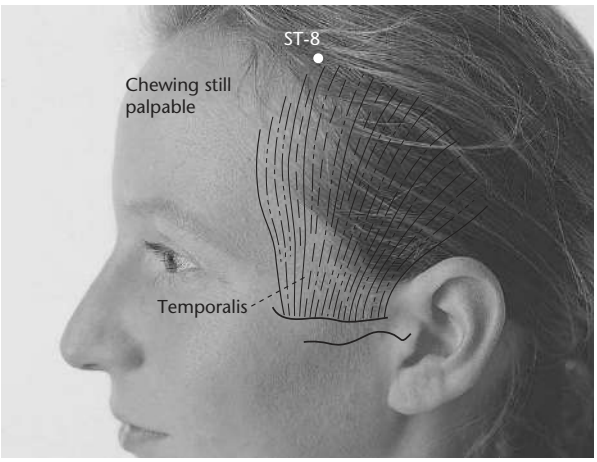


Fig. 3.9

Forehead (→ Figs 3.10, 3.11)

The more or less prominent bulge of the frontal eminences can be palpated on both sides of the forehead. → **G.B.-14** is located at their lower border, in a shallow depression at the junction of the eminences and the superciliary arches. With the patient looking straight ahead, G.B.-14 is located directly above the pupil, approximately 1 cun superior to the supraorbital margin.

Glabella, superciliary arches

The glabella is the central bony reference point on the forehead, forming a slightly convex, level area superior to the root of the nose and between the superciliary arches.

The extra point *yintang* (Ex-HN-3) is located at the centre of the glabella. Several points are located along the superciliary arches (from medial to lateral): → **BL-2, *yuyao*** (Ex-HN-4) and **T.B.-23.**

Please note: → **BL-2** is located superior to the inner canthus of the eye, in the area of the frontal (not the supraorbital) incisure, when this is present.

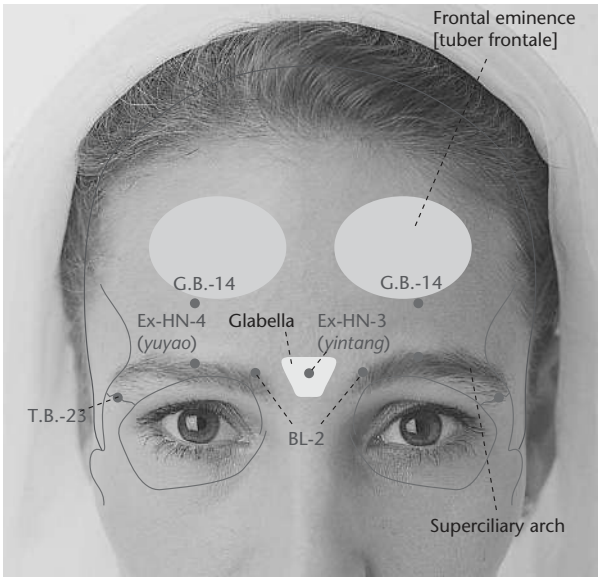


Fig. 3.10

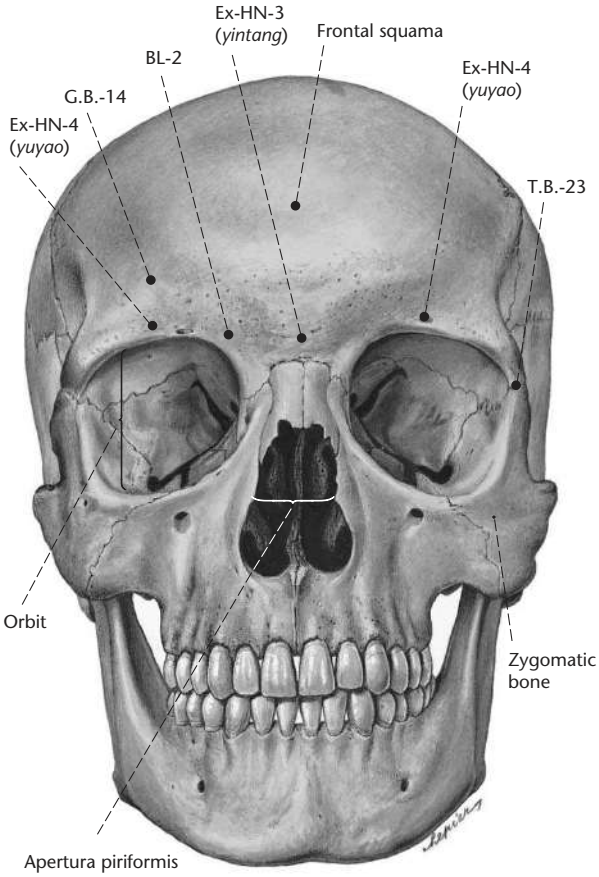


Fig. 3.11

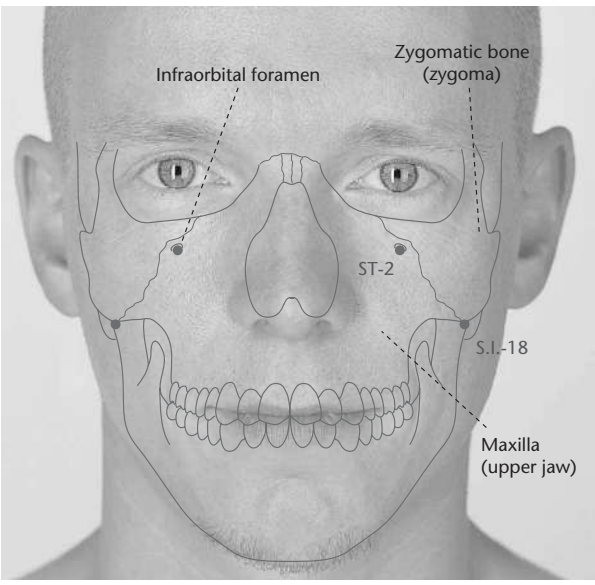


Fig. 3.12

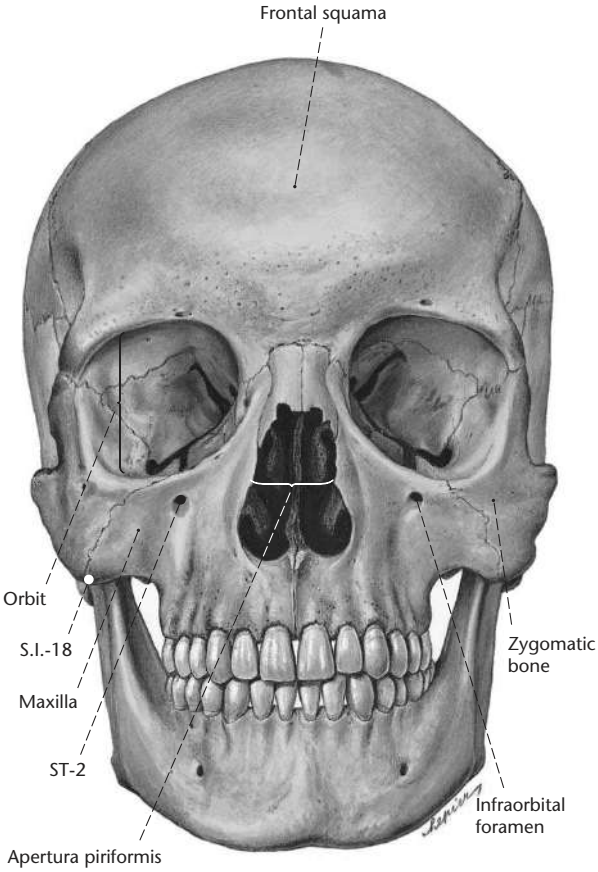


Fig. 3.13

3.1.2 Centre of the Face and Nasal Region

Cheek bones (→ Figs 3.12, 3.13)

Both the maxilla and the zygoma form the cheek bones below the eyes. Important anatomical landmarks are the infraorbital foramen, the lower border of the zygoma and the zygomatic arch of the temporal bone.

Infraorbital foramen (→ Figs 3.12, 3.13)

With the patient looking straight ahead, the infraorbital foramen with → **ST-2** is located on the maxilla, directly below the pupil. The foramen lies 1 finger-width below the infraorbital ridge. By palpating inferiorly from there, it can be felt below the maximal curvature of the ridge, in a small depression that is often sensitive to pressure.

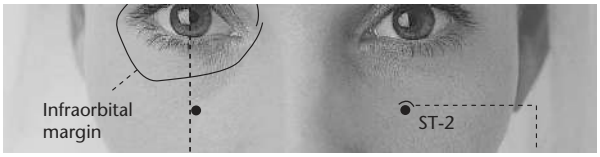


Fig. 3.14

Zygoma (→ Figs 3.15, 3.16)

The bony structures below the lateral orbit are formed by the zygoma. → **S.I.-18** is located directly below the outer canthus of the eye at the lower border of the zygoma, at the junction of the zygoma and the maxilla, on the anterior border of the masseter muscle. (→ Lower face and chin).

Zygomatic arch (→ Figs 3.15, 3.16)

On the lateral aspect of the face, the temporal process of the zygoma articulates with the zygomatic process of the temporal bone to form the zygomatic arch. This is an approximately horizontal bony structure which can be palpated laterally to the ear. → **G.B.-3** and → **T.B.-22** are both located on the upper border of the zygomatic arch, while → **ST-7** and → **T.B.-21** are situated at its lower border.

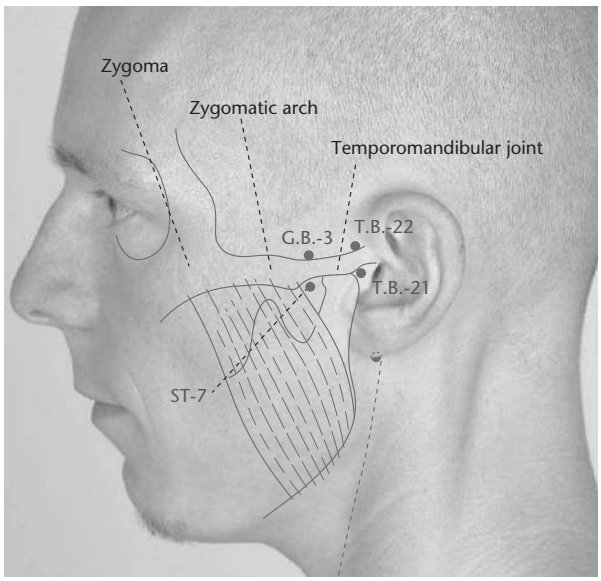


Fig. 3.15

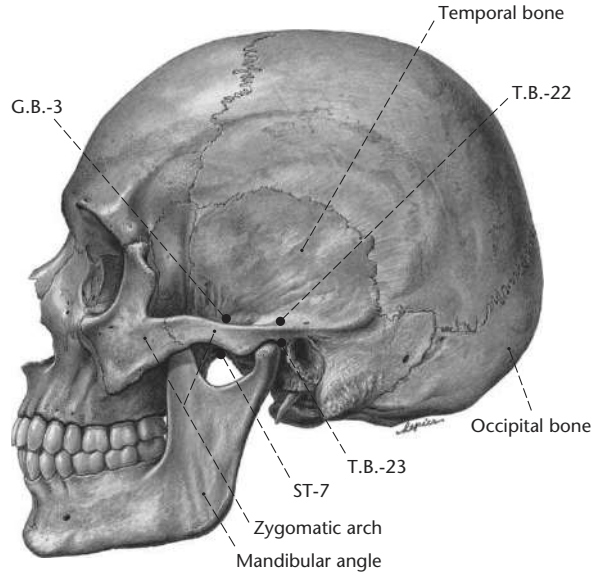


Fig. 3.16

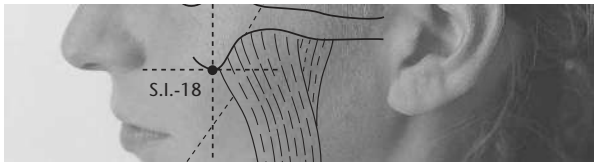


Fig. 3.17

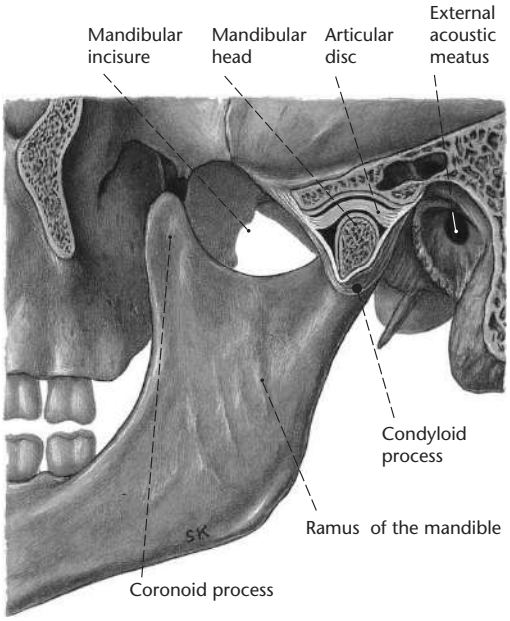


Fig. 3.18

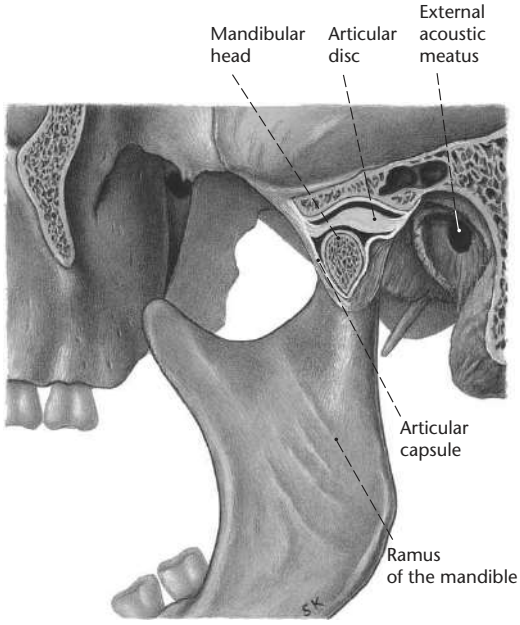


Fig. 3.19

Fig. 3.20

Temporomandibular joint (→ Figs 3.15, 3.18, 3.19)

The temporomandibular joint is located inferior to the zygomatic arch and anterior to the tragus of the ear. Its movement can easily be palpated by gently opening and closing the mouth. → **ST-7** is located in a depression anterior to the joint and directly inferior to the zygomatic arch. This depression is situated in the mandibular incisure, which is formed by the coronoid and condylar processes of the mandible. By opening the mouth, the palpating finger resting on → **ST-7** is 'lifted' out of the depression by the condyloid process sliding anteriorly.

Nasolabial groove (→ Fig. 3.21)

The nasolabial groove begins lateral to the nose and superior to the ala nasi, at the junction of the cartilage and the bone. From there it runs to the corners of the mouth. → **Ex-HN-8** (*shang-yingxiang, bitong*) is located at its upper end, at the junction of the upper jaw and the nasal cavities. → **L.I.-20** is located slightly below *bitong*, between the lateral border of the side of the nose and the nasolabial groove.

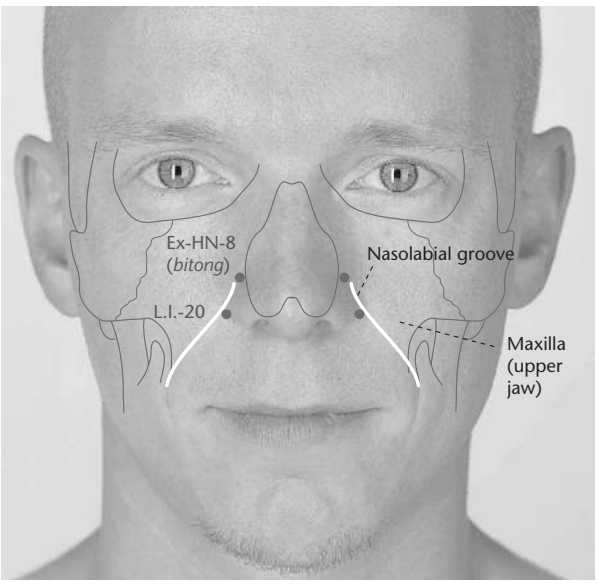


Fig. 3.21

3.1.3 Lower Face and Chin

Mandibular angle (→ Fig. 3.22)

The mandibular angle corresponds to the area where the lower jaw line changes its direction from horizontal to vertical. It is located markedly inferior and anterior to the ear lobe. This angle marks the location of → **ST-6** (1 finger-width anterior and superior to the mandibular angle) as well as of → **S.I.-17** and → **T.B.-16** (level with the mandibular angle).

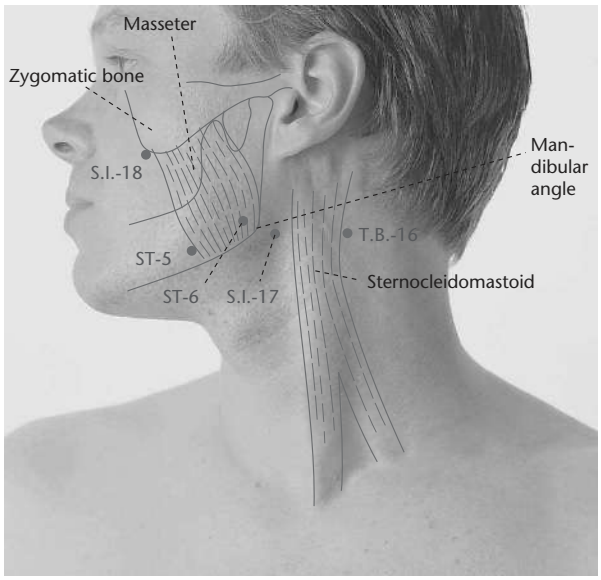


Fig. 3.22

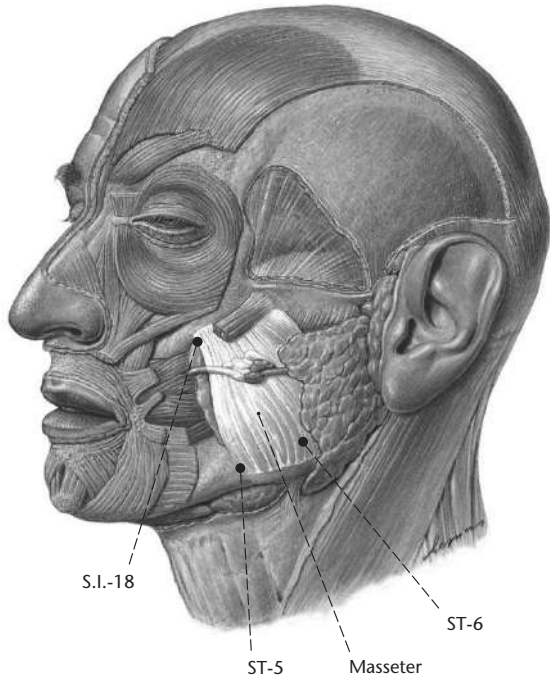


Fig. 3.23

Masseter muscle (→ Fig. 3.23)

By firmly clenching the jaw, the contours of the masseter muscle become well defined, stretching from the lateral aspect of the lower jaw to the zygomatic bone. It originates at the zygomatic arch (→ Fig. 3.15) and inserts at the mandibular angle (→ Fig. 3.22).

Mentolabial groove (→ Fig. 3.24)

This forms a transverse groove at the junction of the chin and the lower lip. → **Ren-24** is located in its centre.

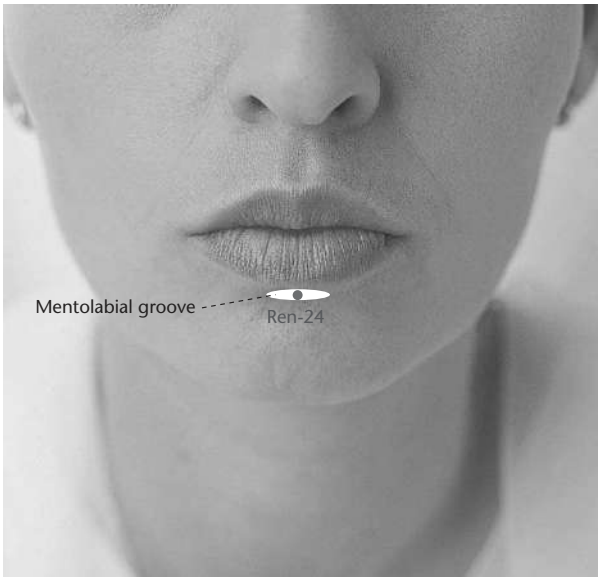


Fig. 3.24

3.1.4 Ear Region

Note: points used in auricular acupuncture are not discussed here.

Helix root (→ Figs 3.25, 3.26)

The helix root borders the upper part of the ear. This is the location of → **T.B.-22**.

Supratragic notch (→ Figs 3.25, 3.26)

The supratragic notch forms an incisure within the cartilage of the ear, separating the helix root from the tragus. → **T.B.-21** is located anterior to it.

Tragus (→ Figs 3.25, 3.26)

→ **S.I.-19** is located anterior to the midpoint of the tragus.

Intertragic notch (→ Figs 3.25, 3.26)

The intertragic notch forms an incisure in the auricular cartilage, separating the tragus from the lobe and antitragus. → **G.B.-2** is located anterior to this notch.

Ear lobe (→ Figs 3.25, 3.26)

Inferior to the earlobe and the ear canal is a depression, which is bordered posteriorly by the mastoid process and anteriorly by the lower jaw. The lower border is formed by the transverse process of the 1st cervical vertebra (atlas). → **T.B.-17** is located in this depression.

Border between the auricle and the face (→ Fig. 3.26)

The border between the auricle and the temple/cheek generally forms a more or less vertical line, which will become more clearly defined by bending the auricle and tragus towards the anterior. Several points are located along this line (from top to bottom): → **T.B.-22, T.B.-21, S.I.-19, G.B.-2.**

Mastoid process (→ Figs 3.26, 3.27)

The mastoid process is a cone-shaped bony structure which can be palpated posterior to the ear. → **G.B.-12** is located at its tip, while → ***anmian*** (Ex-HN) can be found at the border of the mastoid process and the occiput. → ***yiming*** (Ex-HN-14) is located somewhat more inferiorly.

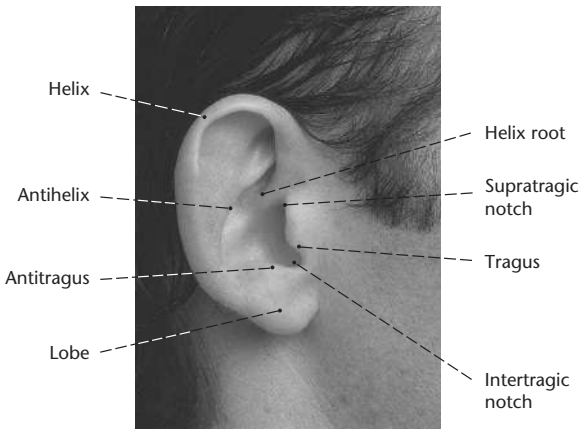


Fig. 3.25

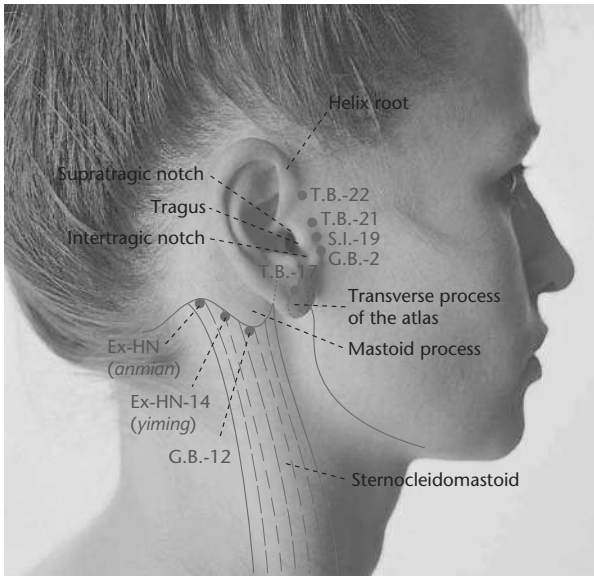


Fig. 3.26

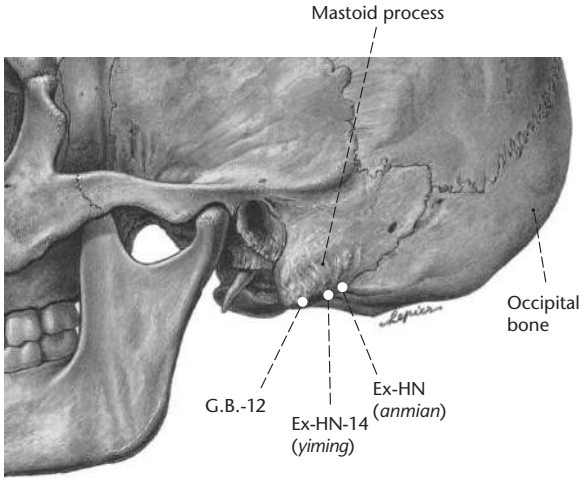


Fig. 3.27

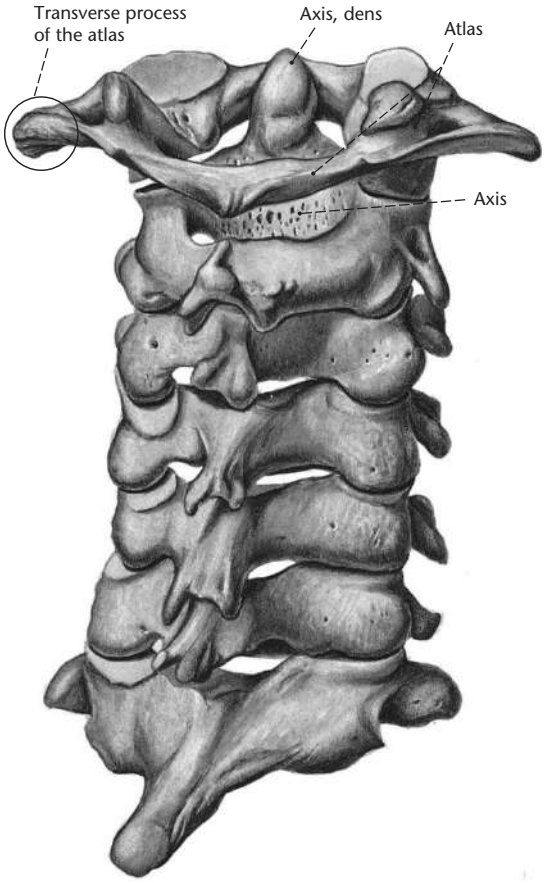


Fig. 3.28

Transverse process of the 1st cervical vertebra (atlas) (→ Fig. 3.28)

The transverse process of the atlas can be palpated inferior to the earlobe as a deep bony structure, which in most cases is very sensitive to pressure.

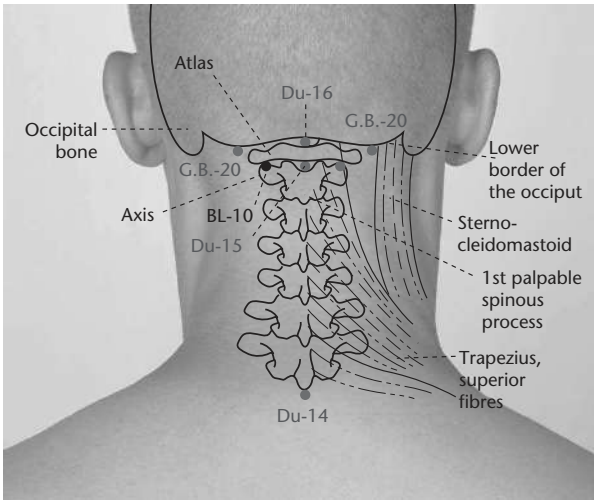


Fig. 3.29

3.1.5 Occiput

Craniocervical transition (→ Figs 3.28–3.32)

The transition from the head to the neck is formed by the mastoid process, the adjacent dorsal musculature and the occiput. The following points are located in this area (from lateral to medial) → **G.B.-12,** ***yiming*** **(Ex-HN-14),** ***anmian*** **(Ex-HN), G.B.-20, BL-10, Du-15** and **Du-16.**

External occipital protuberance (→ Figs 3.32, 3.33)

The external occipital protuberance forms a flat projection on the posterior midline of the occiput, which can be palpated slightly superior to the craniocervical transition. It defines the location of → **Du-16, Du-17** and **BL-9.** Sometimes, and more frequently in women, the protuberance may be defined only poorly or not at all.

Posterior hairline (no figure)

The posterior hairline is used as a reference point for locating points on the occiput, but due to its variable position it is not a very reliable landmark.

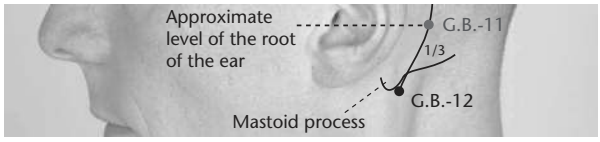


Fig. 3.30

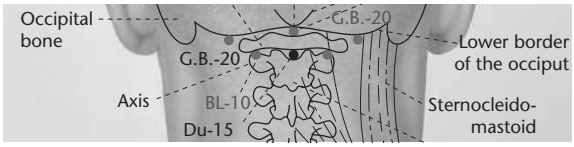


Fig. 3.31

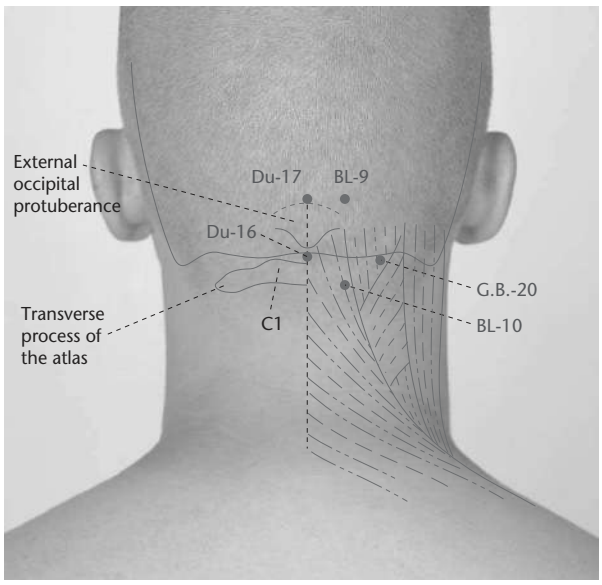


Fig. 3.32

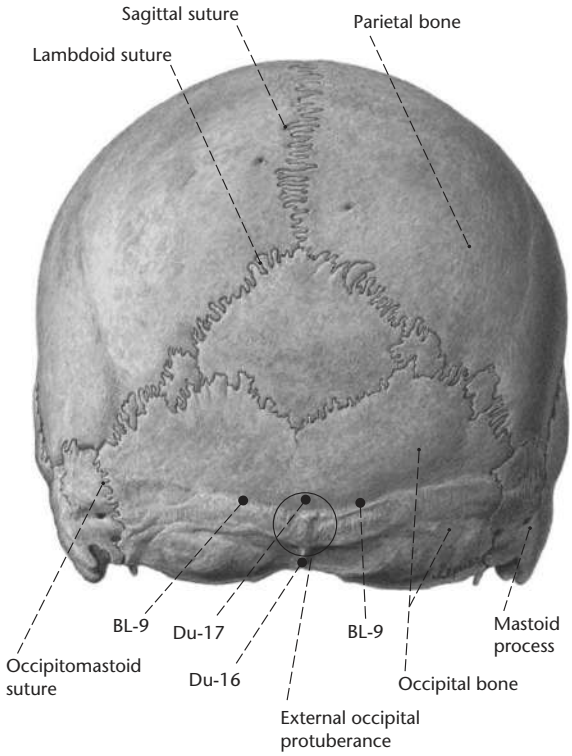


Fig. 3.33

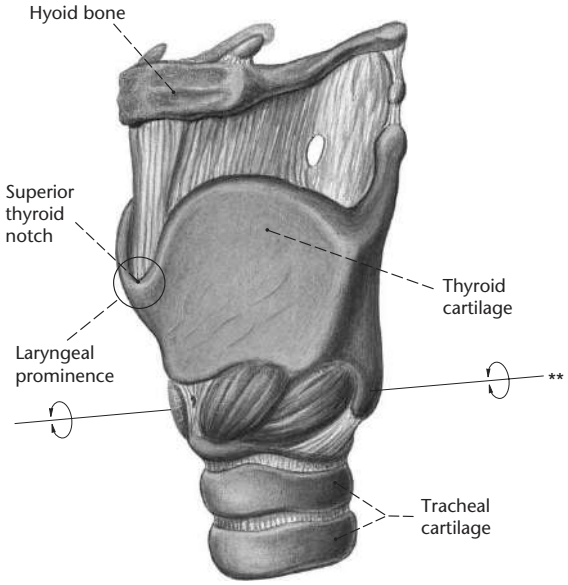


Fig. 3.34

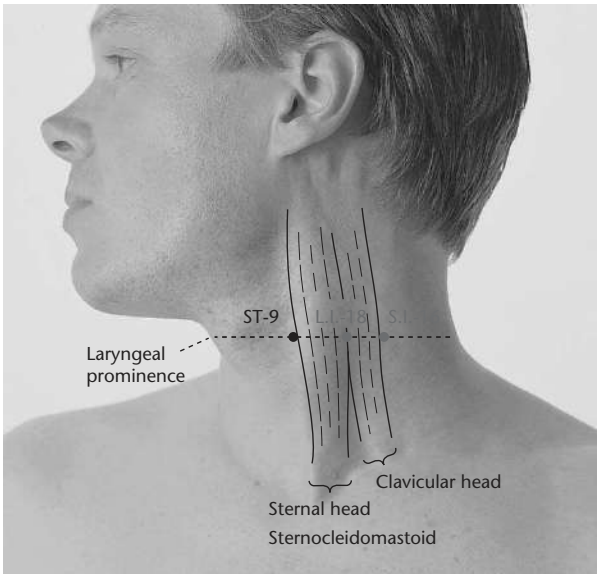


Fig. 3.35

3.2 Neck

Laryngeal prominence (→ Figs 3.34, 3.35)

In men, the laryngeal prominence as the highest point of the larynx ('Adam's apple') tends to form a clearly palpable and visible structure. In women, visual identification is more difficult, so that palpation is necessary in order to locate the V-shaped incisure on the upper border of the thyroid cartilage on the laryngeal midline. Located at the level of the laryngeal prominence are → **ST-9, L.I.-18** and **S.I.-16**.

Sternocleidomastoid (SCM) muscle (→ Figs 3.36, 3.37)

This muscle forms a distinct, easily identifiable structure on the anterior and lateral aspect of the neck, which becomes visible and palpable by rotating the neck in the opposite direction. This effect can be increased by rotating the head against resistance (by pushing against the chin for example). The more slender clavicular head originates from the anterior aspect of the manubrium, while the more flat clavicular head originates from the medial third of the clavicle, revealing a small triangle between the two heads near the sternoclavicular joint. This is the location of → **ST-11**. By palpating along the SCM muscle in a superior direction, the two heads can be distinguished for the major part of the muscle, before they merge to insert at the posterior part of the mastoid process and the lateral superior nuchal line of the occiput. Besides → **ST-11,** the following points are located alongside the muscle belly of the SCM: → **L.I.-17, L.I.-18, S.I.-16, ST-9, G.B-12** and ***anmian*** **(Ex-HN)**.

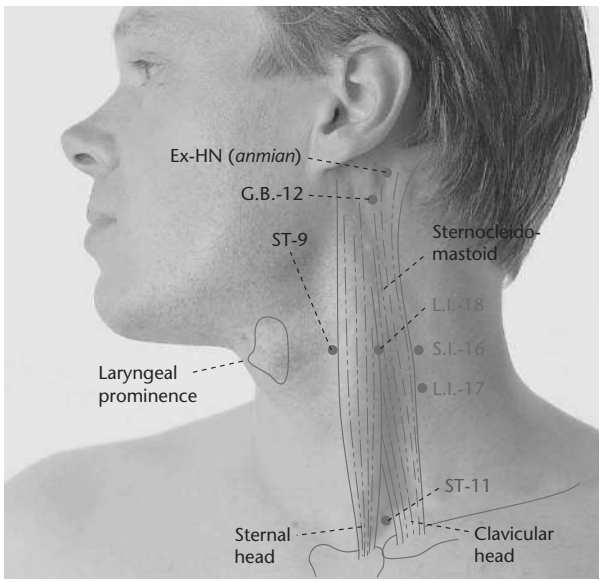
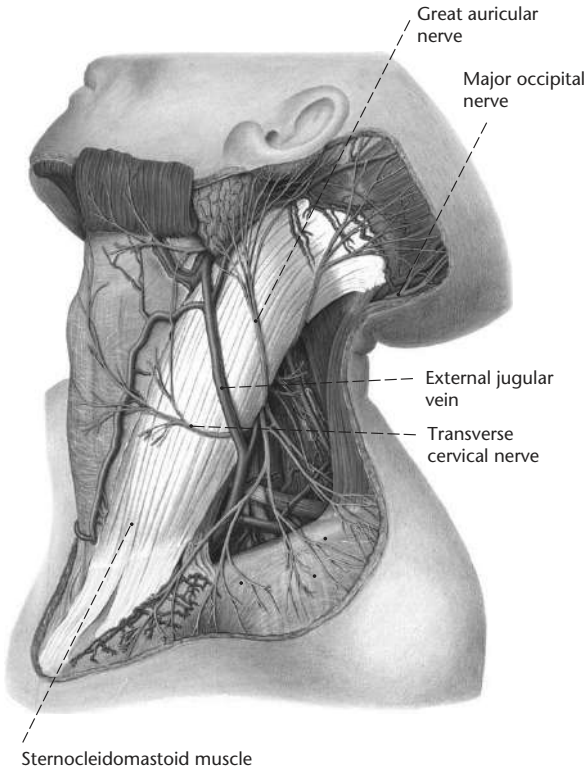


Fig. 3.36



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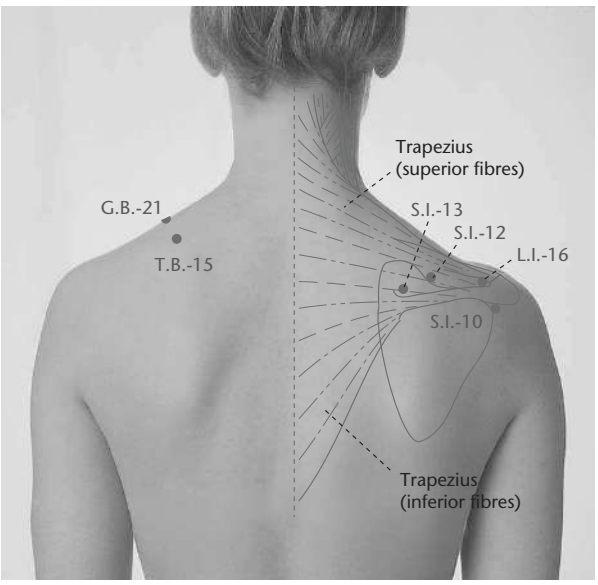

Fig. 3.38

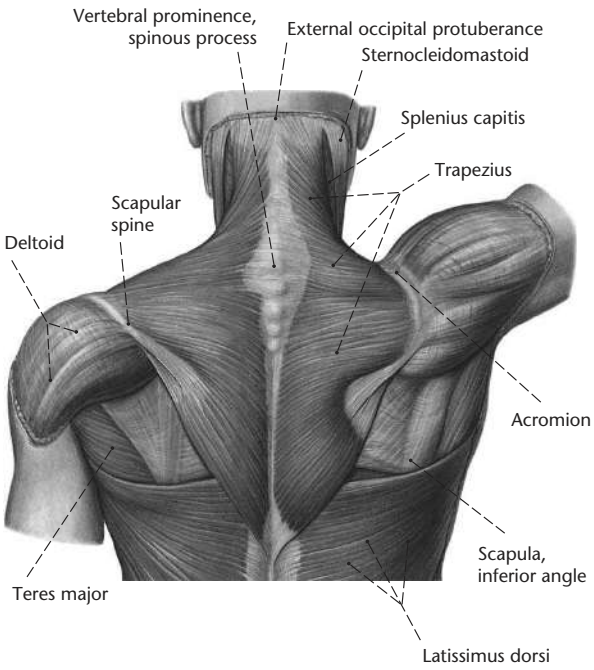

Fig. 3.39

3.3. Shoulder and Arm

3.3.1 Shoulder and Upper Arm

Trapezius muscle (→ Figs 3.38, 3.39)

This muscle covers the superior aspect of the shoulder, its superior portions extending from the cervical spine to the acromion at the lateral end of the scapula. Located at the midpoint of the superior border of the muscle are → **G.B.-21** and, slightly inferiorly, → **T.B.-15.**

Acromion (→ Figs 3.39, 3.42, 3.43)

When palpating the shoulder joint from a lateral direction, the acromion can be felt as a bony extension with a flat surface, slightly superior to the laterally protruding head of the humerus.

Scapular spine (→ Figs 3.39–3.44)

The scapular spine forms a bony ridge that originates at the acromion and runs in an oblique angle across the scapula, ending at its medial border in an upward opening curve. This is the location of → **S.I.-13**, → **L.I.-16** is located on the most lateral portion of the trapezius and supraspinatus muscles, in the angle between the acromial origin of the scapular spine and the acromioclavicular joint.

Head of the humerus, shoulder hollows (→ Figs 3.42, 3.44)

The head of the humerus is located inferior to the acromion and protrudes slightly on the lateral aspect of the shoulder. When abducting the arm horizontally, two hollows will form at the transition from the arm to the shoulder. The anterior hollow is the location of → **L.I.-15**, while → **T.B.-14** is located in the posterior one. The hollows mark the border between the clavicular and acromial portion and the border between the acromial and spinal portion of the deltoid muscle.

Fig. 3.40

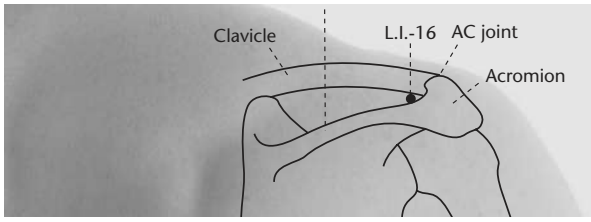

Fig. 3.41

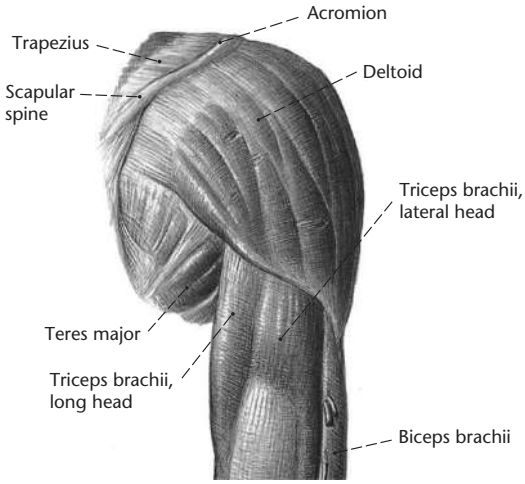

Fig. 3.42

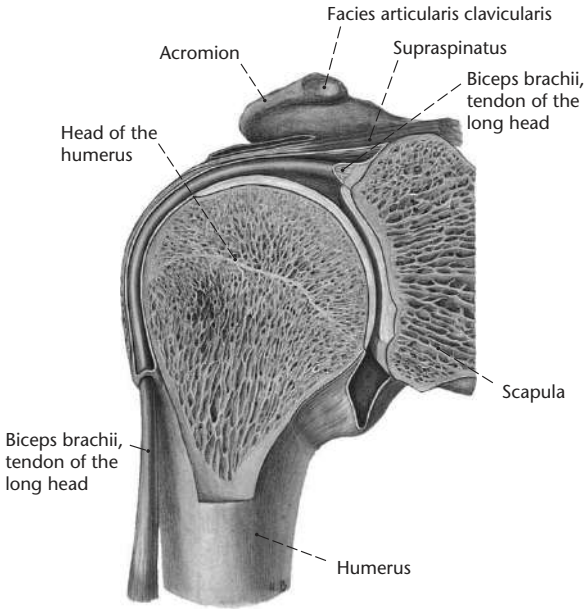

Fig. 3.43

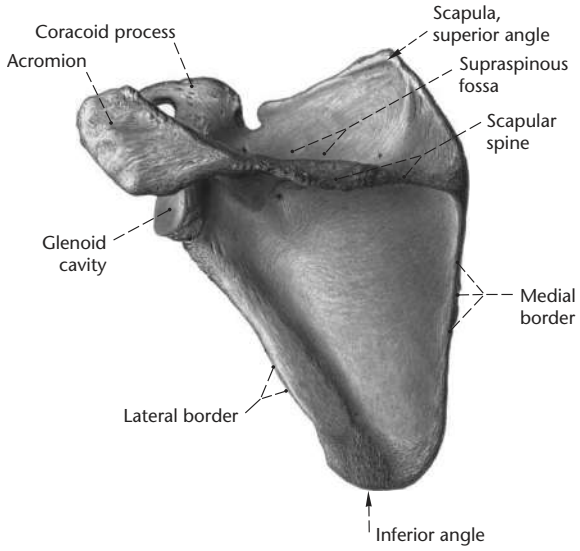

Fig. 3.44

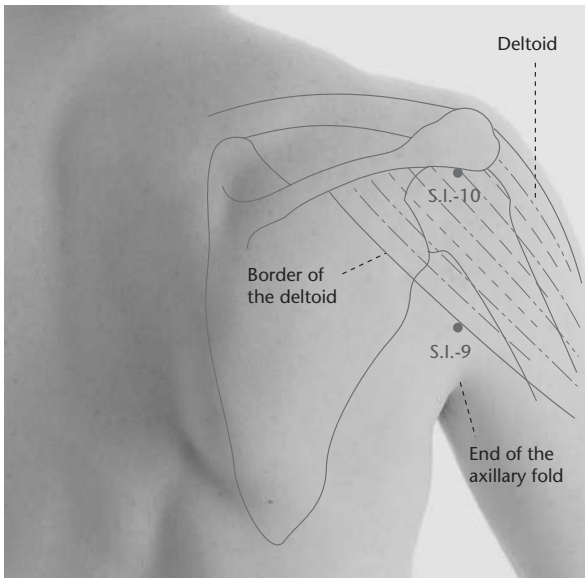

Fig. 3.45

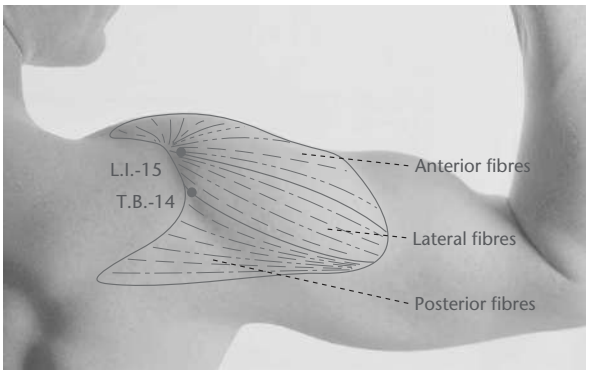

Fig. 3.46

Deltoid muscle (→ Figs 3.42, 3.45–3.51)

This muscle covers the anterior, posterior and lateral aspect of the head of the humerus. The following points are located either on the muscle or on its margins: **→ S.I.-9, S.I.-10, T.B.-14, L.I.-15, *jianquan* (Ex-UE), LU-1, LU-2, LU-3, L.I.-14**.

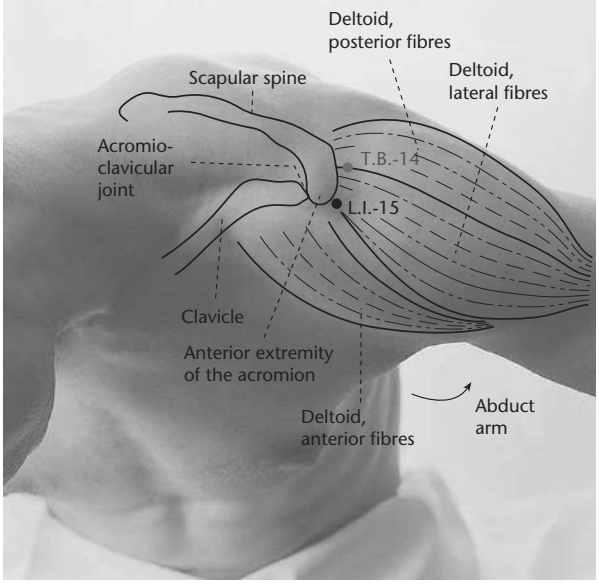

Fig. 3.47

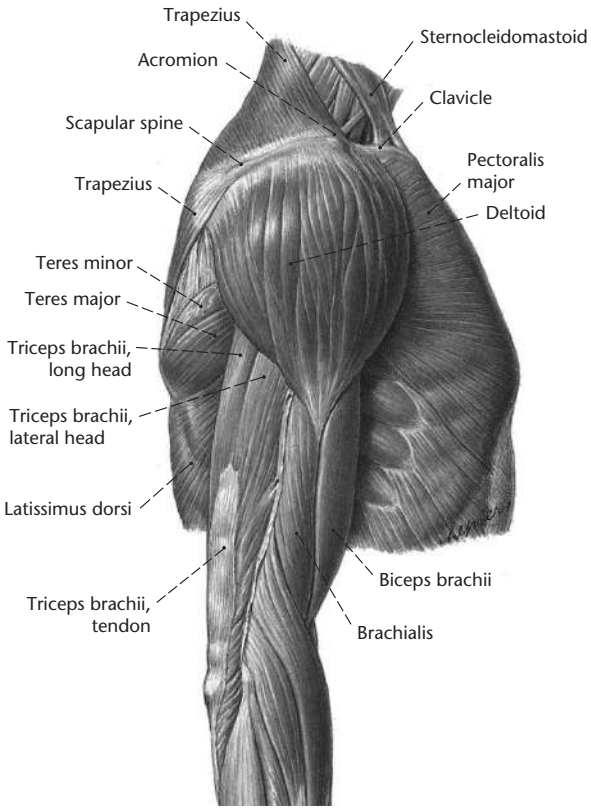

Fig. 3.48

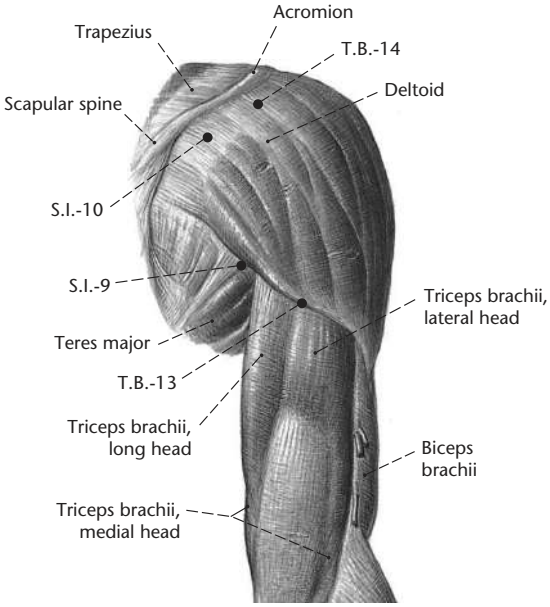

Fig. 3.49

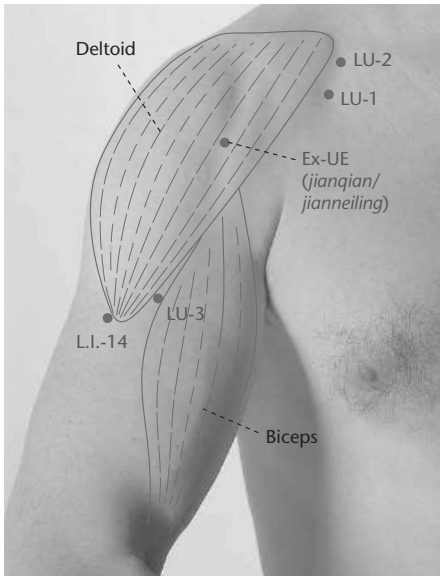

Fig. 3.50

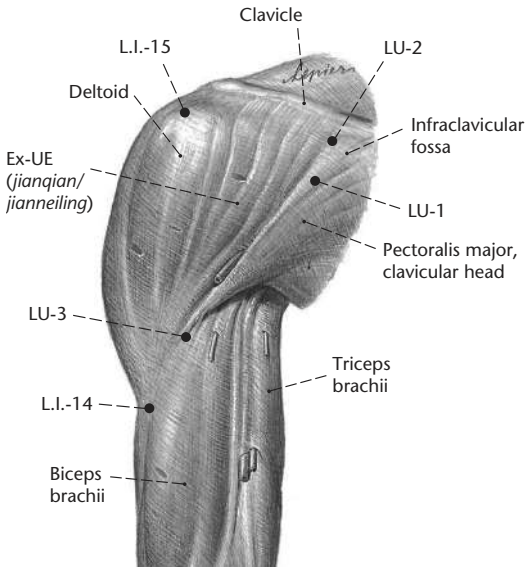

Fig. 3.51

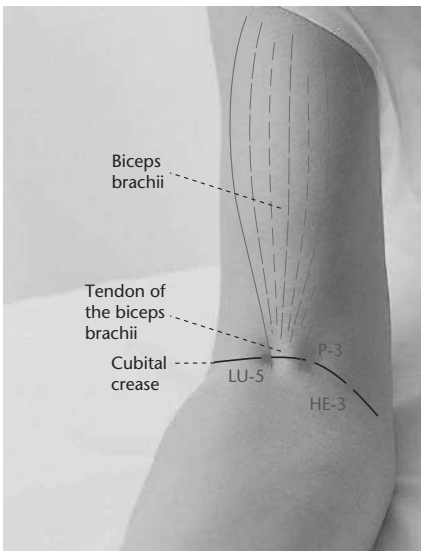

Fig. 3.52

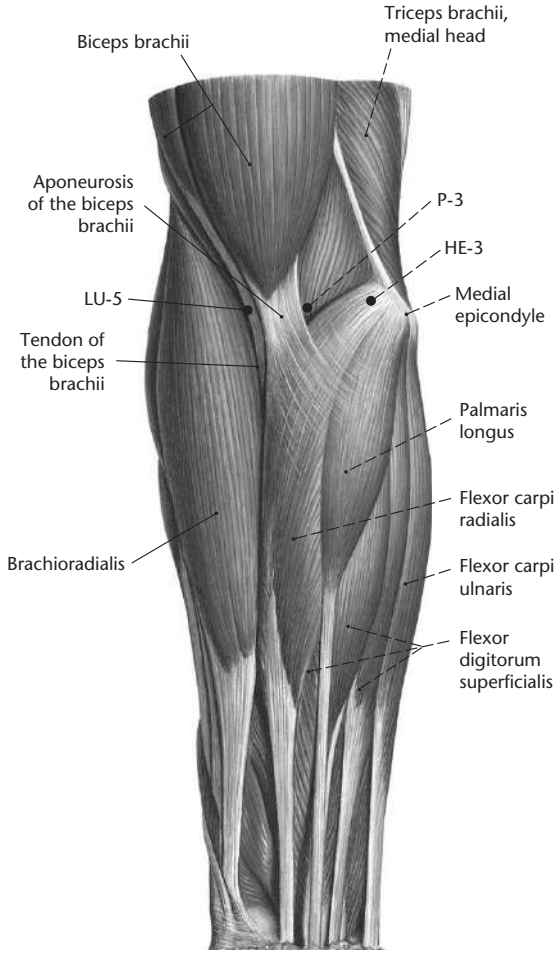

Fig. 3.53

3.3.2 Elbow

Elbow, tendon of the biceps muscle (→ Figs 3.52, 3.53)

The anterior aspect of the elbow is marked by the cubital crease, extending from the lateral to the medial epicondyle of the humerus. It is divided by the tendon of the biceps muscle. → **L.I.-11** and → **LU-5** are located lateral to the tendon while → **P-3** and → **HE-3** are located medial to it.

Lateral and medial epicondyles of the humerus (→ Figs 3.53, 3.55, 3.56)

The lateral and medial epicondyles of the humerus form the lateral aspects of the elbow. The olecranon is located between them, on the posterior aspect of the elbow. The medial epicondyle is the origin of the extensor muscles of the wrist joint, while the flexor muscles originate at the medial epicondyle.

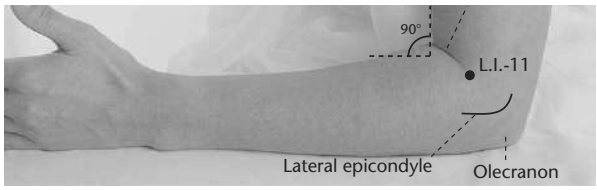

Fig. 3.54

Olecranon (→ Figs 3.55, 3.56)

The olecranon forms the tip of the elbow. Located in the ulnar sulcus, between the medial epicondyle and the tip of the olecranon, is → **S.I.-8**, while → **T.B.-10** is located in a depression proximal to the olecranon.

3.3.3 Forearm and Hand

For locating points on the forearm, it is important to note whether the arm is in a pronated or supinated position, since this can have a considerable effect on the relative location of some points (see also location details of specific points). For example, in supination the line connecting → **L.I.-5** and → **L.I.-11** runs along the lateral border of the forearm, while in pronation it traverses the forearm.

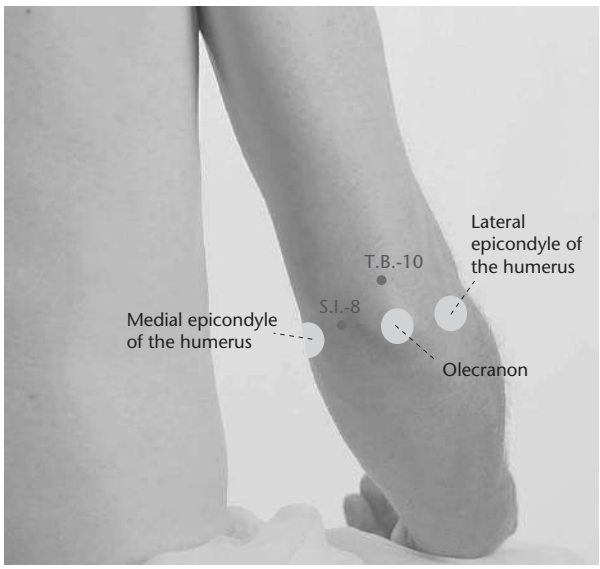

Fig. 3.55

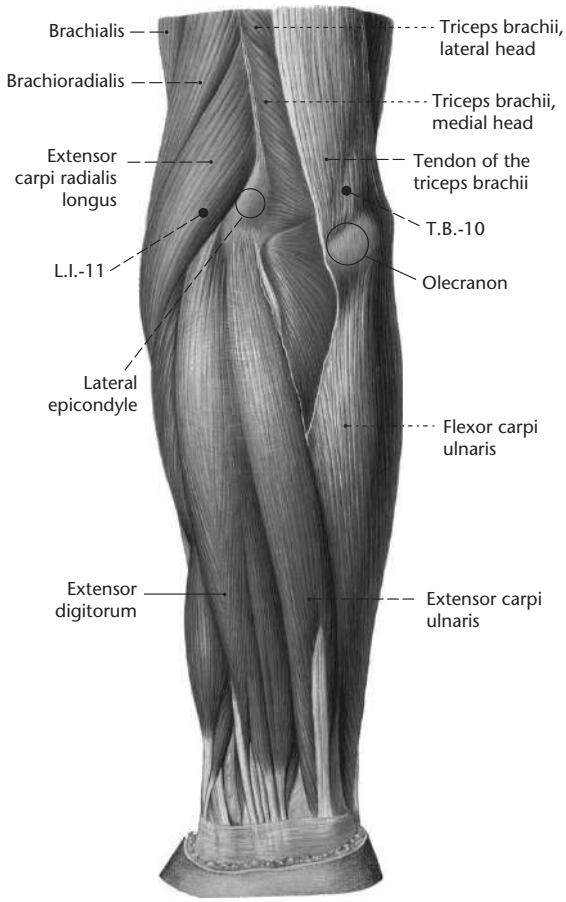

Fig. 3.56

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[redacted]

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Lumbosacral junction

Following orientation in the lumbar region with the help of the iliac crests (→ Iliac crest), the lumbosacral joint can be located by counting the spinous processes in an inferior direction. It can generally be felt as a marked 'kink' or depression, followed by the smaller spinous processes of the slightly convex median sacral crest directly below.

Caution: Note that (according to the literature in up to 15% of cases) there can be lumbarization of the 1st sacral vertebra or sacralization of L5. In these cases there will be either four or six lumbar vertebrae.

Posterior superior iliac spine (PSIS) (→ Figs 3.73, 3.74)

Another important landmark on the lower back is the posterior superior iliac spine (PSIS), which forms the posterior end of the iliac crest lateral to the upper sacral region. The PSIS can often be identified by two superficially visible dimples. It is best located by palpating from an inferior in a superior direction. If the dimples are not visible, they can be located by palpating 3 cun from the rima ani in a superior and lateral direction at an angle of 45°, until a marked bony ridge can be felt.

Generally, the PSIS is located at the level of the space between the 1st and 2nd sacral foramina, so that → **BL-27** is located directly medial or slightly superior and medial to the PSIS, while → **BL-28** is located just inferior and medial to the PSIS.

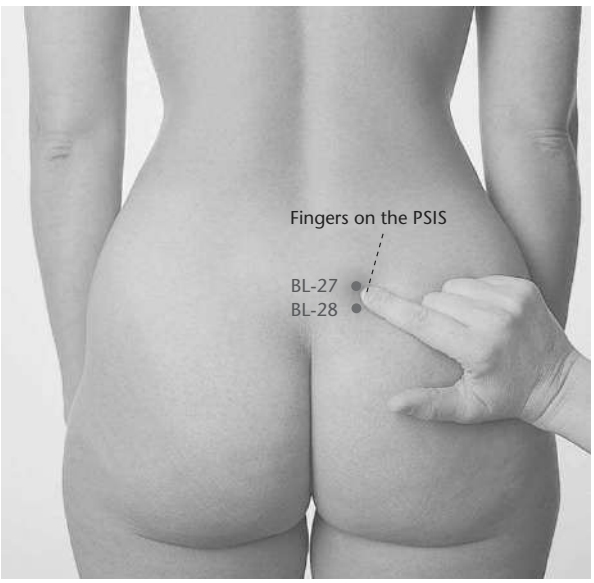
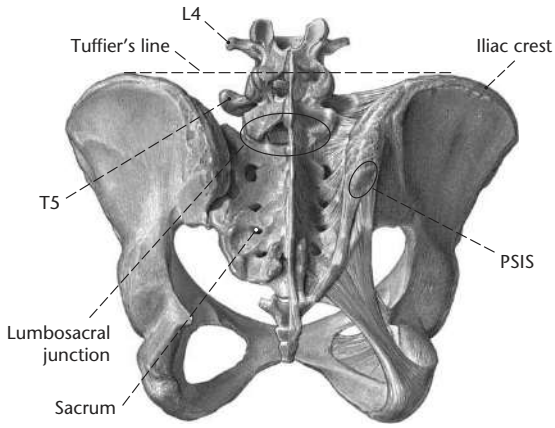


Fig. 3.73



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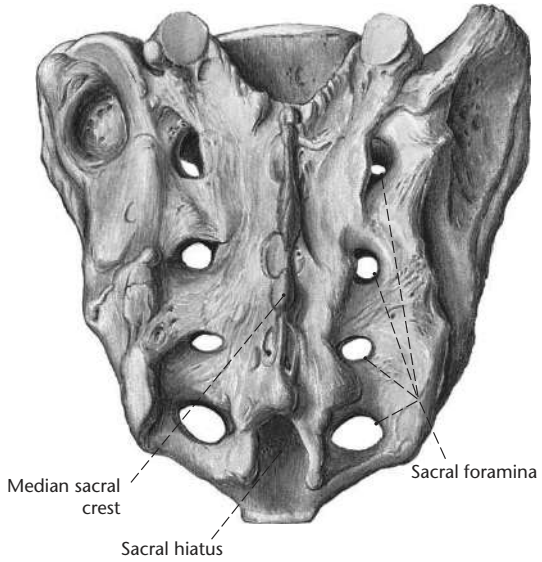


Fig. 3.75

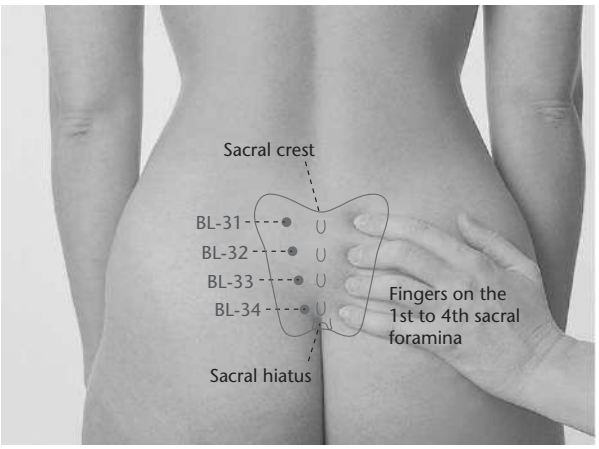


Fig. 3.76

3.4.4 Sacrum and Sacroiliac Joint

Sacrum (→ Figs 3.75, 3.76)

On the sacrum, landmarks for palpation are the median sacral crest and the sacral hiatus as well as the sacral foramina on its lateral aspects.

Sacral crest (→ Figs 3.74, 3.75)

The sacral crest is formed by the narrow, irregular spinous processes, which can be palpated on the sacral midline.

Sacral hiatus (→ Figs 3.75, 3.76)

The sacral hiatus can be palpated as a U-shaped depression at the inferior end of the sacral crest. → **Du-2** is located on the midline, just inferior to it. Both the sacral hiatus and the greater trochanter (→ Lower extremity) are reference points for locating → **G.B.-30.**

Sacral foramina (→ Figs 3.75, 3.76)

The sacral foramina are located between the lumbosacral joint and the sacral hiatus and can usually be palpated. They are in most cases evenly spaced and lie approximately 1 finger-width lateral to the midline, with the distance decreasing in a distal direction. The foramina are the location of → **BL-31–BL-34.**

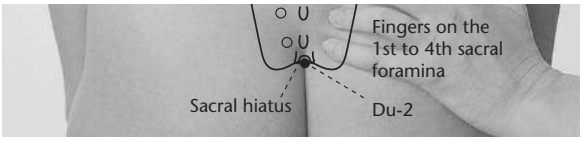


Fig. 3.77

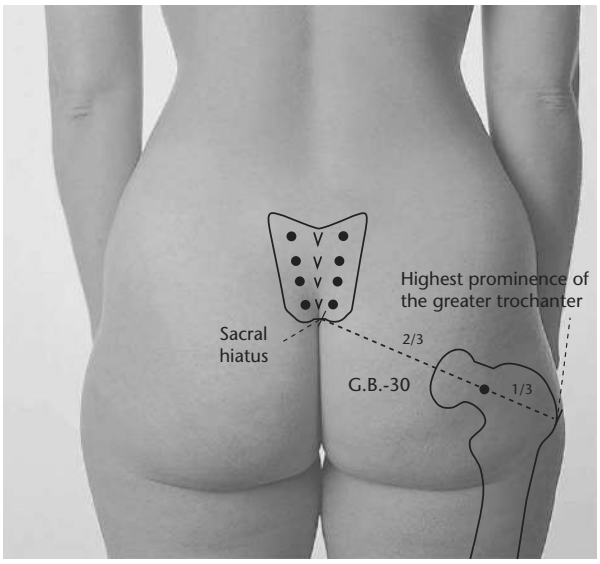


Fig. 3.78

Iliosacral joint (→ Figs 3.80, 3.81)

The iliosacral joint can be palpated bilaterally as a shallow groove between the sacrum, the PSIS (see above) and more inferiorly located ilial structures. → **BL-26–BL-29** are located in this area.

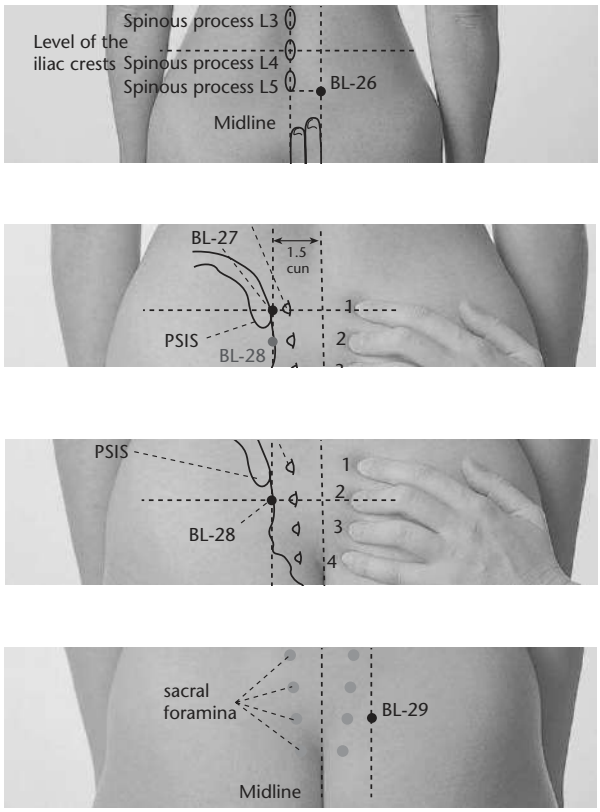


Fig. 3.79

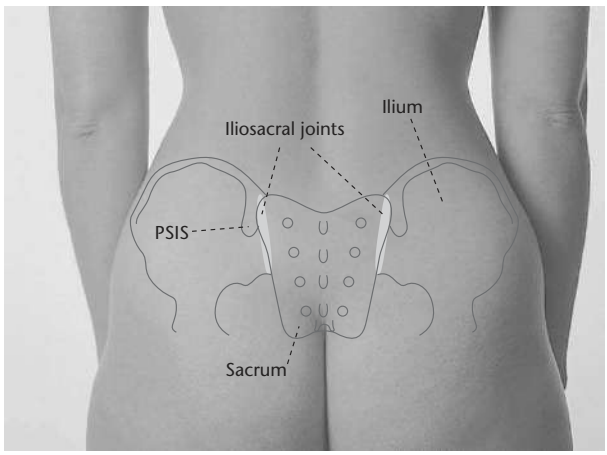
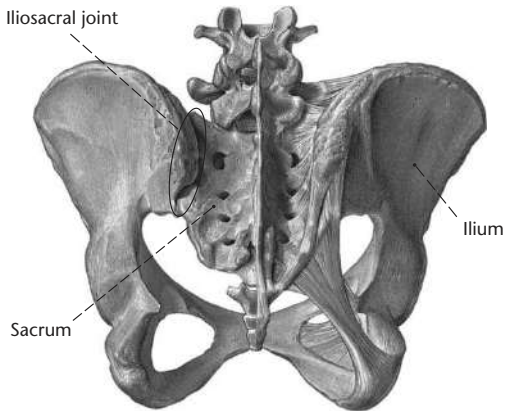


Fig. 3.80



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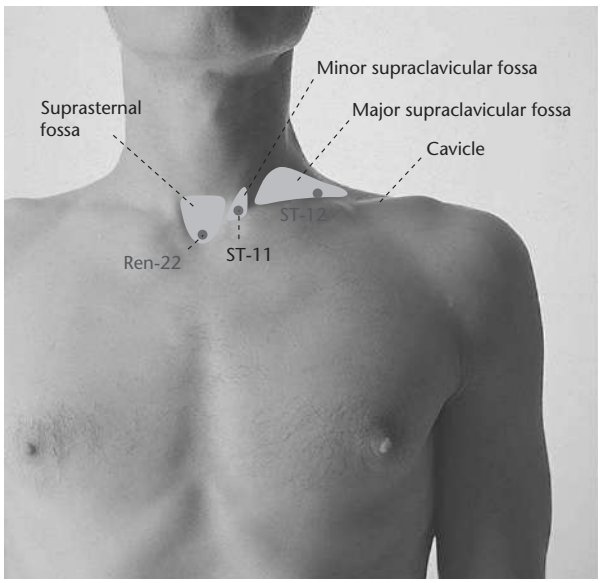


Fig. 3.82

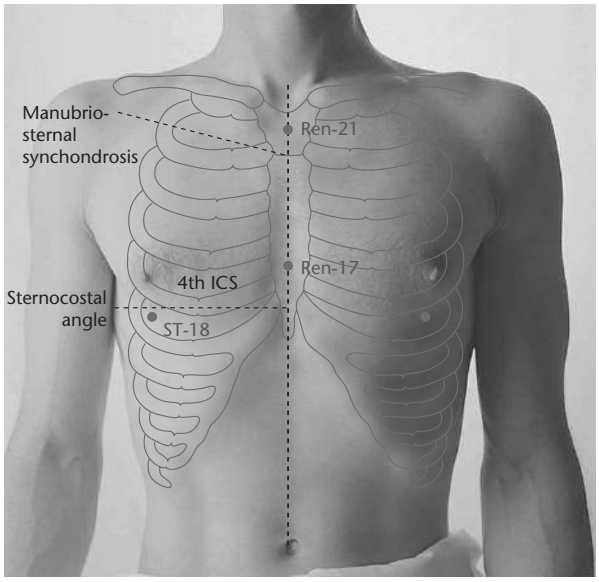


Fig. 3.83

3.5 Anterior and Lateral Aspect of the Thorax and Abdomen

Clavicle (→ Figs 3.82, 3.86)

The clavicle forms the connection between the shoulder girdle and the thorax. It separates the major and minor supraclavicular fossae with → **ST-11, ST-12** and ***jingbi*** (Ex-HN) from the ribcage. Located on the lower border of the clavicle are → **ST-13** (at its midpoint) and → **KID-27** (2 cun lateral to the midline).

Suprasternal fossa (→ Fig. 3.82)

The suprasternal fossa forms a depression superior to the sternum between the sternoclavicular joints. It is the location of → **Ren-22**.

Ribs (→ Figs 3.83, 3.86)

For anatomical orientation of the ribs, the midsection of the clavicle is a good starting point. The first rib lies directly below the clavicle, forming a narrow bow. It articulates with the manubrium just inferior to the sternoclavicular joint.

Please note the following when palpating the ribs and intercostal spaces (ICS) and locating the respective acupuncture points:

- From their articulation with the sternum, the ribs run initially horizontally or in a gentle curve in an inferior direction, while at the lateral aspect of the thorax, they assume a superior direction towards the posterior aspect of the body.
- Inferior to the 4th/5th intercostal spaces, the medial sections of the ribs merge with the costal cartilage, so that the intercostal spaces do not extend very far medially. Therefore it is necessary to palpate somewhat more laterally.

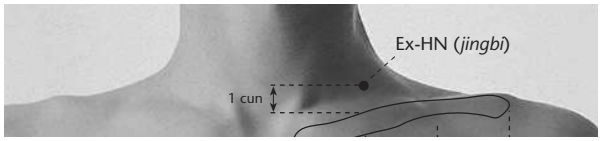


Fig. 3.84A

Fig. 3.84B

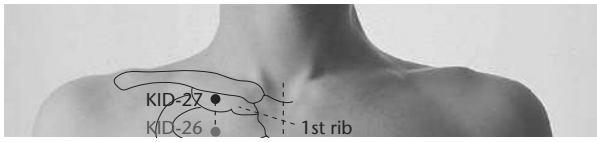


Fig. 3.84C

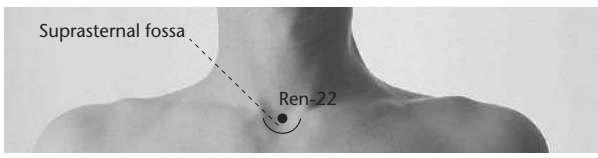


Fig. 3.84D

1st rib, 1st intercostal space (→ Fig. 3.86)

By palpating parasternally in an inferior direction, the first rib can generally be felt directly below the clavicle. Here, → **KID-27** is located 2 cun lateral to the anterior midline. Below follows the first intercostal space, then the second rib and so on. → **Ren-20** is located on the anterior midline, at the level of the first intercostal space, → **Ren-21** is located slightly superior to it.

2nd rib, manubriosternal synchondrosis (manubriosternal junction) (→ Figs 3.83, 3.86)

The synchondrosis is usually a clearly defined transverse bony structure on the superior section of the sternum, level with the articulation of the second rib. Directly below the synchondrosis is the 2nd intercostal space from where subsequent ribs and intercostal spaces can be counted by palpation.

Laterosuperior aspect of the thorax and coracoid process (→ Fig. 3.87)

The laterosuperior aspect of the thorax is bordered by the clavicle and the deltoid muscle with the coracoid process deep to the latter. The deltopectoral triangle can be located by palpating from the end of the anterior axillary fold along the border of the deltoid muscle towards the shoulder and the lower border of the clavicle. Here, in the centre of the triangle, lies → **LU-2**. Laterally, the triangle is bordered by a clearly palpable bony structure, the coracoid process. In order to distinguish the process from the lesser tubercle of the humerus, the arm is rotated externally with the elbow flexed at the same time. While the process will remain fixed, the tubercle will follow the movement. → **LU-1** is located slightly superior and lateral to → **LU-2** and medial to the lower border of the coracoid process. The contours of the deltoid muscle and the deltopectoral triangle can be emphasised through muscle flexion, for example by pressing the hands against each other in front of the chest.

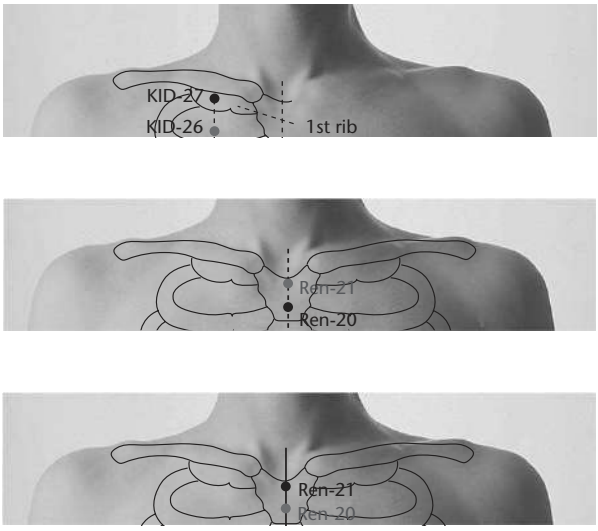


Fig. 3.85

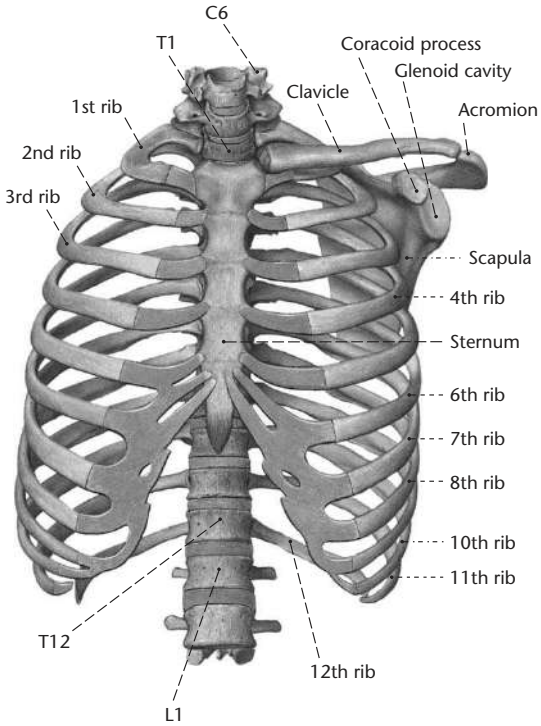


Fig. 3.86

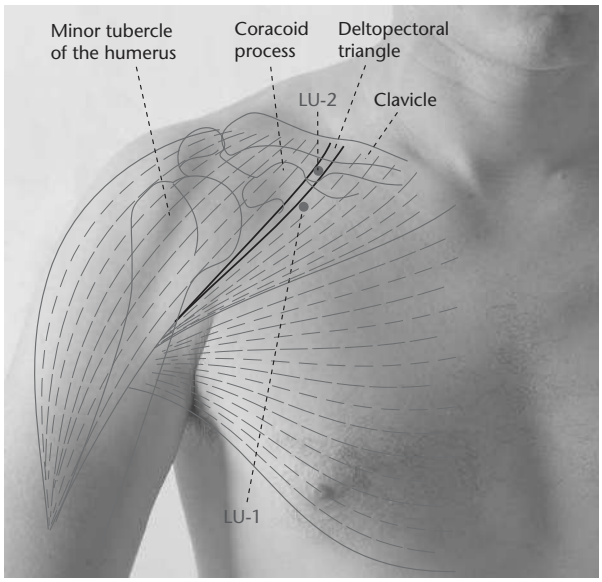


Fig. 3.87

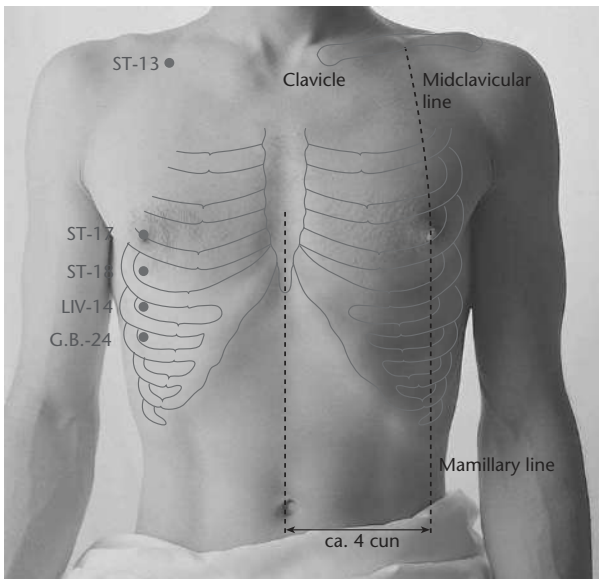


Fig. 3.88

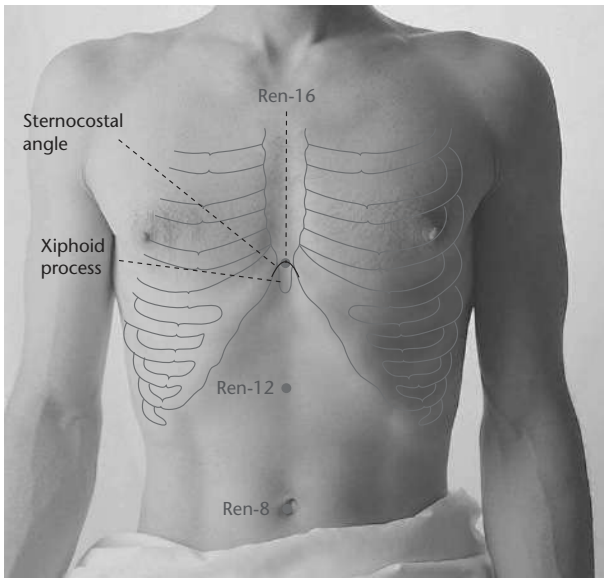


Fig. 3.89

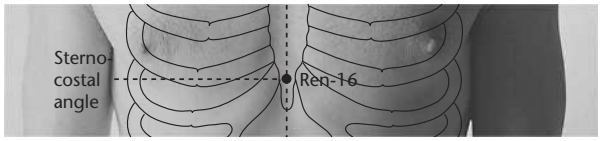


Fig. 3.90

Midclavicular line (→ Fig. 3.88)

The midclavicular line provides a further tool for reference on the upper thorax. It is an imaginary line that runs from the midpoint of the clavicle to the nipple. Since in most cases the nipple lies somewhat more laterally than the clavicular midpoint, the line tends to have a slightly oblique pathway. → **ST-13** to **ST-16** are all located on the line.

Nipple (→ Fig. 3.88)

In men, the nipple is located in the 4th intercostal space, lateral to the midline, while in women, the location can vary depending on the shape of the breast. → **ST-17** is located on the nipple.

Mamillary line (→ Fig. 3.88)

The mamillary line is an imaginary line for orientation on the mediolateral thorax and abdomen. It runs vertically from the nipple in an inferior direction. The points → **ST-18, LIV-14** and **G.B.-24** are all located on this line.

Sternocostal angle, xiphoid process and umbilicus (→ Figs 89, 3.91)

The lower borders of the ribcage unite at the lower sternal border, forming the sternocostal angle. This angle and the umbilicus are the two major anatomical landmarks for point location on the upper abdomen.

Caution: It is important not to mistake the sternocostal angle for the tip of the xiphoid process. The latter is attached to the sternum at the sternocostal angle, projecting inferiorly towards the abdomen. For definite identification, palpate along the costal cartilage in a superior direction to where it meets the sternocostal angle. This is the location of → **Ren-16**.

Axillary line (→ Fig. 3.92)

The axillary line is an imaginary line for orientation on the lateral aspect of the thorax and abdomen. It runs vertically from the middle of the axilla in an inferior direction. Both → **G.B.-22** and **SP-21** are located on this line.

Free end of the 11th rib (→ Figs 3.91, 3.92)

The free end of the 11th rib can be palpated below the costal cartilage, at the transitional zone from the thorax to the abdomen. Location tip: the patient places his/her flexed elbow (90° angle) alongside his/her thorax. The tip of the olecranon will then usually be close to the free end of the 11th rib. → **LIV-13** is located below its anterior lower border.

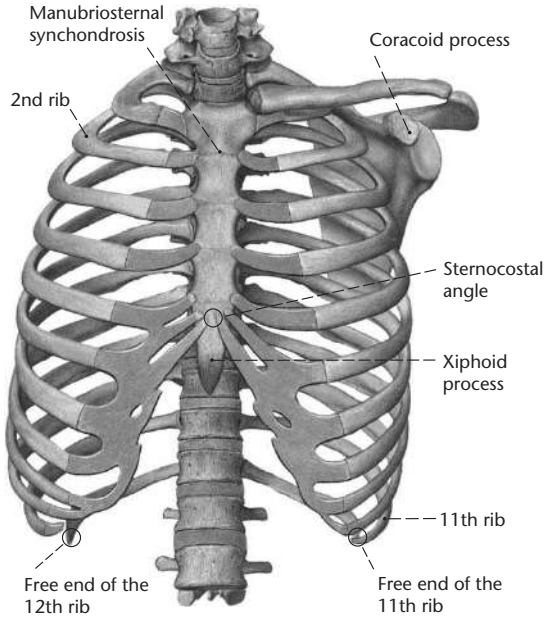


Fig. 3.91

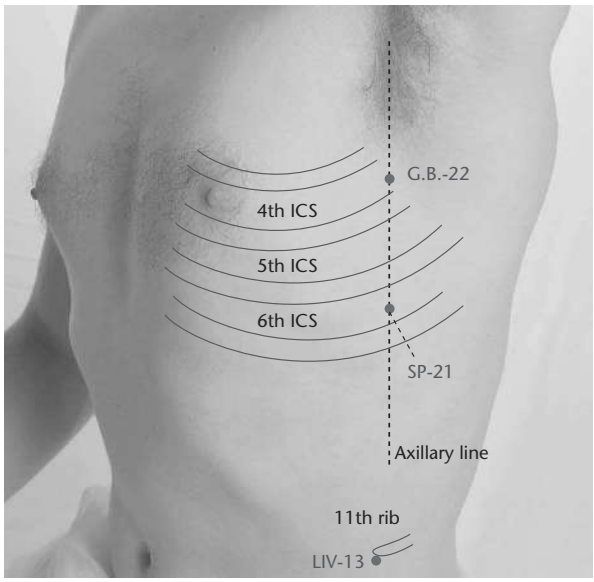


Fig. 3.92

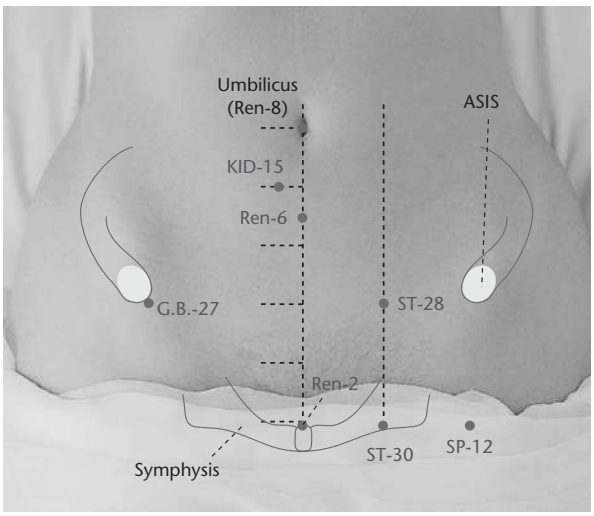


Fig. 3.93

Anterior superior iliac spine (ASIS) (→ Figs 3.93–3.95)

By palpating along the iliac crest in an anterior and inferior direction, the anterior superior iliac spine (ASIS) is reached at the lateral end of the inguinal groove. The ASIS is felt as a distinct bony ridge. → **G.B.-27** is located anterior to it, while → **G.B.-28** is located slightly more inferiorly and medially.

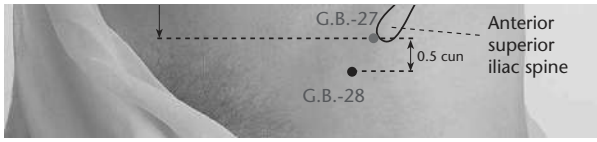


Fig. 3.96

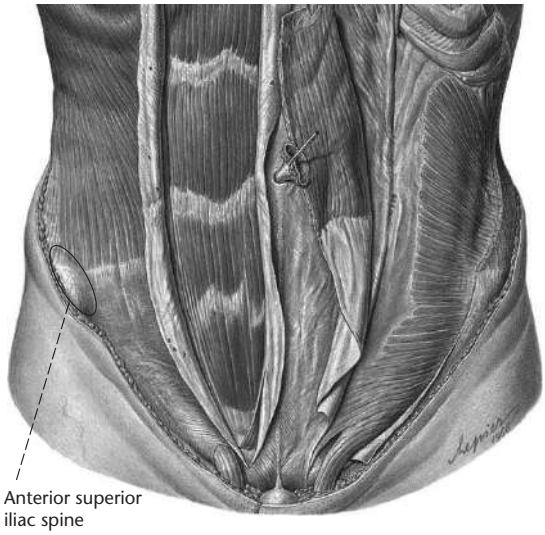


Fig. 3.94

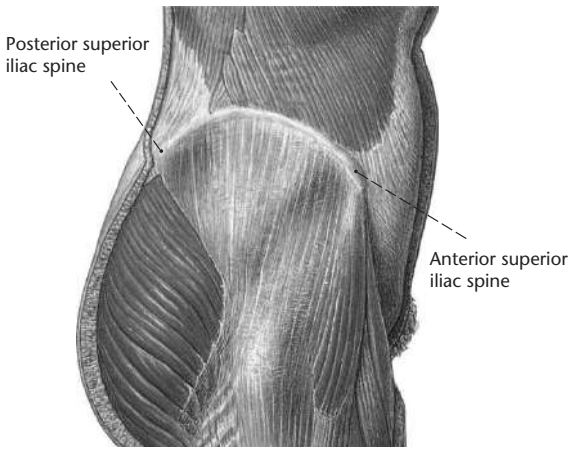


Fig. 3.95

Pubic symphysis, umbilicus (→ Fig. 3.98)

The upper border of the pubic symphysis is an important orientation point for point location on the lower abdomen. The distance between the centre of the umbilicus and the upper border of the symphysis can be divided into 5 proportional cun, which can differ significantly from the patient's finger cun (→ Chapter 2). → **Ren-2** is located on the anterior midline and on the upper border of the pubic symphysis.

3.6 Lower Extremity

Greater trochanter (→ Fig. 3.99)

The greater trochanter forms a distinct, projecting bony structure on the hip area. It is one of the endpoints on an imaginary line connecting it with the sacral hiatus. Located on this line is → **G.B.-30**, a third of the distance from the greater trochanter. Another line connecting the greater trochanter and the anterior superior iliac spine (ASIS) is used for locating → **G.B.-29**.

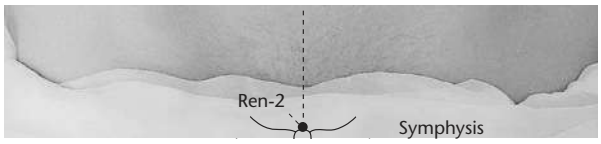


Fig. 3.97

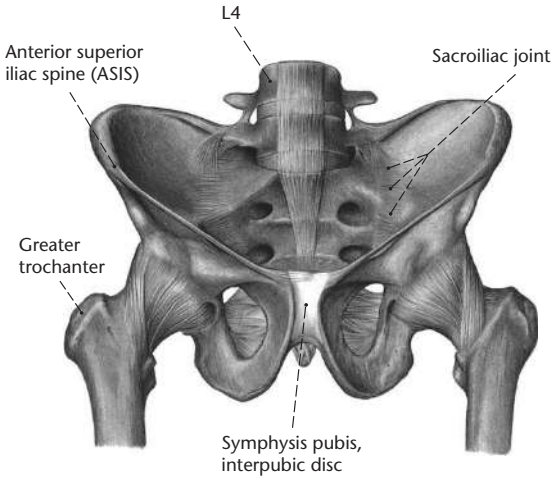


Fig. 3.98

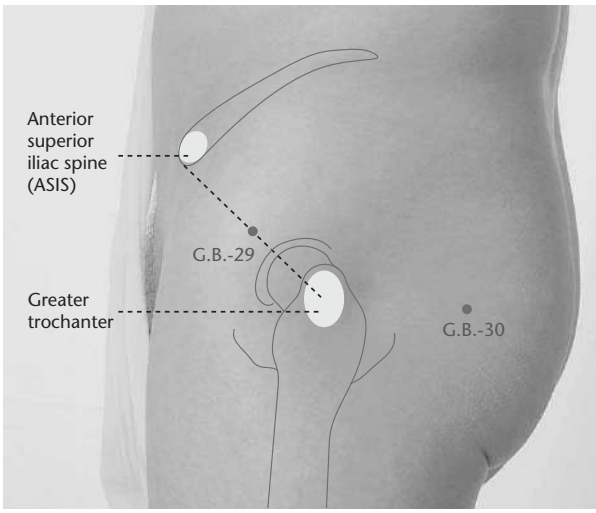


Fig. 3.99

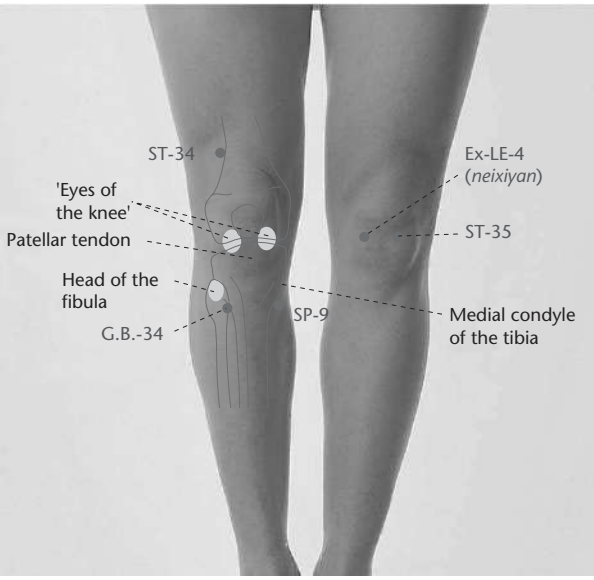


Fig. 3.100

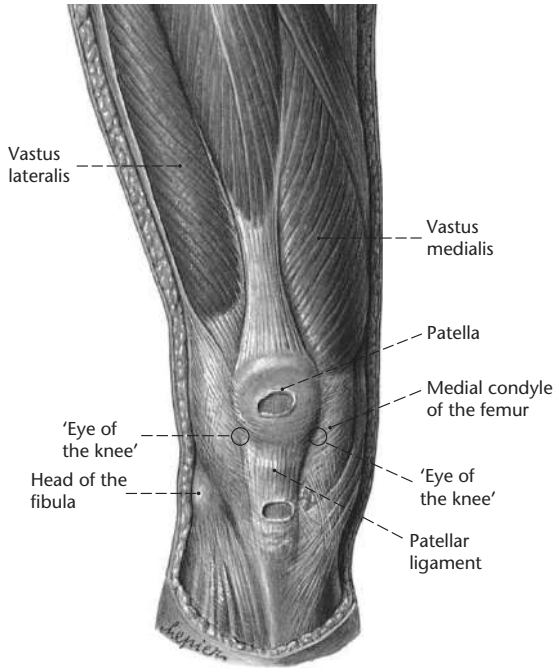


Fig. 3.101

3.6.1 Knee Region

For locating and needling points in the knee region, the patient should be in a relaxed supine position, with the knees slightly flexed and supported by pillows. This opens up the knee joint and allows for better palpation of the eyes of the knees. A prone position with a support below the feet and ankles is recommended for treating points in the popliteal crease.

Patella (→ Figs 3.100, 3.101)

The upper patellar border marks the location of → **SP-10** as well as of → **ST-32** to **ST-34**.

Eyes of the knee (→ Figs 3.100, 3.101)

The eyes of the knee are formed by the depressions on either side of the patellar tendon at the level of the lower patellar border. The lateral eye corresponds to the location of → **ST-35**, the medial eye is the location of the extra point → **Ex-LE-4** (*neixiyan*).

Head of the fibula (→ Figs 3.100, 3.101)

The head of the fibula forms a further important reference point inferior to the lateral aspect of the knee joint. For locating → **G.B.-34**, find the head of the fibula (approximately where the seam of a pair of trousers would be) and hold it with two fingers. By sliding downward, the anterior finger will 'drop' into the depression anterior and inferior to the head of the fibula, which marks the location of → **G.B.-34**.

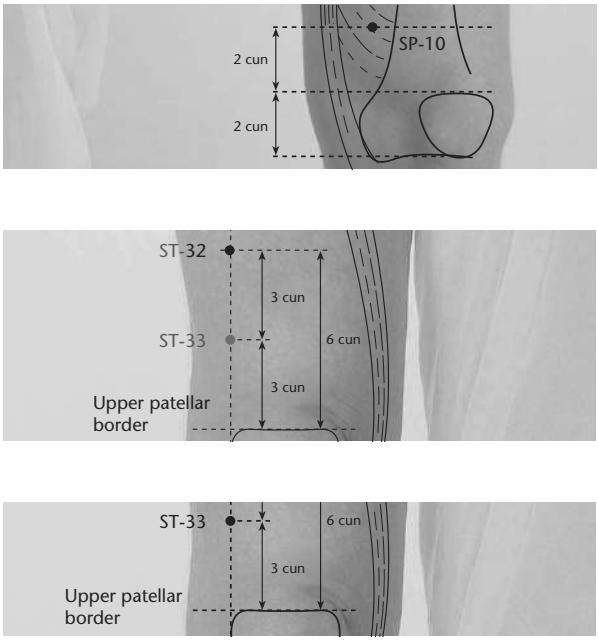


Fig. 3.102

Tibial shaft and medial condyle of the tibia (→ Fig. 3.103)

Below the medial aspect of the knee joint, the transition from the medial condyle of the tibia to the tibial shaft marks the location of → **SP-9**. This transition is best located by palpating in a superior direction along the posterior border of the medial aspect of the tibia. When using a knee roll, be aware that the soft tissue around this area may be pushed anteriorly, hindering palpation.

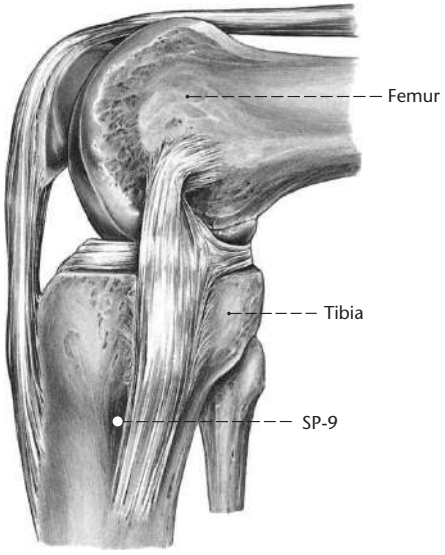


Fig. 3.103

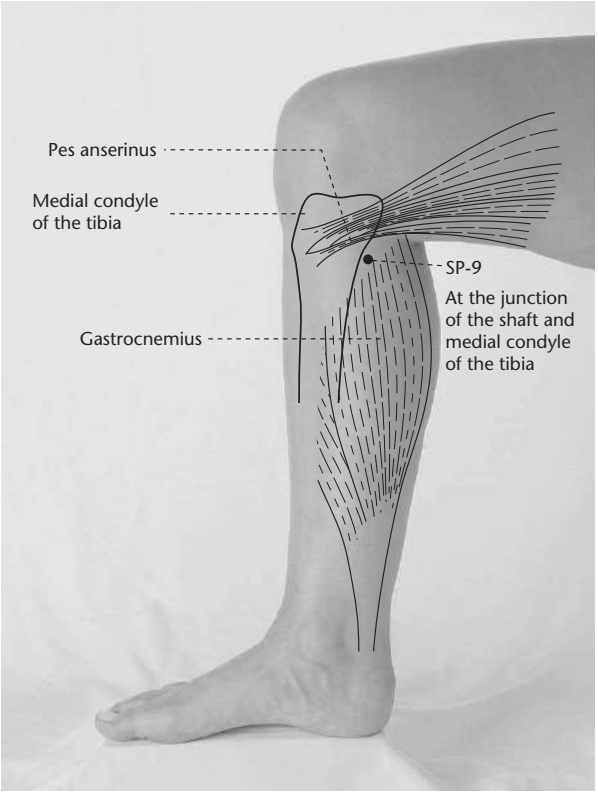


Fig. 3.104

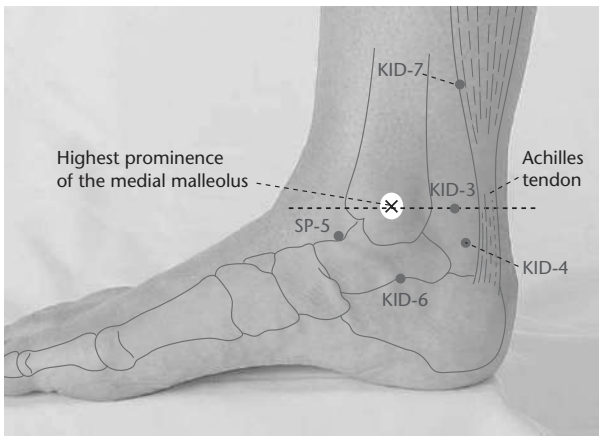


Fig. 3.105

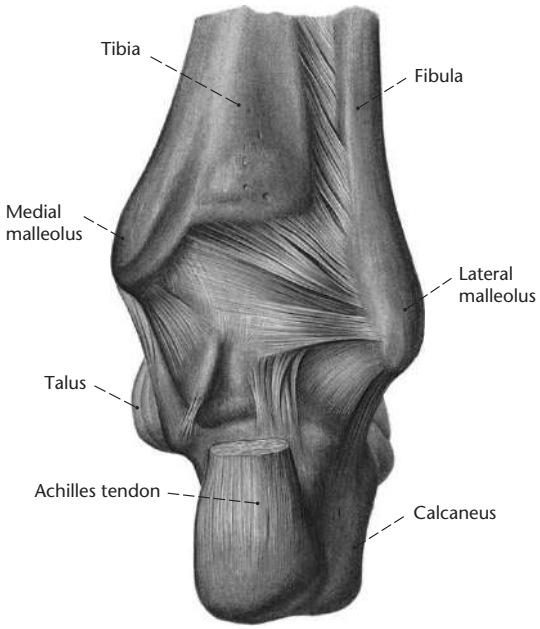


Fig. 3.106

3.6.2 Ankle and Foot

Highest prominence of the medial/lateral malleolus (→ Figs 3.105, 3.106)

Please note: The highest prominence of the malleolus does not refer to its lower border, but literally to its most protruding tip. The prominences are important reference points for the lower leg and ankle. → **Ex-LE-8** (*neihuajian*) is located on the highest prominence of the lateral malleolus, while → **Ex-LE-9** (*waihuajian*) is its medial counterpart.

Please also note: Contrary to some textbooks, the lateral and medial prominences are anatomically not located at the same level. There is approximately a 1 cun (→ Chapter 1, Fig. 1.2) difference in level. Thus, → **BL-60** and → **KID-3** are not located directly opposite each other, but rather occupy a comparable position.

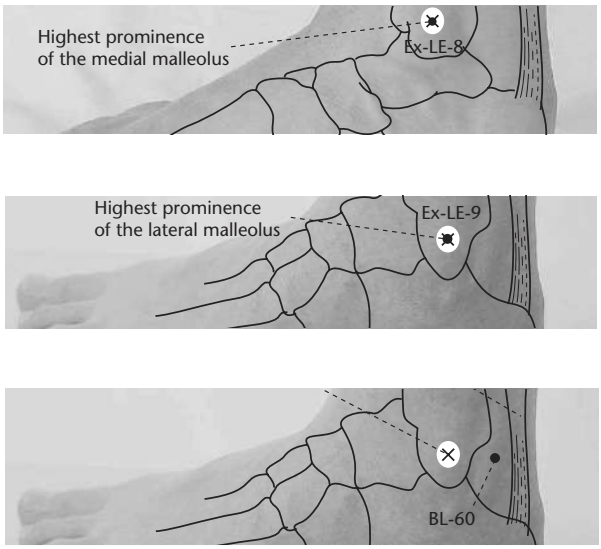


Fig. 3.107

Joint space on the anterior ankle (→ Figs 3.108, 3.109)

The joint space on the anterior aspect of the ankle (between the malleoli) is best palpated by passively flexing and extending the foot. → **LIV-4** and → **ST-41** are both located here.

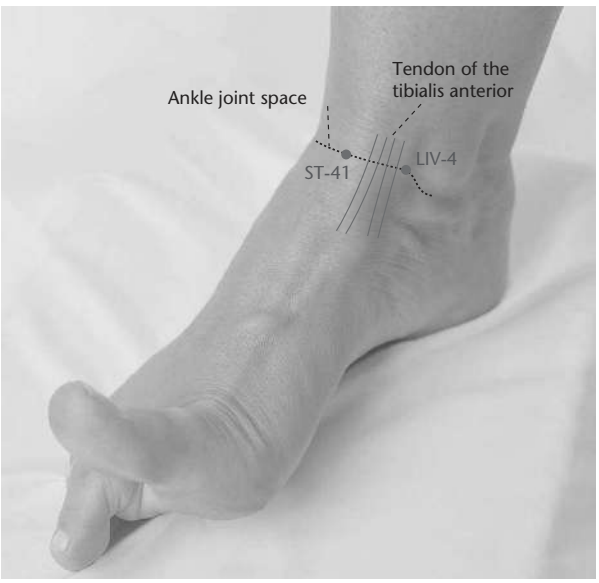


Fig. 3.108

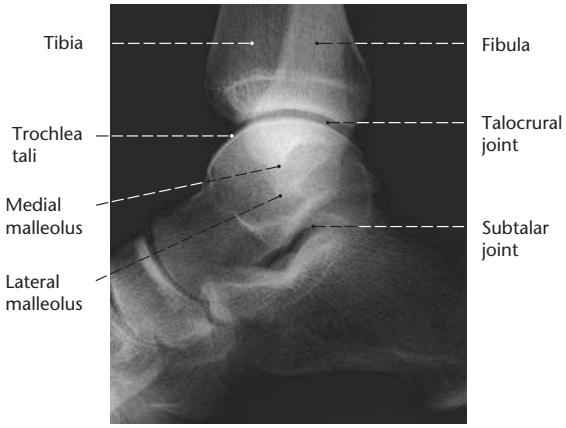


Fig. 3.109

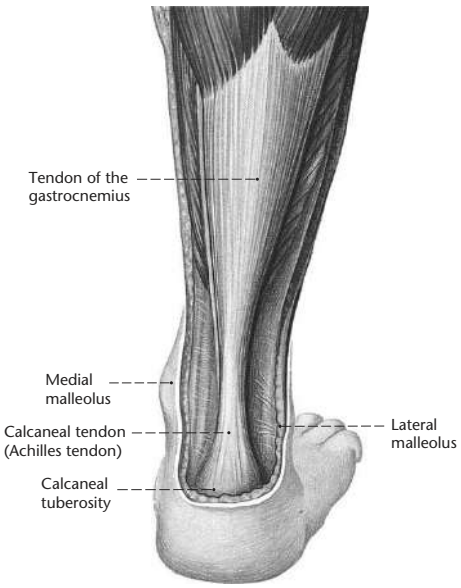


Fig. 3.110

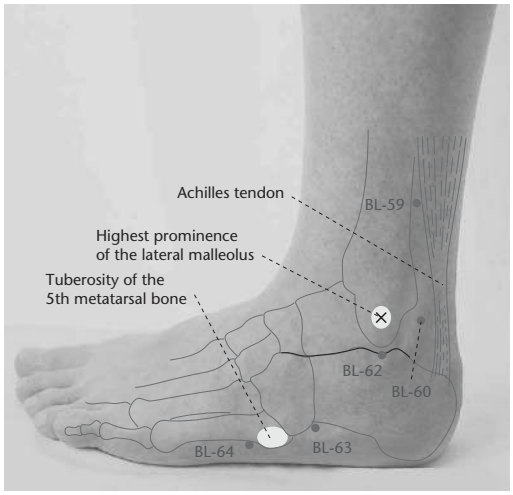


Fig. 3.111

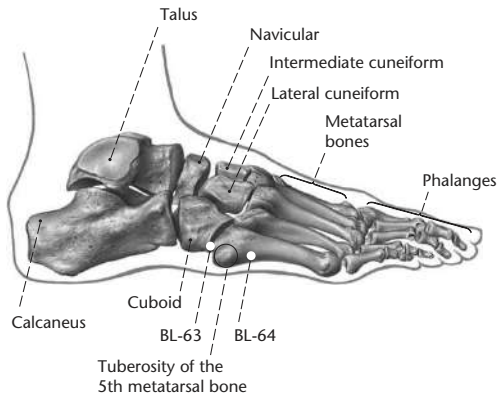


Fig. 3.112

Achilles tendon (→ Fig. 3.110)

On the distal aspect of the lower leg and on the heel, the Achilles tendon defines the location of → **KID-3, KID-4**, and **KID-7** on its medial aspect and of → **BL-59** and **BL-60** on its lateral aspect.

Tuberosity of the 5th metatarsal bone (→ Figs 3.111, 3.112)

The tuberosity at the proximal end of the 5th metatarsal bone is the most palpable orientation point on the lateral aspect of the midfoot. → **BL-63** is located in the depression proximal to the tuberosity, while → **BL-64** is located in the depression distal to it, at the junction of the head and the shaft.

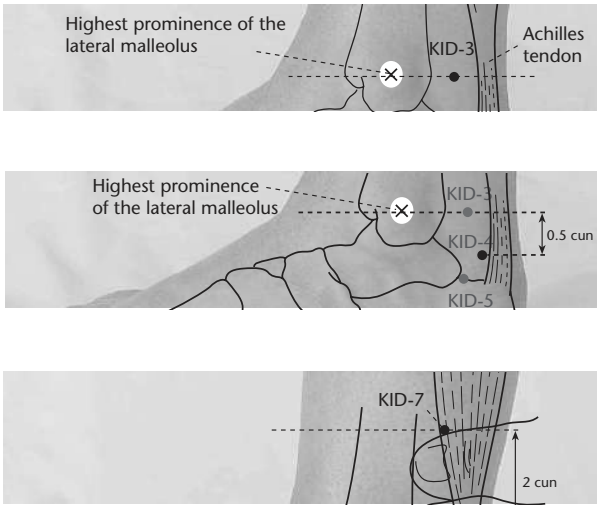


Fig. 3.113

Base of the 1st metatarsal bone (→ Figs 3.114, 3.115)

When palpating along the medial aspect of the midfoot in a proximal direction, the proximal end (base) of the 1st metatarsal bone forms the first distinct prominence. → **SP-4** is located distal to this bony orientation point, at the junction of the shaft and the base.

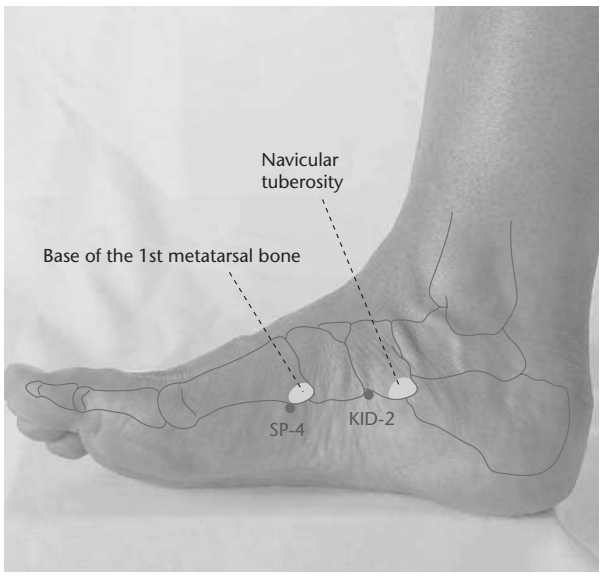


Fig. 3.114

Navicular tuberosity (→ Fig. 3.115)

When palpating along the medial side of the foot, past → **SP-4** and the base of the 1st metatarsal bone, a further bony structure can be clearly felt. This is the navicular tuberosity, where → **KID-2** is located.

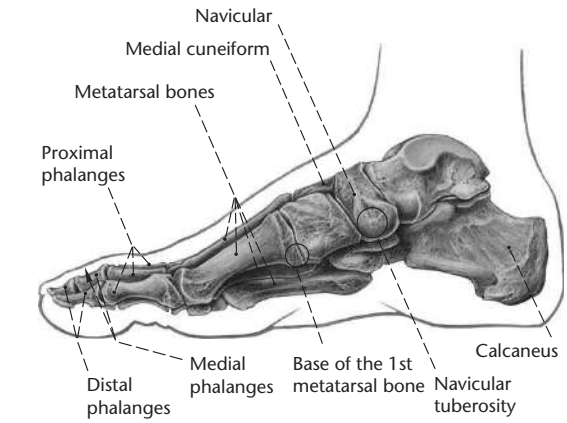


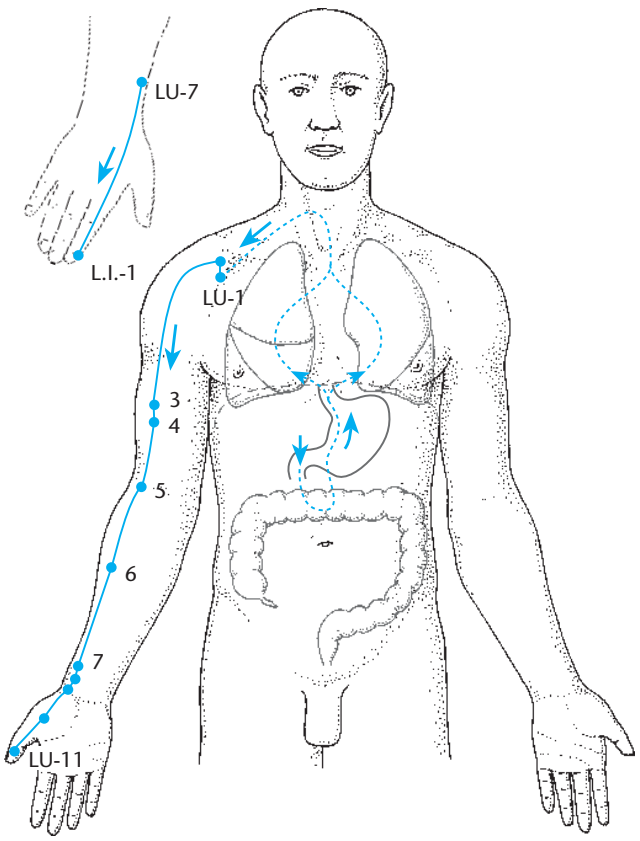
Fig. 3.115

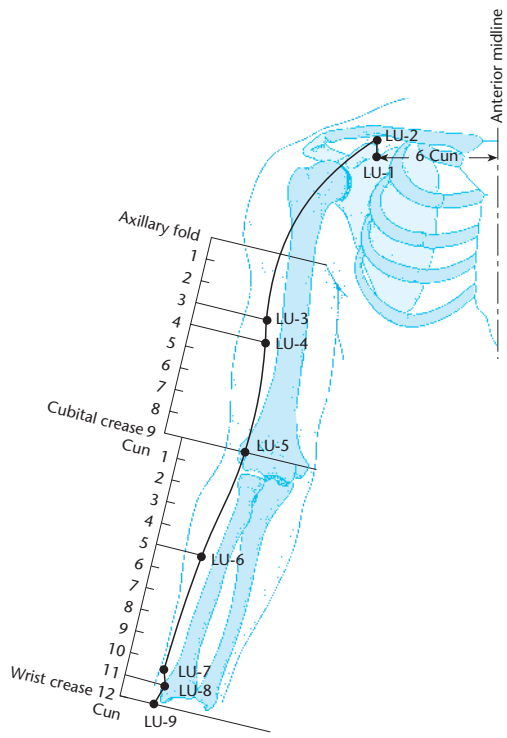
4 Acupuncture Points of the Twelve Primary Channels

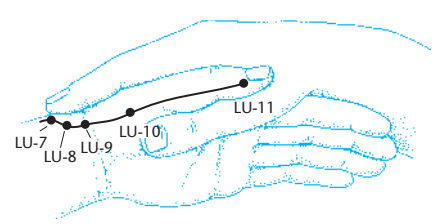
Claudia Focks, Ulrich März

4.1 The Lung Channel System – Hand-*taiyin* (*shou tai yin jing luo*)

4.1.1 The Lung Primary Channel (*shou tai yin jing*)







Pathway

The internal section of the Lung primary channel originates in the Middle Burner in the region of the Stomach (*wei*)

- ➡ descends to connect with the Large Intestine (*dachang*), its paired *fu*-Organ
- ➡ curves upwards again to the Stomach (*wei*)
- ➡ penetrates the diaphragm
- ➡ enters the Lung (*fei*), its pertaining *zang*-Organ
- ➡ ascends to the throat region
- ➡ and curves towards the lateral thoracic region.

The Lung primary channel emerges at LU-1 (*zhongfu*) on the lateral thoracic wall at the level of the first intercostal space

- ➡ travels along the anterolateral aspect of the upper arm and forearm
- ➡ ends at LU-11 (*shaoshang*) on the thumb, at the radial aspect of the corner of the nail.

A branch separates from the primary channel at LU-7 (at the styloid process of the radius) and travels along the radial side of the index finger to its tip, where it connects with → **L.I.-1** (*shangyang*) (hand Yin–Yang connection of the first great circuit).

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Clinical importance (→ 1.2)

Exterior (*biao*) signs and symptoms: Fever, aversion to cold, nasal blockage, headache, pain in the region of the thorax, shoulder and back, pain with cold sensations along the channel
Interior (*li*) or *zangfu*-Organ signs and symptoms: Cough, asthma, wheezing, dyspnoea, shortness of breath, fullness and tightness of the chest, expectoration of phlegm, dry throat, changed colour of the urine, irritability, heat sensation in the palms, abdominal fullness and distension, diarrhoea
Excess (*shi*): Shoulder and back pain, Wind-Cold attack with spontaneous sweating, frequent urination, yawning
Deficiency (*xu*): Shoulder and back pain with aversion to cold, shortness of breath, changed colour of urine

Connections of the Lung primary channel (→ 1.2)

Connections with other channels

Large Intestine primary channel (*shou yang ming jing*)

Connection: Hand Yin–Yang connection of the first great circuit
Location: LU-7 → L.I.-1 (on the hand). A branch of the Lung primary channel separates at **LU-7** (*lieque*) and connects with the Large Intestine primary channel at **L.I.-1** (*shangyang*), according to some authors also with **→ L.I.-4** (*hegu*).
Circulation: Circadian (according to the Organ clock)
Importance: Interior–Exterior relationship

Spleen primary channel (*zu tai yin jing*)

Connection: Paired according to the six channel theory (hand–foot pairing): *tai yin* (Yin axes of the first great circuit)
Location: SP-20 → LU-1 (on the thorax). A branch of the Spleen primary channel separates at **→ SP-20** (*zhourong*) and connects with the Lung primary channel at **→ LU-1** (*zhongfu*).
Circulation: Non-circadian (not according to the Organ clock)
Importance: Above–below relationship

Liver primary channel (*zu jue yin jing*)

Connection: Deep Yin–Yin connection
Location: LIV → LU (on the thorax). An internal branch of the Liver primary channel emerges at the Liver, passes the diaphragm and spreads inside the Lung (*fei*), forming a network with the Lung primary channel.
Circulation: Circadian (according to the Organ clock)
Importance: Closes the circle of the first great circuit of the Nutritive Qi (*ying qi*, → 1.1.4)

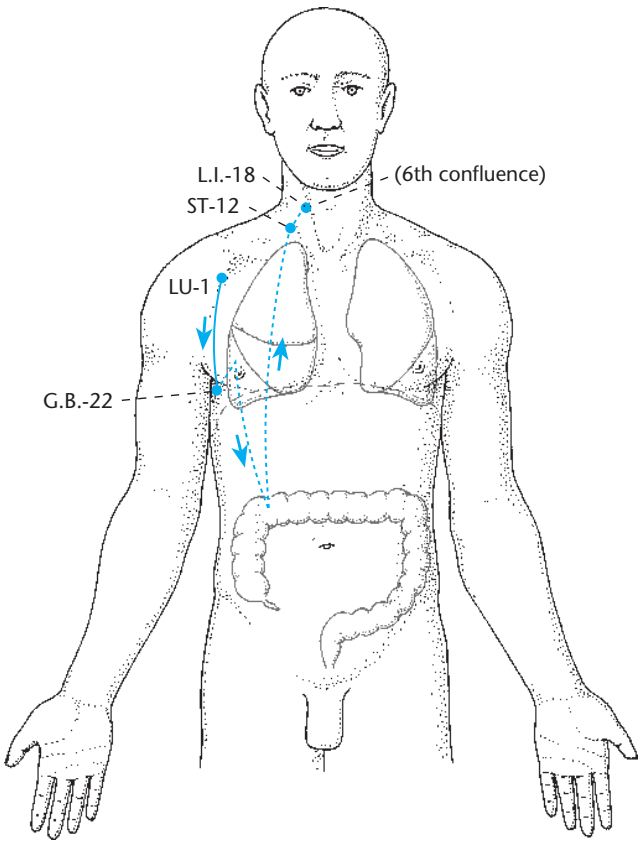
Ren mai

Connection: *Ren mai* → Lung primary channel
Importance: Closes the circle of the second circuit of the Nutritive Qi (*ying qi*, → 1.1.4). The Lung primary channel as well as the great circuit (circulation through the 12 primary channels) receives Qi from the small circuit (*ren mai – du mai*).

Connections to the *zangfu*-Organ systems

Lung (*fei*), **Large Intestine (*dachang*)**, Stomach (*wei*)

4.1.2 The Lung Divergent Channel (*shou tai yin jing bie*)



Pathway

The Lung divergent channel separates from the Lung primary channel in the axillary region

- travels anteriorly to → **G.B.-22** (*yuanye*) on the midaxillary line, 3 cun inferior to the axilla
- enters the thoracic region
- disperses in the Lung (*fei*), its pertaining *zang*-Organ
- descends to the Large Intestine (*dachang*), its paired *fu*-Organ
- ascends again and emerges in the region of the supraclavicular fossa at → **ST-12** (*quepen*)
- traverses the neck in a cranial direction and connects with the Large Intestine primary channel at → **L.I.-18** (*futu*) at one of the six *he*-confluences* (L.I./LU as 6th confluence. → 1.3).

There exist variations regarding the channel pathway due to differing interpretations of the *Ling Shu* (→ Solinas et al. 1998).

* According to some authors the 6th confluence is localised at → **ST-12** (*quepen*).

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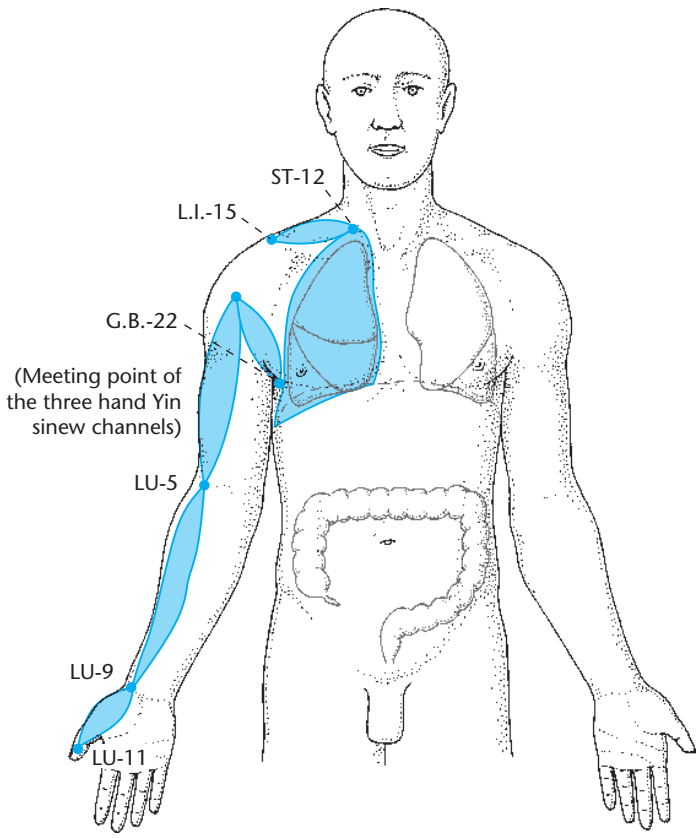
Clinical importance

- Strengthens the connection between the Lung and the Large Intestine (*zangfu*-Organ systems). Points on the Large Intestine primary channel can therefore be used for disorders of the Lung, and vice versa points on the Lung primary channel can treat disorders of the Large Intestine.
- Creates a network between the Lung primary channel and the neck region at the confluent point → **L.I.-18**: thus LU points such as → **LU-10** or → **LU-11** may be used to treat the neck region.

4.1.3 The Lung Sinew Channel (*shou tai yin jing jin*)



Pathway

The Lung sinew channel

- ➡ begins on the thumb at **LU-11** (*shaoshang*), at the radial aspect of the corner of the nail
- ➡ spreads along the radial aspect of the thumb and the 1st metacarpal bone as well as the thenar eminence
- ➡ meets **LU-9** (*taiyuan*) and binds (*jie*) at the radial wrist joint space
- ➡ travels proximally along the anterolateral aspect of the forearm
- ➡ reaches the elbow at **LU-5** (*chize*) and binds (*jie*) at the biceps tendon
- ➡ follows the biceps brachii muscle and the lateral portion of the deltoid muscle
- ➡ binds (*jie*) at the anterior shoulder region near the acromioclavicular joint
- ➡ continues to the axilla and meets the other hand Yin sinew channels (P, HE) at → **G.B.-22** (*yuanye*) and binds (*jie*) there
- ➡ continues deep to the pectoralis major muscle and enters the supraclavicular fossa at → **ST-12** (*quepen*)
- ➡ courses to → **L.I.-15** (*jianyu*) and returns to → **ST-12** (*quepen*)
- ➡ penetrates the supraclavicular fossa and disperses in the thoracic and hypochondriac region and the diaphragm (→ Fig.)

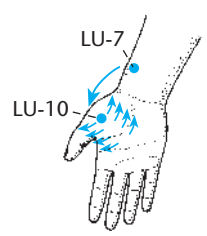
Clinical importance

Pathology: Stiffness, cramps and pain along the sinew channel. *Xi fen*: spasms and pain in the thorax and hypochondriac region. In severe cases formation of nodules below the right lateral costal region and distension along the lateral costal region.

Indication: Mainly for *bi*-syndromes (painful obstruction syndrome) along the LU channel.

The area covered by the Lung sinew channel is larger than that covered by the Lung primary channel. This explains why the indications of points on the Lung primary channel include disorders and diseases of the thoracic and hypochondriac region.

4.1.4 The Lung *luo*-Connecting Vessel System (*shou tai yin luo mai*)



Pathway

The Lung *luo*-connecting channel system separates from the Lung primary channel at **LU-7** (*lieque*) (→ 8.1.2) and forms a three-dimensional reticular network, dividing into multiple branches and sub-branches (*sun luo*, *fu luo*, *xue luo* → 1.5) within the surrounding tissue.

- ➡ Horizontal divisions course to the Interiorly–Exteriorly paired Large Intestine primary channel; according to some schools (for example Van Nghi, → Appendix) they travel as a transverse Lung *luo* vessel to the *yuan*-source point → **L.I.-4** (*hegu*).
- ➡ A longitudinally orientated division spreads on the palm and thenar eminence.

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Clinical importance (→ 8.1.2)

Pathology

- **Excess (*shi*)**: Hot and burning sensations in the palms and the wrist joints
- **Deficiency (*xu*)**: Yawning, shortness of breath, frequent urination, enuresis

4.1.5 Cutaneous Region (*tai yin pi bu*)

See description and figures → 1.6.

4.1.6 Points of the Lung Primary Channel (Overview)

Specific points according to function

- ***Yuan*-source point (→ 8.1.1): LU-9** (*taiyuan*) ■■
- ***Luo*-connecting point (→ 8.1.2.): LU-7** (*lieque*) ■■
- ***Xi*-cleft point (→ 8.1.3): LU-6** (*kongzui*)
- **Pertaining Back-*shu* point (→ 8.1.4): BL-13** (*feishu*) ■■
- **Pertaining Front-*mu* point (→ 8.1.5): LU-1** (*zhongfu*) ■■
- **Five *shu*-transporting points (→ 8.1.6):**
  jing-well point (Wood): **LU-11** (*shaoshang*) ■■
  ying-spring point (Fire): **LU-10** (*yuji*)
  shu-stream point (Earth), tonification point: **LU-9** (*taiyuan*) ■■
  jing-river point (Metal), *ben* point: **LU-8** (*jingqu*) ■■
  he-sea point (Water), sedation point: **LU-5** (*chize*) ■■
- **Influential *hui*-meeting point (→ 8.1.7) of the vessels: LU-9** (*taiyuan*) ■■
- **Opening point (→ 8.1.8) of the *ren mai*: LU-7** (*lieque*) ■■
- ***Jiaohui*-meeting points (→ 8.1.10):**
  – with the SP primary channel: **LU-1** (*zhongfu*) ■■
  – of other channels with the LU channel: –
- **Gao Wu Command point (→ 8.1.11) for the occiput and nape: LU-7** (*lieque*) ■■
- **Window of Heaven point (→ 8.1.12): LU-3** (*tianfu*)
- **Ma Dan Yang Heavenly Star points (→ 8.1.14): LU-7** (*lieque*) ■■
- **Sun Si Miao Ghost point (→ 8.1.15): LU-11** (*shaoshang*) ■■

Points according to region

- **Local points (→ 8.2.1):** Lung – **LU-1** (*zhongfu*) ■■; elbow – **LU-5** (*chize*) ■■; wrist – **LU-7** (*lieque*) ■■
- **Adjacent points (→ 8.2.1):** hands – **LU-7** (*lieque*) ■■
- **Distal points (→ 8.2.1):** occiput – **LU-7** (*lieque* ■■); throat – **LU-10** (*yuji*) – **LU-11** (*shaoshang*); Lung – **LU-5** (*chize*) ■■, **LU-7** (*lieque*) ■■; shoulder – **LU-7** (*lieque*) ■■

Specific points according to the course of the channel (in numeric order)

- **LU-1** (*zhongfu* ■■): associated Front-*mu* point (→ 8.1.5), *jiaohui*-meeting point with the SP channel (→ 8.1.10)
- **LU-3** (*tianfu*): Window of Heaven point (→ 8.1.2)
- **LU-5** (*chize*) ■■: *he*-sea point (Water) (→ 8.1.6); sedation point; distal point of the Lung (→ 8.2.1)
- **LU-6** (*kongzui*): *xi*-cleft point (→ 8.13)
- **LU-7** (*lieque*) ■■: *luo*-connecting point (→ 8.1.2); opening point (→ 8.1.8) of the *ren mai*; Gao Wu Command point (→ 8.1.11) of the nape and occiput; Ma Dan Yang Heavenly Star point (→ 8.1.14); distal point for the occiput, shoulder and Lungs (→ 8.2.1); adjacent point for the hands (→ 8.2.1)
- **LU-8** (*jingqu*): *jing*-river point (Metal) (→ 8.1.6); *ben* point (Five Phase point)
- **LU-9** (*taiyuan*) ■■: *yuan*-source point (→ 8.1.1), hui-meeting point (→ 8.1.7) of the vessels; *shu*-stream point (Earth) (→ 8.1.6); tonification point
- **LU-10** (*yuji*): *ying*-spring point (Fire) (→ 8.1.6); distal point for the neck (→ 8.2.1)
- **LU-11** (*shaoshang*) ■■: Sun Si Miao Ghost point (→ 8.1.15); *jing*-well point (Wood) (→ 8.1.6); distal point for the neck

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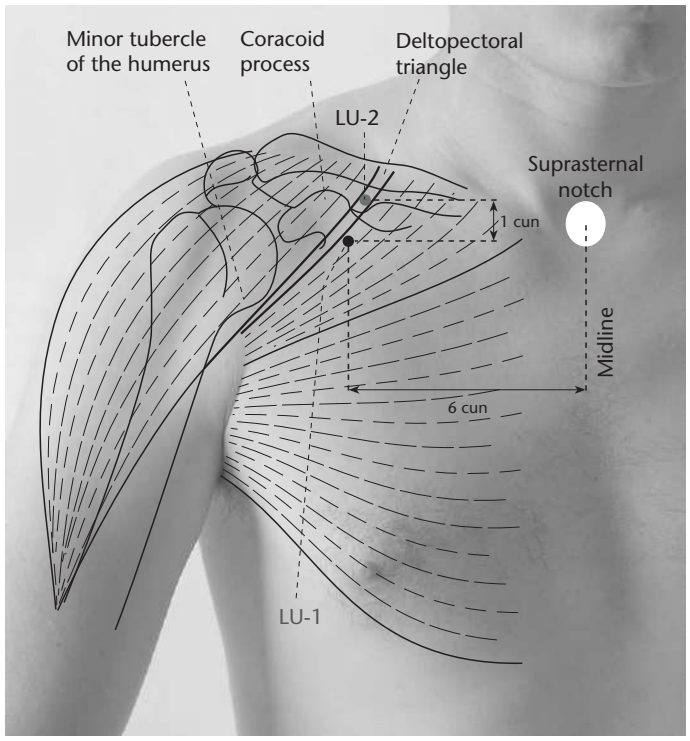
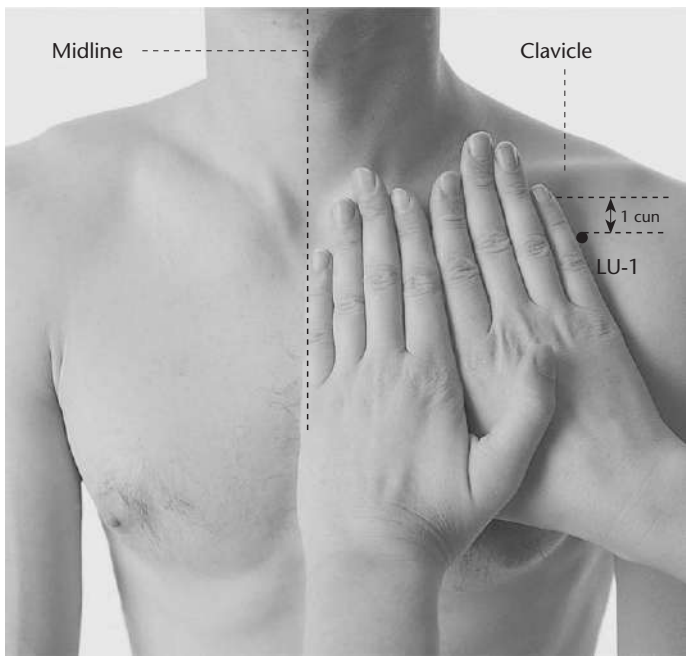
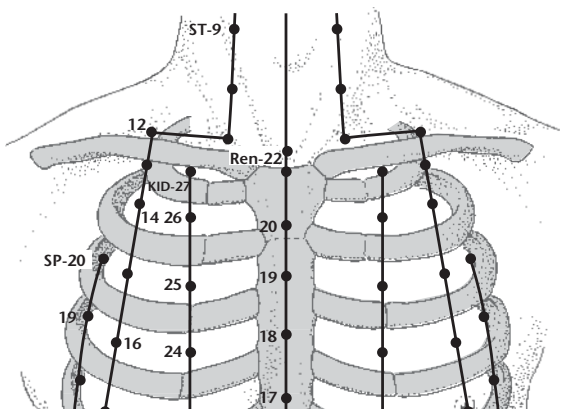
Central Residence ZHONGFU LU-1







Location

6 cun lateral of the anterior midline and approximately 1 cun below → **LU-2,** slightly medial to the lower border of the coracoid process.

How to find

First, locate → **LU-2** in the deltopectoral triangle, which is bordered superiorly by the clavicle and laterally by the coracoid process (within the deltoid muscle). From there, palpate along the border of the deltoid for 1 cun and there locate **LU-1** slightly medial to the lower border of the deltoid on the thoracic wall, approximately 6 cun lateral to the midline. For orientation: when externally rotating the arm with the elbow flexed at the same time, the coracoid process will remain static, while the minor tuberculum of the humerus will follow the movement. → **SP-20** is also located 6 cun lateral to the midline on the level of the 2nd intercostal space. Located approximately on the same level are → **Ren-20,** → **KID-26** and → **ST-14**.

Needling

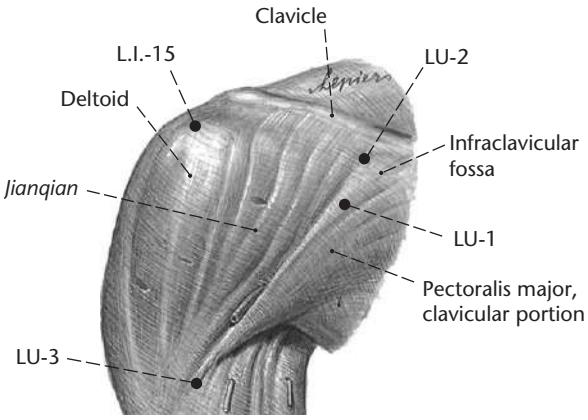
0.5–1 cun obliquely in a cranial (approximately 45°) and lateral direction towards the coracoid process.

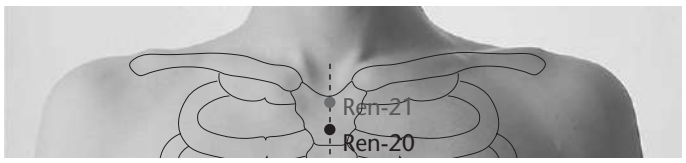
Actions/Indications

- Regulates and descends the Lung Qi
- Clears Heat in the Upper Burner, transforms Phlegm
- Regulates the water passages
- Moves Qi locally and in the sinew channel

Special features

Front-*mu* point of the Lung, meeting point with the Spleen channel, entry point. Important point for disorders of the Lung.





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LU-2 *Cloud Gate* YUNMEN

Location

6 cun lateral to the anterior midline, below the clavicle, in the centre of the deltopectoral triangle.

How to find

Find the angle formed by the lateral lower border of the clavicle and the coracoid process (within the deltoid muscle). Locate **LU-2** at the junction of the clavicular insertions of the deltoid and pectoralis muscles (deltopectoral triangle), in the centre of a clearly palpable depression in the thoracic wall, 6 cun lateral to the anterior midline.

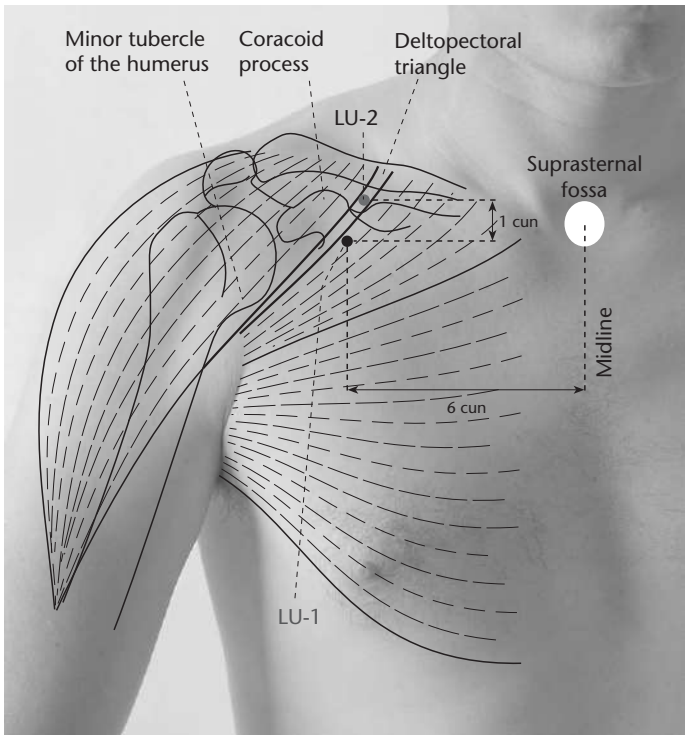
→ **ST-13** is also located at the lower border of the clavicle, 4 cun lateral to the anterior midline or at the midpoint of the clavicle. Also located on approximately the same level are → **KID-27** (2 cun lateral to the midline) and → **Ren-21** (on the midline). → **LU-1** is located 1 cun below and in most cases slightly lateral to **LU-2**.

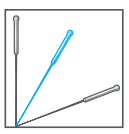
Needling

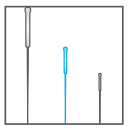
Obliquely to a maximal depth of 0.8 cun. No needling in a medial direction! Risk of pneumothorax!

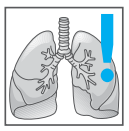
Actions/Indications

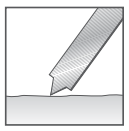
- Clears Lung Heat, decends the Lung Qi
- Opens the channel and sinew channel
- Clears Heat from the extremities

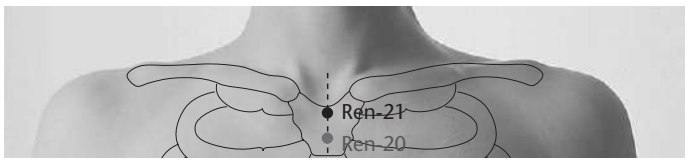


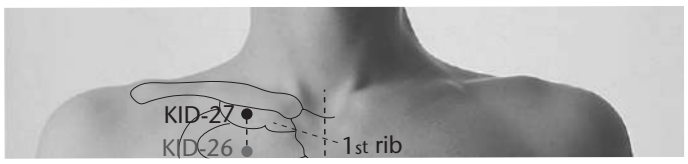


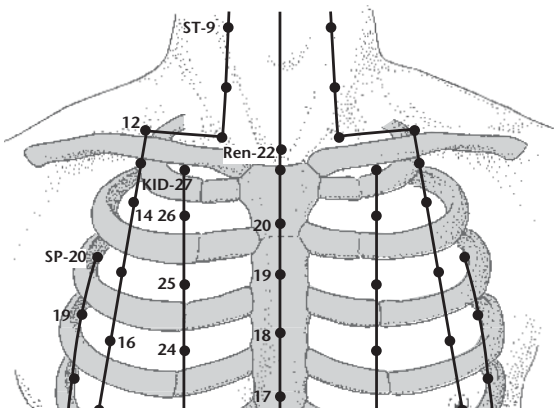


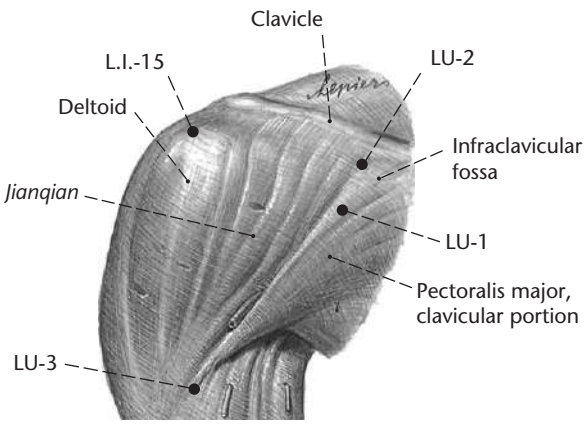












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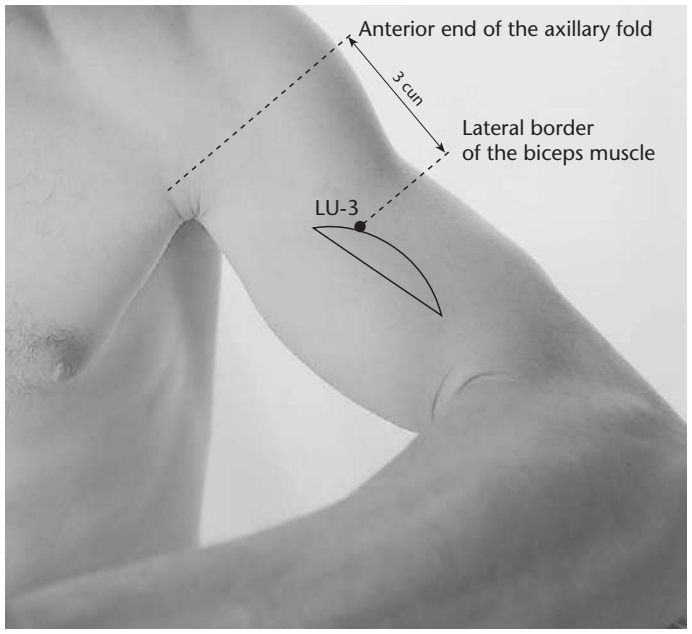
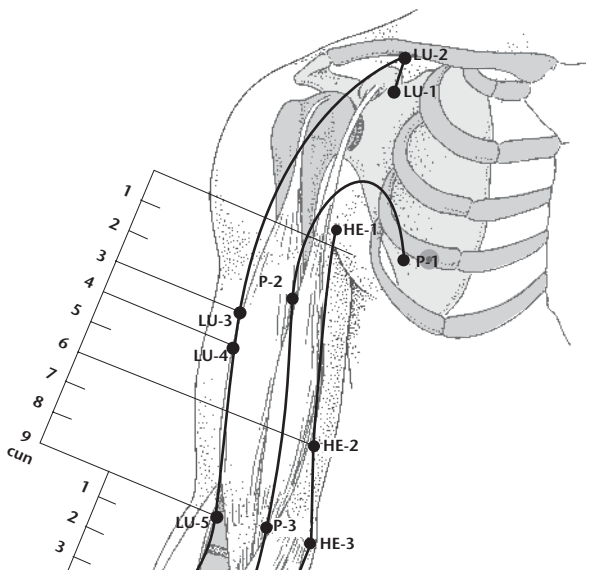
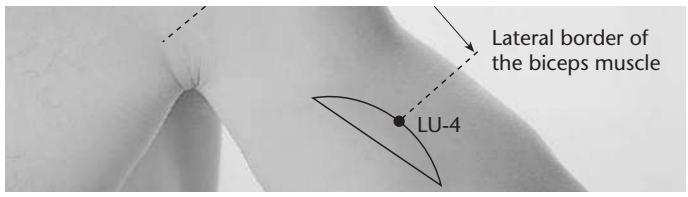
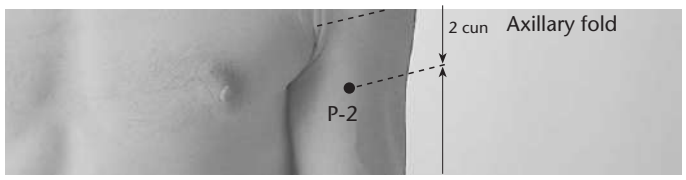
Heavenly Residence TIANFU LU-3









Location

On the medial aspect of the upper arm, 3 cun distal to the end of the anterior axillary fold, in the groove on the lateral border of biceps brachii.

How to find

Ask the patient to flex the biceps muscle against resistance. Locate **LU-3** 3 cun below the anterior end of the axillary fold (→ 2.2) in a groove on the lateral border of biceps brachii. Sometimes, you can feel the pulse of the brachial artery here. **Or:** Divide the distance of 9 cun (→ 2.2) between the end of the axillary fold and the cubital crease (→ **LU-5**) into thirds and locate **LU-3** a third of the distance from the axillary fold.
→ **LU-4** is located in the sulcus, 1 cun distal to **LU-3**. → **P-2** is located 2 cun below the axillary fold, between the two heads of the biceps brachii muscle.

Needling

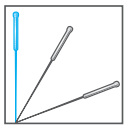
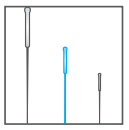
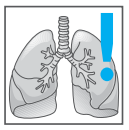
Vertically 0.5–1 cun. Moxibustion is contraindicated according to some classics.

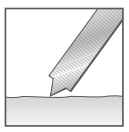
Actions/Indications

- Regulates and descends the Lung Qi
- Clears Lung Heat
- Cools the Blood and stops bleeding
- Calms the *po* (corporeal soul)
- Opens the channel and alleviates pain

Special features

Window of Heaven point



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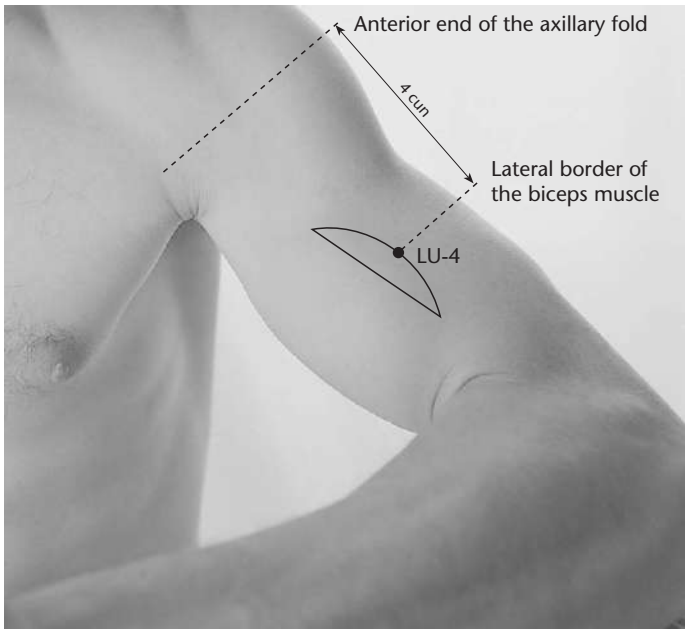
LU-4 *Clasping the White* XIABAI

Location

On the medial aspect of the upper arm, 4 cun distal to the end of the anterior axillary fold, in the depression on the lateral border of sulcus bicipitalis lateralis.



How to find

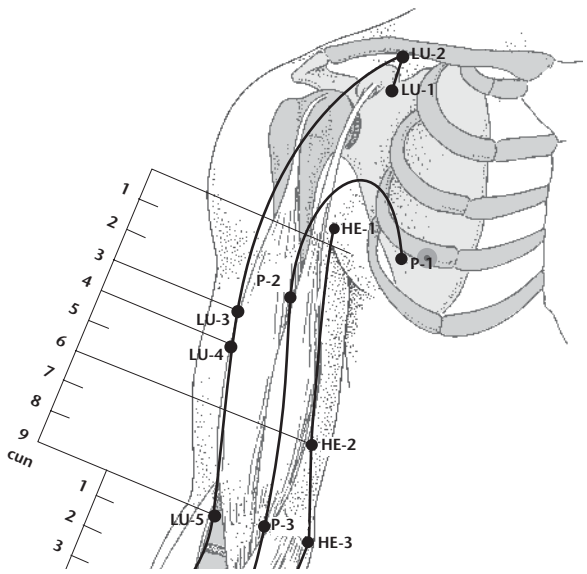
Ask the patient to flex their biceps muscle against resistance. Locate **LU-4** 4 cun below the anterior end of the axillary fold (→ 2.2) in the depression on the lateral border of the sulcus bicipitalis muscle. Sometimes you can feel the pulse of the brachial artery here. **Or quick method:** Spreading hands technique (→ 2.3.3): place the little fingers on the axillary fold and the cubital crease (at → **LU-5**) respectively (this distance corresponds to 9 proportional cun → 2.2) and determine the midpoint of this distance by joining the thumbs. Locate **LU-4** 0.5 proximal to the midpoint in the sulcus on the lateral border of the biceps muscle. → **LU-3** is also located in the sulcus, 1 cun proximal to **LU-4**.

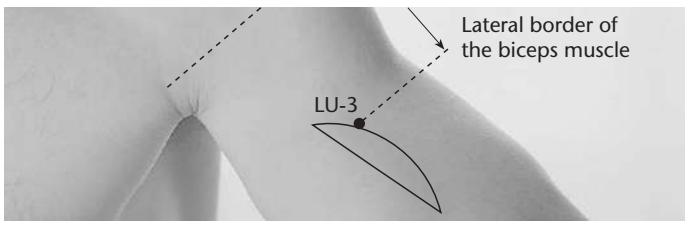
Needling

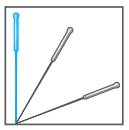
Vertically 0.5–1 cun

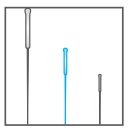
Actions/Indications

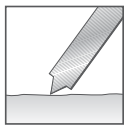
- Regulates and moves Qi and Blood in the chest
- Descends the Lung Qi
- Opens the channel and alleviates pain











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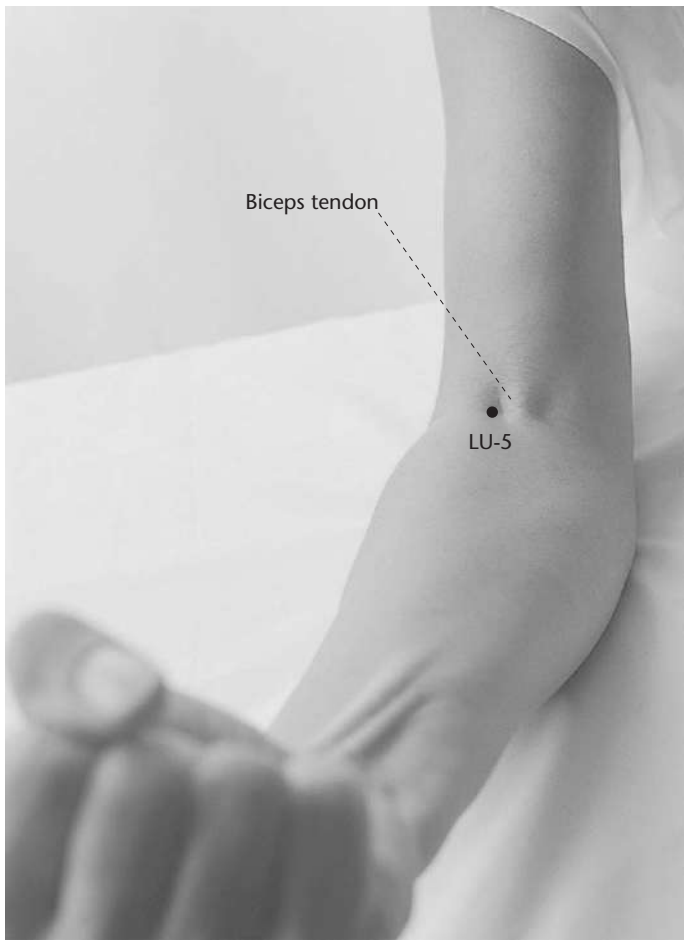
Cubit Marsh CHIZE LU-5



Right arm

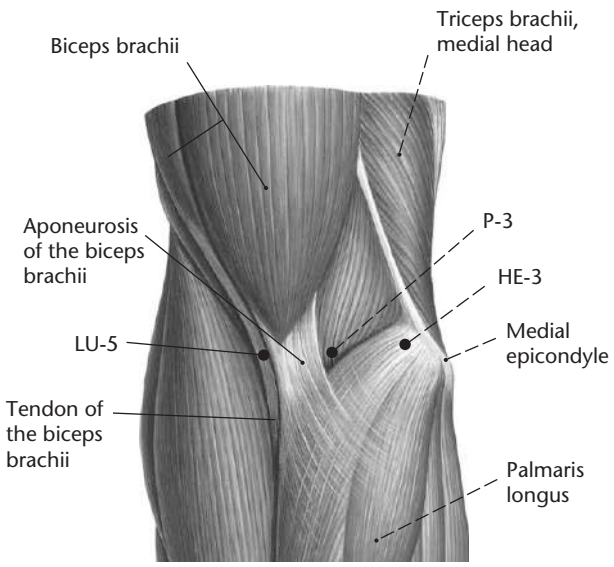
Location
In the cubital crease, on the radial aspect of the tendon of the biceps.

How to find
By slightly flexing the forearm, the biceps tendon becomes more visible. **LU-5** is located on its radial aspect in the cubital crease. Also located in the area of the cubital crease are → **P-3** (ulnar to the tendon), → **HE-3** (at the ulnar end of the cubital crease) and → **L.I.-11** (between the radial end of the cubital crease and the lateral epicondyle).

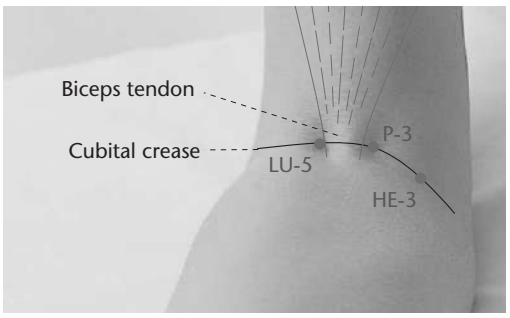
Needling
Vertically 0.5–1 cun. Needle with the arm slightly flexed. Use bloodletting for Heat disorders. Caution: Avoid cubital vein.

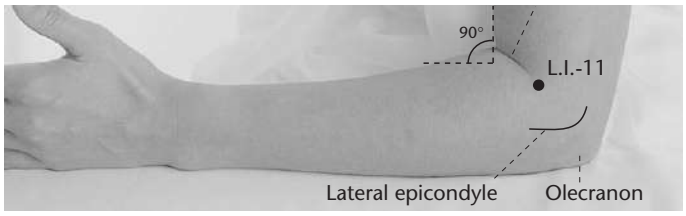
Actions/Indications
- Clears Heat in the Upper Burner
- Descends the Lung Qi
- Regulates the water passages
- Opens the channel and *luo*-connecting vessels, alleviates pain

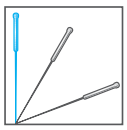
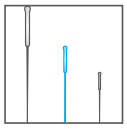
Special features
He-sea point, Water point, sedation point, distal point for the Lung, local point for the elbow. Use bloodletting for disorders of the skin and Lung due to excess and/or Heat.

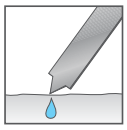


Left arm, anterior aspect







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LU-6 *Biggest Hole* KONGZUI

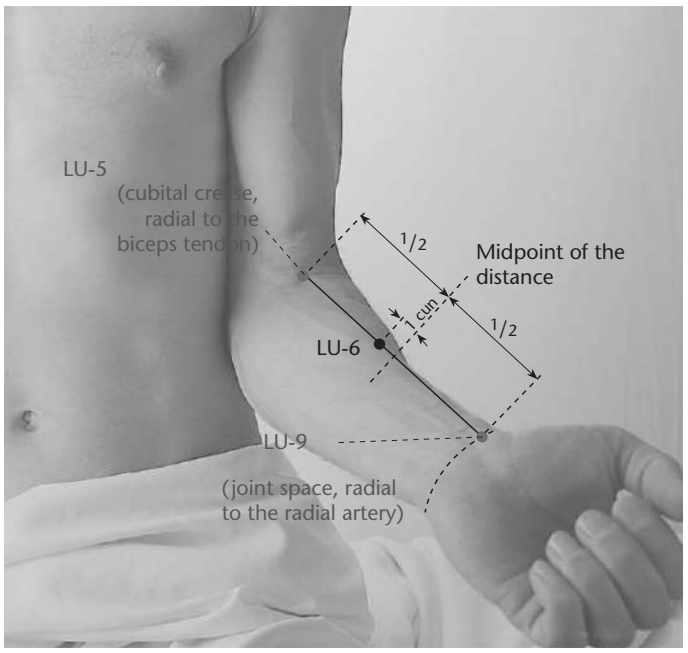
Location

On the line connecting → **LU-5** (in the cubital crease) and → **LU-9** (on the wrist crease/joint space), 5 cun distal to → **LU-5** or 7 cun proximal to → **LU-9**.

How to find

The biceps tendon becomes more visible with the arm flexed. First, locate → **LU-5** radial to the biceps tendon in the cubital crease and → **LU-9** radial to the radial artery on the wrist joint space (→ 3.3.3) between the proximal row of carpals and the radius/ulna. By moving the hand, the joint space becomes more easily palpable. Next, find the midpoint of the distance between → **LU-5** and → **LU-9** using the spreading hands technique (→ 2.3.3). **LU-6** is located 1 cun proximal to the midpoint of this distance.

→ **P-4** is located more medially (between the tendons) and distally (1 cun distal to the midpoint of the distance).

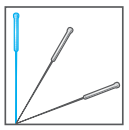


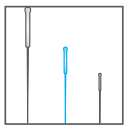
Needling

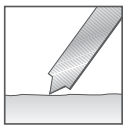
Vertically 0.5–1 cun

Actions/Indications

- Descends the Lung Qi
- Clears Lung Heat
- Cools Blood Heat, stops bleeding
- Expels Exterior pathogenic factors
- Opens the channel

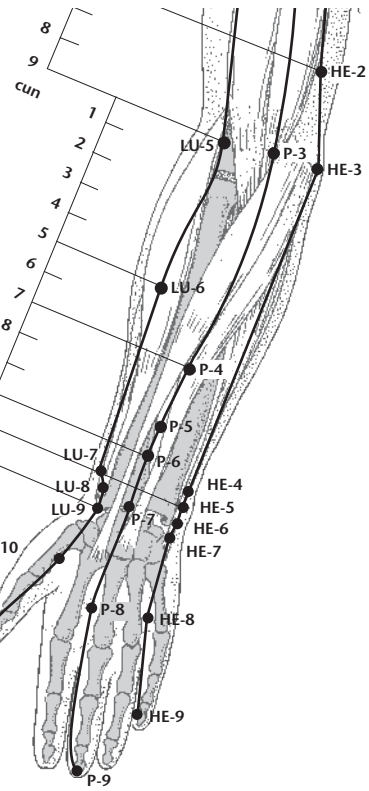


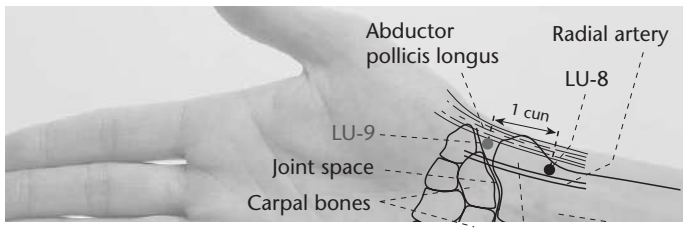


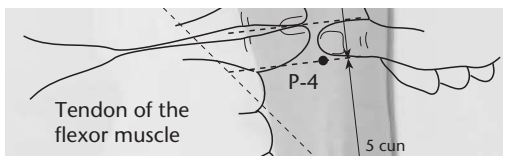


Special features

Xi-cleft point







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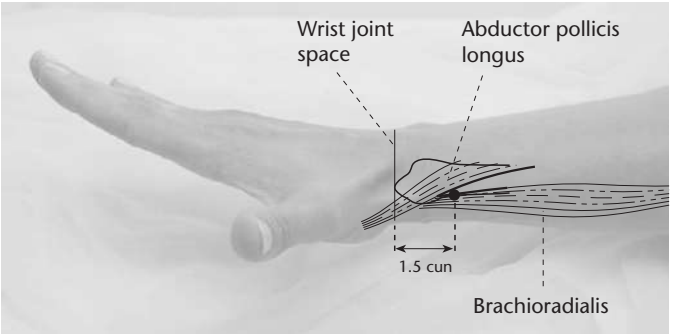
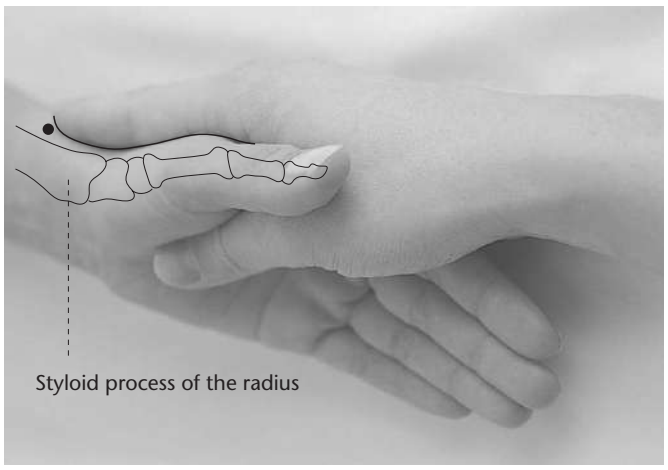
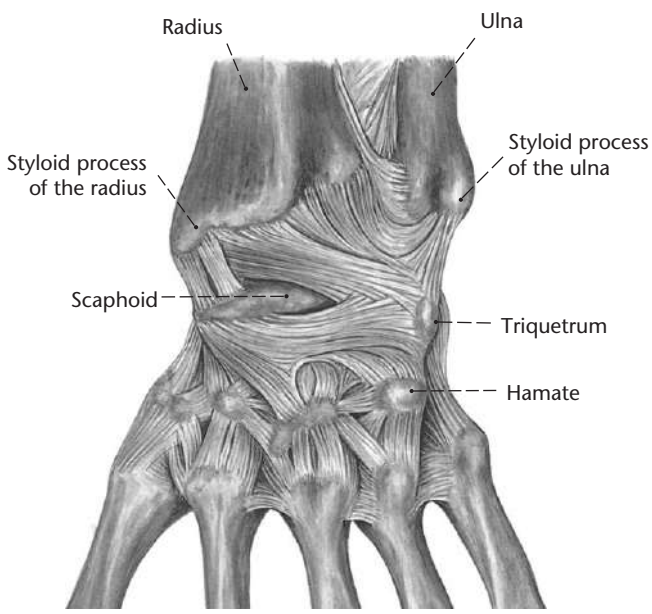
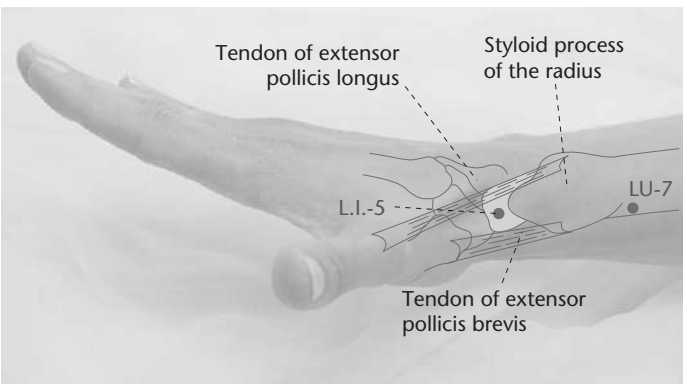
Broken Sequence LIEQUE LU-7







Left hand, dorsal aspect



Location

On the radial aspect of the forearm, directly above the styloid process of the radius, approximately 1.5 cun proximal to the wrist joint space (wrist crease) in a V-shaped groove.

How to find

Place the palpating forefinger on the anatomical snuffbox (→ **L.I.-5**). From there, glide proximally over the styloid process of the radius and locate **LU-7** where the finger can palpate a cleft between two tendons (brachioradialis/abductor pollicis longus). **Or:** 'Tiger mouth grip' (→ Fig. 2.6): spread the thumb and forefinger of both hands, crossing them so that the forefinger of one hand comes to rest on the styloid process of the other, but avoiding bending the wrist. **LU-7** is located directly below the tip of the forefinger in a V-shaped groove

Needling

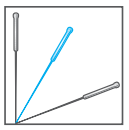
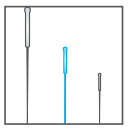
Lift the skin above the styloid process by pinching it. Insert the needle 0.5–1 cun obliquely and proximally (reducing) or distally (tonifying). Caution: Cephalic vein.

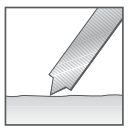
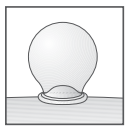
Actions/Indications

- Supports the occiput and head
- Releases the Exterior, expels Wind, descends the Lung Qi
- Opens and regulates the *ren mai*
- Regulates the water passages
- Opens the channel and *luo*-connecting channel, alleviates pain

Special features

Luo-connecting point, opening point of the *ren mai*, Ma Dan Yang Heavenly Star point, Gao Wu command point of the occiput, exit point.

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LU-8 Channel Gutter JINGQU

Location

Lateral to the radial artery, 1 cun proximal to the ventral wrist joint space (most distal wrist crease).

How to find

As the location of the wrist crease varies, use the joint space (→ 3.3.3) between the proximal row of carpals and the radius/ulna for orientation. By loosely moving the hand, the joint space is easily palpable. This is the level for palpating the radial pulse (using the finger tips, not the finger pads). → **LU-9** is located on the radial side of the artery, while **LU-8** is located 1 cun proximal to → **LU-9**.

→ **L.I.-5** is located close to **LU-8**, but on the dorsal aspect of the wrist joint in the anatomical snuffbox.

Needling

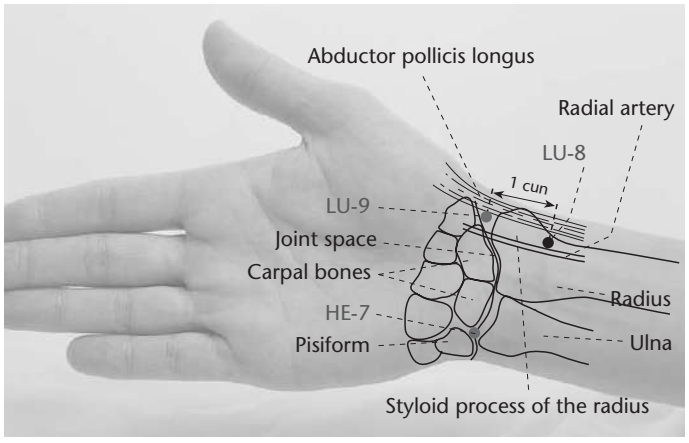
0.3–0.5 cun proximally or vertically. Avoid the radial artery by gently pushing it to the side when palpating for the point. Moxibustion is contraindicated according to some classics.

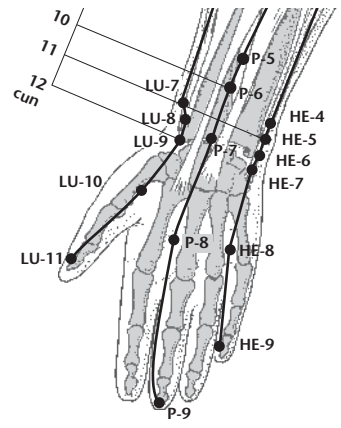
Actions/Indications

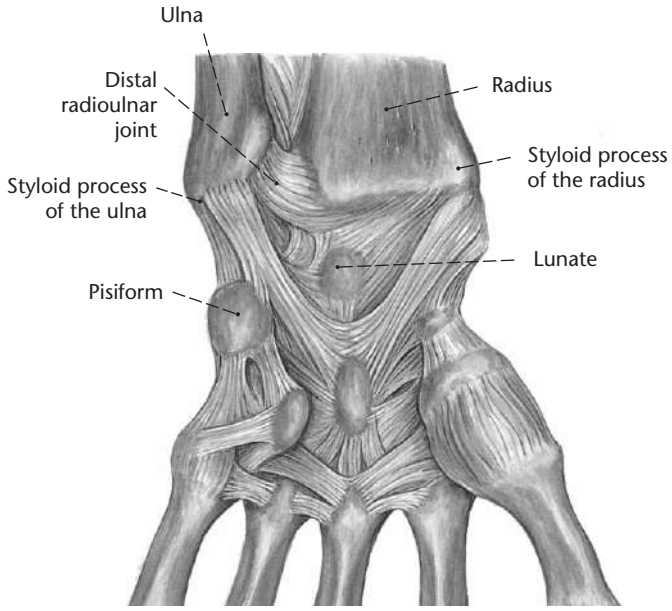
- Descends the Lung Qi, alleviates cough and wheezing
- Opens the pores and expels Wind in particular
- Opens the channel, especially locally

Special features

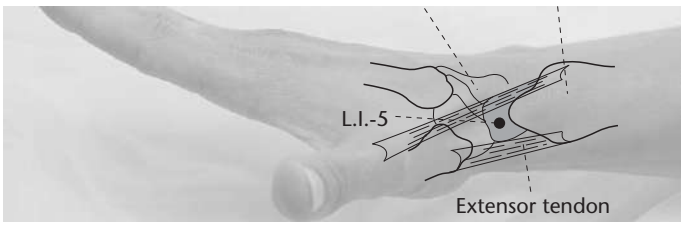
Jing-river point, Metal point, *ben* point (Five Phases).

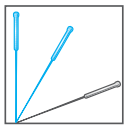
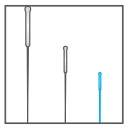


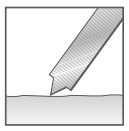




Left hand, palmar aspect





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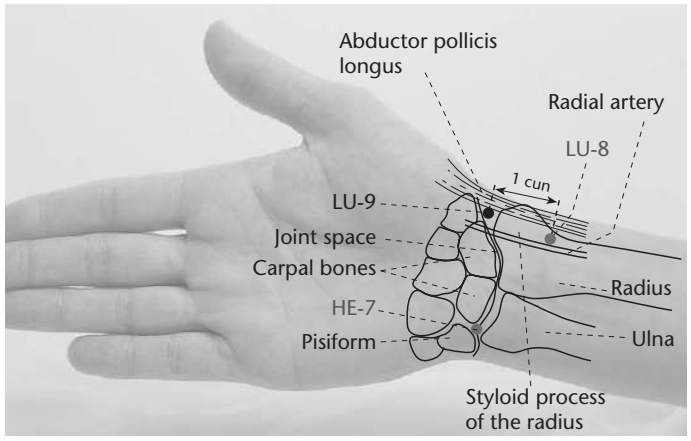
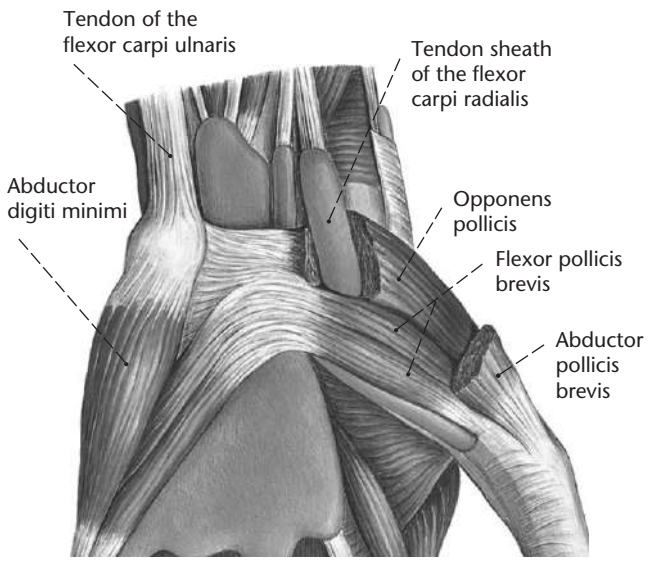
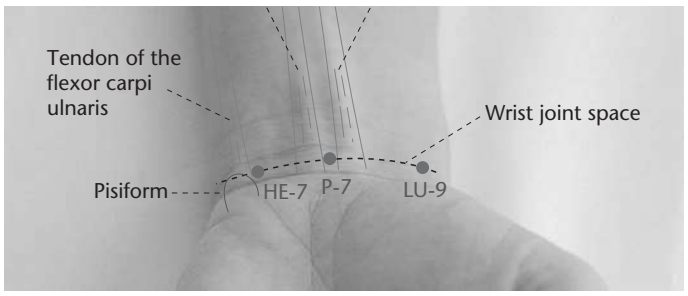
Supreme Abyss TAIYUAN LU-9





Left hand, palmar aspect



Location

On the ventral aspect of the wrist, at the level of the wrist joint space (most distal wrist crease), on the radial aspect of the radial artery and ulnar to the tendon of the abductor pollicis longus muscle.

How to find

As the location of the wrist crease varies, the ventral joint space (→ 3.3.3) between the proximal row of carpals and the radius/ulna is a more reliable landmark for orientation. By loosely moving the hand, the joint space is easily palpable. Palpate the radial artery (pulsation) on the radial side and locate **LU-9** on its radial aspect. Located on the same level are → **P-7** (between two tendons) and → **HE-7** (radial to the insertion of the tendon of the flexor carpi ulnaris on the pisiform bone).

Needling

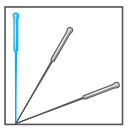
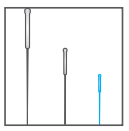
Vertically 0.2–0.5 cun. Caution: Avoid radial artery. If the needle is pulsating (desired effect), no additional stimulation!

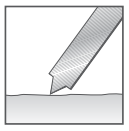
Actions/Indications

- Strengthens the Lung, transforms Phlegm, descends the Lung Qi
- Regulates and harmonises the vessels (relationship between *zong qi* and Blood circulation)
- Opens the channel, alleviates pain

Special features

Yuan-source point, *shu*-stream point, Earth point, tonification point, *hui*-meeting point of the vessels. Important point for tonifying the Lung Qi and Yin, especially with chronic disorders.



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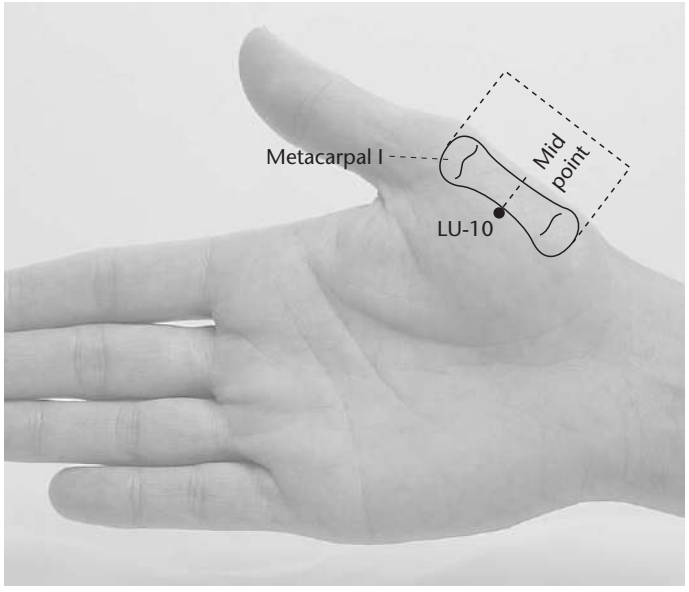
LU-10 *Fish Border* YUJI

Location
At the midpoint of the palmar border of the 1st metacarpal bone.

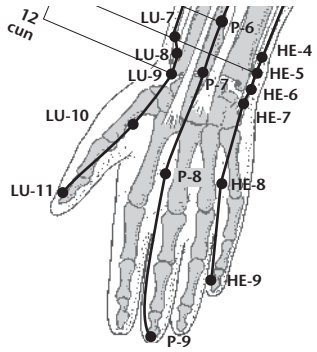
How to find
With the thumb relaxed, palpate the 'belly' of the thenar eminence from palmar to lateral (radial), then palpate the first metacarpal bone. **LU-10** is located at the midpoint of its palmar 'border'.
→ **L.I.-4** is located on the dorsal aspect of the hand, close to the 2nd metacarpal bone.

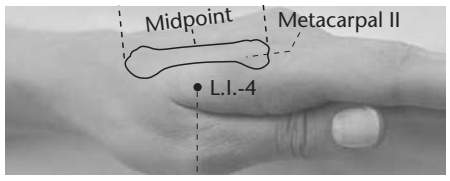


Needling
Vertically 0.5–1 cun. Caution: Painful!

Actions/Indications
- Regulates the Lung Qi
- Cools Blood Heat
- Expels pathogenic factors from the throat
- Descends rebellious Qi
- Harmonises the Stomach and Heart

Special features
Ying-spring point, Fire point, important distal point for sore throat caused by Wind-Heat.





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Lesser Shang SHAOSHANG LU-11

Location
On the thumb, 0.1 cun from the radial corner of the nail.

How to find
The point is located at the junction of two tangents running along the proximal and radial border of the thumb nail, approximately 0.1 cun from the actual border of the nail.

Needling
0.1–0.2 cun vertically or obliquely in a proximal direction or prick to bleed. Avoid needling the perionychium.

Actions/Indications
- Frees the senses
- Regulates the Lung Qi
- Clears Heat (especially from the throat)
- Opens the channel

Special features
Jing-well point, Wood point, Sun Si Miao Ghost point, important distal point for sore throat caused by Wind-Heat.

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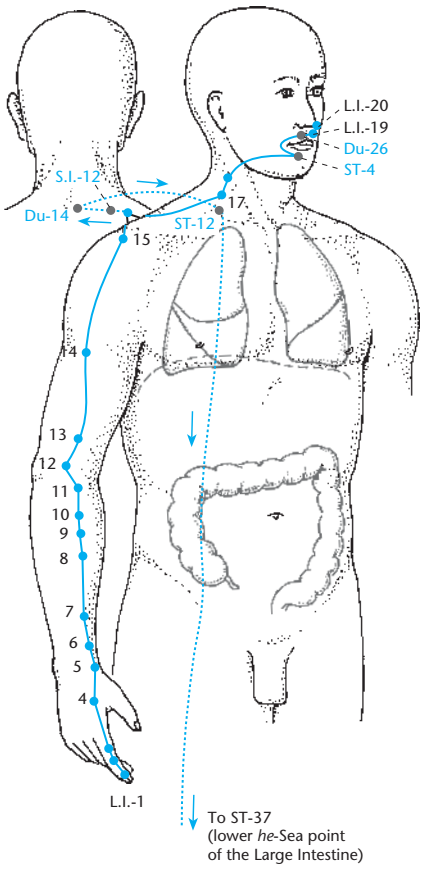
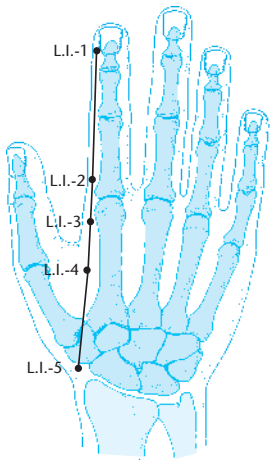
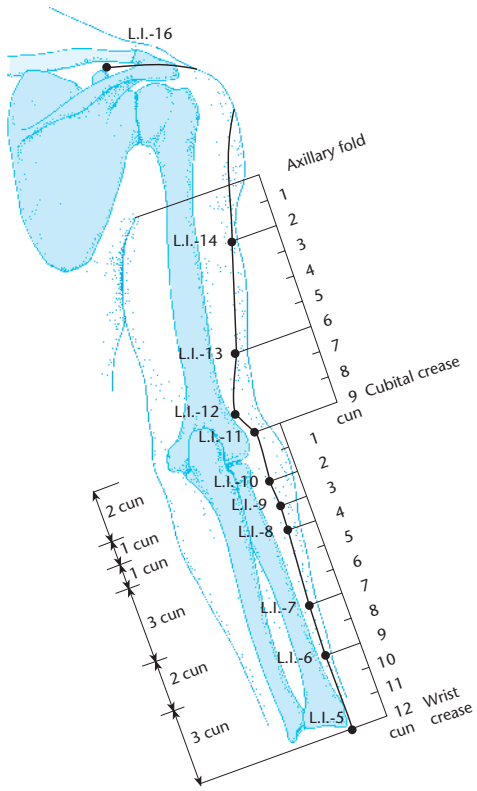
4.2 The Large Intestine Channel System – Hand *yangming* (*shou yang ming jing luo*)

4.2.1 The Large Intestine Primary Channel (*shou yang ming jing*)







Pathway

The **external** part of the Large Intestine primary channel begins on the index finger at ➞ **L.I.-1** (*shangyang*, at the radial aspect of the corner of the nail). This point is reached by a branch which separates from the Lung primary channel at ➞ **LU-7** (*lieque*; hand Yin–Yang connection of the first great circuit).

The Large Intestine primary channel runs between the first and second metacarpal bones,

- then runs proximally along the radial aspect of the forearm towards the lateral aspect of the elbow
- travels in a proximal direction along the lateral aspect of the upper arm towards the shoulder
- crosses the Small Intestine primary channel at ➞ **S.I.-12** (*bingfeng*) in the centre of the suprascapular fossa
- continues to ➞ **Du-14** (*dazhui*) inferior to the spinous process of the 7th cervical vertebra, where it meets with the other five Yang primary channels
- crosses the neck and enters the supraclavicular fossa at ➞ **ST-12** (*quepen*).

Here the **internal** pathway branches off and connects with the Lung (*fei*), its paired *zang*-Organ, penetrates the diaphragm and enters the Large Intestine (*dachang*), its pertaining *fu*-Organ. From the Large Intestine (according to some authors: the Large Intestine primary channel) an **internal** branch runs in an inferior direction to ➞ **ST-37** (*shangjuxu*) on the lateral aspect of the lower leg, the lower *he*-sea point of the Large Intestine.

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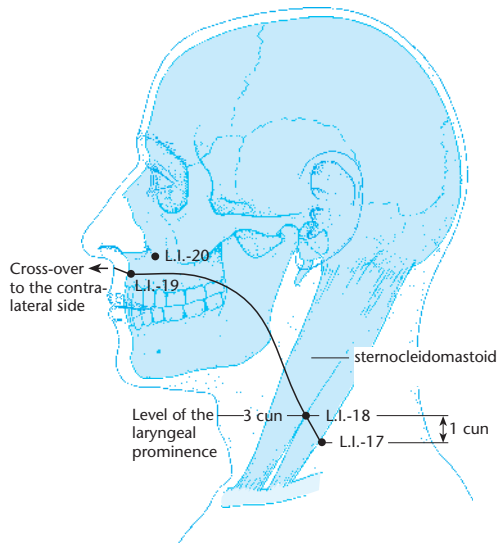

The **external** branch ascends from the supraclavicular fossa, travels along the lateral aspect of the neck and traverses the cheek.

- ➡ From here another **internal** branch enters the lower gums, where it extends further.
- ➡ The **external** course of the primary channel passes → **ST-4** (*dicang*) and curves around the mouth to the upper lip, crossing to the contralateral side of the body at → **Du-26** (*renzhong*), located at the philtrum. On the contralateral side of the body, it reaches → **L.I.-19** (*kouheliao*) and terminates **contralaterally** at → **L.I.-20** (*yingxiang*) on the side of the nose.

Note: Deadman et al. (1998) mention → **Ren-24** (*chengjiang*) as additional meeting point (variant → figure). They also mention → **G.B.-5** (*xuanlu*), → **G.B.-6** (*xuanli*) and → **G.B.-14** (*yangbai*) as classic meeting points with the Large Intestine channel but these are not normally shown in illustrations of the channel.

Clinical importance (→ 1.2)

Exterior (*biao*) signs and symptoms: Fever, dryness of the mouth, thirst, a sore and swollen throat, nosebleed, toothache, red, painful eyes, stiff fingers, painful cold or painful hot swellings of the upper arm and shoulder

Interior (*li*) or *zangfu*-Organ signs and symptoms: Pain in the lower abdomen, borborygmus, diarrhoea or yellow stools with mucus, shortness of breath, dyspnoea

Excess (*shi*): Heat sensations along the channel

Deficiency (*xu*): Cold sensations and chills along the channel

Connections of the Large Intestine primary channel (→ 1.2)

With other channels

Lung primary channel (*shou tai yin jing*)

Connection: Hand Yin–Yang connection of the first great circuit

Location: LU-7 → L.I.-1 (on the hand). A branch of the Lung primary channel connects with the Large Intestine primary channel at **L.I.-1** (*shangyang*)

Circulation: Circadian (according to the Organ clock)

Importance: Exterior–Interior relationship

Stomach primary channel (*zu yang ming jing*)

Connection: Paired according to the six channel theory (hand–foot pairing): *yangming* (Yang axes of the first great circuit)

Location: L.I.-20 → (BL-1) → ST-1 (on the head)

Circulation: Circadian (according to the Organ clock)

Importance: Above–below relationship

With the *zangfu*-Organ systems

Lung (*fei*), **Large Intestine (*dachang*)**, Stomach (*wei*)

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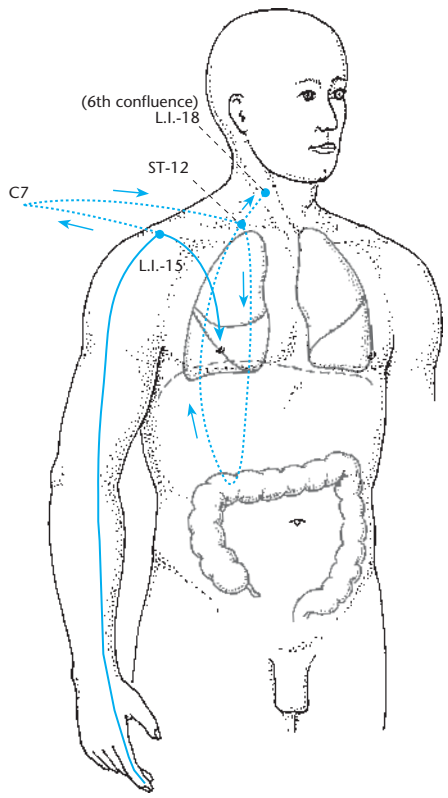
4.2.2 The Large Intestine Divergent Channel (*shou yang ming jing bie*)



Pathway

The Large Intestine divergent channel separates from the Large Intestine primary channel on the hand,

- travels along the arm to the shoulder to → **L.I.-15** (*jianyu*)
- from **L.I.-15** a **branch** runs to the thorax and branches out into the breasts
- **another branch** runs to the cervical spine at the 7th cervical vertebra, returns from there to the supraclavicular fossa, descends to the Large Intestine (*dachang*), ascends to the Lung (*fei*) and **emerges** to the Exterior at → **ST-12** (*quepen*).*

It then travels along the anterolateral aspect of the neck and connects with the Large Intestine primary channel and the Lung divergent channel at → **L.I.-18** (*futu*) at one of the six *he*-confluences† (here: L.I./LU as 6th confluence → 1.3).

Clinical importance

- Strengthens the connection between the Lung and the Large Intestine (*zangfu*-Organs). Points on the Large Intestine primary channel can therefore be used for disorders of the Lung, and vice versa points on the Lung primary channel can treat disorders of the Large Intestine.
- A branch of the Large Intestine divergent channel spreads (from → **L.I.-15**) across the thorax and the breasts, thus extending the actions of the points on the Large Intestine primary channel to these regions, for example for the treatment of mastitis, myalgias and thoracic pain.

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* Some authors describe the divergent channel as travelling directly from the spine to the Large Intestine, without meeting → **ST-12** (variant → Fig.).

† According to some authors the 6th *he*-Confluence is located at → **ST-12** (*quepen*).

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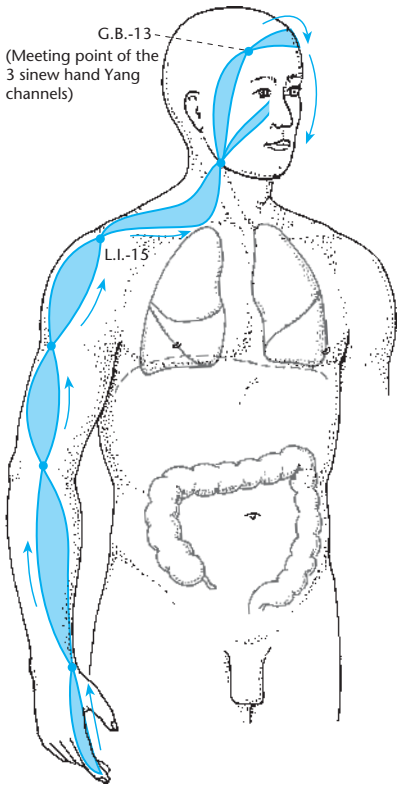
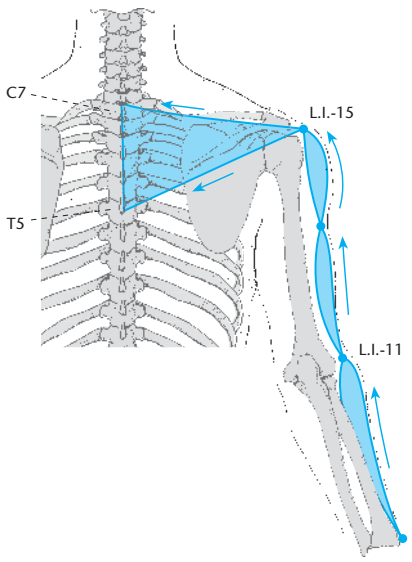
4.2.3 The Large Intestine Sinew Channel (*shou yang ming jing jin*)





Pathway

The Large Intestine sinew channel

- begins on the index finger at → **L.I.-1** (*shangyang*)
- runs along the index finger and the 2nd metacarpal bone towards the wrist, where it binds (*jie*) at → **L.I.-5** (*yangxi*)
- travels along the posterolateral aspect of the forearm
- reaches the elbow and binds (*jie*) at → **L.I.-11** (*quchi*)
- continues along the lateral aspect of the upper arm and the deltoid muscle to the shoulder, where it binds (*jie*) again at → **L.I.-15** (*jianyu*)
- from **L.I.-15** a branch spreads across the scapula and then attaches to the spine between the 7th cervical vertebra and the 5th thoracic vertebra (or between → **Du-14** (*dazhui*) and → **Du-11** (*shendao*).
- The **main branch** ascends from **L.I.-15**, crosses the supraclavicular fossa and continues from there along the lateral aspect of the neck towards the angle of the jaw where it binds (*jie*).

Here it forks into two branches:

- **One branch** runs across the zygomatic bone towards the lateral side of the nose
- **The other branch** ascends the lateral aspect of the face and anterior to the Small Intestine sinew channel, connects at → **G.B.-13** (*benshen*) with the other sinew Yang channels, crosses over the head and ends at the lower jaw on the opposite side.

Note: According to some schools of thought, the sinew channel only ends at → **L.I.-17** (*tianding*; Solinas et al. 1998).

Clinical importance

Pathology: cramps, pain, tension and stiffness along the Large Intestine sinew channel. Limited range of motion of the upper limbs and shoulders. Occipital pain, stiffness and limited range of motion.

Indication: Mainly for *bi*-syndrome (painful obstruction syndrome) along the Large Intestine channel. The area covered by the Large Intestine sinew channel is larger than that covered by the Large Intestine primary channel. This explains why the indications of points on the Large Intestine primary channel include disorders and diseases of the upper neck and thoracic region as well as of the whole face (for example frontal and temporal headaches).

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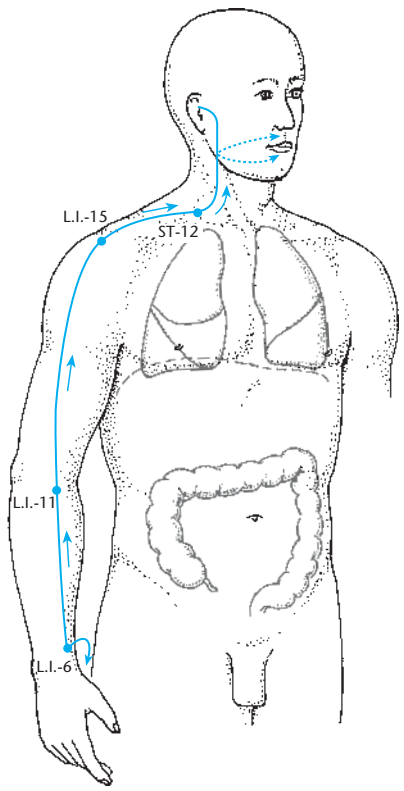
4.2.4 The Large Intestine *luo*-Connecting Vessel System (*shou yang ming luo mai*)



Pathway

The **Large Intestine** *luo*-connecting channel system begins at the *luo*-connecting point → **L.I.-6** (*pianli*) (→ 8.1.2), where it branches off from the primary channel and forms a three-dimensional reticular network, dividing into numerous branches and sub-branches (*sun luo*, *fu luo*, *xue luo* → 1.5) within the surrounding tissue.

➡ Horizontal divisions course to the Interiorly–Exteriorly paired Lung primary channel; according to some schools (for example, Van Nghi → Appendix) they travel as a **transverse** LU *luo*-connecting vessel to the *yuan*-source point → **LU-9** (*taiyuan*).

➡ A **longitudinally** orientated division follows the Large Intestine primary channel to **L.I.-15** (*jianyu*), continues via the supraclavicular fossa to → **ST-12** (*quepen*) and along the neck to the mandibular angle, where it spreads. One branch runs to the teeth; another branch reaches the ear, where it communicates with all channels reaching the ear.

Clinical importance (→ 8.1.2)

Pathology

- **Excess (*shi*):** Disorders of the teeth and gums, disorders of the ears
- **Deficiency (*xu*):** Sensitive teeth and gums (such as sensitivity to cold), sensation of tightness in the chest and diaphragm

4.2.5 Cutaneous Region (*yang ming pi bu*)

See description and figures → 1.6

4.2.6 Points of the Large Intestine Primary Channel (Overview)

Specific points according to their function

- ***Yuan*-source point (→ 8.1.1): L.I.-4** (*hegu*) ■■
- ***Luo*-Connecting point (→ 8.1.2.): L.I.-6** (*pianli*) ■■
- ***Xi*-cleft point (→ 8.1.3): L.I.-7** (*wenliu*)
- **Associated Back-*shu* point (→ 8.1.4): BL-25** (*dachangshu*) ■■
- **Associated Front-*mu* point (→ 8.1.5): ST-25** (*tianshu*)
- **Five *shu*-transport point (→ 8.1.6):**
  jing-well point (Metal), *ben* point:. **L.-I.1** (*shangyang*)
  ying-spring point (Water), sedation point: **L.I.-2** (*erjian*)
  shu-stream point (Wood): **L.I.-3** (*sanjian*)
  jing-river point (Fire): **L.I.-5** (*yangxi*)
  he-sea point (Earth), tonification point: **L.I.-11** (*quchi*) ■■
- ***Hui*-meeting point (→ 8.1.7): –**
- **Opening point (→ 8.1.8): –**
- **Lower *he*-sea point (→ 8.1.9): –**
- ***Jiaohui*-meeting points (→ 8.1.10):**
  – with the Small Intestine primary and BL channel, *yang wei mai*: **L.I.-14** (*binao*)*
  – with the *yang qiao mai*: **L.I.-15** (*jianyu*) ■■, **L.I.-16** (*jugu*)
  – with the primary ST channel: **L.I.-20** (*yingjiang*) ■■
  – of other channels with the L.I. channel: **ST-4, ST-12, S.I.-12, Du-14, Du-26, Ren-24***; according to some classics: **G.B.-5, G.B.-6, G.B.-14**
- **Gao Wu command point (→ 8.1.11) for the face and mouth: L.I.-4** (*hegu*) ■■
- **Window of Heaven point (→ 8.1.12): L.I.-18** (*futu*)
- **Point of the Four Seas (→ 8.1.13): –**
- **Ma Dan Yang Heavenly Star points (→ 8.1.14): L.I.-4** (*hegu*) ■■, **L.I.-11** (*quchi*) ■■
- **Sun Si Miao Ghost point (→ 8.1.15): L.I.-11** (*quchi*) ■■

* Mentioned by only some authors

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Points according to region

- **Local points (→ 8.2.1):** nose – **L.I.-20** (*yingxiang*) ■■; shoulder – **L.I.-15** (*jianyu*) ■■; elbow – **L.I.-11** (*quchi*) ■■; hand – **L.I.-5** (*yangxi*); hand and fingers – **L.I.-4** (*hegu*) ■■; fingers (numbness and pain) – **L.I.-3** (*sanjian*)
- **Regional points (→ 8.2.1):** elbow – **L.I.-10** (*shousanli*), **L.I.-13** (*shouwuli*); shoulder and elbow – **L.I.-14** (*binao*)
- **Distal points (→ 8.2.1):** forehead, eyes, mouth/teeth – **L.I.-4** (*hegu*) ■■; nose – **L.I.-3** (*sanjian*), **L.I.-4** (*hegu*) ■■; neck – **L.I.-4** (*hegu*) ■■, **L.I.-11** (*quchi*) ■■; mouth/teeth – **L.I.-2** (*erjian*), **L.I.-4** (*hegu*) ■■; shoulder, elbow, hand, fingers – **L.I.-4** (*hegu*) ■■, **L.I.-1** (*shangyang*); knee and foot – **L.I.-5** (*yangxi*); foot – **L.I.-2** (*erjian*), **L.I.-3** (*sanjian*); toes – **L.I.-4** (*hegu*) ■■

Specific points according to the course of the channel (in numerical order)

- **L.I.-1** (*shangyang*): *jing*-well point (Metal) (→ 8.1.6); *ben* point (Five Phase point); distal point for the elbow and the hand (→ 8.2.1)
- **L.I.-2** (*erjian*): *ying*-spring point (Water) (→ 8.1.6); sedation point; distal point for the mouth/teeth (→ 8.2.1); distal point for the foot (→ 8.2.1)
- **L.I.-3** (*sanjian*): *shu*-stream point (Wood) (→ 8.1.6); local point for the fingers (numbness and pain) (→ 8.2.1); distal point for the nose (→ 8.2.1); distal point for the feet (→ 8.2.1)
- **L.I.-4** (*hegu*) ■■: *yuan*-source point (→ 8.1.1); Ma Dan Yang Heavenly Star point (→ 8.1.14); Gao Wu command point (→ 8.1.11) for the face and mouth; important point for acupuncture anaesthesia; distal point for the forehead, eyes, nose, mouth/teeth, jaw, shoulder, elbow, hand, fingers (→ 8.2.1); local point for the hand and fingers (stiffness) (→ 8.2.1)
- **L.I.-5** (*yangxi*): *shu*-stream point (Fire) (→ 8.1.6); local point for the hand (→ 8.2.1); distal point for the knees and feet (→ 8.2.1)
- **L.I.-6** (*pianli*): *luo*-connecting point (→ 8.1.2)
- **L.I.-7** (*wenliu*): *xi*-cleft point (→ 8.1.3)
- **L.I.-10** (*shousanli*): adjacent point for the elbow (→ 8.2.1)
- **L.I.-11** (*qichi*) ■■: Sun Si Miao Ghost point (→ 8.1.15); *he*-sea point (Earth) (→ 8.1.6); tonification point; Ma Dan Yang Heavenly Star point; distal point for the neck (→ 8.2.1); local point for the elbow (→ 8.2.1)
- **L.I.-13** (*shouwuli*): regional point for the elbow (→ 8.2.1)
- **L.I.-14** (*binao*)*: *jiaohui*-meeting point with the S.I. and BL channel and the *yang wei mai** (→ 8.1.10); regional point for the shoulder and elbow (→ 8.2.1)
- **L.I.-15** (*jianyu*) ■■: *jiaohui*-meeting point with the *yang qiao mai* (→ 8.1.10); local point for the shoulder (→ 8.2.1)
- **L.I.-16** (*jugu*): *jiaohui*-meeting point with the *yang qiao mai* (→ 8.1.10)
- **L.I.-18** (*futu*): Window of Heaven point (→ 8.1.12)
- **L.I.-20** (*yingxiang*) ■■: local point for disorders of the nose (→ 8.2.1); *jiaohui*-meeting point with the ST channel (→ 8.1.10)

General location help

- The course of the line connecting **L.I.-5** and **L.I.-11** (12 cun) changes depending on whether the forearm is in a supinated or a pronated position. For location purposes the forearm should be in a midposition with the elbow slightly flexed.
- Since the L.I. channel crosses to the opposite side of the body at **Du-26** (nasolabial groove), locate **L.I.-19** and **L.I.-20** contralaterally.

* Mentioned by only a few authors

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Shang Yang SHANGYANG L.I.-1

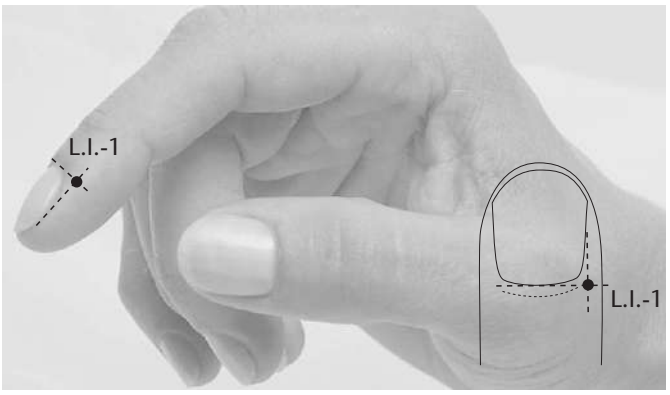
Location
On the index finger, 0.1 cun from the radial corner of the nail.

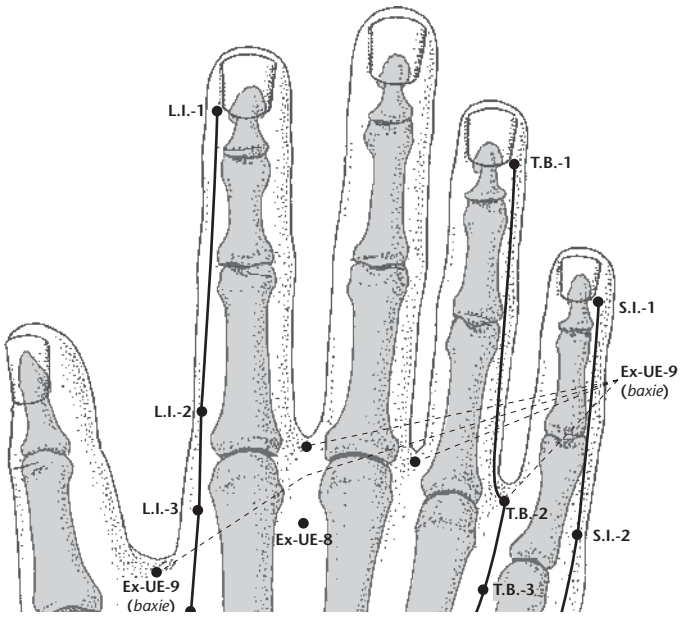
How to find
This point is located where two tangents bordering the nail of the index finger medially and proximally cross, approximately 0.1 cun from the corner of the nail.

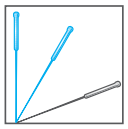
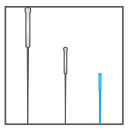
Needling
0.2–0.3 cun vertically or obliquely in a proximal direction. Avoid needling the perionychium. For acute disorders (pain, inflammation), prick to bleed with needle, lancet or three-edged needle.

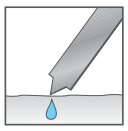
Actions/Indications
- Expels pathogenic factors and opens the channel
- Frees the senses

Special features
Jing-well point, Metal point, *ben* point (Five Phases), entry point according to some authors.







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L.I.-2 *Second Space* ERJIAN

Location

On the radial aspect of the index finger, distal to the metacarpo-phalangeal joint, at the junction of the shaft and the basis of the proximal phalanx.

How to find

With the hand relaxed, palpate the border between the 'red to white' skin along the shaft of the second proximal phalangeal bone towards the metacarpo-phalangeal joint until the angle between the base and the shaft of the bone can be clearly felt. **L.I.-2** is located at the junction of the shaft and the base and slightly below (palmar to) the most external curvature of the bone.

→ **S.I.-2** is located in a similar position at the proximal phalanx of the little finger.

Needling

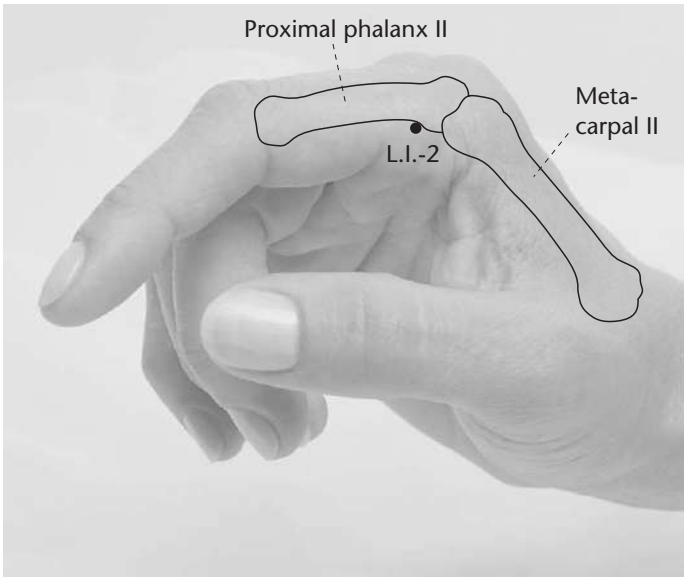
0.2–0.5 cun obliquely in a proximal direction or distal in a slightly palmar direction.

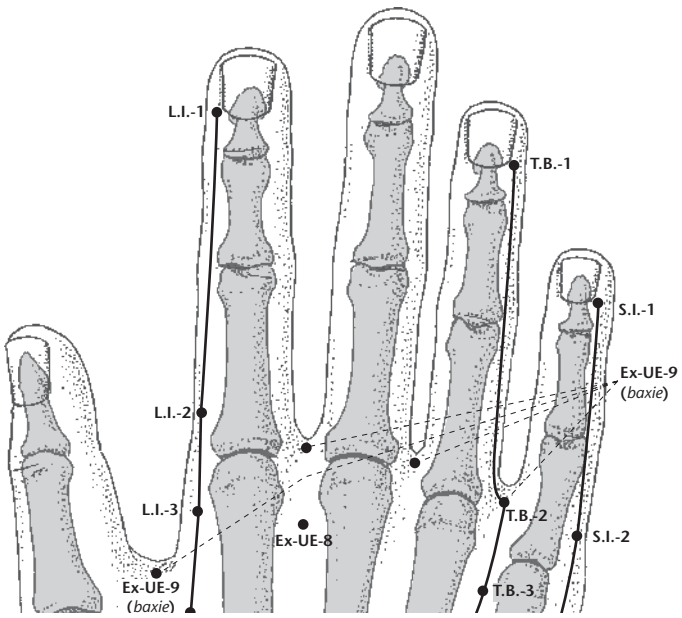
Actions/Indications

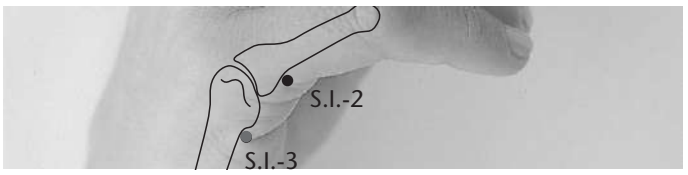
- Clears Heat and expels Wind

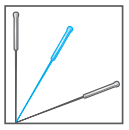
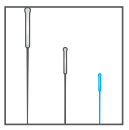
Special features

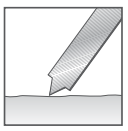
Ying-spring point, Water point, sedation point, distal point for the mouth and teeth









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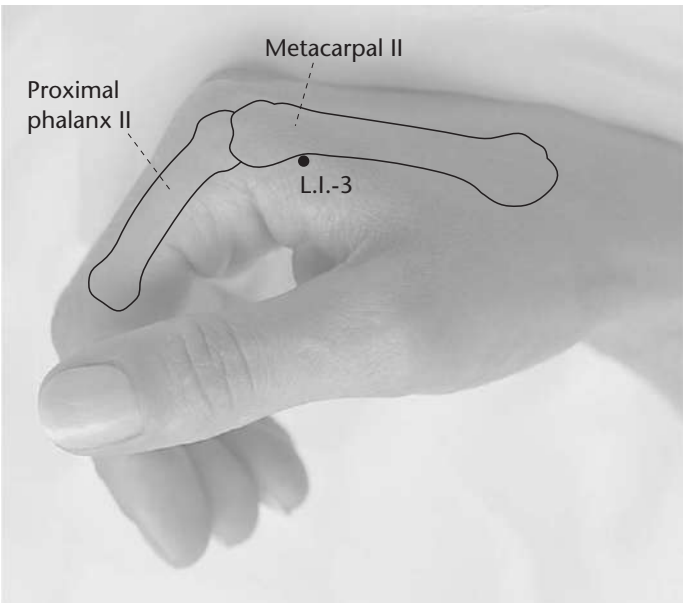
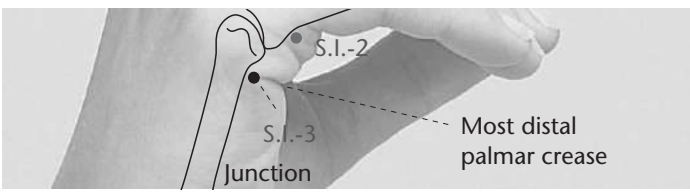
Third Space SANJIAN L.I.-3





Location

On the radial aspect of the index finger, proximal to the metacarpo-phalangeal joint, at the junction of the shaft and the head of the 2nd metacarpal bone.

How to find

With the hand relaxed, palpate along the radial aspect of the 2nd metacarpal bone in a distal direction until the angle formed between the head and the shaft can be clearly felt. **L.I-3** is located at the junction of the shaft and the head and slightly below (palmar to) its most external curvature. → **S.I.-3** is located in a comparable position on the ulnar aspect of the 5th metacarpal bone (on the ulnar border of the hand). Located in a comparable location on the feet are → **SP-3** and → **BL-65**.

Needling

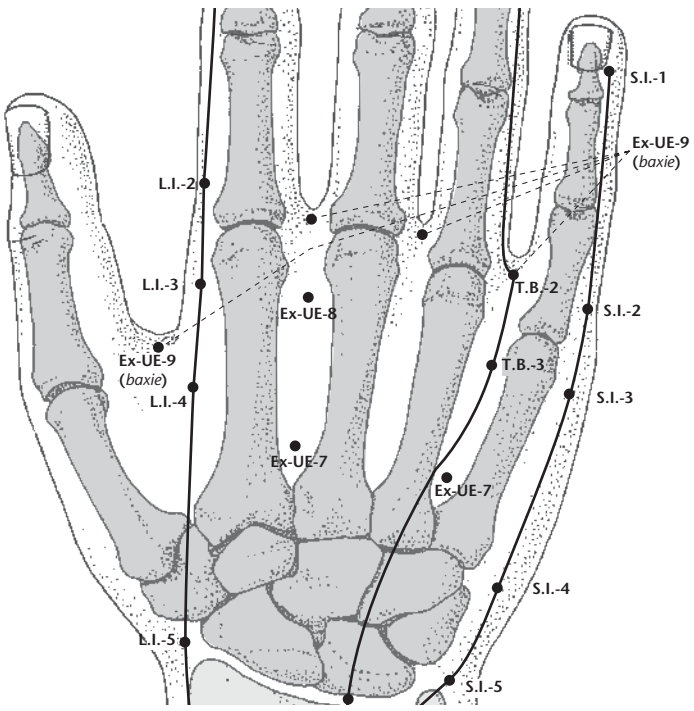
With the hand relaxed, 0.3–1 cun vertically directly below the lower border of the metacarpal bone towards → **S.I.-3**.

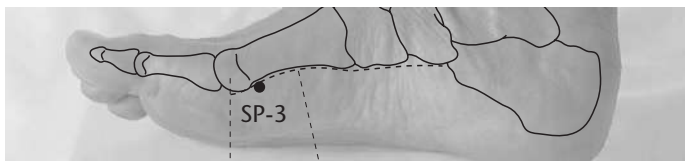
Actions/Indications

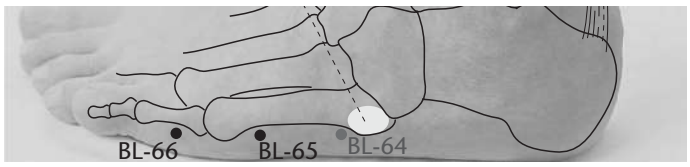
- Clears Heat and expels Wind
- Benefits the throat and teeth
- Alleviates pain

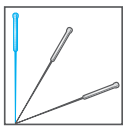
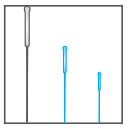
Special features

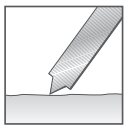
Shu-stream point, Wood point. Important point for pain in the fingers and the metacarpus.









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L.I.-4 *Joining Valley* HEGU

Location

On the radial aspect of the hand, between the 1st and 2nd metacarpal bones, closer to the 2nd metacarpal bone and approximately at its midpoint.

How to find

When pressing the thumb and index finger together, the adductor pollicis and the interosseus dorsalis muscles will form a bulge. Needle **L.I.-4** at the highest point of the bulge and push it further towards the inferior aspect of the second metacarpal bone. **Or**: Spread the thumb and forefinger and place the distal phalanx of the thumb of the other hand on the webbed border. When flexing the thumb, its tip will point to **L.I.-4. Or**: Insertion on the angle bisector between the 1st and 2nd metacarpal bones, needling in the direction of the midpoint of the second metacarpal bone.

Needling

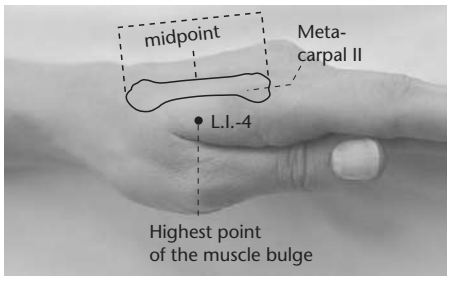
0.5–1 cun vertically or slightly obliquely towards the palmar aspect of the hand. Caution: Reducing needle techniques are contraindicated during pregnancy; exception: to induce labour.

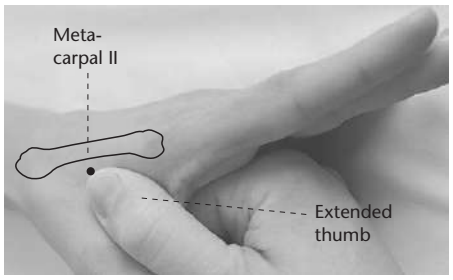
Actions/Indications

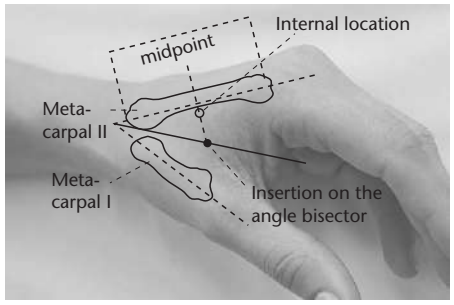
- Releases the Exterior (main point!)
- Regulates the face and head
- Regulates the Defensive Qi (*wei qi*) and sweating
- Opens the channel and *luo*-connecting vessels
- Alleviates pain
- Promotes labour

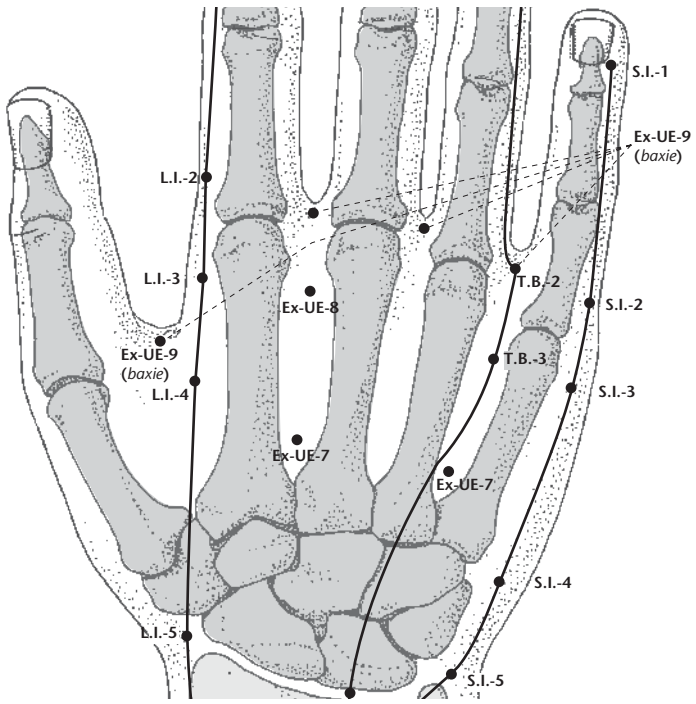
Special features

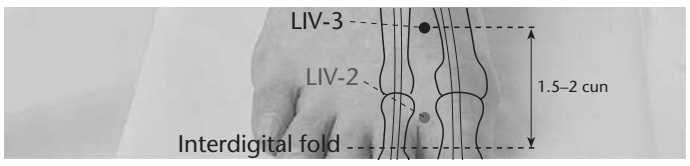
Yuan-source point, Gao Wu command point for the head and mouth, Ma Dan Yang Heavenly Star point, entry point according to some authors. Most important analgesic point for the whole body. Most important single distal point for disorders of the face and sensory organs. It is the most commonly used point in clinical practice. The combined bilateral needling of **L.I.-4** and **→ LIV-3** (between the 2nd and 3rd metatarsal bones) is known as *si guan* (Four Gates): they strongly regulate the Qi and Blood, stop pain and relieve spasms.











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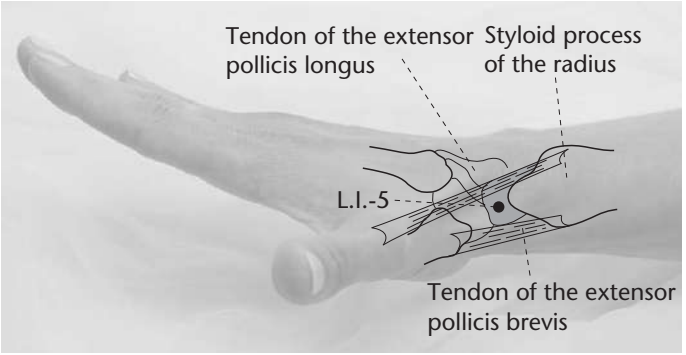
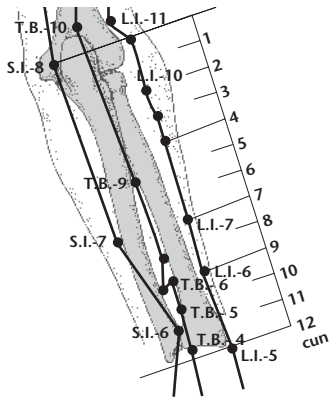
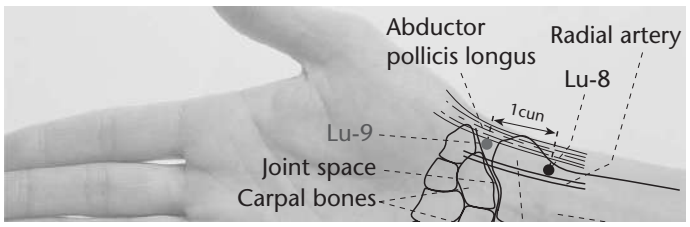
Yang Stream YANGXI L.I.-5







Location

With the thumb abducted, in a depression between the tendons of the extensor pollicis longus and brevis muscles ('anatomical snuffbox'), on the radial aspect of the wrist.

How to find

The anatomical snuffbox is a depression on the radial aspect of the wrist formed when abducting the thumb. Holding the hand in a horizontal position, it opens towards the body. **L.I.-5** is located on the wrist joint space, which becomes palpable by moving the wrist. → **LU-9** is also located on the wrist joint space and can be found by moving anteriorly from **L.I.-5** across the short tendon of the extensor pollicis muscle.

Needling

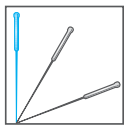
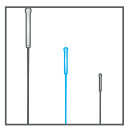
Vertically 0.5–1 cun. Caution: Avoid the superficial cephalic vein.

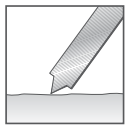
Actions/Indications

- Supports the wrist joint
- Clears Fire and expels Wind
- Clears Fire from the *yangming* (L.I., ST) and calms the *shen*

Special features

Jing-river point, Fire point. Important local point for disorders of the wrist, together with **T.B.-4, S.I.-5, HE-7, P-7** and **LU-9**.



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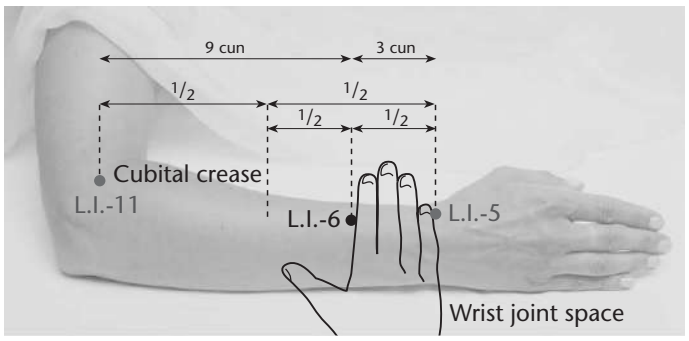
L.I.-6 *Veering Passage* PIANLI

Location

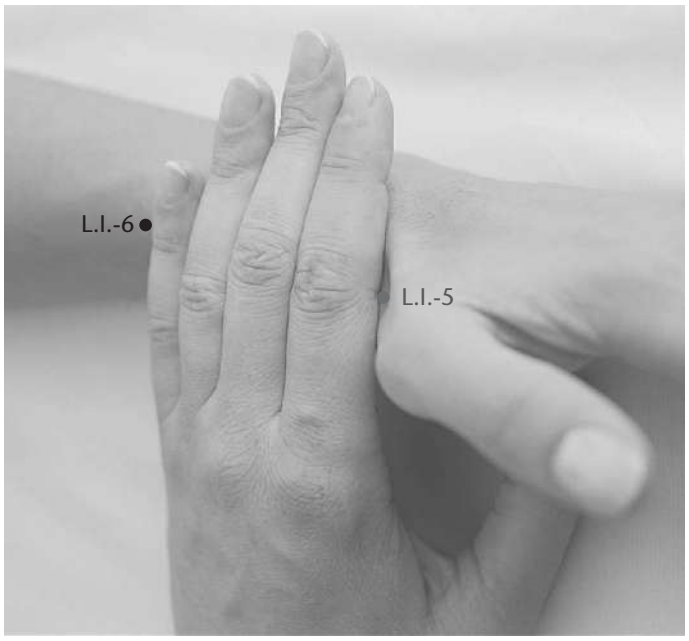
3 cun proximal to → **L.I.-5** (in the centre of the anatomical snuffbox), on the line connecting → **L.I.-5** and → **L.I.-11**, between the abductor pollicis longus and the extensor pollicis brevis muscles, at the level of the junction between the tendon and the muscle.

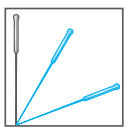


How to find

Please note: The course of the line connecting → **L.I.-5** and → **L.I.-11** depends on the position of the forearm. For location purposes, a midposition of the forearm with flexed elbow is recommended. To locate **L.I.-6**, measure 3 cun (1 handsbreath) from → **L.I.-5** (centre of the anatomical snuffbox) on the connecting line. **Or**: 'Tiger mouth grip' (→ Fig. 2.6): Spread thumb and index finger of both hands, crossing them so that the forefinger of one hand comes to rest on the styloid process of the other, but avoiding bending the wrist. Place the middle finger against the forefinger: **L.I.-6** is located directly below the tip of the middle finger.

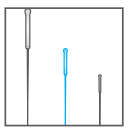
Located at the same level (3 cun proximal to the wrist joint space) on the dorsal side of the forearm are → **T.B.-6** (in the depression between the radius and the muscle) and → **T.B.-7** (in the depression between the ulna and the muscle) as well as → **P-5** (on the ventral side of the forearm between the tendons).





Needling

Obliquely or transversely (subcutaneously) 0.5–1 cun

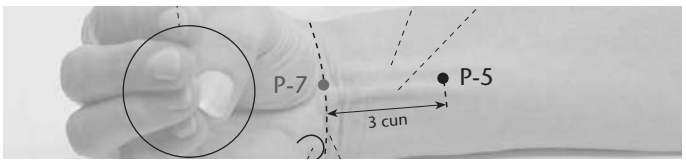


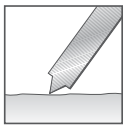
Actions/Indications

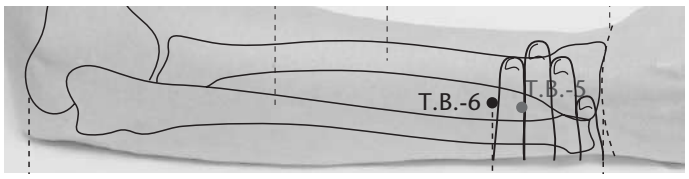
- Expels Wind, clears Heat
- Regulates and opens the water passages
- Opens the channel and *luo* vessels

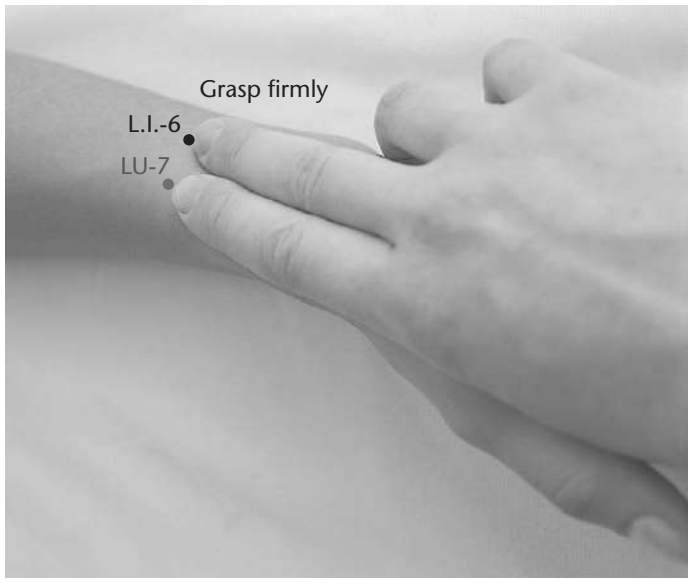
Special features

Luo-connecting point. Major point of the L.I. channel for regulating the water passages.









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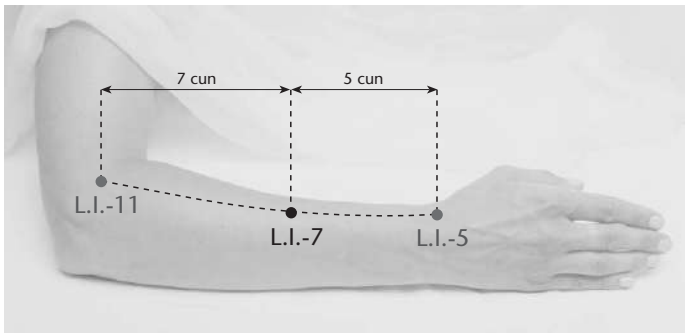
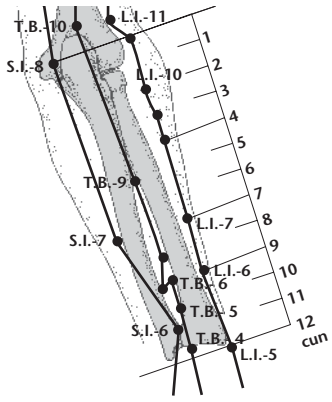
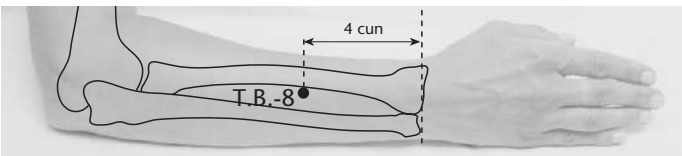
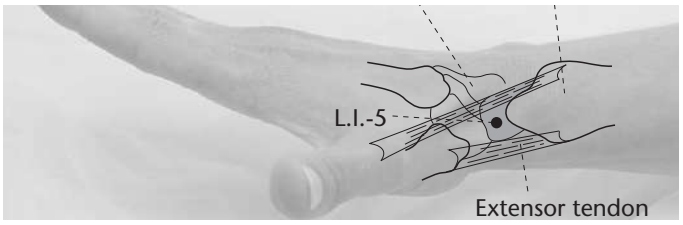
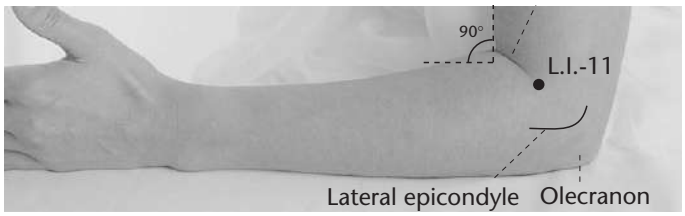
Warm Flow WENLIU L.I.-7











Location

5 cun proximal to the anatomical snuffbox in the direction of the lateral end of the elbow crease or 1 cun distal to the midpoint of the line connecting → **L.I.-5** and → **L.I.-11**.

How to find

Please note: With the hand supinated, the line connecting → **L.I.-5** and → **L.I.-11** runs alongside the radial margin of the forearm. However, with the arm pronated, it transverses the forearm. **L.I.-7** lies on the dorso-lateral aspect of the radius and is best located with the forearm in midposition and the elbow flexed. Spreading hands technique: Place the little fingers on → **L.I.-5** and → **L.I.-11** and span the hands evenly so that the thumbs join at the midpoint of the line. From there, measure 1 cun distally. → **T.B.-8** is located 4 cun proximal to the wrist crease between the radius and the ulna in the centre of the dorsal forearm or 1 cun distal to **L.I.-7**.

Needling

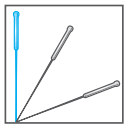
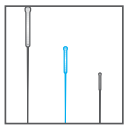
Vertically 0.5–1 cun

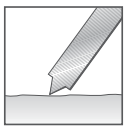
Actions/Indications

- Treats acute disorders
- Clears Heat and toxic Heat
- Regulates the Stomach and Large Intestine

Special features

Xi-cleft point



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L.I.-8 *Lower Angle* XIALIAN

Location

4 cun distal to the lateral end of the elbow crease in the direction of the anatomical snuffbox and on a line connecting → **L.I.-5** and → **L.I.-11**.

How to find

Please note: In supination, the line connecting → **L.I.-5** and → **L.I.-11** runs along the radial margin of the forearm; in pronation, it transverses the forearm. **L.I.-8** lies on the dorsal aspect of the radius and is best located with the forearm in mid-position and the elbow flexed. **L.I.-8** can be found either 4 cun distal to → **L.I.-11** or 2 cun proximal to the midpoint of the line connecting → **L.I.-5** and → **L.I.-11** (spreading hands technique, → 2.3.3).

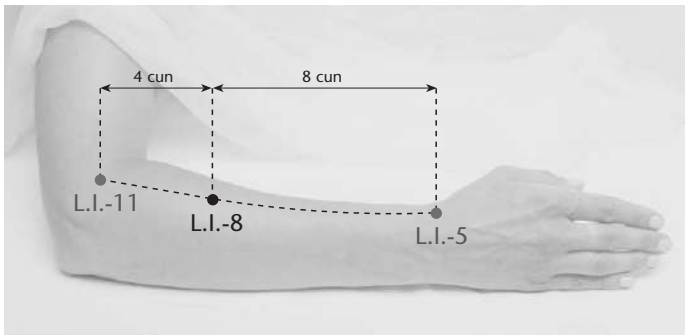
→ **T.B.-9** is 5 cun distal to the olecranon between the radius and the ulna, about 1 cun distal to **L.I.-8** in the middle of the dorsal forearm.

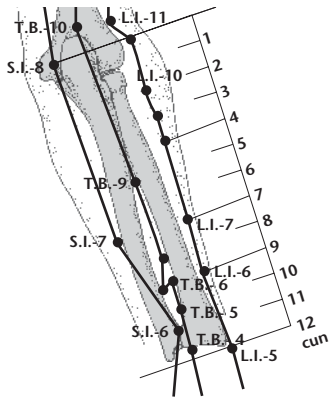
Needling

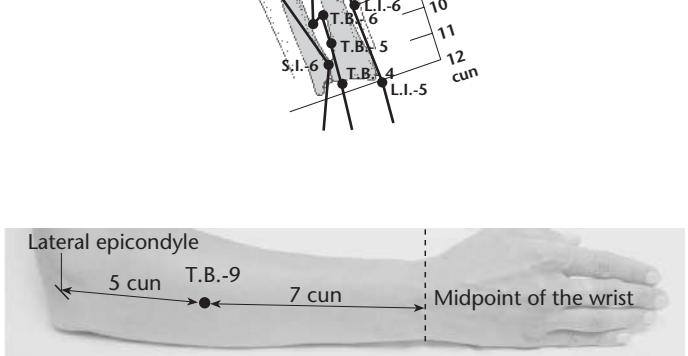
Vertically or obliquely 0.5–1 cun

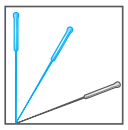
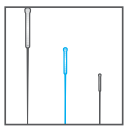
Actions/Indications:

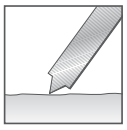
- Opens the channel
- Cools and expels Wind
- Harmonises the Small Intestine









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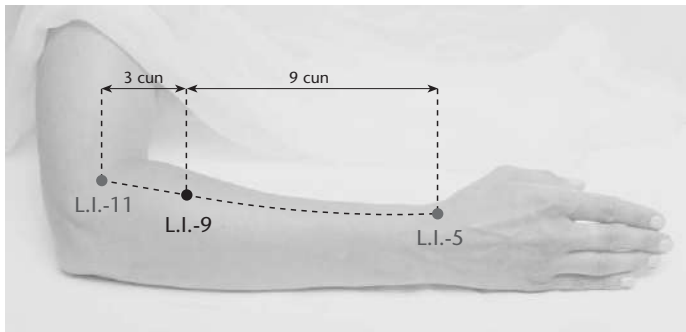
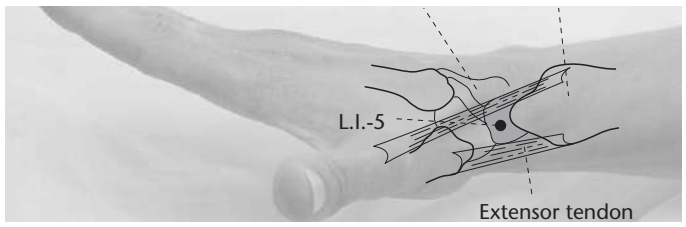
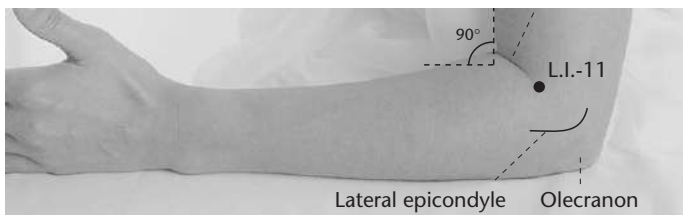
Upper Angle SHANGLIAN L.I.-9







Location

3 cun distal to the lateral end of the elbow crease in the direction of the anatomical snuffbox, on the line connecting → **L.I.-5** and → **L.I.-11**.

How to find

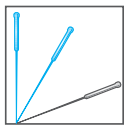
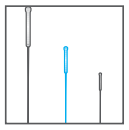
Please note: With the hand supinated, the line connecting → **L.I.-5** and → **L.I.-11** runs along the radial margin of the forearm. However, with the arm pronated, it transverses the forearm. **L.I.-9** lies on the dorsal aspect of the radius and is best located with the forearm in midposition and the elbow flexed. From → **L.I.-11**, measure 3 cun distally. The point is located in an easily palpable depression between two muscle bellies and is often tender with pressure.

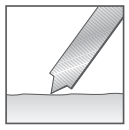
Needling

Vertically or obliquely 0.5–1 cun

Actions/Indications

- Opens the channel, cools and expels Wind
- Harmonises the Large Intestine



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L.I.-10 *Arm Three Miles* SHOUSANLI

Location

2 cun distal to → **L.I.-11**, on the line connecting → **L.I.-5** and → **L.I.-11**, on the extensor carpi radialis longus muscle; a deeper insertion will reach the supinator muscle.

How to find

Please note: With the hand supinated, the line connecting → **L.I.-5** and → **L.I.-11** runs along the radial margin of the forearm. However, with the arm pronated, it transverses the forearm. **L.I.-10** lies on the dorsal aspect of the radius and is best located with the forearm in midposition and with the elbow flexed. First, palpate → **L.I.-11** in the depression lateral to the radial end of the cubital crease. **L.I.-10**, usually sensitive to pressure, is found by measuring 2 cun distally from → **L.I.-11** on the connecting line.

Needling

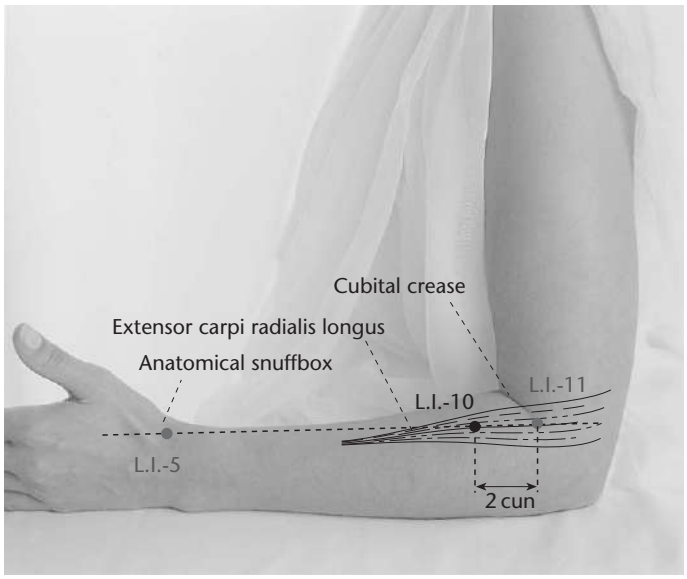
Vertically 1–2 cun

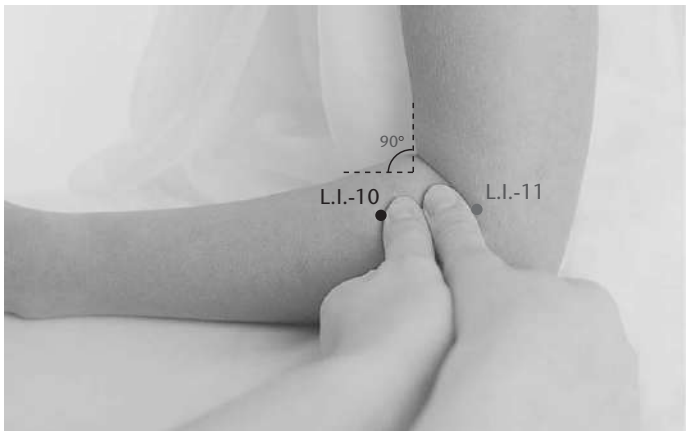
Actions/Indications

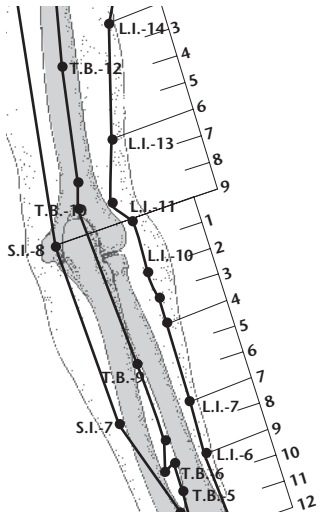
- Regulates the Qi and Blood (in the upper extremity), opens the channel and *luo* vessels, alleviates pain
- Regulates the Stomach and Intestines

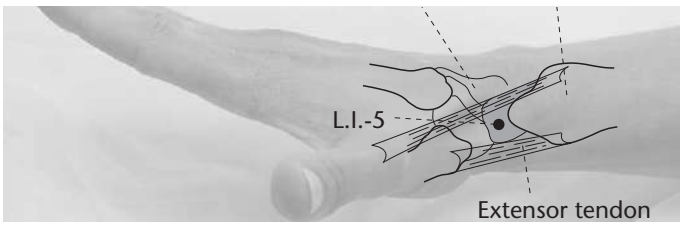
Special features

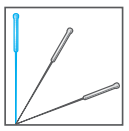
Important local point, often used in chain-and-lock method with other channel points

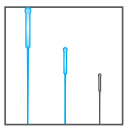


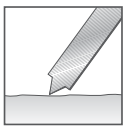












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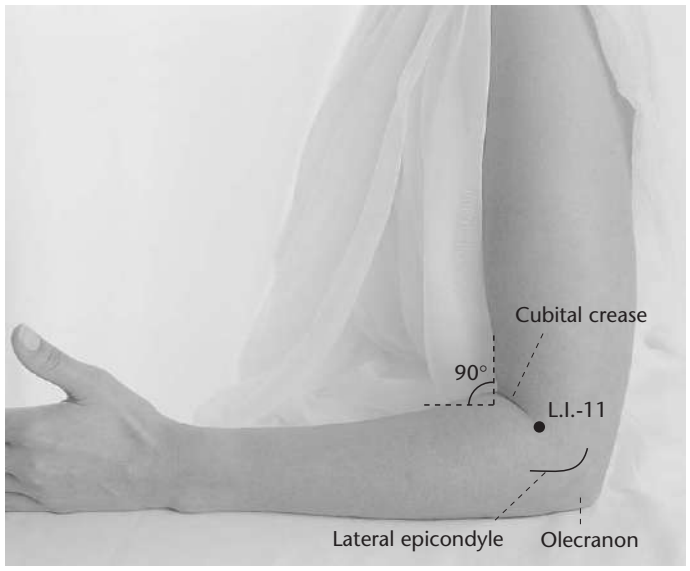
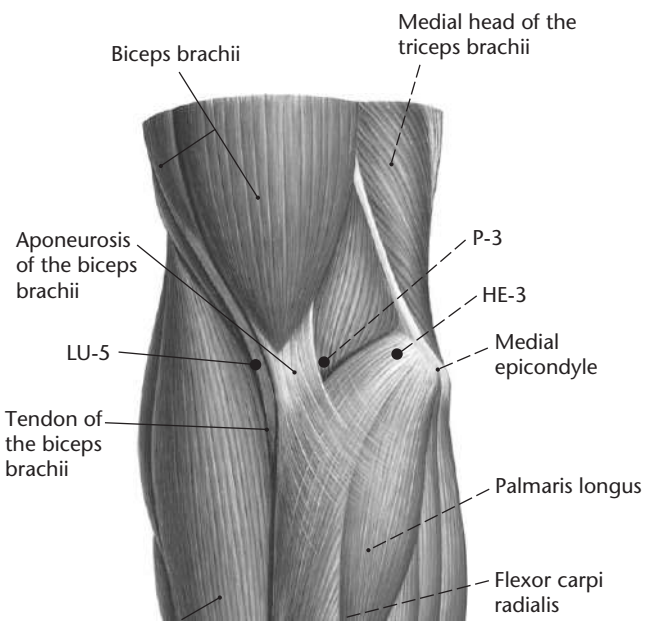
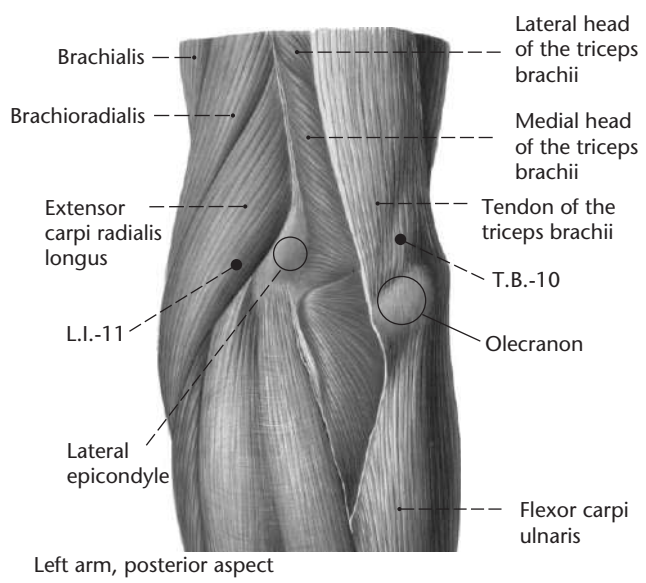
Pool at the Crook QUCHI L.I.-11





Left arm, anterior aspect



Left arm, posterior aspect

Location

With the elbow flexed, on the lateral end of the elbow crease, in a depression between the end of the crease and the lateral epicondyle of the humerus, on the extensor carpi radialis longus muscle.

How to find

First, with the elbow completely flexed, locate the lateral end of the elbow crease. Next, with the elbow flexed at approximately 90°, palpate for a pressure-sensitive depression in this area on the extensor carpi radialis longus muscle. **L.I.-11** is located close to the border of the proximal aspect of the ulna.
Also located at the level of the elbow crease are → **LU-5,** → **P-3** (radial/ulnar of the tendon of the biceps) and → **HE-3** (with the elbow completely flexed at the medial end of the cubital crease).

Needling

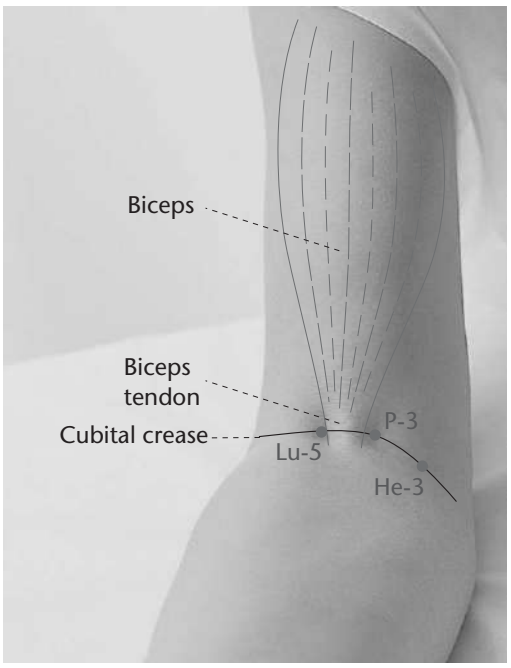
Vertically 1–1.5 cun

Actions/Indications

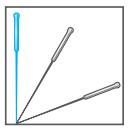
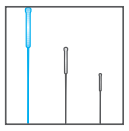
- Clears Heat, expels Wind
- Clears *yangming* – Fire
- Cools the Blood, drains Dampness, alleviates itching
- Opens the channel

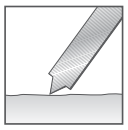
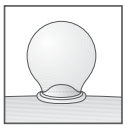
Special features

He-sea point, Earth point, tonification point, Sun Si Miao Ghost point, Ma Dan Yang Heavenly Star point. Important point for Heat conditions and disorders of the upper extremity.



Right arm, anterior aspect

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L.I.-12 *Elbow Crevice* ZHOULIAO

Location

1 cun proximal to the lateral end of the elbow crease (→ **L.I.-11**), on the anterior border of the humerus.

How to find

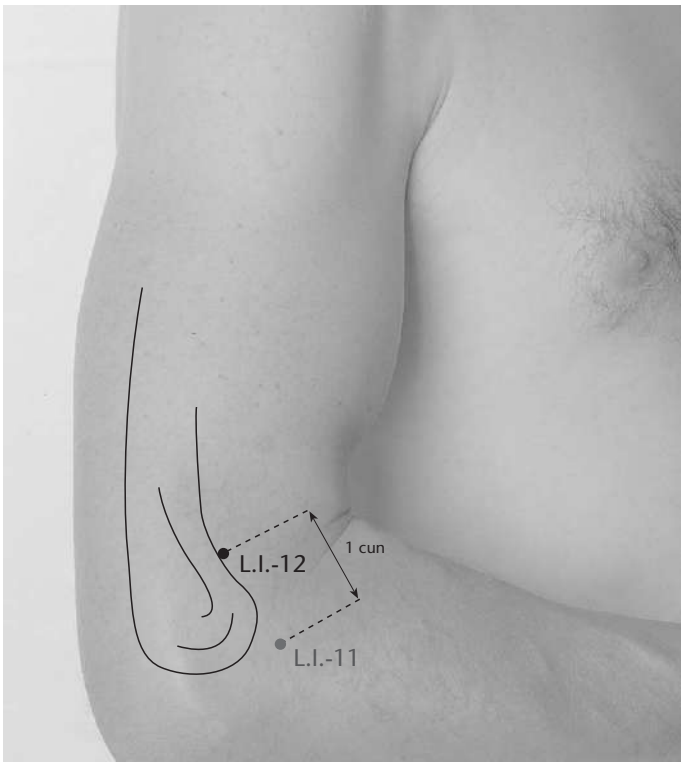
L.I.-12 is best located with the elbow flexed at 90°. From → **L.I.-11** (on the lateral end of the elbow crease), palpate 1 cun towards proximal. There, palpate for the anterior border of the humerus. **L.I.-12** is located at the junction of the shaft with the lateral epicondyle of the humerus and in front of the anterior border of the bone.

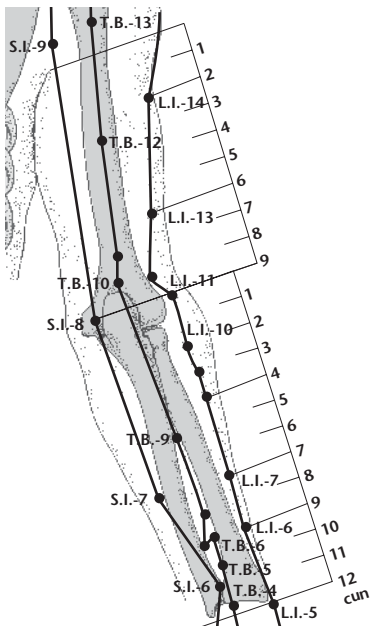
Needling

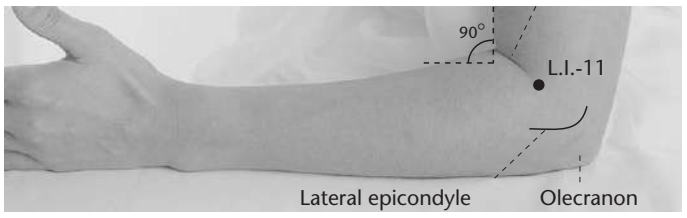
Vertically 0.5–1 cun, needle insertion between the border of the humerus and the flexor muscles in a medial direction.

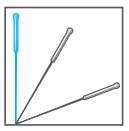
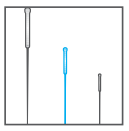
Actions/Indications

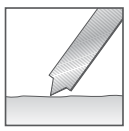
- Opens the channel









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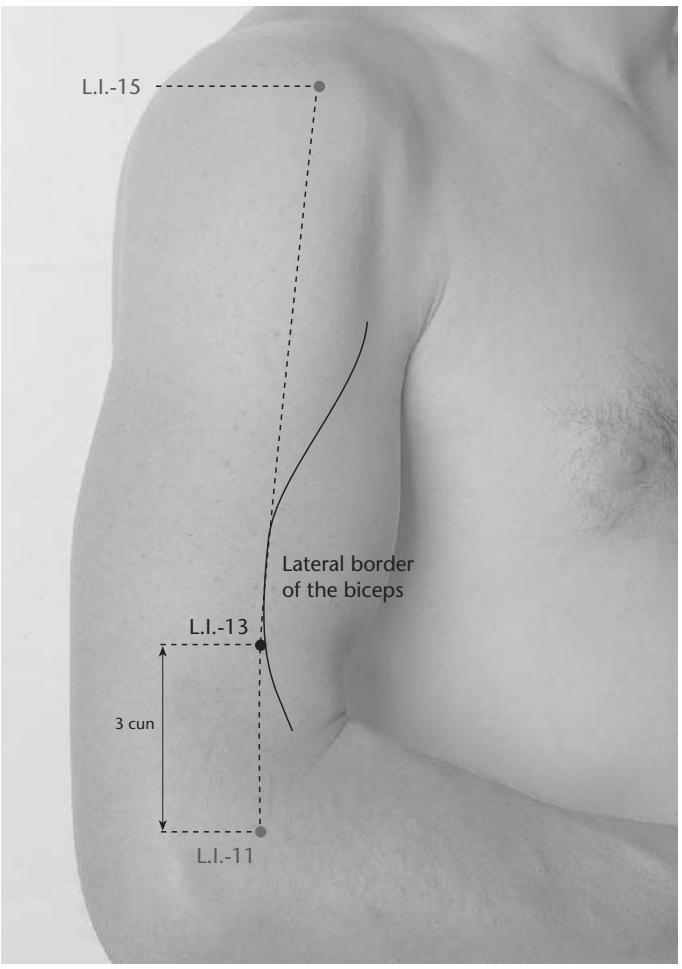
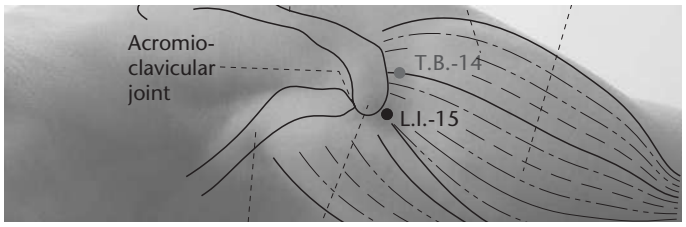
Arm Five Miles SHOUWULI L.I.-13





Location

On the lateral aspect of the upper arm, 3 cun proximal to the lateral end of the elbow crease (→ **L.I.-11**), in the direction of the head of the humerus.

How to find

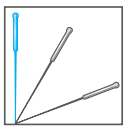
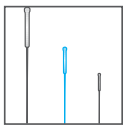
This point is located on a line connecting → **L.I.-11** (lateral end of the elbow crease) and → **L.I.-15** (in a depression anterior and inferior to the acromion), on the lateral border of the biceps, in a groove between the biceps and the brachialis muscles. With the elbow flexed at 90°, measure 3 cun from → **L.I.-11** towards proximal. Ask the patient to flex their biceps.

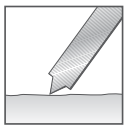
Needling

Vertically 0.5–1 cun, alongside the anterior border of the humerus.

Actions/Indications

- Opens the channel



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L.I.-14 *Upper Arm* BINAO

Location

On the lateral aspect of the upper arm, on a line connecting → **L.I.-11** and → **L.I.-15**, 7 cun proximal to → **L.I.-11** and slightly superior to the pointed insertion of the deltoid muscle.

How to find

This point is best located with the elbow flexed and the deltoid muscle flexed against resistance, making the lateral border of the muscle belly more visible. **L.I.-14** is located in a depression on the lower pointed insertion area of the deltoid. 'By moving the upper arm towards the tip of the nose, the patient will touch the approximate location of this point.' **For orientation:** This point lies approximately 2 cun inferior to the anterior end of the axillary fold (→ 2.2).

Needling

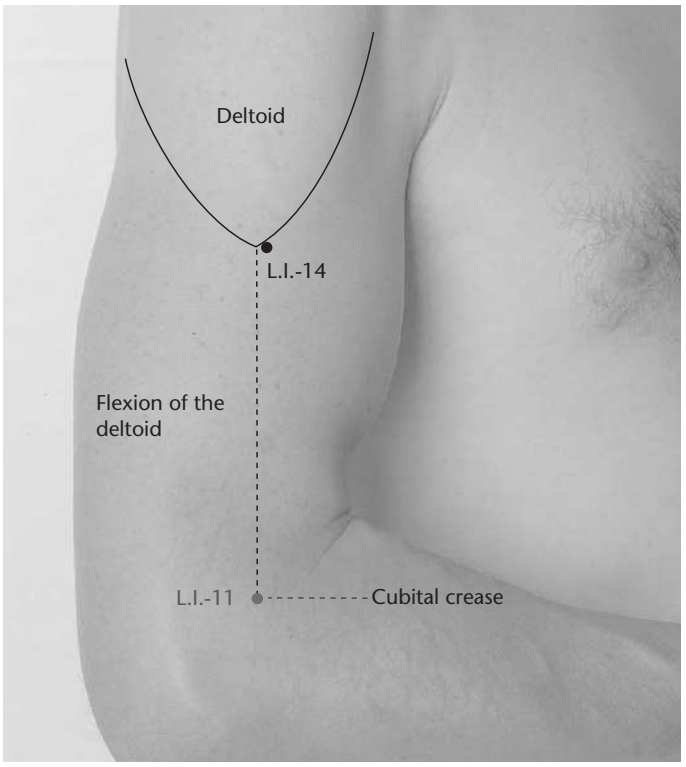
Vertically 0.5–1 cun; also obliquely towards the shoulder for disorders of the eyes.

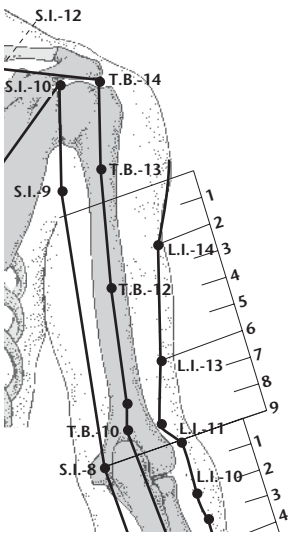
Actions/Indications

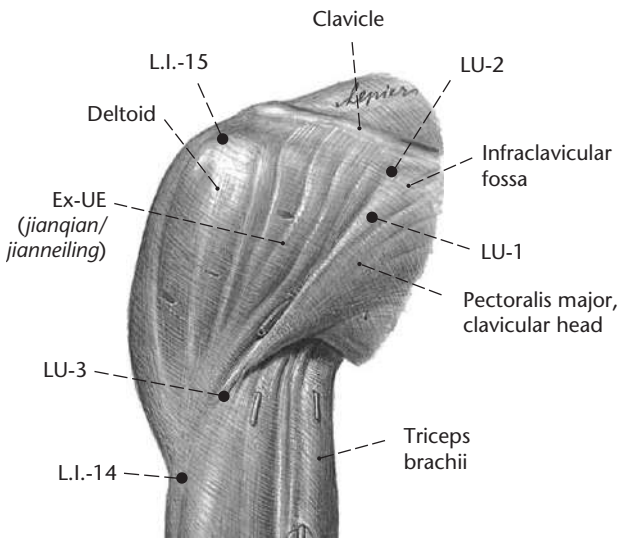
- Opens the channel and *luo* vessels, alleviates pain
- Benefits the eyes

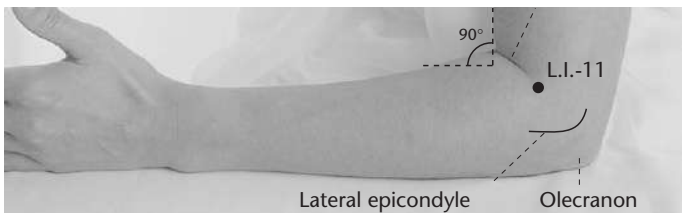
Special features

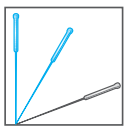
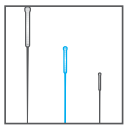
Important local point. According to some authors, meeting point with the *yang wei mai* and the S.I. and BL channels.

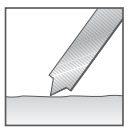










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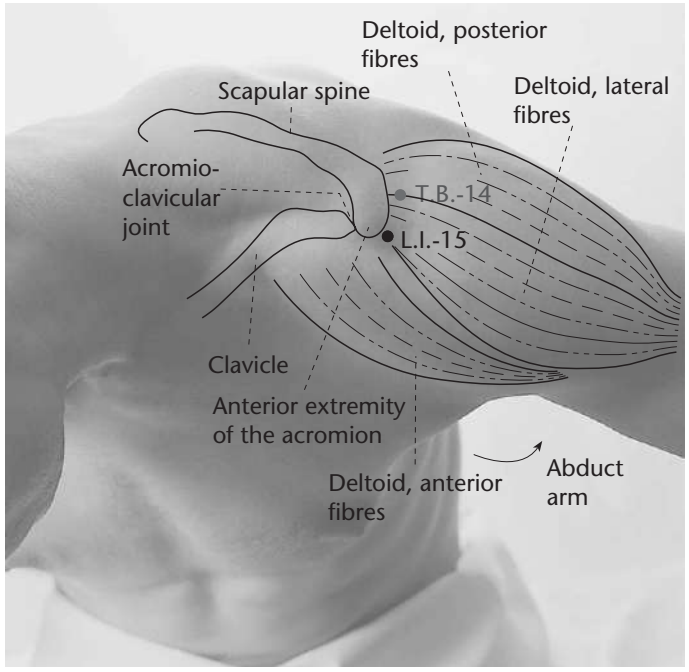
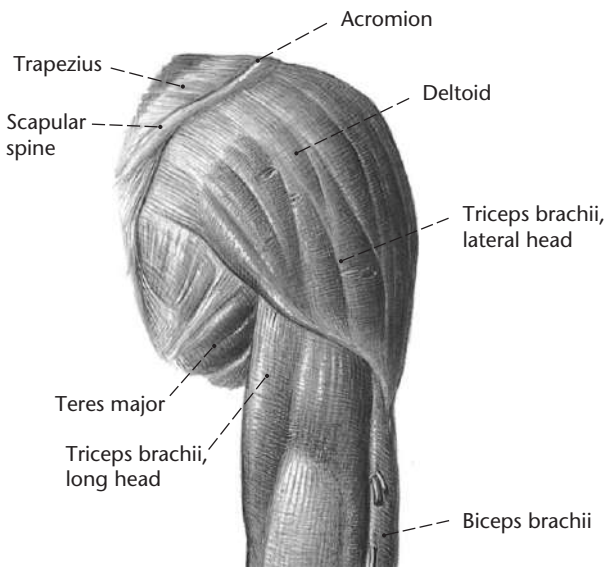
Shoulder Bone JIANYU L.I.-15





Location

In the depression distal and anterior to the acromion, between the clavicular and acromial portions of the deltoid muscle.

How to find

Ask the patient to abduct their arm. With the arm in a horizontal position, two depressions will form in the insertion area of the deltoid, distally to the acromion. By placing the thumb and index finger in those depressions in a pincer-like grip (with thumb and finger 1 thumb's breadth apart), the anterior finger will be in the anterior depression, where **L.I.-15** is located.

→ **T.B.-14** is located under the posterior finger in the dorsal depression.

Needling

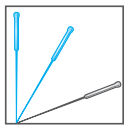
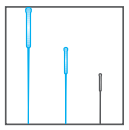
With the arm slightly adducted, 1–1.5 cun obliquely in the bony cleft and in a posterior direction; with the arm abducted, 0.5–1 cun vertically. Caution: Shoulder joint.

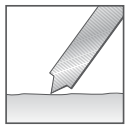
Actions/Indications

- Expels Wind-Damp, opens the channel, alleviates pain, supports the shoulder joint
- Expels Wind
- Regulates the Qi, resolves Phlegm

Special features

Meeting point with the *yang qiao mai*. Important local point for disorders of the shoulder, often used with chain-and-lock method (→ 8.3.6) with other channel points of the upper extremity.



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L.I.-16 *Great Bone* JUGU

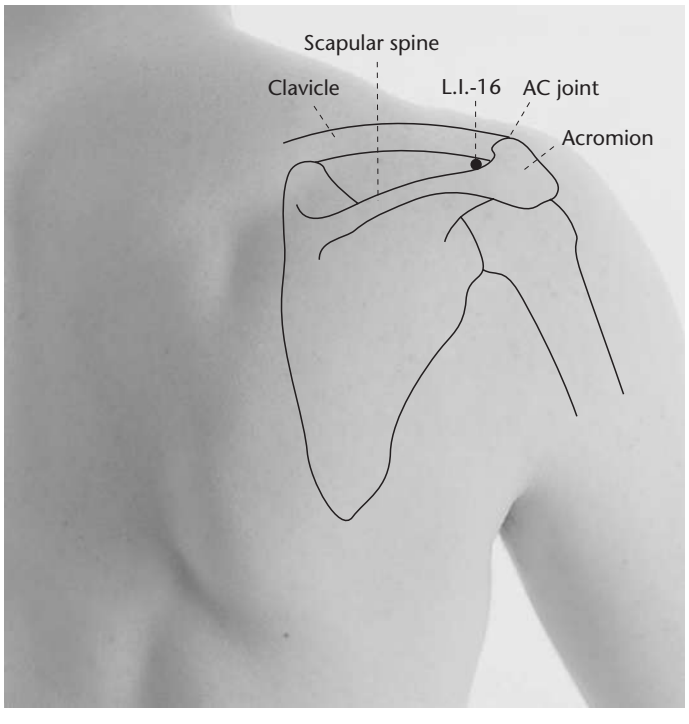
Location
In a depression between the acromial extremity of the clavicle and the junction of the scapular spine and the acromion.

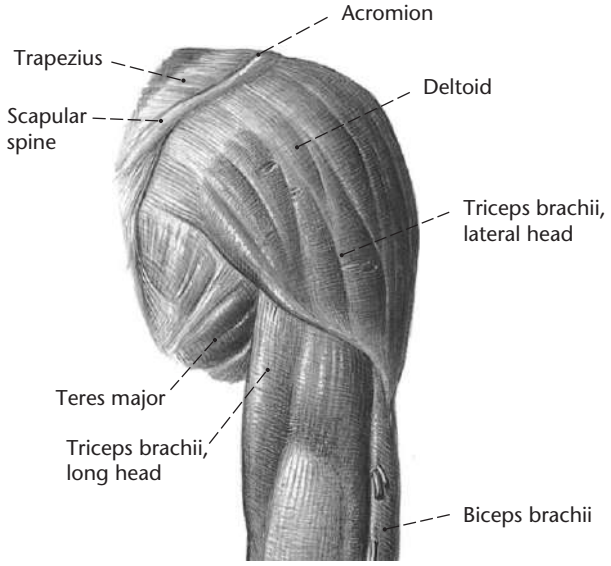
How to find
This point is located on the shoulder, at the angle between the acromio-clavicular joint and the junction of the scapular spine and the acromion (→ 3.3.1), above the most lateral portion of the trapezius and supraspinatus muscles. At this point, the tendon of the supraspinatus delves below the acromion, where it often causes problems owing to the cramped anatomical structure (for example, impingement syndrome).

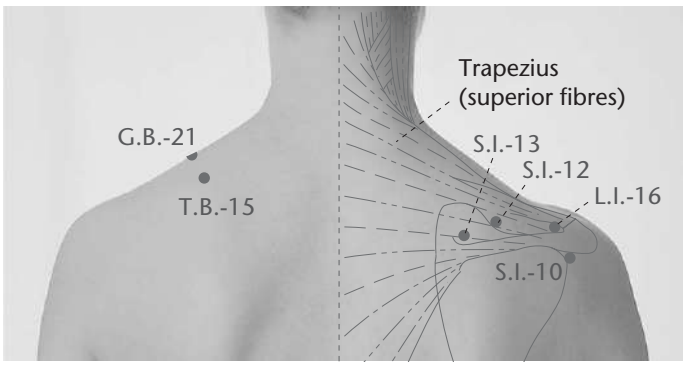
Needling
Vertically 0.5–1 cun

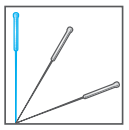
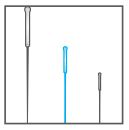
Actions/Indications
- Opens the channel, supports the shoulder joint

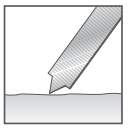
Special features
Meeting point with the *yang qiao mai*









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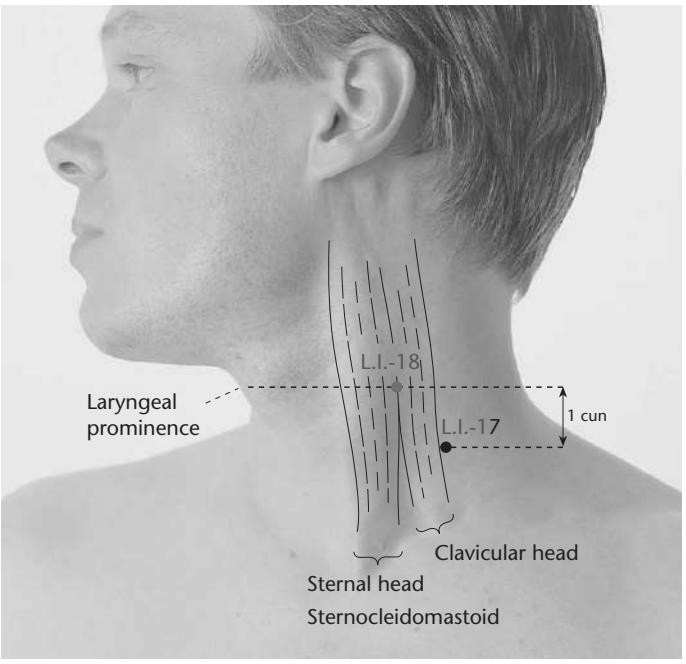
Heaven's Tripod TIANDING L.I.-17



Location

On the posterior border of the sternocleidomastoid muscle, 1 cun below the laryngeal prominence (→ 3.2).

How to find

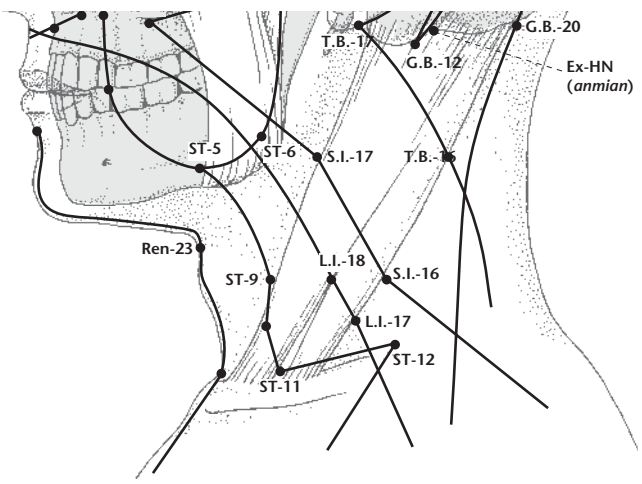
This point is located on the lateral musculature of the neck, directly posterior to the sternocleidomastoid muscle. By rotating the patient's head to the opposite side, this muscle will become more visible and palpable. → **L.I.-18** is located 1 cun superior to **L.I.-17**, between the two heads of the sternocleidomastoid.

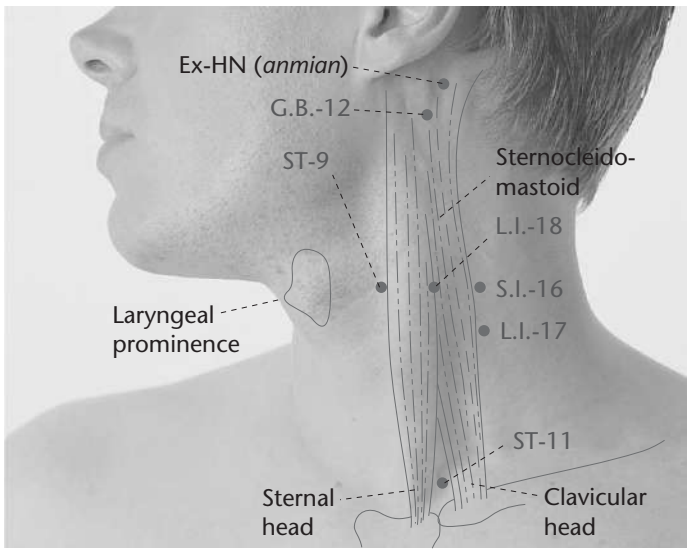
Needling

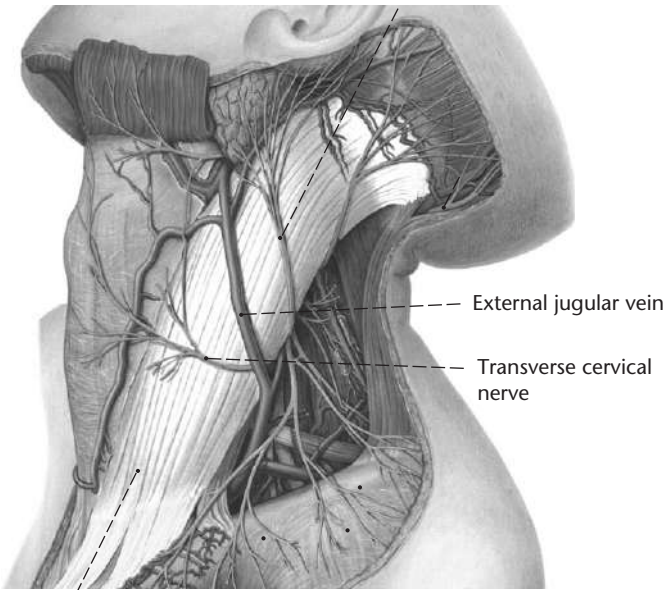
Rotate the head back to its normal position before needle insertion. Vertically 0.3–0.5 cun or obliquely up to 0.8 cun. Caution: Carotid artery, jugular vein.

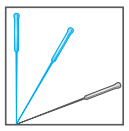
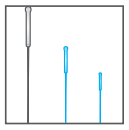
Actions/Indications

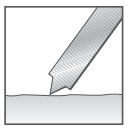
- Benefits the throat and larynx









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L.I.-18 *Support the Prominence* FUTU

Location

On the lateral aspect of the neck, at the level of the laryngeal prominence, between the two heads of the sternocleidomastoid muscle (→ 3.2).

How to find

From the laryngeal prominence (tip of the Adam's apple), draw a line across the sternocleidomastoid muscle to its posterior border. **L.I.-18** is located between the two heads of this muscle, which becomes more visible and palpable by rotating the head to the opposite side.

Located on the same level are → **ST-9** on the anterior border and → **S.I.-16** on the posterior border of the sternocleidomastoid muscle.

Needling

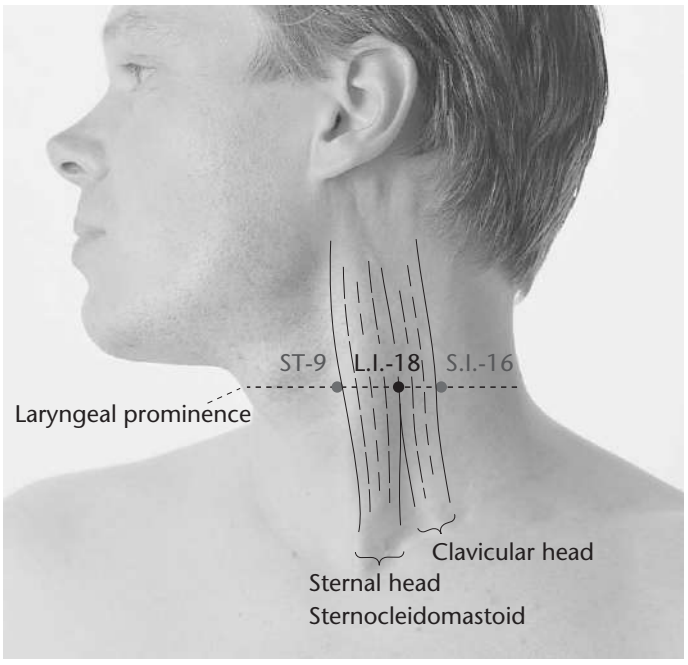
Rotate the head back to its normal position before inserting the needle. Vertically 0.3–0.5 cun or obliquely up to 0.8 cun. Caution: Carotid artery, jugular vein.

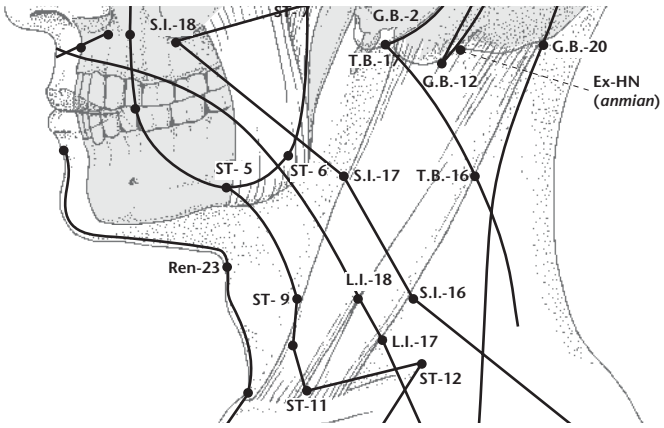
Actions/Indications

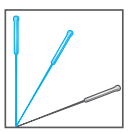
- Benefits the throat and larynx

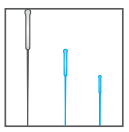
Special features

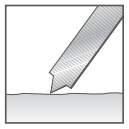
Window of Heaven point. Often used when swallowing is difficult, for example after a stroke.

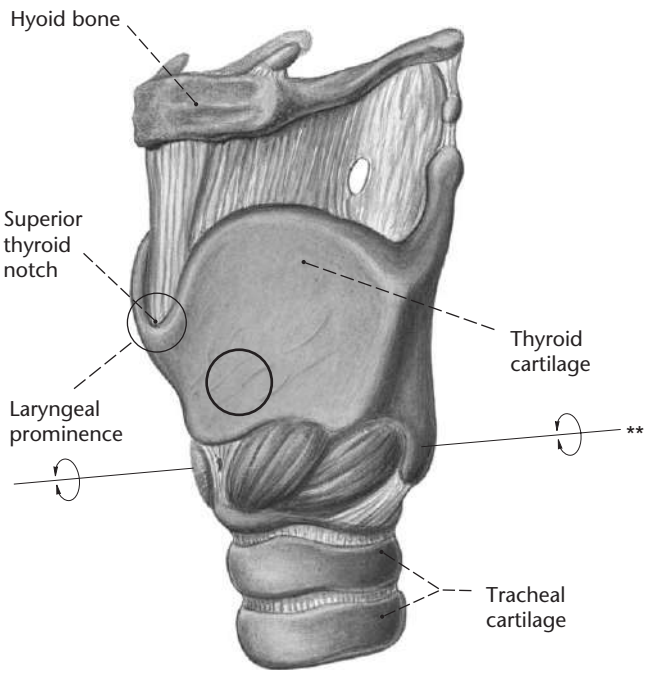


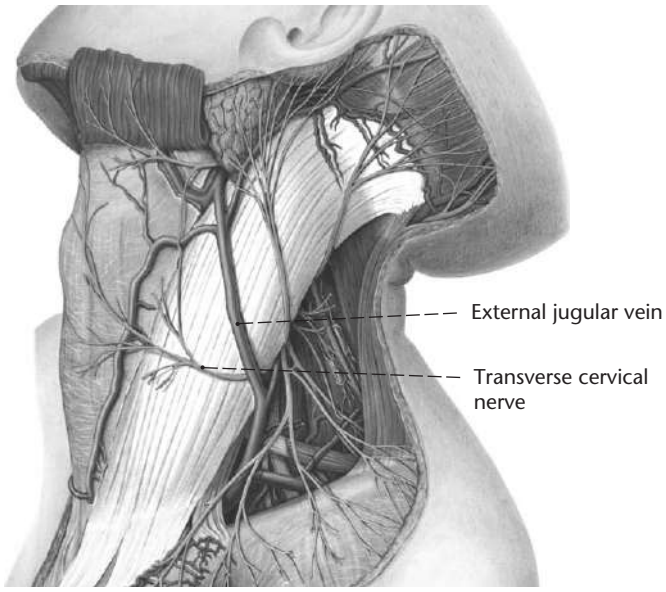












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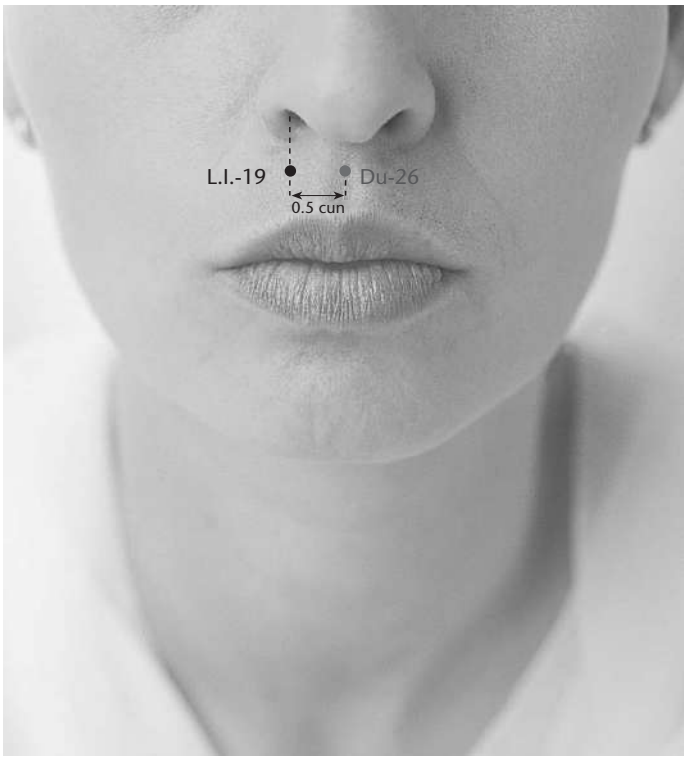
Mouth Grain Crevice KOUHELIAO L.I.-19



Location

On the maxilla, slightly below the lateral margin of the nostril.

How to find

By dividing the distance between the margin of the nostril and the margin of the upper lip into three sections, **L.I.-19** is located at the junction of the upper and the middle third.

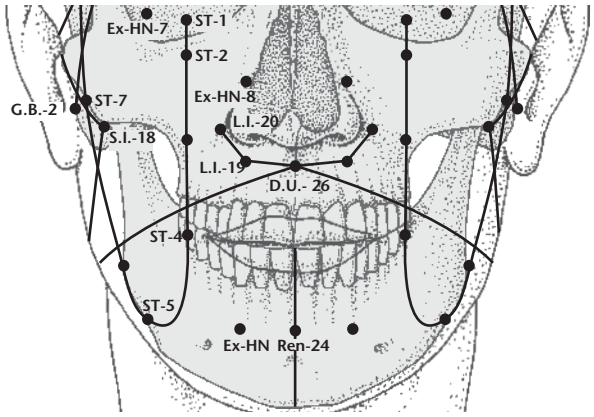
→ **Du-26** is located on the same level, on the anterior midline and at a distance of approximately 0.5 cun.

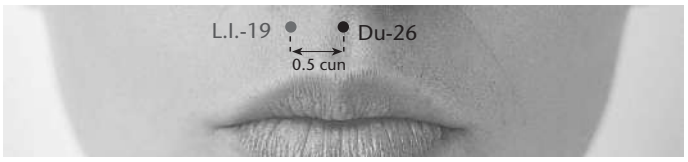
Needling

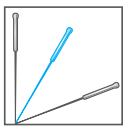
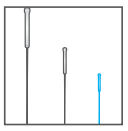
Obliquely 0.3–0.5 cun. Painful point! According to some classics, moxibustion is contraindicated.

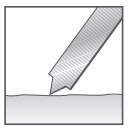
Actions/Indications

- Expels Wind and opens the nasal passages







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L.I.-20 *Welcome Fragrance* YINGXIANG

Location

In the nasolabial groove, on the level of the midpoint of the lateral border of the ala nasi.

How to find

L.I.-20 is located by finding the midpoint of the lateral border of the ala nasi (→ 3.1.2) and following it to the nasolabial groove. Tip: The nasolabial groove becomes more pronounced if you ask the patient to smile.

Needling

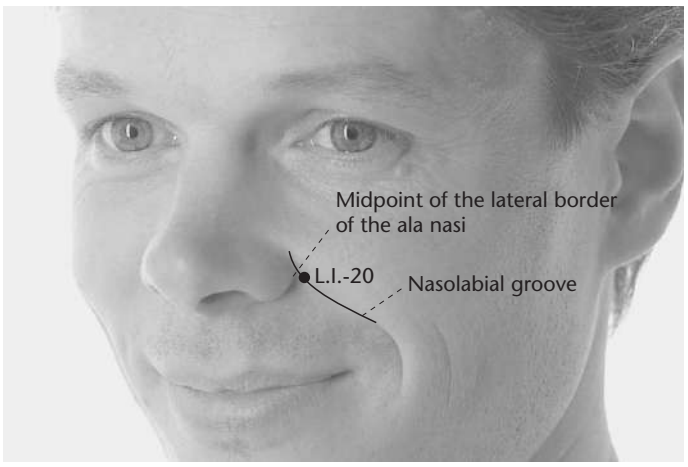
0.3–0.5 cun vertically, obliquely or transversely (subcutaneously) in a medial and superior direction towards the extra point → **EX-HN-8** (*shangyingxiang* or *bitong*: at the upper end of the nasolabial groove, at the transition between the nasal bone and the cartilage). According to some authors, moxibustion is contraindicated.

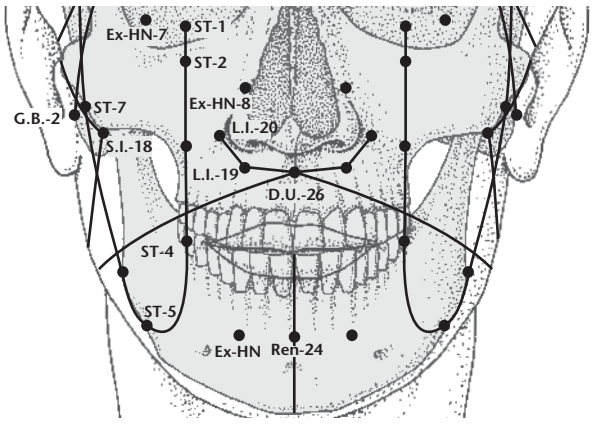
Actions/Indications

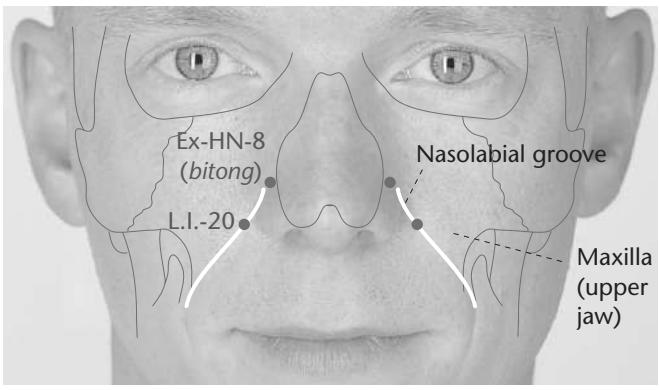
- Opens the nasal passages, expels Wind, clears Heat

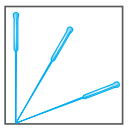
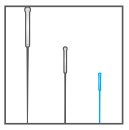
Special features

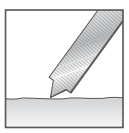
Meeting point with the ST channel, exit point. Most important local point for disorders of the nose.









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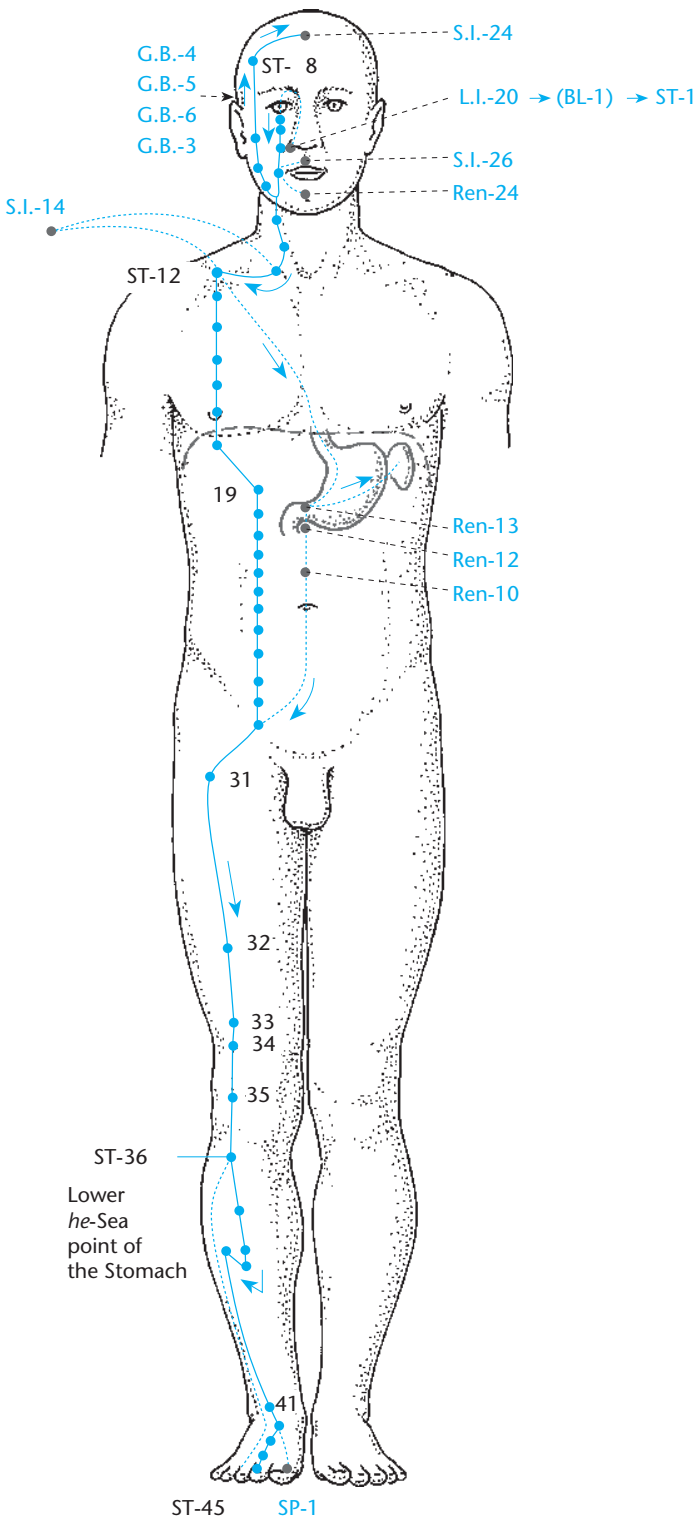
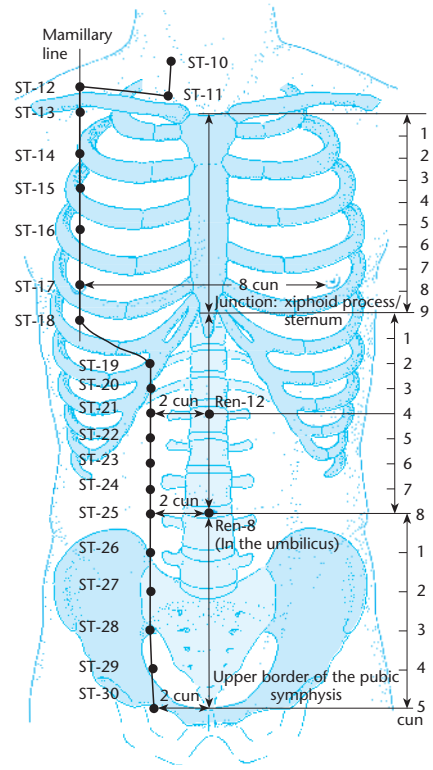
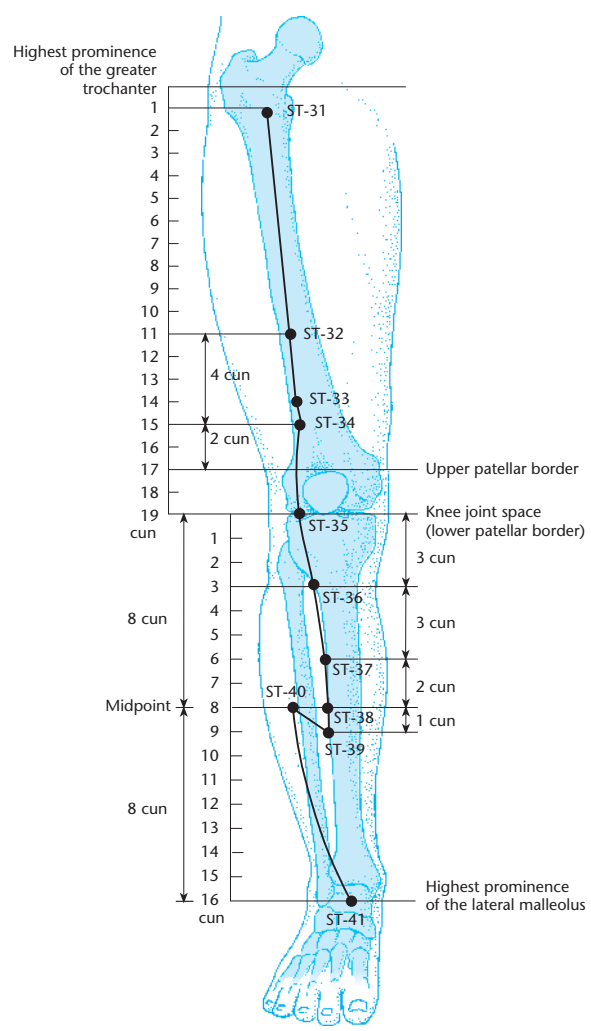
4.3 The Stomach Channel System – Foot *yangming* (*zu yang ming jing luo*)

4.3.1 The Stomach Primary Channel (*zu yang ming jing*)







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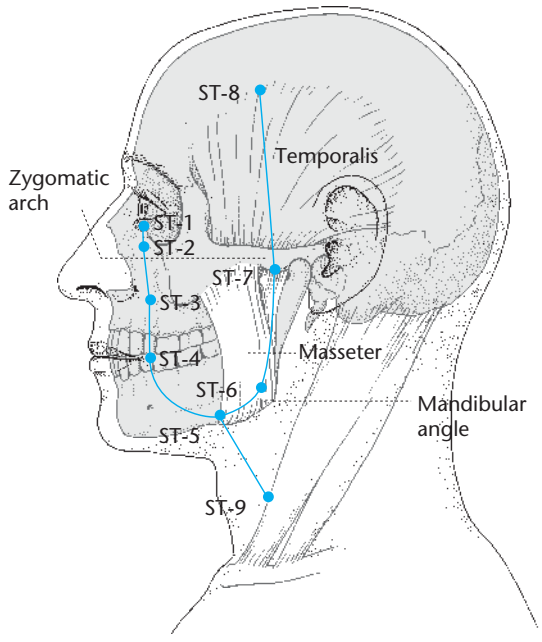

Pathway

The Stomach primary channel begins with an **internal** branch at the Yang axes connection of the first great circuit (*yangming*, hand–foot pairing) at → **LI-20** (*yingxiang*) lateral to the ala nasi

- travels **internally** to → **BL-1** (*jingming*) at the inner canthus of the eye
- emerges at the infraorbital ridge at **ST-1** (*chengqi*), the beginning of the external part of the primary channel
- descends laterally along the nose and **enters** the gums of the upper jaw
- meets the contralateral Stomach primary channel and the *du mai* at → **Du-26** (*renzhong*) and emerges again
- curves around the lips to meet the *ren mai* and again the contralateral Stomach channel at → **Ren-24** (*chengjiang*)
- traverses the lower cheek and winds around the lower angle of the mandible.

Here, at → **ST-5** (*daying*), the external channel **divides into two branches**:

- **One branch** ascends anterior to the ear, travels via → **G.B.-3** (*shangguan*), → **G.B.-6** (*xuanli*), → **G.B.-5** (*xuanlu*) and → **G.B.-4** (*hanyan*) to the temporal region to → **ST-8** (*touwei*) and continues to the forehead to meet → **Du-24** (*shenting*), where it terminates.
- The **other external branch** descends along the lateral aspect of the neck to the supraclavicular fossa and travels posteriorly over the back of the neck to → **Du-14** (*dazhui*) below the spinous process of the 7th cervical vertebra, where it meets the other five Yang primary channels.

An internal branch descends from the supraclavicular fossa, passes the diaphragm, enters first its pertaining *fu*-Organ, the Stomach (*wei*) and then connects with its paired *zang*-Organ, the Spleen (*pi*). Minor branches of the **internal** channel intersect with → **Ren-13** (*shangwan*), → **Ren-12** (*zhongwan*) and → **Ren-10** (*xiawan*). The internal branch then descends towards the inguinal region where it emerges slightly superior to **ST-30** (*qichong*) and reconnects with the **external** branch.

- The **external** channel descends from the supraclavicular fossa, crosses the nipple and laterally passes the umbilicus, travels in a curve to the leg and knee, continues along the anterior crest of the tibia and the dorsum of the foot and terminates on the second toe at → **ST-45** (*lidui*) at the lateral corner of the nail.
- An **internal** branch originates below the knee area at → **ST-36** (*zusanli*) and travels to the lateral aspect of the middle toe.
- A further branch separates from the primary channel at → **ST-42** (*chongyang*) on the dorsum of the foot and connects at → **SP-1** (*yinbai*) with its paired SP channel on the medial aspect of the big toe (foot Yin–Yang connection of the first great circuit).

Clinical importance (→ 1.2)

Exterior (*biao*) signs and symptoms: High fever, malaria, flushed face, sweating, confused mental state, aversion to cold, eye pain, dry nasal passages, nosebleeds, dry lips and mouth, lesions of the lips and mouth, sore and swollen throat, thoracic pain, red and swollen legs

Interior (*li*) or *zangfu*-Organ signs and symptoms: Abdominal distension, sensation of fullness, oedema, irritability during work and rest, mania and epilepsy, hyperpepsinia, constant hunger, yellow urine

Excess (*shi*): Heat sensations on the anterior aspect of the body, constant hunger, yellow urine

Deficiency (*xu*): Cold sensations on the anterior aspect of the body, chills, Stomach Cold with distension and fullness

Connections and meeting points of the Stomach primary channel (→ 1.2)

Connections with other channels

Spleen primary channel (*zu tai yin jing*)

Connection: Foot Yin–Yang connection of the first great circuit
Location: ST-42 → SP-1 (on the foot).
Circulation: Circadian (according to the Organ clock)
Importance: Exterior–Interior relationship

Large Intestine primary channel (*shou yang ming jing*)

Connection: Paired according to the six channel theory (hand–foot pairing): *yang ming* (Yang axes of the first great circuit)
Location: L.I.-20 → (BL-1) → ST-1 (on the head)
Circulation: Circadian (according to the Organ clock)
Importance: Above–below relationship

Connections with other *zangfu*-Organ systems

Stomach (*wei*), Spleen (*pi*)

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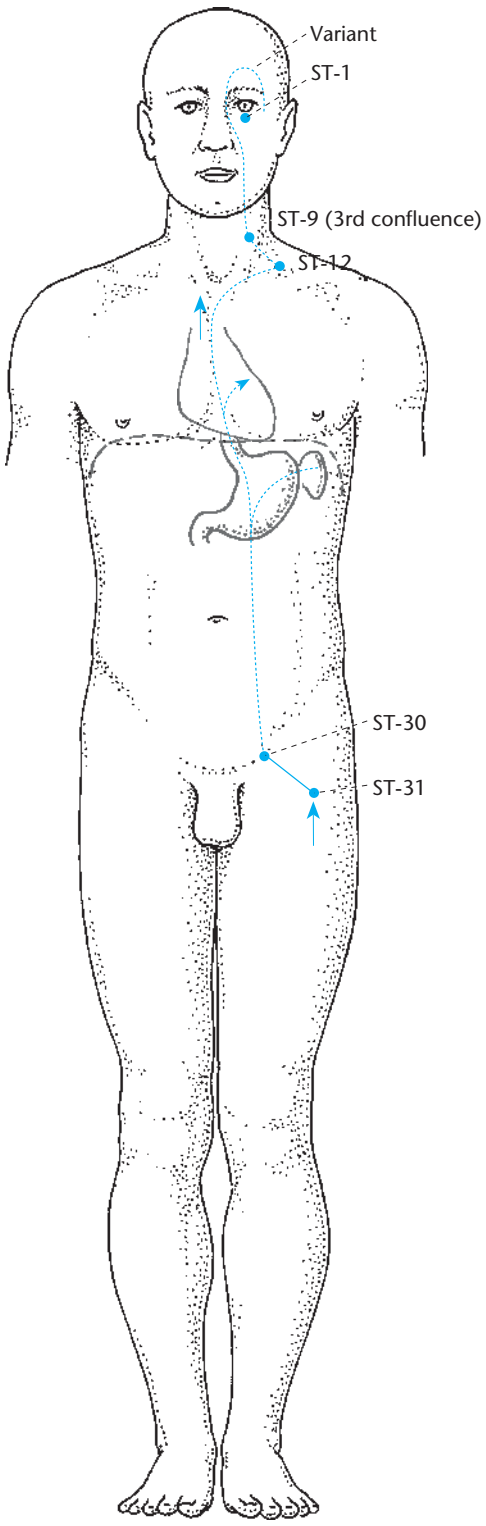
4.3.2 The Stomach Divergent Channel (*zu yang ming jing bie*)



Pathway

The Stomach divergent Channel separates from the Stomach primary channel at ➞ **ST-31** (*biguan*) on the antero-lateral aspect of the thigh

- ➡ penetrates the body at the inguinal region at **ST-30** (*qichong*)
- ➡ continues to the Stomach (*wei*) and disperses in the Spleen (*pi*)
- ➡ ascends and penetrates the Heart (*xin*)
- ➡ ascends along the oesophagus to the suprasternal fossa and travels laterally to the supraclavicular fossa at **ST-12** (*quepen*).

From there it rises along the anterior border of the sternocleidomastoid muscle and meets its primary channel as well as the divergent Spleen channel at **ST-9** (*renying*) at one of the six *he*-confluences (here: ST/SP as third confluence ➞ 1.3).

It then **emerges** at the mouth, ascends along the nose, reaches the inner canthus of the eye and connects with the eye, circles the eye region and meets the Stomach primary channel at **ST-1** (*chengqi*) where it terminates (➞ fig.).

According to some authors, the Stomach divergent channel connects with the Stomach primary channel at **BL-1** (➞ variant, fig.). After intersecting with **BL-1**, the divergent channel could enter the head, disperse in the brain and re-emerge at **ST-1.**

Clinical importance

- Strengthens the relationship between the Stomach and the Spleen (*zangfu*-Organs). Points on the Stomach primary channel can therefore be used for disorders of the Spleen, and vice versa points on the Spleen primary channel can treat disorders of the Stomach.
- Spreads Qi to the face and sensory organs: many points on the ST channel treat disorders of the head and face.
- Strengthens the relationship between the Stomach and the eyes: Heat and excess in this region can be directed downward by using points on the ST channel.

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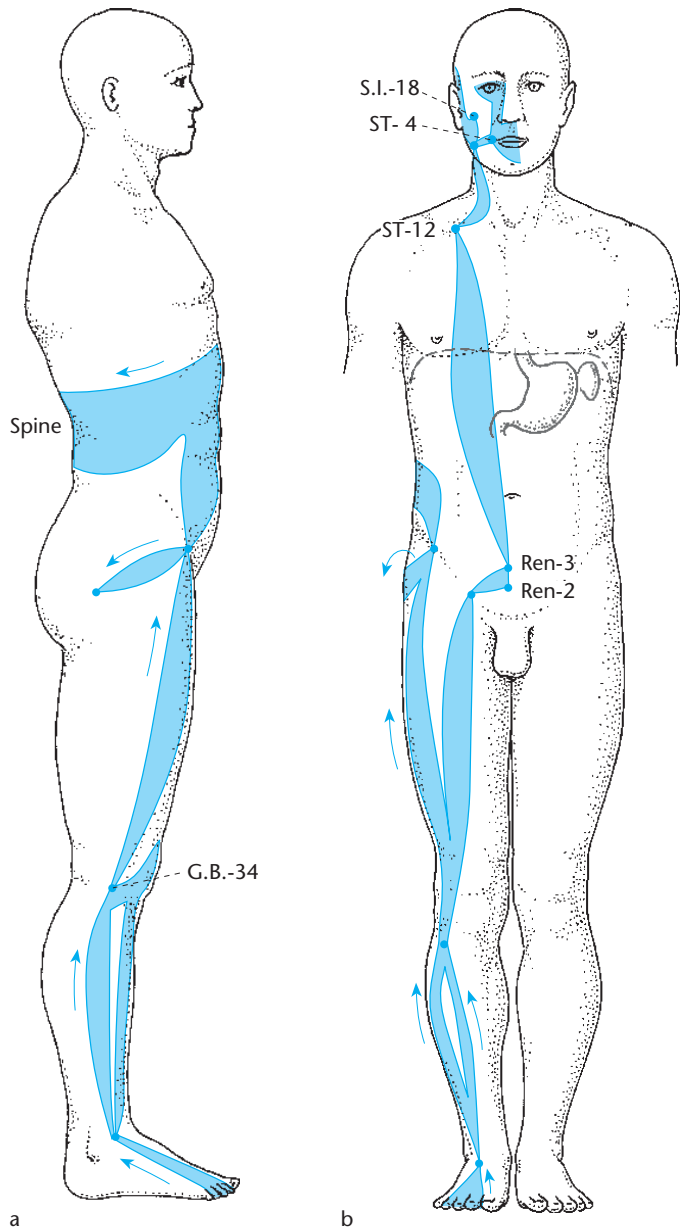
4.3.3 The Stomach Sinew Channel (*zu yang ming jing jin*)



Pathway

The Stomach sinew channel begins as a wider band, encompassing the second, third and fourth toe, traverses the dorsum of the foot, binds (*jie*) at the tibial depression and divides into two branches:

- **One branch** obliquely ascends the **anterolateral aspect** of the leg and binds (*jie*) at the lateral aspect of the knee. It then ascends the anterolateral aspect of the thigh and binds (*jie*) at the anterior hip region. From there it sends **a branch** to → **G.B.-30** (*huantiao*) in the direction of the greater trochanter. The sinew channel travels from the anterior hip region across the lateral abdomen and spreads across the lower ribcage posteriorly to the spine.
- **Another branch** follows the tibia on the **anterior aspect** of the lower leg and binds (*jie*) at the level of the patella. From there a branch runs to the head of the fibula where it meets the G.B. sinew channel at → **G.B.-34** (*yanglingquan*).
- From the patella the channel ascends along the anterior aspect of the thigh, binds (*jie*) in the inguinal region, passes → **Ren-2** (*qugu*) and binds (*jie*) at → **Ren-3** (*zhongji*). It then ascends across the abdominal and thoracic region and reaches the supraclavicular fossa to bind (*jie*) at **ST-12** (*quepen*). It then continues along the anterolateral aspect of the neck and binds (*jie*) at the angle of the mandible.

At the angle of the mandible the channel divides into three branches:

- **One branch** terminates anterior to the ear.
- **A further branch** ascends to the zygomatic bone where it meets the other Yang sinew channels at → **S.I.-18** (*quanliao*).
- **The third branch** circles the mouth, ascends to the upper nose region, there connects with the Bladder sinew channel and then spreads along the lower eyelid. The Bladder sinew channel spreads along the upper eyelid, so that the two channels together form a network around the eyes.

Clinical importance

Pathology: Stiffness and aching of the toes, leg cramps (gastrocnemius and quadriceps muscles), stiffness and pain on the dorsum of the foot (at **ST-41**), swelling and tension in the inguinal region, *shan*-disorders, cramping in the abdomen as well as in the supraclavicular fossa and the face, facial paralysis, weakness and paralysis of the superior rectus muscle.

Indication: Mainly used for *bi*-syndromes (painful obstruction syndromes) along the Stomach channel. The area covered by the Stomach sinew channel is larger than that covered by the Stomach primary channel. This explains why the indications of points on the Stomach primary channel include disorders and diseases of the external genitalia (for example urinary tract disorders such as cystitis, hernia and orchitis, which are often treated in combination with LIV points) as well as disorders of the eyelids and of all sensory organs.

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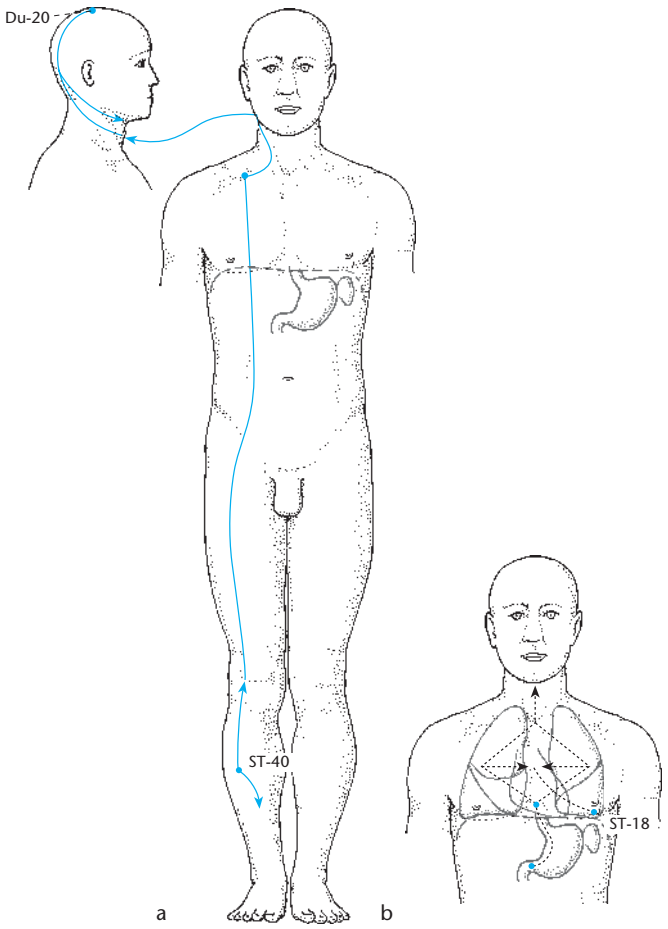
4.3.4 The Stomach *luo*-Connecting Vessel System (*zu yang ming luo mai*)



Pathway

The ST *luo*-connecting vessel separates from the Stomach primary channel at its *luo*-connecting point **ST-40** (*fenglong*) (→ 8.1.2). It forms a three-dimensional reticular network, dividing into multiple branches and sub-branches *(sun luo, fu luo, xue luo* → 1.5) within the surrounding tissue.

- ➡ Horizontal divisions run to the Interiorly–Exteriorly paired primary SP channel; according to some schools of thought (for example Van Nghi, → Appendix) they travel as a **transverse** Stomach *luo*-connecting vessel to the *yuan* point → **SP-3** (*taibai*).
- ➡ A **longitudinal** division ascends along the anterolateral aspect of the leg to the torso and reaches the lateral aspect of the neck at → **ST-12**, where it divides into two branches: **one branch** traverses the neck, the **other branch** runs to the occiput and ascends the head to reach → **Du-20** (*baihui*).

Clinical importance (→ 8.1.2)

Pathology

- **Counterflow Qi:** Swelling and pain of the throat, sudden loss of voice, sensation of tightness in the throat
- **Excess (*shi*):** Psychological disorders, also epilepsy and mania
- **Deficiency (*xu*):** *Wei*-syndrome of the legs (atrophy syndrome with muscle weakness and paralysis)

The great *luo*-connecting vessel of the Stomach (*wei zhi dao luo* or *xu li*)

Pathway

The great Stomach *luo*-connecting vessel begins at the Stomach (*wei*), passes through the diaphragm, intersects with → **Ren-17** (*shanzhong*) and spreads in the Lungs (*fei*), trachea and larynx. From the Lung it travels to the Heart (*xin*) and emerges on the left aspect of the thorax near → **ST-18** (*rugen*) which is located where the heartbeat is visible (→ 8.1.2).

Clinical importance (→ 8.1.2)

Pathology

- **Excess (*shi*):** Dyspnoea
- **Deficiency (*xu*):** Chest tightness, for example with asthma, coughing, angina pectoris, etc.

4.3.5 Cutaneous Region (*yang ming pi bu*)

See description and figures → 1.6

4.3.6 Points of the Stomach Primary Channel (Overview)

Specific points according to their function (→ 8.1)

- ***Yuan*-source point (→ 8.1.1): ST-42** (*chongyang*) ■■
- ***Luo*-connecting point (→ 8.1.2.): ST-40** (*fenglong*) ■■
- ***Xi*-cleft point (→ 8.1.3): ST-34** (*liangqiu*) ■■
- **Associated Back-*shu* point (→ 8.1.4): BL-21** (*weishu*) ■■
- **Associated Front-*mu* point (→ 8.1.5): Ren-12** (*zhongwan*) ■■
- **Five *shu*-transporting points (→ 8.1.6):**
  jing-well point (Metal), sedation point: **ST-45** (*lidui*) ■■
  ying-spring point (Water): **ST-44** (*neiting*) ■■
  shu-stream point (Wood): **ST-43** (*xiangu*) ■■
  jing-river point (Fire), tonification point: **ST-41** (*jiexi*) ■■
  he-sea point (Earth), *ben* point: **ST-36** (*zusanli*) ■■
- ***Hui*-meeting point (→ 8.1.7): –**
- **Opening point (→ 8.1.8): –**
- **Lower *he*-sea points (→ 8.1.9):**
  of the Stomach: **ST-36** (*zusanli*) ■■
  of the Large Intestine: **ST-37** (*shangjuxu*) ■■
  of the Small Intestine: **ST-39** (*xiajushu*) ■■
- ***jiaohui*-meeting points (→ 8.1.10):**

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– with the *ren mai, yang qiao mai, du mai**: **ST-1** (*chengqi*) ■■
– with the *yang qiao mai**: **ST-2** (*sibai*) ■■
– with the *yang qiao mai*: **ST-3** (*juliao*)
– with the primary L.I. channel, *yang qiao mai, du mai*, ren mai*:* **ST-4** (*dicang*)
– with the G.B. channel*: **ST-5** (*daying*), **ST-6** (*jiache*)
– with the G.B. channel: **ST-7** (*xiaguan*) ■■, **ST-9** (*renying*)
– with the G.B. channel, *yang wei mai*: **ST-8** (*touwei*) ■■
– with the primary L.I., S.I., T.B., G.B. channels: **ST-12** (*quepen*)
– with the *chong mai*, G.B. channel*: **ST-30** (*qichong*) ■■
– other channels with the ST channel: **L.I.-20, BL-1, G.B.-3, G.B.-4, G.B.-5, G.B.-6; Du-14, Du-24; Du-26, Du-28*; Ren-10*, Ren-12, Ren-13, Ren-24; G.B.-14*, G.B.-21***

- **Gao Wu command point (→ 8.1.11) for the abdomen: ST-36** (*zusanli*) ■■
- **Window of Heaven point (→ 8.1.12): ST-9** (*renying*)
- **Points of the Four Seas (→ 8.1.13):**
  Sea of Qi point: **ST-9** (*renying*)
  Sea of Grain: **ST-30** (*qichong*) ■■, **ST-36** (*zusanli*) ■■
  Sea of Blood: **ST-37** (*shangjuxu*) ■■, **ST-39** (*xiajushu*) ■■
- **Ma Dan Yang Heavenly Star points (→ 8.1.14): ST-36** (*zusanli*) ■■, **ST-44** (*neiting*) ■■
- **Sun Si Miao Ghost point (→ 8.1.15): ST-6** (*jiache*) ■■
- **Other functional points:**
  – Front-*mu* point of the Large Intestine: **ST-25** (*tianshu*) ■■
  – most important acupuncture 'Phlegm'-point: **ST-40** (*fenglong*) ■■
- Points according to region
- **Local points (→ 8.2.1):** eyes – **ST-1** (*chengqi*) ■■; mouth and teeth – **ST-4** (*dicang*), **ST-6** (*jiache*) ■■; jaw – **ST-7** (*xiaguan*) ■■; Large Intestine – **ST-25** (*tianshu*) ■■; Small Intestine and Bladder – **ST-28** (*shuidao*); urogenital region – **ST-30** (*qichong*) ■■; knee – **ST-34** (*liangqiu*) ■■, **ST-35** (*dubi*) ■■, **ST-36** (*zusanli*) ■■; foot – **ST-41** (*jiexi*) ■■
- **Adjacent points (→ 8.2.1):** forehead – **ST-8** (*touwei*) ■■; eyes – **ST-2** (*sibai*) ■■; mouth/teeth – **ST-7** (*xiaguan*) ■■; throat – **ST-10** (*shuitu*); Spleen, Stomach, Gall Bladder – **ST-21** (*liangmen*); Kidney – **ST-29** (*guilai*); abdominal region – **ST-25** (*tianshu*) ■■, **ST-26** (*wailing*), **ST-30** (*qichong*) ■■; foot – **ST-34** (*liangqiu*) ■■, **ST-36** (*zusanli*) ■■; toes – **ST-41** (*jiexi*) ■■
- **Distal points (→ 8.2.1):** frontal headaches – **ST-44** (*neiting*) ■■; nose – **ST-44** (*neiting*) ■■; mouth/teeth – **ST-44** (*neiting*) ■■; throat – **ST-44** (*neiting*) ■■; shoulder region – **ST-38** (*tiakou*) ■■; Lung – **ST-40** (*fenglong*) ■■; Spleen/Stomach – **ST-36** (*zusanli*) ■■; Large Intestine – **ST-37** (*shangjuxu*) ■■; Small Intestine – **ST-39** (*xiajushu*) ■■; epigastrium – **ST-36** (*zusanli*) ■■; shoulder – **ST-36** (*zusanli*) ■■, **ST-38** (*tiakou*) ■■

Specific points according to the channel pathway (in numerical order)

- **ST-1** (*chengqi*) ■■: meeting point with the *ren mai, yang qiao mai*, du mai* (→ 8.1.10); local point for the eyes (→ 8.2.1)
- **ST-2** (*sibai*) ■■: meeting point with the *yang qiao mai** (→ 8.1.10); adjacent point for the eyes (→ 8.2.1)
- **ST-3** (*juliao*): meeting point with the *yang qiao mai* (→ 8.1.10)
- **ST-4** (*dicang*): meeting point with the Large Intestine channel, *yang qiao mai, du mai*, ren mai** (→ 8.1.10); local point for the mouth/teeth (→ 8.2.1)
- **ST-5** (*daying*): meeting point with the Gall Bladder channel
- **ST-6** (*jiache*) ■■: Sun Si Miao Ghost point (→ 8.1.15); meeting point with the Gall Bladder channel* (→ 8.1.10); local point for the mouth/teeth (→ 8.2.1)
- **ST-7** (*xiaguan*) ■■: meeting point with the Gall Bladder channel (→ 8.1.10); adjacent point for the teeth and jaw (8.2.1); local point for the jaw (→ 8.2.1)
- **ST-8** (*touwei*) ■■: meeting point with the Gall Bladder channel, *yang wei mai* (→ 8.1.10); adjacent point for frontal headaches (→ 8.2.1)
- **ST-9** (*renying*): meeting point with the Gall Bladder channel (→ 8.1.10); Sea of Qi point (→ 8.1.13); Window of Heaven point (→ 8.1.12)
- **ST-10** (*shuitu*): adjacent point for the neck (→ 8.2.1)
- **ST-12** (*quepen*): meeting point with the L.I., S.I., T.B. and G.B. channels (→ 8.1.10)
- **ST-21** (*liangmen*): adjacent point for the Spleen, Stomach and Gall Bladder (→ 8.2.1)
- **ST-25** (*tianshu*) ■■: Front-*mu* point of the Large Intestine (→ 8.1.5); adjacent point for the abdominal region (→ 8.2.1)
- **ST-26** (*wailing*): adjacent point for the abdominal region (→ 8.2.1)
- **ST-28** (*shuidao*): local point for the Small Intestine and Bladder (→ 8.2.1)
- **ST-29** (*guilai*): local point for the urogenital region (→ 8.2.1)
- **ST-30** (*qichong*) ■■: meeting point with the *chong mai*, G.B. channel* (→ 8.1.10); Sea of Water and Grain point (→ 8.1.13); local point for the urogenital region (8.2.1); adjacent point for the abdominal region (→ 8.2.1)
- **ST-34** (*liangqiu*) ■■: *xi*-cleft point, important adjacent point for disorders of the knee (→ 8.2.1)
- **ST-35** (*dubi*) ■■: local point for the knee region (→ 8.2.1)
- **ST-36** (*zusanli*) ■■: *he*-sea point (Earth) (→ 8.1.6), *ben*-point (Five Phase point); Lower *he*-sea point of the Stomach (→ 8.1.9); *Gao Wu* command point (→ 8.1.11) for the abdomen; Sea of Water and Grain point (→ 8.1.13); *Ma Dan Yang* Heavenly Star point (→ 8.1.14); distal point for the Spleen/Stomach and epigastrium (→ 8.2.1); local point for the knee (→ 8.2.1); distal point for the shoulder (→ 8.2.1); adjacent point for the foot (→ 8.2.1)

* Mentioned by only some authors.

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- **ST-37** (*shangjuxu*) ■■: Lower *he*-sea point of the Large Intestine (→ 8.1.9); Sea of Blood point (→ 8.1.13); distal point for the Large Intestine (→ 8.2.1)
- **ST-38** (*tiakou*) ■■: distal point for the shoulder region (→ 8.2.1)
- **ST-39** (*xiajushu*) ■■: Lower *he*-sea point of the Small Intestine (→ 8.1.9); Sea of Blood point (→ 8.1.13); distal point for the Small Intestine (→ 8.2.1)
- **ST-40** (*fenglong*) ■■: *luo*-connecting point (→ 8.1.2); main 'Phlegm'-point; distal point for the Lung (→ 8.2.1)
- **ST-41** (*jiexi*) ■■: *jing*-river point (Fire) (→ 8.1.6); tonification point; local point for the foot (8.2.1); adjacent point for the toes (→ 8.2.1)
- **ST-42** (*chongyang*) ■■: *yuan*-source point (→ 8.1.1)
- **ST-43** (*xiangu*) ■■: *shu*-stream point (Wood) (→ 8.1.6)
- **ST-44** (*neiting*) ■■: *ying*-spring point (Water) (→ 8.1.6); distal point for frontal headaches, as well as for the nose, mouth/teeth and throat (→ 8.2.1); Ma Dan Yang Heavenly Star point (→ 8.1.14)
- **ST-45** (*lidui*) ■■: *jing*-well point (Metal) (→ 8.1.6); sedation point.

General location help

- **ST-1** to **ST-4**: with the patient looking straight ahead, these points are located on the vertical pupil line
- **ST12** to **ST-18** are all located on the midclavicular/mamillary line, 4 cun lateral to the anterior midline
  - **ST-12**: in the supraclavicular fossa
  - **ST-13**: on the lower border of the clavicle
  - **ST-14** to **ST-18**: in the first to fifth intercostal spaces
- **ST-19** to **ST-30** are all located on a vertical line midway between the mamillary line and the anterior midline, 2 cun lateral to the anterior midline:
  - **ST-19** to **ST-25** are located on the 8 cun section (→ 2.2) between the sternocostal angle and the umbilicus (**ST-19** to **ST-25** are evenly spread on this line, from 6 cun above the umbilicus to the same level as the umbilicus)
  - **ST-26** to **ST-30** are located on the 5 cun section (→ 2.2) between the umbilicus and the upper border of the pubic symphysis (1 cun steps from 4 cun superior to the upper border of the pubic symphysis to its upper border).

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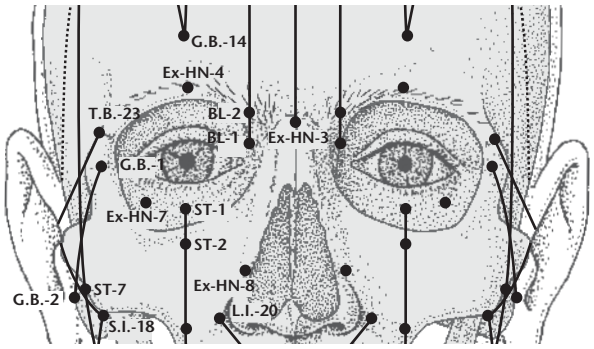
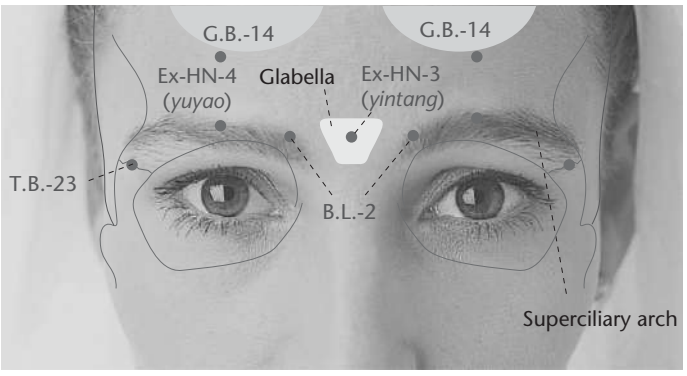
Container of Tears CHENGQI ST-1





Location

With the eyes looking straight ahead, directly below the centre of the pupil, between the eyeball and the infraorbital ridge.

How to find

With the patient looking straight ahead, the first four points of the ST channel are located on a vertical line drawn through the centre of the pupil. Within the area of the lower eyelid, the infraorbital ridge presents itself as a distinct bony structure. **ST-1** is located on the pupil line, directly superior to the infraorbital ridge.

Needling

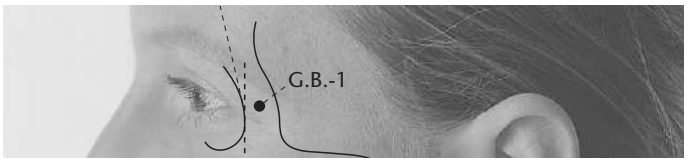
Ask the patient to look upward, gently push the eyeball upwards and insert the needle vertically along the orbital ridge in a dorsal direction. Caution: Venous plexus and arteries, avoid injuring the eyeball and periost! Needling recommended only by experienced practitioners! Pay attention to needling pain! No needle manipulation! After removing the needle, press firmly on the insertion site for about one minute to prevent haematoma. Inform the patient that it may still be possible for a haematoma to develop. Moxibustion is contraindicated! Points for disorders of the eyes with less risk of complications include **BL-2**, **T.B.-21**, **G.B.-1**, **ST-2**, **Ex-HN-5** (*taiyang*), **EX-HN-4** (*yuyao*).

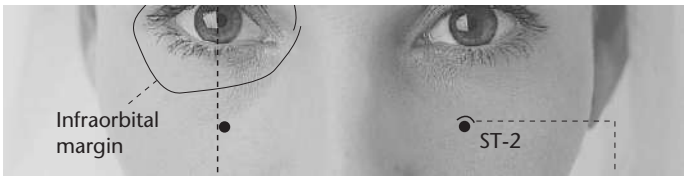
Actions/Indications

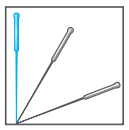
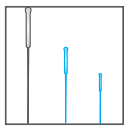
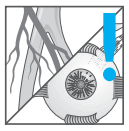
- Expels Wind and Heat, clears and benefits the eyes

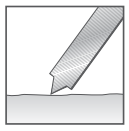
Special features

Meeting point with the *yang qiao mai* and *ren mai*, also with the *du mai* according to some authors, important point for the eyes, entry point.







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ST-2 *Four Whites* SIBAI

Location

With the eyes looking straight ahead, directly below the centre of the pupil, in the depression at the infraorbital foramen.

How to find

With the patient looking straight ahead, the first four points of the ST channel are located on a vertical line drawn through the centre of the pupil. Within the area of the lower eyelid, the infraorbital ridge presents itself as a distinct bony structure. Starting at the infraorbital ridge (→ 3.1.2), palpate inferiorly until you can feel the depression of the infraorbital foramen (this is often located slightly medial to the pupil line), where **ST-2** is located.

Needling

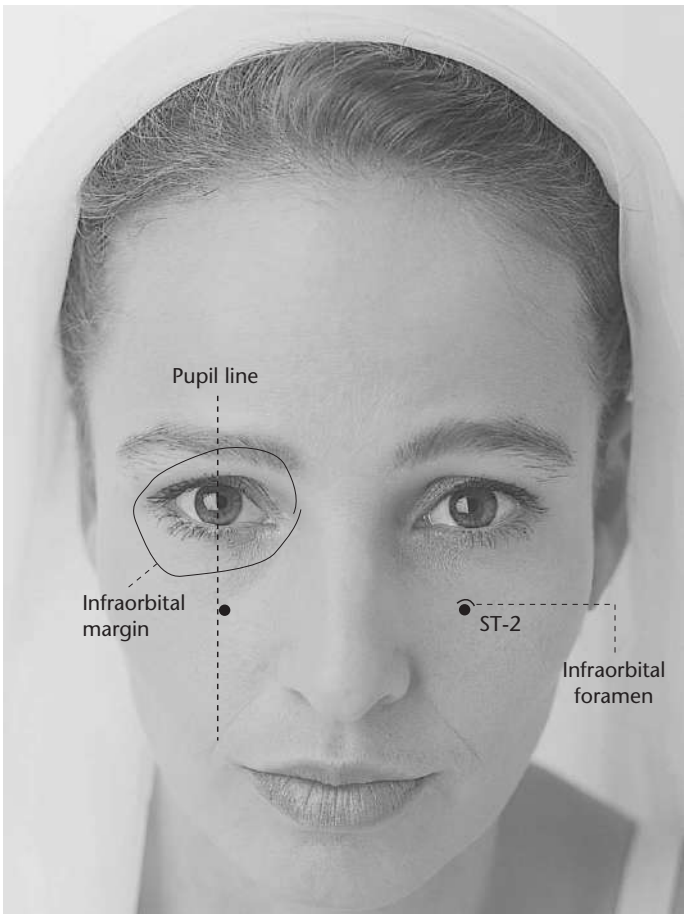
0.3–0.5 cun vertically or transversely (subcutaneously) towards → **S.I.-18** or → **L.I.-20** (for example, in cases of facial paralysis). Deep needling (in an oblique cranial direction) is contraindicated. Caution: Infraorbital nerve, eye injury. According to some classic texts, moxibustion is contraindicated.

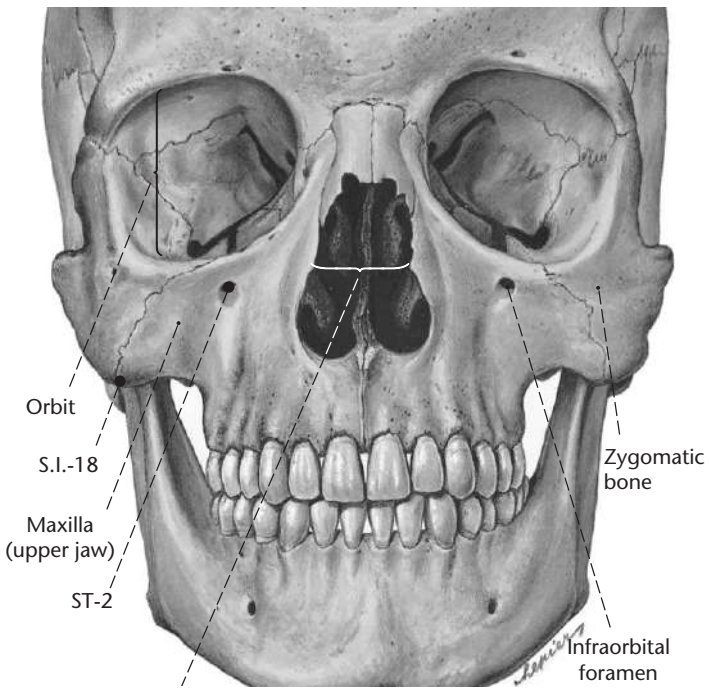
Actions/Indications

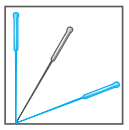
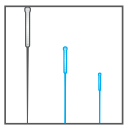
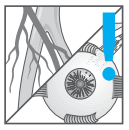
- Benefits the eyes, clears Heat, eliminates Wind

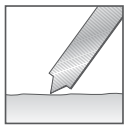
Special features

Important local point for disorders of the eyes, pain and paralysis of the face; meeting point with the *yang qiao mai* according to some authors. A less risky substitute for → **ST-1**.







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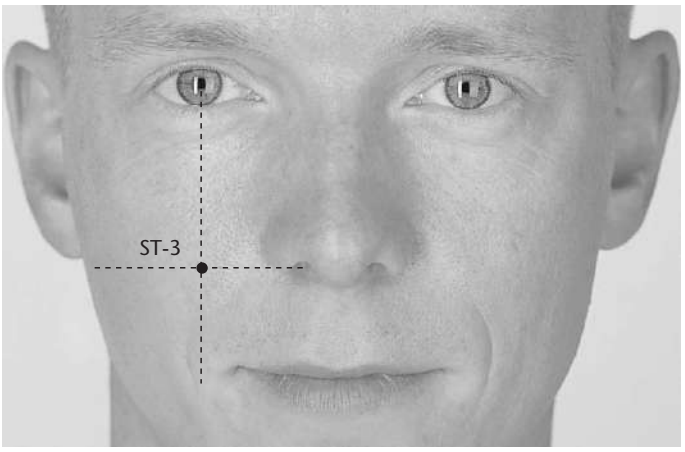
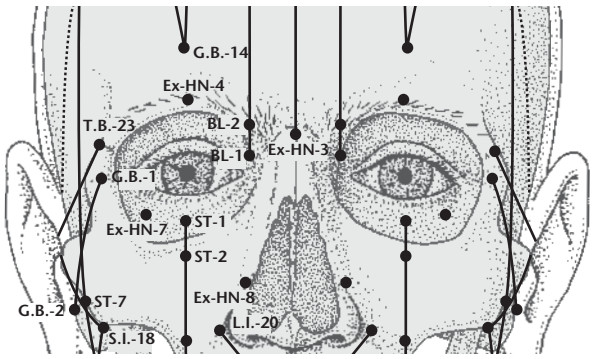
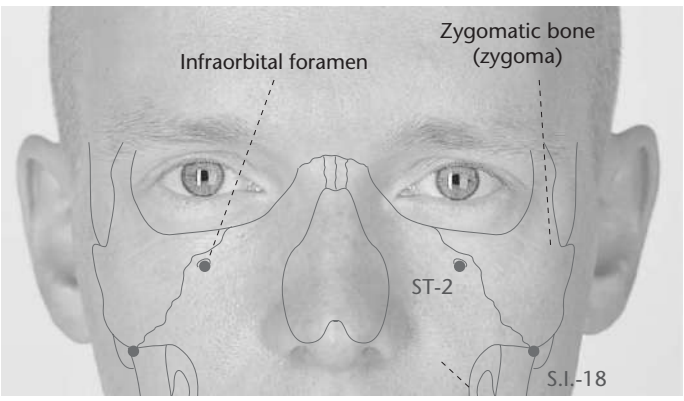
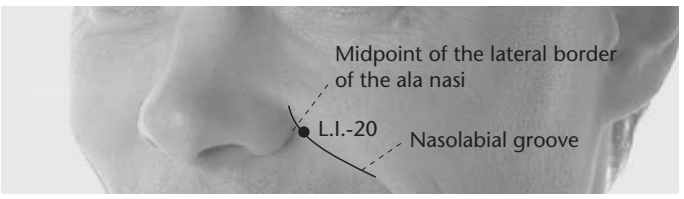
Great Crevice JULIAO ST-3









Location

With the patient looking straight ahead, directly below the centre of the pupil, on the level of the lower border of the ala nasi.

How to find

With the patient looking straight ahead, the first four points of the ST channel are located on a vertical line drawn through the centre of the pupil (pupil line). **ST-3** is located at the crossing point of the pupil line and a horizontal line on the level of the lower border of the ala nasi.

Needling

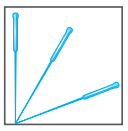
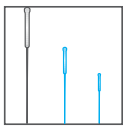
Vertically or obliquely 0.3–0.5 cun or penetration method: transversely (subcutaneously) towards → **ST-4,** → **S.I.-18**, etc, for example, in cases of peripheral facial paralysis.

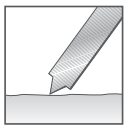
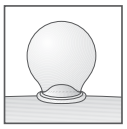
Actions/Indications

- Expels Wind, opens the channel, disperses accumulations

Special features

Meeting point with the *yang qiao mai*

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ST-4 *Earth Granary* DICANG

Location

With the patient looking straight ahead, directly below the centre of the pupil and approximately 0.4 cun lateral to the corner of the mouth.

How to find

With the patient looking straight ahead, the first four points of the ST channel are located on a vertical line drawn through the centre of the pupil (pupil line). **ST-4** is located at the crossing point of the pupil line and a horizontal line originating at the corner of the mouth. The point is located in the nasolabial groove (→ 3.1.2), approximately 0.4 cun lateral to the corner of the mouth. Ask the patient to smile in order to make the line more clearly visible.

Needling

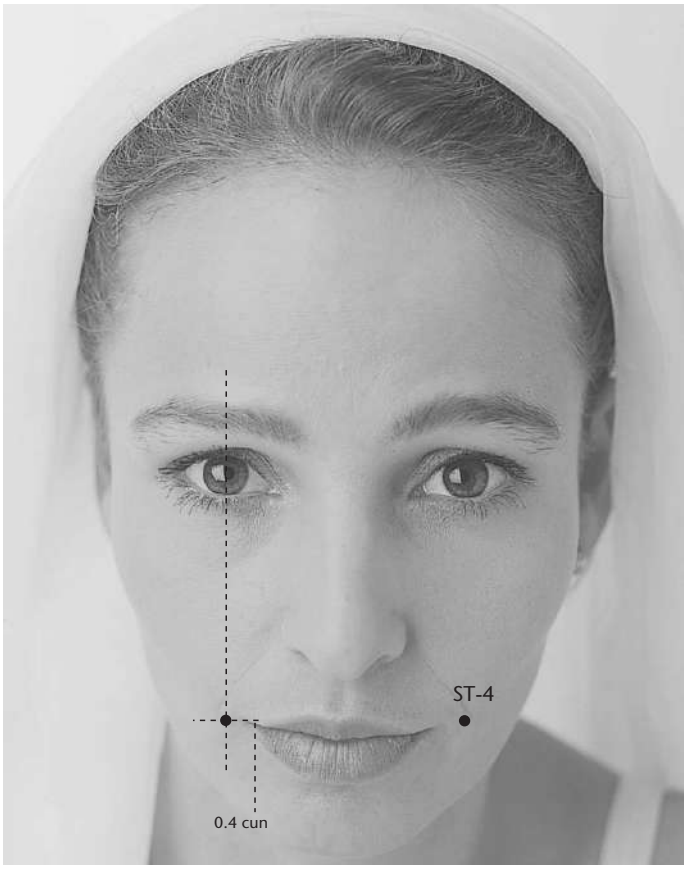
Obliquely in a lateral direction or vertically 0.3–0.5 cun or penetration method: transversely (subcutaneously) approximately 1.5–2 cun in cases of facial paralysis towards → **ST-6**, for trigeminal neuralgia towards → **L.I.-20**. Caution: Facial artery/vein.

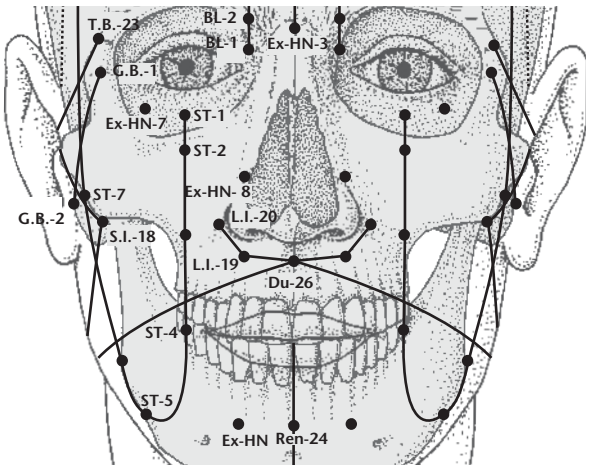
Actions/Indications

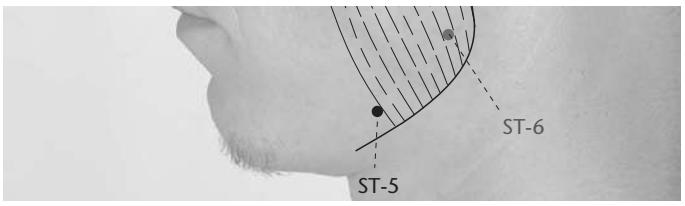
- Expels Wind (from the face), opens the channel, alleviates pain, relaxes the facial musculature
- Sometimes as distal point for disorders of the leg

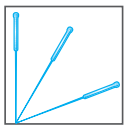
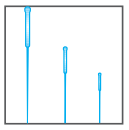
Special features

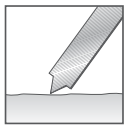
Meeting point with the L.I. channel, the *ren mai* and *yang qiao mai* (also with the *du mai* according to some authors). Important local point for neuralgias and pareses affecting the mouth and cheeks.









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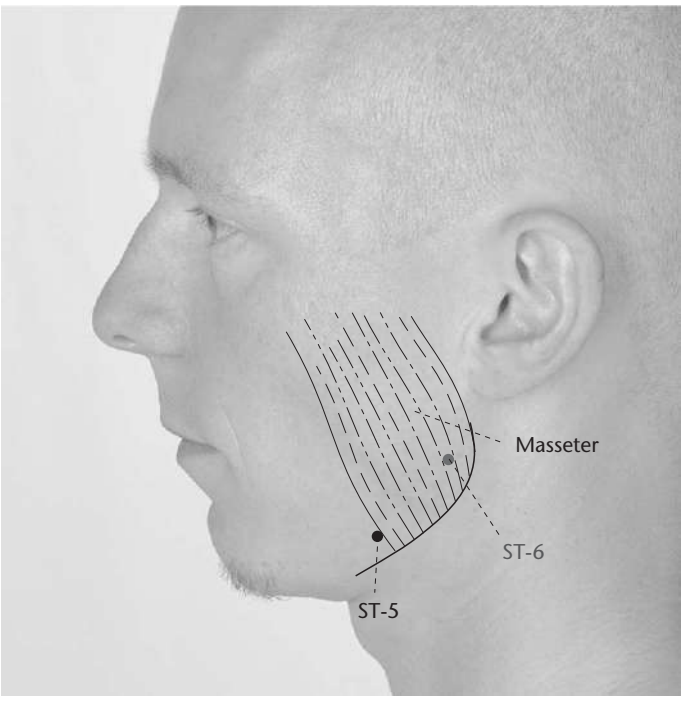
Great Welcome DAYING ST-5



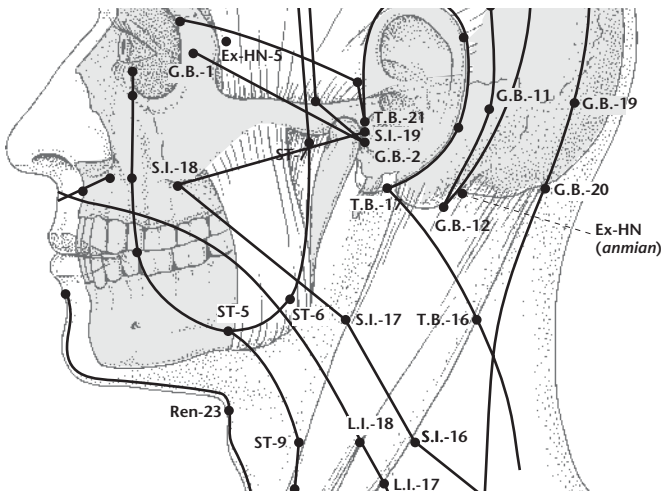
Location
On the lateral mandible, anterior to the masseter muscle.

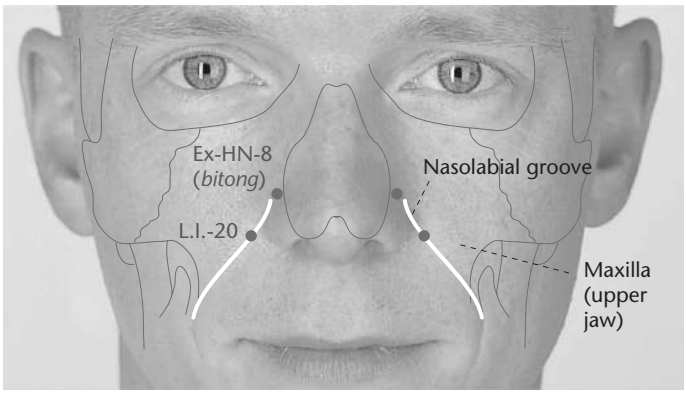
How to find
By asking the patient to clench their teeth, the anterior border of the masseter muscle becomes clearly palpable. **ST-5** is located directly anterior to the border of the muscle, in a shallow depression on the mandible and slightly above the angle of the jaw. Here, the facial artery can be palpated.

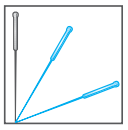
Needling
0.3–0.5 cun obliquely or transversely (subcutaneously) in the direction of → **ST-6**. Caution: Facial artery/vein.

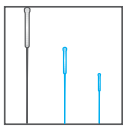
Actions/Indications
- Expels Wind, opens the channels

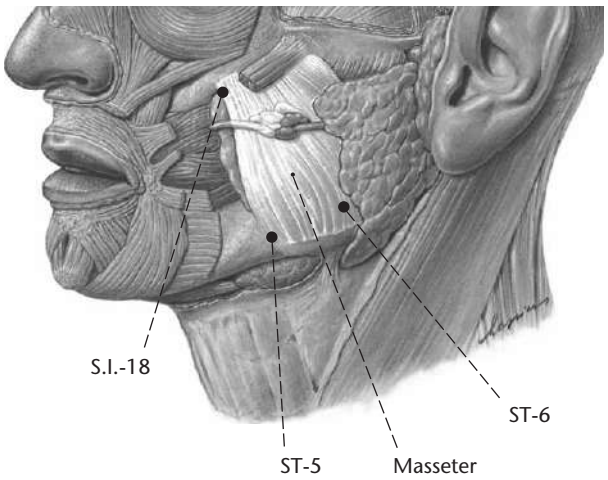
Special features
Meeting point with the G.B. channel according to some authors

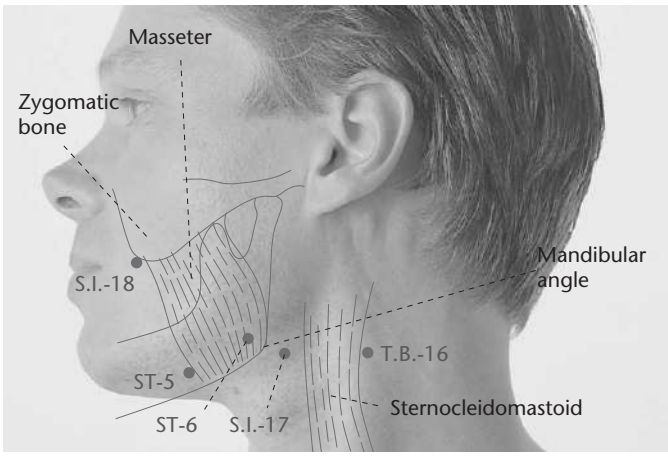


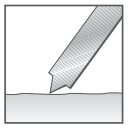












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ST-6 *Jaw Bone* JIACHE

Location

With the teeth clenched, on the highest prominence of the masseter muscle, approximately one finger-width (middle finger) anterior and superior to the angle of the jaw.

How to find

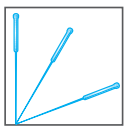
Ask the patient to clench their teeth, which will allow the muscle belly of the masseter muscle to bulge. **ST-6** is located on its prominence, a little anterior and superior to the angle of the jaw (mandibular angle → 3.1.3). With chewing movements of the jaw ('biting and relaxing'), the palpating finger will naturally fall into the right depression when the muscle is relaxed.
→ **ST-5** is located more medially in the depression at the anterior border of the masseter muscle.

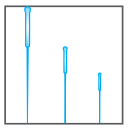
Needling

Insertion with the patient's mouth slightly opened (relaxed masseter muscle). Vertically 0.3–0.5 cun or obliquely or transversely (subcutaneously) 1–1.5 cun in the direction of → **ST-4**, **ST-5**, **ST-7**, for example, in cases of facial paralysis.

Actions/Indications

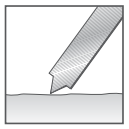
- Eliminates Wind, benefits the jaw and teeth, opens the channel and *luo* vessels, alleviates pain

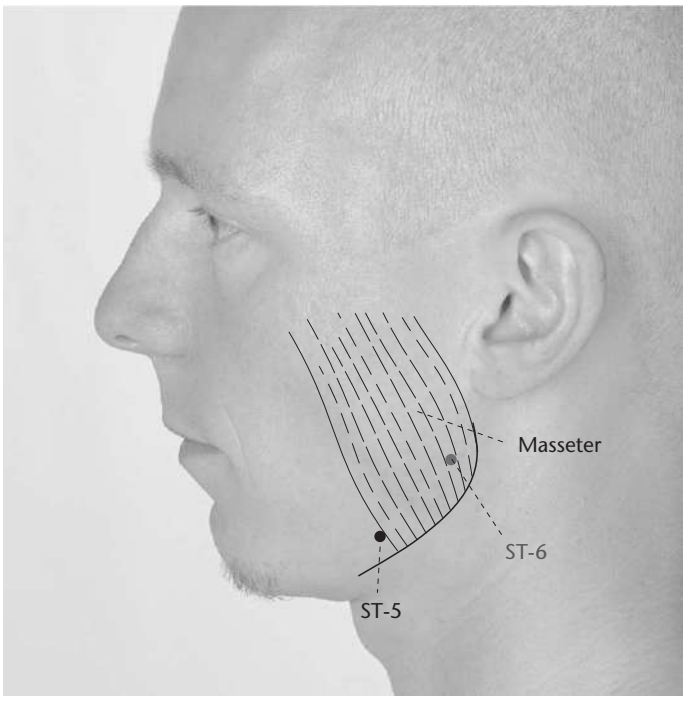


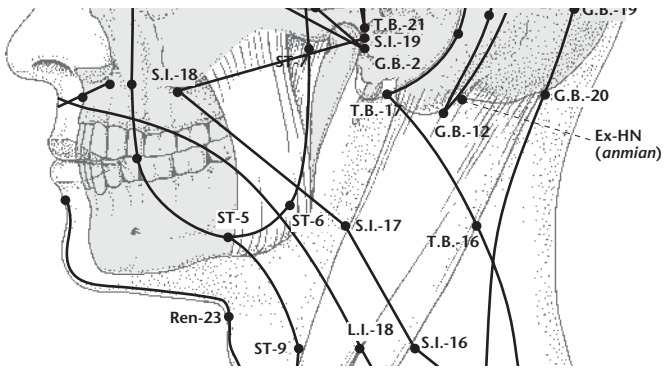


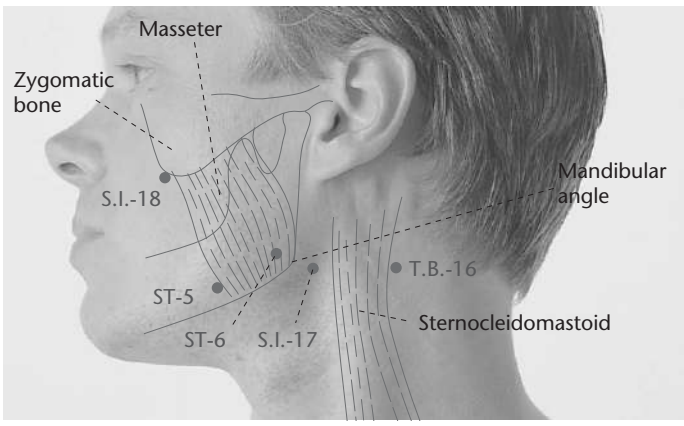
Special features

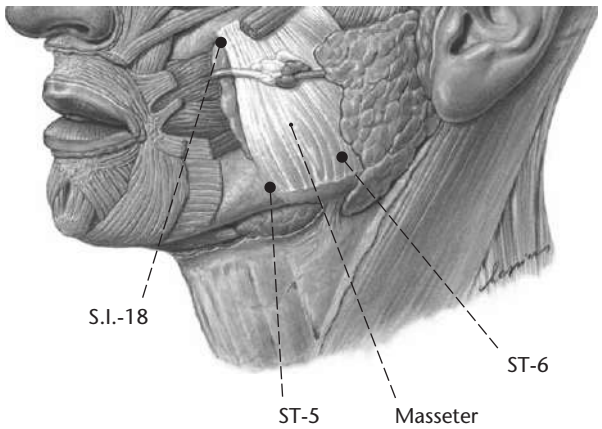
Sun Si Miao Ghost point. Important local point for the jaw region. Its location corresponds to a commonly used trigger point on the masseter muscle. According to some authors, **ST-6** is a meeting point with the G.B. channel.











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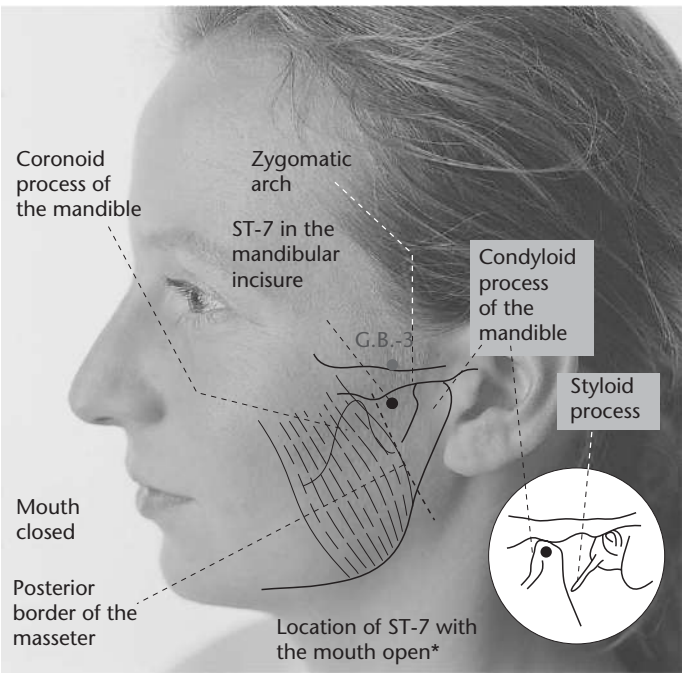
Below the Joint XIAGUAN ST-7



Location

With the mouth closed, at the lower border of the zygomatic arch (→ 3.1.2) in the centre of the depression of the mandibular fossa, between the coronoid process and the condyloid process of the mandible.

How to find

Palpate along the lower border of the zygomatic arch (→ 3.1.2) towards the ear. **ST-7** is located in a clearly palpable depression just before the temporomandibular joint and at the posterior border of the masseter muscle (clench teeth). To confirm: When the patient's mouth is fully opened, the condyloid process of the lower jaw slides anteriorly and the depression disappears (figure modified after Deadman et al).

→ **G.B.-3** is located directly superior to **ST-7**, on the upper border of the zygomatic arch.

Needling

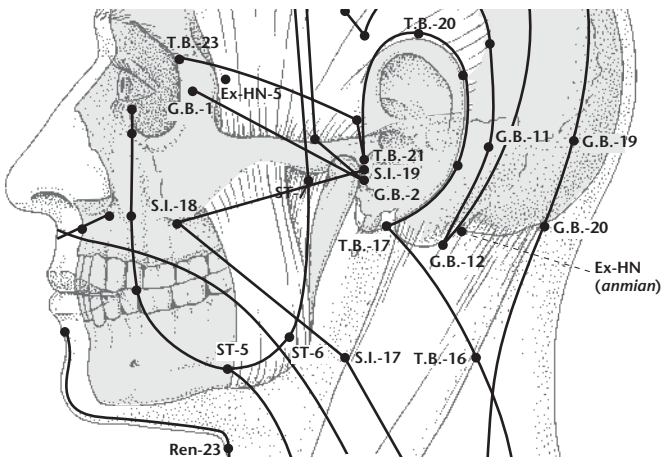
Insert the needle with the patient's mouth closed. 0.3–0.5 cun vertically or 1–1.5 cun transversely (subcutaneously) in the direction of → **ST-6**, → **S.I.-19**, → **S.I.-18**.

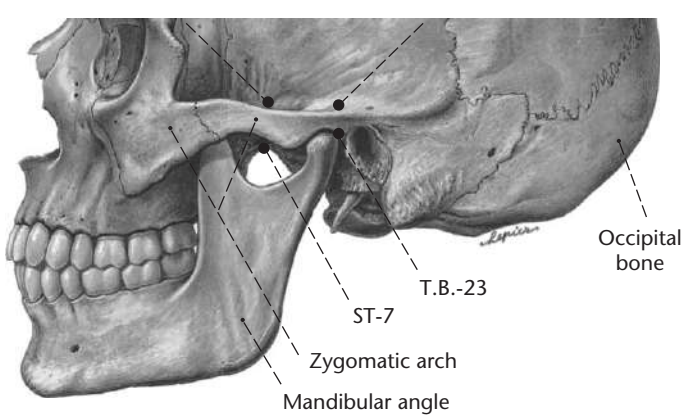
Actions/Indications

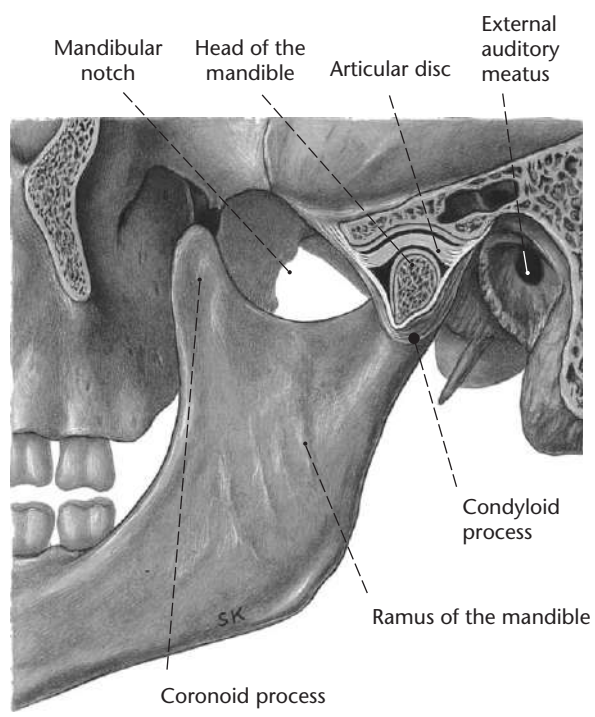
- Opens the channel, benefits the jaw and teeth, alleviates pain
- Benefits the ears

Special features

Meeting point with the G.B. channel. Important local point and frequently used trigger point.







* According to Deadman et al 1998.

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ST-8 *Head's Binding* TOUWEI

Location

At the temporal corner of the forehead, on the border of the temporalis muscle and 0.5 cun within the anterior hairline or 4.5 cun lateral to the anterior midline (→ **Du-24**).

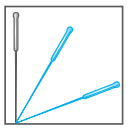
How to find

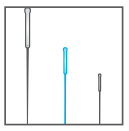
First, find the anterior hairline (→ 3.1.1). Then locate **ST-8** at the temporal corner of the forehead 0.5 cun within the hairline. Chewing movements of the temporalis muscle will still be palpable here.

Also located 0.5 cun superior to the anterior hairline are → **Du-24/BL-3/BL-4/G.B.-15/G.B.-13** (anterior midline/superior to the inner canthus of the eye/1.5 cun lateral to the anterior midline/3 cun lateral to the anterior midline). These distances refer to the distance between → **Du-24** and **ST-8** (=4.5 cun, → 2.2). **ST-8** and → **G.B.-7** (a depression on the level of the apex of the ear, within the temporal hairline) mark the endpoints of a curved line, on which **ST-8 and → G.B.-4–7** are located at regular intervals (by dividing the line into five parts).

Needling

0.5–1 cun transversely (subcutaneously) or obliquely in the direction of the disorder. Moxibustion possible (contraindicated according to some classical texts).



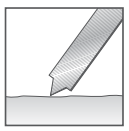


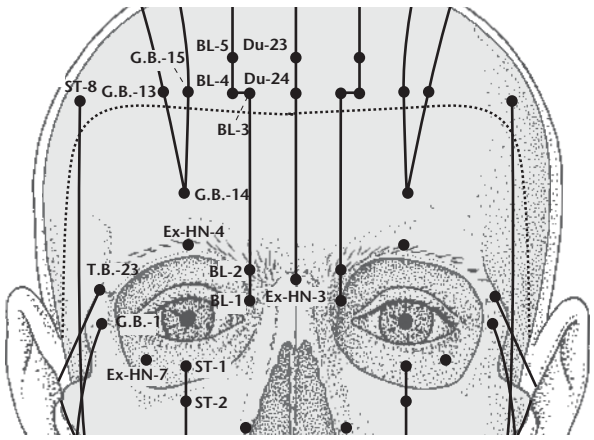
Actions/Indications

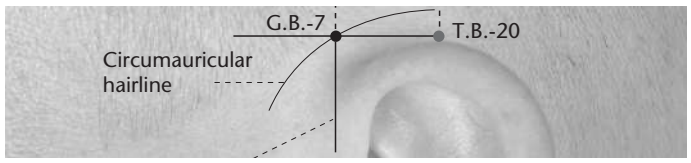
- Eliminates Wind from the head and eyes, benefits the eyes, alleviates pain

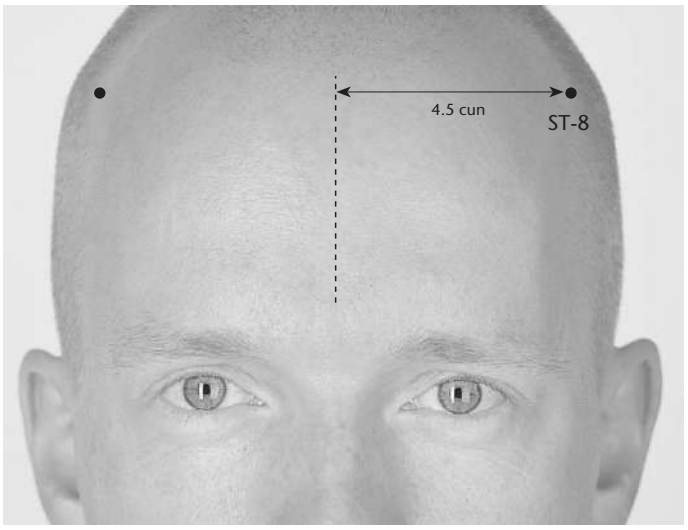
Special features

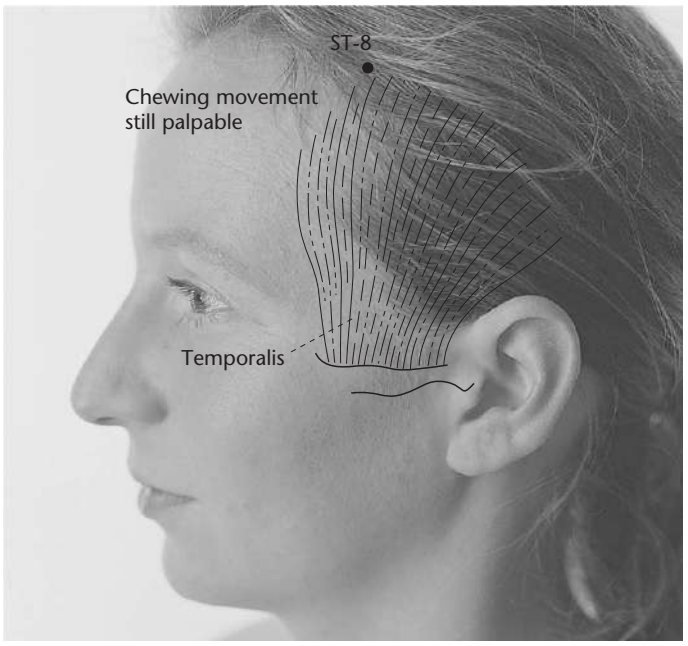
Meeting point with the *yang wei mai* and the G.B. channel. Important local point for headaches and disorders of the eyes.

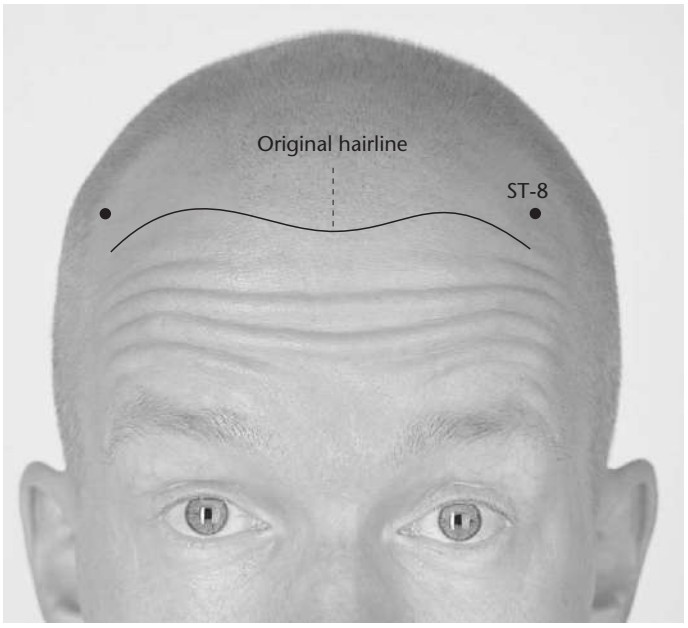












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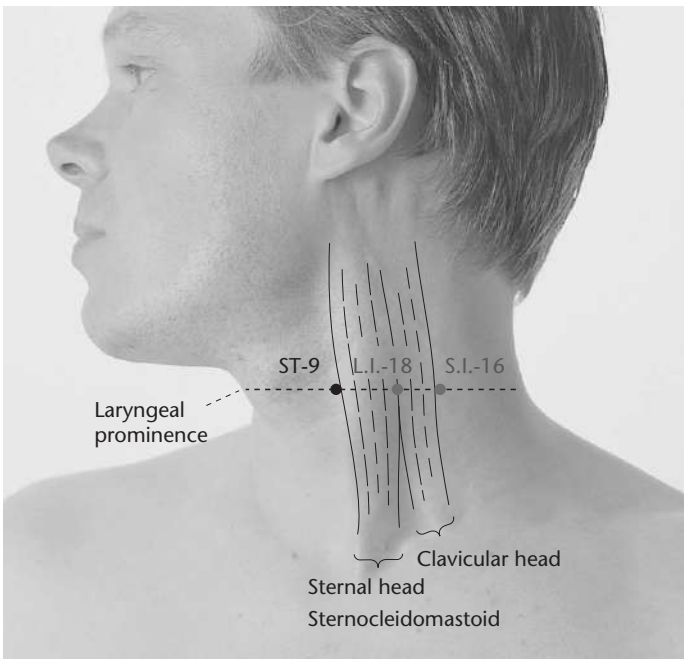
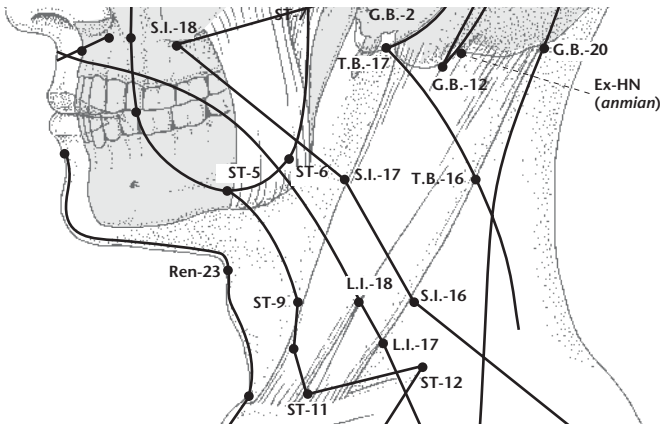
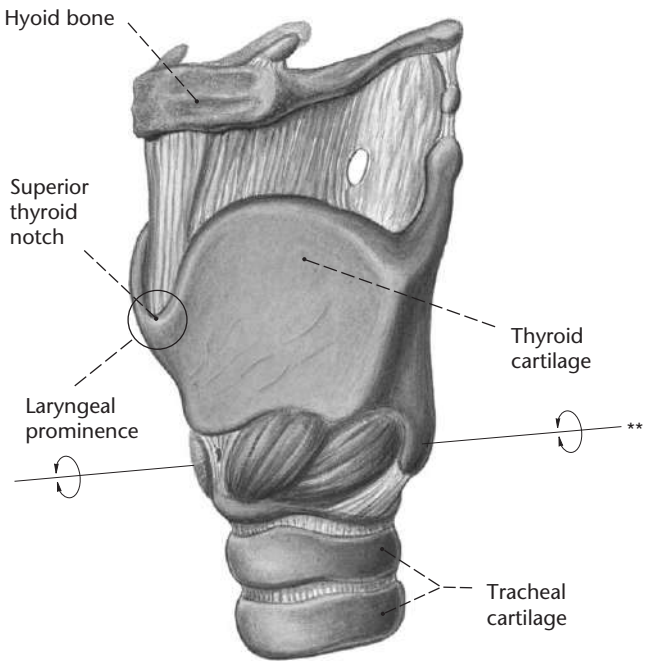
Man's Welcome RENYING ST-9







Location

1.5 cun lateral to the anterior midline, on the level of the laryngeal prominence and at the anterior border of the sternocleidomastoid muscle.

How to find

From the laryngeal prominence, palpate posteriorly to the anterior border of the sternocleidomastoid muscle (→ 3.2). **ST-9** is located at the anterior border of the muscle, which becomes more clearly visible and palpable if the patient's head is turned in the opposite direction.

Located on the same level are → **S.I.-16** on the posterior border of the sternocleidomastoid muscle and **L.I.-18** between the two heads of the sternocleidomastoid muscle.

Needling

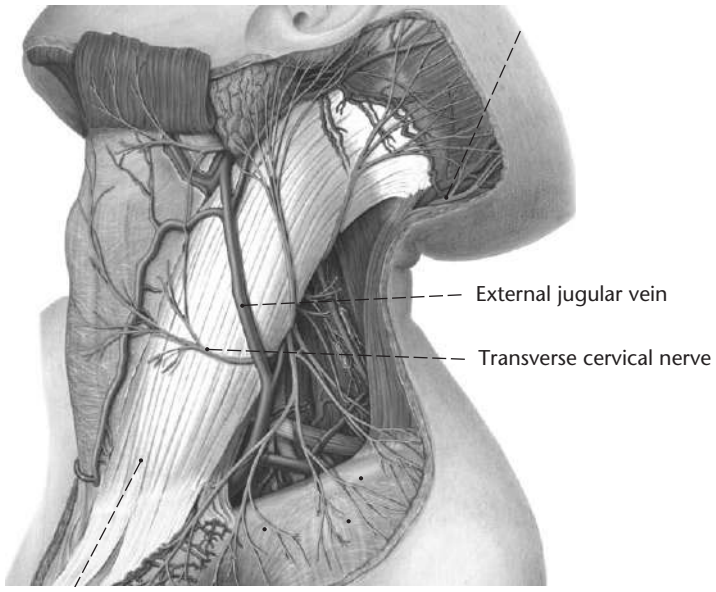
If necessary, move the head to its normal position before needling. Caution: Carotid artery, carotid sinus, jugular veins. The carotid artery is located directly at the anterior border of the sternocleidomastoid muscle. The needle should be inserted anterior to where you can feel the pulsating of the carotid artery. Vertically 0.5–1 cun between the artery and the thyroid cartilage. For reasons of safety, the artery should be held in a lateral position with one finger of the palpating hand above and one finger below the insertion site. Irritation of the carotid sinus can lead to a lowering of the blood pressure and fainting!

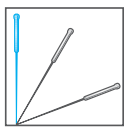
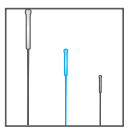
Actions/Indications

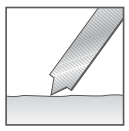
- Regulates the Qi
- Opens the channel
- Harmonises excess or deficiency in the thorax

Special features

Window of Heaven point, Sea of Qi point, meeting point with the G.B. channel.





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ST-10 *Water Prominence* SHUITU

Location

On the anterior border of the sternocleidomastoid muscle, at the midpoint of a line connecting → **ST-9** and **ST-11**.

How to find

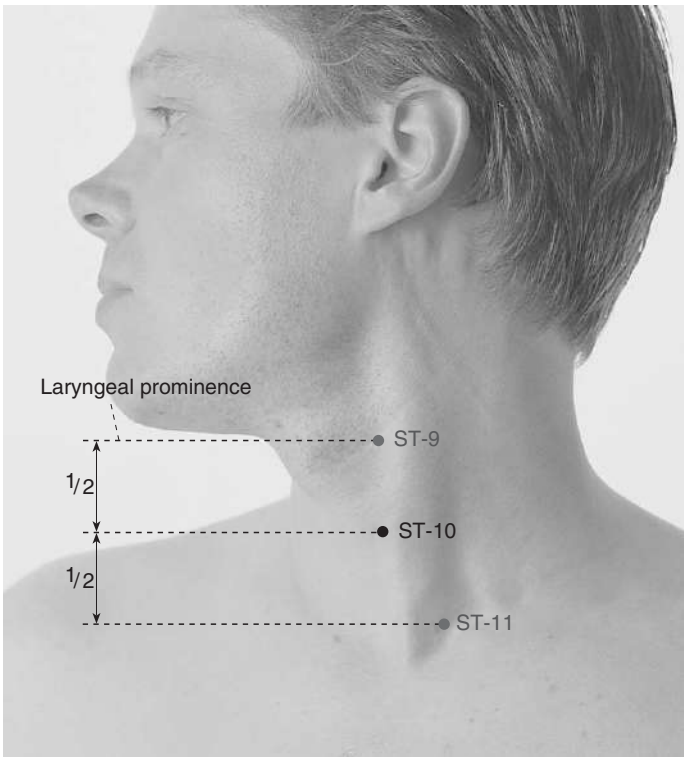
→ **ST-9** and **ST-10** are both located on the anterior border of the sternocleidomastoid muscle (→ 3.2). → **ST-11** is located posterior to the sternal head. Place the middle finger of the left hand onto → **ST-9** on the level of the laryngeal prominence and the thumb on → **ST-11** posterior to the sternal insertion. **ST-10** is located at the midpoint between the two fingers. With the patient's head rotated in the opposite direction, the muscle will be more visible and can be more easily palpated.

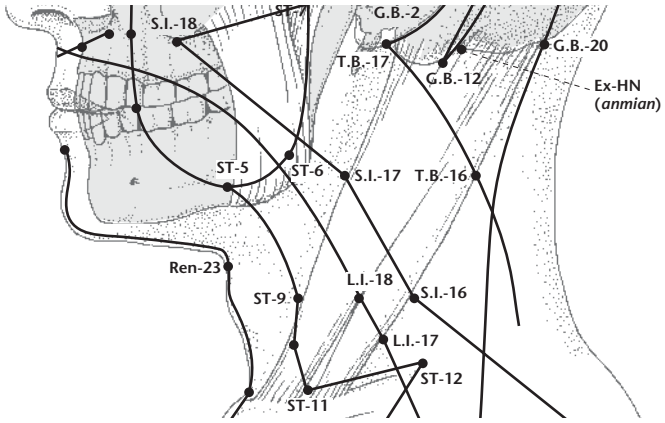
Needling

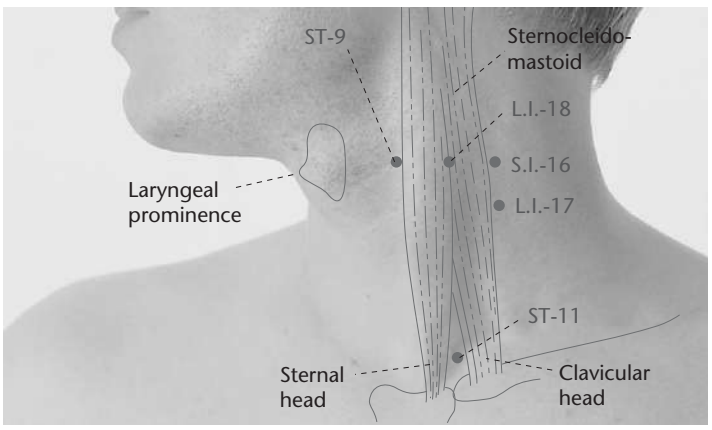
0.5–1 cun obliquely in a medial direction, away from the artery. Caution: Carotid artery, jugular veins. If necessary, rotate the head back to a middle position before needling.

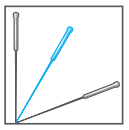
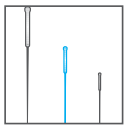
Actions/Indications

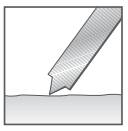
- Regulates the Lung Qi
- Benefits the throat









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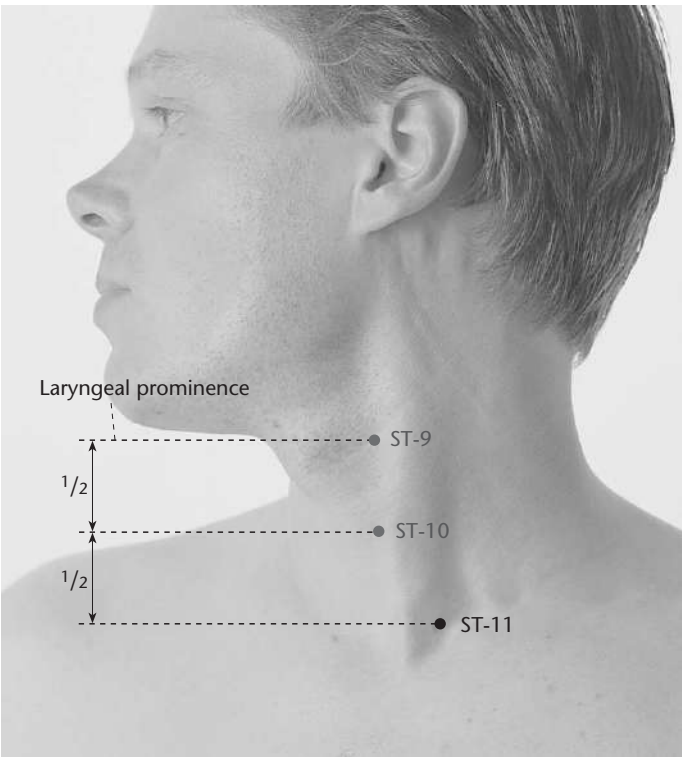
Qi Abode QISHE ST-11



Location

On the upper border of the clavicle, between the tendons of the sternal and clavicular heads of the sternocleidomastoid muscle.

How to find

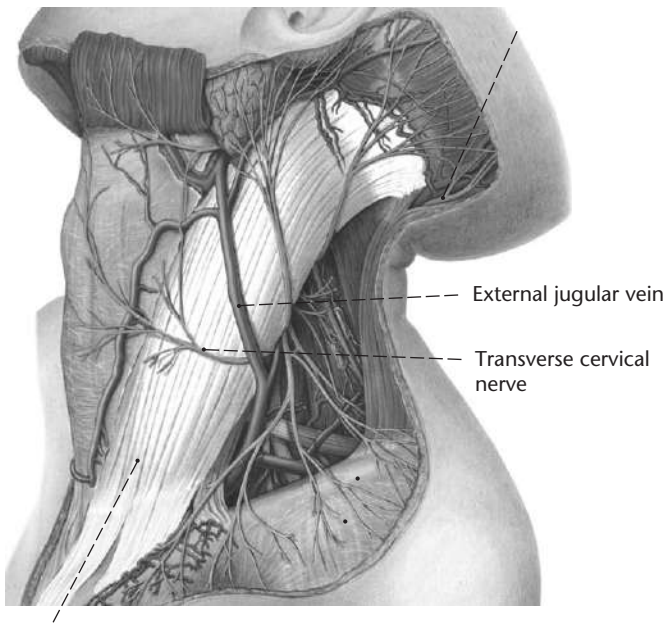
By rotating the patient's head in the opposite direction (especially against resistance), the ropey sternal insertion of the sternocleidomastoid muscle (→ 3.2) becomes clearly visible. **ST-11** is located in a shallow depression, the minor supraclavicular fossa, between the sternal insertion and the more extended insertion of the clavicular head.

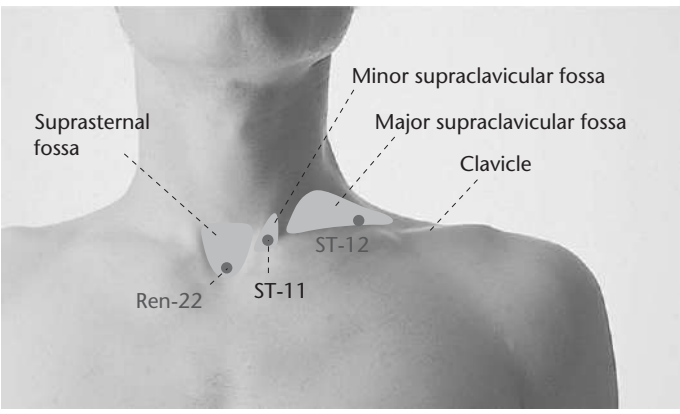
Needling

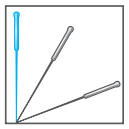
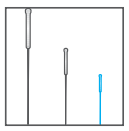
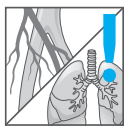
Vertically 0.3–0.5 cun. Caution: Pneumothorax, jugular veins.

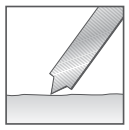
Actions/Indications

- Benefits the throat and neck
- Regulates counterflow Qi







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ST-12 *Empty Basin* QUEPEN

Location

In the supraclavicular fossa, superior to the midpoint of the clavicle, approximately 4 cun lateral to the anterior midline.

How to find

From the anterior midline, palpate to the midpoint of the clavicle (=4 cun in a lateral direction). There, an imaginary vertical line marks the midclavicular line. **ST-12** is located on the midclavicular line, at the upper border of the clavicle, in the supraclavicular fossa, lateral to the clavicular head of the sternocleidomastoid muscle.

Needling

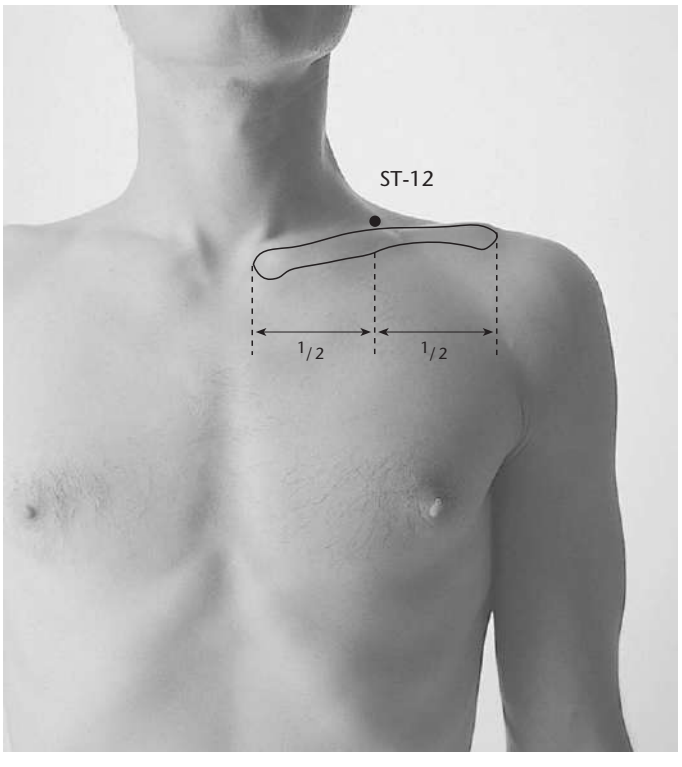
Vertically 0.3–0.5 cun. The needle should be guided along the posterior border of the clavicle. Caution: Pneumothorax, especially with emphysema; superficial and deep cervical arteries. According to some authors, this point is contraindicated during pregnancy.

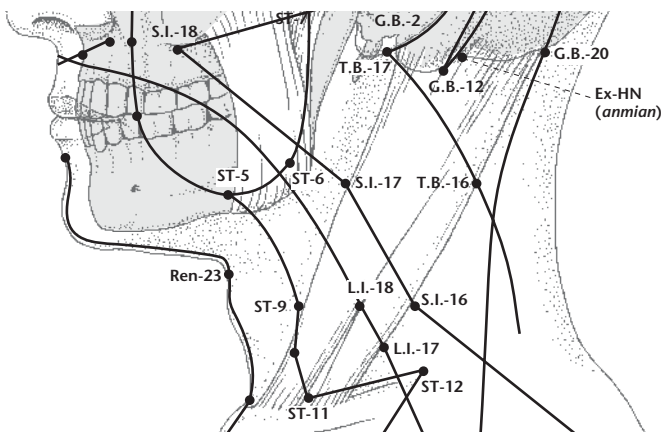
Actions/Indications

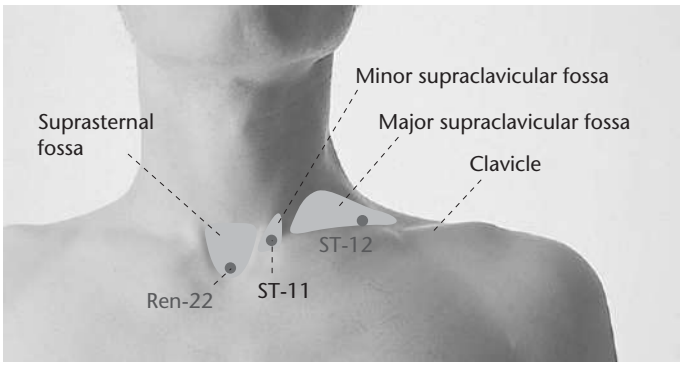
- Opens the channel
- Disperses and descends the Lung Qi
- Clears Heat in the throat

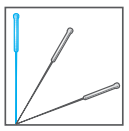
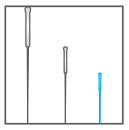
Special features

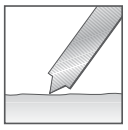
Meeting point with the L.I., S.I., G.B. and T.B. channel









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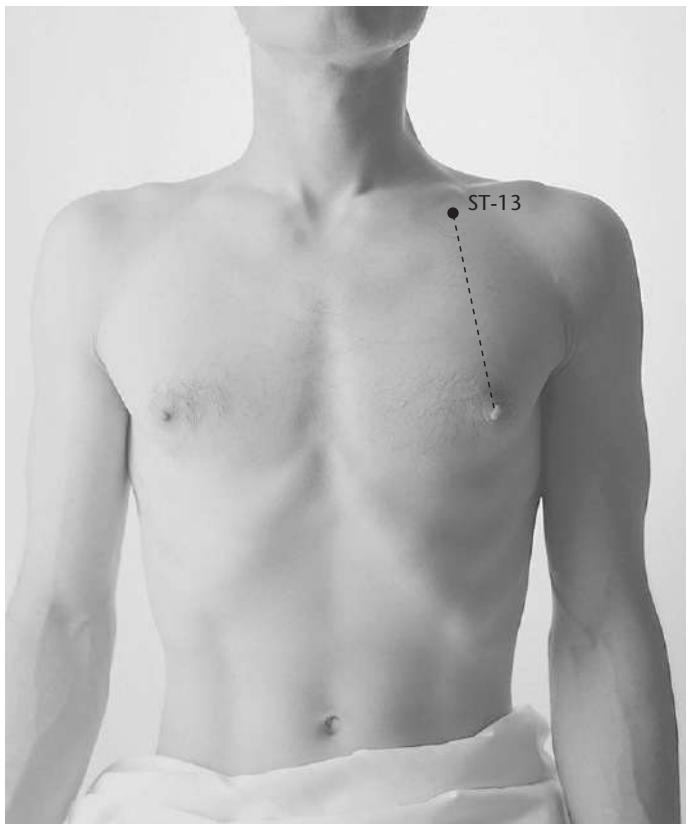
Qi Door QIHU ST-13



Location

At the midpoint of the clavicle and on its inferior border, 4 cun lateral to the anterior midline.

How to find

On the upper thorax region, the midclavicular line (4 cun lateral to the anterior midline) runs slightly obliquely from the clavicular midpoint to the generally more lateral nipple. Find the midpoint of the clavicle (or measure 4 cun lateral to the midline) and locate **ST-13** at the lower border of the clavicle. Since the 1st rib curves posteriorly in a short bow, **ST-13** is generally situated lateral to the 1st rib.

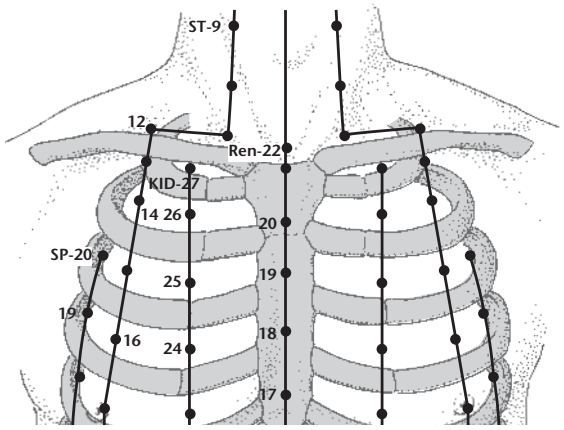
→ **KID-27** is located medial to **ST-13**, but inferior to the lower border of the clavicle and 2 cun lateral to the anterior midline. → **Ren-21** is located on the midline. → **ST-14** is located only slightly inferior to **ST-13** in the 1st intercostal space.

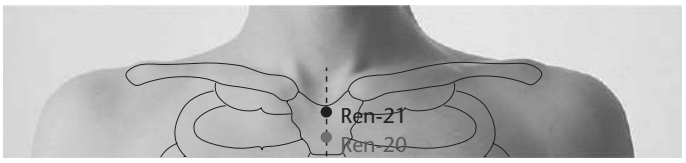
Needling

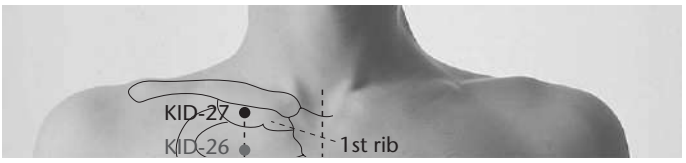
0.3–0.5 cun obliquely in a lateral or medial direction or transversely (subcutaneously) along the channel pathway. Caution: Pneumothorax, subclavicular artery/vein.

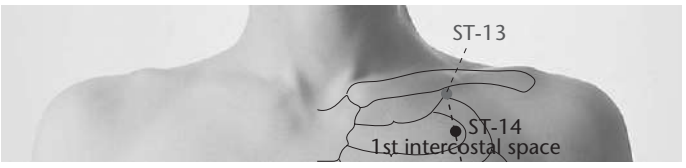
Actions/Indications

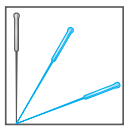
- Descends counterflow Qi
- Clears Heat
- Unbinds the chest

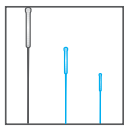


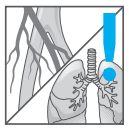


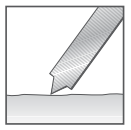












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ST-14 *Store House* KUFANG

Location

On the midclavicular line, in the first intercostal space, 4 cun lateral to the anterior midline.

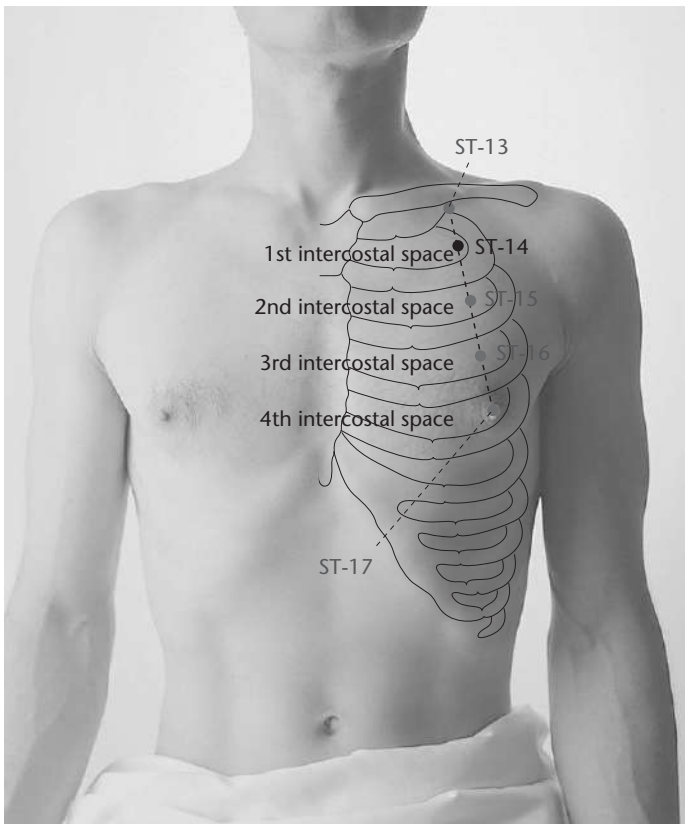
How to find

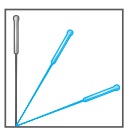
On the upper thorax, the midclavicular line (4 cun lateral to the anterior midline) runs slightly obliquely from the clavicular midpoint to the generally more lateral nipple. By palpating across the clavicle from superior to inferior, the first rib will generally be felt directly below the clavicle, although, in some cases, the 1st rib might be completely hidden under the clavicle. The 1st intercostal space follows directly inferior to the 1st rib, where **ST-14** is located.

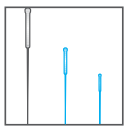
→ **ST-13** is located only slightly superior to **ST-14** at the lower border of the clavicle. Also located on the level of the first intercostal space are → **Ren-20** (anterior midline), → **KID-26** (2 cun lateral to the anterior midline) and → **LU-1** (6 cun lateral to the midline). For more detail about orientation regarding intercostal spaces → 3.5.

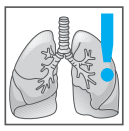
Needling

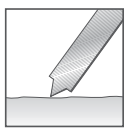
0.5–0.8 cun obliquely or transversely (subcutaneously), parallel to the course of the intercostal space or with or against the channel pathway. Caution: Pneumothorax.





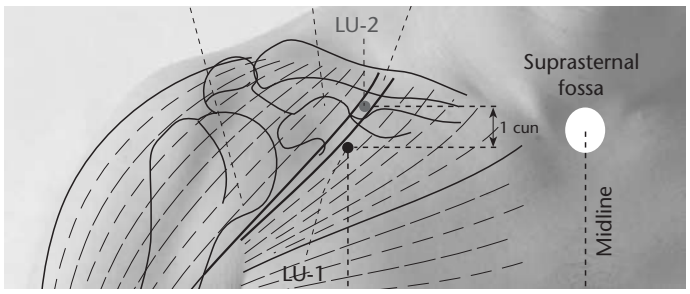


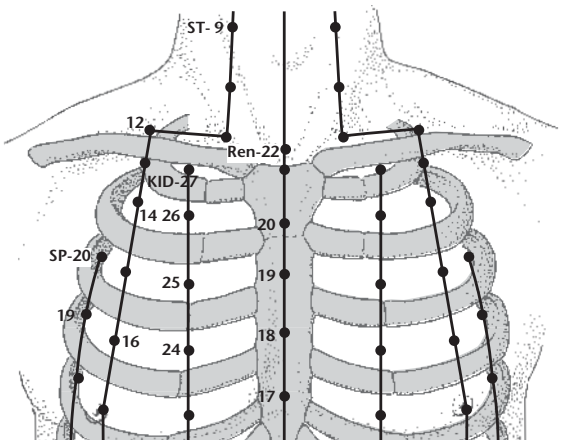


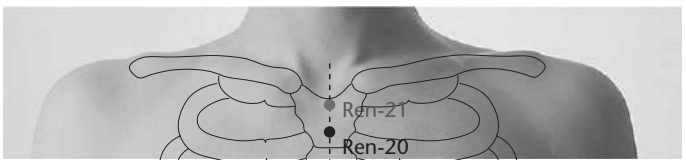


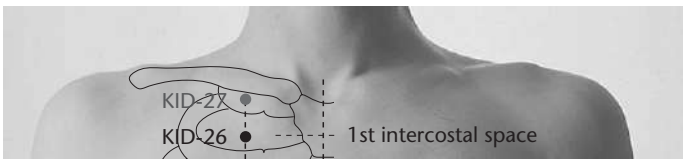
Actions/Indications

- Regulates the Qi
- Unbinds the chest
- Benefits the breasts









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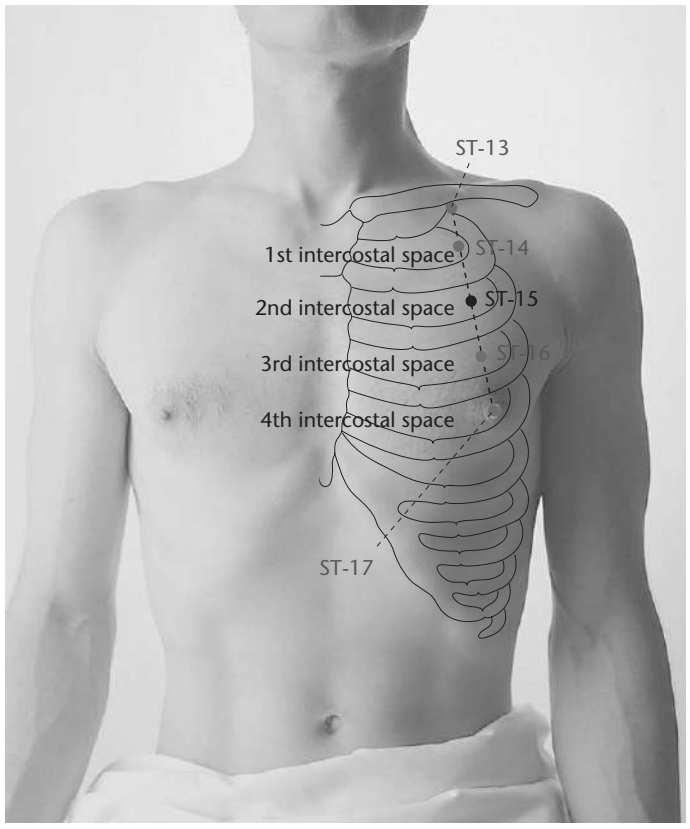
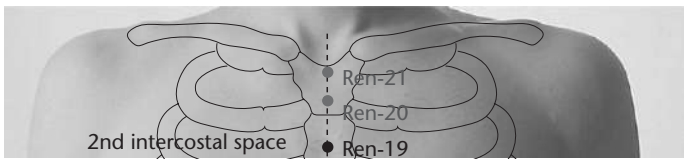
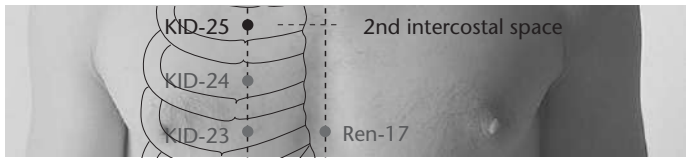
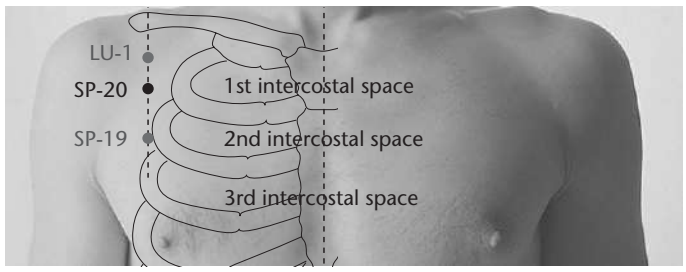
Room Screen WUYI ST-15









Location

In the 2nd intercostal space, on the midclavicular line, 4 cun lateral to the anterior midline.

How to find

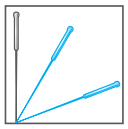
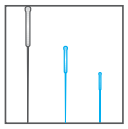
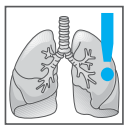
On the upper thorax, the midclavicular line (4 cun lateral to the anterior midline) runs slightly obliquely from the clavicular midpoint to the generally more lateral nipple. Locate the 2nd intercostal space by palpating downward from the clavicle or by palpating from the manubriosternal synchondrosis (second rib) (→ 3.5). Then palpate along its course to the midclavicular line, where **ST-15** is located. Note the ascending course of the intercostal space! Located on the same level are → **Ren-19** (anterior midline), → **KID-25** (2 cun lateral to the anterior midline) and → **SP-20** (6 cun lateral to the midline).

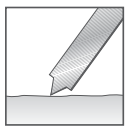
Needling

0.5–0.8 cun obliquely or transversely (subcutaneously), parallel to the course of the intercostal space or with or against the channel pathway. Caution: pneumothorax.

Actions/Indications

- Regulates the Lung Qi
- Unbinds the chest
- Benefits the breasts and clears Heat



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ST-16 *Breast Window* YINGCHUANG

Location

In the 3rd intercostal space, on the midclavicular line, 4 cun lateral to the anterior midline.

How to find

On the upper thorax, the midclavicular line (4 cun lateral to the anterior midline) runs slightly obliquely from the clavicular midpoint to the generally more lateral nipple. Locate the 3rd intercostal space by palpating downward from the clavicle or by palpating from the manubriosternal synchondrosis (second rib) (→ 3.5). Then palpate along its course to the midclavicular line, where **ST-16** is located. Note the ascending course of the intercostal space! In male patients, this point can also be located by counting one intercostal space upward from the level of the nipple.

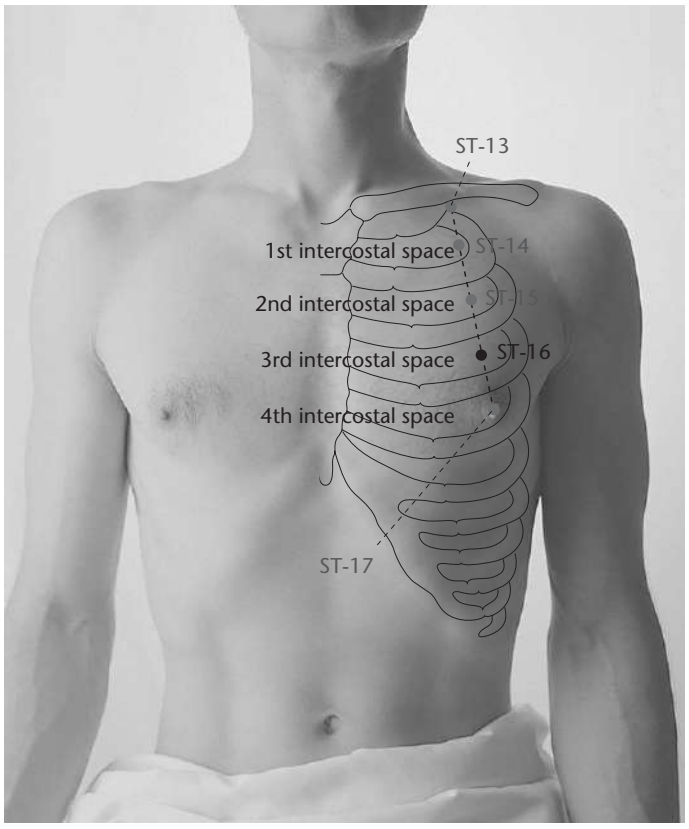
Located on the same level are → **Ren-18** (anterior midline), → **KID-24** (2 cun lateral to the anterior midline) and → **SP-19** (6 cun lateral to the midline).

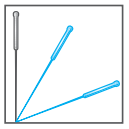
Needling

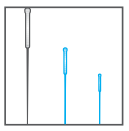
0.5–0.8 cun obliquely or transversely (subcutaneously), along the course of the intercostal space or with or against the flow of the channel. Caution: pneumothorax.

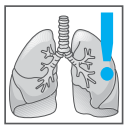
Actions/Indications

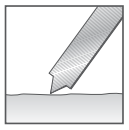
- Regulates the Qi
- Unbinds the chest
- Benefits the breasts

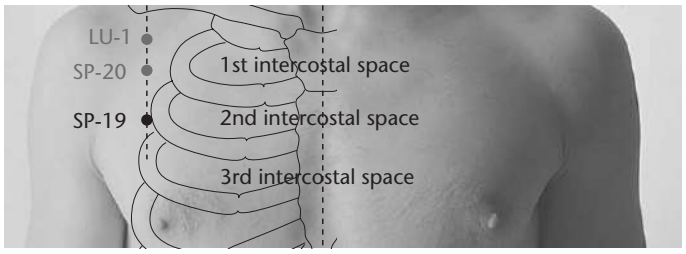


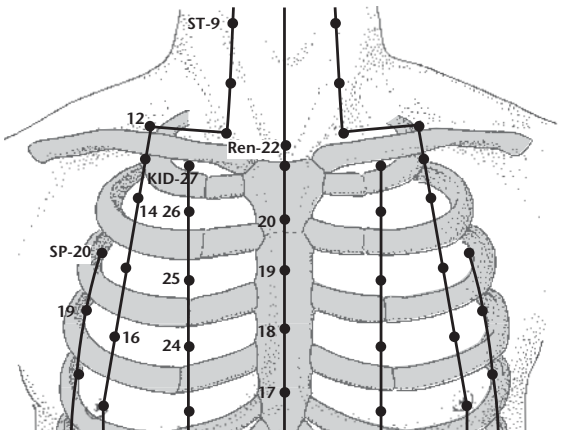


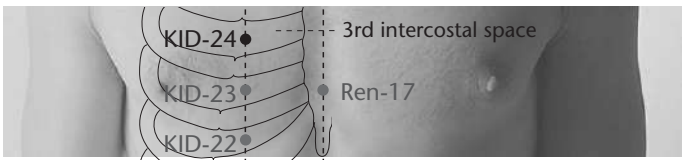












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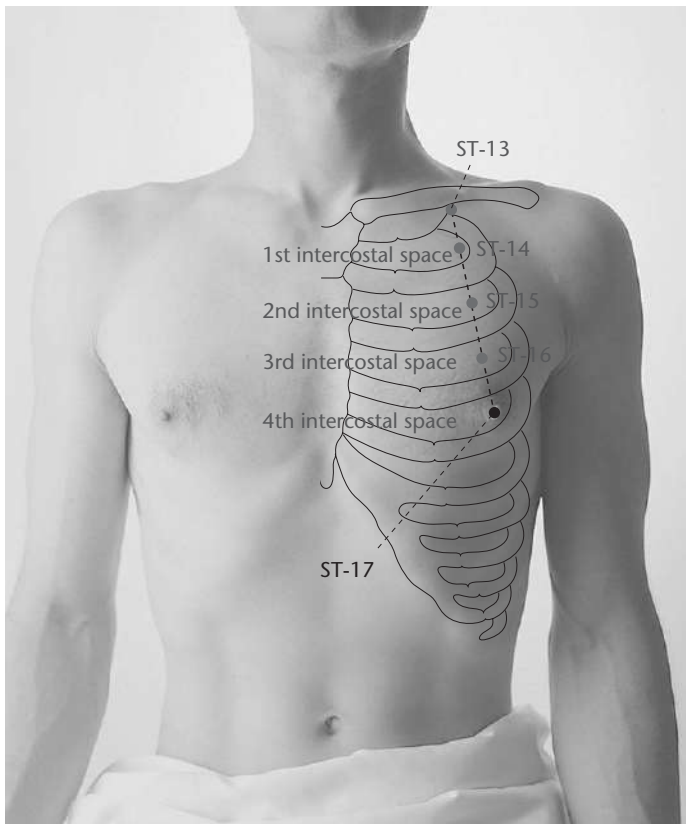
Breast Centre RUZHONG ST-17



Location

In the centre of the nipple.

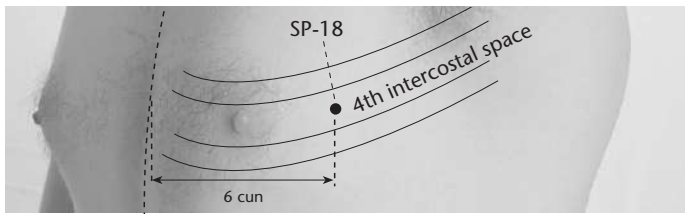
How to find

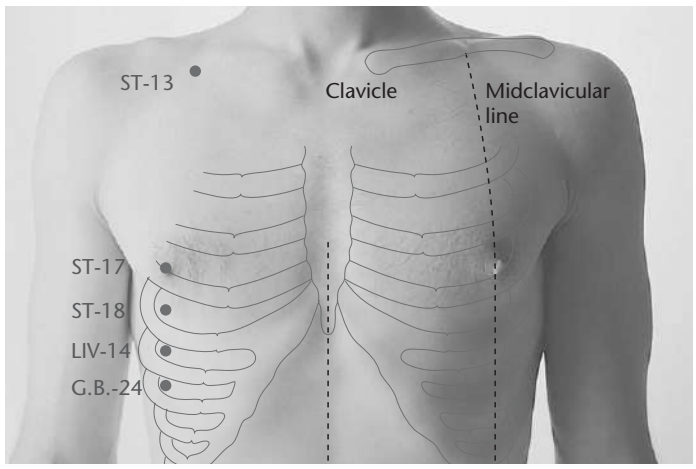
In the centre of the nipple. In men, this is usually located 4 cun lateral to the anterior midline, at the level of the 4th intercostal space and is also used for reference.

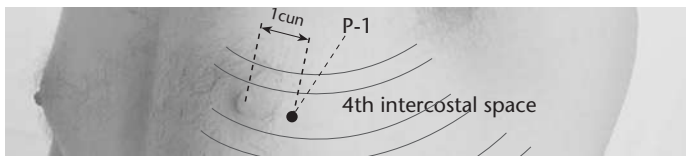
In men, also located on the same level are → **Ren-17** (anterior midline), → **KID-23** (2 cun lateral to the anterior midline), → **SP-18** (6 cun lateral to the midline), → **P-1** (1 cun lateral to the nipple), → **G.B.-22** and → **G.B.-23**. In women, the location of the nipples varies considerably and should therefore not be used for reference.

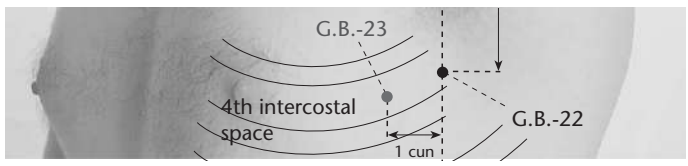
Needling

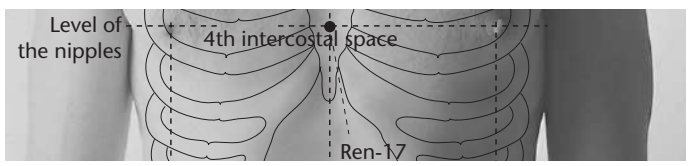
No therapy; this point is for reference only.

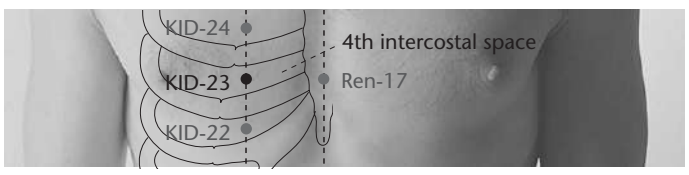


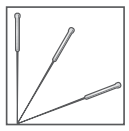
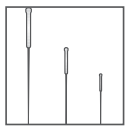


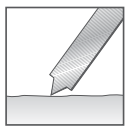










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ST-18 *Breast Root* RUGEN

Location

In the 5th intercostal space, on the mamillary line, 4 cun lateral to the anterior midline.

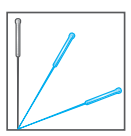
How to find

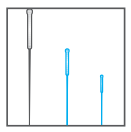
The mamillary line, a vertical line used for reference, is located 4 cun lateral to the anterior midline (→ 3.5). In men, the nipple is generally located on the level of the 4th intercostal space, and **ST-18** is located in the intercostal space directly below. The point is often located at the lower border of the pectoralis major muscle; in women, it is often found at the root of the breast. Location help in women: Find the 5th intercostal space by palpating downward from the clavicle or from the manubriosternal synchondrosis (second rib) (→ 3.5). Then follow the course of the intercostal space laterally to the mamillary line and there locate **ST-18**. Note the ascending course of the intercostal spaces!

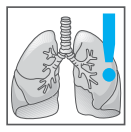
Located on the same level are → **Ren-16** (anterior midline), → **KID-22** (2 cun lateral to the anterior midline) and → **SP-17** (6 cun lateral to the midline).

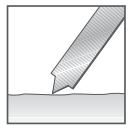
Needling

0.5–0.8 cun obliquely or transversely (subcutaneously), parallel to the course of the intercostal space or with or against the channel pathway. Caution: Pneumothorax.







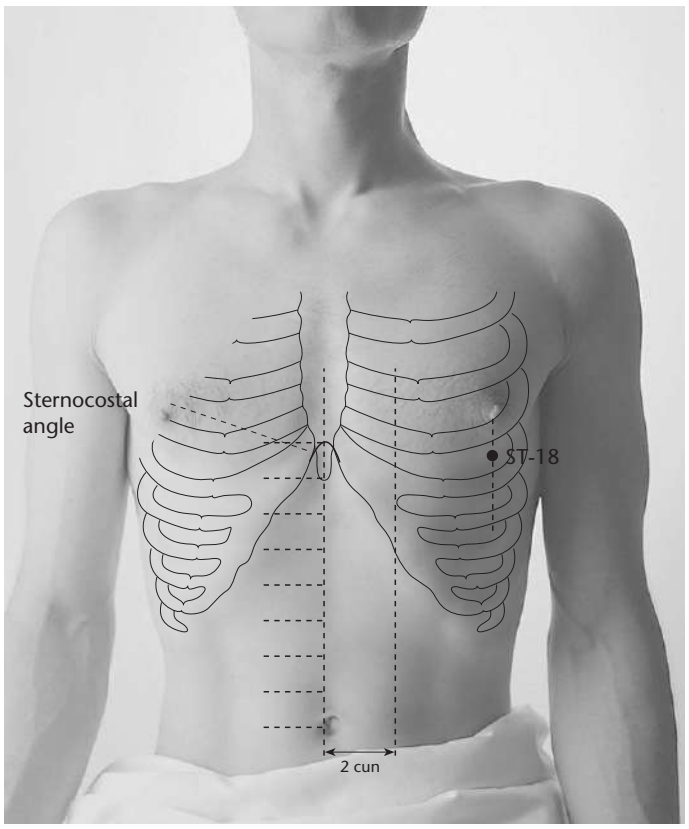


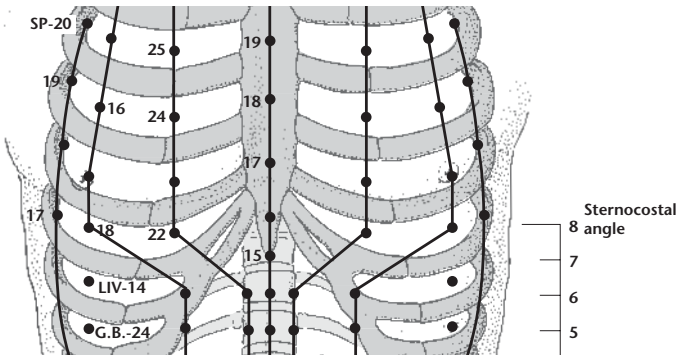
Actions/Indications

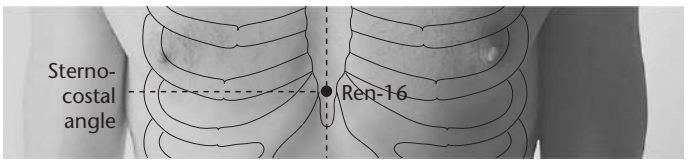
- Benefits the breasts, moves the Blood
- Unbinds the chest
- Regulates the Lung Qi

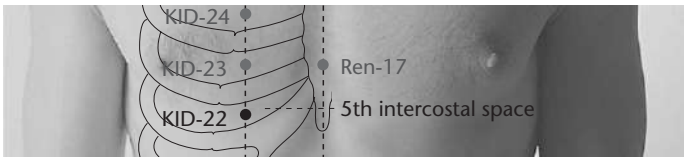
Special features

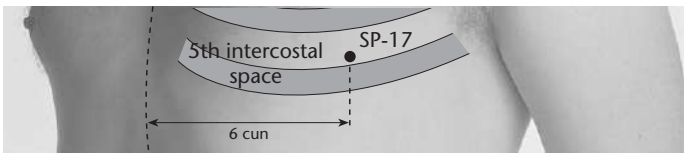
Important local point











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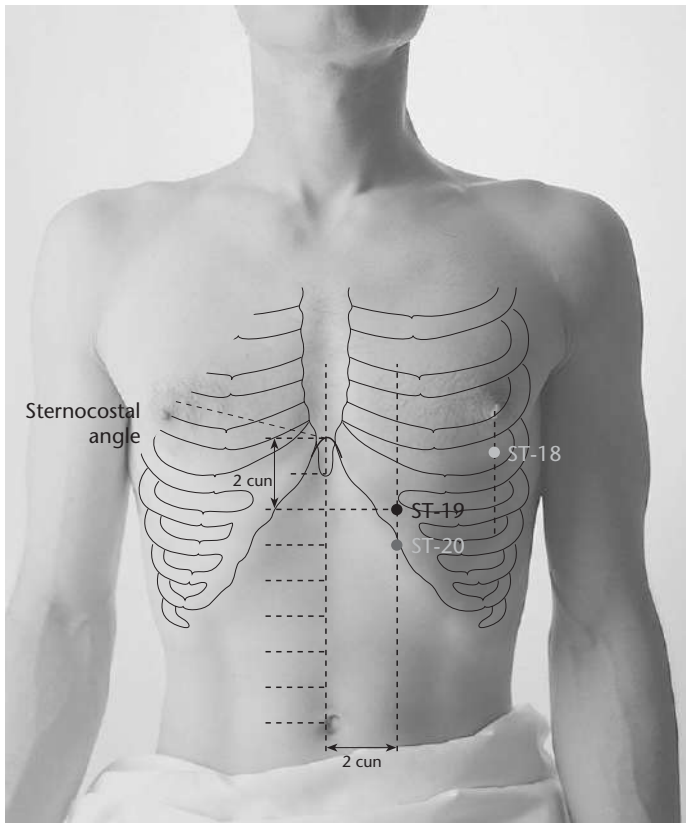
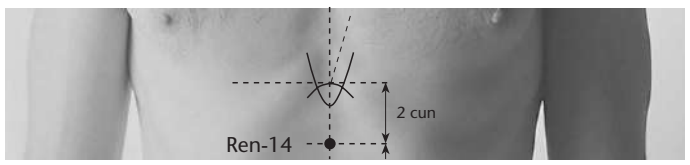
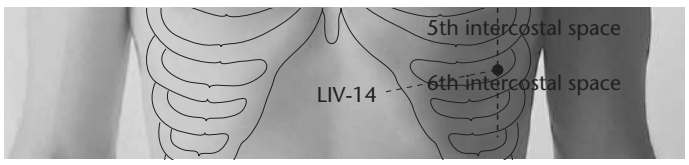
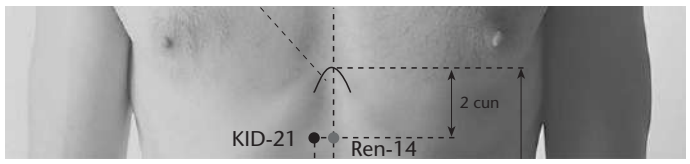
Not Contained BURONG ST-19









Location

2 cun below the sternocostal angle and 2 cun lateral to the anterior midline.

How to find

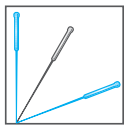
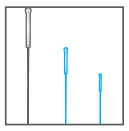
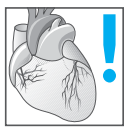
The distance between the sternocostal angle and the centre of the umbilicus is divided into 8 cun, which can vary considerably from the patient's finger cun; therefore, only proportional cun measurements should be used (helpful tool: elastic tape → 2.3.1). First, measure 2 cun down from the sternocostal angle. **Or:** Measure the midpoint of the upper half of the distance between the umbilicus and the subcostal angle (→ **Ren-12**: spreading hands technique → 2.3.3). From there, measure 2 cun in a lateral direction to locate **ST-19**. As its location depends on the shape of the thorax, it might be located either on the rib or on the abdomen. Located on the same level are → **Ren-14** (anterior midline), → **KID-21** (0.5 cun lateral to the anterior midline) and → **LIV-14** (on the mamillary line and in the 6th intercostal space). Please note: From **ST-19** onwards, the ST channel is located only 2 cun lateral to the anterior midline.

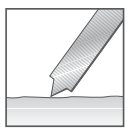
Needling

Vertically 0.5–1 cun. If the correct location projects this point on the lower ribcage, needle transversely on the rib or locate the point more medially (or choose an alternative point) Caution: Peritoneum, pericardium.

Actions/Indications

- Regulates the Stomach, Intestines and Middle Burner
- Regulates the Lung Qi



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ST-20 *Supporting Fullness* CHENGMAN

Location

3 cun below the sternocostal angle (or 5 cun above the umbilicus) and 2 cun lateral to the anterior midline.

How to find

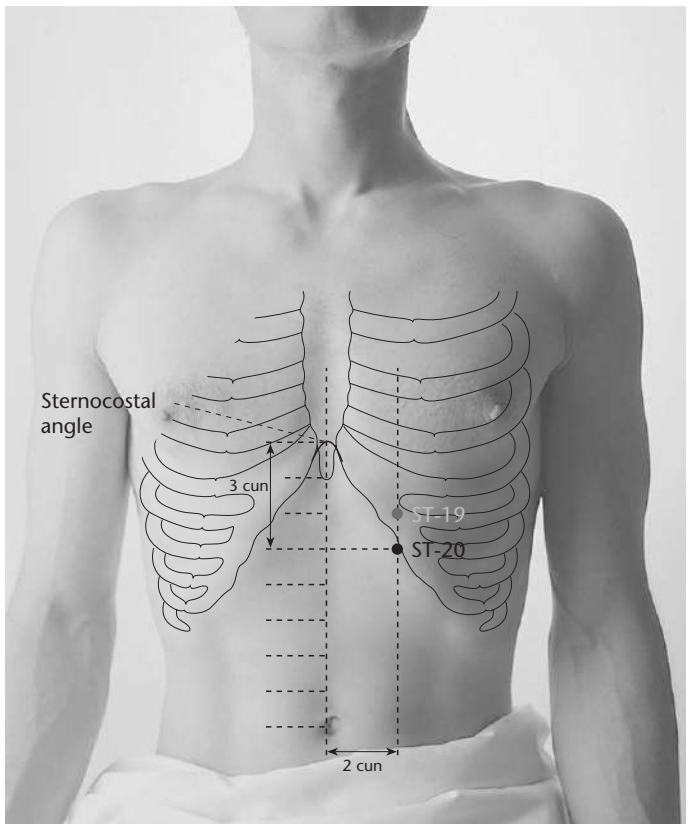
The distance between the sternocostal angle and the centre of the umbilicus is divided into 8 cun, which can vary considerably from the patient's finger cun; therefore, only proportional cun measurements should be used (helpful tool: elastic tape ➞ 2.3.1). First, measure 3 cun down from the sternocostal angle. **Or:** Measure 1 cun up from the midpoint of the distance between the umbilicus and the sternocostal angle (➞ **Ren-12**: spreading hands technique ➞ 2.3.3). From there, measure 2 cun in a lateral direction to locate **ST-20**. Depending on the shape of the thorax, **ST-20** might be located on the lower border of the ribcage in some cases (narrow subcostal angle).
Located on the same level are ➞ **Ren-13** (anterior midline) and ➞ **KID-20** (0.5 cun lateral to the anterior midline) and ➞ **G.B.-24** (on the mamillary line, in the 7th intercostal space).

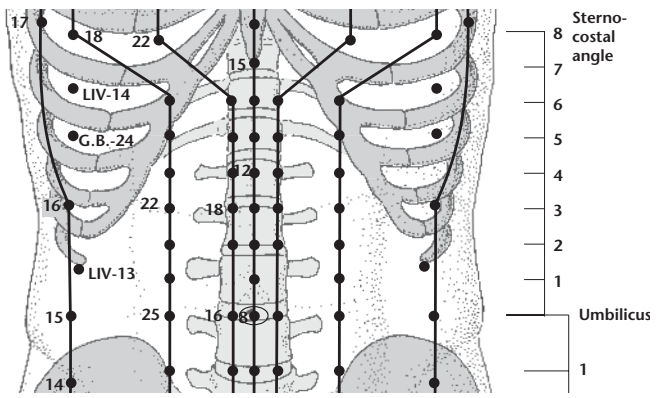
Needling

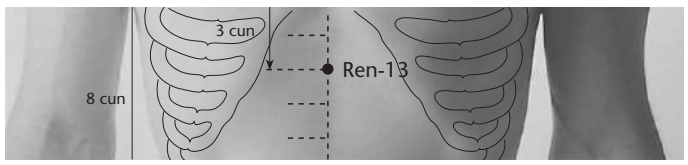
Vertically 0.5–1 cun. If the correct location projects this point on the lower ribcage, needle transversely on the rib or locate the point more medially (or choose an alternative point). Caution: Peritoneum.

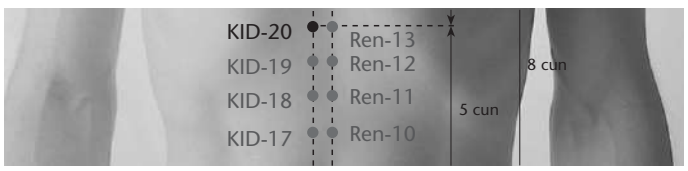
Actions/Indications

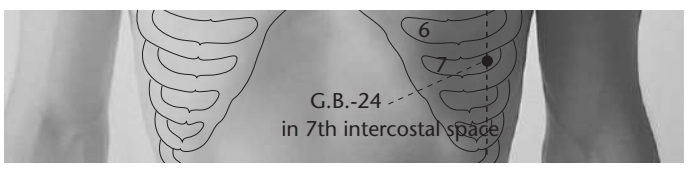
- Regulates the Middle Burner and the Stomach Qi
- Regulates the Lung Qi

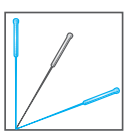
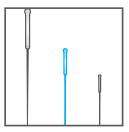
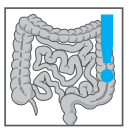


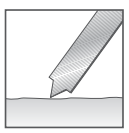










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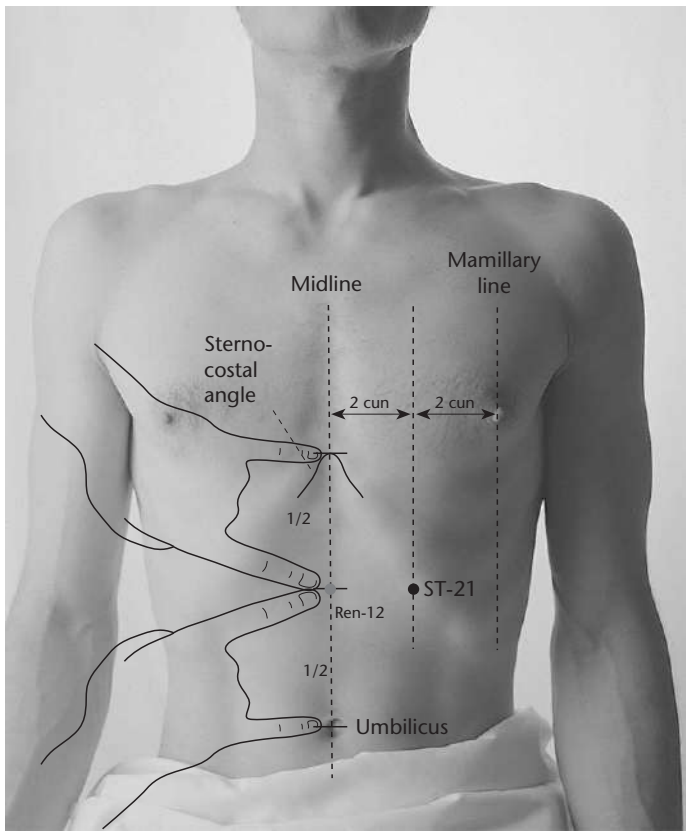
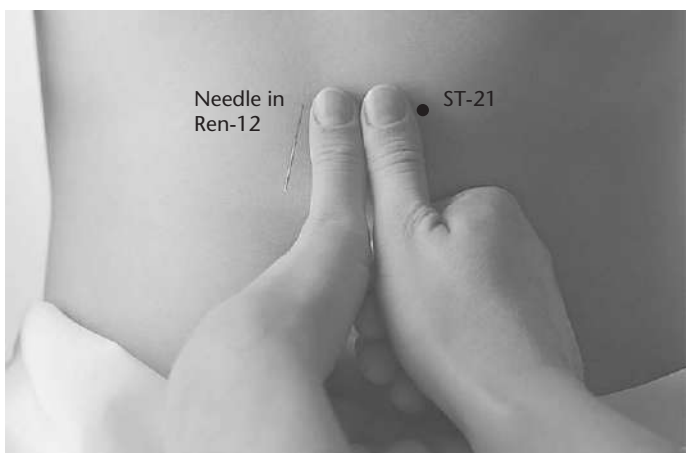
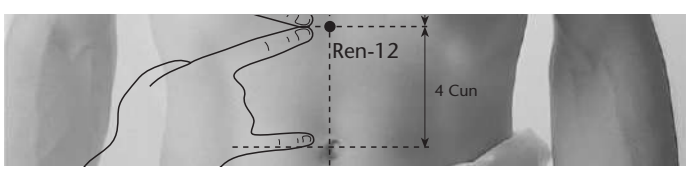
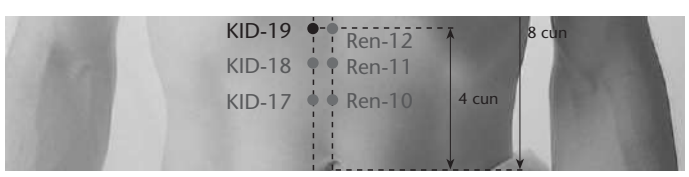
Beam Gate LIANGMEN ST-21









Location

2 cun lateral to the anterior midline, 4 cun above the umbilicus (or 4 cun below the subcostal angle).

How to find

The distance between the sternocostal angle and the centre of the umbilicus can be divided into 8 cun, which can vary considerably from the patient's finger cun; therefore, only proportional cun measurements should be used (helpful tool: elastic tape → 2.3.1). **Quick method:** Find the midpoint between the umbilicus and the sternocostal angle (→ **Ren-12**) by using the spreading hands technique (→ 2.3.3), then measure 2 cun in a lateral direction to locate **ST-21**. Depending on the shape of the thorax, this can be located on the lower rib cage.
Located on the same level are → **Ren-12** (anterior midline) and → **KID-19** (0.5 cun lateral to the anterior midline).

Needling

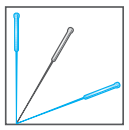
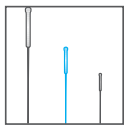
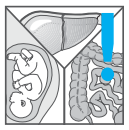
Vertically 0.5–1 cun. If the correct location projects this point on the lower ribcage, needle transversely on the rib or locate the point more medially (or choose an alternative point). Caution: Peritoneum, enlarged liver (on the right), pregnancy.

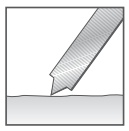
Actions/Indications

- Regulates the Qi, harmonises the Middle Burner, eliminates stagnation, raises the Qi and stops diarrhoea

Special features

Important local point for distension and pain in the epigastrium and the lateral abdomen



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ST-22 *Pass Gate* GUANMEN

Location

3 cun above the umbilicus (or 5 cun inferior to the sternocostal angle) and 2 cun lateral to the anterior midline.

How to find

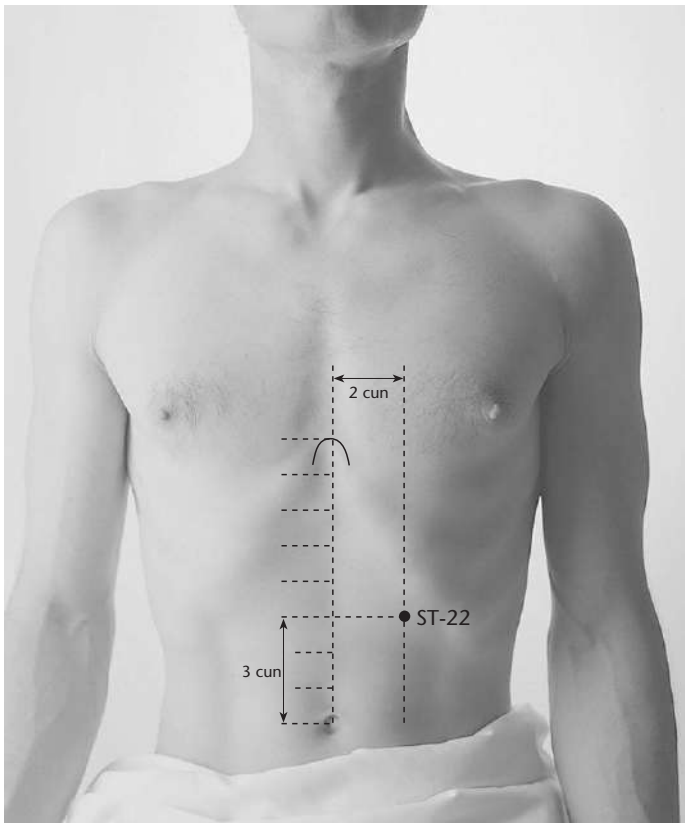
The distance between the sternocostal angle and the centre of the umbilicus can be divided into 8 cun, which can vary considerably from the patient's finger cun; therefore, only proportional cun measurements should be used (helpful tool: elastic tape → 2.3.1). First, measure 3 cun up from the umbilicus. **Or:** Measure 1 cun downward from the midpoint of the distance between the umbilicus and the sternocostal angle (→ **Ren-12**: spreading hands technique → 2.3.3). **ST-22** is located 2 cun lateral from here.
Located on the same level are → **Ren-11** (anterior midline), → **KID-18** (0.5 cun lateral to the anterior midline) and → **SP-16** (4 cun lateral to the midline).

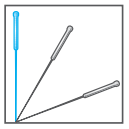
Needling

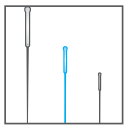
Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy.

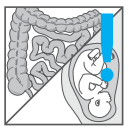
Actions/Indications

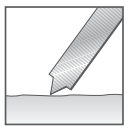
- Regulates the Stomach and Intestines
- Regulates the water passages

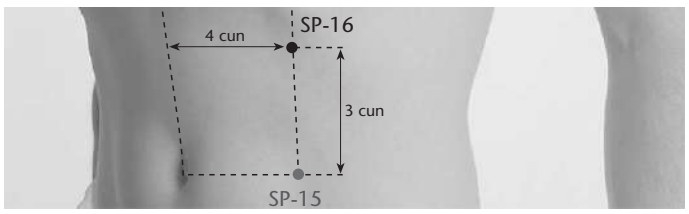


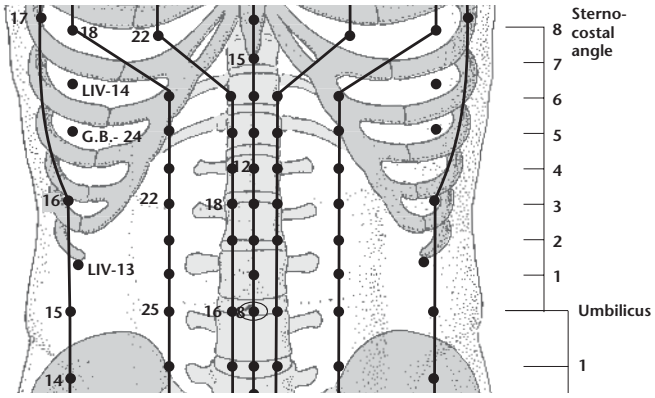


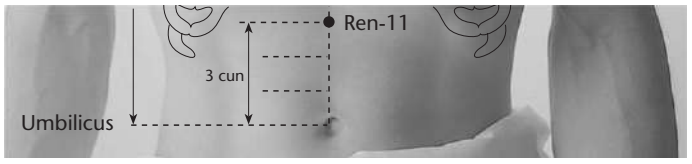


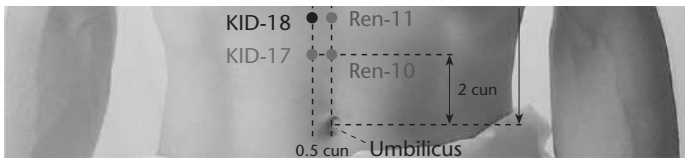












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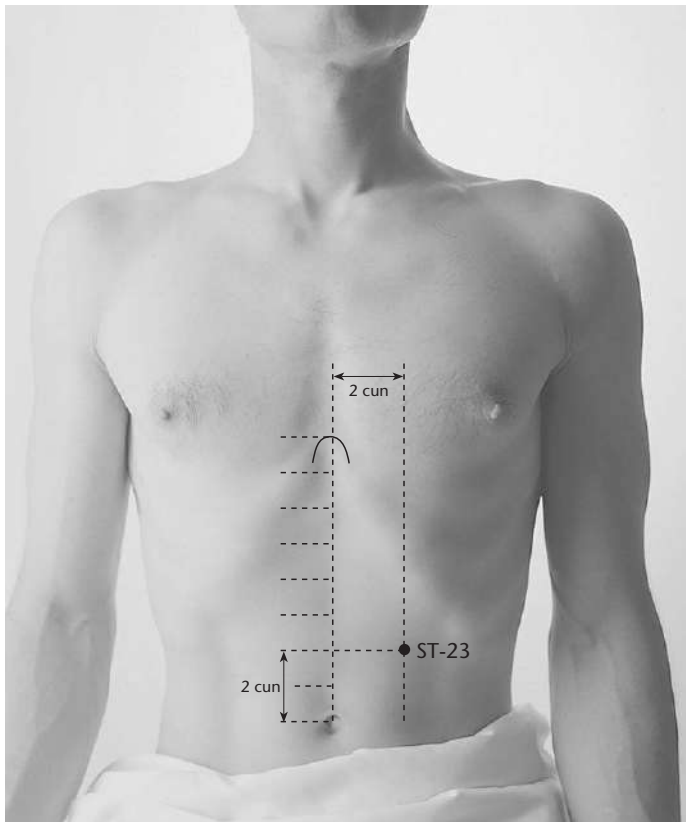
Supreme Unity TAIYI ST-23



Location

2 cun above the umbilicus and 2 cun lateral to the anterior midline.

How to find

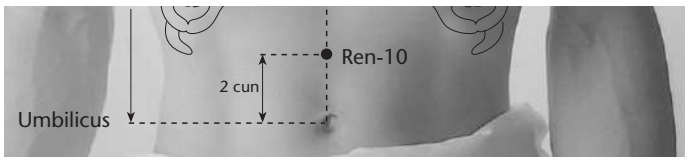
The distance between the sternocostal angle and the centre of the umbilicus is divided into 8 cun, which can vary considerably from the patient's finger cun; therefore, only proportional cun measurements should be used (helpful tool: elastic tape → 2.3.1). First, measure 2 cun up from the umbilicus. **Or:** Measure the midpoint of the lower half of the distance between the umbilicus and the subcostal angle (→ **Ren-12**: spreading hands technique → 2.3.3). **ST-23** is located 2 cun lateral from here.
Located on the same level are → **Ren-10** (anterior midline), → **KID-17** (0.5 cun lateral to the anterior midline) and → **Ex-CA** (*weishang*; 4 cun lateral to the midline).

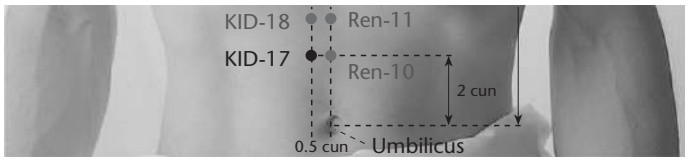
Needling

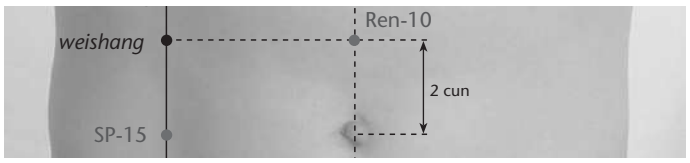
Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy.

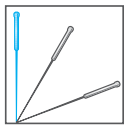
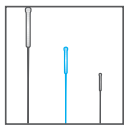
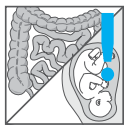
Actions/Indications

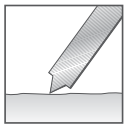
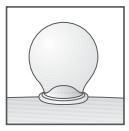
- Harmonises the Middle Burner, strengthens the Spleen
- Benefits the Heart and calms the *shen*







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ST-24 *Slippery Flesh Gate* HUAROUMEN

Location

1 cun above the umbilicus and 2 cun lateral to the anterior midline.

How to find

The distance between the sternocostal angle and the centre of the umbilicus is divided into 8 cun, which can vary considerably from the patient's finger cun; therefore, only proportional cun measurements should be used (helpful tool: elastic tape ➞ 2.3.1). **ST-24** is located 1 cun above the umbilicus and 2 cun lateral to the anterior midline.

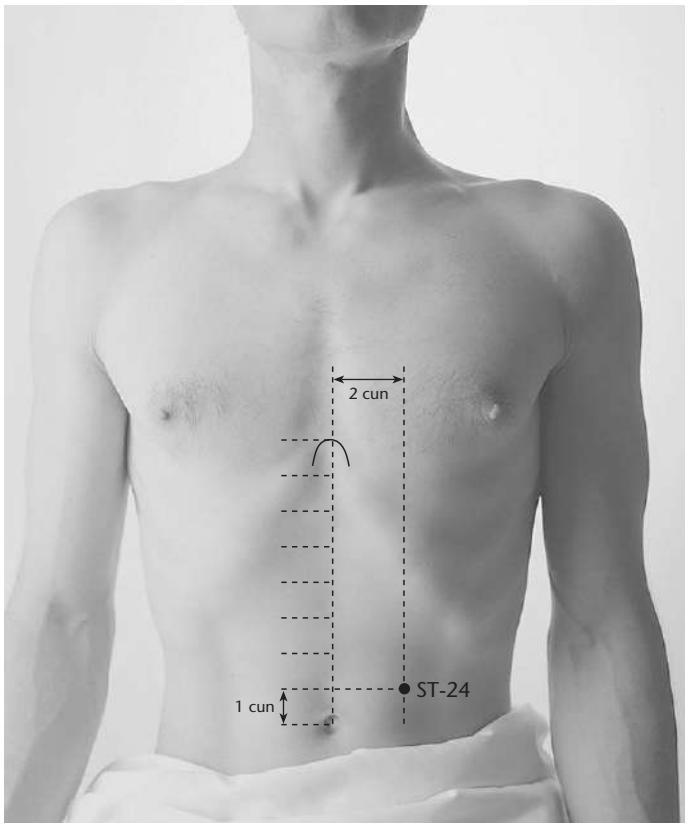
Located on the same level is ➞ **Ren-19** (anterior midline); often, also ➞ **LIV-13** (at the free end of the 11th rib) will be located at this level.

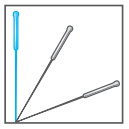
Needling

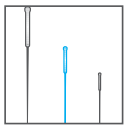
Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy.

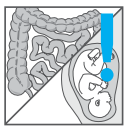
Actions/Indications

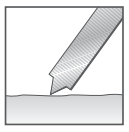
- Regulates the Stomach
- Transforms Phlegm and calms the *shen*

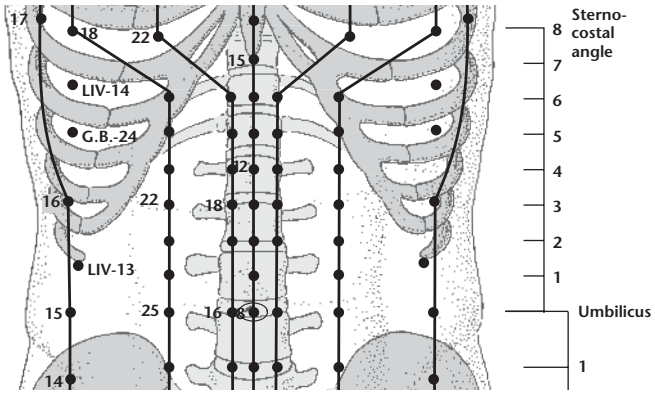


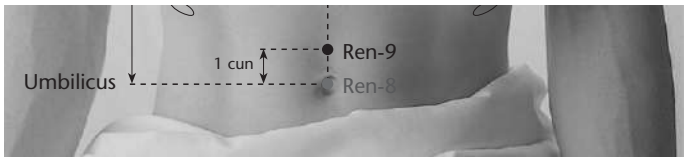


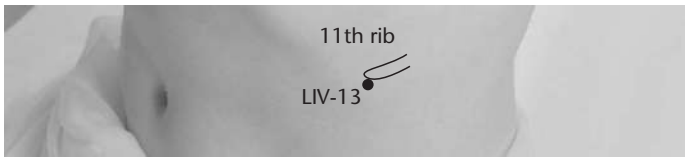












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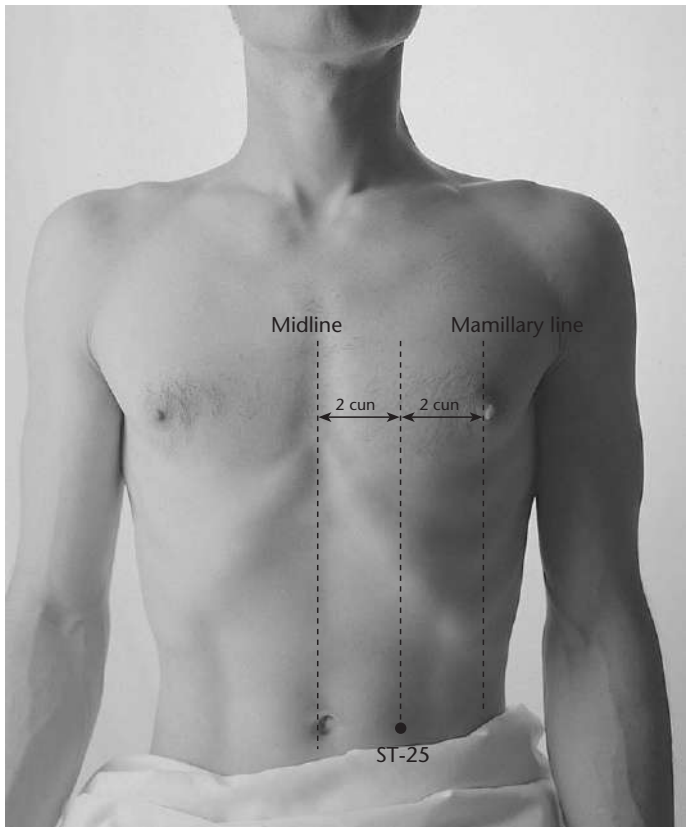
Heaven's Pivot TIANSHU ST-25



Location

2 cun lateral to the umbilicus.

How to find

Measure 2 cun lateral from the centre of the umbilicus. **For reference:** On the abdomen, 2 cun lateral corresponds to the midpoint between the anterior midline and the mamillary line (→ 3.5). Located on the same level are → **Ren-8/KID-16/SP-15/G.B.-26** (umbilicus/0.5 cun lateral to the umbilicus/mamillary line or 4 cun lateral to the umbilicus/at the level of the umbilicus and directly inferior to the free end of the 11th rib).

Needling

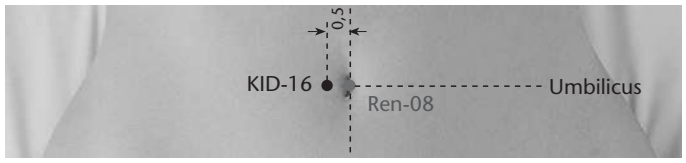
Vertically 0.5–1.5 cun. For gynaecological disorders, obliquely in an inferior direction towards the uterus. Caution: Peritoneum, pregnancy. The needle may reach the aponeuroses of the oblique abdominal musculature at the transition to the sheath of the rectus abdominis muscle.

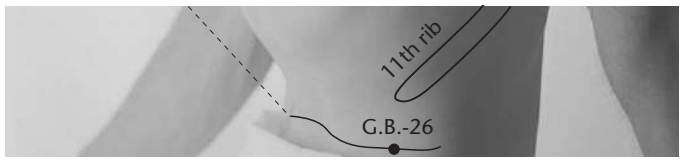
Actions/Indications

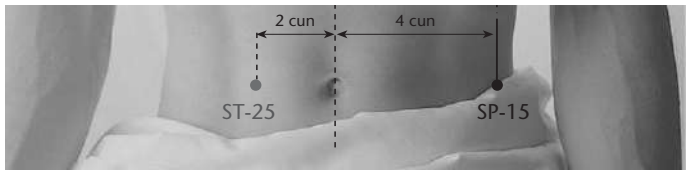
- Regulates the Spleen, Stomach and Intestines, eliminates Dampness and clears Damp-Heat
- Eliminates stagnation

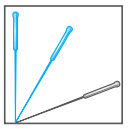
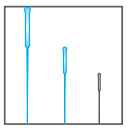
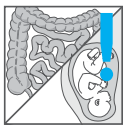
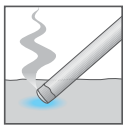
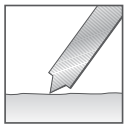
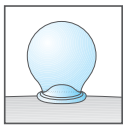
Special features

Front-*mu* point of the Large Intestine. Important point for disorders of the gastrointestinal tract.







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ST-26 *Outer Mound* WAILING

Location

1 cun below the umbilicus and 2 cun lateral to the anterior midline.

How to find

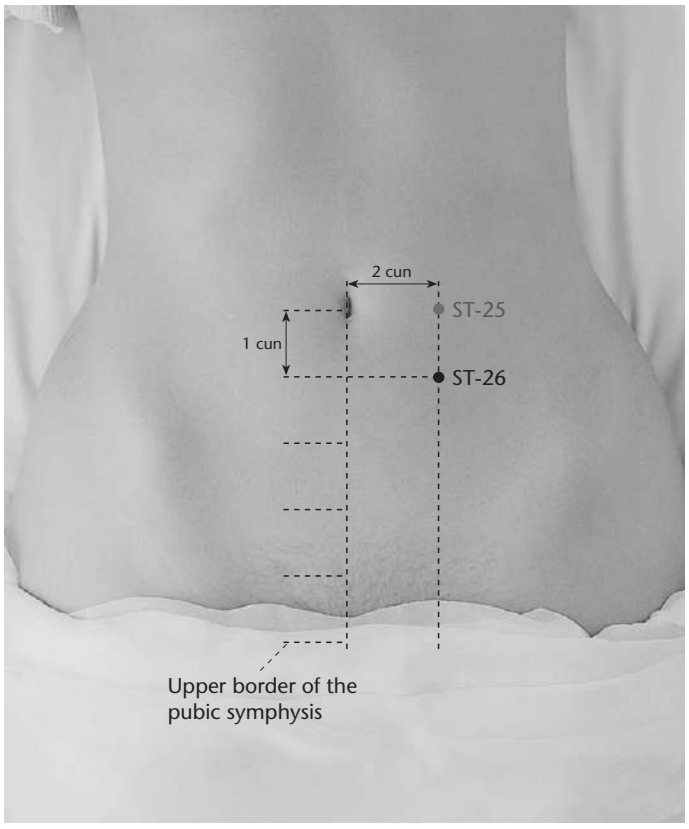
The distance between the umbilicus and the upper border of the pubic symphysis is divided into 5 proportional cun, which can vary considerably from the patient's finger cun; therefore, only proportional cun measurements should be used (helpful tool: elastic tape → 2.3.1). From the umbilicus, measure 1 cun down: **ST-26** is located 2 cun laterally from there.
Located on the same level are → **Ren-7** (anterior midline) and → **KID-15** (0.5 cun lateral to the anterior midline).

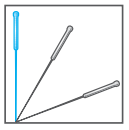
Needling

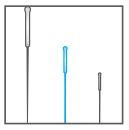
Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy.

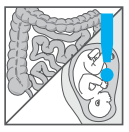
Actions/Indications

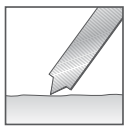
- Regulates the Qi, alleviates pain and Cold

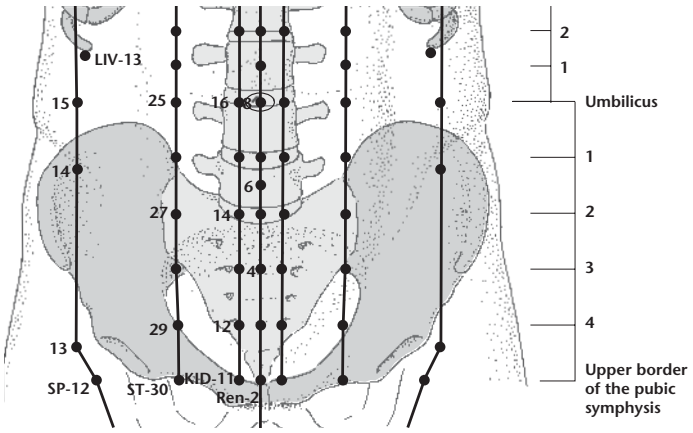


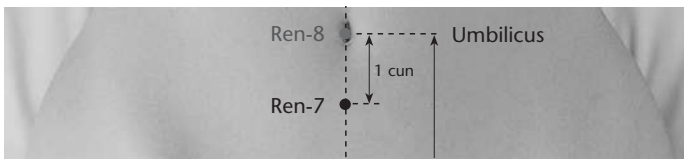


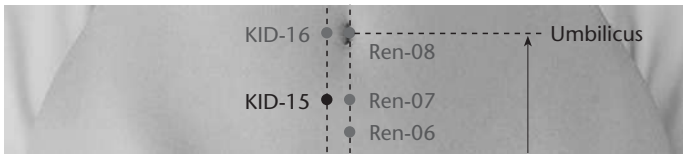












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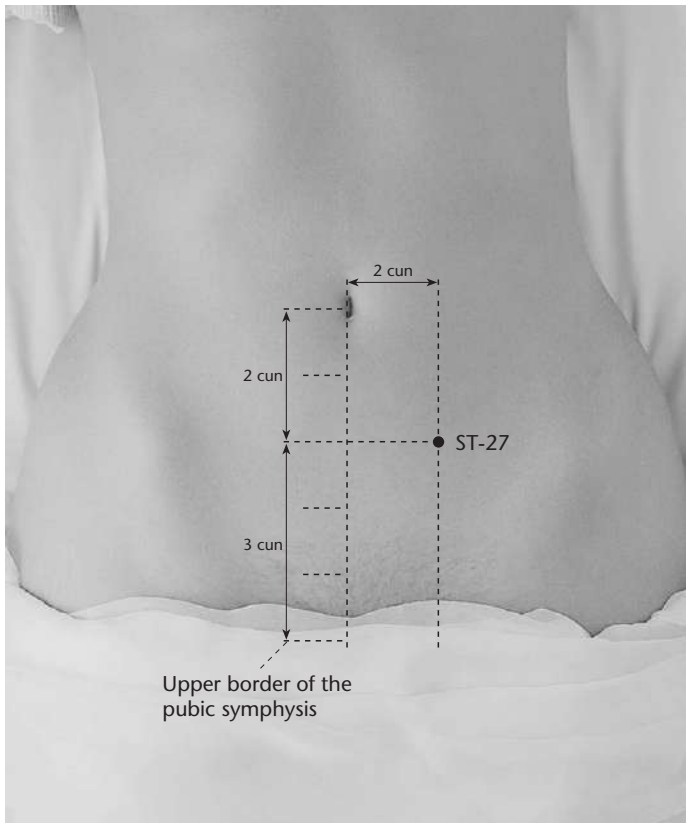
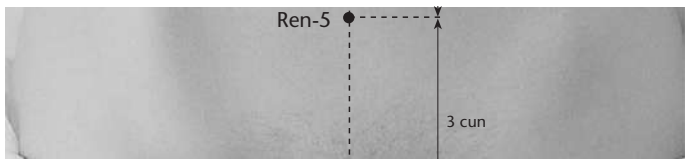
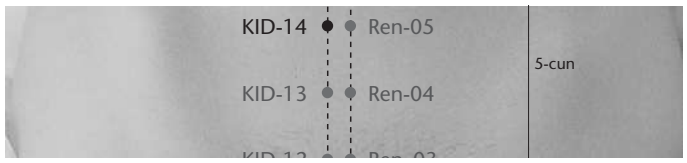
The Great DAJU ST-27







Location

2 cun below the umbilicus and 2 cun lateral to the anterior midline.

How to find

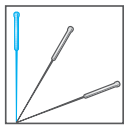
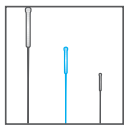
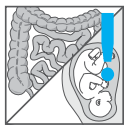
The distance between the umbilicus and the upper border of the pubic symphysis is divided into 5 proportional cun, which can vary considerably from the patient's finger cun; therefore, only proportional cun measurements should be used (helpful tool: elastic tape → 2.3.1). From the umbilicus, measure 2 cun down and 2 cun laterally, where **ST-27** is located.
Located on the same level are → **Ren-5** (anterior midline) and → **KID-14** (0.5 cun lateral to the anterior midline).

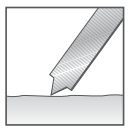
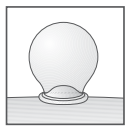
Needling

Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy.

Actions/Indications

- Regulates and strengthens the Qi
- Benefits the Kidneys and promotes diuresis, strengthens the Yang and Essence (*jing*)

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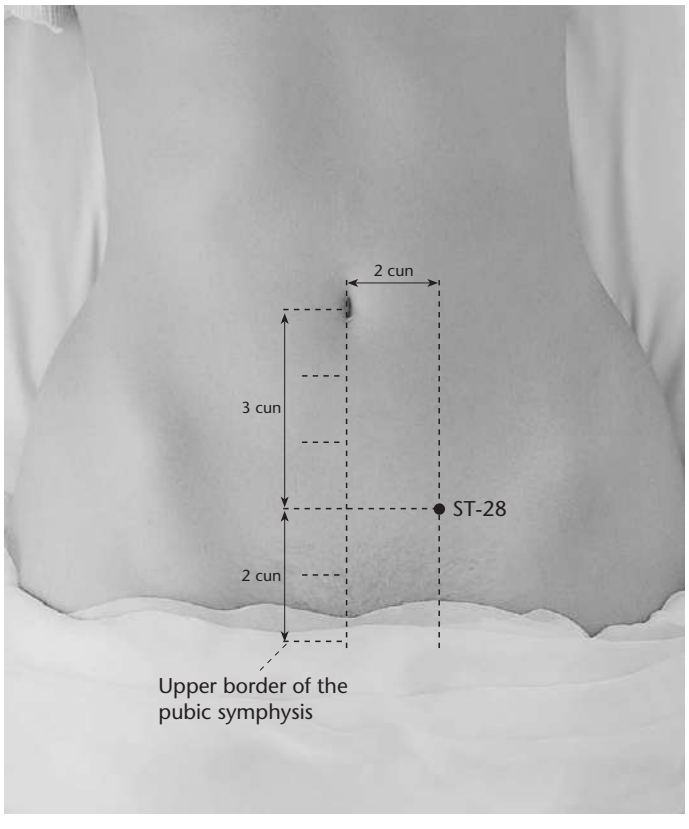
ST-28 *Water Passage* SHUIDAO

Location

3 cun below the umbilicus or 2 cun above the upper border of the pubic symphysis and 2 cun lateral to the anterior midline.

How to find

The distance between the umbilicus and the upper border of the pubic symphysis is divided into 5 proportional cun, which can vary considerably from the patient's finger cun; therefore, only proportional cun measurements should be used (helpful tool: elastic tape → 2.3.1). From the upper border of the pubic symphysis, measure 2 cun up or measure 3 cun down from the umbilicus. **ST-28** is located 2 cun laterally from there.
Located on the same level are → **Ren-4** (anterior midline), → **KID-13** (0.5 cun lateral to the anterior midline) and → **Ex-CA** (*tituo/quimen/yijing*; 4/3/1 cun lateral to the anterior midline).



Needling

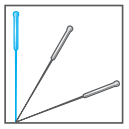
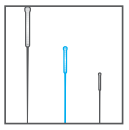
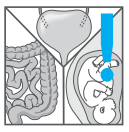
Vertically 0.5–1 cun. Caution: Peritoneum, urinary bladder, pregnancy.

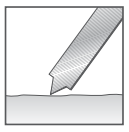
Actions/Indications

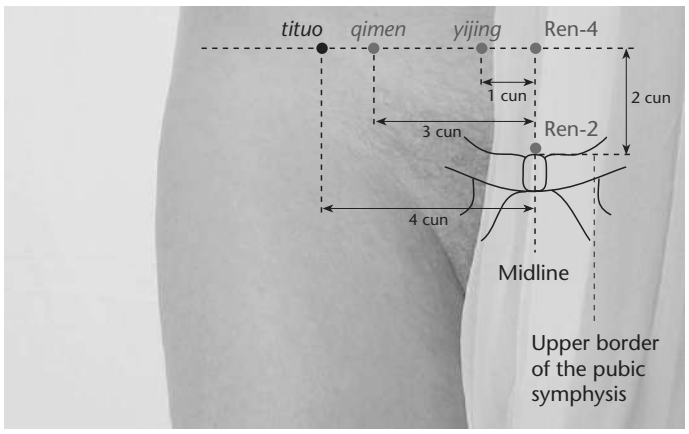
- Clears Damp-Heat, benefits the Lower Burner and eliminates stagnation

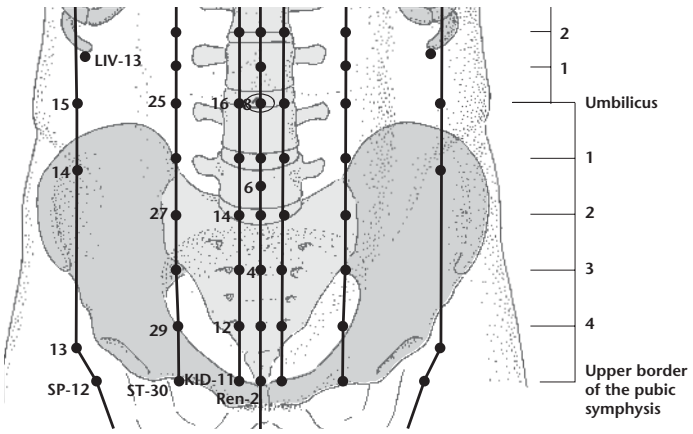
Special features

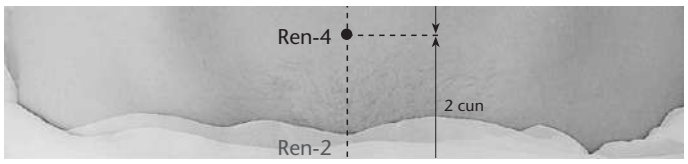
Important local point for the urogenital tract

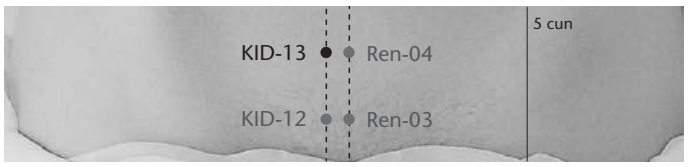














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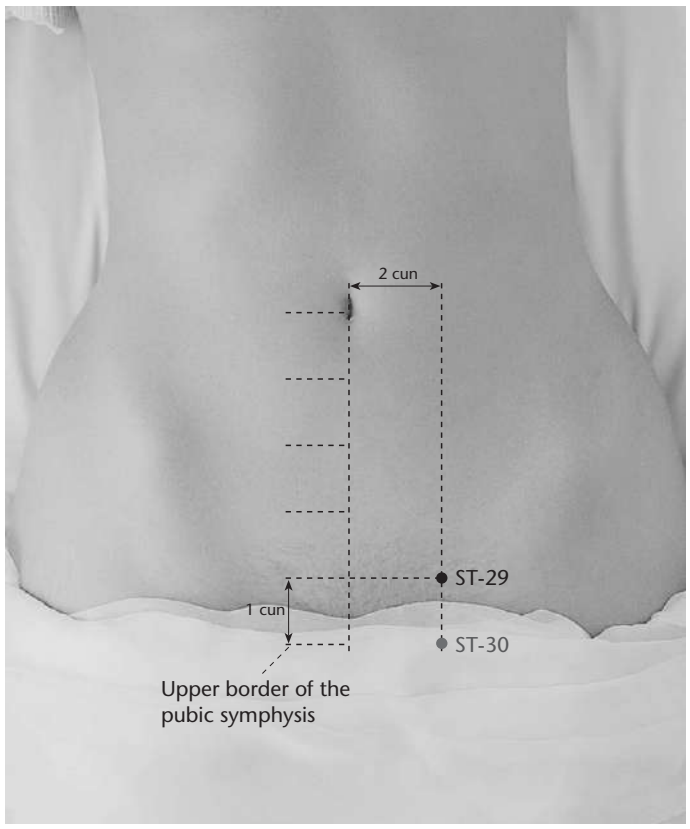
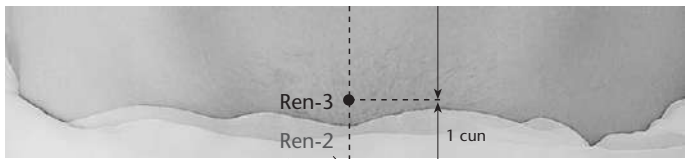
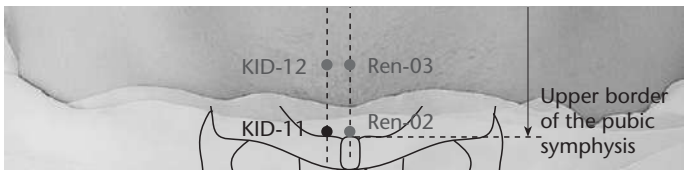
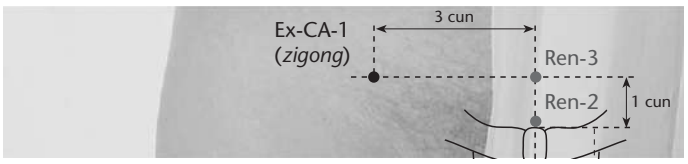
Return GUILAI ST-29









Location

1 cun above the upper border of the pubic symphysis or 4 cun below the umbilicus and 2 cun lateral to the anterior midline.

How to find

The distance between the umbilicus and the upper border of the pubic symphysis is divided into 5 proportional cun, which can vary considerably from the patient's finger cun; therefore, only proportional cun measurements should be used (helpful tool: elastic tape → 2.3.1). From the upper border of the pubic symphysis, measure 1 cun up and 2 cun lateral to **ST-29**.

Located on the same level are → **Ren-3** (anterior midline), → **KID-12** (0.5 cun lateral to the anterior midline) and → **Ex-CA** (*zigong*; 3 cun lateral to the anterior midline).

Needling

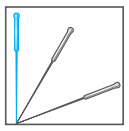
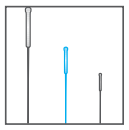
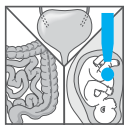
Vertically 0.5–1 cun. Caution: Peritoneum, urinary bladder, pregnancy.

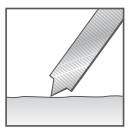
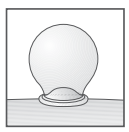
Actions/Indications

- Warms and regulates the Lower Burner and menstruation

Special features

Commonly treated with moxibustion, the combination of acupuncture and moxibustion being particularly beneficial. Important local point for the urogenital tract.

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ST-30 *Rushing Qi* QICHONG

Location

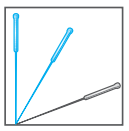
2 cun lateral to the upper border of the pubic symphysis and medial to the femoral artery and vein, approximately 1 cun superior to the inguinal groove.

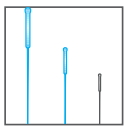
How to find

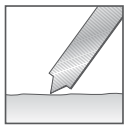
First, locate the upper border of the pubic symphysis (location of → **Ren-2**). Then locate **ST-30** 2 cun lateral from there (on the vertical line halfway between the anterior midline and the mamillary line). This often corresponds with a location 1 cun superior to the inguinal groove and medial to the femoral artery/vein.
Located on the same level are → **Ren-2/KID-11/SP-12** (anterior midline/0.5 cun lateral to the anterior midline/3.5 cun lateral to the anterior midline). → **LIV-12** is located in the inguinal groove, 1 cun inferior and 0.5 cun lateral to **ST-30**.

Needling

0.5–1 cun vertically or 1.5 cun slightly obliquely towards the external genitalia for disorders of the urogenital tract. Caution: Femoral artery, urinary bladder (quite superficial in a superior direction); in men, the spermatic ducts (quite superficial in an inferior direction), pregnancy. Ask the patient to empty their bladder before needling this point.





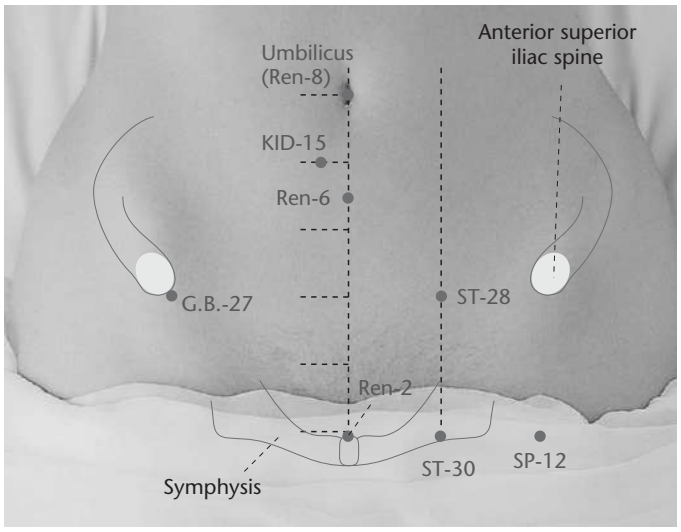


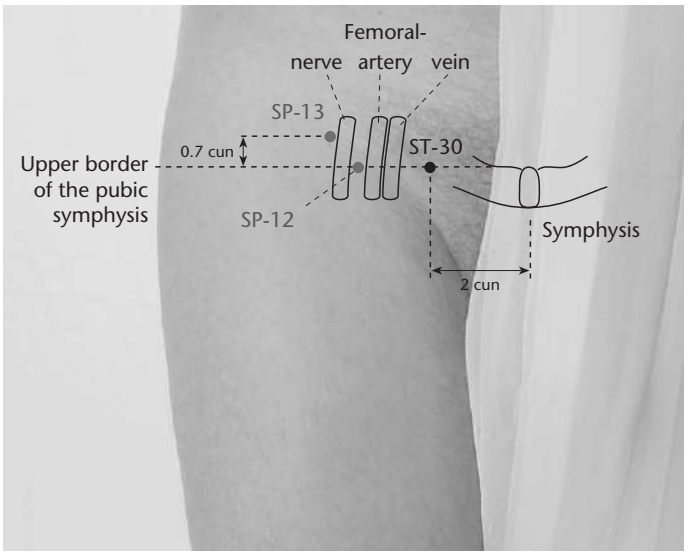
Actions/Indications

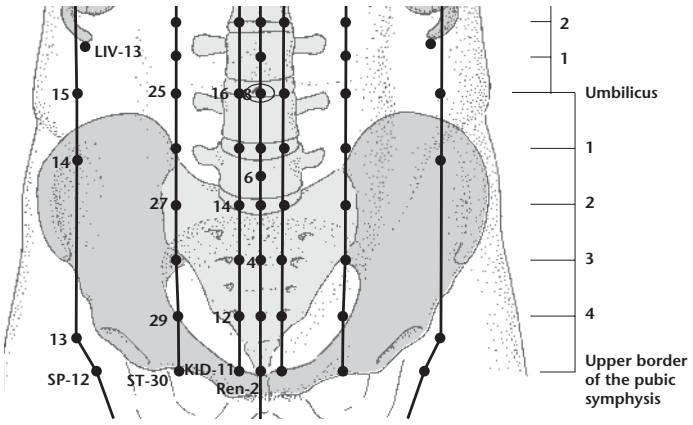
- Regulates the Qi in the Lower Burner
- Strengthens the Sea of Grain (later Heaven Qi)

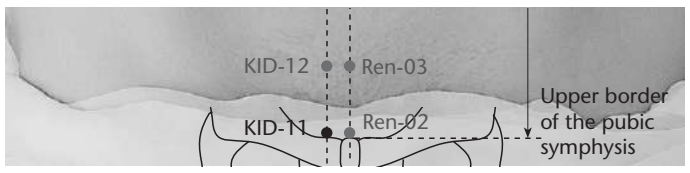
Special features

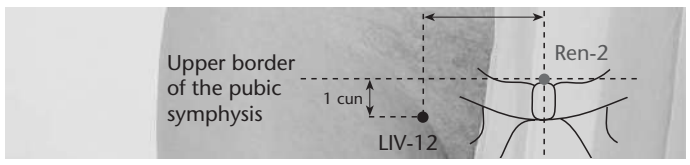
Meeting point with the *chong mai* (according to some authors, also with the G.B. channel), Sea of Grain point. Wide usage for disorders of the Lower Burner.











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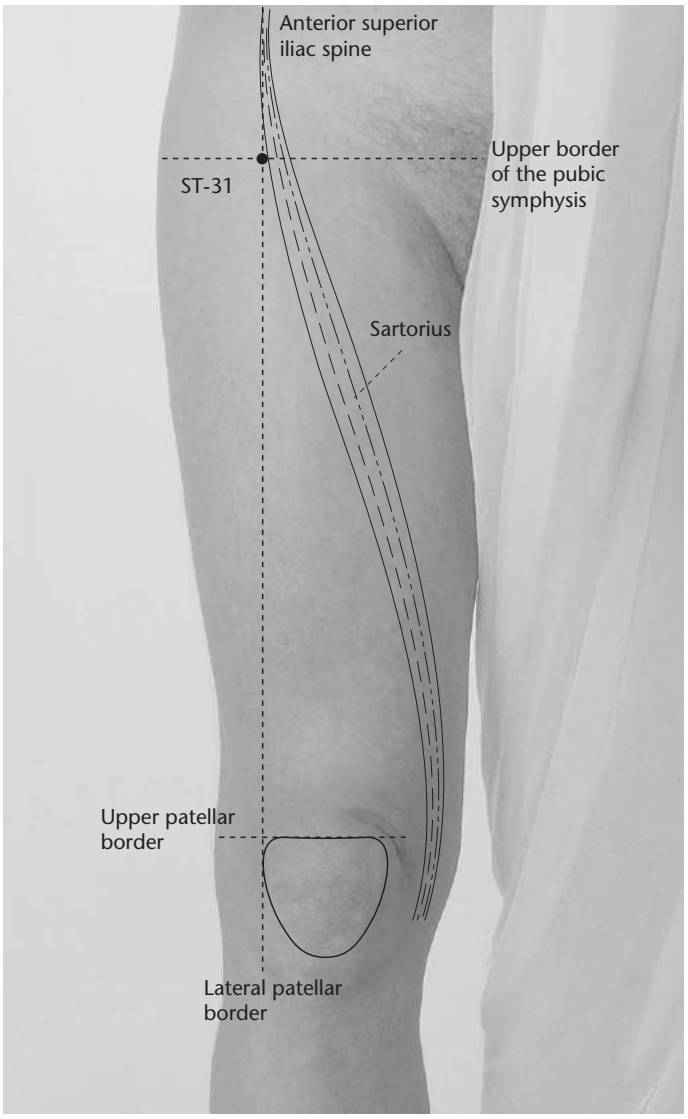
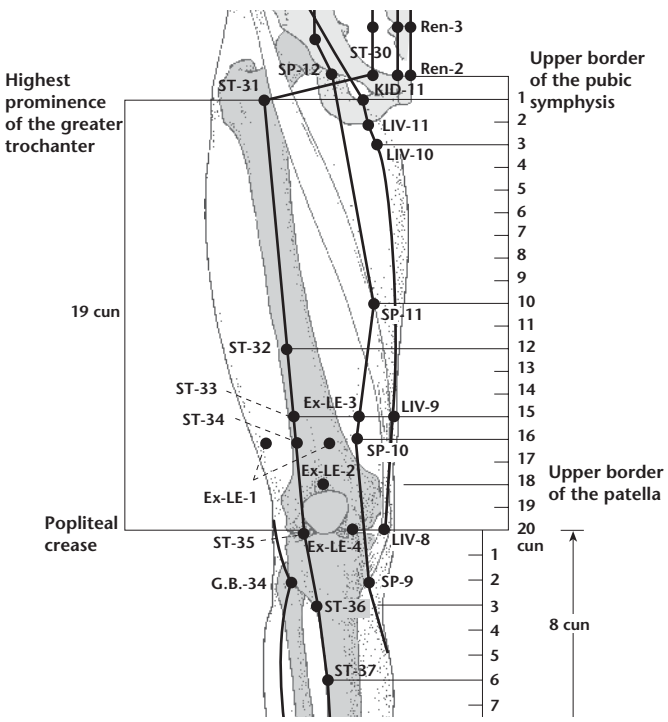
Thigh Gate BIGUAN ST-31





Location

Inferior to the anterior superior iliac spine and lateral to the sartorius muscle, at the level of the lower border of the pubic symphysis.

How to find

The sartorius muscle originates at the anterior superior iliac spine (ASIS) and crosses the thigh towards the medial aspect of the knee. With the knee and hip slightly flexed and with active lateral rotation, it can be isolated easily. **ST-31** is located on the lateral border of the muscle, at the crossing point of a vertical line connecting the ASIS and the lateral upper border of the patella and a horizontal line at the level of the lower border of the pubic symphysis.

Needling

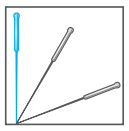
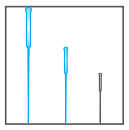
Vertically 0.5–2 cun

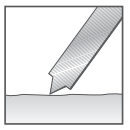
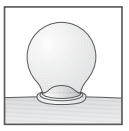
Actions/Indications

- Opens the channel, warms and expels pathogenic factors

Special features

Particularly useful for Cold *bi*-syndrome, disorders of the knees and lower back. The chain-and-lock method in combination (→ 8) with → **ST-36** and → **ST-41** is often used for paraesthesia and pain in the hip and leg radiating along the channel.

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ST-32 *Crouching Rabbit* FUTU

Location

On the thigh, on a line connecting the lateral patellar border and the anterior superior iliac spine, 6 cun superior to the upper, lateral border of the patella.

How to find

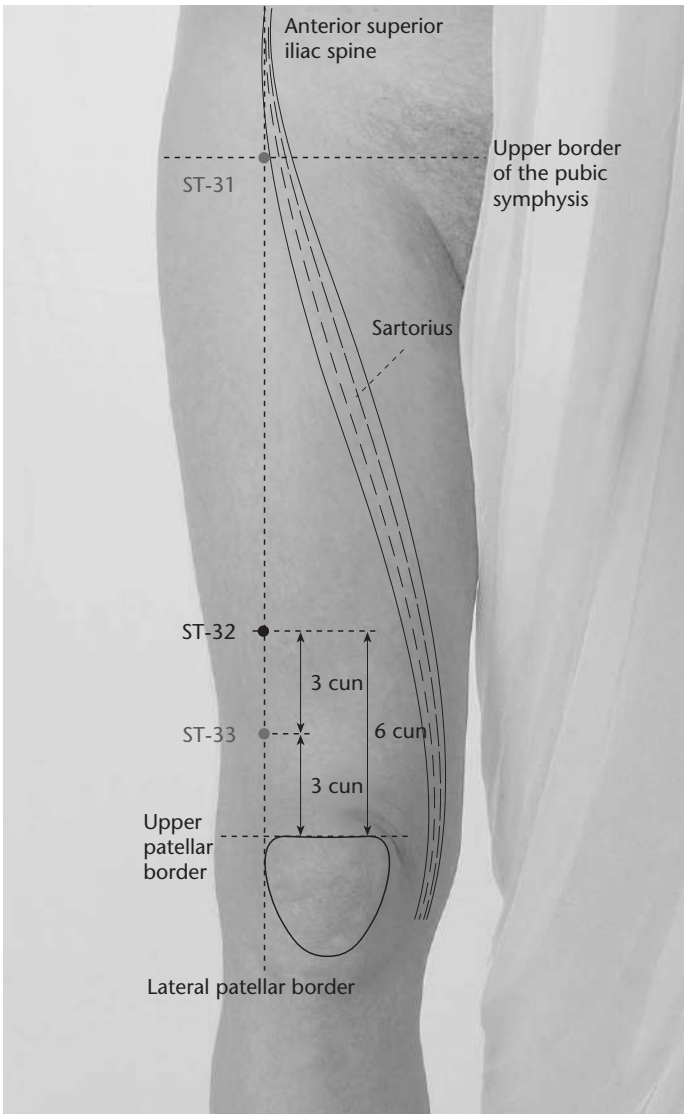
Divide the distance between the tip of the greater trochanter and the lateral upper border of the patella into three sections. **ST-32** is located at the junction of the lower and the middle third of the thigh in a depression on the quadriceps muscle.

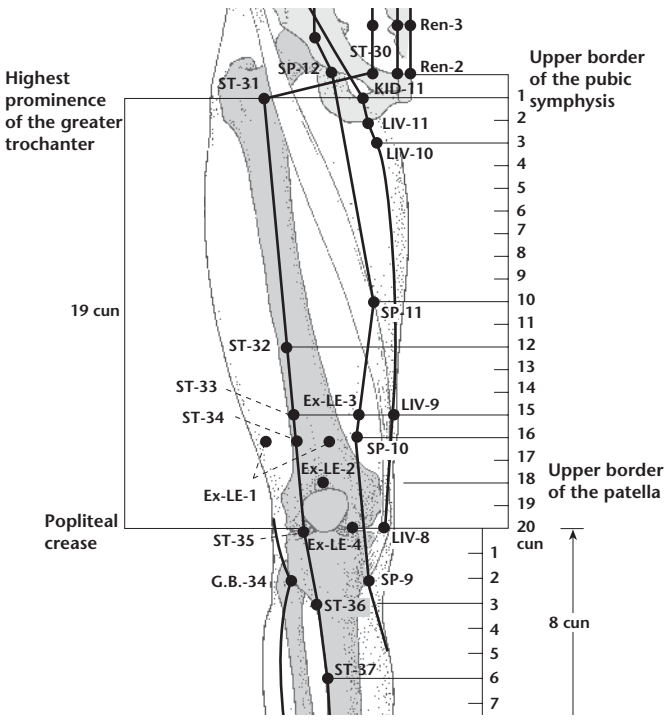
Needling

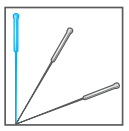
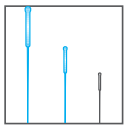
Vertically 0.5–2 cun

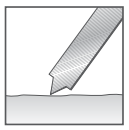
Actions/Indications

- Opens the channel and expels Wind, Dampness and Cold







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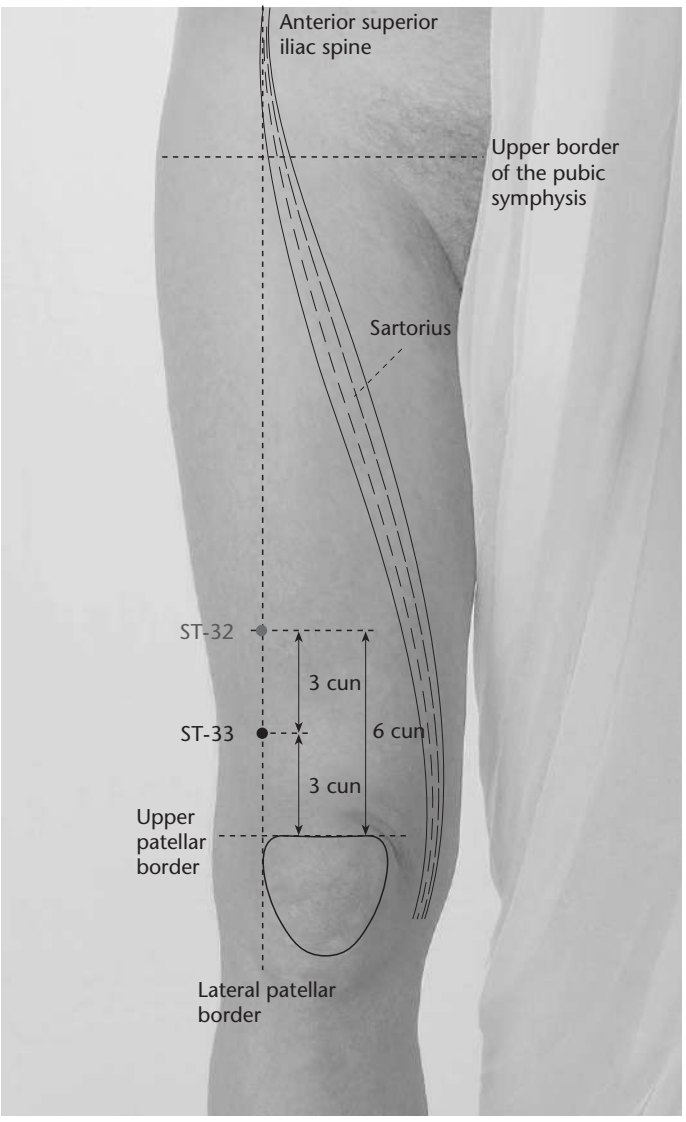
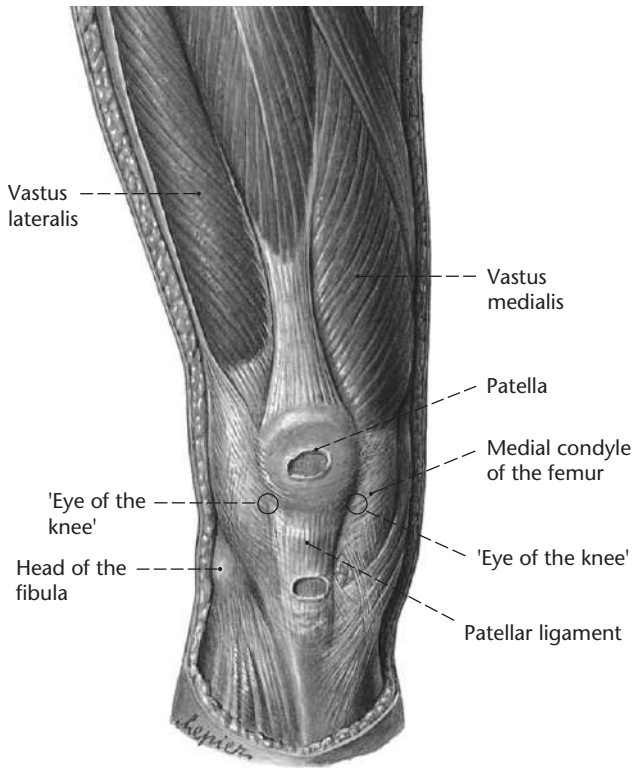
Yin Market YINSHI ST-33





Location

On a line joining the lateral patellar border and the anterior superior iliac spine, 3 cun superior to the upper lateral border of the patella.

How to find

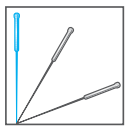
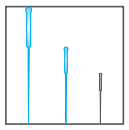
Measure 3 cun up from the upper lateral border of the patella, on the connecting line to the anterior superior iliac spine. **ST-33** is located in a groove at the junction of the rectus femoris and vastus lateralis muscles.

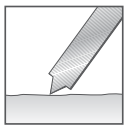
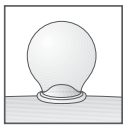
Needling

Vertically 0.5–1.5 cun

Actions/Indications

- Opens the channel and expels pathogenic factors

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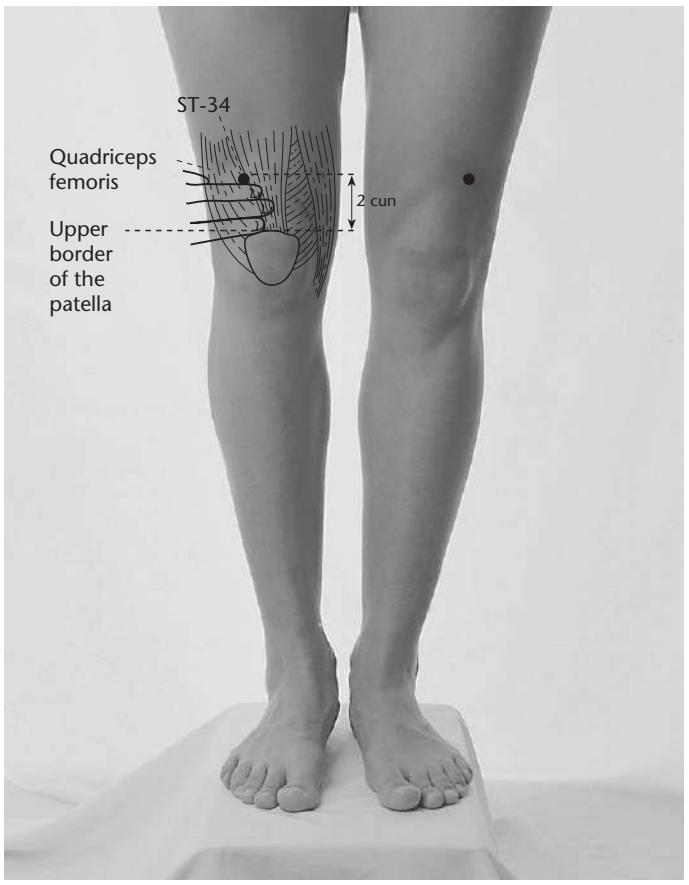
ST-34 *Ridge Mound* LIANGQIU

Location

On a line joining the lateral patellar border and the anterior superior iliac spine, 2 cun proximal to the upper lateral border of the patella, in a groove of the vastus lateralis muscle.



How to find

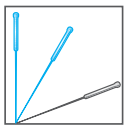
Locate the lateral upper border of the patella and from there measure 2 cun proximally. **ST-34** is located in a palpable groove on the vastus lateralis muscle of the quadriceps femoris group. This point projects on the line joining the lateral upper border of the patella and the anterior superior iliac spine (ASIS → 3.5). Located on the same level are the points → **Ex-LE-1** (each 1.5 cun lateral and medial to **ST-34**). → **SP-10** is located in a comparable position on the medial aspect of the thigh (2 cun proximal to the medial upper border of the patella and in a groove on the vastus medialis muscle).

Needling

Vertically or obliquely 1–1.5 cun

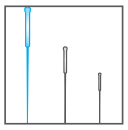
Actions/Indications

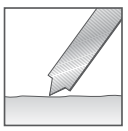
- Regulates the Stomach Qi, alleviates acute conditions
- Opens the channel and alleviates pain

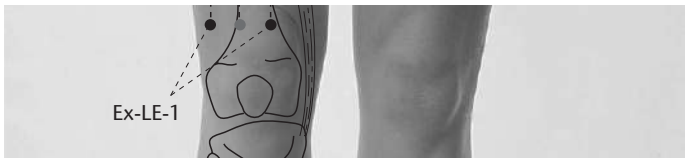


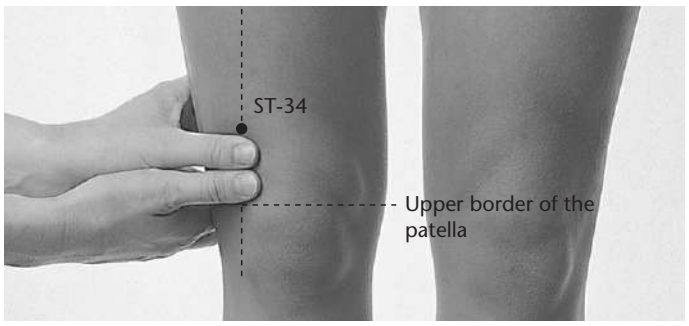
Special features

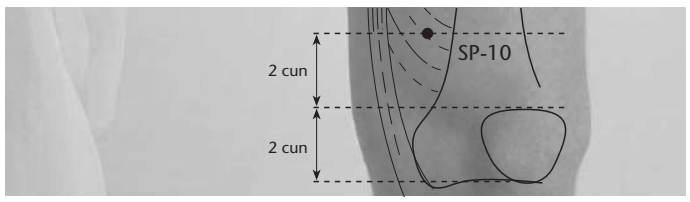
Xi-cleft point. Important local point for disorders of the knee. Modern application for acute epigastric pain – strongly reducing needling techniques have an immediate and calming effect on gastrointestinal peristalsis.

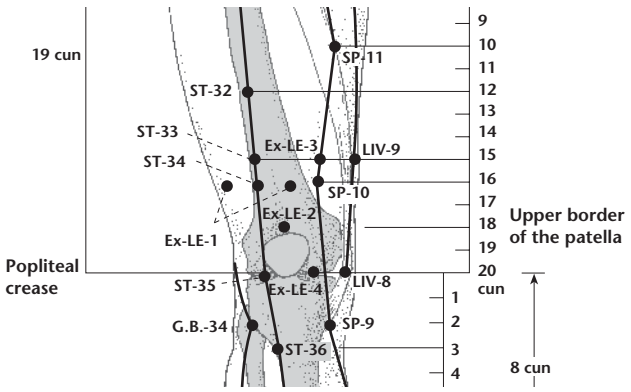












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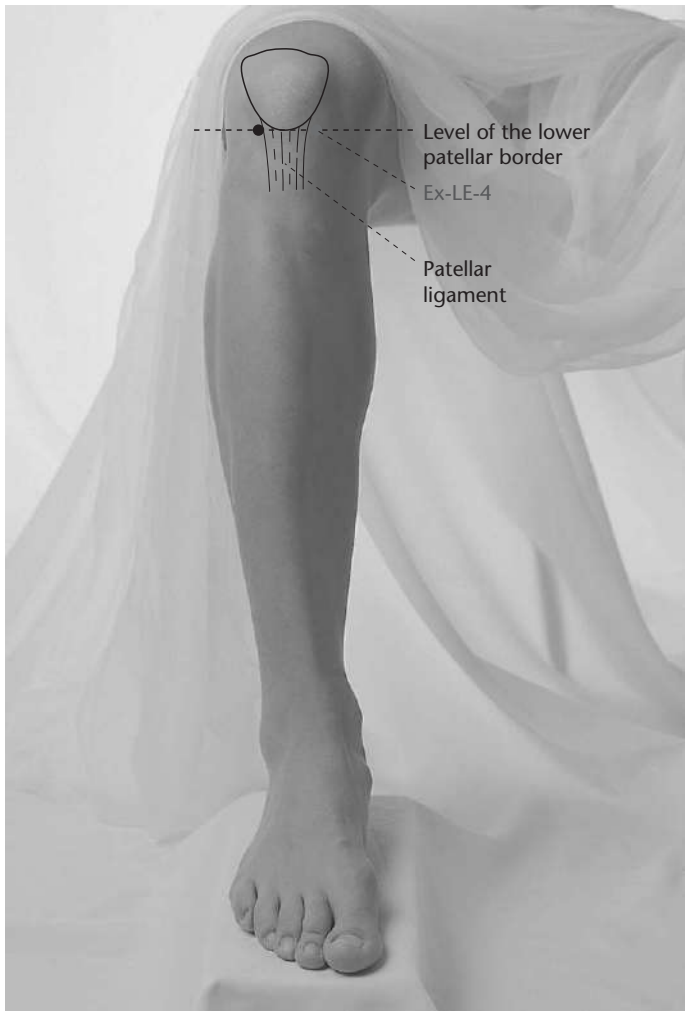
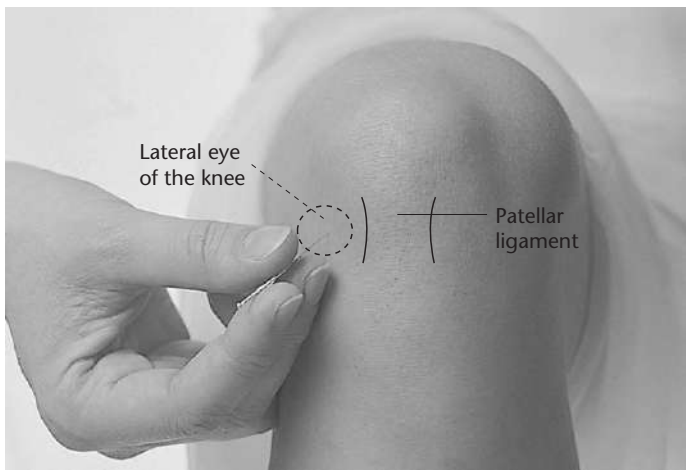
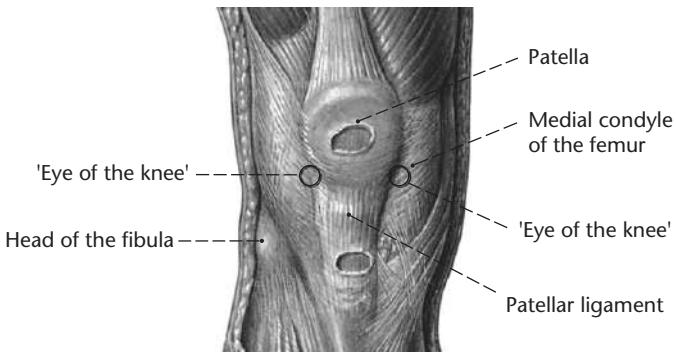
Calf's Nose DUBI ST-35







Location

With the knee flexed, in the depression inferior to the patella and lateral to the patellar ligament.

How to find

This point is best located and needled with the knee slightly flexed (use knee support). **ST-35** is located in a depression on the lower lateral border of the patella, in a groove lateral to the patellar ligament. It projects onto the level of the knee joint space and more or less corresponds with the arthroscopic access to the joint. **ST-35** is also known as 'lateral eye of the knee' and is part of the extra point → **Ex-LE-5** (*xiyan*).

Needling

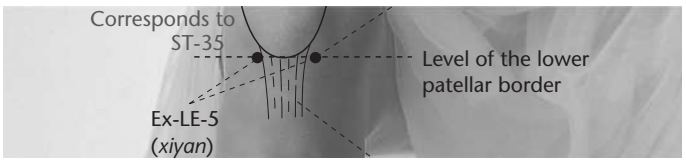
0.5–1 cun slightly obliquely in a medial direction, towards the medial eye of the knee → **Ex-LE-4** (*neixiyan*). Caution: Knee joint (the location of this point corresponds approximately with the arthroscopic access to this joint!).

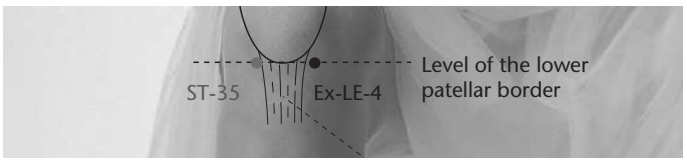
Actions/Indications

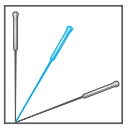
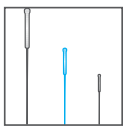
- Expels Wind and Dampness, reduces swellings, opens the channel, alleviates pain

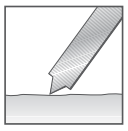
Special features

Important local point for all disorders of the knee







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ST-36 *Leg Three Miles* ZUSANLI

Location

3 cun distal to → **ST-35** ('lateral eye of the knee') and 1 finger-breadth lateral to the anterior crest of the tibia, on the tibialis anterior muscle.

How to find

First, locate → **ST-35** ('lateral eye of the knee', at the level of the knee joint space). From → **ST-35**, palpate 3 cun (1 handbreadth) down and 1 fingerbreadth towards lateral by placing the middle finger adjacent to the tibial crest. There, **ST-36** is located in a depression, which can be palpated 'dynamically' (choose the point according to pressure sensitivity). **Or:** Palpate the lower border of the tibial tuberosity and 'dynamically' locate **ST-36** 1 fingerbreadth lateral to it.

Needling

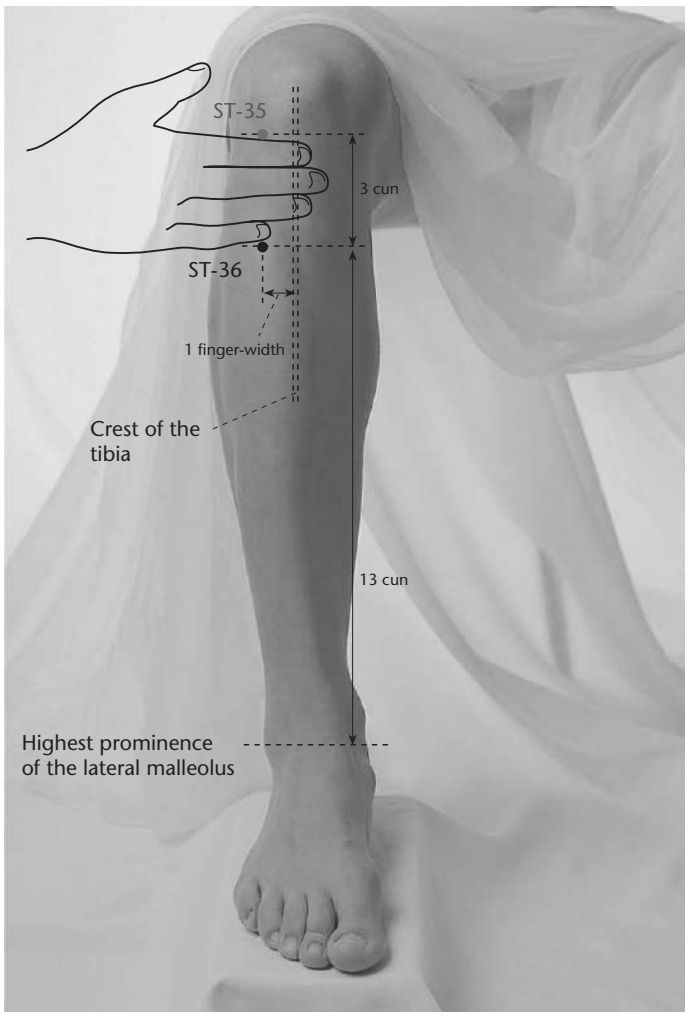
Vertically 1–1.5 cun. Moxibustion is often used on this point.

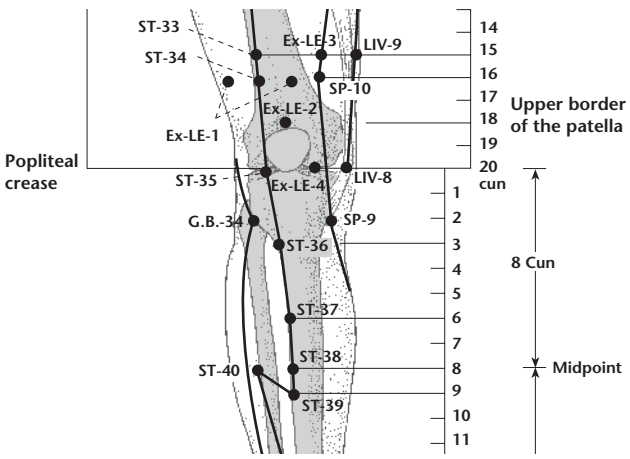
Actions/Indications

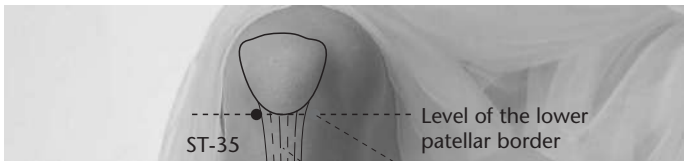
- Regulates the Stomach, strengthens the Spleen, transforms Dampness
- Tonifies Qi and Yang, nourishes the Blood and Yin
- Calms the *shen*
- Opens the channel

Special features

He-sea point, Earth point, *ben* point (Five Phases point), lower *he*-sea point of the Stomach, *Gao Wu* command point for disorders of the abdomen, Ma Dan Yang point, Sea of Water and Grain point. Main point to tonify Qi and Blood for general weakness. Very important point.







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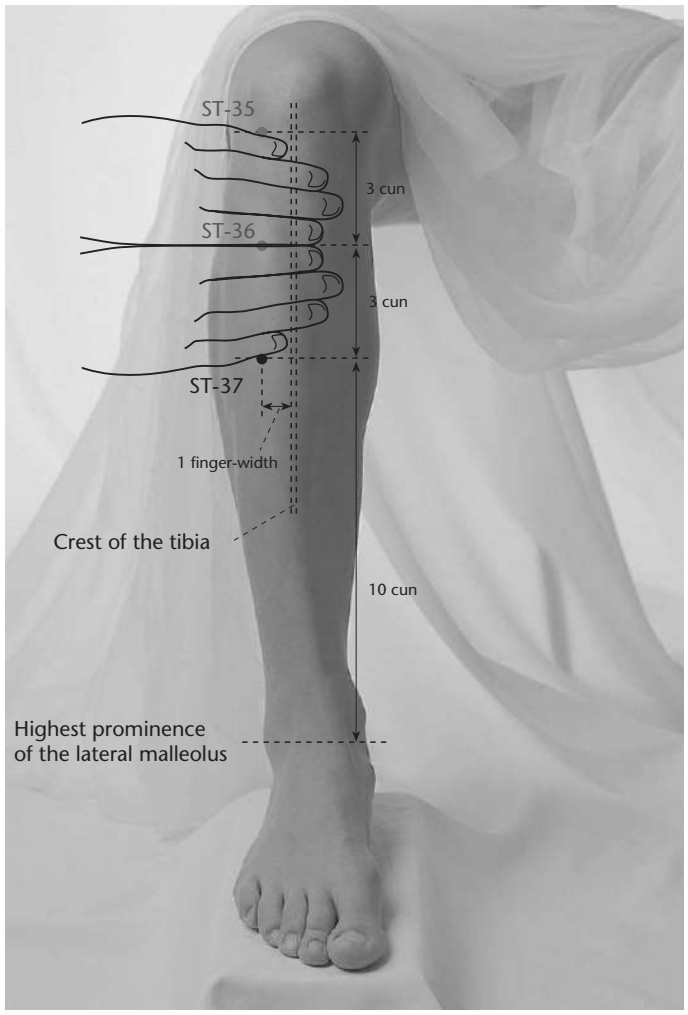
Upper Great Emptiness SHANGJUXU ST-37



Location

6 cun distal to → **ST-35** (at the knee joint space) or 3 cun distal to → **ST-36** and 1 fingerbreadth lateral to the anterior crest of the tibia.

How to find

First, find → **ST-35** ('lateral eye of the knee', level with the knee joint space). From → **ST-35**, measure 6 cun (2 handbreadths) in a distal direction and, at that level, 1 fingerbreadth towards lateral (place the middle finger onto the anterior crest of the tibia). There, **ST-37** is located in a depression, which can be 'dynamically' palpated (choose the point according to pressure sensitivity). **Or:** Find the midpoint of the line joining → **ST-35** and → **ST-41** (in the depression between the tendons of the extensor digitorum longus and the hallucis longus, level with the highest prominence of the lateral malleolus) by using the spreading hands technique (→ 2.3.3). **ST-37** is located 2 cun proximal and 1 fingerbreadth lateral to this point.

Needling

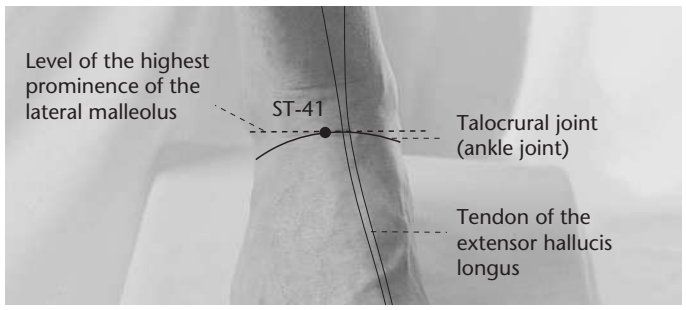
Vertically or obliquely 1–1.5 cun

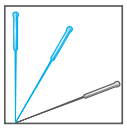
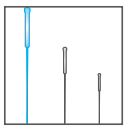
Actions/Indications

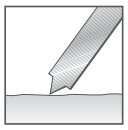
- Regulates the Spleen, Stomach and Intestines, eliminates stagnation, clears Damp-Heat
- Opens the channel, alleviates pain

Special features

Lower *he*-sea point of the Large Intestine, Sea of Blood point.





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ST-38 *Lines Opening* TIAOKOU

Location

At the midpoint of the line joining → **ST-35** and → **ST-41** and 1 fingerbreadth lateral to the anterior crest of the tibia.

How to find

Quick method: Spreading-hands technique (→ 2.3.3): place the small fingers on → **ST-35** ('lateral eye of the knee', level with the knee joint space) and → **ST-41** (in the depression between the tendons of the extensor digitorum longus and the hallucis longus, level with the highest prominence of the lateral malleolus) and determine the midpoint of this line, using the thumbs. **ST-38** is located in a depression 1 fingerbreadth (middle fingerbreadth, measured from the anterior crest of the tibia) lateral to the midpoint. **ST-38** may be palpated 'dynamically' (according to pressure sensitivity). **Or:** From → **ST-35**, measure 8 cun (→ 2 handbreadths and 3 fingerbreadths) distally and 1 fingerbreadth laterally.
Located on the same level are → **ST-40** (1 fingerbreadth more laterally) and → **BL-57** (dorsal aspect of the lower leg, on the midpoint of the line joining → **BL-40** and → **BL-60**).

Needling

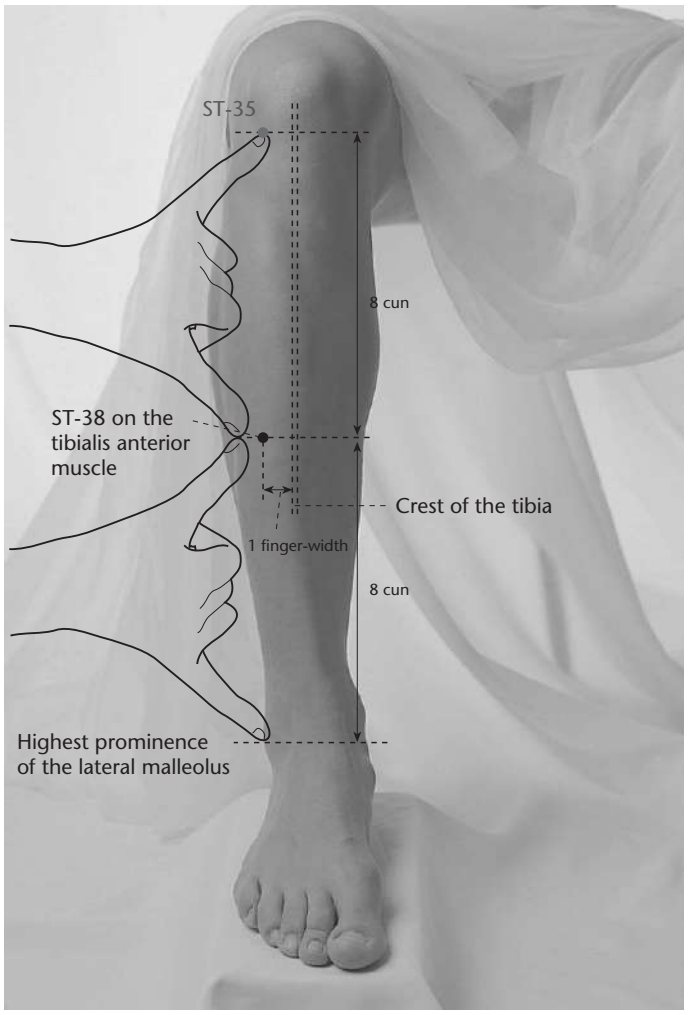
Vertically or obliquely 1–1.5 cun

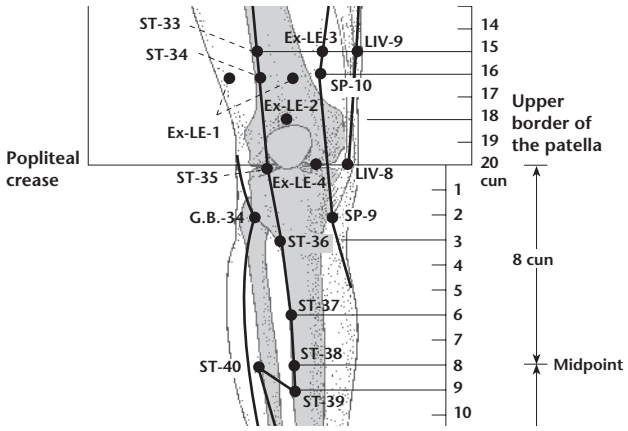
Actions/Indications

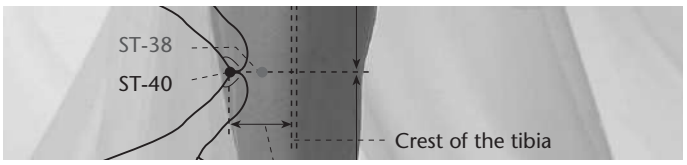
- Expels Wind-Damp, opens the channel, alleviates pain, benefits the shoulder

Special features

Very effective distal point for disorders of the shoulder. For limited range of motion of the shoulder joint: apply strong reducing needling techniques while the patient moves their shoulder joint.







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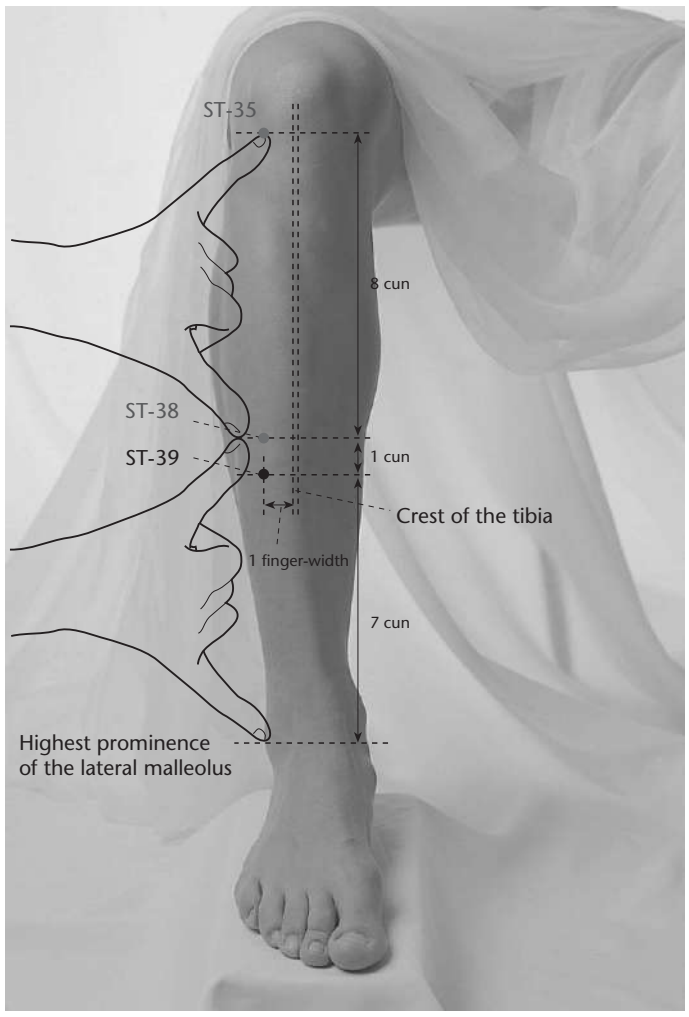
Lower Great Void XIAJUXU ST-39



Location

1 cun distal to → **ST-38** (midpoint of the line joining → **ST-35** and → **ST-41**) and 1 fingerbreadth lateral to the anterior crest of the tibia.

How to find

Quick method: Spreading-hands technique (→ 2.3.3): Place the little fingers on → **ST-35** ('lateral eye of the knee', level with the knee joint space) and → **ST-41** (in the depression between the tendons of the extensor digitorum longus and the hallucis longus, level with the highest prominence of the lateral malleolus) and determine the midpoint of this line (level with → **ST-38**), using the thumbs. **ST-39** is located in a depression 1 cun distal and 1 fingerbreadth (middle fingerbreadth, measured from the anterior crest of the tibia) lateral to this point. **ST-39** may be palpated 'dynamically' (according to pressure sensitivity).

Located on the same level (7 cun proximal to the lateral malleolus) are → **G.B.-35** (on the posterior border of the fibula), → **G.B.-36** (on the anterior border of the fibula) and → **BL-58** (on the lateral border of the gastrocnemius muscle).

Needling

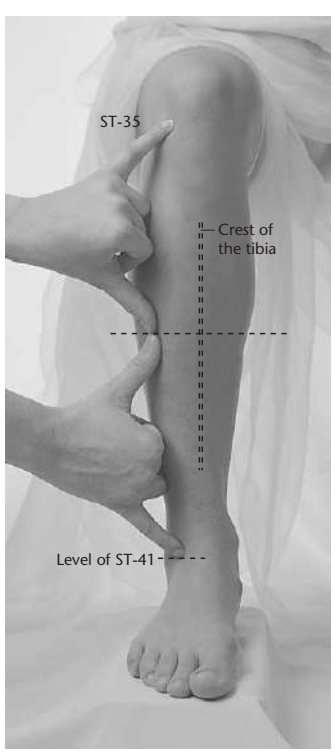
Vertically or obliquely 1–1.5 cun

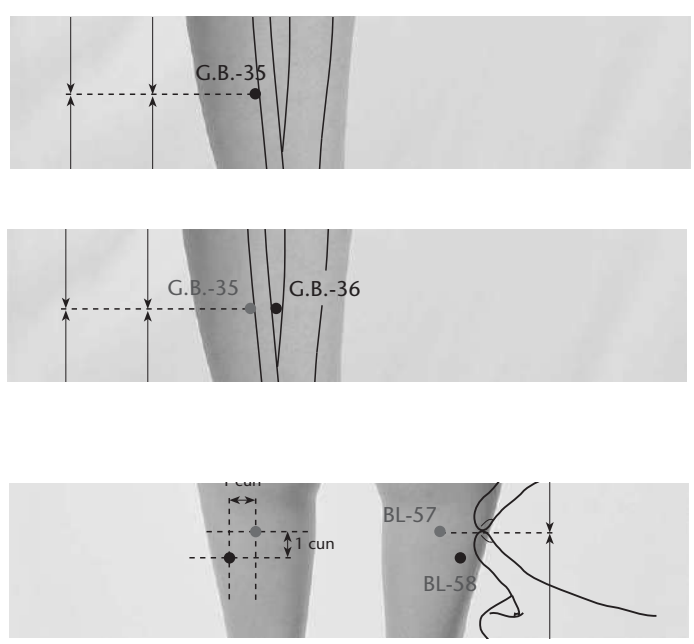
Actions/Indications

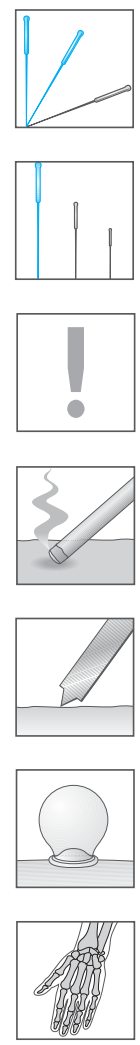
- Moves the Small Intestine Qi, eliminates stagnation, clears Damp-Heat
- Opens the channel, alleviates pain

Special features

Lower *he*-sea point of the Small Intestine, Sea of Blood point.







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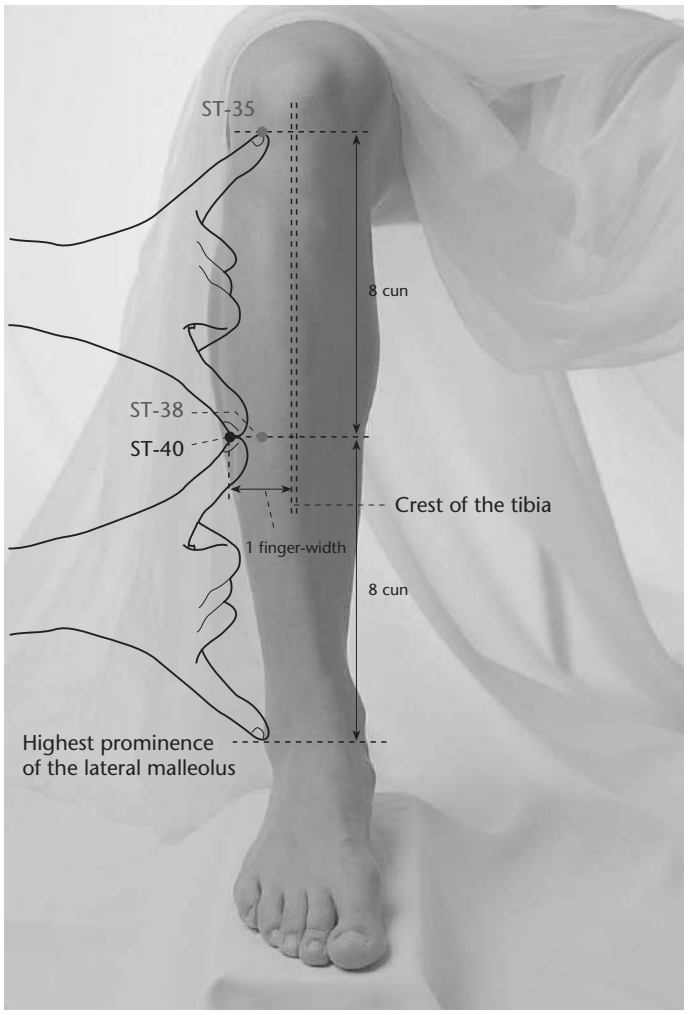
ST-40 *Abundant Bulge* FENGLONG

Location

At the midpoint of the line joining → **ST-35** and → **ST-41** and 2 fingerbreadths lateral to the anterior crest of the tibia or 1 fingerbreadth lateral to → **ST-38**, between the extensor digitorum longus and peroneus brevis muscles.

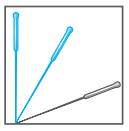
How to find

Quick method: Spreading-hands technique (→ 2.3.3): Place the little fingers on → **ST-35** ('lateral eye of the knee', level with the knee joint space) and → **ST-41** (in the depression between the tendons of the extensor digitorum longus and the hallucis longus, level with the highest prominence of the lateral malleolus) and determine the midpoint of this line, using the thumb. **ST-40** is located in a depression 2 fingerbreadths (2 middle fingerbreadths, measured from the anterior crest of the tibia) lateral to this point. **ST-40** may be palpated 'dynamically' (according to pressure sensitivity). Located on the same level (8 cun proximal to the highest prominence of the lateral malleolus) are → **ST-38** (1 fingerbreadth lateral to the tibia) and → **BL-57** (on the dorsal aspect of the lower leg, halfway between → **BL-40** and → **BL-60**).



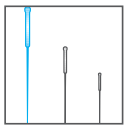
Needling

Vertically or obliquely 1–1.5 cun



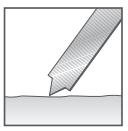
Actions/Indications

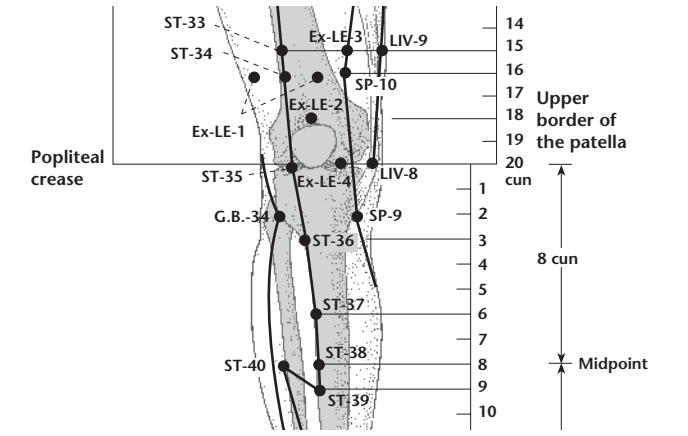
- Transforms Dampness and Phlegm, clears Phlegm in the Lung and Heart, calms the *shen*

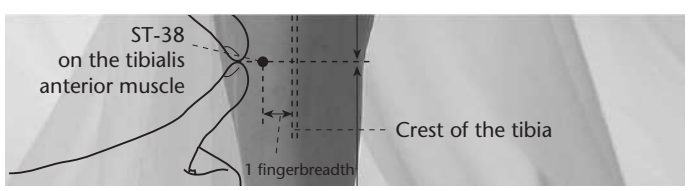


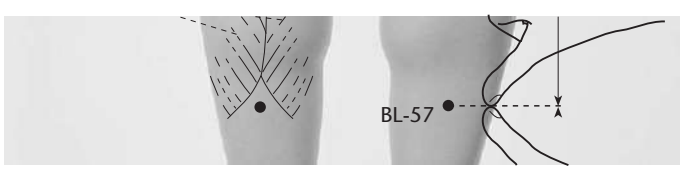
Special features

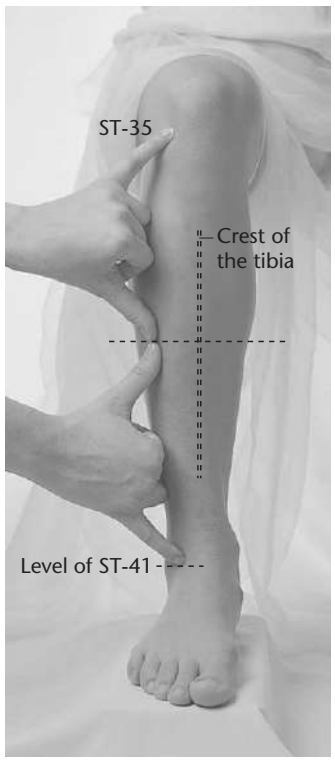
Luo-connecting point. Main acupuncture point for eliminating Phlegm.











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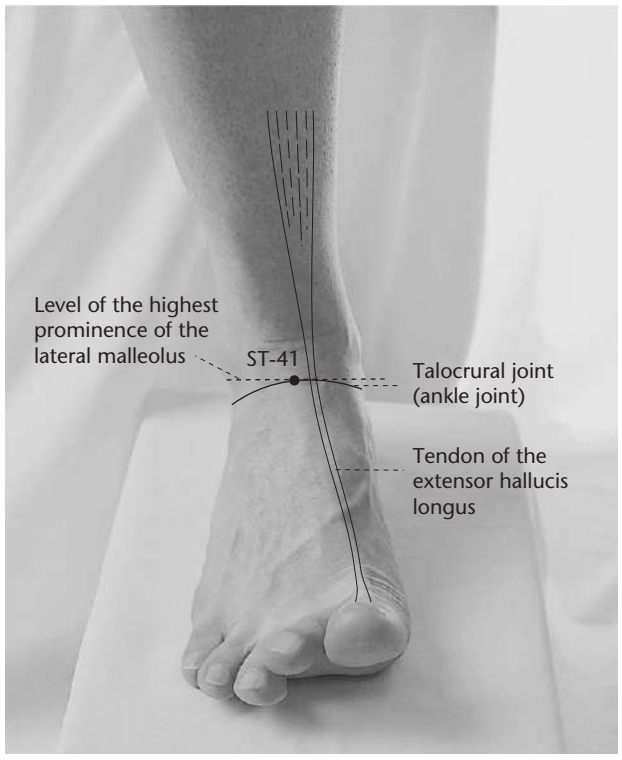
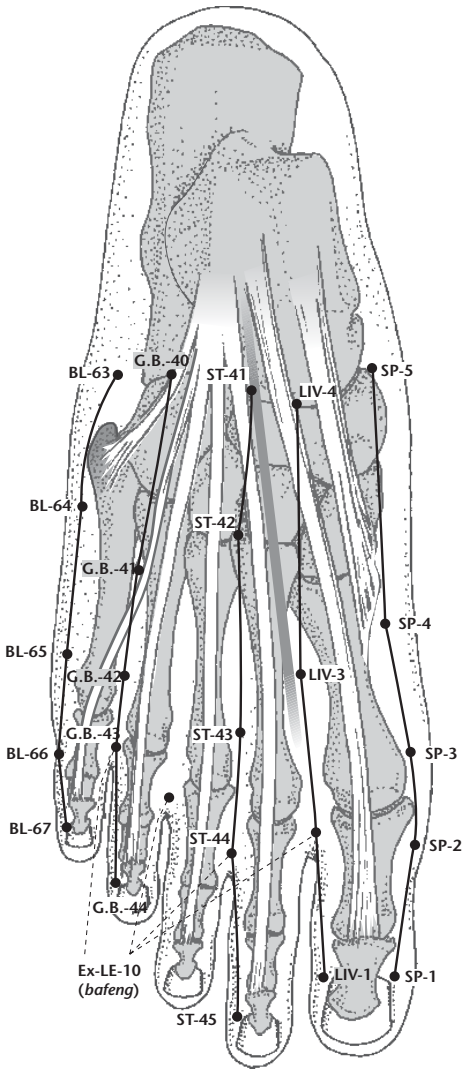
Stream Divide JIEXI ST-41





Location

On the ankle, on the level of the highest prominence of the lateral malleolus, in the depression between the tendons of the extensor digitorum and the extensor hallucis longus.

How to find

With the patient extending their big toe against resistance, the tendon of the extensor hallucis longus muscle will become more distinct. **ST-41** is located lateral to this tendon, in an obvious depression on the level of the highest prominence of the lateral malleolus (→ 3.6.2) and ankle joint space.
Located on the same level is → **LIV-4** (medial to the tendon, halfway between → **SP-5** and **ST-41**).

Needling

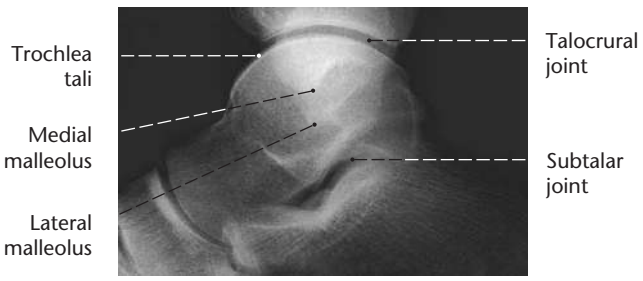
0.5–1 cun vertically or obliquely deep to the tendons in a medial direction towards → **SP-5** or in a lateral direction towards → **G.B.-40**. Caution: Tibial artery/vein/nerve lie deep to this point.

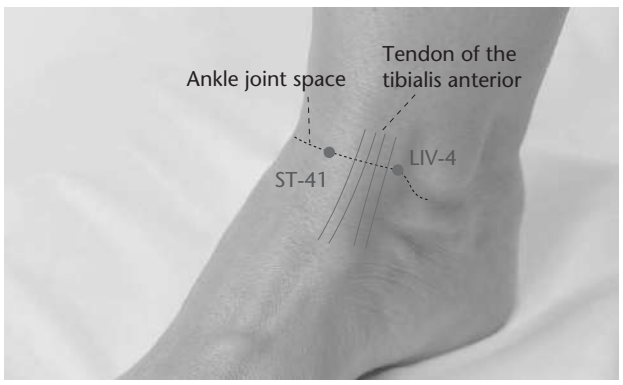
Actions/Indications

- Clears Heat from the Stomach and Stomach channel
- Calms the *shen*
- Opens the channel and *luo* vessels, alleviates pain

Special features

Jing-river point, Fire point, tonification point. Important local point for disorders of the ankle joint. Important distal point for frontal headaches caused by Stomach Heat or Stomach Fire.





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ST-42 *Rushing Yang* CHONGYANG

Location

On the highest point of the dorsum of the foot, between the tendons of the extensor hallucis longus and the extensor digitorum longus, directly lateral to the point where the dorsalis pedis artery may be palpated. The point is bordered proximally by the 2nd and 3rd metatarsal bones and distally by the 2nd and 3rd cuneiform bones. **Alternative location:** Sometimes, this point may be located lateral to the medial portion of the extensor digitorum longus tendon (joining the 2nd toe).

How to find

With the palpating finger, glide from → **ST-43** (in the depression between the base of the 2nd and 3rd metatarsal bones) proximally towards → **ST-41** (in the depression between the tendons of extensor digitorum longus and hallucis longus). Locate **ST-42** at the highest point of the dorsum of the foot, in a depression lateral to the pulse. In most cases, **ST-42** is located lateral to the tendon of the extensor hallucis longus, which becomes more distinct by extending the big toe.

Needling

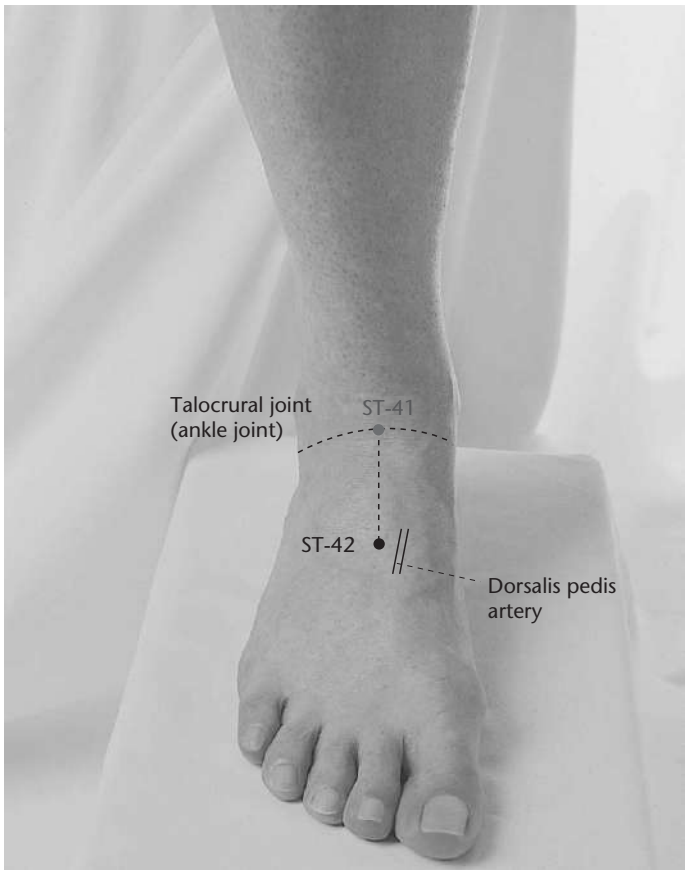
Vertically 0.2–0.5 cun. Caution: Dorsalis pedis artery.

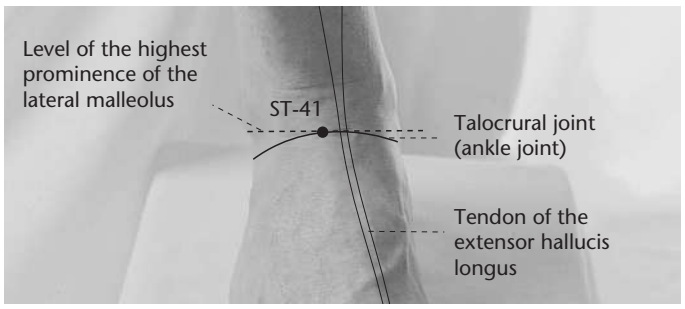
Actions/Indications

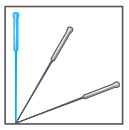
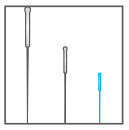
- Clears Heat from the Stomach channel, regulates the Stomach
- Calms the *shen*
- Opens the channel and *luo* vessels

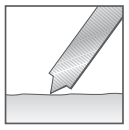
Special features

Yuan-source point, exit point.







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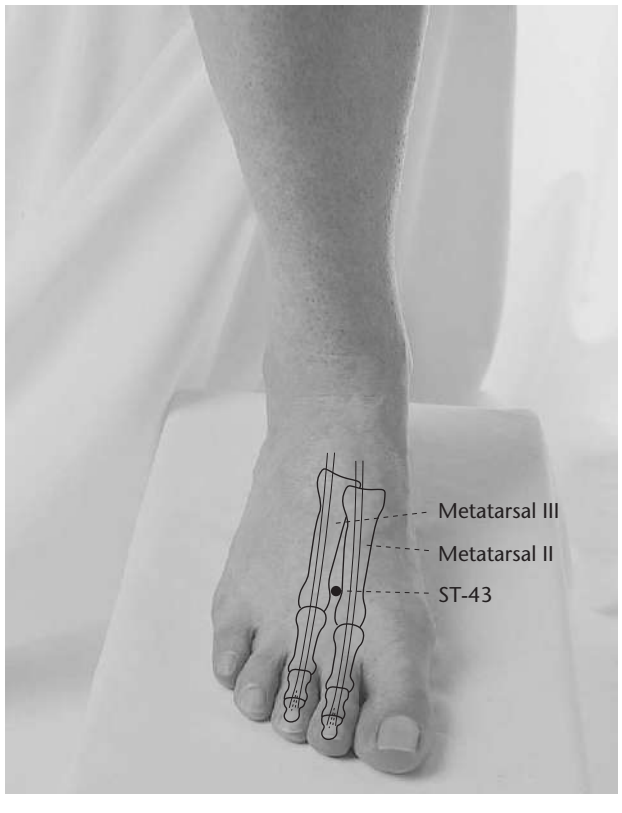
Sunken Valley XIANGU ST-43



Location

On the dorsum of the foot, in the depression between the 2nd and 3rd metatarsal bones, at the level of the junction of the shafts and the heads of these metatarsal bones.

How to find

Palpate from distal (toes) towards proximal (ankle) between the 2nd and 3rd metatarsal bones, until the finger glides into a depression distal to the metatarsophalangeal joint, where **ST-43** is located. It is approximately on the same level as the junction of the shafts and the heads of the two metatarsal bones.

Needling

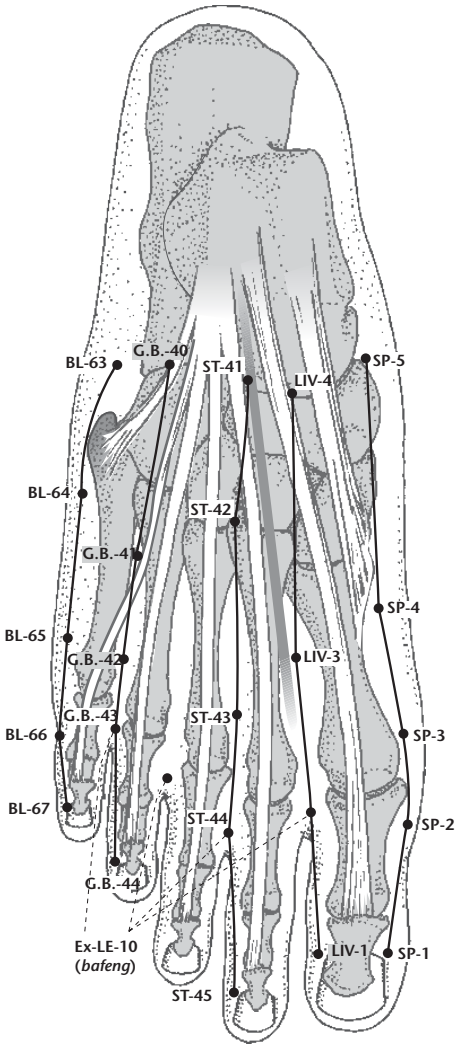
Vertically or obliquely 0.5–1 cun

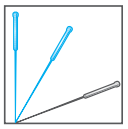
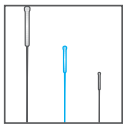
Actions/Indications

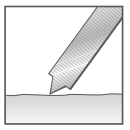
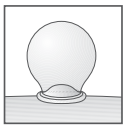
- Regulates the Spleen, Stomach and Intestines, reduces oedema

Special features

Shu-stream point, Wood point, generally used for 'inflammatory' joint disorders (*bi*-syndromes).



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ST-44 *Inner Court* NEITING

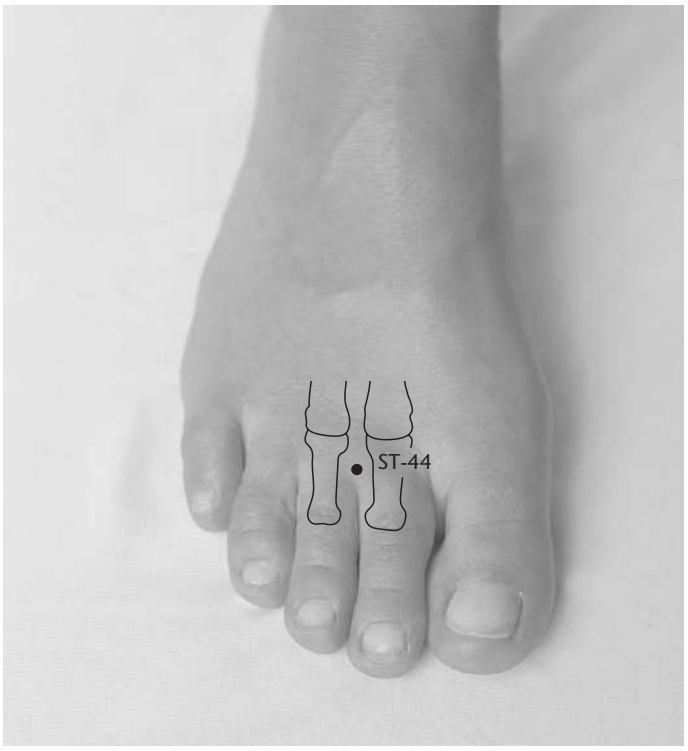
Location
Between the 2nd and the 3rd toes, proximal to the interdigital fold.

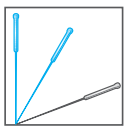
How to find
Locate **ST-44** just proximal to the interdigital fold between the 2nd and the 3rd toes.

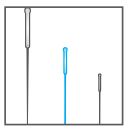
Needling
0.5–1 cun vertically or obliquely in a proximal direction

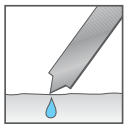
Actions/Indications
- Opens the channel, expels Wind and clears Heat, alleviates pain
- Regulates the Intestines, clears Damp-Heat
- Calms the *shen*

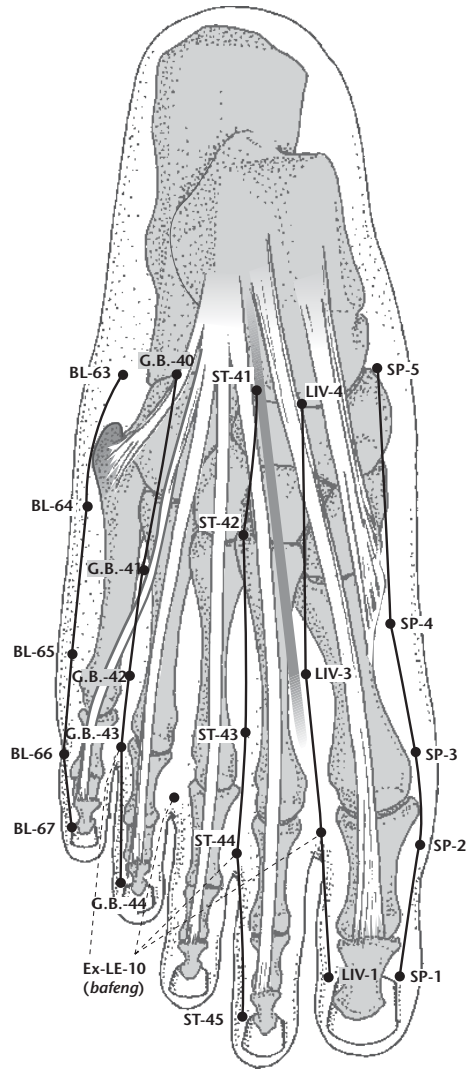
Special features
Ying-spring point, Water point, Ma Dan Yang Heavenly Star point. Major point for clearing Heat from the head and face.











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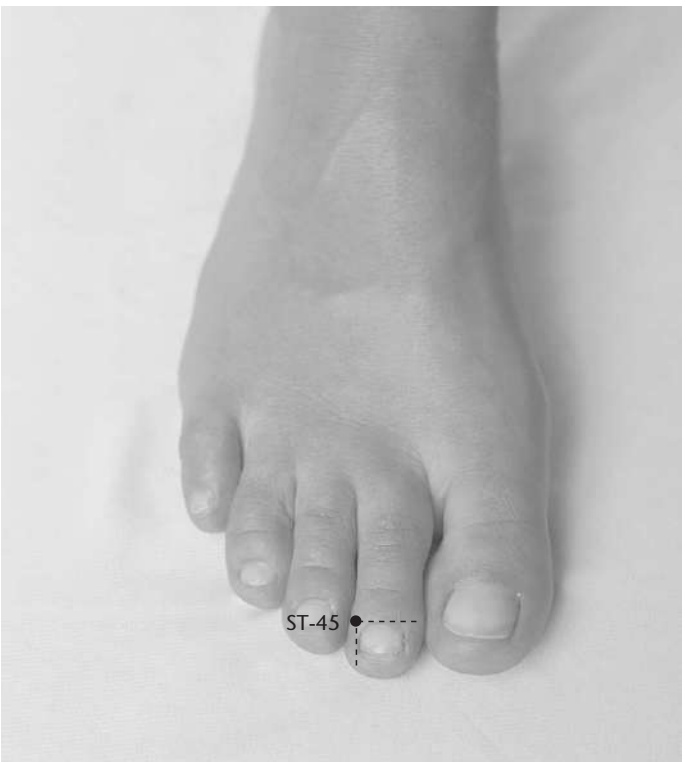
Strict Exchange LIDUI ST-45



Location

On the 2nd toe, 0.1 cun from the lateral corner of the nail.

How to find

ST-45 is located at the junction of two tangents drawn along the lateral and proximal border of the nail of the 2nd toe, approximately 0.1 cun from the margin of the nail.

Needling

0.1 cun vertically or obliquely in a proximal direction or prick to bleed.

Actions/Indications

- Opens the channel and clears Heat from the *yangming* channels (L.I./ST)
- Calms and regulates the *shen*

Special features

Jing-well point, Metal point, sedation point, important distal point for all Heat disorders affecting the head. For severe insomnia due to Fire or Phlegm-Heat, apply moxibustion ('small Fire attracting big Fire' technique).

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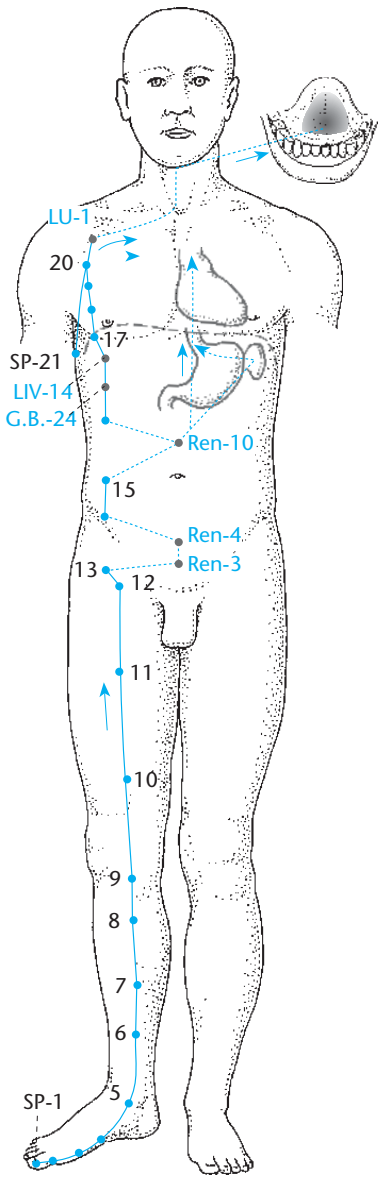
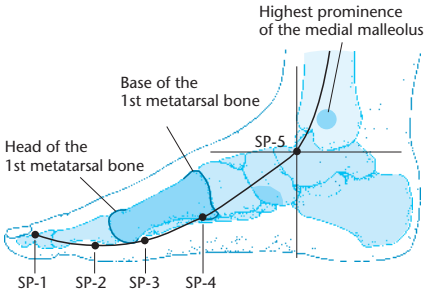
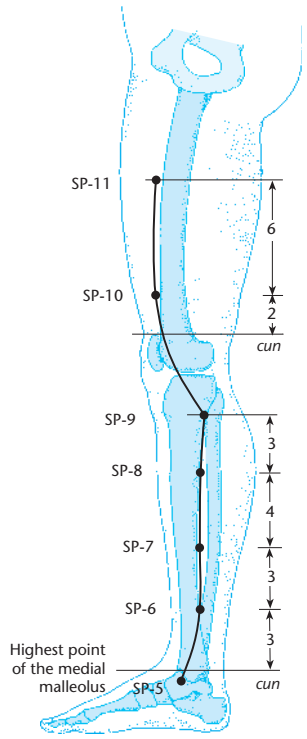
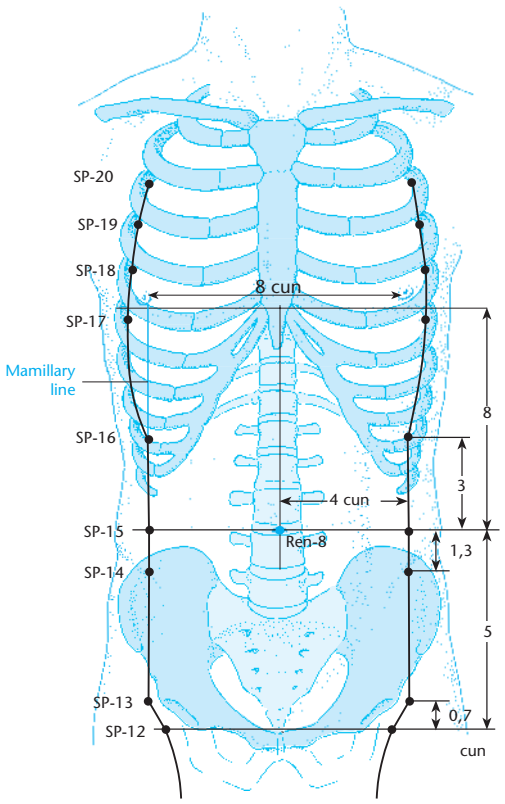
4.4 The Spleen Channel System – Foot *taiyin* (*zu tai yin jing luo*)

4.4.1 The Spleen Primary Channel (*zu tai yin jing*)









Pathway

The **external pathway** of the Spleen primary channel begins at **SP-1** (*yinbai*) on the big toe at the medial corner of the nail. This point is reached by a branch that separates from the Stomach primary channel at ➞ **ST-42** (*chongyang*) (foot Yin–Yang connection of the first great circuit).

➡ From **SP-1** the channel courses along the medial aspect of the foot

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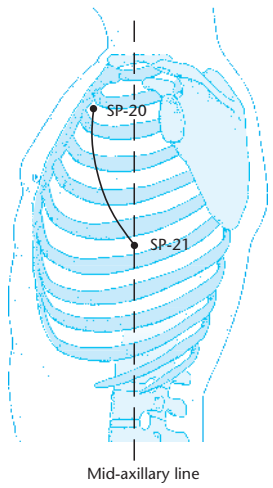

- ascends anterior to the medial malleolus and continues along the posterior border of the medial crest of the tibia
- passes the anteromedial region of the knee and thigh
- ascends the abdomen lateral to the midline to the second intercostal space, passing on its way → **Ren-3** (*zhongji*), → **Ren-4** (*guanyuan*), → **Ren-10** (*xiawan*), → **G.B.-24** (*riyue*) and → **LIV-14** (*qimen*)
- curves downward again and terminates 6 cun inferior to the axilla on the midaxillary line at **SP-21** (*dabao*).

According to Solinas et al (1998), its **inner pathway** branches off at → **Ren-10** (*xiawan*) and enters the Spleen (*pi*), its pertaining *zang*-Organ, and connects with the Stomach (*wei*), its paired *fu*-Organ. From the Stomach (*wei*), an **Interior branch** passes the diaphragm, ascends part of the oesophagus and enters the Heart (*xin*), where it connects with the Heart primary channel (*shou shao yin jing*) (deep Yin–Yin connection → 1.2). From **SP-20** (*zhourong*), a **further branch** ascends to → **LU-1** *(zhongfu)* at the level of the first intercostal space to form the hand–foot pairing (Yin axes of the first great circuit, *taiyin*). The branch ascends further to the tongue, reaches the root of the tongue and disperses on its lower surface.

Clinical importance (→ 1.2)

Exterior (*biao*) signs and symptoms: Heavy sensations of the head and body, sensation of weakness in the legs, general fever, pain in the lower cheek, muscular atrophy and weakness of the legs and medial hip region, cold knees, feet and legs, oedema

Interior (*li*) or *zangfu*-Organ signs and symptoms: Abdominal pain, diarrhoea or loose stools with undigested food, borborygmus, belching and dizziness, abdominal masses, loss of appetite, a sallow complexion, retention of urine

Excess (*shi*) → Spasms, foot pain

Deficiency (*xu*) → Abdominal fullness, borborygmus, diarrhoea with undigested food

Connections and meeting points of the Spleen primary channel (→ 1.2)

Connections with other channels

Stomach primary channel (*zu yang ming jing*)

Connection: Foot Yin–Yang connection of the first great circuit

Location: ST-42 SP-1 (on the foot).

Circulation: Circadian (according to the Organ clock)

Importance: Interior–Exterior relationship

Lung primary channel (*shou tai yin jing*)

Connection: Paired according to the six channel theory (hand–foot pairing) → *tai yin* (Yin axes of the first great circuit)

Location: SP-20 → LU-1 (on the thorax). A branch of the Spleen primary channel ascends from **SP-20** (*zhourong*) to **LU-1** (*zhongfu*)

Circulation: Non-circadian (**not** according to the Organ clock)

Importance: Above–below relationship

Heart primary channel (*shou shao yin jing*)

Connection: Deep Yin–*Yin* connection

Location: SP → HE (on the thorax). An internal branch of the Spleen primary channel spreads inside the Heart (*xin*) and connects with the Heart primary channel.

Circulation: Circadian (according to the Organ clock)

Importance: The Heart primary channel receives Nutritive Qi (*ying qi*) from the Spleen primary channel (first circulation of the *ying qi* → 1.1.4)

Connections with other *zangfu*-Organs

Spleen (*pi*), Stomach (*wei*), Heart (*xin*)

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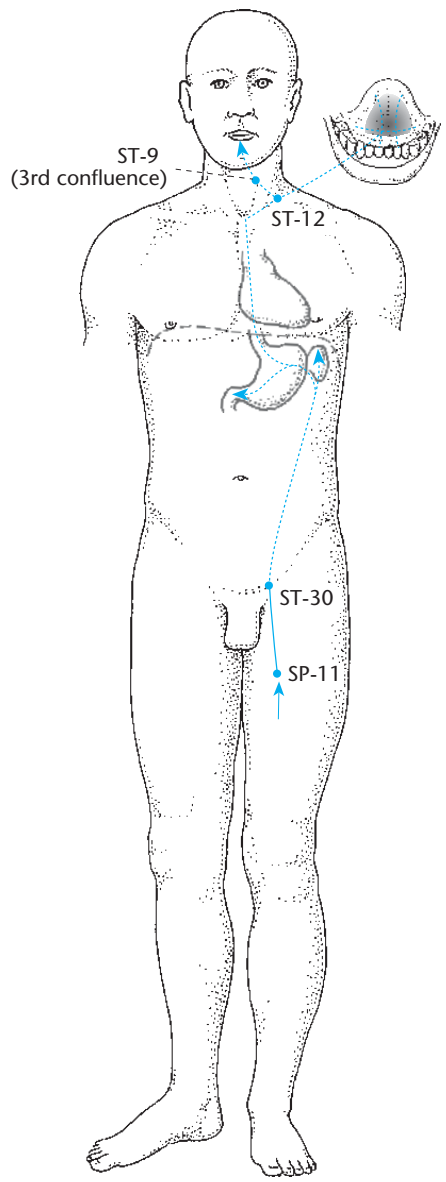
4.4.2 The Spleen Divergent Channel (*zu tai yin jing bie*)



Pathway

The Spleen divergent channel separates from the Spleen primary channel near **SP-11** (*jimen*) on the anteromedial aspect of the thigh, at the medial border of the sartorius muscle. It

- penetrates the abdomen in the inguinal region at → **ST-30** (*qichong*)
- connects with the Stomach (*wei*), Spleen (*pi*) and Heart (*xin*)
- ascends along the oesophagus to the suprasternal fossa and travels laterally to → **ST-12** (*quepen*) in the supraclavicular fossa
- crosses the Stomach primary channel and the Stomach divergent channel at → **ST-9** (*renying*) where they meet to connect at one of the six *he*-confluences (here: ST/SP as third confluence → 1.3).

Clinical importance

- Strengthens the relationship between the Spleen and the Stomach (*zangfu*-Organs). Points on the Spleen primary channel can therefore be used for disorders of the Stomach, and vice versa points on the Stomach primary channel can treat disorders of the Spleen. In clinical practice, Spleen points are used for the whole gastrointestinal tract.
- Meets the Stomach primary channel at → **ST-30**; this is also a Sea of Water and Grain point, which can be used for many digestive disorders.
- Links the Spleen primary channel with the Heart; in combination with other points, SP points can be used for Qi and Blood deficiency as well as for psycho-emotional disorders.
- Connects the Spleen primary channel and the neck region and can therefore be used for chronic disorders of the neck and thyroid caused by retention of Phlegm (for example **SP-3** with **ST-40**, **P-5**).
- Connects the Spleen primary channel with the mouth and tongue and can therefore be used for disorders/ulcers of the tongue and mouth caused by retention of Phlegm (for example **SP-2, SP-3, SP-6**).

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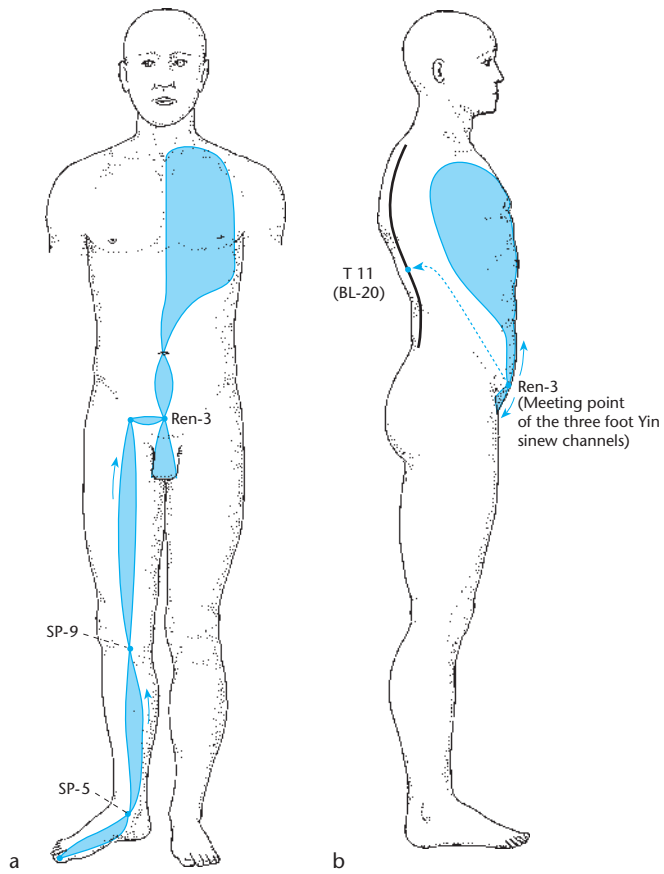
4.4.3 The Spleen Sinew Channel (*zu tai yin jing jin*)



Pathway

The Spleen sinew channel begins on the medial aspect of the big toe at **SP-1** (*yinbai*)

➡ runs along the medial border of the foot

➡ binds (*jie*) anterior to the medial malleolus at **SP-5** (*shangqiu*)

➡ ascends along the medial aspect of the tibia to **SP-9** (*yinlingquan*) and binds (*jie*) anterior to the medial head of the tibia

➡ runs along the medial aspect of the thigh and binds (*jie*) on the medial aspect of the inguinal region

➡ continues to → **Ren-3** (*zhongji*) where it meets the other sinew channels of the foot Yin channels

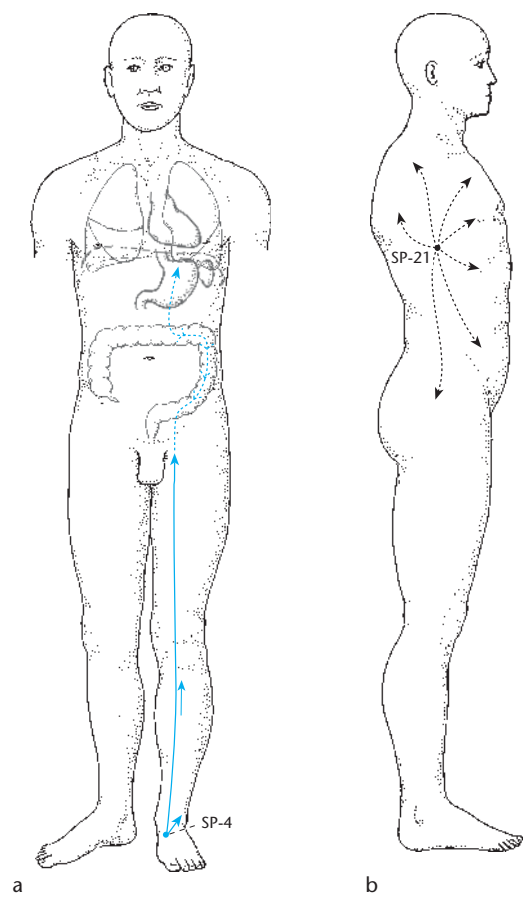
At → **Ren-3** the sinew channel separates into three branches:

- **One branch** runs to the genital region
- **A further branch** ascends along the anterior midline, covering the *ren mai* and binding (*jie*) at the umbilical region. It penetrates the abdomen and spreads in the costal and thoracic region.
- **A third branch** penetrates deeper into the body and ends at the spinal region at → **BL-20** (*pishu*).

Clinical importance

- **Pathology:** Distending pain of the big toe, pain at the medial malleolus, cramps and pain in the calves, pain of the medial aspect of the knees and thighs, pain in the inguinal and genital region (radiating to the umbilicus, thorax and back).
- **Indication:** Mainly for *bi*-syndromes (Painful Obstruction Syndrome) and *wei*-syndrome (atrophy syndrome) along the Spleen channel, especially along the medial aspect of the leg. The area covered by the Spleen sinew channel is larger than that covered by the Spleen primary channel. This explains why Spleen primary channel points can also be used for disorders and diseases of the external genitalia and the umbilical region.

4.4.4 The Spleen *luo*-Connecting Vessel System (*zu tai yin luo mai*)



Pathway

The Spleen *luo*-connecting channel separates from the Spleen primary channel at its *luo*-connecting point **SP-4** (*gongsun*) (→ 8.1.2). It forms a three-dimensional reticulate network, dividing into multiple branches and sub-branches (*sun luo, fu luo, xue luo* → 1.5) within the surrounding tissue.

➡ Horizontal divisions run to the Interiorly–Exteriorly paired Stomach primary channel, according to some schools of thought

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(for example Ngyen Van Nghi → Appendix) they travel as a **transverse** Spleen *luo*-connecting vessel to the *yuan*-source point → **ST-42** (*chongyang*).

- A **longitudinal** division follows the pathway of the Spleen primary channel, enters the abdomen in the inguinal region and connects with the Large Intestine (*dachang*) and the Stomach (*wei*).

Clinical importance (→ 8.1.2)

Pathology

- **Excess (*shi*)**: Colicky pain in the Stomach and Large Intestine
- **Deficiency (*xu*)** → *Gu zhang* (drum-like abdominal distension) such as digestive disorders in children, abdominal fullness and distension, ascites
- **Counterflow Qi:** Acute vomiting, diarrhoea, severe abdominal pain

The great *luo*-connecting vessel of the Spleen (*zu tai yin luo mai*)

Pathway

The great *luo*-connecting vessel of the Spleen begins on the lateral aspect of the thorax at → **SP-21** (*dabao*). It contains the Blood of the *luo*-connecting vessel and disperses to the vessels of the whole body, covering them in a net-like fashion (→ 1.5, → 8.1.2).

Clinical importance (→ 8.1.2)

- **Excess (*shi*)**: Pain in the whole body, polyarthritis, *bi*-Syndrome (Painful Obstruction Syndrome)
- **Deficiency (*xu*)**: Muscular atrophy and weakness, weakness of the joints, weakness in the whole body.

4.4.5 Cutaneous Region (*tai yin pi bu*)

See description and figures → 1.6

4.4.6 Points of the Spleen Primary Channel (Overview)

Specific points according to their function

- ***Yuan*-source point (→ 8.1.1): SP-3** (*taibai*) ■■
- ***Luo*-connecting point (→ 8.1.2.): SP-4** (*gongsun*) ■■/ SP-21 (*dabao*) ■■
- ***Xi*-cleft point (→ 8.1.3): SP-8** (*diji*) ■■
- **Associated Back-*shu* point (→ 8.1.4): BL-20** (*pishu*) ■■
- **Associated Front-*mu* point (→ 8.1.5): LIV-13** (*zhangmen*) ■■
- **Five *shu*-transporting points (→ 8.1.6):**
  jing-well point (Wood): **SP-1** (*yinbai*) ■■
  ying-spring point (Fire), tonification point: **SP-2** (*dadu*)
  shu-stream point (Earth), *ben* point: **SP-3** (*taibai*) ■■
  jing-river point (Metal), sedation point: **SP-5** (*shangqiu*) ■■
  he-sea point (Water): **SP-9** (*yinlingquan*) ■■
- ***Hui*-meeting point (→ 8.1.7): –**
- **Opening point (→ 8.1.8) of the *chong mai*: SP-4** (*gongsun*) ■■
- **Lower *he*-sea points (→ 8.1.9): –**
- ***Jiaohui*-meeting points (→ 8.1.10):**
  – with the Kidney and Liver primary channels (meeting point of the three foot *Yin* channels and the *yin qiao mai**: **SP-6** (*sanyinjiao*) ■■
  – with the LIV and T.B.* channels and the *yin wei mai:* **SP-12** (*chongmen*)
  – with the LIV channel and the *yin wei mai*: **SP-13** (*fushe*)
  – with the *yin wei mai*: **SP-15** (*daheng*), **SP-16** (*fuai*)
  – of other channels with the SP channel: **LU-1**, **G.B.-24**, **LIV-14**, **Ren-3**, **Ren-4**, **Ren-10**, **Ren-17***
- **Gao Wu command point (→ 8.1.11):** –
- **Window of Heaven point (→ 8.1.12):** –
- **Points of the Four Seas (→ 8.1.13):** –
- **Ma Dan Yang Heavenly Star point(→ 8.1.14):** –
- **Sun Si Miao Ghost point (→ 8.1.15): SP-1** (*yinbai*) ■■
- **Other functional points:**
  – important point for diarrhoea: **SP-4** (*gongsun*) ■■
  – important point for Damp *bi*-syndrome: **SP-5** (*shangqiu*) ■■
  – important point for eliminating Dampness: **SP-9** (*yinlingquan*) ■■
  – important point for regulating the Blood: **SP-10** (*xuehai*) ■■
  – important point for general pain: **SP-21** (*dabao*) ■■

Points according to region

- **Local points (→ 8.2.1):** knee region – **SP-9** (*yinlingquan*) ■■; Large Intestine – **SP-15** (daheng) ■■; knee – **SP-9** (*yinlingquan*) ■■; foot – **SP-5** (*shangqiu*) ■■; toes – **SP-3** (*taibai*) ■■
- **Adjacent points (→ 8.2.1):** Spleen/Stomach – **SP-15** (*daheng*) ■■; hypochondrium – **SP-21** (*dabao*) ■■; knee – **SP-10** (*xuehai*) ■■; toes – **SP-4** (*gongsun*) ■■, **SP-5** (*shangqiu*) ■■, **SP-9** (*yinlingquan*) ■■
- **Distal points (→ 8.2.1):** for the Spleen/Stomach, upper abdominal region – **SP-4** (*gongsun*) ■■; for the female genital organs, urogenital region – **SP-6** (*sanyinjiao*) ■■; lower abdomen – **SP-1** (*yinbai*) ■■; for the hand and knee – **SP-5** (*shangqiu*) ■■

Specific points according to the channel pathway (in numerical order):

- **SP-1** (*yinbai*) ■■: Sun Si Miao Ghost point (→ 8.1.15); distal point for the lower abdomen (→ 8.2.1); *jing*-well point (Wood) (→ 8.1.6)
- **SP-2** (*dadu*): *ying*-spring point (Fire) (→ 8.1.6), tonification point
- **SP-3** (*taibai*) ■■: *yuan*-source point (→ 8.1.1), *shu*-stream point (→ 8.1.6), *ben* point (Five Phase point) (→ 8.1.6)

* Mentioned by only some authors.

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- **SP-4** (*gongsun*) ■■: *luo*-connecting point of the Spleen (→ 8.1.2); opening point of the *chong mai* (→ 8.1.8); distal point for the Spleen/Stomach, upper abdomen (→ 8.2.1); important point for diarrhoea; adjacent point for the toes (→ 8.2.1)
- **SP-5** (*shangqiu*) ■■: *jing*-river point (Metal) (→ 8.1.6); Sedation point; important point for Damp *bi*-syndrome; local point for the foot (→ 8.2.1); distal point for the hand and knee (→ 8.2.1)
- **SP-6** (*sanyinjiao*) ■■: *jiaohui*-meeting point with the KID and LIV channels and the *yin qiao mai* (→ 8.1.10) (meeting point of the three foot Yin channels); distal point for the female genital system, the urogenital region (→ 8.2.1)
- **SP-8** (*diji*) ■■: *xi*-cleft point (→ 8.1.3)
- **SP-9** (*yinlingquan*) ■■: *he*-sea point (Water) (→ 8.1.6); important point for eliminating Dampness; local point for the knee region (→ 8.2.1); local point for the knees (→ 8.2.1)
- **SP-10** (*xuehai*) ■■: important point for regulating the Blood; adjacent point for the knees (→ 8.2.1)
- **SP-12** (*chongmen*): *jiaohui*-meeting point with the LIV and T.B.* channels and the *yin wei mai* (→ 8.1.10)
- **SP-13** (*fushe*): *jiaohui*-meeting point with the LIV channel and the *yin wei mai* (→ 8.1.10)
- **SP-15** (*daheng*) ■■: local point for the Large Intestine (→ 8.2.1); adjacent point for the Spleen/Stomach (→ 8.2.1); *jiaohui*-meeting point with the *yin wei mai* (→ 8.1.10)
- **SP-16** (*fuai*): *jiaohui*-meeting point with the *yin wei mai* (→ 8.1.10)
- **SP-21** (*dabao*) ■■: adjacent point for the hypochondrium (→ 8.2.1); Main-*luo*-connecting point of the Spleen (→ 8.1.2); important point for generalised pain

General location help

- **SP-13 – SP-16**: these points are all located 4 cun lateral to the anterior midline (= mamillary line) → **SP-13**: 0.7 cun superior to **SP-12; SP-14**: 1.3 cun inferior to the umbilicus; **SP-15**: at the level of the umbilicus; **SP-16**: 3 cun superior to the umbilicus.
- **SP-17 – SP-20**: these points are all located 6 cun lateral to the anterior midline in the fifth to second intercostal spaces.

*Mentioned by only some authors.

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Hidden White YINBAI SP-1

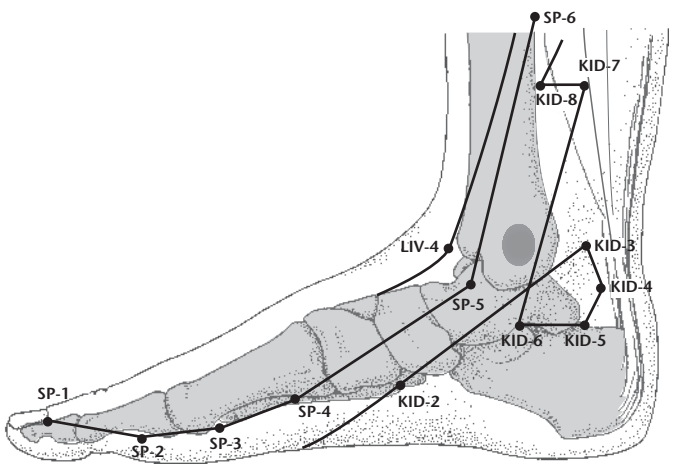
Location
On the big toe, 0.1 cun from the medial corner of the nail.

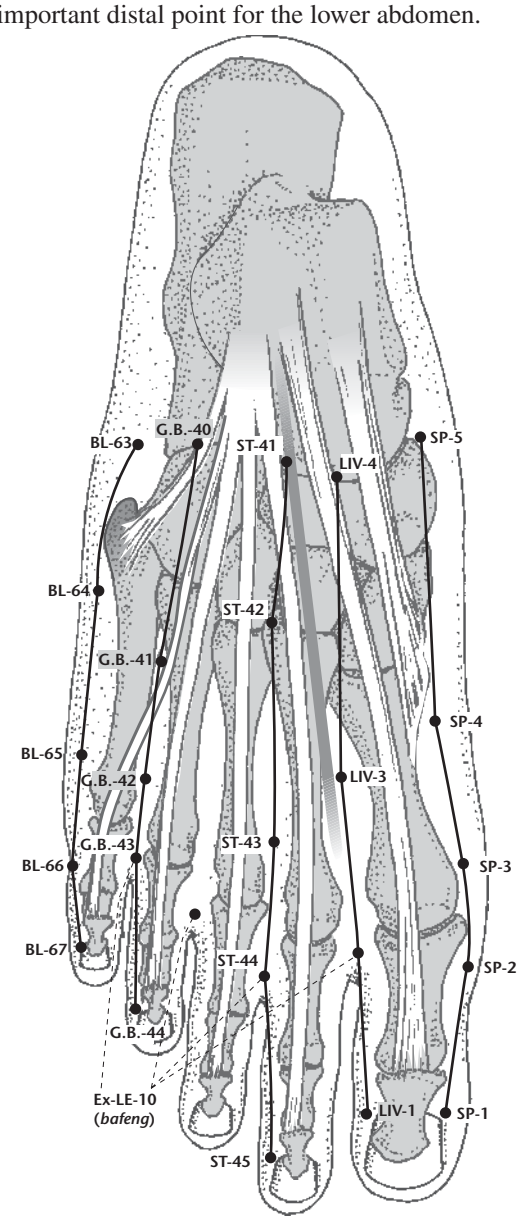
How to find
SP-1 is located at the junction of two tangents drawn along the medial and proximal border of the nail of the big toe, approximately 0.1 cun from the margin of the nail.

Needling
0.1–0.2 cun vertically or obliquely in a proximal direction or prick to bleed with a needle, lancet or three-edged needle.

Actions/Indications
- Regulates the Blood
- Regulates the Spleen
- Unbinds the chest
- Calms the *shen*
- Revives consciousness

Special features
Jing-well point, Wood point, Sun Si Miao Ghost point, entry point, important distal point for the lower abdomen.





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SP-2 *Great Metropolis* DADU

Location

On the medial aspect of the big toe, at the junction of the shaft and the base of the proximal phalanx, distal to the 1st metatarsophalangeal joint.

How to find

On the medial aspect of the big toe, palpate from distal to proximal towards the metatarsophalangeal joint, until you can feel the junction of the shaft with the base of the proximal phalanx. **SP-2** is located distally to the base of the bone, which forms a distinct step, and slightly inferiorly to its outer curvature, at the border of the red and white skin (sole/dorsum of the foot).
Located in comparable positions are → **BL-66** on the lateral border of the foot, → **L.I.-2** on radial aspect and → **S.I.-2** on the ulnar aspect of the hand.

Needling

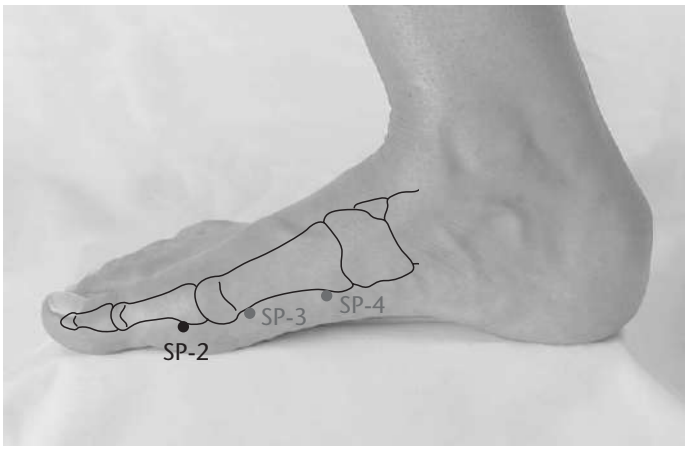
0.2–0.5 cun vertically or obliquely, just below the lower border of the bone. Caution: Painful point.

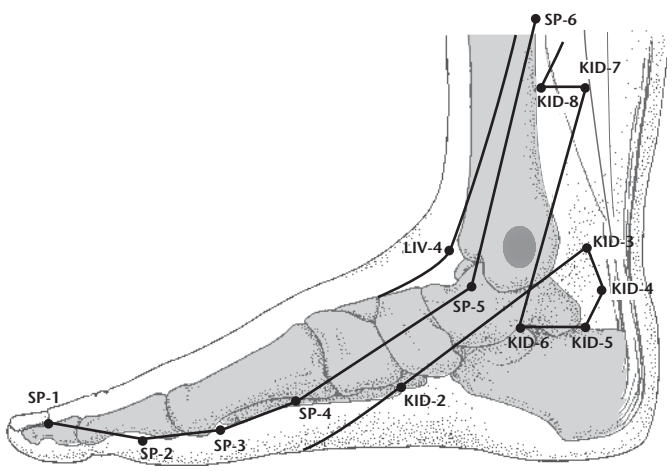
Actions/Indications

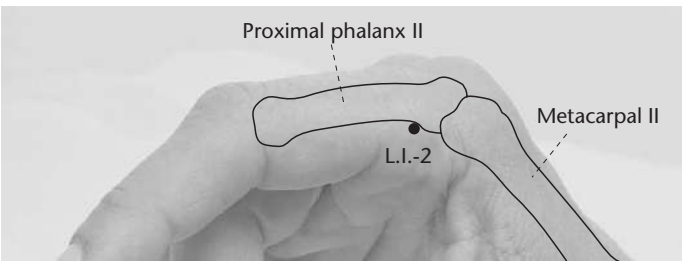
- Regulates and supports the Spleen, harmonises the Lower Burner and clears Heat

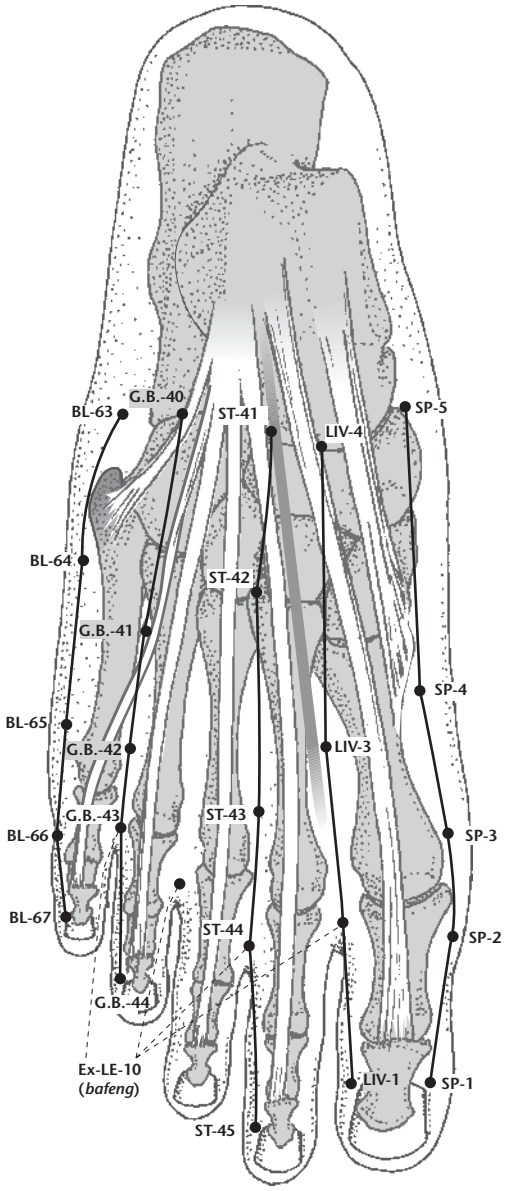
Special features

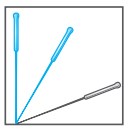
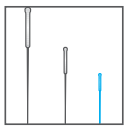
Ying-spring point, Fire point, tonification point.

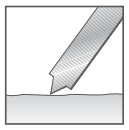










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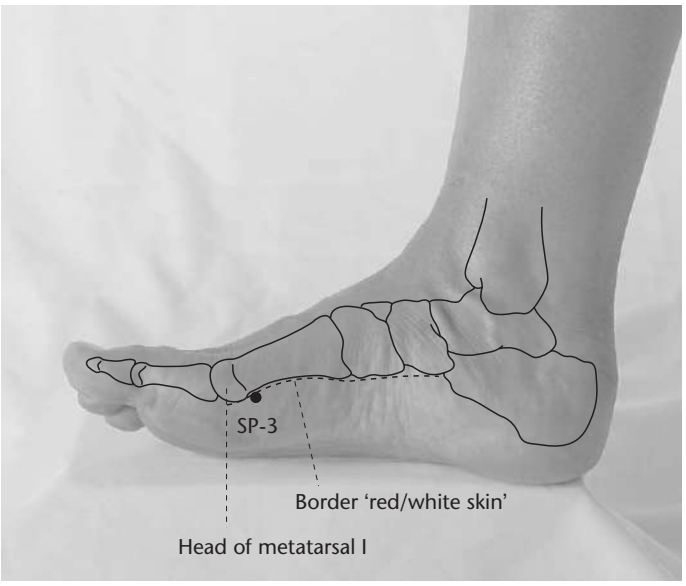
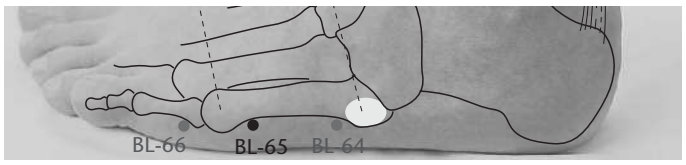
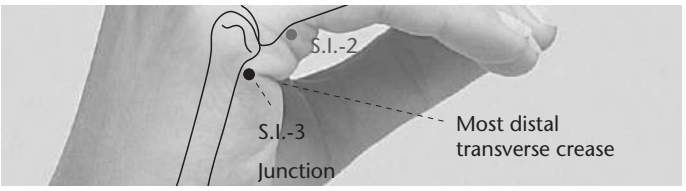
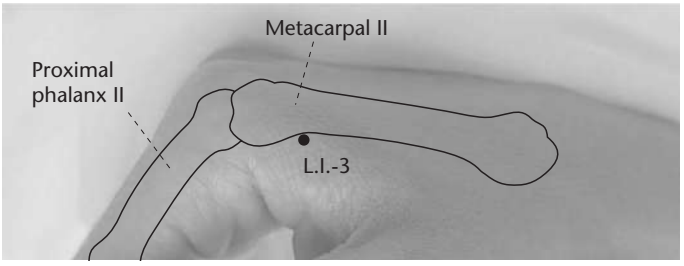
Supreme White TAIBAI SP-3









Location

On the medial aspect of the foot, in the depression proximal to the head of the 1st metatarsal bone, at the border of the red and white skin.

How to find

When palpating along the border of the red and white skin on the medial aspect of the foot from distal (toes) to proximal (ankle), the metatarsophalangeal joint forms a prominent landmark. **SP-3** is located just proximal to this joint in a clearly palpable depression, which marks the junction of the head and the shaft of the 1st metatarsal bone.

Located in a comparable position is → **BL-65** (proximal to the head of the 5th metatarsal bone) on the lateral border of the foot. In comparable locations on the borders of the hand are → **L.I.-3** on the radial aspect and → **S.I.-3** on the ulnar aspect of the hand.

Needling

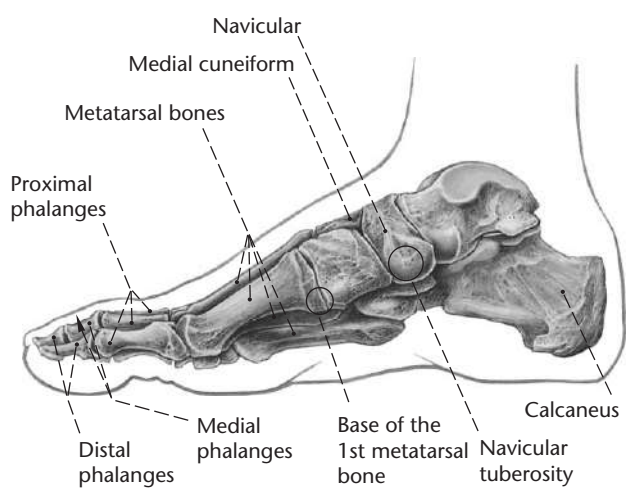
0.5–1 cun vertically or obliquely from medial towards lateral. Caution: Needling this point tends to be painful.

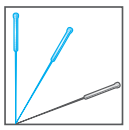
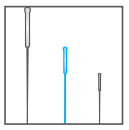
Actions/Indications

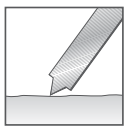
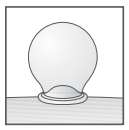
- Tonifies the Spleen, harmonises the Lower Burner
- Eliminates Dampness and Damp-Heat
- Regulates Qi locally

Special features

Yuan-source point, *shu*-stream point, Earth point, *ben* point (Five Phases). Important point for tonifying the Spleen.



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SP-4 *Grandfather Grandson* GONGSUN

Location

In the depression distal to the base of the 1st metatarsal bone, on the border of the red and white skin.

How to find

When palpating along the border of the red and white skin (sole/dorsum of the foot) on the medial aspect of the midfoot from proximal towards medial, the base of the 1st metatarsal bone (→ 2.6.2) forms a distinct bony prominence. **SP-4** is located in the depression distal to this prominence, at the junction of the shaft and the base of the bone.

→ **SP-3** is located slightly more distally at the junction of the head and the shaft of the 1st metatarsal bone. → **BL-64** is located in a comparable position on the lateral aspect of the midsection of the foot (at the junction of the shaft and the base of the 5th metatarsal bone).

Needling

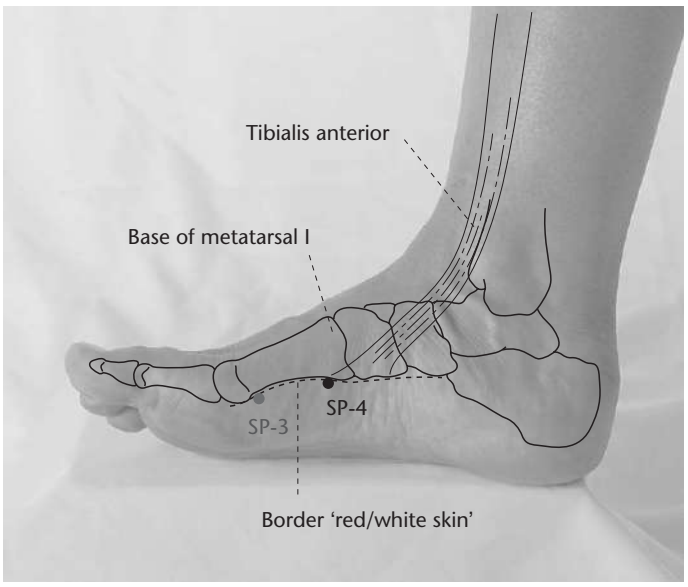
0.5–1 cun vertically or obliquely from medial towards lateral. Caution: Needling may be painful.

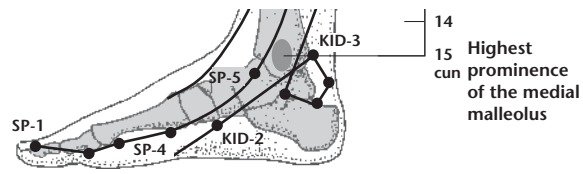
Actions/Indications

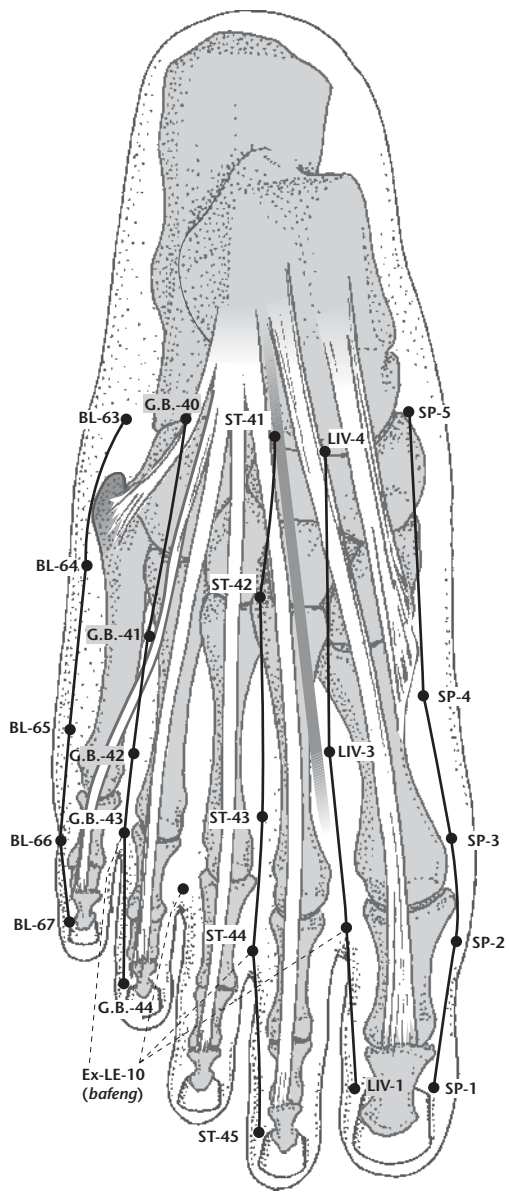
- Strengthens and regulates the Spleen Qi, eliminates Dampness
- Calms the *shen*
- Benefits the Heart and chest
- Regulates the *chong mai*
- Local point, for example for metatarsalgia

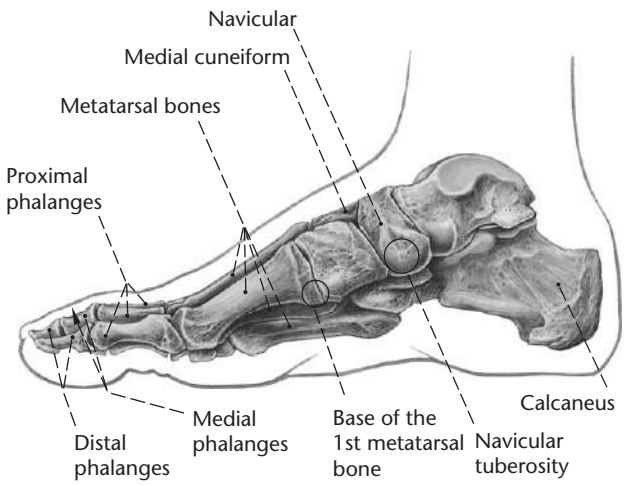
Special features

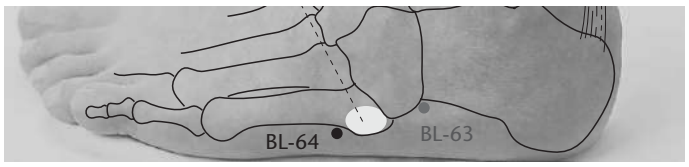
Luo-connecting point, opening (master) point of the *chong mai*. Important point for distension and pain in the upper and lower abdomen caused by Qi stagnation, Blood stasis or obstruction due to Dampness.











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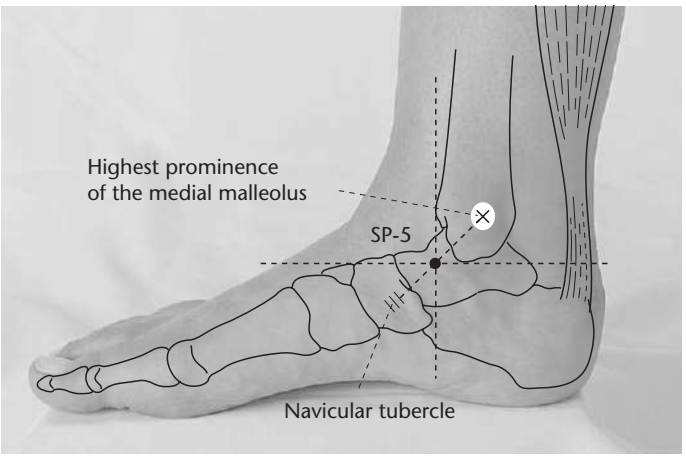
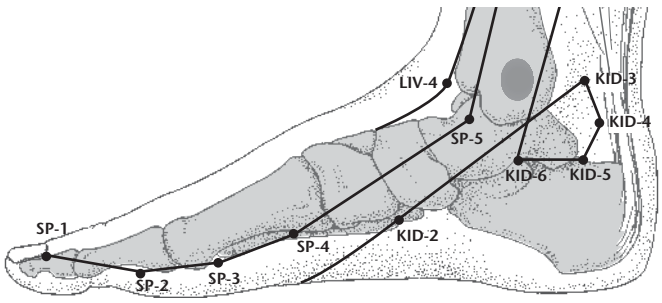
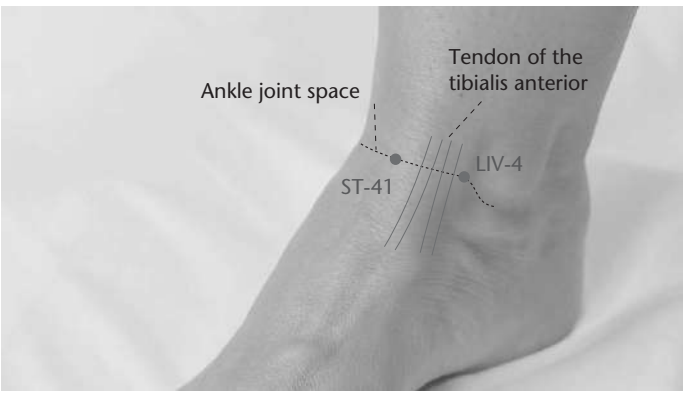
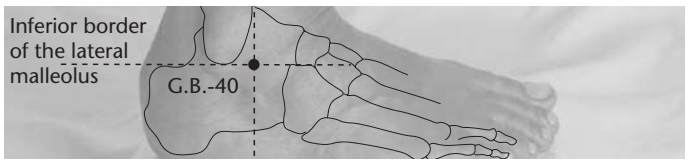
Shang Mound SHANGQIU SP-5









Location

In the depression at the junction of a vertical line drawn along the anterior border and a horizontal line drawn along the lower border of the medial malleolus. **Or**: In the depression halfway between the highest prominence of the medial malleolus and the tubercle of the navicular bone.

How to find

SP-5 is located in a depression anterior and inferior to the medial malleolus, at the junction of a vertical line drawn along the anterior border and a horizontal line drawn along the inferior border of the medial malleolus. **SP-5** is located distal to the tendon of the tibialis anterior muscle.

Located in a comparable position on the lateral aspect of the foot is → **G.B.-40** (in a depression at the junction of a vertical line drawn along the anterior border and a horizontal line drawn along the inferior border of the lateral malleolus).

Needling

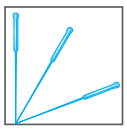
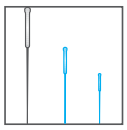
0.3–0.6 cun vertically, obliquely or transversely (subcutaneously) deep to the tendons towards → **ST-41**.

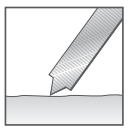
Actions/Indications

- Tonifies the Spleen, eliminates Dampness, benefits the tendons and bones
- Moves Qi locally
- Calms the *shen*

Special features

Jing-river point, Metal point, sedation point. Important point for treating Damp *bi*-syndrome.



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SP-6 *Three Yin Intersection* SANYINJIAO

Location

3 cun proximal to the highest prominence of the medial malleolus, on the posterior border of the medial crest of the tibia.

How to find

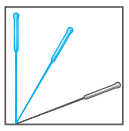
From the highest prominence of the medial malleolus (→ 3.6.2), measure 3 cun (1 handbreadth) in a superior direction, where **SP-6** is located in a depression at the posterior border of the medial crest of the tibia. This point is often sensitive to pressure. Sometimes, this depression is located more anteriorly, and locating **SP-6** should be based on pressure-sensitivity.
Located in a comparable position is → **G.B.-39** (3 cun proximal to the prominence of the lateral malleolus, on the anterior border of the fibula, intersecting point of the three foot Yang channels).

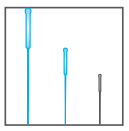
Needling

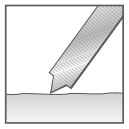
Vertically or obliquely 1–2 cun. Caution: Contraindicated during pregnancy, particularly with reducing needle techniques; exception: to promote labour.

Actions/Indications

- Tonifies the Spleen and the Stomach, eliminates Dampness
- Nourishes the Blood and Yin, regulates menstruation, promotes labour
- Regulates urination, benefits the genitals, harmonises the Lower Burner
- Calms the *shen*

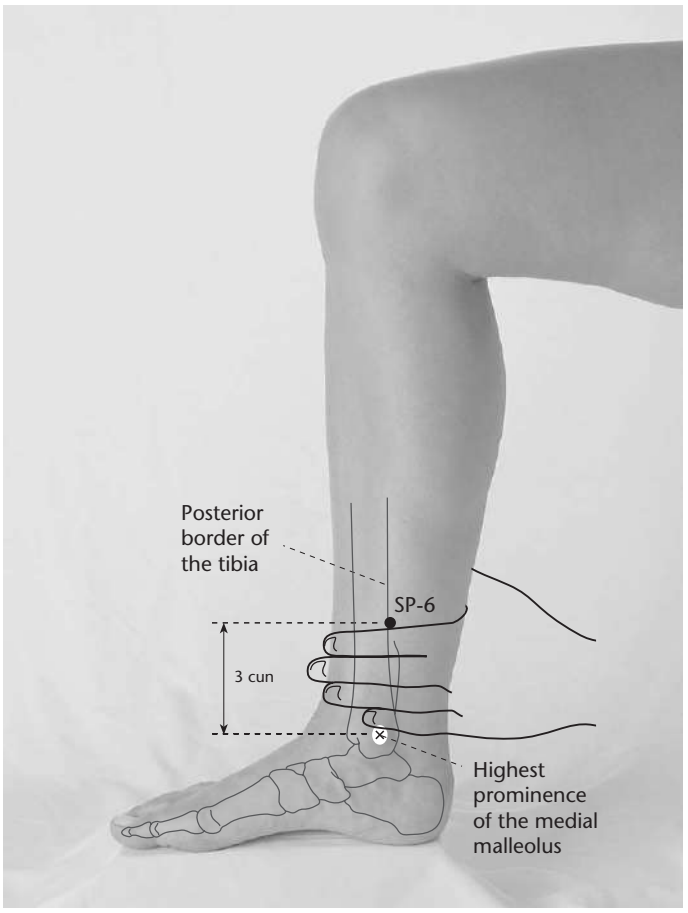


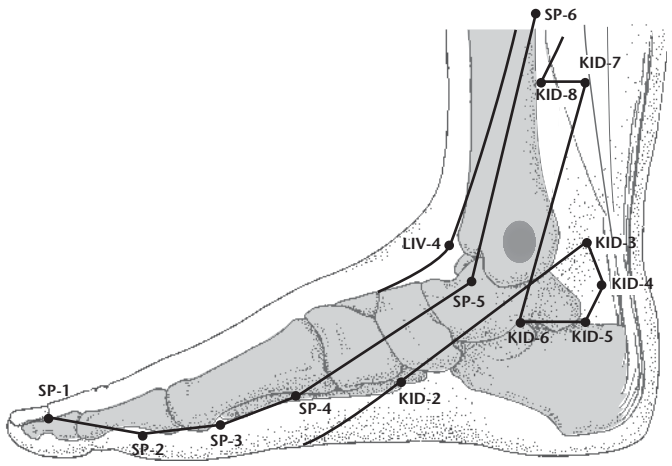


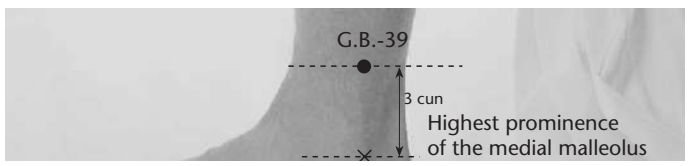


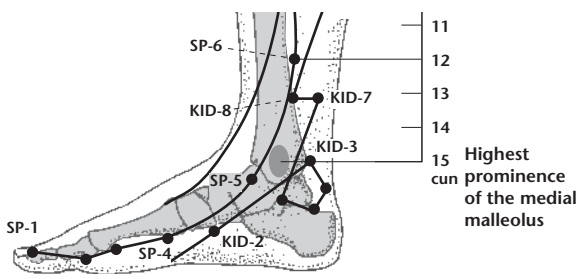
Special features

Meeting point with the Liver and Kidney channels (group *luo*-connecting point) and the *yin qiao mai*. Very important point for disorders of the Lower Burner (especially for gynaecological disorders, birth and urinary disorders), as well as for many digestive disorders and psychological disorders (caused by Blood and Yin deficiency).









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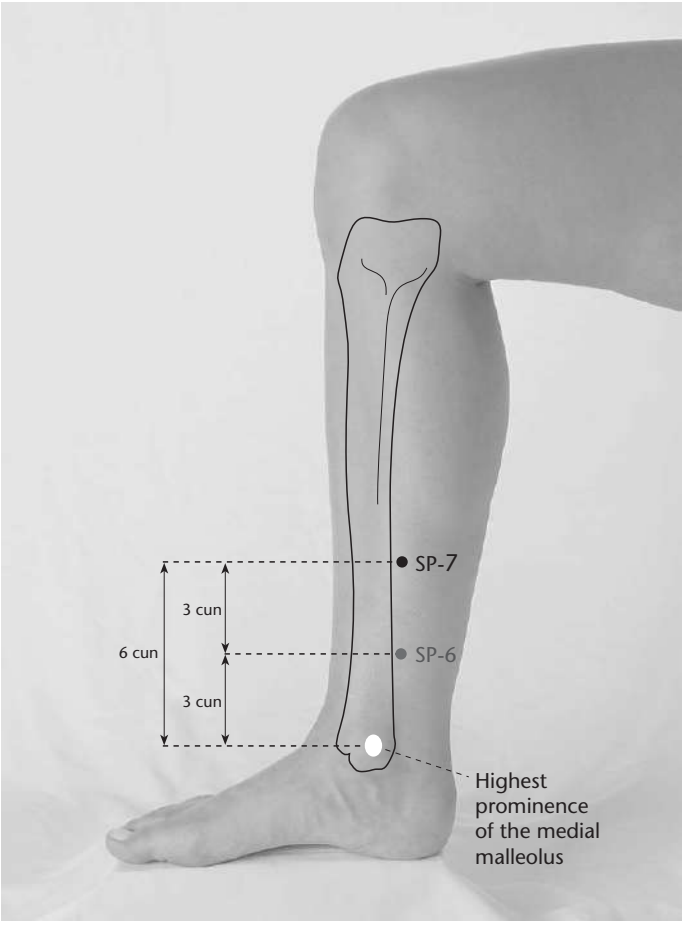
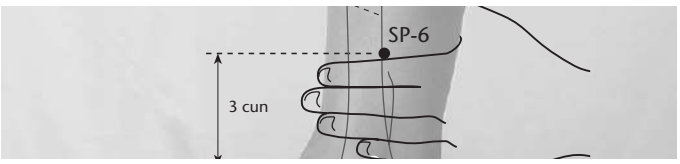
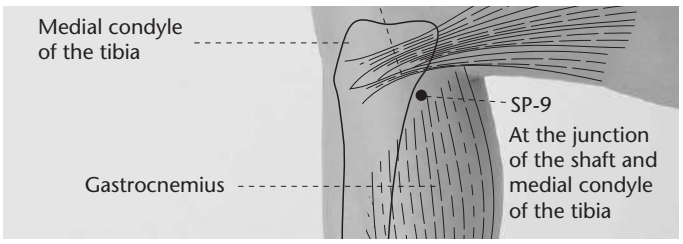
Dripping Valley LOUGU SP-7







Location

6 cun proximal to the highest prominence of the medial malleolus, on the posterior border of the medial crest of the tibia.

How to find

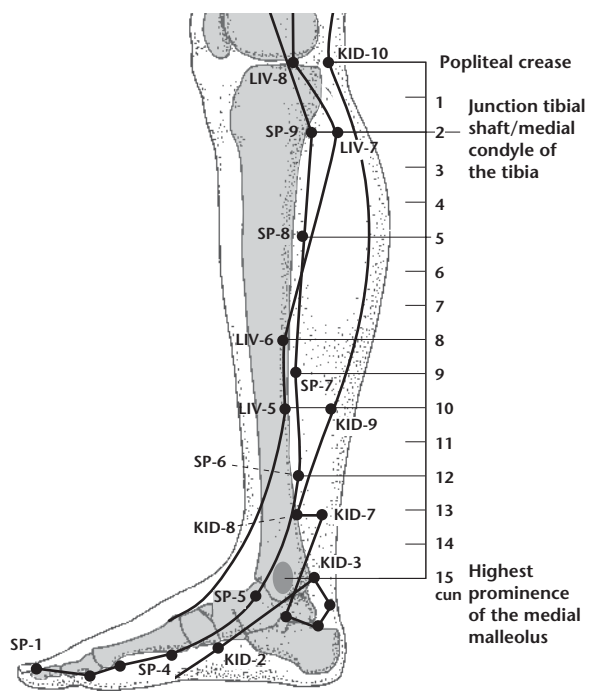
From the highest prominence of the medial malleolus, measure 6 cun in a superior direction, where **SP-7** is located at the posterior border of the medial crest of the tibia. **Or**: Spreading hands technique (→ 2.3.3): **SP-7** is located 0.5 cun distal to the midpoint of a line connecting → **SP-9** (distal to the tibial condyle) and the highest prominence of the medial malleolus.
→ **SP-6** is located midway between the tip of the malleolus and **SP-7** (3 cun superior/inferior respectively).

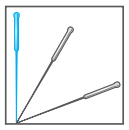
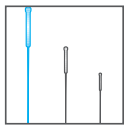
Needling

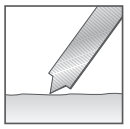
Vertically 1–1.5 cun

Actions/Indications

- Strengthens the Spleen, drains Dampness, opens the channel
- Promotes urination





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SP-8 *Earth Pivot* DIJI

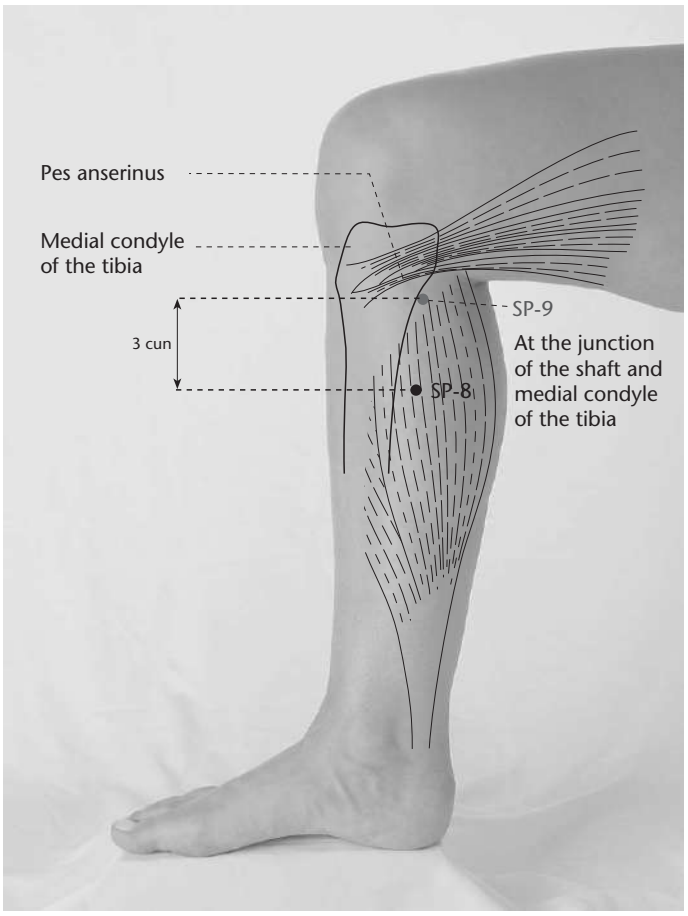
Location
3 cun distal to the junction of the shaft and the medial condyle of the tibia (→ **SP-9**), at the posterior border of the medial crest of the tibia.

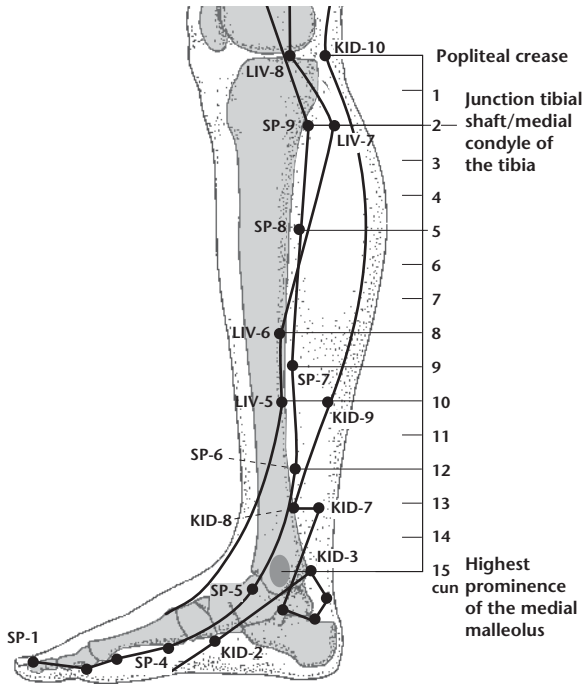
How to find
Measure 1 handbreadth directly inferior to the medial condyle of the tibia (→ **SP-9**). **SP-8** is located 3 cun distal to → **SP-9** on the posterior border of the medial crest of the tibia, on a line connecting → **SP-9** and the highest prominence of the medial malleolus.

Needling
Vertically 1–1.5 cun

Actions/Indications
- Regulates the uterus and the Blood
- Regulates the Spleen and eliminates Dampness

Special features
Xi-cleft point. Important point for acute dysmenorrhoea, often used in combination with → **L.I.-4**.





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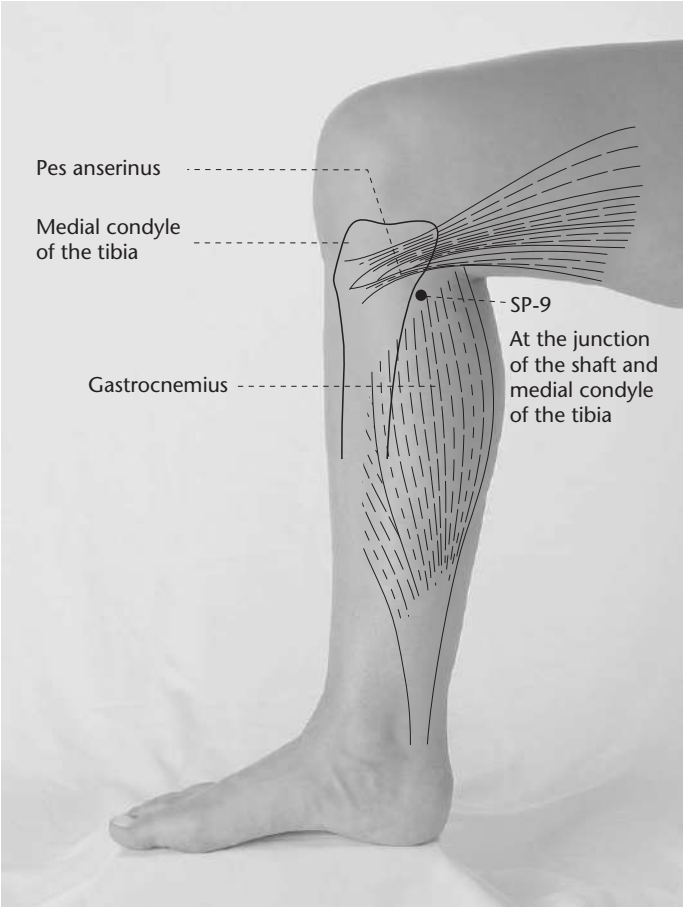
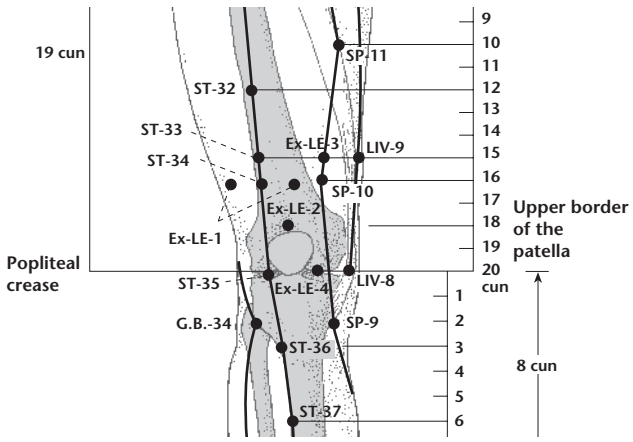
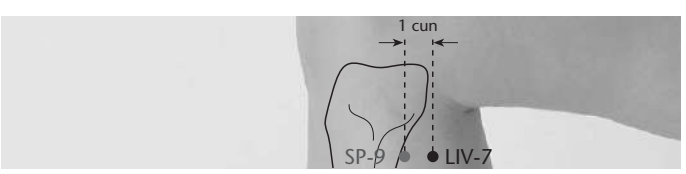
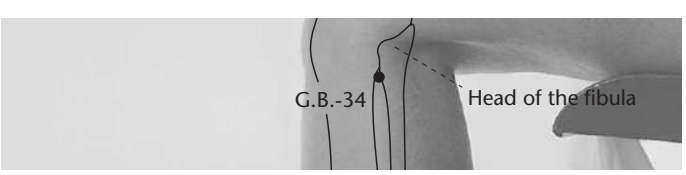
Yin Mound Spring YINLINGQUAN SP-9









Location

With the knee flexed, this point is located in a depression distal to the medial condyle of the tibia, at the junction of the shaft and the medial condyle.

How to find

Patient's position: Preferably locate and needle **SP-9** with the knee bent and the hip slightly externally rotated, so that the knee slightly lifts from the surface, or rest the knee in an externally rotated position on a knee support. **Location**: Palpate along the posterior border of the medial crest of the tibia towards the head of the tibia to locate **SP-9** in a pressure-sensitive depression at the junction of the shaft and the head of the tibia. This depression is located between the pes anserinus superficialis and the belly of the gastrocnemius muscle (→ 3.6.1).
Located on the same level but 1 cun posterior to **SP-9** is → **LIV-7**.
Located on the lateral aspect of the lower leg is → **G.B.-34** (anterior and inferior to the head of the fibula).

Needling

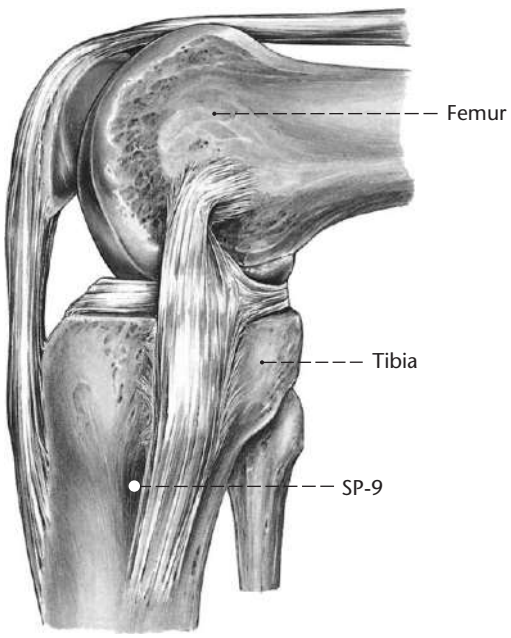
1–1.5 cun vertically, along the posterior border of the tibia.

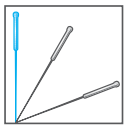
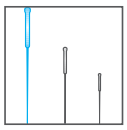
Actions/Indications

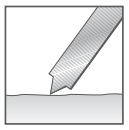
- Regulates the Spleen, transforms Dampness, regulates the water passages, benefits the Lower Burner
- As local point for disorders of the knee, especially if there are swellings

Special features

He-sea point, Water point. One of the major points for eliminating Dampness anywhere in the body. Important local point for disorders of the knee. **SP-9** is located approximately on the same level as → **G.B.-34**. If indicated, this point tends to be very tender upon pressure.





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SP-10 *Sea of Blood* XUEHAI

Location

With the knee flexed, **SP-10** is located 2 cun proximal and slightly medial to the medial superior border of the patella, in a depression on the vastus medialis muscle.

How to find

Measure 2 cun proximal to the medial superior border of the patella and locate **SP-10** by palpating slightly medially for a soft depression. **Or**: The practitioner places their left hand on the patient's right patella, with the heel of the palm level with the inferior patellar border and the extended fingers pointing in a superior direction. With the thumb and index finger forming an angle of 45°, the tip of the thumb will point to **SP-10**.

Needling

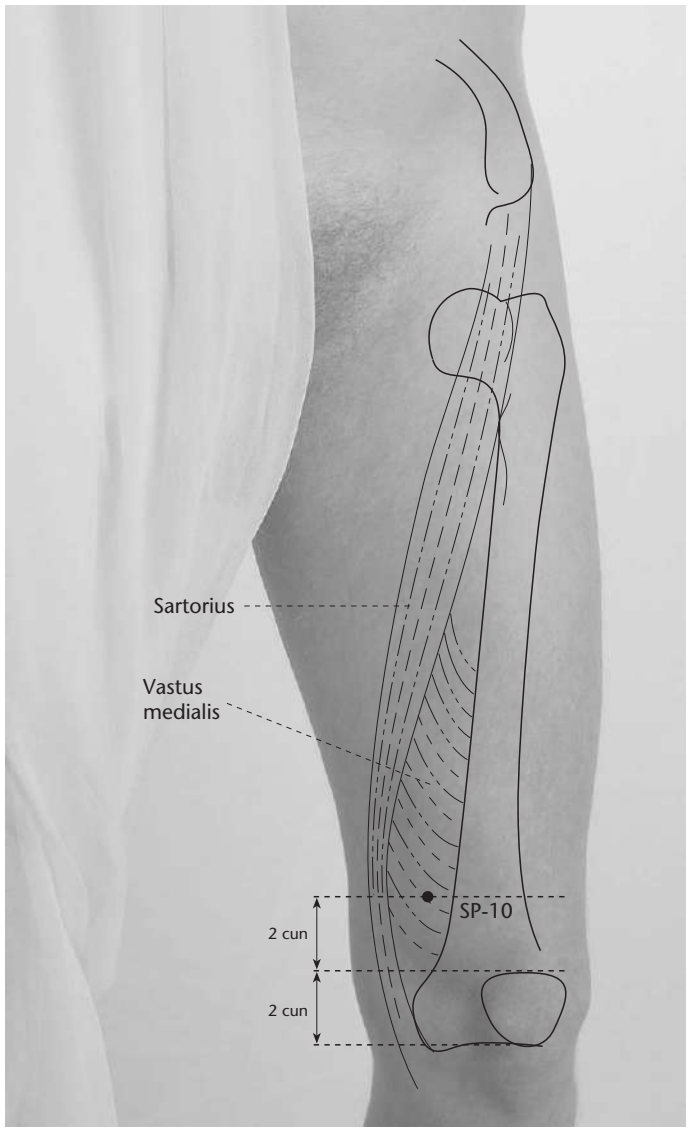
Vertically or obliquely 1–1.5 cun

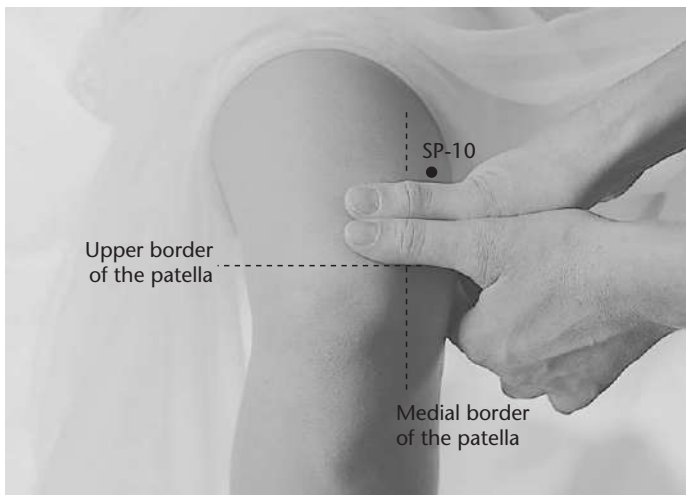
Actions/Indications

- Strengthens the Blood, dispels Blood stasis, cools the Blood, stops bleeding, regulates menstruation, benefits the skin
- Local point for disorders of the knee

Special features

Important point for regulating the Blood





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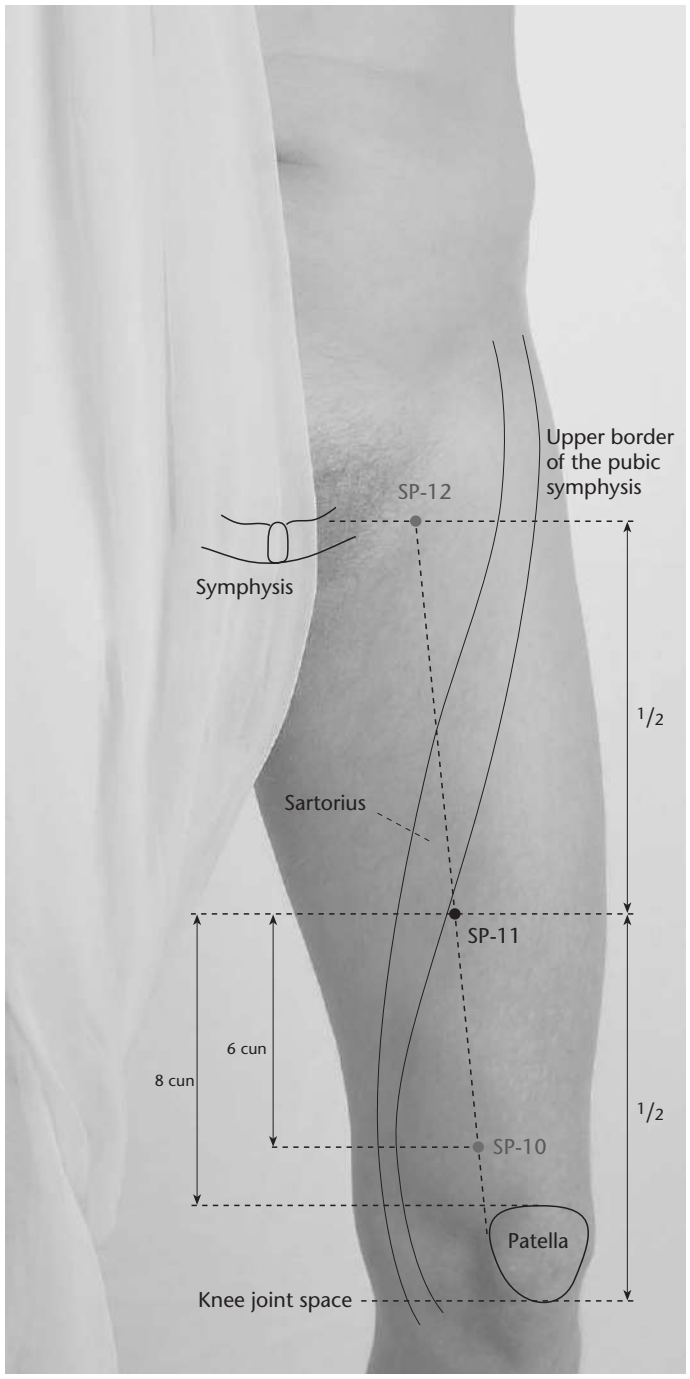
Winnowing Gate JIMEN SP-11



Location

6 cun proximal to → **SP-10** or 8 cun proximal to the medial upper border of the patella, at the midpoint of the femur between the sartorius and vastus lateralis muscles.

How to find

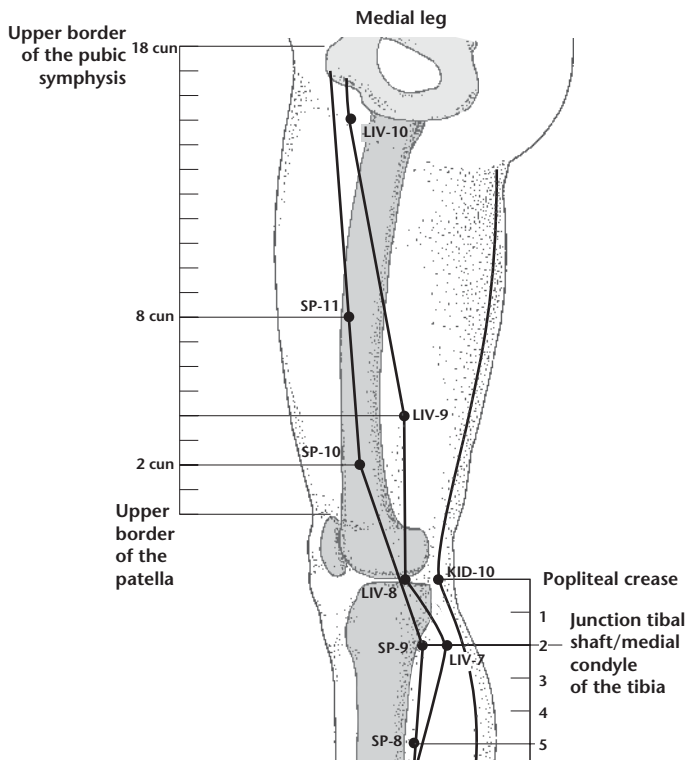
First, locate → **SP-10** by measuring 2 cun proximal and 1 cun medial from the medial upper border of the patella. From there, measure 6 cun vertically in a proximal direction to locate **SP-11** in a depression on the lateral border of the sartorius muscle. **Or**: Spreading hands technique (→ 2.3.3): **SP-11** is located midway between the knee joint space and → **SP-12** (2 cun lateral to the anterior midline, on a level with the upper border of the pubic symphysis).

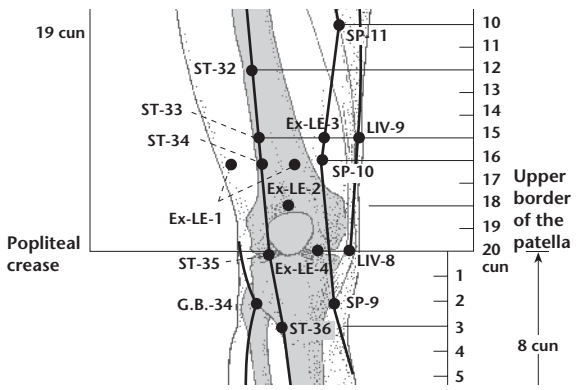
Needling

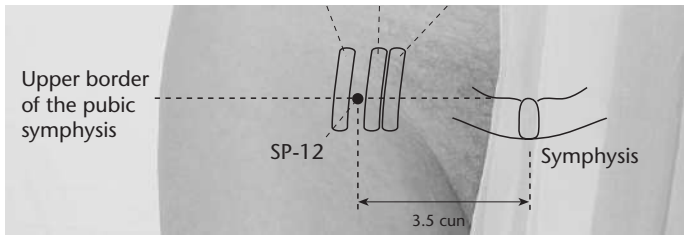
Vertically 0.5–1 cun. Caution: Femoral artery/vein.

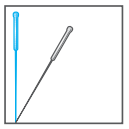
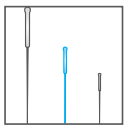
Actions/Indications

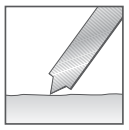
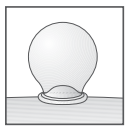
- Regulates the Lower Burner and urination, drains Dampness, clears Heat







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SP-12 *Rushing Gate* CHONGMEN

Location

3.5 cun lateral to the midline, at the level of the upper border of the pubic symphysis, lateral to the femoral artery.

How to find

From the upper border of the pubic symphysis (→ **Ren-2**), measure 3.5 cun in a lateral direction. There, you can feel the pulsation of the femoral artery. **SP-12** is located in a depression immediately lateral to the artery.

Located on the same level are **Ren-2** (on the midline), → **KID-11** (0.5 cun lateral to the midline) and → **ST-30** (2 cun lateral to the midline). → **LIV-12** is located 2.5 cun lateral to the midline, but 1 cun inferior to the upper border of the pubic symphysis.

Needling

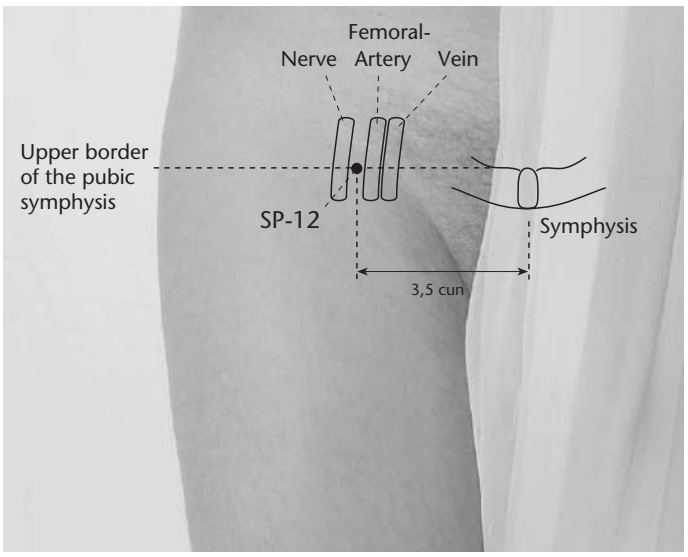
Vertically 0.5–1 cun. Caution: Needling in a medial direction may puncture the artery; needling in a lateral direction may injure the femoral nerve.

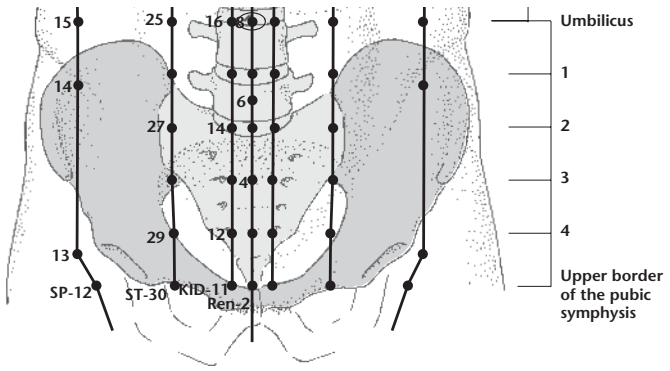
Actions/Indications

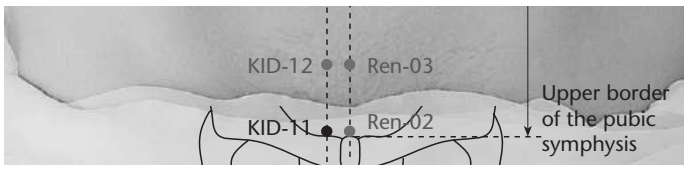
- Regulates Qi and Blood in the Lower Burner
- Descends rising fetal Qi
- Clears Heat and drains Dampness

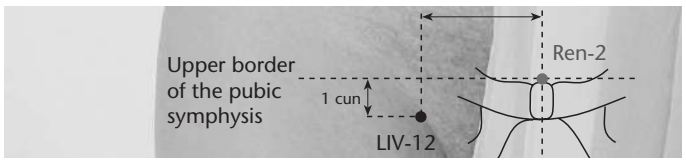
Special features

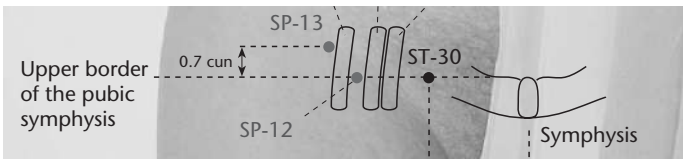
Meeting point with the LIV and T.B.* channels and the *yin wei mai*

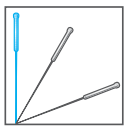


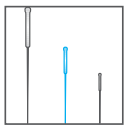


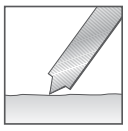












* According to some authors

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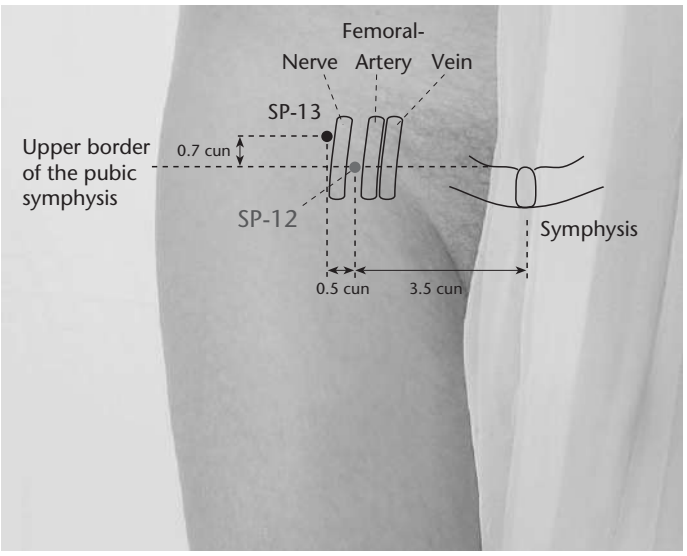
Abode of the Fu FUSHE SP-13



Location

4 cun lateral to the anterior midline and 0.7 cun superior to the upper border of the pubic symphysis.

How to find

First, measure 4 cun in a lateral direction from the upper border of the pubic symphysis and from there 0.7 cun in a superior direction to locate **SP-13** in a depression in the inguinal groove. **SP-13** is located 0.5 cun lateral and 0.7 cun superior to → **SP-12** (→ 3.5 cun lateral to the upper border of the pubic symphysis).

Needling

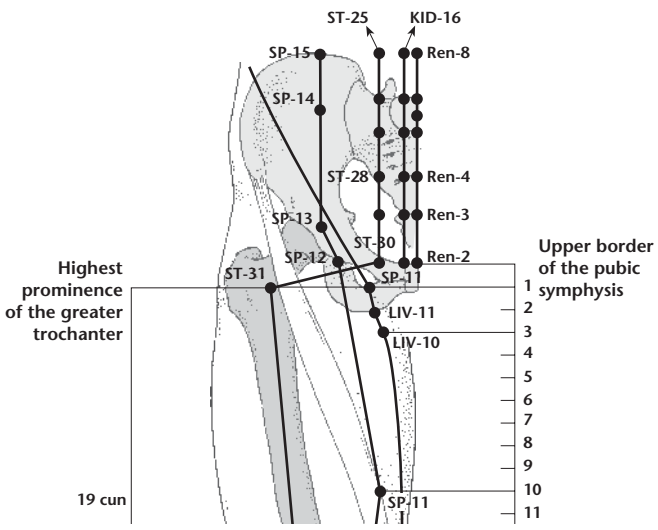
Vertically 0.5–1 cun. Caution: Peritoneum.

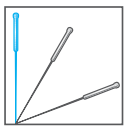
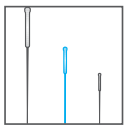
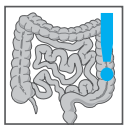
Actions/Indications

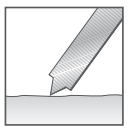
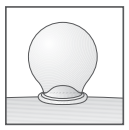
- Disperses accumulations
- Regulates the Qi

Special features

Meeting point with the *yin wei mai* and the Liver channel



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SP-14 *Abdomen Knot* FUJIE

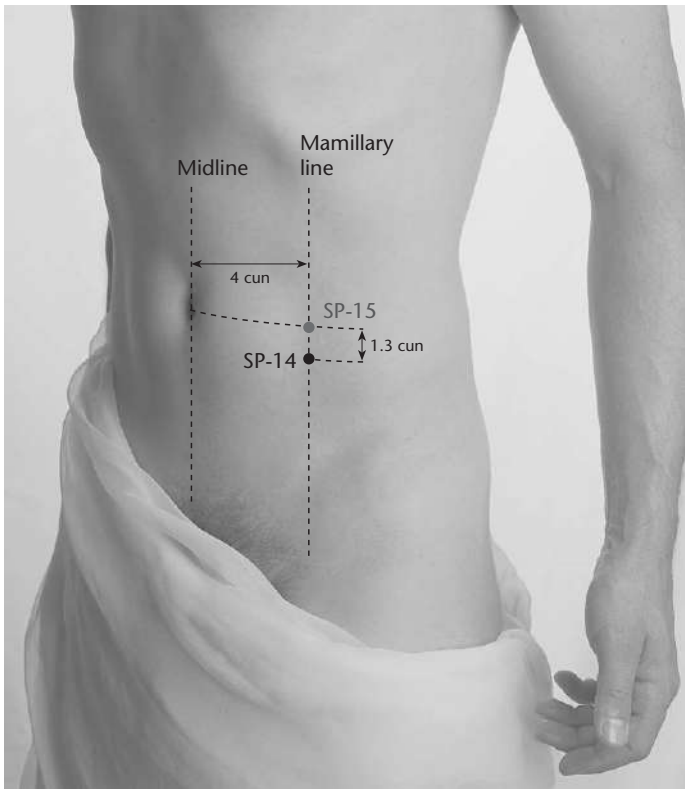
Location
4 cun lateral to the anterior midline, on the mamillary line, 3 cun superior to → **SP-13** or 1.3 cun inferior to → **SP-15**.

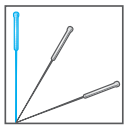
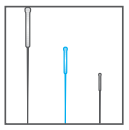
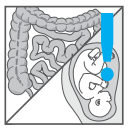
How to find
First, measure 4 cun from the umbilicus in a lateral direction in order to locate the mamillary line. This is the point → **SP-15**. From there, measure 1.3 cun in an inferior direction to locate **SP-14**.

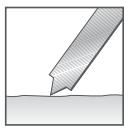
Needling
Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy.

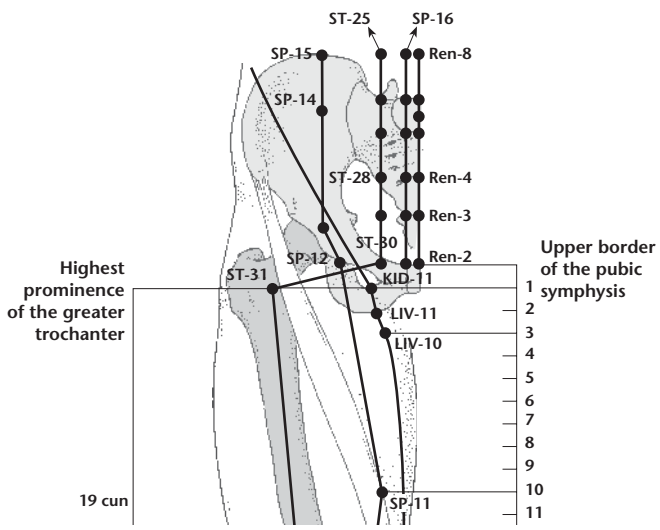
Actions/Indications
- Moves Qi and Blood, warms the middle, dispels Cold
- Regulates the Lower Burner and descends counterflow Qi

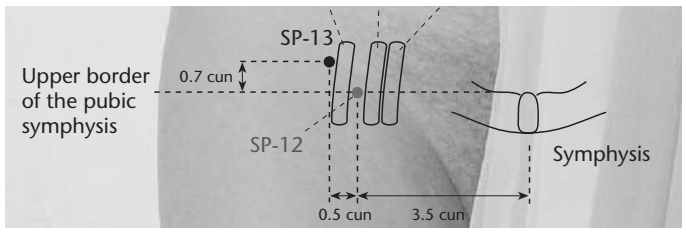
Special features
Sensitive to pressure with appendicitis









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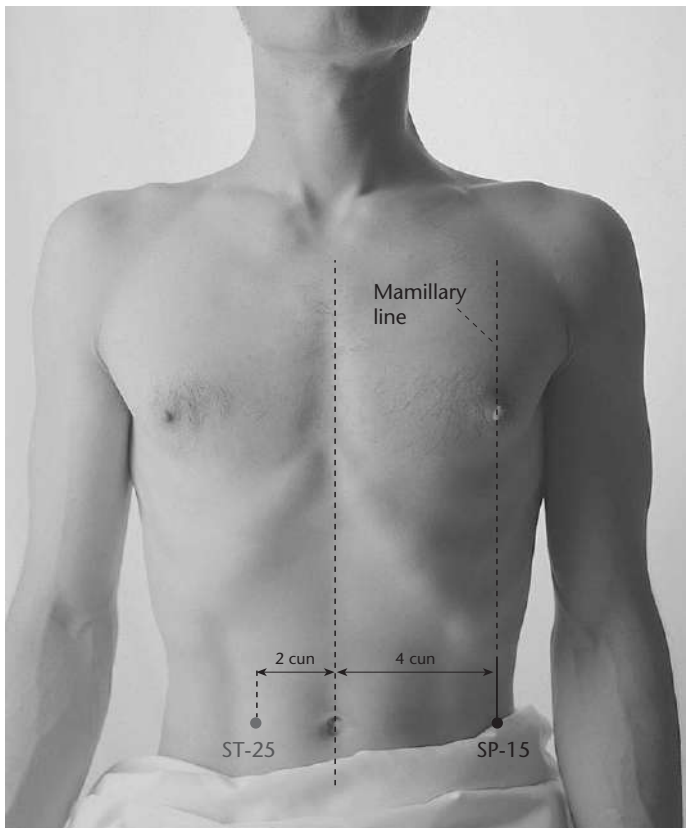
Great Horizontal DAHENG SP-15



Location

4 cun lateral to the centre of the umbilicus, on the mamillary line.

How to find

Locate **SP-15** 4 cun lateral to the umbilicus, using the mamillary line for reference, especially in male patients.
Located on the same level are → **Ren-8/KID-16/ST-25/G.B.-26** (umbilicus/0.5 cun lateral to the umbilicus/2 cun lateral to the umbilicus/below the free end of the 11th rib at the level of the umbilicus).

Needling

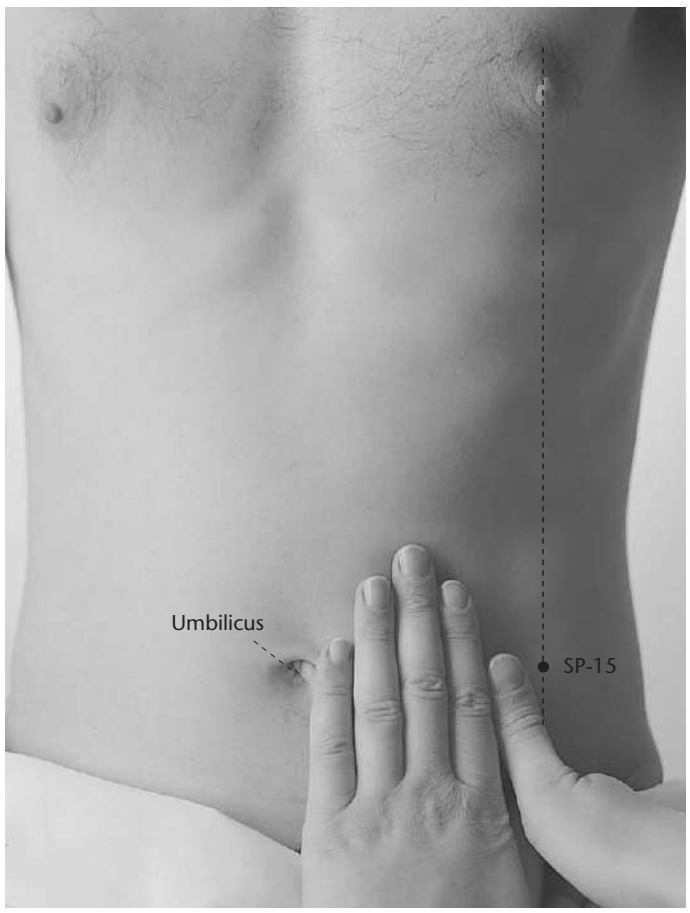
Vertically 1–1.5 cun. Caution: Peritoneum, pregnancy. Deep needling may reach the aponeuroses of the transverse abdominal musculature.

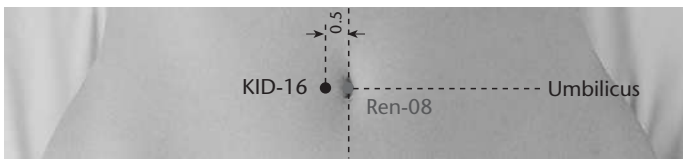
Actions/Indications

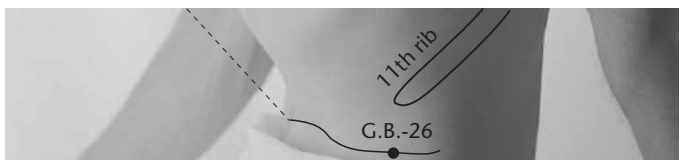
- Regulates and moves Qi in the Intestines (promotes bowel movement by stimulating peristalsis)

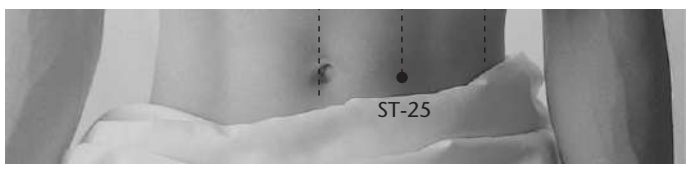
Special features

Meeting point with the *yin wei mai*. Important point for regulating the Large Intestine Qi.









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SP-16 *Abdomen Sorrow* FUAI

Location

3 cun above the centre of the umbilicus and 4 cun lateral to the anterior midline, on the mamillary line.

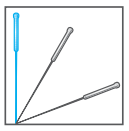
How to find

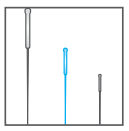
The distance between the sternocostal angle and the centre of the umbilicus can be divided into 8 proportional cun, which can differ considerably from the patient's finger cun; therefore, only proportional cun measurements should be applied (elastic tape → 2.3.1). First, measure 3 cun from the umbilicus in a superior direction, then 4 cun in a lateral direction, where **SP-16** is located on the mamillary line. Depending on the shape of the thorax, this point will either be located on the abdomen or it will project onto the lower border of the ribcage.

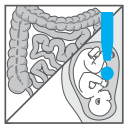
Located on the same level are → **Ren-11** (anterior midline), → **KID-18** (0.5 cun lateral to the anterior midline) and → **ST-22** (2 cun lateral to the anterior midline).

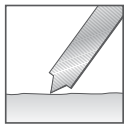
Needling

Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy. Depending on the shape of the thorax, the correct location of this point might be on the costal cartilage. In this case, either transverse (subcutaneous) needling or locate the point more medially (or choose an alternative point).







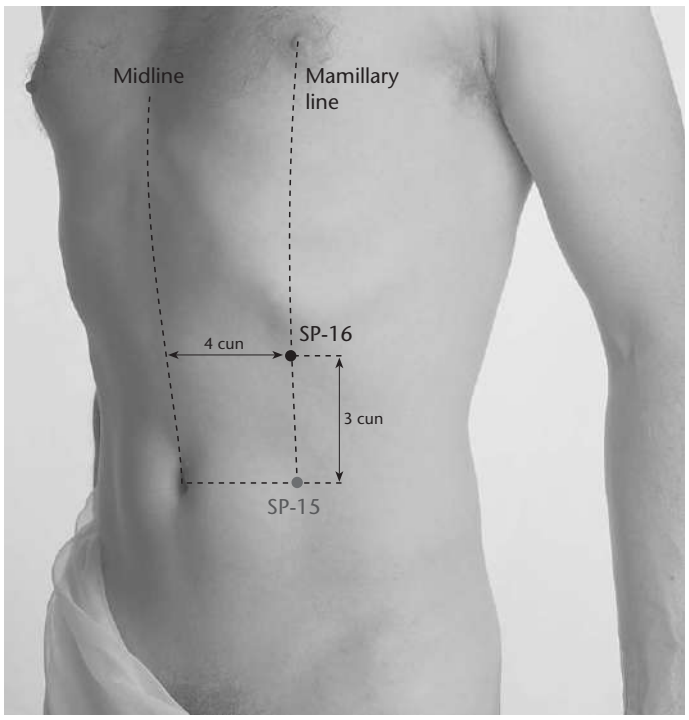


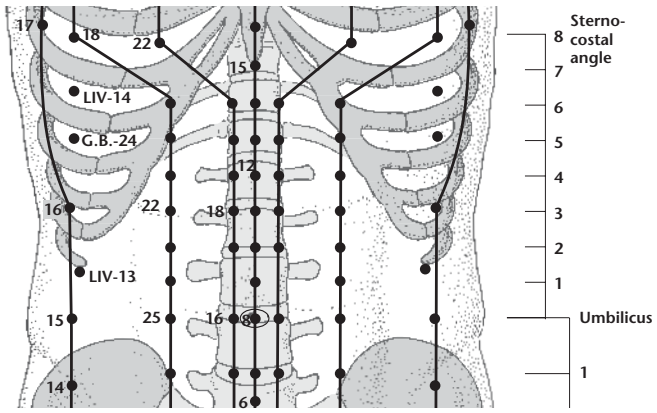
Actions/Indications

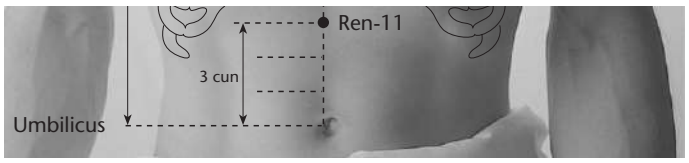
- Regulates Qi in the Intestines
- Drains Dampness

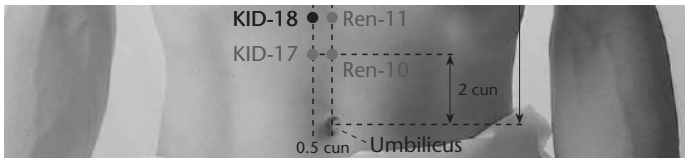
Special features

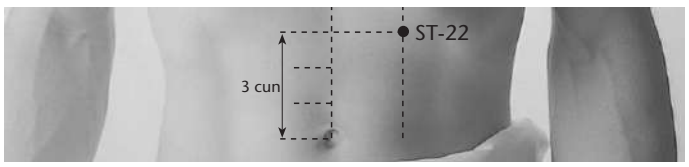
Meeting point with the *yin wei mai*











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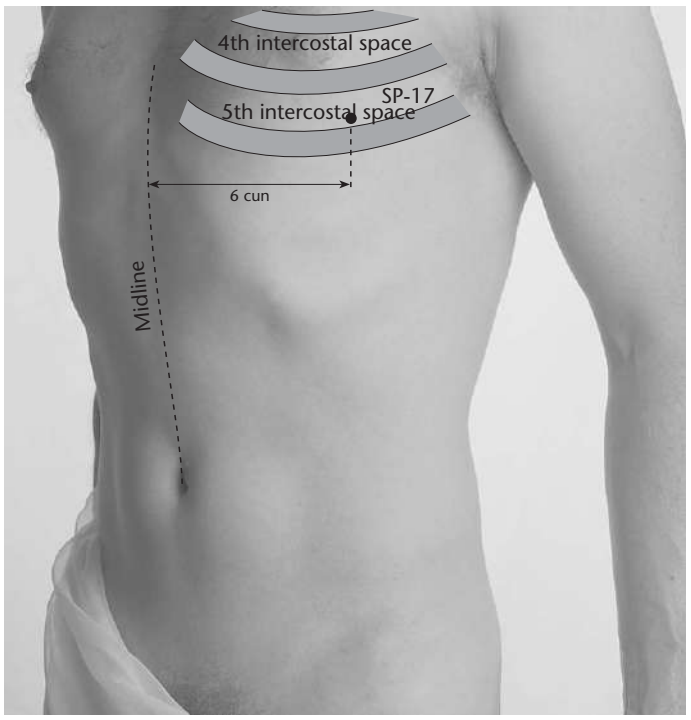
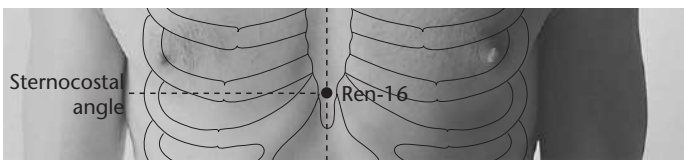
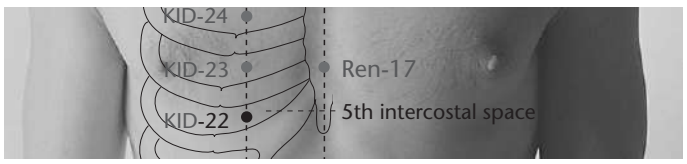
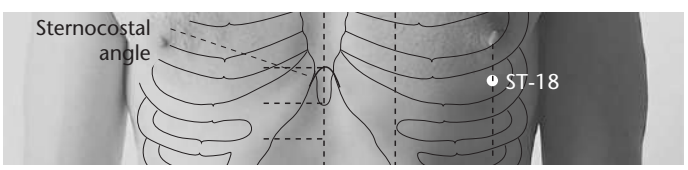
Food Cavity SHIDOU SP-17









Location

In the 5th intercostal space, 6 cun lateral to the anterior midline (in male patients, 2 cun lateral to the nipple).

How to find

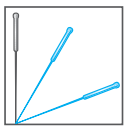
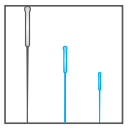
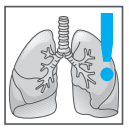
In men, the nipple is generally located on the level of the 4th intercostal space, while in women, when in a supine position, it is not always at this level. Locate **SP-17** in the 5th intercostal space, 2 cun lateral to the mamillary line (note that the intercostal space laterally curves upward). Both the clavicle and the manubriosternal synchondrosis are good reference points for locating the 5th intercostal space. **SP-17** can be located by following the course of the intercostal space in a lateral direction and measuring 2 cun lateral to the mamillary line.
Also located on the level of the 5th intercostal space are → **Ren-16** (anterior midline), → **KID-22** (2 cun lateral to the anterior midline) and → **ST-18** (4 cun lateral to the anterior midline).

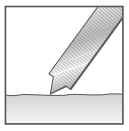
Needling

0.5–0.8 cun obliquely or transversely (subcutaneously), parallel to the intercostal space or with or against the channel pathway. Caution: Pneumothorax.

Actions/Indications

- Regulates the Qi
- Harmonises the Stomach and eliminates stagnation
- Drains Dampness



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SP-18 *Heavenly Stream* TIANXI

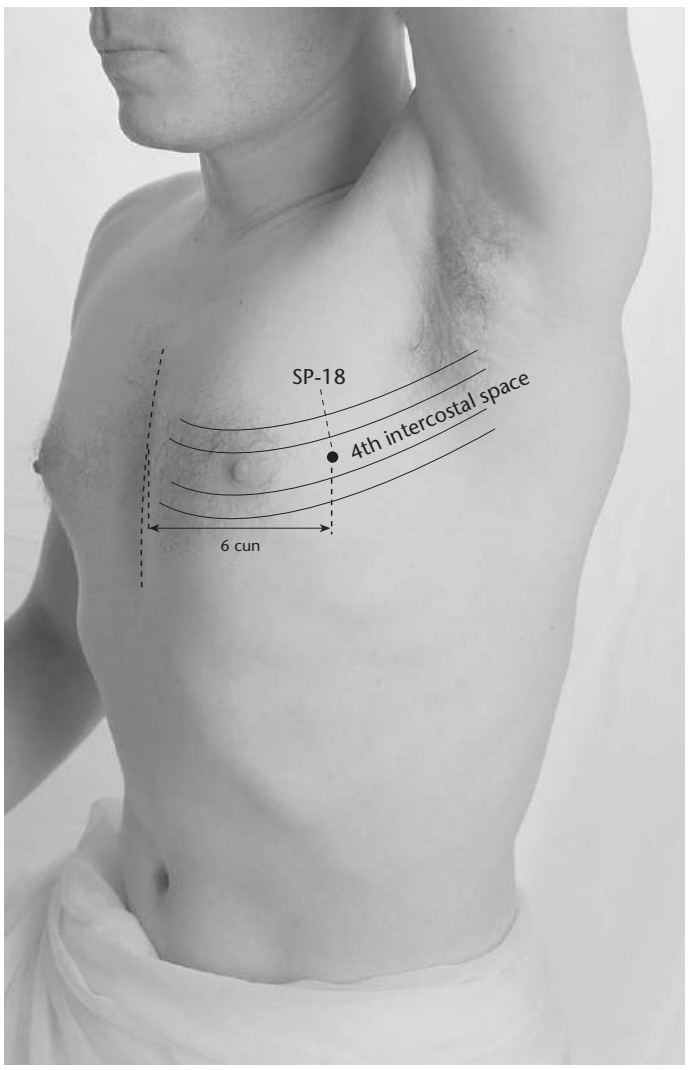
Location

In the 4th intercostal space, 6 cun lateral to the anterior midline or 2 cun lateral to the midclavicular line.

How to find

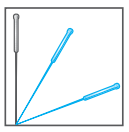
In men, the nipple is generally located on the level of the 4th intercostal space, while in women, when in a supine position, it is not always at this level. Follow the course of the 4th intercostal space in a lateral direction and locate **SP-18** 2 cun lateral to the nipple (note that the intercostal space laterally curves upward). In women, either the clavicle or the manubriosternal synchondrosis are good reference points for locating the 4th intercostal space (→ 3.5). **SP-18** can be located by following the course of the intercostal space in a lateral direction while measuring 6 cun laterally from the anterior midline or 2 cun laterally from the nipple.

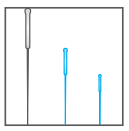
Also located on the level of the 4th intercostal space are → **Ren-17** (anterior midline), → **KID-23** (2 cun lateral to the anterior midline), → **ST-17** (nipple), → **P-1** (1 cun lateral to the nipple) and → **G.B.-23** (1 cun anterior to **G.B.-22**).



Needling

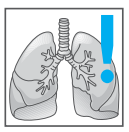
0.5–0.8 cun obliquely or transversely (subcutaneously), parallel to the intercostal space or with or against the channel pathway. Caution: Pneumothorax.

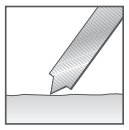


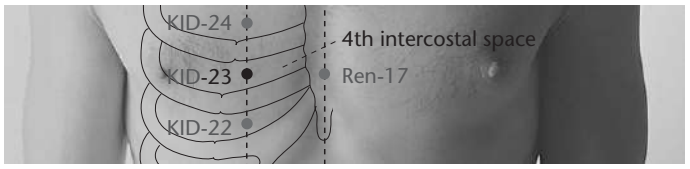


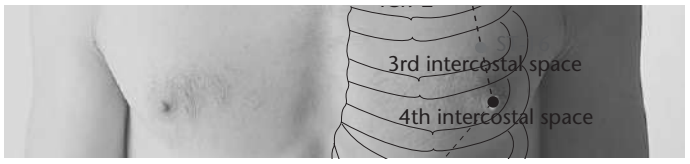
Actions/Indications:

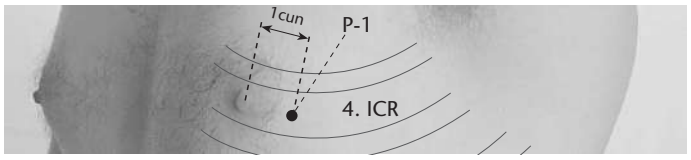
- Unbinds the chest
- Descends the Qi
- Benefits the breasts

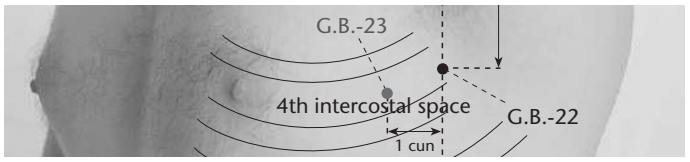


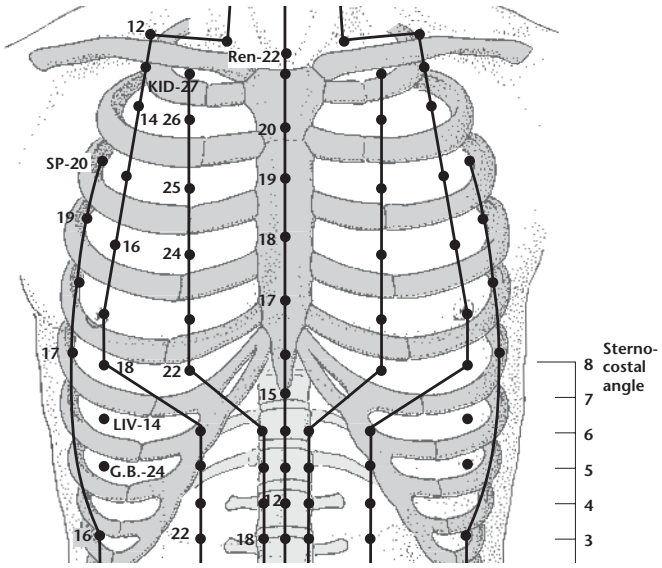


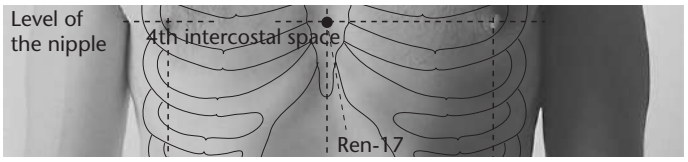












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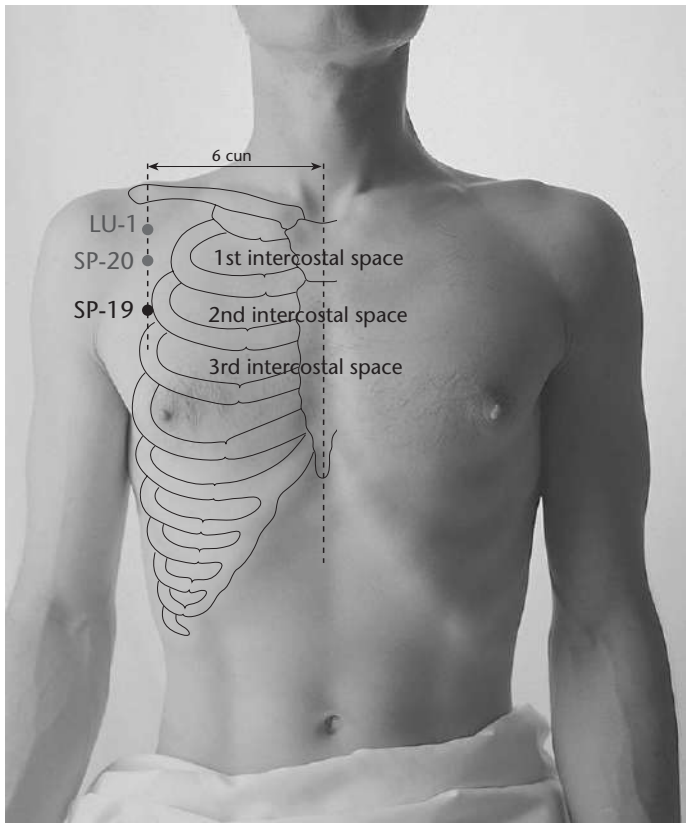
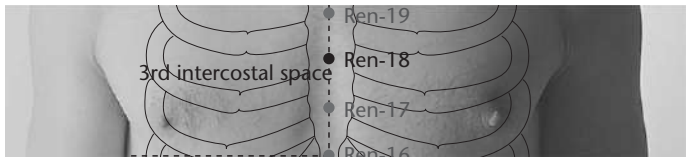
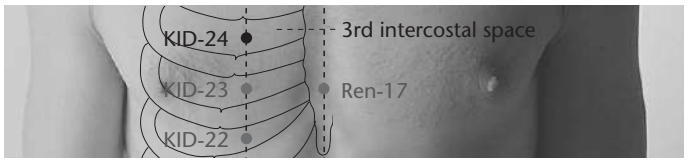
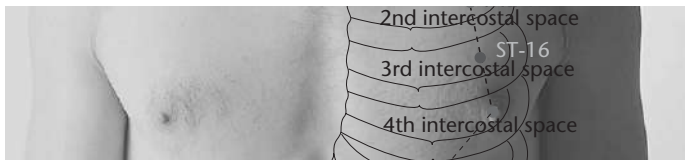
Chest Village XIONGXIANG SP-19









Location

In the 3rd intercostal space, 6 cun lateral to the anterior midline or 2 cun lateral to the midclavicular line.

How to find

Locate the 3rd intercostal space by counting parasternally from the clavicle or from the manubriosternal synchondrosis (→ 3.5). Follow the course of the intercostal space in a lateral direction and locate **SP-19** 6 cun lateral to the anterior midline or 2 cun lateral to the midclavicular line (note: the intercostal space laterally curves upward).

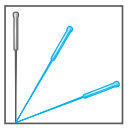
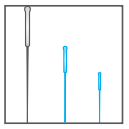
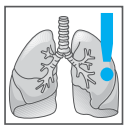
Located on the same level (note: course of the intercostal space) are → **Ren-18** (anterior midline), → **KID-24** (2 cun lateral to the midline) and → **ST-16** (4 cun lateral to the midline).

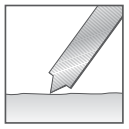
Needling

0.5–0.8 cun obliquely or transversely (subcutaneously), parallel to the intercostal space, or with or against the channel pathway. Caution: Pneumothorax.

Actions/Indications

- Disperses and descends the Lung Qi
- Unbinds the chest



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SP-20 *Encircling Glory* ZHOURONG

Location

In the 2nd intercostal space, 6 cun lateral to the anterior midline or 2 cun lateral to the midclavicular line.

How to find

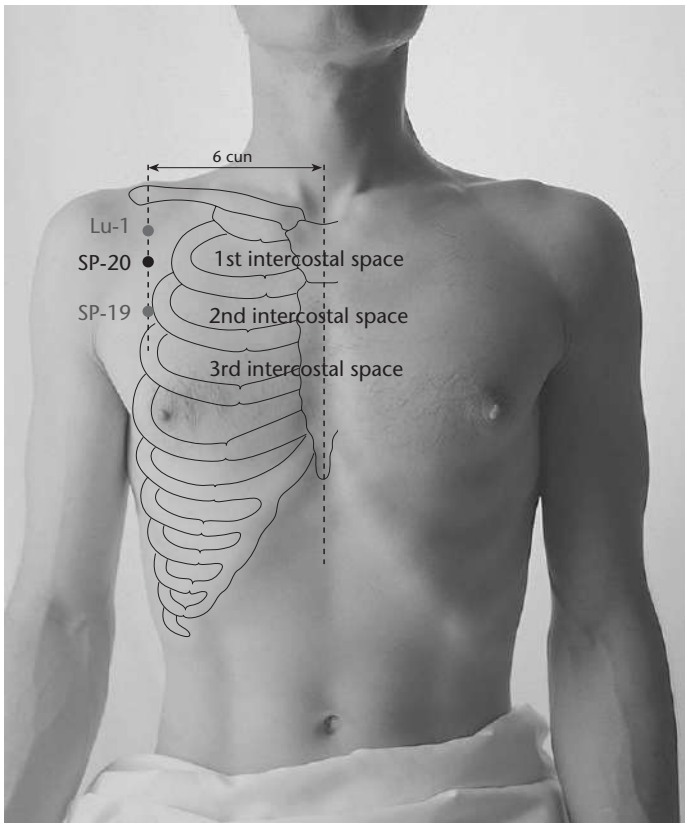
Locate the 2nd intercostal space by counting parasternally from the clavicle or from the manubriosternal synchondrosis (→ 3.5). Follow the course of the intercostal space in a lateral direction and locate **SP-20** 6 cun lateral to the anterior midline or 2 cun lateral to the midclavicular line (note: the intercostal space laterally curves upward). **SP-20** is located 1 cun inferior to → **LU-1**. Located on the same level (note: course of the intercostal space) are → **Ren-19** (anterior midline), → **KID-25** (2 cun lateral to the midline) and → **ST-15** (4 cun lateral to the midline).

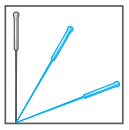
Needling

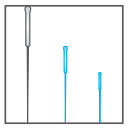
0.5–0.8 cun obliquely or transversely (subcutaneously), parallel to the intercostal space or with or against the channel pathway. Caution: Pneumothorax.

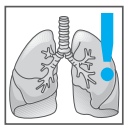
Actions/Indications

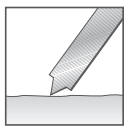
- Unbinds the chest
- Regulates the Lung Qi

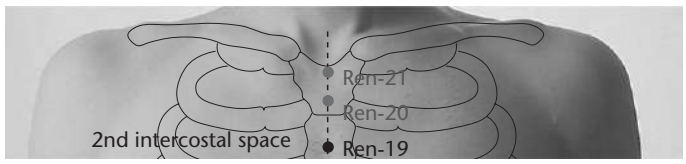


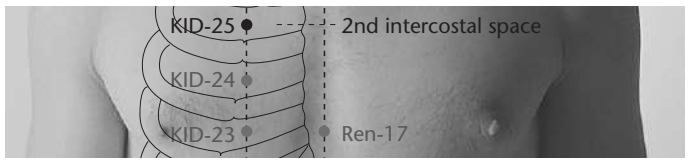


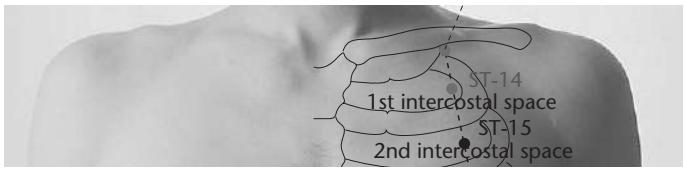


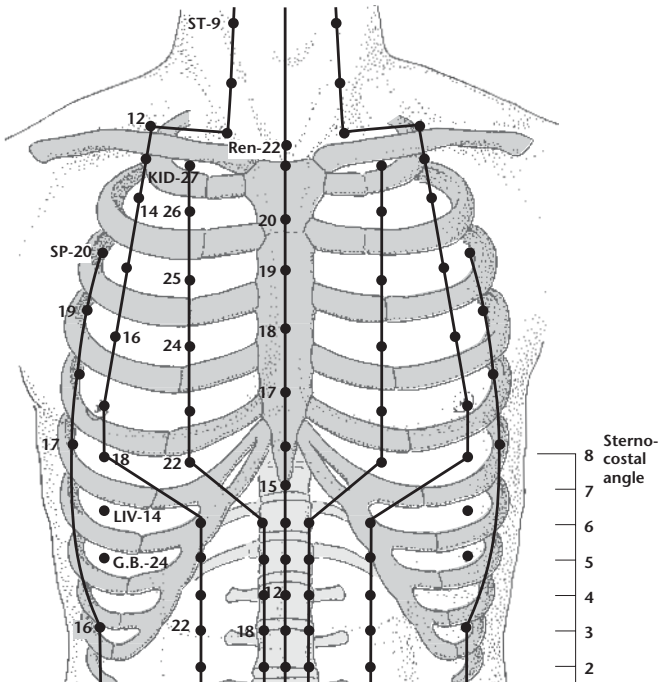












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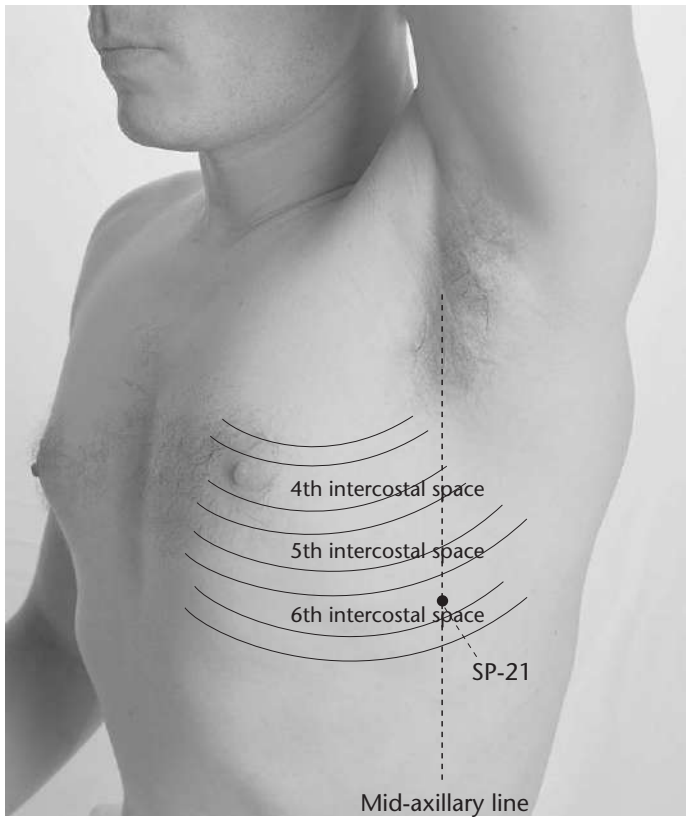
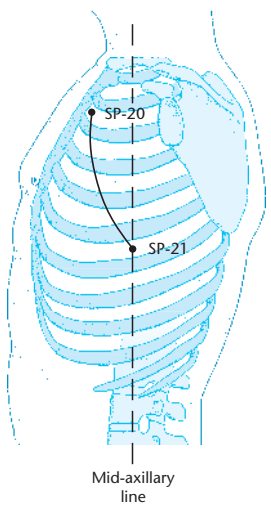
Great Wrapping DABAO SP-21





Location

On the midaxillary line, in the 6th intercostal space. Note: According to some texts, this point is located in the 7th intercostal space.

How to find

Locate the 6th intercostal space by counting parasternally from the clavicle or from the manubriosternal synchondrosis (→ 3.5). Follow the course of the intercostal space in a lateral direction and locate **SP-21** on the axillary midline (note: the intercostal space laterally curves upward). **SP-21** is often sensitive to pressure. Or: Locate **SP-21** on the midaxillary line, midway between the axilla and the end of the 11th rib.

Needling

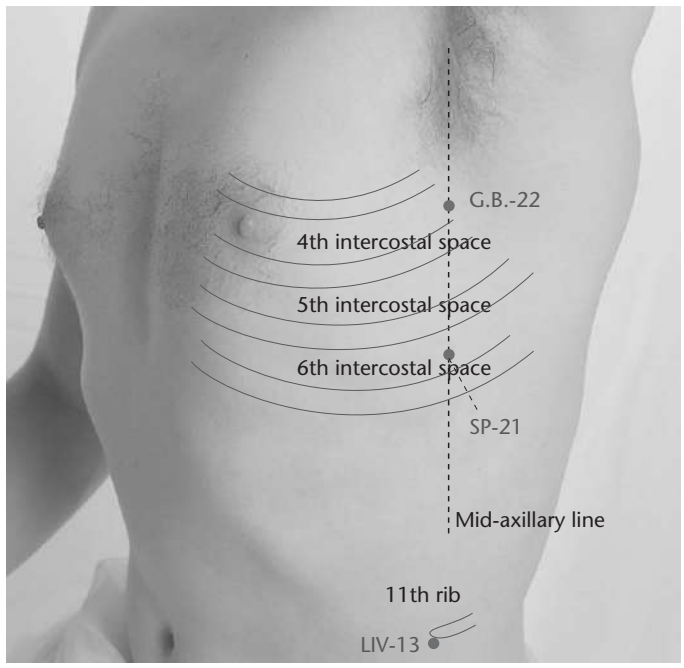
0.5–0.8 cun obliquely or transversely (subcutaneously), parallel to the intercostal space or with or against the channel pathway. Caution: Pneumothorax.

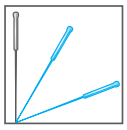
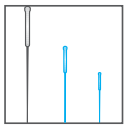
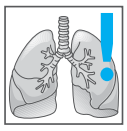
Actions/Indications

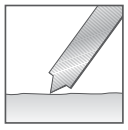
- Regulates Qi and Blood, governs and wraps all the *luo*-connecting vessels of the body
- Unbinds the chest

Special features

Great *luo*-connecting point of the spleen (→ 8.1.2), exit point.





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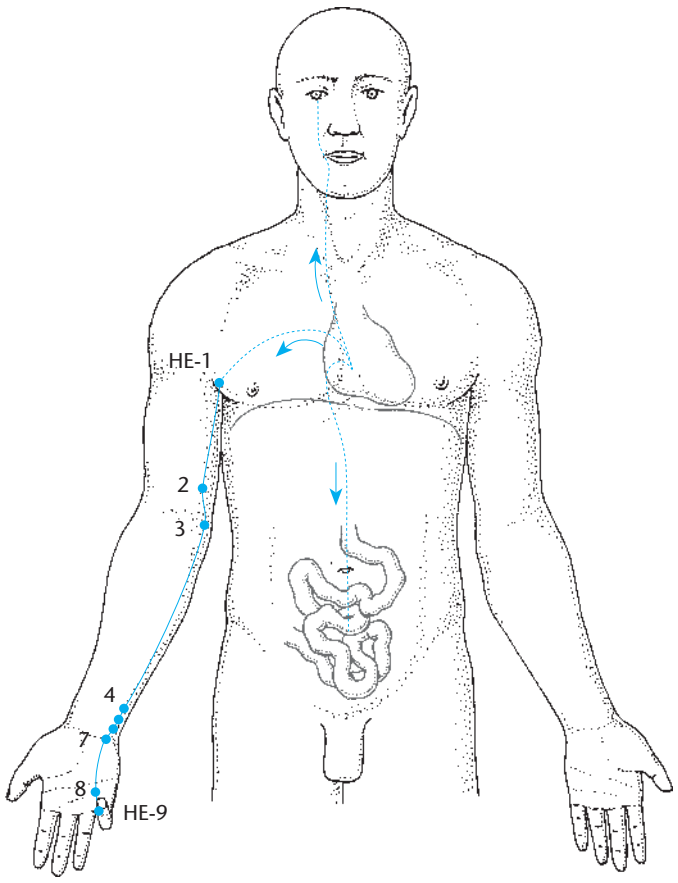
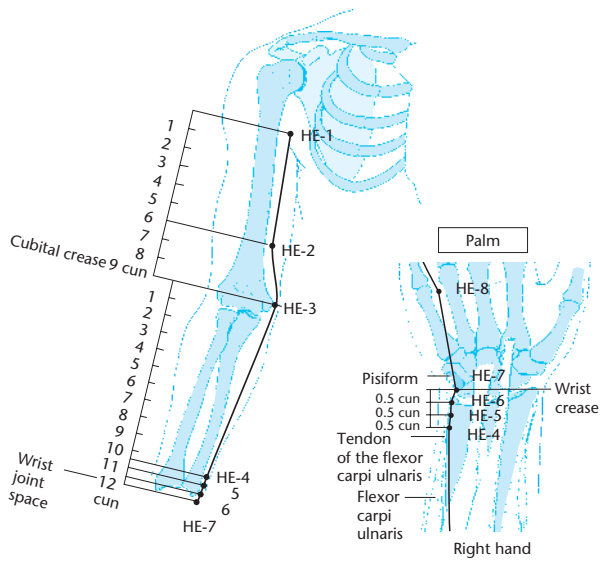
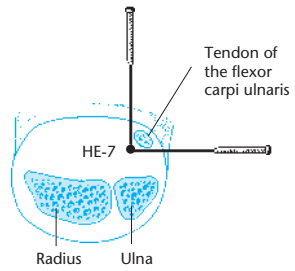
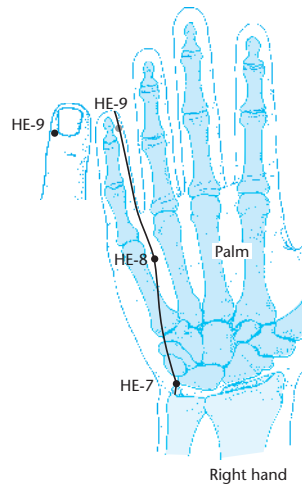
4.5 The Heart Channel System – Hand *shaoyin* (*shou shao yin jing luo*)

4.5.1 The Heart Primary Channel (*shou shao yin jing*)









Pathway

The **internal** pathway of the Heart primary channel originates in its related *zang*-Organ, the Heart (*xin*). An **internal branch** of the Spleen primary channel reaches the Heart and connects with the Heart primary channel (deep Yin–Yin connection ➞ 1.2).

The **internal pathway** of the Heart primary channel splits into three branches:

- **the first branch** penetrates the diaphragm and connects with the internally–externally related *fu*-Organ, the Small Intestine (*xiaochang*)
- **the second branch** ascends along the oesophagus and the neck region, disperses in the tissues around the eyes and, according to some authors, also spreads inside the brain.
- **the main branch** runs from the Heart to the Lung (*fei*) and descends again to emerge in the centre of the axilla at ➞ **HE-1** (*jiquan*) (beginning of the external pathway).

From here the **external pathway** runs along the anteromedial aspect of the upper arm and forearm, traverses the palm between the fourth and fifth metacarpal bones, continues along the radial aspect of the little finger and ends at the radial corner of its nail at **HE-9** (*shaoyang*).

From **HE-9** (*shaoyang*) a branch crosses to the ulnar border of the little finger's nail to ➞ **S.I.-1** (*shaoze*) (hand Yin–Yang connection of the second great circuit).

Clinical importance (➞ 1.2)

Exterior (*biao*) signs and symptoms: General fever, headaches, pain in the thorax and back, thirst with a desire to drink, Heat sensation in the palms, Cold invasion in the extremities, pain in the shoulder and the medial aspect of the upper arm

Interior (*li*) or *zangfu*-Organ signs and symptoms: Heart pain, pain and fullness in the thorax and lateral costal region,

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hypochondriac pain, irritability, shortness of breath, restlessness, dizziness, mental confusion

Connections of the Heart primary channel (→ 1.2)

Connections with other channels

Small Intestine primary channel (*shou tai yang jing*)

Connection: Hand Yin–Yang connection of the second great circuit
Location: H-9 → S.I.-1 (on the hand).
Circulation: Circadian (according to the Organ clock)
Importance: Exterior–Interior relationship

Kidney primary channel (zu shao yin jing)

Connection: Paired according to the six channel theory (hand–foot pairing): *shao yin* (Yin axes of the second great circuit)
Location: KID → HE (on the thorax). An internal branch of the Kidney primary channel travels to the Liver (*gan*), penetrates the diaphragm and spreads in the Lung (*fei*). From the Lung a branch runs to Heart (*xin*) and there connects with the Heart primary channel.
Circulation: Non-circadian (**not** according to the Organ clock)
Importance: Above–below relationship

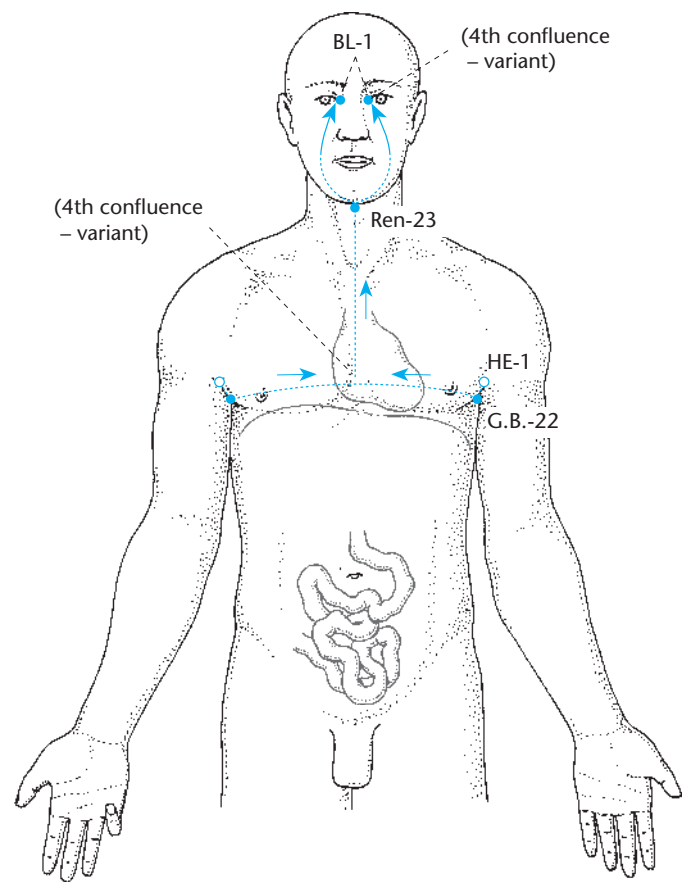
Spleen primary channel (*zu tai yin jing*)

Connection: Deep Yin–Yin connection
Location: SP → HE (on the thorax). An **internal** branch of the Spleen primary channel spreads in the Heart (*xin*) and connects with the Heart primary channel.
Circulation: Circadian (according to the Organ clock)
Importance: The Heart primary channel receives Nutritive Qi (*ying qi*) from the Spleen primary channel (first circulation of the *ying qi* → 1.1.4)

Connections with other *zangfu*-Organ systems

Small Intestine (*xiaochang*), Heart (*xin*), Lung (*fei*)

4.5.2 The Heart Divergent Channel (*zu shao yin jing bie*)



Pathway

The Heart divergent channel separates from the Heart primary channel at **HE-1** (*jiquan*) in the axilla

- penetrates the thorax at → **G.B.-22** (*yuanyue*) on the mid-axillary line and 3 cun distal to the axilla
- and reaches the Heart (*xin*) (see commentary below).
- It then ascends to the neck and crosses → **Ren-23** (*lianquan*)
- disperses in the cheek and reaches the medial canthus of the eye at → **BL-1** (*jingming*), where, according to most authors, it connects with a small branch coming from → **S.I.-18** (*quanliao*) to form one of the six he-confluences (here: S.I./BL as fourth confluence → 1.3).

Commentary: according to Solinas et al (1998) the Heart divergent channel meets the Small Intestine divergent channel and the Small Intestine primary channel at the Heart (*xin*) in order to bind with one of the six he-confluences.

Clinical importance

- Strengthens the relationship between the Heart and the thoracic region. Points on the Heart primary channel mainly treat disorders of the Heart and the thorax. There is no connection with the Small Intestine (*xiaochang*).

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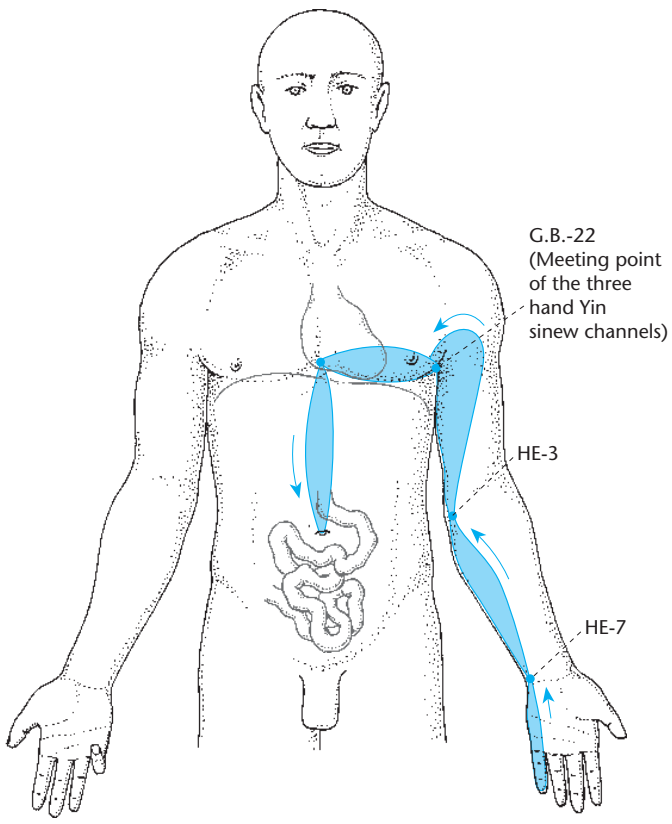
- Connects the Heart primary channel with the neck. Points on the Heart primary channel can be used to treat disorders of the throat and vocal chords such as laryngitis, pharyngitis, etc. Use points such as **HE-5, HE-8**.
- Strengthens the connection between the Heart and the inner canthus of the eye. Heart points can thus be used for disorders of the eyes.

4.5.3 The Heart Sinew Channel (*shou shao yin jing jin*)



Pathway

The Heart sinew channel begins on the radial aspect of the little finger

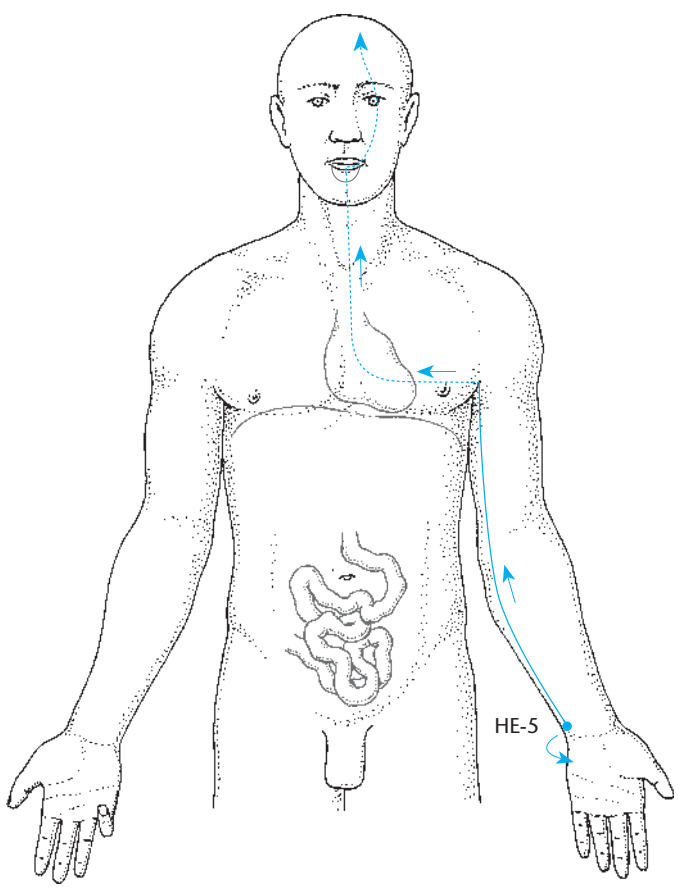
- ➡ continues along the anterior and radial aspect of the little finger and the hand
- ➡ binds (*jie*) at the pisiform bone at **HE-7** (*shenmen*)
- ➡ ascends the anterior and ulnar aspect of the forearm, binds (*jie*) at the medial epicondyle at **HE-3** (*shaohai*) and continues to the axillary region, where it meets the Lung sinew channel, binds (*jie*) in the axilla and meets the other hand Yin sinew channels near → **G.B.-22** (*yuanye*)
- ➡ from here it continues at a deeper level, crosses the thoracic region, binds (*jie*) at → **Ren-17** (*shanzhong*), descends to the upper cardiac orifice, penetrates the diaphragm and terminates in the umbilical region.

Clinical importance

Pathology: Stiffness, cramps and pain along the pathway of the Heart sinew channel. Internal cramping in the cardiac region, for example disorders with angina-like pain due to stress, hiatal hernia and disorders of the stomach.

Indication: Mainly for *bi*-syndromes (painful obstruction syndrome) along the pathway of the Heart channel. The area covered by the Heart sinew channel is larger than that covered by the Heart primary channel. This explains why Heart primary channel points can also be used for disorders and diseases of the thorax and the chest, for example pain and tightness in the chest, mastitis and mastopathy. Since the Heart sinew channel also penetrates the diaphragm, it is also indicated for disorders such as hiccups, acid reflux and oesophagitis. Due to its connection with the umbilical region, the Heart sinew channel has a direct link to the Original Qi (*yuan qi*): if the Heart (*shen*) has suffered a shock, for example due to fainting or collapse, direct moxibustion at **Ren-8** can be very helpful.

4.5.4 The Heart *luo*-Connecting Vessel System (*shou shao yin luo mai*)



Pathway

The HE *luo*-connecting vessel separates from the Heart primary channel at its *luo*-connecting point **HE-5** (*tongli*) (→ 8.1.2). It forms a three-dimensional reticulate network, dividing into

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multiple branches and sub-branches (*sun luo, fu luo, xue luo* → 1.5) within the surrounding tissue.

- Horizontal divisions run to the Interiorly–Exteriorly paired Small Intestine primary channel; according to some schools of thought (for example Ngyen Van Nghi → Appendix) they travel as a **transverse** HE *luo*-connecting vessel to the *yuan*-source point → **S.I.-4** (*wangu*).
- A **longitudinal** division follows the pathway of the Heart primary channel along the anteromedial aspect of the arm, ascends to the axilla, reaches the Heart, ascends to the root of the tongue and terminates in the eye while further branches penetrate the brain.

Clinical importance (→ 8.1.2)

Pathology

- **Excess (*shi*)**: Distension and fullness of the thorax and diaphragm
- **Deficiency (*xu*)**: Aphasia, disorders of the vocal cords

4.5.5 Cutaneous Region (*shao yin pi bu*)

See description and figures → 1.6.

4.5.6 Points of the Heart Primary Channel (Overview)

Specific points according to their function

- ***Yuan*-source point (→ 8.1.1): HE-7** (*shenmen*) ■■
- ***Luo*-connecting point (→ 8.1.2.): HE-5** (*tongli*) ■■
- ***Xi*-cleft point (→ 8.1.3): HE-6 (*yinxi*)** ■■
- **Associated Back-*shu* point (→ 8.1.4): BL-15** (*xinshu*) ■■
- **Associated Front-*mu* point (→ 8.1.5): Ren-14** (*juque*) ■■
- **Five *shu*-transporting points (→ 8.1.6):**
  jing-well point (Wood): **HE-9** (*shaochong*) ■■
  ying-spring point (Fire), *ben* point (Five Phases): **HE-8** (*shaofu*) ■■
  shu-stream point (Earth), sedation point: **HE-7** (*shenmen*) ■■
  jing-river point (Metal): **HE-4** (*lingdao*)
  he-sea point (Water): **HE-3** (*shaohai*) ■■
- ***Hui*-meeting point (→ 8.1.7): –**
- **Opening point (→ 8.1.8): –**
- **Lower *he*-sea points (→ 8.1.9): –**
- ***Jiaohui*-meeting points (→ 8.1.10): –**
- **Gao Wu command point (→ 8.1.11): –**
- **Window of Heaven point (→ 8.1.12): –**
- **Points of the Four Seas (→ 8.1.13): –**
- **Ma Dan Yang Heavenly Star point (→ 8.1.14): HE-5** (*tongli*) ■■
- **Sun Si Miao Ghost point (→ 8.1.15): –**
- **Other functional points: –**

Points according to region

- **Local point (→ 8.2.1):** elbow – **HE-3** (*shaohai*) ■■
- **Distal points (→ 8.2.1):** tongue – **HE-5** (*tongli*) ■■; Heart – **HE-7** (*shenmen*) ■■, **HE-5** (*tongli*) ■■, **HE-3** (*shaohai*) ■■

Specific points according to the channel pathway (in numeric order)

- **HE-3** (*shaohai*) ■■: *he*-sea point (Water); local point for the elbow (→ 8.2.1); distal point for the Heart (→ 8.2.1)
- **HE-4** (*lingdao*): *jing*-river point (Metal)
- **HE-5** (*tongli*) ■■: *luo*-connecting point (→ 8.1.2); Ma Dan Yang Heavenly Star point (→ 8.1.14); distal point for the tongue and Heart (→ 8.2.1)
- **HE-6** (*yinxi*) ■■: *xi*-cleft point (→ 8.1.3)
- **HE-7** (*shenmen*) ■■: *yuan*-source point (→ 8.1.1); distal point for the Heart (→ 8.2.1); *shu*-stream point (Earth), sedation point
- **HE-8** (*shaofu*) ■■: *ying*-spring point (Fire); *ben* point (Five Phases)
- **HE-9** (*shaochong*) ■■: *jing*-well point (Wood), tonification point

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Summit Spring JIQUAN HE-1

Location

With the arm abducted, in the centre of the axilla, medial to the axillary artery.

How to find

With the arm abducted, palpate along the thoracic wall in a superior direction towards the centre of the axilla until you reach the highest point.

Needling

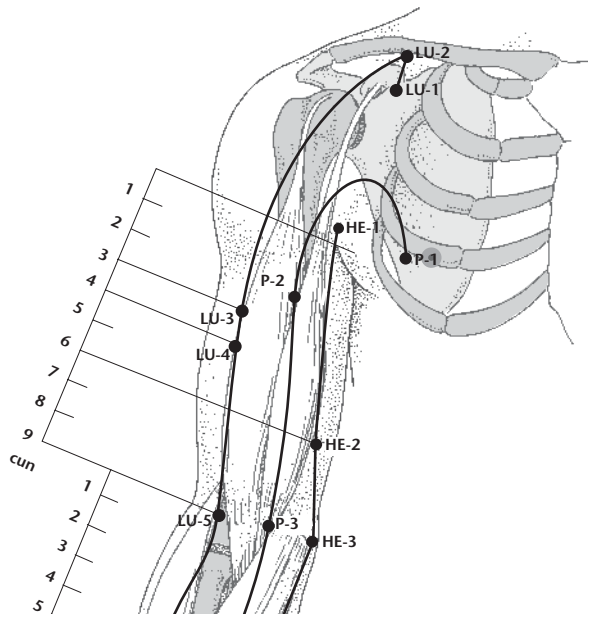
Palpate for the artery before needling! 0.5–1 cun vertically in the direction of → **G.B.-21** (border of the trapezius, middle of the shoulder). Caution: Axillary plexus and artery. Needling in a medial direction may puncture the lung!

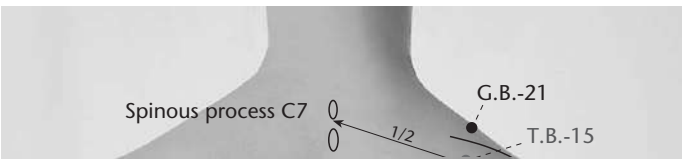
Actions/Indications

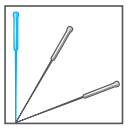
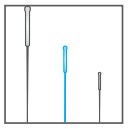
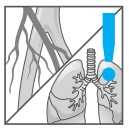
- Unbinds the chest
- Opens the channel
- Nourishes the Heart Yin

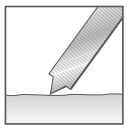
Special features

Entry point. Important point in Qigong practice: During practice (and in everyday life), the axillary region should always be slightly open to allow for the free circulation of Qi and Blood to and from the upper extremity.







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HE-2 *Green Spirit* QINGLING

Location

3 cun proximal to the cubital crease, on the medial border of the biceps brachii muscle.

How to find

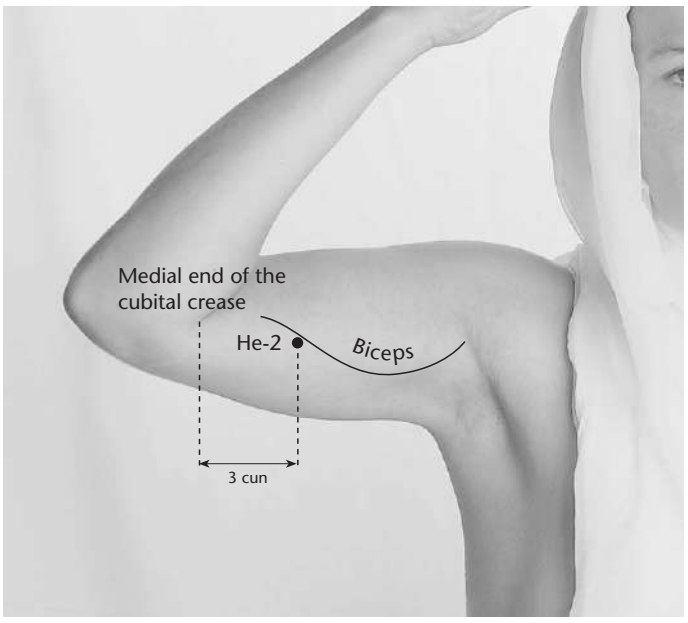
With the elbow flexed, measure 3 cun from the ulnar end of the cubital crease (→ **HE-3**) towards the axilla. **HE-2** is located in a groove on the medial border of the biceps brachii muscle. Ask the patient to flex this muscle for easier location.

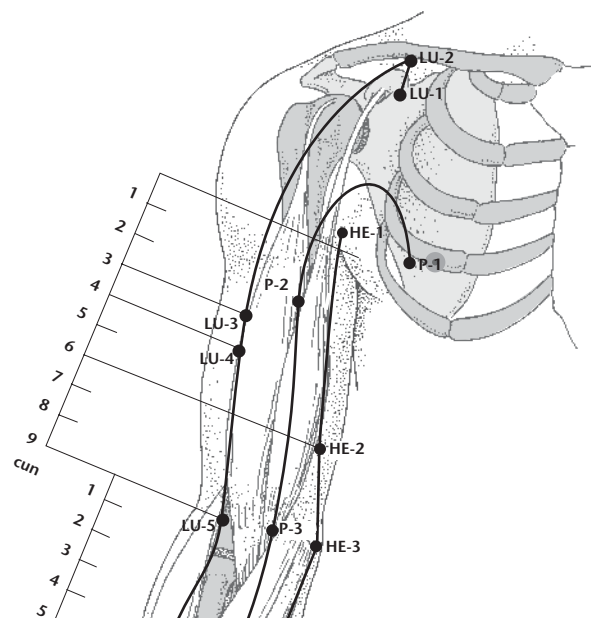
Needling

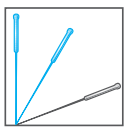
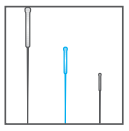
Vertically or obliquely 0.5–1 cun. Caution: Brachial artery! According to classic texts, needling is contraindicated, only moxibustion is permitted.

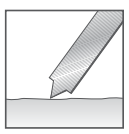
Actions/Indications

- Opens the channel







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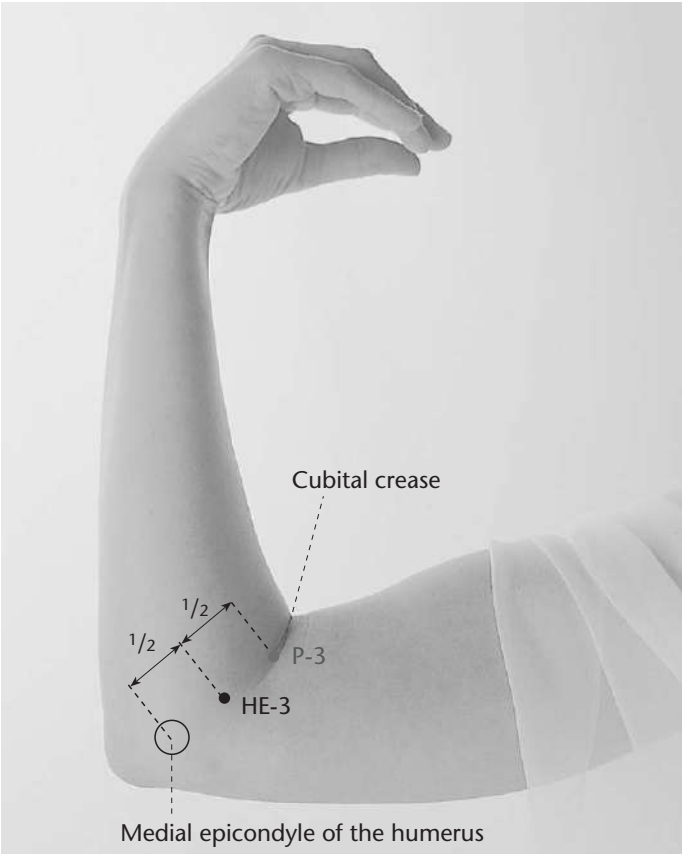
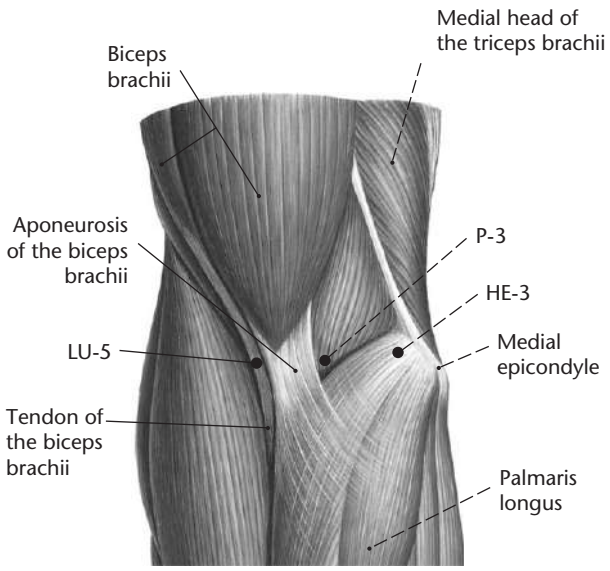
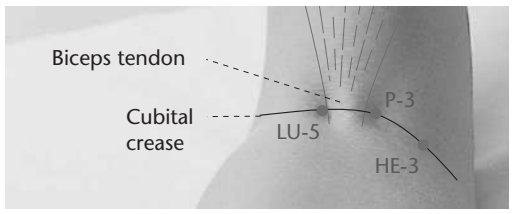
Lesser Sea SHAOHAI HE-3





Right arm anterior aspect



Right arm

Location

With the elbow flexed, this point is in a depression between the ulnar end of the transverse cubital crease and the medial epicondyle of the humerus.

How to find

This point should be located with the elbow slightly flexed and the forearm in a supinated position. Find the ulnar end of the transverse cubital crease and palpate towards the medial epicondyle of the humerus (→ 3.2.2). **HE-3** is located in a depression approximately midway between → **P-3** and the medial epicondyle. **Or**: With the elbow fully flexed, **HE-3** is located directly at the medial end of the transverse crease.
Located on the same level are → **P-3** (ulnar to the tendon of the biceps muscle), → **LU-5** (radial to the tendon of the biceps muscle) and → **L.I.-11** (at the radial end of the crease).

Needling

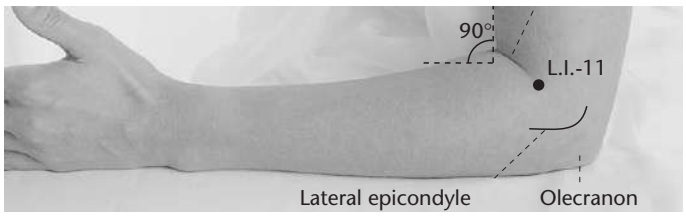
0.5–1.5 cun obliquely in a distal or proximal direction or vertically towards → **L.I.-11**.

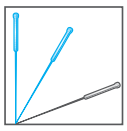
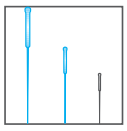
Actions/Indications

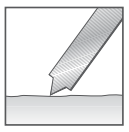
- Transforms Phlegm, clears Heat (from the heart), calms the *shen*
- Opens the channel and *luo*-vessels

Special features

He-sea point, Water point. Important local point, important calming point.





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HE-4 *Spirit Path* LINGDAO

Location

1.5 cun proximal to the transverse wrist crease, on the radial side of the tendon of the flexor carpi ulnaris muscle.

How to find

The flexor carpi radialis muscle has a distinct tendon which can be easily palpated ulnar and proximal to the wrist crease. It attaches to the pisiform bone (→ 3.3.3). **HE-4** is located directly on the radial side of the tendon.

→ **HE-5**, → **HE-6** and → **HE-7** are located at 0.5 cun intervals distal to **HE-4**. → **LU-7** is located approximately 1.5 cun proximal to the wrist crease on the radial aspect of the forearm.

Needling

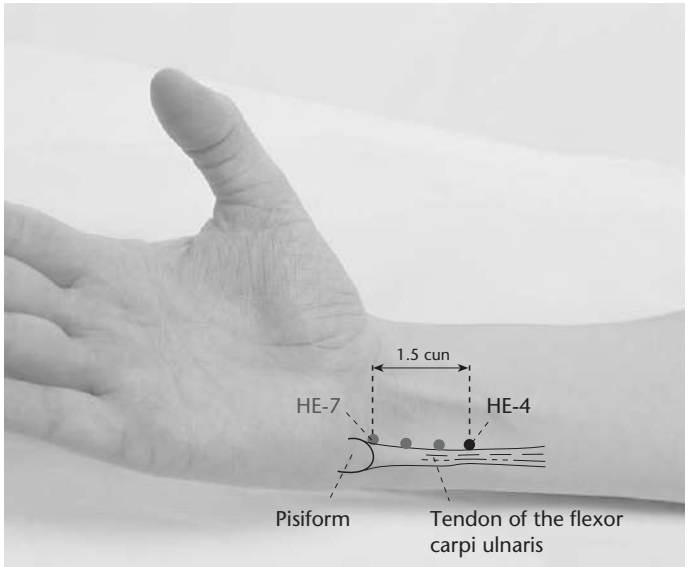
0.3–1 cun vertically or obliquely in a proximal or distal direction.

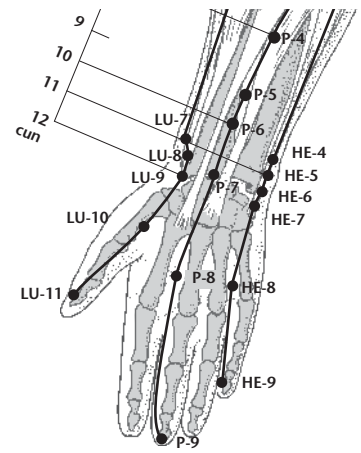
Actions/Indications

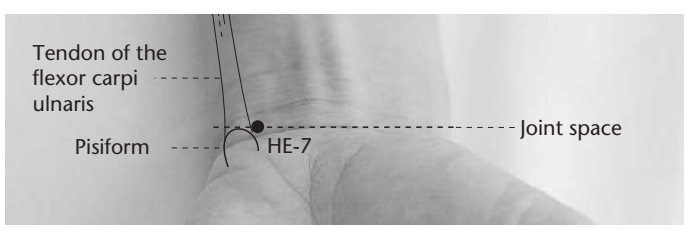
- Opens the channel
- Nourishes the Heart, calms the *shen*
- Strengthens the voice

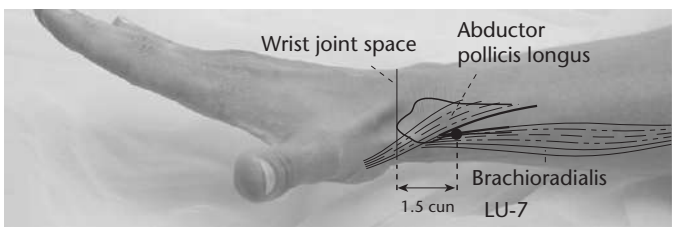
Special features

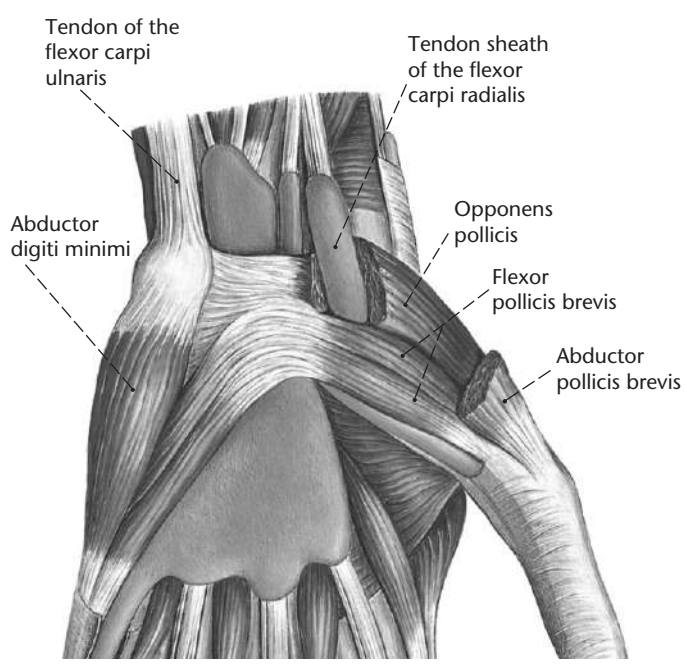
Jing-river point, Metal point.

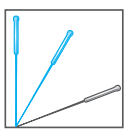
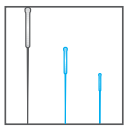


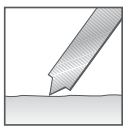










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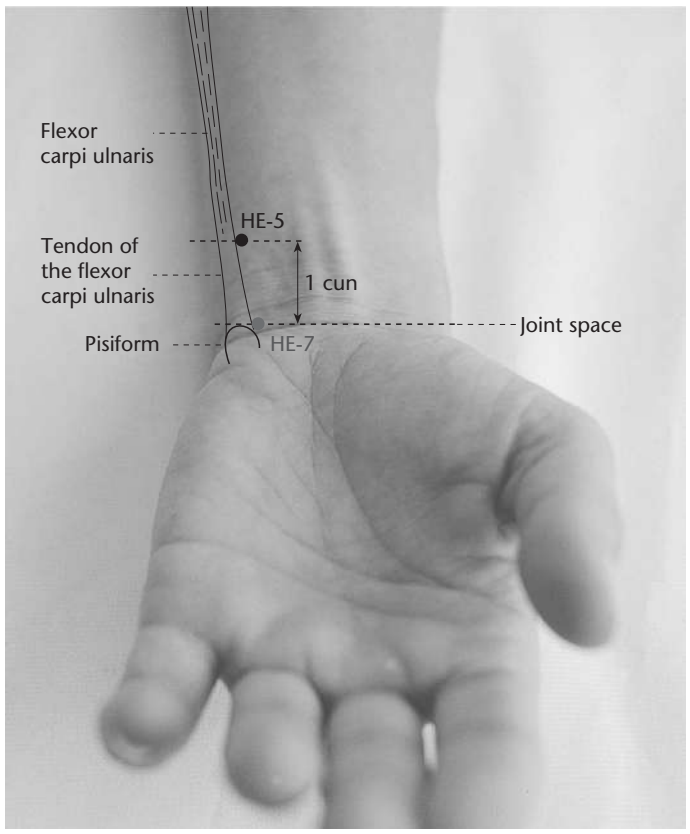
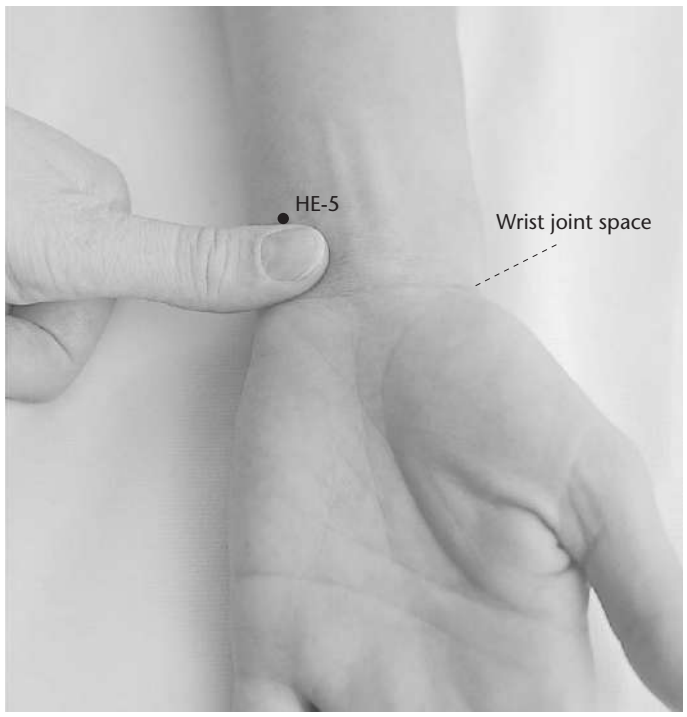
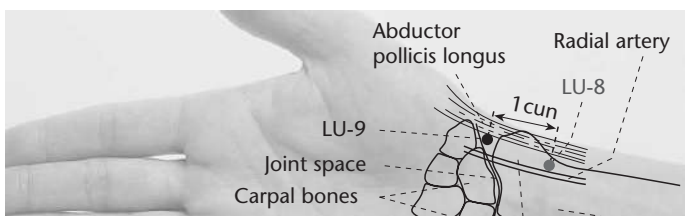
Penetrating the Interior TONGLI HE-5







Location

1 cun proximal to the ventral wrist joint space ('most distal transverse wrist crease'), on the radial side of the tendon of the flexor carpi ulnaris muscle.

How to find

Position the forearm in a relaxed fashion. The location of the ventral wrist crease is variable; therefore, the proximal border of the pisiform bone (→ 3.3.2) provides a more reliable landmark. → **HE-7** is located on the wrist joint space, radial to the distinct tendon of the flexor carpi ulnaris muscle. Locate **HE-5** 1 cun proximal to → **HE-7**, also on the radial side of the tendon.
Located along a line on the radial aspect of the tendon are → **HE-6** (0.5 cun proximal to → **HE-7**) and → **HE-4** (1.5 cun proximal to **HE-7**). → **LU-8** is also located 1 cun proximal to the ventral wrist joint space, but on the radial aspect of the forearm.

Needling

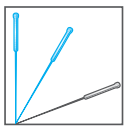
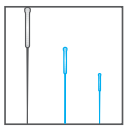
Vertically 0.3–0.5 cun or obliquely 0.5–1 cun in a proximal or distal direction. Caution: Needling may be painful.

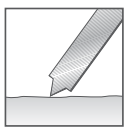
Actions/Indications

- Regulates and strengthens the Heart Qi (main point!) and the Heart rhythm
- Calms the *shen*
- Benefits the tongue
- Benefits the Bladder (via the *taiyang* channel)
- Opens the channel and *luo*-connecting vessels

Special features

Luo-connecting point, Ma Dan Yang Heavenly Star point. Main point for regulating and strengthening the Heart Qi.



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HE-6 *Yin Cleft* YINXI

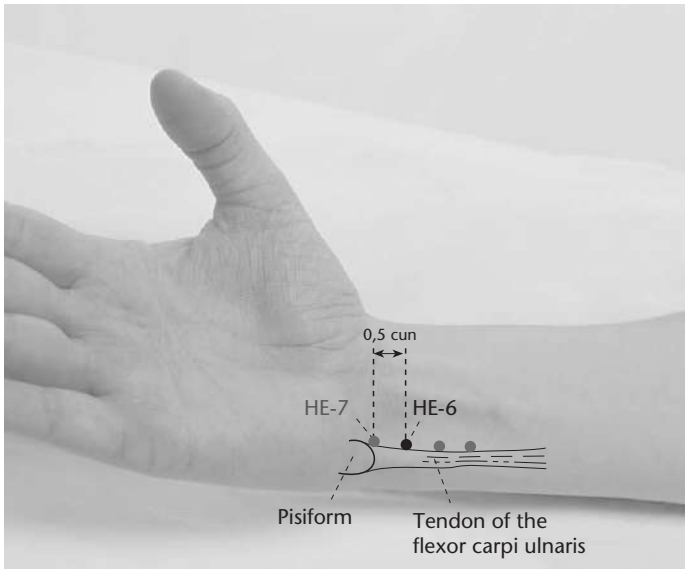
Location
0.5 cun proximal to the transverse wrist crease, on the radial side of the tendon of the flexor carpi ulnaris muscle.

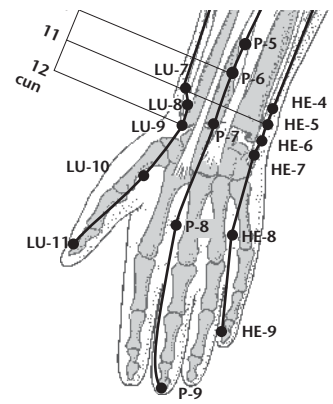
How to find
The flexor carpi ulnaris muscle has a distinct tendon on the ventral aspect of the forearm that can be easily palpated ulnar and proximal to the wrist. **HE-6** is located on the radial aspect of the tendon, 0.5 cun proximal to → **HE-7** (located on the joint space).
→ **HE-5** and → **HE-4** are located proximally on the same line at 0.5 cun intervals.

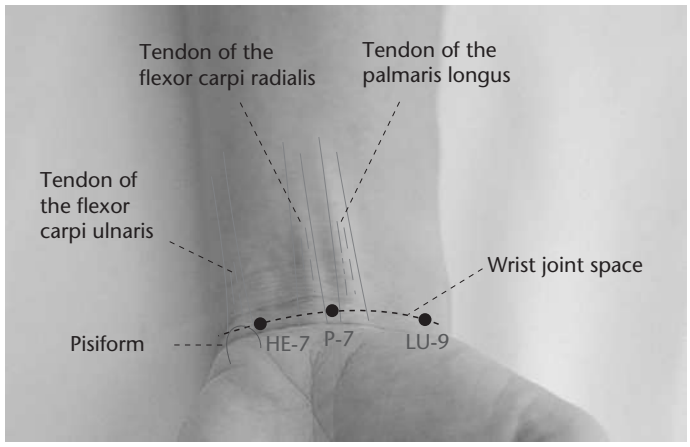
Needling
0.3–1 cun vertically or obliquely in a proximal or distal direction. Caution: Ulnar artery/nerve. Painful point!

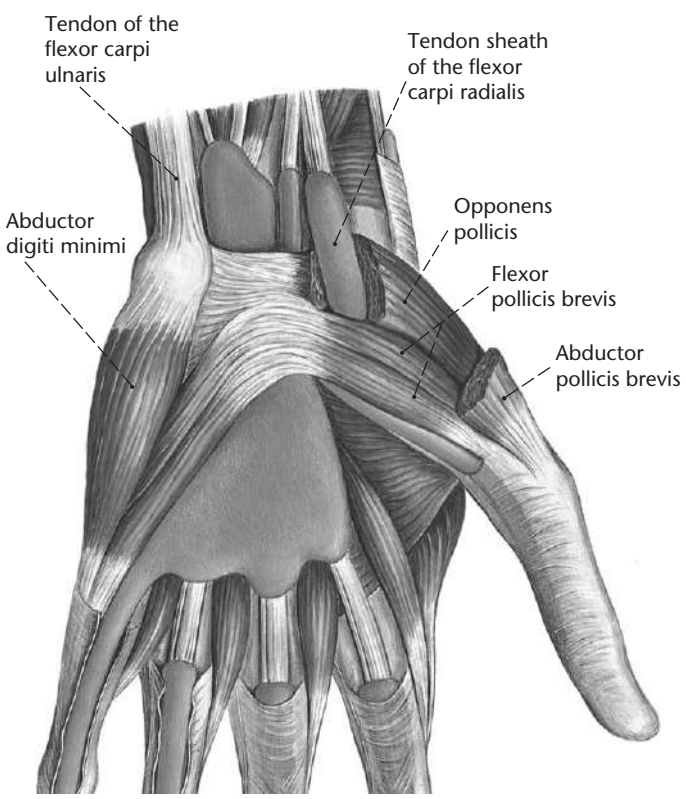
Actions/Indications
- Tonifies and regulates the Heart Yin and Blood, clears empty Heat in the Heart, calms the *shen*

Special features
Xi-cleft point









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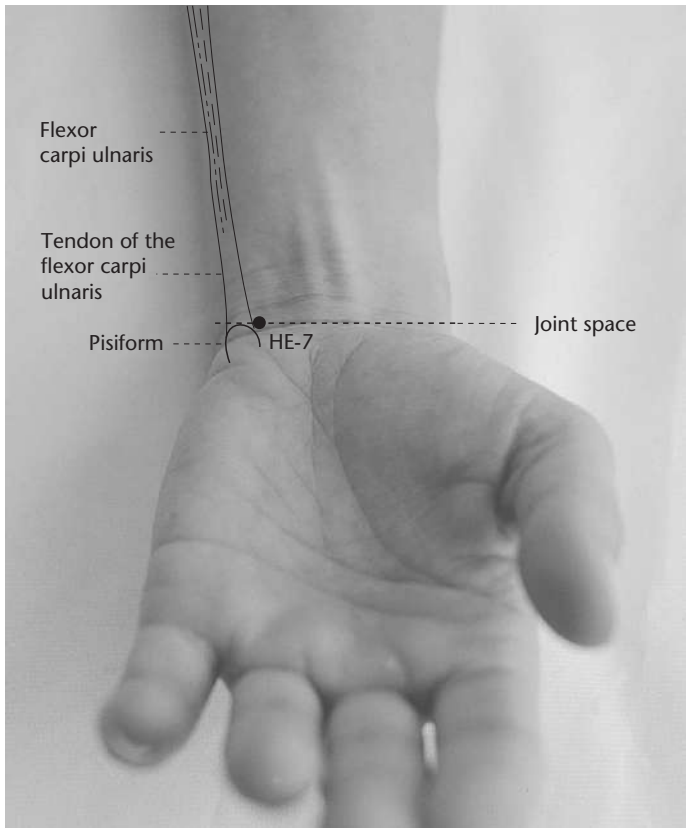
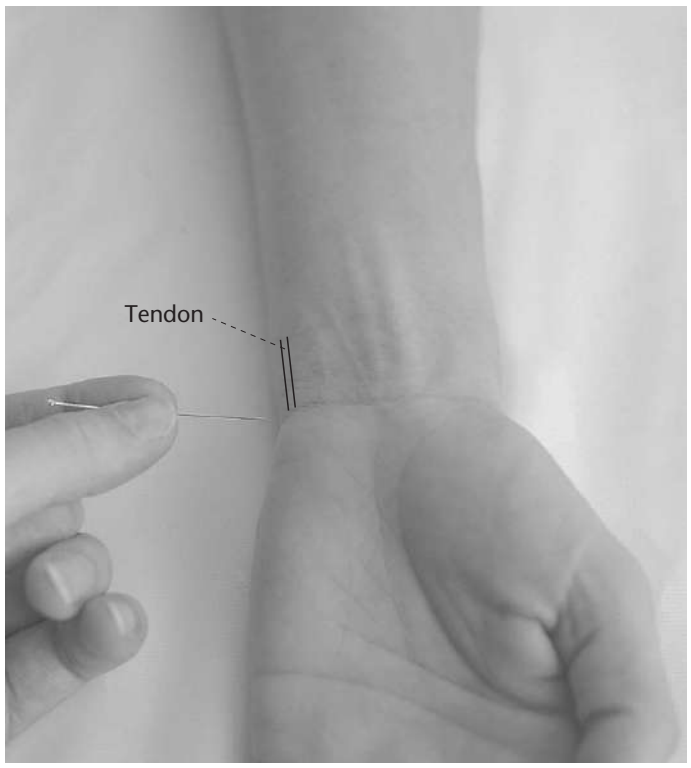
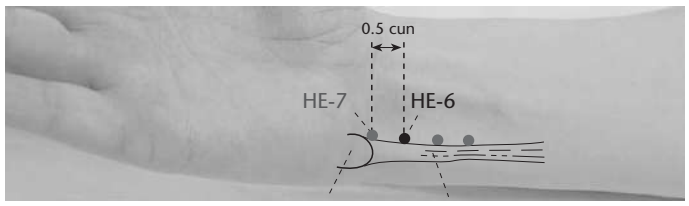
Spirit Gate SHENMEN HE-7







Location

On the ventral aspect of the wrist joint space ('most distal wrist crease'), radial to the insertion of the tendon of the flexor carpi ulnaris muscle.

How to find

Position the forearm in a relaxed supinated position. As the location of the wrist crease can vary, the proximal border of the pisiform bone (→ 3.3.3) should be used for reference instead. **HE-7** is located radial to the insertion of the tendon of the flexor carpi ulnaris muscle, in a depression proximal to the pisiform bone.

→ **HE-6**, → **HE-5** and → **HE-4** are all located on a line on the radial aspect of the tendon at 0.5 cun intervals. Also located on the wrist crease are → **P-7** (between the tendons of the palmaris longus and the flexor carpi radialis muscles) and → **LU-9** (on the radial aspect, lateral to the radial artery).

Needling

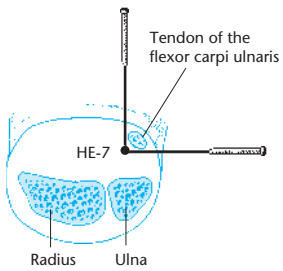
0.3–0.5 cun vertically or transversely deep to the tendon (parallel to the wrist crease 0.5–0.8 cun). Caution: Ulnar artery/nerve. Painful point!

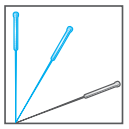
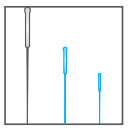
Actions/Indications

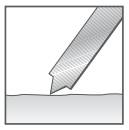
- Regulates and strengthens the Heart (Blood and Yin), calms the *shen*
- Clears Heat from the Heart channel
- Moves Qi locally for disorders of the wrist

Special features

Yuan-source point, *shu*-stream point, Earth point, sedation point. Major point for calming the *shen*.





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HE-8 *Lesser Palace* SHAOFU

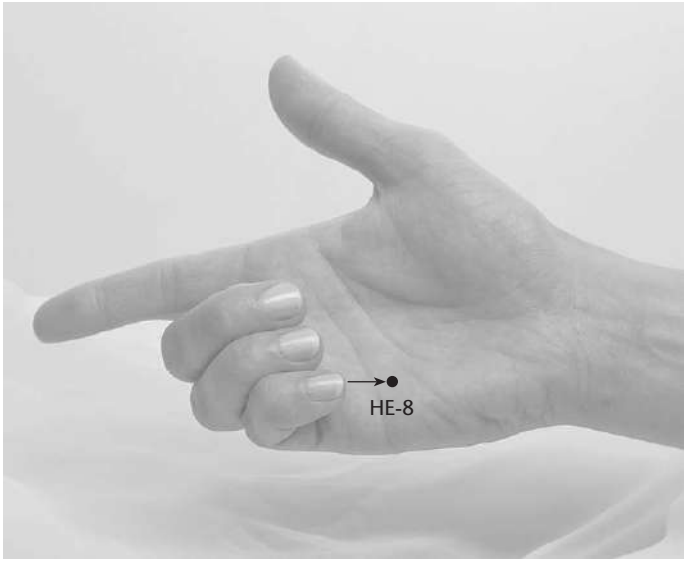
Location

On the palm, between the 4th and 5th metacarpal bones.

How to find

When making a fist, **HE-8** is generally located below the tip of the little finger, in the depression between the 4th and 5th metacarpal bones. **HE-8** often lies between the two transverse palmar creases. It is often sensitive to pressure.

→ **P-8** is also located on the palm, generally below the tip of the middle finger when making a fist (between the 2nd and 3rd metacarpal bones).

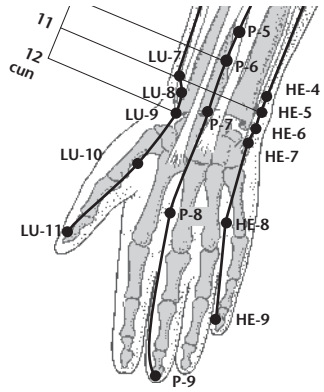


Needling

Vertically 0.5–1 cun. Caution: Needling this point may be painful. Provide a competitive stimulus by pressing the palm with the fingernail close to the point before inserting the needle. Ask the patient to breathe out during needle insertion.

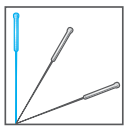
Actions/Indications

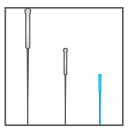
- Clears Heat in the Heart and Small Intestine
- Regulates the Heart Qi for Liver Qi stagnation
- Calms the *shen* and strengthens the Heart Qi
- Opens the channel, especially for contractures of the fingers

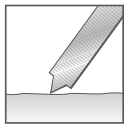


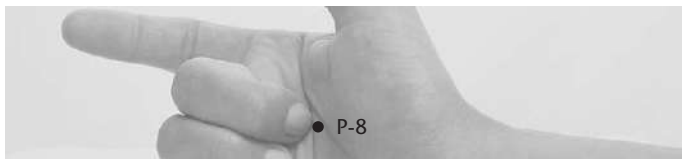
Special features

Ying-spring point, Fire point, *ben* point (Five Phases).









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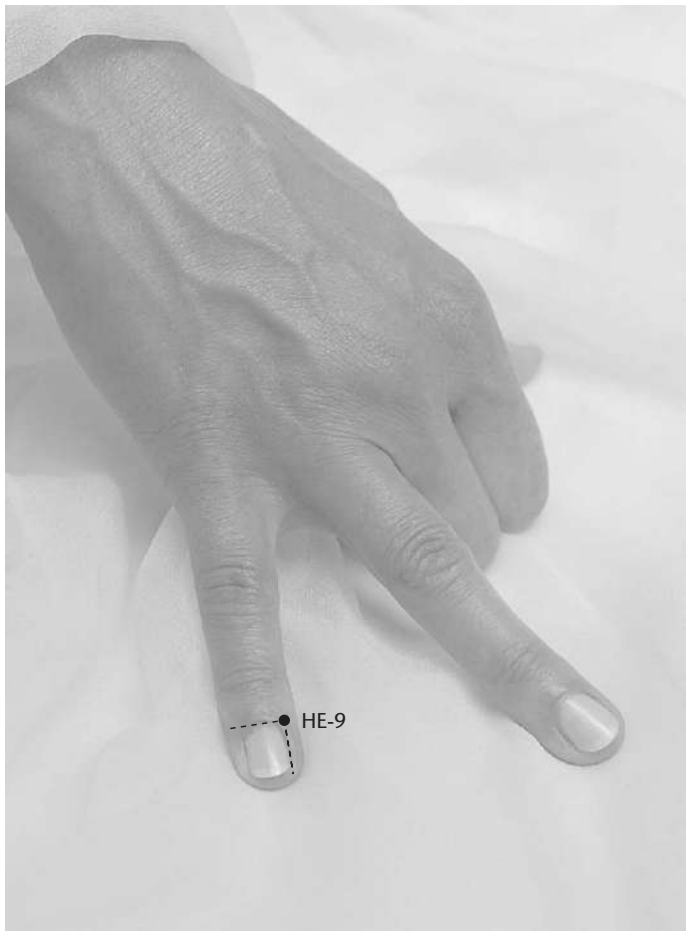
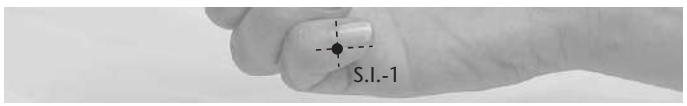
Lesser Rushing SHAOCHONG HE-9





Location

On the little finger, 0.1 cun lateral to the radial corner of the nail.

How to find

This point is located at the junction of two tangents that border the radial and proximal aspect of the nail, approximately 0.1 cun from the actual corner of the nail. → **S.I.-1** is located on the opposite (ulnar) aspect of the nail.

Needling

0.2–0.3 cun vertically or obliquely in a proximal direction. For acute disorders (pain, inflammation), prick to bleed with a needle, lancet or three-edged needle. Caution: Painful point!

Actions/Indications

- Revives consciousness
- Clears Heat from the opposite end of the channel
- Regulates Qi in the chest and clears Heat in the Heart
- Opens the channel

Special features

Jing-well point, Wood point, tonification point, exit point.

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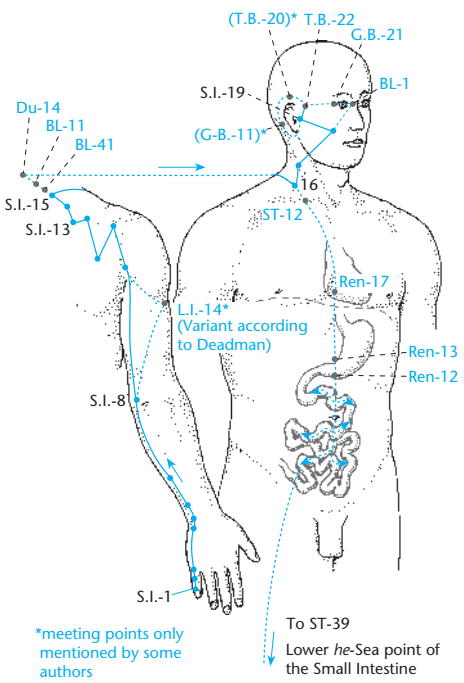
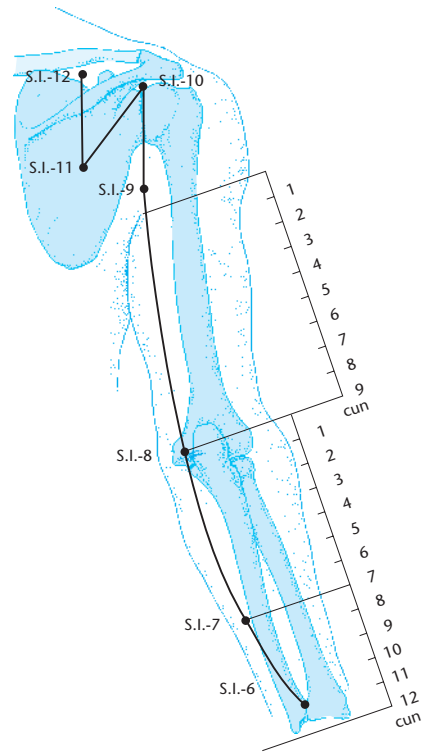
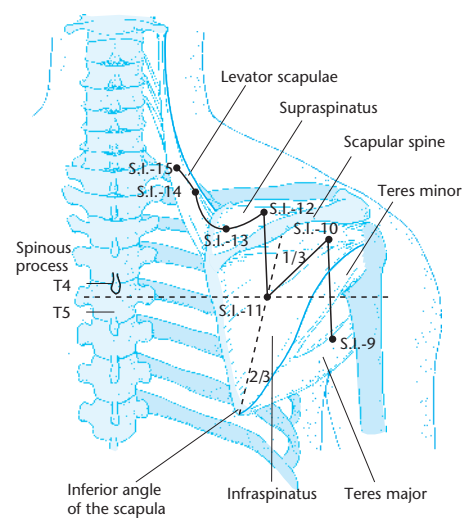
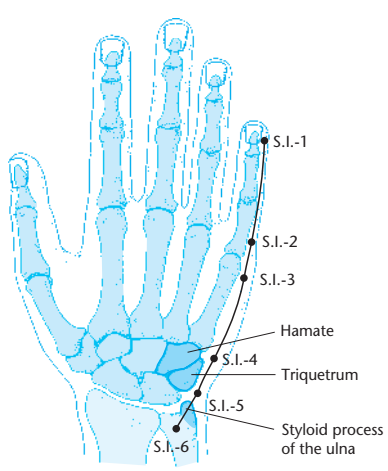
4.6 The Small Intestine Channel System – Hand *taiyang* (*shou tai yang jing luo*)

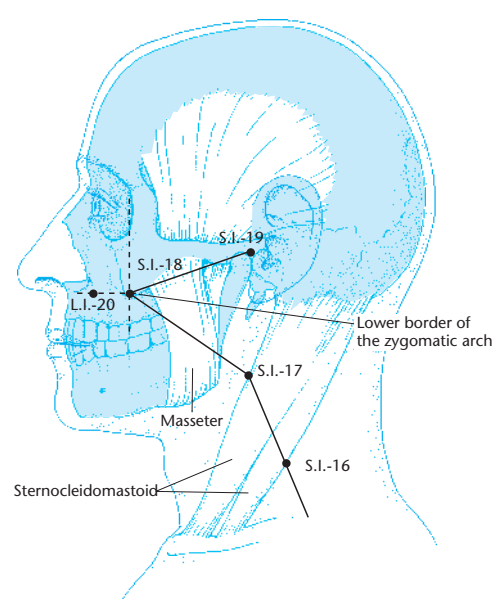
4.6.1 The Small Intestine Primary Channel (*shou tai yang jing*)











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Pathway

The **external** pathway of the Small Intestine primary channel begins on the little finger, on the ulnar corner of the nail, at **S.I.-1** (*shaoze*). This point is reached by a branch that separates from the Heart primary channel at → **HE-9** (*shaochong*) (hand Yin–Yang connection of the second great circuit).

The channel runs along the ulnar border of the hand, passes the wrist and continues along the ulna to the medial aspects of the elbow.

- ➡ passes between the olecranon and the medial epicondyle, ascends the posterior aspect of the humerus to the shoulder joint and, according to some authors, meets → **L.I.-14**
- ➡ zig-zags across the scapula, passes → **BL-41** (*fufen*) and → **BL-11** (*dazhu*) and meets the extraordinary vessel *du mai* and the other Yang primary channels at → **Du-14** (*dazhui*), below the spinous process of C7
- ➡ continues anteriorly to the supraclavicular fossa to → **ST-12** (*quepen*).

An **internal** branch originates at → **ST-12** and runs inferiorly to the Heart (*xin*), the paired *zang*-Organ, continues to → **Ren-17** and descends along the oesophagus, penetrates the diaphragm and continues to the Stomach (*wei*). Here it crosses → **Ren-13** (*shangwan*) and → **Ren-12** (*zhongwan*), further descends and spreads in its pertaining *fu*-Organ, the Small Intestine (*xiaochang*). According to the *Neijing Ling Shu*, an **internal** branch courses from the Small Intestine (according to some authors from the Small Intestine primary channel) to → **ST-39** (*xiajuxu*), the lower *he*-sea point of the Small Intestine.

The **external** pathway of the Small Intestine primary channel continues from the supraclavicular fossa along the neck and ascends to the cheek to **S.I.-18** (*quanliao*).

From **S.I.-18**

- ➡ **a branch** courses to → **BL-1** (*jingming*) at the inner canthus of the eye, where it connects with the Bladder primary channel (six channel theory, Yang axes: *taiyang*)
- ➡ **a further branch** travels to the outer canthus of the eye, intersects with → **G.B.-1** (*tongziliao*), according to some authors also with → **T.B.-20** and → **G.B.-11**, continues to → **T.B-22** (*erheliao*) anterior to the ear and terminates anterior to the ear deep to **S.I.-19** (*tinggong*)

Clinical importance (➡ 1.2)

Exterior (*biao*) signs and symptoms: Mouth and tongue ulcers, cheek pain, neck pain, occipital stiffness, pain on the lateral aspect of the shoulder and the upper arm

Interior (*li*) or *zangfu*-Organ signs and symptoms: Pain and distension of the upper abdomen, radiating to the genital region, diarrhoea, epigastric pain with constipation

Connections of the Small Intestine primary channel

Connections with other channels

Heart primary channel (*shou shao yin jing*)

Connection: Hand Yin–Yang connection of the second great circuit
Location: **H-9** → **S.I.-1** (on the hand)
Circulation: Circadian (according to the Organ clock)
Importance: Exterior–Interior relationship

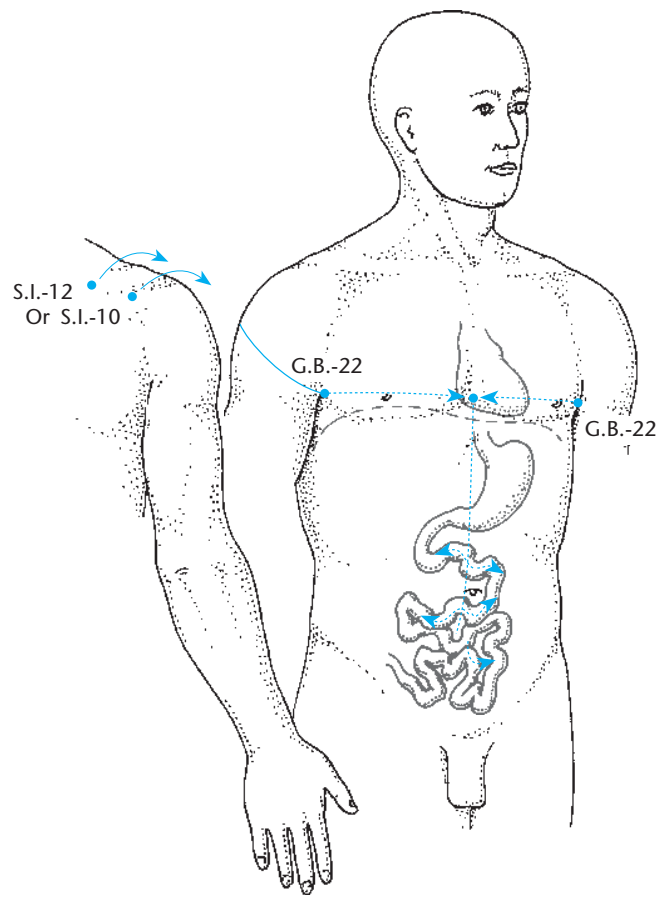
Bladder primary channel (*zu tai yang jing*)

Connection: Paired according to the six channel theory (hand–foot pairing): *tai yang* (Yang axes of the second great circuit)
Location: **S.I.-18** → **BL-1** (on the head)
Circulation: Circadian (according to the Organ clock)
Importance: Above–below relationship

Connections with other *zangfu*-Organ systems

Heart (*xin*), Stomach (*wei*), **Small Intestine (*xiaochang*)**

4.6.2 The Small Intestine Divergent Channel (*shou tai yang jing bie*)



Pathway

The Small Intestine divergent channel separates from the Small Intestine primary channel at the shoulder, depending on the school of thought in the area of → **S.I.-12** (*bingfeng*) or in the area of → **S.I.-10** (*naoshu*)

- ➡ descends towards the axilla and continues to → **G.B.-22** (*yuanye*)
- ➡ penetrates the thorax and spreads in the Heart (*xin*) where, according to most authors, it forms the fourth confluence
- ➡ penetrates the diaphragm to connect with its pertaining *fu*-Organ, the Small Intestine

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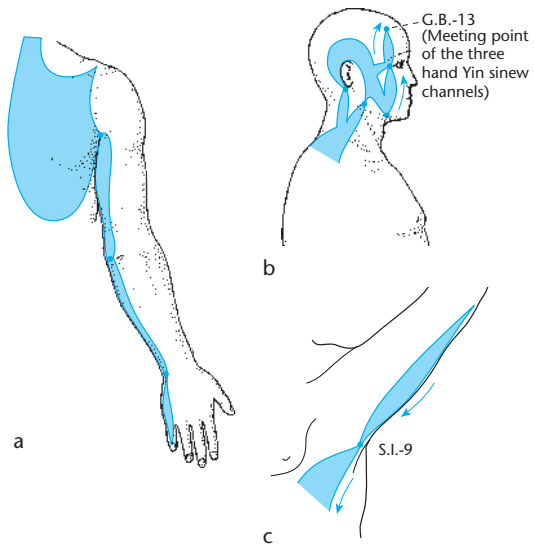
Clinical importance

- Strengthens the relationship between the Heart and the Small Intestine (*zangfu*-Organ system). It provides an explanation for the pattern of Heart Fire transferring to the Small Intestine and the Bladder.

4.6.3 The Small Intestine Sinew Channel (*shou tai yang yin jing jin*)



Pathway

The Small Intestine sinew channel begins on the ulnar aspect of the little finger at ➞ **S.I.-1** (*shaoze*)

- ➡ continues along the ulnar aspect of the little finger and the ulnar border of the hand
- ➡ runs to **S.I.-5** (*yanggu*) distal to the styloid process of the ulna and binds (*jie*) at the wrist
- ➡ travels along the ulnar aspect of the forearm to the elbow, continues to the axilla, binding at **S.I.-8** (*xiaohai*) and the posterior aspect of the axilla.

From here a branch courses into the axilla where it binds (*jie*). Another branch spreads across the scapula and ascends anterior to the Bladder and Gall Bladder sinew channels and posterior to the Stomach sinew channel to the lateral aspect of the neck, where it meets the Triple Burner sinew channel.

At the neck it divides into **two branches:**

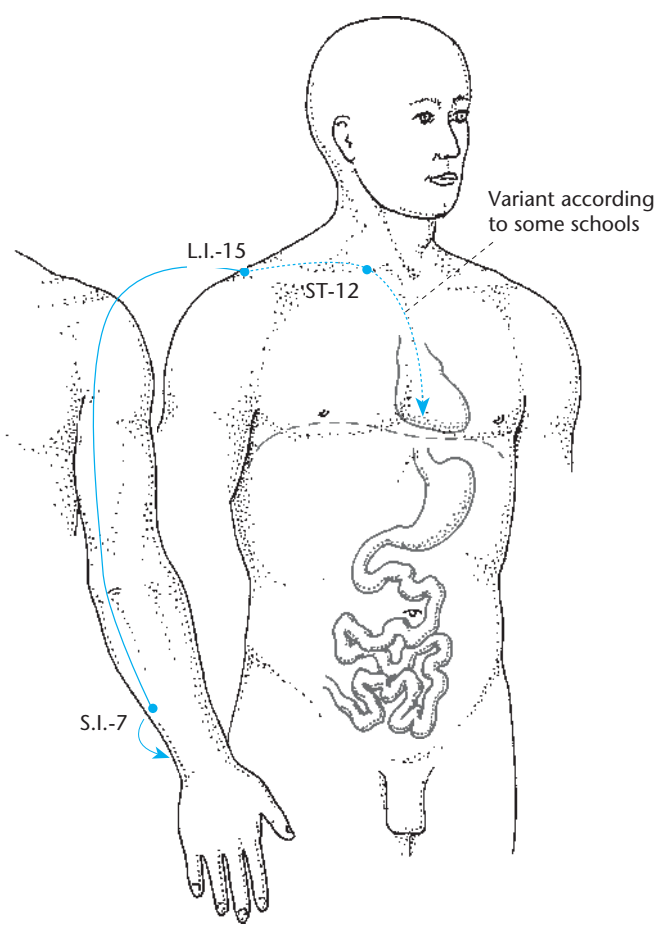
- ➡ the **anterior branch** runs to the mandibular angle where it binds (*jie*), continues along the mandible to the ear and the zygomatic bone to bind (*jie*) at the lateral aspect of the orbit
- ➡ the **posterior branch** binds (*jie*) at the mastoid process (from here a small branch runs to the ear). The branch curves around the ear, descends to the cheek and binds (*jie*) at the insertion of the masseter muscle on the mandible, continues to the lateral aspect of the orbit and reaches ➞ **G.B.-13** (*benshen*) on the frontoparietal aspect of the head, where it meets the other hand Yang sinew channels.

Clinical importance

Pathology: Distending sensations, stiffness and pain of the little finger, impaired range of motion of the upper extremity and shoulder. Pain, stiffness and impaired range of motion of the cervical spine and occiput. Tinnitus and ear pain radiating to the mandible.

Indication: Mainly for *bi*-syndromes (painful obstruction syndrome) along the pathway of the S.I. channel. The area covered by the Small Intestine sinew channel is larger than that covered by the Small Intestine primary channel. This explains why Small Intestine primary channel points can also be used for disorders and diseases of the cervical and thoracic spine and the whole face (for example frontal and lateral headaches).

4.6.4 The Small Intestine *luo*-Connecting Vessel System (*shou tai yang luo mai*)



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Pathway

The S.I. *luo*-connecting vessel separates from the Small Intestine primary channel at its *luo*-connecting point **S.I.-7** (*zhizheng*) (→ 8.1.2). It forms a three-dimensional reticular network, dividing into multiple branches and sub-branches (*sun luo*, *fu luo*, *xue luo* → 1.5) within the surrounding tissue.

- Horizontal divisions run to the Interiorly–Exteriorly paired Heart primary channel, according to some schools of thought (for example Ngyen Van Nghi → Appendix) they travel as a **transverse** S.I. *luo*-connecting vessel to the *yuan*-source point → **HE-7** (*shenmen*).
- A **longitudinal** division runs to the medial condyle of the humerus, ascends to the shoulder to → **L.I.-15** (*jianyu*). According to some schools of thought the vessel spreads and terminates here, while according to other schools it traverses the acromion, continues to → **ST-12** (*quepen*) in the supraclavicular fossa, penetrating the thorax in order to connect with the Heart.

Clinical importance (➡ 8.1.2)

Pathology

- **Excess (*shi*)**: Weak and unstable joints, weakness and paralysis of the elbow and the arm
- **Deficiency (*xu*)**: Warts

4.6.5 Cutaneous Region (*tai yang pi bu*)

See description and figures → 1.6.

4.6.6 Points of the Small Intestine Primary Channel (Overview)

Specific points according to their function

- ***Yuan*-source point (→ 8.1.1): S.I.-4** (*wangu*)
- ***Luo*-connecting point (→ 8.1.2.): S.I.-7** (*zhizheng*)
- ***Xi*-cleft point (→ 8.1.3): S.I.-6** (*yanglao*) ■■
- **Associated Back-*shu* point (→ 8.1.4): BL-27** (*xiaochangshu*) ■■
- **Associated Front-*mu* point (→ 8.1.5): Ren-4** (*guanyuan*) ■■
- **Five *shu*-transporting point (→ 8.1.6):**
  jing-well point (Metal): **S.I.-1** (*shaoze*)
  ying-spring point (Water): **S.I.-2** (*qiangu*)
  shu-stream point (Wood), tonification point: **S.I.-3** (*houxi*) ■■
  jing-river point (Fire), *ben* point: **S.I.-5** (*yanggu*)
  he-sea point (Earth), tonification point: **S.I.-8** (*xiaohai*)
- ***Hui*-meeting point (→ 8.1.7): –**
- **Opening point (→ 8.1.8) of the *du mai*: S.I.-3** (*houxi*) ■■
- **Lower *he*-sea points (→ 8.1.9): –**
- ***Jiaohui*-meeting points (→ 8.1.10):**
  – with the BL channel, the *yang wei mai, yang qiao mai*: **S.I.-10** (*naoshu*)
  – with the L.I., T.B., G.B. channels: **S.I.-12** (*bingfeng*)
  – with the T.B. channel: **S.I.-18** (*quanlao*) ■■
  – with the T.B., G.B.: **S.I.-19** (*tinggong*) ■■
  – of other channels with the S.I. channel: **L.I.-14*, Du-14, BL-41, BL-11, ST-12, Ren-17*, Ren-13, Ren-12, G.B.-1, G.B.-11*, T.B.-20*, T.B.-22, BL-1**
- **Gao Wu command point (→ 8.1.11): –**
- **Window of Heaven point (→ 8.1.12): S.I.-16** (*tianchuang*), **S.I.-17** (*tianrong*) ■■
- **Points of the Four Seas (→ 8.1.13): –**
- **Ma Dan Yang Heavenly Star point (→ 8.1.14): –**
- **Sun Si Miao Ghost point (→ 8.1.15): –**

Points according to region

- **Local points (→ 8.2.1):** face and cheek – **S.I.-18** (*quanlao*) ■■; jaw – **S.I.-19** (*tinggong*) ■■; neck – **S.I.-17** (*tianrong*) ■■; ears – **S.I.-19** (*tinggong*) ■■; shoulder – **S.I.-9** (*jianzhen*), **S.I.-10** (*naoshu*), **S.I.-11** (*tianzong*), **S.I.-12** (*bingfeng*) ■■, **S.I.-13** (*quyuan*), **S.I.-14** (*jianwaishu*) ■■; elbow – **S.I.-8** (*xiaohai*); hand – **S.I.-4** (*wangu*), **S.I.-5** (*yanggu*); finger (numbness and pain) – **S.I.-3** (*houxi*) ■■; finger (stiffness) – **S.I.-3** (*houxi*) ■■, **S.I.-5** (*yanggu*)
- **Adjacent points (→ 8.2.1):** shoulder – **S.I.-9–S.I.-15**; finger – **S.I.-5** (*yanggu*)
- **Distal points (→ 8.2.1):** for the occiput – **S.I.-3** (*houxi*) ■■; for the eyes – **S.I.-6** (*yanglao*) ■■; for the cervical and thoracic spine – **S.I.-3** (*houxi*) ■■; for the thoracic spine – **S.I.-6** (*yanglao*) ■■; for the lumbar region – **S.I.-3** (*houxi*) ■■, **S.I.-6** (*yanglao*) ■■

Specific points according to the channel pathway (in numerical order)

- **S.I.-1** (*shaoze*): *jing*-well point (Metal)
- **S.I.-2** (*qiangu*): *ying*-spring point (Water)
- **S.I.-3** (*houxi*) ■■: *shu*-stream point (Wood), tonification point, opening point (→ 8.1.8) of the *du mai*, distal point for the occiput and the lumbar region (→ 8.2.1); local point for the fingers (→ 8.2.1); distal point for the cervical and thoracic spine (→ 8.2.1)
- **S.I.-4** (*wangu*): *yuan*-source point (→ 8.1.1); local point for the hand (→ 8.2.1)
- **S.I.-5** (*yanggu*): *jing*-river point (Fire), *ben* point (Five Phases); local point for the hand and fingers (stiffness) (→ 8.2.1); regional point for the fingers (→ 8.2.1)
- **S.I.-6** (*yanglao*) ■■: *xi*-cleft point (→ 8.1.3); distal point for the eyes, the thoracic and lumbar spine (→ 8.2.1)
- **S.I.-7** (*zhizheng*): *luo*-connecting point (→ 8.1.2)
- **S.I.-8** (*xiaohai*): *he*-sea point (Earth), sedation point; local point for the elbow (→ 8.2.1)
- **S.I.-9** (*jianzhen*): local point for the shoulder (often sensitive to pressure) (→ 8.2.1)
- **S.I.-9 – S.I.-15**: adjacent points for the shoulder (often sensitive to pressure) (→ 8.2.1)

* According to Deadman et al 1998.

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- **S.I.-10** (*naoshu*): *jiaohui*-meeting point with the BL channel, the *yang wei mai, yang qiao mai* (→ 8.1.10); local point for the shoulder (often sensitive to pressure) (→ 8.2.1)
- **S.I.-11** (*tianzong*) ■■: local point for the shoulder (often sensitive to pressure) (→ 8.2.1)
- **S.I.-12** (*bingfeng*): *jiaohui*-meeting point with the L.I., T.B. and G.B. channels (→ 8.1.10); local point for the shoulder (often sensitive to pressure) (→ 8.2.1)
- **S.I.-13** (*quyuan*): local point for the shoulder (often sensitive to pressure) (→ 8.2.1)
- **S.I.-14** (*jianwaishu*) ■■: local point for the shoulder (often sensitive to pressure) (→ 8.2.1)
- **S.I.-16** (*tianchuang*): Window of Heaven point (→ 8.1.12)
- **S.I.-17** (*tianrong*) ■■: Window of Heaven point (→ 8.1.12); local point for the neck (→ 8.2.1)
- **S.I.-18** (*quanlao*) ■■: local point for the face and cheek (→ 8.2.1); *jiaohui*-meeting point with the T.B. channel (→ 8.1.10)
- **S.I.-19** (*tinggong*) ■■: *jiaohui*-meeting point with the T.B., G.B. channels (→ 8.1.10); local point for disorders of the ear and jaw (→ 8.2.1)

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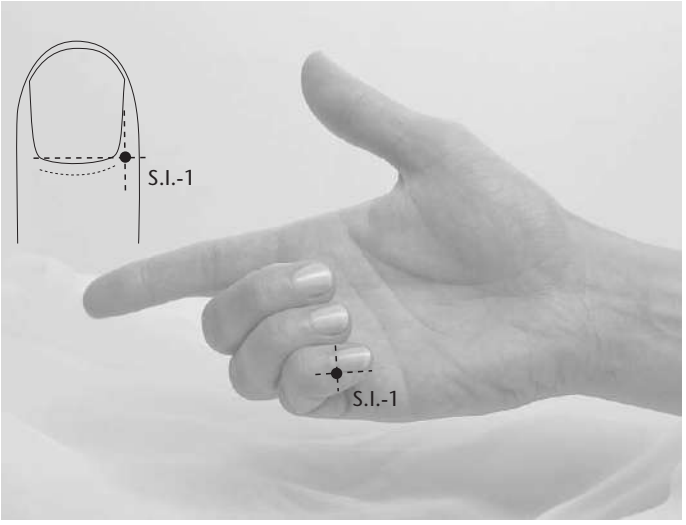
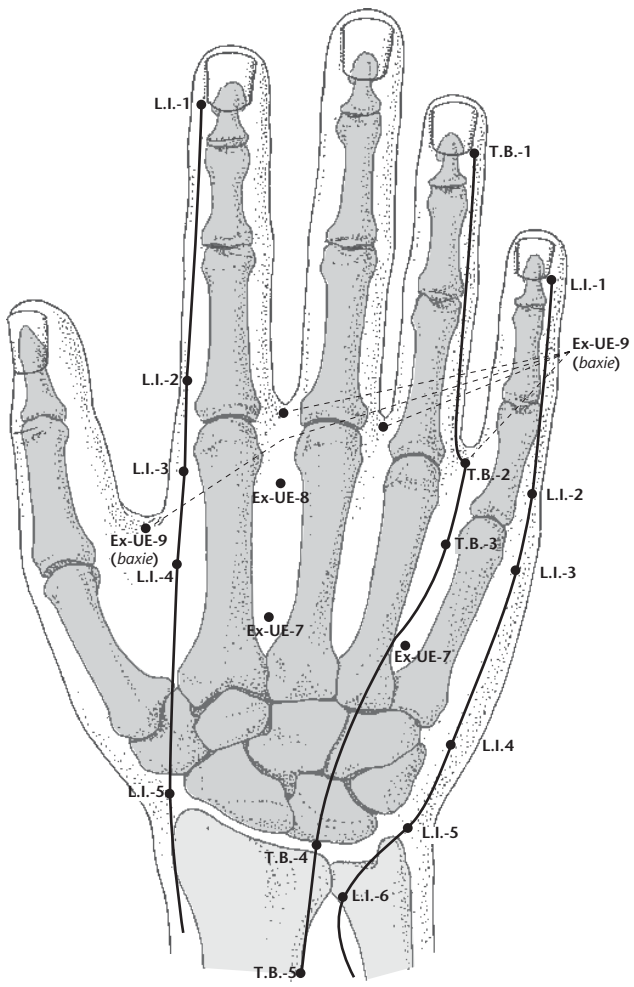
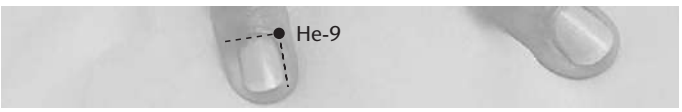
Lesser Marsh SHAOZE S.I.-1







Location

On the little finger, 0.1 cun from the ulnar corner of the nail.

How to find

This point is located at the junction of two tangents drawn along the lateral and proximal borders of the nail, approximately 0.1 cun from the actual corner of the nail. → **HE-9** is located at the radial corner of the nail.

Needling

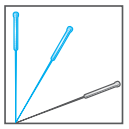
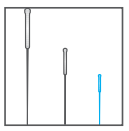
0.1–0.2 cun vertically or obliquely in a proximal direction or prick to bleed with a needle, lancet or three-edged needle. Caution: Painful point.

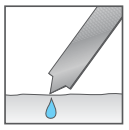
Actions/Indications

- Expels Wind and Heat
- Opens the orifices
- Revives consciousness
- Opens the channel
- Benefits the breasts

Special features

Jing-well point, Metal point, entry point.



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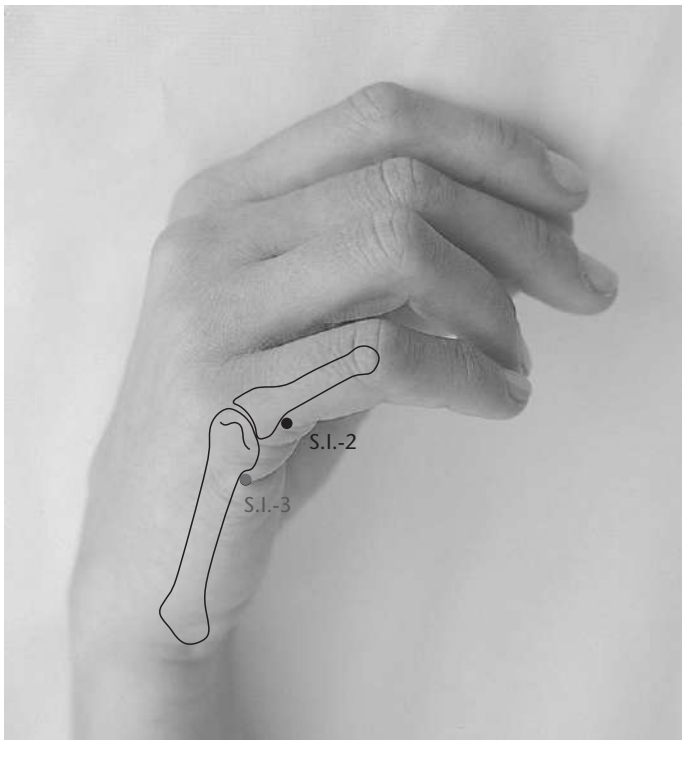
S.I.-2 *Front Valley* QIANGU

Location

On the ulnar aspect of the little finger, distal to the metacarpophalangeal joint, at the junction of the shaft and the base of the proximal phalanx.

How to find

On the ulnar aspect of the little finger, palpate along the border of the 'red and white' skin in the direction of the metacarpophalangeal joint, until you can clearly feel the junction between the shaft and the base. **S.I.-2** is located at the junction of the shaft and the base and slightly inferior (palmar) to the exterior curvature of the bone. → **L.I.-2** is located in a comparable position on the proximal phalanx of the index finger. In a comparable location on the foot are → **BL-66** (on the lateral aspect) and → **SP-2** (on the medial aspect).

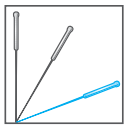
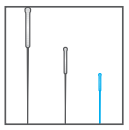


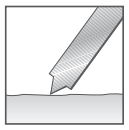
Needling

0.2–0.5 cun obliquely in a proximal or distal direction and slightly towards the palm. Caution: Painful point.

Actions/Indications

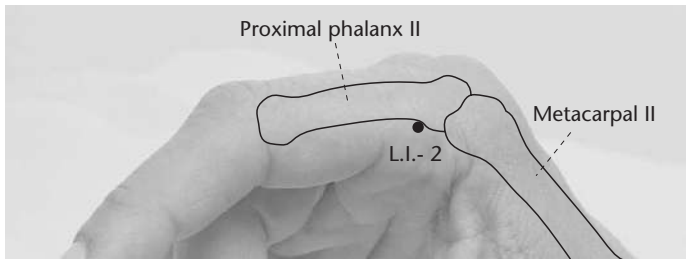
- Drains Heat, expels Wind
- Disperses accumulations

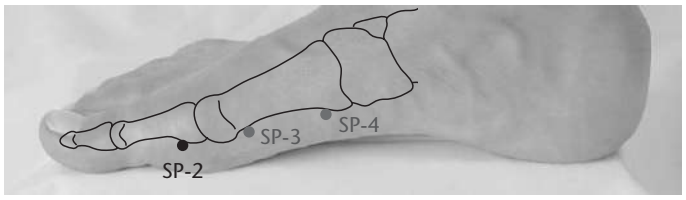



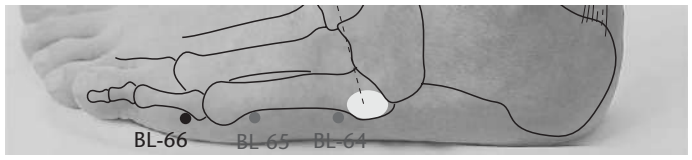


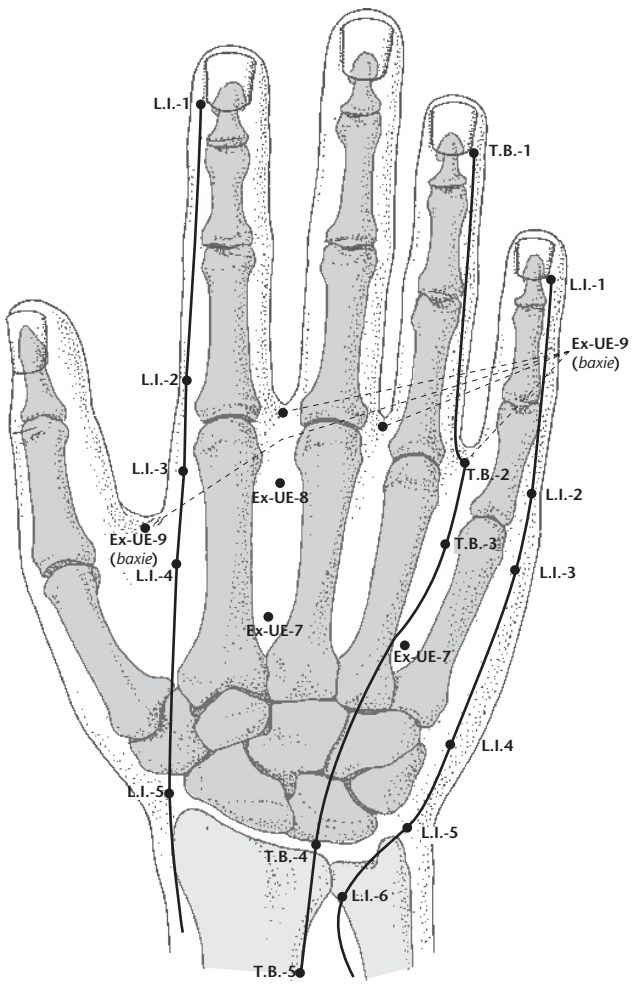
Special features

Ying-spring point, Water point.









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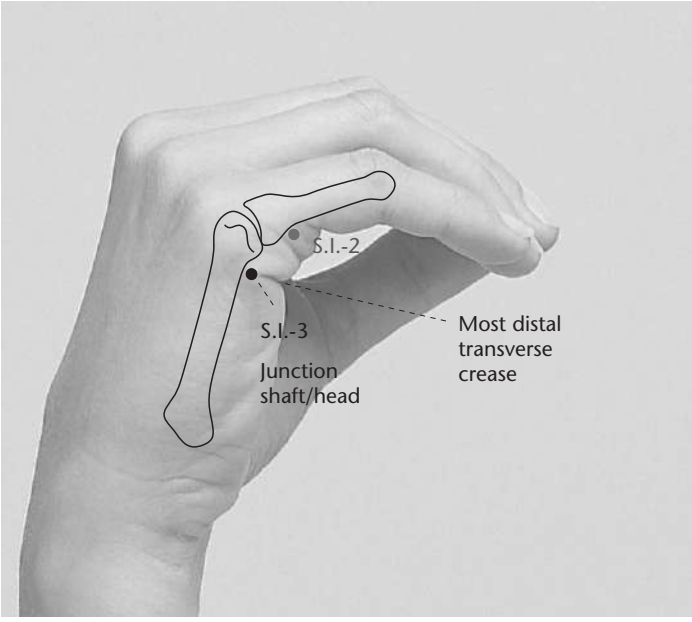
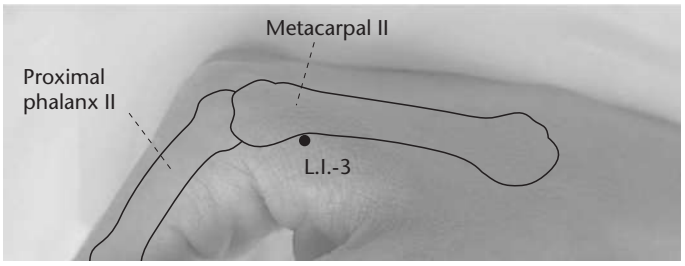
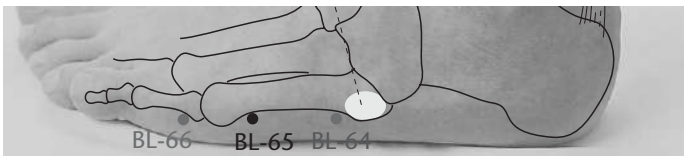
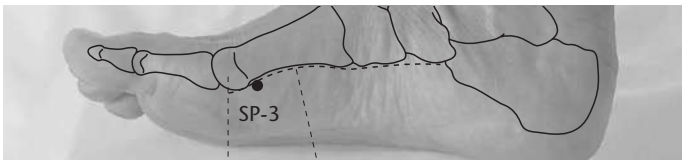
Back Stream HOUXI S.I.-3









Location

On the ulnar border of the hand, in the depression proximal to the metacarpophalangeal joint, at the border of the 'red and white' skin.

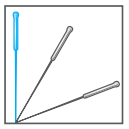
How to find

Quick method: Slide from proximal (wrist) to distal (little finger) along the ulnar border of the hand, until the palpating finger comes to rest at the junction between the base and the head of the 5th metacarpal bone proximal to the metacarpophalangeal joint. Here, locate **S.I.-3. Or:** Locate, with the patient making a loose fist. Locate **S.I.-3** at the end of the most distal transverse crease (this often originates between the index and middle fingers and runs to the little finger). When making a fist, a small bulge forms at the end of the crease. There, locate **S.I.-3** in a palpable depression slightly proximal and dorsal to the bulge.

→ **L.I.-3** is located in a comparable position on the radial border of the hand. Located in a comparable position on the foot are → **SP-3** (on the medial aspect) and → **BL-65** (on the lateral aspect).

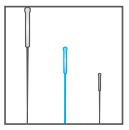
Needling

0.5–1 cun horizontally below the bone – that is, vertically to the skin towards the palm – or 0.2–0.3 cun obliquely in a distal direction. Caution: Painful point.



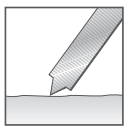
Actions/Indications

- Eliminates Wind and Heat from the *taiyang* (S.I., BL)
- Opens the channel and the *luo* vessels
- Clears Heat and benefits the orifices
- Regulates the *du mai*, calms the *shen*



Special features

Shu-stream point, Wood point, tonification point, opening (master) point of the *du mai*. Important distal point for pain, stiffness and contractures along the course of the channel and for disorders of the cervical spine.



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S.I.-4 *Wrist Bone* WANGU

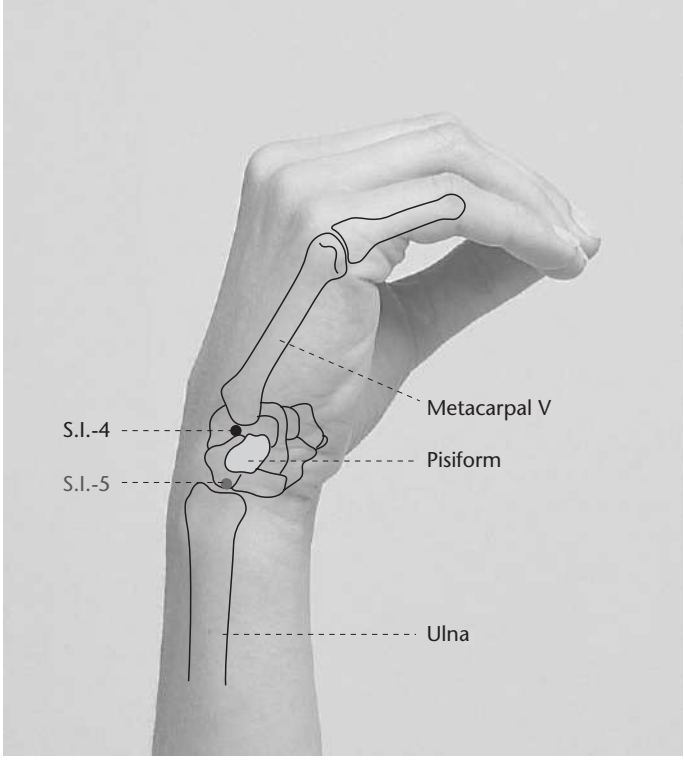
Location
On the ulnar border of the hand, between the 5th metacarpal bone and the carpal bones, on the border of the red and white skin.

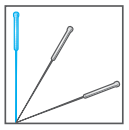
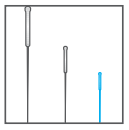
How to find
On the ulnar aspect of the hand, palpate along the shaft of the 5th metacarpal bone in a proximal direction, until the finger glides over the curvature of the base and into the cleft between the metacarpal and carpal bones.
→ **S.I.-5** is located on the same line, proximal to the pisiform bone and at the level of the wrist crease.

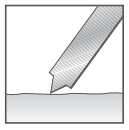
Needling
Vertically 0.3–0.5 cun. Caution: Painful point.

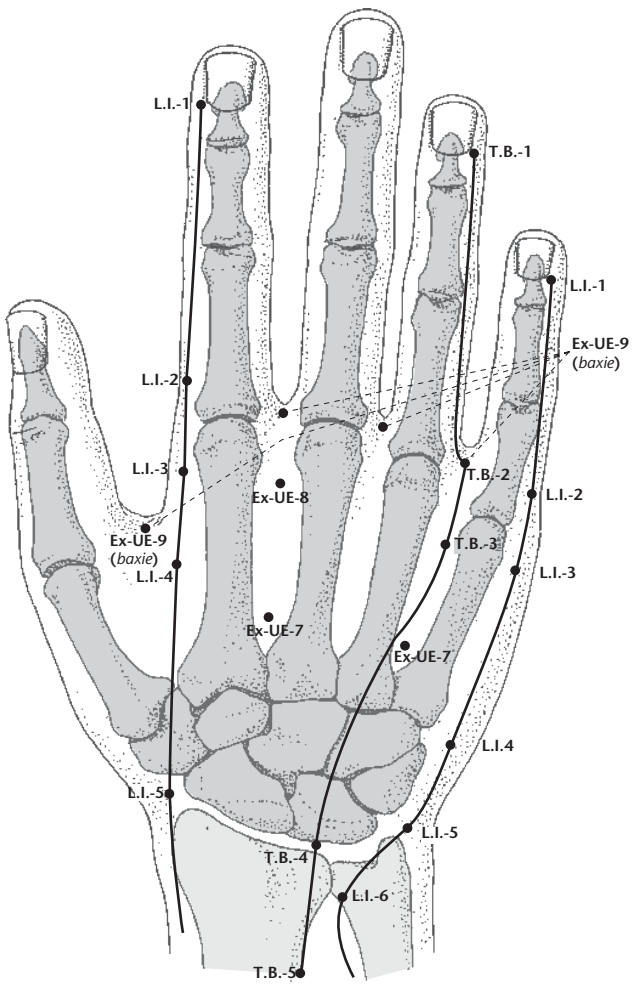
Actions/Indications
- Clears pathogenic factors from the *taiyang* channel
- Clears Damp-Heat in the Small Intestine

Special features
Yuan-source point







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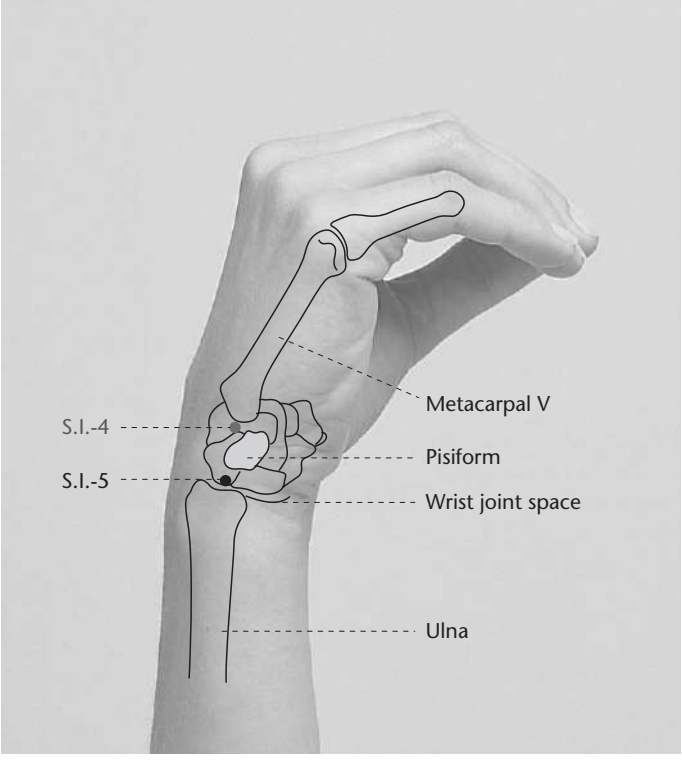
Yang Valley YANGGU S.I.-5



Location

On the ulnar aspect of the wrist, at the level of the lateral joint space.

How to find

By moving the wrist in a relaxed way, the wrist joint space can be palpated on the ulnar side. **S.I.-5** is located directly distal to the styloid process of the ulna (→ 3.3.3), on a line running along the ulnar border of the hand and continuing to the wrist. Located on the same line and distal to the prominence of the pisiform bone is → **S.I.-4**.

Needling

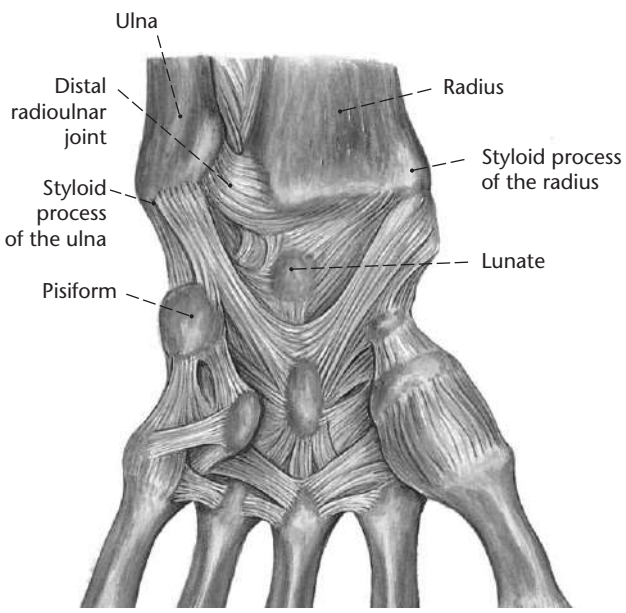
Vertically 0.3–0.5 cun

Actions/Indications

- Clears Heat and reduces swellings

Special features

Jing-river point, Fire point, *ben* point (Five Phases point).



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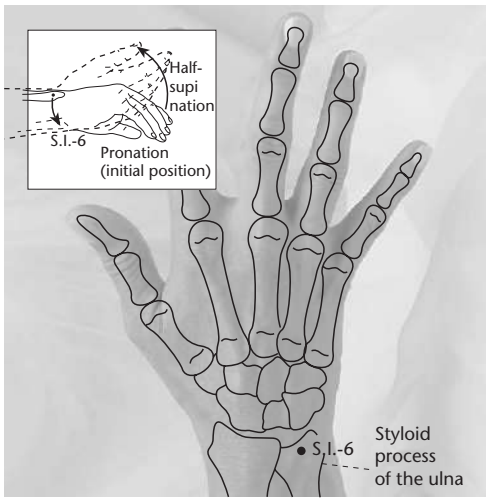
S.I.-6 *Support the Aged* YANGLAO

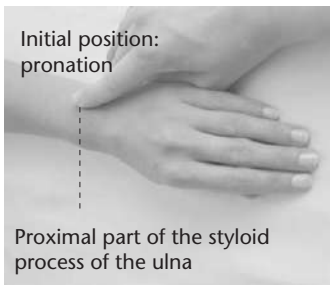
Location

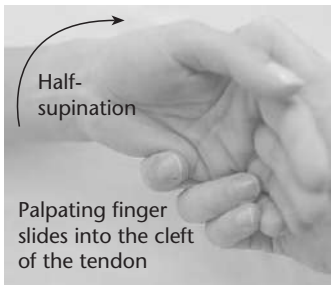
In the depression radial and proximal to the styloid process of the ulna, which forms when the hand is turned from a pronated to a supinated position.



How to find

This point is best located with the elbow slightly flexed. Place the palpating finger on the distal portion of the styloid process of the ulna (→ 3.3.3). When turning the hand from a pronated to a supinated position (mnemonic: cut **br**ead and eat **soup**), the palpating finger will glide into a bony cleft at the proximal aspect of the styloid process (the tendon of the extensor carpi ulnari muscle runs along this groove). This cleft also becomes palpable when the patient rests the hand on the chest (half-supinated position). Locate **S.I.-6** in this bony groove.



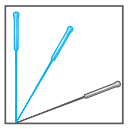


Needling

0.3–0.8 cun vertically or slightly obliquely in a proximal direction towards → **P-6** or along the tendon towards the elbow joint.

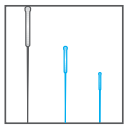
Actions/Indications

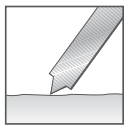
- Opens the channel, alleviates pain, benefits the shoulder and arm, alleviates acute conditions
- Benefits the eyes



Special features

Xi-cleft point. Important distal point for pain and limited range of motion of the occiput and shoulder (for example, acute torticollis) and the lumbar region (for example, acute sciatica). For acute and painful impairment of motion, use strong reducing needling technique while the patient gently moves the affected region.





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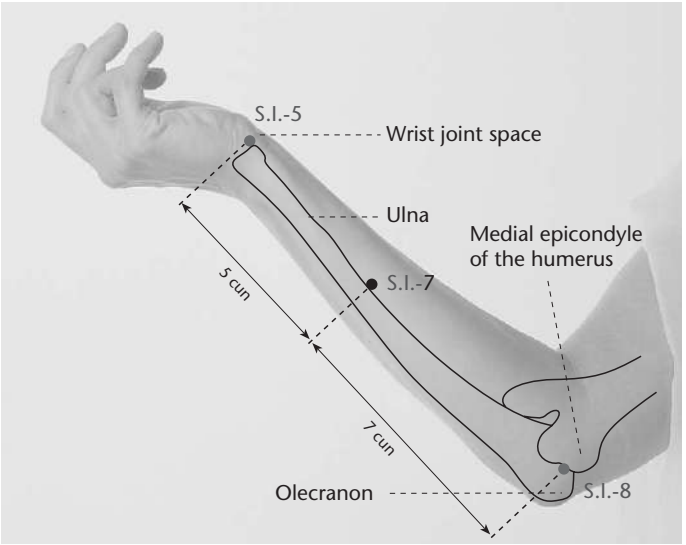
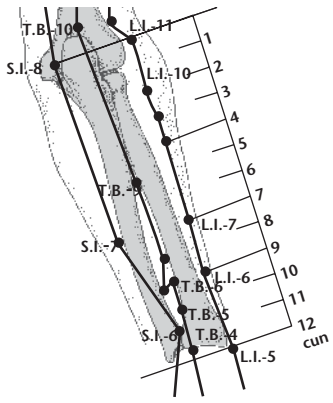
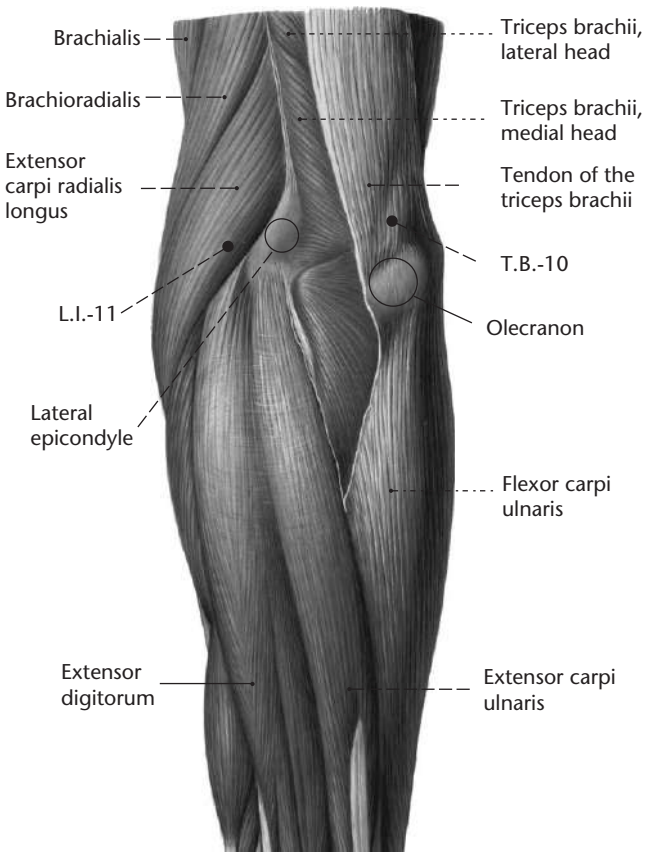
Branch of the Upright ZHIZHENG S.I.-7







Location

5 cun proximal to the wrist joint, on the line connecting the ulnar wrist joint space with the ulnar sulcus of the elbow (→ **S.I.-5** to → **S.I.-8**) or 1 cun distal to the midpoint of this line.

How to find

Find the midpoint of the distance between → **S.I.-5** and → **S.I.-8** by using the spreading hands technique (→ 2.3.3): Place the little fingers on → **S.I.-5** and → **S.I.-8** respectively and span the hands evenly, with the thumbs joining at the midpoint. From the midpoint, measure 1 cun in a distal direction. The point lies between the palpable border of the ulna and the more anteriorly located flexor carpi ulnaris muscle.

Needling

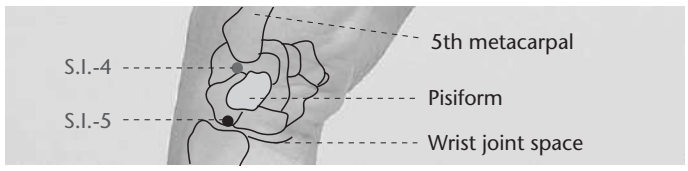
Vertically 0.5–1 cun

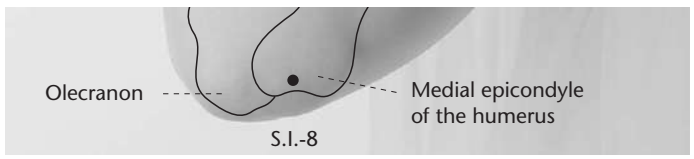
Actions/Indications

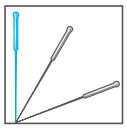
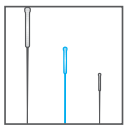
- Opens the channel
- Releases the Exterior
- Calms the *shen*

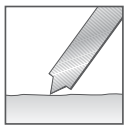
Special features

Luo-connecting point







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S.I.-8 *Small Sea* XIAOHAI

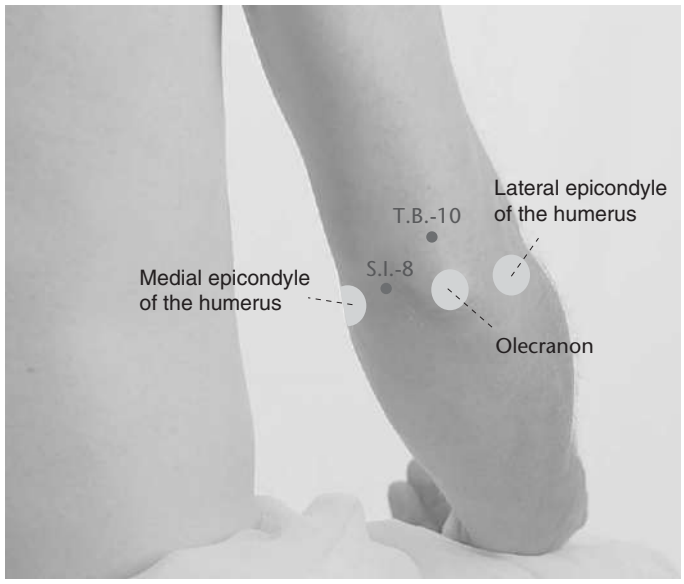
Location
With the elbow flexed, in the depression between the olecranon process of the ulna and the medial epicondyle of the humerus.

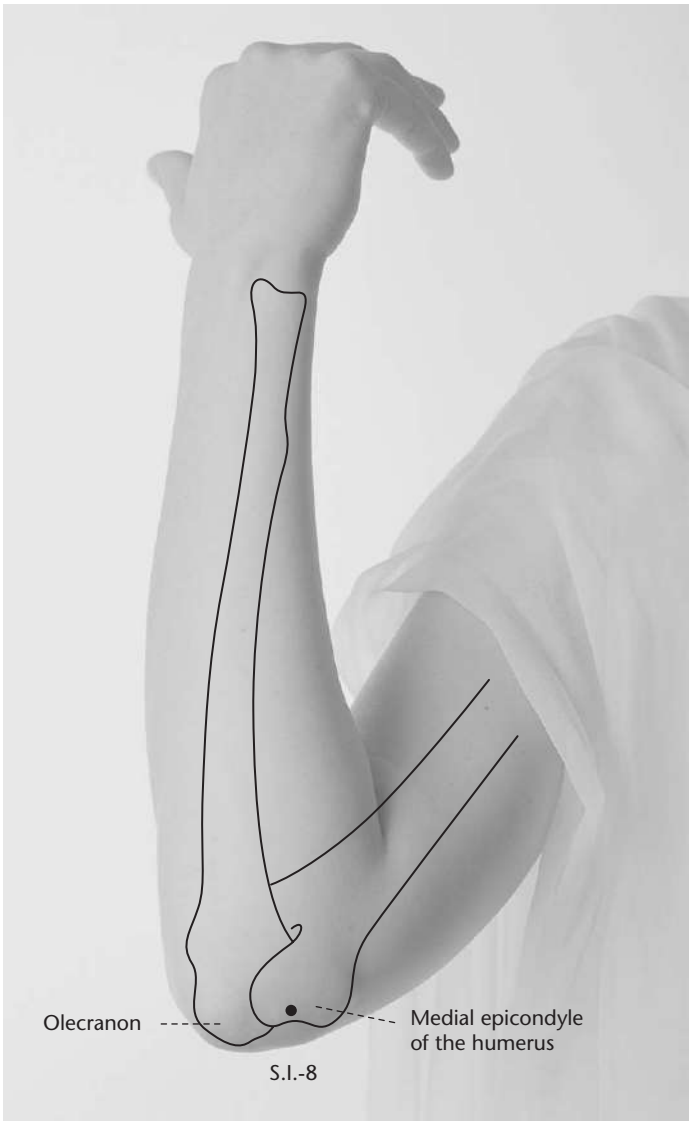
How to find
S.I.-8 is located on a line connecting the tip of the olecranon and the tip of the medial epicondyle, at the deepest point of the groove between those two bony protrusions.

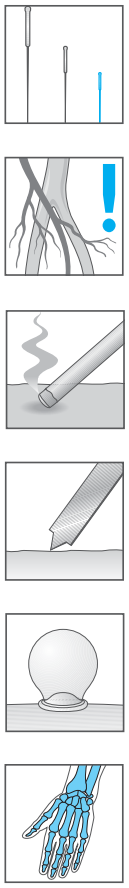
Needling
0.3–0.5 cun vertically or obliquely with or against the flow of the channel. Caution: The ulnar nerve is located in this groove.

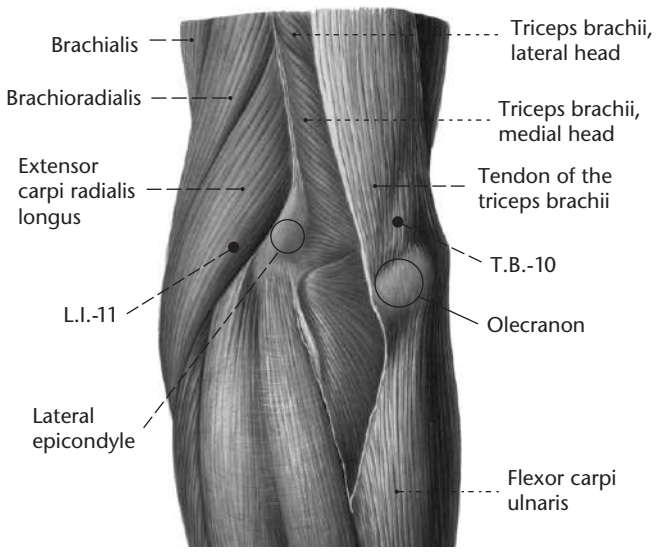
Actions/Indications
- Opens the channel

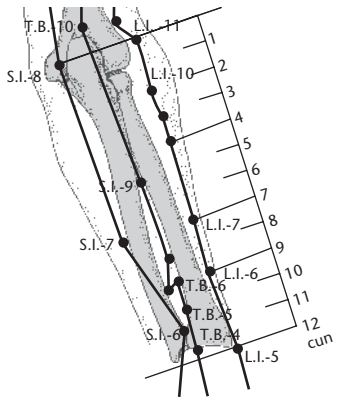
Special features
He-sea point, Earth point, sedation point.











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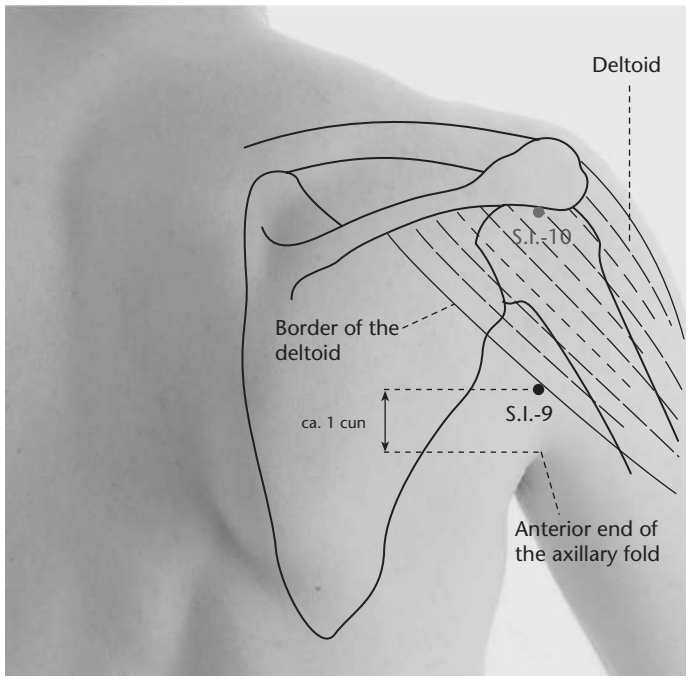
True Shoulder JIANZHEN S.I.-9



Location

With the arm adducted, 1 cun superior to the posterior axillary fold, on the lower border of the deltoid muscle.

How to find

With the patient sitting upright, palpate upward from the end of the posterior axillary fold, until you can feel the lower border of the deltoid muscle. If in doubt, ask the patient to flex their muscle. **S.I.-9** is located on its lower border.

Needling

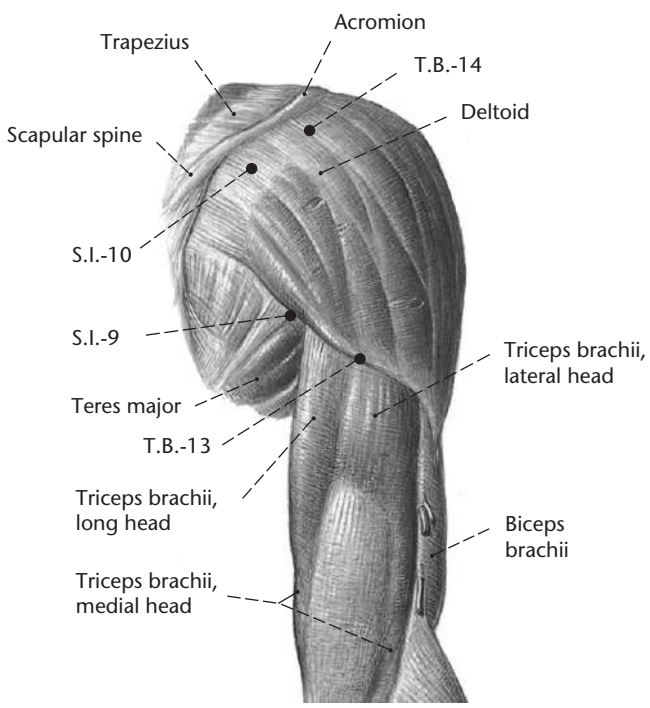
Vertically 1–1.5 cun

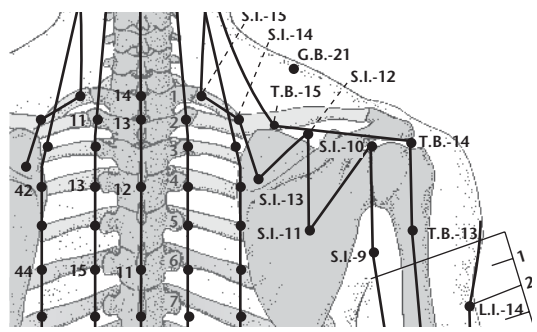
Actions/Indications

- Opens the channel, expels Wind and benefits the shoulder

Special features

S.I.-9 corresponds to a trigger point that is often sensitive to pressure.





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S.I.-10 *Upper Arm* Shu NAOSHU

Location

With the arm adducted, on an imaginary line extending in a superior direction from the posterior axillary fold, on the lower border of the scapular spine.

How to find

With the patient sitting upright, palpate from the posterior axillary fold upward, past the lower border of the deltoid muscle (→ **S.I.-9**) to the bony resistance of the scapular spine and acromion, which here form a curve that opens towards the inferior. **S.I.-10** is located below its bony border.

Needling

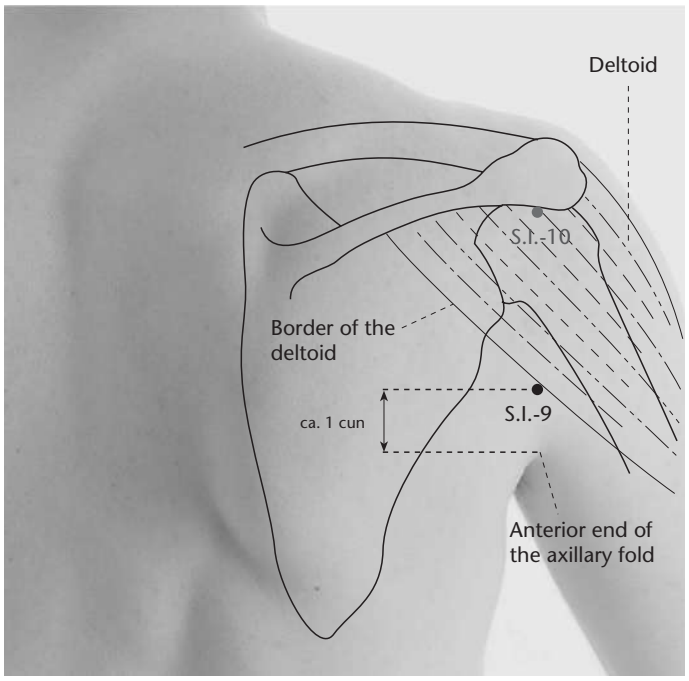
Vertically 0.5–1.5 cun

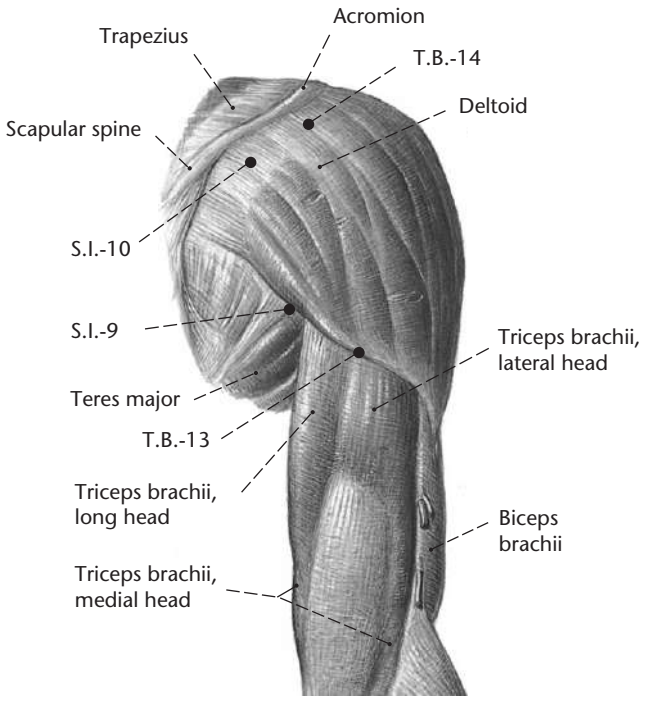
Actions/Indications

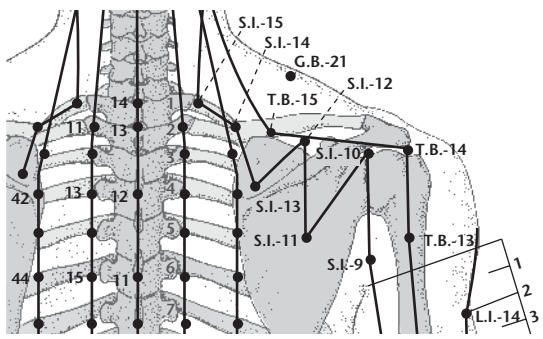
- Opens the channel and relaxes the sinews

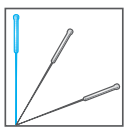
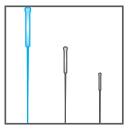
Special features

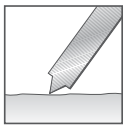
Meeting point of the *yang wei mai* and the *yang qiao mai*. S.I.10 corresponds to a trigger point that is often sensitive to pressure. It also corresponds to the posterior access for puncturing the shoulder joint.









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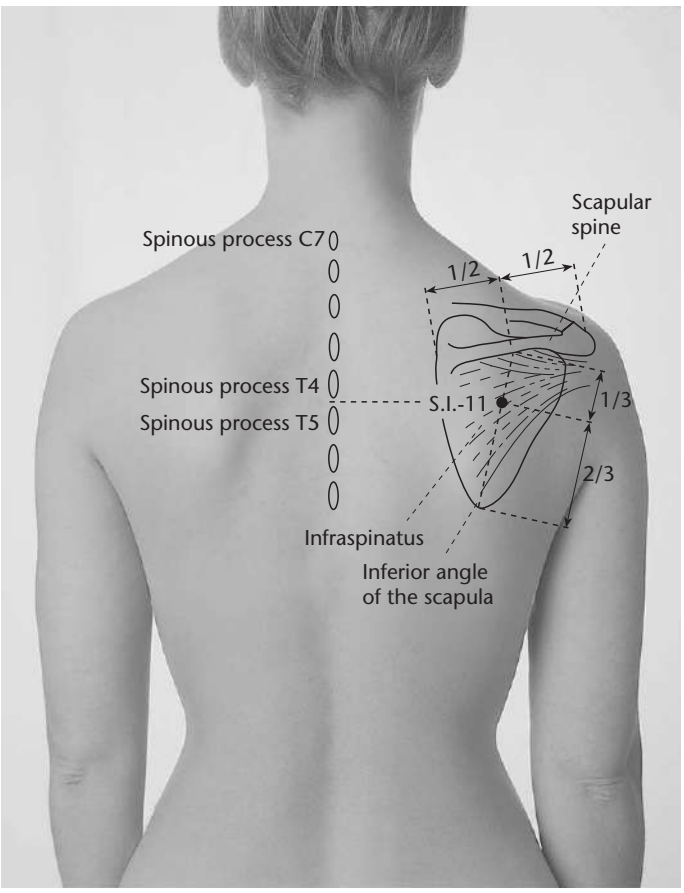
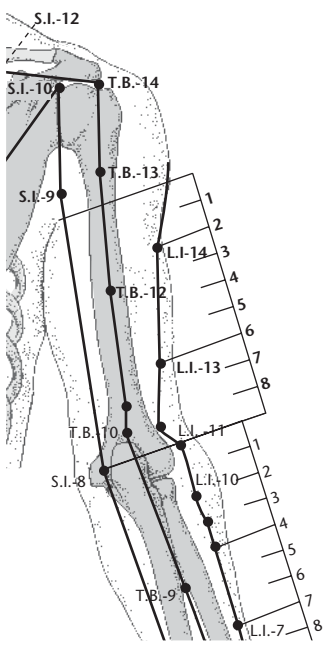
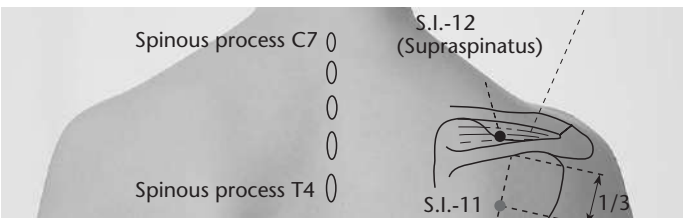
Heavenly Gathering TIANZONG S.I.-11







Location

On the scapula, in a depression on the infraspinatus muscle, one third of the distance from the midpoint of the scapular spine and the inferior angle of the scapula.

How to find

Patient's position: Prone position or better seated with relaxed shoulders. Draw an imaginary line from the midpoint of the scapular spine (→ 3.3.1) to the inferior angle of the scapula. **S.I.-11** is located at the junction of the upper and middle third of this line, in a depression on the infraspinatus muscle, which is often sensitive to pressure. In a seated or standing position with the arms hanging down, it will generally be level with the spinous process of the 4th thoracic vertebra or the body of the 5th thoracic vertebra.

→ **S.I.-12** is located directly above **S.I.-11**, in the centre of the supraspinous fossa.

Needling

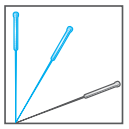
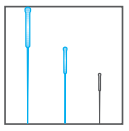
0.5–1.5 cun vertically or obliquely into the muscle tissue

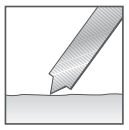
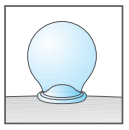
Actions/Indications

- Opens the channel, alleviates pain, moves Qi locally, unbinds the chest and lateral costal region
- Benefits the breasts

Special features

S.I.-11 is often a trigger point on the infraspinatus muscle.

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S.I.-12 *Grasping the Wind* BINGFENG

Location

Directly above → **S.I.-11**, in the centre of the supraspinous fossa.

How to find

Patient's position: Prone position or better seated with relaxed shoulders. First, locate → **S.I.-11** (one third of the distance between the midpoint of the scapular spine and the inferior angle of the scapula). **S.I.-12** is located directly above → **S.I.-11** in the centre of the supraspinous fossa.

Needling

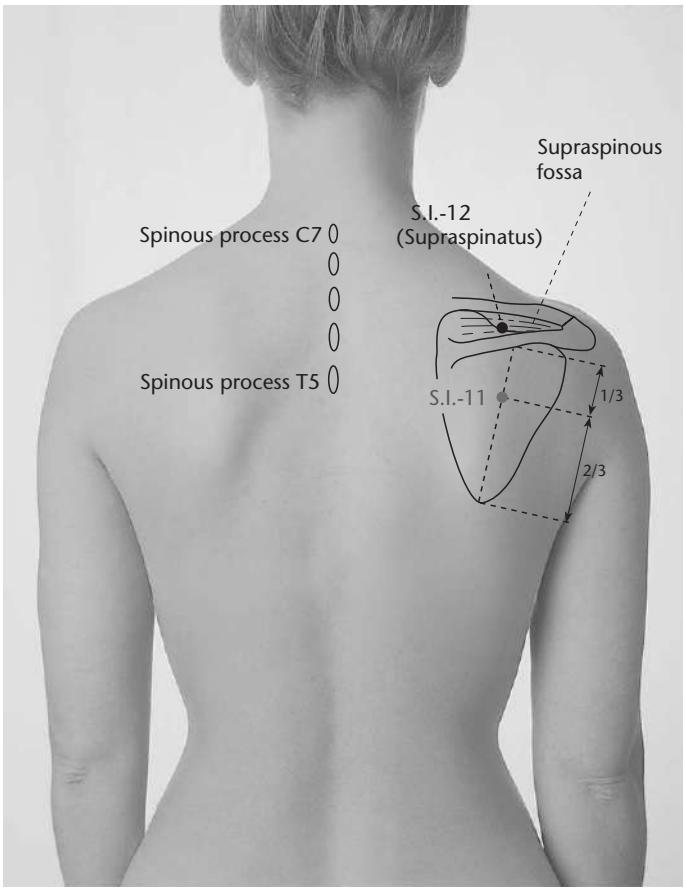
0.5–1 cun vertically or obliquely into the supraspinatus muscle in the direction of the shoulder. Caution: Pneumothorax.

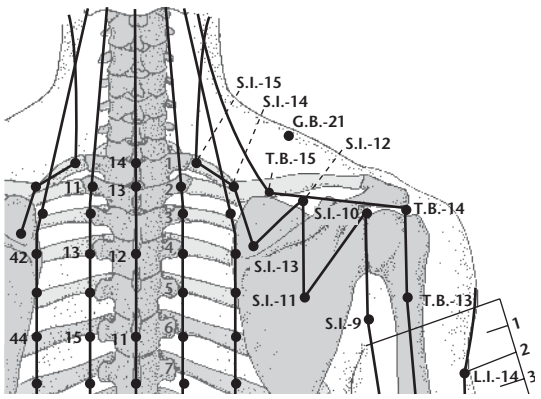
Actions/Indications

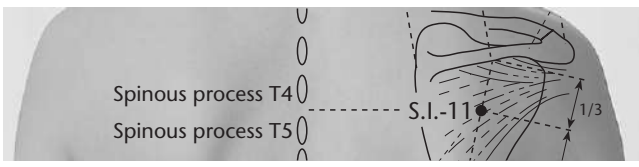
- Eliminates Wind, benefits the shoulder and scapula, opens the channel and the *luo* vessels

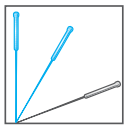
Special features

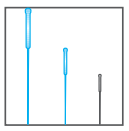
Meeting point with the Gall Bladder, Triple Burner and Large Intestine channels. **S.I.-12** is often a trigger point in the supraspinatus muscle.

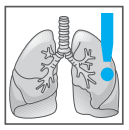


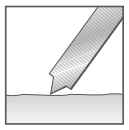












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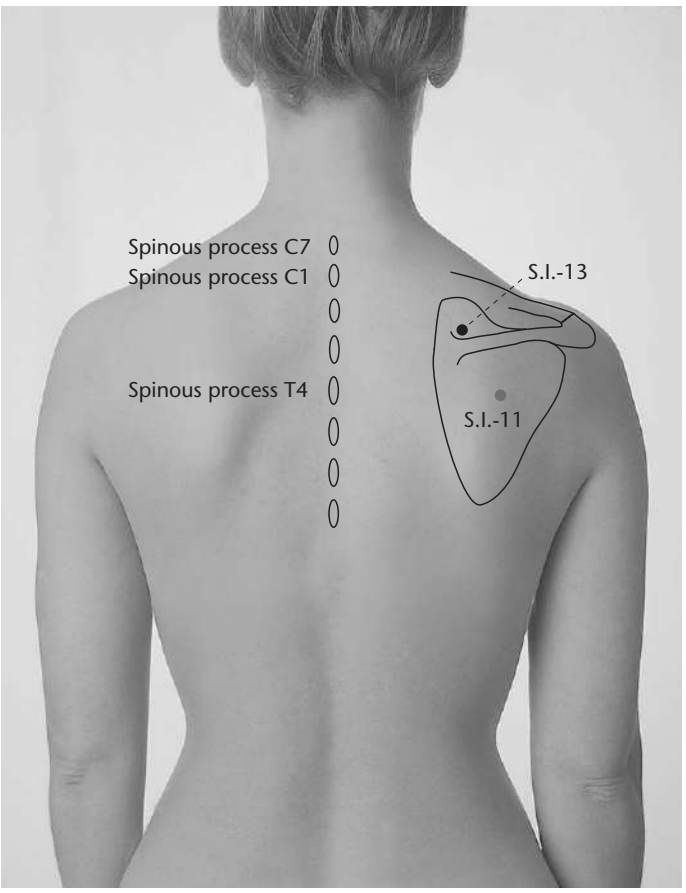
Crooked Wall QUYUAN S.I.-13



Location

At the medial end of the supraspinous fossa.

How to find

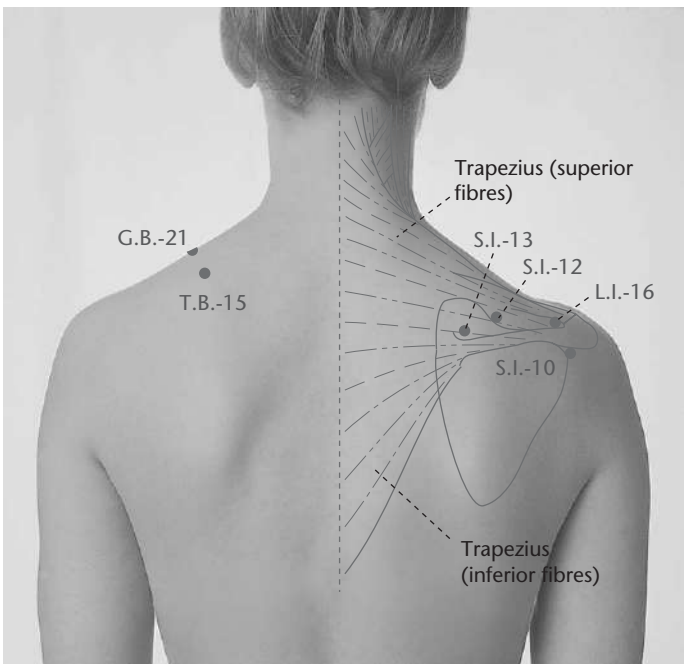
At its medial end, the scapular spine fans out in a deltoid shape, curving round in a superior direction. When palpating, this feels like a 'crooked wall', hence its name. **S.I.-13** is located on the scapula, in the slightly concave bend, at the medial origin of the supraspinatus muscle.

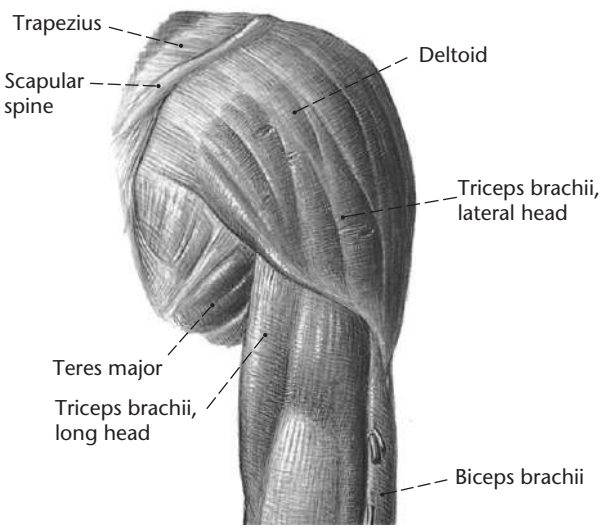
Needling

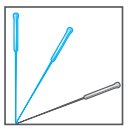
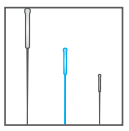
0.5–1 cun vertically or obliquely in a lateral direction. No danger of puncturing the pleura if located correctly.

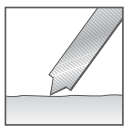
Actions/Indications

- Opens the channel







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S.I.-14 *Outer Shoulder* Shu JIANWAISHU

Location

3 cun lateral to the lower border of the spinous process of the 1st thoracic vertebra, at the insertion of the levator scapulae muscle.

How to find

The levator scapulae muscle originates on the upper aspect of the medial border and the superior angle of the scapula. In this area, it is often myogelotic and therefore well defined and often sensitive to pressure (trigger point). **S.I.-14** is located just superior to the actual muscle insertion; in contrast to → **S.I.-13**, it is not located on the scapula.

Located on approximately the same level are → **Du-13** (below the spinous process of the 1st thoracic vertebra) and → **BL-11** (1.5 cun distal to the posterior midline).

Needling

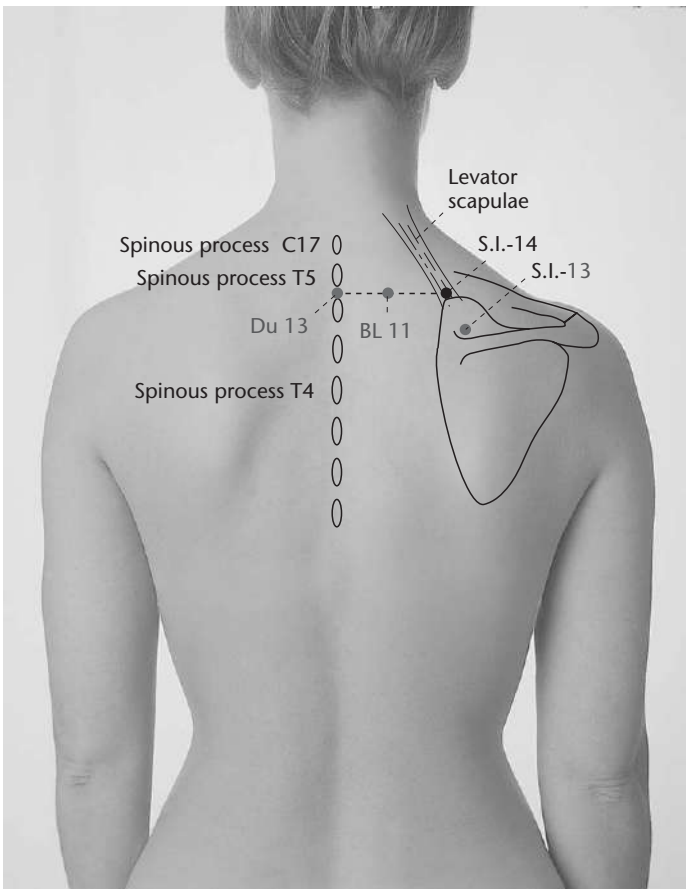
0.5–1 cun vertically or obliquely in a medial direction. Caution: Pneumothorax.

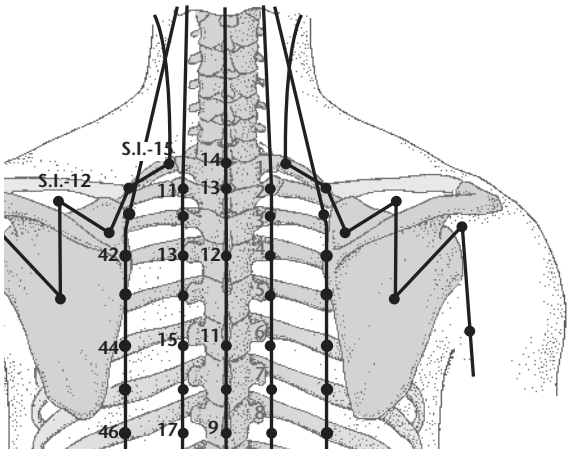
Actions/Indications

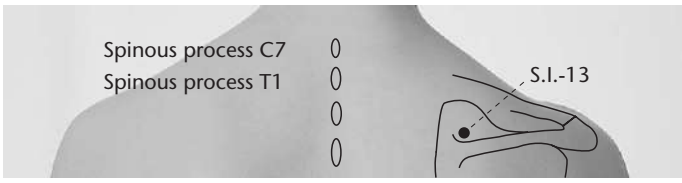
- Opens the channel
- Expels Wind-Cold

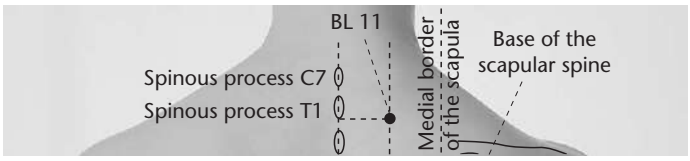
Special features

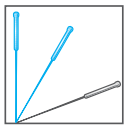
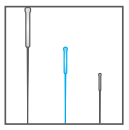
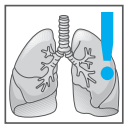
Trigger point on the levator scapulae muscle

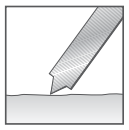










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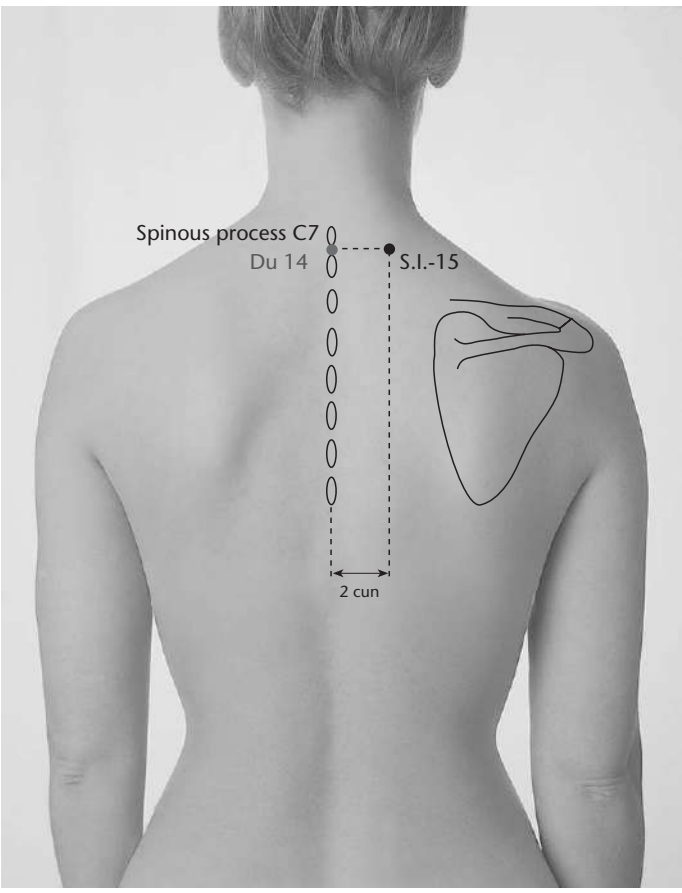
Middle Shoulder Shu JIANZHONGSHU S.I.-15



Location

2 cun lateral to the lower border of the spinous process of the 7th thoracic vertebra.

How to find

For locating the 7th cervical vertebra, see ➞ 3.4.
Located on the same level is ➞ **Du-14** below the spinous process of the 7th cervical vertebra. Locate **S.I.-15** by measuring 2 cun in a lateral direction.

Needling

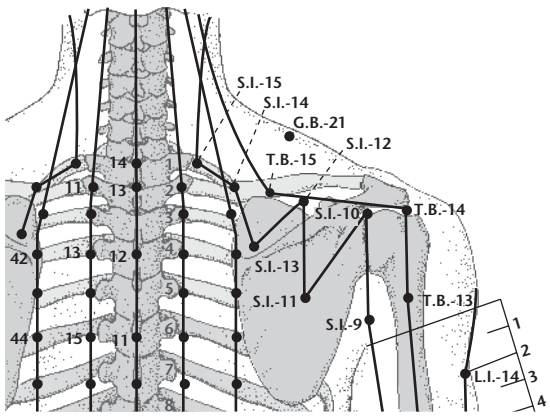
0.5–1 cun vertically or obliquely in a medial direction. Caution: Pneumothorax.

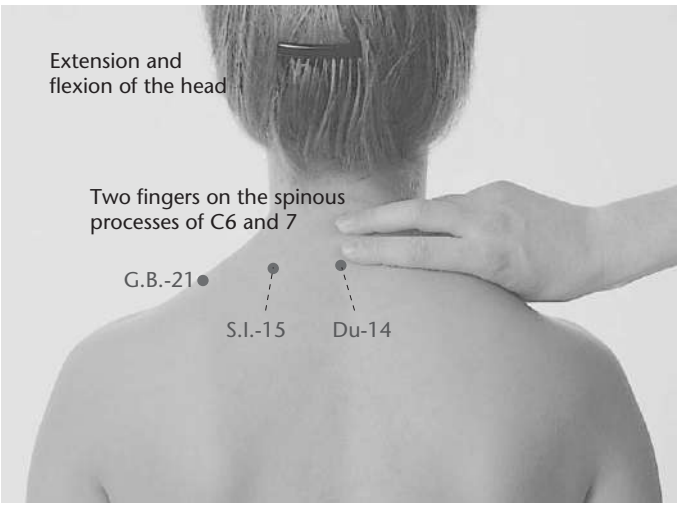
Actions/Indications

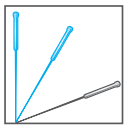
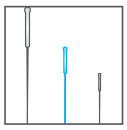
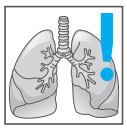
- Opens the channel

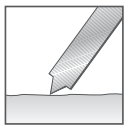
Special features

Trigger point on the levator scapulae muscle, effective point for disorders of the cervicodorsal area.







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S.I.-16 *Heavenly Window* TIANCHUANG

Location

Approximately 3.5 cun lateral to the anterior midline, at the level of the laryngeal prominence, on the posterior border of the sternocleidomastoid muscle.

How to find

From the laryngeal prominence (→ 3.2), draw a line to the posterior border of the sternocleidomastoid muscle. **S.I.-16** is located directly at its posterior border, which can be made more clearly visible and palpable by rotating the patient's head in the opposite direction.

Located on the same level are → **ST-9** (on the anterior border of the sternocleidomastoid muscle) and → **L.I.-18** (between the two heads of the SCM muscle).

Needling

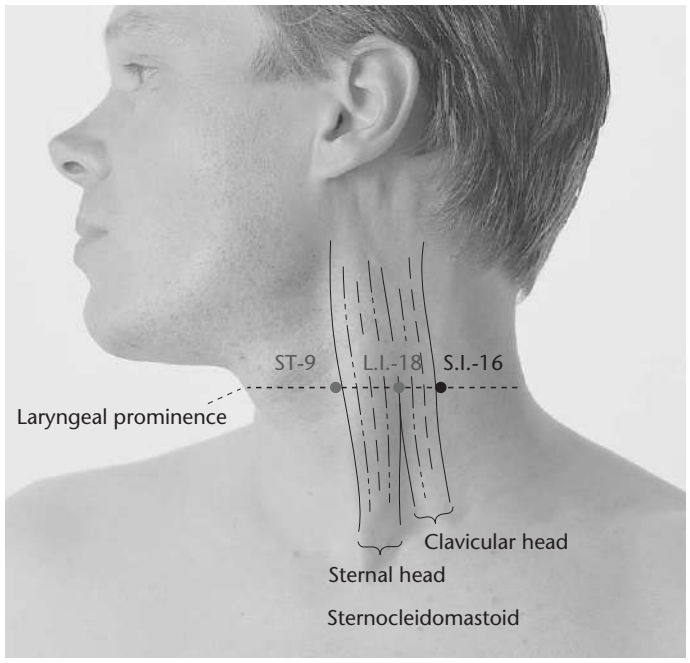
Vertically 0.5–1 cun. If necessary, rotate the patient's head back to its normal position before needle insertion.

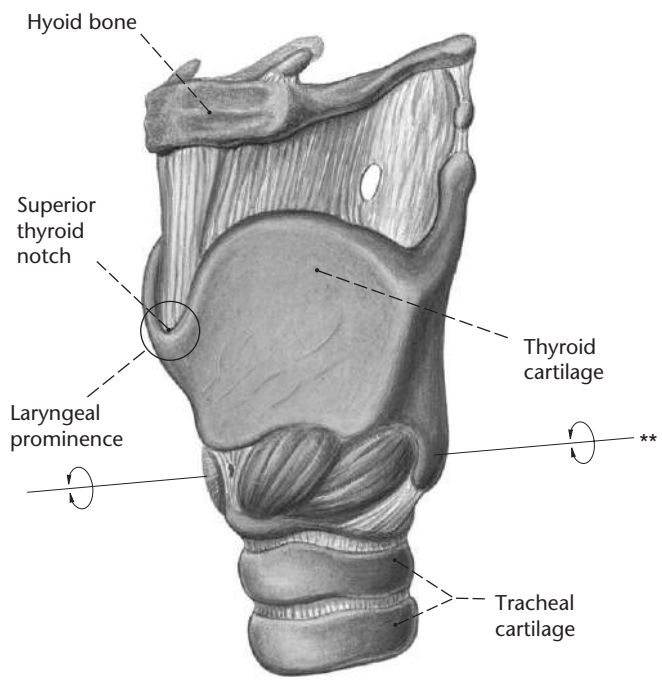
Actions/Indications

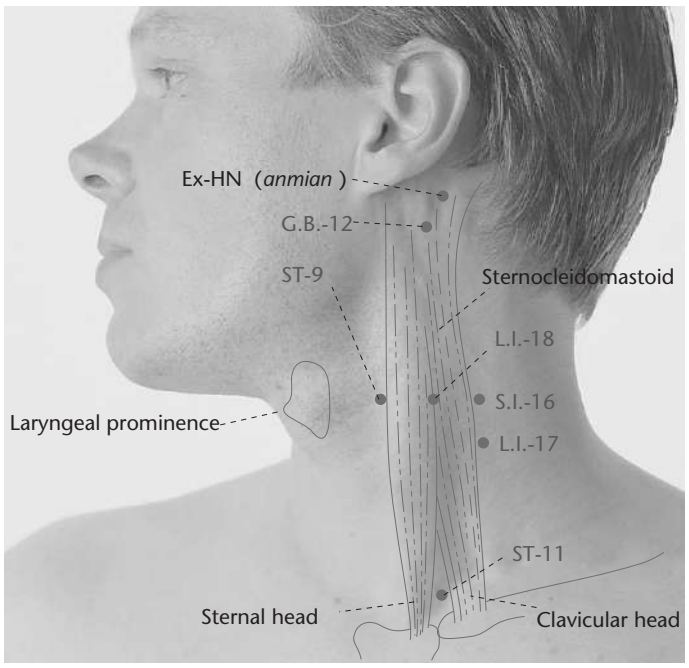
- Expels Wind and Heat, benefits the throat, ears and voice
- Opens the channel

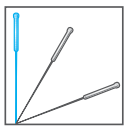
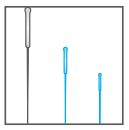
Special features

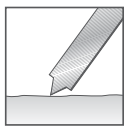
Window of Heaven point









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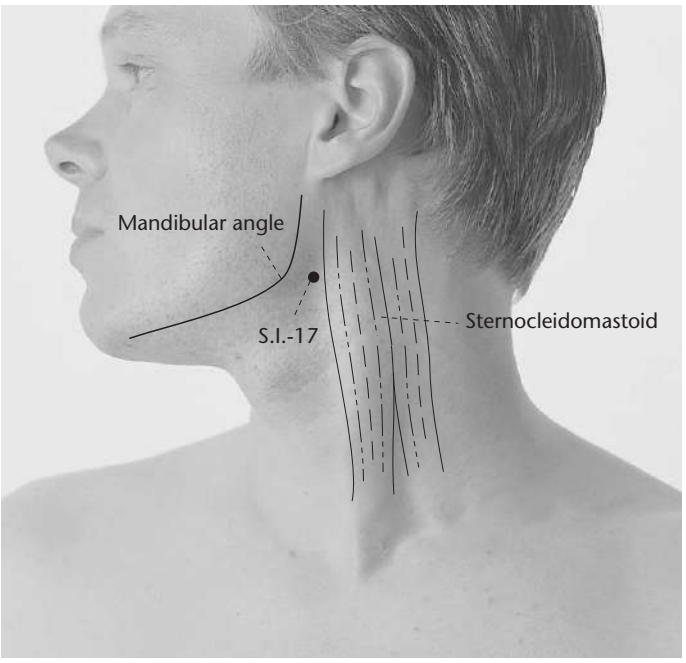
Heavenly Appearance TIANRONG S.I.-17



Location

Posterior to the mandibular angle, on the anterior border of the sternocleidomastoid muscle.

How to find

By rotating the patient's head in the opposite direction, the border of the sternocleidomastoid muscle becomes more pronounced. **S.I.-17** is located halfway between the angle of the mandible and the anterior border of the sternocleidomastoid muscle.

Needling

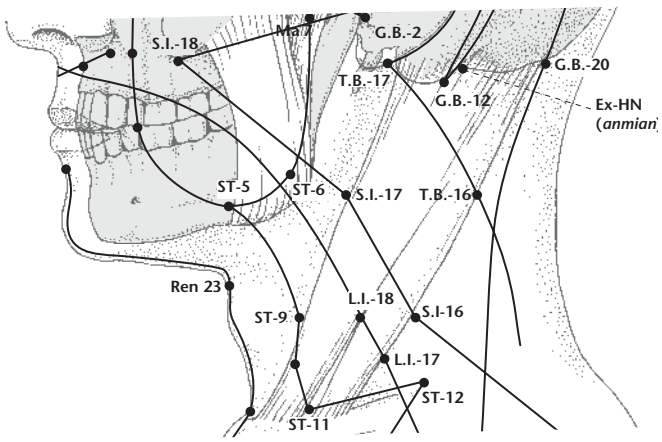
Vertically 0.5–1 cun. Caution: Internal carotid artery, internal and external jugular veins.

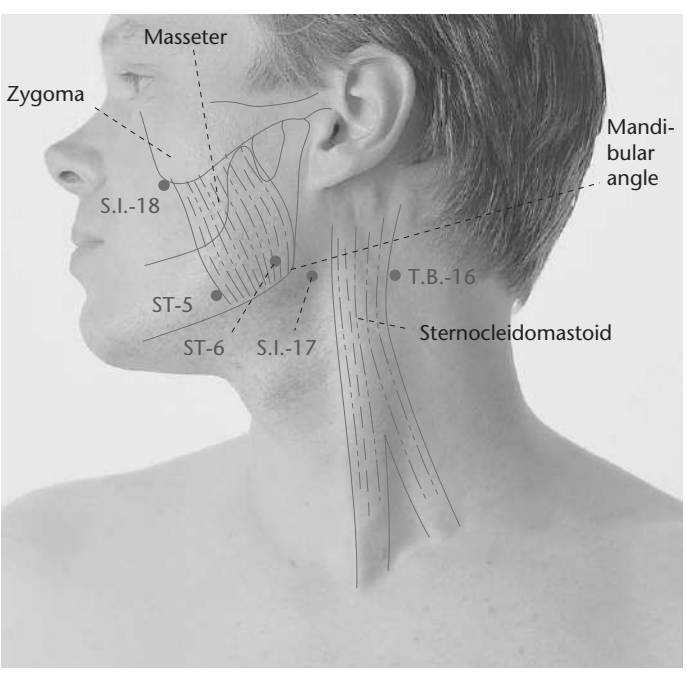
Actions/Indications

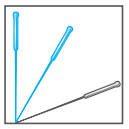
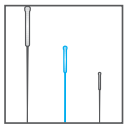
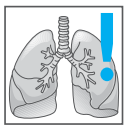
- Expels Wind, opens the channel, disperses accumulations, benefits the ears and throat

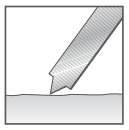
Special features

Window of Heaven point







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S.I.-18 *Cheekbone Crevice* QUANLIAO

Location

At the intersection of a vertical line through the outer canthus of the eye with the lower border of the zygomatic bone, on the anterior border of the masseter muscle.

How to find

Draw an imaginary vertical line from the outer canthus of the eye to the lower border of the zygomatic bone. **S.I.-18** is located in a depression on the anterior border of the masseter muscle, approximately on the level of the lateral border of the ala nasi (→ **L.I.-20**). By making chewing movements, the anterior border of the masseter muscle becomes easily palpable.

Needling

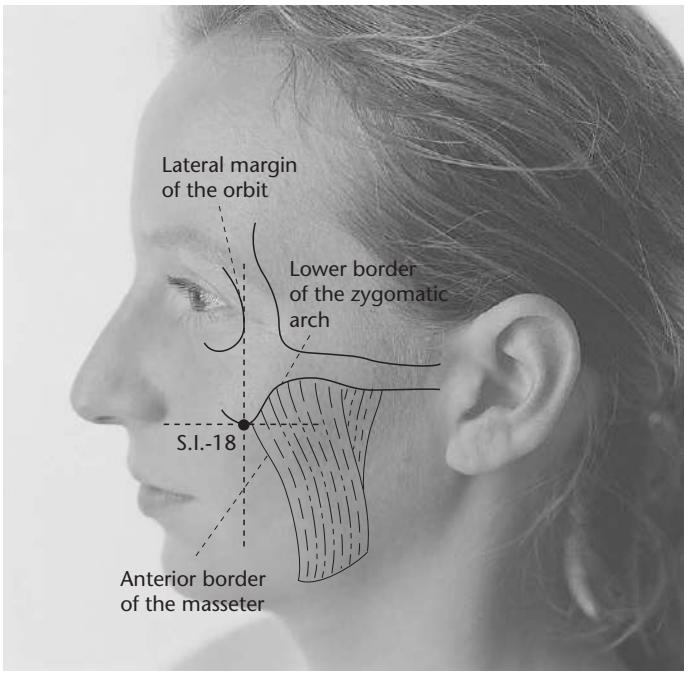
0.3–0.5 cun vertically or 1–1.5 cun transversely (subcutaneously) in the direction of → **ST-4,** → **ST-7** and → **L.I.-20**. According to some texts, moxibustion is contraindicated.

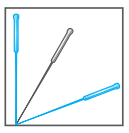
Actions/Indications

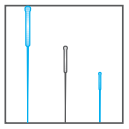
- Eliminates Wind, alleviates pain, clears Heat, reduces swellings

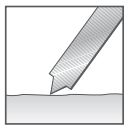
Special features

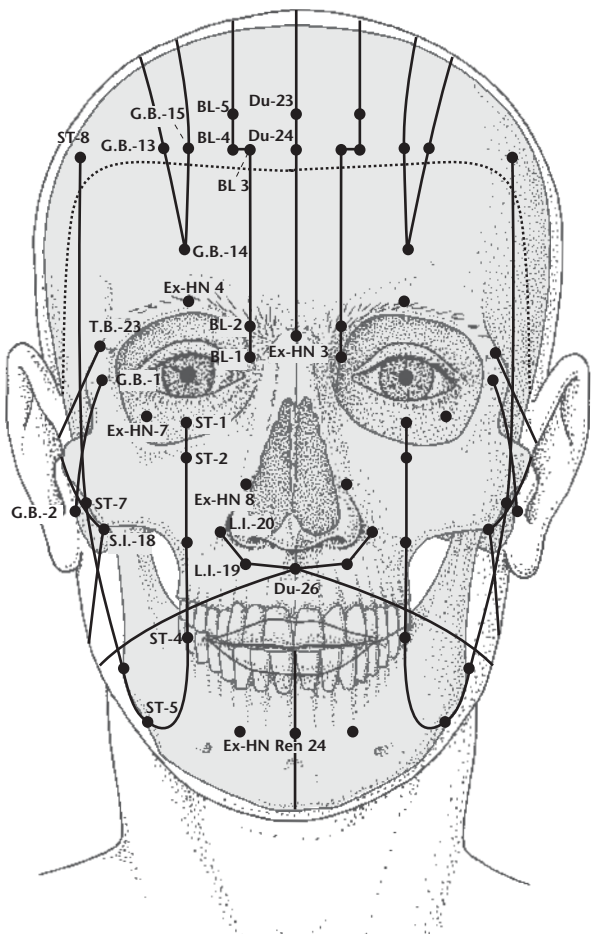
Meeting point with the Triple Burner channel. Important local point for disorders of the face (caused by internal or external Wind).

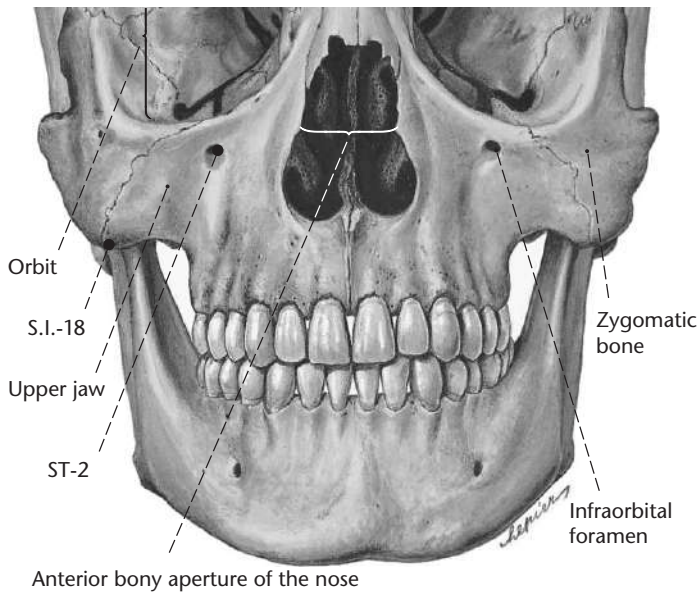


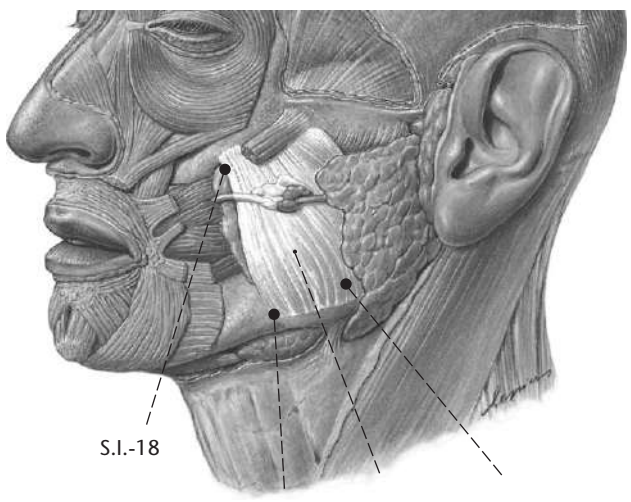












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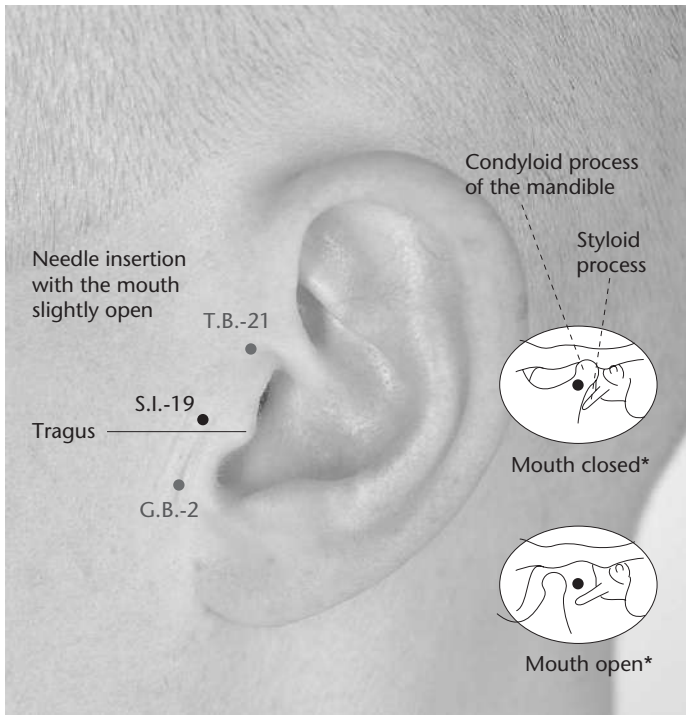
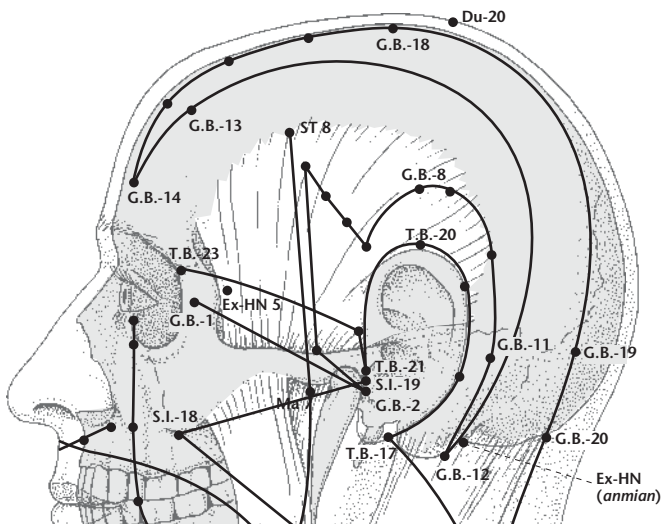
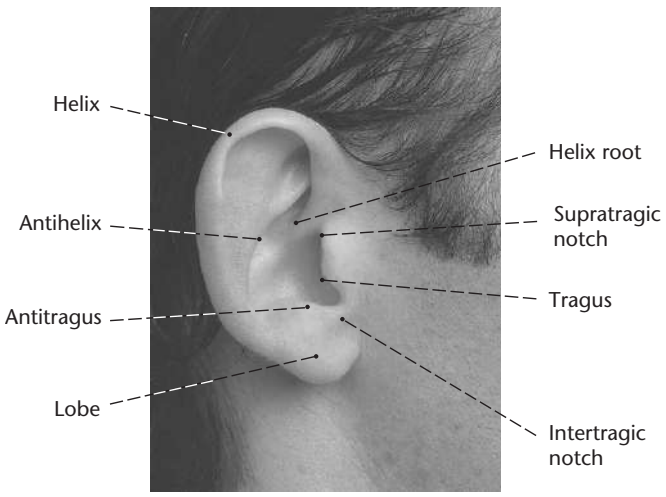
Palace of Hearing TINGGONG S.I.-19







Location

Anterior to the ear, with the mouth open at the level of the middle of the tragus, in a depression between the tragus and condyloid process of the mandible.

How to find

Locate and needle this point with the mouth open. This allows the condyloid process of the mandible to slide anteriorly and reveals the depression. Locate the vertical sulcus at the junction between the ear and the cheek (this is not always very pronounced). Then locate **S.I.-19** on the level of the tragus on the sulcus. If you cannot clearly define the sulcus (it becomes more pronounced with increasing age), an (ear) point locator can be used to locate the point (the patient should have their mouth open in order to reveal the depression).

S.I.-19 is the centre point of three points located anteriorly to the ear (→ **T.B.-21** is located proximal and → **G.B.-2** is located distal to **S.I.-19**).

Needling

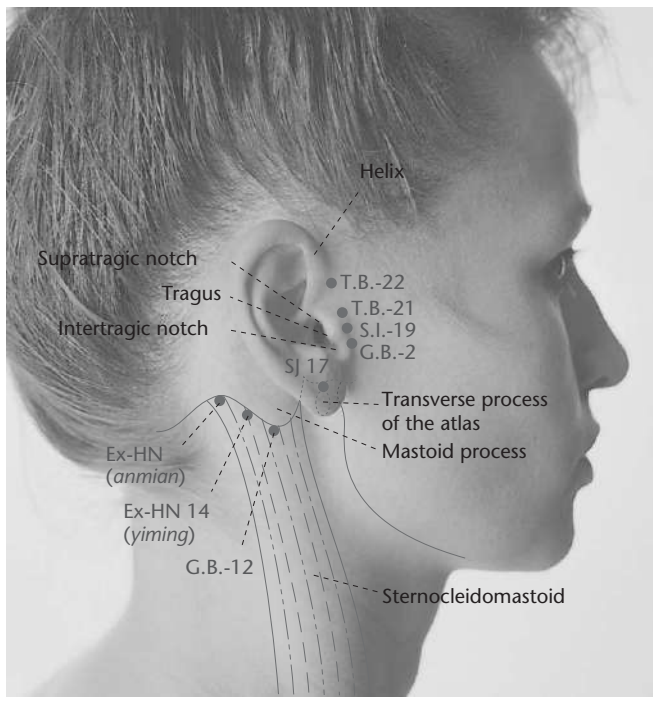
0.5–1 cun vertically or slightly obliquely in an inferior direction. Needle with the mouth open (to avoid intra-articular needling). Caution: This point is located close to the superficial temporal artery and the auriculotemporal nerve (as are → **T.B.-21** and → **G.B.-2**).

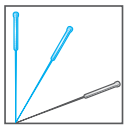
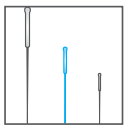
Actions/Indications

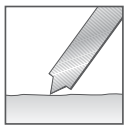
- Benefits the ears
- Calms the *shen*

Special features

Meeting point with the Gall Bladder and Triple Burner channels, exit point. Important local point for disorders of the ears. For temporomandibular joint dysfunction and pain, rather use → **G.B.-2** as a local point.





* According to Deadman et al 1998.

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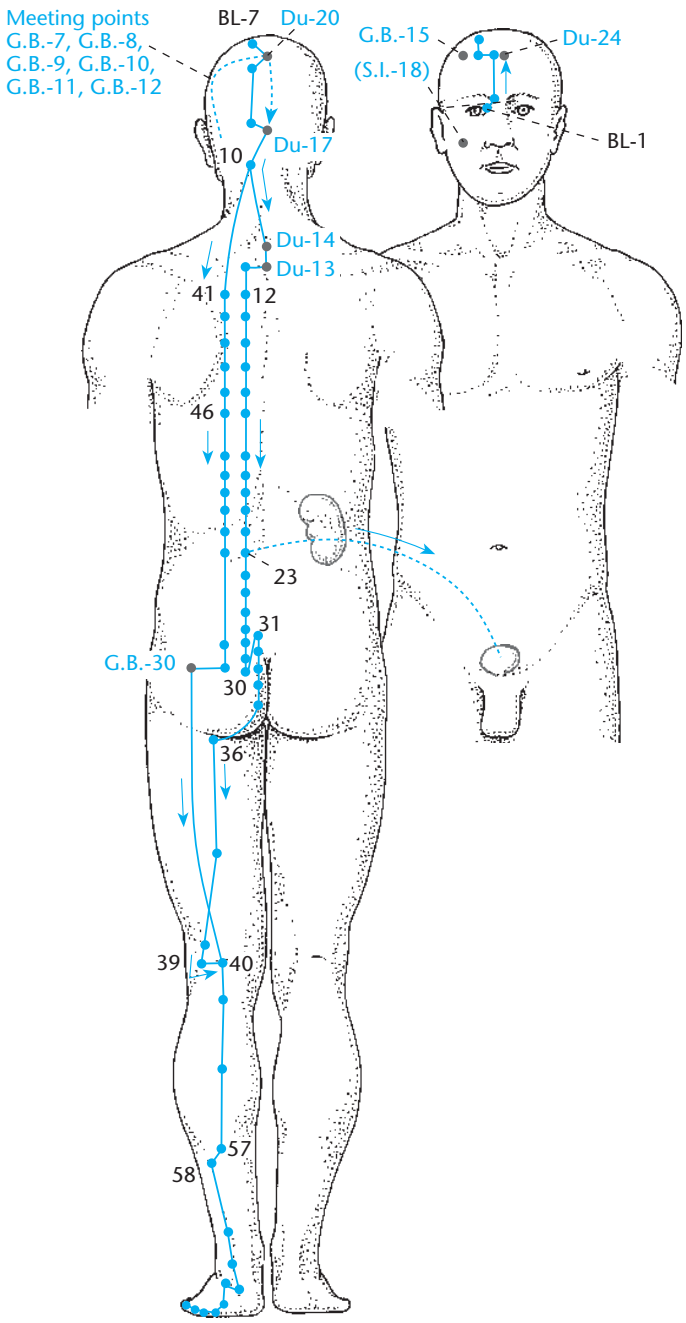
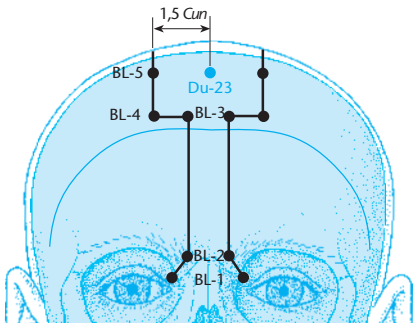
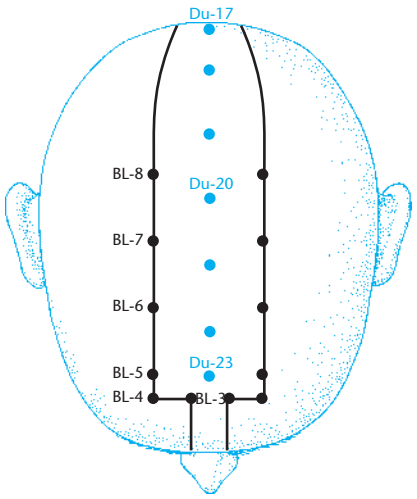
4.7 The Bladder Channel System – Foot *taiyang* (*zu tai yang jing luo*)

4.7.1 The Bladder Primary Channel (*zu tai yang jing*)







Pathway

The **external** pathway of the Bladder primary channel begins at the inner canthus of the eye at → **BL-1** (*jingming*). This point is reached by a branch that separates from the Small Intestine primary channel at → **S.I.-18** (*quanliao*) (hand–foot pairing of the second great circuit, Yang axes: *taiyang*).

The **external** pathway ascends the forehead, there intersects with → **Du-24** (*shenting*) and → **G.B.-15** (*toulinqi*), continues to the vertex and there connects with the *du mai* at → **Du-20** (*baihui*).

At → **Du-20 two branches** separate from the primary channel:

- **one branch** travels to the temporal region and intersects the Gall Bladder primary channel at **G.B.-8** (*shuaigu*), **G.B.-7** (*qubin*), **G.B.-9** (*tianchong*), **G.B.-10** (*fubai*), **G.B.-11** (*touqiaoyin*) and **G.B.-12** (*wangu*)
- the **other branch** penetrates deeper into the brain and re-emerges at → **Du-17** (*naohu*) or, according to some authors, at **BL-8** (*luoque*).

From → **Du-20**, the **external pathway** runs to **BL-8** (*luoque*) and **BL-9** (*yuzhen*), passes → **Du-17** (*naohu*) and continues to **BL-10** (*tianzhu*) in the occipital region. Here, the **external pathway** of the channel separates into **two branches**:

- the **medial** branch runs to → **Du-14** (*dazhui*) below the spinal process of C7 where it meets the other Yang primary channels, then continues to → **Du-13** (*taodao*). From T1 it runs parallel to the posterior midline, 1.5 cun lateral to it.

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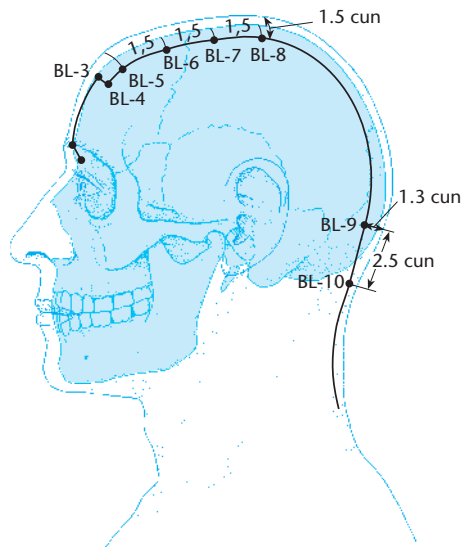
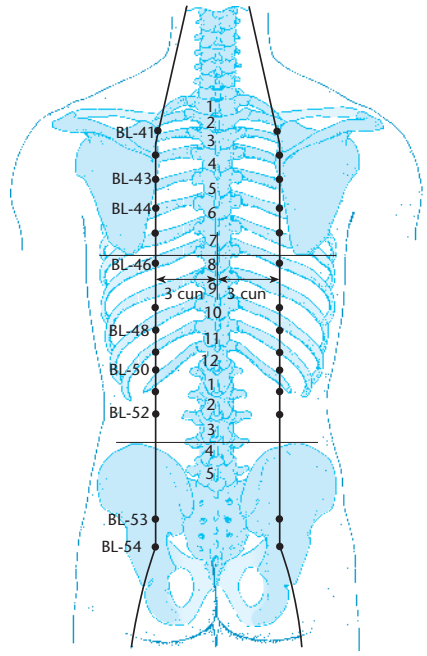
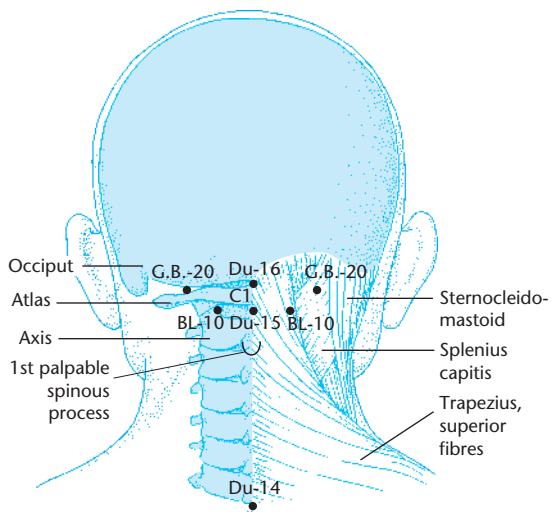
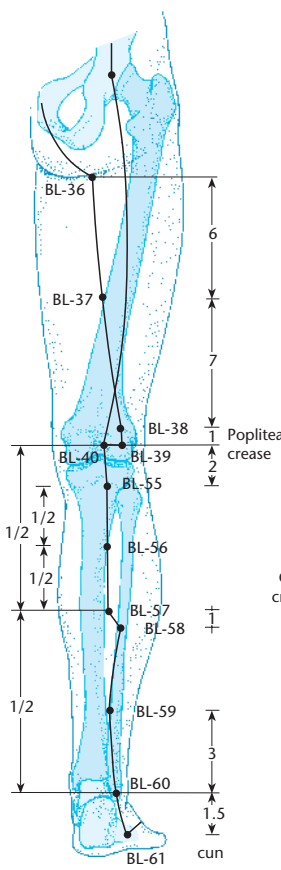
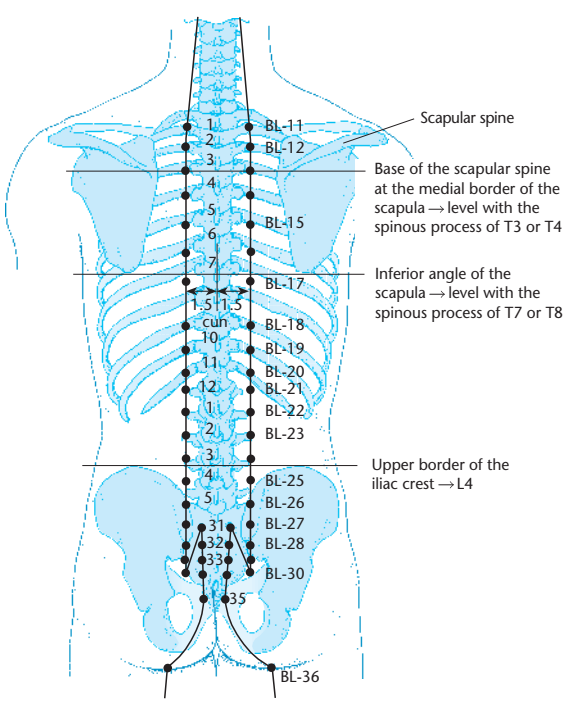
4 Acupuncture Points of the Twelve Primary Channels

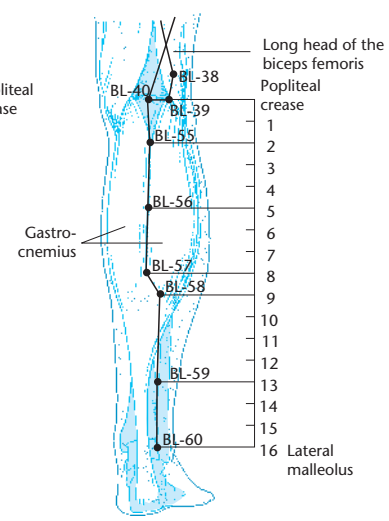


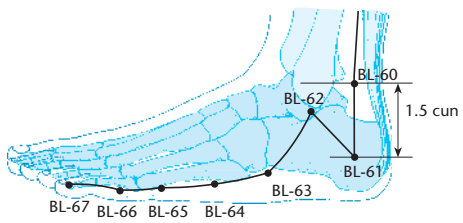












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At the level of L2, it **enters** the abdomen and reaches its paired *zang*-Organ, the Kidney (*shen*) and its pertaining *fu*-Organ, the Bladder (*pangguang*). The **external** branch runs through the gluteal region and the thigh to the popliteal fossa (**BL-40**), where it re-unites with the lateral external branch.

- the **lateral branch** runs from **BL-10** (*tianzhu*) to **BL-41** (*fufen*) at the level of T2, from where it descends down the back, 3 cun lateral to the midline to the level of the fourth sacral foramen. From there it traverses the gluteal region to → **G.B.-30** (*huantiao*), continues along the posterolateral aspect of the thigh and meets the medial external branch at the popliteal fossa.

From the popliteal fossa (**BL-40**) the channel descends along the posterolateral aspect of the foreleg to the foot

- passes the lateral malleolus
- travels along the lateral border of the foot to the lateral corner of the little toenail to **BL-67** (*zhiyin*). From here, a branch travels to → **KID-1** (*yongquan*) located on the Interiorly–Exteriorly paired Kidney primary channel (foot Yin–Yang pairing of the second great circuit).

Clinical importance (→ 1.2)

Exterior (*biao*) signs and symptoms: Chills and fever, headaches, occipital stiffness, pain in the lumbar region, obstruction of the nasal passages, eye pain with tearing, pain along the posterior aspect of the hip, knee and foreleg, foot pain

Interior (*li*) or *zangfu*-Organ signs and symptoms: Pain and tension in the lower abdomen, retention of urine, enuresis, psycho-emotional disorders, opisthotonus

Connections and meeting points of the Bladder primary channel (→ 1.2)

Connections with other channels

Kidney primary channel (*zu shao yin jing*)

Connection: Foot Yin–Yang pairing of the second great circuit
Location: BL-67 → KID-1 (on the foot).
Circulation: Circadian (according to the Organ clock)
Importance: Exterior–Interior relationship

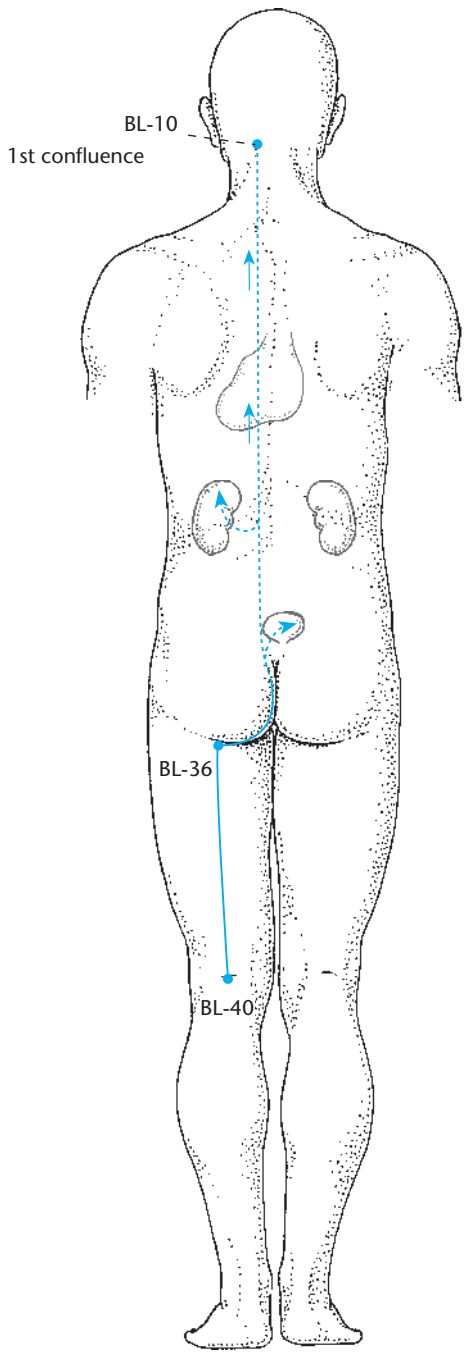
Small Intestine primary channel (*shou tai yang jing*)

Connection: Paired according to the six channel theory (hand–foot pairing): *tai yang* (Yang axes of the second great circuit)
Location: S.I.-18 → BL-1 (on the head).
Circulation: Circadian (according to the Organ clock)
Importance: Above–below relationship

Connections with other *zangfu*-Organ systems

Kidney (*shen*), Bladder (*pangguang*)

4.7.2 The Bladder Divergent Channel (*zu tai yang jing bie*)



Pathway

The Bladder divergent channel separates from the Bladder primary channel in the popliteal fossa at **BL-40** (*weizhong*)

- ascends to the centre of the gluteal crease at **BL-36** (*chengfu*)
- ascends further and penetrates the anus, continues to the Bladder (*pangguang*), its pertaining *fu*-Organ, and the Kidney (*shen*), its paired *zang*-Organ
- rises along the spine and spreads in the Heart (*xin*)

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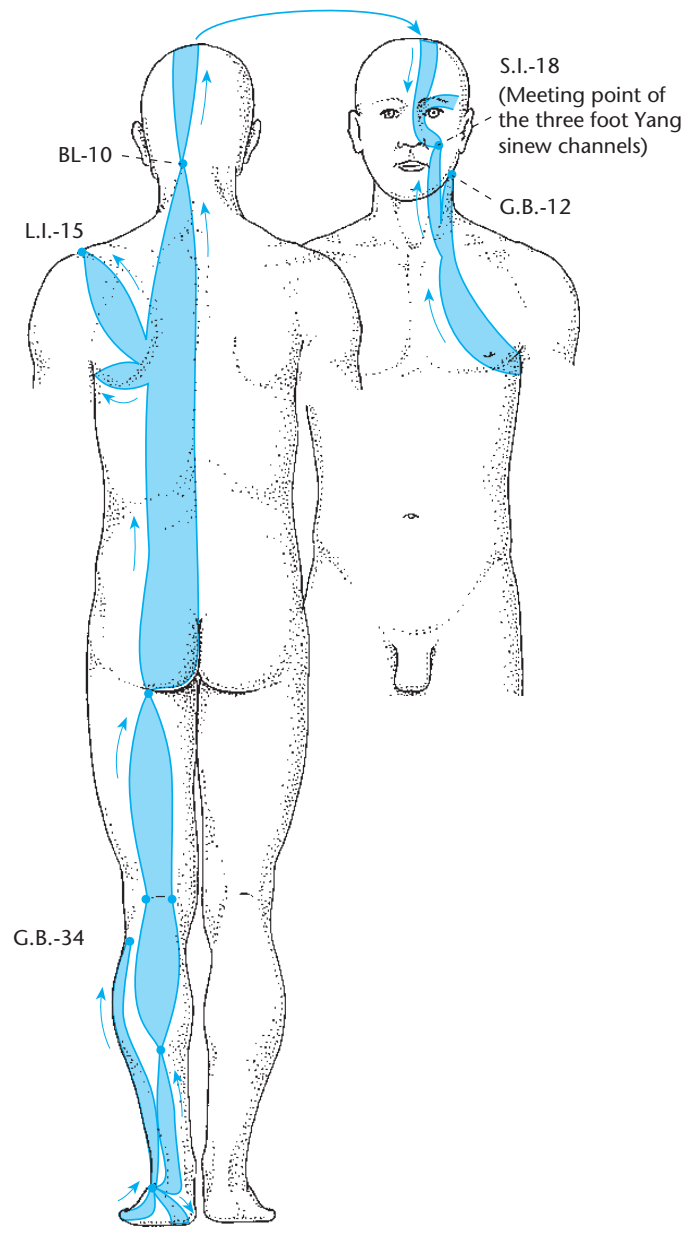
➡ from here it ascends to the occiput, where it unites at **BL-10** (*tianzhu*) with the Kidney divergent channel and the Bladder primary channel to form one of the six *he*-confluences (here: KID/BL as first confluence ➞ 1.3)

Clinical importance

- Strengthens the relationship between the Bladder and the Kidney (*zangfu*-Organs). Points on the Bladder primary channel can therefore be used for disorders of the Kidney, and vice versa points on the Kidney primary channel can treat disorders of the Bladder.
- Supports the connection between the Bladder primary channel and the Heart
- Supports the connection between the Bladder primary channel and the anus
- Creates a connection between the popliteal region (**BL-40**) and the sacral region (**BL-32**, **BL-31**) as well as with the occipital region (**BL-10**).

4.7.3 The Bladder Sinew Channel (*zu tai yang jing jin*)



Pathway

The Bladder sinew channel begins on the lateral aspect of the little toe and travels along the lateral border of the foot to the lateral malleolus, where it binds (*jie*).

At the lateral malleolus **three branches** separate from the sinew channel:

➡ **one branch** runs to the calcaneus where it binds (*jie*) and disperses over the heel

➡ **a further branch** ascends the lateral aspect of the lower leg and binds (*jie*) at the head of the fibula, where it also meets the Gall Bladder and Stmach sinew channels at ➞ **G.B.-34** (*yanglingquan*)

➡ **the main branch** travels to the Achilles tendon, binds (*jie*) in the area of the two heads of the gastrocnemius muscle, ascends the posterior aspect of the leg along the gastrocnemius

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and soleus muscles and binds (*jie*) on either side of the popliteal crease, ascends the posterior aspect of the thigh and binds (*jie*) at the centre of the gluteal crease, ascends as a broad band along the spine and binds (*jie*) at **BL-10** (*tianzhu*).

Two branches separate from the main branch in the thoracic region at the level of the axilla:

- **one branch** ascends to the shoulder and reaches → **L.I.-15** (*jianyu*)
- **the other branch** penetrates the axilla, ascends the thorax and runs to the supraclavicular fossa, where again **two sub-branches** separate:
  - **one sub-branch** ascends to the mastoid process to → **G.B.-12** (*wangu*)
  - **the other sub-branch** crosses the cheek to → **S.I.-18** (*quan-liao*) where it meets with the other foot Yang sinew channels

The **main branch** divides at **BL-10** (*tianzhu*) into **two branches:**

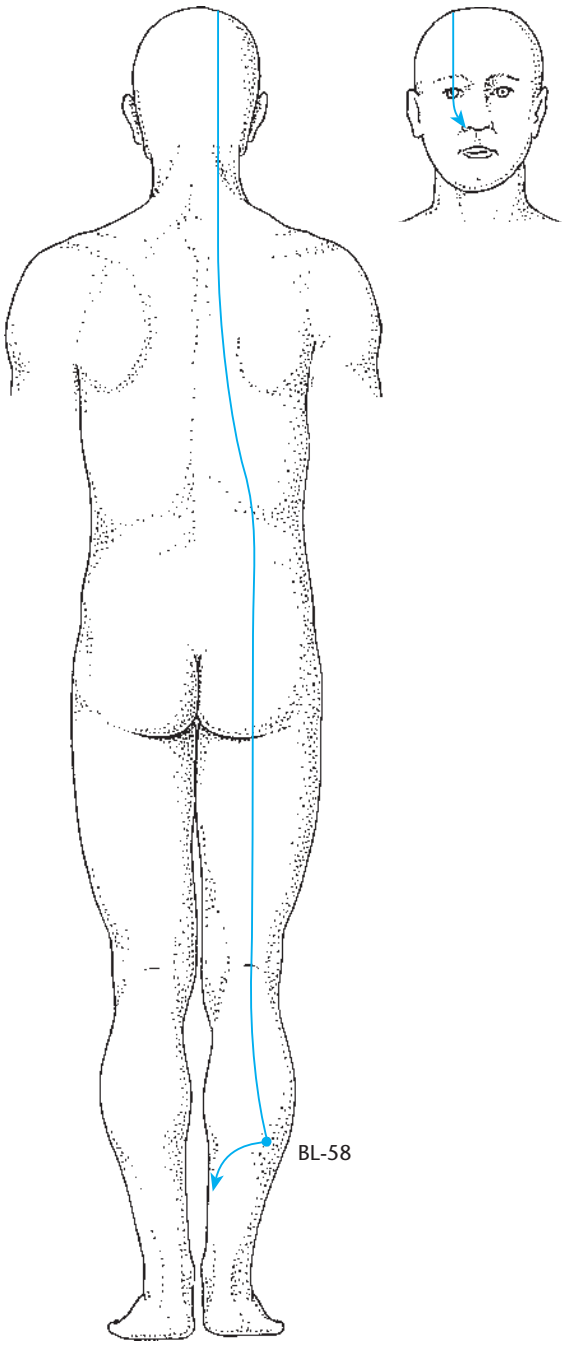
- **one branch** penetrates deeper to the root of the tongue
- **the other branch** crosses the head lateral to the midline, reaches the inner canthus of the eye and separates into **two branches:**
  - **one branch** binds (*jie*) lateral to the nose and descends the cheek
  - **the other branch** crosses the upper eyelid and connects with the Stomach sinew channel, together forming a network around the eye. It then penetrates deeper into the upper orbital region and ends at the roof of the mouth.

Clinical importance

Pathology: Muscular cramping in the region of the little toe. Tension and pain in the heel. Stiffness and limited range of motion of the joints. Tension and stiffness in the back and along the spine, and difficulty when bending forward. Inability to lift the arms above the shoulder region. Stiffness or distending pain in the axillary region. Pain and tense musculature in the supra-clavicular fossa. Limited range of motion of the cervical spine.

Indication: Mainly with *bi*-syndromes (painful obstruction syndrome) along the Bladder channel. The area covered by the Bladder sinew channel is larger than that covered by the Bladder primary channel. This explains why Bladder primary channel points can also be used for disorders of the scapula and the shoulder region as well as for disorders of the lower eyelid and the nasal region.

4.7.4 The Bladder *luo*-Connecting Vessel System (*zu tai yang luo mai*)



Pathway

The Bladder *luo*-connecting channel separates from the Bladder primary channel at **BL-58** (*feiyang*) (→ 8.1.2). It forms a three-dimensional reticular network, dividing into multiple branches and sub-branches (*sun luo*, *fu luo*, *xue luo* → 1.5) within the surrounding tissue.

- Horizontal divisions run to the Interiorly–Exteriorly paired Kidney primary channel; according to some schools of thought (for example Nguyen Van Nghi → Appendix) they travel as a **transverse** BL *luo*-connecting vessel to the *yuan*-source point → **KID-3** (*taixi*).

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- Solinas et al. (1998, variant → fig.) describe a **longitudinal** division following the pathway of the Bladder primary channel, reaching the head and penetrating the nose. While this division is not mentioned in the classics, according to Solinas et al it becomes evident based on the classic descriptions of the pathologies of the *luo*-connecting vessels.

Clinical importance (→ 8.1.2)

Pathology

- **Excess (*shi*):** Obstruction of the nasal passages, clear watery nasal discharge, headaches, back pain
- **Deficiency (*xu*):** Nosebleeds, chronic clear nasal discharge, sinusitis

4.7.5 Cutaneous Region (*tai yang pi bu*)

See description and figures → 1.6.

4.7.6 Points of the Bladder Primary Channel (Overview)

Specific points according to their function

- ***Yuan*-source point (→ 8.1.1): BL-64** (*jinggu*)
- ***Luo*-connecting point (→ 8.1.2): BL-58** (*feiyang*)
- ***Xi*-cleft point (→ 8.1.3): BL-63** (*jinmen*)
- ***Xi*-cleft point of the *yang qiao mai*: BL-59** (*fuyang*)
- **Associated Back-*shu* point (→ 8.1.4): BL-28** (*pangguangshu*) ■■
  – Back-*shu* point of the Lung: **BL-13** (*feishu*) ■■
  – Back-*shu* point of the Pericardium: **BL-14** (*jueyinshu*)
  – Back-*shu* point of the Heart: **BL-15** (*xinshu*) ■■
  – Back-*shu* point of the *du mai*: **BL-16** (*dushu*)
  – Back-*shu* point of the diaphragm: **BL-17** (*geshu*) ■■
  – Back-*shu* point of the Liver: **BL-18** (*ganshu*) ■■
  – Back-*shu* point of the Gall Bladder: **BL-19** (*danshu*) ■■
  – Back-*shu* point of the Spleen: **BL-20** (*pishu*) ■■
  – Back-*shu* point of the Stomach: **BL-21** (*weishu*) ■■
  – Back-*shu* point of the Triple Burner: **BL-22** (*sanjiaoshu*) ■■
  – Back-*shu* point of the Kidneys: **BL-23** (*shenshu*) ■■
  – Back-*shu* point of the Large Intestine: **BL-25** (*dachangshu*) ■■
  – Back-*shu* point of the Small Intestine: **BL-27** (*xiaochangshu*)
  – Back-*shu* point of the Bladder: **BL-28** (*pangguangshu*) ■■
- **Associated Front-*mu* point (→ 8.1.5): Ren-3** (*zhongji*) ■■
- **Five *shu*-transporting points (→ 8.1.6):**
  jing-well point (Metal), tonification point: **BL-67** (*zhiyin*) ■■
  ying-spring point (Water), *ben* point (Five Phases): **BL-66** (*zutonggu*)
  shu-stream point (Wood), sedation point: **BL-65** (*shugu*)
  jing-river point (Fire): **BL-60** (*kunlun*) ■■
  he-sea point (Earth): **BL-40** (*weizhong*) ■■
- ***Hui*-meeting point (→ 8.1.7):**
  – of the Blood: **BL-17** (*geshu*) ■■
  – of the Bones: **BL-11** (*dazhu*) ■■
- **Opening point (→ 8.1.8) of the *yang qiao mai*: BL-62** (*shenmai*) ■■
- **Lower *he*-sea points (→ 8.1.9):**
  of the Triple Burner: **BL-39** (*weiyang*) ■■
  of the Bladder: **BL-40** (*weizhong*) ■■
- ***Jiaohui*-meeting points (→ 8.1.10):**
  – with the ST, T.B.* channels, the *yin qiao mai*, *yang qiao mai*, S.I., G.B.* channels, *du mai*: **BL-1** (*jingming*) ■■
  – with the S.I. channel, (T.B., G.B. channels, *du mai**): **BL-11** (*dazhu*) ■■
  – with the *du mai*: **BL-12** (*fengmen*) ■■
  – with the *du mai**: **BL-23** (*shenshu*) ■■
  – with the G.B. channel: **BL-31–BL-34** ■■
  – with the S.I. channel: **BL-41** (*fufen*)
  – with the *yang qiao mai*: (**BL-59** (*fuyang*)*), **BL-61** (*pucan*), **BL-62*** (*shenmai*) ■■
  – with the *yang wei mai*: **BL-63** (*jinmen*)
  – of other channels with the Bladder channel: **Du-24, G.B.-15, Du-20, (G.B.-6*), G.B.-7, G.B.-8, G.B.-9, G.B.-10, G.B.-11, G.B.-12, Du-17, Du-16*, Du-14, Du-13, G.B.-30**
- **Gao Wu command point (→ 8.1.11) for the Back and lumbar region: BL-40** (*weizhong*) ■■
- **Window of Heaven point (→ 8.1.12): BL-10** (*tianzhu*) ■■
- **Points of the Four Seas (→ 8.1.13):**
  – Sea of Blood point: **BL-11** (*dazhu*) ■■
- **Ma Dan Yang Heavenly Star points (→ 8.1.14): BL-40** (*weizhong*) ■■, **BL-57** (*chengshan*) ■■, **BL-60** (*kunlun*) ■■
- **Sun Si Miao Ghost point (→ 8.1.15): BL-62** (*shenmai*) ■■
- **Other functional points:**
  – *xi*-cleft point of the *yang qiao mai*: **BL-59** (*fuyang*)

Points according to region

- **Local points (→ 8.2.1):** occiput – **BL-10** (*tianzhu*) ■■; eyes – **BL-1** (*jingming*) ■■; Stomach/Spleen – **BL-20** (*pishu*) ■■, **BL-21** (*weishu*) ■■; Kidney – **BL-23** (*shenshu*) ■■, **BL-62** (*shenmai*) ■■; rectum – **BL-35** (*huiyang*); cervical spine – **BL-10** (*tianzhu*) ■■; thoracic spine – **BL-17** – **BL-23**; lumbar spine – **BL-23** – **BL-26**, **BL-52** (*zhishi*); iliosacral region – **BL-27** (*xiaochangshu*), **BL-28** (*pangguangshu*); hip – **BL-49** (*yishe*), **BL-50** (*weicang*), **BL-54** (*zhibian*); knee – **BL-40** (*weizhong*) ■■; foot – **BL-60** (*kunlun*) ■■, **BL-62** (*shenmai*) ■■
- **Adjacent points (→ 8.2.1):** eyes – **BL-2** (*zanzhu*) ■■; nose – **BL-7** (*tongtian*); Lung – **BL-13** (*feishu*) ■■, **BL-43** (*gaohuang*); Heart – **BL-14** (*jueyinshu*), **BL-15** (*xinshu*) ■■; Liver – **BL-18** (*ganshu*) ■■, **BL-20** (*pishu*) ■■; Gall Bladder – **BL-19** (*danshu*) ■■; Large Intestine – **BL-25** (*dachangshu*) ■■; Small Intestine – **BL-27** (*xiaochangshu*) ■■; rectum – **BL-30** (*baihuanshu*), **BL-34** (*xialiao*) ■■; Bladder – **BL-28** (*pangguangshu*) ■■, **BL-23** (*shenshu*) ■■; urogenital region – **BL-23** (*shenshu*) ■■, **BL-32** (*ciliao*); cervical spine – **BL-11** (*dazhu*) ■■;

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iliosacral region – **BL-23** (*shenshu*) ■■; thoracic spine – **BL-38** – **BL-47**; toes – **BL-60** (*kunlun*) ■■, **BL-**65 (*shugu*)

- **Distal points (→ 8.2.1):** occipital region – **BL-65** (*shugu*), **BL-60** (*kunlun*); rectum – **BL-57** (*chengshan*) ■■; thoracic spine – **BL-57** (*chengshan*) ■■; cervical, thoracic, lumbar spine – **BL-60** (*kunlun*) ■■; shoulder and iliosacral region – **BL-58** (*feiyang*); for the thoracic spine, lumbar spine and iliosacral region – **BL-40** (*weizhong*) ■■; lumbar spine – **BL-40** (*weizhong*) ■■, **BL-59** (*fuyang*), **BL-60** (*kunlun*) ■■; lumbar spine and hip – **BL-62** (*shenmai*) ■■

Specific points according to the channel pathway (in numerical order):

- **BL-1** (*jingming*) ■■: *jiaohui*-meeting point with the ST, T.B.* channels, the *yin qiao mai, yang qiao mai*, S.I., G.B.* channels, *du mai* (→ 8.1.10): local point for the eyes (→ 8.2.1)
- **BL-2** (*zanzhu*) ■■: adjacent point for the eyes (→ 8.2.1)
- **BL-7** (*tongtian*): adjacent point for the nose (→ 8.2.1)
- **BL-10** (*tianzhu*) ■■: Window of Heaven point (→ 8.1.12); important point for eliminating Wind; local point for the occiput and the cervical spine (→ 8.2.1)
- **BL-11** (*dazhu*) ■■: *hui*-meeting point (→ 8.1.7) of the bones; Sea of Blood point (→ 8.1.13); *jiaohui*-meeting point with the S.I. channel (T.B., G.B. channels, *du mai**) (→ 8.1.10); adjacent point for the cervical spine (→ 8.1.10)
- **BL-12** (*fengmen*) ■■: *jiaohui*-meeting point with the *du mai* (→ 8.1.10)
- **BL-13** (*feishu*) ■■: Back-*shu* point of the Lung (→ 8.1.4); adjacent point for the Lung (→ 8.2.1)
- **BL-14** (*jueyinshu*): Back-*shu* point of the Pericardium (→ 8.1.4); adjacent point for the Heart (→ 8.2.1)
- **BL-15** (*xinshu*) ■■: Back-*shu* point of the Heart (→ 8.1.4); adjacent point for the Heart (→ 8.2.1)
- **BL-16** (*dushu*): Back-*shu* point of the *du mai* (→ 8.1.4);
- **BL-17** (*geshu*) ■■: Back-*shu* point of the diaphragm (→ 8.1.4); *hui*-meeting point of the Blood (→ 8.1.7)
- **BL-17 to BL-23**: local points for the thoracic spine (→ 8.2.1)
- **BL-18** (*ganshu*) ■■: Back-*shu* point of the Liver (→ 8.1.4); adjacent point for the Liver (→ 8.2.1)
- **BL-19** (*danshu*) ■■: Back-*shu* point of the Gall Bladder (→ 8.1.4); adjacent point for the Gall Bladder (→ 8.2.1)
- **BL-20** (*pishu*) ■■: Back-*shu* point of the Spleen (→ 8.1.4); adjacent point for the Liver (→ 8.2.1)
- **BL-21** (*weishu*) ■■: local point for the Stomach (→ 8.2.1); Back-*shu* point of the Stomach (→ 8.1.4)
- **BL-22** (*sanjiaoshu*) ■■: Back-*shu* point of the Triple Burner (→ 8.1.4)
- **BL-23** (*shenshu*) ■■: *jiaohui*-meeting point with the *du mai** (→ 8.1.10); local point for the Kidneys and lumbar region (→ 8.2.1); adjacent point for the Bladder, urogenital region and iliosacral region (→ 8.2.1); Back-*shu* point of the Kidney (→ 8.1.4)
- **BL-24** (*qihaishu*): local point for the lumbar spine (→ 8.2.1)
- **BL-25** (*dachangshu*) ■■: Back-*shu* point of the Large Intestine (→ 8.1.4); adjacent point for the lumbar spine (→ 8.2.1)
- **BL-26** (*guanyuanshu*): local point for the lumbar spine (→ 8.2.1)
- **BL-27** (*xiaochangshu*) ■■: Back-*shu* point of the Small Intestine (→ 8.1.4); adjacent point for the Small Intestine (→ 8.2.1); local point for the iliosacral region (→ 8.2.1)
- **BL-28** (*pangguangshu*) ■■: Back-*shu* point of the Bladder (→ 8.1.4); adjacent point for the Bladder (→ 8.2.1); local point for the iliosacral region (→ 8.2.1)
- **BL-30** (*baihuanshu*): regional point for the rectum (→ 8.2.1)
- **BL-31** – **BL-34**: *jiaohui*-meeting points with the G.B. channel (→ 8.1.10)
- **BL-32** (*ciliao*): regional point for the urogenital region (→ 8.2.1); local point for the iliosacral region (→ 8.2.1)
- **BL-34** (*xiaoliao*): regional point for the rectum (→ 8.2.1)
- **BL-35** (*huiyang*): local point for the rectum (→ 8.2.1)
- **BL-38** – **BL-47**: adjacent points for the thoracic spine (→ 8.2.1)
- **BL-39** (*weiyang*) ■■: lower *he*-sea point of the Triple Burner (→ 8.1.9)
- **BL-40** (*weizhong*) ■■: *he*-sea point (Earth); lower *he*-sea point of the Bladder (→ 8.1.9); Gao Wu command point (→ 8.1.11) of the back and lumbar region; Ma Dan Yang Heavenly Star point (→ 8.1.14); distal point for the thoracic and lumbar spine as well as for the iliosacral region (→ 8.2.1); local point for the knee (→ 8.2.1)
- **BL-41** (*fufen*): *jiaohui*-meeting point with the S.I. channel (→ 8.1.10)
- **BL-43** (*gaohuang*): adjacent point for the Lung (→ 8.2.1)
- **BL-49** (*yishe*): local point for the hip (→ 8.2.1)
- **BL-50** (*weicang*): local point for the hip (→ 8.2.1)
- **BL-52** (*zhishi*): local point for the lumbar region (→ 8.2.1)
- **BL-54** (*zhibian*): local point for the hip (→ 8.2.1)
- **BL-57** (*chengshan*) ■■: Ma Dan Yang Heavenly Star point (→ 8.1.14); distal point for the rectum (→ 8.2.1); distal point for the thoracic spine (→ 8.2.1)
- **BL-58** (*feiyang*): *luo*-connecting point (→ 8.1.2); distal point for the shoulder and iliosacral region (→ 8.2.1)
- **BL-59** (*fuyang*): *xi*-cleft point of the *yang qiao mai; jiaohui*-meeting point with the *yang qiao mai* (→ 8.1.10)*; distal point for the lumbar spine (→ 8.2.1)
- **BL-60** (*kunlun*) ■■: *jing*-river point (Fire); Ma Dan Yang Heavenly Star point (→ 8.1.14); distal point for the cervical, thoracic and lumbar spine (→ 8.2.1); distal point for the occipital and lumbar region (→ 8.2.1); local point for the foot (→ 8.2.1); regional point for the toes (→ 8.2.1)
- **BL-61** (*pucan*): *jiaohui*-meeting point with the *yang qiao mai* (→ 8.1.10)
- **BL-62** (*shenmai*) ■■:Opening point of the *yang qiao mai* (→ 8.1.8); Sun Si Miao Ghost point (→ 8.1.15); *jiaohui*-meeting point with the *yang qiao mai* (→ 8.1.10); local point

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for the Kidney (→ 8.2.1); local point for the foot (→ 8.2.1); distal point for the lumbar spine and hip (→ 8.2.1)

- **BL-63** (*jinmen*): *xi*-cleft point (→ 8.1.3); *jiaohui*-meeting point with the *yang wei mai* (→ 8.1.10)
- **BL-64** (*jinggu*): *yuan*-source point (→ 8.1.1)
- **BL-65** (*shugu*): *shu*-stream point (Wood); sedation point; distal point for the occiput (→ 8.2.1); adjacent point for the toes (→ 8.2.1)
- **BL-66** (*zutongu*): *ying*-spring point (Water); *ben* point (Five Phases point)
- **BL-67** (*zhiyin*) ■■: *jing*-well point; tonification point

General location help

- **The medial branch of the Bladder channel** runs from **BL-11** (below the spinal process of the T1) to **BL-30** (level with the fourth sacral foramen), 1.5 cun lateral to the midline

Memorisation help for the medial branch of the BL channel:

- **BL11 to BL-17**: the second digit of the point number corresponds to the level of the respective thoracic vertebra. Example: **BL-13** is located below the spinal process of T3.
- **BL-18 to BL-21**: second digit of the point number + 1. *Example*: **BL-19** (9 + 1) is located below the spinal process of the T10.

The outer branch of the Bladder channel runs from **BL-41** (below the spinal process of the T2) to **BL-54** (below the spinal process of S4/level with the 4th sacral foramen) 3 cun lateral to the midline.

Memorisation help for the lateral branch of the BL channel:

- **BL41 to BL-46**: second digit of the point number + 1. *Example*: **BL-42** (2 + 1) corresponds to T3
- **BL-47 to BL-49**: second digit of the point number + 2. *Example*: **BL-47** (7 + 2) corresponds to the level of T9.
- **BL-50**: second digit of the point number + 12.

Needling: The Back-*shu* points are also commonly needled transversely (subcutaneously) towards the spine. This allows the patient to lie in a supine position during needle retention (the needles can be secured with tape).

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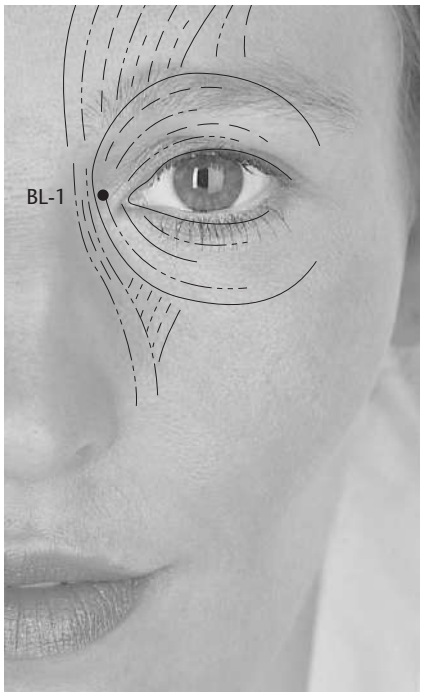
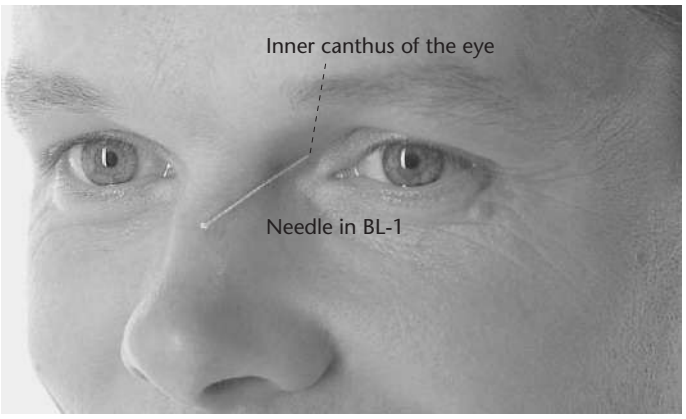
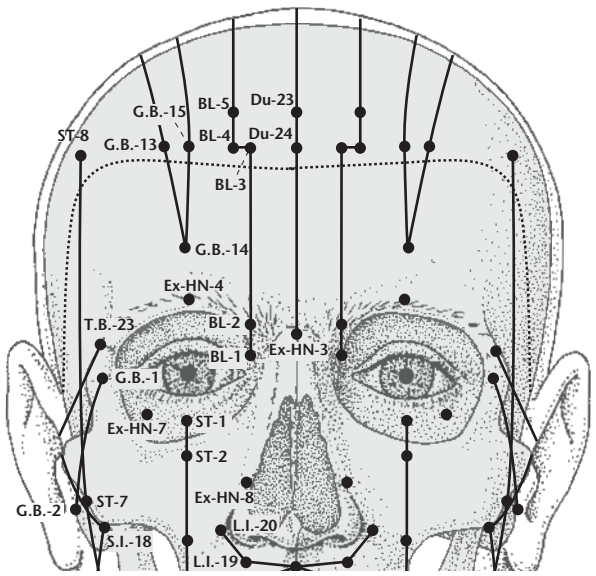
Bright Eyes JINGMING BL-1







Location

0.1 cun superior and medial to the inner canthus of the eye, in a depression.

How to find

BL-1 is located in a small depression near the inner canthus of the eye, superior to the insertion of the upper eyelid. Medially, it is bordered by the bony root of the nose. → **BL-2** is located directly above **BL-1** in a depression at the medial end of the eyebrow. → **ST-1** is located on the pupil line between the eyeball and the border of the infraorbital ridge, → **G.B.-1** and → **T.B.-23** are located on the outer canthus of the eye.

Needling

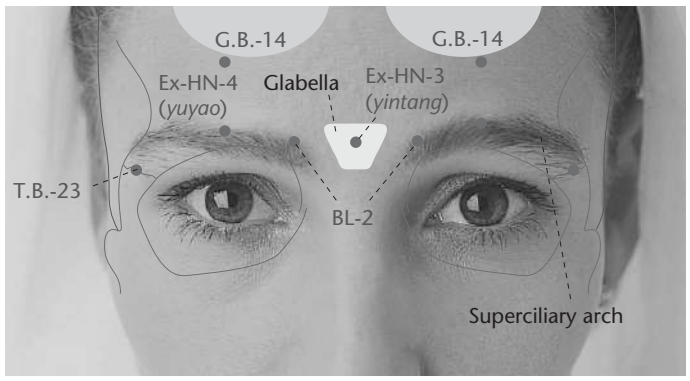
Ask the patient to look downward and outward, with their eyes closed. Gently push the eyeball downward and outward from above. Needle perpendicularly along the supraorbital ridge in a posterior direction. Caution: Angular artery and vein, eyeball, periosteum. This point should only be needled by experienced practitioners. After removing the needle, press on the insertion site for 10 minutes. Despite this precaution, a bruise may still form (inform the patient). **No** needle stimulation! Moxibustion is contraindicated. Alternative point: → **BL-2** or transverse (subcutaneous) insertion at **BL-1** in the direction of → **BL-2**.

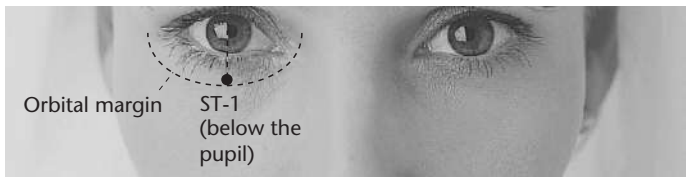
Actions/Indications

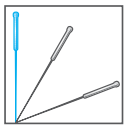
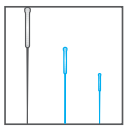
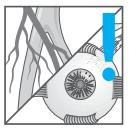
- Expels Wind and clears Heat, benefits the eyes

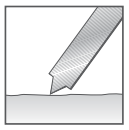
Special features

Meeting point with the *du mai*, *yin qiao mai*, *yang qiao mai* as well as the ST, S.I., G.B. channels and, according to some authors, also the T.B. channel. Entry point.







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BL-2 *Gathered Bamboo* ZANZHU

Location

In a depression at the medial end of the eyebrow, directly above the inner canthus of the eye.

How to find

As the location of the eyebrow can vary, the medial canthus of the eye should be used for reference (→ **BL-1**). Palpate for a generally pressure-sensitive depression in this area of the orbital ridge. Caution: According to Sobotta, except in rare cases, **BL-2** is not located on the supraorbital foramen (mainly located more laterally), but in the area where the supratrochlear artery and the supraorbital nerve emerge (frontal notch).
→ **BL-1** is located inferior to **BL-2**.

Needling

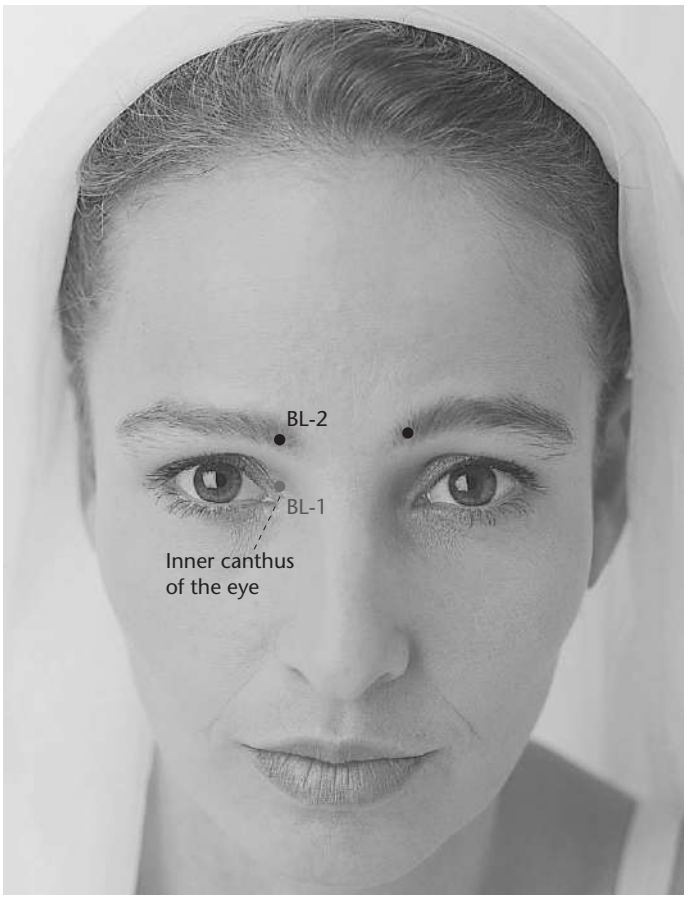
0.3–0.5 cun obliquely from lateral to medial or transversely (subcutaneously) in the direction of the disorder. Caution: Branches of the frontal nerve, facial nerve, blood vessels! According to the majority of authors, moxibustion is contraindicted. Considered a less risky alternative to → **BL-1**.

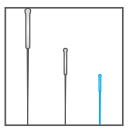
Actions/Indications

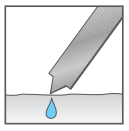
- Benefits the eyes
- Expels external pathogenic factors such as Wind, clears Heat
- Clears the head
- Moves Qi in the Bladder divergent channel (for example, for painful haemorrhoids)

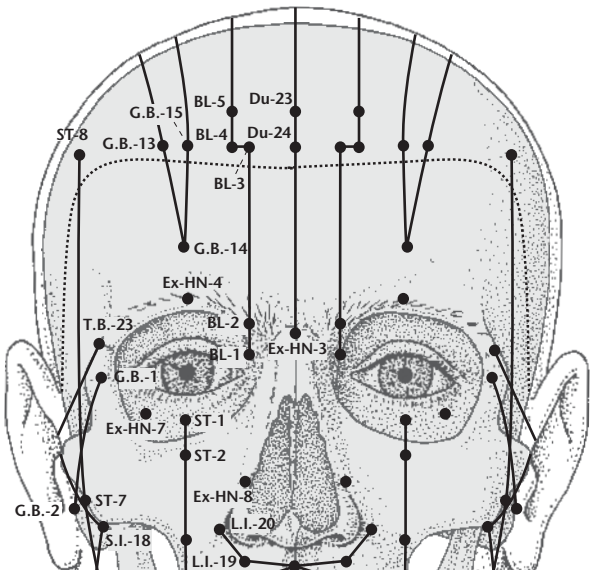
Special features

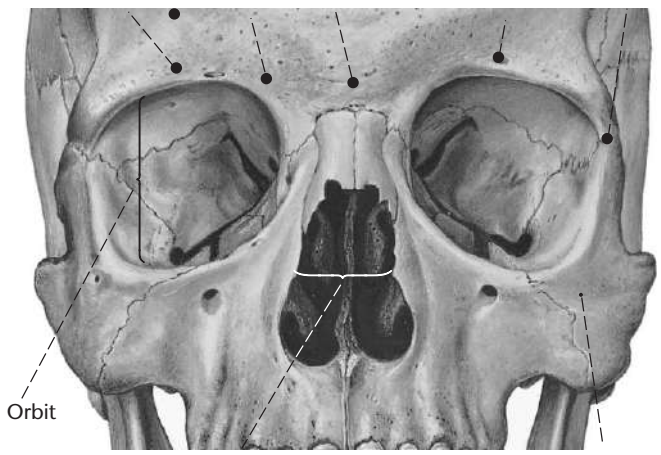
Important and frequently used local point for the eye region. Good point for excess and Heat syndromes of the eye region: prick to bleed (puncture the point and let it bleed), but avoid facial haematoma.











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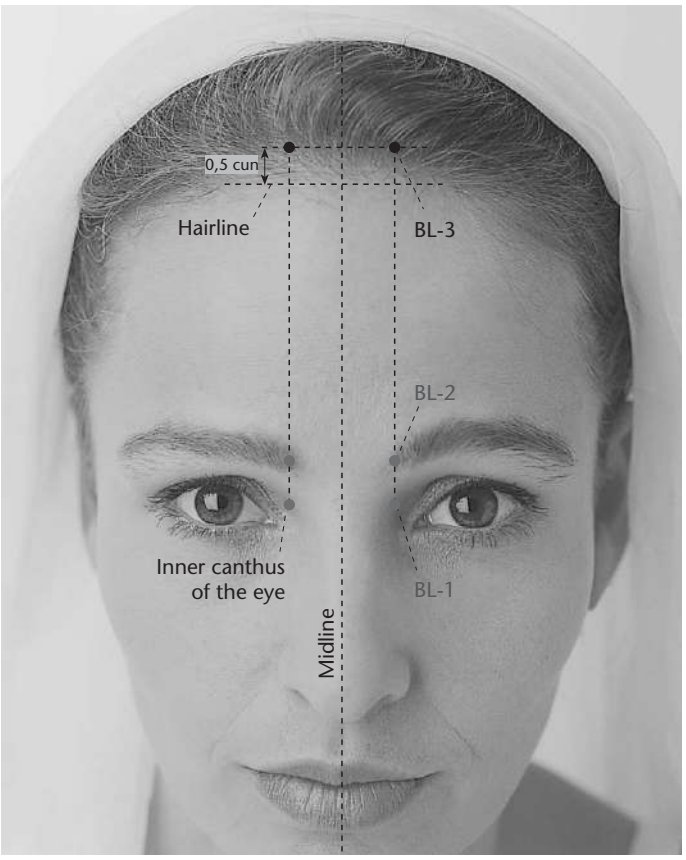
Eyebrows' Pouring MEICHONG BL-3



Location

0.5 cun within the anterior hairline, vertically above the medial canthus of the eye.

How to find

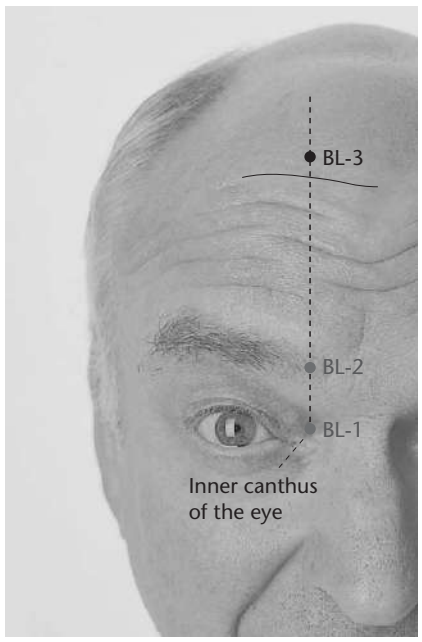
BL-3 is located directly above the medial canthus of the eye (→ **BL-1**) and 0.5 cun within the anterior hairline (→ 3.1.1). Located on the same level (0.5 cun within the anterior hairline) are → **Du-24** (on the midline), → **G.B.-15** (on the pupil line), → **G.B.-13** (3 cun lateral to the midline) and → **ST-8** (on the corner of the forehead).

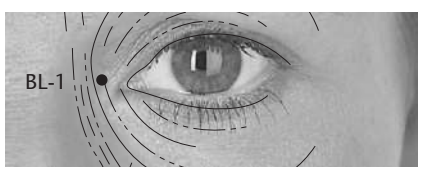
Needling

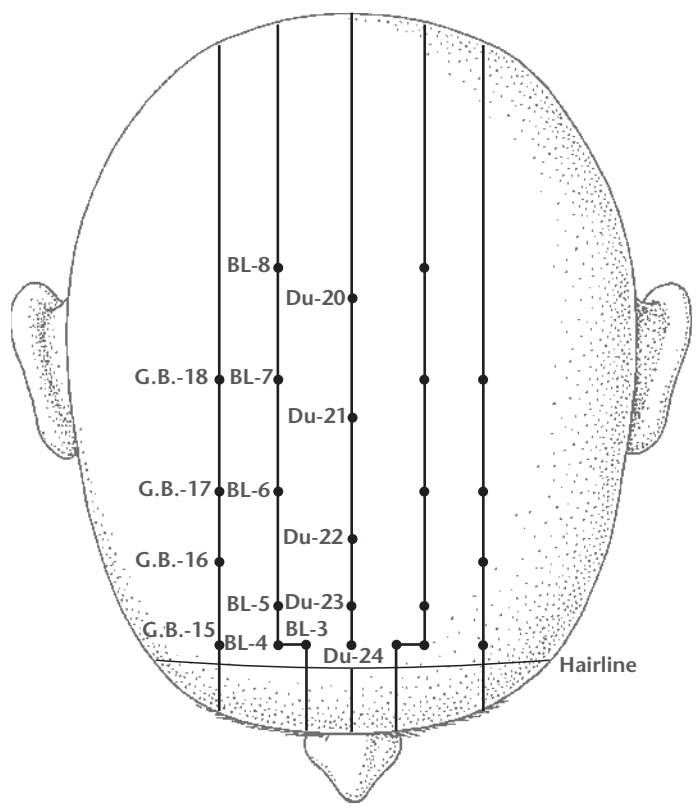
0.5–1 cun obliquely in a dorsal direction or transversely (subcutaneously). According to some classic texts, moxibustion is contraindicated.

Actions/Indications

- Expels Wind and clears Heat from the head and forehead







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BL-4 *Crooked Curve* QUCHA

Location

0.5 cun superior to the anterior hairline and 1.5 cun lateral to the midline (or one third of the distance between → **Du-24** and → **ST-8**).

How to find

While → **BL-3** is still located on a vertical line through the inner canthus of the eye, **BL-4** is located slightly more laterally (hence its name). The distance of 1.5 cun from the midline refers to the proportional cun measurements along the anterior hairline (→ 3.1.1): the distance between → **Du-24** (on the midline) and → **ST-8** (on the corner of the forehead) is 4.5 proportional cun; therefore, the distance between **BL-4** and the midline is one third of this distance.

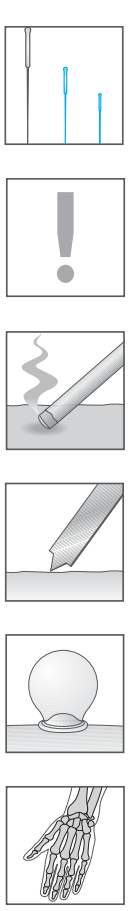
Located on the same level (0.5 cun within the anterior hairline) are → **Du-24** (on the midline), → **BL-3** (superior to the inner canthus of the eye), → **G.B.-15** (on the pupil line), → **G.B.-13** (3 cun lateral to the midline) and → **ST-8** (on the corner of the forehead).

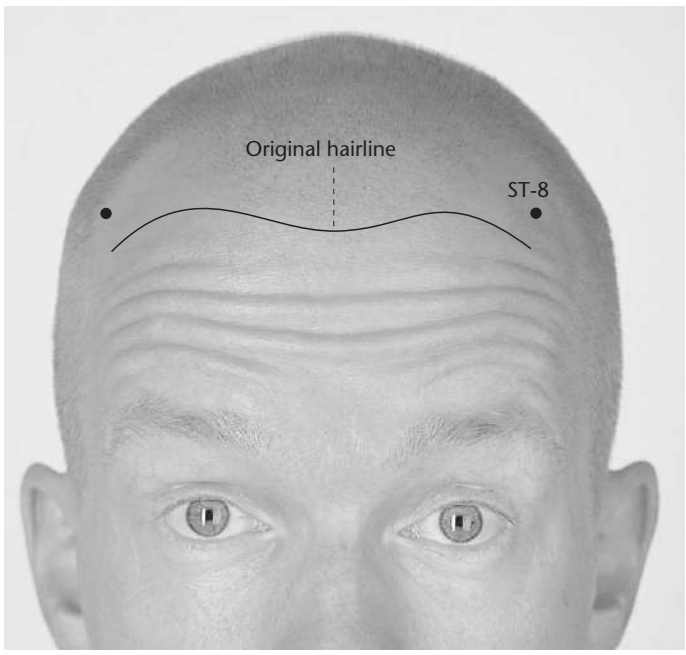
Needling

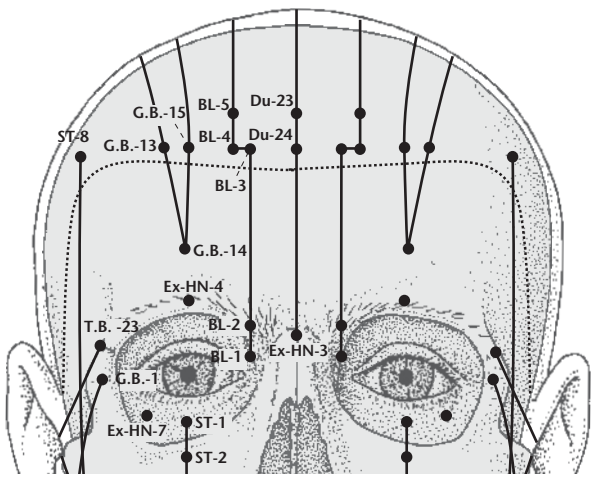
Transversely (subcutaneously) 0.5–1 cun

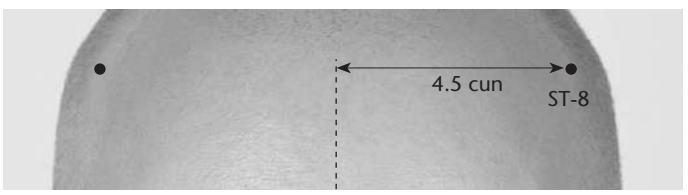
Actions/Indications

- Expels Wind and Wind-Heat, especially from the eyes and the nose
- Clears the head, opens the orifices, alleviates pain









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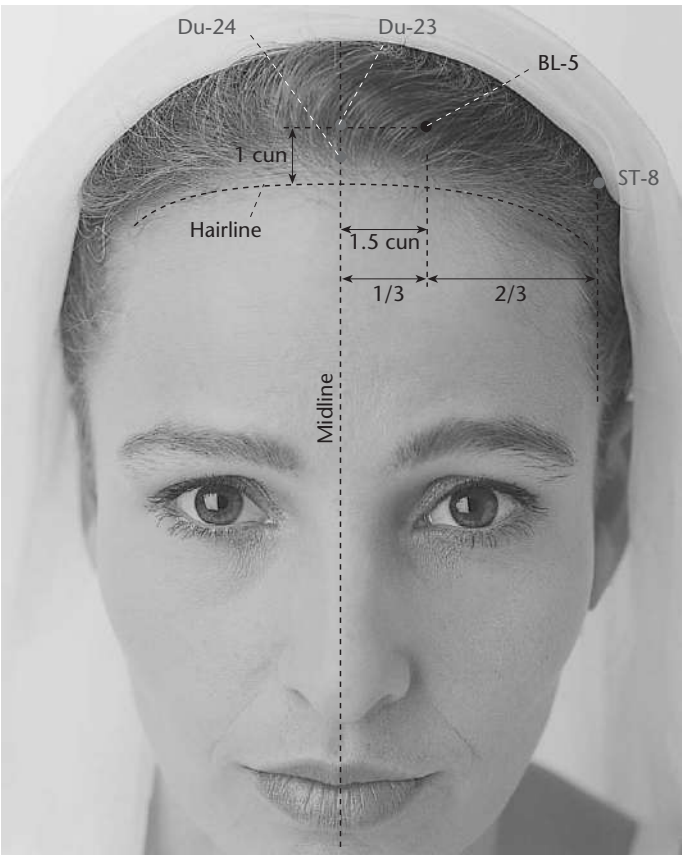
Fifth Place WUCHU BL-5



Location

1 cun superior to the anterior hairline and 1.5 cun lateral to the midline or one third of the distance between ➞ **Du-24** and ➞ **ST-8**.

How to find

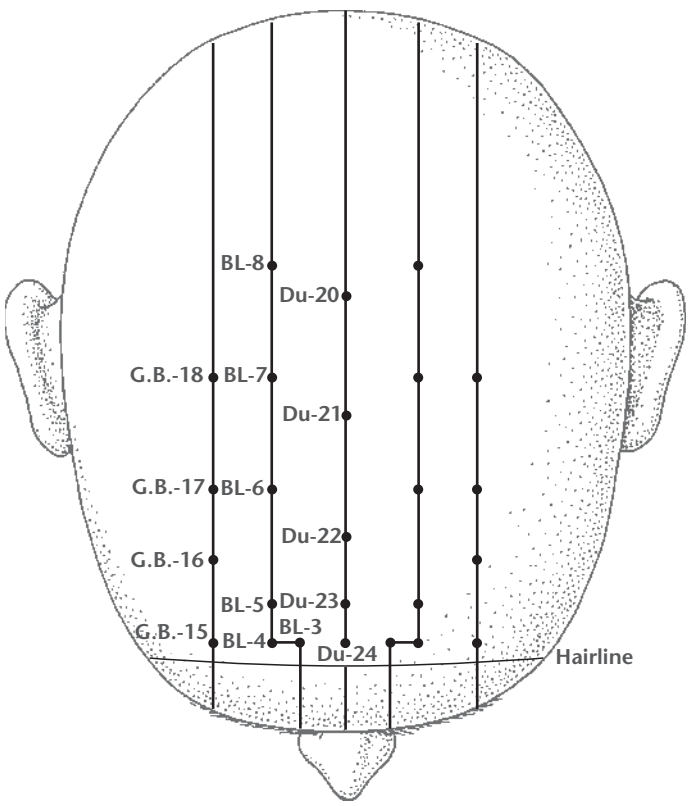
The distance of 1.5 cun refers to the proportional cun measurement for the distance of 4.5 cun between ➞ **Du-24** (midline, 0.5 cun superior to the anterior hairline) and ➞ **ST-8** (corner of the forehead), (➞ 2.2). By dividing this distance into thirds, **BL-5** can be located one third of the distance from ➞ **Du-24** and 1 cun superior to the anterior hairline.
Located on the same level is ➞ **Du-23** (on the midline).

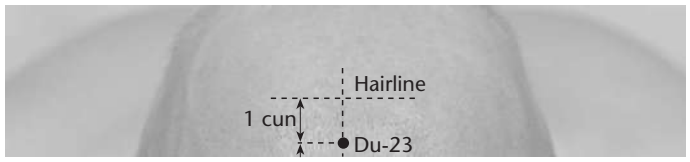
Needling

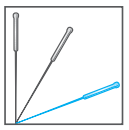
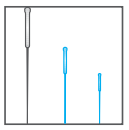
Transversely (subcutaneously) 0.5–1 cun. Moxibustion is contraindicated according to some texts.

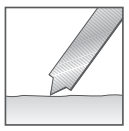
Actions/Indications

- Releases the Exterior, expels Wind and Heat from the head and eyes
- Opens the channel and the *luo* vessels
- Opens the orifices (especially the eyes) and revives consciousness







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BL-6 *Receiving Light* CHENGGUAN

Location

2.5 cun superior to the anterior hairline and 1.5 cun lateral to the midline or one third of the distance between → **Du-24** and → **ST-8**.

How to find

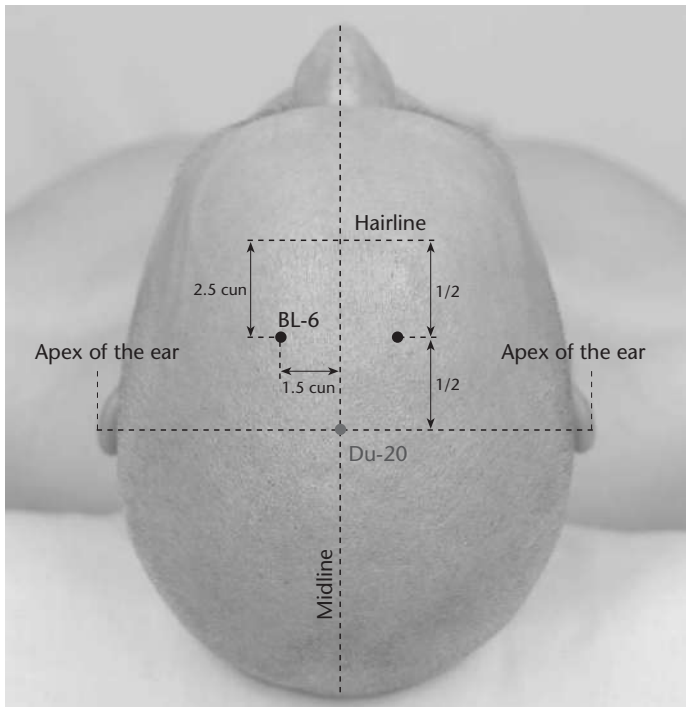
Spreading hands technique (→ 2.3.3): First, locate the anterior midline at the level of the anterior hairline (→ 3.1.1) as well as → **Du-20** (5 cun superior to the anterior hairline, on the vertex, at the junction of the midline with a line connecting the apices of the ears). Next, determine the midpoint between those two reference points (→ 2.5 cun superior to the anterior hairline). From this point, measure 1.5 cun laterally (or one third of the distance between → **Du-24** and → **ST-8**) to locate **BL-6**.
Located on the same level (→ 2.5 cun superior to the anterior hairline), but more laterally (pupil line), is → **G.B.-17**.

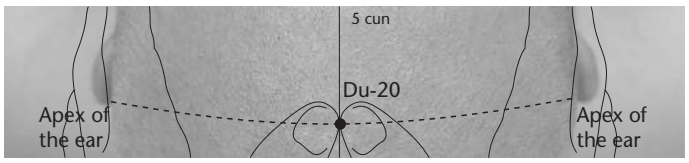
Needling

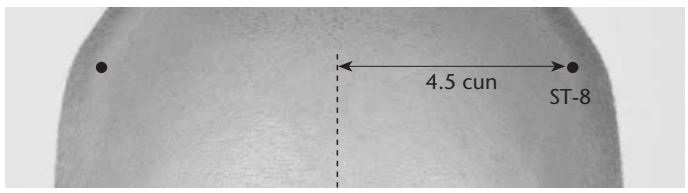
Transversely (subcutaneously) 0.5–1 cun. Moxibustion only following careful diagnosis.

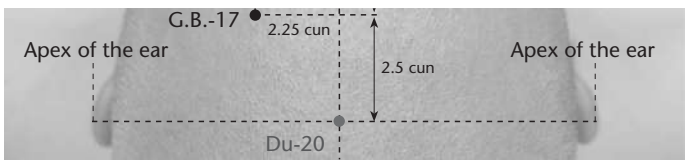
Actions/Indications

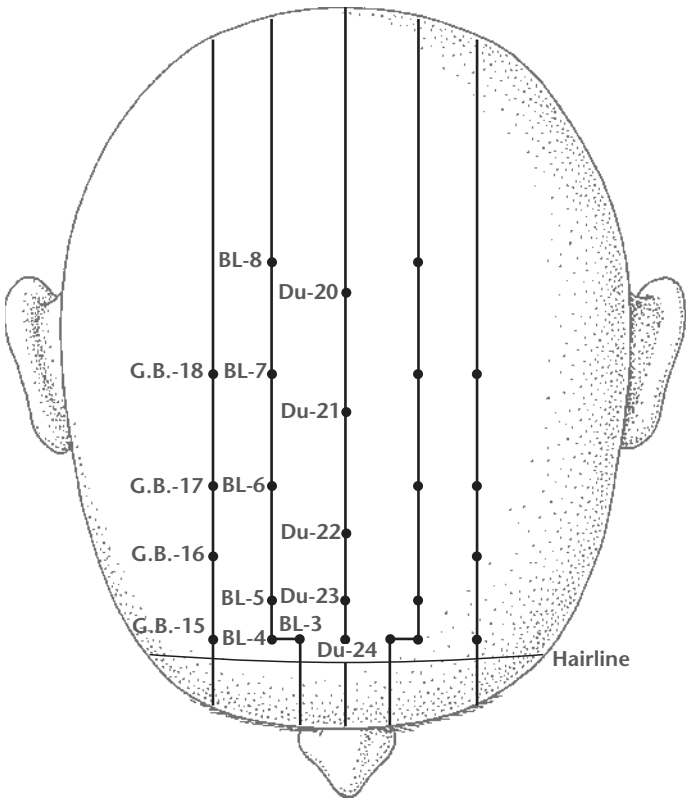
- Expels Wind, especially from the head and eyes
- Clears Heat from the head, especially from the eyes and nose











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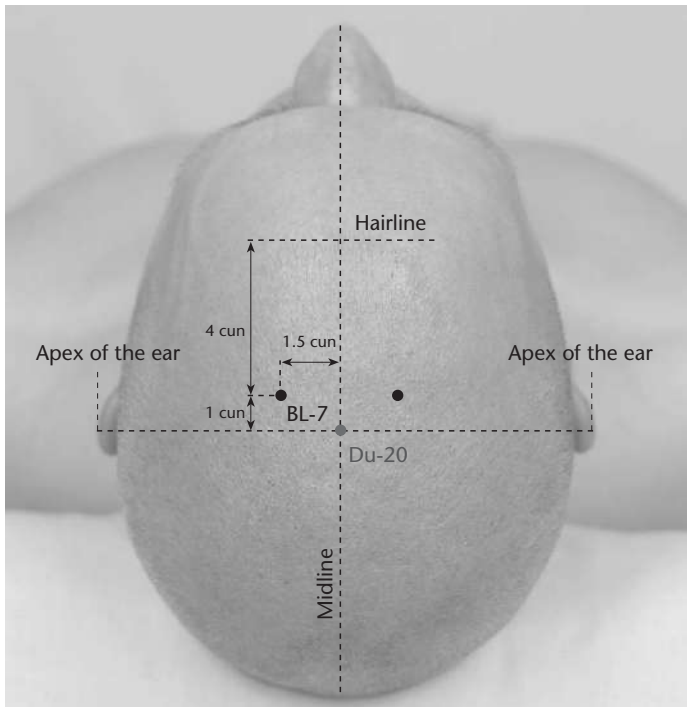
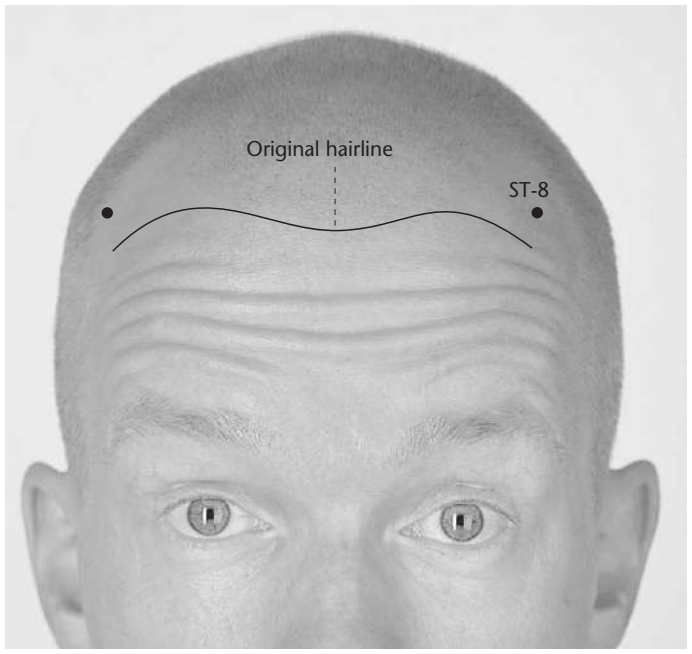
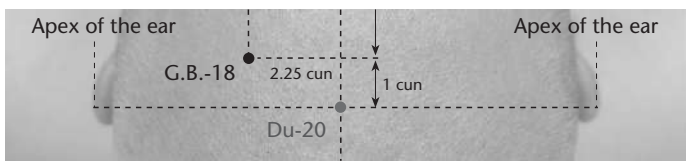
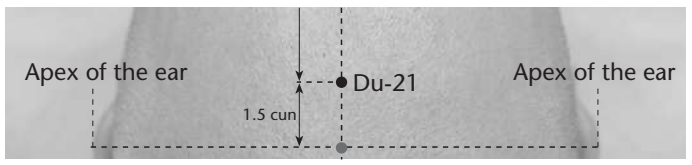
Heavenly Connection TONGTIAN BL-7









Location

1.5 cun lateral to the midline and 4 cun superior to the anterior hairline or 1 cun anterior to → **Du-20**.

How to find

BL-7 is best located by using → **Du-20** (5 cun superior to the anterior hairline, on the vertex, at the junction of the midline with a line connecting the apices of the ears) as a reference point. Measure 1 cun anterior from → **Du-20** and 1.5 cun lateral to the midline (or one third of the distance between → **Du-24** and **ST-8,** → 2.2) to locate **BL-7**. Located on the same level (4 cun superior to the anterior hairline), but more laterally (pupil line), is → **G.B.-18**. → **Du-21** is located on the midline, 1.5 cun anterior to → **Du-20**.

Needling

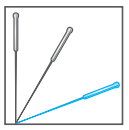
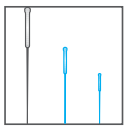
Transversely (subcutaneously) 0.5–1 cun

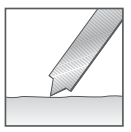
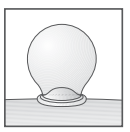
Actions/Indications

- Clears the head, benefits especially the nose

Special features

Important point for treating disorders of the nose

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BL-8 *Declining Connection* LUOQUE

Location

1.5 cun lateral to the midline and 5.5 cun superior to the anterior hairline or 0.5 cun posterior to ➞ **Du-20**.

How to find

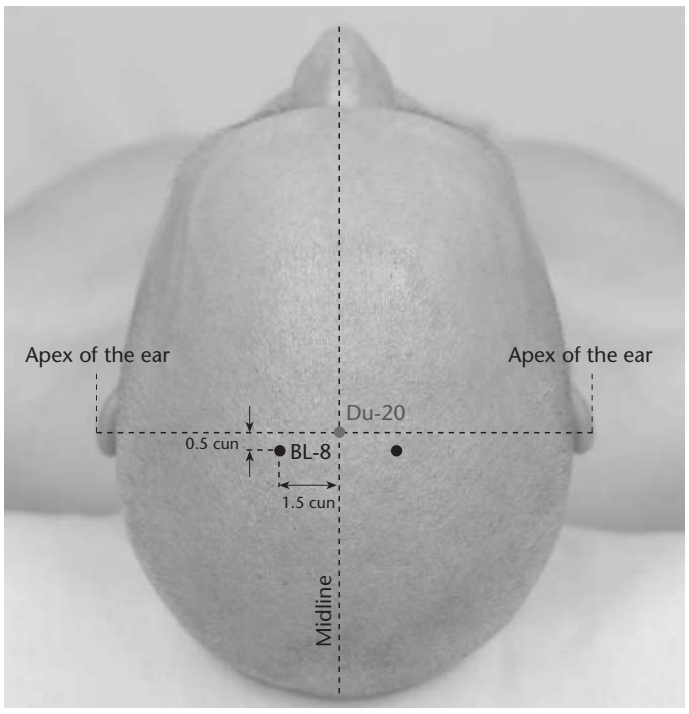
BL-8 is best located by using ➞ **Du-20** as a reference point. ➞ **Du-20** is located at the junction of the vertical midline with a line connecting the apices of the ears, 5 cun superior to the anterior hairline (➞ 3.1.1). To locate **BL-8**, measure 0.5 cun from ➞ **Du-20** in a posterior direction and 1.5 cun in a lateral direction.

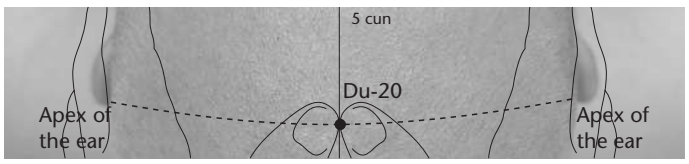
Needling

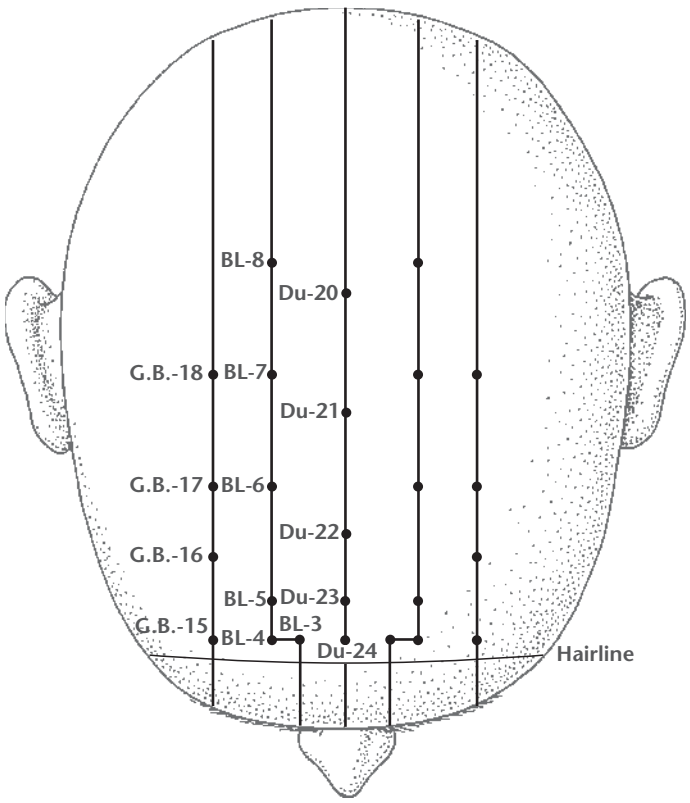
Transversely (subcutaneously) 0.5–1 cun. Moxibustion possible.

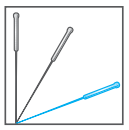
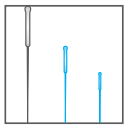
Actions/Indications

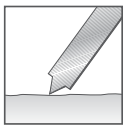
- Opens the orifices
- Subdues Wind
- Transforms Phlegm
- Calms the *shen*









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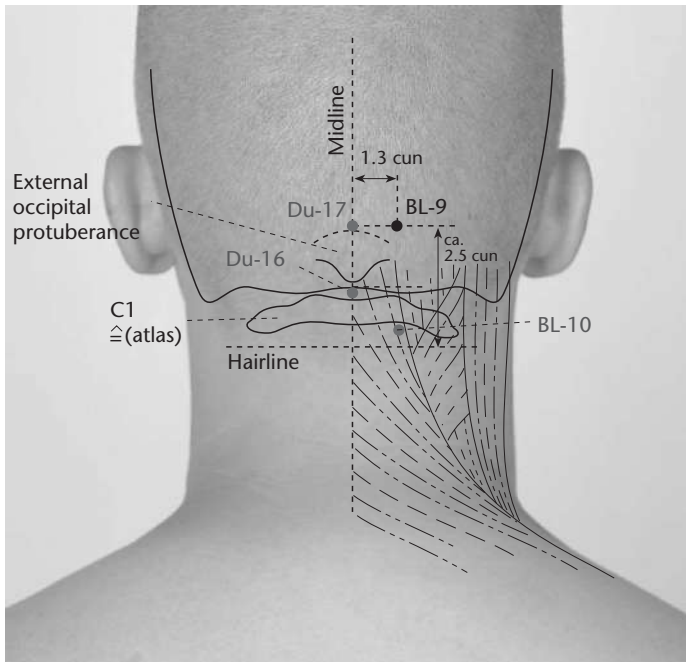
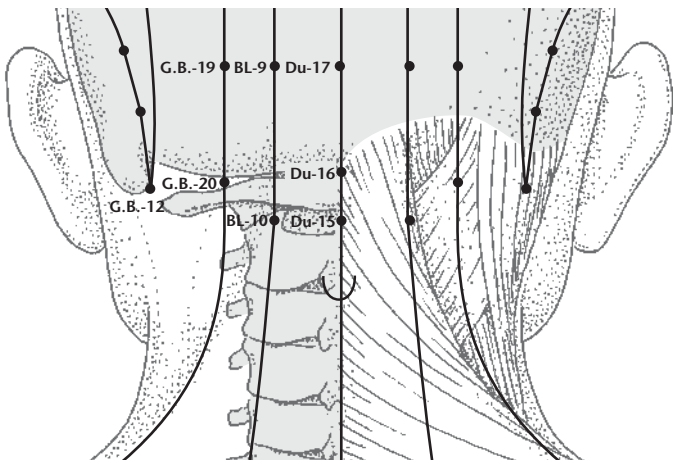
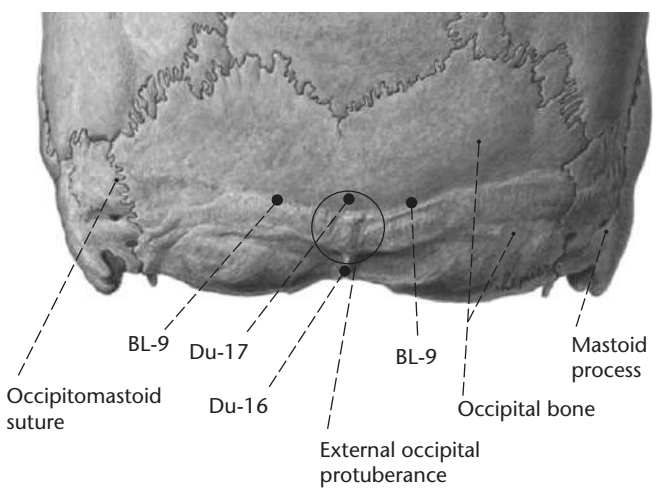
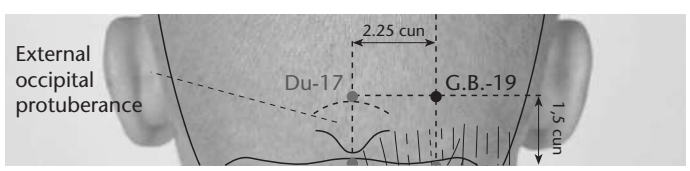
Jade Pillow YUZHEN BL-9









Location

2.5 cun superior to the posterior hairline and 1.3 cun lateral to the midline or ➞ **Du-17** (directly superior to the external occipital protuberance).

How to find

To locate **BL-9,** ➞ **Du-17** is a good reference point, located on the midline, in the depression directly superior to the upper border of the external occipital protuberance (➞ 3.1.5). From there, measure 1.3 cun in a lateral direction to locate **BL-9**, which is generally located on an imaginary vertical line through ➞ **BL-10. Or:** Locate the posterior hairline (often not very accurate ➞ 3.1.5) and, on the midline, measure 2.5 cun in a superior direction, then 1.3 cun towards lateral.
Located on the same level are ➞ **Du-17** (midline, in the depression at the upper border of the external occipital protuberance) and ➞ **G.B.-19** (more laterally, on a vertical line through ➞ **G.B.-20**).

Needling

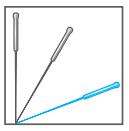
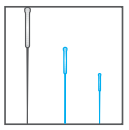
Transversely (subcutaneously) 0.5–1 cun. Moxibustion possible.

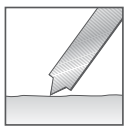
Actions/Indications

- Expels Wind and Cold
- Opens the channel and *luo* vessels, alleviates pain
- Benefits the eyes and nose

Special features

In Qigong practice, **BL-9** plays an important role as one of the three gates (*san guan*).



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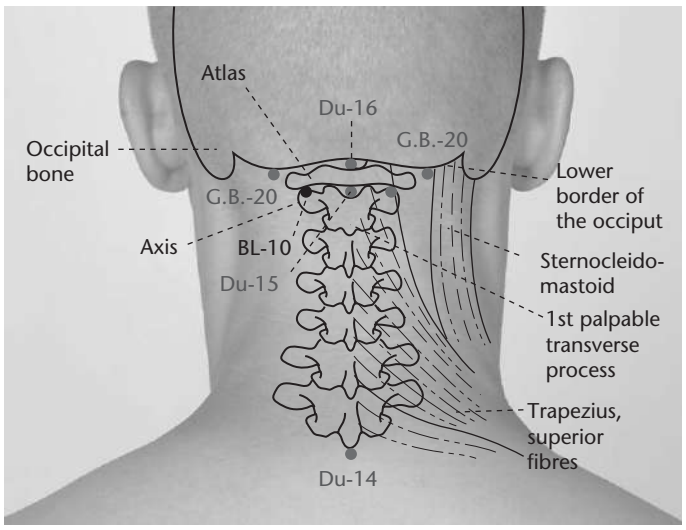
BL-10 *Heavenly Pillar* TIANZHU

Location

Approximately 1.3 cun lateral to → **Du-15**, where the trapezius muscle inserts on the lower border of the occiput, close to where the major occipital nerve emerges.

How to find

With the patient's head in an upright and relaxed position, first locate → **G.B.-20** below the lower border of the occiput and between the insertions of the sternocleidomastoid and trapezius muscles. From there, palpate in a medial and inferior direction at a 45° angle, until the finger comes to a halt against the bulge of the trapezius muscle. This is the location of **BL-10**. For reference: If the practitioner places their left middle finger on → **G.B.-20**, the (shorter) index finger will be pointing to **BL-10**. Located on the same level is → **Du-15** (approximately 1.3 cun lateral to the midline and superior to the axis (first palpable spinous process)).

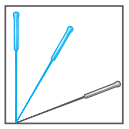


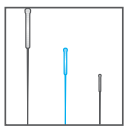
Needling

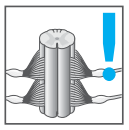
0.5–1 cun vertically or slightly obliquely in a dorsal direction. Caution: Do not needle in a superior direction.

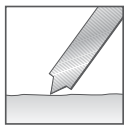
Actions/Indications

- Regulates the Qi, calms Wind and the *shen*, benefits the head and sensory orifices
- Opens the channel
- Strengthens the lower back
- Expels Wind



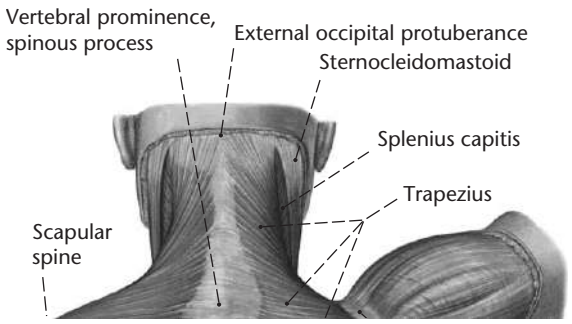


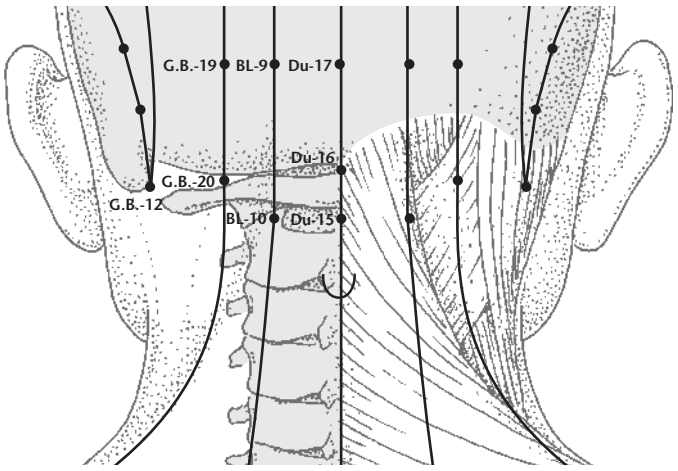




Special features

Window of Heaven point. Important point for expelling (internal and external) Wind. In contrast to → **G.B.-20**, **BL-10** is used in clinical practice mainly for pacifiying internal Wind.





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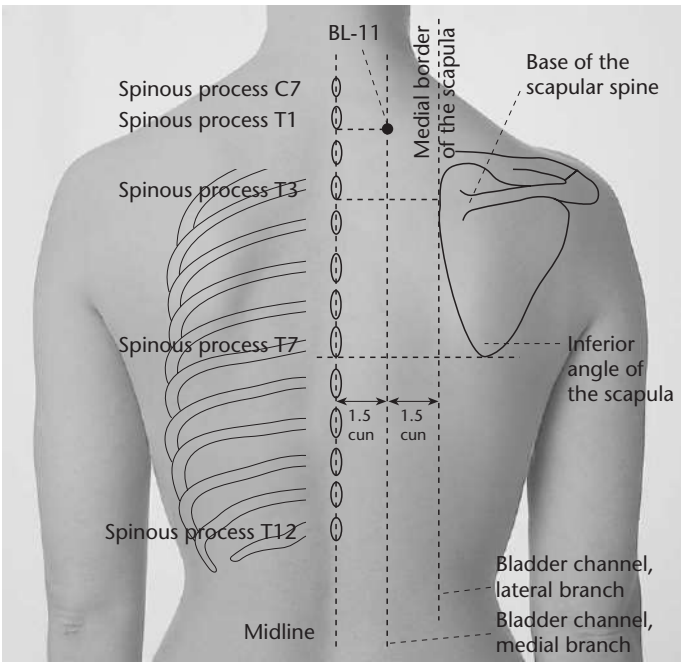
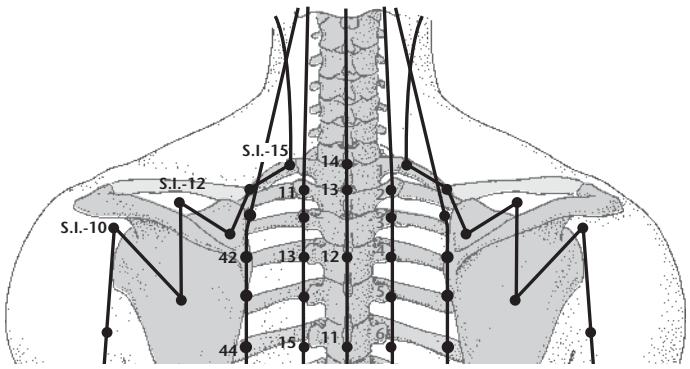
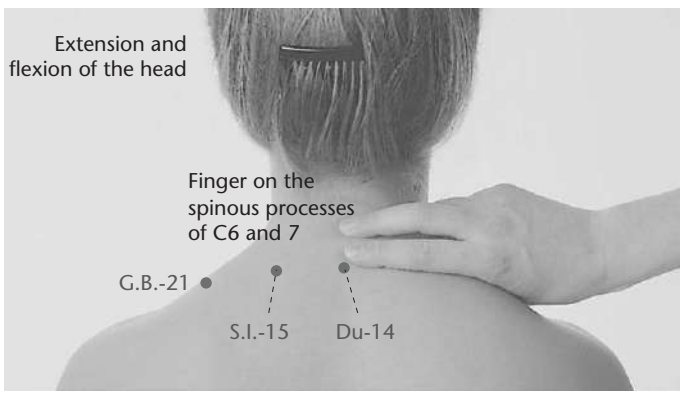
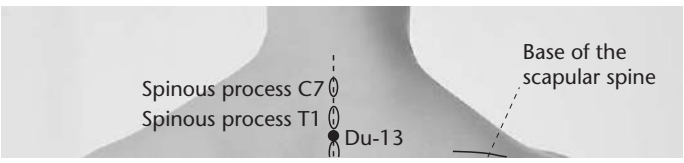
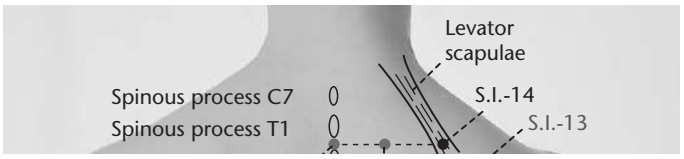
Great Shuttle DAZHU BL-11











Location

1.5 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 1st thoracic vertebra (T1, with hanging shoulders on the level of the acromion).

How to find

First, locate the spinous process of C7 (→ 3.4.1). The next spinous process inferior to this belongs to the T1. Locate **BL-11** 1.5 cun lateral to the lower border of T1, at the highest point of the paraspinal musculature.

Located on the same level are → **Du-13** (on the midline), a point of → **Ex-B-2** (0.5 cun lateral to the midline) and → **S.I.-14** (3 cun lateral to the midline).

Needling

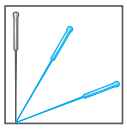
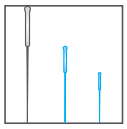
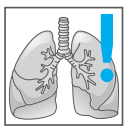
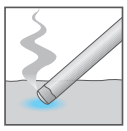
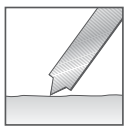
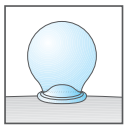
0.5–1 cun obliquely towards the spine or transversely (subcutaneously). Caution: Pneumothorax.

Actions/Indications

- Expels pathogenic factors (Wind-Heat)
- Regulates the Lung Qi
- Opens the channel, benefits the bones and joints

Special features

Hui-meeting point with the bones; meeting point with the S.I. channel, according to some authors also with the T.B., G.B. channels and the *du mai*; Sea of Blood point.

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BL-12 *Wind Gate* FENGMEN

Location

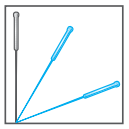
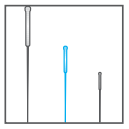
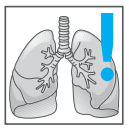
1.5 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 2nd thoracic vertebra (T2).

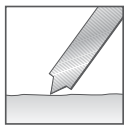
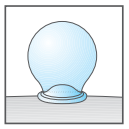
How to find

First, locate the spinous process of C7 (→ 3.4.1). From there, count down two spinous processes to the lower border of the spinous process of T2. Measure 1.5 cun laterally to locate **BL-12** on the highest point of the paraspinal musculature.
Located on the same level are a point of → **Ex-B-2** (0.5 cun lateral to the midline), → **BL-41** (3 cun lateral to the midline) and → **S.I.-13** (on the scapula, on the medial end of the scapular spine).

Needling

0.5–1 cun obliquely towards the spine. In clinical practice, this point is often needled transversely (subcutaneously) towards the spine. This allows the patient to lie in a supine position during needle retention (the needles can be secured with tape). Caution: Pneumothorax. For acute febrile colds, use reducing needling techniques or cupping. For susceptibility to catching colds, use tonifying needling techniques and/or moxibustion.

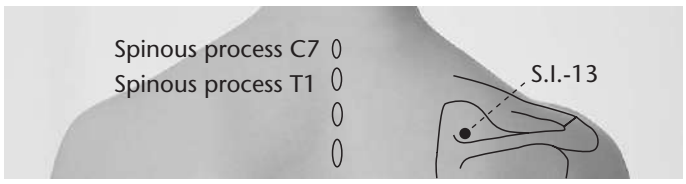



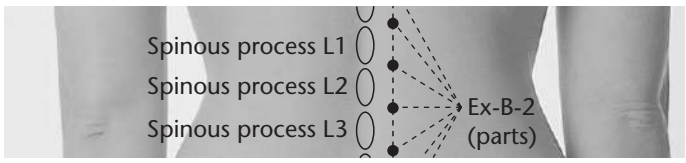
Actions/Indications

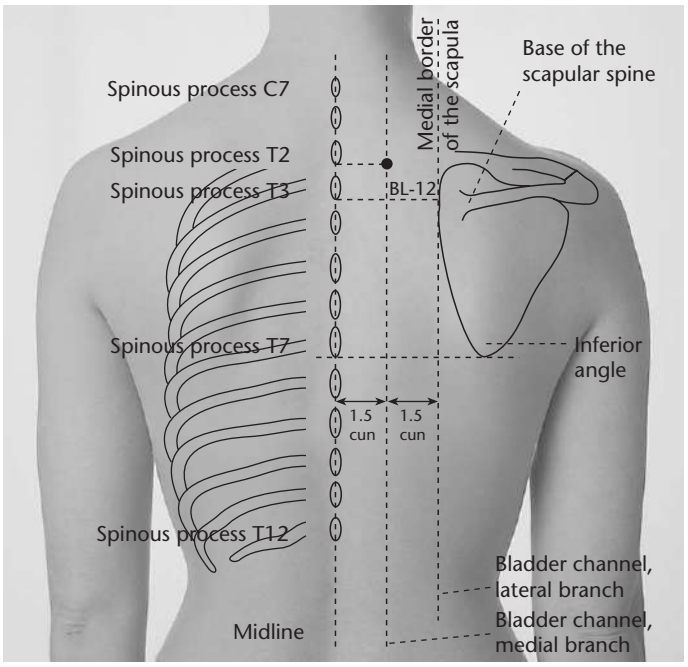
- Expels (external) Wind and releases the Exterior
- Spreads and descends the Lung Qi
- Tonifies the defensive Qi (*wei qi*), stabilises the Exterior
- Benefits the nose
- Opens the channel

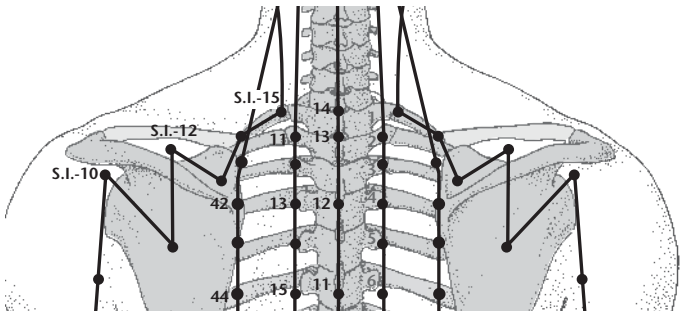
Special features

Meeting point with the *du mai*. Important point for expelling pathogenic factors, especially Wind.









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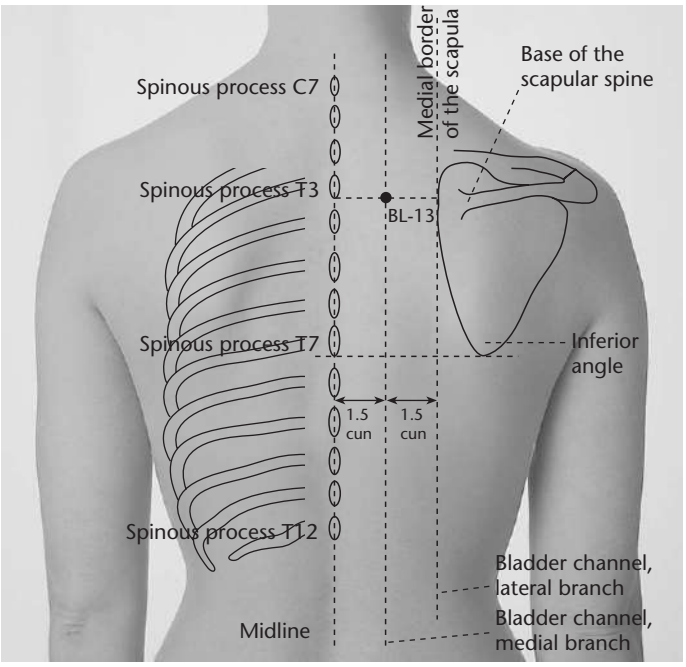
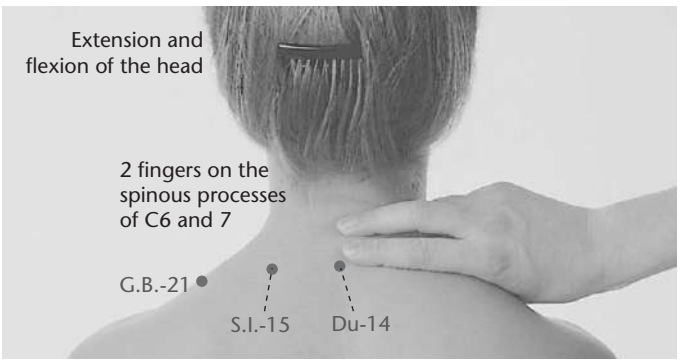
Lung Shu FEISHU BL-13





Location

1.5 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 3rd thoracic vertebra (T3).

How to find

First, locate the spinous process of C7 (→ 3.4.1). From there, count down three spinous processes to the lower border of the spinous process of the T3. Measure 1.5 cun laterally to locate **BL-13** on the highest point of the paraspinal musculature. **Or:** With the patient seated and their arms hanging down, the spinous process of the T3 is generally on the level of the medial end of the scapular spine (→ 3.4.2). Locate **BL-13** 1.5 cun lateral to the midline.

Located on the same level are → **Du-12** (on the midline), a point of → **Ex-B-2** (0.5 cun lateral to the midline) and **BL-42** (3 cun lateral to the midline).

Needling

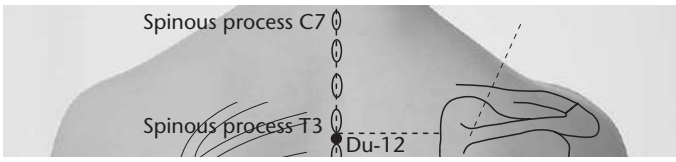
0.5–1 cun obliquely towards the spine. In clinical practice, this point is often needled transversely (subcutaneously) towards the spine. This allows the patient to lie in a supine position during needle retention (the needles can be secured with tape). Caution: Pneumothorax. For chronic Lung Qi deficiency without Heat signs, use moxibustion.

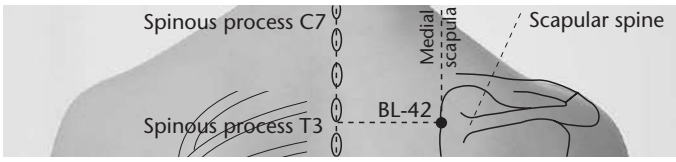
Actions/Indications

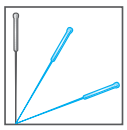
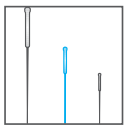
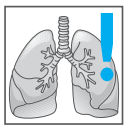
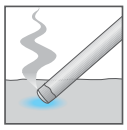
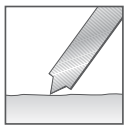
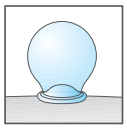
- Tonifies, spreads and descends the Lung Qi, nourishes the Lung Yin
- Clears Heat from the Lung
- Releases the Exterior
- Opens the channel, alleviates pain

Special features

Back-*shu* point of the lung. Major point for all disorders of the Lung (Lung deficiency and excess patterns).





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BL-14 Jueyin Shu JUEYINSHU

Location

1.5 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 4th thoracic vertebra (T4).

How to find

First, locate the spinous process of C7 (→ 3.4.1). From there, count down four spinous processes to the lower border of the spinous process of T4. Measure 1.5 cun laterally to locate **BL-14** on the highest point of the paraspinal musculature. **Or:** With the patient seated and their arms hanging down, the spinous process of T3 is generally on the level of the medial end of the scapular spine (→ 3.4.2). The next spinous process in an inferior direction belongs to the T4. Locate **BL-14** 1.5 cun lateral to the midline. Located on the same level are a point of → **Ex-B-2** (0.5 cun lateral to the midline) and → **BL-43** (3 cun lateral to the midline).

Needling

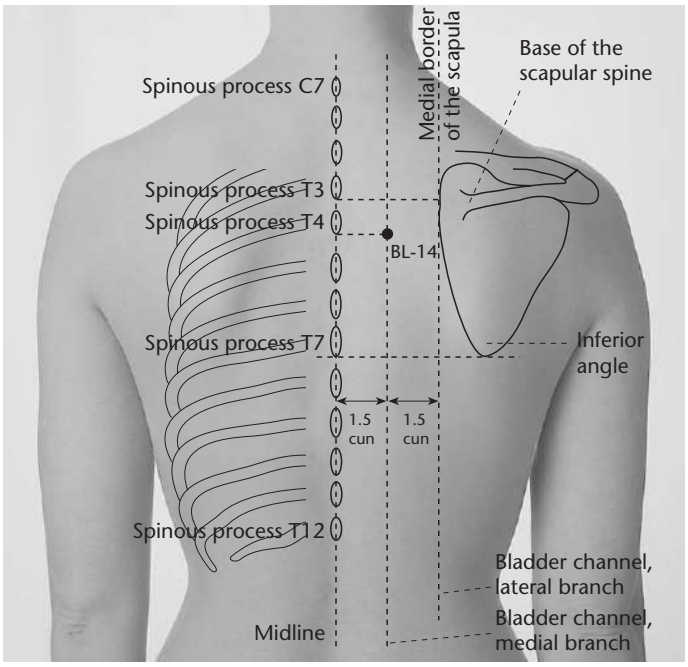
0.5–1 cun obliquely towards the spine or transversely (subcutaneously). Caution: Pneumothorax.

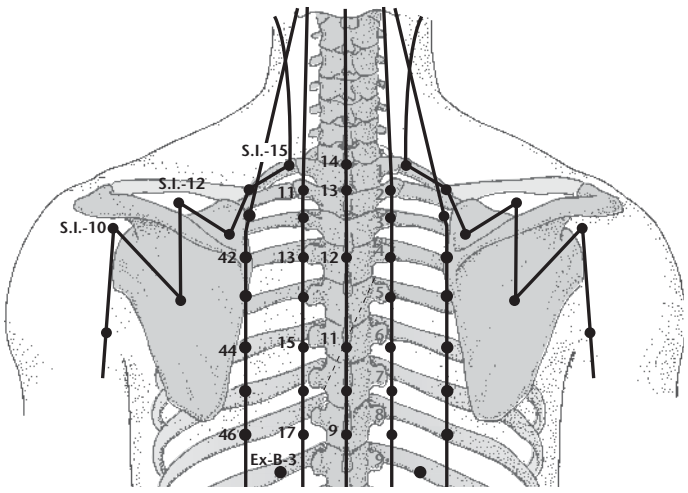
Actions/Indications

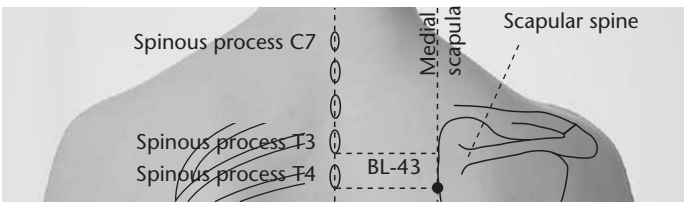
- Regulates and tonifies the Heart
- Unbinds the chest, regulates the Qi
- Calms the *shen*

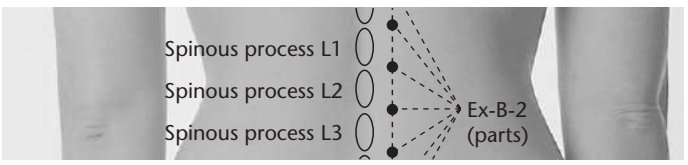
Special features

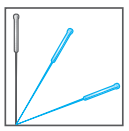
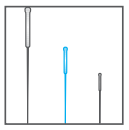
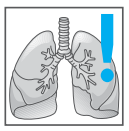
Back-*shu* point of the Pericardium

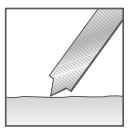
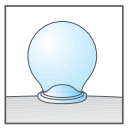








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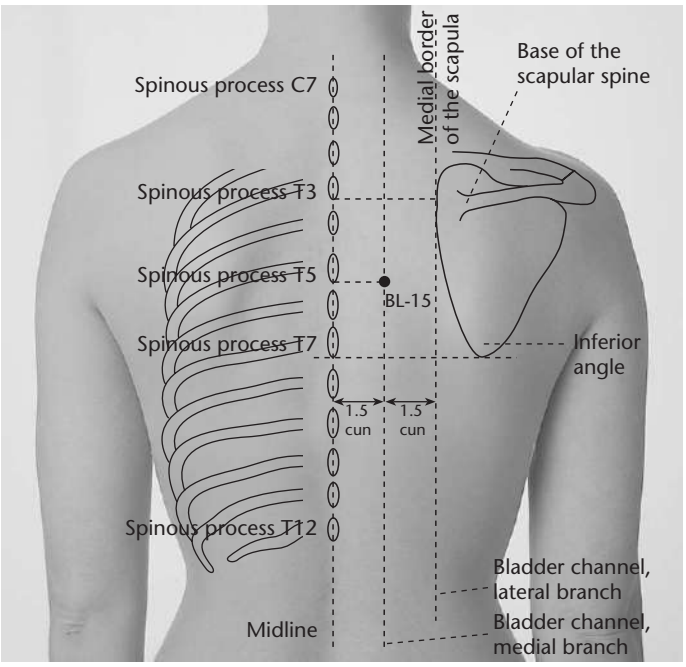
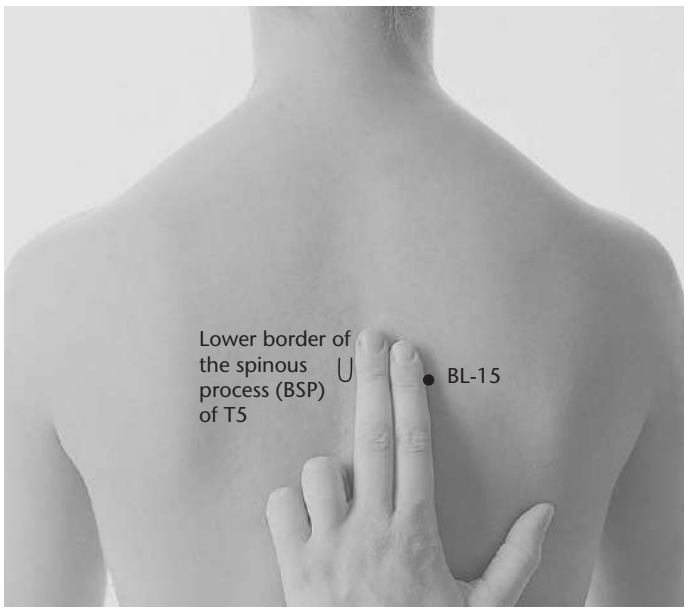
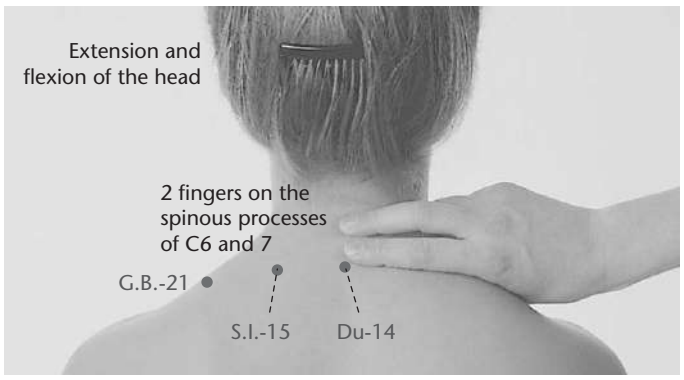
Heart Shu XINSHU BL-15







Location

1.5 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 5th thoracic vertebra (T5).

How to find

First, locate the spinous process of C7 (→ 3.4.1). From there, count down five spinous processes to the lower border of the spinous process of T5. Measure 1.5 cun laterally to locate **BL-15** on the highest point of the paraspinal musculature. **Or:** With the patient seated and their arms hanging down, the spinous process of the T3 is generally on the level of the easily palpable medial end of the scapular spine (→ 3.4.2). From there, count down two spinous processes in an inferior direction to the T5. Locate **BL-15** 1.5 cun lateral to the midline.

Located on the same level are → **Du-11** (on the midline), a point of → **Ex-B-2** (0.5 cun lateral to the midline) and → **BL-44** (3 cun lateral to the midline).

Needling

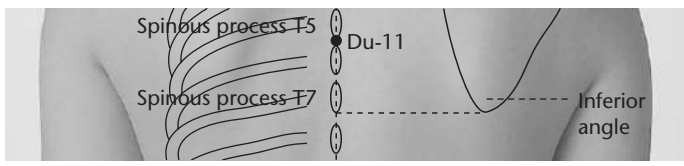
0.5–1 cun obliquely towards the spine. In clinical practice, this point is often needled transversely (subcutaneously) towards the spine. This allows the patient to lie in a supine position during needle retention (the needles can be secured with tape). Caution: Pneumothorax.

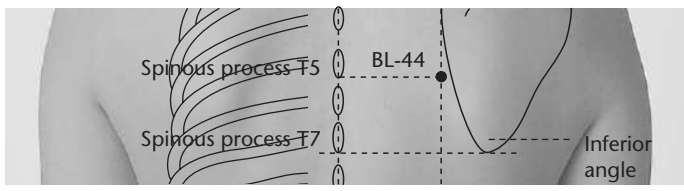
Actions/Indications

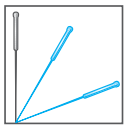
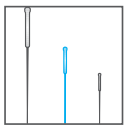
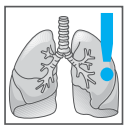
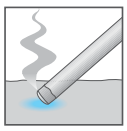
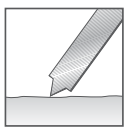
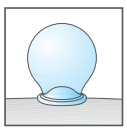
- Tonifies and nourishes the Heart, regulates the Heart Qi, unbinds the chest and removes Blood stasis, calms the *shen*, clears Fire, moves Qi locally and along the channel pathway: for example, for disorders of the thoracic spine and intercostal region

Special features

Back-*shu* point of the Heart





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BL-16 *Governing* Shu DUSHU

Location

1.5 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 6th thoracic vertebra (T6).

How to find

First, locate the spinous process of the C7 (→ 3.4.1). From there, count down six spinous processes to the lower border of the spinous process of T6. Measure 1.5 cun laterally to locate **BL-16** on the highest point of the paraspinal musculature. **Or:** With the patient standing and their arms hanging down, the spinous process of T7 is level with the inferior angle of the scapula (→ 3.4.2). The next spinous process in a superior direction belongs to T6. Locate **BL-16** 1.5 cun lateral to the midline.
Located on the same level are → **Du-10** (on the midline), a point of → **Ex-B-2** (0.5 cun lateral to the midline) and → **BL-45** (3 cun lateral to the midline).

Needling

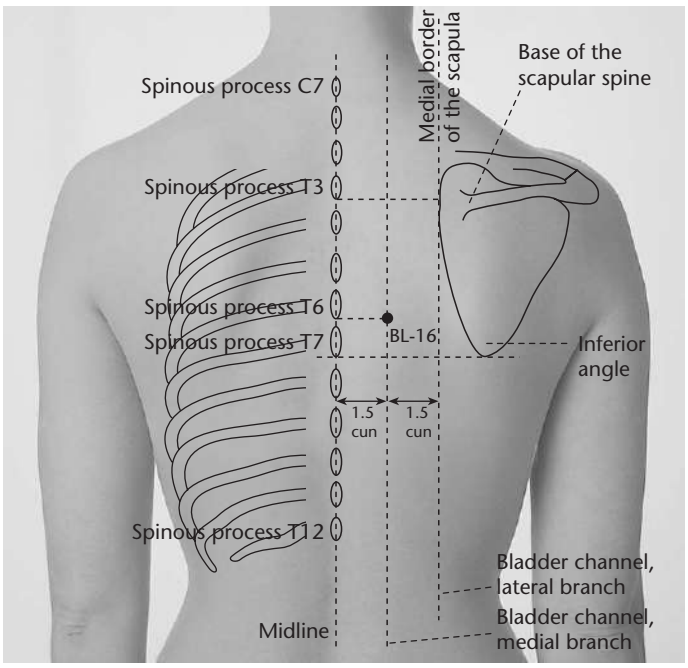
0.5–1 cun obliquely towards the spine or transversely (subcutaneously). Caution: Pneumothorax.

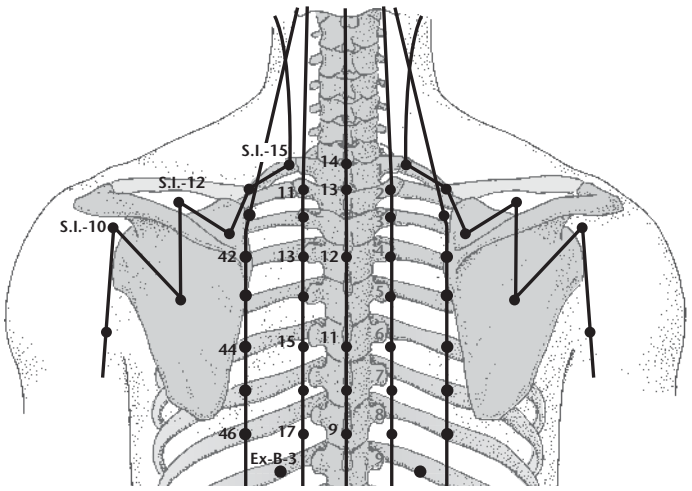
Actions/Indications

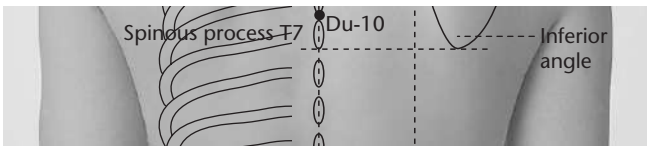
- Unbinds the chest and regulates the Qi movement in the thorax and the abdomen

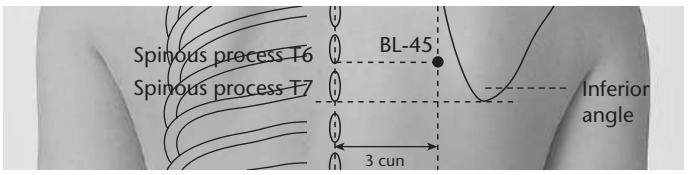
Special features

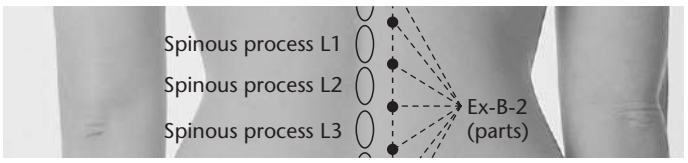
Despite its designation as Back-*shu* point of the *du mai*, this point is hardly mentioned in classical or modern texts.

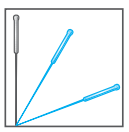


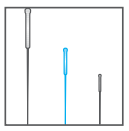


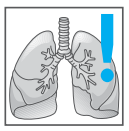


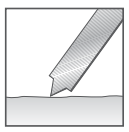


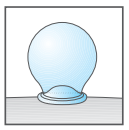












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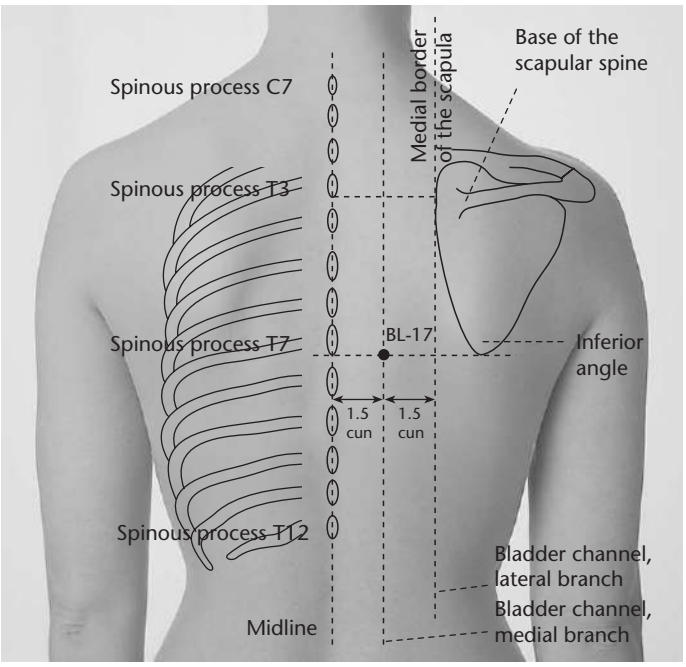
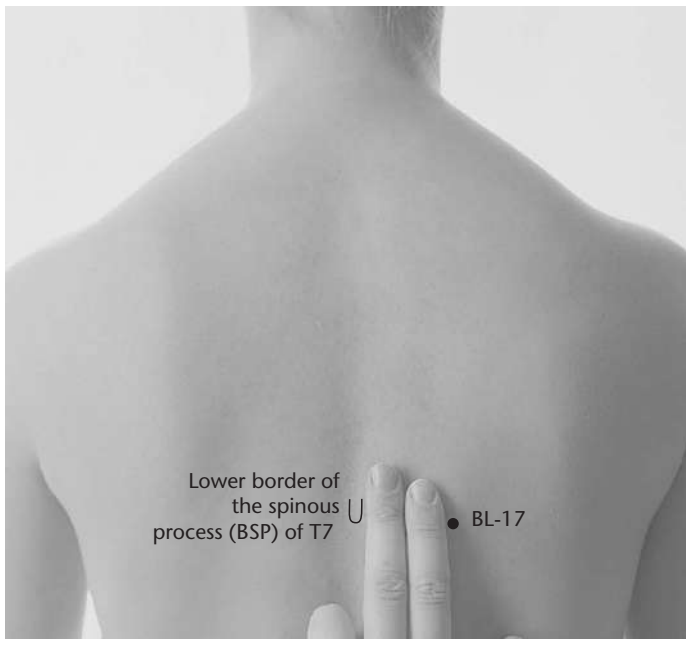
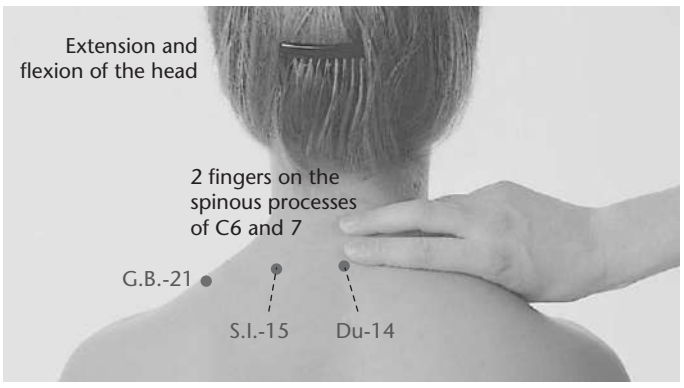
Diaphragm Shu GESHU BL-17







Location

1.5 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 7th thoracic vertebra (T7).

How to find

The spinous process of the T7 is approximately on the level of the inferior angle of the scapula (→ 3.4.2). **BL-17** is located on the level of the lower border of its spinous process and 1.5 cun lateral to the midline at the highest point of the paraspinal musculature. **Or:** Use the spinous process of the T3 for reference (generally on the level of the medial end of the scapular spine) (→ 3.4.2). **Or:** Use C7 as a reference point (→ 3.4.1).
Located on the same level are → **Du-9** (on the midline), a point of → **Ex-B-2** (0.5 cun lateral to the midline) and → **BL-46** (3 cun lateral to the midline).

Needling

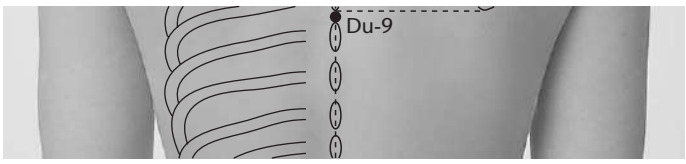
0.5–1 cun obliquely towards the spine. In clinical practice, this point is often needled transversely (subcutaneously) towards the spine. This allows the patient to lie in a supine position during needle retention (the needles can be secured with tape). Caution: Pneumothorax.

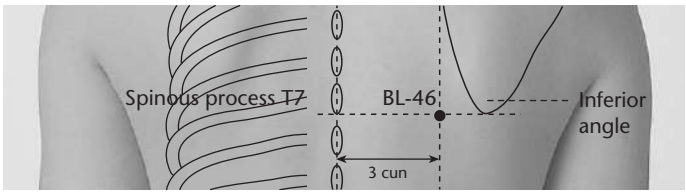
Actions/Indications

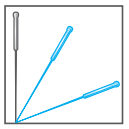
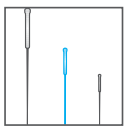
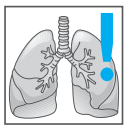
- Cools Blood-Heat, stops bleeding, removes Blood stasis, nourishes and harmonises Blood (and Yin)
- Regulates the diaphragm, descends counterflow Qi
- Moves Qi locally and along the channel pathway

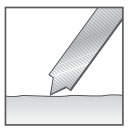
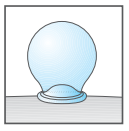
Special features

Back-*shu* point of the Diaphragm, *hui*-meeting point of the Blood.





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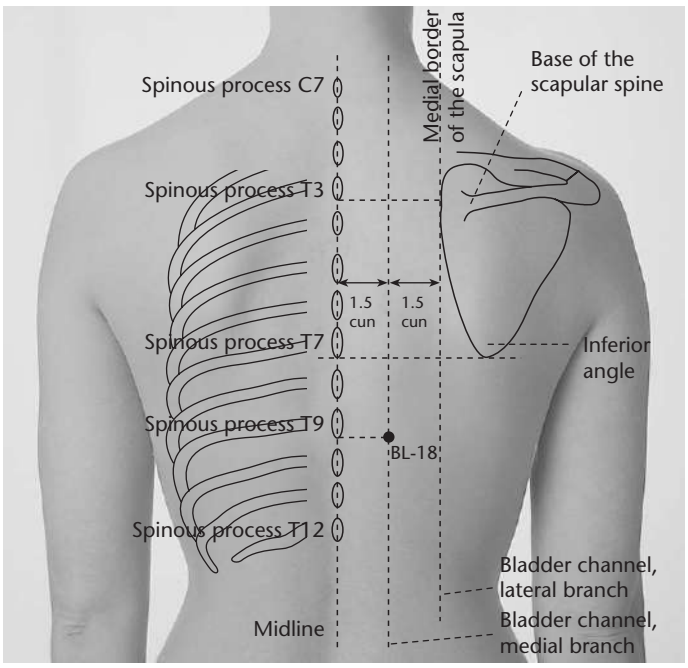
BL-18 *Liver* Shu GANSHU

Location

1.5 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 9th thoracic vertebra (T9).

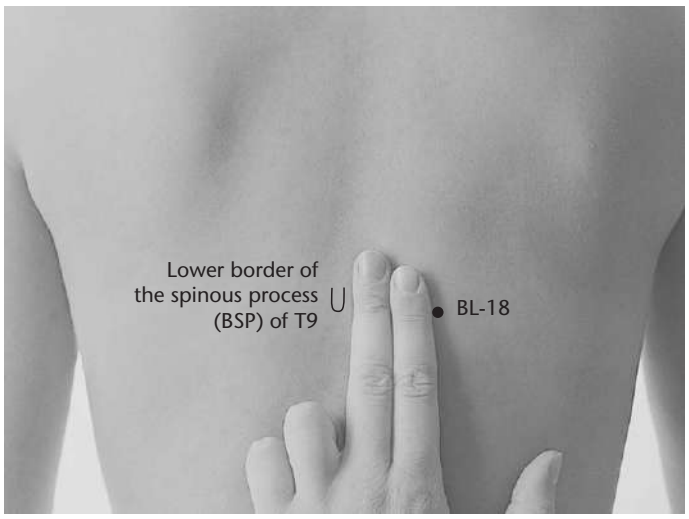
How to find

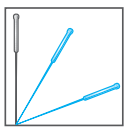
In a standing position with the arms hanging down, the spinous process of T7 is approximately on the level of the inferior angle of the scapula (→ 3.4.2). From there, count down two spinous processes to the spinous process of T9. **BL-18** is located on the level of the lower border of its spinous process and 1.5 cun lateral to the midline at the highest point of the paraspinal musculature. **Or:** Use the C7 as a reference point (→ 3.4.1). From there, count down nine spinous processes to T9 and locate **BL-18** 1.5 cun lateral to the lower border of its spinous process.
Located on the same level are → **Du-8** (on the midline), a point of → **Ex-B-2** (0.5 cun lateral to the midline) and → **BL-47** (3 cun lateral to the midline).

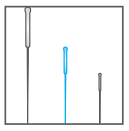


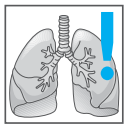
Needling

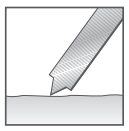
0.5–1 cun obliquely towards the spine. In clinical practice, this point is often needled transversely (subcutaneously) towards the spine. This allows the patient to lie in a supine position during needle retention (the needles can be secured with tape). Caution: Pneumothorax.

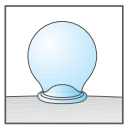










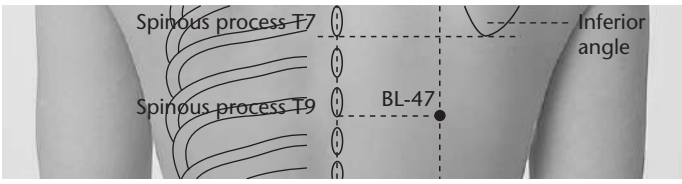


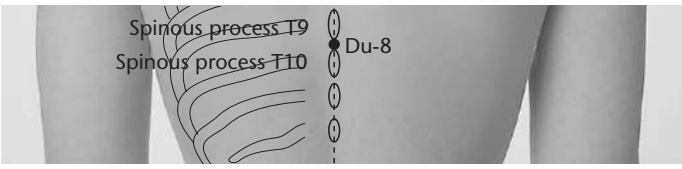
Actions/Indications

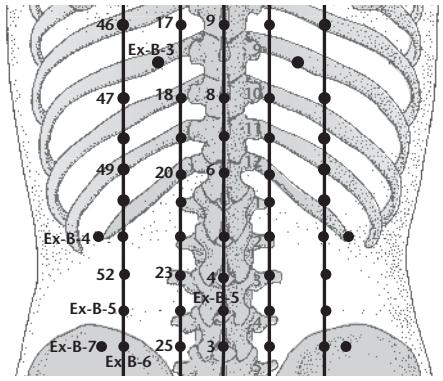
- Spreads Liver Qi, cools Fire, clears Damp-Heat, regulates and nourishes Liver Blood, subdues (internal) Wind
- Benefits the eyes
- Benefits the sinews

Special features

Back-*shu* point of the Liver







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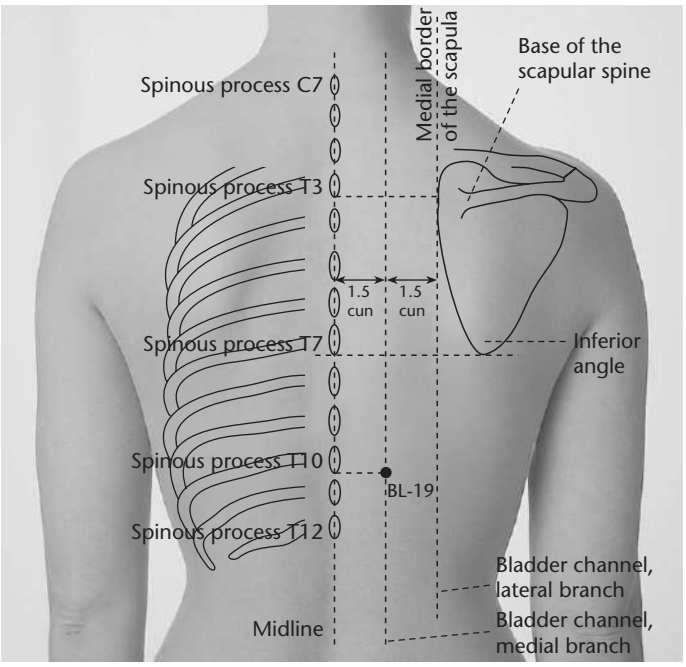
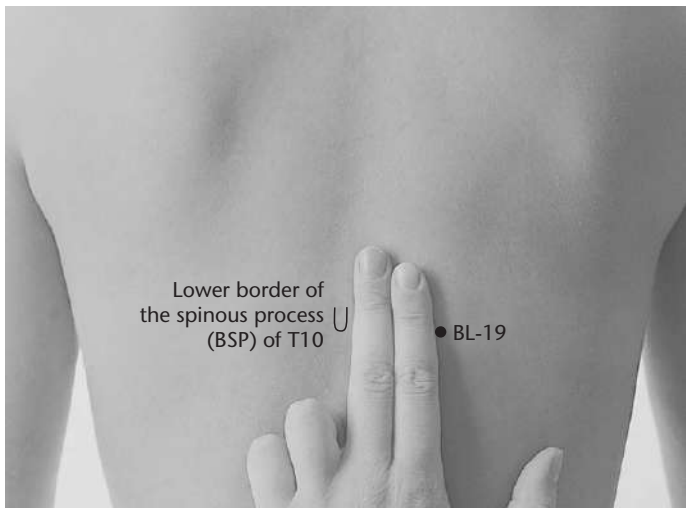
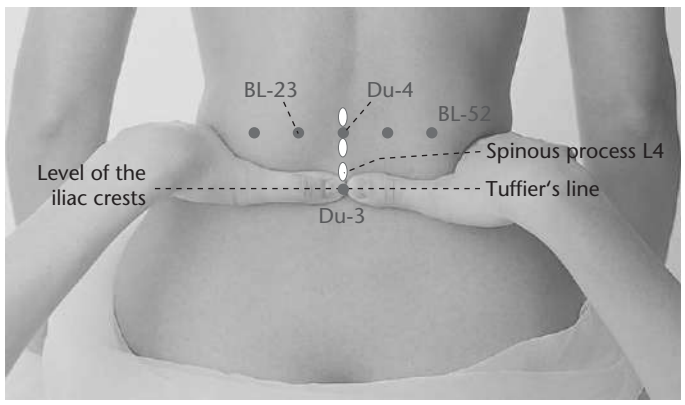
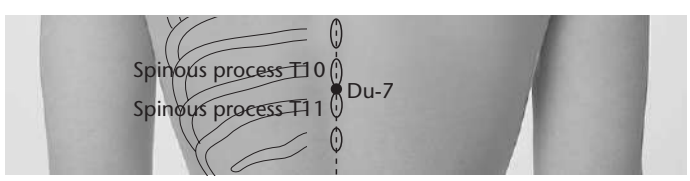
Gall Bladder Shu DANSHU BL-19









Location

1.5 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 10th thoracic vertebra (T10).

How to find

In a standing position with the patient's arms hanging down, the spinous process of T7 is approximately on the level of the inferior angle of the scapula (→ 3.4.2). From there, count down three spinous processes to the spinous process of T10. **BL-19** is located on the level of the lower border of its spinous process and 1.5 cun lateral to the midline at the highest point of the paraspinal musculature. **Or:** Use C7 as a reference point (→ 3.4.1). From there, count down 10 spinous processes to T10 and locate **BL-19** 1.5 cun lateral to the lower border of its spinous process. **Or:** Use the lumbar spine as a reference point (→ 3.4.3).
Located on the same level are → **Du-7** (on the midline), a point of → **Ex-B-2** (0.5 cun lateral to the midline) and → **BL-48** (3 cun lateral to the midline).

Needling

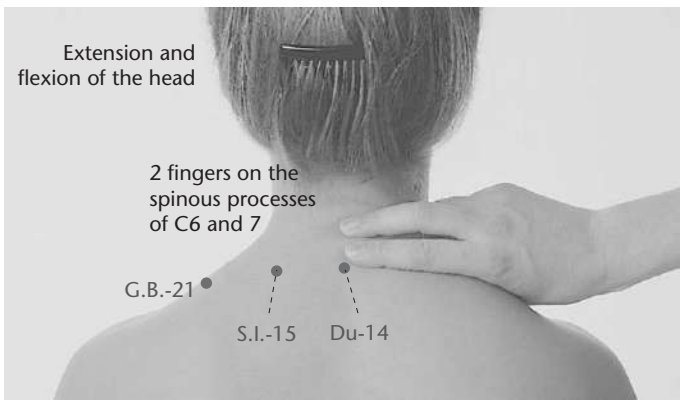
0.5–1 cun obliquely towards the spine. In clinical practice, this point is often needled transversely (subcutaneously) towards the spine. This allows the patient to lie in a supine position during needle retention (the needles can be secured with tape). Caution: Pneumothorax.

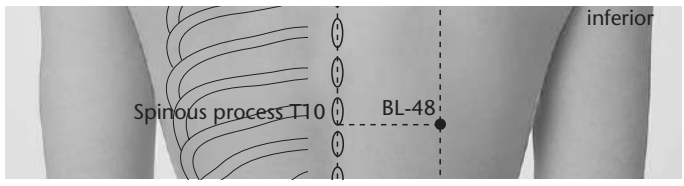
Actions/Indications

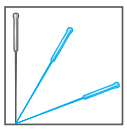
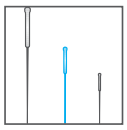
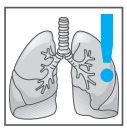
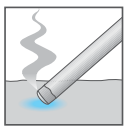
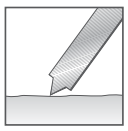
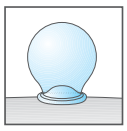
- Clears Damp-Heat from the Liver and Gall Bladder
- Expels pathogenic factors from the *shaoyang*
- Tonifies and regulates the Gall Bladder Qi
- Unbinds the chest and relaxes the pathway of the channel

Special features

Back-*shu* point of the Gall Bladder. Important point for clearing Damp-Heat from the Liver and Gall Bladder.





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BL-20 *Spleen* Shu PISHU

Location

1.5 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 11th thoracic vertebra (T11).

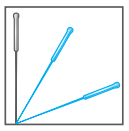
How to find

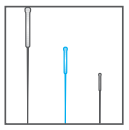
In a seated position with the arms hanging down, the spinous process of T7 is approximately on the level of the inferior angle of the scapula (→ 3.4.2). From there, count down four spinous processes to the spinous process of T11. **BL-20** is located on the level of the lower border of its spinous process and 1.5 cun lateral to the midline at the highest point of the paraspinal musculature. **Or:** Locate the articulation of the most inferior rib (T12) and palpate in a superior direction to T11. **Or:** Use the lumbar spine for reference (→ 3.4.3).

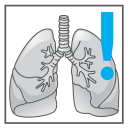
Located on the same level are → **Du-6** (on the midline), a point of → **Ex-B-2** (0.5 cun lateral to the midline) and **BL-49** (3 cun lateral to the midline).

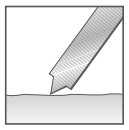
Needling

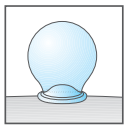
0.5–1 cun obliquely towards the spine. In clinical practice, this point is often needled transversely (subcutaneously) towards the spine. This allows the patient to lie in a supine position during needle retention (the needles can be secured with tape). Caution: Pneumothorax.









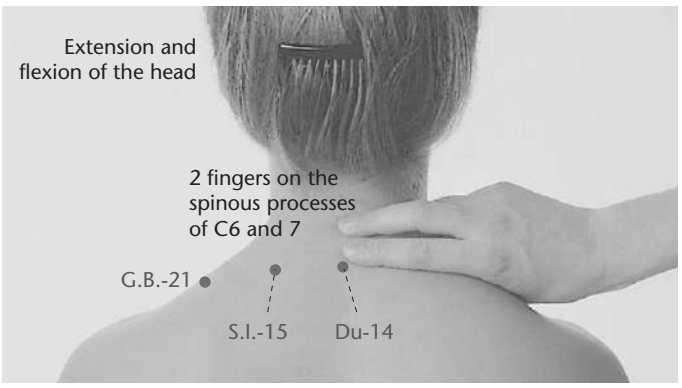


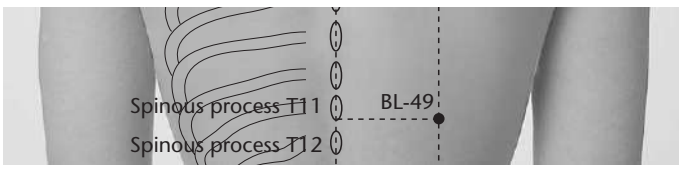
Actions/Indications

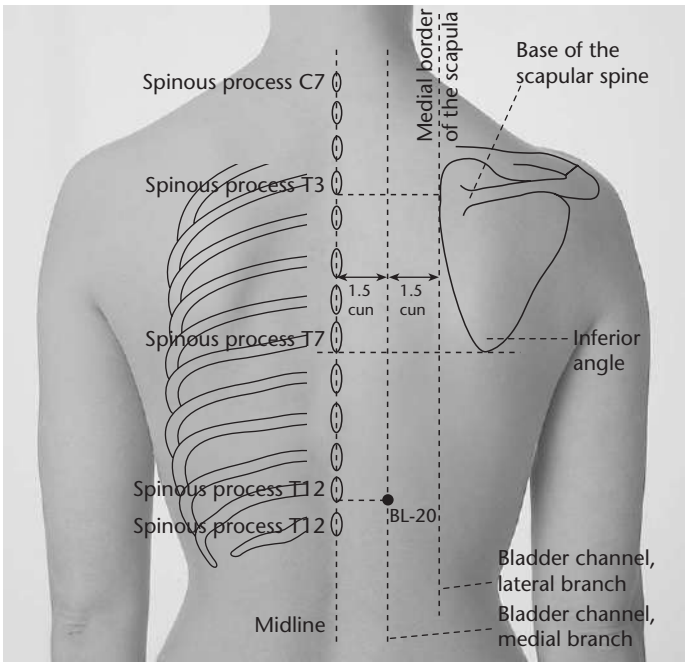
- Tonifies the Spleen Qi and Yang, regulates Qi in the Middle, raises Qi
- Transforms Dampness
- Holds and nourishes Blood

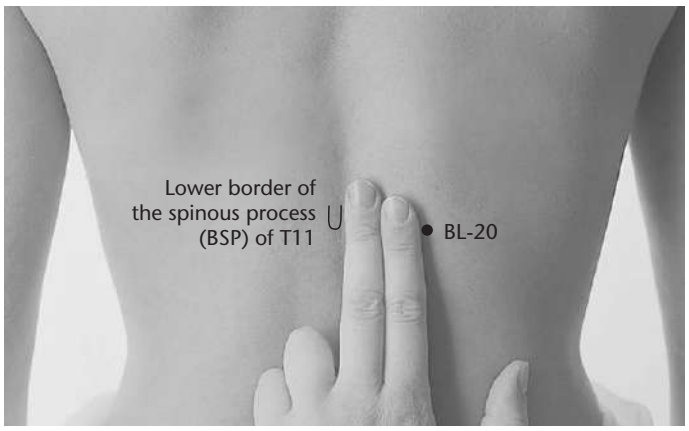
Special features

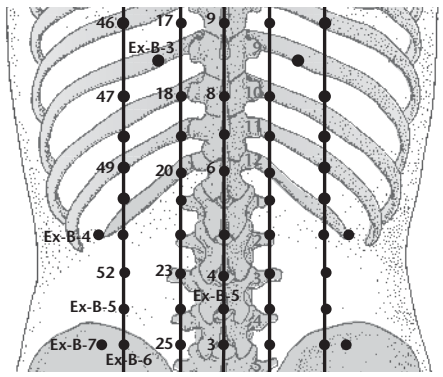
Back-*shu* point of the spleen. Major point for tonifying the Middle, especially for Spleen deficiency syndromes. Use moxibustion or tonifying needle techniques for nourishing the Blood.

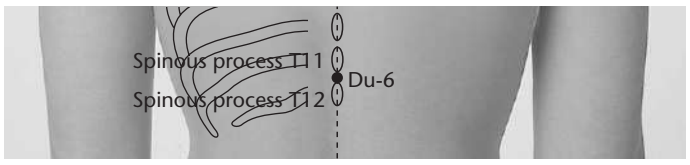


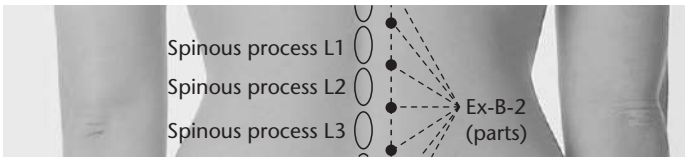












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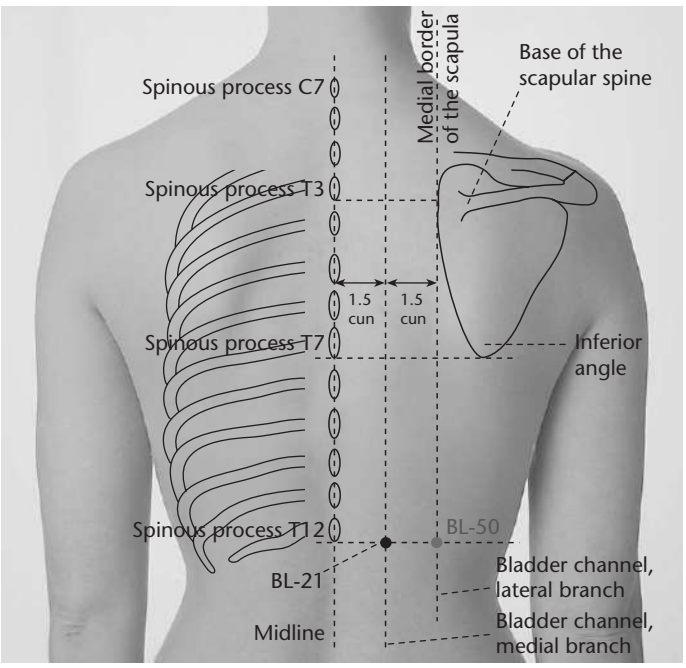
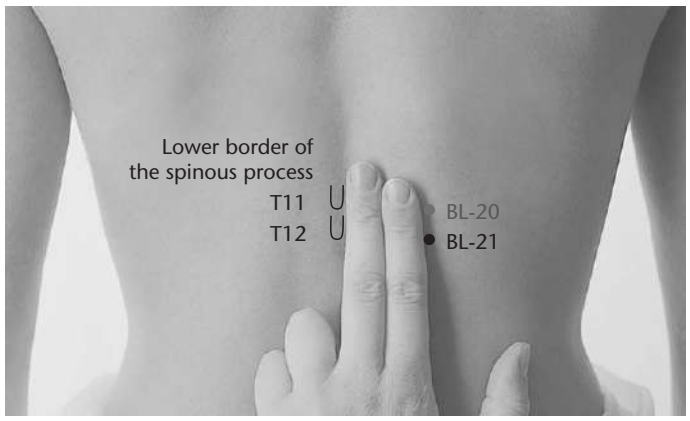
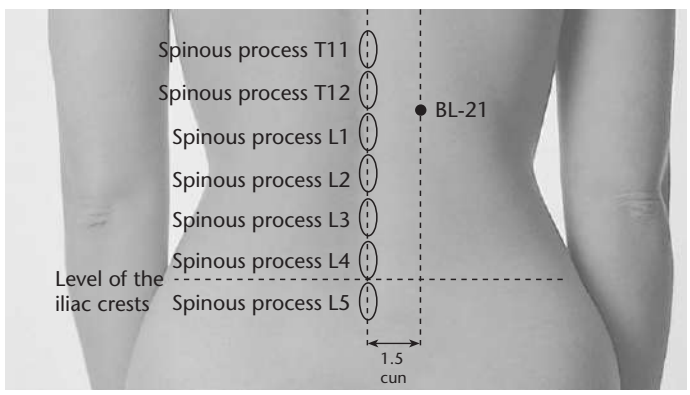
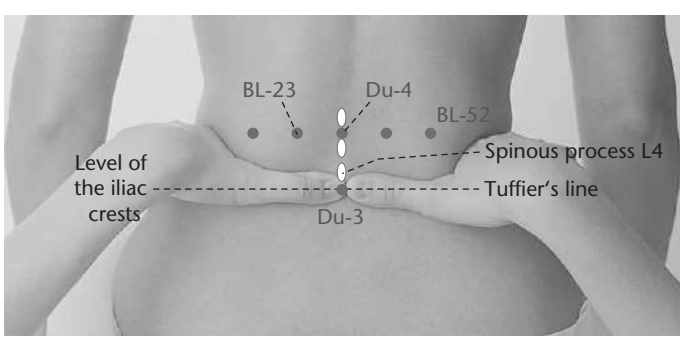
Stomach Shu WEISHU BL-21









Location

1.5 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 12th thoracic vertebra (T12).

How to find

In a seated position with the arms hanging down, the spinous process of T7 is approximately on the level of the inferior angle of the scapula (→ 3.4.2). From there, count down five spinous processes to the spinous process of T12. **BL-21** is located on the level of the lower border of its spinous process and 1.5 cun lateral to the midline at the highest point of the paraspinal musculature. **Or:** Palpate for the articulation of the most inferior rib with T12 and locate **BL-21** 1.5 cun lateral to the lower border of its spinous process. **Or:** Use the lumbar spine for reference (→ 3.4.3). Located on the same level are a point of → **Ex-B-2** (0.5 cun lateral to the midline) and → **BL-50** (3 cun lateral to the midline).

Needling

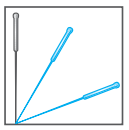
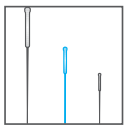
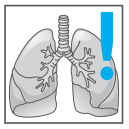
0.5–1 cun obliquely towards the spine. In clinical practice, this point is often needled transversely (subcutaneously) towards the spine. This allows the patient to lie in a supine position during needle retention (the needles can be secured with tape). Caution: Pneumothorax.

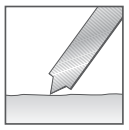
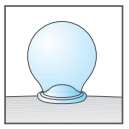
Actions/Indications

- Regulates the Stomach, descends counterflow Qi, harmonises the Middle Burner, eliminates Dampness and food stagnation
- Opens the channel

Special features

Back-*shu* point of the Stomach, main point for regulating any dysfunction of the Stomach.

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BL-22 San Jiao Shu SANJIAOSHU

Location

1.5 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 1st lumbar vertebra (L1).

How to find

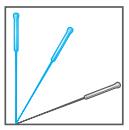
For orientation in the lumbar region (→ 3.4.3), first, determine the Tuffier's line (a line connecting the highest points of the iliac crests), which in most cases intersects with the spinous process of L4 (note: this varies depending on the patient's position → 3.4.3). From there, count upward to the lower border of the spinous process of L1 and, on this level, locate **BL-22** 1.5 cun in a lateral direction, on the highest point of the paraspinal musculature. Located on the same level are → **Du-5** (on the midline), a point of → **Ex-B-2/BL-51/Ex-B-4** (0.5 cun/3 cun/3.5cun lateral of the midline).

Needling

Obliquely 0.5–1.5 cun. Caution: Kidneys.

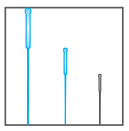
Actions/Indications

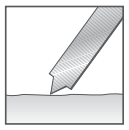
- Regulates the Triple Burner
- Opens the water passages and promotes urination
- Has an effect on the *shaoyang*

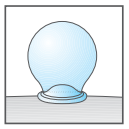


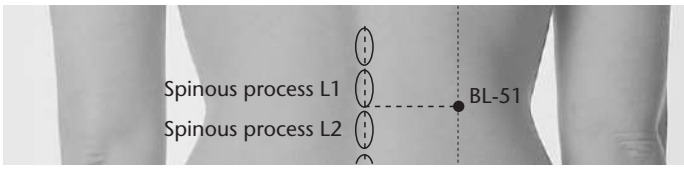
Special features

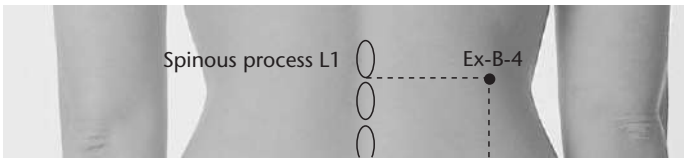
Back-*shu* point of the Triple Burner. Especially regulates the relationship between the Middle and Lower Burner.

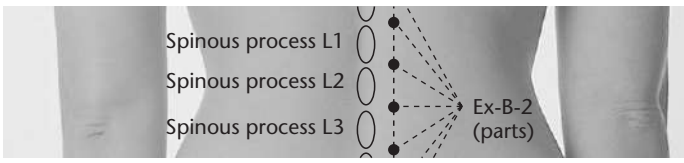


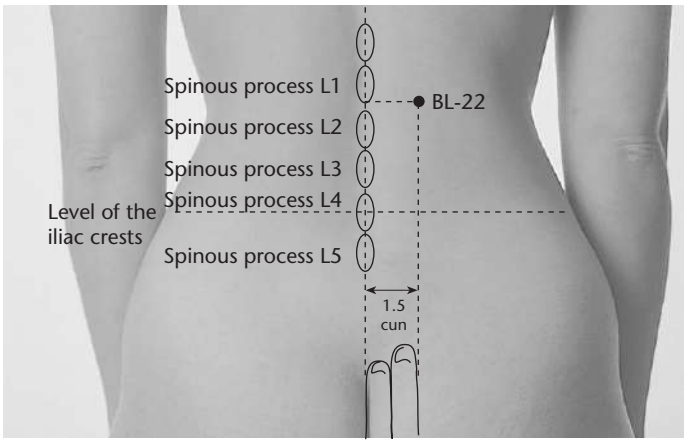


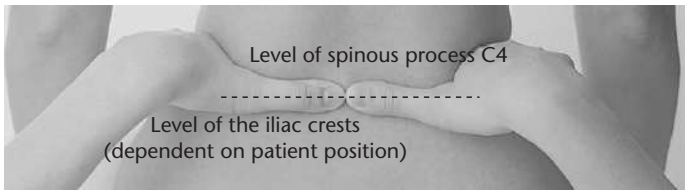


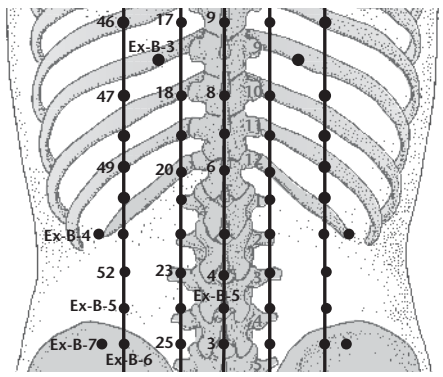


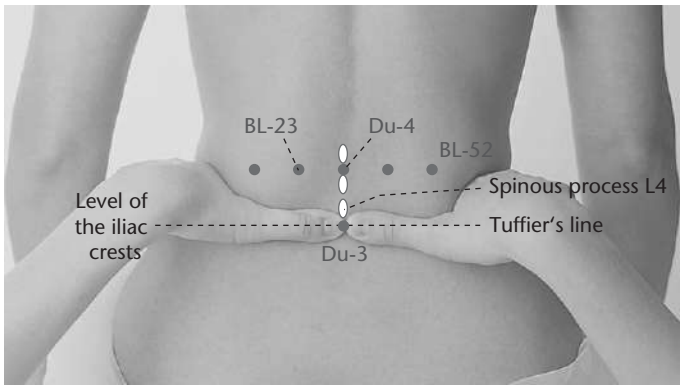


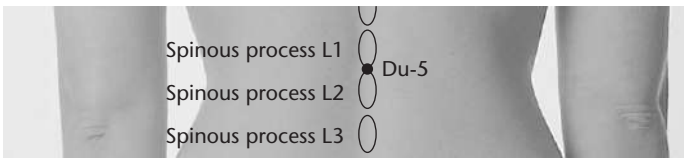












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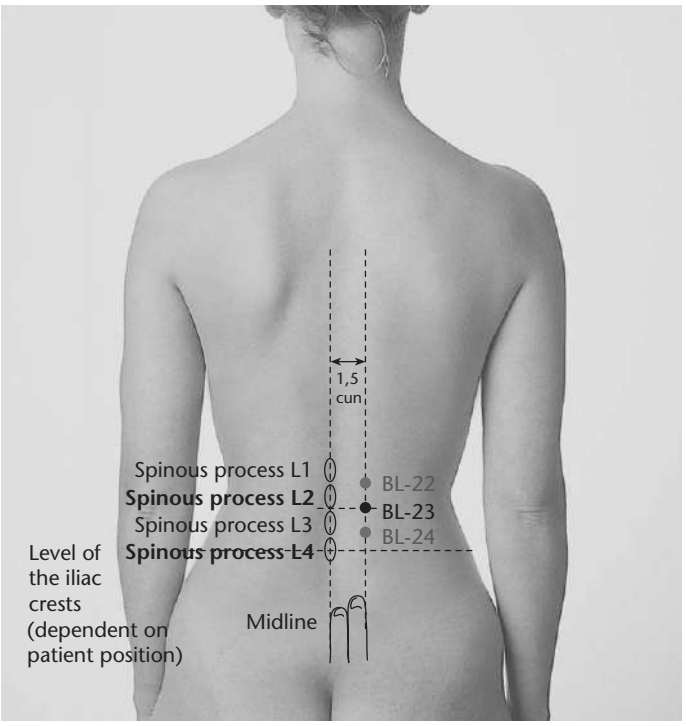
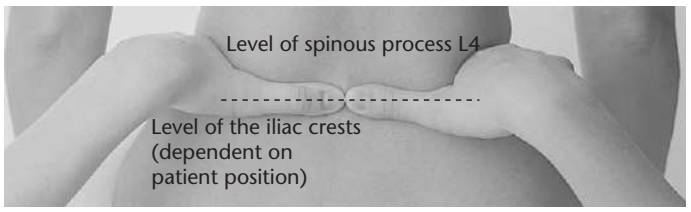
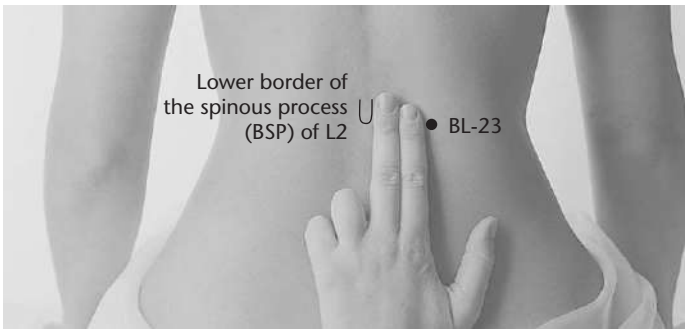
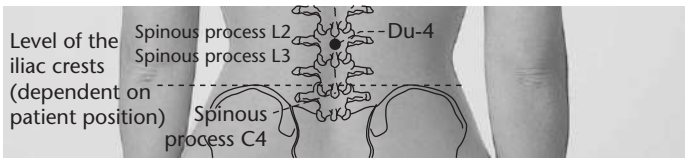
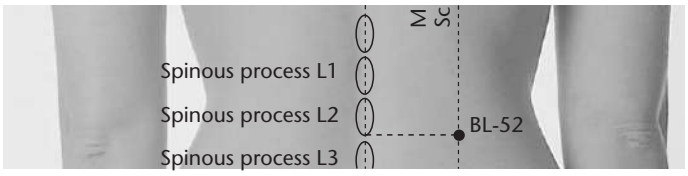
Kidney Shu SHENSHU BL-23











Location

1.5 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 2nd lumbar vertebra (L2).

How to find

For orientation in the lumbar region (→ 3.4.3), first, determine the Tuffier's line (a line connecting the highest points of the iliac crests), which in most cases intersects with the spinous process of L4 (note: this varies depending on the patient's position → 3.4.3). From there, count upward to the lower border of the spinous process of L2 and, on this level, locate **BL-23** 1.5 cun in a lateral direction, on the highest point of the paraspinal musculature. Located on the same level are → **Du-4** (on the midline), a point of → **Ex-B-2/BL-52** (0.5 cun/3 cun lateral of the midline).

Needling

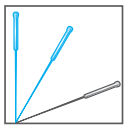
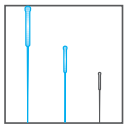
Vertically or obliquely 0.5–1.5 cun. Caution: Kidneys.

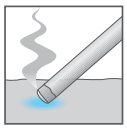
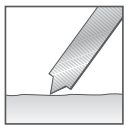
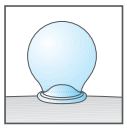
Actions/Indications

- Strengthens the Kidneys, tonifies the Kidney Qi and Yang, benefits the Essence (*jing*), nourishes the Kidney Yin
- Regulates the Lower Burner, benefits the uterus
- Benefits the bones and the marrow
- Benefits the eyes and ears
- Strengthens the lower back

Special features

Back-*shu* point of the Kidneys, according to some authors, meeting point with the *du mai*. Major point for tonifying the Kidneys. Use tonifying needle techniques for all Kidney deficiency syndromes. Moxibustion tonifies especially the Kidney Yang. **Caution**: Moxibustion is contraindicated for Kidney Yin deficiency with empty Heat (Heat in the Five Hearts (Heat in the thorax, the palms and the soles of the feet), night sweats, restlessness, often a red tongue).

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BL-24 *Sea of Qi* QIHAISHU

Location

1.5 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 3rd lumbar vertebra (L3).

How to find

For orientation in the lumbar region (→ 3.4.3), first, determine the Tuffier's line. Place both hands directly superior or lateral to the highest points of the iliac crests, joining the thumbs on the midline at the lumbar spine. In most cases, this line intersects with the spinous process of L4 (note: this varies depending on the patient's position → 3.4.3). From there, count upward to the lower border of the spinous process of L3 and, on this level, locate **BL-24** 1.5 cun in a lateral direction.

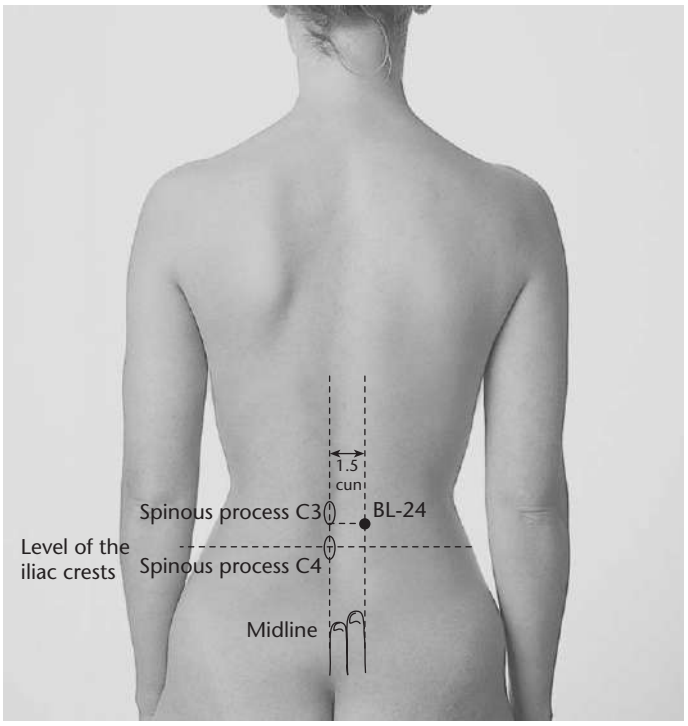
Located on the same level are a point of → **Ex-B-2** (0.5 cun lateral to the midline) and → **Ex-B-5** (*xiazhishi*; 3 cun lateral to the midline according to the WHO location notes).

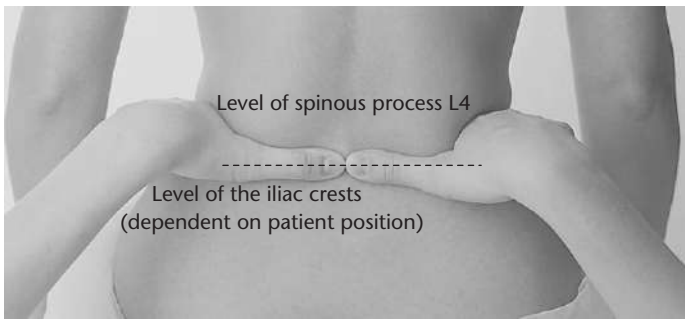
Needling

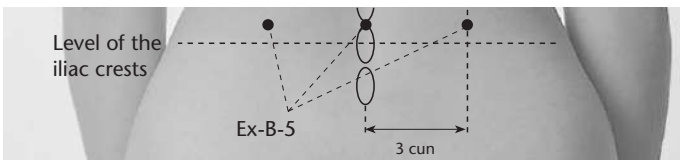
Vertically 0.5–1.5 cun

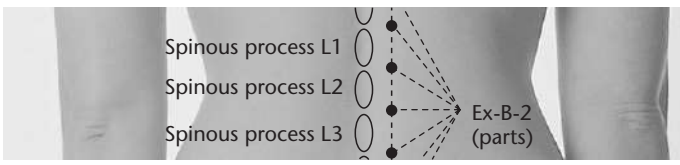
Actions/Indications

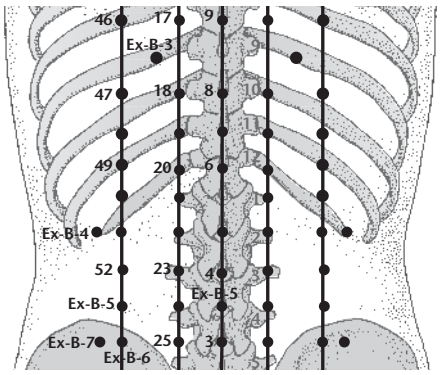
- Benefits the back and strengthens the knees
- Regulates and tonifies Qi and Blood of the Lower Burner

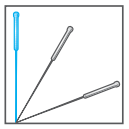
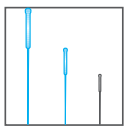


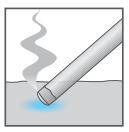
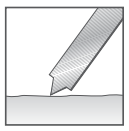
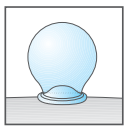








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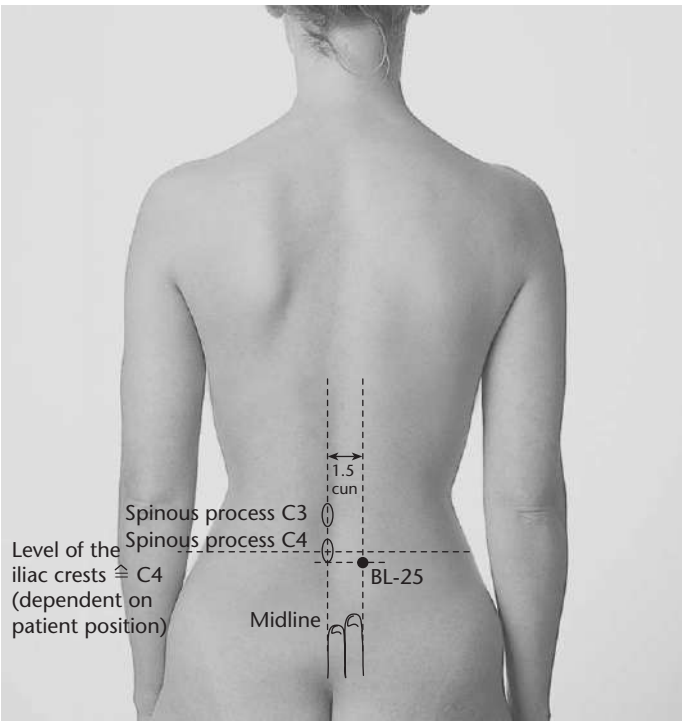
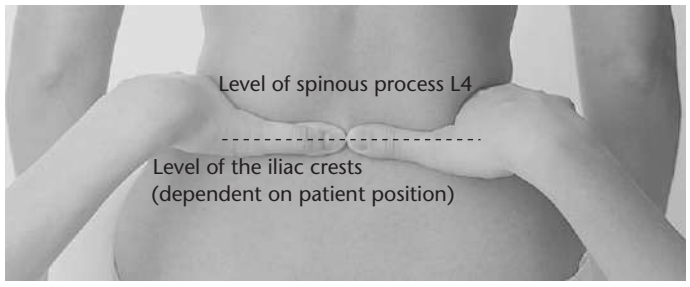
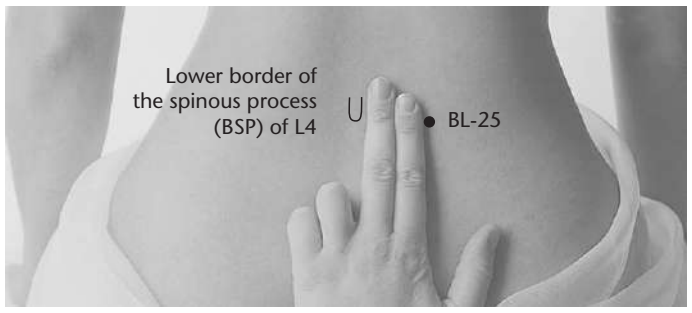
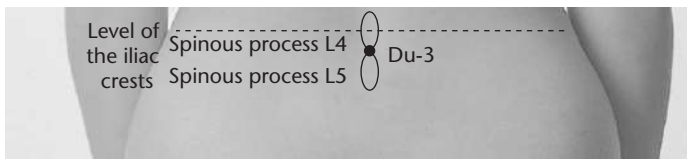
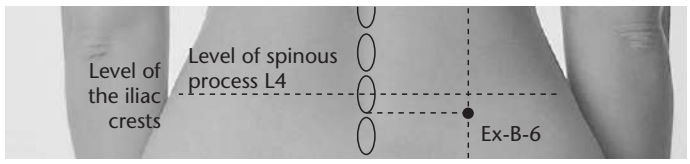
Large Intestine Shu DACHANGSHU BL-25











Location

1.5 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 4th lumbar vertebra (L4).

How to find

For orientation in the lumbar region (→ 3.4.3), first, determine the Tuffier's line. Place both hands directly superior or lateral to the highest points of the iliac crests, joining the thumbs on the midline at the lumbar spine. In most cases, this line intersects with the spinous process of L4 (note: this varies depending on the patient's position → 3.4.3). On this level, locate **BL-25** 1.5 cun in a lateral direction.

Located on the same level are → **Du-3** (on the midline), a point of → **Ex-B-2** (0.5 cun lateral to the midline), → **Ex-B-6** (3 cun lateral to the midline) and → **Ex-B-7** (3.5 cun lateral to the midline).

Needling

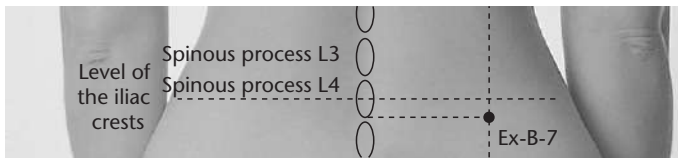
Vertically 1–1.5 cun

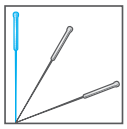
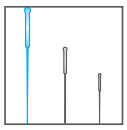
Actions/Indications

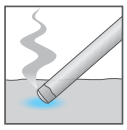
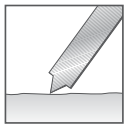
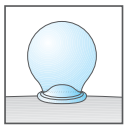
- Regulates the intestines and promotes the Qi flow
- Strengthens the lower back

Special features

Back-*shu* point of the Large Intestine. Important point for regulating the Large Intestine Qi. Important local point for acute and chronic lumbar disorders.



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BL-26 *Gate of Origin* Shu GUANYUANSHU

Location

1.5 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 5th lumbar vertebra (L5).

How to find

For orientation in the lumbar region (→ 3.4.3), first, determine the Tuffier's line. Place both hands directly superior or lateral to the highest points of the iliac crests, joining the thumbs on the midline at the lumbar spine. In most cases, this line intersects with the spinous process of L4 (note: this varies depending on the patient's position; for more detail on orientation in the lumbar/sacral region → 3.4.3, 3.4.4). Next, locate the lower border of the spinous process of L5 and, on this level, locate **BL-26** 1.5 cun in a lateral direction.

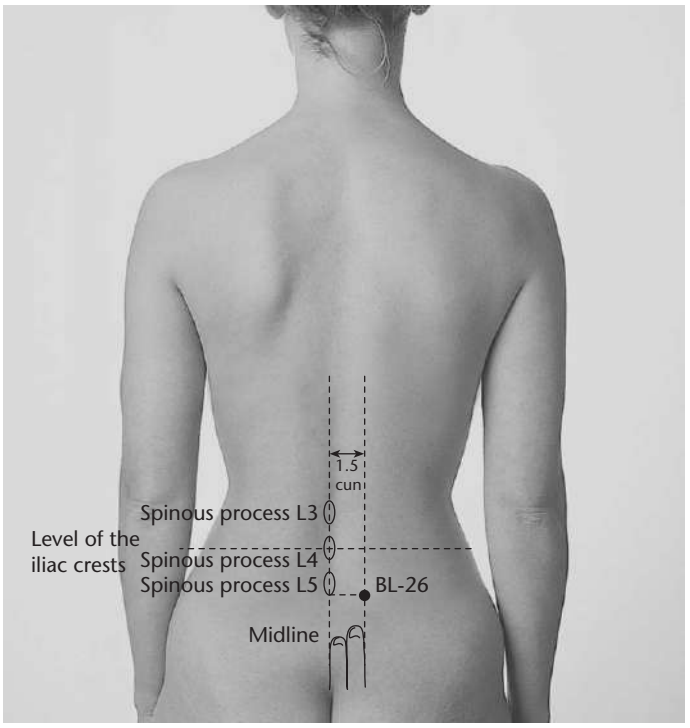
Located on the same level are → **Ex-B-8** (on the midline) and a point of → **Ex-B-2** (0.5 cun lateral to the midline).

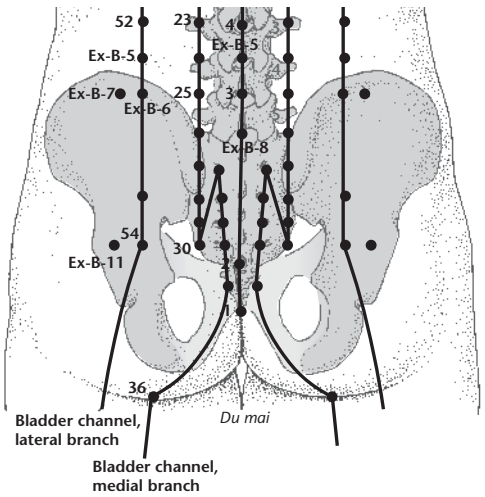
Needling

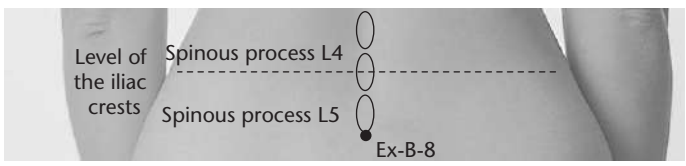
Vertically 0.5–1.5 cun

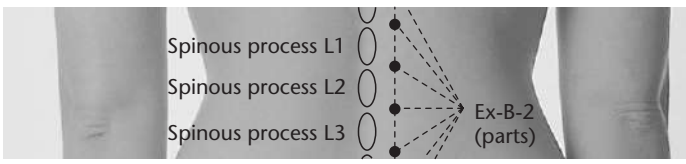
Actions/Indications

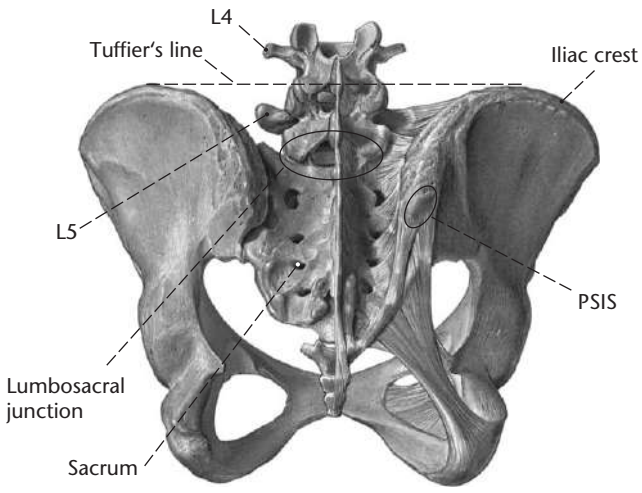
- Strengthens the back, especially for Kidney deficiency syndromes
- Regulates the Lower Burner

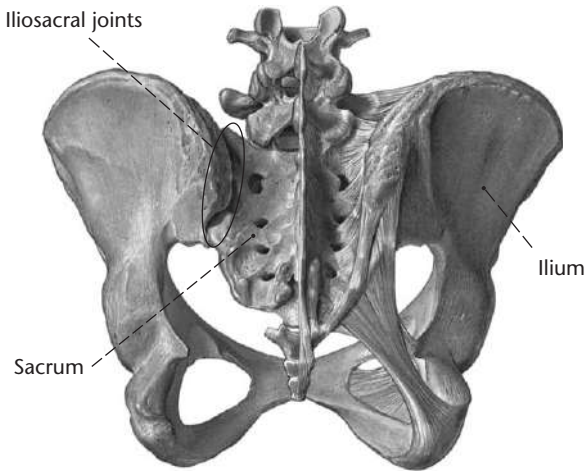












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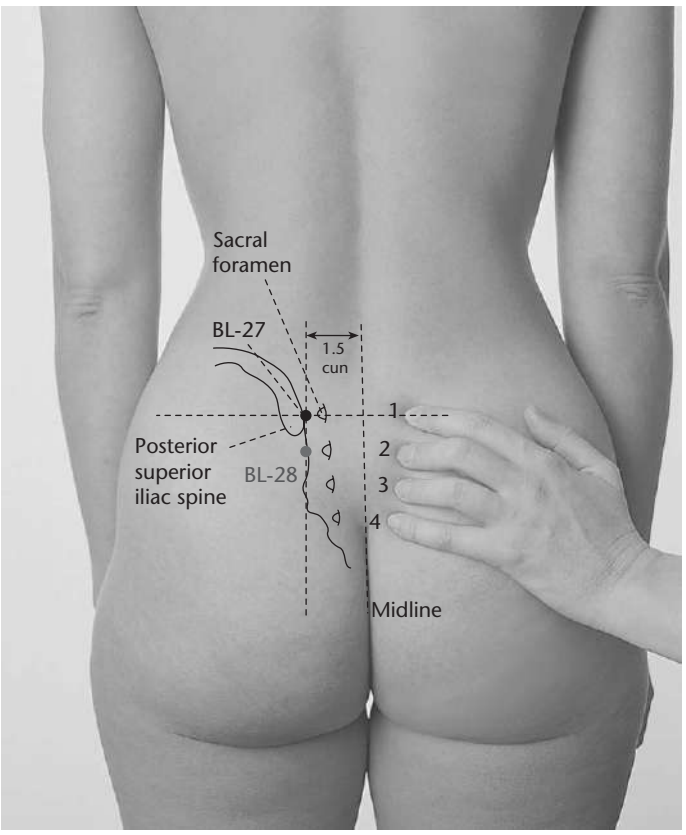
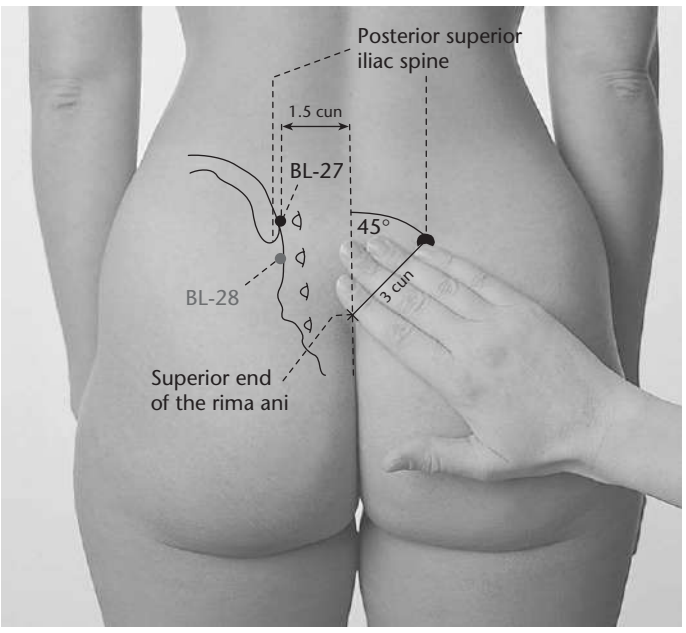
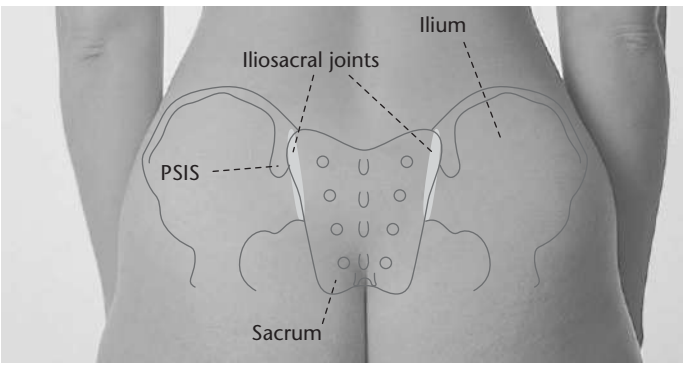
Small Intestine Shu XIAOCHANGSHU BL-27







Location

1.5 cun lateral to the posterior midline, on the level of the first sacral foramen.

How to find

Quick method: Locate the posterior superior iliac spine (PSIS → 3.4.3): from the rima ani, palpate 3 cun (1 handbreadth) in a superior and lateral direction at a 45° angle, until you can feel a distinct bony ridge (often superficially visible by a dimple). **BL-27** is located slightly superiorly and medially to the PSIS, 1.5 cun lateral to the midline, on the level of the first sacral foramen. For more detail on orientation in the lumbar and sacral region → 3.4.3, 3.4.4.

Located on the same level are → **BL-31** (over the 1st sacral foramen) and → **BL-28** (slightly below and medial to the PSIS at the level of the 2nd sacral foramen).

Needling

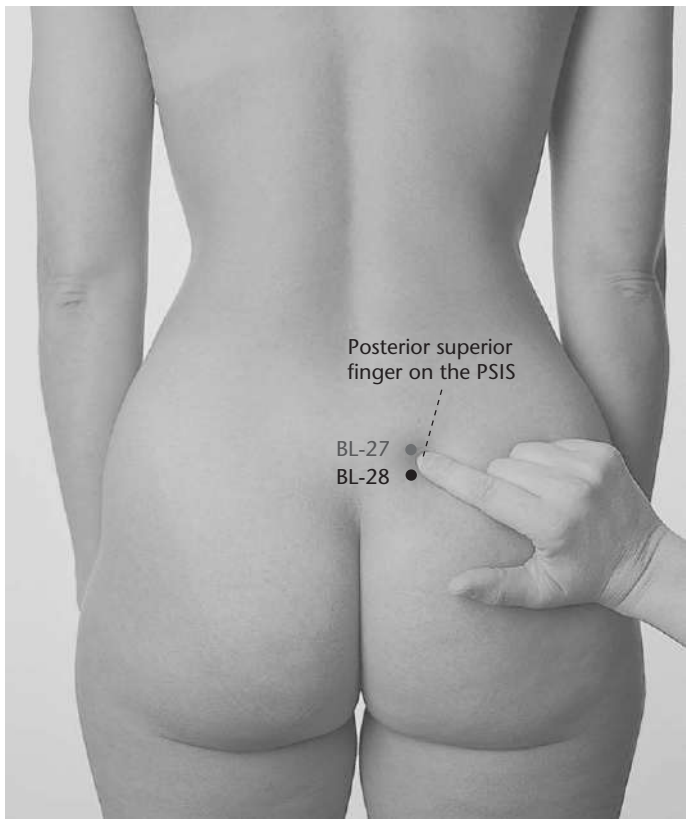
Vertically 0.5–1 cun

Actions/Indications

- Tonifies the Small Intestine Qi
- Drains Dampness and Damp-Heat
- Regulates the water passages

Special features

Back-*shu* point of the Small Intestine



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BL-28 *Bladder* Shu PANGGUANGSHU

Location

1.5 cun lateral to the posterior midline, on the level of the second sacral foramen.

How to find

Quick method: Locate the posterior superior iliac spine (PSIS → 3.4.3): from the rima ani, palpate 3 cun (1 handbreadth) in a superior and lateral direction at a 45° angle, until you can feel a distinct bony ridge (often superficially visible by a dimple). **BL-28** is located slightly inferiorly and medially to the PSIS, 1.5 cun lateral to the midline on the level of the 2nd sacral foramen. For more detail on orientation in the lumbar and sacral region → 3.4.3, 3.4.4.

Located on the same level are → **BL-32** (over the 2nd sacral foramen) and → **BL-53** (3 cun lateral to the midline). → **BL-27** is located slightly superiorly and medially to the PSIS on the level of the 1st sacral foramen.

Needling

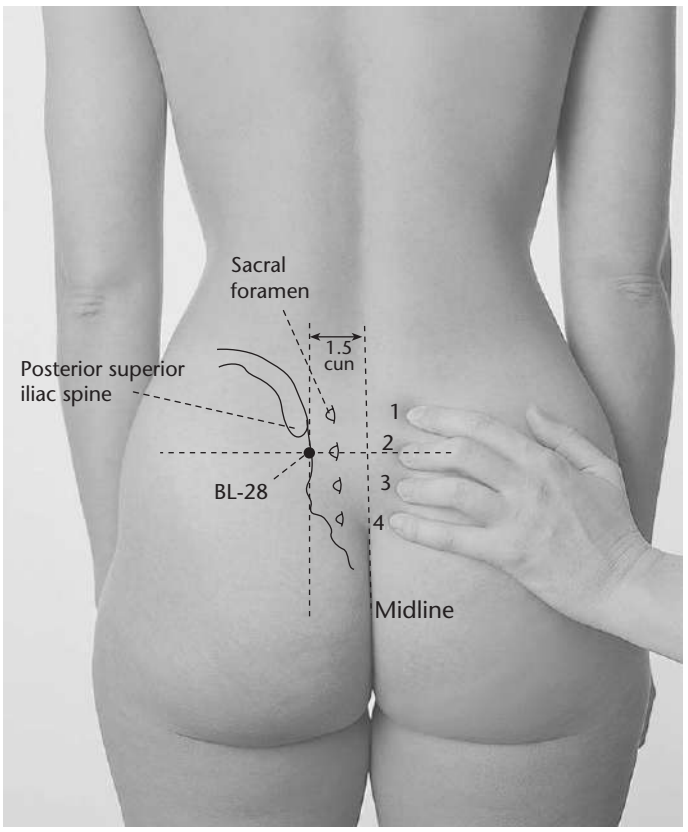
Vertically 0.5–1.5 cun. For local disorders, slightly oblique insertion towards the iliosacral joint.

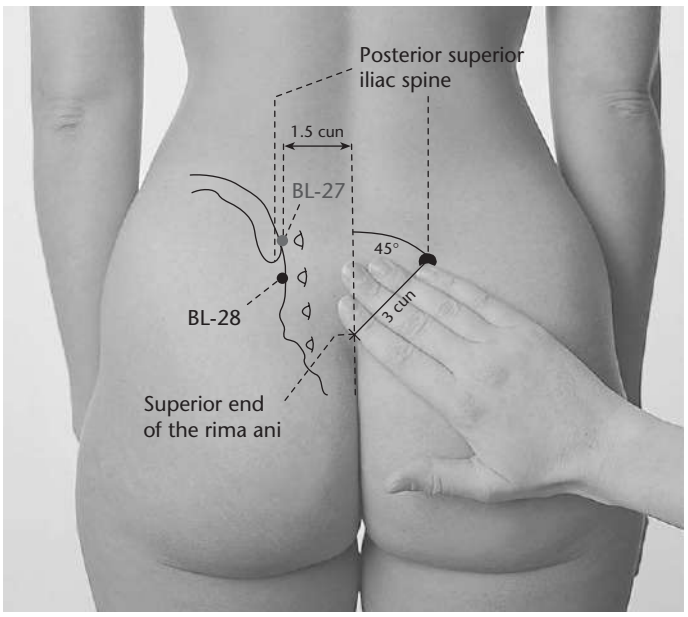
Actions/Indications

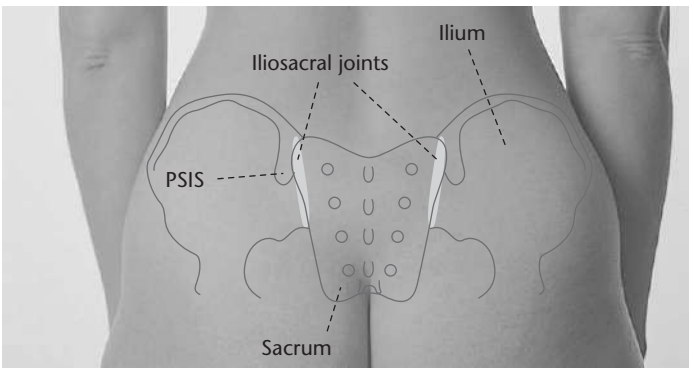
- Regulates the Bladder and the Lower Burner, clears Damp-Heat from the Lower Burner, removes stagnation and transforms masses
- Benefits the lumbar region and the legs

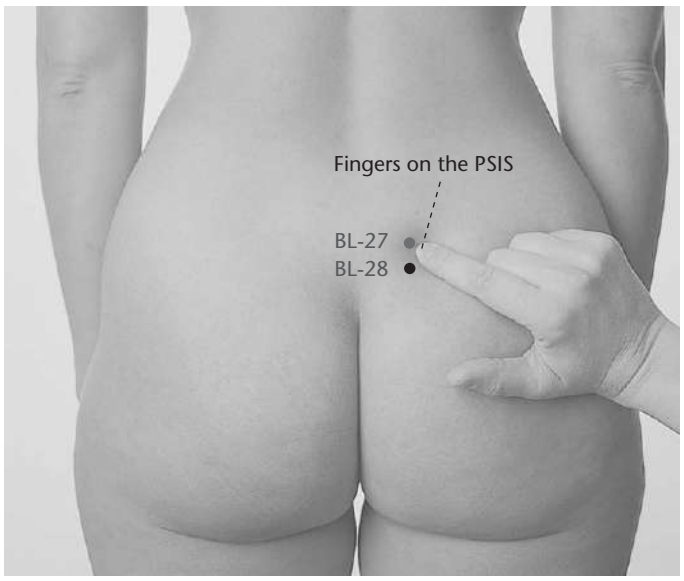
Special features

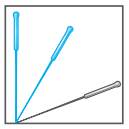
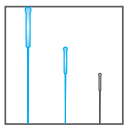
Back-*shu* point of the Bladder

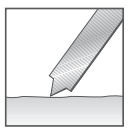
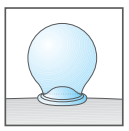








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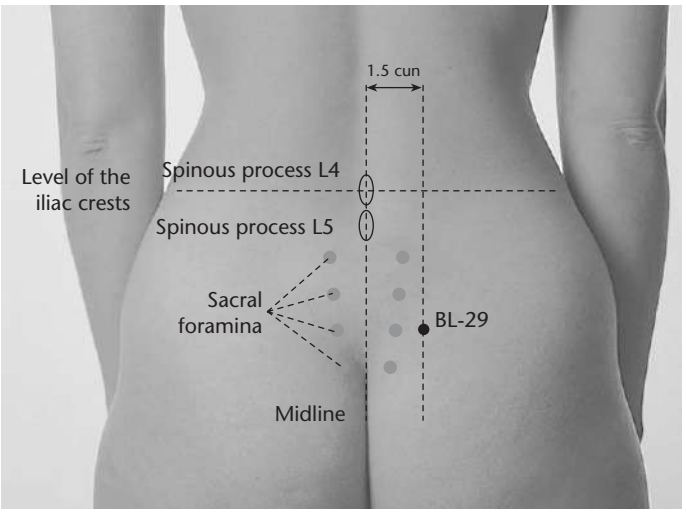
Mid Spine Shu ZHONGLÜSHU BL-29



Location

1.5 cun lateral to the posterior midline, on the level of the 3rd sacral foramen.

How to find

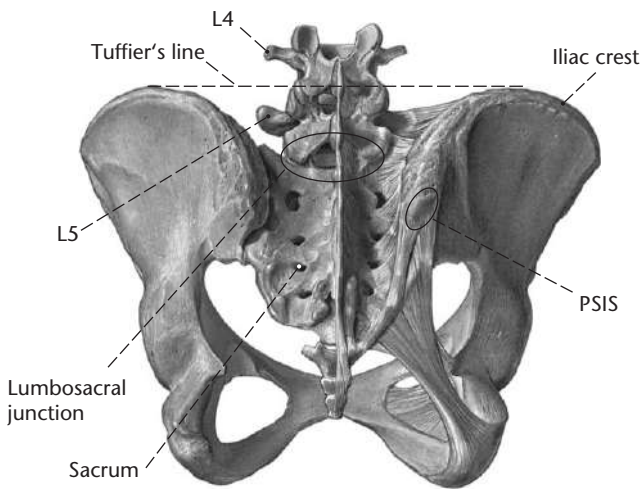
For more detail on orientation in the lumbar and sacral region, see ➞ 3.4.3, 3.4.4. First of all find L5. The next palpable structure in an inferior direction is the most superior sacral spinous process. Palpate in an inferior direction for two further sacral processes and locate the 3rd sacral foramen in a depression less than 1 cun lateral to the 3rd process. **BL-29** is located on the same level (3rd sacral foramen) and 1.5 cun lateral to the midline. Also located on this level is ➞ **BL-33** (over the 3rd sacral foramen).

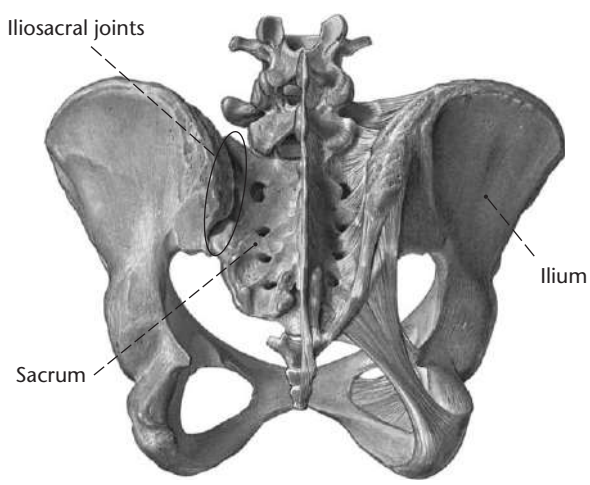
Needling

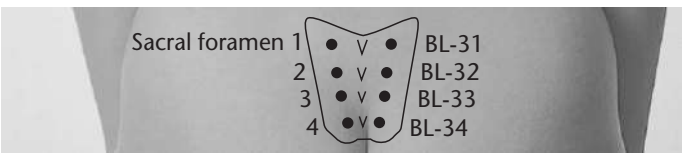
Vertically 0.5–1.5 cun

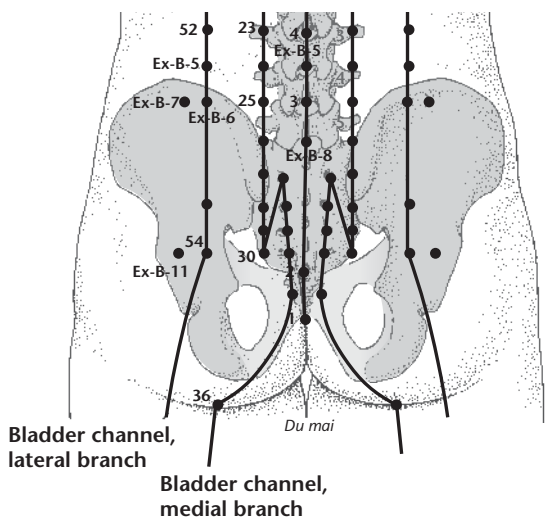
Actions/Indications

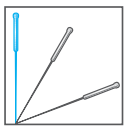
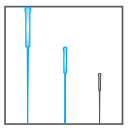
- Strengthens the lower back and the Kidneys
- Expels Cold
- Regulates the Lower Burner and stops diarrhoea

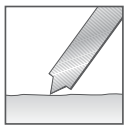










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BL-30 *White Ring* Shu BAI HUAN SHU

Location

1.5 cun lateral to the posterior midline, on the level of the 4th sacral foramen.

How to find

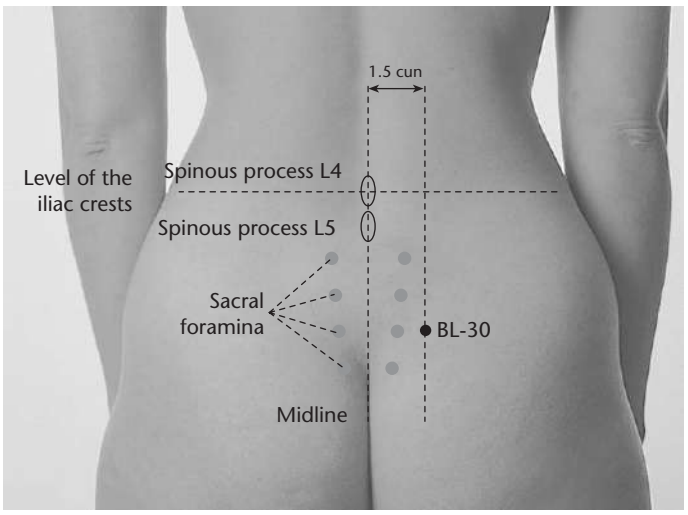
For more detail on orientation in the lumbar and sacral region, see ➞ 3.4.3, 3.4.4. First, find L5. The next palpable structure in an inferior direction is the most superior sacral spinous process. Palpate in an inferior direction for three further sacral processes and locate the 4th sacral foramen in a depression less than 1 cun lateral to the 4th process. **BL-30** is located on the level of the 4th foramen, 1.5 cun lateral to the midline.
Located on the same level are ➞ **BL-34** (over the 4th sacral foramen) and ➞ **BL-54** (3 cun lateral to the midline).

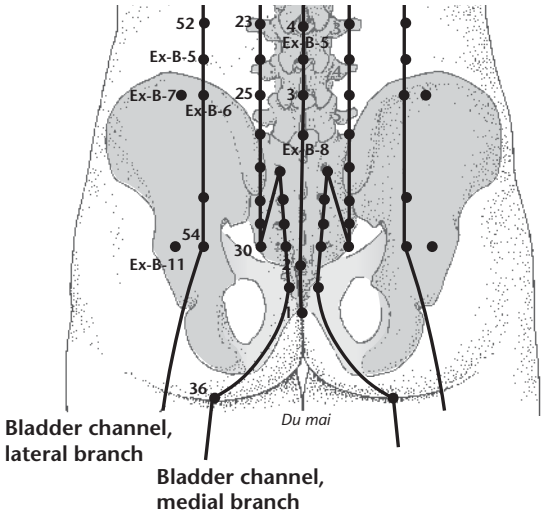
Needling

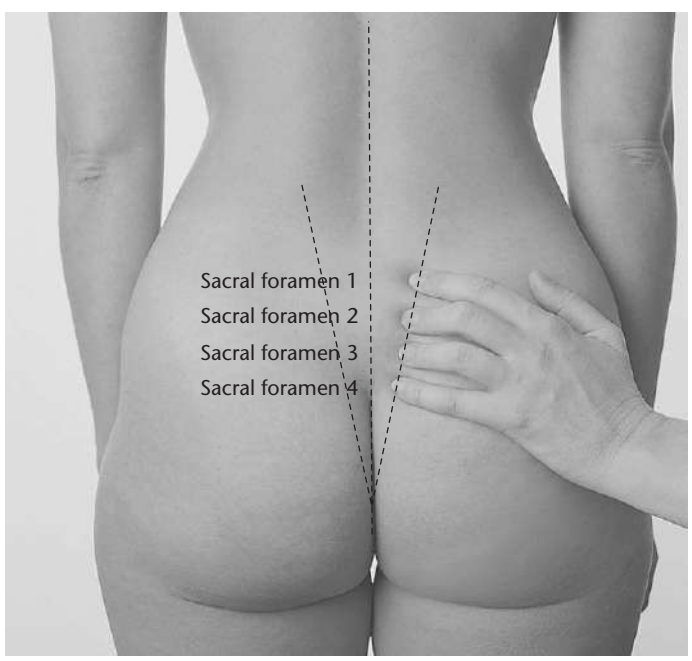
Vertically 0.5–1.5 cun

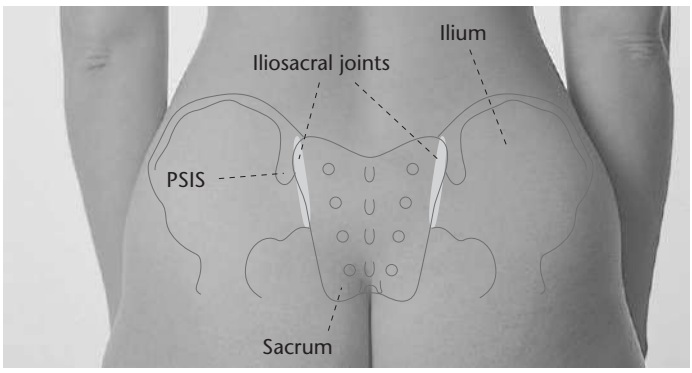
Actions/Indications

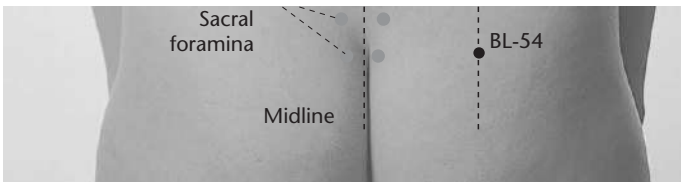
- Strengthens the lower back and the knees
- Eliminates Damp-Heat from the Lower Burner
- Regulates menstruation











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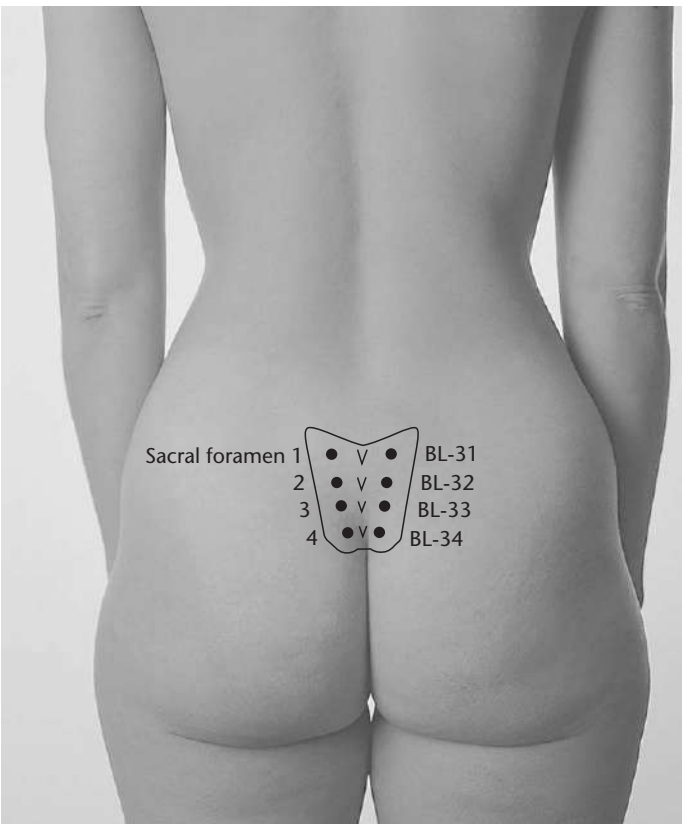
Eight Liao BALIAO BL 31 – BL 34



These points are described together because of their similar actions and indications.

BL-31 (*shangliao*) 'Upper Crevice', 1st sacral foramen
BL-32 (*ciliao*) 'Second Crevice', 2nd sacral foramen
BL-33 (*zhongliao*) 'Middle Crevice', 3rd sacral foramen
BL-34 (*xialiao*) 'Lower Crevice', 4th sacral foramen

Location

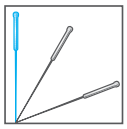
BL-31: Over the 1st sacral foramen
BL-32: Over the 2nd sacral foramen
BL-33: Over the 3rd sacral foramen
BL-34: Over the 4th sacral foramen

How to find

For more detail on orientation in the lumbar and sacral region, ➞ 3.4.3, 3.4.4. First, locate L5. The next palpable structure in an inferior direction is the most superior sacral spinous process. Palpate in a lateral direction on the level of the sacral processes for the depressions of the sacral foramina. **Or:** Locate the 4th sacral foramen on the level of the superior end of the rima ani (sometimes a bit more superiorly or inferiorly). Place the little finger on the 4th foramen, then the ring, middle and index fingers on a slightly V-shaped line in a superior direction, palpating for the depressions of the sacral foramina. With the fingers in this position, the index finger will be resting on the 1st foramen (**BL-31**), the middle finger on the 2nd foramen (**BL-32**), the ring finger on the 3rd foramen (**BL-33**) and the little finger on the 4th foramen (**BL-34**). Located on the same level as **BL-31–BL-34** are the points ➞ **BL-27–BL-30** on the inner branch of the BL channel (1.5 cun lateral to the midline) as well as ➞ **BL-53** (on the level of **BL-32**) and ➞ **BL-54** (on the level of **BL-34**), both 3 cun lateral to the midline. Also on the level of **BL-34** is ➞ **Ex-B-11** (3.5 cun lateral to the midline).

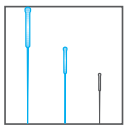
Needling

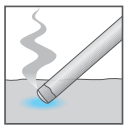
Vertically 0.7–1.5 cun. Caution: Pregnancy (especially reducing needling techniques are contraindicated); exception: to promote labour.

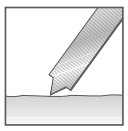


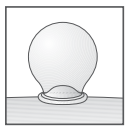
Actions/Indications

- Regulates the Lower Burner, promotes urination (all eight points) (**BL-32** and **BL-33** have the strongest action in cases of urinary disorders, while **BL-34** has the strongest action in cases of genital disorders)
- Strengthens the Kidneys and Essence (*jing*)
- Benefits the Intestines (**BL-34** has the strongest action in cases of intestinal disorders)
- Promotes labour (for example, use **BL-32** with electro-acupuncture)
- Benefits the lumbar region (**BL-32** and **BL-33** have the strongest action)









Special features

According to some authors, meeting point with the G.B. channel. Clinically, **BL-32** is the most commonly used point owing to its widest range of indications. Electro-acupuncture at **BL-32** is useful for alleviating pain during labour: after needling this point, bend the handle of the needle in a superior direction at a 90° angle and tape it to the skin. Now attach the electro-stimulation. This method allows the woman to lie down if desired.
Moxibustion of the *baliao* is indicated for difficult urination or defaecation due to Kidney deficiency in elderly people.

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BL-35 *Meeting of Yang* HUIYANG

Location

0.5 cun lateral to the posterior midline, on the level of the tip of the coccyx.

How to find

Locate the coccyx superior to the anus. In contrast to the sacrum, the coccyx is movable. **BL-35** is located 0.5 cun lateral to the midline on the level of the tip of the coccyx.

→ **Du-2** is located on the midline, on the level of the sacral hiatus (→ 3.4.4) and superior to **BL-35** and the tip of the coccyx.

Needling

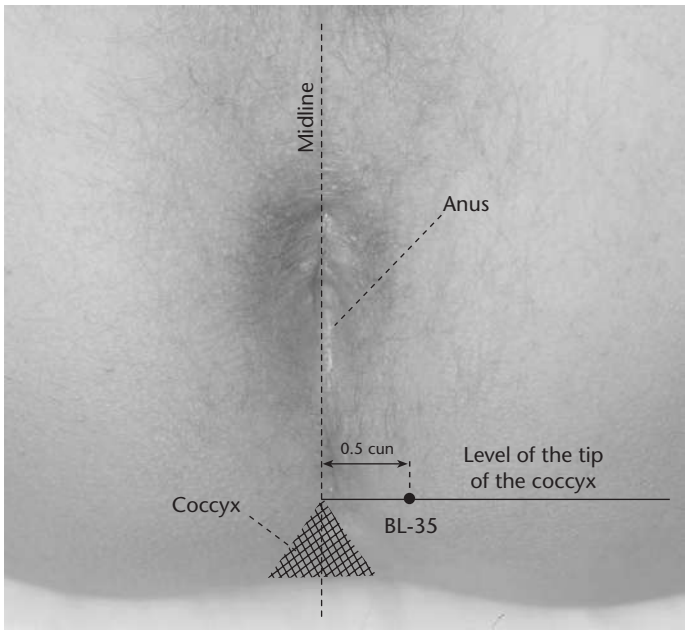
Vertically 1–1.5 cun

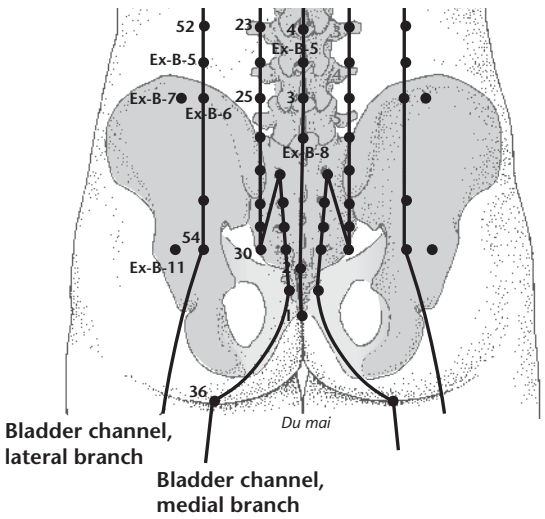
Actions/Indications

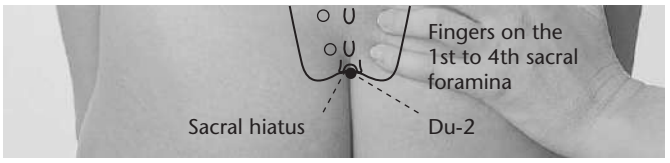
- Clears Damp-Heat from the Lower Burner
- Treats haemorrhoids and rectal prolapse
- Benefits the coccyx

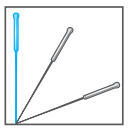
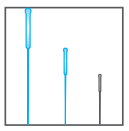
Special features

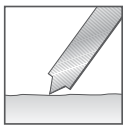
Especially in patients with a weakened immune system, this point should be needled only if strictly necessary and after using a disinfecting wipe three times.









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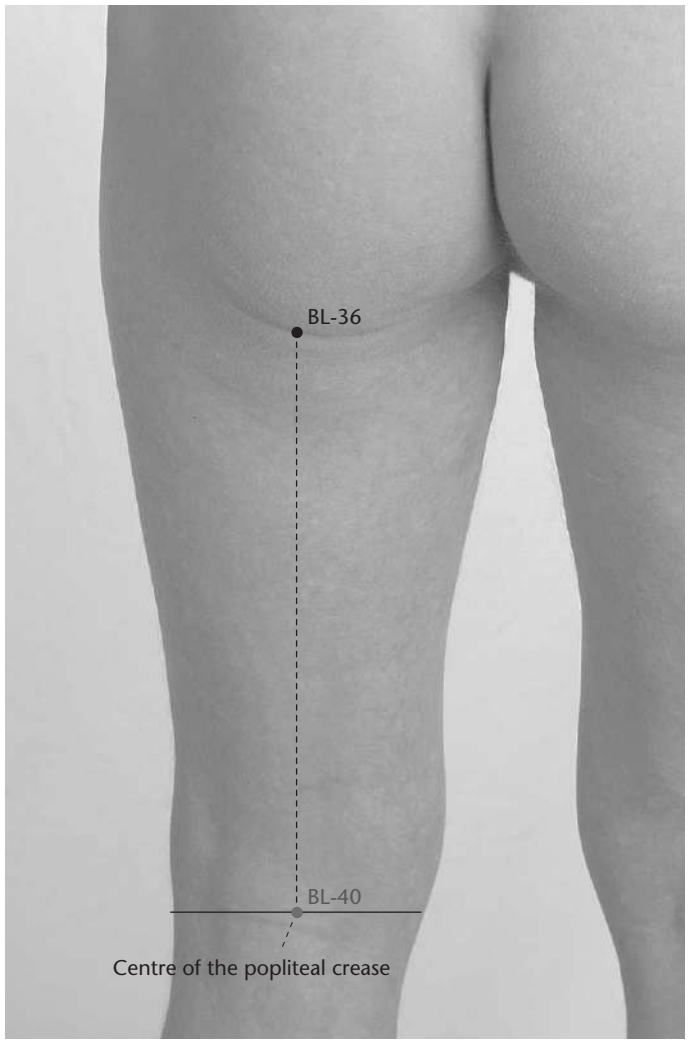
Hold and Support CHENGFU BL-36



Location

In the gluteal crease, superior to the midpoint of the popliteal crease (→ **BL-40**).

How to find

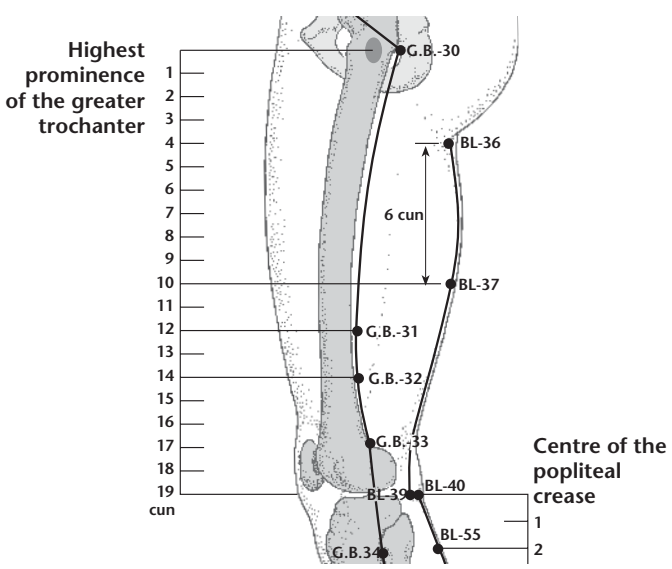
Locate the midpoint of the popliteal crease (in obese patients, use bony/muscular structures to find the midpoint). **BL-36** is located directly vertically above the midpoint of the popliteal crease, in the gluteal crease at the transition between the buttocks and the posterior aspect of the thigh (palpate for a depression).

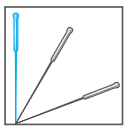
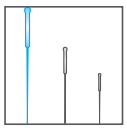
Needling

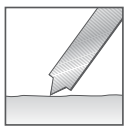
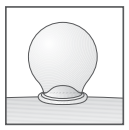
Vertically 1–2 cun

Actions/Indications

- Opens the channel, alleviates pain
- Relaxes the tendons
- Regulates the Lower Burner and treats haemorrhoids



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BL-37 *Gate of Abundance* YINMEN

Location

6 cun distal to → **BL-36** (gluteal crease), on a line connecting → **BL-36** and → **BL-40** (in the popliteal crease), in a gap in the musculature.

How to find

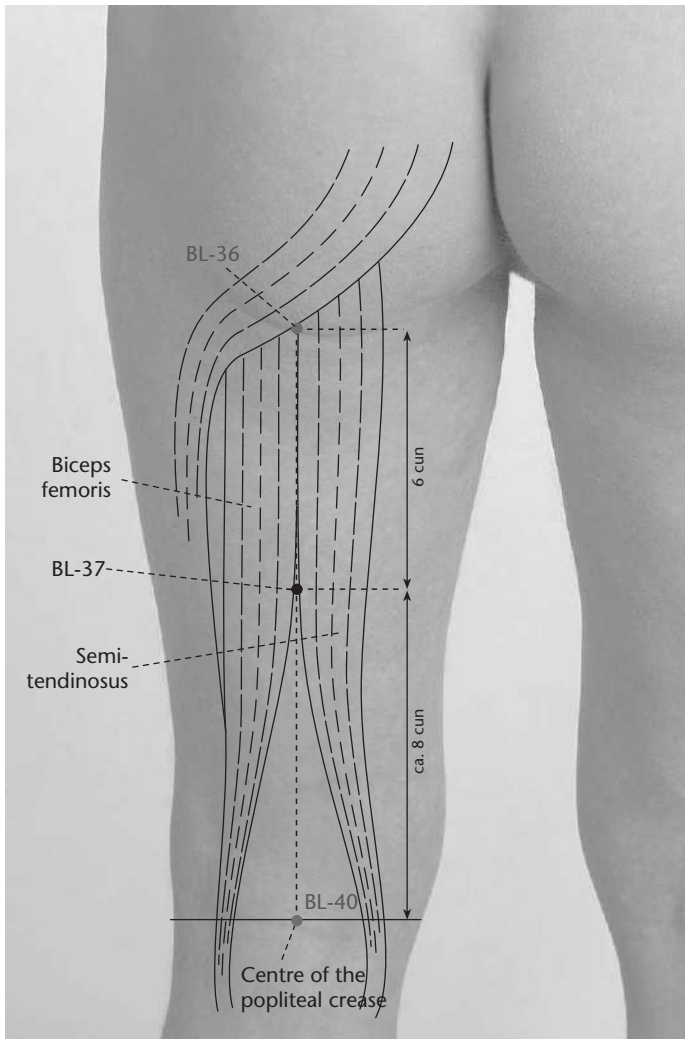
First, locate → **BL-36** in the centre of the gluteal crease and, from there, palpate 6 cun along the posterior aspect of the thigh in an inferior direction towards the centre of the popliteal crease (→ **BL-40**). This is the location of **BL-37**, which in slim patients can be located where the long head of the biceps femoris muscle and the semitendinosus muscle converge (usually 8 cun superior to the centre of the popliteal crease. **Or:** Spreading hands technique (→ 2.3.3 or elastic tape): Place the little fingers on the centre of the popliteal crease (→ **BL-40**) and the centre of the gluteal crease (→ **BL-36**). Locate **BL-37** 1–2 cun proximal to the midpoint of the distance, in a depression between the two muscle bellies.

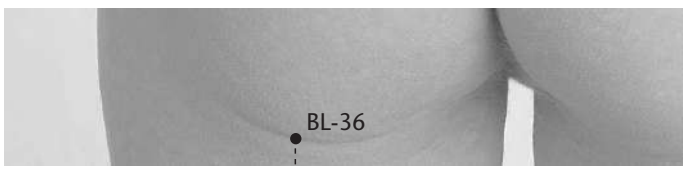
Needling

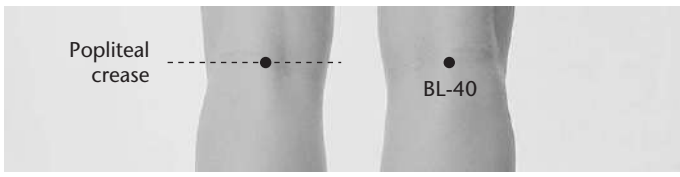
Vertically 0.5–2 cun

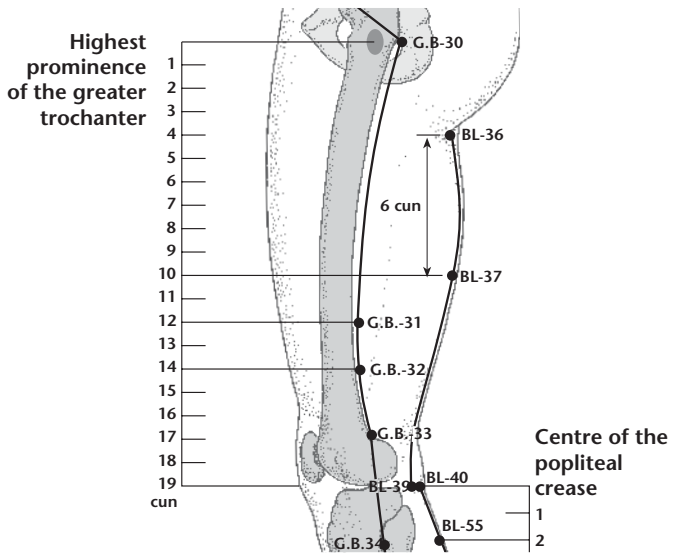
Actions/Indications

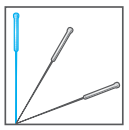
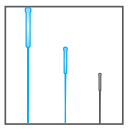
- Relaxes the tendons
- Opens the channel and *luo* vessels
- Benefits the lower back

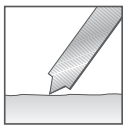










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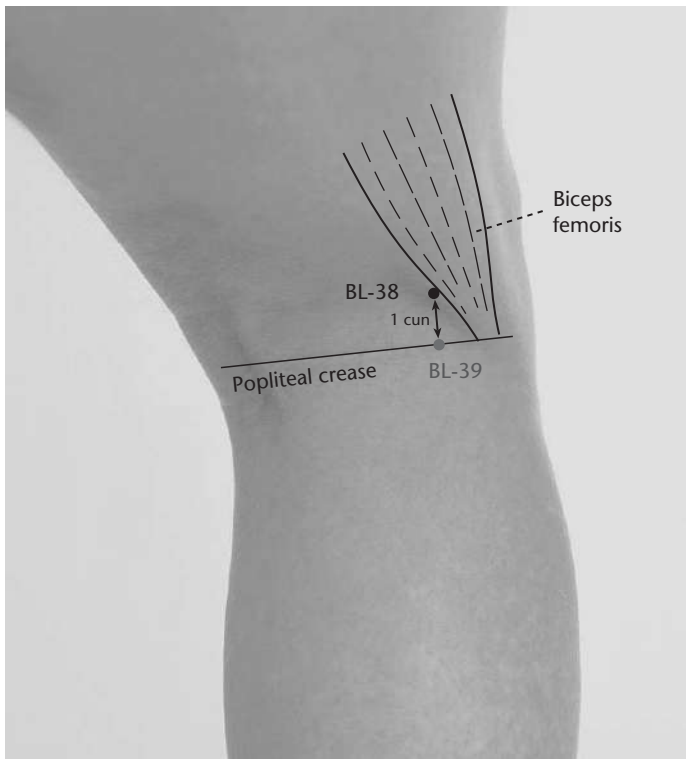
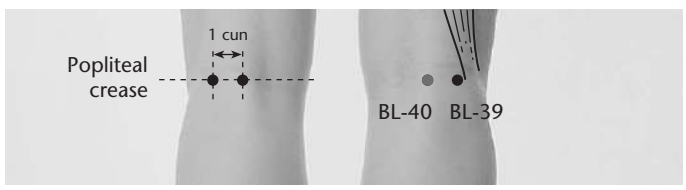
Floating Cleft FUXI BL-38





Location

On the laterodorsal aspect of the knee, 1 cun superior and lateral to the centre of the popliteal crease (→ **BL-40**), medial to the biceps femoris muscle, or 1 cun proximal to → **BL-39**.

How to find

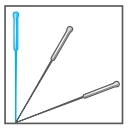
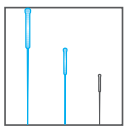
To locate the popliteal crease, ask the patient to flex their knee slightly and palpate for the knee joint space. By flexing the knee against resistance, the tendon of the biceps femoris muscle will become more pronounced and visible. Locate **BL-38** 1 cun superior to the knee joint on the medial border of the tendon.
→ **BL-39** is located 1 cun distal to **BL-38** on the level of the popliteal crease.

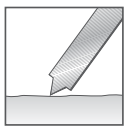
Needling

Vertically 1–2 cun

Actions/Indications

- Relaxes the muscles and tendons
- Opens the channel and *luo* vessels
- Clears Heat (from the Small Intestine)



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BL-39 *Outside of the Crook* WEIYANG

Location

At the lateral end of the popliteal crease, on the medial side of the tendon of the long head of the biceps femoris muscle, 1 cun lateral to → **BL-40** (in the centre of the popliteal crease).

How to find

This point is best located with the patient's knee slightly flexed. Find the midpoint of the popliteal crease (→ **BL-40**) and locate **BL-39** approximately 1 cun lateral in a depression medial to the tendon of the long head of the biceps femoris muscle. Located on the same level is → **BL-40** at the centre of the popliteal crease.

Needling

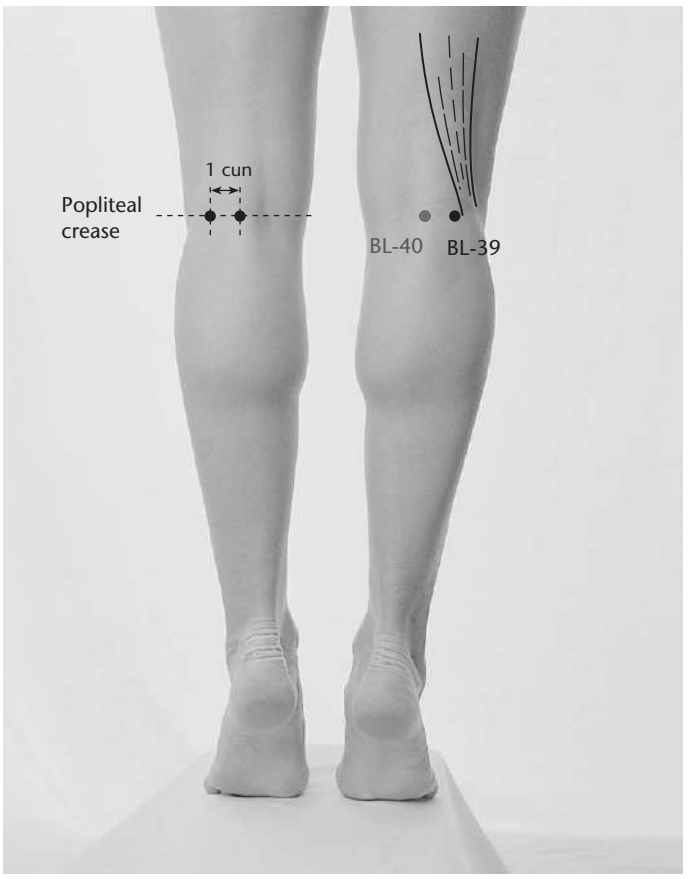
Vertically 0.5–1.5 cun. Caution: N. fibularis communis.

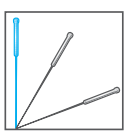
Actions/Indications

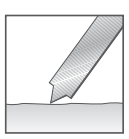
- Harmonises the Triple Burner and regulates the water passages
- Opens the channel and the *luo* vessels, alleviates pain

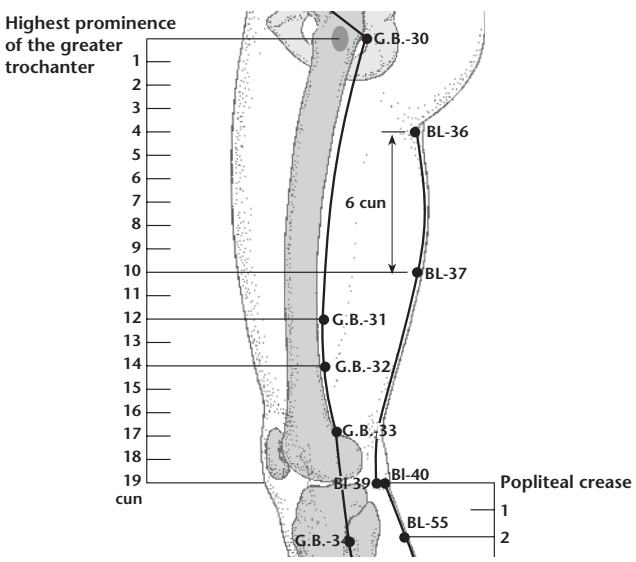
Special features

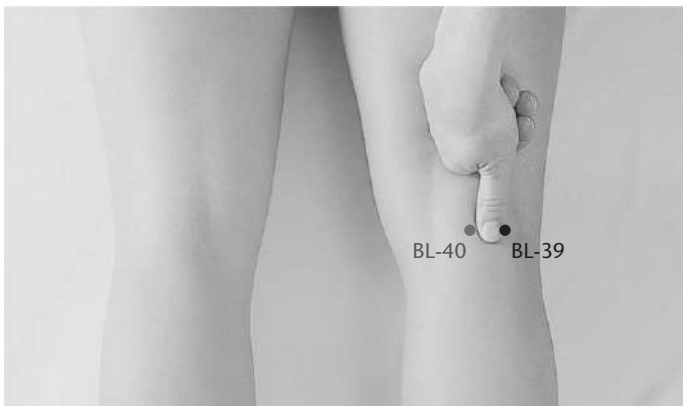
Lower *he*-sea point of the Triple Burner











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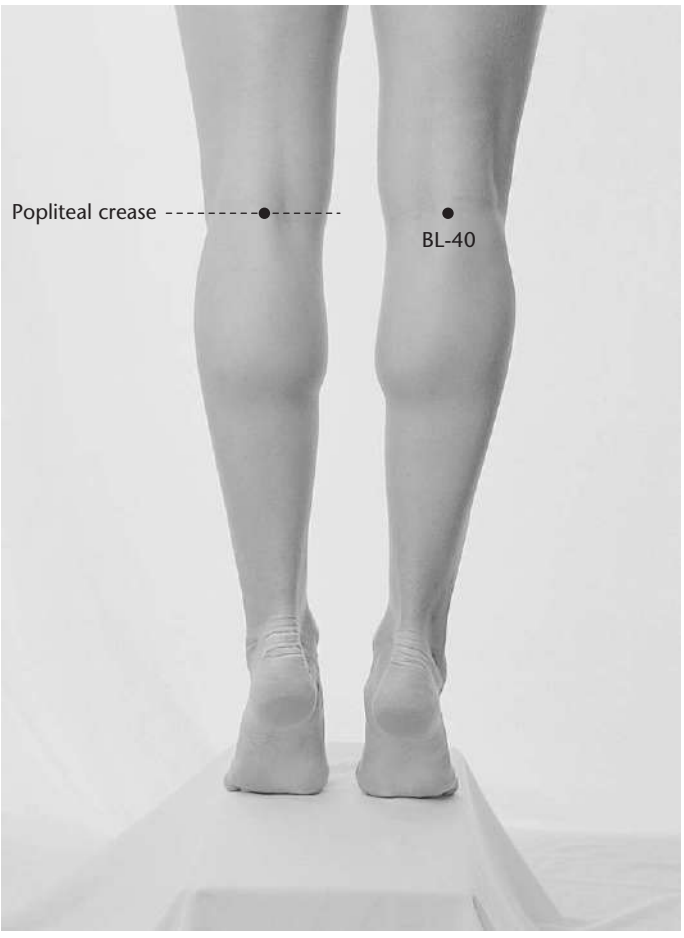
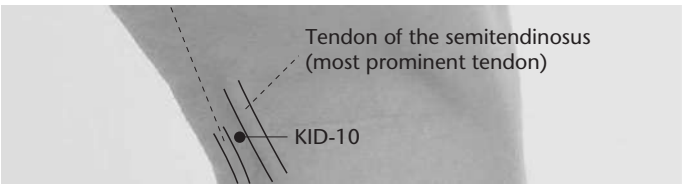
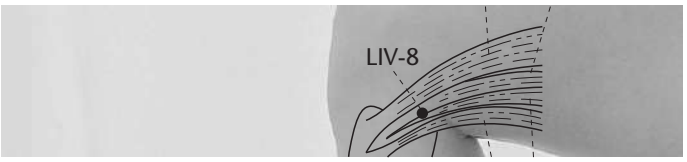
Middle of the Crook WEIZHONG BL-40







Location

In the centre of the popliteal crease, between the tendons of the biceps femoris and semitendinosus muscles.

How to find

This point is best located with the patient's knee slightly flexed. Locate the centre of the popliteal crease (a pulse may be palpable) and there locate **BL-40**.

Located on the same level are → **BL-39** (1 cun laterally), → **KID-10** (more medially, between the tendons of the semimembranosus and semitendinosus muscles) and → **LIV-8** (more medially, anterior to the tendons of the semimembranosus and semitendinosus muscles).

Needling

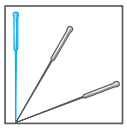
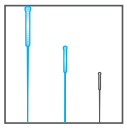
Vertically 0.5–1.5 cun. Caution: Popliteal nerve, artery and vein lie deep to this point. Use moxibustion with caution (contraindicated according to some authors). To clear Heat and eliminate stasis: bleed the superficial veins, possibly followed by brief cupping. Caution: Only use for excess conditions and in constitutionally robust patients. **BL-40** is also indicated as a distal point for the lower back: needle with the patient standing (for safety and balance, use a treatment couch or chair as a support for the hands) and ask them to move their lower back gently while manipulating the needle (only short needle retention). When needling this point with the patient in a prone position, place a supporting roll or pillow under the ankles to relax the popliteal crease.

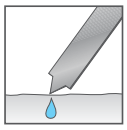
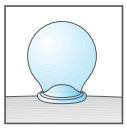
Actions/Indications

- Clears (summer) Heat, stops vomiting and diarrhoea
- Cools the Blood
- Benefits the lower back and knees, opens the channel and *luo* vessels, alleviates pain

Special features

He-sea point, Earth point, lower *he*-sea point of the Bladder, Ma Dan Yang Heavenly Star point, Gao Wu command point of the lumbar region. Important distal point for the lower back, point with a wide range of indications.

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BL-41 *Attached Branch* FUFEN

Location

3 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 2nd thoracic vertebra (T2).

How to find

After locating the spinous process of C7 (→ 3.4.1), count down 2 spinous processes to the lower border of the spinous process of T2. Locate **BL-41** 3 cun lateral from the midline (with the shoulders relaxed and the arms hanging loosely down, 3 cun corresponds on this level to the distance from the midline to the medial border of the scapula). Note: From **BL-41** to → **BL-54**, all points on the BL channel are located on its outer branch.
Located on the same level are a point of → **Ex-B-2** (0.5 cun lateral to the midline), → **BL-12** (1.5 cun lateral to the midline) and → **S.I.-13** (more laterally, on the scapula).

Needling

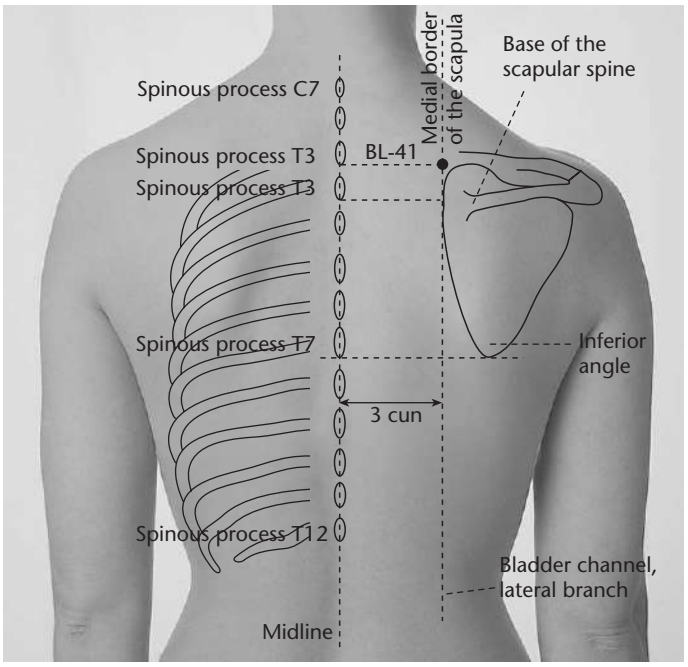
Obliquely 0.3–0.5 cun. Caution: Pneumothorax.

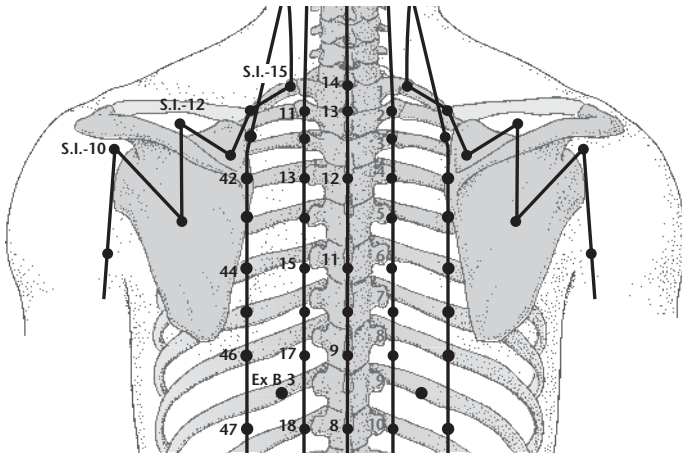
Actions/Indications

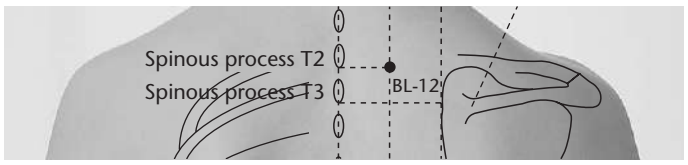
- Expels pathogenic factors such as Wind and Cold
- Opens the channel and the *luo* vessels, alleviates pain

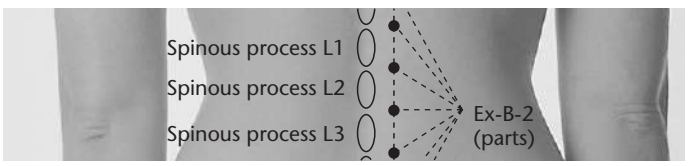
Special features

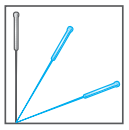
Meeting point with the S.I. channel

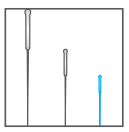


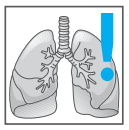


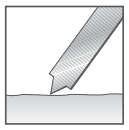












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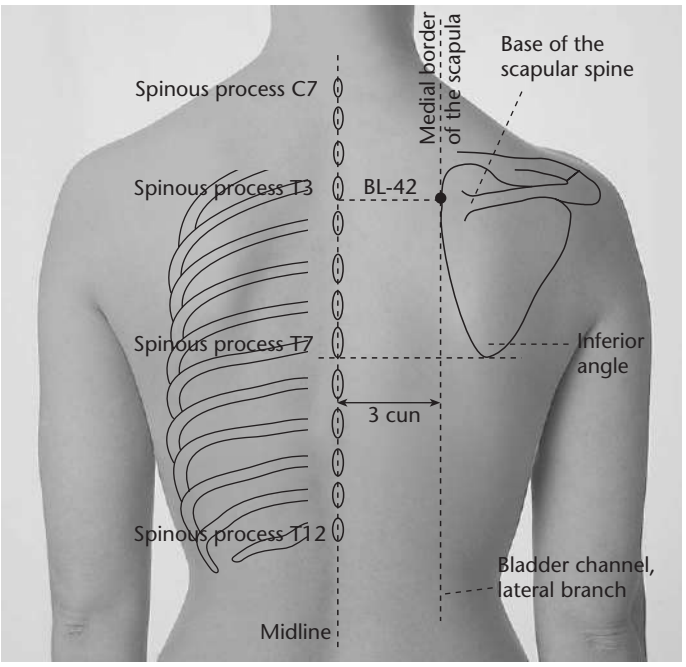
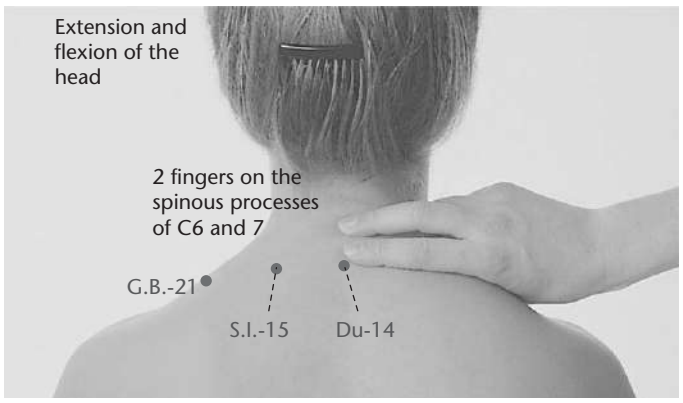
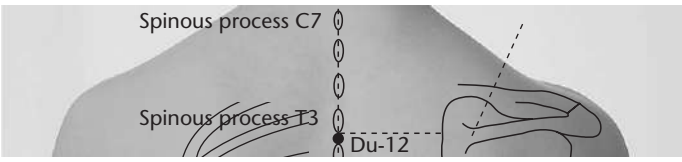
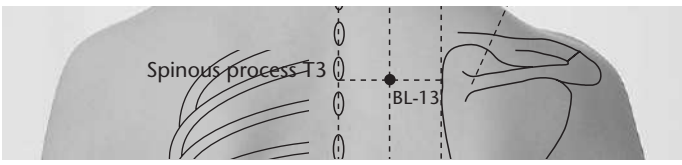
Door of the Corporeal Soul POHU BL-42









Location

3 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 3rd thoracic vertebra (T3).

How to find

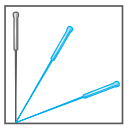
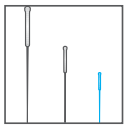
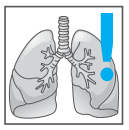
After locating the spinous process of C7 (→ 3.4.1), count down 3 spinous processes to the lower border of the spinous process of T3. Located on this level and 3 cun lateral to the midline is **BL-42.**
Or: With the patient seated and their shoulders in a relaxed position, the spinous process of T3 is generally on the level of the medial end of the scapular spine, an easily palpable structure (→ 3.4.2). Locate **BL-42** on the level of the lower border of the spinous process of T3, 3 cun lateral to the midline. With the patient's shoulders relaxed, 3 cun corresponds on this level to the distance from the midline to the medial border of the scapula.
Located on the same level are → **Du-12** (on the midline), a point of → **Ex-B-2** (0.5 cun lateral to the midline) and → **BL-13** (1.5 cun lateral to the midline).

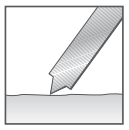
Needling

Obliquely 0.3–0.5 cun. Caution: Pneumothorax.

Actions/Indications

- Tonifies and nourishes the Lung
- Alleviates wheezing and coughing, calms the corporeal soul (*po*)
- Opens the channel and alleviates pain
- Clears Heat from the Lung



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BL-43 *Vital Region* Shu GAOHUANG

Location

3 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 4th thoracic vertebra (T4).

How to find

After locating the spinous process of C7 (→ 3.4.1), count down 4 spinous processes to the lower border of the spinous process of T4. Located on this level and 3 cun lateral to the midline is **BL-43. Or:** Locate **BL-43** by using the spinous process of T3 (generally, on the level of the easily palpable medial end of the scapular spine, 3.4.2) as a reference point.
Located on the same level are a point of → **Ex-B-2** (0.5 cun lateral to the midline) and → **BL-14** (1.5 cun lateral to the midline).

Needling

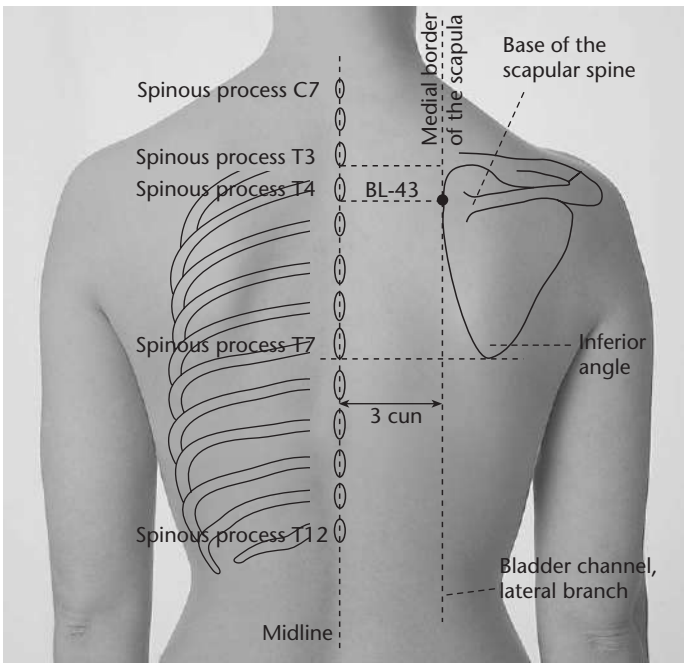
Obliquely 0.3–0.5 cun. Moxibustion is often used on this point. Caution: Pneumothorax.

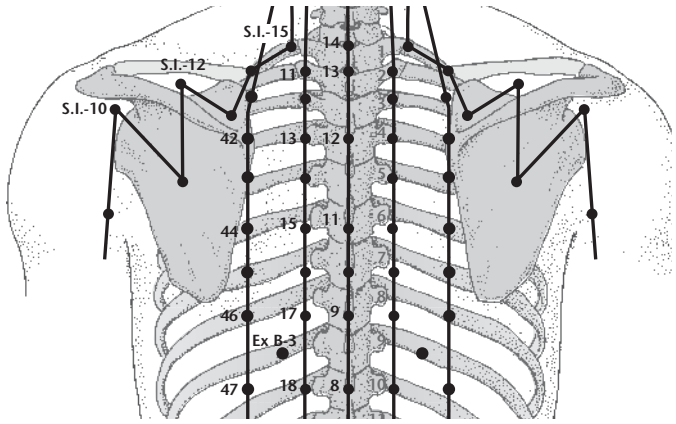
Actions/Indications

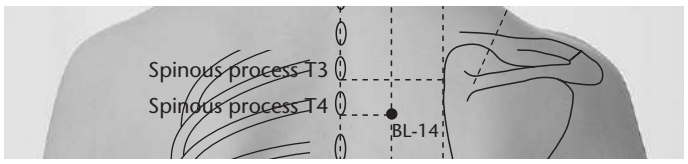
- Tonifies and nourishes the five *zang*-Organs: Lung, Heart, Kidneys, Stomach and Spleen
- Nourishes Yin, clears Heat
- Calms the *shen*
- Strengthens the Original Qi (*yuan qi*)
- Eliminates Phlegm

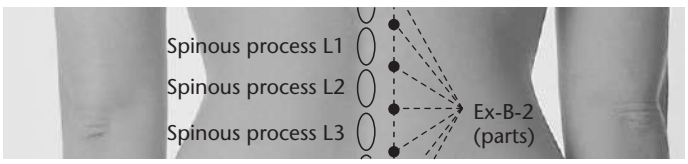
Special features

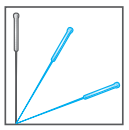
Important point for deficiency syndromes (classic indication)

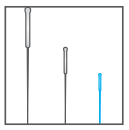


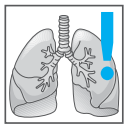


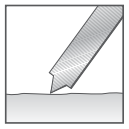












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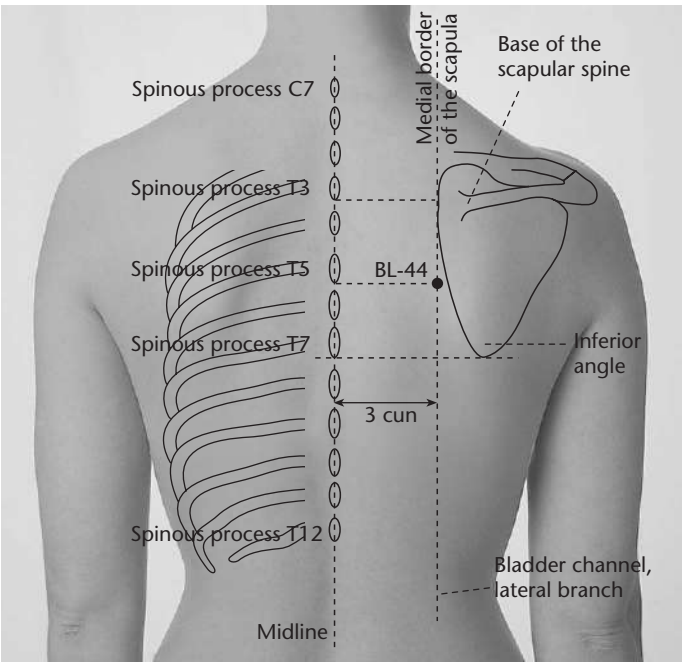
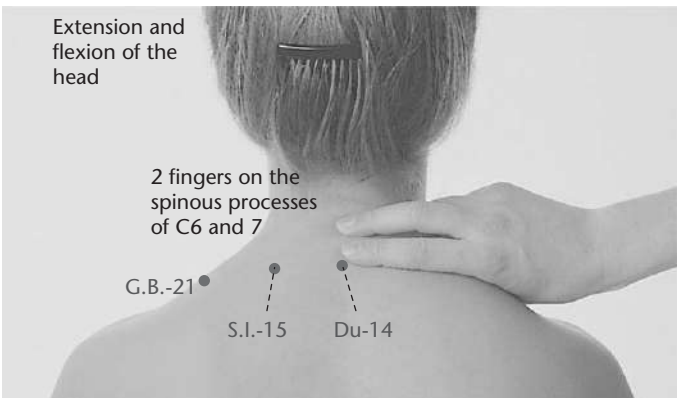
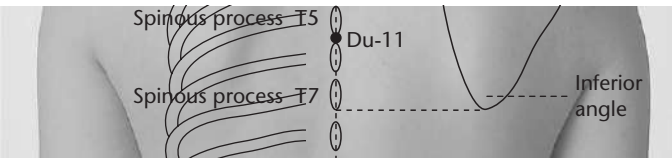
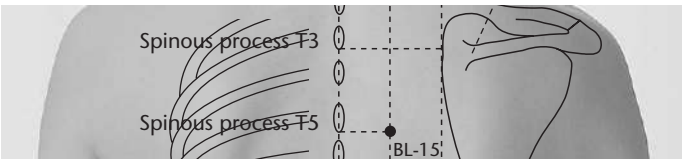
Spirit Hall SHENTANG BL-44









Location

3 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 5th thoracic vertebra (T5).

How to find

After locating the spinous process of C7 (→ 3.4.1), count down 5 spinous processes to the lower border of the spinous process of T5. Located on this level and 3 cun lateral to the midline is **BL-44. Or:** With the patient seated and their shoulders in a relaxed position, the spinous process of T3 is generally on the level of the medial end of the scapular spine, an easily palpable structure (→ 3.4.2). Locate **BL-44** by counting down to the level of the lower border of the spinous process of T5 and measure 3 cun lateral to the midline.

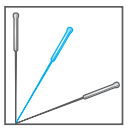
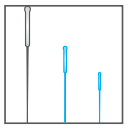
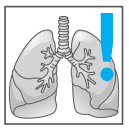
Located on the same level are → **Du-11** (on the midline), a point of → **Ex-B-2** (0.5 cun lateral to the midline) and → **BL-15** (1.5 cun lateral to the midline).

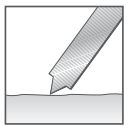
Needling

Obliquely 0.3–0.8 cun. Caution: Pneumothorax.

Actions/Indications

- Regulates the Upper Burner, unbinds the chest
- Opens the channel and alleviates pain



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BL-45 *Cry of Pain* YIXI

Location

3 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 6th thoracic vertebra (T6).

How to find

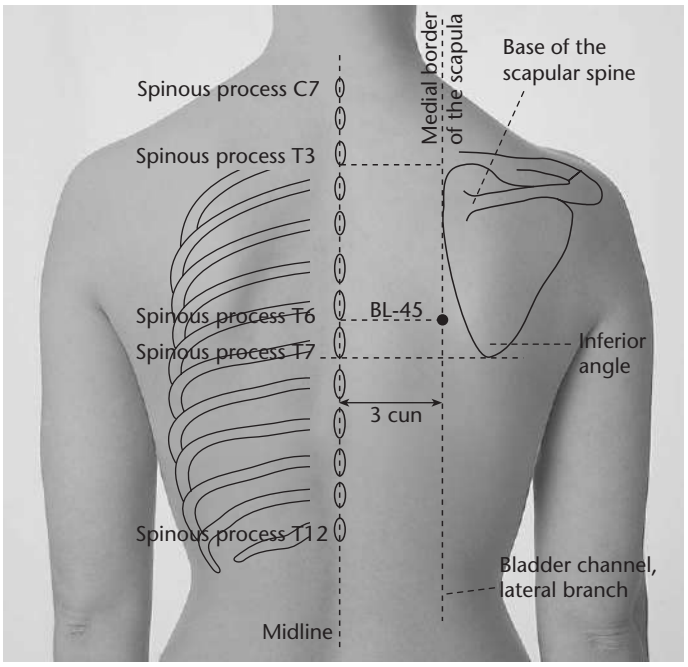
After locating the spinous process of C7 (→ 3.4.1), count down 6 spinous processes to the lower border of the spinous process of T6. Located on this level and 3 cun lateral to the midline is **BL-45. Or:** With the patient seated and their shoulders in a relaxed position, the spinous process of T7 is generally on the level of the inferior angle of the scapula (→ 3.4.2). Locate **BL-45** on the level of the spinous process of T6, 3 cun lateral to the midline. Located on the same level are → **Du-10** (on the midline), a point of → **Ex-B-2** (0.5 cun lateral to the midline) and → **BL-16** (1.5 cun lateral to the midline).

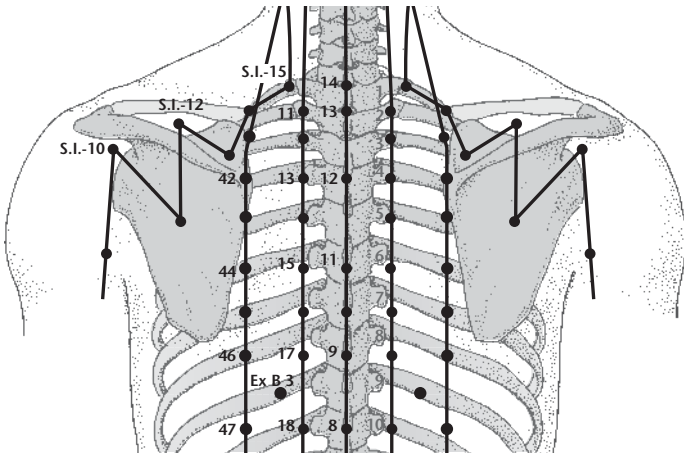
Needling

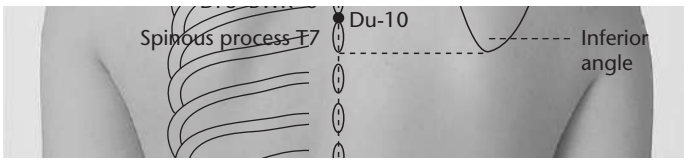
Obliquely 0.3–0.8 cun. Caution: Pneumothorax.

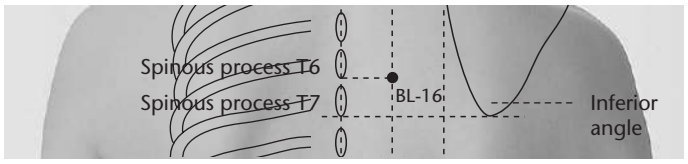
Actions/Indications

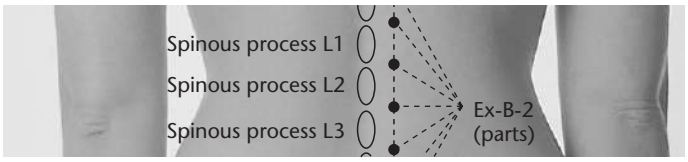
- Expels pathogenic factors, especially Wind and Heat
- Descends the Lung Qi and unbinds the chest
- Strengthens the Qi and Blood and alleviates pain

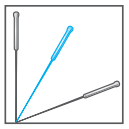


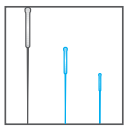


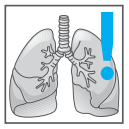


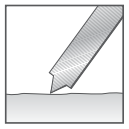












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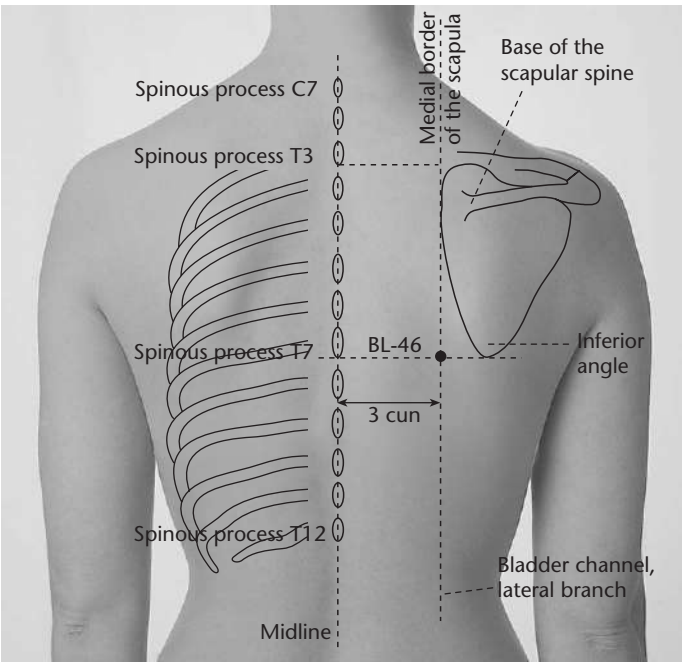
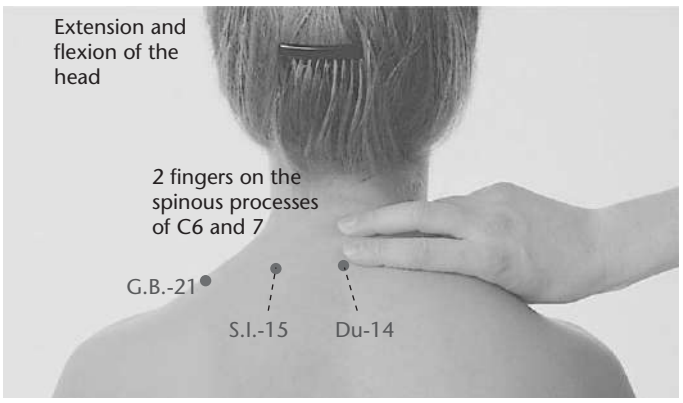
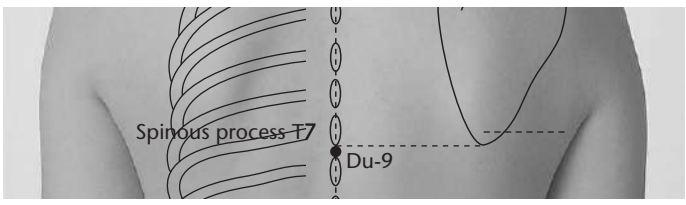
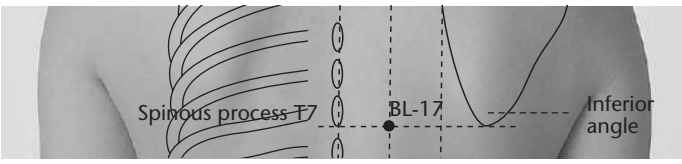
Diaphragm's Gate GEGUAN BL-46









Location

3 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 7th thoracic vertebra (T7).

How to find

With the patient standing and their shoulders in a relaxed position, the spinous process of T7 is generally on the level of the inferior angle of the scapula (→ 3.4.2). Locate **BL-46** on the level of the spinous process of T7, 3 cun lateral to the midline. **Or:** With the patient seated, the spinous process of T3 is generally on the level of the medial end of the scapular spine, an easily palpable bony protrusion at the medial border of the scapula (→ 3.4.2). From there, count down 4 spinous processes to the spinous process of T7. Locate **BL-46** on this level, 3 cun lateral to the midline. **Or:** Find the spinous process of C7 (→ 3.4.1). From there, count down 7 spinous processes in an inferior direction to the spinous process of T7. Locate **BL-46** on this level, 3 cun lateral to the midline.

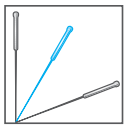
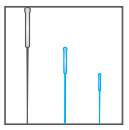
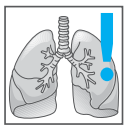
Located on the same level are → **Du-9** (on the midline), a point of → **Ex-B-2** (0.5 cun lateral to the midline) and → **BL-17** (1.5 cun lateral to the midline).

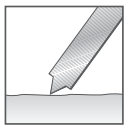
Needling

Obliquely 0.3–0.8 cun. Caution: Pneumothorax.

Actions/Indications

- Regulates the diaphragm and descends counterflow Qi
- Harmonises the Middle Burner
- Opens the channel and alleviates pain



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BL-47 *Gate of the Ethereal Soul* HUNMEN

Location

3 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 9th thoracic vertebra (T9).

How to find

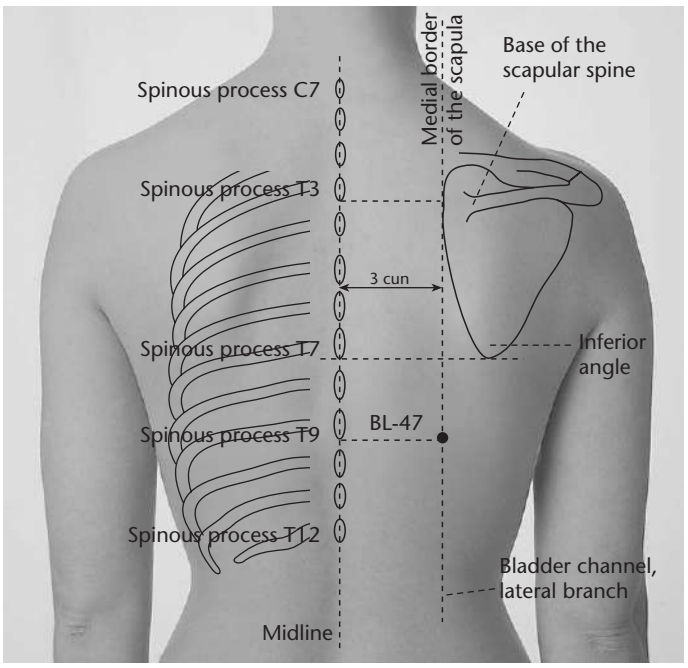
In a sitting position with the arms hanging down, the spinous process of T7 is generally on the level of the inferior angle of the scapula (→ 3.4.2). From there, count down 2 processes to the lower border of the spinous process of T9. **BL-47** is located 3 cun lateral to this point. **Or:** Locate the spinous process of C7 (→ 3.4.1). From there, count down 9 processes to the lower border of the spinous process of T9 and locate **BL-47** 3 cun lateral to it.
Located on the same level are → **Du-8** (on the midline), a point of → **Ex-B-2** (0.5 cun lateral to the midline) and → **BL-18** (1.5 cun lateral to the midline).

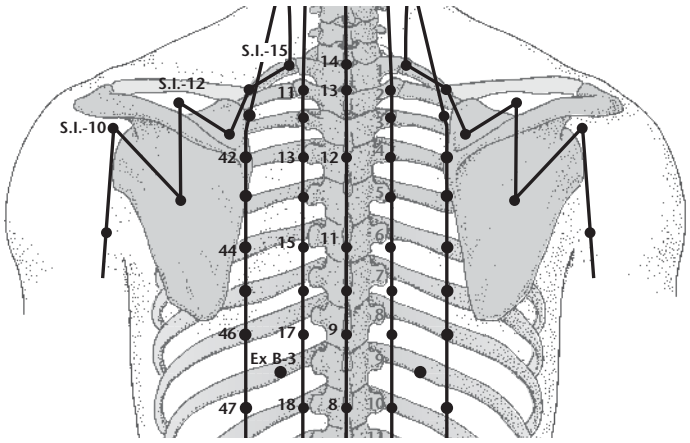
Needling

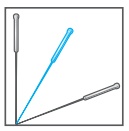
Obliquely 0.3–0.5 cun. Caution: Pneumothorax.

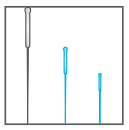
Actions/Indications

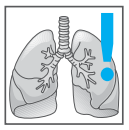
- Spreads the Liver Qi
- Harmonises the Spleen and the Stomach
- Relaxes the tendons

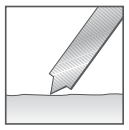


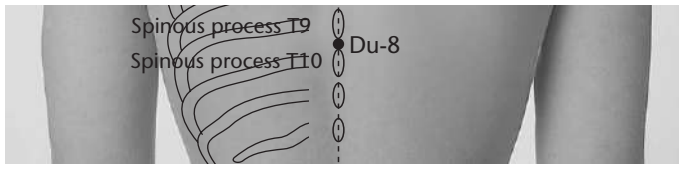


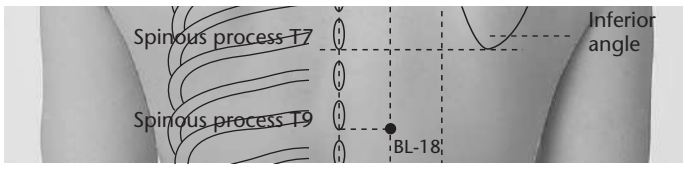


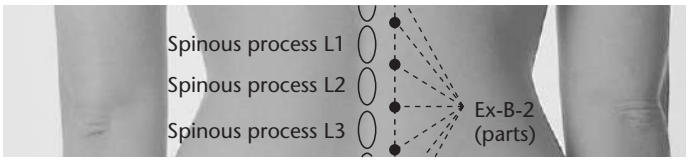


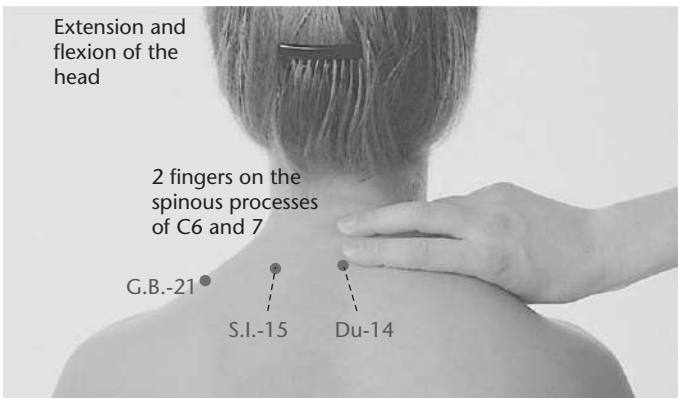












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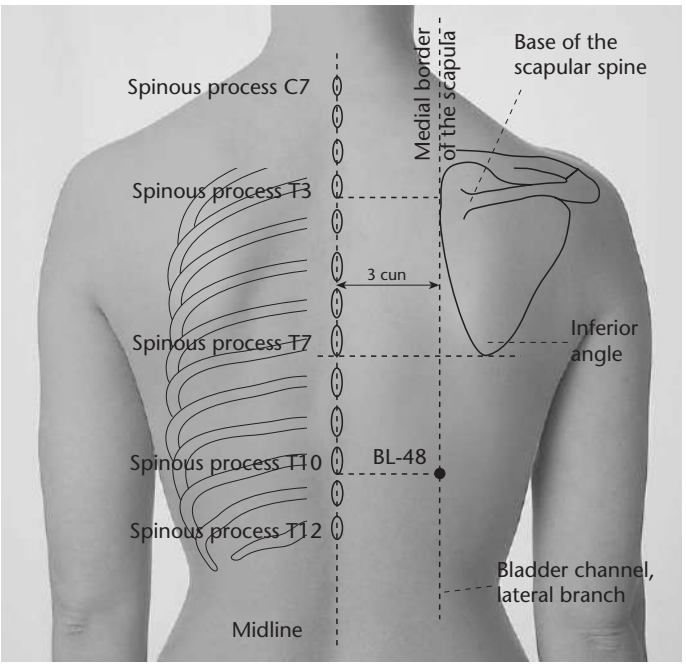
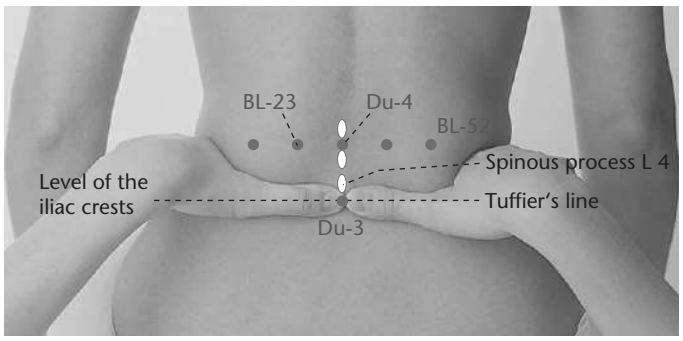
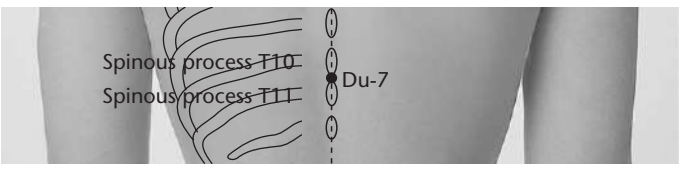
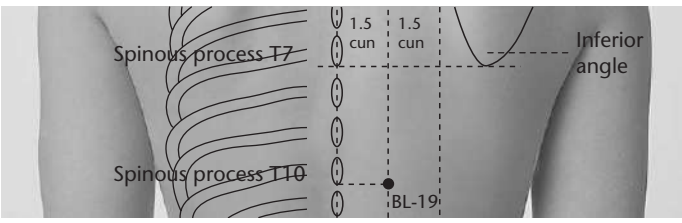
Yang's Key Link YANGGANG BL-48









Location

3 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 10th thoracic vertebra (T10).

How to find

In a sitting position with the arms hanging down, the spinous process of T7 is generally on the level of the inferior angle of the scapula (→ 3.4.2). From there, count down 3 processes to the lower border of the spinous process of T10. **BL-48** is located 3 cun lateral to this point. **Or:** Locate the spinous process of C7 (→ 3.4.1). From there, count down 10 processes to the lower border of the spinous process of T10 and locate **BL-48** 3 cun lateral to it.

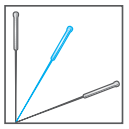
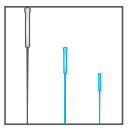
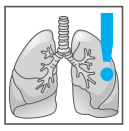
Located on the same level are → **Du-7** (on the midline), a point of → **Ex-B-2** (0.5 cun lateral to the midline) and → **BL-19** (1.5 cun lateral to the midline).

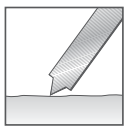
Needling

Obliquely 0.3–0.8 cun. Caution: Pneumothorax.

Actions/Indications

- Regulates the Gall Bladder
- Clears Damp-Heat
- Harmonises the Middle Burner



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BL-49 *Abode of Thought* YISHE

Location

3 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 11th thoracic vertebra (T11).

How to find

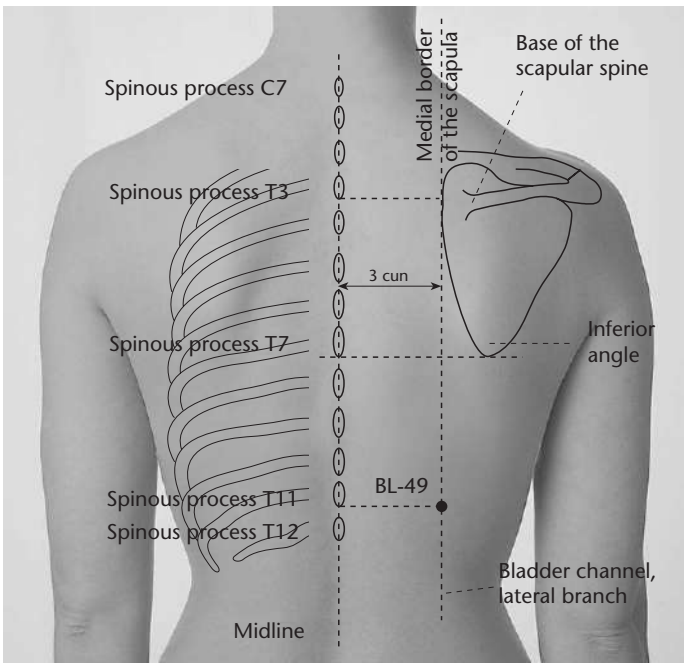
In a sitting position with the arms hanging down, the spinous process of T7 is generally on the level of the inferior angle of the scapula (→ 3.4.2). From there, count down 4 spinous processes to the lower border of the spinous process of T11 and locate **BL-49** 3 cun lateral to this point. **Or:** From the articulation of the most inferior rib, palpate in a superior direction to T11. **Or:** Use the lumbar spine for reference (→ 3.4.3).
Located on the same level are → **Du-6** (on the midline), a point of → **Ex-B-2** (0.5 cun lateral to the midline) and → **BL-20** (1.5 cun lateral to the midline).

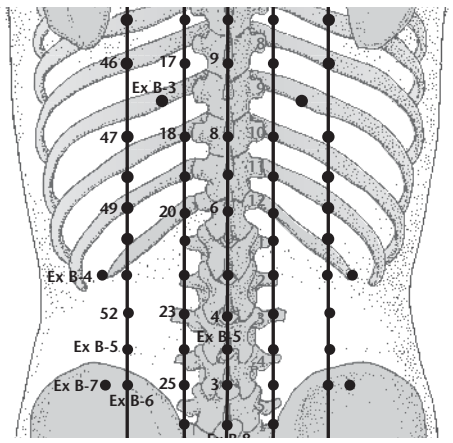
Needling

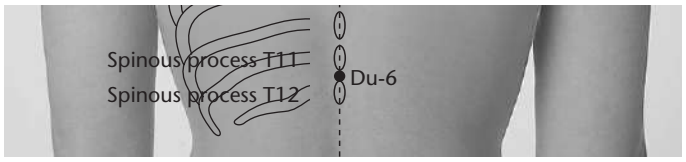
Obliquely 0.3–0.8 cun. Caution: Pneumothorax.

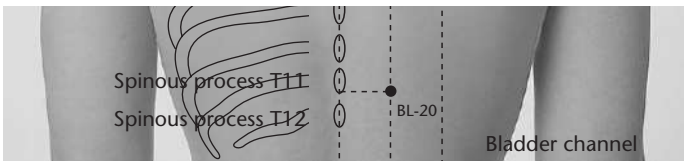
Actions/Indications

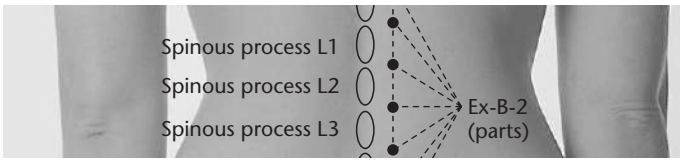
- Clears Damp-Heat
- Harmonises the Spleen and the Stomach

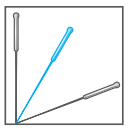
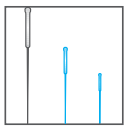
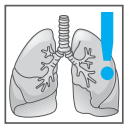


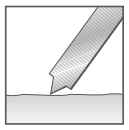










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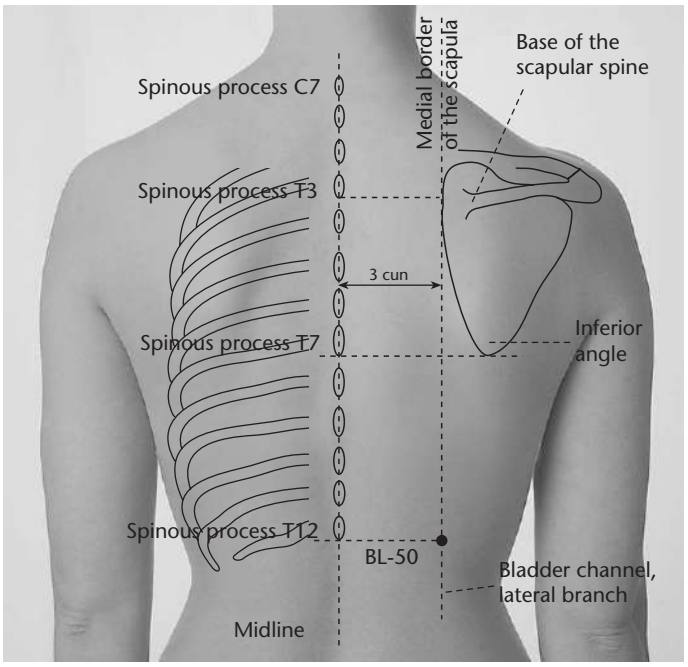
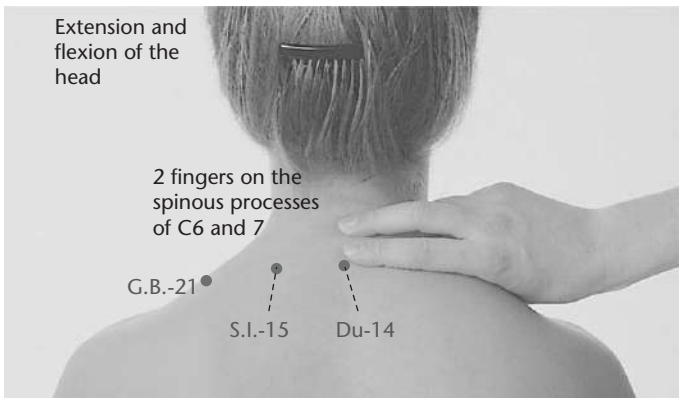
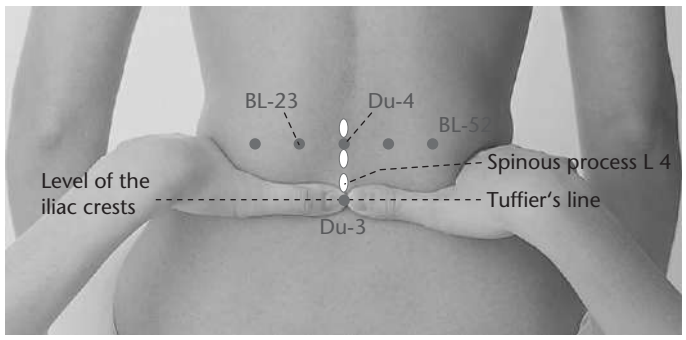
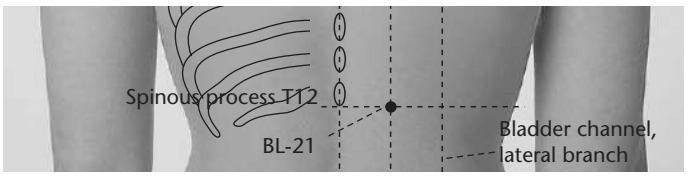
Stomach Granary WEICANG BL-50









Location

3 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 12th thoracic vertebra (T12).

How to find

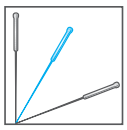
In a sitting position with the arms hanging down, the spinous process of T7 is generally on the level of the inferior angle of the scapula (→ 3.4.2). From there, count down 5 spinous processes to the lower border of the spinous process of the T12 and locate **BL-50** 3 cun lateral to this point. **Or:** Locate the articulation of the most inferior rib with T12 and palpate 3 cun in a lateral direction for **BL-50. Or:** Orientation from the lumbar spine (→ 3.4.3). Located on the same level are a point of → **Ex-B-2** (0.5 cun lateral to the midline) and → **BL-21** (1.5 cun lateral to the midline).

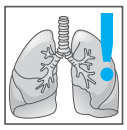
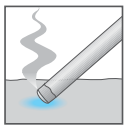
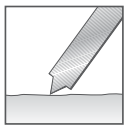
Needling

Obliquely 0.3–0.8 cun. Caution: Pneumothorax, especially with asthenic patients or patients with emphysema.

Actions/Indications

- Harmonises the Middle Burner
- Opens the channel



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BL-51 *Vitals Gate* HUANGMEN

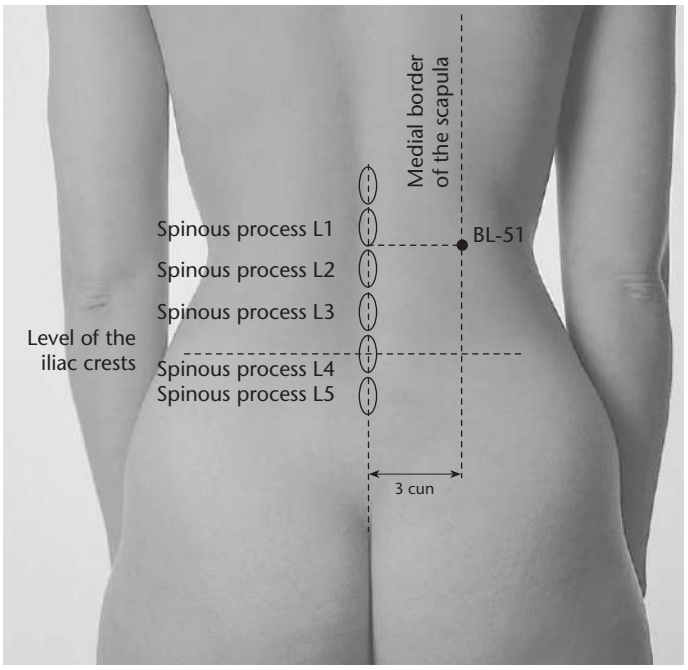
Location

3 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 1st lumbar vertebra (L1).

How to find

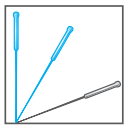
For orientation in the lumbar region (→ 3.4.3), first, the Tuffier's line: place both hands superior or lateral to the highest points of the iliac crest, joining the thumbs in the middle above the spine. In most cases, this line intersects with the spinous process of L4 (note: this varies depending on the patient's position → 3.4.). From there, count upward to the lower border of the spinous process of L1 and, on this level, locate **BL-51** 3 cun in a lateral direction. **Or:** With the patient seated and their arms hanging down in a relaxed way, the spinous process of T7 is generally on the level of the inferior angle of the scapula (→ 3.4.2). From there, count down six spinous processes and locate **BL-51** 3 cun lateral to the spinous process of L1.

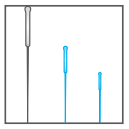
Located on the same level are → **Du-5** (on the midline), a point of → **Ex-B-2** (0.5 cun lateral to the midline), → **BL-22** (1.5 cun lateral to the midline) and → **Ex-B-4** (→ 3.5 cun lateral to the midline).

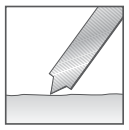


Needling

Vertically or obliquely 0.5–1 cun. Caution: Kidneys.





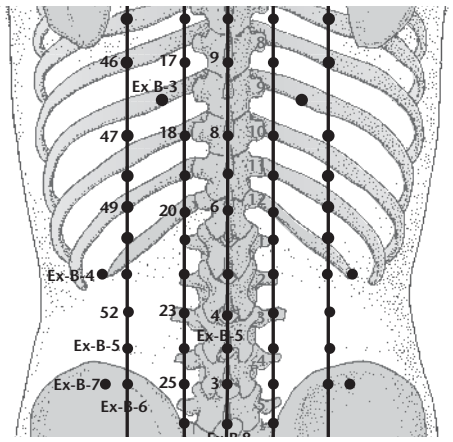


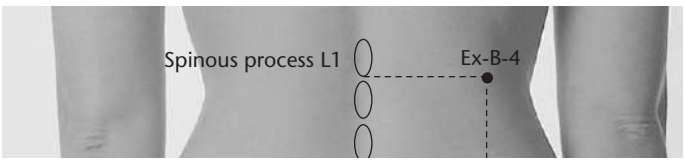
Actions/Indications

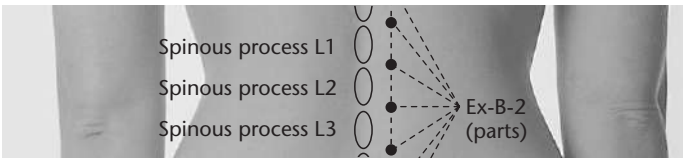
- Moves the Qi and resolves stagnation
- Benefits the breasts

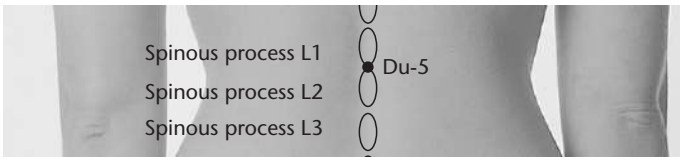
Special features

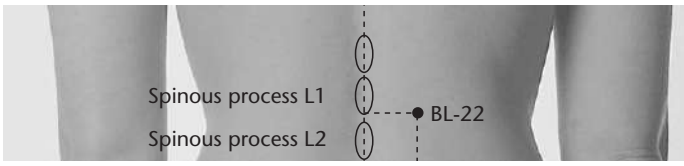
Distal point for disorders of the breasts











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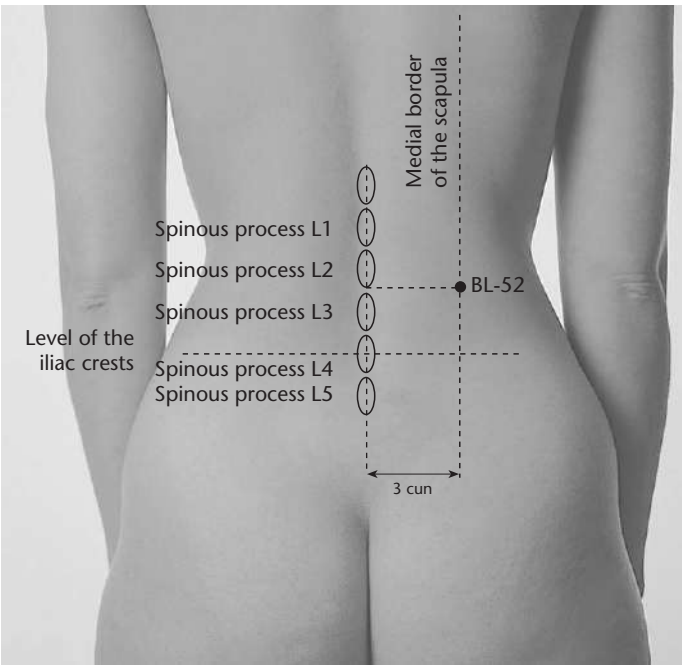
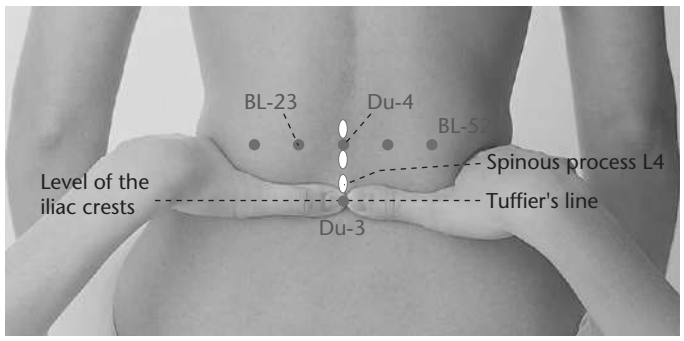
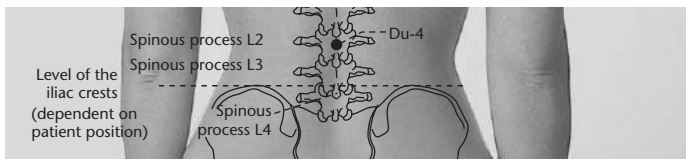
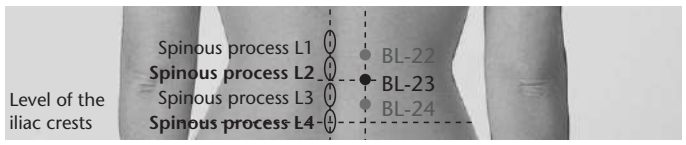
Residence of the Will ZHISHI BL-52









Location

3 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 2nd lumbar vertebra (L2).

How to find

For orientation in the lumbar region (→ 3.4.3), first, locate the Tuffier's line: place both hands superior or lateral to the highest points of the iliac crest, joining the thumbs in the middle above the spine. In most cases, this line intersects with the spinous process of L4 (note: this varies depending on the patient's position → 3.4.). From there, count upward to the lower border of the spinous process of L2 and, on this level, locate **BL-52** 3 cun in a lateral direction.

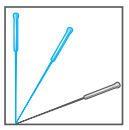
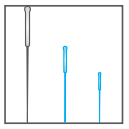
Located on the same level are → **Du-4** (on the midline), a point of → **Ex-B-2** (0.5 cun lateral to the midline) and → **BL-23** (1.5 cun lateral to the midline).

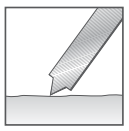
Needling

Vertically or obliquely 0.5–1 cun. Caution: Kidneys.

Actions/Indications

- Tonifies the Kidneys and Essence (*jing*), regulates urination
- Benefits the lumbar region



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BL-53 *Bladder Vitals* BAOHUANG

Location

3 cun lateral to the posterior midline, on the level of the 2nd sacral foramen.

How to find

For details on orientation in the lumbar and sacral region, ➞ 3.4.3, 3.4.4. First, locate L5. The next palpable bony structure inferior to L5 is the highest process of the medial sacral crest. Palpate inferiorly for the 2nd process and locate the 2nd sacral foramen slightly less than 1 cun lateral to the process. Next, locate **BL-53** 3 cun lateral to the midline on the level of the 2nd foramen. **Or:** Use the sacral foramina as a reference point (➞ 3.4.4). **BL-53** is located on the level of the 2nd foramen, 3 cun lateral to the midline.

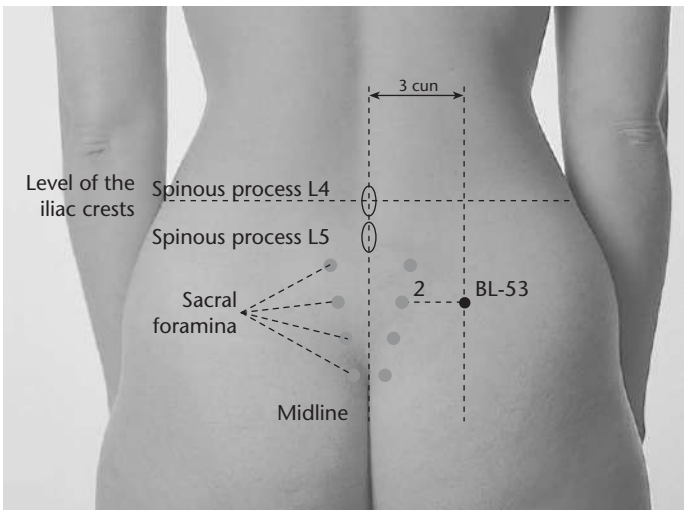
Located on the same level are ➞ **BL-32** (over the 2nd sacral foramen) and ➞ **BL-28** (1.5 cun lateral to the midline).

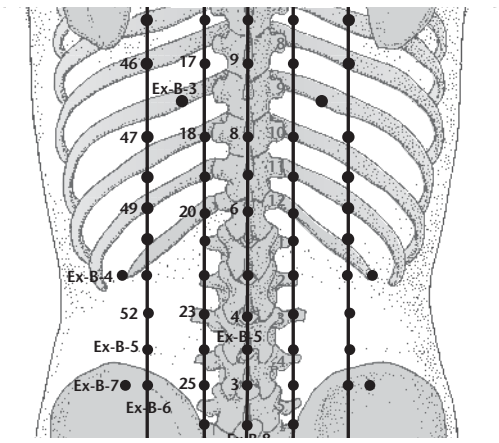
Needling

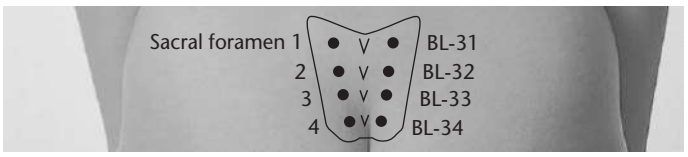
Vertically or obliquely 1–1.5 cun

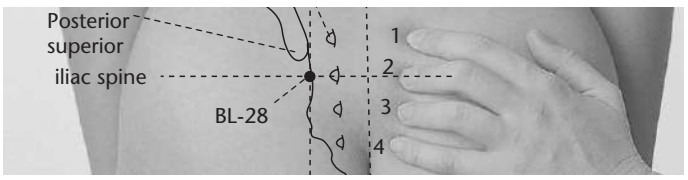
Actions/Indications

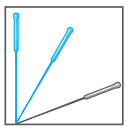
- Benefits the lumbar region, opens the channel and alleviates pain
- Regulates the Lower Burner

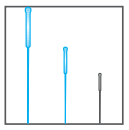


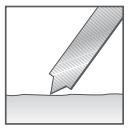


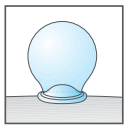












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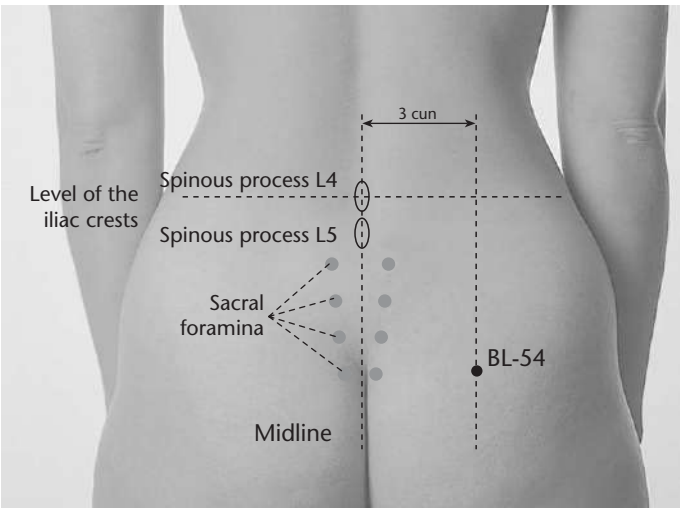
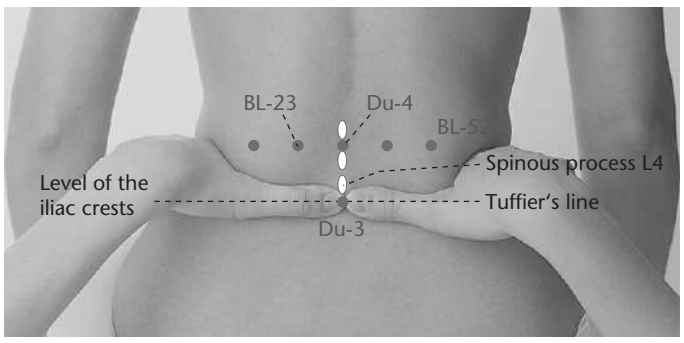
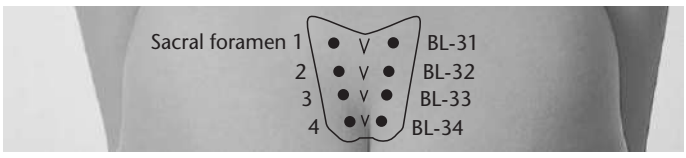
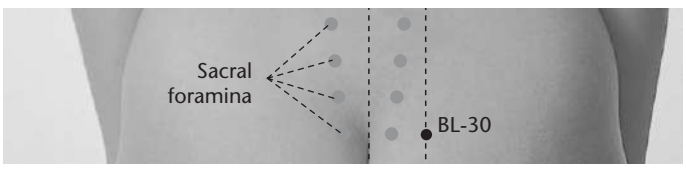
Order's Limit ZHIBIAN BL-54









Location

3 cun lateral to the posterior midline, on the level of the 4th sacral foramen, approximately at the centre of the buttock.

How to find

For details on orientation in the lumbar and sacral region, see ➞ 3.4.3, 3.4.4. First, locate L5. Inferior to it, the next palpable bony structure is the highest point on the medial sacral crest (= sacral spinous processes). Palpate downward for 3 more bony elevations and locate the depression of the 4th sacral foramen less than 1 cun lateral to it. This is on the level of **BL-54**, located 3 cun lateral to the midline. For further reference: The 4th sacral foramen is mostly level with the superior end of the rima ani. Located on the same level are ➞ **BL-34** (over the 4th sacral foramen) and ➞ **BL-30** (1.5 cun lateral to the midline).

Needling

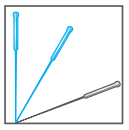
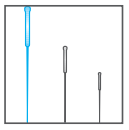
Vertically 1.5–2 cun or 2–3 cun in the direction of the anus or the genital region, depending on the indication.

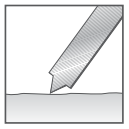
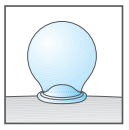
Actions/Indications

- Opens the channel and *luo* vessels, eliminates stagnation
- Regulates urination
- Eliminates haemorrhoids

Special features

Important local point

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BL-55 *Confluence of Yang* HEYANG

Location

2 cun inferior to the midpoint of the popliteal crease, in a depression between the two bellies of the gastrocnemius muscle.

How to find

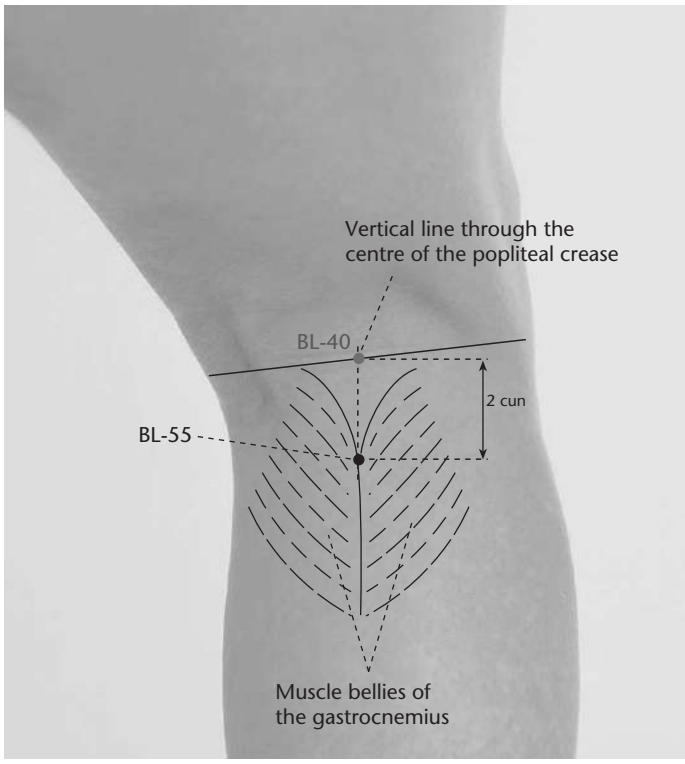
Locate the popliteal crease by flexing the knee. In slim patients, palpate for the joint space. From the centre of the popliteal crease, palpate 2 cun in an inferior direction and locate **BL-55** in a depression between the two bellies of the gastrocnemius muscle.

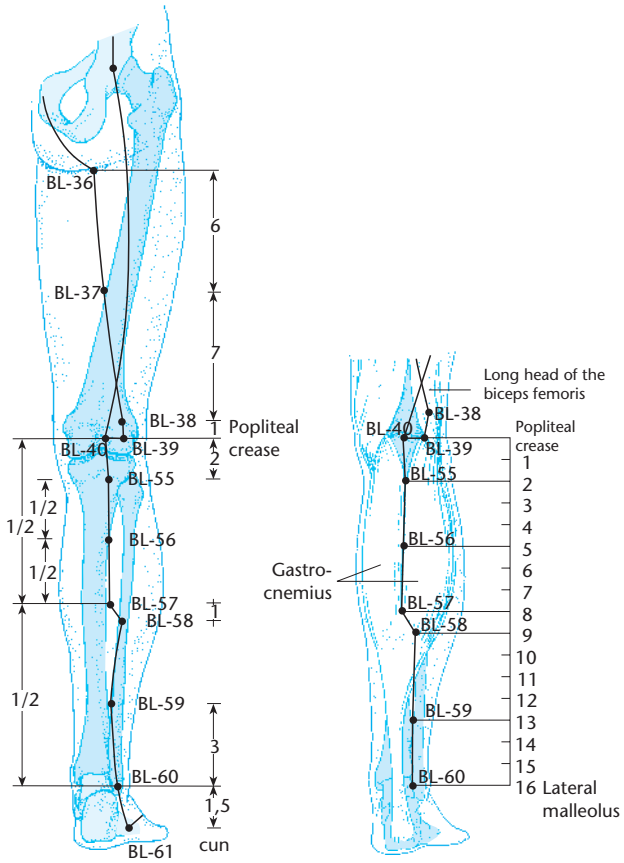
Needling

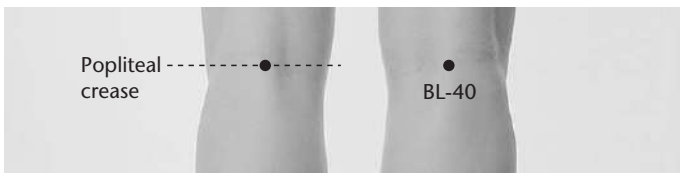
Vertically or obliquely 1–1.5 cun

Actions/Indications

- Opens the channel, alleviates pain (also in the urogenital region)
- Stops uterine bleeding







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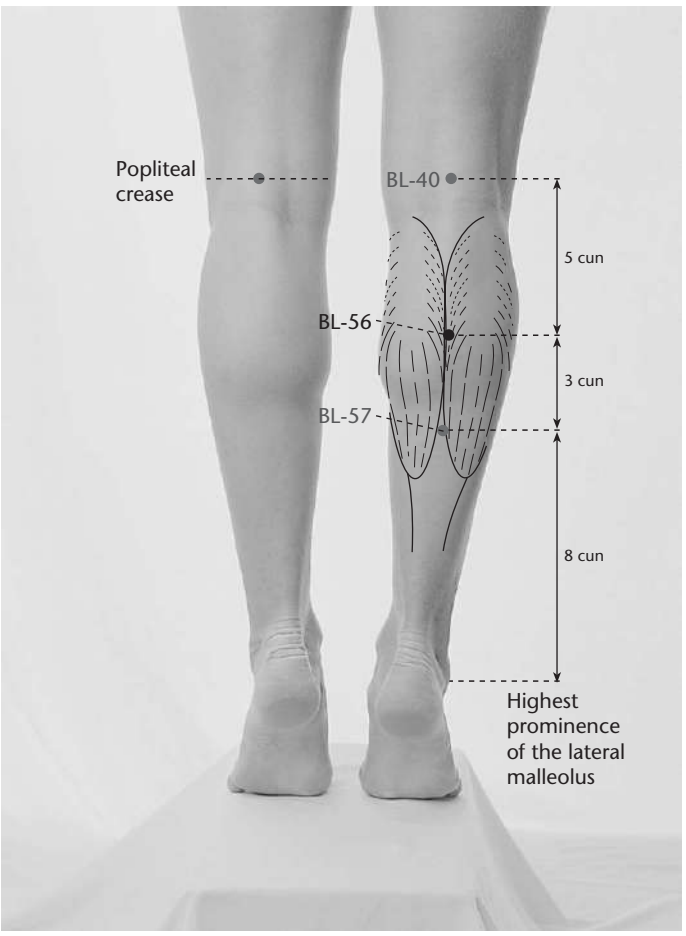
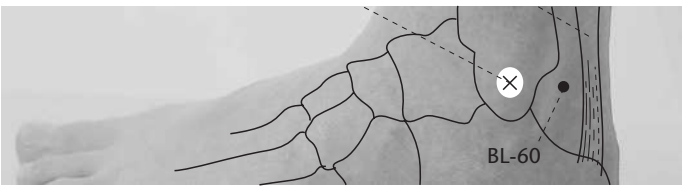
Support the Sinews CHENGJIN BL-56





Location

5 cun inferior to the midpoint of the popliteal crease, between the two bellies of the gastrocnemius muscle.

How to find

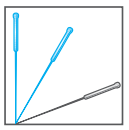
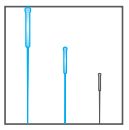
Locate the popliteal crease by flexing the knee. In slim patients, palpate for the joint space. **BL-56** is located 5 cun distal to the popliteal crease, in a depression between the two bellies of the gastrocnemius muscle.

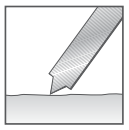
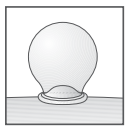
Needling

Vertically or obliquely 1–1.5 cun

Actions/Indications

- Relaxes the muscles and tendons
- Opens the channel
- Eliminates haemorrhoids

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BL-57 *Supporting Mountain* CHENGSHAN

Location

In the middle of the calf, between the two heads of the gastrocnemius muscle, on a line connecting → **BL-40** and → **BL-60**, approximately 8 cun distal to → **BL-40**.

How to find

Slide along the dorsal aspect of the Achilles tendon in a superior direction until you can feel the depression between the two bellies of the gastrocnemius muscle. This will become more defined when the patient's muscles are flexed. **Or:** Spreading hands technique (→ 2.3.3): Place the little fingers on → **BL-40** (centre of the popliteal crease) and → **BL-60** (depression between the Achilles tendon and the highest prominence of the lateral malleolus). The midpoint of this distance, where the thumbs meet, marks the location of **BL-57**.

Located on the same level on the anterolateral aspect of the lower leg are → **ST-38** (1 finger-width lateral to the tibia) and → **ST-40** (2 fingerbreadths lateral to the tibia).

Needling

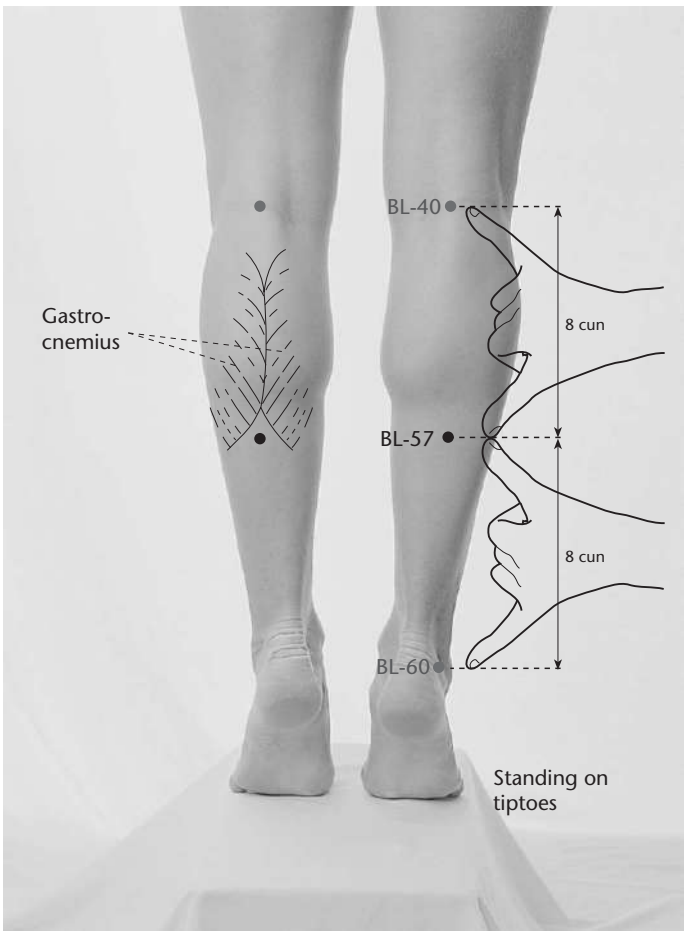
Vertically or obliquely 1–1.5 cun

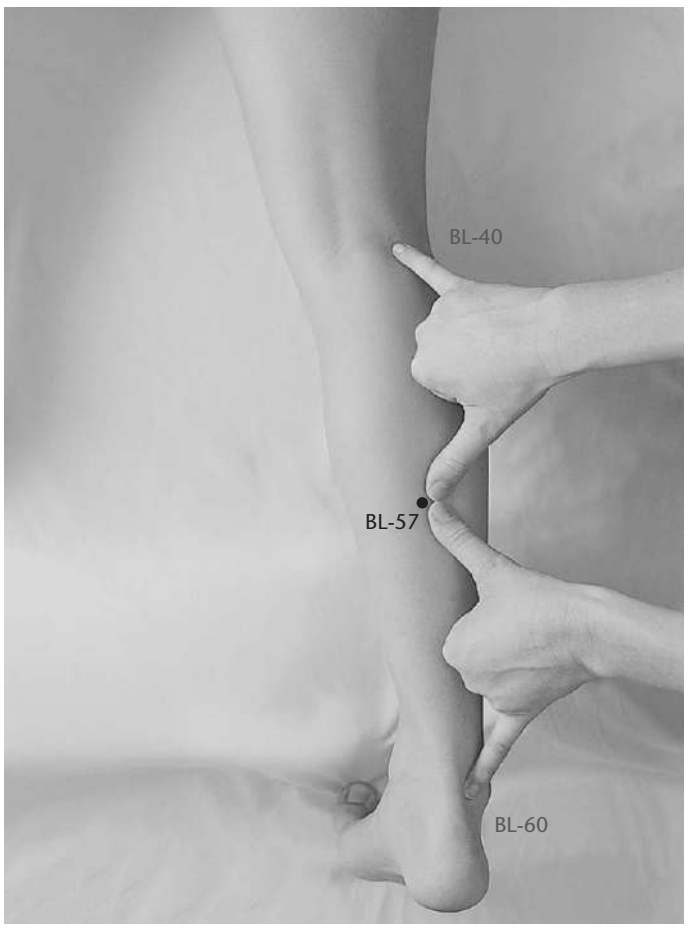
Actions/Indications

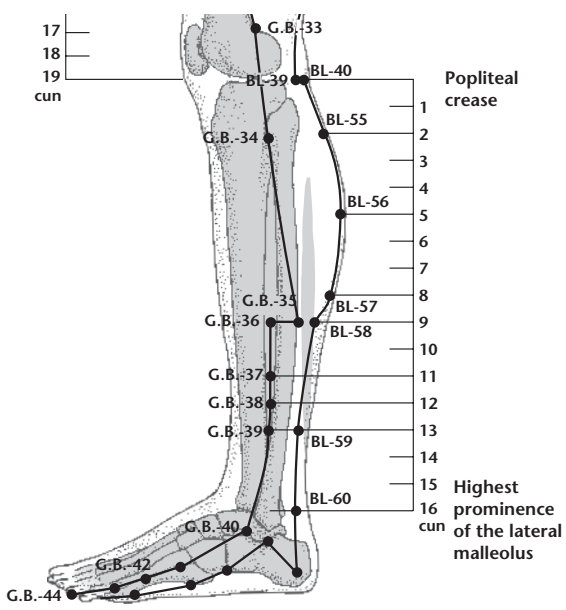
- Relaxes the muscles and tendons, opens the channel
- Eliminates haemorrhoids (pathway of the Bladder divergent channel)

Special features

Ma Dan Yang Heavenly Star point. Important local point with distal effect on the lumbar and anal region.







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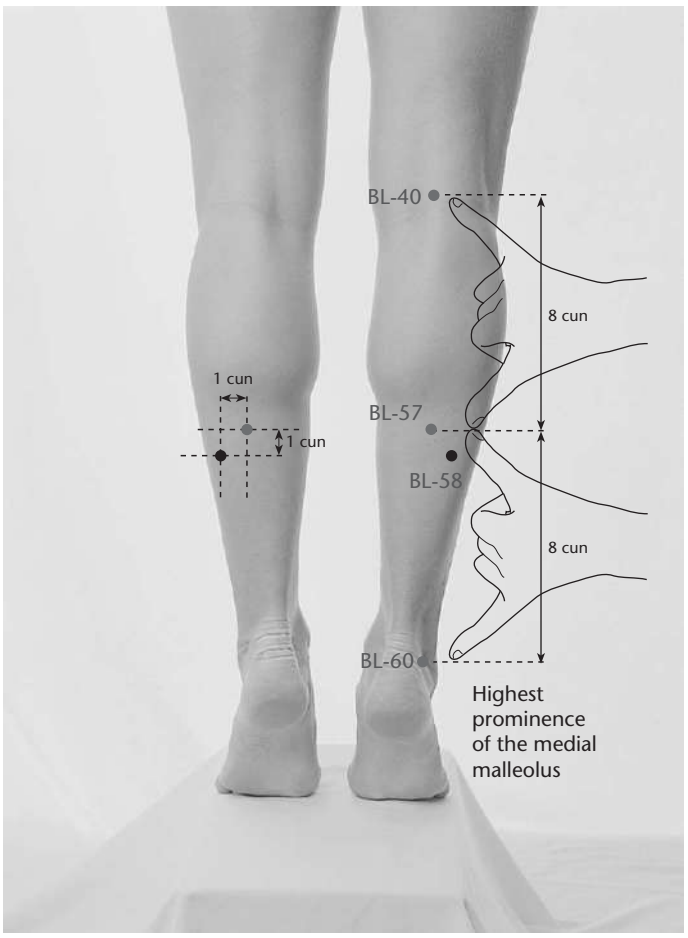
Soaring Upward FEIYANG BL-58



Location

1 cun distal and 1 cun lateral to → **BL-57** or 7 cun proximal to → **BL-60**, at the posterior border of the fibula and at the lower border of the gastrocnemius muscle.

How to find

First, locate → **BL-57** (in the centre of the calf, between the two bellies of the gastrocnemius muscle). From → **BL-57**, palpate 1 cun in a distal direction and 1 cun in a lateral direction. There, locate **BL-58** on the lower border of the gastrocnemius muscle. Located on the same level (7 cun superior to the highest prominence of the lateral malleolus) are → **G.B.-35** (at the posterior border of the fibula), → **G.B.-36** (at the anterior border of the fibula) and → **ST-39** (1 cun distal to the midpoint of the line connecting → **ST-35** and → **ST-41** and 1 fingerbreadth lateral to the anterior crest of the tibia).

Needling

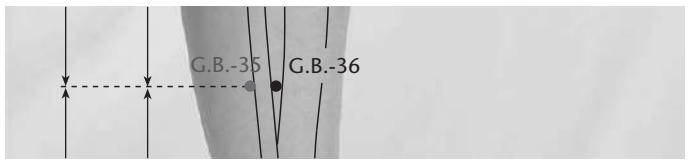
Vertically or obliquely 1–1.5 cun

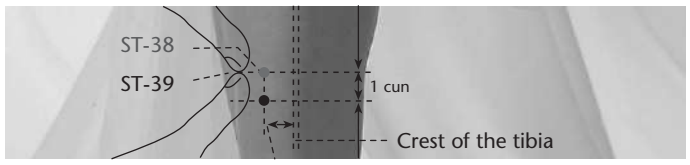
Actions/Indications

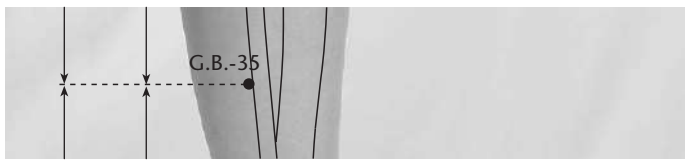
- Opens the channel and *luo* vessels, alleviates pain
- Expels pathogenic factors from the *taiyang* channels (S.I., BL)
- Harmonises above and below
- Treats haemorrhoids

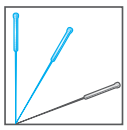
Special features

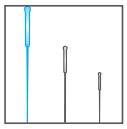
Luo-connecting point

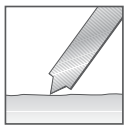












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BL-59 *Instep Yang* FUYANG

Location

On the lateral aspect of the lower leg, 3 cun superior to → **BL-60** (in the depression between the highest prominence of the lateral malleolus and the Achilles tendon).

How to find

First, locate → **BL-60** in the depression between the highest prominence of the lateral malleolus and the Achilles tendon. With oedema of the lower leg, this point is not visible but palpable. From → **BL-60**, measure 3 cun (1 handbreadth) in a superior direction. There, locate **BL-59** in a depression between the Achilles tendon and the tendons of the peroneous longus and brevis muscles.

Located on the same level is → **G.B.-39**, 3 cun directly above the prominence of the lateral malleolus.

Needling

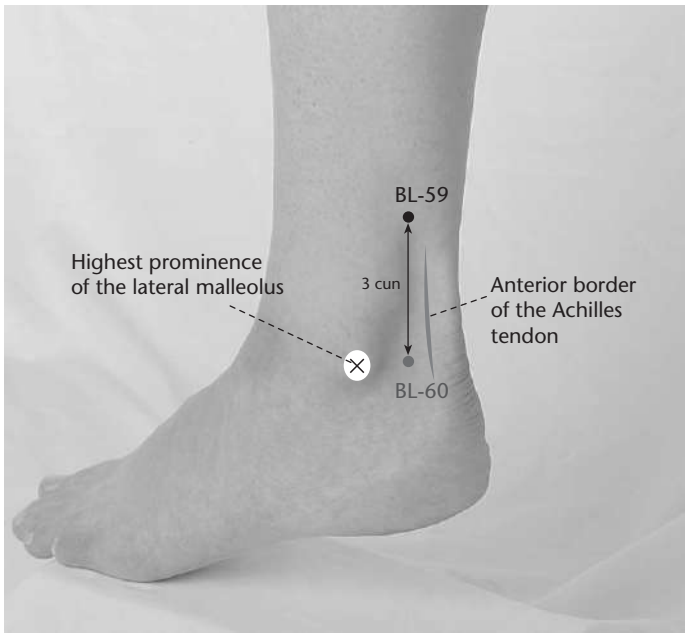
Vertically or obliquely 1–1.5 cun

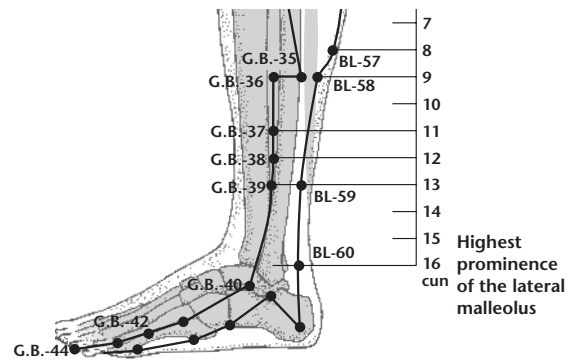
Actions/Indications

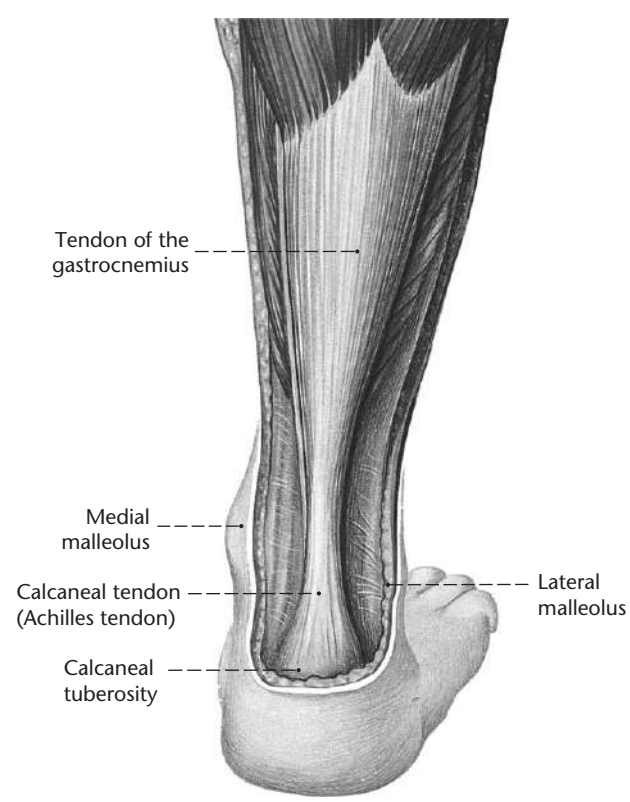
- Opens the channel and *luo* vessels
- Benefits the lower back
- Benefits the head, activates the *yang qiao mai*

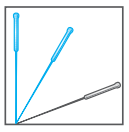
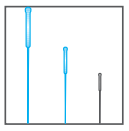
Special features

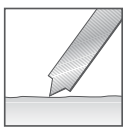
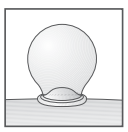
Xi-cleft point of the *yang qiao mai*, meeting point with the *yang qiao mai* according to some authors.







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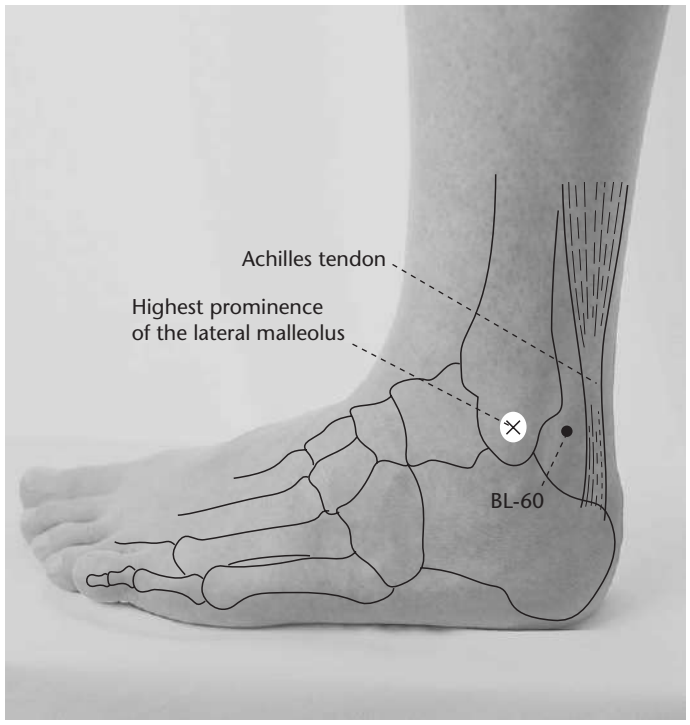
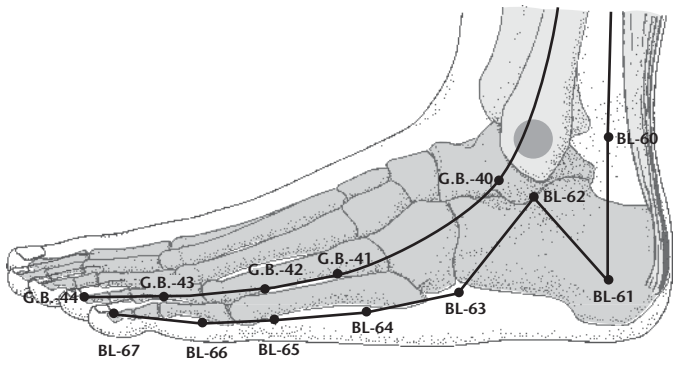
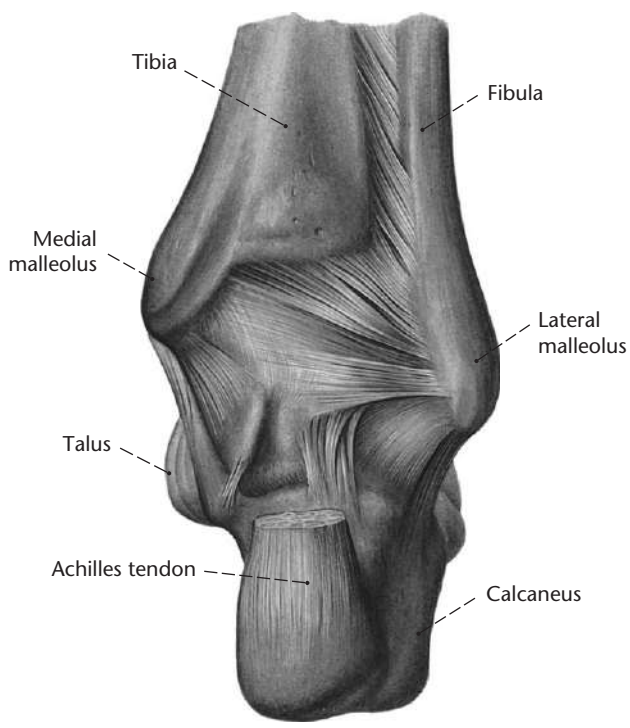
Kunlun Mountains KUNLUN BL-60







Location

In the depression on the line connecting the Achilles tendon and the highest prominence of the lateral malleolus.

How to find

Locate the highest prominence of the lateral malleolus (→ 3.6.2). From there, palpate horizontally towards the Achilles tendon and locate **BL-60** in a depression anterior to the tendon.

Needling

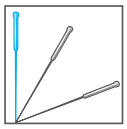
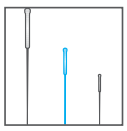
Vertically 0.5–1 cun. Caution: Reducing needle techniques contraindicated during pregnancy. Exception: A supportive point during labour. If the patient has cold feet, the therapeutic effect can be increased by using a heatlamp or a hot cherry-pit bag under the soles of the feet.

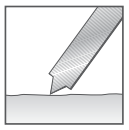
Actions/Indications

- Clears Heat, subdues Yang and Wind and eliminates excess, especially in the head
- Opens the channel, alleviates pain, relaxes the tendons, strengthens the lumbar region
- Promotes labour

Special features

Jing-river point, Fire point, Ma Dan Yang Heavenly Star point. Important distal point for the cervical, thoracic and lumbar spine, especially for chronic cases.



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BL-61 *Servant's Respect* PUCAN

Location

On the lateral aspect of the heel, 1.5 cun inferior to → **BL-60** (in the depression between the highest prominence of the lateral malleolus and the Achilles tendon), in a depression on the calcaneus.

How to find

First, locate → **BL-60** in the depression between the highest prominence of the lateral malleolus and the Achilles tendon. With oedema of the lower leg, the depression is not visible but palpable. From → **BL-60**, measure 1.5 cun in a distal direction. There, locate **BL-61** in a depression on the calcaneus, approximately on the midpoint of a line connecting the sole of the foot and → **BL-60**.

Needling

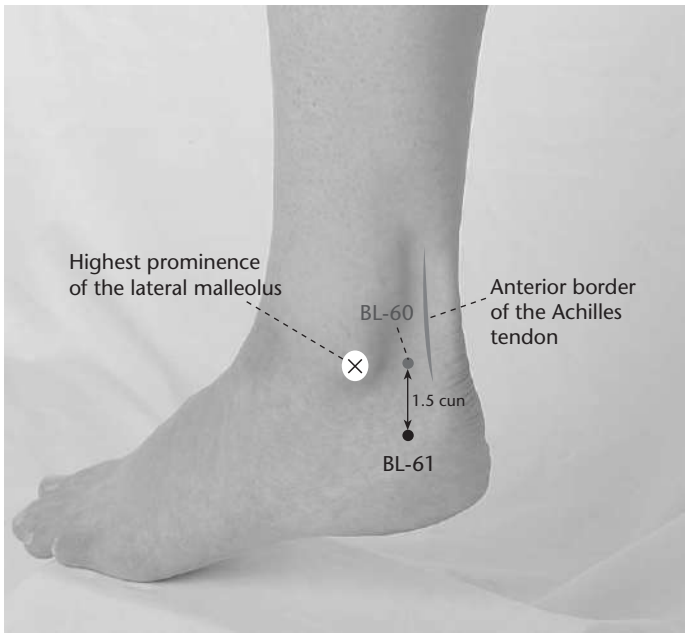
Vertically or obliquely 0.3–0.5 cun

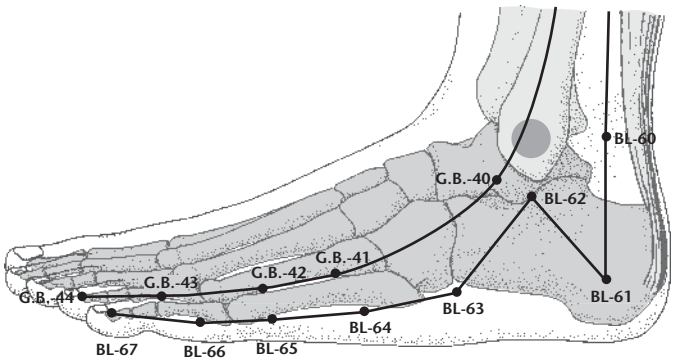
Actions/Indications

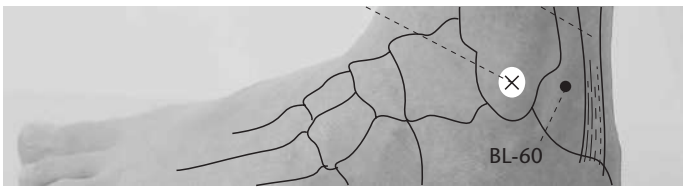
- Relaxes the tendons
- Opens the channel, alleviates pain

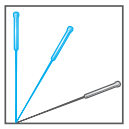
Special features

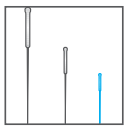
Meeting point with the *yang qiao mai*

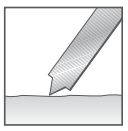


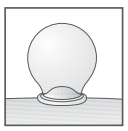












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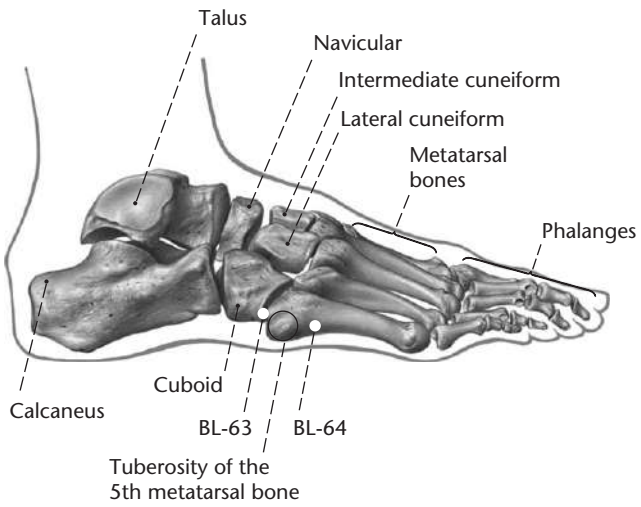
Extending Vessel SHENMAI BL-62



Location

In a depression directly inferior to the highest prominence of the lateral malleolus, above the joint space between the talus and calcaneus.

How to find

First, locate the highest prominence of the lateral malleolus (→ 3.6.2). **BL-62** is located directly below it, in a depression inferior to the lower border of the malleolus and superior to the tendons of the peroneus muscle, in the joint space between the talus and calcaneus.

Needling

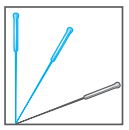
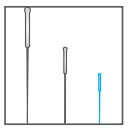
Vertically or obliquely 0.3–0.5 cun. The needle may reach the calcaneofibular ligaments superior to the tendons of the peroneus longus and brevis muscles, possibly also the joint space.

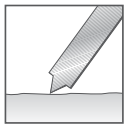
Actions/Indications

- Subdues (internal) Wind, clears Heat from the head, calms the *shen*, benefits the head and eyes
- Expels external Wind
- Opens and regulates the *yang qiao mai*
- Opens the channel, alleviates pain
- Moves the Qi in the Bladder sinew channel

Special features

Opening (master) point of the *yang qiao mai*, Sun Si Miao Ghost point.



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BL-63 *Golden Gate* JINMEN

Location

On the lateral aspect of the foot, proximal to the tuberosity of the 5th metatarsal bone, in a depression anterior and inferior to → **BL-62** between the calcaneus and the cuboid bone. Note: Some authors locate **BL-63** between the cuboid bone and the tuberosity of the 5th metatarsal bone (see figure on **p. 311**); the more tender point should be selected.

How to find

When palpating along the lateral aspect of the foot on the level of the border of the 'red and white' skin, a bony structure can be felt approximately at the midpoint of the foot. This is the tuberosity of the 5th metatarsal point (→ 3.6.2). Slightly proximal to it (towards the heel), you can palpate a depression between the calcaneus and the cuboid bone. There, locate **BL-63**.
→ **BL-64** is located distal (towards the toes) to the tuberosity of the 5th metatarsal bone.

Needling

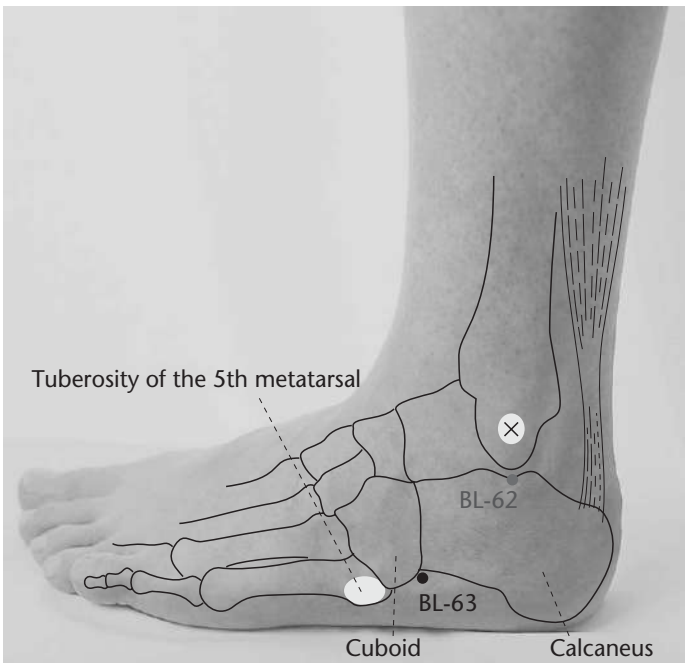
Vertically 0.3–0.5 cun

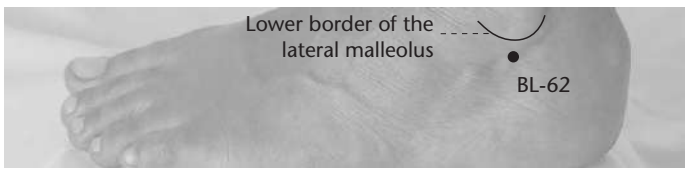
Actions/Indications

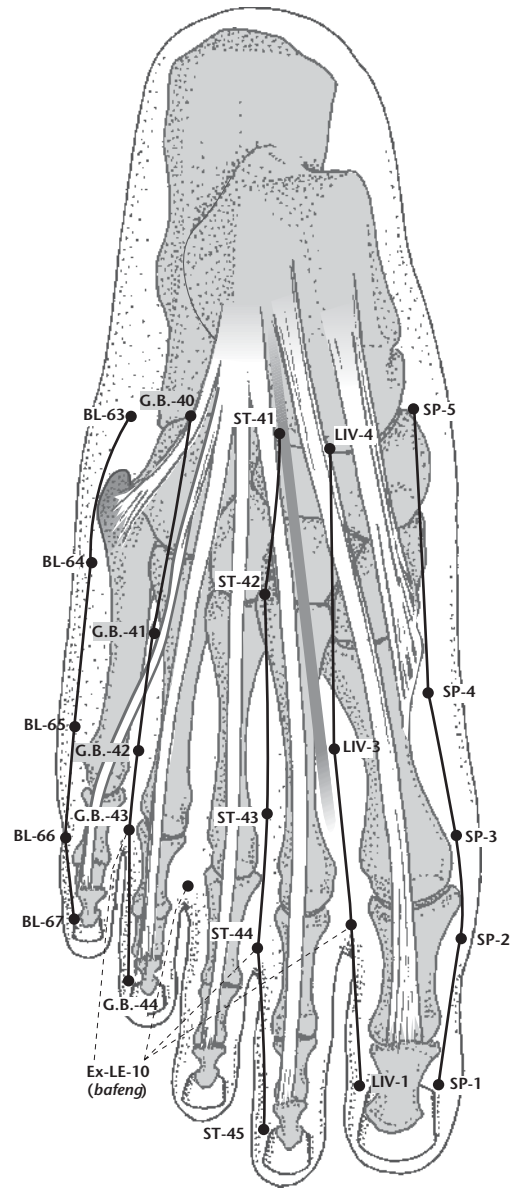
- Opens the channel, alleviates pain and eliminates stagnation (*xi*-cleft point)
- Subdues internal Wind and calms the *shen*

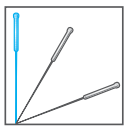
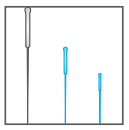
Special features

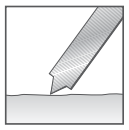
Xi-cleft point, meeting point with the *yang wei mai*.









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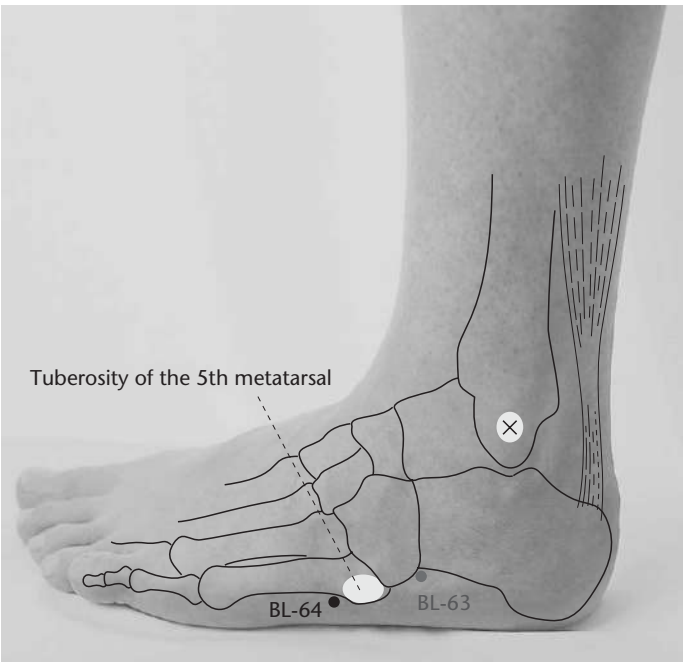
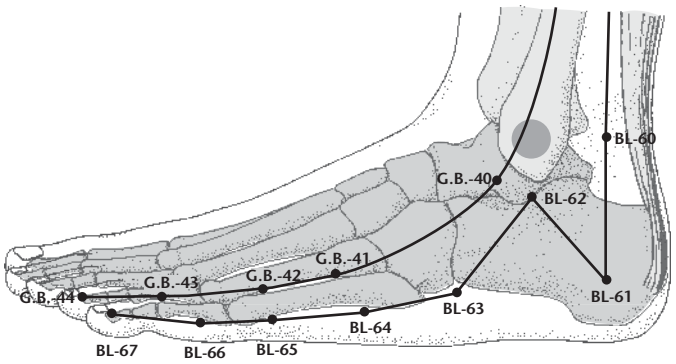
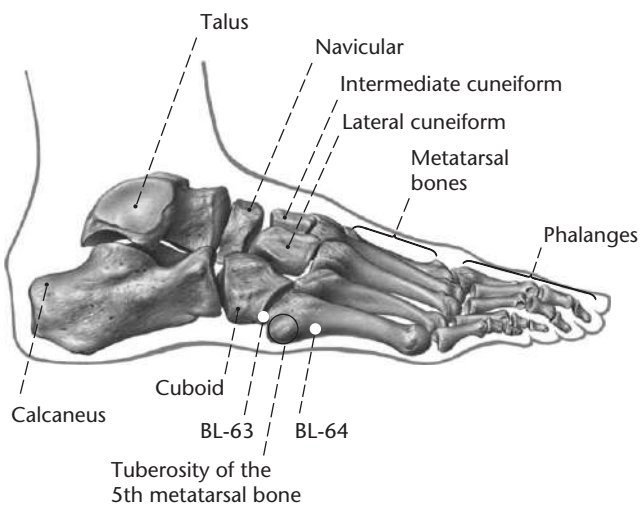
Capital Bone JINGGU BL-64







Location

On the lateral aspect of the foot, distal to the tuberosity of the 5th metatarsal bone.

How to find

When palpating along the lateral aspect of the foot on the level of the border of the 'red and white' skin, a bony structure can be felt approximately at the midpoint of the foot. This is the tuberosity of the 5th metatarsal bone (→ 3.6.2). **BL-64** is located directly distal to it (towards the toes), at the junction between the base and the shaft of the 5th metatarsal bone.

→ **BL-63** is located proximal to the tuberosity of the 5th metatarsal bone, in a depression between the calcaneus and cuboid bone (or between the tuberosity and the cuboid bone). → **SP-4** is located in a comparable position on the medial aspect of the foot, in a depression distal to the base of the 1st metatarsal bone.

Needling

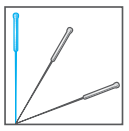
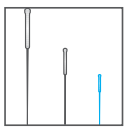
Vertically 0.3–0.5 cun

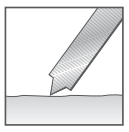
Actions/Indications

- Clears Wind and Heat from the head and eyes
- Calms the *shen*
- Opens the channel

Special features

Yuan-source point



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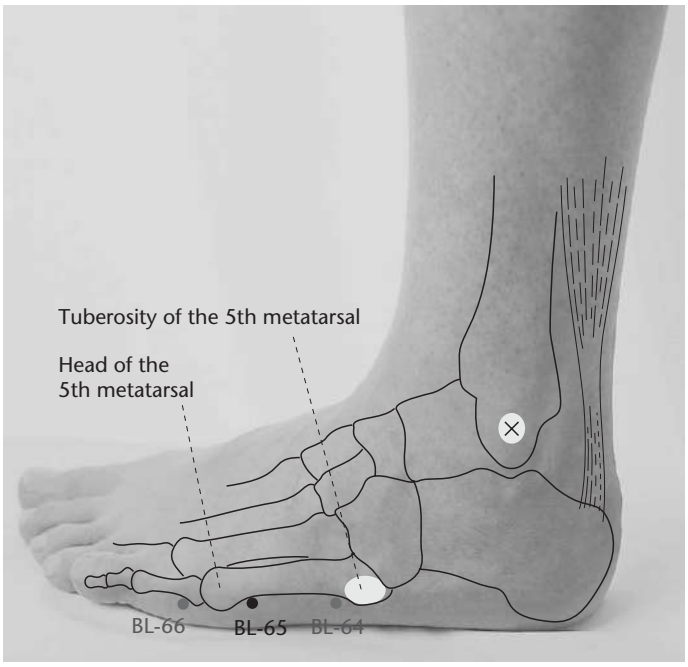
BL-65 *Restraining Bone* SHUGU

Location

On the lateral aspect of the foot, in the depression proximal to the head of the 5th metatarsal bone.

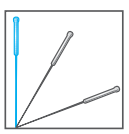
How to find

When palpating along the bony structures on the lateral aspect of the foot, a prominent bony landmark can be felt approximately at the midpoint of the foot. This is the tuberosity of the 5th metatarsal bone. Distal to it (towards the toes), you can feel a further bony structure, the head of the 5th metatarsal bone. Directly proximal to it, at the border of the 'red and white' skin (border dorsum/sole of the foot), **BL-65** can be palpated in a depression. → **BL-66** is located in a depression distal to the head of the 5th metatarsal bone (distal to the metatarsophalangeal joint), at the junction of the base and the shaft of the proximal phalanx of the little toe.
→ **SP-3** is located in a comparable position on the medial aspect of the foot (proximal to the head of the 1st metatarsal bone). → **S.I.-3** and → **L.I.-3** are located in comparable positions at the ulnar/lateral border of the hand.



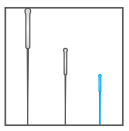
Needling

Vertically 0.3–0.5 cun. Caution: Painful point.



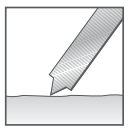
Actions/Indications

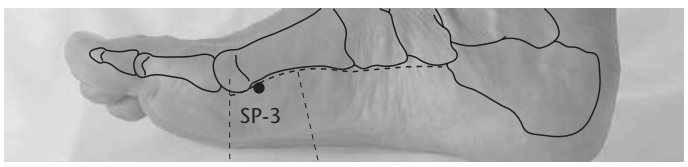
- Expels pathogenic factors (especially from the head)
- Clears Heat
- Opens the channel and *luo* vessels, alleviates pain
- Calms the *shen*

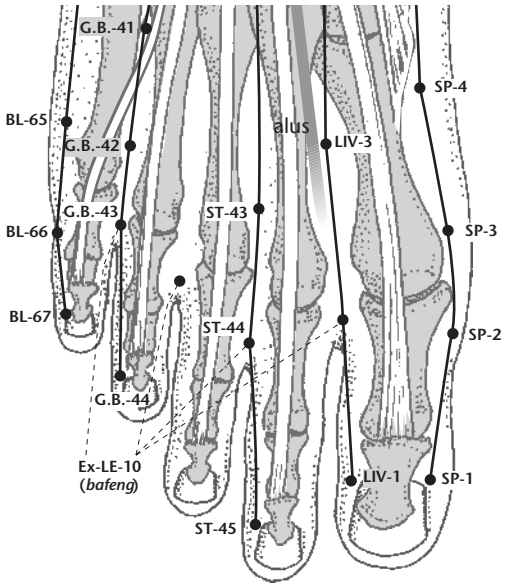


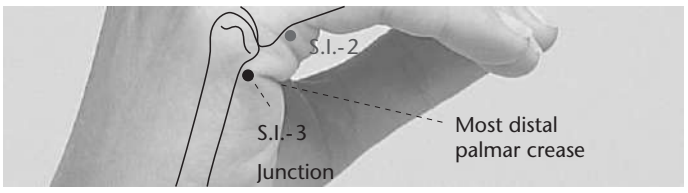
Special features

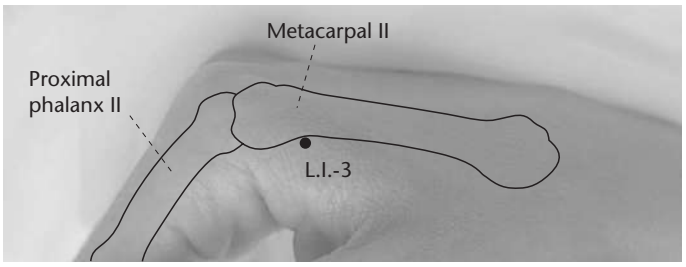
Shu-stream point, Wood point, sedation point.











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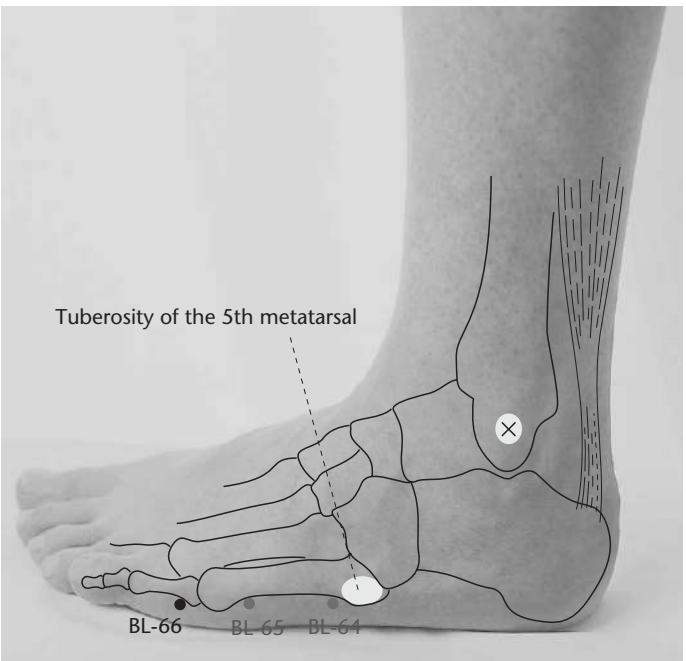
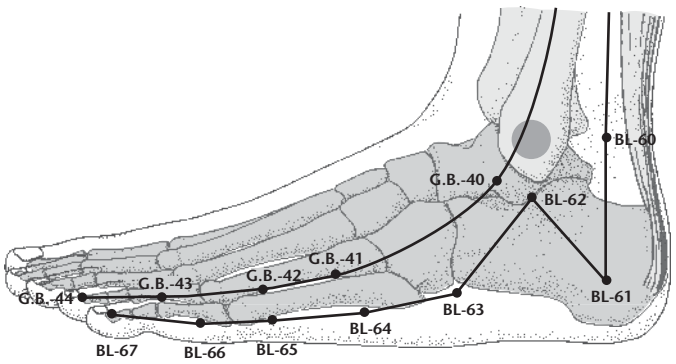
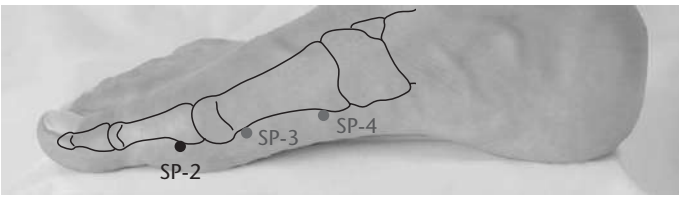
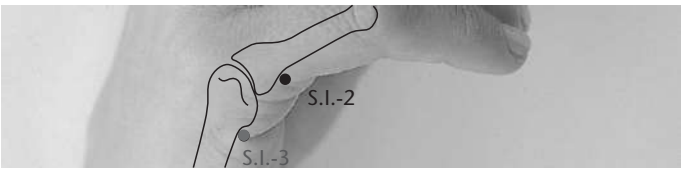
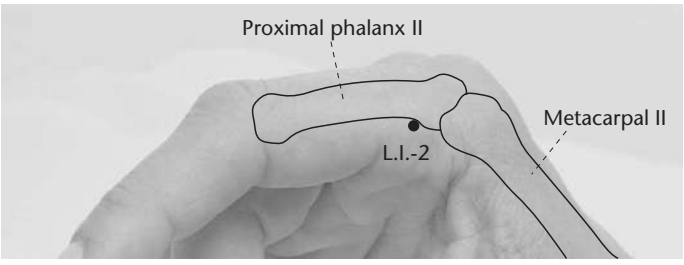
Foot Connecting Valley ZUTONGGU BL-66











Location

At the lateral border of the foot, in the depression distal to the metatarsophalangeal joint of the little toe.

How to find

When palpating along the border of the 'red and white' skin on the lateral aspect of the foot, at approximately the midpoint of the length of the foot, a clearly defined bony structure can be felt. This is the tuberosity of the 5th metatarsal bone. Distal to it (towards the toes), you can feel a further prominent bony structure, the head of the 5th metatarsal bone (or the 5th metatarsophalangeal joint). **BL-66** is located directly distal to it, in a depression at the junction of the base and the shaft of the proximal phalanx of the little toe.

→ **BL-65** is located proximal to the head of the 5th metatarsal bone. → **SP-2** is located in a comparable position on the medial aspect of the foot. Located in comparable positions on the hand are → **S.I.-2** (on the ulnar aspect) and → **L.I.-2** (on the radial aspect).

Needling

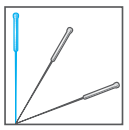
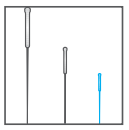
Vertically 0.3–0.5 cun. Caution: Painful point.

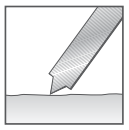
Actions/Indications

- Clears the head
- Descends the Lung and Stomach Qi
- Calms the *shen*

Special features

Ying-spring point, Water point, *ben* point (Five Phases point).



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BL-67 *Reaching Yin* ZHIYIN

Location

On the dorsal aspect of the little toe, 0.1 cun from the lateral corner of the nail.

How to find

This point is located at the junction of two tangents that border the nail of the little toe laterally and proximally, approximately 0.1 cun from the actual corner of the nail.

Needling

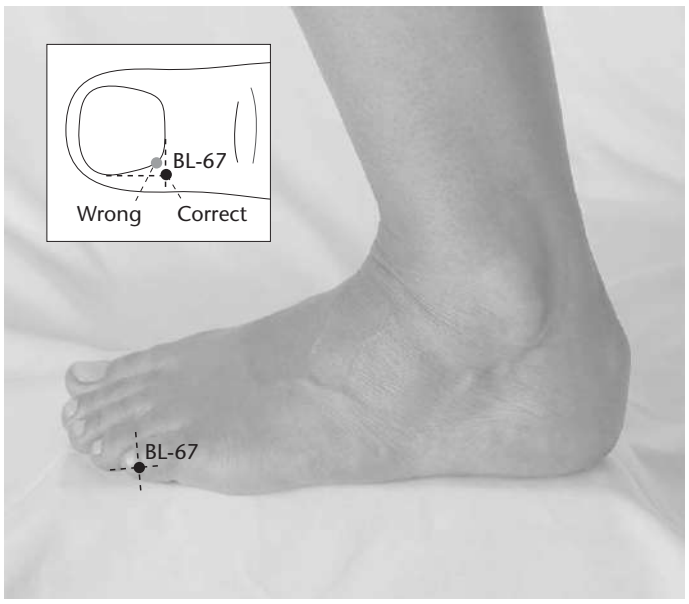
Vertically 0.1 cun or obliquely 0.2 cun in the direction of the foot. Prick to bleed. Caution: Painful point.

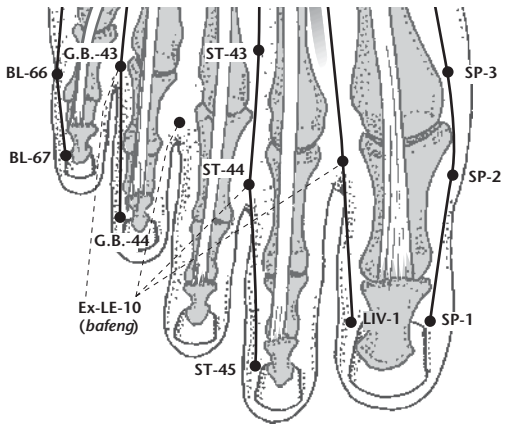
Actions/Indications

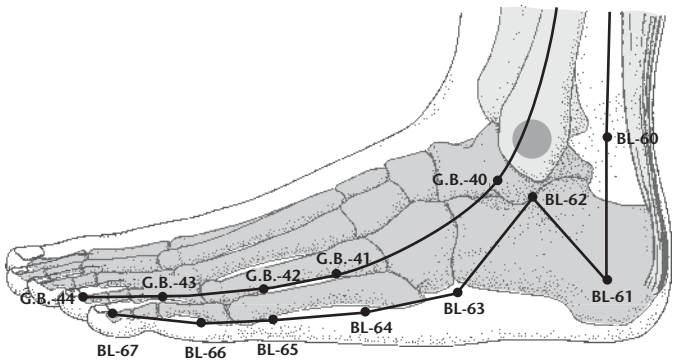
- Scientifically established: conversion of breech presentations prior to birth: moxibustion and electro-acupuncture at this point seem to be most effective (approximately 70–80%)
- Facilitates labour
- Expels pathogenic factors from the opposite end of the channel
- Regulates Yin and Yang of the Water element

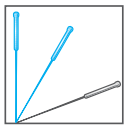
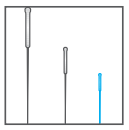
Special features

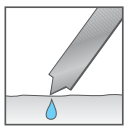
Jing-Well point, Metal point, tonification point, exit point. An isolated case has been reported regarding a pregnant woman who was treated with moxibustion at **BL-67**. This resulted in a fetomaternal transfusion of 300 ml of blood, endangering the fetus. For this reason, treatments should be controlled by cardiotocography.









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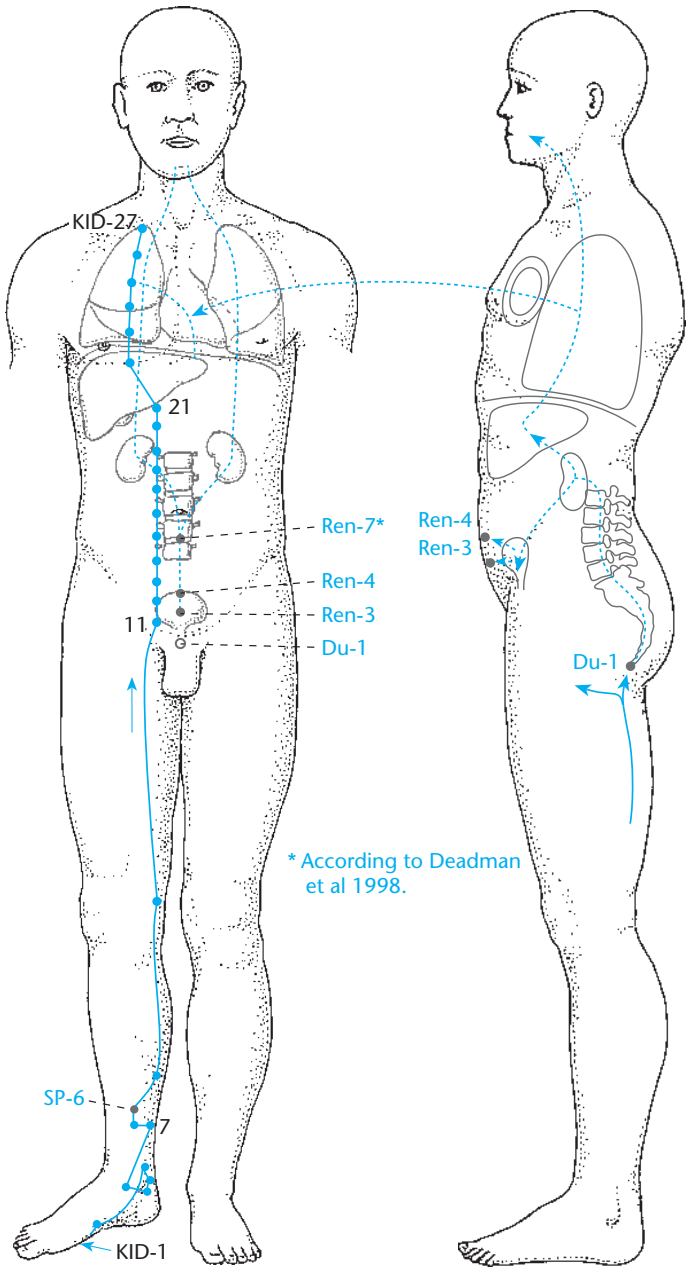
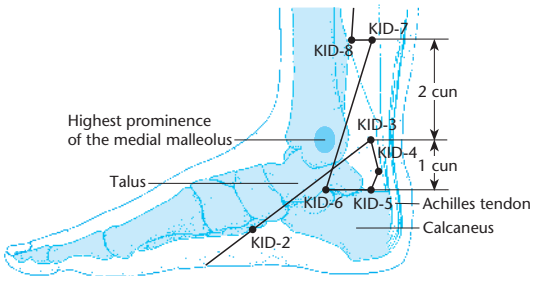
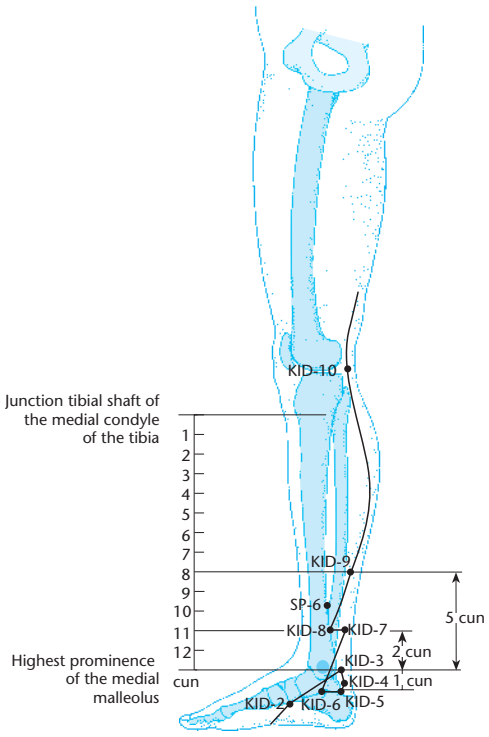
4.8 The Kidney Channel System – Foot *shaoyin* (*zu shao yin jing luo*)

4.8.1 The Kidney Primary Channel (*zu shao yin jing*)







Pathway

The Kidney primary channel begins beneath the little toe, which is reached by **a branch** separating from the Bladder primary channel at its endpoint at → **BL-67** (*zhiyin*) (foot Yin–Yang connection of the second great circuit).

The Kidney primary channel diagonally crosses the sole of the foot to **KID-1** (*yongquan*) and to **KID-2** (*rangu*) below the navicular tuberosity, continues to the posterior aspect of the medial malleolus and descends to enter the heel. From here it ascends the medial aspect of the lower leg, intersecting with → **SP-6** (*yinlingquan*) and continuing to ascend the postero-medial aspect of the thigh towards the perineum.

In the perineal region the primary channel divides into **two branches**:

- the **deep, internal** branch travels to → **Du-1** (*changqiang*) and ascends alongside the spine to connect with its pertaining *zang*-Organ, the Kidneys (*shen*), and its paired *fu*-Organ, the Bladder (*pangguang*). Here it divides into smaller branches which connect with → **Ren-4** (*guanyuan*) and → **Ren-3** (*zhongji*), and, according to some authors, also with → **Ren-7** (*yinjiao*). From the Kidney (*shen*) a branch ascends to the Liver (*gan*), runs to and spreads in the Lung (*fei*), continues to the trachea and terminates at the root of the tongue. From the Lung (*fei*), an **inner branch** travels to the Heart (*xin*), where it meets the Pericardium primary channel (deep Yin–Yin connection). It then disperses in the chest and reaches → **Ren-17** (*shanzhong*).
- the **external** branch separates in the perineal region and runs to the lower abdomen at **KID-11** (*henggu*). From the pubic

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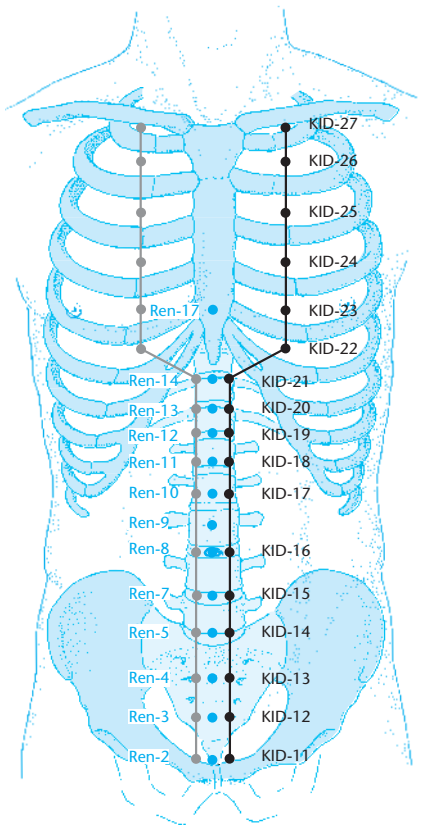

bone it ascends initially 0.5 cun lateral to the anterior midline, from the 5th intercostal space (**KID-22**) 2 cun lateral to the midline to the infraclavicular fossa.

Clinical importance (→ 1.2)

Exterior (*biao*) signs and symptoms: Pain in the lumbar region, counterflow Cold or weakness of the legs, dry mouth, sore throat, pain in the lateral gluteal region and on the posterior thigh, pain on the soles of the feet.

Interior (*li*) or *zangfu*-Organ signs and symptoms: Pain, facial oedema, dark rings under the eyes, shortness of breath, somnolence, restlessness, diarrhoea, thin or dry stools, abdominal distension, nausea and vomiting, impotence.

Connections of the Kidney primary channel

Connections with other channels

Bladder primary channel (*zu tai yang jing*)

Connection: Foot Yin–Yang connection of the second great circuit
Location: BL-67 → KID-1 (on the foot)
Circulation: Circadian (according to the Organ clock)
Importance: Exterior–Interior relationship

Heart primary channel (*shou shao yin jing*)

Connection: Paired according to the Six-Channel theory (hand–foot pairing): *shao yin* (Yin axes of the second great circuit)
Location: KID → HE (on the thorax). A branch of the internal pathway of the Kidney primary channel travels from the Kidney to the Liver, penetrates the diaphragm and spreads in the Lung (*fei*). From the Lung a branch runs to the Heart (*xin*), there connecting with the Heart primary channel.
Circulation: Non-circadian (**not** according to the Organ clock)
Importance: Above–below relationship

Pericardium primary channel (*shou jue yin jing*)

Connection: Deep Yin–Yin connection
Location: KID → P. A branch of the internal pathway of the Kidney primary channel travels from the Kidney to the Liver, penetrates the diaphragm and spreads in the Lung (*fei*). From the Lung an internal branch courses to the Heart (*xin*), where it joins the Pericardium primary channel (deep Yin–Yin connection) and also reaches → **Ren-17** (*shanzhong*).
Circulation: Circadian (according to the Organ clock)
Importance: The Pericardium primary channel receives Nutritive Qi (*ying qi*) from the Kidney primary channel (first circulation of the *ying qi* → 1.1.4).

Connections with other *zangfu*-Organ systems

Kidney (***shen***), **Bladder** (***pangguang***), Liver (*gan*), Lung (*fei*), Pericardium (*xin bao*), Heart (*xin*)

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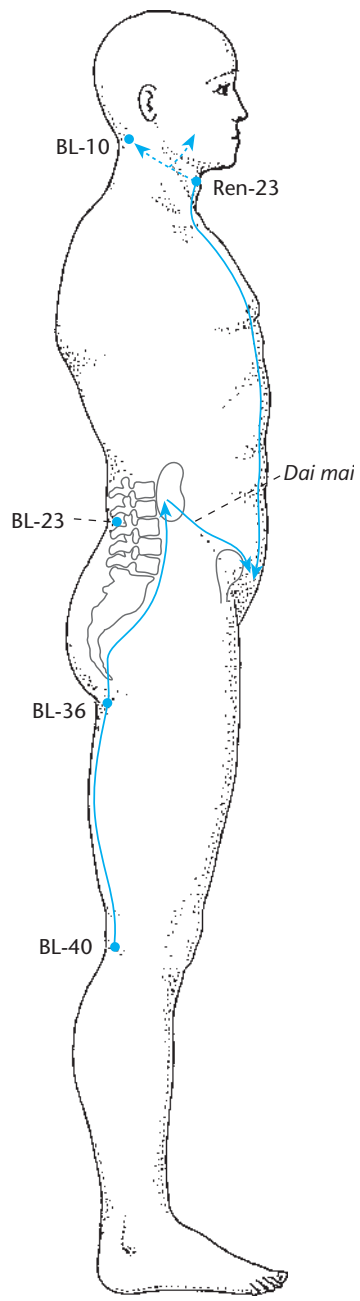
4.8.2 The Kidney Divergent Channel (*zu shao yin jing bie*)



Pathway

The Kidney divergent channel separates from the Kidney primary channel in the popliteal fossa at ➞ **KID-10** (*yinggu*). It

- ➡ meets ➞ **BL-40** (*weizhong*) in the popliteal fossa
- ➡ ascends to ➞ **BL-36** (*chengfu*) in the centre of the gluteal crease
- ➡ penetrates the anus and reaches the Kidney (*shen*) and the Bladder (*pangguang*)
- ➡ ascends to ➞ **BL-23** (*shenshu*) at the level of the lower border of the spinous process of L2, where it also meets the *dai mai*, following it round the waist to the abdomen
- ➡ ascends lateral to the midline to the infraclavicular fossa
- ➡ reaches the neck at ➞ **Ren-23** (*liangquan*)
- ➡ emerges at the nape of the neck at ➞ **BL-10** (*tianzhu*) and converges with the Bladder primary channel and the Bladder divergent channel to form one of the 6 *he*-confluences (here: BL/KID as first confluence ➞ 1.3).

Clinical importance

- Strengthens the relationship between the Kidneys and the Bladder (*zangfu*-Organ systems). Points on the Kidney primary channel can therefore be used for disorders of the Bladder, and vice versa points on the Bladder primary channel can treat disorders of the Kidneys.
- Through the connection with the *dai m*ai, KID points can be used for disorders of the *dai mai*.
- Kidney Qi and Essence (*jing*) are sent to the Brain through the Kidney divergent channel via the spinal canal, thus strengthening the connection between the Kidneys, the Marrow and the Brain.
- Supports the connection to the tongue.

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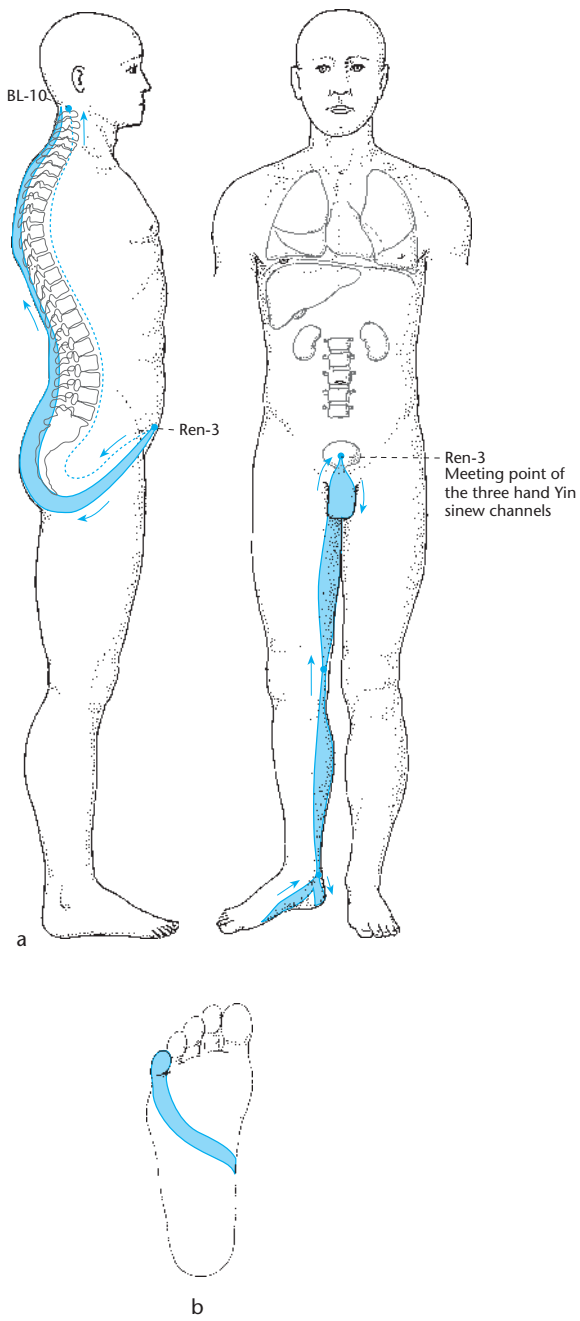
4.8.3 The Kidney Sinew Channel (*zu shao yin jing jin*)



Pathway

The Kidney sinew channel originates beneath the little toe

- diagonally crosses the sole of the foot, meets the Spleen sinew channel and continues to the medial malleolus where it binds (*jie*). From here a **minor branch** travels to the medial portion of the calcaneus. The **main branch** ascends the posteromedial aspect of the leg, binds (*jie*) at the medial condyle of the femur, crosses the Bladder sinew channel, ascends the posteromedial aspect of the thigh to the genital region to → **Ren-3** (*zhongji*) and → **Ren-2** (→ 1.3), where it meets the other Yin sinew channels. It then penetrates the abdomen, runs along the spine to the nape of the neck and there meets the Bladder sinew channel.

From the genital region **an internal branch** traverses the gluteal region and follows the deep musculature along the spine to the occiput, where it meets the Bladder sinew channel.

Clinical importance

Pathology: Spasms on the sole of the foot, pain or spasms along the posteromedial aspect of the lower extremity, the back and the occiput. Chronic *bi*-syndromes. Epileptic seizures, limited range of motion with spinal flexion and extension. Degenerative disorders of the bones and joints, spondylosis, osteoarthritis.

Indication: Mainly for chronic pain, spasms and Cold sensations of the lower back and spine, accompanied by limited range of motion.

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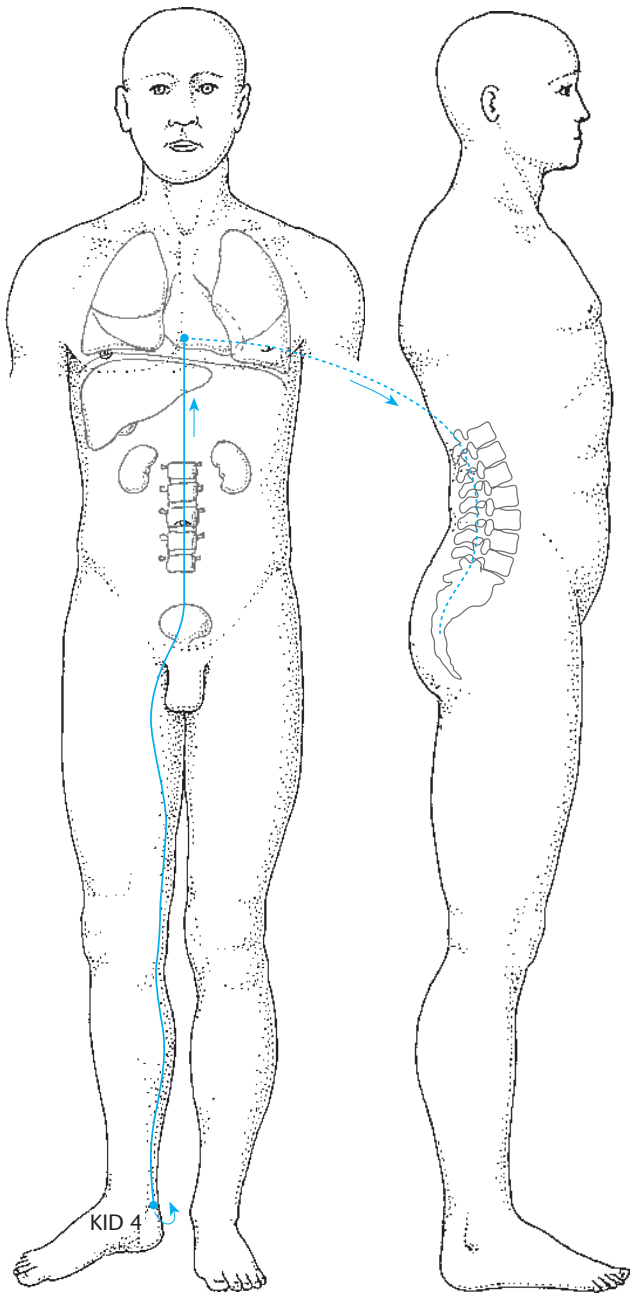
4.8.4 The Kidney *luo*-Connecting Vessel System (*zu shao yin luo mai*)



Pathway

The Kidney *luo*-connecting channel separates from the Kidney primary channel at **KID-4** (*dazhong*). It forms a three-dimensional reticular network, dividing into multiple branches and sub-branches (*sun luo*, *fu luo*, *xue luo* → 1.5) within the surrounding tissue.

➡ Horizontal divisions run to the Interiorly–Exteriorly paired Bladder primary channel; according to some schools of thought (for example Ngyen Van Nghi → Appendix) they travel as a **transverse** KID *luo*-connecting vessel to the *yuan*-source point **BL-64** (*jinggu*).

➡ A **longitudinal** division follows the Kidney primary channel to → **Ren-17** (*shanzhong*), penetrates the thorax and reaches the spine in the lumbar region.

Clinical importance (→ 8.1.2)

Pathology
Excess (*shi*): Retention of urine
Deficiency (*xu*): Pain in the lumbar region
Counterflow Qi: Restlessness, anxiety, fear, depression, fullness in the chest and epigastrium.

4.8.5 Cutaneous Region (*shao yin pi bu*)

See description and figures → 1.6.

4.8.6 Points of the Kidney Primary Channel (Overview)

Specific points according to their functions

- ***Yuan*-source point (→ 8.1.1): KID-3** (*taixi*) ■■
- ***Luo*-connecting point (→ 8.1.2.): KID-4** (*dazhong*)
- ***Xi*-cleft point (→ 8.1.3): KID-5** (*shuiquan*)
- **Associated Back-*shu* point (→ 8.1.4): BL-23** (*shenshu*) ■■
- **Associated Front-*mu* point (→ 8.1.5): G.B.-25** (*jingmen*) ■■
- **Five *shu*-transporting point (→ 8.1.6):**
  jing-well point (Wood), sedation point: **KID-1** (*yongquan*)
  ying-spring point (Fire): **KID-2** (*rangu*)
  shu-stream point (Earth): **KID-3** (*taixi*) ■■
  jing-river point (Metal), tonification point: **KID-7** (*fuliu*) ■■
  he-sea point (Water), *ben* point (Five Phases): **KID-10** (*yingu*) ■■
- *Hui*-meeting point (→ 8.1.7): –
- Opening point (→ 8.1.8) of the *yin qiao mai*: **KID-6** (*zhaohai*) ■■
- Lower *he*-sea points (→ 8.1.9): –
- *Jiaohui*-meeting points (→ 8.1.10):
  – with the *yin qiao mai*: **KID-2** (*rangu*)*, (**KID-6** (*zhaohai*)*, **KID-8** (*jiaoxin*)*)
  – with the *yin wei mai*: **KID-9** (*zhubin*)
  – with the *chong mai*: **KID-11–KID-21**
  – of other channels with the Kidney channel: **SP-6**, **Du-1**, **Ren-4**, **Ren-3**, **Ren-7***, **Ren-17**
- **Gao Wu command point (→ 8.1.11): –**
- **Window of Heaven point (→ 8.1.12): –**
- **Points of the Four Seas (→ 8.1.13): –**

* Mentioned by only some authors

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- **Ma Dan Yang Heavenly Star point (→ 8.1.14): –**
- **Sun Si Miao Ghost point (→ 8.1.15): –**
- **Other functional points:**
  – *xi*-cleft point of the *yin qiao mai*: **KID-8** (*jiaoxin*)
  – *xi*-cleft point of the *yin wei mai*: **KID-9** (*zhubin*)

Points according to region

- **Local points** (→ 8.2.1): foot – **KID-6** (*zhaohai*) ■■; knee – **KID-10** (*yingu*) ■■
- **Adjacent points** (→ 8.2.1): foot – **KID-7** (*fuliu*) ■■; toes – **KID-6** (*zhaohai*) ■■
- **Distal points** (→ 8.2.1): for the throat – **KID-6** (*zhaohai*) ■■; for the tongue – **KID-6** (*zhaohai*) ■■; for the Kidneys and the Bladder – **KID-3** (*taixi*) ■■, **KID-7** (*fuliu*) ■■; for the genito-urinary region – **KID-3** (*taixi*) ■■

Specific points according to the channel pathway (in numerical order)

- **KID-1** (*yongquan*) ■■: *jing*-well point (Wood); sedation point
- **KID-2** (*rangu*): *ying*-spring point (Fire); *jiaohui*-meeting point with the *yin qiao mai* (→ 8.1.10)
- **KID-3** (*taixi*) ■■: *shu*-stream point (Earth); distal point for the Kidneys, Bladder, urogenital region (→ 8.2.1); *yuan*-source point (→ 8.1.1)
- **KID-4** (*dazhong*): *luo*-connecting point (→ 8.1.2)
- **KID-5** (*shuiquan*): *xi*-cleft point (→ 8.1.3)
- **KID-6** (*zhaohai*) ■■: opening point (→ 8.1.8) of the *yin qiao mai*; distal point for the tongue and throat (→ 8.2.1); *jiaohui*-meeting point with the *yin qiao mai** (→ 8.1.10); local point for the foot (→ 8.2.1)
- **KID-7** (*fuliu*) ■■: distal point for the Kidneys and the Bladder (→ 8.2.1); *jing*-river point (Metal); tonification point; regional point for the foot (→ 8.2.1)
- **KID-8** (*jiaoxin*): *xi*-cleft point of the *yin qiao mai*; *jiaohui*-meeting point with the *yin qiao mai** (→ 8.1.10)
- **KID-9** (*zhubin*): *xi*-cleft point of the *yin wei mai*; *jiaohui*-meeting point with the *yin wei mai** (→ 8.1.10)
- **KID-10** (*yingu*) ■■: *he*-sea point (Water), *ben* point (Five Phases); local point for the knee (→ 8.2.1)
- **KID-11** to **KID-21**: *jiaohui*-meeting points with the *chong mai* (→ 8.1.10)

General location help

- **KID-11** to **KID-21** are all located 0.5 cun lateral to the midline
  – **KID-11** to **KID-15** are spread on the 5 cun distance (→ 1.2) between the upper border of the pubic symphysis and the umbilicus (they are spaced at 1 cun intervals from the upper border of the pubic symphysis to 4 cun above it)
  – **KID-16** to **KID-21** are spread on the 8 cun distance (→ 1.2) between the umbilicus and the sternocostal angle (they are spaced at 1 cun intervals from the level of the umbilicus to 6 cun superior to it).
- **KID-22** to **KID-27** are all located 2 cun lateral to the midline
  – **KID-22** to **KID-26** are located in the 5th to 1st intercostal spaces
  – **KID-27** is located on the lower border of the sternoclavicular joint

* Mentioned by only some authors

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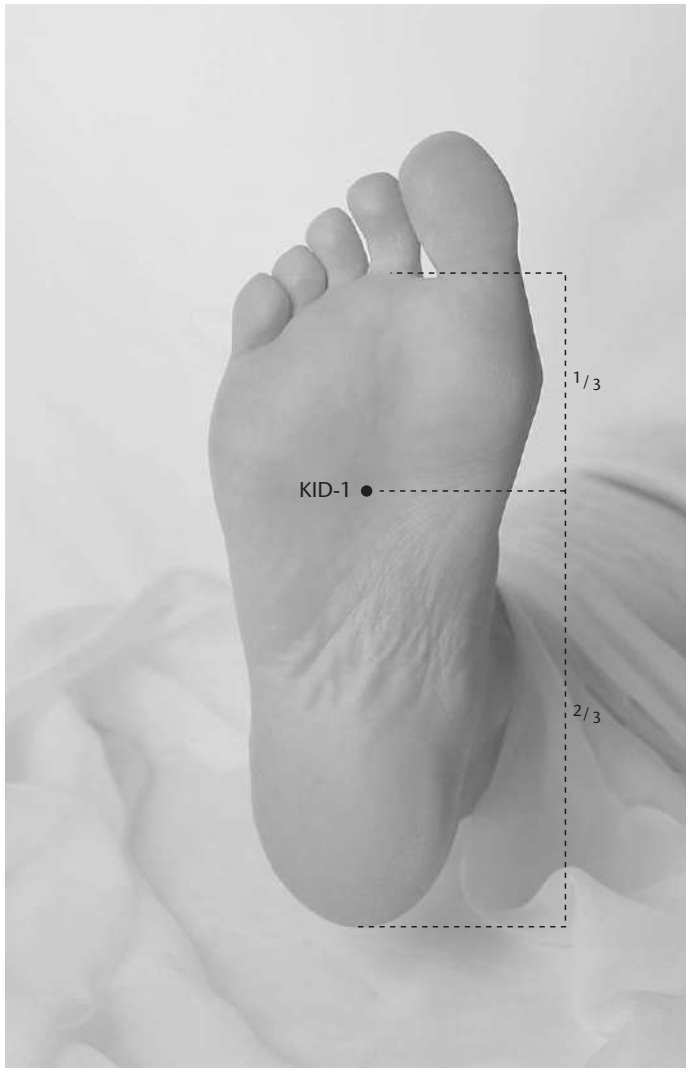
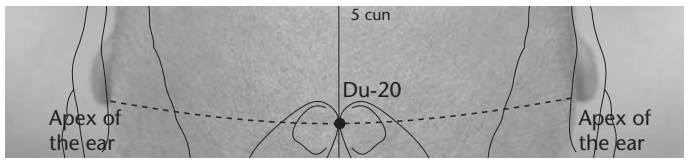
Gushing Spring YONGQUAN KID-1





Location

On the sole of the foot, in a depression between the 2nd and 3rd metatarsal bones, at the junction of the anterior third and the posterior two-thirds of the sole.

How to find

Measure one third from the anterior border of the sole of the foot. Palpate for a pressure-sensitive point dorsal to the balls of the foot, at the midpoint of the width of the foot.

Needling

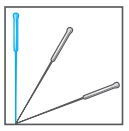
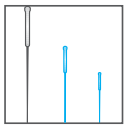
Needling this point is very painful and is therefore only recommended for severe disorders or in an emergency. Acupressure is commonly used instead; moxibustion is possible. For the treatment of collapse, unconsciousness, shock or a severe excess condition, this point should be strongly stimulated; in pronounced deficiency conditions, stimulation should be applied more cautiously.

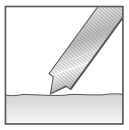
Actions/Indications

- Revives collapsed Yang
- Clears excess, Heat and Wind from the head, lowers Yang
- Calms the *shen*

Special features

Jing-well point, Wood point, sedation point, entry point. **KID-1** is the lowest acupuncture point on the body and the only point on the sole of the foot. For this reason, it plays an important role in Qigong, forming a grounding point in the centre of the foot, where the energies of the Earth and Man unite. During practice, the centre of gravity should be above this point.



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KID-2 *Blazing Valley* RANGU

Location

At the medial border of the foot, in a depression at the anterior border of the navicular bone, at the border of the 'red and white' skin.

How to find

Palpate from distal to proximal along the tarsal section of the medial aspect of the foot, past the shaft and the head of the 1st metatarsal bone (→ **SP-4**) and the medial cuneiform bone, finally reaching the prominent navicular bone. Locate **KID-2** anterior to the navicular bone, at the inferior angle of the joint between the medial cuneiform bone and the navicular bone.

Needling

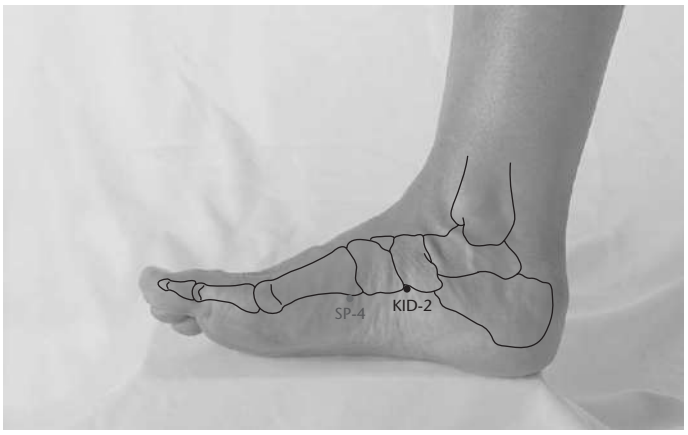
From the medial aspect of the foot, 0.5–1 cun vertically below the border of the bone. Use reducing needling techniques for empty Heat. Use tonifying techniques for Kidney Yang/Qi deficiency.

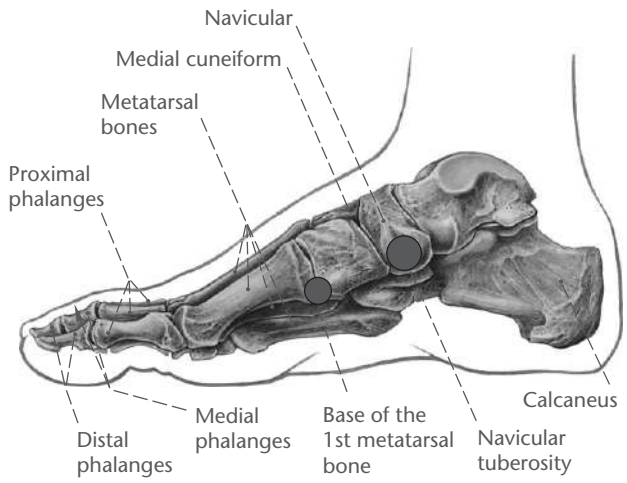
Actions/Indications

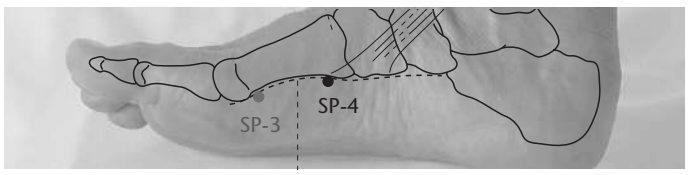
- Clears empty Heat
- Regulates the Lower Burner and the Kidneys
- Local point

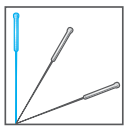
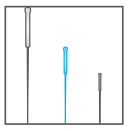
Special features

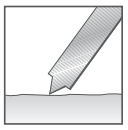
Ying-spring point, Fire point, meeting point with the *yin qiao mai*.









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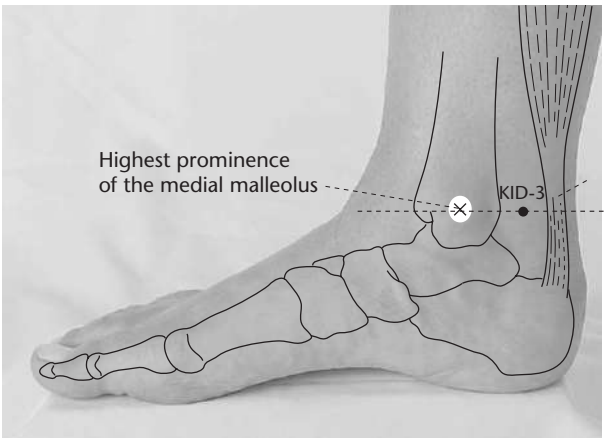
Supreme Stream TAIXI KID-3



Location

In the depression between the highest prominence of the medial malleolus and the Achilles tendon.

How to find

Locate the highest prominence of the medial malleolus (→ 3.6.2). From there, palpate horizontally towards the Achilles tendon. **KID-3** is located in a depression that can be palpated anterior to the tendon.

Needling

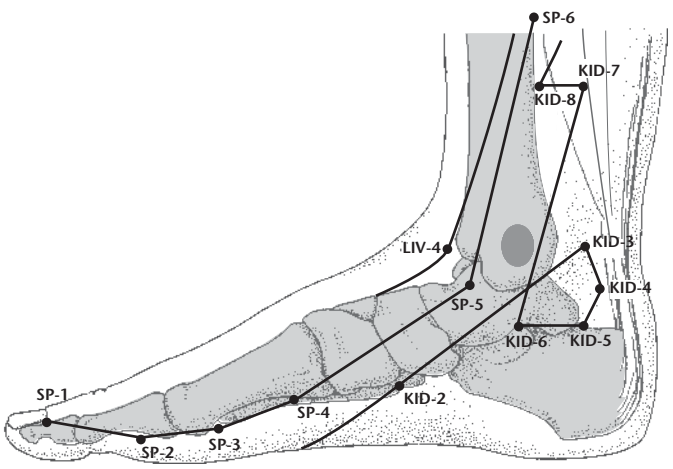
Vertically 0.3–1 cun

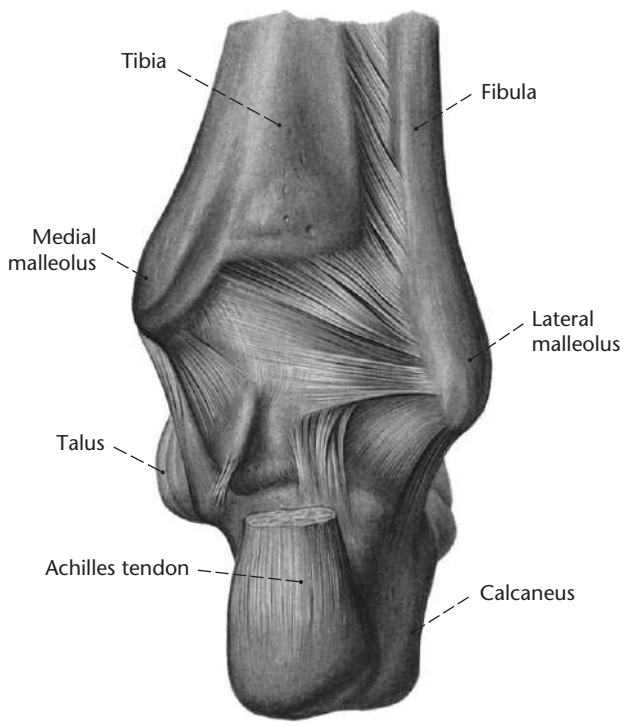
Actions/Indications

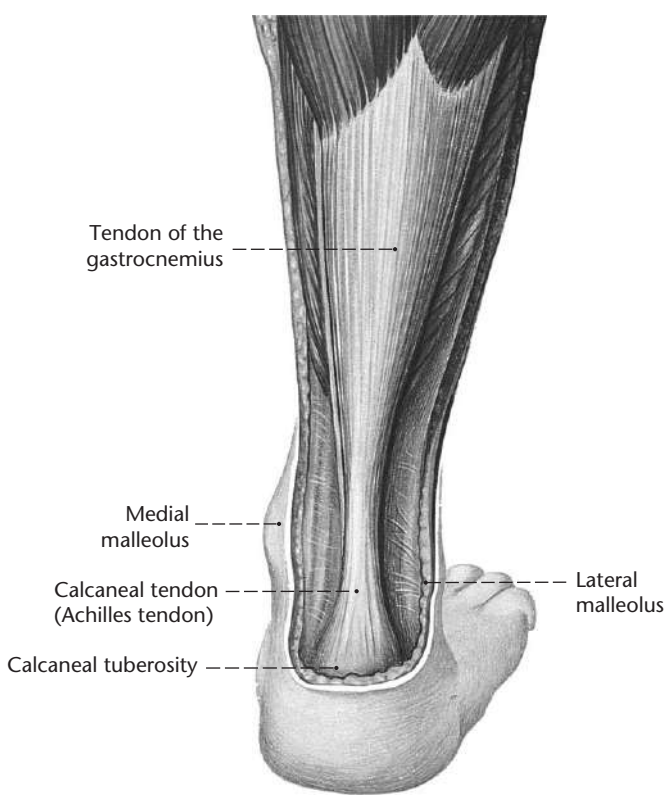
- Nourishes Kidney Yin and clears deficiency Heat, tonifies Kidney Yang, stabilises the Kidney Qi and the Lungs (helping the Kidneys absorb the Qi), regulates menstruation
- Strengthens the lower back, local point

Special features

Yuan-source point, *shu*-stream point, Earth point. Important point for tonifying the Kidneys (especially Kidney Yin).







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KID-4 *Great Bell* DAZHONG

Location

Anterior to the medial border of the Achilles tendon, superior to its insertion at the calcaneus.

How to find

From the highest prominence of the medial malleolus, draw a horizontal line to the medial border of the Achilles tendon. From there, measure 0.5 cun in a distal direction. **KID-4** is located in a depression anterior to the Achilles tendon, slightly superior to its insertion at the calcaneus. **Or: KID-4** is located posterior to the midpoint of a line connecting → **KID-3** and → **KID-5** anterior to the Achilles tendon.

Needling

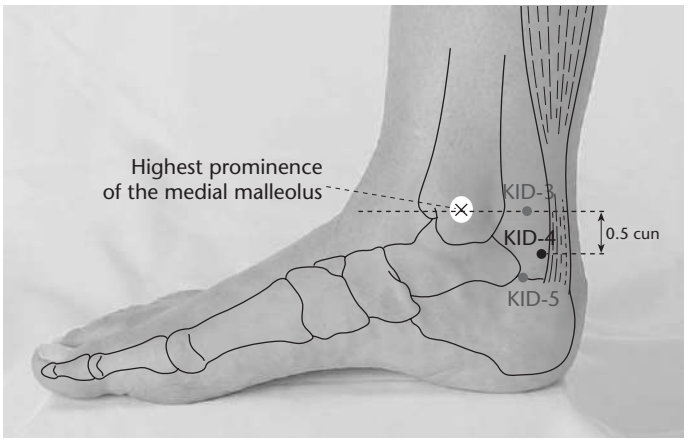
Vertically 0.3–0.5 cun. Avoid puncturing the tendon.

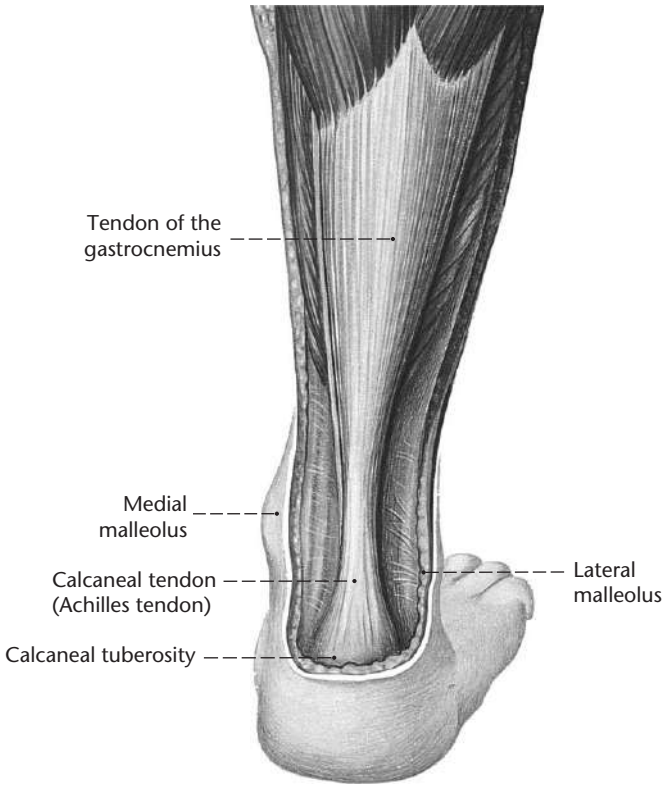
Actions/Indications

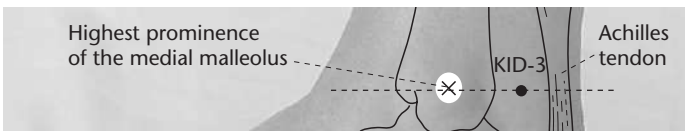
- Firms the Kidney Qi (helping the Kidneys absorb the Qi) and supports the Lungs
- Strengthens the Kidneys and cools empty Heat
- Strengthens the will, dispels fear
- Local point

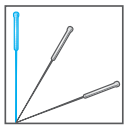
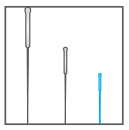
Special features

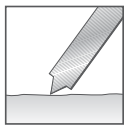
Luo-connecting point









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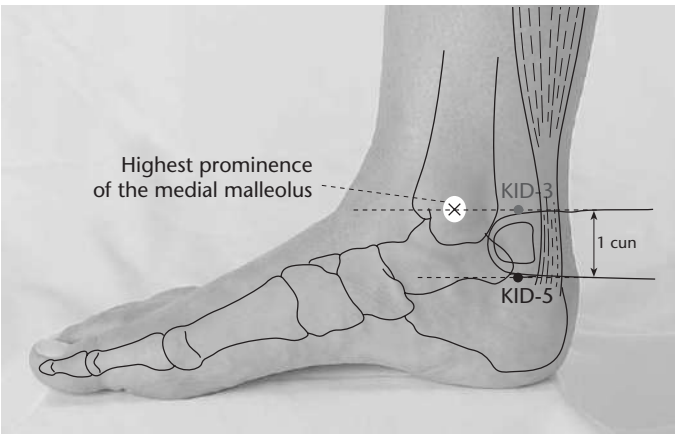
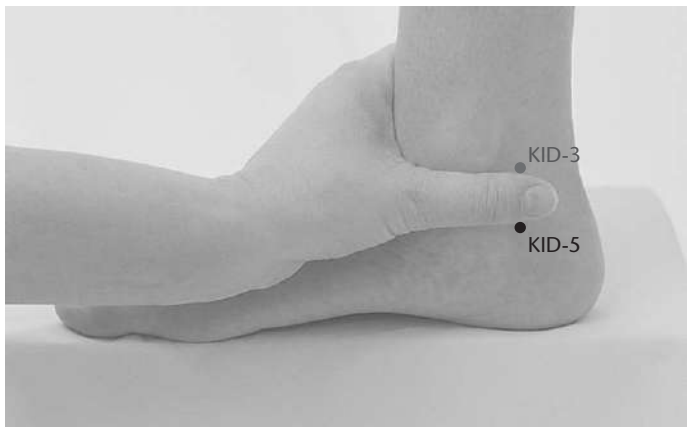
Water Spring SHUIQUAN KID-5





Location

1 cun distal to ➞ **KID-3**, in a depression over the joint space between the talus and calcaneus.

How to find

First, locate ➞ **KID-3** on the level of the highest prominence of the medial malleolus (➞ 3.6.2), in a depression between the malleolus and the Achilles tendon. From **KID-3**, palpate 1 cun in an inferior direction to a palpable depression over the joint space between the talus and calcaneus. This is the location of **KID-5**.

Needling

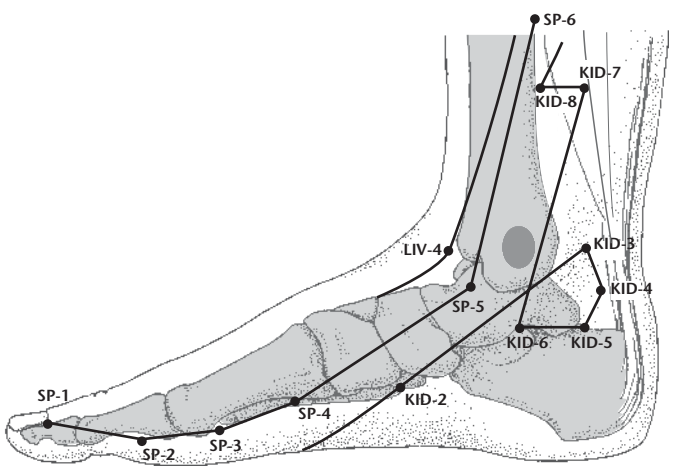
0.3–0.5 cun obliquely to vertically superior to the margin of the bone.

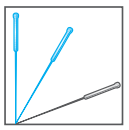
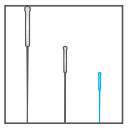
Actions/Indications

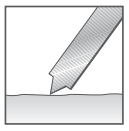
- Regulates the *chong mai* and *ren mai*, benefits menstruation and urination

Special features

Xi-cleft point. Especially indicated for acute disorders and painful conditions.





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KID-6 *Shining Sea* ZHAOHAI

Location

Approximately 1 cun inferior to the highest prominence of the medial malleolus, over the joint space between the talus and the calcaneus.

How to find

From the highest prominence of the medial malleolus (→ 3.6.2), palpate distally, until the palpating finger can feel the depression of the joint space between the talus and the calcaneus. (**KID-6** is often located between the tendons of the tibialis and flexor digitorum longus muscles.) Directly distal to this point, you can palpate a small bony prominence, the sustentaculum tali. With the patient's foot in a supinated position, a visible skin crease forms on the level of the point. Note: There are several variations regarding the exact location of this point. However, the determining aspect for its location is not the cun measurement but the joint space below the prominence.

Needling

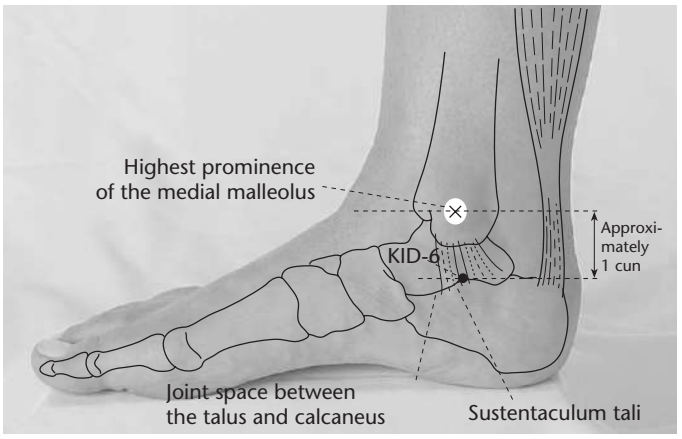
0.3–0.5 cun vertically or obliquely in a proximal direction. The needle may reach the deltoid ligament.

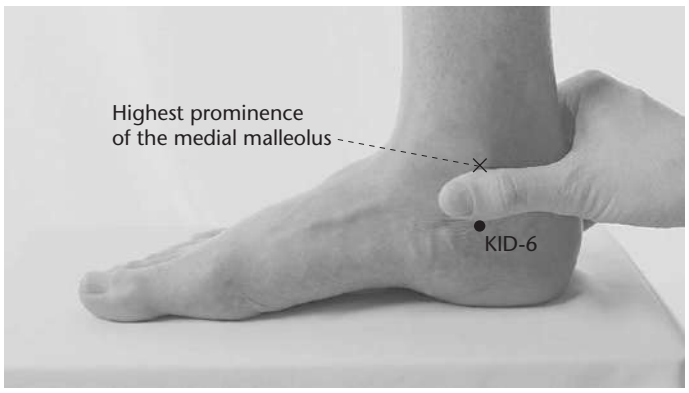
Actions/Indications

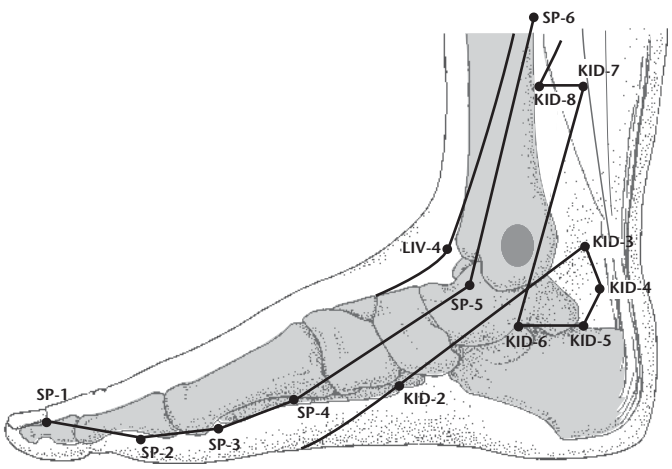
- Nourishes Kidney Yin, clears empty Heat, benefits the throat, regulates the Lower Burner
- Calms the *shen*
- Moves Qi locally

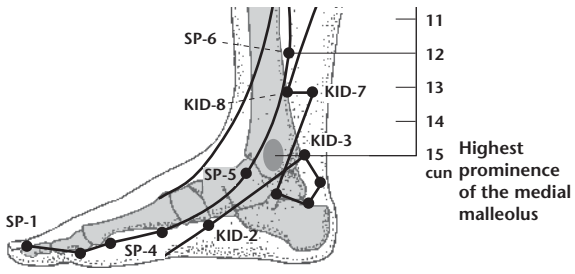
Special features

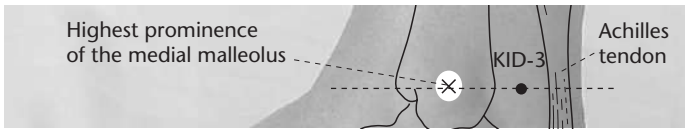
Opening (master) point of the *yin qiao mai*. Important point, especially for strengthening the Kidney Yin.











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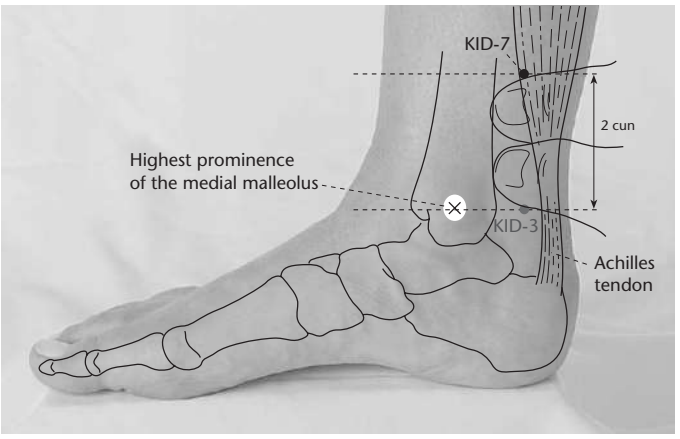
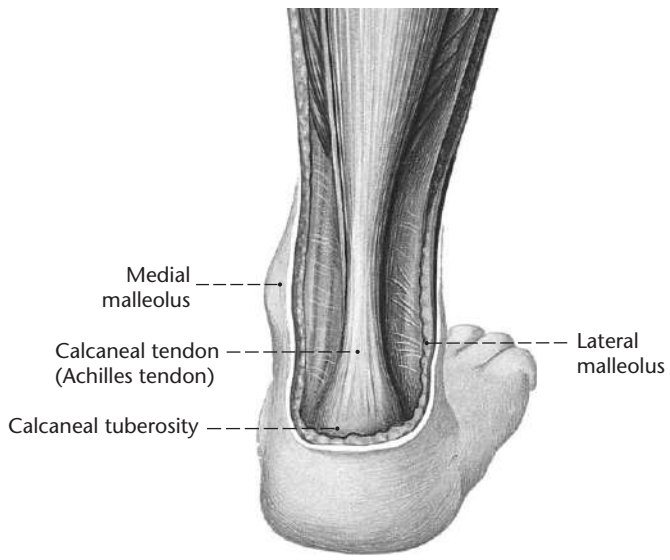
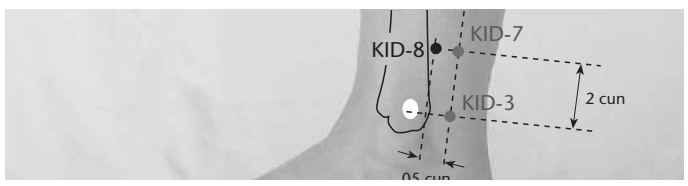
Returning Current FULIU KID-7







Location

2 cun proximal to → **KID-3**, at the anterior border of the Achilles tendon.

How to find

First, locate → **KID-3** on the level of the higest prominence of the medial malleolus (→ 3.6.2), in the depression between the malleolus and the Achilles tendon. From → **KID-3**, measure 2 cun in a proximal direction (towards the knee joint) and locate **KID-7** in a depression at the anterior border of the Achilles tendon.
Located on the same level, but more medially, is → **KID-8** (2 cun directly proximal to the medial malleolus).

Needling

Vertically 0.5–1 cun

Actions/Indications

- Regulates the water passages and treats oedema, strengthens the Kidneys (especially Kidney Yang), drains Dampness and clears Damp-Heat
- For disorders of the Intestines due to Damp-Heat
- Strengthens the lumbar region

Special features

Jing-river point, Metal point, tonification point

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KID-8 *Exchange Belief* JIAOXIN

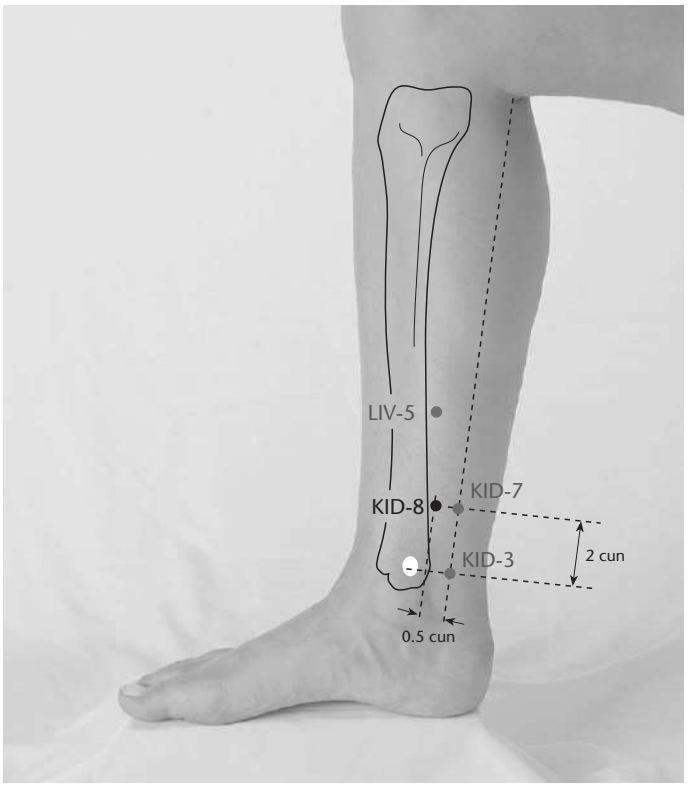
Location
2 cun proximal to the highest prominence of the medial malleolus, posterior to the medial border of the tibia.

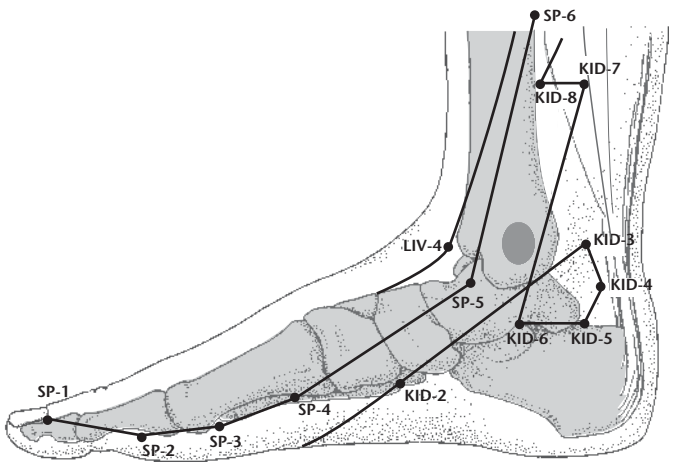
How to find
KID-8 is located on the same level as → **KID-7**, but slightly closer to the border of the tibia (approximately 0.5 cun).

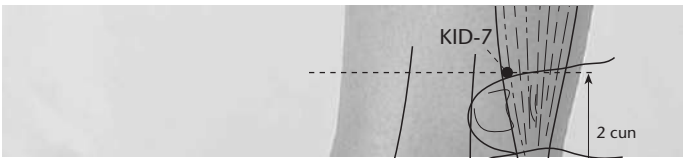
Needling
Vertically 0.5–1 cun

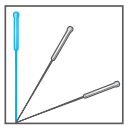
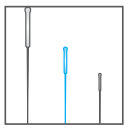
Actions/Indications
- Regulates menstruation, regulates the *ren mai* and *chong mai*
- Clears Heat and eliminates Dampness from the Lower Burner
- Treats blockages of the *yin qiao mai*

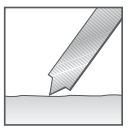
Special features
Xi-cleft point of the *yin qiao mai*









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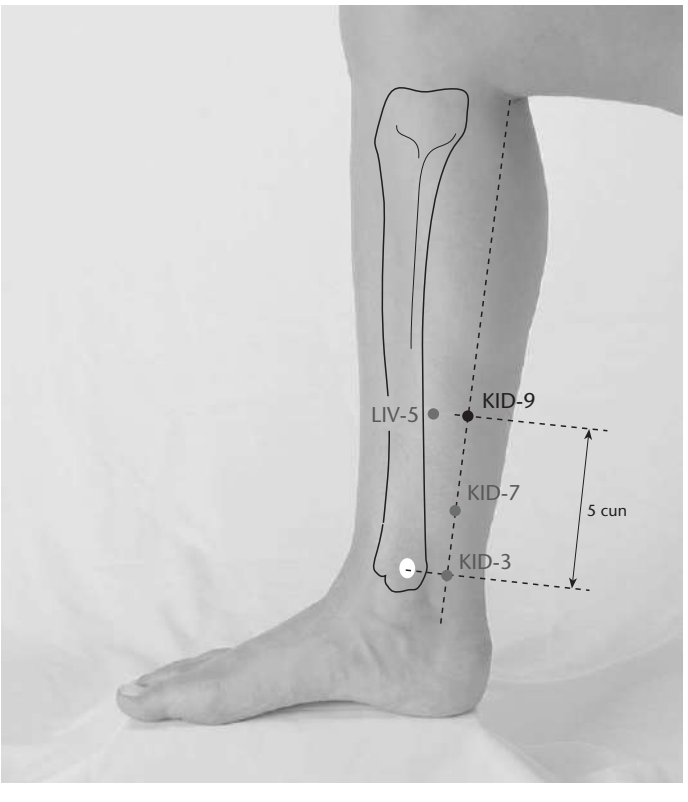
Guesthouse ZHUBIN KID-9



Location

5 cun proximal to the highest prominence of the medial malleolus, 2 cun posterior to the medial border of the tibia.

How to find

On a line connecting → **KID-3** (posterior to the medial malleolus) and → **KID-10** (medial aspect of the popliteal crease), measure 5 cun from the level of the prominence of the medial malleolus. Here, **KID-9** is located 2 cun posterior to the medial border of the tibia.

Located on the same level, but directly posterior to the medial border of the tibia, is → **LIV-5**.

Needling

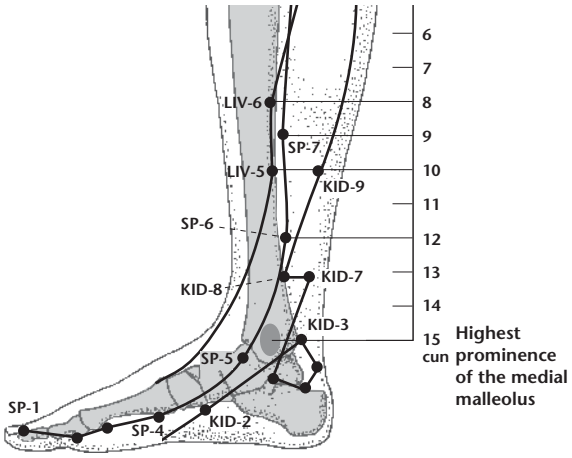
Vertically 1–1.5 cun

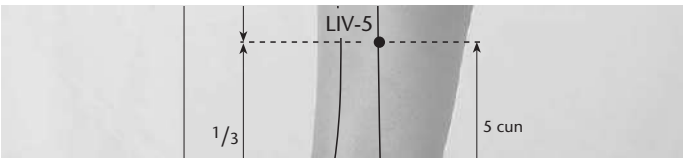
Actions/Indications

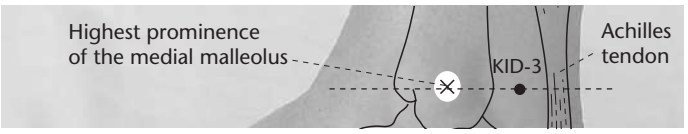
- Clears the Heart and transforms Phlegm
- Regulates the Qi and alleviates pain

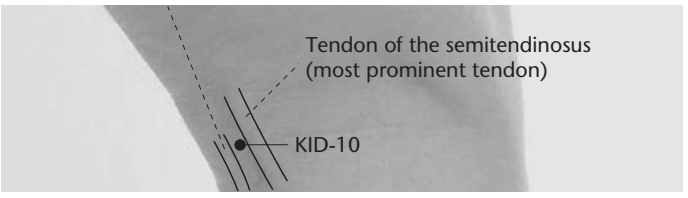
Special features

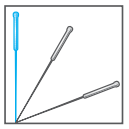
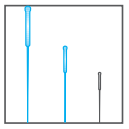
Xi-cleft point of the *yin wei mai*

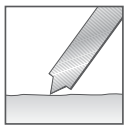










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KID-10 *Yin Valley* YINGU

Location

At the medial end of the popliteal crease, between the tendons of the semimembranosus and semitendinosus muscles, on the level of the knee joint space.

How to find

With the knee flexed less than 90°, ask the patient to press their heel against the treatment couch so that the two tendons will become more pronounced in the popliteal crease. From a medial direction, **KID-10** is located in a small gap anterior to the more prominent tendon of the semitendinosus muscle and posterior to the less well-defined tendon of the semimembranosus muscle.
→ **BL-40** is located on the same level, in the centre of the popliteal crease.

Needling

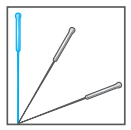
Needle 1–1.5 cun vertically from a dorsomedial aspect towards the tibial tuberosity. Avoid puncturing the tendon.

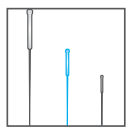
Actions/Indications

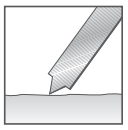
- Drains Damp-Heat from the Lower Burner and benefits the Kidneys
- Opens the channel

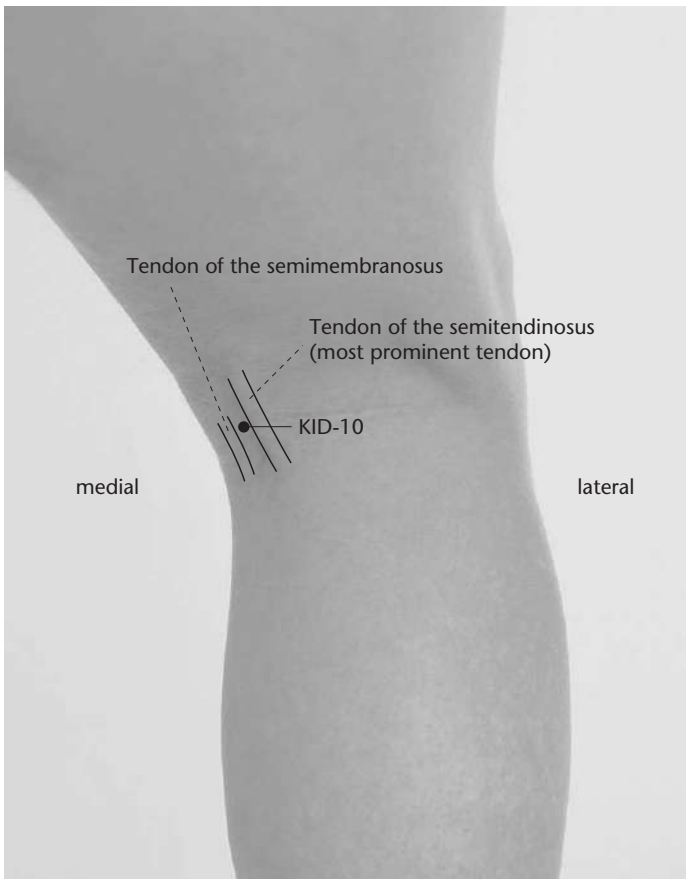
Special features

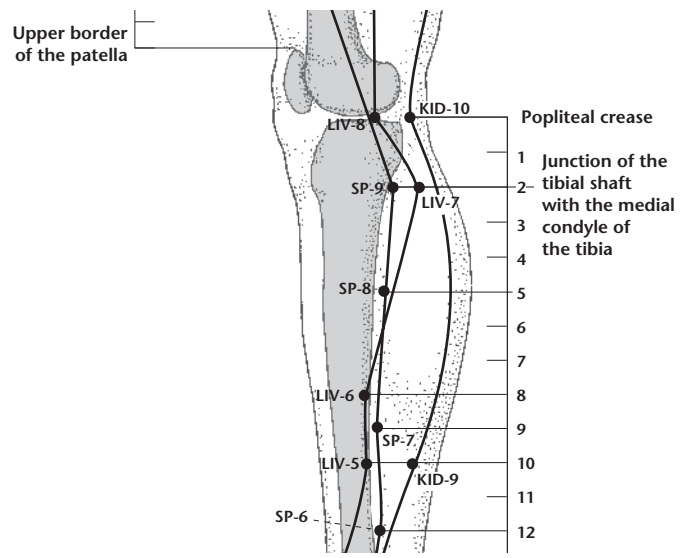
He-sea point, *ben* point (Five Phases point); for recurring urinary disorders with Kidney Yin deficiency.

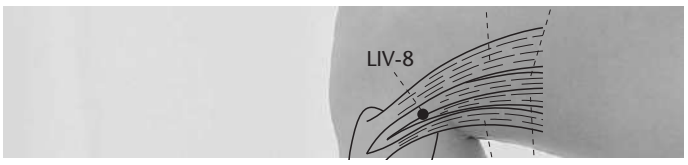


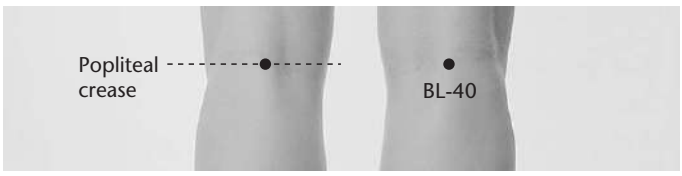












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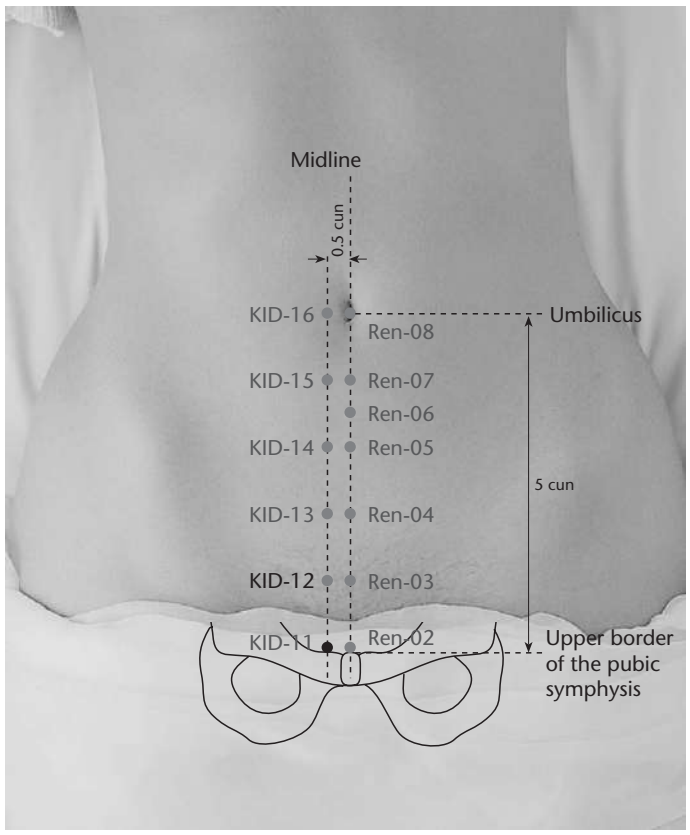
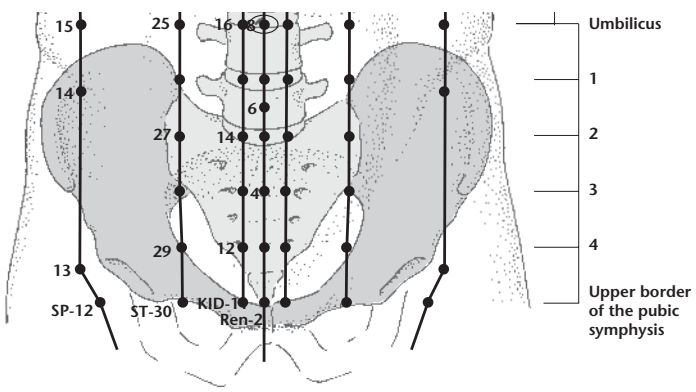
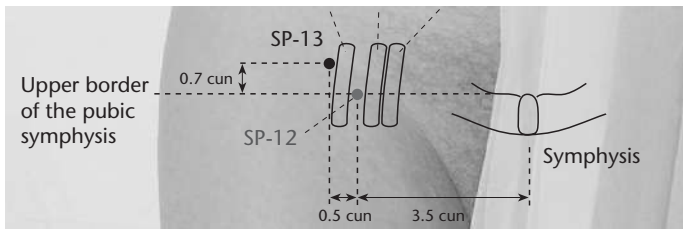
Pubic Bone HENGGU KID-11







Location

At the upper border of the pubic symphysis, 0.5 cun lateral to the anterior midline.

How to find

Close to the midline, the upper border of the pubic symphysis is generally easily palpable. **KID-11** is located directly superior to its bony margin and 0.5 cun lateral to the midline.
Located on the same level are → **Ren-2** (on the midline), → **ST-30** (2 cun lateral to the midline) and → **SP-12** (3.5 cun lateral to the midline).

Needling

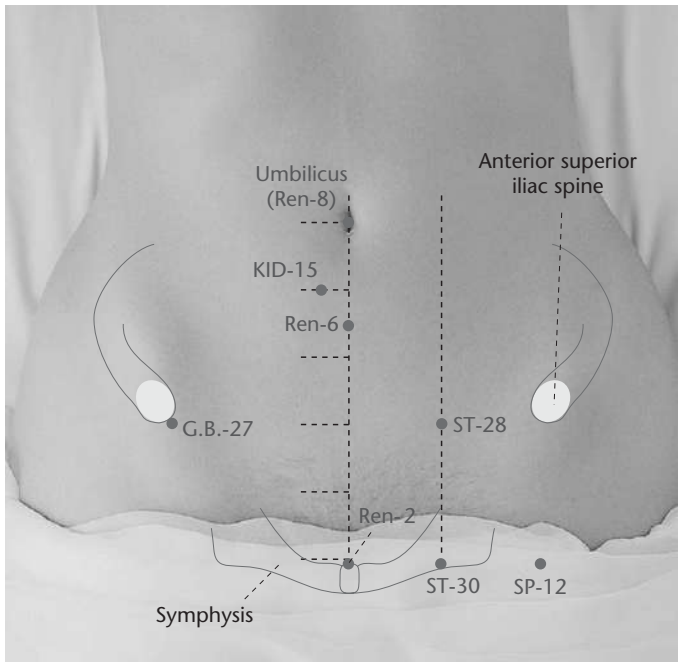
Vertically 0.5–1 cun. Caution: Peritoneum, full bladder, pregnancy.

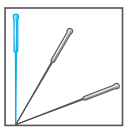
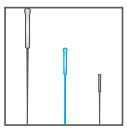
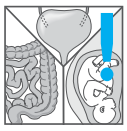
Actions/Indications

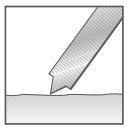
- Regulates the Lower Burner and the water passages, strengthens the Kidneys

Special features

Meeting point with the *chong mai*





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KID-12 *Great Luminance* DAHE

Location

1 cun superior to the upper border of the pubic symphysis, 0.5 cun lateral to the anterior midline.

How to find

The distance between the centre of the umbilicus and the upper border of the pubic symphysis is divided into 5 proportional cun. As these can vary considerably from finger cun measurements, only proportional cun measurements should be applied (elastic tape → 2.3.1). From the upper border of the pubic symphysis, measure 1 cun in a superior direction and on this level locate **KID-12** 0.5 cun lateral to the midline. Located on the same level are → **Ren-3** (on the midline), → **ST-29** (2 cun lateral to the midline) and → **Ex-CA-1** (*zigong*; 3 cun lateral to the midline).

Needling

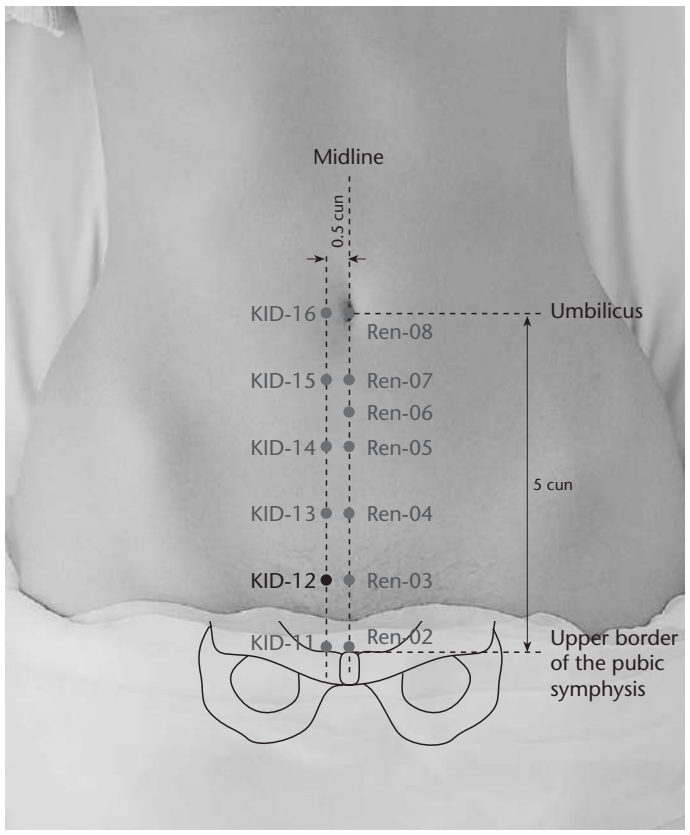
Vertically 0.5–1 cun. Caution: Peritoneum, full bladder, pregnancy.

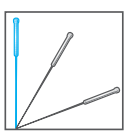
Actions/Indications

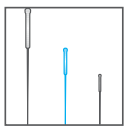
- Regulates the Lower Burner, strengthens the Kidneys and the Essence (*jing*)

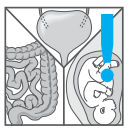
Special features

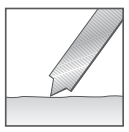
Meeting point with the *chong mai*

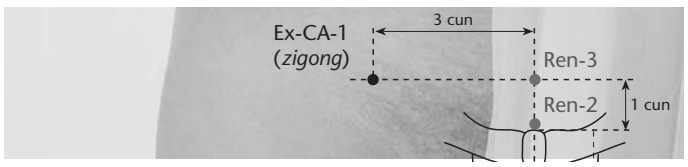


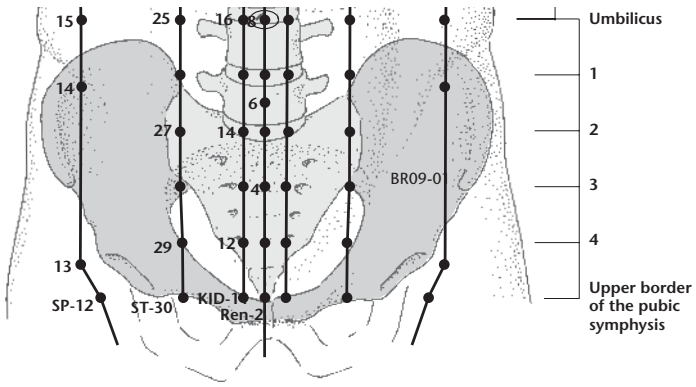


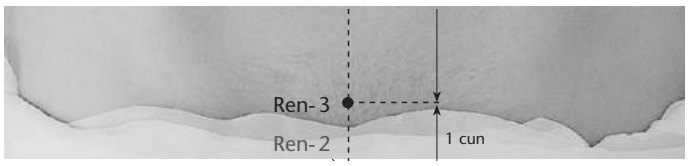


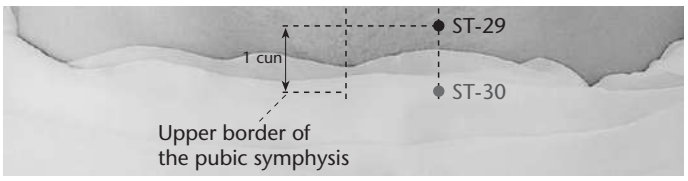












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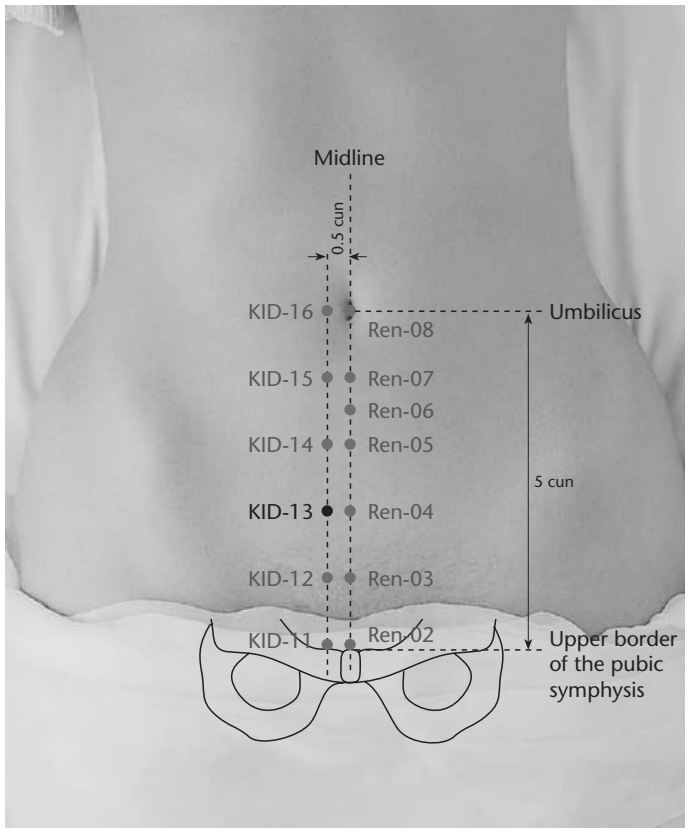
Qi Cave QIXUE KID-13



Location

2 cun superior to the upper border of the pubic symphsis, 0.5 cun lateral to the anterior midline.

How to find

The distance between the centre of the umbilicus and the upper border of the pubic symphysis is divided into 5 proportional cun. As these can vary considerably from finger cun measurements, only proportional cun measurements should be applied (elastic tape ➞ 2.3.1). From the upper border of the pubic symphysis, measure 2 cun in a superior direction and on this level locate **KID-13** 0.5 cun lateral to the midline.

Located on the same level are ➞ **Ren-4** (on the midline), ➞ **ST-28** (2 cun lateral to the midline), ➞ **Ex-CA** (*tituo/qimen/yijing*: 4/3/1 cun lateral to the midline) and ➞ **G.B.-27** (anterior and medial to the ASIS).

Needling

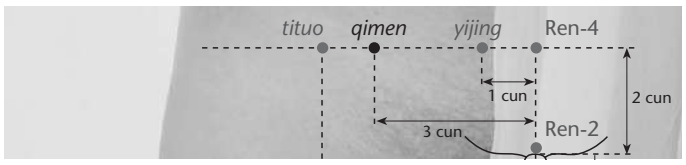
Vertically 0.5–1 cun. Caution: Peritoneum, full bladder, pregnancy.

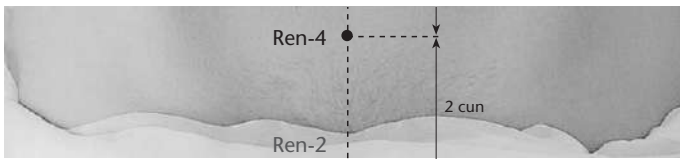
Actions/Indications

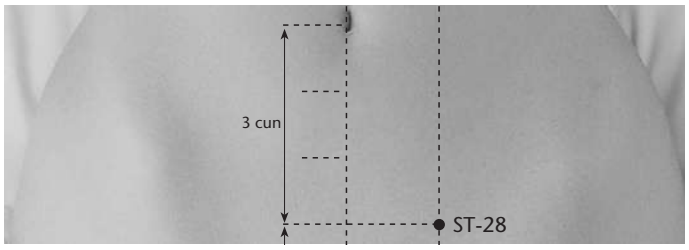
- Regulates the Lower Burner, regulates the *chong mai* and *ren mai*, strengthens the Kidneys and the essence (*jing*)

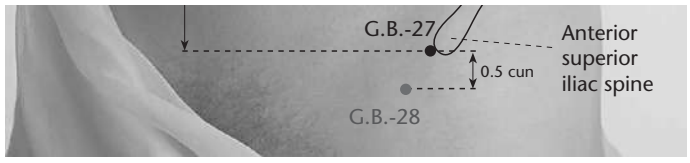
Special features

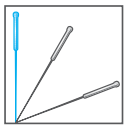
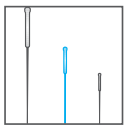
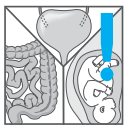
Meeting point with the *chong mai*

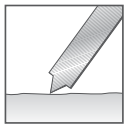










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KID-14 *Four Fullnesses* SIMAN

Location

2 cun inferior to the umbilicus, 0.5 cun lateral to the anterior midline.

How to find

The distance between the centre of the umbilicus and the upper border of the pubic symphysis is divided into 5 proportional cun. As these can vary considerably from finger cun measurements, only proportional cun measurements should be applied (elastic tape → 2.3.1). From the centre of the umbilicus, measure 2 cun in an inferior direction and on this level locate **KID-14** 0.5 cun lateral to the midline.

Located on the same level are → **Ren-5** (on the midline) and → **ST-27** (2 cun lateral to the midline).

Needling

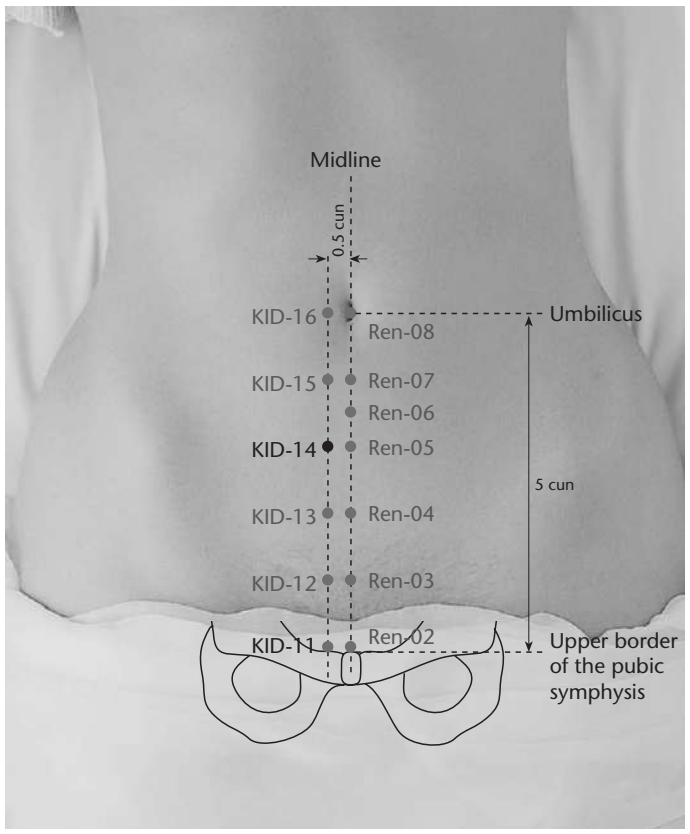
Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy.

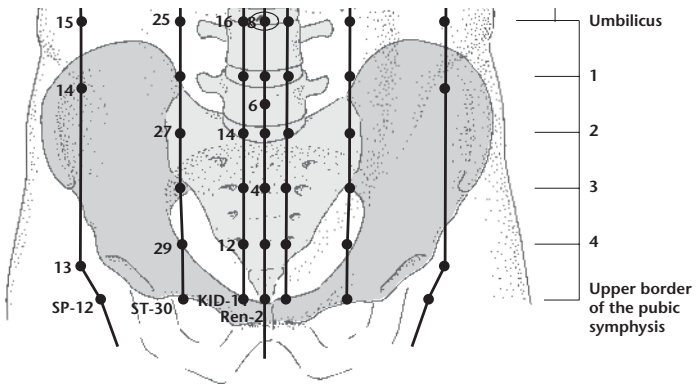
Actions/Indications

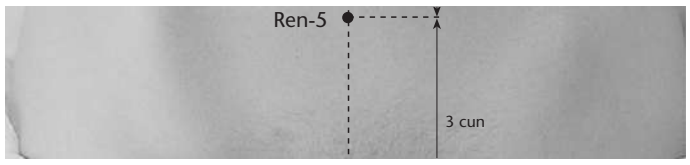
- Regulates the Lower Burner and benefits the Kidneys
- Regulates the water passages
- Regulates the Qi and moves Blood stasis

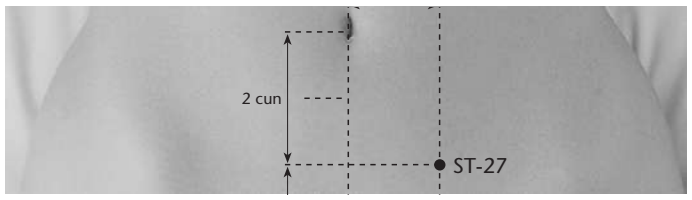
Special features

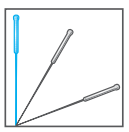
Meeting point with the *chong mai*

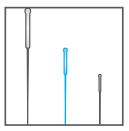


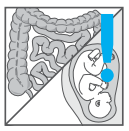


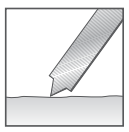












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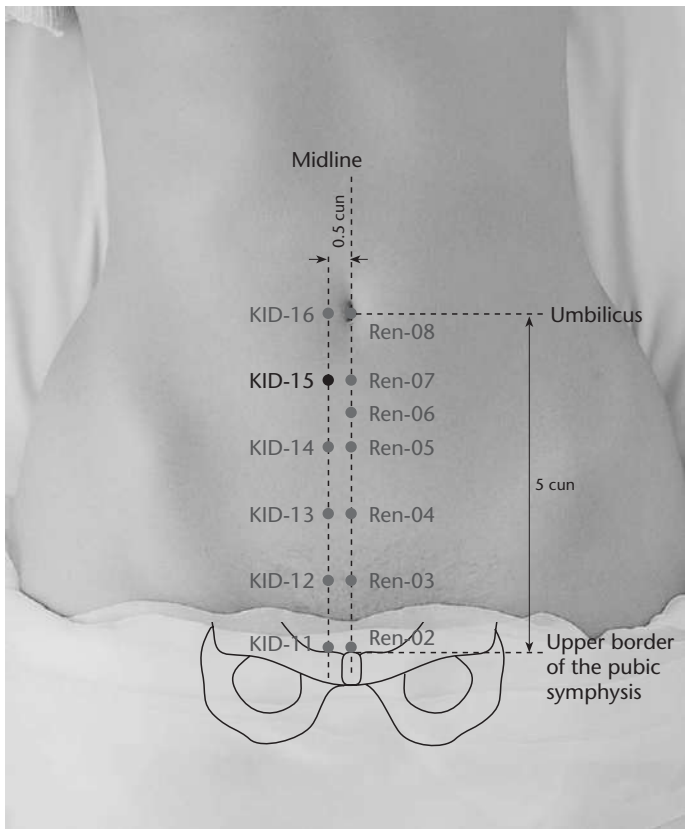
Middle Flow ZHONGZHU KID-15



Location

1 cun inferior to the umbilicus, 0.5 cun lateral to the anterior midline.

How to find

The distance between the centre of the umbilicus and the upper border of the pubic symphysis is divided into 5 proportional cun. As these can vary considerably from finger cun measurements, only proportional cun measurements should be applied (elastic tape → 2.3.1). From the centre of the umbilicus, measure 1 cun in an inferior direction and on this level locate **KID-15** 0.5 cun lateral to the midline.

Located on the same level are → **Ren-7** (on the midline) and → **ST-26** (2 cun lateral to the midline).

Needling

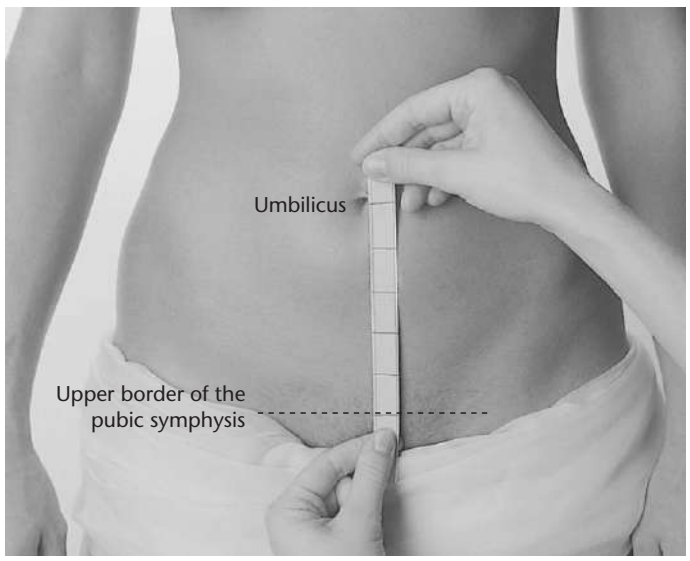
Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy.

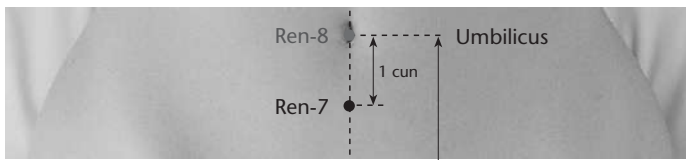
Actions/Indications

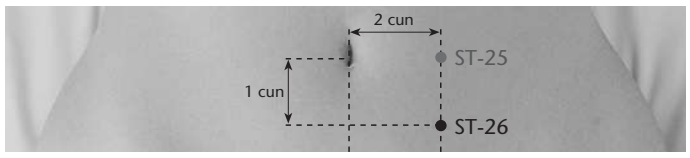
- Regulates the Intestines
- Regulates the Lower Burner

Special features

Meeting point with the *chong mai*







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KID-16 *Vitals* Shu HUANGSHU

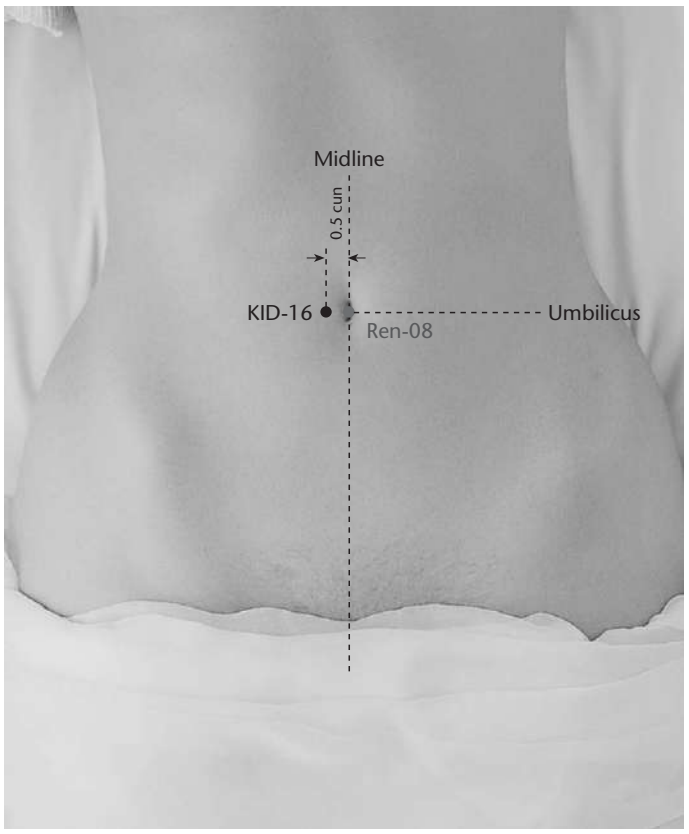
Location
0.5 cun lateral to the centre of the umbilicus.

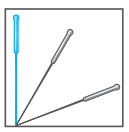
How to find
From the centre of the umbilicus, measure 0.5 cun in a lateral direction. Located on the same level are → **Ren-8** (in the centre of the umbilicus), → **ST-25** (2 cun lateral to the midline), → **SP-15** (4 cun lateral to the midline) and → **G.B.-26** (on the level of umbilicus, on a vertical line drawn through the free end of the 11th rib).

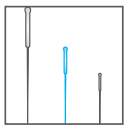
Needling
Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy. Avoid the umbilicus.

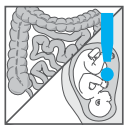
Actions/Indications
- Regulates the Qi, regulates and warms the Stomach and Intestines

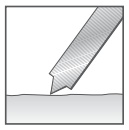
Special features
Meeting point with the *chong mai*

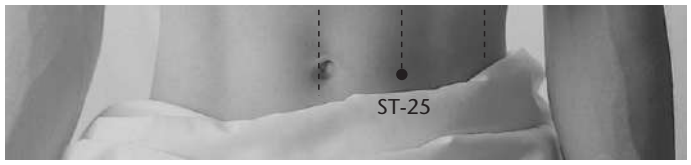


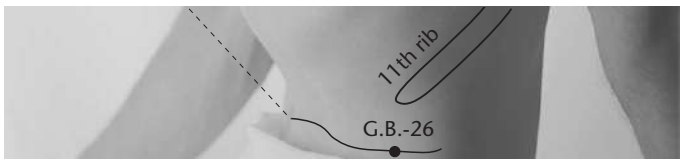


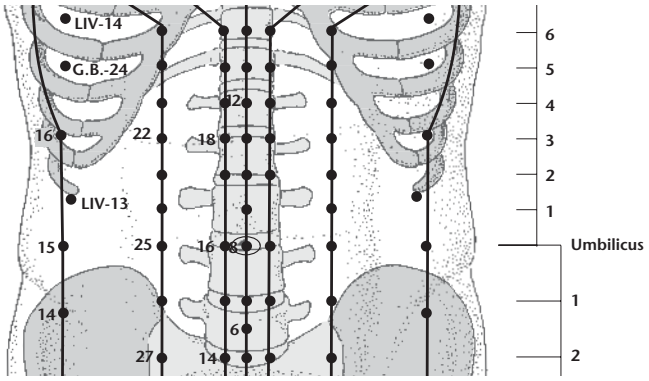


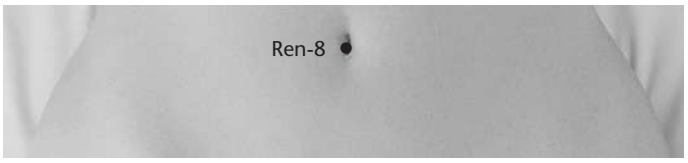


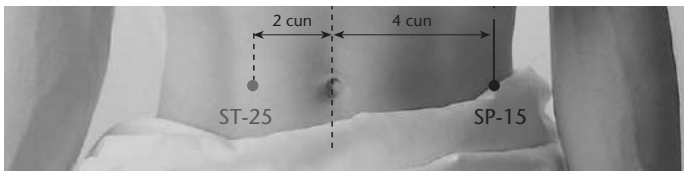












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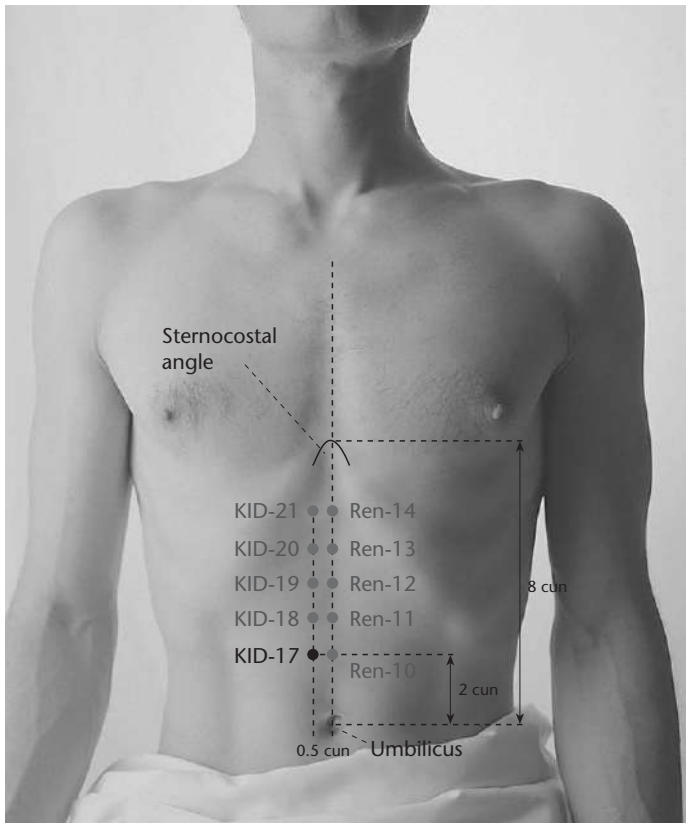
Shang Bend SHANGQU KID-17



Location

2 cun superior to the umbilicus, 0.5 cun lateral to the anterior midline.

How to find

The distance between the sternocostal angle (→ 3.5) and the centre of the umbilicus is divided into 8 proportional cun, which can vary considerably from the patient's finger cun. Therefore, only proportional cun should be used (elastic tape → 2.3.1). From the centre of the umbilicus, measure 2 cun in a superior direction and on this level locate **KID-17** 0.5 cun lateral to the midline.
Located on the same level are → **Ren-10** (on the midline), → **ST-23** (2 cun lateral to the midline) and **Ex-CA** (*weishang*, 4 cun lateral to the midline).

Needling

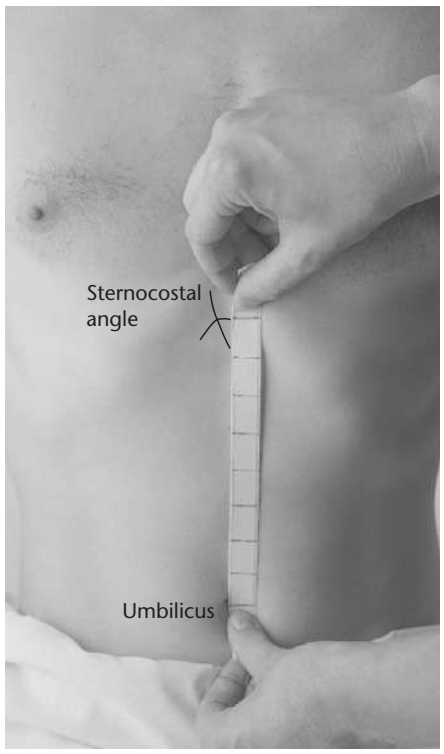
Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy.

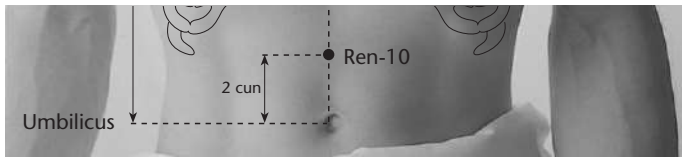
Actions/Indications

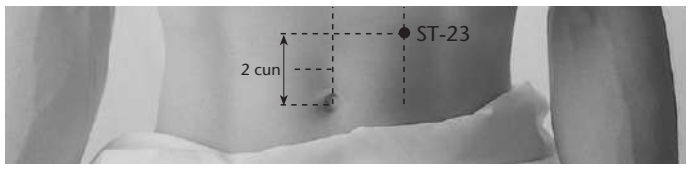
- Regulates the Stomach and Intestines, eliminates stagnation

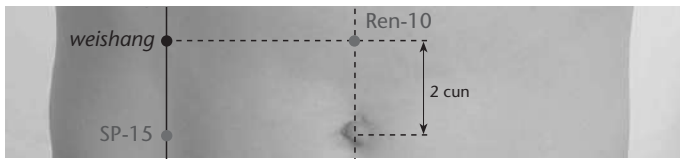
Special features

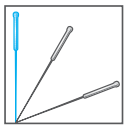
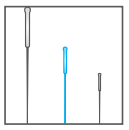
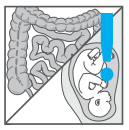
Meeting point with the *chong mai*

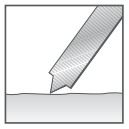










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KID-18 *Stone Gate* SHIGUAN

Location

3 cun superior to the umbilicus, 0.5 cun lateral to the anterior midline.

How to find

The distance between the sternocostal angle (→ 3.5) and the centre of the umbilicus is divided into 8 proportional cun, which can vary considerably from the patient's finger cun. Therefore, only proportional cun measurements should be used (elastic tape → 2.3.1). From the centre of the umbilicus measure 3 cun in a superior direction and on this level locate **KID-18** 0.5 cun lateral to the midline.

Located on the same level are → **Ren-11** (on the midline), → **ST-22** (2 cun lateral to the midline) and → **SP-16** (on the mamillary line).

Needling

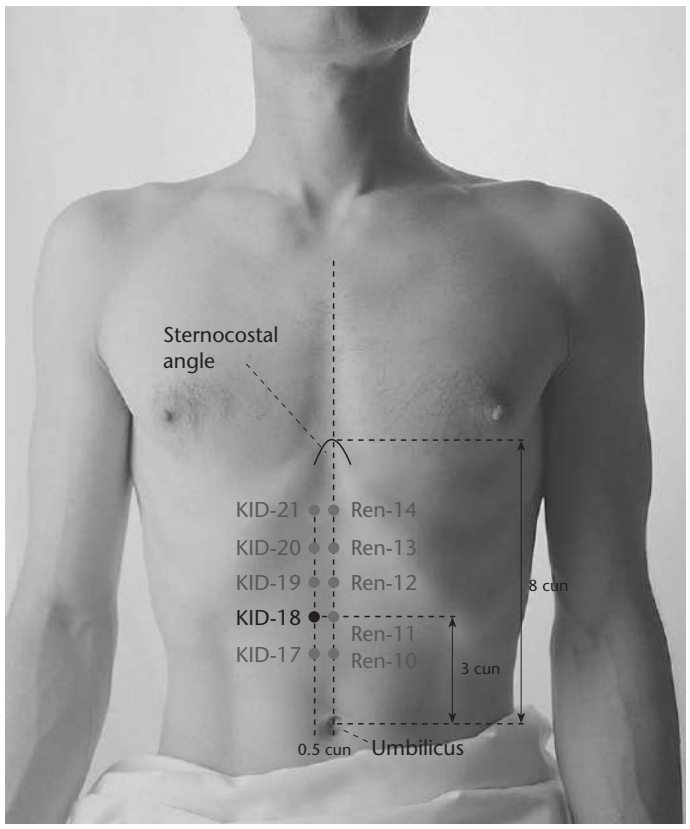
Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy.

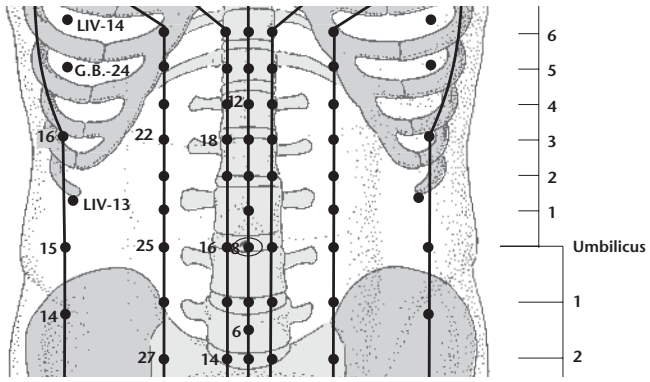
Actions/Indications

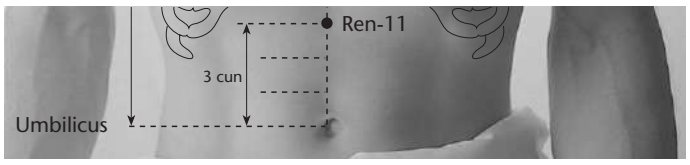
- Strengthens the Middle, regulates the Stomach and Intestines, removes Blood stagnation

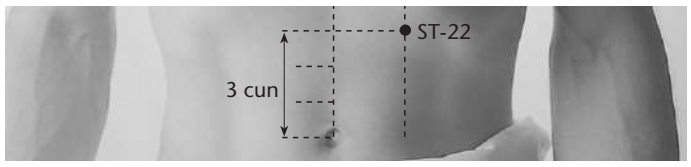
Special features

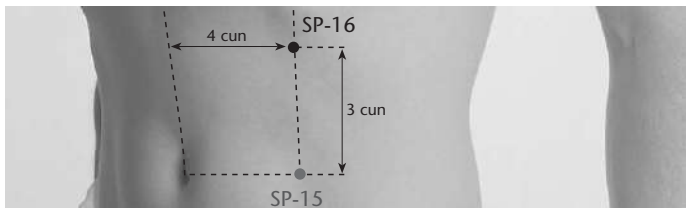
Meeting point with the *chong mai*

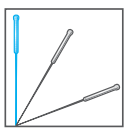


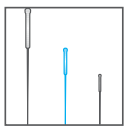


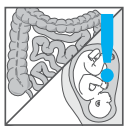


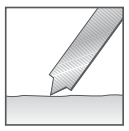












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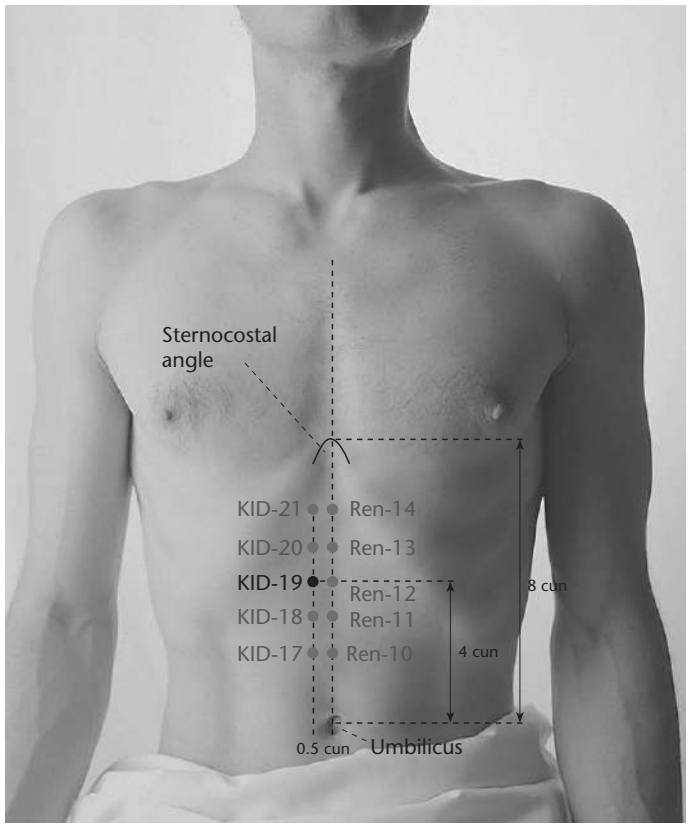
Yin Metropolis YINDU KID-19



Location

Midway between the sternocostal angle and the centre of the umbilicus, 0.5 cun lateral to the anterior midline.

How to find

The distance between the sternocostal angle (→ 3.5) and the centre of the umbilicus is divided into 8 proportional cun, which can vary considerably from the patient's finger cun. Therefore, only proportional cun should be used (elastic tape → 2.3.1). Spreading hands technique (→ 2.3.3): Place the little fingers on the centre of the umbilicus and the sternocostal angle respectively and join the thumbs at the midpoint of this distance by evenly spreading both hands. **KID-19** is located on this level, 0.5 cun lateral to the midline.

Located on the same level are → **Ren-12** (on the midline) and → **ST-21** (2 cun lateral to the midline).

Needling

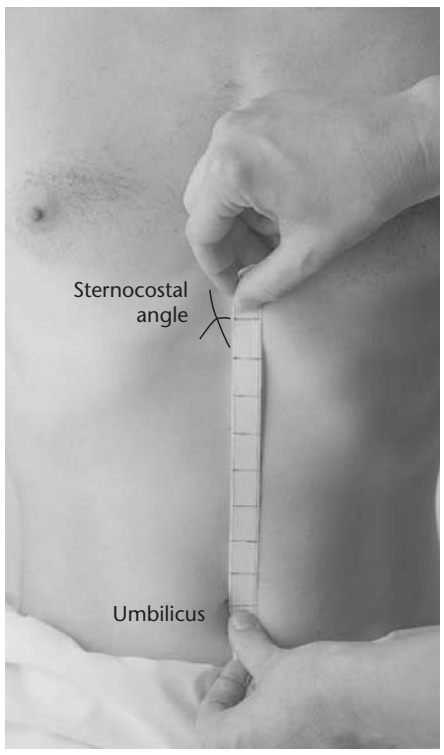
Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy.

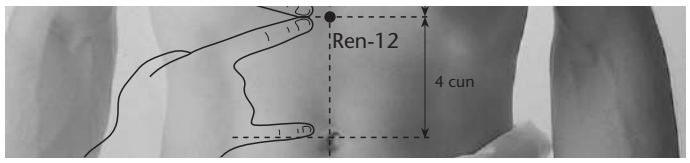
Actions/Indications

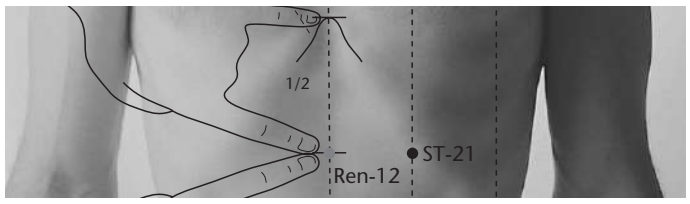
- Regulates the Qi, regulates the Stomach and Intestines
- Regulates counterflow Qi

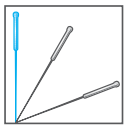
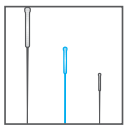
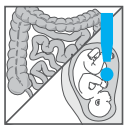
Special features

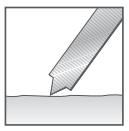
Meeting point with the *chong mai*









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KID-20 *Abdomen Connecting Valley* FUTONGGU

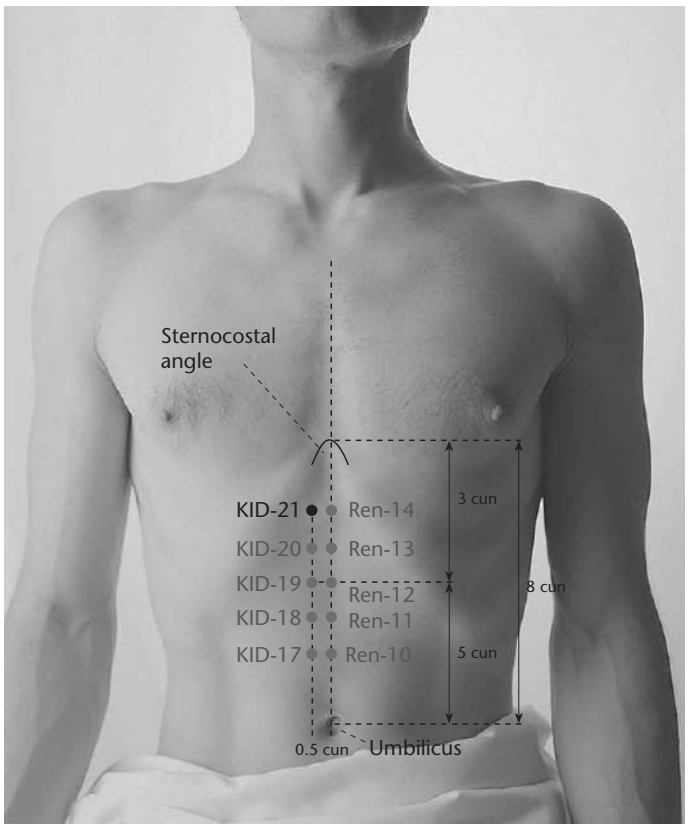
Location

5 cun superior to the umbilicus or 3 cun inferior to the sternocostal angle, 0.5 cun lateral to the anterior midline.

How to find

The distance between the sternocostal angle (→ 3.5) and the centre of the umbilicus is divided into 8 proportional cun, which can vary considerably from the patient's finger cun. Therefore, only proportional cun measurements should be used (elastic tape → 2.3.1). From the sternocostal angle, measure 3 cun in an inferior direction and on this level locate **KID-20** 0.5 cun lateral to the midline.

Located on the same level are → **Ren-13** (on the midline), → **ST-20** (2 cun lateral to the midline) and → **G.B.-24** (on the mamillary line, in the 7th intercostal space).



Needling

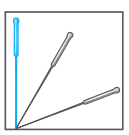
Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy.

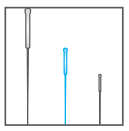
Actions/Indications

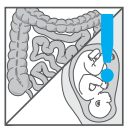
- Strengthens the Spleen, harmonises the Stomach and Intestines, regulates counterflow Qi

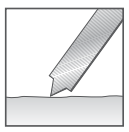
Special features

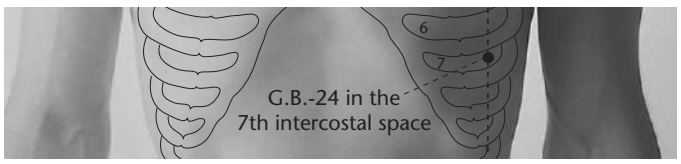
Meeting point with the *chong mai*

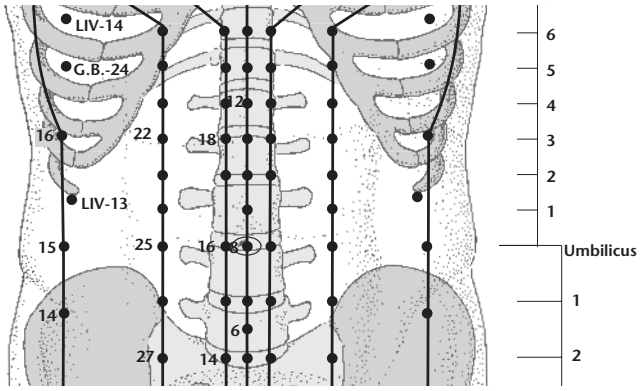


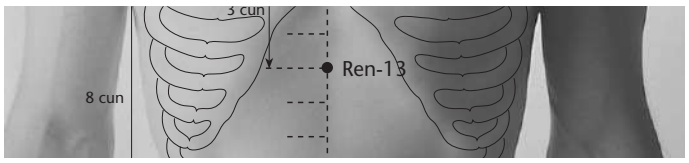


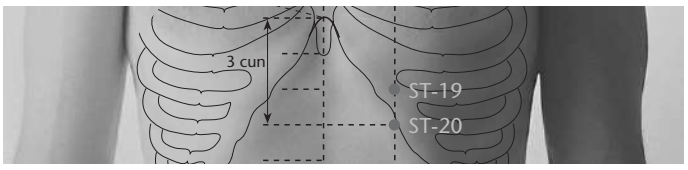












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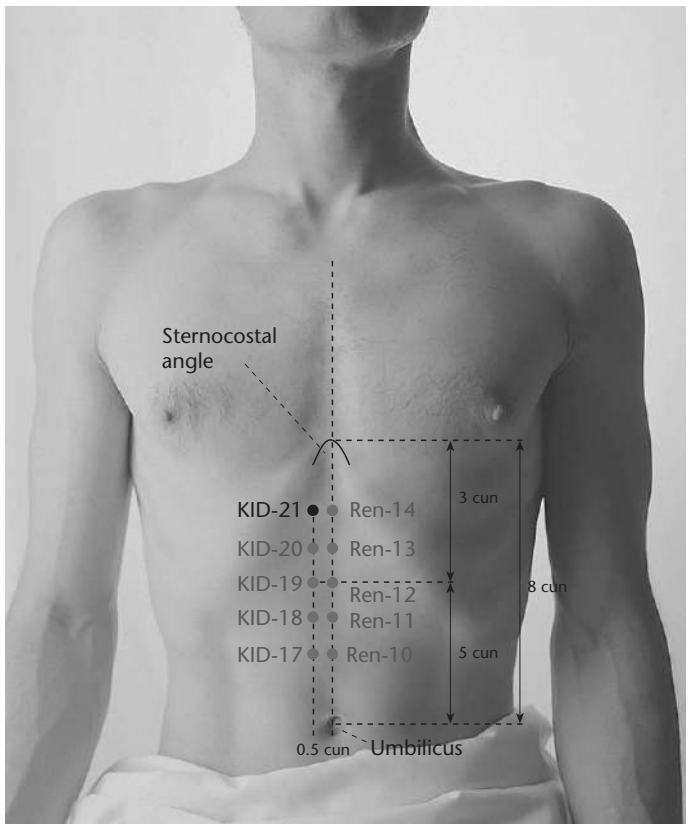
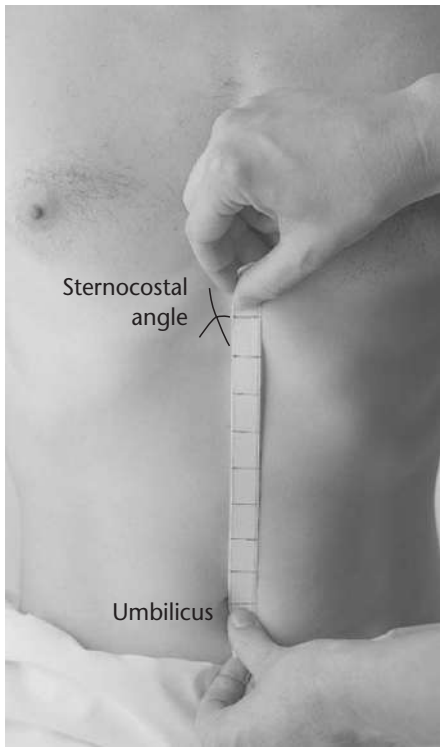
Hidden Gate YOUMEN KID-21





Location

2 cun inferior to the sternocostal angle, 0.5 cun lateral to the anterior midline.

How to find

The distance between the sternocostal angle (→ 3.5) and the centre of the umbilicus is divided into 8 proportional cun, which can vary considerably from the patient's finger cun. Therefore, only proportional cun should be used (elastic tape → 2.3.1). From the sternocostal angle, measure 2 cun in an inferior direction and on this level locate **KID-21** 0.5 cun lateral to the midline.
Located on the same level are → **Ren-14** (on the midline), → **ST-19** (2 cun lateral to the midline) and → **LIV-14** (on the mamillary line, in the 6th intercostal space).

Needling

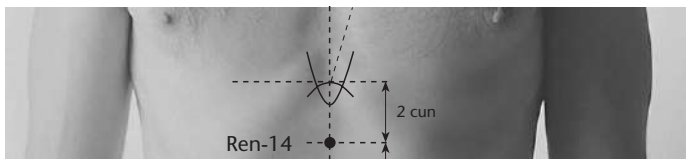
Vertically 0.5–1 cun. Caution: The liver is located on the right, the peritoneum on the left. Caution during pregnancy.

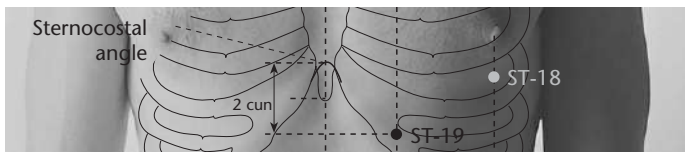
Actions/Indications

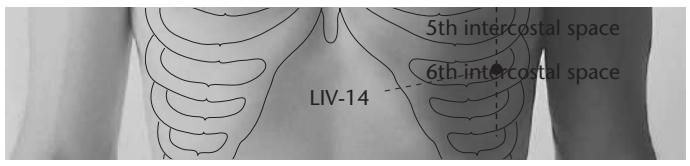
- Harmonises the Stomach, regulates counterflow Qi

Special features

Meeting point with the *chong mai*. Last point of the *chong mai* located on the Kidney channel.







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KID-22 *Walking Corridor* BULANG

Location

In the 5th intercostal space (ICS), 2 cun lateral to the anterior midline.

How to find

Locate the 5th ICS either by counting parasternally from the clavicle or from the manubriosternal synchondrosis (→ 2nd rib) (→ 3.5), then locate **KID-22** 2 cun lateral to the anterior midline. Located on the same level (5th ICS) are → **Ren-16** (on the midline), → **ST-18** (on the mamillary line) and → **SP-17** (6 cun lateral to the midline).

Needling

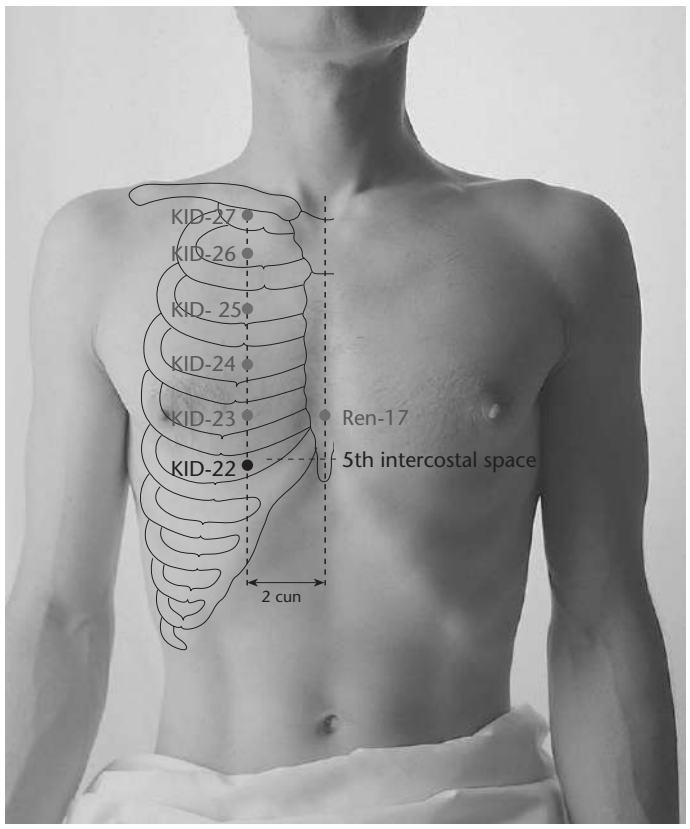
0.5–0.8 cun obliquely or transversely (subcutaneously) with or against the channel pathway. Caution: Avoid injuring the liver (on the right side), the heart (on the left side) and the pleura.

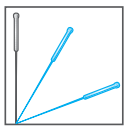
Actions/Indications

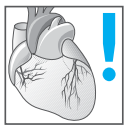
- Regulates the Lung Qi and counterflow Qi, unbinds the chest

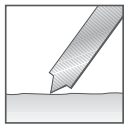
Special features

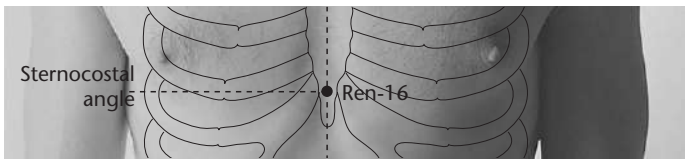
Exit point. The *Su Wen* describes points **KID-22** to **KID-27** as *shu* points of the chest, indicated for difficult breathing and disorders of the thorax. They are particularly indicated for breathing difficulties due to 'excess above, deficiency below', which refers to the inability of the Kidneys to absorb the Qi that has descended from the Lung.

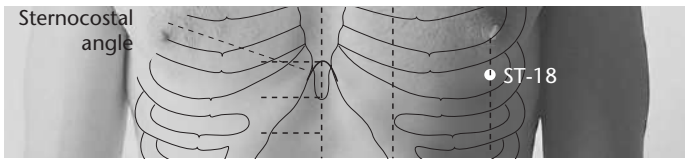


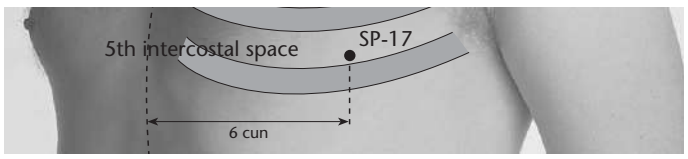


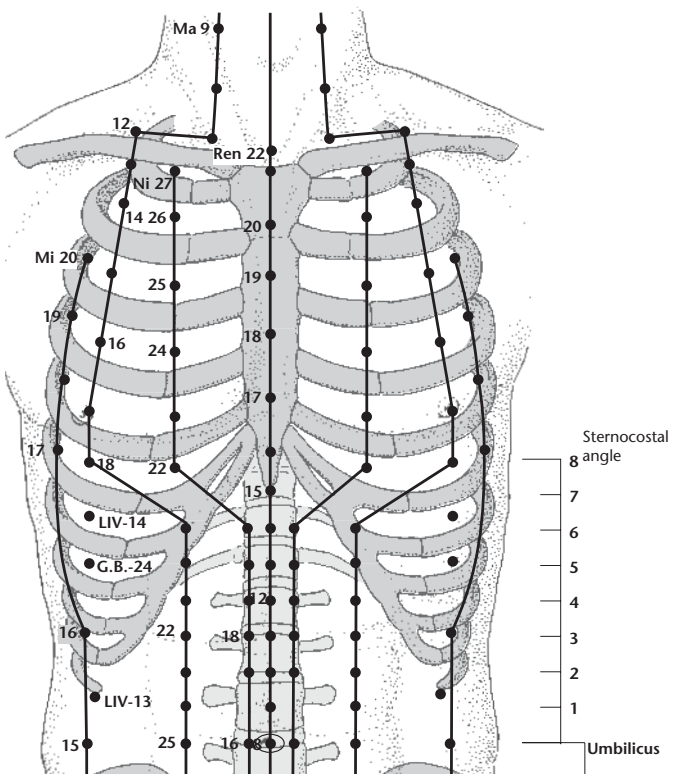












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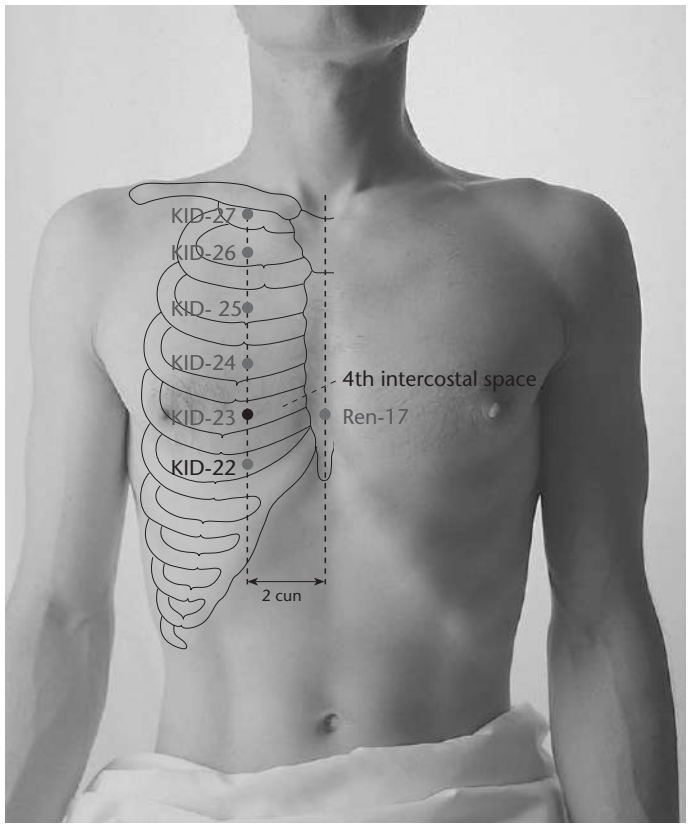
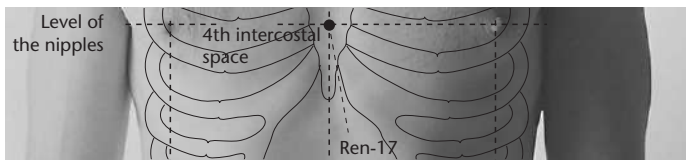
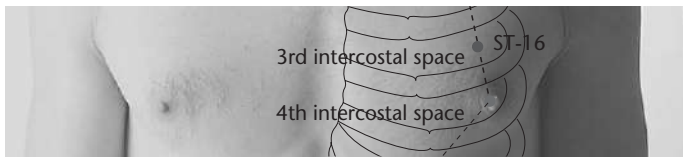
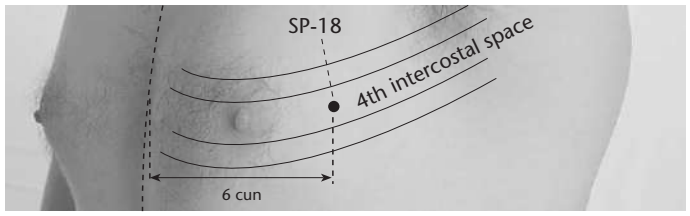
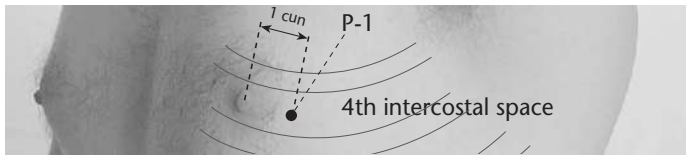
Spirit Seal SHENFENG KID-23

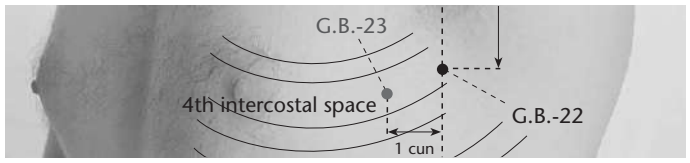












Location

In the 4th intercostal space (ICS), 2 cun lateral to the anterior midline.

How to find

Locate the 4th ICS either by palpating parasternally from the clavicle or by counting from the manubriosternal synchondrosis (→ 2nd rib) (→ 3.5), then locate **KID-23** 2 cun lateral to the anterior midline.

Located on the same level (4th ICS) are → **Ren-17** (on the midline), → **ST-17** (on the nipple), → **SP-18** (6 cun lateral to the midline), → **P-1** (1 cun lateral to the nipple) and → **G.B.-22** (3 cun inferior to the axilla) as well as → **G.B.-23** (1 cun anterior to **G.B.-22**).

Needling

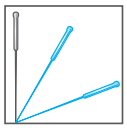
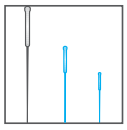
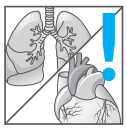
0.5–0.8 cun obliquely or transversely (subcutaneously) along the course of the ICS or with or against the channel pathway. Caution: Heart, pneumothorax.

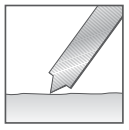
Actions/Indications

- Regulates the Lung Qi and counterflow Qi, unbinds the chest
- Harmonises the Stomach
- Benefits the breasts

Special features

The *Su Wen* describes points **KID-22** to **KID-27** as *shu* points of the chest, indicated for difficult breathing and disorders of the thorax. They are particularly indicated for breathing difficulties due to 'excess above, deficiency below', which refers to the inability of the Kidneys to absorb the Qi that has descended from the Lung.



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KID-24 *Spirit Ruin* LINGXU

Location

In the 3rd intercostal space (ICS), 2 cun lateral to the anterior midline.

How to find

Locate the 3rd ICS by palpating parasternally from the clavicle or by counting from the manubriosternal synchondrosis (→ 2nd rib) (→ 3.5), then locate **KID-24** 2 cun lateral to the anterior midline. Located on the same level (→ 3rd ICS) are → **Ren-18** (on the midline), → **ST-16** (4 cun lateral to the midline) and → **SP-19** (6 cun lateral to the midline).

Needling

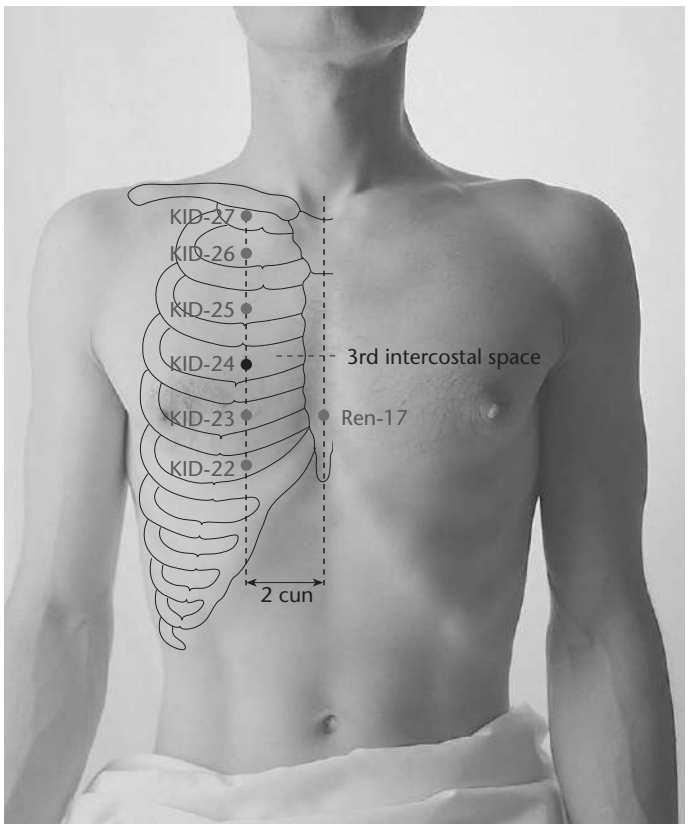
0.5–0.8 cun obliquely or transversely (subcutaneously) along the course of the ICS or with or against the channel pathway. Caution: Pneumothorax.

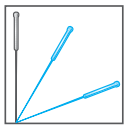
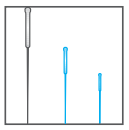
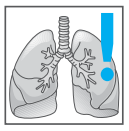
Actions/Indications

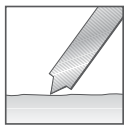
- Regulates the Lung and Stomach Qi
- Unbinds the chest
- Benefits the breasts

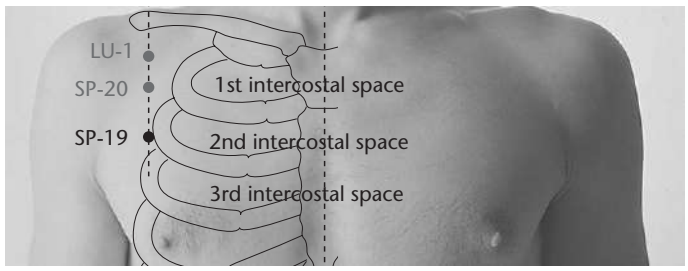
Special features

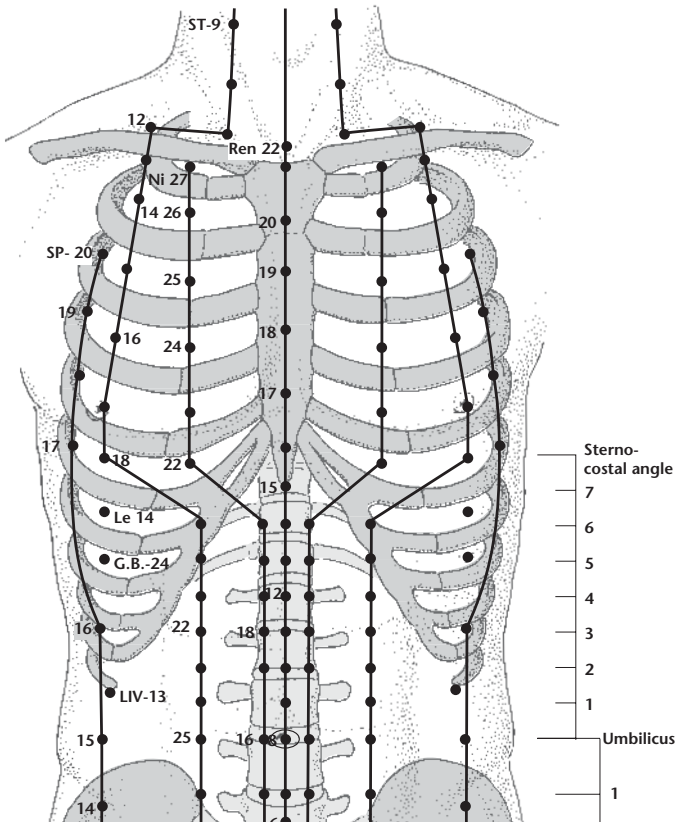
The *Su Wen* describes points **KID-22** to **KID-27** as *shu* points of the chest, indicated for difficult breathing and disorders of the thorax. They are particularly indicated for breathing difficulties due to 'excess above, deficiency below', which refers to the inability of the Kidneys to absorb the Qi that has descended from the Lung.









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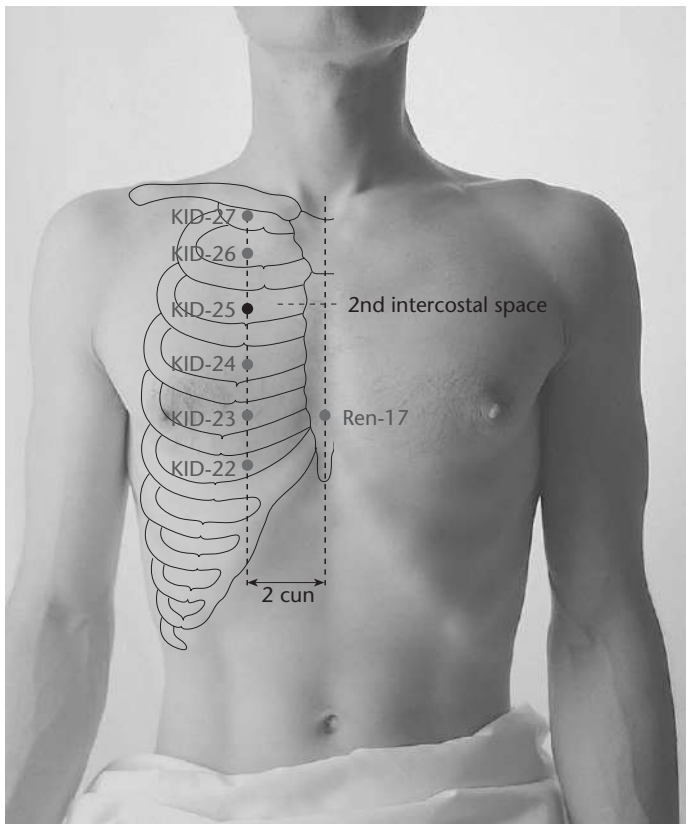
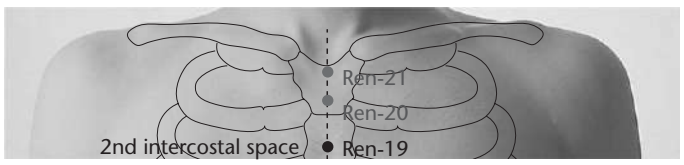
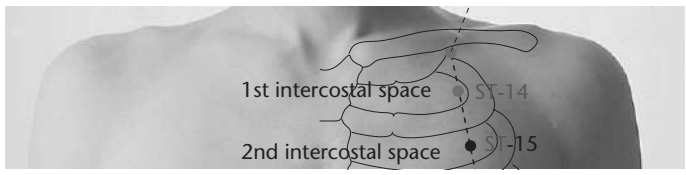
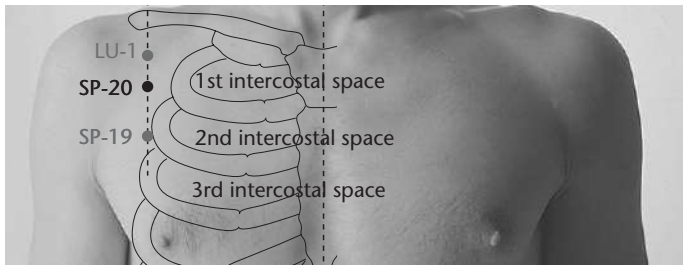
Spirit Storehouse SHENCANG KID-25









Location

In the 2nd intercostal space (ICS), 2 cun lateral to the anterior midline.

How to find

Locate the 2nd ICS by palpating parasternally from the clavicle or by counting from the manubriosternal synchondrosis (→ 2nd rib) (→ 3.5), then locate **KID-24** 2 cun lateral to the anterior midline. Located on the same level (→ 2nd ICS) are → **Ren-19** (on the midline), → **ST-15** (4 cun lateral to the midline) and → **SP-20** (6 cun lateral to the midline).

Needling

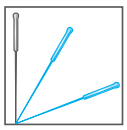
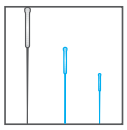
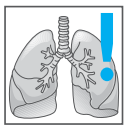
0.5–0.8 cun obliquely or transversely (subcutaneously) along the course of the ICS or with or against the channel pathway. Caution: Pneumothorax.

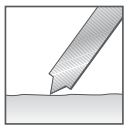
Actions/Indications

- Regulates the Lung Qi
- Unbinds the chest

Special features

The *Su Wen* describes points **KID-22** to **KID-27** as *shu* points of the chest, indicated for difficult breathing and disorders of the thorax. They are particularly indicated for breathing difficulties due to 'excess above, deficiency below', which refers to the inability of the Kidneys to absorb the Qi that has descended from the Lung.



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KID-26 *Comfortable Chest* YUZHONG

Location

In the 1st intercostal space (ICS), 2 cun lateral to the anterior midline.

How to find

Palpating parasternally from superior to inferior, the 1st rib can be palpated directly below the clavicle; in some cases, it can be completely hidden under the clavicle. Locate **KID-26** below the 1st rib in the 1st ICS, 2 cun lateral to the midline. Located on the same level (1st ICS) are → **Ren-20** (on the midline), → **ST-14** (4 cun lateral to the midline) and → **LU-1** (6 cun lateral to the midline).

Needling

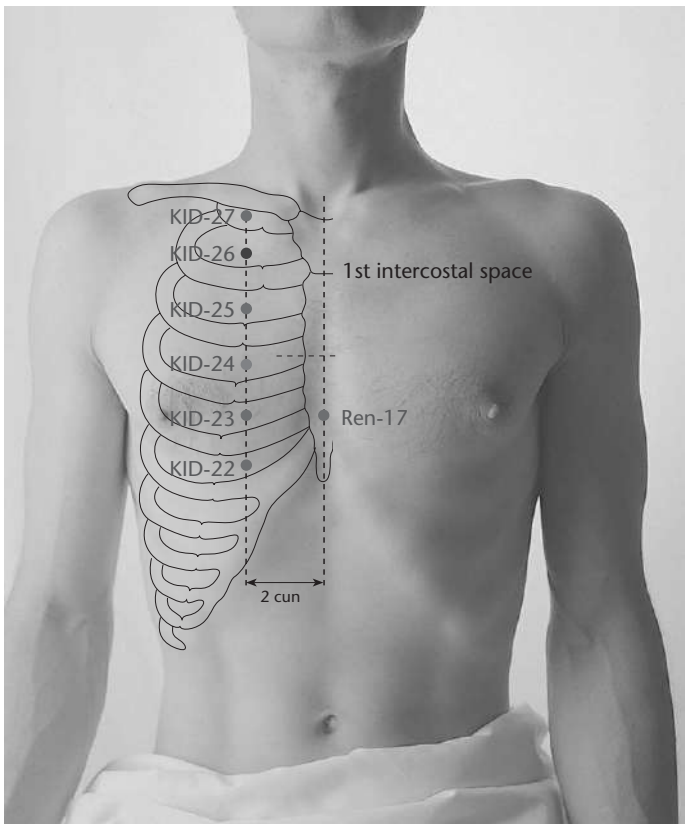
0.5–0.8 cun obliquely or transversely (subcutaneously) along the course of the ICS or with or against the channel pathway. Caution: Pneumothorax.

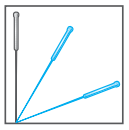
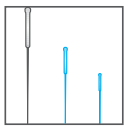
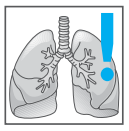
Actions/Indications

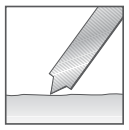
- Regulates the Lung Qi and transforms Phlegm
- Unbinds the chest
- Benefits the breasts

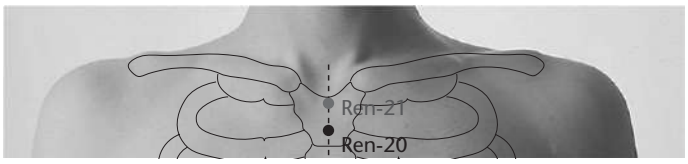
Special features

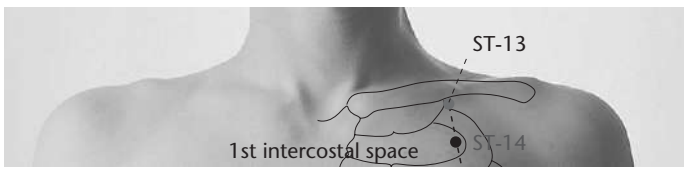
The *Su Wen* describes points **KID-22** to **KID-27** as *shu* points of the chest, indicated for difficult breathing and disorders of the thorax. They are particularly indicated for breathing difficulties due to 'excess above, deficiency below', which refers to the inability of the Kidneys to absorb the Qi that has descended from the Lung.

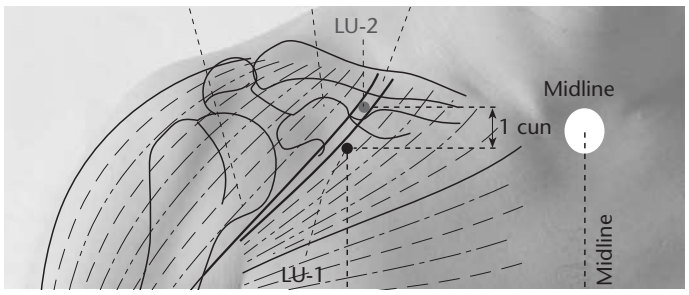


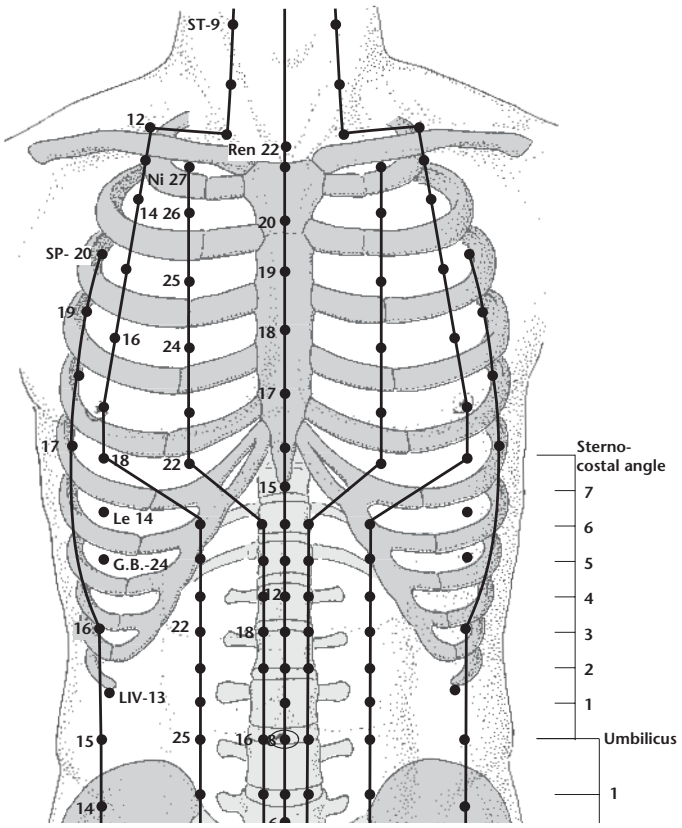














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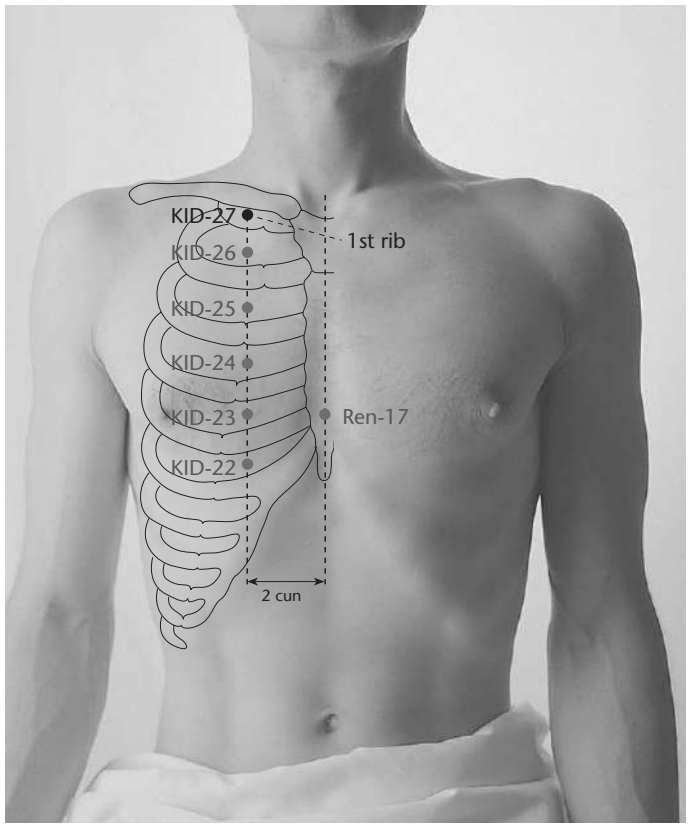
Shu *Mansion* SHUFU KID-27



Location

At the lower border of the clavicle, 2 cun lateral to the anterior midline

How to find

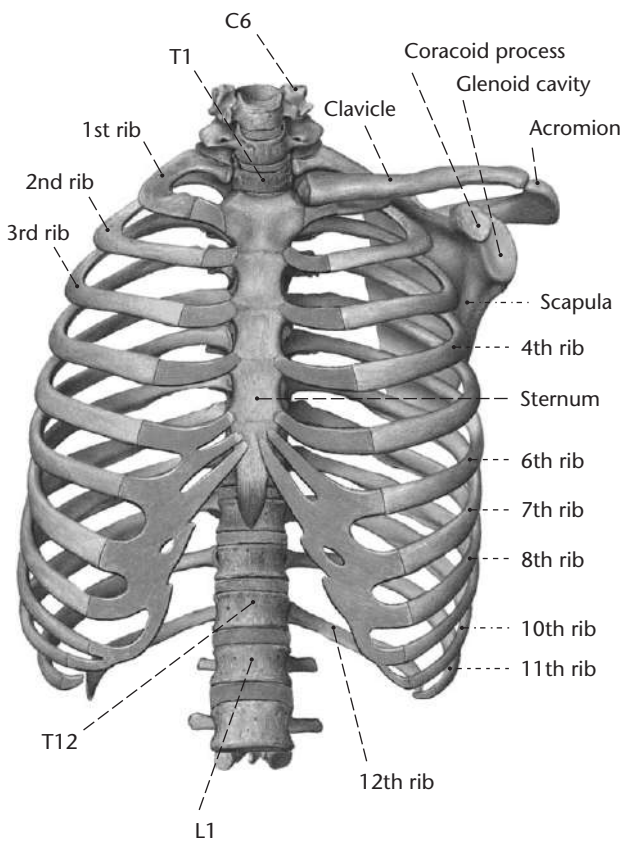
When palpating parasternally from superior to inferior, the 1st rib can be felt directly below the clavicle; in some cases, it can be completely hidden under the clavicle. Therefore, **KID-27** will be located either on the 1st rib or, in some cases, at its lower border. → **ST-13** is located lateral to the short curvature of the 1st rib, below the midpoint of the clavicle.
Located on approximately the same level are → **Ren-21** (on the midline) and → **LU-2** (6 cun lateral to the midline).

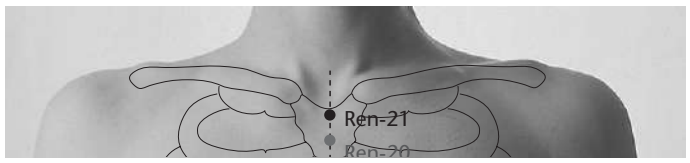
Needling

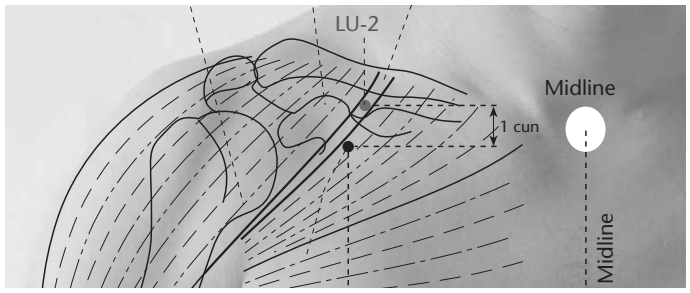
0.5–0.8 cun obliquely or transversely (subcutaneously) along the course of the ICS or with or against the channel pathway. Caution: Pneumothorax.

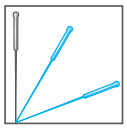
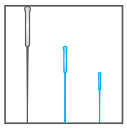
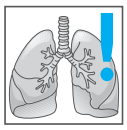
Actions/Indications

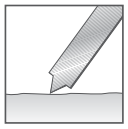
- Regulates the Lung Qi and transforms Phlegm
- Unbinds the chest









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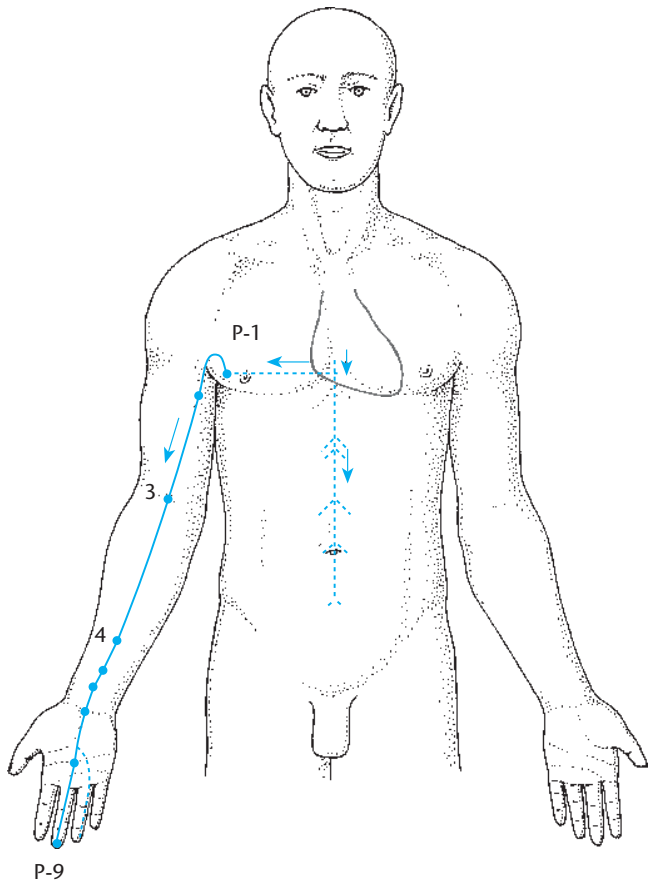
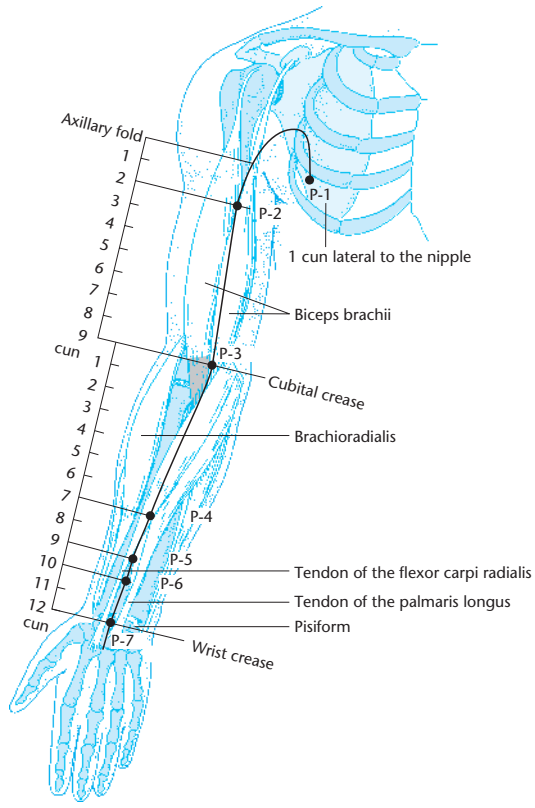
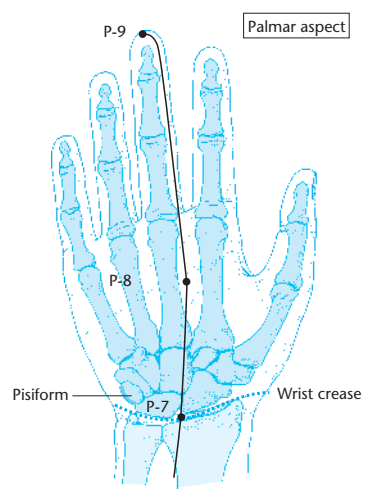
4.9 The Pericardium Channel System – Hand *jueyin* (*shou jue yin jing luo*)

4.9.1 Primary Pericardium Channel (*shou jue yin jing*)







Pathway

The Pericardium primary channel begins in the centre of the thorax on the level of → **Ren-17** (*shanzhong*), where an internal branch of the Kidney primary channel ends, having also connected with the Liver, Lung and Heart (deep Yin–Yin connection).

The Pericardium primary channel then divides into two branches:

- The **first branch** penetrates the diaphragm, descends to the abdomen and connects with the Upper, Middle and Lower Burner.
- A **further internal branch** also originates in the thoracic region, continues to the breast and emerges approximately 1 cun lateral to the nipple in the 4th intercostal space at **P-1** (*tianchi*). Beneath **P-1**, an internal branch of the Liver primary channel emerges from the Liver and joins the Pericardium primary channel (Yin axes of the third great circuit: *jueyin*).

The **external** pathway ascends to the axilla, follows the medial aspect of the upper arm between the Lung and Heart primary channels, passes the elbow and continues along the forearm between the tendons of the palmaris longus and flexor carpi ulnaris muscles, ending at the tip of the middle finger.

Another **internal** branch originates in the centre of the palm at **P-8** (*laogong*), runs along the ring finger and connects at its tip with the Triple Burner primary channel (hand Yin–Yang connection of the third circuit).

Clinical importance (→ 1.2)

Exterior *(biao)* signs and symptoms: Occipital stiffness, leg cramps, red complexion, eye pain, swellings in the subaxillary region, hypertonic musculature with limited range of motion of the arm and elbow, Heat sensations in the palms

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Interior (*li*) or *zangfu*-Organ signs and symptoms: Delirious speech, confusion, irritability, fullness and distension in the thorax and lateral costal region, aphasia, palpitations

Connections of the Pericardium primary channel (→ 1.2)

Connections with other channels

Triple Burner primary channel (*shou shao yang jing*)

Connection: Hand Yin–Yang pairing of the third great circuit
Location: P-8 → T.B.-1 (on the hand)
Circulation: Circadian (according to the Organ clock)
Importance: Exterior–Interior relationship

Liver primary channel (*zu jue yin jing*)

Connection: Six-channel pairing of the third great circuit (Yin axes): *jue yin*
Location: LIV → P. An internal branch of the Liver primary channel emerges at the Liver, penetrates the diaphragm and connects with the Pericardium primary channel beneath **P-1** (*tianchi*).
Circulation: Non-circadian (**not** according to the Organ clock)
Importance: Above–below relationship

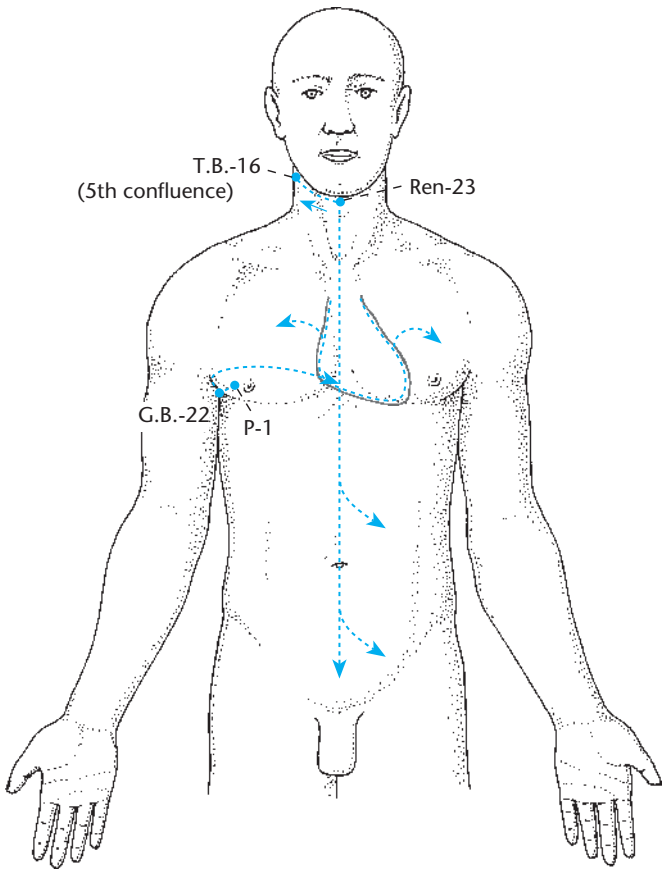
Kidney primary channel (*zu shao yin jing*)

Connection: Deep Yin–Yin connection
Location: KID → P (on the thorax). A branch of the internal pathway of the Kidney primary channel travels from the Kidney to the Liver, penetrates the diaphragm and spreads in the Lung (*fei*). From the Lung, an internal branch runs to the Heart (*xin*), where it joins the Pericardium primary channel (deep Yin–Yin connection) and further reaches → **Ren-17** (*shanzhong*).
Circulation: Circadian (according to the Organ clock)
Importance: The Pericardium primary channel receives Nutritive Qi (*ying qi*) from the Kidney primary channel (first circulation of the *ying qi* → 1.1.4).

Connections with *zangfu*-Organ systems

Pericardium (*xin bao*), Triple Burner (*san jiao*)

4.9.2 The Pericardium Divergent Channel (*shou jue yin jing bie*)



Pathway

The Pericardium divergent channel separates from the Pericardium primary channel near **P-1** (*tianchi*), 1 cun lateral to the nipple on the level of the 4th intercostal space. It

- ➡ runs in a lateral direction to → **G.B.-22** (*yuanye*)
- ➡ penetrates the thorax, continues to the Heart (*xin*) and divides into **two branches:**
  - **one branch** connects with the Upper, Middle and Lower Burner
  - the **other branch** ascends to the neck to → **Ren-23** (*lianquan*) and continues to the lateral aspect of the neck, emerges at → **T.B.-16** (*tianyou*) on the posterior border of the sternocleidomastoid muscle on the level of the mandibular angle, connecting with the Triple Burner primary channel and the Triple Burner divergent channel to form one of the 6 *he*-confluences (here: P/T.B. as 5th Confluence → 1.3)

Clinical importance

- Strengthens the relationship between the Pericardium and the Triple Burner (*zangfu*-Organ systems). Points on the Pericardium primary channel can therefore be used for disorders of the Triple Burner; vice versa, points on the Triple Burner primary channel can treat disorders of the Pericardium.

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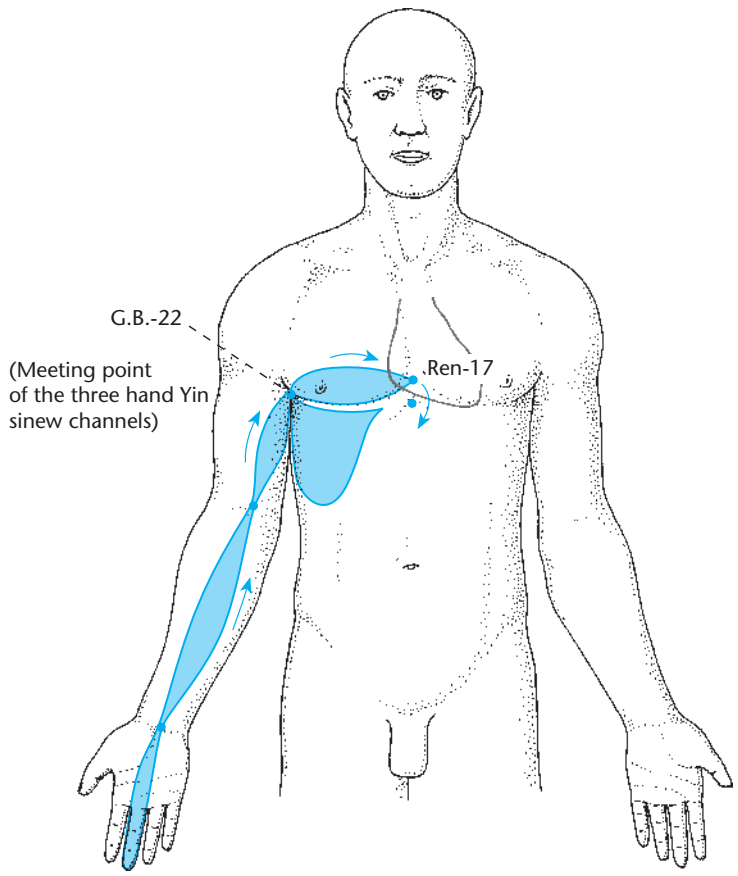
- In contrast to the Pericardium primary channel, the Pericardium divergent channel reaches the occiput and the neck. This explains why several points on the P channel can be used for disorders of the neck and ears, chronic throat pain, etc.
- By reaching the thorax, breast and hypochondrium, the Pericardium divergent channel supports the relationship between the Pericardium primary channel and these regions.

4.9.3 The Pericardium Sinew Channel (*shou jue yin jing jin*)



Pathway

The Pericardium sinew channel begins at the tip of the middle finger

- ➡ runs along the anterior aspect of the middle finger and along the 3rd metacarpal bone
- ➡ spreads in the centre of the palm and meets the Lung sinew channel
- ➡ binds (*jie*) in the centre of the wrist
- ➡ ascends the anterior aspect of the forearm as well as the anteromedial aspect of the upper arm to the axilla, binding (*jie*) at **P-3** (*quze*) on the elbow and at ➞ **G.B.-22** (*yuanye*), where it meets the other hand Yin sinew channels.

At ➞ **G.B.-22**, the channel separates into two branches:

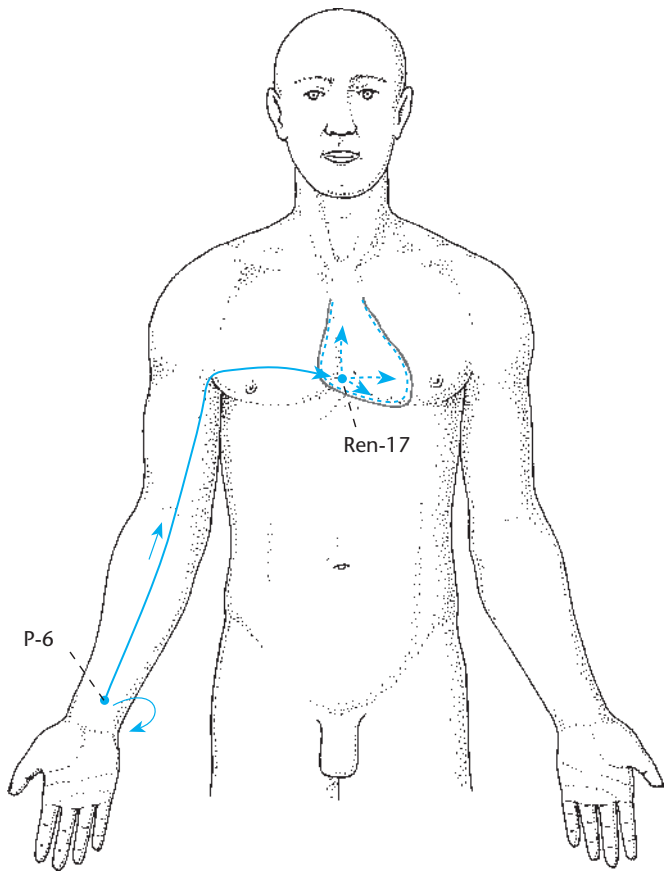
- **one branch** disperses on the anterior, lateral and posterior aspects of the costal region
- **the other branch** penetrates the thorax below the axilla and reaches the midthoracic region on the level of ➞ **Ren-17** (*shanzhong*), from where it spreads in the thoracic cavity to bind (*jie*) at the diaphragm.

Clinical importance

Pathology: Stiffness, pain, spasms and distending sensations along the pathway of the Pericardium sinew channel. Thoracic pain and tightness, *xi fen* syndrome (one of the five *ji*-syndromes, an 'accumulation syndrome') due to Lung Qi stagnation with accumulation of Phlegm and Heat manifesting with symptoms such as masses in the right hypochondriac region, possibly accompanied by thoracic or back pain, haemoptysis, chills and fever, shortness of breath and dyspnoea, etc.

Indication: Mainly for pain, spasms and distending sensations along the pathway of the sinew channel, limited range of motion along the medial aspect of the arm and elbow, swellings and pain in the axilla and the breast.

4.9.4 The Pericardium *luo*-Connecting Vessel System (*shou jue yin luo mai*)



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Pathway

The *luo*-connecting Pericardium vessel system separates from the Pericardium primary channel at its associated *luo*-connecting point **P-6** (*neiguan*) (→ 8.1.2). It forms a three-dimensional reticular network, dividing into multiple branches and sub-branches (*sun luo, fu luo, xue luo* → 1.5) within the surrounding tissue.

- Horizontal divisions run to the Interiorly–Exteriorly paired Triple Burner primary channel; according to some schools of thought (for example, Ngyen Van Nghi → Appendix), they travel as a **transverse** Pericardium *luo*-connecting vessel to the *yuan*-source point → **T.B.-4** (*yangchi*).
- **A longitudinal division** follows the Pericardium primary channel along the anterior aspect of the arm, crosses → **Ren-17** (*shanzhong*) on the midline on the level of the 4th intercostal space, penetrates the thorax and terminates at the Pericardium (*xin bao*) and the Heart (*xin*).

Clinical importance (→ 8.1.2)

Pathology

Excess (*shi*): Heart pain, angina pain, thoracic pain
Deficiency (*xu*): Restlessness, irritability

4.9.5 Cutaneous Region (*jue yin pi bu*)

See description and figures → 1.6.

4.9.6 Points of the Primary Pericardium Channel (Overview)

Specific points according to their function

- ***Yuan*-source point (→ 8.1.1): P-7** (*daling*) ■■
- ***Luo*-connecting point (→ 8.1.2.): P-6** (*neiguan*) ■■
- ***Xi*-cleft point (→ 8.1.3): P-4** (*ximen*) ■■
- **Associated Back-*shu* point (→ 8.1.4): BL-14** (*jueyinshu*)
- **Associated Front-*mu* point (→ 8.1.5): Ren-17** (*shanzhong*) ■■
- **Five *shu*-transporting points (→ 8.1.6):**
  jing-well point (Wood), tonification point: **P-9** (*zhongchong*) ■■
  ying-spring point (Fire), *ben* point (Five Phases): **P-8** (*laogong*) ■■
  shu-stream point (Earth), sedation point: **P-7** (*daling*) ■■
  jing-river point (Metal): **P-5** (*jianshi*) ■■
  he-sea point (Water): **P-3** (*quze*) ■■
- ***Hui*-meeting point (→ 8.1.7): –**
- **Opening point (→ 8.1.8) of the *yin wei mai:* P-6** (*neiguan*) ■■
- **Lower *he*-sea point (→ 8.1.9): –**
- ***Jiaohui*-meeting points (→ 8.1.10):**
  – with the LIV, T.B., G.B.* channels: **P-1** (*tianchi*)
  – of other channels with the Pericardium channel: –
- **Gao Wu command point (→ 8.1.11) for the thoracic region: P-6** (*neiguan*) ■■
- **Window of Heaven point (→ 8.1.12): P-1** (*tianchi*)
- **Points of the Four Seas (→ 8.1.13): –**
- **Ma Dan Yang Heavenly Star point (→ 8.1.14): –**
- **Sun Si Miao Ghost point (→ 8.1.15): P-7** (*daling*) ■■, **P-8** (*laogong*) ■■
- **Other functional points:**
  – important point for eliminating Phlegm misting the orifices: **P-5** (*jianshi*) ■■
  – important point for calming the *shen*: **P-6** (*neiguan*) ■■

Points according to region

- **Local points (→ 8.2.1):** hand – **P-7** (*daling*) ■■
- **Adjacent points (→ 8.2.1): –**
- **Distal points (→ 8.2.1):** tongue – **P-8** (*laogong*) ■■; Lung – **P-6** (*neiguan*) ■■; Heart – **P-4** (*ximen*) ■■; **P-6** (*neiguan*) ■■; Spleen – **P-6** (*neiguan*) ■■; thorax and epigastrium – **P-6** (*neiguan*) ■■; foot – **P-7** (*daling*) ■■

Specific points according to the channel pathway (in numeric order)

- **P-1** (*tianchi*) ■■: *jiaohui*-meeting point with the LIV, T.B., G.B.* channels (→ 8.1.10); Window of Heaven point (→ 8.1.12)
- **P-3** (*quze*) ■■: lower *he*-sea point (Water) (→ 8.1.6)
- **P-4** (*ximen*) ■■: *xi*-cleft point (→ 8.1.3); distal point for the Heart (→ 8.2.1)
- **P-5** (*jianshi*) ■■: *jing*-river point (Metal) (→ 8.1.6); important point for eliminating Phlegm misting the orifices
- **P-6** (*neiguan*) ■■: *luo*-connecting point (→ 8.1.2); Gao Wu command point (→ 8.1.11) for the thorax; Opening point (→ 8.1.8) of the *yin wei mai*; distal point for the Heart, Spleen, thorax and epigastrium (→ 8.2.1); important point for calming the *shen*
- **P-7** (*daling*) ■■: *yuan*-source point (→ 8.1.1); *shu*-stream point (Earth) (→ 8.1.6); sedation point; Sun Si Miao Ghost point (→ 8.1.15); local point for the hand (→ 8.2.1); distal point for the foot (→ 8.2.1)
- **P-8** (*laogong*) ■■: *ying*-spring point (Fire) (→ 8.1.6); *ben* point (Five Phases); Sun Si Miao Ghost point (→ 8.1.15); distal point for the tongue (→ 8.2.1)
- **P-9** (*zhongchong*) ■■: *jing*-well point (Wood) (→ 8.1.6); tonification point

* Mentioned by only some authors

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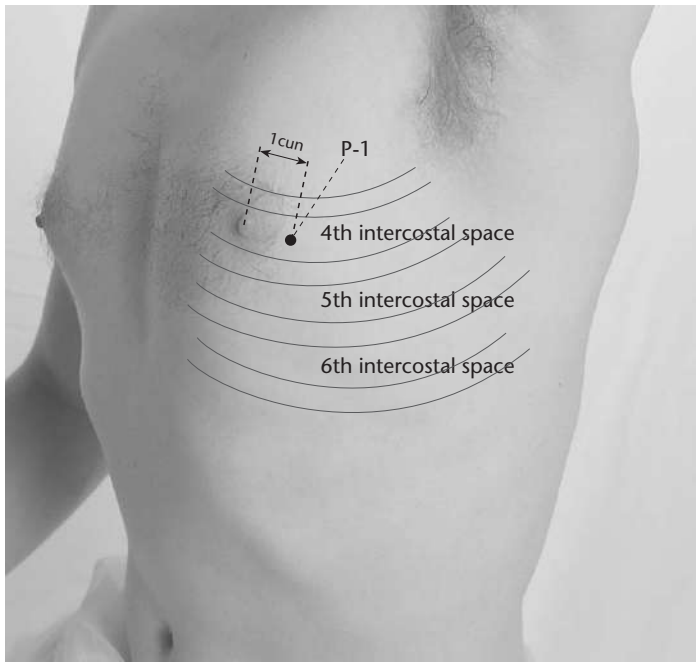
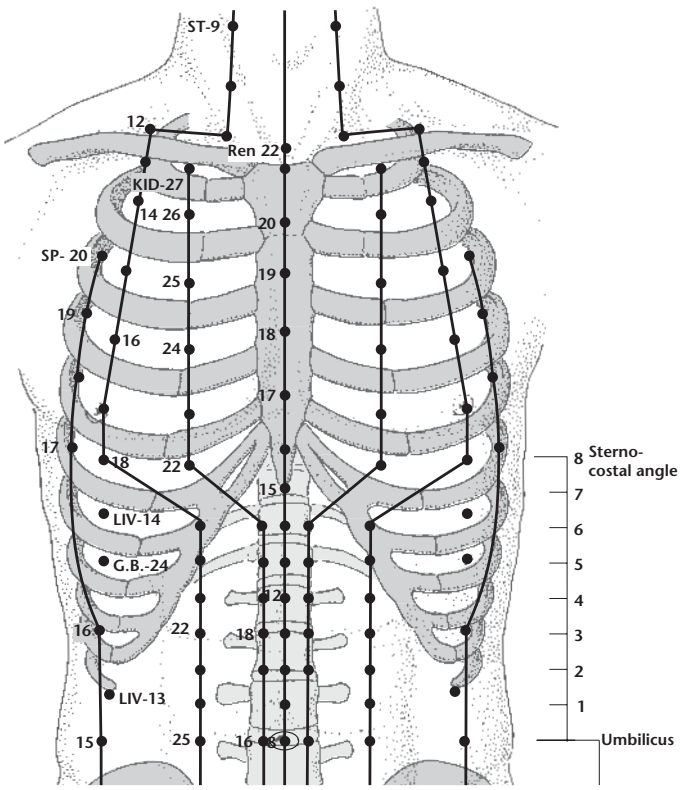
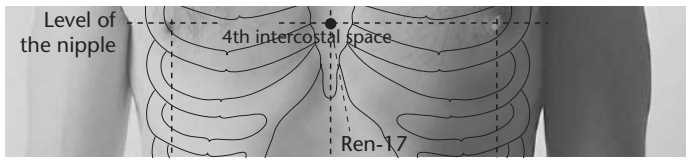
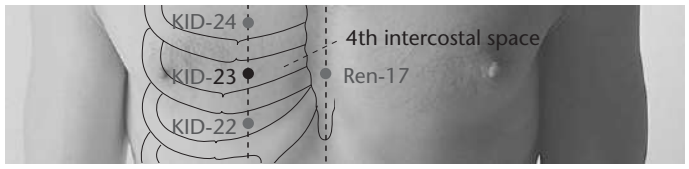
Heavenly Pool TIANCHI P-1









Location

In the 4th intercostal space (ICS), 1 cun lateral to the nipple.

How to find

Quick method, especially in male patients: The 4th ICS is located on the same level as the nipple. Locate **P-1** 1 cun lateral to the nipple in the 4th ICS (note: ascending course of the ICS towards lateral). **Or:** For better orientation in the intercostal region, first, locate the manubriosternal synchondrosis (→ 3.4.2.). This is on the level of the costal cartilage of the 2nd rib, followed by the 2nd ICS below it. Count down to ICS to the 4th ICS and measure 5 cun in a lateral direction. There, locate **P-1**.
Located on the same level (4th ICS) are → **Ren-17** (on the midline), → **KID-23/ST-17/SP-18** (2/4/6 cun lateral to the midline), as well as → **G.B.-22** and → **G.B.-23**.

Needling

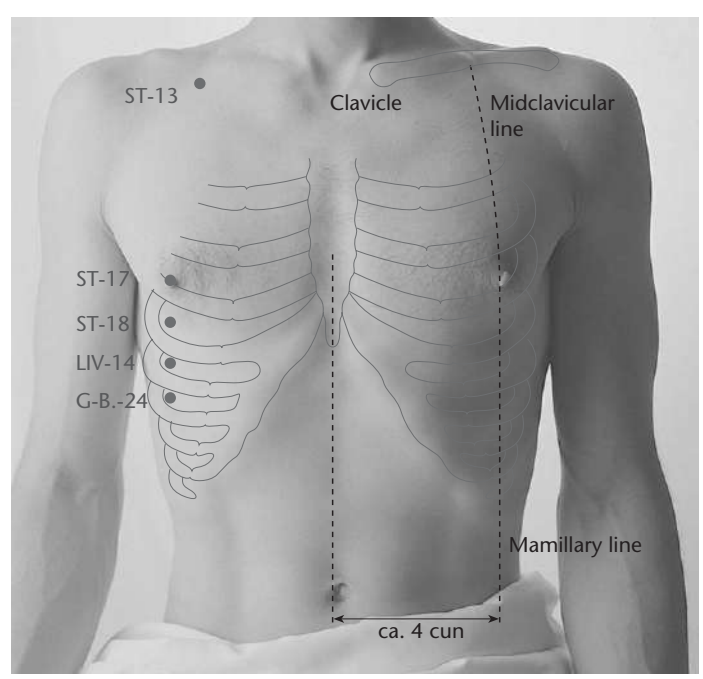
0.5–1 cun transversely (subcutaneously) along the course of the ICS. Especially in women, transverse needling only, avoid puncturing the mamillary tissue. Caution: Pneumothorax.

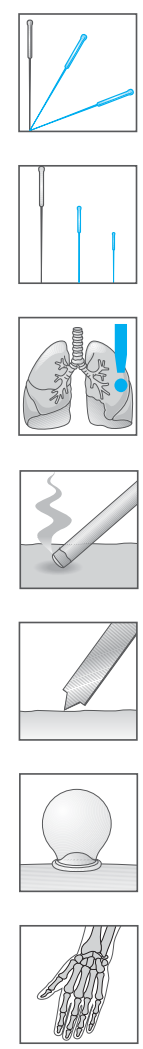
Actions/Indications

- Descends counterflow Qi
- Eliminates excess (especially Heat and Phlegm) from the thorax
- Promotes lactation and eliminates local Qi stagnation

Special features

Meeting point with the LIV and T.B. channels, also with the G.B. channel according to some authors. Window of Heaven point, entry point.





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P-2 *Heavenly Spring* TIANQUAN

Location

Between the two heads of the biceps brachii muscle, 2 cun inferior to the axillary fold.

How to find

Locate the biceps brachii muscle through slight external rotation; in patients with less muscle definition, ask the patient to flex their elbow against resistance. **P-2** is located between the two heads of the biceps brachii muscle, 2 cun inferior to the upper end of the anterior axillary fold (→ 2.2).

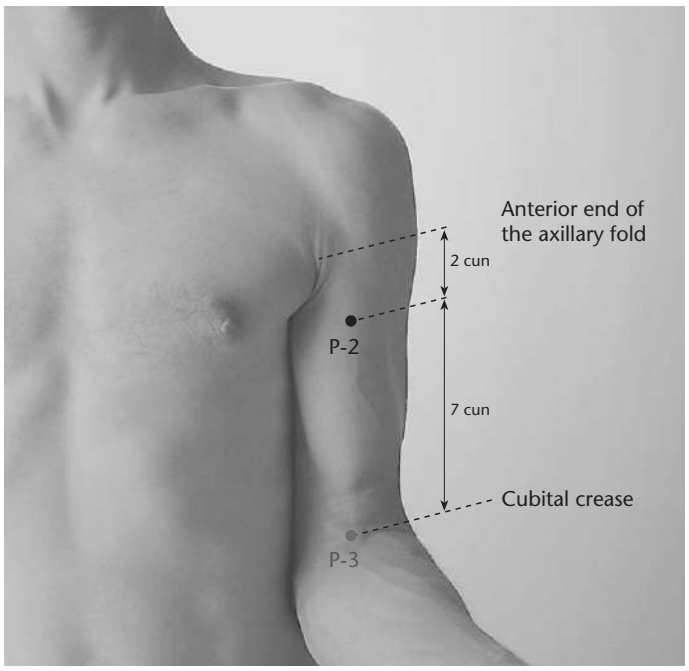
→ **LU-3** is located radial to **P-2,** on the lateral aspect of the biceps brachii muscle and 1 cun more distally.

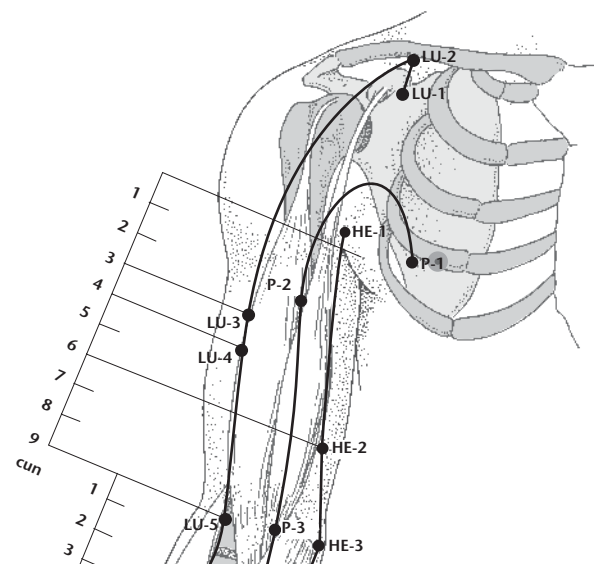
Needling

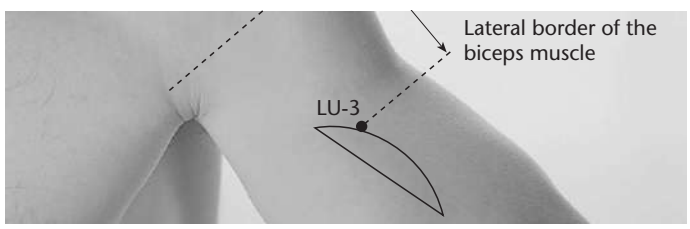
1–1.5 cun obliquely in a proximal or lateral direction.

Actions/Indications

- Unbinds the chest.
- Nourishes and invigorates the Blood
- Calms the *shen*







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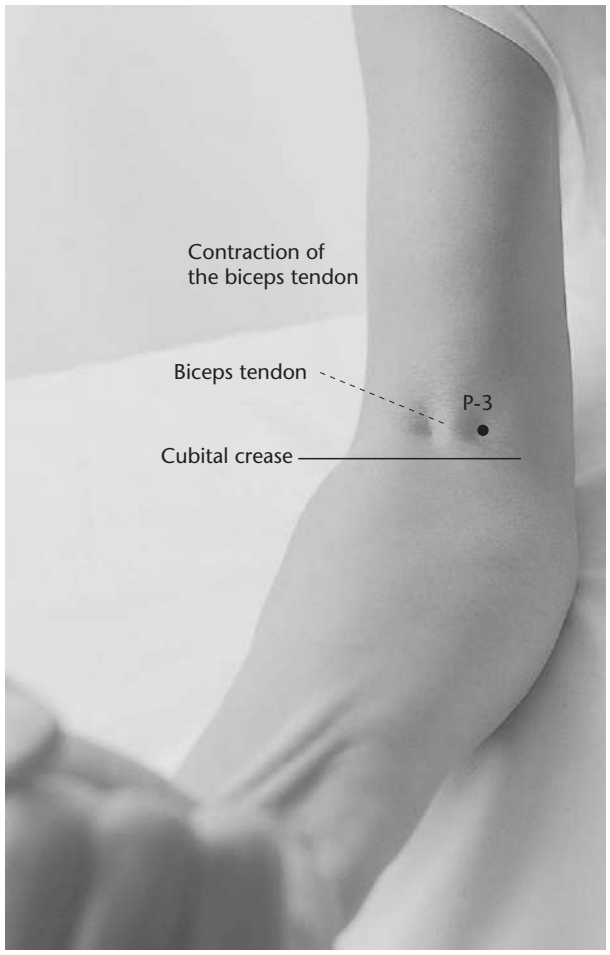
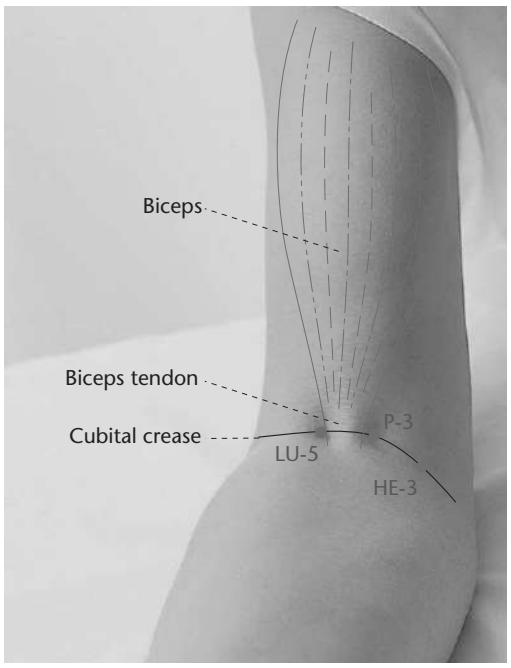
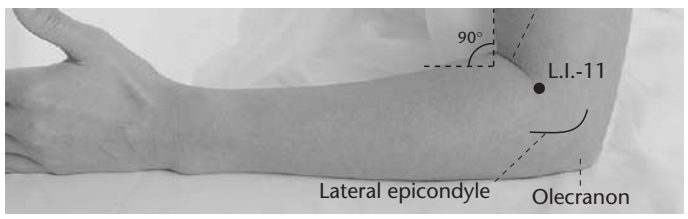
Marsh at the Crook QUZE P-3







Location

On the cubital crease, on the ulnar side of the biceps tendon, between the tendon and the brachial artery.

How to find

Place the patient's arm in a relaxed supinated position. This point is best located with the elbow bent and the biceps flexed in order to make the tendon and elbow crease more clearly visible and palpable. **P-3** is located on the cubital crease, on the ulnar aspect of the tendon.

Also located in the area of the cubital crease are → **LU-5** (on the radial side of the tendon), → **L.I.-11** (between the radial end of the crease and the lateral epicondyle of the humerus) and → **HE-3** (with the elbow fully flexed, at the ulnar end of the cubital crease).

Needling

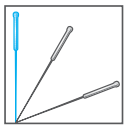
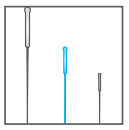
0.5–1 cun vertically or prick to cause bleeding of the vein. Caution: Brachial artery/vein. Palpate for the pulse before needling.

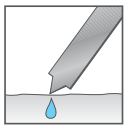
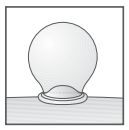
Actions/Indications

- Clears Heat, drains Fire
- Harmonises the Stomach and Intestines, stops vomiting
- Opens the channel, alleviates pain

Special features

He-sea point, Water point. Important local point and important point to drain Heat. For Heat conditions, apply bloodletting.

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P-4 Xi *Cleft Gate* XIMEN

Location

5 cun proximal to the anterior space of the wrist joint (most distal wrist crease), between the tendons of the palmaris longus and flexor carpi radialis muscles.

How to find

Spreading hands technique (→ 2.3.3): Place the little fingers in the centre of the anterior wrist joint space (→ 3.3.3, → **P-7**) and the cubital crease respectively (→ **P-3**). From the midpoint of this distance, measure 1 cun in a distal direction. On this level, locate **P-4** between the two tendons, which become more pronounced when the fingertips are pressed together. If only one tendon is visible, this will be the tendon of the flexor carpi radialis muscle. **P-4** is located on its ulnar aspect.

Needling

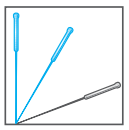
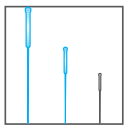
0.5–1 cun vertically or 1–1.5 cun obliquely in a proximal direction.

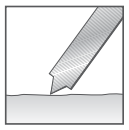
Actions/Indications

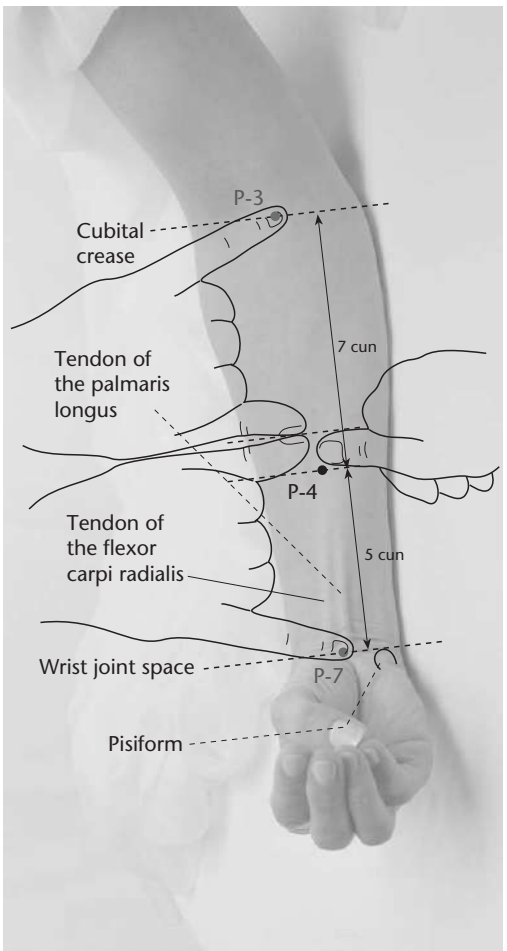
- Tonifies the Blood, dispels Blood stasis
- Calms the *shen*
- Cools the Blood
- Opens the channel

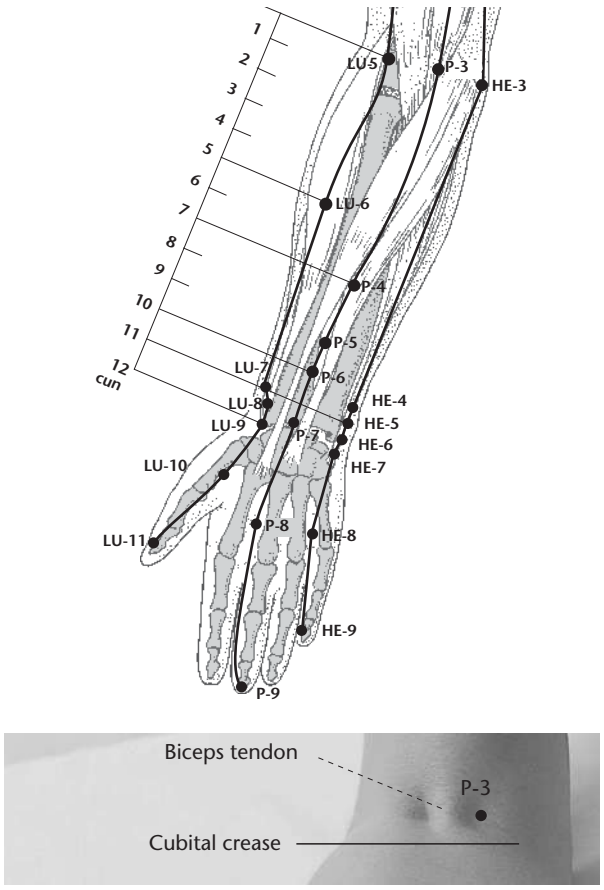
Special features

Xi-cleft point. Major point for acute, painful Blood stasis in the region of the thorax and the Heart







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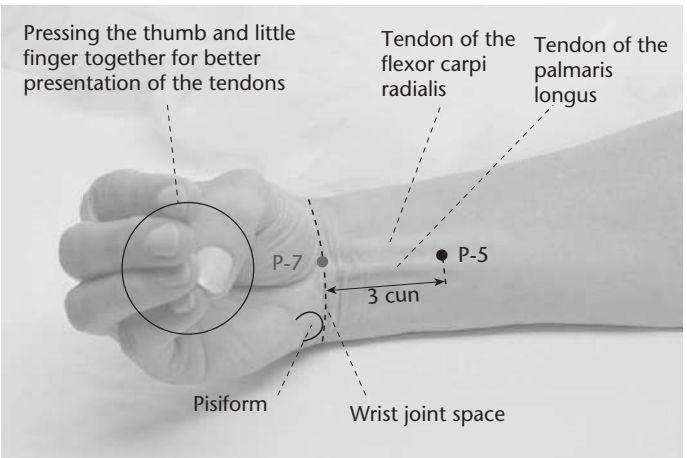
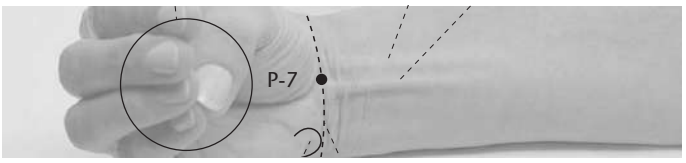
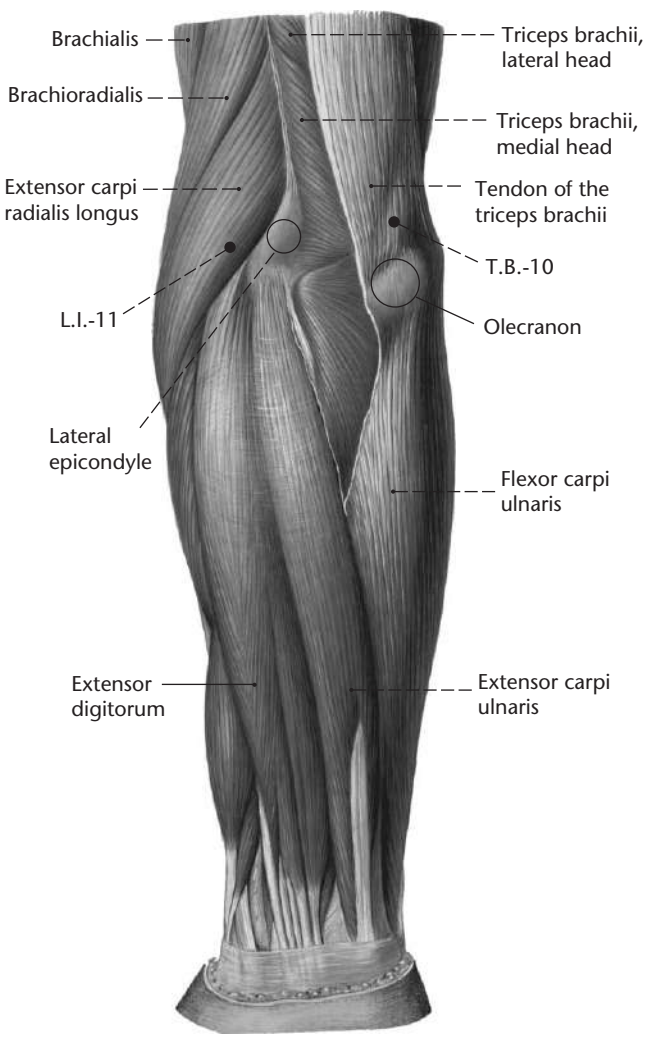
Intermediary Messenger JIANSHI P-5







Location

3 cun proximal to the anterior wrist joint space ('most distal wrist crease'), between the tendons of the palmaris longus and flexor carpi radialis muscles.

How to find

As the location of the wrist crease varies, the wrist joint space is a more reliable reference point (→ 3.3.3). It can easily be palpated by moving the patient's hand in a relaxed way. From the centre of the joint space (→ **P-7**), measure 3 cun in a proximal direction and locate **P-5** between the two tendons, which become more pronounced when the fingertips are pressed together. If only one tendon is visible, this will be the tendon of the flexor carpi radialis muscle. **P-5** is located at its ulnar aspect.

Needling

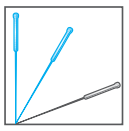
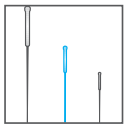
0.5–1 cun vertically or obliquely in a proximal direction. Caution: The median nerve here is only covered by the radial head of the flexor digitorum superficialis. Vertical needling should not exceed 0.5 cun; no strong needle stimulation.

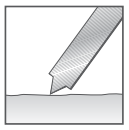
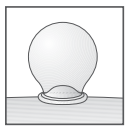
Actions/Indications

- Calms the *shen* and the Heart
- Harmonises the Middle Burner
- Clears Heart Fire
- Unbinds the chest
- Transforms invisible Phlegm

Special features

Jing-river point, Metal point. Important point for transforming Phlegm blocking the orifices.

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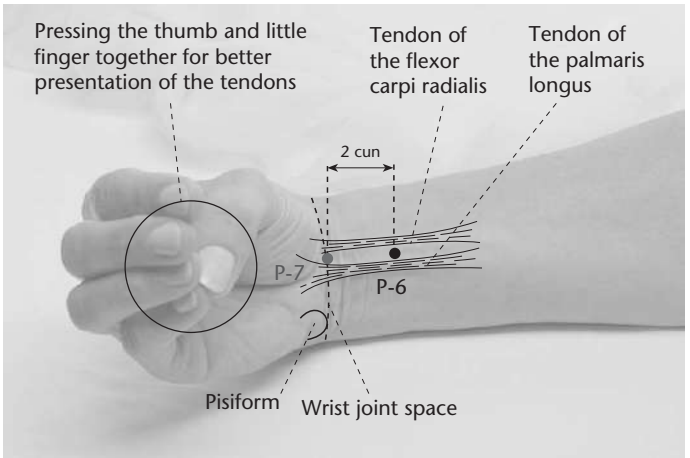
P-6 *Inner Gate* NEIGUAN

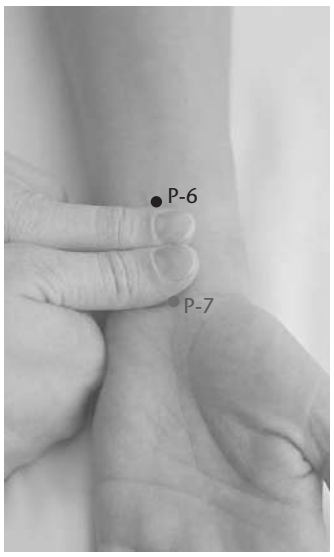
Location

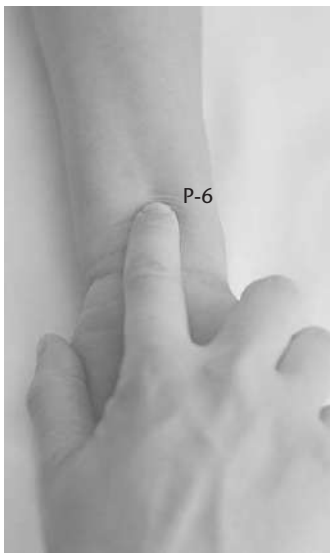
2 cun proximal to the anterior wrist joint space ('most distal wrist crease'), between the tendons of the palmaris longus and flexor carpi radialis muscles.

How to find

As the location of the wrist crease varies, the wrist joint space is a more reliable reference point (→ 3.3.3). It can easily be palpated by moving the patient's hand in a relaxed way. From the centre of the wrist joint space (→ **P-7**), measure 2 cun in a proximal direction and locate **P-6** between the two tendons, which become more pronounced when the fingertips are pressed together. If only one tendon is visible, this will be the tendon of the flexor carpi radialis muscle. **P-6** is located on its ulnar aspect.
Or quick method: From the centre of the wrist joint space, glide in a proximal direction between the two tendons. The skin will begin to form a bulge in front of the sliding finger, which will come to a halt at **P-6.**
→ **T.B.-5** (2 cun proximal to the dorsal wrist joint space) is located opposite **P-6**.

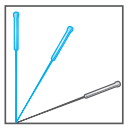


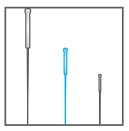




Needling

0.5–1 cun vertically or obliquely in a proximal or lateral direction. Caution: The median nerve is located directly below this point.



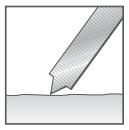


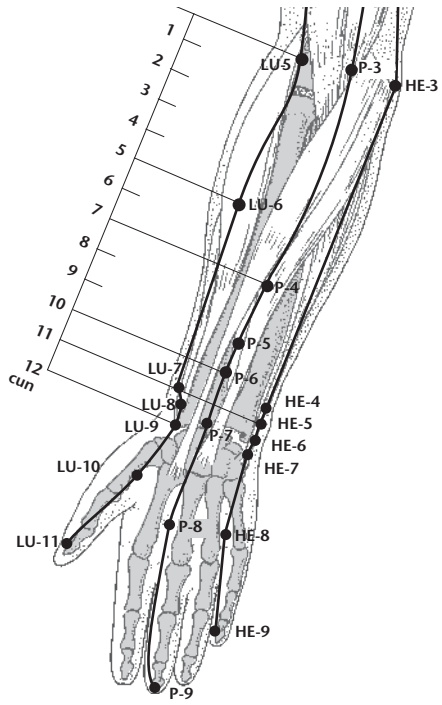
Actions/Indications

- Calms the *shen*
- Unbinds the chest
- Harmonises the Stomach
- Opens the channel

Special features

Luo-connecting point, opening (master) point of the *yin wei mai*, Gao Wu command point for the thorax. Main point for nausea and vomiting. Very important point.





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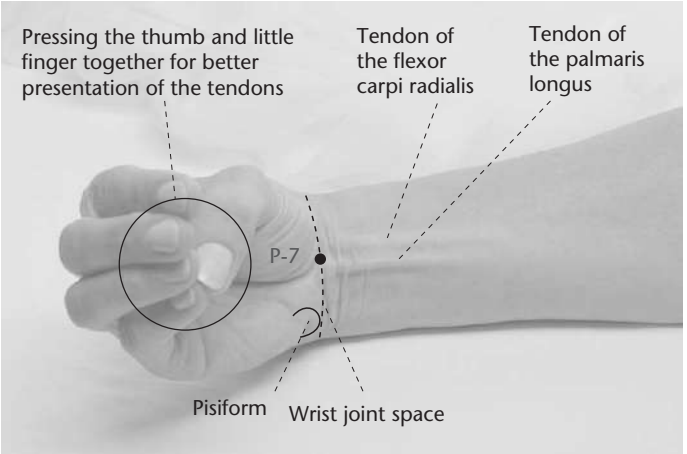
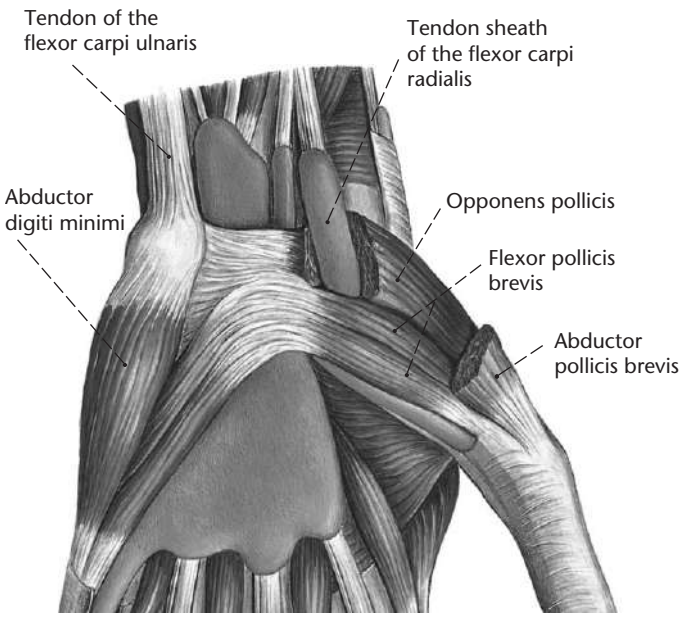
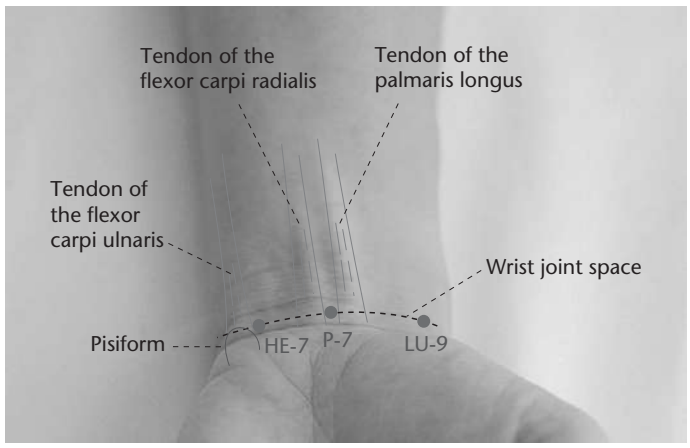
Great Mound DALING P-7







Location

On the anterior aspect of the wrist joint space ('most distal wrist crease'), between the tendons of the palmaris longus and flexor carpi radialis muscles.

How to find

As the location of the wrist crease varies, the wrist joint space is a more reliable reference point (→ 3.3.3). By moving the patient's hand in a relaxed way, it can easily be palpated. Locate **P-7** on this level between the two tendons, which become more pronounced when the fingertips are pressed together. If only one tendon is visible, this will be the tendon of the flexor carpi radialis muscle. **P-7** is located on its ulnar aspect.

Located on the same level are → **HE-7** (on the ulnar aspect of the wrist joint, radial to the tendon of the flexor carpi ulnaris muscle) and → **LU-9** (on the radial aspect of the wrist joint, lateral to the radial artery.

Needling

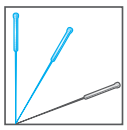
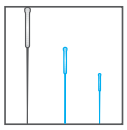
Vertically 0.3–0.5 cun, for carpal tunnel syndrome also 0.5–1 cun obliquely in a lateral direction along the tunnel. Caution: The median nerve is located directly under this point, thus needling can cause a significant electric sensation; in this case, no further needle manipulation to avoid possible injury.

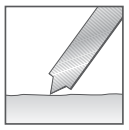
Actions/Indications

- Clears Heat from the Heart, calms the *shen*
- Harmonises the Stomach and Intestines
- Cools Heart Fire affecting the Bladder
- Unbinds the chest
- Cools the Blood
- Opens the channel, alleviates pain

Special features

Yuan-source point, *shu*-stream point, Earth point, sedation point, Sun Si Miao Ghost point. Important point for calming, main point for carpal tunnel syndrome.



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P-8 *Palace of Toil* LAOGONG

Location

In the centre of the palm, between the 2nd and 3rd metacarpal bones, slightly closer to the 3rd metacarpal bone.

How to find

When making a loose fist, the tip of the middle finger will rest on **P-8,** between the 2nd and 3rd metacarpal bones, slightly closer to the 3rd metacarpal bone.

→ **HE-8** is located more radially, between the 4th and 5th metacarpal bones.

Needling

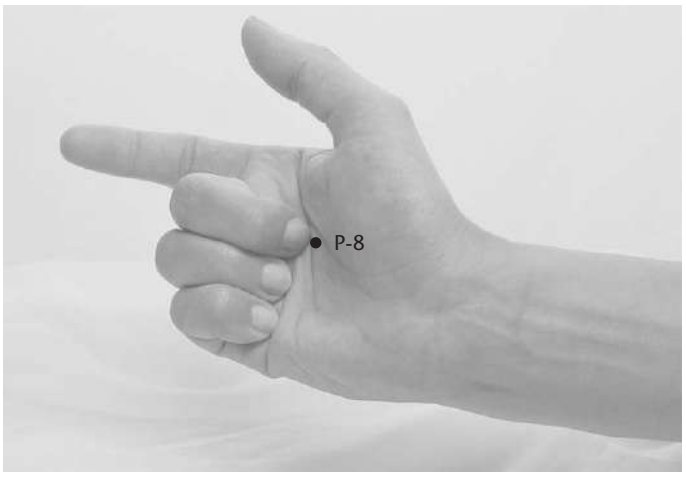
Vertically 0.3–0.5 cun. Thinner needles should be used as needling this point can be painful.

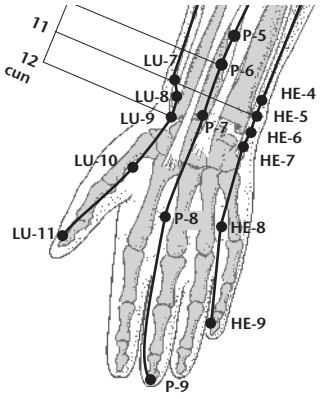
Actions/Indications

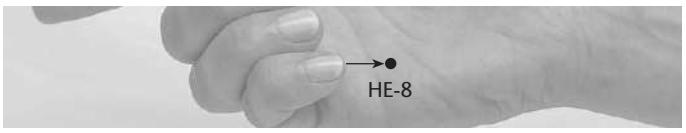
- Clears Heart Fire and calms the *shen*
- Harmonises the Middle Burner
- Clears the *ying*-nutritive level and cools the Blood

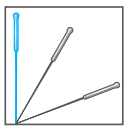
Special features

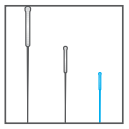
Ying-spring point, Fire point, *ben* point (Five Phases), Sun Si Miao Ghost point, exit point.

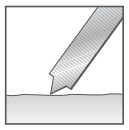












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Middle Rushing ZHONGCHONG P-9

Location
On the most distal point of the middle finger.

How to find
Find the most distal point on the tip of the middle finger and there locate **P-9**.

Needling
Vertically 0.1–0.2 cun or prick to bleed. Caution: Painful point.

Actions/Indications
- Clears Heat, especially from the Heart and Pericardium
- Strengthens collapsed Yang
- Expels internal Wind

Special features
Jing-well point, Wood point, tonification point.

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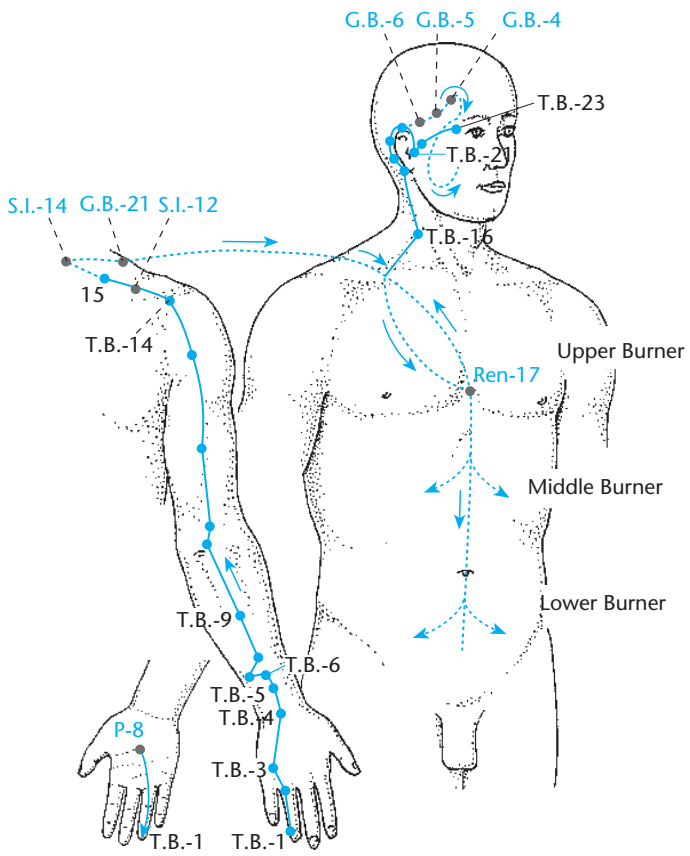
4.10 The Triple Burner Channel System – Hand *shaoyang* (*shou shao yang jing luo*)

4.10.1 Triple Burner Primary Channel (*shou shao yang jing*)



Pathway

The **external pathway** of the Triple Burner primary channel begins on the ring finger, at the ulnar corner of the nail at **T.B.-1** (*guanchong*). **T.B.-1** is reached by a branch of the Pericardium primary channel that separates on the palm of the hand at → **P-8** (*laogong*) (hand Yin–Yang connection of the third great circuit). The channel runs along the ulnar side of the ring finger

- continues between the 4th and 5th metacarpal bones
- travels along the posterior aspect of the forearm between the radius and the ulna towards the lateral aspect of the arm
- passes the olecranon and continues along the upper arm to the shoulder
- traverses the shoulder, intersects with → **S.I.-12** (*bingfeng*) and meets the other Yang primary channels at → **Du-14** (*dazhu*)
- runs to the anterior aspect of the body, crossing → **G.B.-21** (*jianjing*) and → **ST-12** (*quepen*), the latter in the supraclavicular fossa.

At **ST-12,** the channel enters the body to begin its **internal** section. It meets the Pericardium (*xin bao*) at → **Ren-17** (*shanzhong*), penetrates the diaphragm and enters the abdomen, connecting with the Upper, Middle and Lower Burners.

From the Lower Burner, an **internal branch** (according to some authors, the T.B. channel) descends to the popliteal fossa to → **BL-39** (*weiyang*), the lower *he*-sea point of the Triple Burner.

A further **inner branch** originates in the thorax at → **Ren-17** (*shanzhong*), emerges at the supraclavicular fossa and ascends to the posterior border of the sternocleidomastoid muscle to **T.B.-16**, follows via **T.B.-17, T.B.-18, T.B.-19** the temporal bone along its border behind the ear and reaches **T.B.-20** (*jiasun*) above the apex of the ear. It crosses the Gall Bladder primary channel at **G.B.-6** (*xuanli*), **G.B.-5** (*xuanlu*) and **G.B.-4** (*hanyan*), according to Deadman et al 1998) also at **G.B.-11** (*touqiaoyin*) and **G.B.-14** (*yangbai*), descends the cheek to the lower jaw and ascends again to intersect with → **S.I.-18** (*quanliao*) on the lower border of the zygomatic arch and continues to the infraorbital region.

From **T.B.-17** (*yifeng*), a branch penetrates the ear, emerges to the **Exterior** anterior to the tragus, intersects with → **S.I.-19** (*tinggong*), continues past **T.B.-21** (*ermen*) and **T.B.-22** (*erheliao*), meets → **G.B.-3** (*shangguan*), crosses its own cheek branch and ends at **T.B.-23** (*sizhukong*) on the frontozygomatic suture. From **T.B.-23**, or, according to some authors from **T.B.-22**, a small branch runs to → **G.B.-1** (*tongziliao*) at the lateral canthus of the eye (Yang axes of the third great circuit: *shao yang*).

Clinical importance (→ 1.2)

Exterior (***biao***) signs and symptoms: Neck pain, cheek pain, red and painful eyes, deafness, pain behind the ears, pain on the posterior aspect of the shoulder and the upper arm

Interior (***li***) or *zangfu*-Organ signs and symptoms: Abdominal fullness and distension, difficult urination, skin oedema and skin swellings, enuresis

Connections of the Triple Burner primary channel (→ 1.2)

Connections with other channels

Pericardium primary channel (*shou jue yin jing*)

Connection: Hand Yin–Yang pairing of the third great circuit
Location: P-8 → T.B.-1 (on the hand).
Circulation: Circadian (according to the Organ clock)
Importance: Exterior–Interior relationship

Gall Bladder primary channel (*zu shao yang jing*)

Connection: Paired according to the six-channel theory (hand–foot pairing): *shao yang* (Yang axes of the third great circuit)
Location: T.B.-23 (or **T.B.-22**) → **G.B.-1** (on the head).
Circulation: Circadian (according to the Organ clock)
Importance: Above–below relationship

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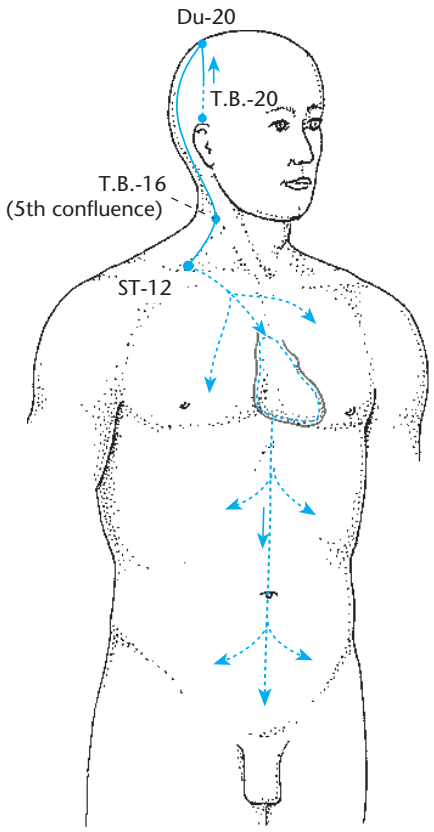
Connections with *zangfu*-Organ systems
Pericardium (*xin bao*), Triple Burner (*san jiao*)



4.10.2 The Triple Burner Divergent Channel (*shou shao yang jing bie*)

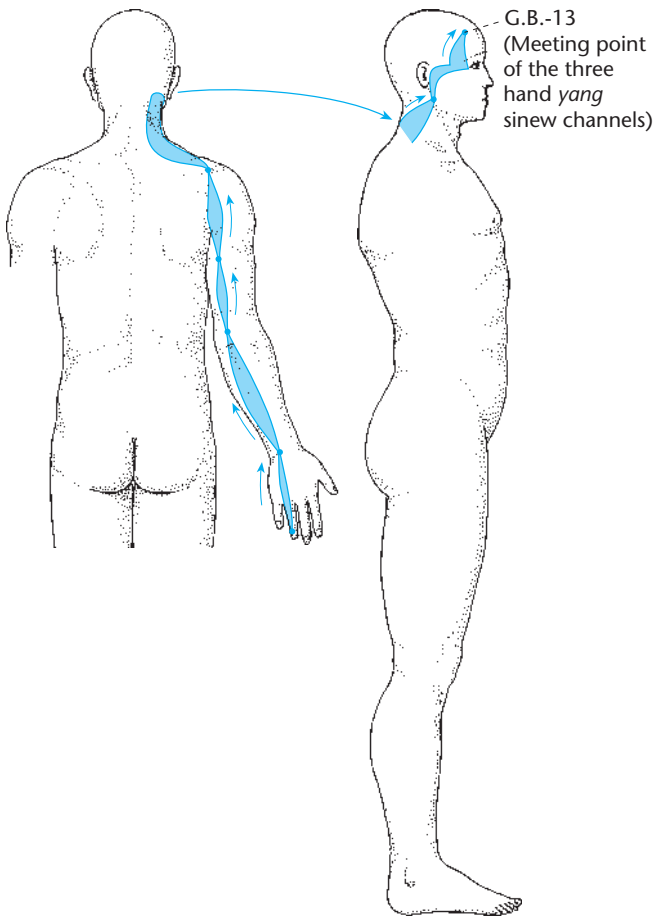
Pathway

The Triple Burner divergent channel separates from the Triple Burner primary channel near **T.B.-20** (*jioasun*)

- ➡ ascends to → **Du-20** (*baihui*)
- ➡ descends along the posterior aspect of the ear to the neck to **T.B.-16** (*tianyou*) on the posterior border of the sternocleidomastoid muscle, where it connects with the Triple Burner primary channel and the Pericardium primary channel to form one of the six *he*-confluences (here: P/T.B. as fifth confluence → 1.3)
- ➡ The Triple Burner divergent channel further descends to → **ST-12** (*quepen*) in the supraclavicular fossa, penetrates the thorax, disperses in the Pericardium (*xin bao*) and reaches the Upper, Middle and Lower Burners.

Clinical importance

- Strengthens the relationship between the Upper, Middle and Lower Burners. T.B. points can be used for disorders affecting these areas and Organs.
- The Triple Burner divergent channel reaches the vertex at → **Du-20**. Therefore, T.B. points can be used for headaches, dizziness, etc, but also to raise the Yang Qi for prolapse, etc.
- The Triple Burner divergent channel spreads in the thorax, so that T.B. points can be used to support the treatment of thoracic problems such as pain, coughing etc.



4.10.3 The Triple Burner Sinew Channel (*shou shao yang jing jin*)

Pathway

The Triple Burner sinew channel begins on the ring finger, at the ulnar corner of the nail at **T.B.-1** (*guanchong*)

- ➡ travels between the 4th and 5th metacarpal bones to the wrist
- ➡ binds (*jie*) at **T.B.-4** (*yangchi*)
- ➡ continues along the posterior aspect of the forearm between the Small Intestine and Large Intestine sinew channels, binds (*jie*) at the olecranon, ascends the posterior aspect of the upper arm to bind (*jie*) at the posterior corner of the acromion, traverses the posterior aspect of the shoulder and the lateral aspect of the occiput and there meets the Small Intestine sinew channel. It then reaches the mandibular angle, where it divides into **two branches**:
- ➡ **One branch** enters internally and penetrates the root of the tongue

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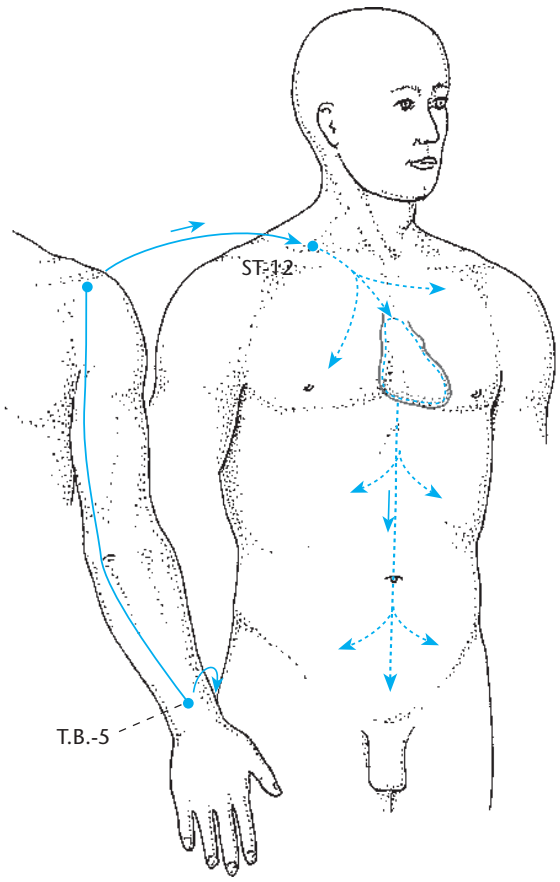
- **The other branch** ascends in front of the ear, binds (*jie*) at the outer canthus of the eye, crosses the temple and terminates at → **G.B.-13** (*benshen*) in the frontoparietal region. There, it also meets the other hand Yang sinew channels.

Clinical importance

Pathology: Stiffness, swellings and distending sensations along the course of the sinew channel. Curling or contraction of the tongue.

Indication: Predominantly for pain, stiffness, spasms, tension and distending sensations along the course of the channel, including the lateral aspects of the head and the body as well as the lateral sections of the extremities. T.B. points can also be used for muscle tension caused by emotional disorders. Owing to the connection of the sinew channel with the tongue, some T.B. points are also indicated for motor disorders of the tongue.



4.10.4 The Triple Burner *luo*-Connecting Vessel System (*shou shao yang luo mai*)

Pathway

The Triple Burner *luo*-connecting vessel system separates from the Triple Burner primary channel at its associated *luo*-connecting point **T.B.-5** (*waiguan*) (→ 8.1.2). It forms a three-dimensional reticulate network, dividing into multiple branches and sub-branches (*sun luo, fu luo, xue luo* → 1.5) within the surrounding tissue.

- Horizontal divisions run to the Interiorly–Exteriorly paired Pericardium primary channel; according to some schools of thought (for example Ngyen Van Nghi → Appendix), they travel as a **transverse** Triple Burner *luo*-connecting vessel to the *yuan*-source point **P-7** (*daling*).
- **A longitudinal division** follows the posterior aspect of the arm, crosses the posterior shoulder region, continues to the front of the body and, according to some authors (for example, Solinas et al 1998), reaches → **ST-12** (*quepen*) in the supraclavicular fossa, penetrates the thorax and reaches the Pericardium primary channel, both dispersing in the Upper, Middle and Lower Burners.

Clinical importance

Pathology

Excess (*shi*): Tension of the elbow joint

Deficiency (*xu*): Muscle weakness in the arm, difficulty flexing the elbow

4.10.5 Cutaneous Region (*shao yang pi bu*)

See description and figures → 1.6.

4.10.6 Points of the Triple Burner Primary Channel (Overview)

Specific points according to their function

- ***Yuan*-source point (→ 8.1.1): T.B.-4** (*yangchi*)
- ***Luo*-connecting point (→ 8.1.2.): T.B.-5** (*waiguan*) ■■
- ***Xi*-cleft point (→ 8.1.3): T.B.-7** (*huizong*)
- **Associated Back-*shu* point (→ 8.1.4): BL-22** (*sanjiaoshu*)
- **Associated Front-*mu* point (→ 8.1.5): Ren-5** (*shimen*)
- **Five *shu*-transporting points (→ 8.1.6):**
  jing-well point (Metal): **T.B.-1** (*guanchong*)
  ying-spring point (Water): **T.B.-2** (*yemen*)
  shu-stream point (Wood), tonification point: **T.B.-3** (*zhongzhu*)
  jing-river point (Fire), *ben point* (Five Phases): **T.B.-6** (*zhigou*)
  he-sea point (Earth), sedation point: **T.B.-10** (*tianjing*)
- ***Hui*-meeting point (→ 8.1.7): –**
- **Opening point (→ 8.1.8) of the *yin wei mai*: T.B.-5** (*waiguan*) ■■
- **Lower *xiahe-s*ea points (→ 8.1.9): –**
- ***Jiaohui*-meeting points (→ 8.1.10):**
  – with the *yang wei mai* and the G.B. channel: **T.B.-13*** (*naohui*)
  – with the *yang wei mai* and the G.B. channel: **T.B.-15** (*tianliao*) ■■
  – with the G.B. channel: **T.B.-17** (*yifeng*) ■■
  – with the S.I.* and G.B. channel: **T.B.-20** (*jiaosun*)
  – with the S.I. and G.B. channels: **T.B.-22** (*erheliao*)

* Mentioned by only some authors

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– of other channels with the T.B. channel: **S.I.-12, BL-11, (S.I.-18, S.I.-19*), Du-14, Ren-12, Ren-17, ST-12, G.B.-21, G.B.-14, G.B.-11, G.B.-6, G.B.-5, G.B.-4, G.B.-3, G.B.-1, (S.I.-9*)**

- **Gao Wu command point (→ 8.1.11): –**
- **Window of Heaven point (→ 8.1.12): T.B.-16** (*tianyou*)
- **Points of the Four Seas (→ 8.1.13): –**
- **Ma Dan Yang Heavenly Star point (→ 8.1.14): –**
- **Sun Si Miao Ghost point (→ 8.1.15): –**
- **Other functional points: –**

Points according to region

- **Local points (→ 8.2.1):** ears – **T.B.-21** (*ermen*) ■■; shoulder – **T.B.-14** (*jianliao*) ■■, **T.B.-15** (*tianliao*) ■■
- **Adjacent points (→ 8.2.1):** temporal aspect of the head – **T.B.-17** (*yifeng*) ■■; eyes – **T.B.-23** (*sizhukong*) ■■; ears – **T.B.-17** (*yifeng*) ■■; jaw – **T.B.-17** (*yifeng*) ■■; shoulder – **T.B.-13** (*naohui*), **T.B.-15** (*tianliao*) ■■
- **Distal points (→ 8.2.1):** temporal aspect of the head – **T.B.-3** (*zhongzhu*) ■■, **T.B.-5** (*waiguan*) ■■; ears – especially **T.B.-3** (*zhongzhu*), **T.B.-5** (*waiguan*) ■■; hypochondrium – **T.B.-5** (*waiguan*) ■■, **T.B.-6** (*zhigou*); cervical spine – **T.B.-8** (*sanyangluo*); cervical spine and shoulder – **T.B.-5** (*waiguan*) ■■; shoulder – **T.B.-1** (*guanchong*)

Specific points according to the channel pathway (in numeric order)

- **T.B.-1** (*guanchong*): *jing*-well point (Metal) (→ 8.1.6); distal point for the shoulder (→ 8.2.1)
- **T.B.-2** (*yemen*): *ying*-spring point (Water) (→ 8.1.6)
- **T.B.-3** (*zhongzhu*): *shu*-stream point (Wood) (→ 8.1.6); tonification point; distal point for the temporal region and the ears (→ 8.2.1); local point for the fingers (numbness and pain) (→ 8.2.1)
- **T.B.-4** (*yangchi*): *yuan*-source point (→ 8.1.1); local point for the hand (→ 8.2.1)
- **T.B.-5** (*waiguan*) ■■: *luo*-connecting point (→ 8.1.2); Opening point (→ 8.1.8) of the *yang wei mai*; distal point for the temporal region, the ears, the cervical spine, the shoulder, the elbow and the hypochondrium (→ 8.2.1); regional point for the hand and fingers (→ 8.2.1)
- **T.B.-6** (*zhigou*): *jing*-river point (Fire) (→ 8.1.6); *ben* point (Five Phases); distal point for the hypochondrium (→ 8.2.1)
- **T.B.-7** (*huizong*): *xi*-cleft point (→ 8.1.3)
- **T.B.-8** (*sanyangliao*): distal point for the cervical spine (→ 8.2.1)
- **T.B.-10** (*tianjing*): *he*-sea point (Earth) (→ 8.1.6); sedation point; local point for the elbow (→ 8.2.1)
- **T.B.-13** (*naohui*): *jiaohui*-meeting point (→ 8.1.10) of the *yang wei mai** and the G.B. channel*; adjacent point for the shoulder (→ 8.2.1)
- **T.B.-14** (*jianliao*) ■■: local point for the shoulder (→ 8.2.1)
- **T.B.-15** (*tianliao*) ■■: *jiaohui*-meeting point of the *yang wei mai* and the G.B. channel; local point for the shoulder (→ 8.2.1)
- **T.B.-16** (*tianyou*): Window of Heaven point (→ 8.1.12)
- **T.B.-17** (*yifeng*) ■■: *jiaohui*-meeting point of the G.B. channel; adjacent point for the temporal region, the ears and the jaw (→ 8.2.1)
- **T.B.-20** (*jiaosun*): *jiaohui*-meeting point of the S.I.* and G.B. channels
- **T.B.-21** (*ermen*) ■■: local point for the ears (→ 8.2.1)
- **T.B.-22** (*erheliao*): *jiaohui*-meeting point with the S.I. and G.B. channels
- **T.B.-23** (*sizhukong*) ■■: adjacent point for the eyes (→ 8.2.1)

*Mentioned only by some authors

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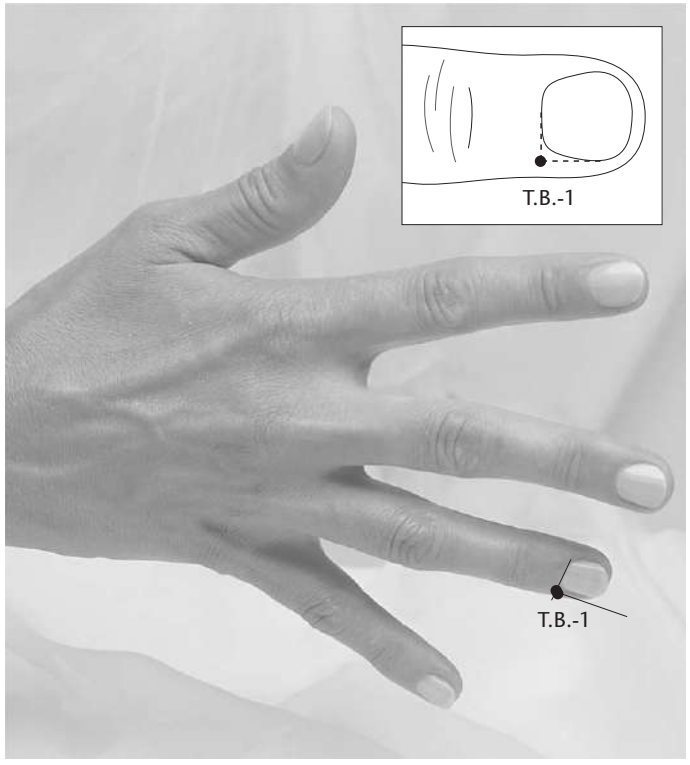
Rushing Pass GUANCHONG T.B.-1



Location

On the ring finger, 0.1 cun from the ulnar corner of the nail.

How to find

This point is located at the junction of two tangents bordering the ulnar and proximal margins of the nail, approximately 0.1 cun from the corner of the actual nail.

Needling

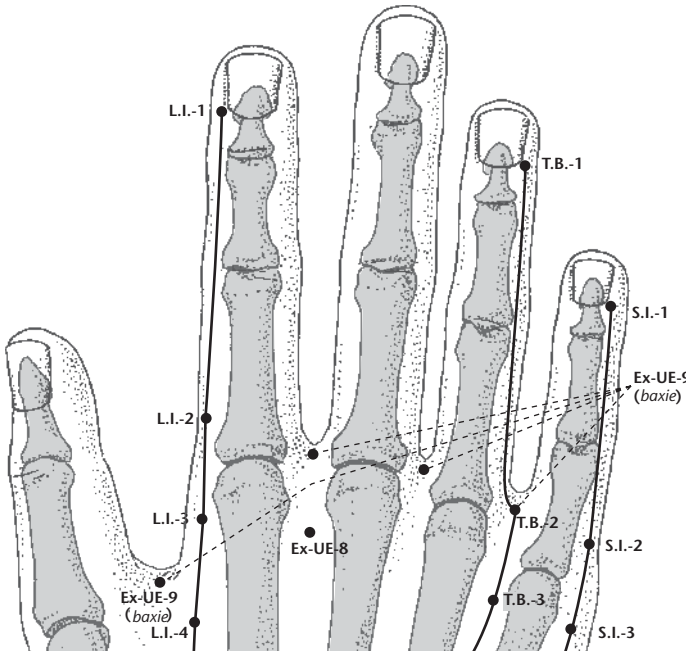
Approximately 0.2 cun vertically or obliquely in a proximal direction or prick to bleed. Caution: Avoid needling too close to the nail; painful point.

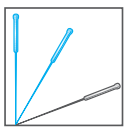
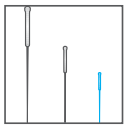
Actions/Indications

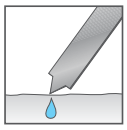
- Clears Heat from the Upper Burner
- Benefits the ears and tongue
- Opens the channel and alleviates pain

Special features

Jing-well point, Metal point, entry point. Especially indicated for acute disorders.





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T.B.-2 *Fluid Gate* YEMEN

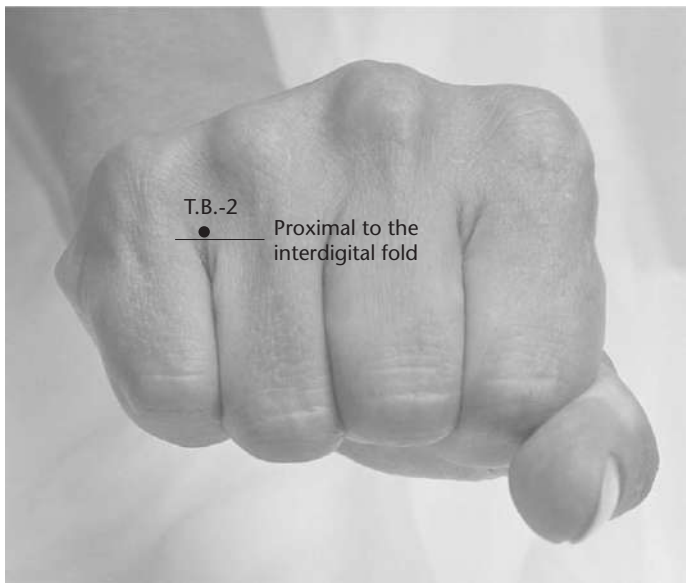
Location
Between the little finger and ring finger, proximal to the margin of the web.

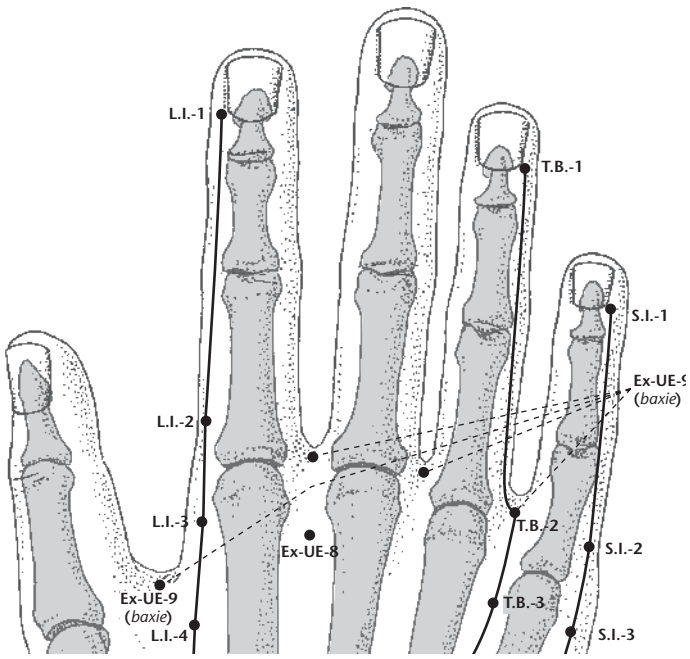
How to find
This point is best located when making a loose fist. Locate the web between the little finger and ring finger (4th and 5th fingers) and locate **T.B.-2** proximal to its margin. **T.B.-2** is part of → **Ex-UE-9** (*baxie*: proximal to the webs between the fingers). Located in a comparable position on the foot is → **G.B.-43** (on the web between the 4th and 5th toes), which is also part of → **Ex-LE-10** (*bafeng*).

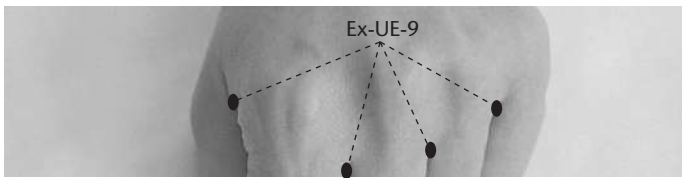
Needling
Vertically up to 0.5 cun

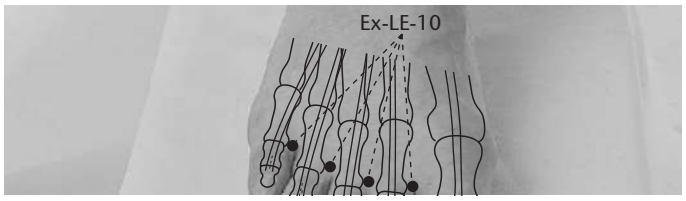
Actions/Indications
- Clears Heat from the Upper Burner
- Benefits the ears and calms the *shen*
- Opens the channel and alleviates pain

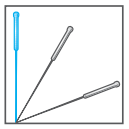
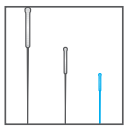
Special features
Ying-spring point, Water point. Especially indicated for psychoneurological disorders caused by Heat and local channel problems.

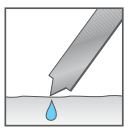










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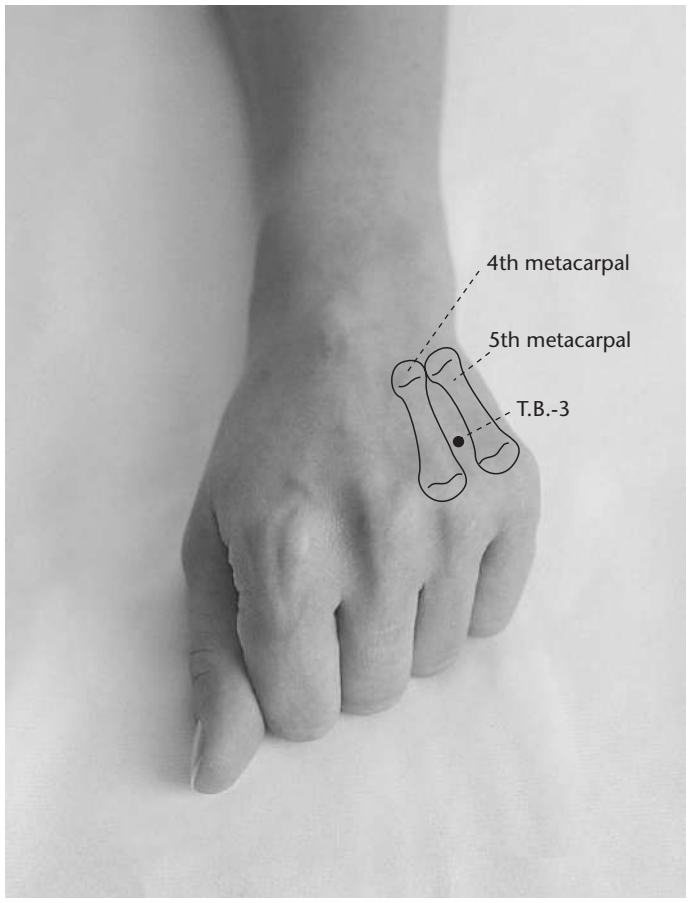
Central Islet ZHONGZHU T.B.-3



Location

On the dorsum of the hand, in a depression between the 4th and 5th metacarpal bones, proximal to the metacarpophalangeal joints. **T.B.-3** is located at the junction between the heads and shafts of the two metacarpal bones.

How to find

The hand should be relaxed or a loose fist should be made. Palpate from the metacarpophalangeal joints along the groove between the 4th and 5th metacarpal bones towards proximal. **T.B.-3** is located at the widest/deepest point of the groove, slightly distal to the carpometacarpal joints.
Located in comparable positions are → **Ex-UE-8** (*wailaogong*: between the 2nd and 3rd metacarpal bones), → **S.I.-3** (on the ulnar aspect of the 5th metacarpal bone) and → **L.I.-3** (on the radial aspect of the 2nd metacarpal bone).

Needling

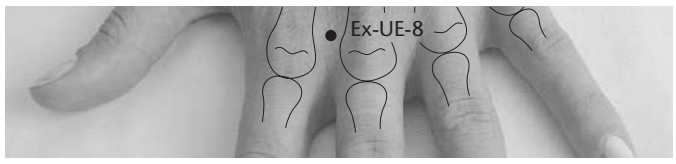
0.5–1 cun vertically or obliquely in a proximal direction.

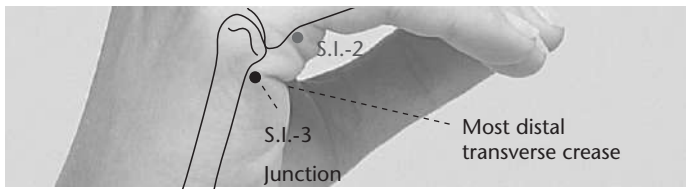
Actions/Indications

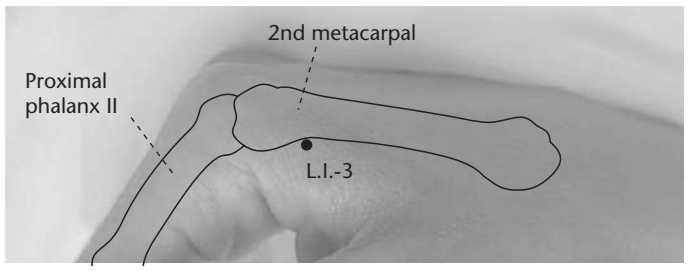
- Benefits the ears, clears Heat (and drains Fire), clears the head and the eyes
- Opens the channel and *luo*-connecting vessels, alleviates pain

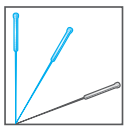
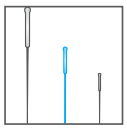
Special features

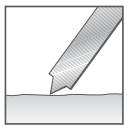
Shu-stream point, Wood point, tonification point. One of the most important distal points for any disorder of the ears.









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T.B.-4 *Yang Pool* YANGCHI

Location

On the dorsum of the wrist (above the wrist joint space, 'dorsal wrist crease'), in the gap between the tendons of the extensor digitorum (on the ulnar aspect) and the extensor digiti minimi muscles (on the radial aspect).

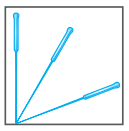
How to find

As the location of the dorsal wrist crease varies, the wrist joint space should be used for orientation instead (→ 3.3.3). By moving the patient's wrist in a relaxed way, the joint space becomes well defined. **T.B.-4** is located slightly laterally to the midpoint of the joint space, in the depression between the tendons of the extensor digiti minimi muscle (continuing to the little finger) on its radial aspect and the tendon of the extensor digitorum muscle on its ulnar aspect. The tendons of the extensor digitorum muscle will become more pronounced by moving the three middle fingers.

Located on the same level but radial to the tendons of the extensor digitorum muscle is → **Ex-UE-3** (*zhongquan*).

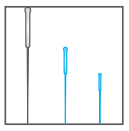
Needling

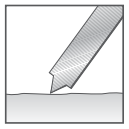
0.3–0.5 cun vertically or slightly obliquely in a proximal direction or transversely (subcutaneously) deep to the tendons towards the radial aspect of the wrist.



Actions/Indications

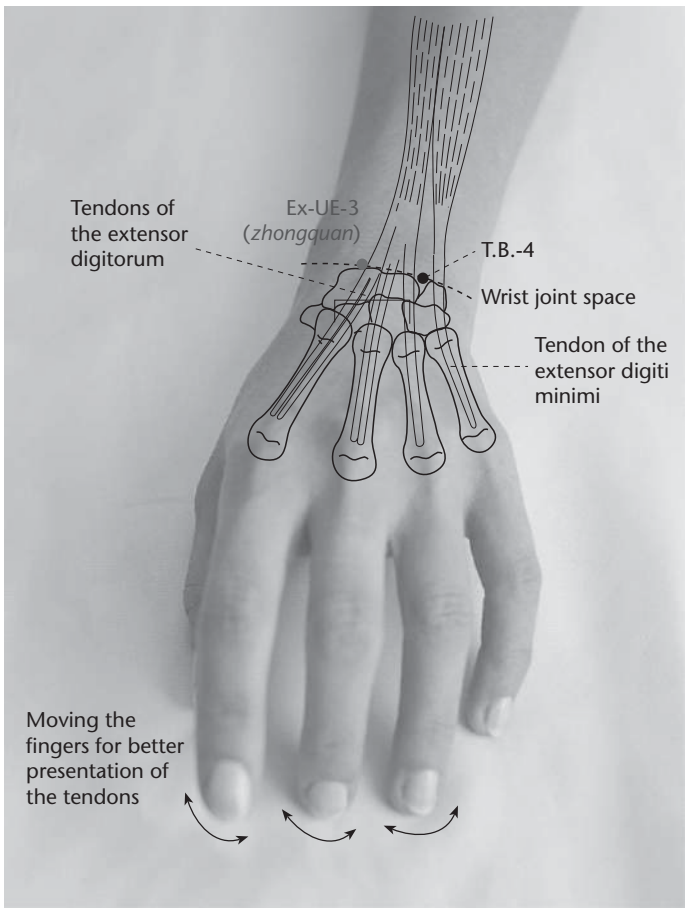
- Clears Heat, opens the channel, relaxes the tendons. In Japanese acupuncture tradition, **T.B.-4**, in its function as *yuan*-source point, is used for deficiency syndromes.

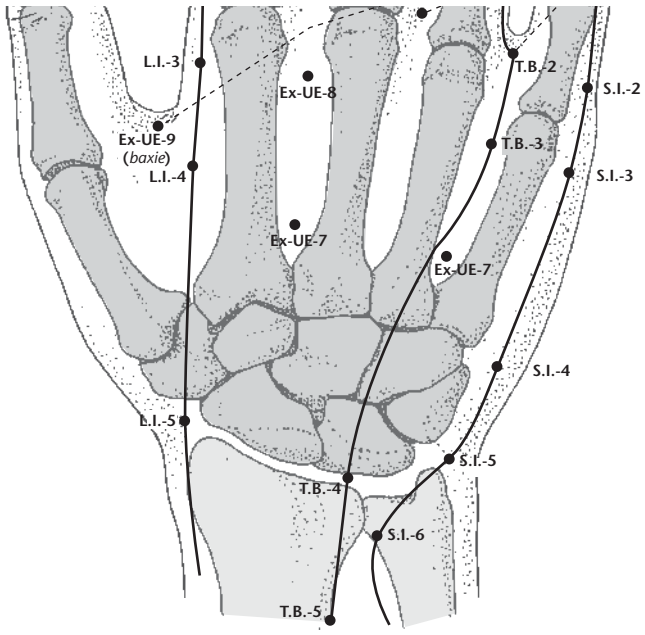


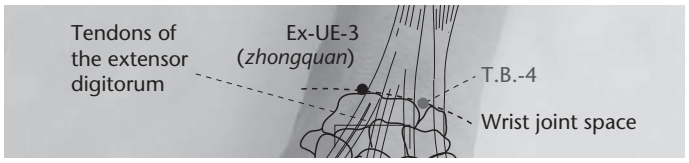


Special features

Yuan-source point







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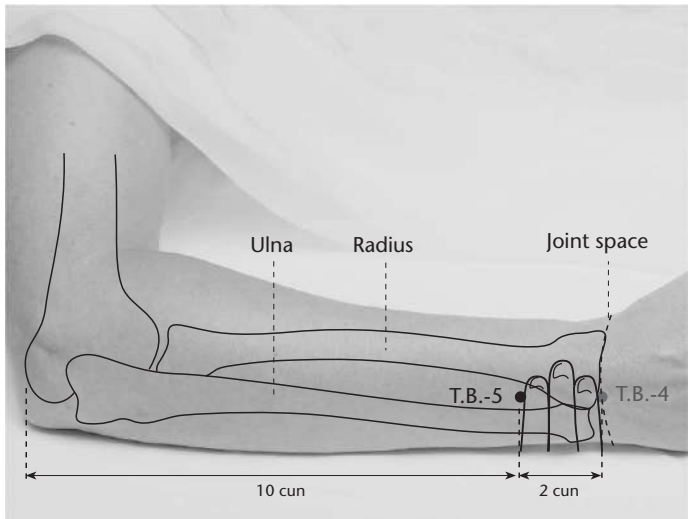
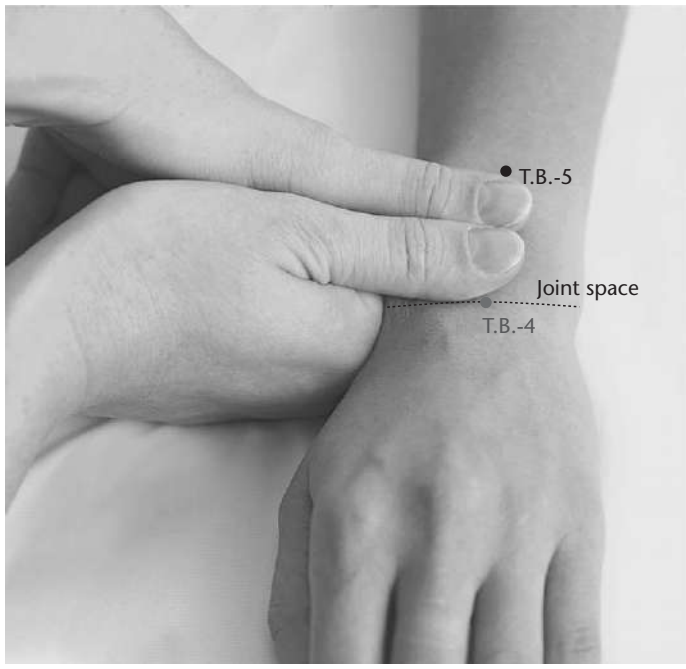
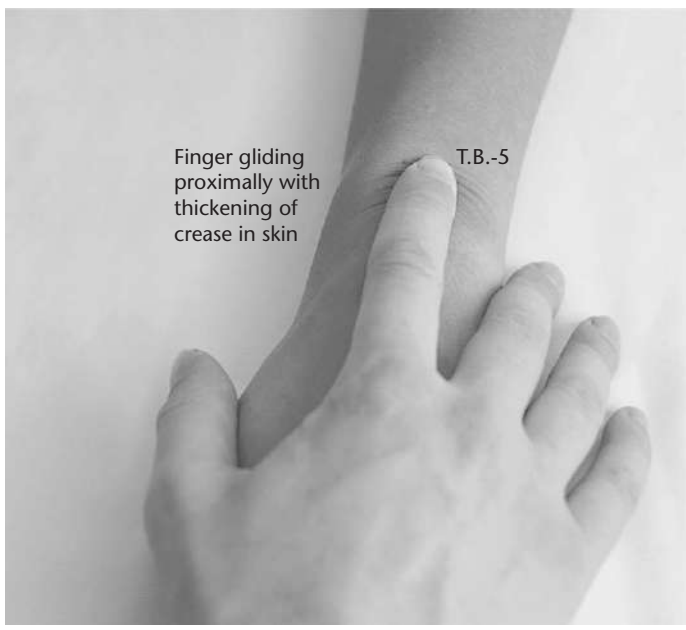
Outer Pass WAIGUAN T.B.-5







Location

2 cun proximal to the dorsal wrist joint space ('dorsal wrist crease'), between the radius and the ulna.

How to find

As the location of the dorsal wrist crease varies, the wrist joint space should be used for orientation instead (→ 3.3.3). By moving the patient's wrist in a relaxed way, the joint space becomes more easily palpable. **T.B.-5** is located 2 cun proximal to the midpoint of the joint space, in the depression midway between the radius and the ulna. **Or quick method:** With the palpating finger, slide with slight pressure from the dorsal aspect of the wrist joint in a proximal direction between the radius and the ulna, until the finger is brought to rest at **T.B.-5** by the increasing skin bulge building up in front of it.

→ **P-6** is located opposite **T.B.-5,** on the anterior aspect of the forearm.

Needling

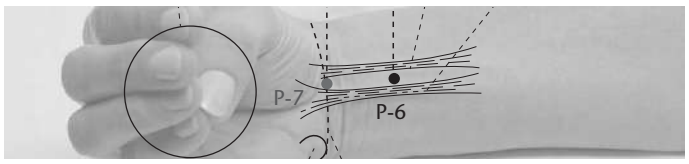
Vertically or obliquely 0.5–1.5 cun. Caution: Movement of the hand/arm during needle retention may cause bending of the needle.

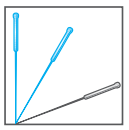
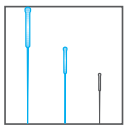
Actions/Indications

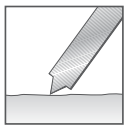
- Expels Wind and benefits the head and ears, clears Heat, opens and regulates the *yang wei mai*
- Opens the channel and alleviates pain

Special features

Luo-connecting point, opening (master) point of the *yang wei mai*. Major point for expelling Wind-Heat, analgesic point for the upper extremity.





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T.B.-6 *Branching Ditch* ZHIGOU

Location

3 cun proximal to the dorsal wrist joint space ('dorsal wrist crease'), in a depression between the radius and the ulna, radial to the tendon of the extensor digitorum communis muscle.

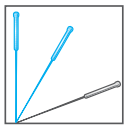
How to find

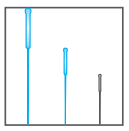
As the location of the dorsal wrist crease varies, the wrist joint space should be used for orientation instead (→ 3.3.3). By moving the patient's wrist in a relaxed way, the joint space becomes more easily palpable. From the joint space, measure 3 cun in a proximal direction. At this point, the extensor digitorum communis muscle will often lie midway between the ulna and the radius. **T.B.-6** is located in a depression close to the border of the radius, on the radial side of the muscle.

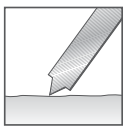
Located on the same level is → **T.B.-7,** in a depression between the ulna and the extensor digitorum communis muscle. → **P-5** is also located on this level, but on the anterior aspect of the forearm.

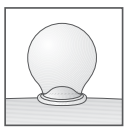
Needling

0.5–1.5 cun slightly obliquely towards the ulna or obliquely in a proximal (elbow) or distal (wrist) direction. Or through-needling to **P-5** (*jianshi*). Caution: Movement of the hand/arm during needle retention may cause bending of the needle.







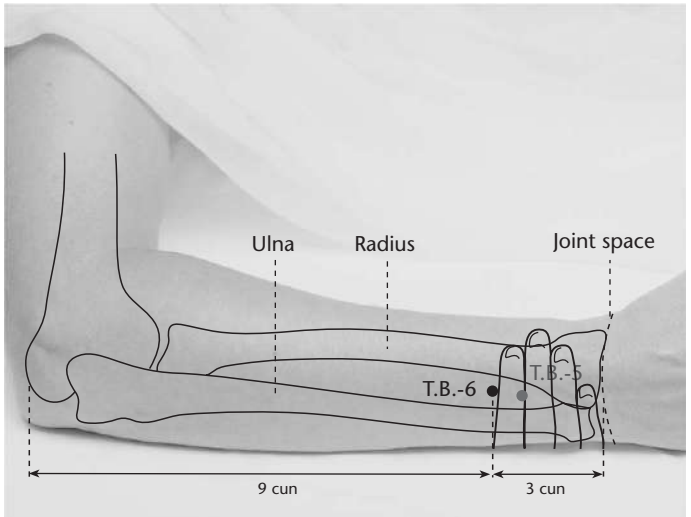


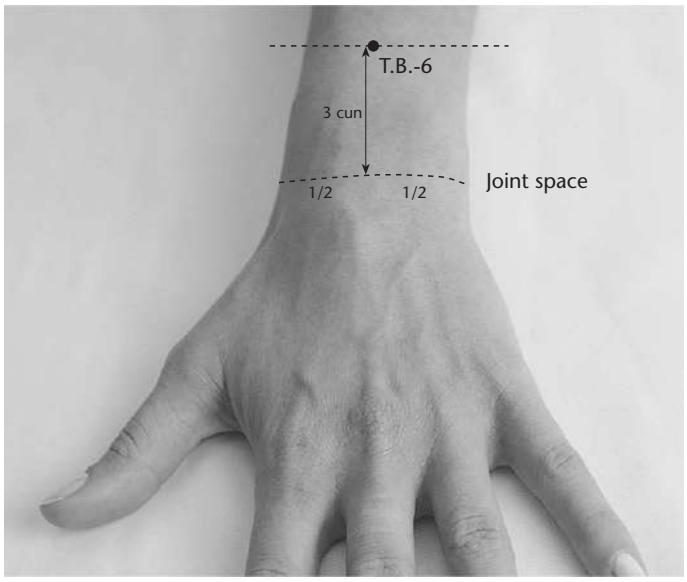
Actions/Indications

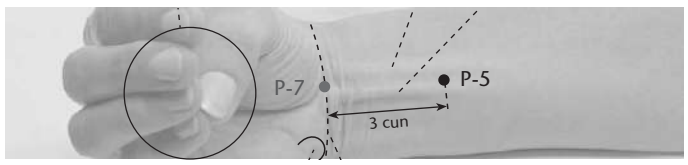
- Regulates the Qi, clears Heat in the Triple Burner, benefits the lateral costal region, promotes bowel movements
- Benefits the voice
- Opens the channel

Special features

Jing-river point, Fire point, *ben* point (Five Phases).







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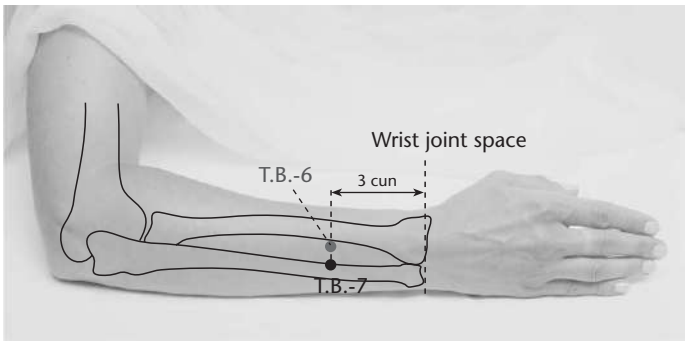
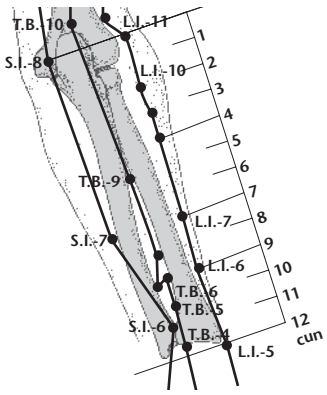
Ancestral Meeting HUIZONG T.B.-7





Location

3 cun proximal to the dorsal wrist joint space ('dorsal wrist crease') and 0.5 cun ulnar to the centre of the forearm.

How to find

As the location of the dorsal wrist crease varies, the wrist joint space should be used for orientation instead (→ 3.3.3). By moving the patient's wrist in a relaxed way, the joint space becomes more easily palpable. From the joint space, measure 3 cun in a proximal direction and locate **T.B.-7** in a depression between the ulna and the extensor digitorum communis muscle. **Or:** Spreading hands technique (→ 2.3.3): Place the little fingers on the elbow crease and the wrist joint space respectively (this distance corresponds to 12 cun). Divide this distance into quarters and locate **T.B.-7** one quarter of the distance from the wrist joint and 0.5 cun ulnar to the centre of the forearm (where → **T.B.-6** is located) on the border of the ulna.

Located on the same level is → **T.B.-6** (0.5 cun towards the radius).

Needling

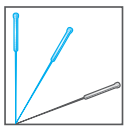
Vertically or obliquely up to 1.5 cun

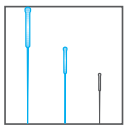
Actions/Indications

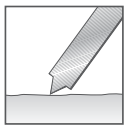
- Opens the channel and alleviates pain
- Benefits the ears

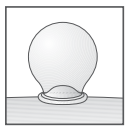
Special features

Xi-cleft point









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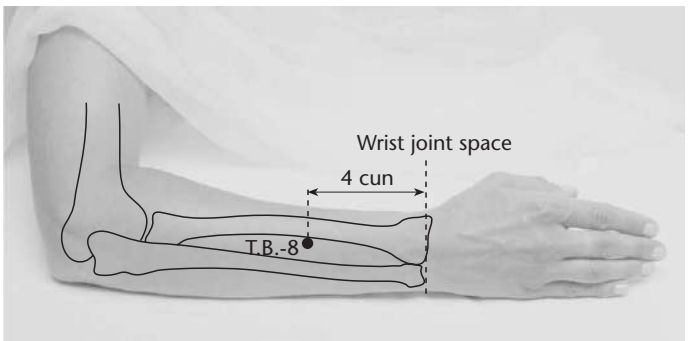
T.B.-8 *Three Yang Connection* SANYANGLUO

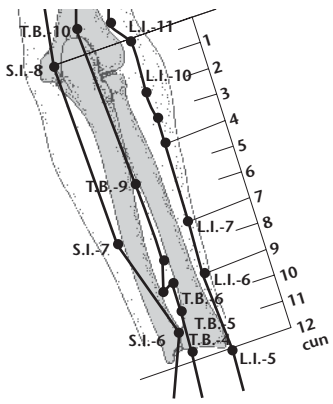
Location

4 cun proximal to the dorsal wrist joint space ('dorsal wrist crease'), between the radius and the ulna, radial to the tendon of the extensor digitorum communis muscle.



How to find

As the location of the dorsal wrist crease varies, the wrist joint space should be used for orientation instead (→ 3.3.3). By moving the patient's wrist in a relaxed way, the joint space becomes more easily palpable. From the joint space, measure 4 cun in a proximal direction and locate **T.B.-8** in a depression between the ulna and radial to the extensor digitorum communis muscle. **Or:** Spreading hands technique (→ 2.3.3): Divide the distance between the elbow crease and the wrist joint space (=12 cun) into thirds and locate **T.B.-8** one third of the distance from the wrist joint between the radius and the ulna.

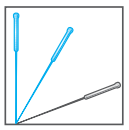


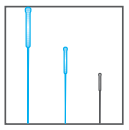
Needling

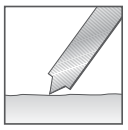
Vertically or obliquely up to 1.5 cun

Actions/Indications

- Benefits the ears and the voice
- Opens the channel and the *luo*-connecting vessels, alleviates pain







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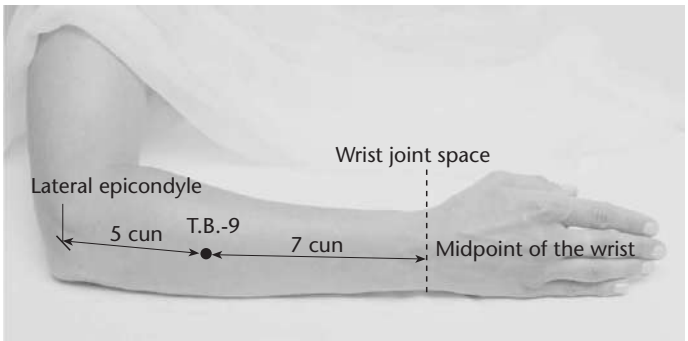
Four Rivers SIDU T.B.-9



Location

7 cun proximal to the dorsal wrist joint space ('dorsal wrist crease'), between the radius and the ulna.

How to find

From the wrist joint space (→ 3.3.3, more accurate reference point than the variable dorsal wrist crease), measure 7 cun in a proximal direction and locate **T.B.-9** in a depression between the extensor digitorum communis muscle and the extensor carpi ulnaris muscle. Alternatively, measure 5 cun distally from the lateral epicondyle of the humerus. **T.B.-9** is located on a line connecting the midpoint of the dorsal wrist joint space and the lateral epicondyle of the humerus. **Or:** Spreading hands technique (→ 2.3.3): Place the little fingers on the cubital crease and the wrist joint space (→ 2.2) respectively and join the thumbs at the midpoint of this distance (=12 cun). From the midpoint of this line, measure 1 cun in a proximal direction and there locate **T.B.-9** between the radius and the ulna.

Needling

Vertically or obliquely up to 2 cun

Actions/Indications

- Opens the channel and *luo*-connecting vessels
- Benefits the ears and throat

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T.B.-10 *Heavenly Well* TIANJING

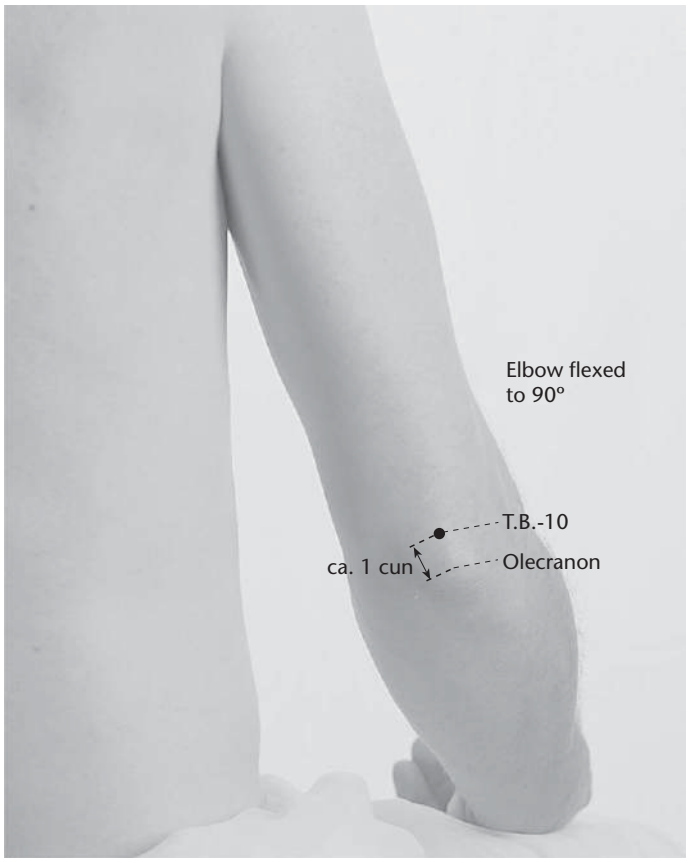
Location
On the lateral aspect of the upper arm, with the elbow flexed in a depression approximately 1 cun proximal to the olecranon.

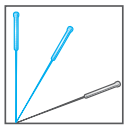
How to find
This point is best located with the patient's elbow flexed to 90°, which will reveal an easily palpable depression 1 cun superior to the olecranon. **T.B.-10** is located in this depression, on the tendon of the triceps brachii muscle.

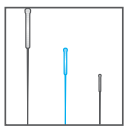
Needling
Up to 1 cun vertically or obliquely in a proximal direction.

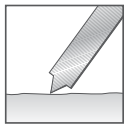
Actions/Indications
- Transforms Phlegm and disperses accumulations
- Regulates and descends the Qi
- Calms the *shen*
- Clears Heat from the channel
- Opens the channel and *luo*-connecting vessels, alleviates pain

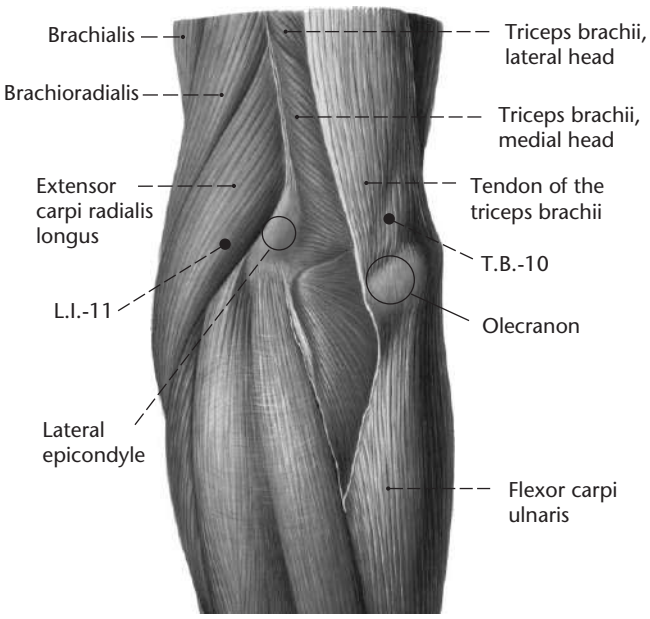
Special features
He-sea point, Earth point, sedation point.

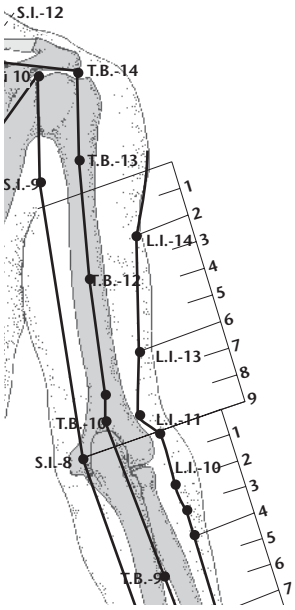












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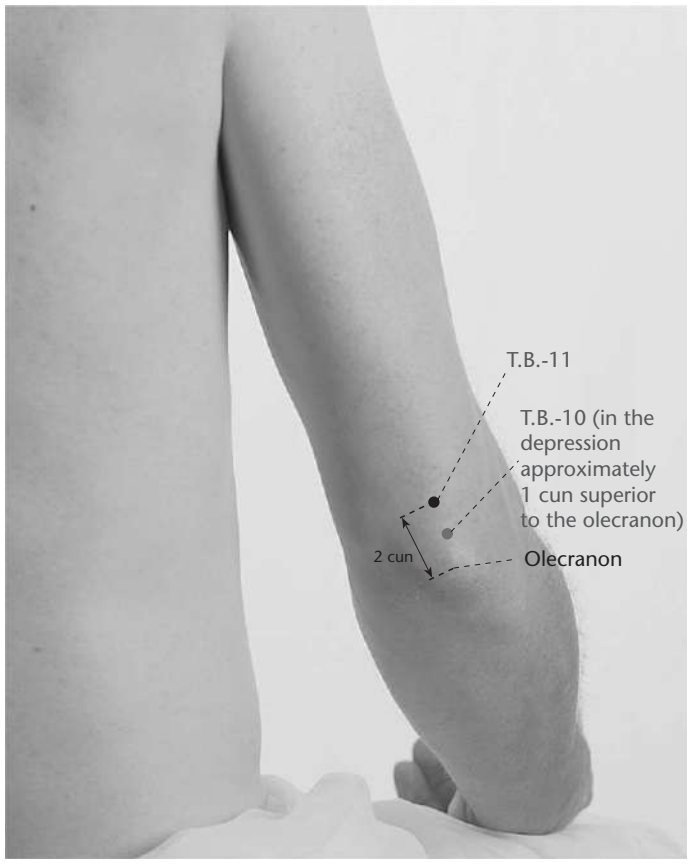
Clear Cold Abyss QINGLENGYUAN T.B.-11



Location

On the lateral aspect of the upper arm, with the elbow flexed 1 cun proximal to → **T.B.-10** or 2 cun proximal to the olecranon, on the triceps brachii muscle.

How to find

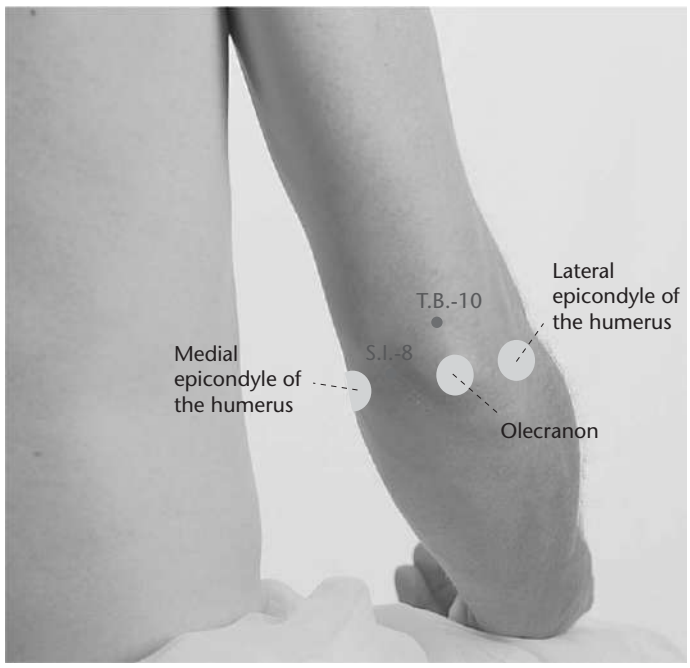
This point is best located with the patient's elbow flexed to 90°, using → **T.B.-10** as a reference point. This is located in an easily palpable depression 1 cun superior to the olecranon. From → **T.B.-10**, palpate approximately 1 cun in a proximal direction and locate **T.B.-11** in a depression on the triceps brachii muscle.

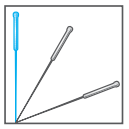
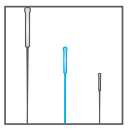
Needling

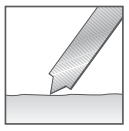
Vertically up to 1 cun

Actions/Indications

- Dispels Wind-Damp
- Opens the channel and the *luo*-connecting vessels
- Clears Damp-Heat





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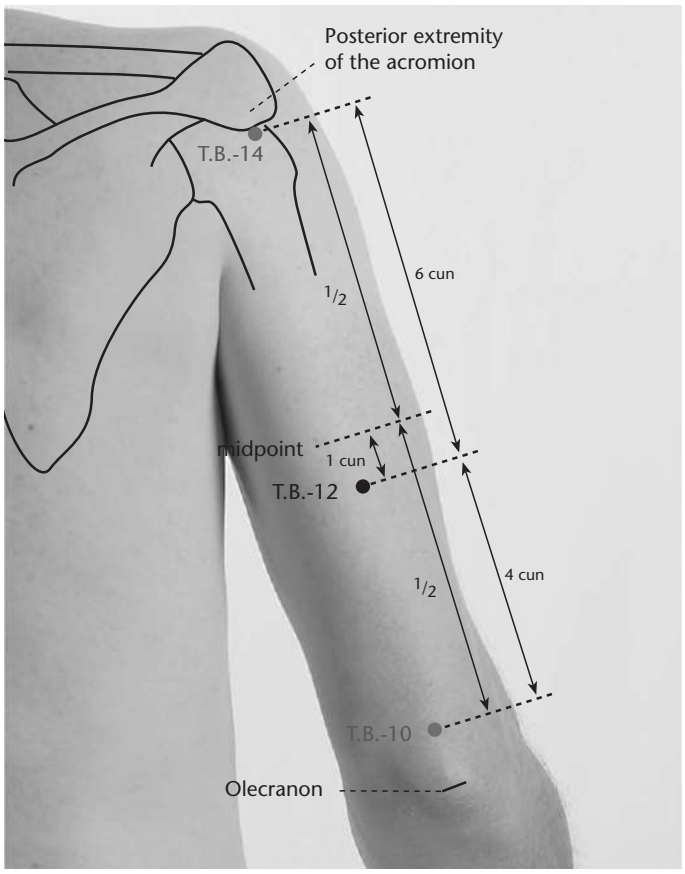
T.B.-12 *Dispersing Luo River* XIAOLUO

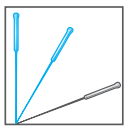
Location

4 cun proximal to → **T.B.-10** (with the elbow flexed in a depression superior to the olecranon) or 5 cun proximal to the olecranon on a line connecting the olecranon and the lateral extremity of the acromion (location of → **T.B.-14**).

How to find

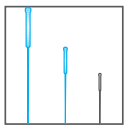
First, locate the acromion (→ 3.3.1). When the patient's arm is in abduction, two depressions will form below the acromion, in the area of origin of the deltoid muscle. → **T.B.-14** is located in the posterior depression, below the posterior aspect of the lateral extremity of the acromion. Next, on a line connecting → **T.B.-14** and the olecranon, measure 4 cun from → **T.B.-10** (1 cun proximal to the olecranon, in the depression that forms when the elbow is flexed) in a proximal direction and there locate **T.B.-12**. **Or quick method:** Spreading hands technique (→ 2.3.3): Place the little fingers on → **T.B.-14** and → **T.B.-10** respectively and determine the midpoint of this distance with the thumbs. From the midpoint, measure 1 cun in a distal direction and there locate **T.B.-12. For orientation: T.B.-12** is midway between → **T.B.-11** (1 cun proximal to **T.B.-10** or 2 cun proximal to the olecranon) and → **T.B.-13** (3 cun distal to → **T.B.-14**, on the margin of the deltoid muscle).





Needling

Vertically or obliquely up to 2 cun

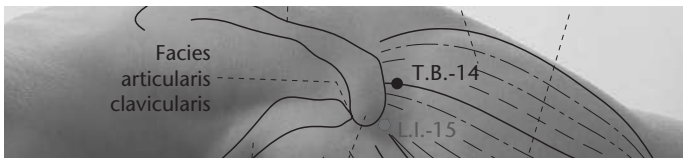


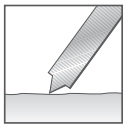
Actions/Indications

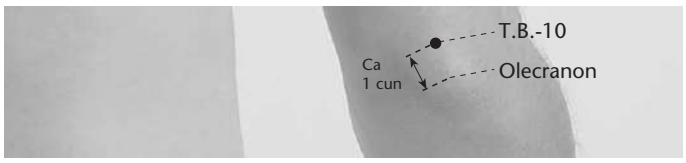
- Opens the channel and alleviates pain

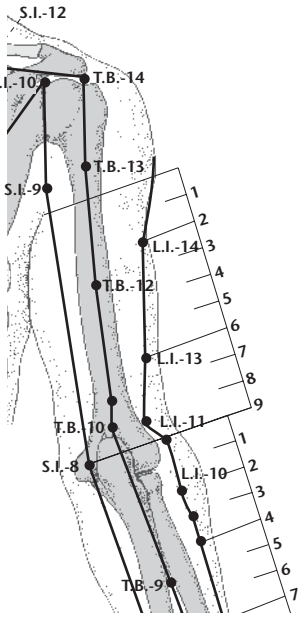
Special features

T.B.-12 represents an area extending from 5–7 cun proximal to the tip of the elbow rather than a discrete acupuncture point. Determine the exact location by tenderness.









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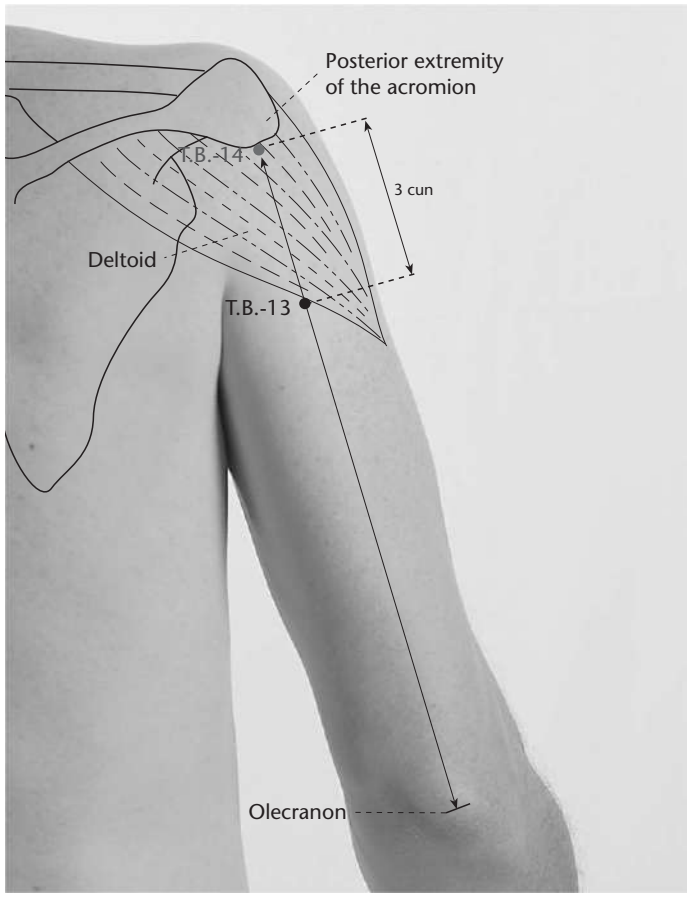
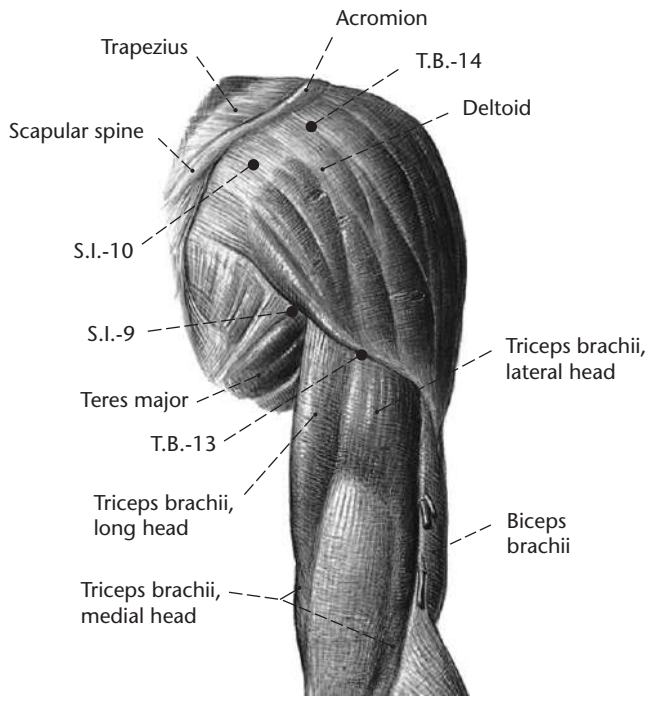
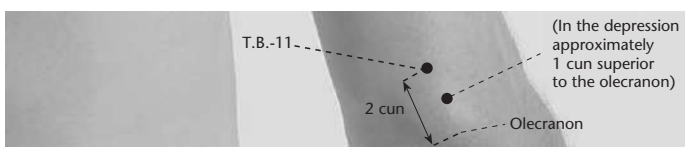
Upper Arm Meeting NAOHUI T.B.-13







Location

3 cun distal to the lateral extremity of the acromion (location of ➞ **T.B.-14**), on a line connecting ➞ **T.B.-14** and the olecranon, at the junction of this line with the margin of the deltoid muscle.

How to find

First, locate the acromion (➞ 3.3.1). When the patient's arm is in abduction, two depressions will form inferior to the acromion, in the area of origin of the deltoid muscle. ➞ **T.B.-14** is located in the posterior depression, below the dorsal aspect of the lateral extremity of the acromion. Next, locate **T.B.-13** 3 cun distal to ➞ **T.B.-14**, on a line connecting ➞ **T.B.-14** and the olecranon. **T.B.-13** is located at the junction of this line with the margin of the deltoid muscle, approximately on the level of the end of the posterior axillary fold.

Needling

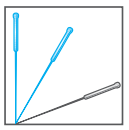
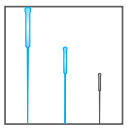
Vertically or obliquely up to 2 cun

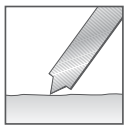
Actions/Indications

- Opens the channel and the *luo*-connecting vessels, alleviates pain
- Regulates the Qi flow and transforms Phlegm

Special features

According to some authors, meeting point with the *yang wei mai* and the G.B. channel



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T.B.-14 *Shoulder Crevice* JIANLIAO

Location

Inferior to the lateral extremity of the acromion between the acromial and spinal portions of the deltoid muscle or, with the arm abducted, in the posterior of the two depressions on the shoulder joint.

How to find

Ask the patient to abduct their arm to a 90° angle, which will reveal two depressions anterior and posterior to the acromion. **T.B.-14** is located in the posterior depression, directly below the dorsal aspect of the lateral extremity of the acromion, between the acromial and spinal fibres of the deltoid muscle. The dorsal aspect of the lateral extremity of the acromion becomes more easily palpable when the upper arm is gently pulled (extension of the upper arm), allowing the head of the humerus to glide anteriorly.

→ **L.I.-15** is located in the depression anterior to **T.B.-14.**

Needling

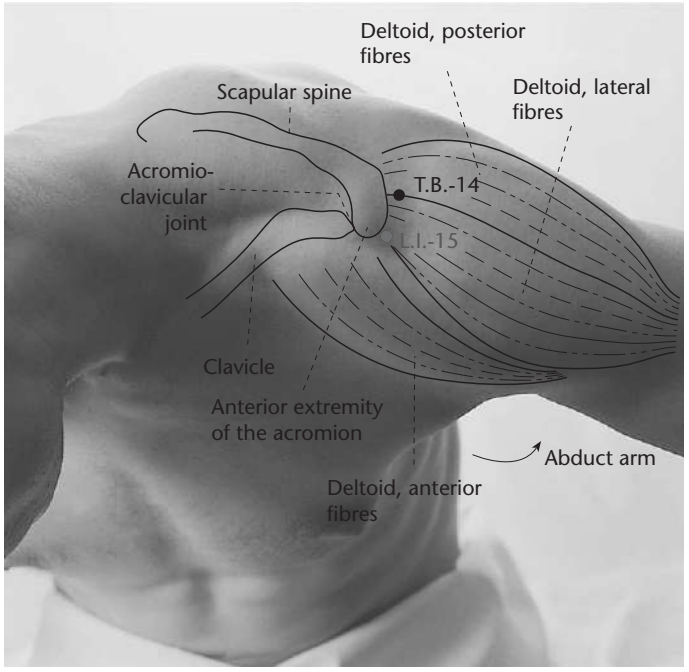
With the arm adducted, 0.5–1 cun perpendicularly towards the centre of the axilla or 1–2 cun transversally to obliquely towards the elbow.

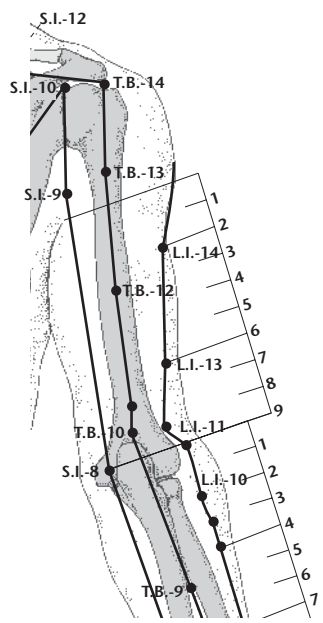
Actions/Indications

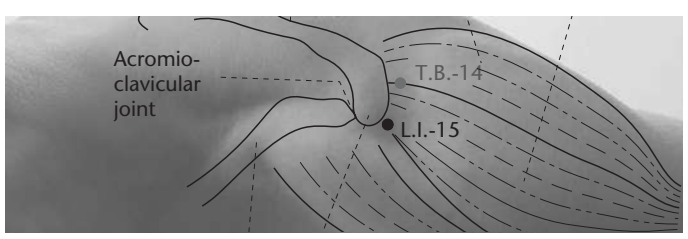
- Disperses Wind and Dampness, benefits the shoulder joint, opens the channel and the *luo*-connecting vessels, alleviates pain

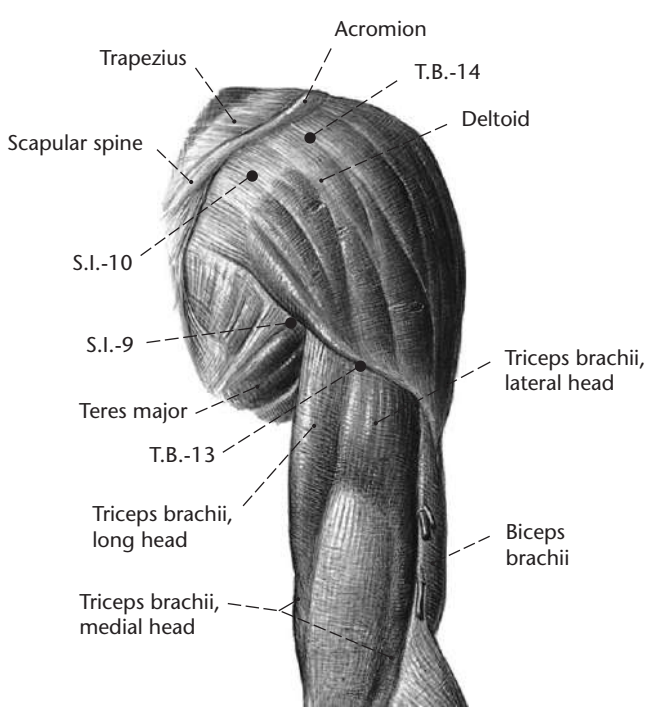
Special features

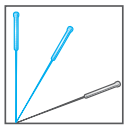
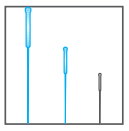
Important local point for shoulder pain, especially for the dorsal aspect of the shouler

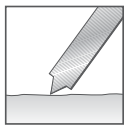










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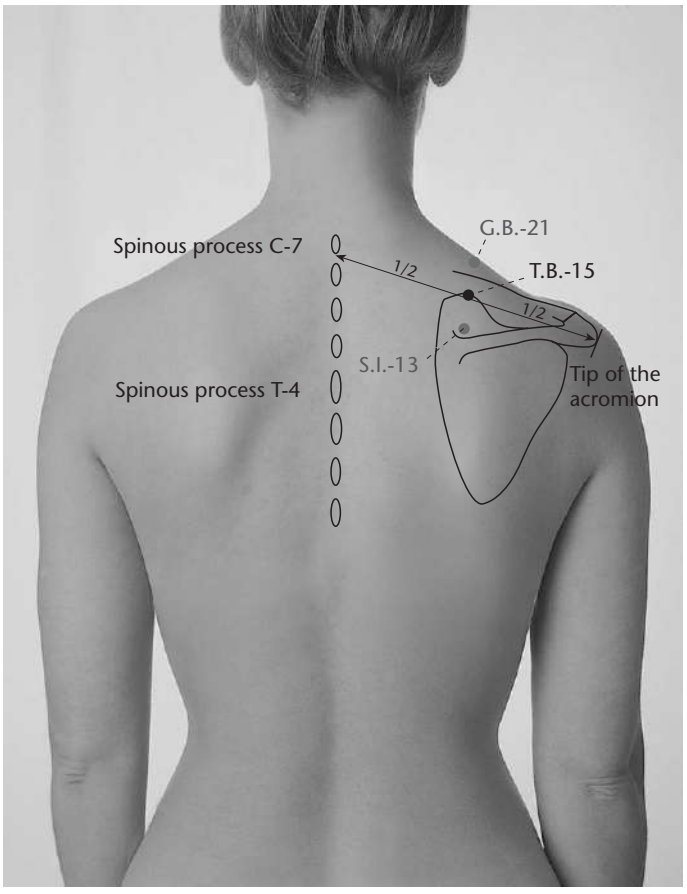
Heavenly Crevice TIANLIAO T.B.-15



Location

At the midpoint of an imaginary line between the spinous process of the 7th cervical vertebra (C7) and the tip of the acromion (lateral extremity of the acromion).

How to find

First, locate C7 (→ 3.4.1) and the acromion (→ 3.3.1), which represents the lateral extension of the scapular spine (→ 3.3.1) and, at its most lateral end, forms a flat surface superior to the head of the humerus (acromial angle). Using, for example, the spreading hands technique (→ 2.3.3), determine the midpoint between C7 and the acromial angle. Located at the highest point of the shoulder is → **G.B.-21. T.B.-15** is located approximately 1 cun inferior to → **G.B.-21**, on the superior angle of the scapula.
→ **S.I.-13** is located inferior to **T.B.-15**, directly superior to the medial end of the scapular spine.

Needling

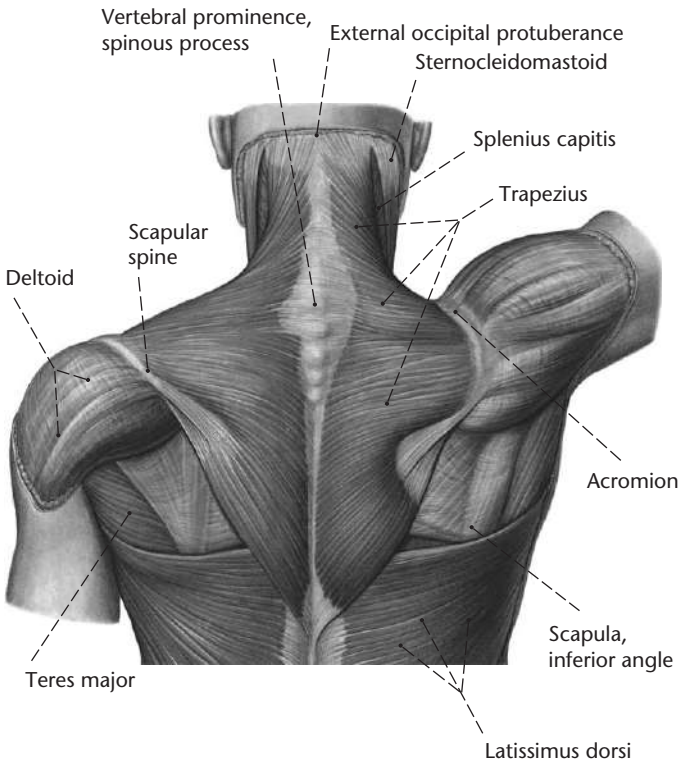
0.5–1 cun vertically or obliquely towards the neck or shoulder. Caution: Pneumothorax.

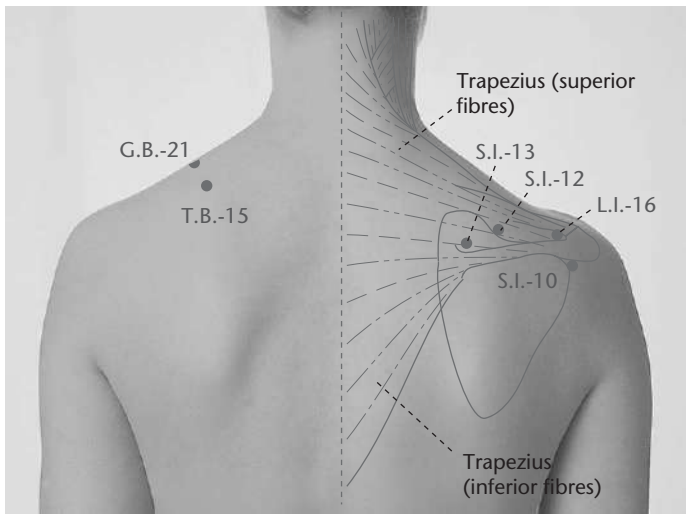
Actions/Indications

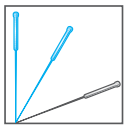
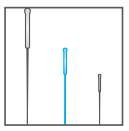
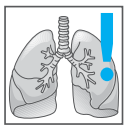
- Opens the channel and alleviates pain
- Dispels especially Wind-Damp, unbinds the chest

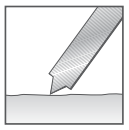
Special features

Meeting point with the *yang wei mai* and the G.B. channel







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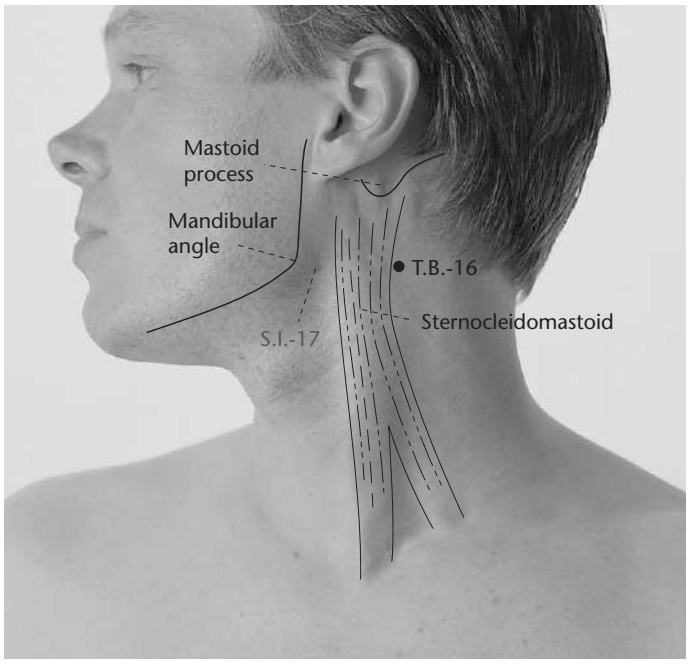
T.B.-16 *Window of Heaven* TIANYOU

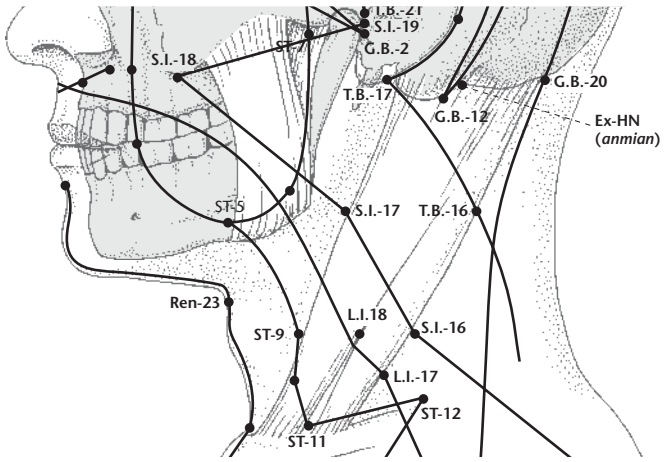
Location

At the posterior border of the sternocleidomastoid muscle, directly inferior to the mastoid process, on the level of the mandibular angle.



How to find

For a better definition of the sternocleidomastoid muscle, ask the patient to rotate their head against resistance towards the side to be needled. **T.B.-16** is located on the level of the mandibular angle, on the dorsal aspect of the sternocleidomastoid muscle. This point is located inferior to the posterior border of the mastoid (→ 3.1.4). → **G.B.-12** is located directly posterior and inferior to the mastoid; → **S.I.-17** is also located on the level of the mandibular angle, but on the anterior border of the sternocleidomastoid muscle.

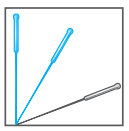


Needling

Vertically 0.5–1 cun. Caution: Carotid artery.

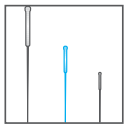
Actions/Indications

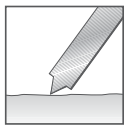
- Benefits the head and sensory organs
- Descends the Qi, expels Wind
- Opens the channel and alleviates pain

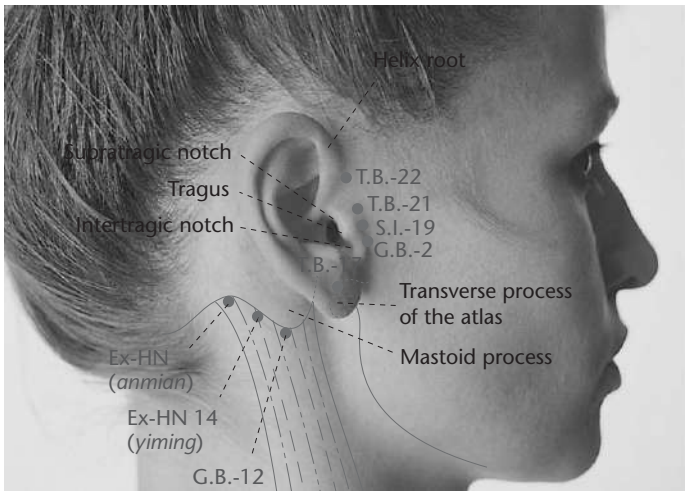


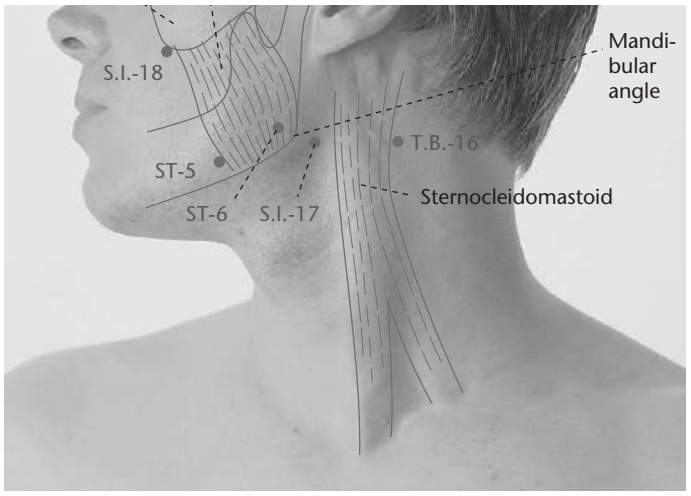
Special features

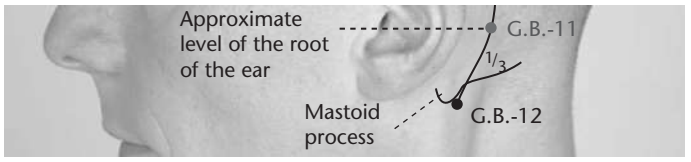
Window of Heaven point











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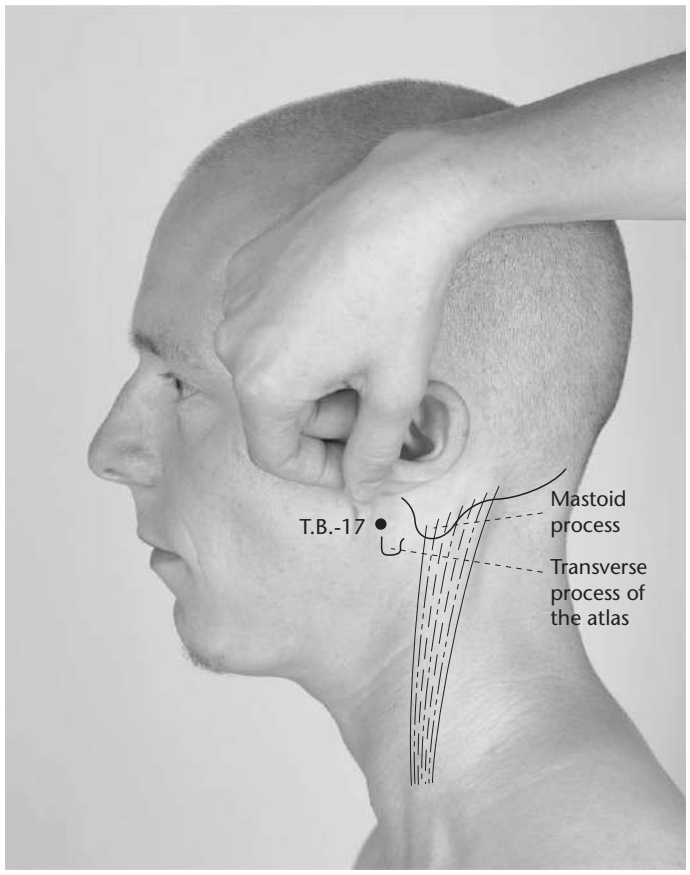
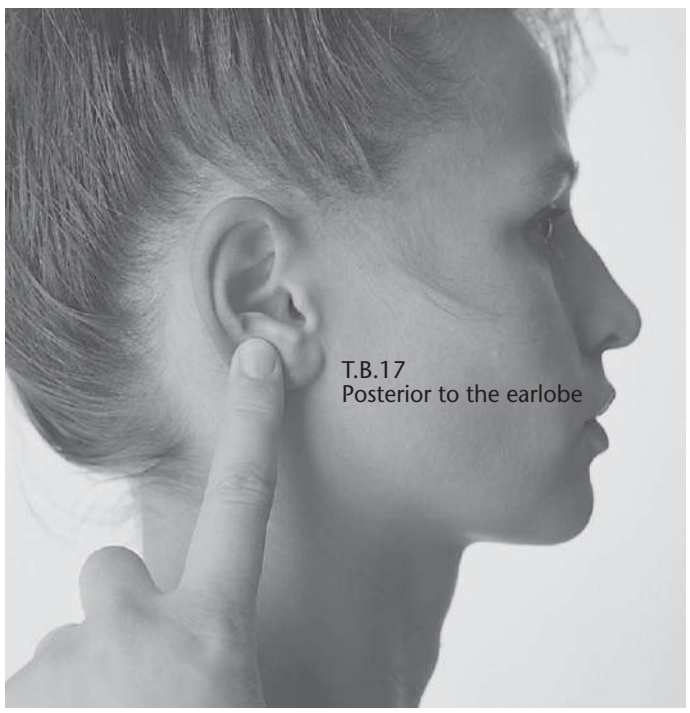
Wind Screen YIFENG T.B.-17





Location

With the patient's mouth open, in the depression behind the earlobe, between the mastoid process and the mandible.

How to find

This point should be located with the patient's mouth open. **Quick method:** When pressing onto the ear lobe, it will touch **T.B.-17**. **Or:** Gently fold the earlobe anteriorly. **T.B.-17** is located posterior to the lobe, in a pressure-sensitive depression which can be palpated between the mandible and the mastoid process. The tip of the needle will get close to the transverse process of the 1st cervical vertebra (transverse process of the atlas, → 3.1.4), which, below the earlobe, can be palpated as a deep bony structure often sensitive to pressure.

Needling

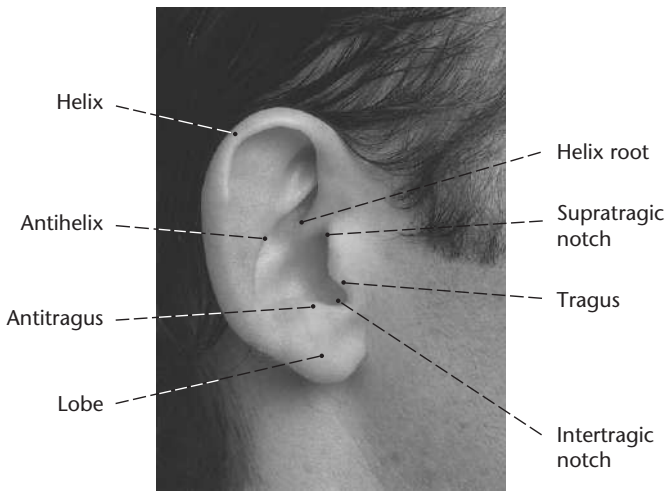
This point should be needled with the patient's mouth slightly open. Caution: This point is close to the facial nerve, therefore no deep needling. Superior to the transverse process, the vertebral artery curves round posteriorly, therefore strictly needle 0.5–1 cun in an anterior direction.

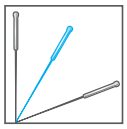
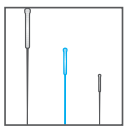
Actions/Indications

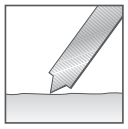
- Expels (external) Wind, benefits the ears, clears Heat, opens the channel and *luo*-connecting vessels, alleviates pain

Special features

Meeting point with the G.B. channel. Important local point for disorders of the ears and the temporomandibular joint.





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T.B.-18 *Spasm Vessel* QIMAI

Location

Posterior to the ear, in a well-defined depression in the centre of the mastoid.

How to find

On an imaginary clock face superimposed over the auricle (12 o'clock = apex of the ear, 6 o'clock = earlobe), you can find an easily palpable depression at 8 o'clock (on the right side) and at 4 o'clock (on the left side). It is located directly behind the margin of the auricle and is the location of **T.B.-18**.

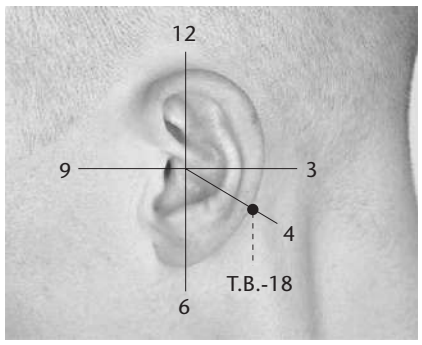
→ **G.B.-11** is located slightly superior to **T.B.-18** and approximately 0.3 cun from the ear; → **G.B.-12** is located inferior to **T.B.-18**, directly posterior to the mastoid.

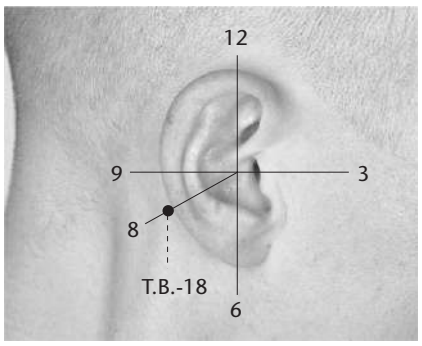
Needling

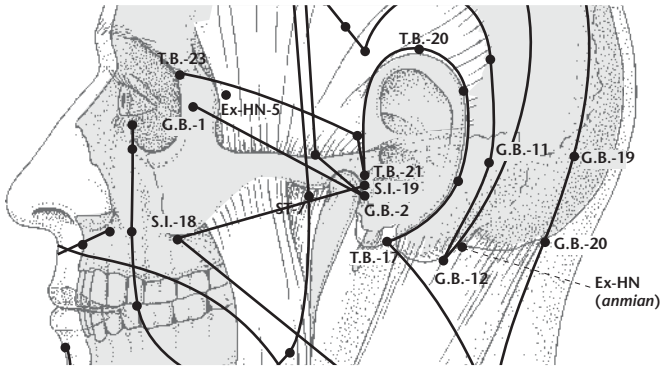
0.5 cun transversely (subcutaneously) in an inferior direction or prick to bleed.

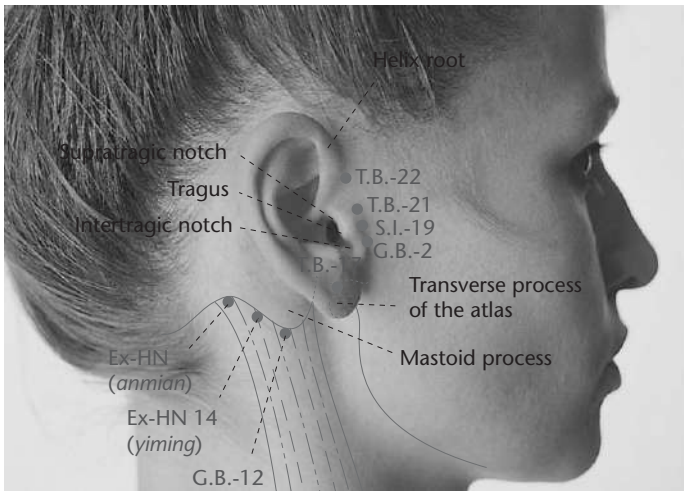
Actions/Indications

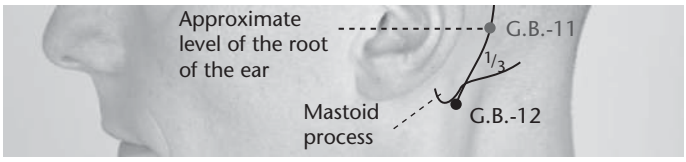
- Dispels Wind
- Opens the channel, alleviates pain
- Benefits the ears

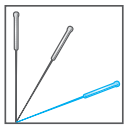
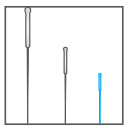


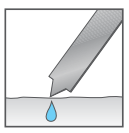










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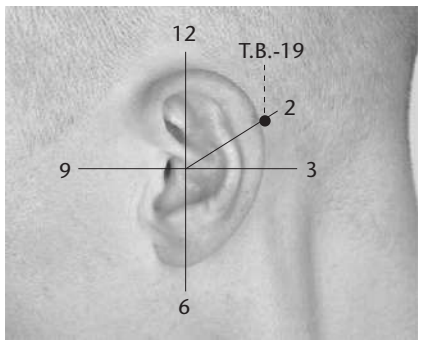
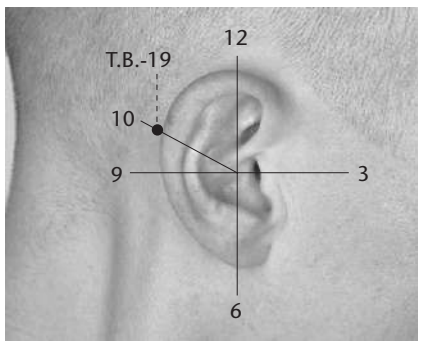
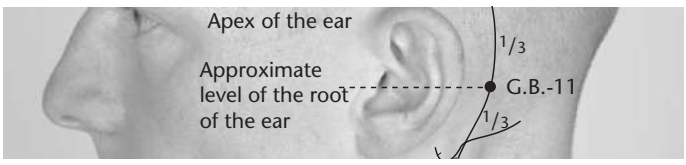
Skull's Rest LUXI T.B.-19







Location

Posterior to the ear, in a well-defined depression superior to the centre of the ear.

How to find

On an imaginary clock face superimposed over the auricle (12 o'clock = apex of the ear, 6 o'clock = earlobe), you can find an easily palpable depression at approximately 10 o'clock (on the right side) and at 2 o'clock (on the left side). It is located directly behind the margin of the auricle and is the location of **T.B.-19**.

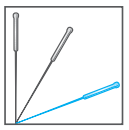
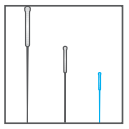
→ **G.B.-11** is located slightly inferior to **T.B.-19** and approximately 0.3 cun from the margin of the ear.

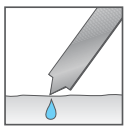
Needling

Up to 0.5 cun transversely (subcutaneously) in an inferior direction or prick to bleed.

Actions/Indications

- Dispels Wind
- Opens the channel
- Benefits the ear, clears Heat



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T.B.-20 *Minute Angle* JIAOSUN

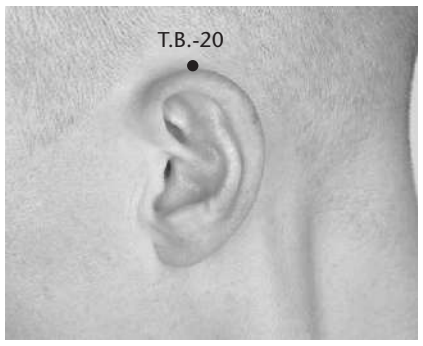
Location
Directly superior to the apex of the ear.

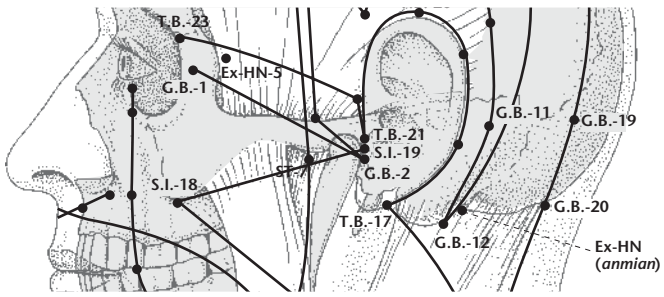
How to find
Directly superior to the apex of the ear. → **G.B.-7** is also located on the apex of the ear, but anterior to it, within the circumauricular hairline. → **G.B.-8** is located 1.5 cun superior to the apex of the ear.

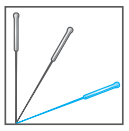
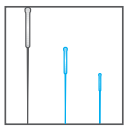
Needling
Up to 1.5 cun transversely (subcutaneously) in the direction of the disorder.

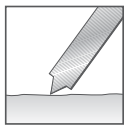
Actions/Indications
- Benefits the ears and the eyes
- Clears Heat, especially from the mouth

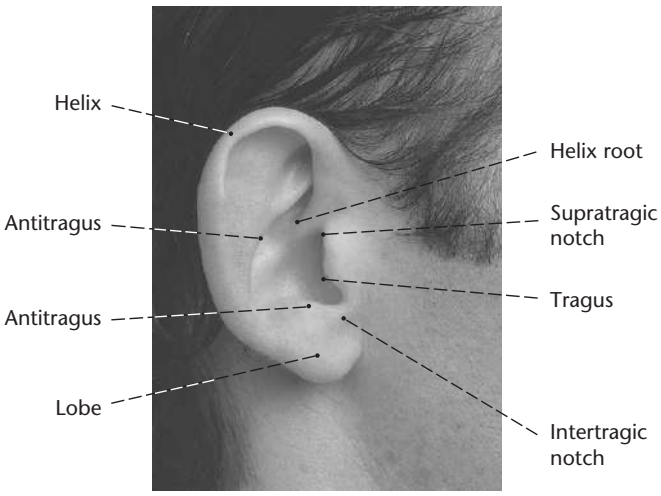
Special features
Meeting point with the G.B. channel, also with the S.I. channel according to some authors.

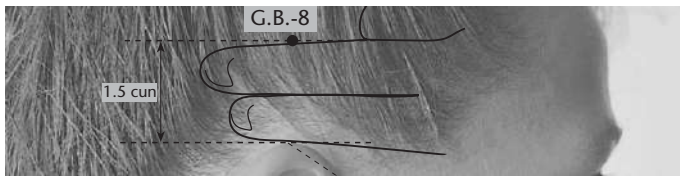


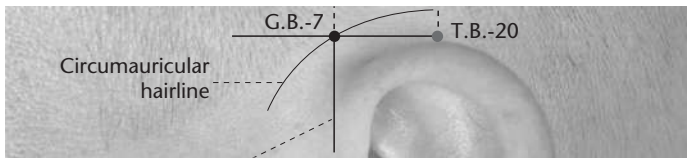










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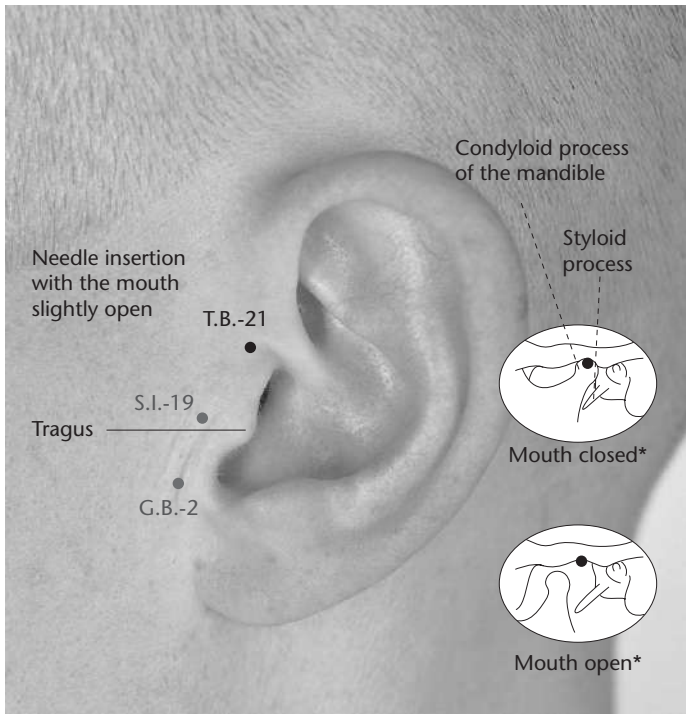
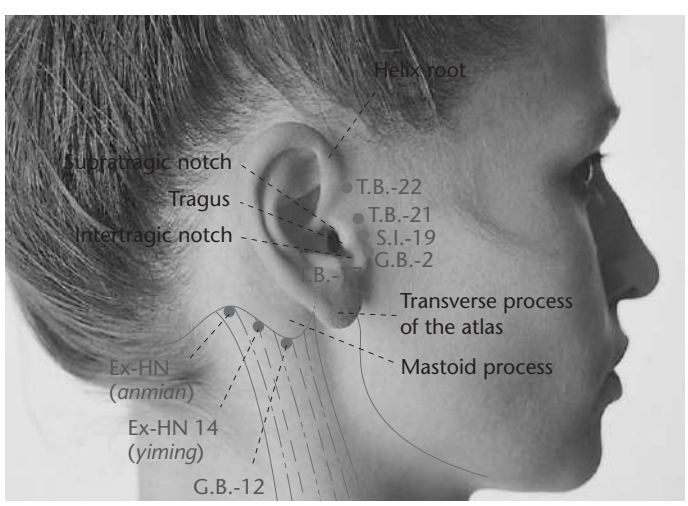
Ear Gate ERMEN T.B.-21





Location

Anterior to the ear, with the patient's mouth open in the depression on the level of the supratragic notch and slightly superior to the condyloid process of the mandible.

How to find

This point should be both located and needled with the patient's mouth open. This allows the condyloid process of the mandible to slide anteriorly to reveal the depression where **T.B.-21** is located. Locate the sulcus between the auricle and the cheek anterior to the tragus (this can be more or less well defined). Then locate **T.B.-21** on the level of the supratragic notch on the sulcus. If the latter cannot be clearly identified (it becomes more pronounced with increasing age), the depression can be located with an (ear) point locator when the patient's mouth is opened. **T.B.-21** is the most superior of three points located anterior to the ear (→ **S.I.-19** and → **G.B.-2** are located more distally).

Needling

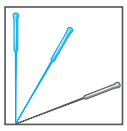
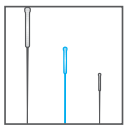
0.5–1 cun vertically or slightly obliquely in an inferior direction. Needle with the patient's mouth open (to avoid intra-articular insertion). After insertion, patients can close their mouth again. Caution: Like S.I.-19 and G.B.-2, this point is close to the superficial temporal artery and the auriculotemporal nerve.

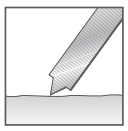
Actions/Indications

- Clears Heat, benefits the ears

Special features

Important local point for disorders of the ears



* Accoring to Deadman et al 1998.

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T.B.-22 *Ear Harmony Crevice* ERHELIAO

Location

In a depression at the border of the circumauricular temporal hairline, anterior to and on the level of the root of the auricle.

How to find

First, locate the anterior aspect of the root of the ear. From there, palpate approximately the breadth of the little finger in the direction of the eye. There, **T.B.-22** is located superior to the zygomatic arch (→ 3.1.2), which forms a bony ridge when sliding inferiorly from **T.B.-22**.
Located inferior to the zygomatic arch is → **T.B.-21**.

Needling

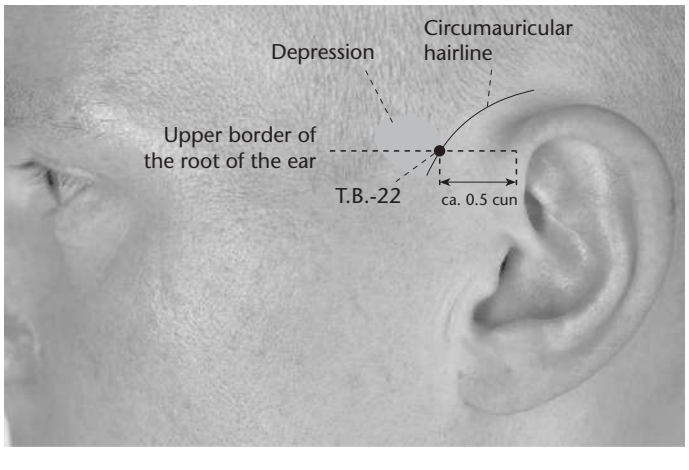
Transversely (subcutaneously) 0.5 cun. Caution: Superficial temporal artery.

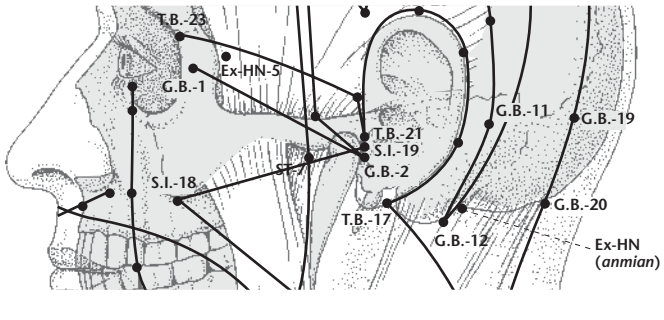
Actions/Indications

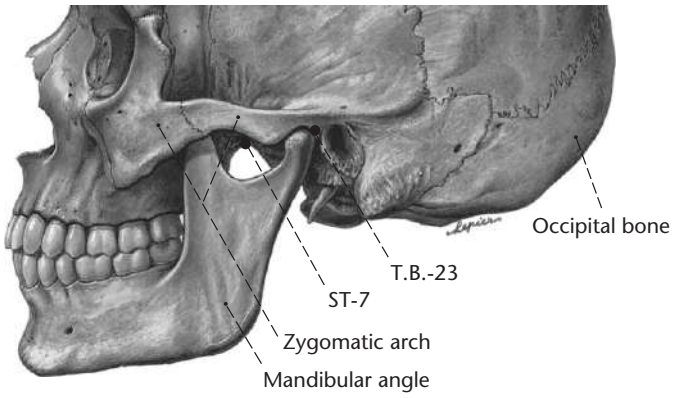
- Dispels Wind
- Opens the channel and the *luo*-connecting vessels

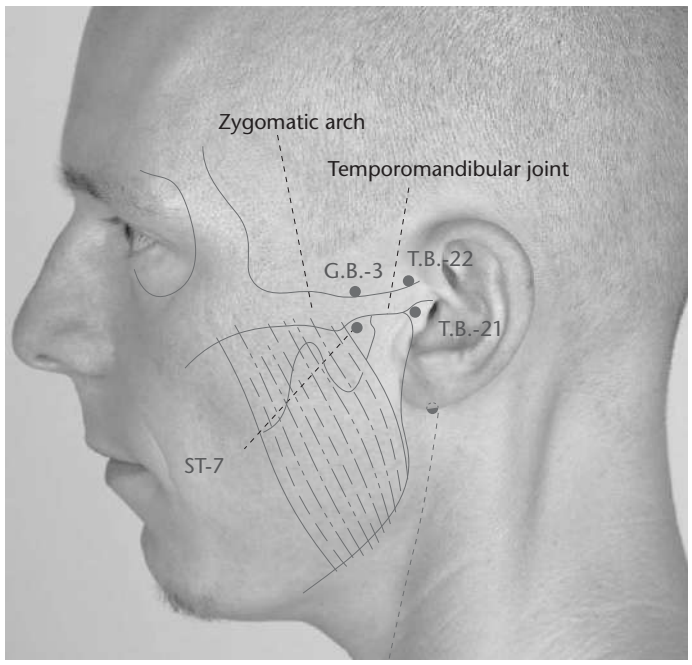
Special features

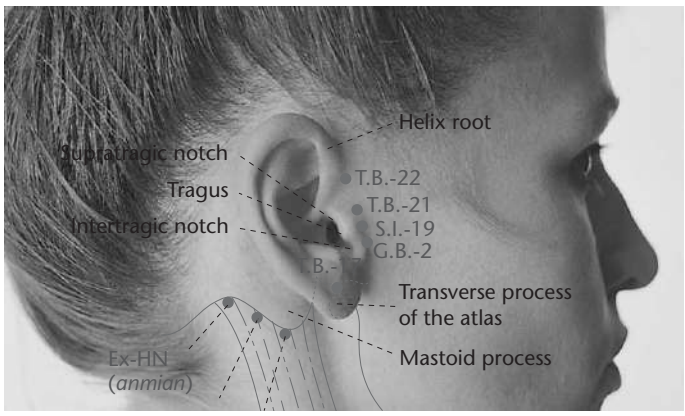
Meeting point with the S.I. and G.B. channels, exit point according to some authors.

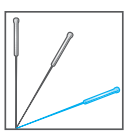
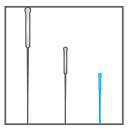


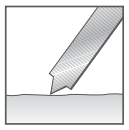










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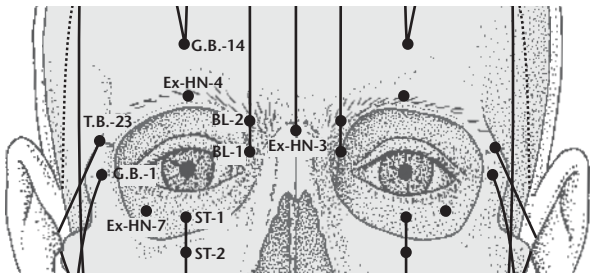
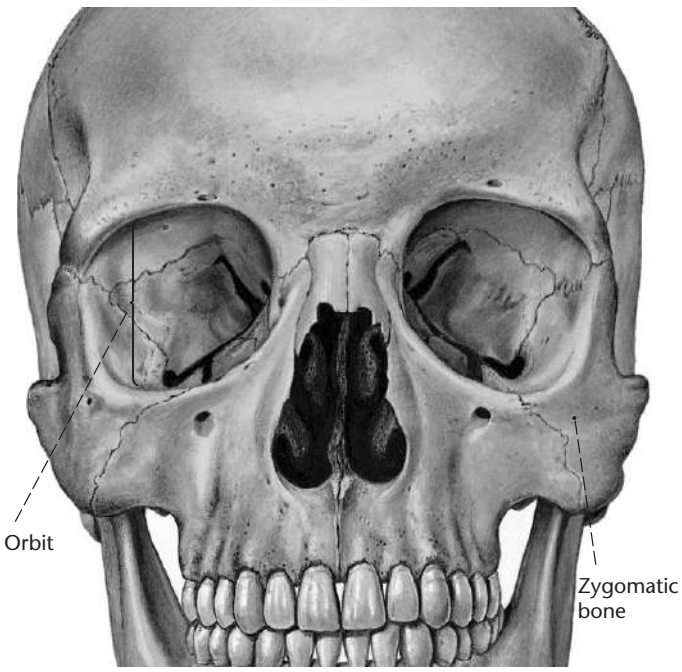
Silken Bamboo Hollow SIZHUKONG T.B.-23





Location

On the lateral end of the eyebrow, in the bony depression of the frontozygomatic suture, between the frontal and zygomatic bones.

How to find

The frontozygomatic suture (between the zygoma and the frontal bone) is generally located at the lateral end of the eyebrow. As the position of the latter can vary considerably, the suture is a more suitable reference point. In order to locate it, palpate from the outer canthus of the eye superiorly along the orbital margin, from its zygomatic to the frontal section, until you can feel a bony depression in the area of the suture. Locate **T.B.-23** in this mainly pressure-sensitive depression.

Needling

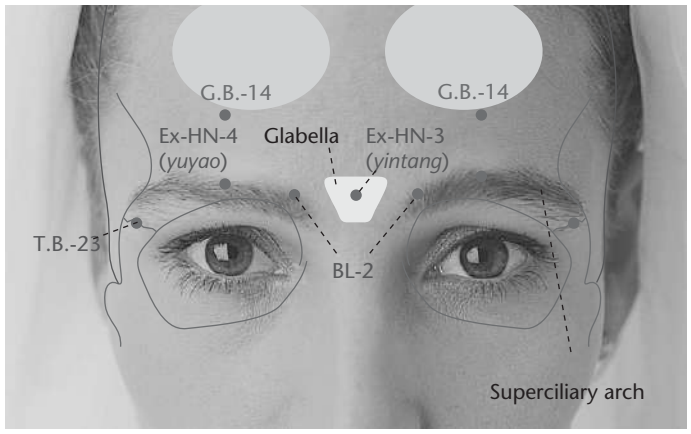
0.5–1 cun obliquely or transversely (subcutaneously) in a posterior direction towards **Ex-HN-5** (*taiyang*). In China, this point is also needled along the eyebrow to **Ex-HN-4** (*yuyao*: in the centre of the eyebrow). Moxibustion is contraindicated according to some classic texts.

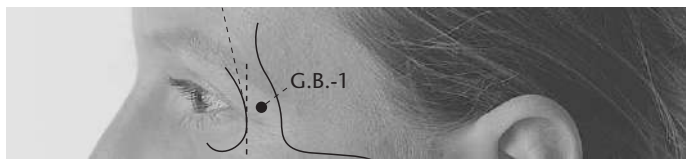
Actions/Indications

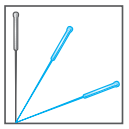
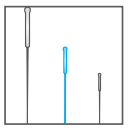
- Benefits the eyes, alleviates pain, eliminates Wind

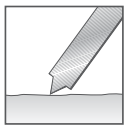
Special features

Important local point for headaches and disorders of the eyes







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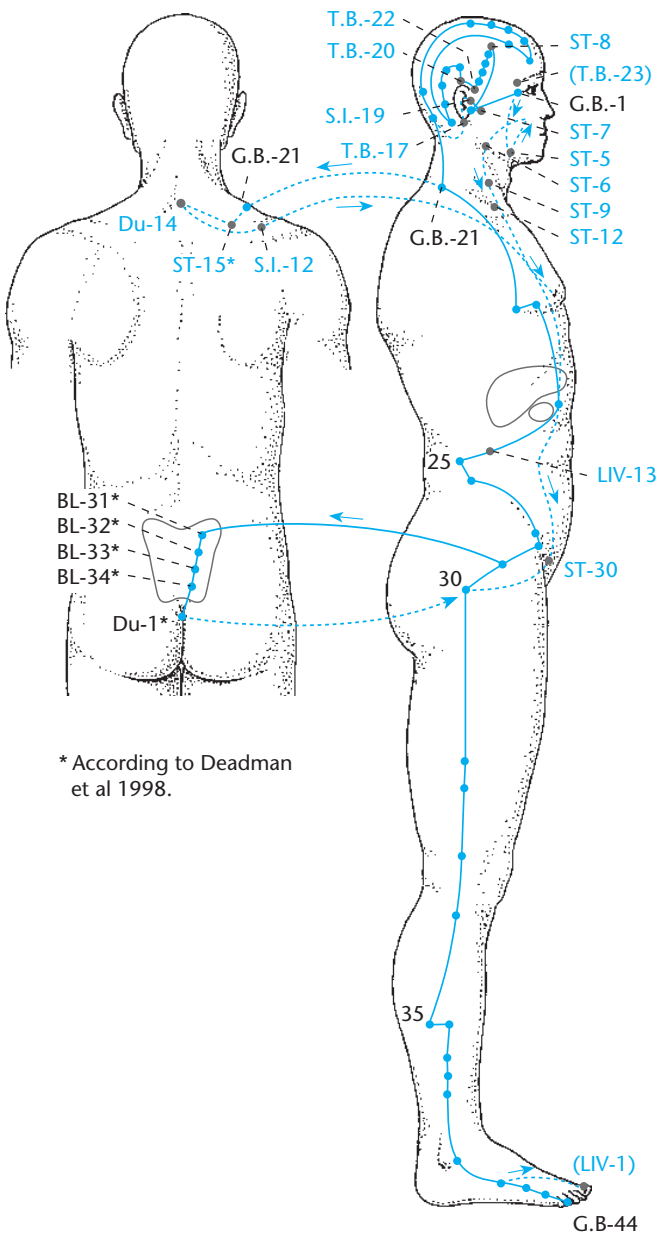
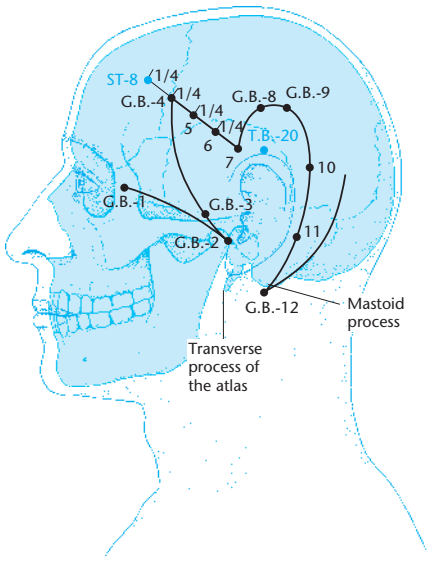
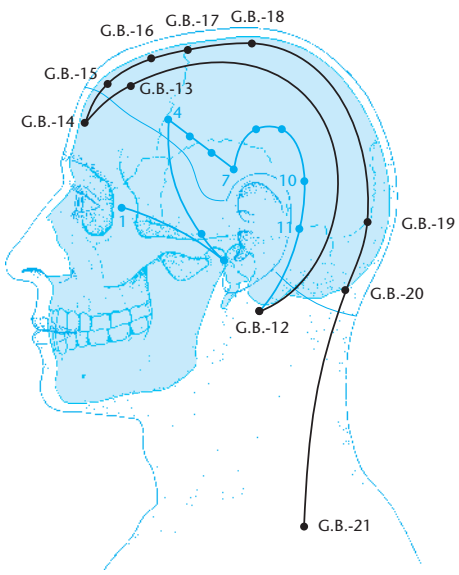
4.11 Gall Bladder Channel System – Foot *shaoyang* (*zu shao yang jing luo*)

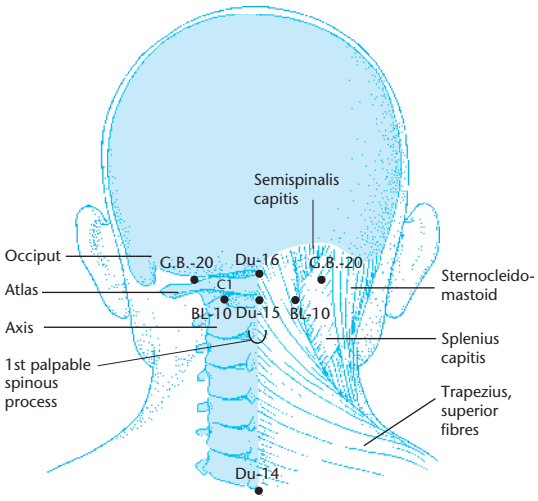
4.11.1 The Gall Bladder Primary Channel (*zu shao yang jing*)



* According to Deadman et al 1998.







Pathway

The Gall Bladder primary channel begins at **G.B.-1** (*tongziliao*) at the outer canthus of the eye. This point is reached by a **small branch** which separates from the Triple Burner primary channel at ➞ **T.B.-23** (*sizhukong*) on the frontozygomatic suture, according to some authors at ➞ **T.B.-22** (hand–foot pairing of the third great circuit, Yang axes: *shaoyang*).

From **G.B.-1**, the **external pathway** runs to **G.B.-2** (*tinghui*) in front of the ear

➡ ascends to the forehead and **ST-8** (*touwei*)

➡ traverses the temporal region in a slight curve, passing

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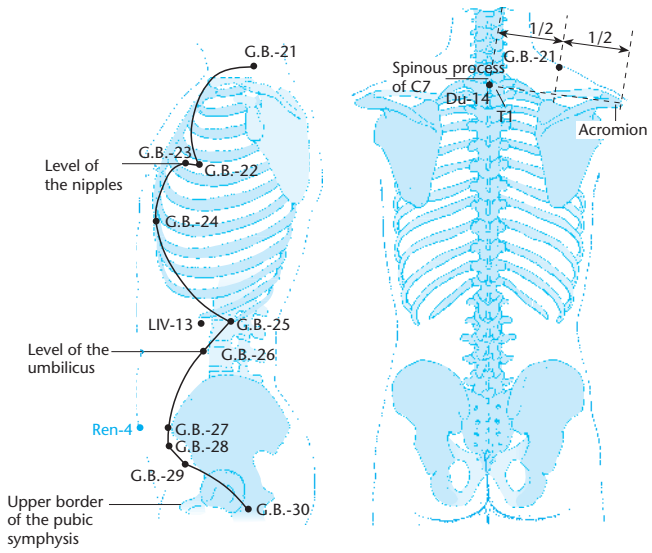

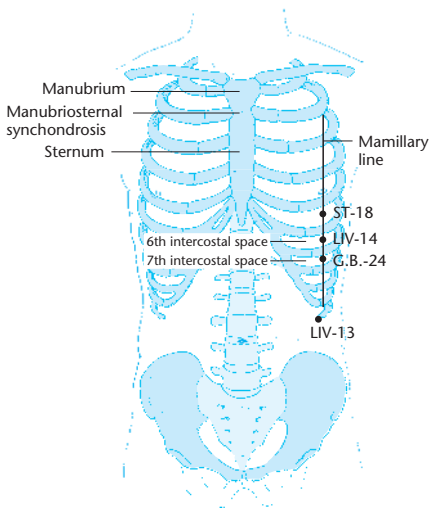

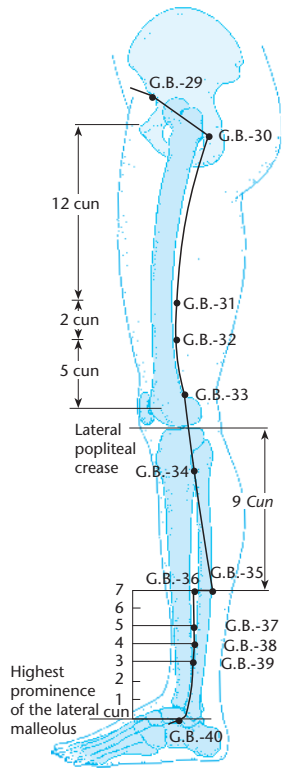

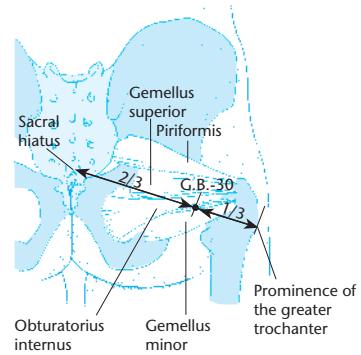

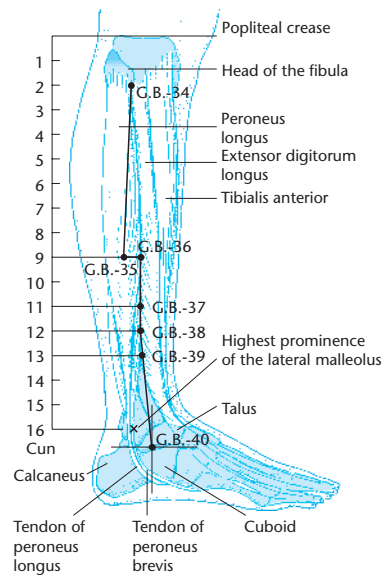

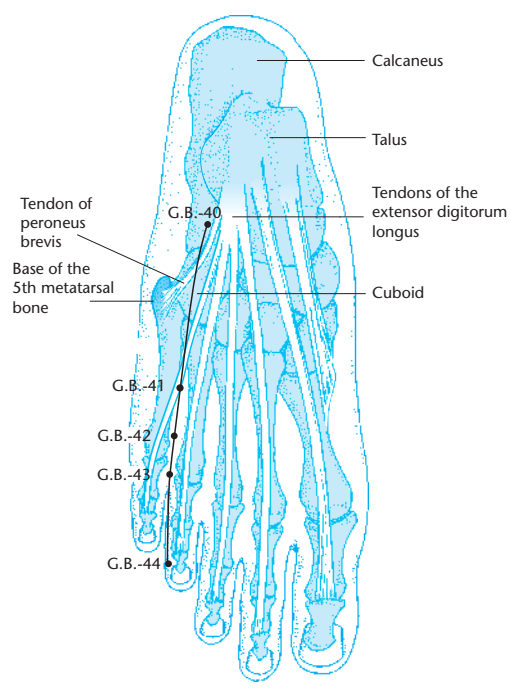

G.B.-4 to **G.B.-7**, and continues to ➞ **T.B.-22** (*erheliao*) anterior to the root of the ear

- ➡ passes ➞ **T.B.-20** (*jiaosun*) superior to the apex of the ear and curves posterior to the ear from **G.B.-8** to **G.B.-12**
- ➡ traverses the lateral aspect of the head to **G.B.-13** (*benshen*) and **G.B.-14** (*yangbai*) on the forehead
- ➡ again traverses the side of the head to **G.B.-20** (*fengchi*)
- ➡ crosses the superior aspect of the shoulder and passes **G.B.-21** (*jianjing*) and ➞ **T.B.-15** (*tianliao*) to reach ➞ **Du-14** (*dazhu*), where it meets the other Yang primary channels
- ➡ continues to **S.I.-12** (*bingfeng*), according to some authors (Deadman et al 1998) previously passing ➞ **BL-11** (*dashu*) and **ST-12** (*quepen*) in the supraclavicular fossa.

One branch runs from **G.B.-20** to ➞ **T.B.-17** (*yifeng*), enters the ear and travels to ➞ **S.I.-19** (*tinggong*), passes ➞ **ST-7** (*xiaguan*) and continues to **G.B.-1** (*tongziliao*) at the lateral canthus of the eye, descends to ➞ **ST-5** (*daying*), again ascends to the infraorbital region, where it meets the Triple Burner primary channel; then descends to ➞ **ST-6** (*jiache*) on the lower jaw, traverses the lateral aspect of the neck, passing ➞ **ST-9** (*renying*) at the sternocleidomastoid, and meets the main branch again at

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→ **ST-12** (*quepen*) in the supraclavicular fossa, where the latter divides into **2 branches**:

- **The inner branch** enters the thorax, meets the Pericardium primary channel at → **P-1** (*tianchi*), runs across the diaphragm, connects with the Liver (*gan*) and the Gall Bladder (*dan*), traverses the hypochondrium and continues to the lower abdomen, enters the lumbar region near the femoral artery, according to Solinas et al (1998) via → **ST-30** (*qichong*), and continues along the pubic hairline to the hip.
- **The outer branch** descends superficially from the supraclavicular fossa, crosses the midaxillary line and continues along the lateral thoracic wall, passing → **LIV-13** (*zhangmen*) at the free end of the 11th rib and continuing to the hip to **G.B.-29** (*juliao*). It then traverses the sacral region, passing → **BL-31** (*shangliao*), → **BL-32** (*ciliao*), → **BL-33** (*zhongliao*) and → **BL-34** (*xialiao*) over the sacral foramina and continues to → **Du-1** (*changqiang*). From there, it travels laterally to **G.B.-30** (*huantiao*), where it reconnects with the main branch (→ see comment below*).

The **external pathway** descends along the lateral aspect of the thigh to the knee and further along the anterior/posterior border of the fibula, passing the anterior aspect of the lateral malleolus and ending at the ulnar corner of the nail of the fourth toe.

A further branch originates at **G.B.-41** (*zulinqi*) on the dorsum of the foot and travels between the 1st and 2nd metatarsal bones to the tip of the big toe and **LIV-1** (*dadun*), where it joins the LIV channel.

Clinical importance (→ 1.2)

Exterior (*biao*) signs and symptoms: Alternating fevers and chills, headaches, eye pain, pain in the cheek and on the chin, subaxillary swellings, deafness, lateral knee and leg pain

Interior (*li*) or *zangfu*-Organ signs and symptoms: Pain in the lateral costal region, vomiting, bitter taste in the mouth, thoracic pain

Connections of the Gall Bladder primary channel (→ 1.2)

Connections with other channels (→ 1.2)

Liver primary channel (*zu jue yin jing*)

Connection: Foot Yin–Yang pair of the third great circuit
Location: G.B.-41 → LIV-1 (on the foot)
Circulation: Circadian (according to the Organ clock)
Importance: Exterior–Interior relationship

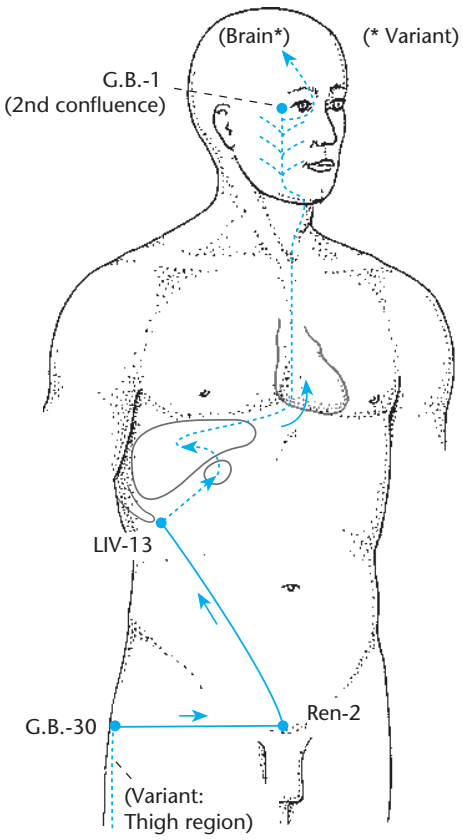
Triple Burner primary channel (*shou shao yang jing*)

Connection: Hand–foot pairing of the third great circuit: *shaoyang* (Yang axes)
Location: T.B.-23 (or **T.B.-22**, according to some authors) → **G.B.-1** (on the head)
Circulation: Circadian (according to the Organ clock)
Importance: Above–below relationship

Connections with *zangfu*-Organ systems

Liver (*gan*), Gall Bladder (*dan*)

4.11.2 The Gall Bladder Divergent Channel (*zu shao yang jing bie*)



Pathway

The Gall Bladder Divergent channel separates from the Gall Bladder primary channel near **G.B.-30** (*huantiao*); according to some authors, it separates on the thigh (→ variant in the illustration)

- traverses the hip region to the anterior aspect of the body
- reaches the inguinal region and crosses the Liver divergent channel at → **Ren-2** (*qugu*)
- ascends the abdomen to **LIV-13** (*zhangmen*) below the free end of the 11th rib
- continues internally along the thoracic wall
- connects with the Gall Bladder (*dan*) and the Liver (*gan*) and passes the Heart (*xin*)
- ascends to the neck
- emerges on the lower jaw

* Not all authors describe the pathway of the G.B. channel as passing the points **BL-31** to **BL-34** and **Du-1** (see figure for variant pathway).

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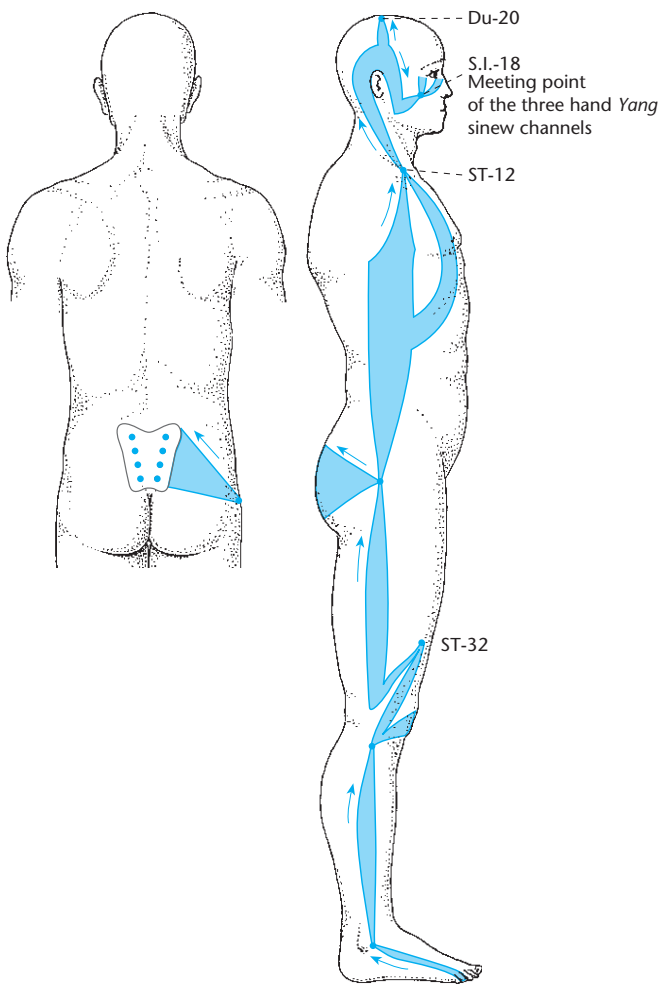
- disperses on the face
- connects with the Gall Bladder primary channel and the Liver divergent channel to form one of the six *he*-confluences (here: G.B./LIV as 2nd confluence → 1.3)
- continues to the eye system and ends in the Brain.

Clinical importance

- Strengthens the relationship between the Gall Bladder and the Liver (*zangfu*-Organ systems). Points on the Gall Bladder primary channel can therefore be used to treat disorders of the Liver and vice versa.
- Supports the relationship between the oesophagus and the Heart.
- The Gall Bladder Divergent channel covers the area around the eyes, thus supporting the action of some G.B. points for disorders of the eyes.

4.11.3 The Gall Bladder Sinew Channel (*zu shao yang jing jin*)



Pathway

The Gall Bladder sinew channel begins at the 4th toe, binds (*jie*) anterior and inferior to the lateral malleolus in the area of **G.B.-40** (*qiuxu*), follows the lateral aspect of the leg, binds (*jie*) at the fibula and the lateral aspect of the knee.

From the fibula, it continues to ascend the lateral aspect of the thigh

- while a **branch** runs obliquely to → **ST-32** (*futu*), where it binds (*jie*).

The main branch further ascends the leg to bind (*jie*) at the greater trochanter. Here, a **branch** separates and disperses over the gluteal and sacral regions.

From the hip, the channel continues to ascend the flanks to the lower costal region, where it divides into **two branches**:

- **one branch** traverses the lateral aspect of the thorax and ascends to bind (*jie*) at → **ST-12** (*quepen*)
- **the other branch** follows the midaxillary line to the thorax, meeting the other branch in the supraclavicular fossa.

From **ST-12**, the channel ascends the lateral aspect of the neck

- curves around the ear
- a branch continues to the apex of the ear and to → **Du-20** (*baihui*)
- from the temporal region, **a branch** descends and traverses the cheek to the lower jaw
- crosses the zygomatic arch to reach **S.I.-18** (*quanliao*), where it meets the other foot Yang sinew channels and divides into **two branches**. One branch travels laterally to the root of the nose, the other to the outer canthus of the eye.

Clinical importance

Pathology: Stiffness and distending sensations in the area of the 4th toe as well as on the lateral aspect of the knee. Limited range of motion of the knee joint. Pain, tension and distending sensations in the popliteal crease radiating to the thigh and the sacral region and vice versa. Pain and distending sensations in the sacral region radiating to the hypochondrium and vice versa. Pain and tension in the supraclavicular fossa, thorax, breast and neck region. Pain along the left side of the channel and inability to open the right eye and vice versa.

Indication: Predominantly for pain, muscle tension, stiff joints and distending sensations on the lateral aspect of the body. Used for disorders of the anterior, lateral and posterior aspects of the legs, especially those affecting the knees and the thighs. The Gall Bladder Sinew channel spreads in the thorax and the breasts so that points on the G.B. channel can be used for disorders in those areas. Also for headaches on the vertex and temporal regions. The channel also reaches the lateral aspect of the nose, which supports the relationship with the nose. Therefore, G.B. points can be used for chronic nasal disorders, chronic sinusitis, etc.

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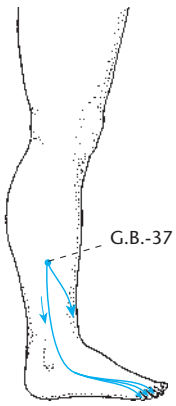
4.11.4 The Gall Bladder *luo*-Connecting Channel (*zu shao yang luo mai*)



Pathway

The Gall Bladder *luo*-connecting channel separates from the Gall Bladder primary channel at its *luo*-connecting point **G.B.-37** (*guangming*) (→ 8.1.2). It forms a three-dimensional reticulate network, dividing into multiple branches and sub-branches (*sun luo, fu luo, xue luo* → 1.5) within the surrounding tissue.

- Horizontal divisions run to the Interiorly–Exteriorly paired Liver primary channel; according to some schools of thought (for example, Ngyen Van Nghi → Appendix), they travel as a **transverse** G.B. *luo* vessel to the *yuan*-source point **LIV-3** (*taichong*).
- A **longitudinal** division descends to the dorsum of the foot and spreads to the 3rd, 4th and 5th toes.

Clinical importance (→ 8.1.2)

Pathology

Excess (*shi*): Cold sensations in the feet

Deficiency (*xu*): Weakness, weak musculature of the foot, including difficulty in standing, paralysis of the lower extremity

4.11.5 Cutaneous Region (*shao yang pi bu*)

See description and figures → 1.6.

4.11.6 Points of the Gall Bladder Primary Channel (Overview)

Specific points according to their function

- ***Yuan*-source point (→ 8.1.1): G.B.-40** (*qiuxu*) ■■
- ***Luo*-connecting point (→ 8.1.2.): G.B.-37** (*guangming*) ■■
- ***Xi*-cleft point (→ 8.1.3): G.B.-36** (*waiqiu*)
- **Associated Back-*shu* point (→ 8.1.4): BL-19** (*danshu*) ■■
- **Associated Front-*mu* point (→ 8.1.5): G.B.-24** (*riyue*) ■■
- **Five *shu*-transporting points (→ 8.1.6):**
  jing-well point (Metal): **G.B.-44** (*zuqiaoyin*) ■■
  ying-spring point (Water), tonification point: **G.B.-43** (*xiaxi*)
  shu-stream point (Wood), *ben* point (Five Phases): **G.B.-41** (*zulinqi*) ■■
  jing-river point (Fire), sedation point: **G.B.-38** (*yangfu*)
  he-sea point (Earth): **G.B.-34** (*yanglingquan*) ■■
- ***Hui*-meeting point (→ 8.1.7)**
  – with the sinews: **G.B.-34** (*yanglingquan*) ■■
  – with the Marrow: **G.B.-39** (*xuanzhong*) ■■
- **Opening point (→ 8.1.8) of the *dai mai:* G.B.-41** (*zulinqi*) ■■
- **Lower *he*-sea point (→ 8.1.9) of the Gall Bladder: G.B.-34** (*yanglingquan*) ■■
- ***Jiaohui*-meeting points (→ 8.1.10):**
  – with the S.I. and T.B. channels: **G.B.-1** (*tongziliao*)
  – with the T.B. and ST channels: **G.B.-3** (*shangguan*), **G.B.-4** (*hanyan*)
  – with the T.B., L.I. and ST channels: **G.B.-5** (*xuanlu*), **G.B.-6** (*xuanli*)
  – with the BL channel: **G.B.-7** (*qubin*); **G.B.-8** (*shuaigu*) ■■, **G.B.-9** (*tianchong*), **G.B.-10** (*fubai*)
  – with the BL, (S.I., T.B.*) channels: **G.B.-11** (*touqiaoyin*)
  – with the BL channel: **G.B.-12** (*wangu*) ■■
  – with the *yang wei mai*: **G.B.-13** (*benshen*) ■■
  – with the *yang wei mai*, (T.B., ST, L.I. channels*): **G.B.-14** (*yangbai*) ■■
  – with the *yang wei mai* and the BL channel: **G.B.-15** (*toulinqi*)
  – with the *yang wei mai*: **G.B.-16** (*muchuang*). **G.B.-17** (*zhengying*), **G.B.-18** (*chengling*), **G.B.-19** (*naokong*)
  – with the *yang wei mai, yang qiao mai* and (T.B. channel*): **G.B.-20** (*fengchi*) ■■
  – with the *yang wei mai*, T.B. and (ST*) channels: **G.B.-21** (*jianjing*) ■■
  – with the BL channel*: **G.B.-23** (*zhejin*)
  – with the SP channel and (*yang wei mai**): **G.B.-24** (*riyue*) ■■
  – with the *dai mai*: **G.B.-26** (*daimai*), **G.B.-27** (*wushu*), **G.B.-28** (*weidao*)
  – with the *yang qiao mai* and (*dai mai**): **G.B.-29** (*juliao*)
  – with the BL channel: **G.B.-30** (*huantiao*) ■■
  – with the *yang wei mai**: **G.B.-35** (*yangjiao*)
  – of other channels with the G.B. channel: **ST-7, ST-8, ST-9, ST-12, S.I.12, S.I.-19, (BL-1, BL-11*), BL-31–34, P-1, (T.B.-15*), T.B-17, T.B.-20, T.B.-22, LIV-13, Du-1, Du-14, (Du-20, ST-5, ST-6, ST-30*)**
- **Gao Wu command point (→ 8.1.11): –**
- **Window of Heaven point (→ 8.1.12): G.B.-9** (*tianchong*)
- **Points of the Four Seas (→ 8.1.13): –**
- **Ma Dan Yang Heavenly Star points (→ 8.1.14): G.B.-30** (*huantiao*) ■■, **G.B.-34** (*yanglingquan*) ■■

* Mentioned by only some authors.

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- **Sun Si Miao Ghost point (→ 8.1.15): –**
- **Other functional points:**
  - main point for all disorders of the head, sensory organs, Brain: **G.B.-20** (*fengchi*) ■■
  - front-*mu* point of the Kidneys (→ 8.1.5): **G.B.-25** (*jingmen*) ■■
  - *xi*-cleft point (→ 8.1.3) of the *yang wei mai:* **G.B.-35** (*yangjiao*)

Points according to region

- **Local points (→ 8.2.1):** forehead – **G.B.-14** (*yangbai*) ■■; head, temporal region – **G.B.-8** (*shuaigu*) ■■; head, occipital region – **G.B.-20** (*fengchi*) ■■; ears – **G.B.-2** (*tingshui*) ■■; cervical spine – **G.B.-20** (*fengchi*) ■■; neck and shoulder region – **G.B.-20** (*fengchi*) ■■, **G.B.-21** (*jianjing*) ■■; Gall Bladder – **G.B.-24** (*riyue*) ■■; hypochondrium – **G.B.-25** (*jingmen*) ■■, **G.B.-26** (*daimai*), **G.B.-27** (*wushu*); hip – **G.B.-29** (*juliao*), **G.B.-30** (*huantiao*) ■■; knee – **G.B.-34** (*yanglingquan*) ■■, **G.B.-35** (*yangjiao*); foot – **G.B.-40** (*qiuxu*) ■■
- **Adjacent points (→ 8.2.1):** head, temporal region – **G.B.-20** (*fengchi*) ■■; ears – **G.B.-8** (*shuaigu*) ■■, **G.B.-20** (*fengchi*) ■■; cervical spine and shoulders – **G.B.-21** (*jianjing*) ■■; lumbar region – **G.B.-25** (*jingmen*) ■■, **G.B.-30** (*huantiao*) ■■; hip – **G.B.-31** (*fengshi*); knee – **G.B.-33** (*xiyangguan*); foot – **G.B.-34** (*yanglingquan*) ■■; toes – **G.B.-38** (*yangfu*)
- **Distal points (→ 8.2.1):** head, temporal region – **G.B.-43** (*xiaxi*), **G.B.-41** (*zulinqi*) ■■; eyes – **G.B.-37** (*guangming*) ■■; ears – **G.B.-41** (*zulinqi*) ■■; Liver – **G.B.-34** (*yanglingquan*) ■■; Gall Bladder – **G.B.-34** (*yanglingquan*) ■■, **G.B.-40** (*qiuxu*) ■■; hypochondrium – **G.B.-38** (*yangfu*), **G.B.-34** (*yanglingquan*) ■■, **G.B.-43** (*xiaxi*); cervical spine and hip – **G.B.-39** (*xuanzhong*) ■■; hip – **G.B.-41** (*zulinqi*) ■■

Specific points according to the channel pathway (in numeric order)

- **G.B.-1** (*tongziliao*): *jiaohui*-meeting point with the S.I. and T.B. channels (→ 8.1.10)
- **G.B.-2** (*tinghui*) ■■: local point for the ears (→ 8.2.1)
- **G.B.-3** (*shangguan*): *jiaohui*-meeting point with the T.B. and ST channels (→ 8.1.10)
- **G.B.-4** (*hanyan*): *jiaohui*-meeting point with the T.B. and ST channels (→ 8.1.10)
- **G.B.-5** (*xuanlu*): *jiaohui*-meeting point with the T.B., L.I. and ST channels (→ 8.1.10)
- **G.B.-6** (*xuanli*):): *jiaohui*-meeting point with the T.B., L.I. and ST channels (→ 8.1.10)
- **G.B.-7** (*qubin*):): *jiaohui*-meeting point with the BL channel (→ 8.1.10)
- **G.B.-8** (*shuaigu*) ■■: *jiaohui*-meeting point with the BL channel (→ 8.1.10); local point for the lateral aspect of the head (→ 8.2.1); adjacent point for the ears (→ 8.2.1)
- **G.B.-9** (*tianchong*): *jiaohui*-meeting point with the BL channel (→ 8.1.10)*; Window of Heaven point (→ 8.1.12)*
- **G.B.-10** (*fubai*): *jiaohui*-meeting point with the BL channel (→ 8.1.10)
- **G.B.-11** (*touqiaoyin*): *jiaohui*-meeting point with the BL, (S.I., T.B.)* channels (→ 8.1.10)
- **G.B.-12** (*wangu*): *jiaohui*-meeting point with the BL channel (→ 8.1.10)
- **G.B.-13** (*benshen*) ■■: *jiaohui*-meeting point with the *yang wei mai* (→ 8.1.10)
- **G.B.-14** (*yangbai*) ■■: *jiaohui*-meeting point with the *yang wei mai* and (T.B., ST, L.I.*) channels (→ 8.1.10); local point for the forehead (→ 8.2.1)
- **G.B.-15** (*toulinqi*): *jiaohui*-meeting point with the *yang wei mai* and BL channel (→ 8.1.10)
- **G.B.-16** (*muchuang*): *jiaohui*-meeting point with the *yang wei mai* (→ 8.1.10)
- **G.B.-17** (*zhengying*): *jiaohui*-meeting point with the *yang wei mai* (→ 8.1.10)
- **G.B.-18** (*chengling*): *jiaohui*-meeting point with the *yang wei mai* (→ 8.1.10)
- **G.B.-19** (*naokong*): *jiaohui*-meeting point with the *yang wei mai* (→ 8.1.10)
- **G.B.-20** (*fengchi*) ■■: *jiaohui*-meeting point with the *yang wei mai, yang qiao mai* and (T.B. channel*) (→ 8.1.10); local point for the occiput (→ 8.2.1); local point for the neck and shoulders (→ 8.2.1); local point for all disorders of the head, sensory organs, Brain; adjacent point for the lateral aspect of the head and the ears (→ 8.2.1)
- **G.B.-21** (*jianjing*) ■■: *jiaohui*-meeting point with the *yang wei mai*, T.B. and (ST*) channels (→ 8.1.10); adjacent point for the neck and shoulders (→ 8.2.1)
- **G.B.-23** (*zhejin*): *jiaohui*-meeting point with the BL channel (→ 8.1.10)
- **G.B.-24** (*riyue*) ■■: associated Front-*mu* point (→ 8.1.5); *jiaohui*-meeting point with the SP channel and (*yang wei mai**) (→ 8.1.10); local point for the Gall Bladder (→ 8.2.1)
- **G.B.-25** (*jingmen*) ■■: Front-*mu* point of the Kidneys (→ 8.1.5); local point for the hypochondrium (→ 8.2.1); adjacent point for the lumbar region (→ 8.2.1)
- **G.B.-26** (*daimai*): *jiaohui*-meeting point with the *dai mai* (→ 8.1.10); local point for the hypochondrium (→ 8.2.1)
- **G.B.-27** (*wushu*): *jiaohui*-meeting point with the *dai mai* (→ 8.1.10); local point for the hypochondrium (→ 8.2.1)
- **G.B.-28** (*weidao*): *jiaohui*-meeting point with the *dai mai* (→ 8.1.10);
- **G.B.-29** (*juliao*): *jiaohui*-meeting point with the *yang qiao mai* and (*dai mai**) (→ 8.1.10); local point for the hip (→ 8.2.1)
- **G.B.-30** (*huantiao*) ■■: *jiaohui*-meeting point with the BL channel (→ 8.1.10); Ma Dan Yang Heavenly Star point (→ 8.1.14); adjacent point for the lumbar region and the hip (→ 8.2.1); local point for the hip (→ 8.2.1)
- **G.B.-31** (*fengshi*): adjacent point for the hip (→ 8.2.1)
- **G.B.-33** (*xiyangguan*): adjacent point for the knee (→ 8.2.1)

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- **G.B.-34** (*yanglingquan*) ■■: *he*-sea point (Earth) (→ 8.1.6); *hui*-meeting point with the sinews (→ 8.1.7); lower *he*-sea point of the Gall Bladder (→ 8.1.9); Ma Dan Yang Heavenly Star point (→ 8.1.14); distal point for the Liver, Gall Bladder and hypochondrium (→ 8.2.1); local point for the knee (→ 8.2.1); adjacent point for the foot (→ 8.2.1)
- **G.B.-35** (*yangjiao*): *xi*-cleft point of the *yang wei mai* (→ 8.1.3); *jiaohui*-meeting point with the *yang wei mai** (→ 8.1.10); local point for the knee (→ 8.2.1)
- **G.B.-36** (*waiqiu*): *xi*-cleft point (→ 8.1.3)
- **G.B.-37** (*guangming*) ■■: *luo*-connecting point (→ 8.1.2); distal point for the eyes (→ 8.2.1)
- **G.B.-38** (*yangfu*): *jing*-river point (Fire) (→ 8.1.6); sedation point; distal point for the hypochondrium (→ 8.2.1)
- **G.B.-39** (*xuanzhong*) ■■: *hui*-meeting point with the Marrow (→ 8.1.7); distal point for the cervical spine and the hip (→ 8.2.1)
- **G.B.-40** (*qiuxu*) ■■: *yuan*-source point (→ 8.1.1); local point for the foot (→ 8.2.1); distal point for the Gall Bladder (→ 8.2.1)
- **G.B.-41** (*zulinqi*) ■■: *shu*-stream point (Wood); *ben* point (Five phases) (→ 8.1.6); Opening point (→ 8.1.8) of the *dai mai*; distal point for the temporal region and the ears (→ 8.2.1); distal point for the hip (→ 8.2.1)
- **G.B.-43** (*xiaxi*): *ying*-spring point (Water) (→ 8.1.6); tonification point; distal point for the lateral aspect of the head and the hypochondrium (→ 8.2.1)
- **G.B.-44** (*zuqiaoyin*) ■■: *jing*-well point (Metal) (→ 8.1.6)

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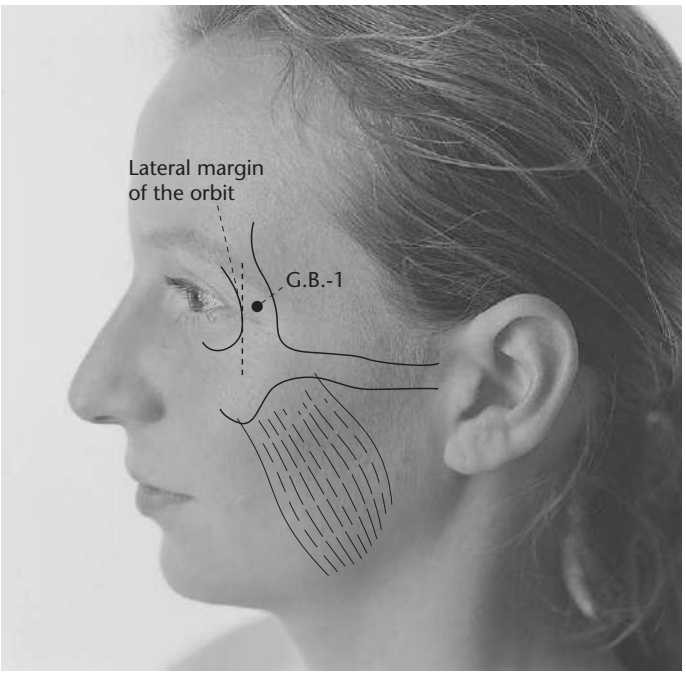
Pupil Crevice TONGZILIAO G.B.-1



Location

In a bony depression on the lateral aspect of the orbital margin, on the level of the outer canthus of the eye.

How to find

From the outer canthus of the eye, palpate in a lateral direction. Locate **G.B.-1** on the outer aspect of the orbit (diagonally inferior to the temple), where a bony depression can be palpated. → **T.B.-23** is located more superiorly on the lateral end of the eyebrow, in a depression on the frontozygomatic suture. → **BL-1** is located at the inner canthus of the eye.

Needling

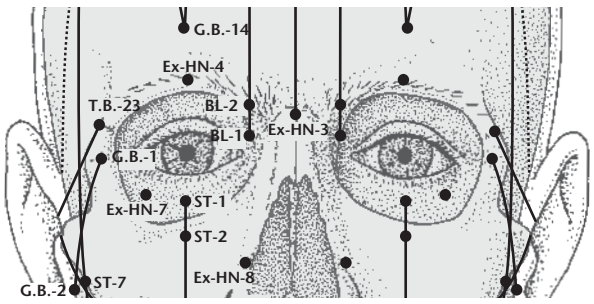
0.2–0.3 cun obliquely in a posterior direction or up to 1 cun transversely (subcutaneously) towards → **Ex-HN-5** (*taiyang*). According to some texts, moxibustion is contraindicated.

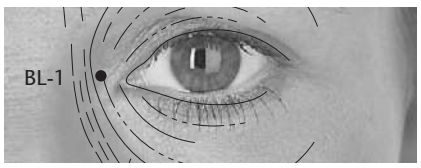
Actions/Indications

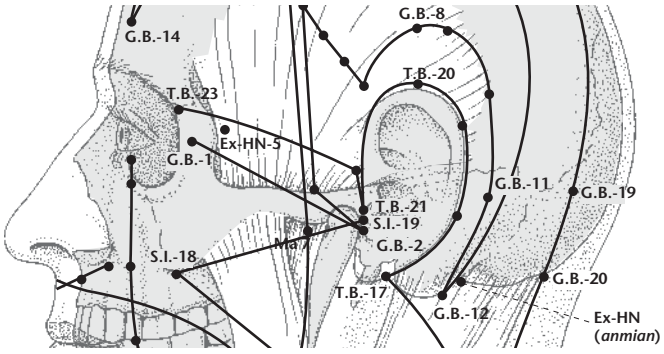
- Expels Wind and Heat from the eyes

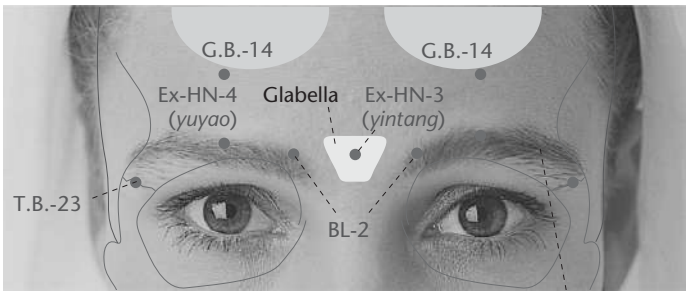
Special features

Meeting point with the S.I. and T.B. channels, entry point.









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G.B.-2 *Meeting of Hearing* TINGHUI

Location

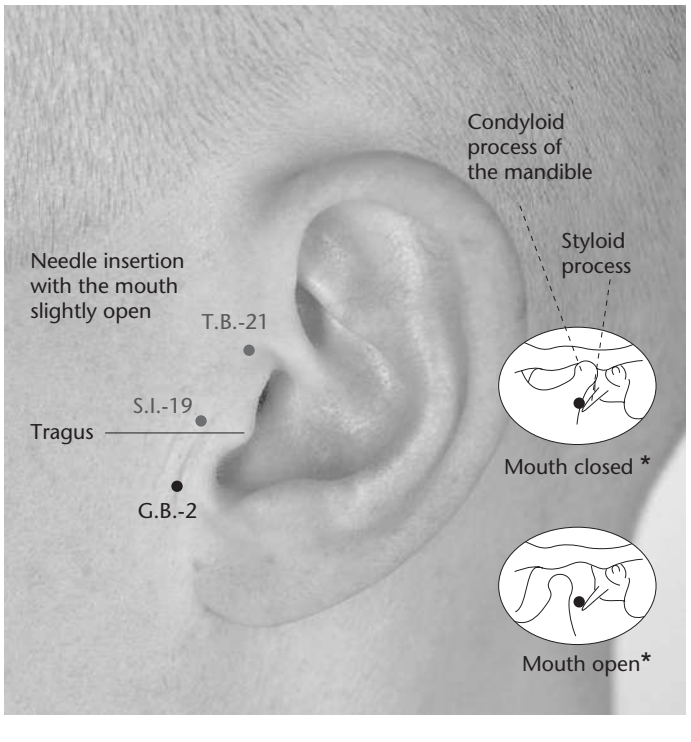
Anterior to the ear, with the patient's mouth open in the depression on the level of the intertragic notch, on the lower border of the condyloid process of the mandible.

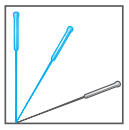
How to find

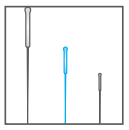
Locate and needle with the patient's mouth open as this allows the condyloid process of the mandible to slide towards the anterior, revealing the depression where **G.B.-2** is located. Find the vertical sulcus anterior to the ear (at the ear/cheek junction), which may be more or less pronounced. Then locate **G.B.-2** on the sulcus, on the level of the intertragic notch. If the sulcus is not clearly defined (it becomes more clearly visible with increasing age), the depression can be located by using an (ear) point locator. **G.B.-2** is the most distal of three points located anterior to the ear (→ **S.I.-19** and → **T.B.-21** are both located more superiorly).

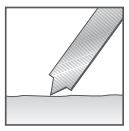
Needling

0.5–1 cun vertically or slightly obliquely in an inferior direction. Needle with the patient's mouth open to avoid intra-articular insertion. Caution: Like **T.B.-21** and **S.I.-19**, this point is located close to the superficial temporal artery and the auriculotemporal nerve.







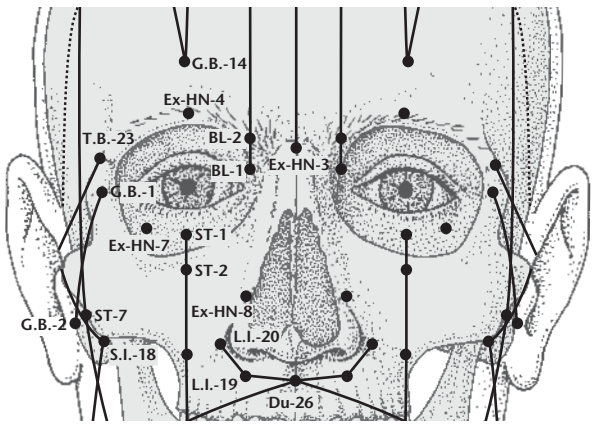


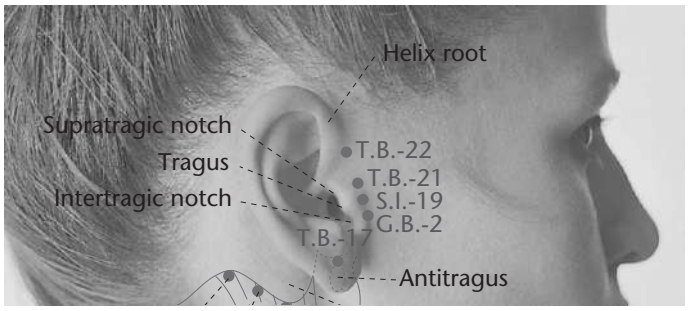
Actions/Indications

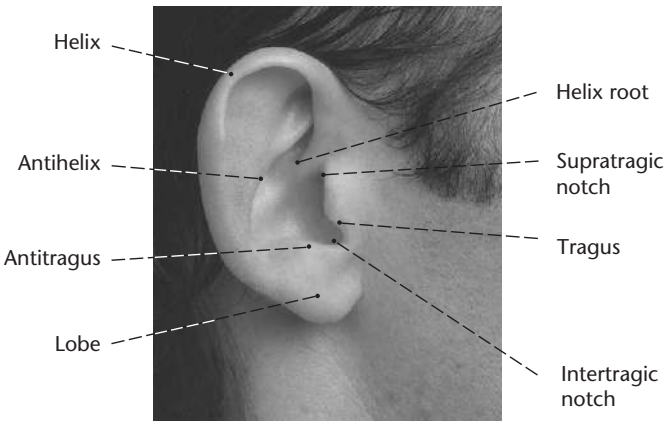
- Eliminates Wind, clears Heat, benefits the ears and the temporomandibular joint
- Opens the channel and the *luo*-connecting vessel, alleviates pain

Special features

Important local point for disorders of the ears and the jaw. This point is often used alternately with **T.B.-21** and **S.I.-19**.







* According to Deadman et al 1998.

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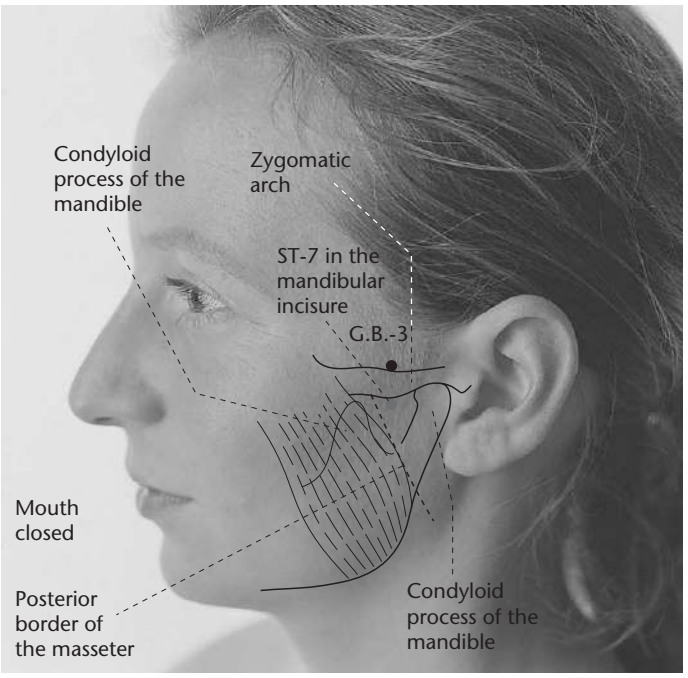
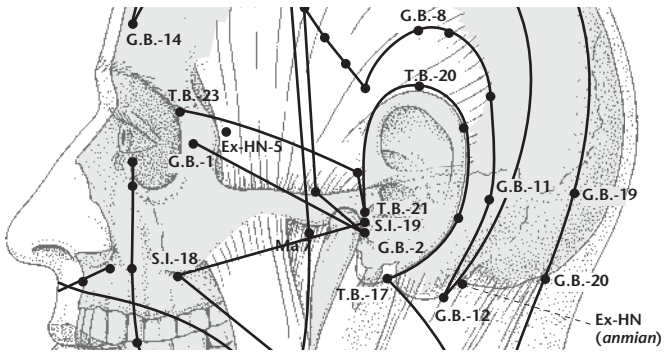
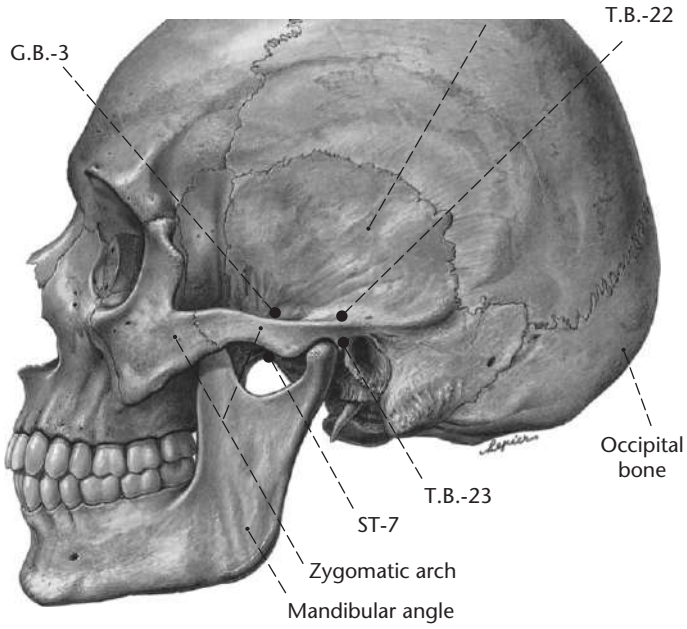
Above the Joint SHANGGUAN G.B.-3







Location

In a depression on the upper border of the zygomatic arch, approximately 1 cun anterior to the root of the ear, superior to → **ST-7**.

How to find

Locate the zygomatic arch (→ 3.1.2) by palpating from the root of the ear (root of the helix) approximately 1 cun towards the orbit. Follow its course by placing one finger above and the other finger below the arch. As soon as the lower finger has reached a clearly palpable depression anterior to the temporomandibular joint and posterior to the masseter muscle (→ **ST-7**), the upper finger will be resting on **G.B.-3**, which is located directly superior to → **ST-7** in a shallow depression on the superior border of the zygomatic arch.

Needling

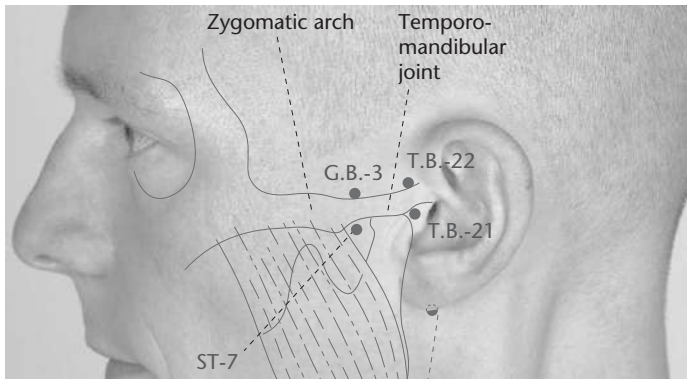
Vertically 0.3–0.5 cun, no strong stimulation. Caution: Branches of the temporal, transverse facial and masseteric arteries! Traditionally, deep needling is prohibited.

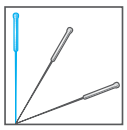
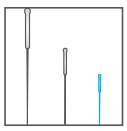
Actions/Indications

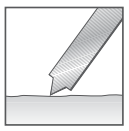
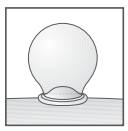
- Opens the channel, alleviates pain
- Eliminates Wind
- Benefits the ears

Special features

Meeting point with the T.B. and ST channels



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G.B.-4 *Jaw Serenity* HANYAN

Location

At the junction of the upper quarter and the second quarter of a line connecting → **ST-8** and → **G.B.-7**.

How to find

First, locate the two reference points: → **ST-8** (4.5 cun lateral to the midline and 0.5 cun within the anterior hairline, at the corner of the forehead) and → **G.B.-7** (in the depression on the level of the apex of the ear, within the circumauricular temporal hairline). Then divide the slightly curved line between these two points into quarters and locate **G.B.-4** at the junction of the upper quarter with the lower three quarters. Generally, **G.B.-4** is located on the temporal hairline and the anterior portion of the temporalis muscle, which can be felt when chewing.

Needling

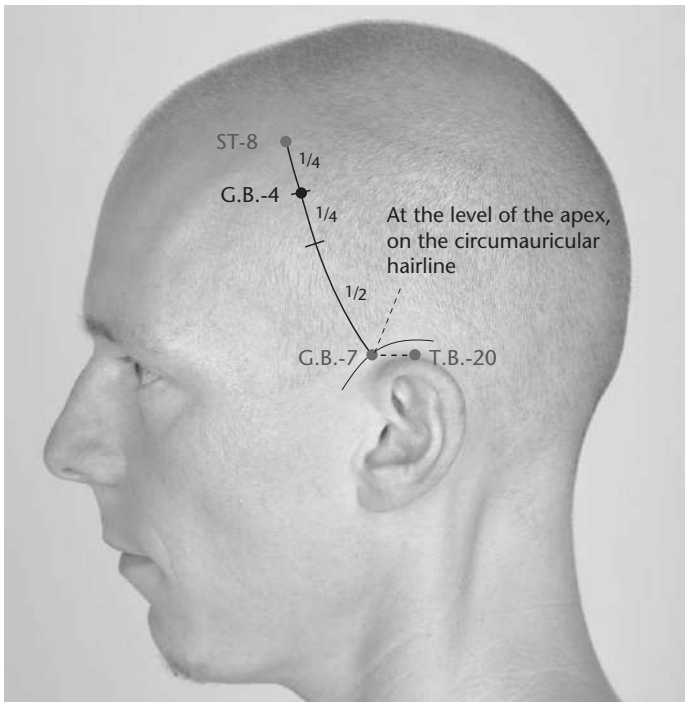
0.3–1.5 cun transversely (subcutaneously), tangentially along the skull, in the direction of the occiput or towards the disorder/pain.

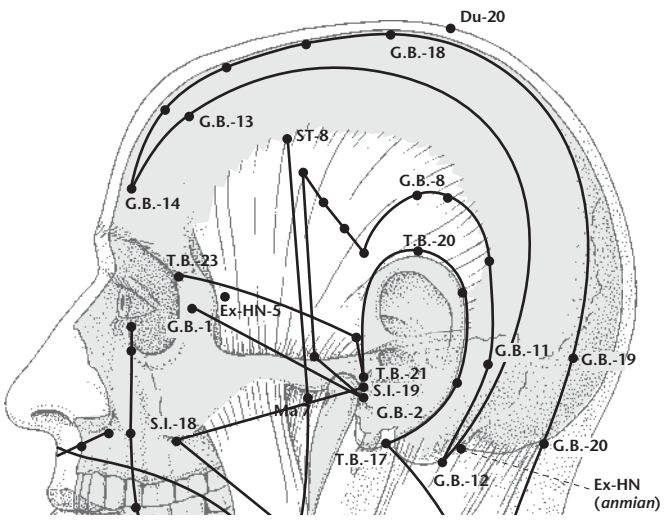
Actions/Indications

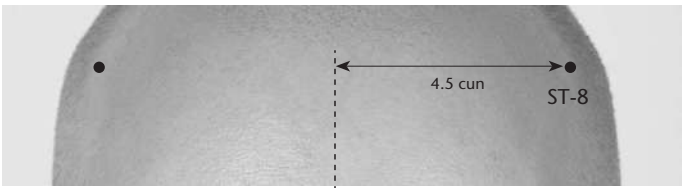
- Eliminates Wind and Heat
- Opens the channel

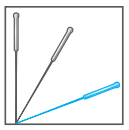
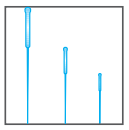
Special features

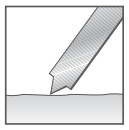
Meeting point with the T.B. and ST channel









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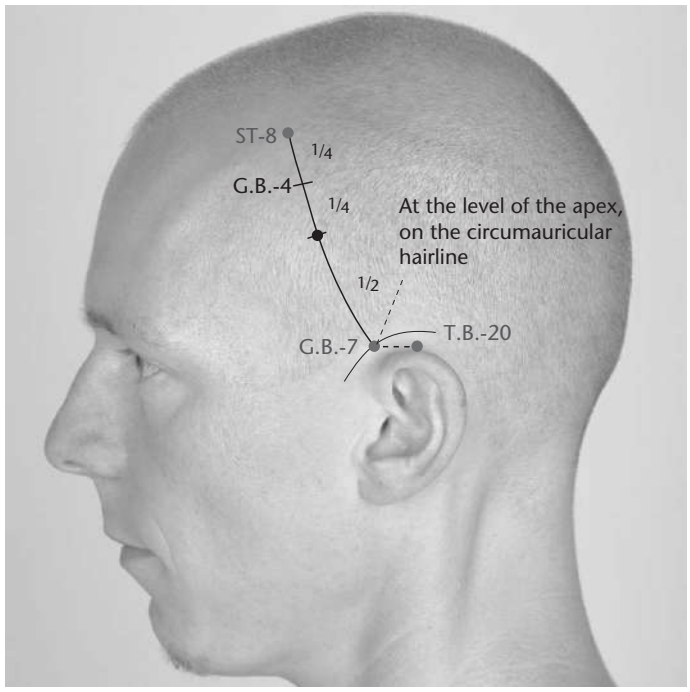
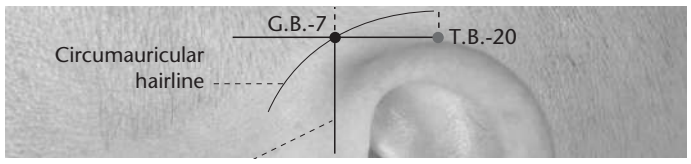
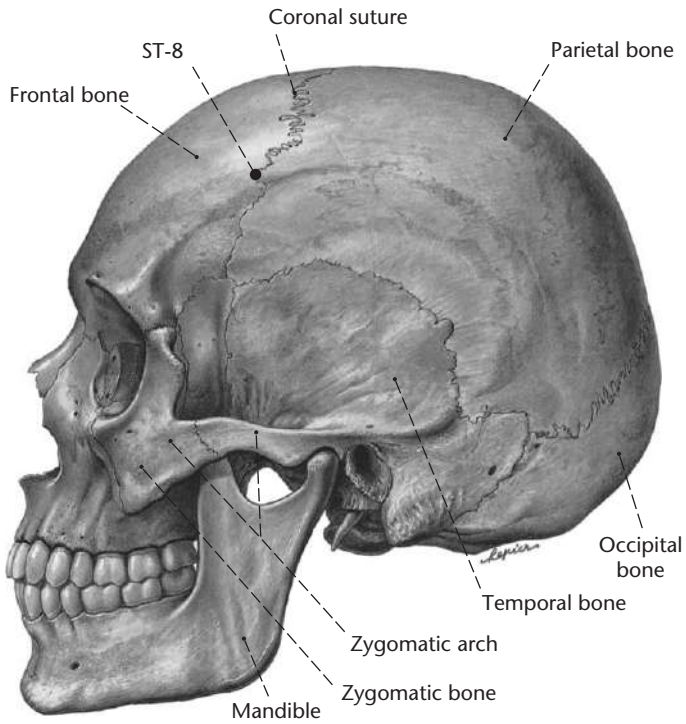
Suspended Skull XUANLU G.B.-5







Location

At the junction of the 2nd and 3rd quarter of an imaginary line connecting ➞ **ST-8** and ➞ **G.B.-7**.

How to find

First, locate the two reference points: ➞ **ST-8** (4.5 cun lateral to the midline and 0.5 cun within the anterior hairline, at the corner of the forehead) and ➞ **G.B.-7** (in the depression on the level of the apex of the ear, within the circumauricular temporal hairline). Then divide the slightly curved line between these two points into quarters and locate **G.B.-5** at the junction of the upper two quarters with the lower two quarters. Generally, this point is located on the level of the parietal suture, just within the hairline.

Needling

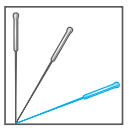
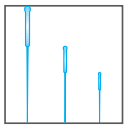
0.3–1.5 cun transversely (subcutaneously), tangentially along the skull, in the direction of the occiput or towards the disorder/pain.

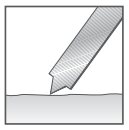
Actions/Indications

- Expels Wind and Heat
- Opens the channel

Special features

Meeting point with the T.B., L.I. and ST channels



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G.B.-6 *Suspended Hair* XUANLI

Location

At the junction of the lower quarter and the upper three quarters of a line connecting → **ST-8** and → **G.B.-7**.

How to find

First, locate the two reference points: → **ST-8** (4.5 cun lateral to the midline and 0.5 cun within the anterior hairline, at the corner of the forehead) and → **G.B.-7** (in the depression on the level of the apex of the ear, within the circumauricular temporal hairline). Then divide the slightly curved line between these two points into quarters and locate **G.B.-6** at the junction of the upper three quarters with the lower quarter.

Needling

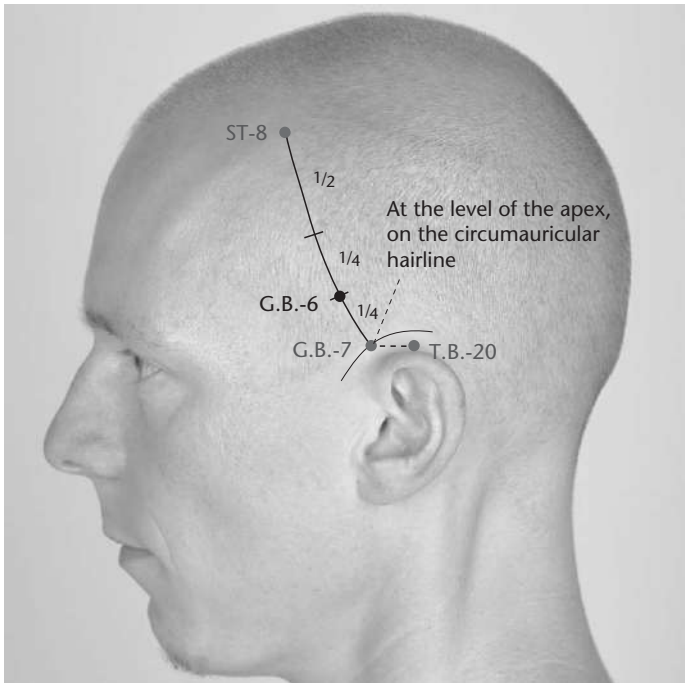
0.3–1.5 cun transversely (subcutaneously) in the direction of the occiput or towards the disorder/pain.

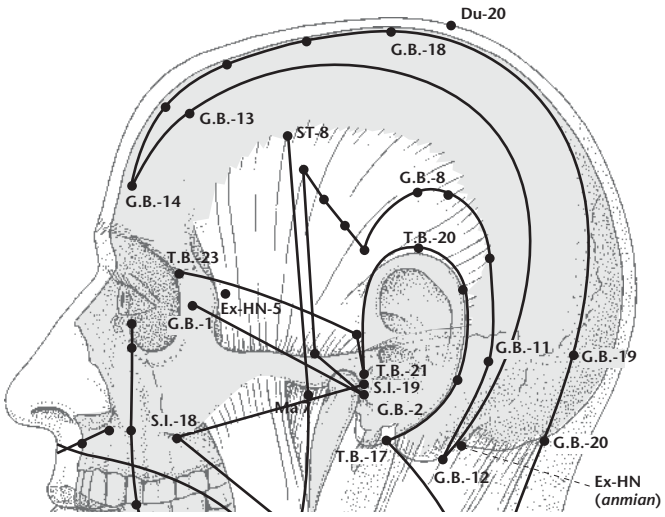
Actions/Indications

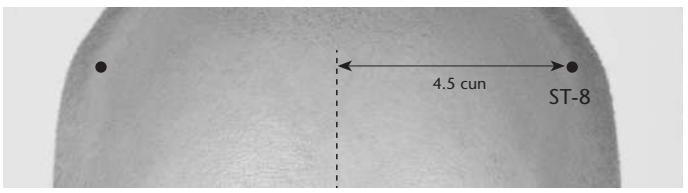
- Expels Wind and Heat
- Opens the channel

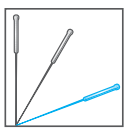
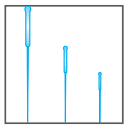
Special features

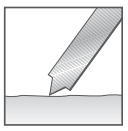
Meeting point with the L.I., ST and T.B. channels









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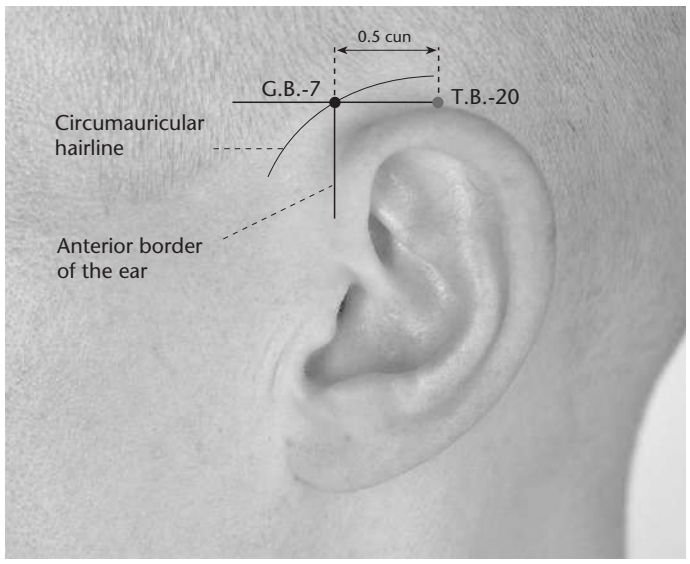
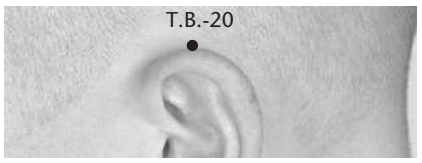
Crook of the Temple QUBIN G.B.-7





Location

In a depression on the level of the apex of the ear, within the circumauricular temporal hairline, approximately at the junction of a horizontal line through the apex of the ear and a vertical line along the posterior border of the temple anterior to the ear.

How to find

Locate **G.B.-7** by palpating for a small depression anterior to the apex of the ear at the circumauricular temporal hairline. The point is located approximately at a junction between a horizontal line through the apex of the ear and a vertical line along the posterior border of the temple anterior to the ear.

For orientation: → **T.B.-20** is located directly superior to the apex of the ear.

Needling

0.3–1.5 cun transversely (subcutaneously) in the direction of the occiput or towards the site of the disorder/pain.

Actions/Indications

- Expels Wind
- Benefits the mouth and jaw

Special features

Meeting point with the BL channel

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G.B.-8 *Leading Valley* SHUAIGU

Location

1.5 cun directly superior to the apex of the ear, in a depression on the upper border of the temporalis muscle.

How to find

Locate the apex of the ear, which becomes more clearly defined by folding the auricle towards the anterior so that the posterior part of the upper helix covers its anterior part. From the apex of the ear, measure 1.5 cun (2 fingerbreadths) in a superior direction. There, the palpating finger will glide into a bony depression (**G.B.-8**) which is often sensitive to pressure. For orientation: When a chewing movement is made, this can just about be felt at this point.

→ **G.B.-9** is located on the same level, 0.5 cun dorsal to **G.B.-8**.

Needling

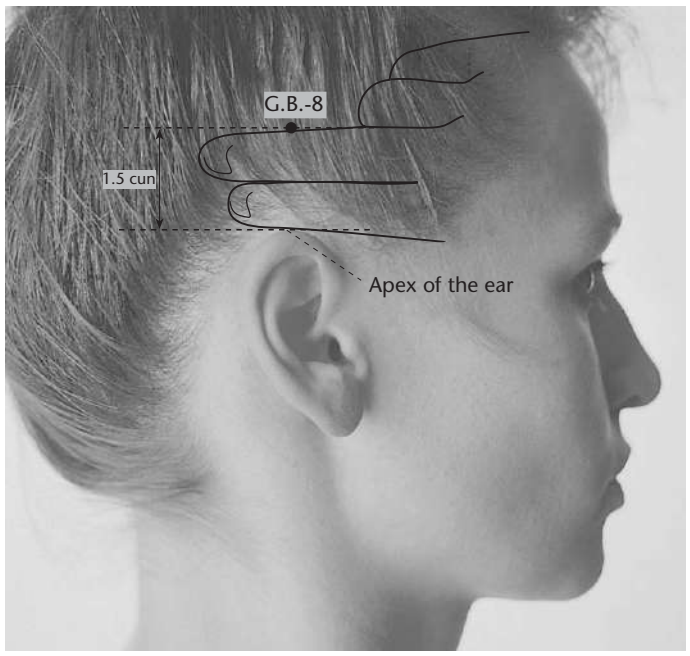
0.3–1.5 cun transversely (subcutaneously), mostly from anterior to posterior or towards the site of the pain.

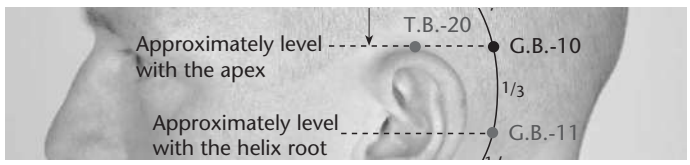
Actions/Indications

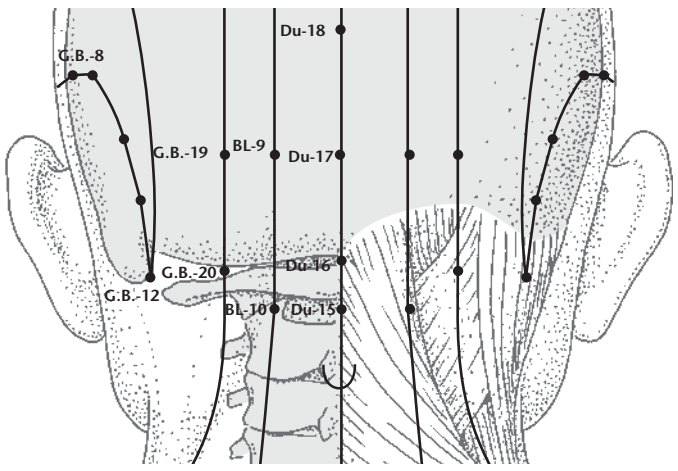
- Expels Wind, benefits the head and ears, alleviates pain, harmonises the diaphragm and Stomach

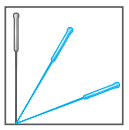
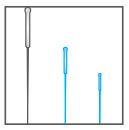
Special features

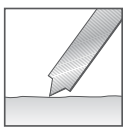
Meeting point with the BL channel. Important local point for parietal and temporal headaches.









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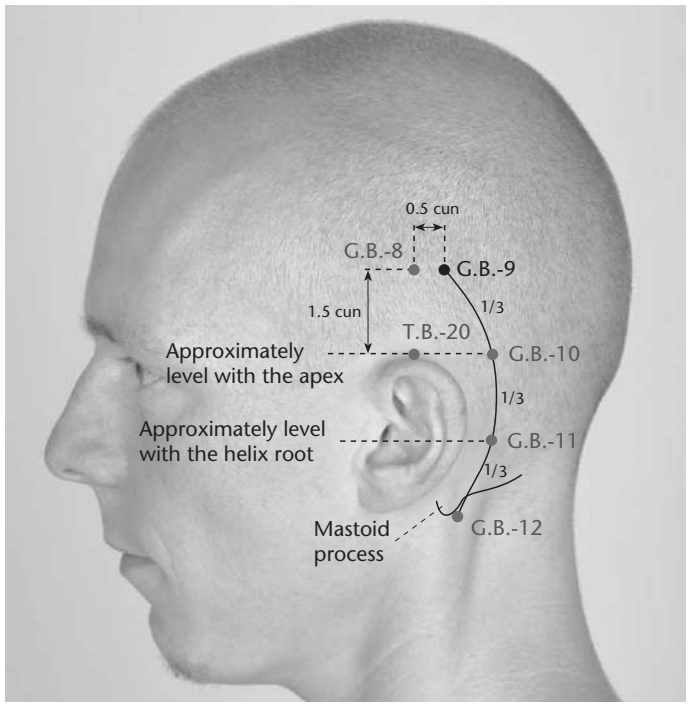
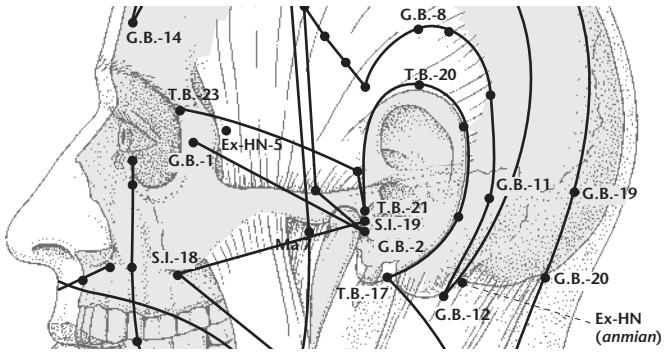
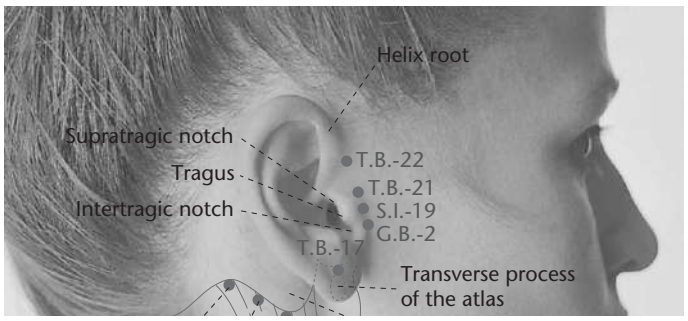
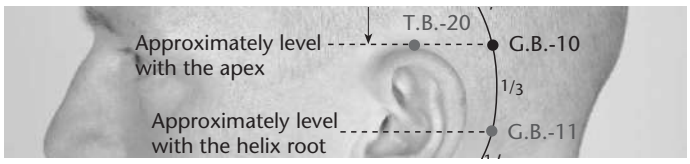
Heavenly Rushing TIANCHONG G.B.-9









Location

1.5 cun directly superior to the apex of the ear (→ **T.B.-20**) and 0.5 cun posterior to → **G.B.-8**. The point is approximately superior to the posterior margin of the ear.

How to find

First, locate → **G.B.-8** 1.5 cun superior to the apex of the ear. The latter becomes more clearly defined by folding the auricle towards the anterior so that the posterior part of the upper helix covers its anterior part. From → **G.B.-8**, measure 0.5 cun in a posterior direction and there locate **G.B.-9**. Similar to → **G.B.-8**, **G.B.-9** is located in a slight 'dip' in the bone.

Both **G.B.-9** and → **G.B.-12** (in the depression posterior and inferior to the mastoid process) are reference points for a curved line that runs approximately parallel to the posterior margin of the ear within the hairline. When dividing this line into thirds, → **G.B.-10** and → **G.B.-11** are located at the junctions of the thirds.

Needling

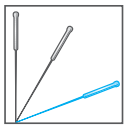
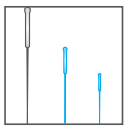
0.5–1.5 cun transversely (subcutaneously) towards the occiput or the site of the pain.

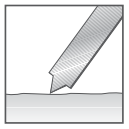
Actions/Indications

- Expels Wind and Heat
- Opens the *luo*-connecting vessels
- Calms the *shen*

Special features

Meeting point with the BL channel; Window of Heaven point according to some authors.



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G.B.-10 *Floating White* FUBAI

Location

Posterior to the ear, at the junction of the upper third with the two lower thirds of the curved line connecting → **G.B.-9** and → **G.B.-12**.

How to find

First, locate → **G.B.-9** (1.5 cun superior to the apex of the ear and 0.5 cun in a posterior direction). Then locate → **G.B.-12** in a depression posterior and inferior to the mastoid process (→ 3.1.4). These two points are the endpoints of a curved line that runs approximately parallel to the posterior margin of the ear within the hairline. Divide this line into thirds and locate **G.B.-10** at the junction of the upper and the middle third, where often a small 'dip' can be felt on the bone. **G.B.-10** tends to be on the level of the apex of the ear.

→ **T.B.-20** is located directly above the apex of the ear.

Needling

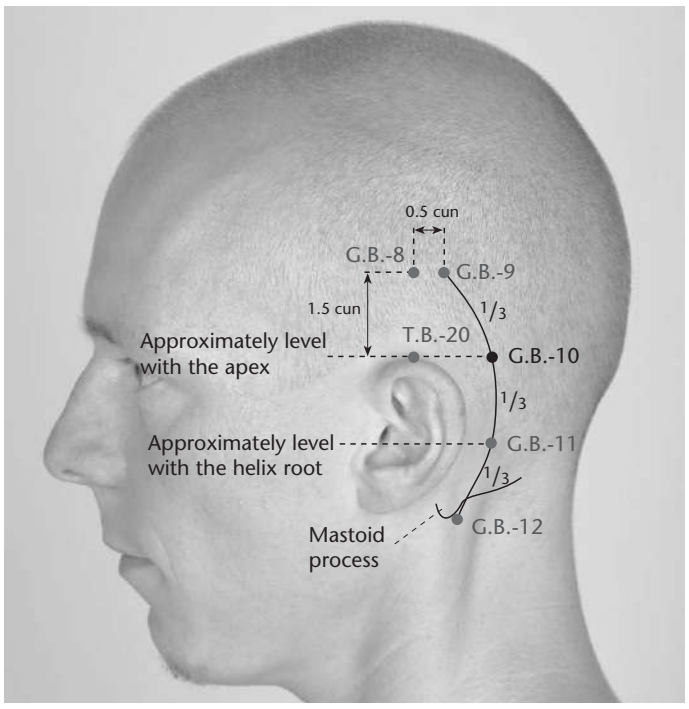
Transversely (subcutaneously) 0.5–0.8 cun

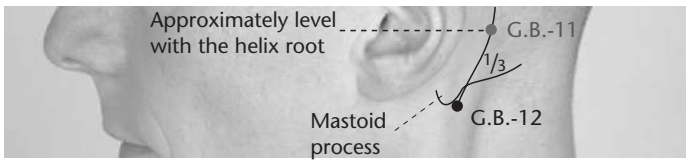
Actions/Indications

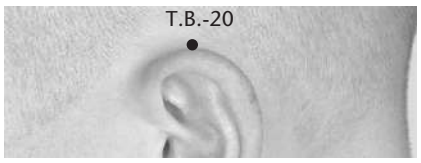
- Expels Wind
- Opens the *luo*-connecting vessels

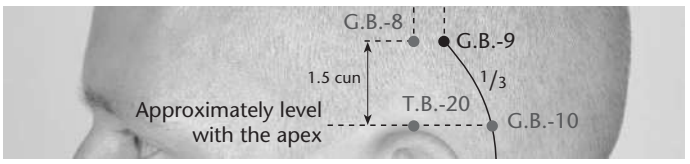
Special features

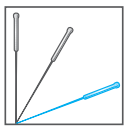
Meeting point with the BL channel

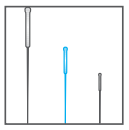


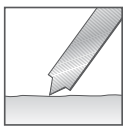












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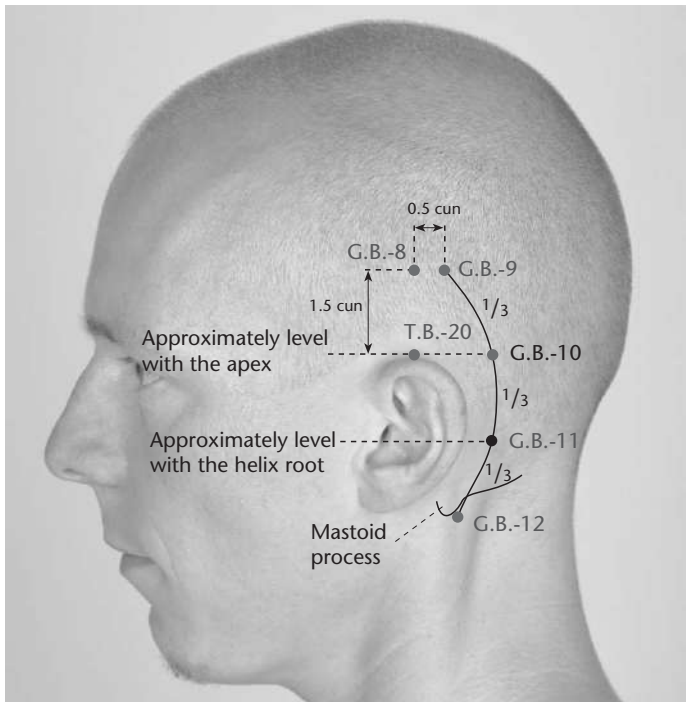
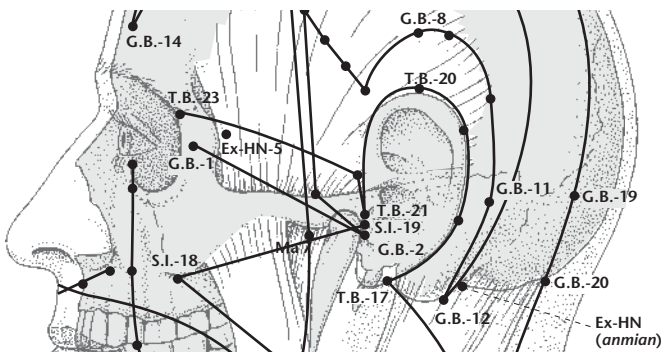
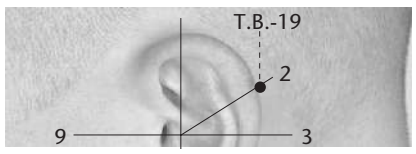
Head Portal Yin TOUQIAOYIN G.B.-11







Location

Posterior to the ear, at the junction of the lower third with the two upper thirds of the curved line connecting → **G.B.-9** and → **G.B.-12**.

How to find

First, locate → **G.B.-9** (1.5 cun superior to the apex of the ear and 0.5 cun in a posterior direction). Then locate → **G.B.-12** in a depression posterior and inferior to the mastoid process (→ 3.1.4). These two points are the endpoints of a curved line that runs approximately parallel to the posterior margin of the ear within the hairline. Divide this line into thirds and locate **G.B.-11** at the junction of the middle and the lower third. At this point, a small 'dip' often can be felt in the bone. For reference: **G.B.-11** is located at the midpoint between a line connecting → **G.B.-10** and → **G.B.-12** and is generally on the level of the root of the helix.

→ **T.B.-19** is located on the same level, directly posterior to the helix.

Needling

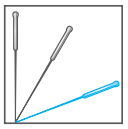
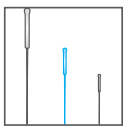
Transversely (subcutaneously) 0.5–0.8 cun

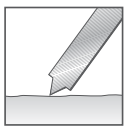
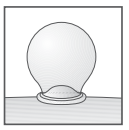
Actions/Indications

- Expels Wind and Damp-Heat
- Opens the ears and the eyes
- Moves the (Liver) Qi and Blood

Special features

Meeting point with the BL channel, also with the S.I. and T.B. channels according to some authors.

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G.B.-12 *Mastoid Process* WANGU

Location

In a depression directly posterior and inferior to the mastoid process.

How to find

First, locate the mastoid process posterior to the ear (→ 3.1.4). This can be palpated at the junction of the cranium and the neck as a cone-shaped, bony structure. With the palpating finger, find the inferior aspect of the mastoid process and locate **G.B.-12** on its lower border posterior to the tip of the process.

→ **T.B.-17** is located more anteriorly, in the depression posterior to the earlobe, between the mastoid process and the mandible.

Needling

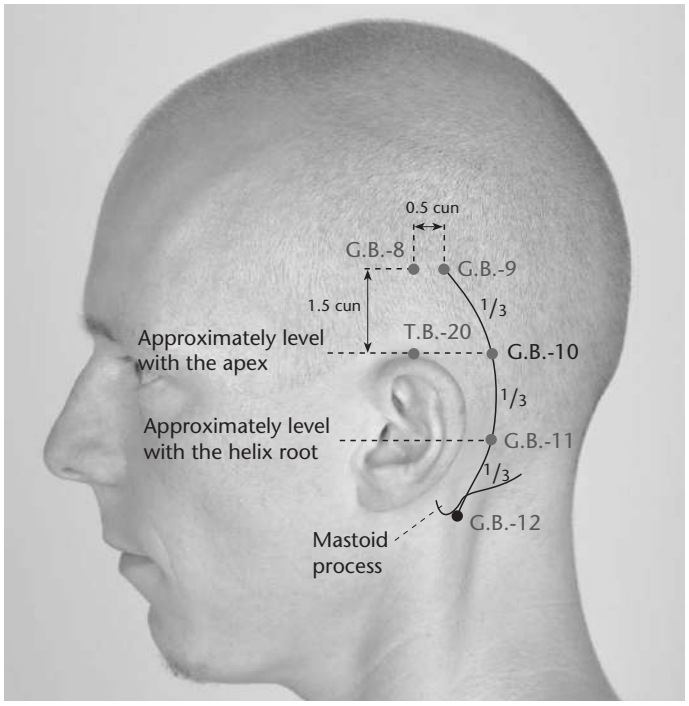
0.5–1 cun obliquely in an inferior direction.

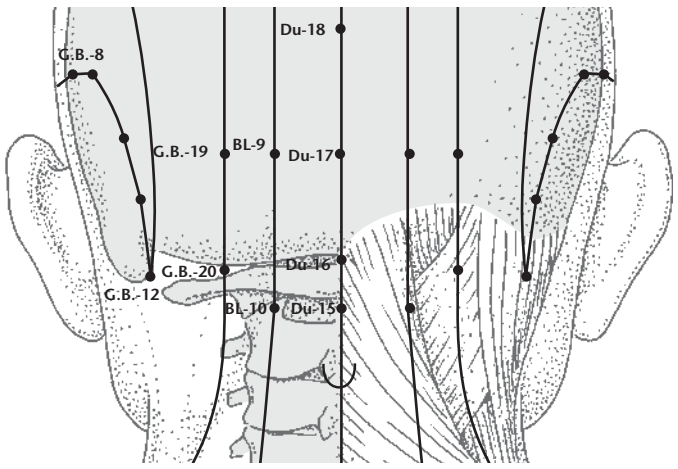
Actions/Indications

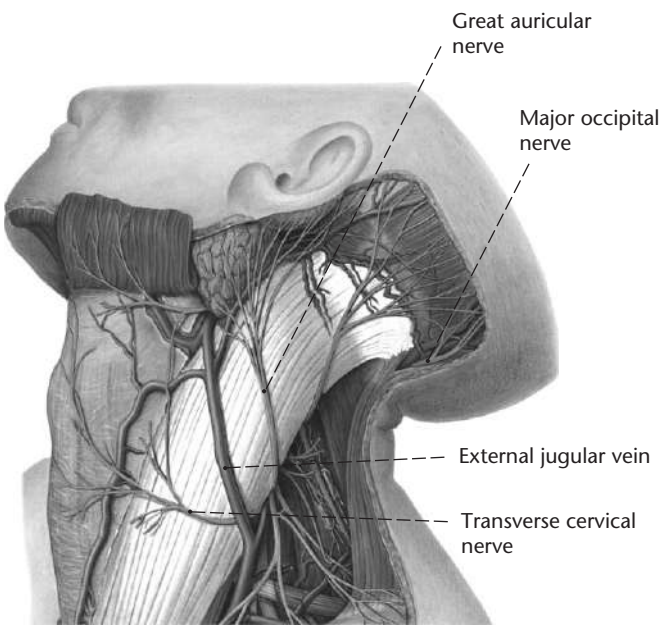
- Expels Wind, Heat and Dampness/Phlegm
- Opens the ears
- Calms the *shen*

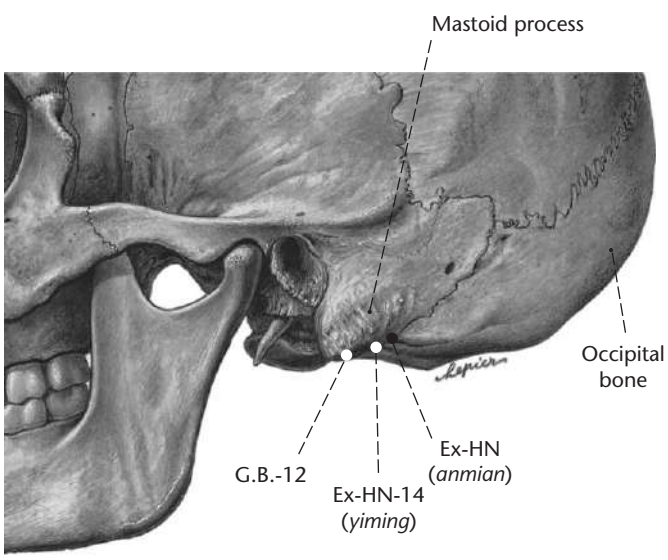
Special features

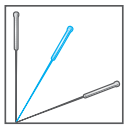
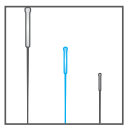
Meeting point with the BL channel

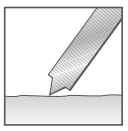










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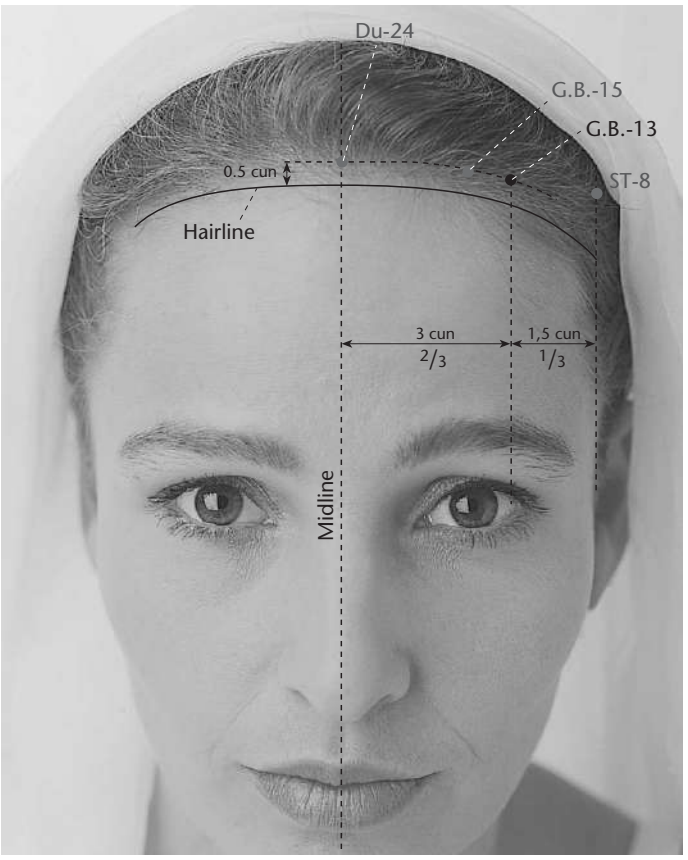
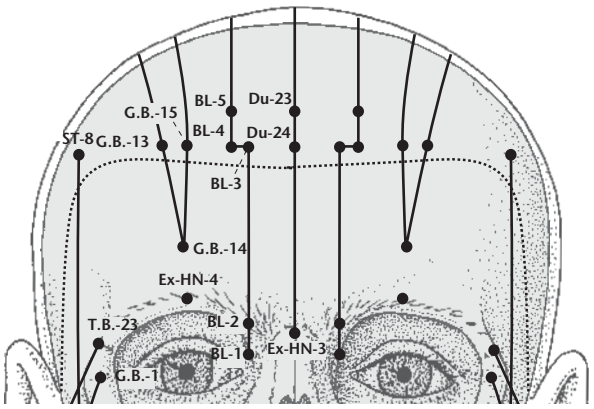
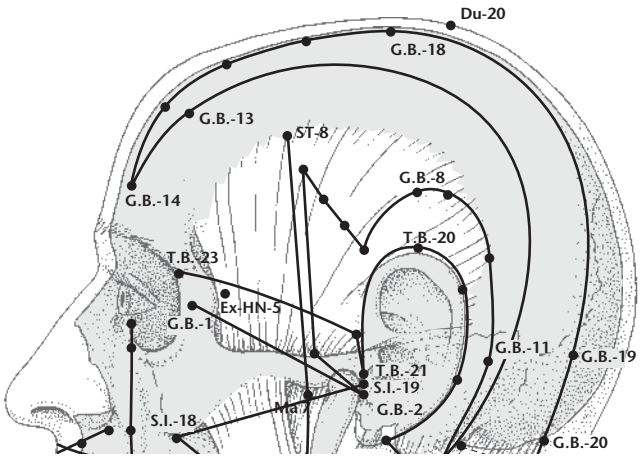
Spirit Root BENSHEN G.B.-13







Location

3 cun lateral to → **Du-24** (on the midline, 0.5 cun superior to the anterior hairline).

How to find

First, locate the anterior hairline (→ 3.1.1, with hairloss: when the patient frowns, the anterior hairline is marked by the border between the creased forehead and the smooth skin above) and there locate → **Du-24** on the midline and 0.5 cun within the hairline. **G.B.-13** is located on the same level, 3 cun lateral to the midline, measured in proportional cun based on the distance → **ST-8** to → **Du-24** (=4.5 cun, 2.2). Divide this distance into thirds and locate **G.B.-13** one third of the distance from **ST-8**. Located at the same level (0.5 cun within the anterior hairline) are → **Du-24/BL-3/BL-4/G.B.-15/ST-8** (on the midline/superior to the inner canthus of the eye/1.5 cun lateral to the midline/on the pupil line or 2.25 cun lateral to the midline/on the corner of the forehead).

Needling

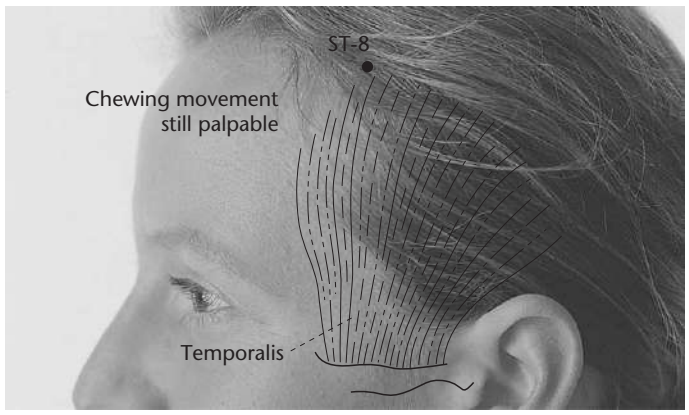
0.5–0.8 cun transversely (subcutaneously) towards the occiput.

Actions/Indications

- Expels Wind
- Calms the *shen*
- Benefits the eyes

Special features

Meeting point with the *yang wei mai*



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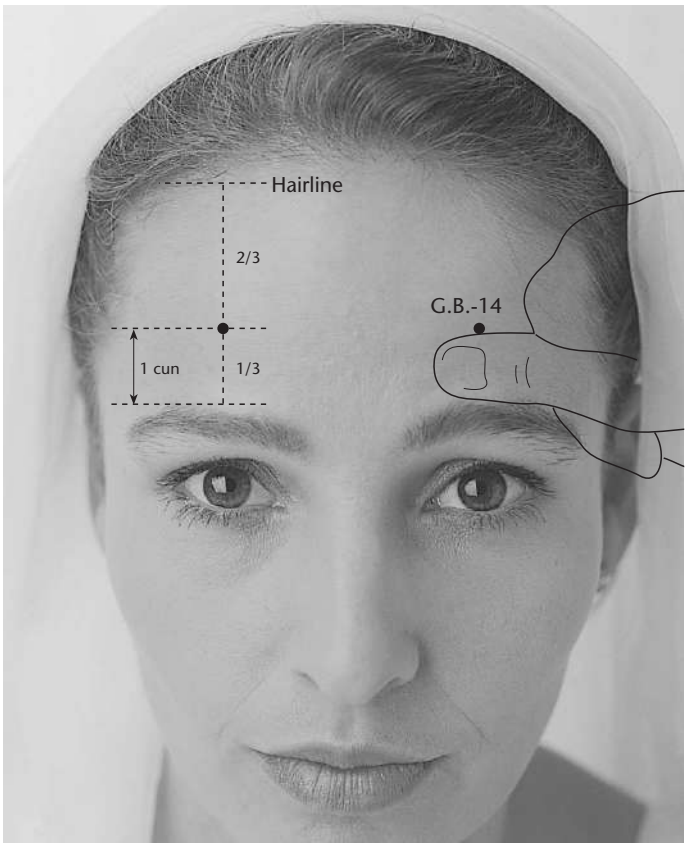
G.B.-14 *Yang White* YANGBAI

Location

With the patient looking straight ahead, on the pupil line, approximately 1 cun superior to the midpoint of the eyebrow, at the junction of the frontal eminence and the superciliary arch.



How to find

On the pupil line, palpate from the anterior hairline in an inferior direction, past the frontal eminence, and locate **G.B.-14** at the deepest point between the frontal eminence and the superciliary arch. The distance between the midpoint of the eyebrow and the anterior hairline (→ 3.1.1) is 3 proportional cun (→ 2.2). **G.B.-14** is located one third of the distance or 1 cun superior to the midpoint of the eyebrow. With the patient looking straight ahead, **G.B.-14** is located on the pupil line.

Needling

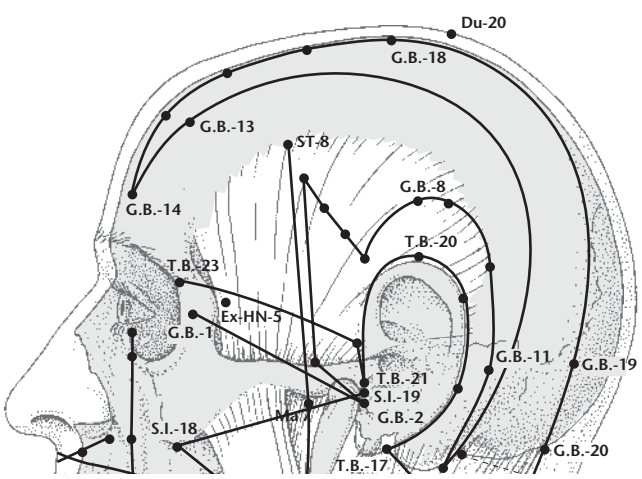
0.3–1 cun transversely (subcutaneously) towards the centre of the eyebrow or towards the site of the pain. The pinching-skin method might be used for needling: pinch the skin between the thumb and index finger so that a skin fold forms. Insert the needle subcutaneously into this fold, directing it towards the site of the pain.

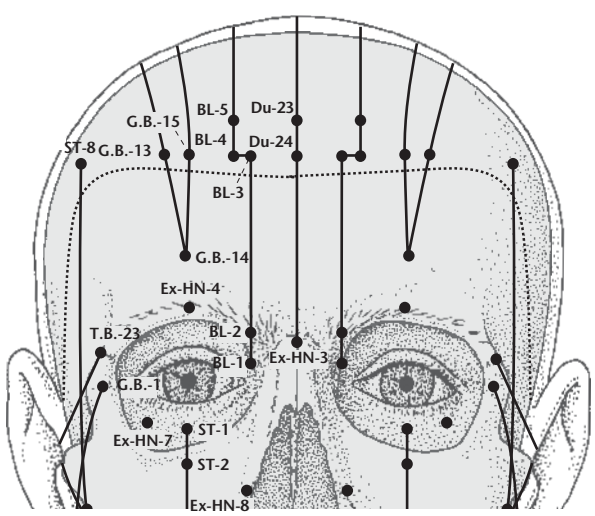
Actions/Indications

- Expels (internal and external) Wind and Wind-Heat, benefits the head, alleviates pain
- Benefits the eyes

Special features

Meeting point with the *yang wei mai*, also with the T.B., L.I. and ST channels according to some authors. Important local point for frontal headache regardless of the pathology.





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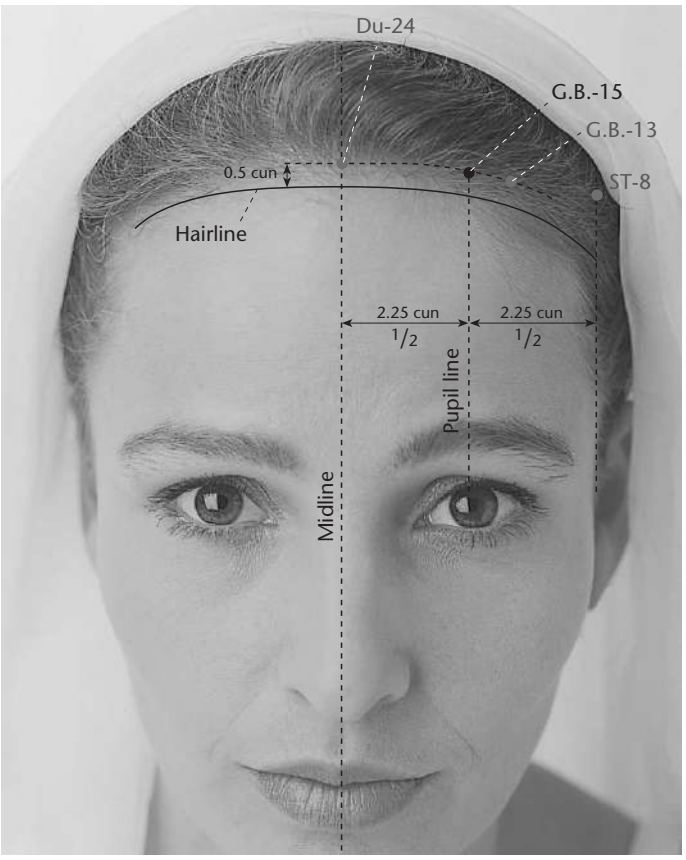
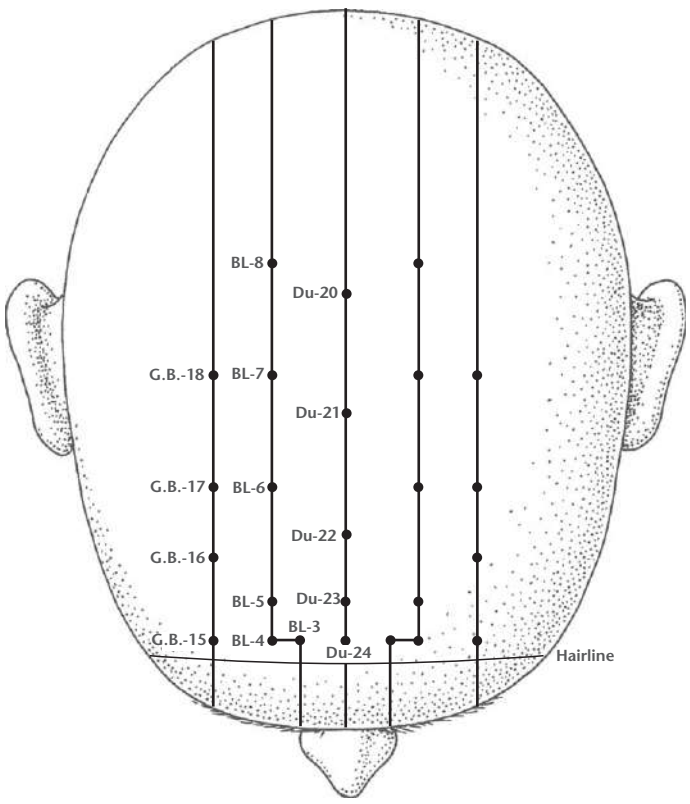
Head Governor of Tears TOULINQI G.B.-15





Location

With the patient looking straight ahead, directly superior to the pupil and 0.5 cun superior to the anterior hairline.

How to find

First, locate the anterior hairline (→ 3.1.1, with hairloss: when the patient frowns, the anterior hairline is marked by the border between the creased forehead and the smooth skin above). With the patient looking straight ahead, **G.B.-15** is located 0.5 cun superior to the anterior hairline and directly superior to the pupil. **G.B.-15** can also be described as being located midway between → **Du-24** (on the midline) and → **ST-8** (4.5 cun lateral to the midline, on the corner of the forehead).

Located on the same level (0.5 cun within the anterior hairline) are → **Du-24/BL-3/BL-4/G.B.-13/ST-8** (on the midline/ superior to the inner canthus of the eye/1.5 cun lateral to the midline/3 cun lateral to the midline or one third of the distance from → **ST-8** (on the corner of the forehead) to → **Du-24**.

Needling

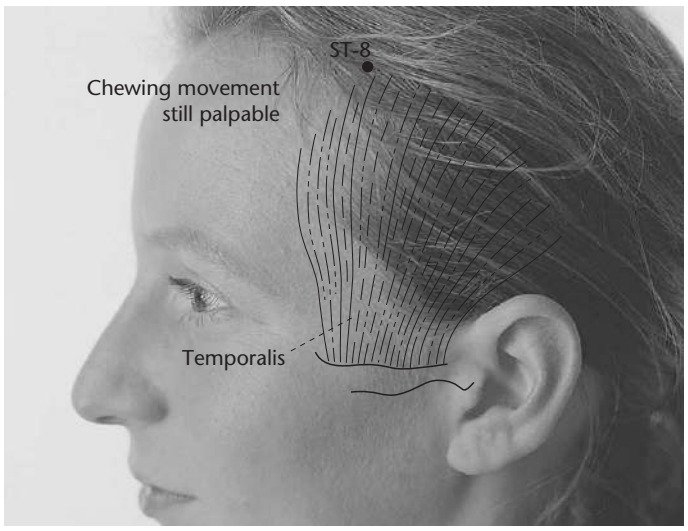
Transversely (subcutaneously) 0.3–0.5 cun

Actions/Indications

- Expels Wind
- Opens the eyes and nasal passages
- Calms the *shen*

Special features

Meeting point with the *yang wei mai*, also with the BL channel according to some authors.



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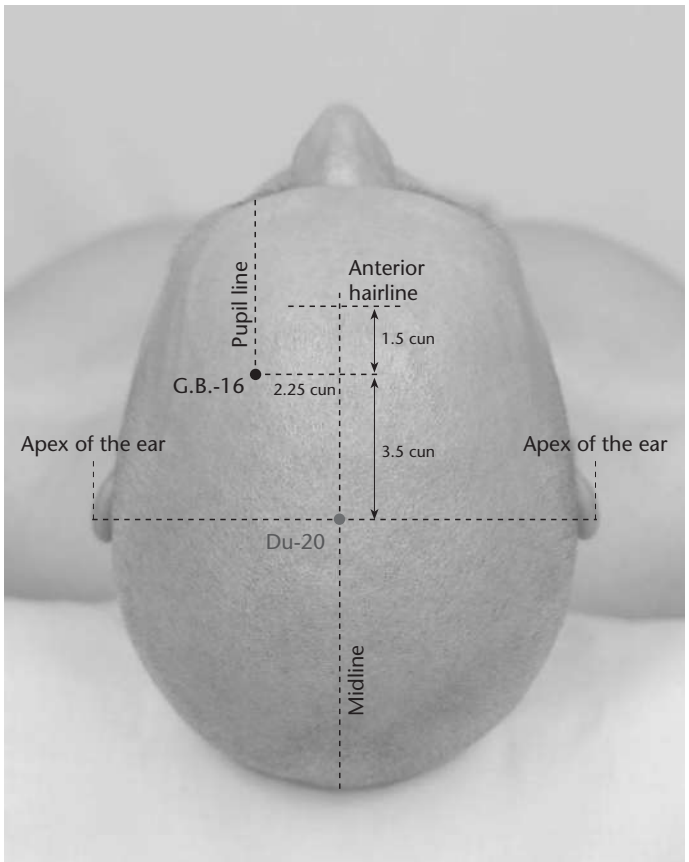
G.B.-16 *Window of the Eye* MUCHUANG

Location

1.5 cun superior to the anterior hairline, on the pupil line or 2.25 cun lateral to the midline (midway between → **Du-24** and → **ST-8**).

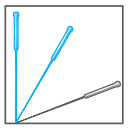
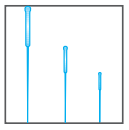
How to find

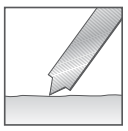
Locate the anterior hairline (→ 3.1.1, with hairloss: when the patient frowns, the anterior hairline is marked by the border between the creased forehead and the smooth skin above). With the patient looking straight ahead, **G.B.-16** is located 1.5 cun superior to the anterior hairline, on a vertical line through the centre of the pupil. This line is located 2.25 cun lateral to the midline (this corresponds to the midpoint of the distance between → **Du-24** and → **ST-8**). For further orientation: The distance between the anterior hairline and → **Du-20** (at the junction of the vertical midline and a line connecting the apices of the ears) is 5 cun. → **G.B.-16** is located 3.5 cun anterior to → **Du-20**, on the curved line connecting → **G.B.-15** and → **G.B.-20**.
→ **G.B.-15** is located on the same vertical line, but 0.5 cun superior to the anterior hairline.



Needling

0.3–1.5 cun transversely (subcutaneously) towards the occiput or the site of the disorder/pain.

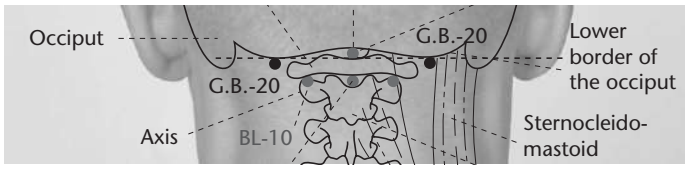


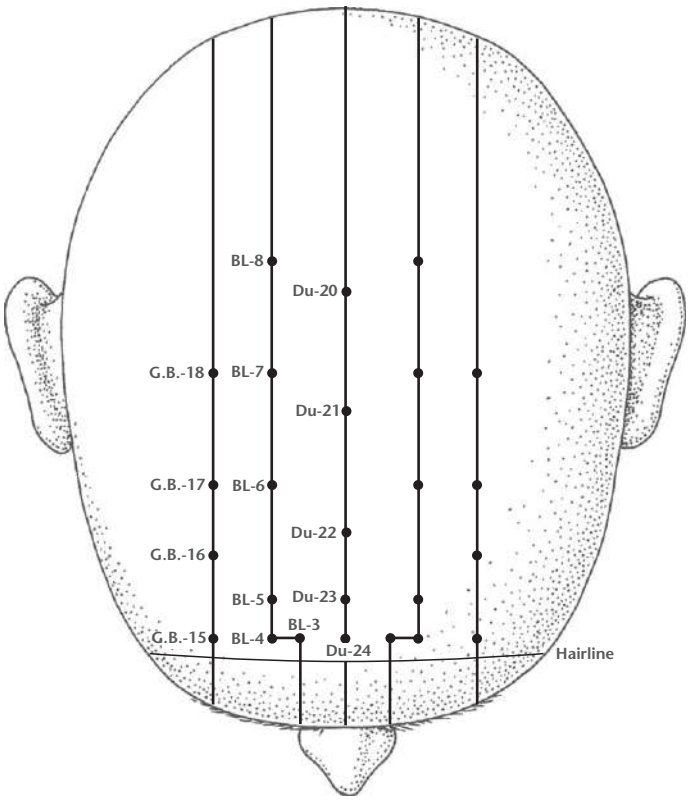
Actions/Indications

- Expels pathogenic factors (especially Wind) from the head and eyes
- Opens the *luo*-connecting vessels

Special features

Meeting point with the *yang wei mai*





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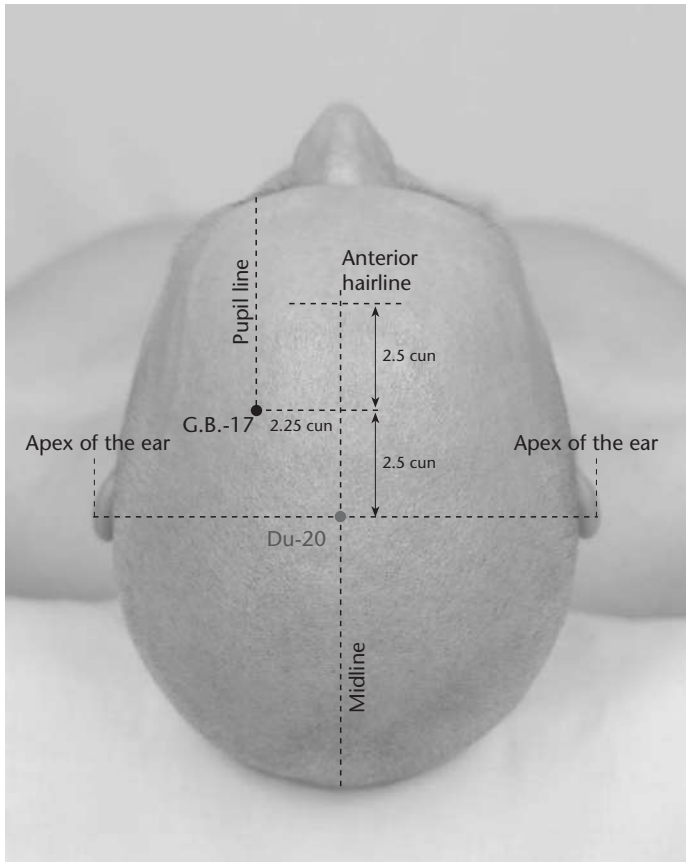
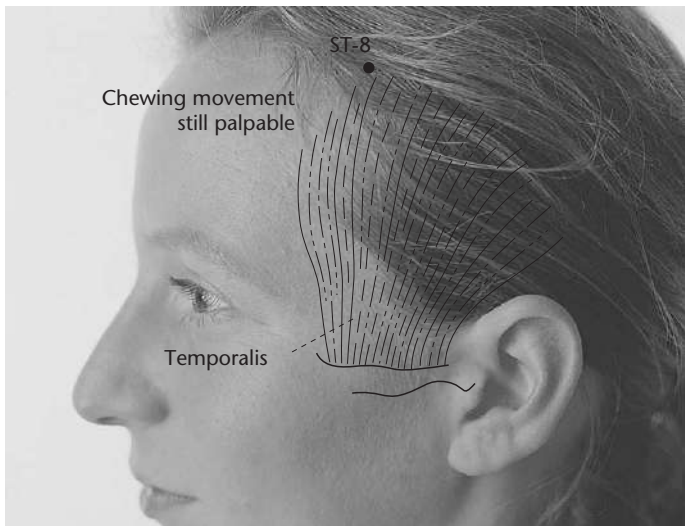
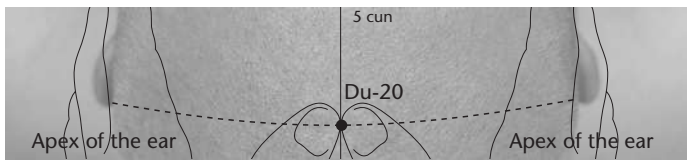
Upright Nutrition ZHENGYING G.B.-17







Location

2.5 cun superior to the anterior hairline and 2.25 cun lateral to the midline.

How to find

First, on the midline, locate the anterior hairline (→ 3.1.1, with hairloss: when the patient frowns, the anterior hairline is marked by the border between the creased forehead and the smooth skin above) and → **Du-20** (at the junction of the vertical midline and a line connecting the apices of the ears). The distance between these two points is 5 proportional cun (→ 2.2). Locate the mid-point (for example by using the spreading hands technique → 2.3.3). **G.B.-17** is located on the curved line connecting → **G.B.-15** and → **G.B.-20** (an extension of the pupil line, 2.25 cun lateral to the midline).

→ **BL-6** is also located 2.5 cun anterior to → **Du-20**, but 1.5 cun lateral to the midline.

Needling

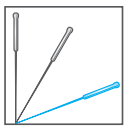
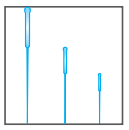
0.3–1.5 cun transversely (subcutaneously) towards the occiput or the site of the disorder/pain.

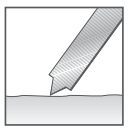
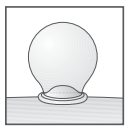
Actions/Indications

- Expels Wind
- Opens the *luo*-connecting vessels
- Descends counterflow Stomach Qi

Special features

Meeting point with the *yang wei mai*

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G.B.-18 *Support Spirit* CHENGLING

Location

4 cun superior to the anterior hairline or 1 cun anterior to → **Du-20** and 2.25 cun lateral to the midline.

How to find

First, locate → **Du-20** (at the junction of the vertical midline and a line connecting the apices of the ears, distance to the anterior hairline = 5 cun). Next, locate **G.B.-18** 1 cun anterior to → **Du-20** on the curved line connecting → **G.B.-15** and → **G.B.-20** (= extension of the pupil line, midway between → **ST-8** and → **Du-24**).
→ **BL-7** is located on the same level (1 cun anterior to → **Du-20**), but 1.5 cun lateral to the midline.

Needling

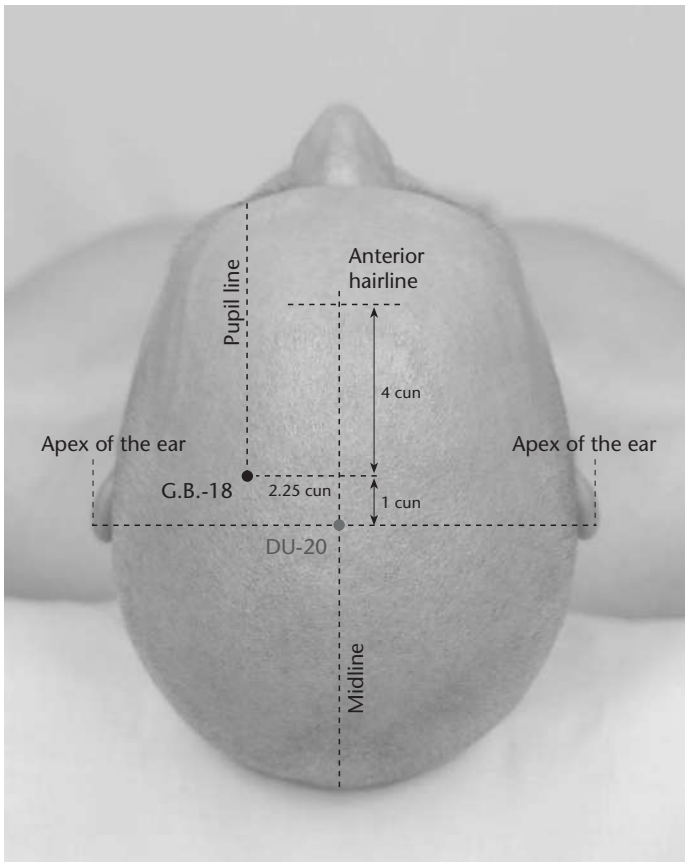
0.3–1.5 cun transversely (subcutaneously) towards the occiput or the site of the disorder/pain.

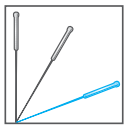
Actions/Indications

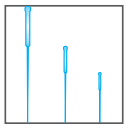
- Expels Wind, especially from the nose

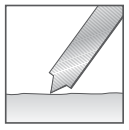
Special features

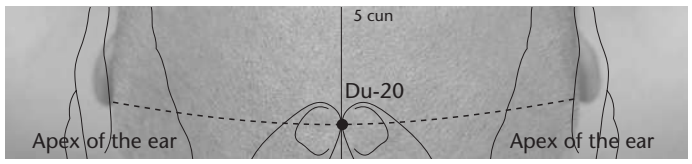
Meeting point with the *yang wei mai*

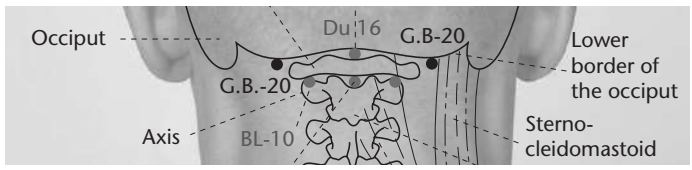


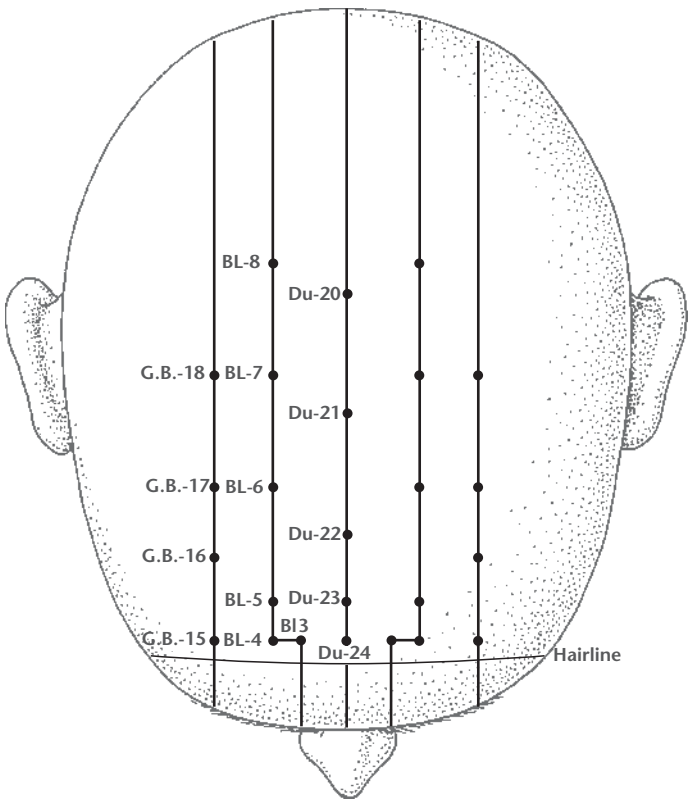












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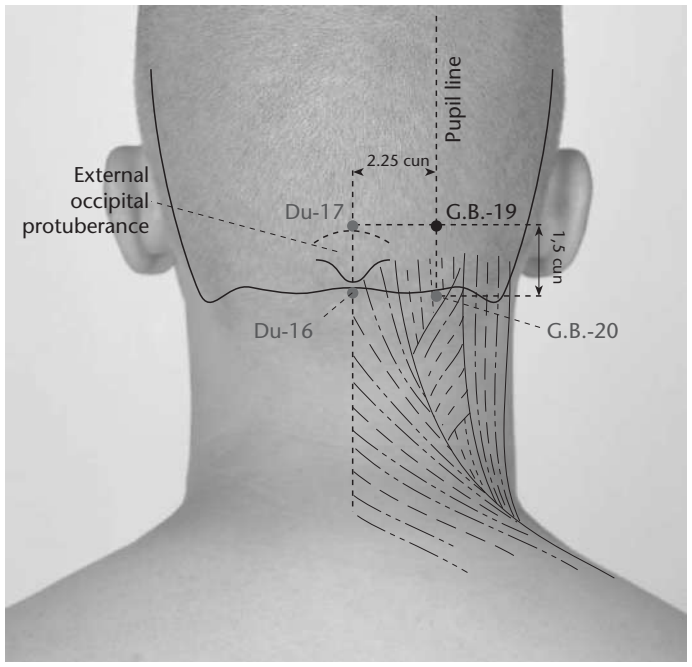
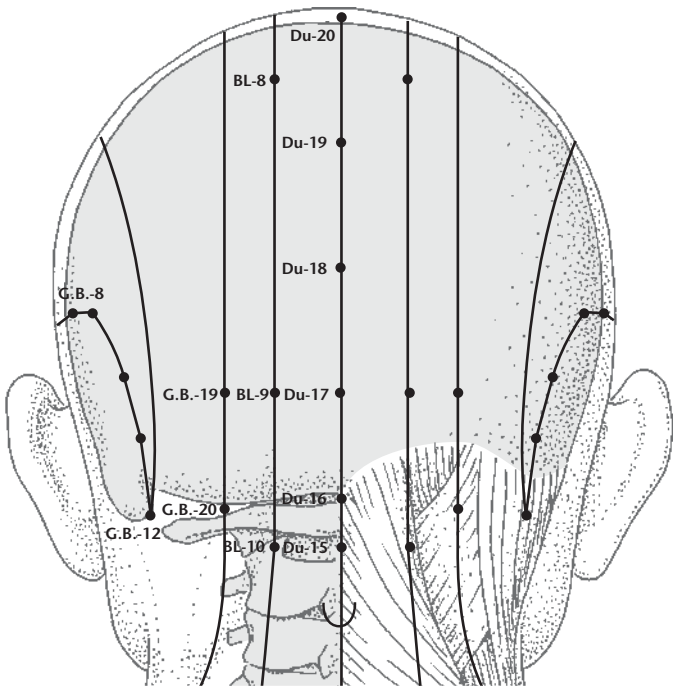
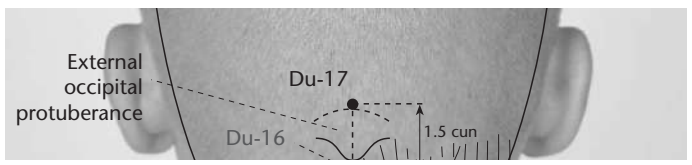
Brain Hollow NAOKONG G.B.-19







Location

On the posterior aspect of the head, at the upper border of the external occipital protuberance (→ **Du-17**) and 2.25 cun lateral to the midline.

How to find

First, locate the external occipital protuberance (→ 3.1.5), which can be palpated as a flat protruding area on the midline. Next, find → **Du-17** in the depressoin just superior to the protuberance. From there, measure 2.25 cun in a lateral direction and locate **G.B.-19** on the curved line connecting → **G.B.-15** and → **G.B.-20**, an extension of the pupil line (→ 2.25 cun lateral to the midline or midway between → **Du-24** and → **ST-8**). **For orientation: G.B.-19** is located approximately 2.5 cun superior to the posterior hairline (→ 3.1.5) and approximately 1.5 cun superior to → **G.B.-20** (on the lower border of the occiput, between the origins of the sternocleidomastoid and trapezius muscles).

Needling

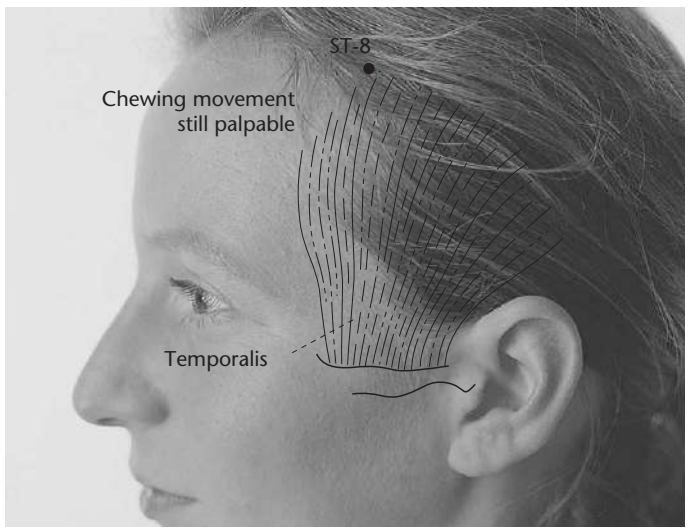
0.3–1.5 cun transversely (subcutaneously) towards the occiput or the site of the disorder/pain.

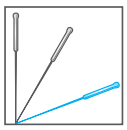
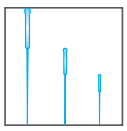
Actions/Indications

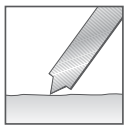
- Expels Wind
- Clears the sensory orifices
- Opens the *luo*-connecting vessels

Special features

Meeting point with the *yang wei mai*





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G.B.-20 *Wind Pool* FENGCHI

Location

At the lower border of the occipital bone, in the depression between the origins of the sternocleidomastoid and trapezius muscles.

How to find

Patient's position: Prone, sitting or supine (supported by a pillow, so that the occipital region is accessible). Starting at the midline, glide with the palpating finger along the lower border of the occiput, crossing the bulge of the origin of the trapezius muscle, until you reach a depression the size of a finger pad. Locate **G.B.-20** in its centre.
Located on the same level is → **Du-16**. → **BL-10** is located more medially and inferiorly.

Needling

Needle with the patient's head bent forward and the tip of the needle pointing inferiorly. Depending on the position of the head, insertion towards the tip of the nose or the contralateral orbit, 0.5–1.2 cun. Caution: In slim patients, do not needle deeper than 2 cm (the vertebral artery is located at a depth of approximately 4 cm).

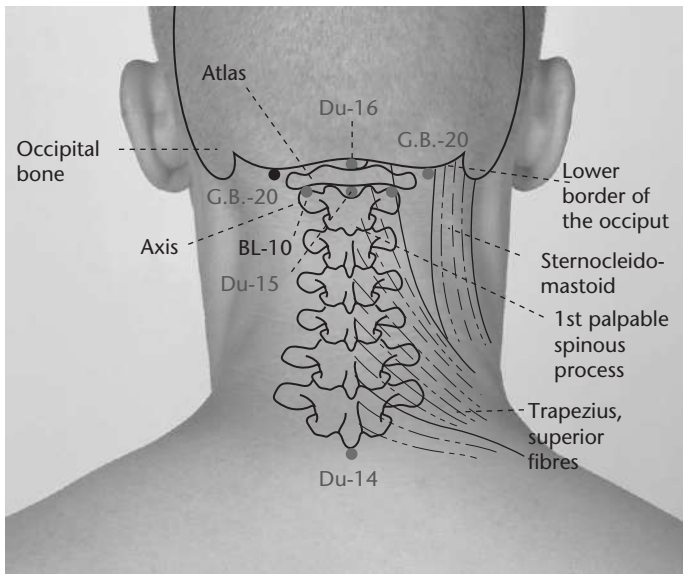
Actions/Indications

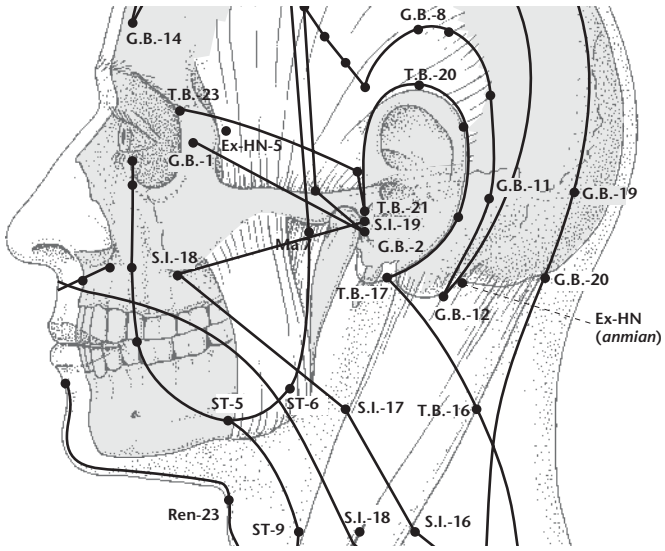
- Eliminates Wind, benefits the head, clears the sensory organs
- Opens the channel
- With tonifying needle technique: strengthens the Marrow and the Brain (according to Maciocia)

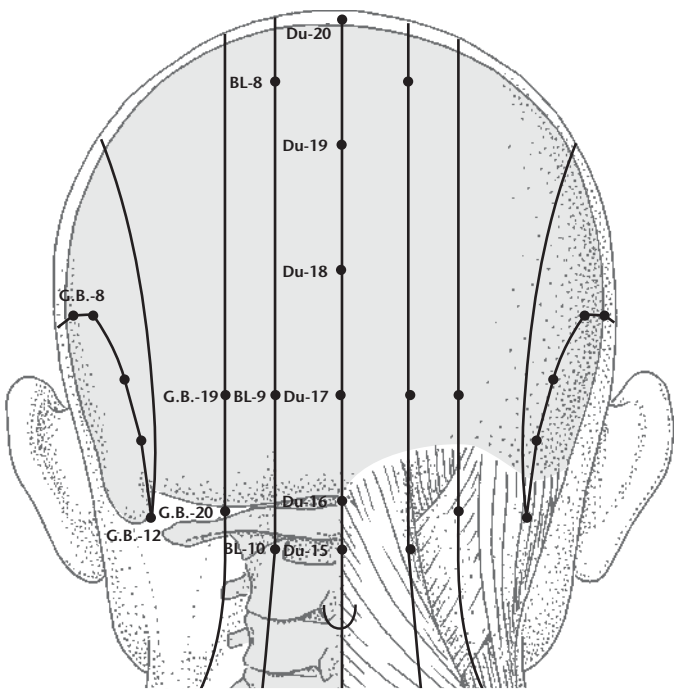
Special features

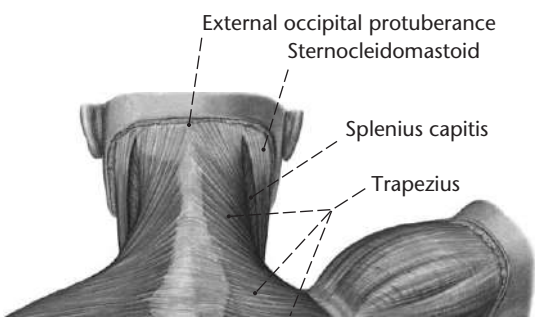
Meeting point with the T.B. channel*, *yang wei mai, yang qiao mai*. Major point for all 'Wind disorders', very important point for disorders of the head and eyes.

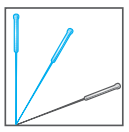
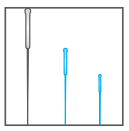
*According to Deadman et al 1998.

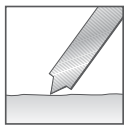










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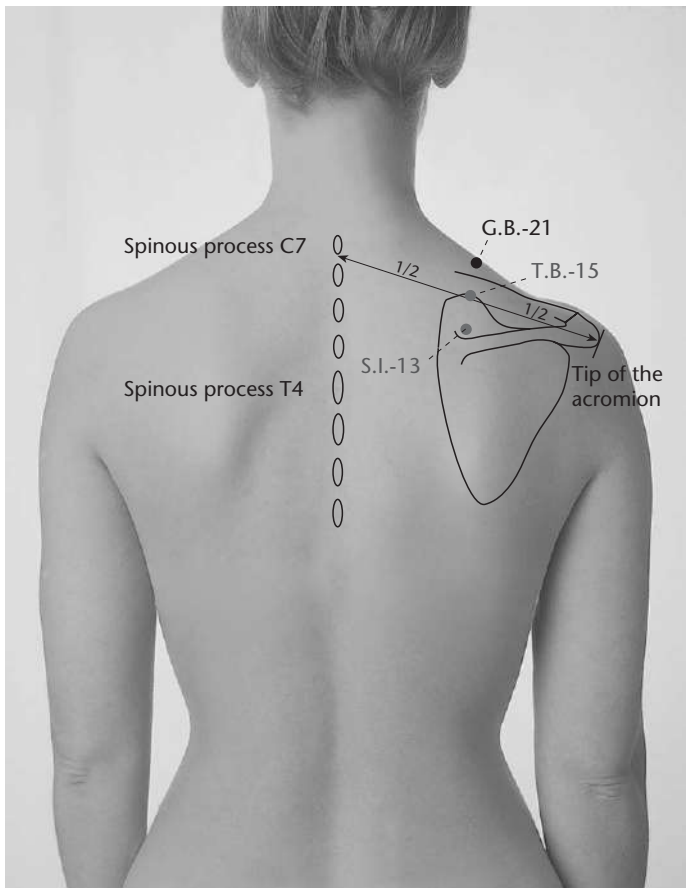
Shoulder Well JIANJING G.B.-21



Location

At the highest point of the shoulder, at the midpoint of a line connecting the 7th cervical vertebra (C7) and the lateral extremity of the acromion.

How to find

First, locate C7 (→ 3.4.1) and the lateral extremity of the acromion (→ 3.3.1). Next, locate **G.B.-21** at the midpoint of a line connecting these two reference points, on the highest point of the trapezius muscle on the sagittal plane.
→ **T.B.-15** is located 1 cun inferior to **G.B.-21**, midway between **G.B.-21** and → **S.I.-13** (medial to the supraspinous fossa).

Needling

Vertically approximately 0.3–0.5 cun (lift the muscle). An alternative, safer method: Lift the muscle and insert the needle approximately 1 cun anteriorly or posteriorly into the muscle belly. Caution: Contraindicated during pregnancy! Pneumothorax.

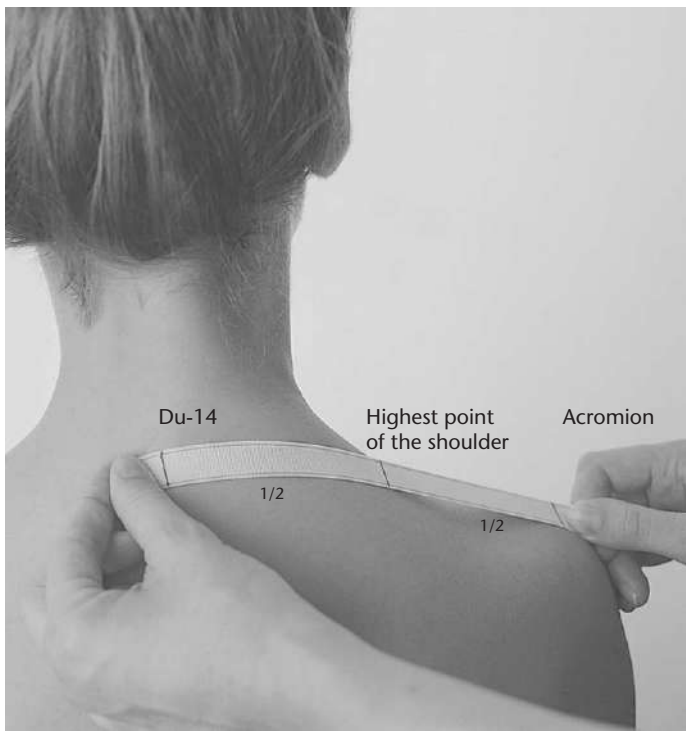
Actions/Indications

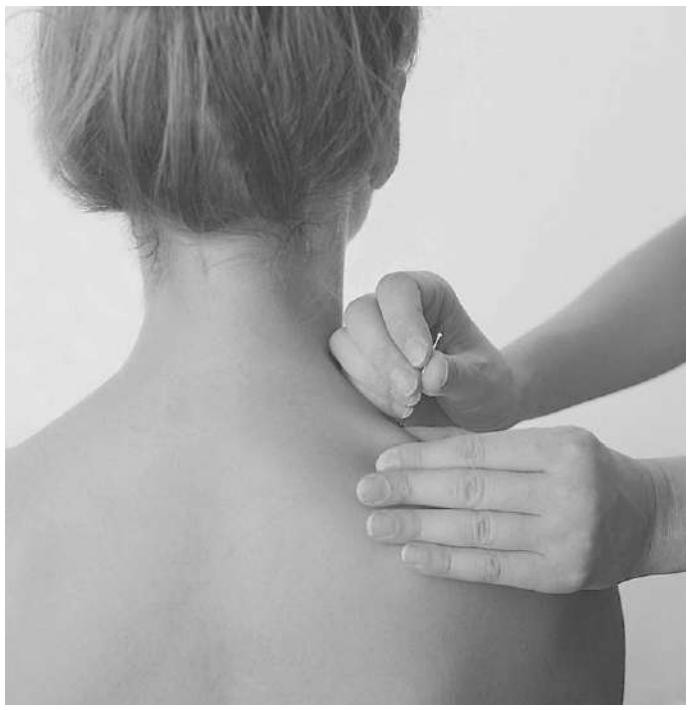
- Opens the channel
- Descends the Qi
- Regulates the Qi flow, transforms Phlegm, dissipates nodules
- Promotes labour, benefits the breasts

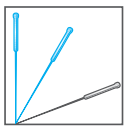
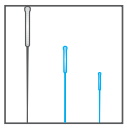
Special features

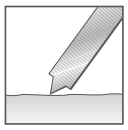
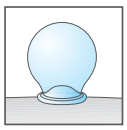
Meeting point with the *yang wei mai* and the T.B. and ST* channels. Important local point. Trigger point for the shoulder with a distal effect on the Uterus.

*According to Deadman et al 1998.





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G.B.-22 *Armpit Abyss* YUANYE

Location

On the midaxillary line, with the arm abducted approximately 3 cun inferior to the apex of the axilla, in the 4th intercostal space (according to some authors, in the 5th intercostal space).

How to find

With the patient's arm slightly abducted, locate the apex of the axilla. Locate **G.B.-22** 3 cun inferior to it in the 4th intercostal space. **For orientation:** In men, the nipple is located in the 4th intercostal space; in women, in a supine position, its location may vary. Therefore, in women, the manubriosternal synchondrosis (→ 3.5) is a more reliable reference point for the costal region. Note: The intercostal space curves in a superior direction towards lateral.

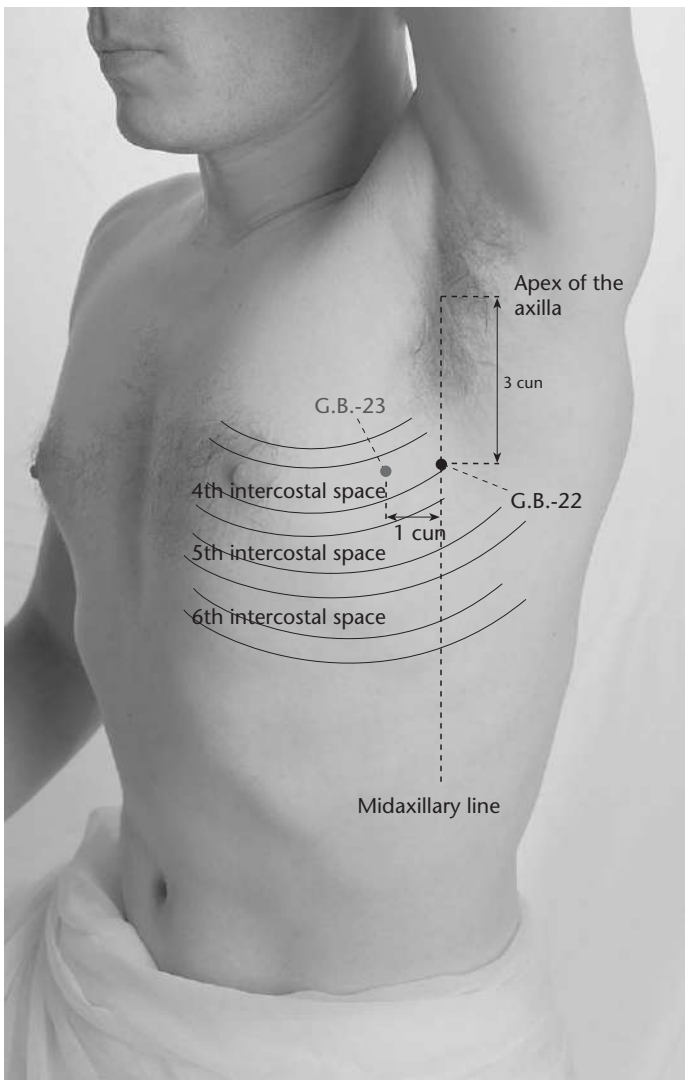
Also located on the level of or in the 4th intercostal space, but more medially, are → **Ren-17/KID-23/ST-17/P-1/SP-18/G.B.-23** (on the midline/2 cun lateral to the midline/in the centre of the nipple or 4 cun lateral to the midline/1 cun lateral to the nipple or 5 cun lateral to the midline/6 cun lateral to the midline/1 cun anterior to **G.B.-22**).

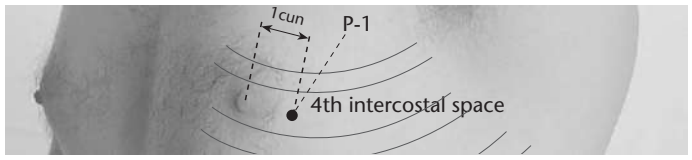
Needling

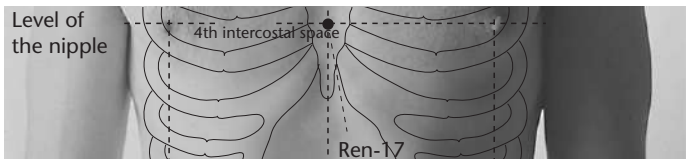
0.5–1 cun obliquely or transversely (subcutaneously) along the intercostal space. Caution: Pneumothorax.

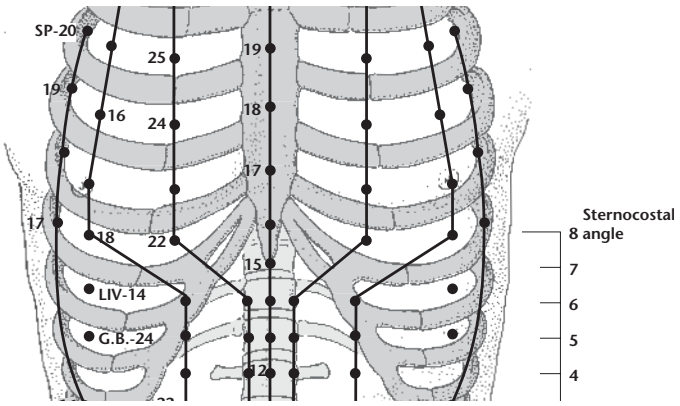
Actions/Indications

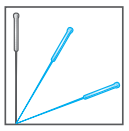
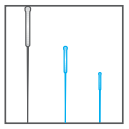
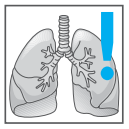
- Regulates the Qi in the Upper Burner
- Opens the *luo*-connecting vessels of the axilla

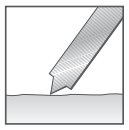










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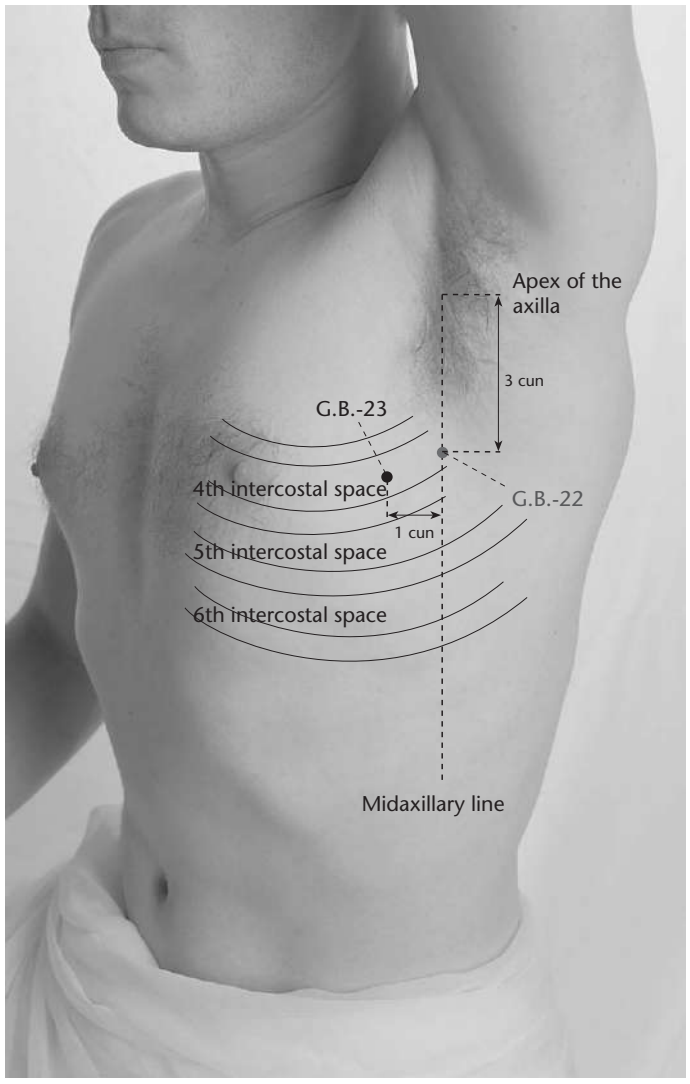
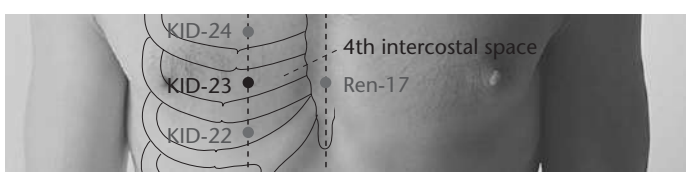
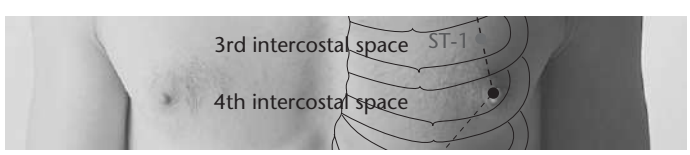
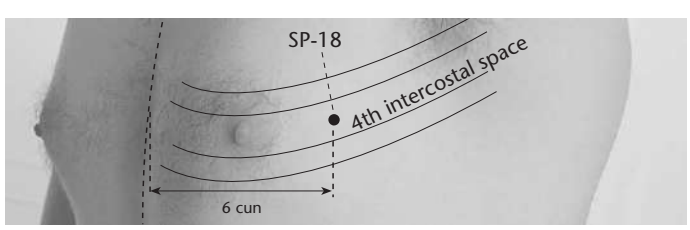
Flank Sinews ZHEJIN G.B.-23









Location

1 cun anterior to → **G.B.-22** (on the midaxillary line, 3 cun inferior to the apex of the axilla in the 4th intercostal space).

How to find

With the patient's arm slightly abducted, locate the apex of the axilla. First, locate → **G.B.-22** 3 cun inferior to it in the 4th intercostal space, then locate **G.B.-23** 1 cun anterior to → **G.B.-22** and also in the 4th intercostal space. **For orientation:** In men, the nipple is located in the 4th intercostal space; in women, in a supine position, its location may vary. Therefore, in women, the manubriosternal synchondrosis (→ 3.5) is a more reliable reference point for the costal region. Note: The intercostal space curves in a superior direction towards lateral.

Also located on the level of or in the 4th intercostal space, but more medially, are → **Ren-17/KID-23/ST-17/P-1/SP-18** (on the midline/2 cun lateral to the midline/in the centre of the nipple or 4 cun lateral to the midline/1 cun lateral to the nipple or 5 cun lateral to the midline/6 cun lateral to the midline).

Needling

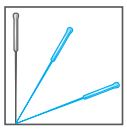
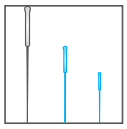
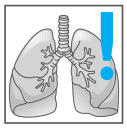
0.5–1 cun obliquely or transversely (subcutaneously) along the 4th intercostal space. Caution: Pneumothorax.

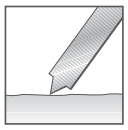
Actions/Indications

- Regulates the Qi between the Upper and Middle Burners
- Opens the channel

Special features

Meeting point with the BL channel according to some authors



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G.B.-24 *Sun and Moon* RIYUE

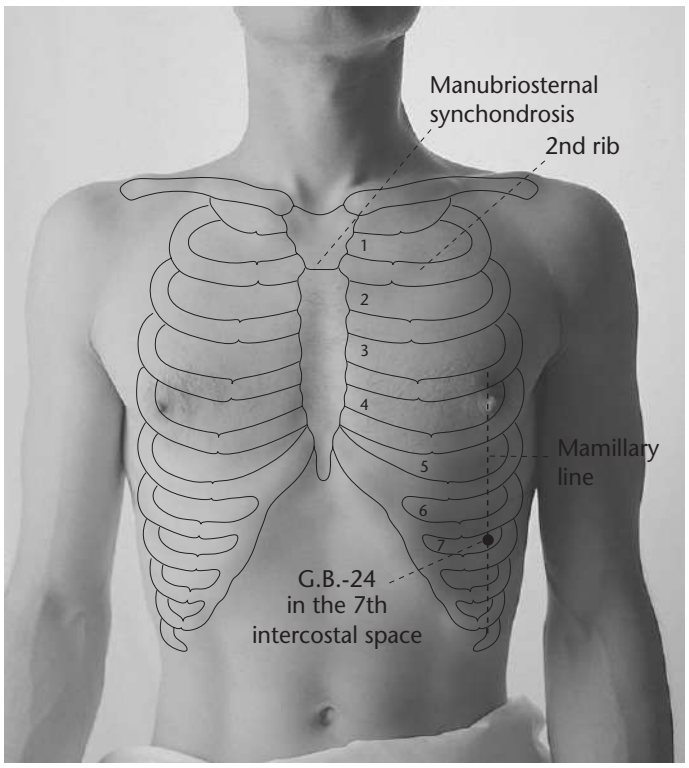
Location

In the 7th intercostal space, on the mamillary line (4 cun lateral to the anterior midline).

How to find

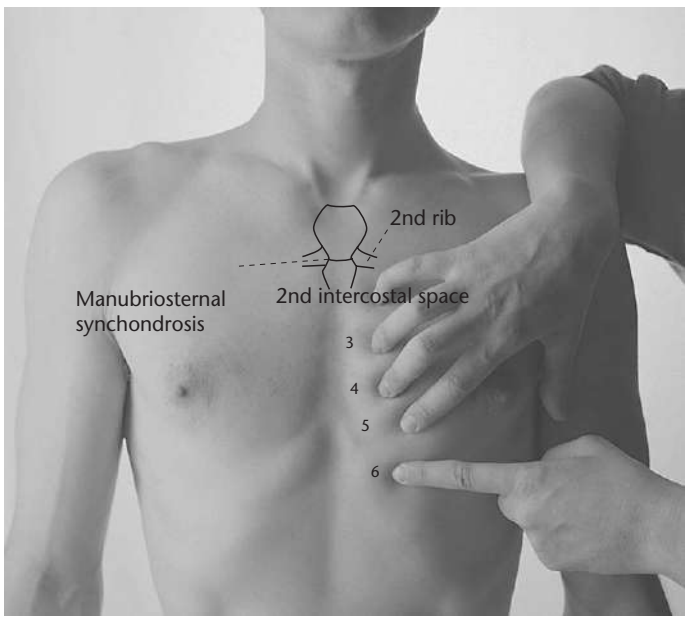
The mamillary line, a vertical line 4 cun lateral to the midline, is used for reference in the thoracic region (→ 3.5). **Quick method, especially in men:** In men, the nipple is usually located on the level of the 4th intercostal space. From the nipple, count downward to the 7th intercostal space. **Or:** A more reliable reference, especially in women, is the manubriosternal synchondrosis, a horizontal bony structure on the sternum. The costal cartilage of the second rib is lateral to the synchondrosis, with the 2nd intercostal space below. From there, count downward to the 7th intercostal space and locate **G.B.-24** on the mamillary line. → **LIV-14** is located directly superior to **G.B.-24** in the 6th intercostal space.

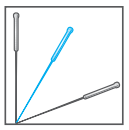
Located approximately on the same level (1 cun inferior to the sternocostal angle) are → **Ren-13/KID-20/ST-20** (on the midline/0.5 cun lateral to the midline/2 cun lateral to the midline).

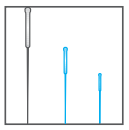


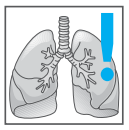
Needling

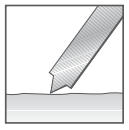
0.3–0.8 cun obliquely in a lateral direction along the intercostal space. Caution: Pneumothorax.









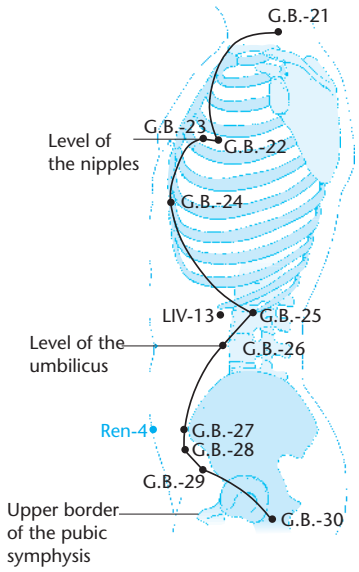


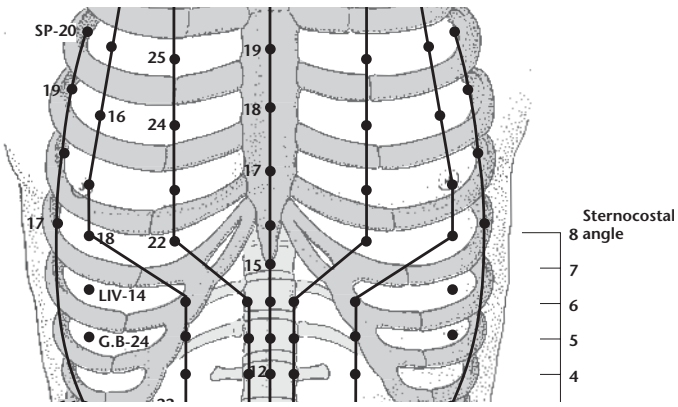
Actions/Indications

- Benefits the Gall Bladder, eliminates Damp-Heat, regulates and spreads Liver Qi, descends counterflow Qi, harmonises the Middle Burner

Special features

Front-*mu* point of the Gall Bladder, meeting point with the SP channel, also with the *yang wei mai* according to some authors. Major point for disorders of the Gall Bladder.





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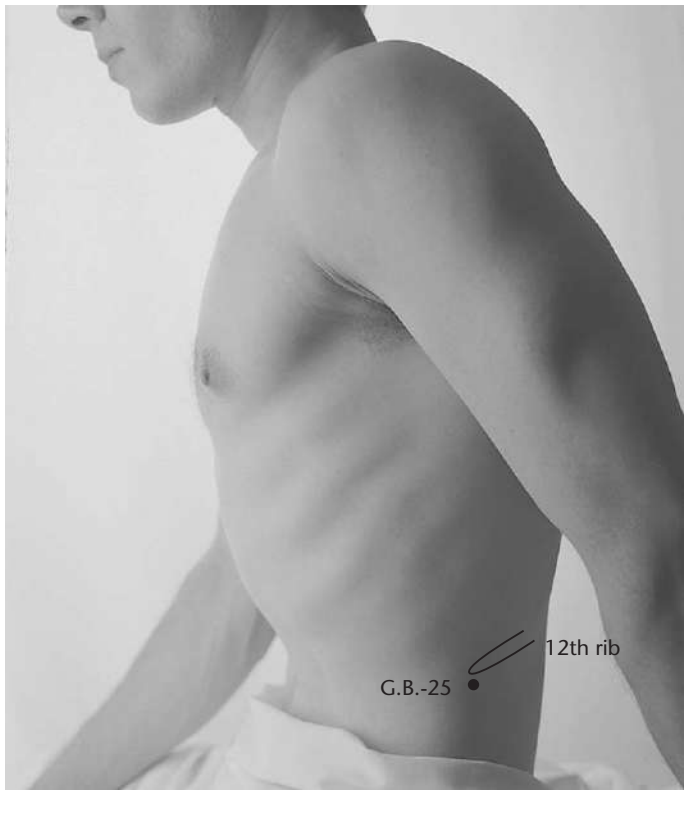
Capital Gate JINGMEN G.B.-25



Location

On the lateral aspect of the ribcage, at the lower border of the free end of the 12th rib.

How to find

Place the hand on the upper abdomen and, with gentle pressure, glide along the lower border of the ribcage until you can feel the free end of the 11th rib (→ **LIV-13**) slightly superior to the umbilicus. By continuing to palpate along the lower border of the ribcage, you will feel the free end of the 12th rib on the lateral aspect of the waist. Locate **G.B.-25** on its lower border. **For orientation:** When pressing the flexed elbow onto the thorax, the tip of the olecranon will rest on the area around the free end of the 11th rib (→ **LIV-13**).

Needling

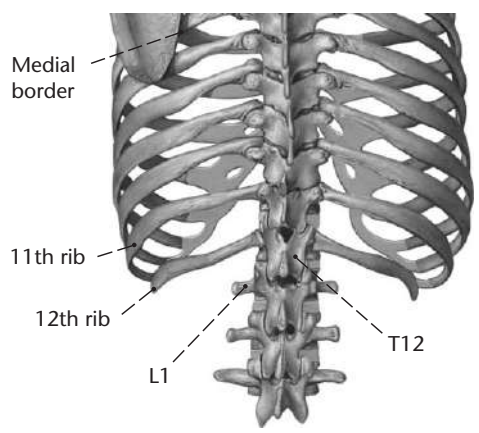
Vertically or obliquely 0.3–1 cun. Caution: Peritoneum; the needle should be inserted into the obliquus externus or internus muscles.

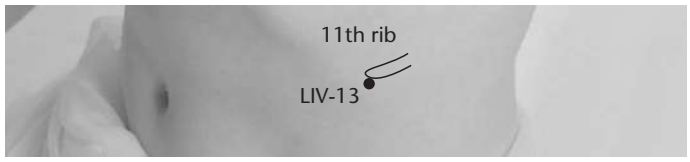
Actions/Indications

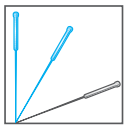
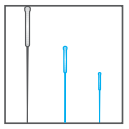
- Tonifies the Kidneys and regulates the water passages
- Strengthens the Spleen, regulates the Intestines
- Benefits the lumbar region

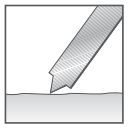
Special features

Front-*mu* point of the Kidneys







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G.B.-26 *Girdling Vessel* DAIMAI

Location

On the lateral aspect of the waist, at the junction of a vertical line through the free end of the 11th rib and a horizontal line through the umbilicus, approximately 1.8 cun inferior to → **LIV-13**.

How to find

First, palpate the lower border of the ribcage to locate the free end of the 11th rib (→ **LIV-13**). Next, locate **G.B.-26** inferior to the free end of the 11th rib, level with the umbilicus. **Quick method for locating → LIV-13:** When pressing the flexed elbow onto the thorax, the tip of the olecranon will rest on the area around the free end of the 11th rib (→ **LIV-13**).
Located on the same level are → **Ren-8** (in the centre of the umbilicus), → **KID-16/ST-25/SP-15** (0.5/2/4 cun lateral to the midline).

Needling

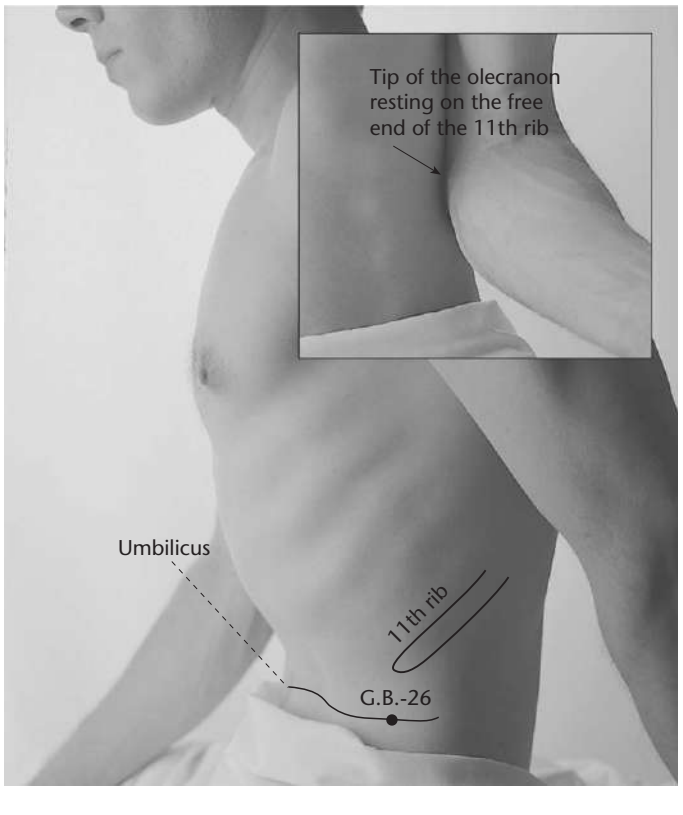
Vertically 0.5–1 cun. Caution: Be careful with slim patients.

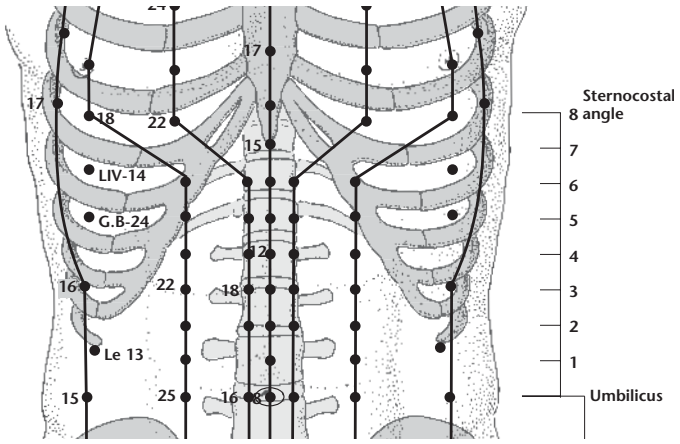
Actions/Indications

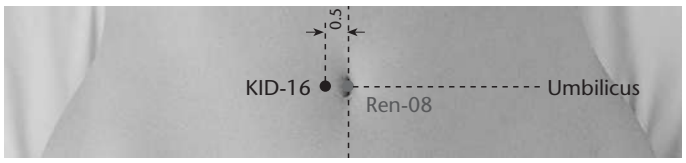
- Regulates the *dai mai*
- Regulates the Uterus
- Drains Damp-Heat

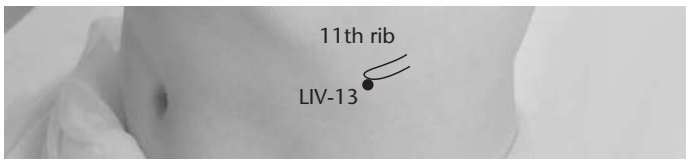
Special features

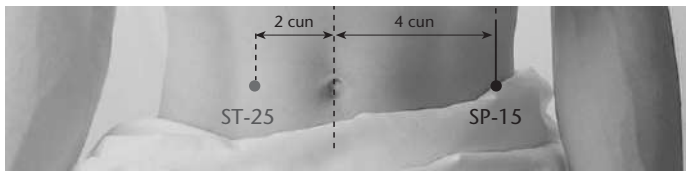
Meeting point with the *dai mai*

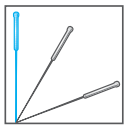
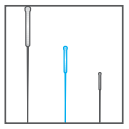


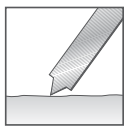










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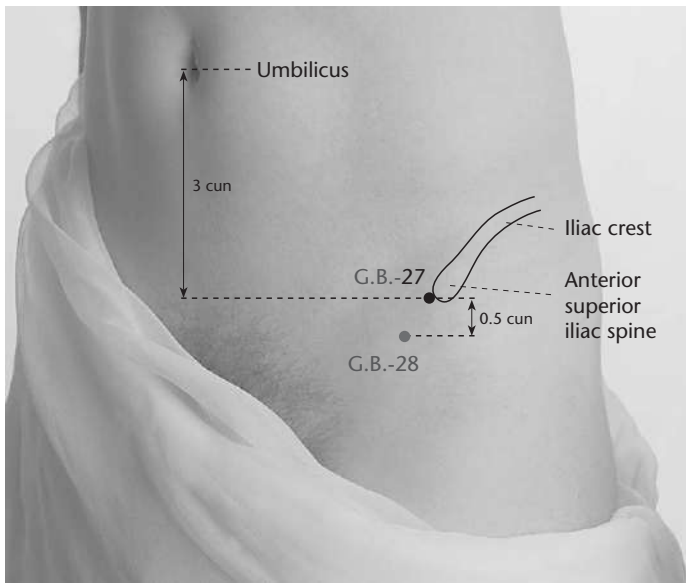
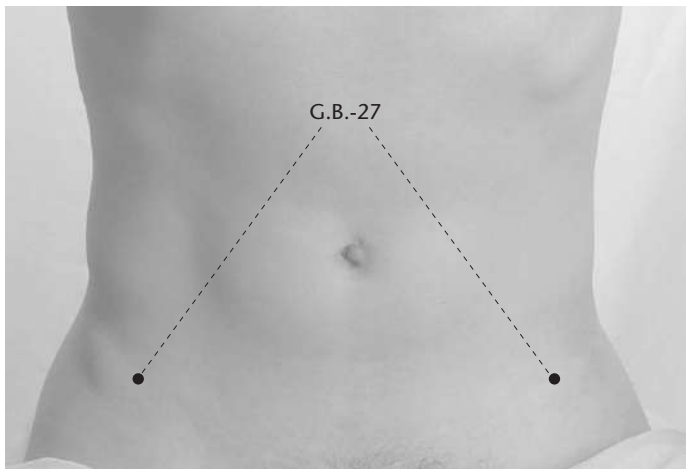
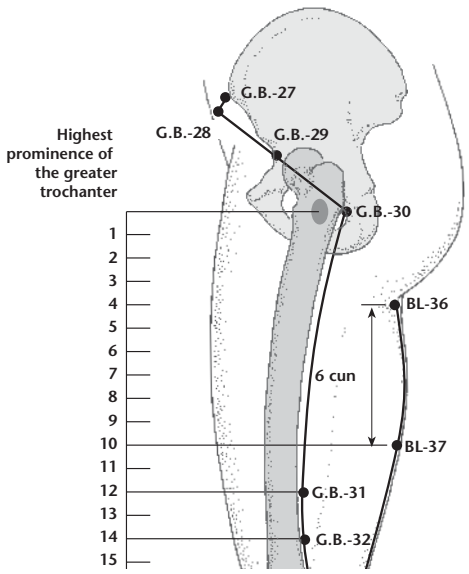
Fifth Pivot WUSHU G.B.-27







Location

In the depression medial to the anterior superior iliac spine (ASIS), approximately 3 cun inferior to the umbilicus.

How to find

First, locate the anterior superior iliac spine (ASIS → 3.5) by palpating along the upper border of the iliac crest in an anterior and inferior direction. At its anterior end, the ASIS can be palpated as a bony ridge on the lateral aspect of the lower abdomen. Locate **G.B.-27** in a depression anterior and medial to the ASIS. → **G.B.-28** is located approximately 0.5 cun inferior and medial to **G.B.-27**.

Located approximately on the same level (3 cun inferior to the umbilicus) are → **Ren-4/KID-13/ST-28** (on the midline/0.5 cun lateral to the midline/2 cun lateral to the midline).

Needling

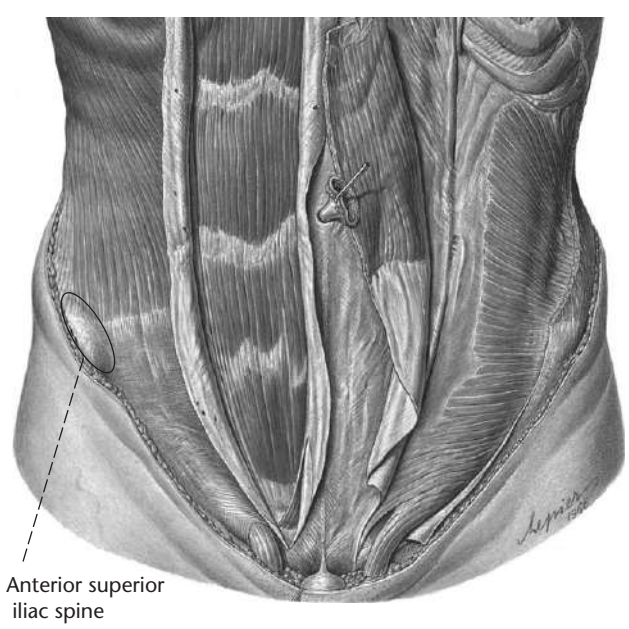
Vertically 1–1.5 cun. Caution during pregnancy.

Actions/Indications

- Strengthens the Kidneys
- Regulates the *dai mai*
- Regulates the Triple Burner

Special features

Meeting point with the *dai mai*



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G.B.-28 *Linking Path* WEIDAO

Location

On the lateral aspect of the abdomen, anterior and inferior to the anterior superior iliac spine (ASIS), approximately 0.5 cun anterior and inferior to → **G.B.-27**.

How to find

First, locate the ASIS (→ 3.5) by palpating along the upper border of the iliac crest in an anterior and inferior direction. On its anterior border, the ASIS can be palpated as a bony ridge on the lateral aspect of the lower abdomen, with → **G.B.-27** located in a depression anterior and medial to the ASIS. Locate **G.B.-28** approximately 0.5 cun anterior and inferior to → **G.B.-27**.

Needling

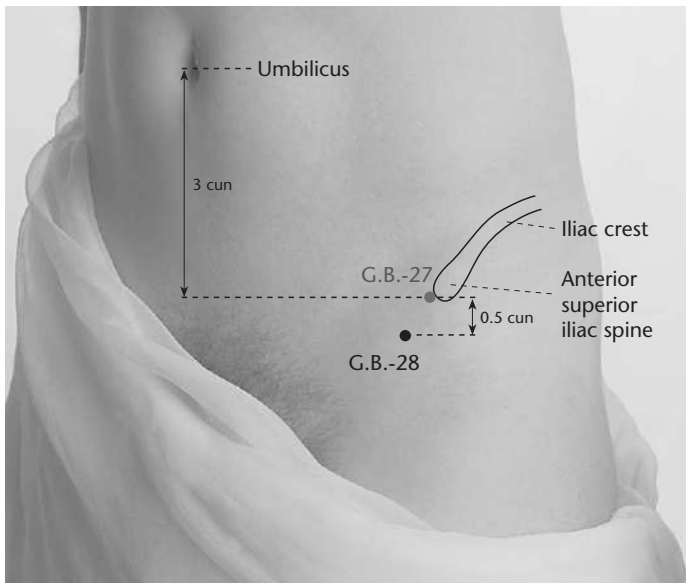
Vertically 1–1.5 cun. Caution during pregnancy.

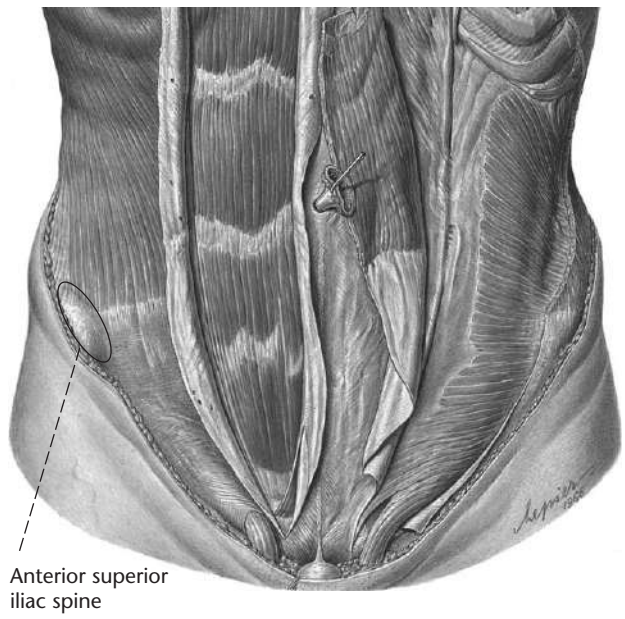
Actions/Indications

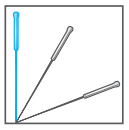
- Regulates the *dai mai*
- Regulates the Triple Burner
- Eliminates Dampness

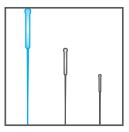
Special features

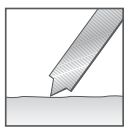
Meeting point with the *dai mai*











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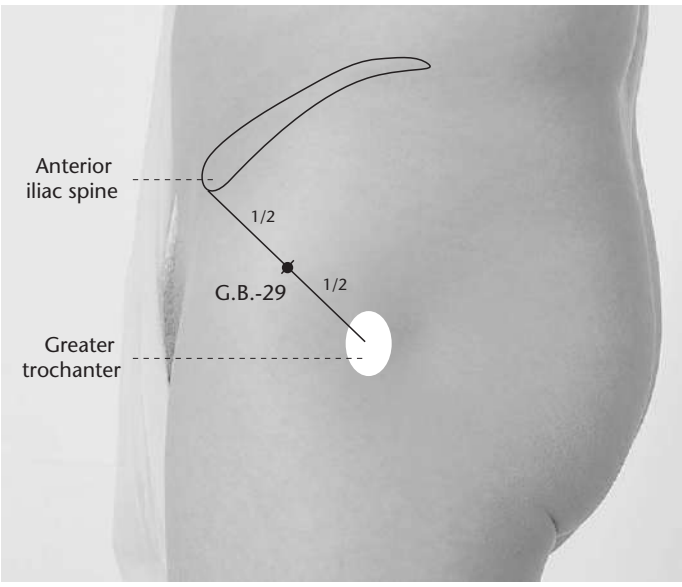
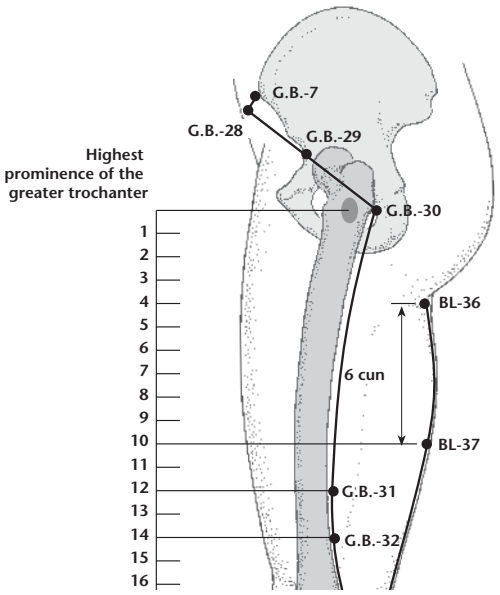
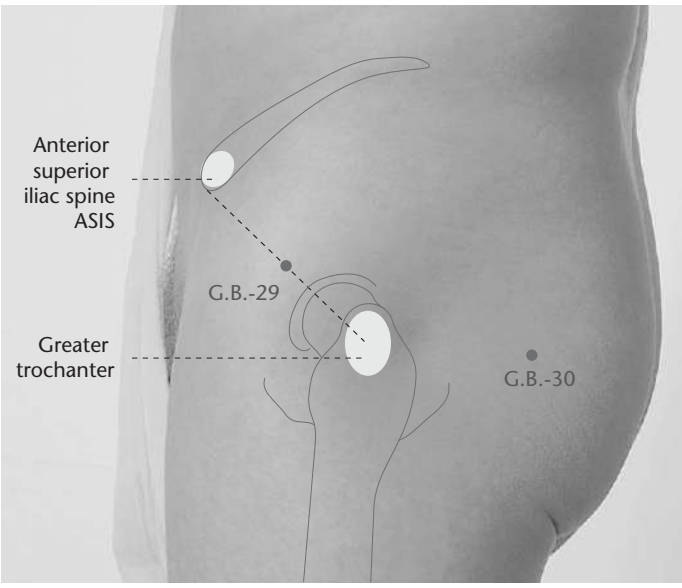
Stationary Crevice JULIAO G.B.-29







Location

At the midpoint of a line connecting the anterior superior iliac spine (ASIS) and the greater trochanter, at the anterior border of the iliac crest.

How to find

First, locate the ASIS (→ 3.5), the highest point on the anterior aspect of the iliac crest, by palpating along the upper border of the iliac crest in an anterior and inferior direction. At its anterior end, the ASIS can be palpated as a bony ridge on the lateral aspect of the lower abdomen. With the patient lying on their side and their leg slightly flexed, locate the greater trochanter (→ 3.6), a clearly marked bony structure in the region of the hip joint. **G.B.-29** is located at the midpoint of a line connecting these two reference points.

Needling

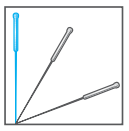
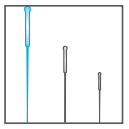
Vertically 1–2 cun

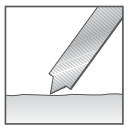
Actions/Indications

- Expels Cold, Dampness and Wind, opens the channel

Special features

Meeting point with the *yang qiao mai*, also with the *dai mai* according to some authors.



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G.B.-30 *Jumping Circle* HUANTIAO

Location

With the patient lying on their side, the point is at the junction between the medial two-thirds and the lateral third of a line connecting the greater trochanter and the sacral hiatus.

How to find

Patient's position: Supine or, better, lying on their side, preferably with the hip and knee joints of the side to be needled flexed and the lower leg straight. Use pillows, etc, for a comfortable position. Reference points: the sacral hiatus (→ 3.4.4) and the lateral prominence of the greater trochanter (→ 3.6). **G.B.-30** is located on a line connecting these two points, one third of the distance from the greater trochanter.

Needling

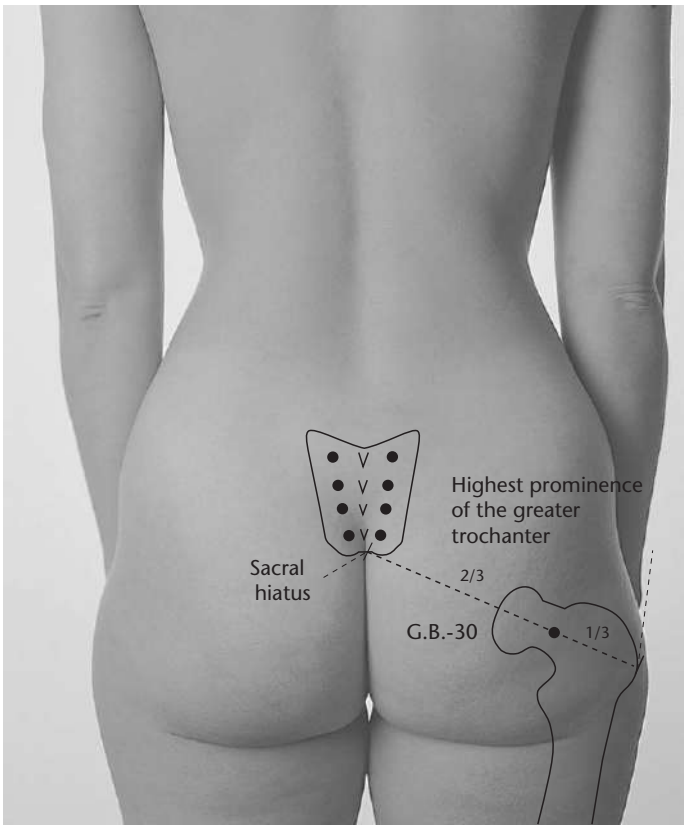
1.5–3 cun vertically towards the genital region. The needle may reach the fascia of the obturator internus muscle as well as intermuscular connective tissue. Long 3 cun needles (50mm) should be used. Caution: Needling is often painful. Needling can result in an electric *de qi* sensation radiating to the toes. This sensation is particularly common with sciatic disorders and if **G.B.-30** is needled 1 cun inferior to its normal location.

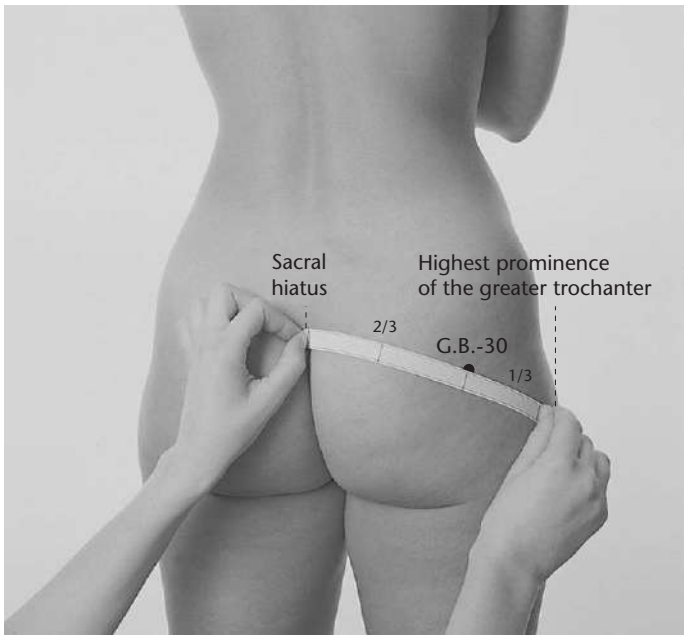
Actions/Indications

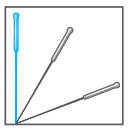
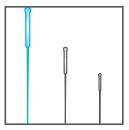
- Opens the channel and the *luo*-connecting vessels, alleviates pain, benefits the hip and legs, eliminates Wind-Damp.

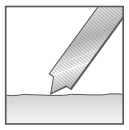
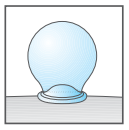
Special features

Meeting point with the BL channel, Ma Dan Yang Heavenly Star point. Important point for disorders of the hips.





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Wind Market FENGSHI G.B.-31

Location

On the lateral aspect of the thigh, inferior to the greater trochanter, approximately 7 cun proximal to the popliteal crease.

How to find

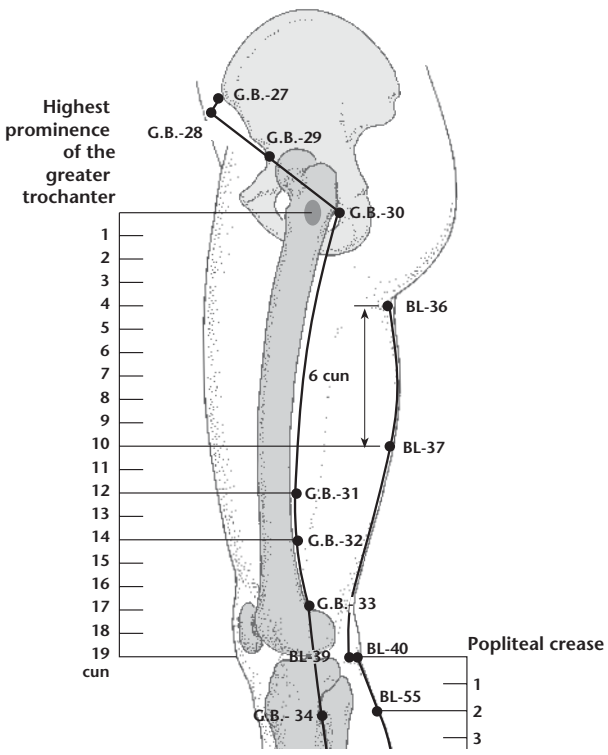
Ask the patient to place their hands on the imaginary seam of their trousers (this is best done with the patient standing). **G.B.-31** is located where the middle finger touches the lateral aspect of the thigh. **Or:** The distance between the highest prominence of the greater trochanter (→ 3.6) to the popliteal crease is 19 cun (→ 2.2). Divide this distance into thirds and locate **G.B.-31** 1 cun proximal to a third of the distance from the popliteal crease. Sensitivity to pressure should help determine the location of this point.

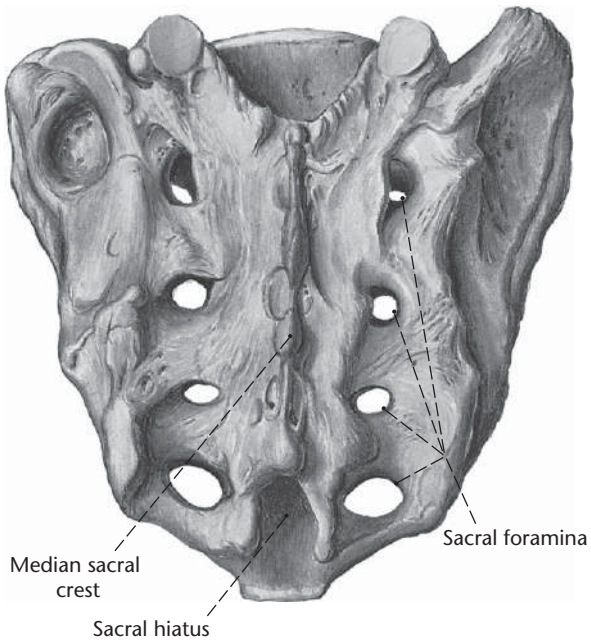
Needling

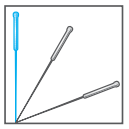
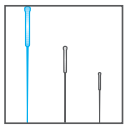
Vertically 1–2 cun

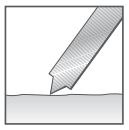
Actions/Indications

- Eliminates Wind, Dampness and Heat
- Opens the channel and alleviates pain







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G.B.-32 *Middle Ditch* ZHONGDU

Location

On the lateral aspect of the thigh, 5 cun proximal to the popliteal crease, between the vastus lateralis and biceps femoris muscles.

How to find

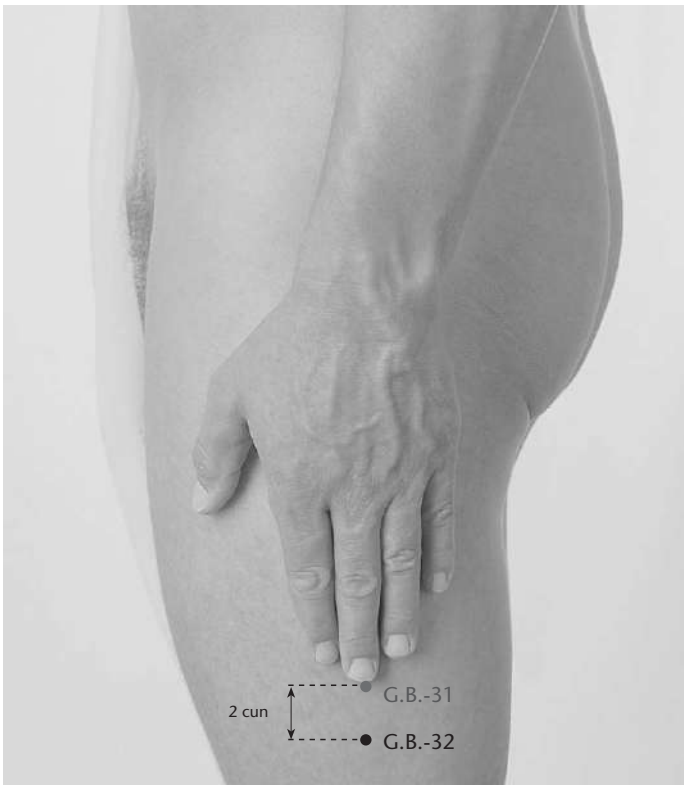
First, ask the patient to place their hands on the imaginary seam of their trousers (this is best done with the patient standing) and locate → **G.B.-31** where the middle finger touches the thigh. **G.B.-32** can now be located 2 cun distal to → **G.B.-31. Or:** The distance between the highest prominence of the greater trochanter (→ 3.6) to the popliteal crease is 19 cun (→ 2.2). Divide this distance into quarters (use an elastic tape or the spreading hands technique) and locate **G.B.-32** slightly proximal to a quarter of the distance from the popliteal crease. Sensitivity to pressure should help determine the location of this point.

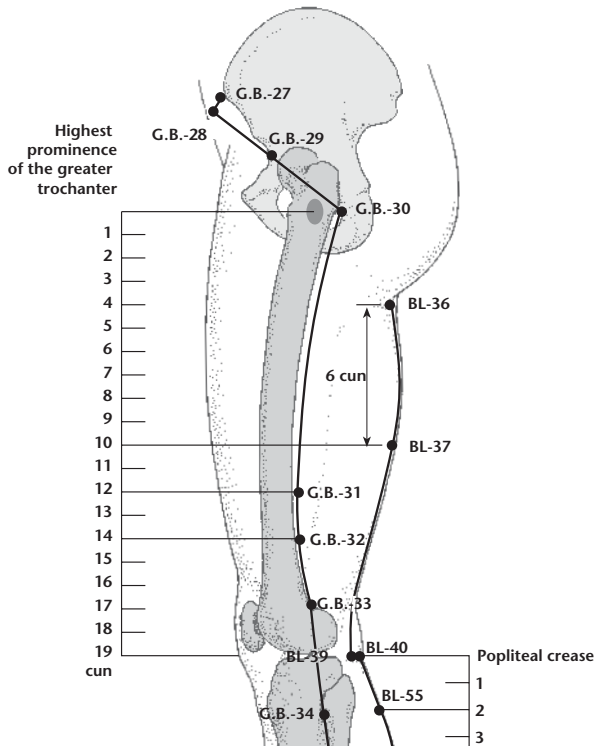
Needling

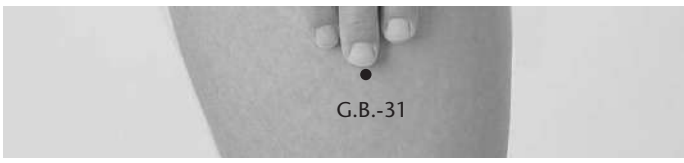
Vertically 1–2 cun

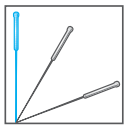
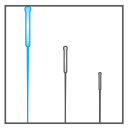
Actions/Indications

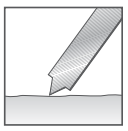
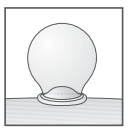
- Eliminates Wind, Dampness and Cold, opens the channel







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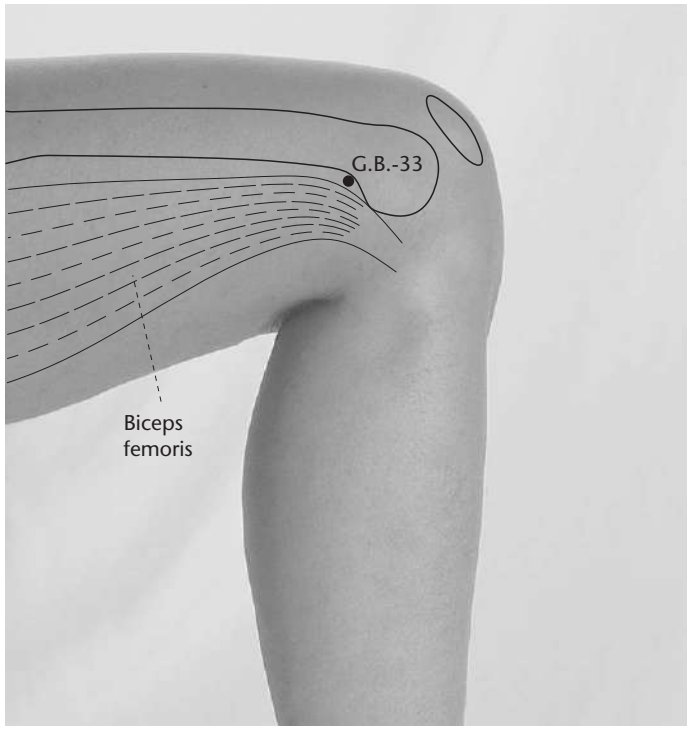
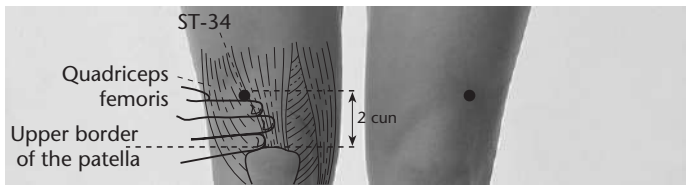
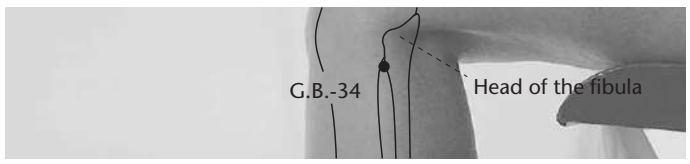
Knee Yang Gate XIYANGGUAN G.B.-33







Location

On the lateral aspect of the knee. With the knee flexed, in the depression between the shaft and the lateral epicondyle and the tendon of the biceps femoris muscle, approximately 3 cun proximal to ➞ **G.B.-34**.

How to find

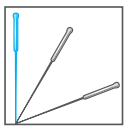
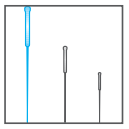
This point is best located with the patient's knee flexed. On the level of the lateral upper border of the patella, palpate in a lateral direction towards the thigh and palpate for the distal end of the lateral epicondyle of the femur. Then locate **G.B.-33** in a clearly palpable depression between the epicondyle and the tendon of the biceps femoris muscle. The latter runs along the lateral aspect of the leg (along the line of an imaginary trouser seam) and attaches inferior to the knee joint at the head of the fibula.
➞ **G.B.-34** is located 3 cun more distal, ➞ **ST-34** is located 2 cun proximal to the lateral upper border of the patella.

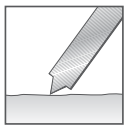
Needling

Vertically 1–2 cun

Actions/Indications

- Opens the channel
- Relaxes the tendons



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G.B.-34 *Yang Mound Spring* YANGLINGQUAN

Location

In the depression anterior and inferior to the head of the fibula, between the peroneus longus and extensor digitorum longus muscles.

How to find

This point is best located with the patient's knee flexed (use knee support). Palpate for the head of the fibula on the lateral aspect of the leg and hold it with the index and middle fingers in a tweezer-like way. Gliding distally with both fingers, the more medial finger will drop into a depression directly anterior and inferior to the head of the fibula, the location of **G.B.-34**.
Located on the same level but on the medial aspect of the lower leg is → **SP-9** (at the junction of the shaft and the medial condyle of the tibia).

Needling

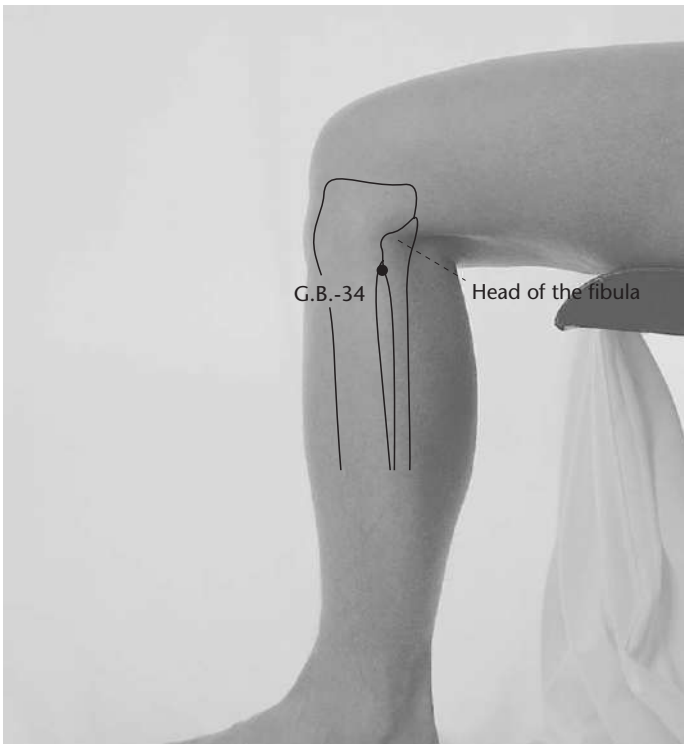
1–1.5 cun vertical insertion between the tibia and fibula towards the interosseous membrane. Caution: Deep peroneal nerve with deep needling, in some cases also common peroneal nerve. The needle may reach the interosseous membrane as well as the epineural tissue of the peroneal nerve.

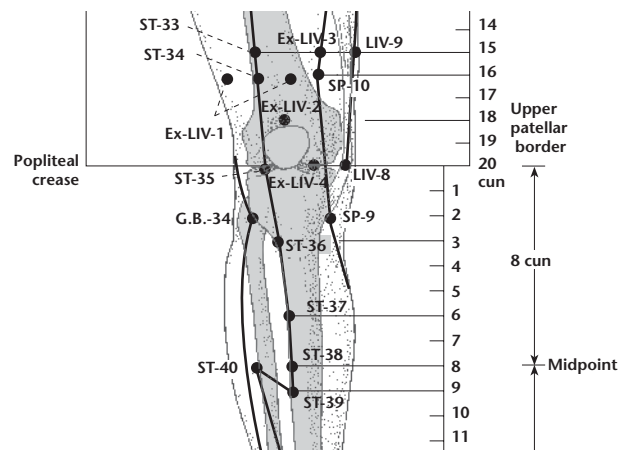
Actions/Indications

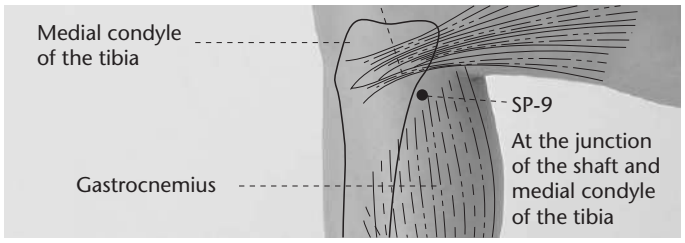
- Benefits the tendons and joints
- Opens the channel, alleviates pain, benefits the lateral costal region
- Clears Damp-Heat from the Liver and Gall Bladder
- Spreads Liver Qi

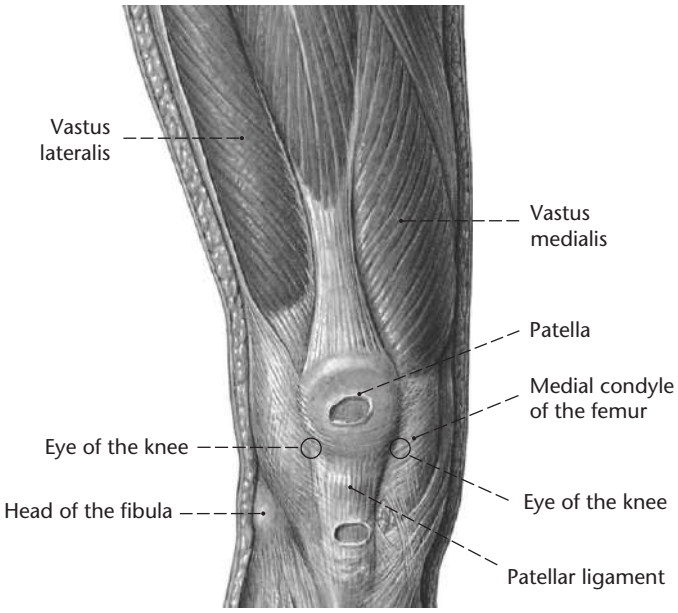
Special features

He-sea point, Earth point, *hui*-meeting point of the tendons (coordination/movement), lower *he*-sea point of the Gall Bladder, Ma Dan Yang Heavenly Star point. Major point for disorders of the tendons and musculature.









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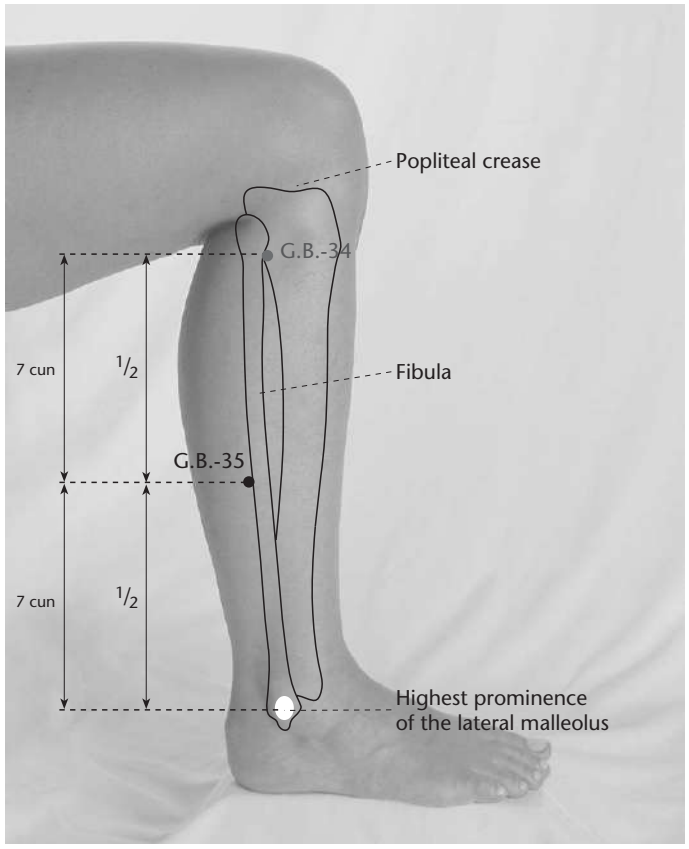
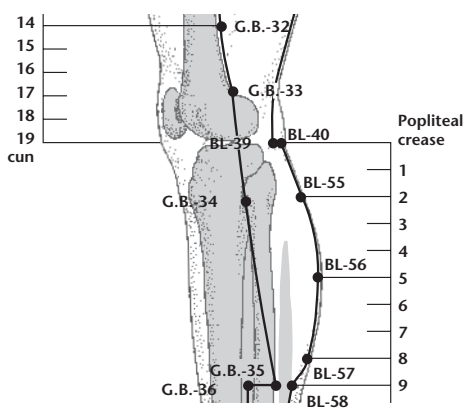
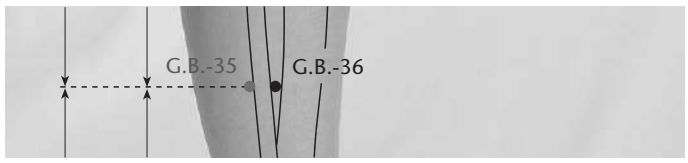
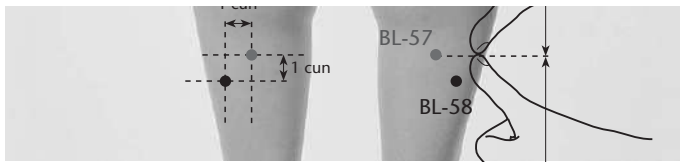
Yang Intersection YANGJIAO G.B.-35









Location

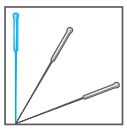
7 cun proximal to the highest prominence of the lateral malleolus, on the **posterior** border of the fibula.

How to find

Quick method: Spreading hands technique (→ 2.3.3): Locate **G.B.-35** at the midpoint of a line connecting → **G.B.-34** (in the depression anterior and inferior to the head of the fibula) and the highest prominence of the lateral malleolus (→ 3.6.2), on the **posterior** border of the fibula (distance = 14 cun). **G.B.-35** is located 7 cun proximal to the prominence of the lateral malleolus. **Or:** Spreading hands technique (→ 2.3.3): Locate **G.B.-35** 1 cun distal to the midpoint of a line connecting the popliteal crease and the highest prominence of the lateral malleolus, on the **posterior** border of the fibula (distance = 16 cun, → 2.2). **For orientation:** The borders of the fibula are deep to the peroneus brevis muscle and are often not easily palpable. For this reason, it is suggested to palpate the posterior border of the fibula just superior to the lateral malleolus and then locate the point on an imaginary line running to the head of the fibula.
Located on the same level are → **G.B.-36** (on the **anterior** border of the fibula) and → **BL-58** (7 cun proximal to → **BL-60**).

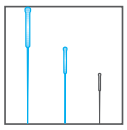
Needling

Vertically 0.5–1.5 cun



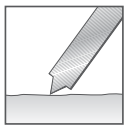
Actions/Indications

- Clears Heat, opens the channel, relaxes the tendons
- Regulates Qi of the Gall Bladder
- Calms the *shen*



Special features

Xi-cleft point of the *yang wei mai*, meeting point with the *yang wei mai* according to some authors.



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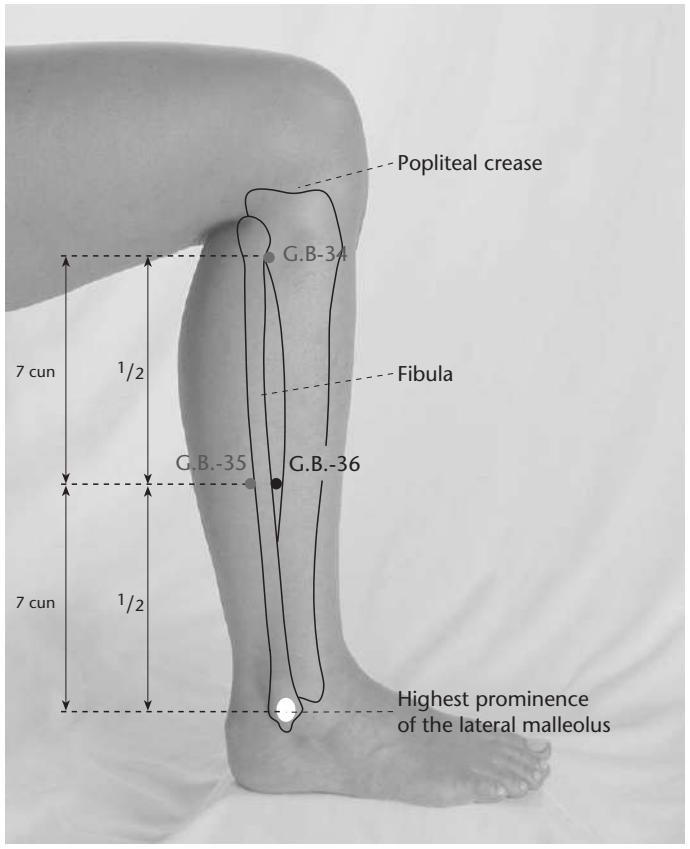
G.B.-36 *Outer Mound* WAIQIU

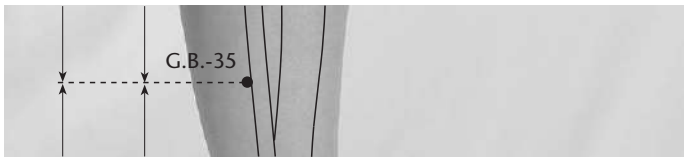
Location

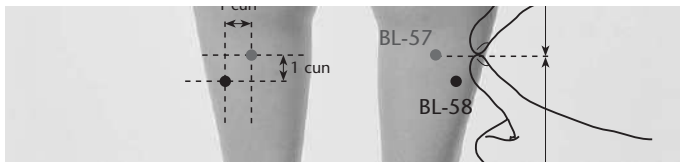
7 cun proximal to the highest prominence of the lateral malleolus, on the **anterior** border of the fibula.

How to find

Quick method: Spreading hands technique (→ 2.3.3): Locate → **G.B.-35** at the midpoint of a line connecting → **G.B.-34** (in the depression anterior and inferior to the head of the fibula) and the highest prominence of the lateral malleolus (→ 3.6.2), on the **anterior** border of the fibula (distance = 14 cun). **G.B.-36** is located 7 cun proximal to the prominence of the lateral malleolus. **Or:** Spreading hands technique (→ 2.3.3): locate **G.B.-36** 1 cun distal to the midpoint of a line connecting the popliteal crease and the highest prominence of the lateral malleolus, on the **anterior** border of the fibula (distance = 16 cun, → 2.2). **For orientation:** The borders of the fibula are deep to the peroneus brevis muscle and are often not easily palpable. For this reason, it is suggested to palpate the anterior border of the fibula just superior to the ankle and then locate the point on an imaginary line running to the head of the fibula.
Located on the same level are → **G.B.-35** (on the **posterior** border of the fibula) and → **BL-58** (7 cun proximal to → **BL-60**).

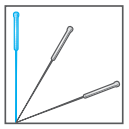


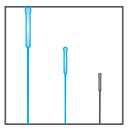




Needling

Vertically 0.5–1.5 cun



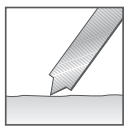


Actions/Indications

- Regulates Gall Bladder and Liver Qi
- Drains Damp-Heat
- Relaxes the tendons and muscles
- Calms the *shen*

Special features

Xi-cleft point



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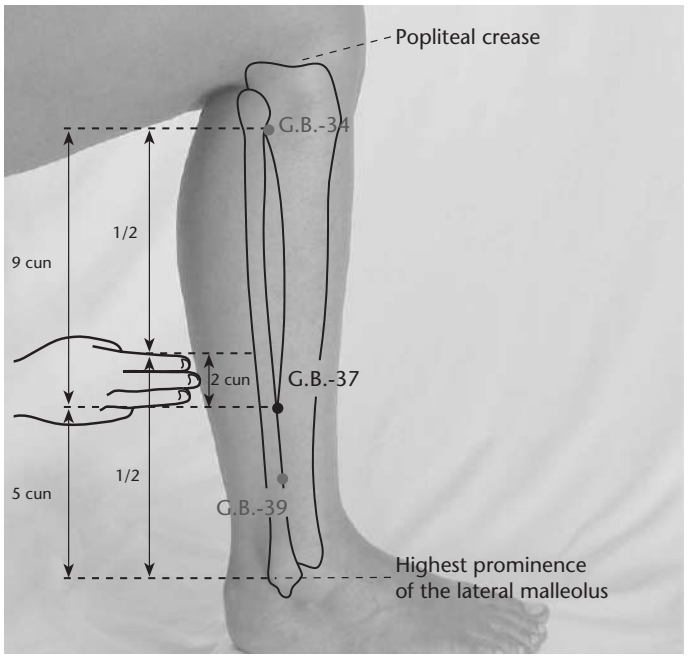
Bright Light GUANGMING G.B.-37



Location

5 cun proximal to the highest prominence of the lateral malleolus, on the anterior border of the fibula, between the peroneus longus and extensor digitorum longus muscles.

How to find

Quick method: Spreading hands technique (→ 2.3.3): Place the little fingers on → **G.B.-34** (in the depression anterior and inferior to the head of the fibula) and the highest prominence of the lateral malleolus (→ 3.6.2). This distance is 14 cun. From the midpoint of this distance, measure 2 cun in a distal direction and locate **G.B.-37** on this level in a depression on the **anterior** border of the fibula. This depression is located 5 cun proximal to the prominence of the lateral malleolus (the width of 1 hand and 2 thumbs). **For orientation:** The borders of the fibula are deep to the peroneus brevis muscle and are often not easily palpable. For this reason, it is suggested to palpate the anterior border of the fibula just superior to the ankle and then locate the point on an imaginary line running to the head of the fibula.

Needling

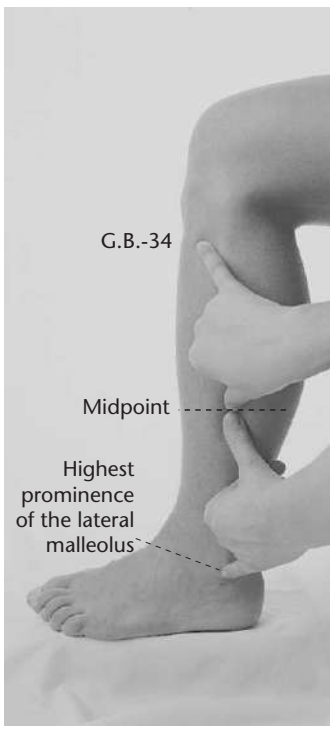
Vertically 0.5–1.5 cun

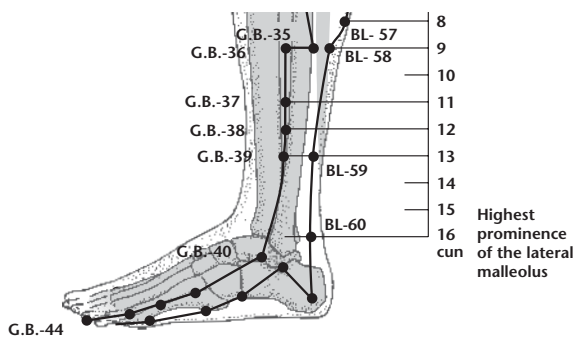
Actions/Indications

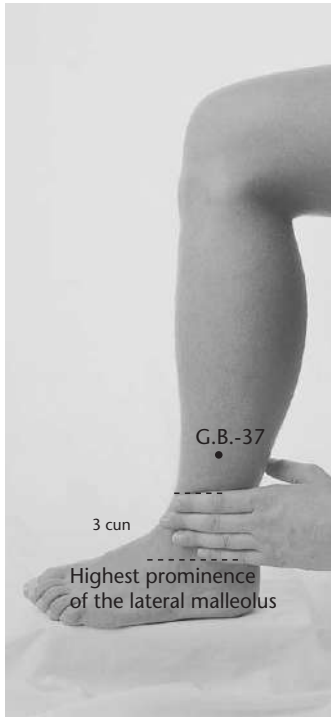
- Benefits the eyes
- Eliminates Wind-Damp, opens the channel, alleviates pain

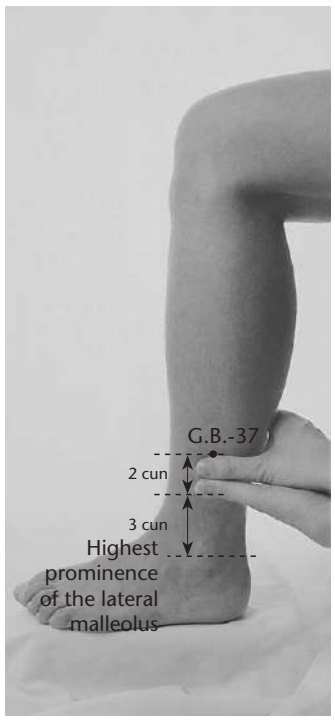
Special features

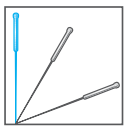
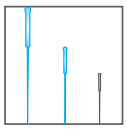
Luo-connecting point. Important distal point for disorders of the eyes.

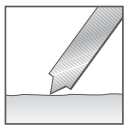










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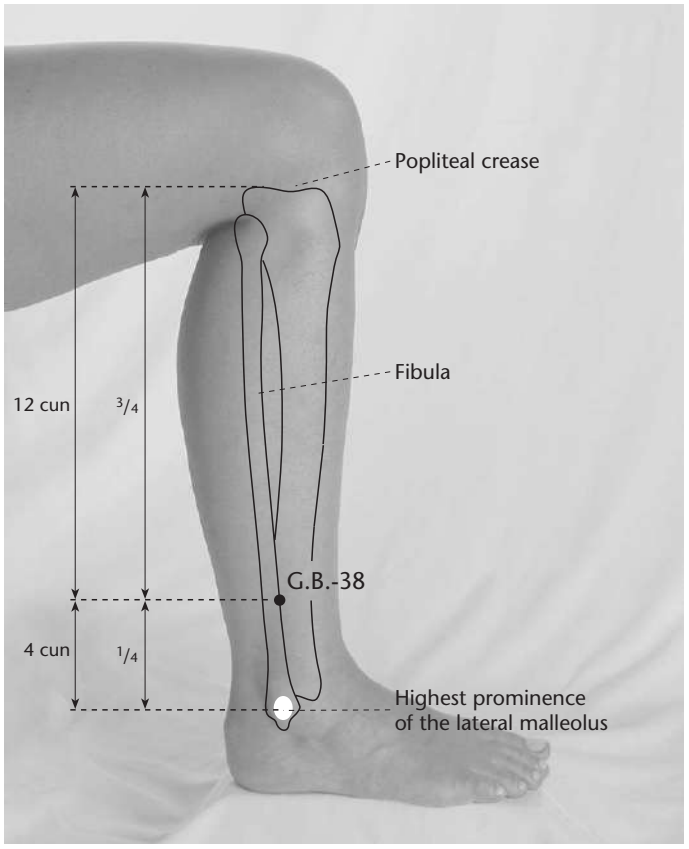
G.B.-38 *Yang Assistance* YANGFU

Location

4 cun proximal to the highest prominence of the lateral malleolus, on the **anterior** border of the fibula.

How to find

First, locate the prominence of the lateral malleolus (→ 3.6.2) and, from there, measure 4 cun in a proximal direction. There, locate **G.B.-38** on the **anterior** border of the fibula. **Or:** On the lateral aspect of the lower leg, the distance between the prominence of the lateral malleolus (→ 3.6.2) and the popliteal crease is 16 cun (→ 2.2). Divide this distance into quarters and locate **G.B.-38** one quarter of the distance from the lateral malleolus (aid: spreading hands technique or elastic tape → 2). **For orientation:** The borders of the fibula are deep to the peroneus brevis muscle and are often not easily palpable. For this reason, it is suggested to palpate the anterior border of the fibula just superior to the ankle and then locate the point on an imaginary line running to the head of the fibula.

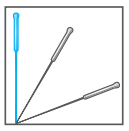


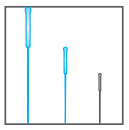
Needling

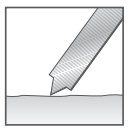
Vertically 0.5–1.5 cun

Actions/Indications

- Opens the channel
- Clears Wind and Heat

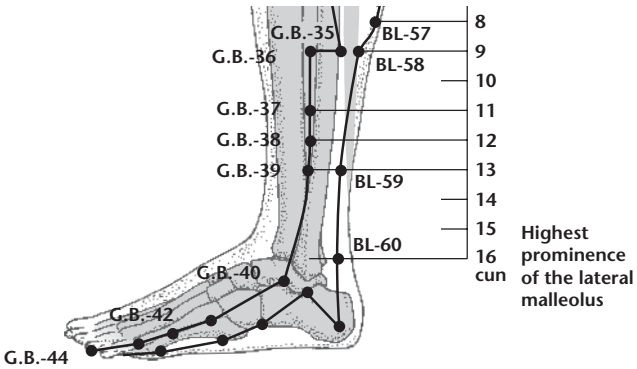






Special features

Jing-river point, Fire point, sedation point.



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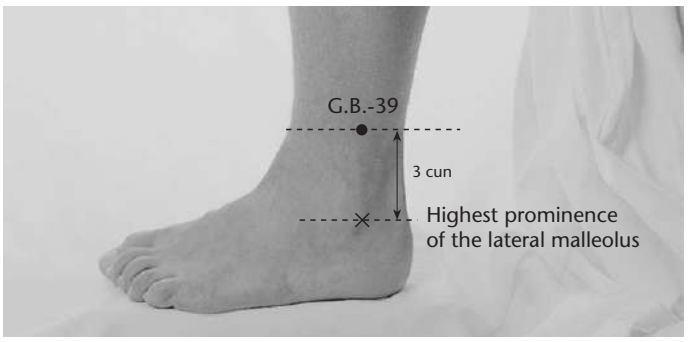
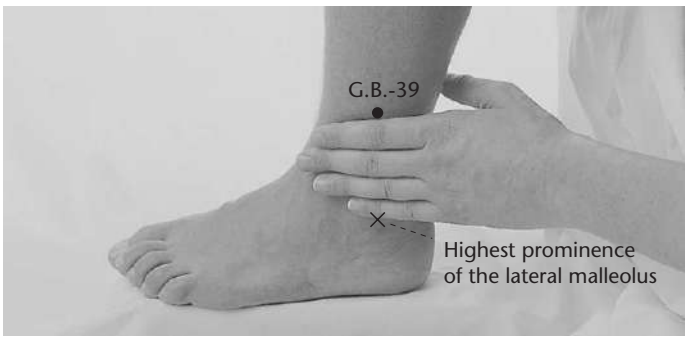
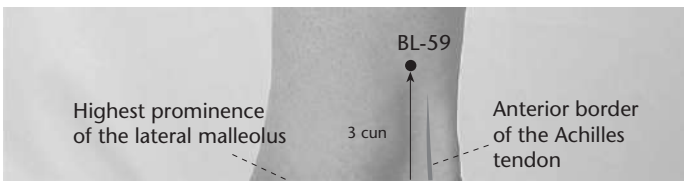
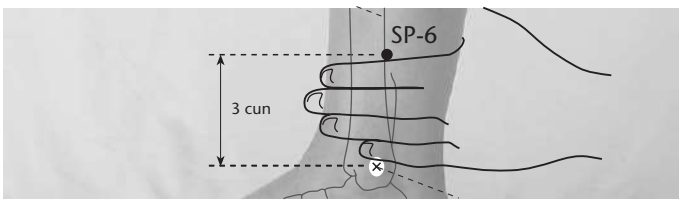
Hanging Bell XUANZHONG G.B.-39









Location

3 cun proximal to the highest prominence of the lateral malleolus, on the **anterior** border of the fibula.

How to find

From the highest prominence of the lateral malleolus (→ 3.6.2), measure 3 cun (1 handbreadth) in a proximal direction and locate **G.B.-39** in a depression on the **anterior** border of the fibula. According to some authors, it is located between the posterior border of the fibula and the tendons of the peroneus longus and brevis musles. When in doubt, choose the more pressure-sensitive point.

Located on the same level but 3 cun proximal to → **BL-60** (depression between the malleolus and the Achilles tendon) is → **BL-59**. In a comparable position but on the medial aspect of the leg is → **SP-6** (3 cun proximal to the highest prominence of the medial malleolus, meeting point of the three leg Yin channels).

Needling

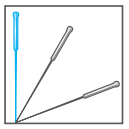
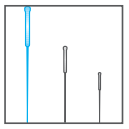
Vertically 1–1.5 cun

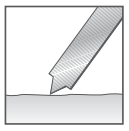
Actions/Indications

- Opens the channel, benefits the tendons and bones
- Benefits the Marrow, clears Wind-Dampness
- Clears Heat from the Gall Bladder

Special features

Hui-meeting point of the Marrow. Important distal point for disorders of the cervical spine.



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G.B.-40 *Mound of Ruins* QIUXU

Location

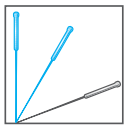
In the depression anterior and inferior to the lateral malleolus, lateral to the tendons of the extensor digitorum longus muscle.

How to find

For easier location, ask the patient to flex their ankle at a 90° angle. From the lateral malleolus (→ 3.6.2), let the palpating finger glide into a well-defined depression anterior and inferior to the malleolus. By lifting the toes, the tendons of the extensor digitorum longus muscle as well as the depression (**G.B.-40**) will become more pronounced. **For orientation: G.B.-40** is located at the junction of a vertical line along the anterior border of the lateral malleolus and a horizontal line along its lower border.
→ **SP-5** is located in a comparable position but on the medial aspect of the ankle (in the depression anterior and inferior to the medial malleolus). On a line connecting → **SP-5** and **G.B.-40**, → **LIV-4** is located medial to and → **ST-41** is located lateral to the tendon of the extensor hallucis longus muscle, which runs to the big toe.

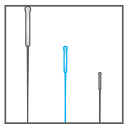
Needling

0.5–1.5 cun vertically or slightly obliquely in the area of the fibulotarsal ligaments towards the medial arch of the foot.



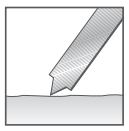
Actions/Indications

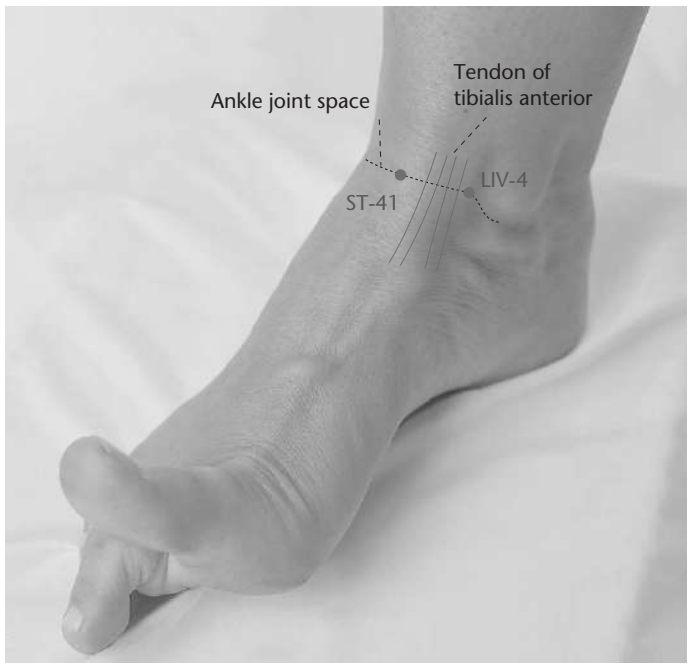
- Opens the channel, benefits the joints
- Spreads Liver Qi, clears Heat and Dampness from the Gall Bladder

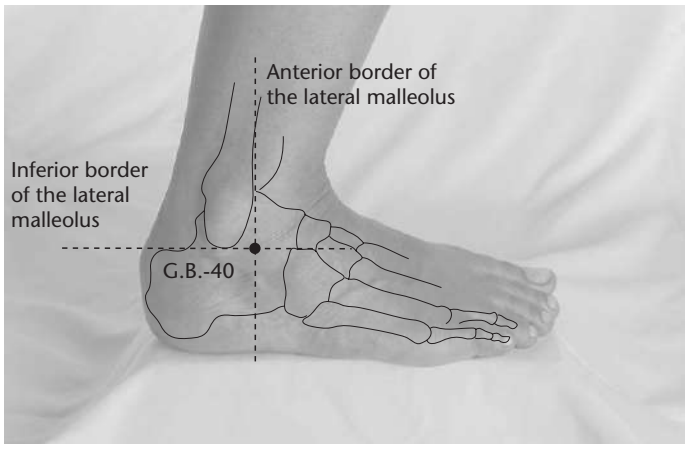


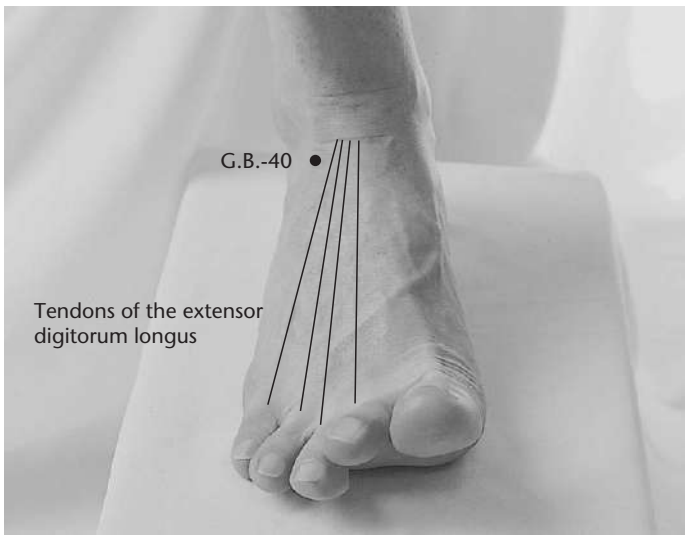
Special features

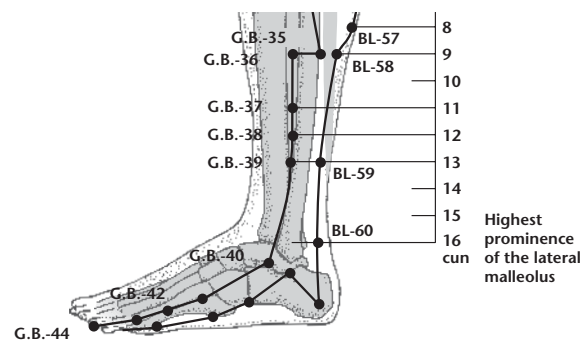
Yuan-source point

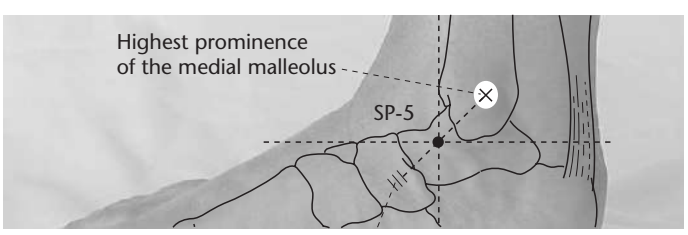












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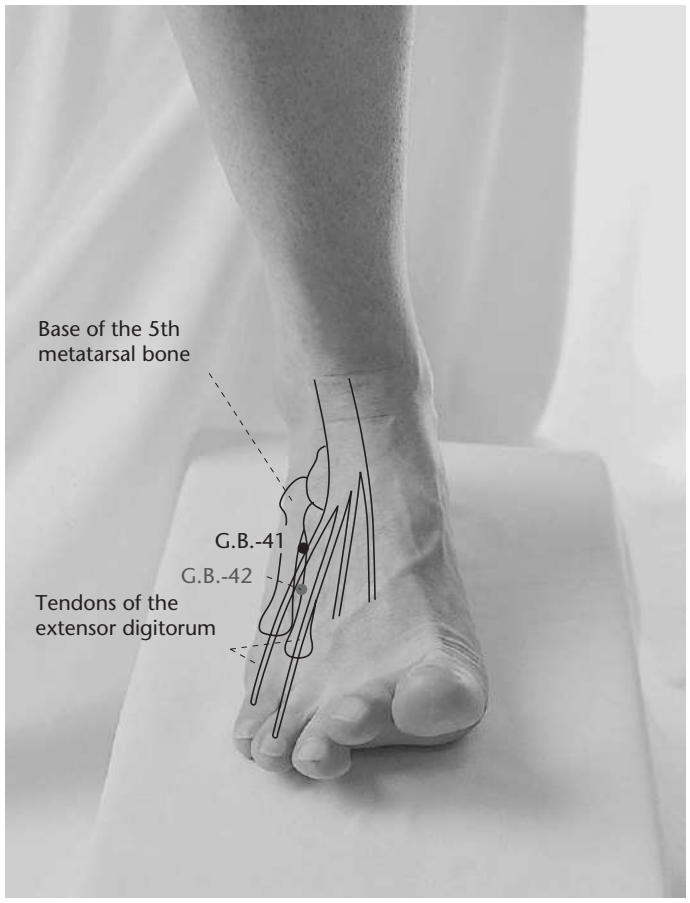
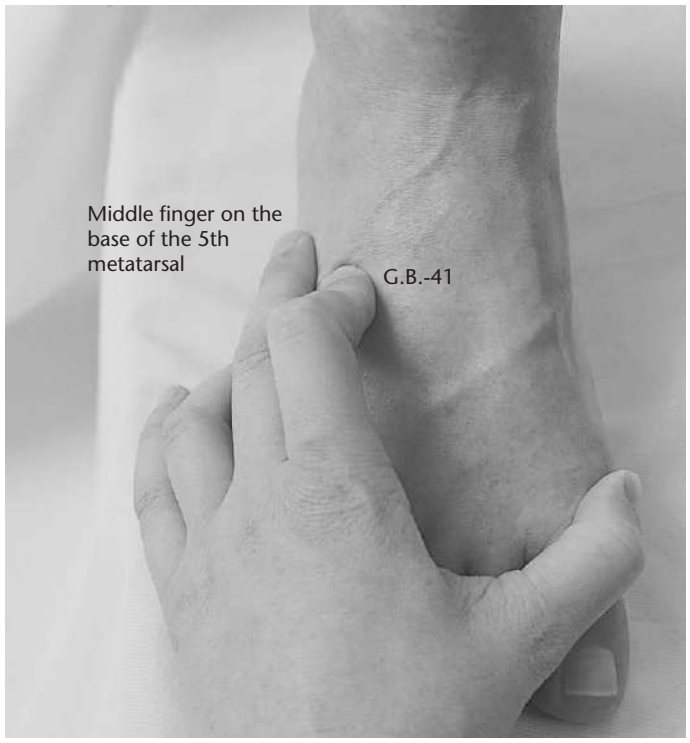
Foot Governor of Tears ZULINQI G.B.-41





Location

In the depression at the junction of the shafts and the bases of the 4th and 5th metatarsal bones, lateral to the tendon of the extensor digitorum longus muscle.

How to find

Palpate for the distinct tuberosity of the 5th metatarsal bone (→ 3.6.2) on the lateral aspect of the midfoot. With the palpating finger, glide on from the tuberosity to the dorsum of the foot, into the groove between the 4th and 5th metatarsal bones. There, palpate in a distal direction. **G.B.-41** is located at the junction of the heads and the shafts of the two bones. **Or:** Ask the patient to abduct their toes so that the branch of the tendon of the extensor digitorum longus muscle extending to the little toe becomes more pronounced. Then palpate in the groove between the 4th and 5th metatarsal bones from distal to proximal to where the tendon crosses the groove. → **G.B.-42** is located medial (or anterior) to it, while **G.B.-41** is located in the depression lateral (or posterior) to the tendon.

Needling

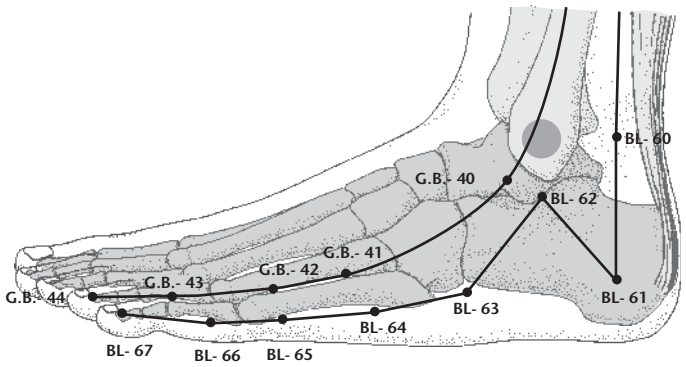
Perpendicularly or obliquely approximately 0.3–0.8 cun

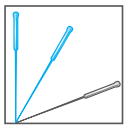
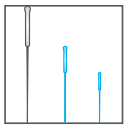
Actions/Indications

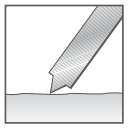
- Spreads Liver Qi, benefits the thorax and the lateral costal region, transforms Phlegm, dissipates nodules, benefits the breasts
- Clears the head, benefits the eyes

Special features

Shu-stream point, Wood point, opening point of the *dai mai*, *ben* point (Five Phases), exit point.





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G.B.-42 *Earth Five Meetings* DIWUHUI

Location

Between the 4th and 5th metatarsal bones, proximal to the metatarsophalangeal joints and medial to the tendon of the extensor digitorum longus muscle.

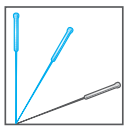
How to find

From the space between the 4th and 5th toes, palpate towards the ankle. Locate **G.B.-42** in the groove between the two bones, proximal to the metatarsophalangeal joints (and proximal to the heads of the two metatarsal bones). **Or:** Ask the patient to abduct their toes so that the branch of the tendon of the extensor digitorum longus muscle extending to the little toe becomes more pronounced. Then palpate from the space between the toes along the groove between the 4th and 5th metatarsal bones from distal to proximal to where the tendon crosses the groove. **G.B.-42** is located medial (or anterior) to the tendon.

→ **G.B.-41** is located lateral (or posterior) to the tendon when continuing to palpate along the groove. → **BL-65** is located approximately on the same level on the lateral border of the foot, proximal to the head of the 5th metatarsal bone.

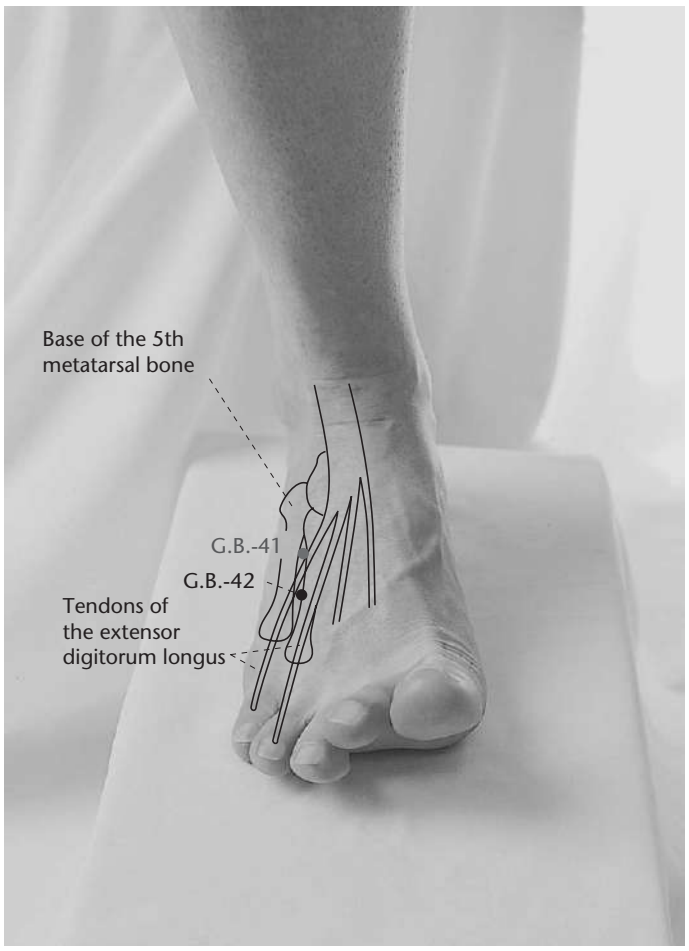
Needling

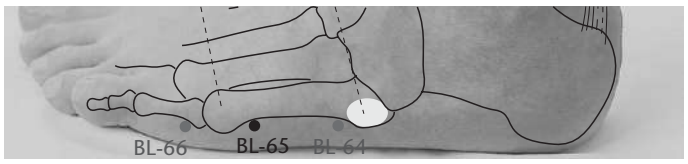
Vertically or obliquely 0.3–0.8 cun

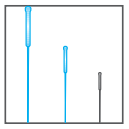


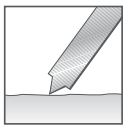
Actions/Indications

- Moves Liver Qi
- Clears Heat from the Gall Bladder









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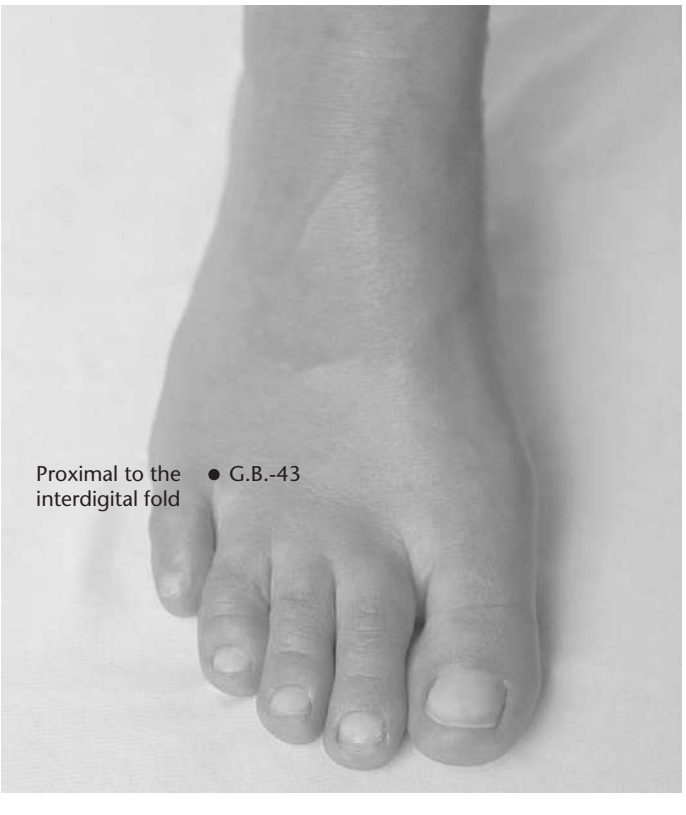
Clamped Stream JIAXI/XIAXI G.B.-43



Location

Between the 4th and 5th toes, proximal to the margin of the interdigital web.

How to find

Locate the interdigital web between the 4th and 5th toes. Then locate **G.B.-43** slightly proximal to the margin of the web. **G.B.-43** as well as → **LIV-2** and → **ST-44** are part of → **Ex-UE-10** (*bafeng*: proximal to the margins of the webs between the toes). → **T.B.-2** is located in a comparable position on the hand, between the ring finger and little finger. It is also part of → **Ex-UE-9** (*baxie*).

Needling

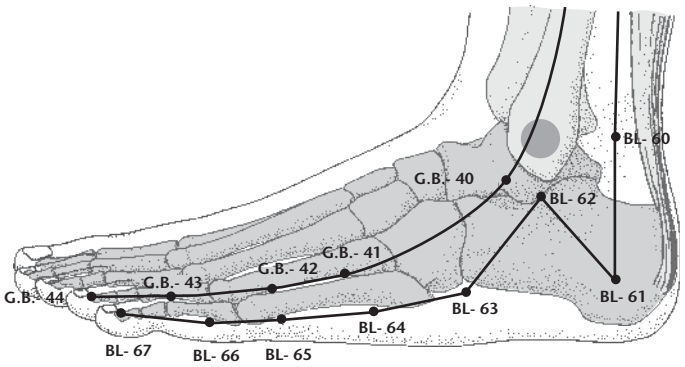
Up to 0.5 cun vertically or 1 cun obliquely in a proximal direction.

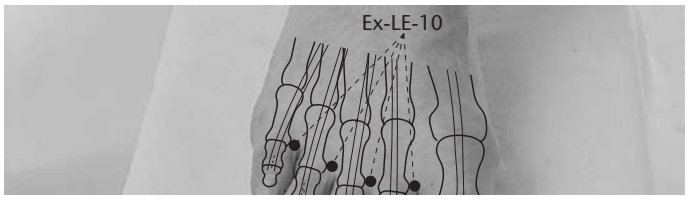
Actions/Indications

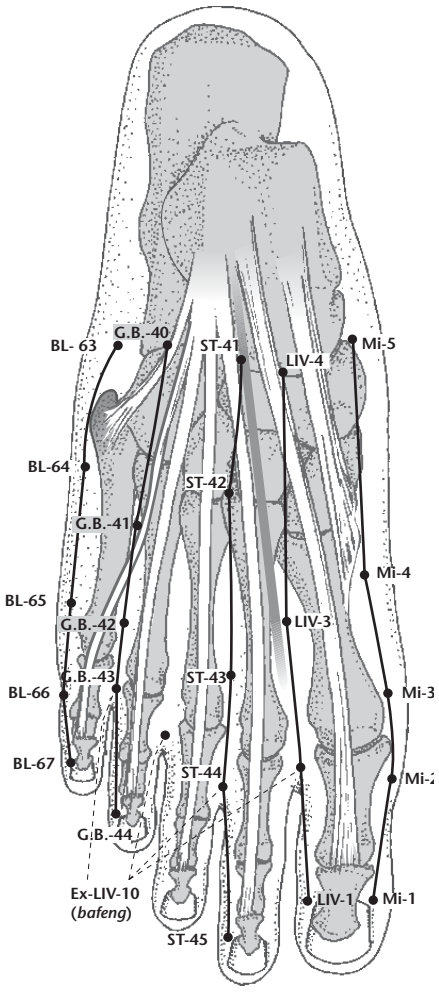
- Clears Heat, Damp-Heat and Wind, especially from the opposite end of the channel
- Calms Liver Yang

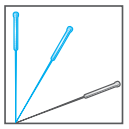
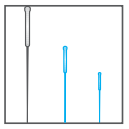
Special features

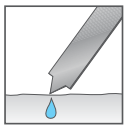
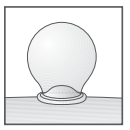
Ying-spring point, Water point, tonification point.







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G.B.-44 *Foot Portal Yin* ZUQIAOYIN

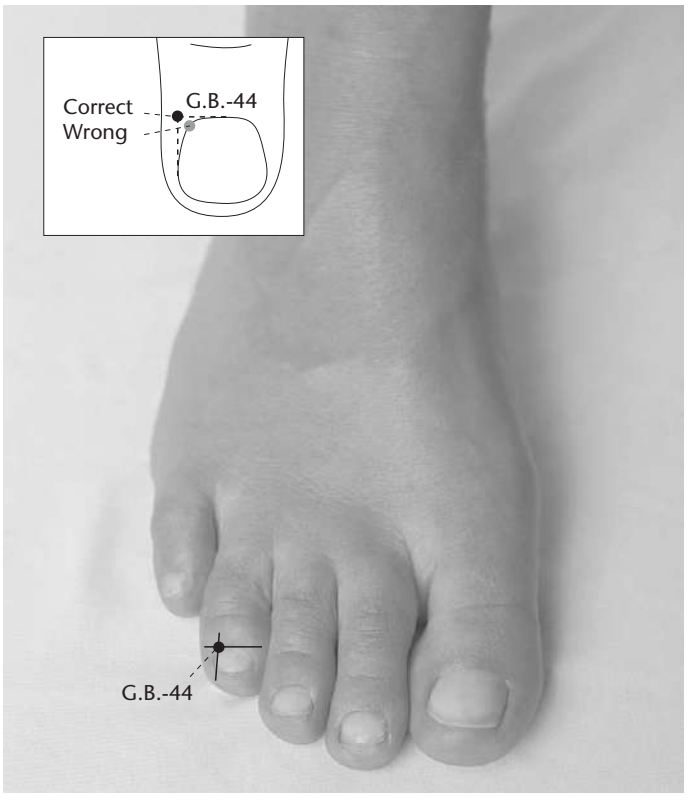
Location
On the 4th toe, 0.1 cun from the lateral corner of the nail.

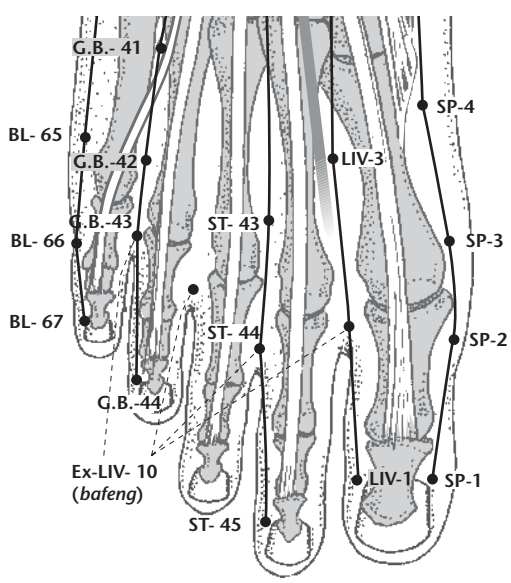
How to find
G.B.-44 is located at the junction of two tangents along the proximal and lateral borders of the 4th toe.
→ **BL-67** is located at the lateral corner of the little toe.

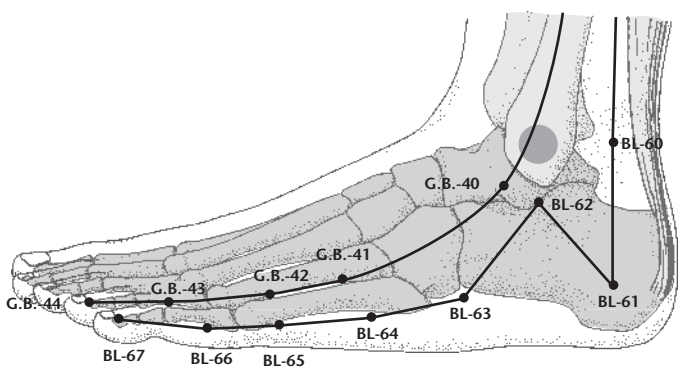
Needling
0.1 cun vertically or 0.2 cun obliquely in a proximal direction or prick to bleed. Caution: Painful point.

Actions/Indications
- Clears Wind, Heat and Fire
- Harmonises the Liver and Gall Bladder
- Calms the *shen*

Special features
Jing-well point, Metal point







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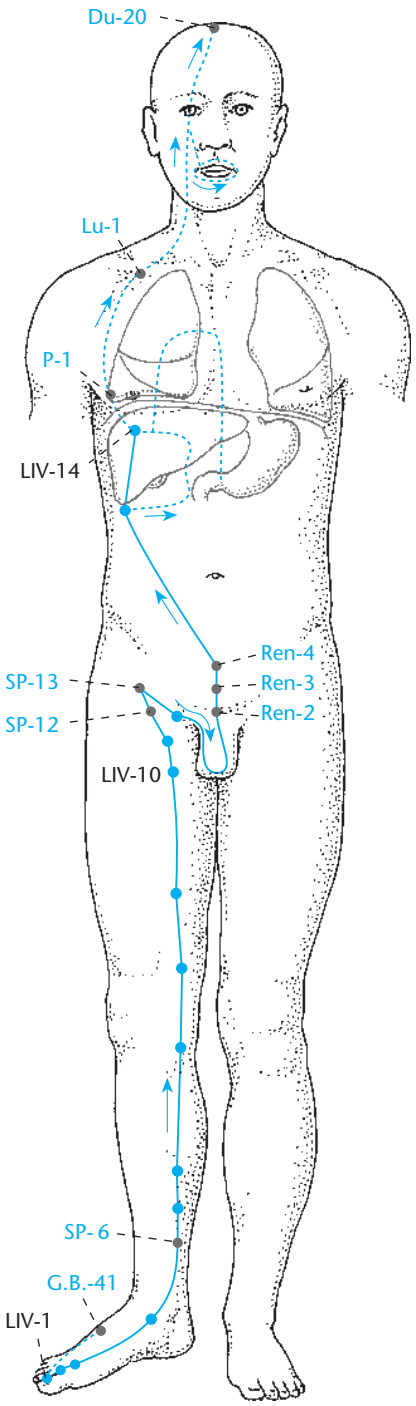
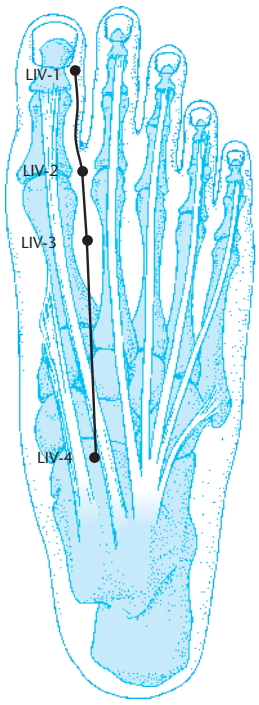
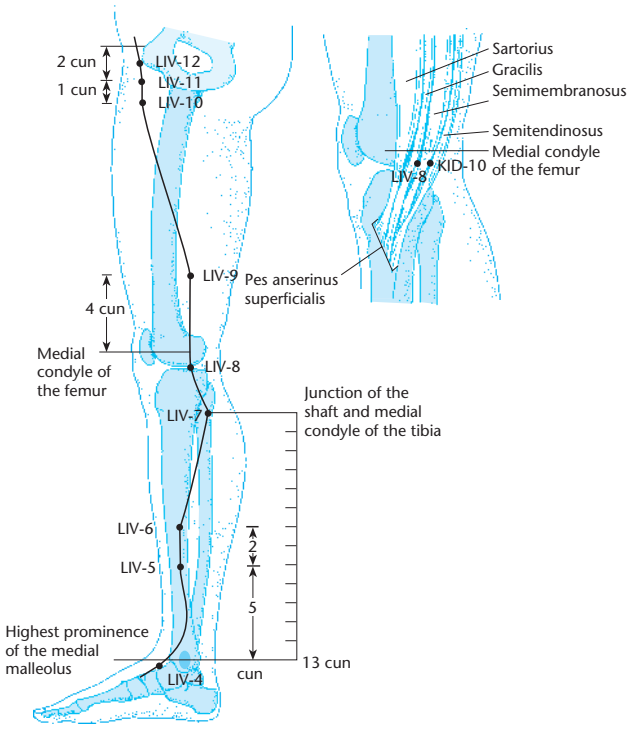
4.12 The Liver Channel System – Foot *jueyin* (*zu jue yin jing luo*)

4.12.1 The Liver Primary Channel (*zu jue yin jing*)







Pathway

The Liver primary channel begins at **LIV-1** (*dadun*) on the lateral corner of the nail of the big toe. This point is reached by a small branch of the G.B. channel, which separates from the Gall Bladder primary channel on the dorsum of the foot at → **G.B.-41** (*zulinqi*) (foot Yin–Yang connection of the third great circuit).

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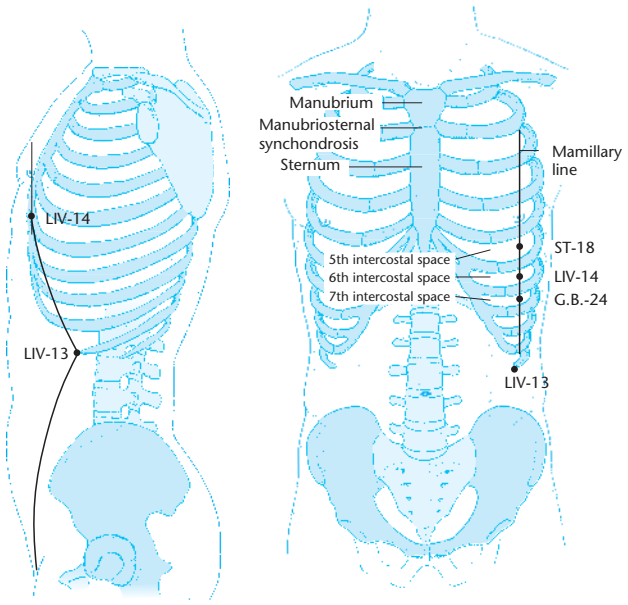

The **external pathway** runs proximally between the 1st and 2nd metatarsal bones

- ➡ ascends anterior to the medial malleolus
- ➡ crosses the SP channel at → **SP-6** (*yinlingquan*) on the medial aspect of the lower leg
- ➡ ascends the medial aspect of the leg towards the knee anterior to the SP channel
- ➡ continues along the medial aspect of the thigh to the pubic region, where it passes → **SP-12** (*chongmen*) and → **SP-13** (*fushe*)
- ➡ circles the external genitalia
- ➡ ascends the lower abdomen, passing → **Ren-2** (*qugu*), → **Ren-3** (*zhongji*) and → **Ren-4** (*guanyuan*)
- ➡ obliquely traverses the abdomen to **LIV-13** (*zhangmen*) at the free end of the 11th rib and to **LIV-14** (*qimen*), where the **external pathway** terminates.

At **LIV-13**, the channel enters the abdomen, marking the beginning of the **internal pathway**. It

- ➡ circles the Stomach (*wei*)
- ➡ connects with its pertaining *zang*-Organ, the Liver (*gan*) and its paired *fu*-Organ, the Gall Bladder (*dan*)
- ➡ penetrates the diaphragm
- ➡ spreads in the lateral hypochondrium and thoracic region.

The channel then ascends along the posterior aspect of the trachea to the throat and nasopharynx and connects with the eye system and the brain. It crosses the forehead and ascends to the vertex, where it connects with the extraordinary vessel *du mai* at → **Du-20** (*baihui*).

An **internal branch** descends from the maxillary sinus to the cheek and circles the **inner surface** of the lips.

An **internal branch** emerges from the Liver, penetrates the diaphragm, disperses in the Lung (*fei*) and meets the Lung primary channel (deep Yin–Yin connection), closing the first circuit of the Nutritive Qi (*ying qi*) (→ 1.1.4). This branch further connects with the Pericardium primary channel beneath → **P-1** (*tianchi*) (hand–foot pairing of the third great circuit: Yin axes, *jue yin*).

Clinical importance (→ 1.2)

Exterior (*biao*) signs and symptoms: Headaches, dizziness, blurred vision, tinnitus, fever, spastic extremities

Interior (*li*) or *zangfu*-Organ signs and symptoms: Distension, fullness and pain in the costal region, tightness and fullness in the chest, abdominal pain, vomiting, jaundice, diarrhoea, *shan* disorder, enuresis, urinary retention, yellow urine

Connections of the Liver primary channel (→ 1.2)

Connections with other channels

Gall Bladder primary channel (*zu shao yang jing*)

Connection: Foot Yin–Yang pairing of the third great circuit
Location: G.B.-41 → LIV-1 (on the foot)
Circulation: Circadian (according to the Organ clock)
Importance: Exterior–Interior relationship

Pericardium primary channel (*shou jue yin jing*)

Connection: Paired according to the six-channel theory (hand–foot pairing): *jue yin* (Yin axes of the third great circuit)
Location: LIV → P. An internal branch originating in the Liver penetrates the diaphragm and connects with the Pericardium primary channel beneath → P-1.
Circulation: Non-circadian (not according to the Organ clock)
Importance: Above–below relationship

Lung primary channel (*shou tai yin jing*)

Connection: Deep Yin–Yin connection
Location: LIV → LU (in the thorax). An internal branch originating in the Liver penetrates the diaphragm and disperses in the Lung to connect with the Lung primary channel.
Circulation: Circadian (according to the Organ clock)
Importance: The Lung primary channel receives part of its Nutritive Qi (*ying qi*) from the Liver primary channel (first circulation of the *ying qi* → 1.1.4).

Connections with zangfu-Organ systems

Stomach (*wei*), **Liver (*gan*)**, **Gall Bladder (*dan*)**, Lung (*fei*)

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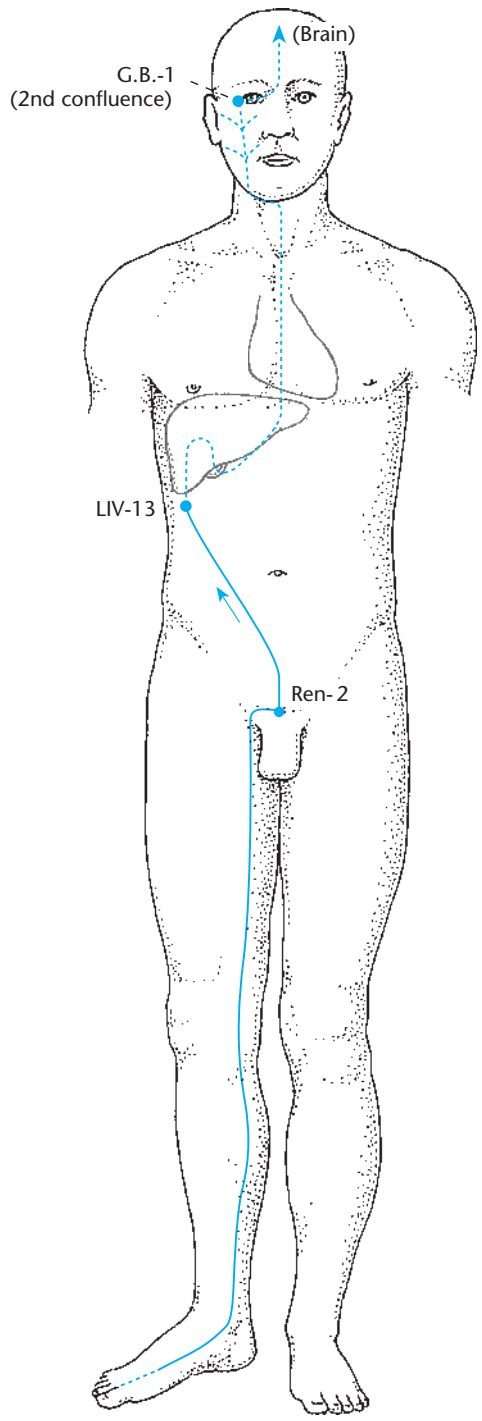
4.12.2 The Liver Divergent Channel (*zu jue yin jing bie*)



Pathway

The Liver divergent channel separates from the Liver primary channel on the dorsum of the foot

- ➡ ascends the medial aspect of the leg to the inguinal region
- ➡ meets the Gall Bladder divergent channel near → **Ren-2** (*qugu*)
- ➡ traverses the abdomen and enters internally at **LIV-13** (*zhangmen*)
- ➡ continues inside the thoracic cavity, spreads in the Liver (*gan*), connects with the Gall Bladder (*dan*) and runs to the Heart (*xin*)
- ➡ ascends to the neck
- ➡ emerges at the mandibular angle and disperses over the face
- ➡ connects with the Gall Bladder primary channel and the Gall Bladder divergent channel at → **G.B.-1** (*tongziliao*) on the outer canthus of the eye to form one of the six *he*-confluences (here: G.B./LIV as 2nd confluence → 1.3)
- ➡ continues to the eye system and ends in the Brain.

Clinical importance

- Strengthens the relationship between the Liver and the Gall Bladder (*zangfu*-Organ systems). Points on the Liver primary channel can therefore be used to treat disorders of the Gall Bladder and vice versa.
- Based on the pathways of the Gall Bladder and Liver divergent channels, points on both channels can be used for disorders of the hips and the lower extremities as well as for disorders of the eye system.

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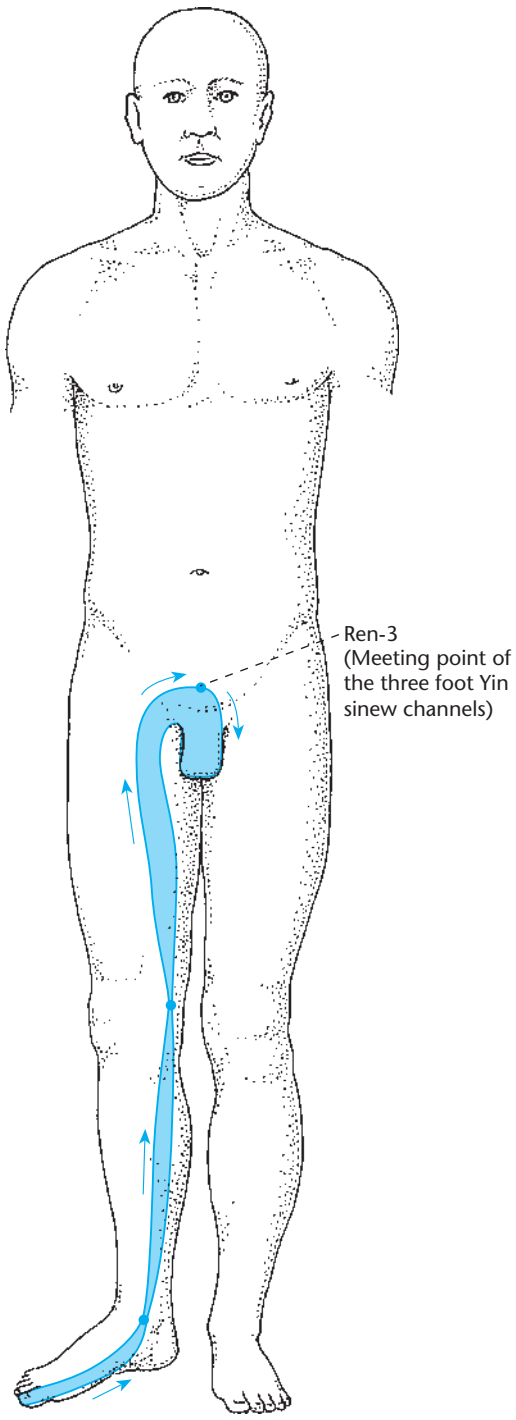
4.12.3 The Liver Sinew Channel (*zu jue yin jing jin*)



Pathway

The Liver sinew channel begins on the dorsum of the big toe

- ➡ follows the dorsolateral aspect of the big toe to the anterior aspect of the medial malleolus, where it binds (*jie*)
- ➡ ascends the medial aspect of the tibia and binds (*jie*) at the medial aspect of the knee
- ➡ further ascends the medial aspect of the thigh between the Kidney and Spleen sinew channels
- ➡ reaches the inguinal region, meeting the other foot Yin sinew channels at → **Ren-3** (*zhongji*) and continues to the genitalia.

Clinical importance

Pathology: Stiffness, tension and distending sensations along the big toe. Pain around the medial malleolus and medial aspect of the knee. Pain and muscular tension along the medial aspect of the thigh. Disorders of the genital region.

Indication: Pain, tension, muscle contractions and distending sensations along the pathway of the channel. Disorders of the genital region.

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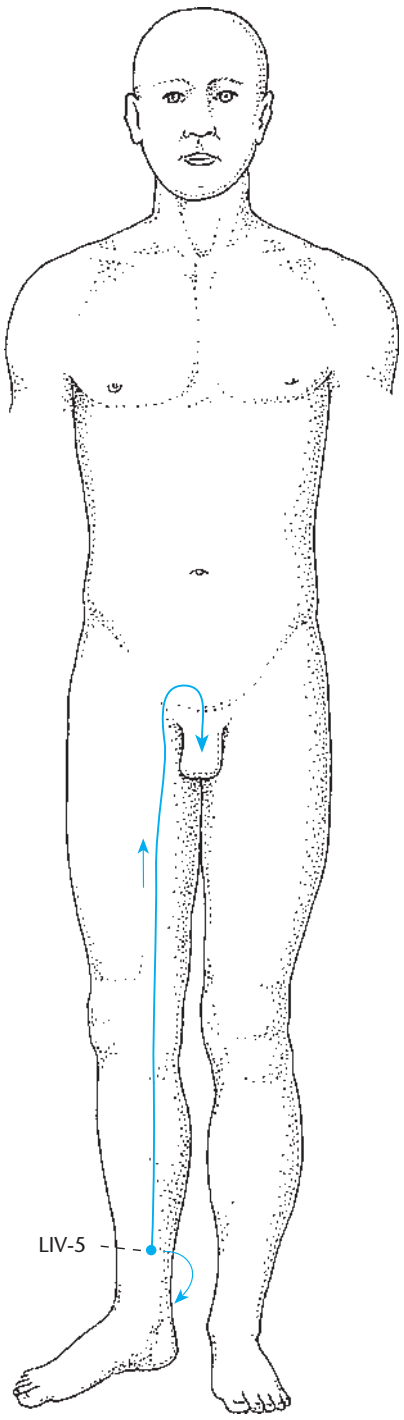
4.12.4 The Liver *luo*-Connecting Vessel System (*zu jue yin luo mai*)



Pathway

The Liver *luo*-connecting vessel system separates from the Liver primary channel at its *luo* point **LIV-5** (*ligou*) (→ 8.1.2). It forms a three-dimensional reticular network, dividing into multiple branches and sub-branches (*sun luo, fu luo, xue luo* → 1.5) within the surrounding tissue.

- Horizontal divisions run to the Interiorly–Exteriorly paired Gall Bladder primary channel; according to some schools of thought (for example, Ngyen Van Nghi → Appendix), they travel as a **transverse** Liver *luo*-connecting vessel to the *yuan*-source point → **G.B.-40** (*qiuxu*).
- **A longitudinal division** ascends the medial aspect of the leg to the genital region, where it branches out.

Clinical importance (→ 8.1.2)

Pathology

Counterflow Qi: Swellings and pain of the testicles and scrotum, hernia
Excess (*shi*): Priapism
Deficiency (*xu*): Itching of the external genitalia

4.12.5 Cutaneous Region (*jue yin pi bu*)

See description and figures → 1.6.

4.12.6 Points of the Liver Primary Channel (Overview)

Specific points according to their function

- ***Yuan*-source point (→ 8.1.1): LIV-3** (*taichong*) ■■
- ***Luo*-connecting point (→ 8.1.2.): LIV-5** (*ligou*) ■■
- ***Xi*-cleft point (→ 8.1.3): LIV-6** (*zhongdu*) ■■
- **Associated Back-*shu* point (→ 8.1.4): BL-18** (*ganshu*) ■■
- **Associated Front-*mu* point (→ 8.1.5): LIV-14** (*qimen*) ■■
- **Five *shu*-transporting points (→ 8.1.6):**
  jing-well point (Wood): **LIV-1** (*dadun*) ■■, *ben* point (Five Phases)
  ying-spring point (Fire): **LIV-2** (*xingjian*) ■■
  shu-stream point (Earth): **LIV-3** (*taichong*) ■■
  jing-river point (Metal): **LIV-4** (*zhongfeng*)
  he-sea point (Water): **LIV-8** (*ququan*) ■■, tonification point
- ***Hui*-meeting point (→ 8.1.7) of the *zang*-Organs: LIV-13** (*zhangmen*) ■■
- **Opening point (→ 8.1.8): –**
- **Lower *he*-sea point (→ 8.1.9): –**
- ***Jiaohui*-meeting points (→ 8.1.10):**
  – with the G.B. channel and the *dai mai**: **LIV-13** (*zhangmen*) ■■

*Mentioned by only some authors

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– with the *yin wei mai* and the ST channel: **LIV-14** (*qimen*) ■■
– of other channels with the LIV channel: **SP-6, SP-12, SP-13, Ren-2, Ren-3, Ren-4, P-1, (Du-20*)**

- **Gao Wu command point (→ 8.1.11): –**
- **Window of Heaven point (→ 8.1.12): –**
- **Points of the Four Seas (→ 8.1.13): –**
- **Ma Dan Yang Heavenly Star point (→ 8.1.14): LIV-3** (*taichong*) ■■
- **Sun Si Miao Ghost point (→ 8.1.15): –**
- **Other functional points:**
  – Front-*mu* point of the Spleen: **LIV-13** (*zhangmen*) ■■

Points according to region

- **Local points** (→ 8.2.1): Liver – **LIV-13** (*zhangmen*) ■■; knee – **LIV-7** (*xiguan*), **LIV-8** (*ququan*) ■■; foot – **LIV-4** (*zhongfeng*)
- **Adjacent points (→ 8.2.1):** Stomach/Spleen – **LIV-13** (*zhangmen*) ■■; hypochondrium – **LIV-13** (*zhangmen*) ■■, **LIV-14** (*qimen*)
- **Distal points** (→ 8.2.1): vertex – **LIV-3** (*taichong*) ■■; eyes – **LIV-2** (*xingjian*) ■■, **LIV-3** (*taichong*) ■■; Liver – **LIV-3** (*taichong*) ■■; Gall Bladder – **LIV-3** (*taichong*) ■■; urogenital region – **LIV-3** (*taichong*) ■■; genital region – **LIV-5** (*ligou*) ■■; lower abdomen – **LIV-8** (*ququan*) ■■

Specific points according to the channel pathway (in numeric order)

- **LIV-1** (*dadun*) ■■: *jing*-well point (Wood), *ben* point (Five Phases) (→ 8.1.6)
- **LIV-2** (*xingjian*) ■■: *ying*-spring point (Fire) (→ 8.1.6), sedation point; distal point for the eyes (→ 8.2.1)
- **LIV-3** (*taichong*) ■■: *yuan*-source point (→ 8.1.1); *shu*-stream point (Earth) (→ 8.1.6); Ma Dan Yang Heavenly Star point (→ 8.1.4); distal point for the vertex, eyes, Liver, Gall Bladder and urogenital region (→ 8.2.1)
- **LIV-4** (*zhongfeng*): *jing*-river point (Metal) (→ 8.1.6); local point for the foot (→ 8.2.1)
- **LIV-5** (*ligou*) ■■: *luo*-connecting point (→ 8.1.2); distal point for the genital region (→ 8.2.1)
- **LIV-6** (*zhongdu*) ■■: *xi*-cleft point (→ 8.1.3)
- **LIV-7** (*xiguan*): local point for the knee (→ 8.2.1)
- **LIV-8** (*ququan*) ■■: *he*-sea point (Water) (→ 8.1.6); tonification point; distal point for the abdomen (→ 8.2.1); local point for the knee (→ 8.2.1)
- **LIV-13** (*zhangmen*) ■■: Front-*mu* point of the Spleen (→ 8.1.5); *hui*-meeting point of the *zang*-Organs (→ 8.1.7); *jiaohui*-meeting point with the G.B. channel and the (*dai mai**) (→ 8.1.10); adjacent point for the Spleen/Stomach and the hypochondrium (→ 8.2.1)
- **LIV-14** (*qimen*) ■■: associated Front-*mu* point(→ 8.1.5); *jiaohui*-meeting point with the *yin wei mai* and the SP channel (→ 8.1.10); regional point for the hypochondrium (→ 8.2.1)

* Mentioned by only some authors

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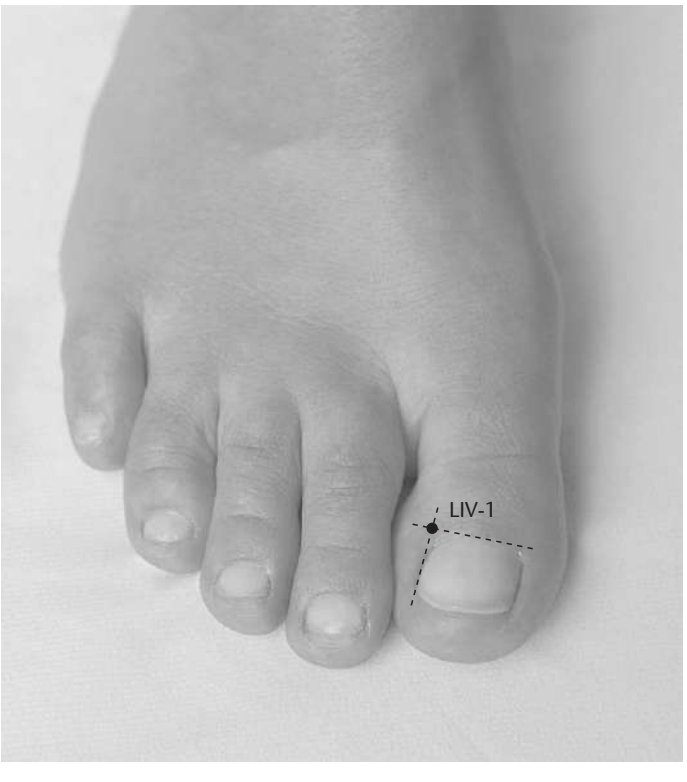
Big Mound DADUN LIV-1



Location

On the lateral aspect of the big toe, 0.1 cun proximal and lateral to the corner of the nail.

How to find

LIV-1 is located at the junction of two tangents along the proximal and lateral borders of the big toe, 0.1 cun from the actual margin of the nail. → **SP-1** is located at the medial corner of the big toe.

Needling

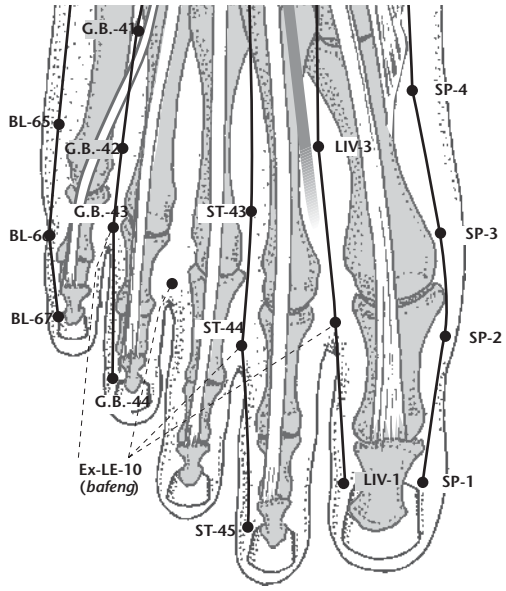
Vertically or obliquely 0.1–0.2 cun. Avoid needling into the perionychium. For excess conditions, prick to bleed. Caution: Painful point.

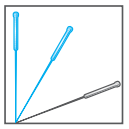
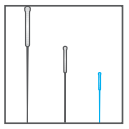
Actions/Indications

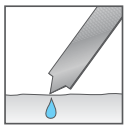
- Regulates the Lower Burner, the genitals and Liver Qi
- Eliminates Dampness
- Opens the sensory orifices

Special features

Jing-well point, Wood point, *ben* point (Five Phases), entry point.





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LIV-2 *Moving Between* XINGJIAN

Location

Between the 1st and 2nd toes, proximal to the margin of the interdigital web.

How to find

Locate **LIV-2** slightly proximal to the margin of the interdigital web between the 1st and 2nd toes.

Located in comparable positions are → **ST-44** (between the 2nd/3rd toes) and → **G.B.-43** (between the 4th/5th toes). → **LIV-2,** → **ST-44** and → **G.B.-43** are all part of the extra point → **Ex-LE-10** (*bafeng*). Its counterpart on the hand is the extra point → **Ex-UE-9** (*baxie*).

Needling

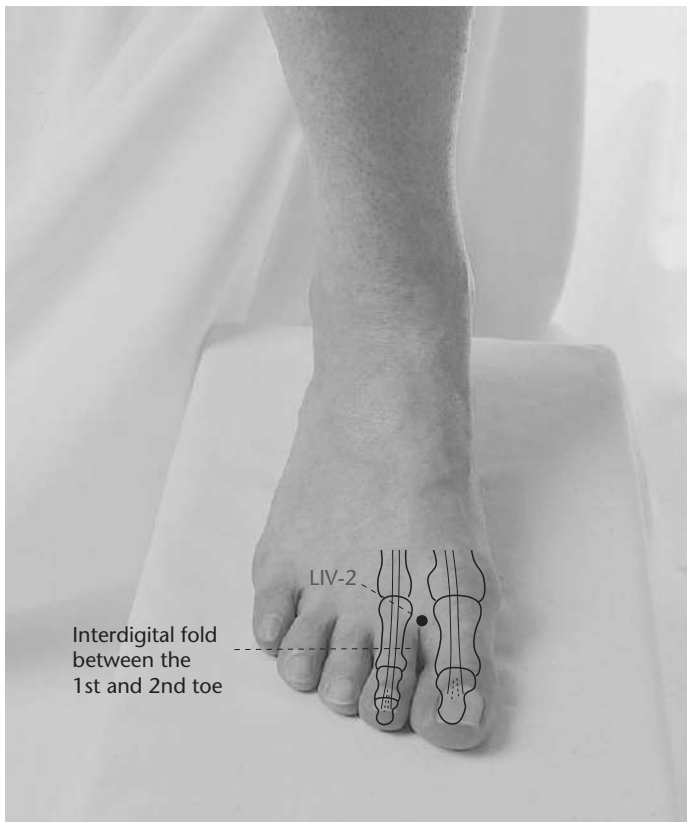
0.3–0.5 cun obliquely towards the heel or vertically.

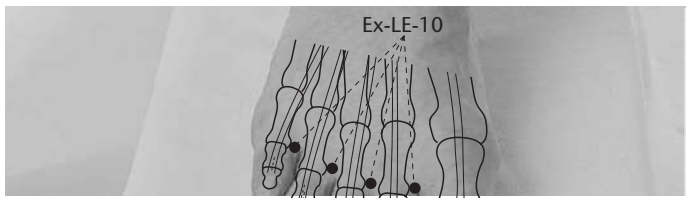
Actions/Indications

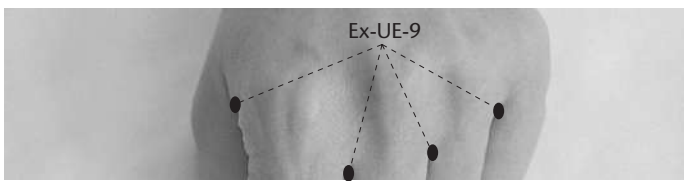
- Clears Liver Fire, spreads Liver Qi, calms (internal) Liver Wind, clears Heat and Blood Heat, stops bleeding, benefits the Lower Burner

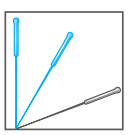
Special features

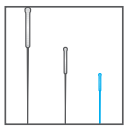
Ying-spring point, Fire point, sedation point. Major point for excess syndromes of the Liver (especially Liver Fire).

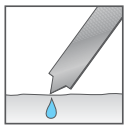












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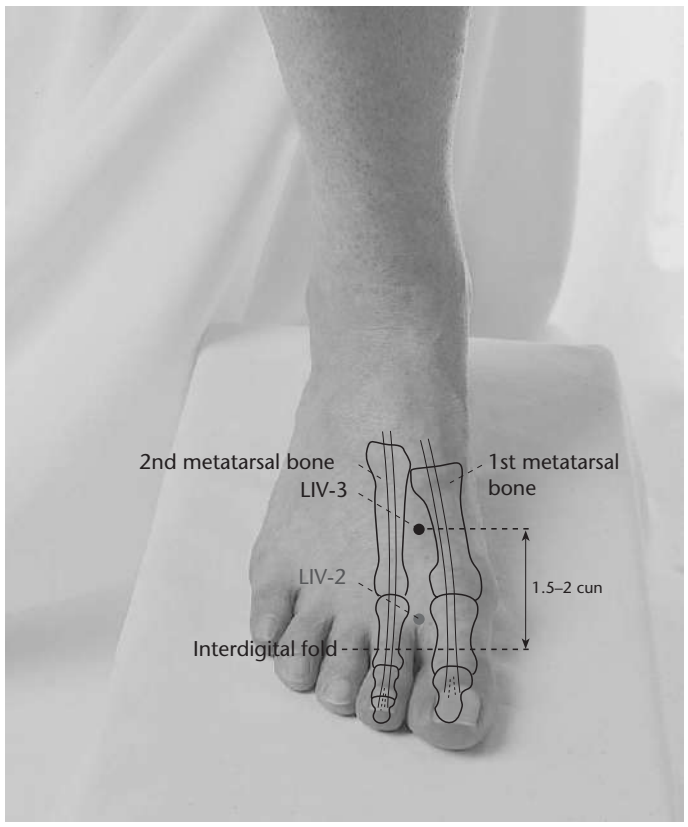
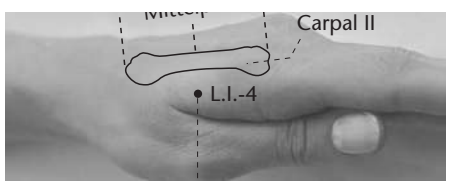
Great Rushing TAICHONG LIV-3





Location

On the dorsum of the foot, between the 1st and 2nd metatarsal bones, in the depression proximal to the metatarsophalangeal joints and the proximal angle between the two bones.

How to find

From the web between the 1st and 2nd toes, palpate proximally past the metatarsophalangeal joints and along the groove between the 1st and 2nd metatarsal bones, until you reach the widest and deepest part of the groove. There, locate **LIV-3**, which is often sensitive to pressure. To double-check: When continuing to palpate along the groove, it will become more narrow and shallow again.

Located in a similar position on the hand is → **L.I.-4** (between the 1st and 2nd metacarpal bones).

Needling

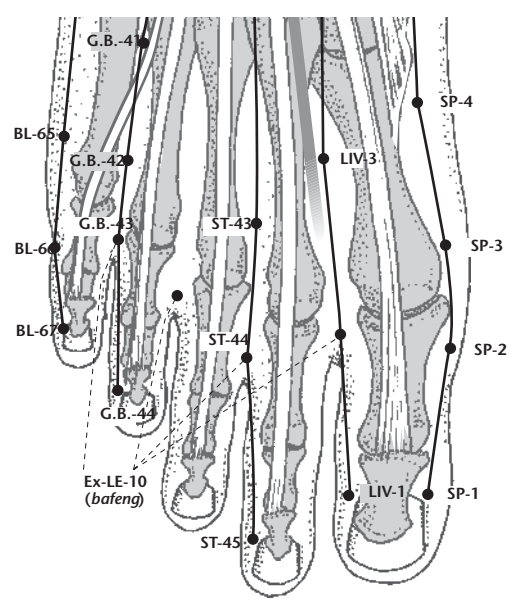
Vertically or slightly obliquely 0.5–1 cun. Caution during pregnancy.

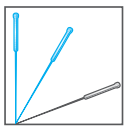
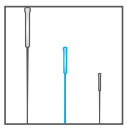
Actions/Indications

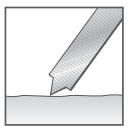
- Spreads Liver Qi, clears the head, benefits the eyes, nourishes Liver Blood and Liver Yin, calms spasms, alleviates pain, regulates menstruation and the Lower Burner
- Eliminates (internal) Wind, pacifies Liver Yang

Special features

Yuan-source point, *shu*-stream point, Earth point, Ma Dan Yang Heavenly Star point (later added by Xu Feng). Major point for spreading Liver Qi.





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LIV-4 *Middle Seal* ZHONGFENG

Location

1 cun anterior to the prominence of the medial malleolus, medial to the tendon of the tibialis anterior muscle.

How to find

Even with slight dorsiflexion of the ankle, the tendon of the tibialis anterior muscle will become more pronounced on the medial aspect of the ankle. **LIV-4** is located between the tendon and the prominence of the medial malleolus, in a depression over the palpable joint space.

→ **ST-41** is also located over the joint space (on the midpoint of its anterior aspect); → **SP-5** lies only slightly distal to → **LIV-4** at the junction of a vertical line along the anterior border and a horizontal line along the lower border of the medial malleolus.

Needling

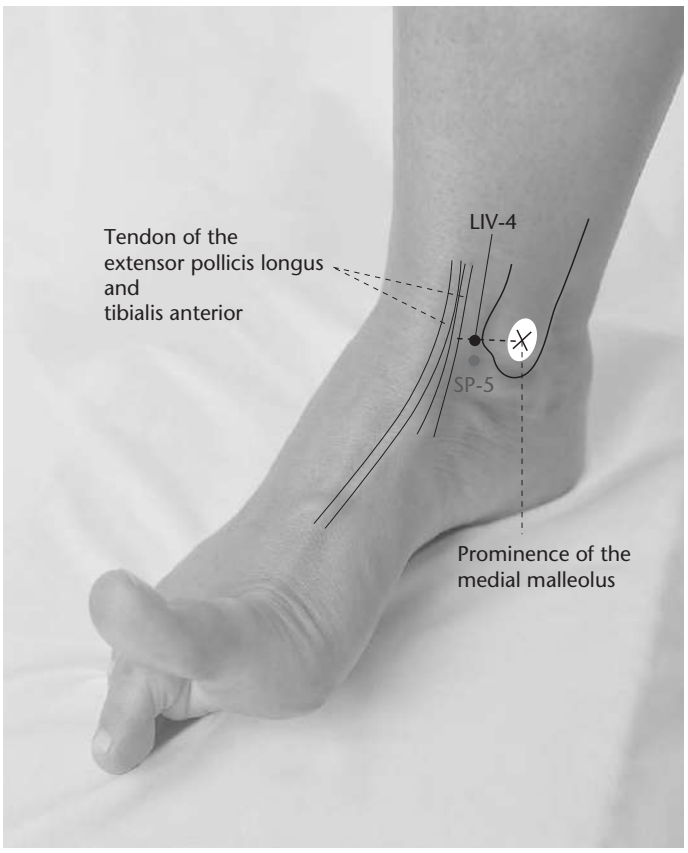
Vertically 0.3–0.5 cun

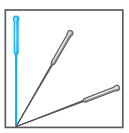
Actions/Indications

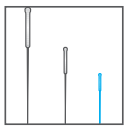
- Opens the channel, promotes the flow of Liver Qi, regulates the Lower Burner

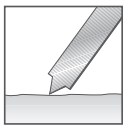
Special features

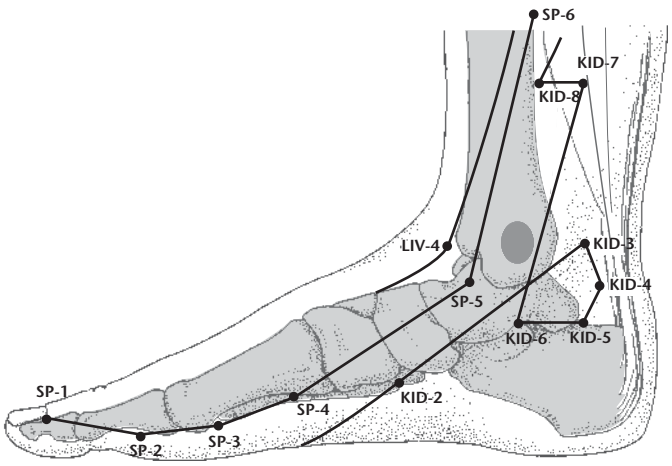
Jing-river point, Metal point.

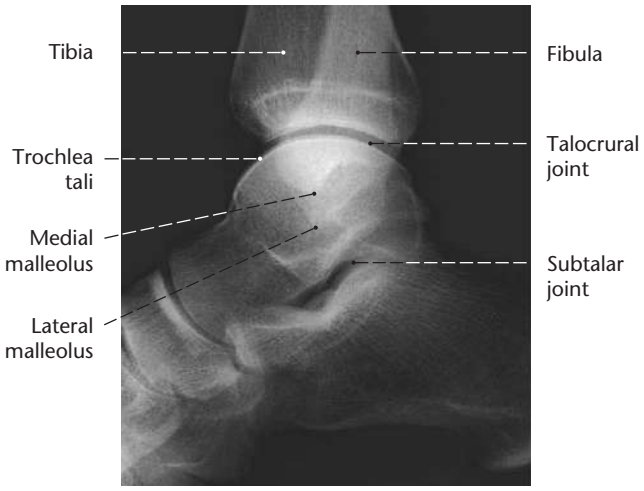


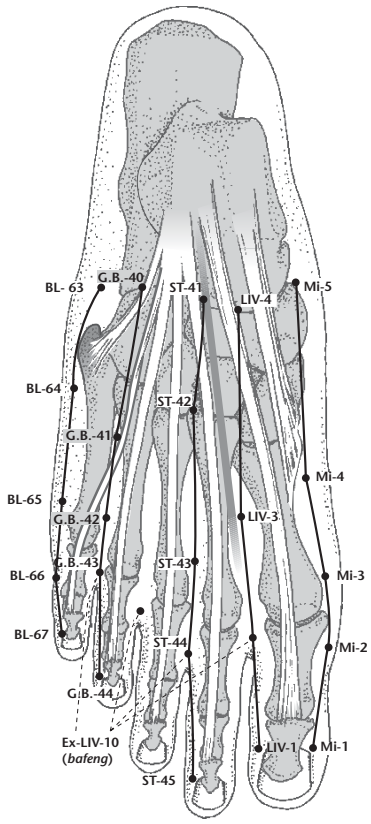












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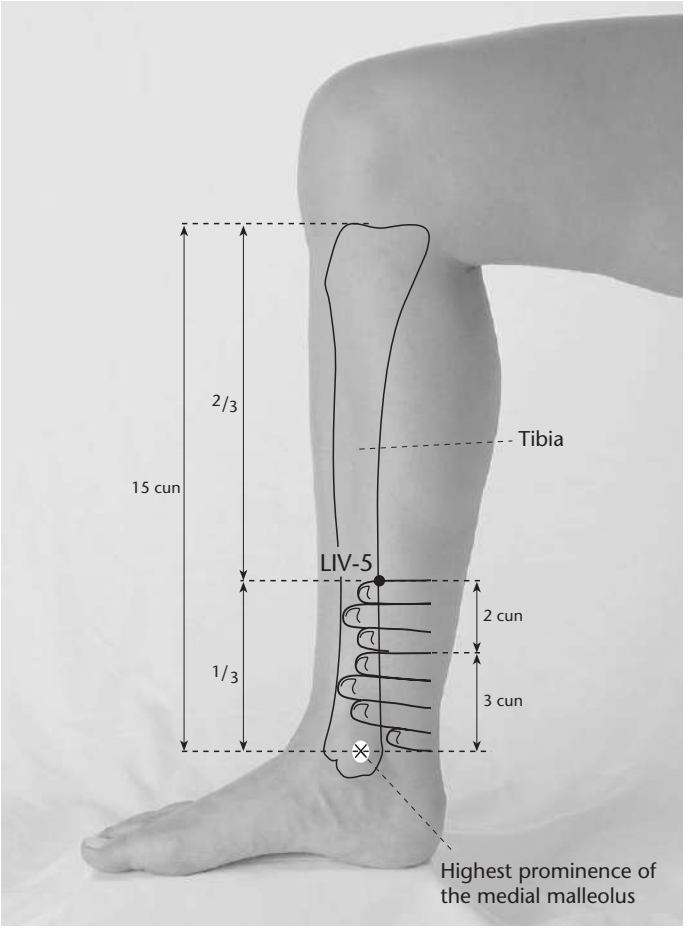
Woodworm Canal LIGOU LIV-5



Location

On the medial aspect of the lower leg, 5 cun proximal to the highest prominence of the medial malleolus, just posterior to the medial crest of the tibia, between the crest of the tibia and the gastrocnemius muscle.

How to find

First, locate the highest prominence of the medial malleolus (→ 3.6.2). From there, palpate 5 cun in a proximal direction and there locate **LIV-5** in a depression directly posterior to the medial crest of the tibia. **Or quick method:** Divide the distance between the medial end of the popliteal crease and the highest prominence of the medial malleolus (=approximately 15 cun, → 2.2) into thirds and locate **LIV-5** a third of the distance from the medial malleolus. Note: Some texts locate **LIV-5 on** the tibia, others on the **posterior** border of the tibia; sensitivity to pressure should be the determining factor. → **KID-9** is located on the same level but directly superior to → **KID-3** (between the medial malleolus and the Achilles tendon).

Needling

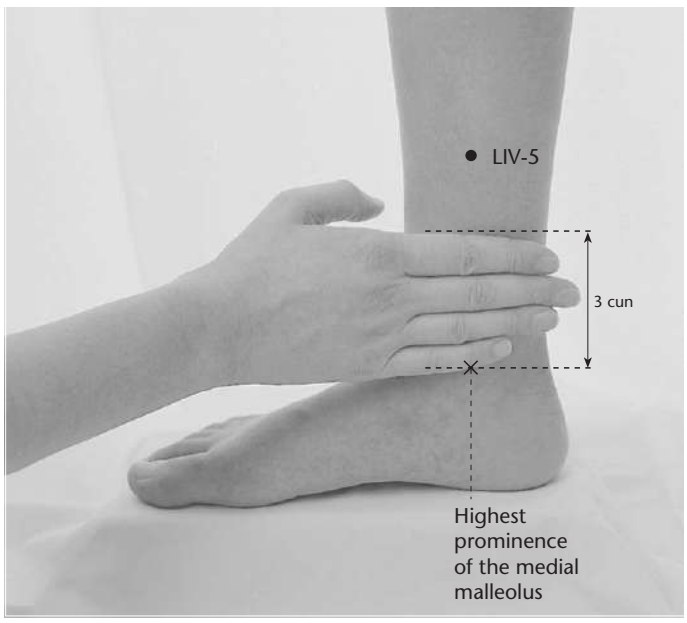
0.5–1 cun vertically or obliquely in a posterior direction towards the fibula or transversely (subcutaneously) along the tibia towards the abdomen.

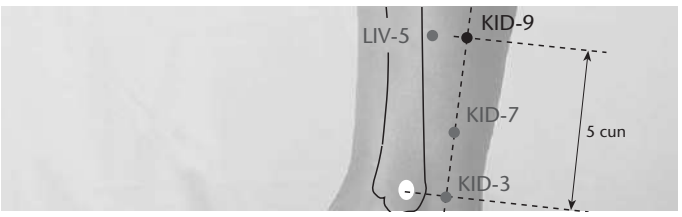
Actions/Indications

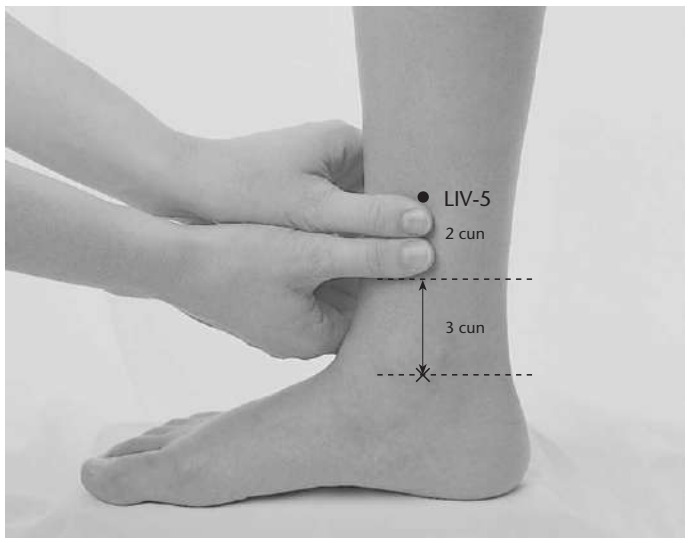
- Regulates Liver Qi, benefits the genitals, clears Damp-Heat from the Lower Burner, regulates menstruation
- Eliminates 'plum-pit' Qi
- Moves Qi locally

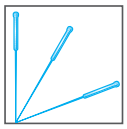
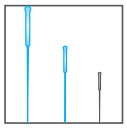
Special features

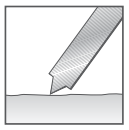
Luo-connecting point. Important distal point for the urogenital region (especially with Liver Qi stagnation and Damp-Heat).









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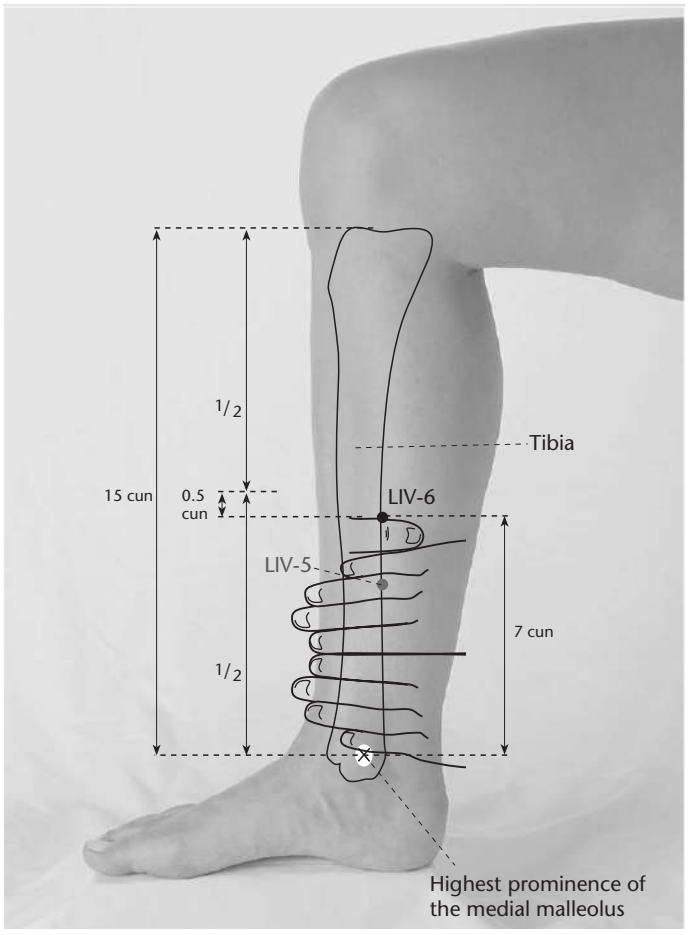
LIV-6 *Central Capital* ZHONGDU

Location

7 cun proximal to the highest prominence of the medial malleolus, just posterior to the medial crest of the tibia.

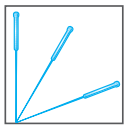
How to find

First, locate the highest prominence of the medial malleolus (→ 3.6.2). From there, palpate 7 cun (= the width of 2 hands and 1 thumb) in a proximal direction and there locate **LIV-6** in a depression directly posterior to the medial crest of the tibia. **Or quick method:** Spreading hands technique (→ 2.3.3): Place the little fingers on the medial end of the popliteal crease and the highest prominence of the medial malleolus respectively and join the thumbs on the posterior border of the tibia at the midpoint of this distance (= approximately 15 cun, 2.2). From there, measure 0.5 cun in a distal direction and here locate **LIV-6** posterior to the medial crest of the tibia. Note: Some texts locate **LIV-6 on** the tibia, others on the **posterior** border of the tibia; sensitivity to pressure should be the determining factor.



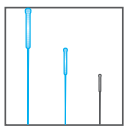
Needling

0.5–1 cun vertically or obliquely in a posterior direction towards the fibula or transversely (subcutaneously) in a proximal direction along the tibia.



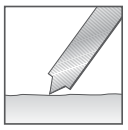
Actions/Indications

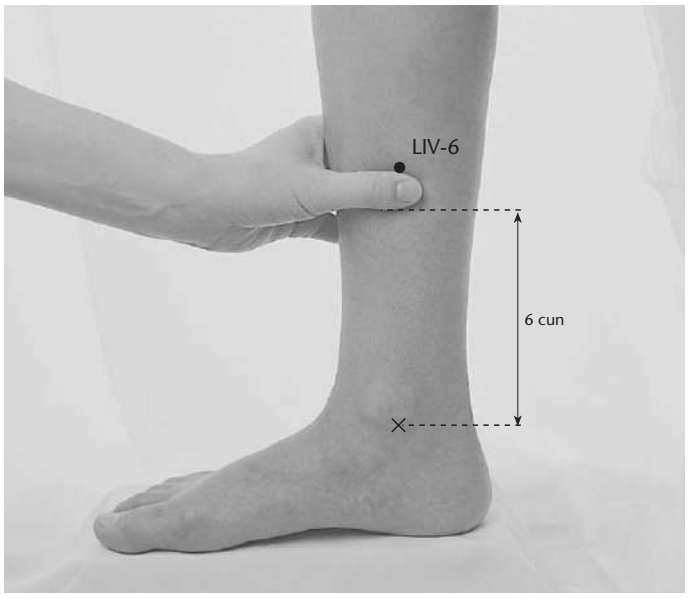
- Spreads Liver Qi, regulates the Lower Burner, regulates Blood, eliminates Dampness

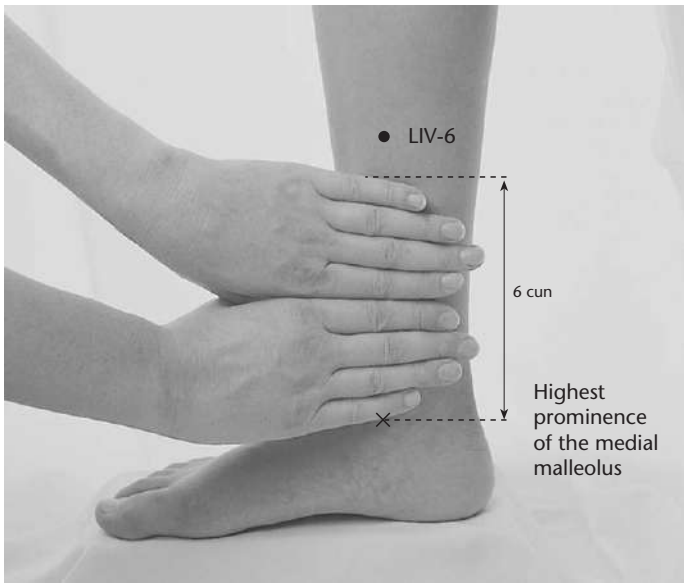


Special features

Xi-cleft point







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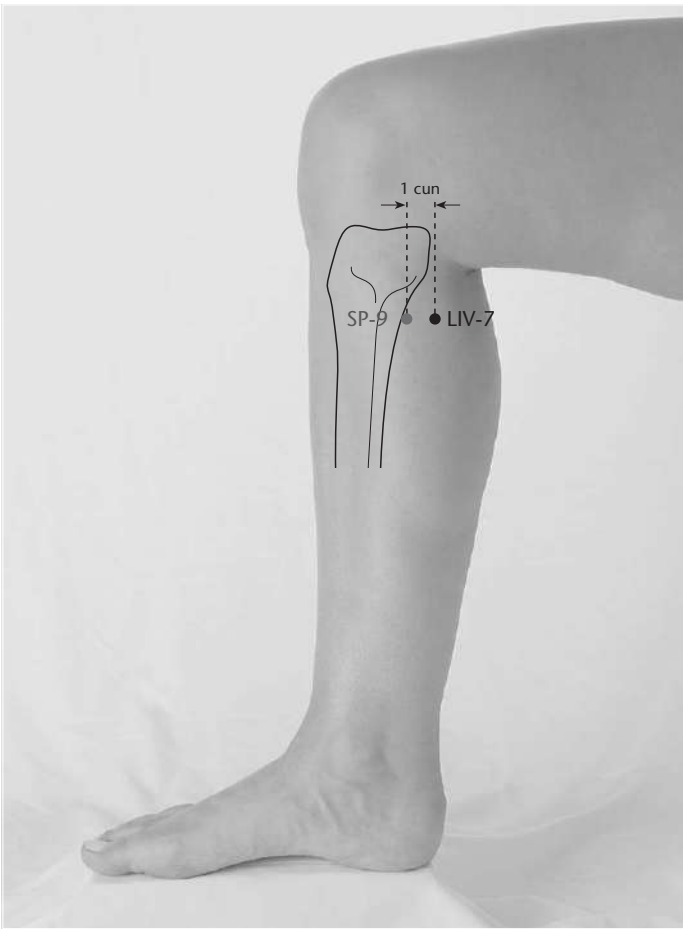
Knee Joint XIGUAN LIV-7



Location

At the junction of the shaft and the medial condyle of the tibia, 1 cun posterior to ➞ **SP-9**.

How to find

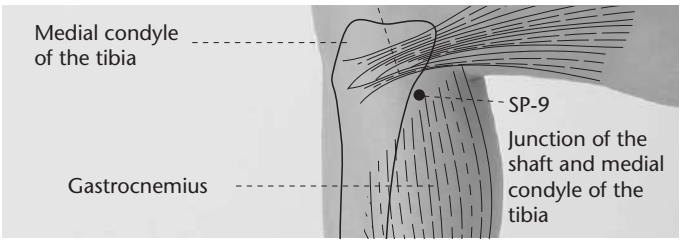
The junction of the shaft and the medial condyle of the tibia can be easily palpated. There, locate ➞ **SP-9** and **LIV-7** 1 cun posterior to it. Both points tend to be sensitive to pressure if indicated.

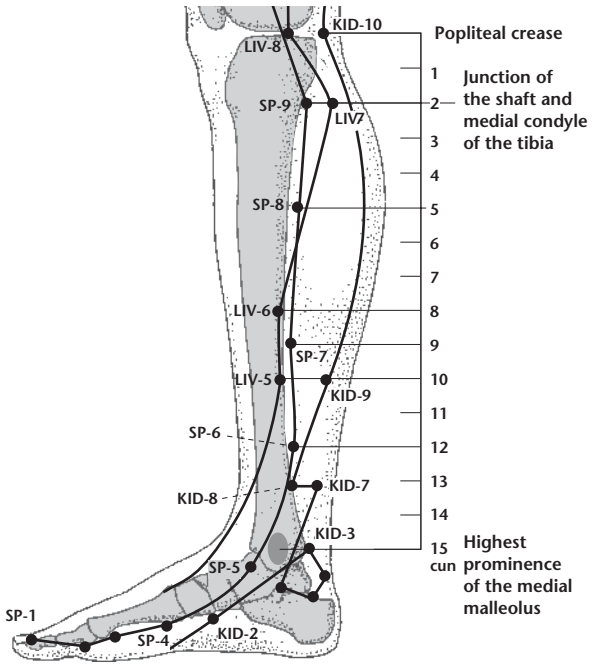
Needling

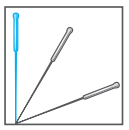
Vertically 1–2 cun

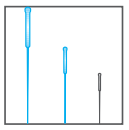
Actions/Indications

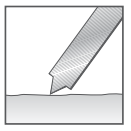
- Opens the channel
- Expels Wind and Dampness

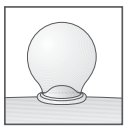












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LIV-8 *Spring at the Crook* QUQUAN

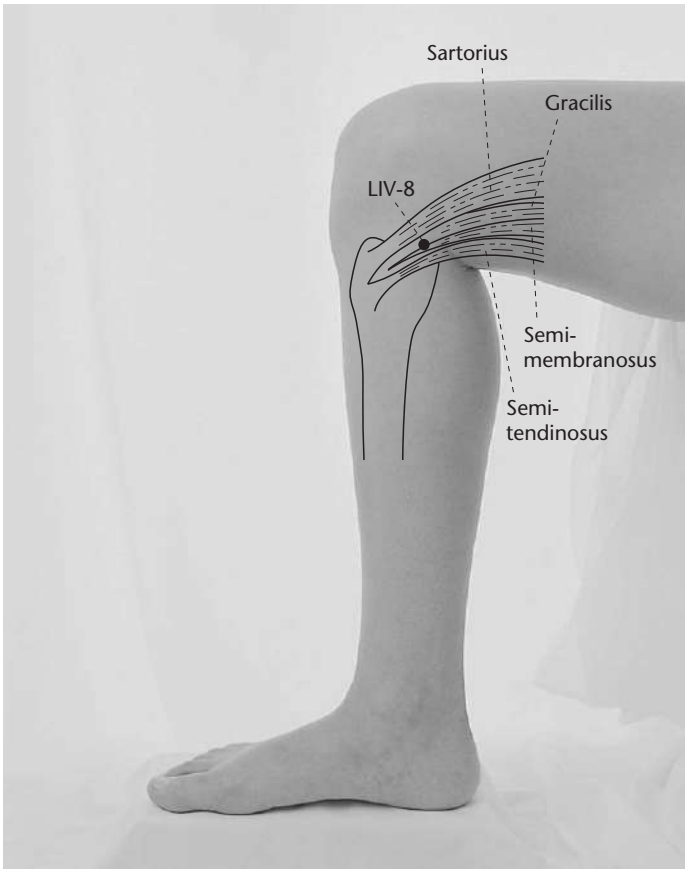
Location

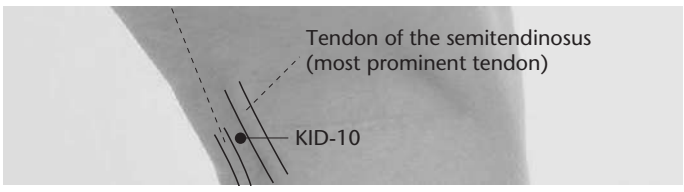
With the knee flexed, **LIV-8** is located directly proximal to the medial end of the popliteal crease, in a depression anterior to the tendons of the semitendinosus and semimembranosus muscles.

How to find

LIV-8 is best located with the patient's knee flexed and slight external rotation of the hip. First, palpate the prominent, ropey tendon of the semitendinosus muscle, which becomes more pronounced with the knee flexed. The tendon of the semimembranosus muscle lies deep to the semitendinosus and is often more difficult to isolate. With the palpating finger, glide from the tendon of the semitendinosus towards the patella. Approximately after 1 cun, you can feel a depression between the muscle bellies. **LIV-8** is located anterior to both tendons. Some authors locate **LIV-8** 1 cun superior and anterior to → **KID-10**. Sensitivity to pressure should determine the location.

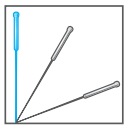
→ **KID-10** is located approximately 1 cun in the direction of the popliteal crease and, from a medial perspective, posterior to the tendon of the semimembranosus and anterior to the tendon of the semitendinosus.

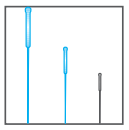




Needling

Vertically 0.5–1.5 cun



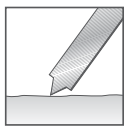


Actions/Indications

- Clears and eliminates Dampness and Damp-Heat from the Lower Burner (major action), benefits the genitals and the Uterus
- Nourishes Blood and Yin
- Moves Qi locally

Special features

he-sea point, Water point, tonification point.



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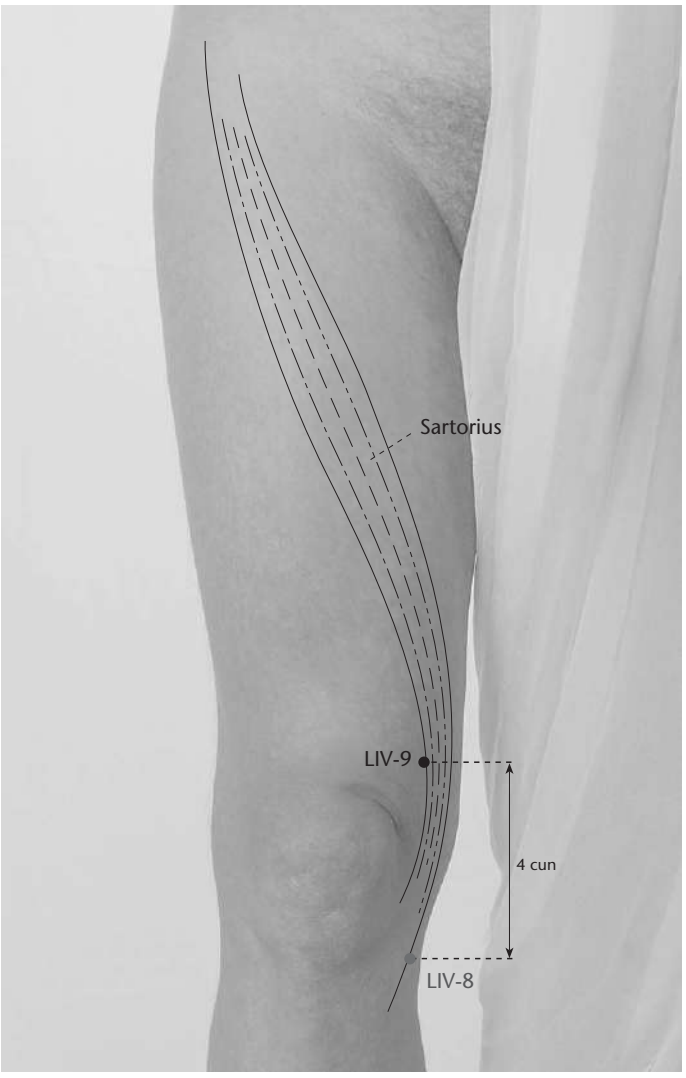
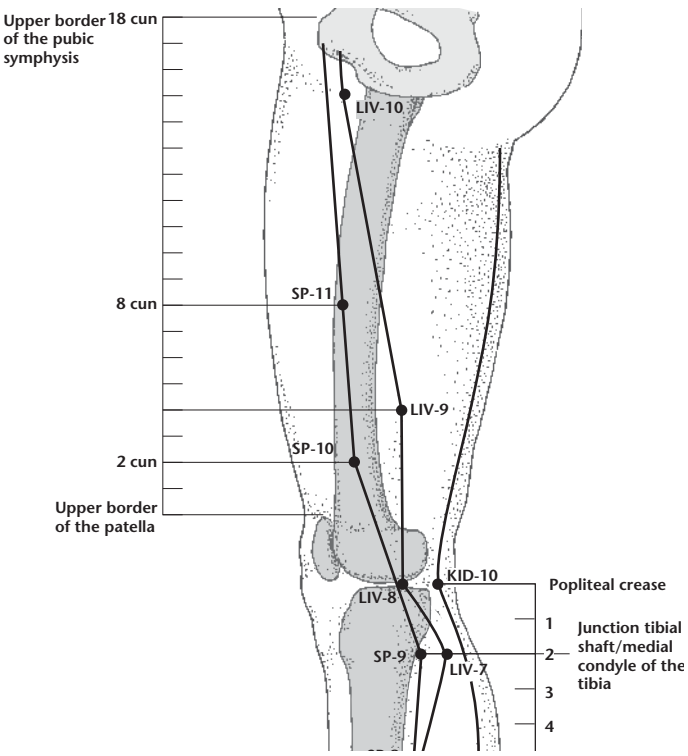
Yin Wrapping YINBAO LIV-9





Location

4 cun proximal to the medial condyle of the femur, between the sartorius and vastus medialis muscles. Alternative locations: 4 cun proximal to → **LIV-8** (for example, Deadman et al 1998, → photo), 4 cun proximal to the junction of the shaft and the condyle of the femur (for example, Hecker et al → see line drawing) or 4 cun proximal to the midpoint of the condyle of the femur (for example, Ogal and Stör 1999, → illustration on p. 443).

How to find

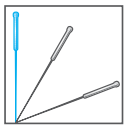
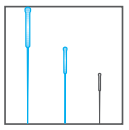
From → **LIV-8**, measure 4 cun in a proximal direction. There, locate **LIV-9** on the border between the more medial, narrow sartorius muscle and the anteromedial vastus medialis muscle. Sensitivity to pressure should determine the location of this point.

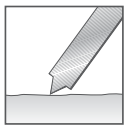
Needling

Vertically 1–2 cun

Actions/Indications

- Benefits the Lower Burner
- Opens the channel



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LIV-10 *Leg Five Miles* ZUWULI

Location

On the anterior aspect of the thigh, 3 cun inferior to the upper border of the symphysis, on the lateral border of the adductor longus muscle.

How to find

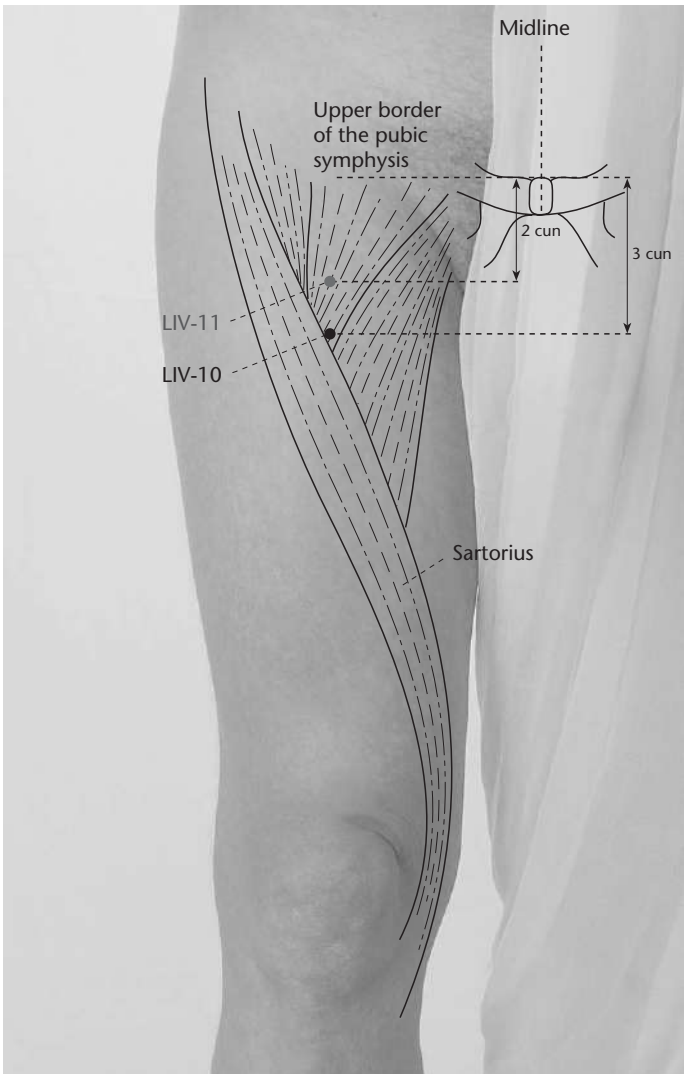
Ask the patient to flex their adductors by pressing their feet against each other. **LIV-10** is located in a groove on the medial border of the adductor longus muscle, where it forms an angle with the sartorius muscle.

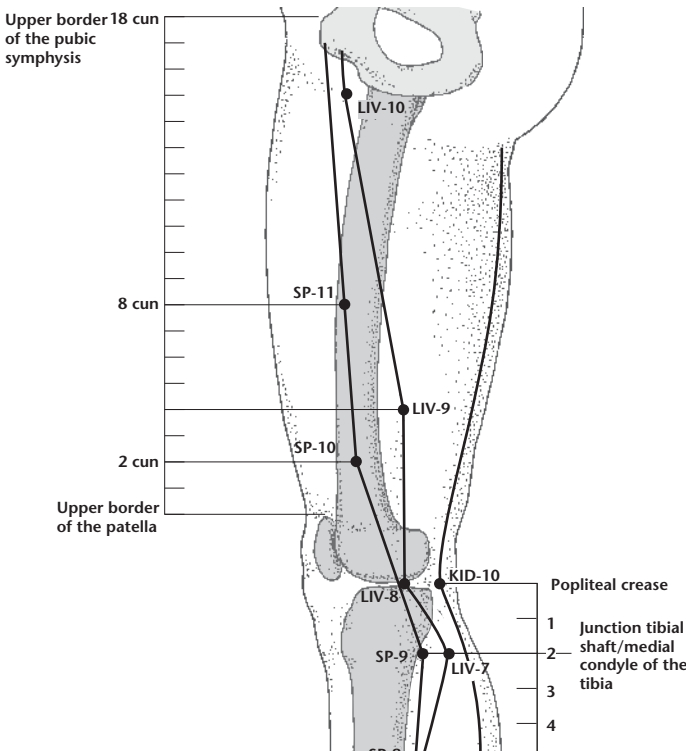
Needling

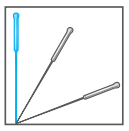
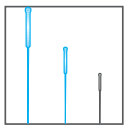
Vertically 0.5–1.5 cun. Caution: Great saphenous vein, femoral artery/nerve.

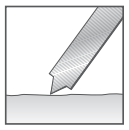
Actions/Indications

- Relaxes the tendons and muscles
- Clears Damp-Heat from the Lower Burner
- Regulates the water passages







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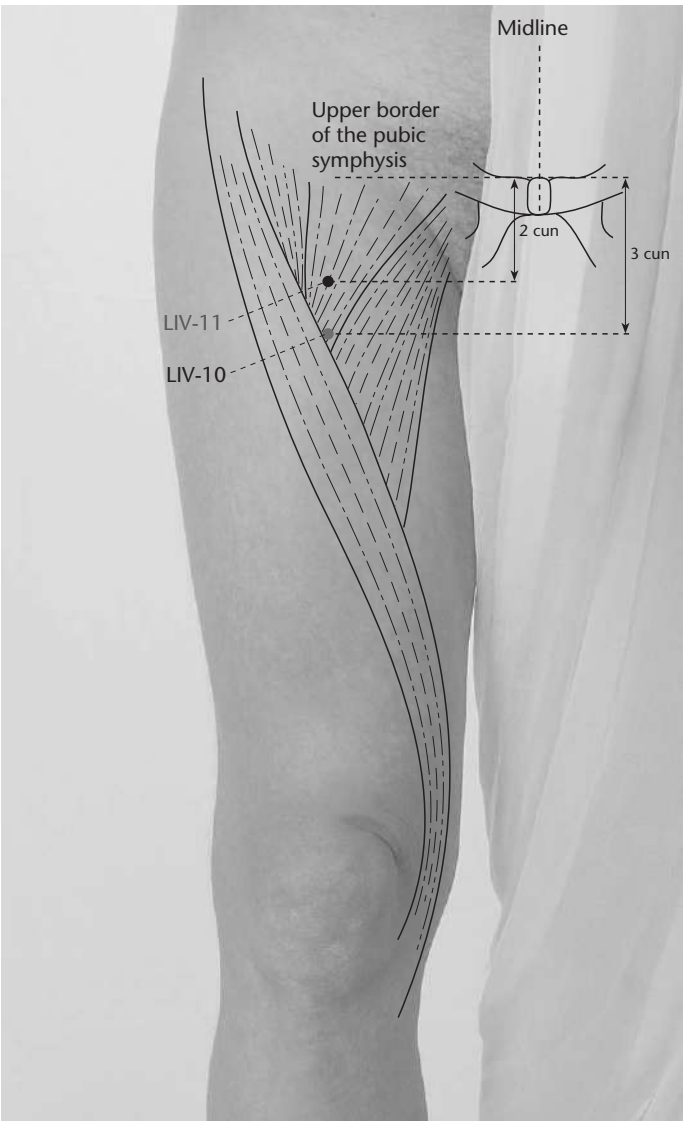
Yin Corner YINLIAN LIV-11



Location

On the anterior aspect of the thigh, 2 cun inferior to the upper border of the symphysis and on the lateral border of the adductor longus muscle.

How to find

Ask the patient to flex their adductors by pressing their feet against each other. **LIV-11** is located 2 cun inferior to the upper border of the pubic symphysis, in a groove on the medial border of the adductor longus muscle.

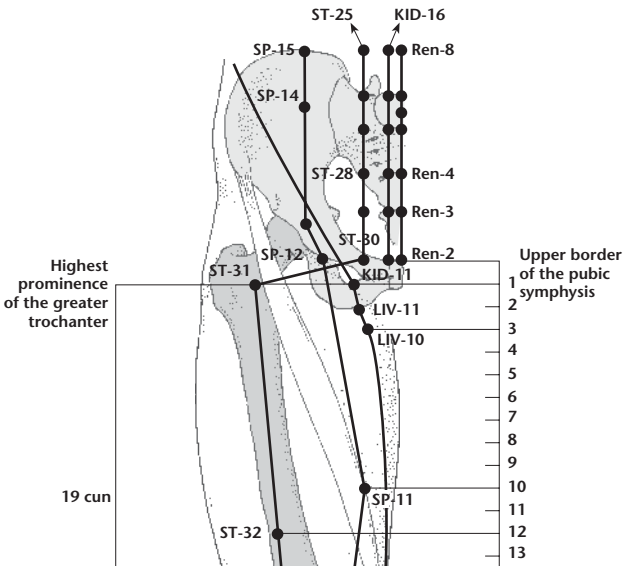
LIV-11 is located approximately 1 cun inferior to where the femoral artery passes under the inguinal ligament.

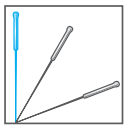
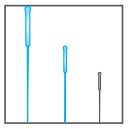
Needling

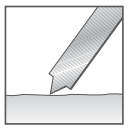
Vertically 0.5–1.5 cun. Caution: Great saphenous vein, femoral artery/vein/nerve. Classical texts recommend moxibustion for female sterility.

Actions/Indications

- Relaxes the tendons
- Benefits the Uterus and regulates menstruation
- For disorders of the lumbar spine





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LIV-12 *Urgent Pulse* JIMAI

Location

In the inguinal groove, 2.5 cun lateral to the anterior midline and 1 cun inferior to the upper border of the symphysis.

How to find

From the upper border of the pubic symphysis, measure 2.5 cun in a lateral and 1 cun in an inferior direction. In this area, you can palpate the pulse of the femoral artery. **LIV-12** is located medial to the pulsating of the artery. As the femoral vein also runs medial to the artery, **LIV-12** should be needled in a medial direction, at least 1 fingerbreadth from the artery.

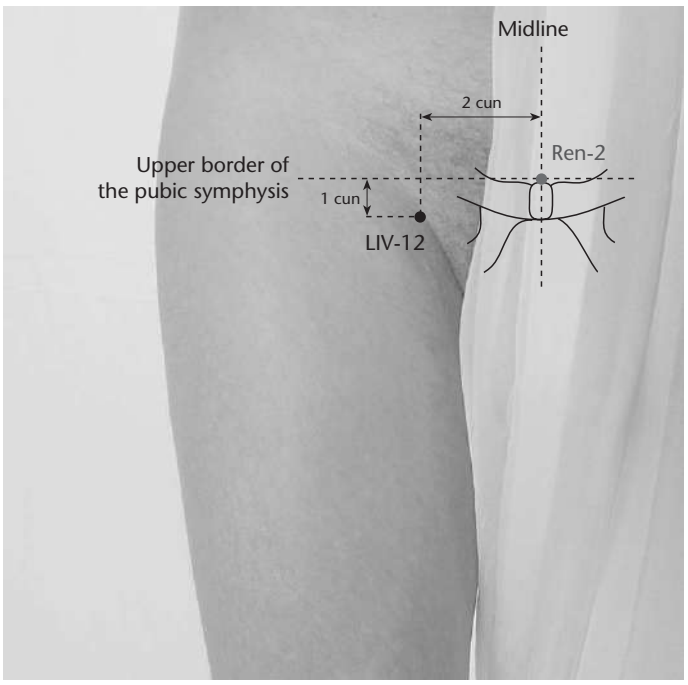
→ **ST-30** is located 1 cun superior and 0.5 cun medial to **LIV-12**.

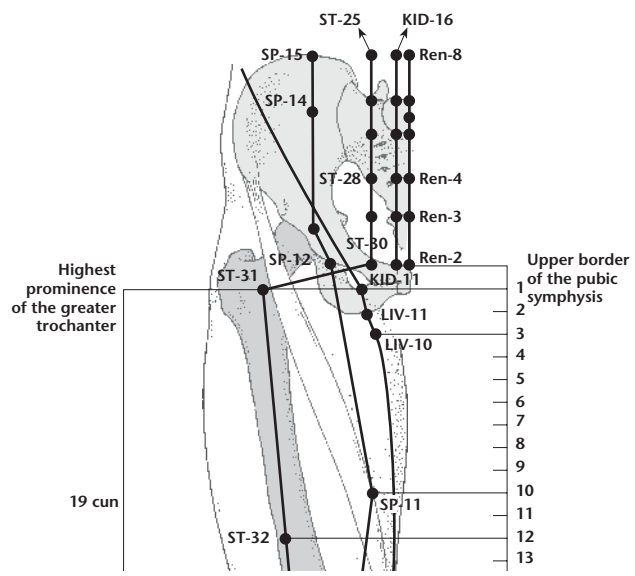
Needling

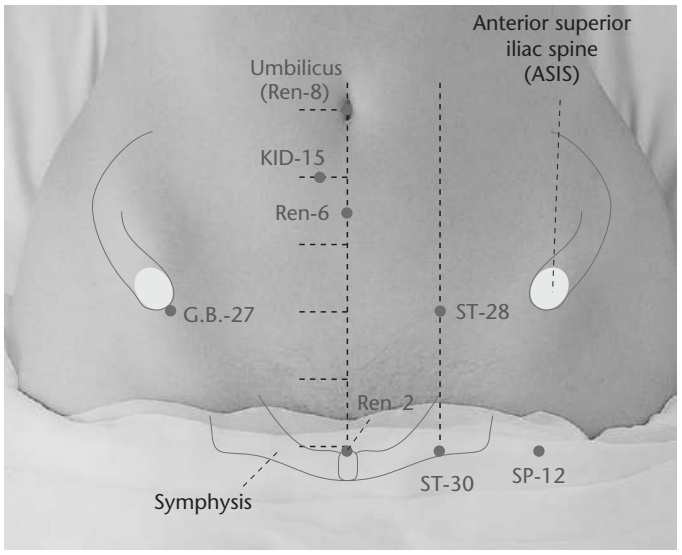
Slightly obliquely 0.5–0.8 cun. Caution: Femoral artery/vein. The femoral vein is located medial to the artery and is approximately the breadth of a finger. To avoid injury to the vein, **LIV-12** should not be needled medial to the artery. Owing to its tricky location, classical texts recommend moxibustion only, while in modern texts moxibustion is contraindicated for the same reason.

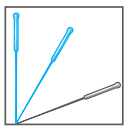
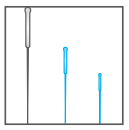
Actions/Indications

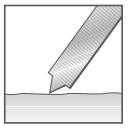
- Dispels Cold from the Liver channel and benefits the Lower Burner









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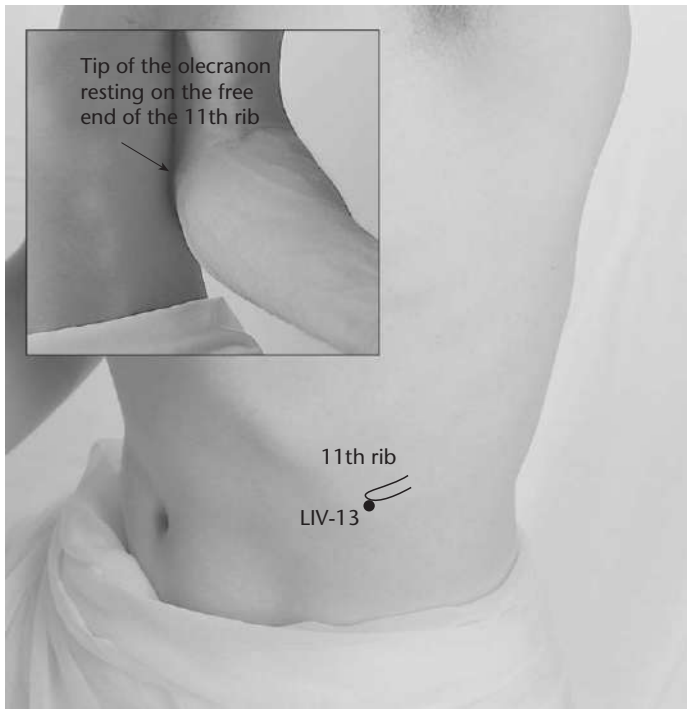
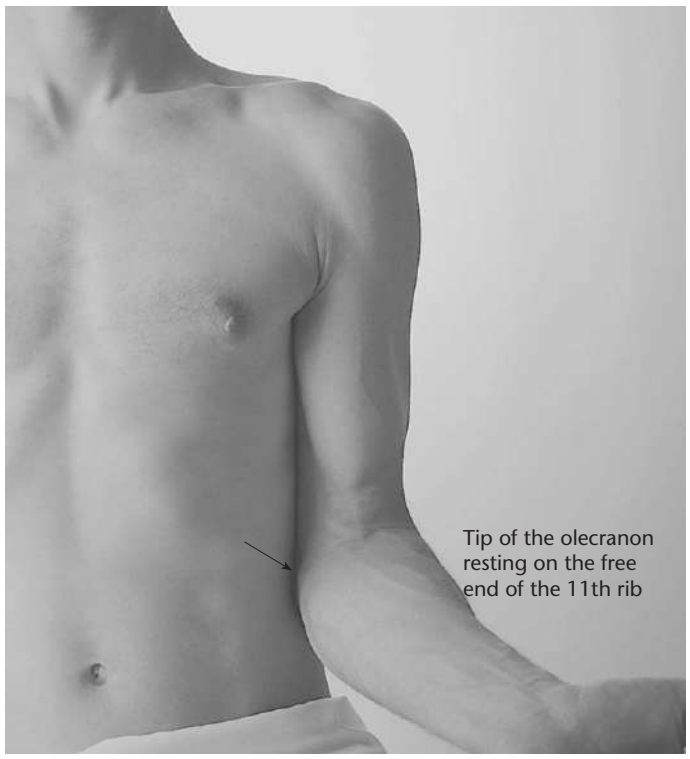
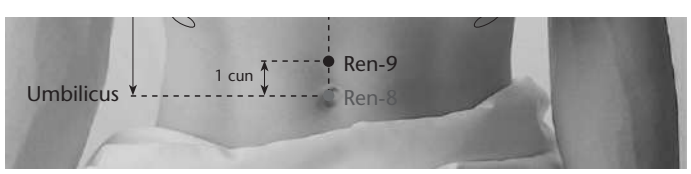
Completion Gate ZHANGMEN LIV-13







Location

Anterior and inferior to the free end of the 11th rib, approximately 1 cun superior to the umbilicus.

How to find

Quick method: Ask the patient to press their flexed elbow (90°) against the lateral aspect of the thorax and the tip of the olecranon will be pointing to the free end of the 11th rib. **LIV-13** can then be located on its anterior and inferior border. **Or:** Place the hand on the upper abdomen and, with gentle pressure, palpate along the lower border of the rib cage until you can feel the free end of the 11th rib just superior to the umbilicus. Locate **LIV-13** on its anterior and inferior border.

Located on approximately the same level (1 cun superior to the umbilicus) are → **Ren-9** (on the midline) and → **ST-24** (2 cun lateral to the midline). → **G.B.-25** is located more laterally and inferiorly, at the free end of the 12th rib.

Needling

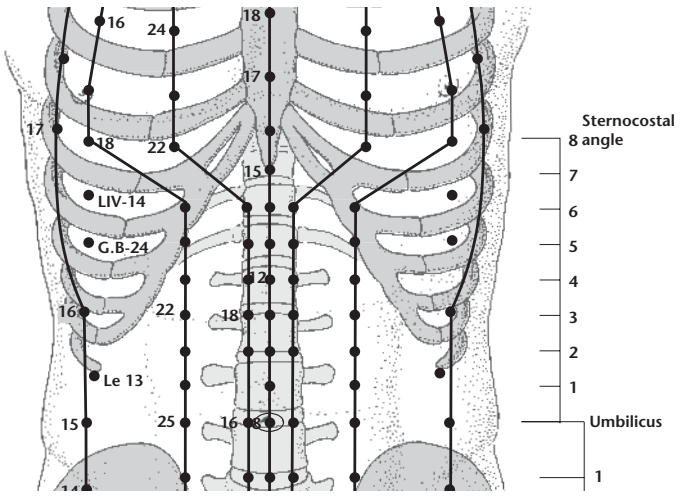
0.5–1 cun vertically or better obliquely in a lateral direction. Caution: Peritoneum, hypertrophied organs (right: liver, left: spleen).

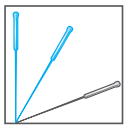
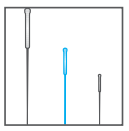
Actions/Indications

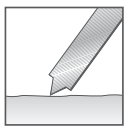
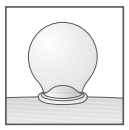
- Harmonises the Liver and the Spleen, regulates Liver Qi (especially in the Middle and Lower Burner), strengthens the Spleen
- Opens the channel

Special features

Front-*mu* point of the Spleen, meeting point with the *dai mai* and the G.B. channel. *Hui*-meeting point of the *zang*-Organs.



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LIV-14 *Cycle Gate* QIMEN

Location

In the 6th intercostal space, on the mamillary line or 4 cun lateral to the midline.

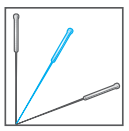
How to find

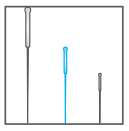
Quick method, especially in men: The nipple is generally located on the level of the 4th intercostal space. From there, palpate downward 2 intercostal spaces and locate **LIV-14** in the 6th intercostal space. **Or:** For more precise orientation on the ribcage (→ 3.5), palpate for the manubriosternal synchondrosis, a well-defined horizontal bony structure on the sternum. Lateral to it, locate the 2nd rib and below it the 2nd intercostal space. From there, count downward 4 intercostal spaces to the 6th intercostal space and there locate **LIV-14** on the mamillary line (4 cun lateral to the midline).

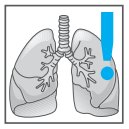
→ **G.B.-24** is located in the 7th intercostal space. Located on the same level (2 cun inferior to the sternocostal angle → 3.5) are → **Ren-14** (on the midline), → **KID-21** (0.5 cun lateral to the midline) and → **ST-19** (2 cun lateral to the midline).

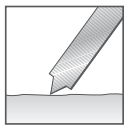
Needling

0.5–1 cun obliquely, either in a lateral or medial (along the course of the ICS) direction. The latter is recommended for disorders of the breasts. Caution: Pneumothorax.







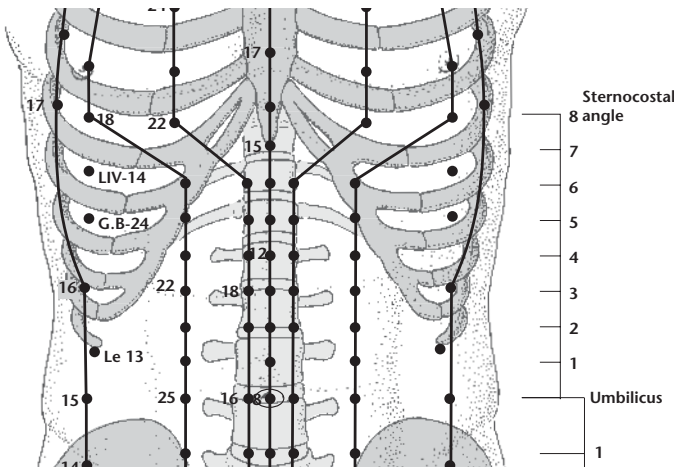


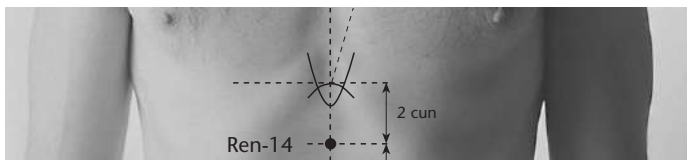
Actions/Indications

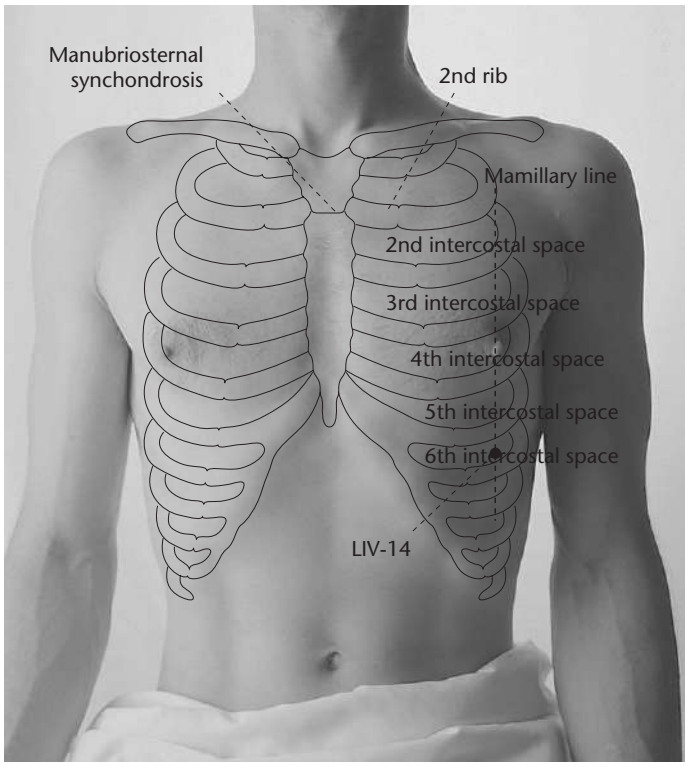
- Regulates Liver Qi and Liver Blood (especially in the Upper and Middle Burner), cools the Blood, disperses accumulations, harmonises the Liver and the Stomach

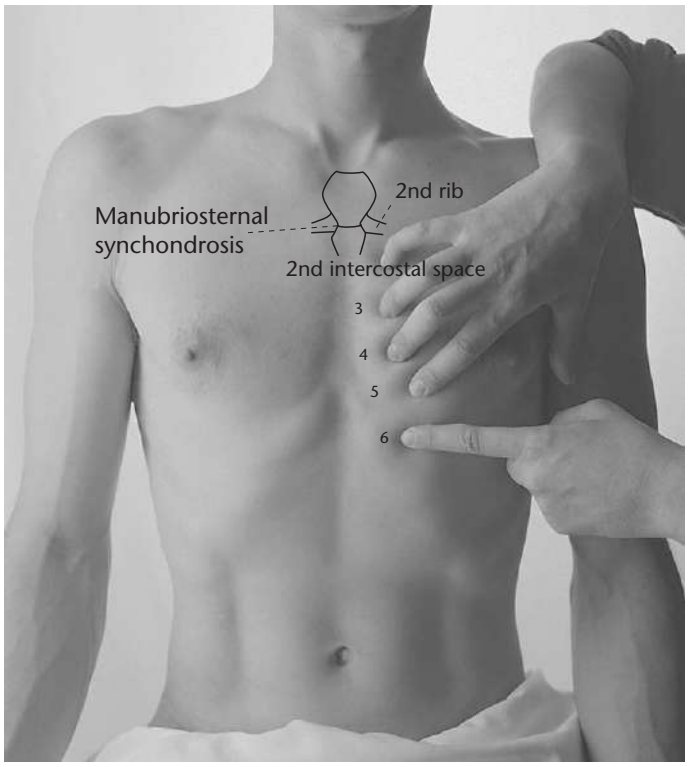
Special features

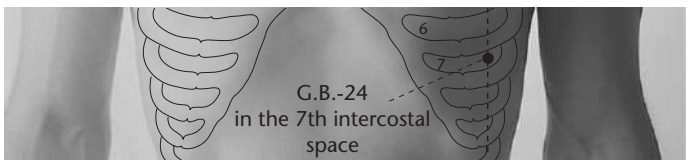
Front-*mu* point of the Liver, meeting point with the *yin wei mai* and the Spleen channel, exit point.











5 The Eight Extraordinary Vessels (*qi jing ba mai*) with Points

Claudia Focks, Ulrich März

For an overview of the theoretical background of the eight extraordinary vessels ➞ 1.7.

5.1 *Chong mai*

Synonym: Penetrating Vessel

Relationships (➞ 1.7.3)

- **Yin/Yang:** *chong mai/dai mai*
- **Central/peripheral:** *chong mai/yin wei mai*. Regions supported by this pairing: Heart, thorax, Stomach. Opening point: SP-4 (*gongsun*), coupled point: P-6 (*neiguan*)

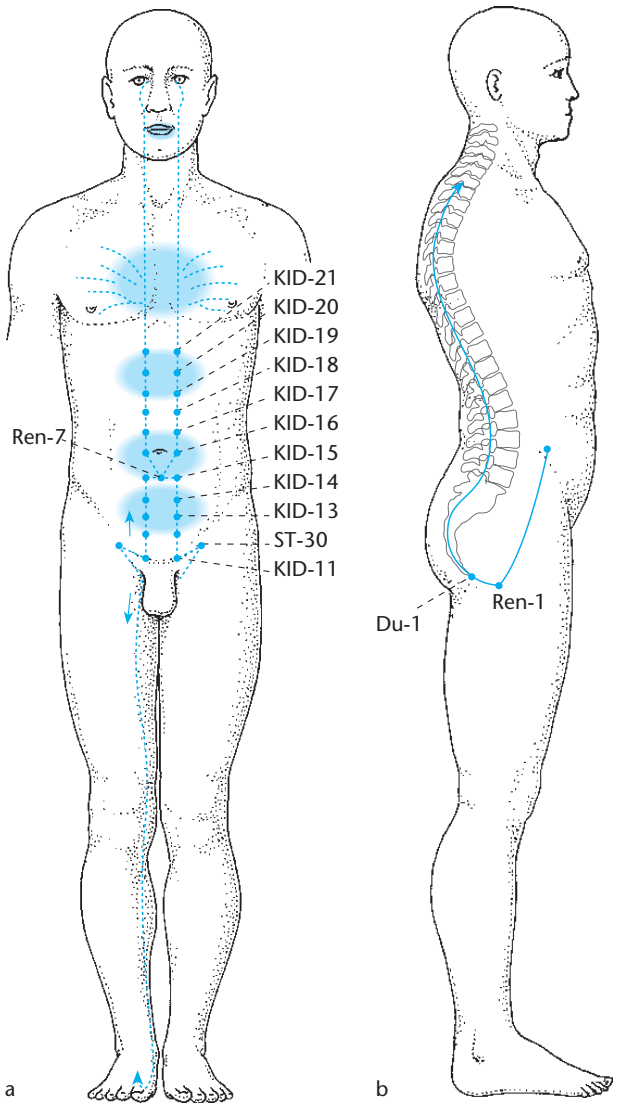
Pathway

The extraordinary vessel *chong mai* originates like the *du mai* and *ren mai* in the lower abdomen at *bao zhong* (in women in the Uterus) or, according to some authors, at the Kidneys. It crosses the genital area and divides into two branches:

➡ A **deep branch** reaches the perineum at ➞ **Ren-1** (*huiyin*), travels to the spine, penetrates the spinal canal and ascends to the level of T1 and T2. (According to some authors the vessel ascends the anterior aspect of the spine.)

➡ The **other branch** emerges at ➞ **ST-30** (*qichong*) to the surface of the body and divides into **two external branches**, one descending and one ascending branch:

- the **ascending** branch reaches ➞ **KID-11** (*henggu*) 0.5 cun lateral to the midline at the level of the pubic symphysis and from there follows the KID channel to ➞ **KID-21** (*youmen*). The KID channel initially ascends the abdomen at a distance of 0.5 cun from the midline, passing ➞ **KID-12** (*dahe*), ➞ **KID-13** (*qixue*), ➞ **KID-14** (*siman*) and ➞ **KID-15** (*zhongzhu*), runs to the midline, meeting ➞ **Ren-7** (*yinjiao*) 1 cun inferior to the umbilicus, and again returns to its pathway 0.5 cun lateral to the midline, passing ➞ **KID-16** (*huangshu*), ➞ **KID-17** (*shangqu*), ➞ **KID-18** (*shiguan*), ➞ **KID-19** (*yindu*), ➞ **KID-20** (*futonggu*) and ➞ **KID-21** (*youmen*). The vessel then disperses into the intercostal spaces, ascends the neck, circles the inner surface of the lips and spreads in the upper pharynx and the nasal cavities.



- the **descending branch** meets the Kidney primary channel and descends the medial aspect of the thigh (according to the *Ling Shu* it divides into the three foot Yin channels), penetrates the popliteal fossa, follows the medial border of the tibia and emerges posterior to the medial malleolus, where it divides into two sub-branches: one branch travels along the anteromedial aspect of the foot to the big toe, the other branch reaches the sole of the foot.

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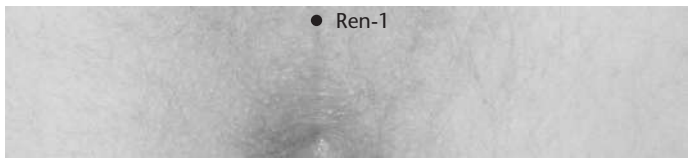
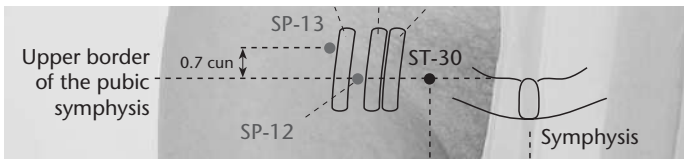
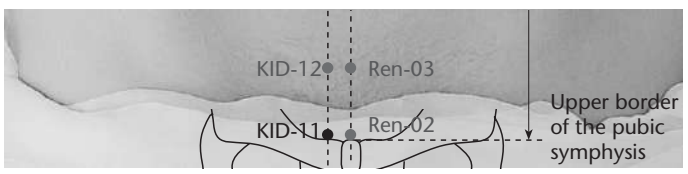


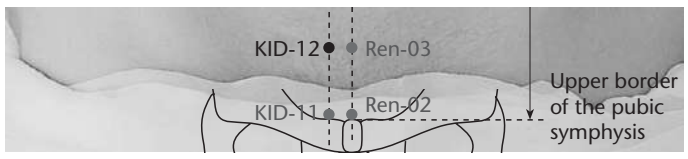
Ren-1 (*huiyin*): In the centre of the perineum.



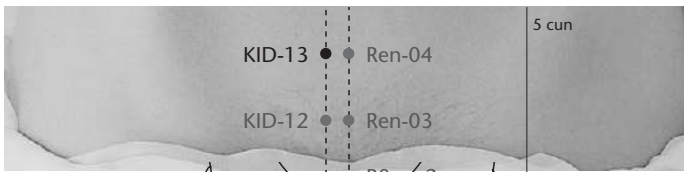
ST-30 (*qichong*): 2 cun lateral to the upper border of the pubic symphysis, medial to the femoral artery; at the level of Ren-2



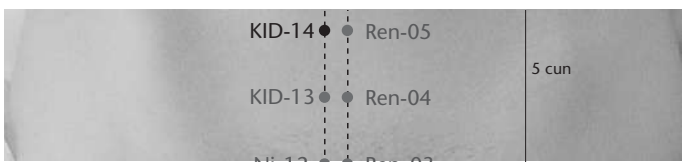
KID-11 (*henggu*): On the upper border of the pubic symphysis, 0.5 cun lateral to the anterior midline



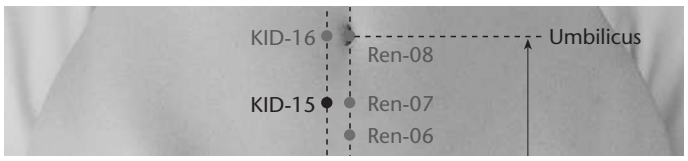
KID-12 (*dahe*): 1 cun superior to the upper border of the pubic symphysis, 0.5 cun lateral to the anterior midline



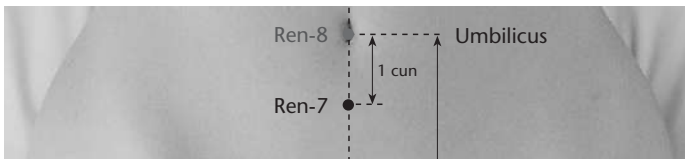
KID-13 (*qixue*): 2 cun superior to the upper border of the pubic symphysis, 0.5 cun lateral to the anterior midline



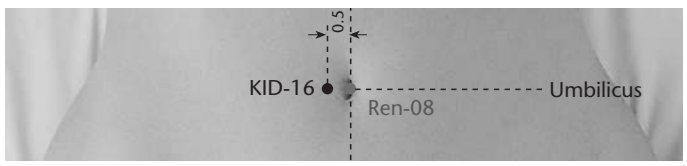
KID-14 (*siman*): 2 cun inferior to the umbilicus, 0.5 cun lateral to the anterior midline



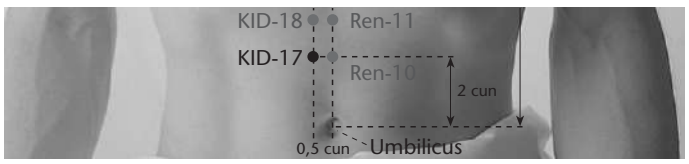
KID-15 (*zhongzhu*): 1 cun inferior to the umbilicus, 0.5 cun lateral to the anterior midline



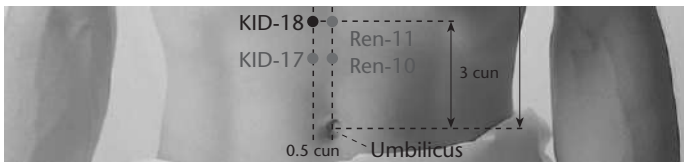
Ren-7 (*yinjiao*): On the anterior midline, 1 cun inferior to the umbilicus



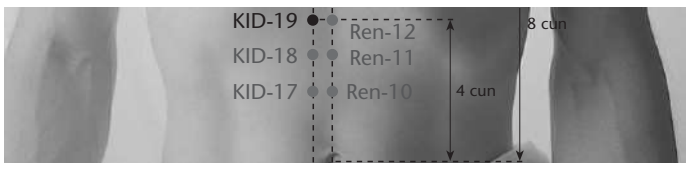
KID-16 (*huangshu*): 0.5 cun lateral to the centre of the umbilicus



KID-17 (*shangqu*): 2 cun superior to the umbilicus, 0.5 cun lateral to the anterior midline



KID-18 (*shiguan*): 3 cun superior to the umbilicus, 0.5 cun lateral to the anterior midline



KID-19 (*yindu*): Midway between the sternocostal angle and the centre of the umbilicus, 0.5 cun lateral to the anterior midline

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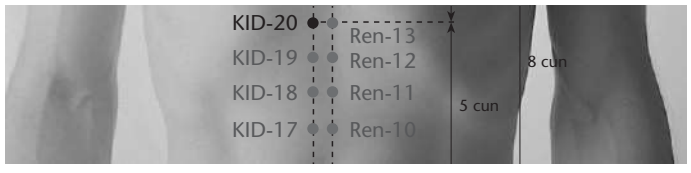
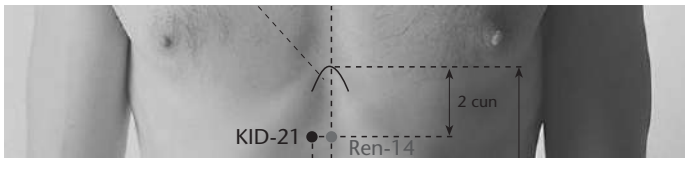


KID-20 (*futonggu*): 5 cun superior to the umbilicus or 3 cun inferior to the sternocostal angle, 0.5 cun lateral to the anterior midline



KID-21 (*youmen*): 2 cun inferior to the sternocostal angle, 0.5 cun lateral to the anterior midline

Connections with other channels and organs

- Kidney primary channel, *ren mai*, *du mai*, Stomach and Liver primary channels
- Kidney, Uterus

Clinical importance (→ 1.7.2, 1.7.3)

- **Sea of Blood**, strong connection to the various functions of the Blood
- Strong relationship to the Uterus, regulates the menses
- Regulates the 12 primary channels, effectively regulates the circulation of the Blood (*xue*) in the whole body
- Regulates counterflow Qi
- Connects the Stomach and Kidney primary channels and strengthens the relationship between the *ren mai* and *du mai*

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5.2 Ren mai

Synonym: Conception Vessel

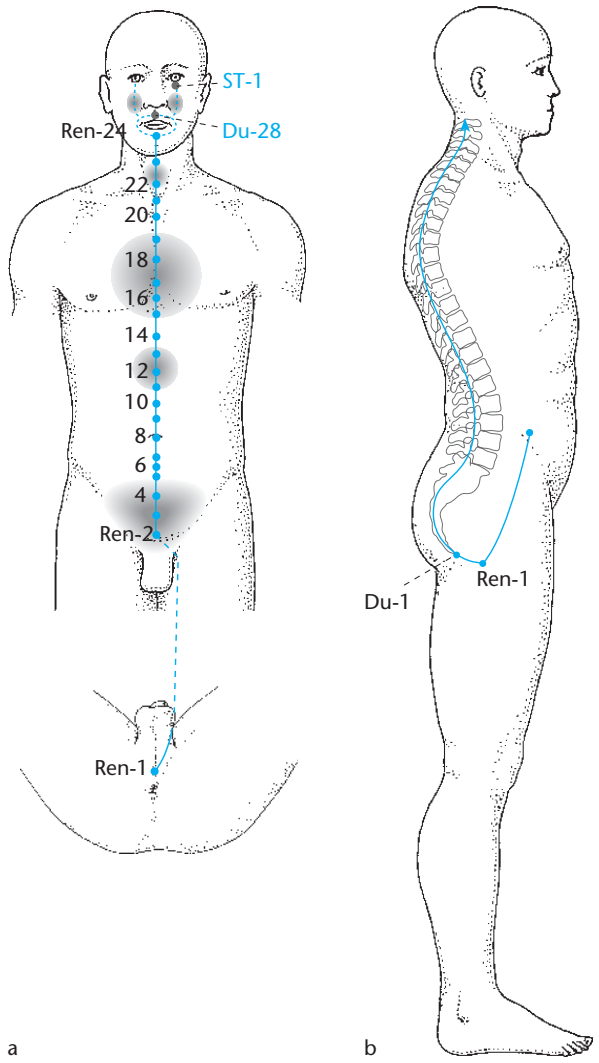
Relationships (→ 1.7.3)

- **Yin/Yang:** *ren mai/du mai*
- **Central/peripheral:** *ren mai/yin qiao mai*. Regions supported by this pairing: face, throat, thorax, Lungs, diaphragm, abdomen. Opening point: **LU-7** (*lieque*); coupled point: **KID-6** (*zhaohai*)

Pathway

The extraordinary vessel *ren mai* originates like the *chong mai* and *du mai* in the lower abdomen (*bao zhong*) or, according to some authors, at the Kidneys, connects with the urogenital area and emerges at the perineum at **Ren-1** (*huiyin*). From there the **external** pathway ascends the anterior midline, passing the abdomen, the chest, and the throat. It terminates on the chin in the mentolabial groove at **Ren-24** (*chengjiang*), where it meets the Stomach primary channel and the extraordinary vessel *du mai*. From here the vessel continues internally, encircles the inner surface of the lips and connects with the *du mai* at → **Du-28** (*yinjiao*) beneath the upper frenulum. It divides into **two branches**, which both reach the infraorbital ridge at → **ST-1** (*chengqi*), where they cross the Stomach primary channel as well as the extraordinary vessel *yin qiao mai*, and terminate near the eyes.

- **An internal branch** runs from the perineum to the spine, penetrates the spinal canal at **Du-1** (*changqiang*) and ascends in the spine.



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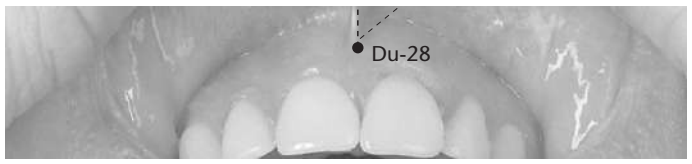
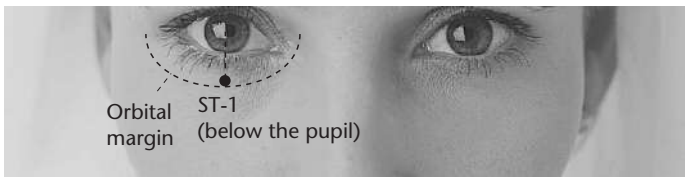
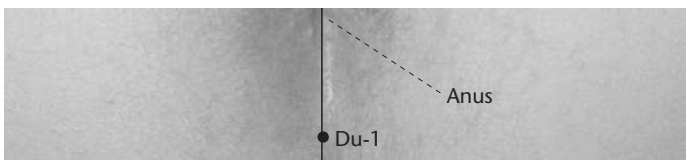
Meeting Points of other channels with the *ren mai*



Du-28 (*yinjiao*): On the inside of the upper lip, at the junction of the frenulum and the upper gum



ST-1 (*chengqi*): With the eyes looking straight ahead, directly below the centre of the pupil, between the eyeball and the infraorbital ridge



Du-1 (*changqiang*): On the midline, midway between the tip of the coccyx and the anus

Connections with other channels and organ systems

- *Du mai*, *chong mai*, Kidney and Stomach primary channels
- Uterus, Kidney

Clinical importance (→ 1.7.2, 1.7.3)

- **Sea of the Yin Qi**, regulates and circulates the Yin Qi (including the Blood, Essence (*jing*) and body fluids) in order to nourish and moisten the body
- Connects all Yin channels, especially those of the lower abdomen
- Controls the anterior thoracic region and the abdomen
- Close relationship to the functions of the abdominal organs, particularly the Kidney, Bladder, Uterus and Lung
- Regulates reproduction
- Stores the Essence Qi (*jing qi*) overflowing from the Yin channels
- Absorbs excess from the Yin channels, especially stagnant Qi and Blood

Notes about the *ren mai*

Both the *ren mai* and *du mai* have a unique position among the eight extraordinary vessels. They are the only two extraordinary vessels with their own specific points – all other extraordinary vessels can only be accessed through points on the primary channels. For this reason the *ren mai* and the *du mai* together with the primary channels are often categorised as 14 channels. However, from the point of view of channel energetics this is not correct, since the extraordinarily vessels occupy a special position, both evolutionary as well as functionally (→ 1.7).

The pathway of the *ren mai*, like that of the *du mai*, is limited to the torso and the head. While it does not course along the extremities and does not have any points on the limbs (neither general points nor specific points such as the five *shu*-transporting points, *yuan*-source point, etc.) it does have an opening point (or Master point) (→ 8.1.8). The *ren mai* is also referred to as the Sea of Yin and governs the Yin in the whole body. Along its pathway are located the anterior aspects of the energy centres (or chakras according to Yogi tradition). Daoist tradition describes three energy centres, the three cinnabar fields (*dantian*) on the anterior aspect of the body, which play an important role in *Qigong* practice as centres where the Qi pools and originates. While all three centres are located on the pathway of the *ren mai*, they do not correspond to specific points but rather to certain areas.

The *ren mai* runs along the Yin side of the body. It contains not only several Front-*mu* points acting directly on the *zangfu*-Organs, but also multiple meeting points with other channels. This clearly denotes the outstanding importance of the *ren mai*.

Specific points according to their function

- ***Yuan*-Source point (→ 8.1.1): –**
- ***Luo*-Connecting point (→ 8.1.2.): Ren-15** (*jiuwei*) ■■
- ***Xi*-Cleft point (→ 8.1.3): –**
- **Associated Back-*shu* point (→ 8.1.4): –**
- **Associated Front-*mu* point (→ 8.1.5): –**
- **Five *shu*-transporting points (→ 8.1.6): –**
- **Hui-meeting point (→ 8.1.7)**
  - of the Qi: **Ren-17** (*danzhong*) ■■
  - of the *fu*-Organs: **Ren-12** (*zhongwan*) ■■
- **Pertaining opening point (→ 8.1.8): LU-7** (*lieque*)
- **Pertaining coupled point (→ 8.1.8): KID-6** (*zhaohai*)
- **Lower *he*-Sea point (→ 8.1.9): –**
- ***Jiaohui*-meeting points (→ 8.1.10):**
  - with the *chong mai* and the *du mai*: **Ren-1** (*huiyin*)
  - with the LIV channel: **Ren-2** (*qugu*) ■■
  - with the SP, LIV, KID channels: **Ren-3** (*zhongji*) ■■, **Ren-4** (*guanyuan*) ■■
  - with the *chong mai* and the KID channel*: **Ren-7** (*yinjiao*)
  - with the SP and ST* channels: **Ren-10** (*xiawan*)
  - with the S.I., T.B.* and ST channels: **Ren-12** (*zhongwan*) ■■
  - with the ST and S.I. channels: **Ren-13** (*shangwan*)
  - with the SP*, KID, S.I.* and T.B. channels: **Ren-17** (*danzhong*) ■■
  - with the *yin wei mai*: **Ren-22** (*tiantu*) ■■, **Ren-23** (*lianquan*)

* Mentioned by only some authors

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–468 with the *du mai*, the L.I. and ST channels: **Ren-24** (*chengjiang*) ■■
– of other channels with the *ren mai*: **Du-28, ST-1, Du-1**

- **Gao Wu command point (→ 8.1.11):** –
- **Window of Heaven point (→ 8.1.12): Ren-22** (*tiantu*) ■■
- **Points of the Four Seas (→ 8.1.13) Qi: Ren-17** (*danzhong*) ■■
- **Ma Dan Yang Heavenly Star point (→ 8.1.14):** –
- **Sun Si Miao Ghost points (→ 8.1.15): Ren-1** (*huiyin*), **Ren-24** (*chengjiang*) ■■
- **Other functional points:**
  – Front-*mu* point of the Bladder: **Ren-3** (*zhongji*) ■■
  – Front-*mu* point of the Small Intestine: **Ren-4** (*guanyuan*) ■■
  – Front-*mu* point of the Triple Burner: **Ren-5** (*shimen*)
  – important, general tonification point: **Ren-6** (*qihai*) ■■
  – Front-*mu* point of the Stomach: **Ren-12** (*zhongwan*) ■■
  – Front-*mu* point of the Heart: **Ren-14** (*juque*) ■■
  – important calming point: **Ren-15** (*jiuwei*) ■■
  – Front-*mu* point of the Pericardium, point of the Sea of Qi: **Ren-17** (*danzhong*) ■■

Points according to region

- **Local points (→ 8.2.1):** throat – **Ren-23** (*lianquan*); Lungs – **Ren-22** (*tiantu*) ■■, **Ren-17** (*danzhong*) ■■; Heart – **Ren-17** (*danzhong*) ■■; Spleen/Stomach – **Ren-12** (*zhongwan*) ■■; Small Intestine – **Ren-4** (*guanyuan*) ■■, **Ren-9** (*shuifen*); Bladder – **Ren-3** (*zhongji*) ■■; urogenital region – **Ren-3** (*zhongji*), **Ren-4** (*guanyuan*) ■■; epigastrium – **Ren-12** (*zhongwan*) ■■, **Ren-13** (*shangwan*); abdomen – **Ren-3** (*zhongji*) ■■, **Ren-4** (*guanyuan*) ■■, **Ren-6** (*qihai*) ■■
- **Adjacent points (→ 8.2.1):** throat – **Ren-22** (*tiantu*) ■■; tongue – **Ren-23** (*lianquan*); Heart – **Ren-14** (*juque*) ■■; Gall Bladder – **Ren-11** (*jianli*); Kidney – **Ren-4** (*guanyuan*) ■■; epigastrium – **Ren-8** (*shenque*)
- **Distal points (→ 8.2.1):** –

Specific points according to the vessel pathway (in numerical order)

- **Ren-1** (*huiyin*): *jiaohui*-meeting point with the *chong mai* and *du mai* (→ 8.1.10); Sun Si Miao Ghost point (→ 8.1.15)
- **Ren-2** (*qugu*) ■■: *jiaohui*-meeting point with the LIV channel (→ 8.1.10)
- **Ren-3** (*zhongji*) ■■: *jiaohui*-meeting point with the SP, LIV, KID channels (→ 8.1.10); Front-*mu* point of the Bladder; local point for the Bladder, urogenital region and lower abdomen (→ 8.2.1)
- **Ren-4** (*guanyuan*) ■■: Front-*mu* point of the Small Intestine (→ 8.1.5); *jiaohui*-meeting point with the SP, LIV, KID channels (→ 8.1.10); local point for the Small Intestine, urogenital region and lower abdomen (→ 8.2.1); adjacent point for the Kidneys
- **Ren-5** (*shimen*): Front-*mu* point of the Triple Burner
- **Ren-6** (*qihai*) ■■: important general tonification point; local point for the lower abdomen (→ 8.2.1); adjacent point for the Lung (→ 8.2.1)
- **Ren-7** (*yinjiao*): *jiaohui*-meeting point with the *chong mai* and the KID channel (→ 8.1.10)
- **Ren-8** (*shenque*): adjacent point for the epigastrium (→ 8.2.1)
- **Ren-9** (*shuifen*): local point for the Small Intestine (→ 8.2.1)
- **Ren-10** (*xiawan*): *jiaohui*-meeting point with the SP and ST* channels (→ 8.1.10)
- **Ren-11** (*jianli*): adjacent point for the Gall Bladder (→ 8.2.1)
- **Ren-12** (*zhongwan*) ■■: *hui*-meeting point (→ 8.1.7) of the *fu*-Organs; *jiaohui*-meeting point with the S.I., T.B.* and ST channels (→ 8.1.10); Front-*mu* point of the Stomach (→ 8.1.5); local point for the SP/ST and the epigastrium (→ 8.2.1)
- **Ren-13** (*shangwan*): *jiaohui*-meeting point with the ST and S.I. channels (→ 8.1.10); local point for the epigastrium (→ 8.2.1)
- **Ren-14** (*juque*) ■■: Front-*mu* point of the Heart (→ 8.1.5); adjacent point for the Heart
- **Ren-15** (*jiuwei*) ■■: *luo*-connecting point (→ 8.1.2); important point for calming
- **Ren-17** (*danzhong*) ■■: *hui*-meeting point (→ 8.1.7) of the Qi; *jiaohui*-meeting point with the SP, KID, S.I. and T.B. channels (→ 8.1.10); Front-*mu* point of the Pericardium, point of the Sea of Qi; local point for the Lung and Heart (→ 8.2.1)
- **Ren-22** (*tiantu*) ■■: *jiaohui*-meeting point with the *yin wei mai* (→ 8.1.10); Window of Heaven point (→ 8.1.12); local point for the Lungs (→ 8.2.1); adjacent point for the throat (→ 8.2.1)
- **Ren-23** (*lianquan*): *jiaohui*-meeting point with the *yin wei mai* (→ 8.1.10); local point for the throat (→ 8.2.1); adjacent point for the tongue (→ 8.2.1)
- **Ren-24** (*chengjiang*) ■■: *jiaohui*-meeting point with the *du mai*, the L.I. and ST channels (→ 8.1.10); Sun Si Miao Ghost point

* Mentioned by only some authors

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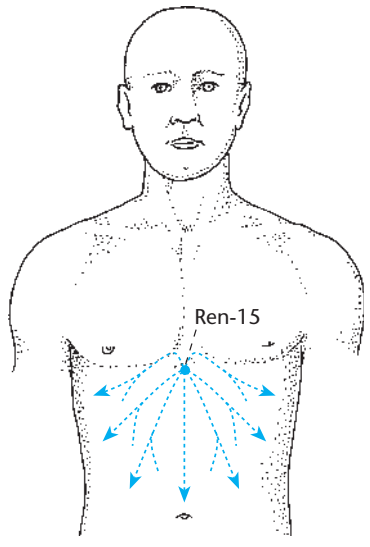

Luo-Connecting Vessel of the *Ren Mai* (→ 1.6)

Pathway

The *luo*-connecting vessel of the *ren mai* originates at **Ren-15** (*jiuwei*), below the xiphoid process (→ 3) and disperses over the skin of the abdomen.

Clinical importance

Pathology

Excess (*shi*): pain of the abdominal skin
Deficiency (*xu*): itching of the abdominal skin

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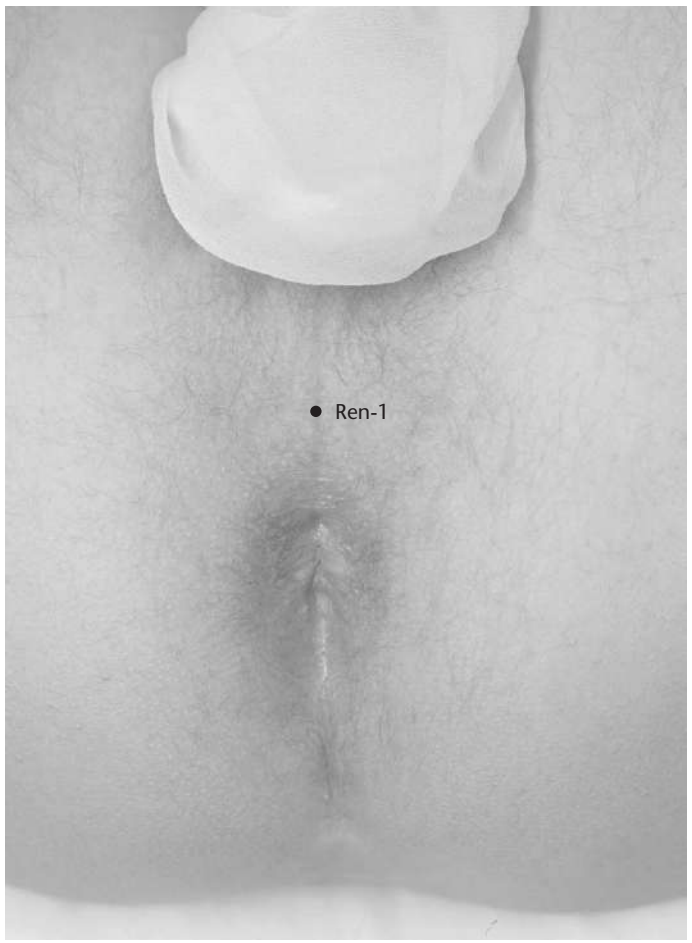
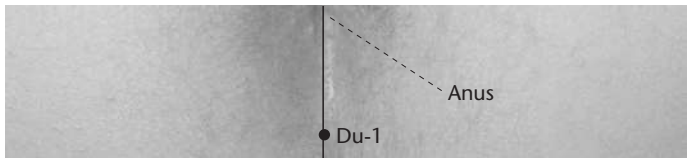
Meeting of the Yin HUIYIN Ren-1





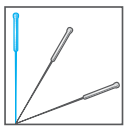
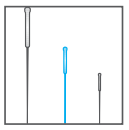
Location
In the centre of the perineum.

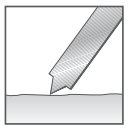
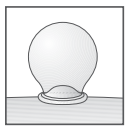
How to find
In women: midway between the anus and the posterior labial commissure. In men: midway between the anus and the scrotum.

Needling
Vertically 0.5–1 cun. Caution: Contraindicated during pregnancy. Some classic texts prohibit needling this point. Particular attention should be paid to the prevention of infection.

Actions/Indications
- Clears Heat, strengthens the Kidneys and drains Dampness
- Regulates menstruation

Special features
Meeting point with the *du mai* and the *chong mai*. As a Sun Si Miao Ghost point, **Ren-1** is traditionally indicated for treating epilepsy and psychoses.

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Ren-2 *Curved Bone* QUGU

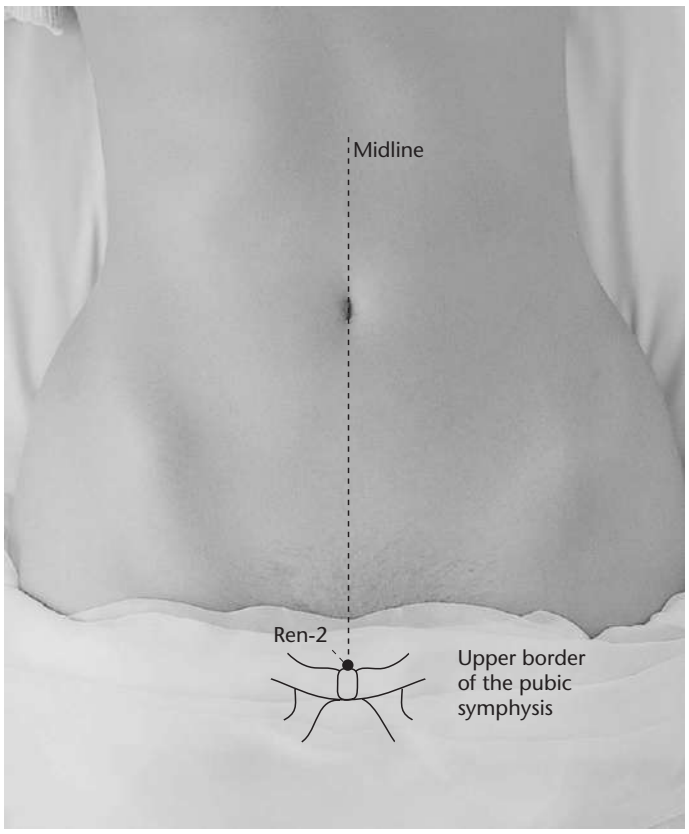
Location
On the anterior midline, on the upper border of the pubic symphysis.

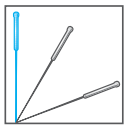
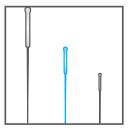
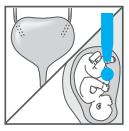
How to find
In the pubic area, locate the upper border of the pubic symphysis. **Ren-2** is located directly superior to its upper border, on the anterior midline.
Located on the same level are → **KID-11** (0.5 cun lateral to the midline), → **ST-30** (2 cun lateral to the midline) and → **SP-12** (3.5 cun lateral to the midline).

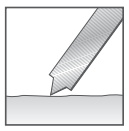
Needling
Vertically 0.5–1 cun. Caution: Peritoneum. Also caution with a full bladder and during pregnancy.

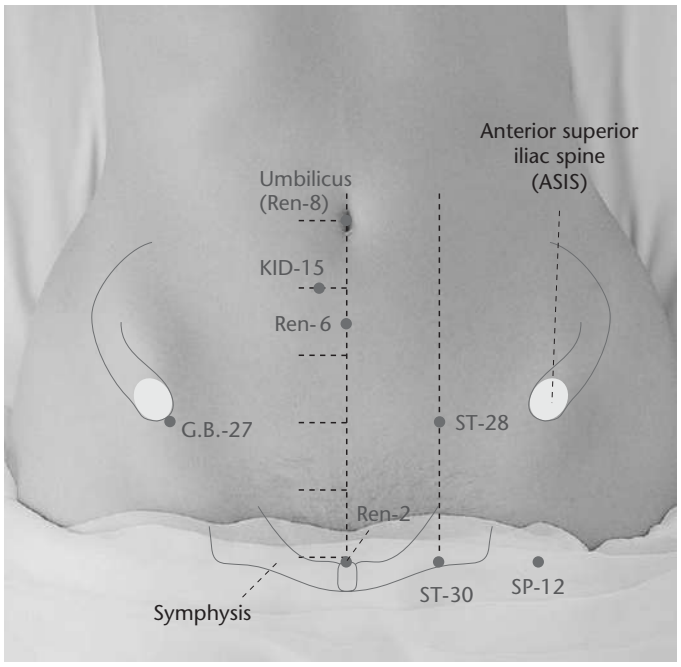
Actions/Indications
- Benefits urination, warms the Yang and strengthens the Kidneys
- Regulates the Lower Burner

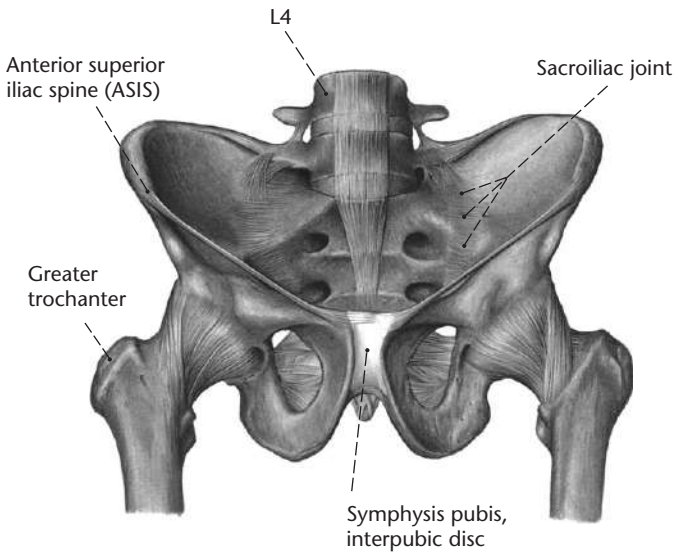
Special features
Meeting point with the LIV channel

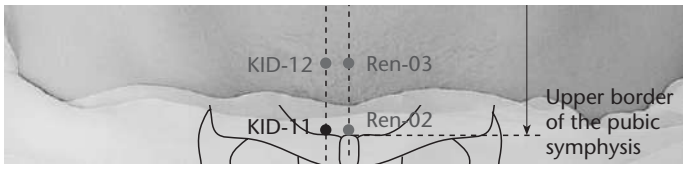










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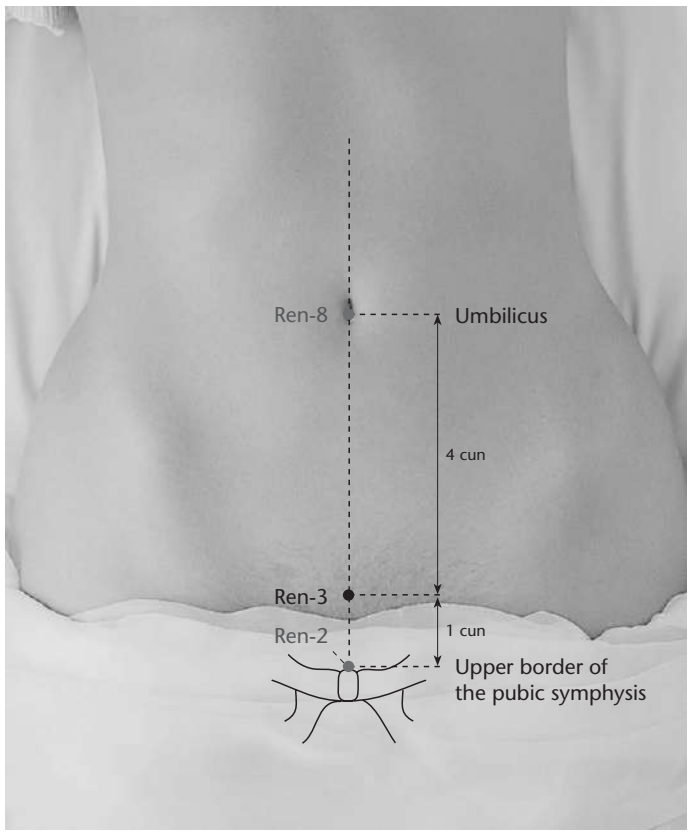
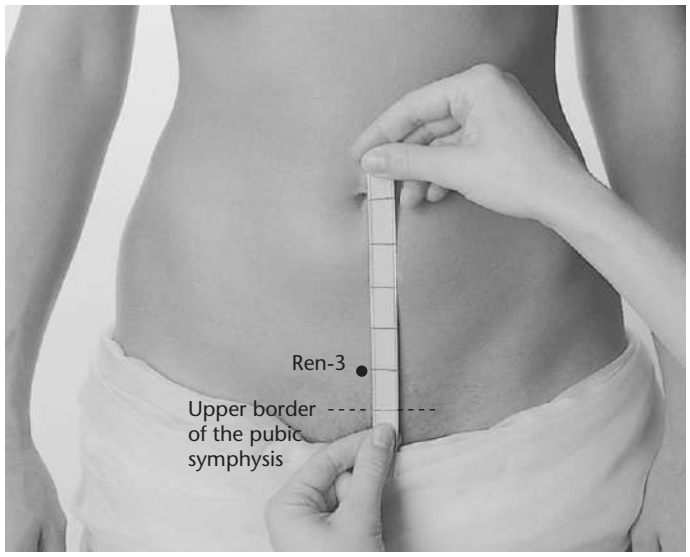
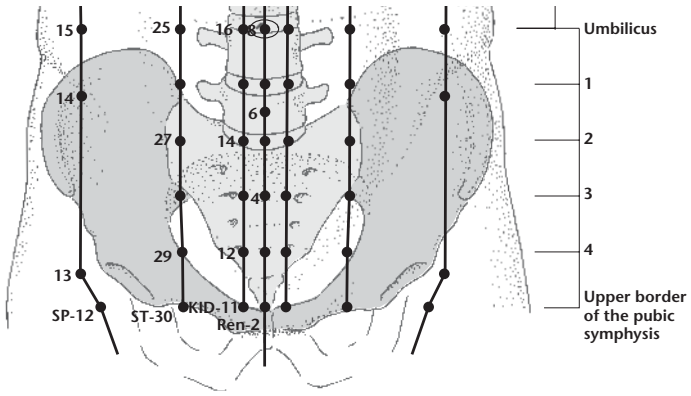
Middle Pole ZHONGJI Ren-3







Location

On the anterior midline, 1 cun superior to the upper border of the pubic symphysis or 4 cun inferior to the umbilicus.

How to find

The distance between the centre of the umbilicus and the upper border of the pubic symphysis is divided into 5 cun. As these can vary considerably from the patient's finger cun, only proportional cun measurements should be used here (helpful device: elastic tape → 2.3.1). Locate **Ren-3** on the midline, 1 cun superior to the midpoint of the upper border of the pubic symphysis.

Located on the same level are → **KID-12** (0.5 cun lateral to the midline) and → **ST-29** (2 cun lateral to the midline).

Needling

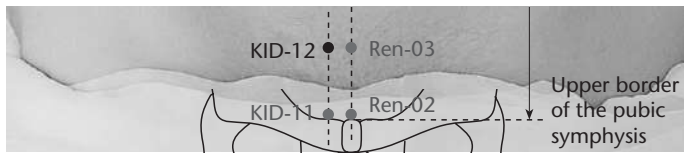
Vertically 0.5–1 cun. Caution: Peritoneum, bladder. Contraindicated during pregnancy. Ask the patient to void their bladder before needling.

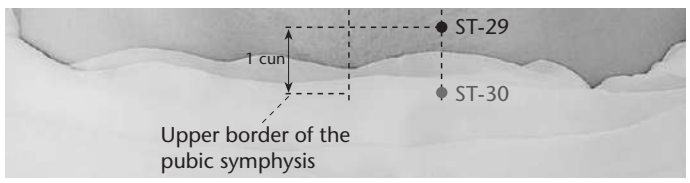
Actions/Indications

- Benefits the Bladder, drains Dampness and Damp-Heat, dispels stagnation, benefits the Lower Burner
- Regulates menstruation
- Strengthens the Kidneys (→ **Ren-4** is more commonly used for this purpose)

Special features

Front-*mu* point of the Bladder, meeting point with the LIV, KID and SP channels. Important point for disorders of the urogenital tract, with its main action on the Bladder (especially for acute cases).





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Ren-4 *Gate of the Source* GUANYUAN

Location

On the anterior midline, 2 cun superior to the upper border of the pubic symphysis or 3 cun inferior to the umbilicus.

How to find

The distance between the centre of the umbilicus and the upper border of the pubic symphysis is divided into 5 cun, which can vary considerably from the patient's finger cun. Therefore, only proportional cun measurements should be used here (helpful device: elastic tape → 2.3.1). **Ren-4** is located on the midline, either 2 cun superior to the midpoint of the upper border of the pubic symphysis or 3 cun inferior to the umbilicus.

Located on the same level are → **KID-13** (0.5 cun lateral to the midline), → **ST-28** (2 cun lateral to the midline) and three extra points → **Ex-CA** (*yijing*: 1 cun lateral to the midline; *qimen*: 3 cun lateral to the midline; *tituo*: 4 cun lateral to the midline). Also located on approximately this level is → **G.B.-27** (medial to the ASIS).

Needling

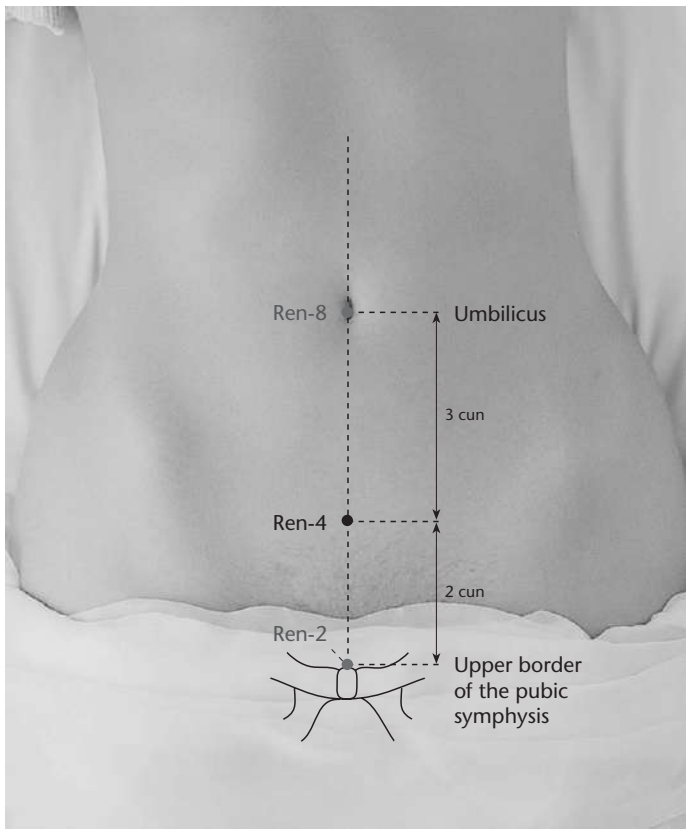
Vertically 0.5–1.2 cun. Caution: Peritoneum. Needling contraindicated during pregnancy.

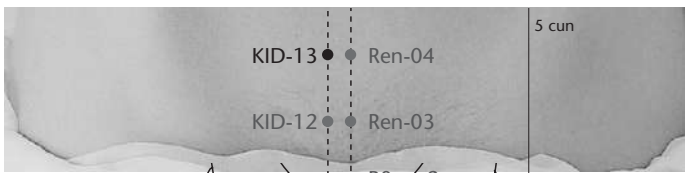
Actions/Indications

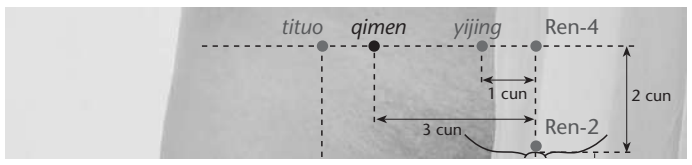
- Tonifies the Original Qi (*yuan qi*), benefits the Essence (*jing*), strengthens and nourishes the Kidneys as well as the Blood and Yin
- Eliminates Cold and Dampness from the Lower Burner (especially with moxibustion)

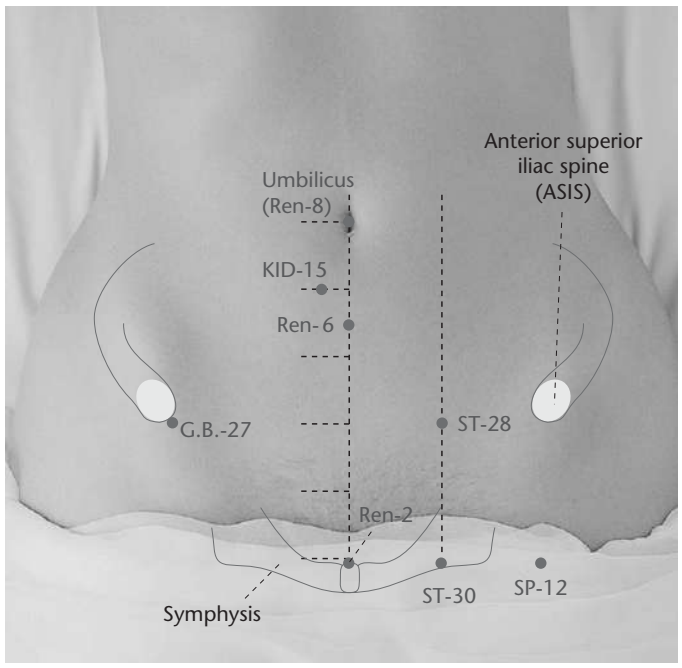
Special features

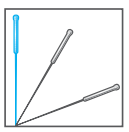
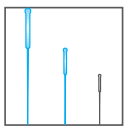
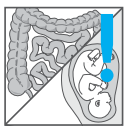
Front-*mu* point of the Small Intestine, meeting point with the SP, KID and LIV channels. Important point for tonification. Major point for urogenital disorders (especially gynaecological disorders).

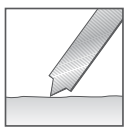
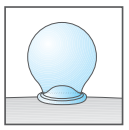








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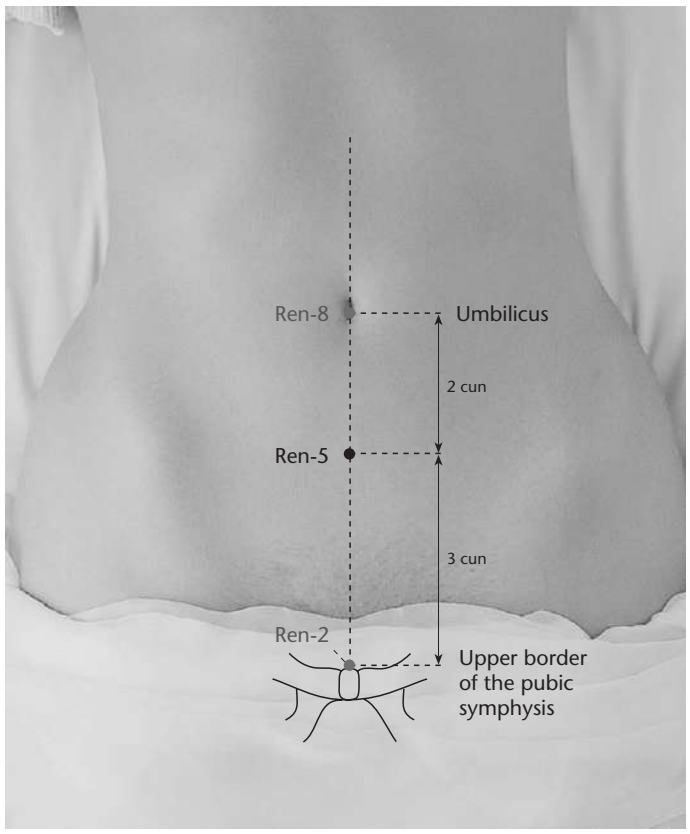
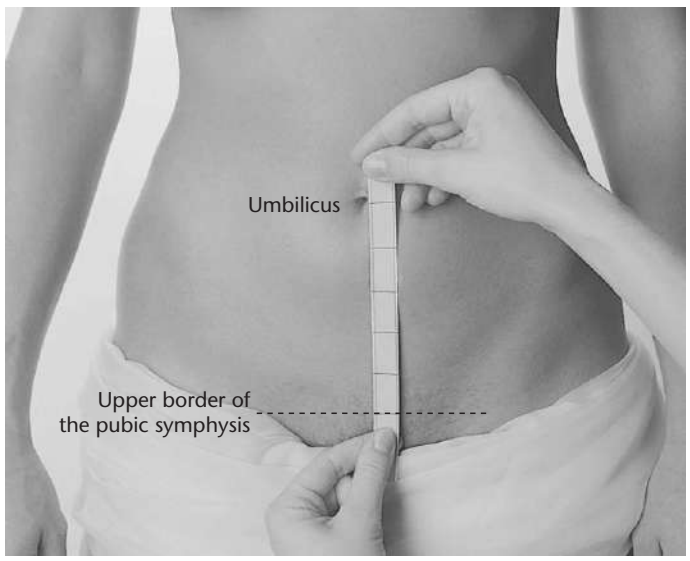
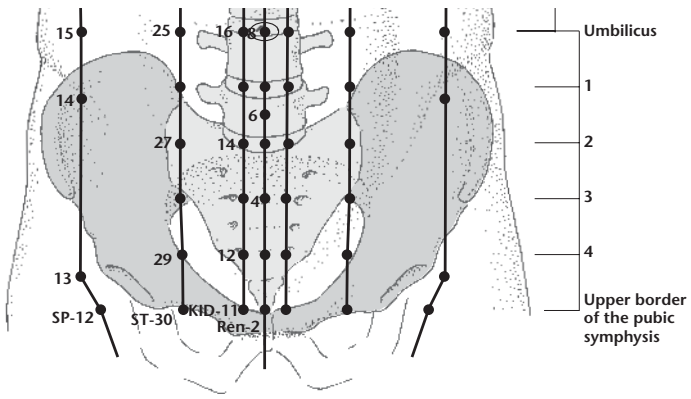
Stone Gate SHIMEN Ren-5







Location

On the anterior midline, 2 cun inferior to the umbilicus or 3 cun superior to the upper border of the pubic symphysis.

How to find

The distance between the centre of the umbilicus and the upper border of the pubic symphysis is divided into 5 cun, which can vary considerably from the patient's finger cun. Therefore, only proportional cun measurements should be used here (helpful device: elastic tape → 2.3.1). **Ren-5** is located on the midline, 2 cun inferior to the umbilicus. Located on the same level are → **KID-14** (0.5 cun lateral to the midline) and → **ST-27** (2 cun lateral to the midline).

Needling

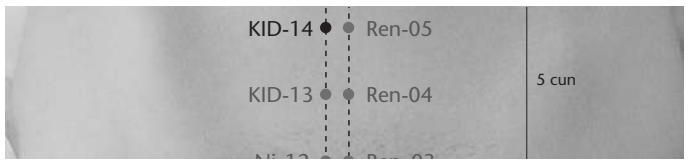
Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy.

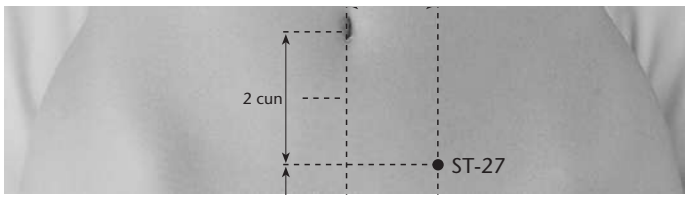
Actions/Indications

- Moves and benefits the water passages
- Regulates the Qi and Blood in the Lower Burner
- Regulates the Uterus

Special features

Front-*mu* point of the Triple Burner. Some classic texts warn that needling this point in women can lead to infertility (hence the name: infertile women were referred to as 'stone women'). There are no such warnings in modern texts.





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Ren-6 *Sea of Qi* QIHAI

Location

On the anterior midline, 1.5 cun inferior to the umbilicus or 3.5 cun superior to the upper border of the pubic symphysis.

How to find

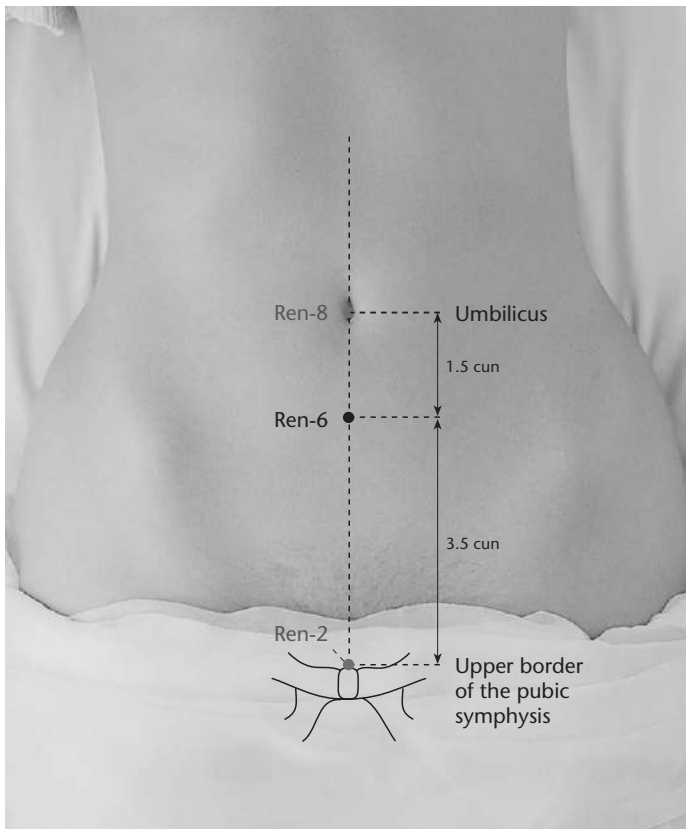
The distance between the centre of the umbilicus and the upper border of the pubic symphysis is divided into 5 cun, which can vary considerably from the patient's finger cun. Therefore, only proportional cun measurements should be used here (helpful device: elastic tape → 2.3.1). **Ren-6** is located on the midline, 1.5 cun inferior to the umbilicus or 3.5 cun superior to the upper border of the pubic symphysis.

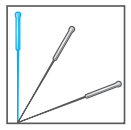
Needling

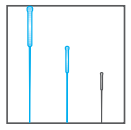
Vertically 0.8–1.5 cun. Caution: Peritoneum, pregnancy. According to some authors, this point should never be needled with strong reducing techniques owing to its strong Qi tonifying action. Moxibustion and cupping are recommended for this point.

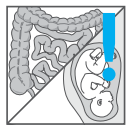
Actions/Indications

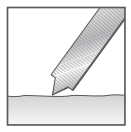
- Tonifies the Original Qi (*yuan qi*) as well as Qi in general, strengthens the Kidneys (especially Kidney Yang), regulates Qi, harmonises Blood and eliminates Dampness

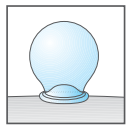






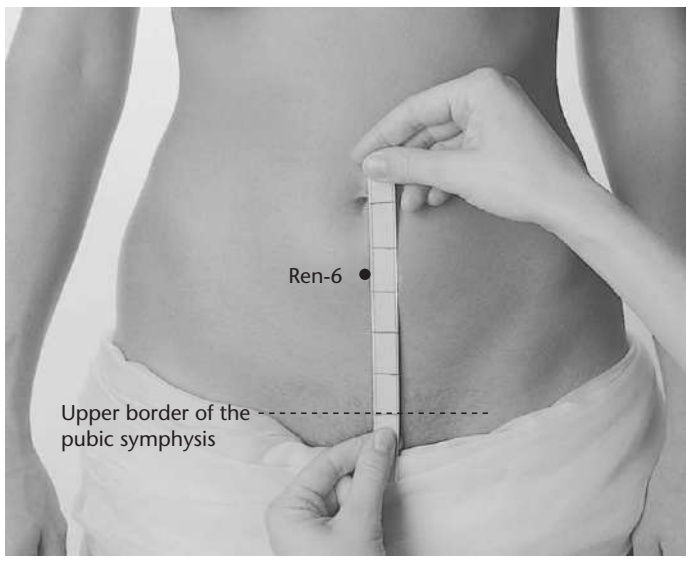


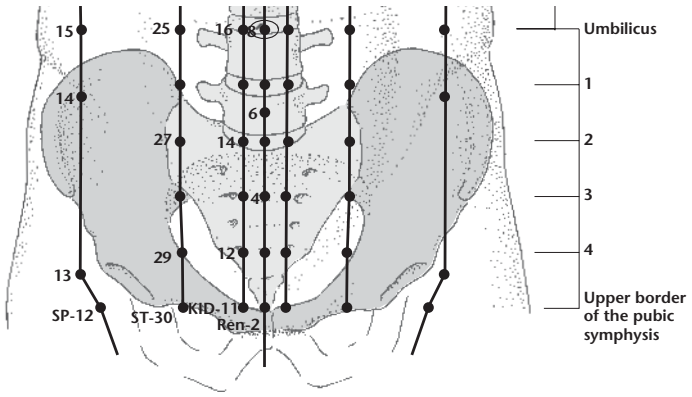




Special features

Important tonification point for mental and physical exhaustion, strengthens especially the Qi and Yang with moxibustion. One of the most important acupuncture points.





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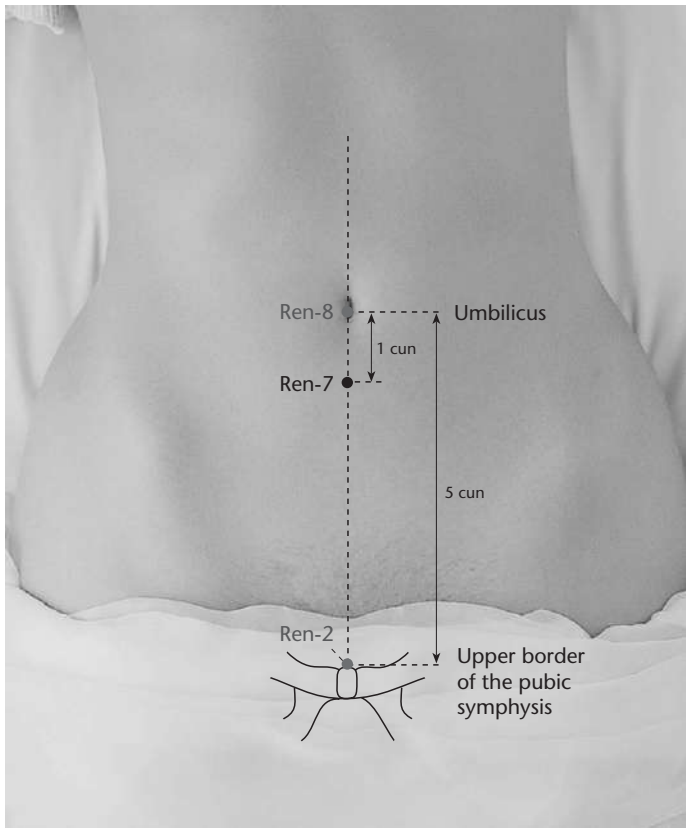
Yin Intersection YINJIAO Ren-7



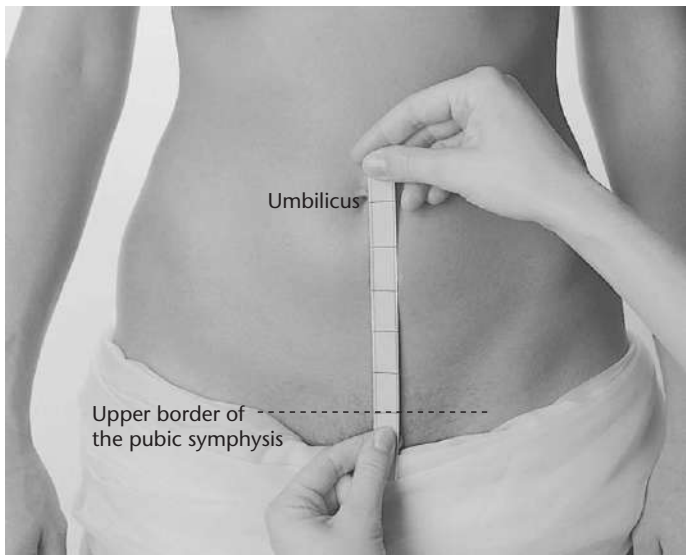
Location
On the anterior midline, 1 cun inferior to the umbilicus.

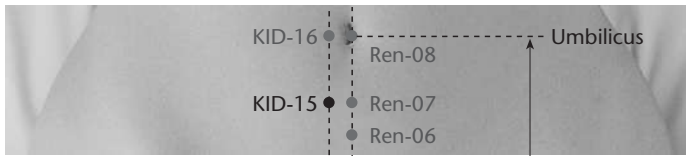
How to find
The distance between the centre of the umbilicus and the upper border of the pubic symphysis is divided into 5 cun, which can vary considerably from the patient's finger cun. Therefore, only proportional cun measurements should be used here (helpful device: elastic tape ➞ 2.3.1). **Ren-7** is located on the midline, 1 cun inferior to the umbilicus.
Located on the same level are ➞ **KID-15** (0.5 cun lateral to the midline) and ➞ **ST-26** (2 cun lateral to the midline).

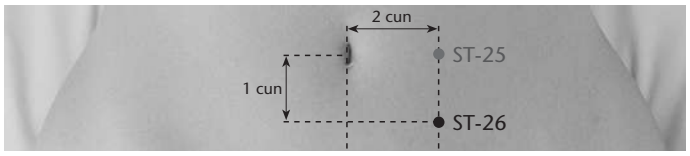
Needling
Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy.

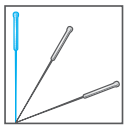
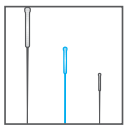
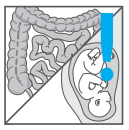
Actions/Indications
- Regulates menstruation
- Regulates the Qi flow in the abdomen and the genital area

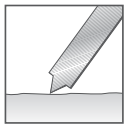
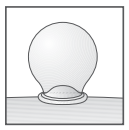
Special features
Meeting point with the *chong mai* and the KID channel







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Ren-8 *Spirit Gateway* SHENQUE

Location

In the centre of the umbilicus.

How to find

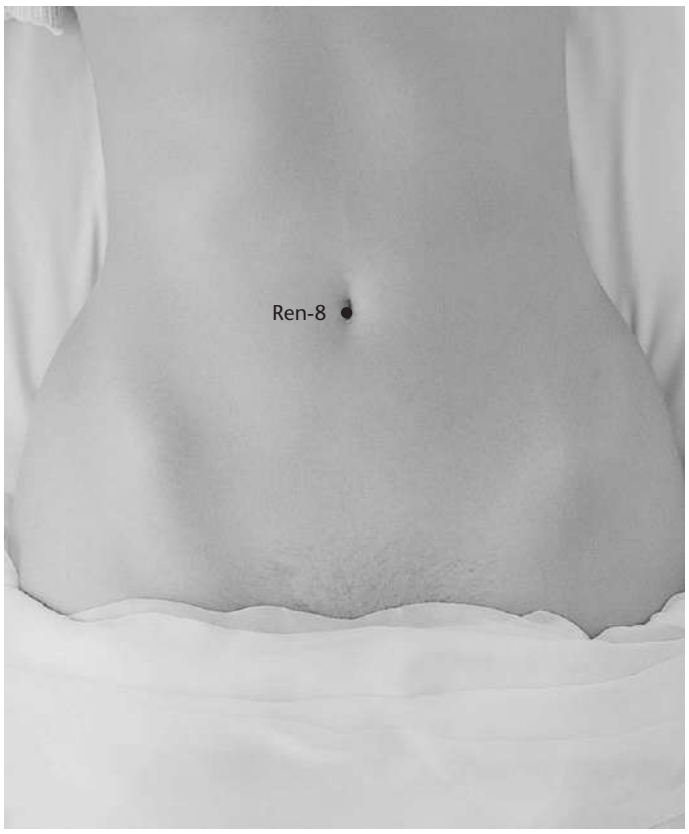
Located on the same level are → **KID-16** (0.5 cun lateral to the midline), → **ST-25** (2 cun lateral to the midline), → **SP-15** (4 cun lateral to the midline) as well as → **G.B.-26** (on a vertical line through the free end of the 11th rib).

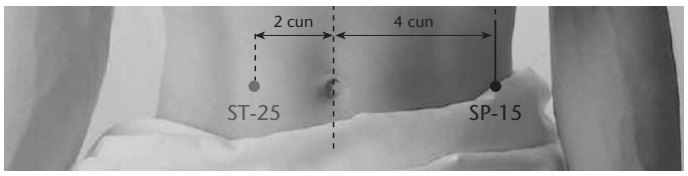
Needling

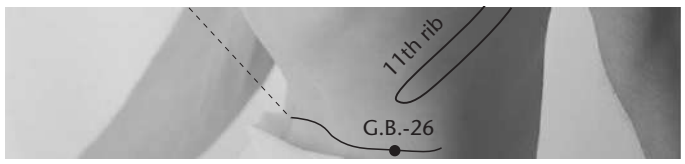
Needling contraindicated. Only indirect moxibustion (on salt or ginger, moxa pole, moxa box).

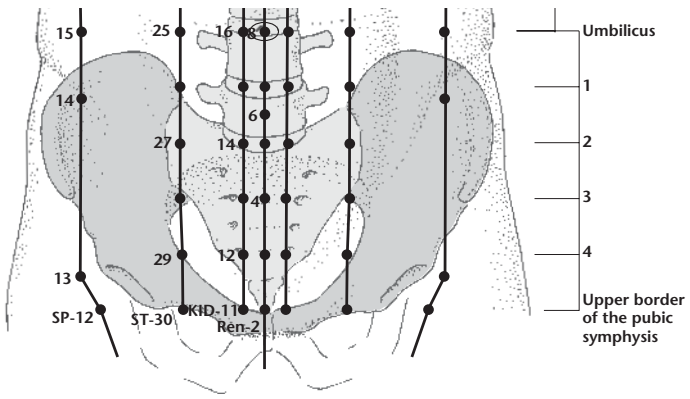
Actions/Indications

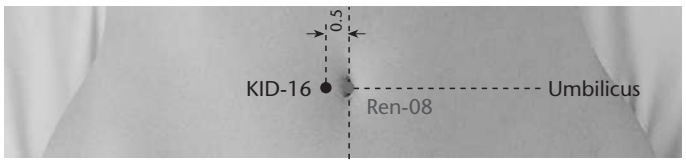
- Warms and stabilises the Yang and the Intestines

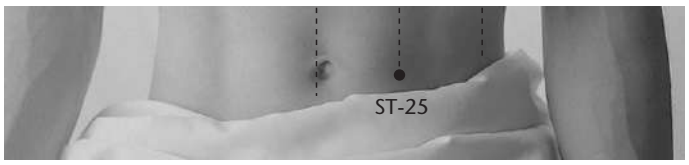


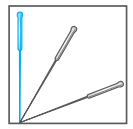
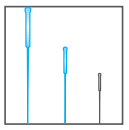


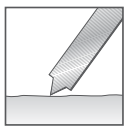
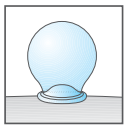








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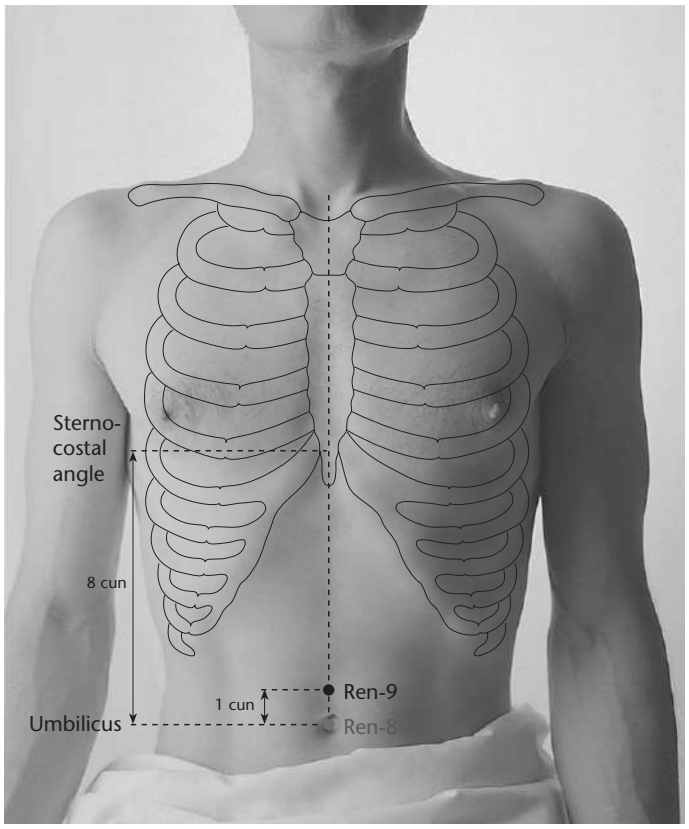
Water Separation SHUIFEN Ren-9



Location

On the anterior midline, 1 cun superior to the umbilicus.

How to find

The distance between the sternocostal angle (→ 3.5) and the centre of the umbilicus is divided into 8 cun, which can vary considerably from the patient's finger cun. Therefore, only proportional cun measurements should be applied here (helpful device: elastic tape → 2.3.1). From the centre of the umbilicus, measure 1 cun in a superior direction and there locate **Ren-9** on the anterior midline.

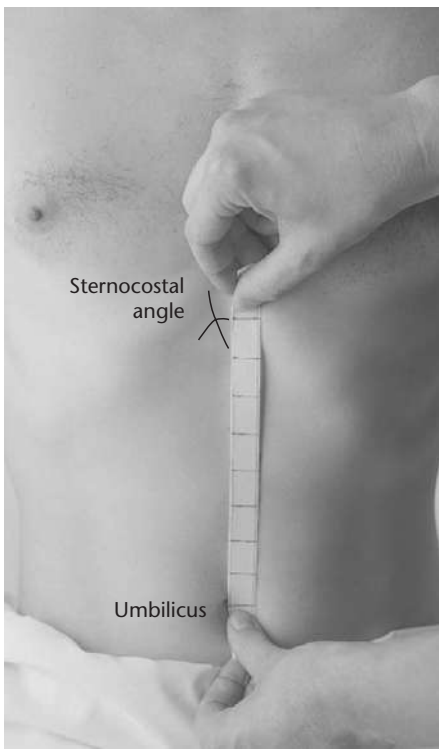
Located on the same level is → **ST-24** (2 cun lateral to the midline). → **LIV-13** is also located on approximately this level (at the free end of the 11th rib).

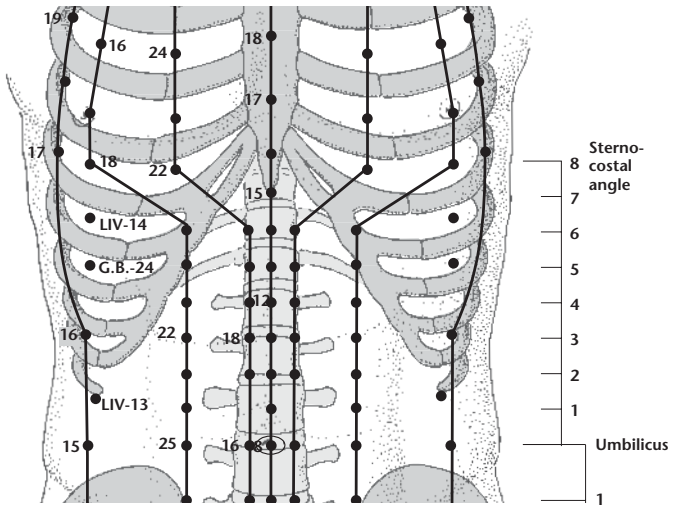
Needling

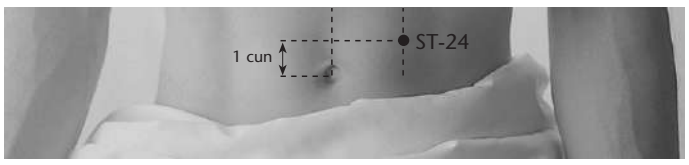
Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy

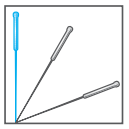
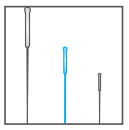
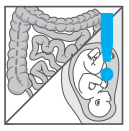
Actions/Indications

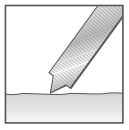
- Eliminates water accumulations, drains Dampness and controls the water passages Regulates the Intestines and disperses accumulations
- Delayed closure of the fontanelles









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Ren-10 *Lower Cavity* XIAWAN

Location

On the anterior midline, 2 cun superior to the centre of the umbilicus.

How to find

The distance between the sternocostal angle (→ 3.5) and the centre of the umbilicus is divided into 8 cun, which can vary considerably from the patient's finger cun. Therefore only proportional cun measurements should be applied here (helpful device: elastic tape → 2.3.1). From the centre of the umbilicus, measure 2 cun in a superior direction and there locate **Ren-10** on the anterior midline.

Located on the same level are → **KID-17** (0.5 cun lateral to the midline), → **ST-23** (2 cun lateral to the midline) and **Ex-CA** (*weishang*; 4 cun lateral to the midline).

Needling

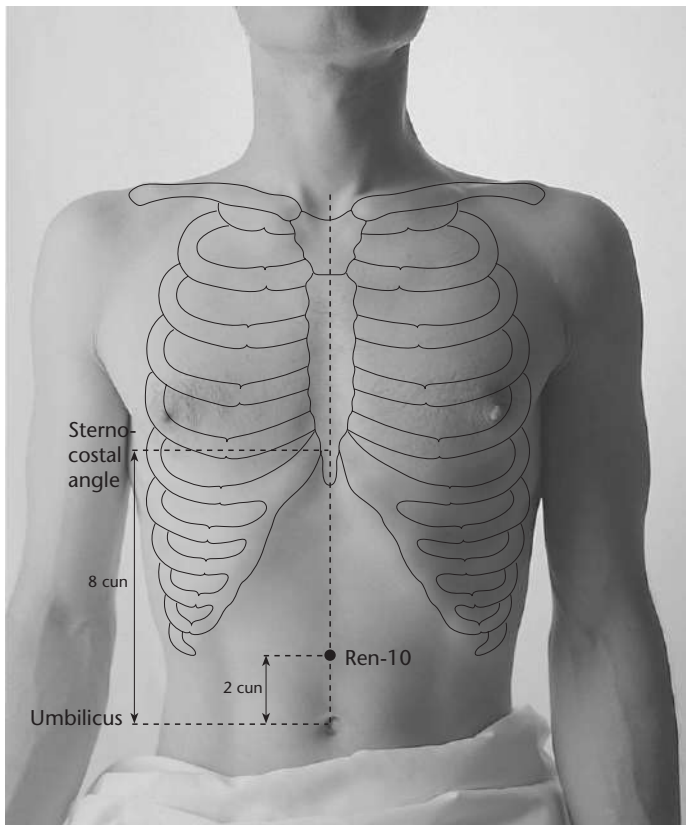
Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy.

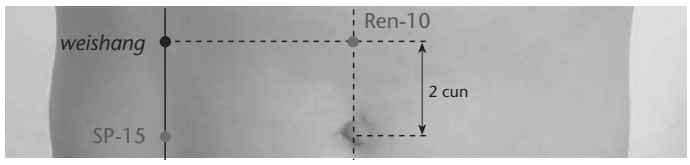
Actions/Indications

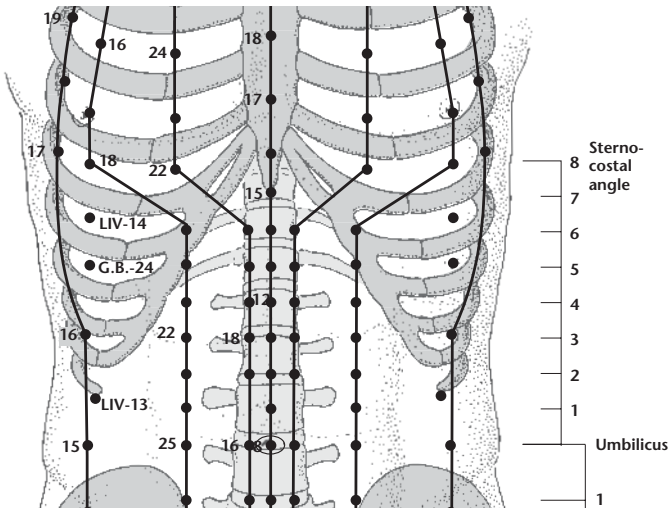
- Tonifies and regulates the Spleen and Stomach Qi, dispels food stagnation

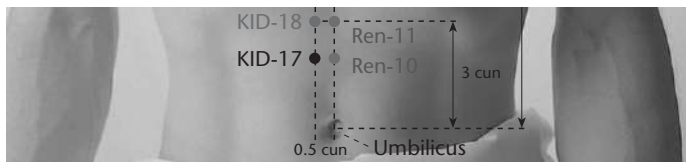
Special features

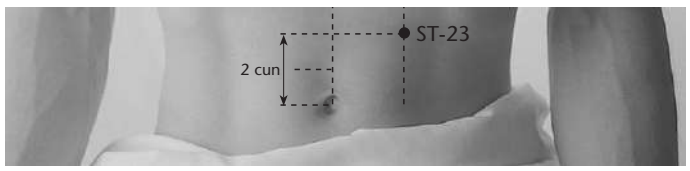
Meeting point with the SP channel and according to some authors with the ST channel. According to some classical texts, this point is contraindicated during pregnancy (for both needling and moxibustion).

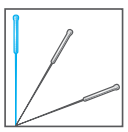
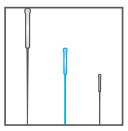
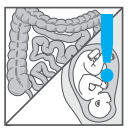


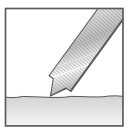










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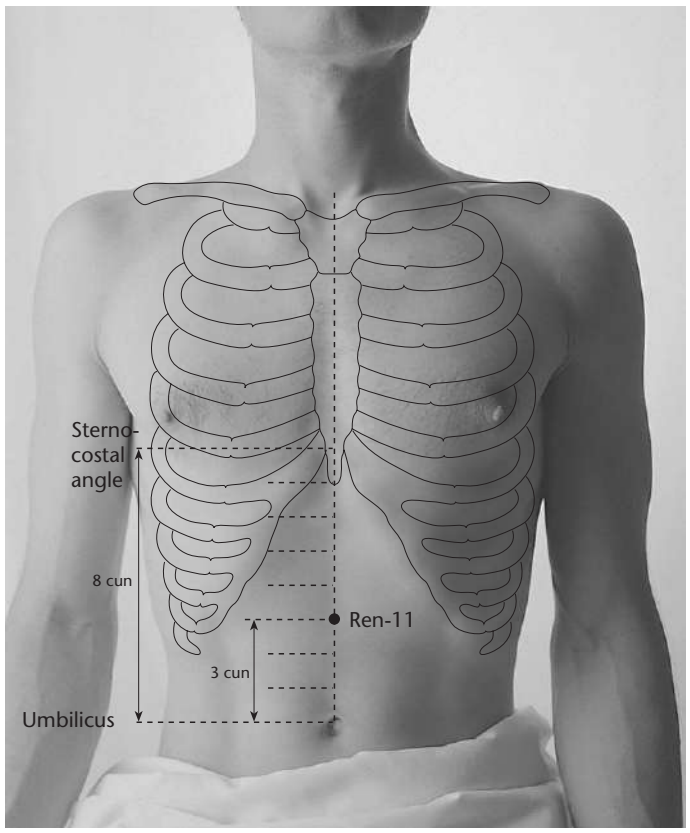
Interior Strengthening JIANLI Ren-11



Location

On the anterior midline, 3 cun superior to the umbilicus.

How to find

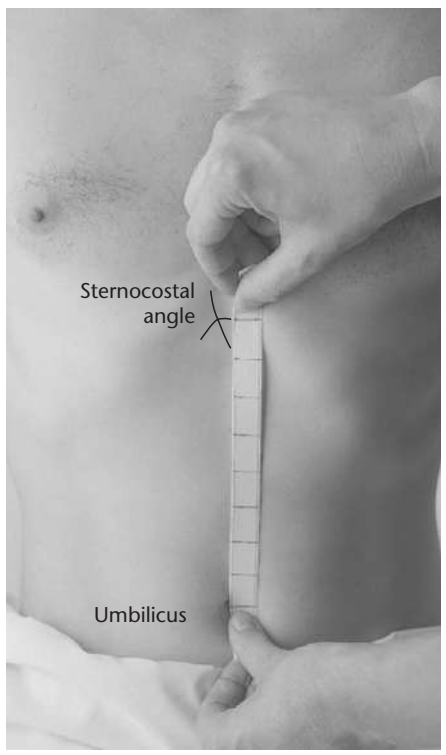
The distance between the sternocostal angle (→ 3.5) and the centre of the umbilicus is divided into 8 cun, which can vary considerably from the patient's finger cun. Therefore, only proportional cun measurements should be applied here (helpful device: elastic tape → 2.3.1). From the centre of the umbilicus, measure 3 cun in a superior direction and there locate **Ren-11** on the anterior midline. Located on the same level are → **KID-18** (0.5 cun lateral to the midline), → **ST-22** (2 cun lateral to the midline) and → **SP-16** (4 cun lateral to the midline).

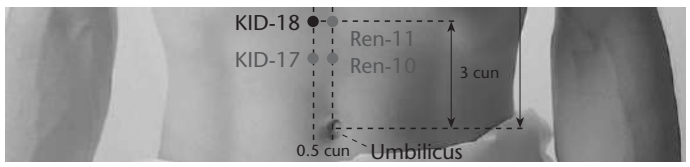
Needling

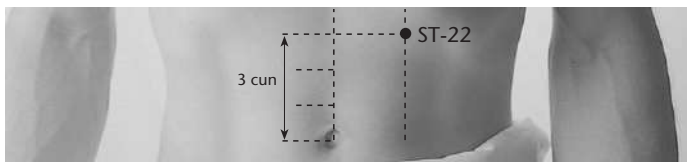
Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy.

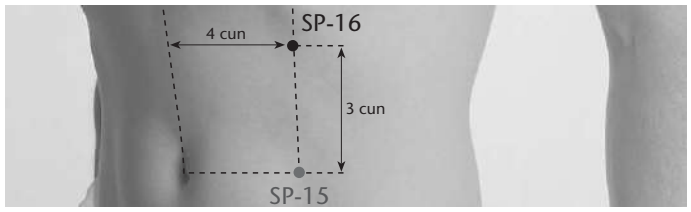
Actions/Indications

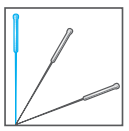
- Harmonises the Middle Burner, regulates the Qi flow

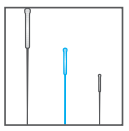


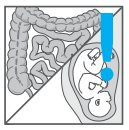


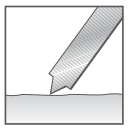












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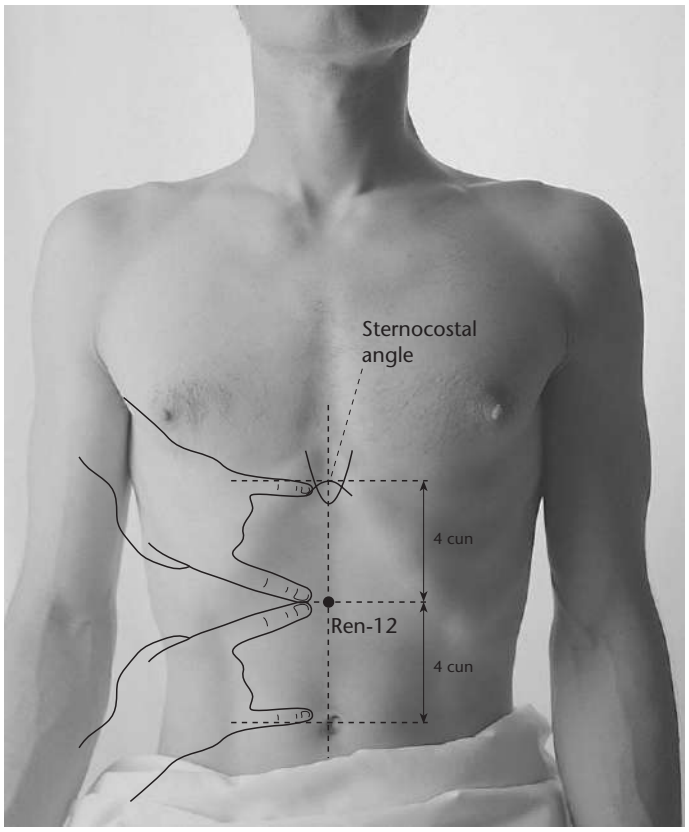
Ren-12 *Middle Cavity* ZHONGWAN

Location

On the anterior midline, 4 cun superior to the umbilicus or 4 cun inferior to the sternocostal angle.

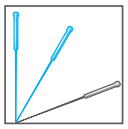
How to find

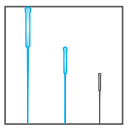
The distance between the sternocostal angle (→ 3.5) and the centre of the umbilicus can be divided into 8 cun, which can vary considerably from the patient's finger cun. Therefore, only proportional cun measurements should be applied here (helpful device: elastic tape → 2.3.1). From the centre of the umbilicus, measure either 4 cun in a superior direction or from the sternocostal angle 4 cun in an inferior direction. There, locate **Ren-12** on the anterior midline. **Or:** Spreading hands technique (→ 2.3.3): Place the little fingers on the sternocostal angle and the centre of the umbilicus respectively and determine the midpoint (=**Ren-12**) of this distance by joining the index fingers. Located on the same level are → **KID-19** (0.5 cun lateral to the midline) and → **ST-21** (2 cun lateral to the midline).

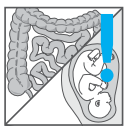


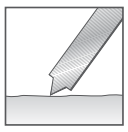
Needling

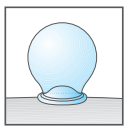
0.8–1.5 cun vertically or obliquely towards surrounding points (→ **ST-21**, **Ren-10**, **Ren-15**). Caution: Peritoneum, pregnancy. If indicated, moxa is recommended.









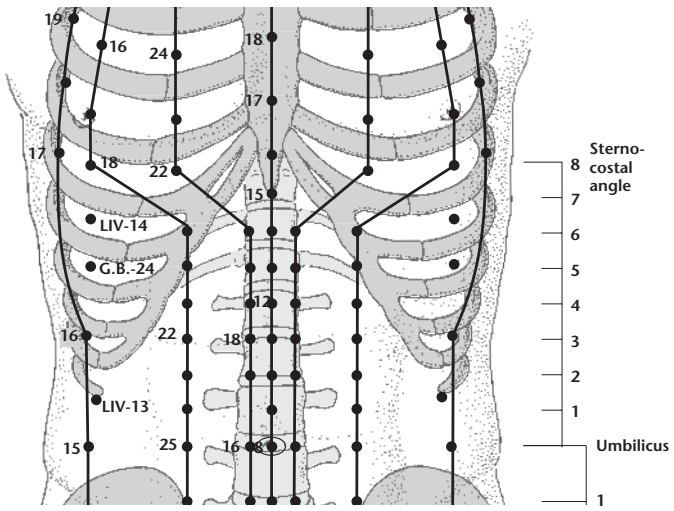


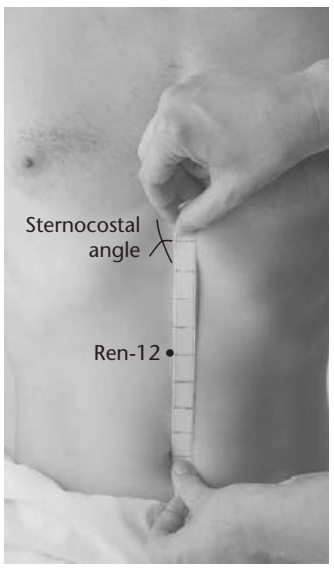
Actions/Indications

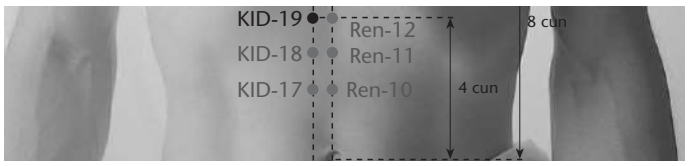
- Harmonises and tonifies the Middle Burner, descends counterflow Qi, regulates the Qi flow and alleviates pain, transforms Dampness

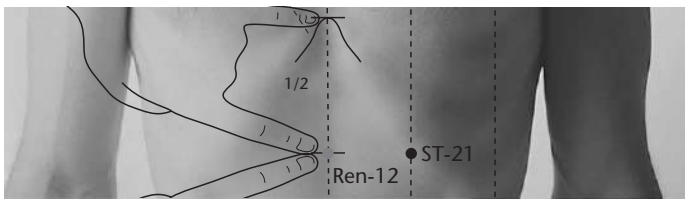
Special features

Front-*mu* point of the stomach, meeting point with the S.I., T.B.* and ST channels, *hui*-meeting point of the *fu*-Organs. Major point for (functional) stomach disorders.









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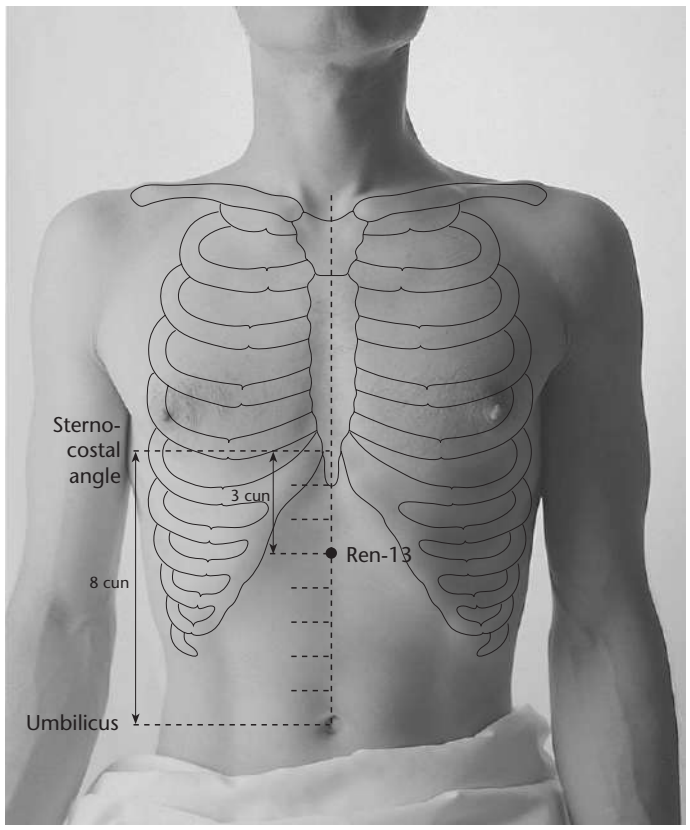
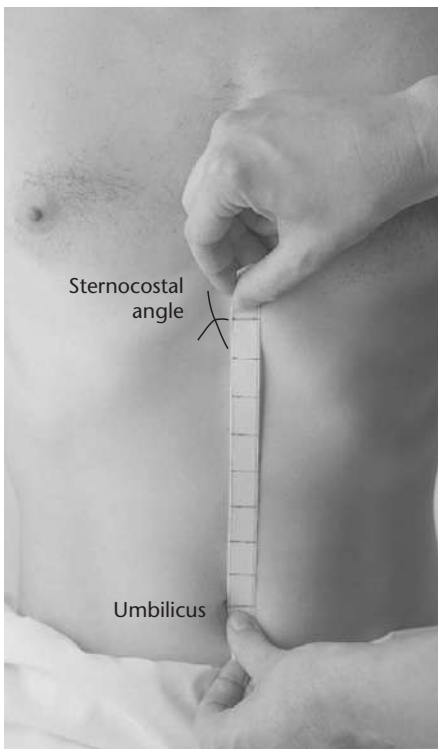
Upper Cavity SHANGWAN Ren-13





Location

On the anterior midline, 3 cun inferior to the sternocostal angle.

How to find

The distance between the sternocostal angle (→ 3.5) and the centre of the umbilicus is divided into 8 cun, which can vary considerably from the patient's finger cun. Therefore, only proportional cun measurements should be applied here (helpful device: elastic tape → 2.3.1). From the sternocostal angle, measure 3 cun in an inferior direction and there locate **Ren-13** on the anterior midline.

Located on the same level are → **KID-20** (0.5 cun lateral to the midline), → **ST-20** (2 cun lateral to the midline) and → **G.B.-24** (approximately on this level, in the 7th intercostal space, on the mamillary line).

Needling

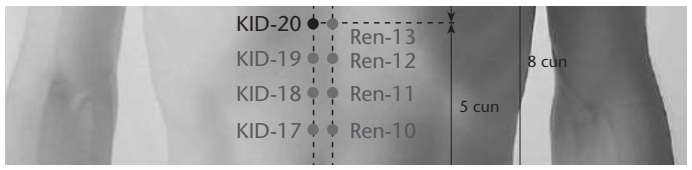
Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy.

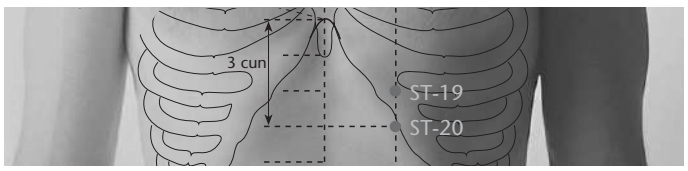
Actions/Indications

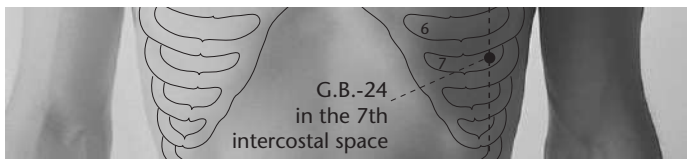
- Regulates the Stomach and counterflow Qi
- Regulates the Heart

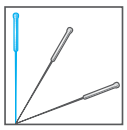
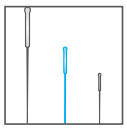
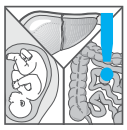
Special features

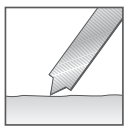
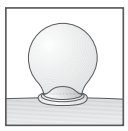
Meeting point with the ST and S.I. channel







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Ren-14 *Great Gateway* JUQUE

Location

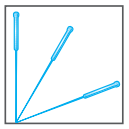
On the anterior midline, 2 cun inferior to the sternocostal angle or 6 cun superior to the umbilicus.

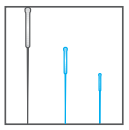
How to find

The distance between the sternocostal angle (→ 3.5) and the centre of the umbilicus is divided into 8 cun (note: these are proportional cun → 2.2). **Ren-14** is located on the midline, 2 cun inferior to the sternocostal angle or 6 cun superior to the umbilicus. **Or:** Use spreading hands technique (→ Chapter 2): Place the little fingers on the sternocostal angle and the umbilicus respectively and determine the midpoint of this distance (→ **Ren-12**). Then locate **Ren-14** on the midpoint of the distance between → **Ren-12** and the sternocostal angle.
Located on the same level are → **KID-21** (0.5 cun lateral to the midline), → **ST-19** (2 cun lateral to the midline) and → **LIV-14** (approximately on this level, in the 6th intercostal space, on the mamillary line).

Needling

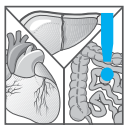
0.3–0.8 cun vertically or often obliquely in an inferior direction or up to 1.5 cun transversely (subcutaneously). Depending on individual anatomy, this point can be located on the xiphoid process. Caution: Peritoneum, injury to hypertrophied organs (left: heart, right: liver) depending on the thickness of the abdominal wall.





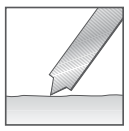
Actions/Indications

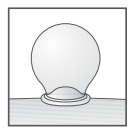
- Regulates the Heart, disperses stagnant Phlegm, alleviates pain, unbinds the thorax, descends the Qi
- Harmonises the Stomach, descends Stomach Qi
- Transforms Phlegm, calms the *shen*

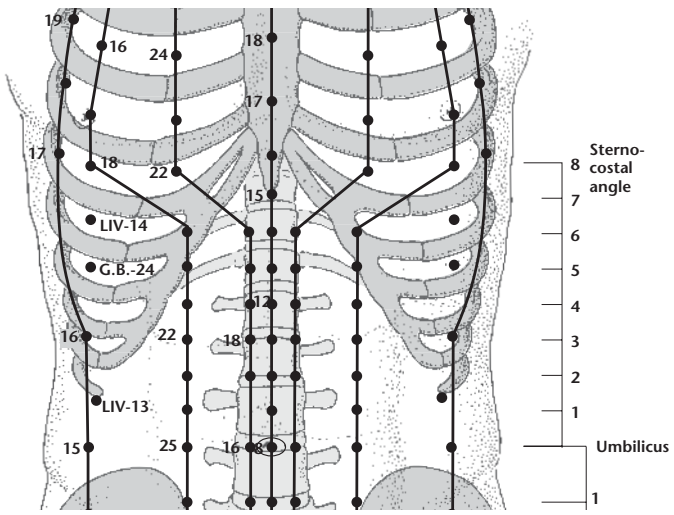


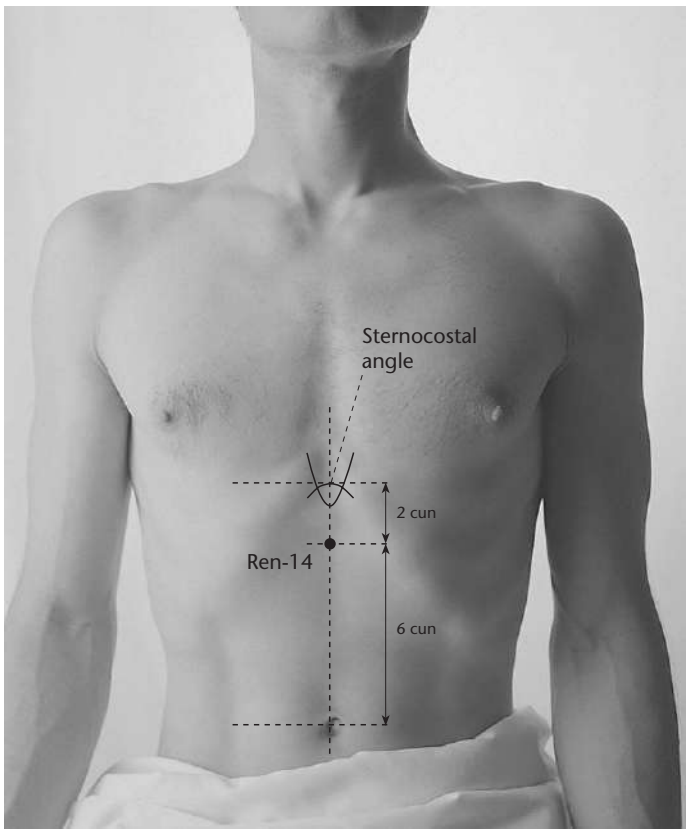
Special features

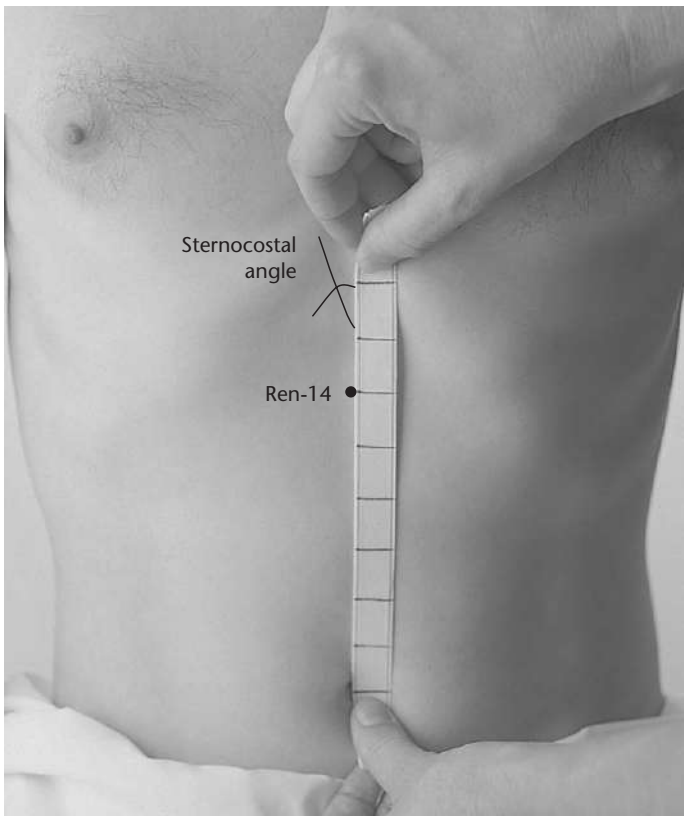
Front-*mu* point of the Heart. Major local point for thoracic pain caused by Blood stasis or Phlegm blockages.

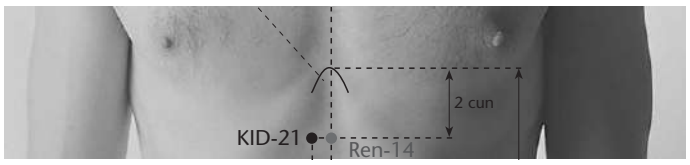












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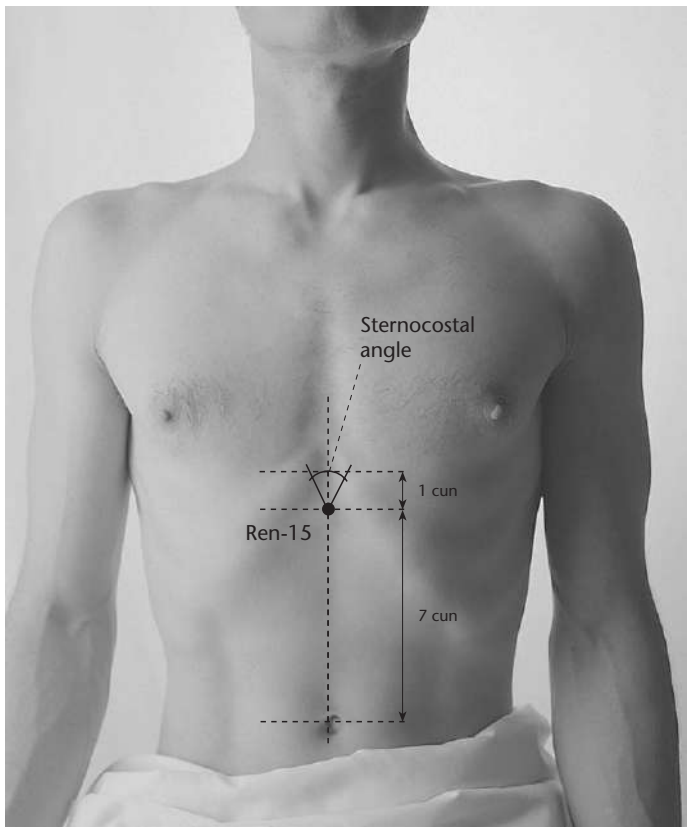
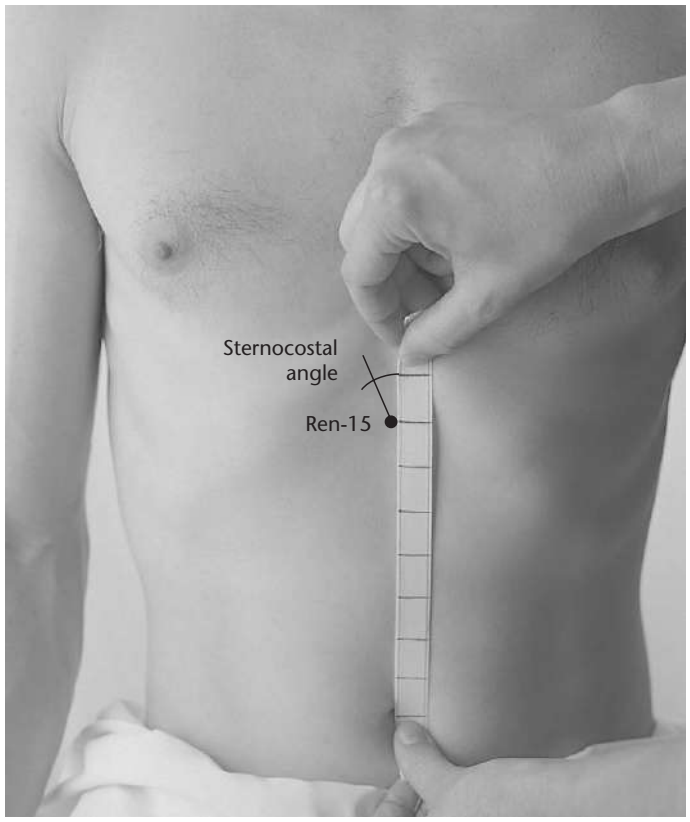
Turtledove Tail JIUWEI Ren-15





Location

On the anterior midline, 1 cun inferior to the sternocostal angle or 7 cun superior to the umbilicus.

How to find

The distance between the sternocostal angle (→ 3.5) and the centre of the umbilicus is divided into 8 cun, which can vary considerably from the patient's finger cun. Therefore, only proportional cun measurements should be applied here (helpful device: elastic tape → 2.3.1). From the sternocostal angle, measure 1 cun in an inferior direction and there locate **Ren-15** on the anterior midline. It is often located directly below or, depending on individual anatomy, on the xiphoid process.

Needling

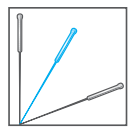
0.5–1 cun obliquely in an inferior direction. The patient should be in an extended position. Caution: Possible injury to organs with deep needling or oblique insertion in a superior direction, especially in patients with hypertrophied organs (left: Liver, right: Heart). According to some classical texts, moxibustion is contraindicated.

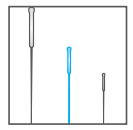
Actions/Indications

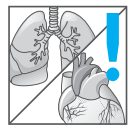
- Regulates the Heart, calms the *shen*
- Descends counterflow lung and stomach Qi, unbinds the chest
- Regulates the *luo*-connecting vessel of the *ren mai*

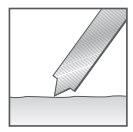
Special features

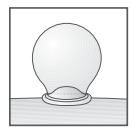
Luo-connecting point of the *ren mai*. Important point for calming.

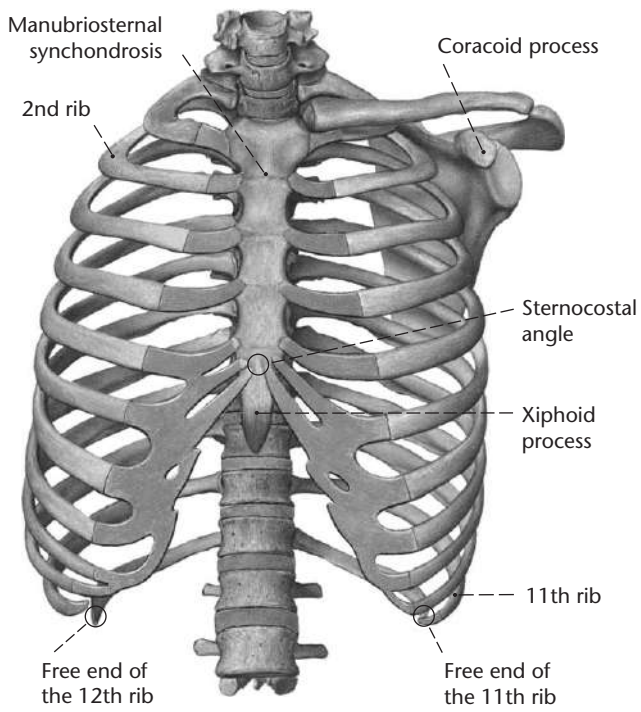












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Ren-16 *Central Courtyard* ZHONGTING

Location

On the anterior midline, on the level of the sternocostal angle.

How to find

Ren-16 is located on the level of the sternocostal angle, where the two lower borders of the ribcage (→ 3.5) meet. To locate this point, palpate upward along the lower borders of the ribcage with one hand on either side until the palpating fingers meet at the sternocostal angle. Here, locate **Ren-16** in a shallow depression between the sternum and the xiphoid process.

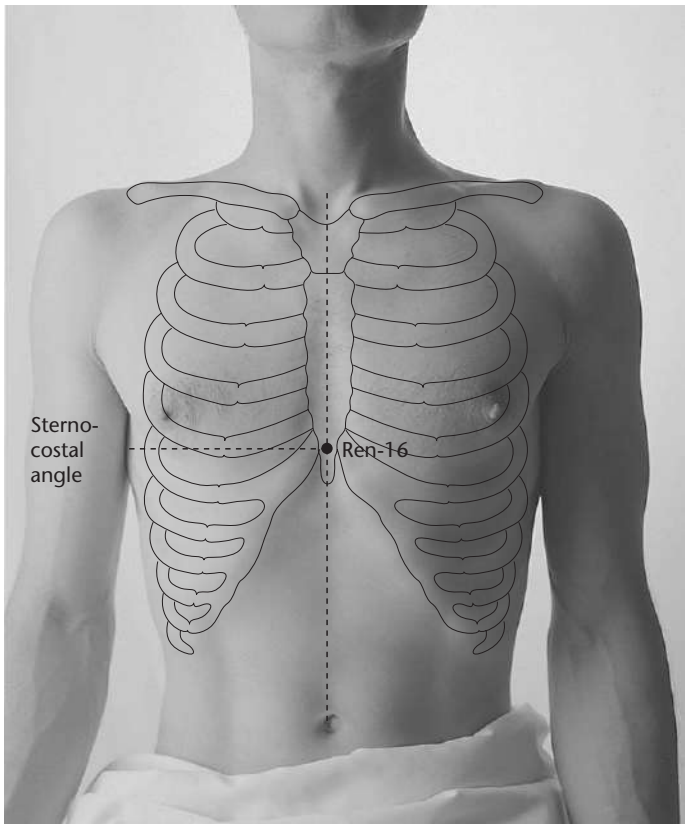
Located on the same level (approximately the 5th intercostal space) are → **KID-22** (2 cun lateral to the midline), → **ST-18** (4 cun lateral to the midline) and → **SP-17** (6 cun lateral to the midline).

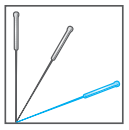
Needling

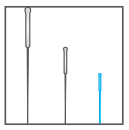
0.5 cun transversely (subcutaneously) in a superior or inferior direction. Caution: Danger of heart injury in patients with a split xiphoid process or a sternal foramen. Therefore, only transverse needling is recommended.

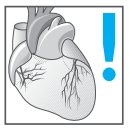
Actions/Indications

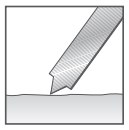
- Unbinds the chest
- Regulates the Stomach and counterflow Stomach Qi

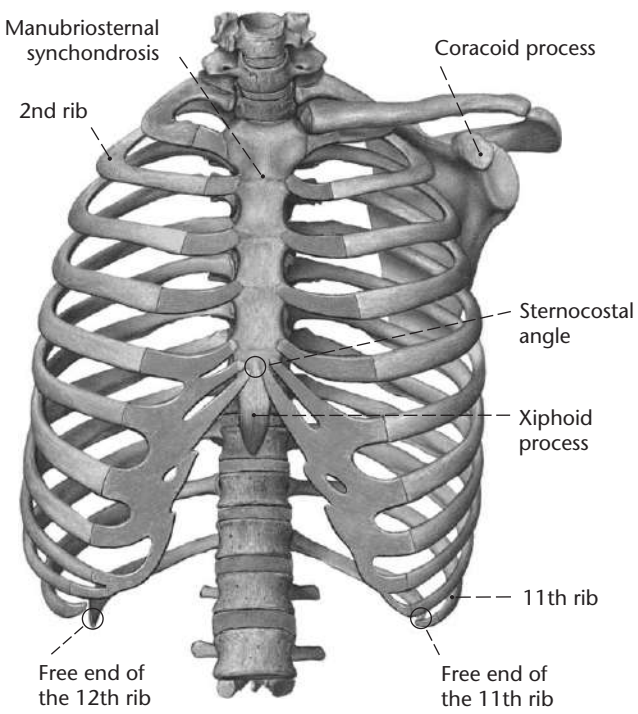


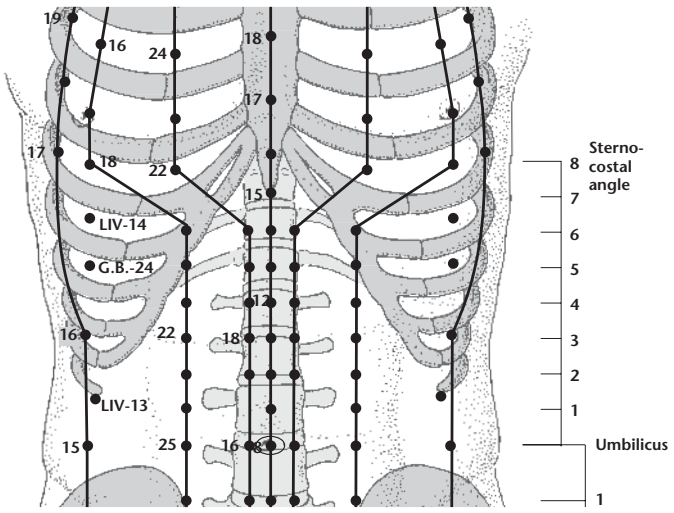


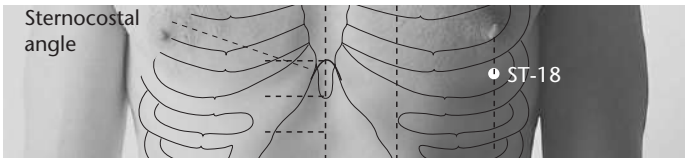


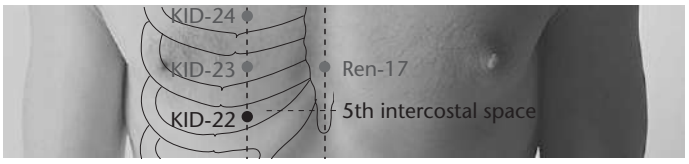


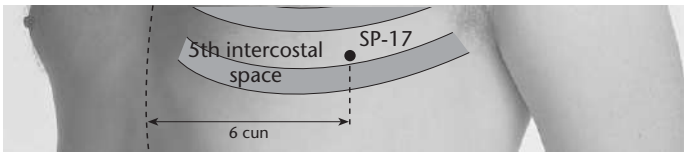












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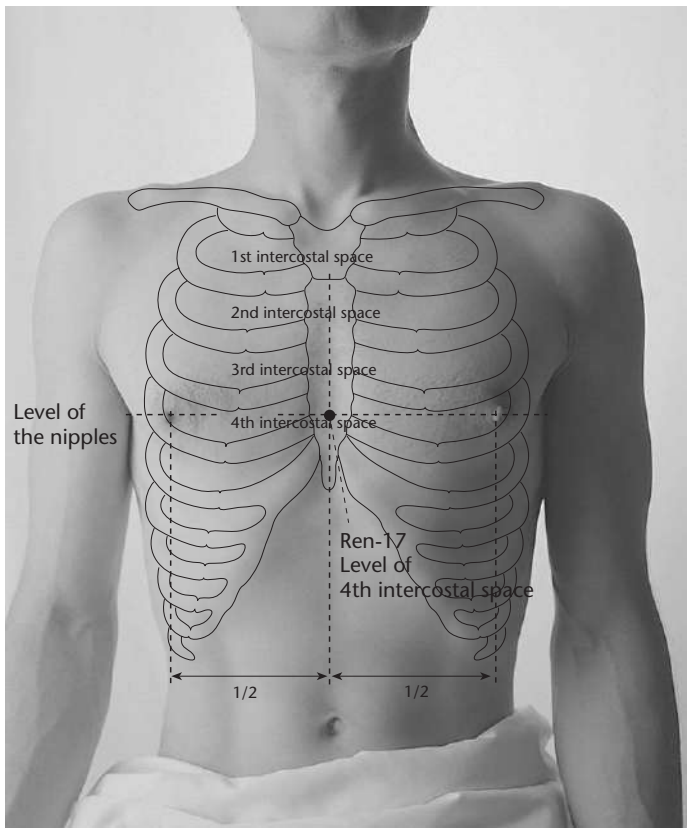
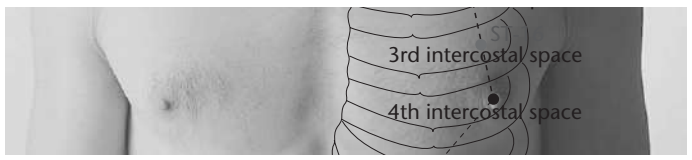
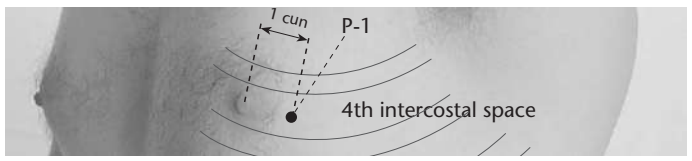
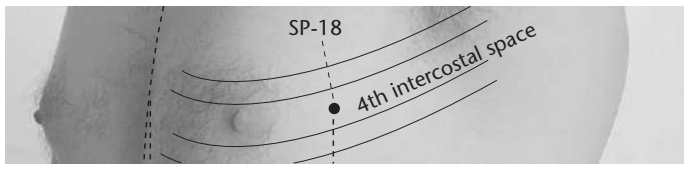
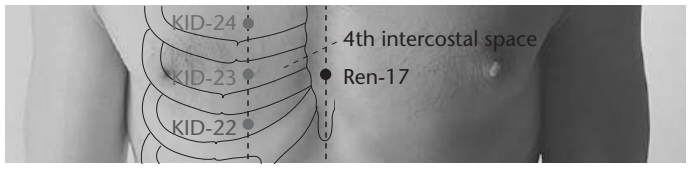
Chest Centre DANZHONG Ren-17

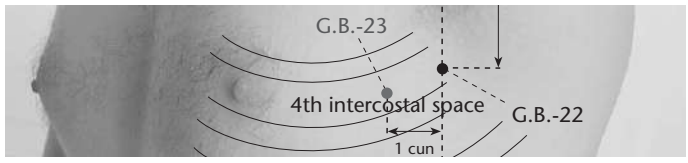












Location

On the anterior midline, on the level of the 4th intercostal space.

How to find

Quick method, especially in men: Locate **Ren-17** on the sternum, between the two nipples. For more detailed orientation on the intercostal region (→ 3.5), first, locate the manubriosternal synchondrosis, which can be felt on the sternum as a well-defined horizontal bony structure on the level of the costal cartilage of the 2nd rib. The 2nd intercostal space is below it. From there, count in an inferior direction to the 4th intercostal space. Locate **Ren-17** on this level on the midline of the sternum. Located on the same level in the 4th intercostal space are → **KID-23/ST-17/P-1/SP-18/G.B.-22/G.B.-23** (2 cun lateral to the midline/on the nipple/1 cun lateral to the nipple/6 cun lateral to the midline/on the axillary line/1 cun anterior to → **G.B.-22**).

Needling

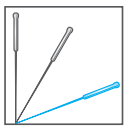
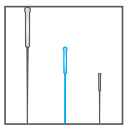
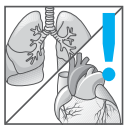
Depending on the indication, 0.5–1 cun transversely (subcutaneously) in a superior or inferior direction or towards the nipples (for mamillary disorders). Caution: Intracardiac needling, pneumothorax. The sternum can be very thin in this area owing to embryonic ossification disorders! Moxibustion is recommended in order to tonify the Qi, but caution with asthmatic patients.

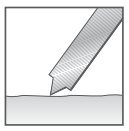
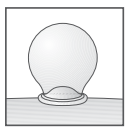
Actions/Indications

- Regulates and benefits the Qi, unbinds the chest, descends counterflow Lung and Stomach Qi
- Benefits the breasts

Special features

Front-*mu* point of the Pericardium, meeting point with the SP, KID, S.I. and T.B. channels. *Hui*-meeting point of the Qi. Sea of Qi. Important point for respiratory disorders.

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Ren-18 *Jade Hall* YUTANG

Location

On the anterior midline, on the level of the 3rd intercostal space.

How to find

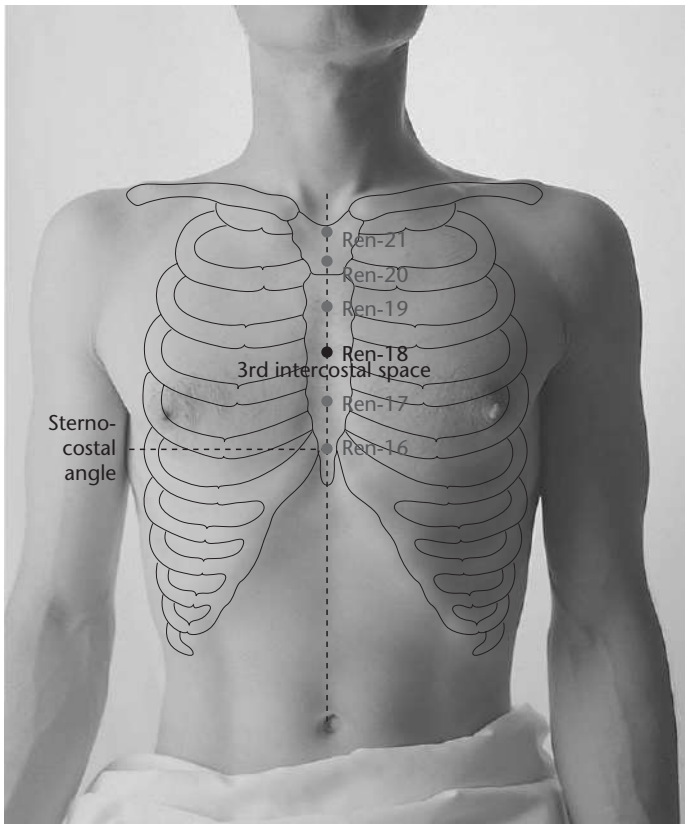
Locate the 3rd intercostal space either by parasternal palpation starting at the clavicle or by counting downward from the manubriosternal synchondrosis (→ 2nd rib) (→ 3.5).
Located on the same level (→ 3rd intercostal space) are → **KID-24/ST-16/SP-19** (2/4/6 cun lateral to the midline).

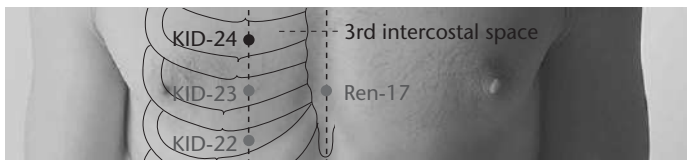
Needling

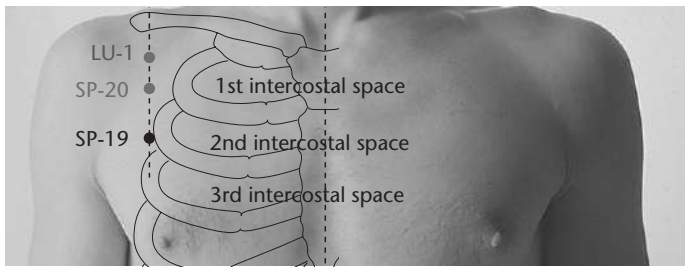
0.5–1 cun transversely (subcutaneously) in a superior or inferior direction. Caution: Danger of injury to the heart or the pleura in patients with a sternal foramen, therefore only transverse needling with or against the flow of the channel.

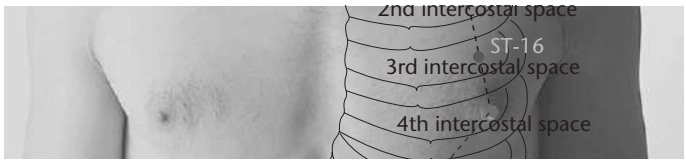
Actions/Indications

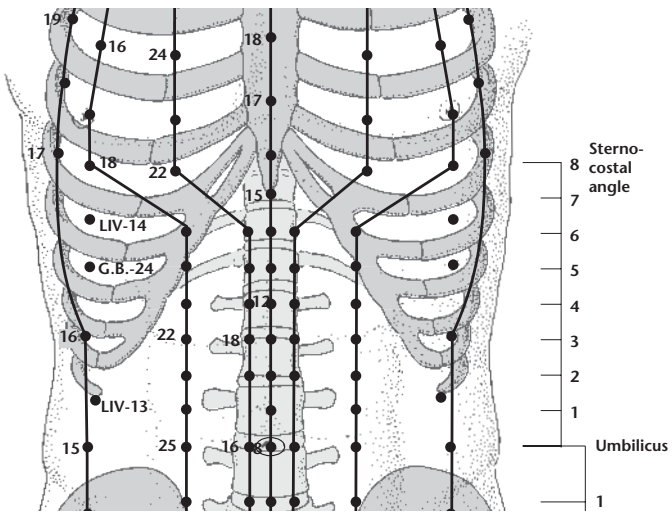
- Unbinds the chest, regulates and descends the Qi

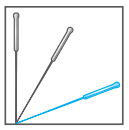


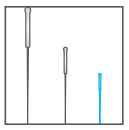


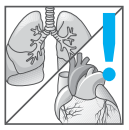


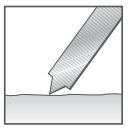












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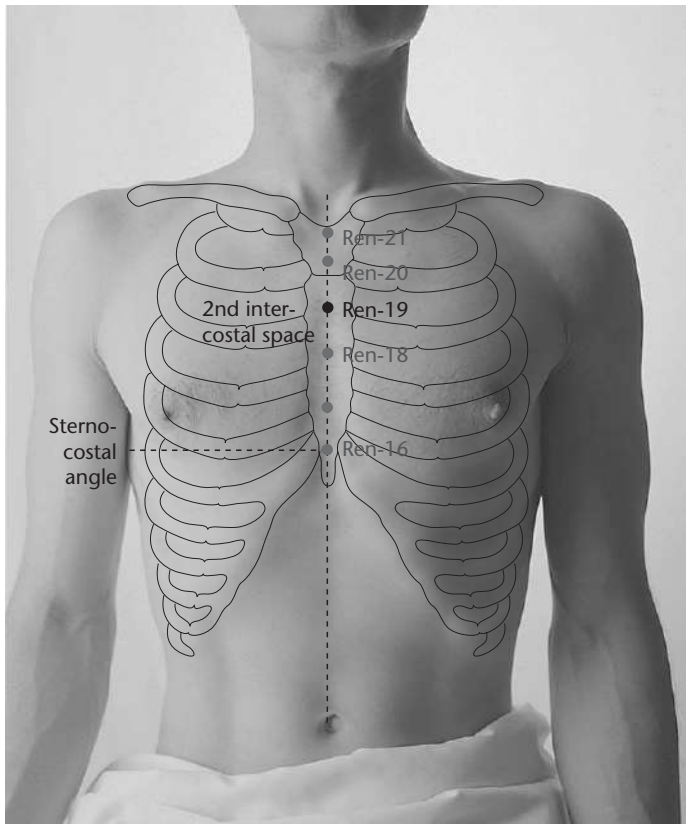
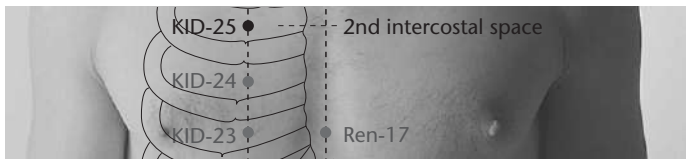
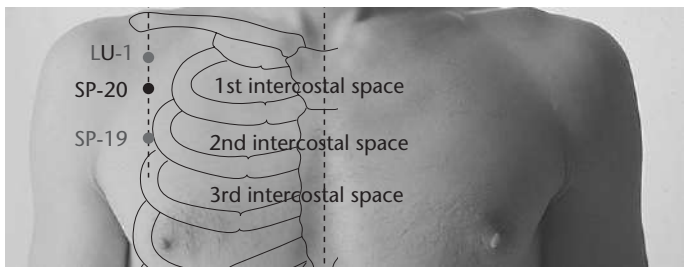
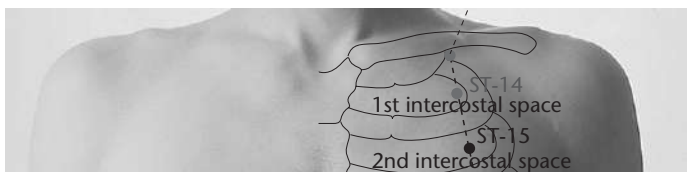
Purple Palace ZIGONG Ren-19









Location

On the anterior midline, on the level of the 2nd intercostal space.

How to find

Locate the 2nd intercostal space by parasternal palpation starting at the clavicle or by palpating from the manubriosternal synchondrosis (→ 2nd rib) (→ 3.5).

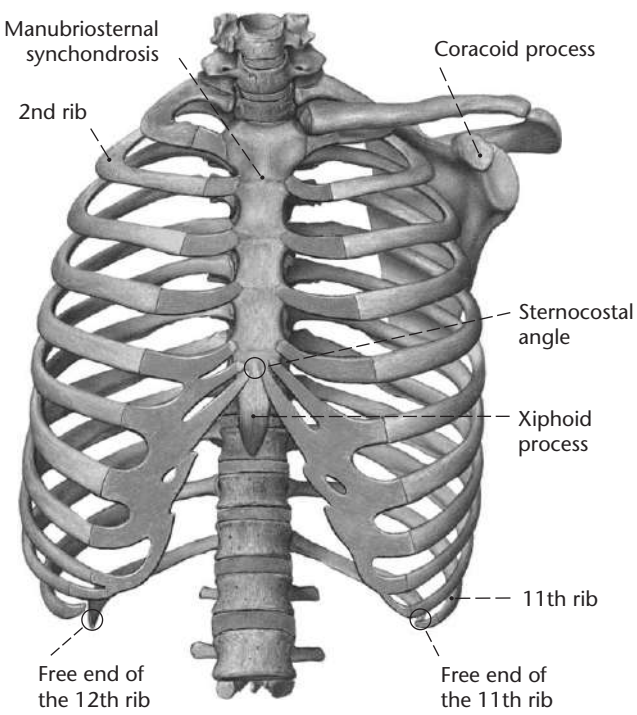
Located at the same level (2nd intercostal space) are → **KID-25/ST-15/SP-20** (2/4/6 cun lateral to the midline).

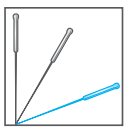
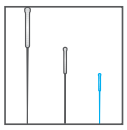
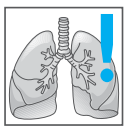
Needling

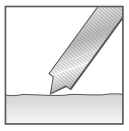
0.5 cun transversely in a superior or inferior direction. Caution: In patients with a sternal foramen, danger of injury to the pleura or the mediastinum, therefore only transverse needling with or against the flow of the channel.

Actions/Indications

- Unbinds the chest
- Regulates and descends the Qi





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Ren-20 *Magnificent Canopy* HUAGAI

Location

On the anterior midline, on the lower part of the manubrium sterni, on the level of the 1st intercostal space.

How to find

The manubriosternal synchondrosis generally forms a distinct horizontal bony structure on the upper part of the sternum. Locate **Ren-20** slightly superior to the synchondrosis, on the midline and on the level of the 1st intercostal space.

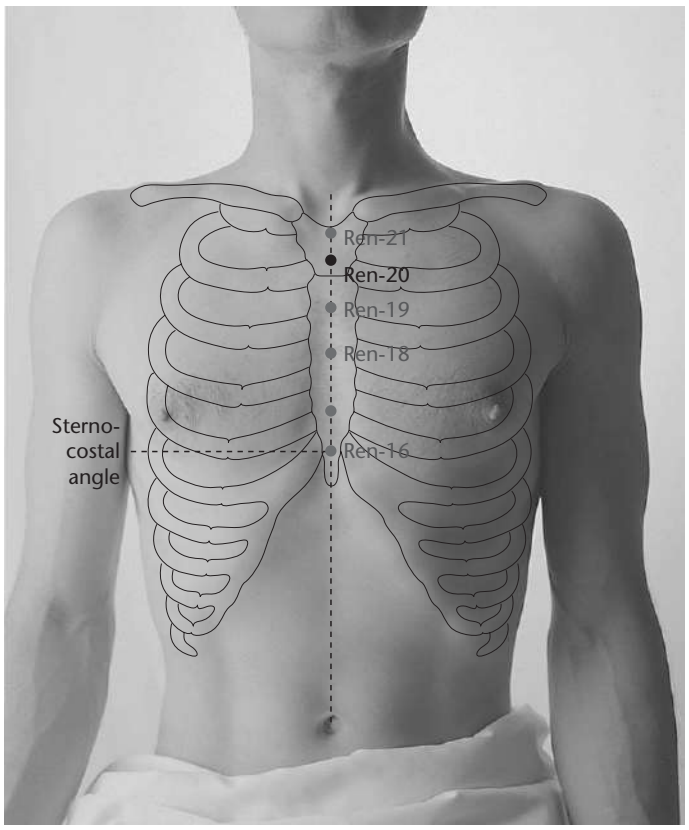
Located at the same level (1st intercostal space) are → **KID-26/ST-14/LU-1** (2/4/6 cun lateral to the midline).

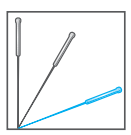
Needling

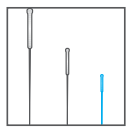
0.5 cun transversely in a superior or inferior direction. Caution: In patients with a sternal foramen, danger of injury to the pleura or the mediastinum, therefore only transverse needling with or against the flow of the channel.

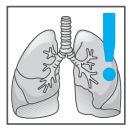
Actions/Indications

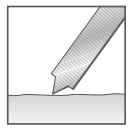
- Unbinds the chest
- Regulates and descends the Qi

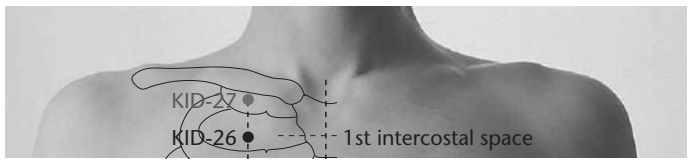


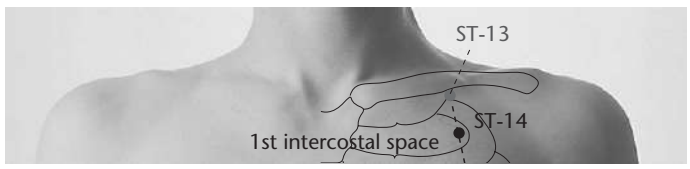


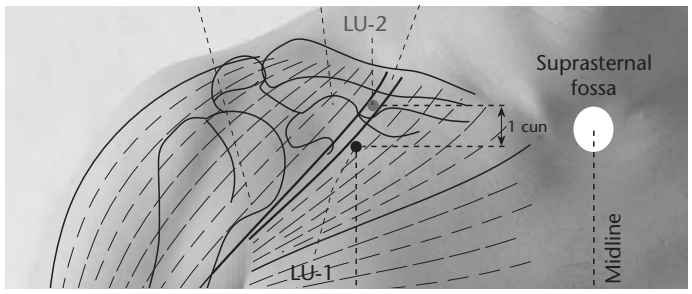


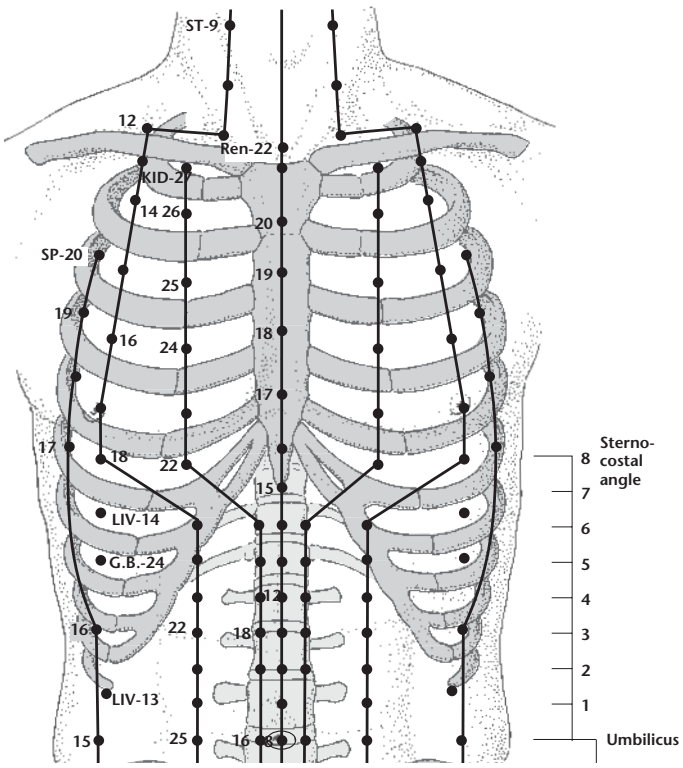












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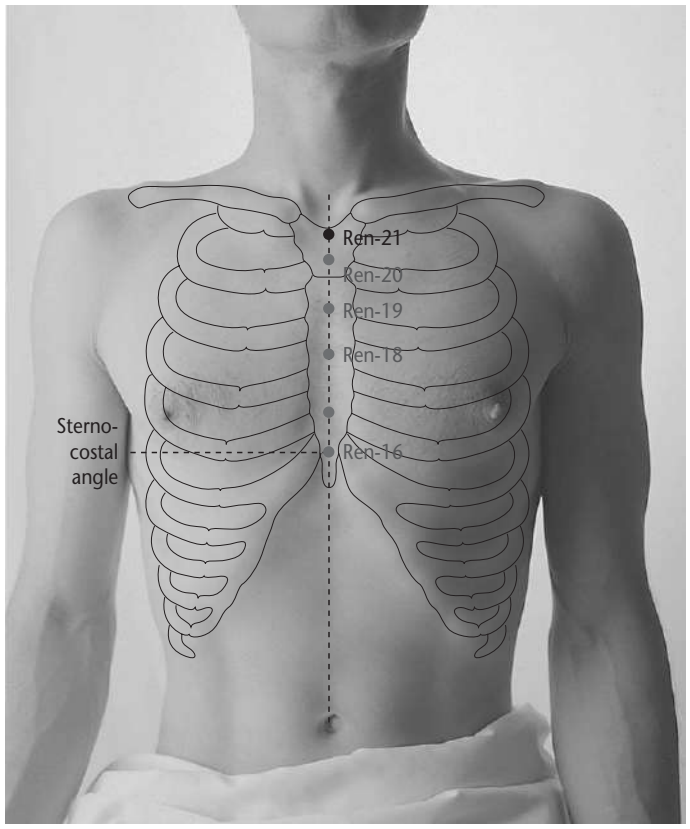
Jade Pivot XUANJI Ren-21



Location

On the anterior midline, below the upper border of the manubrium sterni.

How to find

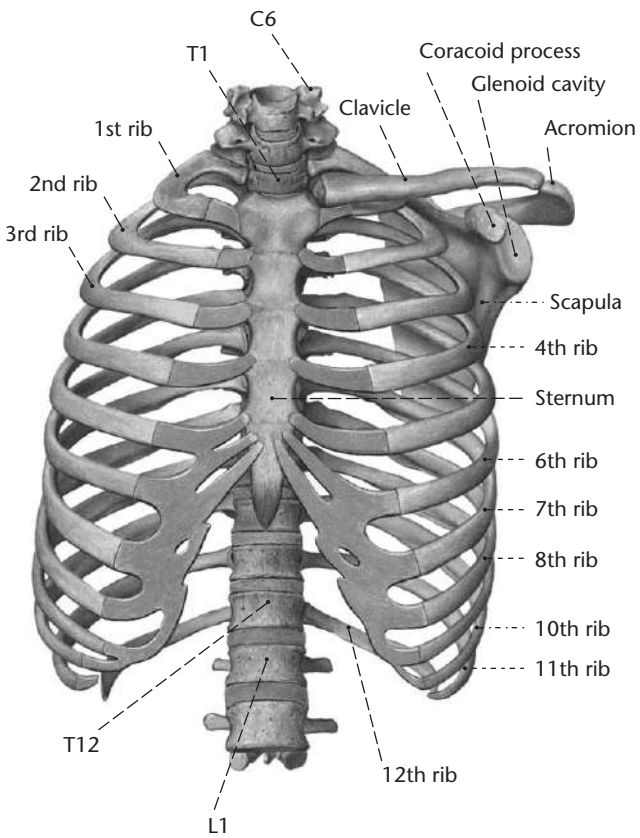
The upper border of the manubrium sterni forms the lower border of the suprasternal fossa. Locate **Ren-21** on the midline, inferior to the bony margin of the sternum.
Located on approximately the same level (below the clavicle) are → **KID-27/ST-13/LU-2** (2/4/6 cun lateral to the midline).

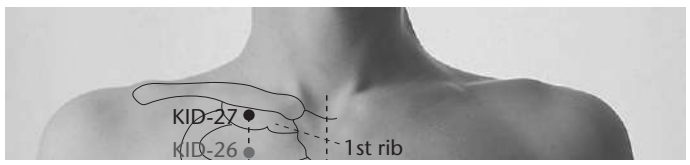
Needling

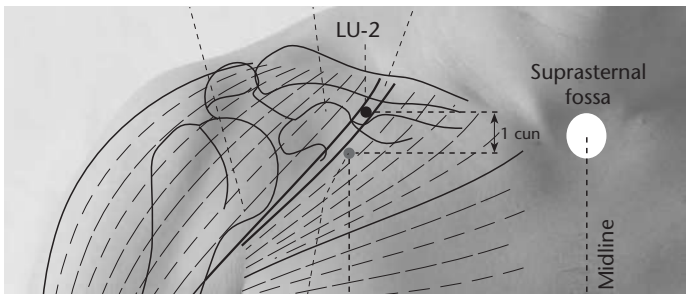
0.5 cun transversely in a superior or inferior direction. Caution: In patients with a sternal foramen, danger of injury to the pleura or the mediastinum, therefore only transverse needling with or against the flow of the channel.

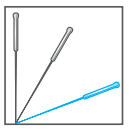
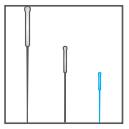
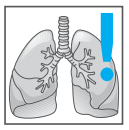
Actions/Indications

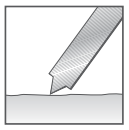
- Unbinds the chest
- Benefits the throat
- Descends counterflow Qi









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Ren-22 *Heavenly Prominence* TIANTU

Location

0.5 cun superior to the sternum, in the centre of the suprasternal fossa.

How to find

This point is best located with the patient in a supine position and a pillow under the shoulders or seated with a comfortable and safe head support. Locate the centre of the suprasternal fossa, approximately 0.5 cun superior to the sternum and there locate **Ren-22**.

Needling

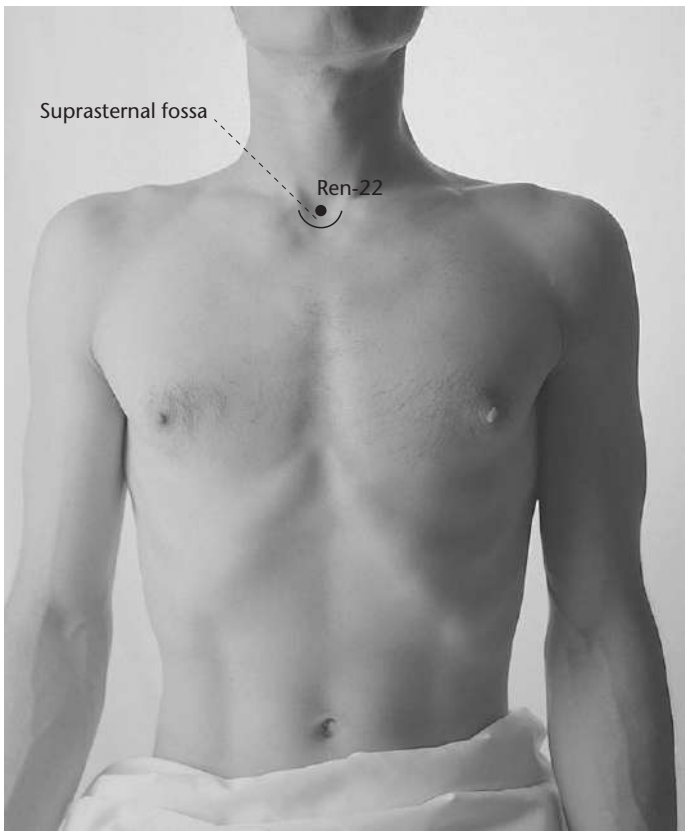
Initial vertical insertion 0.2 cun (in order to penetrate the skin), then direct the tip of the needle inferiorly and continue to insert the needle parallel to the posterior aspect of the sternum up to 0.5–1 cun. Caution: Dangerous point. Wrong insertion technique (for example, vertical or oblique retrosternal needling) may lead to injury of the big vessels and organs inside the mediastinum. This point should only be needled by experienced practitioners.

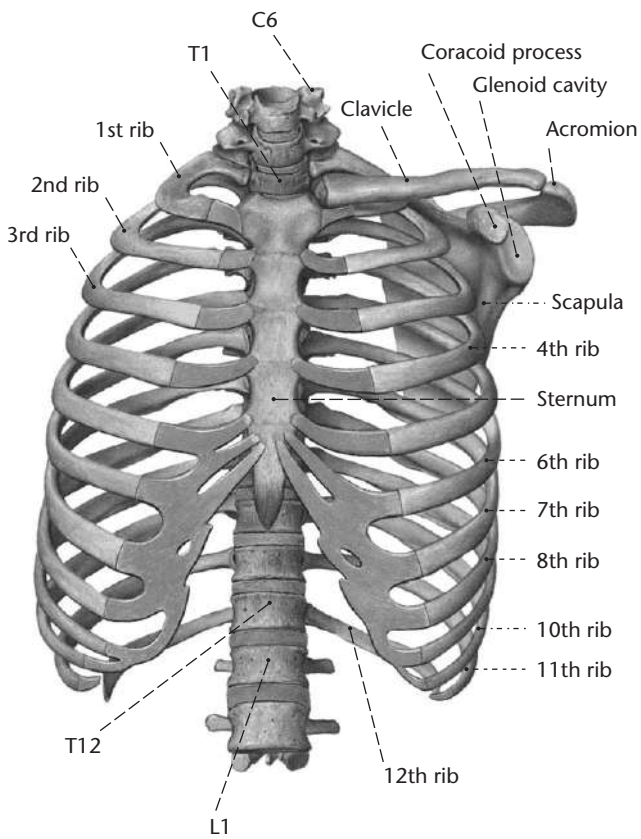
Actions/Indications

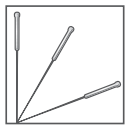
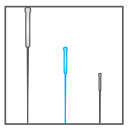
- Descends counterflow Lung Qi, alleviates coughing and dyspnoea, benefits the throat

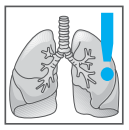
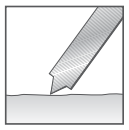
Special features

Meeting point with the *yin wei mai*, Window of Heaven point. Important emergency point for acute asthma attacks.





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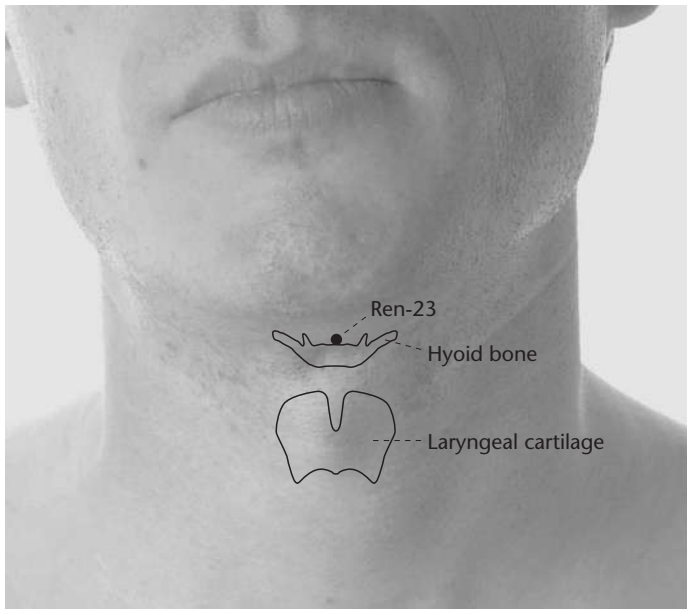
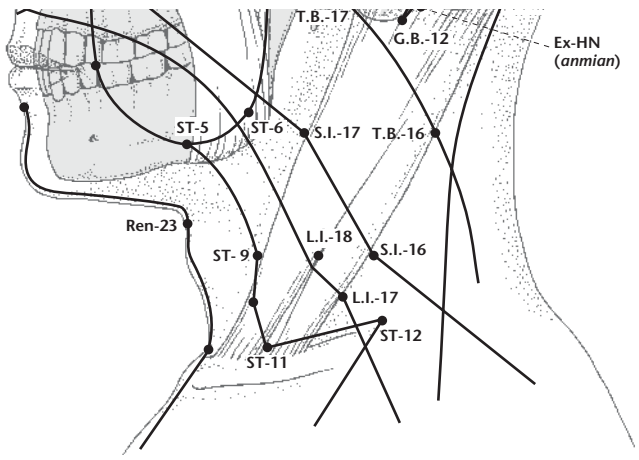
Corner Spring LIANQUAN Ren-23





Location

On the anterior midline, superior to the upper border of the hyoid bone.

How to find

The hyoid bone can be palpated as a delicate bony structure slightly superior to the upper border of the laryngeal prominence. The patient should not recline their head too much, as this will cause the soft tissue to become stretched, making palpation of the bone difficult. **Ren-23** is located on the midline, on the upper border of the hyoid bone and at the junction of the vertical aspect of the neck to the horizontal floor of the mouth (with normal tissue distribution).

Needling

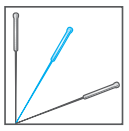
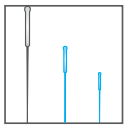
0.3–1 cun obliquely in a superior direction towards the vertex (→ **Du-20**). Moxibustion is contraindicated according to some texts.

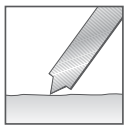
Actions/Indications

- Benefits the tongue
- Benefits the throat, eliminates Phlegm and Heat
- Strengthens the voice

Special features

Meeting point with the *yin wei mai*



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Ren-24 *Container of Fluids* CHENGJIANG

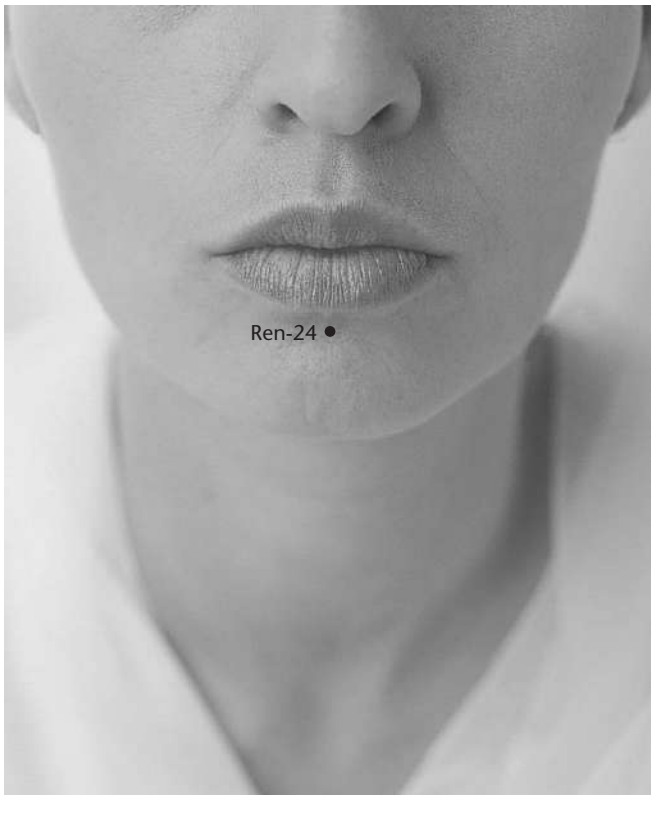
Location
On the anterior midline, below the lower lip, in the mentolabial groove.

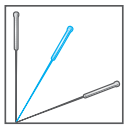
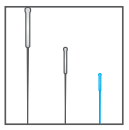
How to find
On the chin, locate the mentolabial groove (→ 3.1.3), which forms a horizontal depression at the transition from the chin to the lower lip. Locate **Ren-24** in this groove, on the midline.

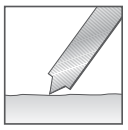
Needling
0.2–0.3 cun obliquely in a superior direction.

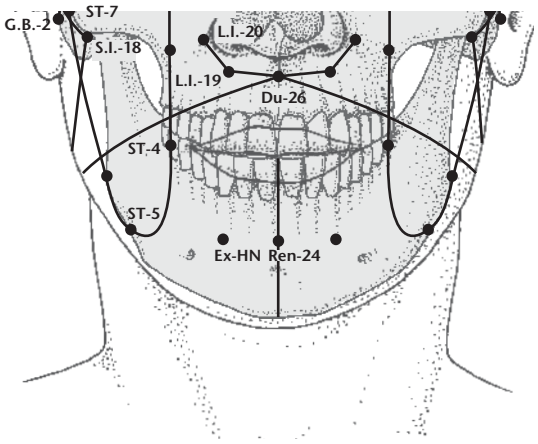
Actions/Indications
- Eliminates (external) Wind, opens the *luo*-connecting vessels, alleviates pain and swellings, regulates the *ren mai*
- As Sun Si Miao Ghost point for epilepsy and mania

Special features
Meeting point with the *du mai*, ST and L.I. channels, Sun Si Miao Ghost point. Important local point.







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5.3 Du mai

Synonym: Governing Vessel

Relationships (→ 1.7.3)

- **Yin/Yang:** *ren mai/du mai*
- **Central/peripheral:** *du mai/yang qiao mai*. Regions supported by this pairing: inner canthus of the eye, occiput, shoulders, back, S.I. and BL channels, opening point: **S.I.-3** (*houxi*), coupled point: **BL-62** (*shenmai*)

Pathway

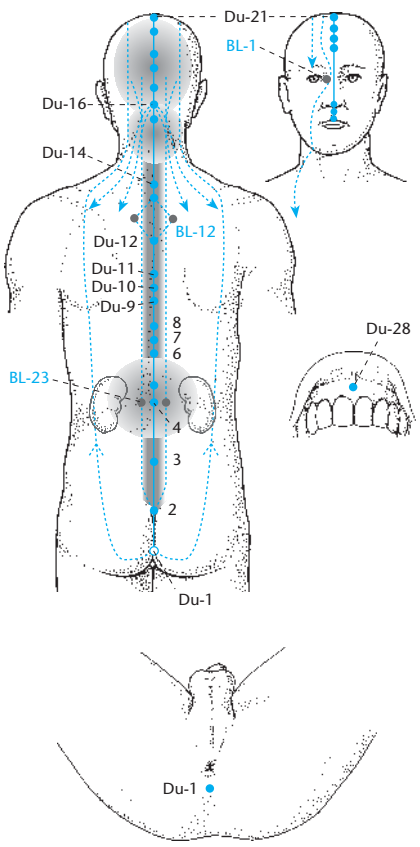
The extraordinary vessel *du mai* originates like the *chong mai* and *ren mai* in the lower abdomen (*bao zhong*), according to some authors at the Kidneys, emerges at the perineum and divides into several branches:

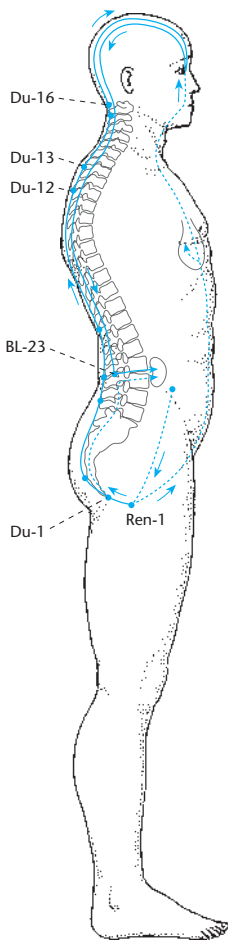
➡ The **main pathway** of the *du mai* begins at → **Ren-1** (*huiyin*) at the perineum, reaches **Du-1** (*changqiang*) between the anus and the coccyx and ascends the posterior midline along the spine. At **Du-12** (*shenzhu*), below the spinous process of T3, a branch separates on either side to reach → **BL-12** (*fengmen*), rejoining the main branch at **Du-13** (*taodao*) below the spinous process of T1. It then continues to **Du-16** (*fengfu*) on the lower border of the occipital bone. Here, an **internal branch** enters the Brain. The external pathway continues to ascend the head to **Du-20** (*baihui*), from there beginning its descent along the midline to the forehead and the nose to **Du-26** (*renzhong*) where it crosses the ST and L.I. channels. It terminates inside the mouth below the frenulum at **Du-28** (*yinjiao*) where it meets the ST channel and the extraordinary vessel *ren mai*.

➡ **one branch** of the *du mai* (the spinal branch) originates at → **Ren-1** (*huiyin*), courses to the tip of the coccyx where it meets the Kidney primary channel, ascends **within** the spinal canal to the space between L2 and L3 and enters the Kidneys.

➡ **The second branch** of the *du mai* (the abdominal branch) also originates at → **Ren-1** (*huiyin*), encircles the external genitalia and ascends to the umbilicus, passes through the Heart (*xin*), continues to the throat, circles the lips, travels to the cheek, passes → **ST-1** (*chengqi*) at the infraorbital ridge and reaches → **BL-1** (*jingming*).

➡ **The third branch** of the *du mai* travels bilaterally alongside the BL channel from → **BL-1** (*jingming*) to the vertex. From here, it branches out **internally** into the Brain. The **external** pathway follows the medial branches of the BL channel in an inferior direction and enters the body at the level of the lower border of the spinous process of L2 at → **BL-23** (*shenshu*) to terminate at the Kidneys (*shen*).





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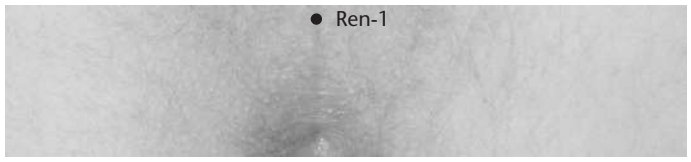
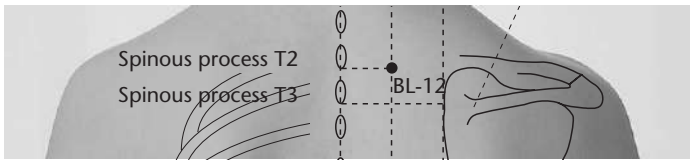
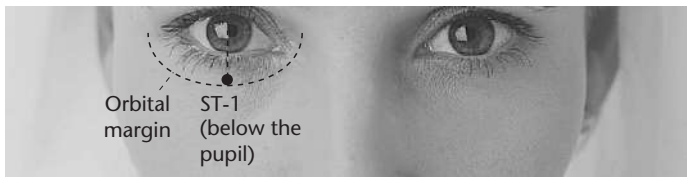
Meeting points of other channels with the *du mai*



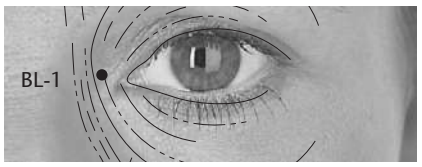
Ren-1 (*huiyin*): In the centre of the perineum



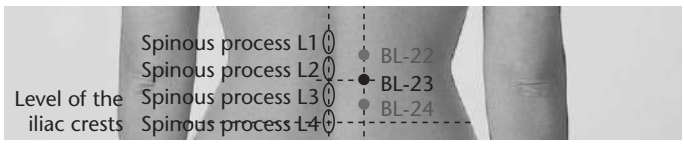
BL-12 (*fengmen*): 1.5 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 2nd thoracic vertebra (T2)



ST-1 (*chengqi*): With the eyes looking straight ahead, directly below the centre of the pupil, between the eyeball and the infraorbital ridge



BL-1 (*jingming*): 0.1 cun superior and medial to the inner canthus of the eye, in a depression



BL-23 (*shenshu*): 1.5 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 2nd lumbar vertebra (L2)

Connections with other channels/Organs

- *Ren mai*, *chong mai*, Bladder and Kidney primary channels
- Uterus, Kidneys, Brain

Clinical importance (→ 1.7.2, 1.7.3)

- **Sea of the Yang Qi**, supplies Yang Qi in order to warm the Organs and channels
- Supports and regulates all Yang channels, especially those of the upper back and head
- Influences and strengthens the functions of the Brain, Marrow and sensory organs
- Strengthens the body constitutionally and supports the immune system (circulation of the Defensive Qi (*wei qi*))
- Stores the Essence Qi (*jing qi*) overflowing from the Yang channels
- Absorbs excess from the Yang channels, especially excess Heat and internal Wind

Notes about the *du mai*

Both the *du mai* and *ren mai* have a unique position among the eight extraordinary vessels. They are the only two extraordinary vessels with their own specific points – all the other extraordinary vessels can only be accessed through points on the primary channels. For this reason the *ren mai* and the *du mai*, together with the primary channels, are often categorised as 14 channels. However, from the point of view of channel energetics this is not correct, since the extraordinary vessels occupy a special position, both evolutionarily and functionally (→ 1.7).

The pathway of the *du mai*, like that of the *ren mai*, is limited to the torso and the head. While it does not course along the extremities and does not have any points on the limbs (neither general points nor specific points such as the five *shu*-transporting points, *yuan*-source points, etc.) it does have a pertaining opening point (or master point) (→ 8.1.8).

The *du mai* is also referred to as the Sea of Yang and governs the Yang in the whole body. Located along its pathway are the posterior aspects of the energy centres (or chakras according to Yogi tradition) while their anterior aspects are located along the pathway of the *ren mai*. In Daoist tradition the *du mai* plays an important role in the cultivation of Qi. This concerns the development of a 'spirit child', which can be influenced by opening and activating energy centres located along the spine.

Furthermore, the *du mai* contains many meeting points with other channels. This clearly denotes the outstanding importance of the *du mai*.

Specific points according to their function

- ***Yuan*-source point (→ 8.1.1): –**
- ***Luo*-Connecting point (→ 8.1.2.): Du-1** (*changqiang*)
- ***Xi*-cleft point (→ 8.1.3): –**
- **Back-*shu* point (→ 8.1.4): –**
- **Front-*mu* point (→ 8.1.5): –**
- **Five *shu*-transporting points (→ 8.1.6): –**
- ***Hui*-meeting point (→ 8.1.7): –**
- **Pertaining opening point (→ 8.1.8): S.I.-3** (*houxi*)
- **Pertaining coupled point (→ 8.1.8): BL-62** (*shenmai*)
- **Lower *he*-Sea point (→ 8.1.9): –**
- ***Jiaohui*-meeting points (→ 8.1.10):**

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– with the G.B. and KID channels and the *ren mai*: **Du-1** (*changqiang*)
– with the BL channel: **Du-13** (*taodao*)
– with all Yang channels: **Du-14** (*dazhui*) ■■
– with the *yang wei mai*: **Du-15** (*yamen*) ■■
– with the *yang wei mai* and the *yang qiao mai**: **Du-16** (*fengfu*) ■■
– with the BL channel: **Du-17** (*naohu*)
– with the BL, G.B., T.B. and LIV channels: **Du-20** (*baihui*) ■■
– with the BL and ST channels: **Du-24** (*shenting*) ■■
– with the L.I. and ST channels: **Du-26** (*renzhong*) ■■
– with the *ren mai* and ST channel*: **Du-28** (*yinjiao*)
– of other channels with the *du mai*: **Ren-1, BL-12**, **ST-1, BL-1, BL-23**

- **Gao Wu command point (→ 8.1.11):** –
- **Window of Heaven point (→ 8.1.12): Du-16** (*fengfu*) ■■
- **Points of the Four Seas (→ 8.1.13):**
  – Sea of Qi: **Du-14** (*dazhui*) ■■, **Du-15** (*yamen*) ■■
  – Sea of Marrow: **Du-16** (*fengfu*) ■■; **Du-20** (*baihui*) ■■
- **Ma Dan Yang Heavenly Star point (→ 8.1.14):**
- **Sun Si Miao Ghost point (→ 8.1.15): Du-16** (*fengfu*) ■■, **Du-26** (*renzhong*) ■■
- **Other functional points:**
  – very important point for strengthening the Yang (with moxibustion): **Du-4** (*mingmen*) ■■
  – important emergency point: **Du-26** (*renzhong*) ■■

Points according to region

- **Local points (→ 8.2.1):** Temporal region – **Du-20** (*baihui*) ■■; nose – **Du-25** (*suliao*); rectum – **Du-1** (*changqiang*); lumbar spine – **Du-3** (*yaoyangguan*), **Du-4** (*mingmen*) ■■
- **Adjacent points (→ 8.2.1):** occipital region – **Du-14** (*dazhui*) ■■; temporal region, eyes – **Du-23** (*shangxing*); nose – **Du-23** (*shangxing*), **Du-24** (*shenting*); Lungs – **Du-14** (*dazhui*) ■■; Heart – **Du-11** (*shendao*); cervical spine – **Du-14** (*dazhui*) ■■
- **Distal points (→ 8.2.1):** tongue – **Du-15** (*yamen*) ■■; rectum – **Du-20** (*baihui*) ■■; lumbar spine – **Du-12** (*shenzhu*), – **Du-26** (*renzhong*) ■■

Specific points according to the vessel pathway (in numerical order)

- **Du-1** (*changqiang*): *luo*-connecting point (→ 8.1.2); *jiaohui*-meeting point with the G.B., KID channels and the *ren mai* (→ 8.1.10); local point for the rectum (→ 8.2.1)
- **Du-3** (*yaoyangguan*): local point for the lumbar spine (→ 8.2.1)
- **Du-4** (*mingmen*) ■■: very important point for strengthening the Yang (with moxibustion)
- **Du-11** (*shendao*): adjacent point for the Heart (→ 8.2.1)
- **Du-12** (*shenzhu*): distal point for the lumbar spine (→ 8.2.1)
- **Du-13** (taodao): *jiaohui*-meeting point with the BL channel (→ 8.1.10)
- **Du-14** (*dazhui*) ■■: *jiaohui*-meeting point with all Yang channels (→ 8.1.10); point of the Sea of Qi (→ 8.1.13); adjacent point for the occiput and Lung (→ 8.2.1); adjacent point for the cervical spine (→ 8.2.1)
- **Du-15** (*yamen*) ■■: *jiaohui*-meeting point with the *yang wei mai* (→ 8.1.10); Sea of Qi point (→ 8.1.13); distal point for the tongue (→ 8.2.1)
- **Du-16** (*fengfu*) ■■: point of the Sea of Marrow (→ 8.1.13); Window of Heaven point (→ 8.1.12); Sun Si Miao Ghost point (→ 8.1.15); *jiaohui*-meeting point with the *yang wei mai* and the *yang qiao mai** (→ 8.1.10)
- **Du-17** (*naohu*): *jiaohui*-meeting point with the BL channel (→ 8.1.10)
- **Du-20** (*baihui*) ■■ *jiaohui*-meeting point with the BL, G.B., T.B. and LIV channels (→ 8.1.10); point of the Sea of Marrow (→ 8.1.13); local point for the temporal aspect of the head (→ 4.2.1); distal point for the rectum (→ 8.2.1)
- **Du-23** (*shangxing*): regional point for the temporal region, the eyes and the nose (→ 8.2.1)
- **Du-24** (*shenting*) ■■: *jiaohui*-meeting point with the BL and ST channels (→ 4.1.10); adjacent point for the nose (→ 8.2.1)
- **Du-25** (*suliao*): local point for the nose (→ 4.2.1)
- **Du-26** (*renzhong*) ■■: *jiaohui*-meeting point with the L.I. and ST channels (→ 8.1.10); Sun Si Miao Ghost point (→ 8.1.15); distal point for the lumbar spine (→ 8.2.1); important emergency point
- **Du-28** (*yinjiao*): *jiaohui*-meeting point with the *ren mai* and ST channel (→ 8.1.10)

* Mentioned by only some authors

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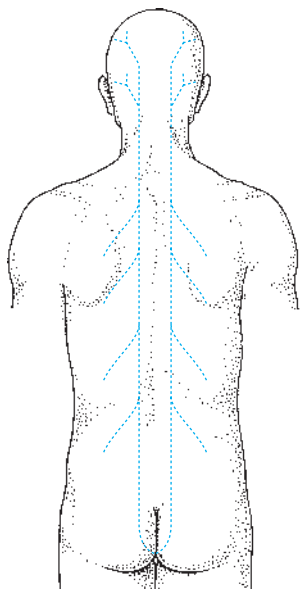
luo-Connecting Vessel of the *Du Mai*

Pathway

The *luo*-connecting vessel of the *du mai* originates at **Du-1** (*changqiang*) between the anus and the tip of the coccyx, bilaterally ascends the spine to the neck and disperses in the occipital region, where it connects with the Bladder primary channel. Both course together to the shoulder region. There the *luo*-connecting vessel enters deeper into the body at the level of the scapula and spreads in the paravertebral musculature.



Clinical importance

Pathology

Excess (*shi*): limited range of motion and stiffness of the spine
Deficiency (*xu*): heavy sensations of the head, dizziness, balance disorders

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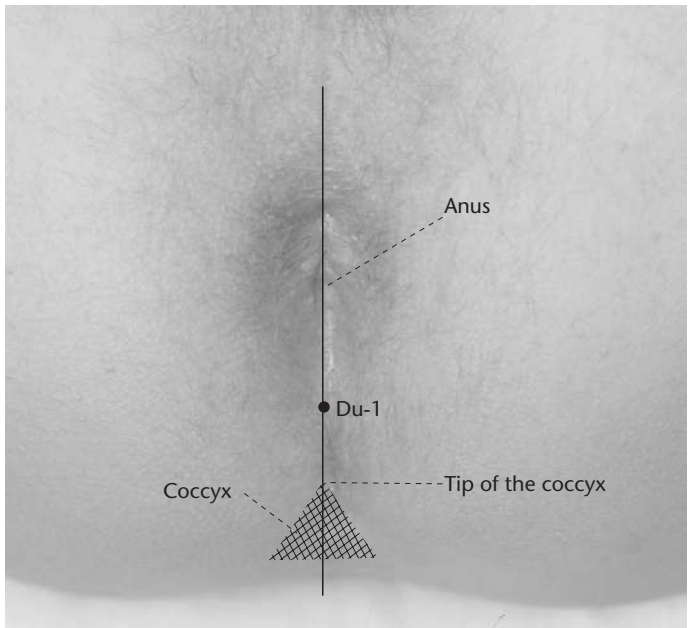
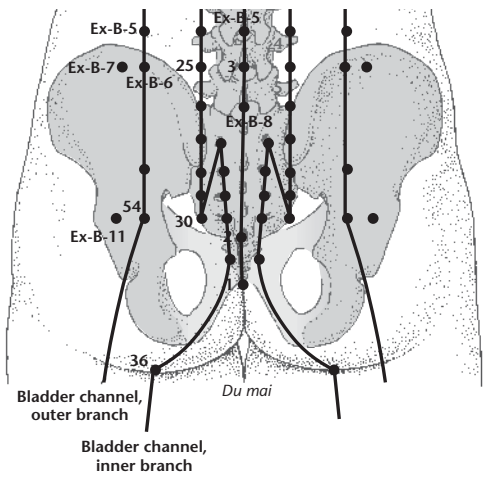
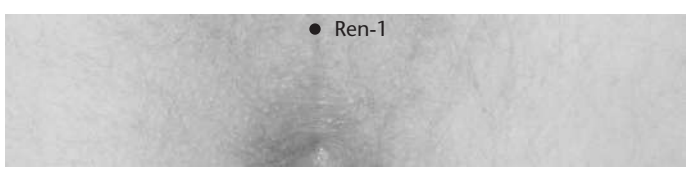
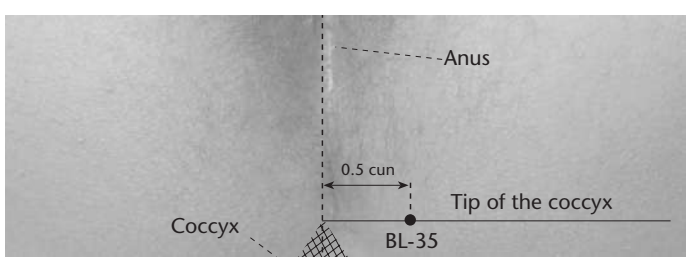
Long Strong CHANGQIANG Du-1









Location

On the midline, midway between the tip of the coccyx and the anus.

How to find

First, locate the coccyx superior to the anus, then palpate for its tip. From the tip of the coccyx, palpate with pressure towards the anus. **Du-1** can often be located based on a strong *de* Qi sensation.

→ **Ren-1** is located anterior to the anus, posterior to the genitals.

→ **BL-35** is located 0.5 cun lateral to the midline, at the level of the tip of the coccyx.

Needling

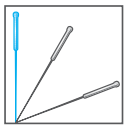
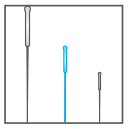
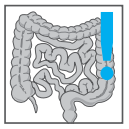
After thorough disinfection, vertically 0.5–1 cun. Avoid puncturing the rectum.

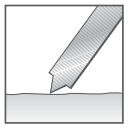
Actions/Indications

- Clears Damp-Heat, lifts the Qi
- Opens the channel and alleviates pain
- Calms the *shen*

Special features

Luo-connecting point, meeting point with the *ren mai*, G.B. and KID channels.



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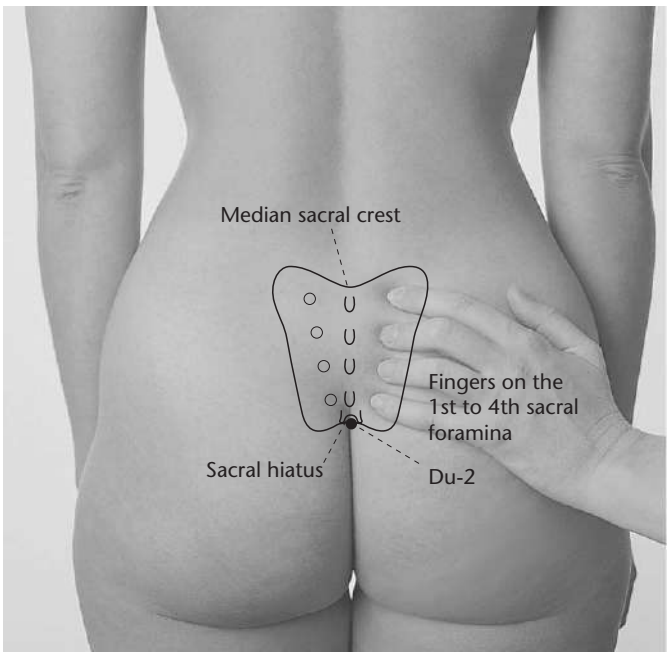
Du-2 *Lumbar Shu* YAOSHU

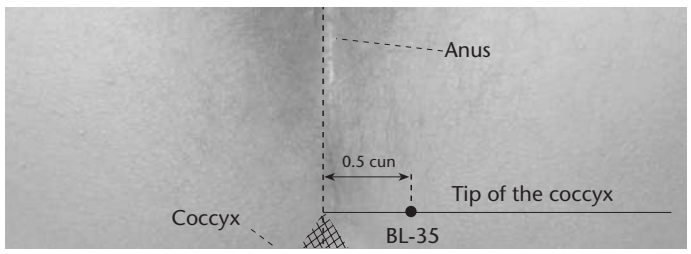
Location
On the midline, in the sacral hiatus.

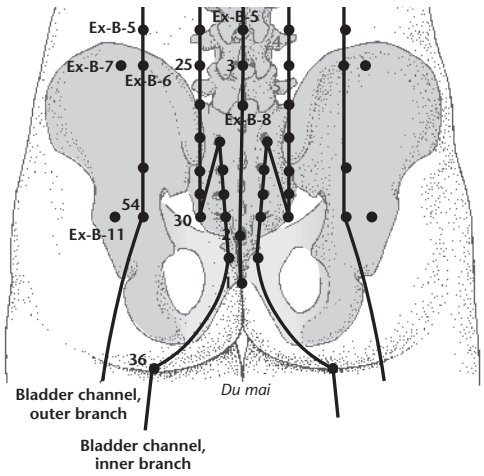
How to find
Palpate for the sacral hiatus (→ 3.4.4) from the sacrum. It can be felt at the inferior end of the iliac median crest as a U-shaped depression opening towards the inferior. **Du-2** is located on the midline, directly below the hiatus.
→ **BL-35** is located slightly more inferiorly, 0.5 cun lateral to the midline, on the level of the tip of the coccyx.

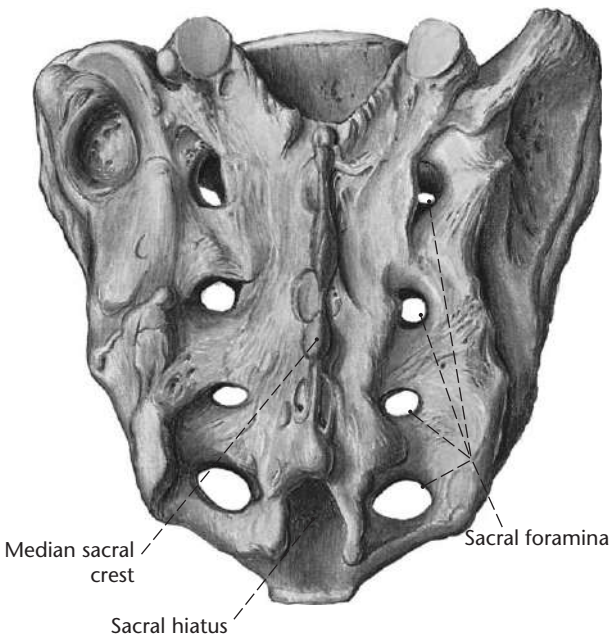
Needling
Up to 1 cun vertically or obliquely in a superior direction.

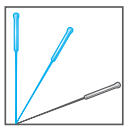
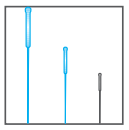
Actions/Indications
- Strengthens the lumbar region and the legs
- Dispels Wind-Dampness
- Warms the Lower Burner

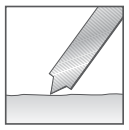










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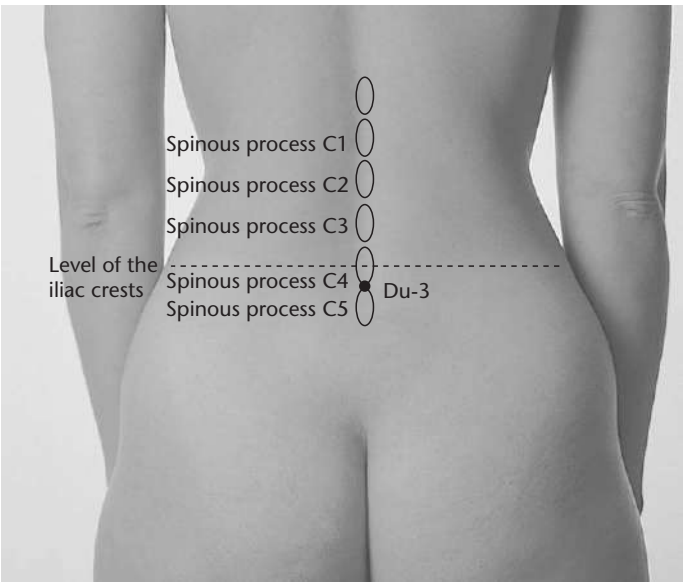
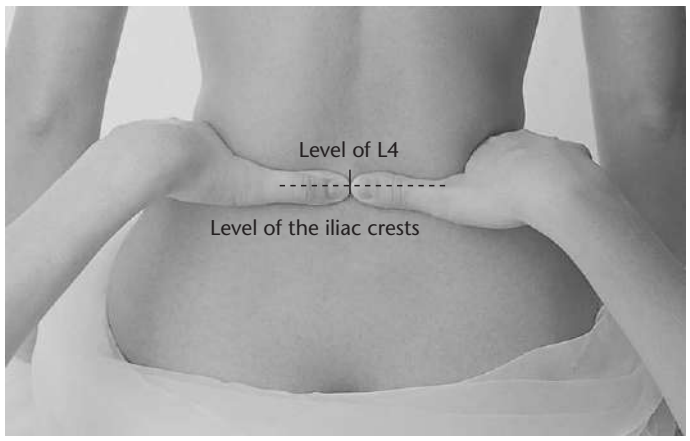
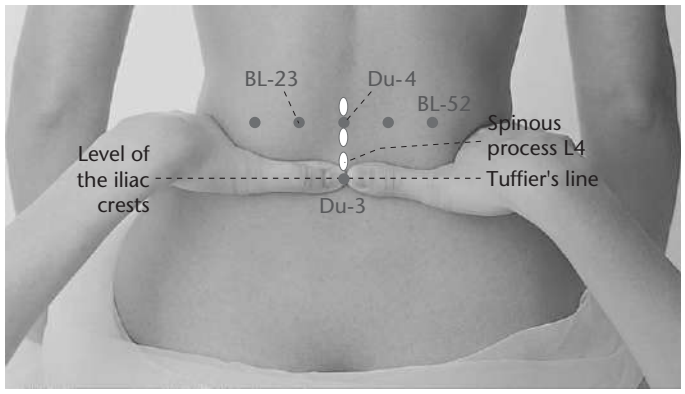
Lumbar Yang Gate YAOYANGGUAN Du-3







Location

On the midline, below the spinous process of the 4th lumbar vertebra (L4).

How to find

For orientation in the lumbar region (→ 3.4.3), first, locate the Tuffier's line (a line connecting the two most superior points on the iliac crest), which generally intersects with the spinous process of L4. (Note: Point location in the lumbar region is dependent on the patient's position; for more detail on orientation → 3.4). Locate **Du-3** on the midline, below the spinous process of L4.
Located on the same level are a point of → **Ex-B-2/BL-25/Ex-B-6/Ex-B-7** (0.5/1.5/3/3.5 cun lateral to the midline).

Needling

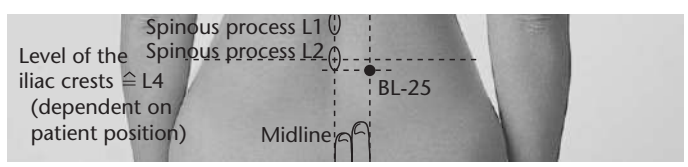
0.5–1 cun strictly vertically to the skin or obliquely in an inferior direction (generally, there is only danger of accidental puncture of the spinal canal from the level of L2 in a cranial direction).

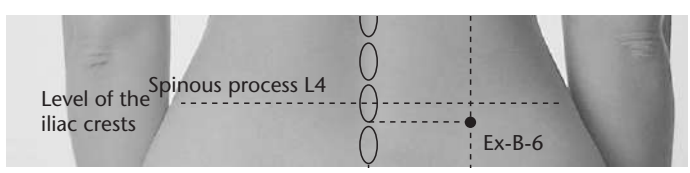
Actions/Indications

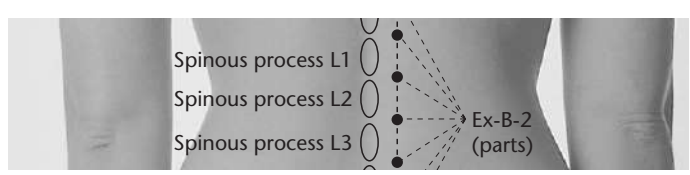
- Dispels Wind, Cold and Dampness
- Regulates Qi in the Lower Burner, strengthens the Original Qi (*yuan qi*)

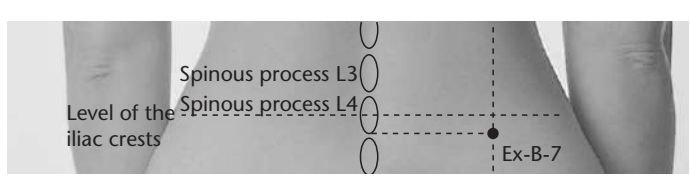
Special features

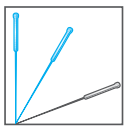
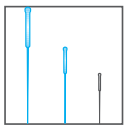
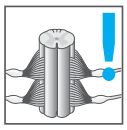
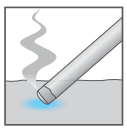
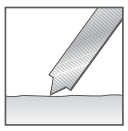
Important local point for combined back and leg pain









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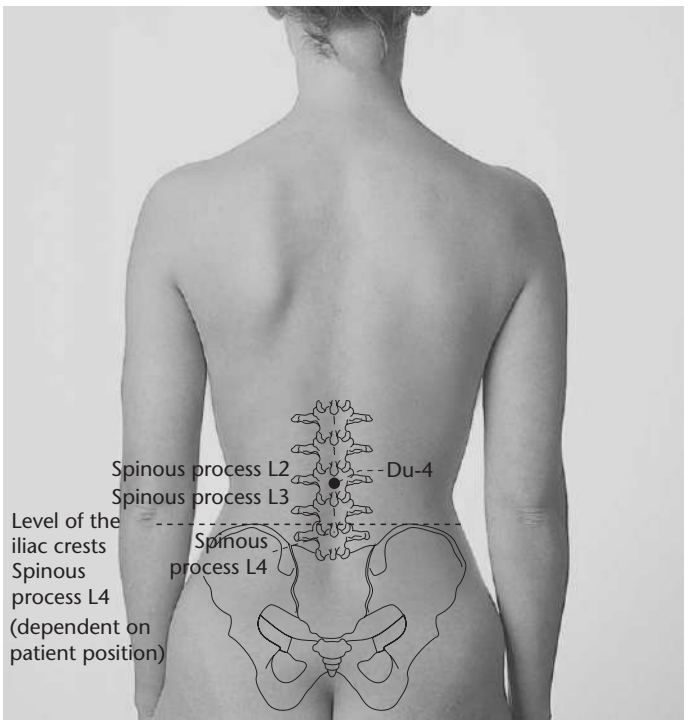
Du-4 *Gate of Life* MINGMEN

Location

On the posterior midline, below the spinous process of the 2nd lumbar vertebra (L2).

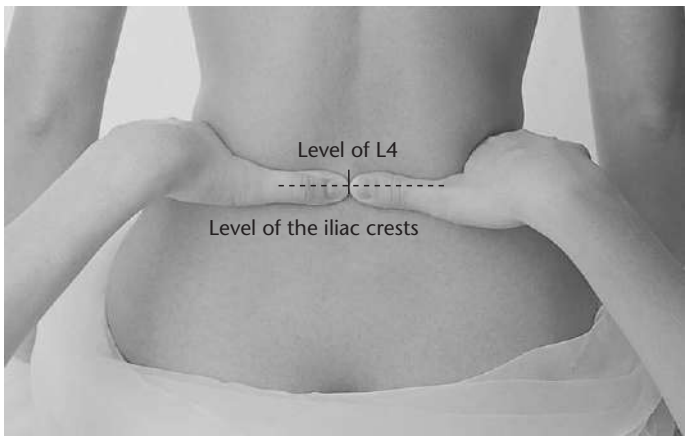
How to find

For orientation in the lumbar region (→ 3.4.3), first, locate the Tuffier's line by placing both hands directly superior and lateral to the two highest points on the iliac crest, joining the thumbs on the midline. The line will generally intersect with the spinous process of L4. (Note: Orientation on the lumbar region depends on the patient's position; for more detail on differential orientation → 3.4). From there, count up to the spinous process of L2 and locate **Du-4** on the midline, below the spinous process. Located on the same level are a point of → **Ex-B-2/BL-23/BL-52** (0.5/1.5/3 cun lateral to the midline).



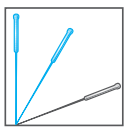
Needling

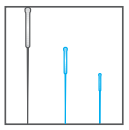
0.5–1 cun vertically to slightly obliquely in an inferior direction, with the patient's back straight or flexed. The spinal cord generally ends between the 1st and 2nd lumbar vertebrae; still, there is hardly any mention in the literature of spinal punctures with deep needling and/or insertions in a superior direction.

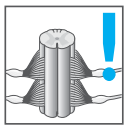


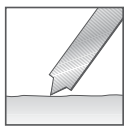
Actions/Indications

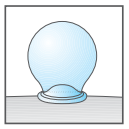
- Tonifies Kidney Yang (especially with moxibustion), warms the *mingmen*, strengthens the Kidneys, regulates the *du mai*, benefits the lumbar region
- Pacifies Wind in the *du mai*





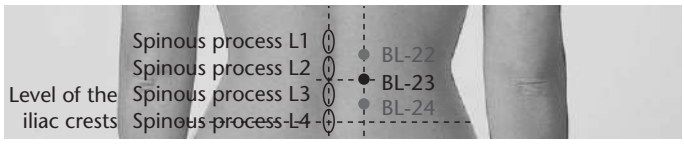


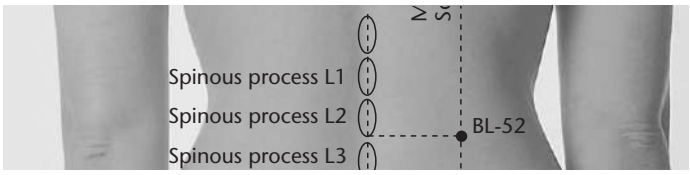


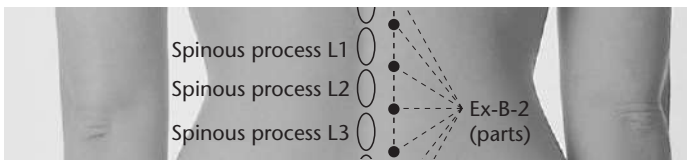


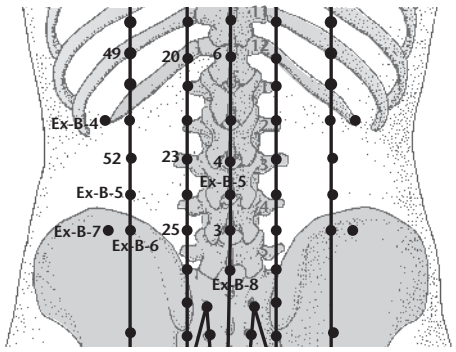
Special features

Major point for tonifying Yang, especially Kidney Yang









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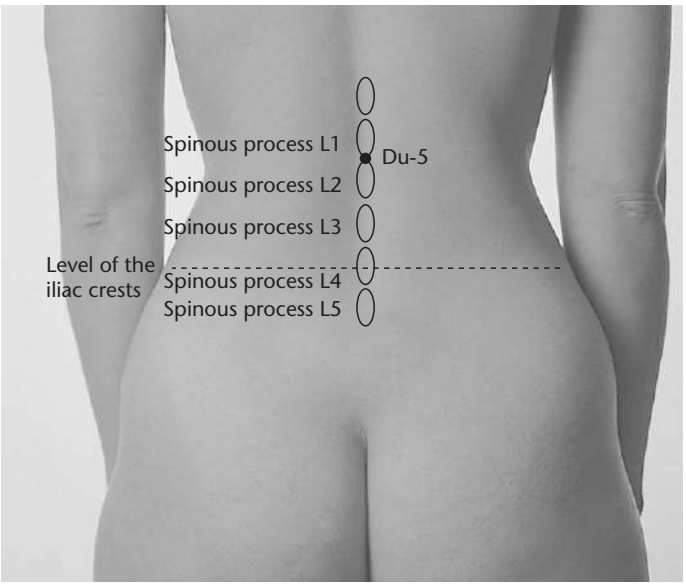
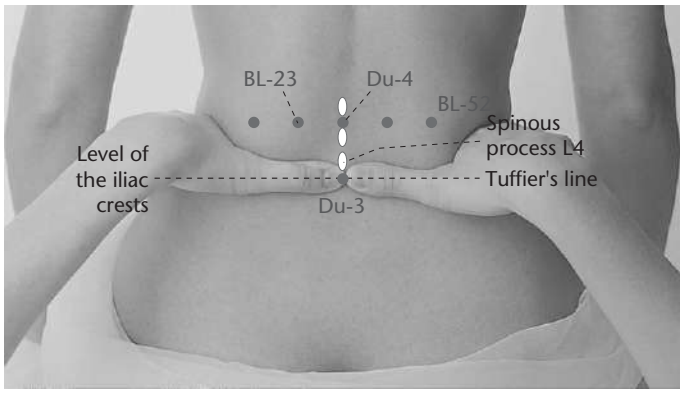
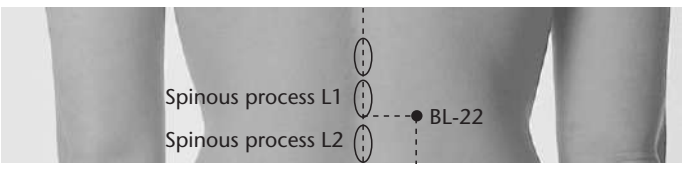
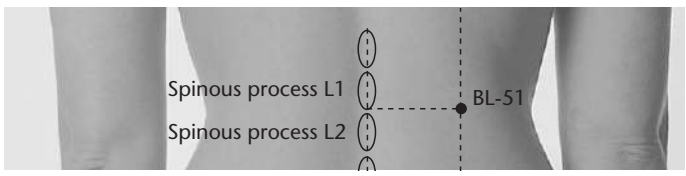
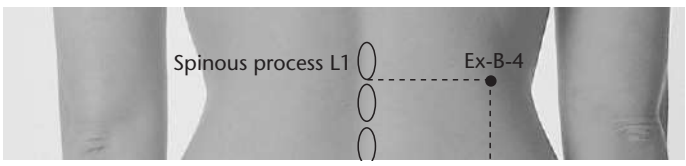
Suspended Pivot XUANSHU Du-5











Location

On the midline, below the spinous process of the 1st lumbar vertebra (L1).

How to find

For orientation in the lumbar region (→ 3.4.3), first, locate the Tuffier's line by placing both hands directly superior and lateral to the two highest points on the iliac crest, joining the thumbs on the midline. The Tuffier's line generally intersects with the spinous process of L4. (Note: Anatomical orientation in the lumbar region is dependent on the patient's position; for more detail on differential orientation → 3.4.) From there, count up to the spinous process of L1 and locate **Du-5** on the midline, below its spinous process. **Or:** Use the spinous process of T7 (inferior angle of the scapula → 3.4.2) for reference.

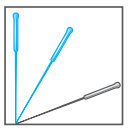
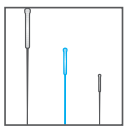
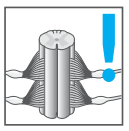
Located on the same level are a point of → **Ex-B-2/BL-22/BL-51/Ex-B-4** (0.5/1.5/3/3.5 cun lateral to the midline).

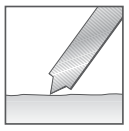
Needling

0.5–1 cun strictly vertically to the skin or obliquely in an inferior direction, with the patient's back straight or flexed in order to avoid puncturing the spinal canal. Oblique insertions should only be carried out by experienced practitioners, as in small persons (irrespective of their body weight), the spinal canal may be reached after only 1.25 cun.

Actions/Indications

- Opens the channel
- Regulates Qi in the Lower Burner



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Du-6 *Centre of the Spine* JIZHONG

Location

On the midline, below the spinous process of the 11th thoracic vertebra (T11).

How to find

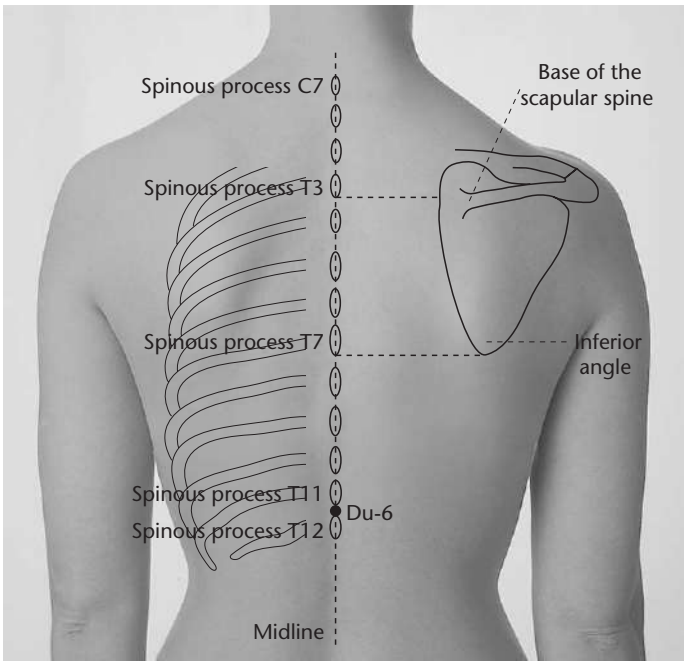
Locate T7 (→ 3.4.2) and, from there, count down 4 spinous processes to T11. Locate **Du-6** on the midline, below its spinous process. **Or:** Use the Tuffier's line for reference (→ 3.4.3). Locate T11 by counting up 5 spinous processes from L4 and there locate **Du-6** on the midline, below the spinous process. Located on the same level are a point of → **Ex-B-2/BL-20/BL-49** (0.5/1.5/3 cun lateral to the midline).

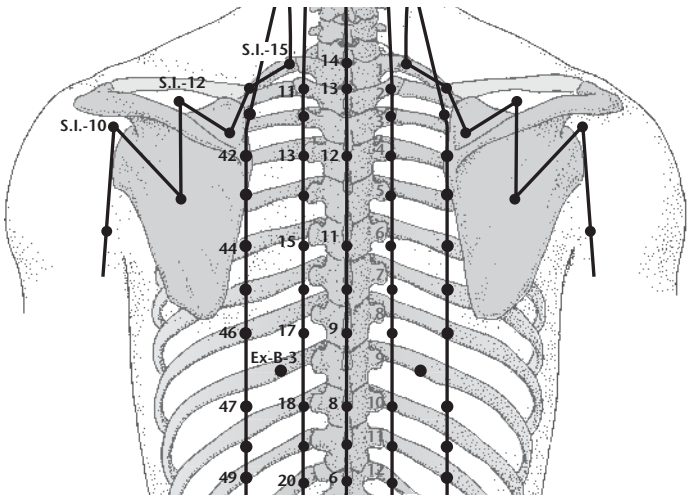
Needling

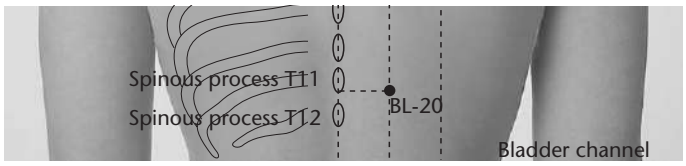
0.5–1 cun strictly vertically to the skin or obliquely in an inferior direction, with the patient's back straight or flexed in order to avoid puncturing the spinal canal. Oblique insertions should only be carried out by experienced practitioners, as in small persons (irrespective of their body weight), the spinal canal may be reached after only 1.25 cun.

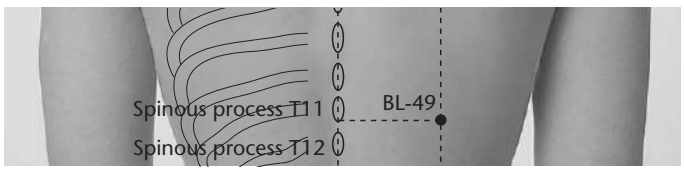
Actions/Indications

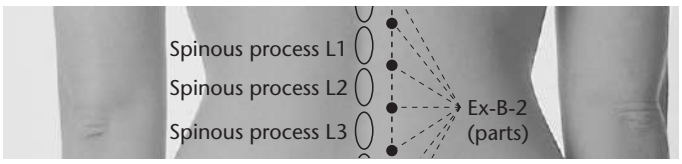
- Strengthens the Spleen and its function of transforming Dampness
- Benefits the spine

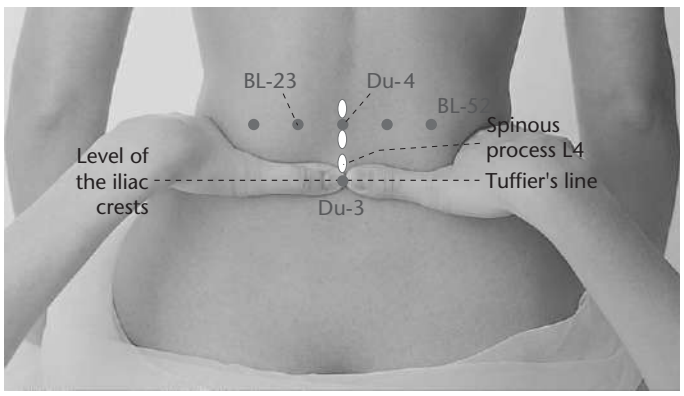


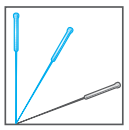
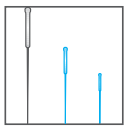
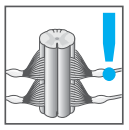


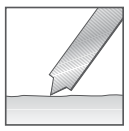
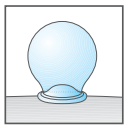








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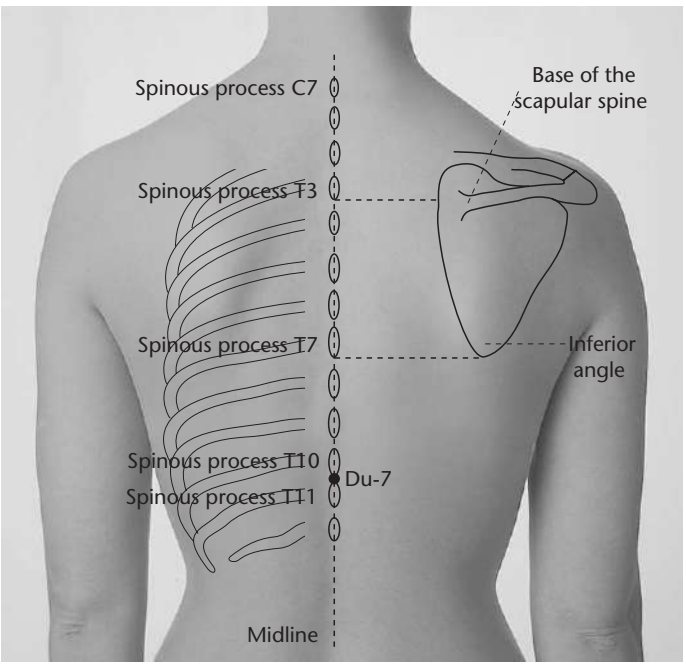
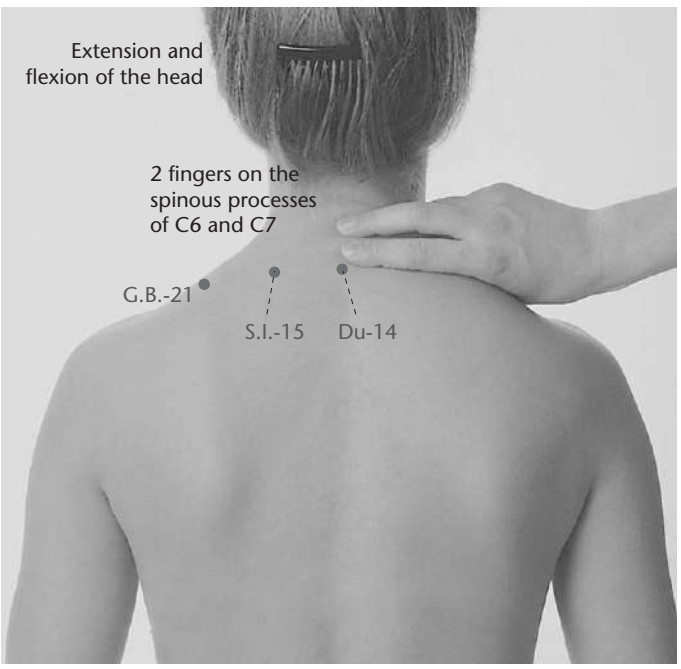
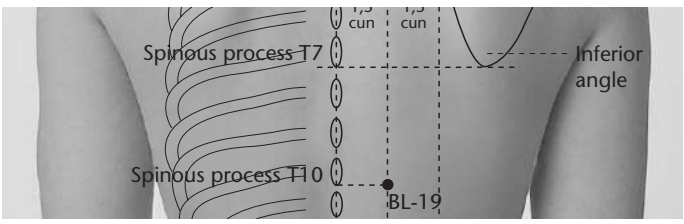
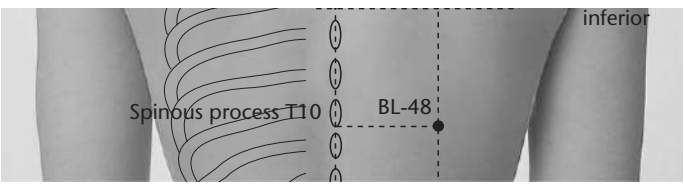
Central Pivot ZHONGSHU Du-7









Location

On the midline, below the spinous process of the 10th thoracic vertebra (T10).

How to find

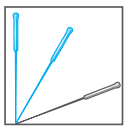
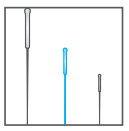
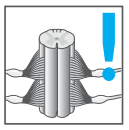
Locate T7 (→ 3.4.2) and, from there, count down 3 spinous processes to T10. Locate **Du-7** on the midline, below its spinous process. **Or:** Use the Tuffier's line for reference (→ 3.4.3). Locate T11 by counting up 5 spinous processes from L4 and there locate **Du-7** on the midline, below the spinous process. Located on the same level are a point of → **Ex-B-2/BL-19/BL-48** (0.5/1.5/3 cun lateral to the midline).

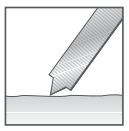
Needling

0.5–1 cun strictly vertically to the skin or obliquely in an inferior direction, with the patient's back straight or flexed in order to avoid puncturing the spinal canal. Oblique insertions should only be carried out by experienced practitioners, as in small persons (irrespective of their body weight), the spinal canal may be reached after only 1.25 cun.

Actions/Indications

- Tonifies the Middle Burner
- Benefits the spine



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Du-8 *Sinew Contraction* JINSUO

Location

On the midline, below the spinous process of the 9th thoracic vertebra (T9).

How to find

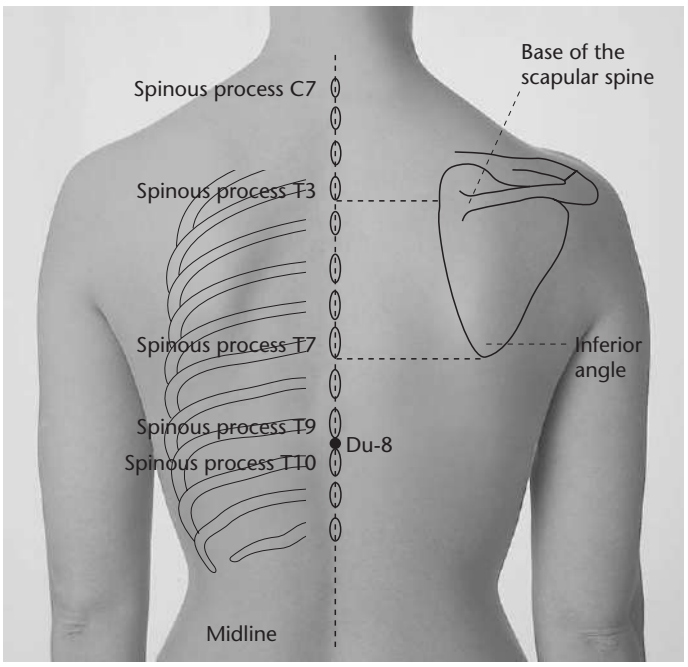
Locate T7 (→ 3.4.2) and, from there, count down 2 spinous processes to T9. Locate **Du-8** on the midline, below its spinous process. **Or:** Use the Tuffier's line for reference (→ 3.4.3). Locate T9 by counting up from L4 and there locate **Du-8** on the midline, below the spinous process.
Located on the same level are a point of → **Ex-B-2/BL-18/BL-47** (0.5/1.5/3 cun lateral to the midline).

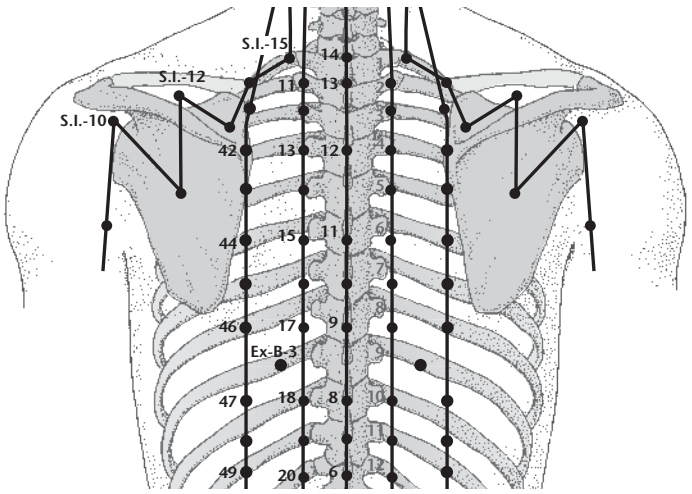
Needling

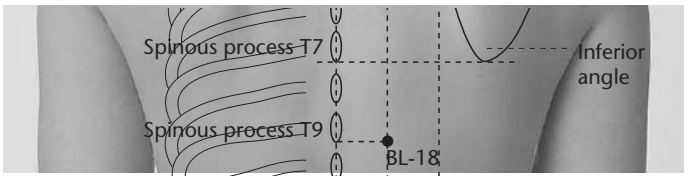
0.5–1 cun strictly vertically to the skin or obliquely in an inferior direction, with the patient's back straight or flexed in order to avoid puncturing the spinal canal. Oblique insertions should only be carried out by experienced practitioners, as in small persons (irrespective of their body weight), the spinal canal may be reached after only 1.25 cun.

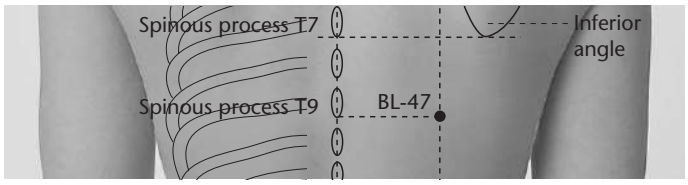
Actions/Indications

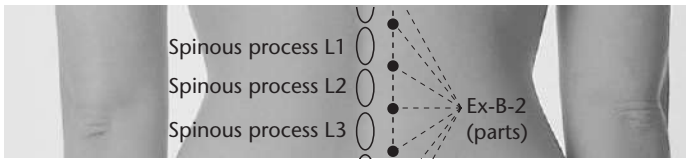
- Soothes the Liver
- Dispels Wind
- Calms the *shen*

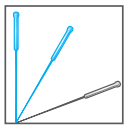


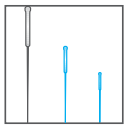


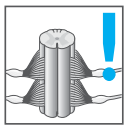


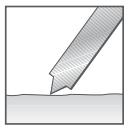


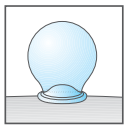












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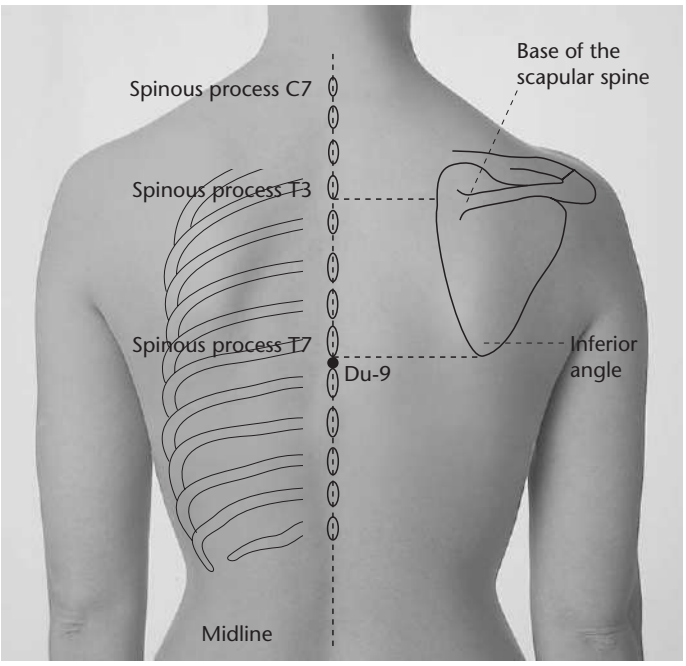
Reaching Yang ZHIYANG Du-9



Location

On the midline, below the spinous process of the 7th thoracic vertebra (T7).

How to find

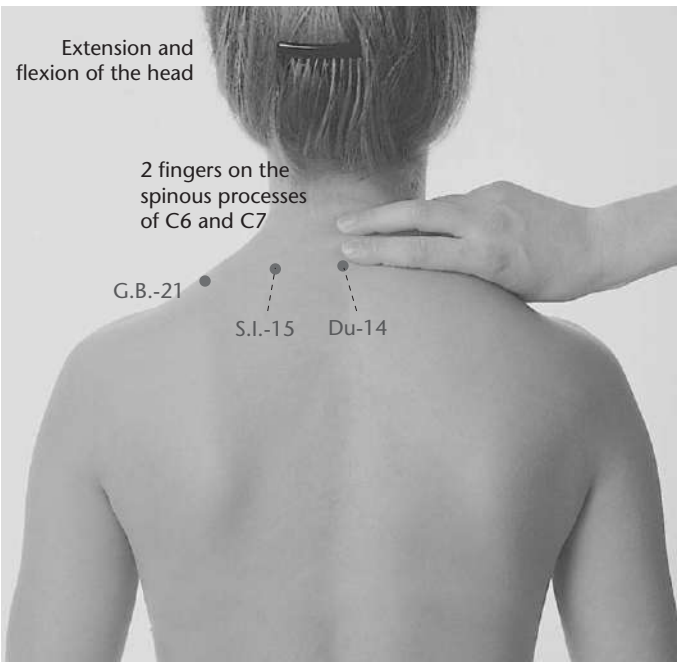
Find T7 (→ 3.4.2) and locate **Du-9** on the midline, below its spinous process. **Or:** Use the Tuffier's line for reference (→ 3.4.3). Locate T7 by counting up from L4 and there locate **Du-9** on the midline, below the spinous process.
Located on the same level are a point of → **Ex-B-2/BL-17/BL-46** (0.5/1.5/3 cun lateral to the midline).

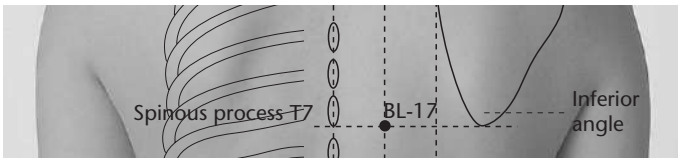
Needling

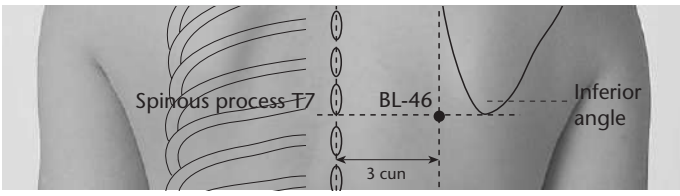
0.5–1 cun strictly vertically to the skin or obliquely in an inferior direction, with the patient's back straight or flexed in order to avoid puncturing the spinal canal. Oblique insertions should only be carried out by experienced practitioners, as in small persons (irrespective of their body weight), the spinal canal may be reached after only 1.25 cun.

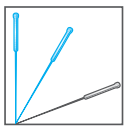
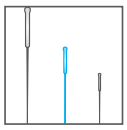
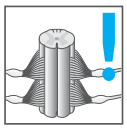
Actions/Indications

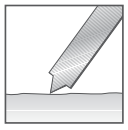
- Strengthens the Spleen and eliminates Dampness
- Clears Damp-Heat from the Middle Burner
- Harmonises the Upper Burner









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Du-10 *Spirit Tower* LINGTAI

Location

On the midline, below the spinous process of the 6th thoracic vertebra (T6).

How to find

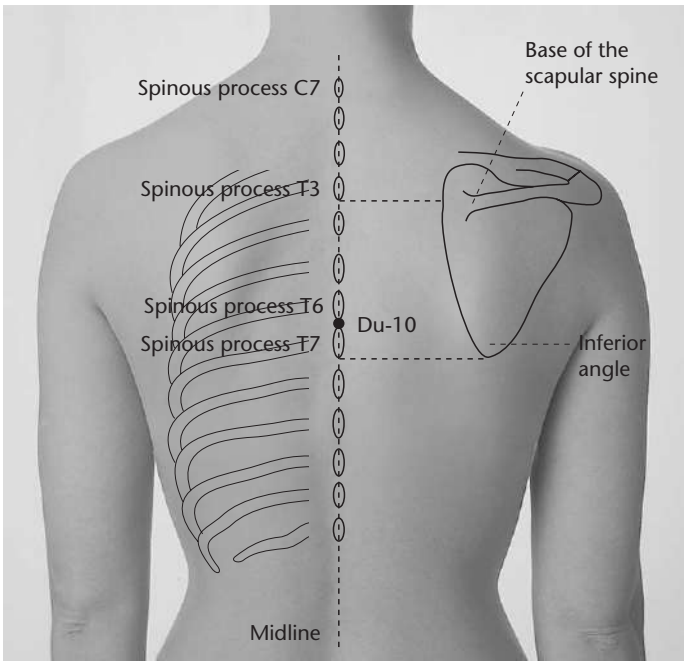
Locate T7 (→ 3.4.2). **Du-10** is located on the midline, below the spinous process of the T6. **Or:** Locate C7 (→ 3.4.1). **Du-10** can then be located by counting down 6 spinous processes (T1–T6). Located on the same level are a point of → **Ex-B-2/BL-16/BL-45** (0.5/1.5/3 cun lateral to the midline).

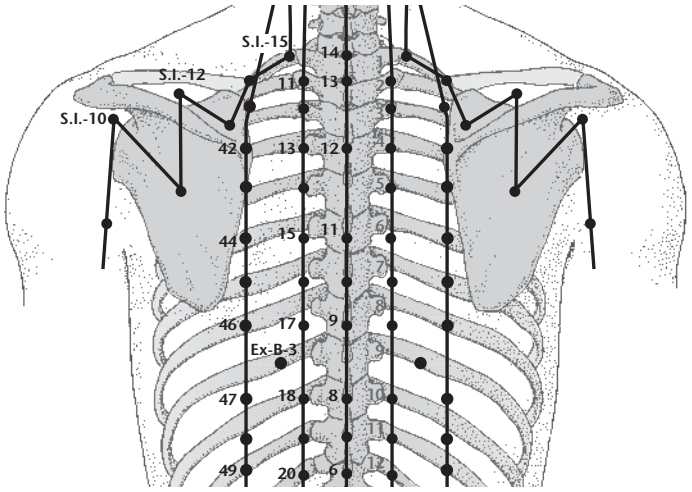
Needling

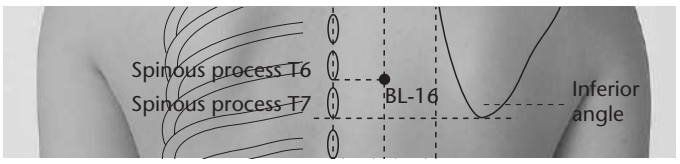
0.5–1 cun strictly vertically to the skin or obliquely in an inferior direction, with the patient's back straight or flexed in order to avoid puncturing the spinal canal. Oblique insertions should only be carried out by experienced practitioners, as in small persons (irrespective of their body weight), the spinal canal may be reached after only 1.25 cun.

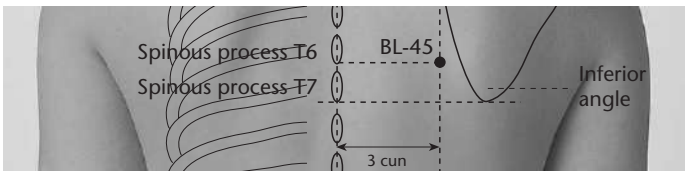
Actions/Indications

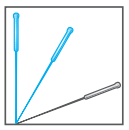
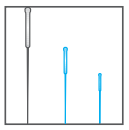
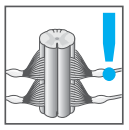
- Harmonises the Upper Burner
- Clears Heat and Fire toxins

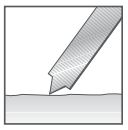
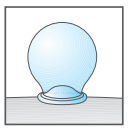








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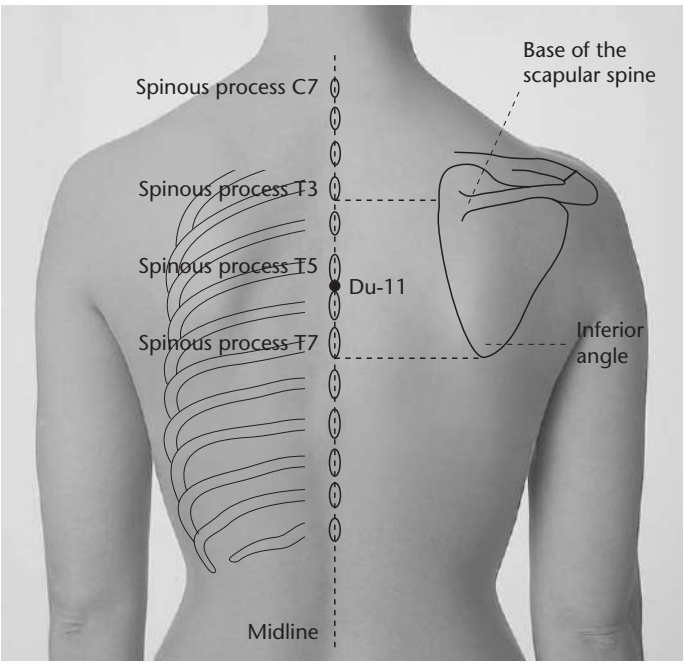
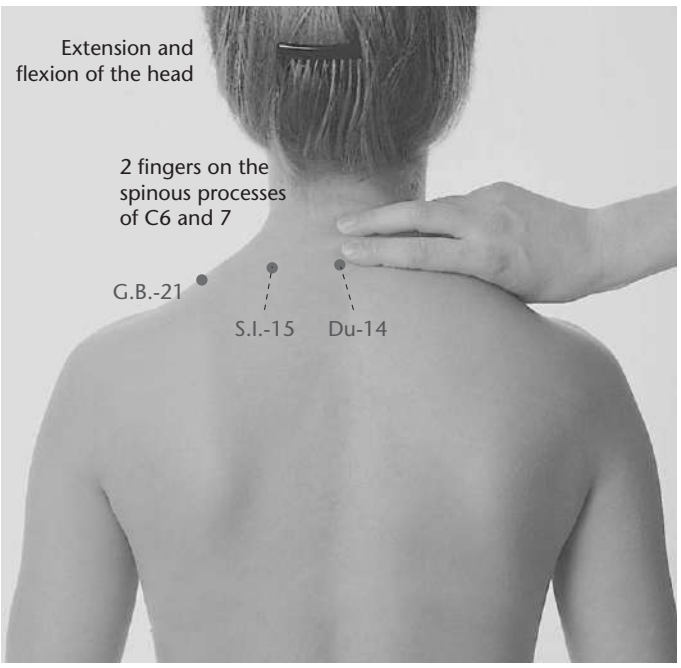
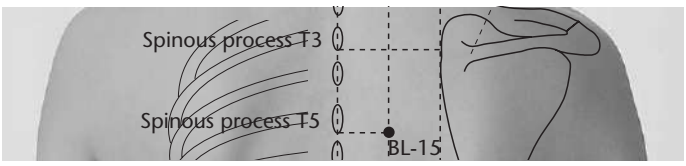
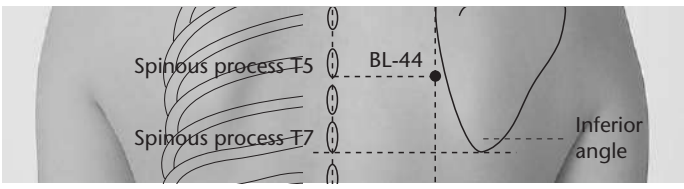
Spirit Pathway SHENDAO Du-11









Location

On the midline, below the spinous process of the 5th thoracic vertebra (T5).

How to find

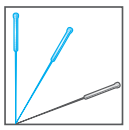
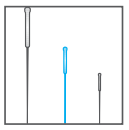
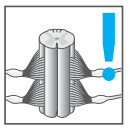
Locate T7 (→ 3.4.2). From there, count up 2 spinous processes and find **Du-11** on the midline, below the spinous process of T5.
Or: Locate C7 (→ 3.4.1). **Du-11** can then be located by counting down 5 spinous processes (T1–T5).
Located on the same level are a point of → **Ex-B-2/BL-15/BL-44** (0.5/1.5/3 cun lateral to the midline).

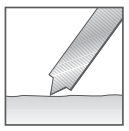
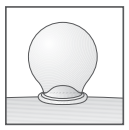
Needling

0.5–1 cun strictly vertically to the skin or obliquely in an inferior direction, with the patient's back straight or flexed in order to avoid puncturing the spinal canal. Oblique insertions should only be carried out by experienced practitioners, as in small persons (irrespective of their body weight), the spinal canal may be reached after only 1.25 cun.

Actions/Indications

- Tonifies the Heart and the Lungs
- Calms the *shen*
- Dispels Wind and Heat

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Du-12 *Body Pillar* SHENZHU

Location

On the midline, below the spinous process of the 3rd thoracic vertebra (T3).

How to find

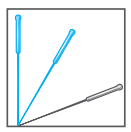
Locate T7 (→ 3.4.2). From there, count up 4 spinous processes and locate **Du-12** on the midline, below the spinous process of T3. **Or:** Locate C7 (→ 3.4.1). **Du-12** can then be located by counting down 3 spinous processes (T1–T3).
Located on the same level are a point of → **Ex-B-2/BL-13/BL-42** (0.5/1.5/3 cun lateral to the midline).

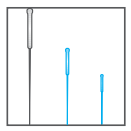
Needling

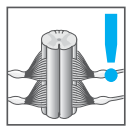
0.3–1 cun strictly vertically to the skin or obliquely in an inferior direction, with the patient's back straight or flexed in order to avoid puncturing the spinal canal. Oblique insertions should only be carried out by experienced practitioners, as in small persons (irrespective of their body weight), the spinal canal may be reached after only 1.25 cun.

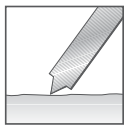
Actions/Indications

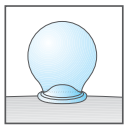
- Dispels internal and external Wind
- Calms the *shen*
- Tonifies the Lungs





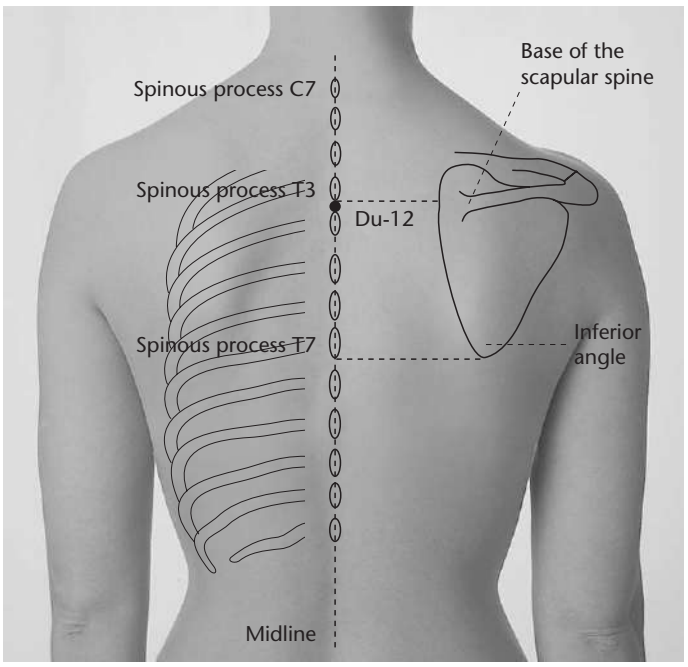


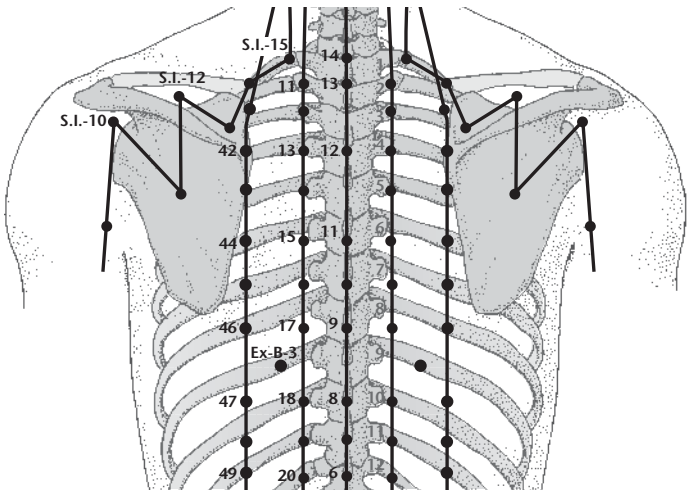


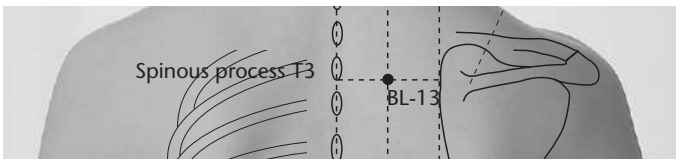


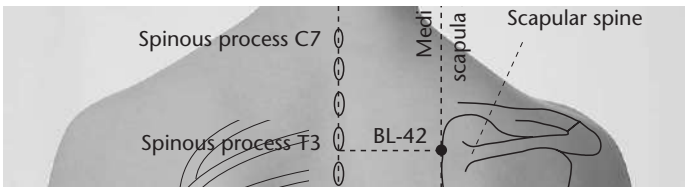
Special features

Meeting point with the BL channel









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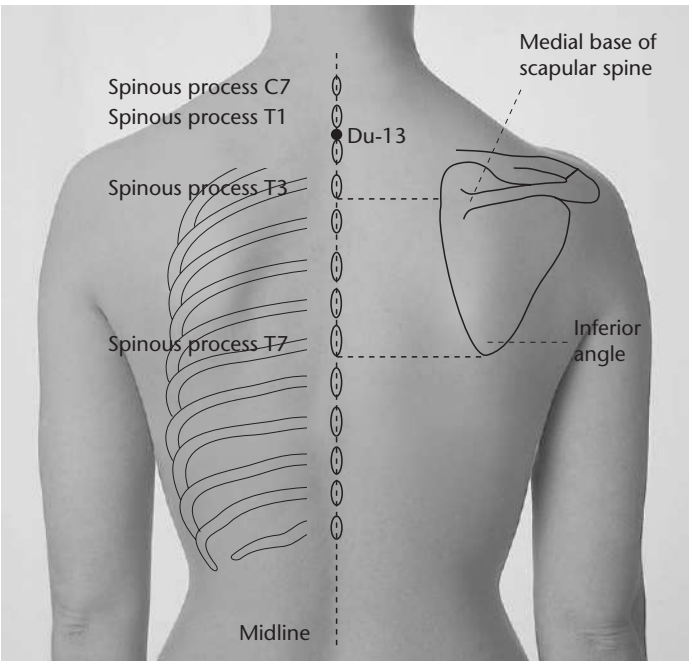
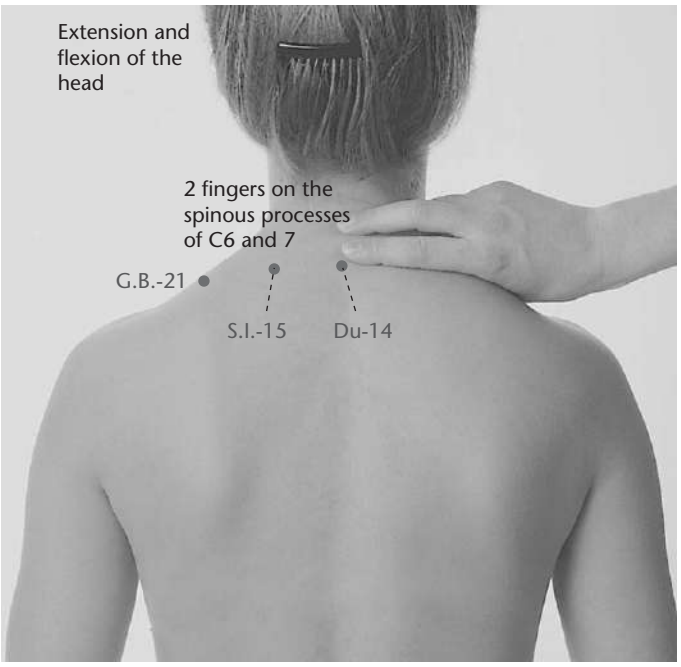
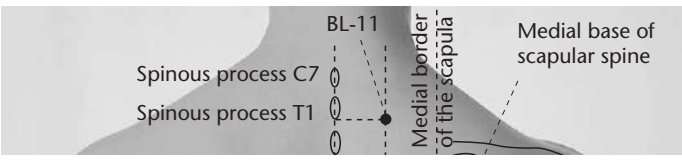
Way of Happiness TAODAO Du-13







Location

On the midline, below the spinous process of the 1st thoracic vertebra (T1).

How to find

Locate C7 (→ 3.4.2). Palpate downward to the next spinous process (T1) and locate **Du-13** on the midline, below its spinous process.

Located on the same level are a point of → **Ex-B-2/BL-11/S.I.-14** (0.5/1.5/3 cun lateral to the midline).

Needling

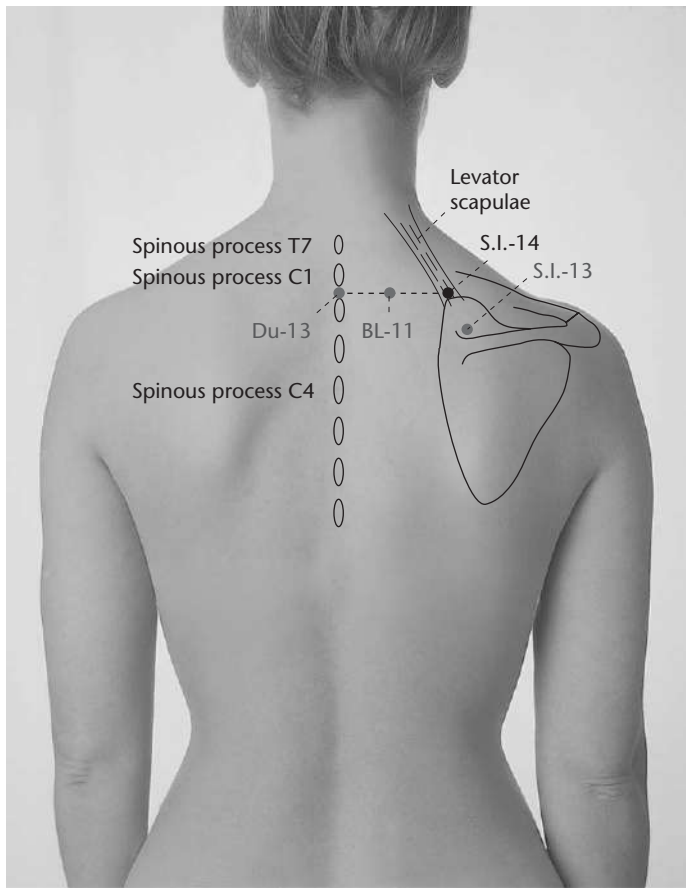
0.3–1 cun strictly perpendicularly to the skin or obliquely in an inferior direction, with the patient's back straight or flexed in order to avoid puncturing the spinal canal. Oblique insertions should only be carried out by experienced practitioners, as in small persons (irrespective of their body weight), the spinal canal may be reached after only 1.25 cun.

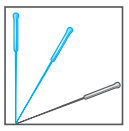
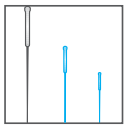
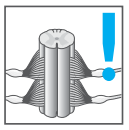
Actions/Indications

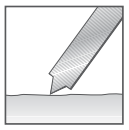
- Dispels pathogenic factors
- Opens the channel and *luo*-connecting vessels

Special features

Meeting point with the BL channel





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Du-14 *Great Vertebra* DAZHUI

Location

On the midline, below the spinous process of the 7th cervical vertebra (C7).

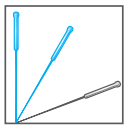
How to find

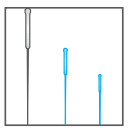
First, identify C7 (→ 3.4.1): Place 2 fingers on the spinous processes believed to belong to C6 and C7 and ask the patient to flex and extend their head. In a fully functional spine and with correct finger placement, C6 will glide anteriorly with neck extension, while C7 will remain fixed. However, if the vertebra below the upper finger does not move with neck extension, the fingers will most probably have been placed on C7 and T1. Locate **Du-14** below the spinous process of C7.

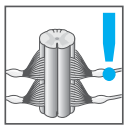
Located on the same level are → **Ex-B-1** (*dingchuan*)/ **S.I.-15/Ex-B** (*jiehexue*) (0.5/2/3.5 cun lateral to **Du-14**).

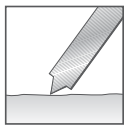
Needling

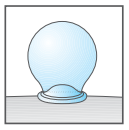
0.3–1 cun strictly vertically to the skin or obliquely in an inferior direction, with the patient's back straight or flexed in order to avoid puncturing the spinal canal. Oblique insertions should only be carried out by experienced practitioners, as in small persons (irrespective of their body weight), the spinal canal may be reached after only 1.25 cun. For persistent epistaxis, place a cold metal object (for example, a spoon) or a cold cloth on **Du-14**. Cupping on this point for acute colds.









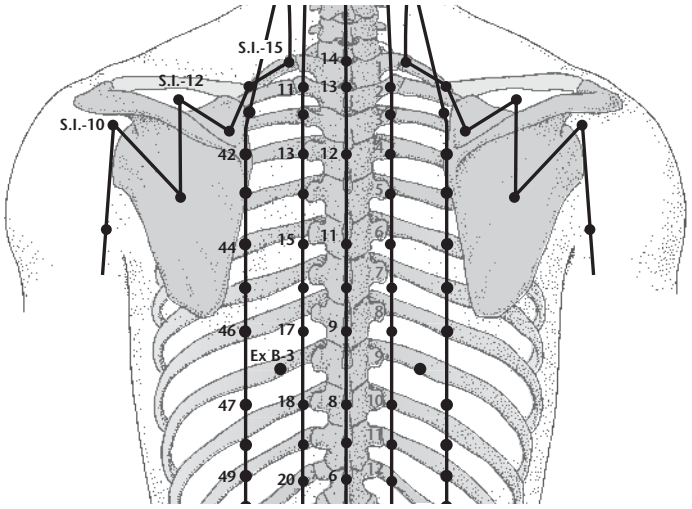


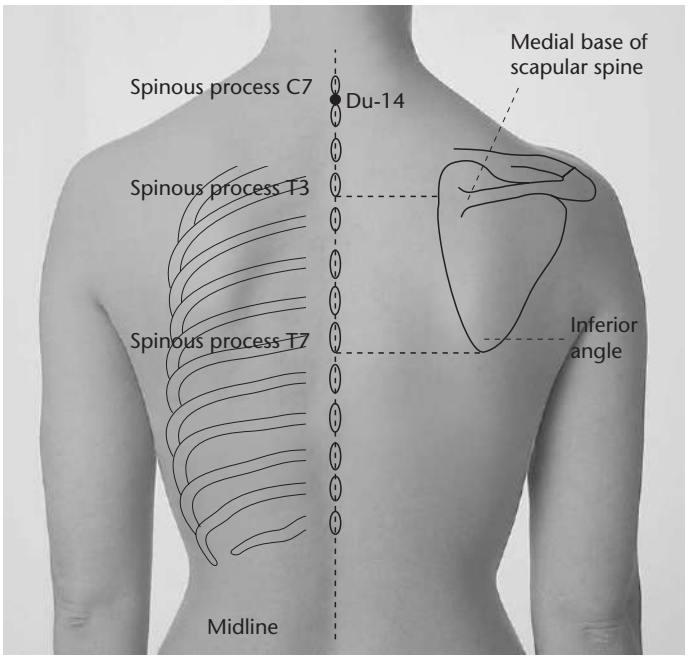
Actions/Indications

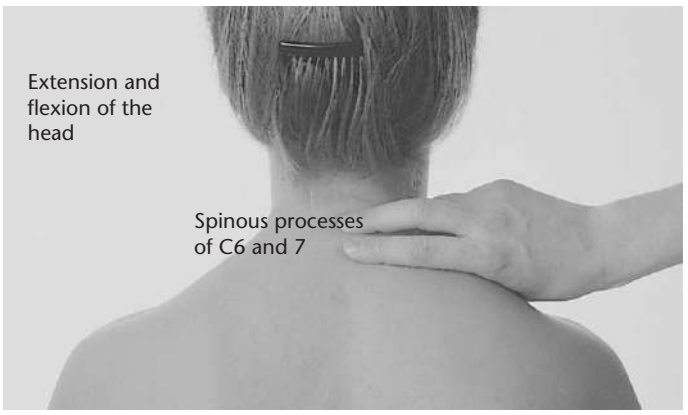
- Clears Wind, firms and regulates the surface, dispels pathogenic factors
- Clears Heat
- Calms (internal) Wind and the *shen*
- Strengthens Qi and Yang in deficiency conditions
- Benefits the spine, especially the cervical spine

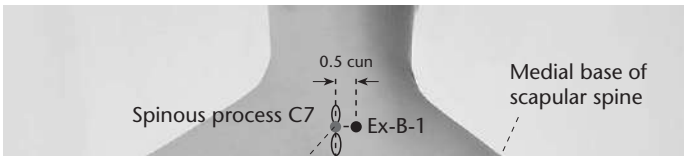
Special features

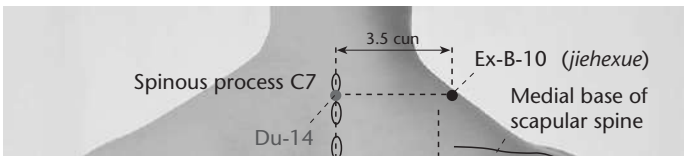
Meeting point with all Yang channels, Sea of Qi point.











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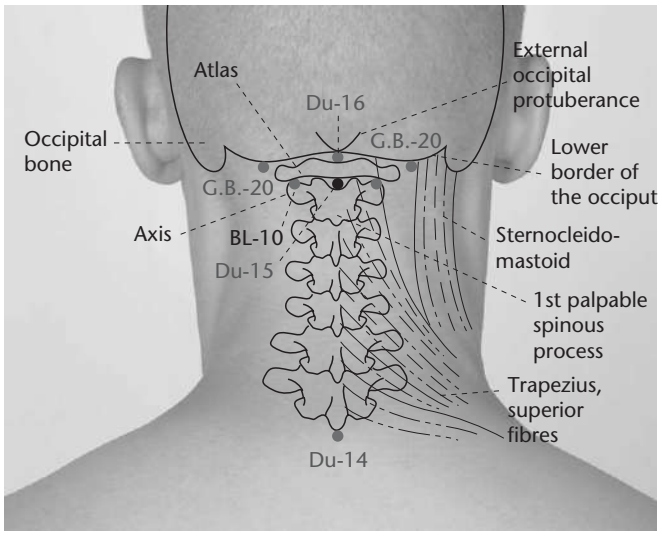
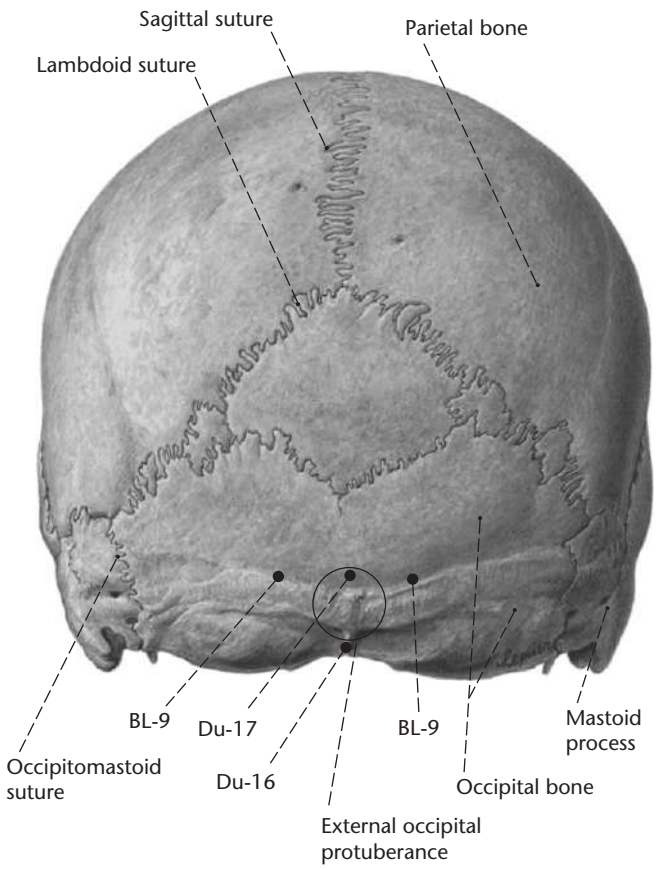
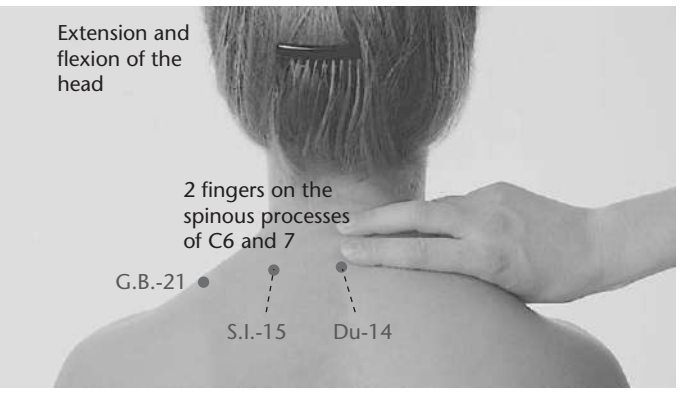
Gate of Muteness YAMEN Du-15







Location

On the occiput, on the posterior midline, in the depression between the 1st (atlas) and 2nd (axis) cervical vertebrae, approximately 0.5 cun inferior to ➞ **Du-16** (directly below the external occipital protuberance).

How to find

The external occipital protuberance (➞ 3.1.5) is a hump-shaped projection on the posterior surface of the occipital bone, on the midline and slightly superior to the craniocervical junction (➞ 3.1.5). ➞ **Du-16** is located in a depression on the posterior midline that you can palpate directly inferior to the protuberance. From there, glide 0.5 cun in an inferior direction and locate **Du-15** superior to the first palpable spinous process (belonging to the axis; the atlas has no spinous process) and approximately 0.5 cun superior to the posteror hairline.
Located on the same level is ➞ **BL-10** (on the lateral aspect of the trapezius muscle).

Needling

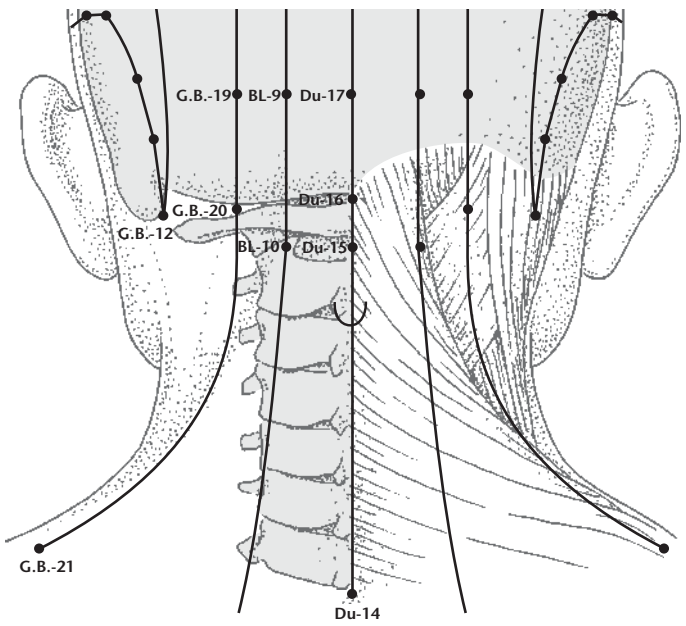
0.5–1 cun strictly perpendicularly in an inferior direction. Caution: Injury to the cervical marrow. According to classic texts, moxibustion is contraindicated.

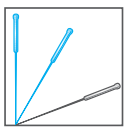
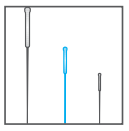
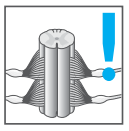
Actions/Indications

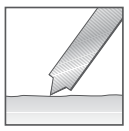
- Benefits the tongue, ears, neck and spine
- Dispels Wind
- Clears Yang Heat/excess

Special features

Meeting point with the *yang wei mai*. Sea of Qi point.





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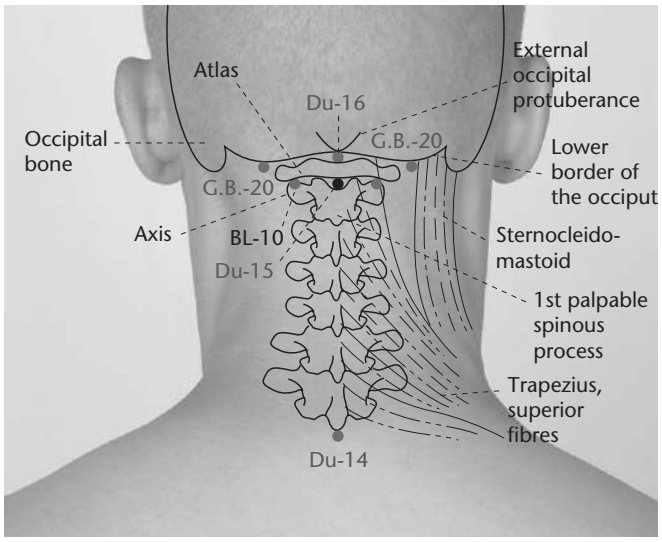
Du-16 *Palace of Wind* FENGFU

Location

On the posterior midline, directly below the external occipital protuberance, in the depression between the origins of the trapezius muscle.

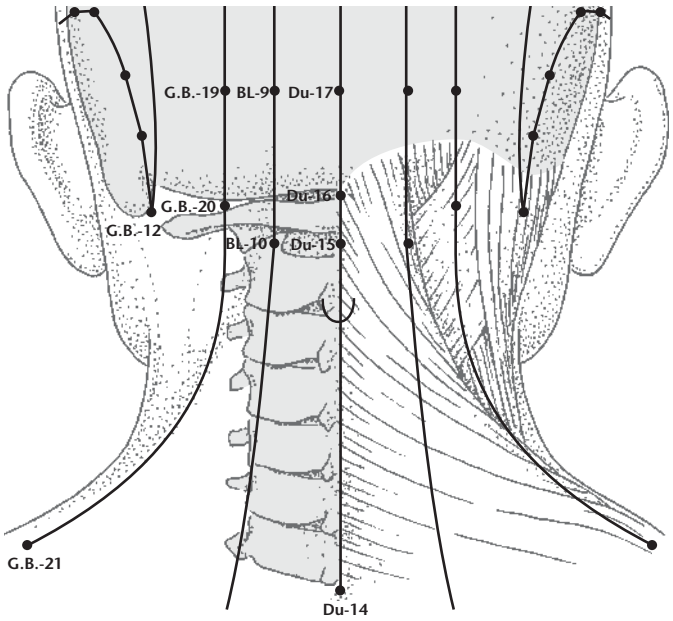


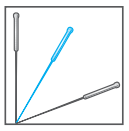
How to find

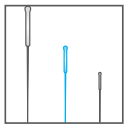
The external occipital protuberance (→ 3.1.5) is a hump-shaped projection on the posterior surface of the occipital bone, on the midline and slightly superior to the craniocervical junction (→ 3.1.5). Locate **Du-16** in a depression on the posterior midline that can be palpated directly inferior to the protuberance and between the two origins of the trapezius muscle. Generally, **Du-16** is located approximately 1 cun superior to the posterior hairline. → **G.B.-20** is located on the same level below the occiput, in a depression between the origins of the trapezius and sternocleido-mastoid muscles.

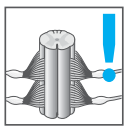
Needling

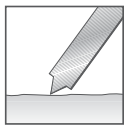
0.5–1 cun slightly obliquely in an inferior direction. Bend the patient's head slightly forward when needling. Caution: Dangerous point with deep needling! No stimulation. Strictly no needling in a superior direction, danger of puncturing the cerebellomedullary cistern (also site for suboccipital puncture). The needle should be inserted into the nuchal ligament. According to some authors, moxibustion is contraindicated.









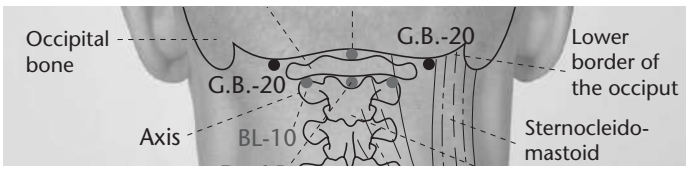


Actions/Indications

- Dispels (external) Wind
- Calms internal Wind and the *shen*
- Nourishes the Sea of Marrow, lightens the *shen*

Special features

Meeting point with the *yang wei mai* and, according to some authors, the *yang qiao mai*. Sea of Marrow point, Window of Heaven point, Sun Si Miao Ghost point. Used for all disorders which are caused by 'external or internal' Wind and which are characterised by sudden onset, changing location and/or intensity of the disorder, involuntary movements.



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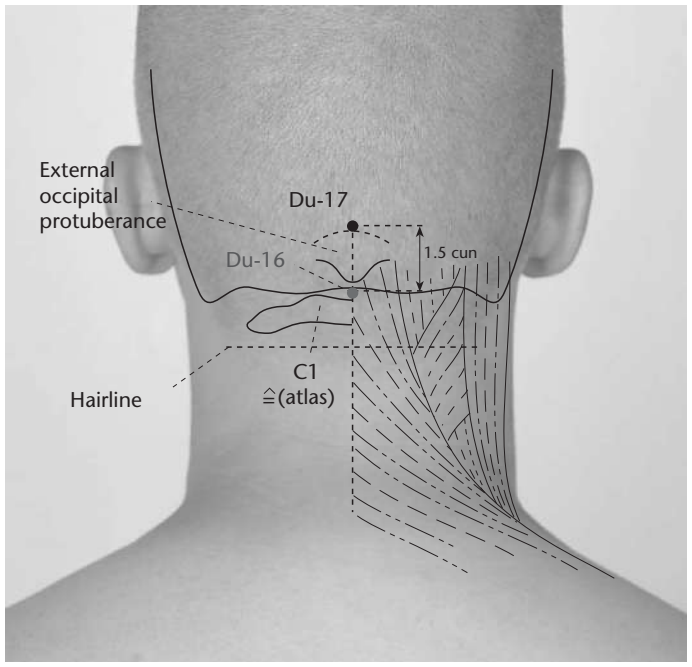
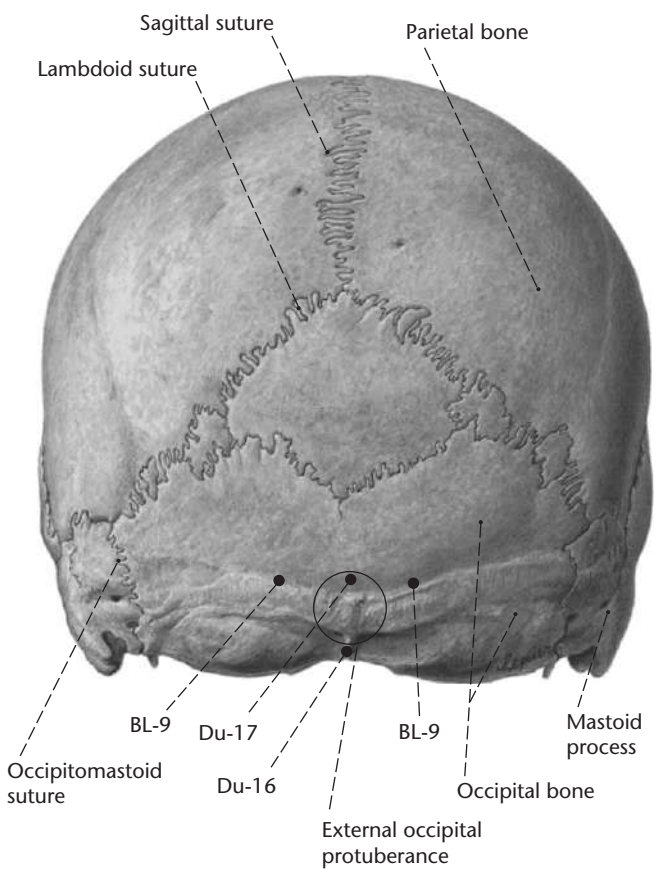
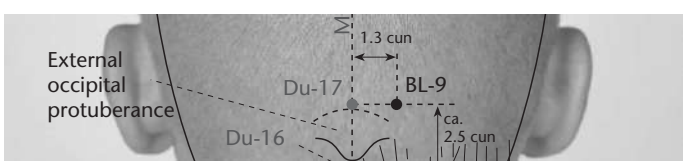
Brain's Door NAOHU Du-17







Location

In a depression superior to the external occipital protuberance, approximately 2.5 cun superior to the posterior hairline or 1.5 cun superior to → **Du-16**.

How to find

First, locate the external occipital protuberance (→ 3.1.5), which forms a hump-shaped projection on the posterior surface of the occipital bone. Next, locate **Du-17** on the posterior midline, in a depression directly superior to the protuberance. This corresponds to a distance of approximately 2.5 cun superior to the posterior hairline (→ 3.1.5).

→ **Du-16** is located directly inferior to the protuberance, whereas → **BL-9** is located 1.3 cun lateral to **Du-17**.

Needling

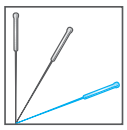
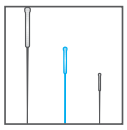
0.5–1 cun transversely (subcutaneously) in an inferior or superior direction. Moxibustion controversial.

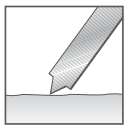
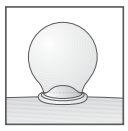
Actions/Indications

- Dispels Wind
- Opens the channel
- Benefits the eyes
- Calms the *shen*

Special features

Meeting point with the BL channel

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Du-18 *Unyielding Space* QIANGJIAN

Location

On the posterior midline, 1.5 cun superior to **Du-17** (directly superior to the external occipital protuberance) or 3 cun inferior to → **Du-20** (on the vertex).

How to find

First, locate → **Du-17** in a depression directly superior to the external occipital protuberance (→ 3.1.5), which forms a hump-shaped projection on the posterior surface of the occipital bone. From there, palpate 1.5 cun in a superior direction and there locate **Du-18** on the posterior midline.

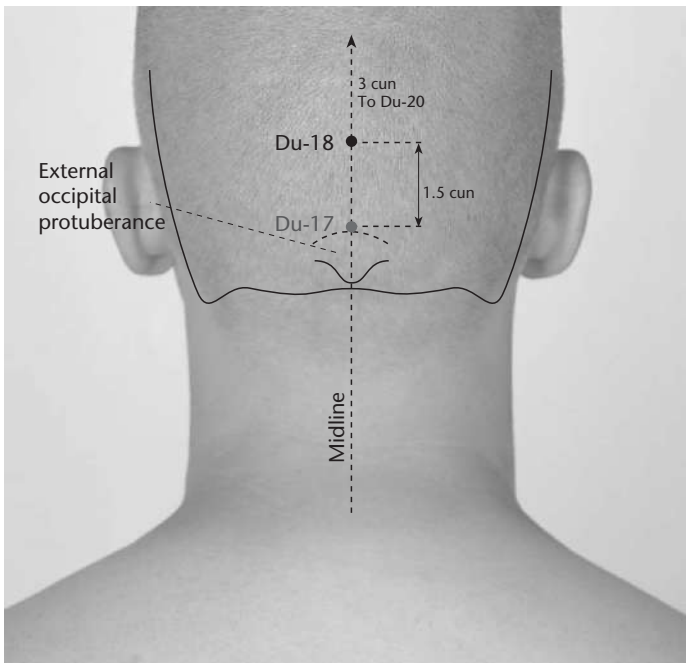
→ **Du-20** is located 3 cun in a superior direction, on the vertex.

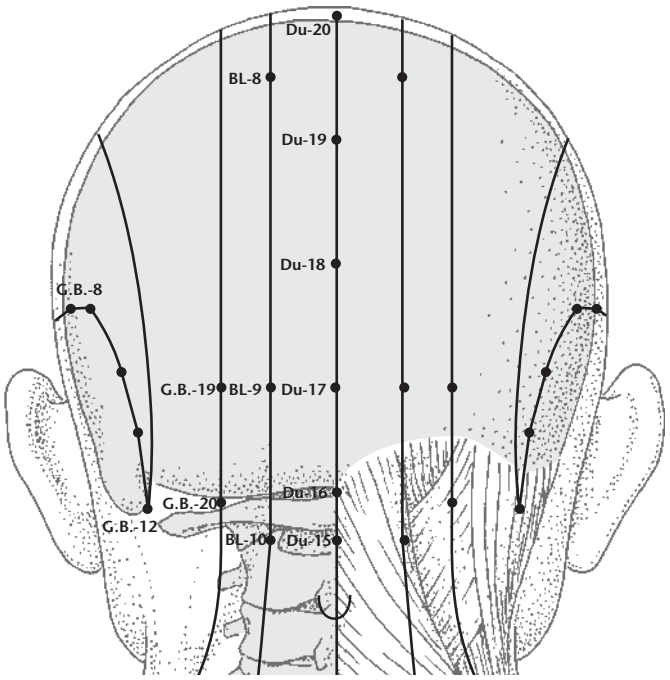
Needling

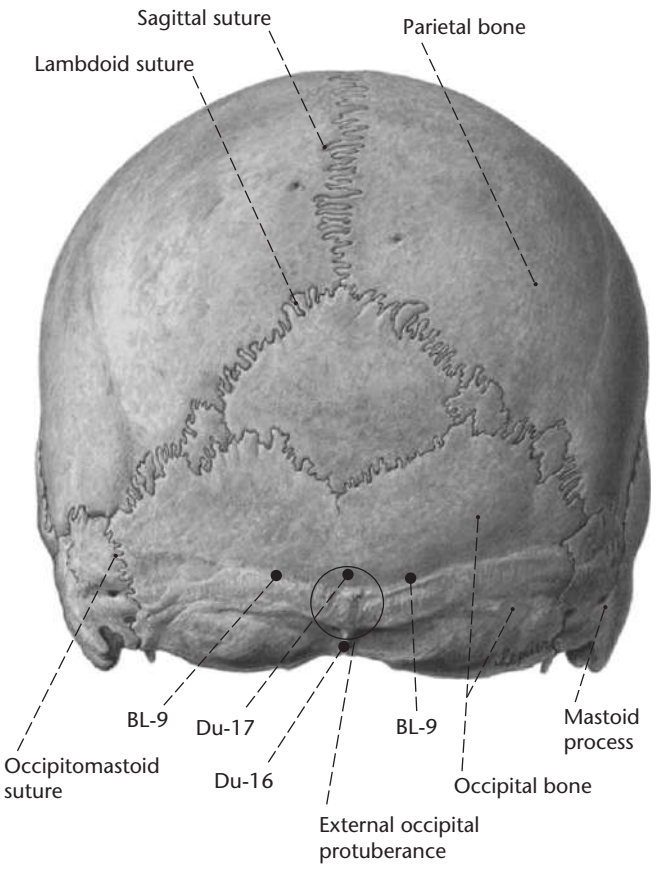
Transversely (subcutaneously) 0.5–1 cun

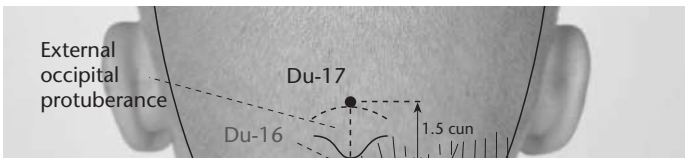
Actions/Indications

- Dispels Wind, especially internal Wind
- Opens the channel
- Calms the *shen*









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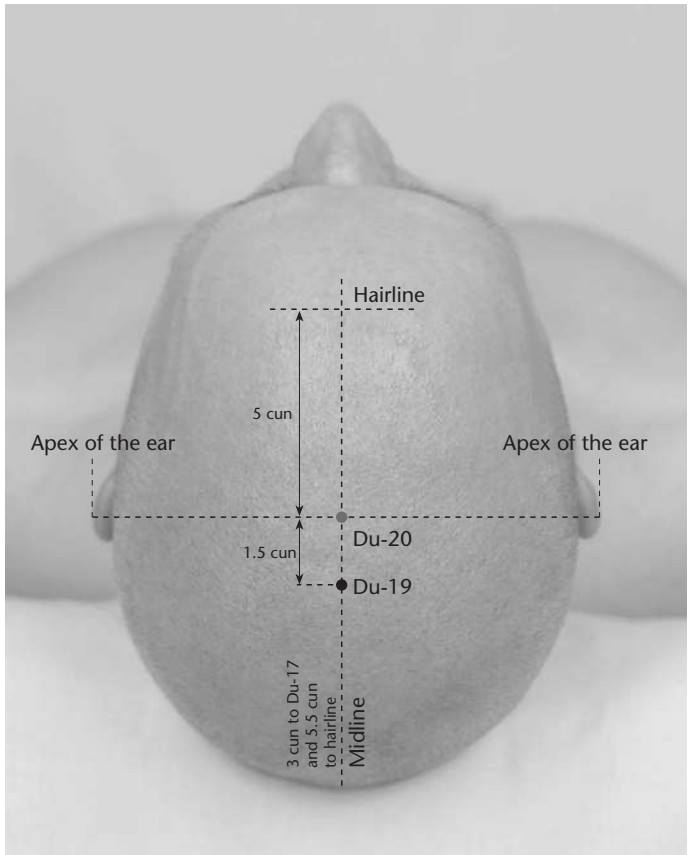
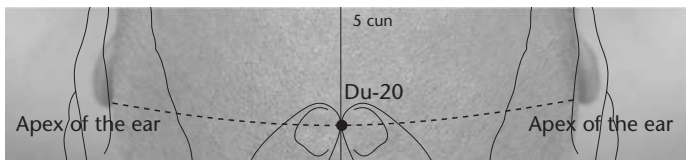
Behind the Crown HOUDING Du-19





Location

On the midline, 3 cun superior to → **Du-17** (directly superior to the external occipital protuberance) or 1.5 cun posterior to → **Du-20**.

How to find

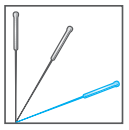
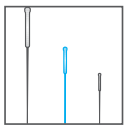
This point is best located by using → **Du-20** as a reference point (at the junction of the vertical midline and a line connecting the apices of the ears). **Du-19** can then be located by palpating 1.5 cun in a posterior direction from → **Du-20**. **Or:** First, locate → **Du-17** superior the external occipital protuberance (→ 3.1.5), then locate **Du-19** on the midline, 3 cun superior to → **Du-17**.

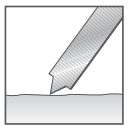
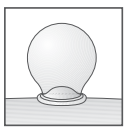
Needling

Transversely (subcutaneously) 0.5–1 cun.

Actions/Indications

- Dispels Wind
- Opens the channel
- Calms the *shen*

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Du-20 *Hundred Meetings* BAIHUI

Location

At the junction of a line connecting the apices of the ears and the midline, 5 cun from the anterior or 7 cun from the posterior hairline respectively.

How to find

Spreading hands technique (→ 2.3.3): Place the hands on both sides of the head, with the little fingers touching the apices of the ears. Join the thumbs on the midline and locate **Du-20** in shallow depression on the vertex of the head (alternative location method: use an elastic tape, with the midpoint marked on it). The symbolic counterpart to **Du-20** (as the highest point on the body and in contact with heaven) is → **KID-1**, the lowest part of the body and in contact with the earth.

Needling

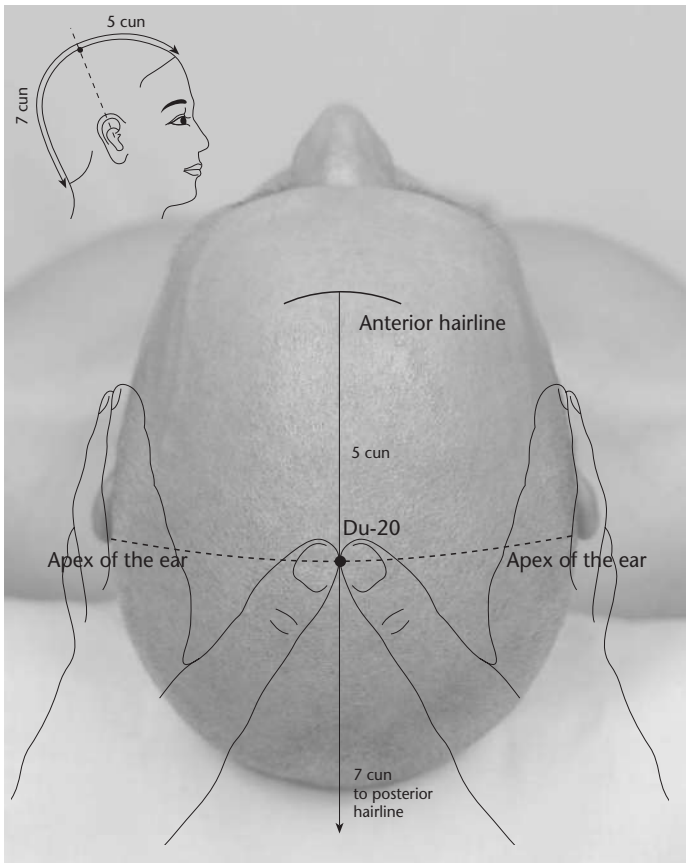
0.5–1 cun transversely (subcutaneously) towards the posterior (reducing effect) or the anterior (tonifying effect). Caution: Apply pressure to head points after needle removal to avoid bleeding. Remember to remove the needle after treatment.

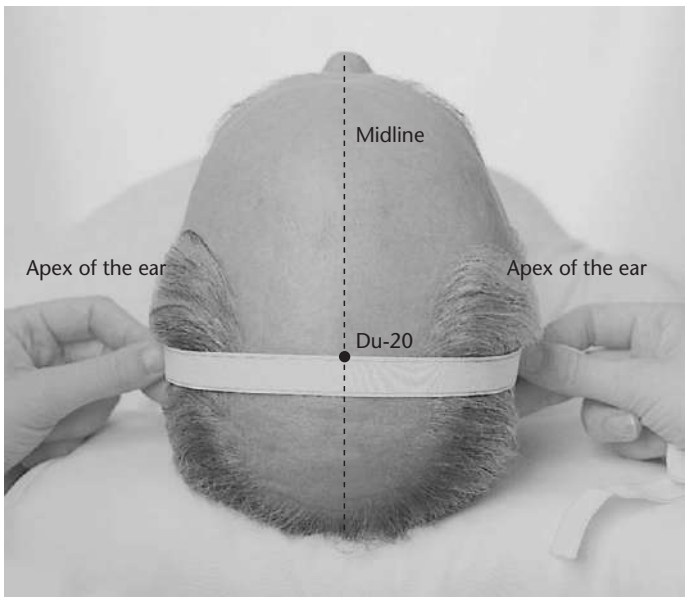
Actions/Indications

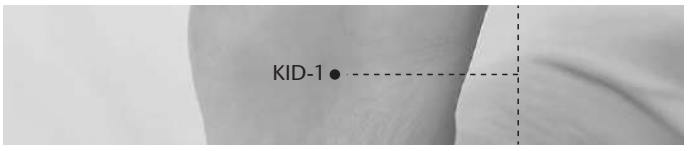
- Calms Wind, pacifies Yang, benefits the Brain and sensory organs, calms the *shen*
- Nourishes the Sea of Marrow; applying moxibustion raises the Yang

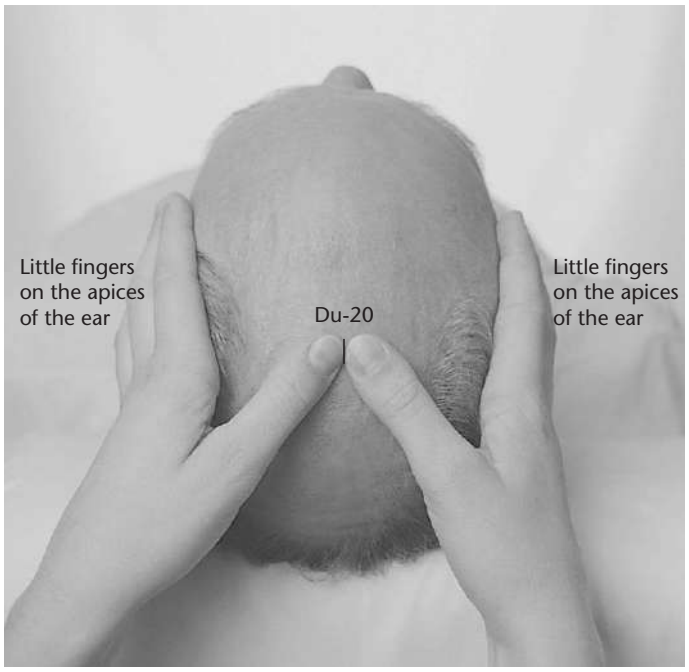
Special features

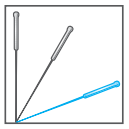
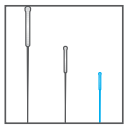
Meeting point with the BL, G.B., T.B. and LIV channels; Sea of Marrow point. Important point for descending the Yang (reducing needle techniques) or raising the Yang (tonifying needle techniques, moxibustion).

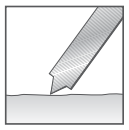










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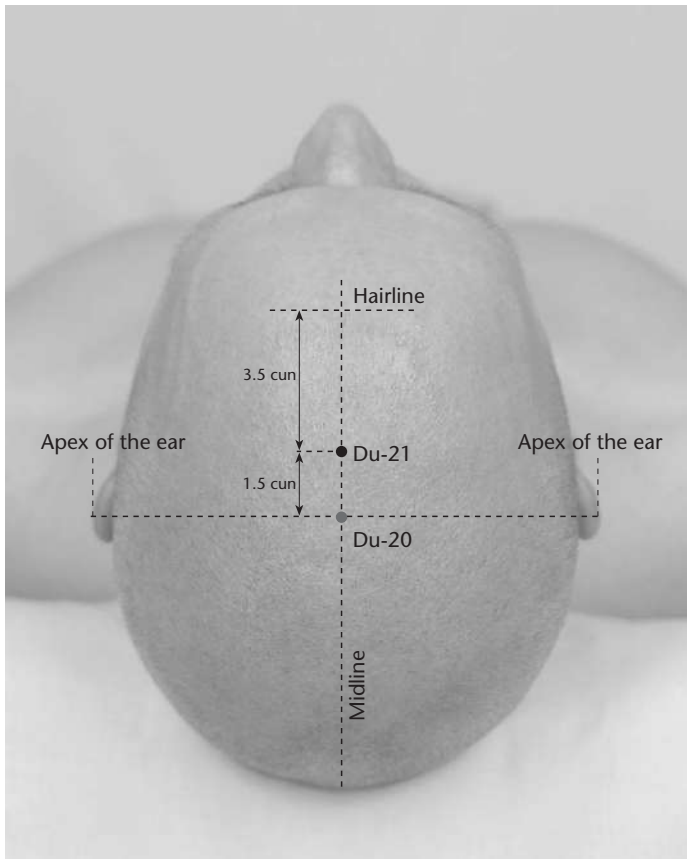
In Front of the Crown QIANDING Du-21



Location

On the midline, 3.5 cun superior to the anterior hairline or 1.5 cun anterior to → **Du-20**.

How to find

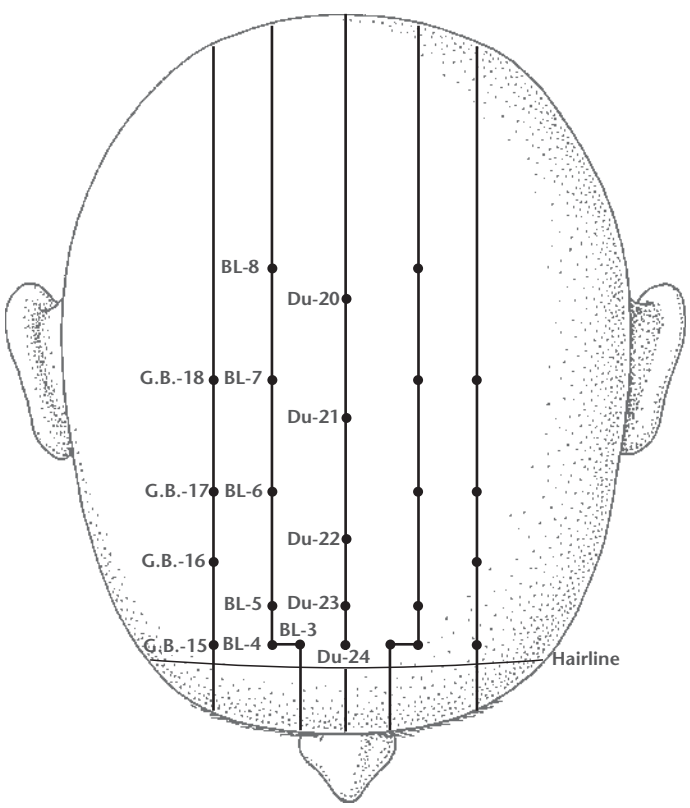
First, locate → **Du-20** (at the junction of the vertical midline and a line connecting the apices of the ears) and, from there, measure 1.5 cun in an anterior direction. **Or:** Locate the anterior hairline (→ 3.1.1; the distance from the anterior hairline to → **Du-20** is 5 cun) and palpate 3.5 cun in a superior/posterior direction. There, locate **Du-21** on the midline.

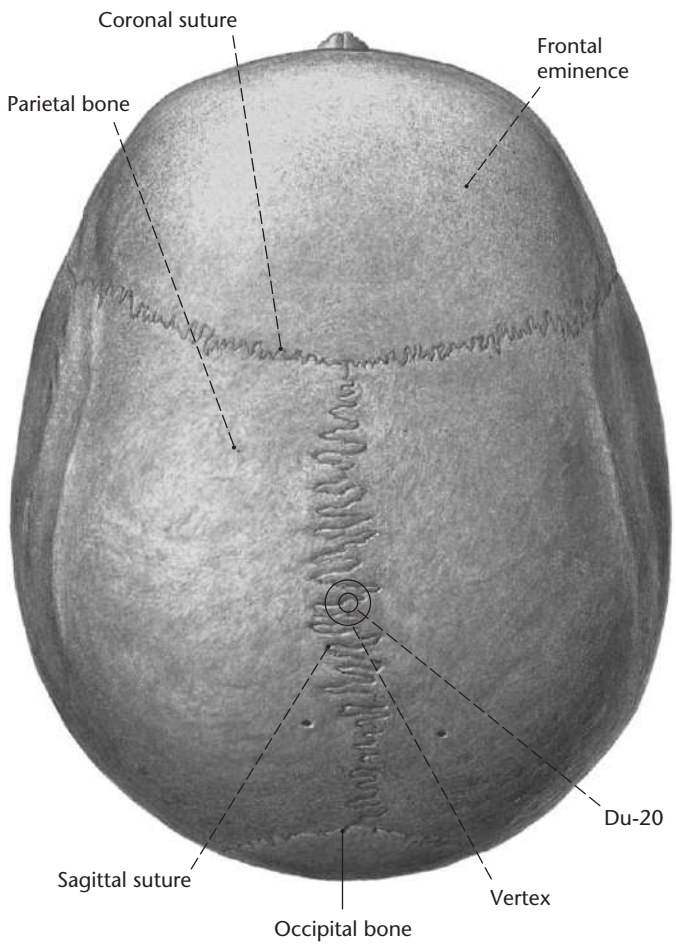
Needling

Transversely (subcutaneously) 0.5–1 cun. Caution with infants whose fontanelle has not yet closed. Moxibustion possible.

Actions/Indications

- Dispels Wind and Dampness
- Opens the channel
- Calms the *shen*





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Du-22 *Fontanelle Meeting* XINHUI

Location

On the midline, 2 cun superior to the anterior hairline.

How to find

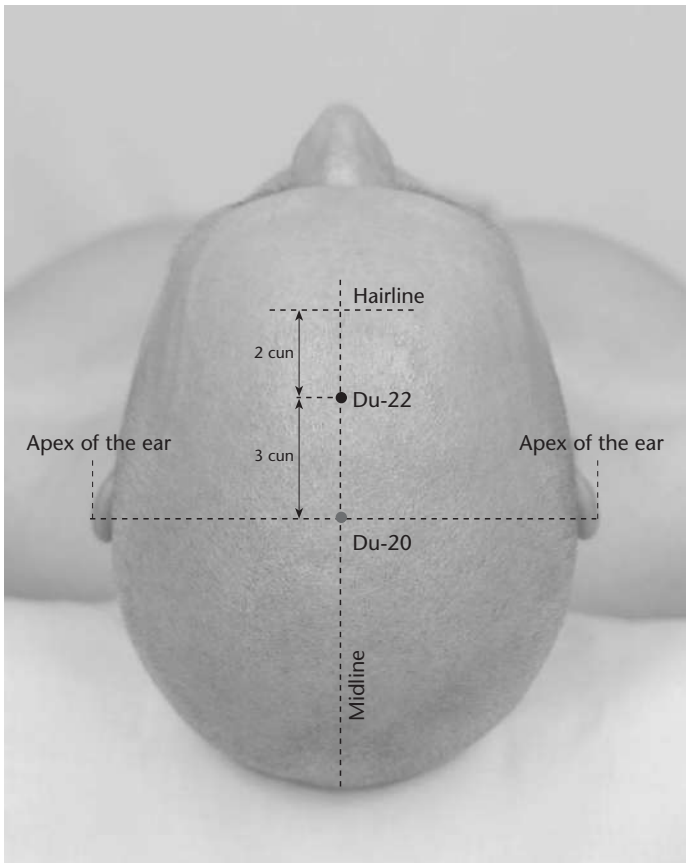
First, locate the anterior hairline (→ 3.1.1) and, from there, palpate 2 cun in a superior direction. There, locate **Du-22** on the midline. For reference: The distance from the anterior hairline to → **Du-20** is 5 cun. **Or:** From → **Du-20** (at the junction of the vertical midline and a line connecting the apices of the ears), measure 3 cun in an anterior direction and there locate **Du-22** on the midline.

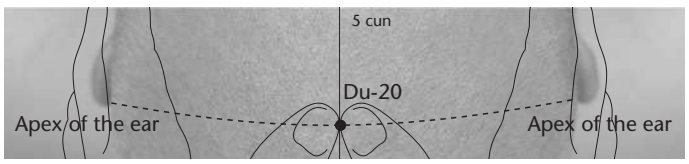
Needling

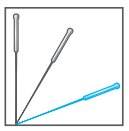
Transversely (subcutaneously) 0.5–1 cun. Caution with infants whose fontanelle has not yet closed (**Du-22** is located on the anterior border of the fontanelle). Moxibustion possible.

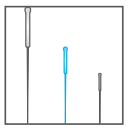
Actions/Indications

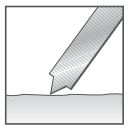
- Dispels Wind
- Calms the *shen*

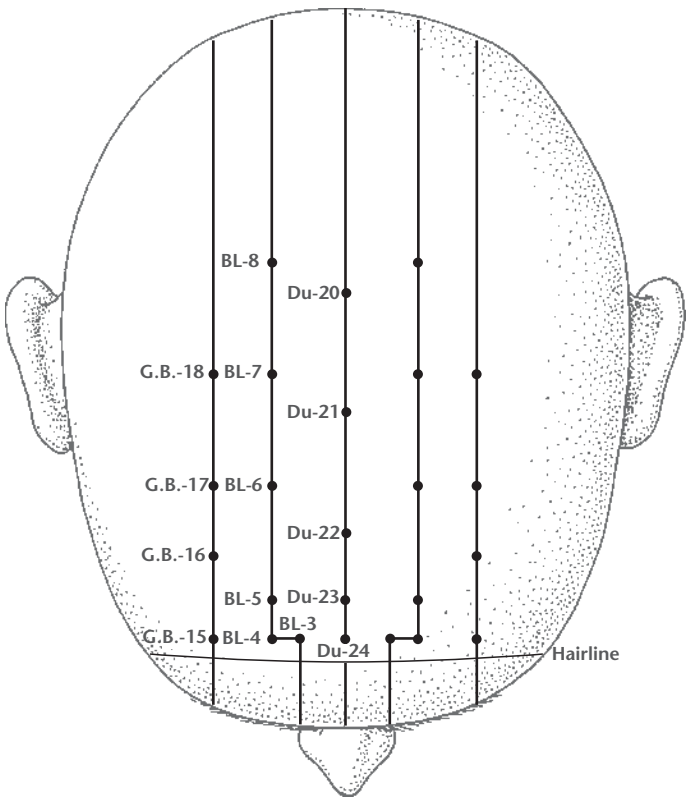












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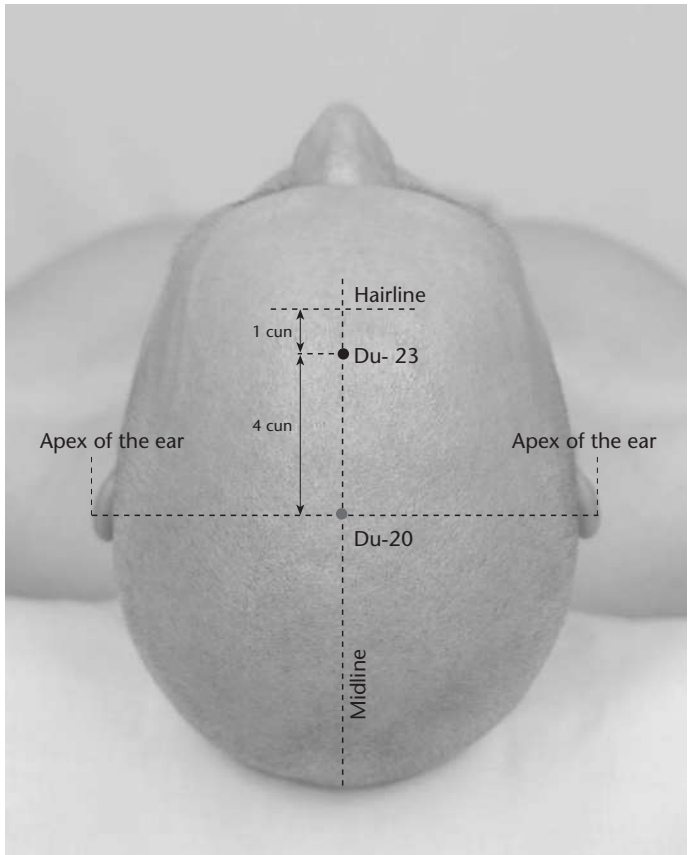
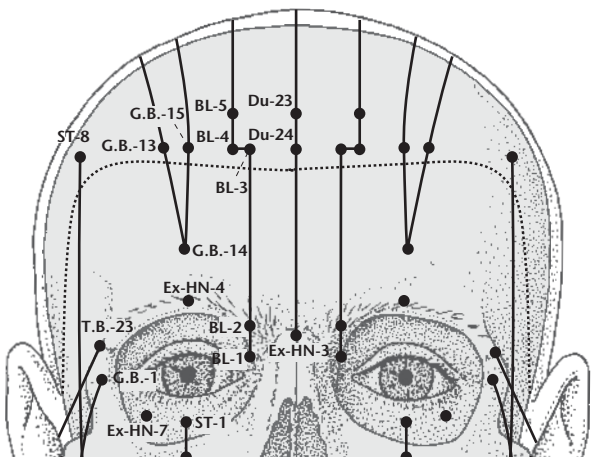
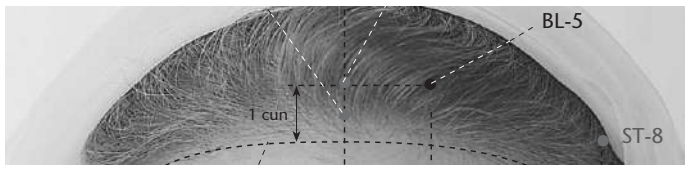
Upper Star SHANGXING Du-23







Location

On the midline, 1 cun superior to the anterior hairline or 4 cun anterior to → **Du-20**.

How to find

First, locate the anterior hairline (→ 3.1.1) and, from there, palpate 1 cun in a superior direction. There, locate **Du-23** on the midline. For reference: The distance from the anterior hairline to → **Du-20** is 5 cun.

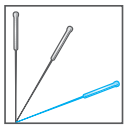
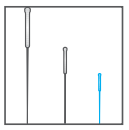
Located on the same level is → **BL-5** (1.5 cun lateral to the midline).

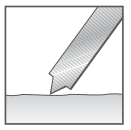
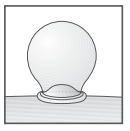
Needling

Transversely (subcutaneously) 0.3–0.5 cun. Moxibustion possible.

Actions/Indications

- Dispels pathogenic factors (especially Wind and Heat) from the nose
- Dispels pathogenic factors (especially Heat) from the face
- Calms the *shen*

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Du-24 *Courtyard of the Spirit* SHENTING

Location

On the midline, 0.5 cun superior to the anterior hairline or 4.5 cun anterior to → **Du-20**.

How to find

First, locate the anterior hairline (→ 3.1.1) and, from there, palpate 0.5 cun in a superior direction. There, locate **Du-24** on the midline. For reference: The distance from the anterior hairline to → **Du-20** (at the junction of the vertical midline and a line connecting the apices of the ears) is 5 cun.

Located on the same level (0.5 cun superior to the anterior hairline) are → **BL-3/BL-4/G.B.-15/G.B.-13** (superior to the inner canthus of the eye/1.5 cun lateral to the midline/on the pupil line or 2.25 cun lateral to the midline/3 cun lateral to the midline). These distances refer to the proportional cun distance (→ 2.2) between **Du-24** and → **ST-8** (on the corner of the forehead), which equals 4.5 cun (1.5 cun lateral to the midline).

Needling

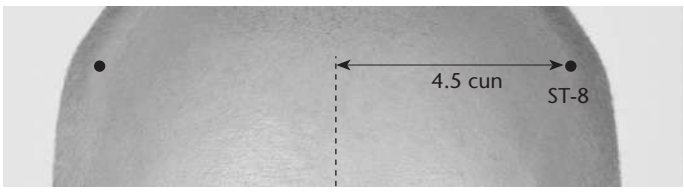
Transversely (subcutaneously) 0.3–0.5 cun. Moxibustion possible.

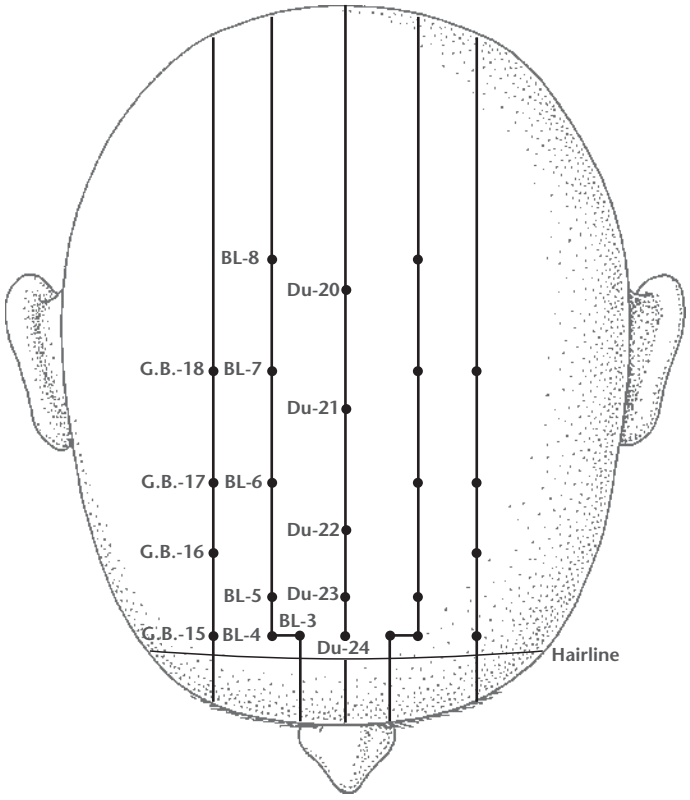
Actions/Indications

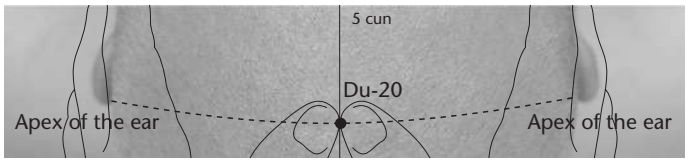
- Calms the *shen*
- Dispels (internal) Wind
- Clears pathogenic factors from the eyes and nose

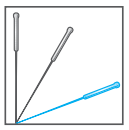
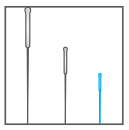
Special features

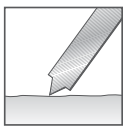
Meeting point with the BL and ST channels. One of the major points for calming the *shen*.









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White Crevice SULIAO Du-25

Location

In a depression on the tip of the nose.

How to find

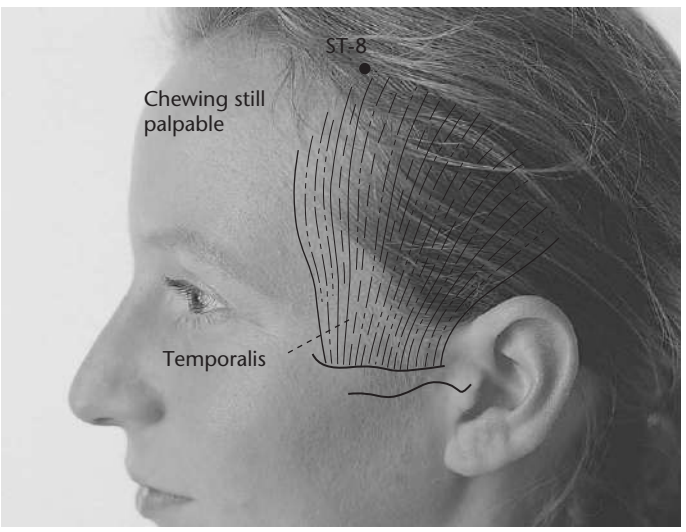
As the name implies, **Du-25** can be located in a depression on the tip of the nose, which generally can be easily palpated.

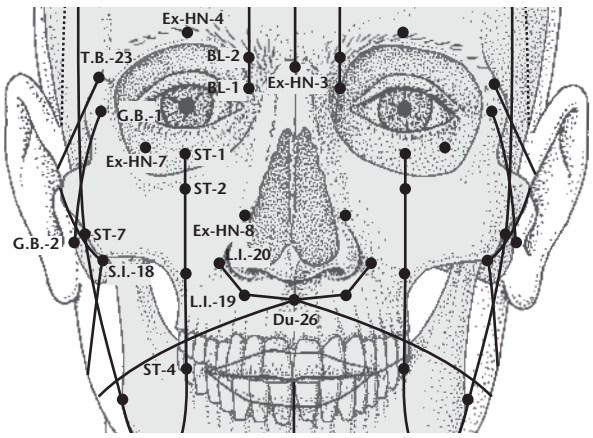
Needling

0.2 cun vertically or transversely (subcutaneously) in a superior direction up to 1 cun. Or prick to bleed. Moxibustion controversial.

Actions/Indications

- Benefits the nose





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Du-26 *Man's Middle* RENZHONG

Location

Below the nose, on the upper third of the philtrum. Note: *shuigou* (Water Grave) is an alternative name for this point.

How to find

Locate the philtrum, which forms a distinct groove on the midline between the root of the nose and the margin of the upper lip. Locate **Du-26** sligthly superior to the midpoint of the philtrum. → **L.I.-19** is located on the same level, 0.5 cun lateral to the midline.

Needling

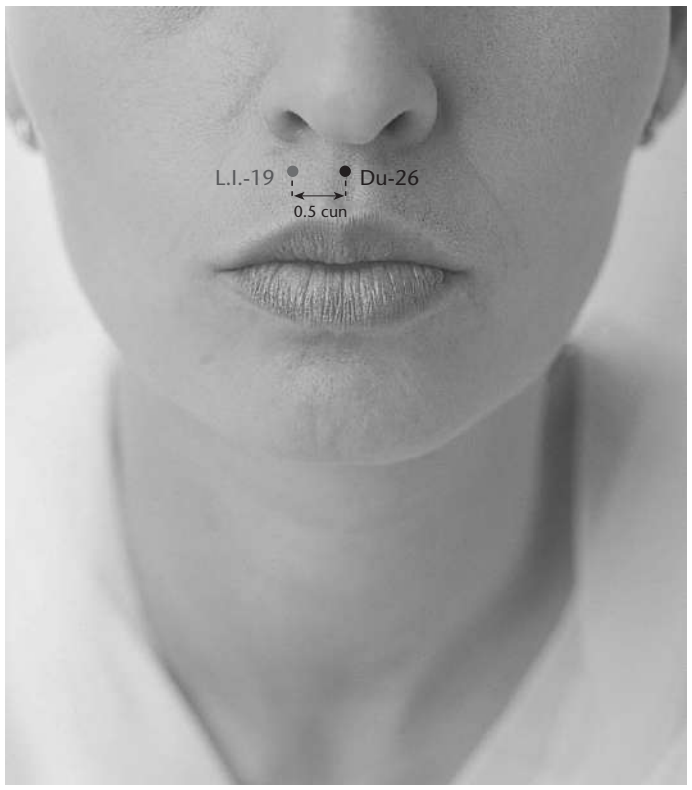
0.3–0.5 cun obliquely in a superior direction. Caution: Needling this point may be painful.

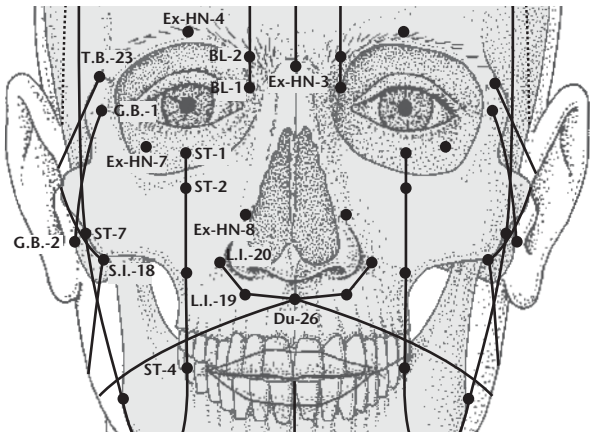
Actions/Indications

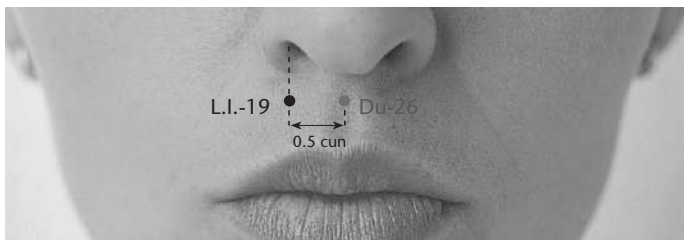
- Revives consciousness
- Benefits the face and nose, eliminates (external) Wind
- Benefits the spine

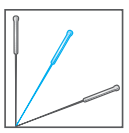
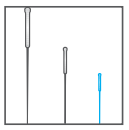
Special features

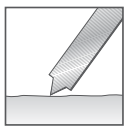
Meeting point with the L.I. and ST channels; Sun Si Miao Ghost point. Major point for acute emergencies: Needle with strongly reducing technique. If no acupuncture needle is available, use a syringe or perform strong acupressure with the nail of the thumb or index finger, supporting the patient's chin with the same hand. Can be used in cases of needle collapse – first remove all other needles.









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Extremity of the Mouth DUIDUAN Du-27

Location

On the midline, on the margin of the upper lip and the philtrum.

How to find

Location help: As the name implies, **Du-27** is located on the midline, at the junction of the upper lip and the philtrum.

Needling

Up to 0.3 cun obliquely in a superior direction. No moxibustion.

Actions/Indications

- Clears Heat
- Moistens the body
- Local point for the mouth
- Calms the *shen*

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Du-28 *Gum Intersection* YINJIAO

Location
On the inside of the upper lip, at the junction of the frenulum and the upper gum.

How to find
Hold the upper lip in a raised position in order to reveal the frenulum and the upper gum. Locate **Du-28** on the midline, at the junction of the frenulum with the upper gum.

Needling
0.1–0.2 cun obliquely in a superior direction or prick to bleed. Do not puncture the frenulum.

Actions/Indications
- Clears Heat (especially from the eyes and the mouth)

Special features
As the name implies, meeting point with the *ren mai* and the ST channel

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5.4 Dai mai

Synonym: Girdling Vessel

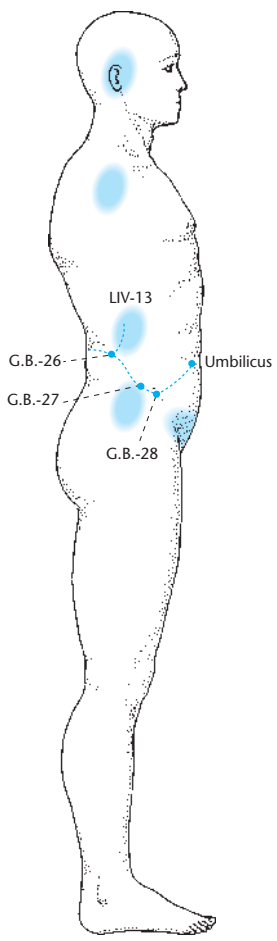
The extraordinary vessel *dai mai* is the only vessel (or channel) with a horizontal pathway (except for *luo*-connecting vessels).

Relationships (→ 1.7.3)

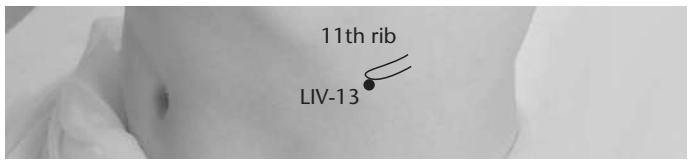
- **Yin/Yang:** *chong mai/dai mai*
- **Central/peripheral:** *dai mai/yang wei mai*. Regions supported by this pairing: lateral eye region as well as temporal region, ears, cheeks, occiput and shoulders. Opening point: **G.B.-41** (*zulinqi*), coupled point: **T.B.-5** (*waiguan*).

Pathway

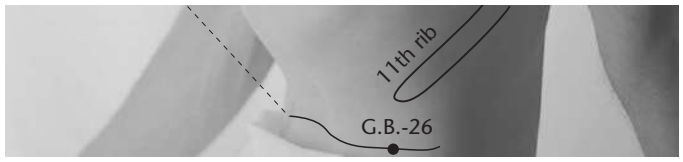
The extraordinary vessel *dai mai* originates in the hypochondrium at the level of L2; according to many other authors it originates at → **LIV-13** (*zhangmen*) at the free end of the 11th rib. It encircles the waist of the body like a belt. As it does so it passes → **G.B.-26** (*dai mai*) at the level of the umbilicus and below the free end of the 11th rib, → **G.B.-27** (*wushu*) and → **G.B.-28** (*weidao*).



Meeting points with other channels

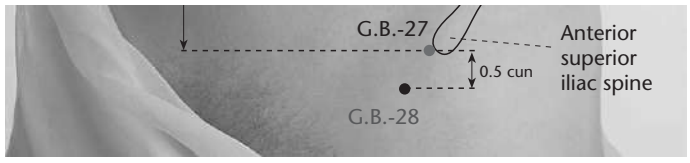


LIV-13 (*zhangmen*): Anterior and inferior to the free end of the 11th rib



G.B.-26 (*daimai*): On the lateral aspect of the waist, at the junction of a vertical line through the free end of the 11th rib and a horizontal line through the umbilicus, approximately 1.8 cun inferior to → **LIV-13**

G.B.-27 (*wushu*): In the depression medial to the anterior superior iliac spine, approximately level with Ren-4



G.B.-28 (*weidao*): Anterior and inferior to the anterior superior iliac spine, 0.5 cun anterior and inferior to G.B.-27

Connections with other channels/Organs

- Gall Bladder and Liver primary channels, Kidney divergent channel
- Kidney, Uterus

Clinical importance (→ 1.7.2, 1.7.3)

- **Controls** and **encircles** the horizontal channels like a belt
- **Connects** the upper and lower halves of the body at the waist
- **Regulates** vaginal discharge
- **Eliminates** Damp-Heat from the Lower Burner, especially from the genitalia
- **Controls** the *shaoyang* channels, especially the G.B. channel

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5.5 *Yin wei mai*

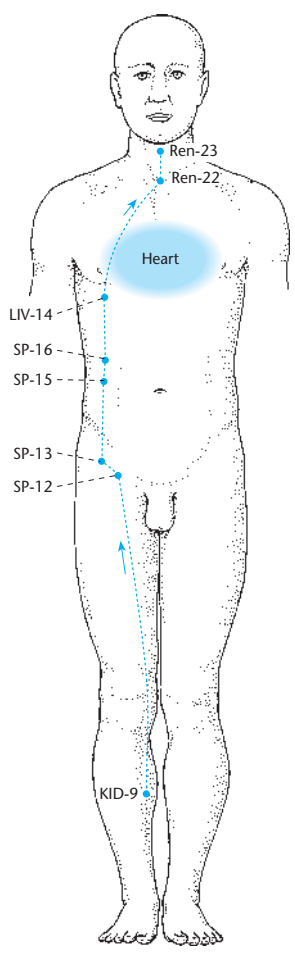
Synonym: Yin Motility Vessel (Deadman), **Yin Heel Vessel** (Maciocia)

Relationships (→ 1.7.3)

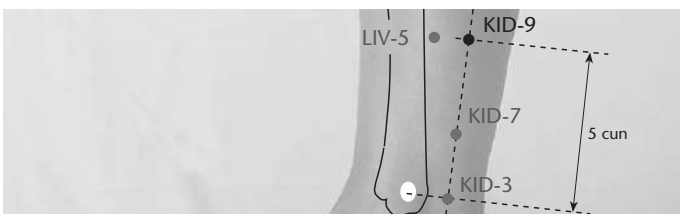
- **Yin/Yang:** *yin wei mai/yang wei mai*
- **Central/peripheral:** *chong mai/yin wei mai*. Regions supported by this pairing: Heart, thorax, Stomach. Opening point: **P-6** (*neiguan*), coupled point: **SP-4** (*gongsun*).

Pathway

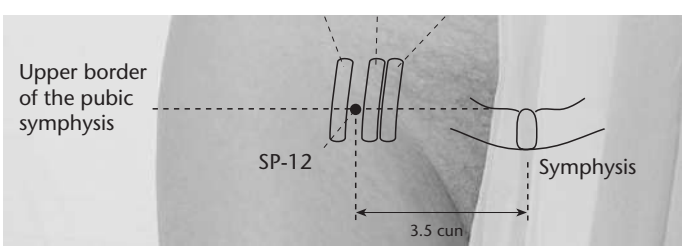
The extraordinary vessel *yin wei mai* originates in the hypochondrium at → **KID-9** (*zhubin*), 5 cun proximal to the prominence of the medial malleolus, ascends the medial aspect of the leg to the inguinal region, follows the Spleen and Liver primary channels, passing the points → **SP-12** (*chongmen*) and → **SP-13** (*fushe*). It then passes → **SP-15** (*daheng*) and → **SP-16** (*fuai*) and again meets with the Spleen and Liver primary channels at → **LIV-14** (*qimen*). The vessel then traverses the thoracic region, passes → **Ren-22** (*tiantu*) in the suprasternal fossa and follows the extraordinary vessel *ren mai* to → **Ren-23** (*lianqiao*) where it terminates.



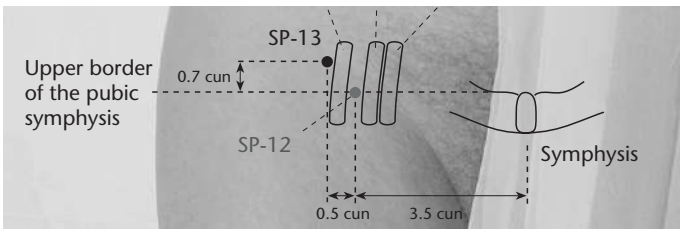
Meeting points with other channels



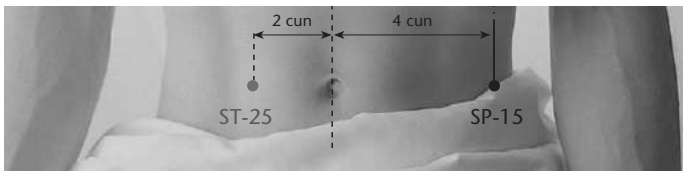
KID-9 (*zhubin*): 5 cun proximal to KID-3 and 2 cun posterior to the medial border of the tibia



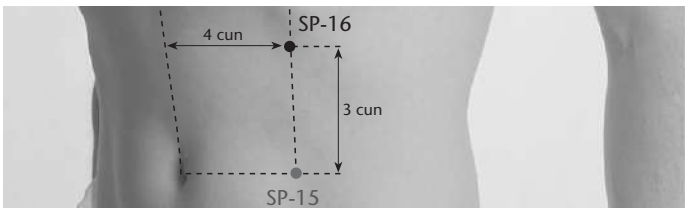
SP-12 (*chongmen*): 3.5 cun lateral to the midline, level with the upper border of the pubic symphysis, lateral to the femoral artery



SP-13 (*fushe*): 4 cun lateral to the anterior midline (mamillary line) and 0.7 cun superior to the upper border of the pubic symphysis



SP-15 (*daheng*): 4 cun lateral to the centre of the umbilicus



SP-16 (*fuai*): 3 cun superior to the centre of the umbilicus and 4 cun lateral to the anterior midline, on the mamillary line

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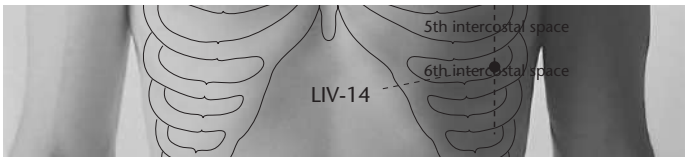
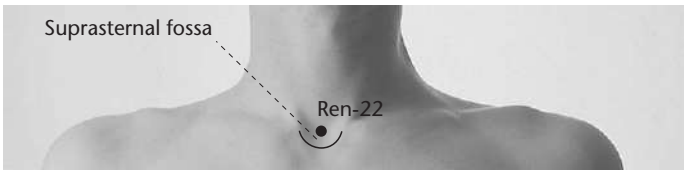
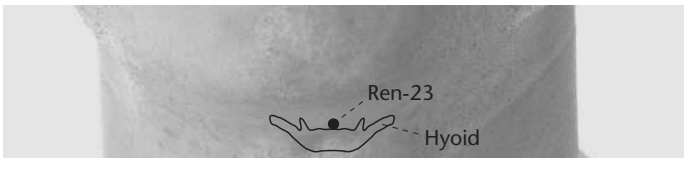


LIV-14 (*qimen*): In the 6th intercostal space, on the mamillary line, 4 cun lateral to the midline.



Ren-22 (*tiantu*): 0.5 cun superior to the sternum, in the centre of the suprasternal fossa



Ren-23 (*lianquan*): On the anterior midline, superior to the upper border of the hyoid bone

Connections with other channels/organs

- Kidney, Spleen and Liver primary channels, *ren mai*
- Internal organs

Clinical importance (→ 1.7.2, 1.7.3)

- **Connects** and **regulates** all **Yin channels** of the body. It connects the KID, SP and LIV channels and the *ren mai* and dominates the **Interior** of the body (the internal organs).
- **Strengthens** Yin and Heart-Blood, especially in women
- **Balances** the emotions

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5.6 *Yang wei mai*

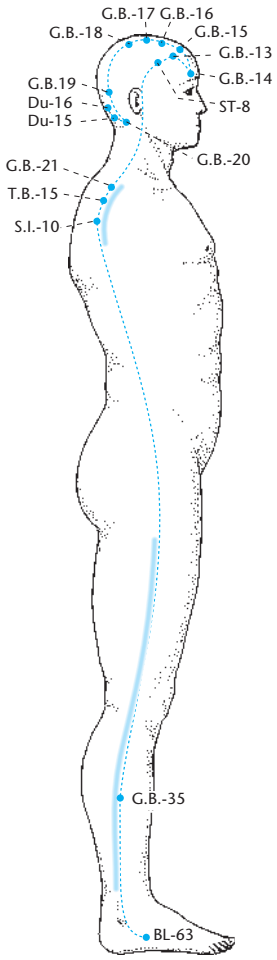
Synonym: Yang Motility Vessel (Deadman), **Yang Heel Vessel** (Maciocia)

Relationships (→ 1.7.3)

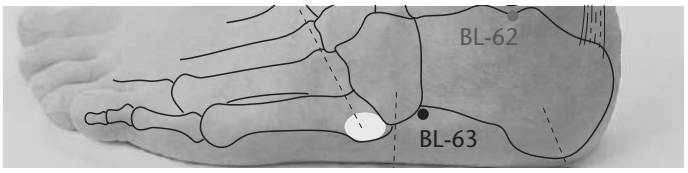
Yin/Yang: *yin wei mai/yang wei mai*
Central/peripheral: *dai mai/yang wei mai*. Regions supported by this pairing: Lateral eye region, temporal region, ears, cheeks, neck and shoulders. Opening point: **T.B.-5** (*waiguan*), coupled point: **G.B.-41** (*zulinqi*).

Pathway

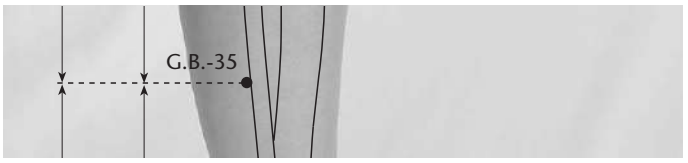
The extraordinary vessel *yang wei mai* originates at → **BL-63** (*jinmen*) in the depression posterior to the tuberosity of the 5th metatarsal bone, runs anterior to the lateral malleolus, passes → **G.B.-35** (*yangjiao*), ascends the lateral aspect of the leg, passes the hip, ascends the posterior aspect of the costal region to the shoulder, passes → **S.I.-10** (*naoshu*), → **T.B.-15** (*tianliao*), → **G.B.-21** (*jianjing*) and ascends the neck. The vessel then ascends anterior to the ear (according to some authors, for example Solinas et al. (1998), posterior to the ear) to the forehead, passing → **ST-8** (*touwei*), → **G.B.-13** (*benshen*) and → **G.B.-14** (*yangbai*). It then runs with the G.B. channel from **G.B.-15** to **G.B.-20** on the occiput, passing → **G.B.-15** (*toulinqi*), → **G.B.-16** (*muchuang*), → **G.B.-17** (*zhengying*), → **G.B.-18** (*chengling*), → **G.B.-19** (*naokong*) and → **G.B.-20** (*fengchi*). The vessel then continues from **G.B.-20** to the posterior midline, passing → **Du-16** (*fengfu*) and → **Du-15** (*yamen*), where the vessel terminates.



Meeting points with other channels



BL-63 (*jinmen*): In a depression anterior and inferior to → **BL-62** between the calcaneus and the cuboid bone, proximal to the tuberosity of the 5th metatarsal bone



G.B.-35 (*yangjiao*): 7 cun proximal to the highest prominence of the lateral malleolus, on the posterior border of the fibula

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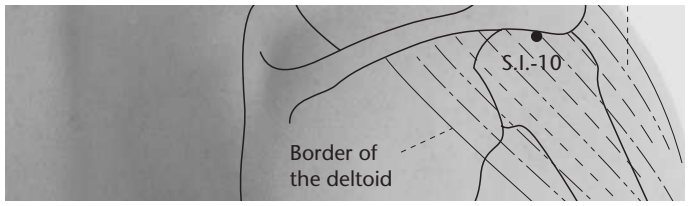
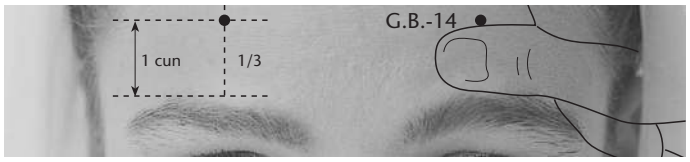
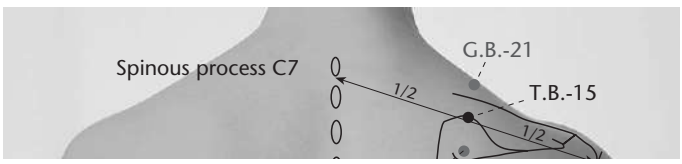


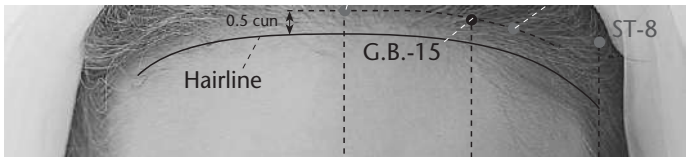
S.I.-10 (*naoshu*): With the arm adducted on a line extending in a superior direction from the posterior axillary fold, on the lower border of the scapular spine



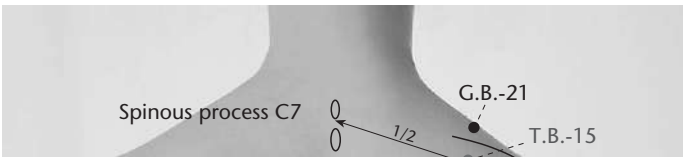
G.B.-14 (*yangbai*): When looking straight ahead on the pupil line, approximately 1 cun superior to the midpoint of the eyebrow, at the junction of the eminence and the superciliary arch



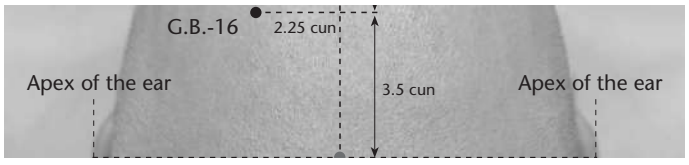
T.B.-15 (*tianliao*): At the midpoint of an imaginary line between the spinous process of the C7 and the lateral extremity of the acromion



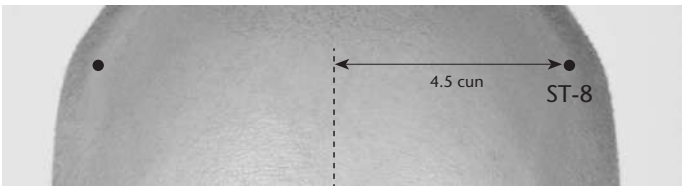
G.B.-15 (*toulinqi*): When looking straight ahead superior to the pupil, 0.5 cun superior to the anterior hairline



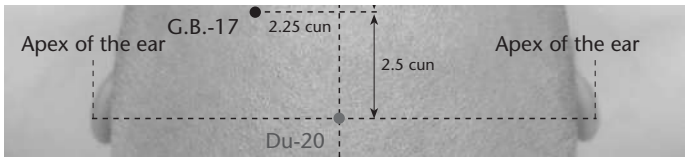
G.B.-21 (*jianjing*): At the highest point of the shoulder, midway between the lower border of the spinous process of C7 and the lateral extremity of the acromion



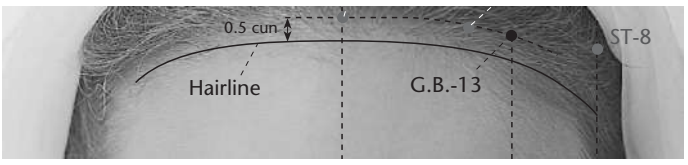
G.B.-16 (*muchuang*): 1.5 cun superior to the anterior hairline, on the pupil line, or 2.25 cun lateral to the midline (= midway between → **Du-24** and → **ST-8**)



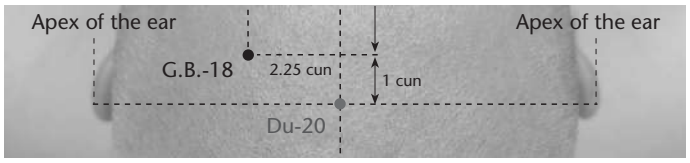
ST-8 (*touwei*): At the temporal corner of the forehead, on the border of the temporalis muscle and 0.5 cun within the anterior hair line or 4.5 cun lateral to the anterior midline (Du-24)



G.B.-17 (*zhengying*): 2.5 cun superior to the anterior hairline and 2.25 cun lateral to the midline



G.B.-13 (*benshen*): 3 cun lateral to → **Du-24** (on the midline, 0.5 cun superior to the anterior hairline)



G.B.-18 (*chengling*): 4 cun superior to the anterior hairline or 1 cun anterior to → **Du-20**, 2.25 cun lateral to the midline

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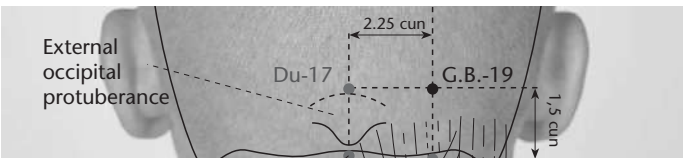
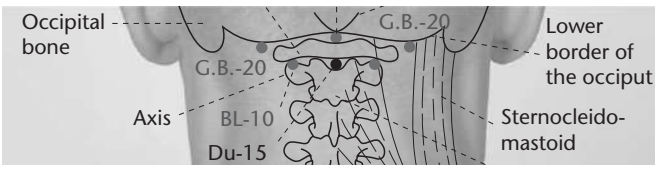
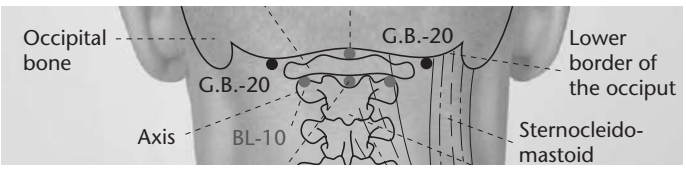


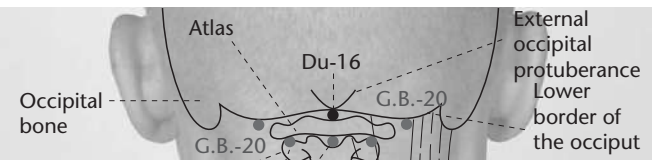
G.B.-19 (*naokong*): On the occiput, level with the upper border of the external occipital protuberance (→ **Du-17**), 2.25 cun lateral to the midline



Du-15 (*yamen*): On the occiput, on the posterior midline, in the depression between the 1st (atlas) and 2nd cervical vertebrae, approximately 0.5 cun below → **Du-16**



G.B.-20 (*fengchi*): On the lower border of the occipital bone, in the depression between the origins of the sternocleidomastoid and trapezius



Du-16 (*fengfu*): On the posterior midline, directly below the external occipital protuberance, in the depression between the origins of the trapezius

Connections with other channels/Organs

- BL, G.B., ST, S.I., T.B. and L.I. primary channels, *du mai*

Clinical importance

- **Connects** and **regulates** all **Yang channels** of the body. It connects the BL, G.B., ST, S.I., T.B. and L.I. channels as well as the *du mai* and controls the Exterior of the whole body (especially the *taiyang* and *shaoyang* channels)
- Harmonises the Nutritive Qi (*ying qi*) and the Defensive Qi (*wei qi*)
- Expels Exterior Wind-Cold, especially with *shaoyang*-syndrome.

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5.7 Yin qiao mai

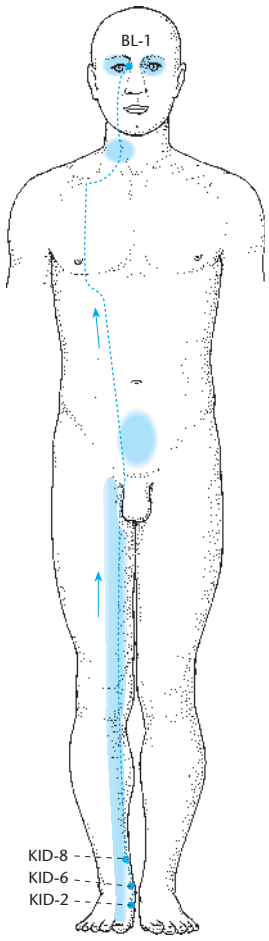
Synonym: Yin Motility Vessel (Deadman), **Yin Heel Vessel** (Maciocia)

Relationships (→ 1.7.2, 1.7.3)

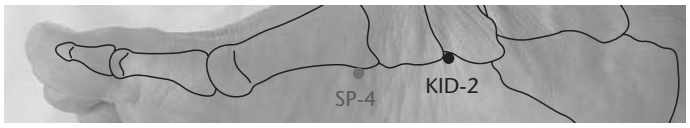
- **Yin/Yang:** *yin qiao mai/yang qiao mai*
- **Central/peripheral:** *ren mai/yin qiao mai*. Regions supported by this pairing: Face, throat, thorax, Lung, diaphragm, abdomen. Opening point: **KID-6** (*zhaohai*), coupled point: **LU-7** (*lieque*).

Pathway

The extraordinary vessel *yin qiao mai* originates at → **KID-2** (*rangu*) inferior to the navicular tuberosity (according to some authors it only begins at → **KID-6**), runs to → **KID-6** (*zhaohai*) and → **KID-8** (*jiaoxin*), ascends the posteromedial aspect of the leg to the external genital region, ascends the abdomen to the thorax, crosses the supraclavicular fossa and continues to the throat and face. It then runs to the inner canthus of the eye where it connects with the Bladder primary channel and the *yang qiao mai* at → **BL-1** (*jingming*). It then ascends to enter the Brain.

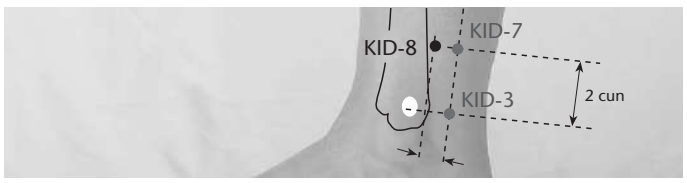


Meeting points with other channels

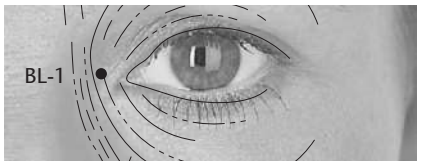


KID-2 (*rangu*): In a depression at the anterior/inferior border of the navicular bone, at the border of the 'red and white' skin

KID-6 (*zhaohai*): In the depression inferior to the highest prominence of the medial malleolus, over the joint space between the talus and calcaneus



KID-8 (*jiaoxin*): 2 cun proximal to the highest prominence of the medial malleolus, posterior to the border of the tibia



BL-1 (*jingming*): In a depression 0.1 cun superior and medial to the inner canthus of the eye

Connections with other channels/Organs

- Kidney and Bladder primary channels
- Brain

Clinical importance (→ 1.7.2, 1.7.3)

- Together with the *yang qiao mai* controls the musculature of the lower extremities
- Together with the *yang qiao mai* regulates the opening and closing of the eyes
- Regulates the functioning of the Brain
- Removes stagnation (of Qi, Blood or Dampness) in the Lower Burner, especially in the Uterus in women

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5.8 *Yang qiao mai*

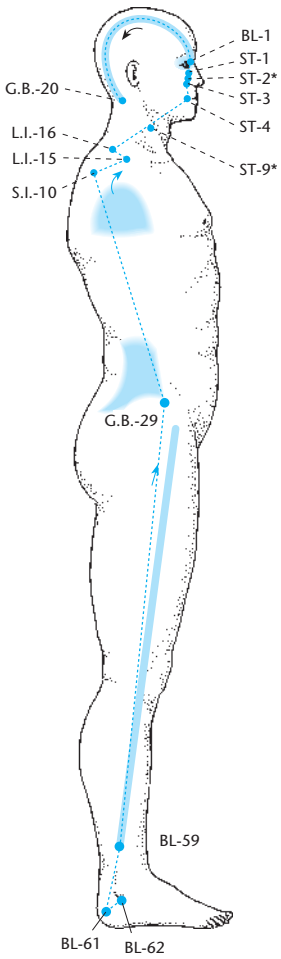
Synonym: Yang Motility Vessel (Deadman), **Yang Heel Vessel** (Maciocia)

Relationships (→ 1.7.3)

- **Yin/Yang:** *yin qiao mai/yang qiao mai*
- **Central/peripheral:** *du mai/yin qiao mai*. Regions supported by this pairing: Inner canthus of the eye, occiput, shoulders and back. Opening point: **BL-62** (*shenmai*), coupled point: **S.I.3** (*houxi*)).

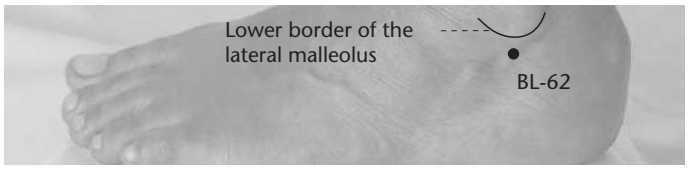
Pathway

The extraordinary vessel *yang qiao mai* originates at → **BL-62** (*shenmai*) below the prominence of the lateral malleolus, curves briefly around the malleolus to → **BL-61** (*pucan*) and ascends anterior to the Achilles tendon to → **BL-59** (*fuyang*), travels up the lateral aspect of the leg, crosses the hip, passing → **G.B.-29** (*juliao*), ascends the flanks and the posterior aspect of the shoulders, passes → **S.I.10** (*naoshu*), continues to → **L.I.-15** (*jianyu*) and runs in a curve to → **L.I.-16** (*jugu*), crosses the supraclavicular fossa, ascends the throat, according to some authors passing → **ST-9** (*renying*), and reaches the face. Here the vessel passes the points → **ST-4** (*dicang*) and → **ST-3** (*juliao*); according to some authors also → **ST-2** (*sibai*) and → **ST-1** (*chengqi*) in the infraorbital region. It then reaches → **BL-1** (*jingming*), where it meets the extraordinary vessel *yin qiao mai*, ascends the forehead to the vertex and descends posteriorly to → **G.B.-20** (*fengchi*); according to the *Nan Jing* and the *Nei Jing* it also reaches → **Du-16** (*fengfu*), where it enters the Brain.

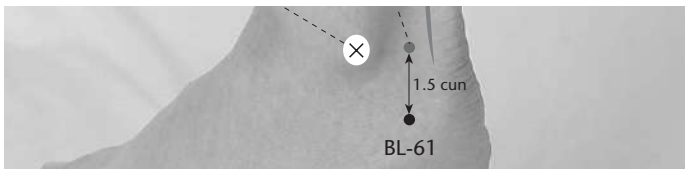


* According to Deadman et al 1998.

Intersection points with other channels



BL-62 (*shenmai*): In a depression directly inferior to the highest prominence of the lateral malleolus, over the joint space between the talus and calcaneus



BL-61 (*pucan*): In a depression on the calcaneus, approximately 1.5 cun inferior to → **BL-60**

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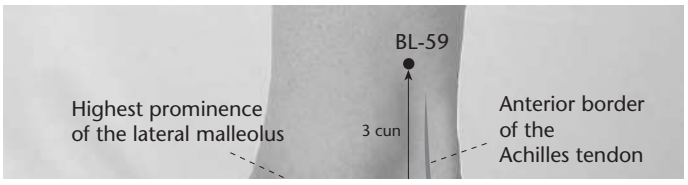
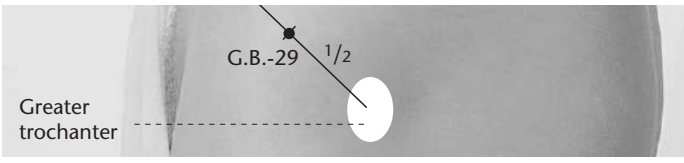
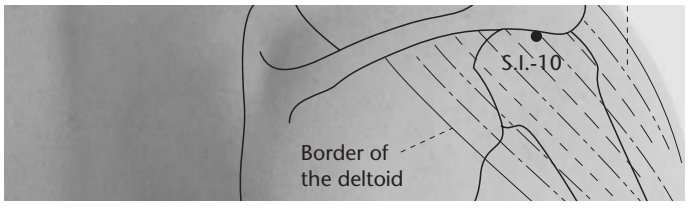


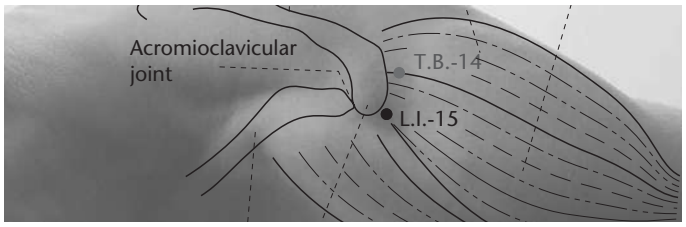
BL-59 (*fuyang*): 3 cun superior to → BL-60 (in the depression between the highest prominence of the lateral malleolus and the Achilles tendon)



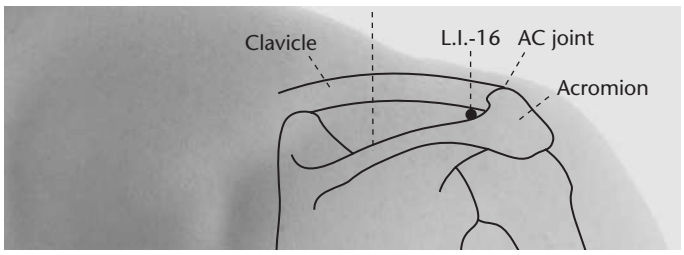
G.B.-29 (*juliao*): At the midpoint of a line connecting the anterior superior iliac spine and the greater trochanter, at the anterior border of the iliac crest



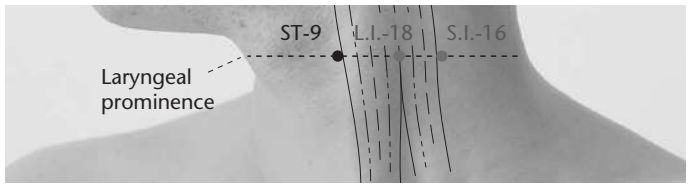
S.I.-10 (*naoshu*): With the arm adducted on a line extending in a superior direction from the posterior axillary fold, on the lower border of the scapular spine



L.I.-15 (*jianyu*): In the depression distal and anterior to the acromion, between the clavicular and acromial portions of the deltoid muscle

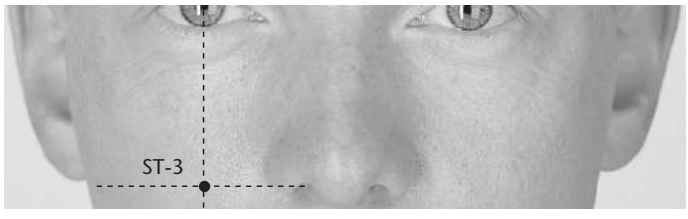


L.I.-16 (*jugu*): In a depression between the acromial extremity of the clavicle and the junction of the scapular spine and the acromion

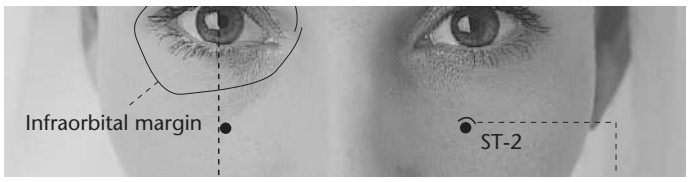


ST-9 (*renying*): Approximately 1.5 cun lateral to the anterior midline, level with the laryngeal prominence, at the anterior border of the sternocleidomastoid

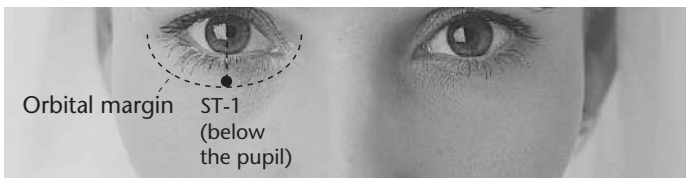
ST-4 (*dicang*): When looking straight ahead on the pupil line, approximately 0.4 cun lateral to the corner of the mouth



ST-3 (*juliao*): When looking straight ahead, directly below the centre of the pupil, level with the lower border of the ala nasi



ST-2 (*sibai*): When looking straight ahead, directly below the centre of the pupil, in the depression at the infraorbital foramen



ST-1 (*chengqi*): With the eyes looking straight forward, directly below the centre of the pupil, between the eyeball and the infraorbital ridge

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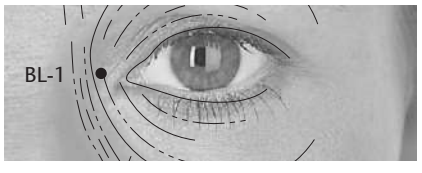
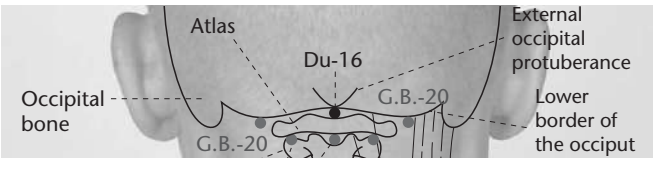
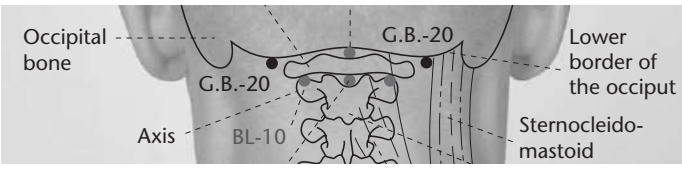


BL-1 (*jingming*): In a depression 0.1 cun superior and medial to the inner canthus of the eye



Du-16 (*fengfu*): On the posterior midline, directly below the external occipital protuberance, in the depression between the origins of the trapezius



G.B.-20 (*fengchi*): On the lower border of the occipital bone, in the depression between the origins of the sternocleidomastoid and trapezius

Connections with other channels/Organs

- Kidney, Bladder, Gall Bladder, Stomach, Large Intestine and Small Intestine primary channels
- Brain

Clinical importance (→ 1.7.2, 1.7.3)

- Together with the *yin qiao mai* controls the musculature of the lower extremities
- Together with the *yang qiao mai* regulates the opening and closing of the eyes
- Regulates the functioning of the Brain, eliminates internal and external Wind from the head
- Removes obstructions and stagnation from the spine, especially after traumatic injuries

6 Extra Points

Claudia Focks, Ulrich März

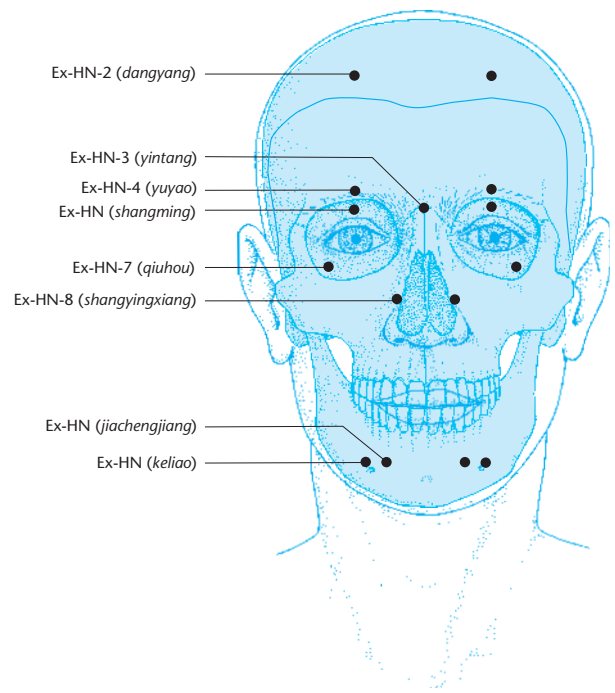
Besides the 361 classic acupuncture points located on the channels there are a number of **Ex**tra Points (**Ex**), located with a few exceptions outside the pathways of the primary channels. In 1991, a new nomenclature for these extra points was confirmed in the People's Republic of China, listing 48 points (*The Location of Acupoints, State Standard of the People's Republic of China*, Foreign Languages Press, Beijing, 1990).

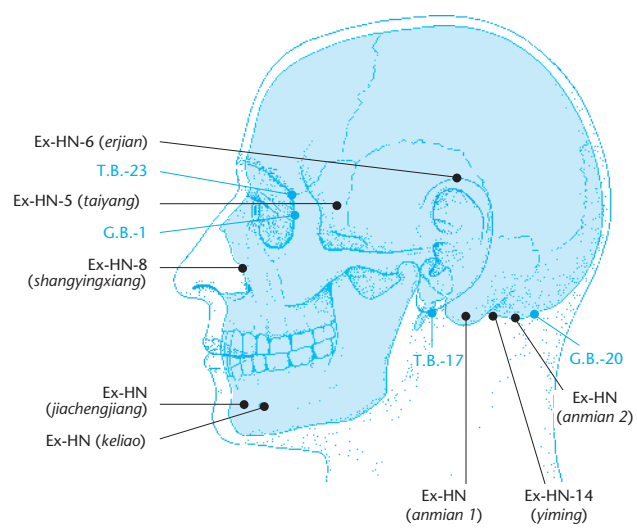
In the past, authors have developed ways of identifying the extra points by names or numbers:

- Nguyen Van Nghi; König and Wancura: '**P**unkte **a**ußerhalb der **M**eridiane' (points not on meridians) (PaM) and '**N**eu-**P**unkte' (new points) (NP); Schnorrenberger (wall charts translated from the Chinese language) uses the same numbering system as Nguyen Van Nghi but refers to the **PaM** as '**Z**usatz**p**unkte' (additional points) (ZP) and also as '**N**eu-**P**unkte' (NP)
- Shanghai College for Traditional Medicine (*Acupuncture – a Comprehensive Text*, English translation by O'Connor J, Bensky D, which also forms the foundation for Deadman et al. 1998 and Ellis and Wiseman 1991): **M**iscellaneous (M) and **N**ew (N) Points
- Hempen 1995: '**E**xtrapunkte' (extra points) (Ex).

The following tables give an overview of the most commonly used extra points also listed in this atlas.

6.1 Extra Points: Head and Neck (EX-HN)





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English abbreviation (standard)	*Pinyin* name	Nguyen Van Nghi, König and Wancura, Schnorrenberger	Shanghai College	Ex (Hempen)
Ex-HN-1	*sishencong*	PaM or ZP1	M-HN-1	Ex6
Ex-HN-2	*dangyang*		M-HN	
Ex-HN-3	*yintang*	PaM or ZP3	M-HN-3	Ex1
Ex-HN-4	*yuyao*	PaM or ZP6	M-HN-6	
Ex-HN-5	*taiyang*	PaM or ZP9	M-HN-9	Ex2
Ex-HN-6	*erjian*	PaM or ZP10	M-HN-10	
Ex-HN-7	*qiuhou*	PaM or ZP8	M-HN-8	
Ex-HN-8	*shangyingxiang/bitong*	NP12 (PaM or ZP14*)	M-HN-14	Ex3
Ex-HN-9	*neiyingxiang*		M-HN-35	
Ex-HN-10	*juquan*		M-HN-36	
Ex-HN-11	*haiquan*		M-HN-37	
Ex-HN-12	*jinjin*†	PaM or ZP20	M-HN-20	
Ex-HN-13	*yuye*†	PaM or ZP20	M-HN-20	
Ex-HN-14	*yiming*	PaM or ZP13	M-HN-13	Ex4
Ex-HN-15	*jing(bailao)*	PaM or ZP30	M-HN-30	
Further extra points				
Ex-HN	*shangming*		N-HN-4	
Ex-HN	*anmian*‡	NP27 and 28 (*anmian*‡1 und 2)	N-HN-54 M-HN-54 (Deadman)	Ex5
Ex-HN	*jiabi*	PaM or ZP15		
Ex-HN	*jiachengjiang*	PaM or ZP18 (*heliao/keliao*)	M-HN-18	Ex7
Ex-HN	*chonggu/zhuidong*	PaM or ZP31	M-HN-31	
Ex-HN	*jingbi*		M-HN-41	

* Nguyen Van Nghi and Schnorrenberger describe a different location for the point with this *pinyin* name (location: 0.5 cun inferior to the inner canthus of the eye); the 'standard' location is described under NP12 as '*bitong*' or '*bicong*'.

† The Shanghai nomenclature and also Nguyen Van Nghi, König and Wancura and Schnorrenberger describe the extra points *jinjin* and *yuye* as a pair of points.

‡ There exists differing information regarding the extra point *anmian*; for example the Shanghai College (and Wiseman) describe *anmian* as N-HN-54 (in Deadman: M-HN-54) with the following location: midway between G.B.-20 and T.B.-17; Nguyen Van Nghi and Schnorrenberger describe *anmian* as two new points with the following locations: *anmian* 1 is located midway between T.B.-17 and *yiming* (PaM13 or Ex-HN-14), *anmian* 2 midway between G.B.-20 and *yiming* (*anmian* according to the Shanghai College is shown on the point page; the location of *anmian* 1 and 2 according to Nguyen and Schnorrenberger in figure 6.1).

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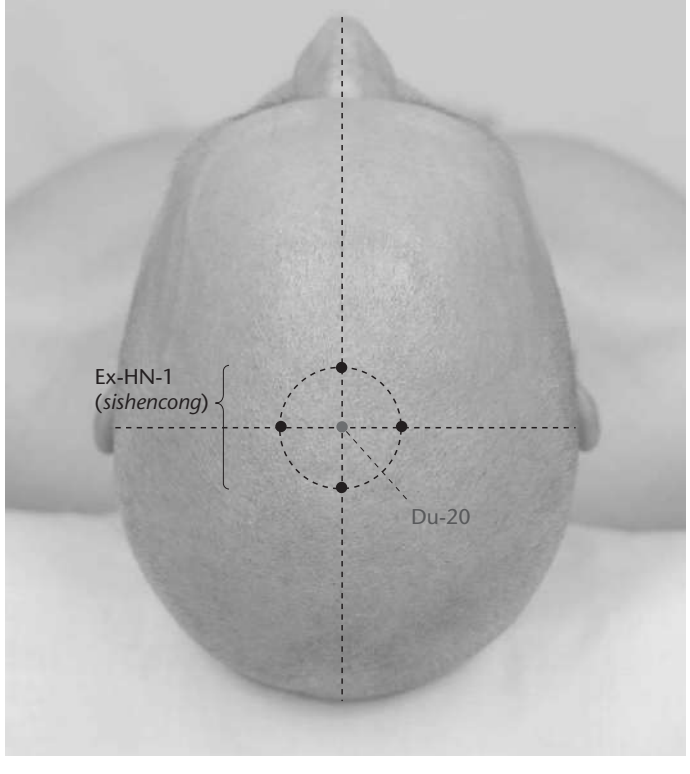
Four Alert Spirit SISHENCONG Ex-HN-1



Location

A group of four points, each located 1 cun from ➞ **Du-20** (anterior, posterior and lateral) (➞ 3.1.1).

How to find

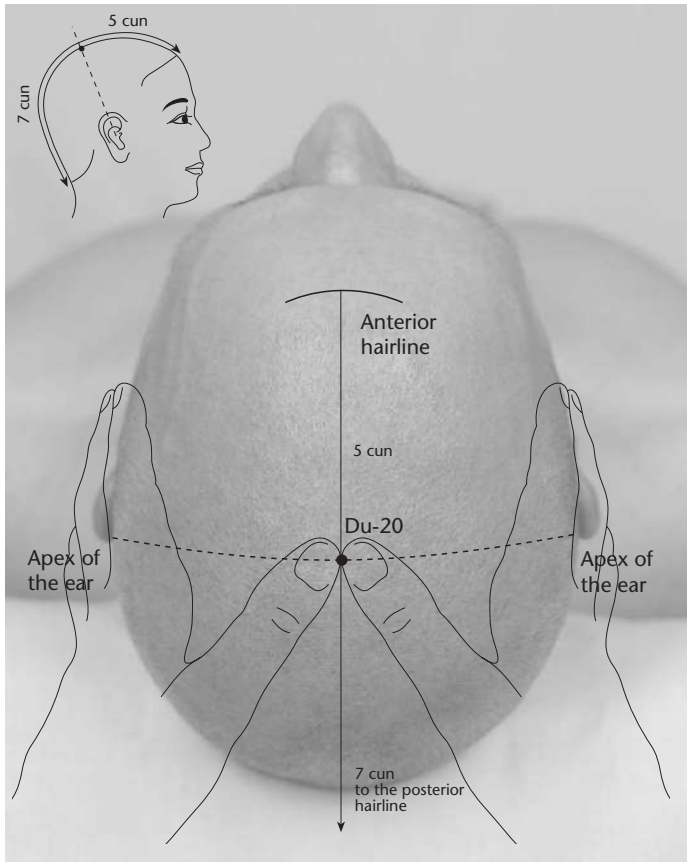
First, locate ➞ **Du-20** on the highest point of the head, at the junction of a line connecting the apices of the ears and the vertical midline. Alternative location method: Locate ➞ **Du-20** 5 cun superior to the anterior and 7 cun superior to the posterior hairline. **Ex-HN-1** (*sishencong*) forms a star-shaped group of points around ➞ **Du-20**: two points are located at a distance of 1 cun each on the *du mai*, whereas the other two are located 1 cun each from ➞ **Du-20** in a lateral direction.

Needling

0.5–1 cun obliquely towards ➞ **Du-20**

Actions/Indications

- Calm the *shen*
- Alleviate pain
- Calm Wind
- Benefit the eyes and ears



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Ex-HN-2 *Above the Yang* DANGYANG

Location

With the patient looking straight ahead, vertically above the pupil, 1 cun above the anterior hairline.

How to find

In patients with a receding hairline, the original hairline can often be recognized by a change in skin texture. Location help (→ 3.1.1): Ask the patient to frown, as this often reveals the site of the original hairline. Ask the patient to look straight ahead, then locate **Ex-HN-2** by measuring 1 cun from the hairline, on a vertical line through the pupil.

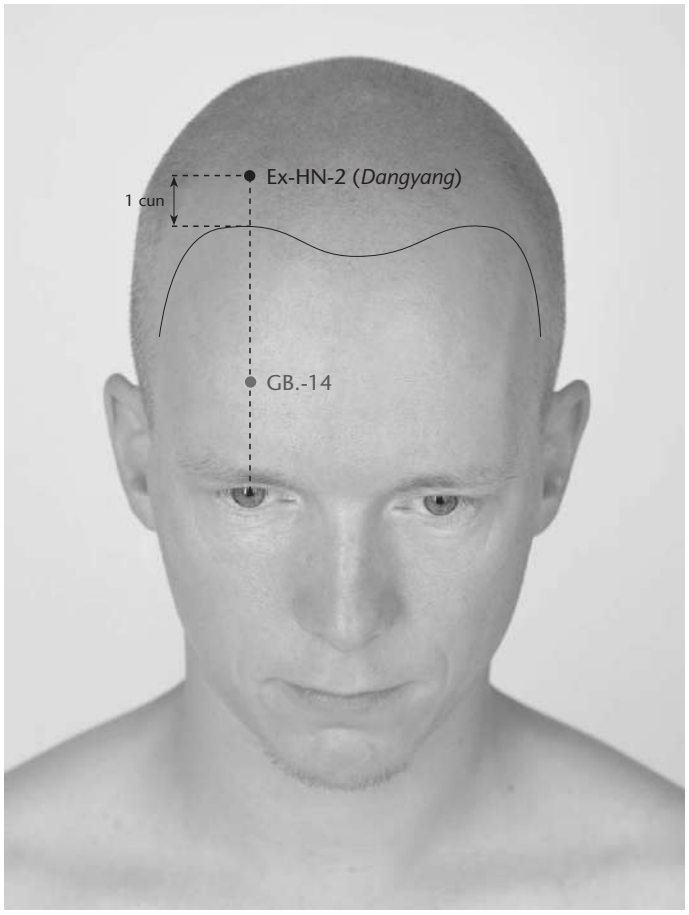
→ **G.B.-14** is also located on the pupil line (on the lower border of the frontal eminence). Located on the same level (1 cun above the hairline) are → **BL-5** (more medial, 1.5 cun from the anterior midline) and → **Du-23** (on the anterior midline).

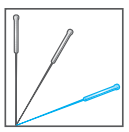
Needling

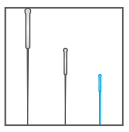
0.5 cun transversely (subcutaneously) towards the site of the disorder/pain.

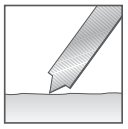
Actions/Indications

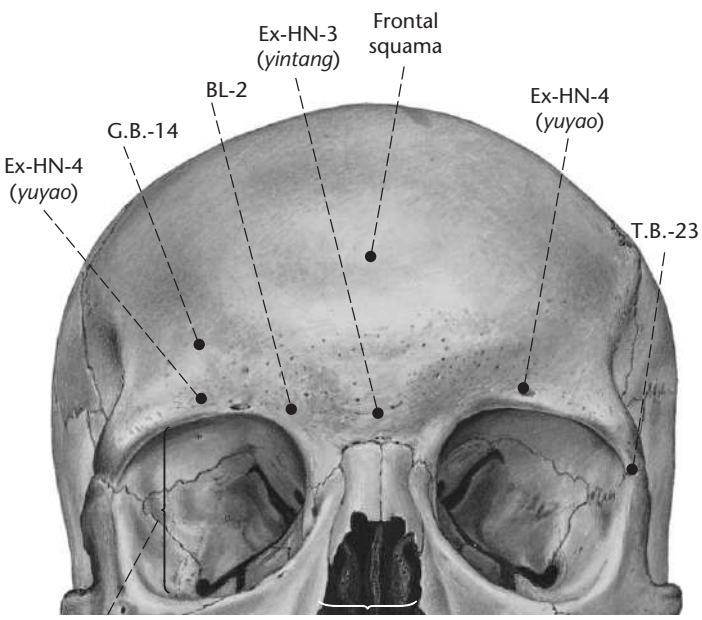
- Dispels Wind and Heat, alleviates pain

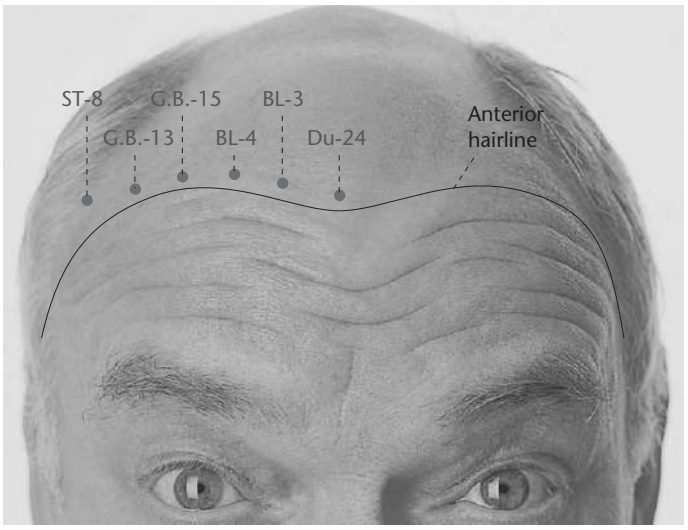


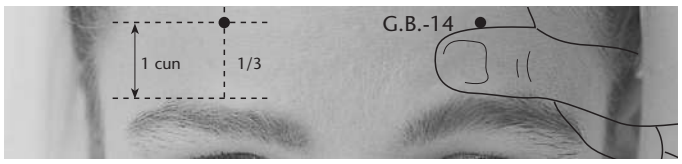


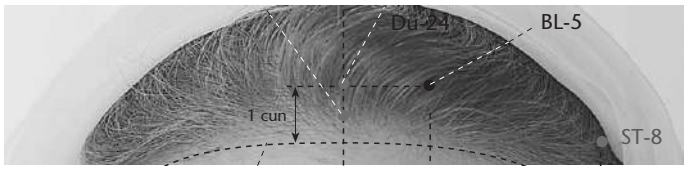












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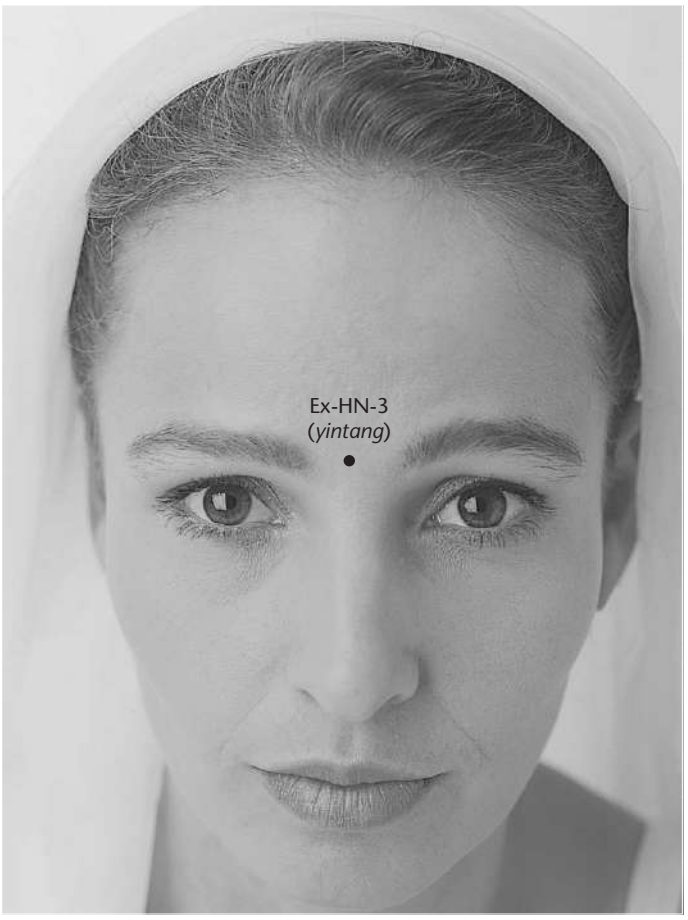
Hall of Impression YINTANG Ex-HN-3



Location

On the anterior midline (*du mai*), between the eyebrows.

How to find

Locate the glabella (→ 3.1.1), a smooth surface on the frontal bone, directly above the root of the nose, between the superciliary arches. Then locate **Ex-HN-3** (*yintang*) in its centre, on the midline and between the medial extremities of the eyebrows. Located along the superciliary arches (from medial to lateral) are → **BL-2,** → **Ex-HN-4** (*yuyao*) and → **T.B.-23**.

Needling

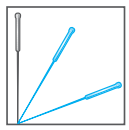
Pinching-skin method: With the thumb and index finger, form a skin fold above the point and insert the needle 0.3–0.5 cun transversely from superior to inferior into the fold, towards the root of the nose. Alternative methods: Oblique or transverse (subcutaneous) insertion towards the eyebrows (→ **BL-2**) or prick to bleed.

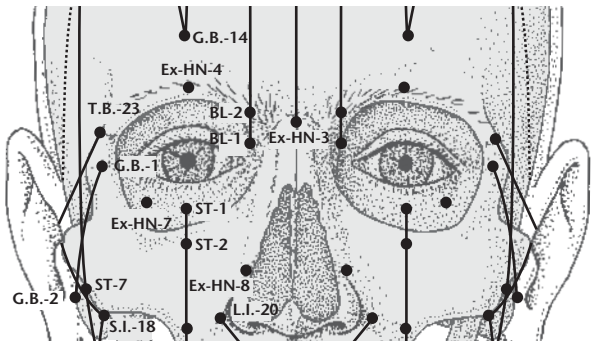
Actions/Indications

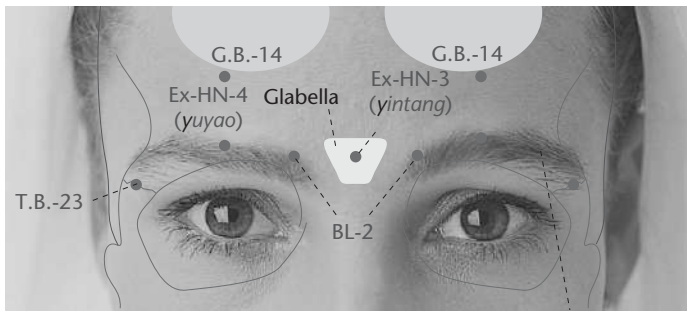
- Calms the *shen*
- Benefits the nose
- Eliminates (internal) Wind
- Opens the channel, alleviates pain

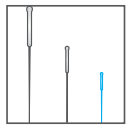
Special features

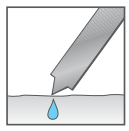
Commonly used extra point with a harmonising effect











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Ex-HN-4 *Fish Waist* YUYAO

Location

In the centre of the eyebrow, with the eyes looking straight ahead directly above the pupil.

How to find

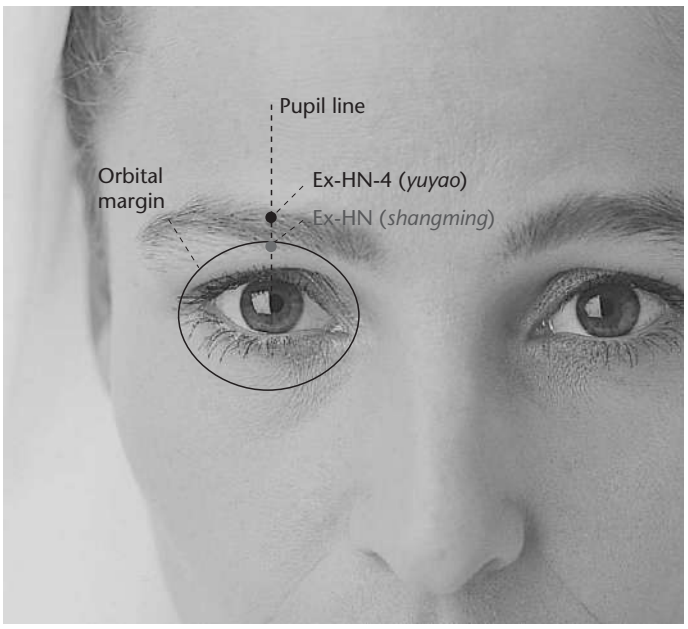
With the patient looking straight ahead, palpate the eyebrow directly above the pupil, superior to the supraorbital ridge. There, locate **Ex-HN-4** (*yuyao*) in a small depression on the superciliary arch.

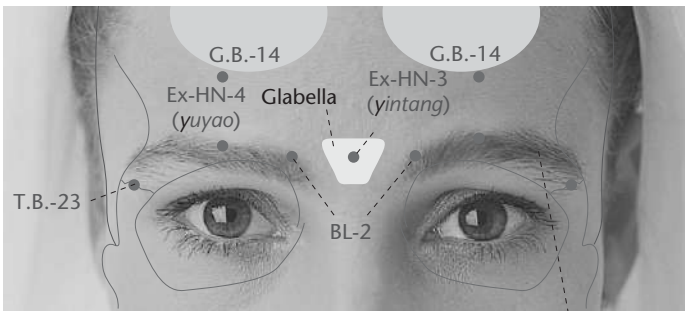
Needling

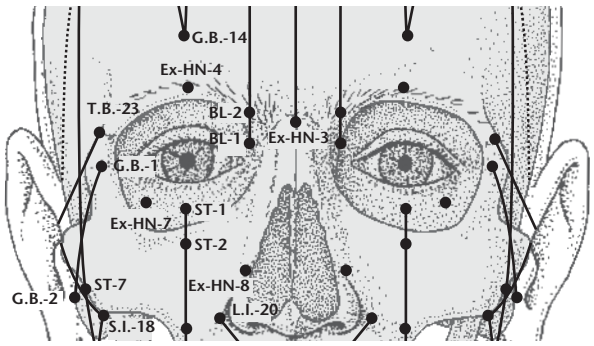
0.3–0.5 cun vertically or obliquely towards the eye.

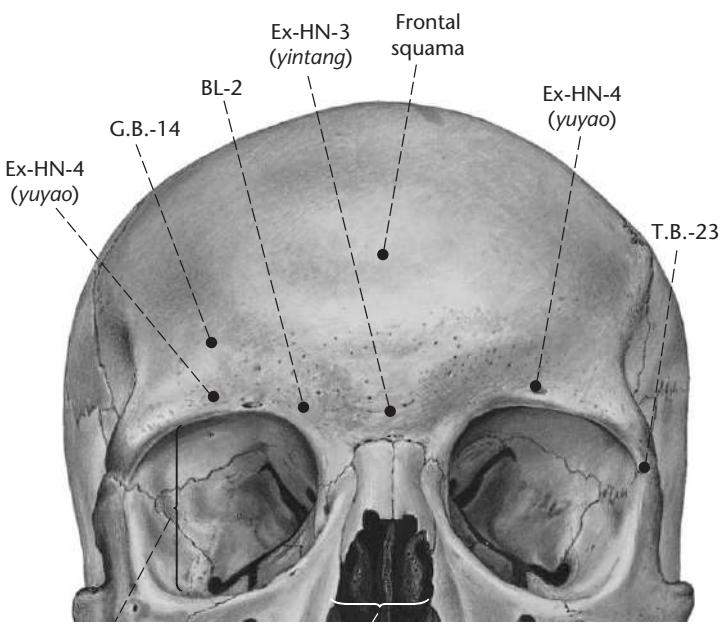
Actions/Indications

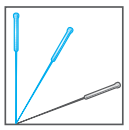
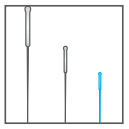
- Benefits the eyes
- Dispels pain

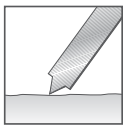










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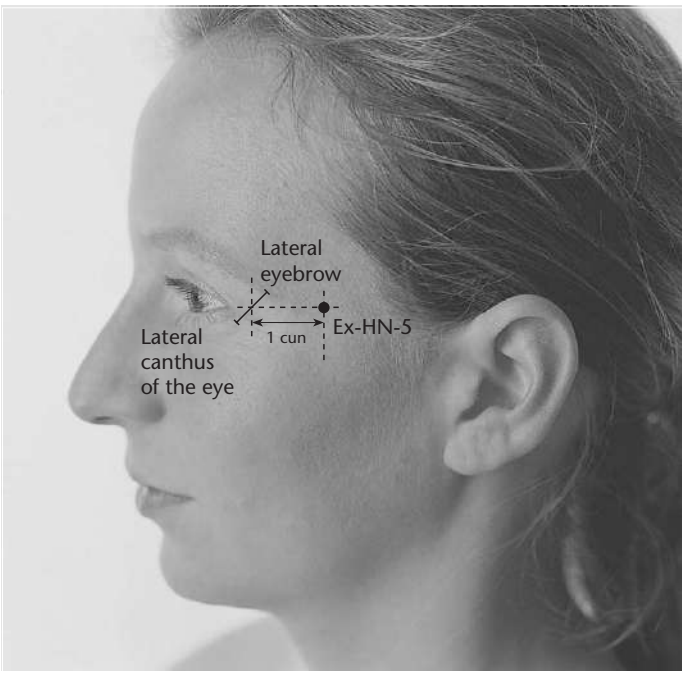
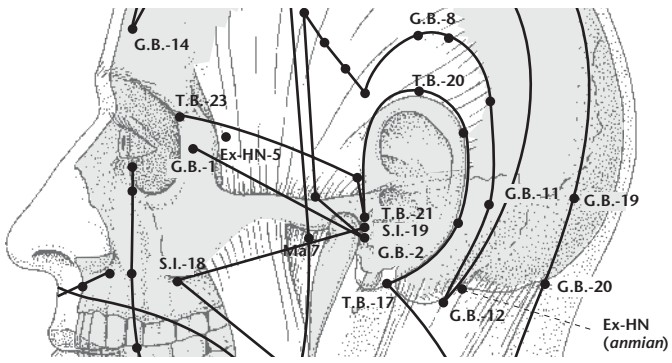
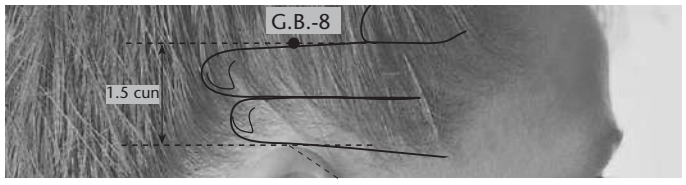
Supreme Yang TAIYANG Ex-HN-5







Location

On the temple, in a depression approximately 1 cun lateral to the midpoint of a line connecting the lateral extremity of the eyebrow and the outer canthus of the eye.

How to find

On the temple, first, draw a line between the lateral extremity of the eyebrow and the outer canthus of the eye. Next, palpate from the midpoint of this line in a lateral direction, until you can feel a distinct depression in the temporal bone. **Ex-HN-5** (*taiyang*) is located in the centre of this depression. This point tends to be pressure-sensitive, especially with temporal headaches. Patients often get relief by using acupressure on this point.

Needling

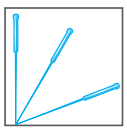
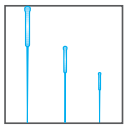
0.5–0.6 cun vertical insertion into the temporal muscle or obliquely in a lateral direction or transversely (subcutaneously) towards → **G.B.-8.** This point often bleeds when needled. Prick to bleed to drain Heat.

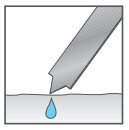
Actions/Indications

- Eliminates Wind, clears Heat, reduces swellings, opens the channel, alleviates pain

Special features

One of the most important and most commonly used extra points, especially with headaches



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Ex-HN-6 *Tip of the Ear* ERJIAN

Location

On the apex of the ear, on the helix.

How to find

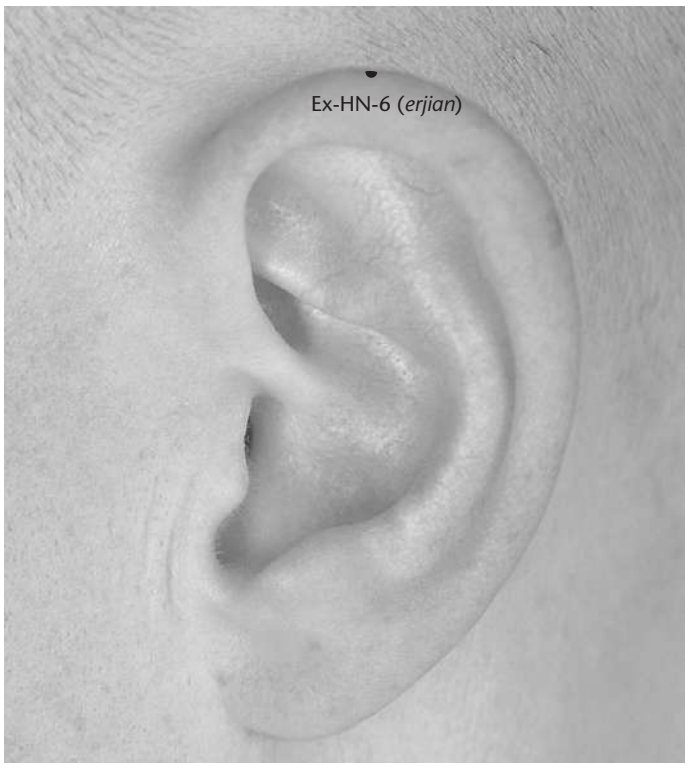
Fold the ear anteriorly, so that the posterior portion of the upper helix covers its anterior part. The point is located at the highest point of the fold. This is also the location of the auricular point **78**.

Needling

Vertically 0.1–0.2 cun. Some authors advise to bleed this point for Heat conditions, but this is not recommended owing to the danger of causing an otic haematoma. Indirect moxibustion for vision disorders.

Actions/Indications

- Clears Heat, alleviates pain, benefits the eyes and the throat



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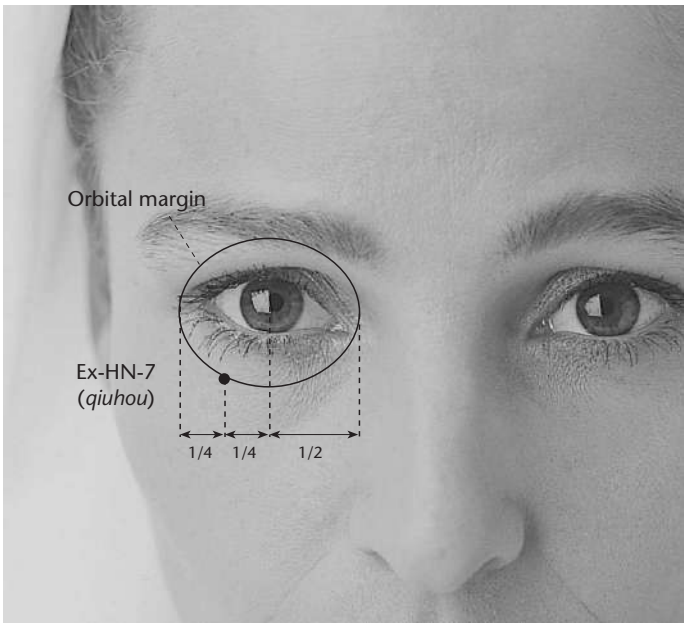
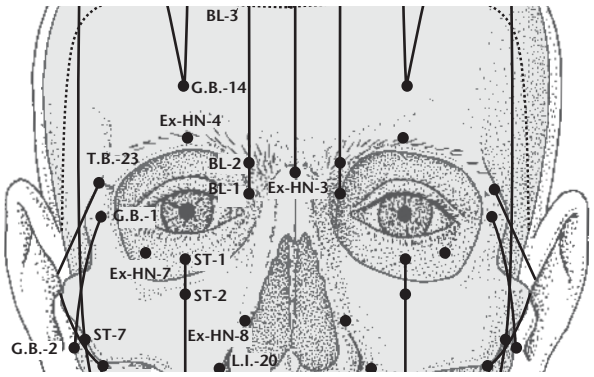
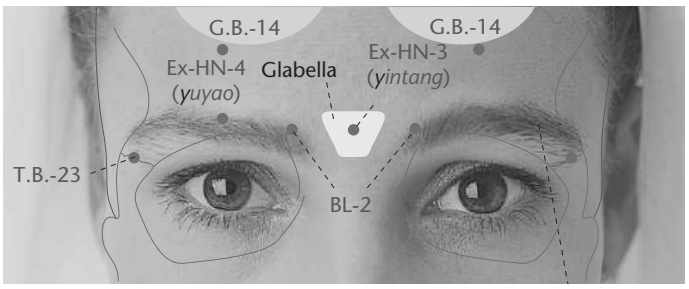
Behind the Ball QIUHOU Ex-HN-7







Location

On the lower border of the orbit, at the junction of the lateral quarter and the medial three quarters.

How to find

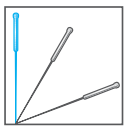
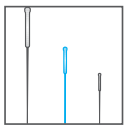
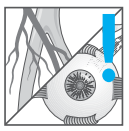
Divide the horizontal extension of the diameter of the orbit in quarters. Then locate the point at the junction of the first and second lateral quarters, slightly superior to the border of the orbit.

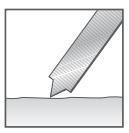
Needling

Ask the patient to look upward and gently push the eyeball upward, away from the lower eyelid. Slowly insert the needle 0.5–1 cun into the fatty tissue immediately above the bone (orbit). Caution: Do not injure the eyeball and the periosteum. Avoid the venous plexus and arteries! Pay attention to any pain from needling. No needle manipulation! After removal of the needle, compress the site for 10 minutes. Haematomas may still occur (inform the patient prior to needling). Moxibustion is contraindicated. Alternative, less difficult points for eye disorders: **BL-2, T.B.-23**, **G.B.-1**, **ST-2, Ex-HN-5** (*taiyang*), **Ex-HN-4** (*yuyao*).

Actions/Indications

- Disorders of the eyes



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Ex-HN-8 *Upper* Yingxiang SHANGYINGXIANG

Location

At the upper end of the nasiolabial groove, at the junction of the maxilla and the nasal cavity. Note: *bitong* (Clear Nose) is an alternative name for this point.

How to find

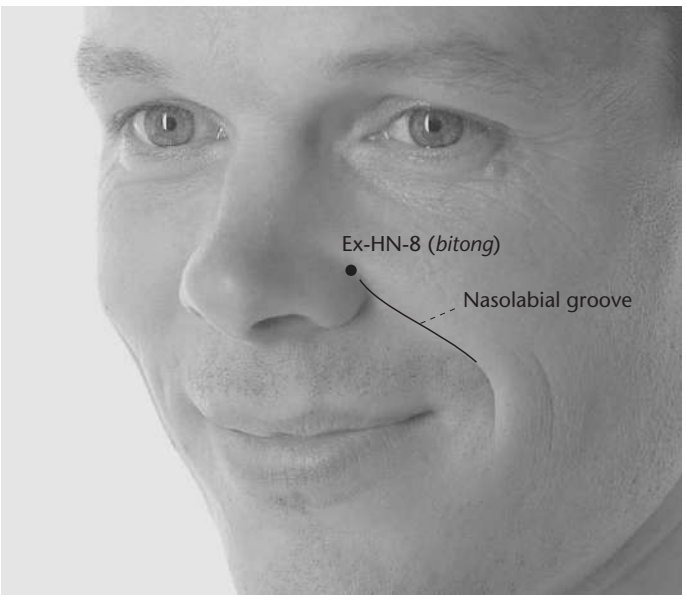
At the upper end of the nasiolabial groove, palpate for the bony margin of the nasal cavity. Here, **Ex-HN-8** (*shangyingxiang* or *bitong*) is located at the junction of the nose and the cheek.

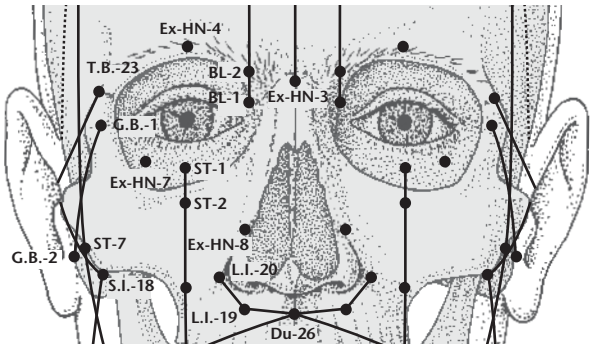
Needling

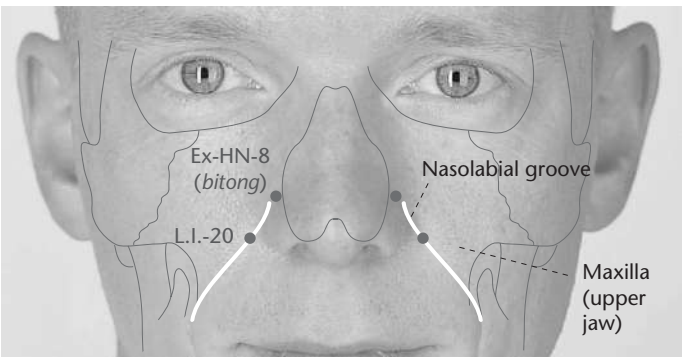
0.3–0.5 cun vertically towards the centre of the nasal cavity.

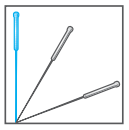
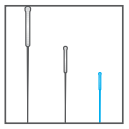
Actions/Indications

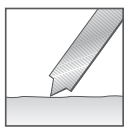
- Clears Heat, opens the nasal passages









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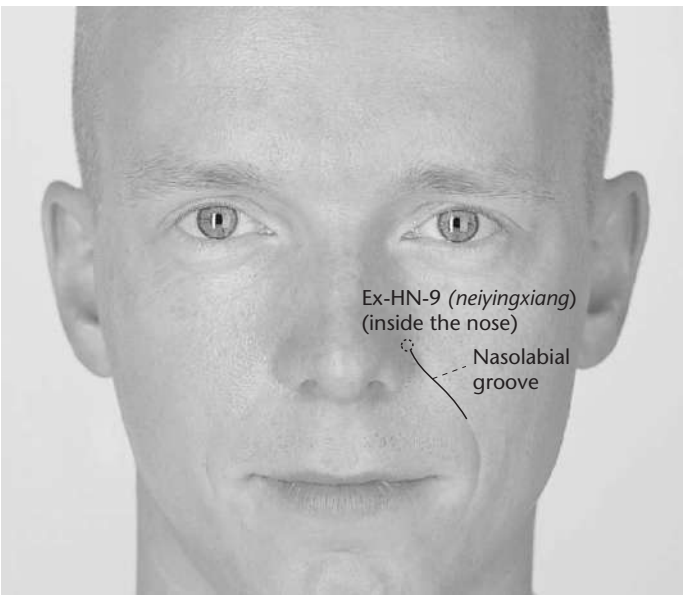
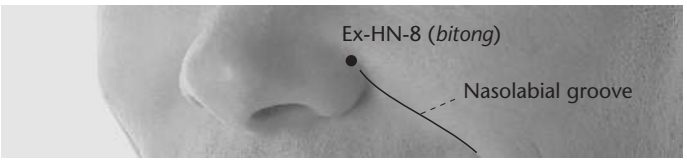
Inner Yingxiang NEIYINGXIANG Ex-HN-9





Location

In the nasal cavity, at the junction of the nasal bone and the nasal cartilage.

How to find

This point lies 'opposite' the external point → **Ex-HN-8** (*shang-yingxiang* or *bitong*), which is located at the upper end of the nasolabial groove.

Needling

Prick to bleed with a needle, lancet or three-edged needle. Caution: Contraindicated in patients with bleeding disorders (or taking anticoagulants). Needling may be painful!

Actions/Indications

- Clears Heat, drains Fire

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Ex-HN-10 *Gathering Spring* JUQUAN

Location

With maximal extension of the tongue, in the centre of the tongue body.

How to find

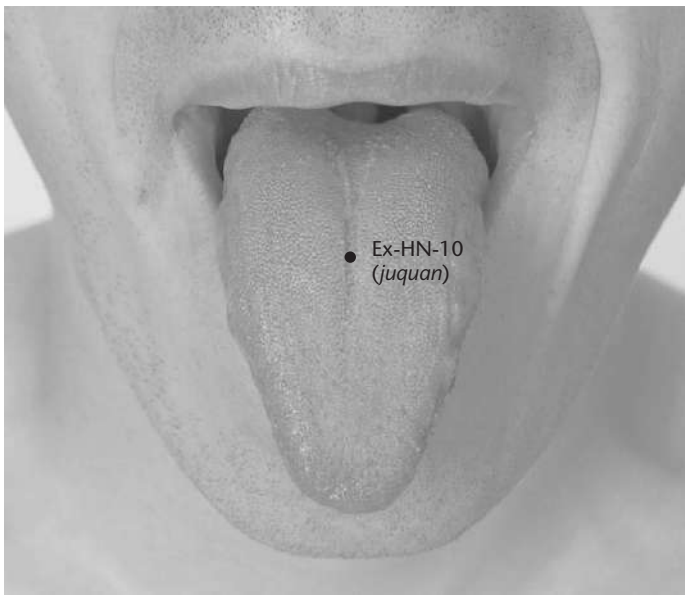
With maximal extension of the tongue in the centre of the tongue body.

Needling

Vertically 0.2 cun. Needling may be painful!

Actions/Indications

- Deviation of the tongue, impaired mobility or atrophy of the musculature of the tongue: for example, after a stroke or with loss of sense of taste



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Sea Spring HAIQUAN Ex-HN-11

Location

Below the tongue, in the centre of the frenulum, between the points ➞ **Ex-HN-12** (*jinjin*) and ➞ **Ex-HN-13** (*yuye*).

How to find

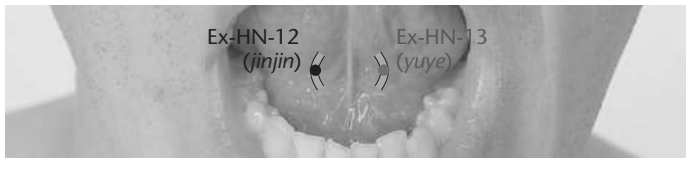
Ask the patient to roll their tongue upward to reveal the frenulum. To avoid injury to the frenulum, this point should be located at the base of the frenulum.

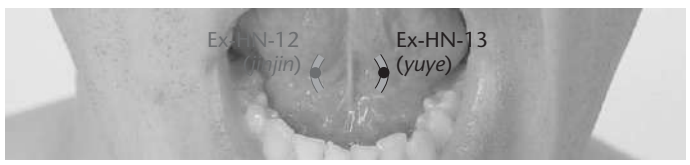
Needling

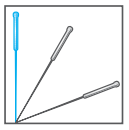
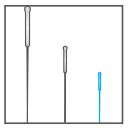
Vertically 0.2 cun. Remove needle immediately after short stimulation. Needling may be painful!

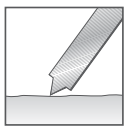
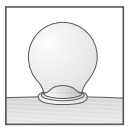
Actions/Indications

- Mouth and tongue ulcers, hiccups





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Ex-HN-12 *Golden Liquid* JINJIN

Location

On the underside of the tongue, on the lingual vein to the left of the frenulum.

How to find

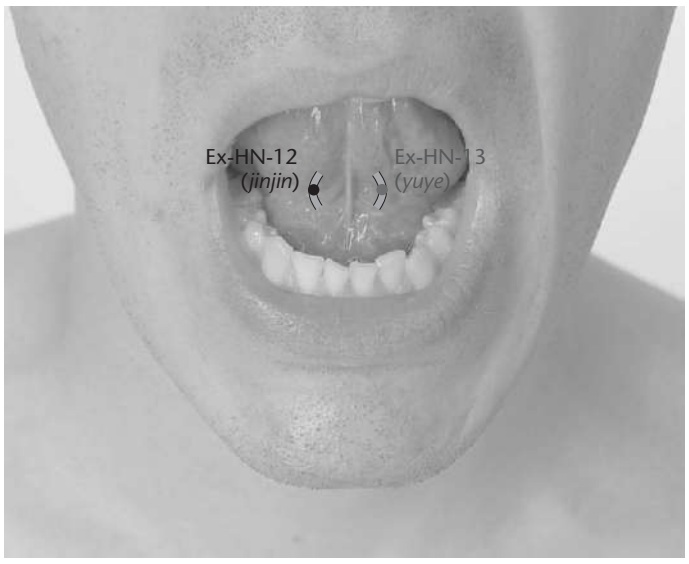
Ask the patient to roll their tongue upward to reveal the lingual veins.

Needling

Prick to bleed: Briefly puncture with a needle, lancet or three-edged needle and let bleed. Often used together with → **Ex-HN-13** (*yuye*). Caution: Contraindicated with bleeding disorders or in patients taking anticoagulant medication.

Actions/Indications

- Dispels Heat and Wind



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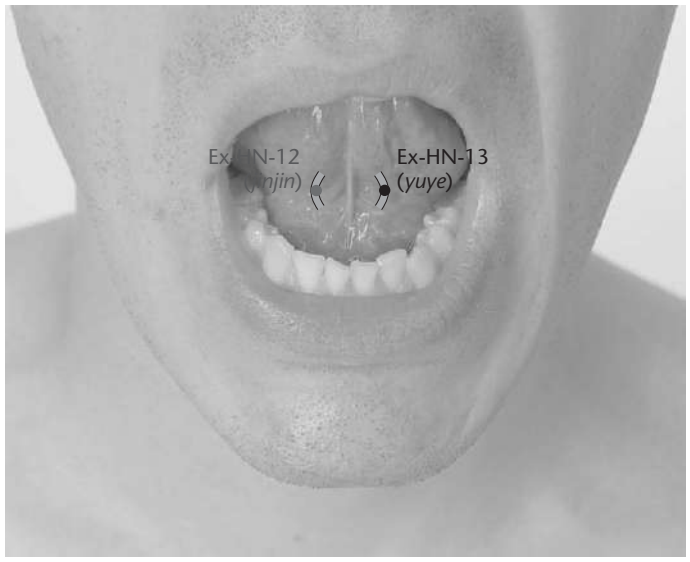
Jade Fluid YUYE Ex-HN-13



Location

On the underside of the tongue, on the great lingual vein to the right of the frenulum.

How to find

Ask the patient to roll their tongue upward to reveal the lingual veins.

Needling

Prick to bleed: Briefly puncture with a needle, lancet or three-edged needle and let bleed. Often used together with → **Ex-HN-12** (*jinjin*). Caution: Contraindicated with bleeding disorders or in patients taking anticoagulant medication.

Actions/Indications

- Dispels Heat and Wind

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Ex-HN-14 *Eye Brightening* YIMING

Location

At the junction of the head and the occiput, posterior to the mastoid bone.

How to find

Ex-HN-14 (*yiming*) is located on a line connecting → **T.B.-17** (below the earlobe, between the maxilla and the mastoid) and → **G.B.-20** (at the junction of the occiput and the neck, in the centre of the dorsolateral depression). From → **T.B.-17**, measure 1 cun towards the posterior and there locate *yiming* posterior to the mastoid.

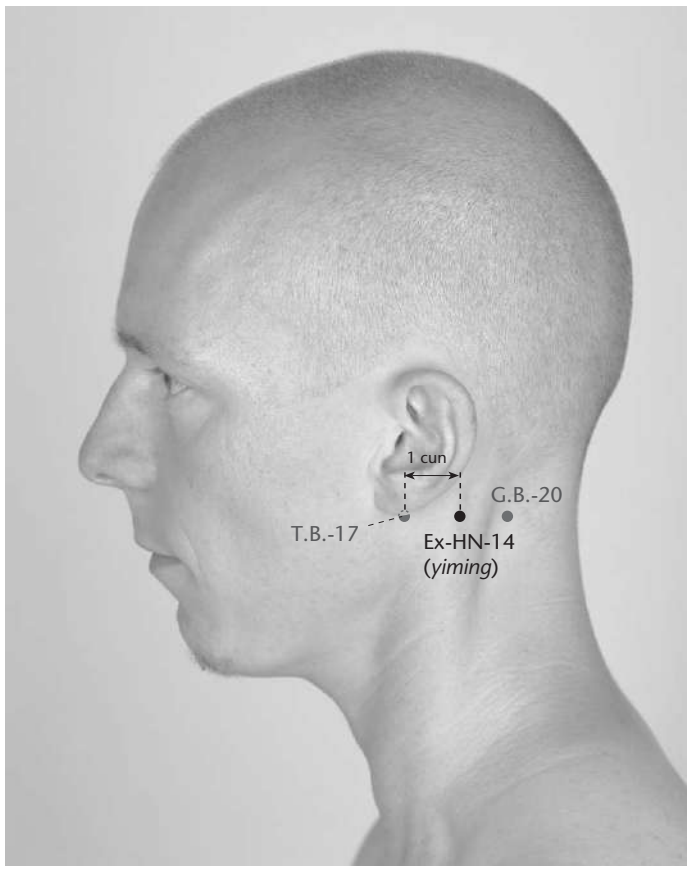
Located slightly superior and posterior to *yiming* is → **Ex-HN** (*anmian*), in the corner between the mastoid and the occiput.

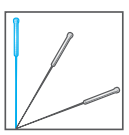
Needling

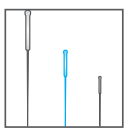
Vertically 0.5–1 cun

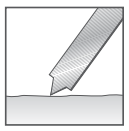
Actions/Indications

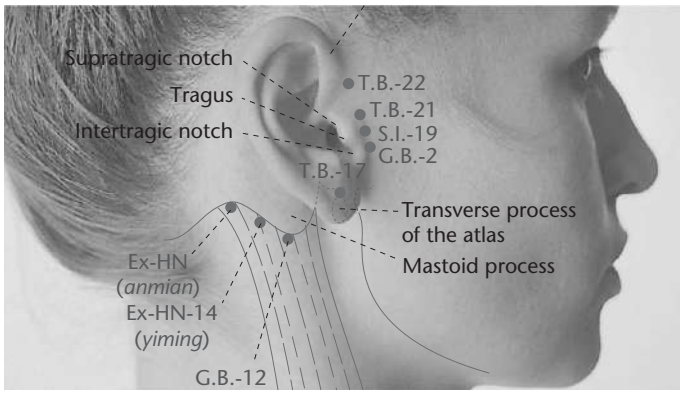
- Disorders of the eyes and ears, dizziness, insomnia

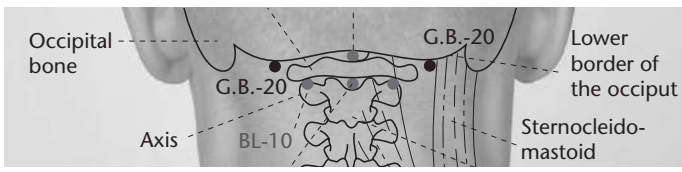


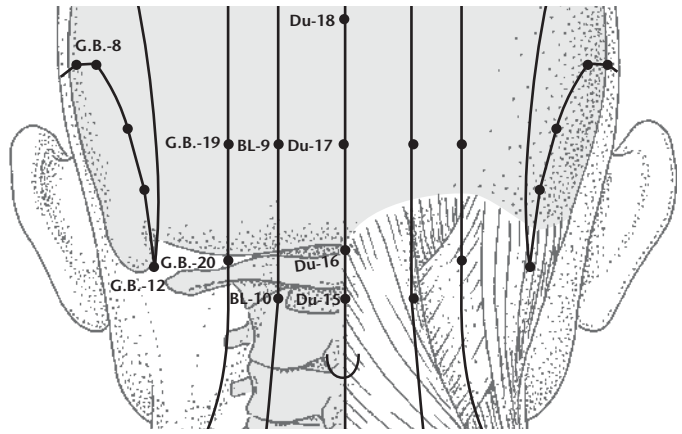


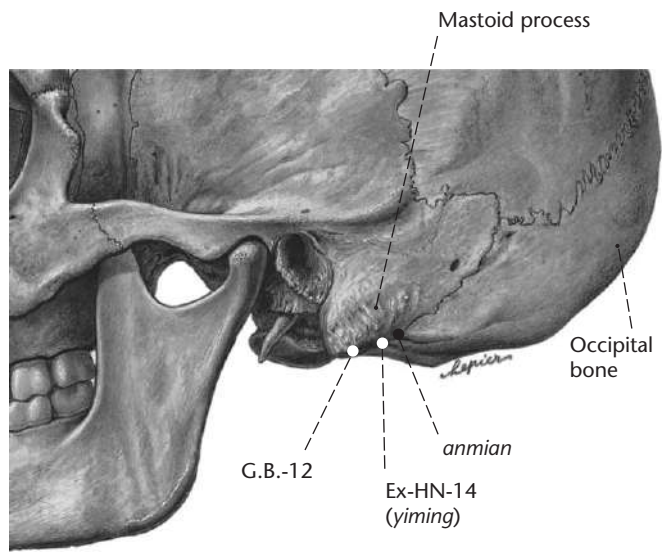












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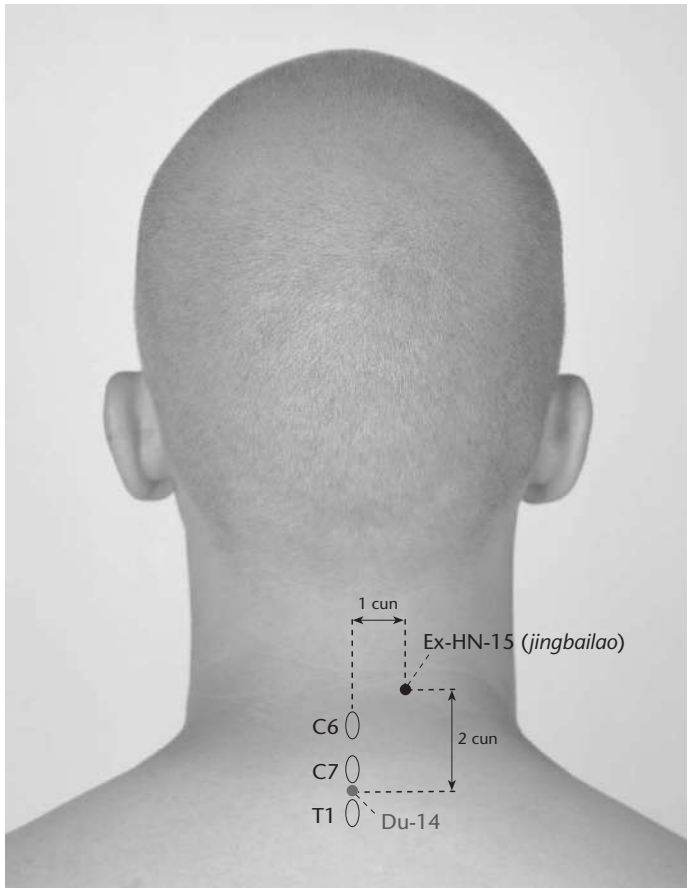
Hundred Taxations JINGBAILAO/BAILAO Ex-HN-15



Location

2 cun superior to the lower border of the spinous process of the 7th cervical vertebra (C7) and 1 cun lateral to the midline.

How to find

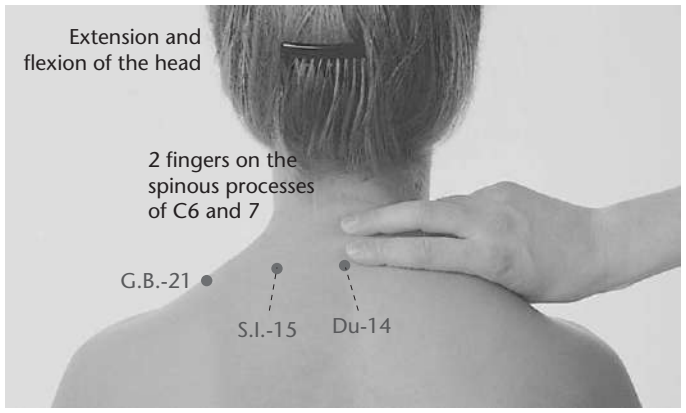
For locating C7, see ➞ 3.4.1. ➞ **Du-14** (*dazhui*) is located below the spinous process of C7. From there, measure 2 cun in a superior and 1 cun in a lateral direction.

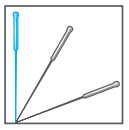
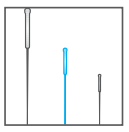
Needling

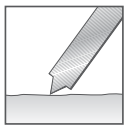
Vertically 0.5–0.8 cun

Actions/Indications

- Dispels Wind and Dampness
- Opens the channel





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Ex-HN Upper Brightness SHANGMING

Location

Directly superior to the pupil, below the margin of the orbit.

How to find

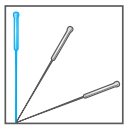
With the patient looking straight ahead, palpate for the margin of the orbit directly above the pupil. **Ex-HN** (*shangming*) is located between the upper margin of the orbit and the eyeball.

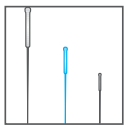
Needling

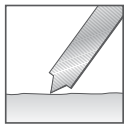
Gently push the eyeball downward. Slowly insert the needle 0.5–1 cun vertically into the fatty tissue immediately below the bone (orbit). Caution: Pay attention to any pain from needling. No manipulation! After removal of the needle, compress the site for 10 minutes. Haematomas may still occur (inform the patient prior to needling). Alternative points with less risk of complications are **BL-2, T.B.-23**, **G.B.-1, ST-2, Ex-HN-5** (*taiyang*), **Ex-HN-4** (*yuyao*).

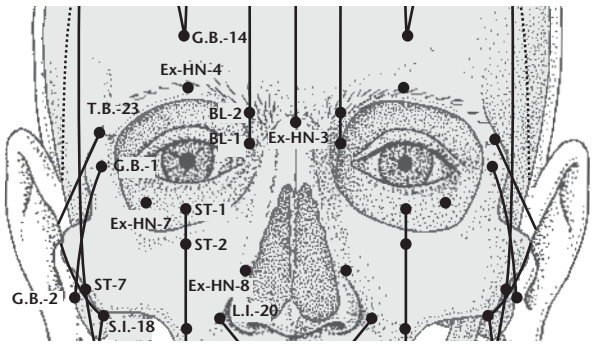
Actions/Indications

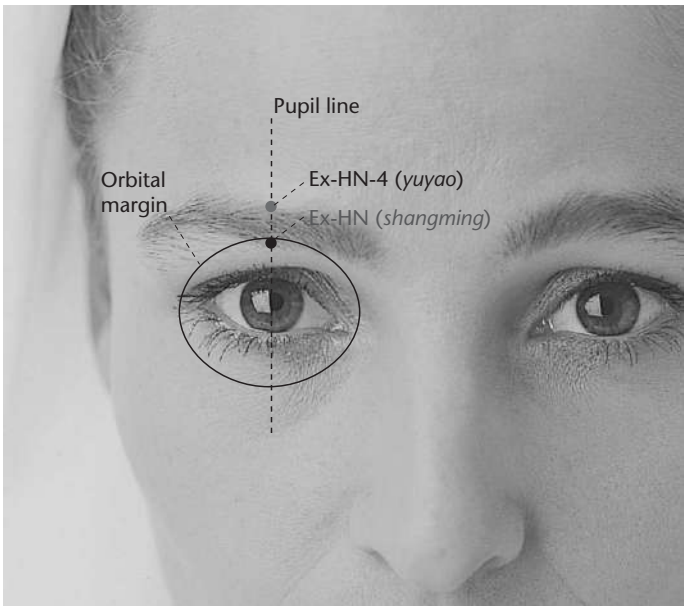
- Disorders of the eyes

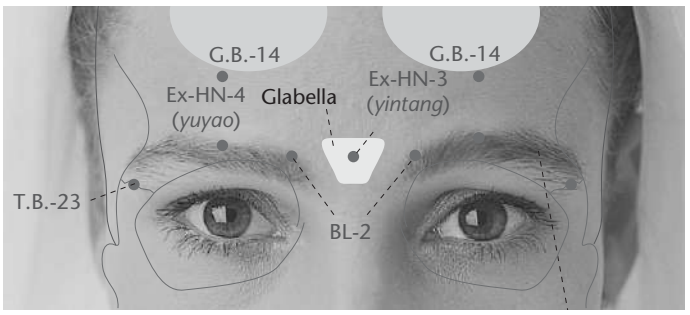


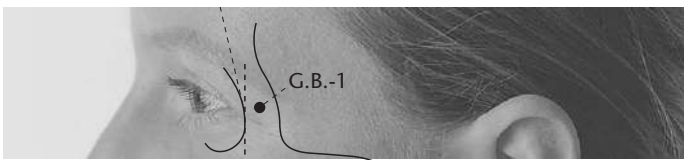


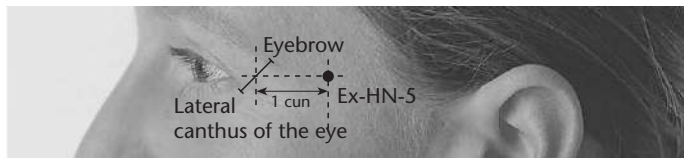


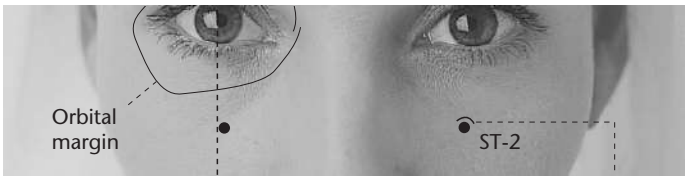












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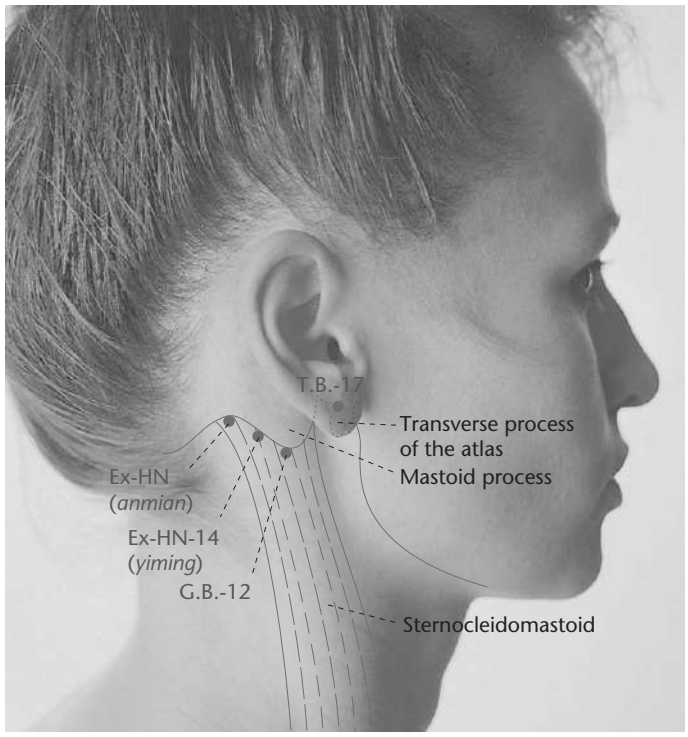
Peaceful Sleep ANMIAN Ex-HN



Location

Posterior to the ear, between → **T.B.-17** and → **G.B.-20**, posterior to the mastoid process.

How to find

First, locate → **T.B.-17** (directly below the earlobe, in the depression between the lower jaw and the mastoid process (→ 3.1) that forms when the mouth is open). Next, locate → **G.B.-20** on the lower border of the occiput, in the depression between the origins of the sternocleidomastoid and trapezius muscles. Locate **Ex-HN** (*anmian*) approximately midway between these two points, slightly posterior to the mastoid bone and superior to → **G.B.-12**, in a depression on the lower border of the occiput.

Needling

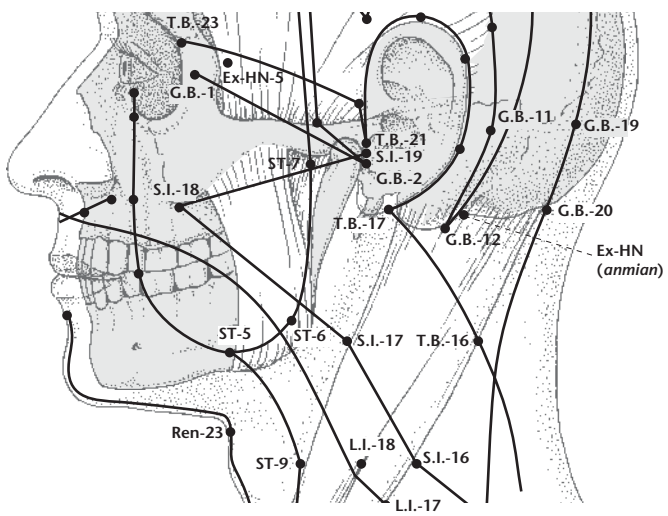
0.5–1 cun vertically or obliquely towards → **T.B.-17** (*yifeng*) or → **G.B.-20** (*fengchi*).

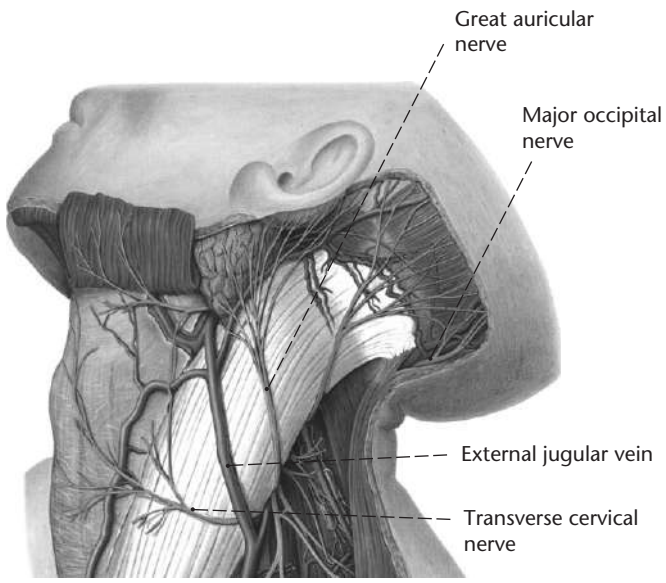
Actions/Indications

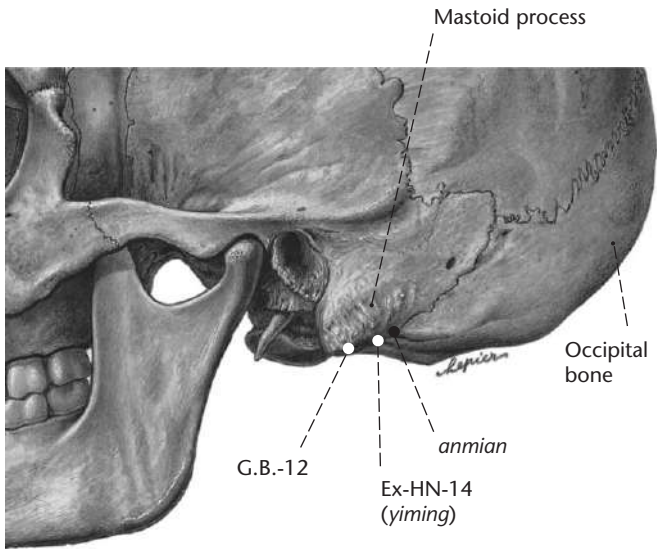
- Calms the *shen*

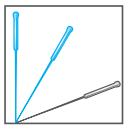
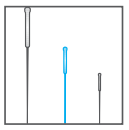
Special features

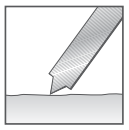
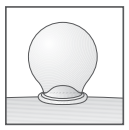
Important calming point for sleeping disorders. This extra point is not part of the WHO classification of extra points.







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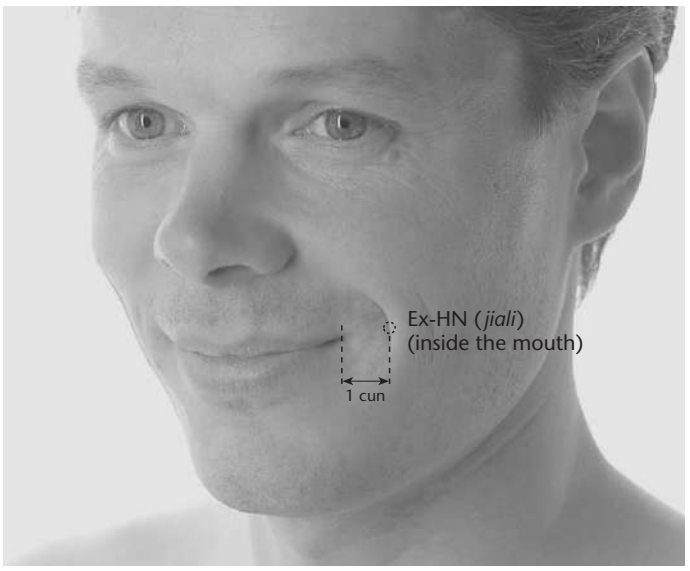
Ex-HN *Cheek Centre* JIALI

Location
Inside the mouth, on the mucosa of the cheek, 1 cun posterior to the corner of the mouth.

How to find
Locate this point on the mucosa of the cheek, 1 cun posterior to the corner of the mouth.

Needling
0.3–0.5 cun obliquely in a posterior direction, prick to bleed.

Actions/Indications
- Clears Heat
- For inflammations of the mouth and throat, for gastritis



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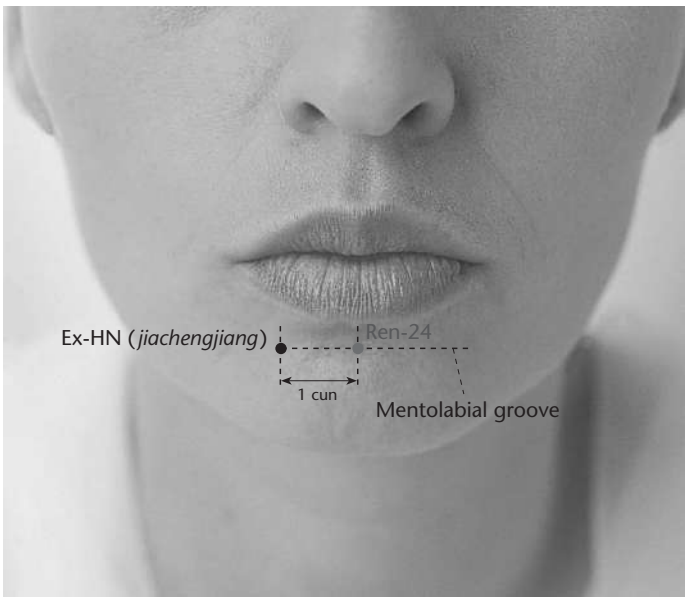
Adjacent to Container of Fluids JIACHENGJIANG



Location

1 cun lateral to the centre of the mentolabial groove.

How to find

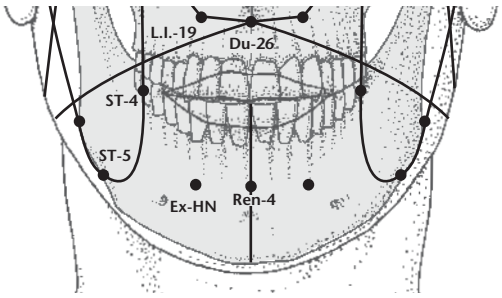
This point is located on the mental foramen. → **Ren-24** (*chengjiang*) is located in the centre of the mentolabial groove.

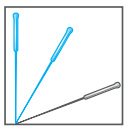
Needling

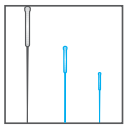
0.3–0.5 cun vertically or up to 1 cun obliquely towards the mental foramen.

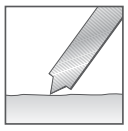
Actions/Indications

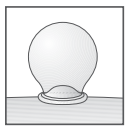
- Dispels Wind, opens the channel











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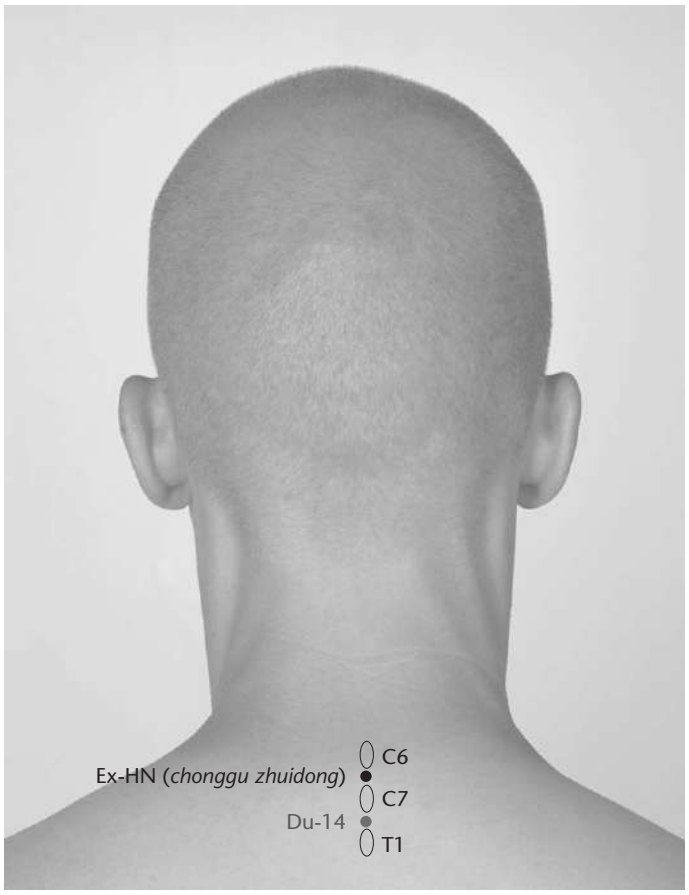
Ex-HN *Prominent Bone* CHONGGU ZHUIDONG

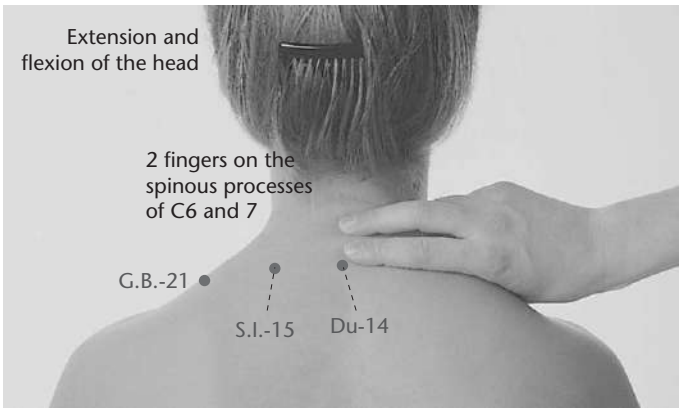
Location
Below the spinous process of the 6th cervical vertebra (C6).

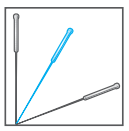
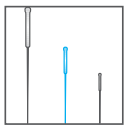
How to find
This point is located on the posterior midline and thus on the *du mai*. In fact, the 'prominent bone' (vertebra prominens) inferior to *chonggu zhuidong* is the spinous process of either C7 or T1. ➞ **Du-14** is located between the two. For the correct method of locating C6 and C7 ➞ 3.4.1.

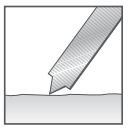
Needling
0.5–1 cun obliquely in a superior direction.

Actions/Indications
- Dispels external pathogenic factors
- Harmonises the *shen*







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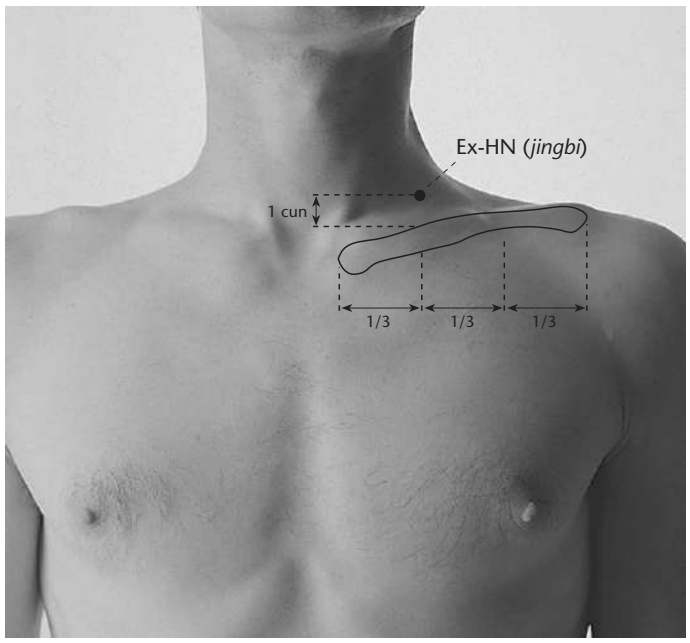
Upper Arm JINGBI



Location

1 cun superior to the junction of the proximal and middle third of the clavicle.

How to find

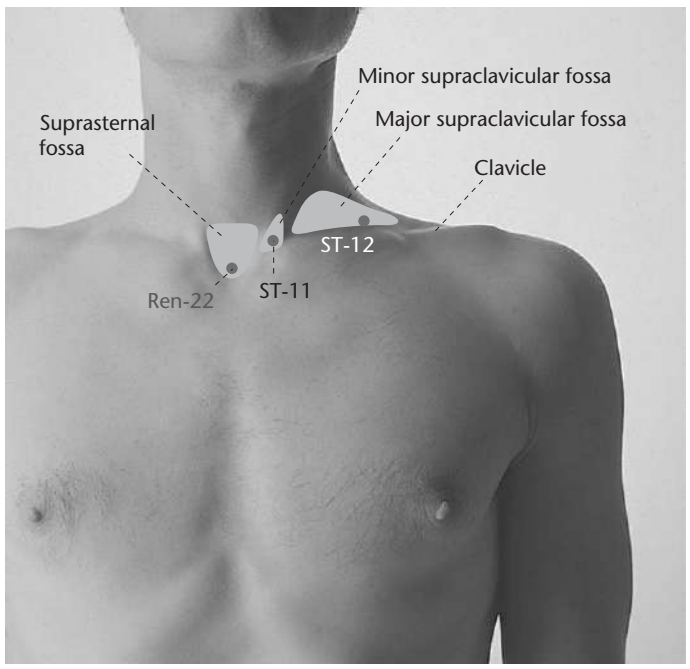
Measure a third of the clavicle from its medial end, then measure 1 cun in a superior direction and there locate *jingbi* in the supraclavicular fossa. The point is located above the brachial plexus.
→ **ST-12** is very close to this point, directly superior to the midpoint of the clavicle.

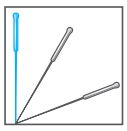
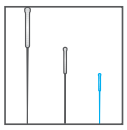
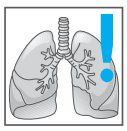
Needling

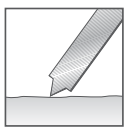
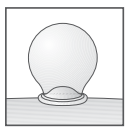
Vertically 0.3–0.5 cun. During insertion or stimulation, a tingling or warm sensation should be felt radiating to the fingers. Caution: Pneumothorax.

Actions/Indications

- Paraesthesia and paralysis of the upper extremity



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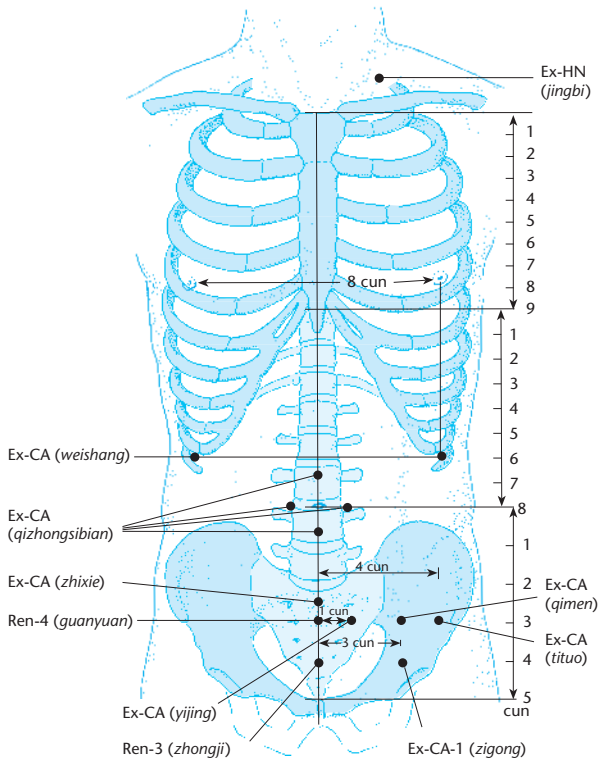
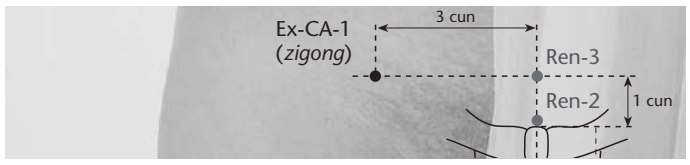
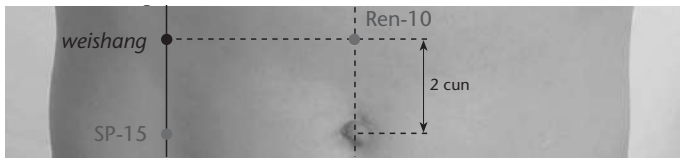
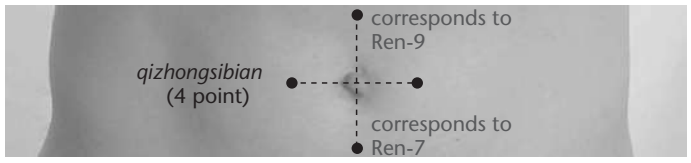
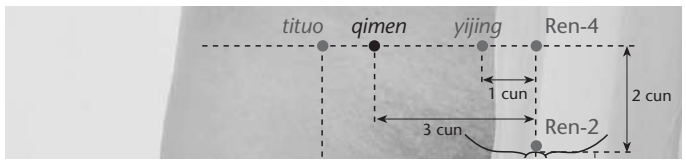
6.2 Extra Points: Chest and Abdomen (EX-CA)

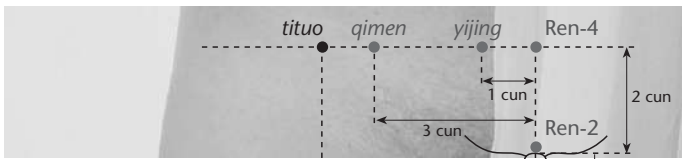


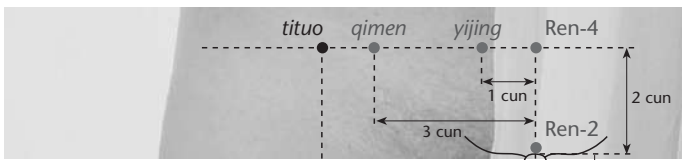












English abbreviation (standard)	*Pinyin* name	Nguyen Van Nghi, König and Wancura, Schnorrenberger	Shanghai College	Ex (Hempen)
Ex-CA-1	*zigong*	PaM or ZP49	M-CA-18	Ex9
Further extra points				
Ex-CA	*weishang*			
Ex-CA	*qizhongsibian*			
Ex-CA	*yijing*	PaM or ZP45		
Ex-CA	*qimen*	PaM or ZP46		
Ex-CA	*tituo*	NP39	M-CA-4	
Ex-CA	*zhixie*	NP38	N-CA31	

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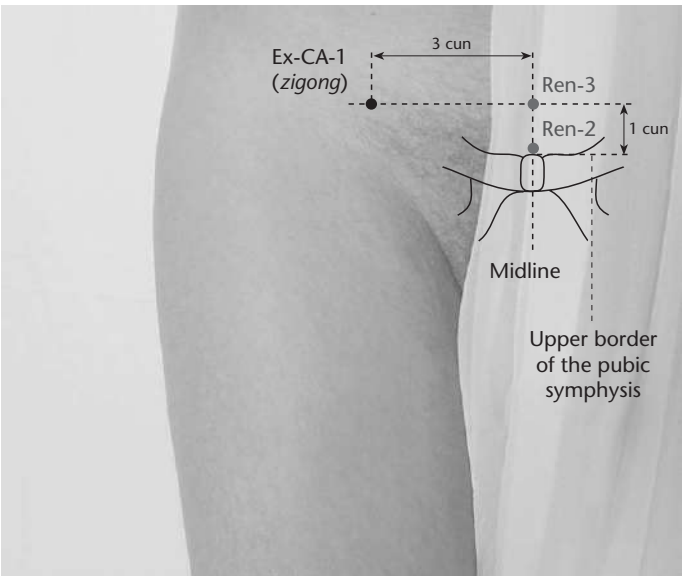
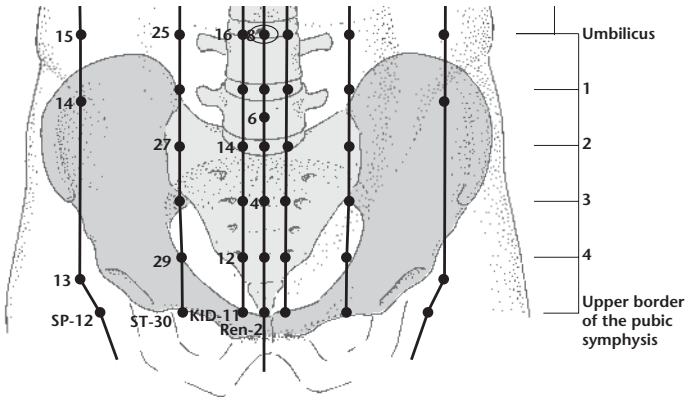
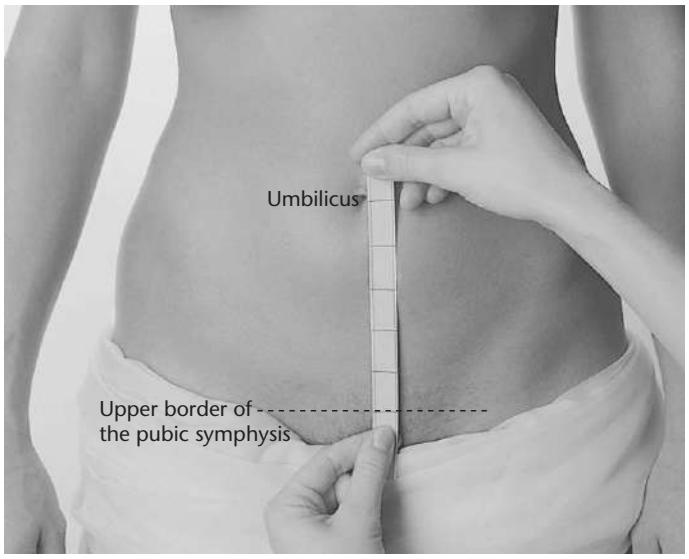
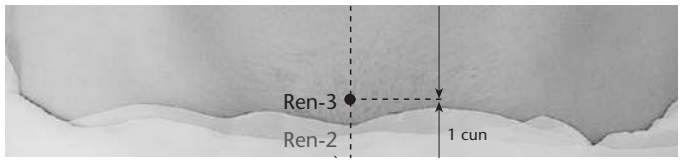
Palace of the Child ZIGONG Ex-CA-1









Location

3 cun lateral to the anterior midline and 1 cun superior to the upper border of the pubic symphysis.

How to find

The distance between the centre of the umbilicus and the upper border of the pubic symphysis is divided into 5 proportional cun, which can vary considerably from the patient's finger cun. Therefore, only proportional cun measurements should be used (helpful device: elastic tape ➞ 2.3.1). From the upper border of the pubic symphysis, measure 1 cun in a superior direction – this is the location of ➞ **Ren-3**. From there, measure 3 cun in a lateral direction to locate *zigong*.

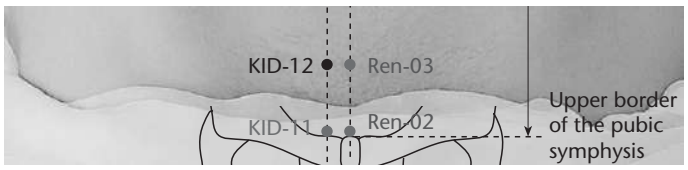
Located on the same level are ➞ **KID-12** (0.5 cun from the midline) and ➞ **ST-29** (2 cun lateral to the midline).

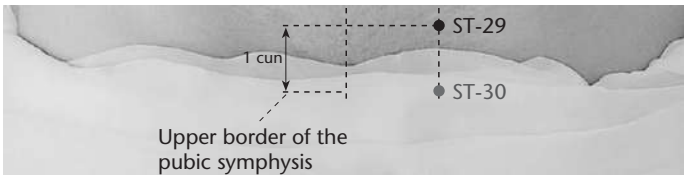
Needling

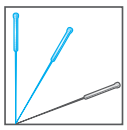
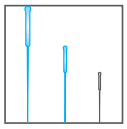
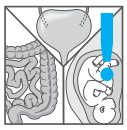
0.5–1 cun vertically or 1–2 cun obliquely towards the upper border of the pubic symphysis. Caution: Peritoneum, pregnancy, full bladder.

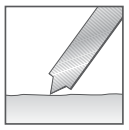
Actions/Indications

- Strengthens and raises Qi
- Regulates menstruation
- Alleviates pain in the abdomen and the lumbar region







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Ex-CA *Lifting the Stomach* WEISHANG

Location

On the Spleen channel, 4 cun lateral and 2 cun superior to the umbilicus.

How to find

The distance between the sternocostal angle and the centre of the umbilicus is divided into 8 proportional cun, which can vary considerably from the patient's finger cun. Therefore, only proportional cun measurements should be used (helpful device: elastic tape → 2.3.1). From the centre of the umbilicus, measure 2 cun in a superior direction (location of → **Ren-10**) and then locate *weishang* 4 cun lateral to the midline. 1 cun superior to → **Ex-CA** (*weishang*) is → **SP-16**.

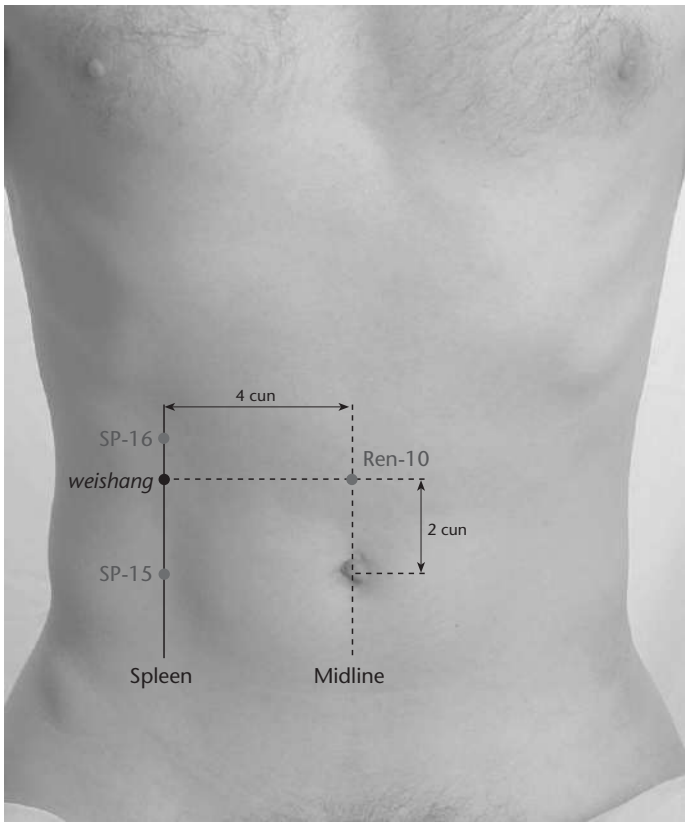
Located on the same level are → **Ren-10/KID-17/ST-23** (on the midline/0.5 cun lateral to the midline/2 cun lateral to the midline).

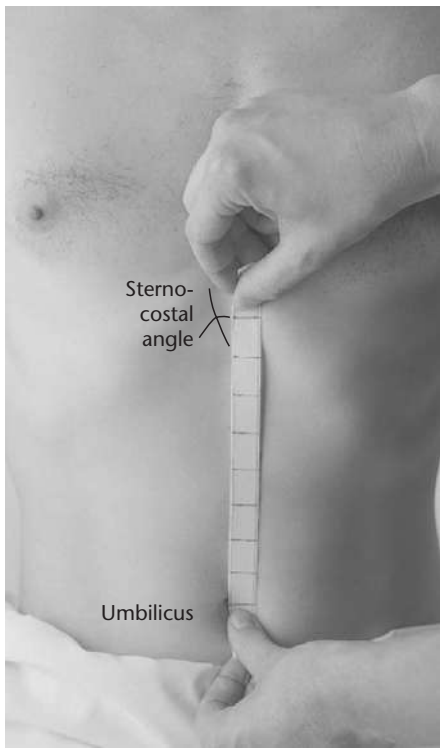
Needling

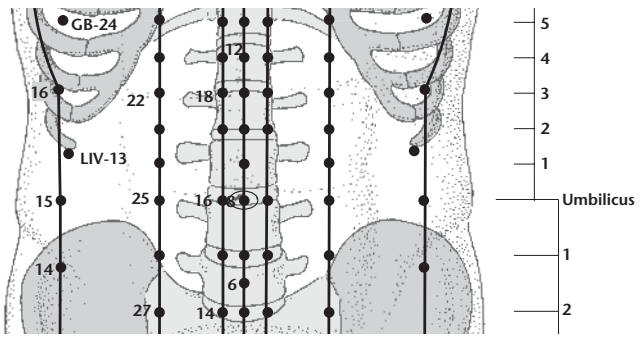
2–3 cun obliquely in the direction of the umbilicus. Caution: Peritoneum, pregnancy.

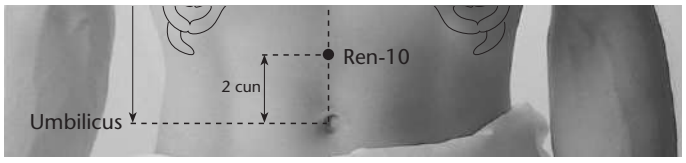
Actions/Indications

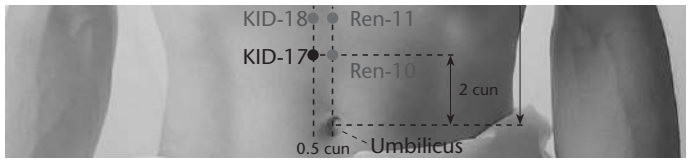
- Gastroptosis, abdominal pain

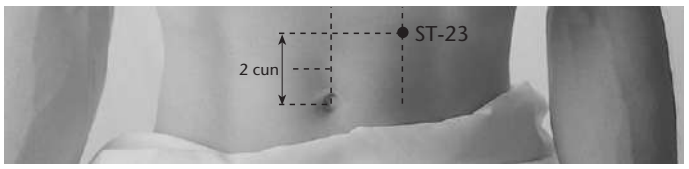












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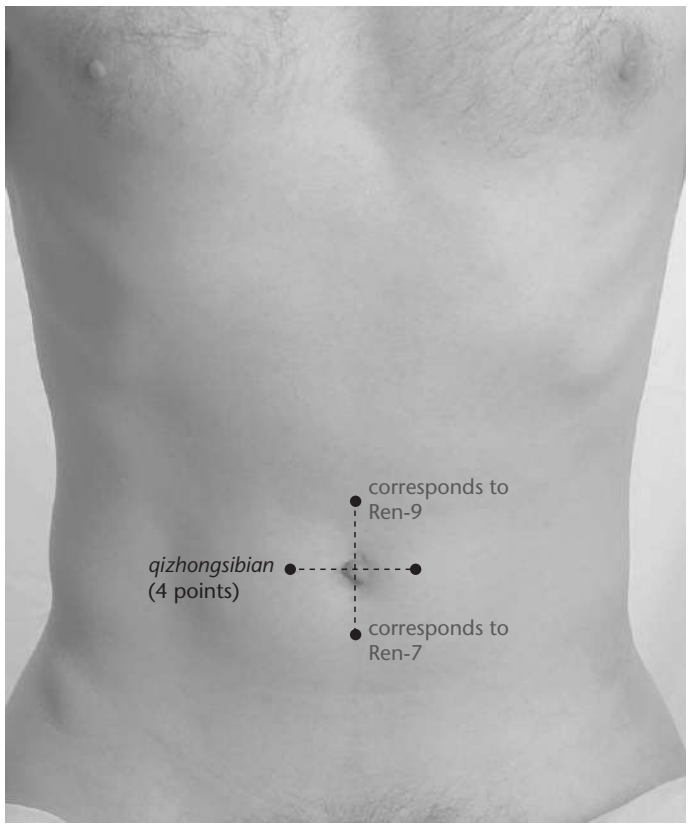
Four Points Around the Umbilicus QIZHONGSIBIAN



Location

Four points, 1 cun lateral, superior and inferior to the umbilicus.

How to find

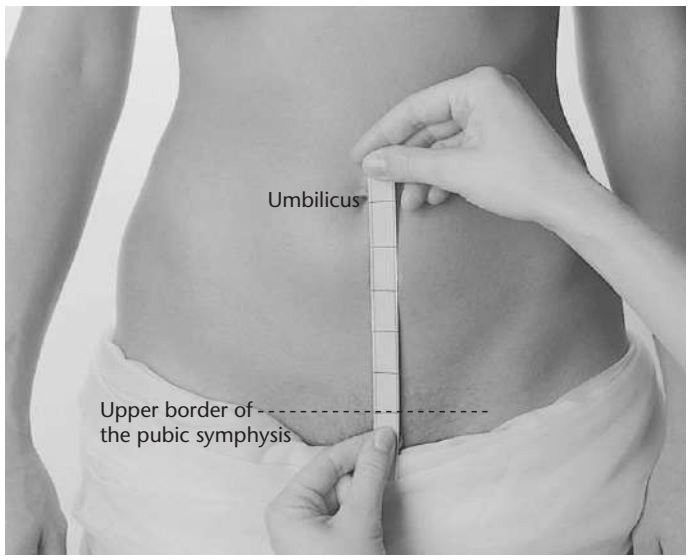
These four points are arranged in a star shape around the umbilicus.

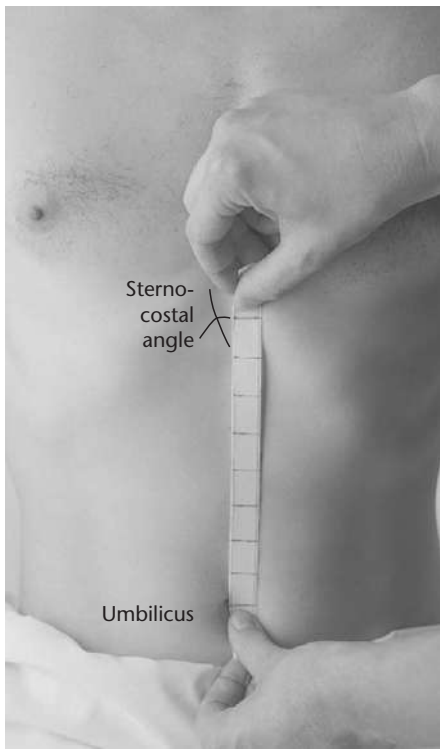
Needling

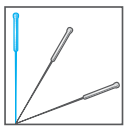
Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy.

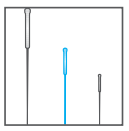
Actions/Indications

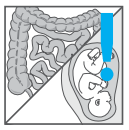
- Distension, diarrhoea, dyspepsia, dysmenorrhoea

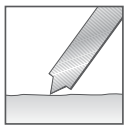


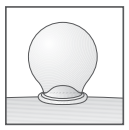












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Ex-CA Loss of Semen YIJING

Location

1 cun lateral to the anterior midline and 2 cun superior to the upper border of the pubic symphysis.

How to find

The distance between the centre of the umbilicus and the upper border of the pubic symphysis is divided into 5 proportional cun, which can vary considerably from the patient's finger cun. Therefore, only proportional cun measurements should be used (helpful device: elastic tape → 2.3.1). From the upper border of the pubic symphysis, measure 2 cun in a cranial direction (→ **Ren-4**) and, from there, measure 1 cun in a lateral direction. There, locate *yijing*.

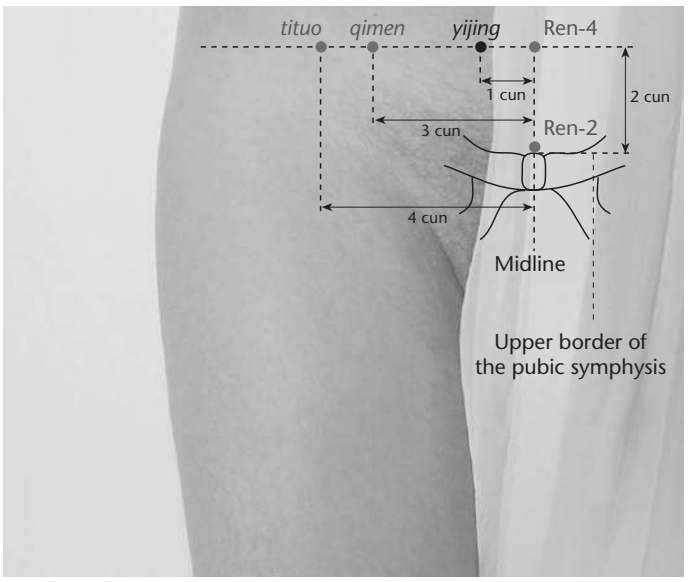
Located on the same level are → **KID-13** (0.5 cun lateral to the midline), **Ex-CA** (*qimen*, 3 cun lateral to the midline), → **ST-28** (2 cun lateral to the midline) and **Ex-CA** (*tituo*, 4 cun lateral to the midline). → **G.B.-27** is located medial to the ASIS, approximately on the same level.

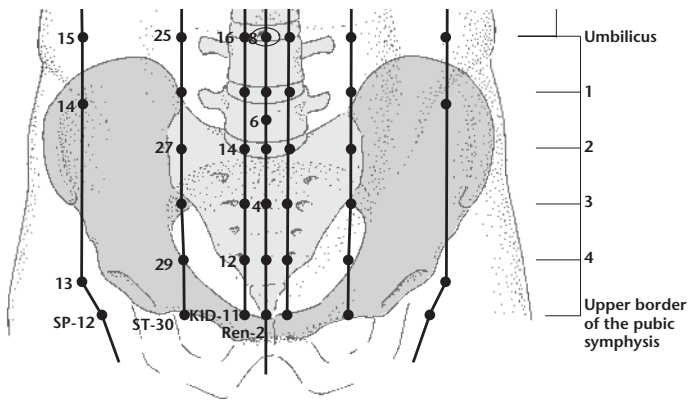
Needling

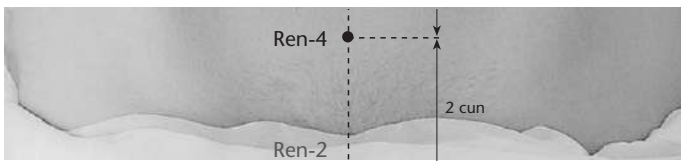
0.5–1 cun. Caution: Peritoneum, full bladder, pregnancy.

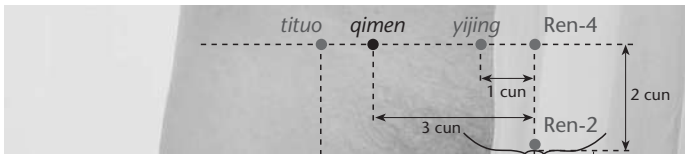
Actions/Indications

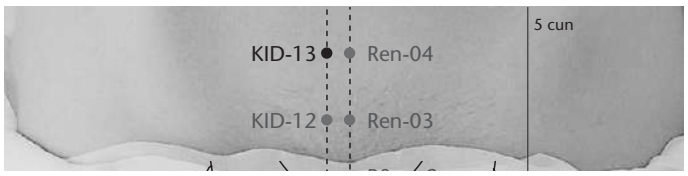
Ejaculation disorders, impotence, scrotal eczema

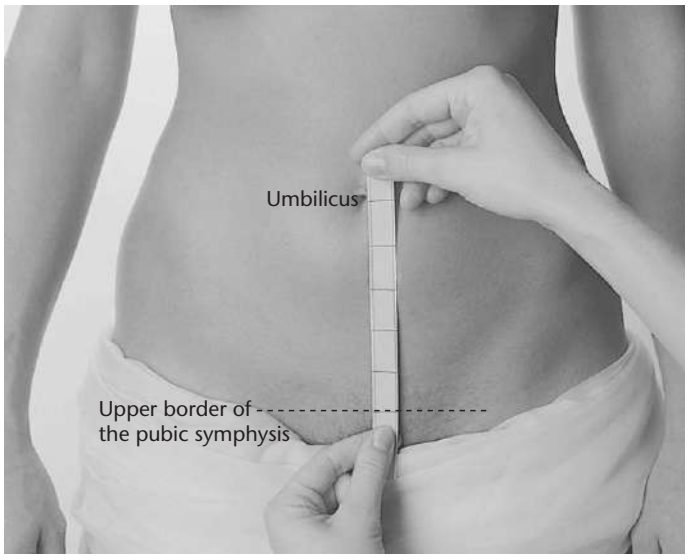


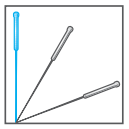


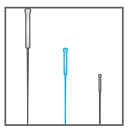


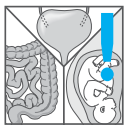


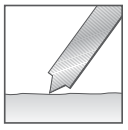












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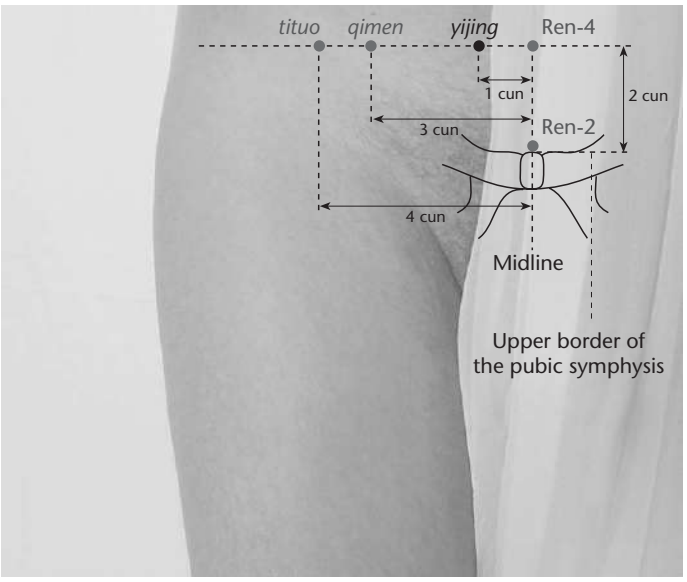
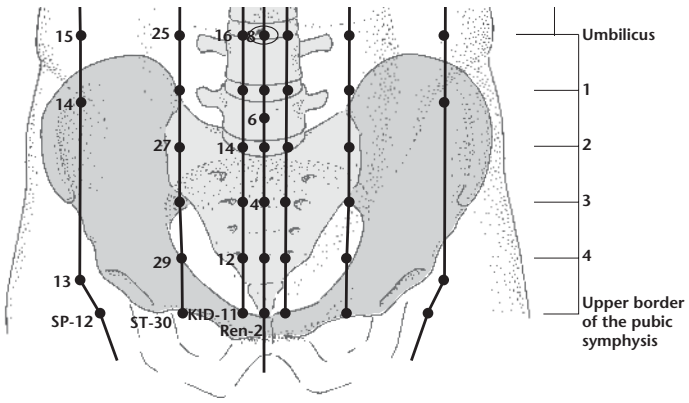
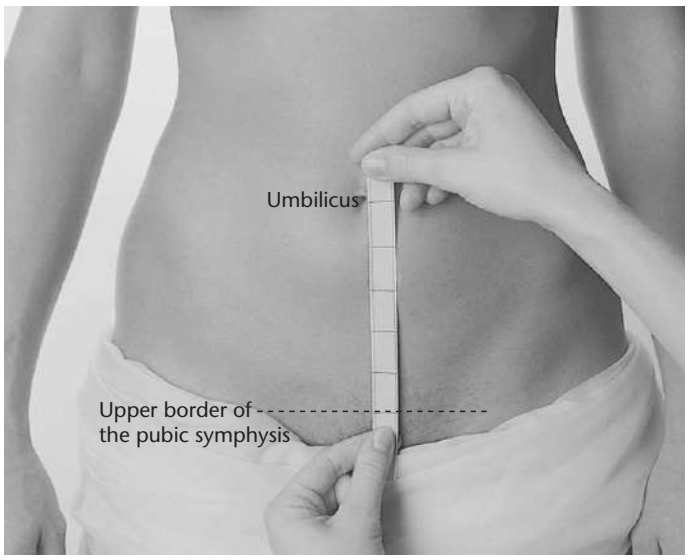
Qi Gate QIMEN Ex-CA







Location

3 cun lateral to the anterior midline and 2 cun superior to the upper border of the pubic symphysis.

How to find

The distance between the centre of the umbilicus and the upper border of the pubic symphysis is divided into 5 proportional cun, which can vary considerably from the patient's finger cun. Therefore, only proportional cun measurements should be used (helpful device: elastic tape → 2.3.1). From the upper border of the pubic symphysis, measure 2 cun in a cranial direction (→ **Ren-4**) and, from there, measure 3 cun in a lateral direction. There, locate *qimen*.

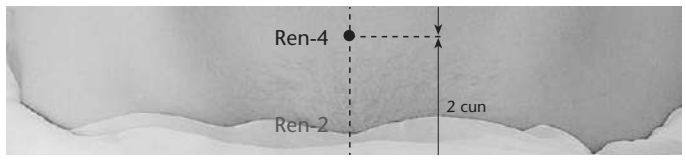
Located on the same level are → **KID-13** (0.5 cun lateral to the midline), **Ex-CA** (*yijing*, 1 cun lateral to the midline), → **ST-28** (2 cun lateral to the midline) and **Ex-CA** (*tituo*, 4 cun lateral to the midline). → **G.B.-27** is located medial to the ASIS, approximately on the same level.

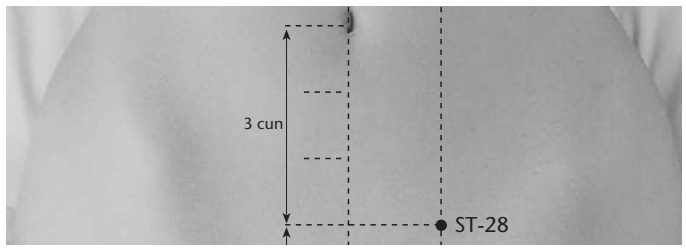
Needling

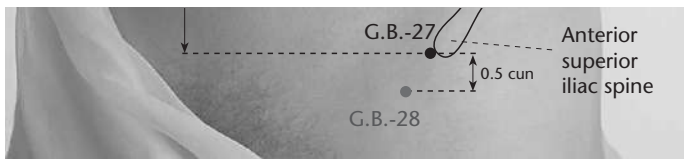
Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy.

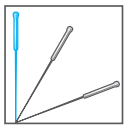
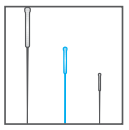
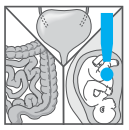
Actions/Indications

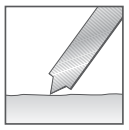
- Metrorrhagia, female infertility, orchitis, urinary tract infections, persistent lochial discharge









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Ex-CA *Lift and Support* TITUO

Location

4 cun lateral to the anterior midline and 2 cun superior to the upper border of the pubic symphysis.

How to find

The distance between the centre of the umbilicus and the upper border of the pubic symphysis is divided into 5 proportional cun, which can vary considerably from the patient's finger cun. Therefore, only proportional cun measurements should be used (helpful device: elastic tape ➞ 2.3.1). From the upper border of the pubic symphysis, measure 2 cun in a cranial direction (➞ **Ren-4**) and from there measure 4 cun in a lateral direction. There, medial to the ASIS, locate *tituo*.

Located on the same level are ➞ **KID-13** (0.5 cun lateral to the midline), ➞ **Ex-CA** (*yijing*, 1 cun lateral to the midline), ➞ **ST-28** (2 cun lateral to the midline) and ➞ **Ex-CA** (*qimen*, 3 cun lateral to the midline). ➞ **G.B.-27** is located medial to the ASIS, approximately on the same level.

Needling

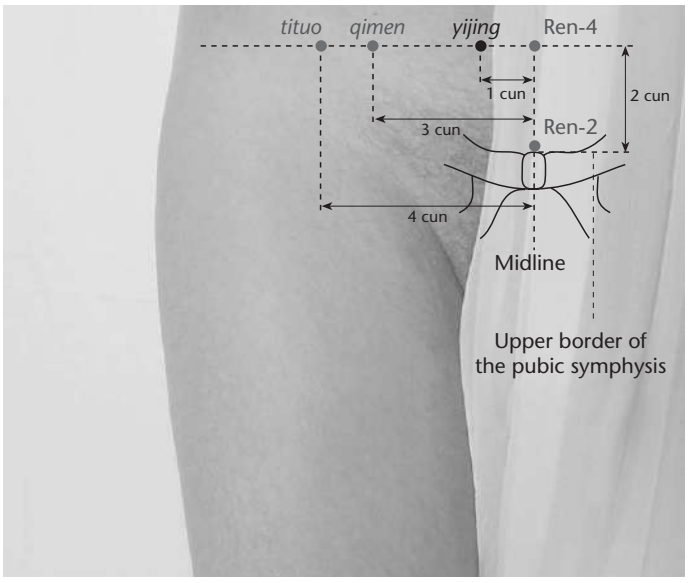
Vertically 0.5–1 cun. Caution: Peritoneum, pregnancy.

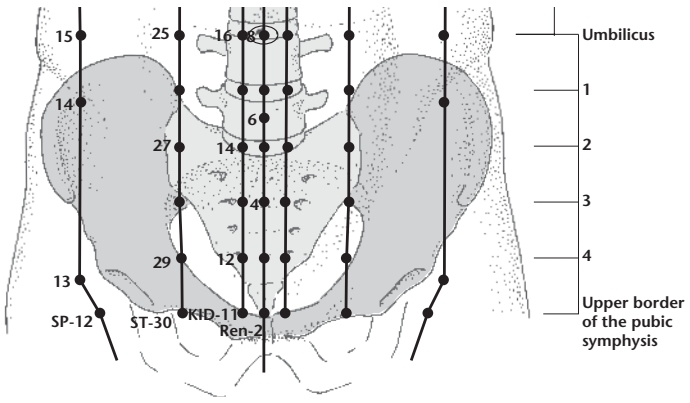
Actions/Indications

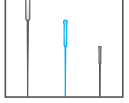
- Strengthens the rising Qi and alleviates organ prolapse

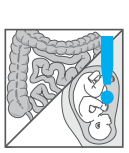
Special features

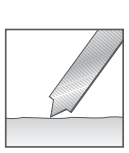
In modern TCM, *tituo* is considered one of the most important points for prolapse of the uterus.

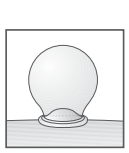


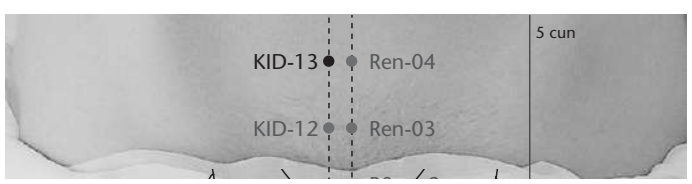


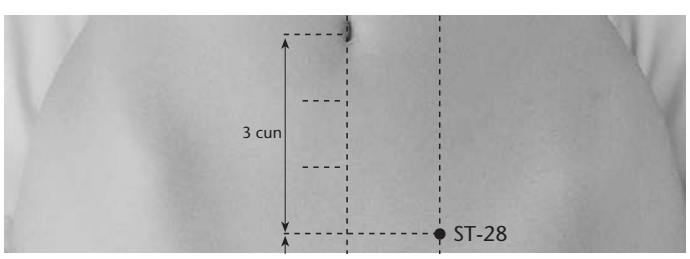


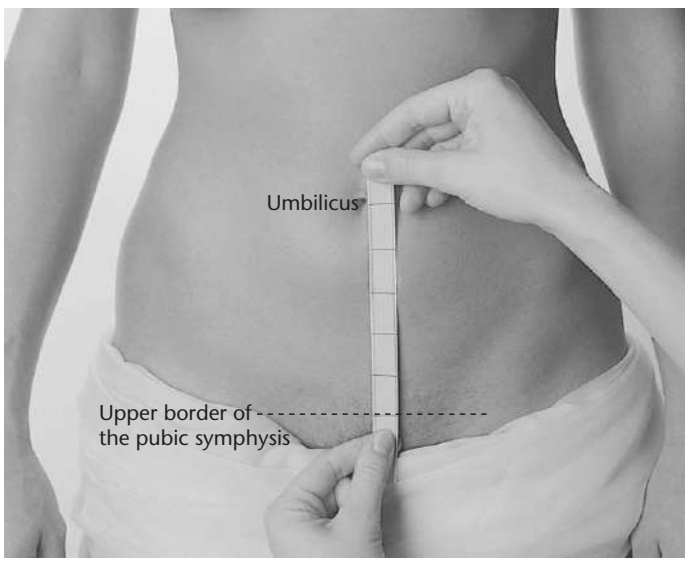


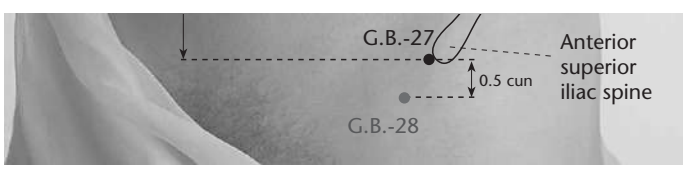


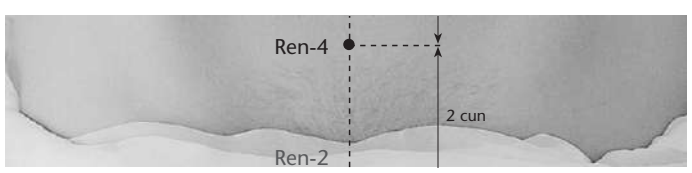












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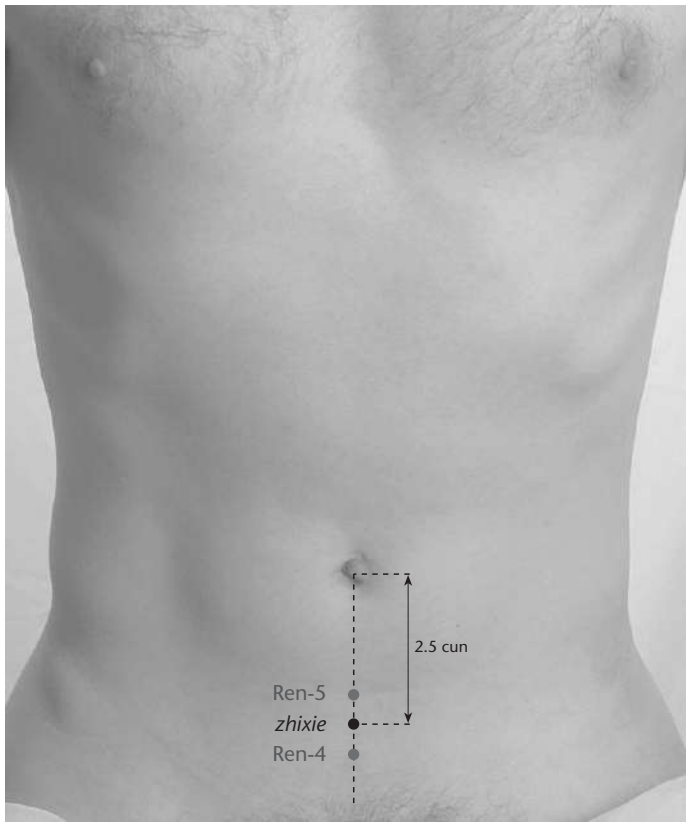
End Diarrhoea ZHIXIE



Location

On the anterior midline, 2.5 cun inferior to the umbilicus.

How to find

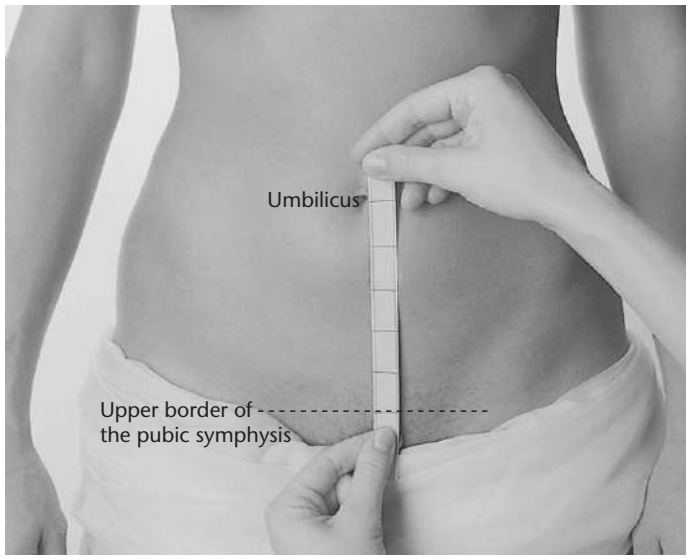
The distance between the centre of the umbilicus and the upper border of the pubic symphysis is divided into 5 proportional cun, which can vary considerably from the patient's finger cun. Therefore, only proportional cun measurements should be used (helpful device: elastic tape → 2.3.1). *Zhixie* is located at the midpoint of this distance, between → **Ren-4** (2 cun superior to the upper border of the pubic symphysis) and → **Ren-5** (2 cun inferior to the umbilicus). **Or:** Spreading hands technique (→ 2.3.3): Place the little fingers on the umbilicus and the upper border of the pubic symphysis respectively and spread the hands evenly, joining the thumbs at the midpoint of this distance.

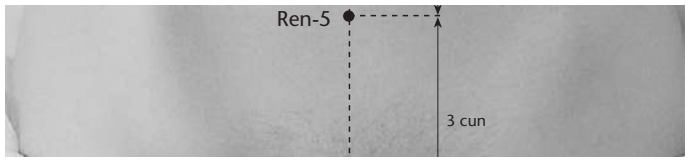
Needling

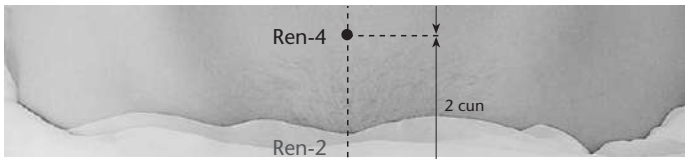
Vertically 0.5–1 cun. Caution: Peritoneum, full bladder, pregnancy.

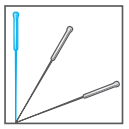
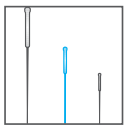
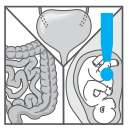
Actions/Indications

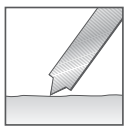
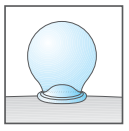
- Stops diarrhoea







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Ex-CA *Triangle Moxibustion* SANJIAOJIU

Location

These three points are located on the corners of an equilateral triangle, the apex of which is formed by the umbilicus, while the base forms a horizontal line on the abdomen. The sides are equal to the patient's smile.

How to find

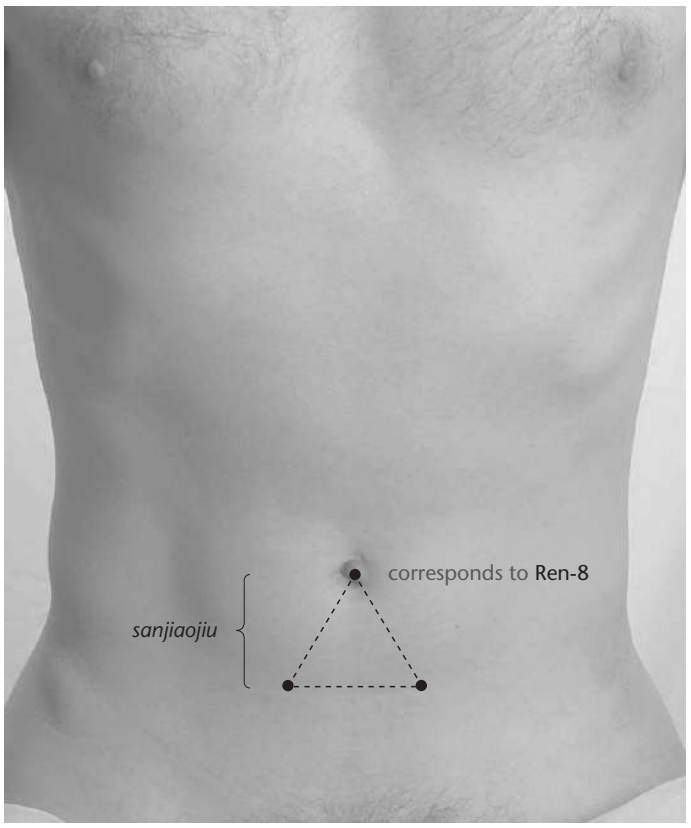
It is helpful to explain the location of this point to the patient. Invariably, this will make them smile, allowing the practitioner to determine the length of the sides of the triangle.

Needling

Moxibustion only, no needling.

Actions/Indications

- Regulate Qi and stop diarrhoea.



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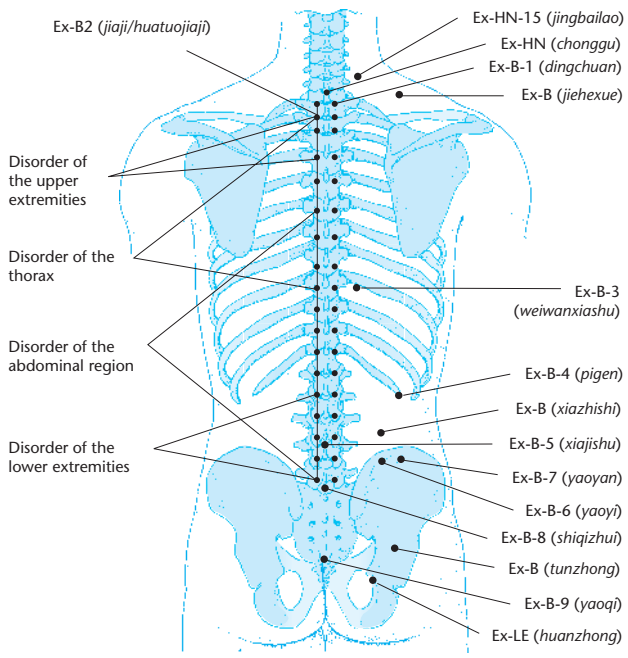
6.3 Extra Points: Back (EX-B)



English abbreviation (standard)	*Pinyin* name	Nguyen Van Nghi, König and Wancura, Schnorrenberger	Shanghai College	Ex (Hempen)
Ex-B-1	*dingchuan*	NP45	M-BW-1	Ex10
Ex-B-2	*huatuojiaji/jiaji*	PaM or ZP85	M-BW-35	Ex12
Ex-B-3	*weiwanxiashu/ waiguanxiashu/ bashu* or *yishu*	PaM or ZP62	M-BW-12	
Ex-B-4	*pigen*	PaM or ZP66	M-BW-16	
Ex-B-5	*xiajishu*	PaM or ZP71	M-BW-21	
Ex-B-6	*yaoyi*	PaM or ZP73	M-BW-23	
Ex-B-7	*yaoyan*	PaM or ZP74	M-BW-24	
Ex-B-8	*shiqizhui/shiqizhuixia*	PaM or ZP75	M-BW-25	Ex11
Ex-B-9	*yaoqi*	PaM or ZP79	M-BW-29	
Further extra points				
Ex-B	*jiehexue*	NP47	N-BW-6	
Ex-B	*tunzhong*	PaM or ZP83	M-BW-33	

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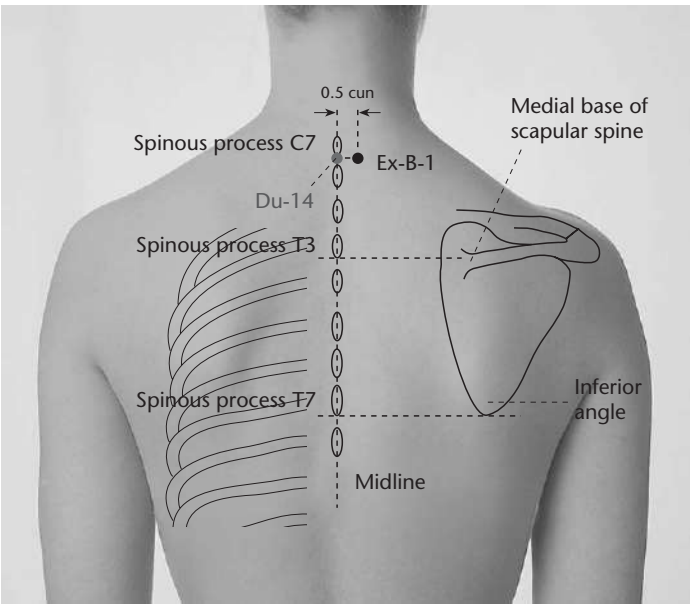
Calm Dyspnoea DINGCHUAN Ex-B-1



Location

0.5 cun lateral to the lower border of the spinous process of the 7th cervical vertebra (C7).

How to find

First, identify C7 (→ 3.4.1). Next, measure 0.5 cun from the lower border of its spinous process in a lateral direction and there locate **Ex-B-1.**

Located on the same level are → **Du-14** (on the midline), → **S.I.-15** (2 cun lateral to the midline) and **Ex-B** (*jiehexue*, 3.5 cun lateral to the midline).

Needling

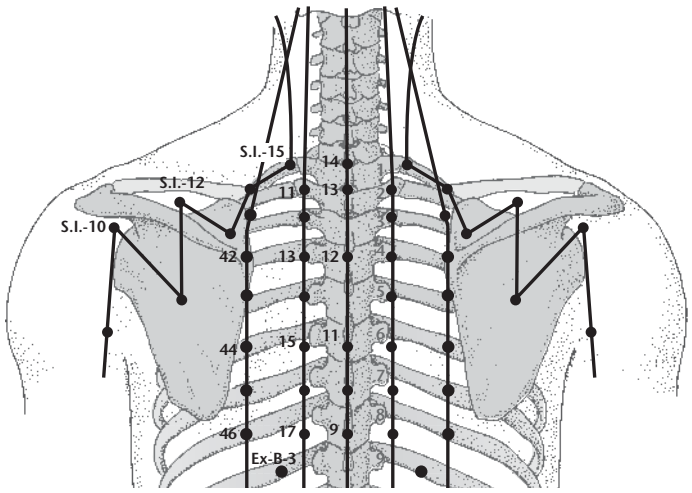
0.5–1 cun in a medial direction.

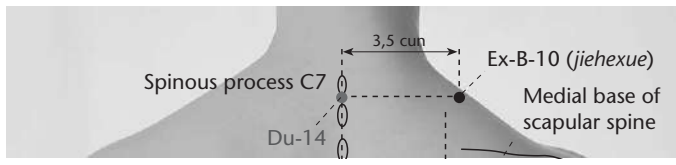
Actions/Indications

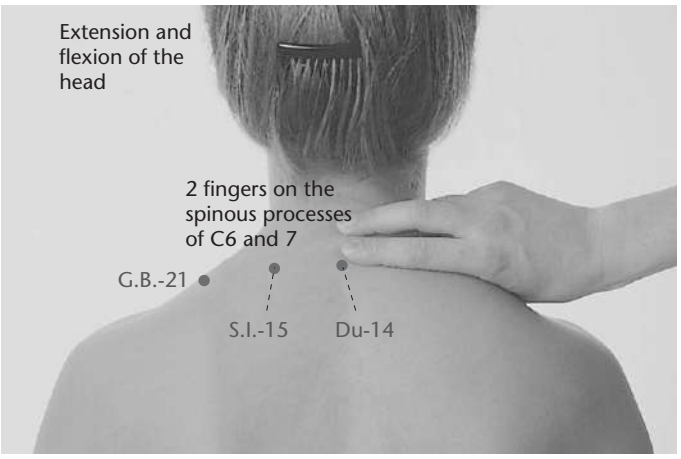
- Harmonises Lung Qi
- Local point for the neck and shoulders

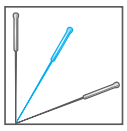
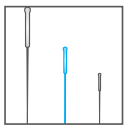
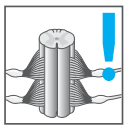
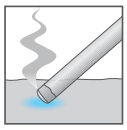
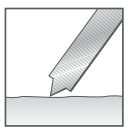
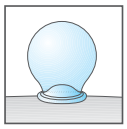
Special features

Modern main point for dyspnoea







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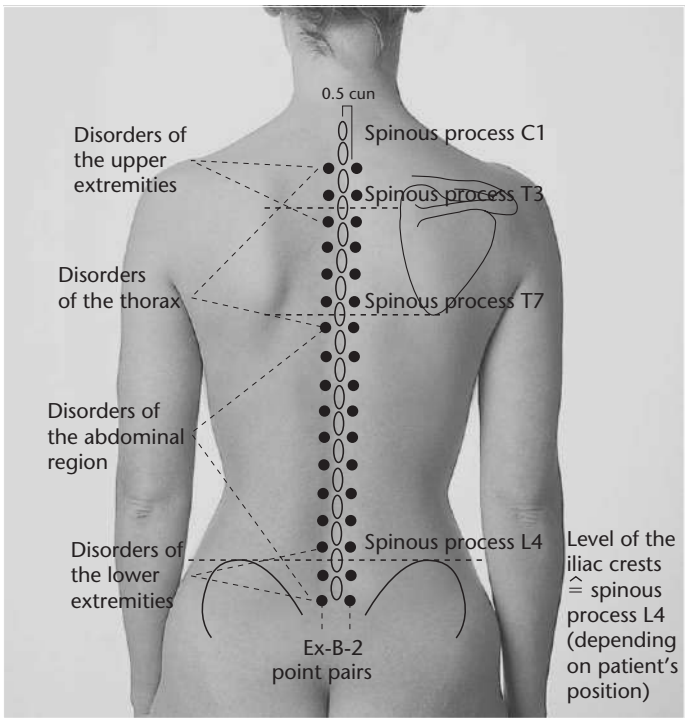
Ex-B-2 *Hua Tuo's Paravertebral Points* HUATUOJIAJI

Location

17 point pairs, 0.5 cun lateral to the lower borders of the spinous processes, close to the spinal facet joints:

- 12 thoracic point pairs (*xiongjiaji*): between T1 and T12
- 5 lumbar point pairs (*yaojiaji*): between L1 and L5, Depending on the school of thought, corresponding points lateral to the cervical spine are described as 'additional *huatuojiaji*'.



How to find

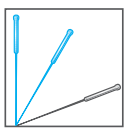
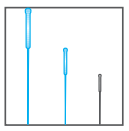
Select points of **Ex-B-2** depending on the disorder. Determine the relevant spinous process and locate the point pairs 0.5 cun lateral to its lower border.

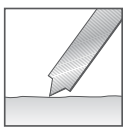
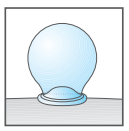
Needling

0.5–1 cun vertically or better obliquely in a medial direction towards the spine, up to 1.5 cun in the lumbar region. The purpose of needling these points is to stimulate the local nerve roots. This means that the insertion angle has to be adapted to the patient's anatomy. Never needle in a lateral direction. Once *deqi* is obtained, do not further stimulate the needle; it is possible to apply electrostimulation.

Actions/Indications

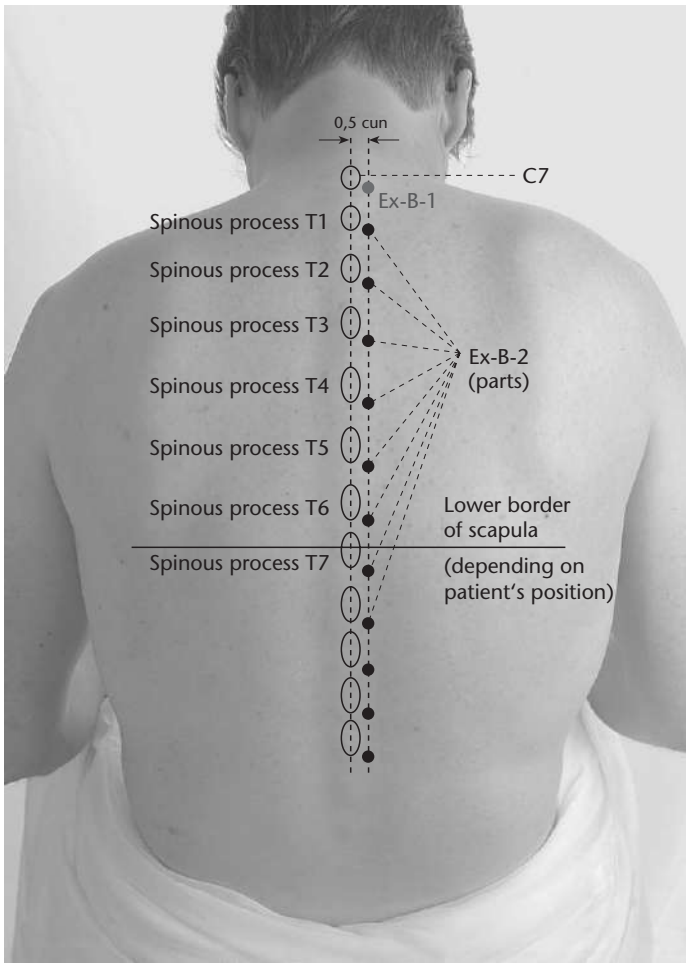
- Regulate and harmonise the five *zang* and six *fu* Organs, depending on the points selected

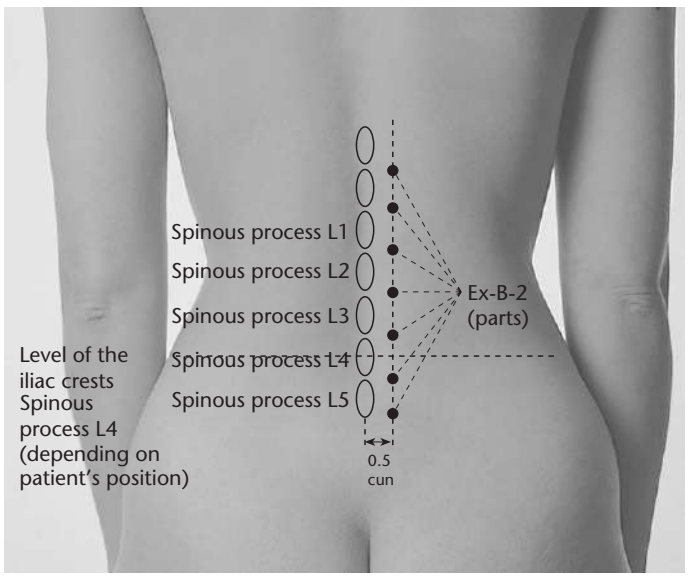



Special features

With disorders of the facet joints of the cervical spine, there are often tender points 0.5 cun lateral to the lower borders of the spinous processes. In China, these are needled for chronic disorders of the cervical spine. If oblique insertions (approximately 45°) in a medial direction are used for points on the inner branch of the Bladder channel, the tip of the needle will reach the area of the *huatuojiaji* points. This enhances the therapeutic effect.





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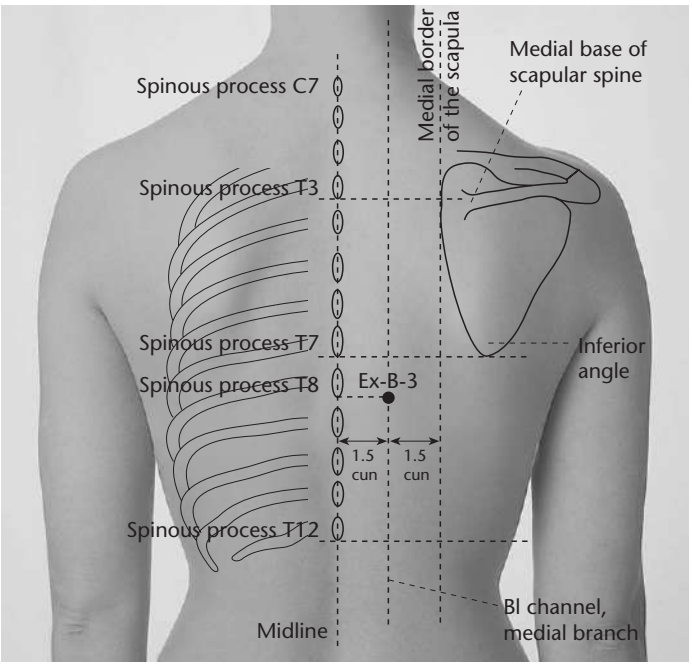
Stomach Controller Lower Shu WEIWANXIASHU Ex-B-3



Location

1.5 cun lateral to the lower border of the spinous process of the 8th thoracic vertebra (T8).

How to find

Locate T7 (→ 3.4.2). From there, count down one spinous process (to T8) and locate **Ex-B-3** 1.5 cun lateral from the midline. Use the Tuffier's line (L4, 3.4.3) to confirm the location of this point: from L4, count up the spinous processes of L3 to L1 and of T12 to T8.

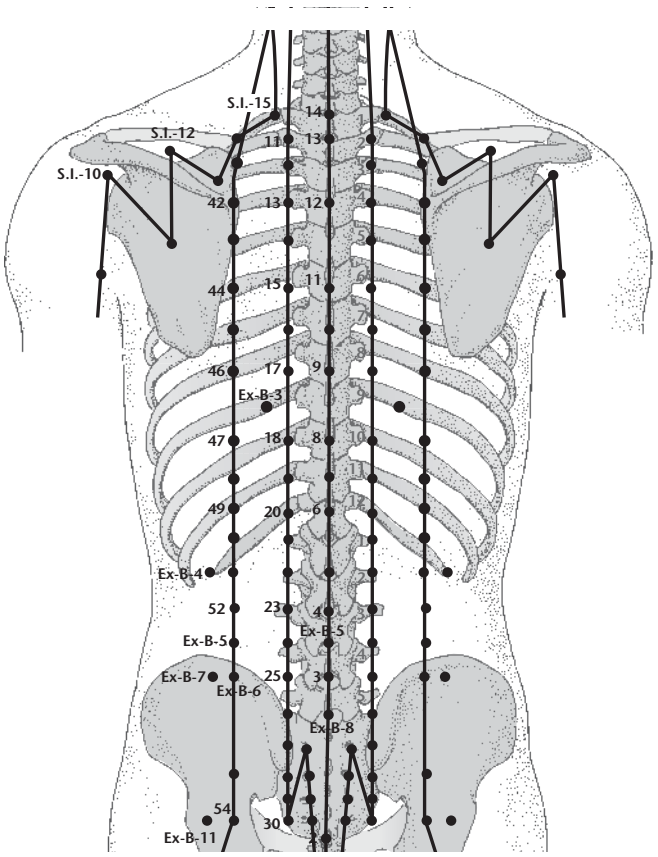
Located on the same level is a point of → **Ex-B-2** (0.5 cun lateral to the midline).

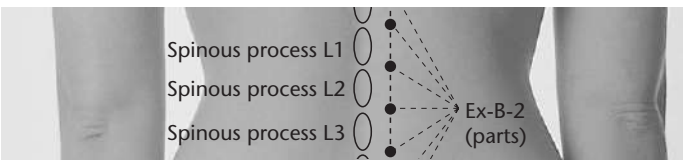
Needling

0.5–1 cun vertically or up to 1.5 cun obliquely in a medial direction. Do not needle in a lateral direction. Caution: Pneumothorax.

Actions/Indications

- Opens the channel locally
- Moistens the body and clears Heat





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Ex-B-4 *Fullness Root* PIGEN

Location

3.5 cun lateral to the posterior midline, on the level of the lower border of the spinous process of the 1st lumbar vertebra (L1).

How to find

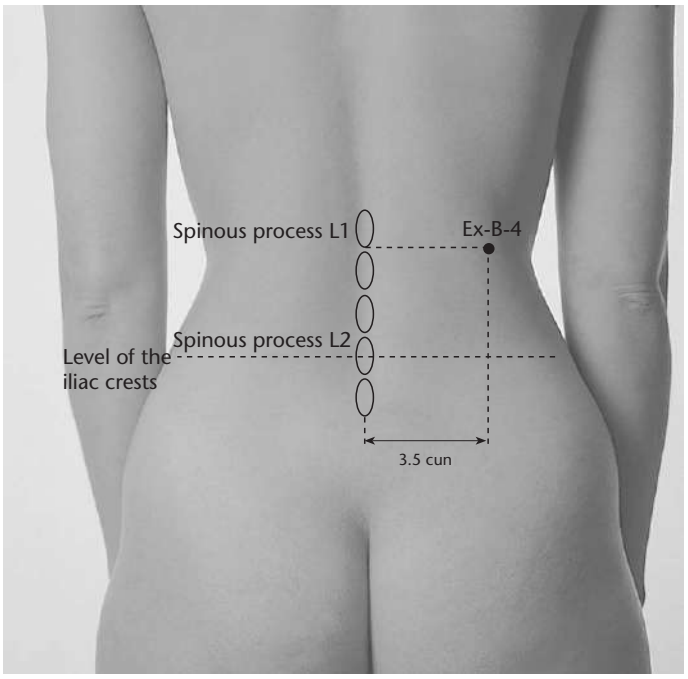
Locate the T7 (→ 3.4.2) and count down 6 spinous processes to L1. Locate **Ex-B-4** on the level of the lower border of its spinous process, 3.5 cun lateral to the midline. Use the Tuffier's line (L4, → 3.4.3) to confirm the location of this point: from L4, count up the spinous processes of L3 to L1.
Located on the same level are → **Du-5** (on the midline), a point of → **Ex-B-2/BL-22/BL-51** (0.5/1.5/3 cun lateral to the midline) as well as → **G.B.-25** (on the lower border of the free end of the 12th rib).

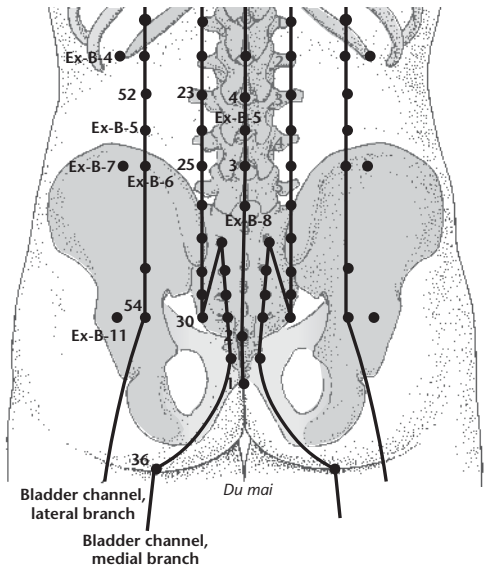
Needling

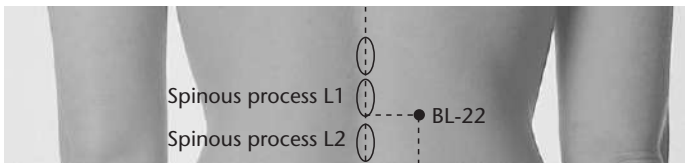
0.8–1 cun obliquely in a medial direction. Caution: Injury to the kidneys!

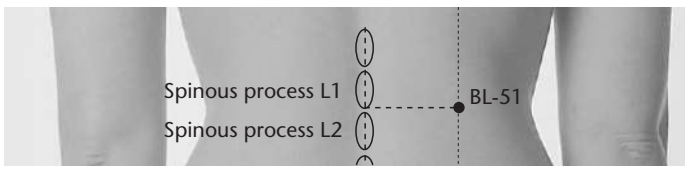
Actions/Indications

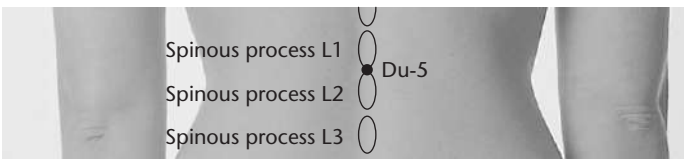
- Improves the Qi flow between the Upper and Middle Burner
- Eliminates local Qi and Blood stagnation

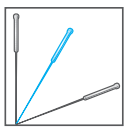
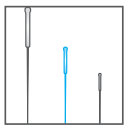


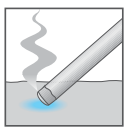
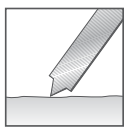








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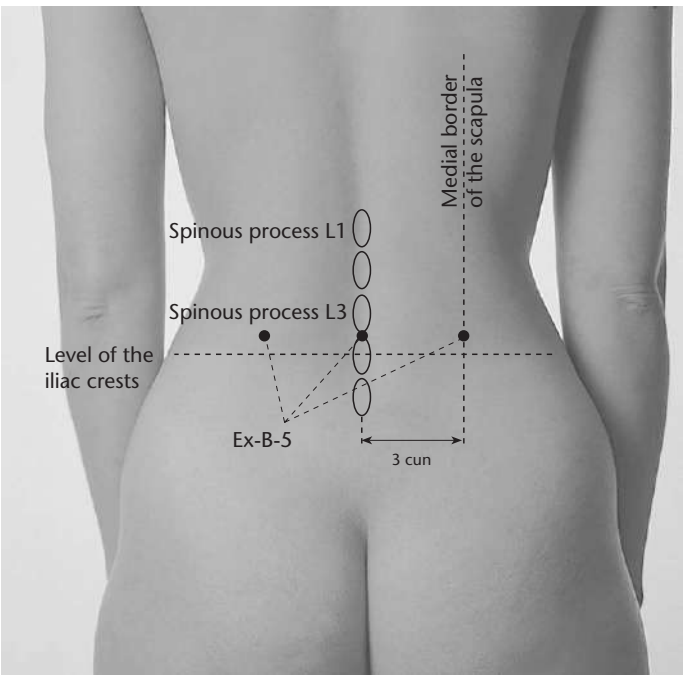
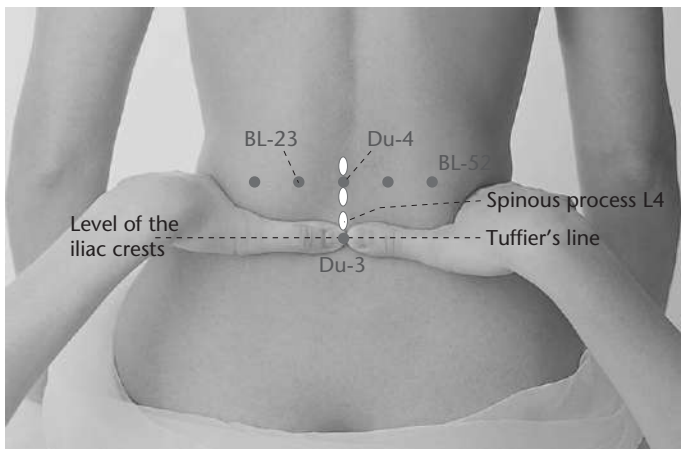
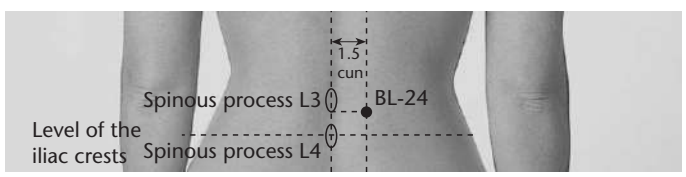
Lower Shu *Point* XIAJISHU Ex-B-5







Location

Some authors consider **Ex-B-5** (*xiajishu*) to comprise three points: one point on the midline below the spinous process of the 3rd lumbar vertebra (L3) (this is the more common and single location of this extra point), complemented by two lateral points 3 cun lateral to the centre point on the midline.

How to find

Locate the Tuffier's line and L4 (→ 3.4.3). Locate **Ex-B-5** on the midline, on the lower border of the spinous process of L3. Then measure 3 cun in a lateral direction and there locate the two lateral points of **Ex-B-5.**

Located on the same level are a point of → **Ex-B-2/BL-24** (0.5/1.5 cun lateral to the midline).

Needling

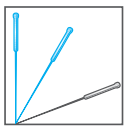
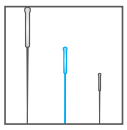
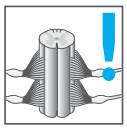
0.5–0.8 cun vertically to the skin or obliquely in an inferior direction. The patient's back should be straight or overextended to avoid a spinal puncture. Oblique insertions in a superior direction should only be carried out by experienced practitioners, as in small persons (regardless of their weight), the spinal canal can be reached after only 1.25 cun. Caution: In pregnant women about to go into labour, this point might have a labour-promoting effect.

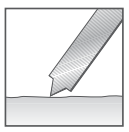
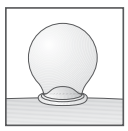
Actions/Indications

- Tonifies Kidney Yang
- Opens the channel locally

Special features

Strictly speaking, this extra point should be considered as a single point and a pair of points with differing indications: depending on the school of thought and the clinical requirements, the lateral points are used for localised Qi and Blood stagnation, whereas the central point is indicated for Kidney Yang deficiency.

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Ex-B-6 *Back Pain Point* YAOYI

Location

3 cun lateral to the midline, on the level of the lower border of the spinous process of the 4th lumbar vertebra (L4).

How to find

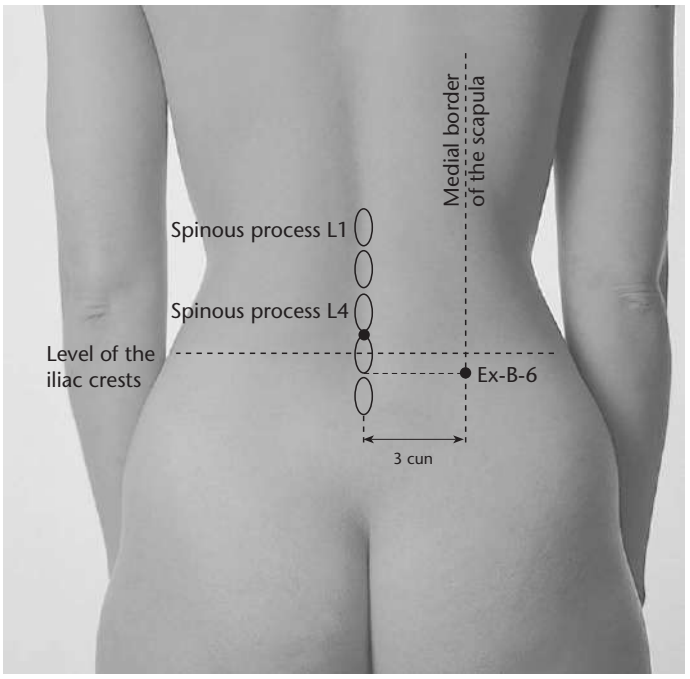
Locate the Tuffier's line and L4 (→ 3.4.3). On the level of the lower border of the spinous process of L4, measure 3 cun in a lateral direction and there locate **Ex-B-6.** Located on the same level are → **Du-3** (on the midline), a point of → **Ex-B-2/BL-25/ Ex-B-7** (0.5/1.5/3.5 cun lateral to the midline).

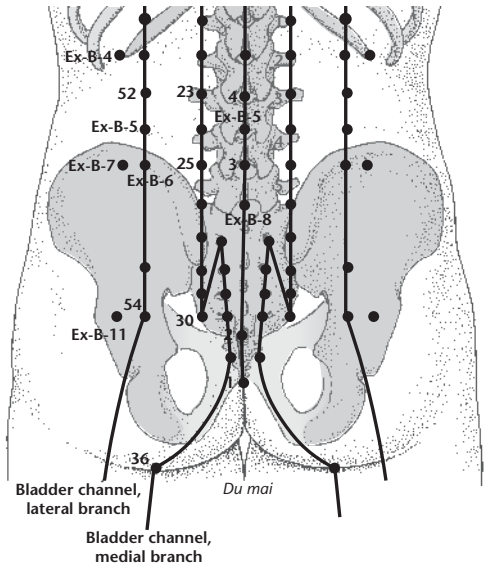
Needling

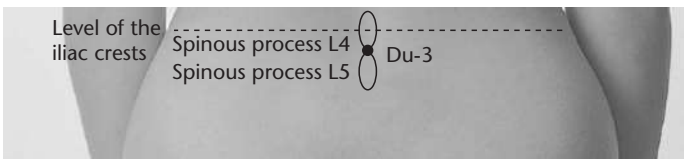
Vertically 0.5–0.8 cun

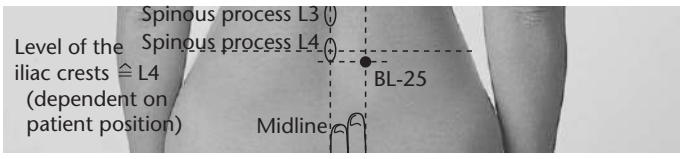
Actions/Indications

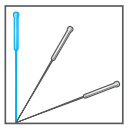
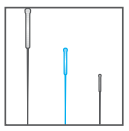
- Opens the channel and *luo* vessels

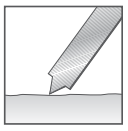










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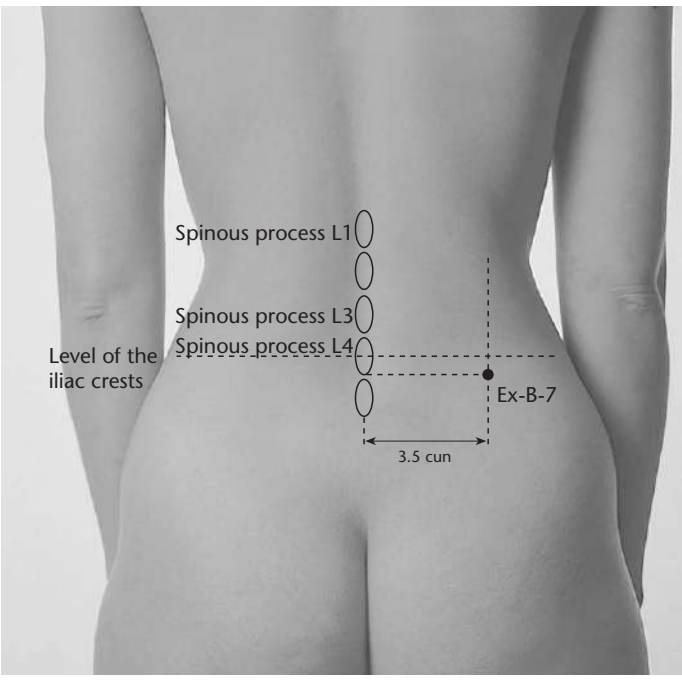
Lumbar Eyes YAOYAN Ex-B-7



Location

3.5 cun lateral to the midline, on the level of the lower border of the spinous process of the 4th lumbar vertebra (L4).

How to find

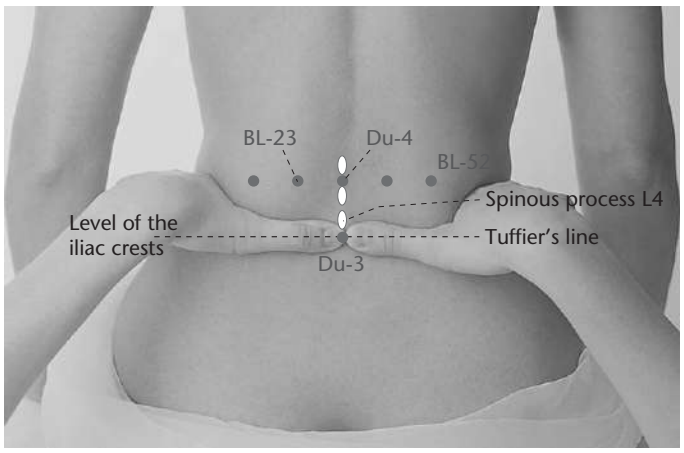
Locate the Tuffier's line and L4 (→ 3.4.3). **Ex-B-7** is located 3.5 cun lateral to it. Located on the same level are → **Du-3** (on the midline), a point of → **Ex-B-2/BL-25/Ex-B-6** (0.5/1.5/3 cun lateral to the midline).

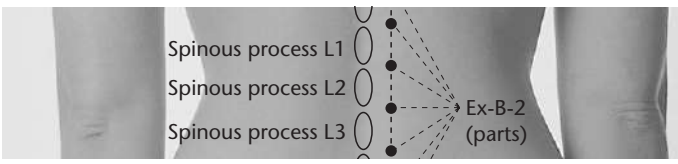
Needling

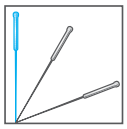
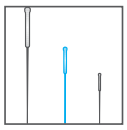
Vertically 0.5–0.8 cun

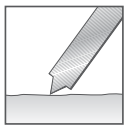
Actions/Indications

- Opens the channel locally
- Tonifies the Kidneys







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Ex-B-8 *Below the 17th Vertebra* SHIQIZHUI/SHIQIZHUIXIA

Location

On the midline, below the spinous process of the 5th lumbar vertebra (L5).

How to find

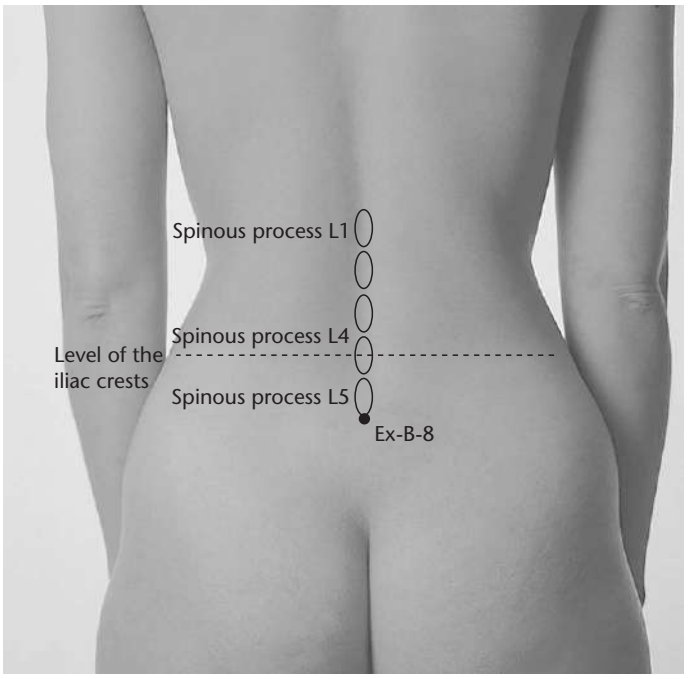
Locate the Tuffier's line and L4 (→ 3.4.3). Next, palpate in an inferior direction to the next vertebra (L5) and locate **Ex-B-8** below the border of its spinous process, at the lumbosacral joint. Located on the same level are a point of → **Ex-B-2/BL-26** (0.5/1.5 cun lateral to the midline).

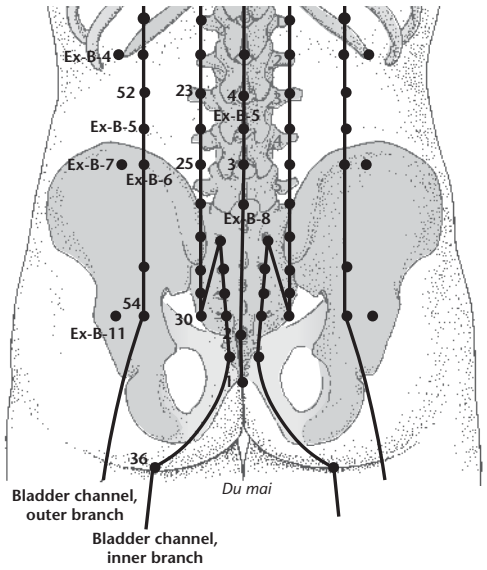
Needling

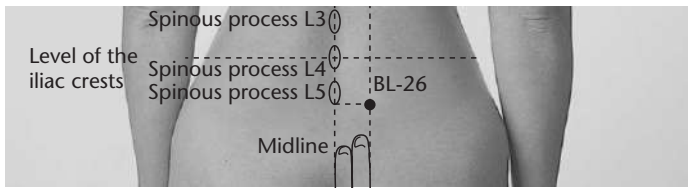
0.5–1 cun vertically to the skin or obliquely in an inferior direction. The patient's back should be straight or slightly flexed to avoid a spinal puncture. Oblique insertions in a superior direction should only be carried out by experienced practitioners, as in small persons (regardless of their weight), the spinal canal can be reached after only 1.25 cun. Caution: In pregnant women about to go into labour, this point might have a labour-promoting effect.

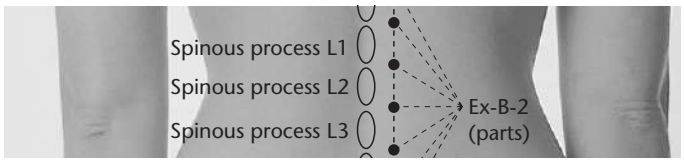
Actions/Indications

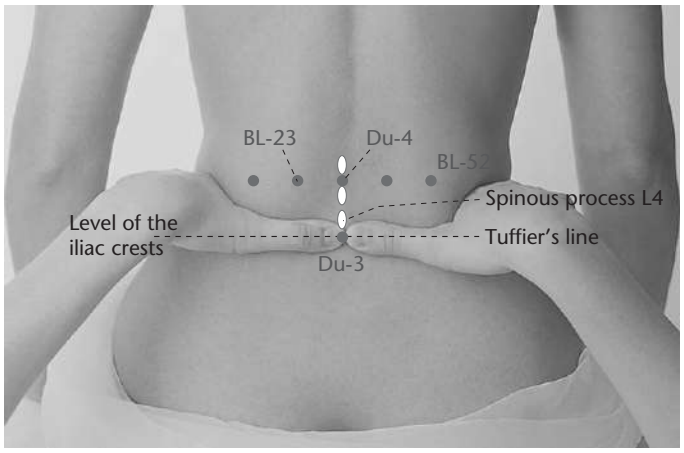
- Tonifies the Kidneys
- Opens the channel locally

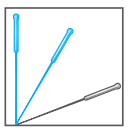
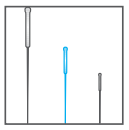
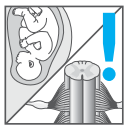


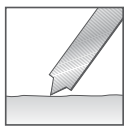










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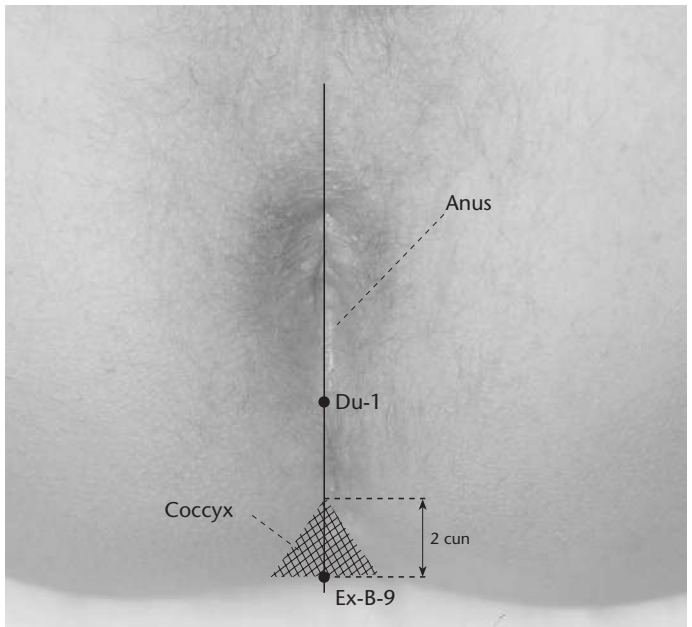
Miraculous Lumbar Point YAOQI Ex-B-9



Location

2 cun superior to the tip (inferior end) of the coccyx.

How to find

Locate the tip of the coccyx superior to the anus and palpate for the sacral hiatus. From there, palpate 2 cun in a superior direction and locate **Ex-B-9** in a depression between the sacral processes.

→ **Du-1** is located on the midline, between the tip of the coccyx and the anus.

Needling

Up to 1.5 cun obliquely in a superior direction.

Actions/Indications

- Calms the *shen*

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Ex-B-10 *Tuberculosis Point* JIEHEXUE

Location

3.5 cun lateral to the lower border of the spinous process of the 7th cervical vertebra (C7).

How to find

Locate the spinous process of C7 and, on this level, palpate 3.5 cun in a lateral direction. There, locate **Ex-B** (*jiehexue*).
Located on the same level are → **Du-14** (on the midline), → **Ex-B-2/S.I.-15** (0.5/2 cun lateral to the midline).

Needling

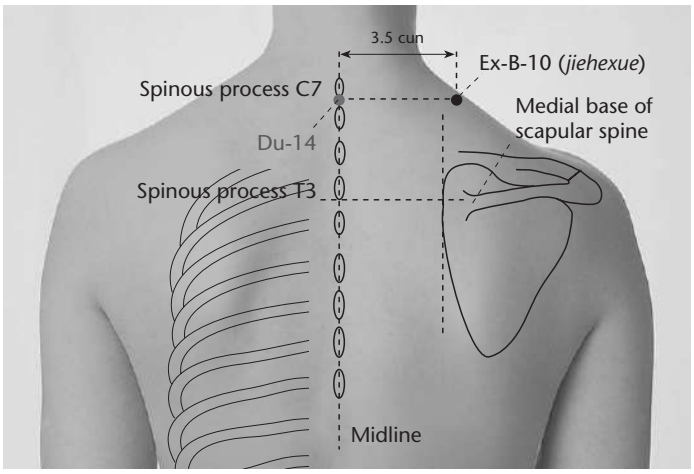
Vertically 0.5–0.8 cun. Caution: Pneumothorax.

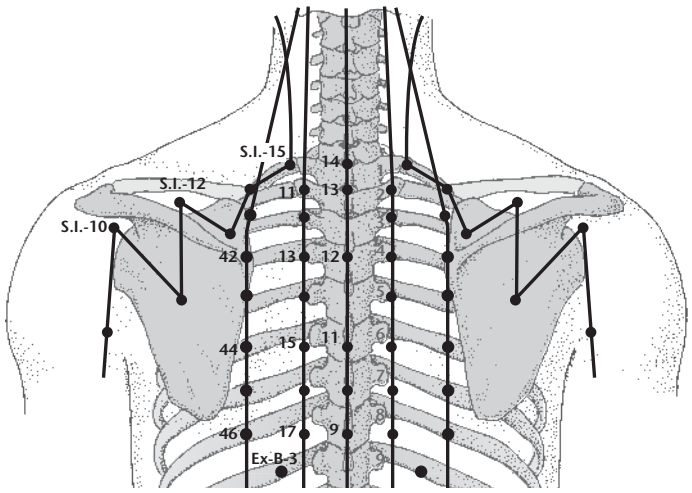
Actions/Indications

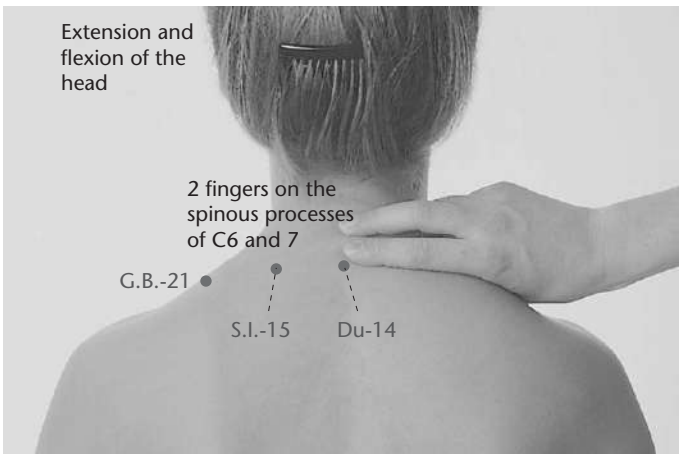
- Tonifies the Lung
- Opens the channel locally

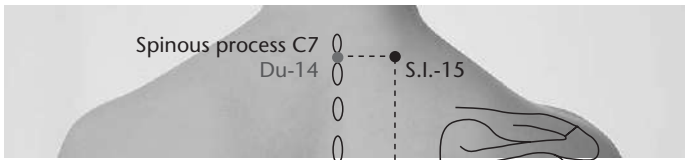
Special features

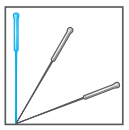
This is an unofficial extra point.

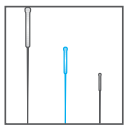


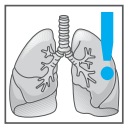


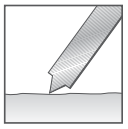












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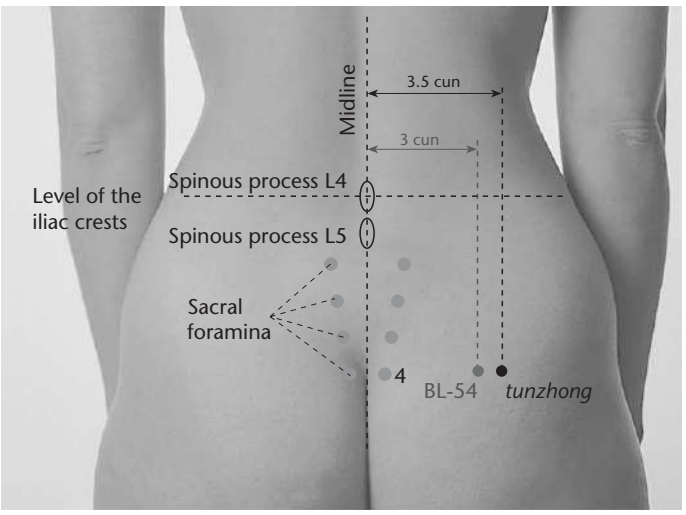
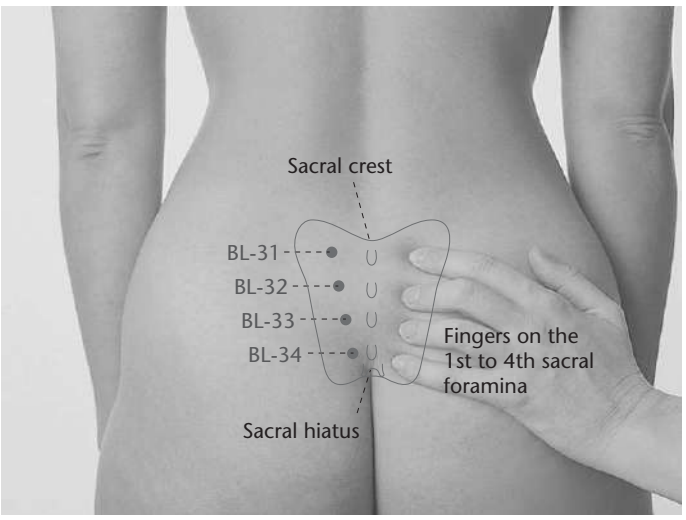
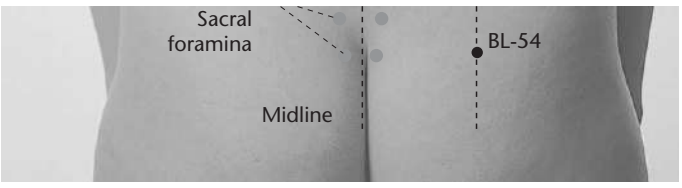
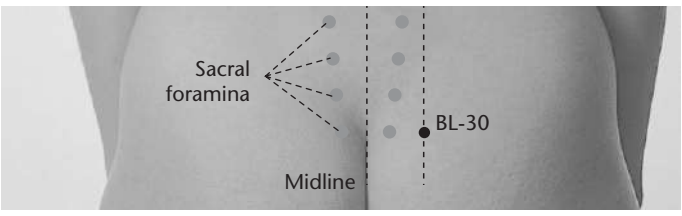
Buttock Centre TUNZHONG









Location

At the centre of the buttock, 3.5 cun lateral to the posterior midline, on the level of the 4th sacral foramen.

How to find

Locate the lumbosacral joint, which often forms an easily palpable 'kink' between the L5 and the sacrum. Alternatively, locate the Tuffier's line (→ 3.4.3) for reference. Then palpate the inferior aspect of the sacrum for the sacral hiatus (→ 3.4.4). Between these two reference points, the four pairs of sacral foramina are arranged on either side of the midline in a slight V-shaped form and can be palpated as shallow depressions. **Ex-B** (*tunzhong*) is located 3.5 cun lateral to the lowest depression (=4th foramen), approximately at the centre of the buttock.
Located on the same level are → **BL-34/BL-30/BL-54** (over the 4th foramen/1.5/3 cun lateral to the midline).

Needling

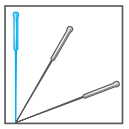
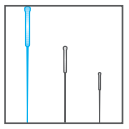
Vertically 2–3 cun

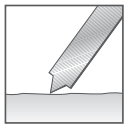
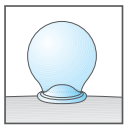
Actions/Indications

- Opens the channel and *luo* vessels locally

Special features

This is an unofficial extra point.

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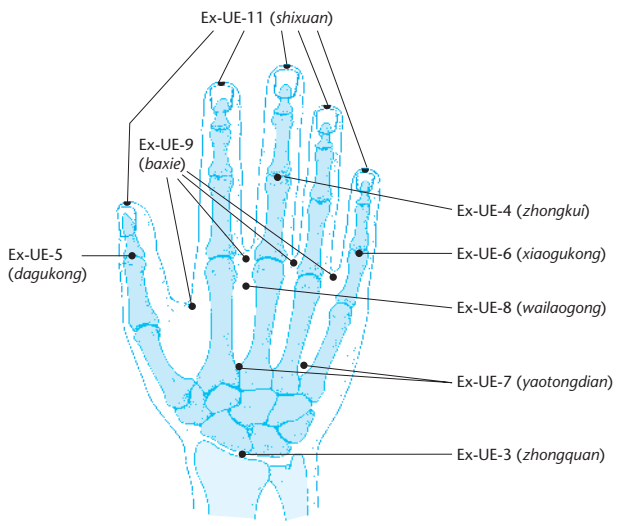
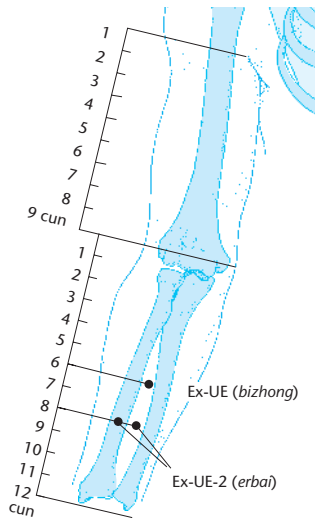
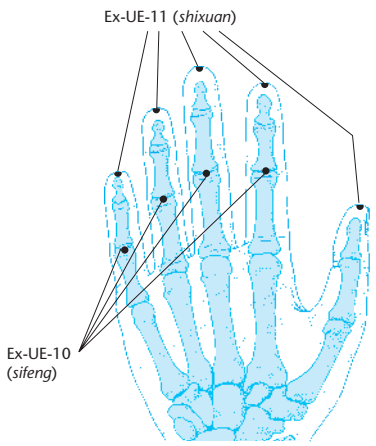
6.4 Extra Points: Upper Extremities (EX-UE)







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English abbreviation (standard)	*Pinyin* name	Nguyen Van Nghi, König and Wancura, Schnorrenberger	Shanghai College	Ex (Hempen)
Ex-UE-1	*zhoujian*		M-UE-46	
Ex-UE-2	*erbai*	PaM or ZP114	M-UE-29	
Ex-UE-3	*zhongquan*	PaM or ZP118	M-UE-33	
Ex-UE-4	*zhongkui*	PaM101	M-UE-16	
Ex-UE-5	*dagukong*	PaM or ZP100	M-UE-15	
Ex-UE-6	*xiaogukong*	PaM or ZP102	M-UE-17	
Ex-UE-7	*yaotongxue/yaotongdian*	Handpoint 2 PaM or ZP110/111*	M-UE	Ex18
Ex-UE-8	*wailaogong*†/*luozhen*	PaM or ZP108†	M-UE-24	Ex17
Ex-UE-9	*baxie*	PaM or ZP107	M-UE-22	Ex14
Ex-UE-10	*sifeng*		M-UE-9	Ex13
Ex-UE-11	*shixuan*	PaM or ZP86	M-UE-1	Ex15
Further Extra points				
Ex-UE	*jianqian/jianneiling*	Part of NP74‡ (*sanjian*): *jianyu* (L.I.-15), *jianqian*, *jianhou*	M-UE-48§	Ex16
Ex-UE	*bizhong*	PaM or ZP115	M-UE-30	

* The 'standard' point Ex-UE-7 (*yaotongdian* or *yaotongxue*) is described by Nguyen Van Nghi and Schnorrenberger as two separate points with different *pinyin* names: PaM or ZP110 (*weiling*) and 111 (*jingling*). Their location also corresponds to handpoint 2.

† Nguyen Van Nghi and Schnorrenberger distinguish between *luozhen* (PaM or ZP108) and *wailaogong* (PaM or ZP109). They describe the location of *luozhen* as identical with the 'standard' location of Ex-UE-8 (*wailaogong*): on the dorsum of the hand, between the 2nd and 3rd metacarpal bones, approximately 0.5 cun proximal to the metacarpophalangeal joint. 'Their' *wailaogong* is located at the midpoint of a line connecting the wrist and the head of the 3rd metacarpal bone, between the metacarpals, directly opposite to the point *laogong* (P-8) – hence the name *wailaogong* ('outer' *laogong*).

‡ **NP74** (*jiansanzhen*/Three pinpricks at the Shoulder) according to Schnorrenberger: a set of three points: the first is identical with **L.I.-15** (*jianyu*), the second (*jianquan*/ Anterior to the Shoulder) is located 1 cun superior to the end of the anterior axillary fold, and the third (*jianhou*/Posterior to the Shoulder) is located 1 cun superior to the end of the posterior axillary fold.

§ According to Deadman et al. (1998), **M-UE-48** (*jianqian*) is located midway between the end of the anterior axillary fold and **L.I.-15** (this point is not mentioned by the Shanghai College). See the point page for the location of this point.

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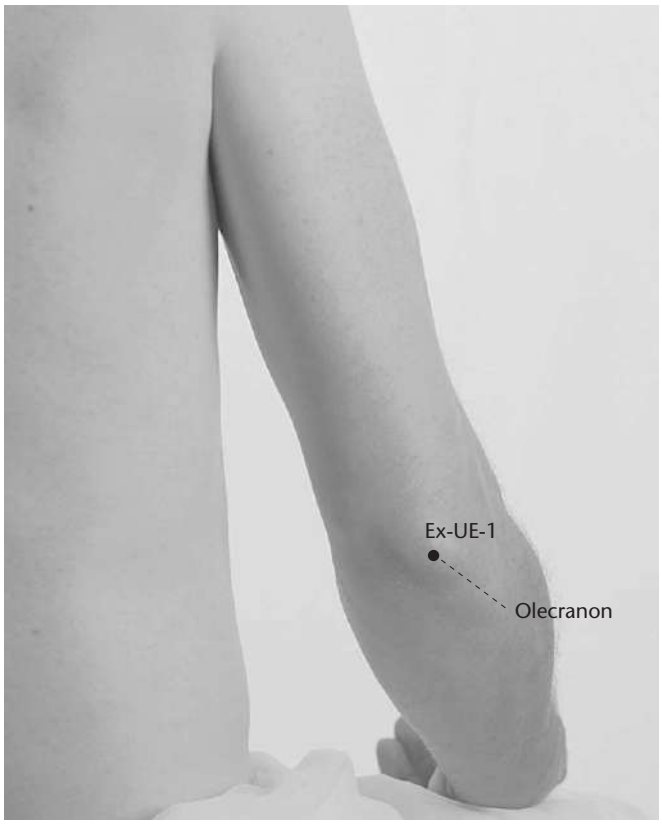
Elbow Tip ZHOUJIAN Ex-UE-1

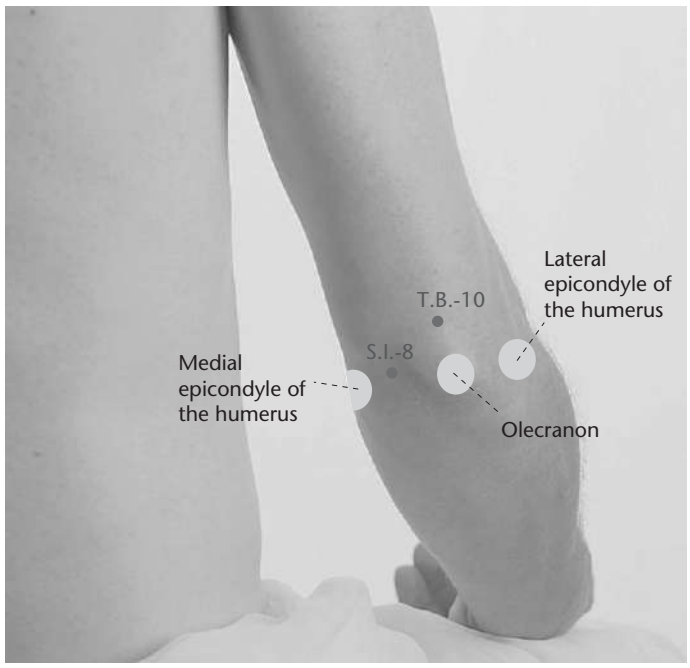


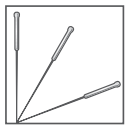
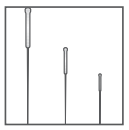
Location
On the tip of the olecranon.

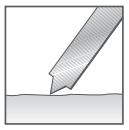
How to find
On the tip of the olecranon. This point is best located with the elbow flexed.

Needling
Moxibustion only!

Actions/Indications
- Opens the channel and *luo* vessels locally
- Disperses Phlegm locally





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Ex-UE-2 *Two Whites* ERBAI

Location

A pair of points on the palmar aspect of the forearm, 4 cun proximal to the wrist joint space (most distal wrist crease), on either side of the tendon of the flexor carpi radialis muscle.

How to find

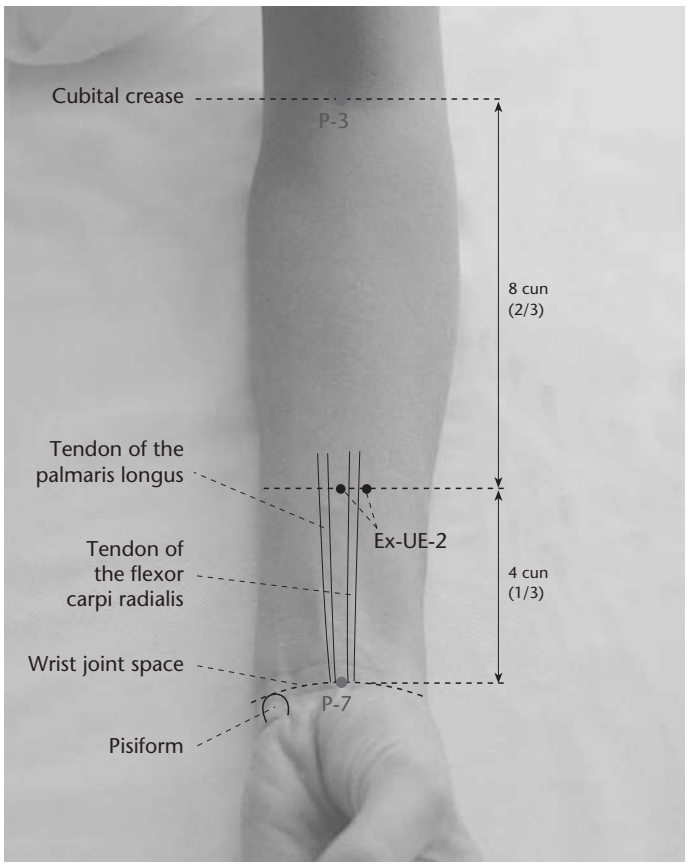
Place the patient's arm in a relaxed supinated position. As the location of the wrist crease can vary, the wrist joint space provides a more reliable point of reference (→ 3.3.3). From the centre of the wrist joint space, measure 4 cun in a proximal direction and, on this level, locate one of the points lateral to and the other point medial to the tendon of the flexor carpi radialis muscle. **Or:** Divide the distance between the cubital crease (at → **P-3**) and the wrist joint space (at → **P-7**) into thirds, then locate → **Ex-UE-2** one third of the distance from the wrist joint (helpful tool: elastic tape → 2).

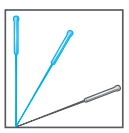
Needling

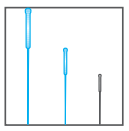
Up to 1 cun vertically or up to 1.5 cun obliquely towards proximal.

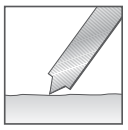
Actions/Indications

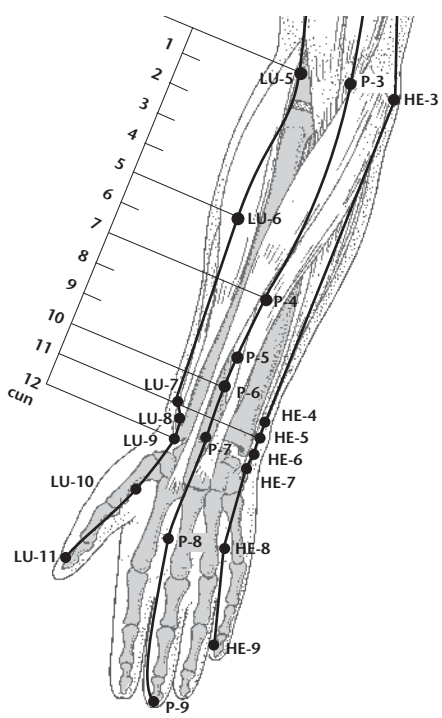
- Raises Qi to treat prolapse of the rectum and haemorrhoids

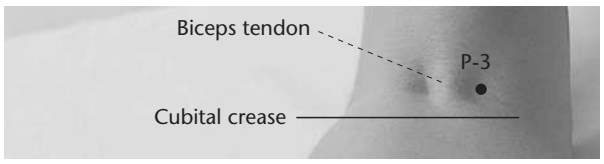


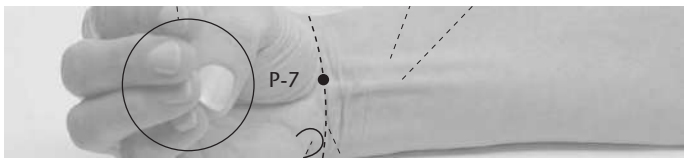












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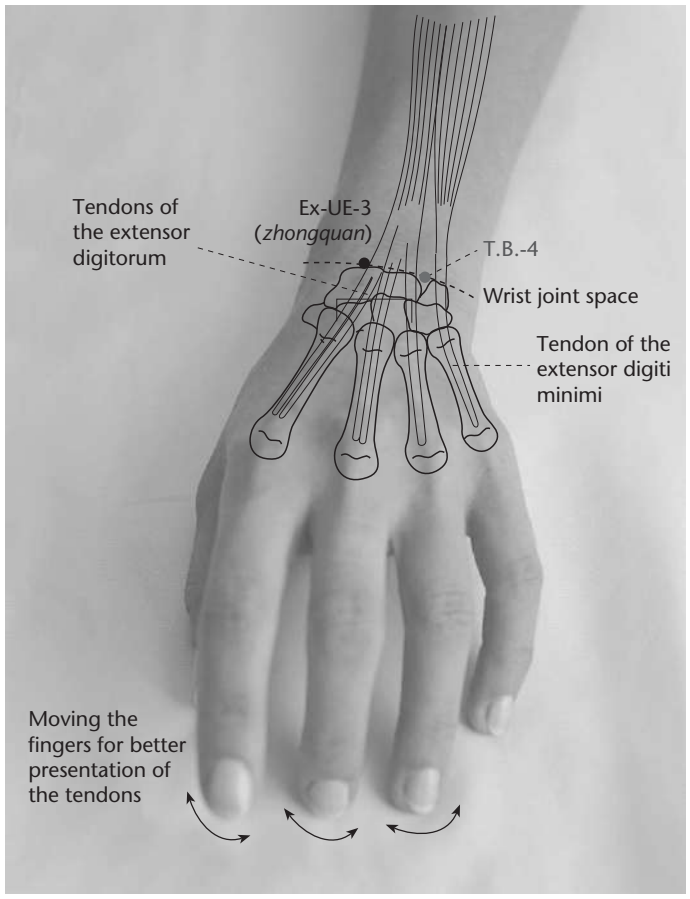
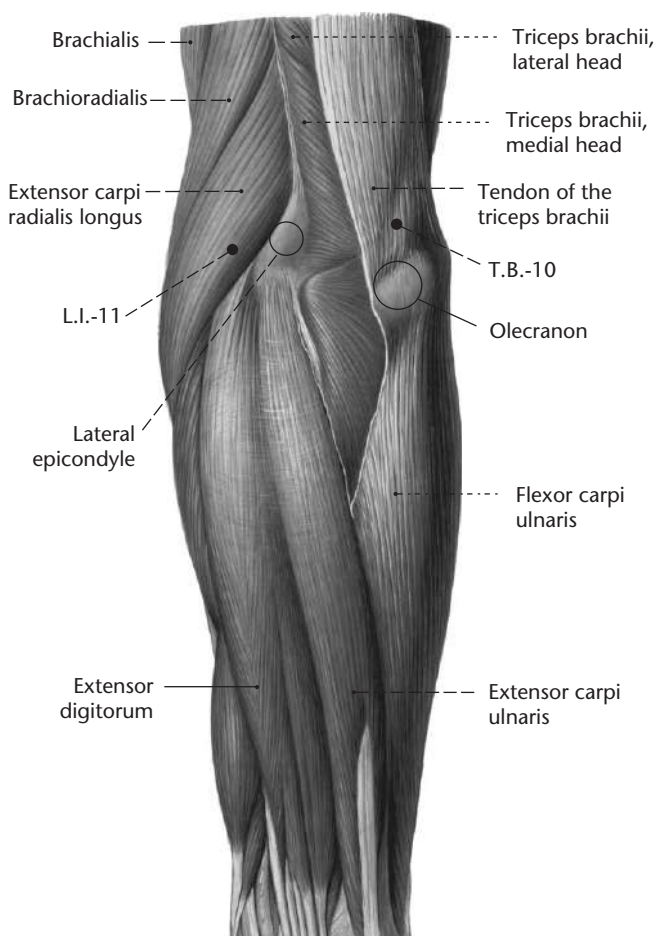
Posterior Spring ZHONGQUAN Ex-UE-3





Location

On the dorsal aspect of the wrist joint space (dorsal wrist crease), radial to the tendon of the extensor digitorum communis muscle.

How to find

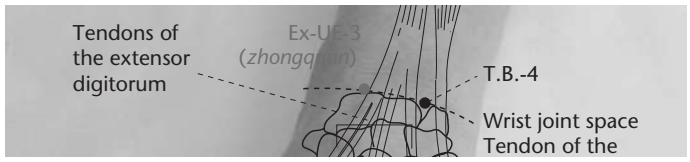
Place the patient's arm in a relaxed pronated position. As the location of the dorsal wrist crease can vary, the joint space between the proximal row of carpals and the radius/ulna provides a more reliable point of reference (→ 3.3.3). By moving the wrist in a relaxed way, you can easily palpate the joint space. Locate **Ex-UE-3** in the joint space, radial to the tendon of the extensor digitorum communis muscle. The tendons become more pronounced by moving and overextending the three medial fingers. → **T.B.-4** is located on the same level, ulnar to the tendon of the extensor digitorum communis muscle.

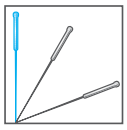
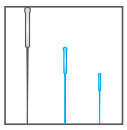
Needling

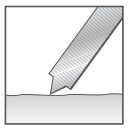
Vertically 0.3–0.5 cun

Actions/Indications

- Harmonises the Qi flow between the Upper and Middle Burner





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Ex-UE-4 *Back of the Middle Finger* ZHONGKUI

Location

As the name implies, on the dorsal aspect of the middle finger, in the centre of the transverse creases of the proximal interphalangeal joint (PIP).

How to find

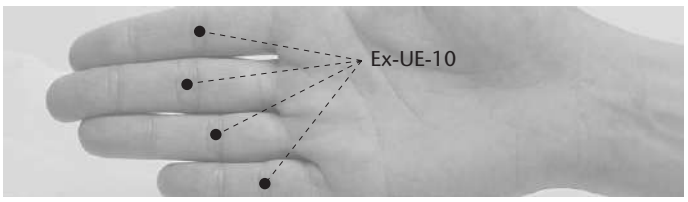
Slightly bend the PIP of the middle finger. The point is located at the vertex of the flexed joint.
Located in a comparable position on the little finger is → **Ex-UE-6** (*xiaokugong*, in the centre of the proximal PIP of the little finger). Also located in a comparable position is → **Ex-UE-10** (*sifeng*, four points on the palmar aspect of the fingers of each hand, in the centre of the creases of the PIP joints of the 2nd to 5th fingers).

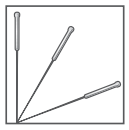
Needling

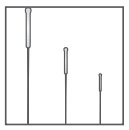
Prick to bleed or moxibustion.

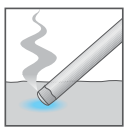
Actions/Indications

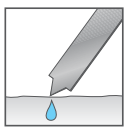
- Descends Stomach Qi
- Clears Heat











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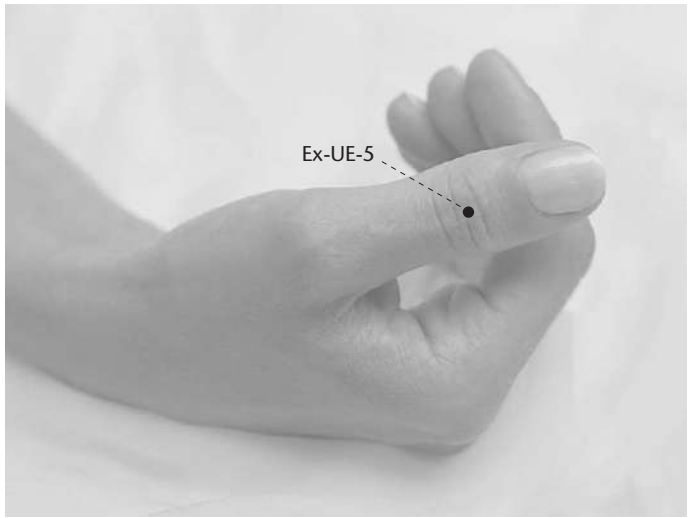
Thumb Joint DAGUKONG Ex-UE-5



Location

As the name implies, on the dorsal aspect of the thumb, in the centre of the transverse creases of the interphalangeal joint.

How to find

Ask the patient to slightly flex the interphalangeal joint of the thumb. The point is located at the vertex of the bent joint.

Needling

Prick to bleed or moxibustion.

Actions/Indications

- Clears Heat
- Harmonises the Middle Burner

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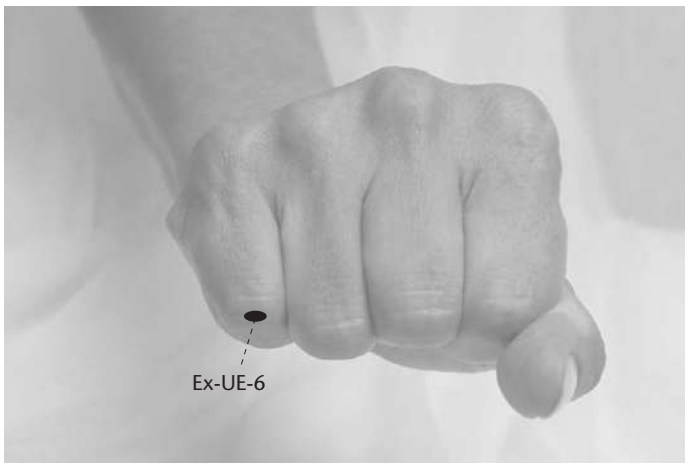
Ex-UE-6 *Little Finger Joint* XIAOGUKONG

Location

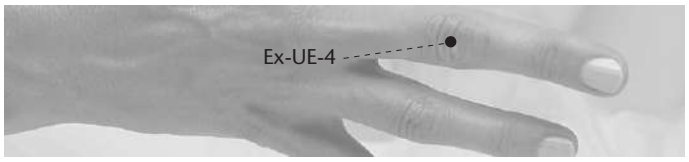
As the name implies, on the dorsal aspect of the little finger, in the centre of the transverse creases of the proximal interphalangeal joint (PIP).



How to find

Slightly bend the PIP of the little finger. The point is located at the vertex of the flexed joint.

Located in a comparable position on the middle finger are → **Ex-UE-4** (in the centre of the proximal PIP of the middle finger) and, on the palmar aspect of the little finger, → **Ex-UE-10** (four points on the palmar aspect of the fingers of each hand, in the centre of the creases of the PIP joints of the 2nd to 5th fingers).

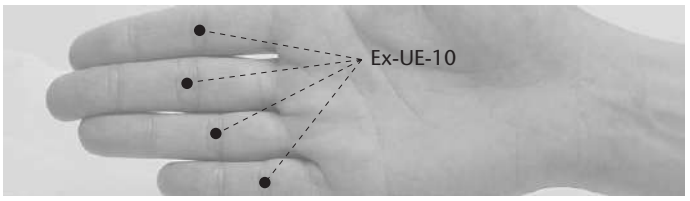


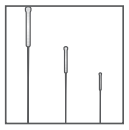
Needling

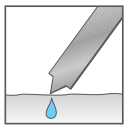
Prick to bleed

Actions/Indications

- Clears Heat







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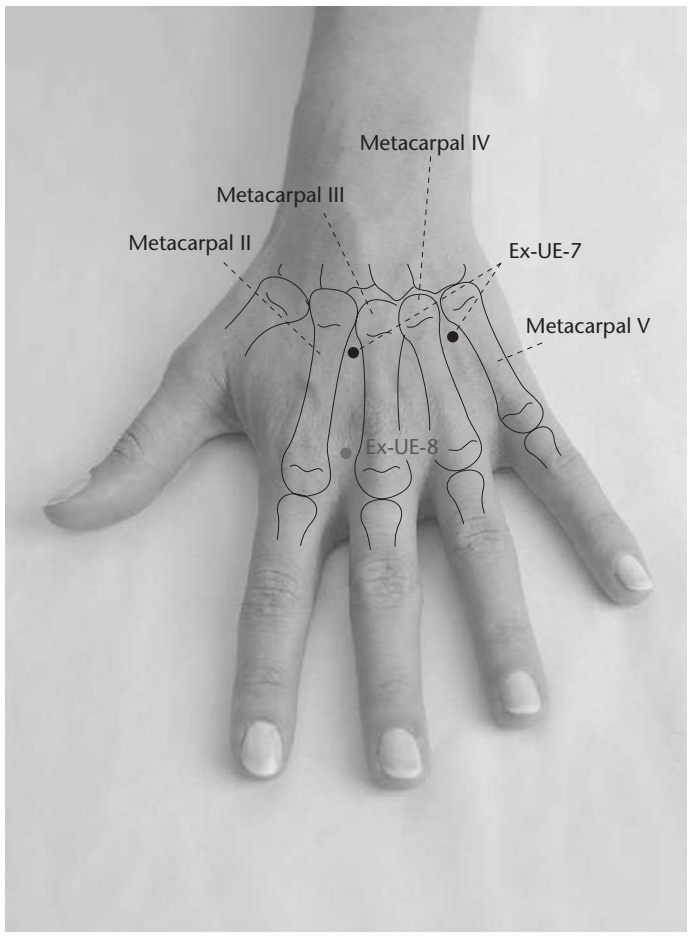
Lumbar Pair Point YAOTONGDIAN Ex-UE-7



Location

Two points on the dorsal aspect of the hand, between the 2nd/3rd and 4th/5th metacarpal bones, on the level of the junctions of the shaft and the base of the respective metacarpal bones.

How to find

On the dorsal aspect of the hand, glide with the palpating fingers in the grooves between the 2nd and 3rd as well as between the 4th and 5th metacarpal bones towards the wrist joint, until the fingers come to rest in the depressions just distal to the bases of the metacarpal bones. Here, locate the points of **Ex-UE-7** (*yaotongdian* or *yaotongxue*).

Needling

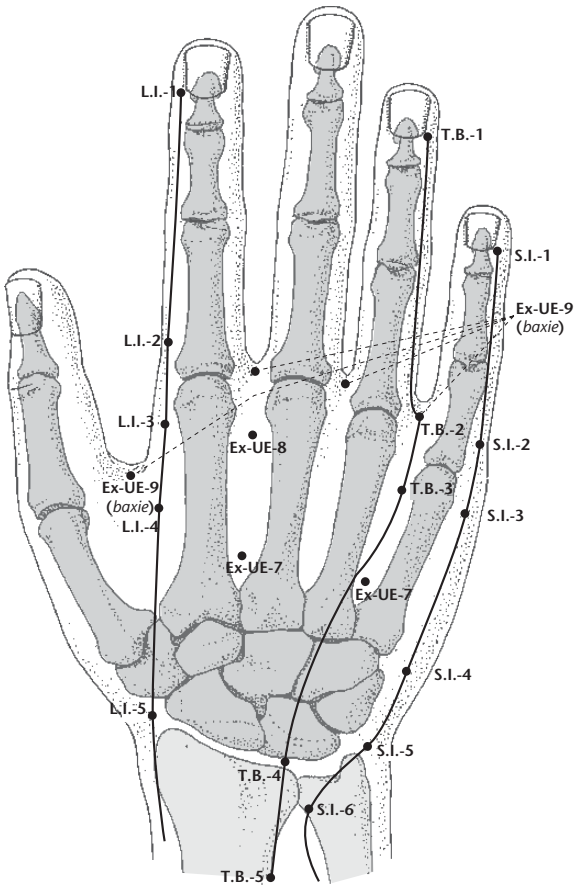
0.5–0.8 cun vertically or slightly obliquely towards the centre of a loose fist. Caution: Painful point! Do not stimulate these distal points in patients with a weak constitution: danger of needle collapse!

Actions/Indications

- Strengthen the Qi and Blood in the lumbar region, alleviate pain

Special features

Very effective distal point for acute disorders of the lumbar spine



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Ex-UE-8 *Stiff Neck* WAILAOGONG/LUOZHEN/XIANQIANG

Location

On the dorsal aspect of the hand, between the 2nd and 3rd metacarpal bones, proximal to the metacarpophalangeal joints, at the junction of the heads and the shafts of the metacarpal bones.

How to find

This point is best located with the patient making a loose fist. With the palpating finger, glide in the groove between the 2nd and 3rd metacarpal bones from the wrist joint towards the fingers until the finger comes to rest in the depression just proximal to the heads of the two metacarpal bones. Here, locate **Ex-UE-8** (*wailaogong*). Located in a comparable position between the 4th and 5th metacarpal bones is → **T.B.-3**.

Needling

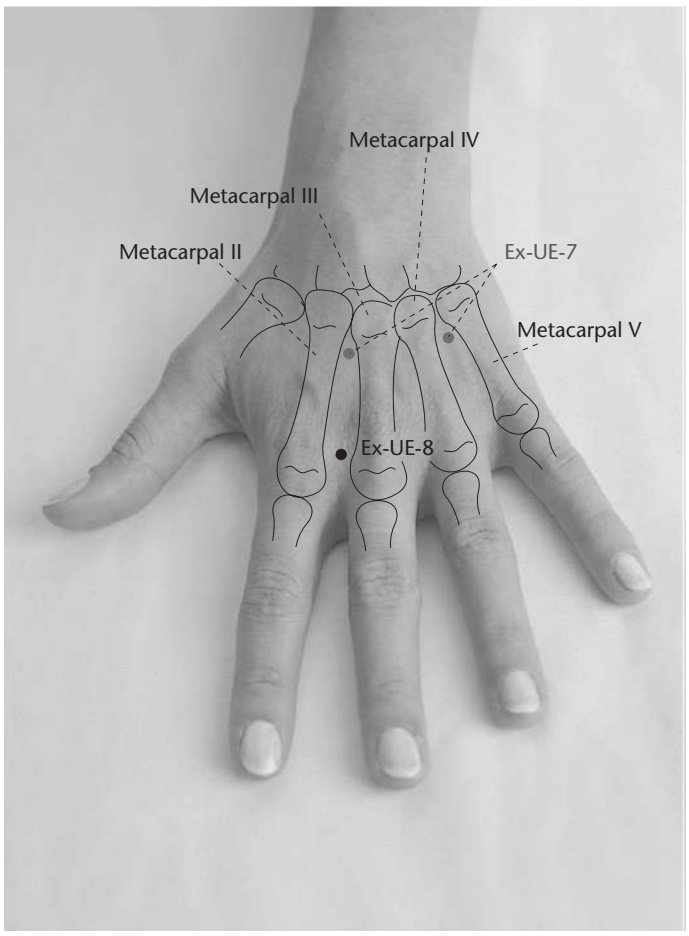
0.5–1 cun vertically or slightly obliquely. Caution: Painful point! Do not stimulate this point in patients with a weak constitution: danger of needle collapse!

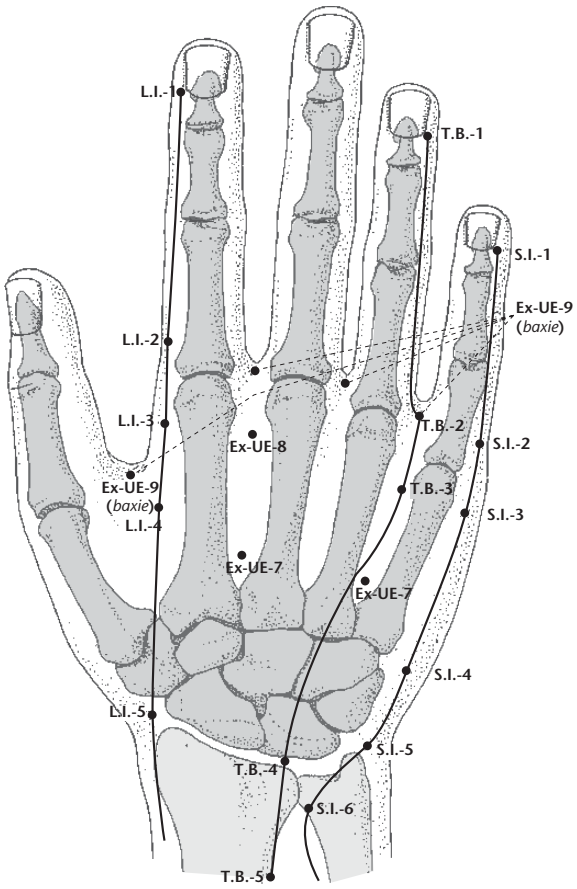
Actions/Indications

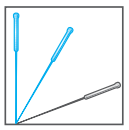
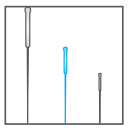
- Strengthens the Qi and Blood of the neck and alleviates pain

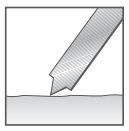
Special features

Very effective distal point for acute disorders of the cervical spine. Use strongly reducing needling techniques (for 1–2 minutes) on the affected or contralateral side while asking the patient to gently move their neck/cervical spine. The practitioner should keep the patient's hand in a fixed position and ensure that the hand and forearm are sufficiently supported.







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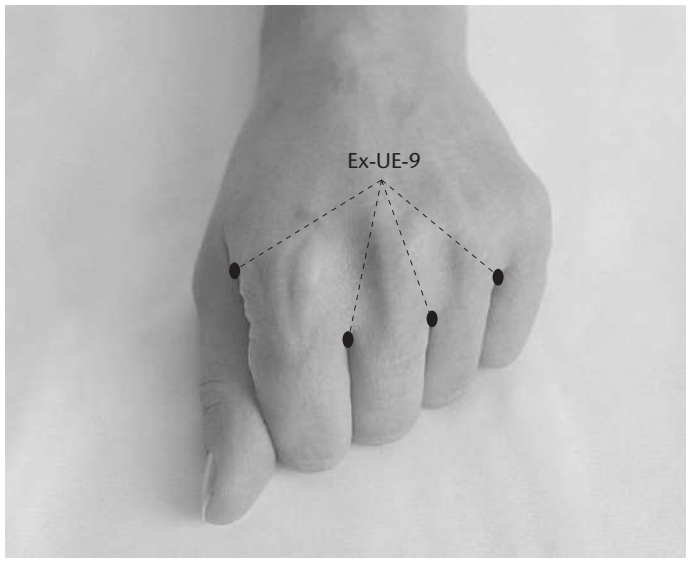
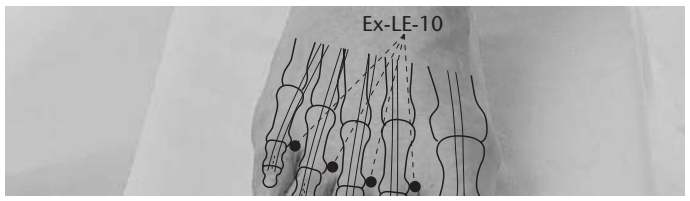
Eight Pathogens BAXIE Ex-UE-9





Location

Slightly proximal to the margins of the webs between the fingers, on the border of the red and white skin.

How to find

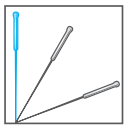
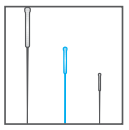
These points are best located when a loose fist is made. Locate the points on the border between the red and white skin. → **T.B.-2** (between the 4th and 5th fingers) is a point of **Ex-UE-9** (*baxie*). The points of → **Ex-LE-10** (*bafeng*) are located in a comparable position on the foot (proximal to the margins of the webs between the toes). → **LIV-2,** → **ST-44** and → **G.B.-43** are all part of → **Ex-LE-10**.

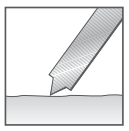
Needling

Up to 1 cun parallel to the metacarpal bones.

Actions/Indications

- Clears Heat
- Expels Cold and Dampness



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Ex-UE-10 *Four Seams* SIFENG

Location

On the palmar aspect of the 2nd to 5th fingers, at the midpoint of the transverse creases of the proximal interphalangeal joints (PIP).

How to find

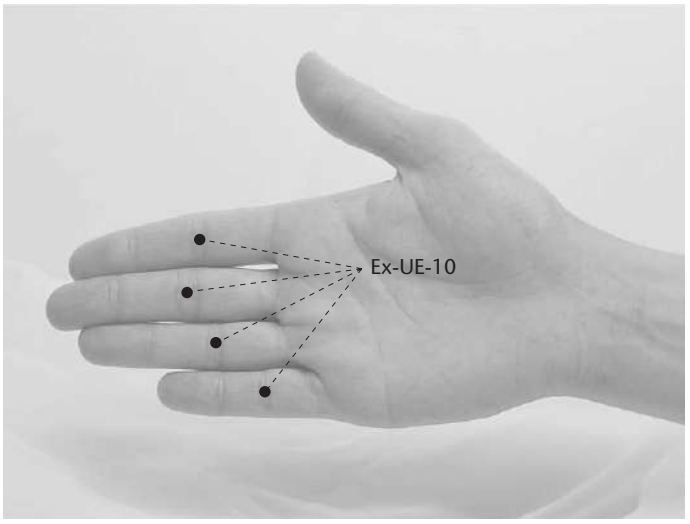
Locate these points on the palmar aspect of the 2nd to 5th fingers, at the midpoint of the transverse creases of the proximal interphalangeal joints (PIP).
Located in a similar position on the dorsal aspect of the little and middle fingers are → **Ex-UE-6** and → **Ex-UE-4** respectively.

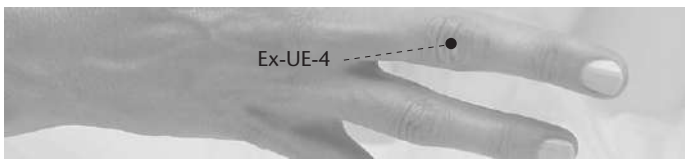
Needling

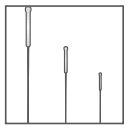
Prick to bleed

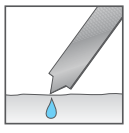
Actions/Indications

- Harmonises the Qi flow between the Upper and Middle Burner









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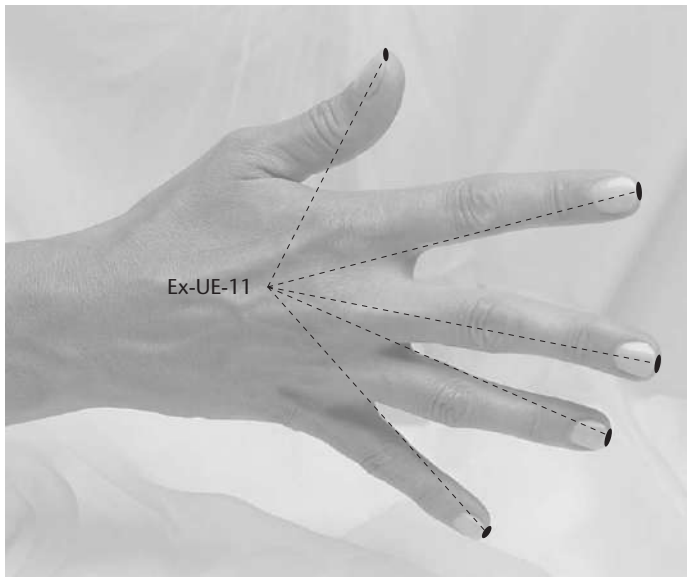
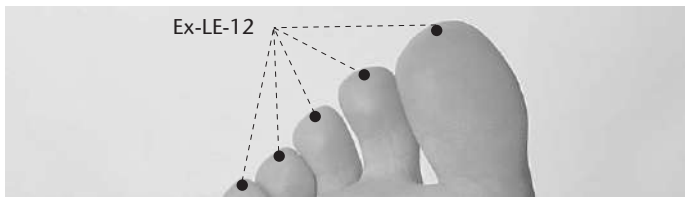
Ten Diffusions SHIXUAN Ex-UE-11





Location

On the tips of the 10 fingers.

How to find

These 10 points are located on the tips of the 10 fingers, approximately 0.1 cun from the free margin of the fingernail.
Located in a comparable position on the foot are the points of → **Ex-LE-12** (*qiduan*, on the tips of the 10 toes).

Needling

Prick to bleed

Actions/Indications

- Expels pathogenic factors

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Ex-UE Front of the Shoulder JIANQIAN/JIANNEILING

Location

On the midpoint of a line connecting the end of the anterior axillary fold and ➞ **L.I.-15**.

How to find

To locate ➞ **L.I.-15**: Ask the patient to actively abduct their arm and locate **L.I.-15** in the depression anterior and inferior to the acromion (=ventrolateral extremity of the acromion). The end of the anterior axillary fold is formed by the easily palpable lower border of the pectoralis major muscle. *Jianqian* is located on the anterior aspect of the shoulder joint, midway between these two reference points.

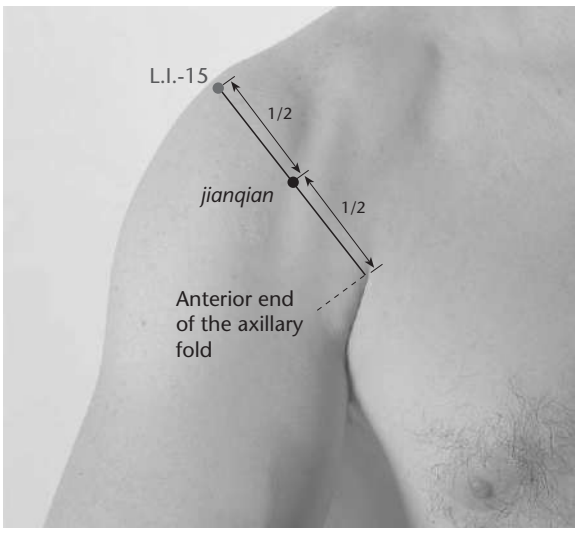
Needling

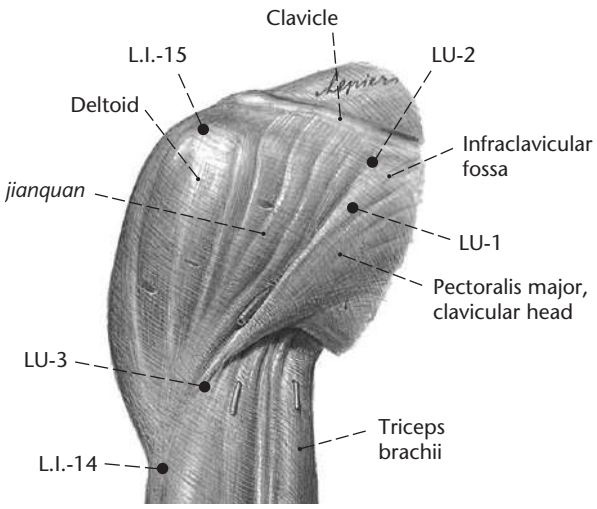
Vertically up to 1.5 cun

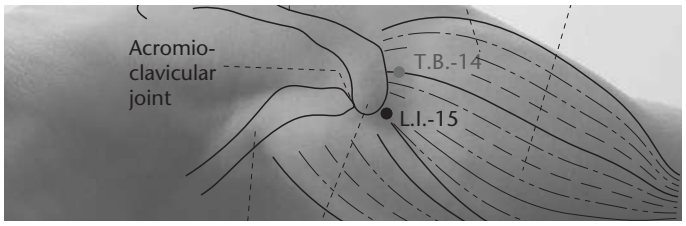
Actions/Indications

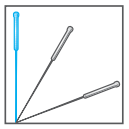
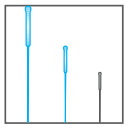
- Opens the channel and *luo* vessels locally

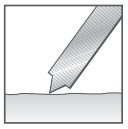
Addendum: For more details, ➞ Table 6.4









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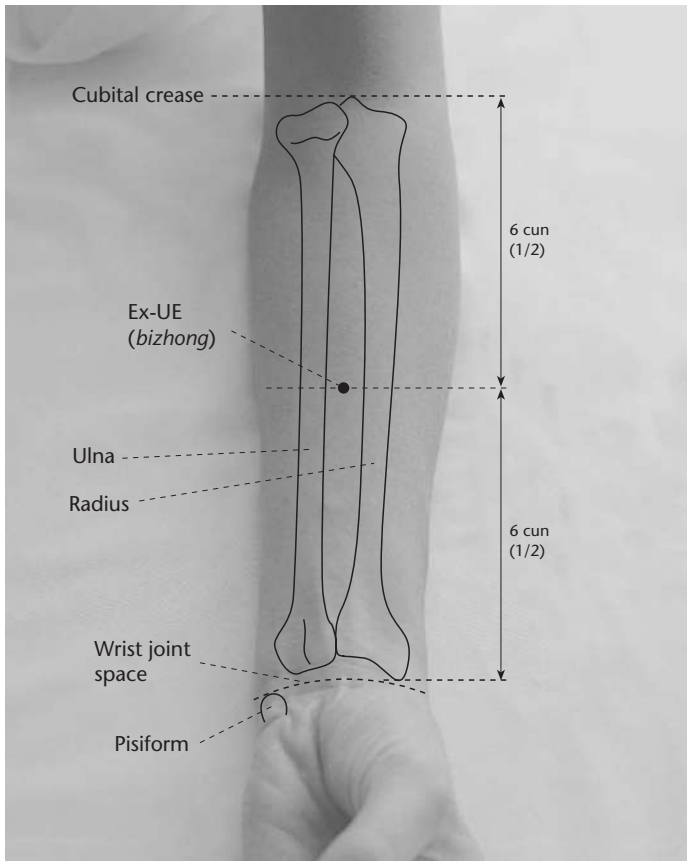
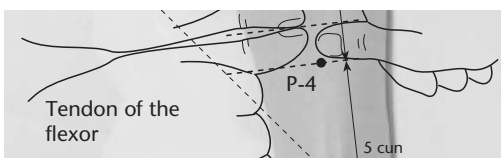
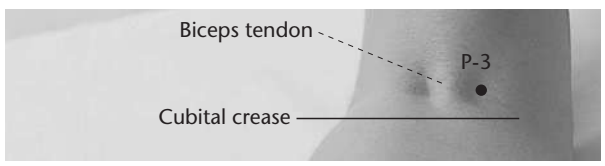
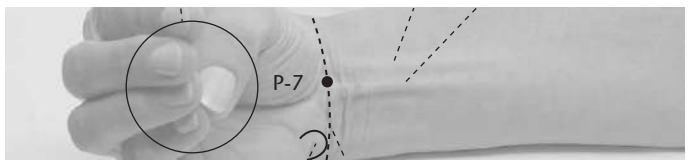
Arm Centre BIZHONG









Location

On the palmar aspect of the forearm, midway between the cubital crease and the wrist joint space ('most distal wrist crease').

How to find

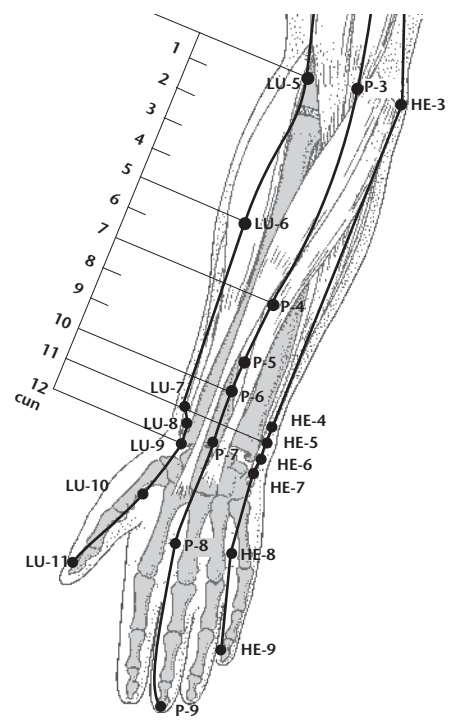
Place the patient's forearm in a relaxed supinated position. As the location of the wrist crease may vary, the wrist joint space presents a more reliable reference point (→ 3.3.3). The spreading hands technique is the best method for locating this point (→ 2.3.3): Place the little fingers on the centre of the wrist joint (→ **P-7**) and the cubital crease (→ **P-3**) respectively and determine the midpoint of this distance by joining the thumbs. Locate **Ex-UE** (*bizhong*) on this level between the radius and the ulna.
→ **P-4** is located 1 cun distal to the midpoint of the distance between → **P-3** and → **P-7** or 5 cun proximal to → **P-7**.

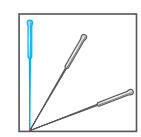
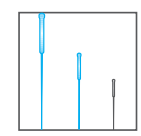
Needling

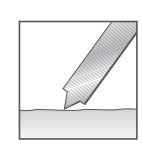
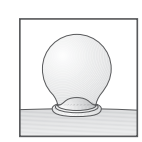
Vertically 1–1.5 cun

Actions/Indications

- Opens the channel and the *luo* vessels locally



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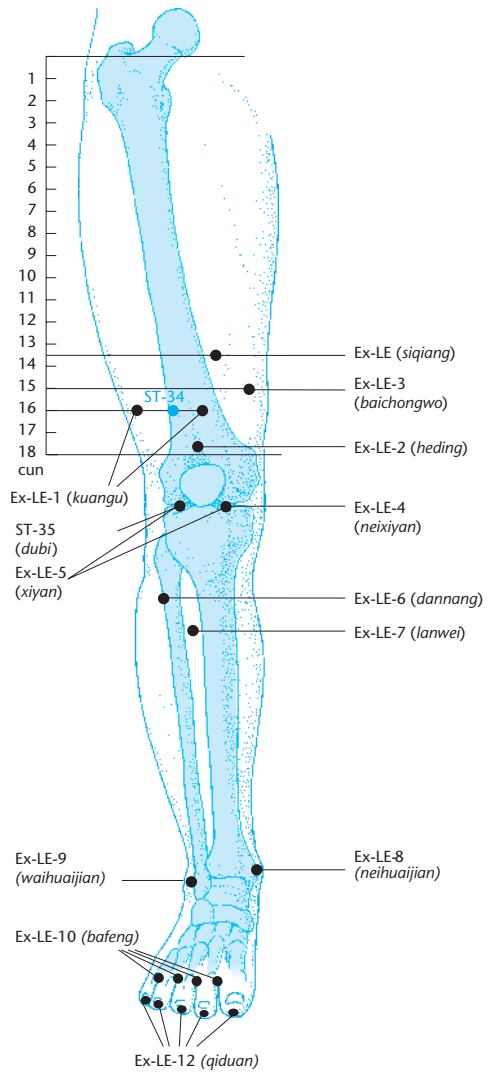
6.5 Extra Points: Lower Extremities (EX-LE)



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English abbreviation (standard)	*Pinyin* name	Nguyen Van Nghi, König and Wancura, Schnorrenberger	Shanghai College	Ex (Hempen)
Ex-LE-1	*kuangu*	PaM or ZP165 (*changgu*)	M-LE-28	
Ex-LE-2	*heding/xiding*	PaM or ZP156	M-LE-27	
Ex-LE-3	*baichongwo*	PaM or ZP163	M-LE-34	Ex21
Ex-LE-4	*neixiyan*	(PaM or ZP145)	M-LE	(Ex23)
Ex-LE-5	*xiyan*	PaM or ZP145	M-LE	Ex23
Ex-LE-6	*dannangxue*	PaM or ZP152	M-LE-23	
Ex-LE-7	*lanweixue*	PaM or ZP142	M-LE-13	Ex22
Ex-LE-8	*neihuaijian*	PaM or ZP146	M-LE-17	
Ex-LE-9	*waihuaijian*	PaM or ZP151	M-LE-22	
Ex-LE-10	*bafeng*	PaM or ZP137	M-LE-8	Ex19
Ex-LE-11	*duyin*		M-LE	
Ex-LE-12	*qiduan*		M-LE-6	
Further extra points				
Ex-LE	*huanzhong*	PaM or ZP84	M-**BW-34**	Ex20
Ex-LE	*siqiang*	NP94	**N**-LE-19	
Ex-LE	*lineiting*	PaM or ZP130	M-LE-1	

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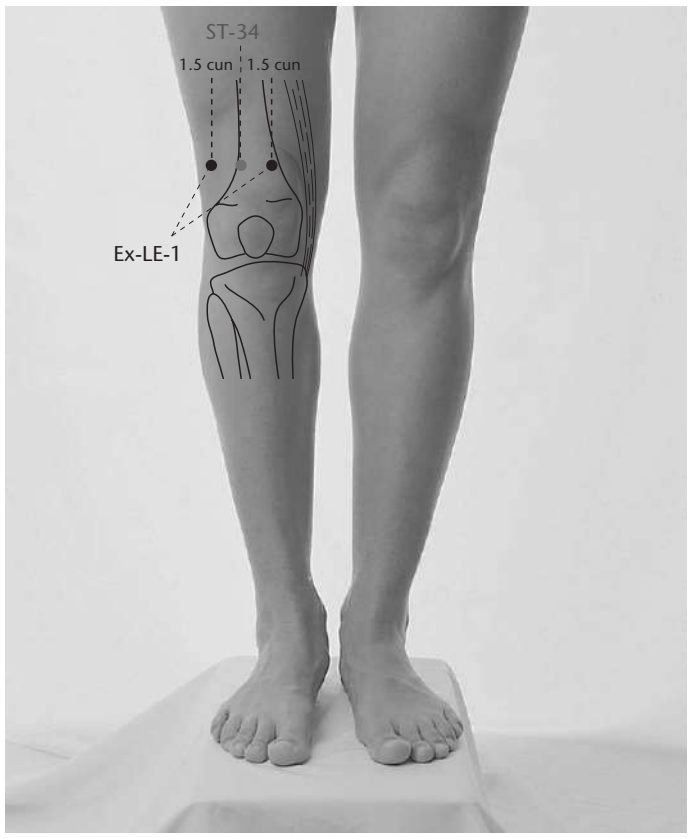
Hip Bone KUANGU Ex-LE-1



Location

A pair of points 2 cun superior to the patella and 1.5 cun lateral and medial to → **ST-34** (*liangqiu*).

How to find

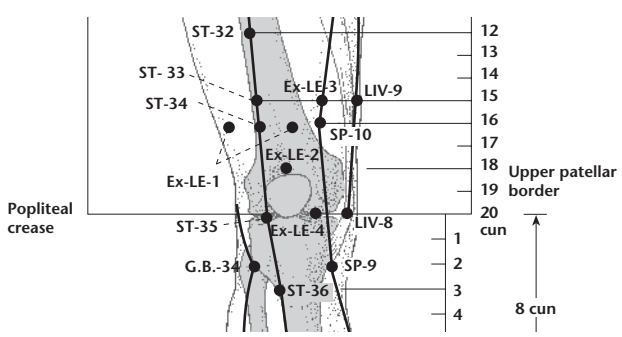
First, locate → **ST-34**: measure 2 cun superiorly from the lateral upper border of the patella and there locate → **ST-34** in a depression on the vastus lateralis muscle. Then locate **Ex-LE-1** 1.5 cun lateral and medial to → **ST-34**.

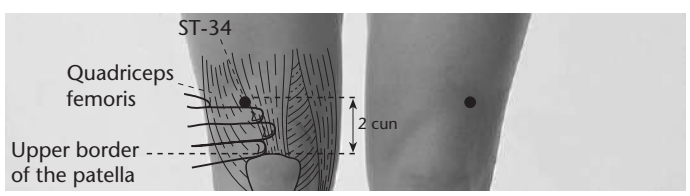
Needling

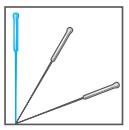
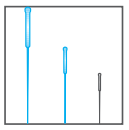
Vertically 1–1.5 cun

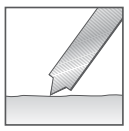
Actions/Indications

- Alleviate pain







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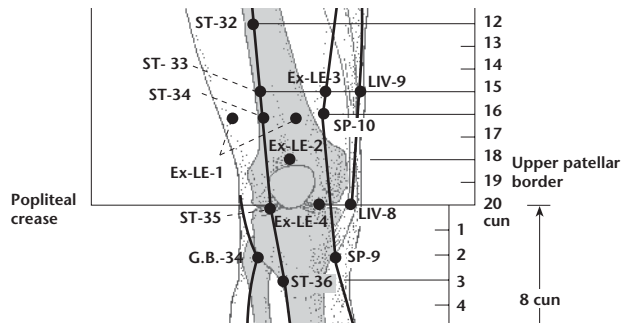
Ex-LE-2 *Crane's Summit* HEDING/XIDING

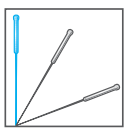
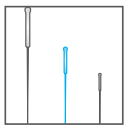
Location
In the centre of the upper border of the patella.

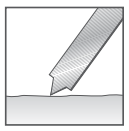
How to find
This point is best located and needled with the patient's knee slightly flexed (knee support). Locate the midpoint of the upper patellar border and there locate **Ex-LE-2** (*heding*).

Needling
Vertically 0.5–0.8 cun

Actions/Indications
- Benefits the knee joint





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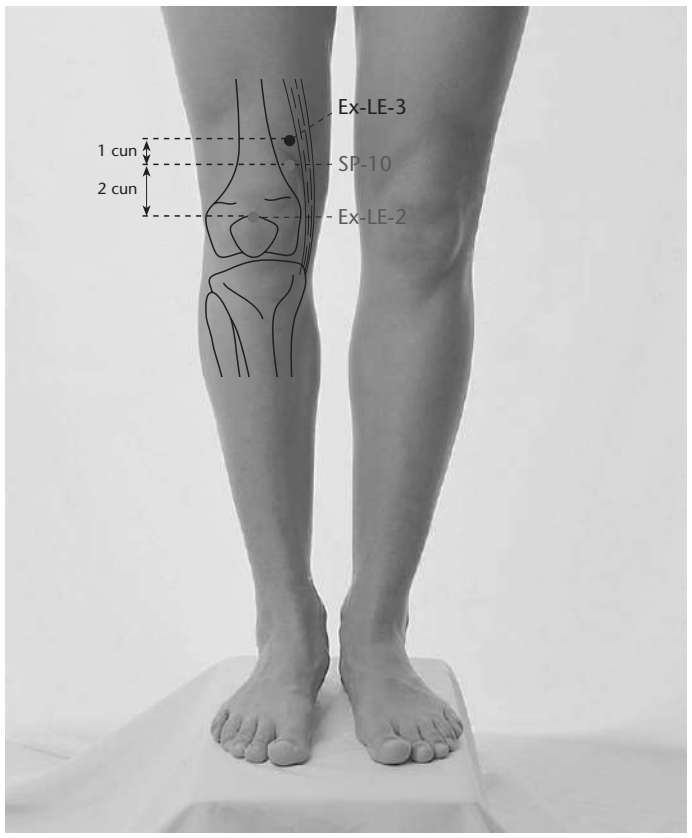
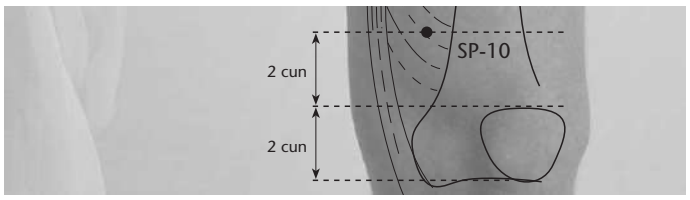
Hundred Insect Burrow BAICHONGWO Ex-LE-3





Location

3 cun superior and 1 cun medial to the upper medial border of the patella, in a small depression on the vastus medialis muscle or 1 cun superior to → **SP-10**.

How to find

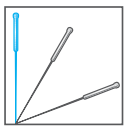
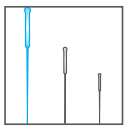
The patient should be in a supine or preferably in a seated position, with their knee flexed. Locate the upper medial border of the patella and, from there, measure 3 cun (1 handsbreadth) towards proximal. There, locate **Ex-LE-3** in a small depression on the vastus lateralis muscle.

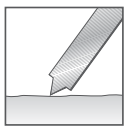
Needling

Vertically 1–2 cun

Actions/Indications

- Cools Blood-Heat, eliminates Wind, drains Dampness



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Ex-LE-4 *Inner Eye of the Knee* NEIXIYAN

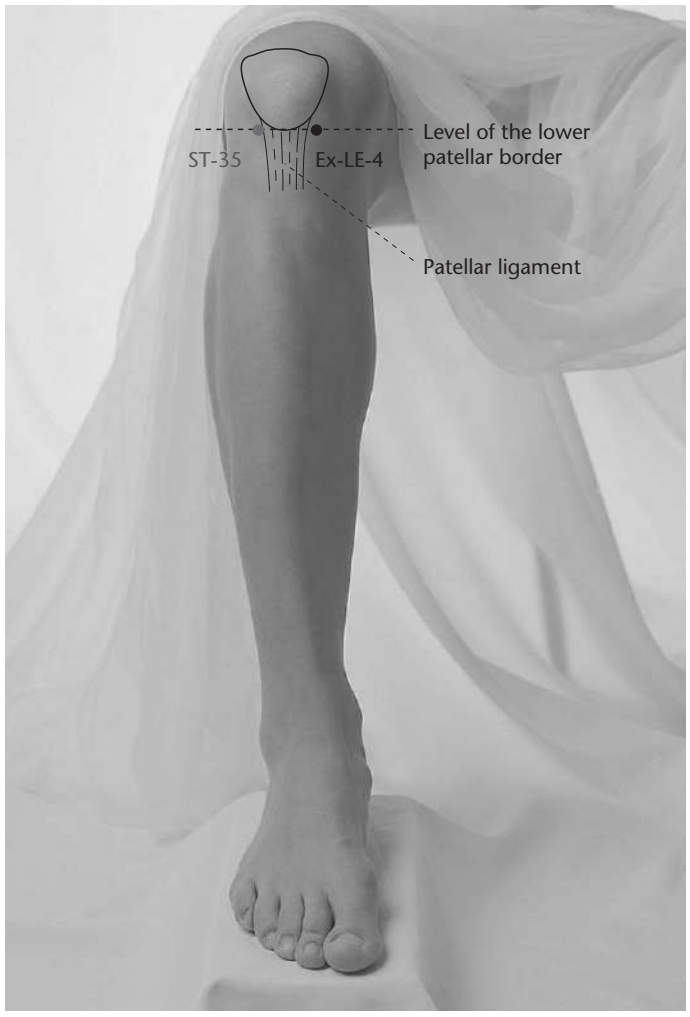
Location
With the knee flexed, inferior to the patella, in a depression medial to the patellar ligament.

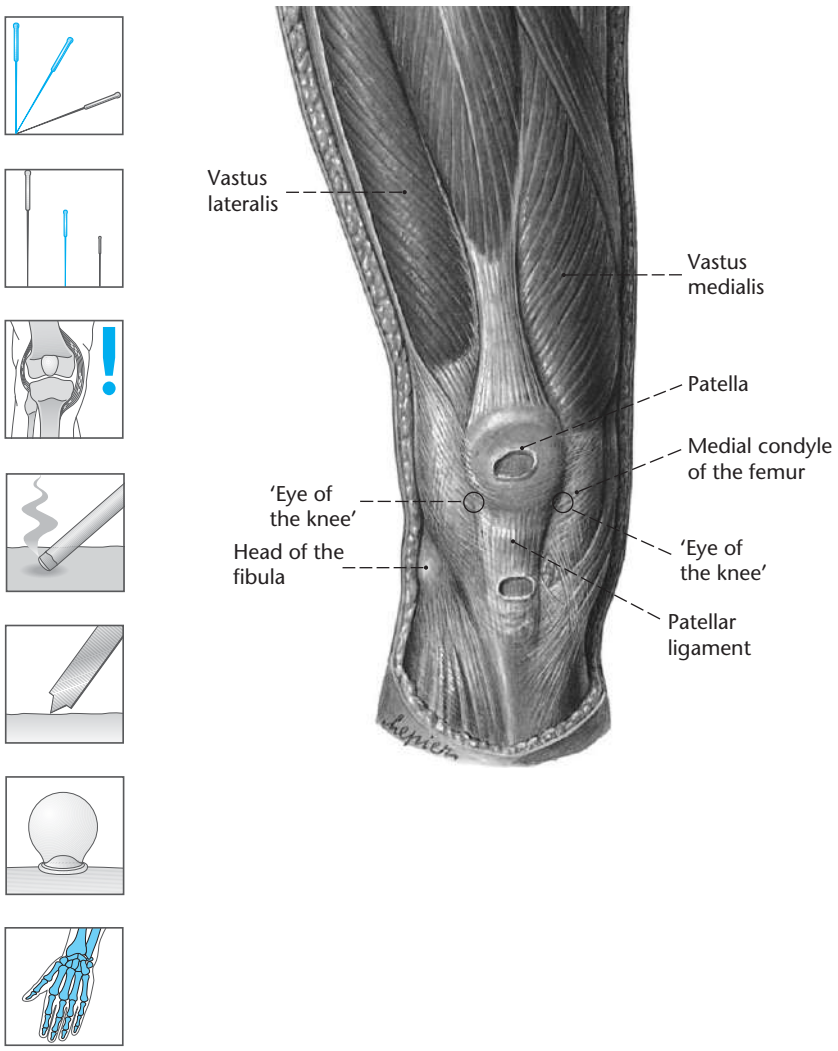
How to find
This point is best located with the patient's knee flexed (use knee support). The medial eye of the knee can be located in a distinct depression on the level of the lower border of the patella, medial to the patellar ligament. The lateral eye of the knee corresponds to → **ST-35** (*dubi*). Together, these two points form the extra point → **Ex-LE-5** (*xiyan*).

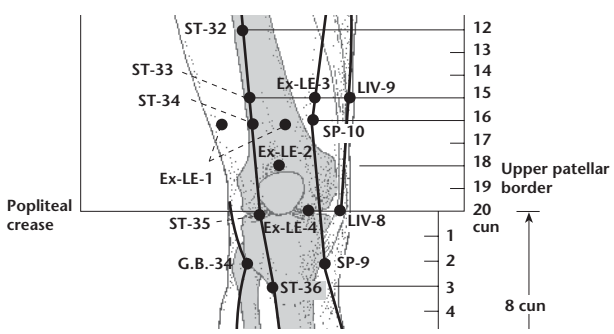
Needling
0.5–1 cun vertically or obliquely towards the lateral eye of the knee. Caution: Knee joint.

Actions/Indications
- Disorders of the knee joint

Special features
Important local point







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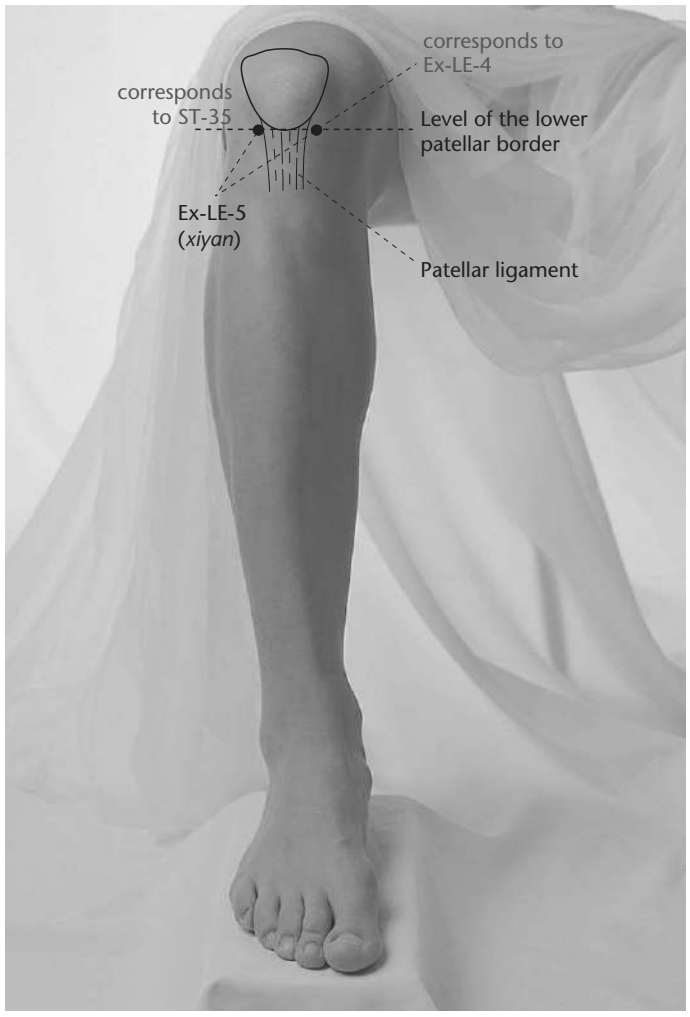
Eyes of the Knee XIYAN Ex-LE-5



Location

With the knee flexed, this pair of points is located inferior to the patella, medial and lateral to the patellar ligament. **Ex-LE-5** (*xiyan*) includes two points: the medial eye of the knee corresponds to → **Ex-LE-4** (*neixiyan*), the lateral eye of the knee to **ST-35** (*dubi*).

How to find

This point is best located with the patient's knee flexed (use knee support). The eyes of the knee can be located on the level of the lower border of the patella, lateral and medial to the patellar ligament. The lateral eye of the knee corresponds to → **ST-35** (*dubi*), the medial eye of the knee to → **Ex-LE-4** (*neixiyan*). Together, these two points form the extra point **Ex-LE-5** (*xiyan*).

Needling

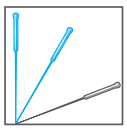
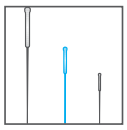
Medial eye of the knee: 0.5–1 cun vertically or obliquely towards the lateral eye of the knee; lateral eye of the knee: 0.5–1 cun vertically or obliquely towards the medial eye of the knee. Caution: Do not needle too deeply to avoid intra-articular puncture (these points correspond to the incision sites for knee arthroscopy).

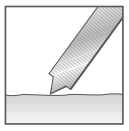
Actions/Indications

- Eliminate Wind-Dampness, reduce swellings and alleviate pain

Special features

Important local points for disorders of the knee



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Ex-LE-6 *Gall Bladder Point* DANNANG/DANNANGXUE/DANNANGDIAN

Location

On the G.B. channel of the **right** leg, approximately 1–2 cun distal to ➞ **G.B.-34**, palpate for the most tender point.

How to find

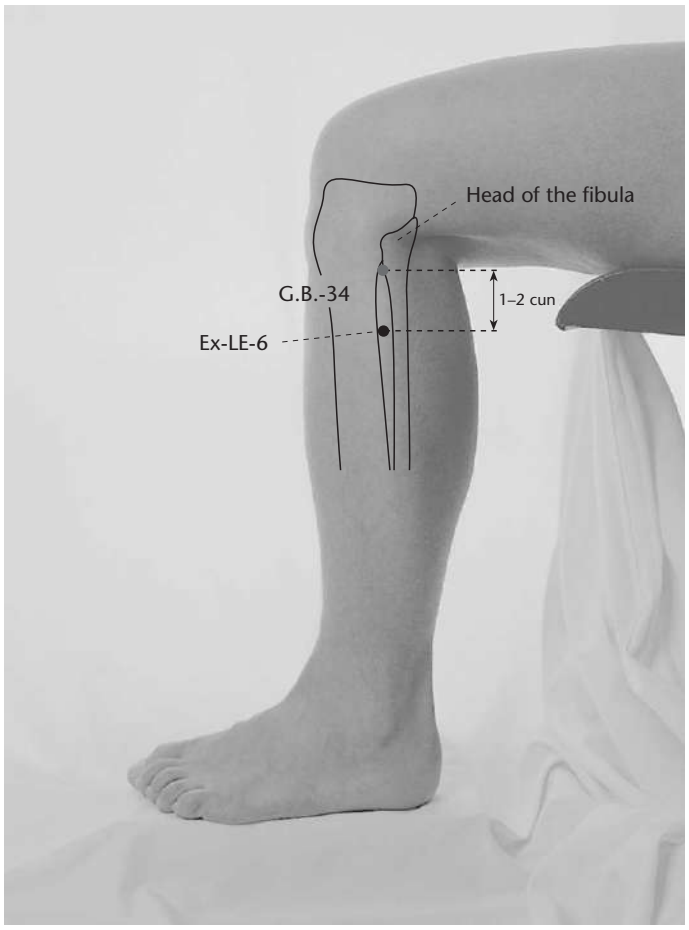
First, locate ➞ **G.B.-34** on the right leg: locate the head of the fibula on the lateral aspect of the leg (where the seam of the trousers would be) and hold it with the index and middle fingers (as with tweezers). By gliding distally with both fingers, the index finger will come to rest in a depression directly inferior and anterior to the head of the fibula (➞ **G.B.-34**). From there, continue to palpate slowly along the G.B. channel, until you find the most tender point approximately 1–2 cun inferior to ➞ **G.B.-34**. This is the location of **Ex-LE-6** (*dannangxue*).

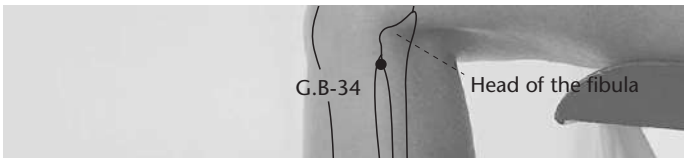
Needling

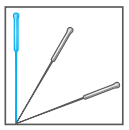
Vertically 1–1.5 cun

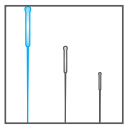
Actions/Indications

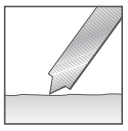
- Clears Heat and drains Dampness for acute and chronic disorders of the Gall Blader such as cholecystitis and cholelithiasis (tenderness on this point is diagnostically significant).











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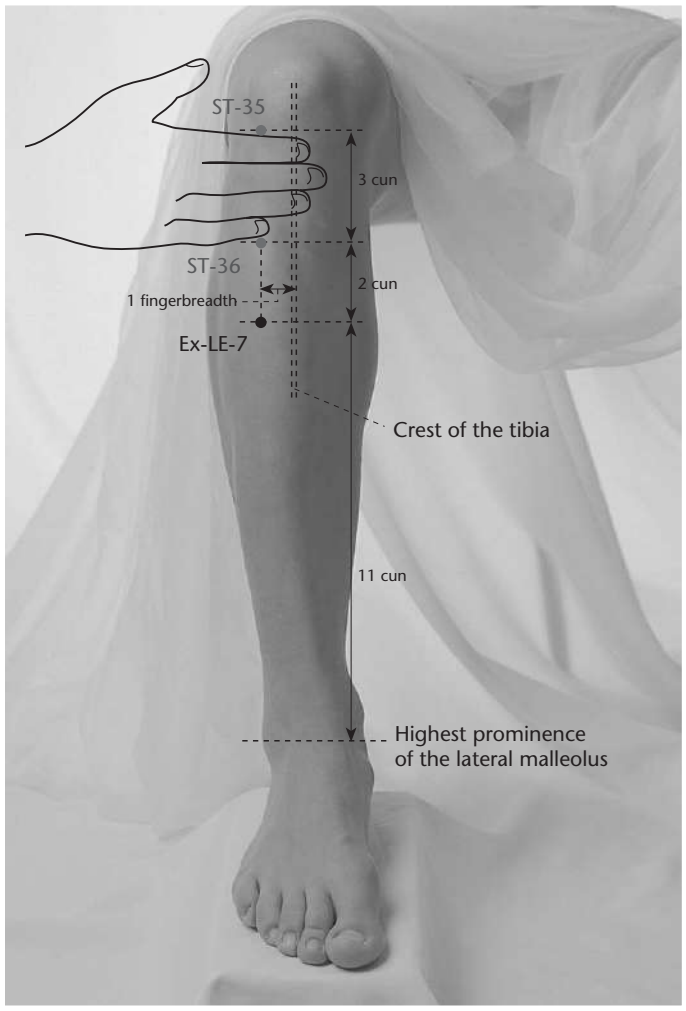
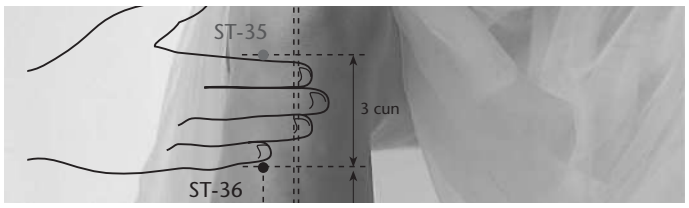
Appendix Point LANWEI/LANWEIXUE Ex-LE-7





Location

On the ST channel of the **right** leg, the most tender point approximately 2 cun distal to → **ST-36**.

How to find

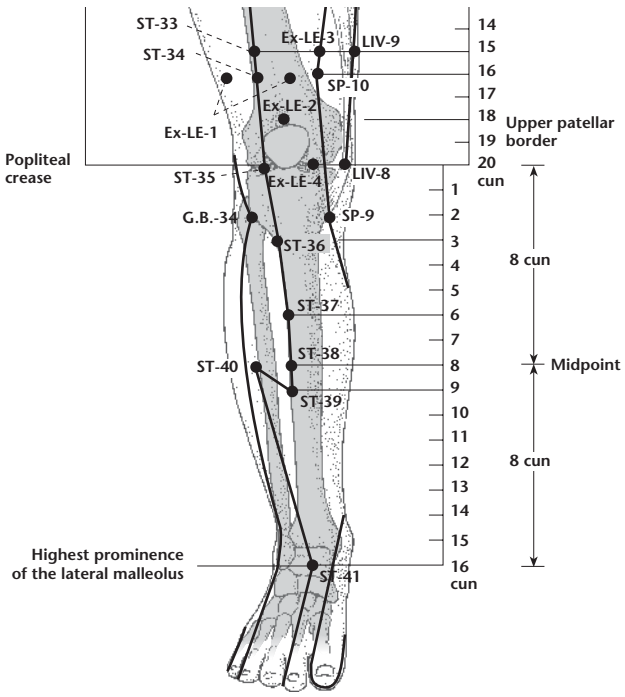
Locate this point on the right leg only (this corresponds to the unilateral location of the appendix on the abdomen). First, locate → **ST-36** 3 cun inferior to the knee joint space (→ **ST-35**) and 1 cun lateral to the anterior crest of the tibia. Then continue to palpate along the ST channel for approximately 2 cun (towards → **ST-37**, 3 cun inferior to → **ST-36**) and locate **Ex-LE-7** (*lanweixue*) on the most tender point.

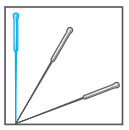
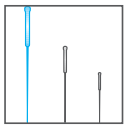
Needling

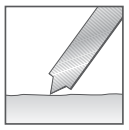
Vertically 1–1.5 cun

Actions/Indications

- Activates the Qi and Blood flow in the Large Intestine, clears Heat and Heat toxins from the Large Intestine





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Ex-LE-8 *Medial Malleolus Tip* NEIHUAIJIAN

Location

On the highest point of the medial malleolus.

How to find

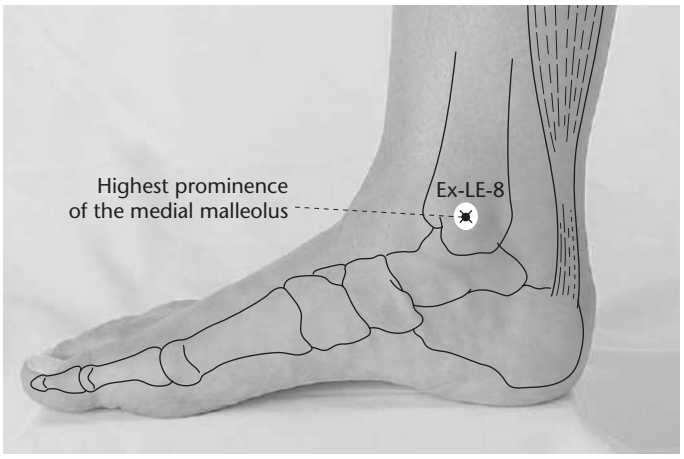
Find the highest prominence of the medial malleolus and there locate **Ex-LE-8** (*neihuaijian*). Located in a comparable position but on the lateral malleolus is → **Ex-LE-9** (*waihuaijian*).

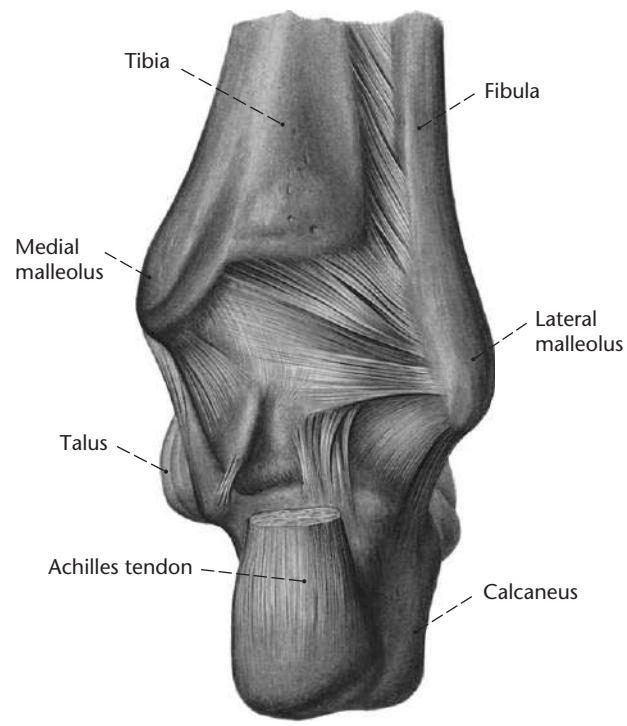
Needling

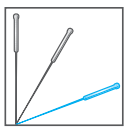
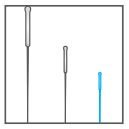
0.1 cun transversely (subcutaneously) or prick to bleed.

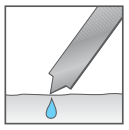
Actions/Indications

- Pain in the medial ankle region







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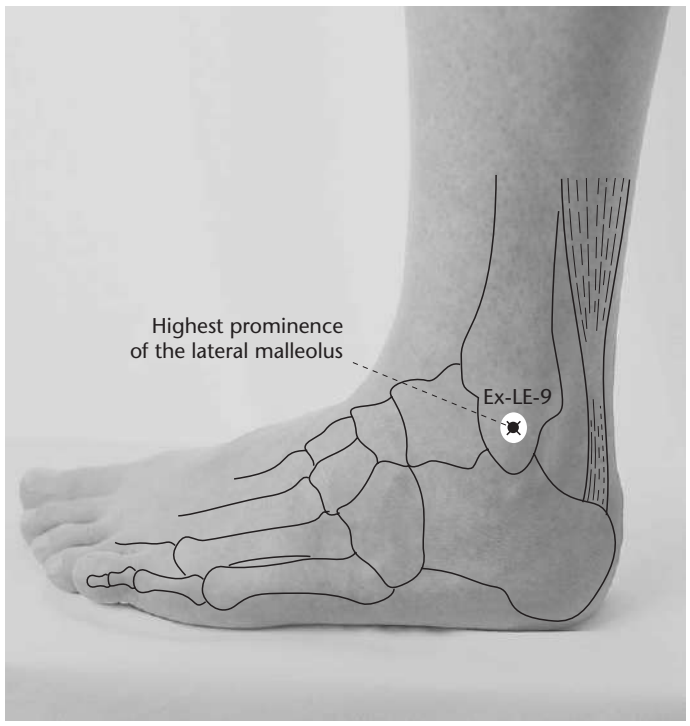
Outer Malleolus Tip WAIHUAIJIAN Ex-LE-9



Location

On the highest prominence of the lateral malleolus

How to find

Find the highest prominence of the lateral malleolus and there locate **Ex-LE-9** (*waihuaijian*). Located in a comparable position but on the medial malleolus is → **Ex-LE-8** (*neihuaijian*).

Needling

0.1 cun transversely (subcutaneously) or prick to bleed.

Actions/Indications

- Pain in the lateral ankle region

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Ex-LE-10 *Eight Winds* BAFENG

Location

Eight points located on the dorsum of the foot, slightly proximal to the margins of the interdigital webs.

How to find

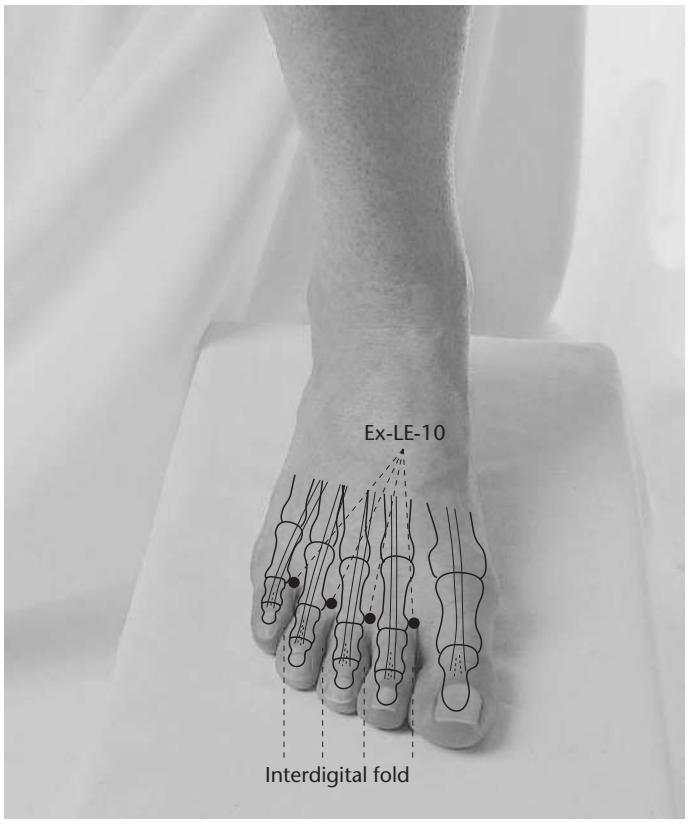
Locate the points of **Ex-LE-10** (*bafeng*) on the dorsum of the foot, proximal to the margins of the webs between the toes, on the border of the red and white skin. → **LIV-2** (*xingjian*), → **ST-44** (*neiting*) and → **G.B.-43** (*xiabai*) are all part of the *bafeng* points. The extra points → **Ex-UE-9** (*baxie*) are located in a comparable position on the dorsum of the hand, proximal to the margins of the webs between the fingers (→ **T.B.-2** is part of the → **Ex-UE-9**).

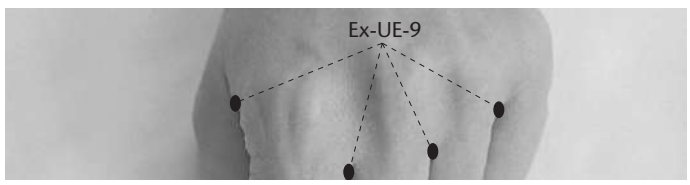
Needling

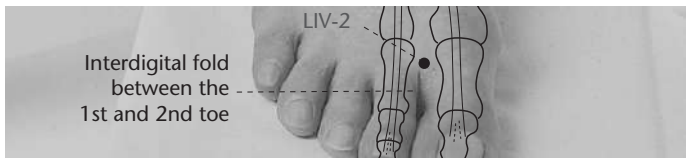
0.3–1 cun obliquely in a proximal direction or prick to bleed.

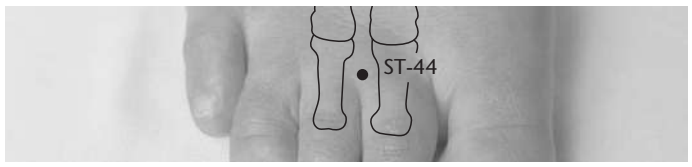
Actions/Indications

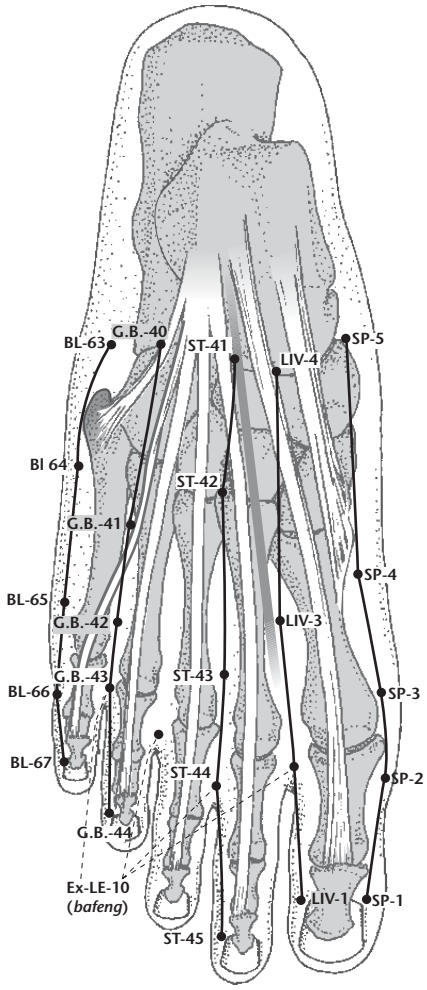
- Clears Heat and reduces swelling

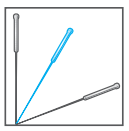
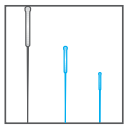


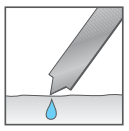










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Solitary Yin DUYIN Ex-LE-11

Location

On the plantar aspect of the 2nd toe, at the midpoint of the transverse crease of the distal interphalangeal joint.

How to find

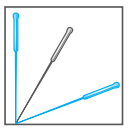
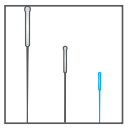
Locate the plantar aspect of the 2nd toe. There, locate **Ex-LE-11** (*duyin*) at the midpoint of the transverse crease of the distal interphalangeal joint.

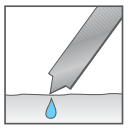
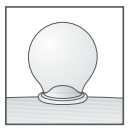
Needling

0.2–0.3 cun vertically or transversely (subcutaneously) or prick to bleed or moxibustion.

Actions/Indications

- Acute angina, thoracic and hypochondriac pain, nausea, vomiting, retention of the lochia, irregular menstruation, inguinal hernia

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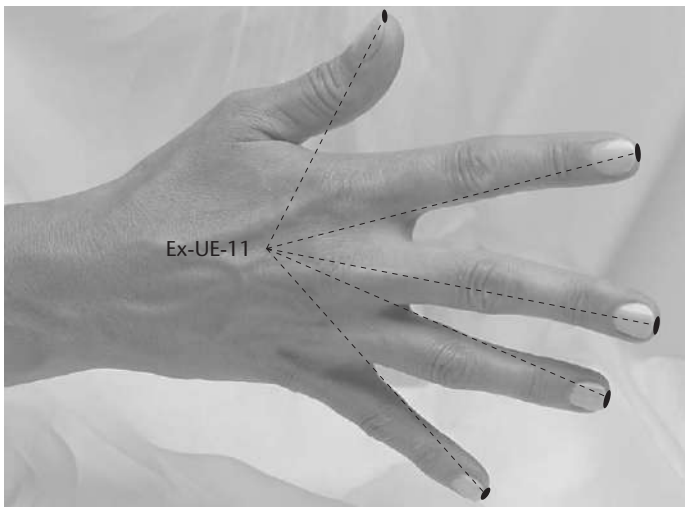
Ex-LE-12 *End of Qi* QIDUAN

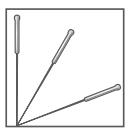
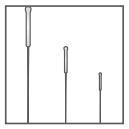
Location
On the tips of the 10 toes.

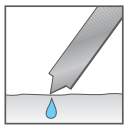
How to find
Locate the points of **Ex-LE-12** (*qiduan*) on the tips of the 10 toes, 0.1 cun from the free margin of the nail.
The points of → **Ex-UE-11** (*shixuan*) are located in a comparable position on the hand, on the tips of the 10 fingers.

Needling
Prick to bleed

Actions/Indications
- Syncope, oedema of the feet, acute abdominal pain





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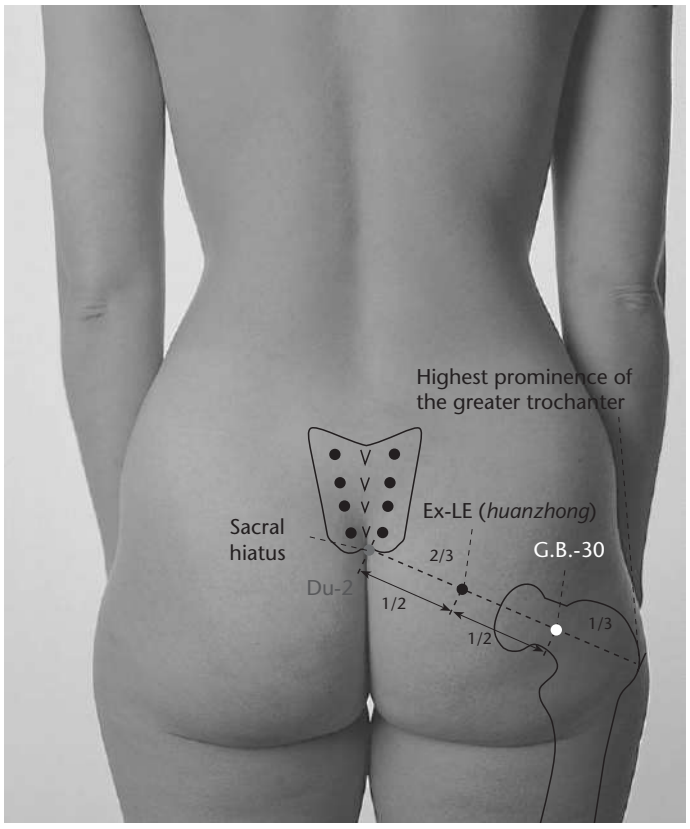
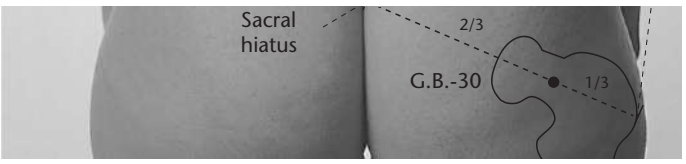
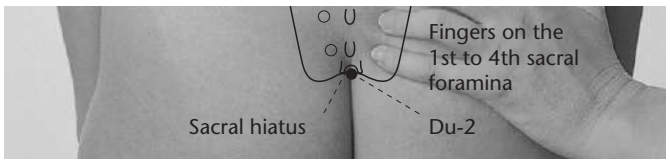
Circle Centre HUANZHONG







Location

Midway between ➞ **G.B.-30** (*huantiao*) and ➞ **Du-2** (*yaoshu*).

How to find

First, locate ➞ **G.B.-30**: divide the distance between the prominence of the greater trochanter and the sacral hiatus into thirds (➞ 3.4.4) and locate ➞ **G.B.-30** a third of the distance from the greater trochanter. Then locate ➞ **Du-2** directly below the sacral hiatus. Next, locate **Ex-LE** (*huanzhong*) midway between these two points.

Needling

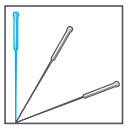
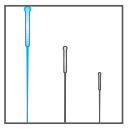
Vertically 2–2.5 cun

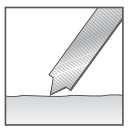
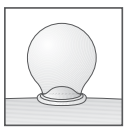
Actions/Indications

- Sciatica, urinary tract infection, haemorrhoids, paralysis of the lower extremities

Special features

- This point is not part of the WHO classification of extra points.

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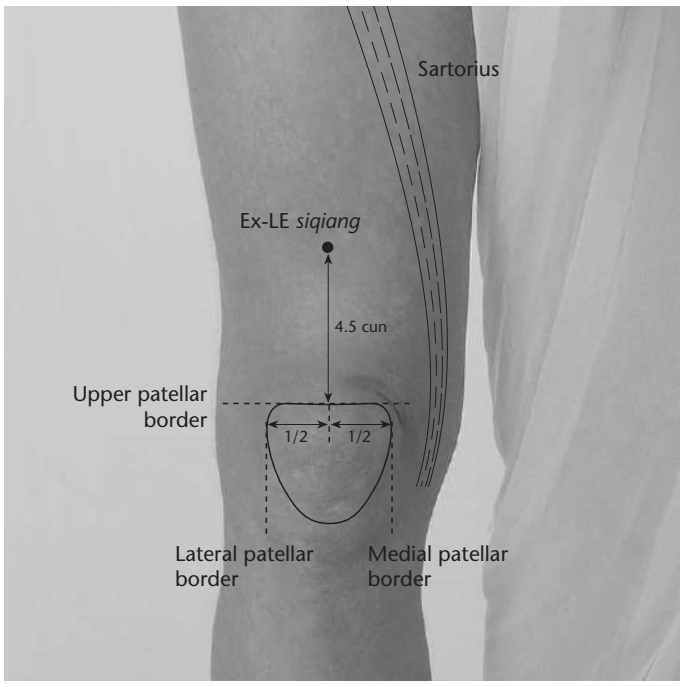
Ex-LE *Four Muscles Strengthening Point* SIQIANG

Location

4.5 cun superior to the centre of the upper patellar border.

How to find

Find the centre of the upper patellar border. From there, measure 4.5 cun (1 handbreadth and 2 fingerbreadths) in a superior direction. **Or:** The distance between the upper border of the pubic symphysis and the upper border of the patella is 18 cun (→ 2.2). Divide this distance into quarters (spreading hands technique, elastic tape → Chapter 2) and **Ex-LE** (*siqiang*) is located on the centre of the thigh, one quarter of the distance from the upper patellar border.



Needling

Vertically 1–2 cun

Actions/Indications

- Paralysis and atrophy of the muscles of the lower extremities, especially of the quadriceps femoris muscle

Special features

'Four muscles' refers to the four portions of the quadriceps femoris muscle. This point is not part of the WHO classification of extra points.

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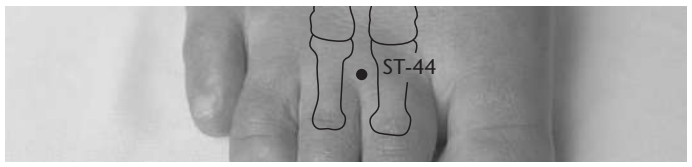
Plantar Inner Space LINEITING



Location

On the plantar aspect of the foot, between the 2nd and 3rd metatarsal bones, opposite → **ST-44** (*neiting*).

How to find

Locate the space between the 2nd and 3rd toes on the plantar aspect of the foot. The extra point *lineiting* lies opposite → **ST-44** (on the dorsal aspect of the foot, proximal to the margin of the web between the 2nd and 3rd toe).

Needling

0.2–0.3 cun vertically towards → **ST-44**. Caution: Painful point.

Actions/Indications

- Acute epigastric pain, local pain, epilepsy, restlessness

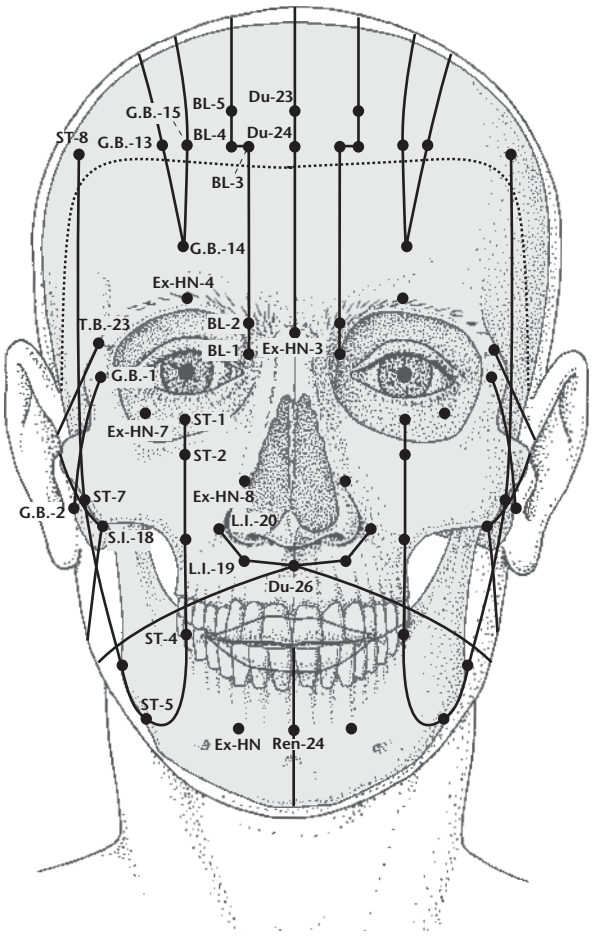
Special features

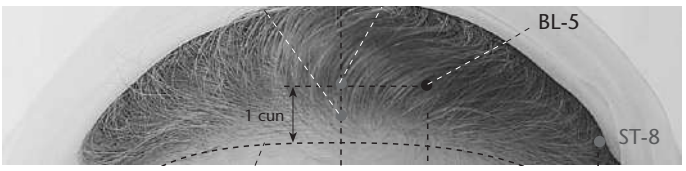
This point is not part of the WHO classification of extra points.

7 Important Points According to Region

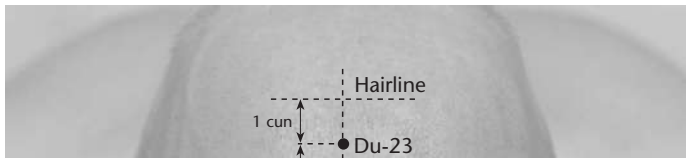
Claudia Focks

7.1 Anterior Aspect of the Head

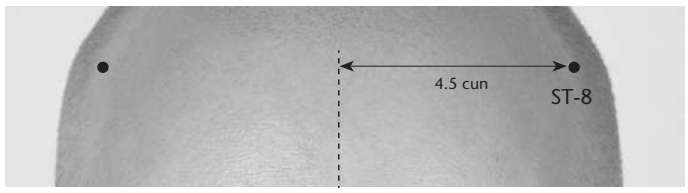




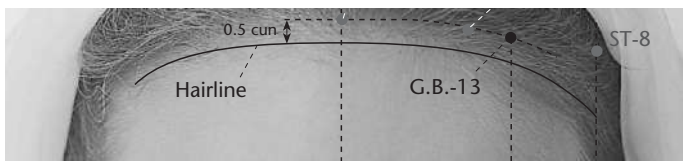
BL-5 (*wuchu*) 'Fifth Place' 1 cun superior to the anterior hairline and 1.5 cun lateral to the midline (directly above **BL-4**, level with **Du-23**)



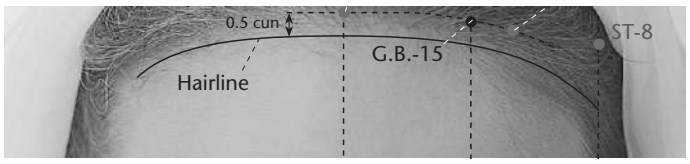
Du-23 (*shangxing*) 'Upper Star' On the midline, 1 cun superior to the anterior hairline



ST-8 (*touwei*) 'Head's Binding' At the temporal corner of the forehead, on the border of the temporalis muscle and 0.5 cun within the anterior hair line or 4.5 cun lateral to the anterior midline (**Du-24**)



G.B.-13 (*benshen*) 'Root of the Spirit' 0.5 cun superior to the anterior hairline and 3 cun lateral to the midline, on the line between **Du-24** and **ST-8** (= 4.5 cun) at the junction of the lateral and medial third



G.B.-15 (*toulinqi*) 'Head Governor of Tears' On the pupil line when looking straight ahead, 0.5 cun superior to the anterior hairline, at the midpoint of the line between **Du-24** and **ST-8** (= 4.5 cun)

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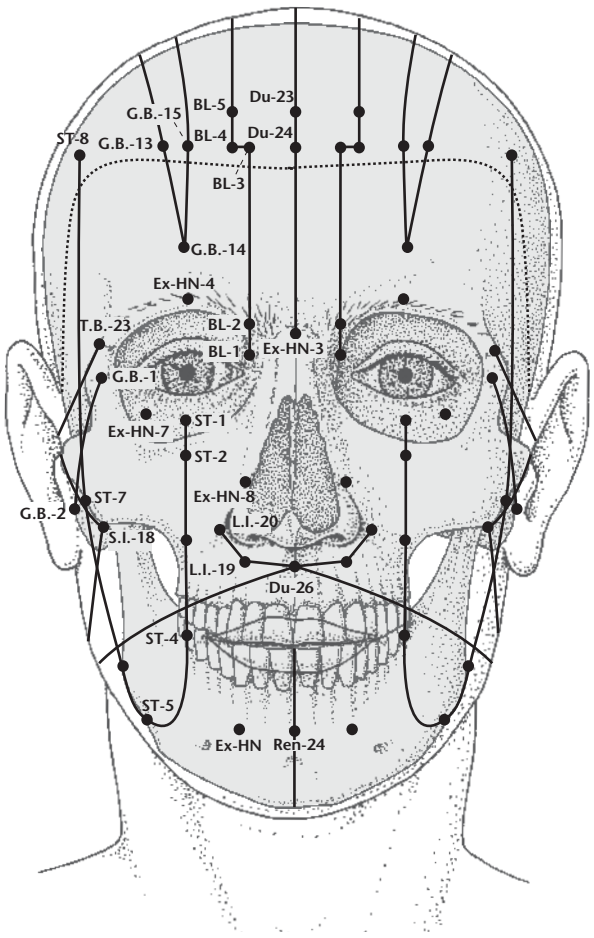
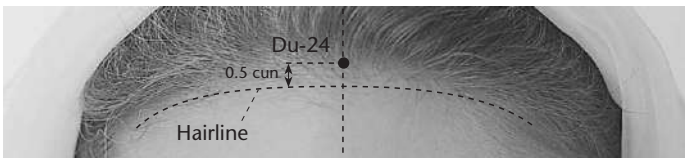
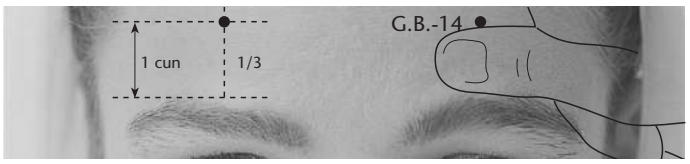
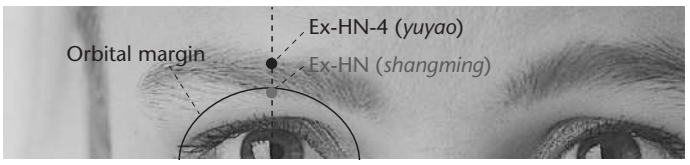




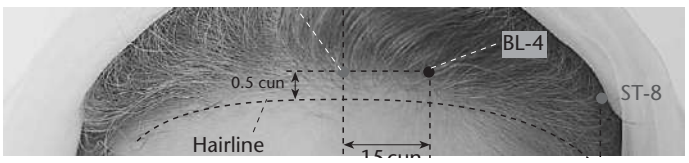
Du-24 (*shenting*) 'Courtyard of the Spirit' On the midline, 0.5 cun superior to the anterior hairline



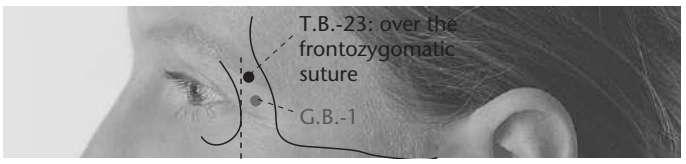
G.B.-14 (*yangbai*) 'Yang White' When looking straight ahead on the pupil line, approximately 1 cun superior to the midpoint of the eyebrow (centre of the eyebrow to anterior hairline = 3 cun)



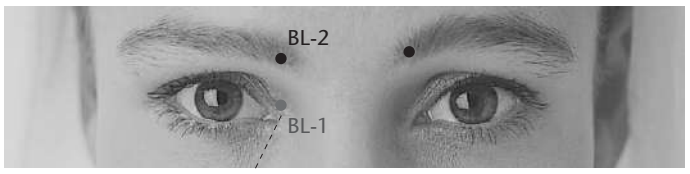
Ex-HN-4 (*yuyao*) 'Fish Waist' In the centre of the eyebrow, with the eyes looking straight ahead directly above the pupil



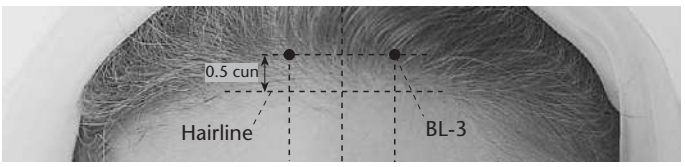
BL-4 (*qucha*) 'Crooked Curve' 0.5 cun superior to the anterior hairline and 1.5 cun lateral to the midline, or one third of the distance between **Du-24** and **ST-8** (= 4.5 cun)



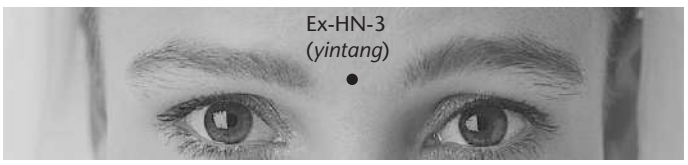
T.B.-23 (*sizhukong*) 'Silken Bamboo Hollow' In the depression (frontozygomatic suture) at the lateral end of the eyebrow



BL-2 (*zanzhu*) 'Gathered Bamboo' In a depression at the medial end of the eyebrow, directly superior to the inner canthus of the eye



BL-3 (*meichong*) 'Eyebrows' Pouring' 0.5 cun within the anterior hairline, superior to the medial canthus of the eye (**BL-1**)



Ex-HN-3 (*yintang*) 'Hall of Impression' On the anterior midline between the eyebrows

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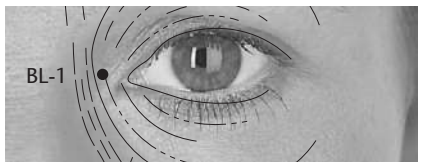
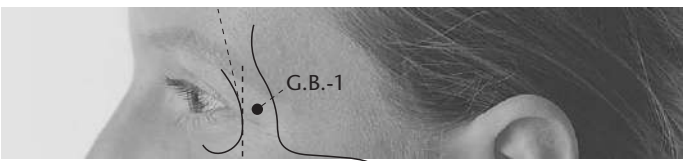
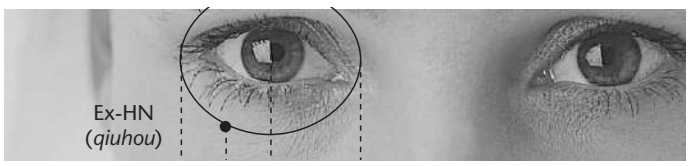


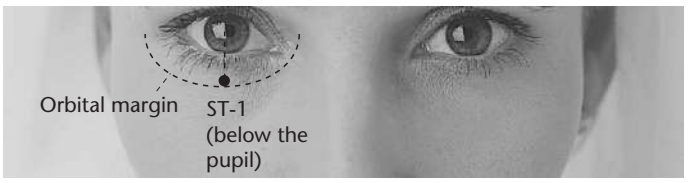
BL-1 (*jingming*) 'Bright Eyes' 0.1 cun superior to the inner canthus of the eye, where spectacles tend to rest



G.B.-1 (*tongziliao*) 'Pupil Crevice' 0.5 cun lateral to the outer canthus of the eye

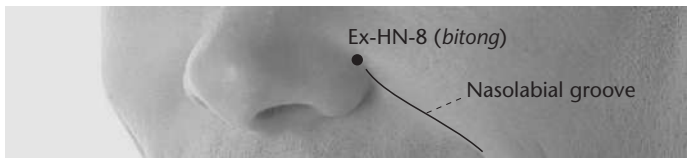


Ex-HN-7 (*qiuhou*) 'Behind the Ball' On the lower border of the orbit, at the junction of the lateral quarter and the medial three-quarters of the orbital margin

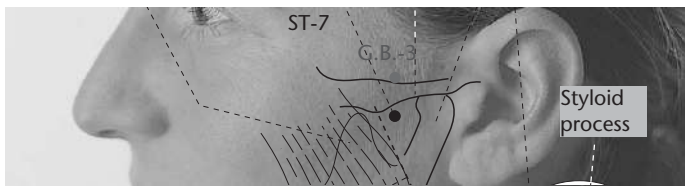


ST-1 (*chengqi*) 'Container of Tears' With the eyes looking straight forward, directly below the centre of the pupil, between the eyeball and the infraorbital ridge

ST-2 (*sibai*) 'Four Whites' When looking straight ahead, directly below the centre of the pupil, in the depression at the infraorbital foramen

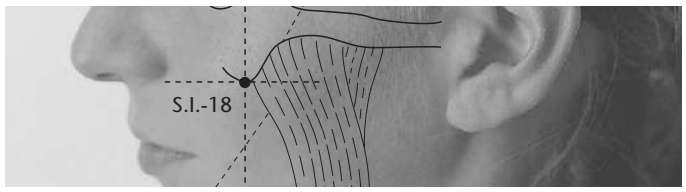


Ex-HN-8 (*shangyingxiang or bitong*) 'Upper Yingxiang' or 'Free Nose' At the upper end of the nasolabial groove, at the junction of the maxilla and the nasal cavity (at the border between the nasal bone and cartilage)



ST-7 (*xiaguan*) 'Below the Joint' With the mouth closed in the depression of the mandibular incisure, between the coronoid and condyloid process of the mandible

G.B.-2 (*tinghui*) 'Meeting of Hearing' Anterior to the ear, with the mouth open in the depression at the level of the intertragic notch, on the lower border of the condyloid process of the mandible.



S.I.-18 (*quanliao*) 'Cheek Bone Crevice' In a depression at the intersection of a vertical line through the outer canthus of the eye with the lower border of the zygomatic bone

ST-3 (*juliao*) 'Great Crevice' When looking straight ahead, directly below the centre of the pupil, level with of lower border of the ala nasi.

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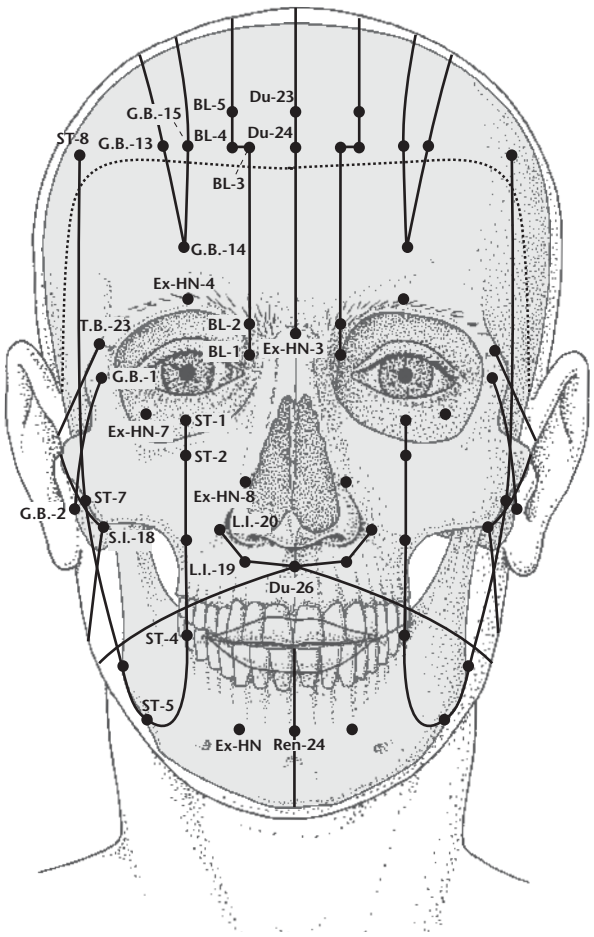
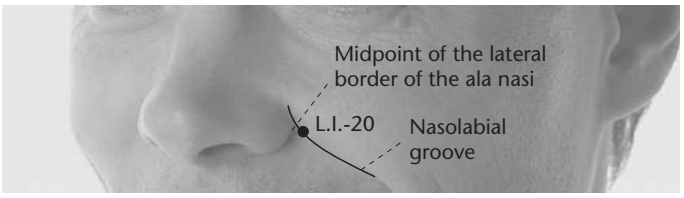
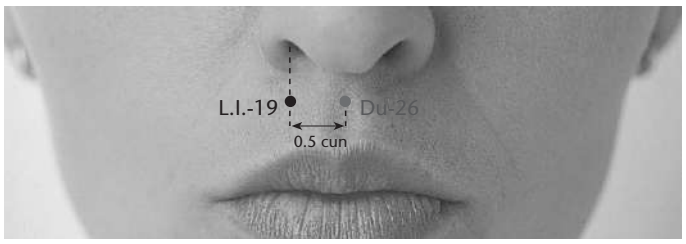
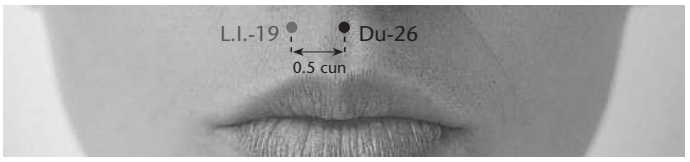




L.I.-20 (*yingxiang*) 'Welcome Fragrance' In the nasolabial groove, at the level of the midpoint of the lateral border of the ala nasi.

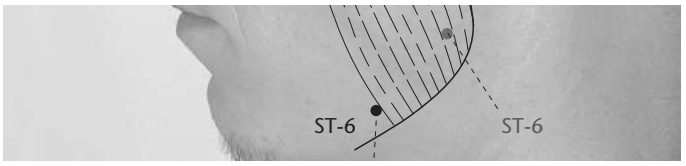


L.I.-19 (*kouheliao*) 'Mouth Grain Crevice' Directly inferior to the lateral margin of the nostril, level with **Du-26**, which is located slightly superior to the midpoint of the philtrum (meeting point of the L.I. channel)

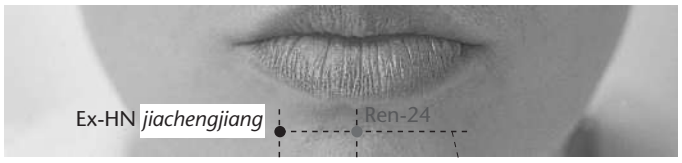


Du-26 (*renzhong* or *shuigou*) 'Man's Middle' Below the nose, on the midline, at the junction of the upper and middle third of the philtrum

ST-4 (*dicang*) 'Earth Granary' When looking straight ahead on the pupil line, approximately 0.4 cun lateral to the corner of the mouth



ST-5 (*daying*) 'Great Welcome' On the lateral mandible, anterior to the masseter (ask the patient to clench the teeth); a branch of the facial artery is palpable here



Ex-HN (*jiachengjiang*) 'Adjacent to Container of Fluids' At the same level and 1 cun lateral to **Ren-24** (chengjiang)

Ren-24 (*chengjiang*) 'Container of Fluids' On the midline, in the mentolabial groove below the lower lip

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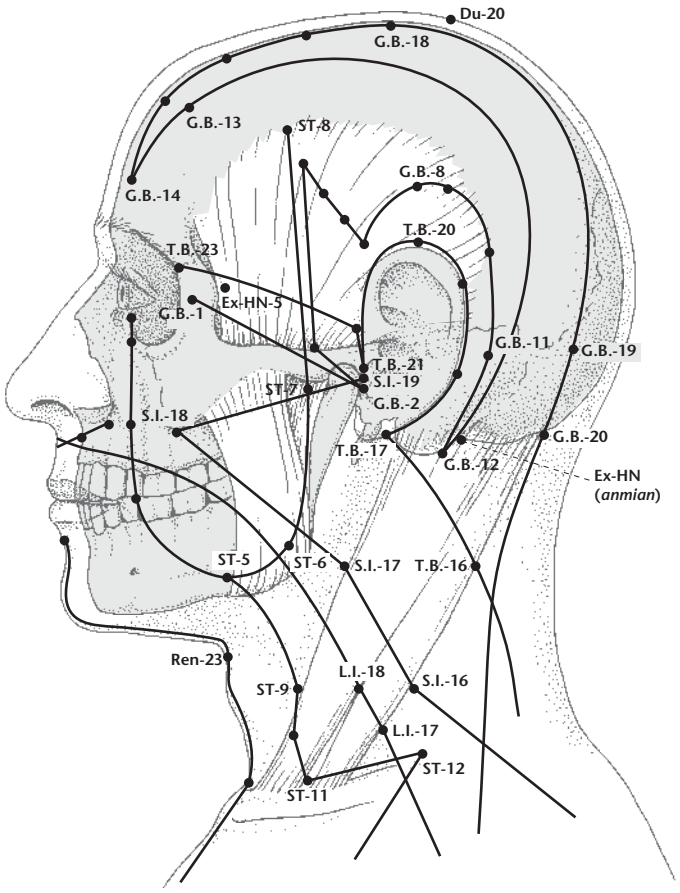
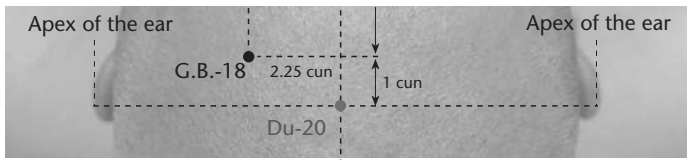
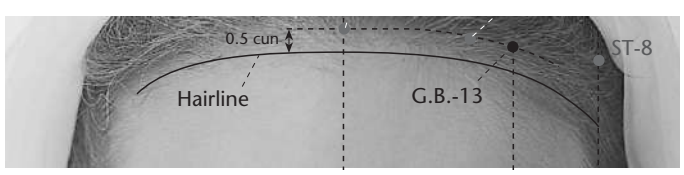
7.2 Head and Lateral Aspect of the Neck

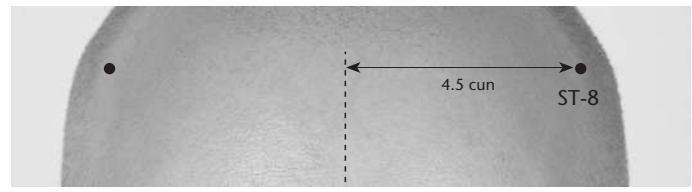




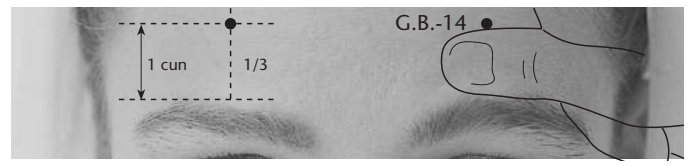
G.B.-18 (*chengling*) 'Support Spirit' 4 cun superior to the anterior hairline or 1 cun anterior to **Du-20**, on the line connecting **G.B.-15** and **G.B.-20**, or 2.25 cun lateral to the midline (midpoint of the line connecting **ST-8** and **Du-24**)



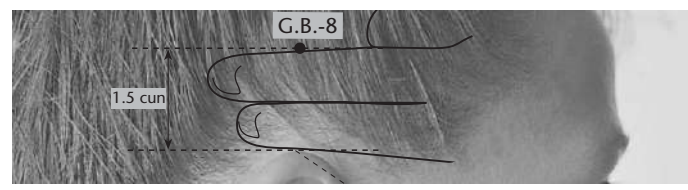
G.B.-13 (*benshen*) 'Root of the Spirit' 0.5 cun superior to the anterior hairline and 3 cun lateral to the midline, on the line between **Du-24** and **ST-8** (= 4.5 cun) at the junction of the lateral and medial third



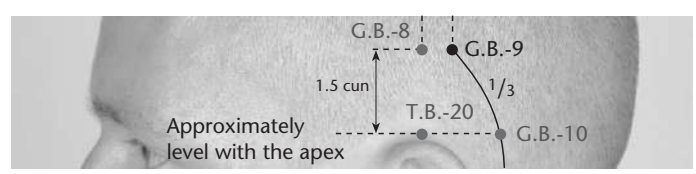
ST-8 (*touwei*) 'Head's Binding' At the temporal corner of the forehead, on the border of the temporalis muscle and 0.5 cun within the anterior hair line or 4.5 cun lateral to the anterior midline (**Du-24**)



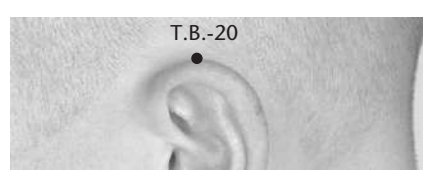
G.B.-14 (*yangbai*) 'Yang White' When looking straight ahead on the pupil line, approximately 1 cun superior to the midpoint of the eyebrow (centre of the eyebrow to the anterior hairline = 3 cun)



G.B.-8 (*shuaigu*) 'Leading Valley' 1.5 cun directly superior to the apex of the ear



G.B.-9 (*tianchong*) 'Heavenly Rushing' 1.5 cun superior and 0.5 cun posterior to the apex of the ear or 0.5 cun posterior to **G.B.-8**



T.B.-20 (*jiaosun*) 'Minute Angle' Directly superior to the apex of the ear

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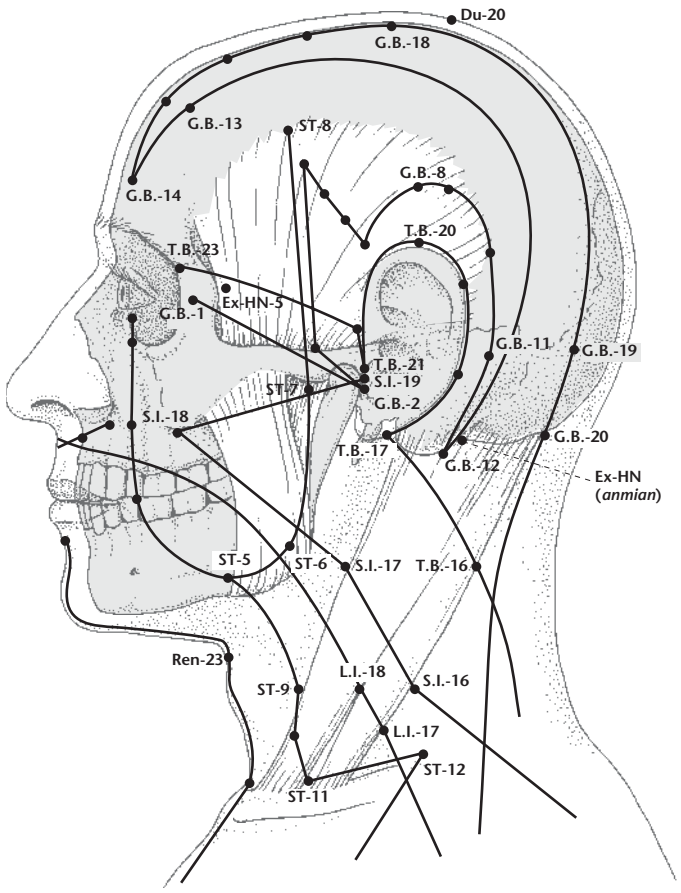
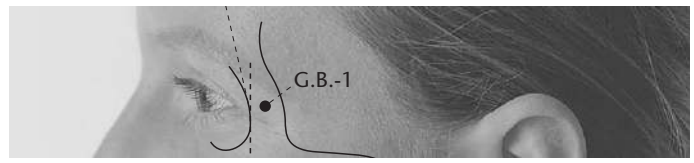
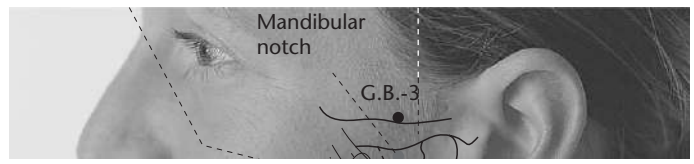


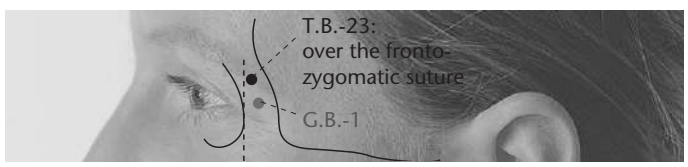


G.B.-1 (*tongziliao*) 'Pupil Crevice' 0.5 cun lateral to the outer canthus of the eye

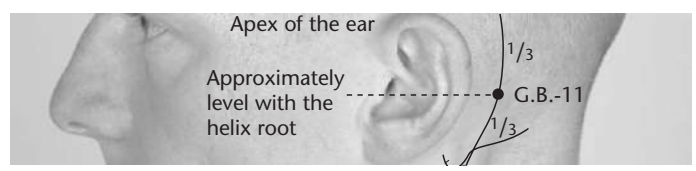


G.B.-3 (*shangguan*) 'Above the Joint' In a depression on the upper border of the zygomatic arch, approximately 1 cun anterior to the root of the ear, directly superior to **ST-7** (lower border of the zygomatic arch)

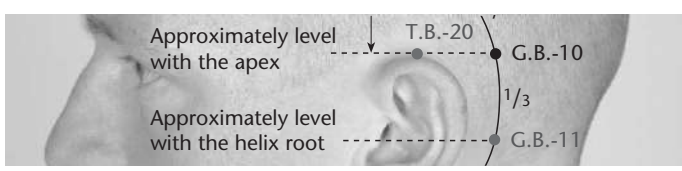
T.B.-21 (*ermen*) 'Ear Gate' Anterior to the ear, with the mouth open in the depression at the level of the supratragic notch, slightly superior to the condyloid process of the mandible



T.B.-23 (*sizhukong*) 'Silken Bamboo Hollow' In the depression (frontozygomatic suture) at the lateral end of the eyebrow

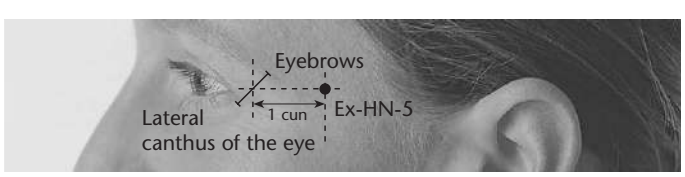


G.B.-11 (*touqiaoyin*) 'Yin Portals of the Head' At the junction of the lower third with the upper two-thirds of the curved line connecting **G.B.-9** and **G.B.-12**



G.B.-10 (*fubai*) 'Floating White' At the junction of the upper third with the lower two-thirds of the curved line connecting **G.B.-9** and **G.B.-12**

S.I.-19 (*tinggong*) 'Palace of Hearing' Anterior to the ear with the mouth open, at the level of the middle of the tragus, in a depression between the tragus and condyloid process of the mandible



Ex-HN-5 (*taiyang*) 'Supreme Yang' In the depression approximately 1 cun posterior to the midpoint between the lateral end of the eyebrow and the outer canthus of the eye

* According to Deadman et al 1998.

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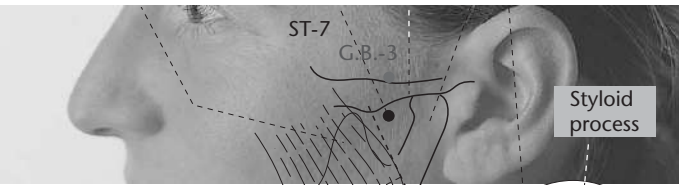
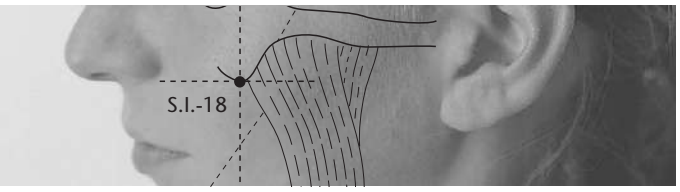
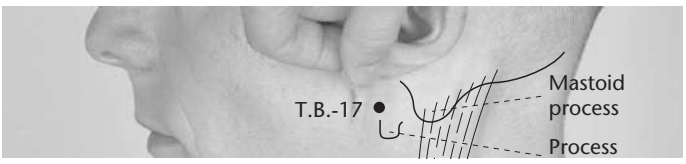


ST-7 (*xiaguan*) 'Below the Joint' With the mouth closed in the depression of the mandibular notch, between the coronoid and condyloid process of the mandible

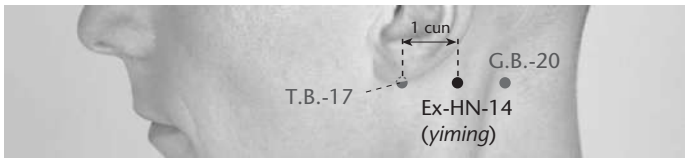
G.B.-2 (*tinghui*) 'Meeting of Hearing' Anterior to the ear with the mouth open, in the depression at the level of the intertragic notch, on the lower border of the condyloid process of the mandible



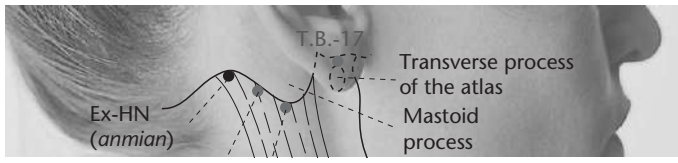
S.I.-18 (*quanliao*) 'Cheek Bone Crevice' In a depression at the intersection of a vertical line through the outer canthus of the eye with the lower border of the zygomatic bone



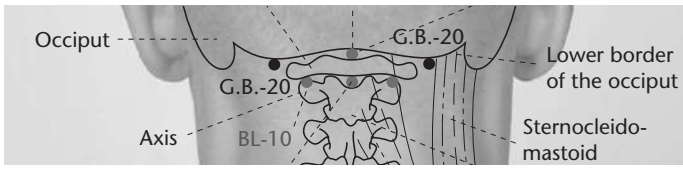
T.B.-17 (*yifeng*) 'Wind Screen' With the mouth open in the depression behind the earlobe, between the mastoid process and the mandible



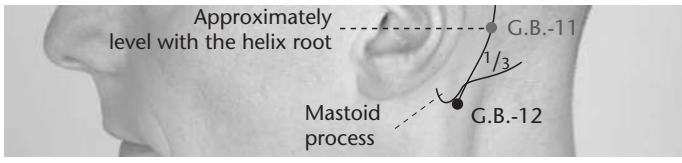
Ex-HN-14 (*yiming*) 'Eye Brightening' On the occiput, 1 cun posterior to **T.B.-17**, on a line connecting **T.B.-17** and **G.B.-20**



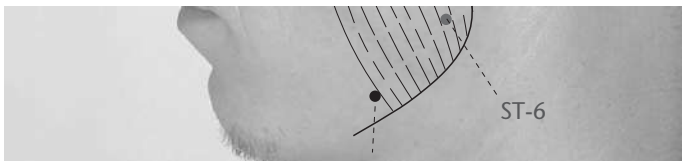
Ex-HN (*anmian*) 'Peaceful Sleep' Posterior to the ear, midway between **T.B.-17** and **G.B.-20**, posterior to the mastoid process



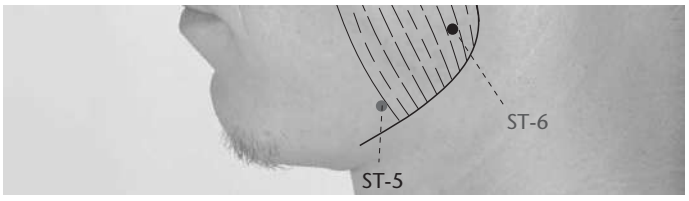
G.B.-20 (*fengchi*) 'Wind Pool' On the lower border of the occipital bone, in the depression between the origins of the sternocleidomastoid and trapezius



G.B.-12 (*wangu*) 'Mastoid Process' In a depression posterior and inferior to the mastoid process



ST-6 (*jiache*) 'Jaw Bone' With the teeth clenched, on the highest prominence of the masseter, approximately one fingerbreadth anterior and superior to the mandibular angle



ST-5 (*daying*) 'Great Welcome' On the lateral mandible, anterior to the masseter (ask the patient to clench the teeth); a branch of the facial artery is palpable here

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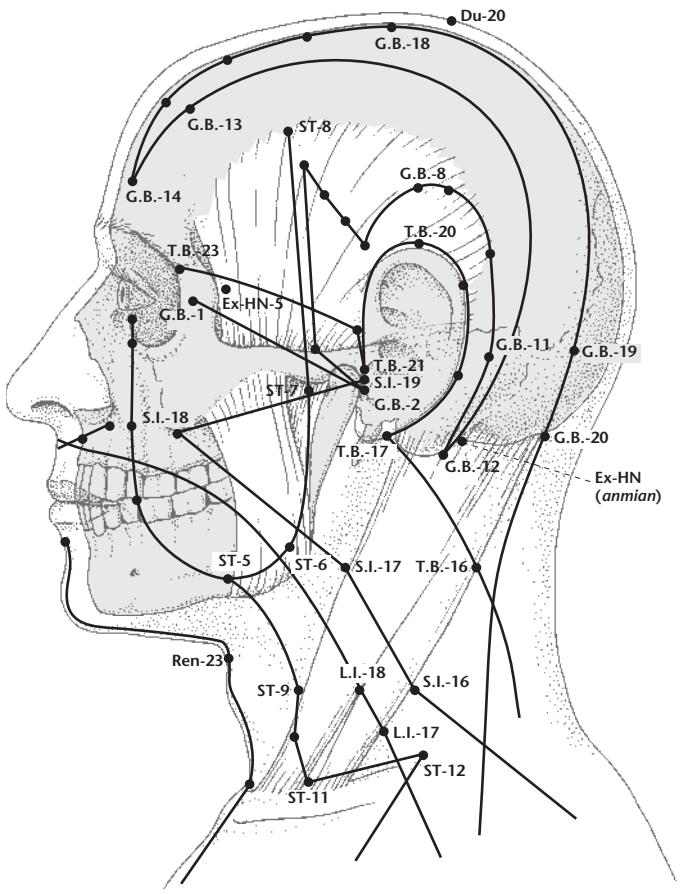
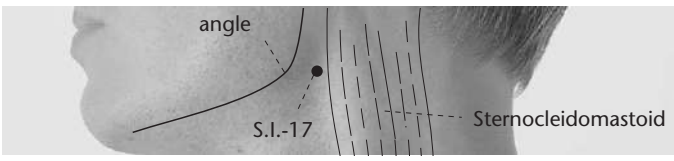
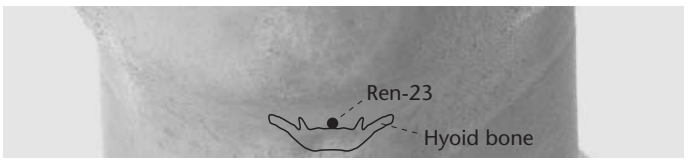


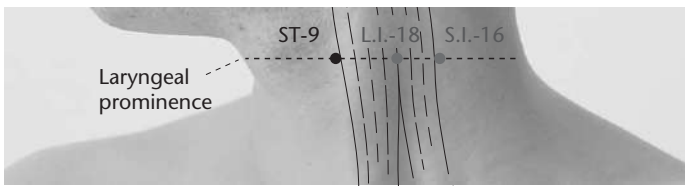


S.I.-17 (*tianrong*) 'Heavenly Appearance' Level with and posterior to the mandibular angle, on the anterior border of the sternocleidomastoid

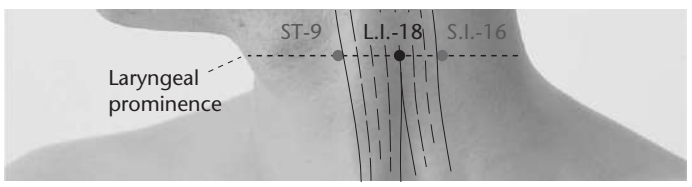
T.B.-16 (*tianyou*) 'Window of Heaven' posterior and inferior to the mastoid process, on the posterior border of the sternocleidomastoid, directly level with the mandibular angle



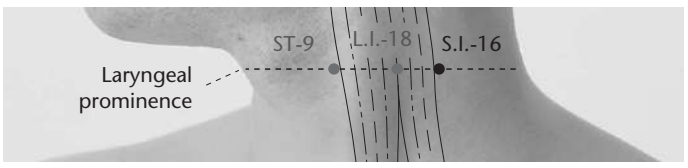
Ren-23 (*lianquan*) 'Corner Spring' On the anterior midline, superior to the upper border of the hyoid bone



ST-9 (*renying*) Man's Welcome' Approximately 1.5 cun lateral to the anterior midline, level with the laryngeal prominence, at the anterior border of the sternocleidomastoid



L.I.-18 (*futu*) 'Support the Prominence' At the level of the laryngeal prominence, between the sternal and clavicular heads of the sternocleidomastoid muscle



S.I.-16 (*tianchuang*) 'Heavenly Window' Approximately 3.5 cun lateral to the anterior midline, level with the laryngeal prominence, on the posterior border of the sternocleidomastoid

ST-10 (*shuitu*) 'Water Prominence' On the anterior border of the sternocleidomastoid, at the midpoint of a line connecting **ST-9** and **ST-11**

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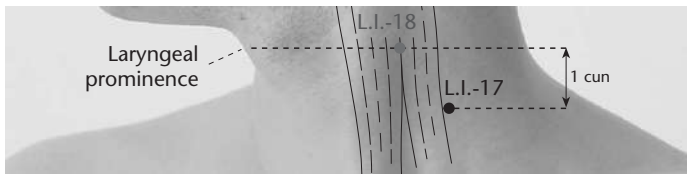
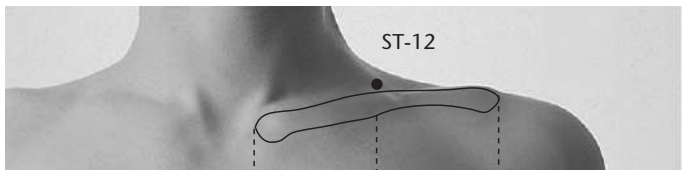


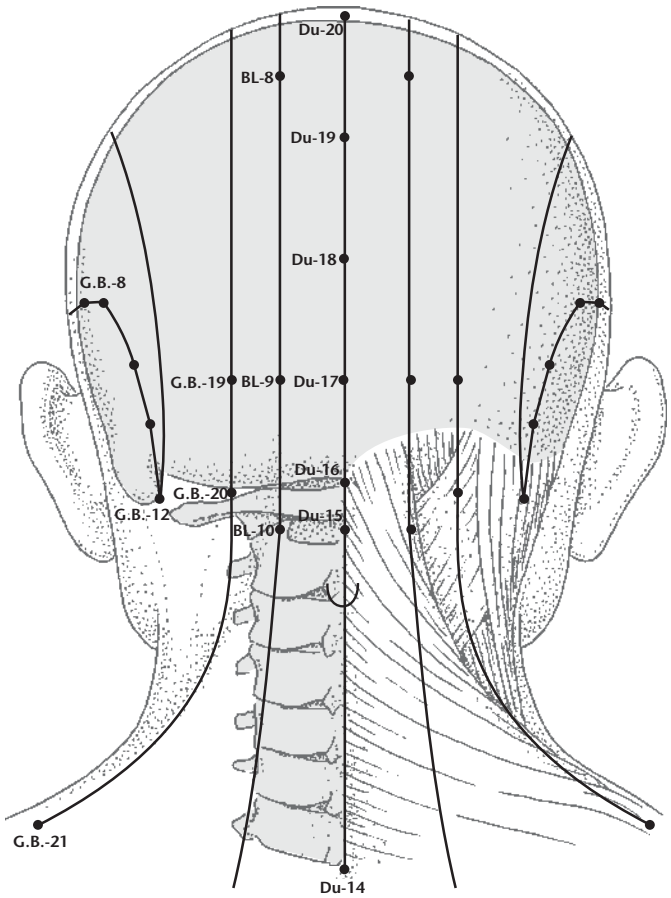
L.I.-17 (*tianding*) 'Heaven's Tripod' 1 cun inferior to the laryngeal prominence, on the posterior border of the sternocleidomastoid

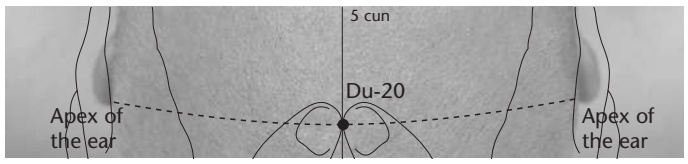
ST-11 (*qishe*) 'Abode of Qi' On the upper border of the clavicle, between the tendons of the sternal and clavicular heads of the sternocleidomastoid



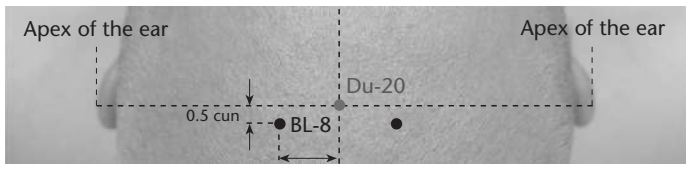
ST-12 (*quepen*) 'Empty Basin' In the supraclavicular fossa, superior to the midpoint of the clavicle, approximately 4 cun lateral to the midline

7.3 Occipital Region





Du-20 (*baihui*) 'Hundred Meetings' At the junction of a line connecting the apices of the ears and the midline, 5 cun from the anterior or 7 cun from the posterior hairline respectively



BL-8 (*luoque*) 'Declining Connection' 1.5 cun lateral to the midline and 5.5 cun superior to the anterior hairline, or 0.5 cun posterior to **Du-20**

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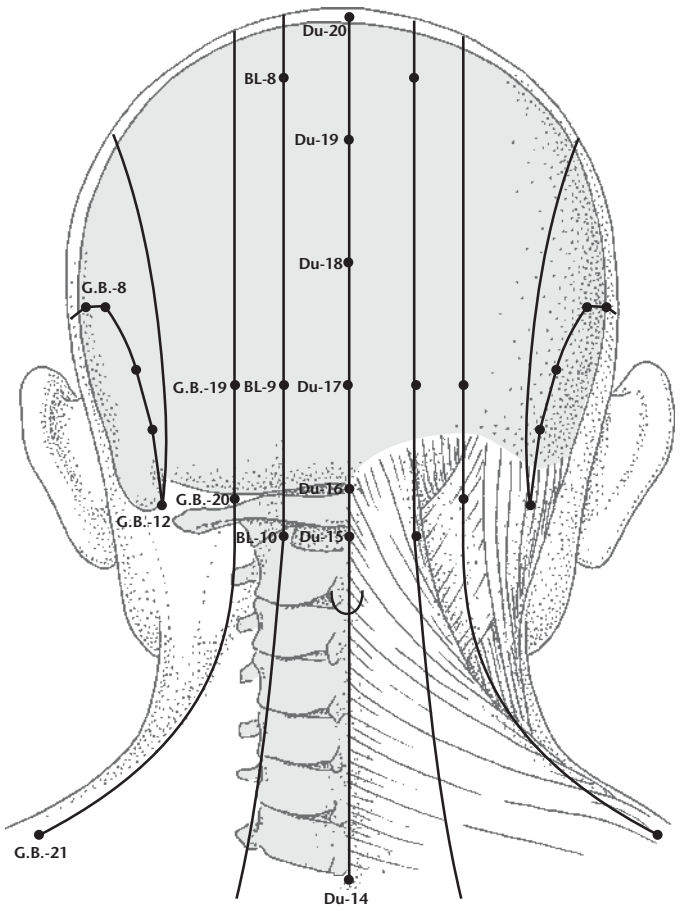
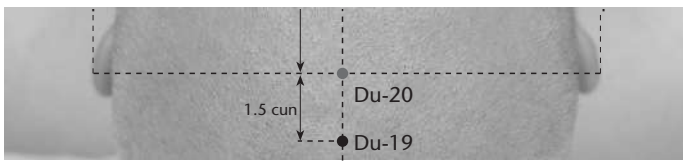
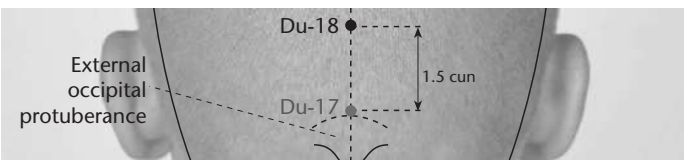
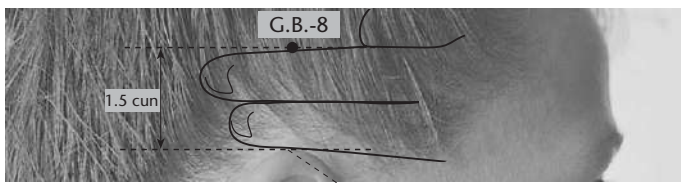




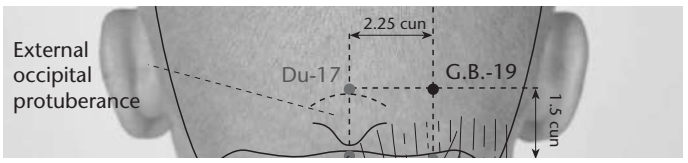
Du-19 (*houding*) 'Behind the Crown' On the midline, 1.5 cun posterior to **Du-20** or 3 cun superior to **Du-17**



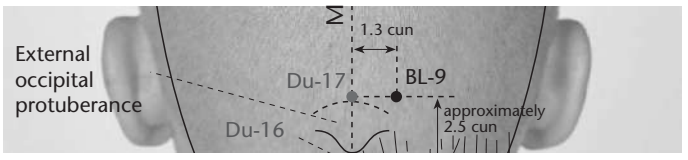
Du-18 (*qiangjian*) 'Unyielding Space' On the posterior midline, 1.5 cun superior to **Du-17** or 3 cun posterior to **Du-20**



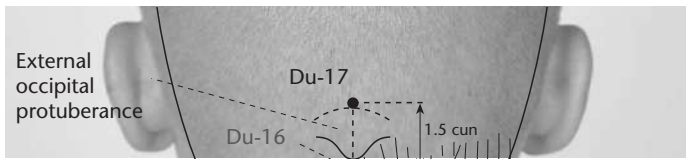
G.B.-8 (*shuaigu*) 'Leading Valley' 1.5 cun directly superior to the apex of the ear



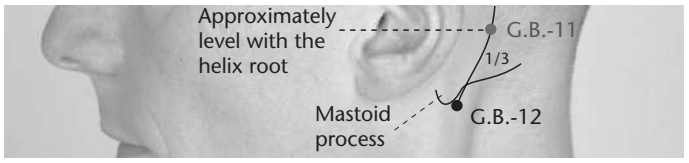
G.B.-19 (*naokong*) 'Brain Hollow' Level with the upper border of the external occipital protuberance (**Du-17**), on the line connecting **G.B.-15** and **G.B.-20**, and 2.25 cun lateral to the midline



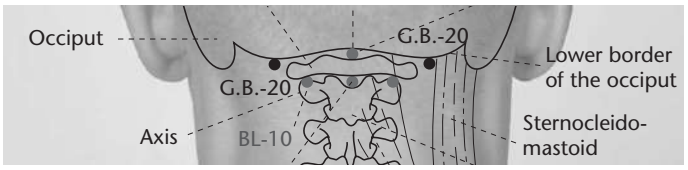
BL-9 (*yuzhen*) 'Jade Pillow' 2.5 cun superior to the posterior hairline and 1.3 cun lateral to the midline or **Du-17** (directly superior to the external occipital protuberance)



Du-17 (*naohu*) 'Brain's Door' On the midline, in a depression superior to the external occipital protuberance, approximately 2.5 cun superior to the posterior hairline, 1.5 cun superior to **Du-16**



G.B.-12 (*wangu*) 'Mastoid Process' In a depression posterior and inferior to the mastoid process



G.B.-20 (*fengchi*) 'Wind Pool' On the lower border of the occipital bone, in the depression between the origins of the sternocleidomastoid and trapezius

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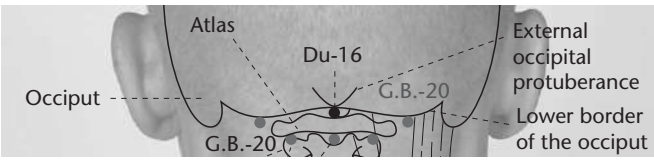
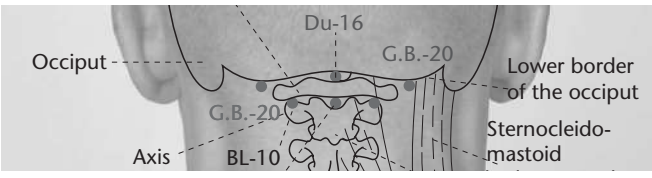
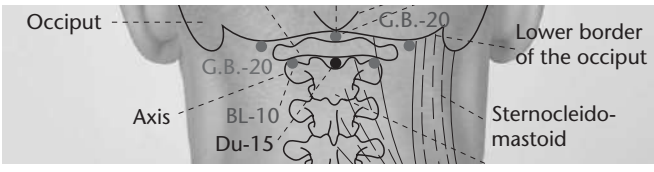


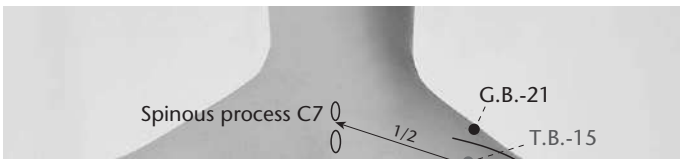
Du-16 (*fengfu*) 'Palace of Wind' On the posterior midline, directly below the external occipital protuberance, in the depression between the origins of the trapezius



BL-10 (*tianzhu*) 'Celestial Pillar' Below the lower border of the occiput, approximately 1.3 cun lateral to the midline (**Du-15**), at the insertion of the trapezius



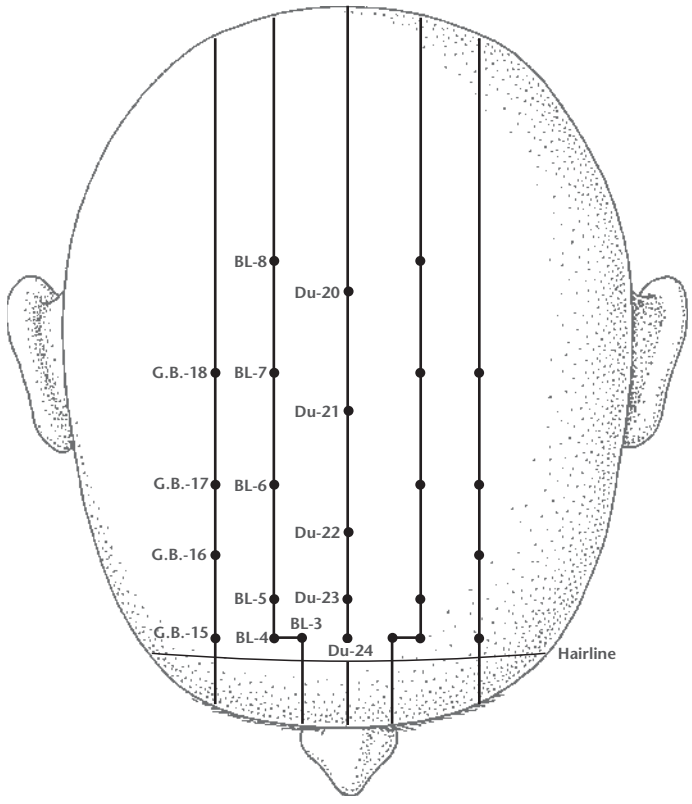
Du-15 (*yamen*) 'Gate of Muteness' On the posterior midline, in the depression between the 1st (atlas) and 2nd cervical vertebrae (axis = first palpable spinous process), approximately 0.5 cun below **Du-16**

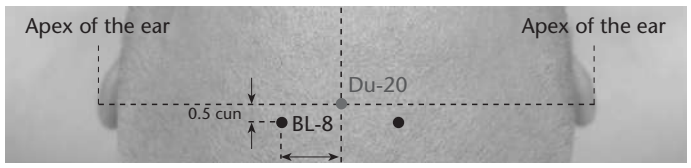


G.B.-21 (*jianjing*) 'Shoulder Well' At the highest point of the shoulder, midway between the lower border of the spinous process of C7 and the lateral extremity of the acromion

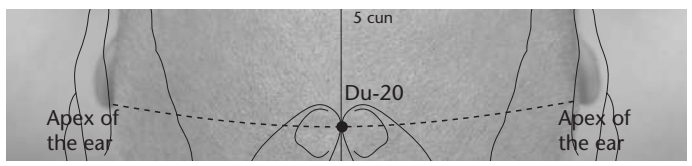
Du-14 (*dazhui*) 'Great Vertebra' Below the spinous process of C7

7.4 Vertex





BL-8 (*luoque*) 'Declining Connection' 1.5 cun lateral to the midline and 5.5 cun superior to the anterior hairline, or 0.5 cun posterior to **Du-20**



Du-20 (*baihui*) 'Hundred Meetings' At the junction of a line connecting the apices of the ears and the midline, 5 cun from the anterior or 7 cun from the posterior hairline respectively

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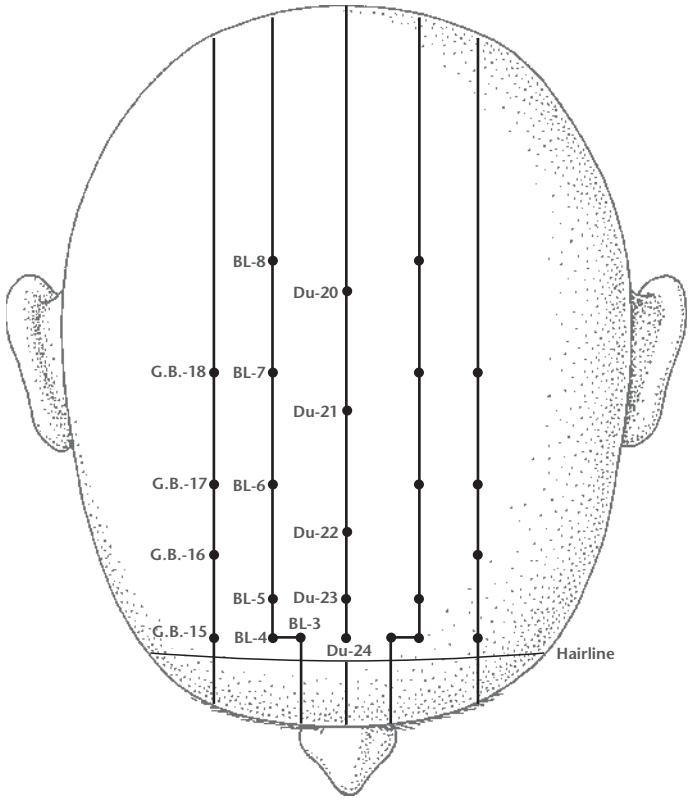
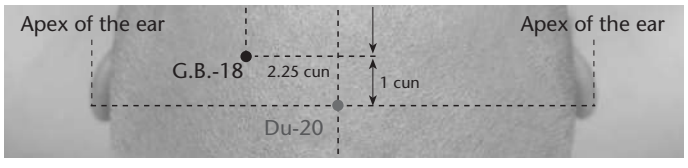
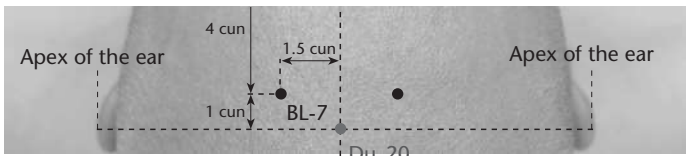
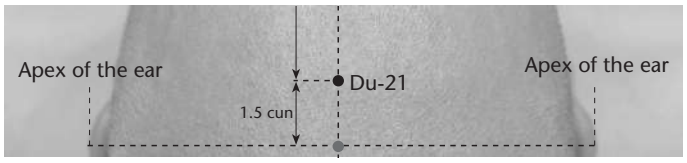




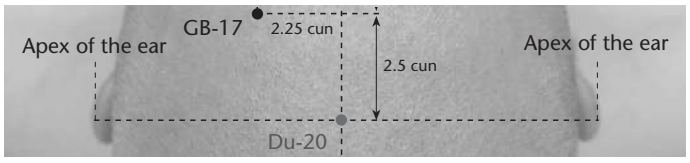
G.B.-18 (*chengling*) 'Support Spirit' 4 cun superior to the anterior hairline or 1 cun anterior to **Du-20**, on the line connecting **G.B.-15** with **G.B.-20**, or 2.25 cun lateral to the midline (midpoint of the line connecting **ST-8** and **Du-24**)



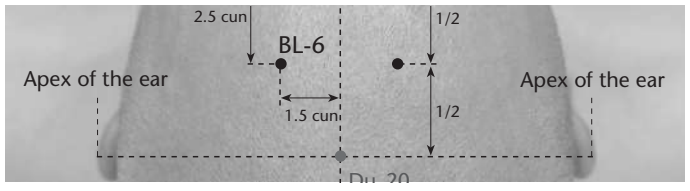
BL-7 (*tongtian*) 'Heavenly Connection' 1.5 cun lateral to the midline and 4 cun superior to the anterior hairline or 1 cun anterior to **Du-20**



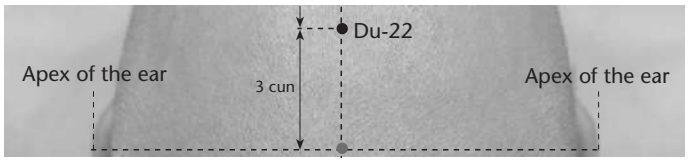
Du-21 (*qianding*) 'In Front of the Crown' On the midline, 1.5 cun anterior to **Du-20** or 3.5 cun above the anterior hairline



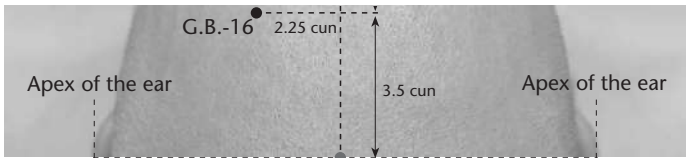
G.B.-17 (*zhengying*) 'Upright Nutrition' 2.5 cun superior to the anterior hairline, on the pupil line, on the line connecting **G.B.-15** and **G.B.-20** (= 2.25 cun lateral to the midline or midway between **Du-23** and **ST-8**)



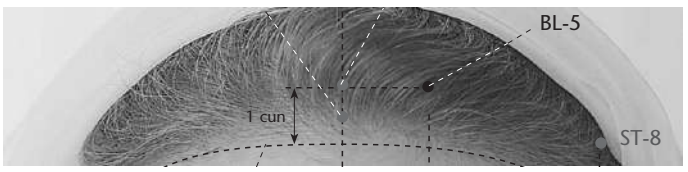
BL-6 (*chengguang*) 'Receiving Light' 2.5 cun superior to the anterior hairline and 1.5 cun lateral to the midline, or one-third of the distance between **Du-24** and **ST-8**



Du-22 (*xinhui*) 'Fontanelle Meeting' On the midline, 2 cun superior to the anterior hairline or 3 cun anterior to **Du-20**



G.B.-16 (*muchuang*) 'Window of the Eye' 1.5 cun superior to the anterior hairline, on the pupil line, on the line connecting **G.B.-15** and **G.B.-20** (= 2.25 cun lateral to the midline or midway between **Du-24** and **ST-8**)



BL-5 (*wuchu*) 'Fifth Place' 1 cun superior to the anterior hairline and 1.5 cun lateral to the midline (directly above **BL-4**, level with **Du-23**)

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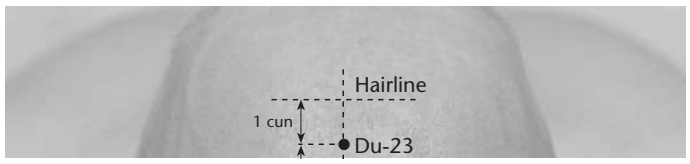
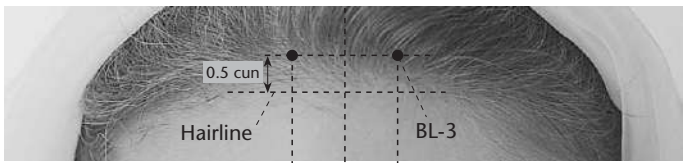
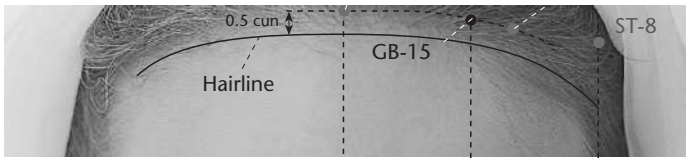


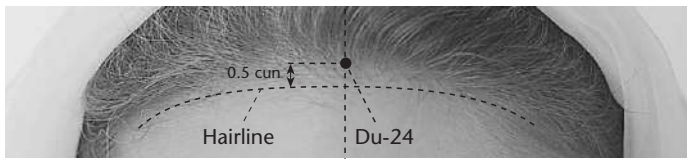
Du-23 (*shangxing*) 'Upper Star' On the midline, 1 cun superior to the anterior hairline



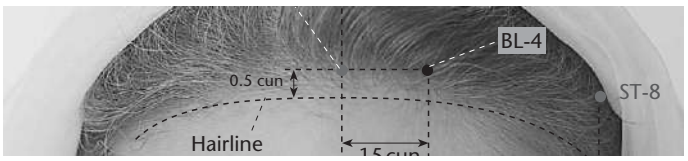
BL-3 (*meichong*) 'Eyebrows' Pouring' 0.5 cun within the anterior hairline, superior to the medical canthus of the eye (**BL-1**)



G.B.-15 (*toulinqi*) 'Head Governor of Tears' On the pupil line when looking straight ahead, 0.5 cun superior to the anterior hairline, at the midpoint of the line between **Du-24** and **ST-8** (= 4.5 cun)



Du-24 (*shenting*) 'Courtyard of the Spirit' On the midline, 0.5 cun superior to the anterior hairline



BL-4 (*qucha*) 'Crooked Curve' 0.5 cun superior to the anterior hairline and 1.5 cun lateral to the midline, or one-third of the distance between **Du-24** and **ST-8** (= 4.5 cun)

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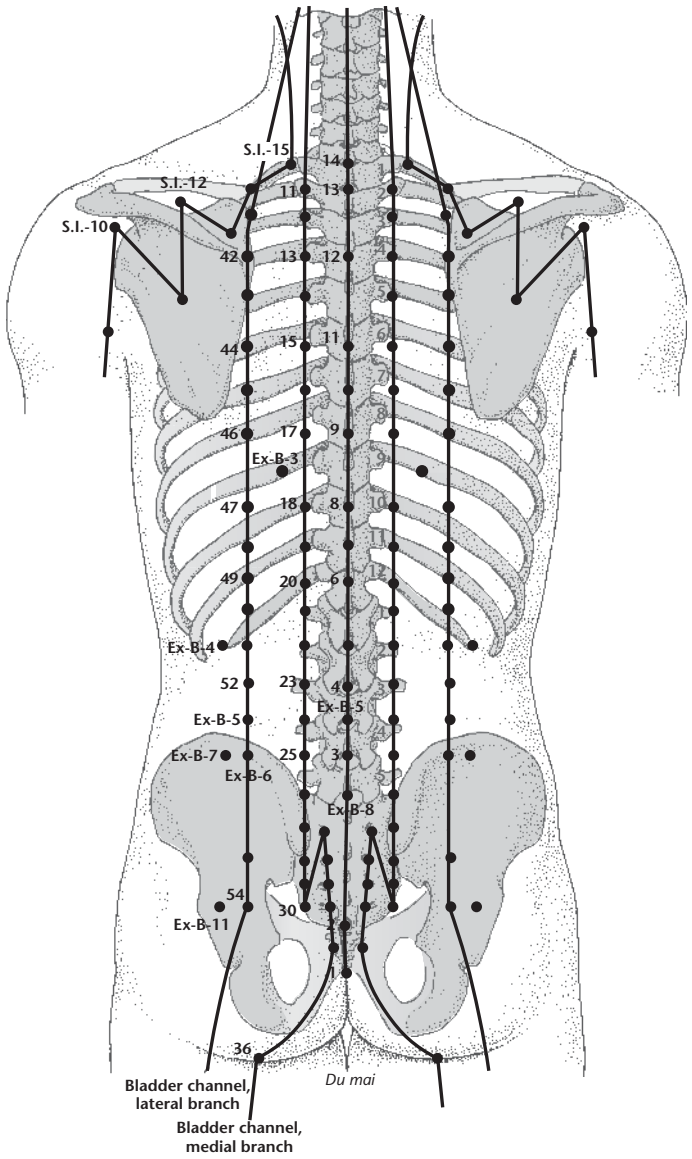
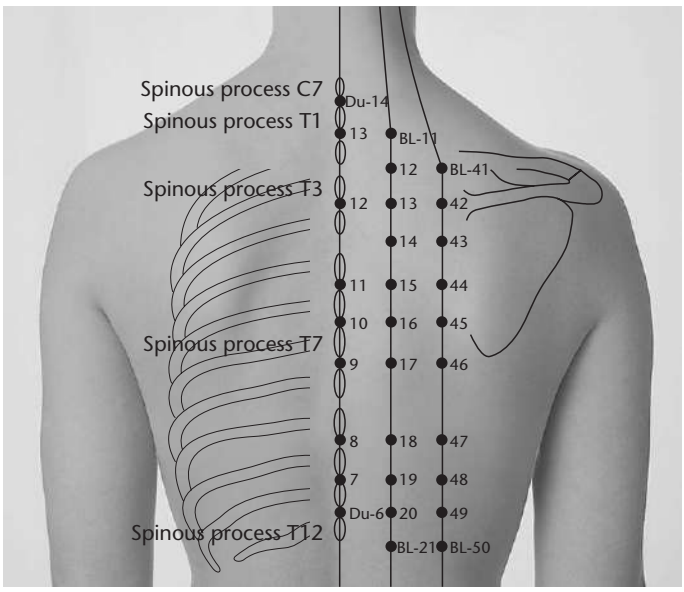
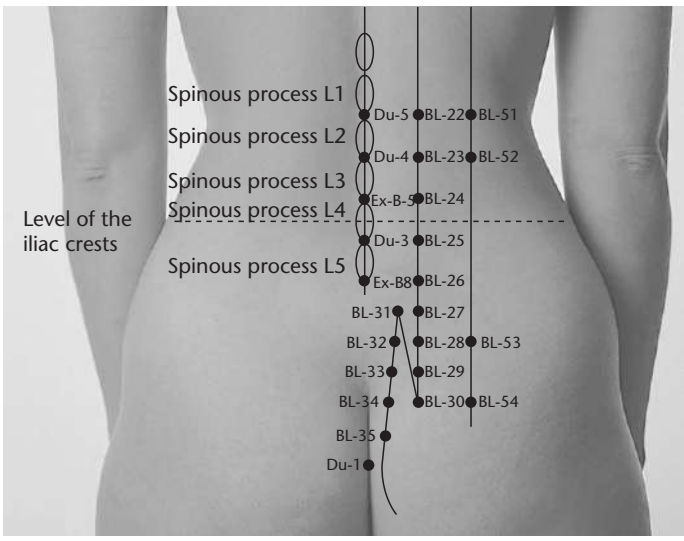
7.5 Back







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Vertebra	Below the spinous process or in the sacral foramen	0.5 cun lateral to the midline, level with the lower border of the spinous process or sacral foramen	1.5 cun lateral to the midline, level with the lower border of the spinous process or sacral foramen	3 cun lateral to the midline, level with the lower border of the spinous process or sacral foramen
C7	Du-14	Ex-B-1 *(dingchuan)*	**2 cun lateral** S.I.-15	**3.5 cun lateral** Ex-B (*jiehexue*)
T1	Du-13	A point of Ex-B-2 (*huatuojiaji*)	BL-11	S.I.-14
T2		A point of Ex-B-2 (*huatuojiaji*)	BL-12	BL-41
T3	Du-12	A point of Ex-B-2 (*huatuojiaji*)	BL-13	BL-42
T4		A point of Ex-B-2 (*huatuojiaji*)	BL-14	BL-43
T5	Du-11	A point of Ex-B-2 (*huatuojiaji*)	BL-15	BL-44
T6	Du-10	A point of Ex-B-2 (*huatuojiaji*)	BL-16	BL-45
T7	Du-9	A point of Ex-B-2 (*huatuojiaji*)	BL-17	BL-46
T8		A point of Ex-B-2 (*huatuojiaji*)	Ex-B-3 (*weiwanxiashu*)	
T9	Du-8	A point of Ex-B-2 (*huatuojiaji*)	BL-18	BL-47
T10	Du-7	A point of Ex-B-2 (*huatuojiaji*)	BL-19	BL-48
T11	Du-6	A point of Ex-B-2 (*huatuojiaji*)	BL-20	BL-49
T12		A point of Ex-B-2 (*huatuojiaji*)	BL-21	BL-50
L1	Du-5	A point of Ex-B-2 (*huatuojiaji*)	BL-22	BL-51/ Ex-B-4 (**3.5 cun lateral**)
L2	Du-4	A point of Ex-B-2 (*huatuojiaji*)	BL-23	BL-52
L3	Ex-B-5 (*xiajishu*)	A point of Ex-B-2 (*huatuojiaji*)	BL-24	Ex-B-5 (according to WHO a set of 3 points)
L4	Du-3	A point of Ex-B-2 (*huatuojiaji*)	BL-25	Ex-B-6/Ex-B-7 (**3.5 cun lateral**)
L5	Ex-B-8	A point of Ex-B-2 (*huatuojiaji*)	BL-26	
1st sacral foramen	BL-31		BL 27	
2nd sacral foramen	BL-32		BL 28	BL-53
3rd sacral foramen	BL-33		BL 29	
4th sacral foramen	BL-34		BL 30	BL-54/Ex-B-11 (3.5 cun lateral)
Sacral hiatus	Du- 2			
		BL-35 (0.5 cun lateral and inferior to Du-2)		
Between the coccyx and the anus	Du-1			

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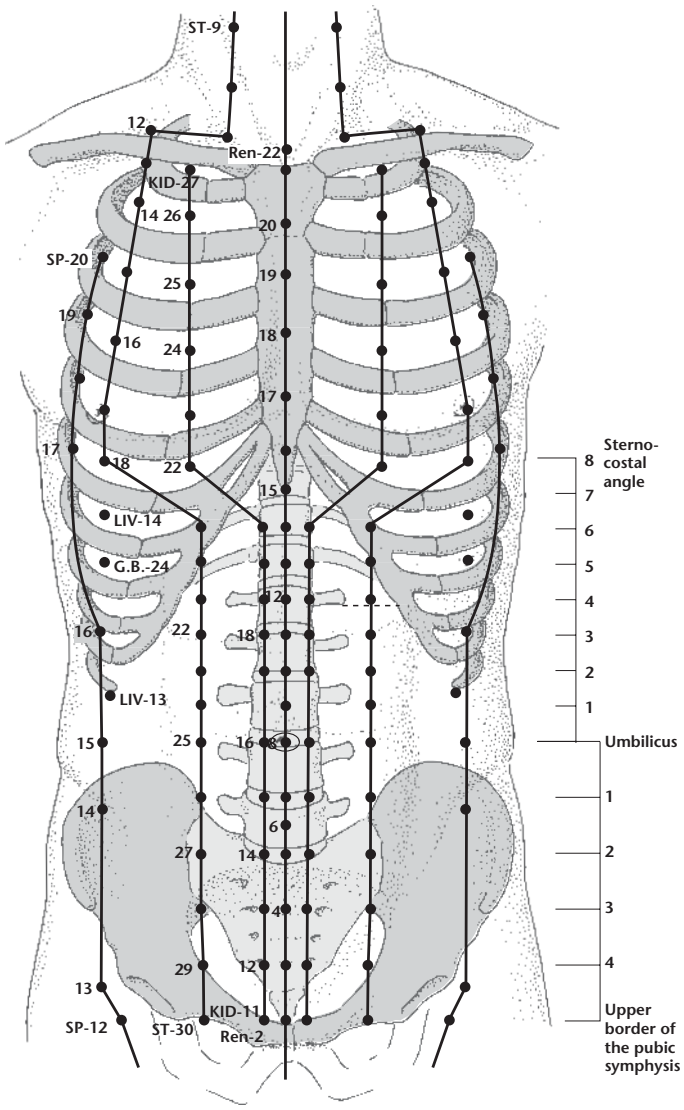
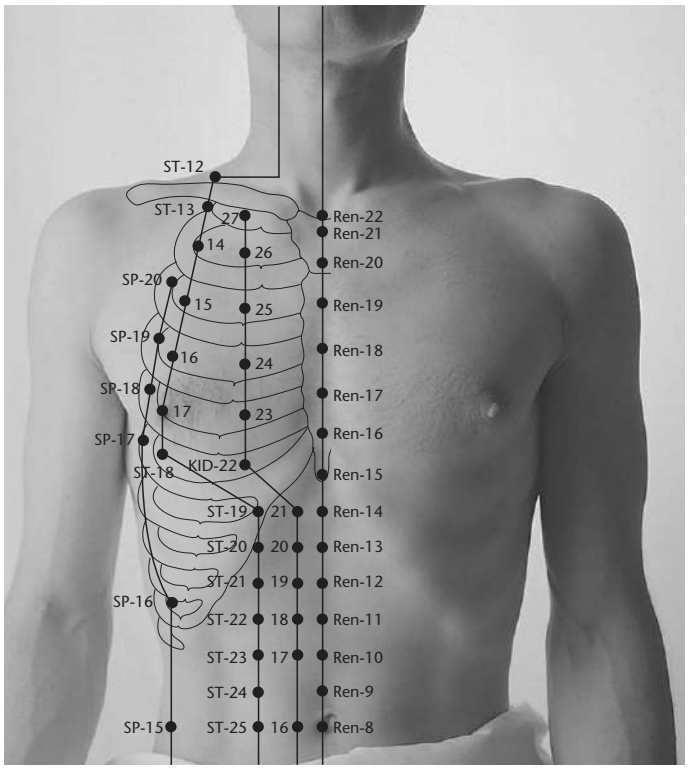
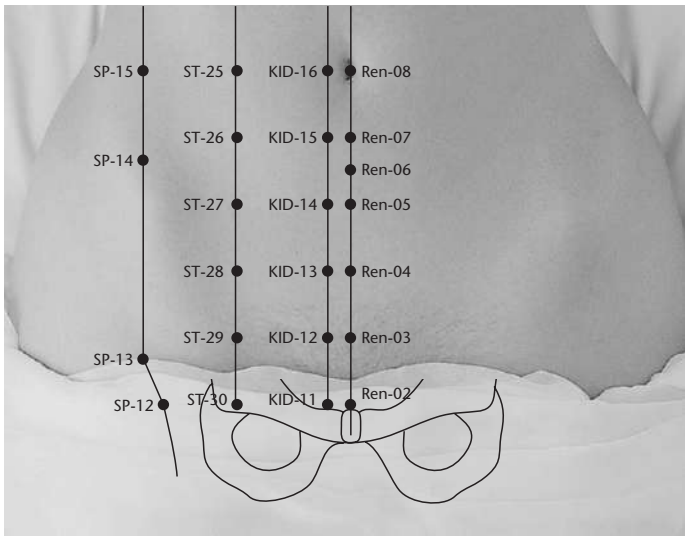
7.6 Frontal and Lateral Thorax and Abdomen







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Anatomical level	***Ren Mai* (midline)**	**KID channel (2 cun lateral to the midline)**	**ST channel (4 cun lateral to the midline)**	**Other (6 cun lateral to the midline)**
Below the clavicle	≈ Ren-21	KID-27	ST-13	LU-2
1st ICS	Ren-20	KID-26	ST-14	LU-1
2nd ICS	Ren-19	KID-25	ST-15	SP-20
3rd ICS	Ren-18	KID-24	ST-16	SP-19
4th ICS	Ren-17	KID-23	ST-17 (nipple)	SP-18/P-1 (1 cun lateral to the nipple)/G.B.-22 (3 cun inferior to the apex of the axilla)/G.B.-23 (1 cun anterior to G.B.-22)
5th ICS	Ren 16	KID-22	ST-18	SP-17
Anatomical level	***Ren mai* (midline)**	**KID-channel (0.5 cun lateral to the midline)**	**ST channel (2 cun lateral to the midline)**	**Other (4 cun lateral to the midline)**
6 cun superior/6th ICS	Ren-14	KID-21	ST-19	LIV-14 (6th ICS)
5 cun superior/7th ICS	Ren-13	KID-20	ST-20	G.B.-24 (7th ICS)
4 cun superior	Ren-12	KID-19	ST-21	
3 cun superior	Ren-11	KID-18	ST-22	SP-16
2 cun superior	Ren-10	KID-17	ST-23	Ex-CA (*weishang*)
1 cun superior	Ren-9		ST-24	≈ LIV-13 (free end of the 11th rib)
Level of umbilicus	Ren-8	KID-16	ST-25	SP-15, G.B.-26 (inferior to the free end of the 12th rib, level with the umbilicus)
1 cun inferior	Ren-7	KID-15	ST-26	
(1.5 cun inferior)	Ren-6			
2 cun inferior	Ren-5	KID-14	ST-27	
(2.5 cun inferior)	Ex-CA (*zhishi*)			
3 cun inferior	Ren-4	KID-13	ST-28	Ex-CA (*tituo*)/Ex-CA (*qimen*)/ Ex-CA (*yijing*)/(4/3/1 cun lateral to the midline)/≈ G.B.-27 (anterior and medical to the ASIS → 3)
4 cun inferior	Ren-3	KID-12	ST-29	Ex-CA (*zigong*), 3 cun lateral to the midline
5 cun inferior **symphysis**	Ren-2	KID-11	ST-30	SP-12 (3.5 cun lateral to the midline)

Note: The intercostal spaces and the ribs curve upwards laterally!

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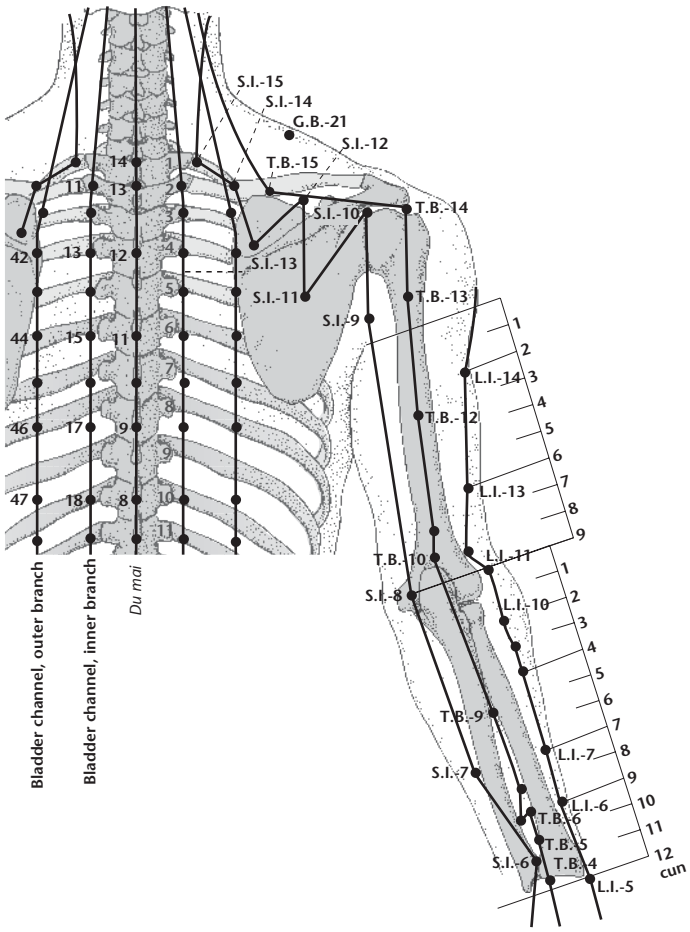
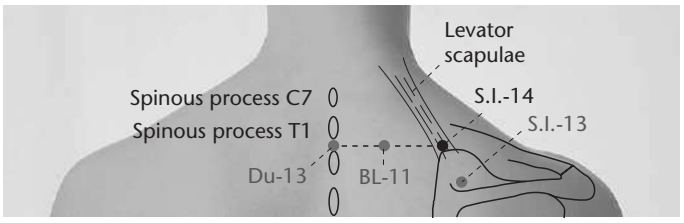
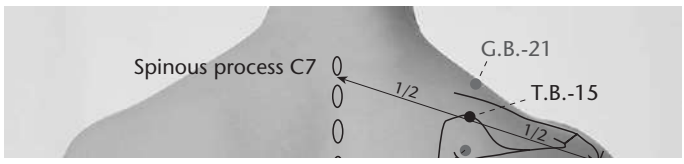
7.7 Posterior Shoulder and Arm

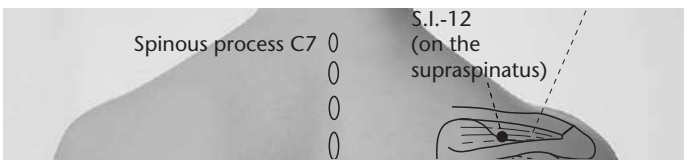




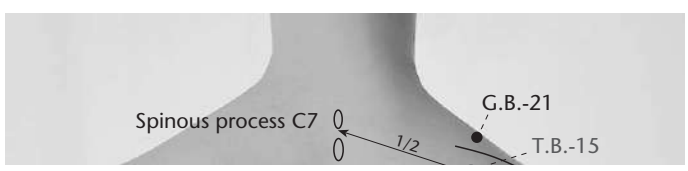
S.I.-14 (*jianwaishu*) 'Outer Shoulder Shu' 3 cun lateral to the lower border of the spinous process of the T1 (**Du-13**), at the insertion of the levator scapulae



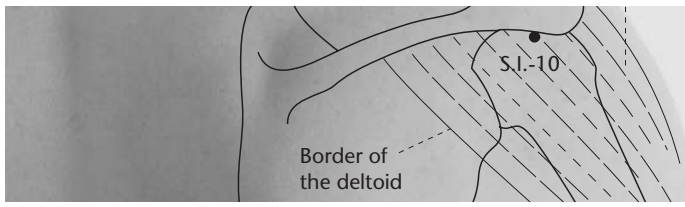
T.B.-15 (*tianliao*) 'Heavenly Crevice' At the midpoint of an imaginary line between the spinous process of the C7 and the lateral extremity of the acromion



S.I.-12 (*bingfeng*) 'Grasping the Wind' Directly superior to **S.I.-11**, in the centre of the supraspinous fossa

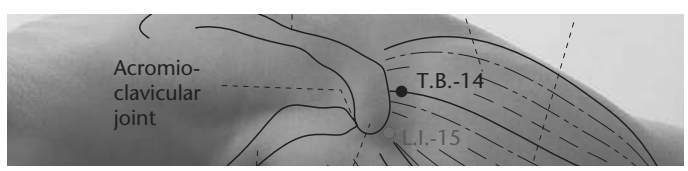


G.B.-21 (*jianjing*) 'Shoulder Well' At the highest point of the shoulder, midway between the lower border of the spinous process of C7 and the lateral extremity of the acromion



S.I.-10 (*naoshu*) 'Upper Arm Shu' With the arm adducted on a line extending in a superior direction from the posterior axillary fold, on the lower border of the scapular spine

S.I.-15 (*jianzhongshu*) 'Middle Shoulder Shu' 2 cun lateral to the lower border of the spinous process of the T7 (**Du-14**)



T.B.-14 (*jianliao*) 'Shoulder Crevice' Inferior to the lateral extremity of the acromion between the acromial and spinal portions of the deltoid, or with the arm abducted in the posterior of the two depressions on the shoulder joint

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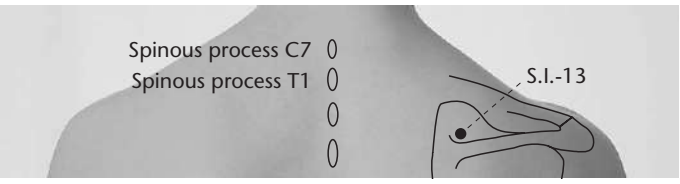
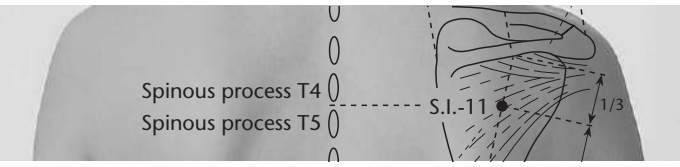
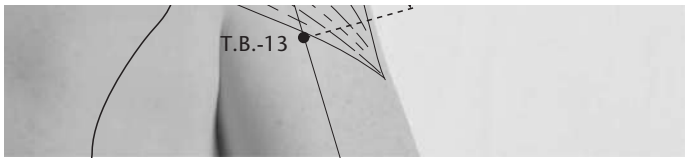


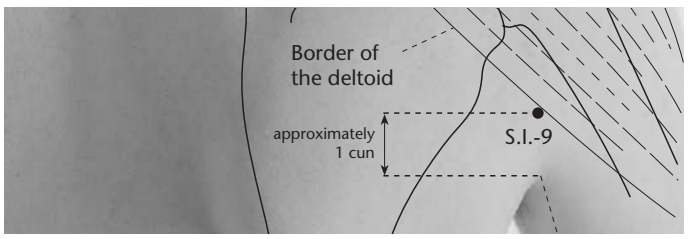
S.I.-13 (*quyuan*) 'Crooked Wall' At the medial end of the supraspinous fossa



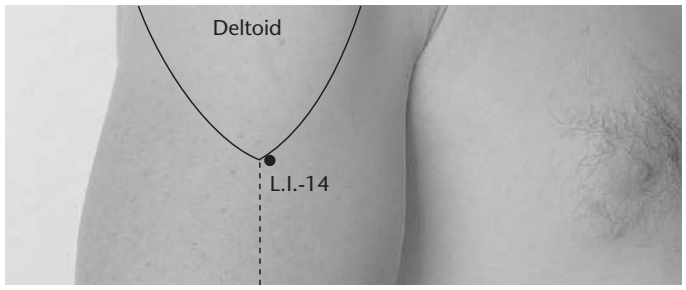
S.I.-11 (*tianzong*) 'Heavenly Gathering' On the scapula, in a depression on the infraspinatus, one third of the distance from the midpoint of the scapular spine and the inferior angle of the scapula



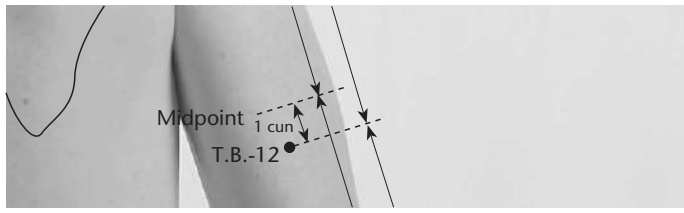
T.B.-13 (*naohui*) 'Upper Arm Meeting' 3 cun distal to the lateral extremity of the acromion (location of **T.B.-14**), on a line connecting **T.B.-14** and the olecranon, at the junction of this line with the margin of the deltoid



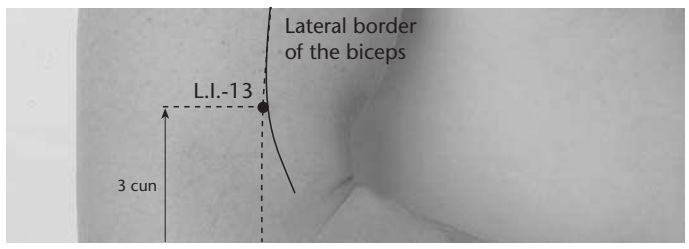
S.I.-9 (*jianzhen*) 'True Shoulder' With the arm adducted on a line extending in a superior direction from the posterior axillary fold, on the lower border of the deltoid, 1 cun superior to the posterior axillary fold



L.I.-14 (*binao*) 'Upper Arm' 7 cun proximal to **L.I.-11**, at the distal end of the deltoid, on a line connecting **L.I.-11** and **L.I.-15**

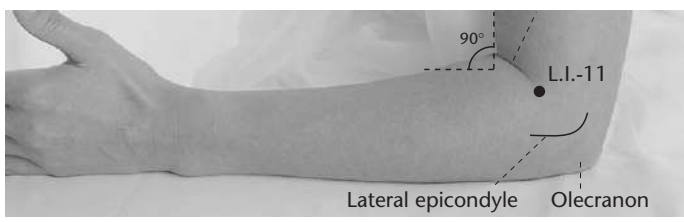


T.B.-12 (*xiaoluo*) 'Dispersing Luo River' 4 cun proximal to **T.B.-10** on a line connecting the olecranon and the lateral extremity of the acromion (location of **T.B.-14**)



L.I.-13 (*shouwuli*) 'Arm Five Miles' On the lateral aspect of the upper arm, 3 cun proximal to **L.I.-11**

T.B.-10 (*tianjing*) 'Heavenly Well' With the elbow flexed in a depression approximately 1 cun proximal to the olecranon



L.I.-11 (*quchi*) 'Pool at the Crook' With the elbow flexed, on the lateral end of the elbow crease, in a depression between the end of the crease and the lateral epicondyle of the humerus, on the extensor carpi radialis longus muscle

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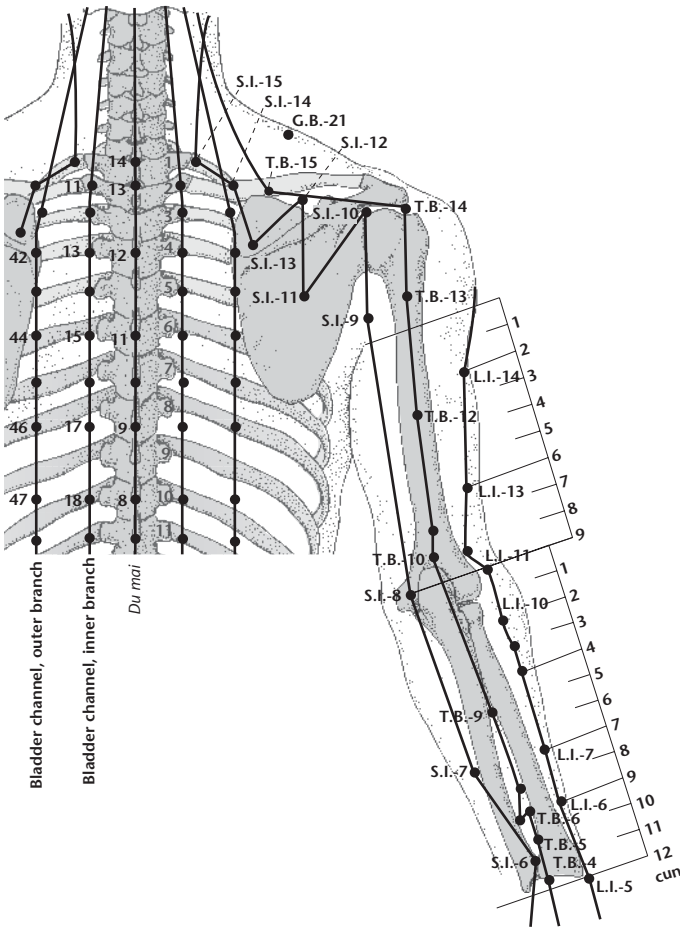
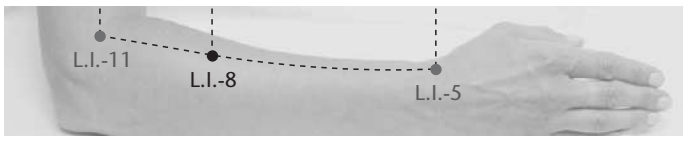
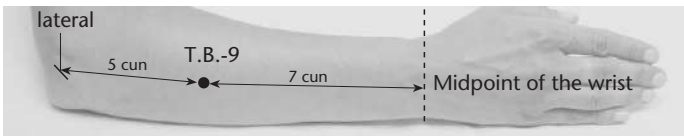


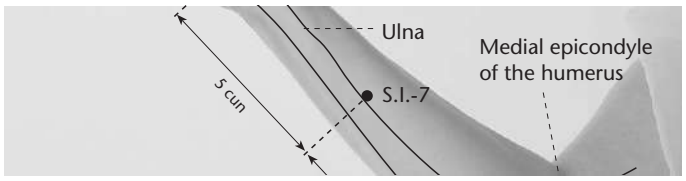
L.I.-9 (*shanglian*) 'Upper Angle' 3 cun distal to **L.I.-11**, on the line connecting **L.I.-5** and **L.I.-11**



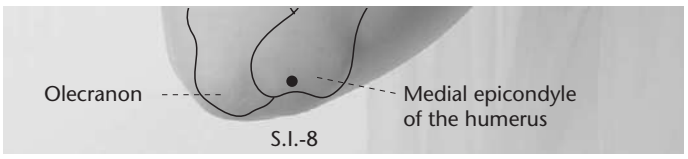
L.I.-8 (*xialian*) 'Lower Angle' 4 cun distal L.I.-11, on the line connecting **L.I.-5** and **L.I.-11**



T.B.-9 (*sidu*) 'Four Rivers' 5 cun distal to the olecranon or 7 cun proximal to **T.B.-4**, between the radius and the ulna

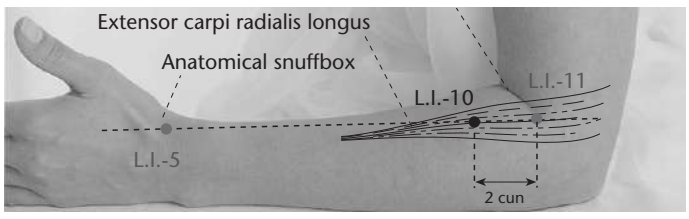


S.I.-7 (*zhizheng*) 'Branch of the Upright' 5 cun proximal to the wrist joint space, on the line connecting **S.I.-5** and **S.I.-8**

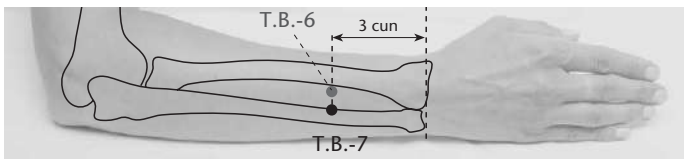


S.I.-8 (*xiaohai*) 'Small Sea' With the elbow flexed in the depression between the olecranon process of the ulna and the medial epicondyle of the humerus

L.I.-7 (*wenliu*) 'Warm Flow' 5 cun proximal to **L.I.-5** or midway between **L.I.-5** and **L.I.-11**



L.I.-10 (*shousanli*) 'Arm Three Miles' 2 cun distal to **L.I.-11**, on the line connecting **L.I.-5** and **L.I.-11**



T.B.-7 (*huizhong*) 'Ancestral Meeting' 3 cun proximal to **T.B.-4**, between radius and ulna, ulnar to extensor digitorum communis

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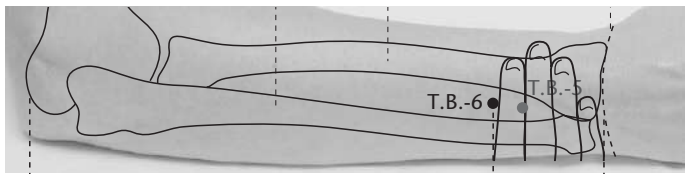
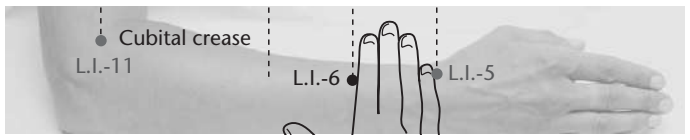
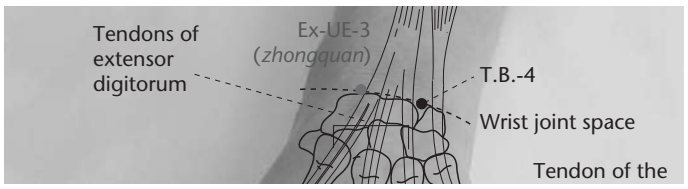


T.B.-6 (*zhigou*) 'Branch Ditch' 3 cun proximal to **T.B.-4**, between radius and ulna, radial to the tendon of extensor digitorum communis

S.I.-6 (*yanglao*) 'Support the Aged' In the depression radial and proximal to the styloid process of the ulna that forms when turning the hand from a pronated to a supinated position.

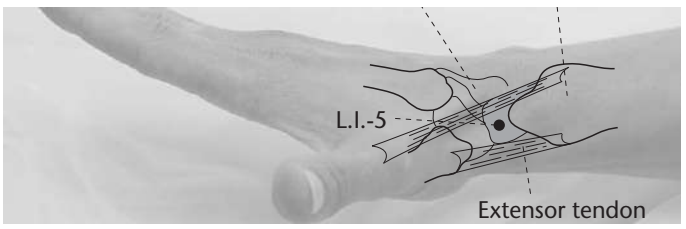


L.I.-6 (*pianli*) 'Veering Passage' 3 cun proximal to **L.I.-5**, on the line connecting **L.I.-5** and **L.I.-11**



T.B.-4 (*yangchi*) 'Yang Pool' On the dorsum of the wrist, in the gap ulnar to the tendons of the extensor digitorum

T.B.-5 (*waiguan*) 'Outer Pass' 2 cun proximal to **T.B.-4** (on the dorsal wrist joint space, between radius and ulna.



L.I.-5 (*yangxi*) 'Yang Stream' With the thumb abducted in the depression between the tendons of the extensor pollicis longus and brevis muscles ('anatomical snuff box')

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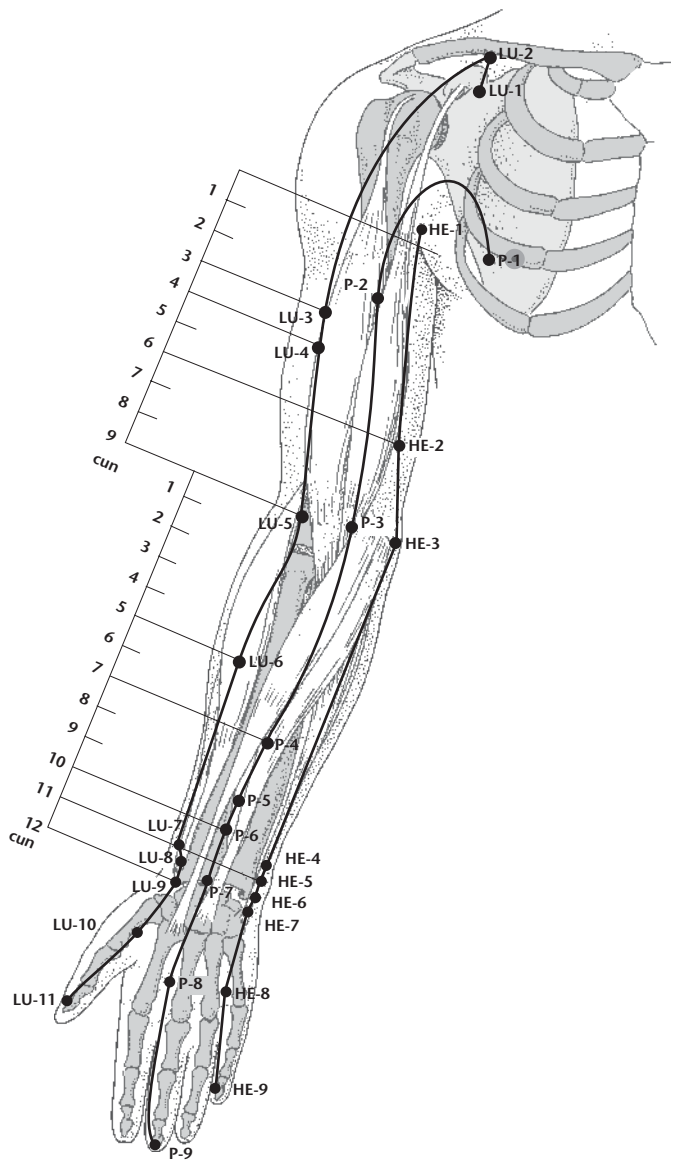
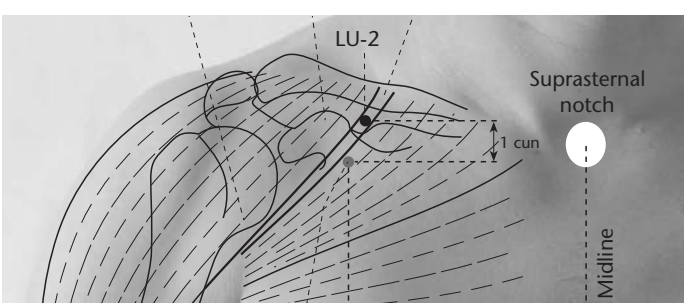
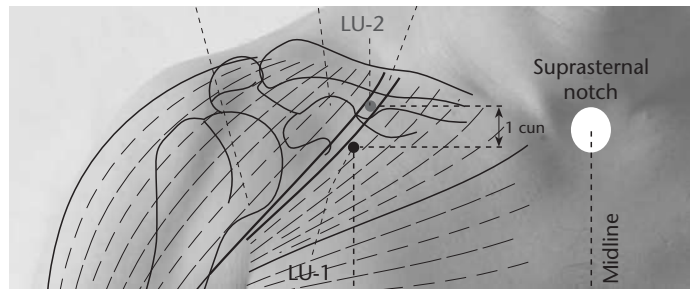
7.8 Anterior Shoulder and Arm



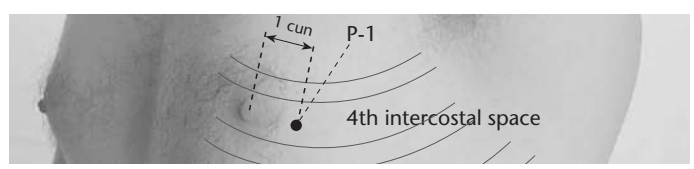


LU-2 (*yunmen*) 'Cloud Gate' 6 cun lateral to the anterior midline, below the clavicle, in the centre of the deltopectoral triangle.

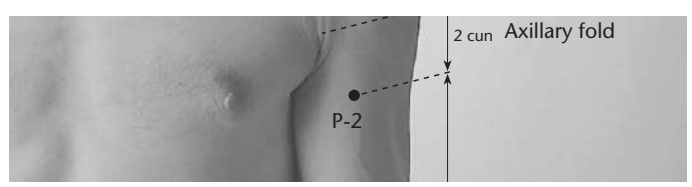


LU-1 (*zhongfu*) 'Middle Palace' 6 cun lateral to the anterior midline and approximately 1 cun inferior to **LU-2**, slightly medial to the lower border of the coracoid process

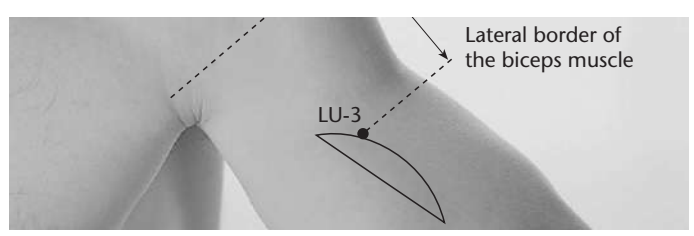
HE-1 (*jiquan*) 'Summit Spring' With the arm abducted, in the centre of the axilla, medial to the axillary artery



P-1 (*tianchi*) 'Heavenly Pool' In the 4th ICS, 1 cun lateral to the nipple



P-2 (*tianquan*) 'Heavenly Spring' Between the two heads of the biceps brachii muscle, 2 cun inferior to the axillary fold.



LU-3 (*tianfu*) 'Palace of Heaven' 3 cun distal to the end of the anterior axillary fold, on the medial aspect of the upper arm, radial to the biceps brachialis

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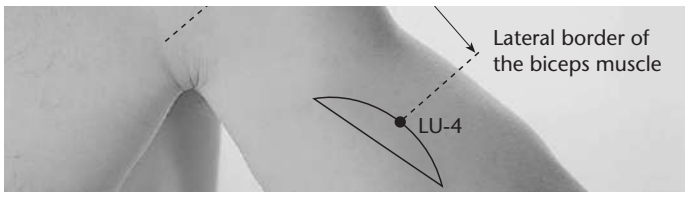
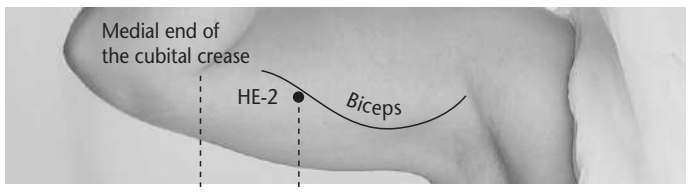
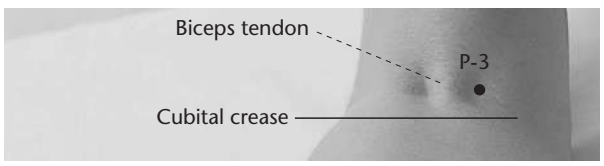


LU-4 (*xiabai*) 'Clasping the White' 4 cun distal to the end of the anterior axillary fold, on the medial aspect of the upper arm, radial to the biceps brachii

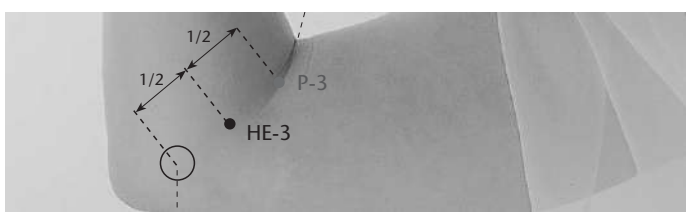


HE-2 (*qingling*) 'Green Spirit' 3 cun proximal to the cubital crease, on the medial border of the biceps brachii

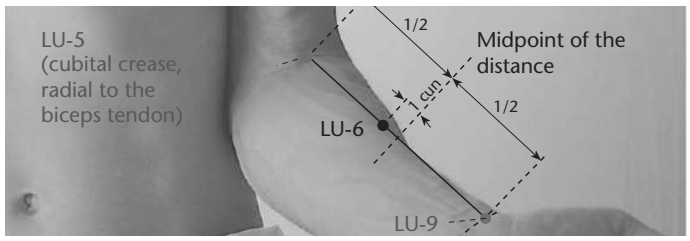
LU-5 (*chize*) 'Cubit Marsh' In the cubital crease, radial to the tendon of the biceps brachii



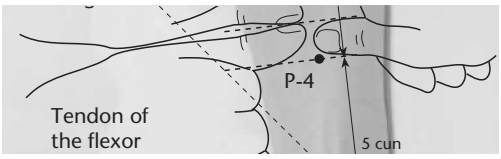
P-3 (*quze*) 'Marsh at the Crook' In the cubital crease, ulnar to the biceps tendon



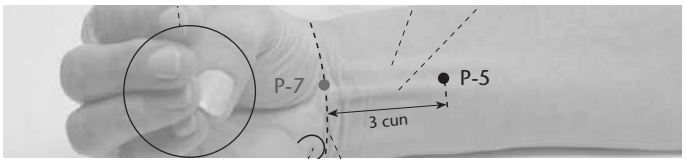
HE-3 (*shaohai*) 'Lesser Sea' With the elbow flexed, in the depression between the ulnar end of the cubital crease and the medial epicondyle of the humerus



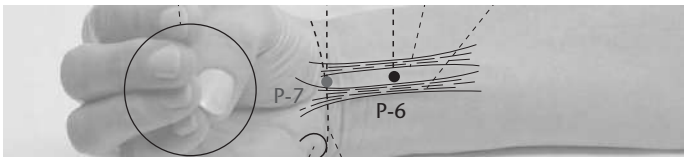
LU-6 (*kongzui*) 'Maximum Opening' 5 cun distal to **LU-5** or 7 cun proximal to the wrist joint space, on a line connecting **LU-5** and **LU-9**



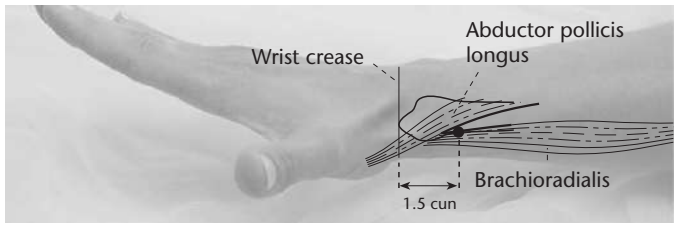
P-4 (*ximen*) 'Xi-Cleft Gate' 5 cun proximal to the palmar wrist joint space, between the tendons of palmaris longus and flexor carpi radialis, or 1 cun distal to the midpoint of the line connecting **P-3** and **P-7**



P-5 (*jianshi*) 'Intermediate Messenger' 3 cun proximal to the palmar wrist joint space, between the tendons of palmaris longus and flexor carpi radialis



P-6 (*neiguan*) 'Inner Pass' 2 cun proximal to the palmar wrist joint space, between the tendons of palmaris longus and flexor carpi radialis



LU-7 (*lieque*) 'Broken Sequence' On the radial aspect of the forearm, immediately above the styloid process of the radius, approximately 1.5 cun proximal to the wrist joint space in a V-shaped groove

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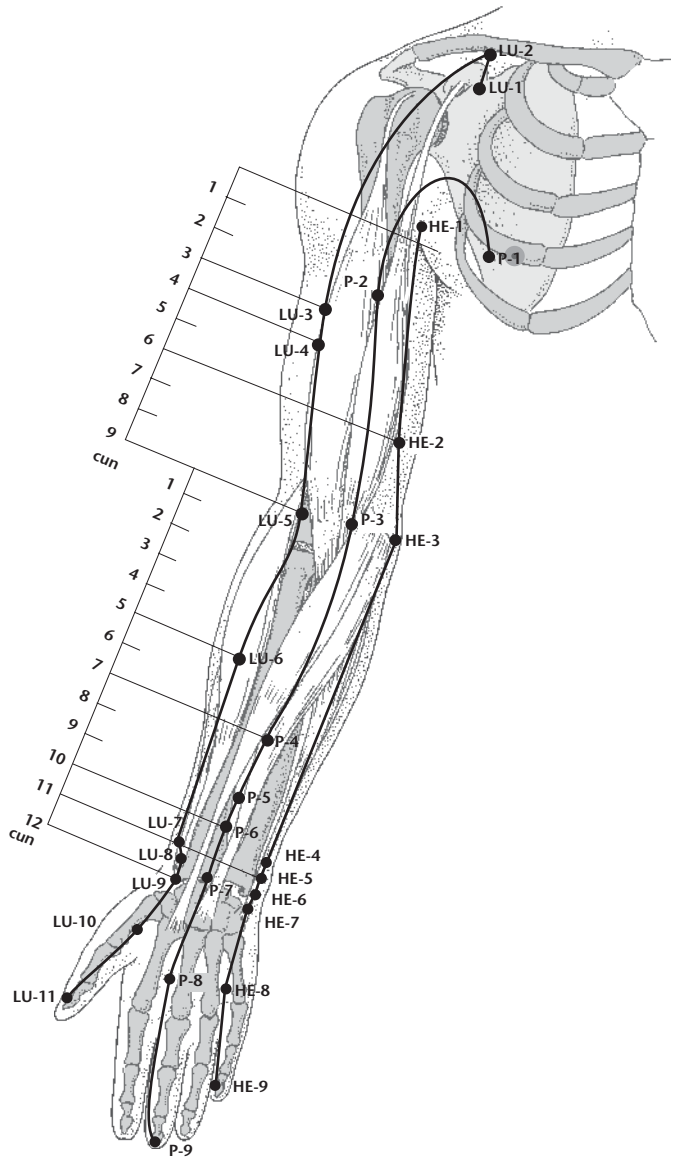
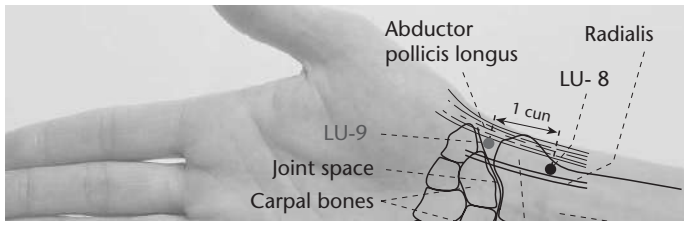
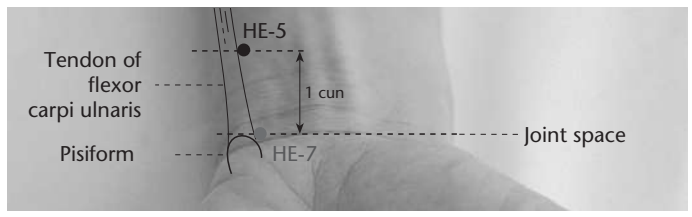
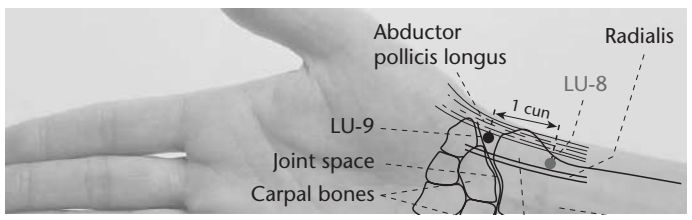




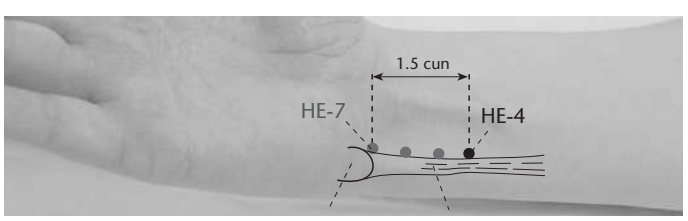
LU-8 (*jingqu*) 'Channel Gutter' 1 cun proximal to the palmar wrist joint space (**LU-9**), lateral to the radial artery



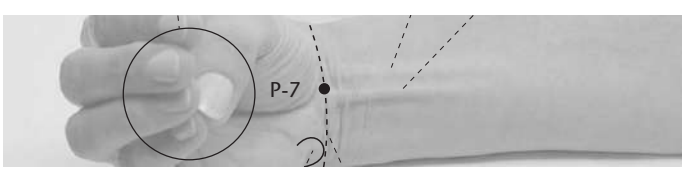
HE-5 (*tongli*) 'Penetrating the Interior' 1 cun proximal to the palmar wrist joint space, on the radial side of the flexor carpi ulnaris tendon



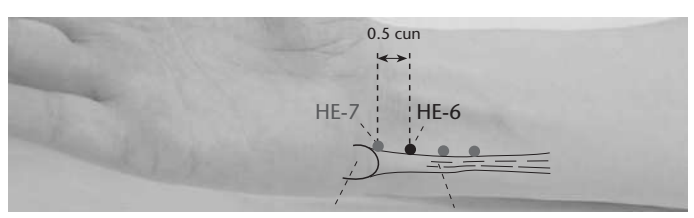
LU-9 (*taiyuan*) 'Supreme Abyss' On the wrist joint space, lateral to the radial artery and ulnar to the tendon of abductor pollicis longus



HE-4 (*lingdao*) 'Spirit Path' 1.5 cun proximal to the palmar wrist joint space, radial to the flexor carpi ulnaris tendon



P-7 (*daling*) 'Great Mound' In the centre of the palmar aspect of the wrist joint space ('most distal wrist crease'), between the tendons of palmaris longus and flexor carpi radialis



HE-6 (*yinxi*) 'Yin Cleft' 0.5 cun proximal to the palmar wrist joint space, radial to the flexor carpi ulnaris tendon

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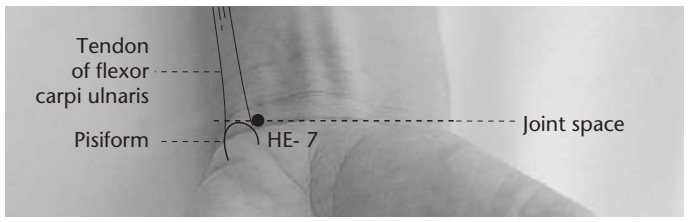
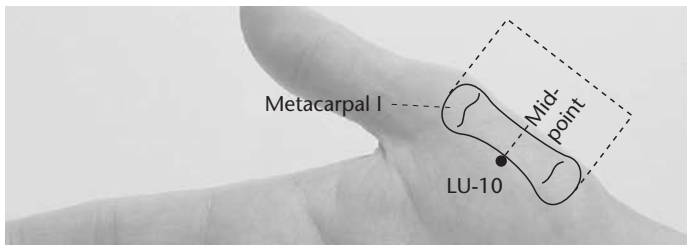
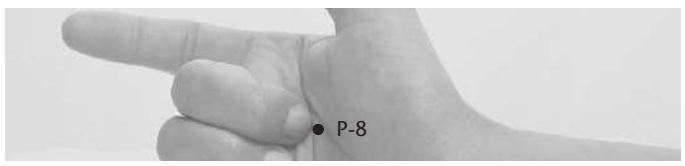


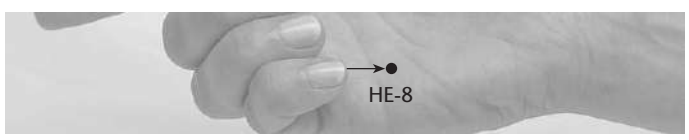
HE-7 (*shenmen*) 'Spirit Gate' On the palmar aspect of the wrist joint space ('most distal wrist crease'), in the depression radial to the insertion of the flexor carpi ulnaris tendon



LU-10 (*yuji*) 'Fish Border' At the midpoint of the palmar border of the 1st metacarpal bone

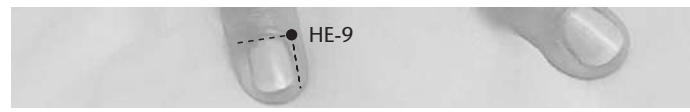


P-8 (*laogong*) 'Palace of Toil' In the centre of the palm, between the 2nd and 3rd metacarpal bones, slightly closer to the 3rd metacarpal bone. When a fist is made, the point is located beneath the tip of the middle finger



HE-8 (*shaofu*) 'Lesser Palace' When a fist is made, beneath the tip of the little finger, on the palm, between the 4th and 5th metacarpal bones

LU-11 (*shaoshang*) 'Lesser Shang' 0.1 cun from the radial corner of the thumb nail



HE-9 (*shaochong*) 'Lesser Rushing' 0.1 cun lateral to the radial corner of the nail of the little finger

P-9 (*zhongchong*) 'Middle Rushing' On the most distal point of the middle finger

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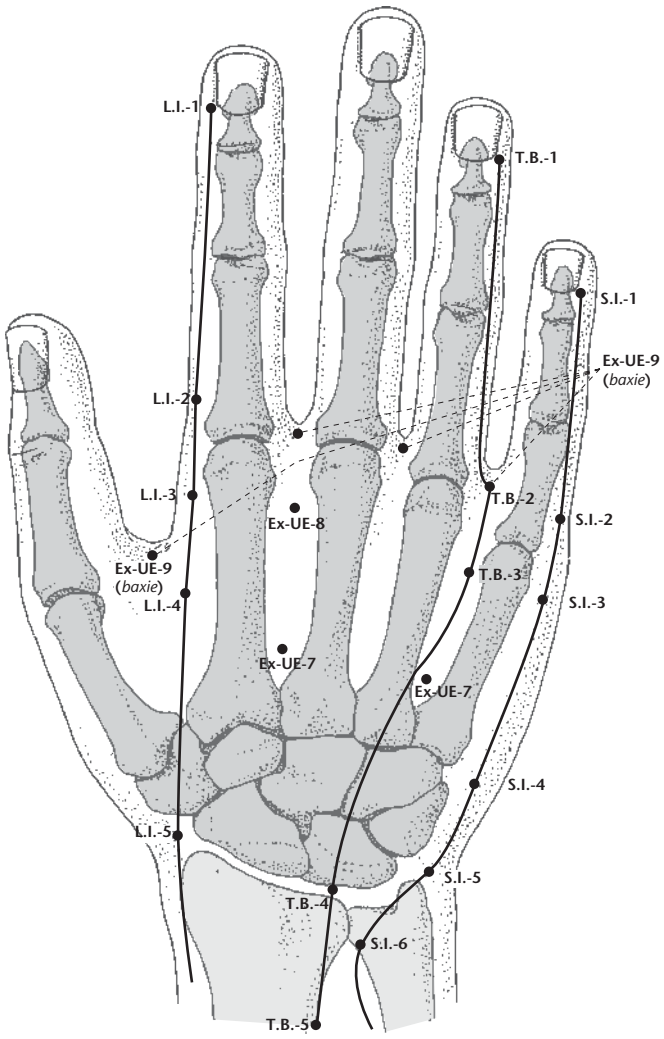
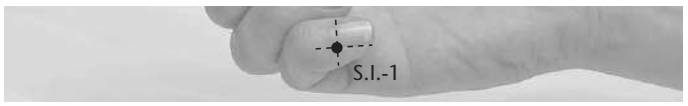
7.9 Dorsum of the Hand

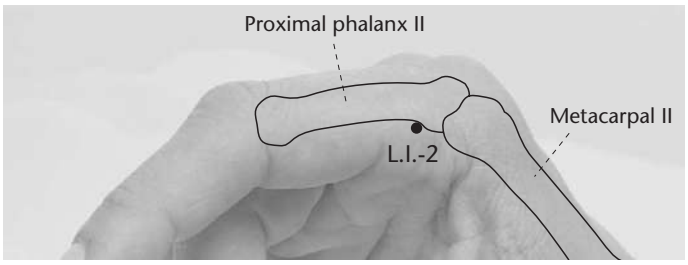


L.I.-1 (*shangyang*) 'Shang Yang' On the index finger, 0.1 cun from the radial corner of the nail

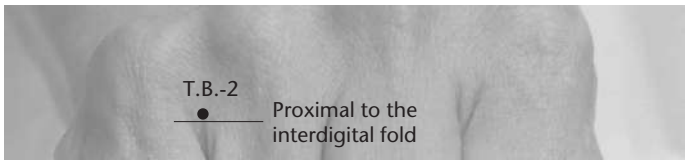
T.B.-1 (*guanchong*) 'Rushing Pass' On the ring finger (4th finger), 0.1 cun from the ulnar corner of the nail



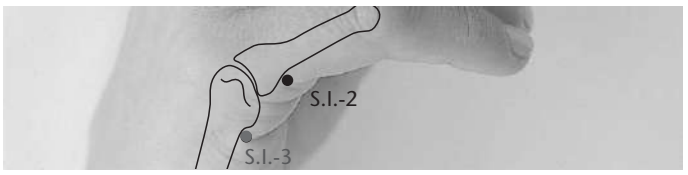
S.I.-1 (*shaoze*) 'Lesser Marsh' On the little finger, 0.1 cun from the ulnar corner of the nail



L.I.-2 (*erjian*) 'Second Space' On the radial aspect of the index finger, distal to the metacarpophalangeal joint at the junction of the shaft and the basis of the proximal phalanx



T.B.-2 (*yemen*) 'Fluid Gate' Between the little finger and ring finger, proximal to the margin of the web; locate with the patient making a fist



S.I.-2 (*qiangu*) 'Front Valley' On the ulnar aspect of the little finger, at the junction of the shaft and the base of the proximal phalanx

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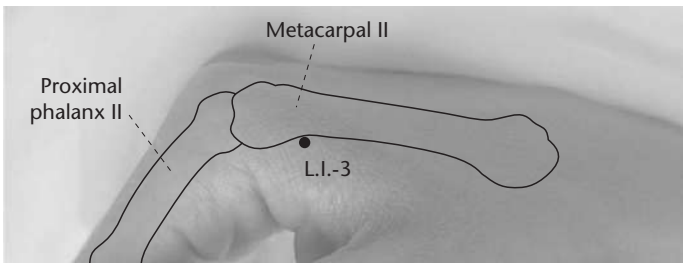
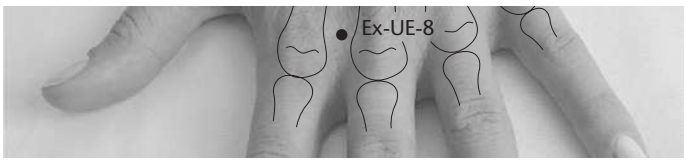
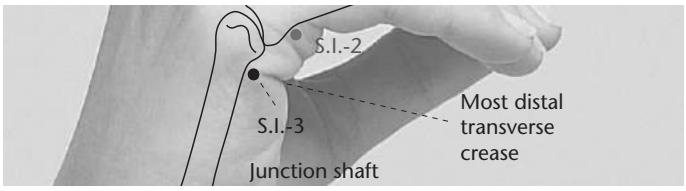


L.I.-3 (*sanjian*) 'Third Space' On the radial aspect of the index finger, proximal to the metacarpophalangeal joint at the junction of the shaft and the head of the 2nd metacarpal bone

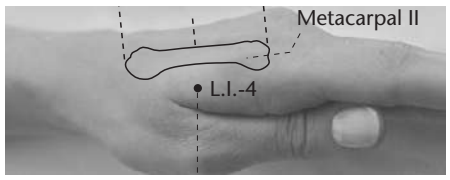


Ex-UE-8 (*wailaogong/luozhen/xianqiang*) 'Stiff Neck' On the dorsum of the hand, between the 2nd and 3rd metacarpal bones, approximately 0.5 cun proximal to the metacarpophalangeal joints

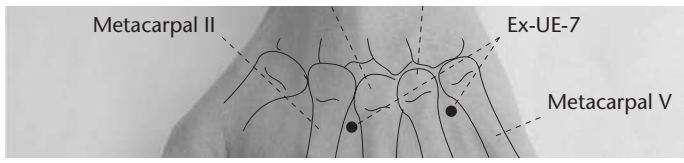
T.B.-3 (*zhongzhu*) 'Central Islet' On the dorsum of the hand, in the depression between the 4th and 5th metacarpal bones, proximal to the metacarpophalangeal joints. **T.B.-3** is located at the junction between the heads and shafts of the two metacarpals



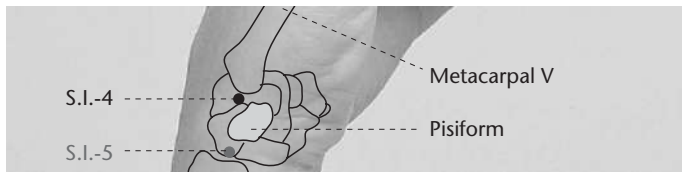
S.I.-3 (*houxi*) 'Back Stream' On the ulnar border of the hand, in the depression proximal to the metacarpophalangeal joint, at the junction between the head and shaft of the 5th metacarpal



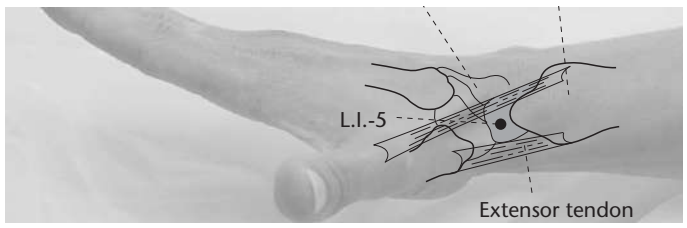
L.I.-4 (*hegu*) 'Joining Valley' On the radial aspect of the hand, between the 1st and 2nd metacarpal bone, closer to the 2nd metacarpal bone and approximately at its midpoint



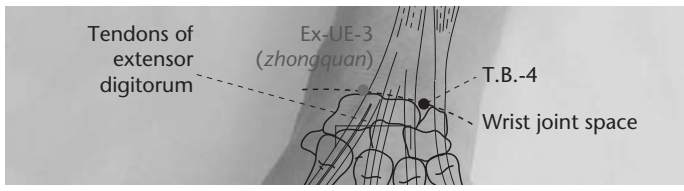
Ex-UE-7 (*yaotongdian/yaotongxue*) 'Lumbar Pair Point' Two points on the dorsum of the hand, between the 2nd/3rd and 4th/5th metacarpal bones



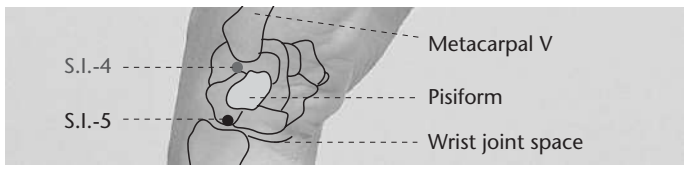
S.I.-4 (*wangu*) 'Wrist Bone' On the ulnar border of the hand, between the 5th metacarpal and the carpal bones, at the border of the red and white skin



L.I.-5 (*yangxi*) 'Yang Stream' With the thumb abducted in the depression between the tendons of the extensor pollicis longus and brevis muscles ('anatomical snuff box')



T.B.-4 (*yangchi*) 'Yang Pool' On the dorsum of the wrist, in the gap ulnar to the tendons of extensor digitorum



S.I.-5 (*yanggu*) 'Yang Valley' On the ulnar aspect of the wrist, at the level of the lateral joint space

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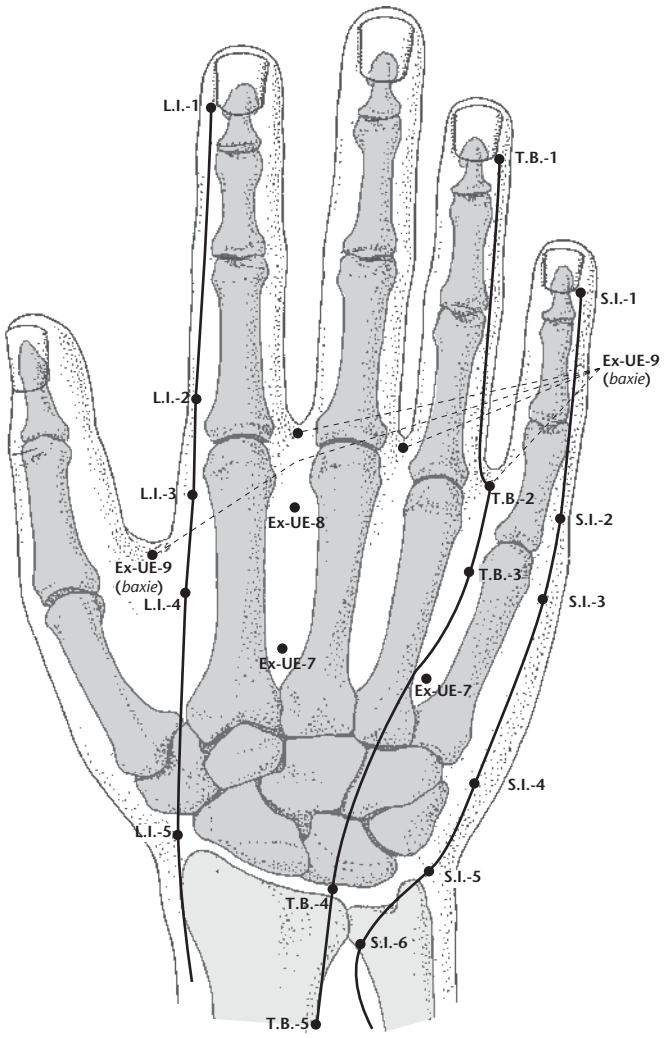
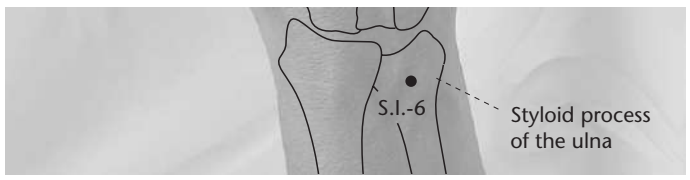
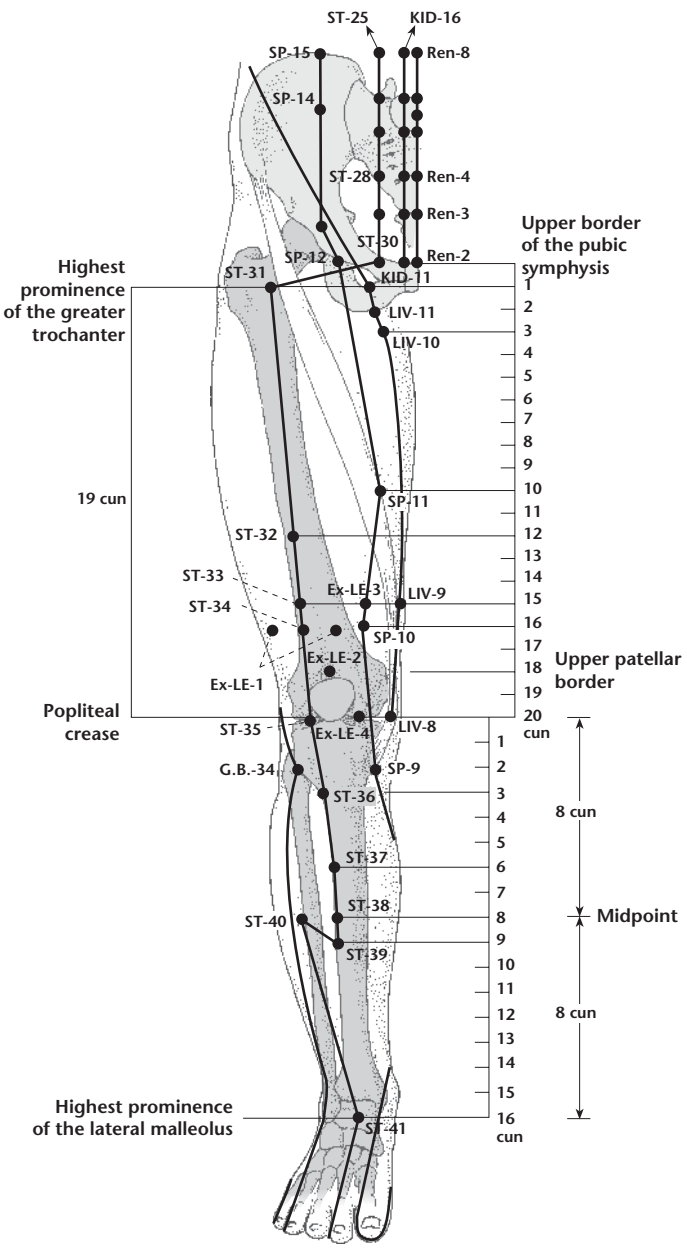


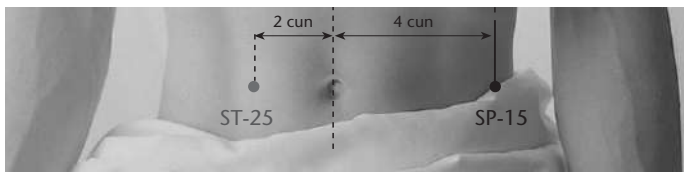


S.I.-6 (*yanglao*) 'Nourishing the Old' In the depression radial and proximal to the styloid process of the ulna that forms when the hand is turned from a pronated to a supinated position

T.B.-5 (*waiguan*) 'Outer Pass' 2 cun proximal to **T.B.-4** (on the dorsal wrist joint space, between radius and ulna)

7.10 Anterior Leg





SP-15 (*daheng*) 'Great Horizontal' 4 cun lateral to the centre of the umbilicus, on the mamillary line

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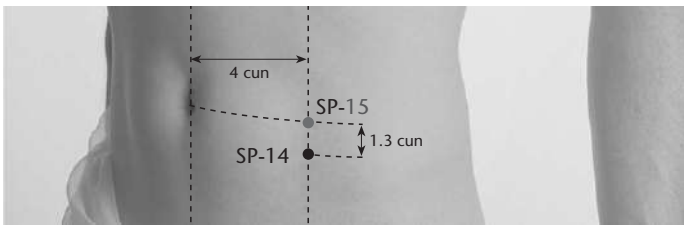
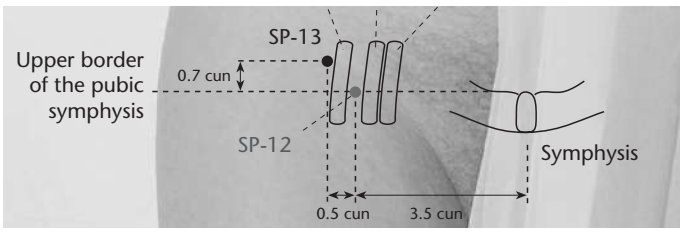
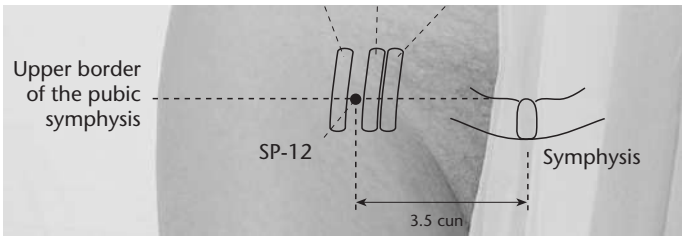


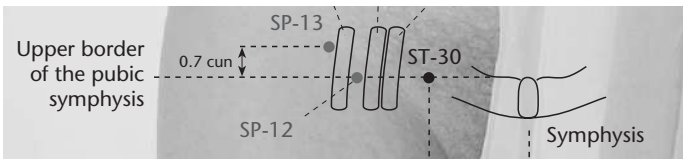
SP-14 (*fujie*) 'Abdomen Knot' 4 cun lateral to the anterior midline (mamillary line), 3 cun superior to **SP-13** or 1.3 cun inferior to **SP-15**



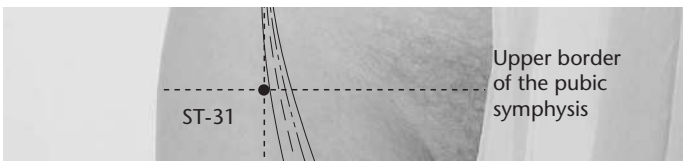
SP-13 (*fushe*) 'Meeting of the Fu Organs' 4 cun lateral to the anterior midline (mamillary line) and 0.7 cun superior to the upper border of the pubic symphysis



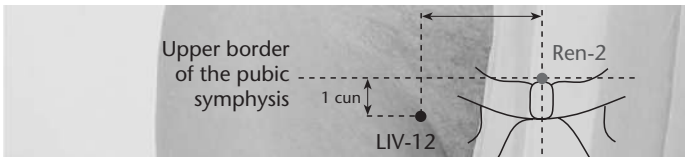
SP-12 (*chongmen*) 'Rushing Gate' 3.5 cun lateral to the midline, level with the upper border of the pubic symphysis, lateral to the femoral artery



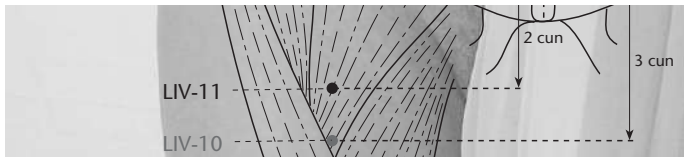
ST-30 (*qichong*) 'Rushing Qi' 2 cun lateral to the upper border of the pubic symphysis, medial to the femoral artery; at the level of **Ren-2**



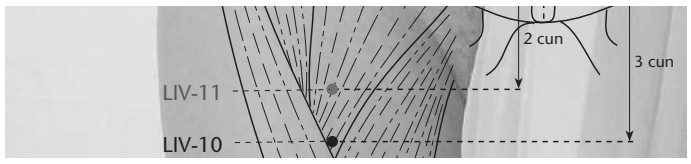
ST-31 (*biguan*) 'Thigh Gate' With the hip joint flexed, in the depression below the anterior superior iliac spine, lateral to the sartorius



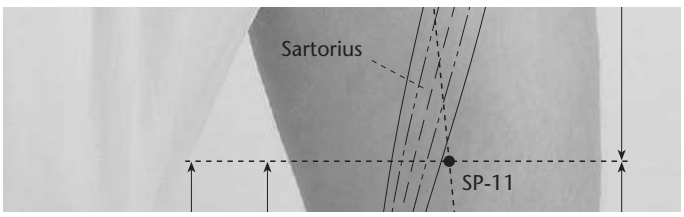
LIV-12 (*jimai*) 'Urgent Pulse' In the inguinal groove, 2.5 cun lateral to the midline and 1 cun inferior to the upper border of the symphysis, inferior to **ST-30** and medial to the femoral artery



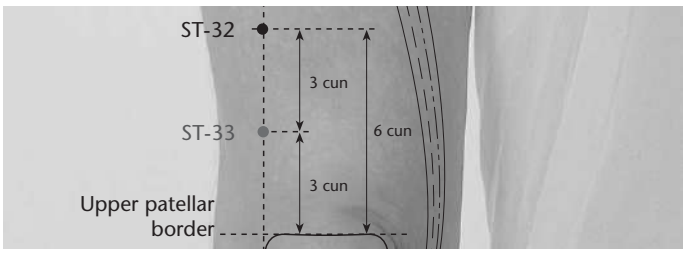
LIV-11 (*yinlian*) 'Yin Corner' 2 cun inferior to **ST-30** (level with the upper border of the pubic symphysis), on the lateral border of the adductor longus muscle or approximately 1 cun inferior to where the femoral artery passes the inguinal ligament



LIV-10 (*zuwuli*) 'Leg Five Miles' On the anterior aspect of the thigh, 3 cun inferior to the upper border of the symphysis, on the lateral border of adductor longus



SP-11 (*jimen*) 'Winnowing Gate' 6 cun proximal to **SP-10** at the midpoint of the femur, in the depression between the sartorius and vastus lateralis



ST-32 (*futu*) 'Crouching Rabbit' 6 cun proximal to the lateral upper border of the patella, on a line connecting with the anterior superior iliac spine

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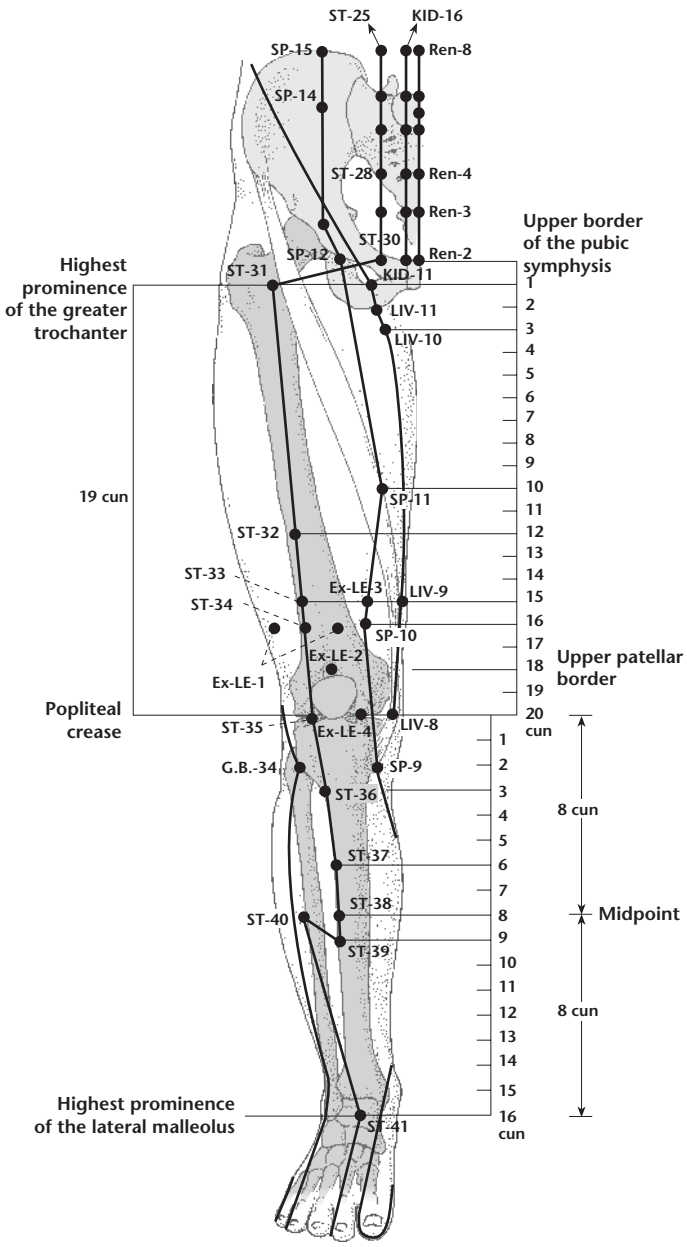
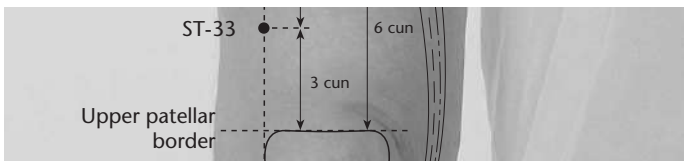
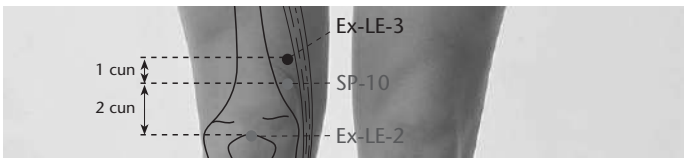
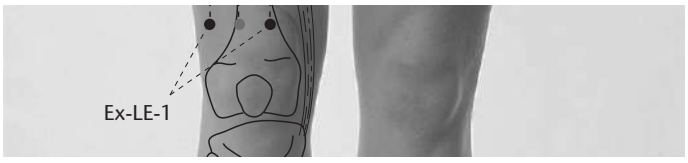




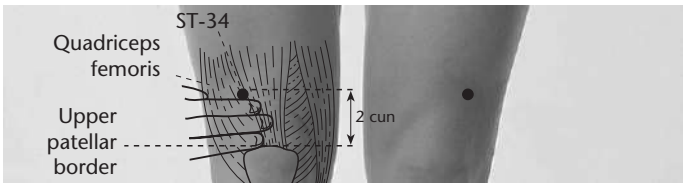
ST-33 (*yinshi*) 'Yin Market' 3 cun superior to the upper lateral border of the patella



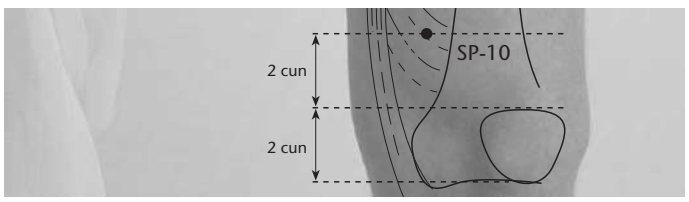
Ex-LE-3 (*baichongwo*) 'Hundred Insect Burrow' 3 cun superior and 1 cun medial to the upper medial border of the patella, in a small depression on the vastus medialis muscle or 1 cun superior to **SP-10**



Ex-LE-1 (*kuangu*) 'Hip Bone' A pair of points 2 cun superior to the patella and 1.5 cun lateral and medial to **ST-34**



ST-34 (*liangqiu*) 'Ridge Mound' 2 cun proximal to the upper lateral border of the patella, in a depression on vastus lateralis



SP-10 (*xuehai*) 'Sea of Blood' With the knee flexed, 2 cun proximal to the medial superior border of the patella. To find: place the right palm on the patient's left patella and locate the point at the tip of the thumb

Ex-LE-2 (*heding/xiding*) 'Crane's Summit' With the knee flexed, at the midpoint of the upper patellar border

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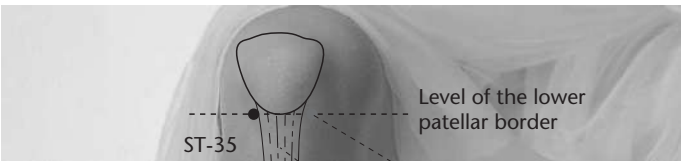
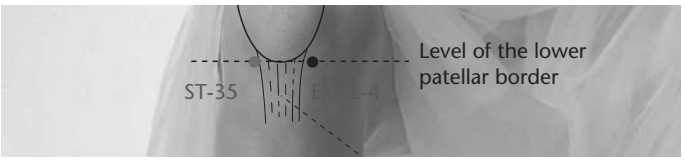
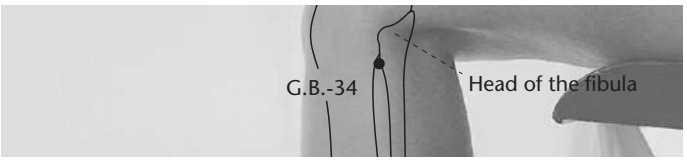


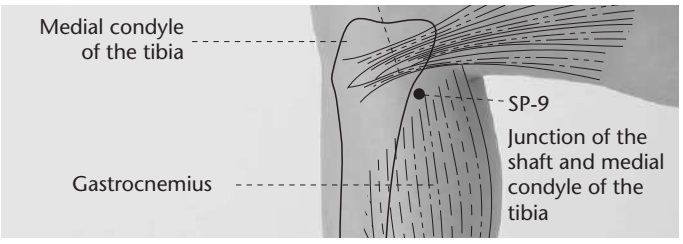
ST-35 (*dubi*) 'Calf's Nose' With the knee flexed, in the depression inferior to the patella and lateral to the patellar ligament; corresponds to the lateral eye of the knee; **Ex-LE-5** (*xiyan*) is the combination of this point and **Ex-LE-4**



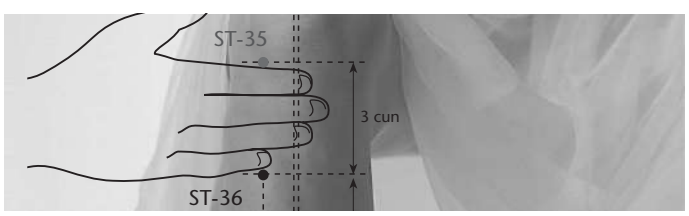
Ex-LE-4 (*neixiyan*) 'Inner Eye of the Knee' Inferior to the patella, in a depression medial to the patellar ligament; **Ex-LE-5** (*xiyan*) is the combination of this point and **ST-35**



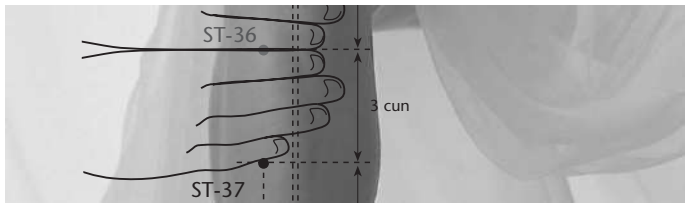
G.B.-34 (*yanglingquan*) 'Yang Mound Spring' In the depression anterior and inferior to the head of the fibula



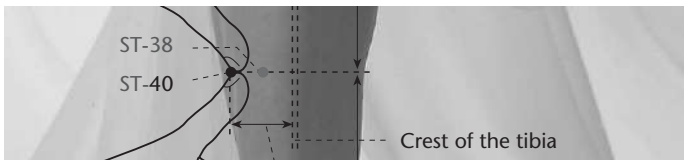
SP-9 (*yinlingquan*) 'Yin Mound Spring' With the knee flexed in a depression distal to the medial condyle of the tibia. To find: palpate from the medial posterior border of the tibia towards proximal, at roughly the same level as **G.B.-34**



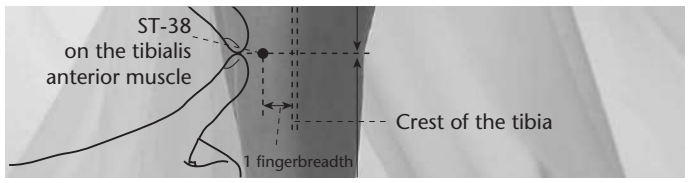
ST-36 (*zusanli*) 'Leg Three Miles' one fingerbreadth (middle finger) lateral to the anterior crest of the tibia, 3 cun distal to **ST-35**



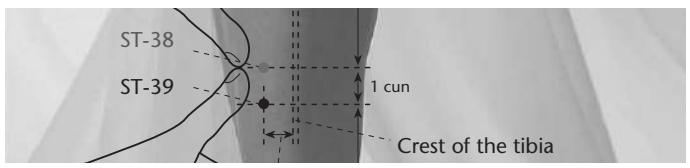
ST-37 (*shangjuxu*) 'Upper Great Void' 1 fingerbreadth lateral to the anterior crest of the tibia, 6 cun distal to **ST-35** or 3 cun distal to **ST-36**



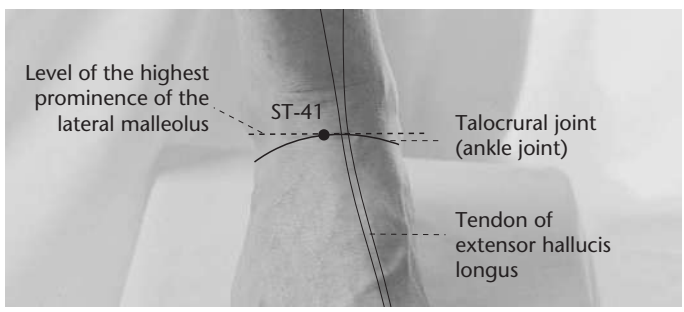
ST-40 (*fenglong*) 'Abundant Bulge' 2 fingerbreadths lateral to the anterior crest of the tibia, at the midpoint of the line joining **ST-35** ('lateral eye of the knee', level with the knee joint space) and the highest prominence of the lateral malleolus



ST-38 (*tiaokou*) 'Lines Opening' 1 fingerbreadth lateral to the anterior crest of the tibia, at the midpoint of the line joining **ST-35** ('lateral eye of the knee', level with the knee joint space) and the highest prominence of the lateral malleolus



ST-39 (*xiajuxu*) 'Lower Great Void' 1 cun distal to **ST-38**



ST-41 (*jiexi*) 'Stream Divide' On the ankle, between the tendons of the extensor digitorum and the extensor hallucis longus, at the level of the highest prominence of the lateral malleolus

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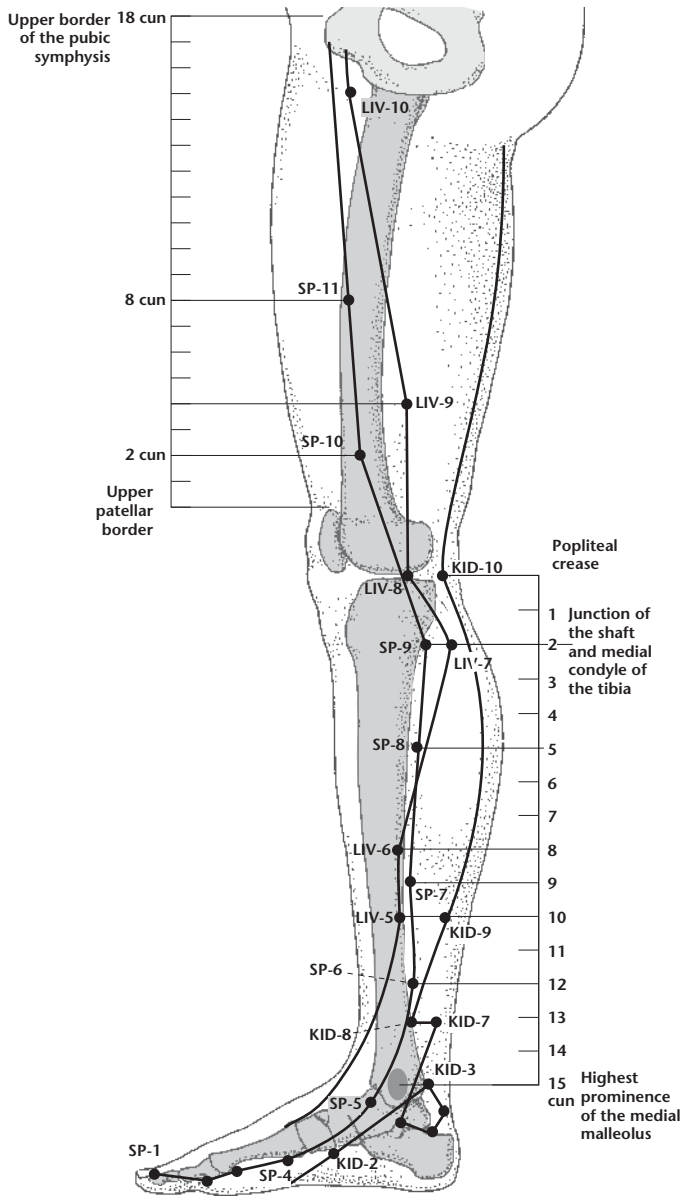
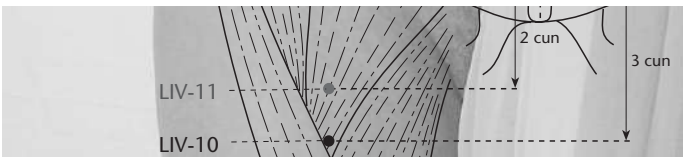
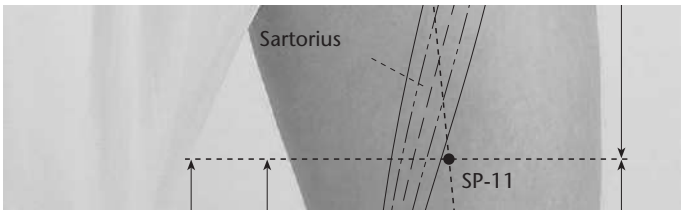
7.11 Medial Leg

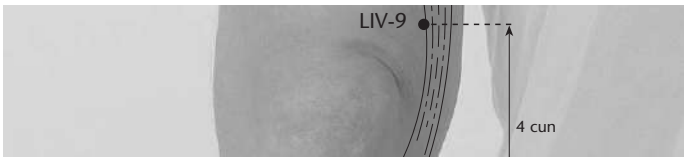




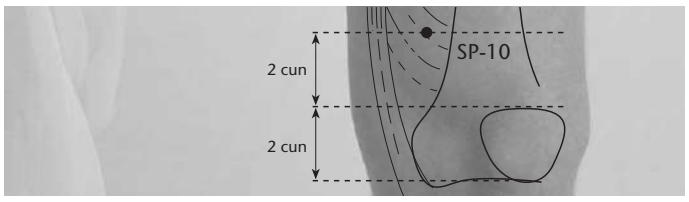
LIV-10 (*zuwuli*) 'Leg Five Miles' On the anterior aspect of the thigh, 3 cun inferior to the upper border of the symphysis, on the lateral border of the adductor longus



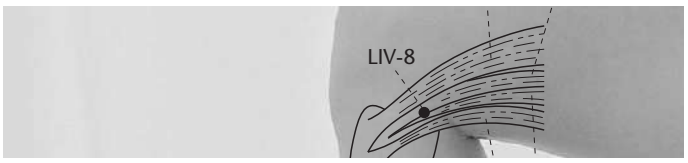
SP-11 (*jimen*) 'Winnowing Gate' 6 cun proximal to **SP-10** at the midpoint of the femur, in the depression between the sartorius and vastus lateralis



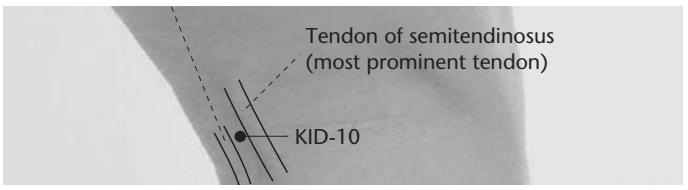
LIV-9 (*yinbao*) 'Yin Wrapping' 4 cun proximal to the medial condyle of the femur, between the sartorius and vastus medialis



SP-10 (*xuehai*) 'Sea of Blood' With the knee flexed, 2 cun proximal to the medial superior border of the patella. To find: place the right palm on the patient's left patella and locate the point at the tip of the thumb



LIV-8 (*ruquan*) 'Spring at the Crook' With the knee flexed, at the medial end of the popliteal crease, in the depression anterior to the tendons of semitendinosus and semimembranosus



KID-10 (*yingu*) 'Yin Valley' At the medial end of the popliteal crease, between the tendons of semimembranosus and semitendinosus, at the level of the knee joint space

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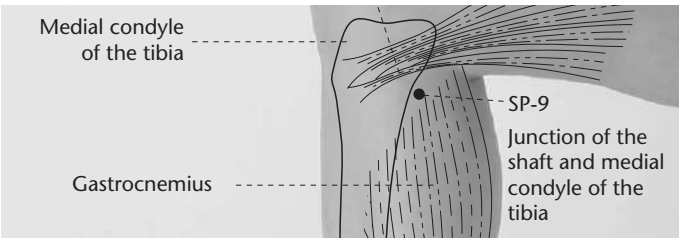
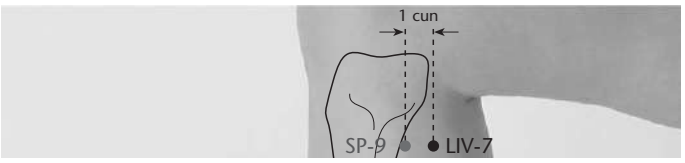
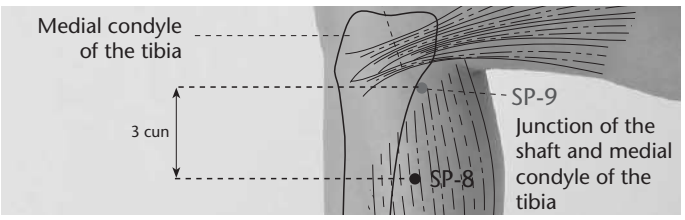


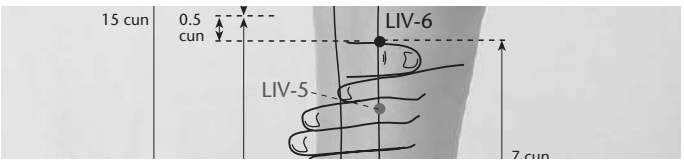
SP-9 (*yinlingquan*) 'Yin Mound Spring' With the knee flexed, in a depression distal to the medial condyle of the tibia. To find: palpate from the medial posterior border of the tibia towards proximal, at roughly the same level as **G.B.-34**



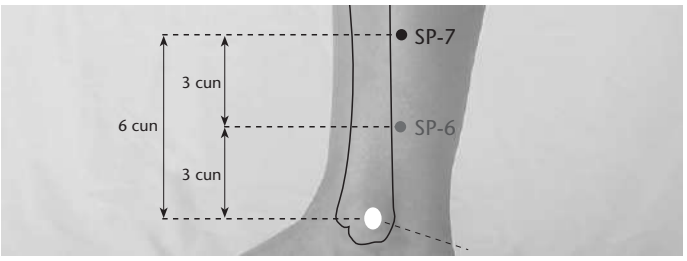
LIV-7 (*xiguan*) 'Knee Joint' At the junction of the shaft and the medial condyle of the tibia, 1 cun posterior to **SP-9**



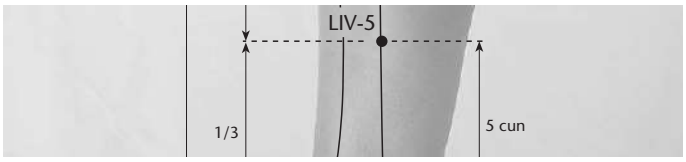
SP-8 (*diji*) 'Earth Pivot' 3 cun distal to **SP-9** (at the junction of the shaft and the medial condyle of the tibia) on the posterior border of the tibia



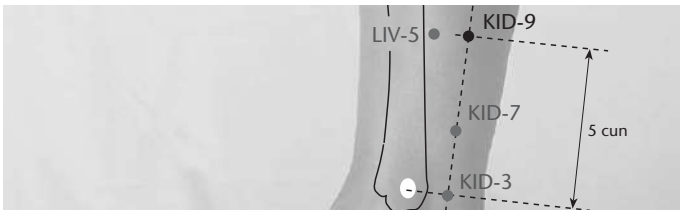
LIV-6 (*zhongdu*) 'Central Capital' 7 cun proximal to the highest prominence of the medial malleolus, just posterior to the medial crest of the tibia



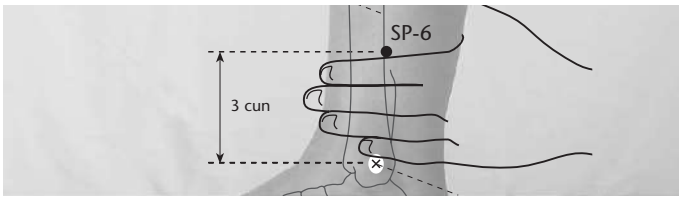
SP-7 (*lougu*) 'Dripping Valley' 6 cun proximal to the highest prominence of the medial malleolus or 3 cun proximal to **SP-6**, on the medial posterior border of the tibia



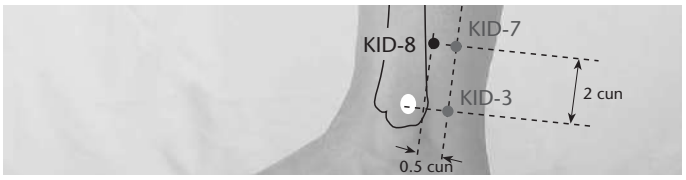
LIV-5 (*ligou*) 'Woodworm Canal' 5 cun proximal to the highest prominence of the medial malleolus, just posterior to the medial crest of the tibia



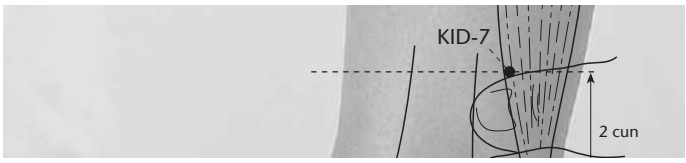
KID-9 (*zhubin*) 'Guest House' 5 cun proximal to KID-3 and 2 cun posterior to the medial border of the tibia



SP-6 (*sanyinjiao*) 'Three Yin Intersection' 3 cun proximal to the highest prominence of the medial malleolus, posterior border to the medial border of the tibia



KID-8 (*jiaoxin*) 'Exchange Belief' 2 cun proximal to the highest prominence of the medial malleolus, posterior to the medial border of the tibia



KID-7 (*fuliu*) 'Returning Current' 2 cun proximal to KID-3, in a depression on the anterior border of the Achilles tendon

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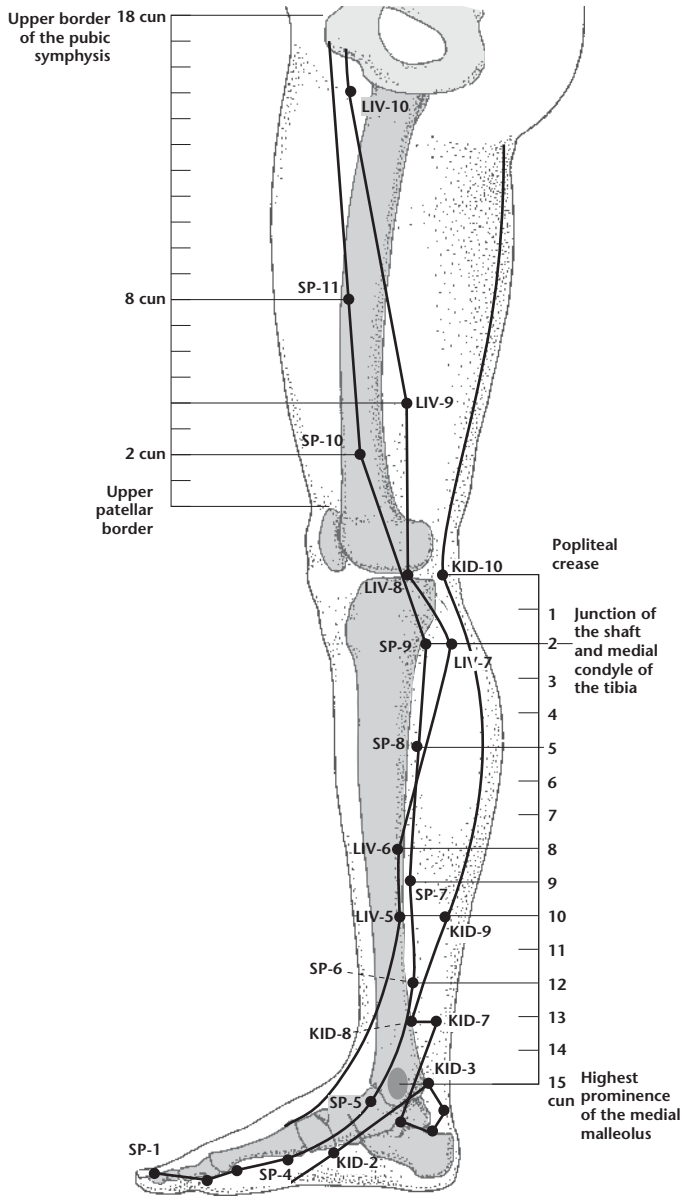
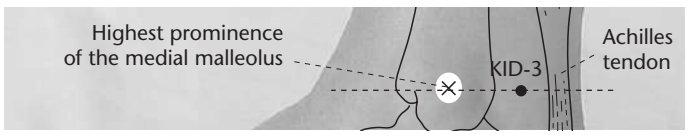
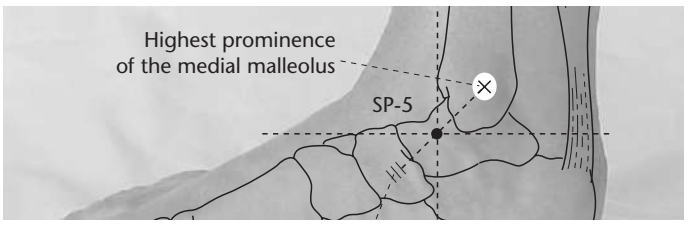
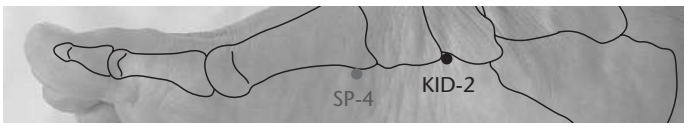




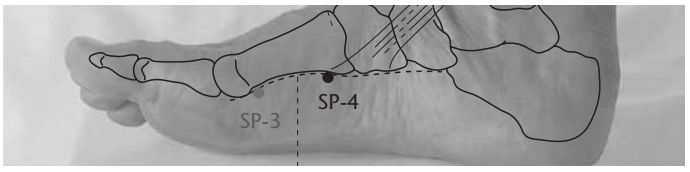
KID-3 (*taixi*) 'Supreme Stream' In the depression between the highest prominence of the medial malleolus and the Achilles tendon



SP-5 (*shangqiu*) 'Shang Mound' In the depression at the junction of a vertical line along the anterior border and a horizontal line along the lower border of the medial malleolus. Or: in the depression halfway between the highest prominence of the medial malleolus and the navicular tuberosity



KID-2 (*rangu*) 'Blazing Valley' In a depression at the anterior inferior border of the navicular bone, at the border of the red and white skin



SP-4 (*gongsun*) 'Grandfather Grandson' In a depression distal and inferior to the base of the 1st metatarsal bone, at the border of the red and white skin

SP-1 (*yinbai*) 'Hidden White' On the big toe, 0.1 cun from the medial corner of the nail

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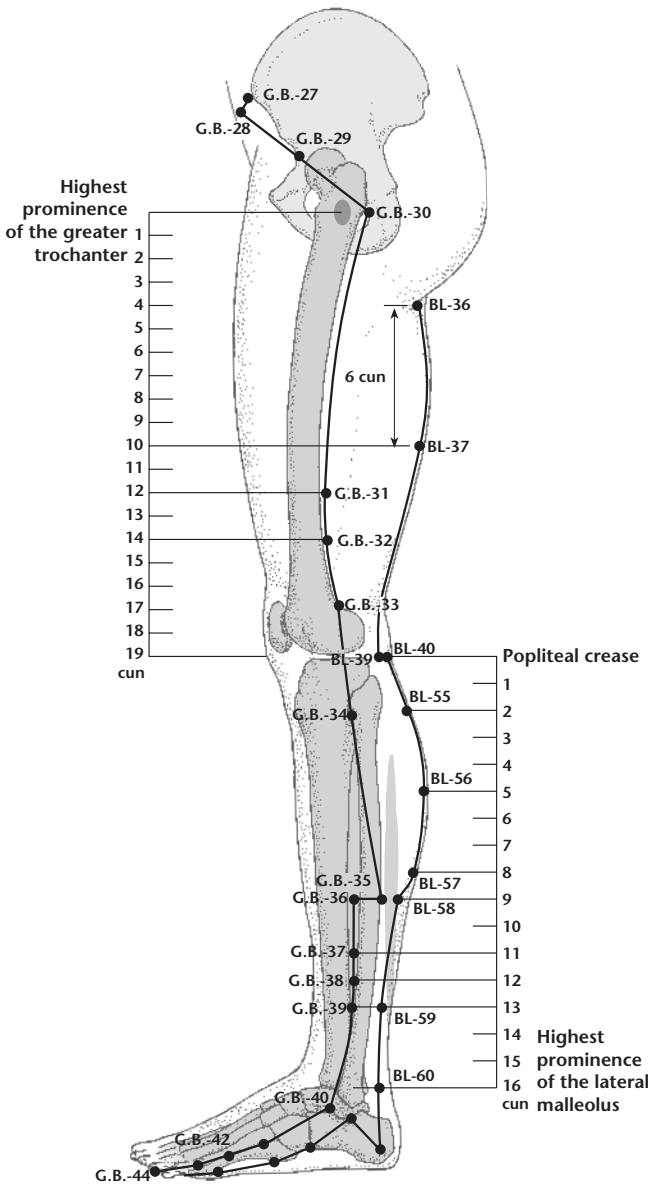
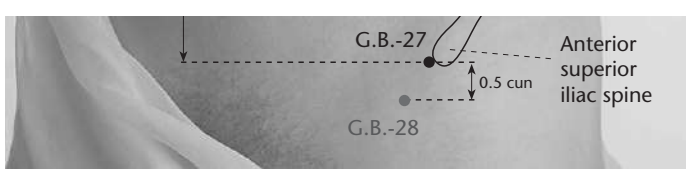
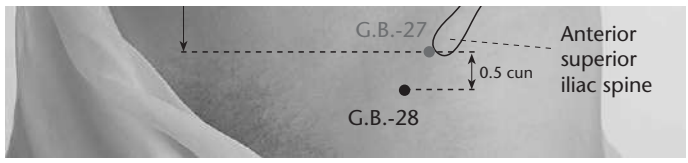
7.12 Lateral Leg

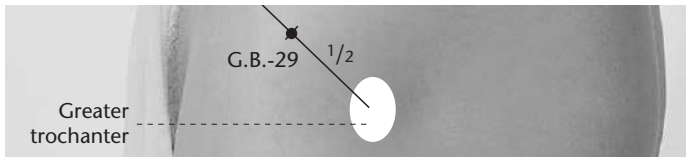




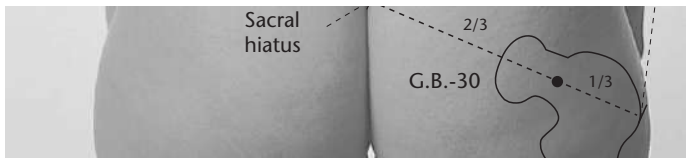
G.B.-27 (*wushu*) 'Five Pivots' In the depression medial to the anterior superior iliac spine, approximately level with **Ren-4**



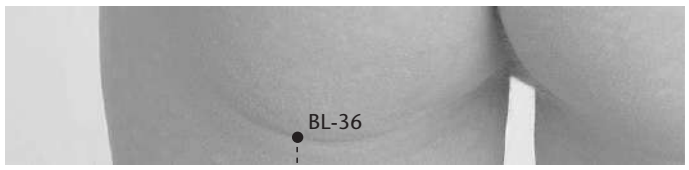
G.B.-28 (*weidao*) 'Linking Path' Anterior and inferior to the anterior superior iliac spine, 0.5 cun anterior and inferior to **G.B.-27**



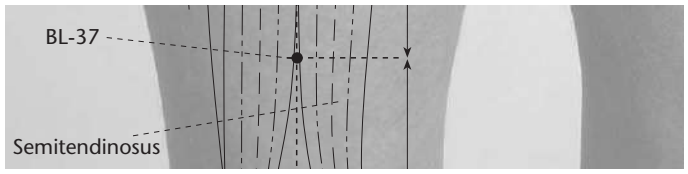
G.B.-29 (*juliao*) 'Stationary Crevice' At the midpoint of a line connecting the anterior superior iliac spine and the greater trochanter, at the anterior border of the iliac crest



G.B.-30 (*huantiao*) 'Jumping Circle' With the patient lying on his/her side, at the junction between the medial two-thirds and the lateral third on a line connecting the greater trochanter and the sacral hiatus



BL-36 (*chengfu*) 'Hold and Support' In the gluteal crease, superior to the midpoint of the popliteal crease



BL-37 (*yinmen*) 'Gate of Abundance' 6 cun distal to **BL-36** (gluteal crease), on a line connecting BL-36 and BL-40 (centre of the popliteal crease), in a gap in the musculature

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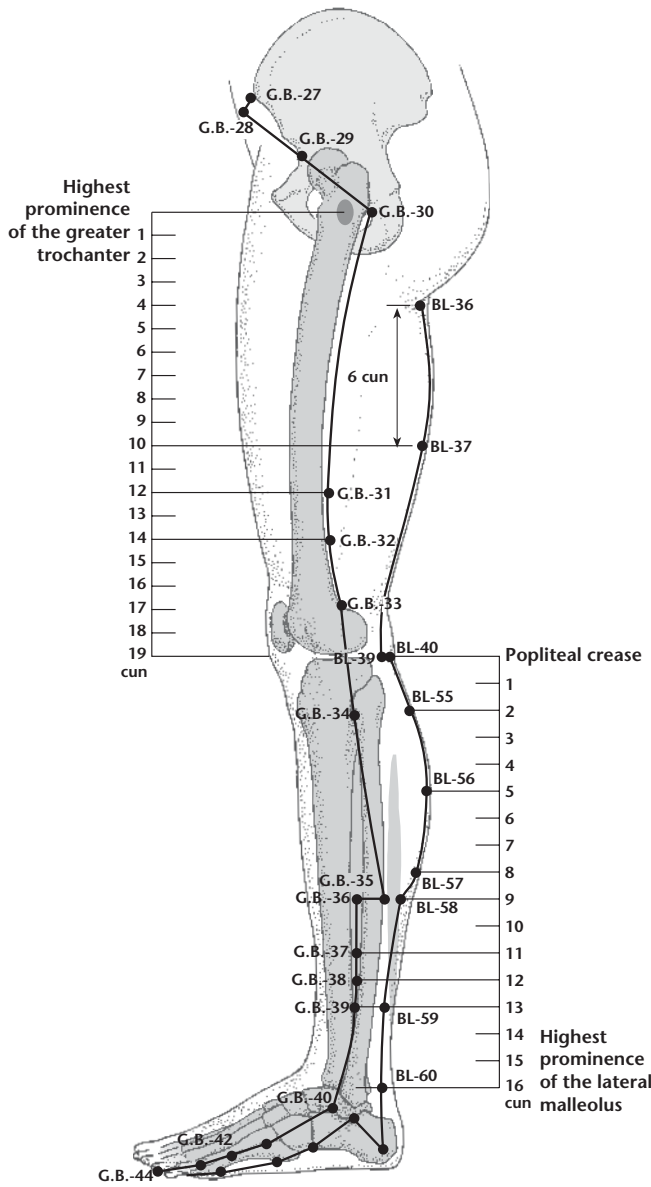
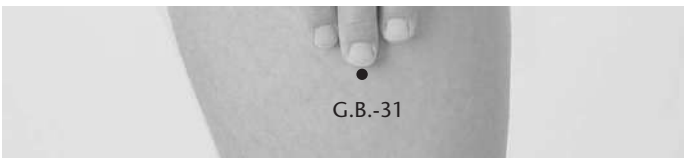
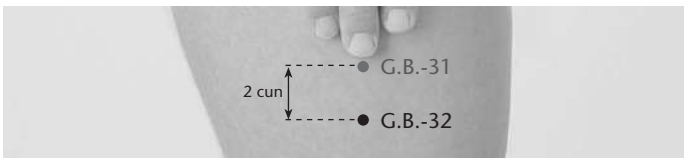
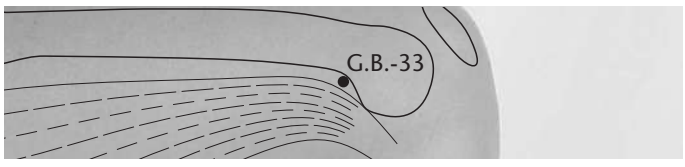




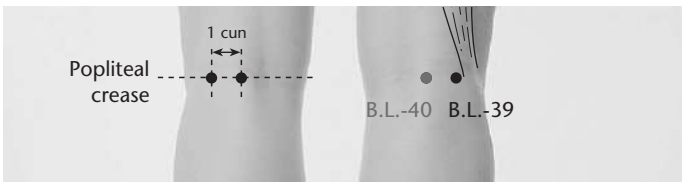
G.B.-31 (*fengshi*) 'Wind Market' On the lateral aspect of the thigh, approximately 7 cun proximal to the popliteal crease. With the patient standing upright, the point is where the patient's middle fingertip touches the thigh



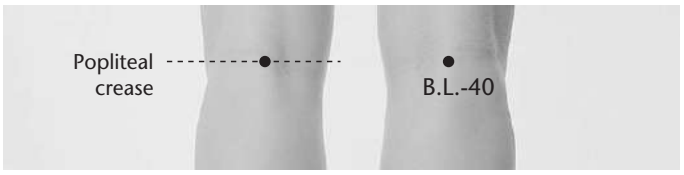
G.B.-32 (*zhongdu*) 'Middle Ditch' On the lateral aspect of the thigh, 2 cun inferior to **G.B.-31** or 5 cun superior to the popliteal crease, between vastus lateralis and biceps femoris



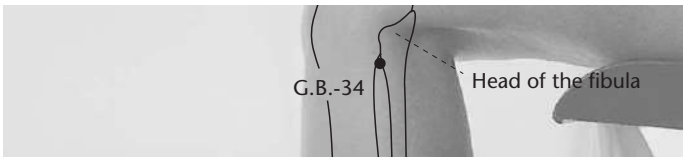
G.B.-33 (*xiyangguan*) 'Knee Yang Gate' On the lateral aspect of the knee, with the knee flexed, in the depression between the lateral epicondyle of the femur and the tendon of biceps femoris, approximately 3 cun proximal to **G.B.-34**



BL-39 (*weiyang*) 'Outside of the Crook' At the lateral end of the popliteal crease, on the medial side of the tendon of the long head of the biceps femoris, 1 cun lateral to **BL-40** (in the centre of the popliteal crease).



BL-40 (*weizhong*) 'Middle of the Crook' In the centre of the popliteal crease, between the tendons of the biceps femoris and semitendinosus.



G.B.-34 (*yanglingquan*) 'Yang Mound Spring' In the depression anterior and inferior to the head of the fibula

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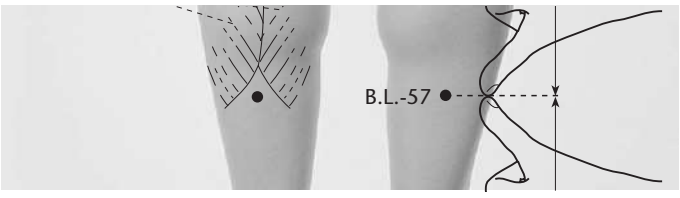
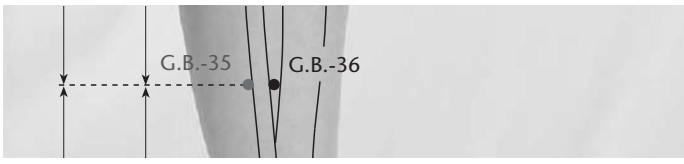
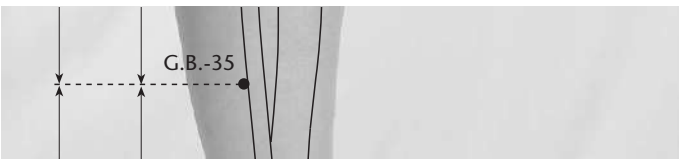


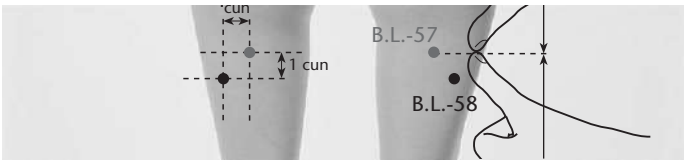
BL-57 (*chengshan*) 'Support of the Mountain' In the middle of the calf, between the two heads of the gastrocnemius, on a line connecting **BL-40** and **BL-60**, approximately 8 cun distal to **BL-40** (spreading hands technique → 2)



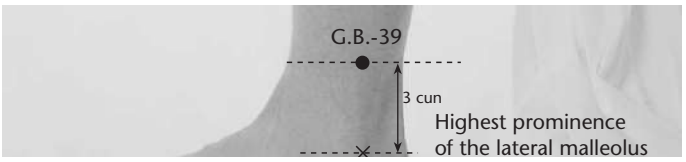
G.B.-36 (*waiqiu*) 'Outer Hill' 7 cun proximal to the highest prominence of the lateral malleolus, on the anterior border of the fibula



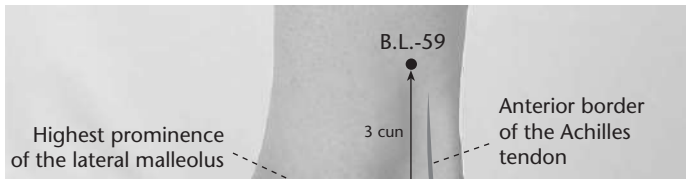
G.B.-35 (*yangjiao*) 'Yang Intersection' 7 cun proximal to the highest prominence of the lateral malleolus, on the posterior border of the fibula



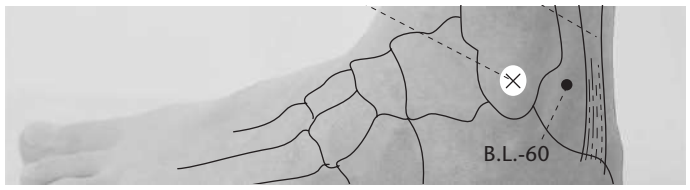
BL-58 (*feiyang*) 'Soaring Upwards' 1 cun distal and 1 cun lateral to **BL-57** or 7 cun proximal to **BL-60**, at the posterior border of the fibula and on the lower border of the gastrocnemius



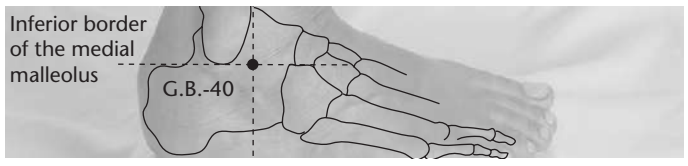
G.B.-39 (*xuanzhong*) 'Suspended Bell' 3 cun proximal to the highest prominence of the lateral malleolus, on the anterior border of the fibula



BL-59 (*fuyang*) 'Instep Yang' 3 cun superior to **BL-60** (in the depression between the highest prominence of the lateral malleolus and the Achilles tendon)



BL-60 (*kunlun*) 'Kunlun Mountains' In the depression between the Achilles tendon and the highest prominence of the lateral malleolus



G.B.-40 (*qiuxu*) 'Large Mound' In the depression anterior and inferior to the lateral malleolus, lateral to the tendons of the extensor digitorum longus muscle.

G.B.-42 (*diwuhui*) 'Earth Five Meetings' Between the 4th and 5th metatarsal bones, proximal to the metatarsophalangeal joints and medial to the tendon of extensor digitorum longus

G.B.-43 (*jiaxi/xiaxi*) 'Clamped Stream' Between the 4th and the 5th toes, proximal to the margin of the interdigital web

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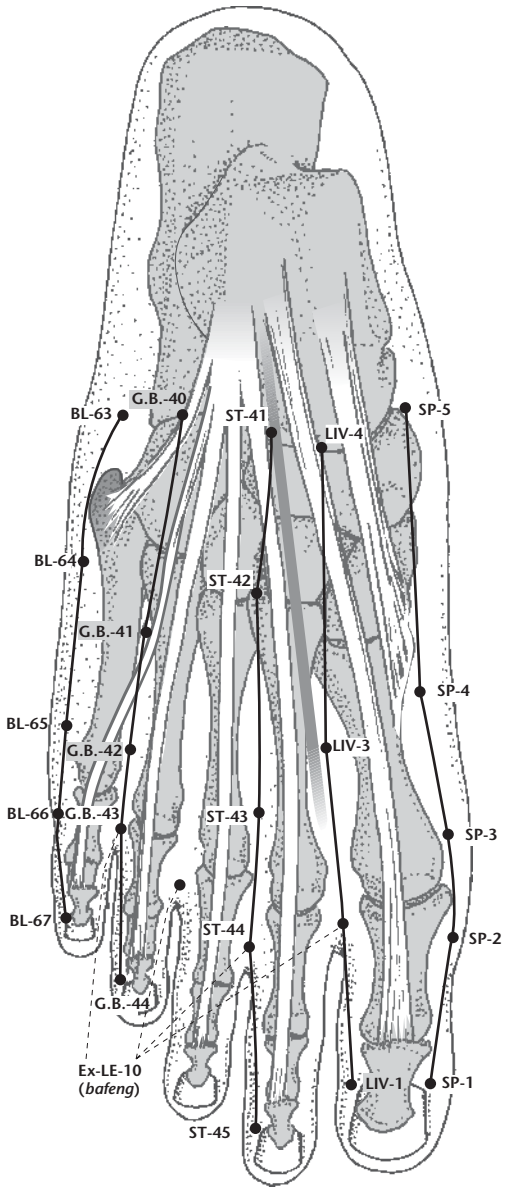
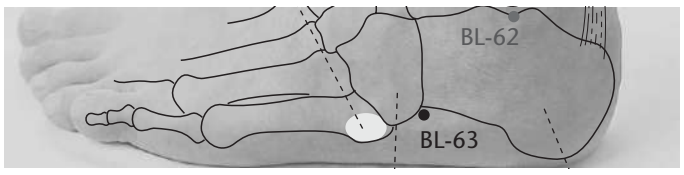
G.B.-44 (*zuqiaoyin*) 'Yin Portals of the Foot' On the 4th toe, 0.1 cun from the lateral corner of the nail

7.13 Dorsum of the Foot





BL-63 (*jinmen*) 'Golden Gate' In a depression anterior and inferior to **BL-62** between the calcaneus and the cuboid bone, proximal to the tuberosity of the 5th metatarsal bone

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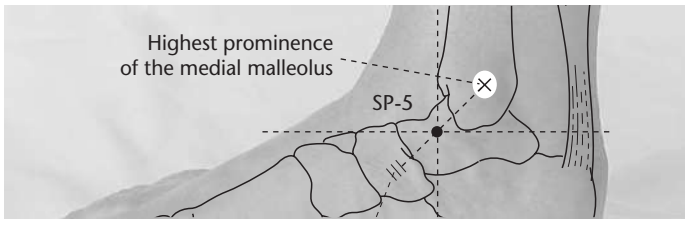
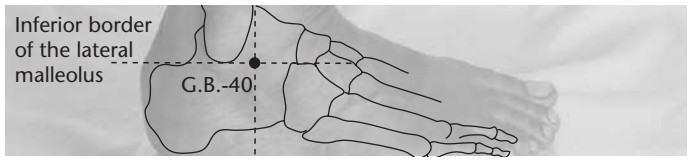
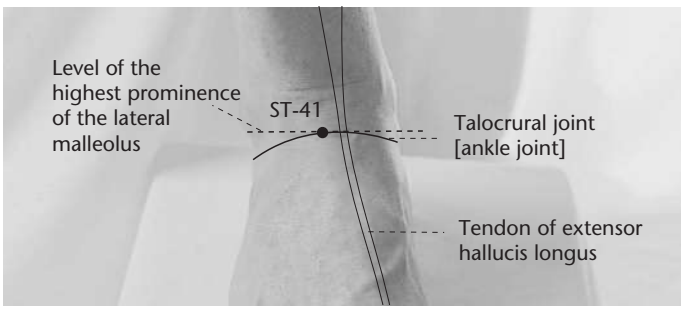


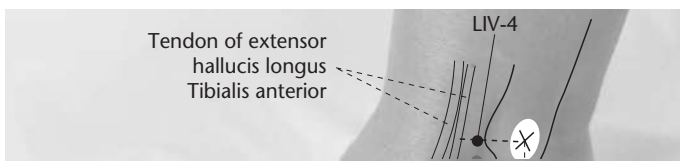
SP-5 (*shangqiu*) 'Shang Mound' In the depression at the junction of a vertical line along the anterior border and a horizontal line along the lower border of the medial malleolus. Or: in the depression halfway between the highest prominence of the medial malleolus and the navicular tuberosity



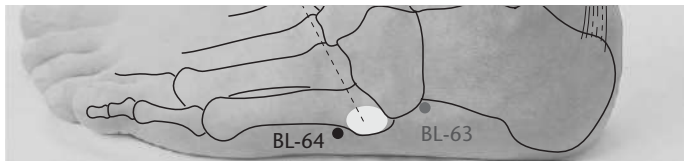
G.B.-40 (*qiuxu*) 'Large Mound' In the depression anterior and inferior to the lateral malleolus, lateral to the tendons of extensor digitorum longus muscle.



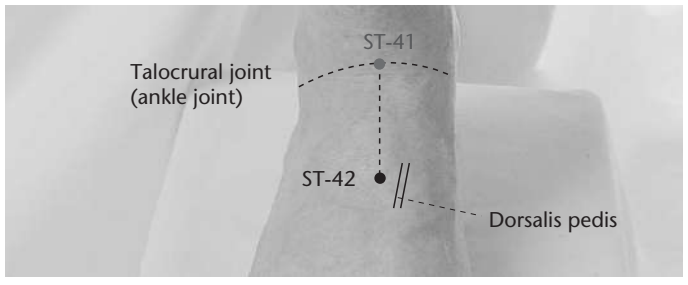
ST-41 (*jiexi*) 'Stream Divide' On the ankle, between the tendons of extensor digitorum and extensor hallucis longus, at the level of the highest prominence of the lateral malleolus



LIV-4 (*zhongfeng*) 'Middle Seal' 1 cun anterior to the prominence of the medial malleolus, medial to the tendon of the tibialis anterior

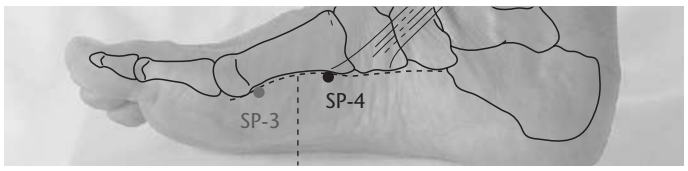


BL-64 (*jinggu*) 'Capital Bone' Distal to the tuberosity of the 5th metatarsal bone, at the border of the red and white skin



ST-42 (*chongyang*) 'Rushing Yang' On the highest point of the dorsum of the foot, between the tendons of extensor hallucis longus and extensor digitorum longus, directly lateral to where the dorsalis pedis artery may be palpated. The point is bordered proximally by the second and third metatarsal bones and distally by the second and third cuneiform bones. **Alternative location:** sometimes this point may be located lateral to the medial portion of the extensor digitorum longus tendon (joining the second toe)

G.B.-41 (*zulinqi*) 'Foot Governor of Tears' In the depression at the junction of the shafts and the bases of the 4th and 5th metatarsal bones, lateral to the branch of the extensor digitorum longus tendon running to the little toe



SP-4 (*gongsun*) 'Grandfather Grandson' In a depression distal and inferior to the base of the 1st metatarsal bone, at the border of the red and white skin

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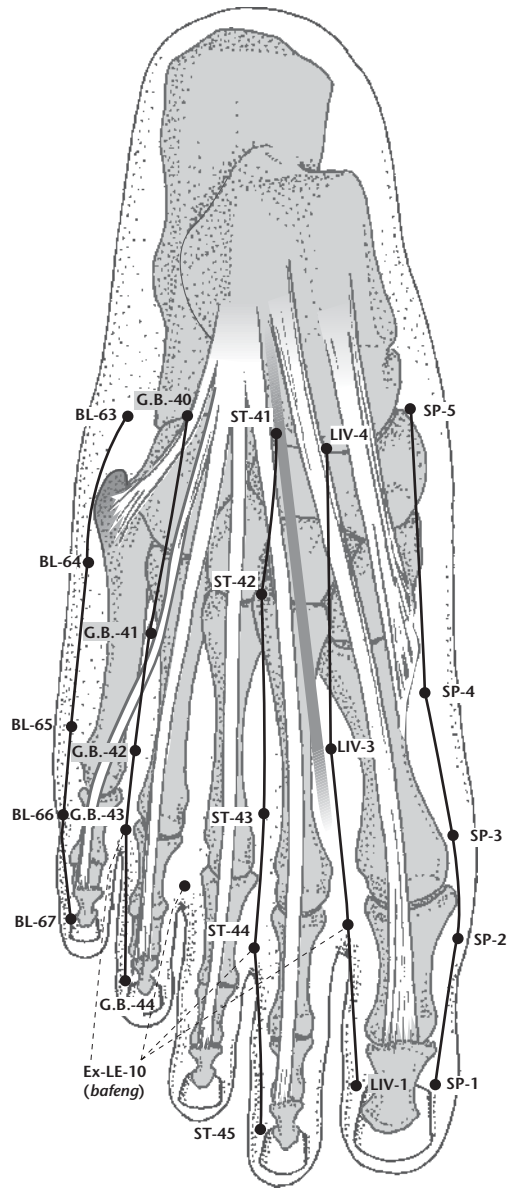
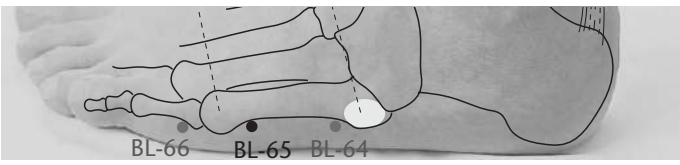
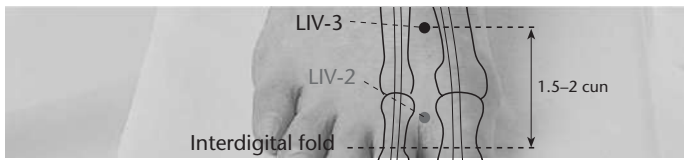


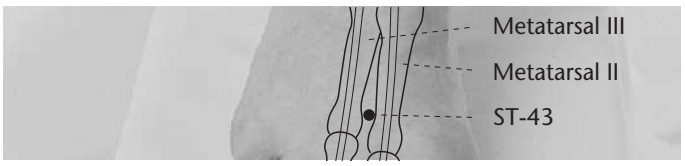


BL-65 (*shugu*) 'Restraining Bone' In the depression proximal to the head of the 5th metatarsal bone, at the border of the red and white skin

G.B.-42 (*diwuhui*) 'Earth Five Meetings' Between the 4th and 5th metatarsal bones, proximal to the metatarsophalangeal joints and medial to the tendon of the extensor digitorum longus

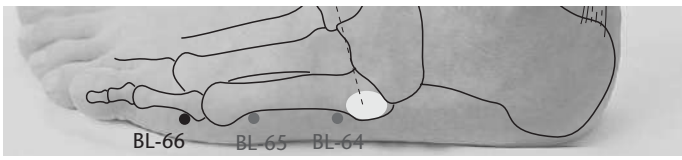


LIV-3 (*taichong*) 'Great Rushing' On the dorsum of the foot, in the depression between the 1st and 2nd metatarsal bones, approximately 1.5–2 cun proximal to the interdigital web



ST-43 (*xiangu*) 'Sunken Valley' In the depression between the second and third metatarsal bones, at the junction of the shafts and the heads of these metatarsal bones

G.B.-43 (*xiaxi*) 'Clamped Stream' Between the 4th and the 5th toes, proximal to the margin of the interdigital web



BL-66 (*zutonggu*) 'Foot Connecting Valley' In a depression distal to the metatarsophalangeal joint of the little toe

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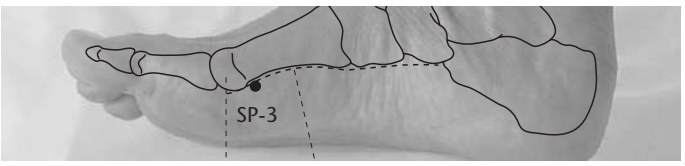
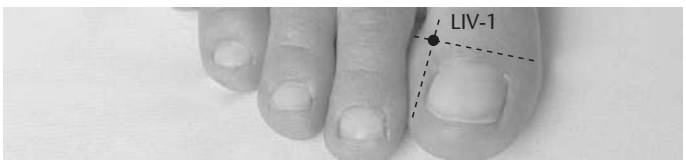


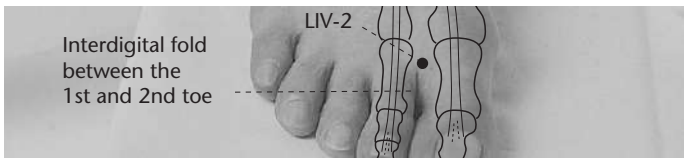
SP-3 (*taibai*) 'Supreme White' In the depression proximal to the head of the 1st metatarsal bone, at the border of the red and white skin

G.B.-44 (*zuqiaoyin*) 'Yin Portals of the Foot' On the 4th toe, 0.1 cun from the lateral corner of the nail

BL-67 (*zhiyin*) 'Reaching Yin' On the little toe, 0.1 cun from the lateral corner of the nail

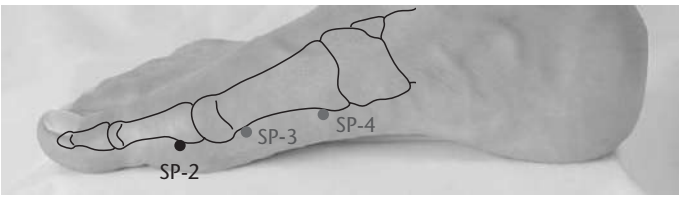


LIV-1 (*dadun*) 'Big Mound' On the lateral aspect of the big toe, 0.1 cun proximal and lateral to the corner of the nail

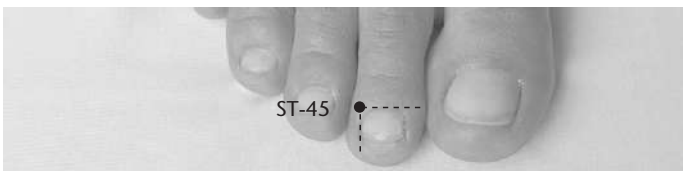


LIV-2 (*xingjian*) 'Moving Between' Between the 1st and 2nd toe, proximal to the margin of the interdigital web

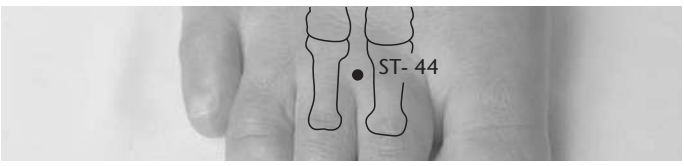
SP-1 (*yinbai*) 'Hidden White' On the big toe, 0.1 cun from the medial corner of the nail



SP-2 (*dadu*) 'Great Metropolis' On the medial aspect of the big toe, in the depression distal to the first metatarsophalangeal joint, on the border of the red and white skin



ST-45 (*lidui*) 'Strict Exchange' On the 2nd toe, 0.1 cun from the lateral corner of the nail



ST-44 (*neiting*) 'Inner Court' Between the 2nd and the 3rd toe, proximal to the interdigital fold

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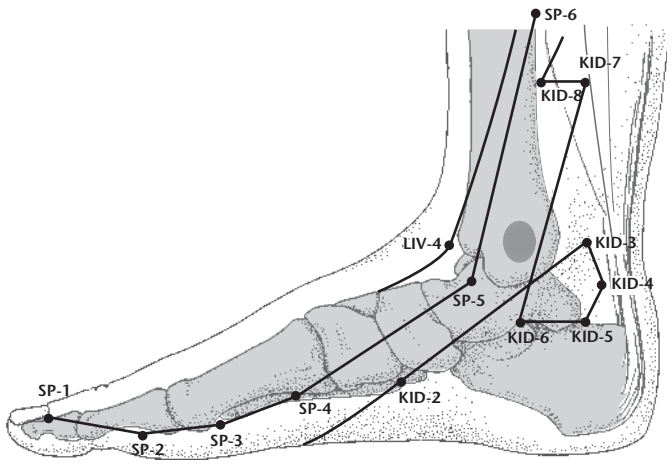
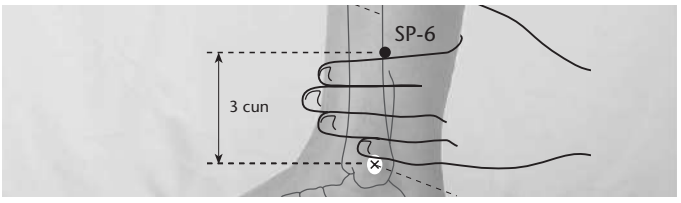
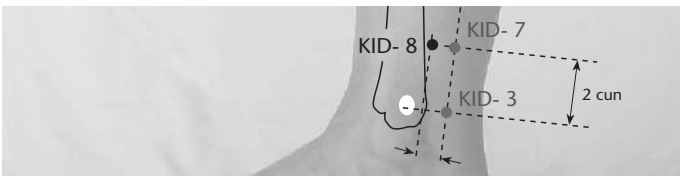
7.14 Medial Foot

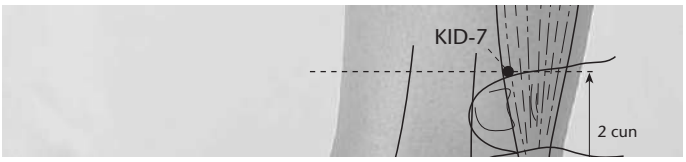




SP-6 (*sanyinjiao*) 'Three Yin Intersection' 3 cun proximal to the highest prominence of the medial malleolus, on the posterior border of the medial crest of the tibia

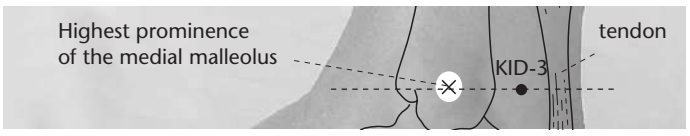


KID-8 (*jiaoxin*) 'Exchange Belief' 2 cun proximal to the highest prominence of the medial malleolus, posterior to the medial border of the tibia.

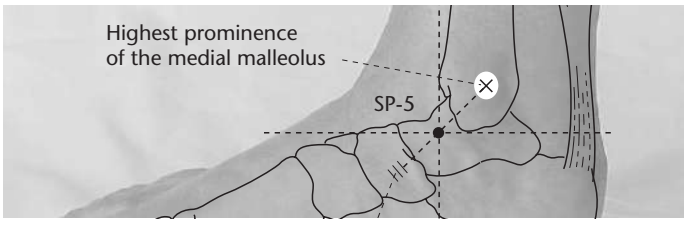


KID-7 (*fuliu*) 'Returning Current' 2 cun proximal to **KID-3**, in a depression on the anterior border of the Achilles tendon

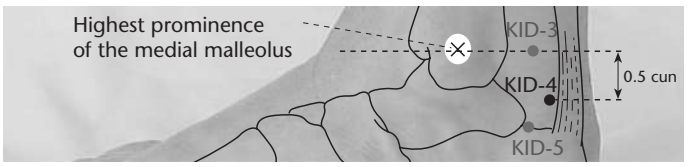
LIV-4 (*zhongfeng*) 'Middle Seal' 1 cun anterior to the prominence of the medial malleolus, medial to the tendon of tibialis anterior



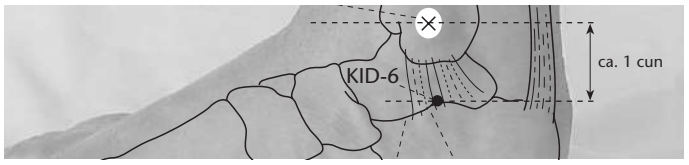
KID-3 (*taixi*) 'Supreme Stream' In the depression between the highest prominence of the medial malleolus and the Achilles tendon



SP-5 (*shangqiu*) 'Shang Mound' In the depression at the junction of a vertical line along the anterior border and a horizontal line along the lower border of the medial malleolus. Or: in the depression halfway between the highest prominence of the medial malleolus and the navicular tuberosity



KID-4 (*dazhong*) 'Great Bell' Anterior to the medial border of the Achilles tendon, superior to its insertion at the calcaneus



KID-6 (*zhaohai*) 'Shining Sea' In the depression inferior to the highest prominence of the medial malleolus, over the joint space between the talus and the calcaneus

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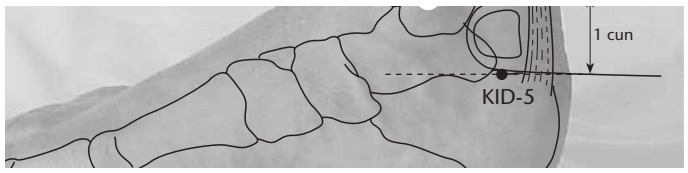
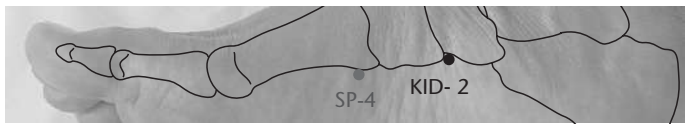
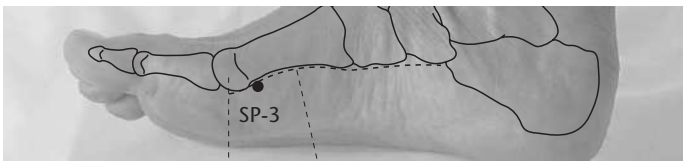


KID-5 (*shuiquan*) 'Water Spring' 1 cun distal to **KID-3**, in a depression over the joint space between the talus and calcaneus

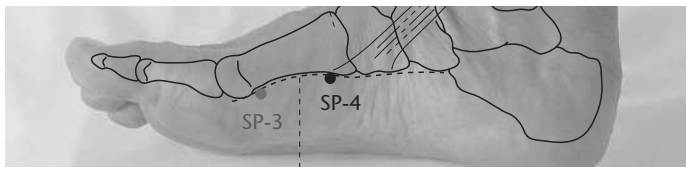
SP-1 (*yinbai*) 'Hidden White' On the big toe, 0.1 cun from the medial corner of the nail



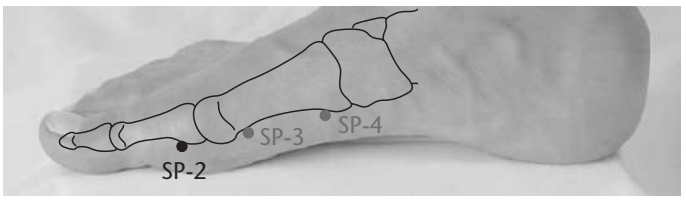
KID-2 (*rangu*) 'Blazing Valley' In a depression at the anterior inferior border of the navicular bone, at the border of the red and white skin



SP-3 (*taibai*) 'Supreme White' In the depression proximal to the head of the 1st metatarsal bone, at the border of the red and white skin



SP-4 (*gongsun*) 'Grandfather Grandson' In a depression distal and inferior to the base of the 1st metatarsal bone, at the border of the red and white skin



SP-2 (*dadu*) 'Great Metropolis' On the medial aspect of the big toe, in the depression distal to the first metatarsophalangeal joint, on the border of the red and white skin

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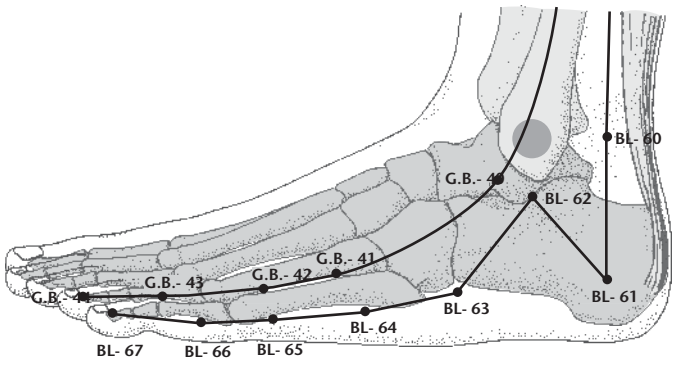
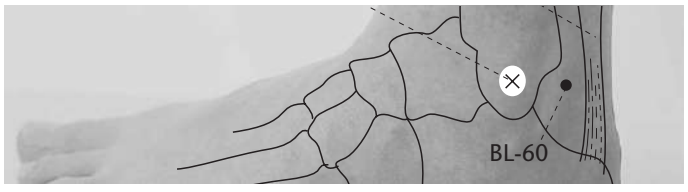
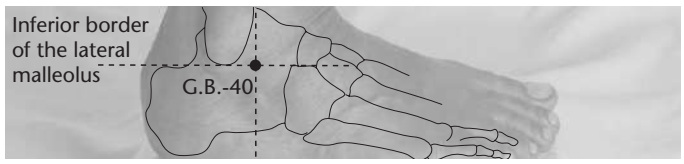
7.15 Lateral Foot

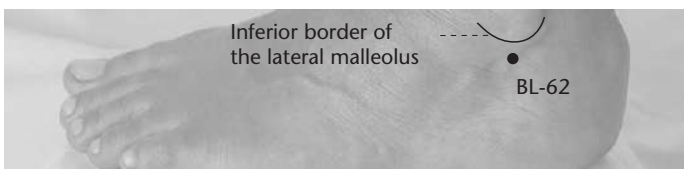




BL-60 (*kunlun*) 'Kunlun Mountains' In the depression between the Achilles tendon and the highest prominence of the lateral malleolus



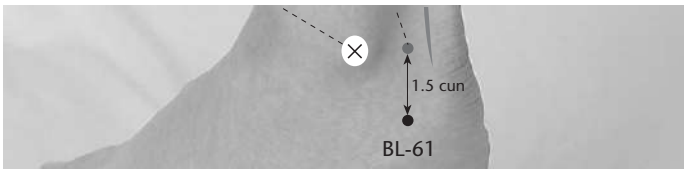
G.B.-40 (*qiuxu*) 'Large Mound' In the depression anterior and inferior to the medical malleolus, lateral to the tendons of extensor digitorum longus muscle.



BL-62 (*shenmai*) 'Extending Vessel' In a depression directly inferior to the highest prominence of the lateral malleolus, over the joint space between the talus and calcaneus

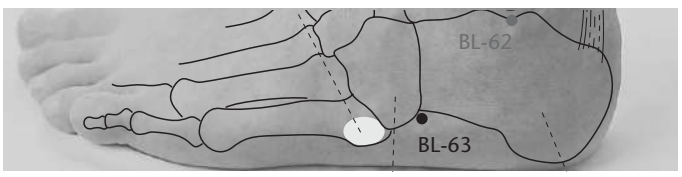
G.B.-41 (*zulinqi*) 'Foot Governor of Tears' In the depression at the junction of the shafts and the bases of the 4th and 5th metatarsal bones, lateral to the branch of the extensor digitorum longus tendon running to the little toe

G.B.-42 (*diwuhui*) 'Earth Five Meetings' Between the 4th and 5th metatarsal bones, proximal to the metatarsophalangeal joints and medial to the tendon of extensor digitorum longus



BL-61 (*pucan*) 'Servant's Respect' In a depression on the calcaneus, approximately 1.5 cun inferior to **BL-60**

G.B.-43 (*xiaxi*) 'Clamped Stream' Between the 4th and the 5th toes, proximal to the margin of the interdigital web



BL-63 (*jinmen*) 'Golden Gate' On the lateral aspect of the foot, proximal to the tuberosity of the 5th metatarsal bone, in a depression anterior and inferior to **BL-62** between the calcaneus and the cuboid bone

G.B.-44 (*zuqiaoyin*) 'Yin Portals of the Foot' On the 4th toe, 0.1 cun from the lateral corner of the nail

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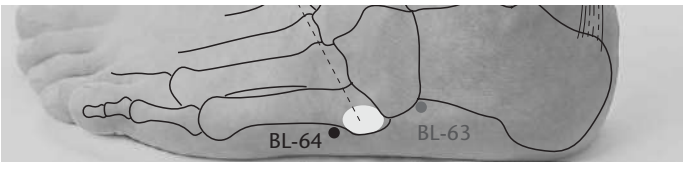
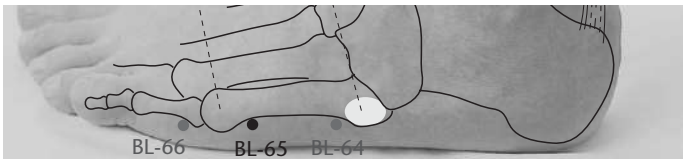
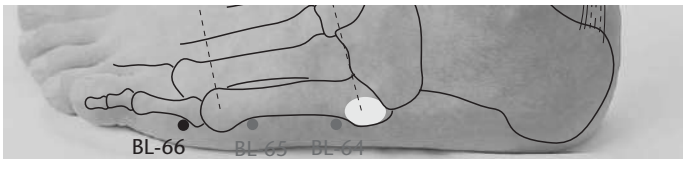
BL-*67* (*zhiyin*) 'Reaching Yin' On the little toe, 0.1 cun from the lateral corner of the nail



BL-*64* (*jinggu*) 'Capital Bone' Distal to the tuberosity of the 5th metatarsal bone, at the border of the red and white skin



BL-*65* (*shugu*) 'Restraining Bone' In the depression proximal to the head of the 5th metatarsal bone, at the border of the red and white skin



BL-*66* (*zutonggu*) 'Foot Connecting Valley' In a depression distal to the metatarsophalangeal joint of the little toe

8 Point Categories and Point Selection

Claudia Focks

There are a total of 361 acupuncture points located on the channels (→ Chapter 1). Translated literally from the Chinese language, the meaning of the word for 'point' is rather 'opening' or 'hole'. Stimulation of the points can be achieved through massage (in acupressure) or through the insertion of needles (in acupuncture). Besides the regular acupuncture points, there exist a wide variety of so-called extra points, located outside the pathways of the channels. The most commonly used of these extra points are described in Chapter 6, as classified by the WHO.

The acupuncture points are effective

- **locally** (for example, points on the elbow treat disorders of the elbow)
- **regionally** (the channel pathway – for example, points on the arm treat disorders of the upper extremity)
- some points have an effect on their **pertaining** ***zangfu***-Organ
- some points have **additional actions** such as calming the *shen* or eliminating Heat.

The following table provides an overview for the general indications of the channel points (modified after Ellis and Wiseman 1991)

Indications of the channel points

Channel	Indications		
Hand-Yin channels			
LU	Lungs, throat		Disorders of the thoracic region
P	Heart, Stomach	Spirit (*shen*) disorders	
HE	Heart		
Hand-Yang channels			
L.I.	Face, mouth, occiput, teeth, nose		Eyes, disorders of the throat, febrile diseases
T.B.	Head/lateral costal region	Disorders of the ears	
S.I.	Occipital region, shoulder, scapula, *shen* disorders		
Foot-Yin channels			
SP	Spleen, Stomach, intestines		Urogenital disorders, menstrual disorders, vaginal discharge, spirit (*shen*) disorders
LIV	Liver, genitalia		
KID	Kidneys, Lungs, throat		
Foot-Yang channels			
ST	Frontal aspect of the head, face, mouth, teeth, throat, Stomach, intestines		Psychoemotional disorders (*shen* disorders), febrile colds
G.B.	Lateral aspect of the head, ears, lateral costal region	Disorders of the eyes	
BL	Posterior aspect of the head, lower back		

8.1 Point Categories

Certain acupuncture points or groups of points are categorised according to their actions or location on their respective channels. (For an overview of these points and point groups → inside back cover.)

8.1.1 *Yuan*-Source Points

At the *yuan*-source points, the Original *Qi* (*yuan qi* → 1.1.4) of the respective Organ system emerges to the surface of the body.
Location: near the hand or ankle.

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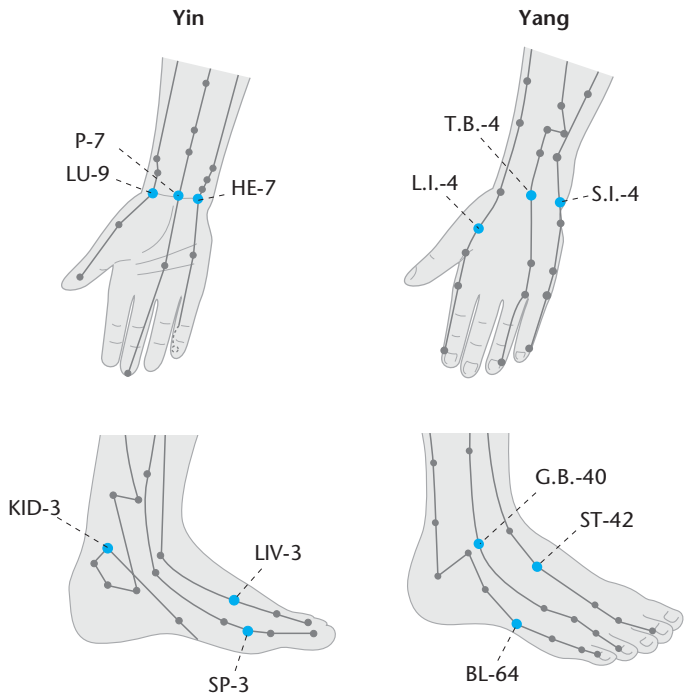


Points

Yuan-source points of the Yin channels

LU-9 (*taiyuan*) **SP-3** (*taibai*) **HE-7** (*shenmen*)
KID-3 (*taixi*) **P-7** (*daling*) **LIV-3** (*taichong*)

- On the Yin channels the *yuan*-source point is always the **3rd point** from the distal end of the channel
- They are identical with the *shu*-stream points and the Earth point of the channel

Function

- They tonify deficiency or weakness of their pertaining *zang*-Organ
- They regulate the Yin/Yang balance, restoring homeostasis
- As Earth points they have a 'grounding' effect on the body, the emotions and the mind.

Yuan-source points of the Yang channels

L.I.-4 (*hegu*) **ST-42** (*chongyang*) **S.I.-4** (*wangu*)
BL-64 (*jinggu*) **T.B.-4** (*yangchi*) **G.B.-40** (*qiuxu*)

- On the Yang channels the *yuan*-source point is always the **4th point** from the distal end of the channel, except for the G.B. channel (5th point)
- Regarding the energetics of the channel, they are all located between the *shu*-stream point and the *jing*-river point.

Function

- Their main function is to expel pathogenic factors in excess syndromes
- They tonify their pertaining *fu*-Organ.

Clinical application

Diagnosis

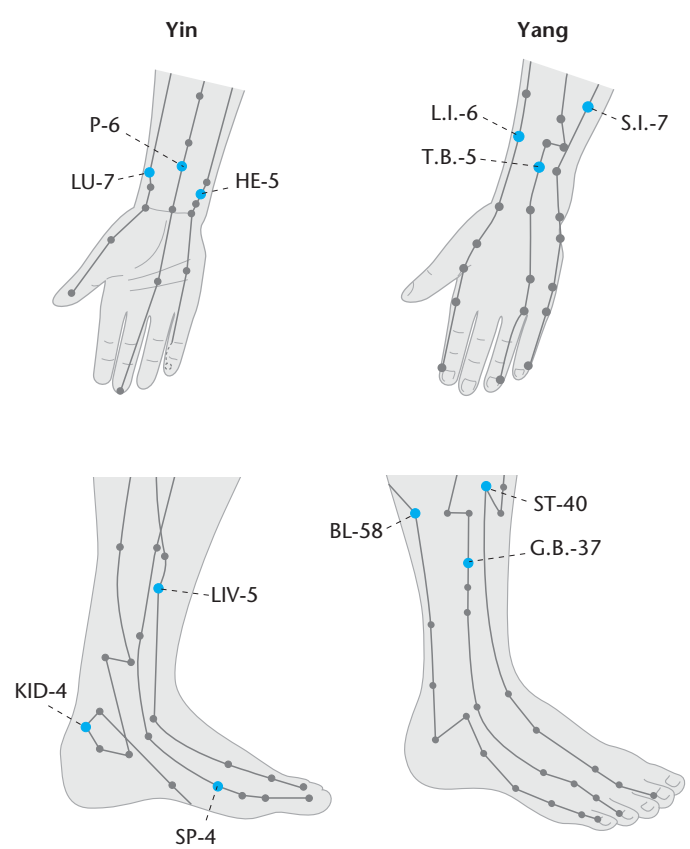
Disorders of a particular channel or its pertaining *zangfu*-Organ will often manifest themselves with tenderness, skin changes such as discolorations, swellings, redness, etc. in the area of the respective *yuan*-source point.

Therapy

- For deficiency of the relevant channel or Organ, use tonifying needling techniques; for excess, use reducing techniques
- Combine with the *luo*-connecting point of its Interiorly–Exteriorly paired channel (→ 1.2.2) in order to increase the therapeutic effect and to balance Yin and Yang (→ 8.3.3)
- Combine with the respective Back-*shu* point (→ 8.1.4) for disorders of the *zangfu*-Organs

8.1.2 *Luo*-Connecting Points

The *luo*-connecting points are located in those regions of the body where the *luo*-network vessels (→ 1.5) branch out, connecting the Interiorly–Exteriorly paired Yin and Yang channels (→ 1.2.2).



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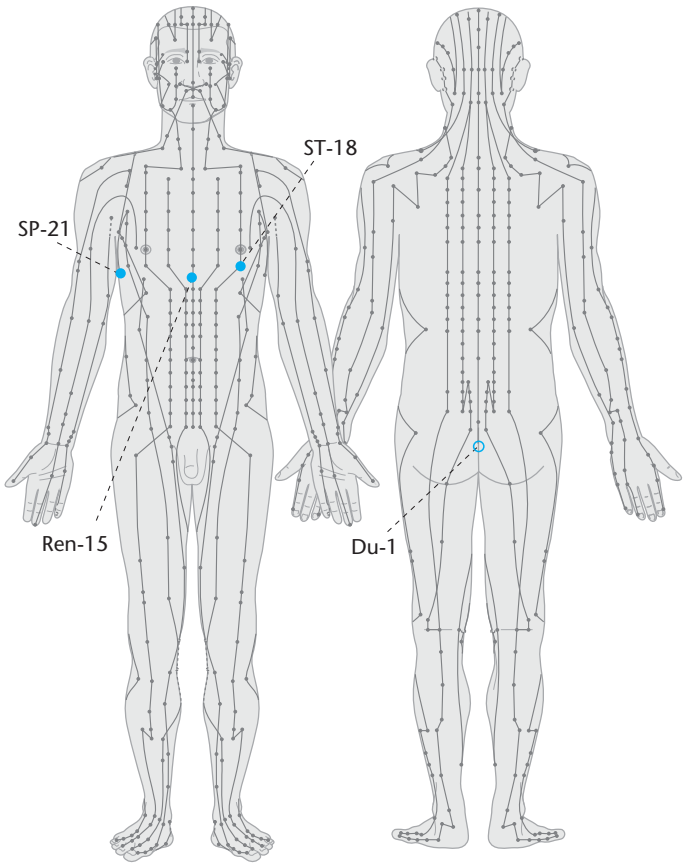

Points

The 12 *luo*-connecting points of the primary channels are located between the fingers and the elbow on the upper extremity and between the toes and the knee on the lower extremity.

- *Luo*-connecting points of the primary Yin channels
  - hand Yin channels: **LU-7** (*lieque*), **P-6** (*neiguan*), **HE-5** (*tongli*)
  - foot Yin channels: **SP-4** (*gongsun*), **LIV-5** (*ligou*), **KID-4** (*dazhong*)
- *Luo*-connecting points of the primary Yang channels
  - hand Yang channels: **L.I.-6** (*pianli*), **T.B.-5** (*waiguan*), **S.I.-7** (*zhizheng*)
  - foot Yang channels: **ST-40** (*fenglong*), **G.B.-37** (*guangming*), **BL-58** (*feiyang*)
- *Luo*-connecting points of the *ren mai:* **Ren-15** (*jiuwei*); action: regulates the *luo*-connecting vessels of the Yin channels; indication: abdominal diseases and disorders
- *Luo*-connecting points of the *du mai:* **Du-1** (*changqiang*); action: regulates the *luo*-connecting vessels of the Yang channels; indication: disorders of the back
- Great *luo*-connecting point of the Spleen: **SP-21** (*dabao*); action: connects with all *luo*-vessels and governs all *luo* and Blood vessels of the body; indication: disorders of the joint, general weakness and pain
- Great *luo*-connecting point of the Stomach: ***xu li****, near the left **ST-18**; moxibustion is contraindicated, only superficial needling is recommended. Indication: breathing and heart disorders such as asthma, dyspnoea, emphysema and bradycardia, also for shortness of breath due to anxiety attacks.

Clinical application

Diagnosis

- In excess syndromes the *luo* vessels often become visible near the *luo*-connecting points, for example skin discolorations and swellings may occur. With pain due to Cold the predominant colour may be bluish to greenish, with Heat syndromes reddish, with chronic stagnation and stasis dark to dark purple.
- In deficiency syndromes there are often no colour changes. However, in severe chronic cases (for example severe Qi deficiency) there will more likely be distinct muscular flaccidity, presenting as a dip or depression in the area of the point.

Therapy

- For disorders of the pertaining *zangfu*-Organ or channel
- For diseases of the Interiorly–Exteriorly paired Organ or channel
- For disorders due to the accumulation of pathogenic factors or substances, for example Qi stagnation, Blood stasis, retention of Dampness or Phlegm
- For psychoemotional problems, especially *luo*-connecting points of the Yin channels, for example classically **P-6** (*neiguan*) and **HE-5** (*tongli*)
- Bloodletting (three-edged needle, lancet or plum-blossom needle) on the *luo*-connecting point of the affected channel: this is particularly indicated for excess syndromes with Qi stagnation and Blood stasis. For more details on point selection → 8.3.3

8.1.3 *Xi*-Cleft Points

Synonyms: Accumulation points (Maciocia)

The *xi*-cleft points are all located between the fingers and the elbow on the upper extremity and between the toes and the knee on the lower extremity. Only **ST-34** is located more proximally on the thigh.

* *Xu li* is only rarely mentioned in Western literature. The location and significance of this point is based on *Su Wen*, chapter 18: 'The geat *luo* vessel of the Stomach is called *xu li* and emerges at **ST-18** under the left breast, passes through the diaphragm and ascends to connect with the Lung. One can feel its pulsation with the hand. It is the place where the *zong qi* (→ 1.1.4) of the channels resides.' (Ngyen Van Nghi, 1989). *Xu li* is the only *luo*-connecting vessel to directly emerge from a *fu*-Organ. It plays an important role in Korean acupuncture.

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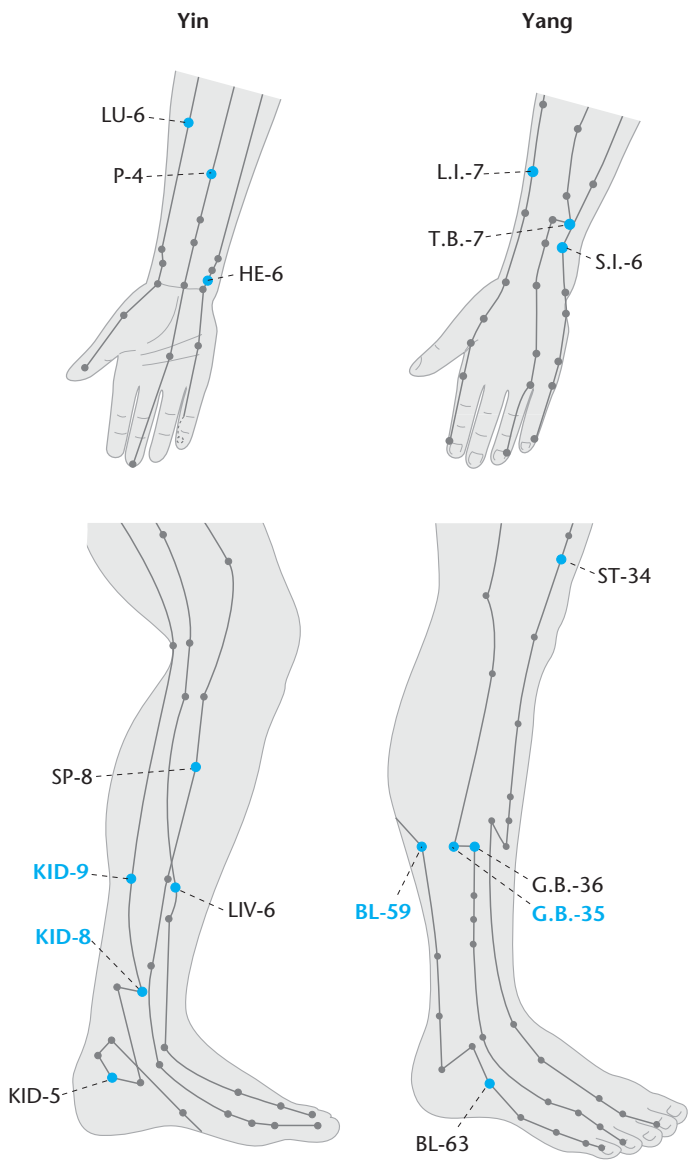


Points

Xi-cleft points of the primary Yin channels

Hand Yin channels

LU-6 (*kongzui*) **HE-6** (*yinxi*) **P-4** (*ximen*)

Foot Yin channels

SP-8 (*diji*) **KID-5** (*shuiquan*) **LIV-6** (*zhongdu*)

Xi-cleft points of the primary Yang channels

Hand Yang channels

L.I.-7 (*wenliu*) **S.I.-6** (*yanglao*) **T.B.-7** (*huizhong*)

Foot Yang channels

ST-34 (*liangqiu*) **BL-63** (*jinmen*) **G.B.-36** (*waiqiu*)

Xi-cleft points of the extraordinary vessels (point names printed in blue)

- *Xi*-cleft point of the *yang qiao mai*: **BL-59** (*fuyang*)
- *Xi*-cleft point of the *yin qiao mai*: **KID-8** (*jiaoxin*)
- *Xi*-cleft point of the *yang wei mai*: **G.B.-35** (*yangjiao*)
- *Xi*-cleft point of the *yin wei mai*: **KID-9** (*zhubin*)

Clinical application

Diagnosis

- They provide information about disorders affecting their pertaining channel or *zangfu*-Organ
  - Excess: acute, intense pain upon pressure or redness and swelling in the area of the point
  - Deficiency: dull, mild pain upon pressure or presence of a depression in the area of the point

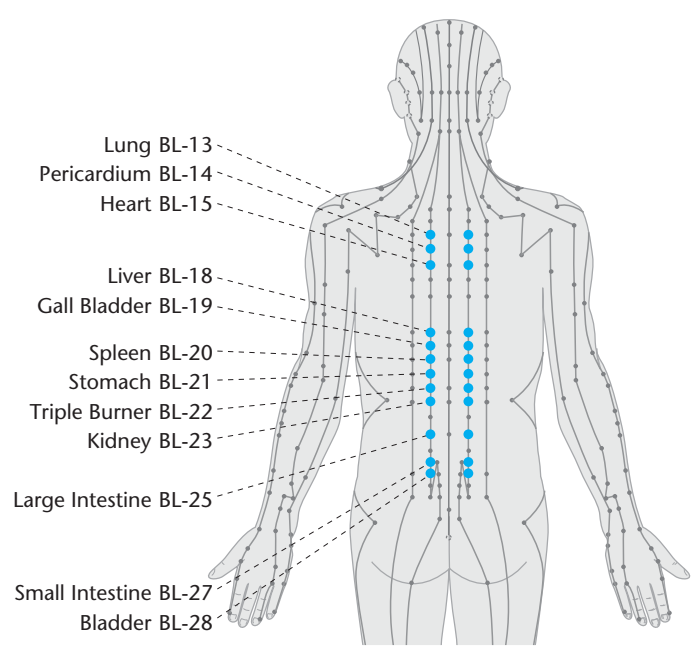
Therapy

- Mainly used for acute and/or therapy-resistant disorders, especially for excess conditions and pain of the affected channel and/or pertaining *zangfu*-Organ. In patients with a robust constitution use reducing needling techniques.
- Add the *xi*-cleft points of the Yin channels for disorders of the Blood.
- In order to increase the therapeutic effect, the *xi*-cleft point may be combined with a relevant *hui*-meeting point (→ 8.1.7).

8.1.4 Back-*Shu* Points

Synonym: Back-transporting points

The Back-*shu* points are located on the inner branch of the BL channel at the level of their pertaining *zangfu*-Organ. They are mostly at the same level as the corresponding Front-*mu* point (→ 8.1.5).



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Points

Organ	Back-*shu* point
Lung	**BL-13** (*feishu*)
Large Intestine	**BL-25** (*dachangshu*)
Stomach	**BL-21** (*weishu*)
Spleen	**BL-20** (*pishu*)
Heart	**BL-15** (*xinshu*)
Small Intestine	**BL-27** (*xiaochangshu*)
Bladder	**BL-28** (*pangguangshu*)
Kidney	**BL-23** (*shenshu*)
Pericardium	**BL-14** (*jueyinshu*)
Triple Burner	**BL-22** (*sanjiaoshu*)
Gall Bladder	**BL-19** (*danshu*)
Liver	**BL-18** (*ganshu*)

Clinical application

Diagnosis

- Often spontaneously tender and/or sensitive upon pressure in disorders of the pertaining *zangfu*-Organ

Therapy

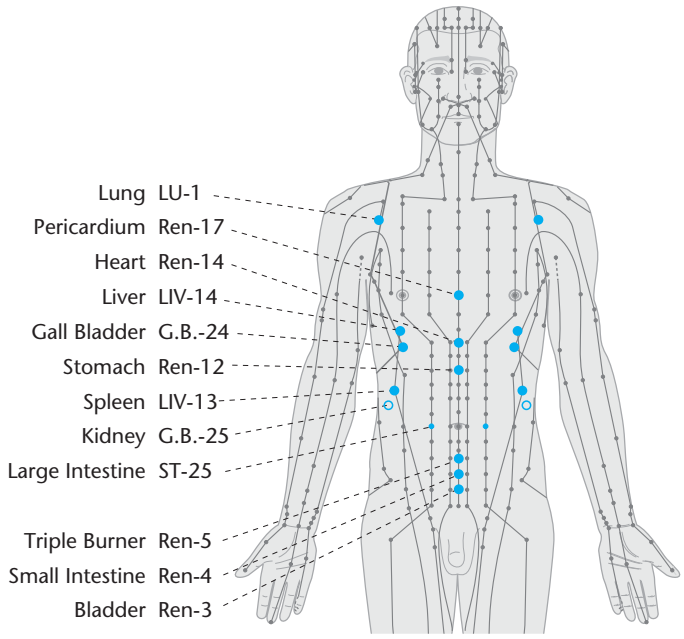
- Mainly used for disorders of the corresponding *zangfu*-Organ. These points have a tonifying effect for chronic disorders and deficiency syndromes, but can also be used for acute disorders of their pertaining *zangfu*-Organ.
- For disorders of the sensory organs, use the Back-*shu* point of the pertaining *zangfu*-Organ.
  Example: for disorders of the eyes, needle the Back-*shu* point of the Liver **BL-18** (*ganshu*).

For excess syndromes, the Back-*shu* points can be needled with reducing needling techniques; for deficiency syndromes, tonifying needling techniques should be applied. When Cold signs are present, moxibustion can also be used. The needles should not be retained longer than 10 minutes – longer needle retention can have a sedating effect and lead to tiredness.

8.1.5 Front-*Mu* Points

Synonym: Alarm points

The Front-*mu* points are located on the thorax and abdomen in the area of their pertaining *zangfu*-Organs.



Points

Organ	Back-*shu* point
Lung	**LU-1** (*zhongfu*)
Large Intestine	**ST-25** (*tianshu*)
Stomach	**Ren-12** (*zhongwan*)
Spleen	**LIV-13** (*zhangmen*)
Heart	**Ren-14** (*juque*)
Small Intestine	**Ren-4** (*guanyuan*)
Bladder	**Ren-3** (*zhongji*)
Kidney	**G.B.-25** (*jingmen*)
Pericardium	**Ren-17** (*danzhong*)
Triple Burner	**Ren-5** (*shimen*)
Gall Bladder	**G.B.-24** (*riyue*)
Liver	**LIV-14** (*qimen*)

Clinical application

Diagnosis

- Often spontaneously tender or sensitive upon pressure in disorders of the pertaining *zangfu*-Organ

Therapy

- Used to regulate the pertaining *zangfu*-Organ. For excess syndromes use reducing needling techniques; for deficiency syndromes use tonifying methods.
- Commonly used point combinations:
  – *Shu–mu* method (→ 8.3.2)
  – For disorders of the *fu*-Organs: simultaneous needling of the lower *he-sea* point (→ 8.1.9) and the Front-*mu* point of the affected *fu*-Organ.

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8.1.6 The Five *Shu*-Transporting Points

The five *shu-t*ransporting points are located **between the fingers and the elbow on the upper extremity, between the toes and the knee on the lower extremity**. The classification and application of these points is based on two theories: on the one hand they are applied according to the Qi flow in the channel from distal to proximal, on the other hand they are used according to the Five Phases (→ 8.2.5).

While the location of the five *shu-t*ransporting points is identical to the Five Phase points, their dynamics and range of application based on the Qi flow in the channels differs from or is even contrary to their actions as Five Phase points. The theoretical foundations of the Qi flow in the channels as applied in the instance of the *shu*-transporting point are based on a rather earlier circulatory concept (→ 1.1.1).

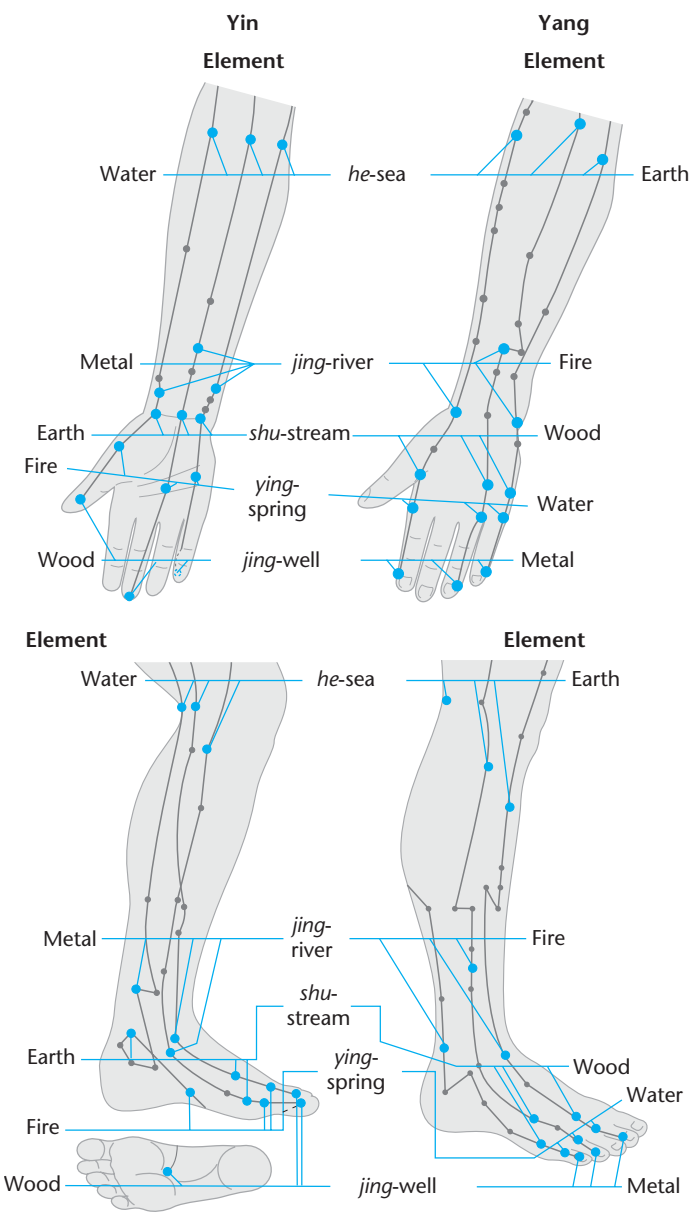
The therapeutic application of the Five Phase points will be explained in more detail in → 8.2.5, while the clinical application according to channel flow is described below.

Theoretical background of the Qi circulation in the channels

According to the more original centripetal model (→ 1.1.1), the Qi flows from the peripheral parts of the body to the elbows and knees, similar to a river coursing from its spring to its estuary and finally into the sea:

- The Qi flow begins at the anastomosis at the *jing-w*ell point. Here the water surfaces, it is dynamic and unstable (change of polarity from Yin to Yang)
- The water course then changes to a spring (*ying*) and a stream (*shu*) – both are at this point still quite dynamic features, the water flowing rapidly and superficially.
- The water then becomes increasingly deeper and slower, taking on the characteristics of a river (*jing*).
- Eventually it flows as a big river into the sea (*he*).

This image of a river system is often used to explain disorders caused by pathogenic factors (*xie qi*). Due to the superficial position of these points on the extremities, pathogens can here easily penetrate the body. By the same token, they can be removed again with relatively little effort. Barbara Kirschbaum (course material 1999) provides a useful visual image: she suggests imagining a ship carrying a cargo of pathogens that begins its journey at the tips of the extremities. The further a point is located peripherally in the body, the easier it is for the ship to get rid of its dangerous cargo (or to expel the pathogen according to the dynamics of the Qi flow). However, once the ship has reached the *he*-sea point, the ship and its cargo will disappear in the big, wide sea, having the potential to injure the internal *zangfu*-Organ. Thus it is the therapeutic goal to eliminate pathogens from the body as soon as possible.



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Overview: *shu*-transporting points

Shu-transporting points of the Yin channels					
Phase/ channel	Wood point	Fire point	Earth point	Metal point	Water point
LU	LU-11	LU-10	LU-9 +	LU-8	LU-5 −
SP	SP-1	SP-2 +	SP-3	SP-5 −	SP-9
HE	HE-9 +	HE-8	HE-7 −	HE-4	HE-3
KID	KID-1 −	KID-2	KID-3	KID-7 +	KID-10
P	P-9 +	P-8	P-7 −	P-5	P-3
LIV	LIV-1	LIV-2 −	LIV-3	LIV-4	LIV-8 +
Channel Qi flow	*Jing*-well point	*Ying*-spring point	*Shu*-stream point	*Jing*-river point	*He*-sea point
***Shu*-transporting points of the Yang channels**					
Phase/ channel	Metal point	Water point	Wood point	Fire point	Earth point
L.I.	L.I.-1	L.I.-2 −	L.I.-3	L.I.-5	L.I.-11 +
ST	ST-45 −	ST-44	ST-43	ST-41+	ST-36
S.I.	S.I.-1	S.I.-2	S.I.-3 +	S.I.-5	S.I.-8 −
BL	BL-67 +	BL-66	BL-65 −	BL-60	BL-40
T.B.	T.B.-1	T.B.-2	T.B.-3 +	T.B.-6	T.B.-10 −
G.B.	G.B.-44	G.B.-43+	G.B.-41	G.B.-38 −	G.B.-34
Channel Qi flow	*Jing*-well point	*Ying*-spring point	*Shu*-stream point	*Jing*-river point	*He*-sea point

+, tonification point; − , sedation point

Clinical application of the *shu*-transporting points

Jing-well points (*jing xue*)

Shu-transporting Points of the Yin channels					
Phase/ channel	Wood point	Fire point	Earth point	Metal point	Water point
LU	LU-11	LU-10	LU-9 +	LU-8	LU-5 −
SP	SP-1	SP-2 +	SP-3	SP-5 −	SP-9
HE	HE-9 +	HE-8	HE-7 −	HE-4	HE-3
KID	KID-1 −	KID-2	KID-3	KID-7 +	KID-10
P	P-9 +	P-8	P-7 −	P-5	P-3
LIV	LIV-1	LIV-2 −	LIV-3	LIV-4	LIV-8 +
Channel Qi flow	*Jing*-well point	*Ying*-spring point	*Shu*-stream point	*Jing*-river point	*He*-sea point
***Shu*-transporting points of the Yang channels**					
Phase/ channel	Metal point	Water point	Wood point	Fire point	Earth point
L.I.	L.I.-1	L.I.-2 −	L.I.-3	L.I.-5	L.I.-11 +
ST	ST-45 −	ST-44	ST-43	ST-41 +	ST-36
S.I.	S.I.-1	S.I.-2	S.I.-3 +	S.I.-5	S.I.-8 −
BL	BL-67 +	BL-66	BL-65 −	BL-60	BL-40
T.B.	T.B.-1	T.B.-2	T.B.-3 +	T.B.-6	T.B.-10 −
G.B.	G.B.-44	G.B.-43+	G.B.-41	G.B.-38 −	G.B.-34
Channel Qi flow	*Jing*-well point	*Ying*-spring point	*Shu*-stream point	*Jing*-river point	*He*-sea point

+, tonification point; − , sedation point

According to the Five Phases (→ 8.2.5) the *jing*-well points of the **Yin channels** correspond to the **Wood points**, while those of the **Yang channels** correspond to the **Metal points**.
Location: as the **last or first point of each channel**, they are located on the **tips of the fingers or the toes** (exception: **KID-1** of the sole of the foot). The course of the channel is here at its **most superficial**. It is also here that a change of polarity is taking place in the energy: from Yin to Yang or vice versa. **Caution**: needling these points can be quite intense and painful, presenting a strong stimulus to the body.

Actions

- Clear Heat, restore consciousness, eliminate Heat and excess from the upper end of the channel: commonly pricked to bleed.
- Treat fullness and Cold below the Heart
- Treat disorders of the spirit (*shen*) for psychological disorders

Indications

- For acute conditions and emergencies: the *jing*-well points can quickly expel Exterior pathogenic factors (*xie qi*), especially Heat. They have a strong effect on the psyche, for example for coma, collapse and shock as well as for severe irritability and restlessness.
- The points on the Yin channels also have an effect on their pertaining *zang*-Organs and can eliminate internal Wind.

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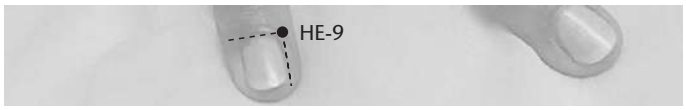
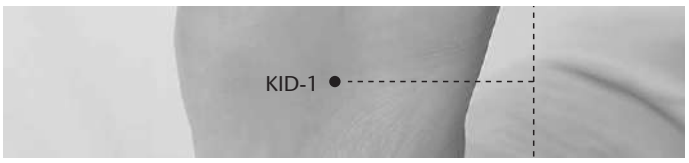
Examples

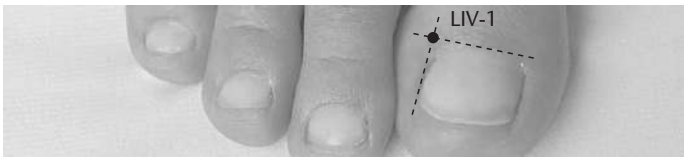
- **LU-11**: prick to bleed for acute sore throat
- **KID-1**: for spasms and unconsciousness
- **HE-9**: for collapse
- **SP-1**: for uterine bleeding

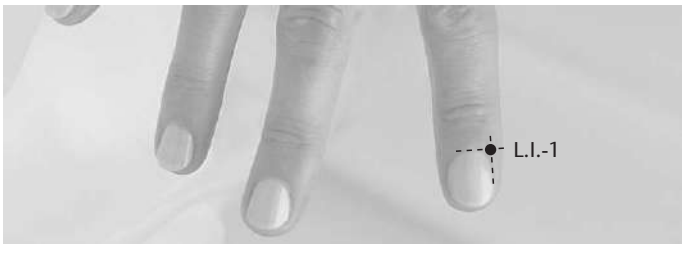
For psychological disorders:

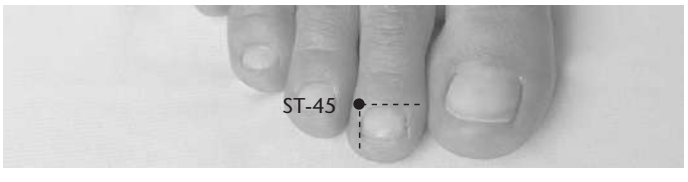
- **KID-1**: for severe restlessness
- **P-9** and **HE-9**: for extreme restlessness and insomnia











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Ying-spring points (*ying xue*)

Shu-transporting points of the Yin channels					
Phase/ channel	Wood point	Fire point	Earth point	Metal point	Water point
LU	LU-11	LU-10	LU-9 +	LU-8	LU-5 −
SP	SP-1	SP-2 +	SP-3	SP-5 −	SP-9
HE	HE-9 +	HE-8	HE-7 −	HE-4	HE-3
KID	KID-1 −	KID-2	KID-3	KID-7 +	KID-10
P	P-9 +	P-8	P-7 −	P-5	P-3
LIV	LIV-1	LIV-2 −	LIV-3	LIV-4	LIV-8 +
Channel Qi flow	*Jing*-well point	*Ying*-spring point	*Shu*-stream point	*Jing*-river point	*He*-sea point
***Shu*-transporting points of the Yang channels**					
Phase/ channel	Metal point	Water point	Wood point	Fire point	Earth point
L.I.	L.I.-1	L.I.-2 −	L.I.-3	L.I.-5	L.I.-11 +
ST	ST-45 −	ST-44	ST-43	ST-41 +	ST-36
S.I.	S.I.-1	S.I.-2	S.I.-3 +	S.I.-5	S.I.-8 −
BL	BL-67 +	BL-66	BL-65 −	BL-60	BL-40
T.B.	T.B.-1	T.B.-2	T.B.-3 +	T.B.-6	T.B.-10 −
G.B.	G.B.-44	G.B.-43+	G.B.-41	G.B.-38 −	G.B.-34
Channel Qi flow	*Jing*-well point	*Ying*-spring point	*Shu*-stream point	*Jing*-river point	*He*-sea point

+, tonification point; − , sedation point

According to the Five Phases (→ 8.2.5) the *ying*-spring points of the Yin channels correspond to the Fire points, while those on the Yang channels correspond to the Water points. **Caution**: needling some of these points can be painful, for example **LU-10, P-8, HE-8**.

Location: as the second most distal point of each channel, they are located on the upper extremity between the phalanges and metacarpal bones and on the lower extremity between the phalanges with the exception of KID-2.

Actions

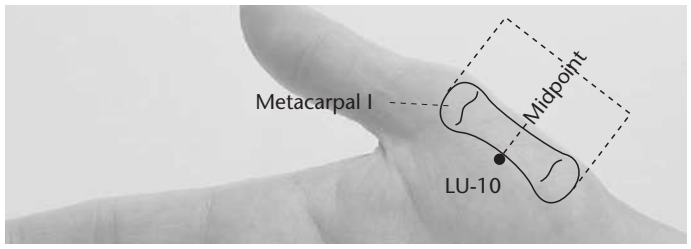
- They are very dynamic points that eliminate both external and internal pathogenic factors.
- They clear Heat from their pertaining *zangfu*-Organ and channel, especially in the upper half of the body.

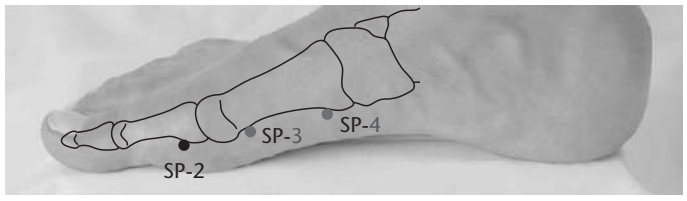
Indications

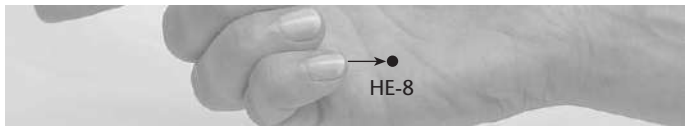
- For example for febrile diseases: Exterior Heat syndromes are mainly treated using points on the Yang channels while Interior Heat or deficient Heat syndromes are treated with points on the Yin channels.

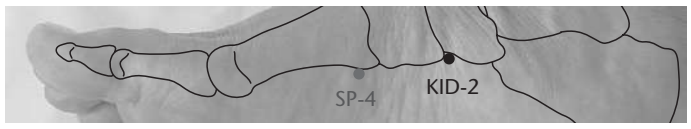
Examples

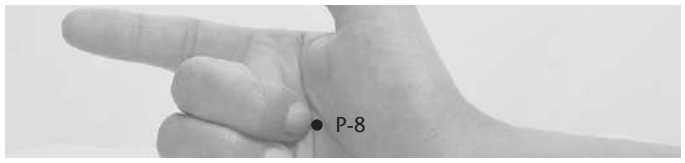
- **LU-10:** for acute inflammations of the throat
- **ST-44:** for acute frontal headaches or acute inflammations affecting the face
- **LIV-2:** for severe temporal headaches, for example due to blazing Liver Fire

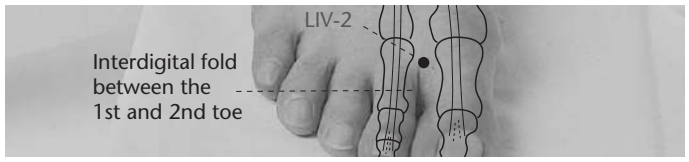


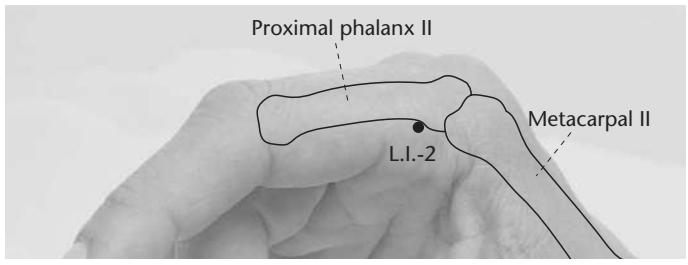


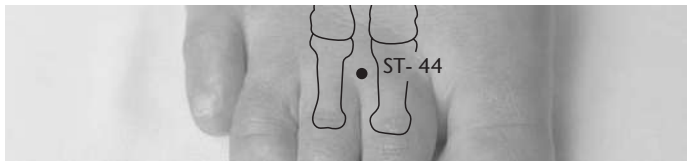


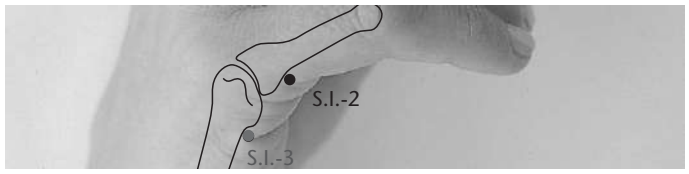












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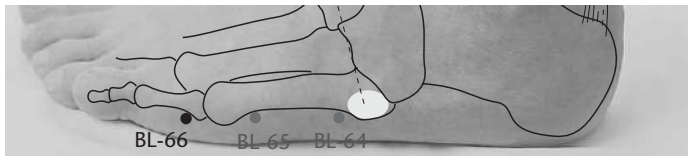
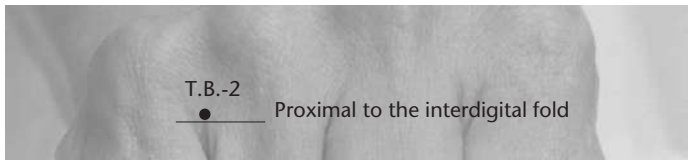




Shu-stream points (*shu xue*)

Shu-transporting points of the Yin channels					
Phase/ channel	Wood point	Fire point	Earth point	Metal point	Water point
LU	LU-11	LU-10	LU-9 +	LU-8	LU-5 −
SP	SP-1	SP-2 +	SP-3	SP-5 −	SP-9
HE	HE-9 +	HE-8	HE-7 −	HE-4	HE-3
KID	KID-1 −	KID-2	KID-3	KID-7 +	KID-10
P	P-9 +	P-8	P-7 −	P-5	P-3
LIV	LIV-1	LIV-2−	LIV-3	LIV-4	LIV-8 +
Channel Qi flow	*Jing*-well point	*Ying*-spring point	*Shu*-stream point	*Jing*-river point	*He*-sea point
***Shu*-transporting points of the Yang channels**					
Phase/ channel	Metal point	Water point	Wood point	Fire point	Earth point
L.I.	L.I.-1	L.I.-2 −	L.I.-3	L.I.-5	L.I.-11+
ST	ST-45 −	ST-44	ST-43	ST-41+	ST-36
S.I.	S.I.-1	S.I.-2	S.I.-3 +	S.I.-5	S.I.-8 −
BL	BL-67 +	BL-66	BL-65 −	BL-60	BL-40
T.B.	T.B.-1	T.B.-2	T.B.-3 +	T.B.-6	T.B.-10 −
G.B.	G.B.-44	G.B.-43+	G.B.-41	G.B.-38−	G.B.-34
Channel Qi flow	*Jing*-well point	*Ying*-spring point	*Shu*-stream point	*Jing*-river point	*He*-sea point

+, tonification point; − , sedation point

According to the Five Phases (→ 8.2.5) the *shu*-stream points of the **Yin channels** correspond to the **Earth points** and ***yuan*-Source points** (→ 8.1.1), while those on the **Yang channels** correspond to the **Wood points**.

Location: counting from the periphery, they are the **third point of each channel**, the only exception being the G.B. channel (4th point on the channel). They are located proximal to the metacarpophalangeal or metatarsophalangeal joints, except for **KID-3** (posterior to the medial malleolus), **LIV-3** and **SP-3** (both located at the distal ends of the metatarsal bones) as well as **LU-9, HE-7** and **P-7** (all located on the wrist joint space).

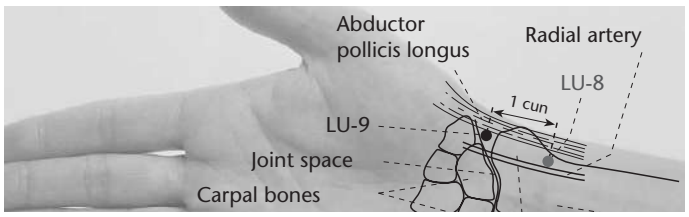
Actions

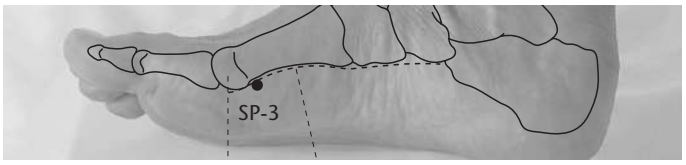
They are considered to be the entry points for pathogenic factors; needling these points can strengthen the Defensive Qi (*wei qi*) (→ 1.1.4) and eliminate pathogenic factors from the respective channel. At the *shu*-stream points, the Qi flow is already somewhat deeper: the bed of the river is widening and deepening.

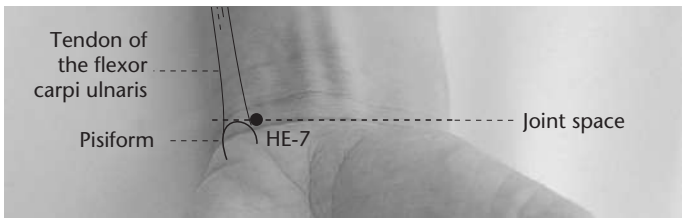
Indications

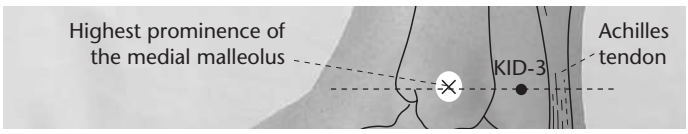
For *bi*-syndromes of the joints, especially due to Damp or pathogenic Wind. They are generally used for heaviness of the body as well as for *shaoyang* syndrome with intermittent symptoms.

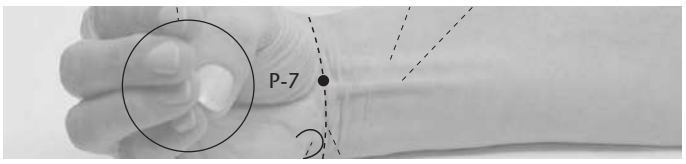
- Points on the Yang channels are predominantly used for Exterior syndromes: they have a specific action on their respective channel.
- Points on the Yin channels are more commonly used for Interior syndromes; they strengthen and harmonise their respective *zang*-Organs (this is in part due to these points also being the *yuan*-source points).

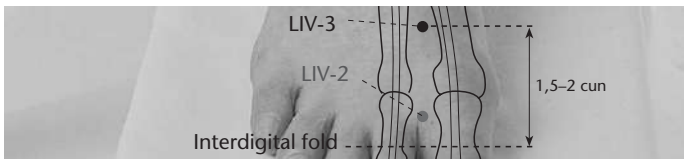












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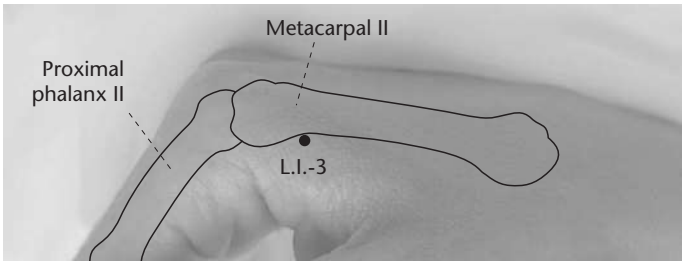

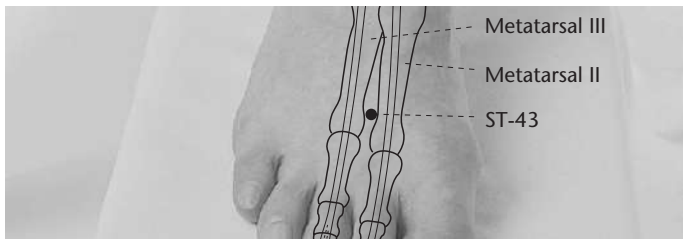

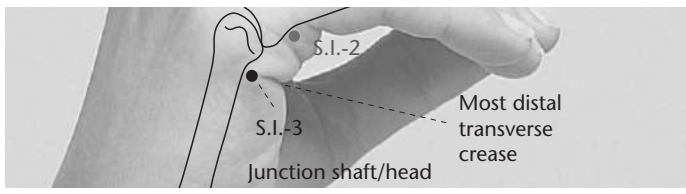

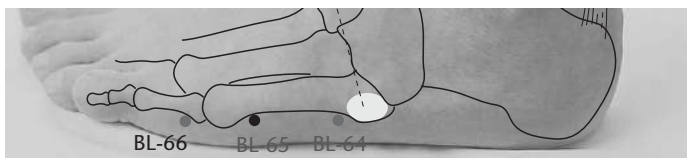

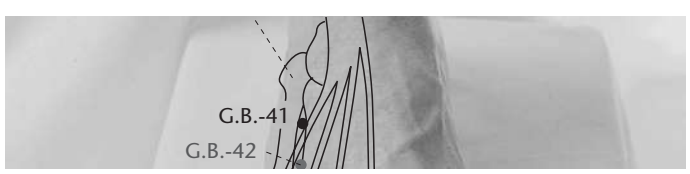

Jing-river points (*jing xue*)

***Shu*-transporting points of the Yin channels**					
Phase/ channel	Wood point	Fire point	Earth point	Metal point	Water point
LU	LU-11	LU-10	LU-9 +	LU-8	LU-5 −
SP	SP-1	SP-2 +	SP-3	SP-5 −	SP-9
HE	HE-9 +	HE-8	HE-7 −	HE-4	HE-3
KID	KID-1 −	KID-2	KID-3	KID-7 +	KID-10
P	P-9 +	P-8	P-7−	P-5	P-3
LIV	LIV-1	LIV-2 −	LIV-3	LIV-4	LIV-8 +
Channel Qi flow	*Jing*-well point	*Ying*-spring point	*Shu*-stream point	*Jing*-river point	*He*-sea point
***Shu*-transporting points of the Yang channels**					
Phase/ channel	Metal point	Water point	Wood point	Fire point	Earth point
L.I.	L.I.-1	L.I.-2 −	L.I.-3	L.I.-5	L.I.-11 +
ST	ST-45 −	ST-44	ST-43	ST-41 +	ST-36
S.I.	S.I.-1	S.I.-2	S.I.-3 +	S.I.-5	S.I.-8 −
BL	BL-67 +	BL-66	BL-65 −	BL-60	BL-40
T.B.	T.B.-1	T.B.-2	T.B.-3 +	T.B.-6	T.B.-10 −
G.B.	G.B.-44	G.B.-43+	G.B.-41	G.B.-38 −	G.B.-34
Channel Qi flow	*Jing*-well point	*Ying*-spring point	*Shu*-stream point	*Jing*-river point	*He*-sea point

+, tonification point; − , sedation point

According to the Five Phases (→ 8.2.5), the *jing*-river points of the **Yin channels** correspond to the **Metal points**, while those on the **Yang channels** correspond to the **Fire points**.
Location: they are located **between** the ***shu*-stream points** and the ***he*-sea points**. On the upper extremity, they are located either at, or distal or proximal to the wrist, while on the lower extremity they are located either at, or distal or proximal to the ankle (see figure on p. 676).

Actions

They divert external pathogenic factors away from joints, bones and tendons towards the Exterior. At the *jing*-river points the Qi flow becomes increasingly wider, slower, deeper and larger – thus the actions of these points are also less dynamic compared to the first three, more peripheral, *shu*-transporting points. At the *jing*-river points external pathogens have already penetrated deeper into the body, especially into the joints, bones and tendons.

Indications

- Dyspnoea, disorders of the throat such as inflammations, cough, disorders manifesting in the voice.
- Alternating fever and chills (especially points on the Yin channels)
- Also for *bi*-syndromes such as painful joint and tendon disorders.

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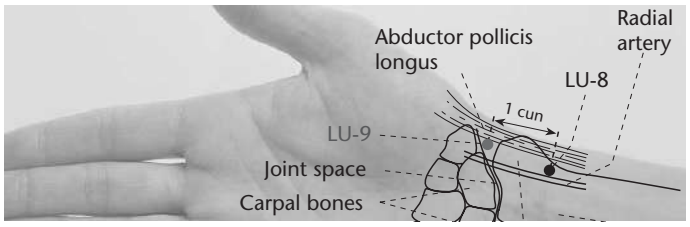

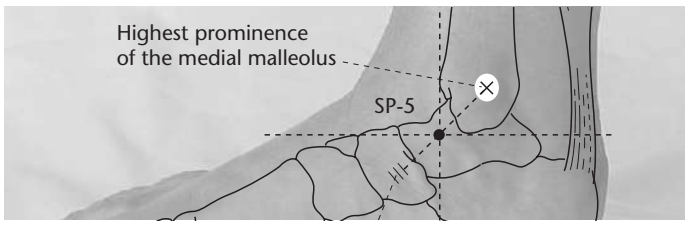

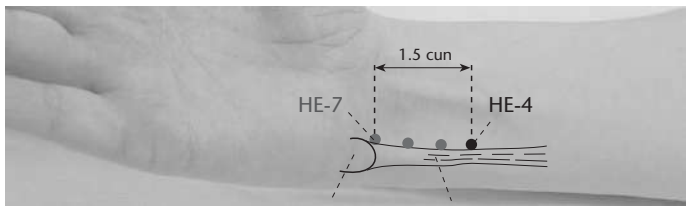

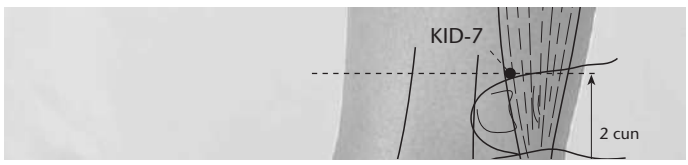

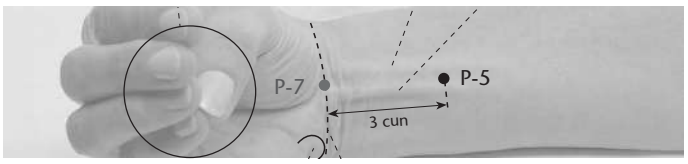

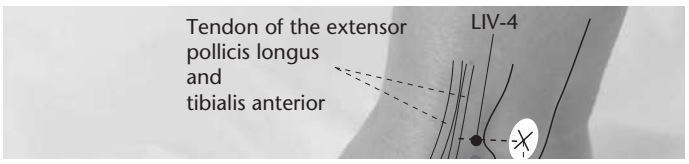

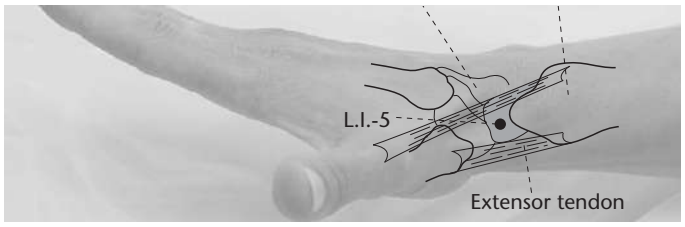

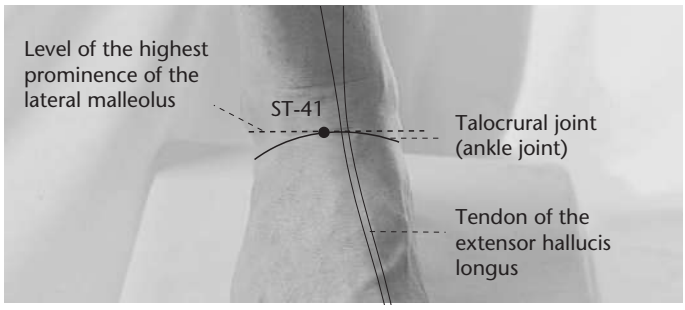

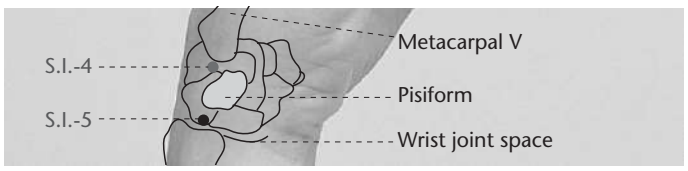

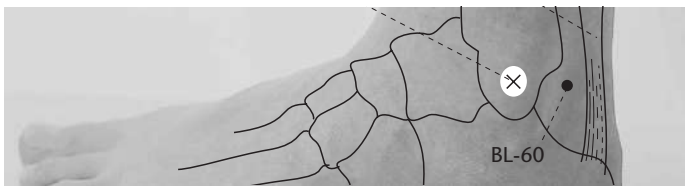

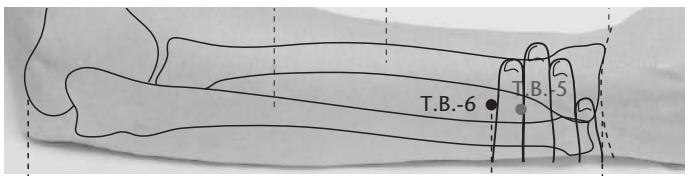

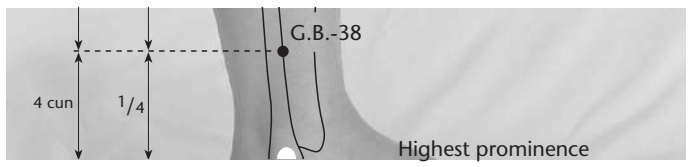

He-sea points (*he xue*)

Shu-transporting points of the Yin channels					
Phase/ channel	Wood point	Fire point	Earth point	Metal point	Water point
LU	LU-11	LU-10	LU-9 +	LU-8	LU-5 −
SP	SP-1	SP-2 +	SP-3	SP-5 −	SP-9
HE	HE-9 +	HE-8	HE-7−	HE-4	HE-3
KID	KID-1 −	KID-2	KID-3	KID-7 +	KID-10
P	P-9+	P-8	P-7−	P-5	P-3
LIV	LIV-1	LIV-2 −	LIV-3	LIV-4	LIV-8 +
Channel Qi flow	*Jing*-well point	*Ying*-spring point	*Shu*-stream point	*Jing*-river point	*He*-sea point
***Shu*-transporting points of the Yang channels**					
Phase/ Channel	Metal point	Water point	Wood point	Fire point	Earth point
L.I.	L.I.-1	L.I.-2 −	L.I.-3	L.I.-5	L.I.-11 +
ST	ST-45 −	ST-44	ST-43	ST-41 +	ST-36
S.I.	S.I.-1	S.I.-2	S.I.-3 +	S.I.-5	S.I.-8 −
BL	BL-67 +	BL-66	BL-65 −	BL-60	BL-40
T.B.	T.B.-1	T.B.-2	T.B.-3 +	T.B.-6	T.B.-10 −
G.B.	G.B.-44	G.B.-43+	G.B.-41	G.B.-38−	G.B.-34
Channel Qi flow	*Jing*-well point	*Ying*-spring point	*Shu*-stream point	*Jing*-river point	*He*-sea point

+, tonification point; − , sedation point

According to the Five Phases (→ 8.2.5) the *he*-sea points of the **Yin channels** correspond to the **Water points**, while those on the **Yang channels** correspond to the **Earth points**.

Location: on the upper extremity these points are located near the **elbow**, on the lower extremity near the **knee**.

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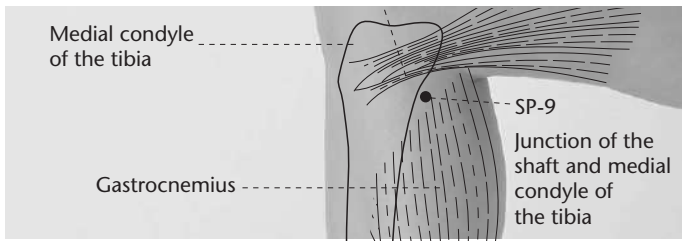
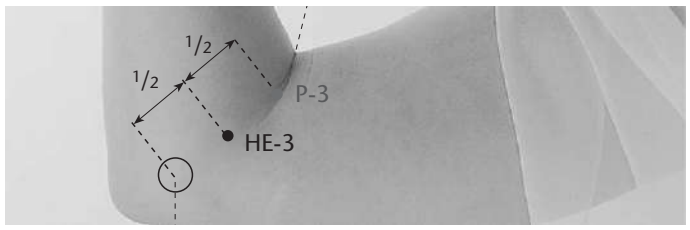
Actions

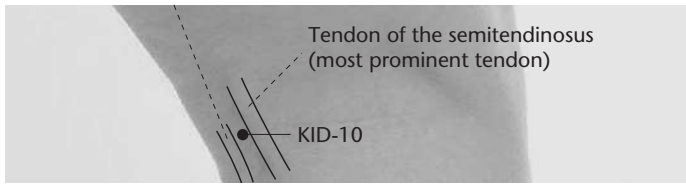
- They descend counterflow Qi and stop diarrhoea. At the *he*-sea points the Qi flow is very wide, deep and slow, 'terminating in the deep sea' where the 'toxic cargo' can 'disappear' into the body unless treated adequately. External pathogens (*xie qi*) which have not been eliminated from the channel beforehand can here penetrate the Interior of the body and injure the *zangfu*-Organs.
- Diseases of the *fu*-Organs (here especially points on the lower extremities are indicated).

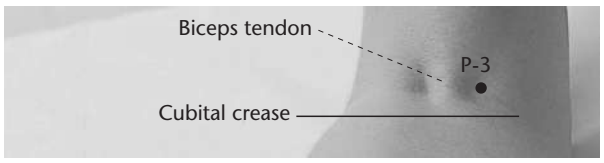
Indications

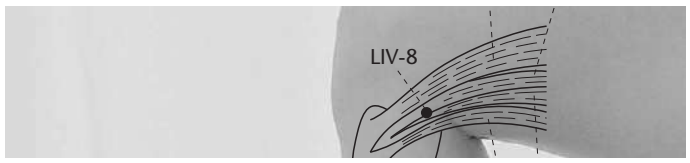
- Disorders of the *fu*-Organs, especially gastro-intestinal disorders with symptoms such as vomiting and diarrhoea
- Some *he*-sea points are also indicated for skin diseases, for example **LI-11, BL-40**.

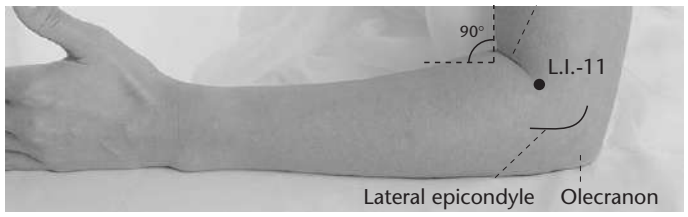


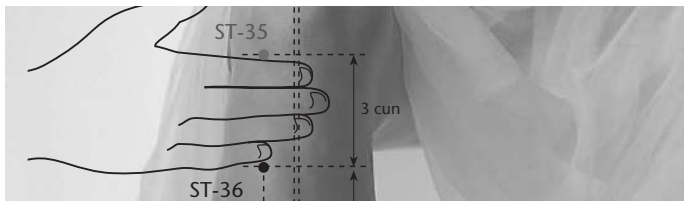


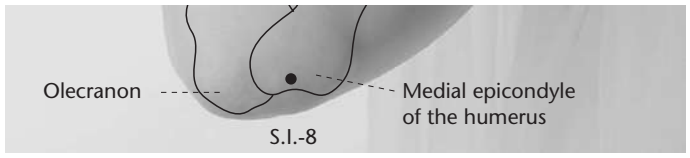


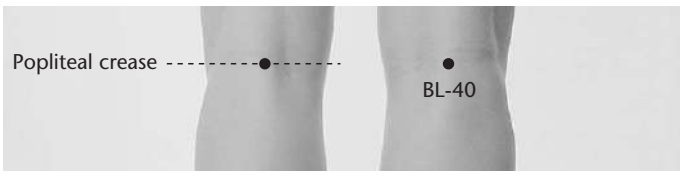


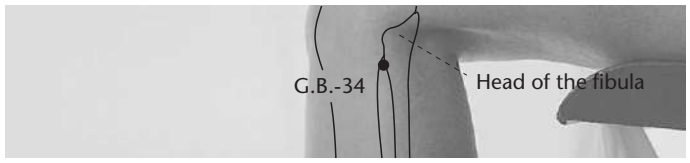












8.1.7 The Eight *Hui*-Meeting Points

Synonym: Gathering Points (Maciocia)

The Qi of a particular tissue, Organ system or substance gathers at the *hui*-meeting points and can be influenced through these points.

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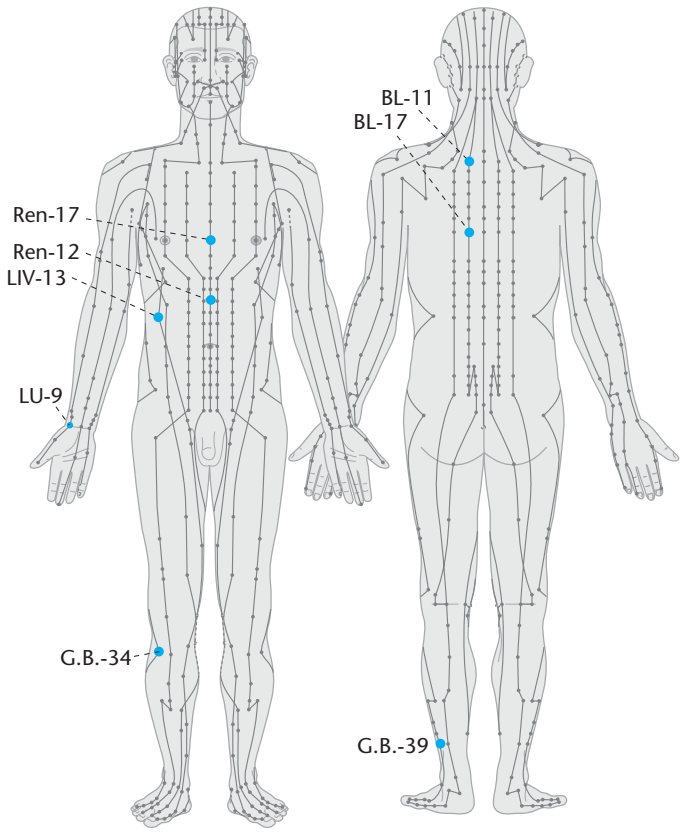
Points and clinical application

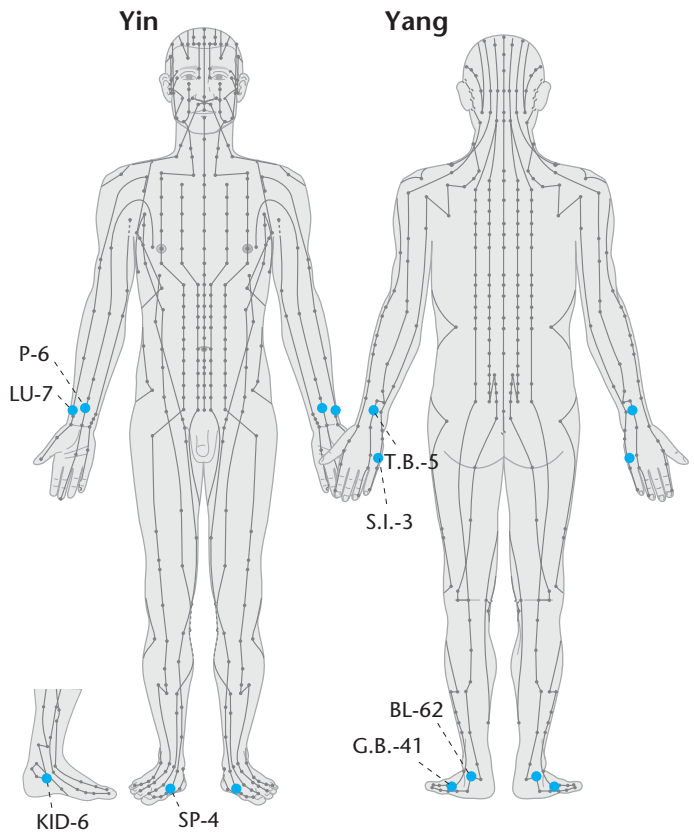


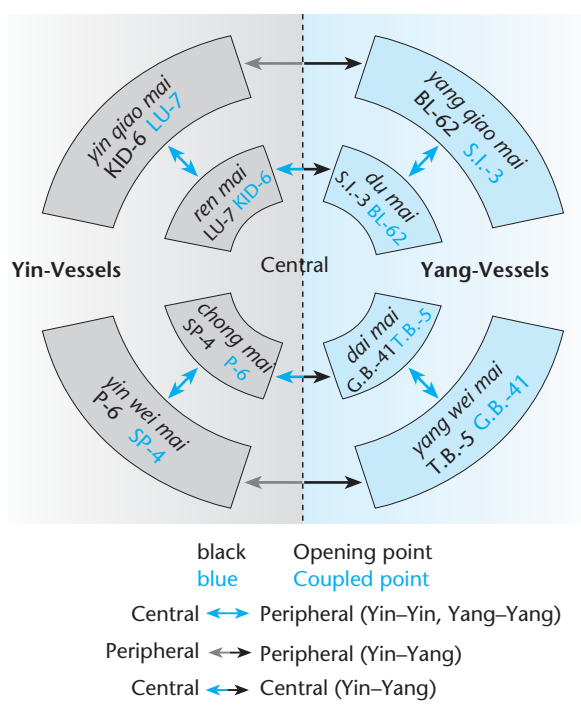
The Eight *hui*-Meeting Points		
Point	Tissue/organ system/substance	Indications
LIV-13 (*zhangmen*)	*zang*-Organs	Disorders of the *zang*-Organs (tonifies the Spleen and indirectly all *zang*-Organs)
Ren-12 (*zhongwan*)	*fu*-Organs	Disorders of the *fu*-Organs, for example of the gastro-intestinal tract
Ren-17 (*danzhong or shanzhong*)	Qi, has a strong effect on the *zong qi*	Respiratory diseases and disorders of the Qi flow such as hiccups; controls the *zong qi* and therefore functioning of the Lungs and Heart
BL-17 (*geshu*)	Blood (*xue*)	Disorders of the Blood such as anaemia, Blood stasis, haemorrhagia and gynaecological disorders
G.B.-34 (*yangling-quan*)	Sinews	Disorders of the joints, sinews and muscles
LU-9 (*taiyuan*)	Blood vessels	Stimulates the peripheral Blood circulation for disorders of the blood vessels such as vasculitis and arteriosclerosis
BL-11 (*dazhu*)	Bones	Disorders of the Bones such as shoulder and spine problems, joint and bone pain
G.B.-39 (*xuanzhong*)	Marrow	Disorders of the Bones, the Marrow and Brain (nerves)

8.1.8 Opening Points of the Eight Extraordinary Vessels

Synonyms: Confluent points (Deadman et al 1998), Master points (Pirog 1996)

The table below shows the opening points of the eight extraordinary vessels. For more detail on their origin and pathways → 1.7, Chapter 5.





black Opening point
blue Coupled point
Central ↔ Peripheral (Yin–Yin, Yang–Yang)
Peripheral ↔ Peripheral (Yin–Yang)
Central ↔ Central (Yin–Yang)

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Points

Pairs	Extraordinary Vessel	Opening point	Coupled point (opening point of the paired vessel)	Supported body regions
Pair 1	*chong mai*	**SP-4** (*gongsun*)	**P-6** (*neiguan*)	Heart, chest, Stomach
	yin wei mai	**P-6** (*neiguan*)	**SP-4** (*gongsun*)	
Pair 2	*du mai*	**S.I.-3** (*houxi*)	**BL-62** (*shenmai*)	Occiput, shoulder, back
	yang qiao mai	**BL-62** (*shenmai*)	**S.I.-3** (*houxi*)	
Pair 3	*dai mai*	**G.B.-41** (*zulinqi*)	**T.B.-5** (*waiguan*)	Temples, ears, lateral aspects of the body
	yang wei mai	**T.B.-5** (*waiguan*)	**G.B.-41** (*zulinqi*)	
Pair 4	*ren mai*	**LU-7** (*lieque*)	**KID-6** (*zhaohai*)	Face, throat, chest, Lungs, abdomen
	yin qiao mai	**KID-6** (*zhaohai*)	**LU-7** (*lieque*)	

Clinical application

Various approaches exist for needling the opening/coupled points of the extraordinary vessels. The following method **for 'opening' or regulating the extraordinary vessels** has been used with good therapeutic results in clinical practice:

- Needle the **opening point** of the relevant channel first, then needle the **contralateral coupled point** (opening point of the paired extraordinary vessel). This will mobilise and regulate the Qi of the extraordinary vessel, making it more dynamic.
- During a subsequent session, needle **either the *xi*-cleft point** of the previously treated extraordinary vessel (→ 8.1.3) or add **other channel points of the vessel** (see channel pathways, chapter 5) during the same or subsequent session. This will further support the dynamics of the Qi flow in the vessel.

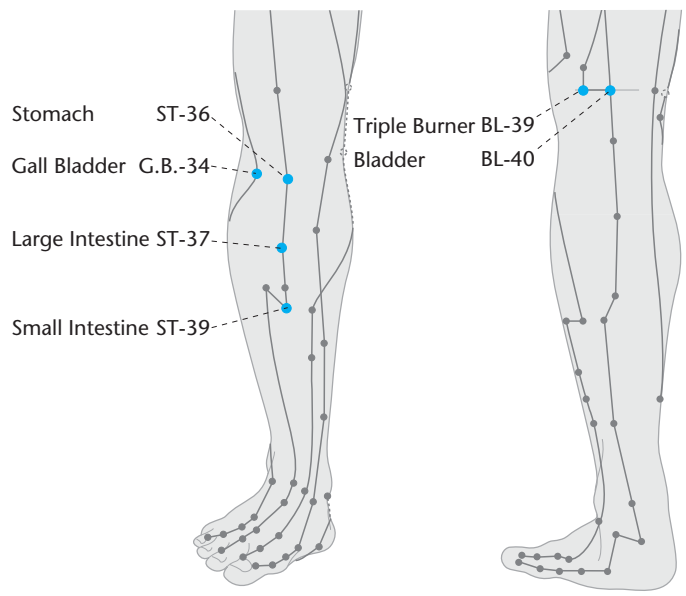
In addition Maciocia (1989) and Kirschbaum (1995) suggest the following procedure for 'opening' the extraordinary vessels:

- **In women:** First needle the opening point on the *right* side with even method, then the coupled point on the *left* side with even method. Afterwards other points on the respective vessel may be added.
- **In men:** First needle the opening point on the *left* side with even method, then the coupled point on the *right* side with even method. Afterwards other points on the respective vessel may be added.
- **Needle retention:** the needles should be retained for 20–25 minutes and should be removed in the opposite order.

8.1.9 Lower *He-S*ea Points

The lower *he-s*ea points are used as the main points for disorders of their pertaining *fu*-Organ.

Points and clinical application



- **ST-36** (*zusanli*): Lower *he-s*ea point of the Stomach; indication: loss of appetite, epigastric pain and fullness, acid reflux, abdominal pain, constipation, diarrhoea
- **ST-37** (*shangjuxu*): Lower *he-s*ea point of the Large Intestine; indication: appendicitis, diarrhoea
- **ST-39** (*xiajuxu*): Lower *he-s*ea point of the Small Intestine; indication: diarrhoea, abdominal pain
- **G.B.-34** (*yanglingquan*): Lower *he*-sea point of the Gall Bladder; indication: cholecystitis, vomiting
- **BL-40** (*weizhong*): Lower *he*-sea point of the Bladder; indication: urinary incontinence, urinary retention
- **BL-39** (*weiyang*): Lower *he*-sea point of the Triple Burner; indication: urinary incontinence, urinary retention

8.1.10 Meeting Points (*Jiaohui* Points)

Synonym: Intersecting points (Practical Dictionary)

Meeting points (*jiaohui* points) represent intersections between channels and vessels. Needling them allows more than one channel to be influenced and widens the range of actions of a given point. By the same token, the number of needles may be reduced while maintaining a good therapeutic effect.

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	Lung	Large Intestine	Stomach	Spleen	Heart	Small Intestine	Bladder	Kidney	Pericardium	Triple Burner	Gall Bladder	Liver	*Du mai*	*Ren mai*	*Yang wei mai*	*Yin wei mai*	*Yang qiao mai*	*Yin qiao mai*	*Chong mai*	*Dai mai*
LU 1	■			■																
L.I. 14		■				▨	▨								▨					
L.I. 15		■															■			
L.I. 16		■															■			
L.I. 20		■	■																	
ST 1			■										▨	■			■			
ST 2			■														▨			
ST 3			■														■			
ST 4		■	■										▨	▨			■			
ST 5			■								▨									
ST 6			■								▨									
ST 7			■								■									
ST 8			■								■				■					
ST 9			■								■									
ST 12		■	■			■				■	■									
ST 30			■								▨								■	
SP 6				■				■				■						▨		
SP 12				■						▨		■				■				
SP 13				■								■				■				
SP 15				■												■				
SP 16				■												■				
S.I. 10						■	■								■		■			
S.I. 12		■				■				■	■									
S.I. 18						■				■										
S.I. 19						■				■	■									
BL 1			■			■	■			▨	▨		■				■	■		
BL 11						■	■			▨	▨		▨							
BL 12							■						■							
BL 23							■						▨							
BL 31							■				■									
BL 32							■				■									
BL 33							■				■									
BL 34							■				■									
BL 41						■	■													
BL 59							■										▨			
BL 61							■										■			
BL 62							■										▨			
BL 63							■								■					
KID 2								■										▨		
KID 6								■										▨		
KID 8								■										▨		
KID 9								■								■				
KID 11								■											■	
KID 12								■											■	
KID 13								■											■	
KID 14								■											■	
KID 15								■											■	
KID 16								■											■	
KID 17								■											■	
KID 18								■											■	

	Lung	Large Intestine	Stomach	Spleen	Heart	Small Intestine	Bladder	Kidney	Pericardium	Triple Burner	Gall Bladder	Liver	*Du mai*	*Ren mai*	*Yang wei mai*	*Yin wei mai*	*Yang qiao mai*	*Yin qiao mai*	*Chong mai*	*Dai mai*
KID 19								■											■	
KID 20								■											■	
KID 21								■											■	
P 1									■	▨	■	■								
T.B. 13										■					▨					
T.B. 15										■	■				■					
T.B. 17										■	■									
T.B. 20						▨				■	■									
T.B. 22						■				■	■									
G.B. 1						■				■	■									
G.B. 3			■							■	■									
G.B. 4			■							■	■									
G.B. 5		■	■							■	■									
G.B. 6		■	■							■	■									
G.B. 7							■				■									
G.B. 8							■				■									
G.B. 9							■				■									
G.B. 10							■				■									
G.B. 11						▨	■			▨	■									
G.B. 12							■				■									
G.B. 13											■				■					
G.B. 14		▨	▨							▨	■				■					
G.B. 15							■				■				■					
G.B. 16											■				■					
G.B. 17											■				■					
G.B. 18											■				■					
G.B. 19											■				■					
G.B. 20										▨	■				■		■			
G.B. 21			▨							■	■				■					
G.B. 23							▨				■									
G.B. 24				■							■				▨					
G.B. 26											■									■
G.B. 27											■									■
G.B. 28											■									■
G.B. 29											■						■			▨
G.B. 30							■				■									
G.B. 35											■						▨			
LIV 13											■	■								▨
LIV 14				■								■				■				
Du 1								■			■		■	■						
Du 13							■						■							
Du 14		■	■			■	■			■	■		■							
Du 15													■		■					
Du 16													■		■		▨			
Du 17							■						■							
Du 20							■			■	■	■	■							
Du 24			■				■						■							
Du 26		■	■										■							
Du 28			▨										■	■						
Ren 1													■	■					■	

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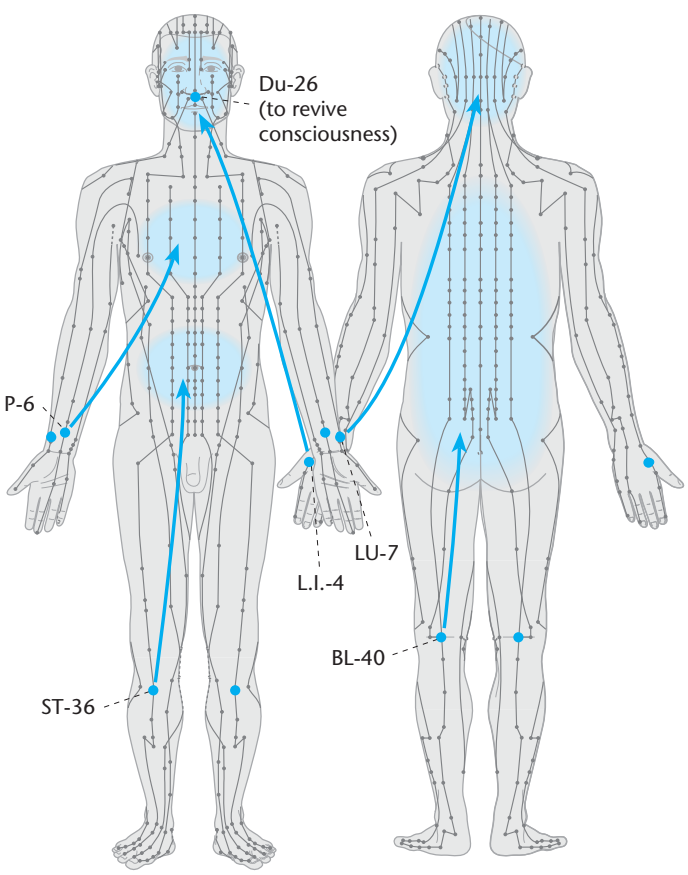
	Lung	Large Intestine	Stomach	Spleen	Heart	Small Intestine	Bladder	Kidney	Pericardium	Triple Burner	Gall Bladder	Liver	*Du mai*	*Ren mai*	*Yang wei mai*	*Yin wei mai*	*Yang qiao mai*	*Yin qiao mai*	*Chong mai*	*Dai mai*
Ren 2												■								
Ren 3				■				■				■								
Ren 4				■				■				■								
Ren 7								▨											■	
Ren 10			▨	■																
Ren 12			■			■				▨										
Ren 13			■			■														
Ren 17				■		■		■		■										
Ren 22																■				
Ren 23																■				
Ren 24		■	■										■							

▨ only mentioned by some authors

8.1.11 The Gao Wu Command Points

Synonym: none known

These points have the ability to affect certain regions of the body. By combining these points with local and other specific points they can increase the therapeutic effect in a particular area of the body.



Points and clinical application

- **ST-36** (*zusanli*): for all disorders of the abdomen
- **L.I.-4** (*hegu*): for disorders of the face and mouth
- **LU-7** (*lieque*): for disorders of the occiput
- **BL-40** (*weizhong*): for disorders of the back and lumbar region
- **P-6** (*neiguan*): for disorders of the thorax
- **Du-26** (*renzhong*): for restoring consciousness (The last two points were added later, → Deadman et al 1998)

8.1.12 The Window of Heaven Points

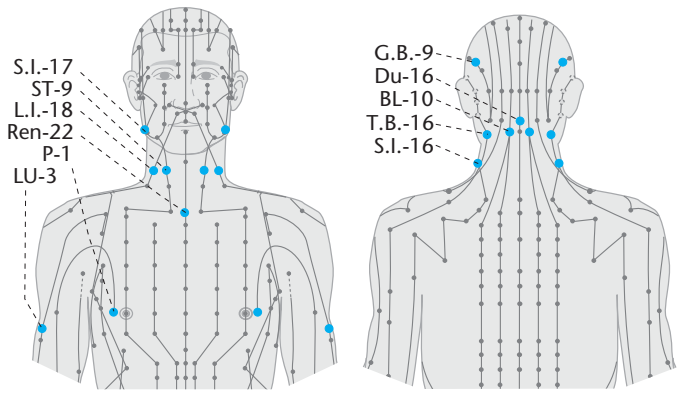
In Chinese classical literature there are only a few references to these points. In modern times, both Ross (1995) and Deadman et al (1998) mention this group of points.

Points

LU-3 (*tianfu*) **L.I.-18** (*futu*) **P-1** (*tianchi*)
T.B.-16 (*tianyou*) **S.I.-16** (*tianchuang*) **S.I.-17** (*tianrong*)
ST-9 (*renying*) **BL-10** (*tianzhu*) **Ren-22** (*tiantu*)
Du-16 (*fengfu*)

Location: Eight of the Window of Heaven points are located in the neck region (exceptions are **LU-3** on the upper arm and **P-1** on the thorax). This might provide a clue about the action of these points in regulating the Qi flow between the head and the body.

Comment: According to Deadman, the Ming dynasty physician Ma Shi remarked that **S.I.-17** should be replaced by **G.B.-9** (*tianchong*). If that was the case all six Yang channels running to the head would be represented by a Window of Heaven point.



Clinical application

- For disorders of the Qi flow:
  - **LU-3, L.I.-18, Ren-22** for counterflow Qi causing cough, wheezing, etc.
  - **P-1** for counterflow Lung Qi with copious Phlegm
  - **ST-9** for counterflow Lung and Stomach Qi
  - **BL-10** treats dizziness, headaches and stiffness of the occiput, etc.
  - **Du-16** for internal Liver Wind

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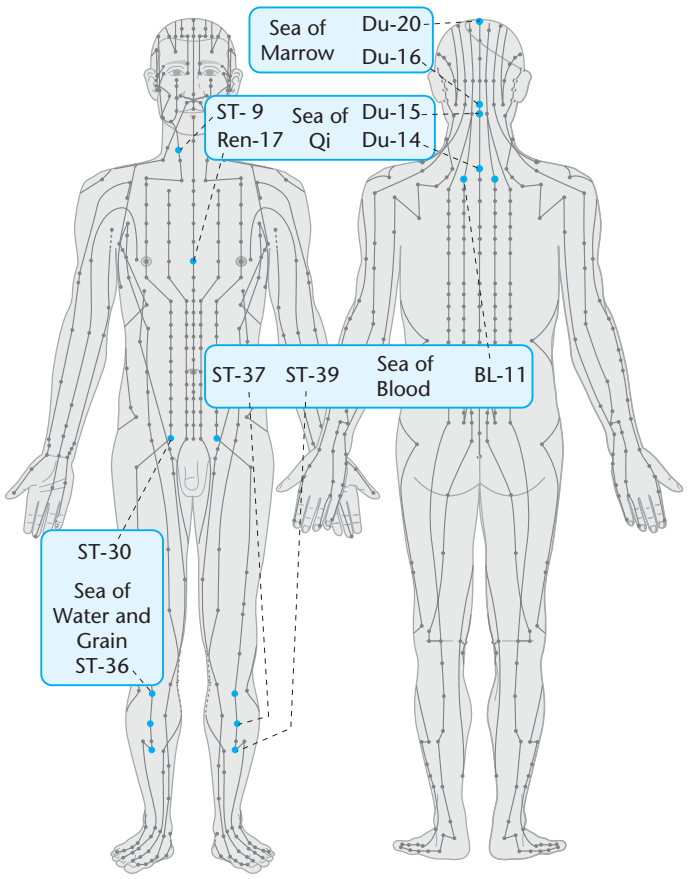
- For goitre, swellings, pain and Qi stagnation in the occiput and neck: especially indicated if these occur locally
- For disorders with an acute onset, for example
  - **L.I.-18** for acute aphonia
  - **ST-9** for acute diarrhoea
  - **S.I.-16** for acute aphonia, for example following a stroke
  - **BL-10** for epilepsy
  - **T.B.-16** for acute hearing loss
  - **Ren-22** for acute dyspnoea
  - **Du-16** for acute aphasia following a stroke
- For psychological disorders:
  - **LU-3** for somnolence, grief, disorientation, forgetfulness, insomnia
  - **S.I.-16** for manic agitation and bipolar disorder
  - **BL-10** for mania, hallucinations, epilepsy, childhood convulsions
  - **T.B.-16** for vivid dreaming
  - **Du-16** for mania, grief, anxiety with anxiety-induced palpitations
- For disorders of the sensory organs:
  - **LU-3** for nose bleeding, blurry vision, myopia
  - **ST-9** for blurry vision
  - **S.I.-16** for deafness, tinnitus, ear pain
  - **S.I.-17** for tinnitus and deafness
  - **BL-10** for eye pain, blurry vision, excessive tearing, speech disorders, blocked nasal passages, loss of sense of smell
  - **T.B.-16** for hearing disorders, visual disorders, eye pain, excessive tearing, loss of sense of smell, blocked nasal passages
  - **Du-16** for speech disorders (for example following a stroke), blurry vision, nosebleeds
  - **Ren-22** for speech disorders

8.1.13 Points of the Four Seas

These points have a particular, supportive effect on their respective 'Sea'.



Sea of Qi	**ST-9** (*renying*), **Ren-17** (*danzhong or shanzhong*), **Du-15** (*yamen*), **Du-14** (*dazhui*)
*Ling Shu**: 'When the Sea of Qi is in excess there is fullness in the chest, urgent breathing and a red complexion. When the Sea of Qi is insufficient, there is scanty energy, insufficient for speech.'	
Sea of Blood	**BL-11** (*dazhu*), **ST-37** (*shangjuxu*), **ST-39** (*xiajuxu*)
*Ling Shu**: 'The Penetrating vessel is the sea of the twelve channels. In the upper it is conveyed to BL-11 (*dazhu*), and in the lower it emerges at both the ST-37 (*shangjuxu*) and ST-39 (*xiajuxu*) …When the Sea of Blood is in excess, then one has a sensation of the body being big; one feels disquiet, but does not know what the illness is; when the Sea of Blood is insufficient, one has the sensation of one's body being small; one feels reduced but does not know what the illness is.'	
Sea of Water and Grain	**ST-30** (*qichong*) as upper point, **ST-36** (*zusanli*) as lower point
*Ling Shu**: 'When the Sea of Water and Grain is in excess, there is abdominal fullness, and when it is deficient, there is hunger with inability to eat.'.	
Sea of Marrow	**Du-20** (*baihui*), **Du-16** (*fengfu*)
*Ling Shu**: 'When the Sea of Marrow is in excess, there is lightness of the body and much strength, and a person's feeling of 'self' exceeds the normal level; when the Sea of Marrow is insufficient there is a whirling sensation of the brain, dizziness, tinnitus, pain of the lower legs, impairment of vision, indolence and desire to sleep.'	

* Quotes from the *Ling Shu* according to Deadman et al. (1998).

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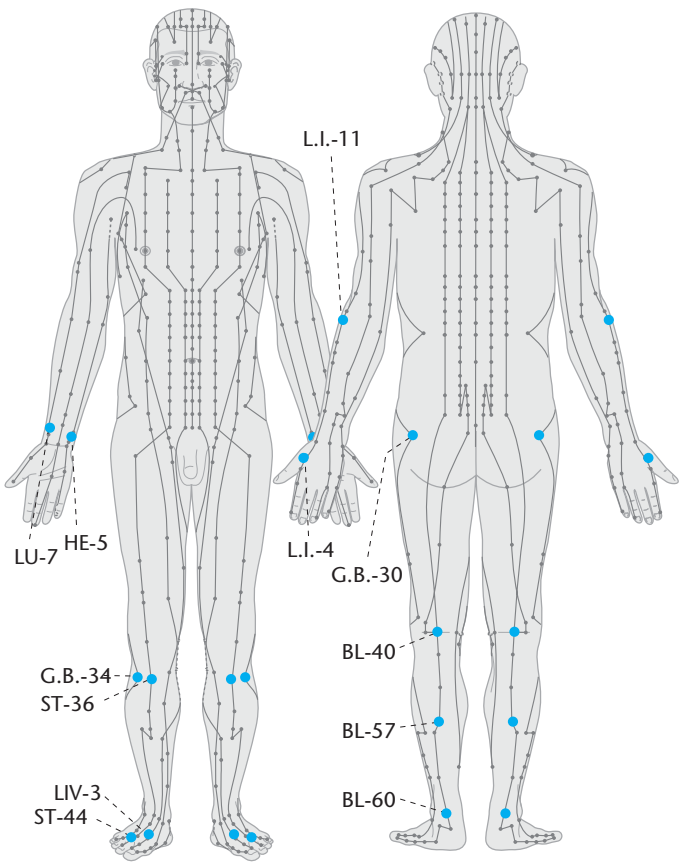
8.1.14 The 12 Heavenly Star Points of Ma Dan Yang

Ma Dan Yang, a famous physician of the Jin dynasty, considered these initial 11 points as the most important acupuncture points. It was the physician Xu Feng who later added **LIV-3** as the 12th point.

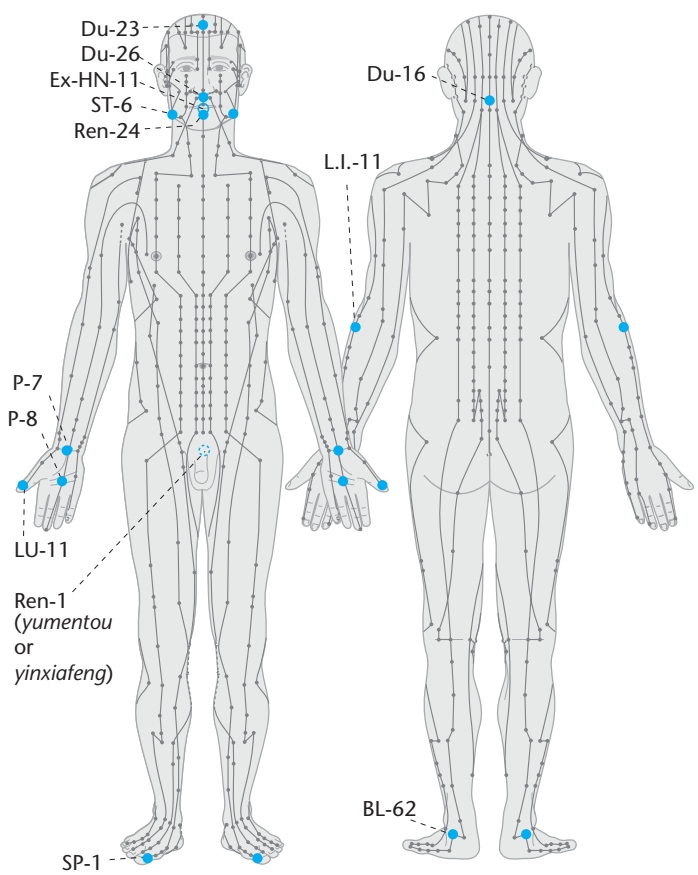


LU-7 (*lieque*) **L.I.-4** (*hegu*) **L.I.-11** (*quchi*)
ST-36 (*zusanli*) **ST-44** (*neiting*) **HE-5** (*tongli*)
BL-40 (*weizhong*) **BL-57** (*chengshan*) **BL-60** (*kunlun*)
G.B.-30 (*huantiao*) **G.B.-34** (*yanglingquan*) **LIV-3** (*taichong*)

8.1.15 The 13 Ghost Points of Sun Si Miao

Sun Si Miao, a famous physician of the Tang Dynasty, applied these 13 points (also called demon points) for treating disorders that today would be considered severe, manic, psychological disorders and/or epilepsy. Each *Sun Si Miao* Ghost point has an alternative Chinese name containing the component 'demon' or 'ghost' (see list according to Deadman et al. 2000). According to Deadman et al., some authors assumed that *guixin* is **LU-9** (*taiyuan*) rather than **P-7** (*daling*), while *guilu* is believed to be **P-5** (*jianshi*) or **P-8** (*laogong*) rather than **BL-62** (*shenmai*). There also exist different versions of this list of points; for example the physician Gao Wu omitted **BL-62, Du-23, Ren-1*** (in the original text of *Sun Si Miao: yumentou/yinxiafeng*) and **L.I.-11**, adding **Du-24, ST-17, LIV-2 and G.B.-34** instead.

	Name	Alternative name	Translation
Du-26	*renzhong*	*guigong*	Ghost Palace
Du-16	*fengfu*	*guizhen*	Ghost Pillow
Du-23	*shangxing*	*guitang*	Ghost Hall
Ren-24	*chengjiang*	*guishi*	Ghost Market
LU-11	*shaoshang*	*guixin*	Ghost Faith
L.I.-11	*quchi*	*guitui*	Ghost Leg
ST-6	*jiache*	*guichuang*	Ghost's Bed
SP-1	*yinbai*	*guilei*	Ghost Fortress
P-7	*daling*	*guixin*	Ghost Heart
P-8	*laogong*	*guicu*	Ghost Cave
BL-62	*shenmai*	*guilu*	Ghost Path
Ex-HN-11	*haiquan*	*guifeng*	Ghost Seal
Ren-1*	*huiyin*	*guicang*	Ghost Store



* *Yumentou* (in women) and *yinxiafeng* (in men): these two extra points approximately correspond to Ren-1 (*huiyin/guicang*) (Ghost Store).

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8.1.16 Entry/Exit Points

While in modern Chinese literature entry/exit points are not mentioned as a separate point category, they are listed as such in some Western literature (for example Jarrett 2003, Hicks et al. 2004, Pirog 1996). However, Hicks et al. (→ 2004, p. 250) postulate that original Chinese sources exist for these points. The concept of entry/exit points is based on a continuous flow of Qi from one channel to the next, the sequence corresponding to the Organ clock (→ 1.1.4). Shunts are suggested in order to facilitate the flow of Qi from the end of one channel to the beginning of the next. At an entry point the Qi therefore flows from the preceding channel into the following one, while at the exit points it leaves the current channel in order to enter the next one.
However, it should be noted that the entry/exit points do not always correspond to the first or last point on a channel. In the following table these points are marked by grey shading.

Channel (sequence according to Organ clock)	Time of maximum Qi flow	Entry/exit points in sequential order		
LU (LU-1–LU-11)	3–5am	LU-1 (*zhongfu*)	➡	LU-7 (*lieque*)
				⬇
L.I. (L.I.-1–L.I.-20)	5–7am	L.I.-20 (*yingxiang*)	⬅	L.I.-4 (*hegxu*)
		⬇		
ST (ST-1–ST-45)	7–9am	ST-1 (*chengqi*)	➡	ST-42 (*chongyang*)
				⬇
SP (SP-1–SP-21)	9–11am	SP-21 (*dabao*)	⬅	SP-1 (*yinbai*)
		⬇		
HE (HE-1–HE-9)	11am–1pm	HE-1 (*jiquan*)	➡	HE-9 (*shaochong*)
				⬇
S.I. (S.I.-1–S.I.-19)	1–3pm	S.I.-19 (*tinggong*)	⬅	S.I.-1 (*shaoze*)
		⬇		
BL (BL-1–BL-67)	3–5pm	BL-1 (*jingming*)	➡	BL-67 (*zhiyin*)
				⬇
KID (KID-1–KID-27)	5–7pm	KID-22 (*bulang*)	⬅	KID-1 (*yongquan*)
		⬇		
P (P-1–P-9)	7–9pm	P-1 (*tianchi*)*	➡	P-8 (*laogong*)*
				⬇
T.B. (T.B.-1–T.B.-23)	9–11pm	T.B.-22 (*erheliao*)	⬅	T.B.-1 (*guanchong*)
		⬇		
G.B. (G.B.-1–G.B.-44)	11pm–1am	G.B.-1 (*tongziliao*)	➡	G.B.-41 (*zulinqi*)
				⬇
LIV (LIV-1–LIV-14)	1–3am	LIV-14 (*qimen*)	⬅	LIV-1 (*dadun*)

* In women P-2 is often substituted for P-1 due to its anatomical location close to the breast.

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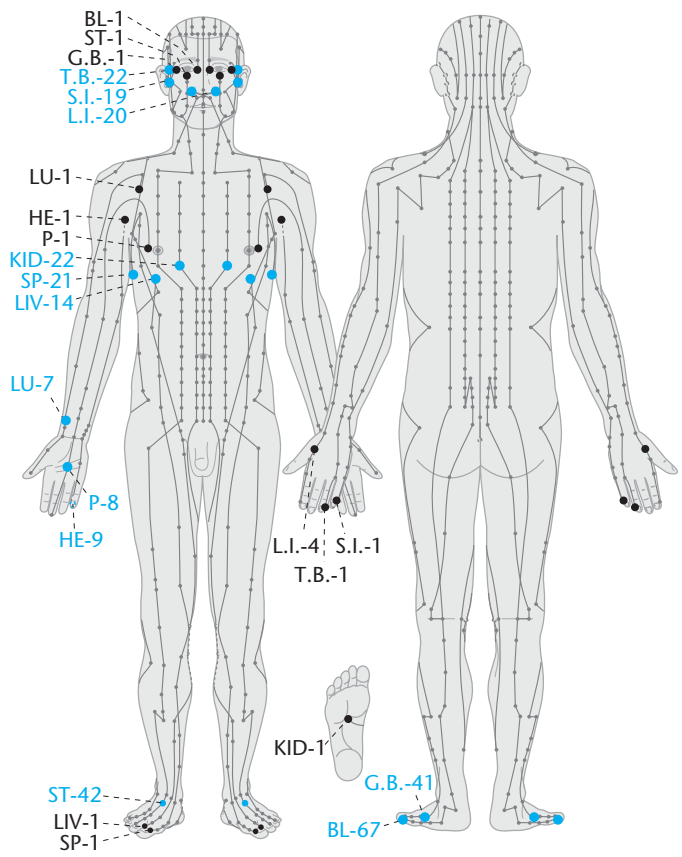

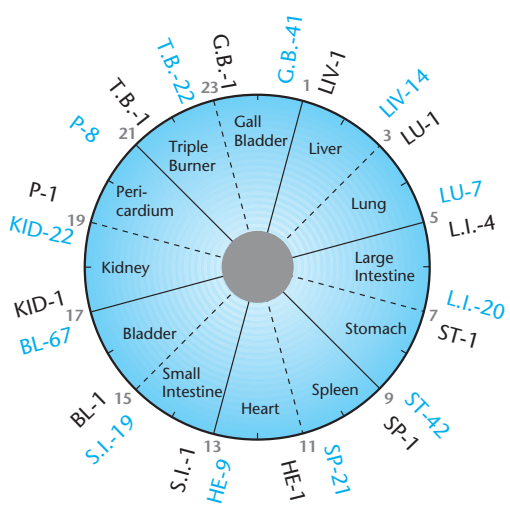

Entry/exit block and therapy

Pulse diagnosis can reveal the partial or complete block between entry and exit points. An entry/exit block will inhibit the Qi flow from one channel to the next. In order to restore the blocked flow, the exit point of the blocked channel and the entry point of the following channel are needled at the same time. According to Hicks et al. (2004), further exit and entry points preceding or following the affected channel can be added in order to regulate the Qi flow over a greater distance. Needling should always be **bilateral**, even if the disorder occurs only on one side of the body. If it is not only the shunt between two channels, but the circulation in a channel as a whole that is affected, the flow in the whole channel can be strengthened and stimulated by simultaneous needling of both its entry point and its exit point.

Pirog (1996) compares the entry/exit points to input and output valves regulating the flow in a series of pipes (the channels) by 'opening' or 'closing' them.

- Tonifying needling techniques at the entry point (opening the input valve) will increase the flow into the channel. For example: tonifying **LU-1** opens the input valve. This will increase Qi flow in the LU channel for deficiency in this channel.
- Tonifying needling techniques at the exit point (opening the output valve) will decrease the flow in the channel. For example: Tonifying **LIV-14** opens the output valve: excess in the LIV channel will be drained.
- Reducing needling techniques at the entry point (closing the input valve) will reduce the flow into the channel. For example: Reducing **LU-1** closes the input valve and reduces the flow from the LIV channel into the LU channel, for example if there is pre-existing excess in the LU channel.
- Reducing needling techniques at the exit point (closing the output valve) will strengthen the flow in the channel. For example: Reducing **LIV-14** closes the output valve and prevents a further loss of Qi if there is a pre-existing deficiency in the LIV channel.

8.2 Strategies for Point Selection

8.2.1 Local, Adjacent and Distal Points

Local points

Local points are located in the immediate vicinity of the affected region. Each point that is tender with pressure (*ashi* point) can be considered to be a local point.

Adjacent points

Adjacent points are located near the affected or painful region.

Distal points

Distal points, despite being located at a distance from the affected area, still have a therapeutic effect, either directly or by being connected to the affected area by a channel (→ 1, also → 8.2.2, selection of distal points). The most effective and dynamic distal points are located distal to the knee (for the leg) or the elbow (for the arm). Generally the distal points of the foot channels tend to be more dynamic and effective than those on the arm channels.

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Needling technique: In acute conditions or with severe pain the distal points should be needled with a reducing technique in order to activate the Qi flow more strongly in the blocked channels.

Stimulation of distal points: For a limited range of motion accompanied by pain the relevant distal point is strongly stimulated with a reducing technique while the patient moves the affected joint.

Enhancing the therapeutic effect: The therapeutic effect can be enhanced by combining distal points on the hand channels with those on the foot channels or by combining distal points with relevant local and adjacent points (→ 8.3.1).

8.2.2 Point Selection According to Affected Channel

Here the method of selecting points is based on the channel system (→ 1):

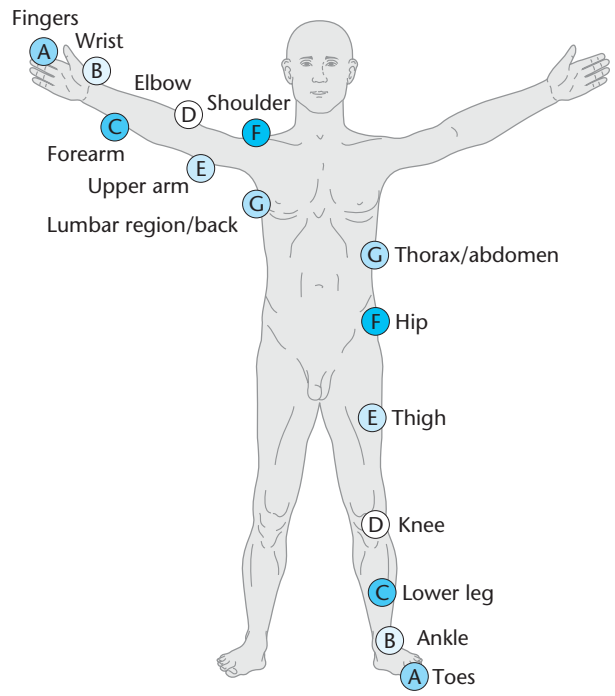
- Selecting points on the channel which **traverses the affected area**
- Selecting points on the channel that is **Interiorly–Exteriorly pertaining** (→ 1.2) to the affected channel
- Selecting points from the channel which is connected to the affected channel by **hand–foot pairing** (for example, *taiyang* axis, etc. → 1.2.3)

Differential selection of distal points

The following possibilities for selecting distal points are, among others, based on course material about the 'one point therapy' by R. Thambirajah (1990, 1991), R. Tan (2003) and my own clinical experience.

Selection of distal points according to corresponding areas

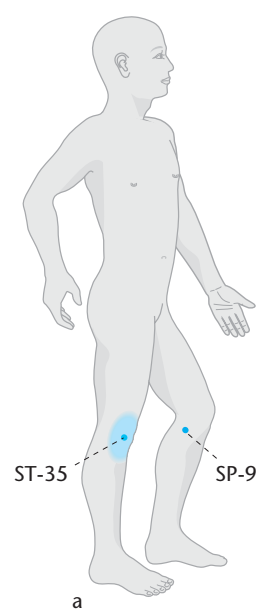
The distal points can be selected according to corresponding areas. The affected area is carefully examined, then the corresponding area is needled contralaterally (→ Fig.).



Selection of distal points according to Interiorly–Exteriorly connected channels

Here points are selected on the Interiorly–Exteriorly connected channel (Yin/Yang). The affected area is carefully located, then the corresponding point (mirror point) is needled with reducing technique on the contralateral side on the Interiorly–Exteriorly pertaining channel. Another specific example for this method of point selection is the *yuan–luo* combination (→ 8.3.3).

Example: For a disorder affecting the ST channel (foot *yangming*) select a point on the Interiorly–Exteriorly pertaining SP channel (foot *taiyin*). For example, for knee pain at **ST-35**, needle **SP-9** contralaterally (→ Fig.).



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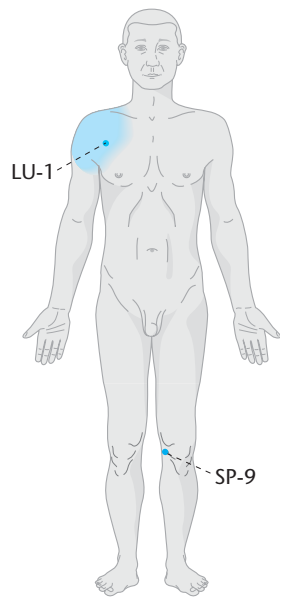
Selection of distal points according to the six great channels (*liu jing*, hand–foot pairing, → 1.2.3)

The point selection with this method is based on the six great channels (hand–foot pairing: *taiyin, taiyang*, etc., → 1.2.3). Disorders affecting the area of the hand channel are therefore treated with points on the corresponding foot channel and vice versa.

Example: Disorders in the area of the hand *taiyin* channel (LU channel) can be balanced by contralateral needling of points on the foot *taiyin* channel (SP channel). For example, shoulder pain with limited range of motion and maximum pain near **LU-1** (*zhongfu*) can be improved by contralateral needling of **SP-9** (*yinlingquan*) with reducing technique.



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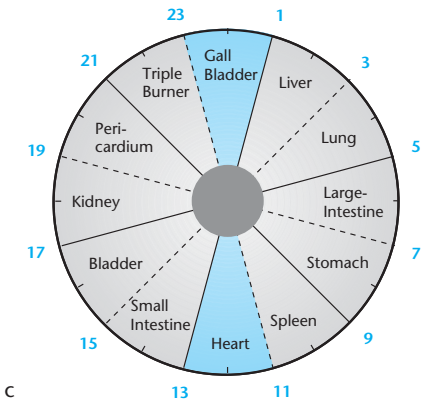
Selection of distal points according to the Organ clock (→ 1.4)

Distal points are selected on the channel that lies chronologically opposite to the affected channel on the Organ clock (→ 1.4). With this method, hand channels will treat disorders affecting the foot channels and vice versa.

Example: For a disorder affecting the G.B. channel (foot *shaoyang*), needle a point on the HE channel (hand *shaoyin*) located opposite the G.B. channel on the Organ clock. Needling can be contralateral or ipsilateral.



c

8.2.3 Point Selection Based on Symptoms

Points can also be selected based on traditional or empirical therapeutic experiences. While this method cannot replace a root treatment based on a differential diagnosis, it can be very helpful in situations where quick action is required.

Examples:

- **Du-14** or **L.I.-11** for fever
- **ST-36, Ren-12** for acute gastrointestinal disorders

8.2.4 Point Selection Based on the Qi Flow of the Organs

Descend counterflow Qi:

- Stomach: **Ren-10, Ren-13, ST-34, ST-44, ST-45, L.I.-4**
- Lung: **LU-1, LU-5, LU-7**
- Heart: **HE-5, HE-8, Ren-15**
- Kidney: **KID-1, KID-7, Ren-4**
- Liver: **LIV-2, LIV-3, LIV-1, LIV-14**

Raise Qi:

Spleen: **Ren-6, Ren-12, Du-20, BL-20**

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8.2.5 Point Selection According to the Five Phases (Elements)

While the Five Phase points are identical to the *shu*-transporting points in location, their function and application differ from the latter (for more detail → 8.1.6). There exist various very specific methods regarding diagnosis, point selection and therapy based on the Five Phases, which are practised by several different schools of thought. Within the framework of this Atlas, only a simplified overview of the possible clinical applications is listed below.

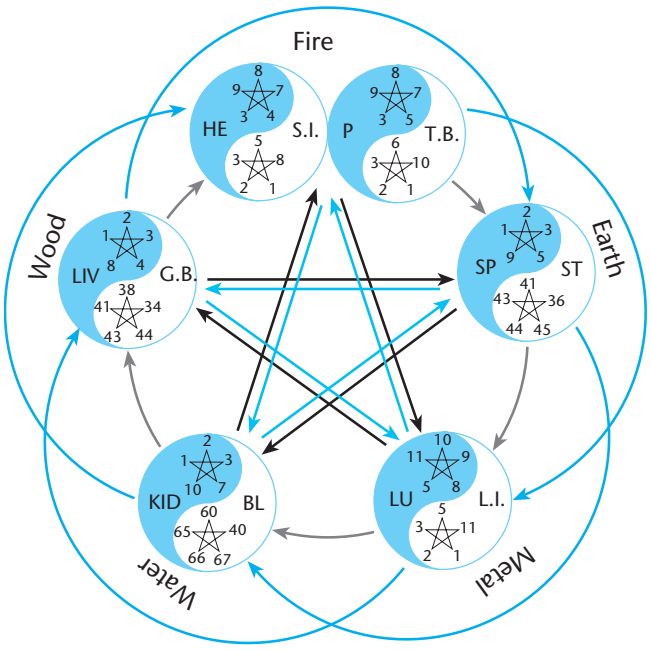
***Shu*-transporting points of the Yin channels**					
Phase/ channel	Wood point	Fire point	Earth point	Metal point	Water point
LU	LU-11	LU-10	LU-9 +	LU-8	LU-5 −
SP	SP-1	SP-2 +	SP-3	SP-5 −	SP-9
HE	HE-9 +	HE-8	HE-7 −	HE-4	HE-3
KID	KID-1 −	KID-2	KID-3	KID-7 +	KID-10
P	P-9 +	P-8	P-7 −	P-5	P-3
LIV	LIV-1	LIV-2 −	LIV-3	LIV-4	LIV-8 +
Channel Qi flow	*Jing*-well point	*Ying*-spring point	*Shu*-stream point	*Jing*-river point	*He*-sea point
***Shu*-transporting points of the Yang channels**					
Phase/ channel	Metal point	Water point	Wood point	Fire point	Earth point
L.I.	L.I.-1	L.I.-2 −	L.I.-3	L.I.-5	L.I.-11 +
ST	ST-45 −	ST-44	ST-43	ST-41 +	ST-36
S.I.	S.I.-1	S.I.-2	S.I.-3 +	S.I.-5	S.I.-8 −
BL	BL-67 +	BL-66	BL-65 −	BL-60	BL-40
T.B.	T.B.-1	T.B.-2	T.B.-3 +	T.B.-6	T.B.-10 −
G.B.	G.B.-44	G.B.-43 +	G.B.-41	G.B.-38 −	G.B.-34
Channel Qi flow	*Jing*-well point	*Ying*-spring point	*Shu*-stream point	*Jing*-river point	*He*-sea point

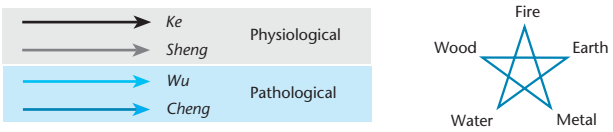
+, tonification point; − , sedation point

Cycles

The Five Phases influence each other both physiologically (*sheng* and *ke* cycle) as well as pathologically (*cheng*, *wu* and to some extent also *sheng* cycle). If the balance between the Five Phases is disturbed, pathological syndromes will appear.

- *Sheng* cycle (generating cycle, mother–son cycle): a phase generates and nourishes the following phase. Each phase nourishes (as mother) and is nourished (as son) at the same time. Fire nourishes Earth, Earth nourishes Metal, Metal nourishes Water, Water nourishes Wood, and Wood nourishes Fire. In a pathological condition either the mother is too weak to nourish the son sufficiently or the son is too strong, draining his mother and weakening her.
- *Ke* cycle (controlling cycle): one phase controls another and is itself controlled by yet another phase.
- *Cheng* cycle (overacting cycle): The controlled phase is pathologically suppressed or weakened.
- *Wu* cycle (insulting cycle): A phase is pathologically stronger than its controlling phase.





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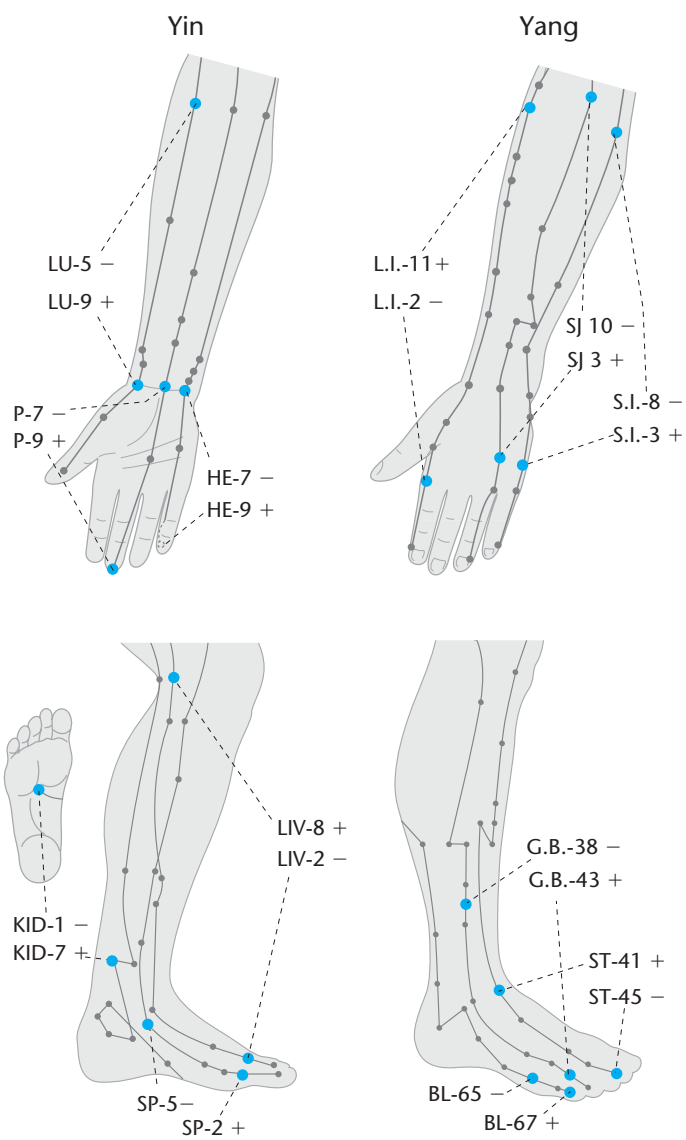
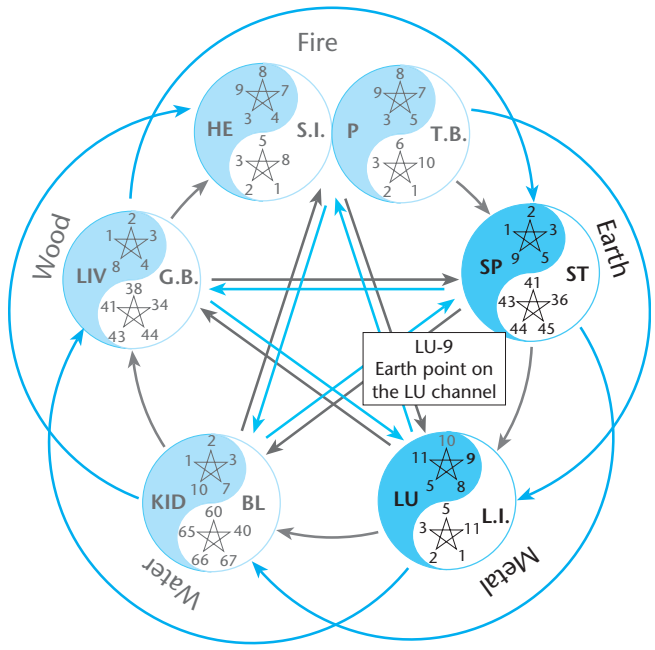
Simple point selection according to the *sheng* cycle





Treatment principle: For deficiency tonify the mother, for excess drain (sedate) the son. Mother–son points are identical to the tonification and sedation points of a channel. The correct needling technique is important in order to obtain the desired result:

- tonifying method for tonification points
- reducing method for sedation points

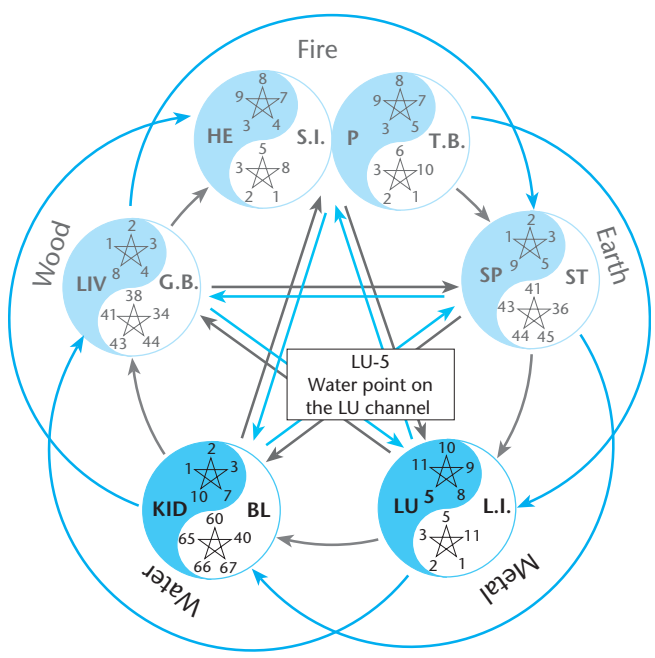
Example for the clinical application of the *sheng* cycle

For deficiency: In cases of deficiency of a particular channel/Organ, tonify that point on the affected channel that corresponds to the phase of the mother.

Example: Earth is the mother of Metal. If the Lung (Metal) is deficient, needle the Earth point (**LU-9**) on the Lung channel with tonifying technique.

For excess: If there is excess in a particular channel/Organ, select that point on the channel which corresponds to the phase of the son and needle it with reducing technique.

Example: Water is the son of Metal. If the Lung (Metal) is in excess, needle the Water point (LU-5) on the Lung channel with reducing technique.



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***Addendum*:** The terms tonification/sedation points are somewhat controversial, since the properties of a point can often be overshadowed by its other features. For example, according to the Five Phase theory, **P-9** and **HE-9** are considered tonification points, since they correspond to the phase of the mother. However, in clinical practice they are much more frequently used as *jing*-well points for acute situations – thus they are considered from the point of view of the Qi flow in the channels, especially in order to drain Heat.

Application of the Five Phase points for the elimination of external pathogenic factors

A connection exists between the Five Phases and pathogenic factors (Maciocia 1994; according to Ross 1998, however, these points should only be used for internal disorders):

- Wood corresponds to Wind
- Fire corresponds to Heat
- Earth corresponds to Dampness
- Metal corresponds to Dryness. According to Maciocia this correlation presents an exception: the Metal point should not be needled to treat Dryness; a moistening treatment is here the preferred choice.
- Water corresponds to Cold.

In accordance with these interrelations, Five Phase points can be applied to eliminate pathogenic factors.

Example: Acute sore throat with fever, redness and swelling of the throat due to Wind-Heat

Affected phases: Wood (Wind), Fire (Heat)

Affected Organ/channel: Lungs

Therapy: Needling of the Wood point on the LU channel (**LU-11**) and the Fire point on the LU channel (**LU-10**).

The application of the ***ke* cycle (controlling cycle)** allows a more differentiated approach in the therapy and elimination of pathogenic factors:

- On the Yin channel, needle the point corresponding to the pathogenic factor with reducing technique (for example, for Heat needle the Fire point)
- In addition, needle the point which corresponds to the controlling phase (according to the *ke* cycle/controlling cycle → 8.2.5) of the pathogenic factor on the paired Yang channel with tonifying technique.

Ben points

***Shu*-transporting points of the Yin channels**					
Phase/ channel	Wood point	Fire point	Earth point	Metal point	Water point
LU	LU-11	LU-10	LU-9 +	LU-8	LU-5 −
SP	SP-1	SP-2 +	SP-3	SP-5 −	SP-9
HE	HE-9 +	HE-8	HE-7 −	HE-4	HE-3
KID	KID-1 −	KID-2	KID-3	KID-7 +	KID-10
P	P-9+	P-8	P-7 −	P-5	P-3
LIV	LIV-1	LIV-2−	LIV-3	LIV-4	LIV-8 +
Channel Qi flow	*Jing*-well point	*Ying*-spring point	*Shu*-stream point	*Jing*-river point	*He*-sea point
***Shu*-transporting points of the Yang channels**					
Phase/ channel	Metal point	Water point	Wood point	Fire point	Earth point
L.I.	L.I.-1	L.I.-2 −	L.I.-3	L.I.-5	L.I.-11 +
ST	ST-45 −	ST-44	ST-43	ST-41 +	ST-36
S.I.	S.I.-1	S.I.-2	S.I.-3 +	S.I.-5	S.I.-8 −
BL	BL-67 +	BL-66	BL-65 −	BL-60	BL-40
T.B.	T.B.-1	T.B.-2	T.B.-3 +	T.B.-6	T.B.-10 −
G.B.	G.B.-44	G.B.-43+	G.B.-41	G.B.-38−	G.B.-34
Channel Qi flow	*Jing*-well point	*Ying*-spring point	*Shu*-stream point	*Jing*-river point	*He*-sea point

+, tonification point; – , sedation point

Ben points (root points, element points) represent the same phase as its pertaining channel. **Example:** The Spleen corresponds to Earth; thus the Earth point on the Spleen channel is its *ben* point.

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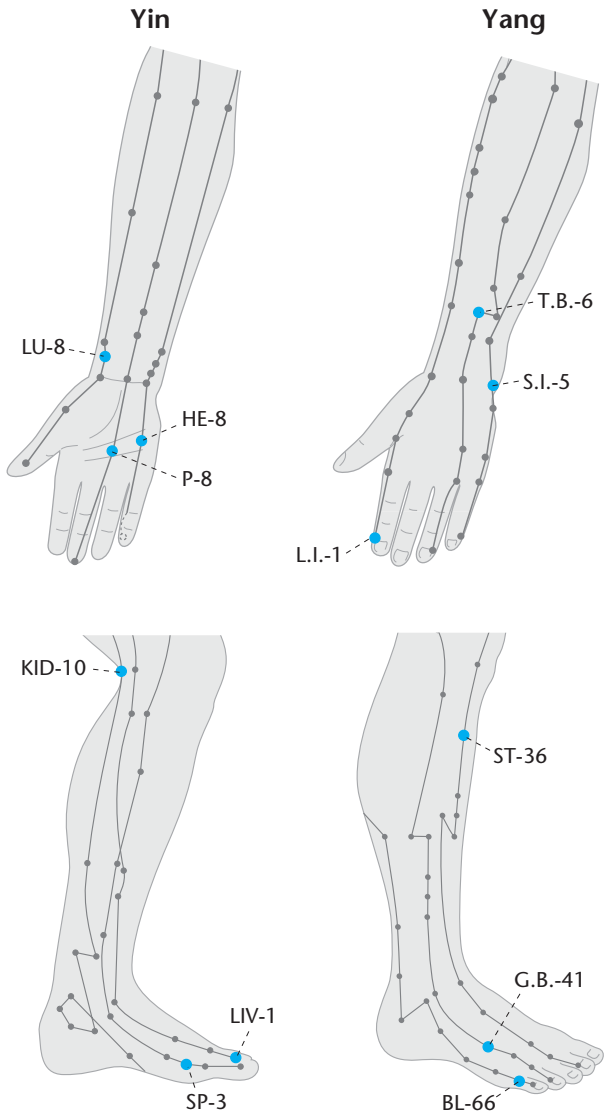


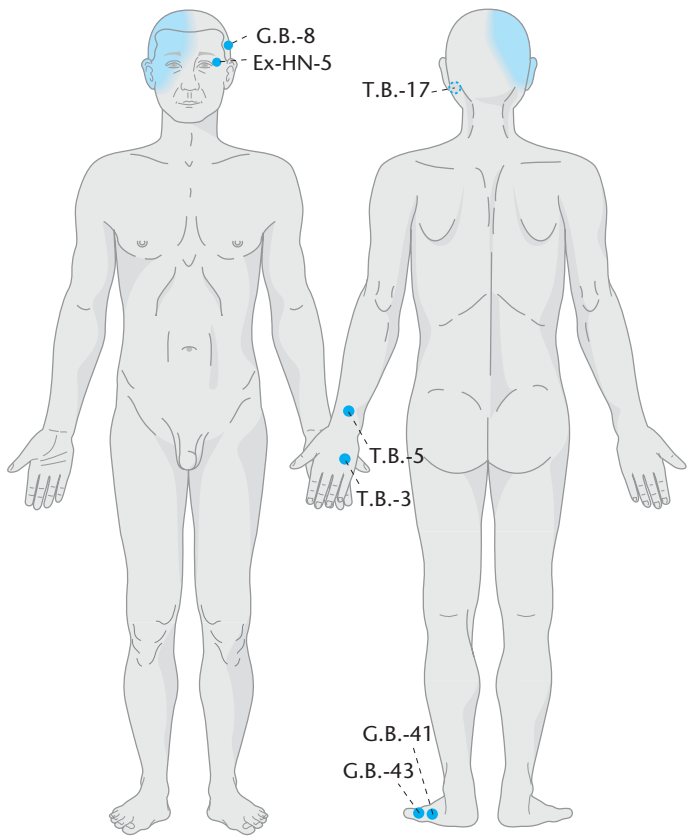
8.3 Point Combinations

8.3.1 Combining Local and Distal Points

Point selection and combination can be carried out according to affected areas and channels (→ 8.2.1, → 8.2.2).

For disorders affecting the channel: For example, for *bi*-syndromes affecting the sinews and joints, distal points can be stimulated first. Then local and adjacent points can be selected based on tenderness. These are needled and/or subsequently cupped.

For disorders of the *zangfu*-Organs: Generally, only distal points are applied in acute conditions. Once the condition (for example, acute pain) has improved, local points can be selected. In chronic conditions the combination of local and distal points – and especially Back-*shu* and Front-*mu* points as adjacent points (→ 8.3.2) – is commonly used. Another possibility is the combination of the opening point of an extraordinary vessel (→ 8.1.8) with local points in the affected area.



Clinical application

- **For deficiency conditions:** needling the *ben* point with tonifying technique will tonify its corresponding Organ or channel
- **For excess conditions:** needling the *ben* point with reducing technique will drain the excess from its corresponding Organ or channel
- **Spiritual aspect:** the *ben* points on the Yin channels also affect the spiritual aspect of their corresponding phases. Thus the LU *ben* point **LU-8** allows the *po* (corporeal soul) to unfold its potential. Similarly the HE *ben* point **HE-8** will empower the *shen* (spirit), the SP *ben* point **SP-3** the *yi* (thinking), the LIV *ben* point **LIV-1** the *hun* (ethereal soul) and the KID *ben* point **KID-10** the *zhi* (will).

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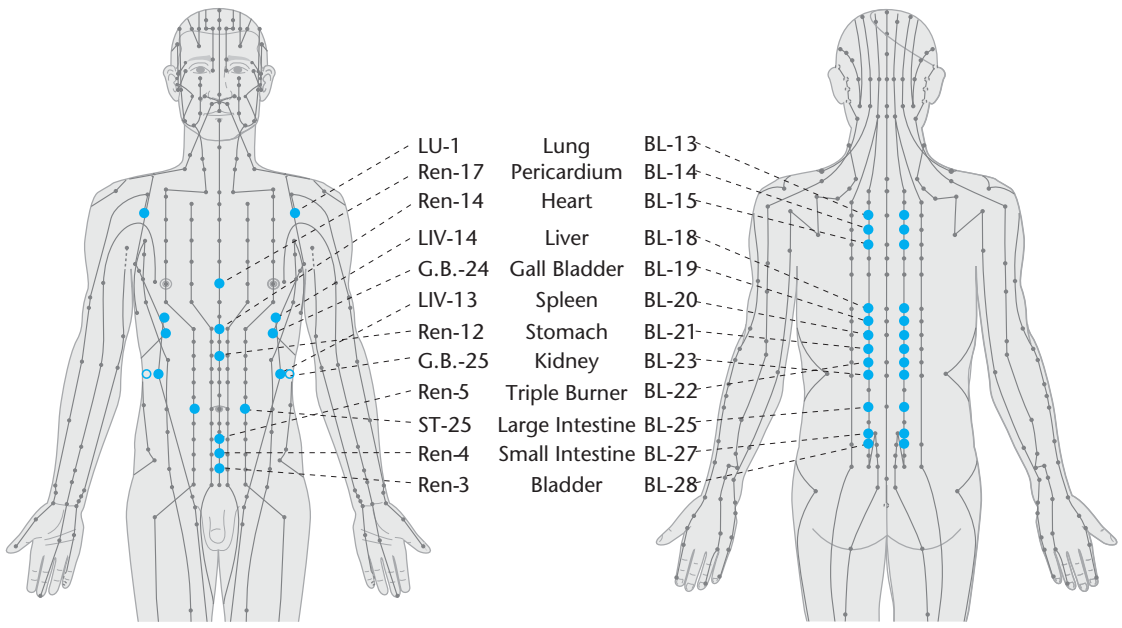
8.3.2 Combining Points on the Front and Back of the Body

Here, points on the anterior and posterior aspect of the body are combined:

- **Anterior points**: mainly located on the thorax and abdomen
- **Posterior points**: mainly located on the back and lumbar region

Back-*shu*/Front-*mu* method

The combination of the Back-*shu* point (→ 8.1.4) and the Front-*mu* point (→ 8.1.5) of the affected Organ is the most important way of combining points on the front and the back of the body. The Back-*shu*/Front-*mu* method enhances and extends the therapeutic effect, compared to using either of those points only. It has a strong Yin/Yang balancing effect and it is particularly beneficial for chronic disorders of the *zangfu*-Organs.



Clinical application of the Back-*shu*/Front-*mu* method

- Needling of the Back-*shu* and Front-*mu* points during one session
- For repeated treatments within a short period of time, alternate needling of the Back-*shu* and Front-*mu* points (for example, during the first treatment select the relevant Back-*shu* point, in the next treatment select the corresponding Front-*mu* point, etc.)
- The Back-*shu*/Front-*mu* combination can also be applied to balance an incorrect treatment. For example, if the needles have been retained too long in the Back-*shu* points and the patient is tired, Front-mu points can be needled to restore balance.

Balancing the *du mai* and the *ren mai*

The points on the *ren mai* are located on the anterior aspect of the body, while those of the *du mai* are predominantly located on the posterior aspect. Combining points on the *ren mai* and *du mai* has a balancing affect on the Yin and Yang and can regulate the ascending and descending flow of Qi. This combination therefore not only balances the front and the back of the body, but also the Yin and the Yang. Furthermore, it has a strong effect on the psyche and, depending on the needling technique and point selection, will have a calming or stimulating effect (figure modified according to Ross 1998).

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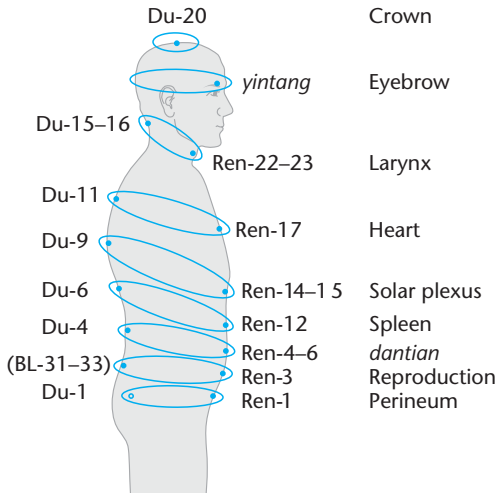


8.3.3 Yin–Yang Combination

Synonym: Interior/Exterior combination

The Yin–Yang combination balances the flow of Yin and Yang in the channels. It is based on the concepts of channel energetics (→ channel circuits, Fig. 1.12).

Needling too many points on the Yang channels can make the patient nervous and restless. In this case, needling points on the Yin channels can restore balance and have a calming effect.

Needling too many points on the Yin channels can lead to tiredness. In this case, needling points on the Yang channels has a balancing, stimulating effect.

Balancing Yin and Yang in paired channels

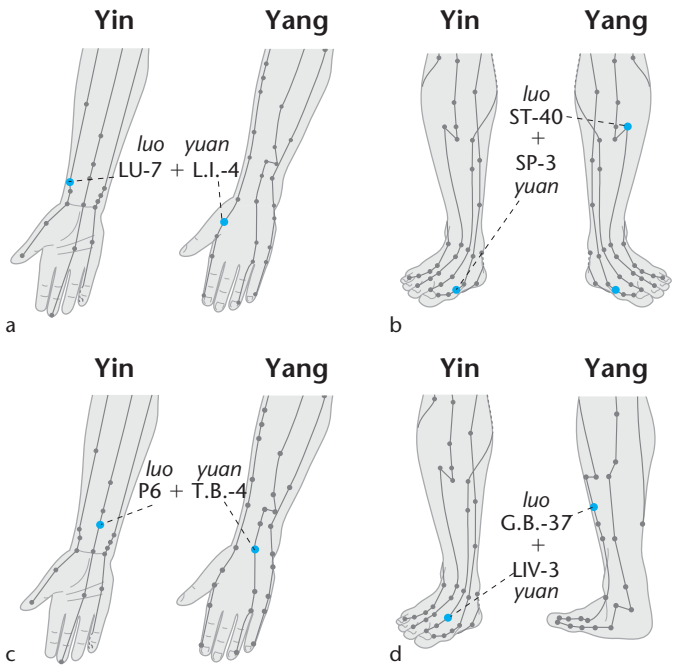
- Points on the Interiorly–Exteriorly paired channels are combined in order to balance Yin and Yang. For example the LU and L.I. channels are the Interiorly–Exteriorly paired channels of the hand, while the ST and SP channels are the Interiorly–Exteriorly paired channels of the foot of the first circuit.
- This method increases the therapeutic effect compared to using only Yin or only Yang points.

Yuan/luo combination

Most important Yin–Yang combination (Synonym: host–guest combination): The *yuan*-source point (host) of the primarily affected channel/Organ is combined with the *luo*-connecting point of the Interiorly–Exteriorly paired channel.

Important *yuan/luo* combinations

- **L.I.-4** (*hegu*) and **LU-7** (*lieque*) support the descending function of the Lung Qi, expel pathogenic factors, tonify the Defensive Qi (*wei qi*) and calm the *shen*
- **SP-3** (*taibai*) and **ST-40** (*fenglong*) tonify the Spleen and transform Phlegm
- **LIV-3** (*taichong*) and **G.B.-37** (*guangming*) benefit the eyes for Liver syndromes
- **T.B.-4** (*yangchi*) and **P-6** (*neiguan*) regulate the Triple Burner, move Liver Qi, calm the *shen*, relax the muscles in the occiput and shoulders.



Further methods of combining points of Interiorly–Exteriorly paired channels and modified *yuan/luo* combinations

a Combining the *luo*-connecting points of Interiorly–Exteriorly paired channels tends to enhance the therapeutic effect; for example combine **ST-40** and **SP-4** for abdominal pain

b For chronic disorders, combine the *yuan*-source point and the *luo*-connecting point of the same Yin channel in order to increase the therapeutic effect; for example needle **LU-9** and **LU-7** for chronic cough.

c For disorders affecting a Yin channel, only needle the *yuan*-source point of the Interiorly–Exteriorly paired Yang channel. For example for an acute cold (a Lung syndrome), needle only **L.I.-4** (*yuan*-source point).

d For unilateral musculoskeletal disorders affecting a Yang channel: in addition to local and adjacent points on the affected channel, needle the contralateral *luo*-connecting point of the Interiorly–Exteriorly paired Yin channel. This method, which promotes balance between Yin and Yang, is mainly used for channel-pertaining disorders. For example: for unilateral arm or shoulder pain along the L.I. channel, needle points on the L.I. channel on the affected side as well as **LU-7** on the opposite side of the body.

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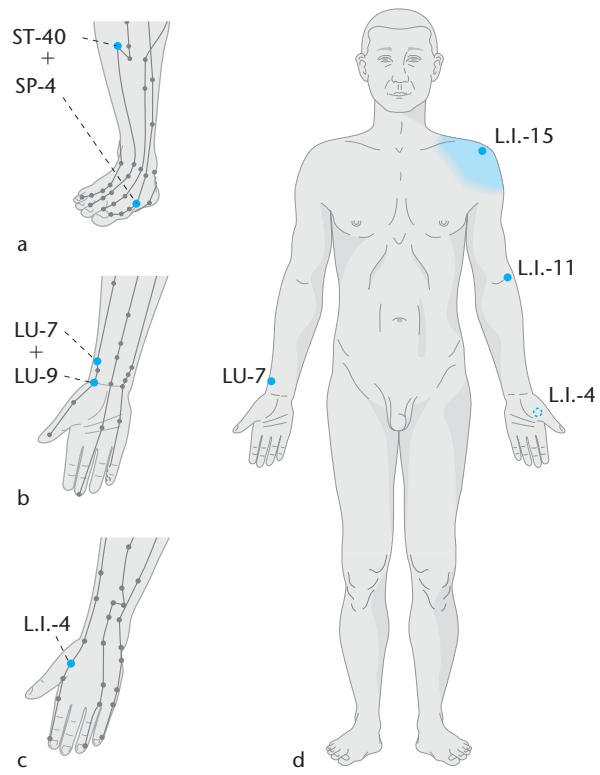
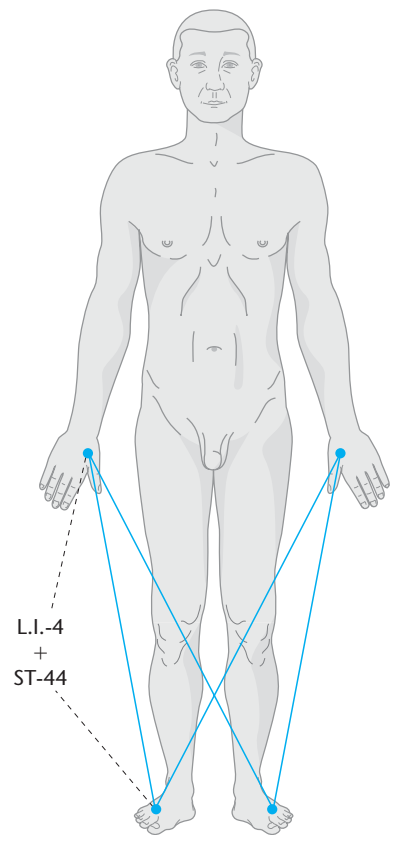


8.3.4 Combining Points from Above and Below



Yin–Yang balance for unpaired channels

Examples:

ST-36 + P-6	Harmonises the Middle Burner and descends counterflow Qi
L.I.-4 + LIV-3	Most important combination for regulating the Qi flow in the whole body

- A balance between the **upper and lower** half of the body is achieved by selecting points that are evenly distributed. For headaches, therefore, **L.I.-4** on the upper extremity is combined with **ST-44** on the lower extremity.
- Combining points above with points below **promotes the smooth flow of Qi**. For example: combining the opening point and coupled point of an extraordinary vessel (→ 8.1.8).

When points from above and below should not be combined

- for acute disorders of the joints and the back – here only distal points should be needled with the reducing method.
- if there is a pre-existing energetic disharmony between above and below. For example: for Heat sensations of the head (for example due to Kidney Yin deficiency with Empty Fire) needle **KID-1** in order to cause the Qi to descend. On the other hand, for a uterine prolapse use moxibustion **on Du-20** in order to raise the Qi.

8.3.5 Left–Right Combination

Often the balance between the right and left half of the body can be restored through bilateral needling of the relevant points. This will increase the therapeutic effect as opposed to unilateral needling.

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Clinical application for Interiorly–Exteriorly paired channels (→ 1.2.3)

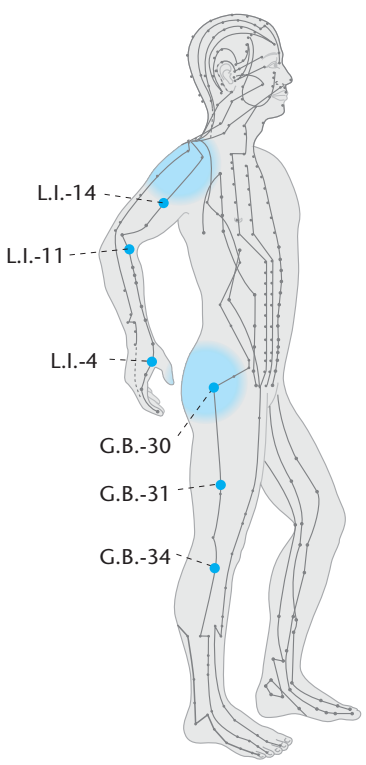
- For acute unilateral channel disorders caused by the invasion of pathogenic factors, combine **local points** on the affected side with the ***luo*-connecting point** on the contralateral side.
- For chronic unilateral channel disorders caused by the invasion of pathogenic factors, combine **local points** on the affected side with the *luo*-**connecting point** of the **Interiorly–Exteriorly paired channel** on the **contralateral** side (with tonifying technique).

Indications for unilateral and/or contralateral needling

- **For acute, painful disorders:** contralateral or diagonal needling (corresponding hand and foot channel, also see → 8.2.1 and → 8.2.2)
- **For chronic joint disorders:** ipsilateral needling of several points balanced by needling of contralateral points.
- **In paediatric acupuncture** (use fewer needles)
- **For ongoing treatment sessions:** occasional balancing contralateral needling of the healthy side of the body

8.3.6 Chain and Lock Point Association Method

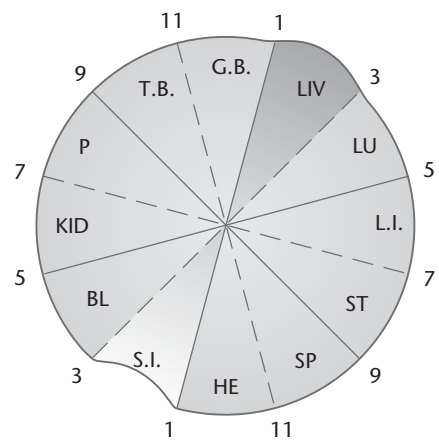
Two, three or more points on the same channel are selected and needled one after the other (in a row). This method is predominantly applied for disorders of the musculoskeletal system or the nervous system.

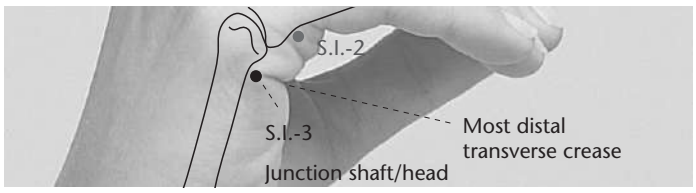


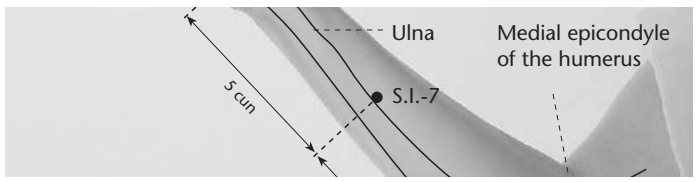
8.3.7 Point Selection According to the Organ Clock

Within a 24-hour cycle each channel experiences a two-hour period of maximum Qi flow (→ Fig. 1.17, Chinese Organ clock). Some modern (Western) schools extrapolate the circadian Qi flow to the Organs (internal channel pathways and divergent channels). If one Organ is at its maximum period, the Organ on the opposite side of the clock will be at its minimum period, in other words the Qi flow will at that time be at its lowest. Symptoms of a disorder occurring at a particular time may provide a hint about the Organ affected, which at that time will be during its **maximal period in excess syndromes** or during its **minimal period in deficiency syndromes**.

For example: Always waking up between 1 and 3 am can be a sign of a Liver syndrome. Thus the tonification point and/or *luo*-connecting point of the channel opposite to the Liver on the Organ clock could be selected, in this example **S.I.-3** (*houxi*, tonification point) or **S.I.-7** (*zhizheng*, *luo*-connecting point).







Addendum: There are some very specific methods for chronoacupuncture, for exampel the *zi wu liu zhu* method and the *ling gui ba fa* method, where points are needled at specific times (→ Kubiena and Ramakers 2002).

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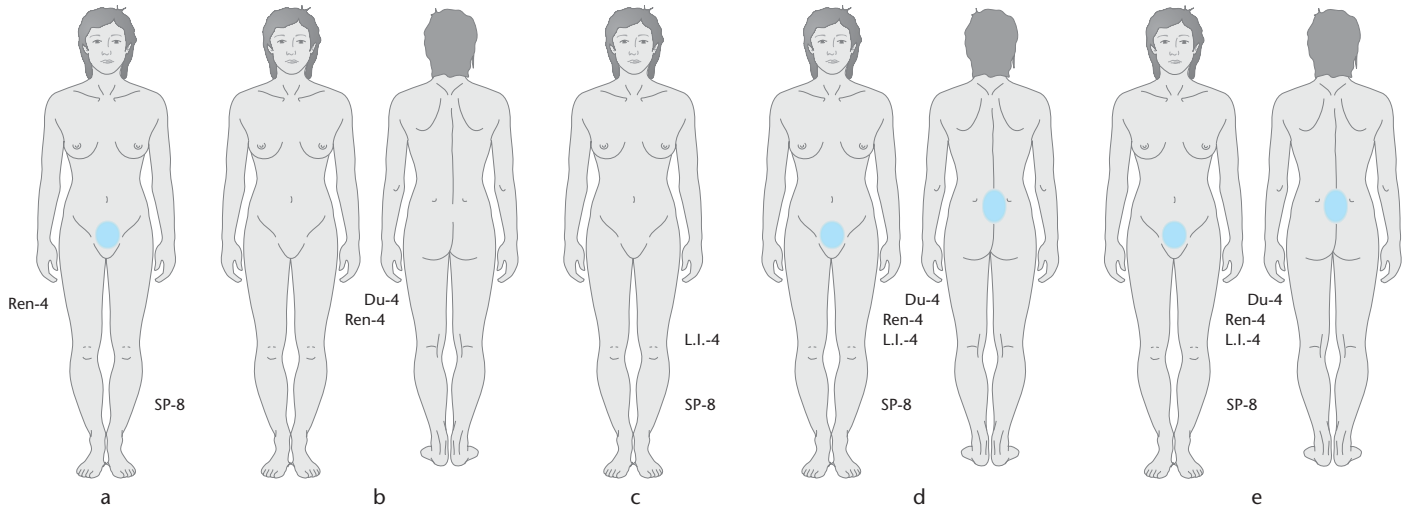
8.3.8 Clinical Application

The following illustration shows the clinical application of several point selection methods (8.3.1 – 8.3.5) for the treatment of dysmenorrhoea.



Possible point combinations for the treatment of dysmenorrhoea:

a. combining local and distal points (→ 8.3.1)
b. combining points on the front and the back of the body (→ 8.3.2) and Yin–Yang (→ 8.3.3)
c. Yin–Yang combination (→ 8.3.3) and above–below (→ 8.3.4)
d. Combination of all of the above methods (→ 8.3.1–8.3.4)
e. Additionally combining points on the left and right side of the body (→ 8.3.5)

9 Scientific Research

Ingolf Hosbach

9.1 Introduction

The aim of this chapter is to give a comprehensive overview about the scientifically proven or disproved effectiveness of certain points. It is not the aim of this chapter to prove the effectiveness of acupuncture as such. Based on the latest research, and 1000 recent human studies with mostly positive results, it is assumed that acupuncture is effective, despite criticism. If applied properly it is a well-established, low-risk method with minimal side effects.

Accordingly, the scope of acupuncture research has developed from simple questions, such as whether acupuncture works, to more specific questions such as which acupuncture points can be used for which conditions and with which stimulation methods. Furthermore, studies are increasingly designed for precise diagnoses and treatments based on the principles of Traditional Chinese Medicine. By the same token, the quality of the biomathematical methods used for the design and analysis of the studies is increasing. The number of randomised, controlled studies (RCTs) is also on the rise (Fig. 1).

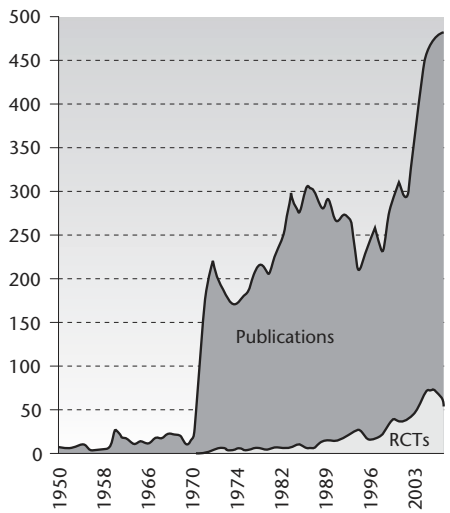


Fig. 1: Number of all publications and RCTs per year between 1954 and 2005. (Source: PubMed, US National Library of Medicine, Bethesda, Maryland)

The percentage of RCTs of all publications is nearly 7%, a figure that compares well with most conventional forms of therapy (for example: arthroscopy 5%, beta-blockers 7%, pain medication 7%, lowering cholesterol medication 8–11%).

Fundamental principles for scientific assessment

One of the prerequisites for including a study in this chapter was the mention of specific acupuncture points in the abstract. Out of 1092 studies listed in PubMed until May 2006 under the keyword 'acupuncture', 259 were therefore chosen for this chapter. In some exceptional cases, studies based on animal experiments were also considered. Regarding the presentation of the results, particular emphasis was placed on the role of biomathematical methods as a parameter for reliability. The terms which allow assessment of a study in terms of its biomathematical quality are explained below:

Case study: Usually a retrospective (=in hindsight) summary of results of a particular treatment method in patients with a particular disorder; no control group or control therapy. Most basic form of clinical trial.

Controlled study: Usually a prospective (=planned in advance) scientific comparison of a treatment method with a group of untreated patients or of patients treated with a placebo or conventional therapy.

Placebo: A form of 'mock' or sham therapy. This can take the form of a pill containing no active ingredient or a therapy without any authentic foundation. The administration of a placebo tries to eliminate the non-specific improvement of the researched disorder (such as the therapist's care of the patient and expectations of the patient) compared to the study group receiving authentic treatment. While the possibilities for placebo-acupuncture are plentiful, none is free of disadvantages. The effectiveness of acupuncture as a holistic therapy can be seen as the sum of many psychological as well as non-specific and specific physiological effects. Depending on the choice of the acupuncture placebo, certain effects can be excluded. Based on the concept of the sinew channels, however, there is an ongoing debate whether non-acupuncture points exist at all. The highest level of placebo acupuncture is the so-called 'sham acupuncture' where actual deep needling takes place at non-acupuncture points. The value of a study increases considerably if it is controlled by a placebo therapy.

Randomisation: The random assignment of a patient to a treatment group, without any influence of either the patient or the therapist. Randomisation significantly increases the value of a study.

Waitlist: A control group formed by patients receiving no treatment as a form of control. While a patient is waiting for his/her treatment, all his/her data relevant to the treatment are collected and later compared to those data obtained during treatment. Since there is neither randomisation nor a placebo treatment, the value of a waitlist group as a control group is very low.

Cross-over study: A particular design of controlled study. Each patient will participate in two different courses of treatment (for example treatment 1: medication; treatment 2: acupuncture). The order in which the treatments are administered can differ from patient to patient and be random (=randomised cross-over study). However, any long-term effect of the first form of treatment poses a problem for the final result. Therefore so-called washout phases during which patients receive no treatments at all are implemented to eliminate these effects and prevent a distortion of the data to be collected during the second phase. Since the effects of some acupuncture treatments have been shown to last for up to a year, cross-over studies are not very suitable for acupuncture research and particularly non-significant results should be questioned.

The 'n of 1' study is another form of research: a patient will receive various different treatments in order to find out which form of treatment led to the best improvement for the relevant disorder. However, the same limitations as discussed above will affect this type of study.

Significance: In simple terms, the significance of a study indicates if the difference of a particular parameter which has been observed between two groups is caused by the treatment (and is therefore a true difference) or whether the difference is the result of random deviation. For example, if in a large number of treated patients the observed data differ 'significantly' from a group of untreated patients, it is **highly probable** that this difference is not due to a random deviation. This probability can be expressed mathematically. If, for example, the significance is expressed as $p = 0.03$ this means that, considering a random error of 3%, the difference noted between the two groups is statistically significant. The convention is to accept a random error of up to 5% as acceptable. The significance of a study is based on the number of patients treated and the extent of the difference in the treatment result (for example by assuming the same random error, the difference in treatment results has to be much larger in a group of 10 patients ($n = 10$) than if the same study was carried out with 100 patients ($n = 100$)). Only differences classified as 'significant' are accepted for research studies.

Power of the study: This refers to the ability of a study to be statistically significant. The higher the number of participants, the higher the power of the study. By international standards, 80% is an acceptable level of power. Depending on the difference between the two study groups, the number of patients required can therefore easily be in the 100s or 1000s.

Experimental studies: Through standardising and controlling conditions of the experiment strictly, every attempt is made to avoid random results, often leading to just a small number of participants. Generally these tend to be healthy volunteers, who are subjected to a clearly defined stimulus. In this case acupuncture as a form of therapy will achieve a high level of validity. More questionable are studies of healthy subjects without a well-defined stimulus, since in that case acupuncture as a balancing form of treatment is not used according to its principles (for example changes in peristalsis caused by acupuncture in healthy subjects).

Blinding: The gold standard of clinical trials are the so-called double blind studies in which both the patient and the therapist remain ignorant as to which treatment (for example the tablet with or without the active ingredient) is administered to the patient. However, blinding of an acupuncturist is not possible. Even in a single blind study (only the patient is 'blinded'), his/her behaviour will distort the result of the trial. This effect can be counterbalanced to some extent by blinding the assessor of the treatment results (for example changes in the range of motion) so that he/she does not know which treatment (authentic or sham acupuncture) was received by the patient.

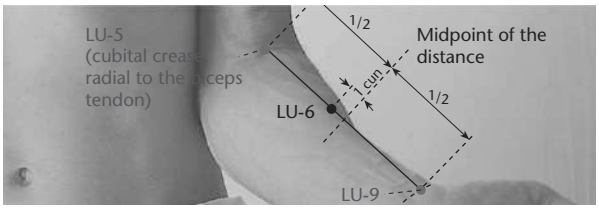
Standardisation: In pharmaceutical trials the amount of the active ingredient per tablet can easily be stated (for example standardisation of a 10 mg tablet). However, acupuncture cannot be standardised. The acupuncturist's point selection will largely be influenced by experience, prior knowledge, specialisation and cultural background. Strictly speaking, acupuncture trials therefore do not investigate acupuncture per se but acupuncture as performed by an acupuncturist or a group of acupuncturists.

The fact that acupuncture is to a large extent centred on the therapist has in the past led to a paradoxical situation: experienced Chinese acupuncturists performing the 'best' acupuncture produced biomathematically 'bad' trials due to their lack of training, while 'bad' Western acupuncturists produced 'good' trials from a biomathematical point of view. 'Importing' Chinese acupuncturists into Western trials did not solve the problem either, since the Chinese clinicians were now treating Europeans with diseases not common in China and which reacted differently to acupuncture. Only as experience grows on both sides – which would have to be evaluated individually for each trial – will the value of acupuncture as a researched form of therapy increase accordingly.

9.2 Scientific Research According to Channels

Lung Channel

LU-5 → Ren-23; L.I.-10



LU-6 192 patients with bronchial asthma were treated with **LU-6** and **LU-10**. 98.9% of the patients experienced an immediate improvement; the rate of clinical remission plus marked improvement was 76.5%. Best therapeutic results were achieved for allergic asthma according to Western medicine (asthma due to Cold according to TCM) and with longer needle retention (approximately 40 minutes). The lack of blinding and control groups reduce the value of this precise therapeutic case study. **Zang, J Tradit Chin Med 1990**

LU-7 → ST-8

LU-10 → LU-6

A Chinese prospective, randomised, controlled, non-blinded trial investigated the effect of bilateral bloodletting at **LU-10**, **P-8**, **HE-8**, **L.I.-2**, **T.B.-2** and **S.I.-3** on heart rate and consciousness in patients with **apoplexy** that had occurred within 3 days. Only patients with mild injuries showed improved consciousness while the heart rated increased independently of the size of injury. **Yi et al**, **J Tradit Chin Med 2005**

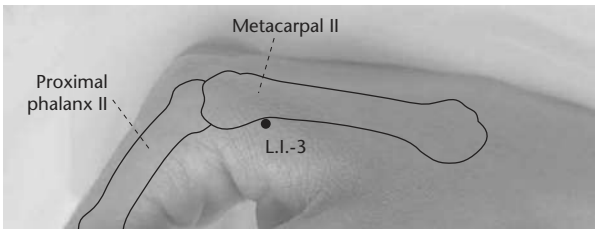
LU-11 Three Russian animal trials demonstrated the antipyretic action of **LU-11**. LU-11 can also strengthen the effect of hypothermic substances, suggesting a combination with antipyretic Chinese herbs. **Nezhenzev et al**, **Biull Eksp Bio Med 1992, and Fizion Zh SSSR Im I M Sechenova 1991**

A Taiwanese prospective, randomised, non-blinded, controlled trial (n = 76) investigated whether bloodletting at **LU-11** and **L.I.-1** can prevent or treat the occurrence of **laryngospasm** after tracheal extubation in children. The incidence of laryngospasm was significantly less in the bloodletting group (5% vs 24%). If laryngospasm developed, this could be relieved with the treatment of LU-11 or L.I.-1 within one minute in all patients. **Lee et al, Anaesthesia 1998**

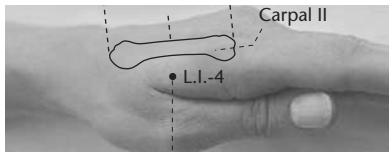
Large Intestine Channel

L.I.-1 → LU-11

L.I.-2 → LU-10



L.I.-3 A Chinese prospective, randomised, controlled study (n = 210) reports the significantly better effects of needling **L.I.-3** and ***lingxia*** in the treatment of **periarthritis of the humerus** compared to the control group treated with local points. Of interest is the application of *lingxia*, an unofficial extra point 2 cun inferior to G.B.-34. **Feng, J Tradit Chin Med 2003**



L.I.-4 → ST-36; P-5, P-6; ST-8; G.B.-43; Du-20; LIV-3; S.I.-18; SP-9; L.I.-11; ST-2

A Turkish prospective, controlled, non-blinded, group-comparison trial (n = 55) investigated the effect of electro-acupuncture (EA) at **L.I.-4**, **L.I.-11**, **ST-25**, **ST-36**, **ST-44** and **LIV-3** (combined with auricular points *shenmen* and *sanjiao*) on **obesity in women**. Treatments were given daily for 20 days. One control group received a 1425 kcal diet for 20 days while the other control group received no treatment. There was a 4.8% weight reduction in the EA group, whereas women on the restricted diet had a 2.5% weight loss. Both groups showed a significant reduction in total cholesterol and triglyceride levels. In the EA group only, LDL levels were also reduced significantly. **Cabioglu et Ergene**, **Am J Chin Med 2005**

A Chinese (Hong Kong) prospective, randomised, controlled, non-blinded study (n = 29) investigated the effect of **L.I.-4** and **P-6** on the heart rate variability (HRV) in normal subjects in **fatigue** and **non-fatigue states** respectively. Only fatigued subjects showed a significant change in HRV. The authors concluded that the effect of acupuncture depends not only on the points selected but also on the functional state of the subject, one of the principles of Chinese Medicine. **Li et al, Eur J Appl Physiol 2005**

An unusual veterinary case study investigated the effects of acupuncture on the **immune system**. According to the authors, immunostimulant points **include LI-4**, **LI-11**, **ST-36**, **GB-39**, **SP-6**, **GV-14**, **BL-11**, **BL-20**, **BL-23**, **BL-24**, **BL-25**, **BL-26**, **BL-27**, **BL-28,** and **Ren-12**. **BL-47** is considered to be immunosuppressive. Anti-febrile points include **ST-36** and **Du-14**. **Rogers et al, Probl Vet Med 1992**

A Chinese prospective, randomised, single-blinded, experimental trial ($n = 20$) compared the effect of transcutaneous electric nerve stimulation (TENS) at **L.I.-4** on the **heat pain threshold** and **vibration threshold** in humans with a placebo control point. In the study group, after TENS at **L.I.-4**, the pain threshold for heat was higher for up to half an hour compared to the control group. There was no effect on the threshold for feeling vibration. **Wang et al, Chin Med J (Engl) 2003**

A Korean prospective, randomised, placebo-controlled trial ($n = 35$) evaluated the efficacy of electro-acupuncture (EA) and moxibustion on **L.I.-4**, **L.I.-10**, **L.I.-11** and **T.B.-5** on **spasticity due to stroke**. The control group was treated with routine acupuncture. Only the EA group experienced a significant, immediate and lasting reduction in spasticity (using a modified Ashworth scale). **Moon et al, Am J Chin Med 2003**

A German prospective, randomised, controlled, non-blinded trial ($n = 29$) investigated if acupuncture at **L.I.-4**, **T.B.-5**, **ST-36**, **P-6**, **Du-20** and **Ex-UE-9** (*baxie*) had a vasospasmolytic effect on patients with **Raynaud's syndrome** during the winter season. There was no significant difference regarding the number and intensity of episodes, nor was there a significant effect on skin microcirculation between the acupuncture group and the placebo group before and after treatment. **Hahn et al, J Dtsch Dermatol Ges 2004**

A Japanese prospective, randomised, controlled study ($n = 21$) investigated the effect of **L.I.-4**, **ST-36 and SP-6** on objective and subjective parameters regarding **exhaustion** in elite female soccer players during a competition period. Only the subjects treated with acupuncture experienced a better rating for both subjective and objective parameters. **Akimoto et al, Med Sci Sports Exerc 2003**

A Chinese prospective, randomised, controlled trial ($n = 89$) researched the effect of **L.I.-4**, **ST-36**, **BL-18** and **BL-23** combined with CT positioning scalp circum-needling (SCN) and herbal therapy in patients with **poly-infarctional vascular dementia**. The control group received herbal treatment only. The treated group had a significantly better short-term result (96.5%) than the control group (75%) regarding changes of clinical symptoms, intelligence and haemorrheological characteristics. **Lun et al, Zhongguo Zhong Xi Yi Jie He Za Zhi 2003**

A Chinese prospective, randomised, controlled experimental trial ($n = 11$) investigated the changes in **brain activation patterns** evoked by stimulating **L.I.-4** manually versus stimulation with electro-acupuncture (EA). These were assessed by functional magnetic resonance imaging (fMRI). Results showed that EA mainly produced fMRI signal increases in precentral gyrus, postcentral gyrus/inferior parietal lobule and putamen/insula; in contrast, manual needle manipulation produced prominent decreases of fMRI signals in posterior cingulate, superior temporal gyrus, putamen/insula. These results suggest that different brain mechanisms may be recruited during manual and EA. **Kong et al, J Altern Complement Med 2002**

An American prospective, randomised, controlled, non-blinded experimental trial ($n = 13$) evaluated the effect of transcutaneous electric acupoint stimulation (TEAS) on **L.I.-4** and **P-6** on **tonic pain** induced with the cold-pressor test. While TEAS alone had a significant analgesic effect, this could be increased by combining TEAS analgesia with low-dose morphine. **Yuan et al, J Clin Pharmacol 2002**

A Taiwanese prospective, randomised, placebo-controlled experimental study ($n = 13$) investigated the effect of manual acupuncture as well as transcutaneous electrical nerve stimulation (TENS) with 2 Hz and 100 Hz respectively at **L.I.-4** on the spinal cord by measuring the **H-reflex**. While the application of TENS with both 2 Hz and 100 Hz changed the amplitude of the H-reflex, it was retained longer with the 100 Hz stimulation. These findings suggest that TENS enhances the excitability of the motoneuron pool in the spinal cord. **Chang et al, Acupunct Electrother Res 2001**

An Austrian prospective, randomised, controlled study ($n = 45$) evaluated whether acupuncture at **L.I.-4** and **SP-6** at term can influence cervical ripening, **induce labour** and thus reduce the need for postdate induction. Compared to the control group, the study group showed a significantly shorter time span (three days) between estimated date of confinement (EDC) and actual time of delivery. Medical induction of labour 10 days after EDC was also significantly lower in the acupuncture group (20%) than in the control group (35%). **Rabl et al, Wien Klin Wochenschr 2001**

An Israeli prospective, randomised, double-blinded controlled trial ($n = 25$) investigated the effect of acupuncture in the treatment of **irritable bowel syndrome**. True acupuncture was performed at **LI-4** and sham acupuncture at **BL-60** during a total of two sessions. There was no significant difference between the two groups. However, the choice of acupuncture points seems somewhat peculiar. While both points are Ma Dan Yang points (the 12 most important points), they have no specific action for intestinal disorders. Obviously the authors chose the points according to the channel (Large Intestine). Furthermore, only two treatments does not seem sufficient. **Fireman et al, Digestion 2000**

A British prospective experimental trial ($n = 14$) investigated the effect of acupuncture at **L.I.-4** on the **resting EEG** of healthy subjects. Acupuncture did not induce any changes in the resting EEG. **Rosted et al, Complement Ther Med 2001**

An Irish prospective, randomised, controlled trial ($n = 30$) applied transcutaneous electric nerve stimulation (TENS) either at **L.I.-4** or over the median nerve, in order to investigate **cutaneous blood flow**. The control group received no treatment. Only TENS over the median nerve showed a significant increase in cutaneous blood flow. **Cramp et al, Acupunct Electrother Res 2001**

A Japanese prospective, randomised, controlled, non-blinded trial ($n = 22$) investigated the effect of acupuncture at **L.I.-4**, **ST-6** and **ST-7** on pain after mandibular **wisdom tooth extraction**. Compared to the control group there was a significant reduction in pain in the treatment group. **Kitade et al, Acupunct Electrother Res 2000**

A Swedish prospective, randomised, controlled experimental trial ($n = 12$) investigated if acupuncture at **L.I.-4** induced **changes in the sympathetic and/or parasympathetic nervous system** in healthy subjects. For this purpose, regular and superficial

needling of **L.I.-4** was compared. Changes were measured by using power spectral analysis and heart rate frequency analysis. Only deeper needling at L.I.-4 led to a significant activation of the sympathetic and parasympathetic nervous system during and after treatment as well as to a significant reduction of the heart rate frequency. **Haker et al, J Auton Nerv Syst 2000**

A US prospective, randomised, sham-controlled, single-blinded trial (n = 101) assessed the effect of varying intensities of transcutaneous electric acupoint stimulation (TEAS) at **L.I.-4** on the **postoperative patient-controlled analgesia** (PCA) requirement for **hydromorphine** (HM), the incidence of opioid-related side effects, and the recovery profile after lower abdominal surgery in women. In the sham-TEAS group HM-requirement was reduced by 23%, low-intensity TEAS produced a 34% decrease in the HM requirement while the high-intensity TEAS reduced requirement significantly by 65%, accompanied by a reduction in the occurrence of dizziness, nausea and pruritus. **Wang et al, Anesth Analg 1997**

A Chinese prospective, randomised, controlled trial (n = 110) investigated the effect of transcutaneous electric acupoint stimulation TEAS) at **L.I.-4**, **Ex-HN-4** ***(yuyao)*** and **G.B.-31** during enflurane anaesthesia in patients undergoing craniotomy. In comparison to the control group (anaesthesia maintained with enflurane only) the **minimum alveolar concentration** (MAC) of enflurane decreased in the TEAS-supplemented group by 38–47%. If anaesthesia was supplemented by TEAS plus scalp infiltration with procaine, there was an even higher reduction of 42–66%. The haemodynamic balance was also more stable during the operation, and postoperative recovery was faster. **Wang et al, Zhongguo Zhong Xi Yi Jie He Za Zhi 1994**

A German prospective, waitlist-controlled trial (n = 6) investigated the effect of electro-acupuncture at **L.I.-4**, **ST-25**, **LIV-3** and **BL-25** on stool frequency and colonic transit time in **chronic constipation**. There were no significant differences in all the parameters between the control group and the waitlist group. **Klauser et al, Z Gastroenterol 1993**

A Japanese experimental trial researched the influence of **L.I.-4 on vibration induced finger flexion reflex**. Unilateral acupuncture at L.I.-4 suppressed the reflex in both hands. **Takakura et al, Am J Chin Med 1992**

A Chinese prospective, randomised, matched controlled trial (n = 12) investigated the analgesic effect of aqueous acupuncture (injection of glucose solution) at **L.I.-4** and **G.B.-34** in **postoperative pain control**. In comparison to the control group, the intensity of postoperative pain as well as the requirement for analgesic medication were significantly lower in the study group. **Chen et al, Gaoxiong Yi Xue Ke Xue Za Zhi 1991**

A German prospective, non-randomised, sham-controlled trial (n = 36) investigated the **analgesic effect** of acupuncture at **L.I.-4**, **P-6**, **ST-36** and **SP-4** prior to a **colonoscopy**. The pain experienced by the acupuncture patients was significantly lower compared to the group receiving sham acupuncture. The analgesics and sedatives required were also significantly less. **Li et al, Dtsch Med Wochenschr 1991**

A prospective, randomised, single-blinded experimental study (n = 39) investigated the effect of acupuncture and laser acupuncture at **L.I.-4** and **Ex-UE** ***jianqian*** on the **pain threshold**. Compared to laser acupuncture, acupuncture significantly increased the pain threshold. **Brockhaus et al, Pain 1990**

A British prospective, controlled experimental cross-over study investigated the effectiveness of electro-acupuncture at **L.I.-4** on experimental **tooth pain**. After 30 minutes of electric stimulation the pain threshold increased by 27%. This increase could be partially blocked by naloxone. **Ernst et al, Acupunct Electrother Res 1987**

A British prospective, randomised, placebo-controlled study (n = 51) investigated the effect of acupuncture at **L.I.-4** as an **analgesic for operative dentistry**. There were no significant differences between the treatment group and the placebo group. **Taub et al, Oral Surg Oral Med Oral Pathol 1979**

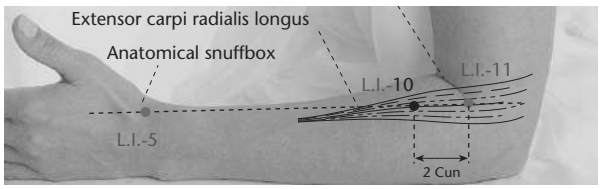
A prospective non-randomised, placebo-controlled experimental trial (n = 40) investigated the effect of acupuncture at **L.I.-4** on the **pain threshold of postoperative dental pain** compared to codeine. Both **L.I.-4** and codeine had a significantly better effect than the placebo. The combination of both had the strongest effect. **Sung et al, Anesth Analg 1977**

An Austrian prospective, sham-controlled, single-blinded experimental trial (n = 12) measured the effect of **L.I.-4** and **P-6** on **pain threshold and pain tolerance**. In contrast to sham acupuncture, true acupuncture significantly raised the pain threshold. **Stacher et al, Am J Chin Med 1975**

L.I.-5 → P-5

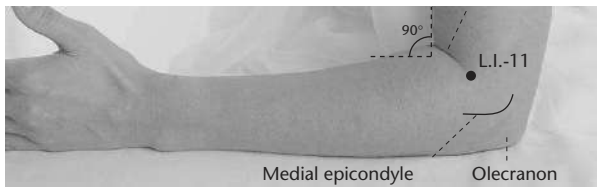
L.I.-6 → P-5

L.I.-7 → P-5



L.I.-10 → L.I.-4; Du-12; ST-36

A Swedish prospective, randomised, controlled, double-blinded trial (n = 49) investigated the effect of laser acupuncture on **L.I.-10**, **L.I.-11**, **L.I.-12**, **LU-5** and **T.B.-5** on **lateral humeral epicondalgia (tennis elbow)**. No significant difference occurred at a dose of 0.36 J/point. **Haker et al, Pain 1990**



L.I.-11 → L.I.-4; ST-36; LIV-3; L.I.-10; L.I.-15

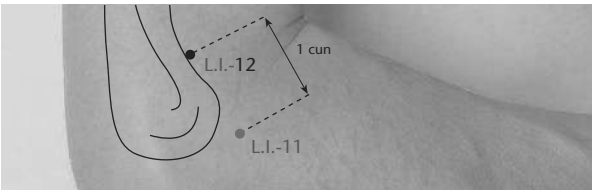
A Taiwanese prospective, randomised, placebo-controlled, single-blinded trial (n = 40) investigated the effect of acupuncture

at **L.I.-11** on **uraemic pruritus**. The results of the pruritus score questionnaires demonstrated that only true acupuncture at **L.I.-11** resulted in a significantly reduced pruritus lasting for a period of three months. Uraemia levels remained unchanged. **Che-yi et al, Nephro Dial Transplant 2005**

A German prospective, randomised, placebo-controlled, single-blinded experimental trial ($n = 22$) investigated the effect of **L.I.-11** on the **phagocytic immune system**. Based on laboratory parameters, the **activity of neutrophils** was significantly higher in the study group. **Karst et al, Complement Ther Med 2003**

A Swedish prospective, non-randomised, placebo-controlled, single-blinded experimental longitudinal trial investigated the influence of electro-acupuncture at **L.I.-11** and **L.I.-4** on sympathetic nerve activity and the pain threshold. Only electro-acupuncture at L.I.-11 and L.I.-4 increased the pain threshold in combination with increased sympathetic nerve activity. **Knardahl et al, Pain 1998**

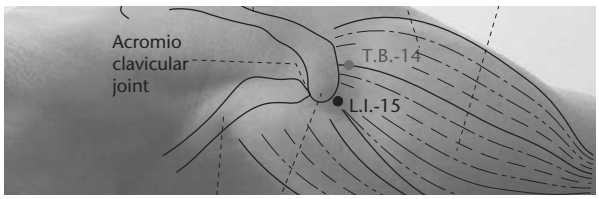
A Swedish prospective, randomised, placebo-controlled, single-blinded trial ($n = 58$) investigated the effect of laser acupuncture at **L.I.-11** and **L.I.-12** for **lateral humeral epicondalgia (tennis elbow)** compared to laser application on the painful area. There were no significant differences between the laser and placebo treatments after the treatment period. **Haker et al, Arch Phys Med Rehabil 1991**



L.I.-12 → L.I.-11; L.I.-10

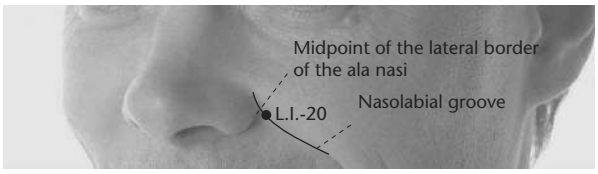
A Chinese prospective, randomised, controlled trial ($n = 64$) investigated the effect of electro-acupuncture at **L.I.-12**, **T.B.-5**, **G.B.-30** and **ST-36** accompanied by medication for **acute cerebral infarction** with regard to the plasma and CSF somatostatin levels. The control group received medication only. Both plasma and CSF somatostatin levels increased significantly in the acupuncture group. **Zhang et al, J Tradit Chin Med 1999**

A Chinese prospective, randomised, controlled trial ($n = 64$) investigated the effect of electro-acupuncture at **L.I.-12**, **T.B.-5**, **G.B.-30** and **ST-36** on the plasma and CSF levels of VIP (vasoactive intestinal peptide), somatostatin and pancreatic polypeptide in patients with **acute cerebral infarction**. The CSF VIP level dropped significantly while the plasma pancreatic polypeptide level increased significantly. In patients with a good response both plasma and CSF somatostatin levels increased significantly after acupuncture. **Zhang et al, Zhen Ci Yan Jiu 1996**



L.I.-15 A Taiwanese prospective, randomised, controlled, non-blinded trial ($n = 150$) investigated the effect of electro-acupuncture at **L.I.-15**, **G.B.-21** and **Ex-UE *jianneiling*** with or without regional nerve block (RNB) (stellate ganglion and suprascapular plexus) for **'frozen shoulder' (adhesive capsulitis)**. This was compared to RNB treatment alone. The combination of electro-acupuncture and RNB produced the most significant reduction of pain and duration of pain relief as well as improvement of range of motion. **Lin et al, Acta Anaesthesiol Sin 1994**

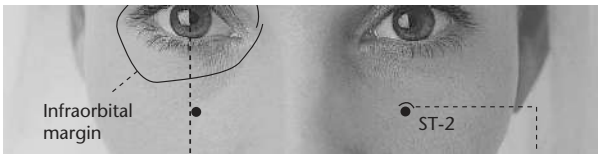
A Chinese prospective, randomised, controlled, non-blinded trial ($n = 63$) investigated the effect of acupuncture at **L.I.-15**, **L.I.-11**, **L.I.-4**, **G.B.-30**, **G.B.-34**, **G.B.-37**, **LIV-3**, **G.B.-20**, **ST-25**, **ST-40**, **ST-36**, **SP-6** and **KID-3** on symptoms of **cerebral infarction** compared to the treatment with the calcium channel blocker verapamil. The effectiveness in the acupuncture group was 94%, in the verapamil group 84%. This difference is statistically significant. However, the choice of a calcium channel blocker seems unusual for this indication. **Zou et al, Zhong Xi Yi Jie He Za Zhi 1990**



L.I.-20 → G.B.-14

A British prospective, randomised, controlled trial ($n = 20$) investigated the effect of a 30 second massage at **L.I.-20** on **nasal airflow** compared to an untreated control group. Symptoms improved significantly in the massage group. **Takeuchi et al, Am J Rhinol 1999**

Stomach channel



ST-2 → G.B.-14

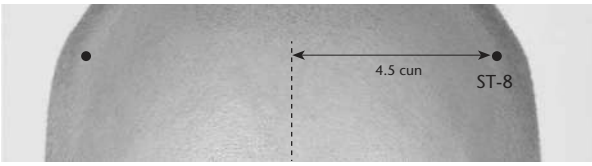
A prospective, non-randomised experimental trial ($n = 33$) investigated the effect of acupuncture and electro-acupuncture at **ST-2**, **L.I.-4** and **ST-44** on experimentally induced **tooth pain**.

While both procedures increased the pain threshold, the increase was not sufficient to justify acupuncture as a means of pain control in conservative dentistry. **Bakke, Scand J Dent Res 1976**

ST-4 → G.B.-14

ST-6 → G.B.-14; L.I.-4

ST-7 → L.I.-4



ST-8 A large prospective, randomised, multi-centre, group-comparison trial (n = 120) in patients suffering from **migraine without aura** demonstrated that acupuncture at **ST-8**, **G.B.-5**, **G.B.-20**, **Du-14** and **LU-7** was significantly more effective than conventional drug therapy, regarding both frequency and duration of the migraine attacks as well as number of sick days. The authors calculated that by treating migraine with acupuncture the Italian health system could save approximately 0.5 billion Euros per year. **Liguori et al., J Tradit Chin Med 2000**

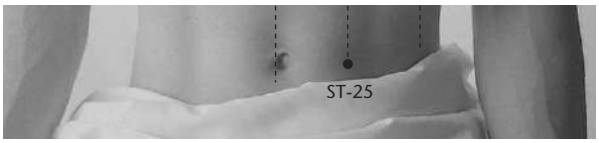
A Bulgarian case study (n = 35) reports the successful treatment of headaches following caesarian sections with spinal anaesthesia with acupuncture at ST-8, L.I.-4, G.B.-11, G.B.-14, BL-10, Du-14 and Du-20 during 1–3 treatments. **Tsenov, Akush Ginekol (Sofia) 1996**

A Swedish prospective, placebo-controlled trial investigated the effect of intrasegmental (**ST-8**) and extrasegmental (**L.I.-4**) electro-acupuncture on sensory thresholds. Only the pain threshold could be increased, and this only with intrasegmental acupuncture at ST-8. **Lundeberg et al, Am J Chin Med 1989**

ST-18 → G.B.-14; Du-1

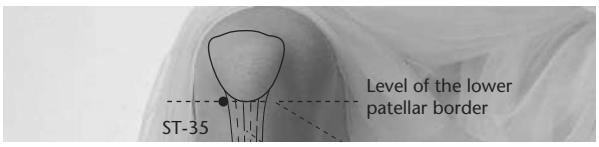
ST-20 → T.B.-8

ST-21 → Du-20



ST-25 → Du-1; Du-20; L.I.-4; L.I.-15

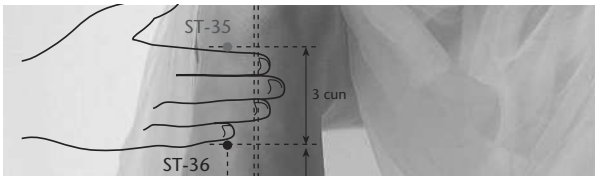
A Chinese prospective, randomised, controlled trial (n = 62) investigated the effect of acupuncture and moxibustion at ST-25 and Ren-4 for chronic colitis. This was compared to modern drug therapy. The acupuncture group showed the same therapeutic results but with fewer side effects. **Yang et al, J Tradit Chin Med 1999**



ST-32 → G.B.-31

ST-34 → ST-36; SP-9

ST-35 A Chinese prospective, randomised, single-blinded, controlled, long-term trial (n = 24) investigated the effect of electro-acupuncture (EA) and transcutaneous electrical nerve stimulation (TENS) at **ST-35** and **Ex-LE-4** (eight treatments over a period of two weeks) in older patients (average age: 85 years) suffering from **painful osteoarthritic knees**. This was compared to conventional therapy for this disorder. Both TENS and EA significantly reduced the knee pain. EA also had an effect on range of motion. **Ng et al, Altern Complement Med 2003**



ST-36 → L.I.-4; BL-27; P-6; T.B.-8; G.B.-26; G.B.-31; Du-1, Ex-B-3; Du-4; Du-20; LIV-3; SP-9; BL-60; L.I.-12; L.I.-15; Ren-17

An Iranian prospective, randomised, placebo-controlled, single-blinded trial (n = 51) investigated the effect of transcutaneous electric nerve stimulation (TENS) at **ST-36** and **ST-38** on nitroglycerin-induced **hypotension under general anaesthesia with halothane**. With true acupuncture at the above points, the mean arterial blood pressure (MAP) was significantly lower (60 vs 66 mmHg). The effect of acupuncture was significantly greater with lower dosages of nitroglycerin compared with higher dosage. In addition, the time to reach steady state MAP was significantly shorter (10 vs 15.8 minutes) and the quality of operative ischaemia was excellent in 83.3% subjects compared to 25% in the sham group. **Saghaei M. et al, Acta Anaesthesiol Taiwan 2005**

A US prospective non-blinded experimental trial investigated the response to acupuncture at **ST-36** as evidenced by **fMRI**. The limbic and paralimbic structures of the cortical and subcortical regions in the telencephalon, diencephalon, brainstem and cerebellum were activated in response to acupuncture. **Hui et al, Neuroimage 2005**

A prospective, randomised placebo-controlled single-blinded trial (n = 13) investigated the effect of electro-acupuncture at **ST-36** on the **heart rate variability** (HRV) in healthy subjects. There was no acupuncture-specific effect on HRV. **Chang et al, Am J Chin Med 2005**

A German prospective randomised placebo-controlled single-blinded experimental crossover study (n = 10) investigated the effect of acupuncture at **ST-36**, **L.I.-11**, **SP-10 and Du-14** on

leukocyte circulation in healthy young subjects. There was a significant decrease in leukocyte and lymphocyte values in the acupuncture group while cortisol and norepinephrine plasma levels remained unchanged. **Kou et al, Brain Behav Immun 2005**

A US prospective, non-randomised, placebo-controlled, single-blinded trial ($n = 7$) investigated if electro-acupuncture at **ST-36, SP-6**, **ST-34** and **L.I.-4** before and during induction of general anaesthesia (desflurane) influenced the **anaesthetic requirement** compared to a control group. There was no reduction in pain in the treatment group. **Chernyak et al Anesth Analg 2005**

A Taiwanese prospective, randomised, placebo-controlled, single-blinded experimental cross-over study ($n = 15$) investigated if electro-acupuncture (EA) at **ST-36** can normalise **atropine-induced gastric dysrhythmia**. While there was a significant increase in the percentage of normal frequency, atropine-induced gastric dysrhythmia was not normalised by EA (no significant differences in the EGG). **Chang et al, Dig Dis Sci 2002**

A Taiwanese prospective, randomised, controlled experimental trial ($n = 15$) investigated the effect of **ST-36** on **gastric myoelectrical regularity**. There was a significant decrease in the tachygastric and bradygastric rhythm during electro-acupuncture on ST-36. **Chang et al, Digestion 2002**

A Taiwanese prospective, randomised, sham-controlled trial ($n = 100$) investigated the effect of electro-acupuncture at **ST-36** on **postoperative pain and opioid-related side effects**. The postoperative pain, the requirement for morphine (via PCA) and the incidence of nausea and dizziness were all significantly reduced. **Lin et al, Pain 2002**

A US prospective, randomised, double-blinded, sham-controlled experimental trial ($n = 14$) investigated if electro-acupuncture at **ST-36**, **G.B.-34** and **BL-60** could reduce the anaesthetic requirement (desflurane) for **experimental pain stimuli**. Electro-stimulation of these points did not reduce desflurane requirements compared to the control group. **Morioka et al, Anesth Analg 2002**

A Taiwanese prospective case study ($n = 15$) investigated the effect of bilateral electro-acupuncture **at ST-36** on gastric slow waves in **diabetic patients** with symptoms suggesting **gastric motor dysfunction**. Changes of gastric activity were measured by EGG. During and after acupuncture there was a significant increase in the percentages of normal frequency. In addition the percentage of tachygastric frequency was decreased significantly during and after acupuncture. **Chang et al, Digestion 2001**

A Chinese case study ($n = 104$) reports the successful injection-acupuncture at **ST-36** for **chemotherapy-induced leukopenia**. **Yin et al, J Tradit Chin Med 2001**

A Chinese prospective, randomised, controlled, non-blinded trial ($n = 26$) investigated the effect of acupuncture at **ST-36** plus auricular plaster therapy on **peristalsis** for postoperative recovery of intestinal function after abdominal surgery. 92% of patients in the treatment group showed recovery of normal peristalsis within 72 hours, while in the control group only 46% patients recovered within the same time-period. **Wan et al, J Tradit Chin Med, 2000**

A US prospective, randomised, controlled pilot study ($n = 17$) investigated the effect of acupressure at **ST-36** and **P-6** on the intensity and frequency of **nausea** in patients undergoing **chemotherapy due to breast cancer**. Both the frequency and intensity of the nausea was significantly lower in the treatment group than in the control group. **Dibble et al, Oncol Nurs Forum 2000**

An Italian prospective, randomised, controlled experimental trial ($n = 120$) investigated the effect of acupuncture at **ST-36** and **L.I.-4** regarding changes in the levels of beta-endorphins and other parameters (VIP, lymphocyte subsets, NK cells and monocyte phagocytosis) in patients suffering from various painful disorders. These changes were compared to an untreated control group. Only in the acupuncture group were the endorphin levels, the CD3 and CD4 values and monocyte phagocytosis increased for at least 24 hours after treatment. At the same time there was an increase of the CD8 values. **Petti et al, J Tradit Chin Med 1998**

A Chinese retrospective case study reports good results in treating **leukopenia** with acupuncture at **ST-36**. **Wei, J Tradit Chin Med 1998**

A Taiwanese prospective, randomised, sham-controlled experimental trial ($n = 18$) investigated the effect of acupuncture at **ST-36** and **L.I.-4** on central nervous system pathways with functional MR imaging of the brain. Besides a significant reduction of the heart rate frequency, acupuncture at both points resulted in activation of the hypothalamus and nucleus accumbens (structures of the descending antinociceptive pathway) and deactivation of the rostral part of the anterior cingulate cortex, amygdala formation, and hippocampal complex (limbic areas of pain recognition). Therefore this study provides explanations for the **pain-reducing effect** of acupuncture. **Wu et al, Radiology 1999**

A prospective, sham-controlled, single-blinded experimental longitudinal trial ($n = 13$) investigated the effect of acupuncture at ST-36 only, compared to acupuncture at **ST-36 plus L.I.-10** on **auditory endogenous potentials** (P300). The effect of the different forms of acupuncture was identical. In contrast to the sham group, it led to a decrease of P300 amplitude in the acupuncture group. **Hsieh et al, Am J Chin Med 1998**

A US prospective, randomised, sham-controlled, single-blinded trial ($n = 100$) investigated the effect of transcutaneous electric nerve stimulation (TENS) at **ST-36** on **opioid analgesic requirement** by PCA following hysterectomy or myomectomy compared to peri-incisional dermatomal stimulation by TENS. TENS applied at the dermatomal level of the incision is as effective as stimulation at ST-36, and both were more effective than stimulation at a sham location. **Chen et al, Anesth Analg 1998**

A Chinese prospective, randomised, controlled trial ($n = 69$) compared the so-called immunotherapy at **ST-36** to conventional desensitisation therapy in patients suffering from **anaphylactic asthma**. Results in the acupuncture group were significantly better, regarding both clinical and immunohistochemical parameters. **Chen et al, Zhongguo Zhong Xi Yi Jie He Za Zhi 1996**

A Mongolian prospective, randomised, controlled study ($n = 48$) compared the effect of acupuncture at **ST-36** and **P-6** combined with epidural anaesthesia to simple epidural anaesthesia for subtotal gastrectomies. The acupuncture group, while requiring a lower dosage of anaesthetic, experienced a stronger analgesic effect, the abdominal muscles were more relaxed and the haemodynamic disturbances were smaller. **Sun, Zhen Ci Yan Jiu 1996**

A US prospective, randomised, controlled, experimental trial ($n = 11$) researched the effect of transcutaneous electric nerve stimulation (TENS) at **ST-36** and **ST-37** on **peripheral blood circulation** and **haemodynamics**. Twenty minutes of TENS on healthy subjects did not produce a significant change in the measured parameters. **Balogun et al, Disabil Rehabil 1996**

A Taiwanese prospective, randomised, placebo-controlled, single-blinded trial investigated the influence of acupuncture at **ST-36** on the **pulse spectrum**. The results indicated that acupuncture at ST-36 has a specific effect on the Fourier components of the pulse: C2 and C4 decreased while C5, C6, C8 and C9 increased. This specific frequency effect was not found when acupuncture was applied on a non-acupuncture point. **Wang et al, Am J Chin Med 1995**

A Chinese prospective, randomised, controlled trial ($n = 45$) investigated the effect of **ST-36**, **L.I.-11** and **KID-6** on the immunoactivity of natural killer cells and the interleukin-2 level in **malignant tumour** patients. After receiving one treatment of 30 minutes daily for 10 days, parameters in the treatment group had increased significantly compared to the control group. **Wu et al, Zhongguo Zhong Xi Yi Jie He Za Zhi 1994**

A Chinese prospective, randomised, controlled trial ($n = 80$) compared **anaesthesia with electro-acupuncture** at **ST-36** and **L.I.-4** to epidural anaesthesia in **appendectomies**. The operations were equally successful in both groups, without any significant differences regarding the success rate. **Sun et al, Zhen Ci Yan Jiu 1992**

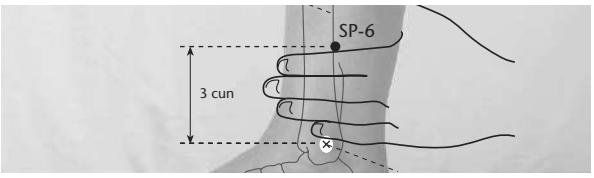
A Chinese prospective, randomised, controlled trial ($n = 39$) investigated the effect of acupuncture at **ST-36** and **SP-6** on **bowel movements following abdominal surgery**. In the acupuncture group the first postoperative bowel movement occurred after approximately 58 hours, but only after 86 hours in the untreated control group. **Liu et al, Zhong Xi Yi Jie He Za Zhi 1991**

ST-37 → ST-36
ST-38 → G.B.-34; ST-36
ST-40 → L.I.-15
ST-44 → L.I.-4; ST-2

Spleen channel

SP-1 A US prospective experimental trial ($n = 13$) investigated the effect of electro-acupuncture (EA) at **SP-1** and **LIV-1** on **thermal pain thresholds**. The pain threshold increased significantly 30 seconds after onset of EA. The authors postulate that EA at the above points has an inhibitory effect on the C-fibre afferents; the analgesic benefit observed is most probably A-delta afferent mediated. **Leung et al, J Altern Complement Med 2005**

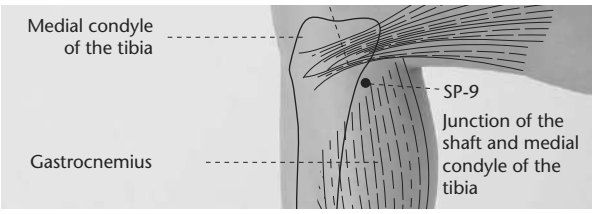
SP-4 → Du-4; P-6; L.I.-4



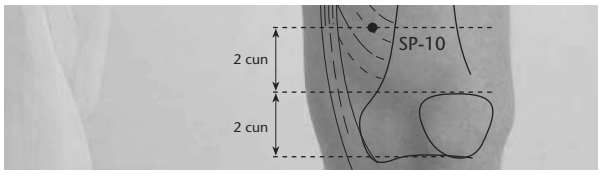
SP-6 → ST-36; L.I.-4; P-6; G.B.-26; Du-4; DU-20; LIV-3; L.I.-15

In a prospective, randomised, double-blinded group-comparison trial ($n = 56$) patients suffering from **interstitial cystitis** performed daily laser therapy on SP-6 at home for 30 seconds over a period of 12 weeks. There were no significant differences between the treatment and control cohorts. **O'Reilly et al, J Urol 2004**

An Australian prospective, randomised, placebo-controlled trial ($n = 20$) investigated the effect of transcutaneous electrical stimulation (TENS) at **SP-6** and **LIV-3** on **uterine contractions** in post-date pregnant women. A significant increase in frequency and strength of contractions was found in the TENS group compared with the placebo group. **Dunn et al, Obstet Gynecol 1989**



SP-9 A British prospective, randomised, controlled, assessor-blinded trial ($n = 44$) investigated the influence of **SP-9**, **SP-10**, **ST-34**, **ST-36** and **L.I.-4** on unilateral versus bilateral acupuncture in patients with **advanced osteoarthritis of the knee**. The symptoms improved significantly in both groups. This improvement was sustained for six months. There was no statistically significant difference between the groups. **Tillu et al, Acupunct Med 2001**



SP-10 → SP-9; ST-36; Ren-17

A Chinese prospective, randomised, controlled trial ($n = 62$) investigated the effect of Q-wave millimetre microwave application at **SP-10** and **BL-17** on **chemotherapy-induced leukopenia in gastrointestinal cancer patients**. One group received

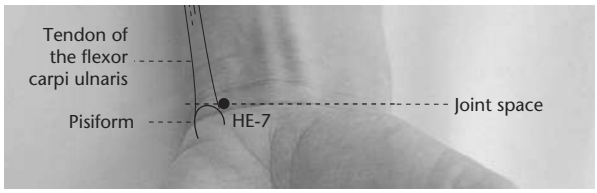
irradiation before the start of chemotherapy, the other group only after the onset of the chemotherapy-induced leukopenia. Beginning the irradiation before starting chemotherapy produced a significantly better result (86% versus 73% with later application). **Wu et al, Zhongguo Zhong Xi Yi Jie He za Zhi 1997**

SP-12 → Du-4

Heart channel

HE-3 → P-6

HE-5 → P-6



HE-7 → G.B.-26; Du-4; Du-20; S.I.-3; P-6

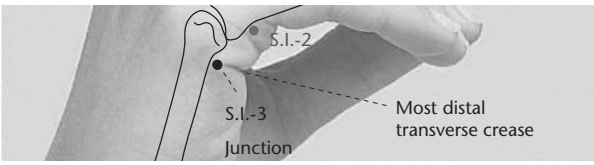
A German prospective, randomised, placebo-controlled, single-blinded trial (n = 36) investigated the effect of **H-7**, **P-6**, **Du-20**, **BL-62** and **Ex-HN-6** ***erjian*** on the cardiac autonomous nervous system in patients with **minor depression and anxiety disorders**. Only the acupuncture group demonstrated a relative increase of cardiovagal modulation of heart rate. **Agelink et al, Fortschr Neurol Psychiatr 2003**

A British pilot study (n = 17) investigated the effect of **HE-7** on certain **stress parameters**. There was an average decrease of 44% (based on the Edinburgh Postnatal Depression Scale (EPDS). **Chan et al, Acupunct Med 2002**

HE-8 → LU-10

HE-9 → Du-4

Small Intestine channel

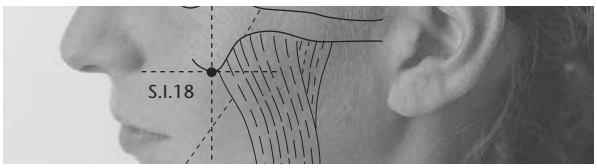


S.I.-3 → LU-10; Du-12

A larger-scale Taiwanese prospective, controlled, randomised trial (n = 100) demonstrated a significant improvement of neurological functioning in patients with **severe spinal cord injuries** (ASIA status A and B) after electro-acupuncture at **S.I.-3** and **BL-62** plus auricular acupuncture versus the control group (conventional and rehabilitation therapy only). **Wong et al, Am J Phys Med Rehabil 2003**

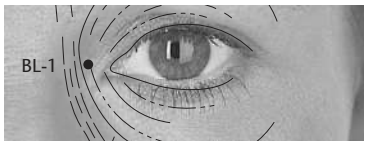
A non-controlled pilot study (n = 18) found that the treatment of **acute torticollis** with a single treatment of ipsilateral acupuncture at **S.I.-3** and **M-UE-8** resulted in a mean improvement of lateral head rotation of 53%. **Samuels N, Am J Chin Med 2003**

A Chinese prospective, randomised, controlled trial (n = 62) investigated the effect of acupuncture at **S.I.-3** and **HE-7** in patients with **cerebral traumatic dementia** compared to conventional physiotherapy. There were significant changes of MMSE scores and auditory P300 values in the acupuncture group only. **Zhang et al, Zhen Ci Yan Jiu 1996** and **Zhang et al, Zhongguo Zhong Xi Yi Jie He Za Zhi 1995**



S.I.-18 A Chinese prospective, randomised, controlled, single-blinded trial (n = 42) investigated the effect of electro-acupuncture at **S.I.-18**, **Ex-HN-04**, **G.B.-20** and **L.I.-4** on controlled hypotension induced by isoflurane during a cerebral operation in order to avoid blood loss. The concentration of isoflurane necessary to achieve controlled hypotension was significantly reduced by 31–42% compared to the control group. **Wang et al, Zhongguo Zhong Xi Yi Jie He Za Zhi 2000**

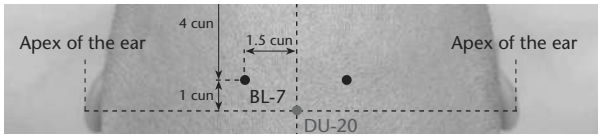
Bladder channel



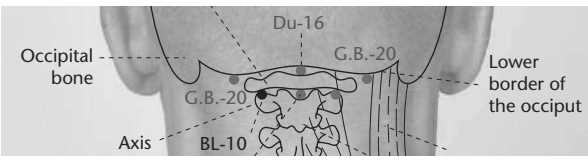
BL-1 → G.B.-14

A non-randomised group-comparison trial (n = 34) investigated the effect of warmed needle acupuncture at **BL-1** in patients suffering from **epiphora** due to dysfunction of the lacrimal duct. The effect in the treatment group was significantly better in comparison to the control group treated with lacrimal duct irrigation and norfloxacin eye drops (92% vs 54%). **Ni et al, J Tradit Chin Med 2002**

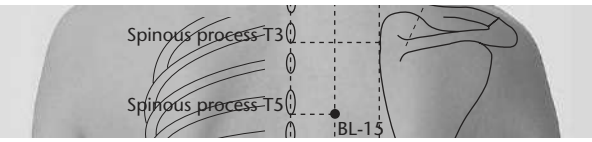
A Chinese case study reports the treatment of **epiphora** due to **insufficiency of lacrimal passage** with acupuncture at **BL-1**. Of the 68 eyes treated in 42 patients, 28 eyes were cured and 35 improved. 34 eyes improved after only one course of treatment. **Ni Y et al, J Tradit Chin Med 1999**



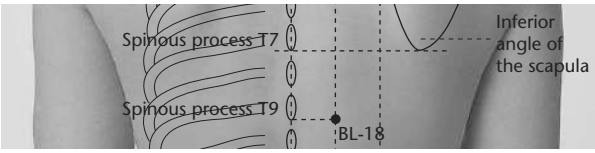
BL-7 A Chinese experimental trial carried out in 1988 was the first to discuss the possible effect of **BL-7**, **G.B.-6** and **Ex-HN-1** on **hemiplegia** through changes of the micro-circulation in the nail bed. **Shun et al, Zhen Ci Yan Jiu 1988**



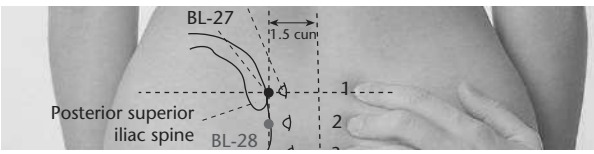
BL-10 → ST-8
A placebo-controlled, non-blinded group-comparison trial (n = 65) investigated the effect of treating children with an acu-plaster at **BL-10**, **BL-11** and **G.B.-34** the night before undergoing **strabismus surgery,** for the prevention of **post-operative nausea and emesis**. Nausea and emesis were reduced by 50% during the early and later postoperative stage compared to the placebo-group. The well-researched point P-6 often failed to prevent nausea in this type of surgery. **Chu et al, Acta Anaesthesiol sin 1998**
BL-11 → Du-12; BL-10; L.I.-4; Ex-B-1
BL-12 → Ex-B-1
BL-13 → Ex-B-1; Du-14



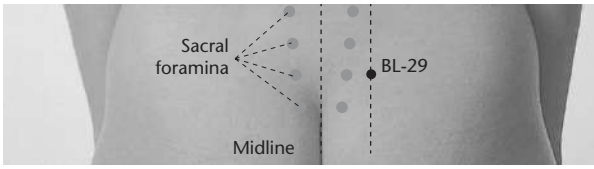
BL-15 → Ex-B-1; P-6
In an animal experiment, moxibustion at **BL-27** was able to reduce the renal excretion of Na^+ while at the same time decreasing urinary volume. Systolic blood pressure remained unchanged while plasma levels of aldosterone and ANP (atrial natriuretic peptide) decreased. In contrast, moxibustion at BL-15 increased urinary volume while reducing excretion of Na^+ and decreasing systolic blood pressure. Plasma levels of aldosterone and ANP decreased. These results suggest that BL-15 and BL-27 might be applied for certain forms of **hypertension**. **Lee et al, Am J Chin Med 1997**
BL-17 → SP-10



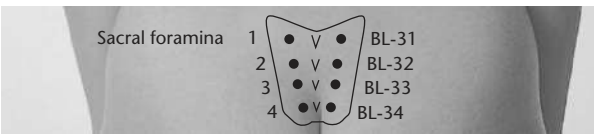
BL-18 → BL-23
A Japanese prospective, randomised, placebo-controlled, double-blinded trial (n = 189) investigated the effect of Japanese intradermal acupuncture at **BL-18**, **BL-19**, **BL-20**, **BL-21**, **BL-22**, **BL-23**, **BL-24**, **BL-25** and **BL-26** on **analgesic requirement, nausea and emesis** as well as stress markers after **abdominal surgery**. Starting from the recovery room and including the second postoperative day incisional pain at rest and during coughing was significantly lower in the verum group than in the control group. The requirement for epidural morphine was also significantly lower (only 50%). Nausea and emesis were also significantly lower (20–30%). Plasma cortisol and epinephrine concentrations were reduced by 30–50% in the acupuncture group during recovery and on the first postoperative day. This is one of the most valuable trials due to its excellent methodology and design. **Kotani et al, Anesthesiology 2001**
BL-19 → BL-18
BL-20 → L.I.-4; Du-1; BL-18; Du-14; P-6
BL-21 → BL-18
BL-22 → BL-18; Ex-B-2
BL-23 → L.I.-4; Du-4; Du-20; BL-18; Du-14
BL-24 → L.I.-4; BL-18
BL-25 → L.I.-4; BL-18; Ex-B-2
BL-26 → L.I.-4; BL-18



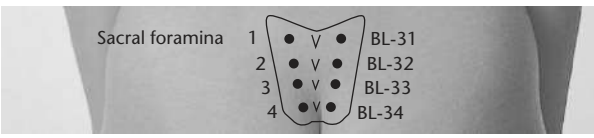
BL-27 → L.I.-4; BL-15
A German randomised, placebo-controlled experimental trial (n = 42) compared the effect of acupuncture at **BL-27** on pain reduction with a point of the Yamamoto New Scalp Acupuncture (YNSA). Experimental pain stimuli were set on the **upper calcaneus edge**. The difference in pain reduction between the acupuncture group and the scalp acupuncture group was highly significant. There are also highly significant differences concerning the verum and the placebo treatment. BL-27 could therefore be a useful point for treating calcaneal pain. **Ogal et al, Anasthesiol Intensivmed Notfallmed Schmerzther 2002**
An animal experiment in 15 healthy dogs investigated the effect of acupuncture on intestinal (duodenum) motility. Electro-acupuncture at BL-27 decreased the frequency of intestinal motility by 31% during stimulation, while showing an increase of 18% after stimulation. Electro-stimulation of ST-36 led to the opposite result: a 20% increase during stimulation followed by a decrease of 7% after stimulation. Based on this result, BL-27 could be applied for **paralytic ileus** or **constipation** while ST-36 could be used for treating **bloating, tenesmus and diarrhoea**. **Choi et al, J Vet Sci 2001**
BL-28 → L.I.-4; Du-4



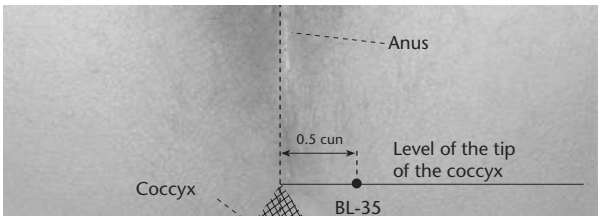
BL-29 There exists only a small case study describing **various disorders**. This is of educational value rather than anything else. **Chen Y., J Tradit Chin Med 2002**



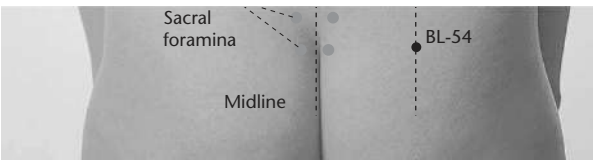
BL-32 → Du-4; Ren-3
A medium-scale Chinese case study ($n = 30$) reports the successful treatment of **urinary and faecal incontinence** due to nerve damage with electro-acupuncture at **BL-35** and **BL-32**. **Yang et al, J Tradit Chin Med 2003**



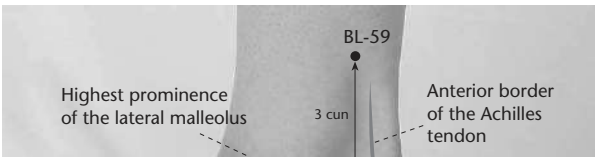
BL-33 A Japanese case study ($n = 10$) documents a significant reduction of pain for **chronic pelvic pain syndrome** with **intrapelvic venous congestion** by weekly treatments with bilateral acupuncture at **BL-33** (needle retention 10 minutes, manual rotation). **Honjo et al, Int J Urol 2004**
A Japanese prospective case study ($n = 13$) investigated the effect of bilateral acupuncture at **BL-33** on cystometry and **incontinence** in **spinal-cord-injured patients**. Incontinence completely disappeared in 15% of cases and decreased to 50% or less compared to baseline in a further 46% of patients. Maximum cystometric bladder capacity increased significantly from 75 ml to 148 ml. When cystometry was repeated in six patients one month after the last acupuncture treatment, bladder capacity showed a further average increase to 187 ml. **Honjo et al, Urol Int 2000**



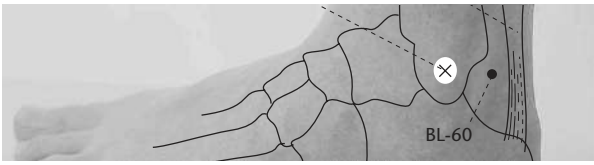
BL-35 → BL-29; BL-32
A larger-scale Chinese case study ($n = 103$) reports the successful treatment of **post-partum urinary retention** with classic acupuncture at **BL-35**. **Li et al, J Tradit Chin Med 1996**
BL-47 → L.I.-4



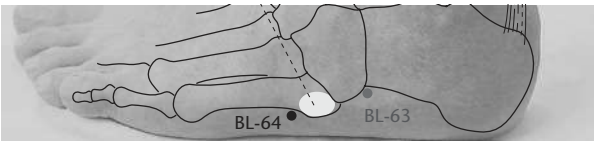
BL-54 → Du-3
A larger-scale Chinese case study ($n = 100$) reports the successful treatment of **lumbar pain** with acupuncture at **BL-54**. **Cui, J Tradit Chin Med 1992**



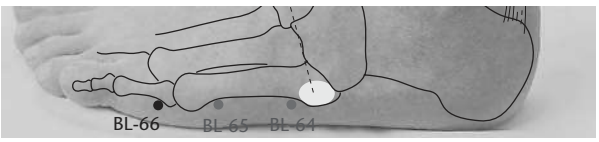
BL-59 A smaller-scale Chinese case study reports the treatment of **acute lumbar pain** with acupuncture at **BL-59**. **Hu, J Tradit Chin Med 1993**



BL-60 → Du-3; ST-36; L.I.-4
A US prospective case study ($n = 7$) reports the positive subjective (questionnaire) and objective (tibial H-reflex) effect of non-invasive electro-acupuncture at **BL-60**, **ST-36**, **KID-1** and **LIV-3** on **HIV-related neuropathy**. Results showed a significant overall improvement in functional activities. **Galantino et al, J Altern Complement Med 1999**
BL-62 → S.I.-3; HE-7; Du-20



BL-64 An animal experiment demonstrated that electro-acupuncture at BL-64 and BL-65 increased the activity of nitric oxide synthase in the brain stem nuclei (nucleus gracilis). **Ma at al, Acupunct Electrother Res 2002**
BL-65 → BL-64



BL-66 An experimental study in rats investigated the antipyretic effect of manual acupuncture at **BL-66** on lipopolysaccharide-induced **fever**. Acupuncture at this point reduced the fever and also reduced the production of the pro-inflammatory cytokines interleukin-1 beta and interleukin-6 in the hypothalamus of the treated rats. **Son et al, Neurosci Lett 2002**

BL-67 An Italian prospective, randomised, controlled, single-blinded trial (n = 123) investigated the effect of moxibustion at **BL-67** on the conversion rate in **breech presentations**. The trial had to be terminated prematurely due to a high drop-out rate of participants. At that time, there were no significant differences between the moxibustion group and the control group. The authors conclude that there is too little acceptance for moxibustion treatment in non-Asian cultures. **Cardini et al, Br J Obstet Gynaecol 2005**

A randomised, controlled, prospective larger-scale trial (n = 67) demonstrated a higher rate of conversion of fetal **breech presentations** in a group treated with 30 minutes of manual acupuncture at **BL-67** (76.4%) compared to an untreated control group (45.4%). **Habek et al, Fetal Diagn Ther 2003**

A large-scale (n = 260), randomised, controlled, prospective trial demonstrated a higher rate of conversion of fetal **breech presentations** in women treated with moxibustion at **BL-67** for 7–14 days (75.4%) than the conventionally treated control group (47.7%). **Cardini et al, JAMA 1998**

A medium-scale case study (n = 48) with retrospective control groups demonstrated that electro-acupuncture at **BL-67** for the conversion of fetal **breech presentations** had a 81.3% success rate. **Li et al, J Tradit Chin Med 1996**

Acupuncture at **BL-67** resulted in a significant increase in the number of **c-Fos-positive cells in the primary visual cortex** of binocularly deprived rat pups to levels suggesting that BL-67 has an influence on the activity of the primary visual cortex. **Lee et al, Am J Chin Med 2002**

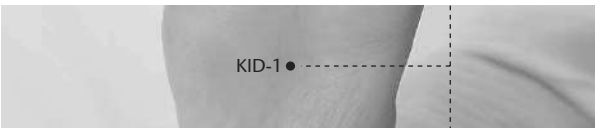
A recent Italian prospective, randomised trial investigated the effect of acupuncture and moxibustion at **BL-67** on the conversion of **breech presentations** in 240 pregnant women. At delivery, breech presentation was significantly lower in the active-treatment group (37%) than in the observation group (54%). Therefore the proportion of caesarean sections indicated for breech presentation was also significantly lower in the treatment group than in the observation group (52% vs 67%). **Neri et al, J Matern Neonatal Med 2004**

A Croatian prospective, randomised, controlled, non-blinded group-comparison trial (n = 67) assessed the value of acupuncture at **BL-67** for 30 minutes in the conversion of **breech presentation**. The success rate of the acupuncture correction of the breech presentation was 76% while the rate in the untreated control group was only 45%. This is a highly significant difference. **Habek et al, Fetal Diagn Ther 2003**

An Austrian prospective, randomised, placebo-controlled experimental trial (n = 10) investigated the effect of laser acupuncture at **BL-67** on the visual cortex using fMRI to monitor **neuroradiological changes**. Only verum acupuncture resulted in an activation in the cuneus (Brodmann Area BA 18) and the medial occipital gyrus (BA 19). These results confirm the traditional application of this point for ophthalmic disorders. **Siedentopf et al, Neurosci Lett 2002**

An Italian prospective, non-randomised, sham-controlled, single-blinded trial (n = 12 pregnant women with **breech presentation**) demonstrated that acupuncture at **BL-67** significantly reduced the fetal heart rate while increasing fetal movement and producing more accelerations. **Neri et al, J Soc Gynecol Invest 2002**

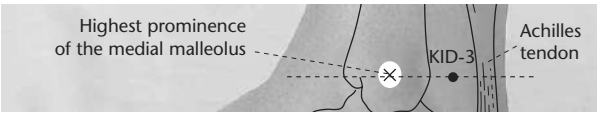
Kidney channel



KID-1 → BL-60

A Chinese prospective, randomised, controlled, non-blinded trial (n = 150) investigated the effect of acupuncture at **KID-1** in the treatment of **children with bronchial asthma** compared to a control group treated with conventional drugs. The clinical effectiveness of acupuncture at KID-1 was significantly higher than treatment with drugs (89% vs 64%). In addition, in the acupuncture group the level of eosinophils and IgE was highly significant and significantly lower respectively than in the control group. **Gao et Zhu, Zhongguo Zhong Xi Yi Jie He Za Zhi 2005**

A Chinese retrospective case study reports the successful local stimulation of **KID-1** by applying a paste in the treatment of **essential hypertension**. **Gong et al, J Tradit Chin Med 1995**

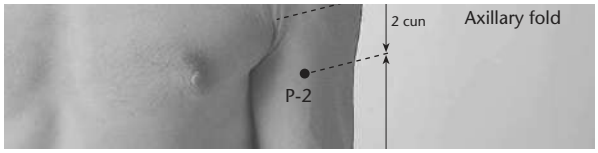


KID-3 → Du-4; L.I.-15

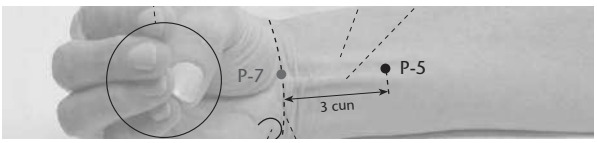
A Taiwanese prospective, randomised, controlled experimental trial (n = 157) compared the absorption of Tc-99 m (a radioactive technetium marker) at **KID-3** with non-acupuncture points. Absorption at KID-3 was significantly better than at non-acupuncture points. **Wu et al, Am J Chin Med 1994**

KID-4 → P-6
KID-5 → Du-4
KID-6 → ST-36

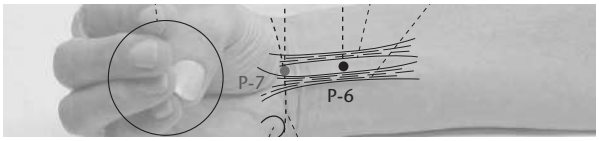
Pericardium channel



P-2 A Chinese experimental trial (n = 100) examined cardiac function before and during acupuncture at **P-2**, **P-3**, **P-4** and **P-6** as well as at control points (some arbitrary points and **G.B.-37**) in patients with **coronary heart disease**. In contrast to the control points the verum points had an effect – even if only a minor one – on the measured parameters (PEP, LVET, P/L, HI, SV, CO, ST segment and T wave of ECG). **You et al, Zhen Ci Yan Jiu 1993**
P-3 → P-2
P-4 → P-2



P-5 An earlier Chinese trial interpreted the synchronising effect of electro-acupuncture at **P-5** on EEG activity as having a **homeostatic effect on the whole body**. **Huang et al, Zhen Ci Yan Jiu 1990**
Electro-acupuncture at **P-5** improved the ST segment of ECG in rabbits with induced **acute myocardial infarction**. **Cao et al, Zhen Ci Yan Jiu 1990**
An earlier Chinese experimental trial (n = 10) found that electro-acupuncture at **P-5** and **P-6** shortened sino-atrial conduction in healthy subjects and increased frequency at the sinus node (**positive chronotropic and bathmotropic effect**). **Xi et al, Zhongguo Zhong Xi Yi Jie He Za Zhi 1993**
Previous work of the team led by Li and Tjen-A-Looi suggests that the inhibitory effect of electro-acupuncture (EA) on the pressor reflex induced by bradykinin (BK) applied to the gallbladder is in part due to the activation of opioid receptors most likely located in the rostral ventrolateral medulla (rVLM). This trial investigated the specific opioid receptor subtypes and neurotransmitters responsible for this inhibition. Therefore BK was applied to the gallbladder of anaesthetised cats to induce an increase of arterial blood pressure. It was found that applying EA at P-5 and P-6 activated the mu and delta opioid receptors located in the rVLM, thus preventing a rise of the arterial blood pressure for a longer period of time through the activating influence of the splanchnic nerve (for example due to stretching of the gallbladder or stomach). This experiment substantiated the positive effect of EA at P-5 and P-6, especially for myocardial ischaemia due to **coronary heart disease**. **Li et al, Auton Neurosci 2001; Li et al, Am J Physiol Regul Integr Comp Physiol 2002; Tjen-A-Looi et al, Auton Neurosci 2003**
In a US study 17 healthy subjects were subjected to weekly bicycle training for 3–4 weeks. Subjects were asked to perform the training with and without electro-acupuncture (EA) at **P-5**, **P-6**, **L.I.-4**, **L.I.-5**, **L.I.-6**, **L.I.-7**, **G.B.-37**, **G.B.-38** and **G.B.-39**. In 70% of subjects, EA at points on the Pericardium and Large Intestine channels led to an increase in maximal workload with decreased blood pressure. Points on the Gall Bladder channel had no effect. Further trials may investigate the application of these points in the treatment of hypertension induced by exercise stress. **Li et al, Clin Auton Res 2004**



P-6 → P-2; P-5; Du-20; Du-14; HE-7; LIV-3; L.I.-4; ST-36
A Taiwanese prospective, randomised, placebo-controlled, double-blinded trial (n = 110) investigated the effect of acupressure bands at **P-6** on **nausea and vomiting during spinal anaesthesia for caesarean delivery**. The reduction and occurrence of nausea (64% vs 71%) and vomiting (22% vs 27%) was not significant. **Ho et al, Anesth Analg 2006**
A US prospective, randomised, placebo-controlled, single-blinded trial (n = 94) investigated the effect of acupressure bands at **P-6** on the occurrence of **nausea and vomiting during caesarean delivery under spinal anaesthesia**. There was no statistically significant difference between the active and sham control groups in the incidence of intraoperative nausea (30% vs 43%), postoperative nausea (23% vs 41%), intraoperative vomiting (13% vs 9%), postoperative vomiting (26% vs 34%), intraoperative antiemetic requirement (23% vs 18%), postoperative antiemetic requirement (34% vs 39%), complete intraoperative response (55% vs 57%) or complete postoperative response (51% vs 34%). These results did not reach the selected level of significance. There were also no significant differences between the groups in nausea scores, number of vomiting episodes and patient satisfaction. **Habib et al, Anesth. Analg 2006**
A Swedish prospective, randomised placebo-controlled experimental double-blinded trial (n = 60) investigated the effect of acupressure at **P-6** on **nausea induced by eccentric rotation**. Mean time to nausea was significantly the longest in the P-6 group (352 seconds), compared to the placebo-acupressure group (280 seconds) and the untreated control group (151 seconds). **Alkaissi et al, Can J Anaesth 2005.**
A Turkish prospective randomised controlled non-blinded trial (n = 90) investigated the effect of transcutaneous electrical acupoint stimulation (TEAS) at **P-6** and **Ren-13** compared to ondansetron on **postoperative nausea following paediatric**

tonsillectomy. There was the same incidence of nausea episodes in the TEAS group and in the ondansetron group, but significantly fewer episodes than in the untreated control group. Side-effects were significantly higher in the ondansetron group. **Kabalak et al, J Altern Complement Med 2005**

An Indian prospective, randomised, placebo-controlled, double-blinded trial ($n = 120$) investigated the effect of capsicum-plasters on **P-6** on **postoperative nausea and vomiting** (PONV) compared to conventional treatment with ondansetron. For the duration of the plaster application (6 hours after the operation) the incidence of PONV and the requirement for antiemetics were significantly lower in both groups. **Misra et al, Can J Anaesth 2005**

A Turkish prospective, randomised, placebo-controlled, single-blinded trial ($n = 127$) investigated the effect of transcutaneous electric nerve stimulation (TENS) at **P-6** on the incidence and severity of **nausea and gagging during gastroscopies**. There were no significant differences between the treatment group and placebo group. **Tarcin et al, Turk J Gastroenterol 2004**

A Chinese prospective, non-blinded, randomised, group-comparison trial ($n = 30$) investigated the effect of acupuncture at **P-6** plus mexiletin on **intermittent ventricular extrasystole**. The treatment group had a total effective rate of 90% compared with the control group, who was administered mexiletin only (80% total effective rate). Only the acupuncture group showed no increase in extrasystole. **Zhang et al, J Tradit Chin Med 2004.**

A Chinese group-comparison trial investigated the effect of acupuncture at **P-6** in the treatment of patients with angina pectoris and **acute myocardial infarct**. The effectiveness of acupuncture was significantly better (91%) than conventional treatment with isosorbide dinitrate and nifedipine. **Meng et al, J Tradit Chin Med 2004**

A US prospective, controlled, group-comparison trial ($n = 77$) investigated the effect of stimulation at **P-6** on the symptoms of **motion sickness** during exposure to optokinetic drum rotation. Despite the extreme test conditions, stimulating P-6 delayed the onset of symptoms considerably. **Miller et al, Aviat Space Environ Med 2004**

A Croatian prospective, single-blinded group-comparison trial ($n = 36$) investigated the efficiency of acupuncture at **P-6** in the treatment of **hyperemesis gravidarum**. Treatment results were measured by the requirement for anti-emetic medication. Acupuncture at P-6 had an efficiency rate of 90%, acupressure at P-6 64%, placebo acupuncture 12.5% and placebo acupressure 0%. **Habek et al, Forsch Komplementarmed Klass Naturheilkd 2004**

In a German prospective, randomised, placebo-controlled double-blinded group-comparison trial acupuncture at **P-6** significantly reduced the incidence of **emesis after gynaecological and breast surgery** (40% placebo, 25% P-6). Postoperative emesis was only reduced for gynaecological surgery, not for breast surgery. **Streitberger et al, Anaesthesia 2004**

A Chinese prospective, randomised, single-blinded, placebo-controlled group-comparison trial ($n = 41$) investigated the effect of twice daily acupressure at **P-6**, **ST-36** and **SP-6** on **gastrointestinal motility following trans-abdominal hysterectomy**. In comparison to the control group receiving acupressure on sham points, gastrointestinal motility (measured with a multifunctional stethoscope) increased significantly in the acupressure group. **Chen et al, Am J Chin Med 2003**

A German prospective, randomised, placebo-controlled, single-blinded trial ($n = 80$) investigated the anti-emetic effect of acupuncture at **P-6** in addition to administration of ondansetron in patients with **chemotherapy-related nausea**. There was no significant difference between the treatment and control group. **Streitberger et al, Clin Cancer Res 2003**

A US prospective, randomised, placebo-controlled, double-blinded trial ($n = 230$) investigated the effect of TENS at **P-6** for the relief of **nausea and vomiting in pregnancy**. Based on the Rhodes Index, results in the verum group were significantly better than in the control group. **Rosen et al, Obstet Gynecol 2003**

A British prospective, partially randomised, partially blinded, placebo-controlled trial ($n = 301$ patients with **acute myocardial infarction**, 125 of whom acted as a non-randomised control group) compared the effect of wristband-acupressure at **P-6** with placebo-acupressure. P-6 led to a significant reduction in **nausea and vomiting** during the last 20 hours of the 24-hour study phase (18%), compared with the placebo group (32%) and the control group (43%). **Dent et al, Complement Ther Med 2003**

A Swedish prospective case study ($n = 39$) investigated the effect of **P-6** combined with ondansetron for **nausea and vomiting** associated with **cyclophosphamide chemotherapy**. The authors stated that, compared with ondansetron treatment alone, the combined acupuncture-ondansetron treatment was significantly more effective, but they do not mention a control group. **Josefson et al, Rheumatology (Oxford) 2003**

In a US prospective, randomised, single-blinded trial ($n = 53$) the application of 'minute sphere' acupressure at **P-6**, **ST-36**, **SP-6** and **SP-4** showed no decrease of **postoperative pain and morphine requirement after abdominal surgery**. **Sakurai et al**, **Anesth Analg 2003**

A Swedish prospective, randomised, placebo-controlled, double-blinded, multi-centre trial ($n = 410$) investigated the effect of **P-6** for the treatment of **postoperative nausea and vomiting after gynaecological surgery**. The incidence of nausea and vomiting was significantly lower in the acupuncture group (33%) than in the control group (46%). **Alkaissi et al, Can J Anaesth 2002**

A US prospective, randomised, placebo- and sham-controlled, double-blinded trial ($n = 120$) investigated the effect of the prophylactic application of a 'ReliefBand' at **P-6** on the incidence of **nausea and vomiting after plastic surgery,** compared to the application of the ReliefBand in addition to 4 mg ondansetron. The occurrence of nausea and vomiting as well as the need for antiemetic 'rescue' medication was significantly the lowest in the P-6 plus ondansetron group. **White et al, Anesthesiology 2002**

A Korean prospective, randomised, placebo-controlled, double-blinded trial ($n = 160$) investigated among other parameters the

effect of a capsicum plaster applied at **P-6** on **postoperative nausea and vomiting**. The incidence of nausea and vomiting was significantly less (P-6: 26% within 24 hours, placebo: 57%). **Kim et al, Anesth Analg 2002**

A Japanese case study investigated the effect of different stimulation techniques at **P-6** on the coronary arteries in patients with **coronary heart disease**. The mean coronary dilation with acupuncture was 69% of that caused by isosorbide dinitrate. **Kurono et al, Am J Chin Med 2002**

A US prospective, randomised, sham-controlled, single-blinded trial ($n = 187$) investigated the effect of **P-6** on the incidence of **postoperative nausea and vomiting** in children. P-6 produced significantly better results than the sham points and was equally effective as administration of droperidol, but without the sedative, hypotensive side effects. **Wang et al, Anesthesiology 2002**

A US prospective, randomised, sham-controlled, single-blinded trial ($n = 27$) investigated the effect of **P-6** on the incidence of **nausea and vomiting during chemotherapy**. Compared to the control group, the anti-emetic requirement was significantly lower in the P-6 group. **Roscoe et al, Altern Ther Health Med 2002**

An Austrian prospective, randomised, placebo-controlled, experimental cross-over study ($n = 51$) investigated the effect of acupuncture at **P-6** on the **skin blood perfusion** measured by laser Doppler perfusion imaging. This was compared to needling a sham point. Changes in the skin blood perfusion occurred significantly earlier in the acupuncture group than in the sham group, with a basically more pronounced reduction in skin blood perfusion at the verum point. **Litscher et al, Lasers Med Sci 2002**

A large-scale Australian prospective, randomised, sham-controlled trial ($n = 593$) investigated the effect of acupuncture at **P-6** on the incidence **of nausea and vomiting in early pregnancy**. Women receiving traditional acupuncture reported significantly less nausea after the second treatment and significantly less dry retching after the third week compared with women in the control group. Women treated with sham acupuncture showed significantly less nausea and retching after the third treatment compared with untreated women. Individualised acupuncture resulted in significantly less nausea and retching already after the first treatment. In this study none of the treatments had a significant influence on the frequency of vomiting. **Smith et al, Birth 2002**

A US prospective, randomised, sham-controlled trial ($n = 120$) investigated the influence of electro-acupuncture (EA) at **P-6** on postoperative **nausea and vomiting** in paediatric patients who had undergone **ENT surgery** and were awake. EA at P-6 significantly decreased the incidence of nausea (P-6: 60%, sham: 85%, control group: 93%). While vomiting had the lowest incidence in the P-6 group, the difference from the other groups was not significant. **Rusy et al, Anesthesiology 2002**

A Swedish prospective, randomised, placebo-controlled pilot study ($n = 60$) investigated the effect of tuina (acupressure) at **P-6** on **pregnancy-related nausea and vomiting**. The frequency of both nausea and vomiting was significantly lower in the acupressure group compared to the sham acupressure group and untreated control group. **Werntoft et al, J Reprod Med 2001**

A US prospective, randomised, controlled trial ($n = 25$) investigated the effect of an acupressure wrist band at **P-6** on **motion sickness**. Both the symptoms of motion sickness and abnormal gastric activity as recorded via EEG were significantly lower in the group treated with wristbands at P-6. **Stern et al, Altern Ther Health Med 2001**

A US prospective, randomised, placebo-controlled, single-blinded trial investigated the effect of 'sea-bands' (acupressure wristbands) at **P-6** on the incidence of **postoperative nausea and vomiting**. There were no significant differences. **Windle et al, J Perianesth Nurs 2001**

A Swedish prospective, randomised, sham-controlled, single-blinded cross-over study ($n = 33$) investigated the effect of acupuncture at **P-6** on pregnant women with **hyperemesis gravidarum** (vomiting in pregnancy). The verum group showed a significantly faster reduction of the nausea, and also a higher number of the patients experienced no vomiting. **Carlsson et al, J Pain Symptom Manage 2000**

A Chinese prospective, controlled, randomised, group-comparison study ($n = 181$) and a Chinese case study ($n = 33$) demonstrated that electro-acupuncture at **P-6** and **P-8** as well as at **L.I.-4**, **T.B.-5**, **ST-36** and **SP-6** with de-escalating treatment frequency from four times daily to once weekly for a period of 15 and 28 days had a significant effect on the **withdrawal symptoms of heroin addicts**. **Zhang et al, Zhongguo Zhong Xi Yi Jie He Za Zhi 2000; Wu et al, Zhongguo Zhong Xi Yi Jie He Za Zhi 2000**

A Taiwanese prospective, non-randomised, placebo-controlled, single-blinded experimental cross-over study ($n = 44$) investigated the effect of acupuncture at **P-6** on the left ventricular ejection fraction (LVEF) in 22 healthy subjects and 22 patients with **coronary artery disease** (CAD). There was no change of LVEF in the healthy subjects while LVEF significantly increased in the CAD patients. **Ho et al, Am J Chin Med 1999**

A US prospective, randomised, placebo-controlled, single-blinded trial ($n = 100$) investigated the effect of pre-operative acupressure (verum group) and intra-operative acupuncture (verum and control group) at **P-6** on **postoperative nausea and vomiting** after **tonsillectomy** in children. There were no significant differences. **Shenkman et al, Anesthesiology 1999**

A Swedish prospective, randomised, placebo-controlled, double-blinded trial ($n = 60$) investigated the effect of acupressure at **P-6** on **nausea and vomiting** after **minor gynaecological surgery**. Only the group receiving acupressure at P-6 experienced no vomiting and also required no anti-emetic medication. **Alkaissi et al, Acta Anaesthesiol Scand 1999**

An Austrian prospective, randomised, placebo-controlled, double-blinded trial investigated the effect of laser acupuncture at **P-6** on **nausea and vomiting in children undergoing strabismus surgery**. The laser acupuncture was administered 15 minutes before induction of anaesthesia and 15 min after arriving in the recovery room. In the laser stimulation group, the incidence of vomiting was significantly lower (25%) than that in the placebo group (85%). **Schlager et al, Br J Anaesth 1998**

A Chinese prospective, randomised, placebo-controlled, double-blinded trial ($n = 163$) investigated the effect of acupoint stickers at **P-6**, **Ren-8** and **T.B.-18** on **motion sickness**. All tested acupuncture points showed a significantly better result than the active control points (scopolamine plaster) and the placebo control (lactose plaster). T.B.-18 was the most effective point (symptoms 100% reduced), followed by Ren-8 (81%) and P-6 (46%). **Pei et al, Zhongguo Zhong Xi Yi Jie He Za Zhi 1998**

A Chinese prospective, randomised, controlled trial ($n = 50$) compared two forms of anaesthesia for the **anterior approach cervical discectomy**: local anaesthesia plus intravenous anaesthesia (IVA) in the control group and electro-acupuncture at **P-6** and **L.I.-4** plus IVA. The effect of the anaesthesia was the same in both groups. The authors therefore recommend electro-acupuncture at P-6 and L.I.-4 as a less risky alternative. **Li et al, Zhongguo Zhong Xi Yi Jie He Za Zhi 1997**

A British prospective, randomised, placebo-controlled, double-blinded trial ($n = 81$) investigated the effect of intra-operative acupuncture at **P-6** in the prevention of **postoperative nausea and vomiting** in patients undergoing **gynaecological laparoscopic surgery**. The use of acupuncture significantly reduced the incidence of postoperative nausea and vomiting by 30–38% compared with placebo. **Al-Sadi et al, Anaesthesia 1997**

A US prospective, randomised, placebo- and sham-controlled, double-blinded trial ($n = 75$) investigated the effect of acupressure at **P-6** on **nausea and vomiting during caesarean section under spinal anaesthesia** compared with administration of 10 mg metoclopramide. Acupressure at P-6 is as effective as 10 mg metoclopramide. **Stein et al, Anesth Analg 1997**

An Australian prospective, randomised, placebo-controlled, double-blinded trial ($n = 84$) investigated the effect of TENS at **P-6** and **L.I.-4** on **postoperative nausea and vomiting** in **paediatric patients** undergoing **minor urological surgery**. The differences between the treatment and control group were not statistically significant. **Schwager et al, Anaesth Intensive Care 1996**

A Taiwanese prospective, randomised, sham-controlled, single-blinded experimental trial ($n = 48$) evaluated the relationship between electro-acupuncture at **P-6** and **ST-36** and cardiopulmonary function in healthy subjects. In the P-6/ST-36 group **resting heart rate**, **carbon dioxide production** and **oxygen requirement** were significantly decreased, indicating that acupuncture can lower the metabolic rate. **Lin et al, Chin Med J (Engl) 1996**

A Taiwanese prospective, randomised, placebo-controlled, double-blinded trial ($n = 60$) investigated the effect of acupressure wristbands at **P-6** on the incidence of **nausea and vomiting after epidural morphine for post-caesarean section pain relief**. Compared to the control group, the incidence of nausea significantly decreased from 43% to 3%, vomiting significantly decreased from 27% to 0%. **Ho et al, Acta Anaesthesiol Scand 1996**

A US prospective, randomised, placebo-controlled, single-blinded cross-over study ($n = 9$) investigated the effect of acupressure wristbands at **P-6** on nausea and vomiting for **seasickness**. Depending on the time of application (earlier or later during the trip) subjects were either symptom-free or complained about nausea and vomiting. The difference was highly significant. **Bertolucci et al, Aviat Space Environ Med 1995**

A US prospective, randomised, placebo- and sham-controlled, single-blinded experimental trial ($n = 9$) investigated the effect of acupressure at **P-6** on the incidence of visually-induced **motion sickness**. Acupressure at P-6 significantly reduced the incidence of nausea and abnormal gastric myoelectric activity. **Hu et al, Aviat Space Environ Med 1995**

A Chinese prospective, randomised, controlled trial ($n = 40$) investigated the effect of acupuncture on **P-6**, **L.I.-4**, **ST-36** and **KID-4** on the regulation of cellular immune function in patients with **malignant tumours**. There was a highly significant increase of the CD3+ and CD4+ levels, an increase in the CD4+/CD8+ ratio, a higher endorphin level and a decreased level of soluble interleukin-2 receptor (SIL-2R). **Wu, Zhen Ci Yan Jiu 1995**

A British prospective, randomised, controlled trial ($n = 46$) investigated the effect of acupressure at **P-6** on **nausea and vomiting** following **laparoscopy** for **gynaecological surgery** and the requirement for anti-emetic therapy. There was a significant reduction in the requests for anti-emetic therapy in the P-6-acupuncture group. **Allen et al, Anaesth Intensive Care 1994**

A Chinese prospective paired trial ($n = 40$) investigated the effect of electro-acupuncture (EA) at **P-6** during different times of the day (*chen*-time: 7–9am, *xu*-time: 7–9pm) on left ventricular function (LVF) in patients with **coronary heart disease**. EA performed at *chen*-time improved LVF, while EA administered under the same conditions during *xu*-time led to an impairment of LVF. **Li et al, J Tradit Chin Med 1994**

A British prospective case study ($n = 27$) reports that wearing a special wrist band decreased **pregnancy-related nausea and vomiting** more than 50%. **Stainton et al, Health Care Women Int 1994**

A US prospective, randomised, sham-controlled, single-blinded trial ($n = 60$) investigated the effect of acupressure at **P-6** on **pregnancy-related nausea and vomiting**. There was a significant decrease of nausea in the P-6 acupressure group. The incidence of vomiting did not differ from the sham control group. **Belluomini et al, Obstet Gynecol 1994**

A German prospective, randomised, placebo-controlled, single-blinded trial ($n = 60$) investigated the effect of acupressure at **P-6** on **nausea** in patients undergoing **gynaecological operations of longer duration** (6–8 h). Nausea was reduced from 53% in the placebo group to 23% in the acupressure group. **Gieron et al, Anaesthesist 1993**

A Chinese prospective, randomised, placebo-controlled, single-blinded trial ($n = 15$) investigated the effect of acupuncture at **P-6**, **HE-7** and **HE-3** on the frequency and duration of **angina pectoris** during exercise. The control groups received either sham acupuncture or no treatment at all. In the verum group, the anginal attack occurred significantly later and the duration of the attack after stopping the exercise was significantly shorter than

in the control groups. **Zhou et al, Zhongguo Zhong Xi Yi Jie He Za Zhi 1993**

A Taiwanese prospective, randomised, controlled trial ($n = 120$) investigated the effect of **P-6** acupoint injection with 0.2 ml 50% glucose in water compared to intravenous injection of 20 micrograms/kg droperidol for the prevention of **vomiting after gynaecological laparoscopy**. A non-controlled comparison-group received no treatment at all. The incidence of vomiting significantly decreased in both the P-6 group and the droperidol group. **Yang et al, Acta Anaesthesiol Scand 1993**

An Italian prospective, randomised, placebo-controlled, double-blinded cross-over study ($n = 60$) investigated the effect of unilateral and bilateral acupressure at **P-6** for the treatment of **morning sickness** compared to acupressure at a sham point. Compared to the placebo group both unilateral and bilateral acupressure at P-6 significantly reduced the frequency of morning sickness from 60% to 30%. **De Aloysio et al, Obstet Gynecol 1992**

A US 'n of 1' trial investigated the effect of **P-6** wristbands on **nausea and vomiting in hospice patients** ($n = 6$). There were no significant differences between the verum group, the placebo group and the group without wristbands. **Brown et al, Am J Hosp Palliat Care 1992**

A Canadian prospective, randomised, controlled, double-blinded trial ($n = 90$) investigated the effect of acupuncture at **P-6**, administered after induction of anaesthesia, on the frequency of **nausea and vomiting after strabismus surgery in children**. The control group received droperidol. There was no significant difference between the two groups. **Yentis et al, Can J Anaesth 1992**

A Canadian prospective, randomised, controlled, single-blinded trial ($n = 45$) investigated the effect of acupuncture at **P-6** administered after induction of anaesthesia on the frequency of **nausea and vomiting after tonsillectomy in children**. There was no significant difference between the verum group and the untreated control group. **Yentis et al, Br J Anaesth 1991**

A US prospective, randomised, controlled, double-blinded trial ($n = 66$) investigated the effect of acupuncture at **P-6** administered after induction of anaesthesia on the frequency of **nausea and vomiting after strabismus surgery in children**. There was no significant difference between the treatment group and placebo group. **Lewis et al, Br J Anaesth 1991**

An Irish case study ($n = 100$) reports that TENS at **P-6** reduced **chemotherapy-induced nausea** by 75%. **Dundee et al, J R Soc Med 1991**

A Swedish prospective, randomised, controlled cross-over study ($n = 21$) investigated the effect of acupuncture at **P-6**, **HE-5**, **BL-15**, **BL-20** and **ST-36** on the frequency of **angina pectoris** (AP) and the performance before onset of pain during exercise in patients suffering from coronary heart disease. The frequency of AP attacks decreased significantly from 11 to 6 attacks per week. Accordingly, the performance before onset of pain during exercise increased significantly from 82 W to 94 W. **Richter et al, Eur Heart J 1991**

A Chinese prospective, randomised, non-blinded, controlled trial ($n = 64$) investigated the effect of a 3 ml normal saline injection into **P-6** on the incidence of **postoperative vomiting**. Compared to the control group, vomiting was significantly reduced (2 vs 10 patients) in the treatment group. **Shyr et al, Ma Zui Xue Za Zhi 1990**

A British prospective, randomised, controlled experimental trial ($n = 18$) compared the effectiveness of acupressure bands at **P-6** on **motion sickness** to a placebo and 0.6 mg scopolamine. Only the subjects taking scopolamine showed a significant increase in tolerance to a laboratory nauseogenic cross-coupled motion challenge. **Bruce et al, Aviat Space Environ Med 1990**

A Taiwanese prospective, randomised, controlled trial ($n = 100$) compared the effect of electro-acupuncture (EA) and TENS at **P-6** on **nausea and vomiting after laparoscopy**. Compared to the control group (44%), nausea was significantly reduced in the EA and perchlorperazine group (12% each), but not in the TENS group (36%). **Ho et al, Anaesthesia 1990**

A British prospective, randomised, controlled trial ($n = 162$) compared the effect of acupressure wristbands at **P-6** on **postoperative nausea and vomiting** in the recovery room with conventional anti-emetic treatment. Acupressure at P-6 significantly reduced the intensity of the nausea. The reduced anti-emetic requirement and the reduced incidence of vomiting were not statistically significant. **Barsoum et al, J R Soc Med 1990**

A Chinese prospective, randomised, controlled trial ($n = 40$) compared the effect of electro-acupuncture (EA) at **L.I.-4** and **P-6** on intra-operative **analgesia** in patients undergoing **thyroidectomy** with superficial cervical plexus block. There was no significant difference between the two groups. **Ouyang et al, Zhen Ci Yan Jiu 1990**

An Irish prospective, randomised, sham-controlled, single-blinded trial investigated the effect of pre-operative electro-acupuncture and acupuncture at **P-6** on the frequency of **nausea and vomiting after minor gynaecological surgery** compared to sham acupuncture. The frequency of nausea and vomiting was significantly reduced in the P-6-group only. **Dundee et al, Br J Anaesth 1989**

A US prospective, randomised, controlled cross-over study ($n = 16$) investigated the efficacy of acupressure wristbands at **P-6** on **morning sickness**. Use of the acupressure wristbands significantly relieved morning sickness and also significantly reduced anxiety, depression and behavioural dysfunction. **Hyde, J Nurse Midwifery 1989**

An Irish prospective, randomised, sham-controlled cross-over study ($n = 10$) investigated the effect of electro-acupuncture on **P-6** on **chemotherapy-induced nausea**. In the verum group sickness was either completely absent or reduced considerably in 97% of patients and no side effects were encountered. The same research team confirmed these results in a larger-scale case study ($n = 105$). **Dundee et al, J R Soc Med 1988**

An Irish prospective, randomised, sham-controlled trial ($n = 350$) compared the effect of acupressure at P-6 on **morning sickness** to sham acupressure and a control group. Only acupressure at P-6 significantly relieved the symptoms of morning sickness. **Dundee et al, J R Soc Med 1988**

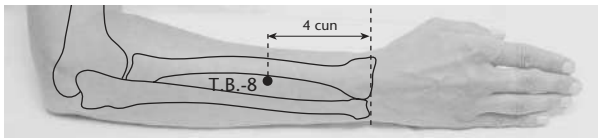
A prospective, randomised, placebo-controlled trial ($n = 75$) investigated the effect of acupuncture at **P-6** on **nausea and vomiting after minor gynaecological surgery**. Acupuncture at P-6 significantly reduced both nausea and vomiting. **Dundee et al, Br Med J (Clin Res Ed) 1986**

P-8 → P-6; LU-10

P-9 A larger-scale Chinese case study ($n = 100$) describes the positive effect of **P-9** on **infantile morbid night crying** in otherwise healthy children. **Zhao, J Tradit Chin Med 2002**

Triple Burner channel

T.B.-5 → P-6; L.I.-4; L.I.-12; L.I.-10



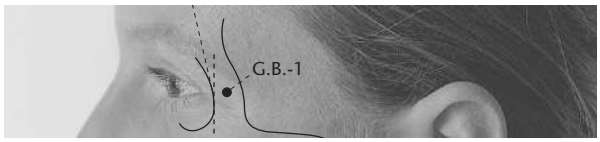
T.B.-8 Acupuncture at **T.B.-8** and **Du-15** activates areas important for **word generation** in the right inferior frontal gyrus, but not in the left inferior frontal gyrus. **Li et al, Hum Brain Mapp 2003**

A Russian case study reports the positive effects of acupuncture at **T.B.-8**, **T.B.-9**, **ST-20**, **ST-36**, **G.B.-14** and **Du-20** in 66 patients with **duodenal ulcer** accompanied by apparent shifts in psychovegetative correlations. **Kravtsova et al, Vopr Kurortol Fizioter Lech Fiz Kult 1994**

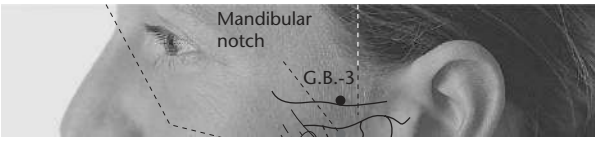
T.B.-9 → T.B.-8

T.B.-18 → P-6

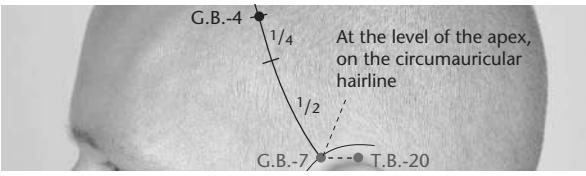
Gall Bladder channel



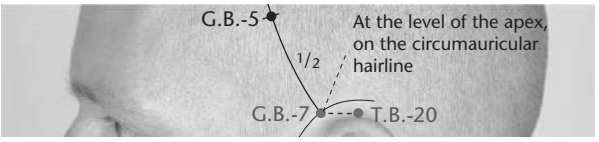
G.B.-1 An earlier Italian case study reports the successful application of **G.B.-1** for **heroin withdrawal** in nine male heroin addicts. After six months, 66% of these patients were classified as abstinent. Besides reservations regarding methodology of such a small-scale trial, the accompanying medication also poses problems in evaluating the effect of the acupuncture treatments. **Cocchi et al, Minerva Med 1979**



G.B.-3 A US prospective, randomised, double-blinded, experimental cross-over study ($n = 20$) investigated the effect of TENS at **G.B.-3** on the **anaesthetic requirement** (desflurane) to prevent purposeful movement of the extremities in response to noxious electrical stimulation. In comparison with the placebo group, bilateral application of TENS at G.B.-3 significantly reduced the desflurane requirement by 11%. **Greif et al, Anesthesiology 2002**



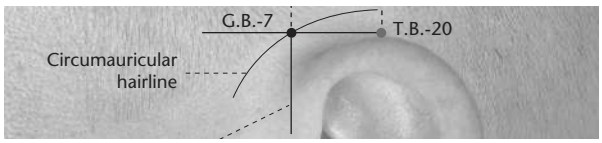
G.B.-4 Following the induction of an **ischaemic cerebral infarction** by occlusion of the middle cerebral artery in rats, animals treated with electro-acupuncture (EA) at **G.B.-4**, **G.B.-5**, **G.B.-6** and **G.B.-7** showed a significantly faster recovery than animals in the untreated control group or in the group treated with EA at **Du-20** and **Du-26**. Infarct volume was significantly reduced in the EA-treated groups. The authors discuss the acupuncture-induced production of vascular endothelial growth factor (VEGF) in astrocytes of the peri-infarct area as a causative factor. **Wang et al, Neurol Res 2003**



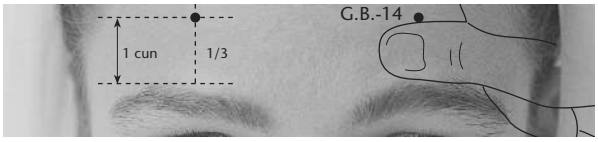
G.B.-5 → G.B.-4; ST-8

A Chinese case study recommends a particular needling technique (from **G.B.-5** or **Ex-HN-5** to **G.B.-8**) for the treatment of **migraine**. **Gan et al, J Tradit Chin Med 1986**

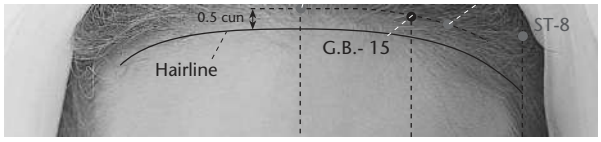
G.B.-6 → BL-7; G.B.-4



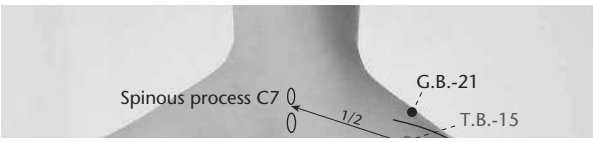
G.B.-7 → G.B.-4
A large-scale Chinese case study (n = 500) reports the successful application of acupuncture at **G.B.-7** in the treatment of **hemiplegia** after apoplexy. **Sun et al, J Tradit Chin Med 1985**
G.B.-8 → G.B.-5
G.B.-11 → ST-8



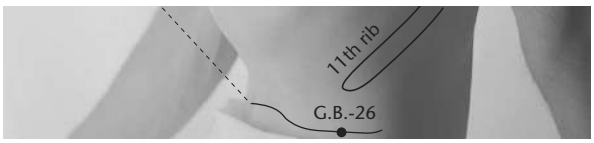
G.B.-14 → T.B.-8; ST-8; LIV-3
A case study reports that 63 patients with **facial paralysis** were treated with acupuncture at **G.B.-14**, **BL-1**, **ST-2**, **L.I.-20**, **ST-4**, **ST-6** and **ST-18** plus auxiliary points according to the underlying TCM pattern. Just over half of the patients were cured and all except one patient showed a marked improvement. **Liu et al, Zhen Ci Yan Jiu 1992**



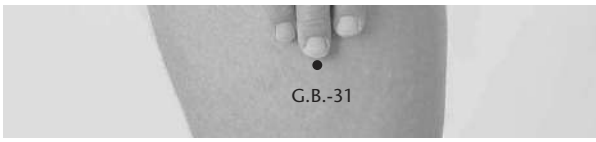
G.B.-15 An uncontrolled, non-randomised, group-comparison trial investigated the effect of acupuncture on **childhood diarrhoea**. Group I received scalp acupuncture (after Yamamoto) with points on line 3 starting at **G.B.-15**; Group II received body acupuncture; and Group III was treated with antibiotics. Group I showed the best results, followed by Group II and Group III, with results in Group I and II significantly better than in Group III. However, besides some methodological shortcomings, the authors did not seem to have a very firm grasp of their subject matter: while using the correct points for the correct indication, they refer to line 3 as line 2 and to G.B.-15 as BL-15! **Lin et al, J Tradit Chin Med 1993**
G.B.-20 → ST-8; LIV-3; S.I.-18; L.I.-15



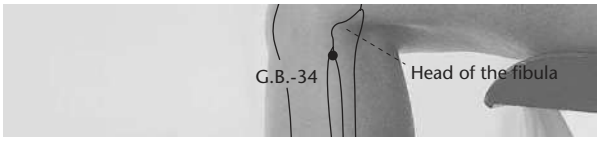
G.B.-21 → L.I.-15
A Chinese case study reports the successful treatment of **achalasia of the cardia** with acupuncture at **G.B.-21**. **Shi et al, J Tradit Chin Med 1994**
G.B.-24 → LIV-14



G.B.-26 An earlier prospective group-comparison trial investigated the **analgesic effect** of electro-acupuncture (EA) at **G.B.-26**, **ST-36**, **SP-6** and **HE-7** in patients who underwent hysterectomy by subumbilical midline incision. EA for 40 minutes had the same analgesic effect as 30 mg pentazocine. However, in contrast to pentazocine; EA also improved the vital capacity of the lung for 3–4 hours after the treatment. **Facco et al, Am J Chin Med 1981**
G.B.-30 → L.I.-12; L.I.-15



G.B.-31 → L.I.-4
Three publications by a Canadian research team led by Romita demonstrated that electro-acupuncture (EA) at **G.B.-31**, **ST-32** and **ST-36** resulted in a more pronounced inhibition of the **nociceptive tail withdrawal reflex** than classical acupuncture in slightly anaesthetised rats. **Romita et al, Brain Res 1997, Romita et al, Brain Res Bull 1997, Romita et al, Brain Res 1996**



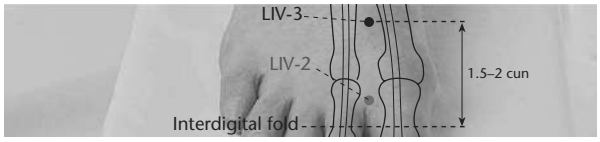
G.B.-34 → BL-10; Du-20; ST-36; L.I.-4; L.I.-15
A Korean prospective randomised placebo-controlled experimental trial (n = 10) investigated the effect of acupuncture at **G.B.-34** on motor cortex activities as evidenced by **fMRI**. Bilateral sensorimotor areas BA 3, 4, 6 and 7 were activated during acupuncture, providing a basis for future investigations regarding therapeutic interventions in **stroke** patients. **Jeun et al, Am J Chin Med 2005**
A Chinese prospective, randomised, controlled trial (n = 20) investigated the effectiveness of electro-acupuncture (EA) at **G.B.-34** and **ST-38** on **epicondylitis lateralis (tennis elbow)** compared to manual acupuncture at the same points. After six treatments over a period of two weeks, the EA group showed significantly better results in relation to pain relief (Pain visual

analogue scale) and pain free hand grip strength (PFG). **Tsui et al, Acupunct Electrother 2002**
A British, prospective, randomised, sham-controlled, double-blinded experimental trial (n = 240) investigated the effect of transcutaneous electric nerve stimulation (TENS) at **G.B.-34** on mechanical **pain thresholds**. Low frequency, high intensity stimulation showed a significant analgesic effect that was sustained post-stimulation. **Chesterton et al, Pain 2002**
G.B.-37 → P-2; P-5; L.I.-15
G.B.-38 → P-5
G.B.-39 → LIV-3
G.B.-40 → LIV-3

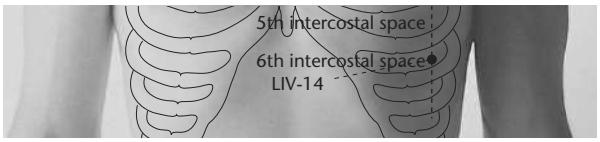
G.B.-43 An Austrian prospective, randomised, placebo-controlled, single-blinded trial investigated the effect of laser acupuncture at **G.B.-43** on cerebral cortical and subcortical activations as evidenced by **fMRI**. Only true laser acupuncture led to ipsilateral activations within the thalamus, nucleus subthalamicus, nucleus ruber, the brainstem, and the Brodmann areas 40 and 22. **Siedentopf et al, Laser Med Sci 2005**
A purely descriptive study investigated the effect of **G.B.-43** and **L.I.-4** on **somatosensory evoked potentials**. Particular attention was paid to the effect of the *deqi*-sensation. **Wu et al, Zhen Ci Yan Jiu 1993**

Liver channel

LIV-1 → SP-1

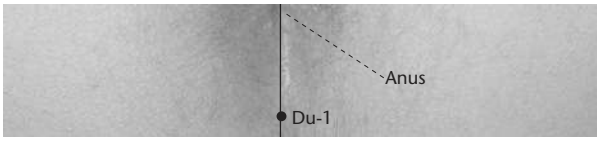


LIV-3 → Du-20; BL-60; L.I.-4; L.I.-15; SP-6
In a Chinese-German single-blinded experimental trial, acupuncture at **LIV-3** and **G.B.-40** resulted in the activation of the secondary somatosensory cortical areas, frontal areas, the right side of the thalamus and the left side of the cerebellum. Sham-points had no effect. **Fang et al, Neuroradiology 2004**
An Italian open, prospective, randomised group-comparison trial investigated the effect of acupuncture, laser acupuncture and TENS on **LIV-3**, **SP-6**, **L.I.-4**, **G.B.-20**, **Du-20** and **Ex-HN-5** on **transformed migraines**. The number of days with headache per month significantly decreased during treatment in all groups. Acupuncture showed the best effectiveness over time. **Allais et al, Neurol Sci 2003**
An Italian prospective, randomised, controlled, non-blinded trial (n = 160) investigated the effectiveness of acupuncture at **LIV-3**, **SP-6**, **ST-36**, **Ren-12**, **L.I.-4**, **P-6**, **G.B.-20**, **G.B.-14**, **Ex-HN-5** and **Du-20** on **migraine attacks** without aura compared to flunarizine. The number of attacks after two and four months of therapy was significantly lower in the acupuncture group than in the flunarizine group, and analgesic consumption was accordingly also significantly lower in the acupuncture group. Pain intensity was significantly reduced only by acupuncture treatment. **Allais et al, Headache 2002**
A British prospective, randomised, placebo-controlled cross-over study (n = 56) investigated the effect of **LIV-3** on **rheumatoid arthritis (RA)**. There were no significant changes between the treatment and placebo group. The treatment of only one point for a condition such as RA is unusual. **David et al, Rheumatology (Oxford) 1999**
A US prospective, randomised, sham-controlled, single-blinded trial (n = 10) investigated the effect of electro-acupuncture (EA) on **LIV-3**, **ST-36** and **L.I.-11** on lowering diastolic blood pressure in hypertensive subjects. Compared to the sham group, diastolic blood pressure showed a significant decrease in the EA-group. **Williams et al, Phys Ther 1991**
LIV-13 → Du-20



LIV-14 A Chinese prospective, non-randomised, controlled, non-blinded trial (n = 56 plus control group) investigated the effect of water injections at **LIV-14**, **G.B.-24** and **Ren-14** on biliary colic pain. The pain disappeared in 57% of cases and showed improvement in a further 39%. This result is significantly better compared to the control group receiving conventional treatment. **Jiang et al, J Tradit Chin Med 1995**

Du mai (governing vessel)

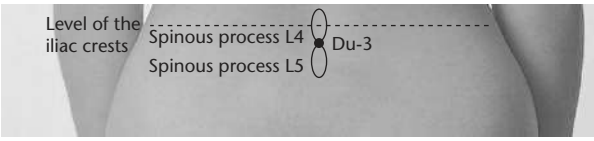


Du-1 A prospective, controlled, group-comparison trial in **hypogalactic postpartum sows** (n = 42) showed that apitherapy (acupuncture with bee venom) at **Du-1** and **ST-18** was superior to treatment with conventional drugs. **Choi et al, J Vet Sci 2001**
A prospective, controlled, group-comparison animal experiment showed that apitherapy at **Du-1** and **ST-25** in piglets with preweaning **diarrhoea** (n = 91) is as effective as conventional treatment with drugs. **Choi et al, Am J Chin Med 2003**

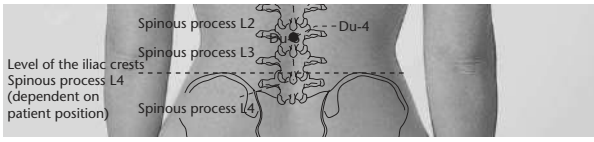
In an earlier prospective, controlled, group-comparison trial in piglets ($n = 44$) with induced **enteropathogenic *Escherichia coli*** diarrhoea, traditional acupuncture at **Du-1**, **ST-36**, **BL-20**, **Ren-12** and **ST-25** produced the best results in comparison to the groups treated with electro-acupuncture or antibiotics. There were too many groups given the number of cases. **Hwang et al, Am J Vet Res 1988**

Several animal experiments investigated the effect of acupuncture on signalling and modulating pain. Acupuncture at **Du-1** and **Du-2** inhibited the reaction on **experimental pain stimuli**. **Bing et al, Neuroscience 1991, Xu et al, Zhen Ci Yan Jiu 1989, Xu et al, Zhen Ci Yan Jiu 1989**

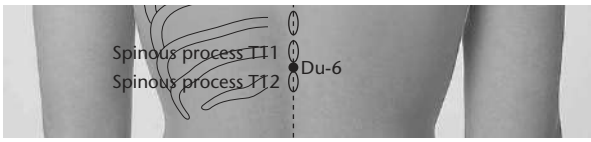
Du-2 → Du-1



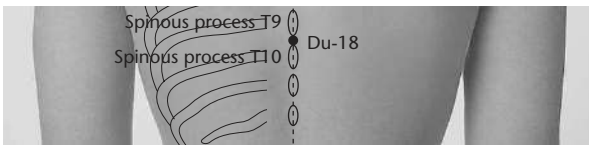
Du-3 Rats treated with electro-acupuncture at **Du-3**, **BL-54** and **BL-60** 15 minutes after a standardised **spinal cord injury** at T8, showed a marked improvement (regarding both morphology and functioning) three days post-operatively compared to rats not treated with acupuncture. However, none of the beneficial effects occurred in rats given acupuncture treatment 24 hours after spinal cord injury. **Politis et al, Acupunct Electrother Res 1990**



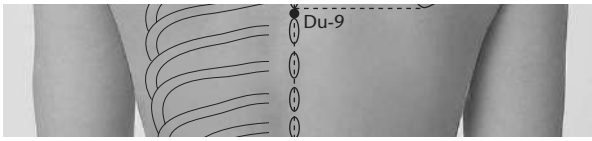
Du-4 A Turkish prospective, randomised, non-blinded, controlled group-comparison trial ($n = 24$) investigated the efficacy of acupressure at **Du-4**, **Du-15**, **Du-20**, **BL-23**, **BL-28**, **BL-32**, **HE-7**, **HE-9**, **ST-36**, **SP-4**, **SP-6**, **SP-12**, **Ren-2**, **Ren-3**, **Ren-6**, **KID-3** and **KID-5** on **enuresis** compared to oxybutynin given to the control group. Acupressure was administered to 12 patients by the parents. While treatments in both groups were successful, complete recovery was significantly higher in the acupressure group (83.3%) compared to the control group (58.3%). **Yuksek et al, J Int Med Res 2003**



Du-6 An earlier Chinese case study reports the application of **Du-6** for **acupuncture anaesthesia for hysterectomies. Authors' Collective, Chin Med J (Engl) 1978**



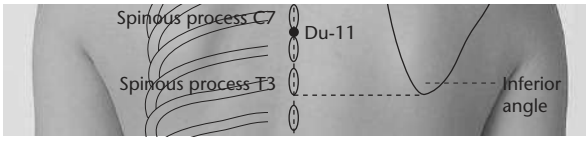
Du-8 An experiment in rats supports the effect of **Du-8** on **seizures** (by releasing melatonin) and on **cerebral infarction** (reduction of the cerebral infarction volume due to release of taurine and decrease of aspartame). **Chao et al, Acupunct Electrother Res 2001, Zhao et al, Acupunct Electrother Res 1997, Yin et al, Zhen Ci Yan Jiu 1994**



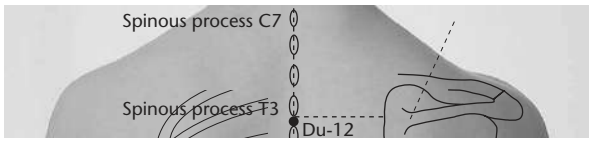
Du-9 The effect of electro-acupuncture at **Du-9** was investigated in 23 patients suffering from **coronary heart disease**. The results showed a slight dilation of the coronary arteries and a slight decrease of the heart rate frequency (monitored by coronary arteriography). **Yan et al, Zhongguo Zhong Xi Yi Jie He Za Zhi 1998**

Two earlier Chinese case studies report decreased symptoms in patients with coronary heart disease after acupuncture or tuina at Du-9. Wang et al, Zhong Xi Yi Jie He Za Zhi 1988, Wang et al, Zhong Xi Yi Jie He Za Zhi 1987

A Chinese case study reports the successful treatment of **angina pectoris** by implanting a micro-depressor at **Du-9**. **Wang et al, Zhong Xi Yi Jie He Za Zhi 1988**



Du-11 Electro-acupuncture at **Du-11** and **Du-16** prior to, during and after an experimentally induced **transient ischaemia** in gerbils suggests the protective influence of these points. They seem to suppress both glutamate release and reperfusion injury following the ischaemic insult. **Pang et al, Am J Chin Med 2003**



Du-12 A Chinese case study reports that classic acupuncture at **Du-12**, **L.I.-10**, **BL-11** and **S.I.-3** with *deqi* sensation in the direction of the disorder in 55 patients with **cervical vertebra**

disease and **impaired cerebral blood flow capacity** led to a significant improvement of blood flow capacity. **Qie et al, Zhong Xi Yi Jie He Za Zhi 1991**

Du-14 → L.I.-4, ST-8; ST-36

A Chinese experimental trial (n = 40) investigated the effect of acupuncture at **Du-14** and **P-6** on driving performance during a three-hour driving simulator test. The acupuncture group showed a significantly better driving performance and a decrease in **driving fatigue**, compared to the untreated control group. **Li et al, Accid Anal Prev 2004**

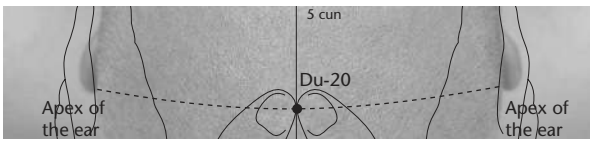
A Chinese prospective, randomised, controlled, non-blinded trial (n = 40) investigated the effect of acupuncture at **Du-14 and P-6** on heart rate and driving performance during a three-hour driving simulator test. The acupuncture group showed a significantly decreased **activation of the sympathetic nervous system** and increased **parasympathetic activity** compared to the untreated control group. **Li et al, Eur J Appl Physiol 2003**

A Chinese retrospective case study (n = 25) investigated the effect of cupping at **Du-14**, **BL-13**, **BL-20** and **BL-23** on **bronchial asthma** while reducing orally administered cortisone. The author reports that 56% of patients showed a marked improvement after 30 treatments. **Hu, J Tradit Chin Med 1998**

A Chinese prospective case study (n = 50) reports the successful treatment of **perennial allergic rhinitis** by applying 10% *Cantharides* extract at **Du-14** and **P-6**. The results showed an effective rate of 88%. The allergic nasal mucosa provocative test of the treated group improved after the treatment, the number of eosinophils and basophils in nasal secretion decreased and the serum total IgE also reduced significantly. **Tang et al, Zhongguo Zhong Xi Yi Jie He Za Zhi 1995**

Du-15 → T.B.-8; Du-4

Du-16 → Du-11



Du-20 → T.B.-8; G.B.-4, ST-8; Du-4; LIV-3; HE-7, L.I.-4

A Chinese prospective randomised controlled single-blinded group-comparison trial (n = 50) investigated the effect of a standardised acupuncture protocol, used either on its own or accompanied by needling of **Du-20**, **Du-26** and **HE-7** (either singly or in combination) on **vascular dementia** in hemiplegic patients. Clinical symptoms were observed and scales such as HDS-R, ADL and functional activities questionnaire (FAQ) used for assessment. The group additionally treated with **Du-20 and HE-7** showed marked improvement of memory, orientation and reaction. At the same time mental rigidity and trance decreased. **Du-20** on its own improved understanding, calculating and social adaptation, while **Du-26** was helpful in treating mental retardation, failure to perform daily activities, trance and poor memory. The combination of the three points showed overall the best results in improving intelligence and social adaptation. The particular design of this trial – combining a standard protocol used in both groups with the actually relevant points in the verum group – presents an interesting model for eliminating persistent problems regarding placebo methods and blinding. However, in this particular trial the number of participants (5 groups of 10 subjects) was too low to determine if the results were statistically significant. **Lai et Huang, Chin J Integr Med 2005**

A German prospective, non-blinded, pair-matched, controlled trial (n = 121 pregnant women between 30 and 39 weeks of gestation) investigated the effect of acupuncture at **Du-20** and **ST-36** on **fetal and maternal cardiotocographic parameters and maternal circulation**. The main difference was a transient increase of the Fisher score in the treatment group compared to the control group, with a persistent increase of the Fisher score. **Scharf et al, Z Geburtshilfe Neonatol 2003**

A Croatian prospective, randomised, placebo-controlled trial (n = 57) investigated the effectiveness of **Du-20**, **L.I.-4**, **Ren-3**, **Ren-4**, **Ren-6**, **G.B.-34**, **BL-23**, **SP-6** and **HE-7** on **primary dysmenorrhoea** compared to placebo-acupuncture. Subjects were observed for a period of two years. After one year, 93.3% of acupuncture patients were symptom-free and/or not taking medication compared to only 3.7% of the placebo patients. **Habek et al, Gynakol Geburtshilfliche Rundsch 2003**

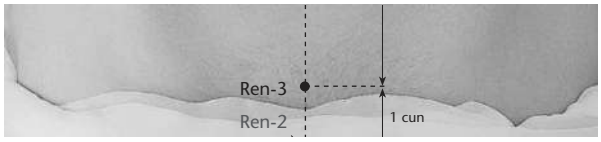
A Polish prospective, randomised, controlled, non-blinded trial (n = 69) investigated the effect of acupuncture at **Du-20**, **Ren-12**, **ST-36**, **ST-21**, **ST-25**, **LIV-3**, **LIV-13**, **P-6** and **HE-7** in addition to a low calorie diet in the treatment of obesity (BMI approximately 33 kg/m^2). This diet consisted of a daily intake of about 1200–1500 kcal, which was about 1000 kcal below the daily energy requirement of the patients. The acupuncture group showed a significantly better result after only 12 treatments over a period of 6 weeks. The mean body weight decreased from 85.5 kg to 72.7 kg, while it only decreased to 77.1 kg in the diet group. **Wozniak et al, Ginekol Pol 2003**

A German prospective, randomised, placebo-controlled, double-blinded trial (n = 56) investigated the effect of acupuncture at **Du-20**, **Ex-HN-6**, **HE-7**, **P-6** and **BL-62** in the treatment of **depression** and **generalised anxiety**. Results were assessed using questionnaires. After 10 treatments, the verum acupuncture group showed a significantly larger clinical improvement compared to the placebo group (61% vs 21%). **Eich et al, Fortschr Neurol Psychiatr 2000**

Du-26 → G.B.-4; Du-20

Ren mai (conception vessel)

Ren-2 → Du-4



Ren-3 → Du-4; Du-20

A Taiwanese prospective, randomised, controlled trial ($n = 60$) investigated the influence of electro-acupuncture (EA) at **Ren-3**, **Ren-4** and **BL-32** on the **neurogenic bladder of spinal cord injured patients** compared to the conventional bladder training programme received by the control group. The acupuncture group took significantly less time to achieve balanced voiding than the control group (on average 28 days less). The best results were achieved in patients who received acupuncture within three weeks after injury (39 days less). **Cheng et al, Spinal Cord 1998**

Ren-4 → Du-20; ST-25; Ren-3

Ren-6 → Du-4; Du-20; Ren-17

Ren-8 → P-6

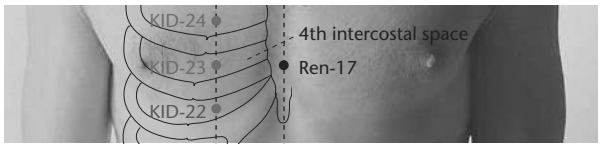
A Chinese prospective, randomised, controlled, non-blinded trial ($n = 56$) investigated the effect of moxibustion at **Ren-8** in addition to chemotherapy for **nasopharyngeal carcinoma** (stage III and IV). There were significantly fewer toxic and side effects in the moxibustion group compared to the control group. The five-year survival rate in the two groups were 50.0% and 35.7% respectively. **Chen et al, Zhongguo Zhong Xi Yi Jie He Za Zhi 2000**

A Chinese prospective, randomised, controlled trial ($n = 140$) investigated the effect of applying a topical ointment at **Ren-8** on **epigastric pain**. Results in the treatment group were significantly better than in the control group (94% vs 53%). **Ba et al, J Tradit Chin Med 1999**

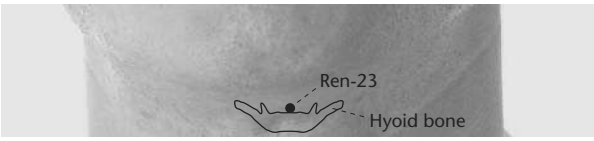
Ren-12 → L.I.-4; Du-1; Du-20; LIV-3; Ren-17

Ren-13 → P-6

Ren-14 → LIV-14



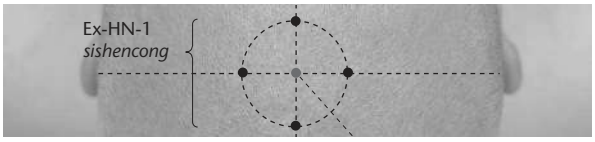
Ren-17 A Chinese prospective, randomised, controlled trial ($n = 60$) investigated the effect of **Ren-17**, **Ren-12**, **Ren-6**, **ST-36 and SP-10** on the symptoms of **vascular dementia** compared to conventional treatment. Both acupuncture and conventional treatment showed a highly significant increase of MMSE, HDS-R and ADL scores. However, the results of the acupuncture group were statistically more significant regarding MMSE, HDS-R and the total rate of effectiveness (80% vs 47%). **Yu et al, Neurol Res 2006**



Ren-23 A Chinese retrospective case study ($n = 120$) reports the successful treatment of **pseudobulbar palsy** with acupuncture at **Ren-23** and **LU-5. Wang et al, J Tradit Chin Med 1998**

Ren-24 A German prospective, single-blinded, controlled trial ($n = 41$) reports that acupuncture at **Ren-24** significantly reduced the severity of the **gag reflex** during transoesophageal echocardiography compared to acupuncture at a sham point. **Rosler et al, J Altern Complement Med 2003**

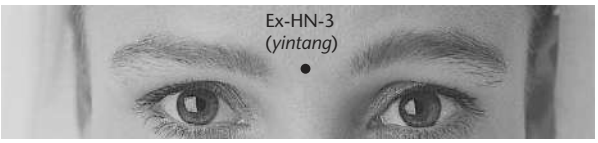
Extra points



Ex-HN-1 → BL-7

A Taiwanese, prospective, randomised, placebo-controlled, single-blinded experimental trial ($n = 9$) investigated the effect of the *sishencong*-points (**Ex-HN-1**) on the variance of heart rate frequency. The authors observed an increase in the vagal activities but a suppression of the sympathetic activity. **Wang et al, Auton Neurosci 2002**

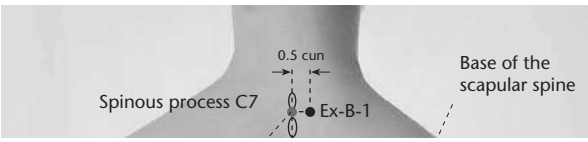
A Chinese case study ($n = 51$) reports the successful treatment of **hyperthyreosis** with acupuncture at Ex-HN-1. **Xie et al, J Tradit Chin Med 1994**



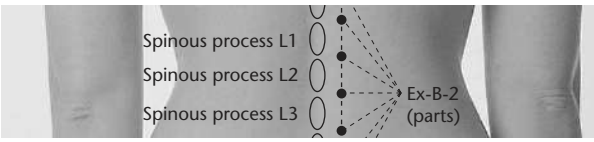
Ex-HN-3 An Austrian prospective, randomised, single-blinded experimental cross-over study ($n = 25$) showed that acupuncture

(but not laser acupuncture) at *yintang* monitored by EEG had a sedating effect. Clinical application of this point, for example for **sleeping disorders**, requires further investigation. **Litscher et al, Eur J Anaesthesiol 2004**

Ex-HN-4 → S.I.-18; L.I.-4
Ex-HN-5 → G.B.-5; LIV-3
Ex-HN-6 → HE-7; Du-20

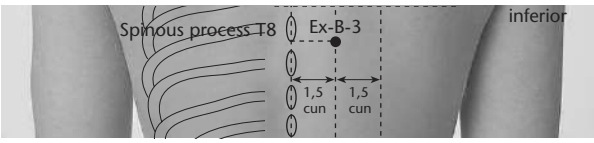


Ex-B-1 A Chinese prospective, randomised, controlled trial (n = 84) investigated the effect of a herbal plaster at **Ex-B-1**, **BL-11**, **BL-12**, **BL-13** and **BL-15** on **chronic bronchitis** compared to intramuscular injection therapy. In the plaster group the clinical total effective rate was 93.2% immediately after the treatment course and 91.5% after 18 months (control group: 80% and 80%). X-rays of the thorax showed the effectiveness of the plaster as 40.7% and 89.8% after 18 months (control group: 20% and 76%). **Huo et al, Zhongguo Zhong Xi Yi Jie He za Zhi 2001**



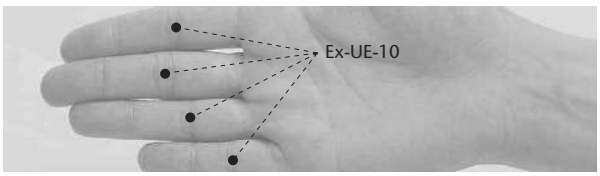
Ex-B-2 A Chinese case study (n = 43) reports the positive effects of treating **ulcerative colitis** with acupuncture at **Ex-B-2** as well as stimulation with a plum-blossom needle at **BL-22** and **BL-25. Yue and Zhenhui, J Tradit Chin Med 2005**

A Chinese retrospective case study (n = 168) reports the successful treatment of **sciatica** with acupuncture at the **Ex-B-2** points. **Pei et al, J Tradit Chin Med 1994**



Ex-B-3 An experiment in diabetic rabbits demonstrated that electro-acupuncture at **Ex-B-3** decreased plasma glucose levels and inhibited the release of pancreatic glucagon. The effect was increased by adding **ST-36**. This latter point led to no significant changes when needled alone. **Zeng et al, J Tradit Chin Med 2002**

Ex-UE-9 → L.I.-4



Ex-UE-10 A case study describes the successful treatment of **hiccups** with acupuncture at **Ex-UE-10**. **Qi, J Tradit Chin Med 1993**

Ex-UE (*JIANNEILING*) → L.I.-15
Ex-UE (*JIANQIAN*) → L.I.-4
Ex-LE-4 → ST-35
Ex-UE (*ZHONGPING*)

A Chinese retrospective case study (n = 115) reports the successful treatment of **shoulder and back pain** with acupuncture at ***zhongping***. The point *zhongping* is located midway between ST-36 and ST-37. **Wang et al, J Tradit Chin Med 1995**

9.3 Summary

The data presented clearly demonstrates that several actions of a number of acupuncture points are undoubtedly effective. These points (for example P-6) were tested according to the highest scientific standards, comparing standard acupuncture to deep acupuncture at non-acupuncture points (a methodology considered the most superior acupuncture placebo).

This proof is even more important since the results of the two largest acupuncture trials to date, ART (Acupuncture Randomized Trials) and GERAC (German Acupuncture Trial), may have led to the impression that, while acupuncture is indeed effective, its effect is independent of the location of the acupuncture points. The hitherto unsurpassed size of the trials and the undoubtedly intelligent and biomathematically impeccable design (especially of the GERAC trial) further contribute to this impression. Due to their flexible point prescriptions and their complexity, these studies have not been included in section 9.2.

But what are the basic results of these trials? (up to May 2006: **Witt et al, Lancet 2005; Linde et al, JAMA 2005; Melchart et al, Br Med J 2005; Brinkhaus, Arch Intern Med 2006**; **Diener et al, Lancet Neurol 2006**)

For both **gonarthrosis** and **lower back pain,** acupuncture had significantly better results than the untreated waitlist (ART) or conventional therapy (GERAC). For **migraine**, acupuncture is significantly better than the untreated waitlist (ART), and treatments with acupuncture for only six weeks had the same results as treatments with conventional medicine for six months (GERAC). For **tension headaches**, acupuncture provided significantly better results than the waitlist (ART). A comparison between acupuncture and conventional therapy in the treatment of tension headaches within the framework of GERAC was not possible, since all but two patients refused the stigmatised conventional treatment with amitriptyline due to the high incidence

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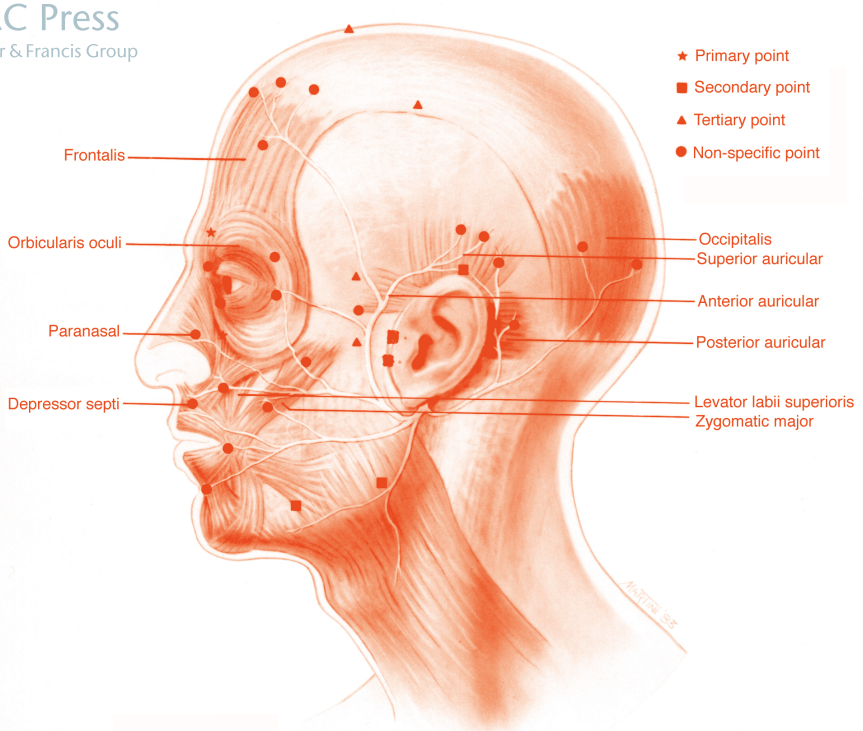

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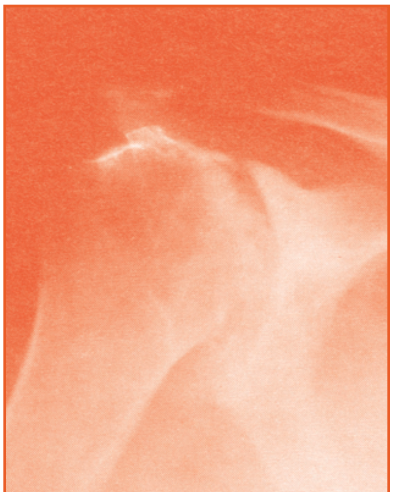

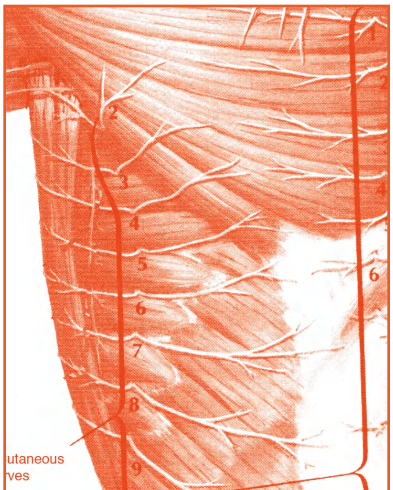

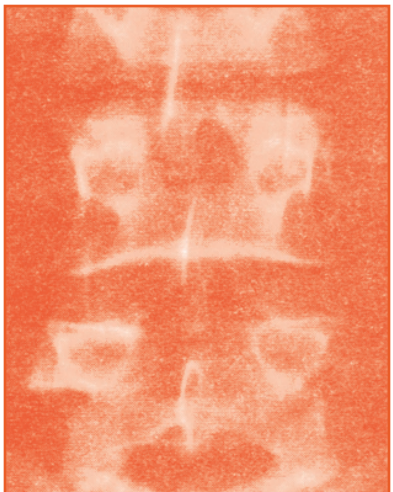

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Dedication

To my wife, Elizabeth Izu Dunn.

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Preface to Second English Edition

In 1970, I was offered a tenure track faculty position in the Department of Anatomy, University of Texas Medical School at San Antonio, and arrived in July of that year to accept that position. By October of 1972, I began to receive inquiries from medical students about learning acupuncture. The timing was not coincidental; after nearly 30 years of Cold War era tension between China and the United States, President Richard Nixon had reopened the diplomatic doors to China.

Many Americans of myriad professions, physicians included, began to arrive in China, discovering new methods and practices almost completely unknown in the western world. When the travelers returned to the United States, they shared what they observed with their fellow countrymen. One astonishing technique that came back with a few physicians was acupuncture anesthesia. Patients received operations on surgical tables while totally awake. To doctors trained in the tradition of sedatives, acupuncture anesthesia appeared to be magic, sparking a quick and sudden soaring of interest in acupuncture, to which my medical students were no exception.

At the time, there were very few faculty members at the school who were ethnically Chinese. Although I was born in Taiwan and have absolutely no relationship with China in any sense, I do possess a certain degree of sophistication in relation to China's cultural heritage (including acupuncture). I did not hesitate to share the knowledge I have of acupuncture, and thus, I ultimately became infamous throughout campus as "the acupuncturist." So when *San Antonio Express/News* reporter D. Dreier was looking for someone who would know something about acupuncture, my name was suggested to him. He came to interview me and wrote a lengthy article that was published in the local newspaper on Sunday, February 27, 1972. The next morning, when I arrived at my office at the school, there were more than a dozen telephone calls awaiting me. All of the callers wanted to know if I could use acupuncture to relieve their pain. For the next few days, the phone rang off the hook with people asking the same thing. At that moment, I came to realize that acupuncture had marketing potential as a therapeutic modality for pain management, although I didn't yet know if acupuncture would indeed be effective to stop any pain.

Eventually, I agreed to offer an elective called theoretical acupuncture for students who were curious about the ancient Chinese practice. The registrar form shows that on October 25, 1972, Jeffery W. Jordan was the first student to enroll in the course. However, the elective didn't last long; after teaching theoretical acupuncture to a few students for just 2 years, I canceled the class. There were four reasons for making such a decision. First, I was a junior faculty member without tenure in the department. I had a family, and I needed the job security that only tenure offered. To better my position, I needed to devote all my time to research activities. Second, teaching an elective such as theoretical acupuncture doesn't help one advance, in terms of either promotion or salary. Why waste my valuable time doing something for nothing in return? Third, like many events or phenomena in medicine, there was always the looming possibility of acupuncture becoming another passing fad, destined to disappear in time from people's memory. If, indeed, acupuncture turned out to be another temporary trend, my effort would become an unattainable dream. Fourth, because the class focused on only the theoretical, the elective consisted only of oral presentation, without any practical applications. There was not a single patient available for bedside clinical training. Without a sensible purpose, the words I preached about acupuncture were useless. It took many more years before the teaching of anatomical acupuncture would be meaningful, with real patients to treat.

To my surprise, 10 years later, I still regularly received regular inquiries from medical students across the country who wanted to learn acupuncture. Such a fact drew me to conclude that interest in acupuncture among medical students in the United States was more pervasive than I had previously

realized. By then, I was a tenured associate professor with a secure position, and I didn't have to worry about my livelihood.

There was another reason that I had to offer acupuncture. In the intervening years between 1978 and 1982, one freshman student, Shari Thomas, suffered from acute and severe neck pain because of an automobile accident. After different medical procedures failed to eradicate her pain, she approached me for help. One acupuncture session stopped her neck pain completely. She was so impressed and inspired that she begged me to teach her acupuncture. I promised that I would teach her during her senior year. Three years later, Shari came to knock on the door of my office and immediately asked, "Dr. Dung, do you remember me?" Without excuses and obligated to keep my promise to Shari, I indicated to my Chairman, Edward G. Rennels, PhD, that I had decided to give up my endeavors in scientific research and would like to devote my time to the study and practice acupuncture. He was not only sympathetic to my decision, but fully supportive of it. My elective was renamed "anatomical acupuncture."

That year, I ended up teaching anatomical acupuncture to eight medical students. The following year, in 1983, the number increased to 12. Soon, anatomical acupuncture, without exaggeration, became the most popular elective on campus. At that time, it came to my mind that I needed a suitable textbook to teach my elective. That was when I conceived the idea of writing a book on anatomical acupuncture.

Student evaluation forms from the end of the course always had inspiring comments. Here are just a few examples:

"Wonderful opportunity. Please, continue this elective. Great for anatomy and physical examination." (Joyce Mauk, May 1983.)

"If the medical school or MCH had an acupuncture clinic, students could practice acupuncture skills and would probably learn more." (Gail Scott Hovorka, April 20, 1983.)

"This may be one of the most useful courses I've taken in all the 4 years. Good review of anatomy." (Susan Joerns, February 14, 1983.)

"Based on what I observed, acupuncture can be very useful and should be researched much more extensively." (Mark Johnson, May 9, 1983.)

"After taking this elective, I find that there are certain cases when acupuncture is very beneficial. I was surprised at the level of pain relief, for example, some patients with chronic pain received. My suggestion is that the pain clinic at our hospital should use this mode of treatment in patients who are refractory to medicines or for some reason or another can't tolerate pain medications. I feel that acupuncture needs to be fully researched in a scientific manner in order to give it an objective evaluation as to its 'real' value for the treatment of pain. Our school has the opportunity and the acupuncturist to do this work." (Josue Montanoz, May 24, 1983.)

"Excellent course, good didactic and clinical instruction. Look forward to completion and publication of Dr. Dung's book, which will be an invaluable aid in the course." (Chris Wahlberg, May 5, 1983.)

"Dr. Dung was one of the most concerned teachers I have had at this medical school. Well-organized. Continue having students practice on one another." (Anna C. Miller, March 23, 1983.)

Unfortunately, the school hierarchy had a different opinion toward acupuncture than my students and I. One day in April of 1987, Erle K. Adrian, Jr., MD, PhD, Professor and Deputy Chairman of my department, handed me a memo addressed to him from Peter O. Kohler, MD, Dean of the Medical School. The memo stated: "We finally had a meeting of the Executive Committee. This was the first since you and I discussed acupuncture. As you may have anticipated, we decided that we do not want an acupuncture elective in the medical school. I will inform Doctor Grant and the Dean's Office so that no further elective forms are signed." And that was officially the end of my

elective. I often wonder what acupuncture would be today if I had been allowed to teach anatomical acupuncture in the medical school through the years.

Although anatomical acupuncture as an elective for medical students was officially killed and dead, the teaching and writing of acupuncture stayed alive and thrived because no one, not even a school bureaucracy, could terminate the desire to learn something that someone wants to know. Students who didn't care if the acupuncture course came with academic credits kept coming to take the class. I have no idea how many students ended up taking the course, as it was difficult to take a precise tally. Some of my students are listed on the pages of acknowledgments in the first edition of *Acupuncture: An Anatomical Approach*.

Apprentices of anatomical acupuncture were not limited to students in our medical school. There were medical doctors from several other countries, including Edwin Falconi (Philippines), Teruko Tashiro (Japan), Andreas Lee (Argentina), Jorge Villalobose (Venezuela), Stanley Chang (Taiwan), D. Embey-Isztin (Hungary), Dumele Andreea (Hungary), Abudul Chen (United Arab Emirates), and several others. Through my personal effort in teaching and in writing for publications in acupuncture journals, it seems that anatomical acupuncture has gradually become known inside and outside the United States. Still, denial, rejection, and refusal to acknowledge acupuncture as a legitimate pain treatment persisted in the medical mainstream, and medical publishing companies refused to print my research and findings.

I completed writing the first edition of *Anatomical Acupuncture*, the predecessor to *Acupuncture: An Anatomical Approach*, in 1996. I spent almost a year attempting to find an established printing company to publish the book, without avail. They all replied to my inquiries with a uniform answer: that the book had no potential market. Finally, in 1997, I financed the publication of *Anatomical Acupuncture* myself. Antarctic Press, a publishing company based in San Antonio, Texas and owned and operated (even to this day) by my sons, printed the book. Two thousand copies were printed; approximately 20 copies are in my inventory to this day. All others were either sold directly to the readers or given away as complementary gifts.

It is hard to say if what happened next to *Anatomical Acupuncture* was sheer luck or preordained destiny. On April 9, 2001, I received a copy of an e-mail sent to Mike Morse by Steve Zollo, both of whom were strangers to me. Steve asked Mike for my name and e-mail address so he could contact me.

Contact indeed occurred. After brief discussion during the spring of 2001, we decided to form a team of three coauthors to rewrite the book. Dr. Curtis Clogston began his career as a reporter for the *Houston Chronicle* before attending and graduating from the medical school where I taught. Not only did he possess a firm comprehension of the medical information in the book, his early years as a reporter guaranteed a proficiency in English that I lacked, so I left the writing to him. My son, Joeming Dunn, completed our team. By 2001, he'd already had a few years of acupuncture practice on his own. He proofread the book to make sure that there would be no mistakes like there were in the first edition, in which the writing was all my own.

Acupuncture: An Anatomical Approach was published in 2004. Despite the use of a different title, in my own mind, it is still the second edition of *Anatomical Acupuncture*. I have no idea how well the book has sold. All I know is that every so often, I receive a small royalty check for it. However, money was never my motivation for writing the book; what pleased me was the knowing that somewhere, someone was reading our book, and thus the knowledge of anatomical acupuncture was propagating.

In addition to two English editions, the book had one Chinese edition. Yun-tao Ma, PhD was doing his postgraduate work at the Department of Pharmacology and Experimental Therapeutics at the University of Maryland at Baltimore. He had had some acupuncture training in China. During the Thanksgiving holiday of 1997, he accidentally had a chance to read the first edition of the book. After reading it, he sent me a three-page letter in which he said that I have "revolutionized the traditional acupuncture modality, both its theoretical concepts and clinical practice," that I "have reached a depth in understanding acupuncture that no one has ever reached so far." He further said

that my book is "an epoch-making milestone in acupuncture history…" He urged me to translate the book into Chinese.

It turned out that he ended up doing the translation himself, and he did a superb job. The first edition of *Anatomical Acupuncture* was translated to *Scientific Acupuncture for Health Professionals*, and in January of 2000, it was published in Beijing by the company known literally as the Chinese Medical and Pharmacological Technology Publication Company.

How the Chinese edition has been received in China is impossible to know, because since the Beijing publisher sent me four complementary copies of the book, I have not heard a word from them. I did have two readers write me, at least reassuring me that the book had indeed been published. One of them was a student in a traditional Chinese medical school from Anhue Province. This student expressed bewilderment after reading the book, as he was not quite sure if he could fully believe what it said. One question puzzling him was why no one in the last two thousand years since acupuncture began had come out and said what was described in the book. I wrote to provide my answer and explanation, but I never heard from him again.

I was used to the disappointment and frustration of waiting for letters. Only five of my many students have bothered to get in touch with me, so I have no idea whether the majority of my students still believe that acupuncture is a valid therapeutic modality. My faith in acupuncture, however, hasn't diminished an iota so far. I became a globe-trotter, traveling to many different countries to find out as much as I could about using and teaching acupuncture. Whenever I have time, I write about acupuncture and its relation to pain, leading to the publication of two more books in the past few years.

The first is *The Bipolar Nature of Pain*, coauthored with Shen-Kai Chen, MD, Chairman, Faculty of Sports Medicine, Kaohsiung Medical University, Taiwan. Yi Hsien Publishing Company in Taipei, Taiwan published our book in 2008. Only 600 copies were printed. Two hundred of them stayed in Taiwan, and the other 400 were shipped to America. All of them were sold.

The second book was written in Chinese, with a title which translates into English as *Pain Quantification*. It was coauthored with Yun-tao Ma, Tan Yuansen, and Fu Chuanghua. *Pain quantification*, which I will address later on in this book, is a new concept found to be used extensively in acupuncture. *Pain Quantification* was published in 2006 by Chemical Industrial Publication, based in Beijing, China. As usual, the outcome of any book published in China is unknown to me.

Previously, I mentioned that I cross the globe to learn about acupuncture. In traveling, I have had opportunities to meet health care professionals of different types in different ranks, and to understand their views toward acupuncture applications and educations. The newest person I've met as of this writing was just a week ago (June 15, 2012). His name is Orlando Alberto Escamilla, MD. His title is Medico Acupuncturist at U. Nacional Clinica del Dolor, located at Calle 22 B No.66-46, Bogota D.C. Clinica Universitaria, Colombia. He showed me his master's degree in acupuncture, which he'd received from Universidad Nacional de Colombia School of Medicine. I asked him what kind of acupuncture he learned, and in response, he pulled out a syllabus from a drawer. The syllabus contained traditional acupuncture indoctrination. This convinced me that an acupuncture textbook based on medical sciences, like *Anatomical Acupuncture*, is needed for medical communities throughout the world.

With the need evident and the hope that someday *Anatomical Acupuncture* might be used as a textbook in the teaching of acupuncture as part of a medical curriculum, the idea of a third edition was never far from my mind.

Eight years after the publication of the second edition, I began contemplating revising and publishing a third edition. Soon after, Barbara Ellen Norwitz, Executive Editor with Taylor & Francis Group/CRC Press, e-mailed me, asking if she could interest me in revising the second edition.

Acupuncture: An Anatomical Approach is needed because acupuncture practices have undergone substantial changes in the decade since the previous edition. The use of acupuncture has grown in the United States and around the world. This growth can be attributed to the demographic shift to longevity. As populations live longer, the number of people suffering from chronic pain can be

expected to increase. Many of them will turn to acupuncture for help, and consequently, there will be a demand for more acupuncturists. Thus, more medical professionals will want to learn acupuncture, and a book such as *Acupuncture: An Anatomical Approach,* based on medical sciences, will be increasingly useful.

The revised edition has some new information added, especially in the area of quantifying pain. Pain is an enigma to health care providers, partially because there is no reliable method to measure or quantify it. This edition offers a proposal for the quantification of pain. If the method is verified, it could be a major step for a better understanding of pain, increasing our ability to predict the outcome in pain management.

Another difficult issue facing pain management is the lack of a meaningful way to differentiate acute pain from chronic pain. Most define whether pain is acute or chronic based solely on time duration, which can be misleading. In this third edition, I will explain a revolutionary way to enable practitioners to determine if pain encountered is already in a chronic stage or is still in an acute phase.

It is my hope that reading this book will help you understand the scientific nature and basis of acupuncture. If you want to learn more, I will gladly address any questions or inquiries you have about the book or about acupuncture in general.

H.C. Dung, PhD
San Antonio, Texas

Preface to First English Edition

I think it was probably 1999 when Houchi Dung first called to say he wanted to teach me acupuncture. I had known Dr. Dung for nearly 30 years; he was one of my interviewers when I applied to medical school, and once I was accepted and matriculated, he was one of my teachers of gross anatomy (a subject in which I did not excel). When he called those many years later, he said he was preparing to retire from the university and he wanted to teach me acupuncture. Why me? He did not say at the time, but later he admitted it was because of my journalistic background. He felt a communicator was necessary to convey what he had learned over his 30-year career of sticking some five million needles into some 16,000 patients. In fact, he said that the reason he pushed for my acceptance into medical school was because the medical profession needed to be able to communicate better.

I was skeptical. My (uninformed) opinion of acupuncture was that it was placebo, pure and simple. Furthermore, to my thinking, it was based on metaphysical concepts that are incongruent with the principles of medicine. I put Dr. Dung off for nearly a year before he wore me down. For one thing, I had a lot of respect for him, and I owed him a debt for his supporting my medical career at an important time. In retrospect, his persistence was uncanny. He wanted me to spend a week or two at his clinic—he said that would be enough time to learn all I needed to know. I could not spare the time as a block. Reluctantly, he agreed to let me come on Saturday mornings, although he feared that would not give me the needed perspective to learn how to manage patients. I went to his clinic every Saturday morning for over a year, observing his patients and then incorporating what I had learned in the treatment of my own patients.

As I said, I was skeptical. I was hoping to spend a few Saturdays at his clinic and then quietly fade away back to my more pressing duties. Little did I know of what was in store for me. First, I had to admit almost immediately that acupuncture was not a placebo; it was obvious that Dr. Dung's patients were helped! Second, there was nothing metaphysical about his teaching. He was the same scientist I had known as a student, and he disdained nonscientific concepts of acupuncture. Dr. Dung had taken classical acupuncture and reinvented it as a medical science. His meticulous observations of his patients (and some 2,000 cadavers) over his career had led to some important discoveries, which he was generously willing to share with any practitioner willing to take the time to learn them.

Dr. Dung has an overriding desire to see acupuncture understood as science and taught, along with gross anatomy, in medical schools throughout the world. He published his first book, *Anatomical Acupuncture*, in 1997; it contains a wealth of knowledge but is somewhat difficult to read. He wanted me to help him write a revised edition of that text, but we ultimately settled on the entirely new text here before you. This current text borrows heavily from the earlier one, with the authors' thanks to its publisher, Antarctic Press, for allowing us to do so. Dr. Dung has traveled throughout the United States and the world to promote the use of acupuncture in medical education, and his earlier book has been translated or is being translated into several languages. Its first printing in Chinese sold out in China, indicating its relevance in a country in which acupuncture is an accepted practice.

Almost immediately after beginning my studies with Dr. Dung, I began incorporating acupuncture into my practice. It was so easy and patients responded so well! It is gratifying in clinical practice to obtain such dramatic results, even in refractory cases, and with so little effort. Dr. Dung is an anatomist as well as an acupuncturist, but not a physician, so his career has been limited in that he cannot diagnose disease and has often been deprived of the benefit of knowing a patient's complete medical history. Some of the case histories in this text reflect that deficit. His son, coauthor Joeming

Dunn, MD, is a physician who limits his practice to acupuncture and has taken over his father's practice since his retirement.

I have a more comprehensive practice, seeing acute occupational injuries and offering a variety of therapeutic options other than acupuncture: medication, education, and physical therapy. Many of my patients are blue collar workers with little sophistication, and it has been difficult to introduce some of them to acupuncture. I rarely do at first, preferring to wait until it has become obvious that they are not progressing with other therapies and may require surgical intervention (I have had patients waiting interminably for insurance approval for epidural steroid injections by a pain medicine specialist. After I administered acupuncture in the interim to provide symptomatic relief, they refused the epidural injections once approval was finally obtained because by then they were asymptomatic).

I have had to overcome quite a bit of initial patient resistance, especially in males, because of a fear of needles. Employers are also resistant, often feeling, as I once did, that acupuncture is bogus. Although, the former are gradually finding acupuncture more palatable than other available options (and are gratified to find that the pain of an acupuncture needle is not at all like that of an injection). The latter are beginning to see that the judicious use of acupuncture saves them money because their employees' recoveries from painful conditions are accelerated without more extensive and expensive interventions. Gradually, I have begun to use acupuncture for sinus allergy and asthma with gratifying results, and I look forward to trying it in a number of other conditions, especially infertility.

I am grateful to Dr. Dung for his helping me to understand more about the subject of pain. This is a greatly overlooked topic in medical education, and he has added new knowledge to the understanding of pain throughout an individual's lifetime. This is one of the most important themes of this text—possibly more important than the description of the practice of acupuncture. I am also grateful for his giving me a tool to help so many patients so easily, and giving me the opportunity to assist in the production of this text. His selflessness and integrity as a person and as a scientist have propelled this project forward, hopefully to the benefit of millions of our readers' patients.

Curtis P. Clogston, MD

Preface to *Anatomical Acupuncture*

Most knowledge is learned from reading. All skills have to be acquired by practice. These two axioms can be applied to my becoming an acupuncturist.

Right from the beginning in the process of learning and doing acupuncture, I quickly realized that everything available for reading on the subject was fictitious—totally lacking in scientific truth. So it remains today. Nevertheless, through years of clinical practice, I cannot help but accept the therapeutic validity of this healing antiquity. In my eyes, what should be a treasured medical heritage is substantially undervalued, for no other reason than a deficiency in its proper scientific aspects. Such a deficiency not only repels mainstream medical professionals from any affinity toward acupuncture, but also, far worse, foments hostility toward this benevolent and useful healing modality. As a result, a great heritage of human civilization has been neglected until it has reached a state of waste and decay. *Anatomical Acupuncture* is undertaken with a wish to change the minds of the medical communities, as well as of society in general. The possibility of such a change arises because acupuncture, for the first time in history, has been described and discussed in the well-established language of the basic and clinical sciences, with which we in the United States are so very familiar.

This book presents no data of hard scientific research to theorize about the mechanism of acupuncture. Rather, it contains a great deal of valuable information obtained from firsthand observations through years of personal practice. The information may be of interest to both laymen and professional people. It can be said with confidence that individuals who have an interest in knowing the medical art of acupuncture healing will find this book useful. The book is written in very much the same framework following the lecture series for anatomy and chronic pain, a senior elective offered to medical students in the University of Texas Health Science Center at San Antonio. Judging from the critiques and evaluations given by the students who have selected the course, the information seems to be well received.

The book consists of five parts. Part one has two chapters: One chapter describes the history of acupuncture in China, and the other in the United States. Part two also has two chapters: One chapter is used to discuss the absurd concepts and heretical suppositions of Chinese medicine, and the other is devoted specifically to nonscientific theories of traditional acupuncture. These four chapters should be comprehensible to all readers, with or without a sophisticated medical background. Such sophistication may be required to fully understand the rest of the book, however.

There are five chapters in part three. Their purposes are to provide established knowledge in the basic sciences of medicine, including anatomy, physiology, and biochemistry, for interpreting acupuncture. After a thorough understanding of the basic sciences in acupuncture, it will be possible to realize how acupuncture can be used in the clinical applications that are discussed in part four. Acupuncture can have good to excellent results for certain patients diagnosed with a clinical condition, and yet, other patients with the same condition may not benefit from such treatments. Thus, patients are categorized into different groups, each of which will have a chapter devoted to explaining why acupuncture will work and why it will not. Four chapters discuss different therapeutic results in acupuncture treatments. Part five is intended for scientific research. One chapter offers suggestions for clinical investigations using acupuncture as a vehicle in designing research protocols. The last chapter speculates on the possibility of using the information described in this book for studies of pain in terms of basic medical sciences.

Not much is known scientifically with respect to how acupuncture works. There are many reasons for this poor understanding of acupuncture's mechanism. One of the important reasons is the ambiguity of pain. With so much research carried out to study the nature of pain, the medical

profession is still not quite sure of its true identity. Unless pain is better understood, it will be rather remote to explain how acupuncture can manage it. Acupuncture and chronic pain are two-way streets. Currently, the traffic on the streets is going in the wrong direction for increased knowledge. Such an increase can only be possible if acupuncture becomes an interesting subject for basic and clinical studies. It would be nice if this book can serve as a catalyst to stimulate some excitement among medical investigators to look into acupuncture more intensively and seriously.

H.C. Dung, PhD

Author

The author graduated from the University of Louisville in 1970 with a Ph.D. in anatomy. Soon after, he accepted a faculty position in the Department of Anatomy, School of Medicine, at the University of Texas Health Science Center at San Antonio, which he held until his retirement in 2002. His main responsibilities were teaching gross human anatomy to medical and dental students and conducting research on a number of neurological mutations in mice.

During his 31-year academic career, he published a total of 77 papers. Twenty-six of these were in abstract form, while the rest were in full-paper form. Twenty-four of the full papers were on the field of acupuncture. These were the product of clinical experiences in acupuncture practice, obtained owing to the demands of medical students who wanted to learn acupuncture.

The first edition of *Anatomical Acupuncture* was published in 1977 and *Acupuncture: An Anatomical Approach* in 2003. This publication will be the Second Edition by that title. The author has published an additional six books on acupuncture and pain, three in English and three in Chinese.

New Editions of Previously Published Works:

Anatomical Acupuncture, First Edition, was published by the author himself, via Antarctic Press, San Antonio, TX (publisher: Ben Y. Dunn).

Anatomical Acupuncture was translated into Chinese by H.C. Dung, Ph.D., and Yun-tao Ma, Ph.D., and was published in 2000 in Beijing, China, under the title *Scientific Acupuncture for Health Professionals*.

Acupuncture: An Anatomical Approach, was coauthored by H.C. Dung, Ph.D., Curtis P. Clogston, and Joeming W. Dunn, M.D. It was published in 2004 by CRC Press.

1 Introduction

As explained in the preface, this book was written and prepared with the intent that it be used as the text for teaching Anatomical Acupuncture as a senior elective for medical students. School officials canceled the elective. Then, I retired. My wish to teach acupuncture based on medical sciences vanished, and I thought that the destiny of the book would be obliterated thereafter. Fortunately, in 2004 (2 years after my retirement), CRC Press agreed to publish a second, revised edition, and the book has survived to this date. With the advent of the third edition, it should be possible to expect its existence to last a few more years.

Acupuncture has been in use and practiced for more than 2 thousand years [1,2]. It would be difficult to make an accurate estimate of how many books have been written in its name during this long period of history. One book more or less about the topic will not make much difference to the reality of acupuncture. It will stay useful and remain in practice for the foreseeable future, despite the small, limited effect of this particular book on its usage and practice. There are several reasons for making the effort to publish this book that may be worth knowing if you want to learn to use acupuncture in your medical practice. It is a matter of professional respect and prestige. One does not want to be criticized as not knowing what he or she is doing, particularly in the field of medicine. Medicine is considered a branch of the sciences. Thus, we want to simply ask, "What is the scientific nature of acupuncture? Is it possible to use scientific terminology known in medical communities to explain what we do in acupuncture?"

Before I started writing this book, I had to collect data. From the beginning, it became a frustrating task to find acupuncture publications that were scientifically oriented. There is no basic medical science to speak of for acupuncture. To acupuncturists, even in this modern age of scientific medicine, human anatomy appears like what we see in Figure 1.1. This figure was taken from a publication intended to be a textbook of Chinese medicine. The book was printed sometime in 1946. The drawing displays an example of human anatomy, with many visceral organs shown in the thoracic and abdominal cavities. However, the division between these two cavities, the diaphragm, is not shown. Anatomically, there are many more obvious errors and gross mistakes. These cannot be unintended negligence because they are grotesque in scope. Even people without anatomical training will be able to detect errors in the drawing. So, why hasn't a single acupuncturist ever stood up to correct these mistakes? Why have they been perpetuated up to this date?

Anatomy in the medical curriculum consists of gross anatomy, microanatomy (histology), and neuroanatomy. No trace of microanatomy or neuroanatomy was found in my search of the literature for acupuncture. No known acupuncture book describes how nerve cells and fibers look histologically. Yet, the combination of nerve cell and fiber, known as a neuron, is the only anatomical entity that matters in acupuncture.

In addition to their dubious depictions of visceral organs in gross anatomy, many acupuncture books printed before 1960 were rather confusing in their presentation of locations or loci of most acupuncture points. The points' diameters were too large in proportion to the body surface. It was often difficult to determine their exact anatomical sites because the texts gave no precise anatomical features as landmarks to demarcate the points' locations. Taking into account these factors and several others, it was natural for individuals of scientific mind to begin questioning the merit of acupuncture's veracity. The willingness to accept acupuncture as something real in terms of medical practice began to subside, and skepticism about its use began to creep into our thoughts. Years later, we found that there were other medical professionals who had spent time learning acupuncture, then decided to forsake its practice for precisely the reasons given above. By then, we had changed our

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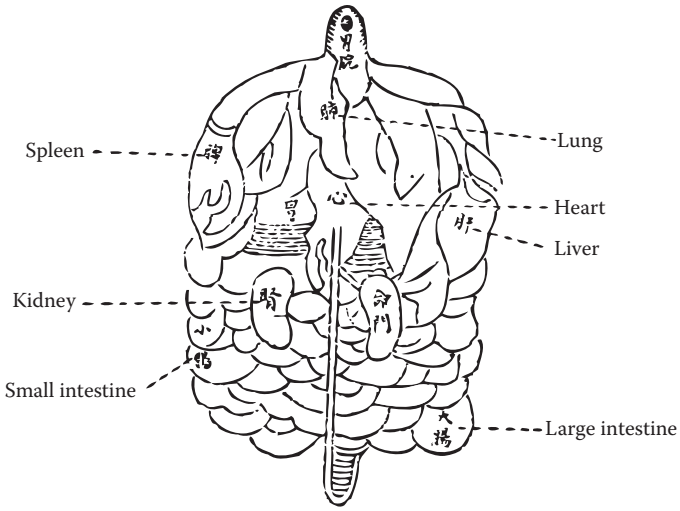

FIGURE 1.1 Human anatomy as viewed by many acupuncturists.

view toward acupuncture because we had proved on our own that acupuncture works and is useful in managing pain of both an acute and chronic nature. This book is offered to share the experience we have gained from acupuncture practice. Don't give up on acupuncture because of what you have heard or read. Try it on your own, and in time, its advantages and benefits will become clear.

In 1976, I received an invitation from the Chinese government to visit China. During my stay in Beijing, I had enough spare time to visit a bookstore. On the shelves of the store was one particular book [3], the Chinese title of which can be translated as *Essentials of Chinese Acupuncture*. The name of the publisher can be translated from Chinese as "People's Hygienic Publishing Company."

I bought a copy and brought it back to Texas, where I thoroughly perused the book from beginning to end. What impressed me the most were the anatomical illustrations printed in the book. I had no doubt that the drawings and pictures seen in the book had been prepared and produced by people with good anatomical training. The anatomical positions of all acupuncture points were well defined. In fact, the book led me to realize that there was good anatomical identity for each point described. I began formulating my understanding of acupuncture as essentially anatomical in nature. Good anatomical knowledge, specifically of gross anatomy, would be the key to unlocking and revealing acupuncture's medical nature.

Coincidentally, on a visit to San Francisco in 1984, I discovered another book in a Chinatown bookstore. The book was titled *Essentials of Chinese Acupuncture* and was written in English [4]. It had been compiled by three colleges—from Beijing, Shanghai, and Nanjing—and the Acupuncture Institute of the Academy of Traditional Chinese Medicine. The drawings and photos used in both this book and the one I'd found in 1976 were basically the same. However, the written content was somewhat different. It was obvious to me that the Chinese edition was written for those who read Chinese, and the English edition was for non-Chinese foreigners. The differences were not entirely due to the separation of linguistic backgrounds. The need to introduce acupuncture to different audiences with different cultural backgrounds also played a factor. The Chinese version sounds more mystic and mythological to me than the English edition does. Editorial maneuvers of this nature could lead to the suspicion that one can interpret acupuncture any way to fit one's own ideas and thoughts. It raised the possibility for acupuncture to be pure fiction, making it harder for the medical mainstream, with its hardened views of science in medicine, to accept that the modality is real.

The maxim, "It is easier to change dynasties than to change minds," applies well for most people in the medical mainstream. Once they think that acupuncture has no scientific reasoning behind it,

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it will be difficult for them to accept acupuncture. We know of incidences in which physicians spent time learning acupuncture, either abroad or in their own country. And yet, in the end, they decided to give up the chance to practice it, confessing that they still don't understand the medical explanation for acupuncture despite making efforts to study it. Here is an example:

I met Dr. Gonzalo Parra Flores (Figure 1.2) in 1998. From June 9 to June 18 of that year, I joined a Christian Medical Mission to go to Chilcapamba, Imbabura, Ecuador. The mission was organized by the Central Christian Church of San Antonio, Texas, and was led by Dr. Douglas Deuell, Senior Minister. The evening of our arrival, a couple of reporters came to interview members of the mission, and they found out that I was an acupuncturist. The next morning, a local newspaper reported that free acupuncture service would be available at Hospital Ibarra. Thereafter, every morning, more than 100 people were lined up to wait for my services. Soon, I realized that not all of them were patients. A few of them, in fact, were medical staff of the hospital. A couple of them even

FIGURE 1.2 Two photos taken on two different days at the Ibarra Hospital. Dr. Flores, wearing the white coat, is in both of them.

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indicated that they wanted to learn to practice acupuncture. One of them, Dr. Parra, told me that he'd gone to Ukraine, then still a part of the Soviet Union, to learn acupuncture. He confessed that after his return, he had no courage to practice acupuncture because he still didn't understand what it was all about. What troubled him the most was not being able to remember the terminology of acupuncture points. I pointed my right index finger at the medial end of my right eyebrow, and asked him, "What is that point?" Naturally, he didn't remember that the point is known in acupuncture as *zanzhu*. Nor did he remember the terms *sibai* and *yifeng*. Then, I told him that *zanzhu* represents the supraorbital nerve, *sibai* the infraorbital, and *yifeng* the greater auricular. Naturally, he had no problem knowing what these three nerves were. What bothered him the most was why his acupuncture instructors in Ukraine didn't tell him so. I knew such puzzlement all too well because none of the students who took Anatomical Acupuncture as their elective were capable of mastering acupuncture points in Chinese, with the exception of a few commonly known points such as *heku*, which is the point representing the superficial radial nerve. Therefore, the main mission of this book is to name acupuncture points using terms learned from gross anatomy. These terms are familiar to every medical student. A big portion of this book—five chapters—is devoted to describing acupuncture points based on human gross anatomy.

Dr. Parra was not the only example of a disgruntled acupuncturist that we knew; the same thing had happened in the United States. We knew of students who had graduated from medical school, then gone to California to take an acupuncture training program for a week or so. After spending substantial sums of money, they returned to say that they still didn't know much about acupuncture. The difference between Dr. Parra and the physicians in the United States was that Dr. Parra's expenses were paid for by the government of the Soviet Union, whereas the American doctors had to pay for their own expenses. The difference occurred because it was during the Cold War, and the Soviet Union used acupuncture as a tool to lure intelligentsia in the Third World to support its political agenda. The same thing happened with Chinese acupuncture during that time.

Hurdles and obstacles that create inconvenience and hesitance in learning acupuncture can turn up in any direction. Some of them are self-inflicted, coming from within acupuncture communities themselves. Some are imposed from external environments. Examples of internally generated ambivalence will be discussed subsequently in this chapter to show why concepts, theories, or views presented by traditional acupuncture practitioners will be difficult for the medical mainstream to accept. Here, I offer three more examples to illustrate how and why external environments as educational systems in medicine can often hinder or obstruct the incorporation of acupuncture teaching into the medical curriculum.

The first example occurred in Cuba in June of 1999. Ralph Alan Dale, from a publication called *AfroCubaWeb* at acupunk.com, e-mailed me a 10-page printout message. The first line of the message was, "East and West Meet in the Caribbean: Is Cuba Developing the World's Best Health Care Model?" Dr. Dale had EdD, PhD, CA, and Dipl. Ac. degrees. He made three trips to Cuba in 1990, 1991, and 1992. His e-mail was a report about the observations made during the trips. One wonders why it took so long, almost 10 years after the first trip, to give such a report. Nevertheless, I took his report seriously and read it carefully. What attracted my attention most in the report was that the Cuban Ministry of Health appointed a National Commission of Acupuncture to facilitate the development of acupuncture throughout the country. The commission would develop acupuncture curricula in the medical colleges. According to Dr. Dale, "there are eight or nine medical colleges in Cuba, all of which will soon incorporate acupuncture as an important part of their curricula. All medical colleges have a 6-year program. In addition, there is a 3- to 4-year internship requirement. Acupuncture will become an integral part of every level of this program. Acupuncture has already been incorporated into the curriculum at many medical colleges, specifically, Giron and Julio Trigo Colleges in Havana, and the medical colleges in Holguin, Oriente (Santiago de Cuba), Villa Clara and Cienfuegos." In the same e-mail, he mentioned a few names: Leoncio Padron, Orlando Sanchez, Marta Perez, and Rita Beretervide. Dr. Sanchez, "a doctor just 2 years out of the University of Havana Medical School, recalled that his interest in a medical career began during his army service.

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He was befriended by a medical school dropout who taught him the traditional Chinese health practice of *tai chi* and *quigong*."

After reading this information, I decided to go to Cuba, which was not that simple a matter at that time. One had to have a license from the U.S. Department of the Treasury to go. After acquiring license #CU-60406, I reached Cuba on June 1, 2000, and stayed there for 11 days. During that period, through rather complicated channels, I was able to meet Francisco Jose Moron Rodriguez, MD, PhD. Dr. Moron was a graduate of the Medical University of Havana, which was the oldest medical school established in the New World after the arrival of Christopher Columbus. At the time we met, he was Professor and Chairman of the Department of Pharmacology at his alma mater. He also had a title as Head of the Central Research Department of Pharmacology, Faculty of Medicine "Dr. Salvador Allende," Vice Minister for Research and Education, Ministry of Public Health. His numerous titles and credentials were so extensive that to write all of them down would take up an entire page. The most important part for me, however, would be whether he was in charge of incorporating acupuncture into their medical curriculum. I asked him if he already did so, and he answered "no," because he didn't know how to do it. I offered my free and voluntary service to help him set up an acupuncture teaching program for his medical students and the physicians in his country. He was most delighted to have such an opportunity come to him. We ended up meeting five times and took a few pictures, one of which is shown in Figure 1.3. I told him all I needed was a letter of invitation from either the dean of his medical school or, even better, from the president of the Medical University of Havana. The letter of invitation never arrived, and my hopes to set up a teaching program for scientific acupuncture never had the chance to be realized. Cuba was a tough country and a difficult place, both at that time and even now. I could tell after visiting that country that it would not be easy for Dr. Moron to arrange a feasible trip to his university. There were just too many logistical handicaps he needed to face and overcome to prepare for my stay.

It was obvious to me that Cuba was not a place where you could speak your mind freely. I didn't ask Dr. Moron why they decided to incorporate acupuncture into their curriculum. They ultimately didn't do it anyway, after almost 10 years of talking about it. He didn't voluntarily explain to me why they decided not to do so. One thing that puzzles me to this date is that Dr. Moron didn't know any of the names of the doctors mentioned in Dr. Dale's e-mail. One wonders how Dr. Dale came up with these people, who were supposedly in charge of incorporating acupuncture into medical

FIGURE 1.3 Dr. Moron on the right. At center is Dr. Larry Hufford, professor of political sciences at St. Mary's University, San Antonio, Texas, the leader of the travel seminar group to Cuba. On the left is the Vice President of the Medical University of Havana, whose name the author has unfortunately forgotten.

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curricula in Cuba. It is doubtful whether Cuba was ever able to incorporate acupuncture into their medical curricula. This example clearly indicated that doing so would not be as easy as expected, even if the intention had sanction from a government official and was clearly approved and supported, in this case for Cuban medical schools, by the highest authority in the country.

The second example took place locally in my neighborhood. My home is within walking distance from South Texas Medical Center, where the University of Texas Health Science Center and Audie L. Murphy Memorial Veterans Hospital are located. I taught at the Health Science Center for 31 years before my retirement, and volunteered to instruct tai chi exercise at the Bob Ross Senior Multi-Service Health and Resource Center, which is one street across from the VA hospital. I made quite a few new friends among enthusiastic tai chi practitioners. In time, a few of them became close friends. One of them was Mary Francis Uptain, who was also one of the acupuncture patients who obtained excellent results from my treatments. We frequently talked about acupuncture. She indicated that my altruistic conviction to share what I knew from practicing it was certainly admirable. One day in February of 2009, she brought me a newspaper clipping printed in the January 31, 2009 edition of the *San Antonio Express/News*. The headline article therein was "Military Expanding Acupuncture Treatments for Pain," written by Kamala Lane, an Associated Press reporter. Lane reported that Col. Richard Niemtzow, an Air Force physician, used auricular acupuncture to reduce pain at Walter Reed Army Medical Center in Washington for Chief Warrant Officer James Brand Smith, who had broken five ribs, punctured a lung, and shattered bones in his hand and thigh after falling more than 20 feet from a Black Hawk helicopter in Baghdad a month before. The results were positive, with an improvement level of perhaps 50%. Lane further said that the Air Force, which runs the military's only acupuncture clinic, was training doctors to take acupuncture to the war zones of Iraq and Afghanistan. At the end of the article, Lane quoted Niemtzow as saying that U.S. troops should start to learn acupuncture so they can treat each other while out on missions. For now, the Air Force program was limited to training physicians. Lane also said it was "remarkable" for the military, a "conservative institution," to incorporate acupuncture. I told Mary that I was curious to confirm the veracity of the report. Mary replied that she worked at VA hospital as a volunteer and had connections within hospital administration. She promised to arrange for me to talk with the proper personnel about offering to teach acupuncture to doctors in the VA hospital. The person she found was David Dooley, MD, Chief of Education Services in the hospital.

I had three meetings with Dr. Dooley, and we e-mailed each other on several occasions. In the first e-mail I received, he said that he "heard good things" about me. Basically, what I offered was very simple: I would provide free instruction in acupuncture to any physicians in his jurisdiction at any time and place of his choosing. A copy of an e-mail sent by Sandra Sanchez-Reilly to Dr. Dooley indicated that "All our fellows (PC and geriatrics) are interested. Some faculty (including myself and Dr. Chiodo, the geri program director) are very interested in learning acupuncture as well. We have three geri fellows and eight PC interprofessional fellows, in addition to about 10 other staff physicians, who could potentially attend these sessions once we organize this. I think we have a quorum. I will let Scotte know via this e-mail as well." The last time I saw Dr. Dooley was in March of 2009, when I gave him the Application for Physicians, Dentists, Podiatrists, and Optometrists, a four-page, double-sided form from the Department of Veterans Affairs. I have not heard a word from either Dr. Dooley or the Department of Veterans Affairs since. The incident made me wonder how substantially the acupuncture program promoted by Col. Richard Niemtzow has been advanced, or even whether the program is real or just one reporter's imagination. If military establishments really had the intention of training their medical staff to use acupuncture, who would have the qualifications or become qualified to teach the course, and where would these instructors be found? Are these not the obstacles that medical professionals will face in the teaching of acupuncture?

One more factor to mention regarding this example—Lane's report describes a case of acute pain. Using acupuncture to manage acute pain like that will be discussed in a later chapter of this book. Acute pain of that nature is very rarely seen in an ordinary acupuncture clinic. Patients who sustain traumatic injuries of that nature always end up in the emergency room of major hospitals.

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Most acute pain will subside on its own in time without requiring auricular acupuncture treatment. It is chronic pain, most of which is intractable, for which acupuncture can be useful.

The third example demonstrates how feeble the connection between physicians and acupuncture can be. The slightest disturbance can disrupt it. Trust in acupuncture can vanish when claims made for the treatment fail to materialize. This was what happened to acupuncture anesthesia in a story told by a Hungarian doctor, Dr. Embey-Isztin. I met Dr. Embey-Isztin when I attended a meeting of the Hungarian Pain Society on October 21, 2005. The meeting was held in a fancy hotel near Balatan Lake, not too far from Budapest. His card indicated that he was a consultant anesthetist and head of a pain clinic, the National Institute of Oncology, Hungary, in Budapest. Soon, I learned that he was a well-known medical figure in his country and a leader of some kind in the establishment of Hungarian medicine. My presentation in the meeting was "Using Trigger Points to Differentiate Acute and Chronic Pain." After the meeting, Dr. Embey-Isztin approached me to talk about acupuncture. At that time, I was a chair professor at Meiho Institute of Technology in Neipu, Pingtung, Taiwan. I promised him that if he cared to come visit me there, I would be very glad to show him how acupuncture worked. Indeed, he showed up the next year, in 2006 (Figure 1.4), and brought with him one of his colleagues, neurologist Dumele Andreea, MD. They stayed with me for almost 2 weeks. During that time, we were together almost 24 hours a day. We spent a lot of time talking about almost everything in life and in the world. One thing we talked about was acupuncture anesthesia, discussions which I will not forget for the rest of my life.

Dr. Embey-Isztin said that he first heard about acupuncture anesthesia when he went to work at a hospital in Paris after graduating from medical school in Hungary. He'd previously known nothing about acupuncture and had never had a chance to observe how it was able to induce anesthesia for surgical purposes. At that time, there were also physicians from China working in the same hospital. Two of them were invited and agreed to demonstrate to the hospital's medical staff how acupuncture anesthesia worked. Dr. Embey-Isztin indicated that he was very excited and had great expectations to see for himself what the acupuncture anesthesia was really like. When the time arrived, he went to the surgical ward with a rather large group of hospital personnel. The two Chinese physicians entered the room and went to prepare acupuncture anesthesia by inserting a number of needles into various locations of the body, including loci in the ears, forearms, hands, legs, and feet. The needles then were twirled, pushed down, and pulled up now and then. The hand manipulation obviously

FIGURE 1.4 Dr. Embey-Isztin on the left, beside him is Dr. Andreea, and then Faye Zu Wu, my secretary at the Meiho Institute of Technology.

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generated certain discomfort, as could be seen from the patient's facial expressions. Such discomfort can be obvious even in some patients coming for regular acupuncture treatments that don't require much needle twisting. After approximately 10 to 15 minutes of needle manipulation, the patient was declared to be ready for surgery via scalpel. All the onlookers were astonished when, as the knife cut into the flesh, the patient almost jumped off the surgical table, weeping. That was the moment Dr. Embey-Isztin came to believe that miraculous acupuncture anesthesia was nothing but a folly, and began to doubt whether acupuncture could be accepted as a scientific entity in medical practice. It was impossible for me to tell whether his visit to the Meiho Institute changed his views on acupuncture. All I knew for sure was that acupuncture anesthesia in China had totally disappeared. In 2002, I stayed in China for 6 months, during which time I went to two medical schools as a visiting professor. During those visits, I kept asking if I could observe surgical operations under acupuncture anesthesia. No one could take me to see a single performance of such a treatment. Even today, we can definitively state that many physicians and medical doctors will use the failure of acupuncture anesthesia as an excuse to deny, discredit, or reject the real usefulness of acupuncture. More will be said about acupuncture anesthesia in a later chapter. All that needs to be said here is that it is not humbug. Acupuncturists need to learn how to screen out which patients are unsuitable for having acupuncture anesthesia. This book may provide a way to achieving that.

As pointed out above, there are elements of factual anatomy in acupuncture, although it is difficult to judge whether the presence of the said elements is sheer coincidence or luck. Because all we know at this time about acupuncture is limited to anatomy, anatomical sciences will occupy a major portion of this book. The next six chapters will be all about anatomy. Chapter 2 provides a general orientation to the nervous system, indicating which parts of it will be relevant for studying acupuncture. Our body can be divided into five regions: head, neck, upper limbs, body trunk, and lower limbs. Each of these regions will have a chapter devoted to covering a description of the acupuncture points located there. Chapter 3 describes acupuncture points located in the head and face, all of which are formed by the cranial nerves. Chapter 4 covers the cervical plexus, which forms acupuncture points in the neck region. Acupuncture points are similarly formed by the brachial plexus in the upper limbs (Chapter 5), the typical spinal nerves in the body trunk (Chapter 6), and the lumbar–sacral plexuses in the lower limbs (Chapter 7).

We know for sure that acupuncture began as a medical practice at the time the basic medical sciences were unknown in our civilization. The basic medical sciences started to evolve and develop from the time of the Renaissance in Europe, and although they have advanced continuously, acupuncture remains unchanged with respect to its scientific prospects. Besides anatomy, the basic medical sciences also include physiology and biochemistry. There is very little physiology to speak of in acupuncture. One commonly cited and widely known tenet that is insisted upon and promulgated by acupuncturists could be described as the theory of *qi* (pronounced "chi"). This qi is said to flow and circulate throughout the entire body within a number of channels, which are termed "meridians" in acupuncture. The flow of qi in the meridians is said to be controlled by two opposite forces, known as *yin* and *yang*. When yin and yang are out of balance, the flow of qi can become stagnated, or even blocked, resulting in sickness or pain. The fine needles used in acupuncture are inserted into the prescribed loci, spots, or points on the body that can adjust the flow of qi, or to reopen the meridians to allow the circulation of the qi. Thus, health can be restored and pain eradicated. The acceptability of such an explanation or theory is up to individual readers of this text. Opinions on this view of acupuncture can be found in many publications. The following quotation from the *Wall Street Journal* (March 23, 2010, p. 5) could be considered a typical example: "Acupuncture has long baffled medical experts, and no wonder: It holds that an invisible life force called qi (pronounced *chee*) travels up and down the body in 14 meridians. Illness and pain are due to blockages and imbalances in qi. Inserting thin needles into the body at precise points can unblock the meridians, practitioners believe, and treat everything from arthritis and asthma to anxiety, acne, and infertility." To us, this is just pure hogwash, without any scientific truth to it. Yet, the majority of acupuncturists keep repeating this worthless, nonsensical language to the world. We consider

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such behavior to be self-inflicted damage to the believability of the scientific nature of acupuncture. To deny this theory is easy: give us an investigator who has been able to identify the existence of meridians. No such meridians have ever been found in the body. However, there are many physiological activities, functions, and phenomena that can be described in the course of acupuncture reactions and usages. Thus, we need Chapter 8 to discuss physiology in acupuncture. There are known attempts to interpret acupuncture following the teachings of modern concepts in physiology. Two books on the topic [5,6] are cited for reference, if any readers are interested in studying this aspect of acupuncture.

Chapter 9, Biochemistry in Acupuncture, concludes the coverage of the basic medical sciences for acupuncture. There is no biochemistry to speak of in acupuncture. Yet, research in biochemical studies will provide the final answer to the question of how acupuncture works. Acupuncture needs to have biochemical substances in the nervous system to produce anesthesia so that pain can be reduced or eliminated. The substances are most likely to be synthesized and secreted as hormones or neural transmitters in the physiological system. What these substances could possibly be will be discussed in this chapter.

The last five chapters can be viewed as the clinical aspect of acupuncture studies. Chapter 12 will discuss several aspects of pain: what is pain? Can pain be measured and quantified? If we cannot measure how much pain patients are suffering, it will be difficult to know whether their pain can be managed. Does it make good sense to differentiate acute and chronic pain with the methods currently available in clinical practice? Several aspects concerning pain will be discussed in this chapter.

Chapters 13, 14, and 15 are devoted to the applications of acupuncture in clinical practices. Chapter 13 provides examples of patients whose pain is easy to manage, and for whom applications of acupuncture will produce excellent results. Chapter 14 will show that, often, the use of acupuncture can have mixed or limited results (or both), with several appropriate cases provided to demonstrate these mixtures and limitations. The purpose of Chapter 15 is to help acupuncture students understand that acupuncture is not a panacea. It will not reduce or stop all sorts of pain. The chapter provides examples of pain that are difficult or impossible to manage, and explains these in terms that are understandable from a medical point of view.

The final chapter, Chapter 16, theorizes where the future of acupuncture may be headed. Much is still unknown in acupuncture. Finding the correct answers for the unknown will take more research and study, and this chapter discusses what kinds of research and studies these should be. Investigators in the field of acupuncture know that there are numerous reports available in the medical literature. Unfortunately, spending time to study these reports will not be of much use in understanding what acupuncture is all about. One example to prove the point: one study of acupuncture was made to determine whether using needles would be more effective than using so-called sham stimulation. Whether real needles are more or less effective is beside the point. As long as acupuncture can reduce or stop pain in a minority of patients, its use in clinical applications can be justified. To me, most research studies consist of merely finding some logical excuse to oppose the use of acupuncture. It is doubtful that most of the investigators who wrote the research reports ever had a chance to really practice acupuncture in their medical careers as health care providers. We are very certain that, in the end, acupuncture will turn out to be a very useful tool for medical investigators and scientific researchers to advance our understanding of the physiological nature of pain. This chapter discusses such a possibility and many other aspects relating to pain.

For anyone with adequate education and training in the basic medical sciences, this book should be easy to read. Reading this book should make it easy to understand what acupuncture is. Furthermore, this book will enable physicians and medical practitioners to perform acupuncture for their patients who are suffering from acute and chronic pain. It is the author's hope that the practice of acupuncture will gain momentum in the medical field after the publication of this book. There are many individuals in this world who are afflicted with pain, and acupuncture is sure to give them some relief. Let medical professionals who are qualified to practice acupuncture provide this therapeutic treatment to those who need its services.

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2 Anatomy in Acupuncture

2.1 GENERAL CONSIDERATION

Any person who is or has been a medical student knows that anatomy consists of gross human anatomy, microanatomy (also known as histology), neuroanatomy, and sometimes embryology as well. The total instruction time required for all of them can require as much as 390 h. Of that, the time required for each can be approximately divided into 180 h for gross anatomy, 120 h for microanatomy, 60 h for neuroanatomy, and 30 h for embryology. Equipping an adequate facility for teaching these courses is extremely expensive. As far as the author is aware, dental and medical schools are the only educational institutions where such an opportunity could possibly be available. Chiropractic schools might be included, but certainly not oriental and acupuncture colleges. If oriental and acupuncture colleges do teach gross anatomy and microanatomy, the said teaching is most likely limited to didactic oral presentation, without practical dissection of cadavers and microscopic examination of tissue mountings on slides.

For all the times mentioned above, how many hours do medical professionals need to review their anatomy to properly learn to practice acupuncture? A reasonable estimate would be 26 h for gross anatomy, 4 h for microanatomy, and none for neuroanatomy or embryology. Out of the time spent for gross anatomy, 18 h can best be put to use by returning to the gross anatomy laboratory for dissecting cadavers. Many obscure and insignificant peripheral nerves need to be dissected out and examined to observe their unique anatomical features, which will be described and discussed in the following five chapters. Four hours for microanatomy can be spent to review the histology of nerve tissues, including the microstructure of neurons, nerve cells, and their fibers. The most difficult requirement in the entire ordeal in learning to practice acupuncture is getting the opportunity to return to a gross anatomy laboratory to dissect a cadaver for a review of anatomy. Of course, skipping this step does not necessarily mean that one cannot learn acupuncture. As long as medical professionals are capable of understanding what is described in this book, they can still achieve that mission. It is just more convincing if one can verify real morphological entities in an actual human body.

2.2 IDENTITY OF ACUPOINTS

Acupuncture can be defined merely as inserting fine, sterilized needles into specific points on the body for therapeutic purposes. These certain points are designated as acupuncture points, abbreviated hereafter in this book as acupoints.

Acupoints are the primary essence of acupuncture. To learn acupuncture, we must know what acupoints are. Certain aspects of acupoints are well established, such as their anatomical locations. Other aspects are uncertain, such as their real identity. Do they represent definite anatomical structures? Are these structures identifiable in our body? The answers to both these and many other similar questions is "no." There is no anatomical structure that can be said to represent acupoints, and no such structure has ever been identified in the body. We do know that some anatomical features, alone or in combination, contribute to the formation of acupoints. Ten such features are mentioned in Section 2.5 of this chapter.

We advise readers with scientific curiosity to check out two reports to learn more about the identity of acupoints. The first is an experimental study using monkeys as a model. The results of the study were reported by Dr. H.C. Ha [1] in 1980. The report describes that under the skin of one

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acupoint studied, there are more nerve receptors of different categories than in areas that are not beneath acupoints. Dr. Ha and I were acquaintances for many years. He told me that the study was only focused on just a couple of acupoint loci. It was impossible to conclude if all acupoints are located in skin areas where an abundance of nerve receptors are found. Thus, it will not be entirely accurate to attribute nerve receptors as the only anatomical structure in forming all acupoints.

A second opinion reported by a number of scientific investigators is that acupoints are actually trigger points [2,3], or motor points [4]. Many of these individuals, such as Melzack, are well-known researchers in the study of pain. It would be unruly to recant their opinions. Yet, the trouble is whether or not we know the real identity of a trigger point. If our bodies indeed have trigger points, why are they not mentioned in any gross anatomy textbook? There are points of numerous different names, in addition to acupoint, trigger point, and motor point, known in medical literature. They include such descriptors as tender, sensitive, and dermal points. More about these points will be discussed in Section 2.6 of this chapter. For the time being, one fact known about all these points, which are under different names, needs to be pointed out: they can all manifest sensitivity as aching or pain under certain physical conditions in certain times of our life. This sensitivity is due to our having nerve tissue in our body, particularly the sensory nerves. Thus, it is clear to us that it will be useful to know the nervous system—more specifically, the sensory nervous system.

2.3 ALL IN THE SENSORY NERVES

Sensory nerves are key players in forming acupoints. They are the only anatomic structures that are capable of generating sensations, painful or otherwise, uncomfortable or comfortable. With a few exceptions, such as the hair, the fingernails, the outermost epidermoid layers of the skin, and the corneas of the eyeballs, sensory nerves can be said to be ubiquitous throughout the body. This is why hair can be cut, nails can be clipped, epidermal skin can be thinly shaved with a razor blade, and the cornea can be damaged by diseases with no pain perceived. Injuries to parts of the body with sensory nerve innervation will make us experience pain. We know that the density of nerve distribution varies greatly from one area of the body to another. How many nerve fibers are needed to constitute the formation of one acupoint is not known at this moment. Nevertheless, it is reasonable to assume that our body surface must have quite a number of acupoints. The most commonly mentioned acupoint total in acupuncture books is 361 points. This is obviously an arbitrary number. In our view, every few square millimeters of body surface can be a potential acupoint. There is no location where acupuncture needles cannot be placed. However, for practical purposes, approximately 100 points are useful to recognize and identify. The difference is that some points will be used therapeutically 100% of the time, whereas others will rarely be used at all. These will be clarified in later chapters of the book, when clinical applications of acupoints are mentioned. The focus for the book will be where the useful acupoints are located. They are distributed along the localities of the peripheral nerve branches. Thus, we will begin our anatomical review by establishing an organization of the nervous system that is convenient for our descriptions.

2.3.1 Organization of the Nervous System

The system is divided into the central and peripheral divisions. The central nervous system consists of the brain and the spinal cord, the study of which falls under neuroanatomy. There is not much of importance for us regarding the neuroanatomy of the brain and the spinal cord. Acupuncture will not be of much help to treat pain due to diseases or injuries in the central nervous system. Pain originating in the brain and the spinal cord is described as central pain. Central pain is rarely seen in acupuncture clinics. Most pain encountered is viewed as somatic in nature, perceived in the outer portions of the body, such as the head, neck, limbs, and lower back. Nerve fibers distributing to these areas of the body are categorized as the peripheral nerves, and they form the peripheral nervous system.

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2.3.2 The Peripheral Nervous System

The peripheral system consists of the cranial and spinal nerves. The cranial nerves originate from the brain. There are 12 pairs: olfactory, optic, oculomotor, trochlear, trigeminal, abducens, facial, vestibulocochlear or statoacoustic, glossopharyngeal, vagus, spinal accessory, and hypoglossal. What roles each of these nerves play, whether they are relevant in acupuncture, and which of them will have acupoints formed along their anatomical locations will be the topics for the next chapter.

Peripheral nerves come from the spinal cord in 33 pairs. They are divided into five groups: cervical plexus, brachial plexus, typical spinal nerves, lumbar plexus, and sacral–coccygeal plexus. The numbers of spinal nerves that participate in forming these five groups are four for the cervical plexus, five for the brachial plexus, 11 for the typical spinal plexus, four for the lumbar plexus, five for the sacral plexus, and four for the coccygeal plexus. The nerve branches of the cervical plexus are distributed in the neck region. The acupoints formed by these nerve branches are described in Chapter 4. Acupoints formed in the upper limbs along nerve branches of the brachial plexus can be found in Chapter 5. Chapter 6 is for the acupoints located in the body trunk, or thorax and abdomen, where terminal branches of the typical spinal nerves are located. Acupoints located in the lower limbs are formed by nerve branches of either the lumbar or sacral–coccygeal plexus, and can be found in Chapter 7.

2.3.3 The Neuron

The term "nerve branch" is used frequently in anatomy, and so it will be within this book. We all know that nerve branches can be microscopic, invisible to the naked eye, or as large as a finger. Tiny twig nerve branches are anatomically ubiquitous. Nerve branches with anatomical nomenclatures are physically larger and limited in number. They are what we will speak about in this book. Regardless of their size, all nerve branches are made of nerve fibers. A nerve fiber is a portion of the nerve cell, which is known as a neuron. Neurons are structural units of the nervous system. As can be seen from Figures 2.1 and 2.2, there are different kinds of neurons, such as unipolar, bipolar, and multipolar. They are also named according to their locations, such as pyramidal, Purkinje,

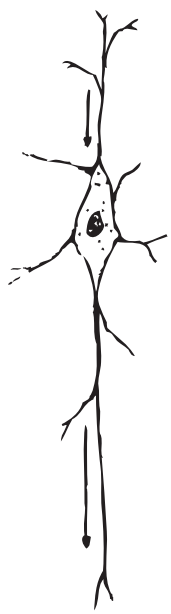

FIGURE 2.1 A representative neuron. This particular type of neuron is known as multipolar. Arrows indicate the direction of nerve impulse transmission in the neuron.

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FIGURE 2.2 Typical appearance of a bipolar neuron.

cerebellum, ventral horn, etc. Neurons can also be described by nomenclature according to physiological function. This can include motor, sensory, sympathetic, and parasympathetic. Sympathetic and parasympathetic neurons are subdivided into preganglionic and postganglionic neurons. Our main attention will be on the bipolar or sensory neurons.

All neurons have a cell body known as the perikarkyon, within which is the nucleus, and its extensions. The extensions of nerve cells are what we call nerve fibers, which are protoplasmic processes extending from the cell body. Neurons of the peripheral nervous system are all housed in a structure known as the ganglion. There are two types of nerve fibers, axons and dendrites, as shown in the two figures. The cells, dendrites, and axons are set in a framework of specialized and specific connective or interstitial tissues known as neuroglia. There is not much concern for knowing what the neuroglia is with regard to acupuncture. What needs to be known are the histologic or microscopic structures of the nerves or nerve fibers.

2.3.4 Histology of Nerves

Nerve fibers, often simply referred to as nerves, have a cord at their center, and this central cord is wrapped by a myelin sheath, as shown in Figure 2.3. There are six fibers seen in this figure. Five of them have only a single myelin sheath layer, and one has multiple sheath layers. The size of the central cord is very much the same for all nerves. However, the number of myelin sheath layers can vary from one to a hundred, as seen in Figure 2.4.

Thus, it is clear that the quantity of layers formed outside the central cord of the nerve determines the size of all nerve fibers. The fact that there are different nerve fibers of different sizes is important in explaining how and why acupuncture should and shouldn't work. More about the physiological aspects of acupuncture will be presented in Chapter 8.

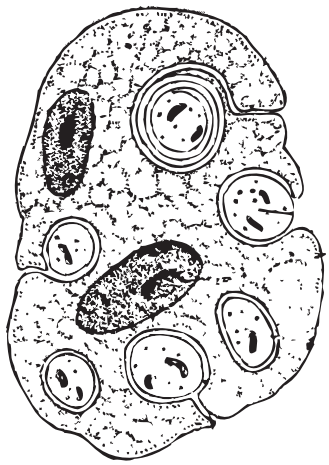

FIGURE 2.3 A drawing depicting the formation of a myelin sheath around six axons or dendrites. One nerve has three layers of myelin sheath, whereas the other five nerves only have one layer. The two nuclei shown belong to neuroglia cells, which synthesize myelin. These particular neuroglia are known as Schwann cells.

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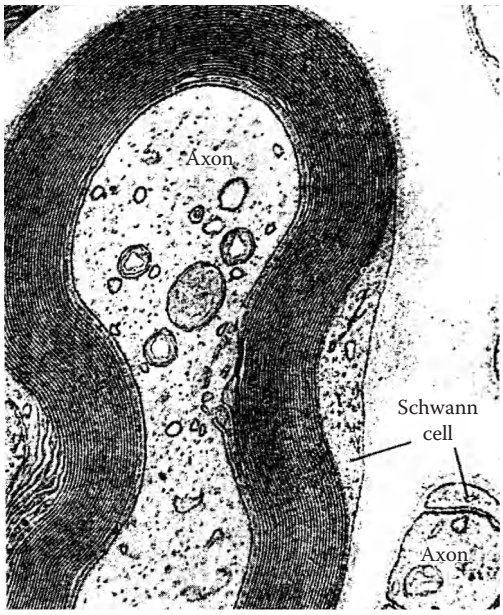

FIGURE 2.4 An electron microscopic picture showing the detailed structures of a myelin sheath. There are two nerves shown; one is myelinated with more than 30 countable layers of sheath, and the other is unmyelinated and is often referred to as a naked nerve.

The myelin sheath is not only the microstructure that determines the size of the nerve, it also serves as the substance that insulates nerve fibers from shorting out each other. Figure 2.5 is a picture taken of a small nerve branch that was cut in a cross-section. From this picture, we can see nerves of different sizes. Not only is each nerve insulated by myelin but also the congregation of nerve fibers as a bundle is protected by a thick layer of connective tissue known as the perineurium. A number of small nerve bundles, such as those seen in Figure 2.5, can be collectively presented to form a larger bundle or branch, which will be wrapped in an even thicker layer called the epineurium. The myelin sheath outside a single nerve fiber is described as the endoneurium. It is obvious that neurons that become part of the nervous tissue are very well protected. This is the reason that, in the practice of acupuncture, needles properly inserted into the body are unlikely to produce substantial damage to nerve fibers. However, if the myelin is damaged or destroyed, pain will occur in

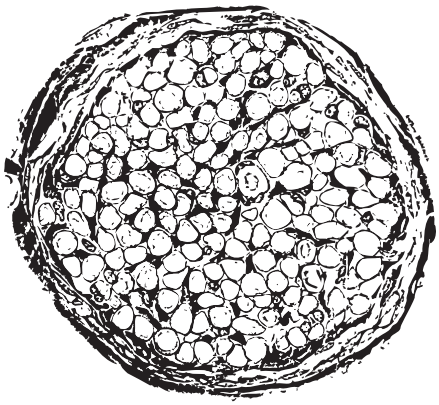

FIGURE 2.5 A small nerve branch cut cross-sectionally to show nerve fibers of different diameters.

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the body. It is very much like two uninsulated electric wires coming into contact, producing sparks and fire as a consequence.

2.3.5 Divisions of the Nerves

Anatomically, all nerve fibers are very much alike. They have a central cord wrapped in myelin sheath layers. Physiologically, however, they have different functions. These functions are motor and sensory. Motor functions are carried out by the efferent fibers, and sensory functions are performed by the afferent fibers. We need to categorize these two divisions in the instruction of acupuncture.

2.4 EFFERENT FIBERS

2.4.1 Efferent Fibers to Skeletal Muscles

Physiologically, "efferent" means move or run away from the cell bodies. What moves or runs away are impulses or messages generated or occurring in the neurons themselves. Efferent nerve fibers are also called motor nerve fibers. By this definition, we have efferent nerves to the skeletal muscles and in the autonomic nervous system. Efferent fibers to the skeletal muscles have two origins: one in the brain and the other in the spinal cord. The anatomy of efferent fibers—their origins, locations, and distributions—are described in the next five chapters. Here, we will briefly mention that skeletal muscles in the face and head are known as muscles of mastication and muscles of facial expression. Mastication muscles are controlled by the trigeminal nerve, and facial expression muscles are controlled by the facial nerves. Skeletal muscles in all other parts of the body are controlled by the spinal nerves. Nerves to the skeletal muscles originate from motor neurons in either the brain or the spinal cord. The signals to activate or move the muscles originate from these motor neurons to reach to the muscles. Therefore, the nerves are known as efferent fibers. The signals transmitted in the efferent fibers do not go from the muscles back to the neurons. This may explain why acupuncture does not have much effect on diseases involving efferent fibers, particularly efferent fibers to the skeletal muscles.

2.4.2 Autonomic Nervous System

Another kind of efferent fiber leads to cardiac and smooth muscles. Cardiac muscles are found in the heart. Smooth muscles are in the visceral organs, including—most importantly in the use of acupuncture—blood vessels in the arterial side. This group of efferent fibers is called the autonomic nerves. The autonomic nervous system has two subdivisions: sympathetic and parasympathetic nerves. Each division has two neuron stations, known as preganglionic and postganglionic cells. The system is far more complicated in organization and distribution. However, it is useful to be familiar with the anatomy of the autonomic nervous system because it plays a minor role in understanding the reactions created by acupuncture stimulation. More will be discussed about the nervous system in the next six chapters.

2.5 AFFERENT FIBERS

Afferent fibers carry nerve messages from the peripheral to the central nervous system. The messages are sensory in nature. Each nerve is believed to have a sensory receptor at the peripheral terminal end of the fiber. The receptor receives sensory messages generated along the afferent fibers. There are two types of sensory receptors: one for receiving the special senses, and the other for the general senses. Histologically, the receptor types are different in form and are distributed in different areas of the body. Special senses occur exclusively in the face and head, and general senses occur throughout the entire body.

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2.5.1 For Special Senses

We have five special senses. Their receptors and nerve fibers are located in the face and head regions of five special areas. These five special senses are smell sensation, located in the olfactory of the first cranial nerve; sight sensation, located in the optic of the secondary cranial nerve; taste sensation, located in the facial of the seventh cranial nerves; and hearing and equilibrium, located in the vestibulocochlear or statoacoustic of the eighth cranial nerve. The sensory receptors for smell are in the upper portion of the nasal cavity, known as the olfactory epithelium. The receptors for vision are located in the retina, which is inside the eyeball. The receptors known as taste buds, which make the discernment of sweet or sour possible, are located on the surface of the tongue. The receptors for hearing sound and balancing our body are located inside the inner ears, deep in the temporal bone in the structure known as the cochlea, which is a portion of the endolymphatic system. From these anatomical descriptions, it should be readily understood that functional deficits in all these special senses will not be easy to improve or correct by acupuncture treatments because none of the afferent nerve fibers that transmit special senses are accessible from the body surface. No known acupoints are formed by the olfactory, optic, or statoacoustic nerves. Acupuncture is useless if no acupoints are available to insert needles. More about facial nerves will be covered in the next chapter.

2.5.2 For General Senses

"General senses" refers to sensations felt throughout the entire body. Physiologically, there are said to be five kinds of general senses: temperature, the sensation of hot or cold; tactile, the sensation of physical contact with the body; stereognostic, the sensation for detecting the form and nature of objects by palpation; proprioception; the awareness of body position and movements of the musculoskeletal system; and nociception, the ability to feel pain. Their respective peripheral receptors at the terminal end of the nerve fibers are the thermoreceptor, mechanoreceptor, stereognostic receptor, proprioceptor, and nociceptor.

There are quite a few histological terms used to describe different receptors in the general sensations. Known examples include Merkel's disk, Meissner's corpuscle, Paciniform ending, Vater–Pacini corpuscle, Ruffini's corpuscle, Krause's end bulb, neuromuscular spindle, neurotendinous organ, tactile corpuscle, free nerve ending, etc. We do not know for sure which of these structures represent what receptor. It is also not certain if any one of these receptors is responsible for one of the five senses we have, or more than one sense. Even though we have divided the sensory abilities into five categories, the reality of sensory functions may be much more complicated than we are able to comprehend. Take nociception, the sensation of pain, for example. Many different kinds of pain are known to us. It can be burning, excruciating, dull, numbing, prickling, tingling, and many more types. Do these terms describe the same phenomenon produced by the same sensory nerve, or is only one type of afferent sensory fiber responsible for our feeling each type of pain? Does each of these pain sensations have one specific receptor, or do multiple receptors act together to produce different kinds of nociception? We don't really know. Receptors for pain sensation are always described as free nerve endings, which have no or very little myelination. Because of their scanty myelin sheath, they are often considered to be naked nerves. A few free nerve endings are seen in Figure 2.6.

Thus, different sizes of afferent fibers, which are known to mediate different sensations, play an important role in our understanding of how acupuncture works. More will be said in the last few chapters about the relationship between the size of afferent fibers and how acupuncture can reduce or stop pain. In general, the different sizes of afferent nerve fibers are described as A, B, and C fibers. For our purposes, it is not necessary to know their exact diameters, only that A fibers are the largest in diameter, B fibers are second in size, and C fibers are the smallest. Using this distinction, we will be able to say that proprioceptors and mechanoreceptors have A fibers, thermoreceptors and stereognoceptors have B fibers, and nociceptors have C fibers. Within group C, numbing and

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FIGURE 2.6 A few free nerve endings are shown to run in the stratum spinosum and germinativum of the skin.

dull pain are transmitted by larger afferent fibers. Next to numbing and dull pain, the fibers to transmit sensation for pricking or tingling pain will be smaller in size. The smallest afferent fibers are the naked free nerve endings, which are nociceptors transmitting burning and excruciating pain. Knowing this is helpful for understanding why it is easier and quicker for acupuncture needles to stop burning and excruciating pain than dull, numbing, prickling or tingling pain. Different sizes for afferent nerves play an important role in the manageability of pain in acupuncture treatments.

By now, the anatomical differences between afferent fibers for the special senses and for the general senses should be clear. Each special sense is confined to the branches of only one cranial nerve. Within that cranial nerve, all afferent fibers perform one identical function for detecting one special sense. Afferent fibers for the five general senses are all mixed inside every peripheral nerve branch, meaning that all peripheral nerve branches contain afferent fibers of different sizes, from A to C groups. In the gross dissection of a cadaver, it is impossible to separate A, B, and C fibers. Thus, we must treat all afferent fibers for the general senses as one anatomical entity, and we will refer to them as afferent fibers for the general senses in this book.

In summary, we have stated that acupoints are the most important thing in acupuncture. From our observations, the identity of acupoints is in the nerve fibers. There are two kinds of fibers—efferent and afferent. Efferent fibers go to innervating skeletal muscles and structures that contain cardiac and smooth muscles. Efferent fibers that innervate cardiac and smooth muscles are known as autonomic nerves. Autonomic nerves are divided into sympathetic and parasympathetic, each of which consists of preganglionic and postganglionic segments. Afferent fibers are sensory nerves. There are afferent fibers for special senses, and afferent fibers for general senses. Combinations of a number of these nerve fibers exist in the body as nerve branches. Nerve branches are what are needed to locate acupoints.

There two types of nerve branches, muscular and cutaneous nerves, which takes us to our next topic.

2.6 MUSCULAR NERVE BRANCHES

The term *motor nerve* can be confused with *muscular nerve*. Innervation to skeletal muscle is not by motor nerves alone. Keep in mind that motor nerves are limited to the efferent fibers originating from motor neurons in the brain and spinal cord. Motor nerves are joined with afferent fibers for general sensations and with postganglionic sympathetic nerves to form a muscular nerve branch. This is why describing the locus where a muscular nerve enters a muscle as a "motor point" is not exactly accurate. However, it is such a commonly accepted term that we will adopt it in this book.

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Muscular nerves or nerve branches, as used in our definition, are implied to contain three types of nerve fibers: efferent nerves to the skeletal muscles, postganglionic sympathetic nerves, and afferent fibers for the general senses.

2.7 CUTANEOUS NERVE BRANCHES

Another type of peripheral nerve branch is cutaneous. Cutaneous branches contain only two kinds of nerve fibers: afferent fibers for the general senses and postganglionic sympathetic nerves. Postganglionic sympathetic nerves control the activity of smooth muscles in blood vessels, secretory glands, and hair follicles.

In the end, what matters with respect to acupoints, are the muscular and cutaneous nerve branches. We can claim that all acupoints are a portion of either muscular or cutaneous nerves because, along these nerve branches, there are certain anatomical features that contribute to acupoints forming at those particular locations.

2.8 ANATOMICAL FEATURES CONTRIBUTING TO THE FORMATION OF ACUPOINTS

The distribution of acupoints in the body is not as random as it may seem to be. Every acupoint has a functional justification to be where it is located. A number of justifications turn out to be anatomical features that form acupoints. Therefore, it is reasonable to assume that acupoints are not formed by an identifiable structure as an anatomical entity, but rather by certain anatomical features that are observable upon gross dissection. How many of these anatomical features do we have? Here, we list 10 that have been previously reported [5].

2.8.1 Size

Acupoints are invariably distributed along either muscular or cutaneous nerve branches. The bigger the branches are, the higher the possibility for acupoints to be formed. Of course, size is not the sole feature to determine whether an acupoint will be located on a particular nerve branch. There are many fairly large nerves, such as the sciatic, femoral, medial, lateral, and posterior cords of the brachial plexus where no acupoints are found. The reason is that these nerve branches are deep in the body.

2.8.2 Depth

The sciatic nerve is buried deep inside three muscles: the gluteus maximus, gluteus medius, and gluteus minimus in the gluteal region. This region is a relatively large area, but only one acupoint is known to be in the gluteal region. After descending to the posterior compartment of the thigh, the sciatic divides into two branches, the tibial and common peroneal. Both are more superficially located in their courses of distribution. A few acupoints are formed along the distal portions of both branches. The same occurrence will be found for the femoral and other nerves mentioned. In general, it is true that muscular nerves are more deeply located than cutaneous branches.

2.8.3 Penetration of the Deep Fascia

This feature is appropriate for cutaneous nerves only. As covered in gross anatomy, structures in the body are arranged layer upon layer. Between layers, particularly of the musculature, there are fasciae of connective tissue. We have superficial and deep fasciae. All cutaneous nerves have to penetrate the deep fascia to go into the superficial fascia under the skin. The location where a cutaneous nerve branch identifiable in gross anatomy can be seen to penetrate the deep fascia will

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unmistakably form an acupoint. Many realistic examples will be provided in the next few chapters. No muscular nerve has a need to penetrate deep fascia.

2.8.4 Passage through Bone Foramina

Some cutaneous nerves pierce deep fascia to go superficially into skin. Others pass through bone foramina to distribute subcutaneously. This anatomical feature applies specifically to the trigeminal nerve. There are five foramina identifiable on the skull bone of the face: the supraorbital, infraorbital, mental, zygomaticotemporal, and zygomaticofacial. Each of these has a cutaneous nerve running through it, carrying the same anatomical name as its foramen. Of these five foramina, the difference in size is visible in gross anatomy. Thus, the size of the five cutaneous nerve branches can be expected to be different. The biggest of them is the infraorbital. Next is the supraorbital, followed by the mental, zygomaticotemporal, and zygomaticofacial. The clinical significance of these differences will become obvious when we discuss headaches in the latter chapters of the book relating to their applications in acupuncture.

2.8.5 Motor Point

The original term used for this anatomical feature was "neuromuscular attachment." Another, more appropriate, name to describe this feature would be "neuromuscular junction." However, neuromuscular junction is a well-established anatomical nomenclature, so using that here could cause confusion. We thus adopt the term "motor point" because it is well known in the medical community. According to *Dorland's Illustrated Medical Dictionary*, a motor point is "the point at which a motor nerve enters a muscle." As explained above, this definition is neither accurate nor true, unless "motor nerve" is intended to be "muscular nerve branch." There is no way for a motor nerve to enter a muscle alone. Nerves that enter a muscle will have to be in a muscular branch, which must contain efferent fibers to skeletal muscle, afferent fibers for general senses, and postganglionic sympathetic nerves. In gross anatomy dissections, it is not important for students to know the precise location where a muscular nerve branch enters the muscle. The site of the motor point is very constant from person to person. Most muscles have only one motor point, with the exception of a few long muscles, such as the biceps brachii. Many motor points are deep under the muscle mass. They do not have the potential to become acupoints.

2.8.6 Concomitant Blood Vessels

Nerve branches are often accompanied by vascular supplies, called concomitant arteries and veins. Nerves, arteries, and veins stay and run together as neurovascular bundles. We don't know whether blood vessels play an important role in the formation of acupoints. We do notice that there is a dense, rich blood supply in the vicinity of several important acupoints. The importance of what constitutes acupoints will be explained in Chapter 8 when their physiological activities and functions are discussed. The significance of concomitant blood vessels in the formation of acupoints is found in the fact that cutaneous nerves are frequently distributed anatomically without visible blood supply. A cutaneous nerve with a known acupoint, but without concomitant blood vessels, is more superficially located than a motor point formed by a muscular nerve of the same size that is situated deeper inside the muscle mass. The acupoint formed by this cutaneous nerve cannot be as useful as that formed by the muscular branch (what we mean here by "useful" will be discussed in later chapters). The deep radial nerve is a good example. It is a muscular nerve located deeply between the brachioradialis and extensor carpi radialis longus muscles. The muscles form a bulgy portion at the proximal region of the forearm over the lateral compartment. According to acupuncture books, there are four acupoints described in the area, as shown in Figure 2.7. These four acupoints can be considered as motor points formed by the deep radial nerve as it branches upon entering

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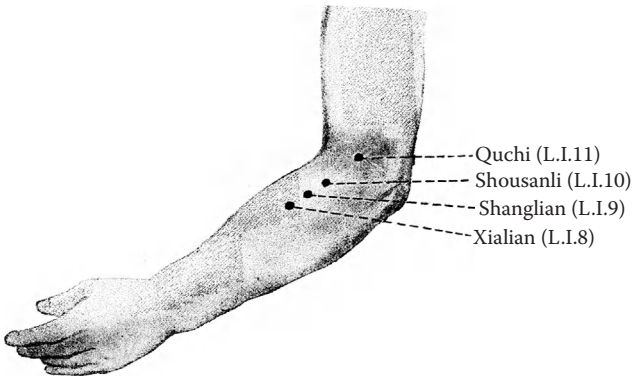

FIGURE 2.7 Four acupoints shown over the proximal region of the forearm lying along the lateral compartment.

the extensor muscle group in the forearm. There are six extensor muscles lying superficially in this region. The motor points of these muscles have potential to become acupoints.

2.8.7 Nerve Fiber Compositions

Nerve fibers in both cutaneous and muscular branches are variable in size. The variability is considered to be greater and higher for muscular nerves than for cutaneous nerves because muscular branches have a greater variety of nerve fibers than cutaneous branches do. This difference could be a reason that acupoints formed by muscular branches often are more useful than those formed by cutaneous branches.

2.8.8 Points of Bifurcation

Several acupoints are located at the point where a relatively large nerve branch divides. The point formed by the superficial radial nerve on the dorsal surface of the hand between thumb and index finger is an example. All larger nerve branches will eventually divide to become smaller nerves. Most of the divisions are too minute to be seen gross-anatomically. They are microscopic in histological nature. Those which are visible under gross dissection are cutaneous nerves at the localities where they penetrate the deep fascia or go through bone foramina. These localities are where acupoints come to be. As the nerves divide into smaller branches, one possible consequence with respect to anatomy is that sensory fields become smaller. A sensory field is defined as a unit of area loaded with a number of sensory receptors. Sensory fields in the palm and plantar skin are more sensitive than skin in the dorsal surface of the body trunk. This difference is due to differences in the density of sensory fields. The skin on the palm is said to have a higher density of sensory fields than skin in other parts of the body. This explains why it is more painful to prick a needle into the palm than the buttock. The highest density of sensory fields, at the opening of a deep fascia where the penetration of a cutaneous nerve branch occurs, is a suitable location to have an acupoint. The same applies to cutaneous branches going through bone foramina on the face.

2.8.9 Sensitive Points on Tendons and Ligaments

Our body has muscle tendons, retinacula of various joints connecting separate pieces of bone, thick fascial sheets such as the iliotibial tract (which cover the lateral surface of the thigh deep under the skin), joint capsules, and collateral ligaments around the knee. These are formed by dense, fibrous connective tissue. These tissue structures are known to have rich proprioceptors, stereognostic

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FIGURE 2.8 A drawing to illustrate muscle and its tendon with afferent fibers and sensory receptors. (Adapted from Copenhaver, W.H. et al., *Bailey's Textbook of Histology,* 7th ed. Williams and Wilkins, Baltimore, 342, 1978.)

receptors, and nociceptors, as can be seen in Figure 2.8. Sensitive points detected along tendons and ligaments can be considered as acupoints and will be used as such. Two of the most frequently detectable acupoints are in the tendon of the long head of the biceps brachii. This segment of tendon is lodged in the intertubercular groove of the humerus head. The tendon will have anywhere from one to three tender points palpable in people who have pain in the shoulder joint. Another example is the acupoint located in the tendon of the long extensor muscles in the forearm. The tendon originates from and is attached to the lateral epicondyle of the humerus. People with "tennis elbow" will not have much difficulty in finding tender points over the surface of the lateral epicondyle. These tender points can surely be considered as acupoints.

2.8.10 Suture Lines on the Skull

Our skull is constructed of a number of bone pieces. These bone pieces are cemented together by connective tissue that become suture lines as our body matures. These include the coronal suture, sagittal suture, lambdoidal suture, and so on. Some areas of suture lines have more connective tissue than others. The areas where there are more connective tissues in the embryonic stage are known as fontanelles. We have the anterior, posterior, anterolateral or sphenoidal, and the posterolateral or mastoid fontanelles. These fontanelles become the bregma, pterion, asterion, etc. The spots where fontanelles were previously located have more afferent nerve receptors remaining. Thus, there is a better possibility for acupoints to appear in such localities.

2.9 DISCUSSION AND CONCLUSION

Assuming what is portrayed above in this chapter to be correct and true, it will be no surprise that the real identity of acupoints is difficult or impossible to find. If a person has multiple shadows, which one of them is really his or hers could be hard to decide. What is more confounding is that there are other points, such as trigger points, which are very well known clinically. Yet, no one has been able to clearly dissect out the real anatomical identity of these intriguing points in the body. This is because trigger points and acupoints have identical anatomical features. They actually are the same in their anatomical localities. Under normal and healthy conditions, the localities are

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FIGURE 2.9 The patient uses an index finger to point at an acupoint, which has become a trigger point with the pain this patient felt. This acupoint is called the intercostobrachial, and will be discussed in Chapter 6.

acupoints. When pain appears in the body, they become trigger points. More about the conversion between acupoints and trigger points will be discussed in later chapters.

Other names used in the medical literature that may have certain relevance to acupuncture include motor point, dermal point, sensitive point, and tender point, and there may be others of which we are not aware. None of them will be used in this book. We have previously explained what a motor point is. Dermal, sensitive, and tender points are simply the spots in the body where pain sometimes appears and can be perceivable. If the patients having one or more of these points are requested to identify where a sensitive or tender points is, the location they indicate will always turn out to be an acupoint or trigger point, as seen in Figure 2.9.

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3 Acupoints of the Cranial Nerves

Acupoints formed by the cranial nerves were first reported by the author in 1984 [1]. There are 12 pairs of cranial nerves, which can be divided into two groups. One group is composed of cranial nerves that have no known affiliated acupoints. Seven nerve pairs belong to this group. The other group is composed of cranial nerves that have anatomical features, which can be viewed as possible indicators for forming acupoints. Thus, for the sake of convenience, the contents of this chapter can be divided between cranial nerves with acupoints and cranial nerves without acupoints. The cranial nerves without acupoints will be discussed first.

3.1 CRANIAL NERVES WITHOUT ACUPOINTS

We have seven cranial nerve pairs without identifiable acupoints. Three of them contain afferent fibers only, whereas the other four carry only efferent fibers.

3.1.1 Afferent Fibers Only

As mentioned in the previous chapter, we have five special senses. The cranial nerves that are responsible for these five special senses are the olfactory, optic, facial, and statoacoustic nerves. Afferent fibers for these special senses run in unexposed routes and are distributed to localities that are not approachable from outside of the body.

3.1.1.1 Olfactory Nerve

This originates from the olfactory epithelium, which is the lining of the roof and adjacent surface of the septum and of the superior nasal concha. Afferent fibers extend from olfactory cells in the epithelium to pass through the cribriform plate to enter the undersurface of the olfactory bulb of the brain. Loss of olfactory sensation due to any disease or damage along this nerve cannot be treated with acupuncture needles. Pain inside the nasal cavity is very rare. Afferent fibers for general senses in the nasal cavity are from cutaneous branches of the ophthalmic and maxillary divisions of the trigeminal nerves. The names of these nerves for pain sensation are nasociliary from the ophthalmic and nasopalatine from the maxillary.

3.1.1.2 Optic Nerve

This nerve consists of the axon of the ganglion cells of the retina in the eye. It is not possible for acupoints to form along this cranial nerve.

3.1.1.3 Statoacoustic Nerve

This nerve, also known as the vestibulocochlear, consists of two functionally distinct and incompletely united nerve fibers, the cochlear nerve and the vestibular nerve. No acupoints are known to be formed on either of the two nerves. However, conditions such as vertigo and tinnitus will respond to acupuncture by stimulating acupoints around the ears. Those acupoints are related to the trigeminal and facial nerves, which have a very close anatomical relationship with the statoacoustic nerve.

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3.1.2 Efferent Fibers Only

The four cranial nerves containing only efferent fibers are the oculomotor, trochlear, abducens, and hypoglossal nerves.

3.1.2.1 Oculomotor Nerve

There is one key difference between the oculomotor nerve and the other three cranial nerves in this group. In addition to efferent fibers to the skeletal muscles, the oculomotor nerve is also composed of a parasympathetic portion of the autonomic nervous system. The preganglionic neurons of these parasympathetic nerves are located at the Edinger–Westphal nucleus inside the brain, and the postganglionic neurons in the ciliary ganglion are located behind the orbits. Short ciliary nerves carry the postganglionic parasympathetic fibers to the sphincter pupillae muscle of the iris and to the ciliary muscle of accommodation. Afferent fibers for the general sensations of the eye are from trigeminal nerves. Interneural communications between branches of the trigeminal and oculomotor nerves can produce reactions in the pupil when acupuncture needles are placed in the acupoints formed by the trigeminal nerve branches around the eyes.

3.1.2.2 Trochlear Nerve

This is the smallest of the cranial nerves and supplies only one muscle. The human eye has seven muscles. Five of them are controlled by the oculomotor nerve. One, the superior oblique muscle, is controlled by the trochlear nerve.

3.1.2.3 Abducens Nerve

This nerve controls the lateral rectus muscle. No acupoints are formed by the abducens nerve or the trochlear nerve.

3.1.2.4 Hypoglossal Nerve

This is the motor nerve of the tongue. The tongue is composed of skeletal muscles. Its intrinsic muscles have no anatomical designations. The names of the extrinsic muscles are the styloglossus, hyoglossus, and genioglossus. Motor points formed by the hypoglossal nerve at these muscles are obscure and difficult, if not impossible, to dissect out in cadavers.

3.2 CRANIAL NERVES WITH ACUPOINTS

Five cranial nerves are qualified to be placed in this group: the trigeminal, facial, glossopharyngeal, vagus, and spinal accessory nerves. The most important of these, in terms of acupoints, is the trigeminal nerve, followed by the facial nerve, and then the spinal accessory nerve. The glossopharyngeal and vagus nerves are placed in this group for one practical reason: their anatomical complexity.

3.3 TRIGEMINAL NERVE

Where acupoints are concerned, the trigeminal nerve is the most important and most useful of the 12 cranial nerve pairs. There are several reasons for this nerve's importance. Anatomically, it is large in size, and possibly the biggest of the cranial nerves. It has more branches than any other cranial nerve, more than 50 with proper anatomical names. Many of them have communications with the neurons of other cranial nerves. Their anatomical relations are too complicated for all of them to be mentioned, but here are a couple of examples. The chorda tympani is a branch of the facial nerve carrying the special sense of taste from the tongue by way of the lingual branch of the mandibular division of the trigeminal. Then, there is the autonomic nerve controlling the secretion of mucus in the nose and saliva in the mouth. The sympathetic section of the autonomic nerve to the secretory glands in the head is from the cervical spinal nerves. The parasympathetic section is from

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the superior salivatory nucleus in the brain, where preganglionic neurons are found. Preganglionic nerves coming out of the brain in the facial nerve than synapse at the postganglionic neurons in the pterygopalatine, otic, and submandibular ganglia. Finally, postganglionic nerves from these ganglia reach their target glands in the nasal and oral cavities. Such a brief and simple description of interneural connections explains why acupuncture can be useful for relieving nasal congestion in people suffering from allergic ailments. However, the physiological mechanism by which acupuncture is beneficial for treating certain kinds of allergies is too complicated to thoroughly explain in this book.

Acupoints formed by the branches of the trigeminal are useful because they are necessary to treat patients suffering from headaches or pain in the head region. Headaches and pain in the head region are not necessarily the same. Varieties of headache include tension, cluster, migraine, and tic douloureux. These headaches are not the same as postherpetic neuralgia along the trigeminal nerve and atypical facial pain. Acupoints located along the branches of the trigeminal nerve are useful for managing both headaches and pain in the head and facial regions.

The anatomy of the trigeminal nerve is rather complex. Because of this complexity, we have a few ways to categorize the acupoints that are located along the branches of the nerve. Acupoints can be identified following the three divisions of the trigeminal: the ophthalmic, maxillary, and mandibular divisions. Each of these divisions has a number of branches that will eventually end up having acupoints. Inconveniently, not all of the terminal branches that form acupoints will come directly from one of the three divisions. The mental nerve is from the inferior alveolar branch, which branches from the mandibular division. The maxillary division has 10 identified branches, one of which is the infraorbital. The ophthalmic division has three terminal branches: the supraorbital, supratrochlear, and infratrochlear. They do not directly branch from the ophthalmic division but are from the frontal nerve which in turn is a direct branch of the division. We have decided that it will be easier to describe acupoints using the denominations of cutaneous and muscular nerve branches given in Chapter 2. However, Figure 3.1 is offered for reference as an overview of the cutaneous nerve supply in the face and scalp by the three divisions of the trigeminal nerve. For all acupoints formed by the cutaneous nerve branches, it should be fairly easy to recognize from which division the nerve comes. If the point is located in the region innervated by that particular division, then the nerve which forms that point must belong to that division.

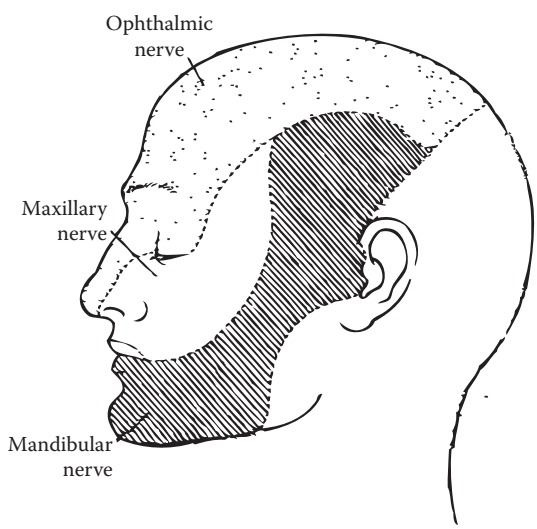

FIGURE 3.1 A schematic drawing of cutaneous nerve supply by the three divisions of the trigeminal nerve.

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3.3.1 Acupoints of Cutaneous Branches

A total of 10 acupoints are considered to be formed by the cutaneous branches of the trigeminal nerve. Their locations are shown in Figure 3.2. Four different symbols are used to mark these acupoints: stars, squares, triangles, and circles. The acupoints designated by stars are considered as the primary acupoints in this book, squares as the secondary, triangles as the tertiary, and circles as the nonspecific points. Their meaning and significance in pain and acupuncture will be extensively explained in Chapters 8 and 10. For the time being, their implications can be ignored. We will frequently come back to figures showing acupoints in this chapter and in the subsequent four chapters when we talk about the clinical applications of acupuncture. These 10 acupoints are listed below with a brief description for each, and are provided to highlight their anatomical locations and significance.

3.3.1.1 Supraorbital

This is located toward the medial end of the eyebrows. The nerve branch forming this point is the second biggest of the 10. With its concomitant blood vessels, the branch runs through the supraorbital foramen to distribute subcutaneously.

3.3.1.2 Supratrochlear and Infratrochlear

The nerve branches that form these two points are too small to be identifiable for gross dissection. They are very rarely used in clinical applications for the practice of acupuncture. Acupoints that are categorized as nonspecific points are not often used in clinical practice.

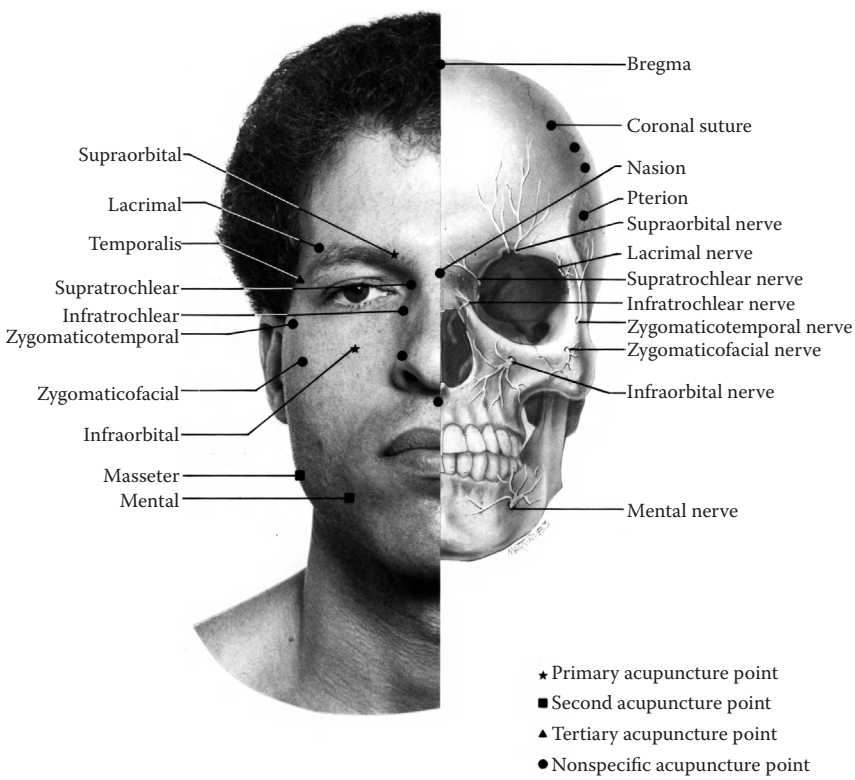

FIGURE 3.2 The right half of the photo shows the cutaneous nerve branches of the trigeminal, which form the acupoints shown on the left half of the photo.

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3.3.1.3 Lacrimal

These points are located toward the lateral ends of the eyebrows but superior to them. The nerve becomes cutaneous after giving away innervation to the lacrimal glands. Stimulating the lacrimal points around the eye has the potential of increasing tear secretion. The nerves that form these four points are all branches of the ophthalmic division.

3.3.1.4 Infraorbital

This is formed by the biggest cutaneous nerve branch. It is accompanied by the infraorbital artery and vein to pass through the infraorbital foramen to reach the skin. This is the most important acupoint in the entire head and face area because it is the most frequently used point, which is why it is classified as a primary point. There are only two primary points among these 10 acupoints, the other being the supraorbital point.

3.3.1.5 Zygomaticotemporal and Zygomaticofacial

These can be considered as one point. The cutaneous nerves forming both of the acupoints are terminal branches of the maxillary division. Like the supratrochlear and infratrochlear nerves, it is very difficult to dissect out these two nerves in the gross laboratory. They are also nonspecific acupoints and can be located over the cheek bones in people who have been suffering from chronic and severe headaches for a long time.

3.3.1.6 Mental

This is one of the terminal branches of the mandibular division. If the supraorbital, infraorbital, and mental points were connected, it would form a straight line. Of these three points, the mental is formed by the smallest nerve. The concomitant vessels are also mental as well as the foramen they go through together. The mental is considered as a secondary point. It will not become tender as often as the supraorbital and infraorbital points, and it is used less frequently, although it ranks the third in usefulness among all the acupoints located in the head and face.

3.3.1.7 Auriculotemporal

This is the only point not seen in Figure 3.2 because of its location on the side of head. However, Figure 3.3 is a drawing of a right ear, in which the location of the acupoint formed by the auriculotemporal nerve can be found. The name of the foramen that the auriculotemporal nerve runs through under the base of the skull is the spinosum. Once it is outside the skull, the nerve then passes laterally behind the temporomandibular joint (TMJ). Because of their proximity, there is no question that the joint receives innervation from the auriculotemporal nerve. As indicated in Figure 3.3, the

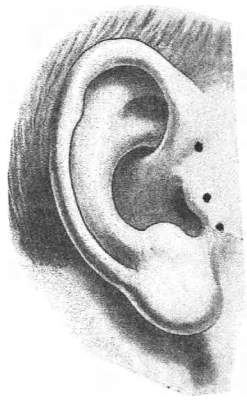

FIGURE 3.3 Three acupoints in front of the right ear. They are the temporomandibular, auriculotemporal, and anterior auricular.

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temporomandibular and auriculotemporal points are right next to each other vertically, although both are formed by the same auriculotemporal nerve. The temporomandibular point is relatively important because of pain in the TMJ. Pain from TMJ is rather frequently encountered in acupuncture clinics. In teaching gross anatomy for 31 years, the author has never had a chance to identify a branch of the auriculotemporal nerve to the TMJ. Because the temporomandibular point is formed in a joint, the point is grouped with tendinous acupoints following acupoints of muscular branches.

3.3.1.8 Paranasal

This extraordinary point is located right on top of the wings of the nose, as can be seen in Figures 3.2, 3.4, and 3.5, each of which has a circled, unnamed, nonspecific point. It is extraordinary because there is no cutaneous nerve to represent the point. The point obviously is inside the territory innervated by the nerve branches of the mandibular division. This point is very useful in dealing with problems involving the nasal airway, such as nasal congestion, coughing, and smoking cessation.

3.3.2 Acupoints of Connective Tissue

A number of acupoints are known to be located along the suture lines of the skull or on the fibrous capsules of joints—specifically, the TMJ. Sutures existing between bones of the skull and on the joint capsule are formed by connective tissue [2]. The areas where two suture lines cross each other are fontanelles during the embryonic stage. Figures 3.6 and 3.7 show where some of the fontanelles are located. Fontanelles will eventually become acupoints, as shown in Figure 3.2. Fontanelles, sutures, and joint capsules must contain sensory receptors of afferent fibers. Yet no cutaneous nerve branches can be found to come from any of the acupoints described in this section. Thus, they have to be assembled together as a separate group. Five of the acupoints in this group are listed in the

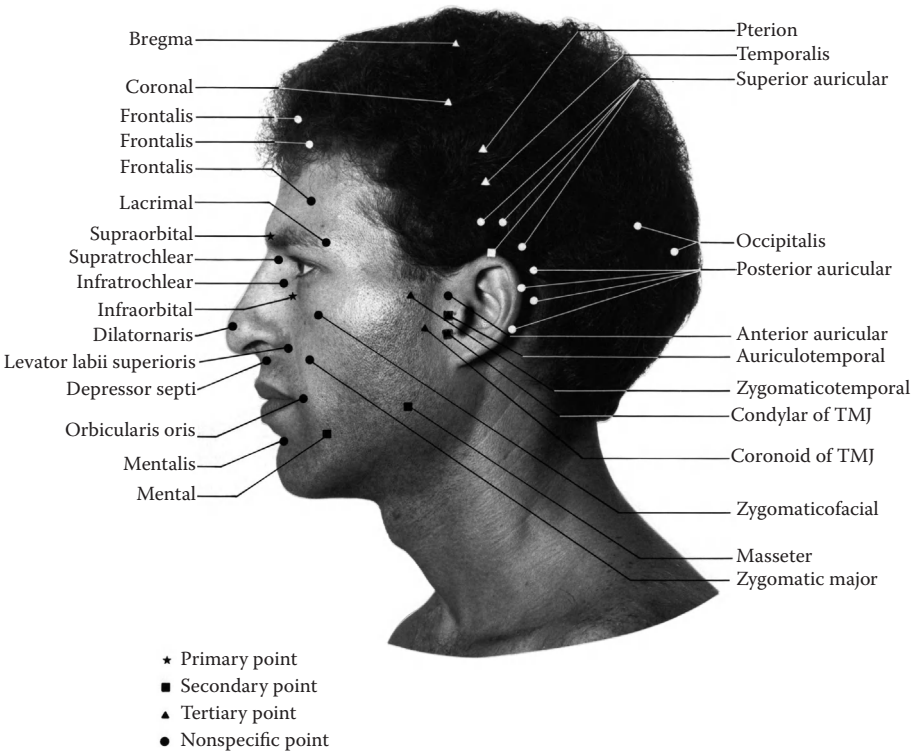

FIGURE 3.4 A lateral view of the head and face. The nonspecific point marked on the side of the nose is the paranasal point.

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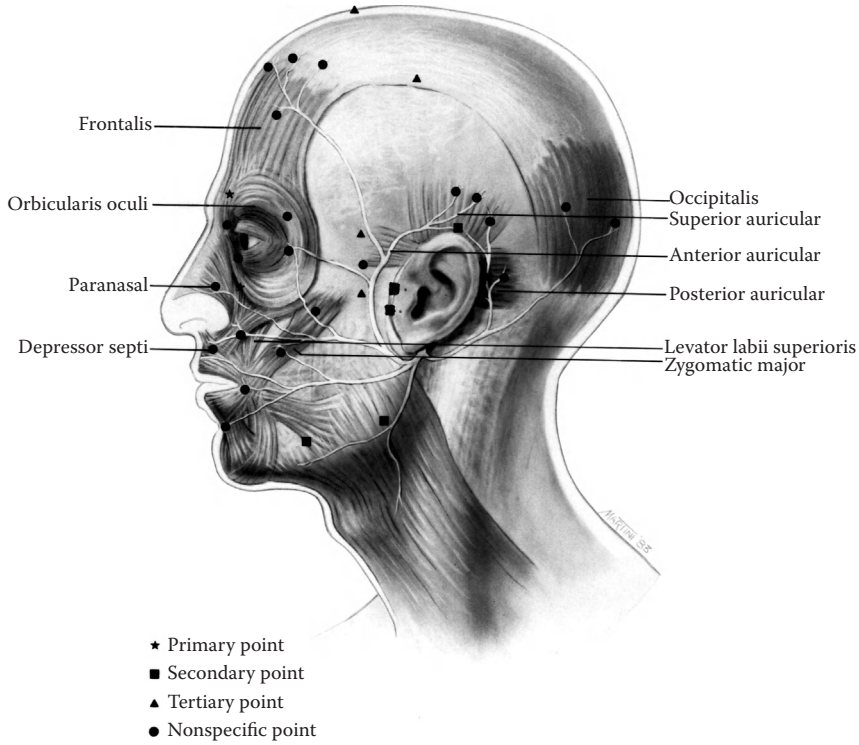

FIGURE 3.5 Lateral view of the head showing a variety of acupoints.

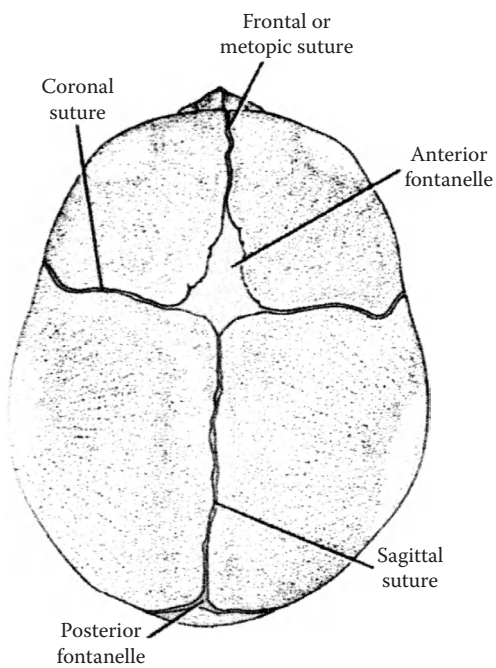

FIGURE 3.6 Top view of the skull in a newborn.

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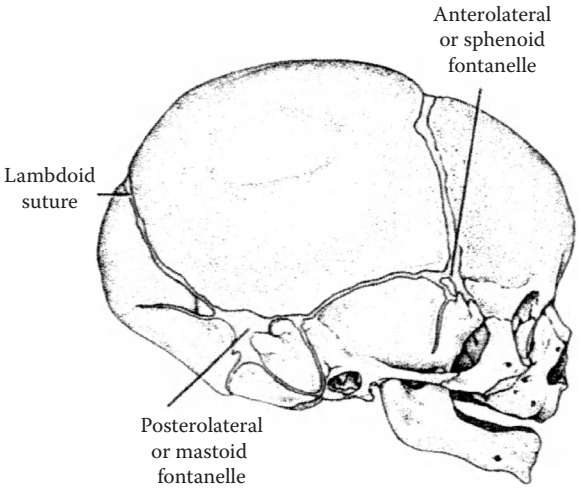

FIGURE 3.7 Lateral view of the skull in a newborn.

following sections. The other acupoints in this group are not described, not only because they lack anatomical nomenclature but also because they lack importance as they are not used clinically at all.

3.3.2.1 Bregma

This point is at the meeting of the coronal and sagittal sutures. In the fetal skull, it is the site of the anterior fontanelle. This acupoint is not used very often because it is a tertiary point.

3.3.2.2 Pterion

This is the area where the frontal, sphenoid, and temporal bones closely adjoin one another. Surgically, it is an important landmark, but again, it is not an important acupoint.

3.3.2.3 Nasion

This is the point where the internasal and frontonasal sutures meet. Occasionally, this acupoint will be useful to ease headaches and severe nasal congestion.

3.3.2.4 Coronal Suture

This acupoint can appear along the coronal suture line between the bregma and the pterion, although such a case might never be encountered among all the patients seen in an acupuncture clinic.

3.3.2.5 Temporomandibular

This acupoint is formed by a branch that comes from the auriculotemporal nerve to the TMJ. It is a very useful point for managing pain in TMJ. As shown in Figures 3.3 and 3.5, there are three acupoints located immediately in front of the anterior line of the external ear: the temporomandibular (secondary point, as indicated by a square), auriculotemporal (tertiary point, as indicated by a triangle), and anterior auricular (nonspecific point, as indicated by a circle). These three points can be used as indicators to evaluate the severity of a TMJ condition. Tenderness in the temporomandibular point alone indicates that TMJ is in the early stages. The pain is often minor and very easy to eradicate. If both the temporomandibular and auriculotemporal points become tender, it indicates that TMJ is getting worse, and pain will bother the patient more frequently. It will be harder to manage, although it is still manageable. When all three points are tender, TMJ is sure to be in an advanced condition. Pain certainly is in the chronic stage, and will be present most of the time. Managing pain in TMJ at this stage is not easy; even the use of acupuncture will not guarantee success.

Each afferent fiber is supposed to have a sensory receptor at the peripheral end of the nerve. All afferent nerves travel to sensory neurons inside the semilunar ganglion. From this ganglion, axons of nerve

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fibers enter the midbrain to terminate in the mesencephalic nucleus and the spinal tract. The spinal tract of the trigeminal descends inferiorly in the spinal cord to as low as the segment of the fourth cervical spinal nerve, which contributes to the upper portion of the brachial plexus, making intercommunication possible between acupoints in the head and in the upper limbs. Some of this intercommunication will be dealt with in Chapter 5, where acupoints of the brachial plexus will be discussed in our study.

Intercommunications between the trigeminal and other cranial nerves belong to the study of neuroanatomy [3]. These communications involve superior and inferior salivatory nuclei. The superior salivatory is part of the facial nerve, and the inferior salivatory is part of the glossopharyngeal. Other nuclei that have nerve cells interconnected to axons of the trigeminal include the vestibulocochlear and vagus. The complexity of these neuro-relationships is beyond the reach of acupuncture. All we need to keep in mind is that stimulating acupoints in the head and face can have profound consequences for physiological activities and functions in these regions.

3.3.3 Acupoints of Muscular Branches

The muscles of the head and face can be divided into two functional groups [4,5]. One group is composed of muscles of mastication, the other group is composed of the muscles of facial expression. The muscles of mastication are the subject of this current description. The muscles of expression will be dealt with in Section 3.4 of this chapter.

All muscles of mastication are innervated by muscular branches coming from the mandibular division of the trigeminal. We know that at least six muscles receive nerve supplies from the mandibular division. A couple of these, the medial and lateral pterygoid muscles, are deep in the wing of the mandible. Their motor points will not be accessible, assuming that they indeed exist. The other four muscles are superficially located. The motor points of these four muscles form acupoints as follows.

3.3.3.1 Masseter

This muscle overlies the angle of the mandible as shown in Figures 3.2, 3.4, and 3.8. The masseteric nerve passes laterally to go through the mandibular notch and enter the deep surface of the masseter muscle. The masseteric nerve also provides branches to the TMJ.

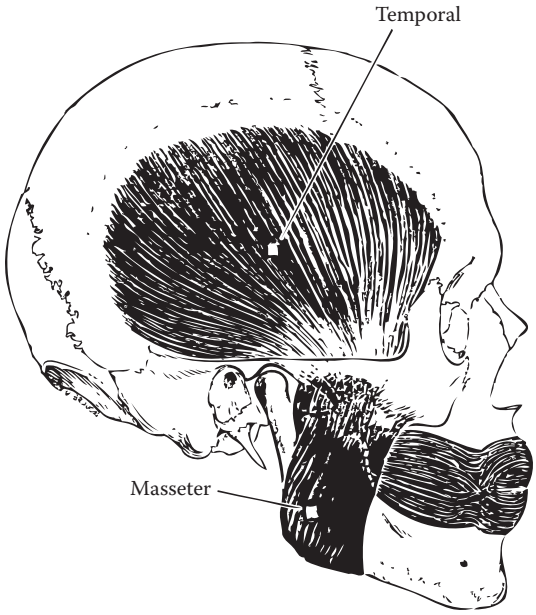

FIGURE 3.8 Lateral view of the head showing the location of two acupoints.

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3.3.3.2 Temporalis

This acupoint (Figures 3.2, 3.4, and 3.8) is formed by the deep temporal nerve. The nerve enters the temporalis muscle on its deep aspect. Both the masseter (secondary acupoint) and temporalis (tertiary) are frequently used for acupuncture therapy. Patients with tension headaches often have pain in the temporalis point.

3.3.3.3 Anterior Auricular and Superior Auricular

These two acupoints can be seen in Figures 3.4. and 3.5. There are three auricular muscles: the anterior, superior, and posterior muscles. Muscular branches to the first two muscles come from the motor nerves of the mandibular division. Nerves to the posterior auricular muscle are derived from the facial nerve, which will be covered subsequently.

3.4 FACIAL NERVE

This cranial nerve (VII) is second in importance only to the trigeminal. All acupoints formed by the facial nerve are motor points in nature. Each motor point can act as an acupoint. Thus, depending on how many muscles are innervated by the facial nerve, we will have that many acupoints in the head and face. According to our calculations, there are at least 21 muscles for which innervations come from the facial nerve. They are what we call the muscles of facial expression. Acupoints formed by the muscular branches from the mandibular division, in general, are not of much use in acupuncture. One disease involving facial nerves is facial paralysis, also known as Bell's palsy. Efferent fibers in the facial nerve going to the muscles of facial expression all originate from neurons of the motor nucleus of that cranial nerve. If the paralysis or palsy is due to a disease in the central nervous system, such as a brain tumor or cancer resulting in damage to or destruction of these motor neurons, acupuncture is absolutely useless. However, facial paralysis is almost always caused by injury to the facial nerve in the stylomastoid foramen, which is relatively far away from the brain. At that location, the facial nerve is already considered to be a portion of the peripheral nerves. Peripheral nerve fibers have the potential to regenerate, and acupuncture is capable of accelerating the regeneration process of nerve fibers. Under ordinary circumstances, Bell's palsy is a self-limiting disease. For most patients suffering from this type of illness, the paralysis will improve and diminish on its own without clinical treatment. From our own clinical experiences, acupuncture indeed has the potential to further improve the symptoms of paralysis by using motor points on the facial muscles. Which acupoints will be useful for treating Bell's palsy? The answer will be almost any of the acupoints that are located in the head and face regions. Example acupoints are depicted in Figures 3.4 and 3.5, and include the frontalis, dilatonaris, levator labii superioris, depressor septi, orbicularis oris, mentalis, occipitalis, posterior auricular, and orbicularis oculi.

Compared with muscles from the rest of body, the muscles of facial expression are relatively small in size and short in length. The nerves of these muscles are tiny. They can be difficult to visualize and impossible to dissect out grossly. Such anatomical conditions make the acupoints formed by the muscular branches of the facial nerve insignificant for use in acupuncture. They are considered as nonspecific acupoints, meaning that if an acupuncturist decides to use any of them in clinical applications, the locations where the needles need to be inserted don't have to be precisely where the motor points are supposed to be, but only in the general loci of the acupoints.

In addition to efferent fibers to skeletal muscles, the facial nerve also contains autonomic and afferent fibers. The autonomic portion is in the parasympathetic division. Its efferent fibers begin at preganglionic cells in the superior salivatory ganglion. The preganglionic nerves end in postganglionic neurons located inside the sphenopalatine and submandibular ganglia, from which the postganglionic nerves are distributed to their target organs by way of the trigeminal branches. The afferent fibers in the facial nerve transmit the special sense of taste generated in the tongue back to the geniculate ganglion. Afferent fibers for the general senses to the muscles of facial expression are

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entirely contributed by the trigeminal nerves. None of these autonomic and afferent nerves for the special senses separately form any acupoint on their own. Therefore, there is no need to describe their presence further.

3.5 GLOSSOPHARYNGEAL NERVE

This ninth cranial nerve is primarily related to the tongue and pharynx. The nerves have no practical relation to acupuncture because no acupoint could be considered to be formed by any branch of this cranial nerve. However, the nerve has a couple of anatomical features that are unique in contrast with the other 11 cranial nerves. The first feature is that it contains all kinds of nerve fibers known in our body. It has efferent fibers to a skeletal muscle, the stylopharyngeus. It has autonomic nerves, both sympathetic and parasympahetic. The inferior ganglion of the glossopharyngeal communicates with the superior cervical ganglion. Nerve fibers of this communication reach the otic ganglion, which contains postganglionic parasympathetic nerve cells. The postganglionic parasympathetic nerve fibers from the otic ganglion proceed to control the secretions of the parotid gland. The afferent fibers in the glossopharyngeal are both for special and general senses. The special sense is the taste sensation for the posterior one-third of tongue. The general sensations are delivered from the parotid gland, carotid sinus, mucous membrane of the pharynx, middle ear, posterior one-third of the tongue, and skin of external ear. The second feature is that the glossopharyngeal has connections with the facial and vagus nerves. This complicated network of communication can produce unexpected physiological responses during acupuncture sessions. Many of these reactions are understood only poorly, if at all, in medical science. The results of these reactions can often turn out to be positive for patients, particularly in cases of abnormalities with indications of hypersympathetic activities.

3.6 VAGUS NERVE

The glossopharyngeal and vagus nerves have both anatomical similarities and dissimilarities. The relationship between the similarities and differences are intertwined, so separating them for the purposes of description and discussion will not be that easy. For example, the vagus contains efferent fibers to skeletal muscles. These efferent fibers provide motor innervation to voluntary muscles of the larynx, pharynx, upper two-thirds of the esophagus, and palate (except the tensor veli palatini, which is innervated by a branch of the mandibular division of the trigeminal nerve). With respect to the autonomic nervous system, the vagus contains parasympathetic nerves, but no sympathetic nerves. Preganglionic nerves of the parasympathetic start from preganglionic neurons in the dorsal nucleus of the medulla oblongata. Their postganglionic nerves extend inferiorly to as low as the stomach and intestine. Thus, it is obvious that the vagus nerves have extensive course and distribution, actually more than any of the other 11 cranial nerves. This extensive course and distribution make the vagus more useful in acupuncture than the glossopharyngeal nerve.

Vagus nerves have many branches, two of which are of interest in acupuncture. These are the auricular branch and vagal trunks, which can be divided into anterior and posterior. Anterior refers to the anterior surface of the stomach, and posterior to the posterior surface. In reality, the anterior vagal trunk comes from the right vagus nerve, and the posterior from the left. The auricular branch first enters the temporal bone through the mastoid canaliculus in the lateral wall of the jugular fossa, then emerges through the tympanomastoid fissure to distribute to the back of the external ear, the floor of the external acoustic meatus, and the lower part of the tympanic membrane. The skin area in the external acoustic meatus, where nerve fibers from the auricular branch are known to distribute, is called the concha and is shown in Figure 3.3. Afferent fibers for general sensation from the concha are transmitted to the vagus nerve to the joint of the anterior and posterior vagal trunks. This communication makes it possible to suppress appetite, which is a general sensation and is generated in

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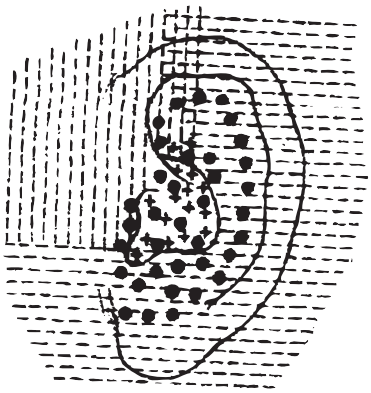

FIGURE 3.9 Lateral view of an ear showing cutaneous innervation. The area with horizontal dotted lines is innervated by the cervical spinal nerves, the area with vertical broken lines is innervated by the trigeminal nerve, the area with crosses is innervated by the glossopharyngeal and vagus nerves, and the area with black circles is innervated by the facial nerve.

the stomach. Many acupuncture practitioners claim that body weight can be reduced by placing a few needles around the concha. This is known as auriculopuncture and involves acupoints in the ear.

Anatomically, innervation to the external ear has five sources [6,7], as shown in Figure 3.9. They are the trigeminal, facial, glossopharyngeal, vagus, and cervical spinal nerves. In addition to using acupoints in the ears for weight reduction, they are also used in helping smokers stop their cigarette smoking. Acupoints for this latter purpose are located in the area of the external ear marked as being innervated by the glossopharyngeal and cervical spinal nerves. From Figure 3.9, it seems that some areas of the skin that cover the external ear have dual sources of nerve innervations. The significance of two afferent fibers in two different nerves coming from the same skin area is unknown in acupuncture practice.

3.7 SPINAL ACCESSORY NERVE

This cranial nerve contains only two kinds of fibers, efferent fibers for skeletal muscles and afferent fibers for general sensation. Their nerve rootlets come from two separate regions, the brain and the cervical spinal cord. They join together to form a single nerve, then separate to go to another nerve branch, then again join to become another nerve branch. Familiarity with this complicated anatomical relation is not essential in learning to practice acupuncture. There is only one acupoint associated with the spinal accessory nerve that needs to be known. This acupoint is also designated the spinal accessory, and its location can be seen in Figure 4.2. In fact, there are five acupoints in Figure 4.2 that are labeled as spinal accessory. This is because the first point to appear and become tender at that spot is considered the primary point. Tenderness at this point is always detectable in patients who arrive at the clinic to seek acupuncture treatments. The tender sensation will expand outward of the vicinity as the duration of pain is prolonged. In time, more acupoints will appear in the area. Depending on the sequence of their appearance, each of these acupoints can be designated as secondary, tertiary, or nonspecific points. This is why there are multiple spinal accessory points indicated in Figure 4.2.

The spinal accessory nerve innervates two muscles, the sternocleidomastoid and trapezius. There is no acupoint formed in the sternocleidomastoid muscle. The motor point where the nerve branch enters the trapezius is right in the middle of the origin and insertion of the muscle. The muscle arises from the medial one-third of the superior nuchal line, the external occipital protuberance of the occipital bone, the ligmentum nuchae, the spine of the seventh cervical and all thoracic vertebrae, and from the intervening supraspinal ligament. The muscle inserts into the scapula, and forms a

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bridge across the shoulder. The acupoint formed by the motor point between the spinal accessory nerve and the trapezius muscle is located right at the center of this bridge.

Efferent fibers in the spinal accessory come from the cervical spinal cord. They enter the cranial cavity through the foramen magnum, then exit the cavity by way of the jugular foramen to go to the trapezius. Before entering the muscle, the efferent fibers are joined by afferent fibers for general sensations coming from the four upper cervical spinal nerves. This connection has physiological significance because it allows pain to be transmitted from the scapular area to the occipital region by way of the dorsal scapular nerve to the spinal accessory nerve to reach the greater occipital nerve behind the head. More about the pathways for the spread of pain from one anatomical region to another will be discussed in later chapters.

The spinal accessory point is tender not only for patients with headaches, neck stiffness, and shoulder pain but the point is also tender when adequately and appropriately palpated with a fingertip. This point is used 100% of the time for all patients seen in acupuncture clinics.

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4 Acupoints in the Neck Region

4.1 BOUNDARIES OF THE NECK

Not much attention has been given to defining the boundaries of the neck in anatomy. Some anatomy textbooks [1] even describe the head and neck under one heading in the same topography. Clearly, we have separated the head and neck in this book. We have learned all the acupoints in the head, so in this chapter, the subject is acupoints in the neck. We are going to divide the neck into two territories, the anterior and posterior regions. The acupoints described in this chapter are all located in the anterior region. Acupoints found in the posterior region belong to another family, the back or dorsal side of the body, and will be covered in Chapter 6.

The anterior region of the neck is divided into two equal halves, right and left, by the median line connecting the center point of the lower margin of the mandible and the midsuperior border of the manubrium of the sternum. The upper boundary of each half is the lower margin of the mandible, and the lower boundary is the clavicle. The posterior boundary is the anterior border of the trapezius muscle. Each half is square in shape. The square is transected by two muscles, the omohyoid and sternocleidomastoid, resulting in the formation of four triangles. These are known as the muscular, carotid, posterior cervical, and omoclavicular triangles. Recognizing these triangles is clinically significant. There are many important structures underneath them, and any decision to insert needles into any of these triangles will require prudence.

The neck is a cylindrical structure that can be visualized as being wrapped in three layers of tissue. The outermost layer is the skin. Deep within the skin is subcutaneous tissue, which has one unique anatomical feature: the platysma muscle. The platysma is one of the two skeletal muscles in the body to be in the fascia of the subcutaneous tissue. The platysma is in the neck, but is not innervated by the cervical plexus. Rather, it is innervated by the cervical branch of the facial nerve. The muscles deep under the platysma form the third layer. Large blood vessels and nerve branches can be thought of the last internal portion. There are four infrahyoid muscles in the anterior region of the neck. Like other skeletal muscles, each of them has a motor point formed by a muscular branch of the cervical plexus. In addition to these muscular branches, the plexus also has cutaneous branches. All cutaneous branches reach the layer of subcutaneous tissue where most acupoints in the neck are formed. Both cutaneous and muscular branches in the neck are from the cervical plexus, the formation of which will be the next topic.

4.2 FORMATION OF THE CERVICAL PLEXUS

The cervical nerve plexus is formed by the interconnecting branches of the ventral primary rami of the first four cervical spinal nerves. Acupoints formed by the dorsal primary rami will be found on the back of the body, and are discussed in Chapter 6. As shown in Figure 4.1, the ventral primary rami of the first four cervical spinal nerves congregate at the midpoint along the posterior border of the sternocleidomastoid muscle. Nerve fibers at this location, which forms the cervical plexus acupoint, are fairly massive but relatively deep.

From the point of the cervical plexus, the nerves divide to become four cutaneous branches. There is one muscular branch, the ansa cervicalis, deep inside the muscle layer.

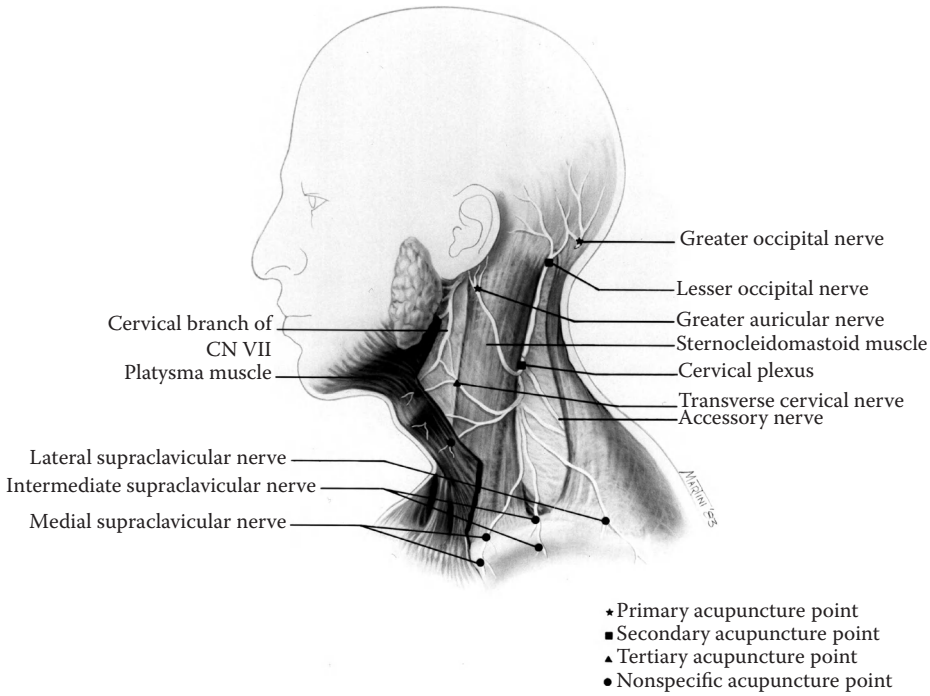

FIGURE 4.1 A lateral view of the neck. Except for the cervical branch of the trigeminal nerve, all other branches belong to the cervical plexus. Circular black dots indicate the locations where the cutaneous nerves pierce the deep fascia to become subcutaneous. These are the places where acupoints are formed.

4.3 ACUPOINTS OF THE CUTANEOUS BRANCHES

The four cutaneous branches in the cervical plexus, which forms the acupoints, are the greater auricular, lesser occipital, transverse cervical, and supraclavicular nerves.

4.3.1 Greater Auricular

After separating from the point of the cervical plexus, this nerve branch runs upward to cross the sternocleidomastoid muscle obliquely. It reaches behind the earlobe at the angle of the mandible (Figure 4.2). The nerve pierces the deep fascia just below the ear. Most cutaneous branches stay as a single nerve bundle inside the deep fascia. It spreads outward to become many smaller fascicles, which will distribute to the subcutaneous layer in the area. The greater auricular point forms at the location where the nerve branch pierces the deep fascia. This nerve is important for acupuncture, and apparently shows tenderness in most patients who have pain in other parts of the body.

4.3.2 Lesser Occipital

This nerve characteristically ascends within the posterior cervical triangle along the posterior border of the sternocleidomastoid muscle. It pierces the deep cervical fascia near the intermuscular gap between the insertions of the sternocleidomastoid and the trapezius muscles on the occipital bone. This intermuscular gap is where the lesser occipital acupoint is formed. Both the greater auricular and lesser occipital are cutaneous and reside at the same depth. Their main difference is in their size; the greater auricular nerve is invariably larger than the lesser occipital. The greater auricular point invariably becomes tender sooner than the lesser occipital point does. Very often, the greater

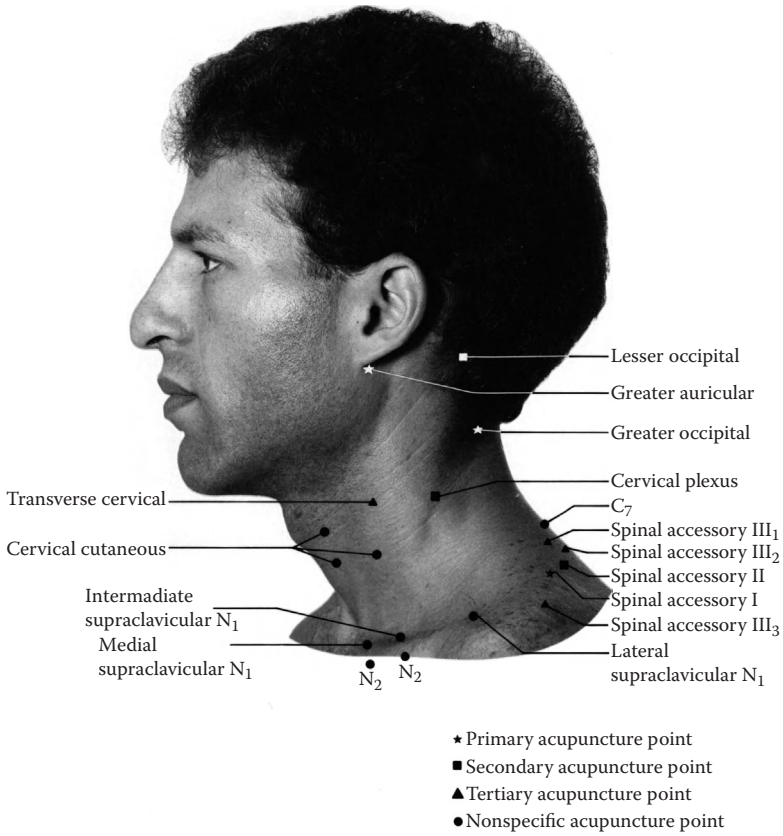

FIGURE 4.2 A photograph showing acupoints in the neck and shoulder regions. Acupoints are indicated with different shapes to designate their different significances in clinical applications.

auricular will experience tenderness in patients whose lesser occipital turns out to have less sensitivity or none at all.

4.3.3 Transverse Cervical

As the name implies, this nerve branch literally traverses the neck by crossing over the sternocleidomastoid muscle, as shown in Figure 4.1. The single branch of the nerve divides into three smaller bundles. These smaller bundles are all recognized anatomically as the transverse cervical (with no additional individual anatomical nomenclatures). However, for acupuncture purposes, we can name the point at the highest location as the upper transverse cervical, the point at the lowest position as the lower transverse cervical, and the point in the center as the middle cervical. These points are formed as the nerve branches of the transverse cervical penetrate through the deep fascia, which covers the anterior surface of the sternohyoid muscle in the muscular triangle of the neck. All branches of the transverse cervical are visible during dissections of cadavers in gross laboratory. However, they are all too small to form acupoints to be important in the practice of acupuncture. By the time acupoints of the transverse cervical become detectably tender, pain in the neck will be too serious to manage easily with needles.

With respect to tender points in the neck with identical locations of acupoints, other investigators [2,3] have reported that they are trigger points or motor points formed on the scalene muscles. In our view, the scalene muscles are too deep inside the neck. It is almost impossible to palpate deep muscles, such as the scalene, from the skin's surface.

4.3.4 Supraclavicular

The branches that travel over the clavicle bone are anatomically known as the supraclavicular. There are three of them: the medial or anterior, the middle, and the lateral or posterior supraclavicular nerves, as shown in Figure 4.1. Each of these supraclavicular nerves has two small divisions. One runs superiorly through the deep fascia and another inferiorly to the clavicle, making a total of six acupoints along the length of the bone (Figure 4.2). Because of their small size, these six supraclavicular acupoints are functionally very similar to those of the transverse cervical nerves. They are all categorized as nonspecific acupoints and are not used much in the practice of acupuncture.

4.4 ACUPOINTS OF MUSCULAR BRANCHES

The cervical plexus is known to have one muscular branch, the ansa cervicalis, as mentioned in Section 4.2. The nerve innervates the infrahyoid muscles: the sternohyoid, omohyoid, sternothyroid, and thyrohyoid. Each of these has a motor point formed by the muscular nerves of the cervical plexus. The motor points are deep inside the muscle masses. They are never used as acupoints, and will not be mentioned further in the book.

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5 Acupoints in the Upper Limb

5.1 TOPOGRAPHY OF THE UPPER LIMB

We view the topography of the upper limb as having four separate regions. These are the chest wall (pectoral region) in the anterior, shoulder (scapular region) in the posterior, arm (brachium) and forearm (antebrachium) dropping down laterally, and wrist (carpus) and hand (manus) at the distal end of the limb. The pectoral region is covered by two muscles, the pectoralis major and the pectoralis minor. The shoulder is bound by two bones, the clavicle and the scapula, and the muscles connecting these two bones, which are the deltoid and the trapezius. Besides the deltoid and trapezius, only a few other muscles attached to the scapula need to be remembered for our purposes. They are the levator scapulae and the rhomboideus minor and major, all of which insert along the medial border of the scapula. The supraspinatus and infraspinatus muscles lodge separately in the supraspinous and infraspinous fossa. Their tendons attach to the humeral head and conjoin with tendons of the subscapularis and teres minor muscles to build up the rotator cuff. Clinically, the rotator cuff is almost always blamed as the culprit for shoulder joint pain. More will be said about pain in the shoulder joint in a later chapter. Here, it is useful to keep in mind that such pain is invariably initiated at one acupoint, which sits right on the top of tendon of the long head of the biceps brachii muscle.

The arm and forearm are each divided into two muscle compartments: the anterior and posterior in the arm, and the lateral and medial in the forearm. Motor points formed by the muscular nerve branches in some of the muscles enclosed within different compartments will become acupoints. Cutaneous nerve branches in the arm and forearm are relatively large. Acupoints formed by a couple of the cutaneous branches are important in acupuncture, particularly when they are used in the quantification of pain. These points are easy to find and conveniently accessible.

The wrist and hand are different from other regions of the upper limb, as they are relatively flat. The flat surface has radial and ulnar sides or margins, between which are the palm and dorsum of the hand. The dorsal surface of the hand has no muscles but is rich in cutaneous nerve distribution. The palmar side of the hand is occupied by quite a number of muscles and is likewise rich in cutaneous nerves. Thus, acupoints formed by the muscular and cutaneous nerves can be expected to be found in both sides and surfaces of the wrist and hand.

5.2 ORGANIZATION OF THE BRACHIAL PLEXUS

The brachial plexus is a rather complicated structure; Figure 5.1 is presented for help in visualizing it. It is a diagrammatic sketch showing most of the nerve branches that participate in creating the plexus. Several nerve branches that don't contribute to the formation of acupoints are not labeled. These are the long thoracic nerve, phrenic nerve, upper subscapular nerve, middle subscapular or thoracodorsal nerve, lower subscapular nerve, nerve to the subclavius muscle, nerve to the longus colli, and scaleni. They are either hidden behind bones or are too deep to be accessible. Other nerves are not included because they are located far too peripherally to be in the diagram.

As can be seen from Figure 5.1, the brachial plexus is formed by the ventral rami of the fifth to eighth cervical spinal nerves and the greater part of the ramus of the first thoracic spinal nerve. A small portion of the fourth cervical and the second thoracic spinal nerves also contribute to the formation of the plexus. Such a contribution is important to know because the portion coming from

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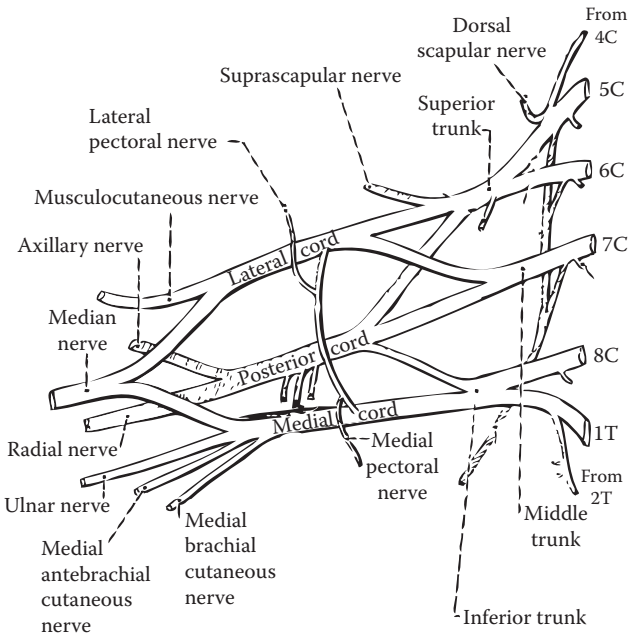

FIGURE 5.1 A diagrammatic sketch of the brachial plexus.

the fourth cervical nerve makes communication possible between the cervical and brachial plexi. Thus, sensory impulses are capable of transmitting from the upper limb to the neck and the occipital region of the head, and vice versa.

The ventral rami of five spinal nerves join one another to form three trunks: the upper (superior), middle, and lower (inferior). Each trunk then splits into two divisions, the anterior and posterior. The union of the two anterior divisions from the upper and middle trunks becomes the lateral cord. The anterior division of the lower trunk stays alone to become the medial cord. All three posterior divisions join together to become the posterior cord. There is only one nerve branch from the ventral rami of the fourth and fifth cervical spinal nerves that is pertinent for acupuncture, and that is the dorsal scapular nerve. The other branches that are useful to know are derivations from the three cords and nerves distal to them.

In principle, nerve branches coming from the medial and lateral cords will go to the pectoral region, anterior compartment of the arm, medial compartment of the forearm, ulnar side of the wrist, and palmar surface of the hand. Nerve branches coming from the posterior cord supply the scapular region, posterior compartment of the arm, lateral compartment of the forearm, radial side of the wrist, and dorsal surface of the hand. Acupoints that can be found in the upper limb have been previously reported [1] and are described below.

5.3 ACUPOINTS ON THE PECTORAL REGION

There are two acupoints on the pectoral region (Figure 5.2). They are formed by the motor points of the lateral and medial pectoral nerves. Both of them are muscular branches. The lateral pectoral is a branch from the lateral cord, and the medial pectoral is from the medial cord. The lateral pectoral nerve is bigger than the medial pectoral because the lateral pectoral innervates the pectoralis major muscle, whereas the medial pectoral innervates the pectoralis minor. For this reason, the lateral pectoral point always becomes tender sooner than the medial pectoral point. The lateral pectoral is thus a primary point, and the medial pectoral a secondary point. The lateral pectoral is located 1.5 inches inferior to the midclavicular point. The medial pectoral is about 1.5 inches lateroinferior to the lateral pectoral point.

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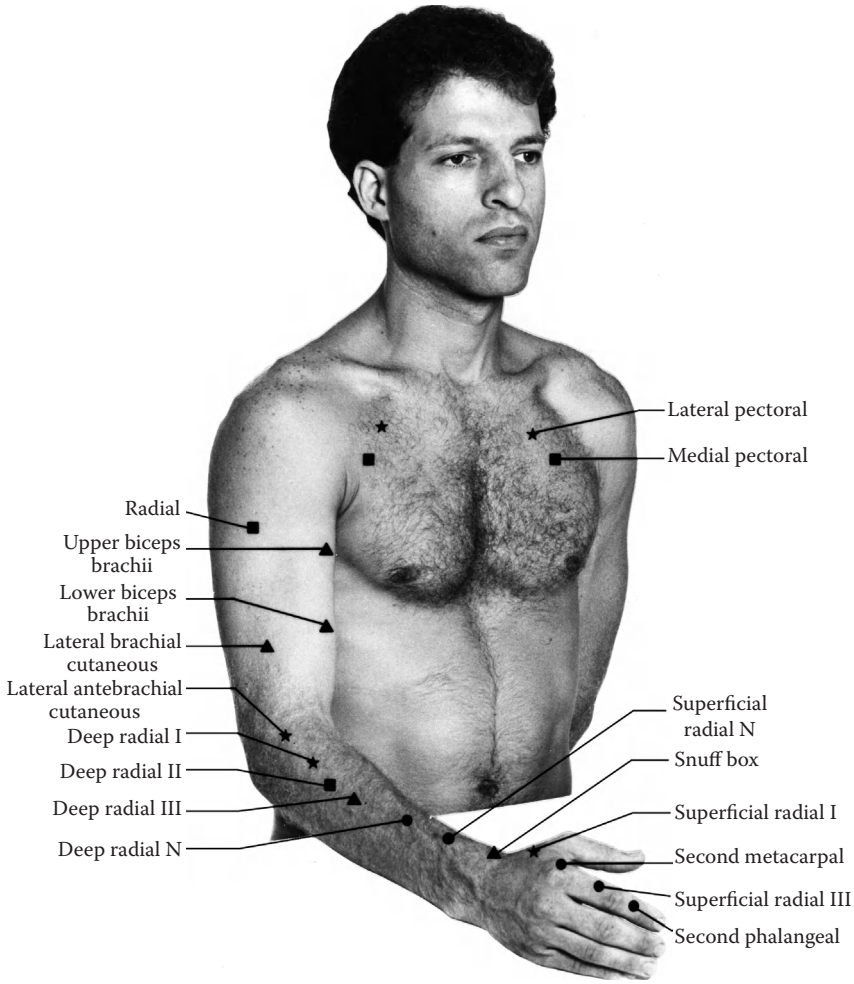

FIGURE 5.2 A photograph showing the locations of acupoints on the chest, arm, forearm, wrist, and hand.

5.4 ACUPOINTS OVER THE SCAPULAR REGION

There are three acupoints over the scapular region: the dorsal scapular, the supraspinatus, and the infraspinatus. Their locations can be seen in Figure 5.3.

Dorsal scapular is the name for a nerve, whereas supraspinatus and infaspinatus are names for muscles. The nerve branches to these two muscles are the suprascapular. Thus, the acupoint formed by the motor point in the infraspinatus muscle can be called the primary suprascapular or suprascapular I to indicate that it is a primary acupoint, and the acupoint formed by the motor point in the suprascapular muscle can be named the secondary suprascapular or suprascapular II to indicate that it is a secondary acupoint. Both names for each of these two acupoints will be used interchangeably.

5.4.1 Dorsal Scapular

The dorsal scapular nerve innervates three muscles: the levator scapulae, the rhomboid major, and the rhomboid minor. The nerve arises from the ventral ramus of the fifth cervical spinal with a contribution from the fourth cervical spinal nerve, as mentioned above. It descends from the cervical region down to the medial border of the scapula. Along the medial border, the dorsal scapular nerve enters the rhomboid minor muscle at the base of the spine of the scapula to form an acupoint. This

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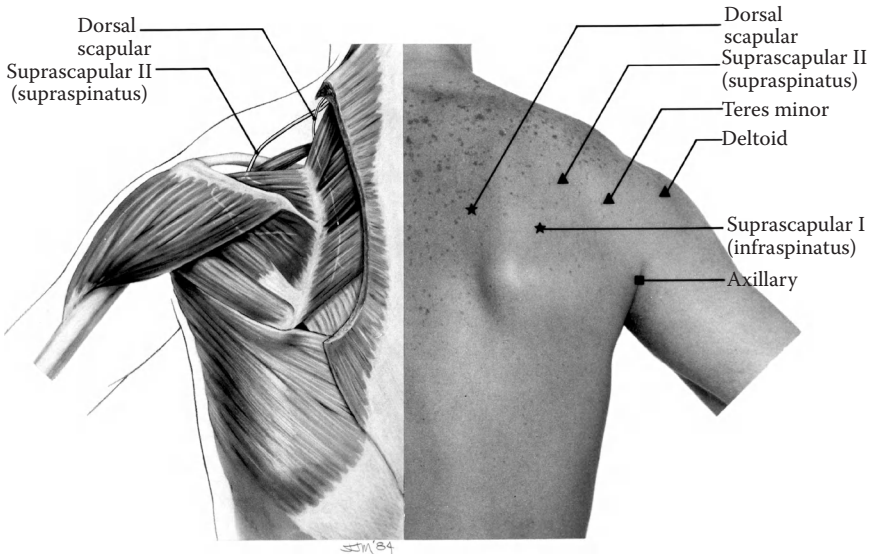

FIGURE 5.3 Rearview anatomic illustration to show the dorsal scapular and suprascapular nerves on the left, and a human model with six acupoints on the right. Three of the six points—the teres minor, deltoid, and axillary—belong to acupoints in the arm.

acupoint is the dorsal scapular point (Figure 5.3), which has attracted the attention of some clinical scientists. Reports by Calabro [2], Campbell [3], Sheon et al. [4], and Travell and Simons [5] have indicated that pain can manifest at the dorsal scapular point in some patients with fibromyalgia. The opinions of where this motor point is located vary from rhomboid [3] to levator scapulae [4,5]. This disagreement can be easily resolved by dissecting a cadaver.

5.4.2 Supraspinatus or Suprascapular II

As shown in Figure 5.1, the suprascapular nerve arises from the superior trunk. The nerve passes laterally across the posterior cervical triangle along the anterior border of the trapezius muscle to reach the scapular notch. The notch forms a pathway by the transverse scapular ligament. Above the ligament, runs the suprascapular artery and vein, and below it, the nerve enters the supraspinous fossa within which it lodges in the supraspinatus muscle. A branch of the suprascapular nerve enters the muscle by running under it, and it is here that the acupoint of the supraspinatus or suprascapular II (Figure 5.3) is formed. The supraspinatus is a round, thick muscle. If the acupoint formed by this motor point deep inside the muscle becomes tender, the sensitivity will be relatively difficult to detect.

5.4.3 Infraspinatus or Suprascapular I

After splitting off the branch to the supraspinatus muscle in the supraspinous fossa, the suprascapular nerve then descends through the notch of the scapular neck to the infraspinous fossa to terminate at the motor point of the infraspinatus muscle. The infraspinatus is a broad, thin muscle, and the motor point is located right in its center. This motor point is the infraspinatus or suprascapular I acupoint (Figure 5.3). The suprascapular I in the infraspinatus muscle is a primary acupoint, and the suprascapular II in the supraspinatus muscle is a secondary point. The infraspinatus point always becomes tender sooner than the supraspinatus.

Regarding the suprascapular nerve, there is a condition known as suprascapular nerve entrapment, believed to stem from the nerve becoming entrapped inside the scapular notch by the transverse

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scapular ligament. The consequence is pain over the scapular region. Actually, it is impossible for this entrapment to occur because the transverse scapular ligament is a tough, tight structure, and will have difficulty bending to entrap anything above or below it.

5.5 ARM AND FOREARM

Acupoints found in the arm and forearm can be divided into three groups. They are acupoints formed by the muscular nerve branches, acupoints formed by the cutaneous nerve branches, and acupoints formed over the tendons and ligaments.

5.5.1 The Muscular Branches

In the arm, there are three muscles in the anterior and four in the posterior compartment. In the forearm, the medial compartment has eight muscles and the lateral has 11 muscles. Among the nerve branches to these 26 muscles, it is possible to locate a total of eight acupoints.

5.5.1.1 Musculocutaneous or Biceps Brachii

The most superficially placed muscle in the anterior compartment of the arm is the biceps brachii. It is a relatively thick and long muscle. The nerve innervating this muscle is the musculocutaneous, a branch of the lateral cord. Because of its length, although the nerve runs underneath deep to the muscle, it apparently needs to provide two muscular branches for innervation. The biceps brachii is one of only a few muscles with multiple nerve innervations, obviously due to its length. These two muscular branches form two acupoints in the biceps brachii muscle, known as the musculocutaneous points or upper and lower biceps brachii, as indicated in Figures 5.2 and 5.4. These two acupoints are situated along the midline on the biceps brachii muscle. The distance between the upper and lower biceps brachii points divides this midline into three equal segments. These two acupoints are seldom used and are categorized as tertiary points in acupuncture because of their deep locations.

5.5.1.2 Median

This acupoint is called the median point because it is located right on the median nerve. The median nerve is formed by a branch from the lateral and another branch from the medial cord in the axillary area. It is one of the four relatively large nerve trunks enclosed inside the neurovascular compartment in the medial aspect of the arm. The other three are the ulnar, medial brachial, and medial antebrachial cutaneous nerves. There is no division or branching for these four nerve trunks inside the neurovascular compartment. Thus, there are no acupoints formed by these nerves in the arm. They all descend down to the forearm. In the forearm, the median nerve sends branches to innervate some long flexor muscles in the medial compartment. Motor points formed between branches of the median nerve and flexor muscles don't become acupoints because they are buried deep inside the muscle masses.

As the median nerve descends distally in the forearm, it gradually emerges to become more superficial. The course of the nerve is right along the center line of the forearm. Toward the distal end of the forearm, approximately 3 inches (40 mm) above the proximal skin crease on the wrist, the nerve runs right under the skin without any muscle coverage. This is the location where the median nerve will divide into small branches to contribute to the formation of the acupoint designated as the median point (Figure 5.4). It is a tertiary acupoint.

5.5.1.3 Axillary

The next six acupoints, axillary included, are either located in the posterior compartment of the arm or lateral compartment of the forearm. The axillary point is not formed from the motor point of the nerve. As shown in Figure 5.5, the axillary nerve passes through the quadrangular space to reach

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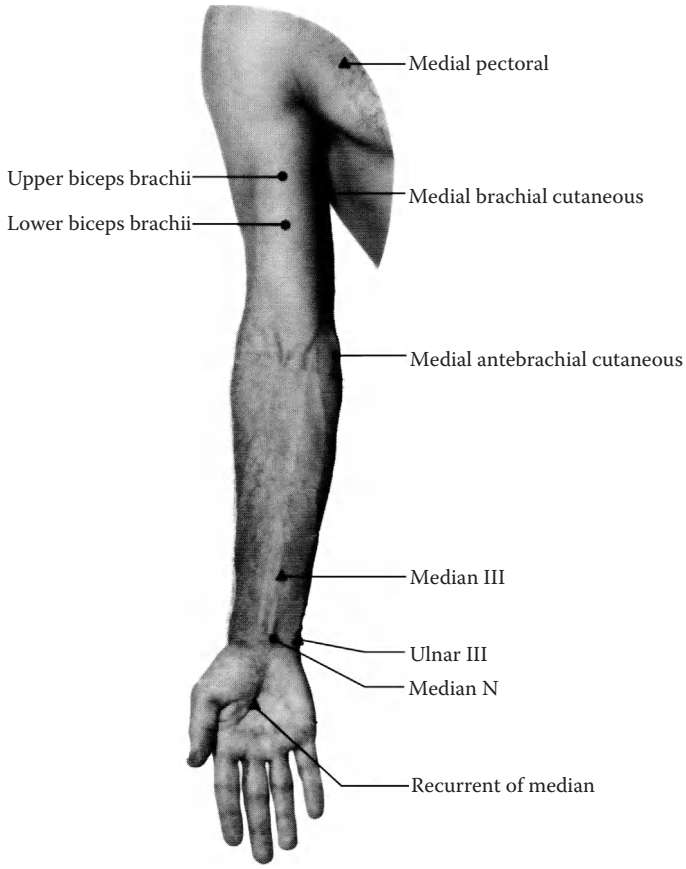

FIGURE 5.4 Acupoints located on the anterior side of the upper limb.

the back of the shoulder joint region. As the nerve emerges out of the space, it divides into several small branches. The acupoint known as the axillary (Figure 5.3) is formed because of the division at this branch. As mentioned in Chapter 2, the spot where a larger nerve divides into smaller branches is an anatomical feature that contributes to the formation of acupoints. The median nerve, which is located toward the distal end of the forearm to become the median point, as mentioned in Section 5.5.1.2, is another example. The location of the axillary point is easy to determine, particularly when it becomes a trigger point. A trigger point always exhibits tenderness when adequate pressure is applied. In the case of the axillary point, use the thumb and index finger to squeeze the posterior axillary fold until a tender spot is found.

5.5.1.4 Teres Minor

The axillary nerve sends branches to other muscles, two examples being the teres minor and deltoid muscles. The teres minor is a narrow, elongated muscle that arises from the lateral border of the scapula in the upper two-thirds of its extent. Its tendon is directed obliquely upward and lateralward to insert into the lower facet of the greater tubercle of the humerus. This makes the muscle a portion of the posterior compartment of the arm. The axillary nerve lies just immediately below the teres minor muscle and sends a branch to the lateral margin of the muscle at the midpoint of its length. The motor point formed by this branch of the axillary nerve on the teres minor muscle is immediately underneath the skin. The acupoint formed by this motor point is called the teres minor (Figure 5.3).

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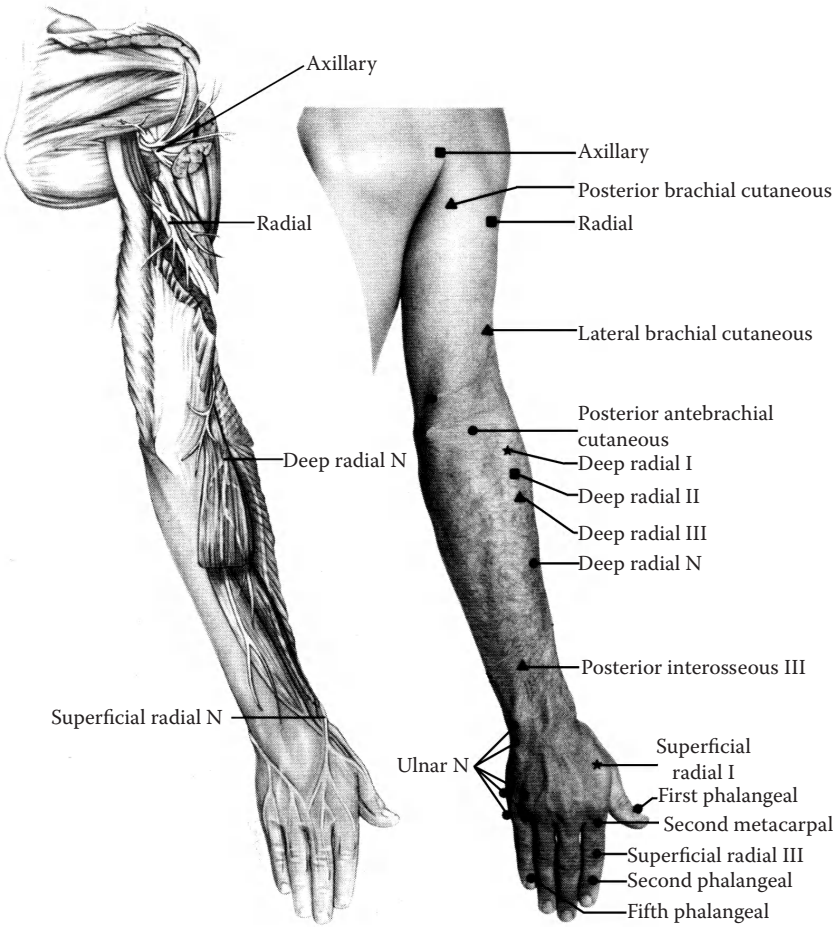

FIGURE 5.5 The drawing on the left shows the locations of four nerves in the posterior compartment of the arm and the lateral compartment of the forearm. All five nerves are branches coming directly or indirectly from the posterior cord. The photograph on the right shows acupoints formed by the nerves rising from the posterior cord, except for the acupoints of the ulnar nerve, which is a branch of the medial cord.

5.5.1.5 Deltoid

Another muscle that receives innervation from a branch of the axillary nerve, the deltoid caps the point of the shoulder joint, as can be seen in Figure 5.3. The point at which a branch of the axillary enters the deltoideus is right on the deltoid tuberosity situated on the lateral surface of the middle acromion of the scapula, or the highest ground on the posterior surface of the shoulder joint. That is the motor point which forms the acupoint for the deltoid.

5.5.1.6 Radial

The posterior cord extends distally to become the radial nerve, one of the largest nerves in the upper limb. It supplies innervations to the extensor muscles in the posterior compartment of the arm. After leaving the axillary, the radial nerve runs downward, backward, and laterally between the long and medial heads of the triceps muscle to enter the radial groove of the humerus (Figure 5.5). The trunk of the radial nerve can be palpated at the location where it lies in the groove immediately below the insertion of the deltoid muscle. At this point, the radial nerve divides to create the posterior brachial cutaneous nerve. The posterior brachial nerve will be discussed later. The point of this division between the radial and the cutaneous nerves becomes an acupoint, which we call the radial point,

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as indicated in Figure 5.5. It is not an important point acupuncture-wise, simply because it is buried deep inside the muscle mass.

5.5.1.7 Deep Radial

The radial nerve penetrates the lateral intermuscular septum of the brachium to enter the lateral compartment of the antebrachium. In the forearm, the radial nerve bifurcates into two terminal branches, the deep and superficial radial nerves. The deep radial is a muscular branch, and the superficial is a cutaneous branch, which is the next topic for description.

Acupoints formed by the deep radial are the most important of all acupoints. More than 99% of all patients received in our acupuncture clinic have been tested to exhibit tenderness at the location of at least one of the acupoints along the deep radial nerve. The deep radial nerve supplies branches to all extensor muscles in the lateral compartment of the forearm. The nerve travels along the forearm in the intermuscular septum between the brachoradialis and the extensor carpi radialis longus muscles. This septum can be easily discerned in a person with a well-developed musculature. Ask the person to clench a fist tightly, and a linear groove will become visible, running between the brachioradialis and extensor radialis longus. The formation of the groove is due to the pulling of the intermuscular septum. Soon after entering the septum, the main trunk of the deep radial nerve begins to branch, and acupoints start to appear at these branching locations. The first point occurs approximately 4 cm distal to the lateral epicondyle of the humerus. Both the lateral and medial epicondyles are easy to palpate for their locations. As the nerve branches out, its size diminishes. This decrease in size is counted as a factor for the decrease in frequency of appearance for the subsequent acupoints. Up to four acupoints may occur along the course of the deep radial nerve. The location of these four acupoints is shown in Figures 5.2 and 5.5. Another reason there are so many acupoints in the region is that there is a rich vascular bed at this location. The vascular bed is contributed by the radial artery and vein, as well as their tributaries. The four acupoints of the deep radial, from the proximal to distal positions, are categorized as primary, secondary, tertiary, and nonspecific. Their respective designated names are deep radial I, deep radial II, deep radial III, and deep radial IV.

5.5.1.8 Posterior Interosseus

As the deep radial nerve reaches the distal one-third of the forearm, it divides, producing the posterior interosseus nerve, which descends on the posterior side of the interosseus membrane. The posterior interosseus nerve passes deep to the extensor pollicis longus muscle and ends at the wrist to supply the intercarpal joints. Where the posterior interosseus nerve splits from the deep radial nerve is the acupoint called the posterior interosseus (Figure 5.5). It is a tertiary point, but is used often in acupuncture because of its convenient position and ease of access.

5.5.2 Cutaneous Branches

Posterior cutaneous branches to the arm and forearm are from the nerves of the posterior cord. The medial and lateral cutaneous branches to the arm and forearm are from the nerves of the medial and lateral cords. The cutaneous innervation can be defined as having six territories, three in the arm and three in the forearm.

5.5.2.1 Posterior Brachial Cutaneous

This cutaneous nerve is a branch of the radial. As shown in Figure 5.5, it pierces the deep fascia at the proximal end of the arm, where the posterior brachial cutaneous point is found. It is a small cutaneous nerve, and the acupoint it forms is not that important. We categorize this point in the tertiary group.

5.5.2.2 Lateral Brachial Cutaneous

There are two nerves innervating the skin on the lateral side of the arm, the axillary and the radial. The axillary nerve supplies the upper area of the lateral side, and the radial supplies the lower area.

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The branch from the axillary is too small to form acupoints. The branch from the radial forms the lateral brachial cutaneous point, as can be seen in Figure 5.5. This is also a tertiary point.

5.5.2.3 Medial Brachial Cutaneous

This nerve is a direct branch of the medial cord in the brachial plexus. It pierces the deep fascia at the midpoint of the line connecting the armpit and the medial epicondyle of the humerus. The medial brachial cutaneous point (Figure 5.4) is also a tertiary point. Yet, it is a very useful point for rapidly quantifying pain when used in combination with the next two points.

5.5.2.4 Lateral Antebrachial Cutaneous

After giving away its muscular branches in the anterior compartment of the arm, the musculocutaneous nerve runs distally to penetrate the deep fascia at the lateral end of the cubital fossa to become the lateral antebrachial cutaneous nerve, which means that this nerve extends from the musculocutaneous nerve. The nerve innervates the skin covering the lateral compartment of the forearm. When the forearm is brought close to the arm, the cubital fossa will become a line. The lateral end of that line is where the acupoint of the lateral antebrachial cutaneous is located (Figure 5.2). This is a primary point; it is formed by the biggest cutaneous nerve in the entire upper limb.

5.5.2.5 Medial Antebrachial Cutaneous

This is the second biggest cutaneous branch in the upper limb. The nerve comes directly from the medial cord of the brachial plexus. It runs through the deep fascia right over the medial epicondyle of the humerus at the medial end of the line created by the folding of the cubital fossa to become subcutaneous over the skin of the medial compartment of the forearm. At that location, the acupoint of the medial antebrachial cutaneous (Figure 5.4) is formed.

These three acupoints formed by the three cutaneous nerve branches described above have a very useful relationship with respect to pain quantification. The nerve which forms the lateral antebrachial cutaneous point is the biggest of the three. The next biggest is that which forms the medial antebrachial cutaneous point, and the smallest forms the medial brachial cutaneous point. The difference in size for these three nerves is easy to discern by mere visual observation in cadaver dissections. The lateral antebrachial cutaneous is a primary point, the medial antebrachial cutaneous is a secondary point, and the medial brachial cutaneous is a tertiary point. A patient with tenderness detectable only at the primary point indicates that the quantity of pain in that patient is less than any patient whose secondary point is also tender. Patients having detectable tenderness in all three acupoints are bound to have the highest quantity of pain. More will be said and about pain quantification in Chapter 10.

5.5.2.6 Posterior Antebrachial Cutaneous

This nerve is a branch of the radial. It pierces the deep fascia between the lateral epicondyle of the humerus and the olecranon of the radius above the elbow joint. The acupoint of the posterior antebrachial cutaneous (Figure 5.5) is formed at the location where the nerve goes through the fascia. It is a nonspecific acupoint and is rarely used in acupuncture treatments.

5.5.3 Acupoints over Tendons and Ligaments

A few acupoints are found to form by sitting on a tendon, ligament, or retinaculum. There is no muscular or cutaneous nerve that can be traced to these structures. No doubt they must have innervation from nerve branches nearby. It will be inappropriate to name such acupoints using the names of nerves that are merely passing by. Instead, they will be named using nomenclatures of the muscular tendons, ligaments, retinacula, or bones of their attachments. Three examples are provided.

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5.5.3.1 Tendon of the Biceps Brachii

The biceps brachii muscle has two heads, long and short. The tendon of the long head is round, arising from the supraglenoid tubercle of the scapula. This tendon crosses the head of the humerus within the capsule of the shoulder joint and then, covered by a prolongation of the synovial membrane, it emerges from the joint beneath the transverse humeral ligament. It then descends in the intertubercular groove of the humerus. Inside this groove, the tendon must sustain a great deal of friction as the arm and the forearm are extended and flexed. It is quite conceivable that this friction can produce tissue damage or injury to the tendon, consequently forming tender points on the tendon. There can be anywhere from one to three tender points formed. The person in Figure 5.6 is shown to have two nonspecific acupoints on the biceps brachii tendon. People who experience pain in the shoulder joint will always exhibit tender sensation in one to three acupoints on the tendon. Locating these acupoints is not difficult. The biceps brachii tendon in the intertubercular groove can be palpated using a fingertip. One then applies adequate pressure with the fingertip while moving it along the tendon.

5.5.3.2 Lateral Epicondyle of the Elbow

This epicondyle is covered by the tendons of the origin of the extensor carpi radialis longus and brevis muscles. Overuse of these two muscles, particularly by amateur tennis players, can result in pain in the elbow. The pain almost always manifests in the acupoints of the lateral epicondyle, shown in Figure 5.7. The number of acupoints in the region can range from one to as many as five.

5.5.3.3 Flexor Retinaculum over the Wrist

This retinaculum stretches between the ends of the concavity of the carpal bones and converts their arch into a fibro-osseous tunnel, through which a considerable number of tendons and the median nerve pass into the hand. The nerve sends a cutaneous branch to this retinaculum, which may be the reason that an acupoint will appear on it. This acupoint is also described as the median N point (Figure 5.4), indicating it as a nonspecific point.

5.6 WRIST AND HAND

The number of acupoints in the wrist and hand is hard to estimate. Occurrences of acupoints vary greatly from individual to individual, disease to disease, and by how long a patient has had a disease.

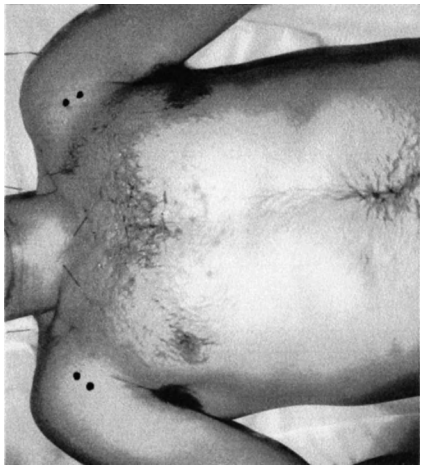

FIGURE 5.6 Two circular black dots indicate the locations of acupoints formed on the biceps brachii tendon on each side of the anterior surface of the shoulder joint.

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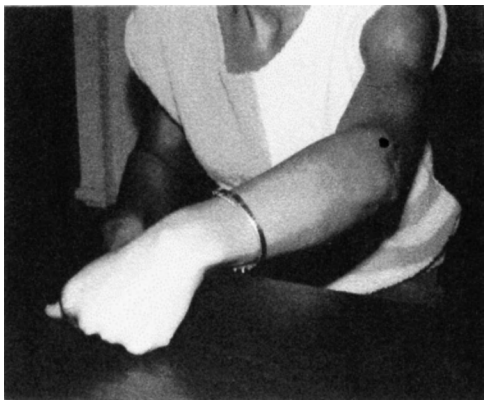

FIGURE 5.7 An acupoint marked by a circular black point over the lateral epicondyle of the left forearm.

For example, identifiable acupoints in patients with carpal tunnel syndrome will be substantially different from those in patients who have suffered advanced rheumatoid arthritis for many years, as can be seen in Figure 5.8.

For illustrative purposes, only a couple of examples are given for the palmar and dorsal surfaces of the wrist and hand. In fact, the median N over the flexor retinaculum mentioned in Section 5.5.3.3 can be considered as an acupoint of the wrist region.

5.6.1 Muscular Branches

5.6.1.1 Recurrent of Median

The median nerve passes through the carpal tunnel in the wrist under the flexor retinaculum to enter the palm. At the distal border of the flexor retinaculum, it gives off a stout branch to the muscles in the thenar compartment on the palm. This branch is known as the recurrent of median because it curves sharply from the median to the muscles in the thenar compartment. The motor point established by this recurrent branch on the thenar muscles is likewise known as the recurrent of median. This point always seems tender in patients diagnosed with carpal tunnel syndrome.

FIGURE 5.8 The hands of a patient suffering for years from rheumatoid arthritis. The circular black points indicate only a fraction of the number of acupoints found on the patient.

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5.6.1.2 Ulnar

Like the median nerve, the ulnar stays inside the deep fascia until it reaches the wrist region, specifically distal to the styloid process of the ulnar bone. Neurological pain is known to manifest on the ulnar side of the wrist and hand. When the pain occurs in the ulnar nerve, several acupoints can manifest along the ulnar side of the wrist and hand, as can be seen in Figures 5.4 and 5.5. Which muscular or cutaneous branches from the ulnar nerve contribute to the formation of acupoints is difficult to say because the ulnar nerve has both muscular and cutaneous branches in this area.

5.6.2 Cutaneous Branches

The wrist and hand have a rich distribution of afferent fibers for general senses, particular the palm side, because of its high sensory field due to the density of sensory receptors. Anatomically, the best known cutaneous branch in the wrist and hand is the superficial radial nerve.

5.6.2.1 Superficial Radial

The radial nerve bifurcates into two terminal branches, the deep and superficial radial. The superficial is the smaller of the two, which is the reason that the acupoint formed by the deep radial always becomes tender earlier than that of the superficial radial, even though the superficial radial is, by definition, closer to the surface of the body. As the superficial radial nerve descends to the lower one-third of the forearm, it runs right on the top of the outer border of the radius bone to pierce the deep antebrachial fascia, then enters the dorsum of the web of the hand between the thumb and index finger (Figure 5.5). At this location, the superficial radial nerve splits into branches. The point where the bifurcation occurs is an acupoint, the superficial radial. The superficial radial point or points can also appear on the lower one-third of the forearm, where the nerve almost adheres to the surface of the radius bone when the nerve is hit by a blunt force, producing a condition clinically known as superficial radial nerve neuropathy.

5.6.2.2 Interphalangeal Points

The cutaneous branches in the hand are called the common palmar digital or common dorsal digital nerves. They reach the margin of the web between two fingers, then split into two branches. Each of these runs along one side of a finger. All these cutaneous branches are known as proper digital nerves. Common digital and proper digital nerves have the potential to form acupoints. Some of them are shown in Figures 5.2, 5.5, and 5.8. These acupoints located between fingers can be called interphalangeal points. Their vast number makes it difficult for us to describe them individually with proper anatomical names, however.

Keep in mind that there are more acupoints than those we have mentioned. The reality is that acupoints can appear at almost any place in the body, depending on where damage to nerve tissue is sustained. However, for practical purposes, the number of acupoints introduced in this book will be sufficient for use in acupuncture.

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6 Acupoints in the Body Trunk

6.1 DEFINING A TYPICAL SPINAL NERVE

We consider only 11 out of all spinal nerves as typical. All others, including the eight cervical, first thoracic, five lumbar, and five sacral spinal nerves are not typical because they participate in the formation of the cervical, brachial, lumbar, and sacral plexuses. Spinal nerves, which form a portion of any plexus, are different from one another in their divisions, connections, and terminal distributions. In contrast, all 11 typical spinal nerves are, with few exceptions, almost identical anatomically in their divisions and distributions. Typical spinal nerves have practically no interconnections, even though their tiny terminal branches do overlap to a certain extent. All acupoints that will be described in this chapter are formed by the typical spinal nerves. Thus, it is useful to define what a typical spinal nerve is. Figure 6.1 is a schematic illustration of a typical spinal nerve.

6.1.1 Two Roots with One Ganglion

A typical spinal nerve has two roots. They can be described as ventral (or anterior) and dorsal (or posterior) roots. The ventral root contains solely efferent fibers, whereas the dorsal root carries only afferent fibers for the general senses. Neurons for these afferent fibers reside in a ganglion attaching to its root, and this ganglion is known as the dorsal root or spinal ganglion. Efferent fibers in the ventral root are either efferent to the skeletal muscles or nerves of the autonomic system, specifically in the division of the sympathetic nerves. The ventral and dorsal roots join to become a spinal nerve, a short but relatively large nerve trunk. The trunk of the spinal nerves quickly divides into two primary rami.

6.1.2 Two Primary Rami

The two primary rami of a spinal nerve are the anterior (or ventral) and posterior (or dorsal). Each of the two rami has branches that we need to recognize. There are four branches useful to know from the anterior ramus: the gray and white rami communicantes, and the lateral and anterior cutaneous branches. Only one branch from the posterior ramus is of concern to us: the posterior cutaneous nerve. These branches are all shown in Figure 6.1.

6.1.3 Muscular Branches without Anatomical Names

Both primary rami of all typical spinal nerves have muscular branches to the thorax and abdomen. Muscular branches in the thorax and abdomen are not anatomically named, and there are no acupoints that can be attributed to these nerves. One can expect many motor points to be present in these areas. All of them are formed by small muscular nerve branches and are too small to be easily identifiable. In addition, they are very rarely used in acupuncture therapy.

6.1.4 Three Cutaneous Nerves with Six Terminal Branches

As mentioned above, each typical spinal nerve has three cutaneous branches. They are the anterior and lateral cutaneous from the ventral primary ramus, and the posterior cutaneous from the

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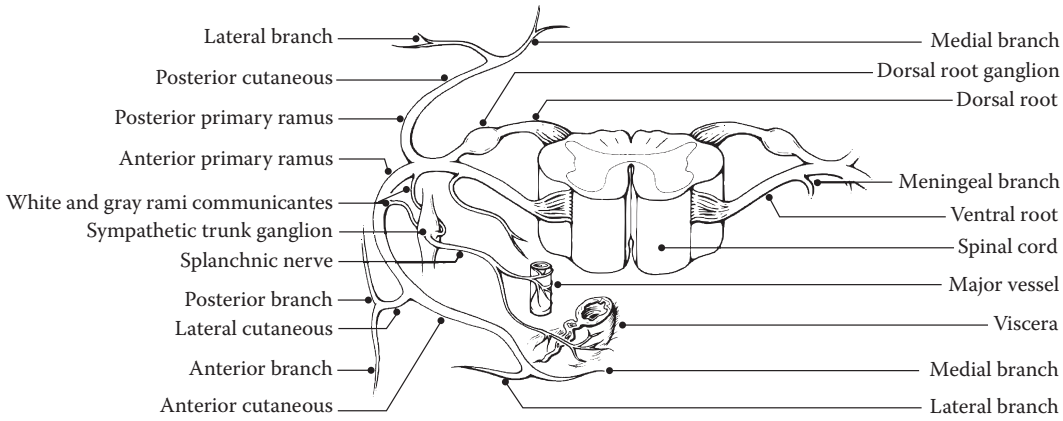

FIGURE 6.1 A schematic illustration of a typical spinal nerve.

dorsal primary ramus. Each of these three cutaneous nerves bifurcates into two terminal branches. Anatomically, these terminal branches all penetrate the deep fascia to become subcutaneously located. Their locations (Figure 6.2) are all identifiable in a careful dissection of the cadaver. Thus, a typical nerve will have six acupoints at the terminal ends of its three cutaneous branches. For practical purposes, only one acupoint is needed to represent each cutaneous branch on the body surface, as shown in Figure 6.3.

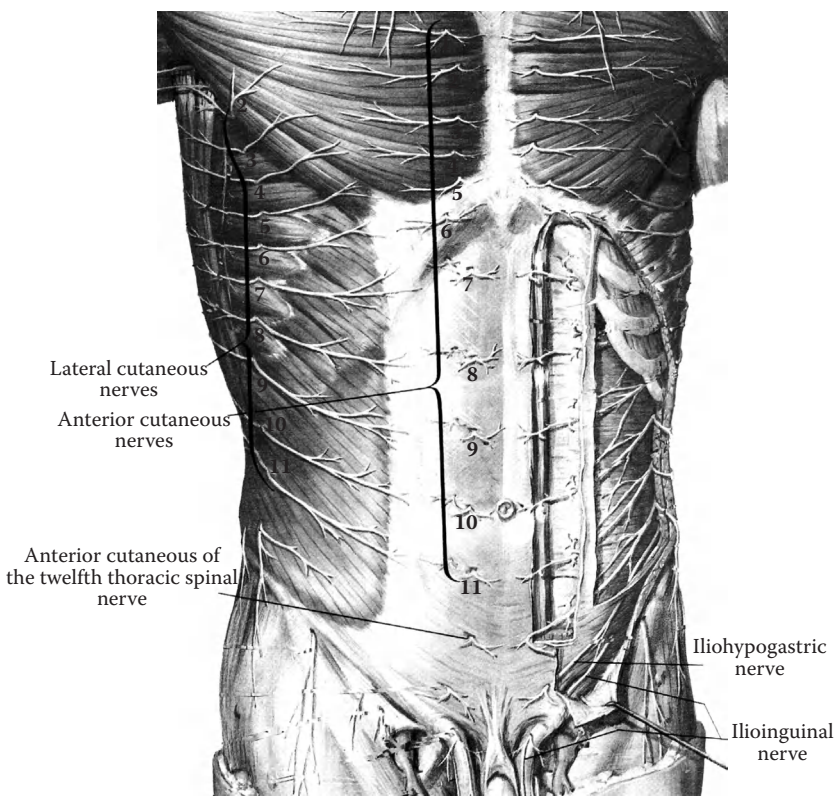

FIGURE 6.2 Distribution of the cutaneous nerves in the chest and abdominal walls.

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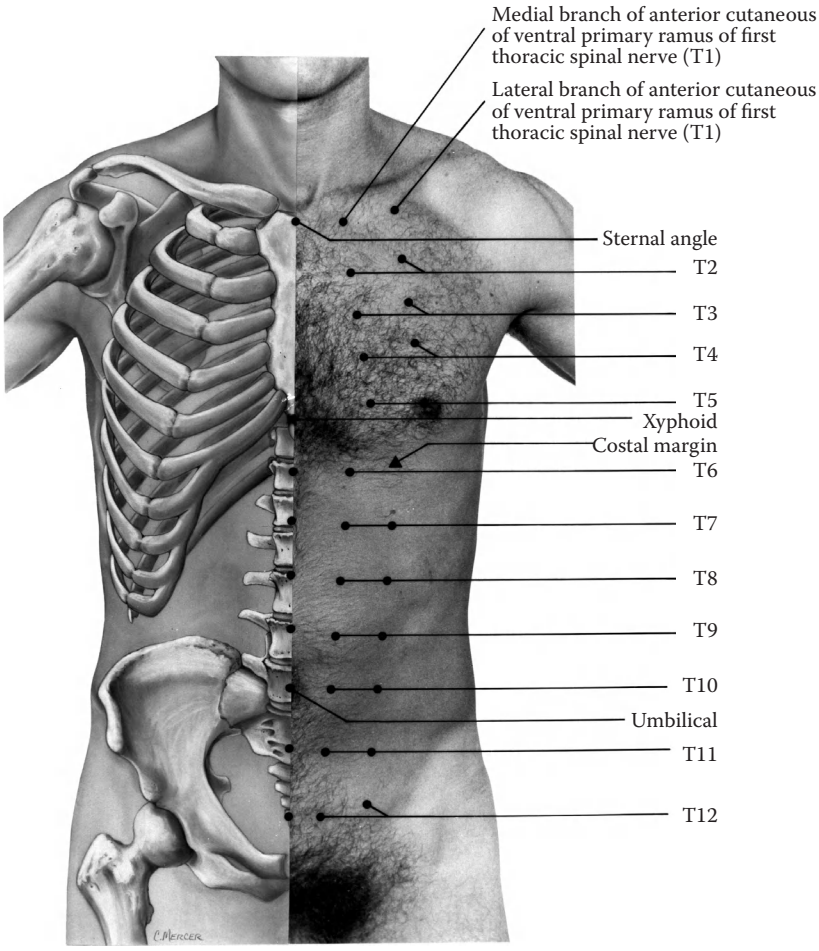

FIGURE 6.3 Distribution of acupoints on the anterior surface of the body.

6.2 COMPOSITION OF FIBERS IN THE TYPICAL SPINAL NERVES

Here is a suitable point to review the different fibers that compose different nerve branches in the typical spinal nerves.

6.2.1 Efferent Fibers to Skeletal Muscles

The nerves originate from motor neurons in the ventral horn of the spinal cord. They are described as nerve fibers with single neurons. The nerves leave the spinal cord by way of the ventral root to become part of the spinal nerve. Because they are efferent fibers, impulses generated by the nerves will travel and will be transmitted outward to their target tissues and organs of the skeletal muscles. Abnormalities or malfunctions due to damage or injury along the efferent fibers to skeletal muscles are not of much use in acupuncture.

6.2.2 Autonomic Nervous System

6.2.2.1 Sympathetic Nerves

Sympathetic nerves originate from preganglionic cells in the intermediate cell column of the spinal cord between the first thoracic and the second lumbar spinal nerves. The route through which the

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preganglionic sympathetic nerve travels is along the ventral root and white rami communicantes to end in the postganglionic neurons in the sympathetic chain. Postganglionic sympathetic nerves from the sympathetic chain are important to know because they are the efferent fibers to smooth muscles in the blood vessels and secretory glands in the skin. These efferent fibers of the sympathetic nerves will enter spinal nerves by the gray rami communicantes, and then follow both the anterior and posterior primary rami to reach acupoints by way of the cutaneous branches. This is the anatomical reason that sympathetic nerve reactions [1] are often observed in the course of acupuncture treatments. Patients with chronic pain tend to have hyperactivity in the sympathetic nerves. Consequently, their parasympathetic nerves can become hypoactive. Acupuncture seems to have the tendency to suppress sympathetic function, and in turn to enhance efficiency in the parasympathetic nerves. Another group of preganglionic sympathetic nerves will just bypass the sympathetic chain without synapses. The preganglionic fibers in this group go through a sympathetic chain to become splanchnic nerves. There are three splanchnic branches: the greater, lesser, and least. They are known as the visceral nerves. The greater splanchnic branch carries preganglionic sympathetic fibers from the first to ninth thoracic spinal nerves to reach postganglionic sympathetic neurons in the celiac ganglion. From this ganglion, postganglionic sympathetic nerves are supplied to organs developed from the embryonic foregut, including the esophagus to the proximal portion of the duodenum. The postganglionic nerves are supplied to these visceral organs by vascular branches of the celiac artery. The lesser splanchnic has a similar anatomical arrangement, from the tenth thoracic to the first lumbar spinal nerves ending in the superior mesentery ganglion, where another bunch of postganglionic sympathetic nerve cells are located. Postganglionic sympathetic nerves from these nerve cells link to the segment of the digestive tract between the duodenum and the end of the transverse colon. This segment of the digestive tract is derived from the embryonic midgut. Postganglionic nerve fibers to this part of the gut are supplied by vascular branches of the superior mesenteric artery. The same applies to the least splanchnic branch, which originates from the last two lumbar and the first sacral spinal nerves. Postganglionic neurons of this branch are in the inferior mesenteric ganglion from which the postganglionic fibers to the descending and sigmoid colons are distributed by the inferior mesenteric artery. Thus, it becomes obvious that there is a segmental and dermatomal relationship between the spinal cord and the cutaneous branches of the typical spinal nerves, making somato-visceral reflexes [2,3] possible in acupuncture stimulation. Examples of this relation will be provided in the rest of this chapter.

6.2.2.2 Parasympathetic Nerves

Parasympathetic nerves in typical spinal nerves are not as relevant to us as sympathetic nerves, primarily because they have no way to reach to the skin's surface and thus become accessible by acupuncture needles. Parasympathetic fibers in the typical spinal nerves are from two sources, one from the hindbrain and the other from the lumbosacral segment of the spinal cord. The preganglionic parasympathetic fibers from the brain are carried to their target organs by the anterior and posterior vagal trunks. Inside the organs, this group of nerves synapses with postganglionic cells from which short postganglionic fibers spread out inside the organs. Similar arrangements are found for the parasympathetic nerves from the lumbosacral portion.

6.2.3 Afferent Fibers for General Senses

None of the branches from typical spinal nerves contain afferent fibers for the special senses. Afferent fibers for general senses, however, are ubiquitous. They can be found in every branch of the nerves. The existence of this anatomical reality is understandable. Sensory receptors exist all over the skin and inside all visceral organs. Afferent nerves extending from these receptors travel inward to their neurons in the spinal or dorsal root ganglia, eventually ending at the substantia gelatinosa in the spinal cord. Reference of pain from internal organs to the skin surface can be occasionally observed in patients with chronic illness inside the body cavity. Such pain on the body surface often

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reflects the number of typical spinal nerves to the visceral organs by way of the splanchnic branch and also to the skin by way of the cutaneous branch. Pain in a particular area of the digestive tract is most likely to have this type of reflective occurrence.

6.3 DISTRIBUTIONS OF ACUPOINTS

Using what is presented in the previous sections for typical spinal nerves, their branches, and what kinds of nerve fibers they contain, we will be able to identify acupoints formed by nerve branches of all the typical spinal nerves. These acupoints are distributed following the locations of their cutaneous branches: the anterior, lateral, and posterior cutaneous nerves. All acupoints described in this chapter have been previously reported [4].

6.3.1 Back of the Body Trunk

We will divide the human back into three regions. First, is the upper region, defined as the back of the neck. Second, is the middle region, which begins from the spinal process of the first thoracic vertebra. Third, is the lower region, which includes the five lumbar vertebrae and sacrum. Acupoints in each of these regions will be described in Sections 6.4, 6.5, and 6.6 of this chapter.

6.3.2 Front of the Body

Acupoints on the anterior surface of the body are all formed by the anterior cutaneous nerve branches. As explained above, typical spinal nerves have muscular branches. The intercostal muscles they innervate are small, and acupoints formed by their motor points are inconspicuous. Very occasionally, pain does occur in the chest cage when ribs are broken. Under these circumstances, acupoints are used nonspecifically, depending on where the tender points appear.

6.3.3 Lateral Side

Both the anterior and lateral cutaneous nerves are branches of the ventral primary ramus of typical spinal nerves. We have only a few clinical examples of perceivable pain in the lateral side of the body. One of them is a herpes infection, as shown in Figure 6.4. There is only one acupoint that will be described for acupoints on the lateral side of the body trunk.

FIGURE 6.4 A patient with herpes infection, showing the scars left by skin lesions on the right thoracic wall along the lateral cutaneous branches of the ventral primary rami of the third and fourth thoracic spinal nerves.

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6.4 ACUPOINTS ON BACK OF THE NECK

Only the first three cervical spinal nerves have the posterior primary ramus run to the back of the neck. The remaining five cervical spinal nerves go to become mostly the ventral primary rami, with only a very small portion each becoming a posterior primary ramus. Their big ventral primary rami are going to become either the cervical or brachial plexus. The posterior primary ramus of the first cervical spinal nerve is known as the suboccipital branch. This suboccipital nerve innervates four muscles: the rectus capitis posterior major, rectus capitis posterior minor, obliquus capitis inferior, and obliquus capitis superior. These four muscles occupy a space deep in the occipital and posterior cervical regions, known as the suboccipital triangle. Because of their depth, motor points of these muscles do not become acupoints. Because the posterior primary ramus of the first cervical spinal is needed to take the nerves of the muscles of the suboccipital triangle, it doesn't spare any of itself for being the cutaneous branch. Thus, it is possible only for two remaining cervical spinal nerves to have posterior cutaneous branches.

6.4.1 Greater Occipital

The greater occipital nerve is the final extension of the posterior primary ramus of the second cervical spinal nerve. Remember, there is a lesser occipital nerve, a branch coming from the cervical plexus. The greater occipital emerges between the posterior arch of the atlas and the lamina of the axis, below the obliquus capitis inferior muscle. The branch becomes superficial dorsal to the suboccipital triangle to supply the skin of the occipital region, as indicated in Figure 6.5. The suboccipital

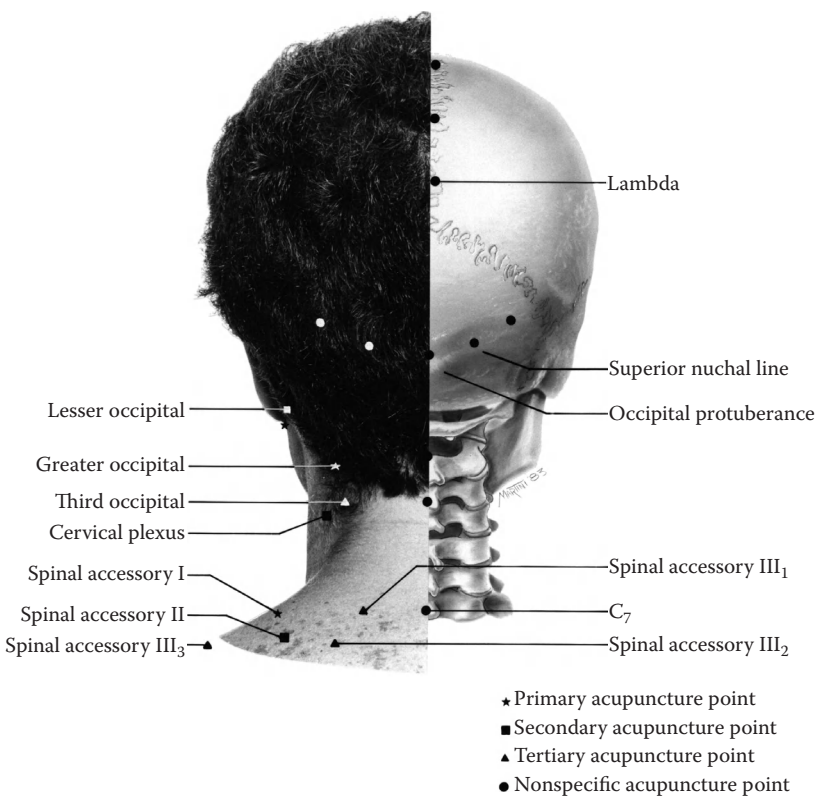

FIGURE 6.5 Acupoints on the back of the head and neck. Some of the acupoints shown are formed by the cranial nerve of the spinal accessory and the lesser occipital of the cervical plexus.

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triangle lies deep in the concavity between the trapezius and sternocleidomastoid muscles at the base of the occipital region. Because it is big in size and superficially located, acupoints formed by the greater occipital nerve are primary points and thus important in acupuncture. Examining the presence of the greater occipital point is relatively easy by palpating the hairline on the back of the head.

6.4.2 Third Occipital

The third occipital nerve is the extension of the posterior primary ramus of the third cervical spinal nerve. The nerve penetrates the deep fascia of the neck to become superficial approximately two or three centimeters medio-inferiorly to the greater occipital point (Figure 6.5). The third occipital nerve is smaller than the greater occipital. Therefore, even though they are located at the same depth, because both of them are cutaneous, acupoints of the greater occipital always become tender earlier than those of the third occipital. The third occipital is thus categorized as a secondary point.

Posterior cutaneous branches of the fourth to eighth cervical and first thoracic spinal nerves are gross-anatomically invisible, because their posterior primary rami are drafted to join ventral primary rami to contribute for the formation of the cervical and brachial plexus. There is not one acupoint found on the back of the neck between the spinal process of the fifth cervical to first thoracic vertebra. Very occasionally, an acupoint appears next to the spinal process of the fourth cervical vertebra in patients with a long history of chronic pain.

6.5 ACUPOINTS ON THE DORSAL SURFACE OF THE CHEST

The area referred to is shown in Figure 6.6. Acupoints in this area can be described as being in two groups: one is on the posterior cutaneous point of the thoracic spinal nerve and the other is on the thoracic spinal process.

6.5.1 Posterior Cutaneous Points

The skin on the dorsal surface of the chest is innervated by the posterior cutaneous branches derived from the posterior primary rami of the thoracic spinal nerves. Each posterior cutaneous nerve is divided into two terminal branches: the medial and lateral branches of the posterior cutaneous nerve of the posterior primary ramus of the thoracic spinal nerve. These official anatomical nomenclatures are obviously too long to use repeatedly, more so by including the medial or lateral branch descriptors.

Each of these terminal branches forms an acupoint, as shown in Figure 6.6. Because the pair of acupoints formed by a single posterior cutaneous can be regarded as a single point, it will be redundant to give each of them an anatomical name. They will be referred to as the posterior cutaneous point of a specific thoracic spinal nerve. In practice, they can be considered as a line of single points, as seen in the patient shown in Figure 6.7. Acupoints on this line will be referred to as the paravertebral points, which are very useful in acupuncture practice if there is a need to suppress hyperactivity of the sympathetic nervous system.

One paravertebral point requires additional attention. This is, the posterior cutaneous point of the sixth thoracic spinal nerve, as shown in Figure 6.6. Out of all paravertebral points, this one always becomes tender sooner than the rest. With respect to dermatomes, the visceral branch of the sixth thoracic spinal nerve is distributed to the gallbladder region. Tenderness in the posterior cutaneous point of this thoracic spinal nerve could reflect something wrong, an abnormality in the internal organ of the same dermatome. It is unknown why this particular acupoint should become tender earlier than other acupoints formed by other posterior cutaneous nerve branches.

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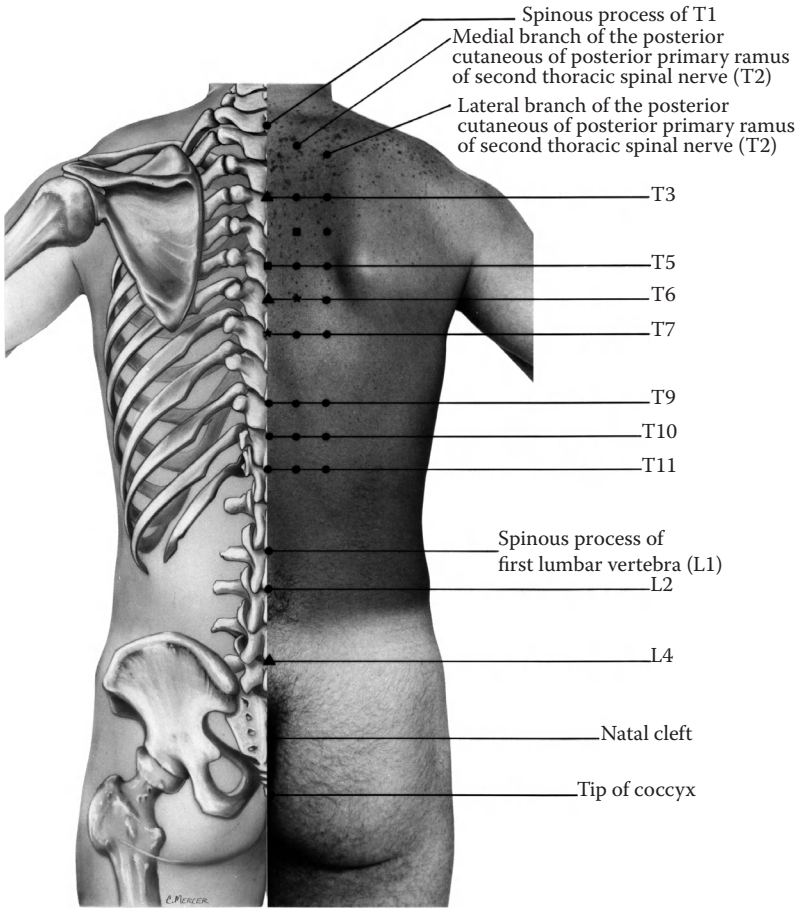

FIGURE 6.6 Acupoints on the dorsal surface of the chest.

FIGURE 6.7 A photograph of a female patient with a number of needles placed in the dorsal surface of the chest and in the lumbar region to activate the paravertebral acupoints. Atopic erythroid (reddish) reactions can be seen to be more obvious in the thoracic region than in the lumbar region, indicating a difference in the quantity of sympathetic nerves.

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6.5.2 Acupoints of the Thoracic Spinal Process

We have 12 thoracic vertebrae. Each vertebra has one spinal process pointing backward and downward. As can be seen in Figure 6.6, out of all the spinal processes, eight have an acupoint sitting on the tip of the process. These are the first, third, fifth, sixth, seventh, ninth, tenth, and eleventh. No acupoints are found on the spinal processes of the second, fourth, and eighth thoracic vertebrae. Acupoints in this group will be simply named as T1, T3, T5, T6, T7, T9, T10, or T11 spinal process point. This group of acupoints is very useful when we want to quantify pain in acupuncture. Pain quantification will be discussed in a later chapter. Here, it is appropriate to say that the T7 spinal process is a primary point, T5 a secondary, T3 a tertiary, whereas all others are nonspecific points.

6.6 ACUPOINTS ON THE LUMBAR AND SACRUM

All acupoints that we are going to cover for the lumbar and sacral regions can be found in Figure 6.8. From this figure, it is appropriate to group acupoints into four localities: the lumbar area, the tips of the spinal processes of the lumbar vertebrae, the sacral area, and along the iliac crest. The acupoints in each of these localities are described separately below.

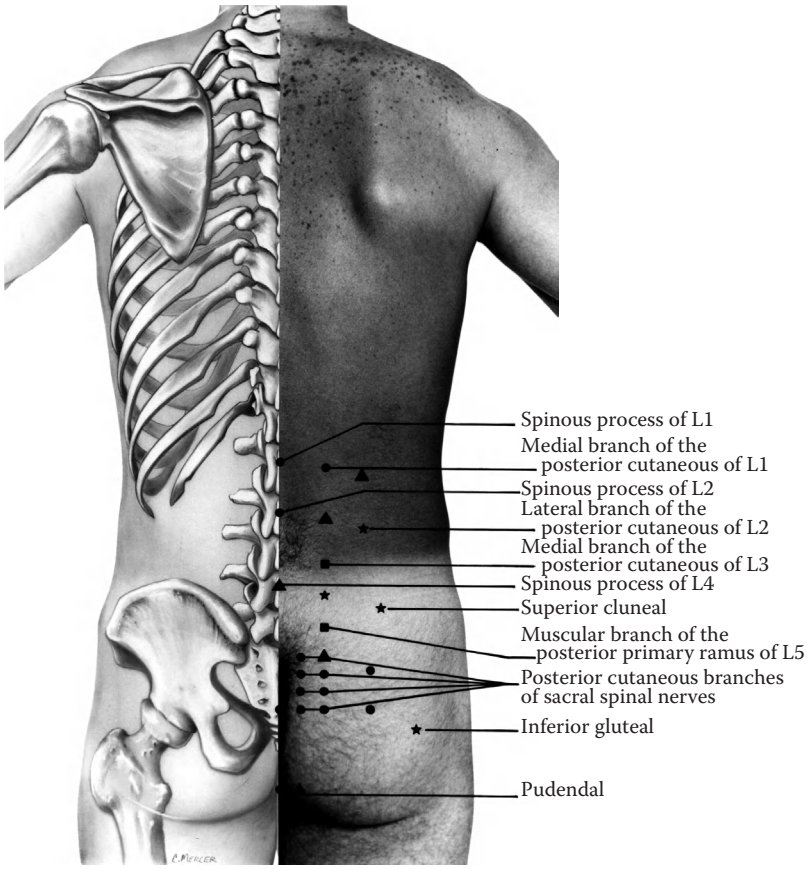

FIGURE 6.8 Acupoints in the lumbar and sacral regions.

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6.6.1 Posterior Cutaneous of the Lumbar Spinal Nerves

The distribution of the posterior cutaneous nerves in the back of the thorax is slightly different from that in the lumbar region. In the thoracic region, most nerve fibers in the lateral branch of the posterior cutaneous are distributed to the muscles. Only a few of them reach subcutaneously. Most nerve fibers in the medial branch of the posterior cutaneous manage to reach the skin to form acupoints. This is the reason that acupoints in the thoracic region are located closer to the midsagittal line than acupoints in the lumbar region. Both terminal branches of the five lumbar spinal nerves, the medial and lateral of the posterior cutaneous (Figure 6.9), reach to the skin. However, more fibers in the medial branches go to the muscles of the lower back, giving the lateral branches a more prominent role as the cutaneous nerves. That is why there are two acupoints for each posterior cutaneous branch in the lumbar region.

The easiest acupoint to detect is the posterior cutaneous of the second lumbar spinal nerve. The acupoint formed by the lateral branch of this cutaneous is located right at the lateral margin of the erector spinae muscle. The lateral margin of this muscle can be palpated in a person thin enough to lack fatty tissue in the superficial fascia. If a waistline is drawn across the narrowest point of the lumbar region, that point will be at the lateral border of the erector spinae where the lateral branch of the posterior cutaneous nerve penetrates the thoracolumbar fascia to form the acupoint. This will be the posterior cutaneous of L2. The posterior cutaneous of L1 is 1 inch above, and the posterior cutaneous of L3 is 1 inch below. A further inch below is the posterior cutaneous of L4. Acupoints for the posterior cutaneous L4 and L5 are also motor points. Branches from the posterior primary ramus of these two lumbar spinal nerves provide nerve fibers to the muscles in this area. Acupoints of the posterior cutaneous L2 and L4 are always detected as tender in people suffering from all kinds of lower back pain.

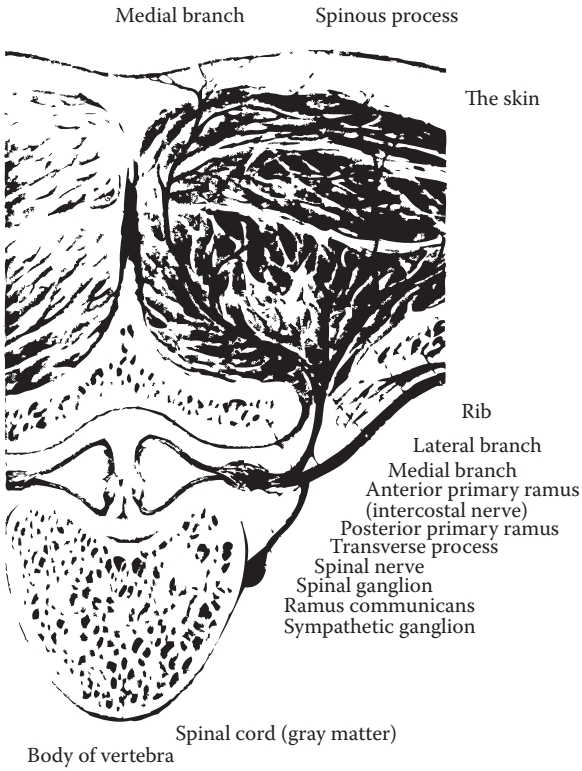

FIGURE 6.9 A drawing of the back of the body trunk, showing the origin of the posterior primary ramus from a spinal nerve and two terminal branches of the posterior cutaneous nerves.

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6.6.2 On the Lumbar Spinous Processes

Just as there are acupoints sitting on the tip of eight thoracic spinous processes, there are also acupoints located on the tip of three lumbar spinous processes, as shown in Figure 6.6. These spinous processes belong to the second, third, and fifth lumbar vertebrae. Very occasionally, an acupoint can also appear at the spinous process of the fourth lumbar vertebra. One or two of these acupoints on the spinous processes, particularly the third and fifth, will become tender in patients with chronic lower back pain.

6.6.3 Posterior Cutaneous of the Sacral Spinal Nerves

Each of us has five pairs of sacral spinal nerves. Only four of them are shown to form acupoints on the sacral region from the posterior cutaneous nerve, as shown in Figure 6.8. One suspected reason is that the last or fifth sacral spinal nerve is too small to have substantial fibers going to the posterior primary ramus, and consequently, the posterior cutaneous becomes insignificant. How many acupoints there are in the sacrum does not really matter because acupuncturists have no chance to use them. In our more than 35 years of practice, not one patient was encountered with pain in the sacrum. Even pain in the tail bone seems to have no effect on the sacral region. The acupoints in the lumbar region described above and in the superior cluneal point, which will be discussed below, are different. They are important in acupuncture practices, specifically to manage lower back pain. Proper use of acupoints in the lumbar region will be the key to successfully taking care of lower back pain.

6.6.4 Superior Cluneal

This acupoint formed by the superior cluneal nerve is isolated from the rest of the acupoints in the lumber and sacral region because of its significance in the formation of acupoints. We have three cluneal nerves: the superior, middle, and inferior. Branches of the posterior cutaneous from the posterior primary rami of the first three lumbar spinal nerves form the superior cluneal nerve. This nerve pierces the thoracolumbar fascia at the lateral border of the erector spinae muscle, crosses the iliac crest a short distance in advance of the posterior superior spine of the ilium, and distributes to the skin of the gluteal region as far as the greater trochanter [5]. The middle cluneal nerve is formed by the posterior cutaneous of the upper three sacral spinal nerves. The inferior cluneal is the gluteal branch of the posterior femoral cutaneous nerve, which belongs to the lower limb. We will deal with acupoints in the lower limb next. In gross anatomy, practically no attention is paid to dissecting out these three cutaneous nerves. Very few medical graduates will even remember seeing them; much less know what and where the cluneal nerves are. There is no need to identify the middle and inferior cluneal nerves but it is very important to know the acupoints formed by the superior cluneal nerve. The superior cluneal point is the key to unlocking pain in the lower back. To locate this point (Figure 6.9), one need only palpate the margin of the iliac crest. The superior cluneal is at the highest point of the crest.

6.7 ACUPOINTS IN THE FRONT

6.7.1 Anterior Cutaneous

Acupoints distributed in front of the thorax and abdomen are shown in Figure 6.3. There is only one acupoint for each dermatome, making a total of 12 points along a line approximately 20 mm lateral to the sternum in the thorax and lateral to the linea alba in the abdomen, where the branches of the anterior cutaneous nerves are located. Each anterior cutaneous nerve has two terminal branches, medial and lateral, which can be presented as one single acupoint. Acupoints formed by the anterior cutaneous are rarely used in acupuncture for the management of pain. One physiological function should be reiterated: the connection between the anterior cutaneous points externally and the visceral organs internally through splanchnic nerves. This connection can generate cutaneo-visceral reflexes [1–3].

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Needle stimulation to the anterior cutaneous points has been reported to induce vascular dilation in the gastrointestinal tract. This cutaneo-visceral connection may also be the reason that acupuncture can occasionally treat irritable bowel syndrome effectively. Irritable bowel syndrome is defined as abdominal discomfort or pain associated with altered bowel habits for days over a period of months [6], with the absence of organic disease. Abdominal pain is the most common symptom and is often described as a cramping sensation. From our experience, by placing acupuncture needles in acupoints of the abdomen, cramping pain can be reduced or stopped for a period longer than months. Here, we choose three anterior cutaneous nerves as examples to demonstrate this relationship of interconnection between acupoints externally and visceral organs internally.

6.7.2 Xiphoid Point

The acupoint right under the xiphoid process indicates the location of the anterior cutaneous of the fifth thoracic spinal nerve. This acupoint is very easy to find and is noticeably tender in people who have a medical history of hiatal hernia. The hernia occurs at the esophageal–cardiac junction where the esophageal passage goes through the diaphragm. The splanchnic nerve to this part of the esophagus is the visceral branch of the ventral primary ramus of the fifth thoracic spinal nerve. The pain caused by the hernia is often expressed at the xiphoid point (Figure 6.3).

6.7.3 Angle of the Chest Cage Point

The costal cartilages of the sixth and seventh ribs join together, and then bend posteriorly and inferiorly. At the junction of this bending, known as the angle of the chest cage, is the location of the anterior cutaneous of the sixth thoracic spinal nerve. This angle is also easy to palpate because it is the lowest point of the ribs. This angle of the chest cage point (Figure 6.3) is the place where the anterior cutaneous of the sixth thoracic spinal nerve penetrates the deep thoracic fascia to become superficial. The visceral branch of this spinal nerve is distributed to the gallbladder area. Pain caused by stones in the gallbladder can manifest in the angle of the chest cage region.

6.7.4 Umbilical Point

The anterior cutaneous branches, which appear on either side of the umbilical, are from the tenth thoracic spinal nerve. We will name these points the umbilical (Figure 6.3). The visceral branch of this spinal nerve innervates the duodenal portions of the small intestine. Irritation in this part of the small intestine can result in pain around the umbilical area.

6.8 LATERAL SIDE OF THE CHEST CAGE

Acupoints on the lateral side of the chest cage occur because of the lateral cutaneous nerves in this region and are called lateral cutaneous points, with one exception—the intercostobrachial point. Thus, acupoints in the lateral side of the chest cage can be described under two headings.

6.8.1 Lateral Cutaneous

The distribution of the lateral cutaneous nerves has a similar pattern to that of the anterior cutaneous, as can be seen in Figure 6.2. Each of them is divided into terminal branches. In the case of the lateral cutaneous, the names of these two terminal branches are the anterior and posterior. Thus, we can expect to have two acupoints formed by each of the two branches. In actual cadaver dissections, the lateral cutaneous nerves are not as conspicuous and consistent as shown in Figure 6.2. Most of the time, they are rather difficult to see in a gross dissection. For this reason, acupoints on the lateral side of the chest cage do not appear as regularly as many other acupoints in other regions of

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FIGURE 6.10 The patient's finger indicates the intercostobrachial.

the body, and they are not used frequently in acupuncture. Out of all the possible acupoints that can appear along the distribution of the lateral cutaneous nerve, we describe one below.

6.8.2 Intercostobrachial

This is the lateral cutaneous branch of the second thoracic spinal nerve. The branch penetrates the deep fascia at the second intercostal space. The patient complained of pain in the armpit. When asked where the pain was located, he pointed at the spot shown with his index finger (Figure 6.10).

In this book, we will describe pain as active, positive, or obvious if it is perceivable by the patients who complain of the sensation. There is another kind of pain, which we describe as passive, negative, or hidden. Most passive pain is found to be detectable in the acupoints. We will regard acupoints having tenderness as trigger points. Using this definition, a number of acupoints can sometimes appear in a rather limited area as shown in Figure 6.4, which is a photo taken from a patient suffering a herpesvirus infection in the axillary region. The number of passive acupoints or trigger points in this area can range as high as eight to 12.

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7 Acupoints in the Lower Limb

7.1 REGIONAL ANATOMY

The lower limb is connected to the abdomen anteriorly by the inguinal ligament. Posteriorly, the gluteal region of the lower limb is demarcated from the lumbar region by the iliac crest. Below the inguinal ligament and gluteal fold, the lower limb can be divided into the thigh, knee, leg, ankle, and foot. A thigh has four compartments: anterior, lateral, posterior, and medial. The knee is a joint, the configuration of which is the patella anteriorly and the popliteal fossa posteriorly. The leg has three compartments: anterior, lateral, and posterior. The ankle joint has two bony prominences, the medial malleolus of the tibia and the lateral malleolus of the fibula. A foot has two surfaces, dorsal and plantar. In spite of so many regions, compartments, and surfaces, nerve supplies to the lower limb can be simplified into two plexuses, the lumbar and the sacral. Branches from the lumbar plexus innervate the inguinal region, the anterior and medial compartments of the thigh, the patella of the knee, and the skin that covers the medial surface of the leg. Branches from the sacral plexus take care of all other regions of the lower limb, including the gluteal, lateral and posterior compartments of the thigh, popliteal fossa, lateral and posterior compartments of the leg, and the entire foot. Thus, the quintessential point of this chapter is to become acquainted with the organization and distribution of the lumbar and sacral spinal nerve plexus. All acupoints that we need to know that appear in the lower limb are attributed to nerve branches of these two plexuses.

7.2 LUMBAR PLEXUS

The lumbar plexus is formed by the interconnection of branches of the ventral primary rami of the first four lumbar spinal nerves. Figure 7.1 is a schematic drawing of these interconnections. Six nerves are labeled with anatomical names. Out of these six, four are cutaneous branches. These are the iliohypogastric, ilioinguinal, genitofemoral, and lateral femoral cutaneous. The other two, the femoral and obturator, are muscular.

Each of the four cutaneous branches forms an acupoint in the inguinal region and proximal region of the anterior surface of the thigh, as shown in Figure 7.2. The femoral and obturator are muscular nerves that innervate quite a few muscles. Most of them are deep in the anterior and medial compartments of the thigh. Their motor points rarely appear superficially. Therefore, there are only a few acupoints discernible in the anterior and medial surfaces of the thigh, despite their relatively large skin area.

The femoral nerve descends to below the knee on the medial surface of the leg and becomes the saphenous, which is an important cutaneous nerve with respect to the formation of acupoints. More about the significance of acupoints formed by the saphenous nerve will be explained later in this chapter.

7.3 SACRAL PLEXUS

The sacral spinal nerve plexus is the interconnection of branches of the lumbosacral trunk and the ventral primary rami of the first three sacral spinal nerves. The lumbosacral trunk consists of a portion of the ventral primary of the fourth lumbar spinal nerve and the entire ventral primary ramus of the fifth lumbar spinal nerve. There are more than 20 different nerve branches coming

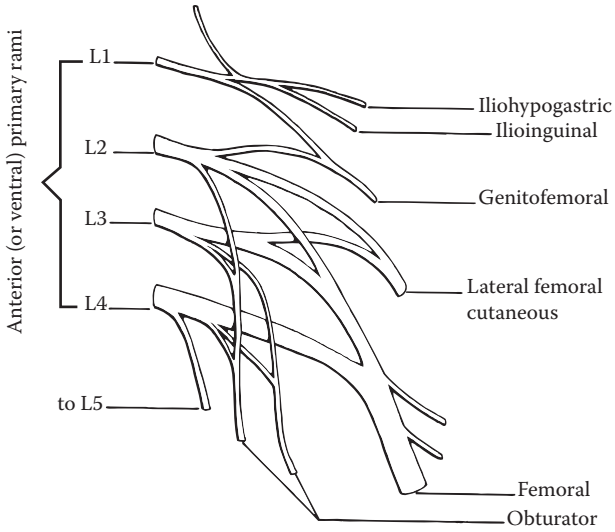

FIGURE 7.1 A schematic drawing of the lumbar spinal nerve plexus.

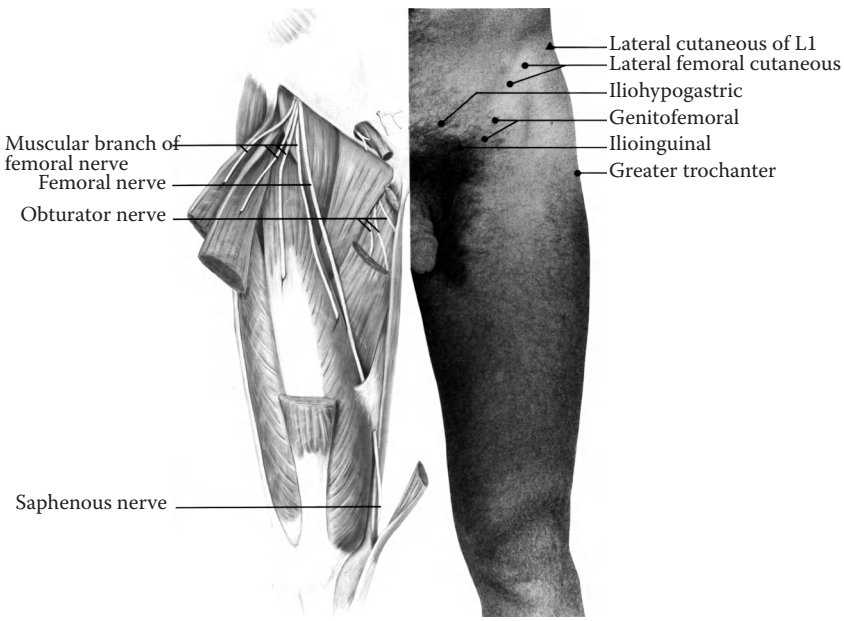

FIGURE 7.2 Acupoints distributed around the inguinal region (right) and the nerve branches nearby (left).

either directly or indirectly from this plexus [1]. Not all of these nerve branches contribute to form acupoints. The branches that do play a role in forming acupoints are the inferior gluteal, pudendal, posterior femoral cutaneous, and the sciatic and its terminal branches. The division of the branches from the plexus can be seen in Figure 7.3.

As shown in the figure, the sciatic nerve is divided into two branches, the common peroneal and the tibial. The common peroneal then further subdivides into two terminal branches, the deep and superficial peroneals. The tibial nerve gives off a cutaneous branch, the sural nerve, in the posterior surface of the leg. After that division, the tibial turns medially to enter the plantar side of the foot

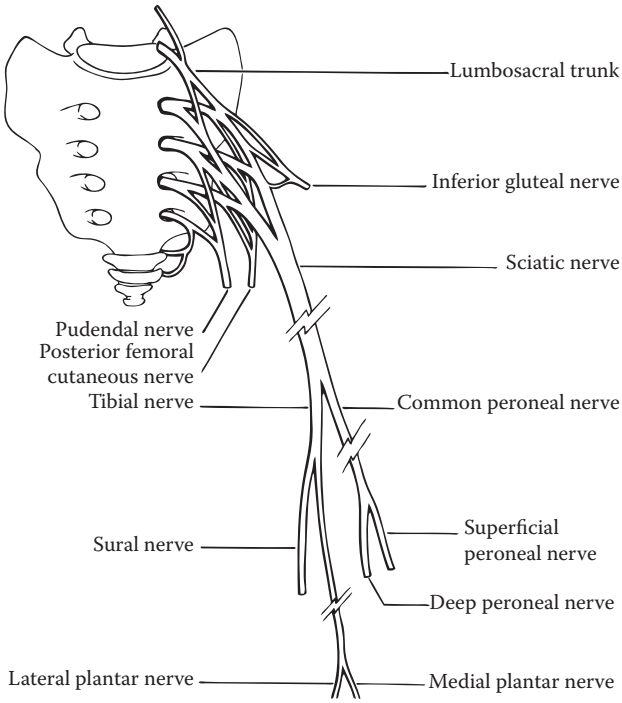

FIGURE 7.3 A schematic drawing of the sacral plexus and terminal branches that contribute to the formation of acupoints in the lower limb.

and become the lateral and medial plantar nerves. Thus, it is clear that the sacral plexus supplies innervation to the gluteal region, the lateral and posterior compartments of the thigh, the popliteal fossa, the lateral and posterior compartments of the leg, and the entire foot.

7.4 ACUPOINTS OF THE LUMBAR PLEXUS

It is convenient to present the acupoints formed by nerve branches of the lumbar plexus as two groups, cutaneous and muscular. There are eight cutaneous and six muscular nerves identifiable. All acupoints formed by these 14 nerves are depicted in Figures 7.2, 7.4, and 7.5. These acupoints have been reported in a previous publication [2].

7.4.1 Cutaneous Branches

7.4.1.1 Iliohypogastric

This is one of the three branches that divide from the ventral primary ramus of the first lumbar spinal nerve. As shown in Figure 7.1, the ventral primary ramus of each of the first four lumbar spinal nerves is divided into three branches. The upper branch of the first ventral ramus becomes the iliohypogastric nerve, the middle branch becomes the ilioinguinal, and the lower branch joins with the upper branch of the ventral ramus of the second lumbar nerve to become the genitofemoral nerve. These last two nerves will be described next.

The iliohypogastric nerve runs inside the posterior abdominal wall and penetrates the three abdominal muscles to reach the superficial fascia at the pelvic area at a site superior to the spermatic cord and lateral to the suspensory ligament of the penis in the male, and superior to the round ligament and lateral to the suspensory ligament of the clitoris in the female (Figure 7.2). An acupoint is

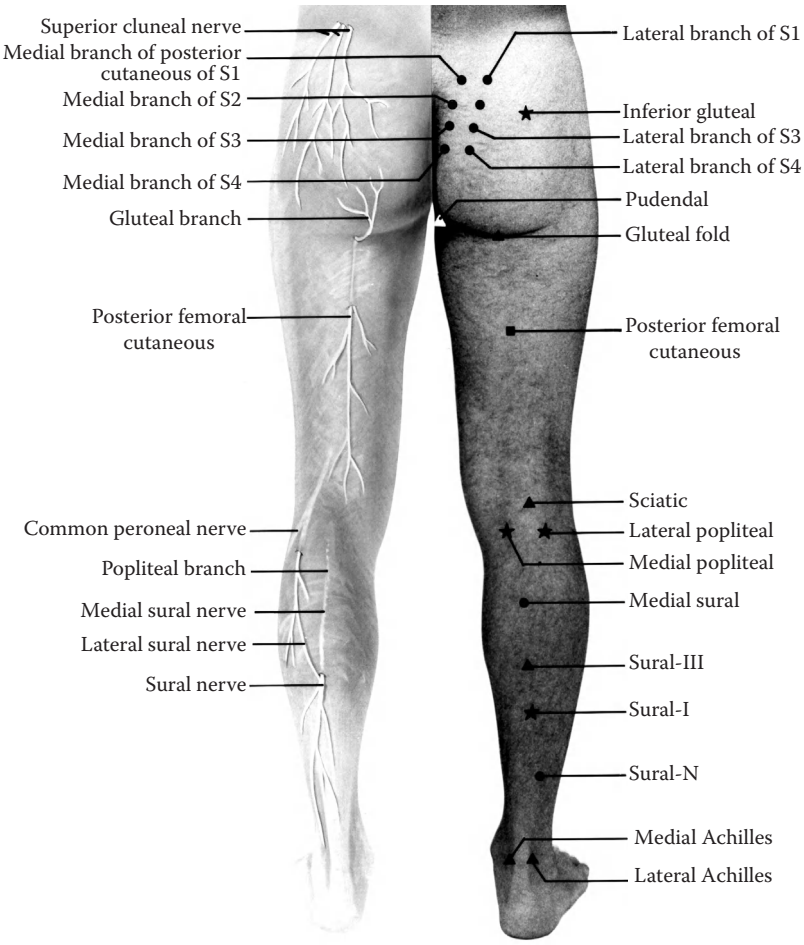

FIGURE 7.4 Some cutaneous nerves of the lumbar plexus in the right lower limb and some acupoints formed by these nerves in the left.

formed at the spot where the nerve pierces the deep fascia of the abdomen or anterior layer of the rectus sheath. This iliohypogastric point is not often used, yet it has one useful aspect in judging whether pain has its origin from the first lumbar spinal nerve. Most often, pain originating from the lumbar region will begin at a herniated disc between the fourth and fifth lumbar vertebrae. The herniation has a tendency to expand and extend upward to the third, then the second, and then reach the first lumbar vertebra. By the time an intervertebrate disc is involved, the pain will already have been in the chronic stage for many years. Another useful indicator function for the iliohypogastric point is that it will become a trigger point with tender sensation in young female patients who have dysmenorrhea, or cramping pain during menstruation. Once menses stop, the trigger point disappears.

7.4.1.2 Ilioinguinal

This is another branch that divided from the ventral primary ramus of the first lumbar spinal nerve. It initially runs parallel to the iliohypogastric. When it reaches the inguinal region, it passes through the inguinal canal and emerges through the superficial inguinal ring. Thus, the ilioinguinal point is located right at the opening of the superficial inguinal ring along the inguinal ligament immediately lateral to the tendon of the pectineal muscle at the superior border of the femoral triangle. Like the iliohypogastric, the ilioinguinal is not a frequently used point. Both of them are categorized as

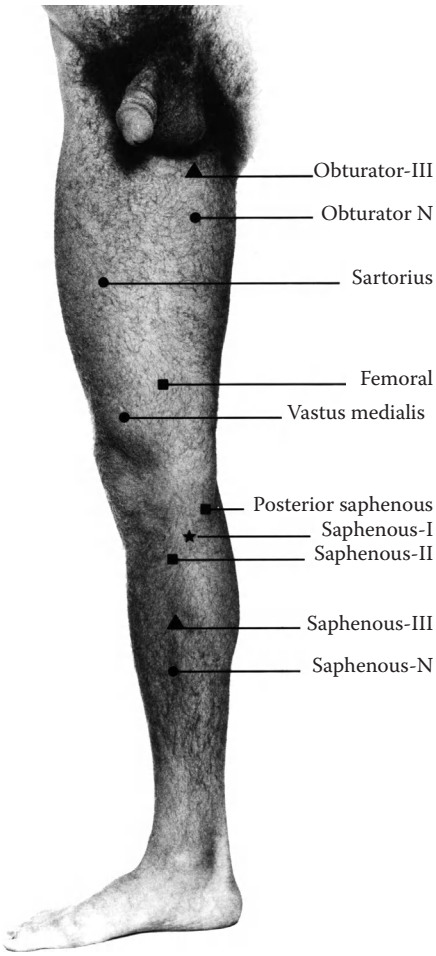

FIGURE 7.5 A medial view of a lower limb, showing the locations of some acupoints.

tertiary points. Pain at the ilioinguinal point is very seldom described by patients younger than 45 years of age. When pain appears at this point, patients will not fail to tell their physicians precisely where the pain is located in the groin. Sometimes, the pain can be mistaken as originating from an inguinal hernia.

7.4.1.3 Genitofemoral

This nerve is formed by the lower branch of the ventral primary ramus of the first lumbar spinal nerve and the upper branch of the ventral primary ramus of the second lumbar spinal nerve, as can be seen in Figure 7.1. The nerve pierces the deep fascia immediately below the inguinal ligament and lateral to the superficial inguinal ring. The genitofemoral point is almost never used because practically no one receives acupuncture treatment due to pain in the testicles or labium major. The only possible cause for having pain in the scrotum is due to surgical removal of cancer in the testicles.

7.4.1.4 Cutaneous of Obturator

This is a variable offshoot of the anterior branch of the obturator nerve [3]. Its anterior branch is mainly muscular and articular nerves. Its cutaneous branch becomes superficial between the gracilis and adductor longus muscles in the location shown in Figure 7.4. This nerve varies in size. It

is distributed, when present, to the skin of the distal one-third of the thigh on its medial side. The acupoint formed by this cutaneous branch of the obturator nerve is not important and is rarely used in practice.

7.4.1.5 Lateral Femoral Cutaneous

This nerve derives from the first three lumbar nerves, from which it courses across the anterior surface of the iliacus muscle where this forms a part of the wall of the false pelvis, and enters the thigh between the lateral border of the iliacus and the upper end of the inguinal ligament; thereafter, it pierces the fascia lata, commonly just below and medial to the anterior superior iliac spine. The larger part of the nerve runs downward on the lateral side of the anterior aspect of the thigh to supply skin here as far as the knee. A smaller posterior branch runs more laterally, supplying the skin below the greater trochanter but usually not reaching the knee [4].

First, we need to define the fascia lata. This is the deep fascia wrapping around the thigh superficial to the muscle mass. On the lateral side of the thigh, the fascia becomes thickened, and this thickening portion of the fascia lata is known as the iliotibial tract. The tract is an extension of the aponeurosis, which encloses the muscle of the tensor fasciae latae. The iliotibial tract runs downward on the lateral side of the thigh and blends into the ligaments and tendons on the lateral aspect of the knee joint. The iliotibial tract is a very important structure in acupuncture because many patients complain of pain right over and along the area covered by the tract. It is obvious that conventional medical wisdom has very little to offer for mending this condition of pain perceived under the iliotibial tract, clinically described as meralgia paraesthetica. The etiology of this disease is not clearly understood. Various things have been blamed for it, including being overweight, having a job as a waiter or waitress for too many years, etc. Anatomically, the nerve that is believed to be the culprit in producing meralgia is, in the descriptions of all experts, the lateral femoral cutaneous [5]. In a medical dictionary, meralgia paraesthetica is defined as "Bernhardt's disease; tingling, formication, itching, and other forms of paraesthetica on the outer side of the lower part of the thigh in the area of distribution of the external cutaneous branch of the femoral nerve. There may be pain, but the skin is usually hyperesthetic to the touch" [6]. In this context, "the external cutaneous branch of the femoral nerve" means the lateral femoral cutaneous. The lateral femoral cutaneous is not a branch of the femoral nerve. It is a blatant anatomical mistake.

Second, if meralgia paraesthetica is indeed neuralgic pain in the lateral femoral cutaneous nerve, then this nerve will be important in acupuncture. The problem with respect to pain in the lateral side of the thigh is that it does not come from the lateral femoral cutaneous, but from the sciatic nerve. After careful and thorough dissection of the iliotibial tract, we are able to trace cutaneous nerves that penetrate the tract to branches divided from the sciatic nerve. More will be said about cutaneous innervation to the lateral side of the thigh when we describe the acupoints formed by the sacral plexus next. The acupoints formed by the lateral femoral cutaneous nerve are not of much use to us.

Third, Bernhardt disease is a rather common occurrence among people seeking acupuncture treatments. Acupuncture seems to be very effective in reducing or even eradicating symptoms described in meralgia paraesthetica, particularly at the early stages of having the disease. In time, patients with Bernhardt disease will have difficulty sleeping on their sides because pressing the hip on the bed will cause pain to appear in the greater trochanter and wake up the sleepers. Also, pain caused by meralgia paraesthetica can be a precursor of eventual hip joint replacements for the patients encountered in our acupuncture clinic.

7.4.1.6 Anterior Femoral Cutaneous

This nerve has multiple branches that originate from the femoral nerve. As shown in Figure 7.4, there are three acupoints that appear in the distal region of the anterior surface of the thigh. They are formed by the anterior femoral cutaneous nerves. The places where these cutaneous nerves pierce the deep fascia vary from individual to individual. Acupoints of the anterior femoral cutaneous nerves are rarely found to become tender. For this reason, they are rarely needed in acupuncture.

7.4.1.7 Parapatellar

This refers to acupoints located in the area of the kneecap (Figure 7.4). Each knee has two acupoints in front of the joint. They appear like two eyes, right and left. We know that there are cutaneous nerves to the knee joints. They innervate structures like the lateral and medial meniscus. We suspect that the parapatellar points are formed by the cutaneous nerve branches from the femoral nerve to the knee joint. Parapatellar points are very useful for deciding whether pain in the knee can be effectively managed with acupuncture. Pain in the knee is very common because of osteoarthritis. More about parapatellar points will be presented when osteoarthritis comes up for discussion in later chapters.

7.4.1.8 Saphenous

This is the most important point in the entire lumbar plexus. The nerve that forms this acupoint is a cutaneous branch as well as the terminal branch of the femoral nerve. Arising from the femoral nerve in the femoral triangle, it enters the adductor, or Hunter's canal, where it crosses the femoral vessels anteriorly from their lateral to their medial side. It emerges medioinferiorly from underneath the sartorius muscle, becoming very superficial just immediately below the medial side of the knee under the medial condyle of the tibia. Immediately after penetrating the deep fascia under the medial condyle, the saphenous nerve divides into three branches: the anterior, middle, and posterior. The area covered by these three branches of the saphenous nerve is very important with respect to the formation of acupoints. Sometimes, more than four acupoints will appear in this area (Figures 7.4 and 7.5). Depending on how early these saphenous points appear, they can be categorized as primary, secondary, tertiary, or nonspecific acupoints. Tenderness in at least one saphenous point is almost universal for patients seen in our acupuncture clinic.

7.4.2 Muscular Branches

7.4.2.1 Obturator

This nerve leaves the pelvis via the obturator foramen to supply the skin and muscles in the medial compartment of the thigh. One acupoint formed by the cutaneous branch of the obturator nerve has been described previously. Two acupoints formed by the muscular branches of the same nerve are offered here (Figure 7.5). Obturator points are rarely used because pain in the medial compartment of the thigh is not common at all. Pain in the medial compartment can occur when one or more muscles become torn or otherwise injured in recreational sports such as speedboat racing or waterskiing. Accidents in these types of sports are known to happen because the thighs are pulled outward too fast and too hard, resulting in tearing or damage to the hamstring (the semimembranous and semitendinosus). In such cases, tender acupoints will appear in the muscular branches from the obturator nerve.

7.4.2.2 Rectus Femoris

This is one of the four heads belonging to the quadriceps femoris muscle. The entire thigh contains many muscles. They overlay one another, and most of them are buried deep inside the muscular compartments. Thus, their motor points don't have any strong possibility to serve as acupoints. Three of the four heads of the quadriceps—the rectus femoris, vastus lateralis, and vastus medialis—are the outermost layer of the muscles in the anterior compartment of the thigh. Their motor points are situated relatively superficially at the locations where the muscle mass (rectus femoris) is relatively thin, or right at the sites where the tendons of the vastus lateralis and vastus medialis spread out to continue as the patellar ligament to attach to the tibial tuberosity.

7.4.2.3 Vastus Lateralis

This point is illustrated in Figure 7.4. Locating it is relatively simple; it sits right on top of the lateral epicondyle of the femur. This point will become tender in people who have arthritis in the knee for

a certain period. We suspect that the reason for vastus lateralis and medialis points becoming tender is a diminishing in the synergistic activities of muscular movement in the thigh. The extent of wear and tear in the quadriceps femoris muscle may increase under ordinary circumstances.

7.4.2.4 Vastus Medialis

This point can be found in Figures 7.4 and 7.5. It is located right on the tip of the adductor tubercle of the medial epicondyle. As with the vastus lateralis point, the vastus medialis will become tender in people who suffer from knee pain. If both points demonstrate painful sensation, the arthritis in the knees is in an advanced stage and will be difficult to manage, even with the use of acupuncture. The sequence for these two points to turn passively painful is not predictable. Sometimes, the vastus lateralis point will become tender first, then the vastus medialis, and sometimes vice versa.

7.4.2.5 Sartorius

The longest ribbonlike muscle in the body, the sartorius has a motor point that becomes an acupoint (as shown in Figure 7.5) because it is right under the skin in the medial compartment of the thigh. A slip of the aponeurosis of this muscle blends above with the capsule of the knee joint. Therefore, functional abnormalities in the knee can have a detrimental influence on the activity of the sartorius muscle, turning its motor point into an acupoint. Even so, this acupoint is very rarely called into use in acupuncture.

7.4.2.6 Femoral

This enters the Hunter's canal (Figure 7.2) to become the saphenous nerve. At this location, it gives away branches to a number of muscles. None of them happen to cover the nerve, making directly pressing it possible when the acupoint formed by this nerve becomes tender. Young women experiencing menstrual cramping will notice that their femoral point can become sensitive during the arrival of menstruation.

7.5 ACUPOINTS OF THE SACRAL PLEXUS

Acupoints of the sacral plexus have been reported previously [7]. The distribution of acupoints formed by the nerve branches of the sacral plexus is more complicated to describe than that of branches formed by the lumbar plexus. Some of them are found in the posterior of the thigh and leg. Some are in the anterior and lateral, or located in the knee, popliteal fossa, and foot. For the sake of convenience, we will describe acupoints of the sacral plexus according to where they can be located. The localities are divided into the thigh, popliteal fossa, leg, and foot.

7.6 DISTRIBUTIONS TO THE THIGH

The acupoints in the thigh are found in the posterior and lateral compartments. There are two acupoints in the posterior compartment, and three in the lateral. One acupoint, the inferior gluteal, is placed in this group, simply because no other place is more appropriate for it.

7.6.1 In the Posterior Compartment

As can be seen in Figure 7.4, there are only two points shown in the posterior compartment of the thigh, the gluteal fold and posterior femoral cutaneous points. In fact, both of them are formed by the same nerve, the posterior femoral cutaneous. The third acupoint, the inferior gluteal, is not in the posterior compartment of the thigh, but in the gluteal region. We view the gluteal region as the upper extension of the thigh.

7.6.1.1 Gluteal Fold Point

This is so named because it appears right in the middle of the gluteal fold. The cutaneous nerve that forms this acupoint is a branch of the posterior femoral cutaneous. The term "posterior femoral

cutaneous" is actually something of a misnomer because it is a mixed nerve rather than purely cutaneous. The nerve receives posterior branches from the first and second sacral spinal nerves, and anterior branches from the second and third sacral spinal, as described by Woodburne [3]. The posterior femoral cutaneous thus includes both cutaneous and muscular branches.

Running parallel with the posterior femoral cutaneous is the pudendal nerve, which passes into the pudendal canal. This is a fascial canal formed by a split in the obturator internus fascia on the lateral wall of the ischiorectal fossa. The pudendal nerve has three branches: the inferior rectal, perineal, and dorsal nerve of the penis (or clitoris). At the location these three branches divide from the pudendal nerve is an acupoint, as indicated in Figure 7.4. This point can become very tender in patients who have a painful condition known as coccydenia. Otherwise, there is no chance to use this point in acupuncture treatments. The point is too close to the external genitalia, too sensitive an area to place needles. It is not necessary to describe this point separately as an entity of acupoints.

7.6.1.2 Posterior Femoral Cutaneous

The nerve keeps running distally along the midline of the thigh. At the center point of this midline between the gluteal fold and popliteal fossa, the nerve penetrates the deep fascia to go superficial. This is the location of the posterior femoral cutaneous point (Figure 7.4). Both the gluteal fold and the posterior femoral cutaneous points can become trigger points in people with a long history of chronic lower back pain. The opportunity to use them in treating pain is rather good.

7.6.1.3 Inferior Gluteal

This nerve is a muscular branch. It arises from the posterior branches of the anterior primary rami of the fifth lumbar and the first two sacral spinal nerves, then leaves the pelvis through the greater sciatic foramen below the piriformis and enters the gluteus maximus muscle. The motor point formed between the inferior gluteal nerve and the gluteus maximus muscle is the inferior gluteal point (Figure 7.4). There are many muscles in the gluteal region. Some of them are large, and some deep. None of them has a motor point that will turn into an acupoint, except the gluteus maximus. This muscle is the most superficially spread out in the gluteal region. This acupoint is the only point present in the entire region. The point is located right in the center of the gluteal region, where the nerve enters the muscle. The motor point of the gluteus maximus muscle has a rich vascular bed, covered by the inferior gluteal artery and vein. Pain in the inferior gluteal point can be very stubborn. Clinically, the pain is referred to as piriformis syndrome because it is believed that the inferior gluteal nerve is pinched by the piriformis muscle. Such an etiology of pain in the buttock is questionable for the very simple reason that the piriformis is a small muscle and sits deeply inside the gluteal. The inferior gluteal point is important because it will seem tender in anyone who has lower back pain.

7.6.2 In the Lateral Compartment

Acupoints in the lateral compartment are important in acupuncture. Painful conditions such as Bernhardt disease are rather frequently encountered in the practice of acupuncture. Acupoints in the lateral compartment are necessary for treating pain in this area. Two controversies or dilemmas have come up for discussion: which nerve plays the necessary role to form acupoints in the lateral compartment of the thigh, and how many acupoints are there in the same anatomical localities? As explained briefly above, the cutaneous innervation to the lateral side of the thigh is said to be from the lateral femoral cutaneous nerve, according to conventional texts of gross anatomy. Our own research, through careful and thorough dissections of cadavers, proves otherwise. The cutaneous branches to the skin in the lateral compartment are derived from the sciatic nerve. Usually, there are four of them. These four cutaneous nerves penetrate the iliotibial tract to become superficial. We have no appropriate anatomical nomenclatures for these cutaneous nerves. The best choice is

to name them as iliotibial points. Besides the iliotibial points, there are the greater trochanter and biceps femoris points to discuss.

7.6.2.1 Greater Trochanter Point

There can be just one or multiple greater trochanter points. Although there is no figure here to indicate where the greater trochanter point is located, it is (or they are) not difficult to find. The greater trochanter of the femur is a bony projection on both hips. As we sit down, this bony process is easy to palpate. If there is any acupoint appearing in this location, it will be easy detecting its presence. Anatomically, we don't know which nerve should be responsible for having acupoints over the trochanter. We do know that there is a large bursa, the largest in the body, covering the greater trochanter. We suspect that the bursa may play a role in causing pain over the trochanteric region.

7.6.2.2 Iliotibial Tract Point

There can be anywhere from one to four iliotibial tract points (Figure 7.6). Some people will have only one acupoint detectable in the lateral side of the thigh. This first appearance makes it the primary acupoint. This first point always appears in the center of the midlateral line. Some will have two, three, or four acupoints along the same line in the lateral compartment. The point that appears second is located approximately 2 in. superior to the first point. The third point is located 2 in. below the first. The fourth and last is 2 in. lower than the third point. As such, the iliotibial tract points shown in Figure 7.6 are designated as the primary, secondary, tertiary, and nonspecific.

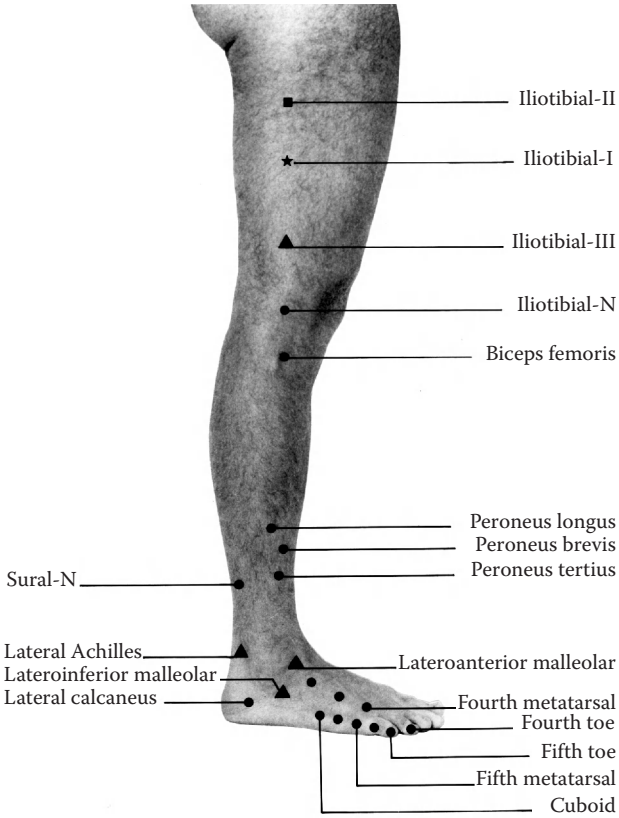

FIGURE 7.6 Acupoints along the ilitibial tract, in the lateral compartment of the leg and the dorsal surface on the lateral side of the foot.

7.6.2.3 Biceps Femoris Point

This point is formed by two muscular branches to this muscle. One comes from the tibial nerve to the long head, and another from the common peroneal to the short head. The tendon of the biceps femoris muscle joins that of the quadriceps to become part of the fibular collateral ligament. This collateral ligament has the potential to be damaged, or even torn apart, because it is immediately beneath the skin. Tenderness in the biceps femoris point can be an indication of an injured fibular collateral ligament.

7.7 DISTRIBUTIONS IN THE POPLITEAL FOSSA

There are three acupoints that can appear in the popliteal fossa, as shown in Figure 7.4. These three points are the sciatic, lateral popliteal, and medial popliteal.

7.7.1 Sciatic Point

As the name indicates, this acupoint is formed at one locality along the course of the sciatic nerve. The sciatic is the biggest nerve trunk in the body. In most cadavers, the trunk is about the size of the little finger. In spite of it being the largest in diameter, no acupoint is attributed directly to this nerve because of its deep position. The sciatic nerve descends down in the posterior compartment of the thigh and divides into two terminal branches—the tibial and the common peroneal—toward the distal end, as indicated by the location of the sciatic point (Figure 7.4). Before becoming the tibial and common peroneal nerves, it gives away a few cutaneous branches, some of which have been described previously, including four branches along the iliotibial tract.

7.7.2 Lateral Popliteal Point

The popliteal fossa lies behind the knee and is covered by the popliteal fascia. The space is diamond-shaped. On each end of the diamond is a shallow pit forming a small concavity. Between the two concavities, as can be seen in Figure 7.4, is a slight elevated bulge in the middle of the fossa. Immediately inside the skin at the lateral pit runs the common peroneal nerve, which is the location of the lateral popliteal point (Figure 7.4). The lateral popliteal is a primary acupoint.

7.7.3 Medial Popliteal Point

Underneath the medial popliteal point (Figure 7.4) runs the tibial nerve. As the tibial nerve continues the course of the sciatic from the thigh, it travels through the fossa in a direction from latero-superiorly to medio-inferiorly. Both the common peroneal and tibial originate from the sciatic nerve, which plays an important role in the pain of sciatica. They also provide genicular branches to the knee joint, which is one of the main sources of pain in the body. Such anatomical and pathological facts make the lateral and medial popliteal points important. Almost every patient received in the clinic has tenderness in one of the two points. Such acupoints are used in every acupuncture session when the occasion permits.

7.8 ACUPOINTS ON THE POSTERIOR COMPARTMENT OF THE LEG AND ANKLE

Acupoints in the posterior compartment of the thigh are all related to the sural nerve. The sural nerve is constructed by joining the medial and lateral sural nerves. They are all cutaneous branches. No muscular branch forms an acupoint in the posterior compartment. The lateral sural is a branch of the common peroneal and is the smaller of the two nerves. The nerve does not participate in the formation of any acupoints. Thus, it will not be further described.

7.8.1 Medial Sural

The medial sural nerve arises from the tibial nerve in the popliteal fossa. It descends immediately under the deep fascia in the groove between two heads of the gastrocnemius muscle as far as the middle of the leg. Here, it pierces the deep fascia and is joined by the lateral sural from the common peroneal to become the sural nerve. This kind of arrangement is rather unusual. Most nerve branches become smaller in size as they are further divided when distributed more peripherally. The sural nerve is more distal to both the lateral and medial sural, and yet it becomes larger than both of the nerves that contribute to its formation. This may be the reason that the sural point serves as an important acupoint.

7.8.2 Sural

The formation of the sural point (Figure 7.4) is explained in the previous subsection. There are three additional acupoints distributed along the medial sural nerve. We have no appropriate anatomical nomenclatures to name them, save for deriving names from the sural. Thus, these acupoints are named sural-III, sural-N, and medial sural, as indicated in Figure 7.4. The star in the figure indicates the primary or sural-I point, the triangle shows the tertiary or sural-III, and the black circles note the nonspecific or sural-N and medial sural points.

7.8.3 Medial Achilles

The calcaneal tendon, commonly known as the Achilles tendon, is the thickest and strongest in the body. Two large muscles, the soleus and gastrocnemius, contribute to forming this tendon. It begins at about the middle of the leg. Narrowing below, it inserts into the middle part of the posterior surface of the calcaneus bone. A bursa lies deep to the tendon and separates it from the upper part of the posterior surface of the calcaneus. An injury to the muscles, to the tendon itself, or inflammation in the bursa can possibly cause the formation of tender points on each side of the Achilles tendon. Thus, there is a medial and a lateral Achilles point.

7.8.4 Lateral Achilles

The lateral and medial Achilles points are very easy to check by rubbing the tendon between the thumb and the index finger. If there is tenderness on either side of the tendon, the indication is that either or both of them have become trigger points and are ready for acupuncture treatment. Immediately adjacent to the medial Achilles is the tibial nerve, which is along the plantar side of the foot. Immediately adjacent to the lateral Achilles is the sural nerve, which goes to the lateral side of the foot.

7.9 ACUPOINTS ON THE LATERAL COMPARTMENT OF THE LEG

Cutaneous innervation to the skin covering the lateral compartment of the leg belongs to dermatomes of the fifth lumbar and first sacral spinal nerves. Herniation of the intervertebral disc between the fifth lumbar and first sacral vertebrae has the potential to compress the dorsal root of the fifth lumbar spinal nerve. Such a condition, in an early stage of nerve root compression, can result in tingling and numbing sensations without much pain in the distal segment of the lateral compartment of the leg. This sensation indicates abnormal activities in the motor points formed by the muscular nerves. There are three muscles in the lateral compartment: the peroneus longus, peroneus brevis, and peroneus tertius.

7.9.1 Peroneus Longus

This muscle is the most superficially located of the three. The common peroneal nerve passes through a gap between the attachments of the muscle to the head and the shaft of the fibula, winds

around the neck of the fibula deep to the peroneus longus, and here divides into the deep peroneal and superficial peroneal nerves. There are usually branches to the peroneus longus from both the common peroneal and superficial peroneal nerves. Both of them contribute to form the peroneus longus point, as shown in Figure 7.6.

7.9.2 Peroneus Brevis

Deep to the peroneus longus is the peroneus brevis muscle. It is the shorter and smaller of the two. This muscle is innervated by a branch of the superficial peroneal nerve, which enters the posterior margin of the muscle where the peroneus brevis point is formed (Figure 7.6).

7.9.3 Peroneus Tertius

This is a small muscle, a lateral slip of another extensor muscle. This larger muscle is the extensor digitorum longus, from which it is seldom completely separated. Two branches of the deep peroneal nerve innervate the extensor digitorum longus. One of the two branches sends a small nerve to form the peroneus tertius point, which is insignificant in acupuncture.

7.10 ACUPOINTS ON THE ANTERIOR COMPARTMENT OF THE LEG

Acupoints in the anterior compartment are formed by the common peroneal nerve (Figure 7.7). In the gluteal region, the common peroneal portion of the sciatic nerve is more superficially placed.

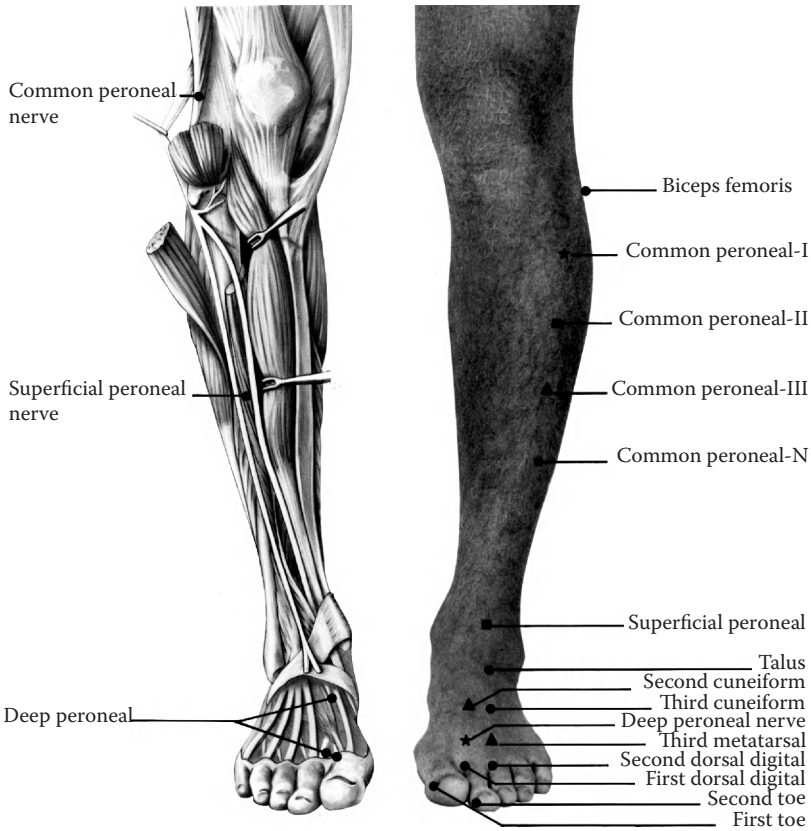

FIGURE 7.7 Acupoints in the anterior compartment of the leg.

Thus, it is more easily injured by an instrument, such as a long hypodermic needle used for buttock injection. Such an incident occurred in a patient. A few days after the injection, she began to feel pain in the anterior compartment of one leg. The pain ran along the lateral border of the tibia where the common peroneal nerve is located, and reached the superficial and deep peroneal nerves to the dorsal surface of the first three medial toes. She felt no pain in her other leg.

The common peroneal nerve is separated from the tibial nerve at the superior angle of the popliteal fossa. It then follows the medial border of the biceps femoris muscle, the tendon of which forms the superolateral boundary of the fossa. The nerve leaves the fossa by passing superficially to the lateral head of the gastrocnemius muscle. It then passes over the back of the head of the fibula before winding around the lateral surface of the neck of the same bone, as shown in Figure 7.7. The nerve finally runs beneath the upper portion of the peroneus longus muscle to enter the anterior compartment of the leg. At the head of the fibula and posterolateral to its neck, the nerve can be palpated by rolling it against the bone. Here, the nerve lies very superficially, immediately under the skin, but there is no acupoint that can be attributed to the nerve at this location, possibly because the nerve lies deep inside the deep fascia without any dividing or accompanying major blood vessels. The common peroneal bifurcates into the superficial and deep peroneal nerves in the upper region of the anterior compartment. Anatomically, the common peroneal and the deep radial nerve in the forearm develop analogically. Both of them have four acupoints along their courses of distribution, as shown for the common peroneal nerve in Figure 7.7. The common peroneal-I is the primary point, the common peroneal-II is secondary, the common peroneal-III is tertiary, and the common peroneal-N is nonspecific.

7.11 ACUPOINTS ON THE FOOT

Three nerves situated in the leg—the common peroneal, sural, and tibial—and their branches provide the structural elements for having acupoints in the foot. The acupoints on the dorsal surface of the foot are formed by the superficial and deep peroneal nerves distributing to the medial four toes (Figure 7.7), and the sural nerve to the fifth toe (Figure 7.6). The acupoints on the plantar surface of the foot are formed by the terminal branches of the tibial nerve (Figure 7.8).

7.11.1 Dorsal Surface of the Foot

Anatomically, the foot is a very complicated structure. Many bones, muscles, tendons, ligaments, and retinaculi make up a foot. Two bones are connected together by muscle tendons and ligaments to form a joint. All joints are innervated by nerves, and nerves have the potential to form acupoints. We will not be able to list all the potential acupoints in the foot because there are far too many to

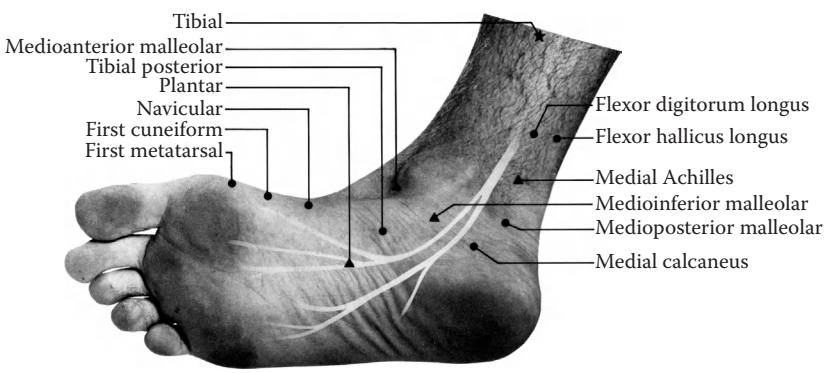

FIGURE 7.8 Acupoints formed by the terminal branches of the tibial nerve on the plantar surface of the foot.

count. All we can do is select the most useful and important acupoints as examples to present to the readers. Ten acupoints are listed here to represent those located on the dorsal surface of the foot.

7.11.1.1 Superficial Peroneal

This becomes a cutaneous nerve after piercing the deep fascia immediately lateral to the tendon of the extensor digitorum longus in the anterior ankle to form the superficial peroneal acupoint (Figure 7.7). It is a secondary acupoint. The acupoint formed by the deep peroneal nerve is the primary point, meaning that the deep peroneal point becomes tender sooner than the superficial peroneal point.

7.11.1.2 Deep Peroneal

This nerve becomes cutaneous after running through the deep fascia at approximately 2 cm rostral to the web between the great and second toes. This is a very important acupoint, belonging to the group of the primary points. Smaller branches from the superficial and deep peroneal contribute nerves to form acupoints described subsequently.

7.11.1.3 Metatarsal

This describes five bones in the foot, which form joints with the toes. These joints are potential locations for having acupoints. The metatarsal point between the third and fourth toes is a good example. This point can become tender in people who have Morton neuroma. We have four metatarsal points in each foot.

7.11.1.4 Talus

The talus is one of the seven tarsal bones. It connects to the navicular and calcaneus. The junctions between these bones can become acupoints.

7.11.1.5 Cuneiforms

There are three cuneiforms. The same acupoint potential applies to their junctions with other tarsal bones adjacent to them.

7.11.1.6 Dorsal Digital

This refers to interphalangeal joints. The acupoints formed by these joints are useful when treating people who have the conditions known as hammer toe or bunions. Hammer toe is a deformity caused by permanent angular flexion, and a bunion is an inflammation that develops in the big toe.

7.11.1.7 Lateroinferior Malleolar

This is located below the lateral malleolus of the fibula, as its name indicates. There are a few ligaments in this area. Tearing or damage to one or more of these tendons is possible when the ankle is twisted due to overeversion or overinversion. The damage can lead to the appearance of acupoints in the lateroinferior malleolar point.

7.11.1.8 Lateroanterior Malleolar

The name is derived in the same fashion as that of the lateroinferior malleolar point. The appearance of either or both of these two points will depend on which ligaments are damaged. More ligaments injured with greater severity will have more acupoints appearing in the inferior region of the lateral malleolus.

7.11.1.9 Lateral Calcaneous

This is the point right on the lateral surface of the calcaneous bone, the largest and strongest of the foot. It is long, flattened from side to side, and bulbous posteriorly and inferiorly where it forms the heel. Acupoints can appear on each side of the flattened surface and the heel, particularly for people who suffer from chronic pain, such as diabetic peripheral neuropathy.

7.11.1.10 Cuboid

This tarsal bone is on the lateral side of the foot between the calcaneus (behind it) and the fifth metatarsal bones (in front). Its dorsal surface is rough and nonarticular, making it easy to palpate. Occasionally, an acupoint can be found in the dorsal surface of the cuboid. All of the last four acupoints mentioned previously located on the lateral side of the foot can exist because of the sural nerve.

7.11.2 Plantar Surface of the Foot

All of the acupoints on the plantar surface of the foot are produced by the tibial nerve and its branches. The plantar surface can become very sensitive in some patients. Consequently, every point in the plantar will appear tender on proper pressing. Twelve acupoints are selected for demonstrative purposes.

7.11.2.1 Tibial Point

The tibial point is not located on the plantar surface, but toward the distal end of the medial side of the leg, as shown in Figure 7.8. This is one of the most important acupoints. It will be used every time the point is possible to reach. After branching from the sciatic nerve, the main trunk of the tibial nerve remains in the posterior compartment of the leg and gives off muscular and cutaneous branches. The cutaneous branches of the tibial contributing to the formation of acupoints are the sural and the plantar. The location of the sural nerve and the acupoints formed by it are shown in Figure 7.4. The tibial nerve comes close to the skin, approximately 7 to 8 cm above the medial malleolus. The skin surface over this area can become very sensitive in people with chronic pain. This is the location of the tibial point. At this point, the tibial nerve gives away branches to several structures, such as the deltoid ligament, before running into the plantar to become the medial and lateral plantar nerves.

7.11.2.2 Medioanterior Malleolar

This anterior acupoint is right under the medial malleolus. Under this bone projection, there are four ligaments that connect the tibia to the tarsal bones. The ligaments, from anterior to posterior, are the tibiotalar, tibionavicular, tibiocalcaneal, and posterior tibiotalar. They are collectively known as the deltoid ligament. If the tibiotalar ligament is injured, the medioanterior malleollar point will appear.

7.11.2.3 Medioinferior Malleolar

This point can appear immediately below the medial malleolus if the tibionavicular or tibiocalcaneal (or both) ligaments are damaged.

7.11.2.4 Medioposterior Malleolar

This point can be a short distance from the medial malleolus. If a ligament behind the ankle is torn, the medioposterior malleolar acupoint can appear there. All of the described acupoints in the ankle joint are more or less anatomical speculation. We don't really know for sure if these acupoints exist because of injury or damage to a particular ligament. Such injury or damage is not easy to verify in the first place.

7.11.2.5 Medial Calcaneous

This is analogous to the lateral calcaneous point on the lateral side of the calcaneous bone. These two points can become tender in patients with a history of chronic pain. Once the calcaneous points appear, the pain can become difficult, if not impossible, to manage. By then, amputation might be the best outcome for diabetic peripheral neuropathy in the foot.

7.11.2.6 Navicular Point

This acupoint can appear at the tuberosity of the navicular bone. The navicular, first cuneiform, and first metatarsal points are on the medial side of the foot. The nerves contributing to form these points are both from the tibial and peroneal on the dorsal side of the foot.

7.11.2.7 First Metatarsal Point

This point is on the head of the first metatarsal, and can become sensitive on feet that have been wearing shoes that are too tight. If the friction between the big toe and shoe is maintained long enough, the area can develop to become a bunion, as mentioned previously. Some bunions can be treated using acupuncture.

7.11.2.8 Flexor Digitorum Longus

Both this and the flexor hallucis longus point are examples showing that acupoints formed by motor points of the muscles in the leg and foot can appear when the conditions are appropriate. However, acupoints formed by such motor points are not commonly detected in the patients that we have encountered.

7.11.2.9 Plantar Point

This point appears right in the center of the plantar surface. Here, the tibial nerve splits into several branches, including the medial plantar and lateral plantar nerves. The plantar point will become tender in patients experiencing pain on the bottom of the foot. Clinically, the pain is diagnosed as tarsal tunnel syndrome, or calcaneus fasciatis.

7.11.2.10 Medial Plantar Point

This point is located under the head of the second metatarsal bone and is formed by the medial plantar nerve. Some patients with tarsal tunnel syndrome or calcaneus fasciatis can experience tenderness at this acupoint.

7.11.2.11 Lateral Plantar Point

This is located under the head of the fourth metatarsal bone. At this point, the medial plantar nerve divides into digital branches. Such divisions make the webs between the toes sensitive. The best and most obvious example of such sensitivity is between the third and fourth toes, where Morton neuroma can occur.

7.11.2.12 Calcaneus

This point is at the bottom of the calcaneus bone. Tenderness in the calcaneus point is typical for all patients who come in with a diagnosis of calcaneus fasciatis. It is not clear to us exactly which nerves contribute to the formation of this calcaneus point because under the calcaneus bone there is no conspicuous cutaneous branch identifiable as clearly coming from the tibial, peroneal, or sural nerve. However, the plantar has a relatively high sensory field. Its skin is rather difficult to penetrate because more severe pain can be felt by the patients when their plantar surface is punctured. We suspect this is the reason that there is only one acupoint described on the plantar surface of the foot in traditional books of acupuncture, because everyone hates to have needles piercing the bottom of the foot.

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8 Physiology in Acupuncture

Anatomy is the science of structures. The only facts of acupuncture are acupoints. We have explained and demonstrated the anatomical identity of each of the acupoints. There is no doubt that nerve fibers are anatomical bases for acupoints. Now that we know their anatomy, we will need to know their physiology. Physiology refers to the knowledge of the function of a living organism or its parts [1]. In case of acupuncture, the quintessential matters we shall discuss are how the nerves function and what kinds of activity they have in physiological terms. However, there is not much information available with respect to physiological research for acupuncture. The few reports found in the literature about the physiology of acupuncture are related to the electrical nature of acupoints. Thus, our attention will have to turn to the electrical phenomena of acupoints in the body.

8.1 ELECTRICAL PHENOMENA OF THE BODY

The human body is a good electrical conductor. Because of this electric nature, it is possible to measure electrical activities in certain organs in our body. Electrocardiograms, electroencephalograms, and electromyograms are just three good examples. Electrical activity in the acupoints is also measurable. The anatomical elements that have this electrical activity are the nerve fibers. Nerve fibers have a number of physiological characteristics that will be useful to briefly review here.

8.1.1 Excitability

Nerve tissue is an excitable structure. This excitability distinguishes life from death. Not everything in our body has the same degree of excitability. Hair and nails are less excitable than nerves. For that matter, the nerve is probably the most excitable structure in a living organism. Because of this excitability, nerves, as well as acupoints, are capable of producing action potential upon adequate stimulation.

8.1.2 Polarization and Action Potential

Nerve fibers are electrically conductive because they carry electrons. There are electrons lining inside every nerve fiber as negative ions. Outside the fiber are positively charged ions that represent chemical elements such as sodium. The arrangement of positive ions outside and negative ions inside the nerve fibers is known as polarization. Neural stimulation can come from heat, cold, touching, pressing, pinching, nipping, cutting, stabbing, etc. When a nerve fiber is stimulated, the positive ions will move inward and negative ions outward, resulting in depolarization. The switch of ions in depolarization creates an electric signal or impulse so that we feel a certain sensation. Once the sensation ceases or disappears, the negative and positive ions will move back to their original positions. This restoration of ion position is known as repolarization. Movement of the ions during the depolarization and repolarization is known as transport of ions. This sequence of the events—depolarization, transport of ions, and repolarization—constitutes an action potential. Action potential is a physiological activity by which the nerve fibers are capable of initiating and propagating sensory and motor messages or impulses. Action potential varies from nerve to nerve or from acupoint to acupoint. Higher action potential makes depolarization easier than does lower action potential. One anatomical characteristic that contributes to having higher or lower action potential is the difference in the size of the nerves. Larger A fibers will depolarize more quickly

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than will smaller C fibers. Nerves or acupoints that are easier to depolarize are described as having a lower threshold, and vice versa.

8.1.3 Threshold

To generate an action potential for a nerve or acupoint, the stimulation has to reach the threshold required. The threshold is the specific point in time when stimulation reaches sufficient intensity to put a nerve or acupoint to work or excite it. With respect to the threshold of pain, one practical example can be demonstrated by anyone. Use a thumb and index finger to squeeze gently and gradually any part of the flesh. Initially, no pain is perceived. As the force is gradually increased, the squeezing can turn into pain at a given time. At that time, the squeezing can be considered to have reached the point of threshold. Physiologically, the larger the nerve fibers are, the lower the threshold for an action potential will be. In contrast, the smaller the nerve fibers are, the higher the threshold will be.

High and low thresholds are important concepts in this book. It should be understood that the threshold can change under different physiological and pathological conditions. Some acupoints will have a low threshold to become painful, whereas other acupoints will have high pain threshold under the same physiological conditions.

8.1.4 Conductivity

Once a nerve is stimulated and becomes excited to begin an action potential, this potential will spread along the same nerve fiber, following the mechanism of the depolarization by transporting negative ions out of and positive ions into the fiber. This mechanism to propagate depolarization is described as the conductivity of nerve fibers. Conductivity enables nerve impulses or messages to be transmitted from one area of the body to another. The speed of nerve impulse conduction is different from fiber to fiber. Larger A fibers will have higher speed of conductivity than smaller C fibers. This difference in conductivity has significance in the physiological function of acupoints. Briefly stated, all acupoints are formed by nerve fibers of different sizes. When an acupoint is stimulated, larger nerve fibers in the acupoint will be fired sooner to become depolarized and produce action potential than will smaller fibers. After the impulse is conducted by the larger fibers into the spinal cord, the gate in the spinal cord will be closed to prevent the impulse transmitted by the smaller fibers from entering. This is the well-known gate control theory proposed by Melzack and Wall [2]. This gate control mechanism explains why acupuncture is able to reduce or stop the pain, but not sensations such as numbness. Numb sensations are conducted by large A fibers, whereas pain is conducted by small C fibers.

8.1.5 Fatigue

If a nerve is repeatedly stimulated, eventually it will not be able to respond to that repeated stimulation. This is another physiological phenomenon of the nerve fibers known as fatigue. Fatigue can also occur at acupoints. Thus, it is not desirable to stimulate the same acupoints too frequently within a short interval. It is not uncommon to see press needles placed in the ears of patients for months.

8.2 ELECTRICAL ACTIVITY IN ACUPOINTS

Measuring electrical activity in the nerves is a well-established medical practice. Patients who suffer from carpal tunnel syndrome are known to have abnormal electrical activity in the median nerve. This fact indicates that electrical activity of the nerves can be quantified. Scientific reports to measure electrical activity in acupoints have been found in the literature. Here, we will cite three

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articles as examples to show electrical activity in acupoints. These three articles were all published in the *American Journal of Chinese Medicine*, which is a nonpeer review periodical.

The first article was authored by Drs. Brown, Ulett, and Stern [3], and is entitled "Acupuncture Loci: Techniques for Location." The original purpose of the research was not to prove any electrical activity at the loci of acupoints. Rather, they used skin potential recording techniques to identify the accurate locations of acupoints. Their findings can be summarized into two sentences: First, electrical conductivity at an acupoint is higher than that of the skin surface away from an acupoint. Second, electrical resistance at the same acupoint is lower than that of nonacupoints. Differences also existed between the different known acupoints they tested and measured. In other words, electrical conductivity and resistance are not uniform throughout our skin surface. This observation suggests that electrical activity such as conductivity and resistance can be quantified to be different at different acupoints by using an appropriate recording technique. This quantifiable difference is an indication that not all acupoints are equal or function the same physiologically. Physiological functional differences must be related to anatomical discrepancies, such as the size of nerve bundles or trunks, whether they are cutaneous or muscular branches, and how deep their locations are. Thus, it should be apparent that acupoints that are formed by a larger nerve branch located superficially will have more electrical activity for recording. Our conclusion is that because of the variability in anatomical structures, some acupoints will have lower thresholds for undergoing depolarization in generating action potential than others.

The second article was reported by Kano and his coworkers [4]. Their study involved using "an electrical probe for the localization of superficial sensory nerves." No acupoints are mentioned in the entire article. Nevertheless, what is described in the study could be properly applied in interpreting the electrical phenomena of acupoints. What they intended was a continuous effort to produce a local anesthesia in the arm, solely by the application of electrical currents. The article says, "best results are produced when the currents are applied over the points where the superficial sensory nerves enter the underlying fascia in the skin." Their superficial sensory nerves are the cutaneous nerves described in this book. The words "enter the underlying fascia" obviously are intended to mean that the cutaneous nerves penetrate the deep fascia. It is clear that the points on which Kano et al. used the electrical probe to stimulate the nerves are the acupoints formed by the cutaneous nerve branches going through the deep fascia. The points they used possess certain anatomical features described previously to contribute to the formation of acupoints. Their study also showed that electrical stimulation to acupoints is quantifiable.

The third article was reported by Lee [5]. The acupoint that Lee used in his report is known in traditional acupuncture as *Tsusanli*. The same point is described in Chapter 7 of this book as the common peroneal. It is located on the lateral side of the leg below the lateral condyle of the tibia. Lee observed that electrical stimulation at this acupoint produced a significant change in the blood flow of mesenteric arteries. A remarkable vasodilation in the arterioles was seen in the mesentery. This observation demonstrates a relationship of somato-visceral reflex. There are other reports [6–14] available for more studies of electrical phenomena observed in acupoints. That acupoints have electrical properties reveals to us that they are physiologically dynamic in nature.

8.3 DYNAMIC NATURE OF ACUPOINTS

Physiologically, acupoints have dynamic functions. The dynamic nature of acupoints is supported by the fact that they appear and disappear at whim. One dependable and reliable way to demonstrate if they appear is to check for the existence of certain sensitivity at a point. This sensitivity is universally present as aching or tenderness. The appearance and disappearance of acupoints will depend on the physical and physiological conditions of each individual. People who suffer from any kind of injury, whether occurring internally, such as infections, or sustained externally, such as severe flesh damage, will have acupoints appear in time as a result. Generally speaking, when acupoints seem to have tenderness, the individuals with the acupoints will not perceive that tenderness. The

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uncomfortable sensations of aching, tenderness, or pain can only be felt upon adequate stimulation, such as fingertip pressing. We will consider pain of this nature as passive. Passive pain has to be induced or provoked by external stimulation to be perceived. It is like a pain hidden in the body. Normal individuals can have it, but will not know that their acupoints have this hidden pain unless they know where acupoints are located.

Acupoints with tenderness were observed by Sola et al. [15] in 1955. Dr. Sola was the chief of Physical Medicine Service at Lackland Air Force Base, San Antonio, Texas in the 1950s. As a military physician, he most likely encountered freshly recruited young airmen coming to his clinic complaining of aches and pains in different parts of the body after a few weeks of intensive, strenuous basic training. Those aches and pains appeared over certain muscles in which a number of tender points were detectable. He used the term "trigger points" to describe these tender points. His opinion was that "trigger points can be most easily accounted for on the basis of mechanical stress" [15]. No doubt that mechanical stress is one of the important factors that contribute to the occurrence of aches and pains in the muscles that are overused. The question is why so many recruits went through the same mechanical stress, yet only some of them suffered from aches and pains in the muscles. Here lies another aspect of the quantitative variations of acupoints. Clearly, it is possible to quantify who does and who does not have tender or trigger points after an equal quantity of stressful exertion on the same muscles. The number of tender or trigger points is likely quantifiable. The locations of tender or trigger points turn out to be identical to those of acupoints. We begin to realize that all acupoints have different physiological functional phases.

The most revealing word used in Sola's report is "latent." He said, "these observations led to the question of the possible existence of the latent trigger points in asymptomatic individuals, where upon being subjected to the physiological insult of strain, chronic fatigue, chilling, or other irritating stimuli, they might serve as the source of clinical symptoms" [15]. The word latent adequately connotes the concept of the dynamism of acupoints. The implication is that, physiologically speaking, acupoints can exist in our body under different functional states or phases. Taking this thought into acupuncture practice, patients coming with pain symptoms were tested to determine if their acupoints had tenderness. The conclusion from the tests is unequivocal that all acupoints must have at least three different functional phases. By adapting Sola's opinion, the three functional phases of acupoints can be described as latent, passive, and active.

8.4 THREE PHASES OF ACUPOINTS

8.4.1 Latent Phase

Anatomically speaking, each person is born with acupoints in the latent phase. Individuals at an optimal state of health should have most or all acupoints in the latent phase. The word latent is intended to describe a state of dormancy. Acupoints in the latent phase are structural entities that lurk undetectably within the body. People with all acupoints in the latent phase are least likely to experience pain, particularly chronic pain. Acupoints in the latent phase seem to have a relatively high threshold because they seem to have less of a tendency to be depolarized in generating action potential. Acupoints in young and healthy people without much illness or physical injury tend to be latent. The concealment of the latent points will diminish or disappear when physical and physiological conditions ripen, as suggested by Sola et al. [15]. As acupoints change their functional phase in lowering the threshold to become more easily depolarized, their latent status will turn to the next phase, which is passive.

8.4.2 Passive Phase

Passive in this context means submissive. Passive also implies existence without explicit awareness. The objective existence of passive acupoints can only be discovered by ones who have sufficient

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knowledge of the location of acupoints. One has to know the right anatomic locations of acupoints to be able to detect them in the passive phase. Any acupoint in the passive phase must have an unfailing quality, which is the sensation of aching, pain, or other forms of possible discomfort. This quality can be elicited upon adequate stimulation.

It is still beyond our knowledge why and how the acupoints can be turned from latent to passive. Physiologically, it is obvious that an acupoint in the latent phase has a higher threshold and is harder to be depolarized under the same mechanical stimulation than the same acupoint in the passive phase. There is no scientific evidence to explain how acupoints are able to change from latent to passive phase. Speculations based on medical knowledge available will be offered at the appropriate times later in this book. For the time being, we just accept that acupoints exist.

Having acupoints in passive phase is a fact for practically all people who have experienced pain in the body for a certain time. How long this period should be is difficult to say. You don't have to be a trained physician to discover passive acupoints in your own body. All you need is to know where acupoints are located, which can be learned easily within this book. Acupoints may not be familiar to everyone. Trigger points certainly are known widely among nonmedical professionals. It will be definitely appropriate and accurate to say that acupoints in the passive phase are all trigger points. From now on, when trigger points are mentioned, we mean acupoints in the passive phase.

Two important aspects relating to the dynamic nature of acupoints and their changes in functional status deserve attention. The first aspect is the transition from latent to passive in a rather orderly sequence. One undeniable phenomenon is that certain acupoints invariably become passive more easily and sooner than others. The reasons for the sequential order can be attributed to the anatomic features described in Chapter 1. The second aspect is that acupoints turning from latent to passive phase can be statistically quantified. The quantity of passive or trigger points is in direct proportion to the chronicity of the pain. A person with a longer period of enduring pain symptoms will have more trigger points than another with a shorter period of pain suffering or none at all. That is to say, the number of trigger points is a reliable indicator for judging the duration of the pain present in the body. This observation provides a useful guideline for quantifying pain in a relatively objective manner. More will be said concerning pain quantification and its implications in pain management later in the book. Using trigger points to quantify pain gives a unique and unprecedented way to diagnose and predict a dependable outcome in the clinical practice of acupuncture.

8.4.3 Active Phase

As the duration of pain increases, a few passive acupoints can develop into the active phase. Patients with acupoints in the passive phase may have pain in a particular region of the body for a considerable time, and acupoints in that region can become active. Individuals with active acupoints will know where the points are because pain in the active acupoints is subjectively perceivable. Indeed, an active acupoint can be defined as a trigger point that can be readily identified by the person who has it. Only a small percentage of patients will show acupoints in the active phase.

The locations of active acupoints vary from time to time and from individual to individual. However, only a limited number of areas will have active points. These are the areas where the passive points are more likely to appear sooner, following the conditions of the anatomic features that contribute to the formation of acupoints. These anatomic features include the size of nerve branches, where they are situated, and whether they are muscular or cutaneous nerves. Acupoints formed by the spinal accessory, superior cluneal, and posterior primary ramus of the second lumbar spinal nerve are a few good examples. The appearances of active acupoints don't follow any sequential order. We cannot predict when or where they will be in whoever has them. Some active points can appear near the sites of disease or injury. In acute and traumatic injuries involving extensive tissue damage or bone fractures, active points can appear randomly, without discernible order. In most patients who are found to have active points, the number is just a few, one or two. Only very occasionally, the number of active points presented can be more than three or four. Clinically

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known examples are tennis elbow, or lateral epicondylitis, and calcaneous fasciatis. To treat pain with active acupoints, the needles have to be placed in such a way that the patients will subjectively feel the sensation produced at the sites where the needles are inserted.

8.5 PHYSICAL PROPERTIES OF ACUPOINTS

Thus far, what has been said about anatomic structures and the physiologic functions of acupoints have all been learned from observing patients who have come to the clinic. Data collected from clinical observations could be subjective. To be accepted as bona fide scientific fact, control studies are required. However, we have no way to conduct such clinical investigations (if anyone is able to reproduce the results offered in this book, then that will support our claims). Any phenomenon that is possible to reproduce may be trusted as having scientific viability.

An undeniable circumstance in acupuncture is that every person attends because of pain, mostly chronic pain. Each of them is carefully examined and tested on a number of selected acupoints. Over a period of approximately 6 months, 250 patients were examined. For comparison, 16 individuals were recruited as control subjects. They were either dental or medical students. One hundred and ten acupoints were chosen, 20 from each of five regions in the body. These five regions are the head, neck, upper limb, thorax and abdomen, and lower limb. For each selected acupoint, we recorded its sensitivity, the sequence in which it became passive, and the specificity in the area where the acupoint became a trigger point. The sensitivity, sequence, and specificity are the "three S's." We view these three S's as the physical properties of acupoints. Each of them is further defined and explained below.

8.5.1 Sensitivity

The word "sensitivity" in this context indicates the amount of pain, aching, tenderness, or other uncomfortable feeling produced when finger pressure is applied. The existence of sensitivity is determined by observing the patients' responses, both verbal and otherwise (wincing, grimacing, etc.). It should be remembered that the locations of acupoints are clearly known to examiners, but the tested individuals didn't have the slightest idea why a particular area chosen was or wasn't an acupoint.

It could be said that the examination is a simple blind test. Nonacupoints are used to make sure that no false response will be given by the tested individuals. The belief is that no person will be able to intentionally mislead the examiners because the examined people don't know how to. This assumes that all people who are tested are honest in responding to the question of whether or not they feel sensitive at the points tested.

The testing resulted in the following summarized observations:

1. All patients complaining of pain were found to have a number of acupoints with sensitivity. In other words, everyone tested had passive acupoints or trigger points. The numbers varied from a few, four or five, to more than a hundred.
2. Most control individuals had no detectable trigger points. In other words, their acupoints were in the latent phase. In those few with some sensitivity, the number of trigger points was very small, one or two at the most. The sensitivity at the passive acupoints was often described as minimal.
3. The degrees of sensitivity varied in different acupoints, and reactions from individuals who received the tests were not uniform. Certain passive acupoints were so sensitive that the persons tested winced or grimaced. Sometimes, the body parts involved, such as the arm, forearm, or hand, were withdrawn because of pain caused by the tests. Very often, patients could distinguish a passive acupoint that was more or less sensitive than the next acupoint or another acupoint tested.

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4. The passive acupoints with more intense sensitivities were the ones that became trigger points more often and sooner. The number of acupoints turning from latent to passive could increase as the duration of pain was extended. Patients suffering from pain in multiple locations of the body had more passive acupoints or trigger points.

In summary, sensitivity in the acupoints indicates that they are functionally in the passive phase, and that they are categorized as trigger points.

8.5.2 Sequence

The word "sequence" refers to the order by which acupoints become passive. The sequence has both qualitative and quantitative connotations. An acupoint that becomes sensitive sooner is considered to be at a higher order in sequence, and vice versa. The sequential order of acupoints becoming passive is clearly determined by the anatomic features they have. An acupoint formed by a larger nerve branch will have a higher order than one formed by a smaller nerve, even if they are located at the same depth under the skin. The infraorbital point is at a higher order than the supraorbital point. Both acupoints are formed by the cutaneous nerves in the face, and the depth of both cutaneous nerves under the skin is the same. Because the infraorbital nerve is bigger than the supraorbital, the infraorbital point becomes passive sooner than the supraorbital point. The same situation applies to the lateral antebrachial cutaneous point and the medial antebrachial cutaneous point. The lateral antebrachial point is formed by a larger cutaneous nerve branch than that of the medial antebrachial, and turns to become passive sooner than the medial antebrachial point. Similar examples can be found for many other acupoints.

Because acupoints turn from the latent to passive phase in a predictable order, it is possible to physically count how many trigger points any person may have. The number of trigger points provides a reliable way to objectively measure how much pain we may have at the time of examination. The quantity of pain measured in this way seems to have very little fluctuation over a reasonable period, if no therapeutic intervention is provided to manage the pain. Much more will be discussed with respect to pain quantification in Chapter 12. Essentially, what we have found is that having more trigger points will indicate having more objective pain in a person. Once it is possible to quantify pain by the physical calculation of existing trigger points, the manageability of pain will become predictable.

8.5.3 Specificity

The word "specificity" refers to the precise location and the size of the trigger points. The size of the sensitive area for a trigger point is very small, not much wider than a fingertip (estimated as 0.5 cm in diameter) in the beginning when acupoints turn passive. The area of the sensitivity will enlarge, and can reach 3 to 4 cm in diameter in some patients with chronic pain. The higher the specificity, the harder it is to locate the trigger points. As the specificity diminishes, the trigger points will become easier to detect. In short, sensitivity and specificity seem to be inversely related. As the sensitivity of passive acupoints increases, the specificity decreases. One good example is the saphenous point right below the medial condyle in the knee. The specificity of this acupoint can become so low that the whole area may turn passive in some patients, particularly if they happen to be female with gynecological problems.

In conclusion, we will summarize our findings in relation to acupoints. Physiologically, all acupoints have three functional phases: the latent, the passive, and the active. Conversion of acupoints from latent to passive is demonstrated by three physical properties of acupoints, described as the "three S's" (sensitivity, sequence, and specificity). Having sensitivity indicates that acupoints have turned from the latent to passive phase. They convert from the latent to passive phase in a predictable sequence, which enables counting how many acupoints are in a passive phase for each

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individual who is in pain or not. The quantitative evaluation of how many passive acupoints a patient has provides a useful criterion for making a reliable prognosis in pain management. Predictions in pain management will be thoroughly explained in a later portion of the book.

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9 Biochemistry in Acupuncture

9.1 BIOCHEMISTRY IN RELATION TO ACUPUNCTURE

Biochemistry is possibly the most important key to opening the secrets of acupuncture. Essentially, acupuncture is a useful tool to manage pain. How the pain is produced in the body, how the pain is transmitted from location to location, and how pain can be reduced or stopped will eventually have to be based on how much understanding there is with respect to the chemical substances that mediate the activities of pain. To keep acupoints in function, it is obvious that some biochemical media are required. These biochemical media are known as neurotransmitters. A great deal is known about neurotransmitters. However, their relationship to acupuncture is not totally clear. We know that if an acupoint is stimulated and the nerve that forms that acupoint is depolarized to generate an action potential, the depolarization is propagated and transmitted from nerve to nerve by certain neurotransmitters. The contents of this chapter are about the neurotransmitters that have a functional relationship to acupuncture.

9.2 TERMINOLOGIES IN NEUROTRANSMITTERS

There are a few terms that we need to describe neurotransmitters. For review purposes, they are briefly defined and explained below.

9.2.1 Neuroreceptor

The concept of a receptor in biochemistry was introduced at the beginning of the twentieth century [1]. There are receptors for drugs, hormones, and neurotransmitters. Our concern is mainly for the receptors of the neurotransmitters. They will be referred to as neuroreceptors [2], or simply receptors for our purposes. We don't know how many receptors there are. All that can be said is that each neurotransmitter discussed in this chapter has its own receptor. All receptors are located on the surface of the neurons. How important the receptors are in acupuncture is not well known. The search and research for various kinds of receptors is one of the most intensively investigated areas for the nervous system. It will remain so in the foreseeable future, and more receptors will be discovered in future studies of the nerves. There is no doubt that receptors must play some role to lead to a better future understanding of how acupuncture works.

9.2.2 Agonist and Antagonist

The agonists and antagonists are two enemies because they work against each other in a chemical sense. If an agonist works for one neurotransmitter, an antagonist will work against the same transmitter. Receptors are said to be a major factor in determining whether something will be an agonist or antagonist. An agonist can enhance a particular neurotransmitter and an antagonist will suppress or prevent such a potential. The terms agonist and antagonist are often used in a pharmacological sense or in the study of drug action. However, they also appear rather frequently in acupuncture literature. In acupuncture, "agonist" implies something that can increase needle effectiveness, whereas "antagonist" is something that can minimize or block such effectiveness.

9.2.3 Synapses

A specialized site of contact between neurons is defined as a synapse. There are numerous types of synapses, which are described in textbooks of histology as axoaxonic, axodendritic, axosomatic, chemical, and electrical synapses. Chemical and electrical signals pass from neuron to neuron through the synapses. Neurotransmitters are synthesized in one nerve cell, the presynaptic neuron. The neurotransmitters are then released into the microspace of the synapse and received by the receptors in the postsynaptic neuron. Thus, there are presynaptic and postsynaptic neurons. The relationship between synapses and acupuncture is entirely unknown. No report has been found in the literature to explain what role the synapses play in making acupuncture work or not work.

9.2.4 Granules

One reason to mention synapses is the presence of granules. Many neurotransmitters appear like granules when prepared and observed under an electron microscope. In presynaptic neurons, many granules containing neurotransmitters can be seen. These granules are described as synaptic vesicles. There are different forms of granules and vesicles. These differences in form are believed to represent different transmitters. There is no information to offer with respect to the form and shape of any neurotransmitter implicated in acupuncture mechanisms. Information such as what granule will be released when acupuncture is applied, and in which synapse, is all unknown.

9.2.5 Neuromuscular Junction

Anatomically and physiologically, "neuromuscular junction" is a well-known term. We know how a neuromuscular junction looks microscopically, what it does physiologically, which transmitters its synaptic vesicles contain, and which diseases associated with pathological changes can occur at the junction. There is no direct relationship between neuromuscular junctions and acupuncture. However, one indirect relationship can occasionally be observed. When a needle is inserted into an acupoint that contains a muscular nerve to the motor point, and the motor point is formed by a large number of neuromuscular junctions, immediate twitching in the muscles can be easily seen. This immediate twitching muscle reaction is due to a simple nerve reflex. The neurotransmitter participating in this nerve reflex is acetylcholine, which is irrelevant in the actions of acupuncture.

9.3 RELEVANCE OF NEUROTRANSMITTERS

For all of the neurotransmitters we have learned, we come to conclude that some of them, such as endorphins, have significant physiological relevance to acupuncture. Others, such as acetylcholine, have little or no relevance to acupuncture. We will first take the example of acetylcholine to interpret the relevance of neurotransmitters in relation to acupuncture.

Acetylcholine has been known as a neurotransmitter for more than 100 years [3]. This chemical was the first neurotransmitter experimentally identified in the central nervous system. A great deal of information and knowledge has been accumulated about the chemical nature, physiological functions in the nervous system, and diseases associated with acetylcholine because of the enormous quantities of scientific research on this substance. There could be as many as a million scientific publications carrying the word "acetylcholine" reported by countless numbers of investigators.

The first person to point out that acetylcholine might be a chemical cellular mediator for modulating certain physiological function was Dr. Hunt [3]. In 1914, Dr. Dale provided clear evidence to show that acetylcholine was released in nerve stimulation. By 1984, this neurotransmitter had been purified chemically by a number of investigators [4,5]. Thus, the chemical structure of acetylcholine was firmly established.

Acetylcholine is found in many locations in the body. It has broad functional effects in a number of tissues and organs. Acetylcholine is known to be able to dilate blood vessels in the skin and viscera so that blood flow will increase in that area. It can cause contraction of the eye's iris and play a role in the accommodation of our vision. Acetylcholine is a possible promotor of the secretion of the salivary and sweat glands. Release of acetylcholine from presynaptic neurons has been shown to slow down heartbeat, lower blood pressure, and speed up peristalsis of the alimentary canal. It can relax the urinary bladder and the erect penis. These are just a few examples to show what acetylcholine can do for and in the physiological system. By unraveling how acetylcholine is synthesized, stored, released, and metabolized, scientists have attained a fairly good idea of how acetylcholine causes all these functional changes in the system.

We go to such a great extent to speak of acetylcholine for one purpose: to show how much the scientific communities know about this neurotransmitter. Acetylcholine has many physiological activities and functions. Surprisingly, no evidence is available to indicate whether acupuncture is involved in the activity of this neurotransmitter. Nothing is known of whether acetylcholine plays any role in how acupuncture works. We do know that in the peripheral nerves, acetylcholine is very active in the skeletal neuromuscular junctions. This neurotransmitter is released at the end of the efferent nerve fibers that innervate the skeletal muscles. Acetylcholine is also found to be released from the preganglionic and postganglionic cells of the parasympathetic nerves. They are all in the group of efferent nerves (see Chapter 2). No acetylcholine has ever been found to be present in the afferent nerves. The efferent nerves play no beneficial role in the usefulness of acupuncture. Therefore, diseases such as myasthenia gravis, which is caused by a deficiency of acetylcholine in the neuromuscular junctions, will be impossible to improve much by acupuncture.

Parasympathetic nerves contain acetylcholine. One drawback is that these nerves are not readily available over the skin of the body. No definite evidence shows that acupuncture directly induces the secretion of acetylcholine. However, there are some indications that acupuncture changes certain functional activities in some visceral organs. These physiological changes are related to the activities of acetylcholine. Here are a few examples: acupuncture can momentarily reduce blood pressure. Certain incontinences can be improved by acupuncture. Patients have claimed that they can control the bladder better with decreased frequency of urination after acupuncture. Conditions of constipation seem to improve with acupuncture treatments. All these effects are manifestations of cholinergic nerve reaction with an increase in acetylcholine activities. All these effects are indirect actions of acupuncture. The results are often short-lasting and difficult to sustain for a long period of relief or improvement. There are many questions that need to be answered with respect to what effect acupuncture can have over the activities of the neurotransmitter acetylcholine.

9.4 IMPORTANCE OF ENDORPHIN

We all know that endorphin is an endogenous morphine. There are approximately half a dozen peptides that deserve to be named endorphin. The name refers to a number of neuropeptides, all of which are considered neurotransmitters. Two of them are most often mentioned when topics of pain and acupuncture come up for discussion. They are metenkephalin and leuenkephalin. Other neuropeptides have rather complicated and difficult-to-comprehend nomenclatures, such as proopimelanochortin and prodynorphin. To simplify matters, neuropeptides that constitute this family of endorphins will be referred to as opioid peptides. The term obviously derives from the fact that morphine is a powerful ingredient in opium. So the connection between opium, morphine, opioid peptides, and endorphin should be clear. Opium and morphine are very effective substances for pain management. It stands to reason that because endorphin or opioid peptides are endogenous morphines, they ought to have the property of relieving pain. In fact, there is evidence to suggest that endorphin is 100 to 200 times more potent in relieving the same pain than exogenous morphine. This fact makes endorphin the most important, popular, and relevant neurotransmitter in acupuncture research.

Endorphin is found in many areas of the central nervous system. Major organs believed to synthesize endorphin include the pituitary gland, dorsal root ganglia, and intestine. In animals, endorphin receptors are said to be found in the vas deferens, heart, and other locations. The data available seems to indicate that not all opioid peptides have the same analgesic potency. One peptide can be more potent than another at different locations and at different times. Different neurons with distinct morphological features may contain different peptides. The biochemical physiological complexities are unquestionably overwhelming.

We are incapable of repeating everything reported for endorphin. Only a few items in the relation between endorphin and acupuncture deserve our attention and are mentioned here.

One of the best known antagonists for endorphin is naloxone. In acupuncture research, naloxone is used to determine if a given phenomenon or manifestation is an endorphin-related reaction. Thus, naloxone is used to block the effects of acupuncture. To prove if a physiological activity, such as facilitating mitosis of lymphocytes, is a result of acupuncture, administer naloxone before acupuncture stimulation, and the division of lymphocytes will be seen to decrease. This observation leads us to believe that acupuncture can enhance the activity of the immune system. This suggests why acupuncture is useful in improving some conditions, such as nasal congestion due to allergies.

There are many articles available for us to read that report the results of studies in acupuncture. One of the most important findings is that acupuncture induces the production of endorphin, which is the reason that pain can be reduced or even stopped. This finding is useful to help us understand why acupuncture works. Nevertheless, it will not help anyone to become a better acupuncturist. The status of acupuncture stays the same. Some pain will be manageable by using acupuncture, other pain will remain impossible for acupuncture to do anything. Theories based on endorphin have been proposed to explain how acupuncture works. None of them either enhances or reduces the effectiveness of acupuncture.

9.5 OTHER NEUROTRANSMITTERS

There are several other neurotransmitters. They can be categorized into six groups: catecholamines, serotonin, histamine, neuroactive peptides, amino acids, and adenosine. What role these neurotransmitters play in acupuncture is not entirely clear. We will try our best to speculate whether acupuncture applications will involve the activities of any of these chemicals.

9.5.1 Catecholamines

The term "catecholamines" refers generically to all organic compounds that contain a catechol nucleus, which is a benzene ring with adjacent hydroxyl substituents [6] and an amine group. The compound from which the other catecholamines described here are derived is known chemically as dihydroxyphenylamine or dopamine. Dopamine can be converted into norepinephrine, and norepinephrine can be transformed into epinephrine or adrenaline. Adrenaline is produced in the adrenal gland. It is common knowledge that adrenaline is pumped out very quickly from the adrenal gland when we undergo stress. Therefore, it is easy to understand the relationship between the adrenal gland and pain. Pain in patients with a deficiency in the adrenal gland is harder to manage with acupuncture than in those with normal adrenal function. For example, acupuncture will not be of much use in handling reflex sympathetic dystrophy.

Norepinephrine is another catecholamine. This neurotransmitter is released at the nerve terminals of postganglionic sympathetic fibers. The postganglionic sympathetic nerves are widely involved in acupuncture treatments. A release of norepinephrine is expected each time acupuncture is performed. The relationship between norepinephrine and acupuncture is a temporal event. Immediately after needling, acupuncture seems to serve as an agonist for norepinephrine. In time, acupuncture becomes an antagonist to suppress the sympathetic nerve's activities. The suppression of sympathetic activity can be used to explain why acupuncture is able to reduce or minimize

menstrual cramping. One hormone that has something to do with cramping is prostaglandin, which is a potent antagonist of norepinephrine. Acupuncture increases norepinephrine release, which in turn reduces the production of prostaglandin.

In the course of acupuncture treatments, a number of reactions to needling occur rather frequently. These needle reactions are clearly related to a surge in the activity of the autonomic nerves due to an increase in the secretion of catecholamine neurotransmitters. These reactions will be further mentioned in the last part of this chapter, after we finish our discussion on neurotransmitters.

The third neurotransmitter in the catecholamine group is dopamine. In the central nervous system, dopamine is found in the red nucleus of the medulla oblongata. In the peripheral nerves, it is known to be present in the carotid body and the superior cervical ganglia. A deficiency in dopamine can result in Parkinson disease. Acupuncture is not of much use for improving the symptoms of the disease, possibly because it is an abnormality in the function of efferent or motor nerves, in which acupuncture does not provide much effect.

9.5.2 Serotonin

This neurotransmitter can inhibit neural firing. Nerves become harder to depolarize. Yet, serotonin has the potential to increase dopamine and norepinephrine release, which means that it can act like an agonist for dopamine and norepinephrine, and an antagonist for acetylcholine. The reason serotonin is an antagonist to acetylcholine is because sensitivity to acetylcholine at postsynaptic nicotine receptors is depressed or suppressed. That being true, serotonin must be an antagonist for acupuncture.

Serotonin has been found in many areas of the brain and the spinal cord. Neurons containing serotonin are known as serotonergic nerve cells. Nerve terminals of serotonergic neurons are known as serotonergic fibers or pathways. Some serotonergic neurons and pathways contain not only serotonin but also other groups of neurotransmitters, namely, substance P and enkephalin. Substance P, enkephalin, and serotonin have all been implicated in the transmission or modulation of pain impulses in the central nervous system [7]. Substance P is thought to be an excitatory neurotransmitter for neurons in the dorsal horn of the spinal cord to transmit pain signals, whereas enkephalin and serotonin seem to suppress pain transmission in various parts of the spinal cord and brain. Thus, substance P is an agonist for pain, and enkephalin and serotonin are antagonists as far as the central nervous system is concerned in the perception of pain. Just why substance P and enkephalin should be present in serotonergic neurons and possibly be released with serotonin remains a mystery. Can the relationship between serotonin and acupuncture not be the same?

Serotonin is found in two more central nervous system locations: preganglionic sympathetic neurons in the lateral intermediate cell column and motor neurons in the ventral horn of the spinal cord. Axons of motor neurons form efferent fibers to skeletal muscles, and as noted previously, acupuncture is not very useful for problems in efferent fibers. Whether serotonin in preganglionic sympathetic neurons has anything to do with acupuncture is not known. From our clinical observations, we conclude that serotonin plays no significant role in the practice of acupuncture.

9.5.3 Histamine

Histamine is found in mast cells, which are ubiquitous in connective tissue. Connective tissue is right underneath the skin. When the skin is irritated, either by a simple act of finger scratching or acupuncture stimulation, a histamine reaction can be seen. Histamine plays an obvious and important role in acupuncture. It is arguable whether histamine is a real neurotransmitter. First, mast cells are not neurons. Second, no mast cell is found in the central nervous system. Third, very few nerve cells can be identified as histaminergic. Yet, no one argues that histamine is not a neurotransmitter. Histamine is found in the brain. Antihistamines, which are histamine antagonists, are commonly consumed drugs. Consumers know very well how they feel after taking antihistamines. It is well

known that antihistamines can induce drowsiness. There are occasions in which acupuncture can produce similar results. Thus, it is reasonable to think that acupuncture is an agonist of antihistamines. This assumption explains why acupuncture is useful for relieving allergic symptoms due to excessive histamine activity.

The histamine released by the mast cells in connective tissue has certain biochemical and physiological differences from histamine in the nervous system. Histamine in the mast cells is high in quantity and slow in turnover. It can be depleted by antihistamine drugs. In the nervous tissue, histamine acts in a different manner. We don't know if such a functional difference plays any role in the applications of acupuncture. If histamine serves any purpose in the utility of acupuncture, this usefulness can be only in the peripheral nerves and not in the central nervous system. In the smooth muscles, two types of histamine receptors have been identified. Smooth muscle is an essential structural element for many organs, including the blood vessels, sweat glands, sebaceous glands, and the arrector pili attached to hair follicles. They all contain smooth muscles, and they all are found under the skin. Smooth muscles in these structures have histamine receptors. Acupuncture stimulation activates mast cells to release histamine, which is accepted by its receptors. After receiving histamine, the smooth muscles undergo certain functional changes. These changes are frequently seen in patients receiving acupuncture treatments. Examples of the changes are presented in the last section of this chapter.

9.5.4 Neuroactive Peptides

Neuroactive peptides are produced by the neurons. Their activities are in the specific target nerve cells, which are neuronal, glial, smooth muscular, glandular, or vascular in nature. Not much is known for us to report on what functions neuroactive peptides serve as neurotransmitters in the use of acupuncture; except for endorphin and substance P. Endorphin has been presented. Here, substance P deserves some mention.

Substance P is frequently described as playing a role in relation to the neuronal functions of pain. The relation of substance P to acupuncture is unknown. We do know that substance P is a very potent neurotransmitter that depolarizes afferent fibers in the spinal cord. Morphine can serve as an antagonist to substance P, whereas naloxone is its agonist. Substance P causes pain; it is released from the cut ends of sensory neurons. Substance P is thought to be responsible for neurogenic pain and inflammation. It is an agent that can bring vasodilation in time after injury as well as release histamine from mast cells. It is not synthesized at either the efferent or afferent terminal ends of the peripheral nerves. Therefore, substance P cannot have a direct influence on acupuncture stimulation.

9.5.5 Amino Acids as Neurotransmitters

After afferent fibers in the peripheral nerves are activated, as in acupuncture, the depolarization becomes a signal to excite secondary neurons in the substantia gelatinosa in the dorsal horn of the spinal cord. The same signal can also inhibit the secondary neurons from becoming excited. This is the basis for the formulation of the gate control theory. The inhibition of secondary neuronal firing is designated as presynaptic inhibition. Presynaptic inhibition is an imperfectly understood event [8]. We know it takes place in the presynaptic terminals of afferent fibers. We select one amino acid, γ-aminobutyric acid (GABA), to illustrate what relationship presynaptic inhibition can have with acupuncture.

Explaining presynaptic inhibition is not easy. The hypothesis was initiated by Eccles in the 1960s. The neurotransmitter assumed to play the role of inhibitor was believed to be released from so-called axoaxonic synapses located on, or close to, the synaptic terminals of afferent fibers. Eccles and his coworkers postulated that GABA was the amino acid acting as the responsible neurotransmitter. After extensive testing over 30 years, some provisions of the hypothesis have been fully accepted, but certainly not all of them. There are still some disputes among the experts in this field of research.

Biochemists and pharmacologists distinguish afferent fibers as the primary and secondary sensory nerves. Neurons for the primary afferent fibers are in the dorsal root ganglion. Neurons for the secondary afferent fibers are in the substantia gelatinosa. No such distinction is known in anatomy. A great deal of research for GABA has been done in the dorsal root ganglia, sympathetic chain, and collateral ganglia near the intestine. Reports of the studies seem to indicate that GABA as a neurotransmitter might act by inhibiting pain signals from entering the central nervous system. This presynaptic inhibition could help acupuncture to reduce or stop pain, because acupuncture might enhance GABA production in the terminals of the primary and secondary afferent fibers.

9.5.6 Adenosine

The last neurotransmitter introduced is adenosine. The adenosine receptor, which mediates the local antinociceptive effects of acupuncture, was reported in 2010 [9]. It was then used in a study for pain control [10]. A group of investigators found that "adenosine was released during acupuncture in mice and that its antinociceptive actions required adenosine A1 receptor expression. Direct injection of an adenosine A1 receptor agonist replicated the analgesic effect of acupuncture. Inhibition of enzymes involved in adenosine degradation potentiated the acupuncture-elicited increase in adenosine, as well as its antinociceptive effect. Their observations indicate that adenosine mediates the effects of acupuncture and that interfering with adenosine metabolism may prolong the clinical benefit of acupuncture." In the study of pain control, "the endogenous adenosine has various modulatory effects in the peripheral and central nervous system, mediated through specific cell surface-associated receptors." The view is that "adenosine receptors of the A1-subtype are associated with a modulatory effect on pain transmission at the spinal cord level. Animal studies have repeatedly demonstrated adenosine- and adenosine analog-mediated inhibitory influences on presumed nociceptive reflex responses. These examinations in rodents have tested acute pain models involving tactile, pressure, and heat stimulations. More recently, animal lesion models, presumably reflecting chronic pain, have shown that adenosine analogs can suppress nociceptive behavior through both systemic and intrathecal administration. Consequently, there is substantial evidence that adenosine can modulate nociceptive input. Further, it has been proposed that endogenous adenosine formation is involved in opioid antinociception."

Two important questions arise from this information: Will adenosine replace acupuncture? And will adenosine become the next panacea to manage pain? We are not familiar with pharmaceutical markets. It is not known if adenosine has been manufactured as a pain control medication available in drug stores. Adenosine may be able to suppress nociceptive behavior, but it is doubtful that it will totally replace acupuncture. We expect that acupuncture will be kept in use for managing pain regardless of what happens with adenosine. We remember well that when endorphin was first found to be a powerful analgesic, it was thought that acupuncture would just disappear. Instead, the use of endorphin as a pain control agent disappeared. We have one expectation for adenosine: We wish that further research will determine whether adenosine turns out to be the common denominator acting as the antagonist of subjective and objective pain detectable in the body.

9.6 IMMEDIATE ACUPUNCTURE REACTIONS

It is a fact that interactions and interrelations between acupuncture and neurotransmitters occur. Inserting needles into the body will induce certain changes in the activity of neurotransmitters. However, what changes occur, such as which transmitters increase and which decrease, is not precisely known. Many of these changes are observable by the practitioners and comprehensible by the patients in the course of acupuncture treatments. Observable changes can occur while needles are still *in situ*. Such changes are considered to be immediate acupuncture reactions. Some changes were noticed by patients days after the acupuncture was carried out. These were described as latent acupuncture reactions. Three examples of immediate reactions are offered here.

9.6.1 Atopic Erythroid Skin Change

Figure 9.1 is intended to show this atopic erythroid skin change. The photo was taken roughly 5 min after the needles were inserted into the skin. By then, the skin reaction was complete. There was a clearly visible pink halo surrounding each needle. The pinkish hue was caused by the dilatation of capillary beds under the skin. One neurotransmitter that might be acting on the postganglionic sympathetic nerves would be histamine. Histamine release by acupuncture varies from individual to individual. Even in the same person, the quantity of histamine resulting from one acupuncture stimulation is not equal every time. Atopic erythroid skin reaction can be more intense in one area, such as the upper region of the back, than another, such as the lower lumbar area, as seen in the figure. This difference may indicate differentiated innervation of postganglionic sympathetic nerves, denser in the upper back and less so in the lower back. To exhaust histamine release, as in the case of improving allergic conditions, it will be more effective to place needles in the upper back than in other locations.

9.6.2 Sweating

Physiologically, there are two kinds of sweating, hot and cold. Hot sweat is produced by either physical or environmental increase in temperature. Cold sweat is a consequence of mental stress. Some sweat glands, such as the apocrine in the armpits, are said not to participate in thermoregulatory sweating, but are thought to secrete in response to mental stress. Sweating is controlled by the sympathetic nerves. Parasympathetic nerves don't directly participate in regulating the activity of the sweat glands. No parasympathetic nerves reach peripherally to the glands. The sympathetic supply to sweat glands is cholinergic. Epinephrine exerts a major influence on cold sweat. During acupuncture, sweating in patients is not uncommon. The sweating produced during acupuncture has to be of the cold type, because there is no objective thermal change, either physically or environmentally. Needle insertions in the course of acupuncture can undeniably cause a small degree of mental stress. Nevertheless, mental stress cannot be the sole physical cause of

FIGURE 9.1 A photograph of a patient showing immediate atopic erythroid reaction induced by a number of acupuncture needles.

sweating in acupuncture. Such sweating seems to only occur in certain patients, and it may not occur every time that needles are inserted in the same individual. The quantity of sweat produced is different from one person to the next. The amount of sweat can be so little as to be practically invisible on the paper placed on top of the clinic table, or so profuse that the entire sheet of paper becomes soaking wet. The degree of hyperhidrosis most likely depends on how much of the relevant neurotransmitters are involved. We do not know what kinds of neurotransmitters are involved in having sweating reactions. Patients who have hyperhidrosis during acupuncture are most often young, between the ages of 25 and 45 years old. More males than females are found to have a sweating reaction during acupuncture. Having this reaction often indicates that acupuncture is going to be useful. Thus, neurotransmitters that promote sweating must be agonists for acupuncture treatments.

9.6.3 Syncope

Syncope is a fancy physiological term that means fainting. In a small pamphlet by R.T. Ross [11], only 3% of the adult population is reported to have the potential to develop syncope. Fainting is not a harbinger of brain or heart disease. Why only a small percentage of the general population will develop syncope is still a wonder to us. The physiological mechanism for syncope is well-defined and understood medically. It is a reversible, temporary loss of consciousness due to a qualitative and quantitative disturbance of the cerebral blood flow.

In most instances, syncope induced by acupuncture needles is a mere nuisance; it is inconvenient and embarrassing for acupuncture practitioners. Yet, it can be dangerous if the patients having syncope are not properly dealt with and cared for. The dangers can range from broken bones to premonitions of death. In fact, patients dying from incidences of syncope while in the hands of acupuncturists is nothing new. Coughing, sneezing, micturition, vomiting, defecation, and profuse sweating have been encountered in patients during the course of acupuncture treatments that cause syncope to happen. On very rare occasions, if needles are not removed quickly enough, the body could become rigid and stiff as in death. The appearance of patients in a state of syncope can be frightening. Fortunately, it is rather easy to wake up patients with a very simple technique, by inserting a needle into a fingertip or immediately under the nasal septum. Which neurotransmitter is involved in creating syncope is not clear. Patients who have syncope reactions are believed to have poor homeostasis. Their physiological systems are less stable. Female patients are more likely to have syncope than males. The ages during which syncope occurs are 30 to 50 years old. They often have a medical history of low blood pressure with symptoms of dysmenorrhea, such as painful menstruation, irregular periods, and long menstrual bleeding. For male patients, syncope most often occurs for those between 20 and 40 years of age. They appear to be physically strong. Their pain is in the acute stage. Patients having syncope during acupuncture always respond well to needle treatments.

9.7 REACTIONS AFTER ACUPUNCTURE

A few reactions can occur after acupuncture. The duration of their occurrence range from hours to days. In some incidences, this period can be as long as a week. These are considered to be latent reactions. Three examples are described here as typical of latent reactions. These have to be more than mere neural phenomena. Nerve reactions are always rapid in manner, like electrical activity. When a switch is turned on, the light appears in an instant. Upon stimulation, a nerve becomes depolarized right away, and the impulse will be transmitted very quickly along the nerve fibers, as in the propagation of the electricity. Thus, the idea of neural phenomena is incapable of explaining the occurrence of latent reactions, which takes hours or days after needling to realize. The factors to produce latent reactions have to be humoral in blood circulation, such as the neurotransmitters.

9.7.1 Flare-Up of Pain

Flare-up means to burst into sudden intensity, like an abrupt flame. With respect to pain, a flare-up brings heightened perception of discomfort. The pain is exacerbated. Ironically, the flare-up of pain doesn't have to be the same as the original pain being suffered. It can be discomfort outside the pain perceived before receiving acupuncture treatments.

Flare-up of pain is rather common among patients undergoing acupuncture. In truth, flare-ups can be produced artificially. Two main factors determine if the flare-up will occur: the number of needles inserted and the intensity of needle stimulation. The number of needles is quantitative, and the intensity of stimulation is qualitative. Thus, the flare-up has quantitative and qualitative aspects in acupuncture therapy. The quantitative aspect can be easily shown by giving needles to the patients at sites exceeding the number of primary acupoints at the initial session of acupuncture treatments, or at the first session after an interval of sufficient time, such as four or more months since the last needling session. The quantitative aspect of the flare-up is rarely observed if the needles are placed in only one small skin area, or after a patient is repeatedly given a number of acupuncture treatments in a limited time interval. The qualitative aspect of the flare-up can be purposefully demonstrated by continuously manipulating a few needles for a minute or less, once every 2 to 3 min during the entire therapy session, with the needles turned being those at the location where pain was actively and subjectively perceived by the patients. It should be accurate to say that a latent reaction with a flare-up of pain must be related to the freshness of the nervous system in the persons involved.

The sensation of worsened pain is often described by patients as occurring suddenly 8 to 12 h after the initial session of acupuncture treatments. This flare-up can last from a few hours to a day. Some patients will become anxious. They might call to report what is happening. Most of them experience a kind of relief within 48 h, which is the time interval between two acupuncture sessions. By the time they come for the second treatment, the flare-up will have subsided, with the pain perceived originally before receiving acupuncture being reduced or disappearing.

There are speculations on how acupuncture might evoke flare-ups. One of these is related to the sensory homunculus shown in Figure 9.2. According to the sensory homunculus, every part of the skin surface is represented in the postcentral gyrus of the cerebral cortex. The representative area can be relatively small or large, depending on the density of sensory receptors or sensory field, in the skin. The palms of the hands and plantar surfaces of the feet have a relatively larger area represented in the postcentral gyrus, because the skin in them has a denser sensory field with more receptors. This is the reason that inserting needles in the palm or plantar surface is almost always more painful than doing the same to other skin surfaces. There are more representations in the sensory cortex for the palm and plantar than other peripheral regions of the body [12]. All nerve impulses from peripheral locations have to reach centrally for the cerebral cortex to process to give away proper reactions. The response from the cerebral cortex will be lesser if only a few skin sites are stimulated with acupuncture needles, and the response can be expected to be greater when we use acupuncture to stimulate many different locations in the skin. Activation of the postcentral gyrus in the cerebral cortex is neural. Responses from the cortex to provoke flare-ups have to be hormonal through certain neurotransmitters.

9.7.2 Drowsiness and Sleeplessness

The second example of latent reaction in acupuncture is drowsiness. Such feelings can occur within 30 min after acupuncture, or as long as 3 to 4 h afterward. Most patients come for treatments in the late afternoon or early evening. Whether the time of day has anything to do with drowsiness is difficult to say. The fact is that patients will claim that they were tired and sleepy after the initial visit. The sleepiness can be so bad that they have a tough time driving home after their treatment. On the other hand, we have patients who swear that they had the best night's sleep in a long while

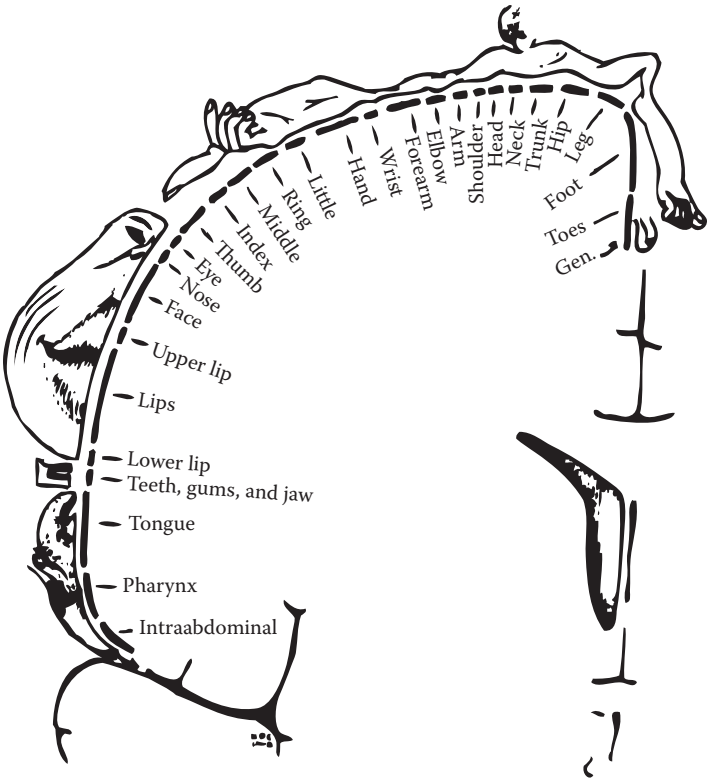

FIGURE 9.2 Sensory homunculus drawn overlaying a coronal section through the postcentral gyrus.

after their first acupuncture treatment. The sleep can be so profound (the words "slept like a log" are often used) that the patients didn't wake up to go to the toilet for urination throughout night, which is unusual for them.

It is also not uncommon to hear the comments by patients who complain of an increase in irritability and sleeplessness after acupuncture. Such an opposite reaction often comes from patients who experience a flare-up in pain after needle stimulation. Both reactions, sleepiness or sleeplessness, take time to develop. Again, having this kind of latent reaction indicates that acupuncture doesn't affect the nervous system alone. It has to involve factors such as hormones or neurotransmitters. Which neurotransmitter is the most likely candidate for producing drowsiness or sleeplessness from acupuncture? The answer clearly is endorphin. Endorphin behaves like morphine, which can seduce or excite our physiological functions. Seduction leads to drowsiness and sleepiness. Excitation causes agitation, arousal, and awakening. From a pharmacological point of view, seduction and excitation have to be dose-dependent. Adequate amounts of morphine may be beneficial in inducing sleep. Excessive quantities can overstimulate the nerves, resulting in difficulty in sleeping. Inciting sleepiness or sleeplessness also depends on the number of needles given. If more needles than needed are used, sleeplessness can occur. But it is impossible to induce sleepiness if not enough needles are used. Similar to flare-ups, drowsiness and sleeplessness also have quantitative and qualitative aspects of acupuncture.

Because of the potential for needles to induce sleepiness temporarily, acupuncture has been widely claimed to be able to cure insomnia. Such a claim lacks scientific support. Insomnia is clinically a chronic problem with rather complicated psychological and physiological backgrounds as underlying causes. Just because acupuncture occasionally makes patients become sleepy for a few nights, it doesn't qualify as a panacea to solve the problem of insomnia.

9.7.3 Parasympathetic Enhancement

Anatomically, acupuncture is unlikely to have direct action on the parasympathetic nerves. However, there are indications that indirect actions do occur. These indirect actions have to be mediated through neurotransmitters. Some patients report improvements in their incontinence or impotence after acupuncture. The same applies to irregular bowel movements or constipation. Among the elderly, particularly in female patients over 70 years of age, incontinence can be a problem. To claim that acupuncture can cure diseases of such nature is unjustifiable. However, in the course of acupuncture treatments with the primary purpose of managing pain, occasionally there are patients who insist that their bladder control improved. Such improvement is possible not through direct nerve stimulation but by indirect action of certain neurotransmitters. Which neurotransmitters these can be is not known. We do know that the autonomic nervous system must be involved. Hypersympathetic activity is more prevalent in the autonomic nervous system. When sympathetic nerves become hyperactive, parasympathetic nerves will be suppressed and hypoactive, resulting in indigestion, poor bowel movements, constipation, or weak bladder control (or all of the above). Acupuncture has a tendency to reduce tension from the sympathetic nerves. Consequently, the activity of the parasympathetic nerves will be enhanced.

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10 Pathology in Acupuncture

10.1 CONVENTIONAL WISDOM IN PATHOLOGY

Pathology can be defined simply as any abnormality that occurs in the body. The abnormalities can be in anatomical structures, in physiological functions, or in biochemical substances. They can be due to changes in molecules, cells, tissues, organs, or systems. One common indication of pathology is pain, which is the primary concern in acupuncture. It would be accurate to state that the overwhelming majority of people seeking acupuncture, if not all, suffer from some kind of pain. Their pain, in our opinion, is subjective, obvious, and perceivable. They know where the pain is located. However, in acupuncture, there is another form of pain. For this book, this pain will be described as objective, hidden, or unperceived pain. Much more about subjective and objective pain will be presented in Chapter 12. The main purpose of this chapter is to explain how objective pain appears in acupoints. Objective pain is always discernible in passive acupoints, which are also known as the trigger points. Pathology in acupuncture will mean what diseases, damage, or injuries in the body are capable of converting acupoints from the latent phase to the passive phase, as known and observed in the patients received in our own acupuncture clinic.

10.2 PATHOLOGICAL ORIGINS

In Chapter 8, we stated that each acupoint has three functional phases, which are described as latent, passive, and active. Acupoints in the latent phase can become passive, and then go from passive to active. In the latent phase, acupoints have no discernible sensitivity, such as aching, pain, or tenderness. Once they are converted into the passive phase, discernible sensitivity will be present, but not subjectively perceivable. This unperceived pain is what we described as objective pain. Objective pain will help us determine whether pain can be managed with the use of acupuncture, and how to use acupuncture therapeutically. Thus, it is vital that we know what causes acupoints in the latent phase to be converted into the passive phase and become trigger points. The mechanism for this conversion is unknown. No reports are available because no one ever makes any effort to study the phenomenon. What we have is all derived from empirical observations in clinical experiences. Clinically, it is clear that pathological changes are behind the reason for acupoints to convert from the latent to passive phase.

To date, we have received a total of more than 24,000 patients in our clinic. The data and studies presented here come from this number. Demographically, there are more females (57.3%) than males (42.7%). All these patients had a number of passive acupoints or trigger points detected in their bodies. A small group of these patients also had a few acupoints in the active phase. We decided to theorize that passive acupoints or trigger points are an expression of somatic pain, which we describe as subjective pain. In the process of taking medical histories, or asking for medical diagnoses given by their respective physicians, we have discovered the pathological causes of the patients having objective pain in passive acupoints. The pathologies can be categorized into two origins, which will be simply described as endogenous and exogenous.

10.3 ENDOGENOUS ORIGINS

"Endogenous origins" mean that the pathology starts from the internal milieu of our physical environment. How many endogenously originated pathologies are there that are capable of transforming

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acupoints from latent to passive? We do not know the answer to this question. We do know that a large number of patients can suffer from the same kind of pain with similar pathological causes. Here, it is only possible to give a few examples as an illustration.

10.3.1 Hormonal Imbalances

Among female patients, one of the most commonly noticed pathologies in relation to having trigger points is hormonal imbalances. The suspected cause is derived from the menstrual cycles that females have in their life. To maintain normal menstrual function, a delicate balance of hormone production and consumption is required. Many times, this delicate balance can be disturbed. Disorders that result from such disturbances include dysmenorrhea, diabetes, and abnormal thyroid activity. Here, we will first focus on dysmenorrhea.

Dysmenorrhea can be caused by a variety of diseases, including endometriosis, pelvic inflammatory illness, uterine leiomyomas, or adenomyosis [1]. To us, dysmenorrhea is defined as having one or any combination of the following three conditions. The first condition is menstrual cramping, or pain in the pelvic region during the monthly periods. The second is irregular periods. Normal periods occur once every 29 or 30 days. If the periods are less than 27 days or longer than 32 days apart, or variable out of this time interval, they will be considered as a symptom of dysmenorrhea. The third condition is menstrual bleeding of less than 2 days or longer than 5 days. It is not unusual for menstruation to last more than 7 days among the patients seen in the clinic.

We divided all the female patients into three age groups: premenopause, which includes from age at menarche to the time of menopause (generally before 40 years of age), menopause (41–60 years of age), and postmenopause (61 years or older). The respective percentages are 25.5%, 40.3%, and 34.2%. Most patients were in the menopause age group, followed by the postmenopause and premenopause age groups. Of the premenopausal women, 98.9% said they had experienced some degree of dysmenorrhea, and 66.9% had had their uterus removed surgically. Among the patients in the menopause group, 95.2% reported that they had suffered from dysmenorrhea at some time during their reproductive lives, and 88.6% had already had a hysterectomy. Among the postmenopausal patients, menstrual cramping was their common experience (88.2%) when they were young, and 90.1% of them had had a hysterectomy. The most commonly cited reason for having a hysterectomy was fibroid tumors (67%), followed by endometriosis or prolonged bleeding (21%), prolapsed uterus (8%), and other diseases (4%). From these statistics, we concluded that the subjective pain perceived by all the female patients may have certain causes originating in hormonal imbalances. One fact holds true for all of them: they all had acupoints in the passive phase, or trigger points, present. Their subjective pain varied widely, ranging from headaches, neck pain, or trapezius muscle spasms in the shoulder to lower back pain, arthritic knee, restless leg, or tarsal tunnel syndrome. You name a subjective pain, and some of them were found to have it. Almost none of them suspected a connection between their subjective pain and the dysmenorrhea they had experienced.

There are clear relationships between age groups and the number of trigger points detectable. Premenopausal females between 15 and 25 years of age usually are found to have few acupoints in passive phase throughout the entire body, generally eight to 24 in number. Dysmenorrhea in this young age group can be very effectively treated using acupuncture [2,3]. However, there were very few young patients with dysmenorrhea who sought acupuncture treatments to stop their menstrual cramping. Most patients didn't even bother to mention that they had dysmenorrhea. To them, menstrual cramping was part of being feminine, and nothing to be concerned about. They certainly didn't realize that their subjective pain originated from the dysmenorrhea they'd had years ago.

As patients grow older, their number of trigger points tends to increase. Patients between 25 and 45 years old with a history of dysmenorrhea would have 24 to 50 trigger points on one half of their body. By the time they reached 65 years or older, the number could increase to more than 100. Many of them suffered from lower back pain, osteoid or degenerative arthritic knees, headache, neck and shoulder pain, carpal tunnel syndrome, spastic colon, hiatal hernia, leg cramping, diverticulitis,

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fibromyalgia or myofascial pain syndrome, or indigestion with excess stomach acid. One wonders whether there is any connection between these seemingly disparate problems and dysmenorrhea or diagnoses ending in hysterectomy.

There are other diseases involving some sort of hormonal imbalances that result in acupoints becoming passive. Diabetes and abnormal thyroid functions are two examples. Among our patients, only 3.2% can be considered as having these types of hormonal imbalances. People with diabetes can have the potential to develop pain in the extremities—the hands and fingers, feet, and toes. The pain is diagnosed as a peripheral neuropathy. Patients with abnormal thyroid function had either undergone a thyroidectomy or were taking synthetic thyroid hormones. One reason for them to seek acupuncture treatments was pain in different locations of the body. They might also have hypoglycemia. Their hope for acupuncture was that it could "energize" them, as they felt a constant tiredness and lack of energy required to perform their daily routines. These patients were all found to have passive acupoints, even when no subjective pain was perceived at the time of their visits to the clinic. Thus, we speculate that hormones may play some role in converting acupoints from the latent phase to the passive phase.

10.3.2 Poor Blood Circulation

For one reason or another, blood supply to certain regions of the body can become insufficient for maintaining normal metabolic activities. The regions we know of that are susceptible to poor blood circulation include the palmar side of the hands, the calf of the leg, and the trapezius muscle in the shoulder bridges. Pain in the trapezius muscle is used here as an example.

Approximately 15% of our patients complained specifically of having pain in the trapezius and the suboccipital triangle regions. The trapezius region medially includes the base of the neck and laterally extends to the acromion. The suboccipital triangle region is just behind the occipital bone. Subjective pain perceived in these regions was believed to be due to poor blood circulation because these patients invariably had low blood pressure. Generally, their systolic pressure was 110 mm Hg and their diastolic pressure was 70 mm Hg. The lowest diastolic pressure on record was 59 mm Hg, and the lowest systolic pressure was 94 mm Hg. Most patients with this kind of low blood pressure were female. Their medical records reflected a history of dysmenorrhea, most prominently prolonged days of menstrual bleeding, as long as 7 to 8 days for each monthly cycle. It is obvious that the hemopoietic capacity of the patients was not sufficient to replenish the blood needed for normal circulation. For reasons unknown to us, poor blood circulation seems to convert acupoints from the latent to the passive phase. The specific affected region would display a higher than normal proportion of passive acupoints in that specific region. This phenomenon is described as regional appearance, which will be discussed next in this chapter. Poor circulation in the hands can turn them cold, with passive acupoints detectable in the palm. Poor circulation in the calf can create restless legs, which have many passive acupoints along the sural nerves. Of course, all these patients had trigger points in other parts of their bodies as well.

10.3.3 Degeneration

Aging is followed by degeneration. There are many abnormalities known as degenerative diseases. Nephropathy, asthma, emphysema, and arthritis are just a few examples. Some degeneration is not visible because it happens inside the body, whereas some can be seen physically. When kidney function is weakened, patients often are found to have edema in the lower limbs, particularly around the ankles. Swollen ankles inferior to the medial and lateral malleolus will have obvious trigger points. Another sign of degeneration is easy to notice in patients who have a history of respiratory diseases, such as asthma and emphysema: they will frequently run out of breath. Trigger points are always detectable in the anterior, lateral, and posterior thoracic wall along the distributions of the cutaneous nerves in the body trunk.

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The most prevalent example of degenerative disease in relation to the production of trigger points would have to be degenerative arthritis in the knees. There are all too many knees with degenerative arthritis, most obviously among females older than 60 years. We are convinced that degeneration and the appearance of trigger points must be related. What we don't know is which comes first, degeneration or trigger points? Every knee with a medical diagnosis of degenerative arthritis invariably had a number of passive acupoints or trigger points. These points would appear in a predictable sequential order. The more trigger points an arthritic knee had, the harder it would be to manage the pain in that knee. We have observed that when the trigger points exceeded a certain number, even after the knee was replaced, the pain would not disappear. The same principle can be applied to other points with degenerative arthritis, such as the shoulder, hip, and lower back, even after surgery.

10.3.4 Infections

We have no idea how many infectious diseases there are in this world. With regard to infections as the pathology of endogenous origin for producing trigger points, we do know that some infectious diseases are mundane and insignificant, whereas others are vicious and toxic. One speculation we have about these two extremes is that if the infection is mild, the conversion of acupoints from latent to passive will be slow in speed and number. However, if the infection is strong, passive acupoints will quickly become numerous in the body. The common cold and influenza are forms of infection. How potent these infections are in converting latent acupoints to passive is not known because we have not had the chance to systemically study people with colds or influenza. We have had sufficient opportunities to examine and test patients with rheumatoid arthritis. Patients with rheumatoid arthritis always came with a clear and firm diagnosis from their physicians. Among infectious diseases, rheumatoid arthritis (or Still's disease in young individuals) is probably the most invasive and vicious with respect to generating passive acupoints. Patients with rheumatoid arthritis almost always were found to have a high number of trigger points in a relatively short period after they began to notice pain in various joints. There are other kinds of infectious diseases, such as postherpetic neuralgia, trigeminal neuralgia, and other forms of neuropathies, which are also found to have a massive number of trigger points. How quickly patients with these diseases acquired a high number of passive acupoints is not known because an insufficient number of patients are available for reliable studies.

10.4 EXOGENOUS ORIGINS

Pathology originating from outside the body is defined as exogenous. Therefore, all external injuries inflicted on our body can be said to have exogenous origins. They can be sports injuries, automobile accident injuries, gunshot wounds, job-related diseases, other ailments caused by stress, and more. In general, pathologies of endogenous origin contribute to abnormal functions in physiological systems. Pathologies of exogenous origins always begin as localized problems, occurring in a limited region of the body. Such pathologies are not as potent as those of endogenous origin. It takes a longer period for a pathology of exogenous origin to convert the same number of acupoints from the latent phase to the passive phase.

There are several ways to categorize injuries of exogenous origins. We all know that injuries can occur during a sports competition, while on the job, in the battlefield during a war, or just by sheer accident without any justifiable reason. What is important in acupuncture is the intensity and extensiveness of the injuries. Some injuries are only minor scratches or skin lacerations. Some involve torn tendons and muscles. Some result in bone fractures. Some involve severe damage to visceral organs. For the convenience of our presentation, we will simply divide exogenous injuries into three categories: minor, moderate, and monstrous.

Minor injuries involve only soft tissues. The pain resulting from these injuries is short-lasting. The wounds will heal on their own within weeks without medical intervention. However, if the injury is substantial enough, the pain can linger for a relatively long period. Examples include tennis

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elbow, carpal tunnel syndrome due to long hours of typing at work, or neck stiffness after excessive viewing of computer screens. Pain of this nature can be taken care of effectively because most patients with such injuries have a low number of passive acupoints.

Moderate injuries include cuts deep into the muscle mass and hard tissue damage, such as bone fractures, joint dislocations, and concussions to the head. Pain produced by moderate injuries is commonly seen in the clinic. Examples include baseball players with wrist pain, football players with lower back injury, and basketball players with ruptured cruciate ligaments or menisci in the knees. Many of these injuries can cause pain lasting for months.

Shelby is a good example of such an injury. Here is the history provided by her mother. "In the summer of 2001, my daughter was a healthy 9-year-old girl who suffered a concussion in a sports injury. No physical damage, not even a skin laceration, was found. After the accident, she experienced dizziness, nausea, vomiting, blurred vision, and severe headaches. We took her to the emergency room, where she had a CAT scan. She was released that day and given instructions to restrict her activities for a few weeks. The following spring, she started to experience severe headaches. They would start in the front, just above the eyebrows, and move to the back either in a halo effect or all over the head. After several episodes, I took her to our family doctor, who prescribed adult-strength Aleve. The medicine seemed to help, and she had headaches roughly every 2 to 3 weeks until the early fall, when the headaches appeared to stop on their own. However, a few months passed until the next spring, and the same headaches began to attack her again. On Mother's Day, 2003, Shelby had a classic migraine for the first time. She had vomiting, dizziness, and blurred vision. I called the doctor, who prescribed Zomig. It took several hours for the medicine to take effect. Two days later, she had another migraine. Since that time, she has averaged a headache approximately once a week. Often, the medicine the doctor prescribes does not work. The doctor has told me he has no idea why she has the headaches or what causes them and why the medicine prescribed wouldn't help stop the headache…" To the patient's doctor, there is nothing medically wrong with her. For us, the only pathology definable in Shelby was a high number of passive acupoints present in her entire body. Our firm opinion is that there is a cause-and-effect relationship between a high number of passive acupoints and migraine headaches.

Monstrous injuries include limbs being blown apart, extensive lacerations into the body, and puncturing of internal organs. Healing these wounds will require multiple surgical repairs. Clinical cases that have had monstrous injuries include patients suffering from phantom limbs, reflex sympathetic dystrophy, and causalgia. Their pain is not easy to manage even with acupuncture, simply because patients with this type of pain always have the highest number of passive acupoints that could possibly exist. One consoling fact in the practice of acupuncture is that patients experiencing pain because of monstrous injuries are rarely clinically encountered.

One conclusion from dealing with pain, with respect to its exogenous origins, is that there is a clear relationship between the kind of injuries sustained and the potential for the passive acupoints to grow physically. Minor injuries that don't provide latent acupoints the time and opportunity to reach the passive phase will not be harmful to people. When injuries are severe, involving intensive and extensive damage, they require a longer time to heal, providing latent acupoints the chance to be converted into the passive phase. We don't know what physiological functions and biochemical substances are involved in turning latent acupoints to the passive phase. We do know that injuries of exogenous origin will eventually make acupoints sensitive, with aching and pain detectable in the bodies of victims.

10.5 MODES FOR TRIGGER POINTS TO APPEAR

We have offered endogenous and exogenous reasons as pathological factors for acupoints to be converted from the latent to the passive phase. We have observed two methods for such a conversion. In other words, when trigger points begin to appear, they can do so in a systemic manner or in a limited region. What is systemic or regional can be best understood by using cases of patients seen in the clinic as examples for explanation.

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10.5.1 Systemic

Because acupoints turn from latent to passive in an orderly sequence, it is logical to view such a phenomenon as being of a systemic nature. "Systemic" is also used to mean the entire body. Passive acupoints appear systemically in different loci of the body with an orderly and predictable sequence. This sequential appearance in a systemic manner occurs in patients whose pathology is endogenous in origin, such as hormonal imbalances, infectious diseases, or degeneration in physiological systems.

Acupoints can turn from latent to passive beginning at a young age. Nine-year-old Shelby is an example. Young patients often begin to have a small number of passive acupoints in comparison with adult patients examined and tested for their passive acupoints, although this is not always the case. Passive acupoints in some young patients can also be high. Here are six examples:

Case 1: Greta was a 14-year-old junior high student. She was brought to the clinic by her mother, essentially as the last available choice for her severe attacks of migraine headache. Greta began suffering from migraines when she was just over 10 years old, at the time she started her menarche. The headaches gradually worsened in the following 4 years. To overcome her problem, every conceivable drug believed to be effective for stopping headaches had been prescribed and taken. The attacks had recently become so severe that she had been hospitalized three times in 1 month, and even in the hospital, the headaches could only be stopped by doses of synthetic narcotics. The frequent usage of narcotics began to worry her parents and attending physician. Her father was a professor and chairman in the dental school department where the author worked, and her mother had been a good friend of the author's wife. Greta was a good example for showing the systemic appearance of passive acupoints in the initial stage. For approximately 120 acupoints tested, only 20 could be definitely identified as being in the passive phase. These 20 passive acupoints or trigger points were distributed systemically throughout the entire body (see Chapter 12 for the distribution of the primary acupoints). The trigger points in her face were more sensitive than those in other loci. The distribution of passive acupoints similar to Greta's were found among female patients who were younger than 20 years, and who had symptoms of dysmenorrhea.

Case 2: Theresa was a 23-year-old housewife. She came to the clinic because she wanted to see if auriculopuncture would be able to help her reduce her weight by about 10 pounds. She looked a little chubby, but certainly not obese. She claimed that she had always been very healthy. However, upon careful checking, approximately 12 acupoints seemed to be sensitive and exhibited tenderness. They certainly qualified to be considered in the passive phase. During the interview, Theresa revealed that she had irregular menstrual periods and suffered from menstrual cramping almost every month. She said that cramping could be so bothersome that she had to take medicine to ease her pain. Her cramping lasted for only 1 day, usually the day before or the first day of each period. She thought that it was normal to have some cramping, that it was a part of being feminine. Repeated menstrual cramping month after month might serve as the pathology of endogenous origins in turning latent acupoints passive. A great number of patients in the menopausal and postmenopausal age groups were found to have menstrual cramping as a symptom of dysmenorrhea. These older female patients always have a higher number of passive acupoints detectable, indicating that passive acupoints will grow in number as symptoms become prolonged in age.

Case 3: Randall was the youngest patient we had. He was only 7 years old. His mother wanted him to try acupuncture to see if it was possible to control his asthmatic attacks, which he had suffered from frequently since infancy. Not too long before his visit, he had almost drowned in a river not far from his family ranch. It was in midsummer, but despite the warm climate, the water in the river was cold. It was so cold that when Randall jumped in, he was unable to breathe because, as he described it, his chest became so tight that

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he was immediately choked up and almost suffocated right on the spot. He looked weak and seemed underweight for his age. We were surprised to find that this boy had so many trigger points throughout the body at such a young age, particularly in the neck and thoracic regions. These trigger points represent the anterior, lateral, and posterior cutaneous branches of the upper fourth thoracic spinal nerves. Acupoints formed by the same cutaneous branches of other spinal nerves didn't transform to become trigger points.

Case 4: Beverly was 24 years old. She had been diagnosed as having rheumatoid arthritis about a year earlier. The pain in her wrists and interphalangeal joints was so bad that she could barely perform her routine secretarial duties, such as typing, although her arthritis was said to be in a stable state under prescribed antiinflammatory drugs and analgesics. The medications taken were not of much help to easing her pain in the wrists and fingers when she attempted to work. Among pathologies of endogenous origins, rheumatoid arthritis can be considered as one of the most vicious diseases, turning acupoints from the latent to passive phase rather quickly in a relatively short time. When we tested her acupoints, our estimate was that more than 85% of them were already in the passive phase.

Case 5: Debbie was a 19-year-old senior high student. We had known each other for more than 4 years, since her family immigrated to the United States. Because of the language barrier, her family sought our assistance for various reasons. From the time we became acquainted, she appeared to be a healthy young girl, without any indication that one day she would become ill from systemic lupus erythematosus at such a young age. For a month, it seemed to her parents that she was unwarrantably gaining too much weight, because her face suddenly appeared puffy. In fact, her mother cautioned her to watch her diet. Then one day, she became sick with fever and felt weak. They thought that the symptoms were nothing but a common cold and assumed she would be all right in no time. However, her condition worsened, and she was unable to go to school because of her weakness and fatigue. Her parents turned to us for help because of our medical knowledge. Looking at this young girl closely, it was not hard to conclude that she needed to see a physician. After a preliminary examination and hematological tests, her physician suggested that Debbie be put in a hospital for a more thorough evaluation because of conspicuous abnormalities in her bone marrow. Three days later, she was positively diagnosed as having systemic lupus. Before she went to the hospital, we checked her acupoints. She said that she experienced no pain except occasional backaches if she was in bed for a long period. Yet, it turned out that Debbie had many passive acupoints in her body. All of the 24 primary points and most of the secondary points were tender upon testing. Even a few tertiary points were also passive, although no nonspecific acupoints were found to be in the passive phase. It was clear that lupus was capable of systemically turning acupoints from latent to passive in a rather short time. We cannot tell if the appearance of trigger points took place before the existence of lupus, or after the patient became sick with the disease. If the passive acupoints began to appear only after the onset of the disease, then systemic lupus erythematosus is indeed a very powerful endogenous factor for turning acupoints from latent to passive. The idea for using the word "systemic" in this book, in fact, was derived from the name of this disease. Not too long after the diagnosis, Debbie was sent back to Taiwan, and died there 6 months later.

Case 6: Lu Ann was a 17-year-old high school student. She had had rheumatic fever when she was 7 years old. Thereafter, she had suffered low-grade temperature elevation, increased sedimentation rate, and painful joints. According to her medical evaluation, the infection had not caused damage to her heart. Nevertheless, she suffered from occasional pain in the knees and hands. The intermittent pain got worse one winter after a strenuous cheerleading practice at school. She took aspirin to "kill" the pain in the knees; relief occurred approximately 30 min after taking the medicine. She took 4 gr. (or eight tablets) of aspirin a day for almost 2 weeks. By then, she had developed a ringing in the ears. When she stopped taking

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aspirin, her knee pain recurred in a short time. Her father brought her to the clinic to see if her knee pain and tinnitus could be managed with acupuncture. She looked pale, indicating the possibility of anemia. She complained of feeling weak and getting tired easily. It was approximately 10 years between the time of her rheumatic fever infection and her visit to the clinic. Upon examination, she was found to have all the primary and some of the secondary acupoints in the passive phase. Thus, it is clear that rheumatic fever is another powerful endogenous factor that can turn acupoints from latent to passive, although its potency for converting acupoints to trigger points may be not as effective as that of lupus.

10.5.2 Regional

Regional is just the opposite of systemic. Instead of following the sequential order described in Chapter 8, acupoints in the latent phase will become passive in the locality where the pathology of exogenous origin occurs. The initial appearance of trigger points is always limited to the vicinity of the injury. The regional appearance of passive acupoints has no sequential order. They will appear randomly around the region of the injury. Tender sensitivity can be detected in the acupoints described in the book or at loci not traditionally recognized as acupoints. So-called nonacupoints can become tender or passive regionally. Most passive acupoints appearing regionally were observed in injured young patients with pain that could be viewed as acute in nature. Here are three examples.

Case 1: Carl was a 17-year-old high school student. He was a very enthusiastic soccer player and practiced the game almost weekly. During a game, he was kicked very hard in his left abdomen by another player. Carl claimed that the kick was so hard that he collapsed abruptly to the ground with a severe, sharp pain. Fortunately, the pain subsided after time, and he was able to continue in the game until the end. Not too long after the incident, he began to experience pain in his left lower abdomen either during or after each game or practice. The pain began to extend to the left hip region. It bothered him so often and so much that finally medical consultation was sought to determine if there was any serious injury that was causing the pain repeatedly. Three different specialists were visited: a gastroenterologist, a neurologist, and an anesthesiologist. Their final conclusion was that Carl was a perfectly healthy young man without any detectable pathologic changes that could be the source of his pain. The treatments offered included prescriptive analgesics to be taken for the pain, and advice to discontinue playing soccer for a time. Carl claimed that soccer was half of his life and he would not give it up. Unfortunately, the pain kept recurring, and the medications were not very helpful for his problem. His mother thought that acupuncture might be useful as an alternative. Upon careful and thorough examination, no trigger points were detected, except in the region where he was kicked in the abdomen. The region where tenderness appeared was approximately 1.5 in. (40 mm) in diameter on the skin under which the iliohypogastric nerve pierces the deep membranous layer of Scarpa's fascia to emerge subcutaneously. The tender region was approximately 3 in. (78 mm) superior to the inguinal ligament and 4 in. (102 mm) medial to the left anterior superior iliac spine. The whole area was tender upon palpation. The accidental kick was coincidentally right at a strategic locus of anatomy and acupuncture, where the iliohypogastric nerve is located. This is a typical case in which passive acupoints appear regionally.

Case 2: Ben was a 21-year-old college student. He had been healthy thus far except for being slightly overweight, and he'd decided to reduce his weight by jogging. One day, he stepped into a hole covered by grass in the sidewalk and sprained his right ankle. He thought it was nothing more than an innocent mishap and that nothing could be seriously wrong. By the following morning, however, his right ankle was swollen and so painful that he could hardly stand on his right foot. There was ecchymosis visible on the lateral surface of the foot, indicating tissue damage and internal bleeding around the ankle. He was taken to an orthopedic clinic, where a surgeon examined the injured foot. It was decided that there

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was no bone fracture but that he had torn one of the talofibular ligaments. A foot casting was made and a prescription was given for reducing his pain. I had the opportunity to closely follow this case because Ben is my son, and we lived in the same house at the time. The morning after the accident happened, I made a complete testing of all acupoints I could think of. The only passive acupoints detected were all around the injured ankle, particularly inferior to the lateral and medial malleoli. Some of the tenderness was at the known acupoints, but some were not. In other words, nonacupoints in the area of the injury seemed to become passive or trigger points. Ben's injured ankle is a typical case, demonstrating that passive acupoints can appear regionally after a specific injury in a limited locality. He had no other acupoints that could be found to be in the passive phase.

Case 3: Matthew was 25 years old and a freshman medical student in the Health Science Center. One day, during the laboratory in Gross Anatomy for which I was on the teaching staff, he asked if acupuncture would be able to help eradicate the pain in his right elbow. The pain had just started to bother him recently, and no formal medical consultation had been sought thus far. It was suspected to be a case of tennis elbow because the pain was located right on the lateral epicondyle. Excessive use of the muscles can produce the condition of tennis elbow, and Matthew played tennis very vigorously. His right elbow had never given him any problem before. The pain had occurred only about a couple of weeks earlier. He stated that he had had an automobile accident approximately 2 months before the pain started to appear in his elbow. As a consequence of the accident, he was diagnosed as having whiplash because of his neck pain and stiffness. Although a few nonprescriptive analgesics were able to take care of the neck pain and stiffness, it was difficult to determine if the whiplash and tennis elbow were related in this case. Upon testing, no acupoints were found to be in the passive phase except three tender points distributed over the lateral epicondyle, where the long extensor muscles of the forearm have their origins. In addition, acupoints of the deep radial and lateral antebrachial cutaneous were also tender. This appearance of tender points on the epicondyle and the two passive acupoints in Matthew is another example of the regional phenomenon.

Patients who have pain due to regional injury with passive acupoints found in a limited locality are not commonly seen in the clinic. However, there are a sufficient number of them to convince us that the pain mentioned above must be what we consider as acute. Most acute pain can subside on its own in time after the wound is healed. The question for which we would like to find an answer is—can acupuncture shorten the duration of acute pain? In the meantime, acupoints in the passive phase associated with the injury will disappear and return to the latent phase. If the exogenous injury is monstrous in degree and extensive, acupoints could linger in the passive phase for a long time, and the pain will have the potential to become chronic. As the pain develops to the chronic stage, the number of passive acupoints will grow throughout the body in time. This is our distinction between acute and chronic pain. More about acute and chronic pain will be expanded on in Chapter 12.

10.6 COMBINATION OF SYSTEMIC AND REGIONAL APPEARANCES

Demographically, typical examples of systemic or regional appearances of passive acupoints alone are relatively few in comparison with the total number of patients received. Most patient cases can be described as results of the convergence or combination of systemic and regional manifestations.

In the beginning, acupoints turn from the latent to passive phase systemically or regionally alone. If they keep in the passive phase long enough, other pathologies of either endogenous or exogenous origins have the opportunity to set in, and two modes of passive acupoints will appear. Thereafter, more passive acupoints will appear in the body. Inevitably, this will create a physical and physiological environment for the pain to become chronic and hard to manage. Four examples are provided for illustration (Figures 10.1–10.4). They are all from patients received in the clinic. Because we have the photos to prove their existence, their names have been withheld.

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FIGURE 10.1 This patient had postherpetic neuralgia affecting the ophthalmic division of the left trigeminal nerve. The pain in the left side of her face had been hurting for 18 years. We found that more than 85% of all her acupoints were in the passive phase. Furthermore, the entire left frontal forehead extending superiorly from the left eyebrow to the coronal suture line was tender practically everywhere it was touched. Systemically, all primary through tertiary acupoints in her body were passive. Regionally, even all nonspecific acupoints in the area where the herpes infection had occurred were passive. All patients afflicted with postherpetic neuralgia have been found to have a high number of passive acupoints, whether the infection occurred only a month previous or 18 years ago. This observation led us to conclude that the neuralgia developed from herpes in patients with sufficient numbers of preexisting trigger points in their bodies.

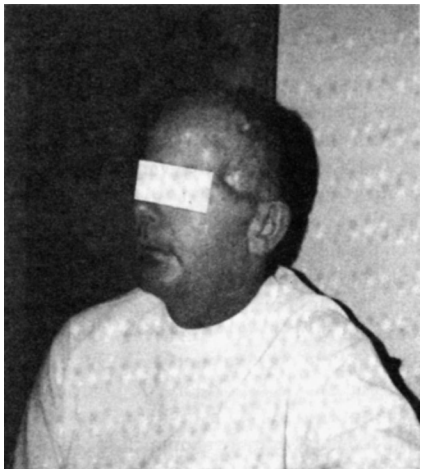

FIGURE 10.2 This image shows a middle-aged man who had intracranial surgery to remove a meningioma from the left side of his brain. A surgical scar is clearly seen on the left parietotemporal region of his scalp. The area was soft because part of the cranium had been surgically removed, and it was also very tender in the whole region when adequate pressure was applied. His reason for coming to the clinic was to stop his headaches, which had been hurting him even before his surgery many months prior. Acupuncture was not much help for this patient and others like him because they had too many acupoints in the passive phase. Again, having so many passive acupoints is only possible with sufficient time permitted; passive acupoints need time to generate and increase in number.

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FIGURE 10.3 This middle-aged woman had a condition diagnosed as torticollis. She had had the condition for so long that she didn't remember how many years she had been suffering. Nor could she recall its cause. The result was visible; hypertrophy could be seen to have developed in the trapezius and sternocleidomastoid muscles. The patient had a lot of cervical stiffness and neck pain. Our guess was that the patient must have had some kind of injury to the neck that was exogenous in origin. The injury might not have been monstrous, but was substantial enough to involve some kind of abnormality in the cervical vertebrae. Damage to the vertebrae often takes a long time to heal, giving injury a chance to make pain chronic. Initially, only acupoints in the neck become passive. As time progresses, acupoints outside the neck will begin to turn from latent to passive. When she came for acupuncture, her systemically passive acupoints were only limited to the primary and secondary categories. In addition, tertiary and nonspecific acupoints in the neck region were in the passive phase, which was certainly understandable. Acupuncture was able to reduce her neck pain, but only for a short period. In a couple of weeks, the same pain would relapse, which was expected when the injury had resulted in an organic anatomical change, such as muscular hypertrophy.

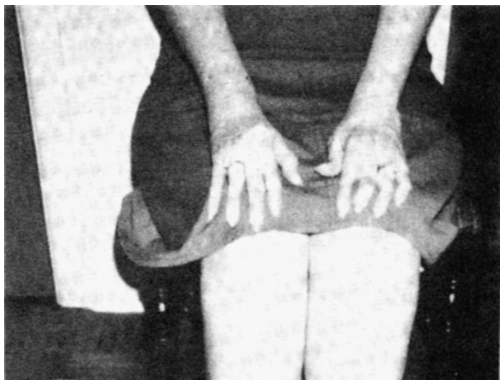

FIGURE 10.4 This shows the two lower limbs of a 73-year-old patient who had been suffering from rheumatoid arthritis for 25 years. This is an autoimmune disease that produces antibodies that invade one's own joints. The most vulnerable structures for the antibodies to attack include the finger joints, which can be deformed and become crooked. The disease can also affect kidney function. The kidneys of this elder patient were in poor condition, as indicated by the edema in her ankles, which appear swollen. Her ankles were shown to have many tender points surrounding the medial and lateral malleoli, as can be seen in the photo with needles inserted in them. The tender points appearing in the ankles, as seen in this patient, are nonspecific. They are there because the localities have endogenously originating pathological changes. Acupoints in patients affected by rheumatoid arthritis will turn from latent to passive rather quickly, most of them making the shift within 1 year's time. This is the reason that pain in patients afflicted by the disease is generally not easy to manage. The patient in the photo was no exception. Pain from rheumatoid arthritis is still possible to control within a year from the time the disease is first detected and diagnosed. It will be hopeless once the deformity is set in the fingers, wrists, toes, or ankles.

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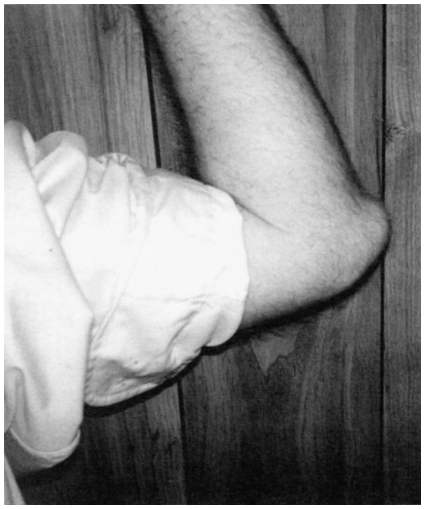

FIGURE 10.5 The patient developed a hemangioma on his left elbow, projecting outward from the olecranon.

10.7 A SPECIAL CASE

The four individuals shown above were all senior patients. Here is one young person who may serve as an example to show that the convergence and combination of systemic and regional appearances of passive acupoints can also occur at a younger age. The name of this young individual is Fred. Fred is not a patient, he is a friend. We have known him from the time he was a child because he is the son of one of our graduate school professors. We estimate he was about 30 years old at the time of examination. As shown in Figure 10.5, Fred developed a hemangioma on his left elbow, projecting outward from the olecranon. He had noticed that something was growing in his elbow from the time he was in medical school. After graduation, he joined the military to become a naval surgeon. He had ended up at the Okinawa military base by the time we met again. We met because he came to Wilford Hall AFB Hospital for the operation to remove the tumor in his left elbow. Because he was an old friend, we were very happy to have the opportunity to entertain him and his wife. We became aware of this medical condition after lengthy conversations with him. Because he is a medical doctor, it was only natural for us to explain some aspects of acupuncture, and we showed him where he would have tender spots in his body. We expected, because of his young age, that he would not have a high number of passive acupoints systemically, but would have more passive acupoints regionally around his left elbow, and up and down his left upper limb. Our expectations turned out to be accurate in this case.

10.8 A FEW CONCLUSIONS

First, the appearances of passive acupoints are so common as to be universal, and yet very little—almost nothing, we could say—is known about how this can happen. This will remain unknown for some time to come because no one is doing anything to answer this perplexing question.

Second, acupuncture definitely is a very useful and effective tool for managing pain. Some pain is very easy to manage and eradicate. Some is impossible to reduce for even just a short time. Pain of an acute nature will subside and disappear on its own in time when and after the damage caused by pathology of endogenous or exogenous origins heal. If the injuries are severe enough and the damages are substantial, making healing and repair difficult or impossible, pain will become chronic. The physical and temporal extent of chronic pain is clearly related to the quantity of passive acupoints the patients have.

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Third, as passive acupoints increase in number, the chances for pain to become chronic will be enhanced. Such occurrences provide a possibility for us to define what acute pain is and what chronic pain is. It will be a new way to differentiate the two types. More about defining acute and chronic pain is presented in Chapter 12.

Fourth, as far as we are aware, there is no objective way to measure or quantify pain. All we can attempt to do is to estimate how much subjective pain an individual has. Subjective pain changes from time to time, making measurement meaningless. There is another mode of pain that we describe as objective pain, which is stable and will stay the same in the body for a reasonable time. The pain reflects the quantity of passive acupoints one has. These are quantifiable.

Fifth, how much pain one has can be measured by quantifying how many passive acupoints one has. The objective pain measured is useful and reliable for predicting the outcome of managing the subjective pain. A pain with fewer passive acupoints is invariably easier to eliminate than similar pain with more passive acupoints.

Sixth, none of the statements given above require a double-blind control study to prove. Their results all can be repeated in any patient available in an acupuncture clinic. It is our hope that more physicians who are caring for patients suffering from pain will be willing to try the treatment methods offered in this book and to report their observations.

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11 Psychology in Acupuncture

Does psychology play any role in acupuncture? There is no ambivalence in the answer to this question. It is an unequivocal "no." We know whether acupuncture is useful to manage pain, how much that pain can be managed, and even how long the relief can last if such pain has a probability to relapse. With this ability, there is no need to have psychology play a role in the practice of acupuncture. Our prognoses in predicting the outcome of pain management are not 100% accurate. Nothing in medicine works 100% of the time. However, we have the confidence to claim that our prognoses are 92% dependable and reliable. As such, there is no sense in making false claims. If acupuncture does not work, then it will not be of any help no matter how hard the patient believes that the pain will be eradicated. If acupuncture does work, the results of improvement will be difficult to deny, regardless of the patient's positive or negative psychology.

If psychology plays no part in acupuncture, why then do we spend time to discuss the subject? The answer is simple: Acupuncture is used primarily to deal with pain, and there is a great deal of psychology in pain. When medical professionals raise the issues of pain, psychological elements or factors are nearly always involved. Therefore, when we talk of using acupuncture to manage pain, certain psychological aspects need to be addressed. This chapter on psychology in acupuncture is included for this purpose.

11.1 PSYCHOLOGY OF PAIN

One reason that psychology is important in pain is because whenever someone writes about pain, psychological factors will be mentioned. There are far too many books available with some pain-related content for use in citation. The quotations provided here are randomly selected from among several such books that we have on hand in our bookshelves.

First, according to Walter B. Cannon [1]: "Closely related to fear is pain. Indeed, fear has been defined as the premonition of pain. As a rule, pain is associated with the action of injurious agents, a fact well illustrated in cuts, burns, and bruises. There are, to be sure, instances of very serious damage being done to the body—for example, in tuberculosis of the lung—without any pain whatsoever; and there are instances, also, of severe pain as in neuralgia, without corresponding danger to the integrity of the organism. These are exceptions, however, and the rule holds that pain is a sign of harm and injury. By experience, agents which injure and destroy, and which produce pain, become associated, so that our relations to them are conditioned by their effects. Thus, pain saves us from repeating acts which, in the end, might make and an end to life itself."

The word "psychology" is not used in this writing, but there is no doubt that in Dr. Cannon's opinion, psychology plays a part in pain because of our fear of this uncomfortable feeling.

In a book by Janet G. Travell and David G. Simons [2], we have the following: "A number of psychological factors can contribute to perpetuation of myofascial TPs (trigger points). Most important, the physician must be careful *not to assume* that psychological factors are primary. It is all too easy for the physician to blame the patient's psyche for the inability of physician to recognize all of the medical and neurophysiological factors that are contributing to the patient's myofascial pain. This wrong assumption can be—and often is—frightfully devastating to the patient. We have so much to learn about pain, especially referred pain. Patients who misunderstand the nature of their condition may be depressed, may exhibit anxiety tension, or may be victims of the 'good sport' syndrome; some may be exhibiting secondary gain and/or sick behavior; a few will evidence conversion hysteria. Each must be diagnosed on its own merits."

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Our comments on those specific psychological factors to generate pain will be made later in this chapter.

Next, we hear from Robert P. Sheon et al. [3]: "Pain may cause temporary changes in personality. Psychologic evaluation of persons who suffer from chronic pain reveals several common deviations, including neuroticism and depression. These personality patterns do not, however, relate to future disability or disease outcome. In fact, these deviations tend to normalize following relief of the pain. Anxiety, hostility, denial, fear, guilt, hysteria, and depression are associated with changes in pain perception. In one study, six different personality patterns were defined, yet none of these related to chronicity or to illness behavior patterns. In another study, examining patients who were undergoing surgery for treatment of painful disorders, affirmative answers to two questions were useful as predictors of a poor outcome: (1) 'Has your appetite decreased recently?' and (2) 'Has your sexual interest lessened?' In other reports of patients treated nonsurgically, certain other characteristic features were also found that were predictive of an unsuccessful outcome. These included guilt, particularly if related to a supernatural reason given for the illness; projection of guilt onto others, particularly the therapist and pretreatment medication dependency; accident proneness; and expressed dissatisfaction with previous therapy. During care in a comprehensive pain center, these patients opposed psychologic approaches, used circumscribed delusions, and resisted many attempts at treatments. The pain center utilized formal and informal psychologic approaches in an effort to alleviate a 'negative–resigned' attitude in such patients."

This excerpt drags pain into a very complicated psychologic sphere.

The fourth quotation is made by Roy J. Mathew [4]. In the treatment of migraine headaches, Mathew describes in his book that there are "many emotional factors in the migraine patients' personality." They are found "to suffer from being anxious, (to be) striving, perfectionistic, order-loving, rigid. They become progressively more tense during periods of threat or conflict and show mismanagement and suppression of anger." Mathew also reports that "migraine sufferers tend to be tense and overconscientious. Their personality is described as sensitive, worrisome, perfectionist, chronically tense, apprehensive, and preoccupied by achievement and success. The migraine personality was also characterized by superficial interpersonal relationships, sexual maladjustment, and obsessive preoccupation with moral and ethical issues and was more neurotic than that of nonmigraine patients." One trouble with this quotation is that we don't believe any of these descriptions given to patients with migraine headache. We have met quite a few migraine patients, and none of them were known to have the personality described above. It is questionable whether the migraine personality is real. If it is, we certainly know nothing about such a personality.

Next, we excerpt from an article in *Time* magazine by Claudia Wallis [5]. In the article, chronic pain is said to come with anxiety, depression, and hopelessness. Throughout this short report, the terms "psychotherapy," "psychologist," and "psychological perspective" were repeated six times. One specific example was mentioned: a patient "for 2 years had been battling searing pain in his shoulder blade and armpit from shingles. Tried a variety of drugs, but they brought only temporary relief. Finally, he was referred to pain psychologists to learn techniques that would help him control his pain. The techniques include teaching patients relaxation exercises, breathing skills, guided imagery (focusing on pleasant mental images), and distraction techniques." According to Wallis, "pain psychologists play a vital role at most pain management centers, though patients are often reluctant to consult them. Patients hate to hear you offer them mind therapy, because they feel what you're doing is telling them they have a mental illness and you don't really believe they have a physical problem." She quoted an anesthesiologist, an internist, and a psychiatrist who is chief of pain medicine at a medical center, saying that "the mind is always actively involved in pain, especially in chronic cases. When we image the brain, the areas that light up when you experience pain include parts of the brain involved in emotions. That is why learning to relieve fear, anxiety, and depression related to pain actually helps bring relief, probably by activating the body's own pain-killing

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chemicals." Toward the end of her article, Wallis quoted the opinion of the then-incoming president of the American Academy of Pain Management on the question of why psychological therapy is less frequently used to manage pain compared with prescribing drugs. The answer was that "insurance companies prefer quick pharmaceutical fixes over the kinds of physical and psychological therapies that chronic-pain patients need. The bias toward drug treatment is not only bad medicine but is also expensive." The question here is what constitutes psychological therapy for pain management. In our view, what the psychological therapists use for the patients mentioned in this report is more neuromodulation than the dialectic oral consultation conducted in psychological therapy. Briefly, neuromodulation is defined as stimulation of the nervous system by whatever means to affect its function. As so defined, acupuncture is a mode of neuromodulation; and so are relaxation exercises, breathing skills, or biofeedback.

Finally, we hear from a book by Alice Park [6]. The author began by stating, "Pain is the human bodyguard, the cop on the beat racing to the scene, sirens wailing, shutting down traffic" and discussed "finding new ways to treat pain." The new ways include training the brain to ignore pain, using magnetic waves to reset neural circuits involved in pain, and using talking to cure pain, which is described as the talking cure. The talking cure is based on the fact that a "low-tech piece of the pain puzzle involves the psychological, social, and behavioral factors at play. Whether or not post-surgical pain becomes chronic certainly has a lot to do with a person's genetic sensitivity to activating pain pathways, but it may also depend in part on temperament and mental state. Because the brain chemicals that regulate mood and emotion, such as serotonin and norepinephrine, are closely linked to those that govern crisis response—including pain—it makes intuitive sense that their functions would be intertwined, and doctors see evidence of that all the time. Chronic pain really is a disease of the central nervous system. As such, it is a disease that affects the sensory, emotional, motivational, cognitive, and modulatory pathways. And the more we understand, in particular, the emotional pathways, the more we begin to understand that the traditional way we approach patients in pain may need to be revised. Patients with depression or anxiety, for example, often report a higher incidence of chronic pain, and their discomfort rises as their depression worsens. In addition, the opioid-based response to pain loops in the same reward and motivational systems that reinforce behaviors like addiction. Treat the depression and you may break the entire pathological cycle. New research into mental illness, genetic and molecular biology is giving researchers and patients new hope that pain may not have to remain so intractable and untreatable. And rethinking chronic pain as a disease, as a normally adaptive process gone awry instead of as a symptom, may be the key to finding safer and more effective ways of interrupting the hurt." To us, Alice Park's writing sounds more like fantasy than true scientific reality. Nothing she says about pain has any scientific proof to date, as far as we are aware.

11.2 TRUE OR FALSE

So much has been said about the psychology of pain. There may be questions on whether what has been said is true or false. However, we need not attempt to answer this question, because most, if not all, of what is said about the psychology of pain is inapplicable to the practice of acupuncture. The purpose of having acupuncture is to manage pain. If acupuncture is useful, pain will be manageable, and vice versa. Whether psychology is involved makes no difference to the outcome of acupuncture treatments.

However, a few issues related to psychology in acupuncture deserve our comments. One is the reality of psychological factors. What are these factors? Do these factors exist before or after the pain occurs? Does acupuncture treat the pain to make these factors disappear, or are these factors eliminated before pain is made to subside?

We begin by asking how many psychological factors we have. From what we have learned, medically mentioned terminology includes depression, anxiety, stress, tension, fear, hypochondriasis, worrisome, apprehension, and more. Conventional wisdom often is ambiguous in whether

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the factors or the pain comes first. We need to point out categorically that in the overwhelming majority of patients we have met, pain always precedes the factors. The patients have pain years before they begin to have depression and other psychological difficulties. We don't know if their psychological problems disappeared after acupuncture helped to eliminate their pain because none of our patients return to provide the opportunity for the follow-up studies once their pain is gone.

We cannot deny that once pain, particularly when it becomes chronic in nature, is set in the body, psychological factors of anxiety, stress, and tension will aggravate its intensity. We have never had patients come in purely for the treatment of stress and tension. Psychological derangement is very rare among our clientele. Out of more than 24,000 patients, we have encountered only a couple of cases of schizophrenia. There are more patients suffering for many years from chronic pain coming to complain of depression and anxiety. There is no question for us that after years of suffering pain, depression, as a consequence, is only to be expected.

11.3 HISTORICAL PROSPECT OF PAIN PERCEPTION

It is undeniable that psychology plays an important role in the perception of pain, as supported by the following example: A 46-year-old woman came to the clinic and declared that she suffered from fibromyalgia, because, for the last 4 days, she had had pain under the right armpit over the area covered by the latissimus dorsi muscle. Fibromyalgia is an illegitimate child in medicine. Even today, many doctors still don't recognize fibromyalgia as a genuine disease entity. There are doctors who think that the pain caused by fibromyalgia is all in the imagination of the sufferers. Most patients who suffer from fibromyalgia are female, and there are some six million of them. Six million is a substantial number, and to say that they are all "just crazy" or have something wrong in their heads would not merely be impolite, but insulting. The dismissive attitude stems from the fact that no pathology can be cited as the cause for having pain in fibromyalgia. Most patients with fibromyalgia have no obvious source of pain resulting from an injury of endogenous or exogenous origins. The symptoms they claim to have include chronic fatigue, insomnia, and depression without a substantive manifestation of psychological disorders. The psychological burden for the patients is aggravated when the pain they suffer is difficult to dispel. Therefore, it was imperative that we would be able to determine whether the woman really had the disease described as fibromyalgia. Otherwise, she would be regarded merely as having a psychopathic belief that she was suffering. Whether fibromyalgia is just a psychopathic symptom or a real pain symptom is beside the point of our discussion for the time being. The point here is that this is a useful case to help us look into why the mind is important in perceiving pain. We first have to look at it from a historical perspective.

Primitive people believed that the pain they sustained was inflicted by foreign objects. These foreign objects could be anything intruding into the body. To stop pain, besides extracting the intruding object, efforts also had to be made to ward off, appease, or frighten away any ill-intentioned spirits or demons with rings, talismans, amulets, tiger claws, or similar charms worn in the ears or nose. Figure 11.1 is one such example that is still in practice today. Even if the individual shown in the figure did not have his nose pierced for the sake of repelling pain, we do know that, in modern times, tattooing one's skin with exorcism symbols and wearing copper bracelets are accepted as ways to keep evil spirits and pain out of the body. Scientifically, practices of this nature are viewed as nothing but psychological make-believe.

It was an ancient belief in countries such as Egypt, India, and China that painful afflictions without injuries or wounds were caused by gods or evil spirits. Evil spirits usually arrived in darkness and could enter the body through the nostrils or the ears. Thus, pain clearly could carry religious overtones in different cultures. These overtones are another role that psychology plays in the perception of pain.

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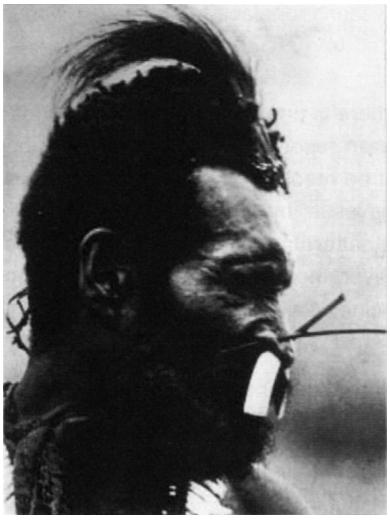

FIGURE 11.1 Piercing the nose with certain objects is still a known practice among primitive tribes in our modern world. This picture is valid proof for such a custom, although there is no proof whether the ornament in the nose of this individual was for vanity or for repelling any evil which might bring pain through the nasal orifice.

11.4 MENTAL ATTITUDE TOWARD PAIN

By the Middle Ages, during the Renaissance, medical professionals began to think that pain was more than a psychological phenomenon and described 15 different types of pain due to different kinds of humoral presences. To relieve these different types of pain, they suggested exercise, heat, and massage. They also used natural compounds such as opium to control the pain. European cultures began to dominate the world, and scientific thinking was emerging among European medical schools. The center of sensory perception shifted from the heart to the brain. The Renaissance fostered great scientific advances in anatomy, physiology, and chemistry. The anatomy of the nervous system became the focal point for the understanding of pain. However, the scientific study of the sensation in general and pain in particular didn't take root in physiological experiences until the nineteenth century. It is accurate and fair to say that we now know much more about the anatomical, physiological, and biochemical aspects of pain. Nevertheless, it is also true and fair to say that old beliefs die hard; spiritual elements, including the mind and thought, still play a significant role in the perception of pain. Isn't it true that people suffering from chronic pain may wonder why they have to be punished with such terrible agony? Pain is still thought by some people to be supernatural, beyond secular control.

Besides the differences in cultural background and religious belief (Figure 11.2), there are other factors that are known to influence our psychology toward pain. The most commonly cited factors include financial gain, social pressure, judicial litigation, personality conflict, etc. We wonder whether religious devotees performing self-flagellation may understate the pain that they have inflicted on themselves. On the other hand, it is also a known fact that victims who stand to have financial gain can and will overstate pain suffering. Complaining of pain is also known as a tactic to attract attention and sympathy. More examples are available to show the interplay between our mind and pain. Further arguments over which mental attitude toward pain is beneficial for its relief or exacerbates suffering will serve no useful purpose. There are, and always will be, disagreements among medical experts in the study and care of pain in relation to psychology. Their disagreements indicate the uncertainty in our understanding of how psychology plays a role in the perception of pain.

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FIGURE 11.2 Self-flagellation is a common religious practice. Do these faithful have a different psychology toward pain than ordinary individuals? (From *National Geographic*, November 2003, page 33, photographed by Steve McCurry.)

The biggest disagreement among the experts and pundits is that they don't have a uniform view of how much of a role psychology plays in pain. Is it 99% or only 1%, or somewhere in between? If so, just where in between does it fall? How important the mind is over pain depends very much on which school of thought we are willing to accept. There are many schools which have proposed different theories to explain pain. These include the specificity theory, the intensive theory, the pattern theories, the central summation theories, the fourth theory, the sensory interaction theory, the gate control theory, the psychological theory, and the behavioral theories.

A student of psychological and behavioral theories naturally will be more inclined to think that the mind is more important. Otherwise, how logical is it to explain that pain can occur in the absence of tissue damage or other organic pathology, as in case of fibromyalgia? Such pain is believed to be of a psychogenic nature. Psychogenic pain is said to occur in patients with a neurosis or psychosis. No demonstrable pathology can be found in these patients. The highest incidence of psychogenic pain is said to be found in patients with neurotic disorders, especially hysteria, and less frequently with reactive depression and other psychotic disorders. This view seems to imply that crazy people will suffer more pain, and the crazier they are, the more pain they will have. This theory has one inherent pitfall: How can we trust what crazy people tell us? They are known not to be trustworthy. Furthermore, if psychogenic pain is indeed less frequent in patients with depression than in hysteric patients, how can the difference in frequency be tangibly measured?

To avoid possible conflicts between the different theories promulgated by different schools and to cover any possible domain of psychological pain, when any questionnaires are designed to measure pain, they almost always turn out to require a thorough and total comprehension beyond that of ordinary intelligence. Like theories, there are many questionnaires used in clinical practices to estimate how much pain the patients might be suffering. Realistically, most of them cannot be considered as helpful for medical professionals to reliably understand the quantity of pain the patients might have. This is only to be expected if the patients themselves have no clear idea of their own pain.

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11.5 THE VICIOUS CYCLE OF PAIN

Psychology is an undisputed factor in the perception of pain. However, we have to be aware of other factors that can also play a more substantial role than the mind. Medically speaking, each of these factors can be as complicated and intriguing as psychology. Discussing them all would be excessive for this book, which is intended to be brief and concise. One way to simplify their interactions and interrelationships is to use a conceptual diagram, such as in Figure 11.3, for an easy visualization. What is shown in the figure is not entirely our own imagination. The same vision has been proposed by many other well-known people in the study of pain. Here is a mere adaption of their ideas to put into use for our readers.

Understanding what role psychology alone plays in pain (and how) is mind-boggling enough. To tangle with all the factors listed in the figure of the cycle will certainly make it more difficult to better understand pain. However, from the diagram, we can imagine that pain operates like a wheel turning in a cycle. The axle of the wheel is the sensory nervous system. When the system is stable, as described in an optimal homeostatic state, the wheel remains sedate, without much need to move and become active. The wheel can and will turn on its own when the various factors included are stimulated. When the wheel of pain begins to turn, it will turn in two dimensions, larger in size and faster in speed. These two dynamic phenomena explain why pain grows in intensity and severity if permitted to perpetuate for too long. The size and speed dimensions of the wheels' turning will be determined by elements including hormones, nutrition, blood flow, infections, etc. All these factors can be fed into the cycle of pain, and it is this vicious cycle that is capable of exacerbating our pain.

The information provided above is intended to illustrate two simple and obvious facts. First, no one knows how to measure or quantify pain in a realistic and reliable way so that we are able to understand how much pain people are suffering. Clearly, we need to find such a way to quantify pain realistically and reliably. This is precisely what this book is intended to offer. The claim is not preposterous; we expect our readers to come to the conclusion that the promise offered is genuine.

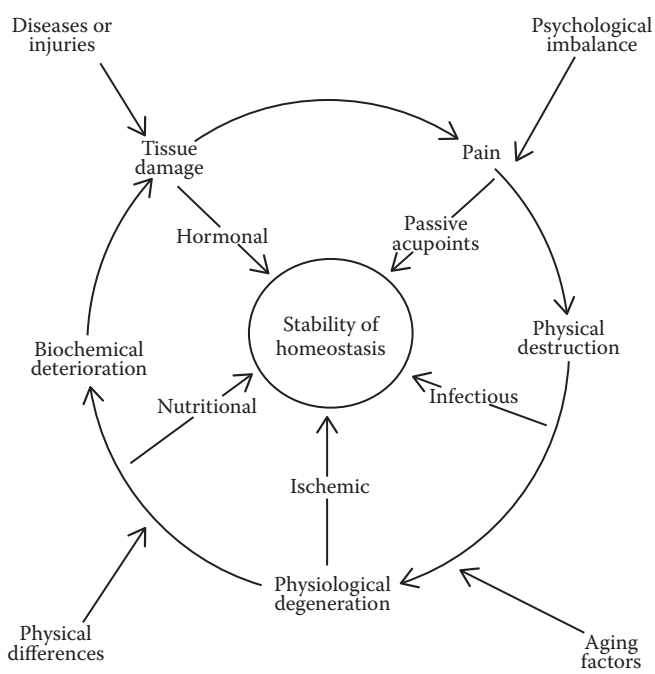

FIGURE 11.3 The vicious cycle of pain.

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By reading this book, one may discover that pain is culturally, politically, ethnically, economically, educationally, religiously, and socially neutral. How much pain each of us has is measurable and quantifiable. One can be atheistic or fanatic, and the pain measured will be the same. The results of the measurement turn out to be independent of our mood. Quantifiable pain is relatively constant whether we are happy or sad, depressed or exhilarated, angry or cheerful, provoked or pacified, rich or poor, during daytime or at night. A person will be shown to have the same degree of pain regardless of whoever conducts the testing as long as the identical procedures described are followed. There is definitely no psychology involved in our understanding of pain.

11.6 REBUTTING ACUPUNCTURE AS PLACEBO

To conclude the discussion of psychology in pain, one last item of controversy we face in acupuncture is whether the efficacy produced by needle insertion is real or just imaginary. Critics of acupuncture insist that the results from needle therapy are nothing but placebo. Acupuncture has been viewed as a product of placebo because the results of several clinical investigations have shown that the positive results of acupuncture were no greater than those of control or nonacupuncture groups. In other words, the difference between experimental acupuncture groups and control nonacupuncture groups is not statistically significant. There is no need to dispute whether the results produced by acupuncture are wholly or partly placebo. Even if the results are placebo, acupuncture is still undeniably useful in managing pain in some patients. The merit of having the potential to reduce or stop pain in one or more patients justifies keeping acupuncture in practice for the time being. Most clinical studies in acupuncture have not had much scientific meaning in determining whether the pain suffered indeed was reduced because we do not have a reliable method to measure how much there is to begin with. Thus, whether or not acupuncture is placebo does not mean much to us. If there is no way to reliably measure the pain in the beginning, how can we say for sure that the pain had been reduced at the end of the therapy? One of the missions set for this book is to show our readers how pain can be measured reliably.

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12 Pain and Measurement

12.1 A CHALLENGE AND A PUZZLE

In the study of pain, two renowned scientists, Melzack and Wall, wrote a book entitled *The Challenge of Pain* [1], which was published in 1982. In the book, the authors view pain as a puzzle. The reason that pain is challenging can be best described by Bonica [2]. He said that today, as then, proper management of pain remains one of the most important and most pressing issues of society in general, and of the scientific community and the health professions in particular. Demographically, one-third of all Americans have chronic discomfort due to pain. Medically, pain is the number one reason people seek medical care. Financially, medical care for pain is estimated to cost $100 billion a year in treatments, lost wages, and other expenses. Drugs used to treat pain are one of the leading causes of liver failure. Painkillers send more than half a million to the emergency room annually, and about 200 die from taking them each year.

Pain is a puzzle. No mentally sane individual wants to have pain, even though we all need it, because pain is protective. The sensation we seek most to avoid is, in fact, one of the most essential ones for our survival. We think that we know a great deal about pain, yet we still don't know what pain really is. We don't know when pain could go rogue. Pain can help us get well and stay safe. Yet, it can become an illness in itself, resulting in persistent torment. Pain can act like a thief. It breaks into your body and robs you blind. With lightning fingers, it can take away your livelihood, your marriage, your friends, your sanity, your joy, your happiness, your favorite pastimes, and big chunks of your personality. Left unapprehended, it will steal your days and nights until the world has collapsed into a cramped cell of suffering.

Pain is said to be gaining new respect at all levels of health care. It is even making its way onto the national political agenda. The U.S. Congress has declared that this is the decade of pain control and research. Pain is an important medical, political, and social issue. Yet, we still have a lot of unknown factors when facing pain: We don't know the exact cause of generalized pain disorders. We have no dependable method to measure pain. We don't have any agreeable, reasonable way to define acute and chronic pain. Can a pain grow? Does pain have memory? And these are only a few examples of questions we still have regarding pain. Our available space and time are far too limited to investigate even the small selection given above, much less all of them. Our intention in this book is to select three of the questions most urgently in need of answers: Can pain be objectively measured? Is it possible to differentiate acute pain from chronic pain? What is the relationship between acute and chronic pain? Finding reasonable answers for these three questions will be helpful in understanding how and why acupuncture is useful.

12.2 MEASUREMENTS OF PAIN

There are four commonly used procedures to measure pain in patients: psychophysical, rating scale, magnitude estimation, and measurement of performance behavior on laboratory tasks. A good example of the psychophysical method is the McGill Pain Questionnaire. There are many rating scale methods available for both clinical research and daily routine practice. The magnitude estimation method uses direct judgments of stimulus intensity or quality made by number assignment or cross-modality matching techniques such as hand grip force. The fourth method obtains indices of

discrimination ability or detection. These four methods are not inclusive; there are other methods described in the literature.

It will not serve much purpose to evaluate the different methods used conventionally in pain measurement. However, to be informative, we will just point out one disadvantage for each of these methods. For example, the McGill Pain Questionnaires are very tedious and lengthy. Answering all the questions alone takes hours, not to mention how long it requires to evaluate all the answers provided. Results obtained from rating scale methods can vary from time to time, reading eight out of a possible 10 in one hour, and then dropping down to two the next hour. The third and fourth methods involve elaborate procedures that require too much time, manpower, and expensive facilities to perform. They are not suitable for routine use in ordinary clinical setups.

Any method for measuring pain must have several feasible aspects to be clinically useful. It should be applicable to every patient coming to the clinic. Its procedures should be usable anytime by people trained in acupuncture as promulgated in this book. For experienced acupuncturists, pain in a patient should be measurable in less than 5 min. Measured pain should be recordable with integers to designate its degree of intensity. The measurement must be reproducible for any patient with any possible painful condition. Most importantly, the data on the degree of pain collected must be applicable for prognostic purposes in determining whether the pain in that particular patient can be managed. If the pain can be managed, how many acupuncture sessions are required to achieve a substantial relief? And, indeed, once the pain has subsided, what is the possibility for it to relapse? To medical professionals who provide care in pain management, the claims offered here could sound outlandish. I recommend they try out my methods for themselves before drawing a final conclusion.

Pain has to be quantifiable. As the prelude to his book [3], Dr. Bond quoted Lord Kelvin: "…when you can measure what you are speaking about, and express it in number, you know something about it, but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind; it may be the beginning of knowledge, but you have scarcely in your thoughts, advanced to the stage of science whatever the matter may be." This quotation is quite applicable to the scientific status of pain. When we speak of pain, there is not much science involved because we don't have a reliable way to numerically express pain measured in the bodies of patients. Until it is possible to measure what degree of pain there is in every patient, pain research will remain meaningless to all of us.

12.3 SUBJECTIVE PAIN VERSUS OBJECTIVE PAIN

Why is pain impossible to measure? The reason is very simple. We have two kinds of pain: subjective and objective. To this day, when we want to measure pain medically, we invariably will target subjective pain. Why do we always focus on subjective pain? Because subjective pain is perceivable; it is the unpleasant sensation produced after injuries of either endogenous or exogenous origins. We know where subjective pain is located. This kind of pain is mutable; it changes frequently from time to time. This mutability makes the assessment of subjective pain difficult, if not impossible. Subjective pain is capricious in nature. It hurts now, but a few hours later, the hurting will disappear on its own. If we use a scale rating of one to 10 to measure how much pain a patient has, and the answer is eight right at this moment, it could change to one a few hours later. Subjective pain can appear randomly in any part of the body. Where there is an injury, the injured location will have subjective pain. Subjective pain provides no clue for us to determine if the pain is acute or chronic in nature.

In contrast, there is objective pain. Objective pain is measurable. It is our main focus of pain measurement. Objective pain is not perceivable. People who have objective pain will not know they have it. The pain is relatively stable, meaning without noticeable variation in the intensity of hurting sensation over a rather long period of time, such as months. Objective pain serves as a useful

indicator to differentiate chronic from acute pain. All objective pain is found to occur in acupoints in the passive phase, or trigger points. In other words, trigger points are acupoints where objective pain is stored. How many trigger points one has will indicate the quantity of objective pain one carries. The method for counting trigger points will be explained subsequently. All we want our readers to know right now is that the manageability of a subject's pain depends on how much the objective pain the subject has.

12.4 RANKING THE TRIGGER POINTS

Almost all of our patients have been found to have trigger points. The trigger points appear in an orderly sequence, as described in an earlier chapter of the book. The sequence appears to be predictable, as shown from our study. Over an approximately 4-month period, 221 patients were studied. The sex and age distribution of these patients is summarized in Table 12.1. Of the patients studied, 130 (58.8%) were female, and 91 (41.2%) male. There were fewer young patients than older ones. Only two were younger than 19 years of age. One of the two was 12 years old and came not because of pain, but because of asthma. Patients between 40 and 69 years of age made up 63.8% of the total.

The pains these patients complained of suffering varied widely. They included lower back pain, arthritis of different types, headaches, and pain at various joints. Most of the patients (95%) had received conventional medical treatment without substantial benefit in terms of pain relief. They often confessed that acupuncture was their final recourse.

A total of 110 acupoints were selected for study. That number is approximately a third of the total number of acupoints described in this book. The acupoints selected for the study were chosen to represent the head, neck, upper limb, body trunk, and lower limb proportionally. The time required to test all 110 acupoints in each patient was less than an hour, giving the opportunity to schedule two patients per hour. Generally, three to four patients were available for the study per night.

A checklist with all 110 acupoints was prepared. After testing if tender sensation was present, a functional phase of latent, passive, or active was recorded for each acupoint. All the tests were conducted by the author. Acupoints on the anterior side of the body were tested first, followed by those on the posterior surface. After completing the study, we determined how many patients had a given number of passive phase acupoints. As can be seen in Table 12.2, out of a total of 221 patients, 220

TABLE 12.1
Sex and Age Distributions of Patients Examined for Passive Acupuncture Points

	Female Patients		Male Patients		Total Patients	
Age in Years	**No.**	**(%)**	**No.**	**(%)**	**No.**	**(%)**
10–19	0	0	2	2.2	2	0.9
20–29	8	6.2	7	7.7	15	6.8
30–39	17	13.1	14	15.4	31	14.0
40–49	25	19.2	11	12.1	36	16.3
50–59	32	24.6	18	19.8	50	22.6
60–69	31	23.9	24	26.3	55	24.9
70–79	15	11.5	14	15.4	29	13.1
80–89	2	1.5	1	1.1	3	1.4
	130	100.0	91	100.0	221	100.0

TABLE 12.2
Names of the Primary Trigger Points in Sequence of Appearance

Sequence	Acupuncture Points (Anatomical Nomenclature)	Passive Phase	
		Frequency	(%)
1	Deep radial-I	220	99.5
2	Great auricular	219	99.1
3	Spinal accessory-I	217	98.2
4	Saphenous-I	216	97.7
5	Deep peroneal	215	97.3
6	Tibial-I	214	96.8
7	Greater occipital	213	96.4
8	Suprascapular-I (infraspinatus)	212	95.9
9	Lateral antebrachial cutaneous	211	95.5
10	Sural-I	209	94.6
11	Lateral or medial popliteal	207	93.7
12	Superficial radial-I	203	91.9
13	Dorsal scapular-I	201	91.0
14	Superior cluneal	198	89.6
15	Posterior cutaneous of L2	196	88.7
16	Inferior gluteal	195	88.2
17	Lateral pectoral	192	86.9
18	Iliotibial-I	185	83.7
19	Infraorbital	184	83.3
20	Spinous process of T7	178	80.5
21	Posterior cutaneous of T6	172	77.8
22	Posterior cutaneous of L5	168	76.0
23	Supraorbital	167	75.6
24	Common peroneal-I	165	74.7

of them had deep radial-I in the passive phase. Translated into percentages, 99.5% of all patients had that acupoint in the passive phase. Taking the supraorbital point as another example, 167 patients, or 75.6%, had that acupoint in the passive phase. Only three patients, or 1.4%, had the olecranon point in the passive phase. That was the lowest ranking for any acupoint.

12.5 TRIGGER POINTS IN FOUR GROUPS

We decided to divide the 110 trigger points into four groups: primary, secondary, tertiary, and nonspecific. The reason for such divisions will be explained in the later chapters. For the time being, it is useful to remember the sequence in which acupoints turn from the latent to passive phase or the sequential order in which trigger points appear. One hundred and ten is not a small number to deal with. It is very difficult, if not totally impossible, to memorize all of them in correct sequence. The primary points are the most important and used in acupuncture practice all the time (there are 24 of them). It should be possible to become acquainted with their names, if not their correct sequence. For other trigger points in the secondary, tertiary, and nonspecific groups, it will be sufficient to remember a few in each group for acupuncture practice. Which of them are beneficial to remember will be suggested in the following descriptions.

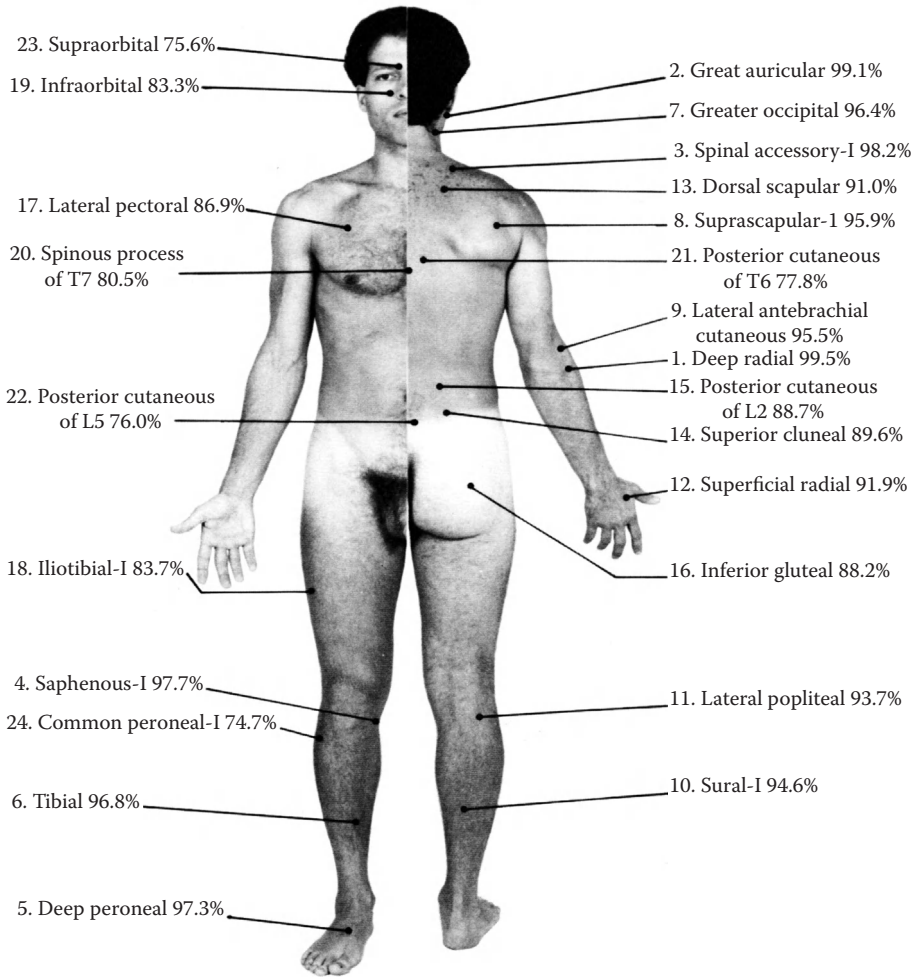

FIGURE 12.1 Anatomic locations of 24 primary trigger points.

12.5.1 Primary Points

The first 24 acupoints to become trigger points are considered as the primary points. The justification for claiming a total of 24 acupoints will be offered in Chapter 13. The names of these 24 points are listed in Table 12.2, and their anatomic locations are shown in Figure 12.1.

Gradually, the author figured out one adequate and appropriate scale for rating objective pain in 12 degrees. Each degree encompasses eight trigger points. Therefore, if a patient had the first 24 trigger points detectable with painful sensitivity, that patient was estimated to have at least third-degree objective pain. The same rule will apply to the secondary, tertiary, and nonspecific trigger points.

12.5.2 Secondary Points

The next 28 points in sequence are grouped as the secondary points. Their names are listed in Table 12.3, and their anatomic locations are shown in Figure 12.2. We can divide 28 by three to have nine trigger points representing one degree of objective pain. We suggest keeping three of the 28

TABLE 12.3
Names of the Secondary Trigger Points in Sequence of Appearance

Sequence	Acupuncture Points (Anatomical Nomenclature)	Passive Phase	
		Frequency	(%)
25	Medial antebrachial cutaneous	164	74.6
26	Tibial-II	164	74.6
27	Temporomandibular	164	74.6
28	Cervical plexus	163	74.2
29	Deep radial-II	163	74.2
30	Masseter	162	73.6
31	Femoral	161	72.9
32	Xyphoid	160	72.4
33	Saphenous-II	156	70.6
34	Lesser occipital	152	68.8
35	Posterior cutaneous of T4	148	67.0
36	Iliotibial-II	147	66.5
37	Medial pectoral	146	66.1
38	Radial	143	64.7
39	Spinous process of T5	142	64.3
40	Axillary	138	62.4
41	Posterior cutaneous of L1	138	62.4
42	Spinal accessory-II	135	61.1
43	Superficial peroneal	134	60.6
44	Sural-II	132	59.7
45	Posterior cutaneous of L3	128	57.9
46	Recurrent of median	123	55.7
47	Posterior cutaneous of T8	122	55.2
48	Common peroneal-II	114	51.6
49	Suprascapular-II (superspinatus)	111	50.2
50	Mental	110	49.8
51	Superior auricular	108	49.3
52	Acromioclavicular	106	48.8

points in mind: the medial antebrachial cutaneous in the sequence of 25, the lesser occipital in 34, and the mental in 50. The medial antebrachial cutaneous can be used to compare with the lateral antebrachial cutaneous of the primary points in the sequence of nine. If the lateral antebrachial cutaneous point is tender and the medial antebrachial cutaneous is not, the objective pain in the patient is third degree or lower. If the medial antebrachial cutaneous begins to exhibit sensitivity but the intensity of tenderness is less than that of the lateral antebrachial cutaneous, this is an indicator that the pain is reaching the fourth degree. If tender sensitivity in both points is equal, the pain is unquestionably exceeding the fifth degree. Many more examples can be cited to explain how to use trigger points for measuring objective pain. The best way to learn this method is by using it in clinical practice. Of course, it is simple to recognize that having the lesser occipital point in the passive phase indicates pain at the fifth degree, and having the mental point in the passive phase indicates pain at the sixth degree.

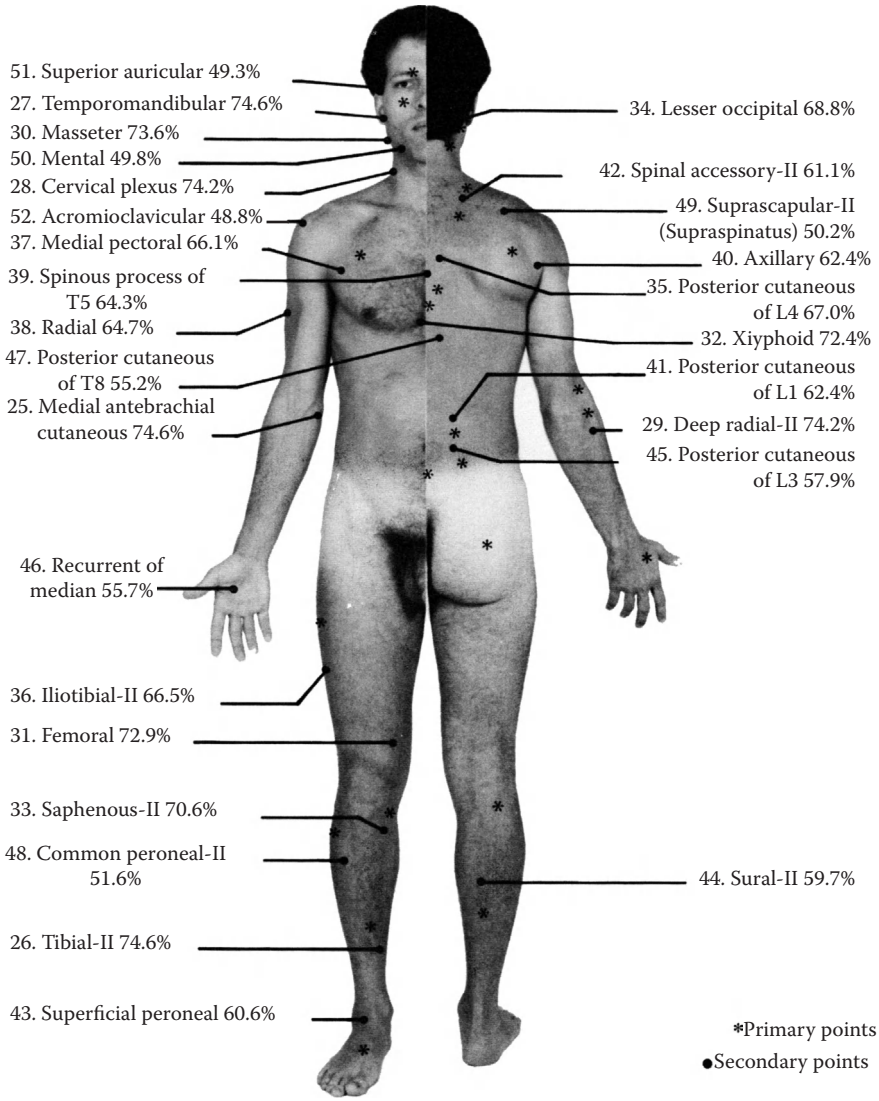

FIGURE 12.2 Anatomic locations of 28 secondary trigger points.

12.5.3 Tertiary Points

As listed in Table 12.4, there are 27 points in this group. Their anatomic locations are shown in Figure 12.3. Three in this group are easily accessible and convenient to use: the transverse cervical, the temporalis, and the medial brachial cutaneous. When the medial brachial cutaneous is used to compare with two other cutaneous points in the arm, the lateral antebrachial and the medial antebrachial, one will quickly realize how much objective pain the patient has. By the time the medial brachial cutaneous is passive, the pain is reaching the ninth degree. The objective pain at nine degrees makes the subjective pain rather difficult to manage.

TABLE 12.4
Names of the Tertiary Trigger Points in Sequence of Appearance

Sequence	Acupuncture Points (Anatomical Nomenclature)	Passive Phase	
		Frequency	(%)
53	Transverse cervical	108	48.8
54	Achilles	107	48.4
55	Upper biceps brachii	105	47.5
56	Inferolateral malleolus	104	47.1
57	Inferomedial malleolus	104	47.1
58	Intercostobrachial	102	46.2
59	Temporalis	102	46.2
60	Lateral cutaneous of T8	100	45.2
61	Spinous process of T3	95	43.0
62	Iliotibial-III	93	42.1
63	Obturator	91	41.2
64	Spinous process of T6	83	37.6
65	Plantar	81	36.7
66	Ilioinguinal	79	35.8
67	Costal margin	78	35.3
68	Saphenous-III	76	34.4
69	Third metatarsal	73	33.0
70	Spinal accessory-III	72	32.6
71	Coronal suture	71	32.1
72	Pterion	71	32.1
73	Greater trochanter	70	31.7
74	Medial brachial cutaneous	69	31.2
75	Bregma	67	30.3
76	Common peroneal-III	65	29.4
77	Posterior brachial cutaneous	63	28.5
78	Deltoid	63	28.5
79	Deep radial-III	61	27.7

12.5.4 Nonspecific Points

When objective pain gets to the tenth degree or higher, subjective pain becomes very difficult to manage. The degrees of the objective pain encompassed by the last 31 nonspecific points, as indicated in Table 12.5, are ranked 10, 11, and 12. Sometimes, the degree can go higher than that because other nonspecific points, which are not included in the table, can turn functionally to the passive phase. It is not necessary to remember which points are associated with tenth-, eleventh- or twelfth-degree pain because subjective pain involving nonspecific points is not only difficult to manage, but also the trigger points can be ubiquitous.

Figure 12.4 shows the anatomic locations of 31 nonspecific trigger points, although their number can be greater. Often, people with that many nonspecific trigger points will cry out in pain when a portion of their body is gripped unexpectedly.

12.6 TRIGGER POINTS ON THE SPINOUS PROCESSES

Trigger points can also appear on the spinous processes of some vertebrae. Figure 12.5 is taken from a drawing in a traditional acupuncture textbook [4]. The drawing shows acupoints on the spinous

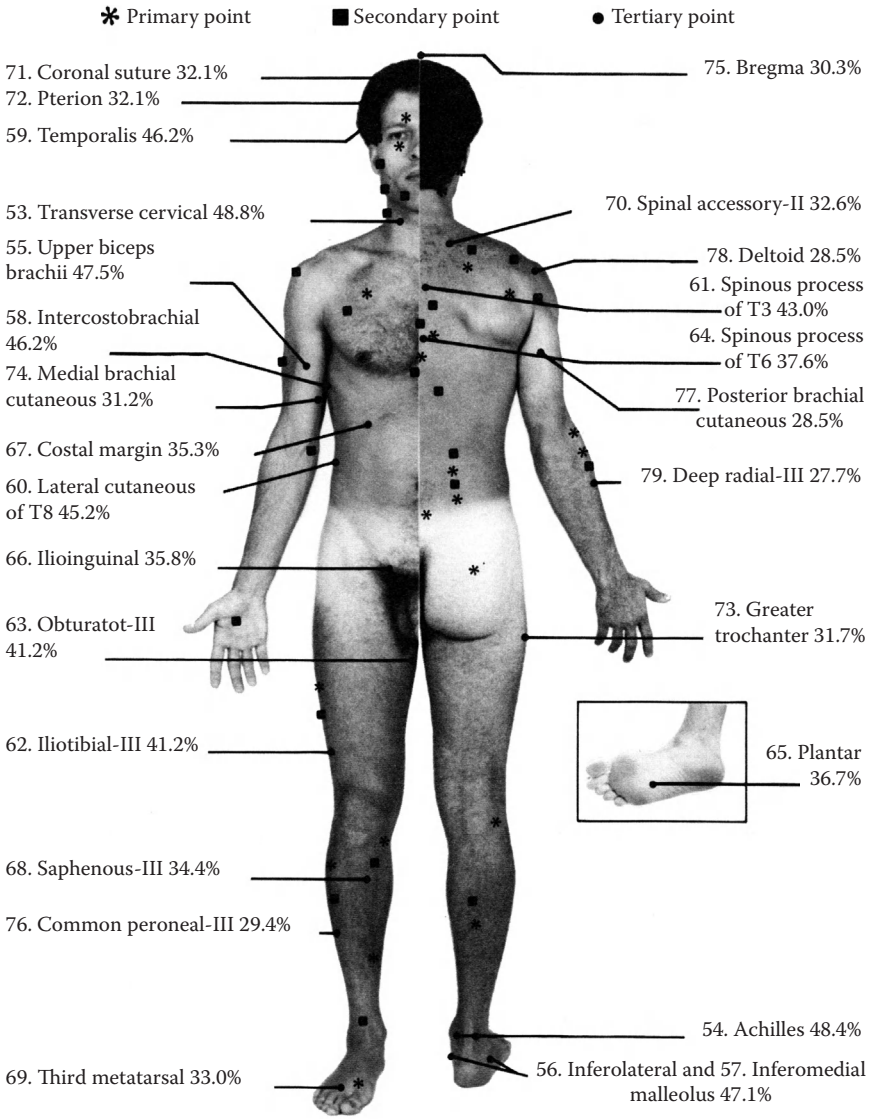

FIGURE 12.3 Anatomic locations of 27 tertiary trigger points.

processes of the seventh cervical and first, third, fifth, sixth, and seventh thoracic vertebrae. The second and fourth thoracic vertebrae have no acupoints on their processes. A study was undertaken to determine if there were no acupoints on these two processes because no trigger point was formed on them [5,6]. Here is a brief summary of this study:

First, the drawing of acupoints shown in Figure 12.5 needs to be converted into an anatomic illustration in English, as seen in Figure 12.6. Using Figure 12.6 as a guide, the anatomic location of each spinous process for the first seven thoracic vertebrae can be easily determined. The spinous process of T1 is located approximately 1 to 2 cm inferior to the vertebral prominence, which is the spinous process of the seventh cervical vertebrate. The spinous of T3 can be palpated on the midpoint of the line connecting the base of the spines of two scapulae. The spinous process between T1 above and T3 below should belong to T2. If we draw a line connecting the two inferior angles of the scapulae, the spinous process of T7 is found at the midpoint of the line. The spinous processes

TABLE 12.5
Names of Nonspecific Trigger Points in Sequence of Appearance

Sequence	Acupuncture Points (Anatomical Nomenclature)	Passive Phase Frequency	(%)
80	Intermediate supraclavicular	61	27.6
81	Fifth metatarsal	60	27.1
82	Medial sural	58	26.2
83	Zygomaticofacial	55	24.9
84	Saphenous-N	51	23.1
85	Medial supraclavicular	48	21.7
86	Lateral supraclavicular	44	19.9
87	Common peroneal-N	41	18.6
88	Peroneus brevis	39	17.6
89	Sternal angle	37	16.7
90	Posterior auricular	35	15.8
91	Median-N	34	15.4
92	Depressor septi	32	14.5
93	Vastus medialis	28	12.7
94	Lateral cutaneous of T10	26	11.8
95	Nasion	24	10.9
96	Occipital protuberance	21	9.5
97	Rectus femoris	20	9.0
98	Frontalis	18	8.1
99	Spinous process of T10	17	7.6
100	Lacrimal	16	7.2
101	Mentalis	15	6.8
102	Posterior cutaneous of S3	14	6.3
103	Anterior cutaneous of T10	13	5.9
104	Great toe	12	5.4
105	Posterior interosseus	11	5.0
106	Third proximal interphalangeal	9	4.0
107	Anterior cutaneous of T8	8	3.6
108	Heel	7	3.2
109	Third distal interphalangeal	6	2.7
110	Olecranon	3	1.4

of T4, T5, and T6 can be located sequentially either from above starting at T3 or from below beginning with T7.

After becoming familiar with the anatomic locations of the thoracic spinous processes, we turn to Figure 12.7 for a more realistic view of the body's dorsal surface taken in a photograph. The model stood with the upper limbs abducted about 30 degrees. Thus, the inferior angles of the scapulae were slightly protracted upward. They are clearly visible, nevertheless, and their anatomic locations are easy to identify for recognizing the acupoints.

To test for the appearance of any trigger points in the spinous processes, patients were asked to undress from the waist up. In a prone position, they laid flat on an examination table. Their upper limbs were kept close to the body to maintain an anatomic position akin to standing. The acupoint on the spinous process of the seventh thoracic vertebra was tested first using a thumb or index finger to apply 2 lb. of pressure to determine if it had become a trigger point. The same test was repeated

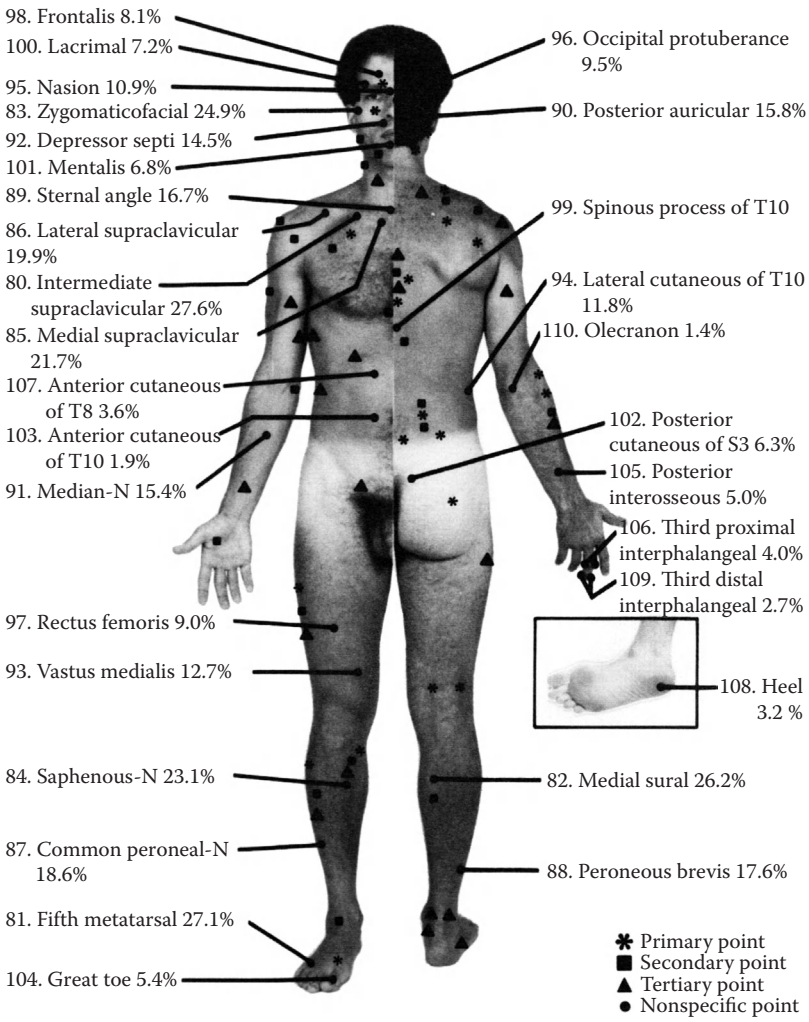

FIGURE 12.4 Anatomic locations of 31 nonspecific trigger points.

for the spinous processes of other eight thoracic vertebrae as indicated in Table 12.6. A total of 219 patients were available for the study. As can be seen in the table, 177 (80.9%) of them had a trigger point on T7. Next, in rank to T7 is T5, with 147 patients having a trigger point on that spinous process. The lowest frequency for a trigger point was found on the spinous process of T2. Only 17 out of 219 patients (7.8%) were found to have that trigger point in T2. The sex and age distributions of the 219 patients for the study of trigger points in the spinous processes of the thoracic vertebrae are tabulated in Table 12.7.

12.7 RESULTS OF PAIN MEASUREMENT

In this chapter, we describe two ways to measure pain. One way is to quantify trigger points detectable throughout the body. The trigger points are divided into four groups: primary, secondary, tertiary, and nonspecific. Each group encompasses three degrees of pain, providing a scale of 12 degrees. Another way is to quantify trigger points in the spinous processes of nine thoracic

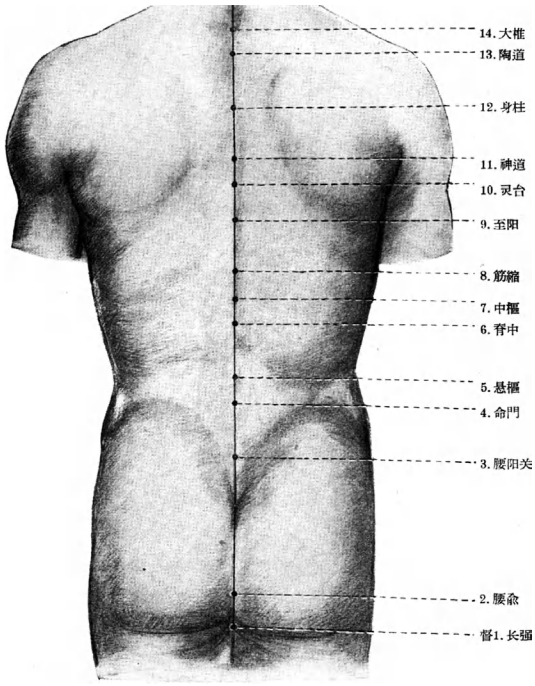

FIGURE 12.5 Acupoints on the tips of spinous processes of some vertebrae.

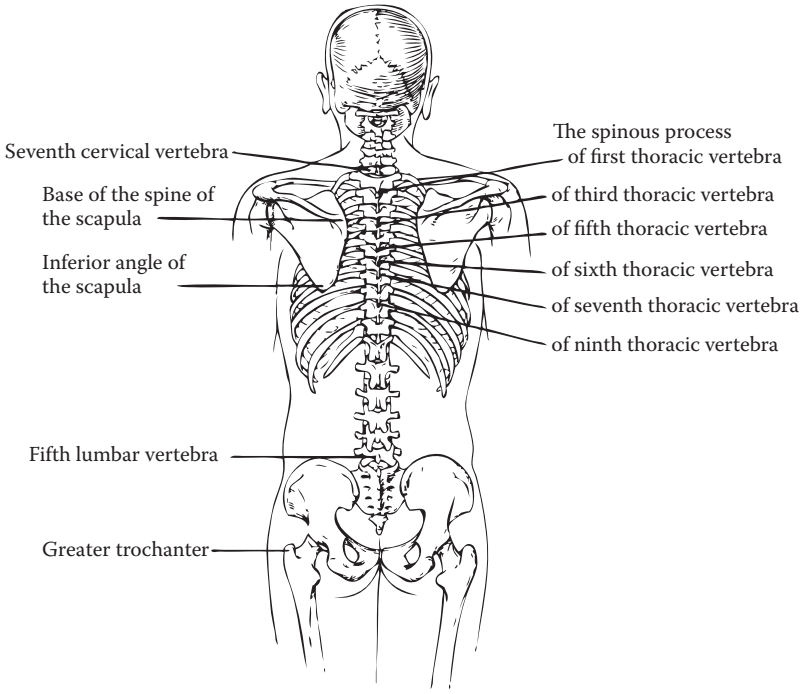

FIGURE 12.6 A posterior view of the vertebral column.

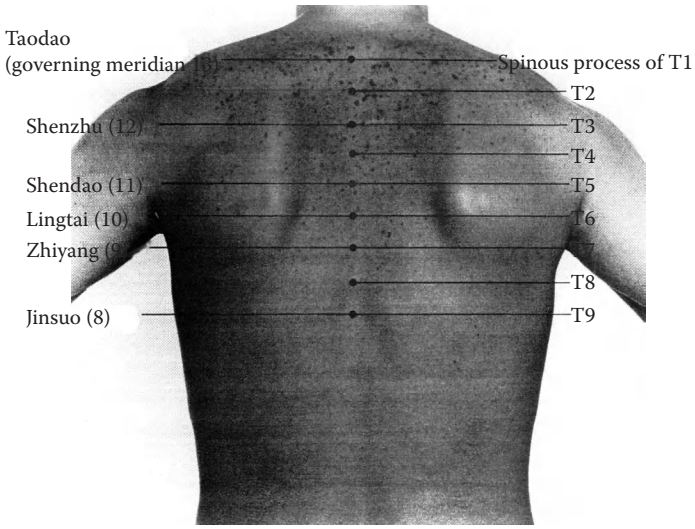

FIGURE 12.7 A photograph of the posterior thoracic wall showing the anatomical locations of the spinous processes of the upper nine thoracic vertebrae and the names of the acupoints translated from Chinese.

TABLE 12.6
Acupoints on the Spinous Processes of the Thoracic Vertebrae in the Passive Phase in Patients with Pain Symptoms

Spinous Process	Acupuncture Points (Traditional Chinese Terms)	In Passive Phase Frequency	(%)
T1	Taodao	42	19.2
T2		17	7.8
T3	Shenzhu	90	41.1
T4		31	14.2
T5	Shendao	147	67.1
T6	Lingtai	79	36.1
T7	Zhiyang	177	80.9
T8		32	14.6
T9	Jinsuo	39	17.8

vertebrae. The results of pain measurement using the number of trigger points in the thoracic vertebrae will be discussed first, followed by the results of pain measurement in which the four groups of trigger points are used.

12.7.1 Pain Measurement by Counting Trigger points in the Thoracic Vertebrae

For all nine thoracic spinous processes in Table 12.6, T7 is the first one to become a trigger point. T5 will be the second to convert, followed by T3, T6, and T9. Although the sequence for the last three points can vary, they always turn into trigger points after T7 and T5. In other words, T3, T6, and T9 will not become trigger points if T7 and T5 have not already done so. In turn, the spinous processes of T1, T2, T4, and T8 will not become trigger points before the other five points have already done so. More spinous processes in the thoracic vertebrae turning into trigger points seem to indicate a

TABLE 12.7
Sex and Age Distributions of Patients Surveyed for Passive Acupuncture Points on the Spinous Processes of the First Nine Thoracic Vertebrae

	Male Patients		Female Patients		Total Patients	
Age in Years	No.	(%)	No.	(%)	No.	(%)
10–19	0	0.0	1	0.8	1	0.5
20–29	6	6.8	8	6.1	14	6.4
30–39	16	18.2	24	18.3	40	18.3
40–49	15	17.0	21	16.0	36	16.4
50–59	16	18.2	28	21.4	44	20.1
60–69	21	23.9	33	25.2	54	24.6
70–79	31	14.8	14	10.7	27	12.3
80–89	1	1.1	2	1.5	3	1.4
	88	40.2	131	58.9	219	100.0

longer duration of pain in the patient. We believe that T7 can be appropriately used as a primary point; T5 as a secondary; T3, T6, and T9 as tertiary; and T1, T2, T4, and T8 as nonspecific.

Patients frequently reported a discrepancy in sensitivity during the process of checking trigger points in the thoracic spinous processes. Many times when T7 was first tested, patients would respond by saying that it was painful. As the test was moved to T5, the same patients might also indicate pain, but then add that it was not as painful as the previous point. The responses clearly indicated some difference in the quantity of pain at the two trigger points. Thus, painful sensitivity in T7 could deserve a full credit and in T5 only partial credit with less perceivable pain. The same consideration should also apply to other trigger points in the thoracic spinous processes: one full credit for tenderness equal to that of T5 and partial credit for tenderness less than that of T7. The degree of pain for patients can be calculated using the formula $T \times 2 = D$, where T is the number of trigger points gaining full or half credit for sensitivity. By the time T7 becomes a trigger point, the objective pain has reached the second degree. Rarely, will more than six thoracic spinous processes turn into trigger points, and even if they do, one or more of them will have only half a credit in sensitivity, making 12 the highest degree of objective pain possible.

Measuring objective pain in the patients using the method described sounds rather simple. However, some experience is required to obtain accurate measurements of objective pain efficiently. For example, if a patient has no trigger points in the thoracic spinous processes, T in the formula will be considered as equal to zero, and the degree of the objective pain in the patient will also be zero. However, this zero degree doesn't mean that the patient is free of pain. The reason is that the acupoint in the spinous process of the seventh thoracic vertebrate ranks twentieth in the sequence of primary acupoints becoming trigger points. Out of all the patients we received, only 80.5% were found to have T7 in the passive phase, and for some of them, the tenderness at that point could be considered as having only partial credit because it was less sensitive compared with primary points that ranked higher in the sequence. It is also possible for patients to have third-degree objective pain measured using trigger points distributed systematically throughout the body, yet still have their T7 in the latent phase.

Another example of experience required is determining whether a trigger point should be given full credit or half credit. In general, T7 will be most sensitive among all trigger points in the same patients. Anything less sensitive than T7 should gain only half credit. Sometimes, two or more other trigger points have sensitivity equal to that of T7. Then, it will be acceptable to give all of them only half credit. A lot of clinical practice with many patients will naturally improve one's skill for measuring objective pain correctively and reliably.

Finally, although T6 becomes a trigger point much less often than T5, when it does turn, it can be as sensitive as T5.

There are many more examples that can be cited to discuss applying the trigger points in the thoracic spinous processes to measure objective pain. They will be realized after more experience is obtained in using trigger points for pain measurement.

One last comment about trigger points in the thoracic spinous processes: Why acupoints on the thoracic spinous processes turn into trigger points in such an orderly sequence is unknown. No physiological explanation is available. Anatomically, we know that the tips of the spinous processes are joined by a strong supraspinous ligament. The supraspinous ligament expands to form the ligamentum nuchae in the cervical and thoracic vertebral regions. At the attachments of the ligament to the spinous processes, there are numerous free nerve endings that are terminals of nonmyelinated and finely myelinated afferent fibers, which are nociceptive in nature. We don't know if one spinous process has more of the nociceptive afferent fibers than others. From our study, the spinous process of T2, T4, and T8 were not recognized as having acupoints in traditional acupuncture schools simply because the frequency for them to become trigger points is much lower than for other thoracic spinous processes.

12.7.2 Pain Measurement by Counting Trigger Points in the Body

The second method for measuring pain is by counting the number of trigger points detected in the entire body. We were able to garner 436 patients for this study. Their sex and age distributions are shown in Table 12.8. Using this number, we constructed Figures 12.8 through 12.11. Before interpreting what these four figures mean in the measurement of objective pain, it will help to make a few comments on how the results of the study were collected. First, in this study, only the first 96 acupoints in sequence were used, meaning that each degree of objective pain was encompassed by eight trigger points. The last 14 acupoints were dropped because they were so infrequently found to become passive. Second, there were some variations noticed in our testing to determine whether acupoints had indeed been converted from latent to passive phase and become trigger points. There was some subjectivity involved in testing. For example, different trigger points in a patient could exhibit different intensities of tenderness. This variation in intensity made it difficult to regard them as having full credit or half credit. Thus, no such full/half credit distinction is made for the trigger points; they are considered the same as long as they are tender upon testing. Generally speaking, trigger points ranking higher in the sequence will be more sensitive and it is easier for patients to

TABLE 12.8
Sex and Age Distributions of Patients Coming in for Pain Management and Pain Quantification

	Female Patients		Male Patients		Total Patients	
Age in Years	No.	(%)	No.	(%)	No.	(%)
10–19	5	1.98	2	1.09	7	0.61
20–29	22	8.73	13	7.07	35	8.03
30–39	39	15.47	36	19.57	75	17.20
40–49	49	19.44	33	17.93	82	18.80
50–59	51	20.24	38	20.65	89	20.42
60–69	42	16.67	38	20.65	80	18.35
70–79	35	13.89	21	11.41	56	12.84
80–89	9	3.59	3	1.63	12	2.75
	252	100	184	100	436	100.0

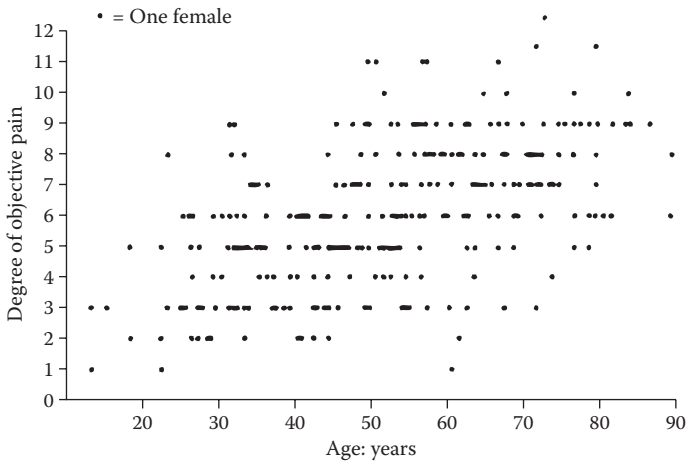

FIGURE 12.8 Degrees of objective pain in female patients with their trigger points counted. Each degree encompasses eight trigger points.

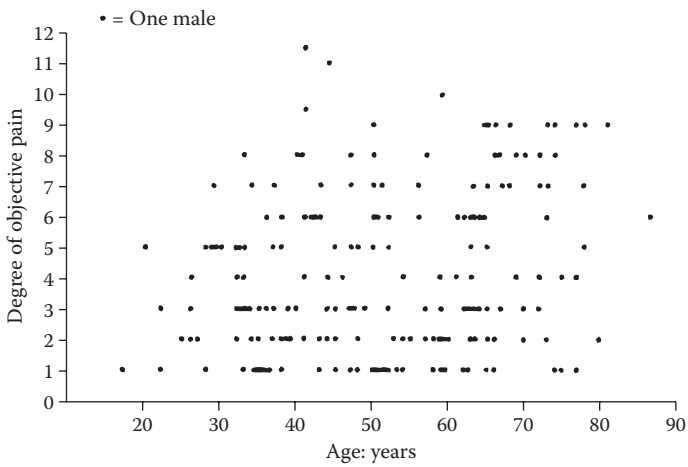

FIGURE 12.9 Degrees of objective pain in male patients with their trigger points counted. Each degree encompasses eight trigger points.

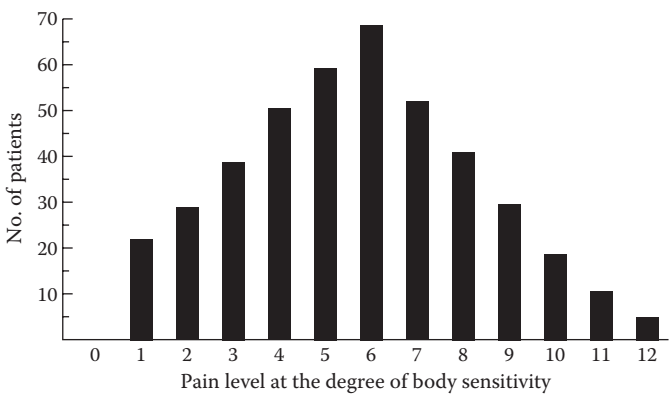

FIGURE 12.10 Total number of patients and their pain levels and degree of sensitivity.

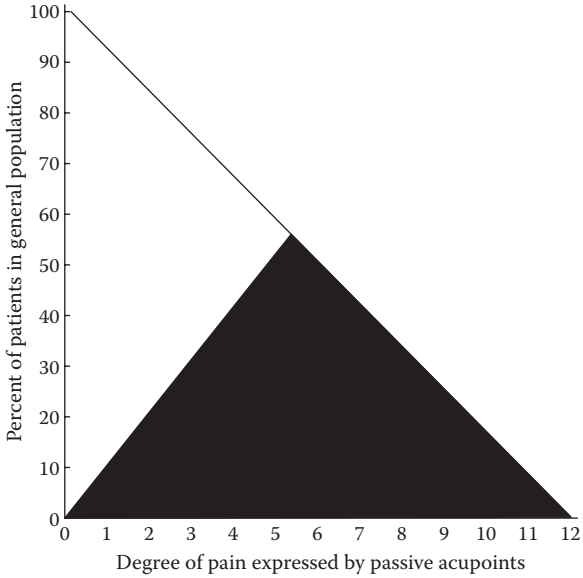

FIGURE 12.11 Percentage of patients in the general population and their degrees of objective pain.

feel pain when they are pressed. Trigger points ranking lower in the sequence will be less sensitive and it is harder for patients to perceive pain when they are pressed. The transition for acupoints to become trigger points can be abrupt. In some cases, the point which ranks no. 26 in sequence is tender, whereas a point ranking no. 27 is not. In other instances, the point which ranks 26 is tender, and those ranking 27 to 29 are also tender but with less intensity. The possibility also exists for nos. 26 and 29 to become trigger points, but nos. 27 and 28 could stay in the latent phase, without tenderness perceived by the patients. The sequence for acupoints to change from latent to passive phase is not absolute. Their sequential order is based on statistical results, and variance is expected. The variations are most likely to appear toward the end of the sequence of the objective pain in a particular degree. For instance, if the objective pain is fifth degree, the last acupoint to become a trigger could be nos. 40, 41, or even 42.

Figures 12.8 and 12.9 are the results of the study described above. Figure 12.8 is charted from 252 female patients, whereas Figure 12.9 is from 184 male patients. Both charts summarize the distributions of objective pain in degrees from 0 to 12 for patients aged 13 to 90 years. As explained above, the degree of objective pain is obtained by counting how many trigger points the patients have. Each patient was found to have a different number of trigger points. The number varies from individual to individual, and whether each of them has the same or different kinds of pain. The number of trigger points collected can be considered as objective because patients were blind to what was going on for them. Patients knew neither the location of acupoints nor the sequence of the trigger points. It would be difficult, if not impossible, for patients to fake the results of testing trigger points. Determining the honesty of patients in testing is relatively easy. We first test an acupoint at a lower ranking of the sequence, and the patient's response to the test is positive. Then, another acupoint at a higher sequence ranking is tested, and the response is negative. We then know that patient is faking the test. The only time patients know where acupoints are located is when acupoints turn to trigger points that are in the active phase. Trigger points in the active phase are what we describe as subjective pain.

As we inspect Figures 12.8 and 12.9, we notice one difference. The distribution of objective pain in Figure 12.9 is rather random. Some young men have high degrees of objective pain, and some older male patients have low degrees of objective pain. The distribution of objective pain in

Figure 12.8 seems to have a tendency to increase with age. It seems that as female patients grow older, their objective pain tends to become higher in degree. This difference in genders may be due to functional differences in physiology. One such physiological difference is menstrual activity in female patients. A large number of female patients seen in the clinic suffered dysmenorrhea with frequent monthly menstrual cramping, which we believe is a serious source of subjective pain with endogenous origins. If a subjective pain is not or cannot be stopped, the objective pain will be increased and perpetuated. This is why the objective pain in female patients has a tendency to go higher in degree as they grow older.

Figure 12.10 is a chart constructed using both male and female patients in the study. Each degree of objective pain consists of a number of patients among the total of 436. For example, 68 patients had sixth-degree objective pain, 39 patients had third-degree pain, six patients had twelfth-degree pain, and so on.

The distribution of patients in each of the 12 degrees of objective pain forms a bell-shaped curve. The highest number is in the sixth degree, and the number decreases toward both ends of the curve. Such a distribution is unexpected. The expected distribution was a straight line, with the highest number at degree one and lowest at 12, as shown in Figure 12.11. As shown in the drawing, most patients who came for acupuncture tended to have higher degrees of objective pain. In fact, the majority were higher than the sixth degree. Fewer patients had objective pain that was less than the fifth degree. One feasible explanation was that subjective pain in patients with lower degrees of objective pain was easier to manage by conventional therapeutic approaches, such as over-the-counter painkillers, chiropractic adjustments, physical therapy, and other neuromodulation remedies. Most of us are needle-phobic. Going to acupuncturists is most likely the last thought to come to mind when people face painful distress in the early stages. Acupuncture for almost all of the patients we encountered was the last resort after other available means to cure or stop their pain failed. Of course, there may be other reasons for the way acupuncture has been received in the United States, but adequately covering all those reasons is beyond the scope of this book.

12.8 ACUTE VERSUS CHRONIC PAIN

One of the most commonly used criteria in clinically defining which pain is acute and which is chronic is time duration. The most often used time duration is 3 to 6 months, which is clearly arbitrary and illogical. How should a pain be classified when the duration is 1 to 3 days shorter or longer than 3 or 6 months? How about a pain that suddenly disappears 1 week before a duration of 6 months is reached, then reappears 1 month later? Should such a pain be considered as acute or a chronic? There are many more contradictions that medical doctors will face if we insist on defining acute and chronic pain based on the time element alone. The contradictions are due to one single fact: To this day, we all attempt to differentiate acute pain from chronic pain based on our comprehension of what subjective pain is. Subjective pain is capricious; it changes frequently from time to time. It cannot be fathomed. We suggest using objective pain to define acute and chronic pain.

The objective pain produced in trigger points is stable. It can and will stay in the trigger points unchanged for months to years. Yes, objective pain invariably accompanies or follows subjective pain. However, there are times when subjective pain has subsided, and objective pain has remained in the trigger points. Without preexisting objective pain in any acupoint, or in other words, without having trigger points, new injury of endogenous or exogenous origin has little or no chance to develop into a chronic state. The injury will heal on its own or will be treated medically, and the subjective pain, which is acute in nature, should subside in time. On the other hand, if patients have a number of trigger points already existing in the body before any injury of endogenous or exogenous origin, the injury may seem to be acute, yet have the potential to become chronic. How long it will take for an acute pain to develop into a chronic pain depends on how high a degree of objective pain the patient has. No favorable circumstances are available for us to conduct clinical studies, and no scientific data has been collected to prove a meaningful relationship between the degree of

objective pain and the speed at which an acute pain is capable of becoming chronic. From our observations, we have reasons to believe the duration of time for acute pain to grow into the chronic stage can be stated in four simple terms. For patients with trigger points limited to the primary group of acupoints, the time duration can be many months or even years. For patients having trigger points within the secondary group, the time duration can be weeks to months. If trigger points reach the tertiary group of acupoints, an acute pain will not take long at all, an estimated period of days to weeks, to become chronic. For patients who have trigger points in the nonspecific group, any fresh injury can be considered as chronic from the time it occurs. Only time will tell whether what has been said above is correct. It is our wish that those who have interest in the study of acupuncture and pain will take time to look into the matters mentioned here. If what is said should be proven to be accurate, it will be a revolutionary way for us to understand the relationship between acute and chronic pain.

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13 Good to Excellent Applications

13.1 GENERAL GUIDELINES

After learning of the possibility of measuring objective pain in patients, a study was set to determine if there might be relationships between the objective pain measured and the results of acupuncture applications. The specific relationships investigated included the percentage of patients who gained relief from acupuncture treatments, how many treatments were required to achieve noticeable relief, the probability of the same pain relapsing, and if so, the probable time lapse before its recurrence. The results of the study were tabulated in Table 13.1. The data presented in the table were collected from 436 patients.

Objective pain was rated on a scale of 1 to 12 degrees and was divided into four groups: primary, secondary, tertiary, and nonspecific, as listed in the table. The general guidelines described in this chapter were drawn from these four groups of patients as the basis for referral. Take the patients in the primary group, whose objective pain ranged from 0 to 3 degrees, for example. Twenty-three out of 100 patients were in this group. Of those 23, the manageability of their subjective pain could range from 75% to 100%, meaning that there is a 75% to 100% possibility for relief. Achieving such an outcome would most likely require four to eight treatments. The chance for the same pain to relapse was 25% at most. On the other hand, only seven out of 100 were in the nonspecific group. The possibility of totally eradicating their pain was 25% at most, but could also turn out to be a total failure without any noticeable improvement, even after many repeated acupuncture sessions. How many tests are needed before such a conclusion can be drawn? The answer is uncertain. The same guidelines listed could similarly apply to patients in the secondary and tertiary groups.

One comment about the number of treatments required to achieve total relief of pain is that it involves a personal assumption of ideal circumstances—specifically, that patients will follow recommendations. For example, patients in the tertiary group are recommended to come for 16 to 32 acupuncture treatments for a chance at total eradication of their subjective pain. After total relief, the same pain will not recur for a long time. In reality, very few patients with objective pain at the tertiary stage have come for so many treatments, for a couple of reasons. Some patients had substantial pain relief before the required number of treatments was reached, and stopped coming for further therapy. The subjective pain was noticeably reduced, but was not completely eradicated, giving the same pain a chance to return. Other patients gave up on acupuncture after four or five sessions without noticeable improvement. They might have thought that acupuncture was not helpful, but in fact, they didn't give it a sufficient chance to work.

With respect to the duration of pain relief, there is a relation between how many treatments are received and how long the relief may last before a relapse. Not all patients come for the expected and required number of treatments. If they come for a few sessions, the duration of the relief can be shorter than anticipated. The overall results will not be different because if we add the number of treatments and the duration of relief together, the end results will be very much the same. We could use any patient as an example. One patient had objective pain in the secondary group and came for four treatments. The subjective pain disappeared. Acupuncture treatment was stopped. Four months later, the same patient returned with the same subjective pain. Three more treatments were provided, and the pain subsided again. The same pain relapsed again in 4 months, making the duration of relief 8 months in total. If the same patient had come continuously for a total of seven treatments from the beginning, the relief could last for the 8 months uninterrupted. In our practice,

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TABLE 13.1
A Summary of Chronic Pain Measurements Using Quantified Passive Acupoints as the Caliber to Measure Degrees or Levels of Pain

	Levels of Pain			
	Primary	**Secondary**	**Tertiary**	**Nonspecific**
	1st–3rd Degree	**4th–6th degree**	**7th–9th degree**	**10th–12th degree**
Estimated number of every 100 new patients received	23	38	32	7
Percentage of estimated number effectively treatable	100–75	75–50	50–25	25–0
Number of treatments required to achieve total relief of pain	4–8	8–16	16–32	>32
Percentage of probability for the same pain to relapse or recur	0–25	25–50	50–75	75–100
Possible time lapse before the recurrence of same pain	Years	Months to years	Weeks to months	Days to weeks

Note: A summary of patients seen in the clinic. Results indicate their objective pain measured in relation to therapeutic outcome in acupuncture treatments.

once the subjective pain disappears, no more justification exists to request the patient to come and receive more needles. The number of treatments required to achieve total pain relief is more of an ideal suggestion. Very few patients need to come for the required number of treatments to achieve the goal of pain relief.

Regarding the potential time lapse before the recurrence of the same pain, the decision to use days, weeks, months, and years was made for the sake of easy memorization. Few patients with objective pain in the primary group have the same pain recur after its elimination by acupuncture. To say these patients have years of relief should be a reasonable claim. The relief, if any, for patients in the nonspecific group is only days, or at the most, weeks. If all the patients are pooled together, the average relief of subjective pain in acupuncture therapy is approximately 4 to 6 months.

In a final analysis, to be a competent acupuncturist, one needs the sophistication to answer a few questions: Can any pain in a patient be successfully managed? If yes, then how many needling sessions will be required to stop the pain? What is the possibility for the same pain to return after its eradication, and after how long an interval? Observations from clinical experiences seem to suggest that the answers for questions of this inquisitive nature can be given in a few terms. These terms need to be rather broad and inclusive. We have chosen three headings for the terms. The first heading is good to excellent applications, which is described in this chapter. The second heading is applications with mixed and limited results, which will be found in Chapter 14. The third heading is poor results and difficult patients for acupuncture, which is covered in Chapter 15.

13.2 SAMPLES OF PAIN FOR DEMONSTRATION

We don't know how many different kinds of pain there are medically. It is not easy to determine which among the different kinds of pain we know will be most appropriate to use in clinical demonstrations showing how acupuncture treatments can be given. There is no scientific merit to saying

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TABLE 13.2
Different Types of Pain Described by Acupuncture Patients

	1981		1982		1983		1984	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Lower back pain	201	33.9	220	34.9	253	34.6	229	35.8
Arthritic pain	81	13.6	85	13.5	94	12.8	77	12.1
Pain in neck and shoulder	81	13.6	84	13.3	98	13.4	84	13.1
Pain in knee and leg	55	9.3	64	10.1	72	9.8	68	10.6
Headache	50	8.5	57	9.0	53	7.2	45	7.0
Pain in ankle and foot	20	3.4	22	3.9	24	3.3	20	3.1
Pain in arm and elbow	18	3.0	16	2.5	26	3.6	25	3.9
Pain in wrist and hand	16	2.8	11	1.7	22	3.0	21	3.2
Myofascial pain	15	2.5	15	2.4	19	2.6	13	2.0
Cramping	13	2.2	10	1.5	14	1.9	11	1.7
Temporomandibular pain	6	1.0	5	0.8	3	0.4	7	1.1
Neuritis and neuropathy	5	0.8	7	1.1	5	0.7	6	0.9
Herpes	4	0.7	5	0.7	8	1.1	7	1.1
Trigeminal neuralgia	1	0.2	3	0.4	5	0.7	3	0.5
All others	27	4.5	27	4.2	36	4.9	23	3.6

Note: Types of pain as described by acupuncture patients.

that arthritic pain is more important than headaches, or that lower back pain is less urgent than a herpes infection. Pain is pain, regardless of where and for whatever reason it occurs. The types of pain seen in the clinic have stayed the same throughout many years. As can be seen in Table 13.2, the pain that is most commonly mentioned in writing by patients is lower back pain, followed by arthritic pain, pain in the neck and shoulder, pain in the knee and leg, headaches, and so on. There are 14 pains listed in the table. No checklists are available for all other kinds of pain, which involves only 3.6% of the total number of patients we have.

In the end, we thought it would be fair to select pain based on anatomical locations, such as headache, neck pain, pain in the upper limb, pain in the body trunk, and pain in the lower limb. Two kinds of pain from each of these five localities can serve as representatives for one area. The pains chosen are those most commonly suffered by patients arriving in the clinic. In the head, the types of pain selected are headache and temporomandibular pain. Headache can be tension, cluster, migraine, trigeminal, or postherpetic neuralgia. Pain in the neck and shoulder can be whiplash, arthritis, rotator cuff damage, or stiff neck. Pain in the upper limb can be tennis elbow, superficial radial neuropathy, carpal tunnel syndrome, and arthritic pain in the wrist or in the fingers. Pain in the body trunk can be myofascial pain, menstrual cramping, herpes infection, or lower back pain. Pain in the lower limb can be osteoarthritic knee, splinted ankle, tarsal tunnel syndrome, or plantar fasciatis. Two to three cases will be chosen from our large patient pool to represent one type of pain selected for demonstration. Demographic data of the patient pool from which the examples were chosen is summarized in Table 13.3. There were 3,669 patients, of which 1,074 (41.4%) were male and 2,595 (58.6%) were female. In all the statistics we have, there are always significantly more female patients than male patients. Only a tiny number of patients were selected for the purpose of demonstration compared with the total number of examples we have.

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TABLE 13.3
Sex and Age Distributions of Patients Examined for Passive Acupuncture Points

	Male		Female		Total	
Age in Years	**No.**	**(%)**	**No.**	**(%)**	**No.**	**(%)**
Younger than 19	15	1.4	24	1.6	39	1.5
20–29	100	9.3	131	8.6	231	8.9
30–39	202	18.8	254	16.7	456	17.6
40–49	185	17.2	239	15.7	424	16.4
50–59	208	19.4	309	20.3	517	19.9
60–69	213	19.8	280	18.4	493	19.0
70–79	137	12.8	213	14.1	350	13.5
Older than 80	14	1.3	71	4.7	85	3.3
Total	1,074	41.4	1,521	58.6	2,595	100.0

Note: Sex and age distributions of patients with pain as the main reason for seeking acupuncture treatment.

13.3 DEFINING GOOD TO EXCELLENT RESULTS

From the demographic profiles collected, patients who will have good to excellent results from acupuncture treatments can be summarized as follows. They are younger than 40 years of age and appear physically healthy without other illness besides the pain for which they come to seek relief. Their pain is invariably new and acute in nature. They are suffering the pain for the first time. It is in a single locality that is limited to only one area. The degree of objective pain measured is no more than fourth degree, sometimes only first or second degree, and the number of trigger points detected is 10 or less. In such patients, less than 16 needles are required to stop the pain in one or two sessions.

Therapeutically, the subjective pain in patients whose objective pain is no more than fourth degree can be effectively managed by taking nonprescription analgesic medicine of some kind. Other methods that have neuromodulation function, such as chiropractic adjustments, physical therapies, use of transcutaneous electrical nerve stimulation (TENS) units, massage, and rubbing in reflexology, can all be useful in managing pain in patients whose objective pain is fourth degree or less. Very rarely will patients in this group with objective pain between first and fourth degree ever return for the same kind of pain.

13.4 PAIN IN THE FACE AND HEAD

It is correct to say that all pain occurring in the face and head originates from the trigeminal nerve. The afferent fibers in this cranial nerve are ubiquitous. They are distributed throughout the entire face and head, including the facial surface and interior cavities of the head, such as the nasal sinuses, their linings, and meninges. Disturbance, irritation, infection, or inflammation of any of these afferent fibers will result in generating nociceptive sensation to produce pain.

Approximately 8% to 9% of patients can be considered as having pain in the face and head [1]. In 1995, out of 881 patients coming to visit for the first time, 74 could be considered as having pain in the face and head. Their pain can be divided into two essential kinds: headache and nonheadache. Sixty-nine of them used the word "headache" to describe their medical problem. Only five used words other than headache, even though, upon inquiry, they revealed that they were not totally free of headache. The adjectives used to describe their headache included migraine, cluster, tension, sinus, depression, premenstrual, and pressure. The headaches could be felt in the front or back of

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the head. The causes of headaches, in their opinion, consisted of allergies, smoking, neuralgia, brain damage, tumor, herpes, muscle spasms, and concussion. Most headache patients didn't distinguish these different kinds; all they wrote down was "headache." The five nonheadache patients indicated that they had Bell's palsy, or facial paralysis and twitching in the face. A few cases of patients with headache have been selected as examples to demonstrate how acupuncture works to stop their pain in the head. The number is small, but may serve sufficient purpose to show how acupuncture works to manage headache or other kinds of pain.

Case 1: Marsha O. was a 31-year-old female. On her first visit, she used the words "acute migraine" to describe her problem. She said that she had been to medical doctors, and none of them had really helped to ease her misery. She did have brief relief from a chiropractor, but had to keep going frequently. Finally, she had stopped going because she had grown tired of chiropractic manipulation. She had also tried reflexology using foot rubbing, without any appreciable result. The bad headache attacks could come as frequently as three times in a week. During bad attacks, she had been hospitalized and received injections. During migraine attacks, she had nausea, although she didn't experience vomiting. During menstrual periods, she would have severe cramping, which would exacerbate the headache. Bright light and loud noise could trigger the headaches. She felt tired all the time. Most headaches began on the left side of the head, but they could also start from the right. Regardless, each headache always ended on the left side. Her objective pain was measured to be fourth degree. Her primary acupoints in the face (supraorbital and infraorbital) and in the neck (great auricular, greater occipital, and spinal accessory) were all in passive phase with palpable tenderness. The secondary acupoints (mental, masseter, superior auricular, temporomandibular, lesser occipital, and cervical plexus) were also passive with tender sensation. Even a few tertiary acupoints, such as the bregma, pterion, and temporalis were slightly tender. Outside of the head and neck, only primary acupoints were found to be in passive phase. The appearance of passive acupoints in patients like Marsha is rather typical because the main pain is in the face and head. Therefore, more trigger points will appear in the painful region to begin with. This phenomenon is particularly prevalent in the early stages of headache development. Systematically considering the body as a whole, objective pain in Marsha can be categorized as in the range of the primary points. Because she also had trigger points in the secondary and tertiary groups, she was assigned fourth-degree objective pain. At this degree, subjective pain occurring as headaches can be effectively managed with good to excellent results. Such was the case for Marsha. The method to treat her headache, or patients with other kinds of pain within four degrees of objective pain, is relatively simple and requires few (four or fewer) in sessions. For the first treatment, Marsha was placed in a supine position. One needle was inserted into each of the trigger points listed in the primary group as shown in Figure 12.2. Additional needles were placed in three of the secondary (mental, masseter, and superior auricular) trigger points mentioned above, for a total of 34 needles used, with 17 along one side of the body from the face down to the feet. Two days later, she came for the second treatment. She was placed in the prone position. Trigger points used included all primary group points in the back (Figure 12.2) and the temporomandibular, lesser occipital, and cervical plexus in the secondary group. A total of 35 needles were used, one more than in the first session of treatments. That one needle was on the spinous process of the seventh thoracic vertebra. On her third visit, 2 days after the second treatment, she reported that she hadn't had any headaches in the previous 4 days. Patients with any kind of headache are asked to take a sitting position for the third treatment. In that position, all of the trigger points in the primary and secondary groups located in the head, face and neck regions, plus a few trigger points in the tertiary group (bregma, pterion, and temporalis) are available for needling. A total of 29 needles were used. By the time the patient came for her fourth treatment, she hadn't had a headache for a week. She did have tension in the back of her head because she had to take care of a disabled husband at home. She often didn't know what to expect after a day of work, and claimed that she had a great deal of stress and tension. For the fourth treatment, she was placed in the supine position again, repeating what had been done for her in the first treatment. Fifteen days after the first treatment, she came for a fifth visit. She reported that the headache had relapsed once

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in a week's time because she was under a lot of stress and pressure. She had lived under a great deal of tension the previous week. Fortunately, that headache subsided on its own without her having to take any drugs. Acupuncture treatments were repeated using the supine, prone, and sitting positions in an alternated manner. The number of needles used in each treatment was maintained the same, using very much the same trigger points described for each of them. For two consecutive months, she came in three times for one week each month, for a total of 11 treatments. One month after her last visit, she called to cancel the next appointment because she said that she already hadn't had any headache for more than a month. She indicated that she would call if her migraine attacked again. We have not received a telephone call from Marsha O. for more than 28 years. Migraine has one difference from other types of headache with respect to changes of objective pain. The objective pain in migraine can vary from as low as 1 or 2 degrees to as high as 11 or 12. This is the reason we think that some migraines are easy to manage with good to excellent results, whereas some are very difficult to treat and the results are often poor. Patients having other kinds of headaches, such as cluster, tension, or allergic, tend to have objective pain no higher than six degrees. Thus, they are relatively easy to care for. On the other hand, most patients suffering from tic douloureux and postherpetic neuralgia along the trigeminal nerve will have objective pain at the eighth degree or higher. This is why these kinds of headaches are often difficult to manage. Their management will be discussed in the next two chapters. To ensure that the same type of headache will not return, it is prudent to provide an additional series of three treatments during that interval. If the headache hadn't returned after 1 month, the chances of it coming back will be minimal.

Case 2: James M. was 69 years old. He was selected to represent patients with cluster headache, which is not commonly seen, often no more than one to two cases in a year. In fact, he indicated on the form he filled out that he had cluster migraine. The term did not come from diagnosis by his physician but his own opinion. How he came to conclude that his headache was cluster migraine is a mystery to us. His recollection was that he had had the headache for the last 30 years of his life. He claimed that, for all those years, he was able to ease the headache by taking medicine, although he did not elaborate on what kind. Sometimes, he would stop taking medicine for months, although he did not explain why. When he stopped taking medicine, his headache would get worse. Most times, the headache was on the left side of the face around the ocular area. His objective pain was measured to be fifth degree. During his first visit, he was placed in the supine position. The trigger points used were all in the primary group. The second and third treatments for James were similar to those for Marsha. The first three acupuncture treatments for all patients coming with a headache are the same. The sequential order of positions taken is supine, prone, and sitting. The trigger points are mostly from the primary group. A few secondary or even tertiary trigger points can be added if such an addition is helpful in patients whose objective pain can be higher than third degree. Most of the patients having cluster headaches were male. They were easy to manage. All but one acknowledged that the headache was gone after three or four acupuncture sessions. None of the patients with cluster headache, including James, ever returned with the same problem. He came for three treatments, the last of which was in March 22, 1985. He did come back on March 16, 1987, not because of the headache, but because he wanted to stop smoking. For 2 years, he was free of any headache. On January 19, 1988, he visited again because he had "left sciatic pain." At that time, his objective pain was measured to be only third degree. The procedures for treating lower back pain will be described subsequently. For James's case, all we will say here is that he was free of "left sciatic pain" after four sessions. He has not come again since February 1, 1988.

Case 3: Steffany T. was a 17-year-old high school student suffering temporomandibular joint syndrome (TMJ), about which we have a few preliminary comments. This term is used to include pain located in the temporomandibular joint without direct cause from dental and orofacial origins. The pain can be associated with the muscles of mastication or the TMJ itself. The pathophysiology of this pain disorder is not very well understood. Even the existence of the syndrome is controversial. Dental professionals accept the reality of the problem and treat it as such. There are medical practitioners who don't believe that there is such a disease as TMJ syndrome. Patients like Steffany are

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not common. She came with a rather complete medical history, presented in writing. She brought her report upon visiting the clinic on June 17, 1996. The report described her problem as "my neck, shoulders, and throat are always tight. My throat gets real tight when I sing, talk, or chew. My ears ache as if I have swimmer's ears. I always have a headache at the temples and in between my eyes. My temples and the upper right side of my jaws are tender to the touch. My left side pops at the joint, but it doesn't bother me as much as the right side does. My bottom teeth feel like they are going to fall out. When I eat soft food, talk very little and don't sing, it helps. I constantly take Ibuprofen, Tylenol, and Excedrin to relieve the pain. Ice packs and Mineral Ice are great to use while the pain killers are kicking in. It hurts when I whistle and for some unknown reason I am always crying. These symptoms have been going on for about three years. I have been to see: one oral dental surgeon who took out my wisdom teeth, thinking they were pressing on a nerve, two chiropractors who couldn't find anything wrong, one orthodontist who gave me a prescribed mouthpiece, and a regular dentist who said my problem was caused by tension." Using the method described in Chapter 12, Steffany was measured to have objective pain at the sixth degree. This is the highest degree of objective pain that would limit the manageability of symptoms described for this patient while still having good to excellent results after acupuncture treatments. Steffany was the youngest patient we have had with TMJ. Young age is a very favorable factor in acupuncture therapy. At sixth degree, TMJ would be harder to manage if her age was, say, 45 years or older. The first treatment was provided with her in the supine position. Trigger points in the primary group, plus one needle each in the auriculotemporal and TMJ points in front of one ear were used. Two days later, on June 19, she came for the second treatment. She was asked if she knew her blood pressure, and she said explicitly that it was 70 mm Hg diastolically and 93 mm Hg systolically. Having blood pressure so low is a possible reason for the symptoms she had. Another causative factor is menstrual cramping, and Steffany did suffer from monthly cramping pain during her period. She indicated that the first treatment seemed to help her feel better. The second treatment was made with her in the prone position, using all trigger points in the primary group. Her third treatment was given on June 21 with her sitting upright, using the trigger points in the primary and secondary groups accessible in the head, face, neck and upper limbs, plus the auriculotemporal and TMJ points. There was a 1-week break between two series of three treatments each. She came for the fourth visit on June 28. During her fourth visit, she reported that most of her problems were at the left ear only, and the discomfort was slight. When she came for the fifth treatment, she was asked to lay on her right side so the focus could be on the left ear. In addition to the primary group of trigger points accessible, four needles were placed around the left ear at the auriculotemporal, TMJ, superior auricular and posterior auricular points. She was told that four treatments should be able to stop her pain for at least a while, and that if for any reason the symptoms persisted, she could return for more treatments. She came back on October 21, 1996. Her TMJ symptoms had relapsed, which she attributed to her excessive gum-chewing and too much jumping exercises. She said that sweating seemed to ease pain momentarily. Over the next 5 days, three more treatments were given with the same protocol described above for the first three visits. Her last visit was on October 26, and she has not returned since. Steffany ended up coming for a total of seven treatments. It is possible that she might have needed fewer treatments if she had come in at an earlier stage of the development of her problem, as the degree of the objective pain would most likely have been lower. Nevertheless, it is still reasonable to conclude that the result of acupuncture treatments for the patient can be considered good to excellent.

13.5 PAIN IN THE NECK AND SHOULDERS

Anatomically, the neck and shoulder are interconnected and continuous with each other. Muscles such as the trapezius cover both areas. Pain in the region originates from the greater occipital, lesser occipital, third occipital, great auricular, transverse cervical, supraclavicular, dorsal scapular, and spinal accessory nerves. The spinal accessory is a cranial nerve. The lesser occipital, great auricular, transverse cervical, and supraclavicular are branches of the cervical plexus. The dorsal

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scapular and suprascapular are branches of the brachial plexus. Efferent fibers in the spinal accessory are originated in the upper cervical spinal cord. They go through the foramen magnum to enter the cranial cavity, and reemerge out of the cavity by way of the jugular foramen. These efferent fibers control the actions of the trapezius and the sternocleidomastoid muscles. However, the afferent fibers responsible for nociception to the same muscles come directly from the cervical plexus without going through the cranial cavity. The dorsal scapular and the suprascapular nerves are both muscular. Muscular nerve branches contain afferent, efferent, and postganglionic sympathetic fibers. Three muscles are innervated by the dorsal scapular nerve: the levator scapulae, and the rhomboidus minor and major muscles, which attach to the medial border of the scapula. The motor point formed between the dorsal scapular nerve and the muscles is located right at the base of the spine of the scapula where the rhomboidus minor is inserted into the bone. The suprascapular nerve innervates the supraspinatus and infraspinatus muscles. Their motor points are located right at the geometric center of each muscle. This brief review shows that anatomical arrangements for the innervations in the neck and shoulder seem to be rather haphazard. Pain in the neck and shoulder can cross from a cranial nerve cephalically to branches of cervical and brachial plexuses caudally. Occasionally, patients will describe having pain from the shoulder blade to the middle point of the shoulder bridge ending up in the back of head, as shown in Figure 13.1. It is quite easy to see how pain in the neck and shoulder can be complicated. Is pain in the upper back a headache or a neckache? It all depends on how patients present their pain to you. There are many forms of pain in the neck and shoulder. One of the most often encountered pains in the neck is whiplash. Whiplash can be due to a minor automobile accident, resulting in a fracture in the cervical vertebrae. Here is a classic case of whiplash resulting from an auto accident. It is clearly a case with acute pain, and the degree of objective pain is not too high. The result of acupuncture treatment can be confidently claimed as good to excellent.

Kuang-Hua Chang (Figure 13.2) was a 29-year-old captain in the Taiwan Air Force. We decided to use his case as an example for a few reasons: He agreed for us to use his picture and name, the duration of his pain was short, and his pain was, without any doubt, acute. The captain was a student

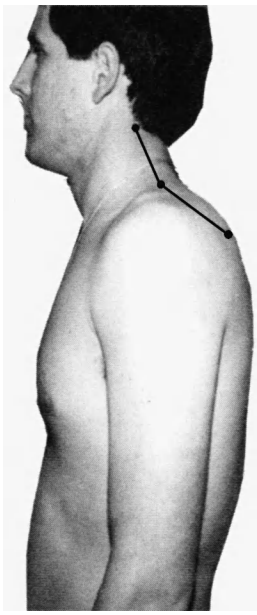

FIGURE 13.1 The black line in the neck and shoulder area indicates the location of pain from the trigger point on the dorsal scapular below, to the spinal accessory over the trapezius muscle, ending at the greater occipital right at the hairline above. There are intercommunications between these three nerves.

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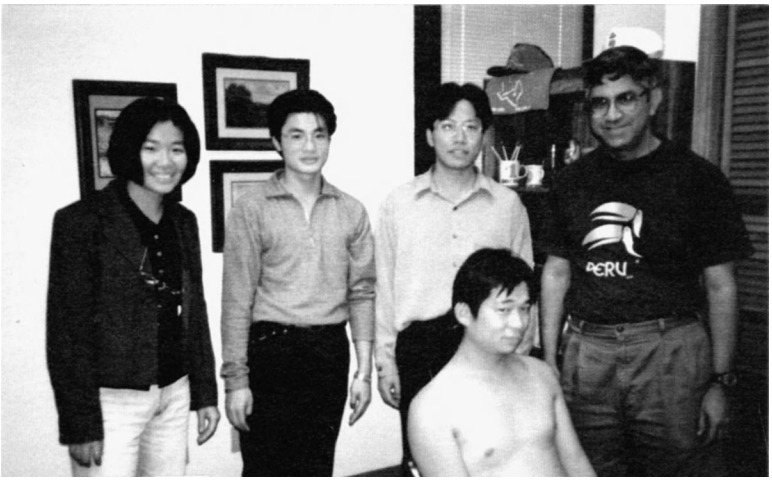

FIGURE 13.2 Captain Kuang-Hua Chang (sitting), accompanied by three of his military comrades from Taiwan and one of his instructors.

at the Defense Language Institute on Lackland Air Force Base, San Antonio, Texas. He was brought to our clinic on October 17, 1996 by his instructor, who was an acquaintance, because of a rather severe automobile accident the previous week. He had received very good medical care after the incident. No bones were fractured, yet he had experienced terrible neck pain since. He couldn't turn his neck at all. He was told he had whiplash, from which acute pain would be expected, and that nothing could be done to speed up his recuperation. It would take time to recover from the injury, and the pain would naturally subside. However, the captain said that he was unable to sleep. Without proper sleep and rest, he had no way to learn effectively at the language school, and he had only a limited time to learn his English for the next destination in his training program. He needed to have immediate relief, without further delay. His physician at Wilford Hall USAF Hospital suggested that he come for my acupuncture, and one of his instructors, who knew me, brought him to me. After a routine examination, his objective pain in general was measured as being fourth degree. However, more trigger points were detected in the neck and shoulder areas. Therefore, he was given a fifth-degree rating for his objective pain. For the first treatment, he was asked to lie in the supine position. In addition to 24 trigger points in the primary group on the anterior side of the body, a few trigger points in the secondary and tertiary groups were also needled. These were the lesser occipital, third occipital, biceps brachii tendon, cervical plexus, and spinal accessory-II points. Two days later, on October 19, he came for the second treatment. He claimed that the pain was reduced substantially, and he was able to sleep much more comfortably. He was laid in a prone position for the second treatment, which used all trigger points in the primary group, again adding trigger points in the secondary and tertiary groups in the neck and shoulder. The day after the second treatment, the first cold front of the year arrived in San Antonio. The captain had a flare-up that was attributed to the sudden weather change. He had difficulty turning his neck for a couple of days. Four days after his first visit, he came for the third treatment, during which he was in a sitting position, as can be seen in Figure 13.2, and needles were placed in all trigger points of the primary, secondary, and tertiary groups in the neck, shoulder, and the upper limbs. His fourth visit was on October 24. The supine position was repeated from the first treatment. He described his pain as being more than 80% improved. He ended up coming for a total of six treatments. By his fifth visit, he was practically free of pain. To ensure that his pain wouldn't relapse, he was urged to come for one last time on October 28. He was advised to call and visit for more treatments if needed. The service for him was free of charge as a goodwill gesture for foreign visiting military officers, particularly as he was from my home country of Taiwan. He didn't come again.

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13.6 PAIN IN THE UPPER LIMBS

In this context, subjective pain of the upper limbs implies any pain that is perceived in the shoulder joint and areas distal to the joint down to fingertips. Three bones participate to form the shoulder joint: the clavicle, acromion of the scapula, and humerus head. Below the shoulder is the elbow. The elbow joint is formed by the humerus, the radius, and the ulna. Between the forearm and hand is the wrist joint, which has eight carpal and 30 phalangeal or finger bones. These many bones form a number of joints that are interconnected by ligaments and tendons. To move a joint, one or more muscles are needed. There are 42 named muscles, which have attachments to the bones in the upper limbs. Everything mentioned previously receives nerve innervations from branches of the brachial plexus. The brachial plexus is everywhere in the region. Therefore, it is understandable that subjective pain can be perceived anywhere in the entire upper limb. It would be impractically time-consuming to describe every possible pain in the upper limb. There are two kinds of subjective pain most often seen in the upper limb. Medically, they are known as rotator cuff injury and carpal tunnel syndrome. One example for each of the two abnormalities is chosen to explain how acupuncture can manage these two kinds of subjective pain in the upper limb.

Elmer G. was 61 years old, in the "supply" profession. His first visit was on January 6, 1989. He said that he had a "pinched nerve" in the left shoulder. That pinched nerve gave him pain inside the left shoulder joint. He also had lower back problems that had been kept at bay through faithful exercise, which indicated that the degree of his objective pain couldn't be too high. After measurement, his objective pain was estimated to be fourth degree. He stated that the pain inside his left shoulder, meaning the shoulder joint, had been bothering him for about 5 years. During that time, he had gone to a chiropractor for adjustments and visited his medical doctor, who gave him pain pills and muscle relaxants to take. None of them provided long-lasting relief. He used his right index finger to pinpoint the left greater occipital as the origin of the pain, which would spread down inferiorly to the spinal accessory and to the dorsal scapular, as we have described previously. The pain would be felt inside the shoulder joint. He said that he had been healthy throughout his entire life. He hadn't had any surgery, and no injury had been inflicted upon his body except for a cut on the left thumb that would suffer stiffness at times. He had had low blood pressure, 110 over 70, for as long as he could remember. Low blood pressure is fairly common among patients of middle age coming with pain in the neck and shoulder. There may be a causal relationship between neck and shoulder pain and low blood pressure from an adolescent age. Elmer was 61, and his blood pressure was still low. He certainly was not unique. Many other patients of his age had similar medical backgrounds: low blood pressure from a young age with a history of neck stiffness and pain in the shoulder joints. Besides trigger points in the primary group, two more points that stood out prominently were located right over the tendon belonging to the long head of the biceps brachii muscle. The tendon is lodged in the intertubercular groove of the humerus head. He had normal motion for both shoulder joints. However, when he extended his left arm backward or abducted it upward laterally, slight pain could be perceived in the joint along the biceps tendon. The pain in his left shoulder took only two treatments to eliminate. The first treatment was given on the day he came for the first visit. It was decided to treat him in the sitting position because of his rather intense pain from the left greater occipital point down to the medial border of his left shoulder blade, where the dorsal scapular point is located. Sitting upright offers the most convenience for placing needles in these regions. In addition to the trigger points in the primary group, a total of six needles were added on the biceps tendons in both shoulder joints. Elmer came for the second treatment on January 8. He claimed that the first treatment had helped to ease his pain, and that he had slept well for the past two nights. He was placed in the supine position for the second treatment. Besides all trigger points in the primary group, another six needles were added along the biceps tendon areas. A third treatment was suggested to him, but he failed to come for the appointment. Subjective pain in the shoulder joint is relatively common—in one out of 10 patients, by our estimate. Books and other publications written about the shoulder joint are in no short supply. Their opinions are that the culprit is the

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rotator cuff. We have a great deal of reservation in condemning the rotator cuff. If indeed, subjective pain in the shoulder joint is caused by any damage in the cuff, acupuncture is unlikely to reduce or stop it, but the truth is that the pain can be effectively managed with good to excellent results. Most pain in the joint is possible to detect as the trigger points along the tendon of the long head of the biceps brachii muscle, as described above. The rotator cuff is a broad band of tendinous tissue extending from four large muscles: the teres minor, infraspinatus, supraspinatus, and subscapularis. This cuff covers almost the entire circumference of the humeral head. The area is rather lengthy. If there is damage or injury to the rotator cuff, a few trigger points should appear in the acromion of the scapula and the humeral head.

Another type of subjective pain we want to mention is known as carpal tunnel syndrome. As we know, there are two rows of carpal bones. The proximal row has the scaphoid (also known as the navicular), the lunate or semilunar, and two triquetral bones, one of which is also known as the pisiform. The distal row consists of the trapezium, trapezoid, capitates, and hamate bones. These bones form a tunnel in the ventral side of the wrist. Taking into consideration all the ligaments that interconnect these bones, the wrist is a very complicated structural unit in which many things can go wrong and end up causing pain here and there. One of these pains is carpal tunnel syndrome. Patients with this syndrome are fewer in number than those having pain in the shoulder. There are more females than males. They are usually middle-aged people. One thing they often blame for having symptoms of carpal tunnel is modern technology, such as repetitive stress in typing on a keyboard. Medical doctors believe carpal tunnel syndrome is caused by a compression of the median nerve inside the carpal tunnel in the wrist area. After running through the tunnel, the nerve branches out to distribute to the thumb, index, and middle fingers. Most sufferers who come to visit complain of numbness, tingling, and pain sensations. Patients with milder stages of the problem indicate that they are wakened by these symptoms in the early morning hours. Patients with severe symptoms can become so uncomfortable that they wake up in the middle of the night. Manageability of these symptoms depends very much on the degree of objective pain patients have. If the pain is fifth degree or lower, three treatments are generally sufficient to take care of the symptoms. If the pain is between the sixth and eighth degrees, carpal tunnel syndrome is still possible to manage, with the possibility of relapse in 4 to 6 months. Once the objective pain of the patients reaches the ninth degree or higher, the problem becomes difficult to manage. By then, surgery will be the only alternative that these patients have. For patients with carpal tunnel syndrome having objective pain lower than fifth degree, subjective pain is invariably limited only to the hand and fingers. Objective pain between the fifth and eighth degrees will be likely to have subjective pain in one other location, such as backache, headache, shoulder pain, etc. Once the objective pain exceeds the ninth degree, there will be multiple sites of pain in different areas of the body. That is why carpal tunnel becomes a difficult problem to manage. Treating simple carpal tunnel syndrome is easy. For the first treatment, place patients in the supine position. All trigger points of the primary group, plus the median and median recurrent, are used. The median recurrent and median points belong to the secondary and tertiary groups, respectively. Their anatomical locations are shown in Figure 12.2 (for median recurrent) and Figure 12.4 (for median, which is marked with an unlabeled black triangle superior to the wrist in the right forearm). For the second treatment, patients are placed in the prone position. Again, all trigger points of the primary and the two additional points are used. The third and last treatment is given in the sitting position. Trigger points of the primary and secondary groups in the head, neck, and upper limbs are used. Patients are asked to wait for a week and return for more treatments if the symptoms persist. Most of them will just disappear without needing further acupuncture therapy.

13.7 PAIN IN THE BODY TRUNK

If the skin's surface is used as a guideline to gauge the frequency for pain to occur, the body trunk has a large area with less potential to have subjective pain, if the lower back is excluded. Not too

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many patients who come for acupuncture treatments have pain in various regions of the body trunk, which includes the thorax, abdomen, and back. We think that there are reasons for such an outcome. First, pain in these regions is very likely a referral or reflection of disease or illness from internal organs or viscera. Pain of this kind constitutes an emergency. Patients who have this kind of urgent pain will be smart enough not to come to us for emergency care. Besides, as an acupuncturist, it is wise to not deal with pain of possible internal origins. Another reason is anatomical. As explained in the previous chapters, except for the lumbar region, no nerve branches distributed throughout the body trunk are major in size. We have a total of 66 acupoints in the thoracic and abdominal regions. Most of them belong to either the tertiary or the nonspecific groups. These acupoints rarely have potential to be converted to the passive phase and become trigger points. One disease that has the ability to do so is herpes infection, which can develop to become postherpetic neuralgia. We will use this neuralgia as an example to illustrate pain in the body trunk. Skin breakouts due to herpes infection can occur anywhere in the entire body. More will be said about postherpetic neuralagia in the following chapters. Herpes infections occurring in the body trunk are characteristically dermatomic, as seen in Figures 13.3 and 13.4. The patient shown in Figure 13.3 had scars on the skin of the right scapular region. The scars were formed by a herpes infection that had broken out 19 days before

FIGURE 13.3 A patient with herpes infection affecting dermatomes of the fourth and fifth thoracic spinal nerves.

FIGURE 13.4 A patient with herpes infection showing as many as two dozen needles placed in the affected area.

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this picture was taken. The infected skin is along the dermatomes of the fourth and fifth thoracic spinal nerves. The herpes infections we saw affected two to three dermatomes. In the thorax and abdomen, the scars are linear. The skin area where the scars of the infection are located has a dozen or more trigger points, as can be seen in Figure 13.4. The purpose of this photo is to show how many needles an acupuncture treatment will take to manage the subjective pain produced by postherpetic neuralgia. The infected area in the pectoral region is densely filled with trigger points. Patients coming with subjective pain caused by postherpetic neuralgia were diagnosed by their attending physicians. With few exceptions, pain in patients with postherpetic neuralgia is difficult to manage and produces poor results (see Chapter 15). One simple reason is that they apparently have a higher degree of objective pain. The lowest objective pain measured was second degree for Clifton M. He was a 71-year-old rancher. The postherpetic neuralgia was diagnosed 3 months prior to his first visit to the clinic. His subjective pain was perceived in the skin area above the left eye extending upward to the frontal head in the territory innervated by the ophthalmic division of the left trigeminal nerve. After four treatments between August 3 and August 20, 1995, his pain disappeared. The first treatment was given with the patient in the supine position. Trigger points in the primary group, plus 18 needles belonging to the nonspecific points, were used in the manner shown in Figure 13.4. He was placed in the prone position for the second treatment using very much the same points in the primary and nonspecific groups. The third treatment was offered with the patient sitting upright. Trigger points of the primary and secondary groups accessible in the head, neck and upper limbs, plus nonspecific points were needled. He lived in Kerrville, more than an hour away from San Antonio. We suggested that he wait for 2 weeks to see if the pain would subside in that time. He did come on August 20, saying he was practically free of pain in the head region, but decided to have one more treatment to make sure that pain was eliminated forever. A few days later, we received a call from a doctor at the VA hospital in Kerrville. The physician wanted to know what we had done for Clifton to get rid of his headache. Our answer was simple: acupuncture. He was told to come to learn acupuncture, if he had such a desire. As usual, this doctor didn't accept our altruistic gesture.

As can be seen in Table 13.2, approximately one in three patients (34%) come to seek acupuncture because of lower back pain. An entire book can be written to describe acupuncture for treating lower back pain alone. As with other pain types, pain in the lower back can have good to excellent, mixed with limited and poor results, depending on the degree of objective pain that patients are measured to have. A couple of examples will be cited in this section to describe lower back pain in which patients can be treated with good to excellent results. Patients with mixed and limited results are the targets for Chapter 14. Difficult to impossible cases will be discussed in Chapter 15.

Case 1: It is only sensible for us to mention Woodie C. and Jim B. together, as Jim came to us because of urging from Woodie. Both of them had lower back pain, even though Jim was initially told to seek acupuncture treatment to quit dipping tobacco. Jim said that he had had a tobacco-chewing habit since high school. He had decided to stop chewing tobacco because of his six children—three sons and three daughters—who told him that they hated to see him doing so. Before coming, he had tried nicotine patches, but still seemed to have difficulty in overcoming the addiction. Someone in his home town suggested that he should try acupuncture to stop chewing tobacco, that person being Woodie. We will gloss over further detail of the tobacco chewing and focus only on the lower back pain for both of them. All we will say further on it is that Jim kicked his habit of dipping tobacco after two acupuncture treatments without having to suffer withdrawal symptoms.

Woodie came for acupuncture first on November 15, 1987, when he was 46 years old. He wrote "back" as his main problem, and "pumper" as his job. The lower back pain would sometimes run down to his right hip and thigh. This indicated that the roots of the lower lumbar and upper sacral spinal nerves were involved, as with the pinching of a herniated disc. His objective pain was measured at second to third degree. The last five acupoints in the primary group had no tender sensitivity. In other words, there were enough trigger points to qualify him for having second degree but not enough to place him at third degree. Using the prone position, needles were given at each of the trigger points in the primary group only. Needles in each of the trigger points of the primary group

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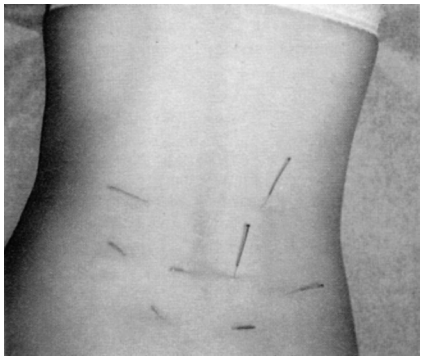

FIGURE13.5 A photo showing primary acupoints for needles to manage lower back pain.

in the lumbar area are shown in Figure 13.5. Anatomical names for these trigger points can be found in Figure 12.1. Because of the low degree of objective pain, one treatment could be sufficient to stop his lower back pain. We suggested that he wait for 1 week and then call if the pain didn't go away. He didn't call until September 25, 1988, when he began to feel some aching in his back again. The first treatment was repeated. He came again 2 days later, not because of his lower back, but because he wanted to stop smoking. Discussing how acupuncture can help smokers kick their habits would require another dissertation. Suffice it to say that Woodie stopped smoking after four acupuncture sessions between September 25 and October 4 of 1988. On his last visit, he claimed that he had no more craving for cigarettes, and his lower back was free of pain. As a pumper for oil companies, he had to drive several hundred miles every day to check many oil pumps. Long-distance driving made his back tired, and when he happened to be in town, he would appear without appointment for one needling session in the back. For him, an acupuncture treatment was a tune-up that made him relax as well as loosened his back tension.

Because of his good and excellent results, Woodie recommended acupuncture to Jim. On March 15, 1990, Jim was 21 years old, and came as an emergency without prior appointment because his lower back was hurting "real bad." He said he had had lower backache since the age of 10, although the cause was not elaborated. In all those 11 years, he had not consulted a medical doctor, even when he sometimes suffered a great deal of pain in the lower back. That was the reason Woodie had urged him to come. Because he came as an emergency patient, there was no time to properly quantify his objective pain. It was suspected that it would not be too high. Otherwise, one treatment would not be able to clear the pain in his back. His second visit was on October 25, 1996, more than 6 years after his first. During this not-so-short period, he had not had any lower back pain. He came because he wanted to quit dipping tobacco for the sake of his six kids. If Jim does not come again, we will not know whether he had good to excellent results from acupuncture treatment.

Case 2: The next case of lower back pain was selected to represent that good to excellent results can occasionally be immediately visible. Mary Lou V. (Figure 13.6) is such a case. This patient arrived with her right hip slouching toward the side (left two photos of the figure). A slouching posture toward one side is always an unspoken indication that the person has lower back pain. Patients whose lower back pain is evident from a tilted body are seen now and then. Sometimes, patients with visible signs of lower back pain will have dramatic and drastic results from acupuncture treatments. Immediately after the needles were removed, Mary Lou appeared to be able to stand straighter, as can be seen from two photos on the right of the figure. The subjective pain she perceived was reduced substantially. Again, such obvious good to excellent results were possible because her objective pain was low, between third and fourth degree. Mary Lou was a 46-year-old clerk typist. At the age of 23, she was involved in an automobile accident. She ended up landing on asphalt pavement with a chipped tailbone. Pain caused by a fracture in the coccyx is not easy to

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FIGURE 13.6 Photos of Mary Lou taken before (left) and immediately after (right) the first acupuncture treatment. An improvement in her standing posture can be clearly seen.

manage. Yet, after four treatments, pain in the coccygeal area subsided because of her low degree of objective pain. The diagnosis from her doctor was "tendonitis [sic] and a chip on the coccyx," although medical dictionaries give the spelling "tendinitis." She couldn't recall precisely when her lower back started to have pain, but it had worsened about 2 years ago. The pain had become more frequent, occurring once every 2 days. She had received physical therapy, was taking hot baths three or four times a day, and was using Tylenol, Advil, and Ascriptin pills. They helped for a short period. She had had some kind of breast operation in 1973, and in 1984, she had had a hysterectomy because of endometriosis. She was told her back pain would disappear after the surgery, but that prediction failed to materialize. The lower back pain persisted. She had had some dysmenorrhea with mild cramping during menstrual periods, but there was no more cramping after the hysterectomy. Her obstetric-gynecologist also told her that the uterus had precancer cells. She said that she slept well but would wake up with pain every morning around 5:30. She also had occasional constipation. Before coming for acupuncture, she had had four cortisone injections: one in the midback, one at the coccyx, and two inside the pelvic bone. She also complained of numbness in the right thumb and index finger, particularly in the morning after a night's sleep. Her feet would become uncomfortable after standing for any period of time. For the first treatment on November 3, 1984, in the prone position, 25 needles were placed in each of the trigger points in the primary group. The relief was immediate after the needles were removed. The second treatment was given on November 5, using trigger points in the primary group on the supine position. Three additional needles were placed around the right tibial points proximal to the medial malleolus of the right ankle, because active pain was perceived in that area. Mary Lou came for two more treatments, on November 9 and November 12. On both occasions, she was asked to lie in the prone position. For these two last treatments, an additional three points of the secondary and tertiary groups in each limb were used. She reported that her pain was much reduced and that she slept very well, without any discomfort. She stopped coming after her fourth visit.

13.8 PAIN IN THE LOWER LIMBS

Because nerve branches in the lower limb come from the lumbar and sacral plexus, there is pain associated with each of these points. If we wanted to pick pain in just two regions in the lower

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limb to describe, for example, these would be knee pain and meralgia paraesthetica (which is also known as Bernhardt disease). Knee pain related to osteoarthritis is the most common complaint in the entire lower limb. Meralgic pain from the greater trochanter is not as common as knee pain. It is a pain that can lead to hip joint replacement if the problem is not effectively taken care of. The cause of meralgia paraesthetica is not clearly understood. Knee pain often is the consequence of joint degeneration.

13.8.1 Meralgia Paraesthetica or Bernhardt Disease

We have mentioned this pain condition in a previous chapter. The pain almost always starts in the greater trochanter, which is a bony process of the femur that can be easily and conveniently palpated on the upper end of the thigh. Laypeople often refer to the trochanter as the hip. Between the greater trochanter above and the lateral aspect of the knee below, there is a strong aponeurotic ligament known as the iliotibial tract, a thickening portion of the fascia lata covering the lateral side of the thigh. Bernhardt disease involves tingling, formication, itching, and other forms of paresthesia on the outer side of the thigh beginning at the greater trochanter and running down to the lateral epicondyle of the femur, and is a very commonly seen condition. Most patients seen in the clinic with this disease have objective pain at fifth degree or higher. Acupuncture for them will have mixed and limited results, which are presented in Chapter 14. The pain in some of the patients will be difficult to manage with poor results, and are presented in Chapter 15. In our opinion, meralgia paraesthetica is an expected extension of pain deriving from lower back pain. In other words, people who have Bernhardt disease will have had lower back pain to start with, and it could be with them for years. Some medical doctors believe that the pain originates from the trochanteric bursa, which covers the outer surface of the greater trochanter. Therefore, the disease is also known as trochanteric bursitis. However, most patients who have a biopsy done by aspirating synovial fluid from the trochanteric bursa were found to have no pathological indication of any infection. The symptoms of pain, tingling, formication, itching, and other forms of paresthesia are easy to manage if the objective pain in the patient is no higher than fourth degree. The results are always good to excellent. To treat meralgia paraesthetica or Bernhardt disease, patients are first placed in the prone position, using trigger points in the primary group. The second treatment is given in the supine position, again using the trigger points in the primary group. Patients are placed a lateral recumbent position, meaning lying on one side. If the uncomfortable sensation is more prominent on the right side, place patients on the left hip, and vice versa. Trigger points used include all primary group accessible locations, plus four trigger points of the secondary group in the available locations. Needles placed over the greater trochanter and iliotibial tract are essential for managing the disease. In the lateral recumbent position, the greater trochanter is easy to palpate and locate. There will be an obvious trigger point detectable right on the top of the trochanter. A needle must be inserted right at that locus. Approximately 1.5 in. peripherally from that needle, six additional needles are needed to circle it. Finally, trigger points along the iliotibial tract must be searched out. There are often three to five of them found along the tract. Each is inserted with one needle to complete the third treatment. The fourth treatment is repeated as described for the third on the other side of the hip. Four treatments are enough to erase symptoms of Bernhardt disease if the objective pain in the patients is fourth degree or lower. If symptoms persist for any reason after four needle sessions, the same protocol of four treatments should be repeated once more no later than 2 weeks afterwards. Very rarely are additional series of therapy required.

13.8.2 Pain in the Region of the Knee Joint

When we say "knee pain," some people may have a narrow concept of pain inside the knee joint only. It is more inclusive to say pain in the region of the knee joint. Anatomically, the region consists of the distal end of the femur with the lateral and medial epicondyles, the patella, and the proximal

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ends of fibula and tibia with their heads and the lateral and medial condyles of the tibia. In this entire region, one trigger point that often becomes the first to be detectable is formed by the saphenous nerve. This saphenous nerve point is clearly not in the knee joint. The point becomes sensitive with pain or tenderness palpable early in the sequence of acupoints turning from latent to passive phase. It ranks fourth in the sequence of all acupoints that have potential to become trigger points. In fact, pain that appears in the knee due to an injury inside or outside the joint will have the saphenous point turning to a trigger point. Injuries inside the knee joint can include tearing of the meniscus or damage to cruciate ligaments. Injuries outside the joint can include rupturing of muscles or collateral ligaments that attach to the bones of the joint. The pain caused by these types of injuries is acute in nature. The injured parties are most likely young and healthy athletes. Their pain has the potential to stay in the acute stage for years. This kind of acute pain can turn chronic only if the same injury happens repetitively over a period of many years, or if the original pain was not totally eliminated. Years later, trigger points will appear in other loci of the knee joint region. More about chronic pain in the region of the knee joint will be discussed in the next two chapters. Here, one reality concerning chronic pain in the knee is useful to point out. This chronic pain will often be mistakenly regarded as acute because the knee has suddenly begun hurting in the past few days or week when, in fact, the aching knee has been degenerating for years. Such is the case particularly for female patients who have passed the postmenopausal age. They already have numerous trigger points in the body with osteoarthritis going on inside their knee joints for a number of years without being able to perceive subjective pain in their knees. Of course, the patients themselves have no idea that the pain in their knee is already in the chronic stage when one day they become aware of it. This fact explains why degenerative osteoarthritis in the knee often is difficult to manage with poor results, whether using acupuncture or whatever other remedies. Knee pain is easy to manage with good to excellent results if the patients have an objective pain that is no higher than fourth degree and if there are no other trigger points detectable in the region of the knee joints. Here is an example.

Lila M. was a 96-year-old tour director. She is certainly unique because she is the oldest patient on our records, an old-fashioned schoolteacher, and had remained single her entire life. After retiring from teaching, she became a tour director because of her penchant for traveling. She belonged to a club whose membership requirement is to travel to at least 100 countries. At the age of 84, she was still leading tour groups to China.

Lila first came to visit on November 27, 1995. She indicated that she'd come because of a suggestion from a Dr. Richard Carraghan. No such name was found in the local telephone directory. Her main problem was "arthritis in the left knee" with pain for about 3 months. After checking her trigger points, her objective pain was measured to be fifth degree, which could be considered low for her age. This fact might explain why she had a successful total hip replacement in 1988. The hip surgery was necessary because she had Bernhardt disease in the left hip joint, which her physician told her was already "bone to bone" contact in the joint. After the surgery, the problem was completely solved. Surgery for her left knee was not justifiable because the arthritis was "minimal." Because of her relatively low degree of objective pain, it was predicted that four treatments would be able to manage her subjective pain in the knee.

To stop Lila's knee pain, she was first placed in the supine position, and needles were inserted in all trigger points of the primary group, plus an additional four needles in the saphenous area, which had more sensitivity. She came for a second treatment on November 29. Pain relief in the knee was obvious because she came without a walking cane. She reported that she was able to walk to the post office and work in the yard without using her cane. She was very happy with the results. In the prone position, needles were placed in the trigger points of the primary group with an additional four needles in the left knee. By the time she came for her third visit on December 1, she said that she was free of pain in the left knee. In a sitting position, all trigger points accessible in the primary group plus four additional in the knee were used for needling. She was advised to call if the knee became painful again. She returned for a fourth visit on January 15, 1996, because the knee had begun to bother her again. A series of three treatments was repeated, mimicking the first three

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sessions in the first series of four, on January 17 and January 19, 1996. In the meantime, a letter from Orthopaedic Surgery Associates of San Antonio arrived to compliment Ms. Lila M., reading: "I am absolutely delighted that you have had such an excellent response to the acupuncture therapy. I trust that it will be of lasting duration for you…" It was signed by one of the physicians at that practice.

13.8.3 Pain in Other Locations of the Lower Limb

Subjective pain can appear in many locations of the lower limb. Acupoints where subjective pain has been seen include the ilioinguinal, genitofemoral, and obturator at the junction of the lower body trunk and upper end of the lower limb. Subjective pain in the popliteal fossa (known as Baker's cyst), along the shaft of tibia and fibula, around the ankle, between the toes (Morton's neuroma), under the foot (tarsal tunnel syndrome), calcaneal or plantar fascitis, and bunions on either the big or little toe are just some of the pain types seen in the clinic. Some of them will be mentioned in the next two chapters.

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14 Applications with Mixed and Limited Results

Acupuncture has a tendency to be contentious. All manner of news media are filled with information that can be considered as misleading. One example is found in an issue of *Consumer Reports* [1]. The magazine describes how a patient diagnosed with systemic lupus erythematosus received acupuncture treatments. Reports that a disease of this nature can be treated with acupuncture will surely draw a great deal of skepticism from people with medical sophistication. Obviously, acupuncture is neither a panacea nor a charade. The treatments, without a doubt, can produce good to excellent results, as presented in the previous chapter. They can also be ineffective and produce poor results. Most of the results obtained from acupuncture treatments will be appropriately described as mixed and limited. Thus, we have the title for this chapter.

14.1 DEFINING MIXED AND LIMITED

"Mixed" is used here to mean that patients can have more than two kinds of pain at once. They may perceive any two or more of headaches, lower back pain, pain in the shoulder, knee pain, pain under the foot, and other kinds at the same time. Pain may also be mixed with other medical problems or symptoms; patients with headache or lower back pain may suffer from hot flashes, indigestion, stomach ulcers, hiatal hernia, constipation, insomnia, depression, dysmenorrhea, menstrual cramping, hypoglycemia, low blood pressure (hypotension), anemia, and so on. Acupuncture may be useful for solving one or more of these diseases or symptoms, but not all of them at one time. Thus, the results are best described as mixed. Subjective pain in some patients is perceived in many locations. This pain can be managed with good and excellent results in some locations, but not in others. Such results are best categorized as mixed.

Clinically, patients commonly express that their pain is better, but they are not completely well or totally free of the pain subjectively perceived. The relief is clearly limited. Mixed relief in pain also consists of limited relief in pain. Mixed and limited can be best explained by using the three terms below.

14.1.1 In Terms of Patient Profiles

Most patients are of middle age or older. They often consume multiple prescription drugs simultaneously. Adverse reactions to medicines taken are rather common. Most medicines taken for pain are not helpful, or if they are, the relief of pain is short—lasting only hours, not days—unless the medicines contain narcotics. Other medical modalities, including physical therapy, prescribed analgesics, antiinflammatories, muscle relaxants, and steroid injections have all been tried without lasting relief. One thing they want to avoid is the need to undergo surgery to solve their painful problems. Surgery can be beneficial for managing the pain of some patients in this group. Their pain can be considered as being chronic in nature. The objective pain measured for these patients is from sixth to ninth degree. Nonprescription drugs are a waste of money because they are useless. Chiropractic adjustments are not of much help, and have the potential to generate more pain after the adjustments. Massage, TENS units, or any other counterirritants are all similar wastes of time and money.

14.1.2 In Terms of Number of Treatments

It will require a minimum of four sessions to administer a proper number of acupuncture treatments to see mixed and limited results. Most of the time, six sessions are needed to see subjective relief. Substantial relief may not be achieved until as many as 16 treatments are given. In the long term, patients in this group come hundreds of times because their subjective pain can relapse from time to time. Patients in this group constitute the majority of our acupuncture clientele. Our estimate is that 63% of all patients belong to this group with mixed and limited results. The greatest appreciation of acupuncture is found among them, and they are the most enthusiastic in urging others to try acupuncture for the relief of chronic pain.

14.1.3 In Terms of Pain Relief and Relapse

We don't collect statistical data to say for sure how many treatments are required before subjective pain in a patient shows noticeable improvement. We do know that after as few as four treatments, some patients report being better. Only a small number of patients are fortunate enough to have such a quick outcome. Some patients will take six or more treatments to see an improvement. As many as 12 treatments to see relief of subjective pain is not unusual at all. The number of treatments required to conclude with a desirable result also varies from patient to patient. Some of them have satisfactory relief after four sessions, and no more will be required until the same pain relapses. Some may need as many as 16 treatments. The duration of pain relief ordinarily lasts from 4 to 6 months. Of course, the period can be shorter or longer for a small percentage of patients. The time until relapse of the same subjective pain will increase as the patients return for more series of treatments.

14.2 IRRELEVANT TO PAIN

By now, it has to be clearly understood that the main purpose for using acupuncture is for managing pain. The matter may not be that simple because not all people seeking acupuncture do so due to pain. Among the patients received, some want acupuncture to help them quit smoking, stop dipping tobacco, or kick other addictive habits. There are women who cannot get pregnant and want to have babies. Overweight individuals hope placing needles in their ears will help them to reduce weight. Wrinkles come with age, and some women expect acupuncture to smooth their facial skin, or give them a face-lift. Patients with nasal congestion due to allergic sinusitis may not experience any pain. Even without any subjective pain perceived, these people have to be included in the acupuncture clientele. Acupuncture is known to be useful in offering solutions for their problems. The solutions are not complete. Some will be helped, and some will not have fruitful results. Therefore, the results of treating these patients can be suitably described as mixed and limited. Some of these patients, of course, can have pain of one kind or another. If they don't have any subjective pain perceived at the time of their first visit, they can be appropriately placed into the group of patients who are irrelevant to pain. Describing how to take care of patients who are irrelevant to pain would involve a great deal of space. We have no intention of undertaking such a big task. Nevertheless, two examples can be provided for demonstrating what mixed and limited results are in the acupuncture practice. These are weight reduction and infertility.

14.2.1 Weight Reduction

The popularity of using acupuncture to reduce body weight has faded to some extent in America. In the early 1980s, overweight patrons knocked on the clinic's door every day to seek acupuncture's help in solving their problem of excessive caloric intake. The phenomenon speaks of a social problem in an affluent nation. Americans simply eat more than they need. The unutilized energy is then converted into fat for storage in the stomach and elsewhere. One can fairly say that obesity is one of

the unique dilemmas of the United States. This social peculiarity became an expectation that was unheard of in the history of acupuncture. No mention of using acupuncture to reduce body weight was found in any of the writings or publications available prior to 1970. The real story behind how acupuncture became popular for weight reduction is fascinating, but we have neither the time nor the need to repeat it in this book. The acupuncturist who started the practice of acupuncture face-lifting was a personal friend. He resided in Hollywood, where the abundance of movie stars is a well-known fact. They don't mind spending cash to keep themselves young. Such a reality explains why acupuncture for face-lifting became popular in California and throughout the country at one time. The results of face-lifting are also mixed and limited, with a tendency to be on the very poor side. We have no desire to explain why. We do want to have a rational anatomical explanation for understanding why placing three or four press needles, known as auriculopuncture, in the ears will be able to help some people to reduce a few pounds of their body weight in a few weeks. This rational explanation was reported in two publications [2,3]. Briefly, the principal scheme relies on the distribution of the vagus nerve to the ears, as shown in Figure 14.1. The anatomic mechanism for suppressing appetite by inserting very small press needles in the ear concha is the auricular branch, a small nerve branching from the vagus. Nerve signals generated in the concha by the press needles will interfere with hunger signals coming from digestive organs carrying the vagus nerve. This interference must be able to confuse the central nervous system's desire for food intake. When food intake is reduced over a period of time, body weight will have a chance to decrease. Overall, such a reduction only occurs in approximately 23% of people who tried it and were able to drop 2 or 3 pounds during a 2- to 3-week period. Therefore, we say the results are mixed and limited. Mixed because some people had the expected results of shedding a few pounds of their weight, and some

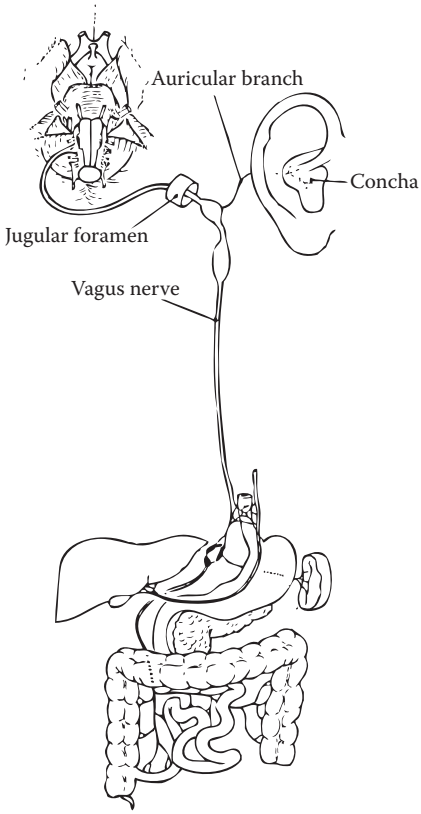

FIGURE 14.1 A diagrammatic drawing to depict distribution of the vagus nerve and its branches. (Modified from K.L. Moore, *Clinically Oriented Anatomy*, 1st ed. Williams & Wilkins, Baltimore, 1980.)

didn't. Limited because body weight reduced was limited to just a few pounds, and for only a small number of people who tried the method.

14.2.2 Infertile Pregnancy

Describing a pregnancy as infertile is an oxymoron. A total of 67 females came for acupuncture procedures with the hope of becoming pregnant. Slightly more than 50% of them achieved pregnancy, with 35 of them reported as having a baby. Among these, one mother had twins, as shown in Figure 14.2. Her name is Pamela Sadler (her name is used with permission). She was 29 years of age, and taught at an elementary school in San Marcos. Her mother, Kathie P., received a total of 55 acupuncture treatments between January 18, 1992 and December 2, 1995 because of back pain after an unsuccessful lumbar fusion. Kathie is considered as having mixed and limited results. The treatments helped to ease the back pain, which relapsed repeatedly during 4 to 6 months after receiving two to four needling sessions per series. In early 1996, Kathie inquired into the possibility of using acupuncture to improve her daughter Pam's infertility. Pam came on February 10, 1996. She indicated her "failure to conceive is due to ovulation disorder." More knowledge of this ovulation disorder would have been helpful to determine whether acupuncture was able to make her infertility into pregnancy. The diagnosis of the disorder was given by her fertility doctor in Austin. Her doctor had tried every means in his arsenal to overcome her infertility, without success. Pam said that she had already spent a lot of money trying to have a baby, but that she would not mind spending more, if anything could help her become a mother. We told her we would try to make her pregnant free of charge. Our only request for reciprocation was that she show us a picture of her baby after his or her arrival in the world. Pam kept her promise, and that is the reason we have the photo for this book. To be able to conceive, the father has to have a sufficient sperm count, and the mother must have normal menstrual cycles with ovulation occurring. The best time to have acupuncture is about 1 week prior to expected ovulation. Three to four sessions will constitute a series of treatments in promoting fertility. The sequence of treatments is supine first, then prone. Both times, only acupoints in the primary group are used. The third treatment is done in a sitting position using the primary and the secondary points accessible. The fourth treatment, if such a chance is available, is repeated in the supine position using only the primary points. After four series and a total of 13 treatments by May 13, Kathie called on June 6. Her excitement was beyond words, because her daughter Pam had been confirmed as pregnant. Her happiness was painfully brief. An unexpected spontaneous abortion occurred, just a couple of weeks after the pregnancy. Pam returned for two more series in July and

FIGURE 14.2 Pamela Sadler with her twin sons, Wesley and John. Residual symptoms of facial paralysis due to Bell's palsy are still visible on her face.

August. A second pregnancy was confirmed on August 16. By then, 18 treatments had been provided. On December 17, 1996, Kathie informed us that Pam was expecting twin boys on April 24, 1997. The twins arrived more than 1 month early. A week before the childbirth, Pam developed Bell's palsy with paralysis on the right side of her face. She was assured not to worry. Most facial paralysis would improve by itself without medical intervention. She did take steroids as prescribed. No initial attempt was made to see if acupuncture would improve her condition. The symptoms of facial paralysis on the right side of Pam's face persisted, and she came for six treatments to get rid of her Bell's palsy, which can be treated with good to excellent results in the early stages of the disease. The treatment procedures are given using the primary points and trigger points in the face and head.

Another case of infertility pregnancy is that of Norma G., a 31-year-old wife of a district judge in Brownsville. She came to the clinic on January 17, 1983, through a referral by her nephew, Dr. Joe Zayas, a graduate of UTHSC's dental school. Without this connection, it would be difficult for someone more than 300 miles away to become aware of our clinic's existence. Because of the distance, Norma could come and stay for no more than three treatments, and then only when she and her entire family came to San Antonio for various reasons and activities. She had "severe headache" of the migraine and tension type. The headaches often landed her in the hospital, where she would receive Demerol injections to ease her suffering. In reply to our inquiry, she indicated that her menarche occurred when she was 11 years of age. Thereafter, she would have severe cramping every month, and her periods would last 6 days. At the time of her first visit, she had one child, who was mentally disabled, as can be seen from Figure 14.3. The family picture was mailed as a Christmas greeting years later. The boy in the chair is their first son. Because of their first son's disability, she and her husband decided to wait before having a second child. When they decided to have another child 3 years later, she was unable to become pregnant. She consulted every medical

FIGURE 14.3 A Christmas greeting from Norma with her husband, Robert, second son Ryan, daughter, Rochelle, and first son, Robby, Jr., in the chair.

resource available to her, but still could not conceive. She blamed the stress and anxiety of taking care of a brain-damaged son and becoming infertile as the reasons for her headache. This is a typical patient attributing subjective pain to psychological factors. We do agree that Norma's psychology might have played a role in creating "severe" headaches as she described them. The degree of her objective pain was only between five and six. At such a degree, headaches should not be severe all the time, unless one is regularly under a great deal of psychological stress. The family stayed in San Antonio for 3 days. She came once a day during that time for three acupuncture treatments, using the supine, prone, and sitting positions. The number of trigger points used has been given in the previous descriptions of headache treatments.

It was almost 11 months later, December 10, 1983, when Norma returned again. On that day, she reported that a few weeks after the acupuncture received in January, she became pregnant. She adamantly insisted that her pregnancy was the result of the acupuncture treatments, because she had tried very hard for several years without any luck. She jokingly said that after her pregnancy was confirmed, she paid a visit to her fertility doctor's office, and was told that the reason she couldn't conceive was because she was not ovulating. She then told the receptionist at the fertility clinic that she had already become pregnant because of acupuncture treatments received in San Antonio. She was so thrilled that the first thing she did when she stepped into the clinic was to give this author a hug. She said that she was very happy to have had a healthy boy, Ryan, the week before coming to San Antonio. He was a big baby, 10 pounds in weight at birth. She said this author was a miracle-worker because her headache had gone away after the three treatments and remained at bay until the birth of her second son. She received two treatments for her second series at the clinic, once a day for 2 days. A year later, she had her daughter, Rochelle. During her pregnancy with Rochelle, her headache got better. However, it kept relapsing, and she came about once every 6 to 8 months through July 9, 1996. By then, she had been given a total of 38 acupuncture treatments not only for headache but also for lower back pain, neck pain, and shoulder and knee pain. Her whole family has grown so enamored of acupuncture that all, but one, have become patients at the clinic in time. Each of them has two to three acupuncture treatments when they come to San Antonio.

14.3 SUBJECTIVE PAIN PERCEIVED

Acupuncture is used to control and manage perceivable pain, which is subjective. Subjective pain gives all of us uncomfortable sensations. Uncomfortable sensations are not restricted to pain. They can include numbness, itching, burning, prickling, stabbing, and many more. Acupuncture needles can eliminate some of these unpleasant sensations sooner and more easily than others. The intention of using "mixed" and "limited" is to imply such results. The treatments improve some of these problems, but not all of them. The improvement for some of them is more profound and longer-lasting than for others. Quantitatively, pain can be described as being somewhat relieved but not eradicated. It is not uncommon for patients to say that they feel somewhat better, but are still hurting. Such comments lead to an understanding that pain relief can have a quantitative aspect. "Limited improvement" would suitably describe such a quantitative change. "Limited" can also be used to define the duration of pain relief. In Chapter 13, good to excellent results are used to define patients who don't return for the same pain after four or fewer treatments. In this chapter, it will be found that most patients return for the same pain after some time. In most cases, this period is 4 to 6 months. Norma is an example. This period of 4 to 6 months of relief can also be viewed as a limit. Most acupuncture patients will have a limited time of relief. Except for those patients whose objective pain is fourth degree or lower, anyone expecting permanent relief could be disappointed.

With respect to age, patients with good to excellent results tend to be younger. Older patients with good to excellent results are fewer in number. Mixed and limited results are more often observed for patients who are older than 20 years and can be as old as 90. A reasonable explanation is that latent acupoints can be converted to passive at any age. Young patients with objective pain of sixth to ninth degree are less common. Older patients provide the possibility for having a higher degree of objective pain. If,

indeed, pain can be acute and chronic, all of the patients who will have mixed and limited results must have chronic pain. Our reasoning is that their objective pain is almost always at sixth degree or higher, and anyone at this level of pain can be viewed as having subjective pain in the chronic stage.

In determining whether the results will be mixed and limited, we must discuss the number of treatments involved. The answer is six to 12 for 85% of the patients treated. The other 15% can take fewer or more treatments to obtain the same results. The duration of relief for subjective pain can be from weeks to years but, as already mentioned, 4 to 6 months is most likely.

One of the reasons that patients have mixed and limited results is subjective pain in multiple locations. Usually, a subjective pain is described as appearing first in one location. Another subjective pain can then appear later in a second location, and so will a third or fourth pain. Take, for example, patients with lower back pain, who can eventually have pain in the groin or lateral surface of the thigh. Some of these pains can have anatomical relations, and others may not. Let us examine the two example secondary pains mentioned. Pain in the groin always occurs at the ilioinguinal point, the nerve of which is a branch of first lumbar spinal nerve. Chronic lower back pain most often begins from the fifth lumbar. In time, the pain will involve the first lumbar. Pain in the lateral surface of the thigh is Bernhardt's syndrome, which is part of sciatica. Patients who have lower back pain can also suffer from chronic headache. Subjective pain in one location is almost always easier to manage than in multiple locations.

With very few exceptions, the overwhelming majority of patients who have had mixed and limited results after treatment had consulted at least one medical doctor before coming for acupuncture. It is obvious that when pain is perceived, acupuncture was most likely the last remedy to come to their minds. If acupuncture becomes popularly accepted as a legitimate therapy, people suffering from pain will go to acupuncture as the first choice, at which point their problems can be easily and quickly solved. One patient had seen at least 14 doctors before trying acupuncture, the highest number seen by any given patient prior to coming to us for treatment. None of them had given him good relief. Before acupuncture, therapeutic regimens given by their physicians consisted most commonly of pain pills (prescribed or nonprescribed), injections of one substance or another (most often steroids), and surgical interventions (for the elimination of pain or other pathologic reasons). Of the regimens mentioned, the number who had received surgery was relatively small. Nevertheless, saying that they were not regularly seen is not an overstatement.

Other forms of treatment received and mentioned by the patients include physical therapy, chiropractic adjustments, reflexology, and massage. Of these, chiropractic adjustments seem to provide temporary relief for some time. One reason that they decided to try acupuncture was because chiropractors became ineffective in providing even momentary relief. It was not infrequent for some patients to confess having their pain aggravated by their chiropractors. In the beginning of their pain, nonprescription pills might have helped for a short while. In time, the pain pills would become useless. Then, drugs prescribed by their physicians would follow. The three types of drugs most commonly prescribed medically were pills for pain, muscle relaxation, and counterinflammation. Individual drugs must come in and out of fashion because their names have changed rather often in just a few short years. Drug treatments provide relief at the beginning of their consumption, but after a while, they become of little use for the purpose of relieving pain.

Next to drugs, another often-mentioned treatment is the injection of steroids. The first injection often worked beautifully for patients who had mixed to limited results from acupuncture treatments. The relief usually lasted for as long as 6 months, but was much shorter after the second injection. Very few patients received more than three injections, at which point they were likely to have minimal or no relief. At that juncture, acupuncture would come to mind.

We suspect that patients who have mixed and limited results have a poorer homeostatic state than normal, as manifested in a number of conditions. They complain of easily becoming fatigued, of having difficulty sleeping at night, and of a tendency for indigestion and constipation, and are more likely to be stressed, become depressed, and be sensitive to environmental changes during the arrival of rain or a cold front. These patients have a higher incidence of allergies to chemicals and

toxic substances, and have low tolerances for medications. It is not uncommon for them to describe how one pill could turn their stomachs upside down.

Pathologically, subjective pain originates more from endogenous causes in females, and more from exogenous causes (e.g., sports and work injuries) in males. One main source of pathological changes, which have endogenous origins, is menstrual malfunction. A large proportion of females with chronic pain seemed to have a medical history related to dysmenorrhea. Many of them had had a hysterectomy by the time of they reached the age of menopause. Other pathologic conditions that were mentioned by patients, and which produced mixed and limited results, included hiatal hernia, gastritis associated with excessive gastric acids, colitis, and diverticulitis. With improvements in the quality of drugs for pain, such as better buffering against indigestion, illness in the digestive system seems to be more seldom seen among patients. The availability of medicines such as cimetidine, packaged as Tagamet, may be another reason for the substantial decrease in gastrointestinal problems among patients with chronic pain. We suspect that there is a causal relationship between the irritation of the digestive tract and the consumption of pain pills that is observed so frequently among patients coming with chronic pain. It may be a simple coincidence but we wonder why the three most frequently advertised medicines on commercial TV during the 1980s and the 1990s seemed to be for pain, excessive stomach acids, and constipation. Subjective pain in patients who have some kind of gastrointestinal abnormality can be anticipated to be harder to manage. Again, we come to the purpose for this chapter's title.

Managing subjective pain with mixed and limited results will be described following the approach used in a previous chapter. The body is divided into five regions: face and head, neck and shoulder, upper limb, body trunk, and lower limb. Two or three kinds of subjective pain are chosen to represent each of the five regions. Some of the pain types chosen can be identical in one region, and some may be different. The reasons for such discrepancies will be explained whenever the circumstance is appropriate.

14.4 PAIN IN THE FACE AND HEAD

The three kinds of subjective pain in the face and head region chosen as examples are migraine, tic douloureux, and postherpetic neuralgia. Two cases for each of these three sicknesses are used to illustrate how subjective pain in the face and head can be managed.

14.4.1 Migraine

Over more than 20 years, we have had several hundred patients come to us with migraine headaches. A few dozen of them have good to excellent results after four or fewer acupuncture treatments, and practically no patient in this first group was known to return for further migraine treatment. Clinically, most migraines have mixed and limited results. Migraine headache can certainly be managed, although with more frustration than satisfaction. Before we explain why migraines are not easy to manage, a short review of the medical literature will be helpful.

Essays in the form of books [5–8], periodicals [9–11], reviews [12,13], and others [14,15] about migraines constitute a greater volume than any person can possibly digest. The number of reports published by different investigators regarding headaches is astronomical. Medical experts must know a great deal about migraines. To this author, after dealing with the problem for so many years and in so many patients, migraines are still an enigma. To say that no two migraines are alike is altogether reasonable. The first conspicuous discrepancy is in gender. There are far more female migraine sufferers than males. Three out of every four cases of migraine are in women. This type of headache can assault victims as young as 10 years or as old as 60 years. Individuals older than 65 years seem to be immune to migraines. We have seen only two migraine patients older than 70 years. By the time the patients arrive in the clinic, the duration of their headaches can be from 1 year to more than 30 years. The interval between headaches can vary from days to years. Some migraines

can relapse after years of remission. The severity of the headaches can be extreme, ranging from mild discomfort to paroxysmal sensations resulting in fainting and vomiting. Some patients didn't have to depend on too much medication to subdue their headaches. Others had a long history of consuming different types of drugs for combating tenacious migraines. The symptoms, their intensity, and characteristic sensitivity can change with age for many patients. Clinical variables in migraines are almost unlimited. Because of the possibility of such wide variations, the predictability for acupuncture managing migraines is less reliable than for other kinds of pain. "Mixed and limited" is unquestionably more appropriate for describing the results in managing migraine headaches than for any other kind of pain. Two patients are selected to serve as examples for migraine management.

Case 1: Lois C. was 26 years old. She didn't mention what her job was. She was literally brought to the clinic by Joyce Mauk, a senior-year student of the medical school who was taking the Anatomical Acupuncture elective for which I was the instructor. Lois used "common migraine" to describe her main problem. She gave us a written report in which she said, "headache since 9 or 10 (prepubescent). Head x-rays done around that time ruled out tumor. Headaches usually unilateral accompanied by nausea and vomiting. Over-the-counter medication (aspirin, Tylenol, etc.) didn't work. Usually slept the headaches off by going to a dark room and sleeping through the night. Headaches have always started around midday and reached their peak around 6 to 7 pm. Nothing in particular ever seemed to trigger them. Never occurred at any particular time during the month, and frequency was around once a week. As I have gotten older, nausea less of a problem. The only time headache-free was when I was pregnant (once). Now headaches are one-sided (right). They occur almost weekly and last for 2 to 3 days running (even sleeping didn't help). In November of 1982, went to a neurologist in San Antonio who did a CT scan to rule out tumor and was prescribed 50 mg Endep nightly and Midrin at the start of any headache. When headaches persisted, he prescribed Cafergot at the start of the headaches. On December 15 of the same year, started to take Inderal (60 mg) daily. It prevented any headaches for about 1 month. When I did get a headache, he increased the Inderal to 120 mg daily, and this was successful in relieving the headaches. Diagnosis was common migraines." Lois couldn't relate the headaches to menstrual function; the headaches came once a week, whereas menstruation naturally occurred once a month. Her periods were regular; she was taking contraceptive pills. During her periods, she would feel puffy and swollen, but no other discomfort or pain. Her objective pain was estimated as sixth degree. However, some trigger points in the tertiary group were detected in the head region, making her to be between sixth and seventh degree.

The first acupuncture treatment given to Lois was on February 26, 1983, the day she came to visit. Using the supine position, all trigger points in the primary group from the supraorbital in the head down to the deep peroneal in the feet were used for needling. When she came for the second treatment 2 days later, she indicated that she had cut down her Inderal intake to 60 mg daily. In the prone position, trigger points in the primary group were used. Additional trigger points in the secondary group, including the lesser occipital and third occipital, were also used. The third treatment was given on March 2, using the sitting position. Trigger points of the primary and secondary groups in the head, neck, shoulder, arms, forearms and hands, plus tertiary points on the scalp, including the bregma, coronal, pterion, and temporalis, were also needled. The first three treatments were repeated after a 1-week break. By March 24, when she came for her ninth treatment, she claimed that she had had no headache for a week. She felt elated because she was free from migraines. The author suggested that she keep coming for a few more treatments to prevent relapse. The treatments were free of charge because she was willing to be used as a teaching case for my Anatomical Acupuncture elective. Six days after her ninth visit, the headache relapsed, but subsided on its own within the day. She returned on March 30 for the tenth time. She said that a headache seemed to be building up, and upon her arrival, she was suffering. It was also at that time she began her new menstrual period. This coincidence led to the reasonable suspicion that the migraine and menstrual activity were related. Lois was advised to return after 2 days instead of waiting for a week, so that migraine could be suppressed without having a chance to rebound. The

eleventh treatment was on April 1. She reported that the headache went away after the last treatment she received. The remainder of her visits were on April 6, 11, and 25. The modus operandi was the same, using the supine, prone, and sitting positions. The trigger points used were the primary, secondary, and tertiary in combinations. Lois's next menstrual period was on April 26. She came on April 27 for the fifteenth treatment. She again had a headache, which was not as bad as the ones she used to have. She was asked to come again on April 29 for her sixteenth treatment. Her seventeeth visit was on May 21 because she was expecting a new menstrual period and wanted to make sure that the headache would not relapse. Lois received two more treatments on May 23 and May 25. She returned again beginning June 11 for another series of four treatments (June 11, 15, 19, and 22), for which, as with all subsequent services she received, she was charged as a regular patient. Her headaches kept bouncing back every so often. They were mild headaches, without any severity to speak of. She had come for a total of 38 treatments by October 20, 1983. She returned for her thirty-ninth treatment on March 2, 1984, because she'd begun to have headaches after almost 4 months of freedom from suffering. The headaches seemed to coincide with the arrival of menstrual periods again. Migraines and acupuncture became a seesaw for the next 8 months, through October 6, 1984. By then, she had come for a total of 57 treatments. We have not seen Lois since. We hope that she is free of migraines after all these years.

Case 2: Bill G. was a 75-year-old retired rancher. He was our oldest patient to have migraines, and one of only two who were older than 70. He couldn't remember for how many years the headaches had been with him, or when he was diagnosed as having migraines. Most of the headaches were in the temporal area on both sides. The headache attacks were infrequent and impossible to anticipate. He had a headache upon arrival at the clinic, although not a severe one. Severe headaches appeared only very occasionally. He had not taken prescription or nonprescription medicine for headaches in years. His headaches were more a nuisance than a threat to his life. Most of the time, he just ignored the discomfort and carried on with whatever he had to do. He decided to try acupuncture because so many good friends in his town of Uvalde had urged him to come. He arrived on March 3, 1995 for the first visit. After giving him an examination to check the number of trigger points he had, his objective pain was measured as being fourth degree. He was assured that his headache could definitely be managed. Because of the pain's relatively long duration, the possibility for his headaches to relapse would be high. To us, pain is like a tree; it will grow in time. A small tree is easy to pull up at the roots. If a tree grows to 100 feet tall, the trunk can be cut down, but digging out all the branches of the roots can be difficult. He understood the analogy and decided to take the chance. The first treatment was in the supine position. The trigger points used were all in the primary group. Three extra needles were added to each temporal region. On his second visit (March 5, 1995), he described how his headache had subsided a few hours after his first visit, but then rebounded a day later. He came, more or less, as an emergency case because of his relapsed headache. He now felt pain around the rims of his eyes. The second treatment was again given in the supine position. In addition to the primary group trigger points, three needles were placed in the temporal areas and three were placed around the orbital margins, including the lacrimal, the lateral angle of the eyes, and the zygomaticofacial points. He came back for the third time on March 7, still suffering from headaches. The treatment was provided on the prone position. Trigger points used were all in the primary group. Two days later, on March 9, he came for the fourth treatment, which was made with him sitting. Needles used included six on each half of the scalp, and trigger points in the primary and secondary groups in the neck, shoulder, and upper limbs. The fifth treatment was given on March 11 and repeated the same needles as the first time in the supine position, adding secondary-group trigger points in the head, face, and neck. A total of 48 needles were used. He came for the sixth treatment on March 15 and reported that he hadn't had a headache for the last 3 days. Needles were given with him in the prone position. This time, only trigger points of the primary group were used. He was advised to wait for a week, unless the headache rebounded. He came for the seventh visit on March 22, 1995 because he felt as though a headache was impending, although it didn't materialize. The fourth treatment given on March 9 was repeated for this seventh visit with him

sitting on a chair. He waited for 5 more days and returned for the eighth visit on March 27. He said that unmaterialized headaches could still be apprehended. The inconclusive battle to conquer his headaches would go on for the next 5 months, until August 29, 1995. By then, Bill had come for 21 treatments. During this time, he mentioned that he also had pain in the shoulder, neck, and lower back, as well as indications of tinnitus. He stopped coming until February 26 1996, which was the date for his 22nd treatment. Briefly, he hadn't had many headaches for about 5 months. The headaches then gradually began to sneak back. To combat his migraines, he returned on May 31, 1996. He received a total of 44 acupuncture treatments before he decided not to come again. The results of acupuncture therapy for Bill can be properly categorized as having mixed and limited outcome. The treatments helped to ease some of his migraine, but did not totally stop the headaches. The relief from the headaches was only for a limited period.

14.4.2 Trigeminal Neuralgia or Tic Douloureux

Our patients have a tendency to express opinions about their problems. Upon close scrutiny, they will confess that the conclusions they have are derived without prior medical diagnosis. One exception for this tendency is the disease clinically known as trigeminal neuralgia, also known as tic douloureux. The tic is not a very commonly seen illness in the acupuncture clinic. As recorded in Table 14.1, in 7 years' time, a total of 16 patients were seen with the tic, ranging from none in one year (1991) to four at the most in another (1994), with an average of 2.3 of these cases per year. All of them positively indicated that they suffered from trigeminal neuralgia or tic douloureux (even though most of them couldn't spell the words correctly), as diagnosed by their physicians. Because of their rarity, tic patients were not commercially significant. Nevertheless, from a clinical point of view, the tic is a very important problem for the patients. It is one of the worst sufferings a living soul can possibly have. Descriptions of the condition include terms like "excruciating pain" and "lancing, stabbing, burning sensations." The severe pain will attack suddenly with slight or even no provocation. The pain can last briefly, disappearing in seconds, or can endure minutes or longer. The pain can be so sharp as to collapse its victim. It must be merciful to experience relief from such a pain. For that reason, we have always had a strong compassion for patients with the tic, even though in our hearts, we know that the chance of helping these patients is not very good. Most tic cases have a poor prognosis and are difficult to manage with acupuncture treatments. Only a small percentage of them will have mixed and limited results. Here is an example.

Linda H. was a 12-year-old student. She and her case are unique for the following reasons: at 12 years old, she was the youngest among the patients seen suffering from the tic, which is a disease of the elderly, but does occur very uncommonly among the young [16]. There are more female than male patients with the disease. Among the tic patients received, 87% were women. No scientific evidence is available to explain why more females than males should suffer from the tic. Our own speculation is that, after middle age, there are more female then male patients with the tendency to have a higher degree of objective pain measured [17]. We were surprised to find out that Linda had seventh-degree objective pain at only 12 years of age. Subjective pain with seventh-degree objective pain is, indeed, not easy to manage. Linda's tic had been treated by several dentists and medical doctors. None of them were able to help her. She ended up in our acupuncture clinic through the referral of a pediatric neurologist, Dr. Sheldon Gross.

A few words about Dr. Sheldon Gross, MD, PA, FAAP: He was a graduate of the medical school in the Health Science Center in the mid-1970s. He was a very friendly and courteous student. We developed a good camaraderie during his student years. He had been our guest for dinner a number of times during his school years, because he had been tutoring piano lessons for our son. After his postgraduate training, he set up his practice of pediatric neurology in an office across the street from his alma mater. It is just a short walk to drop by his clinic to pay him a visit whenever we desired. We went to visit Dr. Gross unannounced on March 4, 1997 to inquire about Linda. After checking her file, Dr. Gross told me that the acupuncture had cured her tic. This is possibly the only time a

TABLE 14.1
Biostatistical Data for Patients with Trigeminal Neuralgia

Year	Case No.	Name	Patient's Code No.	Sex and Age	Etiology	Side and Division of Trigeminal	Duration	Degree of Pain	No. of Treatments	Results
1990	1	Linda H.	90208H551	F12	Didn't mention	R-Maxillary	2 months	7	7	Good
	2	Allen M.	90326M533	M63	Postherpetic neuralgia	R-Maxillary	10 years	5	9	Pain reduced
1991	0									
1992	1	Anna M.	92160M656	F44	Extensive dental drilling	L-Maxillary	5 years	9	2	Needles were too painful
	2	Francis V.	92640V146	F71	Unknown	R-Maxillary	5 years	8	7	Didn't call for appointment again
1993	1	Eva G.	93047G595	F73	Didn't remember	L-Maxillary	10 years	10	12	Feeling better
	2	Maria R.	93141R553	F84	Dental treatments	R-Maxillary	6 months	8	7	Less pain but still hurting
	3	J.C.B.	93651B874	M53	Dentist	R-Maxillary	2 years	3	3	Good
1994	1	Cathy S.	94005S078	F55	Not sure	L-Maxillary	2 years	5	5	No improvement
	2	Elsie Mc.	94020Mc155	F73	Unknown	L-Maxillary	Couldn't remember	12	4	No improvement
	3	Geraldine M.	94039M750	F63	Dental implantation	R-Mandibular	6 months	8	4	Pain reduced
	4	Mildred B.	94666B927	F80	Dental care	R-Maxillary	20 years	9	28	Limited improvement
1995	1	Janine V.	95726V172	F46	Due to automobile wreck	R-Mandibular	11 years	4	3	No improvement
	2	Jane B.	95726B992	F74	Unknown	L-Mandibular	5 years	7	17	Still has attacks
	3	Ruby Mc.	95759Mc174	F51	Dental filling	R-Maxillary	7 years	5	26	Substantially improved
1996	1	Jean A.	96746A422	F75	Blaming her dentist	L-Mandibular	3 months	5	3	Excellent
	2	Alice M.	96768M969	F64	Unknown	L-Maxillary	3 years	8	10	Still hurting the same

result of acupuncture treatment was able to be verified by a medical doctor. Linda was lucky. Her tic took seven treatments to stop because she had had it for only 2 months. It definitely would have been different had the duration of the tic been much longer.

The protocol for treating the tic is very similar to that for migraines, with emphasis around the maxillary and mandibular regions. The tic seems to involve only the maxillary and mandibular divisions of the trigeminal nerve. We do not profess knowledge as to why it skips the ophthalmic division. Seven out of 16 tic patients, as shown in Table 14.1, indicated that before having headaches, they received rather extensive dental drilling. Because of their high degree of objective pain, injury to the nerve inside the tooth pulp provoked general pain in the face and head. If this turns out to be accurate, people who have a high degree of objective pain need to watch out before undergoing dental drilling.

14.4.3 Postherpetic Neuralgia in the Face and Head

Postherpetic neuralgia in the face and head is another kind of trigeminal neuralgia. Both of them are headaches. One difference is that trigeminal neuralgia seems to involve the maxillary and mandibular divisions, whereas postherpetic neuralgia involves the ophthalmic and maxillary divisions. The reason the mandibular division is not involved is unknown. Both neuralgias are due to damage in the same nerve. Yet, by talking to the victims, it becomes obvious that the tic hurts more than herpetic infection. There is an anatomical difference. Nerve fibers that produce tic pain are in the tooth pulp. The herpes virus destroys ordinary afferent fibers distributed to the skin. Both kinds of pain are not easy to overcome. Nevertheless, postherpetic neuralgia has a better chance of being managed than tic douloureux. A few cases of postherpetic neuralgia have had good to excellent results. Approximately 60% of the patients can expect to have mixed and limited results, whereas 40% end up being difficult to manage with poor to impossible results. The manageability of the pain very much depends on the degree of the objective pain the patients have and the duration since the skin outbreak caused by the infection. Within 2 months after the skin infection, chances for good to excellent results are high. As this period is prolonged, the manageability will decrease, and the results will turn to mixed and limited. After 1 year, it is reasonable to expect poor and difficult results. The reason is that, scientifically, we know the herpes virus can erode and dissolve myelin sheaths wrapped around the nerve fibers after about a year's time, from the terminal end of nociceptors to the dorsal root ganglia. The procedures to manage pain generated by herpetic infection are very much the same as for other kinds of headaches. The positions used, in order, are supine, prone, and sitting.

Figure 14.4 is provided to visualize where the needles are placed for managing headache perceived in postherpetic neuralgia. The picture was taken as the patient was sitting to receive his third acupuncture treatment. His headache was perceived in the area where needles were inserted. As can be noticed, needles over the scalp were inserted in the primary, secondary, tertiary, and even a couple of nonspecific points. Needles in the mandible and shoulder were placed in the primary points only. The number of needles will increase after the first series of four treatments if improvement is not noticeable. If the improvement is perceived after any series of three treatments, then the same protocol can be repeated. This patient came with pain from a shingles infection affecting the scalp area innervated by the left ophthalmic division on March 25, 1996. He said that the skin infection happened more than 5 months ago, in October of 1995. He had been treated immediately by military doctors in an Air Force hospital in San Antonio. The skin healed quickly in a couple of weeks, but the pain over his head lingered. His doctors told him that sometimes it took months for the pain to subside. After waiting for 5 months, he was told that nothing more could be done for him medically. None of the medicines taken were useful in reducing his headache. Besides postherpetic neuralgia, the patient was also hard of hearing. His objective pain was measured to be sixth degree. The first treatment was given with the patient in the supine position. In addition to the trigger points in the primary group distributed throughout the entire body, trigger points in the secondary and

FIGURE 14.4 Patient with postherpetic neuralgia over the scalp where needles can be seen.

tertiary groups, as shown in Figure 14.4, were also used. A total of five treatments were given as a series, one session every 2 days over 10 days. He was advised to wait for 1 week. Then, the second series of three treatments was provided. By that time, his pain began to show signs of diminishing in both the frequency of attacks and their intensity. The third and last series of three treatments was repeated after 1 more week of waiting. The eleventh and last treatment was given on April 25, 1996. The patient happily informed us that he had been free of pain for almost a week.

There are other kinds of pain in the face and head. They are known as atypical facial pain, that is, pain associated with Bell's palsy, as shown in Figures 14.5 and 14.6. Most cases of Bell's palsy are painless, but these two patients did perceive pain in the face. Acupuncture treatments for these patients had mixed and limited results. Their pain showed obvious relief, but not their facial paralysis, as can be seen from the pictures. One of the headache patients was also unusual in that she is the only patient we have had who came for treatment after a tumor was removed from her left internal acoustic meatus. Figure 14.7 includes two pictures taken before acupuncture on January 18, 1994 (top) and one taken in December of 1996 (bottom). From these pictures, we believe that she had mixed and limited results. Her face became more normal-looking, but paralysis due to damage to her facial nerve persisted. Treating symptoms associated with these problems is not any more complicated than treating other kinds of headaches.

FIGURE 14.5 Two photos taken of the same patient, one taken on April 24, 1995 before acupuncture (left), the other on June 6 of the same year after 26 treatments (right). His right eye could close better, but he still felt some paralysis in his right face.

FIGURE 14.6 A patient with Bell's palsy after eight acupuncture treatments. She still had problems closing her right eye, and the paralysis on the right face persisted.

FIGURE 14.7 A patient who had a tumor removed from the left internal acoustic meatus. The top two pictures were taken at the time of her first visit to the clinic. Due to the paralysis, her left eye was barely able to close normally because her left facial nerve was damaged in the surgery. Her face in the bottom picture, taken almost 3 years later, appears more normal.

14.5 PAIN IN THE NECK AND SHOULDER

We often say "pain in the neck," possibly because neck pain is rather common. Anatomically, the neck is the thinnest portion of the entire body trunk; it may also be the weakest. Yet, it has to carry the relatively heavier head on the top. It has a great degree of mobility, which inherently must compromise its stability. The form and shape in which the neck is constructed anatomically makes the region vulnerable to many possible forms of injury. If an accidental force of exogenous origins is applied to the body, the neck would have to be one of most likely regions to suffer impact. Just take automobile accidents as an example. How many of them happen every minute in the United States? The number can be a reasonable explanation of why so many people complain of whiplash. In time, whiplash will eventually become arthritis in the neck. We will use one patient as an example for each of these two kinds of pain to show how acupuncture could have mixed and limited results.

14.5.1 Whiplash

Many patients used whiplash as a substitute term for neck pain. Yet, whiplash is not even listed in the 21st edition of *Stedman's Medical Dictionary* (1966), as an official medical term. The dictionary does include "whiplash injury" under the heading of "injury," but not whiplash. Whiplash injury is defined there as "a popular term for hyperextension–hyperflexion of the neck. The term should not be used to imply any specific resultant pathologic condition or syndrome." In the context of this writing, whiplash means neck pain, with some exceptions, as a consequence of the automobile accidents. We understand that the force of impact in an accident will vary because of differences in the driving speeds and in the size of cars. It is a simple principle of physics: force is equal to the rate of change in speed multiplied by the factor of mass. In reality, the result might not always be as physics suggests. There are cases of whiplash with severe neck pain from low-speed collisions. There must be multiple factors involved in determining how much neck pain the injured persons will have after suffering whiplash. From our clinical experience, one general principle applies in many cases of whiplash neck pain: the degree of objective pain measured in the victims seems to be a reliable way for predicting the manageability of neck pain from whiplash. We have had many patients come with whiplash injuries for which the neck pain was totally eradicated in four or fewer treatments, and the patients were not seen to return for the same pain. In other words, we have treated neck pain from whiplash with good to excellent results. These patients invariably have objective pain at no higher than fourth degree. If the degree of the objective pain is five or higher, the results are often mixed and limited. Here is an example.

Sylvia C. was a 71-year-old retiree. Her whiplash was diagnosed by her doctor. She said a drunk driver ran into her car while she was in a funeral motorcade in 1954. She had a chiropractor adjust her neck for 3 months until she was almost killed during a manipulation. She admitted that she had occasional cramping during menstrual periods with pain in the back. She also bled a lot during her periods. Her symptoms indicated that she had dysmenorrhea. Sylvia had a hysterectomy in 1955 because her uterus was prolapsed. By the time she came in December 16, 1983, she had additional pain besides that in the neck. She had a palpable knot of muscle mass over the trapezius at the location of the spinal accessory point. Having a palpable knot of muscle mass at that location can be taken as a sign of a long chronicity of muscle tension in the region. Her objective pain was measured to be ninth degree. That is the upper limit of the manageability of subjective pain, and the manageability is often low and poor. Because of possible poor results, we decided to use more needles than normal from the beginning. For the first three sessions, in the sequence of supine, prone, and sitting, we stimulated trigger points in the primary group and a few in the secondary, including the lesser occipital, third occipital, and cervical plexus. After three treatments as a series in a week, she came for the fourth time on December 26, the day after Christmas. She believed that her neck was less painful. Three more treatments were repeated to constitute a second series. The number of needles used in the neck region was increased to cover

the trigger points in the tertiary group, such as the transverse cervical and a few supraclavicular points. After the sixth treatment was given on January 6, 1983, she didn't come for more than 3 years, until March 9, 1987. She returned because she couldn't abduct her right arm without pain in the shoulder joint. She also had some pain in the left ankle when walking. The neck pain only bothered her very occasionally, and it was tolerable. What was wrong in her right shoulder was not determined medically because she came to the clinic directly without going to see a licensed physician. Her pain in the shoulder joint and the arm area is a common problem for patients seeking relief via acupuncture. To us, the problem is related to biceps tendinitis and rotator cuff damage, which are discussed in the next section. The pain in the right shoulder and left ankle Sylvia complained of was reduced after only two visits. She didn't even bother to come for the third appointment, which was suggested for March 17, 1987. On April 19, 1988, more than a year later, she came as an emergency case because she'd been kicked by a horse in her right knee, and she had difficulty walking. The pain was also felt over the left hip along the greater trochanter, which is familiar to us as meralgia paraesthetica or Bernhardt disease. Pain in both areas was taken care of in a single treatment. Her next emergency visit was on June 7, 1989, when the medial plantar surface of her left foot became painful. The pain was stopped in one visit with needles given on the primary trigger points, adding six extra needles along the medial side of the foot. On November 16, 1989, she became dizzy, a condition known medically as vertigo. Her vertigo was taken care of in two treatments using trigger points in the primary group with an additional two needles in front of each ear, at the auriculotemporal and temporomandibular joint points each time. By July 28, 1994, she had come for a total of 22 treatments. During this period, besides recurrent neck pain, she was treated for other kinds of pain, including burning sensation in the toes, loss of tactile sensation in the left hand, signs of carpal tunnel syndrome, etc. We are sure that she will keep returning for years to come, because acupuncture can only provide mixed and limited results for her. Her problem is like a brush fire. When the fire burns over only a couple of square feet, the flame is easy to put out. Fire over an area of thousands upon thousands of acres of brush and forest lands will be hard to stop. Fire in one site is eliminated, but another spot can be ignited, and it will begin to burn again.

14.5.2 Arthritic Neck

Many patients we have describe themselves as suffering from arthritis in the neck. The descriptions and opinions can be either their own or given by their doctors. We have no knowledge of what constitutes arthritis in the neck. Is the pain from whiplash and in an arthritic neck the same or different? Our suspicion is that when pain lasts for a long time in the neck, arthritis possibly will set in the neck between the cervical vertebrae. The following is an example.

Jean J. was a 63-year-old retiree. Her doctors at the Air Force Hospital at Lackland told her that she had arthritis in her fourth, fifth, and sixth cervical vertebrae. The pain was so bad that she had only limited motion in the neck. Her objective pain was measured as seventh degree. After four treatments with a protocol similar to that for Sylvia in the previous subsection, she was able to move her neck slightly better. Her neck pain was concentrated in the occipital region over the nuchal line, extending medially from the occipital protuberance to the insertions of the trapezius and sternocleidomastoid muscle laterally on both sides of the shoulder bridges. For the next two treatments on February 1, 1987 (fifth) and February 3, 1987 (sixth), six extra needles were placed in the occipital along the nuchal line with Jean in an upright sitting position. She received 12 treatments between January 12 and February 19 of that year. At that time, she said the pain had reduced and she could turn her neck more easily, as when backing up her car. It was suggested that she come for more sessions after a week of intermission, but she ignored the suggestion and hasn't called to request more acupuncture service since. Our prediction is that she will call sometime in the future, because we know that the results of the treatments for her are mixed and limited. The same neck pain will return sooner or later.

14.6 PAIN IN THE UPPER LIMB

Subjective pain in the upper limb, from shoulder joint to fingertips, is a good example to demonstrate that it can appear anywhere, particularly in the wrist and hands. Several photos in Figure 14.8 show the different deformities that can occur in the wrist and fingers. The pain can be located over the radial side of the wrist, in the interphalangeal joints, at the basal joint in the base of the thumb, and so on.

We have selected pain in two areas, the shoulder joint and the carpal tunnel, for the purpose of illuminating how the results of acupuncture treatments can be mixed and limited for managing pain in the upper limb. The anatomical term for the shoulder joint is the glenohumeral; it is the joint formed between the glenoid cavity of the scapula and the humeral head. Our clinical observations seem to indicate that the pain in the shoulder is not from diseases or pathological changes inside the joint. In most patients, the pain is produced by biceps tendinitis, as we have mentioned in Chapter 13. This kind of pain will have good to excellent results with acupuncture treatments, when patients have objective pain of fourth degree or lower. After objective pain reaches the fifth degree or higher, the results will be mixed and limited, as in the case of Tom B. described in Section 14.6.1. Shoulder pain can have poor results and could be difficult to manage once the objective pain reaches the ninth degree or higher, which will be discussed in the next chapter.

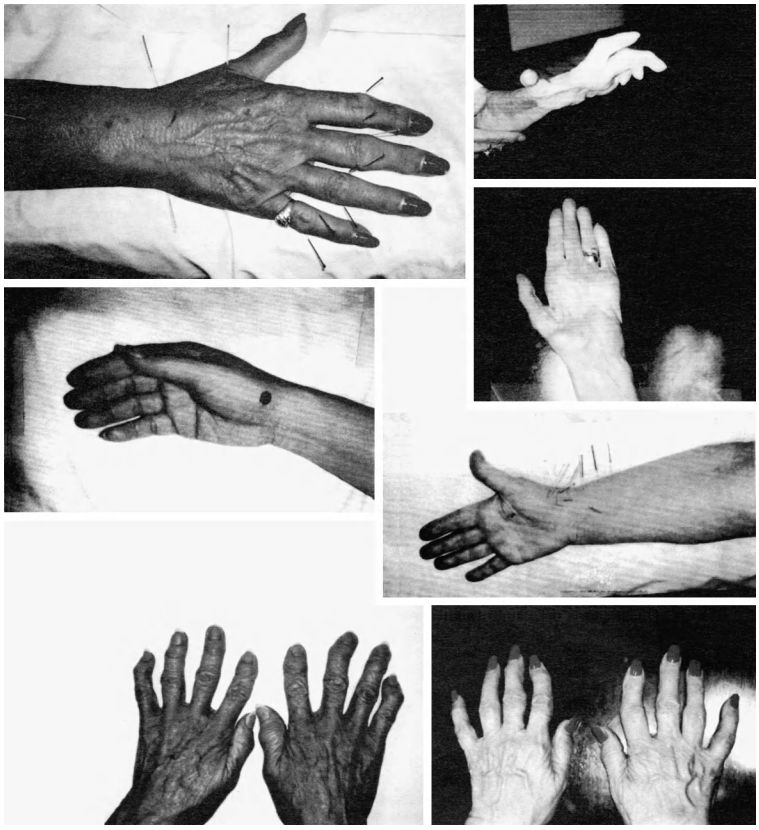

FIGURE 14.8 In this group of pictures, some fingers are deformed, and some interphalangeal joints have needles inserted. These are the loci where the trigger points are detected.

14.6.1 Biceps Tendinitis

The subject was Tom B., 75 years old and self-employed. We need to begin with a quote from the medical report he brought to us. A portion of the report described that "I saw Mr. B. on the morning of January 7, 1997, for an evaluation of the right shoulder. He gave a history of having trouble back in May 1995, and had x-rays made by Dr. Schoch. I think there was concern at that time the patient had a problem with his rotator cuff. He had a shot of cortisone at that point, and he said that gave him nice relief of symptoms until September 1995. Between May and September, he was able to play golf and do some hunting. He stated that in 1996, he did some fishing, maybe only two or three times, but slowed down because of right shoulder pain. He pretty much stopped playing golf altogether in October 1996. He said that since September or October of 1996, he's had a heck of a lot of trouble with his right shoulder, a lot of pain, a decrease in function and particularly has trouble sleeping at night, and his wife states that he has to get up and walk the floor or even go to sleep in a chair. She also mentioned that she has to help him get dressed because he has trouble moving the right arm. Tom has been a diabetic since the age of 40 and currently is taking four units of Humulin R and 28 units of Humulin N each morning, as well as four units of Humulin R and four units of Humulin N each night. He has not had any trouble with neuropathy in the upper extremities and his only real problem with the upper extremities has been this right shoulder. Dr. Blevins is his current endocrinologist and is managing his diabetes as well as his neuropathy. The family seems to be greatly concerned over the neuropathy problems and asked if I might suggest another person to give an opinion, and I recommend that they might want to contact Dr. Green. In summary, I believe Mr. B. suffers from pretty severe rotator cuff deficiency and muscle weakness in the right shoulder…" The report was signed by Charles A. Rockwood, Jr., MD, who ruled out surgery for Tom to rectify his shoulder problem. With such a medical history on hand, it was no surprise to find out that Tom had ninth-degree objective pain. He came on February 26, 1997, more than a month after consulting with Dr. Rockwood, having been referred to try acupuncture by one of his physicians. Acupoints around his right shoulder joint were palpated to check if Tom had any indication of damage in the rotator cuff. Many of the acupoints in his shoulder were passive with tenderness. The most sensitive acupoints in his shoulder were along the long head of the biceps brachii tendon situated inside the intertubercular sulcus. This was to be expected, because passive acupoints, which by then had already converted to become trigger points, would invariably appear at that location for all patients with shoulder pain. These trigger points are shown in Figure 14.9. Usually, one or two needles are

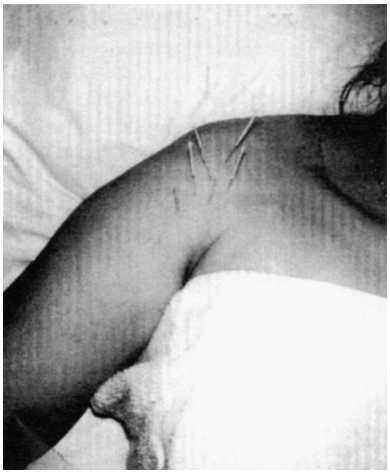

FIGURE 14.9 A picture showing six needles inserted along the biceps brachii tendon in the intertubercular sulcus. One needle further back is in the acromioclavicular point.

used in this location. For Tom, six needles were given because his objective pain had been measured as ninth degree. Once trigger points begin to appear outside the region where the long head of the biceps brachii is located, such as the acromioclavicular and deltoid points, some diseases in the rotator cuff may be indicated, as in the case of Tom's shoulder. We predicted that it would not be possible to eradicate pain totally in Tom's shoulder. However, there could be a chance to ease some of his pain because ninth degree is the upper limit for having mixed and limited results. He came for five treatments. On his last visit on March 7, 1997, he still had pain in his right shoulder, although he believed there was a slight relief. His diabetic neuropathy seemed to be more serious than his physicians realized. The neuropathy in the lower limbs was already up to the knees. Once the neuropathy reaches the knees, acupuncture will not be very useful. Tom's case should belong to the next chapter, covering treatments with poor results and difficult manageability. He is mentioned here because he only came to the clinic five times. He might have had better results if he had tried a few more treatments. Thus, it is appropriate to include him in the category of mixed and limited results. Patients like Tom are not uncommon. They don't understand the relationship between objective pain and the outcome of treatments. As should be clear by now, the outcome of the treatments depends on how many sessions they need to receive to have substantial relief for their pain. For Tom, the projected number of treatments for the right shoulder pain to be effectively managed could be as many as 36.

14.6.2 Carpal Tunnel Syndrome

The proper nomenclature for the carpal tunnel should be "radiocarpal joint." It is the joint formed between the distal radius and the proximal row of the carpal bones. The area of this joint is commonly referred to as the wrist. Pain in the wrist can be carpal tunnel syndrome, superficial radial neuropathy, or arthritis in the wrist. Our attention is placed on carpal tunnel syndrome.

Carpal tunnel syndrome is a clinically and medically well-defined disease. Very rarely will patients with this disease arrive without diagnosis from their doctors. We would not describe the condition as common in our practice. Only one or two cases are seen each month. Most cases (90% or more) are female. Cases seen in males are most often injury-related. In females, carpal tunnel syndrome seems to associate with having low blood pressure during premenopausal years and a history of enduring dysmenorrhea. Unless objective pain is graded to be higher than ninth degree, carpal tunnel syndrome can be adequately and effectively managed with good to excellent results. The exception is after surgery to reduce pressure on the median nerve. The median nerve runs inside the carpal tunnel. The syndrome is attributed to the fact that pressure inside the tunnel increases to compress on the nerve. This is the reason that the thumb and index finger become painful, numb, and tingling, and sometimes can have burning sensations. Larry R. is a typical example for whom acupuncture treatments provide mixed and limited results.

Larry R. was a 34-year-old railroad car repairman. Although he first came on October 27, 1980, at which time he had only carpal tunnel problem in the right hand, it would perhaps be best to begin discussion of this case by quoting a medical report later prepared by Dr. David P. Green, a very well known surgeon and coauthor with Dr. Charles A. Rockwood for their famous book about the shoulder. Larry was referred to Dr. Green by Dr. Robert Stevens. The report that we received was written by Dr. Green. Dr. Green wrote "[...]I have none of the previous medical records, but the patient relates the following history. He has had symptoms of carpal tunnel syndrome bilaterally for 3.5 to 4 years, for which he has been treated by Dr. Dung with acupuncture every 6 to 9 months with good relief of his symptoms." The story that Larry told was that of a few months before coming for acupuncture, in an attempt to catch an accidentally falling railroad tie, his right hand was injured. When he caught the tie, one of the wood block's corners hit squarely at the center of his wrist. The pain he had at that moment was beyond description. The best he could do was to say it was like going through hell. The severe pain lasted for a while. Eventually, the severity subsided to some degree, but there was always some pain in his hand. Sometime later, the pain gradually became exacerbated. By the time of his arrival, the suffering had grown intermittent. At worst, his hand

would have numbness, tingling, and a hot sensation like burning fire. He even attempted to immerse his hand into a bucket of ice water, although this did nothing to alleviate the sensation. Larry was young, muscular, and tall, and a strong and handsome man. He had the appearance of a well-trained athlete. Such a person couldn't possibly have a high degree of objective pain. In 1980, we hadn't yet perfected the system to measure objective pain, so there is no record of what degree of objective pain Larry had. The protocol of treatments for him was similar to what has described many times before. First, he was laid in the supine position. Trigger points in the primary group were used. Two additional points are very important for managing the pain of carpal tunnel syndrome, the median and recurrent median, the locations for which can be seen in Chapter 12. They are located at the ventral side of the distal forearm and in the thenar compartment of the palm. These two points must be used for pain related to the median nerve. In the early stages of carpal tunnel syndrome, one of these two will become a trigger point first, although which is difficult to predict. At this stage, the objective pain is already in the secondary category. In time, both of them will turn into trigger points, and the objective pain will enter into the tertiary category. The subjective pain in the carpal tunnel will be harder to manage. Both points in Larry were tender when they were pressed during testing. Each time when Larry received treatment, these two points were used. Less than 3 min after needle insertion was completed, he began to feel nauseated, with an urge to vomit or throw up. This is one of the immediate needle reactions sometimes observed in patients who suffer from acute pain for relatively a long time, such as several months. Physiologically, the reaction is known as syncope. The syncope indicated that Larry's autonomic nervous system was becoming unstable. In time, when acute pain transforms to become chronic, the pain will have the potential to develop into reflex sympathetic dystrophy. Once syncope is observed, needles have to be removed. After a few minutes of resting, signs of syncope clear away. Having syncope is a positive indication that acute pain will show improvement soon after the treatment. When Larry returned for the second time on October 31, he was very exuberant because his pain was much reduced. What made him happy was that he had had his first two good nights of sleep since the injury to his right median nerve on the wrist. He received only three treatments to stop pain in the arm, forearm, hand, and fingers. Of course, his story was not that simple. Over the next 17 years, until March 5, 1997, he came for a total of 67 treatments. During these years, the intervals between his returns for old and new symptoms varied from 3 months to 3 years, depending on what he did in daily life. A few years later, he was given a disability retirement. There is no way for a person of his age and energy to stay idle. There were occasions when he would appear without an appointment because he was in pain after working strenuously for days to build his new home. The old pain and symptoms would take only a couple of treatments to amend. As the years passed, new problems began to appear. Some of them were beyond needle treatments, such as "losing strength in the hands." That was why he was referred to Dr. Green. Dr. Green reported "examination of both hands reveals very thick, heavy, large, working man's hands with callus formation primary over IV and V bilaterally. There is well localized tenderness over A1 pulley in right III, and active motion in this digit lacks the final few degrees. There is no triggering. Phalen's, Tinel's, and direct compression of the median nerve are all somewhat equivocal bilaterally, but definitely suggestive of median nerve compression. Two-point discrimination is 5 mm in all digits with no subjective diminution in any digit. There is excellent thenar muscle tone bilaterally, and key pinch strength is 23# right and 27# left. Grip strength is 55# right and 110# left. All intrinsic and extrinsic muscles appear to be intact." The final impression and recommendations were, "I agree that this patient appears to have bilateral carpal tunnel syndrome, although I believe that his major symptoms at the present time are due to an early trigger finger in right III. Therefore, the right carpal tunnel and the flexor tendon sheath right III were each injected with 8 mg of dexamethasone acetate. He will return in 1 month for reevaluation." One important reason for quoting this report is to show that pain can grow. When Larry first came for acupuncture, his left hand was free of any problem. Six years later, the left hand was diagnosed to have the same condition as that of the right. Thus far, neither hand has required surgical intervention for the carpal tunnel syndrome. On his latest visit, he said that both hands were doing fine. He had come instead

because of a pain on his right dorsal scapular point extending to the right greater occipital point. The pain had bothered him so much that he hadn't slept well for a few nights. One treatment was sufficient to stop that pain, and he didn't return for another treatment, which we suggested if the pain persisted.

14.7 PAIN IN THE BODY TRUNK

The two kinds of body trunk pain we have picked to discuss are postherpetic neuralgia and lower back pain. Both of them have been mentioned in the previous chapter. We want to use them as examples again to compare and contrast good to excellent results from acupuncture treatments with mixed and limited results. To manage subjective pain perceived in the body trunk, just like pain in other parts of the body, trigger points of the primary group are essential in treatments. However, many points in the tertiary and nonspecific groups will be needed in managing pain located in this region.

14.7.1 Postherpetic Neuralgia

We have offered a case of headache caused by herpes infection in the previous chapter. That patient, whose headaches resulting from postherpetic neuralgia turned out to have good to excellent results, was not an exception. Postherpetic neuralgia in other regions can have good to excellent results as well, if treated with acupuncture within an appropriate period after the infection. Regretfully, such ideal circumstances are not commonly encountered. Very few patients with postherpetic neuralgia come with objective pain at fourth degree or lower. As can be seen from Table 14.2, most of them were measured to have objective pain at fifth degree or higher, placing the expected outcome of their treatments in the mixed and limited results group. Some of them will have poor results or even turn out to be impossible to manage, as explained in the next chapter. The duration of subjective pain after infection is obviously critical in managing postherpetic neuralgia. If the neuralgia is less than 3 months in duration, acupuncture will produce good to excellent results. The pain will still be manageable up to 6 months. Between 6 months to 1 year, the neuralgic pain will become obstinate, and the results of the treatments will be mixed and limited at best. After 1 year, postherpetic neuralgia

TABLE 14.2
Cases of Postherpetic Neuralgia Seen Over a Period of 3 Years

Patient	Sex	Age (Years)	Pain Code	Duration	Degree of Pain	No. of Treatments
1. RD (84958D094)	F	86	403.X2b	3 weeks	4	6
2. CK (83006K075)	M	66	203.X2a	1 day	5	7
3. SB (82902B100)	F	46	303.X2b	1 month	6	6
4. HC (83437C122)	M	65	303.X2b	4 months	7	10
5. MO (84472O020)	F	49	303.X2b	1 week	10	5
6. FS (84579S309)	M	65	203.X2b	2 months	3	3
7. TR (85199R151)	F	34	403.X2b	2 years	4	3
8. JP (86009P156)	F	72	203.X2b	3 months	7	9
9. BB (85124B281)	M	61	203.X2b	6 weeks	7	5
10. RS (86297S443)	M	66	203.X2b	5 months	4	12
11. RP (86177P169)	F	28	403.X2b	1 month	5	2
12. MA (85120A084)	M	69	003.X2b	6 weeks	2	9

Note: A few of these cases have good to excellent results. More have mixed and limited results. Note the Duration column, which indicates that a shorter duration of pain seems to produce better results.

becomes difficult to manage, and the results are often poor to nonexistent. The following are case reports for two patients with postherpetic neuralgia.

Case 1: Clifton M. was a 71-year-old rancher. His herpes could still be clearly seen (Figure 14.10) on the skin when he arrived on August 3, 1994. The infection had occurred 3 months prior to his first visit. The dermatomes involved were the third to fifth thoracic spinal nerves, because the infected area extended to the right nipple in front. His objective pain was measured to be only second degree, the lowest of all patients seen with postherpetic neuralgia. This may explain why his subjective pain diminished a little on its own during the previous 3 months, although he was still hurting, which was the reason he decided to come for acupuncture. For the first treatment, he was in the prone position, as shown in the figure. The needles were inserted into the trigger points of the primary group, plus nonspecific points seen in the picture (Figure 14.10). Two days later, he came for the second treatment, which used the supine position to needle the trigger points in the primary group and nonspecific points, approximately 24 in number, over the infected skin in the ventral thorax. He reported that the pain had been reduced by more than 50%. His third treatment was given on August 9, with him lying on the left side of his body. In addition to all the trigger points in the primary group accessible, another 50 needles were placed around the three dermatomes in the right side of the body. He returned for the fourth and last treatment on August 20. He said that he felt better that morning than at any other time in the last 4 months. He came because he felt so good that he wanted to have one more needle treatment. The second treatment was repeated for his last visit. In retrospect, the results for Clifton can be considered as good to excellent. His case is included here for the purpose of showing how needles are used in the skin area where herpes infection occurred.

The protocols for treating postherpetic neuralgia are basically the same regardless of the differences in the degree of objective pain that patients have. In the beginning, trigger points of the primary group are used. If the treatments work, then that is all we need to do. If not, trigger points of the secondary, or even tertiary and nonspecific groups can be used in increments until pain relief is obtained. In Clifton's case, his pain was totally gone after four treatments, after needling only the trigger points in the primary group and the points as seen in the figure.

Case 2: Norman A. was a 51-year-old gardener. He was chosen because we also have a picture to show where his herpes was (Figure 14.11). He said that he "worked hard to keep customers having a good-looking yard." His first visit was on March 23, 1988. He described his conditions as being "tinnitus, allergy, and ringing in the ears because of nerve deafening." He also had pain in both elbows, as with tennis elbow, but he didn't play tennis at all. Pain was also perceived in the deep radial point area. He had had back pain for some time and had been operated on, as can be seen in the figure. He said that his doctor told him it was a fusion. The surgery was not totally successful for Norman because he still had lower back pain. He attributed his allergy to long hours of exposure, working outdoors among all kinds of pollens. The outdoor environments were often much more noisy than they normally should be, which was why he believed his ear nerves were dying and why he heard ringing all the time. His main reason for coming was because he couldn't work due to severe pain in his right arm. He took a lot of aspirin, but still had so much pain that he couldn't

FIGURE 14.10 Visible herpes infection in Clifton M.

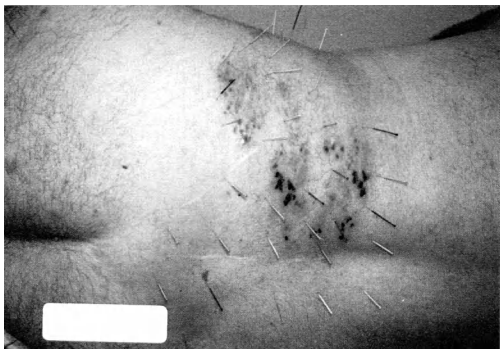

FIGURE 14.11 A photo of Norman A. showing skin infected with herpes and needles placed over the infected area.

have a good night's sleep. At his first visit, his objective pain was measured to be seventh degree. At this level, some of the problems mentioned were better after a number of treatments, but the same problems kept coming back, and we kept giving him treatments. To save space and time, we need to jump back to discussing Norman's postherpetic neuralgia.

The picture shown in Figure 14.11 was taken 10 days after the skin broke out, which occurred on August 10, 1996. Because of its short duration of only 10 days, the condition may not qualify as postherpetic neuralgia. Clinically, pain produced by the herpes virus is known to be self-limited. For most patients, subjective pain will subside automatically once the skin lesions are healed. The irony is that no reliable prognosis is available to predict whether a herpes infection will develop into the postherpetic neuralgia. He still had seventh-degree objective pain. At this level, the possibility for his herpes infection to turn into postherpetic neuralgia was definitely there. He indicated that his pain had stayed the same for the last 10 days without noticeable diminishment. Figure 14.11 shows the needles placed in the infected skin area for the first visit, plus the trigger points in the primary group. After two more sessions, one in the supine position and another on his right side, we waited for 1 week. He returned on December 20. Pain caused by the herpes infection was gone, except for some itching in the right hip where rashes were seen. He thought the skin rashes were an indication of herpes. We told him that couldn't happen because we had never seen a herpes infection occur bilaterally. Another three treatments over a week's time stopped the herpetic pain totally.

Pain related to postherpetic neuralgia is unique; once the pain is gone, it is gone forever. We never see patients come back because of relapsed postherpetic neuralgia. Lower back pain is different. Pain in the lumbar region will keep coming back to haunt the victims faithfully in time. This interval is 4 to 6 months for most patients whose objective pain is between the fifth and eighth degrees, and thus have mixed and limited results from acupuncture.

14.7.2 Lower Back Pain

Patients with lower back pain are all too numerous. Their records alone would be sufficient to write a big book. By regretful necessity, we will use only one example to represent all of them. There are theories to explain why *Homo sapiens* should be so vulnerable to lower back problem. One explanation is that we are upright creatures. When we stand, our center of gravity is between the fourth and fifth lumbar vertebrae, which is the location where back pain will start first. Once the pain is in the lower back, it will keep recurring for the rest of one's life. That is why there are so many cases of this pain seen in clinics. The sequence for treating lower back pain is fairly similar—practically identical, in fact—for most patients. The first treatment is always given using the prone position. The trigger points used are limited to the primary group. The most essential points are the four found on each side of the lumbar. These are shown in the anatomical charts found in Chapter 12.

Each of them must be accurately located for needle stimulation. All the needles have to be inserted in such a manner that a sensation is generated and felt by the patients. Catching the superior cluneal points can be tricky. Only a millimeter away, the needle can hit the iliac crest below, or generate no sensation if it is too far above. Individuals who have had lower back pain for years can have very tight tissues in the superior cluneal points. The tightness will be testable by needle insertion at the localities. It can be so tight that the needle becomes hard to pull out once it is placed in deep. During the 1930s, many biopsy investigations were performed by taking tissue from this area in patients who had long-term chronic pain in the lower back. The studies were not conclusive because of the variables observed in the tissues taken from different patients.

The second treatment is routinely given 48 h after the first one, if time and circumstances permit. The treatment is provided with patients in the supine position if the lower back shows substantial relief. The definition of "substantial" is subjective. However, when patients are asked how much relief they have after the first treatment, and their answer is 50% or more, that certainly can be taken as an indication of having substantial relief. Trigger points used for the second treatment in the supine position include the primary group only.

If, on their second visit, patients indicate that the lower back is still hurting, the protocol of the first treatment, inserting needles in the back using the prone position, will be repeated once more. An additional three needles are used on each side of the lumbar at the posterior cutaneous of the first lumbar spinal nerves. Occasionally, three treatments in the lumbar may have to be repeated for patients with a great deal of pain in the lower back. For us, three is the limit. At the third treatment, lumbar spinous process points have to be examined to see if any of them have already turned passive as trigger points. If so, they have to be stimulated with needles. As many as 20 needles (Figure 14.12) can be used in the entire lumbar region. The fourth treatment has to be on the supine position. After that, one or two more treatments using the prone position will be repeated for patients with lower back pain. Four or five sessions constitute a series of treatments. To give six consecutive treatments, once every 2 days, is rare. There's always a week's break between the two series of treatments. If the second series is called for, the same sequence described above will be repeated, usually with no more than four treatment sessions. Patients coming for three or more series consecutively are the minority. Most patients don't need more than eight treatments to either see the benefit of acupuncture or to give up in disappointment and stop coming. Mario is the only example given here for patients who have lower back pain.

Mario Q. was a 57-year-old tile salesman. He had a particularly good memory regarding the history of the start of his lower back pain 40 years ago. He was a teenager working for his father in a grocery store. One day, while holding a piece of ice in one arm, he slipped and fell to the ground. His back had hurt ever since. Whenever he had lower back pain, he would go to a chiropractor for adjustments or take Tylenol. Either remedy would take care of his pain. He had had an inguinal

FIGURE 14.12 A photo showing a total of 20 needles placed in the lumbar region for a patient receiving a third treatment after not receiving much relief from the first two sessions.

hernia that ruptured when he was younger, and his gall bladder was removed in 1973. Yet, he never went for medical consultation about his back because his doctor was not interested in an innocuous problem such as lower back pain. When he first appeared at our clinic on January 17, 1985, he looked as shown in Figure 14.13a and c. His posture alone was enough to indicate that he had acute pain in his lower back. He had been in this shape since the New Year. He said that he hadn't done anything but raise his hands to change a light bulb. His back pain had relapsed more frequently as he grew older. Sometimes merely turning the wrong way could make his back hurt. Chiropractic adjustments and nonprescription pain pills had reached the point of uselessness. In fact, he blamed his chiropractor for making him crooked with his last adjustment. His cousin Manuel, who was one of our patients, suggested that he should try acupuncture, because Manuel had had good to excellent results from the needle treatments. Mario explained that he had waited for more than 2 weeks to come because he was hoping that his back would get better. Besides, the drive between his home in Houston and San Antonio took 6 h for a round trip. Finally, he settled for a week at his cousin's place at Gonzales, which is about an hour's drive from the clinic. One week is long enough to have three treatments. This is a case in which improvement could be seen immediately after the first treatment, as seen in Figure 14.13. He stood straighter as compared with his appearance before needling. He claimed that he had less pain in getting up from the bed after the treatment. His objective pain was measured at seven degrees. After three treatments in prone, supine, then prone again using trigger points of the primary and some in the secondary group, his lower back pain disappeared. He was advised that the pain would relapse in 4 to 6 months. Ultimately, the pain stayed away for 11 months, until December 14, 1985. On his fourth visit, he said that he had been free of back pain the whole time, until 1 week before returning. Two treatments were given as a series, prone and supine. The back pain was under control for another 10 months until October 23, 1986. On his sixth visit, he said he had fallen again on July 4 in his front yard while mowing the lawn, and been caught by the blade of the lawnmower. His shirt had been torn and his ribs fractured. Yet he had no pain at all until the end of September. He began to have headaches on the right side, as well as right neck and

FIGURE 14.13 Pictures taken of Mario Q. on the day of his first visit: a and c are before treatment, b and d are after treatment.

shoulder pain. The headache and neck pain were managed effectively by taking Tylenol and muscle relaxants. He started by taking a dose of one pill. By the time he came one and a half months later, even three pills were not enough to ease his pain. For a couple of weeks, pain would develop on his right shoulder (at the dorsal scapular point) at around 5 to 8 a.m. The pain then extended to the right greater occipital point.

With Mario on his left side, needles were placed in the trigger points of the primary and secondary groups located in his right upper limb, from the dorsal scapular to the greater occipital points down to the points in the hands. For the rest of the body, only the trigger points of the primary group were used. He came for two more treatments on October 24 and October 25, on the prone position using the trigger points of the primary group and an additional four needles in the secondary and tertiary groups in the scapular shoulder and occipital regions, then the supine with a similar protocol. His ninth visit was on December 29, 1986. It was an emergency call, because his back pain hit him suddenly as he attempted to pick up a heavy gas tank. This time, besides the usual trigger points in the primary group, three in the secondary group were added for a total of 14 needles in the lumbar region. He had a flare-up and came with a crutch the next day. He said that he had difficulty walking. The tenth treatment was given prone, with four needles added in the lumbar instead of three. He didn't return for his eleventh treatment the next day, which was at the end of the year. Instead, he made his eleventh visit on March 1, 1990, and received a series of three treatments, with the thirteenth on March 3. Mario is a case for acupuncture treatments having mixed and limited results. The relief lasts only for a period of several months, and the pain will relapse. He will need to come back repeatedly for an expected period. The lower back pain has the potential to go away forever after a number of repeated series of treatments, but how many times they must be repeated and over how long a period is unknown.

14.8 PAIN IN THE LOWER LIMB

It is not easy for us to estimate how many different kinds of pain are possible in the lower limb. One type we have seen is hip pain or trochanteric bursitis, also known as meralgia paraesthetica (Bernhardt disease). Figure 14.14 shows two patients with the disease. One of the treatments for pain

FIGURE 14.14 Two patients having hip pain under treatment in which needles are placed over the greater trochanter area. One of them (right) had surgery to the hip without much success.

in the hip is to have patients lie on their side, as seen in the figure. The pertinent medical history and acupuncture treatments for meralgia paraesthetica or Bernhardt disease are covered in Chapter 13, and so we will omit them here.

Another known example of pain in the lower limb is caused by a Baker cyst (Figure 14.15) in the popliteal fossa. However, although it is worth mentioning, it is not a common enough case for us to spend time describing this kind of pain and how to treat it.

Ankle pain is relatively common. Causes of pain in the ankle vary, from endogenous to exogenous origins. We have two photos included in Figure 14.16. One picture shows swollen ankles due to edema without any previous injury known to the patient. Another picture shows the right ankle has been injured, as evident from the swelling. Ankle pain is easy to manage, often with positive results, which can be mixed and limited in nature.

Patients with different kinds of skin diseases are also occasionally seen. Some diseases we know, such as psoriatic arthritis (Figure 14.17). We have no idea what many others are (Figure 14.18).

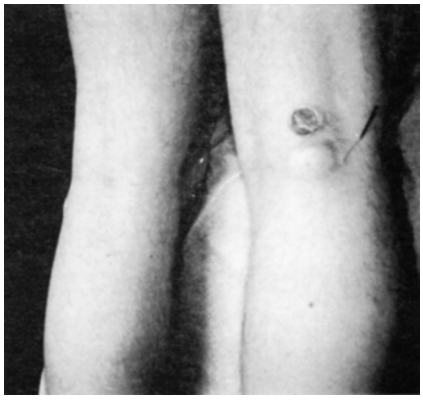

FIGURE 14.15 A Baker cyst the size of a nickel is seen in the popliteal fossa.

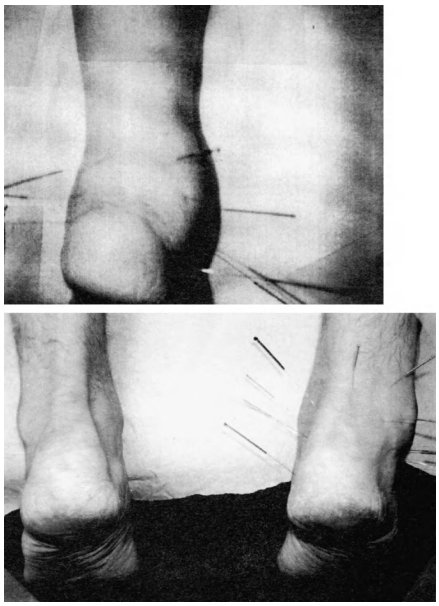

FIGURE 14.16 The trigger points used to treat pain in the ankles are mostly nonspecific.

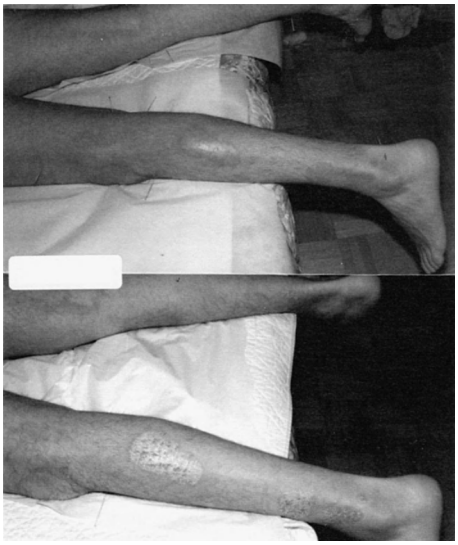

FIGURE 14.17 A patient with psoriatic arthritis. The upper picture was taken before acupuncture, when the color of the infected skin areas was a hot red. The lower picture was taken 3 days later, and the color of the same skin areas appeared whitish. Pain in this patient was reduced, but his skin lesions remained unhealed.

FIGURE 14.18 Photos of patients with skin lesions that produced subjective pain in the lower limbs. The names of these dermatological diseases are unknown to us.

Their pain is rather complicated to describe clearly. All that can be said is that acupuncture treatments have mixed and limited results for many of these patients. We still recommend trying acupuncture, if you so desire.

For us, two kinds of pain in the lower limbs have certain significance that deserves mention. They are knee pain and pain in the foot.

14.8.1 Knee Pain

Addressing pain in the knees is a daunting proposition. This conclusion is drawn from seeing a large number of patients with knee pain. But the task can be simplified into two categories: knee pain with organic diseases and those without. "Organic" in this instance means structural damage or injury in the knee joints. The most likely damaged or injured structures in the knee are the meniscus and cruciate ligaments. There are a number of ways these structures can be damaged and injured, such as sports activities and arthritic degeneration due to aging. Conditions and diseases of this nature in the knees are usually not difficult for doctors to detect and diagnose. Sophisticated medical equipment, such as the arthroscope, is available for both diagnostic and therapeutic purposes. Patients with pain of an organic nature seldom turn to acupuncture for help, and acupuncture won't be much help for patients with this kind of knee pain. Our only requirement for differentiating knee pain with organic diseases or without them is the knowledge of acupoints. If the locations of acupoints as shown in Figure 14.19 can be recognized in the knee, and one knows the sequence of their turning into trigger points, it is possible to judge whether knee pain involves organic damage and injury or not.

We name the acupoints on each side of the patellar ligament as the eyes of knee or knee eyes. The two acupoints superior to the knee eyes (Figure 14.19) are the insertion of the vastus medialis and vastus lateralis muscles, making four of them all over the kneecap region. We suspect that knee pain starts in most patients from the saphenous point. If the saphenous point is the only locus with pain in the entire knee region, that pain will be very easy to eliminate with good to excellent results. Once tenderness is detected in one of the two knee eye points, managing pain in the knee begins to become difficult. This difficulty will increase when both knee eyes become trigger points. If either acupoint formed by the vastus medialis or lateralis turns into a trigger point, such knee pain becomes quite difficult to manage. The manageability of pain in the knee is almost impossible when trigger points for both muscles are detectable. By this time, lesions inside the knee joint will be discernible and organic damage will be detected. By then, knee surgery or replacement may be inevitable to take care of the pain. If there is still hope in using acupuncture, all acupoints indicated in Figure 14.19 are beneficial to use for managing the pain. The protocol for managing knee pain is very much the same as for treating other kinds of pain. Start on the supine position by using trigger

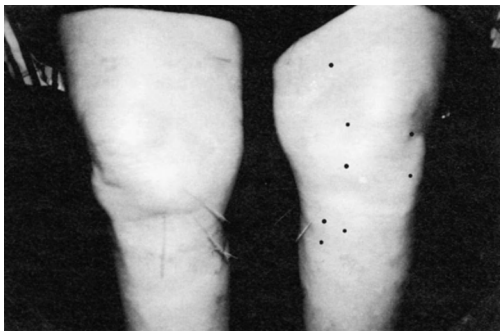

FIGURE 14.19 A patient with knee pain. The 11 dark points marked over the knee region are used to treat knee pain.

points of the primary group, plus the points in the knee region as shown in Figure 14.19. The second treatment is on the prone position using the trigger points in the primary group, plus the accessible points around the knee. The third treatment is on the sitting position with focus on the knee region. The trigger points can be increased if more treatments are needed to produce pain relief in the knees. No case examples will be offered to show the exact manner for managing knee pain.

The knee pain in the patient seen in Figure 14.19 had mixed results. Her pain in the knee was reduced, but not completely dispelled. The same pain returned a few months later.

14.8.2 Pain in the Foot

We have seen patients with several kinds of pain in the feet. Specific examples include Morton neuroma between the third and fourth toes, bunions over the big toe (Figure 14.20), and on the dorsal surface of the feet (Figure 14.21), for which the name of the skin disease is not known. Again, we will not spend time here studying these pain types. Instead, the last pain in the foot we shall mention is clinically known as diabetic peripheral neuropathy.

Peripheral neuropathy is well-known medically. There exists a two-volume book, more than 2,300 pages long, with this title by Dyck et al. [18]. Yet, when we want to find out the symptoms of peripheral neuropathy, the answer simply includes pricking pain, numb sensation, burning, tightness, and cold. The symptoms can start unilaterally or bilaterally from either foot to hand, or both of them simultaneously. The symptoms will then spread proximally toward the ankle, leg, knee and thigh

FIGURE 14.20 Two bunions on the proximal end of each big toe surrounded by a number of needles.

FIGURE 14.21 Skin disease in a patient. We don't know the name of this disease, only that the patient complained that her feet hurt. Acupuncture eased her pain in the feet, but didn't heal the skin lesions during the time she came for the treatments.

in the lower limb, and the wrist, forearm, arm, and shoulder in the upper limb. The spreading of neuropathy is generally slow in speed. It can take years for the symptoms to reach the leg or forearm. Peripheral neuropathy can be associated with several disease entities, such as causalgia, reflex sympathetic dystrophy, and diabetes. Our attention is focused here on diabetic peripheral neuropathy.

Diabetes is a common illness in southern Texas. Nevertheless, diabetic peripheral neuropathy is not commonly seen among the patients we have. Only one such patient is received each month. It would be preposterous to claim that acupuncture benefits them all. However, we have no reservations about stating that acupuncture indeed helps to reduce some symptoms for some patients for a certain period. Because of our curiosity for a scientific answer as to whether acupuncture really has any use in managing diabetic peripheral neuropathy, it was an exciting thrill for us to receive a memo from a diabetic research consortium in San Antonio, soliciting a proposal for a study in diabetes. With undying naiveté, we accepted the invitation and mailed the consortium an outline of our research proposal to see if acupuncture would be able to improve the symptoms of diabetic peripheral neuropathy. To date, we have received no reply, even as a minimum of courtesy, to indicate whether our proposal had been received by the consortium. Clearly, the solicitations were delivered to us for three consecutive years before our response to the third time, purely because we were a faculty member at the health science center. Surely, people in the consortium didn't expect someone to be so crazy as to suggest acupuncture for diabetic research.

Management of diabetic peripheral neuropathy can have good to excellent results, if the symptoms are limited to the feet only. Once symptoms reach the ankle, management starts to have mixed and limited results. When neuropathologic symptoms are in the knee, they will be difficult to manage. Once above the knee, there is no hope of taking care of the symptoms.

Diabetic peripheral neuropathy is rarely seen in the upper limb, and thus we have not similarly described its occurrence there. Our example for diabetic peripheral neuropathy is among the far more typical lower limb cases.

Charles R. was a 70-year-old retiree. He described his problem as "shooting pain in the back of legs, very painful." That was on February 23, 1995. He didn't reveal how long he had suffered from diabetes, when the symptoms of pain first appeared, or when the peripheral neuropathy was first diagnosed. He didn't even mention the name of his disease, but admitted upon questioning that he had been diagnosed by his doctor to have diabetic peripheral neuropathy. He brought six pill bottles, the contents of which were perphenazine (for anxiety), Propoxy (Darvon containing narcotics), Zantac (for stomach), and Dilantin and Sulindac (for arthritis). He complained that he couldn't sleep because his muscles twitched with fibrillation (author's term) at night in bed. We thought that with the symptoms Charles had, he would have a high degree of objective pain, but it turned out to be only sixth degree. After two treatments, one supine and one prone, using only trigger points in the primary group each time, he came for a third visit on February 27. He said that he still had same symptoms: muscle jumping and jerking. He had been sleepless for the last two nights. Two more treatments were repeated, one supine and one prone, and used primary trigger points and an additional four needles in the secondary trigger points on each leg. A week later, he came for a fifth and last visit on March 10, 1995. He was pleased because the jumping muscles in the legs had been somewhat calmed down, and he had had good nights' sleep since. We urged him to come for few more sessions, but he failed to show up. Charles' feet didn't have the typical neuropathy described by diabetic patients. We were not sure that he could be classified as a patient with diabetic peripheral neuropathy even though he had been so diagnosed. Whatever his disease was, because he had diabetes and pain in his legs, we will just assume for practical purposes that he is a patient with neuropathy that was helped by acupuncture. The results, most likely, will be mixed and limited.

14.9 DIFFUSE PAIN

Some pain is confined to only a limited area. Headache, neck pain, and lower back pain are typical examples. Some pain is diffuse, spreading over several areas in the body. Examples include

rheumatoid arthritis, osteoarthritis, Still's disease, Reiter's syndrome, reflex sympathetic dystrophy, causalgia, myofascitis, and fibromyalgia. A couple of these diseases will be mentioned in the next chapter. One of them is selected for discussion here.

Fibromyalgia was chosen to represent a pain that is diffuse in nature, and is perceived all over the body. Medically, fibromyalgia is thought to be a disease in the connective tissue. Connective tissue, just like afferent nerve fibers, is found everywhere in the body. Therefore, illness in the connective tissue can generate pain in multiple locations of the body. Is this concept scientifically valid? Medical terms found in scientific literature to describe fibromyalgia include myalgic spots, myalgia, myofascitis, myositis, fibrositis, muscular rheumatism, fibromyositis, muscular strain, and myofascial pain syndrome. Which of them is most accurate and acceptable? There may even be more terms, but if so, the matter is unimportant because all we need is an agreeable name, and there is none. Fibromyalgia is the name most often mentioned in medical reports and commonly used by the patients we have.

First, we have a brief background of our experience with fibromyalgia. Publications about fibromyalgia began to inundate us by the 1980s. We have decided to not cite any of them because after reading so many of these publications, we still had no clear understanding of what fibromyalgia is. The reason is simple: all these authoritative experts, pundits, scholars, scientists, and clinicians cannot even agree among themselves as to the definition of fibromyalgia. To this date, there are still medical professionals who seek to discredit the identity of fibromyalgia. To them, it is a fake disease, a medical fantasy or chimera. Can they be condemned for having such a stance? Not really. Fibromyalgia can be any case of pain manifesting in multiple locations, from headache on the crown of the head to fascial pain on the bottom of the feet, and all those in between. Do we believe there is such a disease as fibromyalgia? The answer is yes. That is what we will discuss next.

We begin this discussion by mentioning Dr. I. John Russell, a colleague of ours in the medical school. We knew who he was, although it is doubtful he knows who we were. He was an important faculty member heading the division of rheumatology, and we were but a minor faculty member in the same institute. He was outspoken on the issue of fibromyalgia, going to the nation's capital to speak in front of the U.S. House of Representatives' Appropriation Subcommittee on Labor, Health and Human Services to ask for more funding to study the disease. According to Dr. Russell, having tenderness in a total of 16 points in the body can be taken as an indication of suffering fibromyalgia. The 16 points he described corresponded to the trigger points in the primary group described in Chapter 12 of this book. If his criteria are used to diagnose this disease, more than 96% of our patients would be qualified as having fibromyalgia. Patients who arrived bearing their doctors' diagnosis of having the disease invariably were found to have seventh-degree objective pain or higher. That translates into 65 or more trigger points on one side of the body. This fact tells us that most pain produced by fibromyalgia can definitely be managed by acupuncture with mixed and limited results. Patients with the objective pain lower than fifth degree will certainly have good to excellent results, whereas in those with objective pain at ninth degree or higher will have poor results and will be difficult to manage. The protocol for treating fibromyalgia is similar to that used in treating other kinds of pain. The supine position is used first if the pain is mainly located in front, or in the prone position first if the back is hurting. Then, alternate positions of need are selected depending on the location of pain requiring attention. Trigger points to use begin from the primary group for the first three treatments. This gradually increases to use trigger points in the secondary group for the next three treatments, and the tertiary group eventually, if such is required.

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15 Difficult Patients with Poor Results

15.1 CONNECTING DIFFICULT AND POOR

We connect the terms "difficult" and "poor" together because patients in this group have pain that is difficult take care of, and the results, after using acupuncture on them, often turn out to be poor. They are difficult to take care of because, by the time of their arrival, they already have multiple medical conditions or problems. All these conditions and problems are the consequences of failures due to previous attempts to stop their pain. For example, they may have undergone surgery that failed to manage their pain. They may have taken strong, addictive drugs that were ineffective in stopping their pain, yet it is these drugs that could have their made acupuncture treatments less effective. They may have physically perceived their subjective pain in multiple locations due to the chronic nature of their pain. Their pain may have begun when they were young, so it has been enduring for years. The patients may have passed retirement age, have limited resources, be overmedicated, or suffer other clinical complications. Combining any or all of these conditions and problems together leads us to conclude that these patients are difficult for us to deal with. Unless acupuncture can be incorporated into a more comprehensive medical practice, it is unrealistic to expect a sole practitioner to take care of multiple medical problems alone.

Nevertheless, we face difficult patients frequently. It is medically unethical and humanly immoral to refuse difficult patients from our practice. There is one advantage in caring for the difficult patients: we learn from taking care of them what poor results are in performing acupuncture. Why are the results poor? Because the patients always have higher degrees of objective pain. Their objective pain is invariably measured at seventh degree or higher, most of them being between the ninth and 12th degrees. Statistically, approximately 7% to 8% of all the patients we have examined have measurable objective pain between the 10th and 12th degrees. In other words, out of 100 patients, seven or eight of them will have objective pain at the 10th degree or higher. In proportion, they are a small minority of our clientele. Therefore, it became our policy to either charge a mere token fee or treat free of charge patients whom we considered to be difficult and have poor results from treatment. Such a policy enables us to have a sufficient opportunity to observe the outcome of acupuncture treatments. The data used in this chapter is essentially derived from this approach.

15.2 PROFILES OF DIFFICULT PATIENTS

Table 15.1 contains the biomedical profiles of 25 patients who were considered as difficult. The results of their acupuncture treatments were categorized as being poor. These 25 difficult patients were selected from registered records collected between 1980 and 1997. Twenty of them were female, the remaining five were male. Their subjective pain was very diversified, and pain in every location of the body was represented. Their objective pain ranged from seventh to 12th degrees. More of them were at eighth degree or higher. The total number of treatments each of these difficult patients received ranged from 100 to 392 sessions at the time the first edition of this book was written. The numbers definitely increased later on. We have had difficult patients come for more than 1000 treatments. Even though the results were poor, acupuncture was the only relief some difficult patients would have in their life. They had no alternative relief to choose from for their suffering.

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TABLE 15.1
Biomedical Profiles of 25 Difficult-to-Treat Patients

Name	Code No.	Age and Sex	Proclaimed Condition	Degree of Pain	Dates of First and Last Treatments	Total No. of Treatments
1. Rosaline A.	85121A085	F65	Arthritis	9	03/04/1985 11/01/1995	111
2. Tony A.	86422A129	F56	Swelling of right arm and shoulder	9	06/12/1986 05/31/1993	104
3. Wendy B.	81009B017	F65	Bell's Palsy	8	01/14/1981 10/19/1996	272
4. Elizabeth B.	88412B521	F37	Lower back and hip pain after surgery	8	06/01/1988 02/08/1997	162
5. Rachel C.	83671C135	F43	External ear pain	7	07/24/1983 07/29/1984	124
6. Arlene C.	90432C568	F69	Three bulging discs in the spine	10	07/27/1990 12/03/1992	103
7. Ava D.	84206D096	F31	Lower back pain	7	03/28/1984 06/06/1992	153
8. Robert F.	84034F081	M42	Nerves	5	01/18/1984 03/01/1997	108
9. Casey F.	85672F144	M29	Chronic sciatica	10	12/13/1985 09/16/1996	132
10. Herbert J.	80456H021	M48	Neck spurs	9	12/17/1980 05/10/1996	344
11. Lucille J.	84326J067	F79	Feet, back, and knees	9	05/09/1984 07/20/1991	101
12. Villet J.	88318J157	F66	Arthritis, lower back, headache, neckache	12	05/03/1988 11/29/1996	209
13. Evelyn K.	84391K087	F62	Lower back, shoulder, colon	9	06/07/1984 09/17/1992	148
14. Kay K.	87914K087	F48	Neck, head, back, leg, feet	7	11/09/1987 10/08/1996	205
15. Doris L.	88672L283	F63	Bone spurs	8	09/06/1988 08/14/1996	153
16. Paul M.	81396M010	M52	Back pain	8	11/19/1981 06/10/1996	392
17. Betty M.	83571M125	F51	Myofascial syndrome	11	06/23/1983 09/09/1995	256
18. Lyria M.	84742M163	F53	Arm, shoulder, and knees	11	02/03/1984 03/30/1997	100
19. Ernistine M.	93058M703	F72	Lower back herniated disc, hand numbness	9	02/19/1993 02/20/1997	177
20. Carol M.	95034M827	F50	Connective tissue disease	12	06/18/1995 03/25/1997	102
21. Jeane P.	95486P556	F51	Ruptured disc, fibromyalgia	9	07/29/1995 02/26/1997	116
22. Peggy S.	82258S060	F51	Allergy, tension, neck and back pain	7	04/14/1982 08/19/1996	105
23. Robert S.	82496S097	M39	Lower back pain due to disc herniation	7	07/27/1988 12/02/1996	122
24. Virginia S.	88625S644	F56	Separated lumbar fusion cervical disc	7	08/20/1988 10/19/1996	101
25. Patsy W.	88569W397	F??	Migraine headache	7	07/26/1988 09/14/1996	118

The treatment protocol for difficult patients is not that critical because the results will be poor anyway. Expecting good to excellent results is sheer optimistic exuberance, as those are not possible. Mixed and limited results sometimes happen, but very rarely. The longest relief these patients can hope for is days or weeks. Occasionally, they receive a pleasant surprise of 1 or 2 months of exoneration. To achieve any beneficial results, the first treatment position can be supine, prone, sitting, or on one side of the body, depending on where the focal point of pain is located. Thereafter, the treatments will alternate through previously unused positions. The number of needles used can appropriately start at 24, then increase by three to four needles each time by using trigger points in the secondary group

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first, followed by the tertiary, and finally the nonspecific group. It should take six to eight consecutive sessions to reach a maximum of 50 needles. Using more than 50 needles each time is unnecessary because exceeding that number will not proportionally enhance the efficacy of acupuncture.

The best way to learn how to take care of difficult patients is to have the chance to practice. Each difficult patient is different. However, describing a large number of examples to explain what needs to be done for each kind of pain would still lead to some redundancies, along with taking up excessive space. We have therefore chosen only one or two different kinds of pain in each of the five major regions of the body as examples for our discussion below.

15.3 PAIN IN THE FACE AND HEAD

As described in the previous two chapters, the most difficult pains in the face and head region to take care of are migraine, postherpetic neuralgia, and tic douloureux. Only the first two will be repeated in our discussion because they are more commonly seen among our patients.

15.3.1 Migraine

Case 1: Annette C. was a 31-year-old RN. After checking her objective pain, we knew that her headache would not be easy to manage. Annette stated that she had had headaches since she was 4 years old. For 4 weeks before she came to us, the headache had been bothering her day and night. She had had seizures due to overmedication with Demerol this time, so she was taking Dilantin for her seizures. None of the drugs she had taken had been very helpful, and she continued to have headaches. Her objective pain was measured at the eighth degree. At this level, with her taking the narcotic Demerol, this made her headache very difficult to manage. Poor results were expected. After our explanation, she still decided to try. A total of 22 treatments were provided in the early part of 1995. She called on March 17, 1995, and said that she would not come for any more treatments because they were not helping.

Case 2: Mary G. was a 46-year-old retiree. This patient first visited in June of 1996. She indicated that she had "chronic headaches" for the last 20 years. The headaches had been with her all the time, except during sleep. She stated that her headaches could be migraine, but she was without the classical symptoms of proximity. She also suffered from occasional dizzy spells, which were not severe. The headache could be on either side of the head or encompassing the entire head and would intensify after menstrual periods. She was taking multiple drugs. One would ease her suffering for a short time, and then she would have to take a different drug. Her headache always returned. Her objective pain was measured at only the sixth degree, which, of course, was in her favor. If not for her long history of headaches, we might have had a chance to reduce or stop the pain. Between June and December, she received a total of 24 treatments. After a series of three or four treatments, she would have 1 week's relief, after which the headache returned to plague her. She wrote to inform us that "my husband wants to try a different approach for my headache. I want to thank you for your gentle, professional care and your unreserving support and encouragement."

We are sorry to say that too many difficult patients with migraines like Mary's wait too long to come for acupuncture. We feel that their migraines could have been manageable if they had chosen acupuncture to stop their headaches a few years earlier. We hope that the physicians of this world are willing to refer or suggest to their patients with migraine to seek acupuncture treatments as soon as possible after they find that addictive drugs are unable to stop the headaches. This generous attitude can save a great deal of suffering for patients with migraine headaches.

15.3.2 Postherpetic Neuralgia

Like migraines, the manageability of headaches produced by this neuralgia is determined by the degree of objective pain and how long the subjective pain has been perceived by the patient. Twelve difficult patients with postherpetic neuralgia are listed in Table 15.2. These 12 patients were seen

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TABLE 15.2
Pain in Patients with Postherpetic Neuralgia without Improvement after a Number of Acupuncture Treatments

Patient	Sex	Age	Pain Code	Duration of Pain	Degree of Pain	No. of Treatments
1. MR (83482R070)	F	79	003.X2b	4 years	10	8
2. JJ (84618J075)	F	75	303.X2b	6 years	5	5
3. CW (84773W202)	F	78	003.X2b	2 years	5	4
4. EK (84742K202)	F	81	403.X2b	2 years	5	5
5. GR (85211R153)	F	75	303.X2b	2.5 years	6	8
6. JB (84764B256)	F	81	003.X2b	8.5 years	11	8
7. MH (85461H268)	M	77	003.X2b	5 months	6	8
8. LN (85526W241)	F	75	303.X2b	5 months	11	8
9. LH (86179H299)	F	66	303.X2b	1.5 years	12	21
10. FV (86424V063)	M	52	303.X2b	10 months	5	7
11. VH (86460H321)	F	65	403.X2b	2 years	8	5
12. CE (86535E102)	F	76	303.X2b	7 months	8	12

over a period of 3 years [1]. None of them benefited from acupuncture treatments. In all but three, the duration of the subjective pain had lasted for longer than 1 year by the time of their arrival. These statistics seem to indicate that once the pain of postherpetic neuralgia has existed for longer than a year, it becomes relatively difficult to eradicate. However, we did have patients whose objective pain was fourth degree or lower and who had suffered postherpetic neuralgic pain for 6 to 12 months, and yet reported having relief. No patients obtained relief if their objective pain was ninth degree or higher. At that level, the neuralgic pain definitely would not respond to acupuncture treatments.

Childhood infection by the chickenpox virus, medically known as varicella, is the cause of herpes zoster in adults [2]. After the infection has subdued, the virus migrates to hide in the sensory ganglia, such as the trigeminal and dorsal roots. The virus remains latent and stays dormant in the ganglia until an appropriate opportunity for attack, such as when the immune system of the host is weakened by other factors. One of these factors is aging. As we age, the body's defenses decrease because of our weakened immune systems. This explains why herpes infections victimize seniors more often than younger adults. Not only are fewer young adults known to have herpes zoster but also, after the infection, they have less potential for it to develop into postherpetic neuralgia. Our thoughts are that younger people are more likely to have lower degrees of objective pain. Finding whether our speculation has any medical basis could be an important topic for scientific research with respect to understanding why only a small percentage of herpes infections become postherpetic neuralgia.

Josephine B. was an 81-year-old retired school teacher. When we first met in September 1984, she seemed to be unhappy, as can be seen in her picture (Figure 15.1). She was brought to San Antonio after a 4-h drive from San Angelo. She was very frail, requiring assistance for almost any activity. Her subjective pain in the forehead had lasted as for long as she could remember, which was the cause of her unhappiness. Her doctor told her that it was herpes neuritis, which is another name used clinically for postherpetic neuralgia. The skin area on the right forehead where the infection occurred was visibly lighter, with fine lines. She said that the pain attacked her head all the time, even when she tried to sleep. Narcotic opiates prescribed for her provided no relief at all. After carefully examining her trigger points, we measured her objective pain to be 11th degree. With the long duration of subjective pain, consumption of addictive drugs, and high degree of objective pain, acupuncture was doomed to fail. We knew treatment results for her postherpetic neuralgia could be expected to be poor before we even made the attempt. However, she was desperate, and thus still

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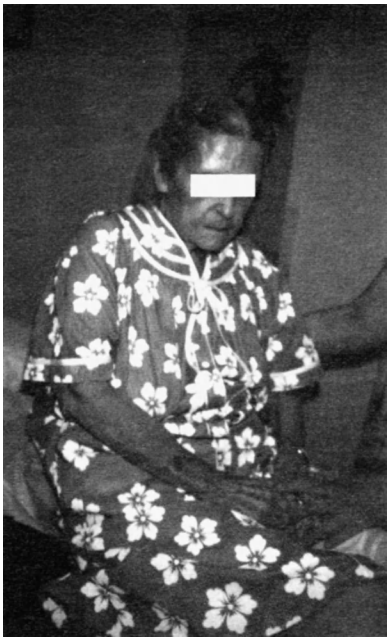

FIGURE 15.1 Josephine B. on the day of her first visit to the clinic.

wanted to try, even with our forewarning of failure. Naturally, our services were provided free of charge. She stayed in San Antonio for 20 days and received a total of eight treatments. She became no better, and finally decided to go back home. Could more sessions improve the pain in her head? There is no way to know because more chances are not available. We would certainly be more than willing to try more. Until we reach 32 sessions, we will not give up the hope of making Josephine's pain more tolerable.

After years of taking care of difficult patients with postherpetic neuralgia pain, we still have a few questions that remain unanswered despite some effort to research the medical literature. One of the questions is why pain from this neuralgia is only perceived in the ophthalmic and maxillary divisions, and not the mandibular. The manifestation of postherpetic pain is different from that of tic douloureux, which is often perceived in the maxillary and mandibular divisions, but not in the ophthalmic. Why does the herpes virus, or varicella, only infect the trigeminal nerve in the head unilaterally and not bilaterally? Why is the infection only involved in three of the spinal nerves and not more?

The herpes virus can remain in the sensory ganglia for a long time. When physiological circumstances become favorable, the virus emerges to attack its host. The virus propagates down the axons of the spinal nerves and their branches. However, the mechanism for the reactivation of viral movement to the peripheral nerve fibers remains unknown [2]. The destination of the virus is likewise unknown. What happens once the virus reaches the cutaneous ends of the nociceptive fibers? These have to be nociceptors in the skin, so does the virus come out of the nociceptors? If so, can it damage or destroy sensory nerves? In what manner would it damage or destroy? Although none of these questions can be answered, it is logical to speculate that nociceptors and nociceptive fibers can be damaged or destroyed to generate nociception. The most likely way to damage or destroy the nerve fibers is to dissolve their myelin sheaths. This is comparable to having insulation stripped from electrical wires, which can result in electrocution. Pain felt in postherpetic neuralgia is analogous to a nerve fiber acting like an electrical wire. The destruction of myelin sheaths around nociceptive fibers must be retroactive, beginning at the terminal and peripheral ends of the nociceptors. Gradually, the myelin sheaths are

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dissolved toward the sensory nerve cells in the sensory ganglia. After a time, the entire nerve fibers are stripped of myelin, all the way to the bodies of the sensory neurons, and regeneration of the myelin becomes impossible. This is why after a sufficient time of a year or longer, acupuncture treatments will become unable to heal the damage incurred on the nociceptive fibers, making pain management useless. This is a field with abundant research potential for better understanding of postherpetic neuralgia and its relationship to the actions of acupuncture therapy.

15.4 DIFFICULT PAIN FROM THE NECK TO THE FINGERS

We all have too many difficult patients with subjective pain perceivable from the neck to the hands and fingers. A number of these patients can be selected as useful examples to show how poor results are possible in managing their pain. Four of them are chosen to represent pain in the neck, shoulder joint region, and hands and fingers. We start with an example for neck pain.

15.4.1 Torticollis in Perpetual Motion

Depending on the duration after the injury, torticollis has different forms. The necks of certain torticollis patients seem normal, whereas some have rigid neck muscles. Mary's torticollis was in perpetual motion.

Mary G. was 75 years old. It would be appropriate to use the term "perpetual motion" to describe her torticollis. As seen in Figure 15.2, either she or someone else had to push her head upright. Otherwise, her head would turn toward the right shoulder. The condition had originated 18 years earlier in an automobile accident. At the impact of the accident, she turned her head backward and suddenly noticed a stiffness in her neck. There was no pain at the time. A few months later, while she was under tremendous emotional strain, her neck began deviating to one side without any apparent outward cause. She was driving her car home when she noticed a pain in her neck, which worsened over time. She said that she had seen several physicians without much help until she visited an acupuncturist in 1973. After 15 treatments, the pain "completely" subsided for 6 months, which was more than 10 years prior to her coming to us. Thereafter, the pain gradually reappeared. The acupuncture clinic she patronized was closed for illegal practice of medicine, and she was then referred to our clinic. Her objective pain was estimated to be between the ninth and 10th degrees. For the first two treatments, she had a latent flare-up reaction after each session. She also complained of sinus congestion and excessive stomach acid with indigestion. After 23 treatments, she said that her neck was almost free of pain.

FIGURE 15.2 Mary's head had to be pushed upward from the right side because of torticollis, which would pull her neck toward the right.

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Mary returned 5 years later with pain in her right shoulder and lower back. She attributed the shoulder pain to a fall, and the lower back pain to a fracture in her ilium. She still had some pain in the neck, which was expected, because her torticollis seemed to be the same. She still used her right hand to push and support her head upward all the time. We measured her objective pain for the second time, and it was 10th degree. She came for two more treatments, and did not return thereafter.

15.4.2 Severe Arthritis inside the Shoulder Joint

In previous chapters, we have stated that pain in the shoulder joint area can have good to excellent results when treated with acupuncture if the trigger points are detected only on the tendon of the long head of the biceps brachii muscle. Keep in mind that, if the pain inside the joint is not properly managed and if the damage or disease is prolonged, arthritic conditions can set in the joint cavity. The subjective pain becomes very difficult to eradicate. We have no way to know how commonly such developments can occur in the shoulder. We do have one example to prove that it has the possibility of occurring in some patients.

Philip C. was a 71-year-old retiree. The patient visited in July 1993 and described having pain in the right shoulder for 2 years. He was barely able to move either shoulder joint, which we suspect indicated that the problem had existed for longer than 2 years. When both of his shoulder regions were examined for trigger points, practically every place palpated was tender. His overall objective pain was measured to be only eighth degree, despite so many nonspecific group trigger points being located around the shoulder joint regions. If we take those nonspecific trigger points into consideration, he may have qualified to be at the ninth or 10th degree. From our experience, we know that his shoulders were most likely affected by severe arthritis. He was urged to go to the Physical Medicine and Rehabilitation clinic at the university hospital for further examination. The hospital gave him x-rays for both shoulder regions. He brought the images (Figure 15.3) to show us how his shoulders looked. From the radiograms, we had no problem recognizing extensive and severe degenerative arthritis in the joint cavities of both shoulders. We pointed out to him that he ought to have had shoulder pain for more than 2 years. Philip then confessed that he had injured his right shoulder during his high school years when he slipped and fell. Thereafter, he had suffered pain in the right shoulder for the last 60 years. He ended up having more than 12 acupuncture treatments without any noticeable improvement, and stopped coming after September of 1993.

15.4.3 Carpal Tunnel Syndrome

This disease was first described about 70 years ago, and it has been well documented in the medical literature [3]. Anatomically, the main malefactor for the symptoms of this syndrome is the median nerve. The median nerve is very long. Medical opinion is that along its long course, a compression on the nerve will produce numbing pain in the three fingers on the radial side of the hand—the

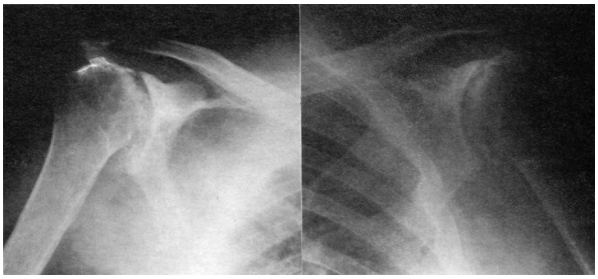

FIGURE 15.3 Both of Philip's shoulder regions, showing extensive and severe arthritis inside the joint cavities.

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thumb, index, and middle. Clinically, the most vulnerable site where the compression can occur is under the flexor retinaculum, the location known as the carpal tunnel. When the median nerve is compressed in the tunnel, it can cause numbing pain with itching and severe burning sensations. In the early phase of the disease, the pain typically begins to present on only one hand toward the end of the night. Gradually, the patients will be awakened in the middle of the night, but the pain usually subsides in the morning.

As the symptoms are prolonged, the syndrome will eventually involve both hands. A small number of patients are seen to have muscular atrophy in the thenar compartment. Once muscular atrophy sets in, acupuncture will not be of much use. Flexing and extending the diseased wrists can aggravate pain. It is a concern for industrialized societies, particularly in the computer age, due to loss of working time after symptoms of carpal tunnel syndrome begin to appear and become more serious. Many reasons, including pregnancy, kidney dialysis, diabetes, hypothyroidism, and acromegaly, are given as the causes of carpal tunnel syndrome [4]. One common indicator among our patients with the syndrome is low blood pressure beginning from the teen years. One obvious reason for having low blood pressure is protracted and excessive bleeding associated with monthly menstruation. We believe that having low blood pressure during premenopause is one of the causes of having carpal tunnel syndrome in the menopausal stage. Our female patients with carpal tunnel syndrome invariably are found to have had dysmenorrhea with menstrual cramping during their premenopausal years.

It is not that difficult to realize if a person has carpal tunnel syndrome. Patients having the syndrome are not commonly seen in our clinic. Of those seen, if the symptoms are confined to only one hand, the pain is relatively easy to eliminate. We have had many patients with good to excellent results after three to four treatments. Once both hands are involved, the pain in the fingers becomes harder to manage. Still, most patients with an objective pain lower than seventh degree will have relief. Patients with objective pain at ninth or higher degree, or pain that has persisted after hand surgery, are the exceptions. Margaret E. is one example.

Margaret E. was a 76-year-old retiree. She was diagnosed with carpal tunnel syndrome by her doctor 8 months before coming to us to ask for help. Not too long after the diagnosis, the symptoms disappeared on their own, but reappeared later. She waited for 3 months after the recurrence before coming to us. Her right hand was the first to have symptoms. After a brief intermission, both hands were affected the second time around. The left hand hurt more after the second episode. She then perceived pain in the forearms and the shoulder joints. She had difficulty abducting her right shoulder by more than 15 degrees. Her past medical history included hypothyroidism, which had been treated with synthyroid for the last 40 years. Her parathyroid glands had been removed. She had herpetic infection. Both of her index fingers were visibly deformed. She used Motrin and Tylenol to overcome her pain. Her objective pain was measured at ninth degree. After a total of 14 treatments, she said her pain was still hurting. She stopped coming thereafter.

15.4.4 Deformities and Pain

If a patient has deformities in the hands or feet (Figure 15.4), they will be easy to see. We don't see them very often. Almost all of them occur in patients who have been diagnosed with rheumatoid arthritis (RA). The deformities do not form in a short time, but take years to develop. We don't know if all deformities are accompanied by pain. We do know our patients with deformities come because of pain. After the fingers or feet become crooked as shown in the figure, we cannot expect acupuncture to restore their normality. Pain in patients with deformities is also not easy to manage. Because the deformities we see come from RA, and not all patients with RA have deformities, but they all have pain when they come for acupuncture, some comments regarding RA are justified. RA is a chronic disease that can last for many years throughout life. For most patients we see with RA, very few of them consult a rheumatologist within 6 months of the onset of the disease. By the time the illness is firmly and positively diagnosed, the condition could have existed in the patient's body for

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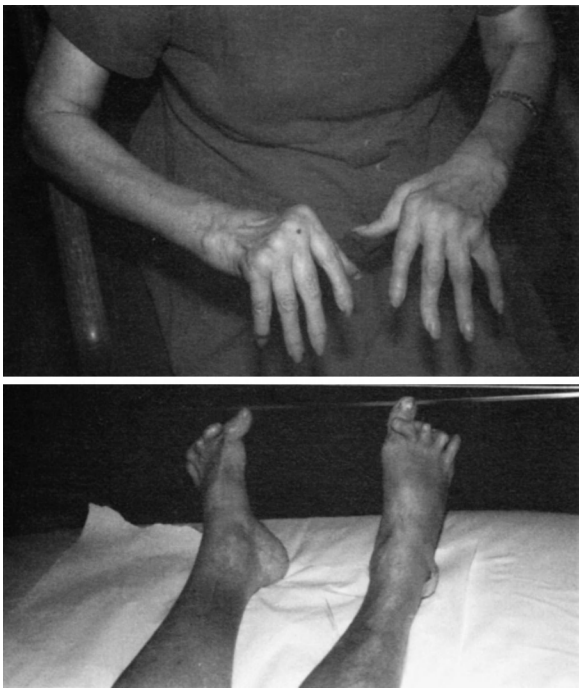

FIGURE 15.4 Deformed extremities in patients with RA: hands and fingers (top), and feet and toes (bottom).

a year or longer. Acupuncture for subjective pain in RA patients can have good to excellent results, if they are treated within 1 year after having the disease. Mixed and limited results are reasonable to expect if the patients have objective pain at the seventh degree or lower. Once deformities appear, they become difficult patients for acupuncture to treat, and poor results are inevitable. Growth of objective pain in RA is not easy to foresee. We have patients whose objective pain increased to trigger points of the tertiary group within a year or so. We also have patients who have had RA for more than 10 years, and the objective pain stays at no more than the fifth degree. There is an unfortunate degree of uncertainty in having an accurate and reliable diagnosis for RA, even given by a physician who is not a rheumatologist. Patients may say that they have RA, but their diagnosis can be false or inaccurate if given by their general practitioners or family doctors. Vanita A. is an example of a difficult patient with poor results.

Vanita A. was a 45-year-old housewife. This patient developed RA after her first pregnancy and has had the disease for the last 20 years. She had had cortisone and gold injections. Her fingers and feet had already become deformed, but were surgically corrected. We measured her objective pain as ninth degree. After the second treatment, she had a latent flare-up reaction, and the pain increased. To ease her pain, she took Trilisate 750 for 2 days. After coming for 15 treatments, her subjective pain was reduced enough for her to be able to ride a bicycle. Unfortunately, she fell from her bicycle and broke her left ankle, with a 2-in.-long hematoma and ecchymosis visible inferiorly to the medial malleolus in the foot injured. Her RA continued to be problematic. We have not seen her for years.

15.5 PAIN AFTER SURGERY

Surgical remedies to stop pain are not always successful. We have received patients who were still in pain after their surgeries. The pain that surgeries attempt to manage can be at numerous different locations. Here, we pick two of the most commonly seen examples to explain how they make

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patients difficult to treat: lower back and hip surgeries. They become difficult patients in a different sense after unsuccessful surgeries. The difference is that it becomes difficult to predict the outcomes of the treatments. What has been described in this book for pain management is not always applicable for pain after surgery. These difficult patients may have low degrees of objective pain, and the results can still be poor. Certainly, poor results are expected if the degree of their objective pain is higher than the eighth degree. A few patients are chosen here as examples.

15.5.1 Lower Back Pain after Surgery

Lower back pain after surgery is commonly seen. We have received at least one such patient every 2 to 3 weeks. The surgical marks were the visible indicators. Figure 15.5 contains just four samples observed among hundreds. Some of these patients still had good to excellent results if the degree of their objective pain was not too high. Surgical procedures disturb anatomical normalcy, and the scar tissue could be dense, making needle penetration difficult, if not impossible.

Case 1: Paul M. was a 52-year-old disabled postal office worker. Paul is listed in Table 15.1 as patient no. 16. From the table, one can see that he is the record-holder for having the most acupuncture treatments at our clinic. He came for a total of 392 treatments from November 1981 to June 1996. That number went up to more than 1200 during 2006. We checked his objective pain intermittently. On his 79th visit, it was still at the 10th degree, although it had been higher when he came for the first visit 3 years earlier.

Paul's lower back pain began during the Korean War, where he was in hand-to-hand combat on numerous occasions. At night, he had to sleep on the snow-covered ground. Soon after that, he would occasionally experience nagging backache. He noticed that when he was tense and under

FIGURE 15.5 Four patients still having low back pain after surgery. The one at the bottom right had undergone surgery only recently, whereas the others were from years earlier.

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stress, the back would bother him more. Five years ago, he was under a great deal of emotional stress, and his back really began to hurt him. Eventually, he underwent two back surgeries in 2 years' time. The pain never completely went away. At the time of his arrival, he was in a great deal of pain. He also had neck pain, which his physicians blamed on arthritis.

His other concern was "dizziness and fear of falling." His dizziness was most likely attributable to the medications he was taking for his pain. He showed a newspaper clipping of an advice column that described another patient with similar problems. The answer given by the physician who wrote that column was "you fall into the category of what is called 'dizzy patient.' There are increasing numbers of people who have faintness, dizziness and related problems. Some are caused by ear problems, which is particularly likely in patients below the age of 50. Many of these patients have true vertigo, meaning a sensation of the body moving when it is not, or the surrounding objects moving when they are not." But, what then is true vertigo? Is there a false vertigo?

Paul's pain was not totally eliminated, but it was reduced to such a degree that he could stop taking drugs for a few months. During that time, his dizziness disappeared. His physicians disagreed, insisting his dizziness had nothing to do with the drugs prescribed. Did Paul have the "false vertigo" to which that newspaper columnist alluded? He hasn't mentioned the dizziness in the last 20 years.

Difficult patients with medical histories and physical profiles similar to Paul's often have the potential to have dispersed pain. Through the years, Paul would come complaining of pain in the shoulder, in the temporomandibular joints, from trochanteric bursitis, along the erector spinae muscle in the back of the thorax, and in the calves of the legs. These kinds of pain were relatively easy for us to manage because he'd had them for only a short duration. None of his pain can be considered as cured, because it all has the potential to come back to hurt him. That is why he keeps coming back after all these years. He said that acupuncture is the only thing saving his life from more pain. He was 83 years old in 2012 and still going strong, evidence that protracted pain can hurt but not kill.

Case 2: Another difficult patient was Jay N., a 50-year-old dentist (Figure 15.6) who still suffered lower back pain after four surgeries. He received 27 treatments from February 1997 to June of the same year. He will have to come for more because, as he indicated, acupuncture is his last hope to ease his lower back pain. Jay said that all his physicians would do is give him more pills. Our opinion is that his lower back pain is developing into symptoms of Bernhardt disease with paresthesia on the lateral surface of both thighs. He had seventh-degree objective pain. At that degree, without surgery, we might be willing to predict that 5 to 10 acupuncture treatments would effectively get rid of his pain, both in the lower back and thighs. After 27 treatments, his pain was essentially unchanged. How many more treatments he will need to have his pain under control is uncertain.

FIGURE 15.6 The state of Jay's lower back after four surgeries.

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15.5.2 Pain after Hip Replacement

Prosthetic surgery to replace the hip joint is only occasionally seen in our clinic. When pain remains after the surgery, patients become difficult to treat. Here are two examples.

Case 1: Judith M. was a 53-year-old housewife. This patient came with a walker. She claimed that surgeries to her hips crippled her legs. Thereafter, she could only walk using a walker. She had had numerous surgeries, enough that she could not remember the exact number. Years ago, she was diagnosed with RA. Her visit to us was not for her pain in the legs but because of severe pain in her chest, which was diagnosed as "pericarditis" by her physicians. We have no intention of nitpicking in defiance of medical opinion, but it is most likely that her chest pain was not solely due to pericarditis. Pain of such a pathological nature involving the pericardium will be out of reach of any acupuncture treatment, yet the patient claimed that, after four treatments, she had no more pain in the chest. The pain she felt most was in the left pectoral region, where the pectoralis major and minor muscles are innervated by the medial and lateral pectoral nerves. Anatomically, it is possible for cardiac pain to be referred to these two nerves, manifesting in the upper chest. The difficulty we faced was in explaining the pain this patient had above the clavicle, reaching as far superior as the occipital area. Cardiac innervation is from the seventh cervical and first and second thoracic spinal nerves. Nerve innervation to the occipital area is from the first and second cervical spinal nerves. They are six dermatomes apart. Of course, Judith also had pain in other locations, including the shoulder and scapular regions, lower back, hips, thighs, legs, and so on. Pain in multiple locations can be expected if the patients have objective pain of the eighth degree or higher. Judith's objective pain was eighth degree. The pain over her two hip areas was typical of trochanteric bursitis or meralgia paresthetica. Surgery was not beneficial for her, but instead aggravated the pain in the hips and the thighs. Her thighs were so sensitive that she didn't want to have needles placed in these areas. A year after the first series of four treatments, her chest pain returned. The second series of three treatments was in April of 1996. Then, she decided to take care of the pain in her hips and thighs. Three treatments were given for that purpose. Again, her chest pain was relieved, but her hip pain persisted. Judith proved to be a difficult patient for whom acupuncture treatments often have poor results. Such pain after surgery is difficult, if not impossible, to manage.

Case 2: Lars W. was a 68-year-old retiree from the U.S. Army. This patient had had four surgeries, with results seen in Figure 15.7. Lars was chosen as an example to show that even after surgery, acupuncture sometimes can be still useful to manage pain. His objective pain was measured at only the fifth degree. It was a pity to see a nice, gentle, and healthy man suffering so much from pain that left him looking so depressed. He was taking antidepressants when we first met. He said that he had played hockey for many years and was very athletic until an injury to his left hip in 1989.

FIGURE 15.7 Scars seen on Lars' left hip from hip joint replacement surgery.

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After multiple surgeries, he had no other recourse but to pursue acupuncture. His physicians in the military had all but given up on him totally, and he was still in so much pain that he could not walk normally. It turned out that our acupuncture treatments were able to reduce his pain after 14 treatments. Ordinarily, without surgery, four or five treatments might have done the job. When he came for his 14th treatment, he told us that he felt so good that he had decided to go back to Sweden to visit his relatives.

15.6 PHANTOM LIMB PAIN

We do not know how many people in this world have their arms or legs amputated, willingly or unwillingly, every day. After the amputation, how many of these victims are known to suffer from relentless postoperative pain? The answer will depend on which statistics one believes [5–7]. The incidence of pain after amputation or phantom limb pain has been reported to be 10% to 25%. Postamputation or postsurgical pain is also known among patients who have lost their nose, tongue, breast, fingers, teeth, testes, penis, bladder, and anus [8–11]. An extensive damage to tissues, either accidentally or performed for medical reasons, can potentiate patients to perceive pain of a phantom nature. Physicians are still in total darkness when it comes to predicting who will be the next victim to have postamputative or postsurgical pain. There is a need for surgeons to know if the development of phantom pain can be predicted. The principles of acupuncture discussed in this book may offer a useful answer. This is the reason phantom limb pain is included here for our discussion. Patients seen with phantom limb pain were found to have objective pain at relatively high degrees. This observation leads us to speculate that patients with phantom limb pain could have some kinds of pain for a long duration before amputation. Our thinking is in agreement with that of Roberts et al. [12], who reported that "the role of preamputation pain in the genesis of phantom limb pain is unclear. Some have suggested that pain prior to amputation increases the likelihood of severe phantom limb pain. Others have not found this association." At the time the first edition of this book was in print, only eight cases of phantom limb pain had been seen in the clinic. All of them involved lower limb amputation, and only one of the patients was female. Their objective pain was seventh degree or higher, with a specific objective pain distribution of one at the seventh degree, three at the eighth degree, two at the ninth degree, and two at the tenth degree. Four of these eight difficult patients are briefly mentioned here as examples to show their poor results. Their medical histories are condensed but otherwise the descriptions are quite lengthy, and thus will be omitted.

Ruth S. was 45 years old, and did not tell us what her profession was. Her right leg was amputated, as shown in Figure 15.8. The reason for the amputation was an automobile accident in 1969, 15 years before her first visit to us. She had seventh-degree objective pain, the lowest level among the eight patients with phantom limb pain. From March 24 to April 17, 1983, she came for eight treatments. Two years later, on April 13, 1985, she returned because of recurring lower back pain. That is how we found out that acupuncture treatments stopped her phantom limb pain.

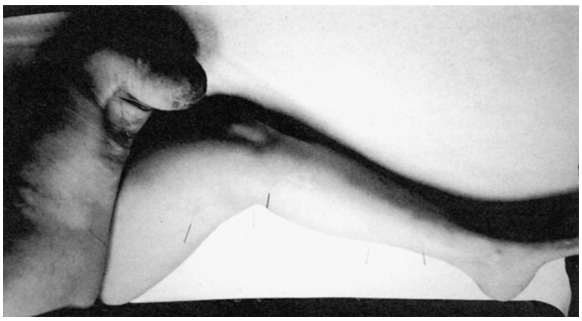

FIGURE 15.8 Ruth's right leg after the amputation.

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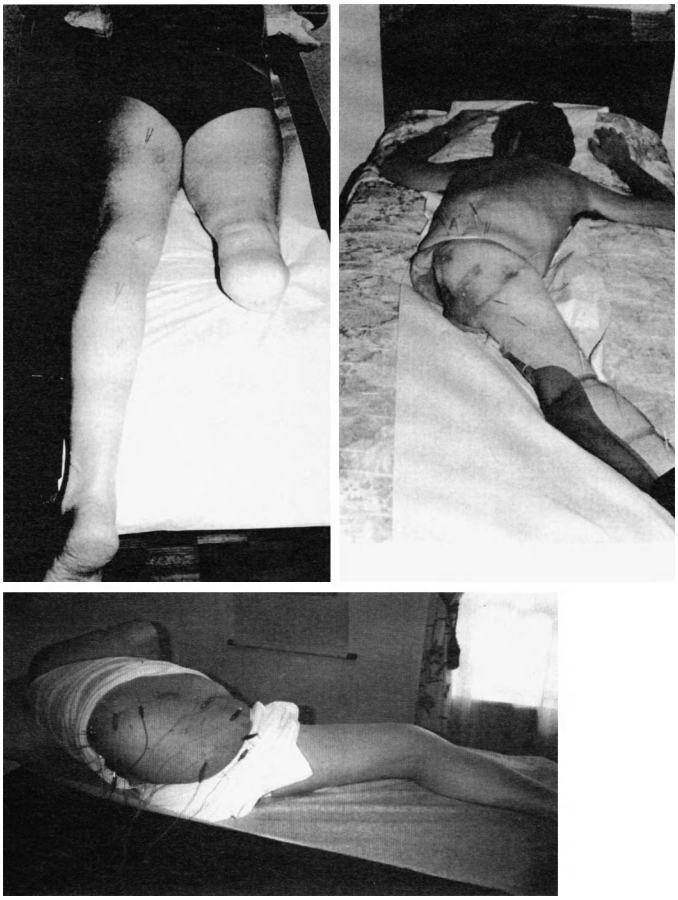

FIGURE 15.9 Three patients with lower limb amputations. Acupuncture didn't help to stop their phantom limb pains.

Another three patients with lower limb amputations are seen in Figure 15.9. We assume that giving their names will not serve any useful purpose. Of the three, one patient had electrodes connected to the needles inserted. At that time, electrical stimulation was popular in acupuncture practice. We had tried it on a number of our patients, including those with phantom limb pain. Our conclusion is that the stimulation provides nothing but vibration of different frequencies and intensities to the needles. There is nothing to convince us that it enhances the efficacy of acupuncture. After taking care of patients with phantom limb pain, we are convinced that there must be some connection between the objective pain that patients have before amputation and the development of phantom limb pain after the surgery. Such a connection should not be difficult to prove with adequate study and research.

15.7 SPONDYLITIC ABNORMALITIES

Many patients with lower back pain are found to have nothing wrong in their vertebral column. A few of them do have abnormalities, as seen from the x-rays they provided. Medical terms used to describe these abnormalities by the patients include words such as "spondylitic." We thought that it would be appropriate to use "spondylitic abnormalities" to describe subjective pain with organic problems involving bones, particularly the vertebrae. Spondylitic abnormalities can include

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spondylosis, spondylitis, spondylolisthesis, and their associated adjectives, such as ankylosing, stenotic, etc. There are many reports of lower back pain in the literature [13–15]. We have three of our own to offer. They were all difficult patients to treat with acupuncture, and their results were all poor.

Case 1: David H. was a 24-year-old student and construction worker. He described his main problem as "lower back-slippage." The report from his orthopedic consultation stated that he has had multiple episodes of back pain over the years and was diagnosed with spondylolysis. The report also stated his present backache had started 3 to 4 months ago and also involved the posterior aspect of his right leg. Valsalva maneuvers did not increase the pain. Bowel or bladder function had not been altered. Physical examination by the orthopedic physician revealed equivocal straight leg raising, normal deep tendon reflexes, and motor and sensory exam results. He could walk on his heels and toes and had no selective atrophy, sciatic, or peroneal nerve tenderness. He had some mild spasming on his left paraspinal area and, oddly enough, his pain occurred mostly in the morning. X-rays revealed spondylolysis of L4 and L5 with no slippage. David was placed on a "stretching program," and was told "to stay in sports for now and we'll see how you feel when you get the back stretched out good in a month."

One month later, his report indicated "the patient is not any better." He apparently was not doing the stretching exercises properly, so he was retaught the technique and was to return in a month. After another month, the patient had some improvement but reaggravated the pain playing basketball. The pain had a radicular component in the right buttock and leg. X-rays were again performed, which revealed no change, but because his pain continued he had a CAT scan. He then was placed on a stretching program again. The CAT scan revealed "a HNP (herniated disc) of L4–5 that may require surgical treatment." It was also believed that David had "transitional vertebra with sacralization of transverse process L5 bilaterally and spina bifida occulta L5 and S1." He was referred to a variety of consultants, which finally revealed "grade 2 to grade 3 central disc herniation at L4–5 with a possibility of an extruded fragment and advanced facet hypertrophy with no evidence of sagittal lateral recess, or foraminal stenosis." It was now stated that David had "symptoms compatible with right L5 nerve root compression syndrome secondary to a combination of disc protrusion and spondylolysis bilaterally." It was felt by the consultants that "disc space exploration and probable fusion would eventually be required." The sequence of events described thus far seemed to us as medically complicated. Yet, after only three acupuncture treatments, David said that his pain was gone from the lower back to the bottom of his foot. He brought us the x-rays taken by his doctors (Figure 15.10). We are sure a radiologist can determine whether they are normal or not. Our motivation to present this case is, once again, to point out that whatever spondylitic abnormality can be, if the objective pain of the patient is low, good to excellent results are still possible. The objective pain in David was measured to be only at the third degree.

Case 2: Roman F. was a 31-year-old repairman. His first visit to the clinic was in March 1985. His back had been injured in 1974, when he was 20 years old, by a heavy falling pole. Chiropractic adjustment helped to ease some of his pain, but was unable to eradicate it totally. His chiropractor told him that one of his legs was shorter than the other so that he would have pain for the rest of his life. He also used a heating pad and took medications, but none of them helped. Medical doctors had told him that nothing was wrong from looking at his x-rays. The objective pain in Roman was also measured at third degree, and it took three treatments to stop his lower back pain.

Case 3: Harry Y. was a 67-year-old salesman and a typical example of difficult patients having subjective pain due to spondylitic abnormalities with poor results after acupuncture treatments. His problems began as "cervical spine and lower back pain." His neck pain was due to whiplash from a head-on automobile collision 35 years ago. He came well-prepared with a long medical report, which he had written himself. Included in the report were visits to multiple doctors, even to the Mayo Clinic. He quoted diagnoses provided by his physicians. "[The conditions] are severe degenerative disease in the lumbosacral spine, and sclerotic changes of the apophyseal joints, particularly in the lower lumbosacral spine. There is also some narrowing of the disc space at the level of L2 and L3. Concave defects are also seen in the inferior aspect of L5, probably representing a

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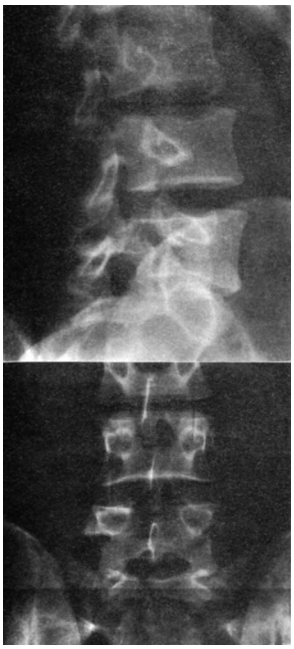

FIGURE 15.10 Two photos printed from x-ray images brought to us by David on his visit to the clinic.

small Schmorl's node. There is also a break in the pars and interarticularis of L5 bilaterally with no evidence of spondylolisthesis." For the cervical spine, there was "extensive degenerative disease as evidenced by compromise of most of the neural foramina by bony lipins. There are also narrowed disc spaces, particularly most severe at the level of C5 and C6, C6 and C7. There is also an approximately 4 to 5 mm anterior displacement of C3 in relation to C4. Considering the previous history of trauma, this could be well related to a dislocation. Clinical correlation is suggested. The odontoid process is intact." Harry brought us many x-rays, from which we selected two for Figure 15.11. His objective pain was measured as seventh to eighth degree. After 15 treatments, he told us that his subjective pain had eased a little. After just a month or so, his pain returned, and he came back for a few more treatments. His repeated visits led us to conclude that his was a difficult case; his pain will stay with him for the foreseeable future.

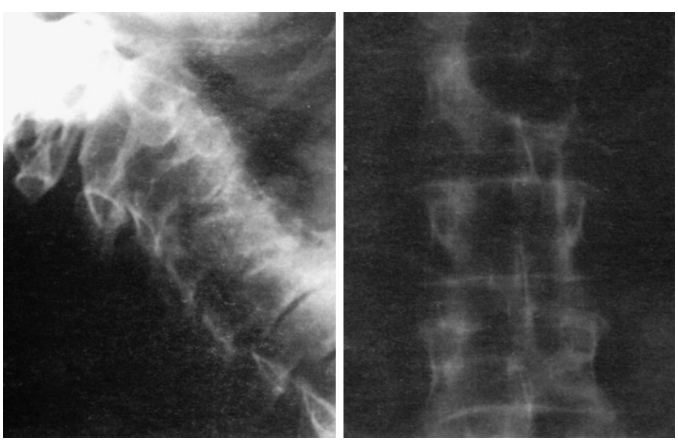

FIGURE 15.11 X-ray images of Harry's cervical vertebrae.

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15.8 REFLEX SYMPATHETIC DYSTROPHY

We learn that reflex sympathetic dystrophy (RSD) is also known as minor causalgia, posttraumatic pain syndrome, Sudeck atrophy, and sympathalgia. RSD can be caused by accidental injuries, surgical or other iatrogenic interventions, myocardial infarction, and neurological disorders. Clinical manifestations for RSD include causalgic pain, allodynia, hyperalgesia, hyperesthesia, skeletal muscle hypotonia, and vasomotor and sudomotor disturbances. The symptoms of RSA are graded at three different levels: grade 1 is severe, grade 2 is moderate, and grade 3 is mild. The disease can pass through three stages: the first stage is acute, the second stage is dystrophic, and the third stage is atrophic.

RSD is a rarely seen condition in our clinic. In general, acupuncture treatments will provide poor results, particularly if the disease is at grade 1 or 2, or at its second or third stage. Any single symptom of RSD alone is difficult enough to manage, not to mention a combination of them. To manage all of the symptoms described above for RSA is an impossibility. We can take allodynia as a case in point. Allodynia officially means pain in response to a normally nonpainful stimulus, but essentially, it appears to mean pain all over the entire body. We don't know if allodynia occurs before or after any particular injuries, accidents, or surgeries. Any RSD patient with allodynia must likely have had the pain before they had the disease. Of the few RSD patients we have seen, all were measured to have objective pain at seventh degree or higher. We believe difficult patients with objective pain at that level have allodynia. This fact is the reason that RSD often has poor results. In our opinion, RSD is an extension of old nociceptive disorders and not the beginning of new pain.

15.9 TAILBONE FRACTURE

Here, "tailbone" refers to the coccyx. The coccyx can be fractured when a person lands on the buttocks hard enough. The injury can cause pain at the lowest part of the back. This kind of pain is known as coccydynia. If the coccydynia is new and the patient has objective pain lower than fourth degree, acupuncture could produce good to excellent results after three or four treatments. However, if coccydynia is chronic and the patient becomes difficult to treat with a high degree of objective pain to manage, the results can be expected to be poor. The pain will become allodynic, spreading to the anal and genital areas. Inserting needles in any of these areas is not desirable for either the provider or the recipient. There are other factors that make pain in the tailbone difficult to handle, including discomfort in having sexual activities, as confessed by the victims. We have had three patients who suffered from coccydynia.

Case 1: Mildred C. was a 66-year-old housewife. She described her pain in the tailbone as "scar tissue from eight deliveries in life." She had been through 25 doctors and many pain pills. Her pain was so bad that she could not sit for any time without discomfort. She could only sleep on her side. Her objective pain was measured to be the 11th degree. After 26 treatments, she still had coccydynia. The benefits she received from acupuncture were that she didn't have to stand all the time and she slept better at nights.

Case 2: Joan M. was a 40-year-old psychotherapist. She described her suffering as "coccygeal pain, secondary to hips and pelvis" as the main problem. Her coccydynia began due to back surgery for disc degeneration in the lumbar vertebrae rather than a fall. Our opinion is that her coccydynia was not caused by the surgery, but because she already had seventh degree objective pain by the time of the operation. Her having allodynic pain in multiple locations was triggered by the surgery. Of course, we didn't have scientific evidence to make such a claim. Hopefully, other investigators will conduct clinical research at a future time to prove we are right. When she came for the first time, she was taking Vicodin, Clinoril, and Prednisone. She also had a sleep disorder and had to depend on medications to help her sleep. Other problems diagnosed by her physicians included the connective disease fibrocytis and collagen problems. She told us that she provides consultations to support groups of people with chronic illnesses and disabilities. She had never suggested

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acupuncture to any of them. Yet, she decided to try the treatment for herself. She had seventh degree objective pain. Her pain subsided for 10 days after six treatments. Of course, we didn't expect to cure her pain, and sure enough, she returned many times later on. We have not found Joan to be a difficult patient because she still had mixed and limited results.

Case 3: Kathy S. was a 34-year-old student/waitress/artist. Kathy described her problem as "lower back and tailbone pain." She was injured in a water-skiing accident in 1989, 7 years before seeing us. She went to a chiropractor, who fixed her back pain in one adjustment. In 1994, she fell from a lawn chair and landed on a concrete floor. Without medical consultation, she concluded that her "tailbone was broken." The pain was much more severe than after the skiing accident. The same chiropractor adjustments became useless. Her objective pain was measured as fourth degree. After eight treatments, she continued to have coccydynia but reported significant improvement in the lower back. After 6 months, she returned for her ninth treatment. Asked why she stopped coming, she replied that she had run out of money. We told her that treatments would be free thereafter, and she could visit as many times as necessary to get rid of her pain. She accepted the offer and came for three more treatments before her pain was resolved. Again, we use Kathy as an example to emphasize that similar pain to that of coccydynia can have good to excellent results, if the pain is cared for within a reasonable duration after the injury, and the patient has a low degree of objective pain. If the pain had been sustained for many years, and the patient had become difficult to treat because of a high degree of objective pain, the results of acupuncture treatment will be poor.

15.10 DIFFICULT PATIENTS WITH DIFFERENT RESULTS

There are many other kinds of pain that patients complain of when they come seeking help from acupuncture. Examples include multiple sclerosis, lupus erythematosus, itching skin, psoriatic arthritis, erythema multiforme, complications due to silicone breast implants, facial pain after plastic surgery, ulcerative colitis, and Crohn's disease. Some of the symptoms these patients have seem to benefit from acupuncture treatments, whereas some definitely do not. Results of managing their pain vary from excellent to mixed and limited to poor. It will take writing another entire book to describe them all meaningfully.

15.11 A FEW AFTERTHOUGHTS

We could write more about acupuncture. This book's basic purpose is to focus attention on pain management through acupuncture treatments. Our own clinical applications also validate that acupuncture is effective for treating allergic problems, nicotine addiction, tinnitus, and vertigo. Very little or nothing is said here about them for several reasons. One of these is unpredictability. Some patients with allergic problems such as rhinitis, sinusitis, asthma, nasal irritation, sneezing, rhinorrhea, nasal congestion, or blockage can be improved, whereas some cannot. We have no way to predict who will be which. Thus, we decided to avoid mentioning these problems. In addition, an overly lengthy book has the potential drawback of boring or wearing out readers. It will be more beneficial for us if readers peruse this book all the way through once they begin it. If they are willing to do so, then we expect a greater possibility for licensed physicians to learn acupuncture. That is the main goal for our spending time in writing this book. Finishing it up required substantial effort. Its purpose is not for financial gain, as a book of this nature is not profitable. Our wish is to see more medical doctors become more willing to perform acupuncture. There are many people suffering from chronic pain in this world, not to mention this country. We are certain acupuncture will be useful to help relieve their pain. From personal experiences and observations, we know for sure that there are many medical professionals who have a desire to learn to practice acupuncture. The question is, where would this opportunity be available?

The answer is: nowhere. As of this writing, no single medical school in the United States offers inculcation in acupuncture. We know there exists the opportunity to take a week's training course

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in California. One week may be sufficient time to attend many hours of didactic instruction in a classroom using a blackboard. However, ideal teaching and learning acupuncture requires that bedside training is available.

We believe that some review of anatomy will be needed, because in time, most medical school graduates will forget some of the basic sciences they learned in their freshmen year. After reading this book, it will become obvious that having a solid anatomical science background is certainly helpful in learning the acupuncture promulgated in this book. It is also useful to have experience using acupuncture to treat real patients with different kinds of pain. Through many years of offering anatomical acupuncture as an elective, I estimated that I had more than 200 students participate in the elective. None of them took the elective under the circumstances described above. Therefore, as far as I am concerned, their elective is incomplete. I always wonder if any of them had a chance to practice acupuncture after their medical school years. I have not received feedback from any of them. It would be very nice to be able to find out if the acupuncture they learned from me has been in use. My time is past, yet my dream to teach medical professionals to practice acupuncture is still alive. I hope there can be abundant opportunity for physicians to learn acupuncture because practitioners with proper medical training really are in great need in societies where so many people are suffering from the torture of pain.

We also ponder the potential for basic and clinical research in pain. Whether or not a given reader happens to have formal medical education, after reading through the book, it will not be difficult for her or him to realize that there is a great deal of potential to do research following the many phenomena we have observed and described. We believe the subjects of greater potential include:

First, are acupoints and trigger points the same? The difference is in their functional state. Determining whether this observation is accurate will not require elaborate experimental procedures. Anyone can test someone next to them to determine if there are any trigger points detectable.

Second, can trigger points be used for quantifying objective pain in all people? Doing so will certainly require some training and experience. Nevertheless, the testing can be done without question. It is our hope that some investigators are willing to study whether pain is, indeed, measurable.

Third, is it unreasonable to question the conventional way acute and chronic pain have been defined? What would be a reasonable way to distinguish them? We hope our way of differentiating acute from chronic pain will find some supporters in the near future.

Fourth, why is surgery to manage pain effective for some patients, but not for many others? We are sure many concerned surgeons will be curious to know the reasons behind this discrepancy. The answer could be in how much objective pain the patients have.

Fifth, the same speculation can be applied to patients who develop postherpetic neuralgia. Is it possible that patients with a high degree of objective pain will have their herpes infection become postherpetic neuralgia? We are sure that dermatologists will be interested in whether our hypothesis has any basis at all.

Sixth, does any scientist or medical expert really know if pain has memory? Pain is an unfortunate experience. We all want to forget the pain that we suffer. Yet, we feel that pain seems to have memory. Otherwise, why does it keep coming back to haunt the people who have had it before?

Seventh, does a pain grow? If not, why does chronic pain get worse in time, becoming harder to reduce or eradicate? If pain can grow, how can we tell? Could we detect this by an increase in the number of trigger points?

There are many more questions that can be asked in relation to pain and acupuncture. For the time being, those listed above are enough for curious people to ponder. Once we have the answer for any of these questions, we are sure other questions about pain and acupuncture will be asked.

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Certainly, we know something about pain and acupuncture, although we do not know all we need to know. Yet, pain will doubtlessly stay with us for the foreseeable future. So will acupuncture, because it is a useful remedy to conquer pain.

One final piece of advice is that if you have pain, go to see your doctor first. If nothing serious is found, such as cancer or a tumor, try to manage your pain through acupuncture as quickly as your time permits. Acupuncture will do no harm; if it doesn't stop your pain, it cannot hurt you more, and you still have many other options to subdue the pain you have. Don't wait for pain to have the chance to grow on you. The longer your pain grows, the harder it will be for you to tackle it in the end.

15.12 EDITOR'S AFTERWORD

I have known Dr. Houchi Dung since 1986 or 1987, when I first became acquainted with his elder son and began visiting once a month or so to his home in San Antonio. I have seen his acupuncture clinic grow from a home-based office to its current location. When I initially moved to the city to work for the company his son cofounded, I saw him at his work almost daily.

I learned that after training himself and then his wife in acupuncture, Dr. Dung began growing his practice purely on a word-of-mouth basis; there was never any media advertising. And yet, any time I saw his clinic in operation, it was always busy. Business only continued to grow over the years, regardless of economic trends. He has since moved the clinic to a new, better location, and his younger son has taken over the practice, which still thrives, providing a solid income for his son and his family. The clinic has a phone book listing, but as far as I know, it has still never advertised in the media. Obviously, many people needed (and still need) the service Dr. Dung's acupuncture provides, enough that promoting his services by anything more than word of mouth is practically unnecessary.

For more than 20 years, through three editions of this book, I have seen Dr. Dung quietly crusade for the legitimization of his chosen practice as a proper medical treatment. He knows that acupuncture works to reduce or eliminate many kinds of pain, even if it isn't a miracle cure. His education in anatomical science has allowed him to analyze acupuncture to an extent I believe almost no one else has done. However, for acupuncture to become a proper medical modality, he knows it has to be researched and verified by people with medical science backgrounds. To that end, he has done his best to present to the world at large, and to interested people in the medical community in particular, his personal experiences, observations, and conclusions regarding acupuncture. I have found it worthwhile to aid him in this endeavor.

I speak here as someone with a college education but no medical or anatomical science background. In the course of editing this book (both the first and third editions), I have readily absorbed the basics of how acupuncture seems to work. I have at least some grasp of the principles of afferent and efferent nerves, myelinization, and neural signal transmission. I understand the ideas of primary, secondary, tertiary, and nonspecific acupoints, even if I don't have their locations memorized. I can see clearly from the examples presented that acupuncture works better in some situations than others, and that where it doesn't work, at least it has no ill aftereffects or lasting side effects. Sometimes, the medical terminology has left me a bit confused, but all in all, I believe I understand what this book is saying. If someone like me can understand that much, how much more could an actual doctor, medical school professor, or medical student draw from it? I dearly hope to find out within my lifetime.

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Medicine

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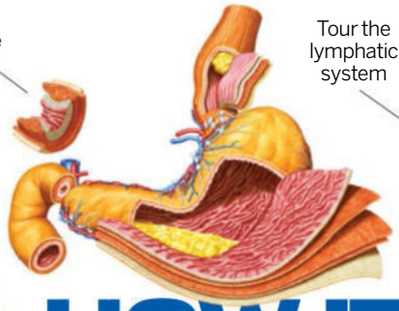
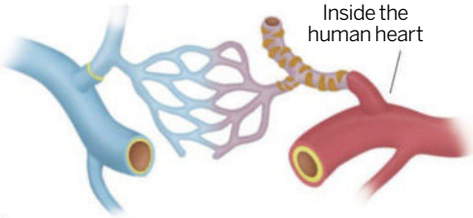
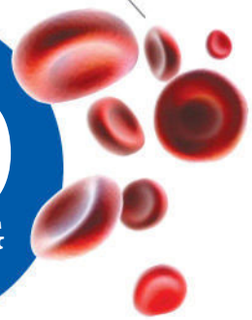


Dissecting the stomach

Tour the lymphatic system



Inside the human heart



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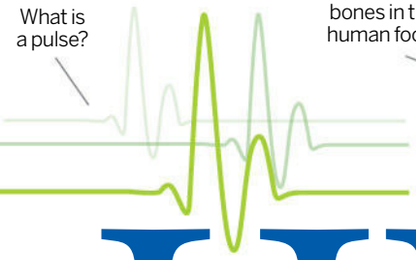

What is a pulse?

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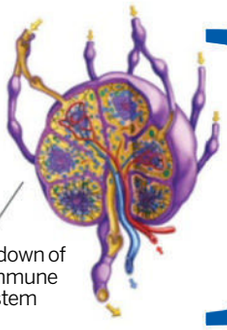

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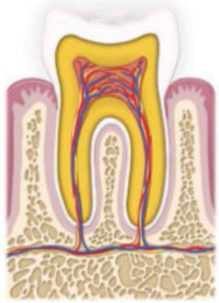

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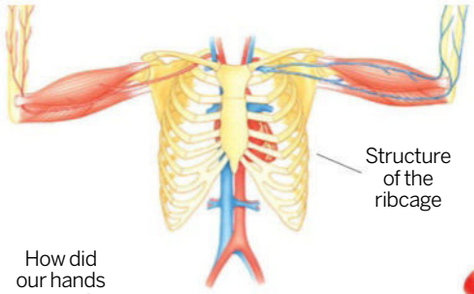
EVERYTHING YOU NEED TO KNOW ABOUT THE HUMAN BODY



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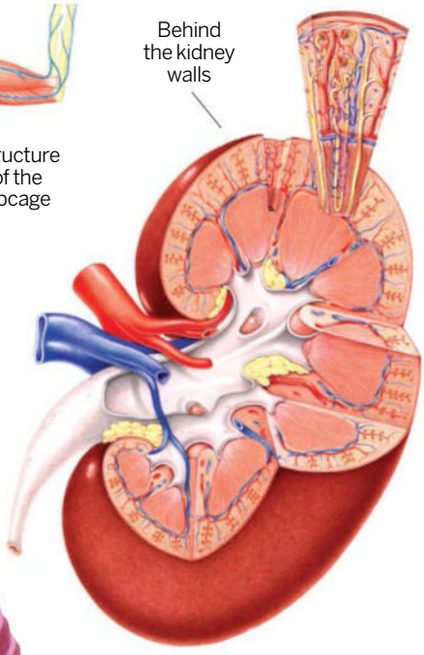

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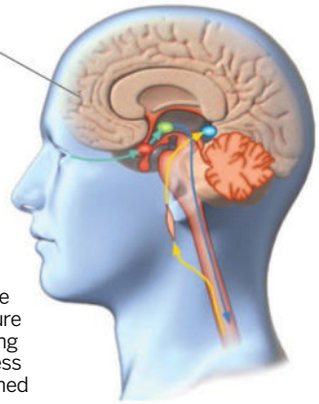

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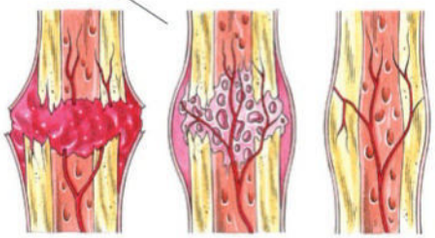

Bone fracture healing process explained

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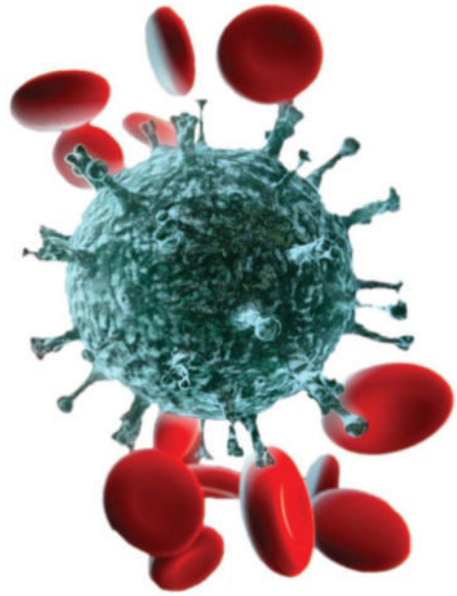
HOW IT WORKS

BOOK OF

THE HUMAN BODY

The human body is truly an amazing thing. Capable of awe-inspiring feats of speed and agility, while being mind-blowing in complexity, our bodies are unmatched by any other species on Earth. In this new edition of the Book of the Human Body, we explore our amazing anatomy in fine detail before delving into the intricacies of the complex processes, functions and systems that keep us going. For instance, did you know you really have 16 senses? We also explain the weirdest and most wonderful bodily phenomena, from blushing to hiccuping, cramps to blisters. We will tour the human body from head to toe, using anatomical illustrations, amazing photography and authoritative explanations to teach you more. This book will help you understand the wonder that is the human body and in no time you will begin to see yourself in a whole new light!



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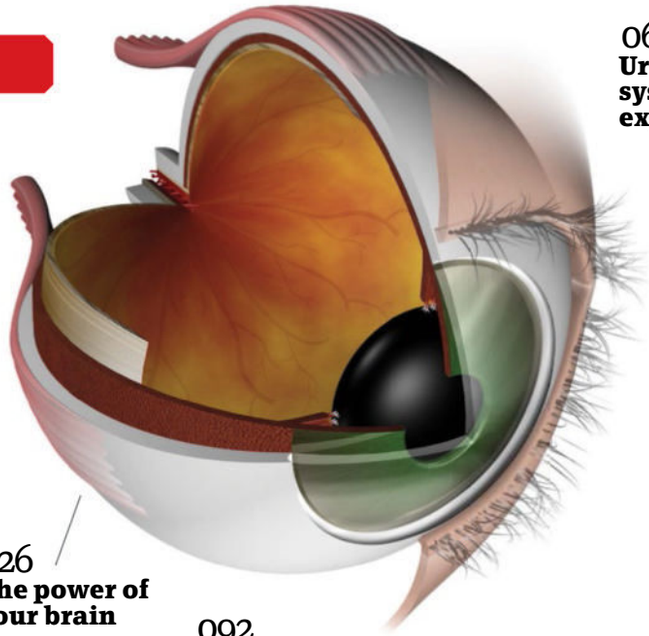

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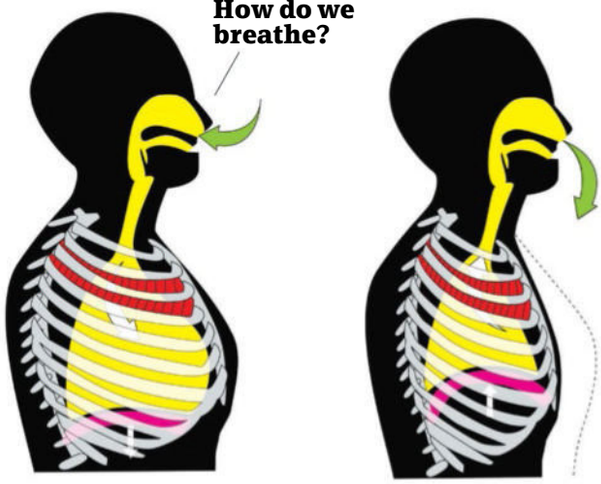

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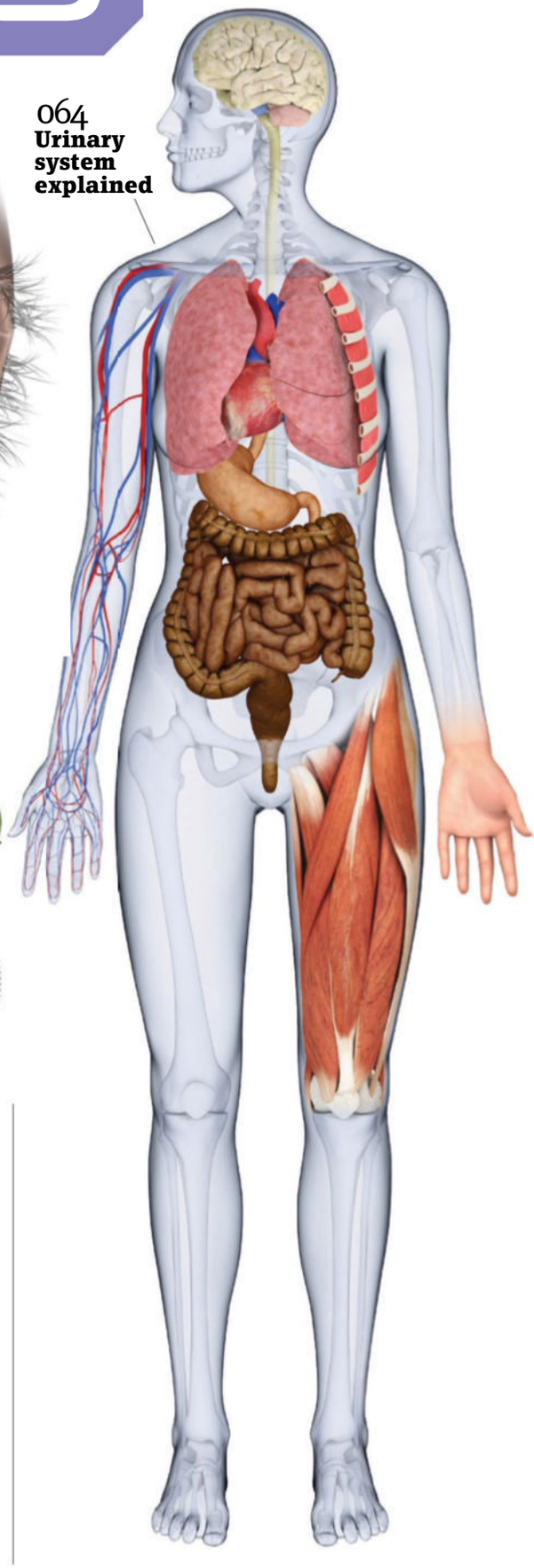

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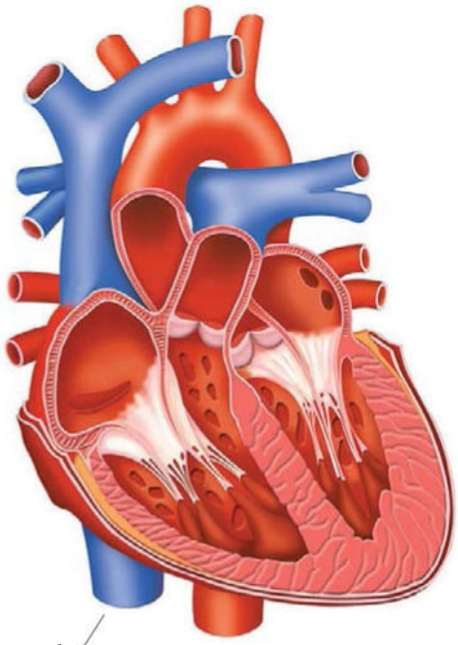

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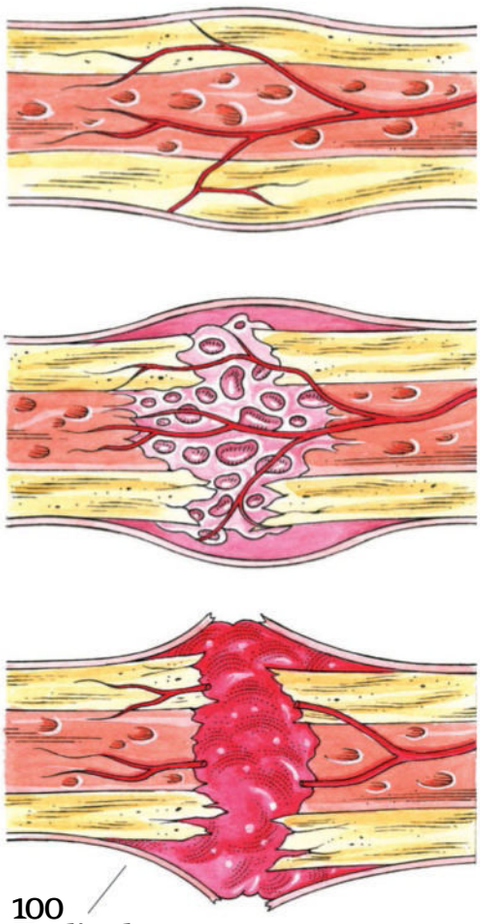

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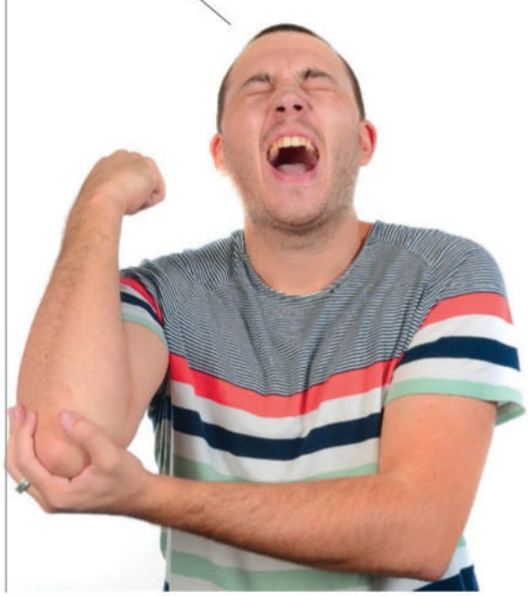

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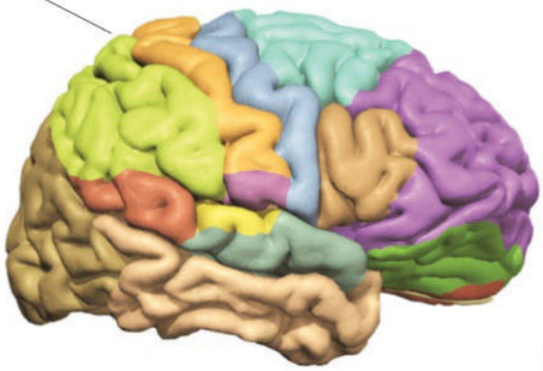

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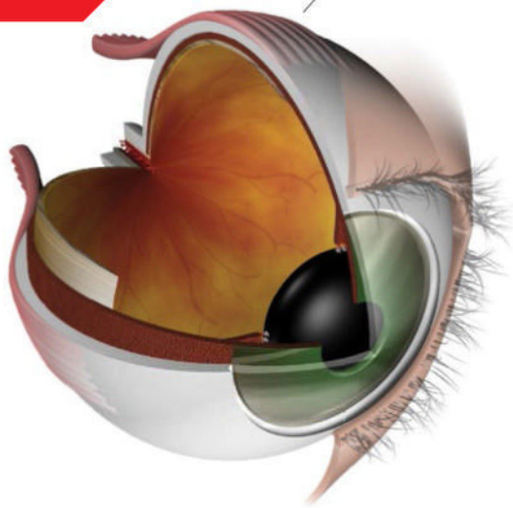

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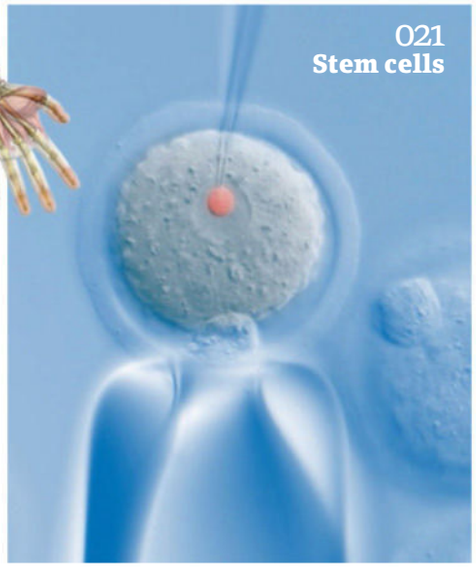

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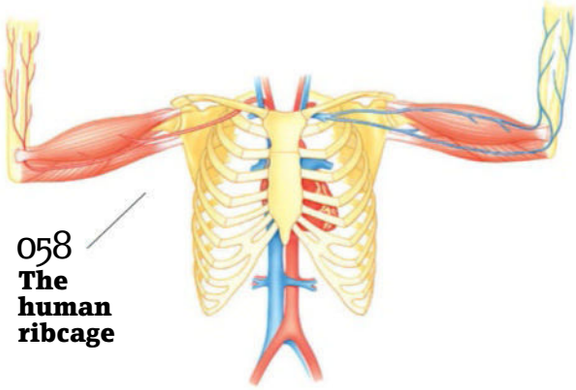

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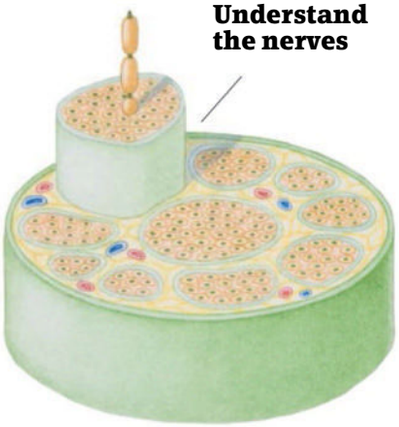

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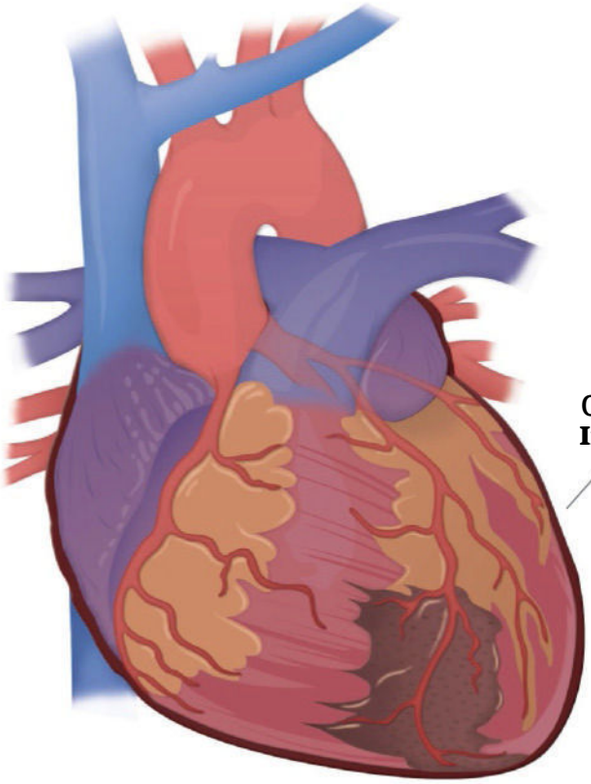

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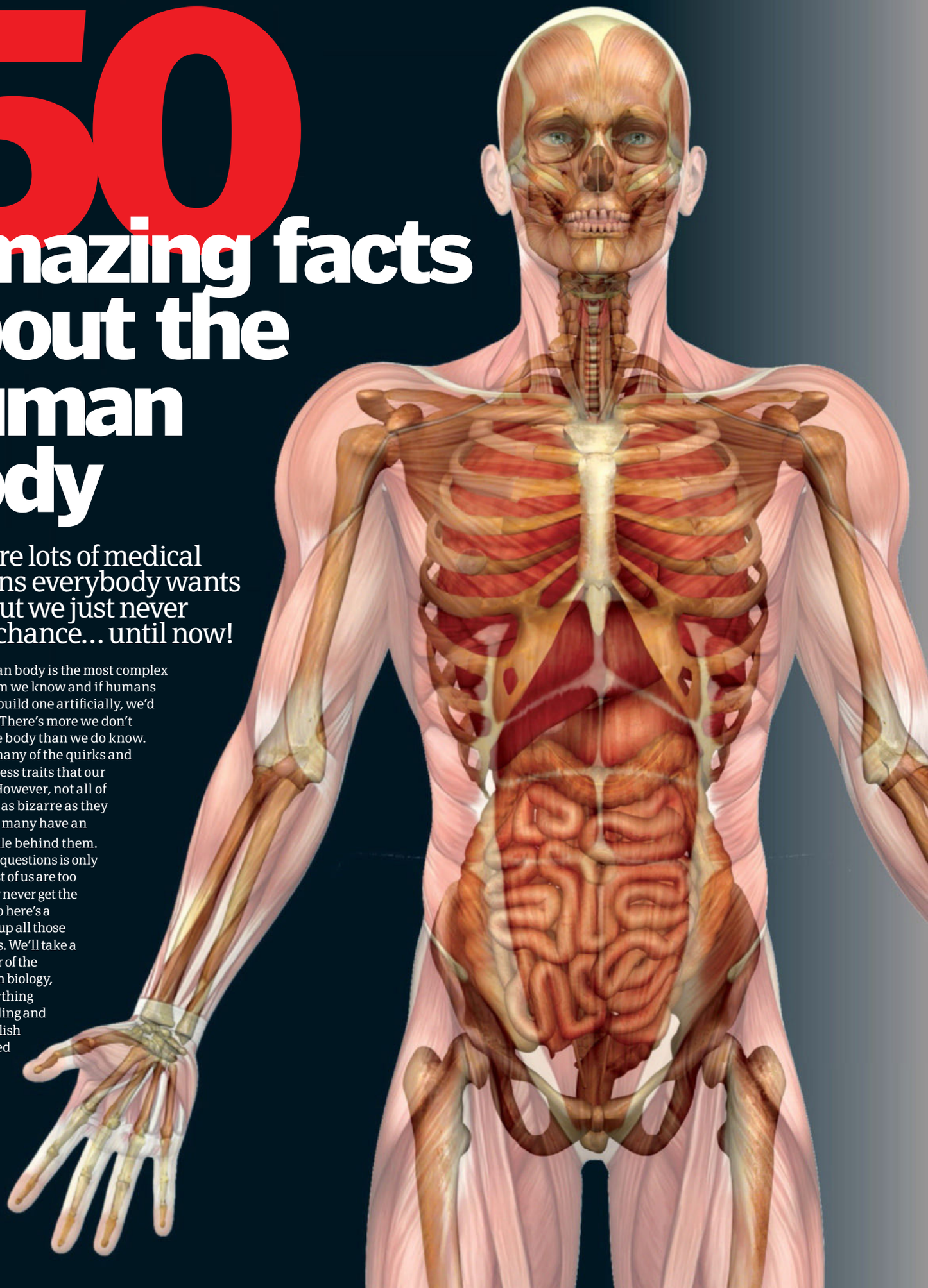
50 Amazing facts about the human body



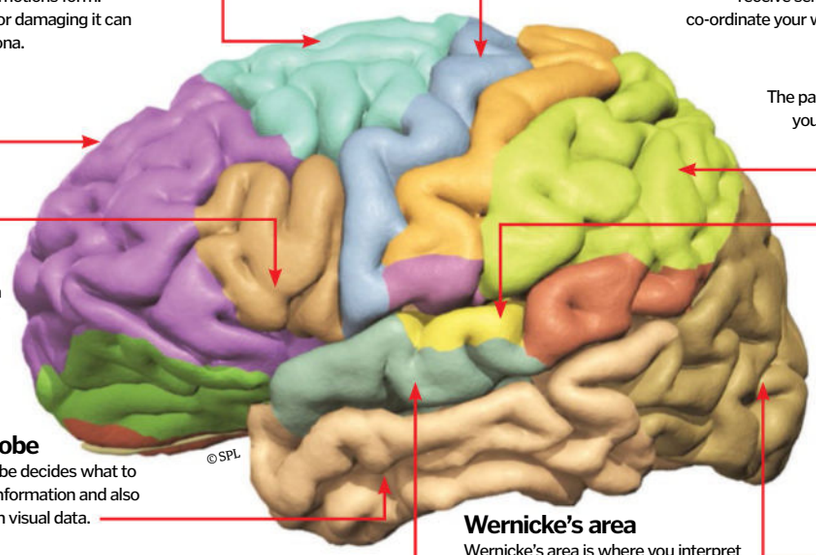
There are lots of medical questions everybody wants to ask but we just never get the chance… until now!

The human body is the most complex organism we know and if humans tried to build one artificially, we'd fail abysmally. There's more we don't know about the body than we do know. This includes many of the quirks and seemingly useless traits that our species carry. However, not all of these traits are as bizarre as they may seem, and many have an evolutionary tale behind them.

Asking these questions is only natural but most of us are too embarrassed or never get the opportunity – so here's a chance to clear up all those niggling queries. We'll take a head-to-toe tour of the quirks of human biology, looking at everything from tongue rolling and why we are ticklish through to pulled muscles and why we dream.

1 How do we think?

What are thoughts? This question will keep scientists, doctors and philosophers busy for decades to come. It all depends how you want to define the term 'thoughts'. Scientists may talk about synapse formation, pattern recognition and cerebral activation in response to a stimulus (such as seeing an apple and recognising it as such). Philosophers, and also many scientists, will argue that a network of neurons cannot possibly explain the many thousands of thoughts and emotions that we must deal with. A sports doctor might state that when you choose to run, you activate a series of well-trodden pathways that lead from your brain to your muscles in less than a second. There are some specifics we do know though – such as which areas of your brain are responsible for various types of thoughts and decisions.



Frontal lobe
The frontal lobe is where your personality is, and where your thoughts and emotions form. Removing this or damaging it can alter your persona.

Pre-motor cortex
The pre-motor cortex is where some of your movements are co-ordinated.

Primary motor cortex
The primary motor cortex and the primary somatosensory cortex are the areas which receive sensory innervations and then co-ordinate your whole range of movements.

Parietal lobe
The parietal lobe is responsible for your complex sensory system.

Broca's area
Broca's area is where you form complex words and speech patterns.

Primary auditory complex
The primary auditory complex is right next to the ear and is where you interpret sound waves into meaningful information.

Temporal lobe
The temporal lobe decides what to do with sound information and also combines it with visual data.

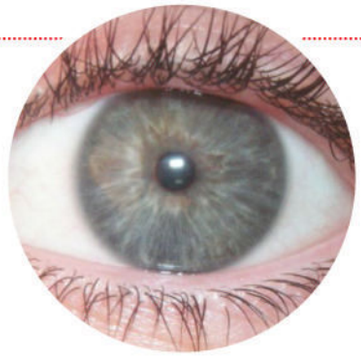
Wernicke's area
Wernicke's area is where you interpret the language you hear, and then you will form a response via Broca's area.

Occipital lobe
The occipital lobe is all the way at the back, but it interprets the light signals in your eyes into shapes and patterns.

© Dora Pete

2 In the mornings, do we wake up or open our eyes first?

Sleep is a gift from nature, which is more complex than you think. There are five stages of sleep which represent the increasing depths of sleep – when you're suddenly wide awake and your eyes spring open, it's often a natural awakening and you're coming out of rapid eye movement (REM) sleep; you may well remember your dreams. If you're coming out of a different phase, eg when your alarm clock goes off, it will take longer and you might not want to open your eyes straight away!



3 Do eyeballs grow like the rest of the body?

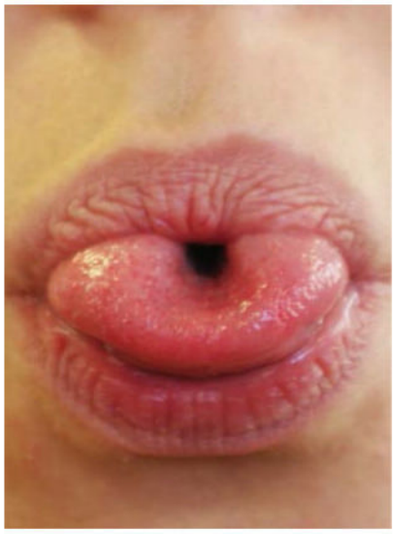
Only a small amount – hence why babies appear so beautiful, as their eyes are slightly out of proportion and so appear bigger.

4 Why do we fiddle subconsciously? I'm constantly playing with my hair

This is a behavioural response – some people play with their hair when they're nervous or bored. For the vast majority of people such traits are perfectly normal. If they begin to interfere with your life, behavioural psychologists can help – but it's extremely rare that you'll end up there.

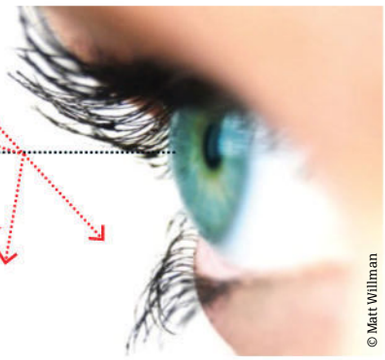
5 Why can some people roll their tongues but others can't?

Although we're often taught in school that tongue rolling is due to genes, the truth is likely to be more complex. There is likely to be an overlap of genetic factors and environmental influence. Studies on families and twins have shown that it cannot be a case of simple genetic inheritance. Ask around – the fact that some people can learn to do it suggests that in at least some people it's environmental (ie a learned behaviour) rather than genetic (inborn).



6 What is a pulse?

When you feel your own pulse, you're feeling the direct transmission of your heartbeat down an artery. You can feel a pulse where you can compress an artery against a bone, eg the radial artery at the wrist. The carotid artery can be felt against the vertebral body, but beware: a) press too hard and you can faint, b) press both at the same time and you'll cut off the blood to your brain and, as a protective mechanism, you'll definitely faint!



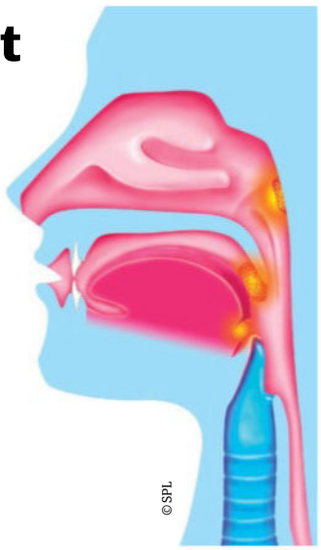
© Matt Willman

7 What's my field of vision in degrees?

The human field of vision is just about 180 degrees. The central portion of this (approximately 120 degrees) is binocular or stereoscopic – ie both eyes contribute, allowing depth perception so that we can see in 3D. The peripheral edges are monocular, meaning that there is no overlap from the other eye so we see in 2D.

8 What is the point of tonsils?

The tonsils are collections of lymphatic tissues which are thought to help fight off pathogens from the upper respiratory tract. However, they themselves can sometimes become infected – leading to tonsillitis. The ones you can see at the back of your throat are just part of the ring of tonsils. You won't miss them if they're taken out for recurrent infections as the rest of your immune system will compensate.



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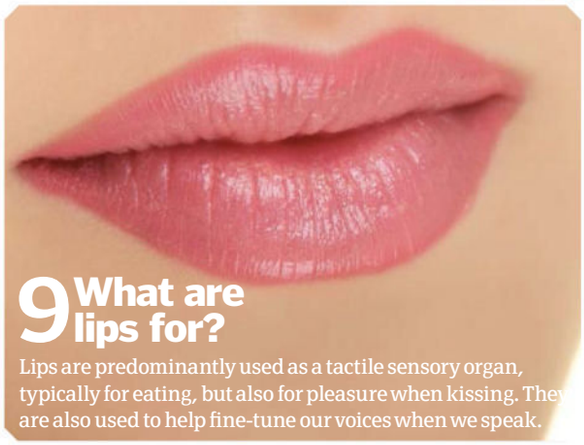
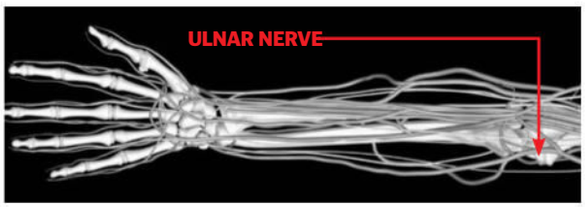


9 What are lips for?

Lips are predominantly used as a tactile sensory organ, typically for eating, but also for pleasure when kissing. They are also used to help fine-tune our voices when we speak.

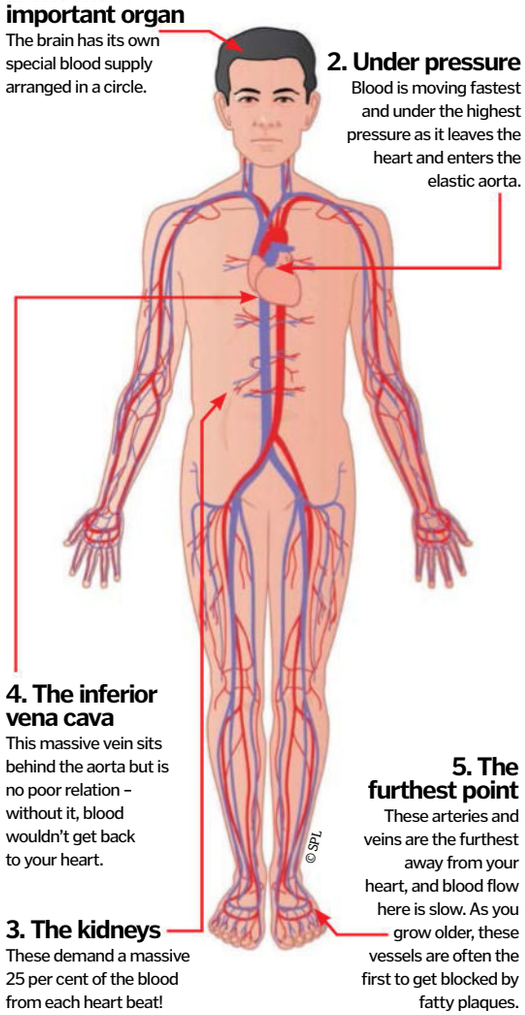
10 Why does it feel so weird when you hit your funny bone?

You're actually hitting the ulnar nerve as it wraps around the bony prominence of the 'humerus' bone, leading to a 'funny' sensation. Although not so funny as the brain interprets this sudden trauma as pain to your forearm and fingers!



11 How fast does blood travel round the human body?

Your total 'circulating volume' is about five litres. Each red blood cell within this has to go from your heart, down the motorway-like arteries, through the back-road capillary system, and then back through the rush-hour veins to get back to your heart. The process typically takes about a minute. When you're in a rush and your heart rate shoots up, the time reduces as the blood diverts from the less-important structures (eg large bowel) to the more essential (eg muscles).



© SPL

12 Why do we burp?

A burp is a natural release of gas from the stomach. This gas has either been swallowed or is the result of something you've ingested – such as a fizzy drink. The sound comes from the vibration of the oesophageal sphincter at the oesophago-gastric junction, which is the narrowest part of the gastrointestinal tract.

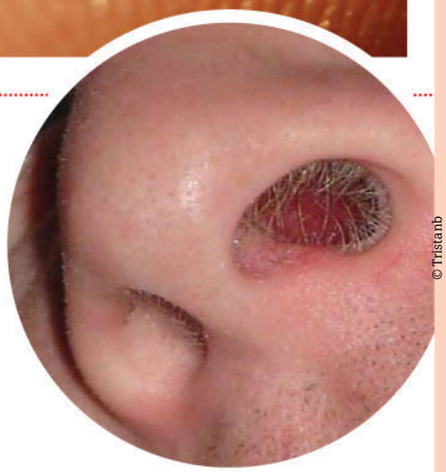
© Prettie

13 How many inches of hair does the average person grow from their head each year?

It's different for everybody – your age, nutrition, health status, genes and gender all play a role. In terms of length, anywhere between 0.5-1 inch (1.2-2.5cm) a month might be considered average, but don't be surprised if you're outside this range.

14 Why are everyone's fingerprints different?

Your fingerprints are fine ridges of skin in the tips of your fingers and toes. They are useful for improving the detection of small vibrations and to add friction for better grip. No two fingerprints are the same – either on your hands or between two people – and that's down to your unique set of genes.



© Tristanb

15 Why do we only remember some dreams?

Dreams have fascinated humans for thousands of years. Some people think they are harmless while others think they are vital to our emotional wellbeing. Most people have four to eight dreams per night which are influenced by stress, anxiety and desires, but they remember very few of them. There is research to prove that if you awake from the rapid eye movement (REM) part of your sleep cycle, you're likely to remember your dreams more clearly.

16 Why, as we get older, does hair growth become so erratic?

Hair follicles in different parts of your body are programmed by your genes to do different things, eg the follicles on your arm produce hair much slower than those on your head. Men can go bald due to a combination of genes and hormonal changes, which may not happen in other areas (eg nasal hair). It's different for everybody!

17 Why do we all have different coloured hair?

Most of it is down to the genes that result from when your parents come together to make you. Some hair colours win out (typically the dark ones) whereas some (eg blonde) are less strong in the genetic race.

18 Is it possible to keep your eyes open when you sneeze?

Your eyes remain shut as a defence mechanism to prevent the spray and nasal bacteria entering and infecting your eyes. The urban myth that your eyes will pop out if you keep them open is unlikely to happen – but keeping them shut will provide some protection against nasty bugs and viruses.

19 What gives me my personality?

Researchers have spent their whole lives trying to answer this one. Your personality forms in the front lobes of your brain, and there are clear personality types. Most of it is your environment – that is, your upbringing, education, surroundings. However some of it is genetic, although it's unclear how much. The strongest research in this comes from studying twins – what influences one set of twins to grow up and be best friends, yet in another pair, one might become a professor and the other a murderer.

20 WHY DO MEN HAVE NIPPLES?

Men and women are built from the same template, and these are just a remnant of a man's early development.

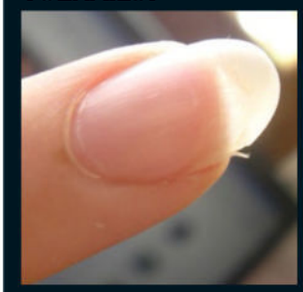
21 WHAT'S THE POINT OF EYEBROWS?

Biologically, eyebrows can help to keep sweat and rainwater from falling into your eyes. More importantly in humans, they are key aids to non-verbal communication.

22 WHAT IS A BELLY BUTTON?

The umbilicus is where a baby's blood flows through to get to the placenta to exchange oxygen and nutrients with the mother's blood. Once out, the umbilical cord is clamped several centimetres away from the baby and left to fall off. No one quite knows why you'll get an 'innie' or an 'outie' – it's probably all just luck.

23 WHY DO FINGERNAILS GROW FASTER THAN TOENAILS?



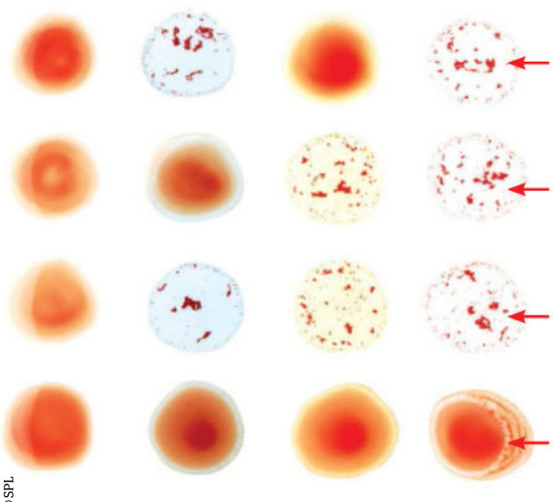
The longer the bone at the end of a digit, the faster the growth rate of the nail. However there are many other influences too – nutrition, sun exposure, activity, blood supply – and that's just to name a few.

24 WHY DOES MY ARM TINGLE AND FEEL HEAVY IF I FALL ASLEEP ON IT?

This happens because you're compressing a nerve as you're lying on your arm. There are several nerves supplying the skin of your arm and three supplying your hand (the radial, median and ulnar nerves), so depending on which part of your arm you lie on, you might tingle in your forearm, hand or fingers.

25 What makes some blood groups incompatible while others are universal?

Your blood type is determined by protein markers known as antigens on the surface of your red blood cells. You can have A antigens, B antigens, or none – in which case you're blood type O. However, if you don't have the antigen, your antibodies will attack foreign blood. If you're type A and you're given B, your antibodies attack the B antigens. However, if you're blood type AB, you can safely receive any type. Those who are blood group O have no antigens so can give blood to anyone, but they have antibodies to A and B so can only receive O back!



© SPL

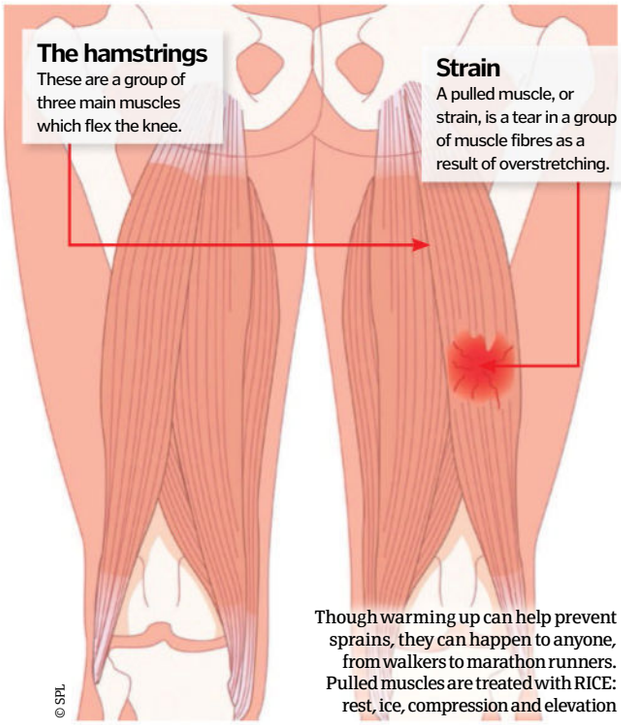
A
You have A antigens and B antibodies. You can receive blood groups A and O, but can't receive B. You can donate to A and AB.

B
You have B antigens and A antibodies. You can receive blood groups B and O, but can't receive A. You can donate to B and AB.

AB
You have A and B antigens and no antibodies. You can receive blood groups A, B, AB and O (universal recipient), and can donate to AB.

O
You have no antigens but have A and B antibodies. You can receive blood group O, but can't receive A, B or AB and can donate to all: A, B, AB and O.

26 What is a pulled muscle?



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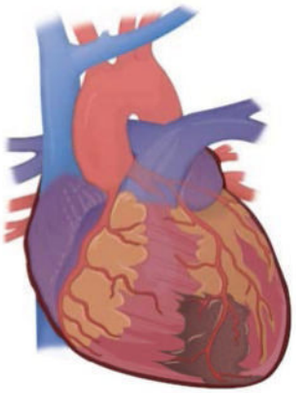
Though warming up can help prevent sprains, they can happen to anyone, from walkers to marathon runners. Pulled muscles are treated with RICE: rest, ice, compression and elevation



27 Which organ uses up the most oxygen?

The heart is the most efficient – it extracts 80 per cent of the oxygen from blood. But the liver gets the most blood – 40 per cent of the cardiac output compared to the kidneys, which get 25 per cent, and heart, which only receives 5 per cent.

28 What is the appendix? I've heard it has no use but can kill you...

The appendix is useful in cows for digesting grass and koala bears for digesting eucalyptus – koalas can have a 4m (13ft)-long appendix! In humans, however, the appendix has no useful function and is a remnant of our development. It typically measures 5-10cm (1.9-3.9in), but if it gets blocked it can get inflamed. If it isn't quickly removed, the appendix can burst and lead to widespread infection which can be lethal.

© SPL

29 Why does people's skin turn yellow if they contract liver disease?

This yellow discolouration of the skin or the whites of the eyes is called jaundice. It's due to a buildup of bilirubin in your body, when normally this is excreted in the urine (hence why urine has a yellow tint). Diseases such as hepatitis and gallstones can lead to a buildup of bilirubin due to altered physiological processes, although there are many other causes.

30 What is the gag reflex?

1. Foreign bodies
This is a protective mechanism to prevent food or foreign bodies entering the back of the throat at times other than swallowing.

2. Soft palate
The soft palate (the fleshy part of the mouth roof) is stimulated, sending signals down the glossopharyngeal nerve.

3. Vagus nerve
The vagus nerve is stimulated, leading to forceful contraction of the stomach and diaphragm to expel the object forwards.

4. The gag
This forceful expulsion leads to 'gagging', which can develop into retching and vomiting.

31 Why are we ticklish?

Light touches, by feathers, spiders, insects or other humans, can stimulate fine nerve-endings in the skin which send impulses to the somatosensory cortex in the brain. Certain areas are more ticklish – such as the feet – which may indicate that it is a defence mechanism against unexpected predators. It is the unexpected nature of this stimulus that means you can be tickled. Although you can give yourself goosebumps through light tickling, you can't make yourself laugh.

32 Why don't eyelashes keep growing?

Your eyelashes are formed from hair follicles, just like those on your head, arms and body. Each follicle is genetically programmed to function differently. Your eyelashes are programmed to grow to a certain length and even re-grow if they fall out, but they won't grow beyond a certain length, which is handy for seeing!

© shlomitg

33 What makes us left-handed?

One side of the brain is typically dominant over the other. Since each hemisphere of the brain controls the opposite side (ie the left controls the right side of your body), right-handed people have stronger left brain hemispheres. Occasionally you'll find an ambidextrous person, where hemispheres are co-dominant, and these people are equally capable with both right and left hands!

© Jeinny Solis

34 Could we survive on vitamins alone?

No, you need a diet balanced in carbohydrate, protein, fat, vitamins and minerals to survive. You can't cut one of these and expect to stay healthy. However, it's the proportions of these which keep us healthy and fit. You can get these from the five major food groups. Food charts can help with this balancing act.

35 Why do we get a high temperature when we're ill?

The immune response leads to inflammation and the release of inflammatory factors into your blood stream. These lead to an increased heart rate and blood flow, which increases your core body temperature – as if your body is doing exercise. This can lead to increased heat production and thus dehydration; for this reason, it's important to drink plenty of clear fluids when you're feeling unwell.

© Loyna

36 WHY DO SOME PEOPLE HAVE FRECKLES?

Freckles are concentrations of the dark skin pigment melanin in the skin. They typically occur on the face and shoulders, and are more common in light-skinned people. They are also a well-recognised genetic trait and become more dominant during sun-exposure.

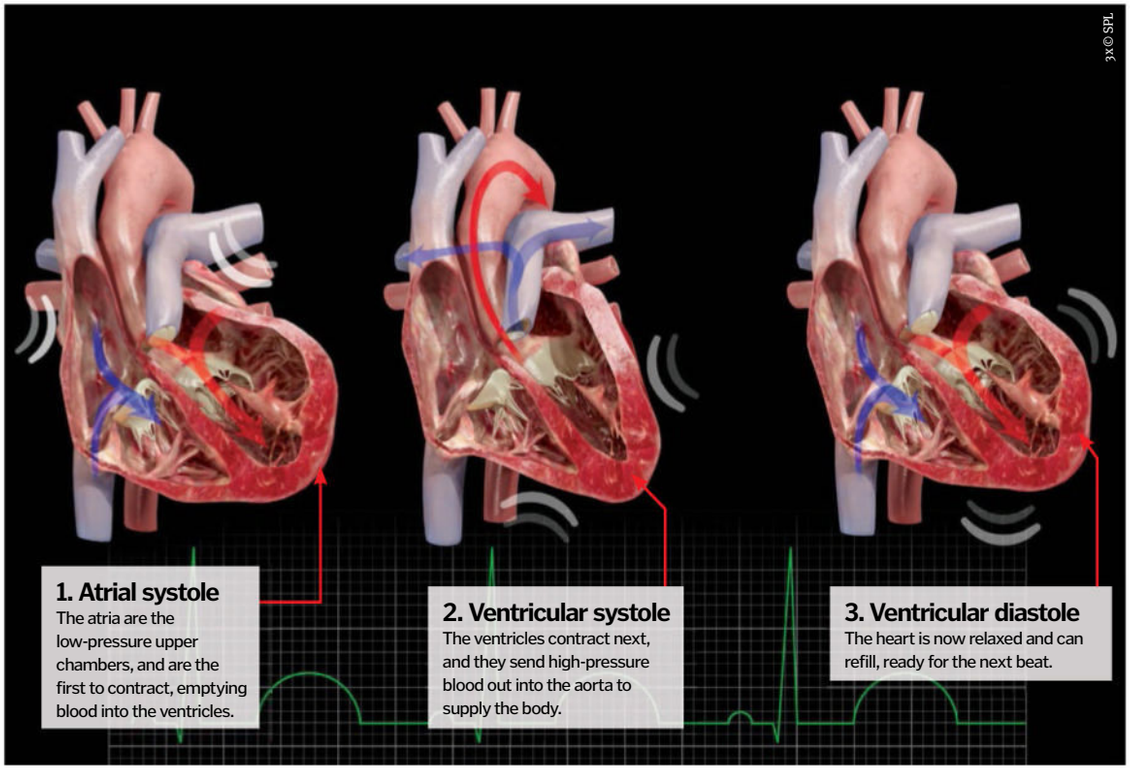
© Klaus D. Peter, Wiehl, Germany

37 WHAT IS A WART?

Warts are small, rough, round growths of the skin caused by the human papilloma virus. There are many different types which can occur in different parts of the body, and they can be contagious. They commonly occur on the hands, but can also come up anywhere from the genitals to the feet!

38 WHY DO I TWITCH IN MY SLEEP?

This is common and known in the medical world as a myoclonic twitch. Although some researchers say these twitches are associated with stress or caffeine use, they are likely to be a natural part of the sleep process. If it happens to you, it's perfectly normal.



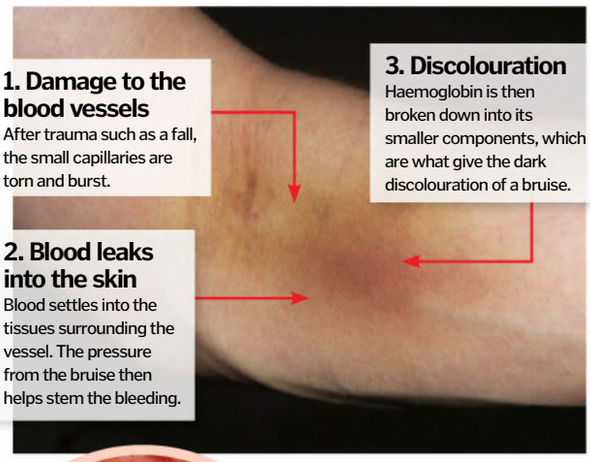
39 What triggers the heart and keeps it beating?

The heart keeps itself beating. The sinoatrial node (SAN) is in the wall of the right atrium of the heart, and is where the heartbeat starts. These beats occur due to changes in electrical currents as calcium, sodium and potassium move across membranes. The heart can beat at a rate of 60 beats per minute constantly if left alone. However – we often need it to go faster. The sympathetic nervous system sends rapid signals from the brain to stimulate the heart to beat faster when we need it to – in 'fight or flight' scenarios. If the SAN fails, a pacemaker can send artificial electrical signals to keep the heart going.

Definitions
Systole = contraction
Diastole = relaxation

40 Why do bruises go purple or yellow?

A bruise forms when capillaries under the skin leak and allow blood to settle in the surrounding tissues. The haemoglobin in red blood cells is broken down, and these by-products give a dark yellow, brown or purple discolouration depending on the volume of blood and colour of the overlying skin. Despite popular belief, you cannot age a bruise – different people's bruises change colour at different rates.



41 Why does cutting onions make us cry?

© Lali Masriera

Onions make your eyes water due to their expulsion of an irritant gas once cut. This occurs as when an onion is cut with a knife, many of its internal cells are broken down, allowing enzymes to break down amino acid sulphoxides and generate sulphenic acids. These sulphenic acids are then rearranged by another enzyme and, as a direct consequence, syn-propanethial-S-oxide gas is produced, which is volatile. This volatile gas then diffuses in the air surrounding the onion, eventually reaching the eyes of the cutter, where it proceeds to activate sensory neurons and create a stinging sensation. As such, the eyes then follow protocol and generate tears from their tear glands in order to dilute and remove the irritant. Interestingly, the volatile gas generated by cutting onions can be largely mitigated by submerging the onion in water prior to or midway through cutting, with the liquid absorbing much of the irritant.

44 Why do more men go bald than women?

'Simple' male pattern baldness is due to a combination of genetic factors and hormones. The most implicated hormone is testosterone, which men have high levels of but women have low levels of, so they win (or lose?) in this particular hormone contest!

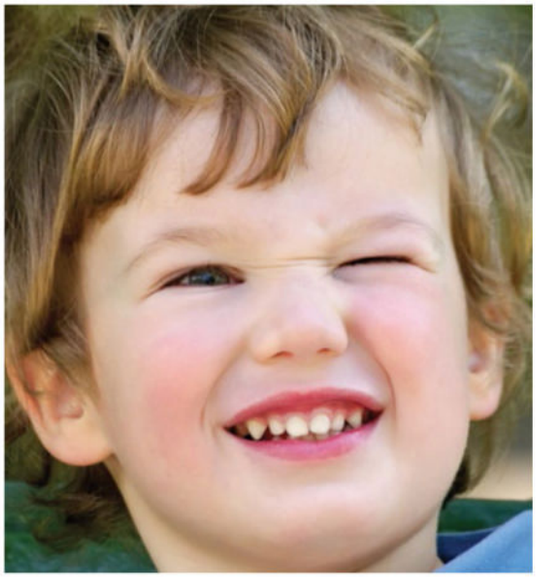
© David Benbennick

42 What is the little triangle shape on the side of the ear?

This is the tragus. It serves no major function that we know of, but it may help to reflect sounds into the ear to improve hearing.

43 When we're tired, why do we get bags under our eyes?

Blood doesn't circulate around your body as efficiently when you're asleep so excess water can pool under the eyes, making them puffy. Fatigue, nutrition, age and genes also cause bags.



45 Why do we blink?

Blinking helps keep your eyes clean and moist. Blinking spreads secretions from the tear glands (lacrimal fluids) over the surface of the eyeball, keeping it moist and also sweeping away small particles such as dust.

46 How come most people have one foot larger than the other?

Most people's feet are different sizes – in fact the two halves of most people's bodies are different! We all start from one cell, but as the cells multiply, genes give them varying characteristics.

47 Why do we get itchy?

Itching is caused by the release of a transmitter called histamine from mast cells which circulate in your body. These cells are often released in response to a stimulus, such as a bee sting or an allergic reaction. They lead to inflammation and swelling, and send impulses to the brain via nerves which causes the desire to itch.

48 Why do some hereditary conditions skip a generation?

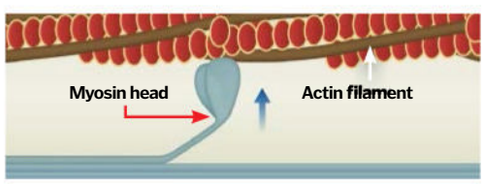
Genes work in pairs. Some genes are 'recessive' and if paired with a 'dominant' half, they won't shine through. However, if two recessive genes combine (one from your mother and one from your father), the recessive trait will show through.

49 Why do amputees sometimes still feel pain in their amputated limbs?

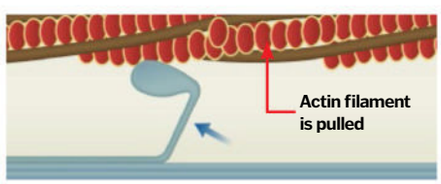
This is 'phantom limb pain' and can range from a mild annoyance to a debilitating pain. The brain can sometimes struggle to adjust to the loss of a limb, and it can still 'interpret' the limb as being there. Since the nerves have been cut, it interprets these new signals as pain. There isn't a surgical cure as yet, though time and special medications can help lessen the pain.

50 Which muscle produces the most powerful contraction relative to its size?

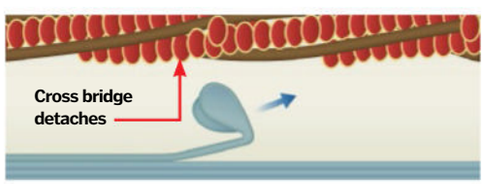
The gluteus maximus is the largest muscle and forms the bulk of your buttock. The heart (cardiac muscle) is the hardest-working muscle, as it is constantly beating and clearly can never take a break! However the strongest muscle based on weight is the masseter. This is the muscle that clenches the jaw shut – put a finger over the lowest, outer part of your jaw and clench your teeth and you'll feel it.



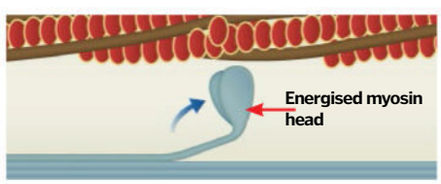
1. Taking the first step
Muscle contraction starts with an impulse received from the nerves supplying the muscle – an action potential. This action potential causes calcium ions to flood across the protein muscle fibres. The muscle fibres are formed from two key proteins: actin and myosin.



2. Preparation
The calcium binds to troponin which is a receptor on the actin protein. This binding changes the shape of tropomyosin, another protein which is bound to actin. These shape changes lead to the opening of a series of binding sites on the actin protein.



3. Binding
Now the binding sites are free on actin, the myosin heads forge strong bonds in these points. This leads to the contraction of the newly formed protein complex; when all of the proteins contract, the muscle bulk contracts.



4. Unbinding
When the energy runs out, the proteins lose their strong bonds and disengage, and from there they return to their original resting state.

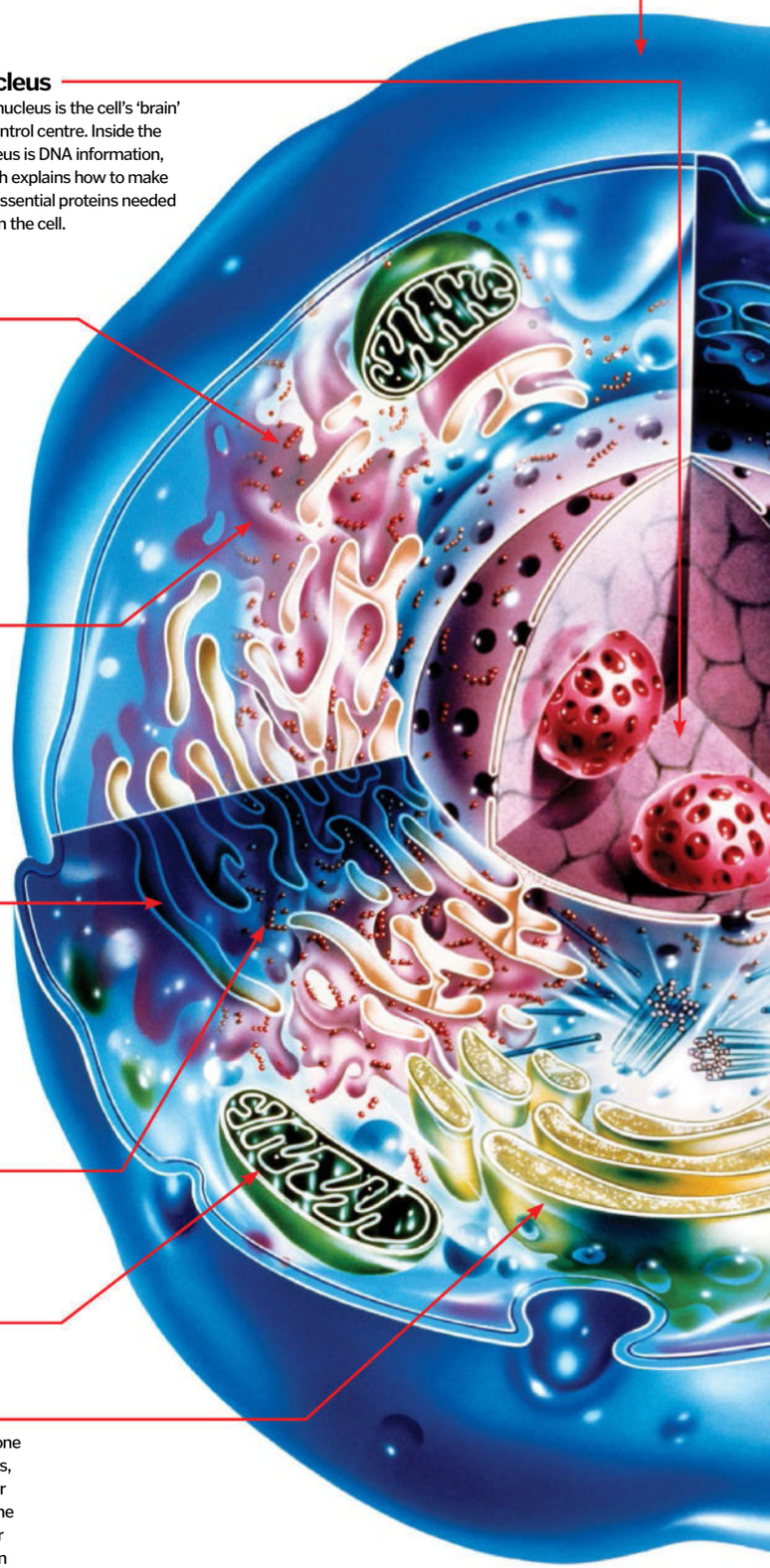
Cell structure explained

There are around 75 trillion cells in the human body, but what are they and how do they work?

Cells are life and cells are alive. You are here because every cell inside your body has a specific function and a very specialised job to do. There are many different types of cell, each one working to keep the body's various systems operating. A single cell is the smallest unit of living material in the body capable of life. When grouped together in layers or clusters, however, cells with similar jobs to do form tissue, such as skin or muscle. To keep these cells working, there are thousands of chemical reactions going on all the time.

All animal cells contain a nucleus, which acts like a control hub telling the cell what to do and contains the cell's genetic information (DNA). Most of the material within a cell is a watery, jelly-like substance called cytoplasm (cyto means cell), which circulates around the cell and is held in by a thin external membrane, which consists of two layers. Within the cytoplasm is a variety of structures called organelles, which all have different tasks, such as manufacturing proteins – the cell's key chemicals. One vital example of an organelle is a ribosome; these numerous structures can be found either floating around in the cytoplasm or attached to internal membranes. Ribosomes are crucial in the production of proteins from amino acids.

In turn, proteins are essential to building your cells and carrying out the biochemical reactions the body needs in order to grow and develop and also to repair itself and heal.



Cell membrane
Surrounding and supporting each cell is a plasma membrane that controls everything that enters and exits.

Nucleus
The nucleus is the cell's 'brain' or control centre. Inside the nucleus is DNA information, which explains how to make the essential proteins needed to run the cell.

Ribosomes
These tiny structures make proteins and can be found either floating in the cytoplasm or attached like studs to the endoplasmic reticulum, which is a conveyor belt-like membrane that transports proteins around the cell.

Endoplasmic reticulum
The groups of folded membranes (canals) connecting the nucleus to the cytoplasm are called the endoplasmic reticulum (ER). If studded with ribosomes the ER is referred to as 'rough' ER; if not it is known as 'smooth' ER. Both help transport materials around the cell but also have differing functions.

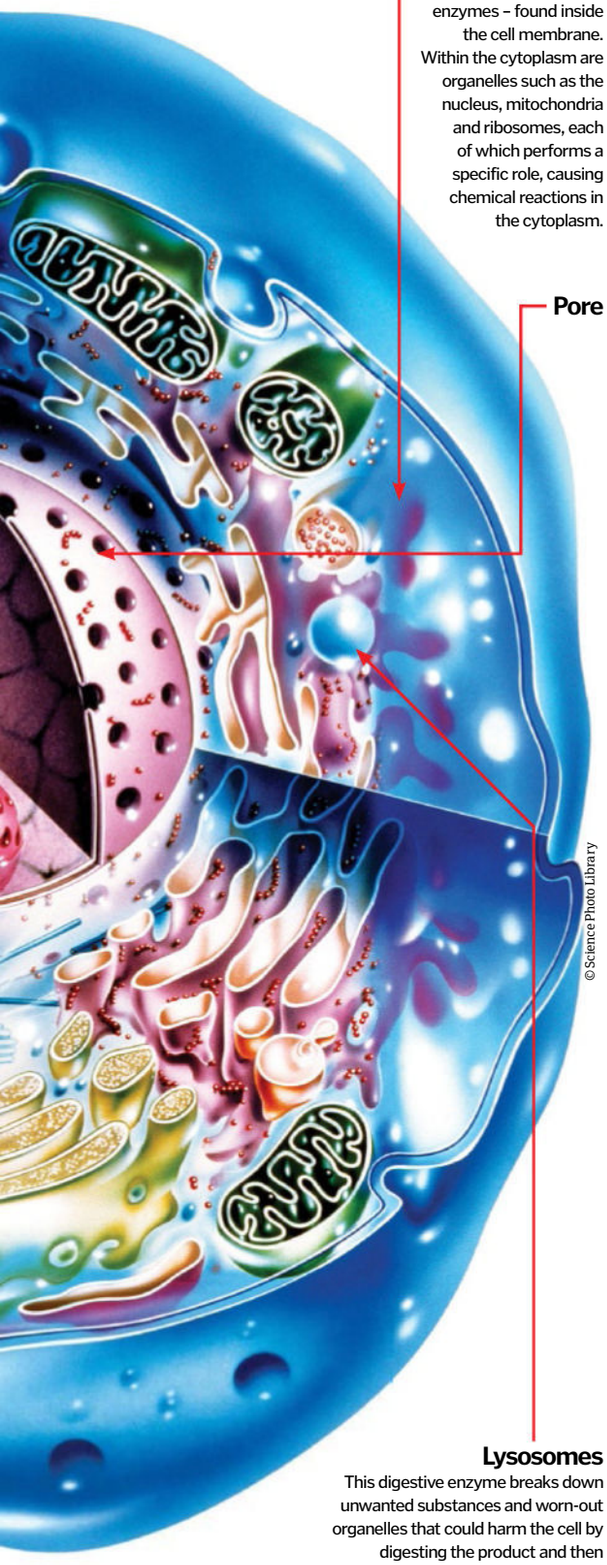
Smooth endoplasmic reticulum

Rough endoplasmic reticulum (studded with ribosomes)

Mitochondria
These organelles supply cells with the energy necessary for them to carry out their functions. The amount of energy used by a cell is measured in molecules of adenosine triphosphate (ATP). Mitochondria use the products of glucose metabolism as fuel to produce the ATP.

Golgi body
Another organelle, the Golgi body is one that processes and packages proteins, including hormones and enzymes, for transportation either in and around the cell or out towards the membrane for secretion outside the cell where it can enter the bloodstream.

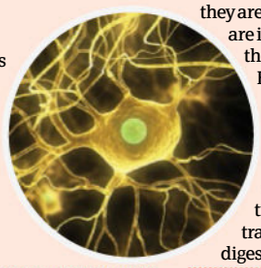
Cell anatomy



Types of human cell

So far around 200 different varieties of cell have been identified, and they all have a very specific function to perform. Discover the main types and what they do…

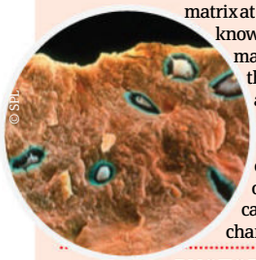
NERVE CELLS



The cells that make up the nervous system and the brain are nerve cells or neurons. Electrical messages pass between nerve cells along long filaments called axons. To cross the gaps between nerve cells (the synapse) that electrical signal is converted into a chemical signal. These cells enable us to feel sensations, such as pain, and they also enable us to move.

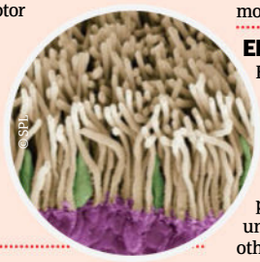
BONE CELLS

The cells that make up bone matrix – the hard structure that makes bones strong – consist of three main types. Your bone mass is constantly changing and reforming and each of the three bone cells plays its part in this process. First the osteoblasts, which come from bone marrow, build up bone mass and structure. These cells then become buried in the matrix at which point they become known as osteocytes. Osteocytes make up around 90 per cent of the cells in your skeleton and are responsible for maintaining the bone material. Finally, while the osteoblasts add to bone mass, osteoclasts are the cells capable of dissolving bone and changing its mass.



PHOTORECEPTOR CELLS

The cones and rods on the retina at the back of the eye are known as photoreceptor cells. These contain light-sensitive pigments that convert the image that enters the eye into nerve signals, which the brain interprets as pictures. The rods enable you to perceive light, dark and movement, while the cones bring colour to your world.

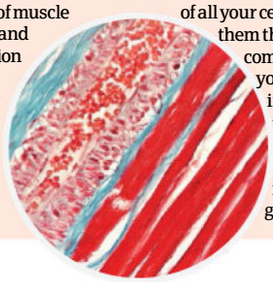


LIVER CELLS

The cells in your liver are responsible for regulating the composition of your blood. These cells filter out toxins as well as controlling fat, sugar and amino acid levels. Around 80 per cent of the liver's mass consists of hepatocytes, which are the liver's specialised cells that are involved with the production of proteins and bile.

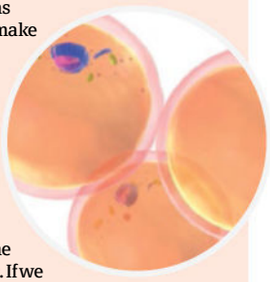
MUSCLE CELLS

There are three types of muscle cell – skeletal, cardiac and smooth – and each differs depending on the function it performs and its location in the body. Skeletal muscles contain long fibres that attach to bone. When triggered by a nerve signal, the muscle contracts and pulls the bone with it, making you move. We can control skeletal muscles because they are voluntary. Cardiac muscles, meanwhile, are involuntary, which is fortunate because they are used to keep your heart beating. Found in the walls of the heart, these muscles create their own stimuli to contract without input from the brain. Smooth muscles, which are pretty slow and also involuntary, make up the linings of hollow structures such as blood vessels and your digestive tract. Their wave-like contraction aids the transport of blood around the body and the digestion of food.



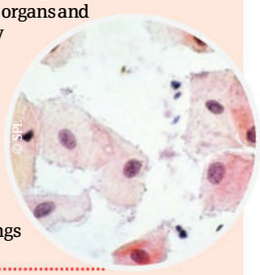
FAT CELLS

These cells – also known as adipocytes or lipocytes – make up your adipose tissue, or body fat, which can cushion, insulate and protect the body. This tissue is found beneath your skin and also surrounding your other organs. The size of a fat cell can increase or decrease depending on the amount of energy it stores. If we gain weight the cells fill with more watery fat, and eventually the number of fat cells will begin to increase. There are two types of adipose tissue: white and brown. The white adipose tissue stores energy and insulates the body by maintaining body heat. The brown adipose tissue, on the other hand, can actually create heat and isn't burned for energy – this is why animals are able to hibernate for months on end without food.



EPITHELIAL CELLS

Epithelial cells make up the epithelial tissue that lines and protects your organs and constitute the primary material of your skin. These tissues form a barrier between the precious organs and unwanted pathogens or other fluids. As well as covering your skin, you'll find epithelial cells inside your nose, around your lungs and in your mouth.



RED BLOOD CELLS

Unlike all the other cells in your body, your red blood cells (also known as erythrocytes) do not contain a nucleus. You are topped up with around 25 trillion red blood cells – that's a third of all your cells, making them the most common cell in your body. Formed in the bone marrow, these cells are important because they carry oxygen to all the tissues in your body. Oxygen is carried in haemoglobin, a pigmented protein that gives blood cells their red colour.

Inside a nucleus

Dissecting the control centre of a cell

Surrounded by cytoplasm, the nucleus contains a cell's DNA and controls all of its functions and processes such as movement and reproduction.

There are two main types of cell: eukaryotic and prokaryotic. Eukaryotic cells contain a nucleus while prokaryotic do not. Some eukaryotic cells have more than one nucleus – called multinucleate cells – occurring when fusion or division creates two or more nuclei.

At the heart of a nucleus you'll find the nucleolus; this particular area is essential in the formation of ribosomes. Ribosomes are responsible for making proteins out of amino acids which take care of growth and repair.

Being so important, the nucleus is the most protected part of the cell. In animal cells it is always located near its centre and away from the membrane to ensure it has the maximum cushioning. As well as the jelly-like cytoplasm around it, the nucleus itself is filled with nucleoplasm, a viscous liquid which maintains its structural integrity.

Conversely, in plant cells, the nucleus is more sporadically placed. This is due to the larger vacuole in a plant cell and the added protection that is granted by a cell wall.

Central command

Take a peek at what's happening inside the 'brain' of a eukaryotic cell

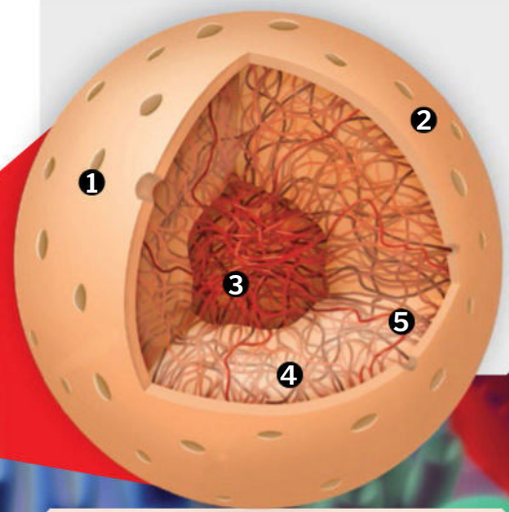
1 Nuclear pore
These channels control the movement of molecules between the nucleus and cytoplasm.

2 Nuclear envelope
Acts as a wall to protect the DNA within the nucleus and regulates cytoplasm access.

3 Nucleolus
Made up of protein and RNA, this is the heart of the nucleus which manufactures ribosomes.

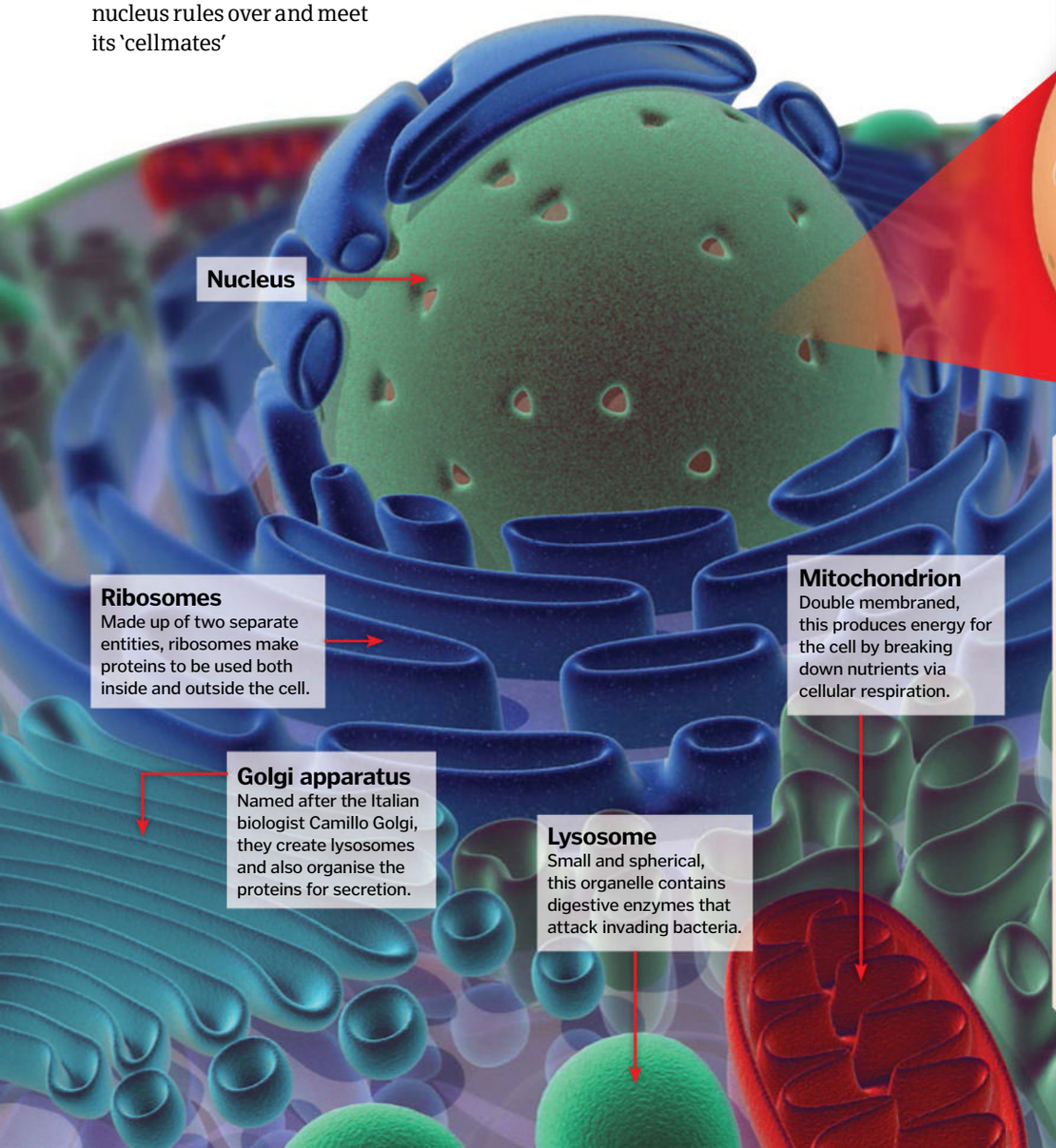
4 Nucleoplasm
This semi-liquid, semi-jelly material surrounds the nucleolus and keeps the organelle's structure.

5 Chromatin
Produces chromosomes and aids cell division by condensing DNA molecules.



Nucleus in context

Explore the larger body that a nucleus rules over and meet its 'cellmates'



How do cells survive without a nucleus?

Prokaryotic cells are much more basic than their eukaryotic counterparts. Up to 100 times smaller and mainly comprising species of bacteria, prokaryotic cells have fewer functions than other cells, so they do not require a nucleus to act as the control centre for the organism.

Instead, these cells have their DNA moving around the cell rather than being housed in a nucleus. They have no chloroplasts, no membrane-bound organelles and they don't undertake cell division in the form of mitosis or meiosis like eukaryotic cells do.

Prokaryotic cells divide asexually with DNA molecules replicating themselves in a process known as binary fission.

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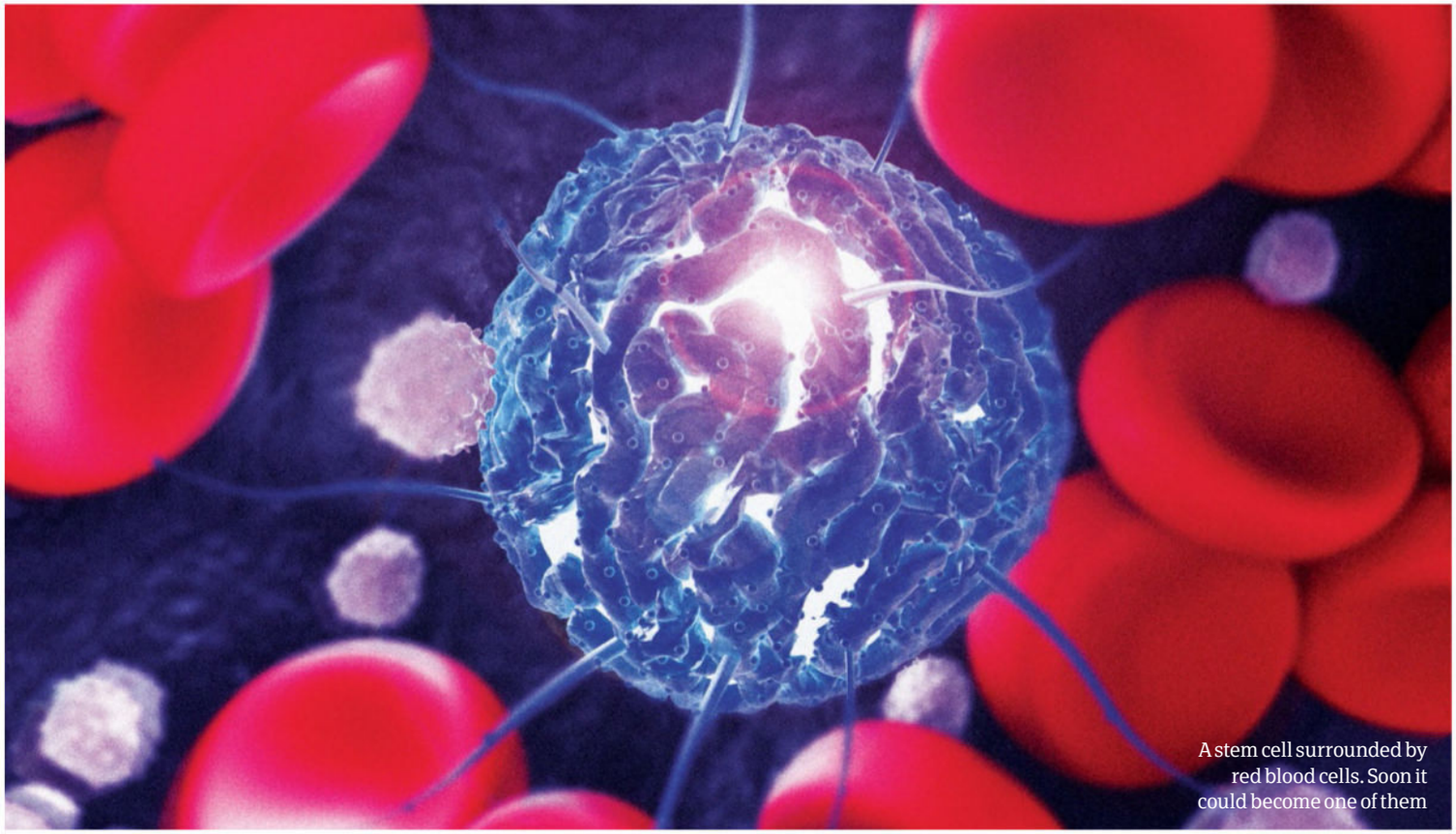


A stem cell surrounded by red blood cells. Soon it could become one of them

What are stem cells?

Understand how these building blocks bring new life

Stem cells are incredibly special because they have the potential to become any kind of cell in the body, from red blood cells to brain cells. They are essential to life and growth, as they repair tissues and replace dead cells. Skin, for example, is constantly replenished by skin stem cells.

Stem cells begin their life cycle as generic, featureless cells that don't contain tissue-specific structures, such as the ability to carry oxygen. Stem cells become specialised through a process called differentiation. This is triggered by signals inside and outside the cell. Internal signals come from strands of DNA that carry information for all cellular structures, while external signals include chemicals from nearby cells. Stem cells can replicate many times – known as proliferation – while others such as nerve cells don't divide at all.

There are two stem cell types, as Professor Paul Fairchild, co-director of the Oxford Stem Cell Institute at Oxford Martin School explains: "Adult stem cells are multipotent, which means they are able to produce numerous cells that are loosely related, such as stem cells in the bone marrow can generate cells that make up the blood," he says. "In contrast, pluripotent stem cells, found within developing embryos, are able to make any one of the estimated 210 cell types that make up the human body."

This fascinating ability to transform and divide has made stem cells a rich source for medical research. Once their true potential has been harnessed, they could be used to treat a huge range of diseases and disabilities.

Cloning cells

Scientists can reprogram cells to forget their current role and become pluripotent cells indistinguishable from early embryonic stem cells. Induced pluripotent stem cells (IPSCs) can be used to take on the characteristics of nearby cells.

IPSCs are more reliable than stem cells grown from a donated embryo because the body is more likely to accept self-generated cells. IPSCs can treat degenerative conditions such as Parkinson's disease and baldness, which are caused by cells dying without being replaced. The IPSCs fill those gaps in order to restore the body's systems.

Professor Fairchild explains, "by deriving these cells from individuals with rare conditions, we are able to model the condition in the laboratory and investigate the effects of new drugs on that disease."

Your brain

The human brain is the most mysterious – and complex – entity in the known universe

It's a computer, a thinking machine, a pink organ, and a vast collection of neurons – but how does it work? The human brain is amazingly complex – in fact, more complex than anything in the known universe. The brain effortlessly consumes power, stores memories, processes thoughts, and reacts to danger.

In some ways, the human brain is like a car engine. The fuel – which could be the sandwich you had for lunch or a sugar doughnut for breakfast – causes neurons to fire in a logical sequence and to bond with other neurons. This combination of neurons occurs incredibly fast, but the chain reaction might help you compose a symphony or recall entire passages of a book, help you pedal a bike or write an email to a friend.

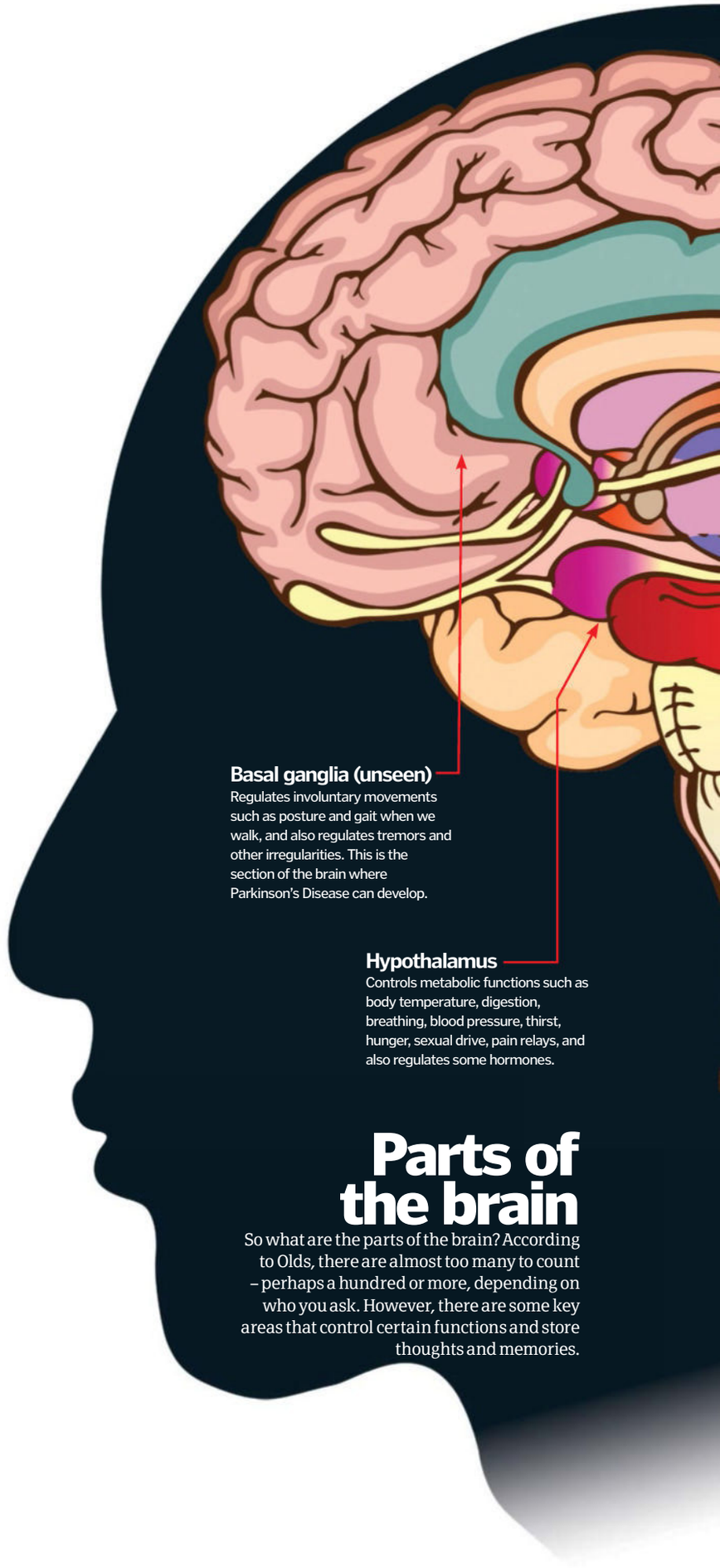
Scientists are just beginning to understand how these brain neurons work – they have not figured out how they trigger a reaction when you touch a hot stove, for example, or why you can re-generate brain cells when you work out at the gym.

The connections inside a brain are very similar to the internet – the connections are constantly exchanging information. Yet, even the internet is rather simplistic when compared to neurons. There are ten to 100 neurons, and each one makes thousands of connections. This is how the brain processes information, or determines how to move an arm and grip a surface. These calculations, perceptions, memories, and reactions occur almost instantaneously, and not just a few times per minute, but millions. According to Jim Olds, research director with George Mason University, if the internet were as complex as our solar system, then the brain would be as complex as our galaxy. In other words, we have a lot to learn. Science has not given up trying, and has made recent discoveries about how we adapt, learn new information, and can actually increase brain capability.

In the most basic sense, our brain is the centre of all input and outputs in the human body. Dr Paula Tallal, a co-director of neuroscience at Rutgers University, says the brain is constantly processing sensory information – even from infancy. "It's easiest to think of the brain in terms of inputs and outputs," says Tallal. "Inputs are sensory information, outputs are how our brain organises that information and controls our motor systems."

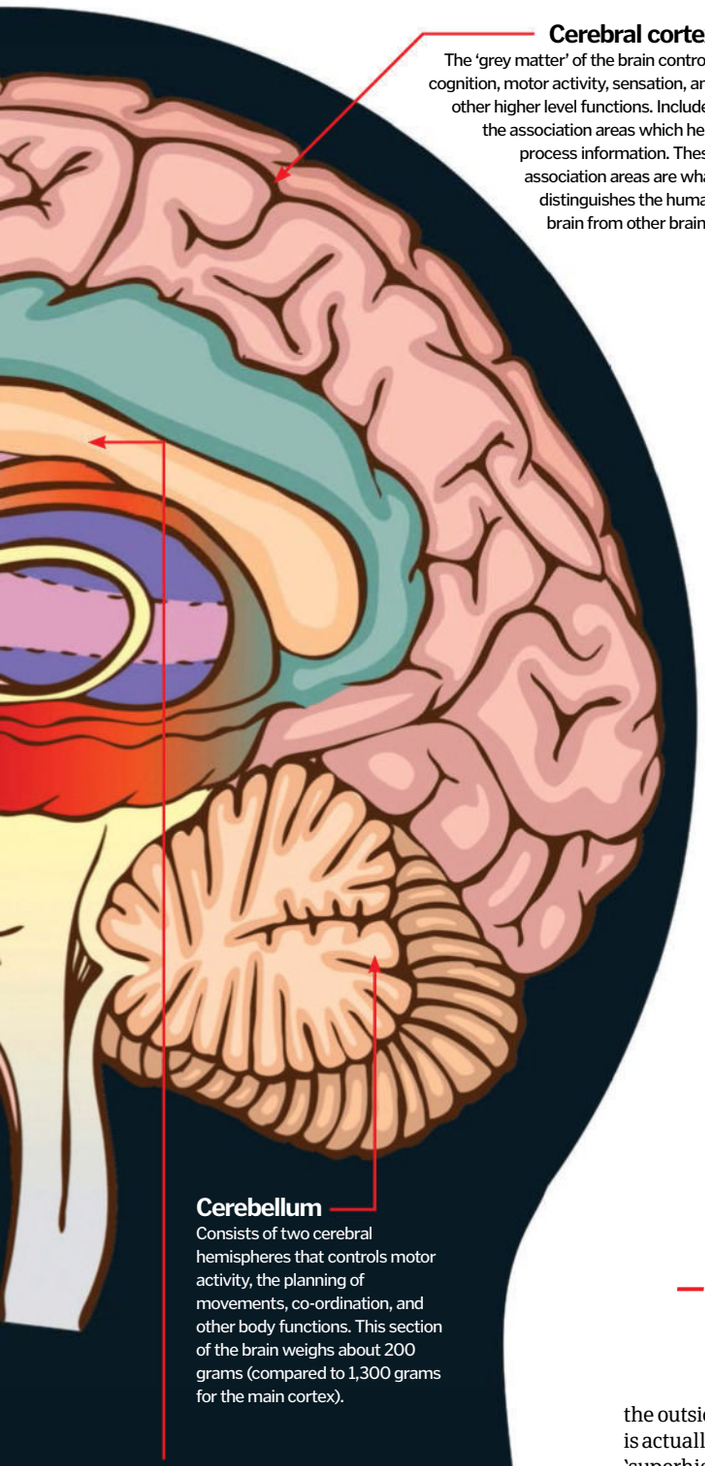
Tallal says one of the primary functions of the brain is in learning to predict what comes next. In her research for Scientific Learning, she has found that young children enjoy having the same book read to them again and again because that is how the brain registers acoustic cues that form into phonemes (sounds) to become spoken words.

"We learn to put things together so that they become smooth sequences," she says. These smooth sequences are observable in the brain, interpreting



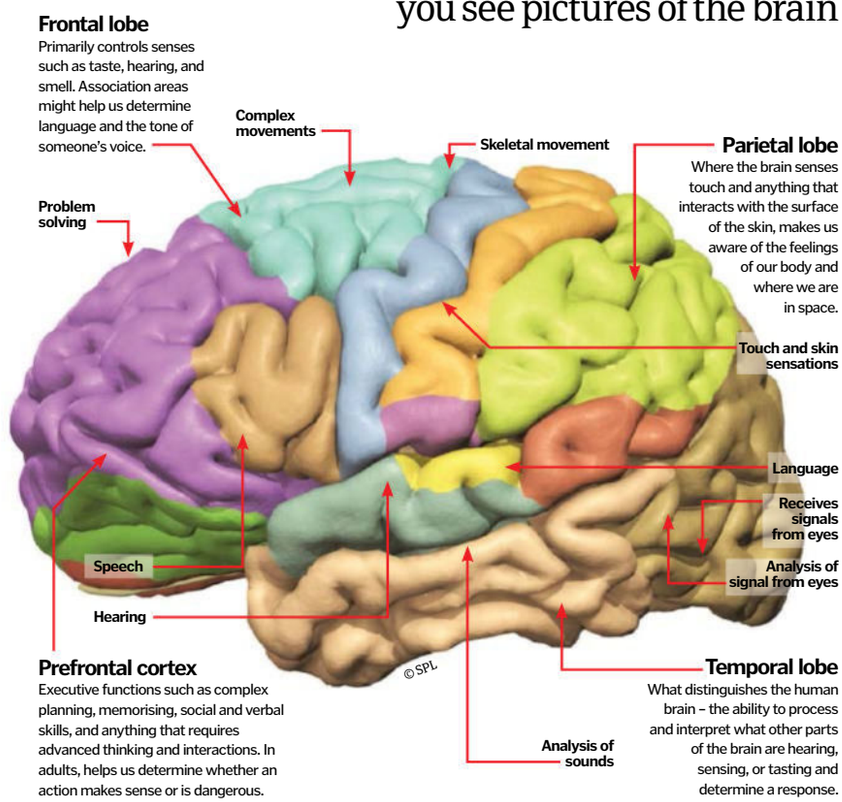
Parts of the brain

So what are the parts of the brain? According to Olds, there are almost too many to count – perhaps a hundred or more, depending on who you ask. However, there are some key areas that control certain functions and store thoughts and memories.



Functions of the cerebral cortex

The cerebral cortex is the wrinkling part of our brain that shows up when you see pictures of the brain



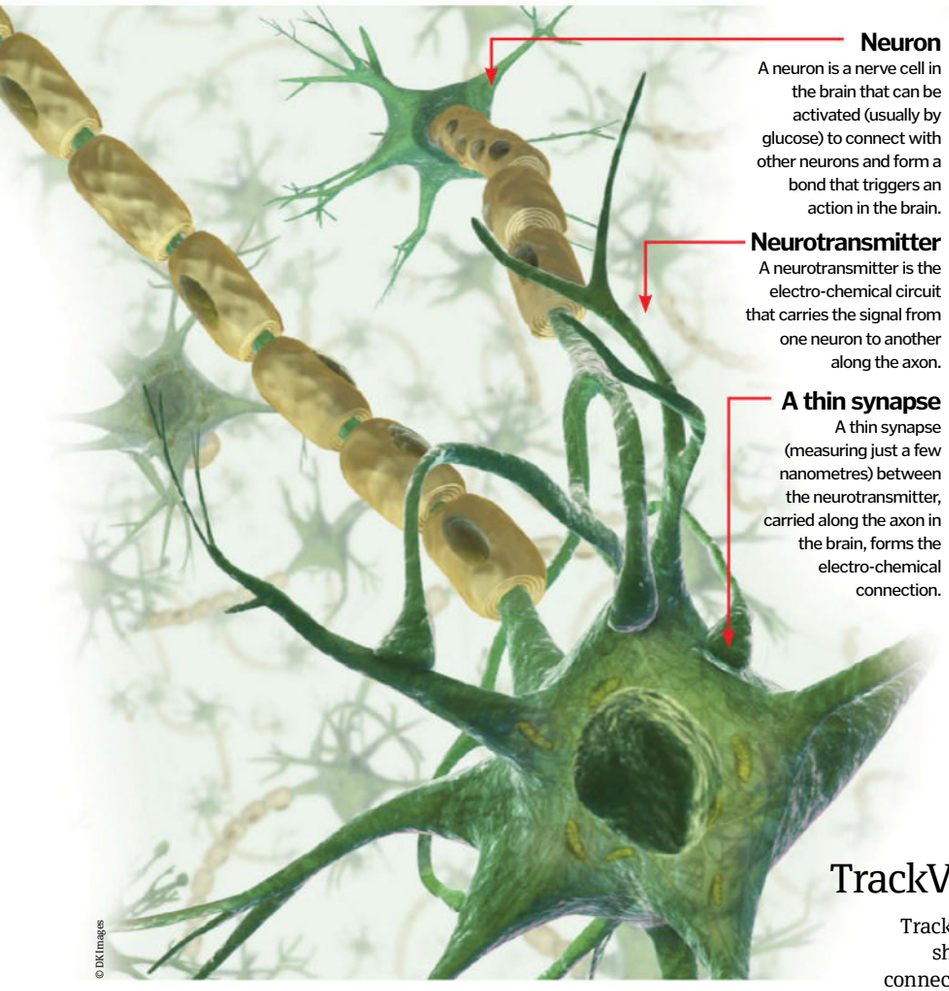
> *"In a sense, the main function of the brain is in ordering information – interpreting the outside world and making sense of it"*

the outside world and making sense of it. The brain is actually a series of interconnected 'superhighways' or pathways that move 'data' from one part of the body to another.

Tallal says another way to think about the brain is by lower and upper areas. The spinal cord moves information up to the brain stem, then up into the cerebral cortex which controls thoughts and memories. Interestingly, the brain really does work like a powerful computer in determining not only movements but registering memories that can be quickly recalled.

According to Dr Robert Melillo, a neurologist and the founder of the Brain Balance Centers (www.brainbalancecenters.com), the brain actually predetermines actions and calculates the results about a half-second before performing them (or even faster in some cases). This means that when you reach out to open a door, your brain has already predetermined how to move your elbow and clasp your hand around the door handle – maybe even simulated this movement more than once, before you even actually perform the action.

Another interesting aspect to the brain is that there are some voluntary movements and some involuntary. Some sections of the brain might control a voluntary movement – such as patting your knee to a beat. Another section controls involuntary movements, such as the gait of your walk – which is passed down from your parents. Reflexes, long-term memories, the pain reflex – these are all aspects that are controlled by sections in the brain.



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Neurons explained

Neurons fire like electrical circuits

Neurons are a kind of cell in the brain (humans have many cells in the body, including fat cells, kidney cells, and gland cells). A neuron is essentially like a hub that works with nearby neurons to generate an electrical and chemical charge. Dr Likosky of the Swedish Medical Institute says another way of thinking about neurons is that they are like a basketball and the connections (called axons) are like electrical wires that connect to other neurons. This creates a kind of circuit in the human body. Tallal explained that input from the five senses in the body cause neurons to fire.

"The more often a collection of neurons are stimulated together in time, the more likely they are to bind together and the easier and easier it becomes for that pattern of neurons to fire in synchrony as well as sequentially," says Tallal.

Brain maps

TrackVis generates unique maps of the brain

TrackVis is a free program used by neurologists to see a map of the brain that shows the fibre connections. On every brain, these neural pathways help connect one part of the brain to another so that a feeling you experience in one part of the brain can be transmitted and processed by another part of the brain (one that may decide the touch is harmful or pleasant). TrackVis uses fMRI readings on actual patients to generate the colourful and eye-catching images. To construct the maps, the program can take several hours to determine exactly how the fibres are positioning in the brain.

"The brain – a fragile organ that weighs about 1,500 grams"

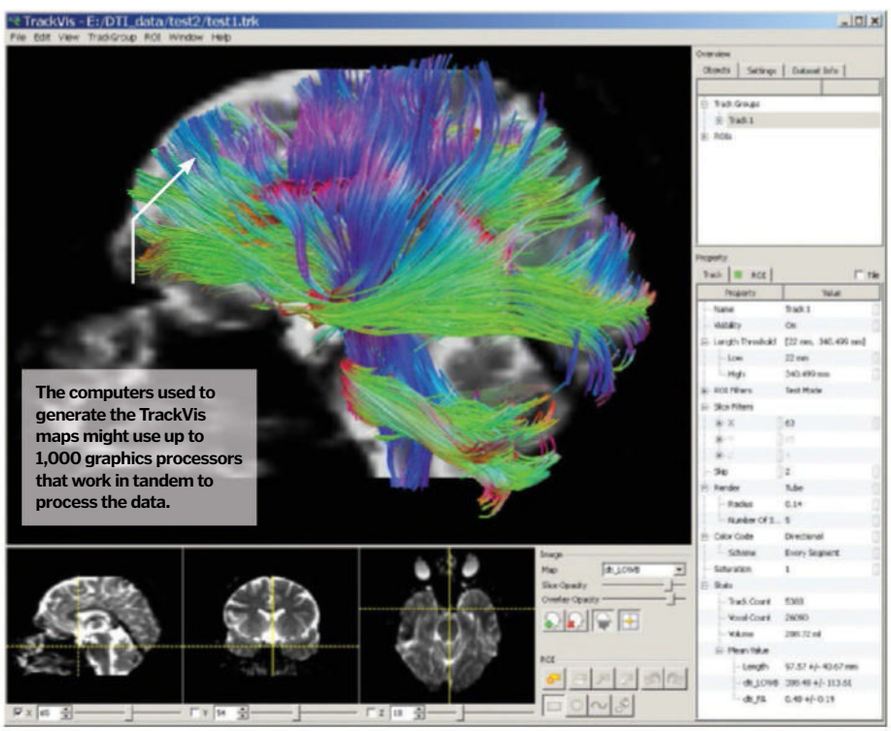
What is my brain like?

If you could hold it in your hand…

In pictures that we are all accustomed to seeing, the human brain often looks pink and spongy, with a sheen of slime. According to Dr William Likosky, a neurologist at the Swedish Medical Institute (www.swedish.org), the brain is actually quite different from what most people would immediately think it is.

Likosky described the brain as being not unlike feta cheese in appearance – a fragile organ that weighs about 1,500 grams and sags almost like a bag filled with water.

In the skull, the brain is highly protected and has hard tissue, but most of the fatty tissue in the brain – which helps pass chemicals and other substances through membranes – is considerably more delicate.



The computers used to generate the TrackVis maps might use up to 1,000 graphics processors that work in tandem to process the data.

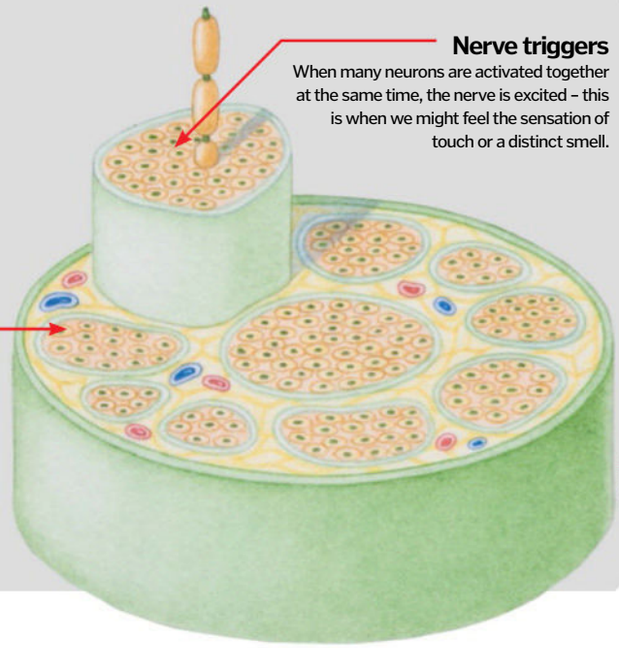
How do nerves work?

Nerves carry signals throughout the body – a chemical superhighway

Nerves are the transmission cables that carry brain waves in the human body, says Sol Diamond, an assistant professor at the Thayer School of Engineering at Dartmouth. According to Diamond, nerves communicate these signals from one point to another, whether from your toenail up to your brain or from the side of your head.

Nerve transmissions

Some nerve transmissions travel great distances through the human body, others travel short distances – both use a de-polarisation to create the circuit. De-polarisation is like a wound-up spring that releases stored energy once it is triggered.



Nerve triggers

When many neurons are activated together at the same time, the nerve is excited – this is when we might feel the sensation of touch or a distinct smell.

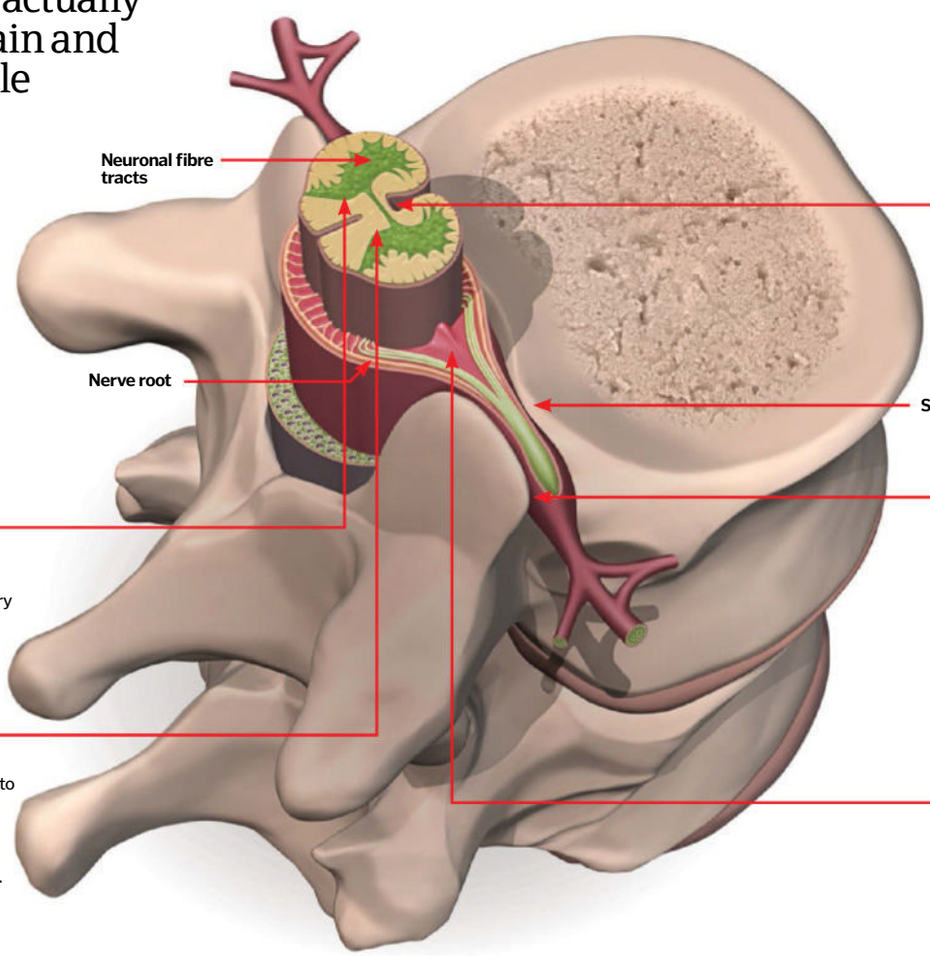
Myelinated and un-mylinated

Some nerves are myelinated (or insulated) with fatty tissue that appears white and forms a slower connection over a longer distance. Others are un-myelinated and are un-insulated. These nerves travel shorter distances.

What does the spinal cord do?

The spinal cord actually is part of the brain and plays a major role

Scientists have known for the past 100 years or so that the spinal cord is actually part of the brain. According to Melillo, while the brain has grey matter on the outside (protected by the skull) and protected white matter on the inside, the spinal cord is the reverse: the grey matter is inside the spinal cord and the white matter is outside.



Spinal cord core

In the core of the spinal cord, grey matter – like the kind in the outer layer of the brain – is for processing nerve cells such as touch, pain and movement.

Grey matter cells

Grey matter cells in the spinal cord cannot regenerate, which is why people with a serious spinal cord injury cannot recover over a period of time. White matter cells can re-generate.

White matter cells

White matter cells in the spinal cord carry the electro-chemical pulses up to the brain. For example, when you are kicked in the shin, you feel the pain in the shin and your brain then tells you to move your hand to cover that area.

Neurogenesis

According to Tallal, by repeating brain activities such as memorisation and pattern recognition, you can grow new brain cells in the spinal cord and brain.

Neuroplasticity

In the spinal cord and in the brain, cells can rejuvenate over time when you exercise and become strengthened. This process is called neuroplasticity.

Inside the human eye

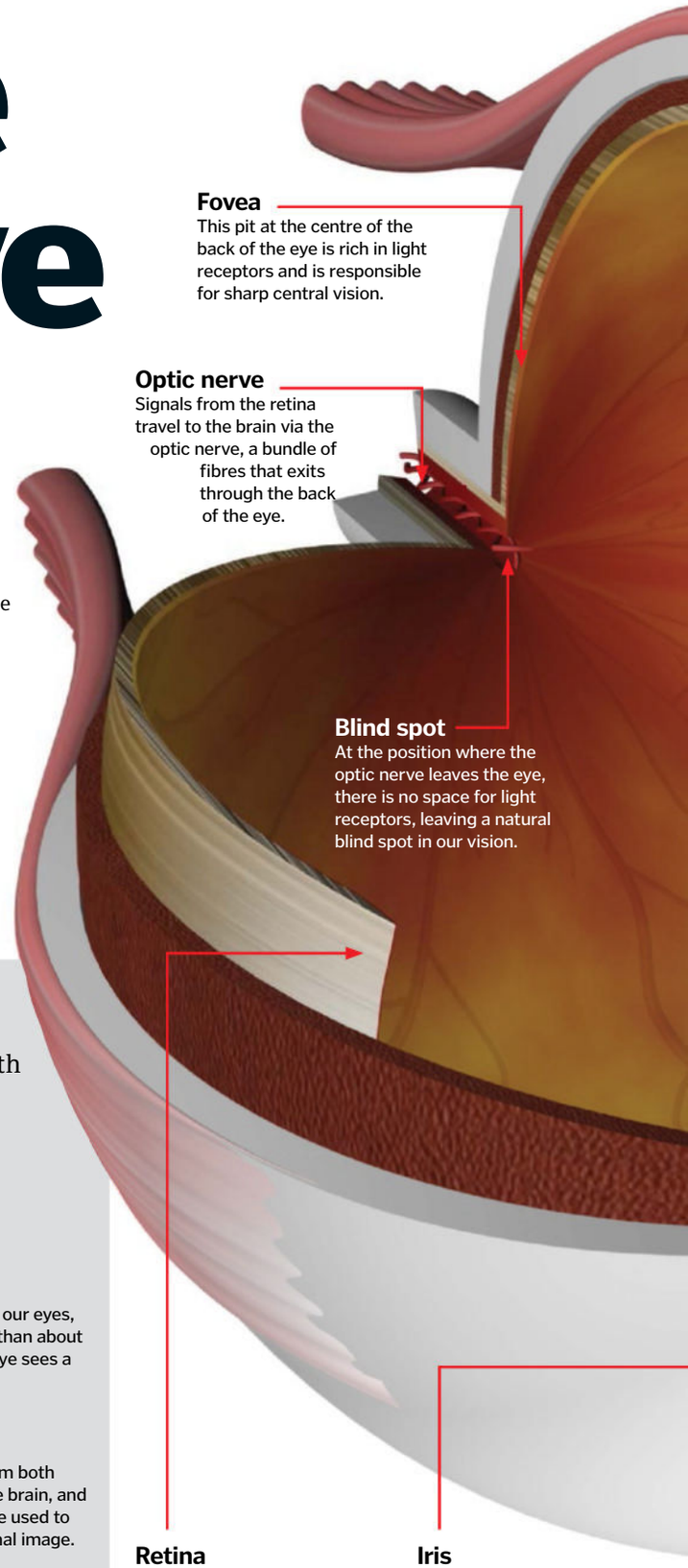
Uncovering one of the most complex constructs in the natural world

The structure of the human eye is so complex that it's hard to believe that it's not the product of intelligent design. But by looking at the eyes of other animals, scientists have shown that it evolved very gradually from a simple light-dark sensor over the course of around 100 million years.

It functions in a very similar way to a camera, with an opening through which the light enters, a lens for focusing and a light-sensitive membrane at the back.

The amount of light that enters the eye is controlled by the circular and radial muscles in the iris, which contract and relax to alter the size of the pupil. The light first passes through a tough protective sheet called the cornea, and then moves into the lens. This adjustable structure bends the light, focusing it down to a point on the retina, at the back of the eye.

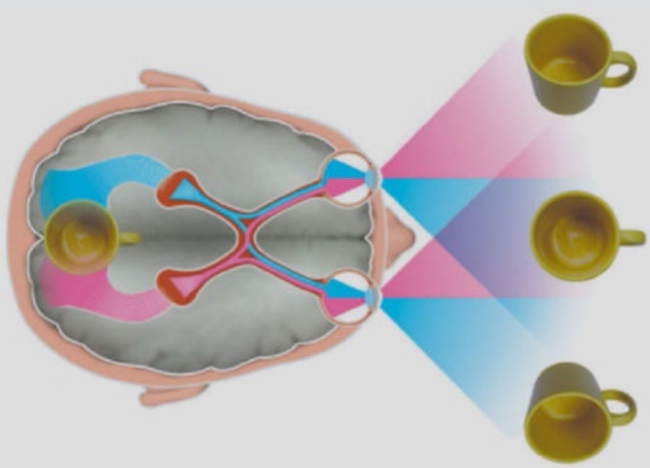
The retina is covered in millions of light-sensitive receptors known as rods and cones. Each receptor contains pigment molecules, which change shape when they are hit by light, triggering an electrical message that travels to the brain via the optic nerve.



Seeing in three dimensions

Each eye sees a slightly different image, allowing the brain to perceive depth

Our eyes are only able to produce two-dimensional images, but with some clever processing, the brain is able to build these flat pictures into a three-dimensional view. Our eyes are positioned about five centimetres (two inches) apart, so each sees the world from a slightly different angle. The brain compares the two pictures, using the differences to create the illusion of depth.



Individual image
Due to the positioning of our eyes, when objects are closer than about 5.5m (18ft) away, each eye sees a slightly different angle.

Combined image
The incoming signals from both eyes are compared in the brain, and the subtle differences are used to create a three-dimensional image.

Try it for yourself
By holding your hand in front of your face and closing one eye at a time, it is easy to see the different 2D views perceived by each eye.

Ciliary body
This tissue surrounds the lens and contains the muscles responsible for changing its shape.

Sclera
A tough white membrane known as the sclera helps to maintain the eye's spherical shape.

Lens
The lens is responsible for focusing the light, and can change shape to accommodate objects near and far from the eye.

Pupil
The pupil is a hole that allows light to reach the back of the eye.

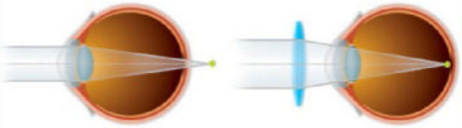
Cornea
The pupil and iris are covered in a tough, transparent membrane, which provides protection and contributes to focusing the light.

Vision problems

The most common problems with our eyesight

Farsightedness (hyperopia)

If the eye is too short, the cornea is too flat, or if the lens sits too far back, incoming light is focused behind the retina, making nearby objects appear blurry, particularly in the dark.



Nearsightedness (myopia)

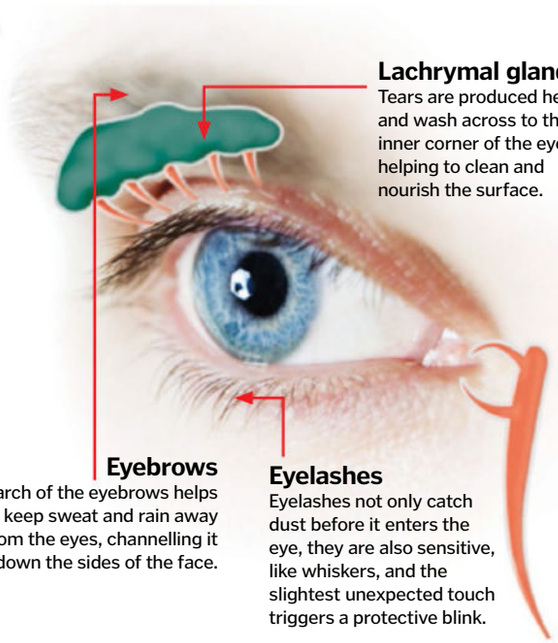
If the eye is too long, or the cornea and lens are too curved, the light is focused before it hits the back of the eye, and then starts to defocus again as it reaches the retina, making distant objects difficult to see.

Colour-blindness

This rare condition is often linked to a gene on the X-chromosome and occurs more commonly in men than in women. A defect in the cone cells of the eye reduces the number of colours that can be detected.

Protection

The eyes are shielded by several layers of protection. They are almost completely encased in bone at the back and insulated from shock by layers of muscle and connective tissue. The front is kept moist with tears and are constantly wiped by the blinking of the eyelids, while the hairs of the eyebrows and eyelashes catch any debris that might fall in.



Lachrymal gland
Tears are produced here and wash across to the inner corner of the eye, helping to clean and nourish the surface.

Eyebrows
The arch of the eyebrows helps to keep sweat and rain away from the eyes, channelling it down the sides of the face.

Eyelashes
Eyelashes not only catch dust before it enters the eye, they are also sensitive, like whiskers, and the slightest unexpected touch triggers a protective blink.

How ears work

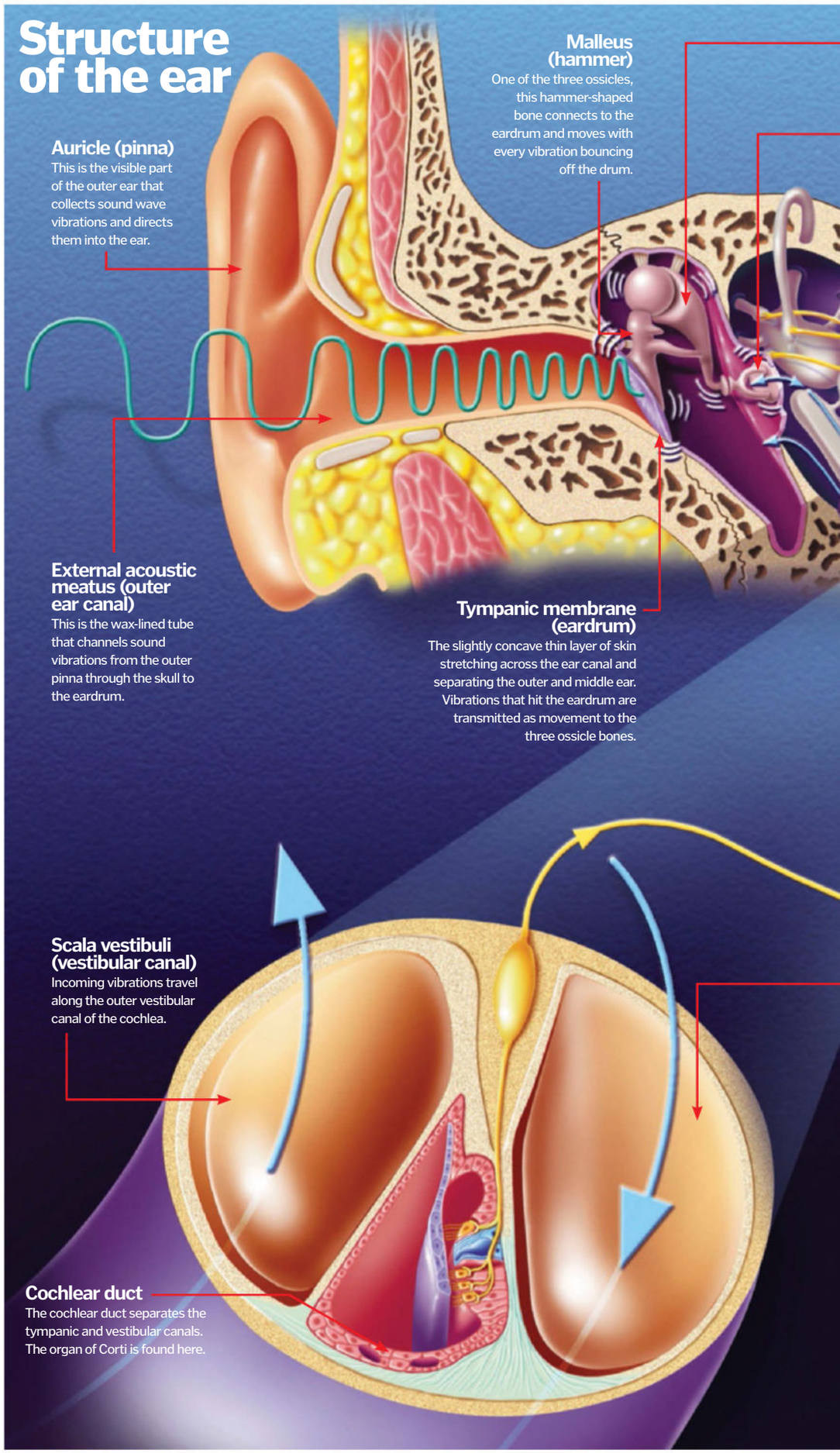
The human ear performs a range of functions, sending messages to the brain when a sound is made while also providing your body with a sense of balance

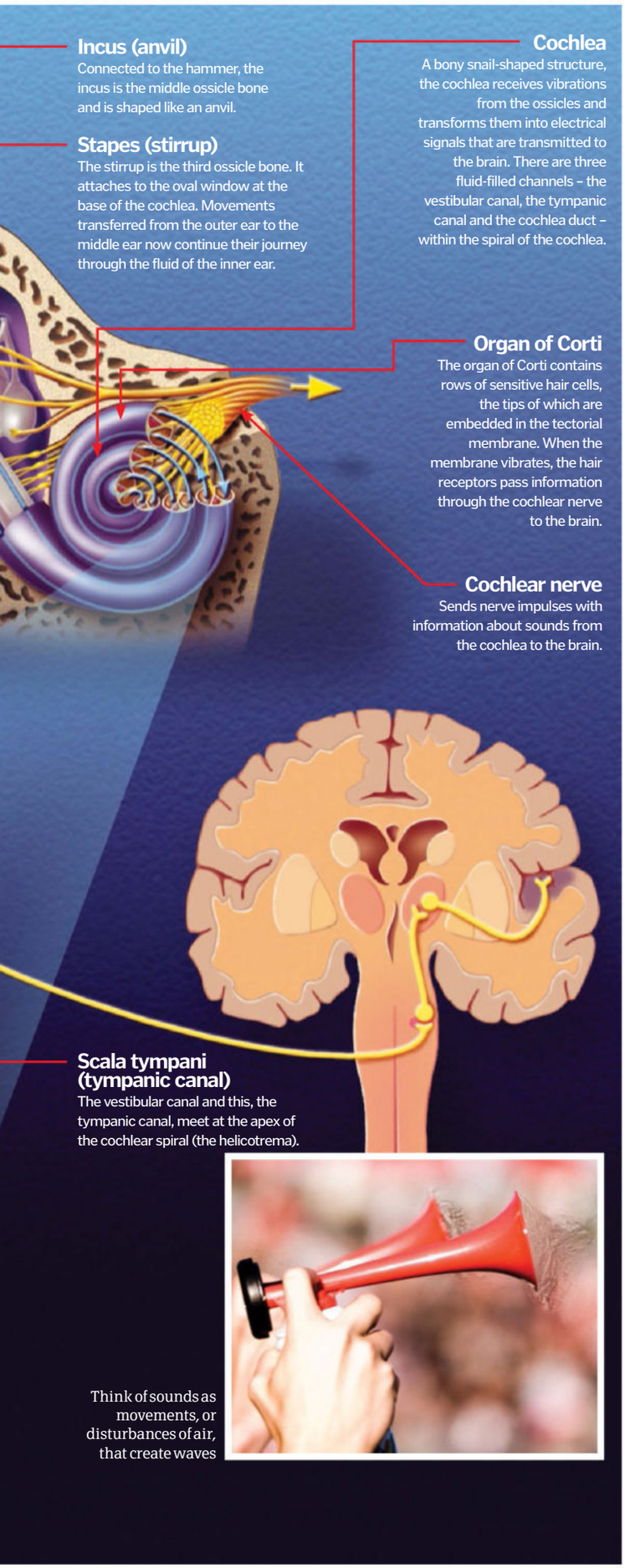
The thing to remember when learning about the human ear is that sound is all about movement. When someone speaks or makes any kind of movement, the air around them is disturbed, creating a sound wave of alternating high and low frequency. These waves are detected by the ear and interpreted by the brain as words, tunes or sounds.

Consisting of air-filled cavities, labyrinthine fluid-filled channels and highly sensitive cells, the ear has external, middle and internal parts. The outer ear consists of a skin-covered flexible cartilage flap called the 'auricle', or 'pinna'. This feature is shaped to gather sound waves and amplify them before they enter the ear for processing and transmission to the brain. The first thing a sound wave entering the ear encounters is the sheet of tightly pulled tissue separating the outer and middle ear. This tissue is the eardrum, or tympanic membrane, and it vibrates as sound waves hit it.

Beyond the eardrum, in the air-filled cavity of the middle ear, are three tiny bones called the 'ossicles'. These are the smallest bones in your body. Sound vibrations hitting the eardrum pass to the first ossicle, the malleus (hammer). Next the waves proceed along the incus (anvil) and then on to the (stapes) stirrup. The stirrup presses against a thin layer of tissue called the 'oval window', and this membrane enables sound waves to enter the fluid-filled inner ear.

The inner ear is home to the cochlea, which consists of watery ducts that channel the vibrations, as ripples, along the cochlea's spiralling tubes. Running through the middle of the cochlea is the organ of Corti, which is lined with minute sensory hair cells that pick up on the vibrations and generate nerve impulses that are sent to the brain as electrical signals. The brain can interpret these signals as sounds.





Think of sounds as movements, or disturbances of air, that create waves

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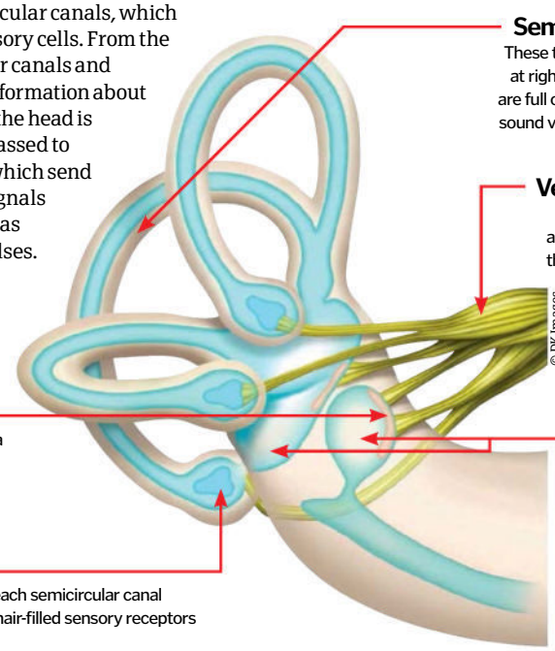
The vestibular system

Inside the inner ear are the vestibule and semicircular canals, which feature sensory cells. From the semicircular canals and maculae, information about which way the head is moving is passed to receptors, which send electrical signals to the brain as nerve impulses.



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A sense of balance

The vestibular system functions to give you a sense of which way your head is pointing in relation to gravity. It enables you to discern whether your head is upright or not, as well as helping you to maintain eye contact with stationary objects while your head is turning.

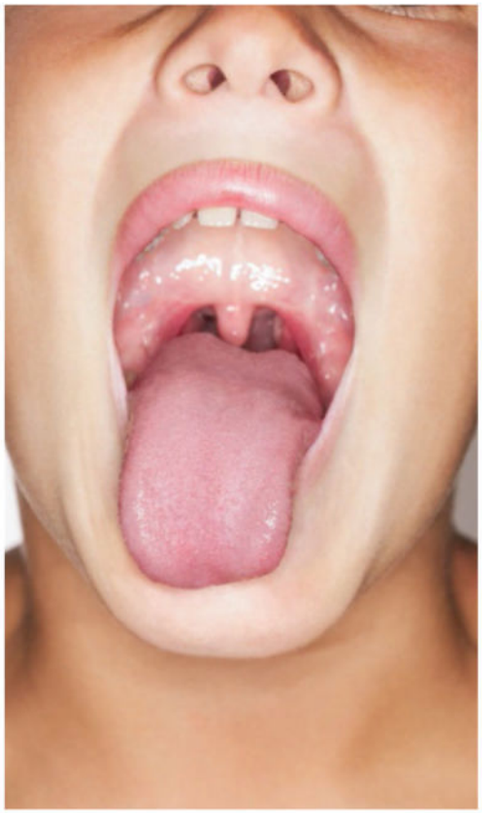
Also located within the inner ear, but less to do with sound and more concerned with the movement of your head, are the semicircular canals. Again filled with fluid, these looping ducts act like internal accelerometers that can detect acceleration (ie, movement of your head) in three different directions due to the positioning of the loops along different planes. Like the organ of Corti, the semicircular canals employ tiny hair cells to sense movement. The canals are connected to the auditory nerve at the back of the brain.

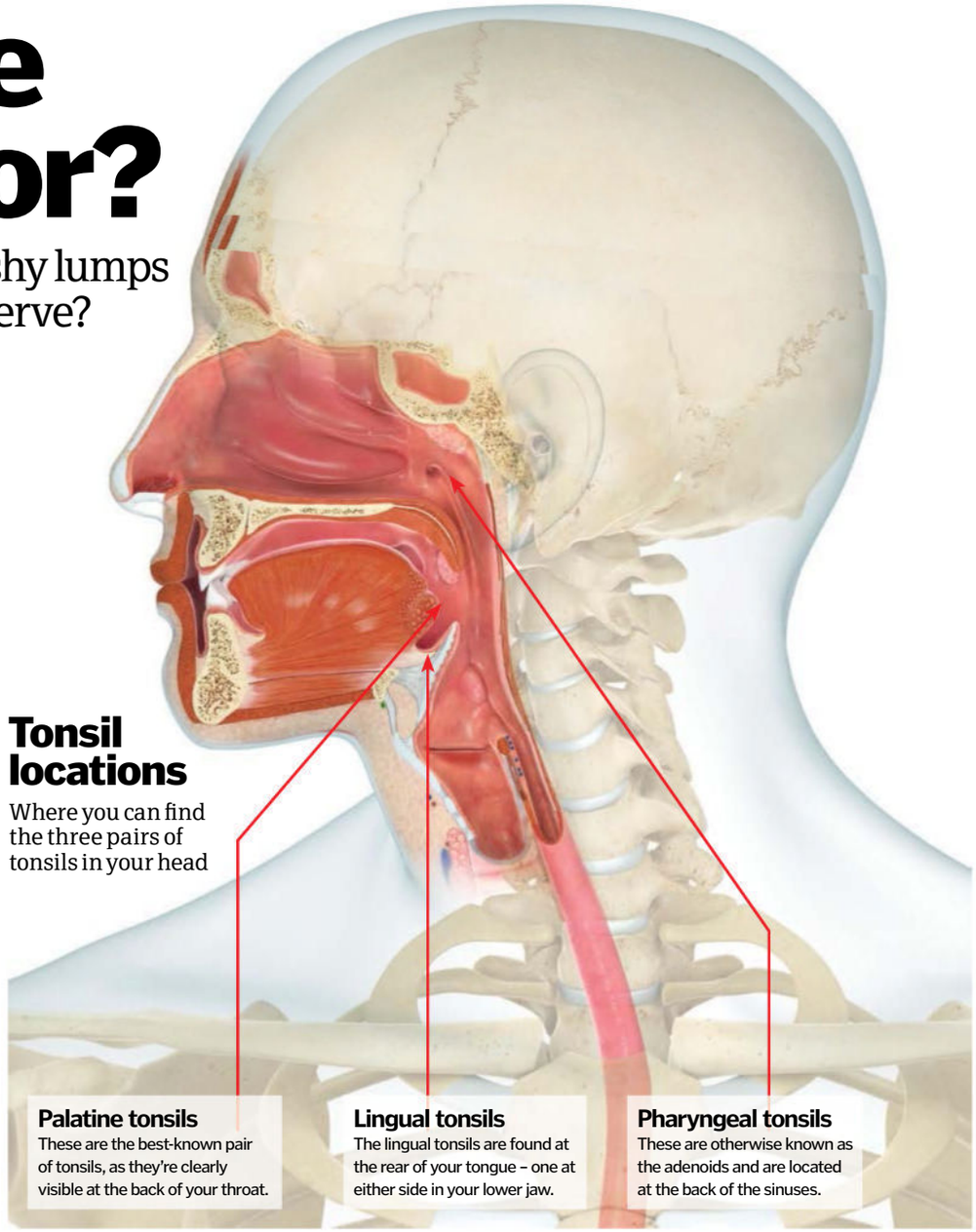
Your sense of balance is so complex that the area of your brain that's dedicated to this one role involves the same number of cells as the rest of your brain cells put together.

The surfer's semicircular canals are as crucial as his feet when it comes to staying on his board

What are tonsils for?

What purpose do these fleshy lumps in the back of our throats serve?





Tonsil locations

Where you can find the three pairs of tonsils in your head

Tonsils are the small masses of flesh found in pairs at the back of the throats of many mammals. In humans the word is actually used to describe three sets of this spongy lymphatic tissue: the lingual tonsils, the pharyngeal tonsils and the more commonly recognised palatine tonsils.

The palatine tonsils are the oval bits that hang down from either side at the back of your throat – you can see them if you look in the mirror. Although the full purpose of the palatine tonsils isn't yet understood, because they produce antibodies and because of their prominent position in the throat, they're thought to be the first line of defence against potential infection in both the respiratory and digestive tracts.

The pharyngeal tonsils are also known as the adenoids. These are found tucked away in the nasal pharynx and serve a similar purpose to the palatine tonsils but shrink in adulthood.

The lingual tonsils are found at the back of the tongue towards the root and, if you poke your tongue right out, you should spot them. These are drained very efficiently by mucous glands so they very rarely get infected.

Lots of bed rest, fluids and pain relief like paracetamol are all recommended for treating tonsillitis

Tonsillitis in focus

Tonsillitis is caused by certain bacteria (eg group A beta-haemolytic streptococci), and sometimes viral infections, that result in a sore and swollen throat, a fever, white spots at the back of the throat and difficulty swallowing. Usually rest and antibiotics will see it off, but occasionally the infection can cause serious problems or reoccur very frequently. In these cases, a tonsillectomy may be considered,where the tonsils are removed.

The adenoids are less commonly infected but, when they are, they become inflamed, obstruct breathing through the nose and interfere with drainage from the sinuses, which can lead to further infections. In younger people, constant breathing through the mouth can stress the facial bones and cause deformities as they grow, which is why children will sometimes have their adenoid glands removed.

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How do humans speak?

The vocal cords and larynx in particular have evolved over time to enable humans to produce a dramatic range of sounds in order to communicate – but how do they work?

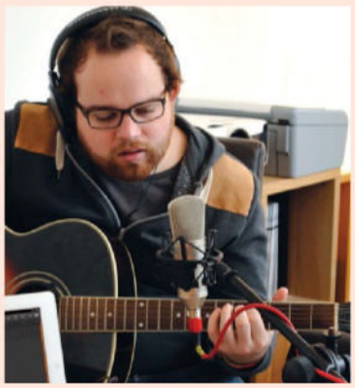
Vocal cords, also known as vocal folds, are situated in the larynx, which is placed at the top of the trachea. They are layers of mucous membranes that stretch across the larynx and control how air is expelled from the lungs in order to make certain sounds. The primary usage of vocal cords within humans is to communicate and it is hypothesised that human vocal cords actually developed to the extent we see now to facilitate advanced levels of communication in response to the formation of social groupings during phases of primate, and specifically human, evolution.

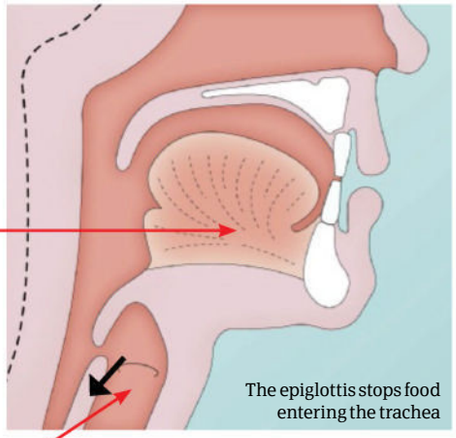
As air is expelled from the lungs, the vocal folds vibrate and collide to produce a range of sounds. The type of sound emitted is effected by exactly how the folds collide, move and stretch as air passes over them. An individual 'fundamental frequency' is determined by the length, size and tension of their vocal cords. Movement of the vocal folds is controlled by the vagus nerve, and sound is then further fine-tuned to form words and sounds that we can recognise by the larynx, tongue and lips. Fundamental frequency in males averages at 125Hz, and at 210Hz in females. Children have a higher average pitch at around 300Hz.

Differences between male and female vocal cords

Male voices are often much lower than female voices. This is primarily due to the different size of vocal folds present in each sex, with males having larger folds that create a lower pitched sound, and females having smaller folds that create a higher pitch sound. The average size for male vocal cords are between 17 and 25mm, and females are normally between 12.5 and 17.5mm. From the range in size, however, males can be seen to have quite high pitch voices, and females can have quite low pitch voices.

The other major biological difference that effects pitch is that males generally have a larger vocal tract, which can further lower the tone of their voice independent of vocal cord size. The pitch and tone of male voices has been studied in relation to sexual success, and individuals with lower voices have been seen to be more successful in reproduction. The reason proposed for this is that a lower tone voice may indicate a higher level of testosterone present in a male.

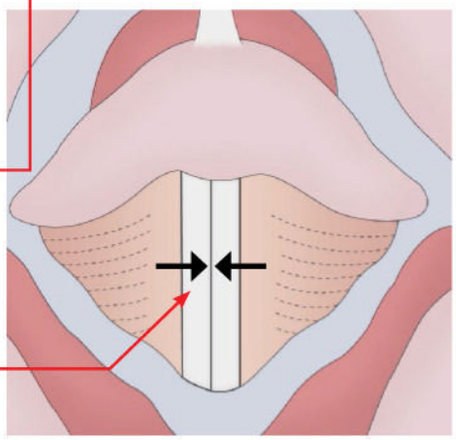




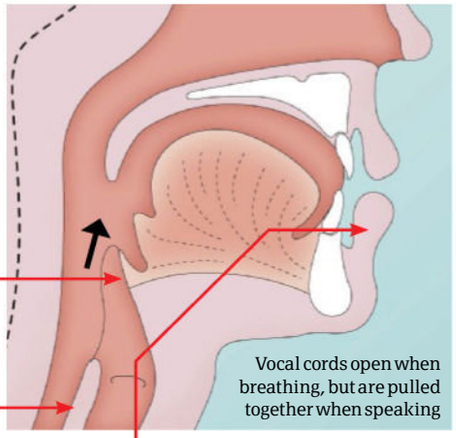
The epiglottis stops food entering the trachea

Tongue
This muscle, situated in the mouth, can affect and change sound as it travels up from the vocal cords and out through the mouth.

Trachea
The vocal cords are situated at the top of the trachea, which is where air from the lungs travels up through from the chest.



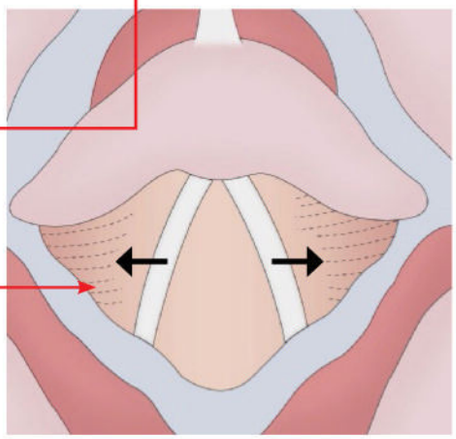
Vocal cords
These layers of mucous membranes stretch across the larynx and they open, close and vibrate to produce different sounds.



Vocal cords open when breathing, but are pulled together when speaking

Epiglottis
This is a flap of skin that shuts off the trachea when an individual is swallowing food. It stops food and liquids 'going down the wrong way'.

Oesophagus
This tube, situated behind the trachea, is where food and liquid travels down to the stomach.



Lips
Lips are essential for the production of specific sounds, like 'b' or 'p'.

Larynx
Known as the voice box, this protects the trachea and is heavily involved in controlling pitch and volume. The vocal cords are situated within the larynx.

The biological structures that are so versatile they enable us to eat a well varied diet

All about teeth

The trouble with teeth

Tooth decay, also often known as dental caries, affects the enamel and dentine of a tooth, breaking down tissue and creating fissures in the enamel. Two types of bacteria – namely Streptococcus mutans and Lactobacillus – are responsible for tooth decay.

Tooth decay occurs after repeated contact with acid-producing bacteria. Environmental factors have a strong effect. Sucrose, fructose and glucose cause problems, and diet is a factor in maintaining good oral health.

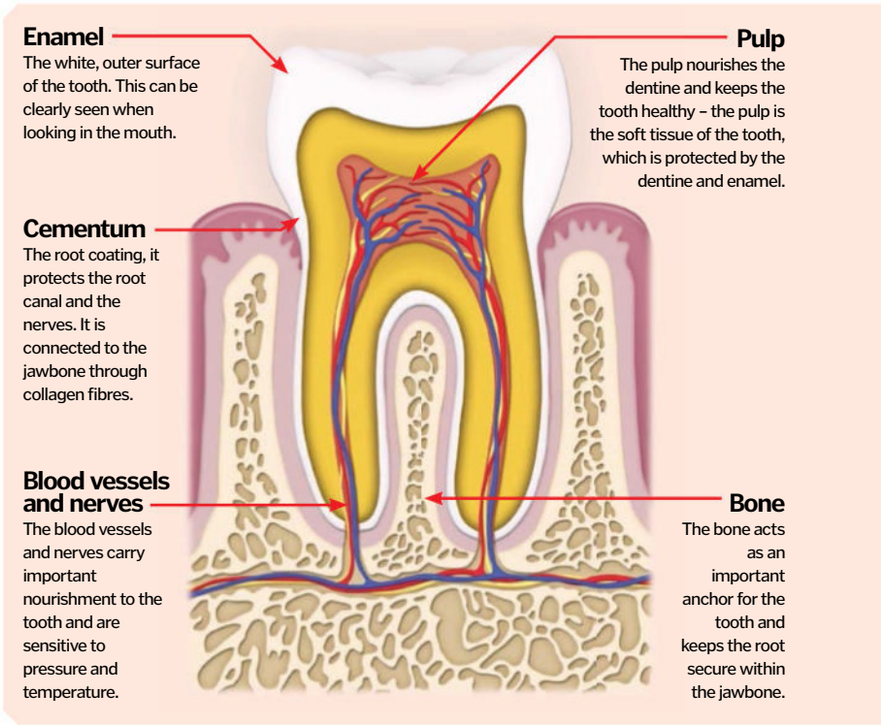
The mouth contains an enormous variety of bacteria, which collects around the teeth and gums. This is visible in the form of a sticky white substance called plaque. Plaque is known as a biofilm. After eating, the bacteria in the mouth metabolises sugar, which subsequently attacks the areas around the teeth.

The primary function of teeth is to crunch and chew food. For this reason, teeth are made of strong substances – namely calcium, phosphorus and various mineral salts. The main structure of the tooth is dentine, which is itself enclosed in a shiny substance called enamel. This strong white coating is the hardest material to be found in the human body.

Humans have different types of teeth that function in various ways. Incisors tear at food, such as the residue found on bones, while bicuspids have long sharp structures that are also used for ripping. Bicuspids tear and crush while molars, which have a flatter surface, grind the food before swallowing. This aids digestion. Because humans have a varied array of teeth (called collective dentition) we are able to eat a complex diet of both meat and vegetables. Other species, such as grazing animals, have specific types of teeth. Cows, for example, have large flat teeth, which restrict them to a simple 'grazing' diet.

Teeth have many functions, in some cases they aid hunting but they also have strong psychological connotations. Both animals and humans bare their teeth when faced with an aggressive situation. Teeth are the most enduring features of the human body. Mammals are described as 'diphyodont', which means they develop two sets of teeth. In humans the teeth first appear at six months old and are replaced by secondary teeth after six or seven years. Some animals develop only one set of teeth, while sharks, for instance, grow a new set of teeth every two weeks.

With humans, tooth loss can occur through accident, gum disease or old age. From ancient times healers have sought to treat and replace the teeth with false ones. Examples of this practice can be seen from ancient Egyptian times and today, we see revolutionary new techniques in the form of dental implants, which are secured deep within the bone of the jaw.



Inside your mouth

The upper and lower areas of the mouth are known as the maxilla and the mandible. The upper area of the mouth is attached to the skull bone and is often called the upper arch of the mouth, while the mandible is the v-shaped bone that carries the lower set of teeth.

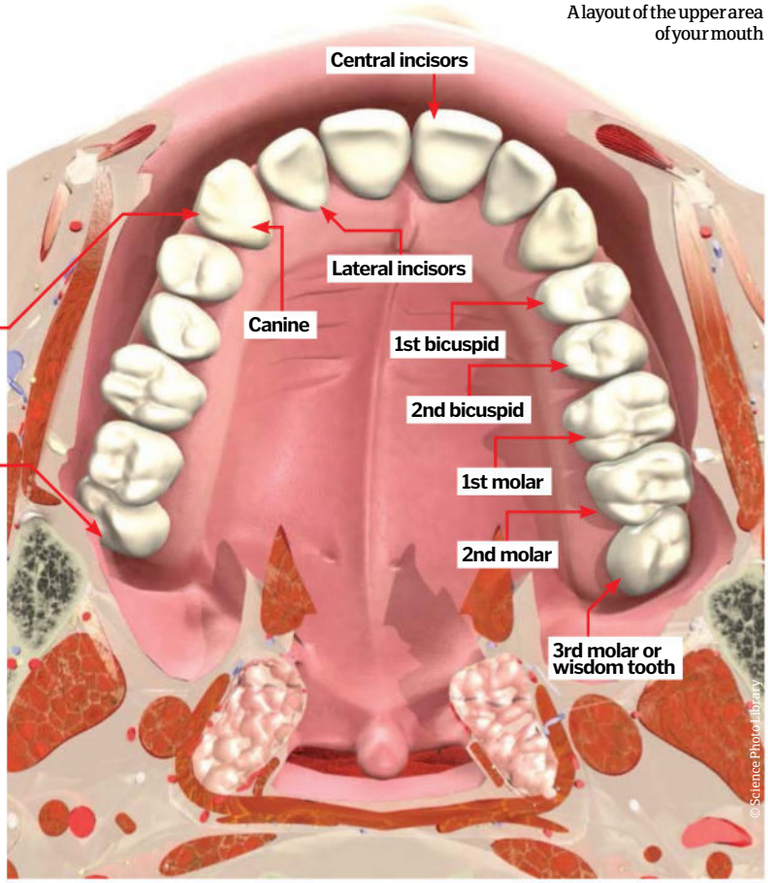
Canine teeth
Long, pointed teeth that are used for holding and tearing at the food within the mouth.

Wisdom teeth
Usually appear between the ages of 17 and 25, and often erupt in a group of four.

Regular check-ups help keep teeth healthy

Maxilla

A layout of the upper area of your mouth



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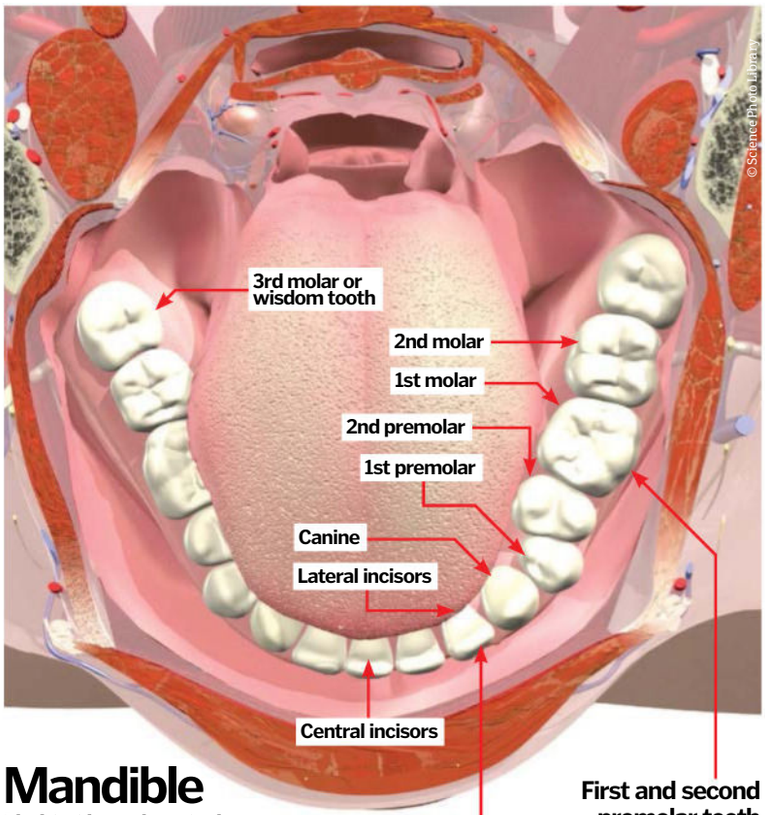

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Mandible

A look inside your lower jawbone

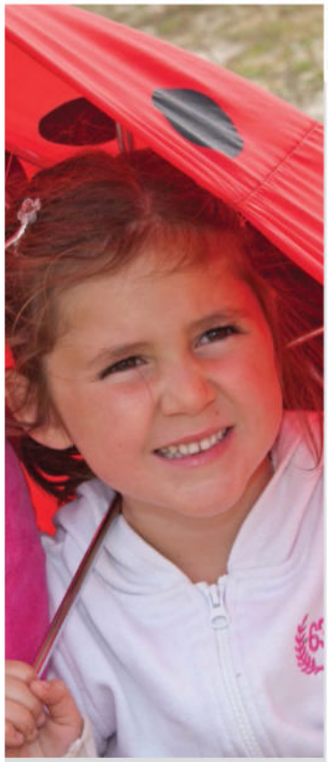
Lateral and central incisors
Incisor comes from the Latin word 'to cut', they are used to grip and bite.

First and second premolar teeth
The premolar or bicuspids are located between the canine and molar teeth. They are used for chewing.

Tooth anatomy

The tooth is a complex structure. The enamel at the surface of the tooth is highly visible while the dentine is a hard but porous tissue found under the enamel. The gums provide a secure hold for the tooth, while the root is anchored right into the jawbone. In the centre of the tooth there is a substance called 'pulp' which contains nerves and blood vessels, the pulp nourishes the dentine and keeps the tooth healthy.

Tooth formation begins before birth. Normally there are 20 primary teeth (human baby teeth) and later, 28 to 32 permanent teeth, which includes the wisdom teeth. Of the primary teeth, ten are found in the maxilla (the upper jaw) and ten in the mandible (lower jaw), while the mature adult has 16 permanent teeth in the maxilla and 16 in the mandible.



Eruption of teeth

The approximate ages at which the permanent teeth begin to erupt

Age 6
First molar

Age 7
Central incisor

Age 9
First premolar

Age 10
Second premolar

Age 11
Canine

Age 12
Second molar

Age 17 to 21 or not at all
Third molar (wisdom teeth)

Anatomy of the neck

Explore one of the most complex and functional areas of the human body

The human neck is a perfect blend of form and function. It has several specific tasks (eg making it possible to turn our heads to see), while serving as a conduit for other vital activities (eg connecting the mouth to the lungs).

The anatomical design of the neck would impress modern engineers. The flexibility of the cervical spine allows your head to rotate, flex and tilt many thousands of times a day.

The muscles and bones provide the strength and flexibility required, however the really impressive design comes with the trachea, oesophagus, spinal cord, myriad nerves and the vital blood vessels. These structures must all find space and function perfectly at the same time. They must also be able to maintain their shape while the neck moves.

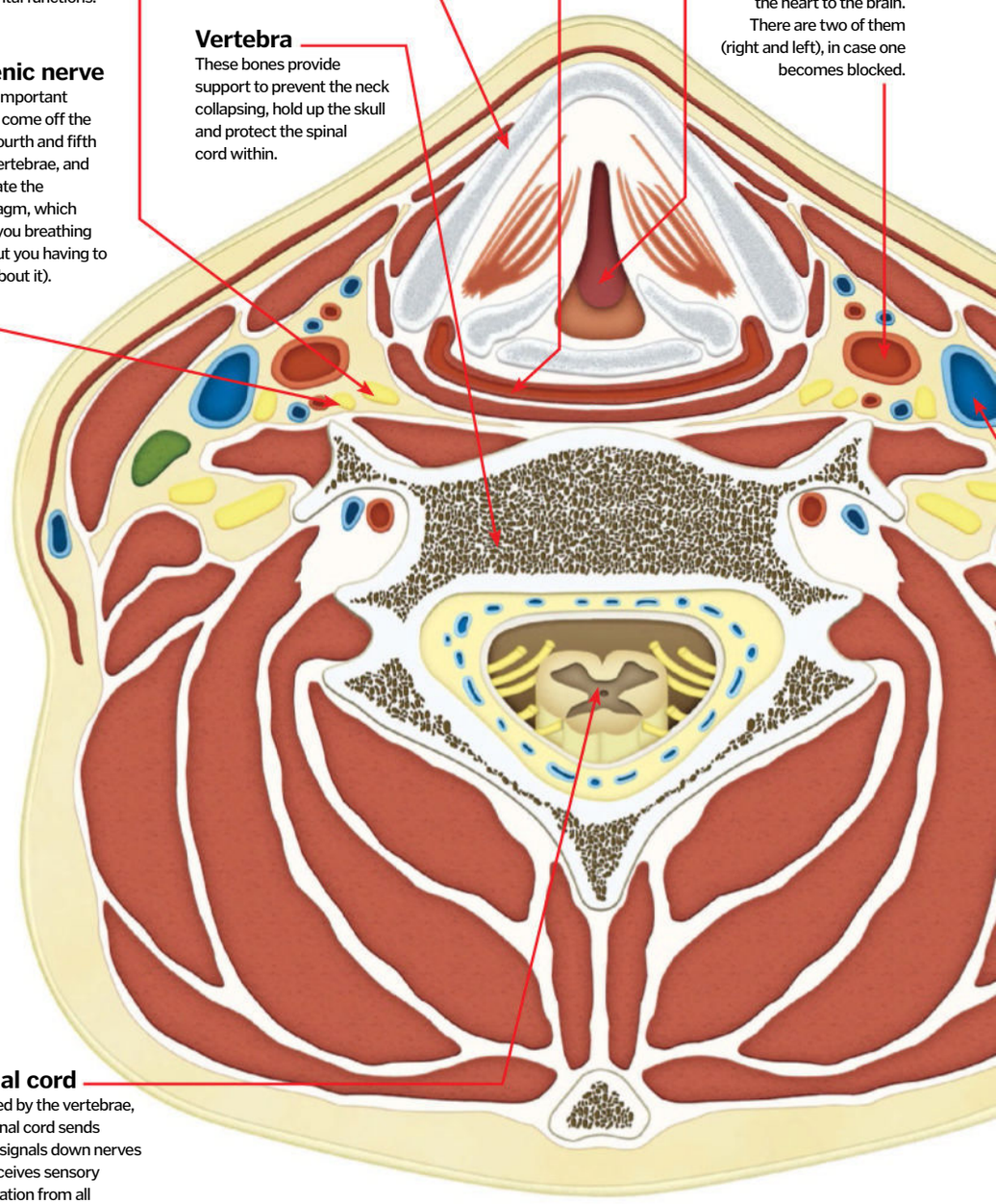
These structures are all highly adapted to achieve their aims. The trachea is protected by a ring of strong cartilage so it doesn't collapse, while allowing enough flexibility to move when stretched. Above this, the larynx lets air move over the vocal cords so we can speak. Farther back, the oesophagus is a muscular tube which food and drink pass through en route to the stomach. Within the supporting bones of the neck sits the spinal cord, which transmits the vital nerves allowing us to move and feel. The carotid arteries and jugular veins, meanwhile, constantly carry blood to and from the brain.

How does the head connect to the neck?

They are connected at the bottom of the skull and at the top of the spinal column. The first vertebra is called the atlas and the second is called the axis. Together these form a special pivot joint that grants far more movement than other vertebrae. The axis contains a bony projection upwards, upon which the atlas rotates, allowing the head to turn. The skull sits on top of slightly flattened areas of the atlas, providing a safe platform for it to stabilise on, and allowing for nodding motions. These bony connections are reinforced with strong muscles, adding further stability. Don't forget that this amazing anatomical design still allows the vital spinal cord to pass out of the brain. The cord sits in the middle of the bony vertebrae, where it is protected from bumps and knocks. It sends out nerves at every level (starting right from the top) granting control over most of the body.

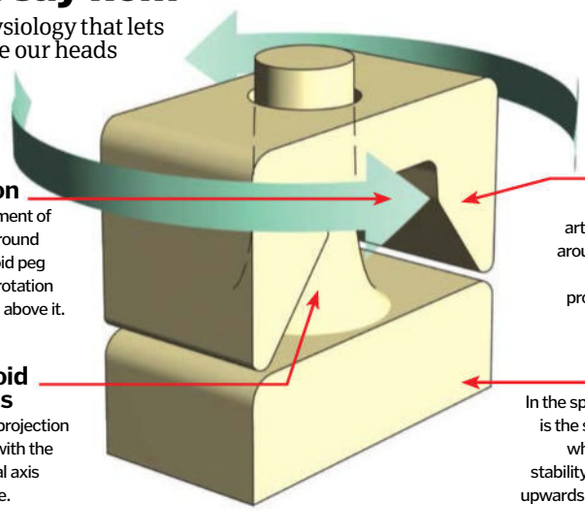
Get it in the neck

We show the major features that are packed into this junction between the head and torso



Just say no...

The physiology that lets us shake our heads



Rotation
The movement of the atlas around the odontoid peg allows for rotation of the skull above it.

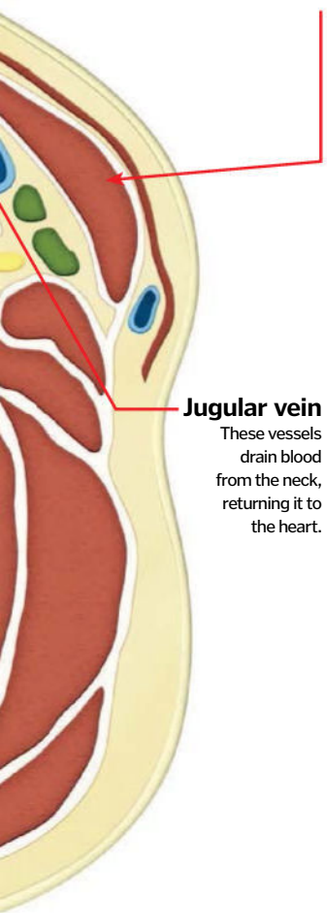
Atlas
This section articulates (moves) around the odontoid process which projects through it.

Odontoid process
This bony projection is parallel with the longitudinal axis of the spine.

Axis
In the spinal column, this is the second vertebra, which provides the stability for the required upwards bony projection.

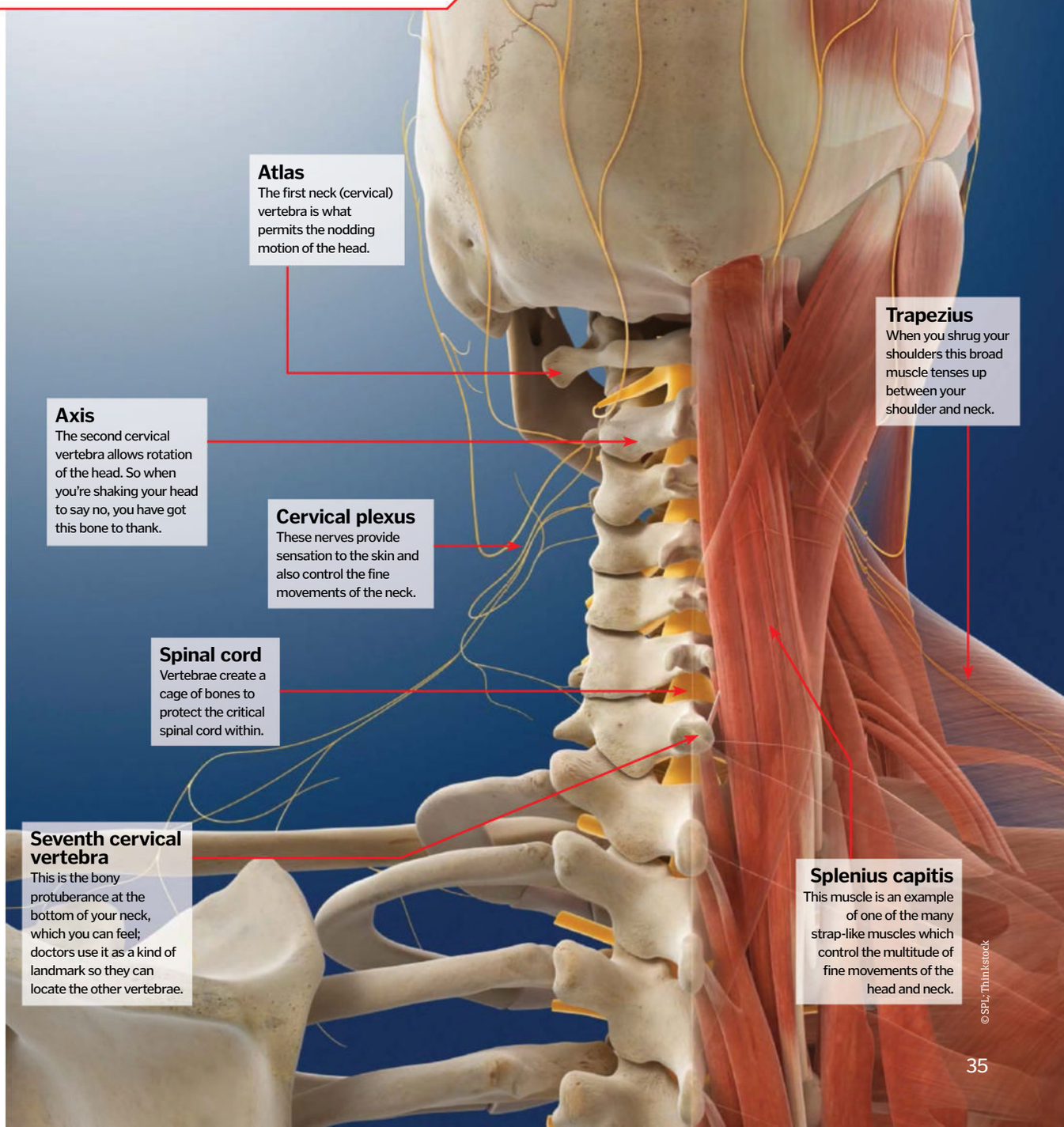
The neck in context

The human neck relies on a wide array of bones and muscles for support, as we see here



Sternocleidomastoid
Turn your head left and feel the right of your neck – this is the muscle doing the turning.

Jugular vein
These vessels drain blood from the neck, returning it to the heart.



Atlas
The first neck (cervical) vertebra is what permits the nodding motion of the head.

Axis
The second cervical vertebra allows rotation of the head. So when you're shaking your head to say no, you have got this bone to thank.

Cervical plexus
These nerves provide sensation to the skin and also control the fine movements of the neck.

Spinal cord
Vertebrae create a cage of bones to protect the critical spinal cord within.

Seventh cervical vertebra
This is the bony protuberance at the bottom of your neck, which you can feel; doctors use it as a kind of landmark so they can locate the other vertebrae.

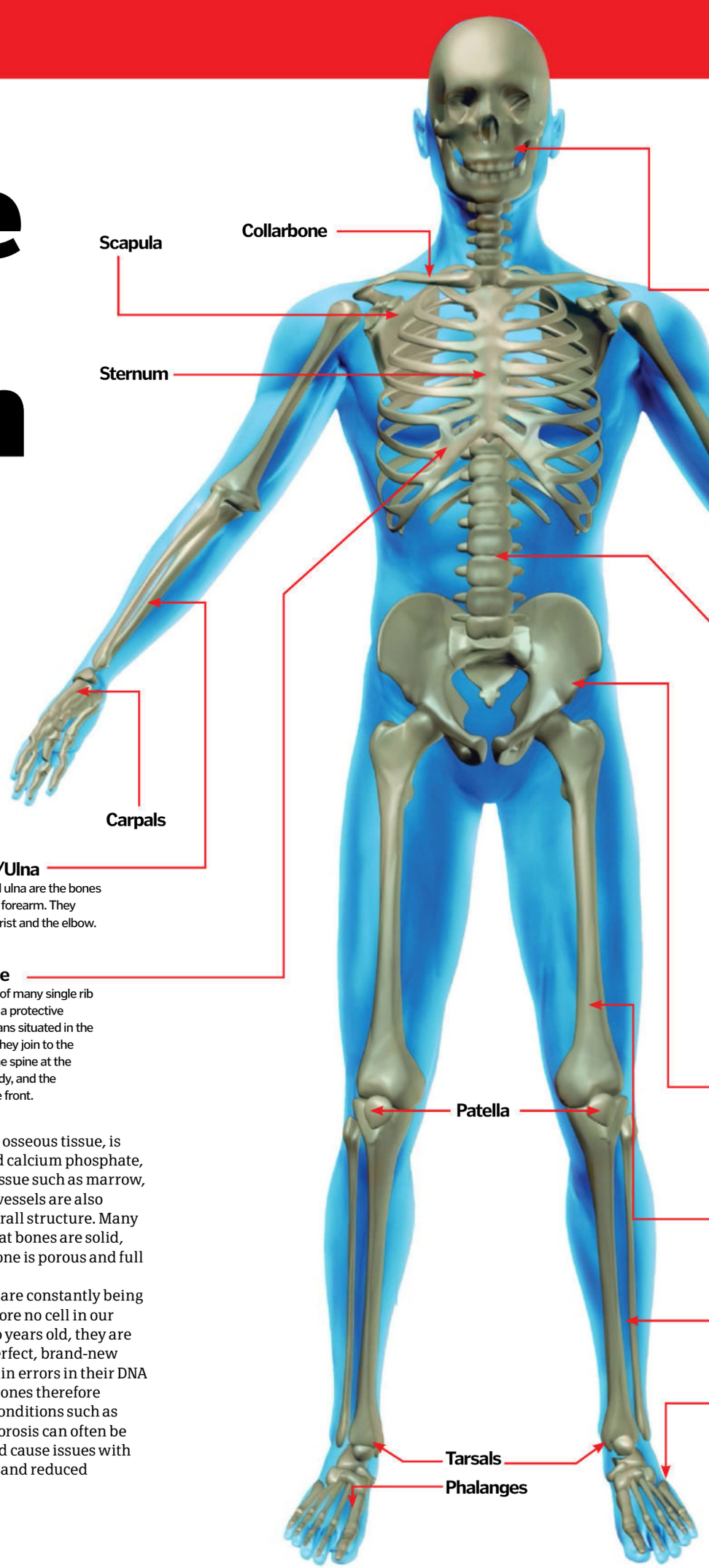
Trapezius
When you shrug your shoulders this broad muscle tenses up between your shoulder and neck.

Splenius capitis
This muscle is an example of one of the many strap-like muscles which control the multitude of fine movements of the head and neck.

©SPL; Thinkstock

How the human skeleton works

Without a skeleton, we would not be able to live. It is what gives us our shape and structure and its presence allows us to operate on a daily basis. It also is a fascinating evolutionary link to all other living and extinct vertebrates



4. Radius/Ulna
The radius and ulna are the bones situated in the forearm. They connect the wrist and the elbow.

5. Rib cage
This structure of many single rib bones creates a protective barrier for organs situated in the chest cavity. They join to the vertebrae in the spine at the back of the body, and the sternum at the front.

The human skeleton is crucial for us to live. It keeps our shape and muscle attached to the skeleton allows us the ability to move around, while also protecting crucial organs that we need to survive. Bones also produce blood cells within bone marrow and store minerals we need released on a daily basis.

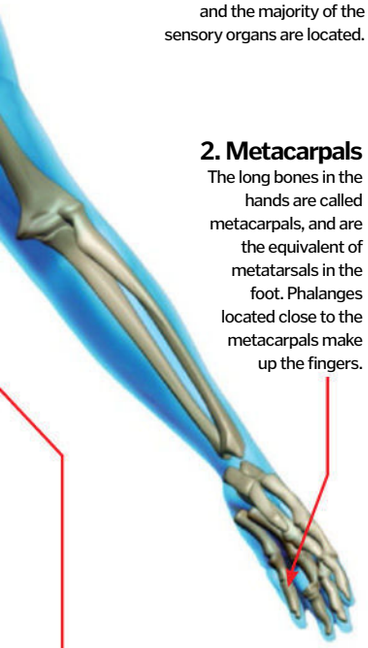
As an adult you will have around 206 bones, but you are born with over 270, which continue to grow, strengthen and fuse after birth until around 18 in females and 20 in males. Skeletons actually do vary between sexes in structure also. One of the most obvious areas is the pelvis as a female must be able to give birth, and therefore hips are comparatively shallower and wider. The cranium also becomes more robust in males due to heavy muscle attachment and a male's chin is often more prominent. Female skeletons are generally more delicate overall. However, although there are several methods, sexing can be difficult because of the level of variation we see within the species.

Bones are made up of various different elements. In utero, the skeleton takes shape as cartilage, which then starts to calcify and develop during gestation and following birth. The primary element that makes up bone, osseous tissue, is actually mineralised calcium phosphate, but other forms of tissue such as marrow, cartilage and blood vessels are also contained in the overall structure. Many individuals think that bones are solid, but actually inner bone is porous and full of little holes.

Even though cells are constantly being replaced, and therefore no cell in our body is more than 20 years old, they are not replaced with perfect, brand-new cells. The cells contain errors in their DNA and ultimately our bones therefore weaken as we age. Conditions such as arthritis and osteoporosis can often be caused by ageing and cause issues with weakening of bones and reduced movement ability.

Inside our skeleton

How the human skeleton works and keeps us upright



1. Cranium
The cranium, also known as the skull, is where the brain and the majority of the sensory organs are located.

2. Metacarpals
The long bones in the hands are called metacarpals, and are the equivalent of metatarsals in the foot. Phalanges located close to the metacarpals make up the fingers.

3. Vertebrae
There are three main kinds of vertebrae (excluding the sacrum and coccyx) – cervical, thoracic and lumbar. These vary in strength and structure as they carry different pressure within the spine.

6. Pelvis
This is the transitional joint between the trunk of the body and the legs. It is one of the key areas in which we can see the skeletal differences between the sexes.

7. Femur
This is the largest and longest single bone in the body. It connects to the pelvis with a ball and socket joint.

8. Fibula/Tibia
These two bones form the lower leg bone and connect to the knee joint and the foot.

9. Metatarsals
These are the five long bones in the foot that aid balance and movement. Phalanges located close to the metatarsals are the bones which are present in toes.

Breaking bones

Whether it's a complete break or just a fracture, both can take time to heal properly

If you simply fracture the bone, you may just need to keep it straight and keep pressure off it until it heals. However, if you break it into more than one piece, you may need metal pins inserted into the bone to realign it or plates to cover the break in order for it to heal properly. The bone heals by producing new cells and tiny blood vessels where the fracture or break has occurred and these then rejoin up. For most breaks or fractures, a cast external to the body will be put on around the bone to take pressure off the bone to ensure that no more damage is done and the break can heal.

"The skull is actually seven separate plates when we are born, which fuse together"

Skull development

When we are born, many of our bones are still somewhat soft and are not yet fused – this process occurs later during our childhood

The primary reasons for the cranium in particular not to be fully fused at birth is to allow the skull to flex as the baby is born and also to allow the extreme rate of growth that occurs in the first few years of childhood following birth. The skull is actually in seven separate plates when we are born and over the first two years these pieces fuse together slowly and ossify. The plates start suturing together early on, but the anterior fontanel – commonly known as the soft spot – will take around 18 months to fully heal. Some other bones, such as the five bones located in the sacrum, don't fully fuse until late teens or early twenties, but the cranium becomes fully fused by around age two.

3skulls © DK Images

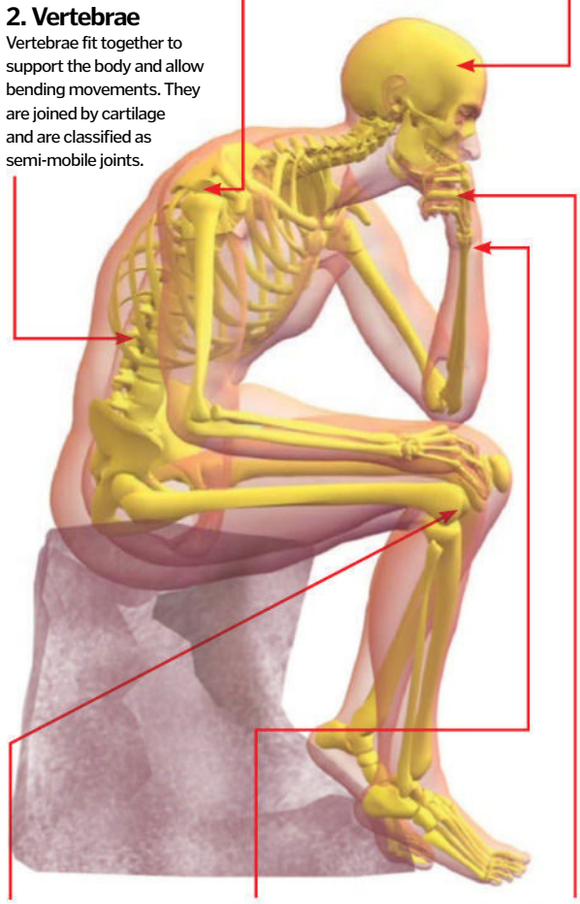
How our joints work

The types of joints in our body explained

1. Ball and socket joints
Both the hip and the shoulder joints are ball and socket joints. The femur and humerus have ball shaped endings, which turn in a cavity to allow movement.

2. Vertebrae
Vertebrae fit together to support the body and allow bending movements. They are joined by cartilage and are classified as semi-mobile joints.

3. Skull sutures
Although not generally thought of as a 'joint', all the cranial sutures present from where bones have fused in childhood are in fact immoveable joints.



4. Hinged joints
Both elbows and knees are hinged joints. These joints only allow limited movement in one direction. The bones fit together and are moved by muscles.

5. Gliding joints
Some movement can be allowed when flat bones 'glide' across each other. The wrist bones – the carpals – operate like this, moved by ligaments.

6. Saddle joints
The only place we see this joint in humans is the thumb. Movement is limited in rotation, but the thumb can move back, forward and to the sides.

The human spine

The human spine is made up of 33 vertebrae, but how do they support our bodies while allowing us such flexibility?

The human spine is made up of 33 vertebrae, 24 of which are articulated (flexible) and nine of which normally become fused in maturity. They are situated between the base of the skull to the pelvis, where the spine trails off into the coccyx – an evolutionary remnant of a tail our ancestors would have displayed.

The primary functions of the vertebrae that make up the spine are to support the torso and head, which protect vital nerves and the spinal cord and allow the individual to move. By sitting closely together, separated only by thin intervertebral discs which work as ligaments and effectively form joints between the bones, the vertebrae form a strong pillar structure which holds the head up and allows for the body to remain upright. It also produces a base for ribs to attach to and to protect vital internal organs in the human body.

Vertebrae are not all fused together because of the need to move, and the vertebrae themselves are grouped into five types – cervical, thoracic, lumbar, sacral and coccygeal. The sacral vertebrae fuse during maturity (childhood and teenage years) and become solid bones towards the base of the spine. The coccygeal vertebrae will fuse in some cases, but studies have shown that often they actually remain separate. Collectively they are referred to as the coccyx (tail bone). The rest of the vertebrae remain individual and discs between them allow them to move in various directions without wearing the bones down. The cervical vertebrae in the neck allow particularly extensive movement, allowing the head to move up and down and side to side. The thoracic are far more static, with ties to the rib cage resisting much movement. The lumbar vertebrae allow modest side-to-side movement and rotation. A particular feature of the spine is how it is actually curved to allow distribution of the body's weight, to ensure no one vertebrae takes the full impact.

C1 (atlas)
This is the vertebrae which connects the spinal column with the skull. It is named 'atlas' after the legend of Atlas who held the entire world on his shoulders.

Cervical vertebrae
These are the smallest of the articulating vertebrae, and support the head and neck. There are seven vertebrae, with C1, C2 and C7's structures quite unique from the others. They sit between the skull and thoracic vertebrae.

C2 (axis)
C2 is the pivot for C1 (atlas), and nearly all movement for shaking your head will occur at this joint – the atlanto-axial joint.

Thoracic vertebrae
The thoracic vertebrae are the intermediately sized vertebrae. They increase in size as you move down the spine, and they supply facets for ribs to attach to – this is how they are primarily distinguished.

Intervertebral discs
These discs form a joint between each vertebrae and, effectively, work as ligaments while also serving as fantastic shock absorbers. They facilitate movement and stop the bones rubbing together.

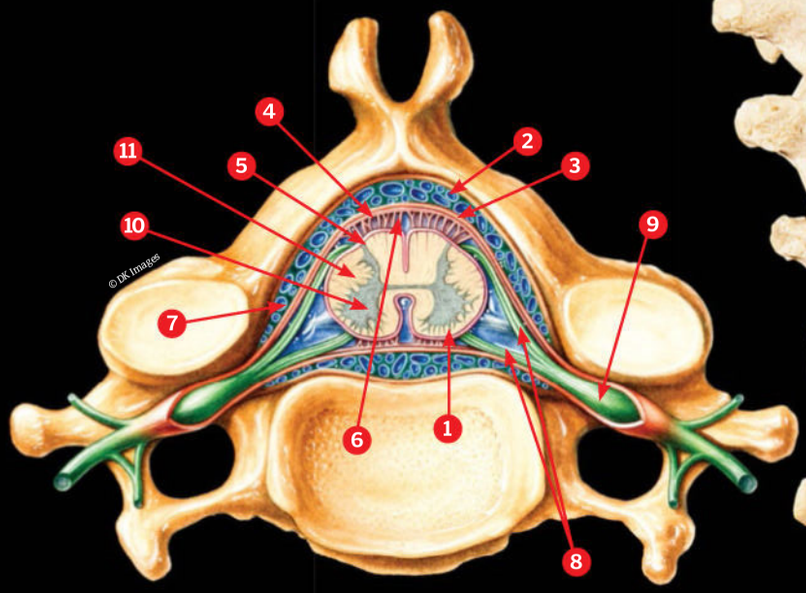
Spine curvature

As you look at the human spine, you can see some distinct curves. The primary reasons for these are to help distribute weight throughout the spine and support aspects of the body. The curve most familiar to us is the lumbar curve, between the ribs and pelvis. This develops when we start to walk at about 12-18 months and helps with weight distribution during locomotion. Prior to this we develop the cervical curve, which allows us to support the weight of our head at around three-four months, and two smaller less-obvious curves in the spine (the thoracic and pelvic curves) are developed during gestation.

Spinal cords and nerves

The human spinal cord is an immensely complex structure made up of nerve cells and a large amount of supporting, protective tissue. It splits into 31 different sections and stretches 43-45cm, down from the brain to between the first and second lumbar vertebrae. Although more commonly referred to in respect of the brain, there is both white and grey matter present in the centre of the spinal cord. White matter contains axons tracts surrounded by fats, and blood vessels to protect them. The grey matter contains more of the neural cell bodies, such as dendrites, more axons and glial cells.

Spinal cord injuries are normally caused by trauma. If the trauma causes intervertebral discs and vertebrae to break, they can pierce the spinal cord, which can result in loss of feeling. Cord severance may result in paralysis.



Spinal column cross-section

1. Spinal cord
This is an immensely important pathway for information to transfer between the brain and the body's nervous system. It is heavily protected by tissue and vertebrae, as any damage to it can be fatal.

2. Epidural space
This is the space between the outer protective tissue layer, dura mater and the bone. It is filled with adipose tissue (fat), while also playing host to numerous blood vessels.

3. Dura mater
This is the tough outer layer of tissue that protects the spinal cord. The three layers of protection between the vertebrae and the spinal cord are called the spinal meninges.

4. Arachnoid mater
Named for its spider web appearance, this is the second layer of the tissue protection provided for the spinal cord.

5. Pia mater
This thin, delicate layer sits immediately next to the spinal cord.

6. Subarachnoid space
This is the space between the pia mater and the arachnoid mater, which is filled with cerebrospinal fluid.

7. Blood vessels
Four arteries, which form a network called the Circle of Willis, deliver oxygen-rich blood to the brain. The brain's capillaries form a lining called the 'blood-brain barrier', which controls blood flow to the brain.

8. Dorsal and ventral roots
These connect the spinal nerves to the spinal cord, allowing transition of information between the brain and the body.

9. Spinal nerves
Humans have 31 pairs of spinal nerves all aligned with individual vertebrae, and these communicate information from around the body to the spinal cord. They carry all types of information – motor, sensory and so on – and are commonly referred to as 'mixed spinal nerves'.

10. Grey matter
Within the horn-like shapes in the centre of the spinal cord, sit most of the important neural cell bodies. They are protected in many ways, including by the white matter.

11. White matter
This area that surrounds the grey matter holds axon trails, but is primarily made up of lipid tissue (fats) and blood vessels.

Lumbar vertebrae
Lumbar vertebrae are the largest of the vertebrae and the strongest, primarily because they withstand the largest pressures. Compared with other vertebrae they are more compact, lacking facets on the sides of the vertebrae.

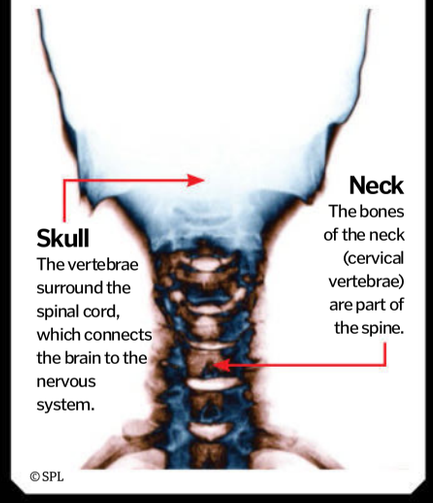
Sacral vertebrae
We have five sacral vertebrae at birth, but by maturity they will have fused to form a solid bone, which helps support the lumbar vertebrae and connect the coccyx to the spine.

Coccyx (tailbone)
The coccyx can display between three and five vertebrae. They're commonly thought to be fused, but often are not. Although these vertebrae are a vestigial remnant of a tail, they have several uses, such as supporting weight when sitting.

Articulated vertebrae enable maximum flexibility

How is the skull attached to the spine?

The skull is connected to the spine by the atlanto-occipital joint, which is created by C1 (atlas) and the occipital bone situated at the base of the cranium (skull). This unique vertebra has no 'body' and actually looks more like a ring than any other vertebra. It sits at the top of the cervical vertebrae and connects with the occipital bone via an ellipsoidal joint, allowing movement such as nodding or rotation of the head. An ellipsoidal joint is where an ovoid connection (in this case the occipital bone) is placed into an elliptical cavity (C1 vertebrae). The rest of the cervical vertebrae also work to support the weight of the head.



DID YOU KNOW? *Cartilage [intervertebral discs] actually makes up 25% of the spine's length*

Joints

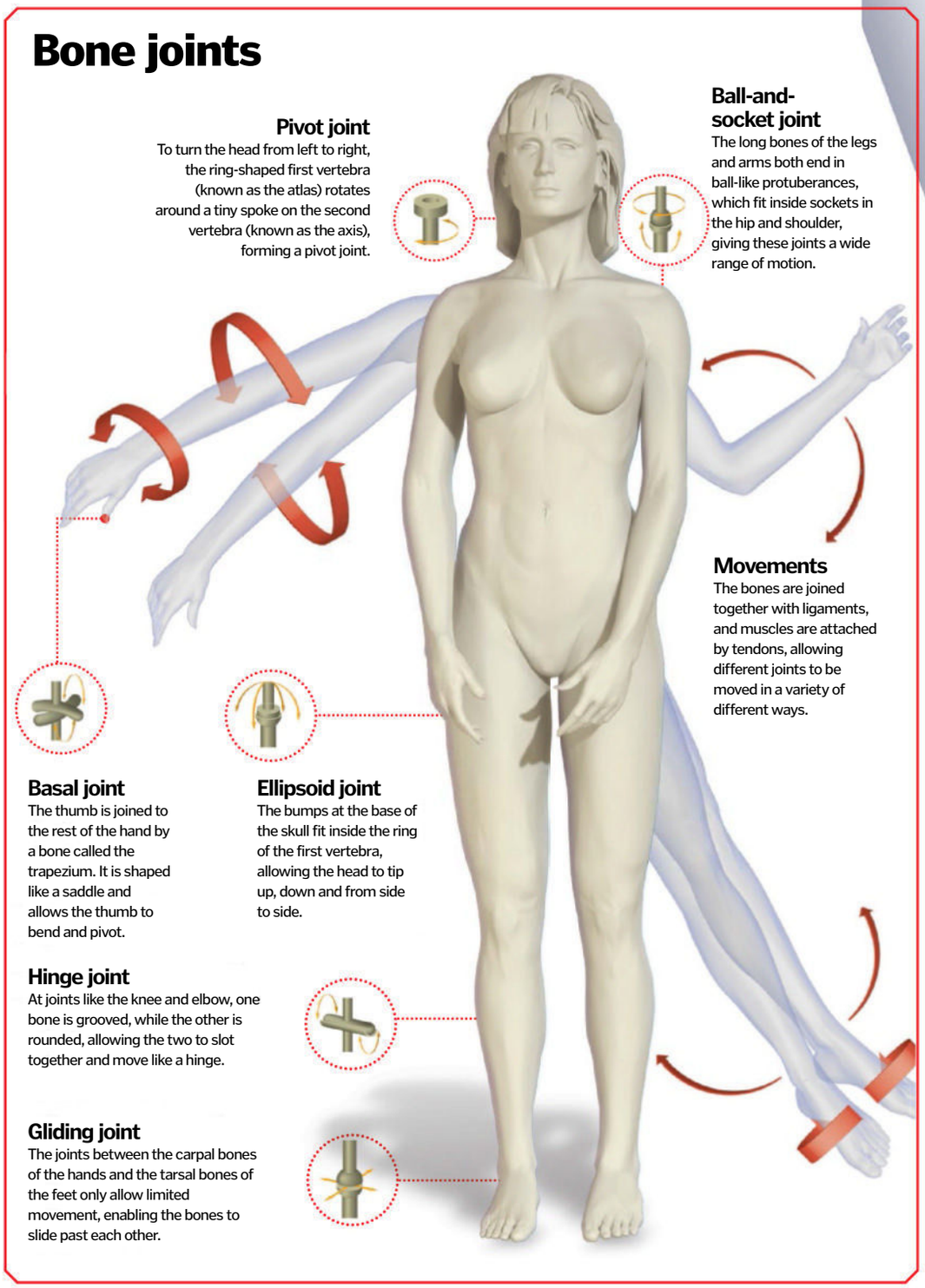
For individual bones to function together, they must be linked by joints

Some bones, like those in the skull, do not need to move, and are permanently fused together with mineral sutures. These fixed joints provide maximum stability. However, most bones need flexible linkages. In some parts of the skeleton, partial flexibility is sufficient, so all that the bones require is a little cushioning to prevent rubbing. The bones are joined by a rigid, gel-like tissue known as cartilage, which allows for a small range of compression and stretching. These types of joints are present where the ribs meet the sternum, providing flexibility when breathing, and between the stacked vertebrae of the spinal column, allowing it to bend and flex without crushing the spinal cord.

Most joints require a larger range of movement. Covering the ends of the bones in cartilage provides shock absorption, but for them to move freely in a socket, the cartilage must be lubricated to make it slippery and wear-proof. At synovial joints, the ends of the two bones are encased in a capsule, covered on the inside by a synovial membrane, which fills the joint with synovial fluid, allowing the bones to slide smoothly past one another.

There are different types of synovial joint, each with a different range of motion. Ball-and-socket joints are used at the shoulder and hip, and provide a wide range of motion, allowing the curved surface at the top end of each limb to slide inside a cartilage covered cup. The knees and elbows have hinge joints, which interlock in one plane, allowing the joint to open and close. For areas that need to be flexible, but do not need to move freely, such as the feet and the palm of the hand, gliding joints allow the bones to slide small distances without rubbing.

Bone joints



Hypermobility

Some people have particularly flexible joints and a much larger range of motion. This is sometimes known as being 'double jointed.' It is thought to result from the structure of the collagen in the joints, the shape of the end of the bones, and the tone of the muscles around the joint.

Mobile

The synovial joints are the most mobile in the body. The ends of the bones are linked by a capsule that contains a fluid lubricant, allowing the bones to slide past one another. Synovial joints come in different types, including ball-and-socket, hinge, and gliding.

Semi-mobile

Cartilaginous joints do not allow free motion, but cushion smaller movements. Instead of a lubricated capsule, the bones are joined by fibrous or hyaline cartilage. The linkage acts as a shock absorber, so the bones can move apart and together over small distances.

Fixed

Some bones do not need to move relative to one another and are permanently fused. For example the cranium starts out as separate pieces, allowing the foetal head to change shape to fit through the birth canal, but fuses after birth to encase the brain in a solid protective skull.

Why our joints crack

The synovial fluid used to lubricate the joints contains dissolved gasses. The fluid is sealed within a capsule, so if the joint is stretched, the capsule also stretches, creating a vacuum as the pressure changes, and pulling the gas out of solution and into a bubble, which pops, producing a cracking sound.

Muscle
The quadriceps muscle group runs down the front of the femur and finishes in a tendon attached to the knee cap.

Artery
The femoral artery supplies blood to the lower leg, and its branches travel around the knee joint and over the patella.

Synovial membrane
The membrane surrounding the interior of the joint produces a lubricant called synovial fluid.

Knee cap
The patella prevents the tendons at the front of the leg from wearing away at the joint.

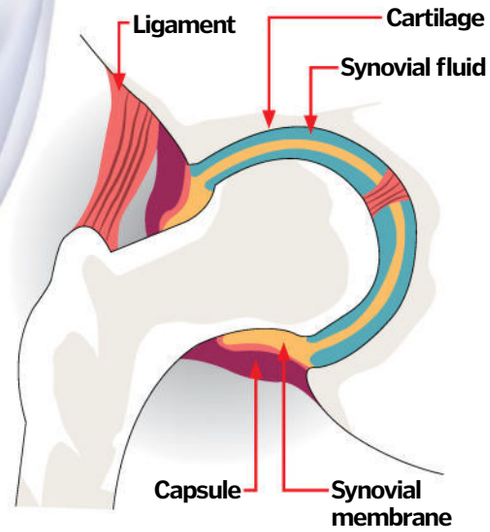
External ligaments
The joint is held together by four ligaments that connect the femur to the bones of the lower leg.

Patellar ligament
The patellar ligament connects the kneecap to both the quadriceps in the thigh and the tibia in the lower leg.

Meniscus
Each of the bones is capped with a protective layer of cartilage, preventing friction and wear.

Fibula
The end of the fibula (calf bone) has two rounded bumps that are separated by a deep groove.

Tibia
The rounded ends of the fibula fit in to two concave slots at the top of the tibia (shin bone).



Inside a joint

Synovial joints prevent mobile areas of the skeleton from grinding against one another as they move. The two bones are loosely connected by strips of connective tissue called tendons, and the two ends are encased in a capsule that is lined by a synovial membrane. The bones are covered in smooth cartilage to prevent abrasion and the membrane produces a nourishing lubricant to ensure the joint is able to move smoothly.

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How do muscles work?

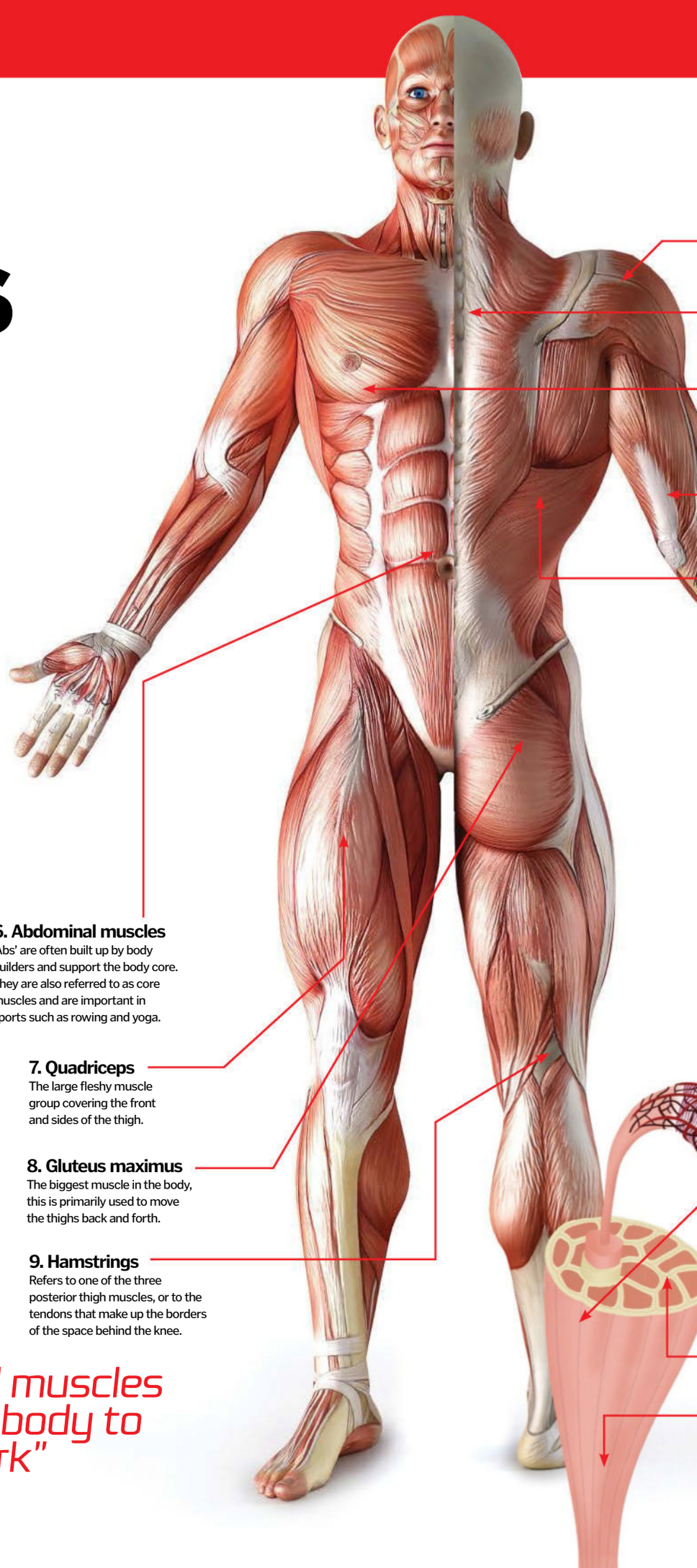
Muscles are essential for us to operate on a daily basis, but how are they structured and how do they keep us moving

A muscle is a group of tissue fibres that contract and release to control movements within the body. We have three different types of muscles in our bodies – smooth muscle, cardiac muscle and skeletal muscle.

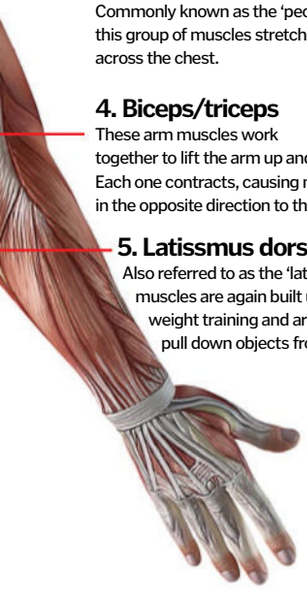
Skeletal muscle, also known as striated muscle, is what we would commonly perceive as muscle, this being external muscles that are attached to the skeleton, such as biceps and deltoids. These muscles are connected to the skeleton with tendons. Cardiac muscle concerns the heart, which is crucial as it pumps blood around the body, supplying oxygen and ultimately energy to muscles, which allows them to operate. Smooth muscle, which is normally sheet muscle, is primarily involved in muscle contractions such as bladder control and oesophagus movements. These are often referred to as involuntary as we have little or no control over these muscles' actions.

Muscles control most functions within our bodies; release of waste products, breathing, seeing, eating and movement to name but a few. Actual muscle structure is quite complex, and each muscle is made up of numerous fibres which work together to give the muscle strength. Muscles increase in effectiveness and strength through exercise and growth and the main way this occurs is through small damage caused by each repetition of a muscle movement, which the body then repairs and improves.

More than 640 muscles are actually present across your entire body to enable your limbs to work, control bodily functions and shape the body as a whole.



"More than 300 individual muscles are present across your body to enable your limbs to work"



1. Deltoids
These muscles stretch across the shoulders and aid lifting.

2. Trapezius
Large, superficial muscle at the back of the neck and the upper part of the thorax, or chest.

3. Pectoralis major
Commonly known as the 'pecs', this group of muscles stretch across the chest.

4. Biceps/triceps
These arm muscles work together to lift the arm up and down. Each one contracts, causing movement in the opposite direction to the other.

5. Latissmus dorsi
Also referred to as the 'lats', these muscles are again built up during weight training and are used to pull down objects from above.

What affects our muscle strength?

How strong we are is a combination of nature and nurture

Muscle strength refers to the amount of force that a muscle can produce, while operating at maximum capacity, in one contraction. Size and structure of the muscle is important for muscle strength, with strength being measured in several ways. Consequently, it is hard to definitively state which muscle is actually strongest.

We have two types of muscle fibre – one that supports long, constant usage exerting low levels of pressure, and one that supports brief, high levels of force. The latter is used during anaerobic activity and these fibres respond better to muscle building.

Genetics can affect muscle strength, as can usage, diet and exercise regimes. Contractions of muscles cause injuries in the muscle fibres and it is the healing of these that actually create muscle strength as the injuries are repaired and overall strengthen the muscle.

"Tendons attach muscles such as biceps to bones, allowing muscles to move elements of our body"

What are muscles made up of?

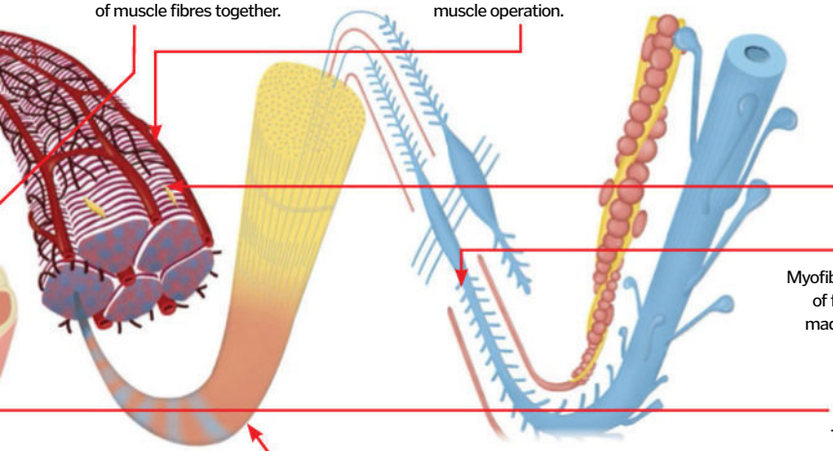
Muscles are made up of numerous cylindrical fibres, which work together to contract and control parts of the body. Muscle fibres are bound together by the perimysium into small bundles, which are then grouped together by the epimysium to form the actual muscle.

Blood vessels and nerves also run through the connective tissue to give energy to the muscle and allow feedback to be sent to the brain. Tendons attach muscles such as biceps and triceps to bones, allowing muscles to move elements of our body as we wish.

Epimysium
The external layer that covers the muscle overall and keeps the bundles of muscle fibres together.

Blood vessel
This provides oxygen and allows the muscle to access energy for muscle operation.

Perimysium
This layer groups together muscle fibres within the muscle.



Filaments
Myofibrils are constructed of filaments, which are made up of the proteins actin and myosin.

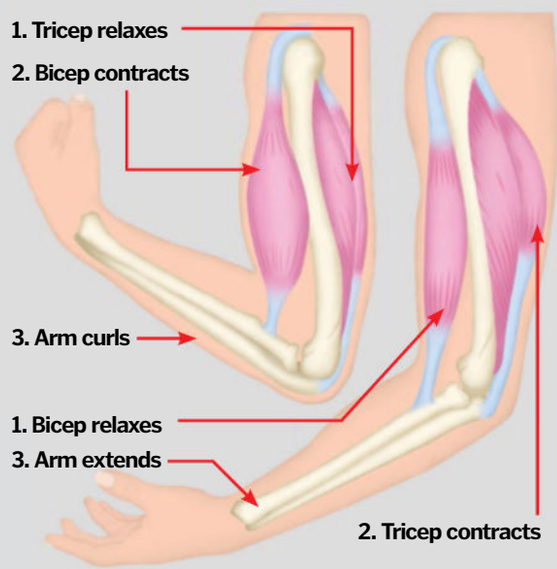
Endomysium
This layer surrounds each singular muscle fibre and keeps the myofibril filaments grouped together.

Tendon
These attach muscle to bones, which in turn enables the muscles to move parts of the body around (off image).

Myofibril
Located within the single muscle fibres, myofibrils are bundles of actomyosin filaments. They are crucial for contraction.

How does the arm flex?

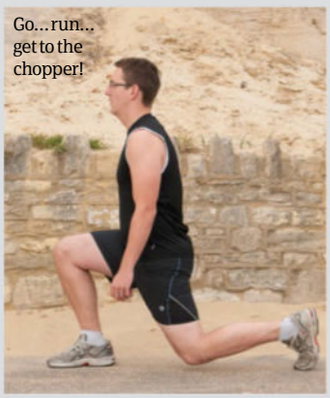
Biceps and triceps are a pair of muscles that work together to move the arm up and down. As the bicep contracts, the triceps will relax and stretch out and consequently the arm will move upwards. When the arm needs to move down, the opposite will occur – with the triceps contracting and the bicep relaxing and being forcibly stretched out by the triceps. The bicep is so named a flexor as it bends a joint, and triceps would be the extensor as it straightens the joint out. Neither of these muscles can push themselves straight, they depend on the other to oppose their movements and stretch them out. Many muscles therefore work in pairs, so-called antagonistic muscles.



What is a pulled muscle, and how does it happen?

They hurt like crazy so here's why it's important to warm up

A pulled muscle is basically a tear in muscle fibres. Sudden movements commonly cause pulled muscles, and often, when an individual has not warmed up appropriately before exercise or is unfit, a tear can occur as the muscle is not prepared for usage. The most common muscle to be pulled is the hamstring, which stretches from the buttock to the knee. A pulled muscle may result in swelling and pain can last for several days before the fibres repair themselves. To prevent pulling muscles, warming up is recommended before any kind of physical exertion.



Go… run… get to the chopper!

Skin colour explained

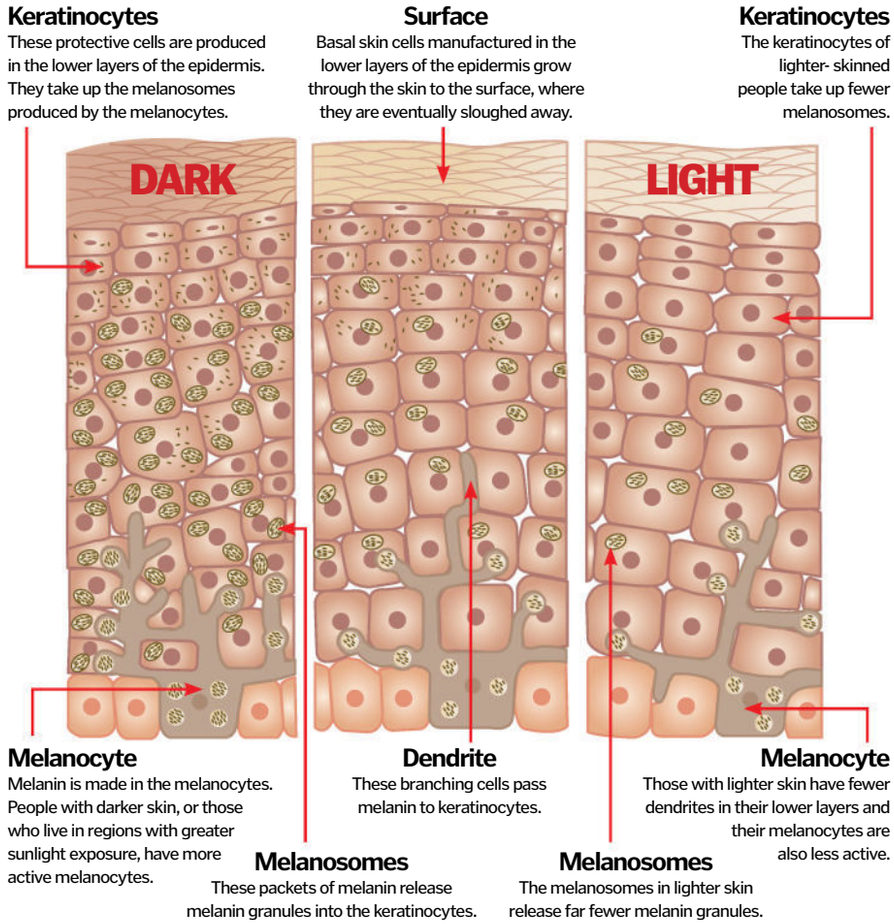
What is melanin and how does it affect the tone of our skin?

The light-absorbing pigment melanin is a chemical substance that gives your skin its natural colouring. Skin can vary from very dark brown to almost completely white due to a combination of your genes and inherited traits and the amount of sunlight to which you're exposed.

Skin colour differs depending on the concentration of melanin present and its distribution throughout the skin's layers. Those with less melanin have lighter skin, while those with more of the pigment have darker skin. Melanin is produced by specialised skin cells called melanocytes in the lower layers of the epidermis and is contained inside a melanosome by a very thin membrane.

Exposure to sunlight stimulates the production of melanin granules. The melanosomes containing the melanin then move out towards the skin's protective keratinocyte cells along branch cells called dendrites. Melanin is then stored in the nuclei of the keratinocytes where it acts as a natural protector against the effects of the Sun's ultraviolet rays. Keratinocytes make up the bulk – around 95 per cent – of the outer layers of the skin and form the barrier between the body and the outside world. They take up melanin which can absorb cancer-causing UV radiation so it doesn't get into the body's internal tissues.

Melanin and skin colour



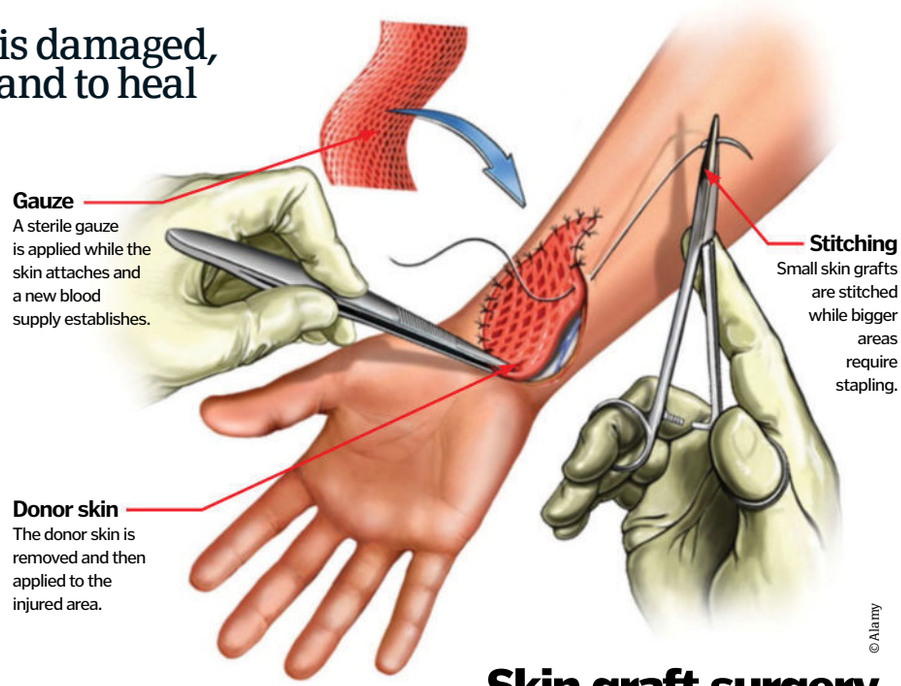
How skin grafts work

When our body's largest organ is damaged, sometimes it needs a helping hand to heal

Skin grafting is a medical procedure where a portion of skin is removed and stitched onto another part of the body. There are many cosmetic and medical reasons why this might be necessary: serious burns, surgery, tattoo removal and some medical conditions (skin cancer or diabetes, for example) might all necessitate skin grafting.

Autografts are skin grafts taken from the patient's own body, usually the buttocks, neck or back of the arm. Depending on the size of the area that it's removed from, it's then stitched or stapled closed again and the new skin applied to the injured area. Allografts and xenografts, meanwhile – taken from other humans and animals, respectively – are temporary grafts.

But perhaps most interesting is the artificial 'skin' called Integra, made of animal collagen that gives the damaged part an organic scaffolding for new skin to grow into. This is usually used in cases of extreme burns where there isn't enough healthy skin for an autograft.



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Skin graft surgery

Under the skin

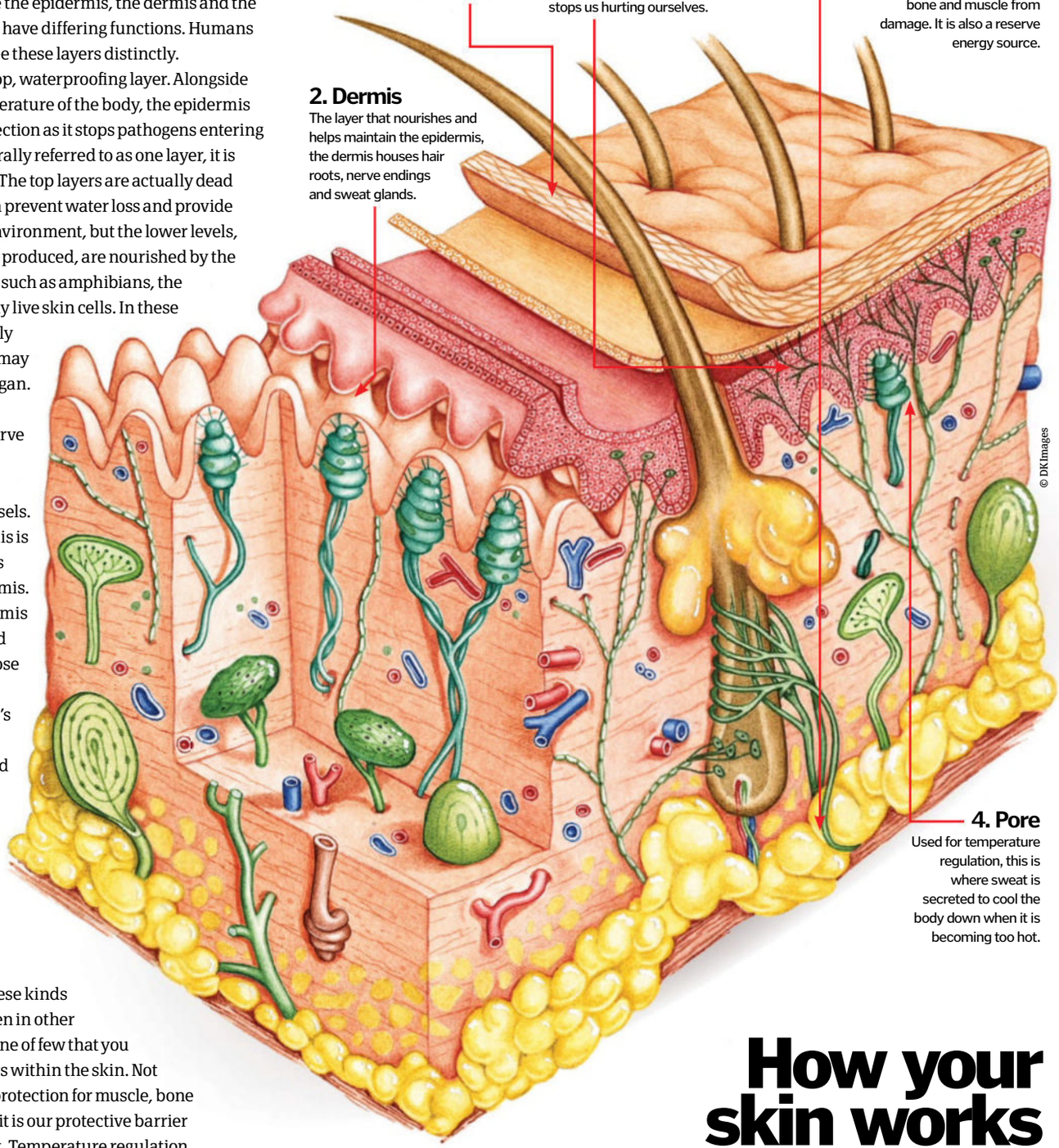
Find out more about the largest organ in your body…

Our skin is the largest organ in our bodies with an average individual skin's surface area measuring around two square metres and accounting for up to 16 per cent of total body weight. It is made up of three distinct layers. These are the epidermis, the dermis and the hypodermis and they all have differing functions. Humans are rare in that we can see these layers distinctly.

The epidermis is the top, waterproofing layer. Alongside helping to regulate temperature of the body, the epidermis also protects against infection as it stops pathogens entering the body. Although generally referred to as one layer, it is actually made up of five. The top layers are actually dead keratin-filled cells which prevent water loss and provide protection against the environment, but the lower levels, where new skin cells are produced, are nourished by the dermis. In other species, such as amphibians, the epidermis consists of only live skin cells. In these cases, the skin is generally permeable and actually may be a major respiratory organ.

The dermis has the connective tissue and nerve endings, contains hair follicles, sweat glands, lymphatic and blood vessels. The top layer of the dermis is ridged and interconnects securely with the epidermis.

Although the hypodermis is not actually considered part of the skin, its purpose is to connect the upper layers of skin to the body's underlying bone and muscle. Blood vessels and nerves pass through this layer to the dermis. This layer is also crucial for temperature regulation, as it contains 50 per cent of a healthy adult's body fat in subcutaneous tissue. These kinds of layers are not often seen in other species, humans being one of few that you can see the distinct layers within the skin. Not only does the skin offer protection for muscle, bone and internal organs, but it is our protective barrier against the environment. Temperature regulation, insulation, excretion of sweat and sensation are just a few more functions of skin.



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How your skin works

The skin is made of many more elements than most people imagine

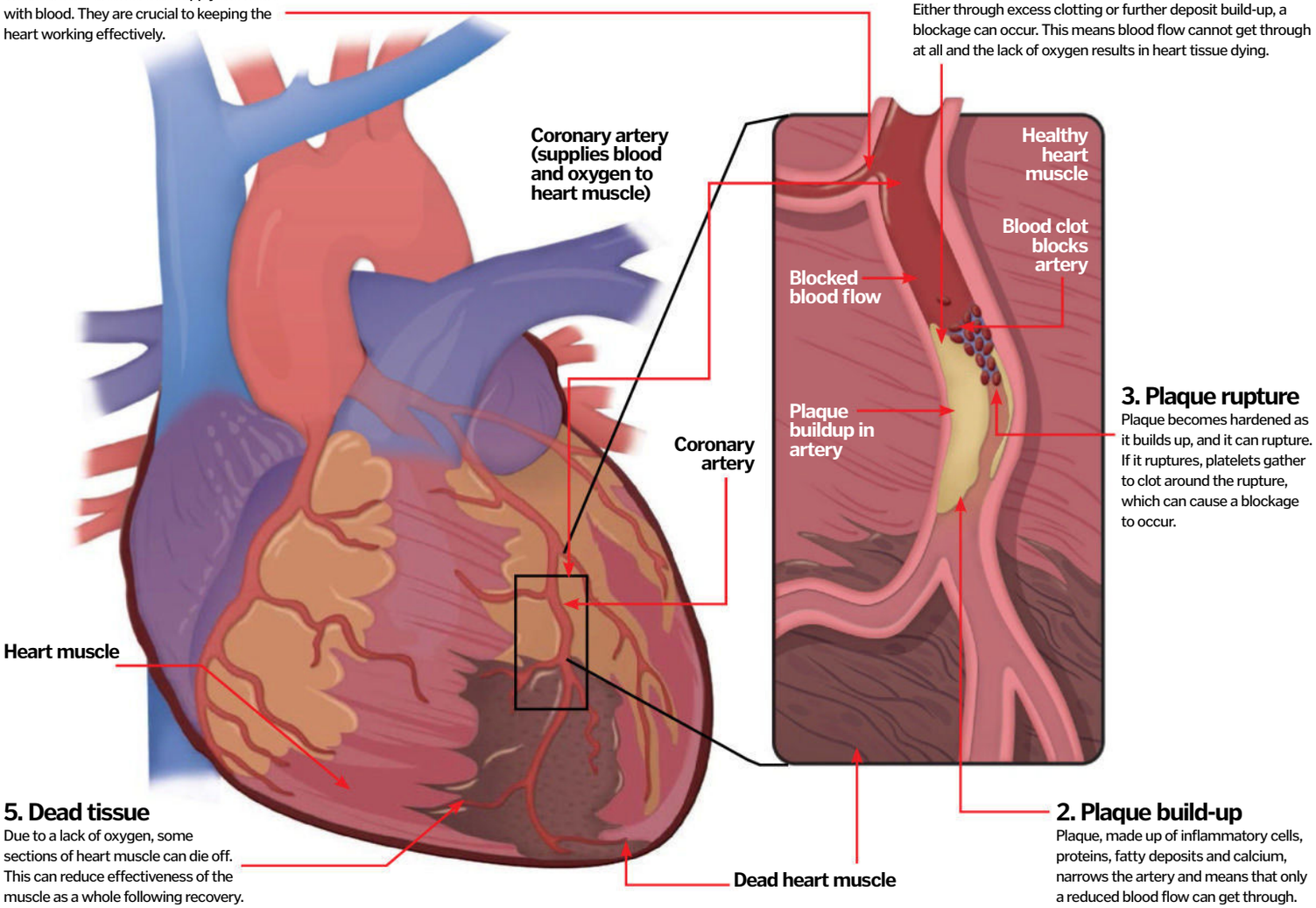
Heart attacks

What causes heart attacks and how do they kill?

A heart attack, also known as a myocardial infarction, occurs when a blockage stops blood oxygenating the heart muscle. If this is not corrected quickly, the muscle tissue that is lacking oxygen can become damaged, or indeed die. The scale of impact on the individual's health after the attack is dependant on how long the blockage occurs for, what artery it affected and what treatment was received. Following the initial attack, heart failure or arrhythmias can occur, both of which may prove fatal to the victim. However, given the right treatment many sufferers go on to make good recoveries and can eventually return to their normal activities.

The most common reason for heart attacks worldwide in humans is the generation of coronary artery disease (CAD). This is where arteries are constricted due to plaque build-ups and this layer then ruptures. Blood platelets make their way to the site of rupture and start to form blood clots. If these clots become too large, the narrowed artery will block and a heart attack occurs. Heart attacks can also be caused by coronary artery spasms, but these are rare.

Although some people will be genetically predisposed to heart attacks, individuals can reduce risk by keeping their weight down, watching what they eat, not smoking and exercising regularly.



1. Coronary arteries

These are the arteries that supply the heart with blood. They are crucial to keeping the heart working effectively.

4. Blockage occurs

Either through excess clotting or further deposit build-up, a blockage can occur. This means blood flow cannot get through at all and the lack of oxygen results in heart tissue dying.

3. Plaque rupture

Plaque becomes hardened as it builds up, and it can rupture. If it ruptures, platelets gather to clot around the rupture, which can cause a blockage to occur.

5. Dead tissue

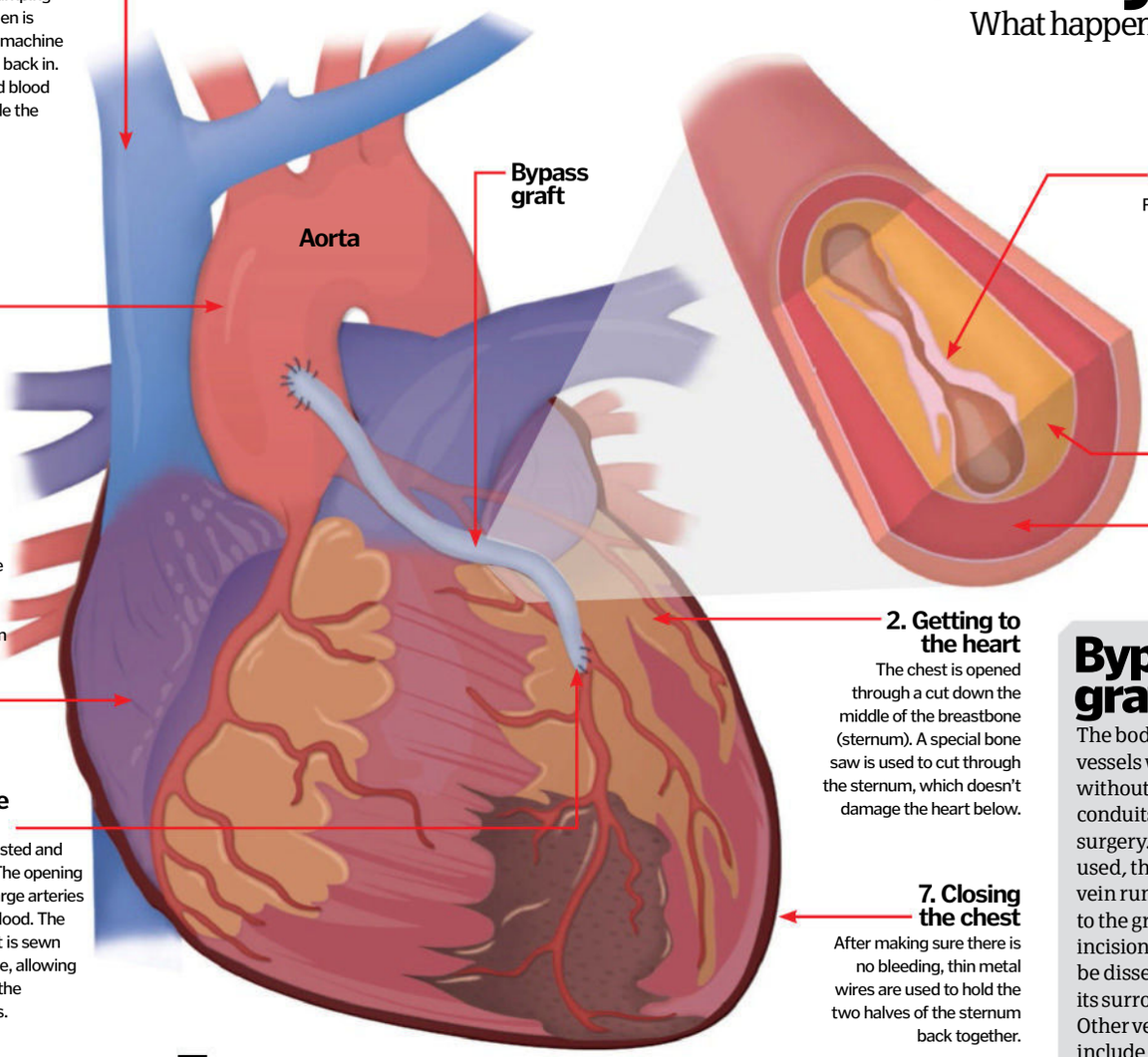
Due to a lack of oxygen, some sections of heart muscle can die off. This can reduce effectiveness of the muscle as a whole following recovery.

2. Plaque build-up

Plaque, made up of inflammatory cells, proteins, fatty deposits and calcium, narrows the artery and means that only a reduced blood flow can get through.

Heart bypass

What happens in surgery?



3. Bypassing the heart
Blood is removed by pumping it out of the body, oxygen is added to it in a bypass machine and the blood pumped back in. This allows oxygenated blood to continually flow while the heart is stopped.

4. Stopping the heart
The aorta, the main vessel out of the heart, is clamped. The heart is then cooled and stopped using a potassium-rich solution.

6. Restarting the heart
Once the new vessels have been secured, the aorta is unclamped which washes the potassium-rich solution from the heart. The patient is warmed and the heart restarts.

5. Attaching the new vessels
The new vessels are tested and then sewn into place. The opening is sewn to one of the large arteries carrying oxygen-rich blood. The end of the bypass graft is sewn beyond the fatty plaque, allowing blood to freely flow to the affected heart muscles.

1. The problem
Fatty plaques narrow and eventually block the coronary arteries, preventing oxygen-rich blood flowing to the heart muscle.

2. Getting to the heart
The chest is opened through a cut down the middle of the breastbone (sternum). A special bone saw is used to cut through the sternum, which doesn't damage the heart below.

7. Closing the chest
After making sure there is no bleeding, thin metal wires are used to hold the two halves of the sternum back together.

How heart bypasses work

When too little blood is getting to the muscles of the heart, a surgeon can bypass the blockages using the body's own vessels

Although the heart pumps oxygenated blood around the body, the heart's muscular walls need their own blood supply. Oxygen-rich blood is delivered to these tissues via small vessels on its surface – the coronary arteries. These arteries can get narrowed or blocked up with cholesterol causing fatty plaques which slow blood flow. At times of exercise, not enough blood gets to the heart muscles, leading to pain due to lack of oxygen – angina. If a vessel becomes completely blocked, no blood gets through, causing a heart attack where the heart muscle dies.

The first way to treat this type of coronary artery disease is with medicines. Secondly, angioplasty can be used, where narrowings in the arteries are stretched using a balloon, placing a stent to keep the vessel open. Finally, a heart bypass operation is an option for some patients.

The surgeon uses healthy vessels from other parts of the patient's body to bypass the blockage, allowing a new route for blood to flow. This delivers higher volumes of the oxygen-rich blood to the heart muscles beyond the blockage, preventing the pain.

Most bypasses are performed by stopping the heart and using a heart-lung bypass machine to deliver oxygenated blood to the body. The new vessels are then sewn into place.

Bypass grafts

The body has certain vessels which it can do without, and these act as conduits for bypass surgery. Commonly used, the long saphenous vein runs from the ankle to the groin. A shallow incision allows the vein to be dissected away from its surrounding tissue. Other vessels often used include small arteries from behind the rib cage (internal mammary artery) or the arms (radial artery).

Stopping the heart

Cardiopulmonary bypass (where a machine takes over the heart's pumping action and the gas exchange function of the lungs) is established to provide oxygenated blood to the rest of the body. Next, the heart is stopped. This is achieved using a potassium-rich solution, pumped down the coronary arteries. This stops the heart contracting. The surgeon can now carefully attach the fresh vessels to bypass the blockages.

Kidney function

How do your kidneys filter waste from the blood to keep you alive?

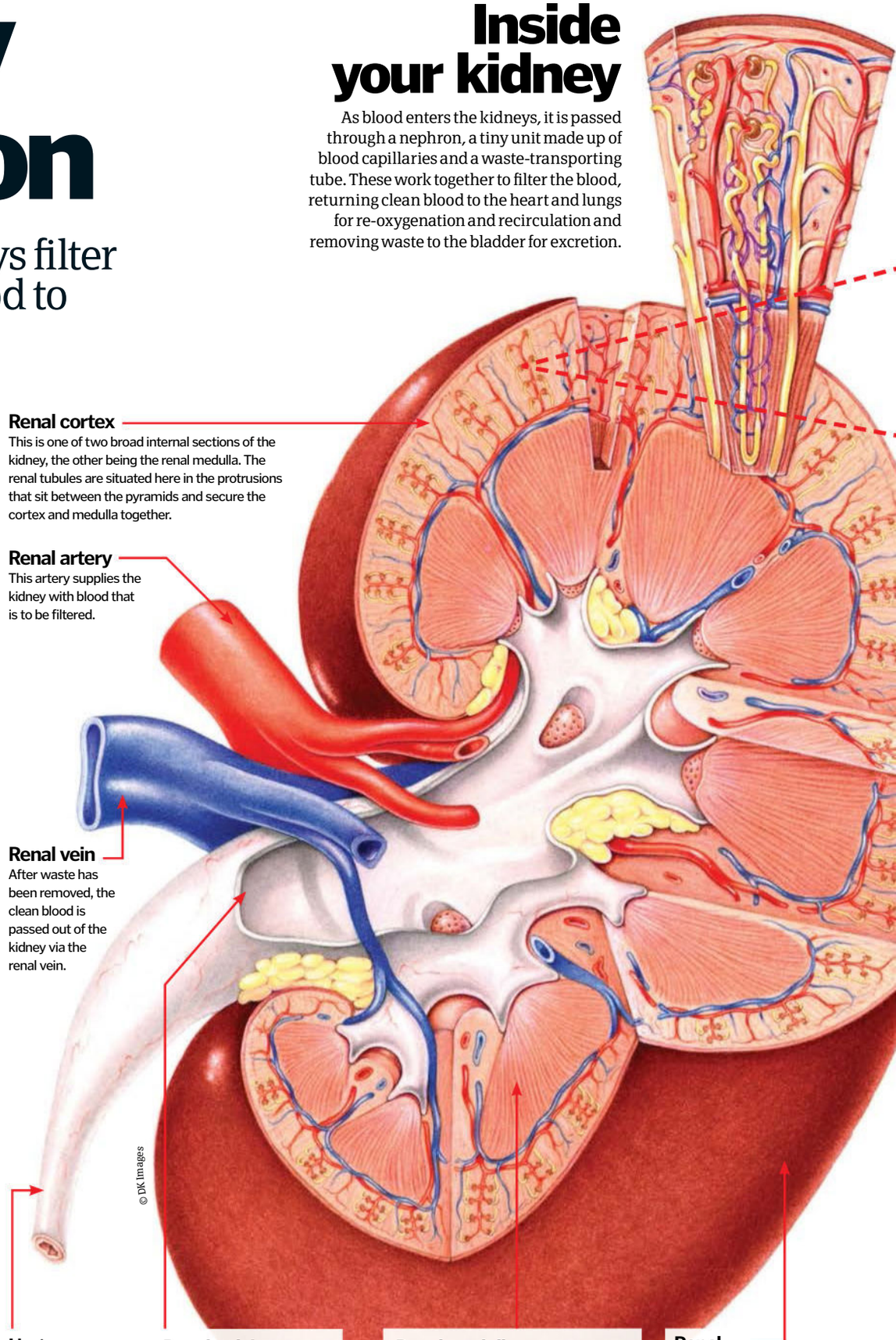
Kidneys are two bean-shaped organs situated halfway down the back just under the ribcage, on each side of the body, and weigh between 115 and 170 grams each, dependent on the individual's sex and size. The left kidney is commonly a little larger than the right and due to the effectiveness of these organs, individuals born with only one kidney can survive with little or no adverse health problems. Indeed, the body can operate normally with a 30-40 per cent decline in kidney function. This decline in function would rarely even be noticeable and shows just how effective the kidneys are at filtering out waste products as well as maintaining mineral levels and blood pressure throughout the body. The kidneys manage to control all of this by working with other organs and glands across the body such as the hypothalamus, which helps the kidneys determine and control water levels in the body.

Each day the kidneys will filter between 150 and 180 litres of blood, but only pass around two litres of waste down the ureters to the bladder for excretion. This waste product is primarily urea – a by-product of protein being broken down for energy – and water, and it's more commonly known as 'urine'. The kidneys filter the blood by passing it through a small filtering unit called a nephron. Each kidney has around a million of these, which are made up of a number of small blood capillaries, called glomerulus, and a urine-collecting tube called the renal tubule. The glomerulus sift the normal cells and proteins from the blood and then move the waste products into the renal tubule, which transports urine down into the bladder through the ureters.

Alongside this, the kidneys also release three hormones (known as erythropoietin, renin and calcitriol) which encourage red blood cell production, aid regulation of blood pressure and aid bone development and mineral balance respectively.

Inside your kidney

As blood enters the kidneys, it is passed through a nephron, a tiny unit made up of blood capillaries and a waste-transporting tube. These work together to filter the blood, returning clean blood to the heart and lungs for re-oxygenation and recirculation and removing waste to the bladder for excretion.



Renal cortex
This is one of two broad internal sections of the kidney, the other being the renal medulla. The renal tubules are situated here in the protrusions that sit between the pyramids and secure the cortex and medulla together.

Renal artery
This artery supplies the kidney with blood that is to be filtered.

Renal vein
After waste has been removed, the clean blood is passed out of the kidney via the renal vein.

Ureter
The tube that transports the waste products (urine) to the bladder following blood filtration.

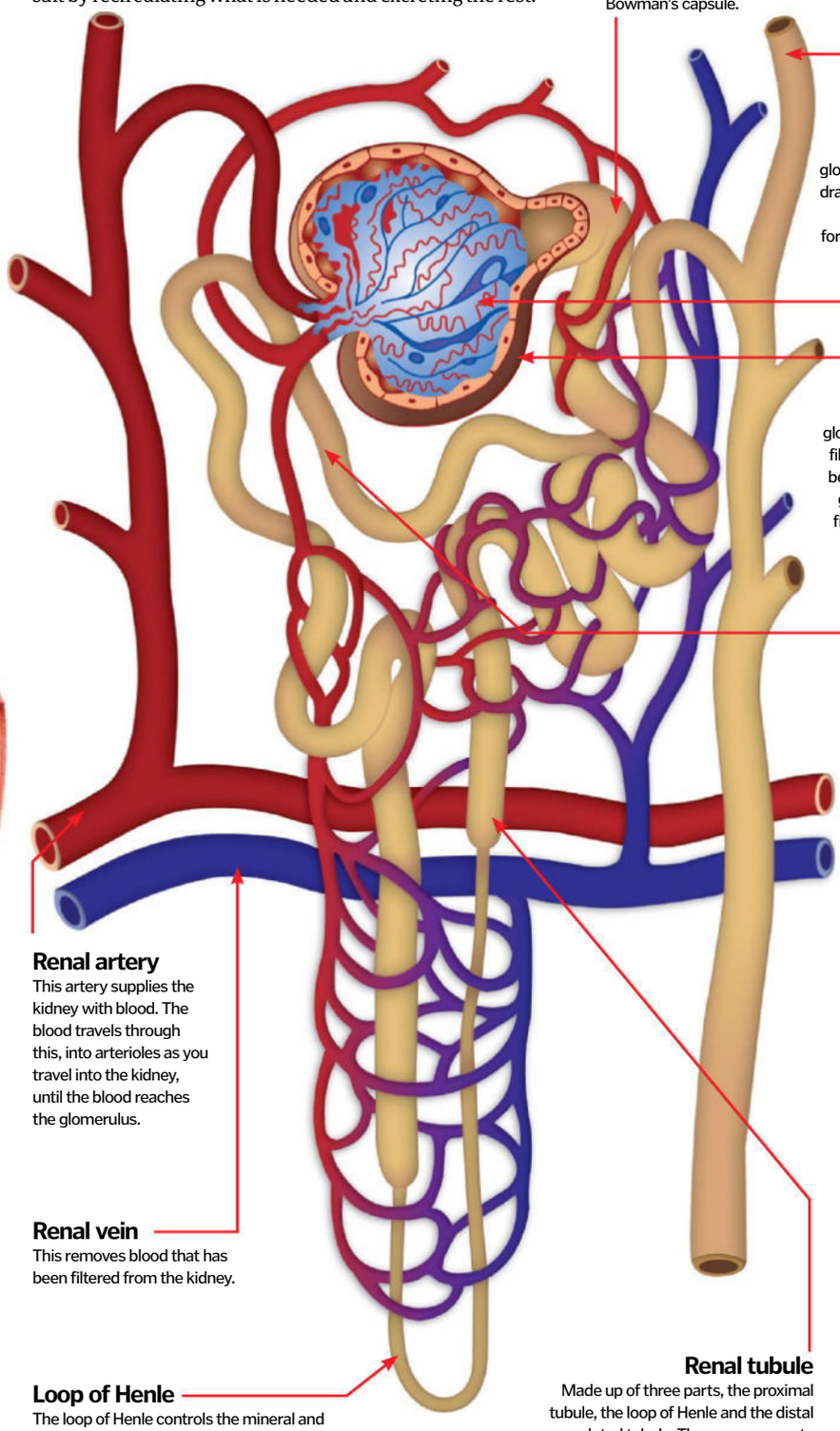
Renal pelvis
This funnel-like structure is how urine travels out of the kidney and forms the top part of the ureter, which takes urine down to the bladder.

Renal medulla
The kidney's inner section, where blood is filtered after passing through numerous arterioles. It's split into sections called pyramids and each human kidney will normally have seven of these.

Renal capsule
The kidney's fibrous outer edge, which provides protection for the kidney's internal fibres.

Nephrons – the filtration units of the kidney

Nephrons are the units which filter all blood that passes through the kidneys. There are around a million in each kidney, situated in the renal medulla's pyramid structures. As well as filtering waste, nephrons regulate water and mineral salt by recirculating what is needed and excreting the rest.



Proximal tubule
Links Bowman's capsule and the loop of Henle, and will selectively reabsorb minerals from the filtrate produced by Bowman's capsule.

Collecting duct system
Although not technically part of the nephron, this collects all waste product filtered by the nephrons and facilitates its removal from the kidneys.

Glomerulus
High pressure in the glomerulus, caused by it draining into an arteriole instead of a venule, forces fluids and soluble materials out of the capillary and into Bowman's capsule.

Bowman's capsule
Also known as the glomerular capsule, this filters the fluid that has been expelled from the glomerulus. Resulting filtrate is passed along the nephron and will eventually make up urine.

Distal convoluted tubule
Partly responsible for the regulation of minerals in the blood, linking to the collecting duct system. Unwanted minerals are excreted from the nephron.

Renal artery
This artery supplies the kidney with blood. The blood travels through this, into arterioles as you travel into the kidney, until the blood reaches the glomerulus.

Renal vein
This removes blood that has been filtered from the kidney.

Loop of Henle
The loop of Henle controls the mineral and water concentration levels within the kidney to aid filtration of fluids as necessary. It also controls urine concentration.

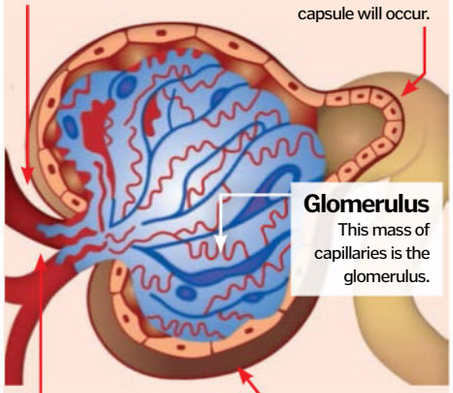
Renal tubule
Made up of three parts, the proximal tubule, the loop of Henle and the distal convoluted tubule. They remove waste and reabsorb minerals from the filtrate passed on from Bowman's capsule.

The glomerulus

This group of capillaries is the first step of filtration and a crucial aspect of a nephron. As blood enters the kidneys via the renal artery, it is passed down through a series of arterioles which eventually lead to the glomerulus. This is unusual, as instead of draining into a venule (which would lead back to a vein) it drains back into an arteriole, which creates much higher pressure than normally seen in capillaries, which in turn forces soluble materials and fluids out of the capillaries. This process is known as ultrafiltration and is the first step in filtration of the blood. These then pass through the Bowman's capsule (also know as the glomerular capsule) for further filtration.

Afferent arteriole
This arteriole supplies the blood to the glomerulus for filtration.

Proximal tubule
Where reabsorption of minerals from the filtrate from Bowman's capsule will occur.



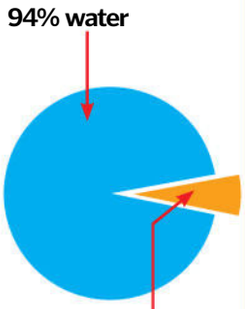
Glomerulus
This mass of capillaries is the glomerulus.

Efferent arteriole
This arteriole is how blood leaves the glomerulus following ultrafiltration.

Bowman's capsule
This is the surrounding capsule that will filter the filtrate produced by the glomerulus.

What is urine and what is it made of?

Urine is made up of a range of organic compounds such as proteins and hormones, inorganic salts and numerous metabolites. These by-products are often rich in nitrogen and need to be removed from the blood stream through urination. The pH-level of urine is typically around neutral (pH7) but varies depending on diet, hydration levels and physical fitness. The colour of urine is also determined by these factors, with dark-yellow urine indicating dehydration and greenish urine being indicative of excessive asparagus consumption.



Kidney transplants

The kidneys are the body's natural filters. You can survive on just one, but when that fails you may need a transplant

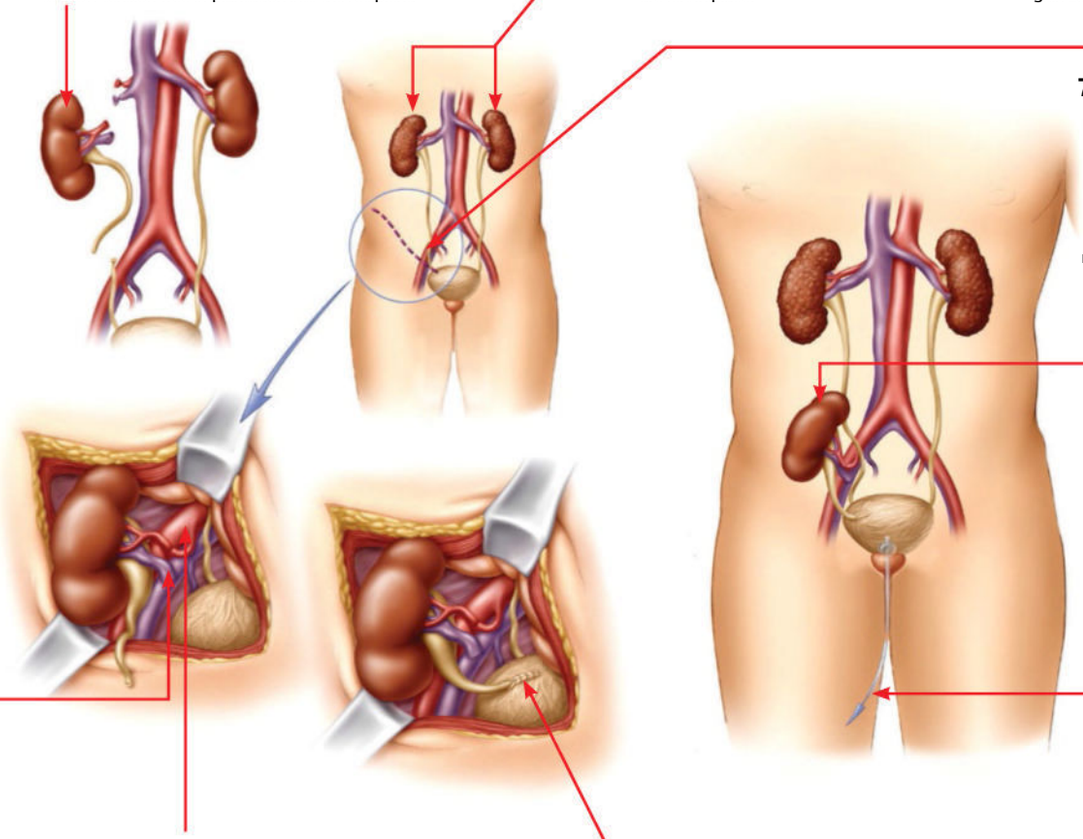
Transplanting organs is a complex process, but it can give a new lease of life to recipients. The kidney is the most frequently transplanted organ, across the globe. However, there is a discrepancy between the number of patients waiting for a transplant and the number of available organs; only around one third of those waiting per year receive their transplant. The number of patients registered for a kidney transplant increases each year, and has risen by 50 per cent since 2000.

Kidney transplants come from two main sources: the living and the recently deceased. If a healthy, compatible family member is willing to donate a kidney, they can survive with just one remaining kidney. In other cases, someone else's tragedy is someone else's fortune. For those who are declared brain-dead, the beating heart will keep the kidneys perfused until they are ready to be removed. In some patients, the ventilator will be switched off and it's a race against time to harvest organs. Either way, consent from the family is needed, even at such an emotional and pressurised time.

When a suitable organ becomes available, it is matched via a national register to a suitable recipient. A 'retrieval' team from a central transplant unit (of which there are 20 based around the UK) will go to whichever hospital the donor is in. They will remove the organs, while the recipient is being prepared in the base hospital. During the tricky operation, the new kidney is 'plumbed' into the pelvis, leaving the old, non-functioning ones in-situ.

How to perform a kidney transplant

Transplanting a kidney is a case of careful and clever plumbing. The first step is to harvest the donor kidney, and then it's a dash to transplant the new kidney into the recipient. When the brain-dead donor is transferred to the operating theatre for organ harvest, they are treated with the same care and respect as if they were still alive. When consent has been given for multiple organ harvest, a cut is made from the top of the chest to the bottom of the pelvis. The heart and lungs are retrieved first, followed by the abdominal organs.



1. The donor
The donor kidney is harvested, including enough length of artery, vein and ureter (which carries urine to the bladder) to allow tension-free implantation into the recipient.

2. Out with the old?
As long as there's no question of cancer, the original kidneys are left in place.

3. Into the pelvis
An incision is made in the lower part of the abdomen to gain access into the pelvis.

4. Make space!
The surgeon will create space in the pelvis, and identify the large vessels which run from the heart to the leg (the iliac arteries and veins). The new kidney's vessels will be connected to these.

5. Plumbing it in
The renal artery and vein are connected to the corresponding iliac artery and vein in the recipient's body. Holes (arteriotomies) are created in the main arteries, and the kidney's vessels are anastomosed (a surgical join between two tubes using sutures).

6. The final link
The ureter, which drains urine from the kidney, is connected to the bladder. This allows the kidney to function in the same way as one of the original kidneys.

7. What's that lump?
The new kidney can be felt underneath the scar in the recipient. These patients are often recruited to medical student exams .

8. Catheter
A catheter is left in-situ for a short while, so that the urine output of the new kidney can be measured exactly.

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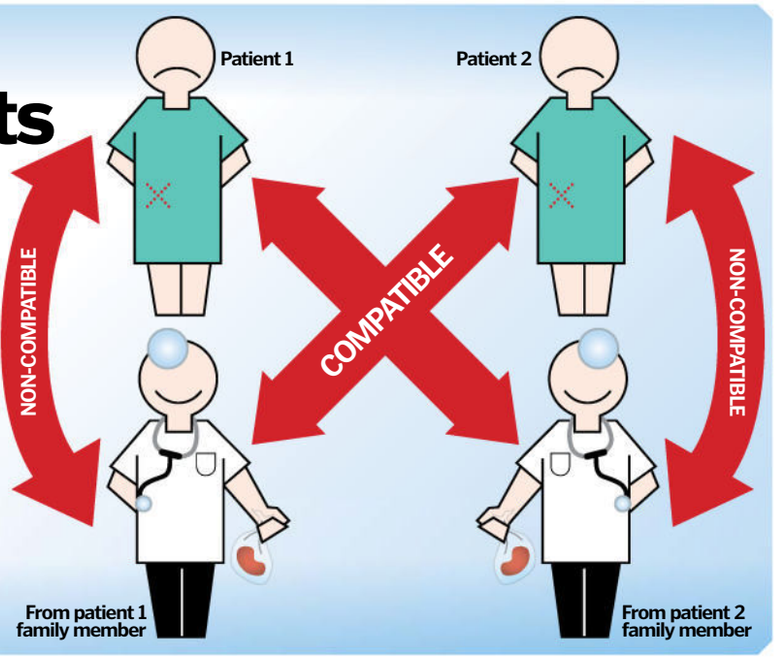
Domino transplants

Patient 1 needs a new kidney but their family member isn't compatible. Patient 2 also needs a kidney and has an incompatible family member as well. However, patient 2's relation is compatible with patient 1 and vice versa. The surgeon arranges a swap – a 'paired' transplant. A longer line of patients and family members swapping compatible kidneys can be arranged – a 'daisy-chain' transplant. A 'good Samaritan' donor, who isn't related to any of the recipients, can start the process. This first recipient's family member will subsequently donate to someone else – a 'domino' transplant effect which can go on for several cycles.



Time is always of the essence

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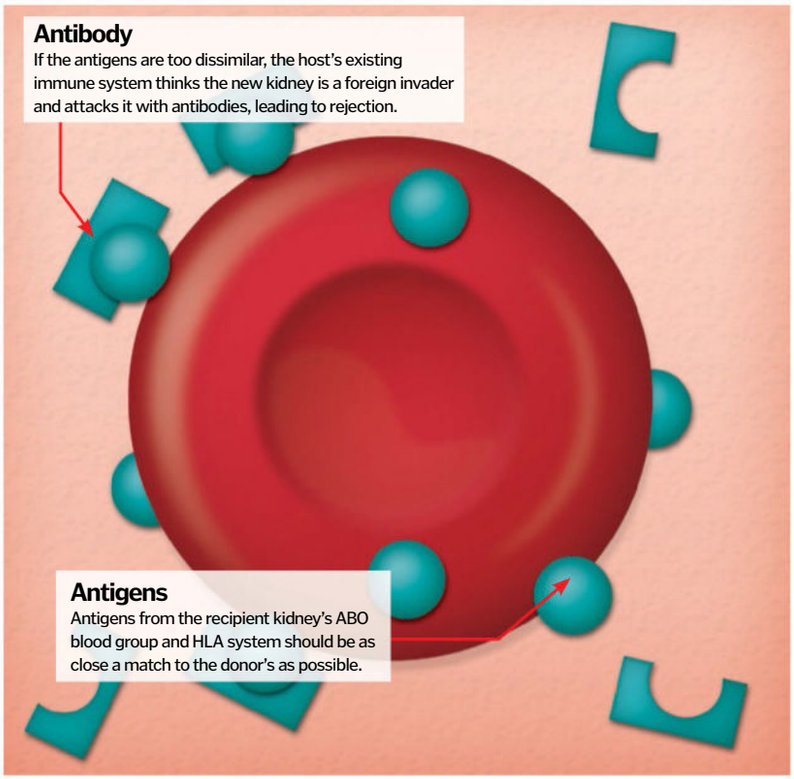
Who is suitable?

Of the several million people in the UK with kidney disease, only around 50,000 will develop end-stage renal failure (ESRF). For these people, dialysis or kidney transplantation are the only options. Kidney damage from diabetes is the most common cause of transplantation. Other causes include damage from high blood pressure, chronic kidney scarring (chronic pyelonephritis) and polycystic kidney disease (the normal kidney tissue is replaced with multiple cysts); many other less common causes exist also.

Patients must be selected carefully due to the scarcity of organs. Those with widespread cancer, severely calcified arteries, persistent substance abuse and unstable mental problems mean that transplants are likely to fail and so these patients are unsuitable to receive a precious kidney transplant.

"Patients are monitored for the rest of their lives"



When things go wrong...

Kidneys need to be carefully matched to suitable donors, or rejection of the new organ will set in fast. Rejection occurs when the host body's natural antibodies think the new tissue is a foreign invader and attacks; careful pre-operative matching helps limit the degree of this attack. The most important match is via the ABO blood group type – the blood group must match or rejection is fast and aggressive. Next, the body's HLA (human leukocyte antigen) system should be a close a match as possible, although it doesn't need to be perfect. Incorrect matches here can lead to rejection over longer periods of time. After the operation, patients are started on anti-rejection medicines which suppress the host's immune system (immunosuppressants such as Tacrolimus, Azathioprine or Prednisolone). Patients are monitored for the rest of their lives for signs of rejection. These immunosuppressants aren't without their risks – since they suppress the body's natural defences, the risks of infections and cancers are higher.

Pack carefully!

The transport of harvested organs is time critical – the sooner the surgeon can put them into the recipient the better. As soon as blood stops flowing to the harvested tissue, the lack of oxygen damages these cells, which is called ischaemia. The retrieval team have a few tricks up their sleeves to maximise the viability of the precious cargo they carry.

In the operating theatre, just before they remove the harvested kidney, it is flushed clean of blood with a special cold, nutrient-rich solution. Once removed, it is quickly put in a sterile container with ice. The most modern technique is to use a cold perfusion machine instead of ice, which pumps a cooled solution through the kidney and improves its lasting power. While hearts and lungs can only last around four hours, kidneys can last 24-48 hours. Transfer of the affected organ is done via the fastest method possible; this often involves using helicopters or police escorts.

All of these methods prolong the preservation time of the kidney, although once 'plugged' back in, it can take a few days for the kidney to start working properly (especially if harvested from a non-heart-beating donor).

Useless body parts

Why have humans and other animals stopped using certain organs and functions which were once crucial for survival?

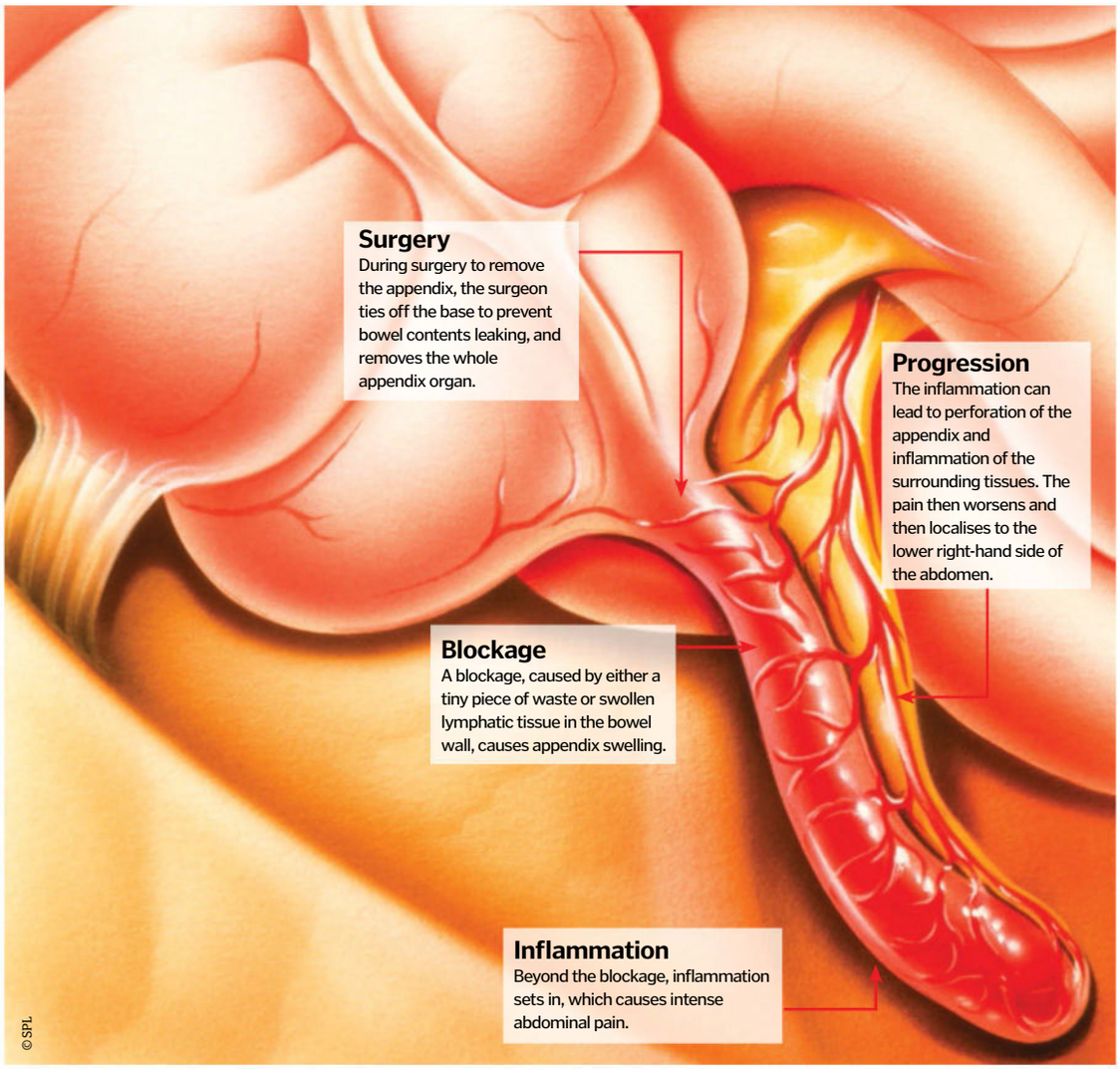
Charles Darwin is one of history's most famous naturalists. Living in the 19th Century, he became celebrated for his theories on evolution. In his seminal work *On The Origin Of Species* he described how similar animals were likely to be related by common ancestors, rather than be completely unrelated. As subsequent generations are born, traits and features that did not bring a survival benefit to that species were eliminated. That, in a nutshell, is the theory of evolution.

As a consequence, some organs and traits left in the body lose their function and are no longer used. This applies to modern human beings as much as other creatures; some of our physical attributes and behavioural responses are functional in other animals, but they do not seem to be of any benefit to us; such as the appendix and your tailbone. These evolutionary remnants that no longer serve any purpose are called vestigial organs, though this can apply as much to behaviour and other body structures as it does to actual organs.

Evolution has also adapted some existing features to help us in new ways, in a process known as exaptation. For example, birds' wings not only help them to fly but keep them warm too. These changes may take thousands of years to develop, and in some cases the original role is eventually eliminated altogether.

Appendicitis in focus

What happens when your appendix gets inflamed?



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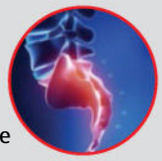
Evolution's leftovers

1 Appendix
The best known of the vestigial organs, the appendix is used in animals to help digest cellulose found in grass, but in humans it serves no clear function now.

2 Tailbone



The hard bone at the bottom of your spine, the coccyx, is a remnant of our evolutionary ancestors' tail. It has no function in humans, but you could break it if you fall over.

3 Goosebumps
Animals use body hair for insulation from the cold, by trapping a warm layer of air around the body. Each hair can stand on end when its own tiny muscle contracts, but as human beings have lost most of their body hair, a jumper is more effective.

4 Plica semilunaris

The fleshy red fold found in the corner of your eye used to be a transparent inner eyelid, which is still present in both reptiles and birds.

5 Wisdom teeth
These teeth emerge during our late teens in each corner of the gums. Our ancestors used them to help chew dense plant matter, but they have no function today, but can cause a lot of pain.

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DID YOU KNOW? *Around 15 per cent of us have an extra spleen – a small sphere close to but separate from the principal organ*

How the spleen works

Perhaps not as well known as famous organs like the heart, the spleen serves vital functions that help keep us healthy

The spleen's main functions are to remove old blood cells and fight off infection. Red blood cells have an average life span of 120 days. Most are created from the marrow of long bones, such as the femur. When they're old, it's the spleen's job to identify them, filter them out and then break them down. The smaller particles are then sent back into the bloodstream, and either recycled or excreted from other parts of the body. This takes place in the 'red pulp', which are blood vessel-rich areas of the spleen that make up about three-quarters of its structure.

The remainder is called 'white pulp', which are areas filled with different types of immune cell (such as lymphocytes). They filter out and destroy foreign pathogens, which have invaded the body and are circulating in the blood. The white pulp breaks them down into smaller, harmless particles.

It is surrounded by a thin, fragile capsule and so is prone to injury. It sits beneath the lower ribs on the left-hand side of your body, which affords it some protection, but car crashes, major sports impacts and knife wounds can all rupture the organ. In the most serious cases, blood loss can endanger the person's life, and in these situations it needs to be removed by a surgeon. Since this reduces the body's ability to fight infections, some people will need to take antibiotics to boost their immunity for the rest of their lives.

The immune system

Although the red blood that flows through our bodies gets all the glory, the transparent lymphatic fluid is equally important. It has its own body-wide network which follows blood vessel flow closely and allows for the transport of digested fats, immune cells and more…

Spleen
One of the master co-ordinators that staves off infections and filters old red blood cells. It contains a number of lymphocytes that recognise and destroy invading pathogens present in the blood as it flows through the spleen.

Thymus
A small organ that sits just above the heart and behind the sternum. It teaches T-lymphocytes to identify and destroy specific foreign bodies. Its development is directly related to hormones in the body so it's only present until puberty ends; adults don't need one.

Tonsils
These are masses of lymphoid tissue at the back of the throat and can be seen when the mouth is wide open. They form the first line of defence against inhaled foreign pathogens, although they can become infected themselves, causing tonsillitis.

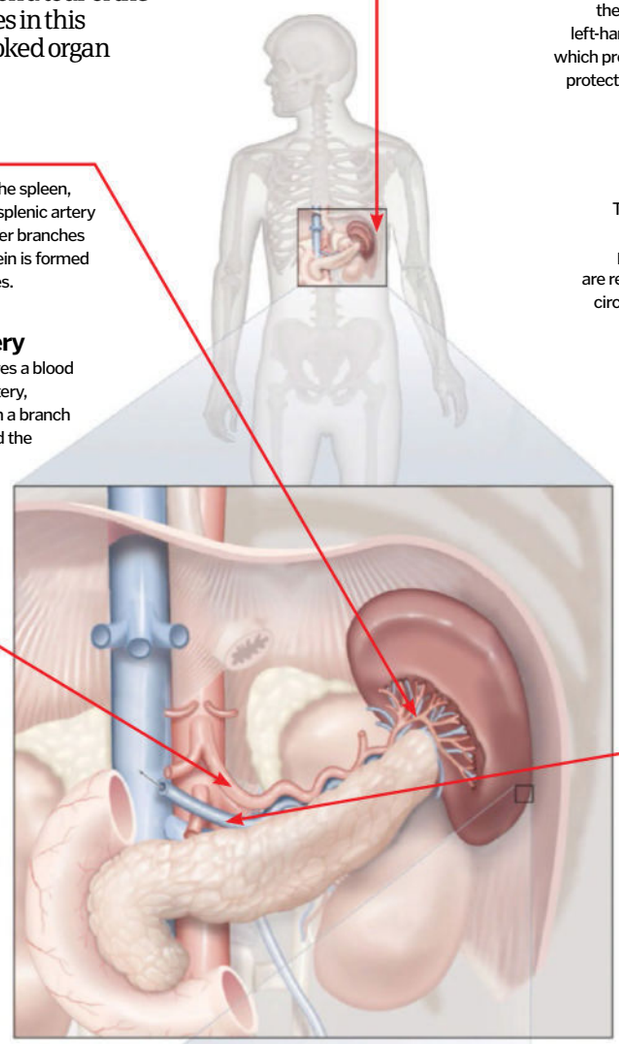
Adenoids
These are part of the tonsillar system that are only present in children up until the age of five; in adults they have disappeared. They add an extra layer of defence in our early years.

Bone marrow
This forms the central, flexible part of our long bones (eg femur). Bone marrow is essential as it produces our key circulating cells, including red blood cells, white blood cells and platelets. The white blood cells mature into different types (eg lymphocytes and neutrophils), which serve as the basis of the human immune system.

Lymph nodes
These are small (about 1cm/0.4in) spherical nodes that are packed with macrophages and lymphocytes to defend against foreign agents. These are often linked in chains and are prevalent around the head, neck, axillae (armpits) and groin.

Inside the spleen

We take you on a tour of the major features in this often-overlooked organ



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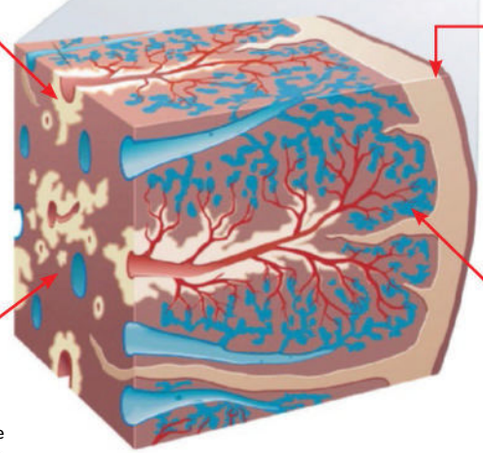


Location
The spleen sits underneath the 9th, 10th and 11th ribs (below the diaphragm) on the left-hand side of the body, which provides it with some protection against knocks.

Hilum
The entrance to the spleen, this is where the splenic artery divides into smaller branches and the splenic vein is formed from its tributaries.

Splenic vein
The waste products from filtration and pathogen digestion are returned to the main circulation via this vein for disposal.

Splenic artery
The spleen receives a blood supply via this artery, which arises from a branch of the aorta called the coeliac trunk.

White pulp
Making up roughly a quarter of the spleen, the white pulp is where white blood cells identify and destroy any type of invading pathogens.

Splenic capsule
The capsule provides some protection, but it's thin and relatively weak. Strong blows or knife wounds can easily rupture it and lead to life-threatening bleeding.

Red pulp
Forming approximately three-quarters of the spleen, the red pulp is where red blood cells are filtered and broken down.

Sinusoid
Similar to those found in the liver, these capillaries allow for the easy passage of large cells into the splenic tissue for processing.

How the liver works

The human liver is the ultimate multitasker – it performs many different functions all at the same time without you even asking

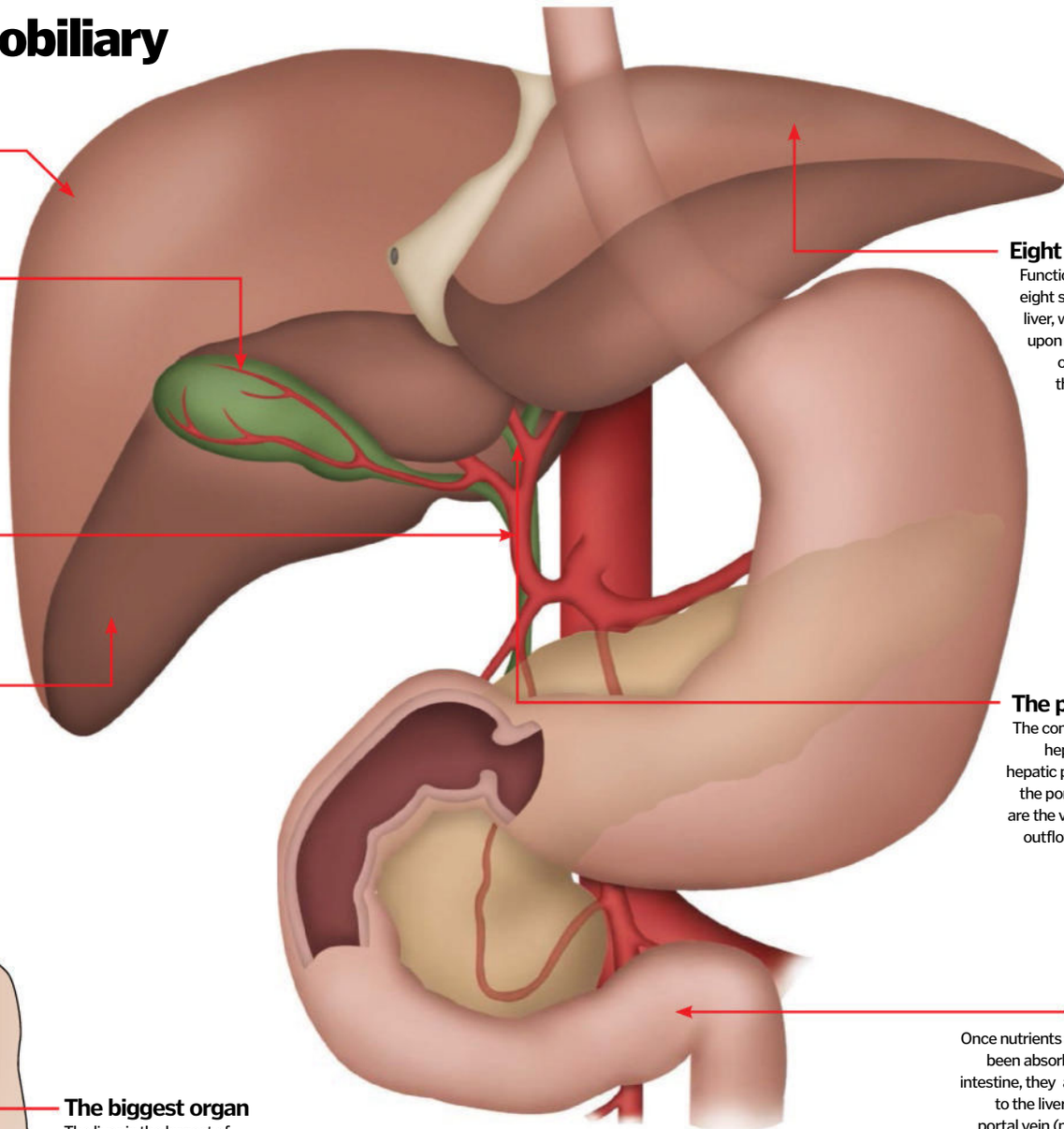
The liver is the largest internal organ in the human body and, amazingly, has over 500 different functions. In fact, it is the second most complex organ after the brain and is intrinsically involved in almost every aspect of the body's metabolic processes.

The liver's main functions are energy production, removal of harmful substances and the production of crucial proteins. These tasks are carried out within liver cells, called hepatocytes, which sit in complex arrangements to maximise their overall efficiency.

The liver is the body's main powerhouse, producing and storing glucose as a key energy source. It is also responsible for breaking down complex fat molecules and building them up into cholesterol and triglycerides, which the body needs but in excess are bad. The liver makes many complex proteins, including clotting factors which are vital in arresting bleeding. Bile, which helps digest fat in the intestines, is produced in the liver and stored in the adjacent gallbladder.

The liver also plays a key role in detoxifying the blood. Waste products, toxins and drugs are processed here into

The hepatobiliary region



Two halves
The liver is anatomically split into two halves: left and right. There are four lobes, and the right lobe is the largest.

The gallbladder
The gallbladder and liver are intimately related. Bile, which helps digest fat, is produced in the liver and stored in the gallbladder.

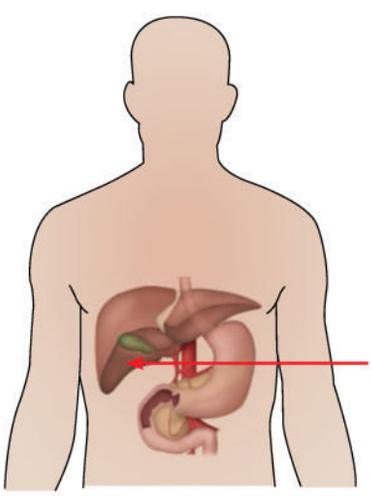
The common bile duct
This duct is small, but vital in the human body. It carries bile from the liver and gallbladder into the duodenum where it helps digest fat.

Feel your liver
Take a deep breath in and feel just under the right lower edge of your ribs – in some people the lower edge of the liver can be felt.

Eight segments
Functionally, there are eight segments of the liver, which are based upon the distribution of veins draining these segments.

The portal triad
The common bile duct, hepatic artery and hepatic portal vein form the portal triad, which are the vital inflows and outflows for this liver.

Digestion
Once nutrients from food have been absorbed in the small intestine, they are transported to the liver via the hepatic portal vein (not shown here) for energy production.

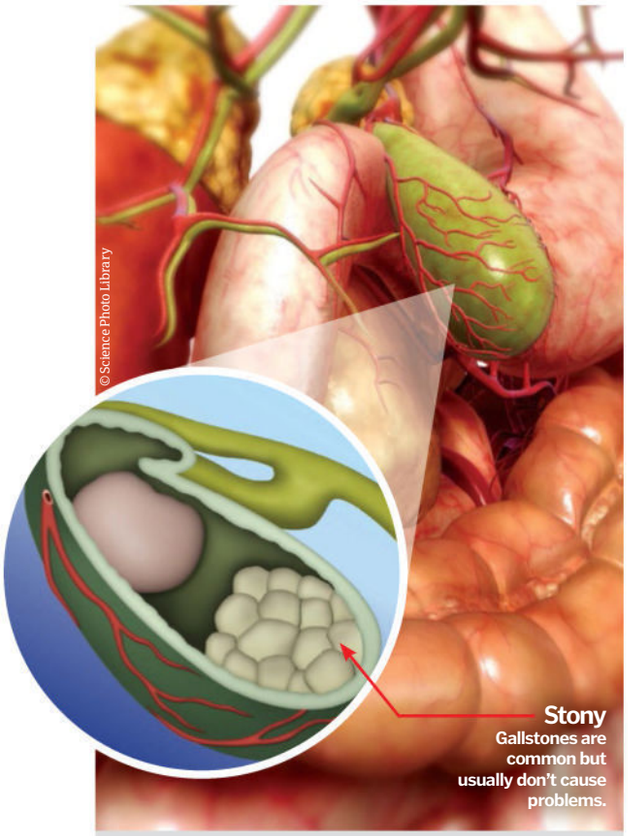


The biggest organ
The liver is the largest of the internal organs, sitting in the right upper quadrant of the abdomen, just under the rib cage and attached to the underside of the diaphragm.

"The liver also breaks down old blood cells and recycles hormones such as adrenaline"

forms which are easier for the rest of the body to use or excrete. The liver also breaks down old blood cells, produces antibodies to fight infection and recycles hormones such as adrenaline. Numerous essential vitamins and minerals are stored in the liver: vitamins A, D, E and K, iron and copper.

Such a complex organ is also unfortunately prone to diseases. Cancers, infections (hepatitis) and cirrhosis (a form of fibrosis often caused by excess alcohol consumption) are just some of those which can affect the liver.



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Stony
Gallstones are common but usually don't cause problems.

The gallbladder

Bile, a dark green slimy liquid, is produced in the hepatocytes and helps to digest fat. It is stored in a reservoir which sits on the under-surface of the liver, to be used when needed. This reservoir is called the gallbladder. Stones can form in the gallbladder (gallstones) and are very common, although most don't cause problems. In 2009, just under 60,000 gallbladders were removed from patients within the NHS making it one of the most common operations performed; over 90 per cent of these are removed via keyhole surgery. Most patients do very well without their gallbladder and don't notice any changes at all.

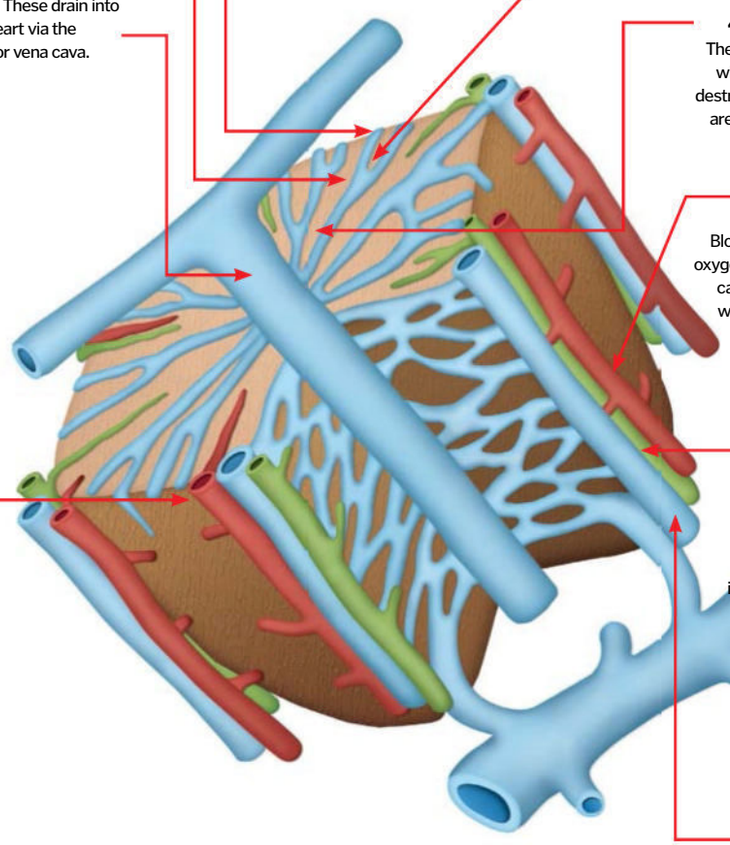
A high demand organ

The liver deals with a massive amount of blood. It is unique because it has two blood supplies. 75 per cent of this comes directly from the intestines (via the hepatic portal vein) which carries nutrients from digestion, which the liver processes and turns into energy. The rest comes from the heart, via the hepatic artery (which branches from the aorta), carrying oxygen which the liver needs to produce this energy. The blood flows in tiny passages in between the liver cells where the many metabolic functions occur. The blood then leaves the liver via the hepatic veins to flow into the biggest vein in the body – the inferior vena cava.

Liver lobules

The functional unit which performs the liver's tasks

The liver is considered a 'chemical factory,' as it forms large complex molecules from smaller ones brought to it from the gut via the blood stream. The functional unit of the liver is the lobule – these are hexagonal-shaped structures comprising of blood vessels and sinusoids. Sinusoids are the specialised areas where blood comes into contact with the hepatocytes, where the liver's biological processes take place.



3. Sinusoids
These blood filled channels are lined by hepatocytes and provide the site of transfer of molecules between blood and liver cells.

1. The lobule
This arrangement of blood vessels, bile ducts and hepatocytes form the functional unit of the liver.

9. Central vein
Blood from sinusoids, now containing all of its new molecules, flows into central veins which then flow into larger hepatic veins. These drain into the heart via the inferior vena cava.

2. The hepatocyte
These highly active cells perform all of the liver's key metabolic tasks.

4. Kupffer cells
These specialised cells sit within the sinusoids and destroy any bacteria which are contaminating blood.

5. Hepatic artery branch
Blood from here supplies oxygen to hepatocytes and carries metabolic waste which the liver extracts.

6. Bile duct
Bile, which helps digest fat, is made in hepatocytes and secreted into bile ducts. It then flows into the gallbladder for storage before being secreted into the duodenum.

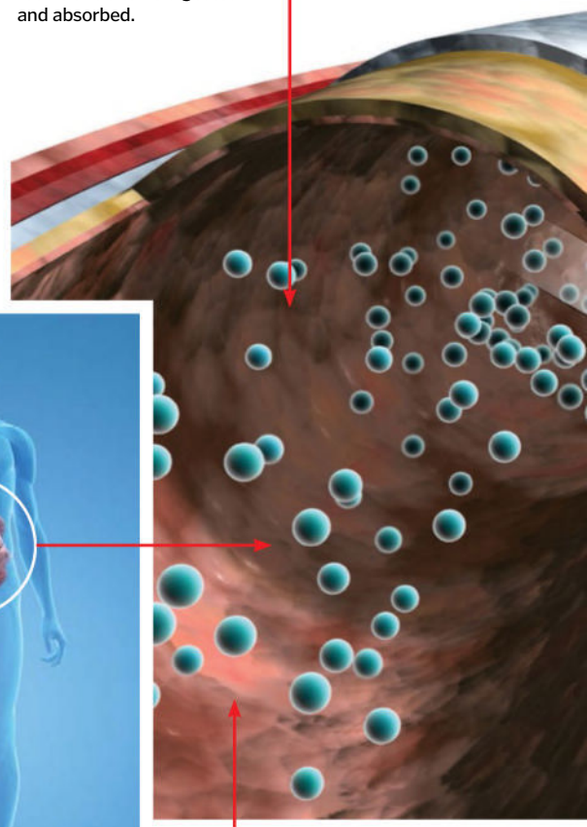
8. The portal triad
The hepatic artery, portal vein and bile duct are known as the portal triad. These sit at the edges of the liver lobule and are the main entry and exit routes for the liver.

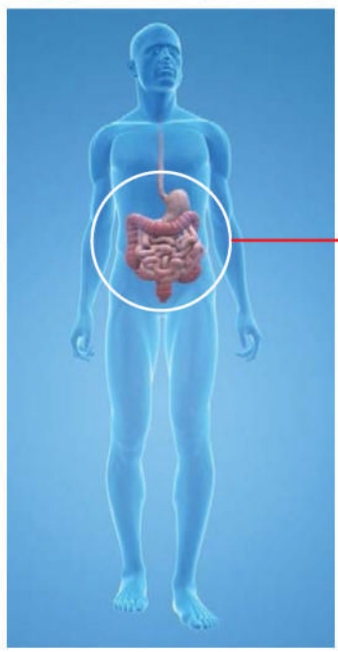
7. Portal vein
This vein carries nutrient-rich blood directly from the intestines, which flows into sinusoids for conversion into energy within hepatocytes.

The surface area of the small intestine is huge – in fact, rolled flat it would cover a tennis court!

Structure of the small intestine

Examine the anatomy of this vital organ in the human digestive tract





Lumen
This is the space inside the small intestine in which the food travels to be digested and absorbed.

Mucosa
The internal lining of the small intestine where the plicae circulares (mucosal folds) and villi are situated.

Mucosal folds
These line the small intestine to increase surface area and help push the food on its way by creating a valve-like structure, stopping food travelling backwards.

Submucosa
This supports the mucosa and connects it to the layers of muscle (muscularis) that make up the exterior of the small intestine.

Exploring the small intestine

Crucial for getting the nutrients we need from the food we eat, how does this digestive organ work?

The small intestine is one of the most important elements of our digestive system, which enables us to process food and absorb nutrients. On average, it sits at a little over six metres (19.7 feet) long with a diameter of 2.5-3 centimetres (1-1.2 inches), and it's made up of three distinctive parts: the duodenum, jejunum and the ileum.

The duodenum connects the small intestine to the stomach and is the key place for further enzyme breakdown, following the stomach turning food into an amino acid state. While the duodenum is very important in breaking food down, using bile and enzymes from the gallbladder, liver and pancreas, it is the shortest element of the small bowel, only averaging about 30 centimetres (11.8 inches).

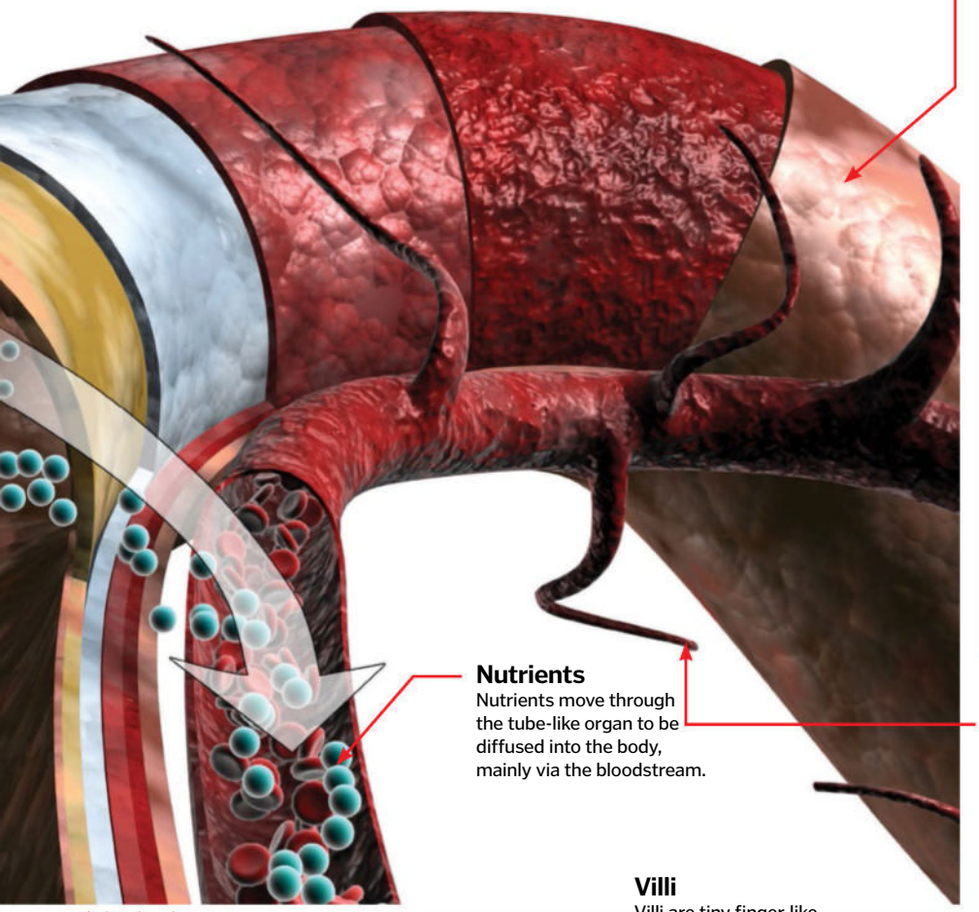
The jejunum follows the duodenum and its primary function is to encourage absorption of carbohydrates and proteins by passing the broken-down food molecules through an area with a large surface area so they can enter the bloodstream. Villi – small finger-like structures – and mucosal folds line the passage and increase the surface area dramatically to aid this process.

The ileum is the final section of the small bowel and serves to catch nutrients that may have been missed, as well as absorbing vitamin B12 and bile salts.

Peristalsis is the movement used by the small intestine to push the food through to the large bowel, where waste matter is stored for a short period then disposed of via the colon. This process is generated by a series of muscles which make up the organ's outer wall.

DID YOU KNOW? *The small intestine is actually longer than the large intestine, but is so called because of its narrower diameter*

Serosa
This protective outer layer stops the small intestine from being damaged by other organs.



Nutrients
Nutrients move through the tube-like organ to be diffused into the body, mainly via the bloodstream.

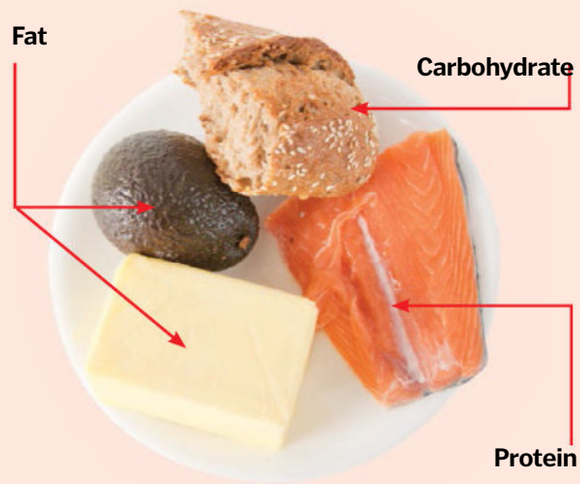
Blood vessels
These sit close to the small intestine to allow easy diffusion of nutrients into the bloodstream.

Longitudinal muscle layer
This contracts and extends to help transport food with the circular muscle layer.

Circular muscle layer
This works in partnership with the longitudinal muscle layer to push the food down via a process called peristalsis.

What exactly are nutrients?

There are three main types of nutrient that we process in the body: lipids (fats), carbohydrates and proteins. These three groups of molecules are broken down into sugars, starches, fats and smaller, simpler molecule elements, which we can absorb through the small intestine walls and that then travel in the bloodstream to our muscles and other areas of the body that require energy or to be repaired. We also need to consume and absorb vitamins and minerals that we can't synthesise within the body, eg vitamin B12 (prevalent in meat and fish).



A closer look at villi

What role do these little finger-like protrusions play in the bowel?

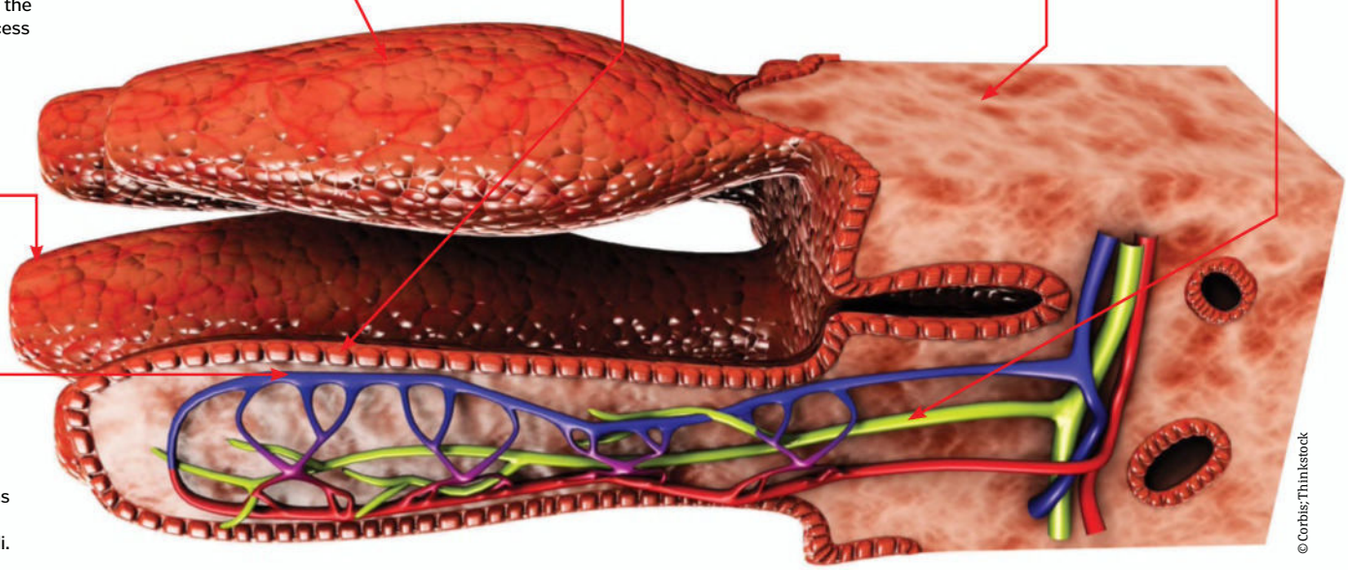
Villi
Villi are tiny finger-like structures that sit all over the mucosa. They help increase the surface area massively, alongside the mucosal folds.

Epithelium (epithelial cells)
These individual cells that sit in the mucosa layer are where individual microvilli extend from.

Mucosa
The lining of the small intestine on which villi are located.

Lacteal
The lacteal is a lymphatic capillary that absorbs nutrients that can't pass directly into the bloodstream.

Microvilli
These are a mini version of villi and sit on villi's individual epithelial cells.

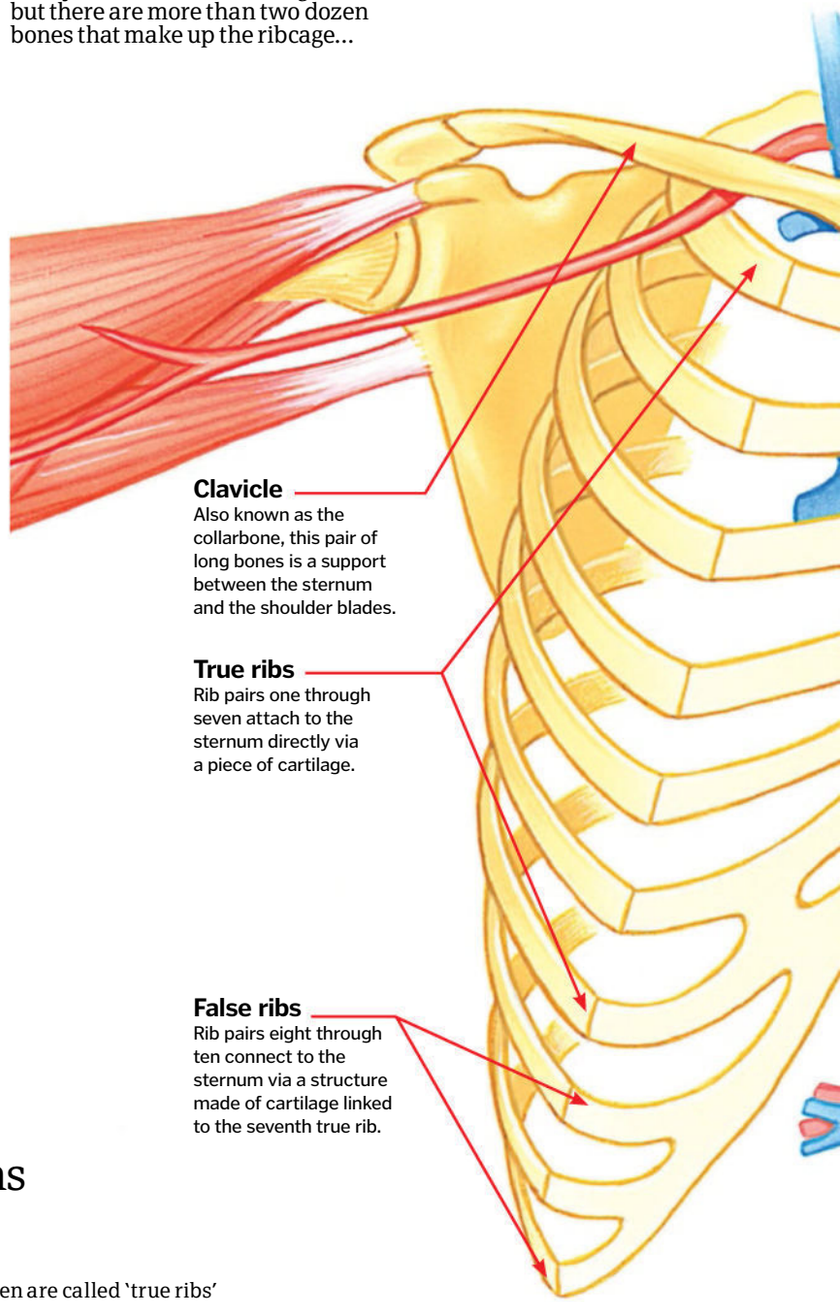


Capillary bed
These absorb simple sugars and amino acids as they pass through the epithelial tissue of the villi.

© Corbis; Thinkstock

Inside the thoracic cavity

It may not look like it at first glance, but there are more than two dozen bones that make up the ribcage…



The human ribcage

Ribs are not merely armour for the organs inside our torsos, as we reveal here…

The ribcage – also known as the thoracic cage or thoracic basket – is easily thought of as just a framework protecting your lungs, heart and other major organs. Although that is one key function, the ribcage does so much more. It provides vital support as part of the skeleton and, simply put, breathing wouldn't be possible without it.

All this means that the ribcage has to be flexible. The conical structure isn't just a rigid system of bone – it's both bone and cartilage. The cage comprises 24 ribs, joining in the back to the 12 vertebrae making up the middle of the spinal column.

The cartilage portions of the ribs meet in the front at the long, flat three-bone plate called the sternum (breastbone). Or rather, most of them do. Rib pairs one through seven are called 'true ribs' because they attach directly to the sternum. Rib pairs eight through ten attach indirectly through other cartilage structures, so they're referred to as 'false ribs'. The final two pairs – the 'floating ribs' – hang unattached to the sternum.

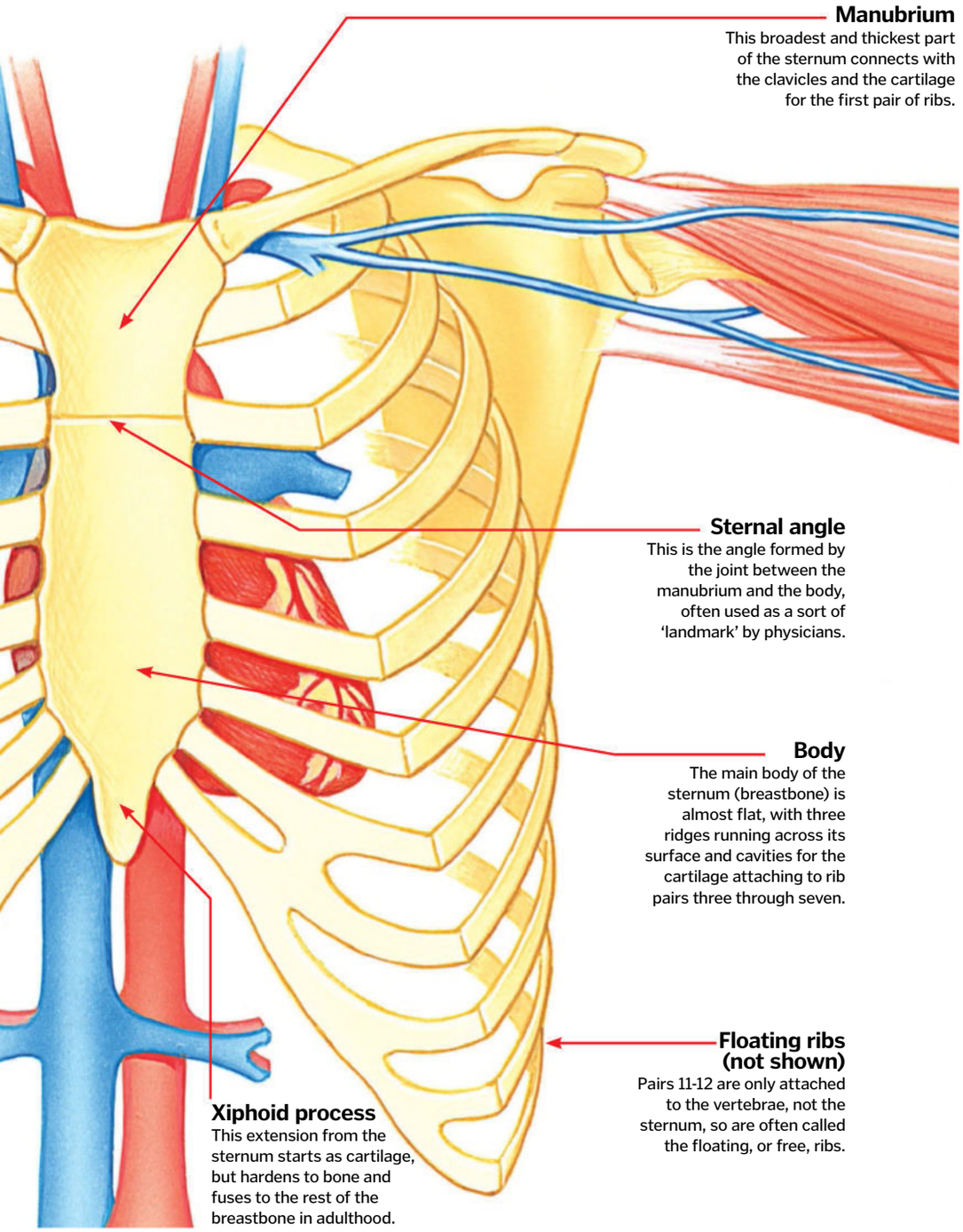
Rib fractures are a common and very painful injury, with the middle ribs the most likely ones to get broken. A fractured rib can be very dangerous, because a sharp piece could pierce the heart or lungs.

There's also a condition called flail chest, in which several ribs break and detach from the cage, which can even be fatal. But otherwise there's not much you can do to mend a fractured rib other than keep it stabilised, resting and giving it time to heal.

What are hiccups?

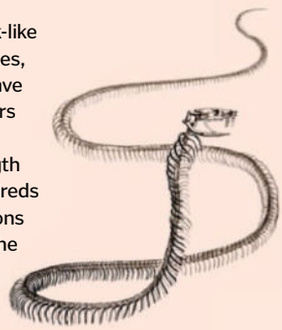
Hiccupping – known medically as singultus, or synchronous diaphragmatic flutter (SDF) – is an involuntary spasm of the diaphragm that can happen for a number of reasons. Short-term causes include eating or drinking too quickly, a sudden change in body temperature or shock.

However, some researchers have suggested that hiccupping in premature babies – who tend to hiccup much more than full-term babies – is due to their underdeveloped lungs. It could be an evolutionary leftover, since hiccupping in humans is similar to the way that amphibians gulp water and air into their gills to breathe.



Ribs in other animals

Most vertebrates (ie animals with backbones) have a ribcage of sorts – however, ribcages can be very different depending on the creature. For example, dogs and cats have 13 pairs of ribs as opposed to our 12. Marsupials have fewer ribs than humans, and some of those are so tiny they aren't much more than knobs of bone sticking out from the vertebrae. Once you get into other vertebrates, the differences are even greater. Birds' ribs overlap one another with hook-like structures called uncinate processes, which add strength. Frogs don't have any ribs, while turtles' eight rib pairs are fused to the shell. A snake's 'ribcage', meanwhile, runs the length of its body and can comprise hundreds of pairs of ribs. Despite the variations in appearance, ribcages all serve the same basic functions for the most part: to provide support and protection to the rest of the body.

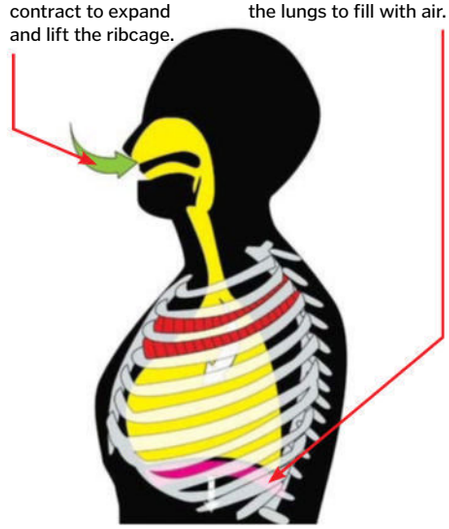


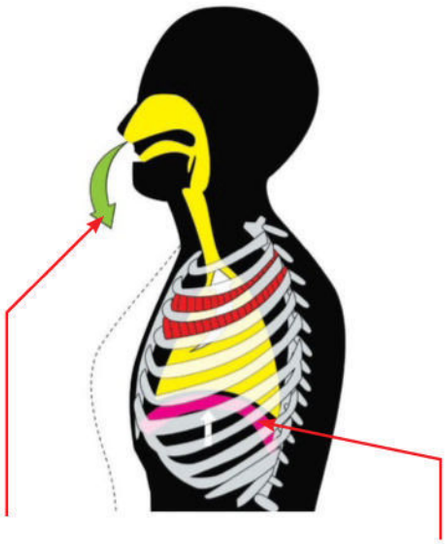
Breathe in, breathe out...

Consciously take in a breath, and think about the fact that there are ten different muscle groups working together to make it happen. The muscles that move the ribcage itself are the intercostal muscles. They are each attached to the ribs and run between them. As you inhale, the external intercostals raise the ribs and sternum so your lungs can expand, while your diaphragm lowers and flattens. The internal intercostals lower the ribcage when you exhale. This forces the lungs to compress and release air (working in tandem with seven other muscles). If you breathe out gently, it's a passive process that doesn't require much ribcage movement.

Inhalation
As you inhale, the intercostal muscles contract to expand and lift the ribcage.

Contraction
The diaphragm contracts by moving downward, allowing the lungs to fill with air.





Exhalation
The intercostal muscles relax as we exhale, compressing and lowering the ribcage.

Relaxation
The diaphragm relaxes, moving upward to force air out of the lungs.

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How the pancreas works

Learn how the workhorse of the digestive system helps to break down food and control our blood sugar levels

The pancreas is a pivotal organ within the digestive system. It sits inside the abdomen, behind the stomach and the large bowel, adjacent to the spleen. In humans, it has a head, neck, body and tail. It is connected to the first section of the small intestine, the duodenum, by the pancreatic duct, and to the bloodstream via a rich network of vessels. When it comes to the function of the pancreas, it is best to think about the two types of cell it contains: endocrine and exocrine.

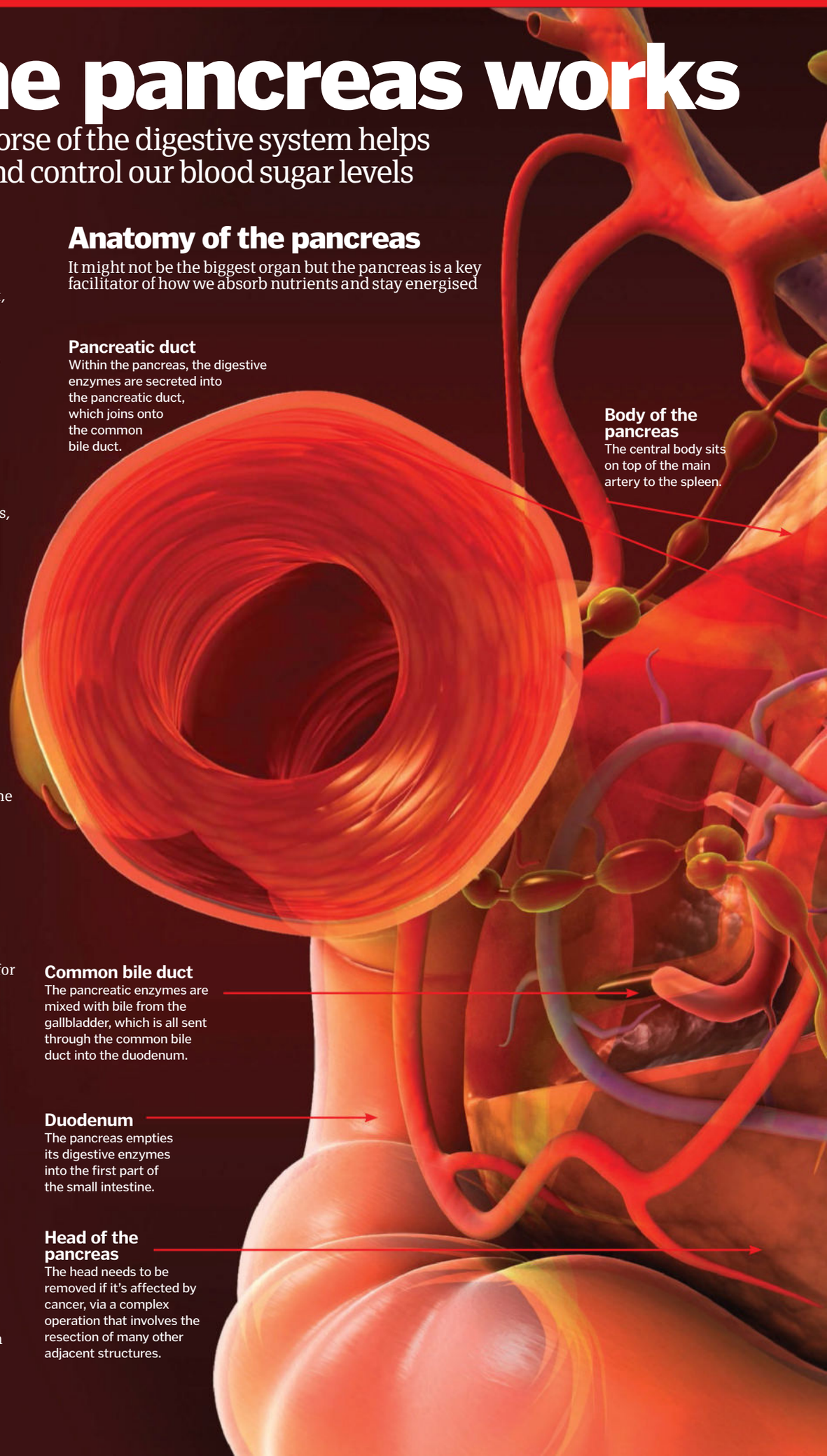
The endocrine pancreas is made up of clusters of cells called islets of Langerhans, which in total contain approximately 1 million cells and are responsible for producing hormones. These cells include alpha cells, which secrete glucagon, and beta cells which generate insulin. These two hormones have opposite effects on blood sugar levels throughout the body: glucagon increases glucose levels, while insulin decreases them.

The cells here are all in contact with capillaries, so hormones which are produced can be fed directly into the bloodstream. Insulin secretion is under the control of a negative-feedback loop; high blood sugar leads to insulin secretion, which then lowers blood sugar with subsequent suppression of insulin. Disorders of these cells (and thus alterations of hormone levels) can lead to many conditions, including diabetes. The islets of Langerhans are also responsible for producing other hormones, like somatostatin, which governs nutrient absorption among other things.

The exocrine pancreas, meanwhile, is responsible for secreting digestive enzymes. Cells are arranged in clusters called acini, which flow into the central pancreatic duct. This leads into the duodenum – part of the small bowel – to come into contact with and aid in the digestion of food. The enzymes secreted include proteases (to digest protein), lipases (for fat) and amylase (for sugar/starch). Secretion of these enzymes is controlled by a series of hormones, which are released from the stomach and duodenum in response to the stretch from the presence of food.

Anatomy of the pancreas

It might not be the biggest organ but the pancreas is a key facilitator of how we absorb nutrients and stay energised



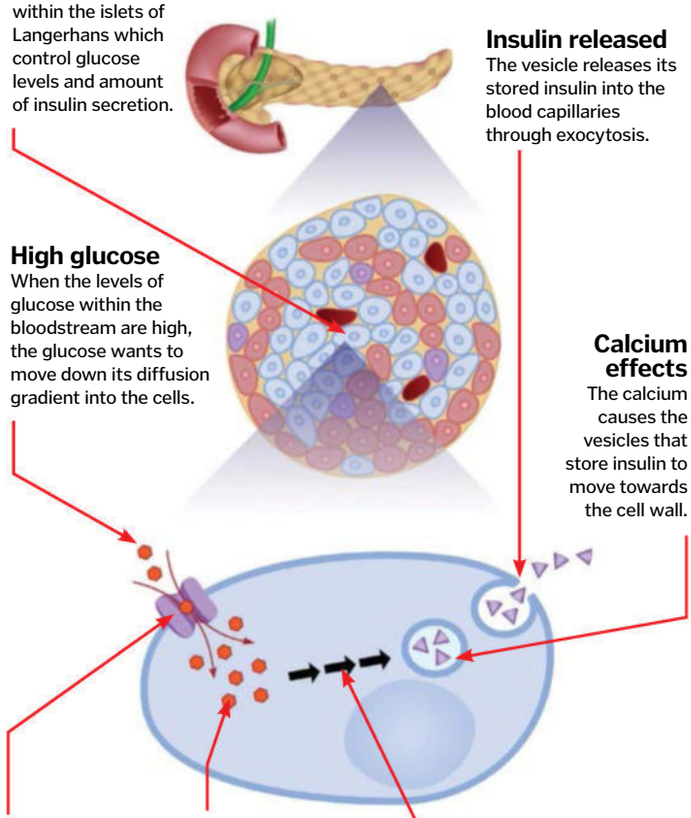
DID YOU KNOW? *In the UK, 80 per cent of acute pancreatitis cases are caused by gallstones or excessive alcohol ingestion*

Tail of the pancreas
This is the end portion of the organ and is positioned close to the spleen.

Blood supply
The pancreas derives its blood supply from a variety of sources, including vessels running to the stomach and spleen.

What brings on diabetes?

Diabetes is a condition where a person has higher blood sugar than normal. It is either caused by a failure of the pancreas to produce insulin (ie type 1, or insulin-dependent diabetes mellitus), or resistance of the body's cells to insulin present in the circulation (ie type 2, or non-insulin-dependent diabetes mellitus). There are also other disorders of the pancreas. Inflammation of the organ (ie acute pancreatitis) causes severe pain in the upper abdomen, forcing most people to attend the emergency department as it can be life threatening. In contrast, cancer of the pancreas causes gradually worsening pain which can often be mistaken for other ailments.



Does the pancreas vary in humans and animals?

Every vertebrate animal has a pancreas of some form, meaning they are all susceptible to diabetes too. The arrangement, however, varies from creature to creature. In humans, the pancreas is most often a single structure that sits at the back of the abdomen. In other animals, the arrangement varies from two or three masses of tissue scattered around the abdomen, to tissue interspersed within the connective tissue between the bowels, to small collections of tissue within the bowel mucosal wall itself. One of the other key differences is the number of ducts that connect the pancreas to the bowel. In most humans there's only one duct, but occasionally there may be two or three – and sometimes even more. In other animals, the number is much more variable. However, the function is largely similar, where the pancreas secretes digestive enzymes and hormones to control blood sugar levels.

© Corbis; Süleyman Habib

When you've got to go, you've got to go… but really our bodies are reacting to our bladders' direction

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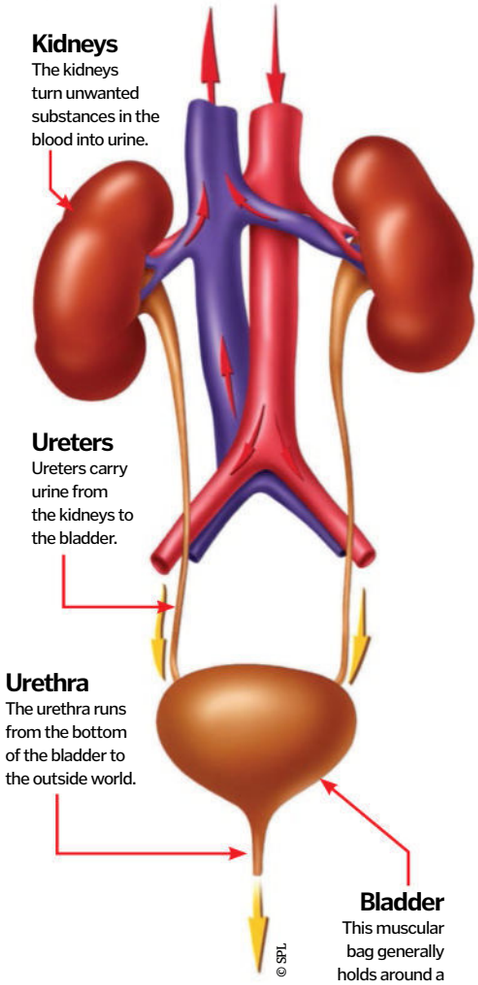
How your bladder works

As a key part of the urinary system, the bladder is crucial to removing waste from your body

THE COMPLETE URINARY SYSTEM



© SPL

The bladder is one of the key organs in the urinary system and it stores urine following production by the kidneys until the body can release it.

Urine is a waste substance produced by the kidneys as they filter our blood of toxins and other unneeded elements. Up to 150 litres (40 gallons) of blood are filtered per day by your kidneys, but only around two litres (0.5 gallons) of waste actually pass down the ureters to the bladder.

Urine travels down the ureters and through the ureter valves, which attach each tube to the organ and prevent any liquid passing back. The bladder walls, controlled by the detrusor muscles, relax as urine enters and allow the organ to fill. When the bladder becomes full, or nearly full, the nerves in the bladder communicate with the brain, which in turn induces an urge to urinate. This sensation will get stronger if you do not go – creating the 'bursting for a wee' feeling that you can occasionally experience. When ready to urinate, both the internal and external sphincters relax and the detrusor muscles in the bladder wall contract in order to generate pressure, forcing urine to pass down the urethra and exit the body.

As well as telling you when you need to pass fluid, the urinary system also helps to maintain the mineral and salt balance in your body. For instance, when salts and minerals are too highly concentrated, you feel thirst to regain the balance.

Incontinence explained

For the bladder to work correctly, several areas within it must all function properly. It is most commonly the failure of one of these features that leads to incontinence.

A common type of urinary incontinence is urge incontinence. This is when an individual feels a sudden compulsion to urinate and will release urine without control. It is often caused by involuntary spasms by the detrusor muscles which can be a result of either nervous system problems or infections.

Another type is stress incontinence, caused when the external sphincter or pelvic floor muscles are damaged. This means urine can accidentally escape, especially if the pelvic floor is under pressure (eg while coughing, laughing or sneezing). This kind of incontinence is most common in the elderly.

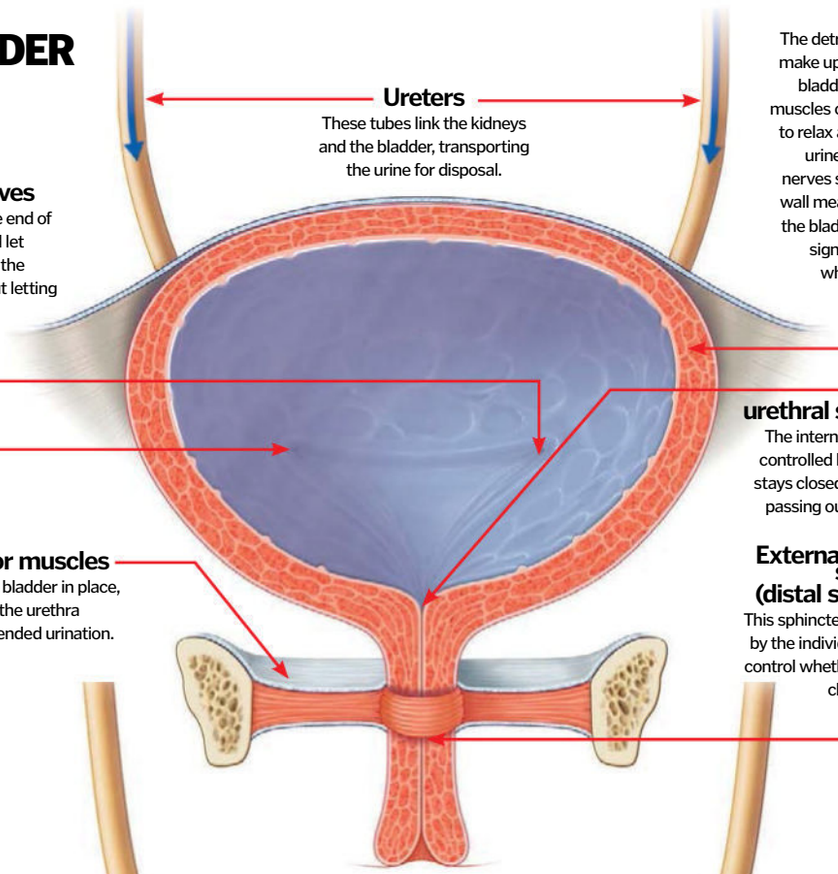
One modern remedy is a preventative implant that has been developed to replace post-event incontinence pads. This comes in the form of a collagen-based substance injected around the urethra in order to support it.

DID YOU KNOW? *Everyone's bladder differs slightly in size. The average maximum capacity is between 600-800ml (1.3-1.7pt)*

Inside the bladder

How this organ acts as the middleman between your kidneys and excretion

FULL BLADDER



Ureters
These tubes link the kidneys and the bladder, transporting the urine for disposal.

Ureter valves
These sit at the end of the ureters and let urine pass into the bladder without letting it flow back.

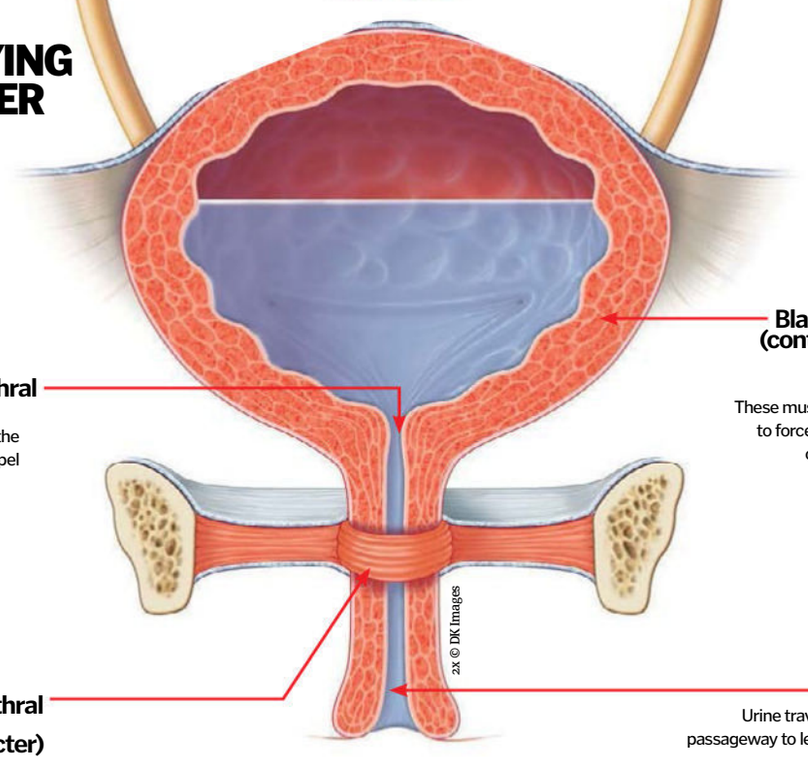
Bladder wall (detrusor muscles)
The detrusor muscles make up a layer of the bladder wall. These muscles cause the wall to relax and extend as urine enters, while nerves situated in the wall measure how full the bladder is and will signal to the brain when to urinate.

Internal urethral sphincter
The internal sphincter is controlled by the body. It stays closed to stop urine passing out of the body.

Pelvic floor muscles
These hold the bladder in place, and sit around the urethra stopping unintended urination.

External urethral sphincter (distal sphincter)
This sphincter is controlled by the individual, and they control whether to open or close the valve.

EMPTYING BLADDER



Bladder wall (controlled by detrusor muscles)
These muscles contract to force the urine out of the bladder.

Internal urethral sphincter
This relaxes when the body is ready to expel the waste liquid.

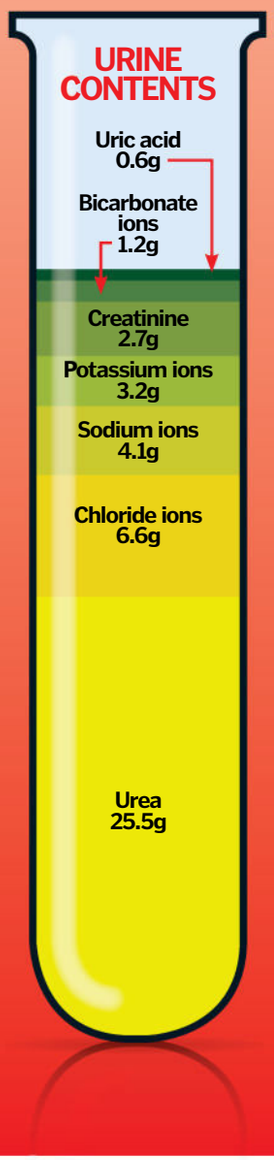
External urethral sphincter (distal sphincter)
This also relaxes for the urine to exit the body.

Urethra
Urine travels down this passageway to leave the body.

2x © DK Images

What is urine made up of?

A human bladder usually holds around 350 millilitres (0.7 pints) of urine, though male bladders can typically hold slightly more than those of females. Urine is made up of urea, the waste by-product the body forms while breaking down protein across the body. The kidneys will filter this out and pass it with extra water to the bladder for expulsion. Other waste products produced or consumed by the body that pass through the kidneys will also exit the body via this route. Typically, urine is made up of 95 per cent water and 5 per cent dissolved or suspended solids including urea, plus chloride, sodium and potassium ions.



The urinary system explained

Every day the body produces waste products that enter the bloodstream – but how do we get rid of them?

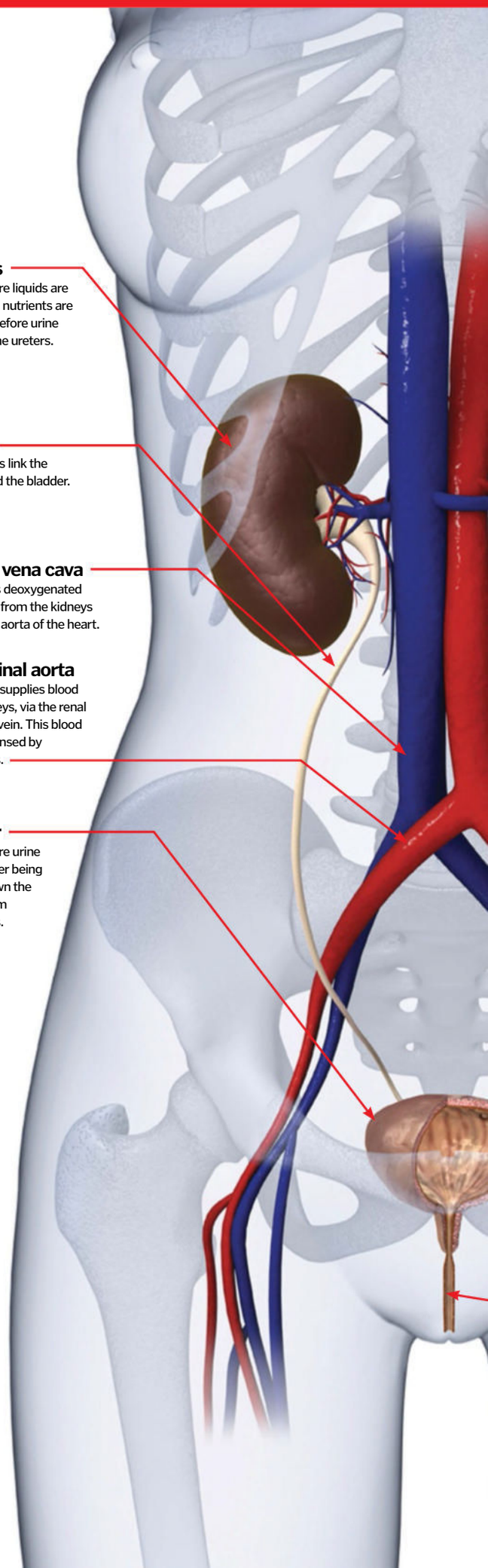
The human urinary system's primary function is to remove by-products which remain in the blood after the body has metabolised food. The process is made up of several different key features. Generally, this system consists of two kidneys, two ureters, the bladder, two sphincter muscles (one internal, one external) and a urethra and these work alongside the intestines, lungs and skin, all of which excrete waste products from the body.

The abdominal aorta is an important artery to the system as this feeds the renal artery and vein, which supply the kidneys with blood. This blood is filtered by the kidneys to remove waste products, such as urea which is formed through amino acid metabolism. Through communication with other areas of the body, such as the hypothalamus, the kidneys also control water levels in the body, sodium and potassium levels among other electrolytes, blood pressure, pH of the blood and are also involved in red blood cell production through the creation and release of the hormone erythropoietin. Consequently, they are absolutely crucial to optimum body operation.

After blood has been filtered by the kidneys, the waste products then travel down the ureters to the bladder. The bladder's walls expand out to hold the urine until the body can excrete the waste out through the urethra. The internal and external sphincters then control the release of urine.

Generally, a human will produce approximately 2.5-3 litres of urine a day, although this can vary dramatically dependant on external factors such as water consumption.

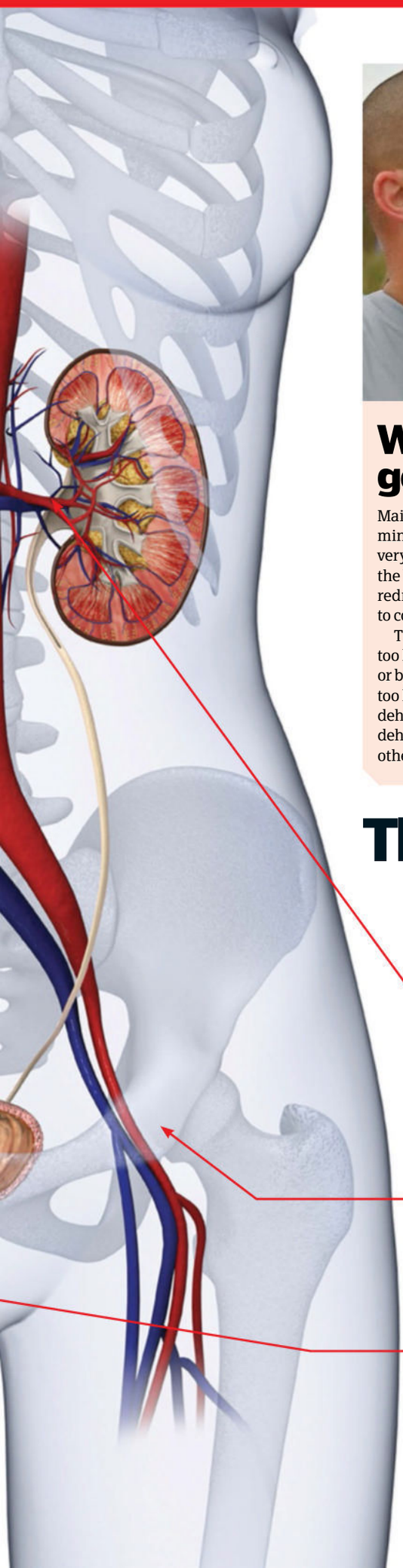
"Generally, a human will produce 2.5-3 litres of urine a day"



How do the kidneys work?

The kidneys will have around 150-180 litres of blood to filter per day, but only pass around two litres of waste down the ureters to the bladder for excretion, therefore the kidneys return much of this blood, minus most of the waste products, to the heart for re-oxygenation and recirculation around the body.

The way the kidneys do this is to pass the blood through a small filtering unit called a nephron. Each kidney has around a million of these, which are made up of a number of small blood capillaries and a tube called the renal tubule. The blood capillaries sift the normal cells and proteins from the blood for recirculation and then direct the waste products into the renal tubule. This waste, which will primarily consist of urea, mixes with water and forms urine as it passes through the renal tubule and then into the ureter on its way to the bladder.



The human urinary system

Renal artery and vein
This supplies blood to the kidneys in order for them to operate, and then removes deoxygenated blood after use by the kidneys.

Pelvis
The bladder sits in the pelvis, and the urethra passes through it for urine to exit the body.

Urethra
The urethra is the tube that urine travels through to exit the body.

© DK Images

Why do we get thirsty?

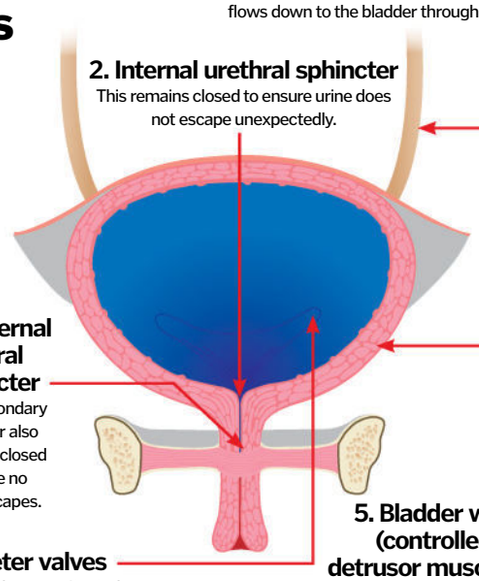
Maintaining the balance between the minerals and salts in our body and water is very important. When this is out of balance, the body tells us to consume more liquids to redress this imbalance in order for the body to continue operating effectively.

This craving, or thirst, can be caused by too high a concentration of salts in the body, or by the water volume in the body dropping too low for optimal operation. Avoiding dehydration is important as long term dehydration can cause renal failure, among other conditions.

How do we store waste until we're ready to expel it?

The bladder stores waste products by allowing the urine to enter through the ureter valves, which attach the ureter to the bladder. The walls relax as urine enters and this allows the bladder to stretch. When the bladder becomes full, the nerves in the bladder communicate with the brain and cause the individual to feel the urge to urinate. The internal and external sphincters will then relax, allowing urine to pass down the urethra.

Bladder fills



1. Ureters
These tubes connect to the kidneys and urine flows down to the bladder through them.

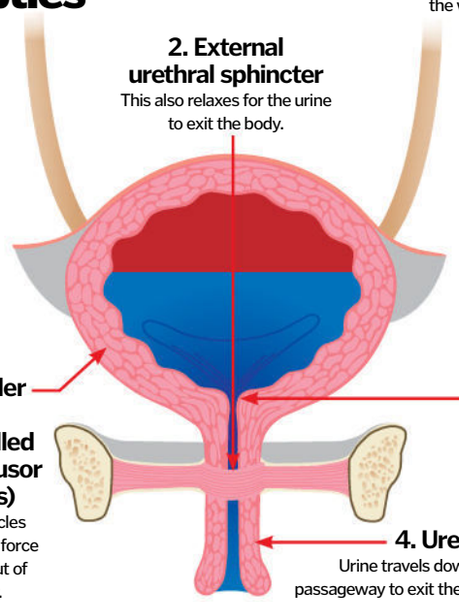
2. Internal urethral sphincter
This remains closed to ensure urine does not escape unexpectedly.

3. External urethral sphincter
This secondary sphincter also remains closed to ensure no urine escapes.

4. Ureter valves
These valves are situated at the end of the ureters and let urine in.

5. Bladder walls (controlled by detrusor muscles)
The detrusor muscles in the wall of the bladder relax to allow expansion of the bladder as necessary.

Bladder empties



1. Internal urethral sphincter
This relaxes when the body is ready to expel the waste.

2. External urethral sphincter
This also relaxes for the urine to exit the body.

3. Bladder walls (controlled by detrusor muscles)
These muscles contract to force the urine out of the bladder.

4. Urethra
Urine travels down this passageway to exit the body.

Inside the human stomach

Discover how this amazing digestive organ stretches, churns and holds corrosive acid to break down our food, all without getting damaged

The stomach's major role is as a reservoir for food; it allows large meals to be consumed in one sitting before being gradually emptied into the small intestine. A combination of acid, protein-digesting enzymes and vigorous churning action breaks the stomach contents down into an easier-to-process liquid form, preparing food for absorption in the bowels.

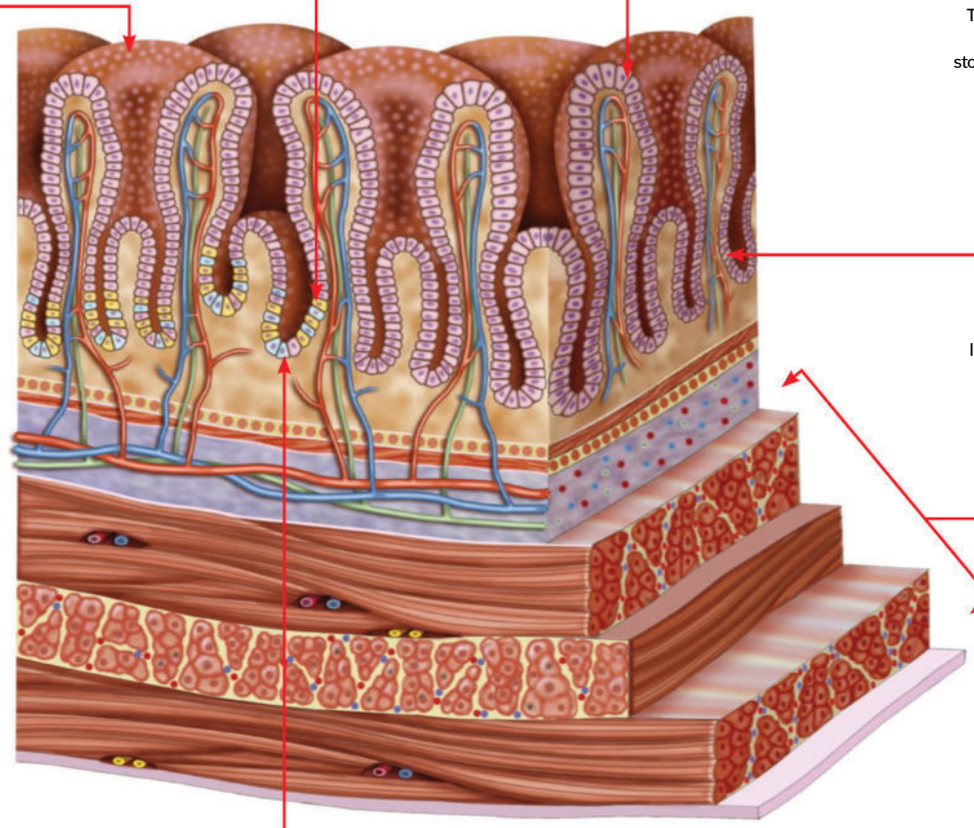
In its resting state, the stomach is contracted and the internal surface of the organ folds into characteristic ridges, or rugae. When we start eating, however, the stomach begins to distend; the rugae flatten, allowing the stomach to expand, and the outer muscles relax. The stomach can accommodate about a litre (1.8 pints) of food without discomfort.

The expansion of the stomach activates stretch receptors, which trigger nerve signalling that results in increased acid production and powerful muscle contractions to mix and churn the contents. Gastric acid causes proteins in the food to unravel, allowing access by the enzyme pepsin, which breaks down protein. The presence of partially digested proteins stimulates enteroendocrine cells (G-cells) to make the hormone gastrin, which encourages even more acid production.

The stomach empties its contents into the small intestine through the pyloric sphincter. Liquids pass through the sphincter easily, but solids must be smaller than one to two millimetres (0.04-0.08 inches) in diameter before they will fit. Anything larger is 'refluxed' backwards into the main chamber for further churning and enzymatic breakdown. It takes about two hours for half a meal to pass into the small intestine and the process is generally complete within four to five hours.

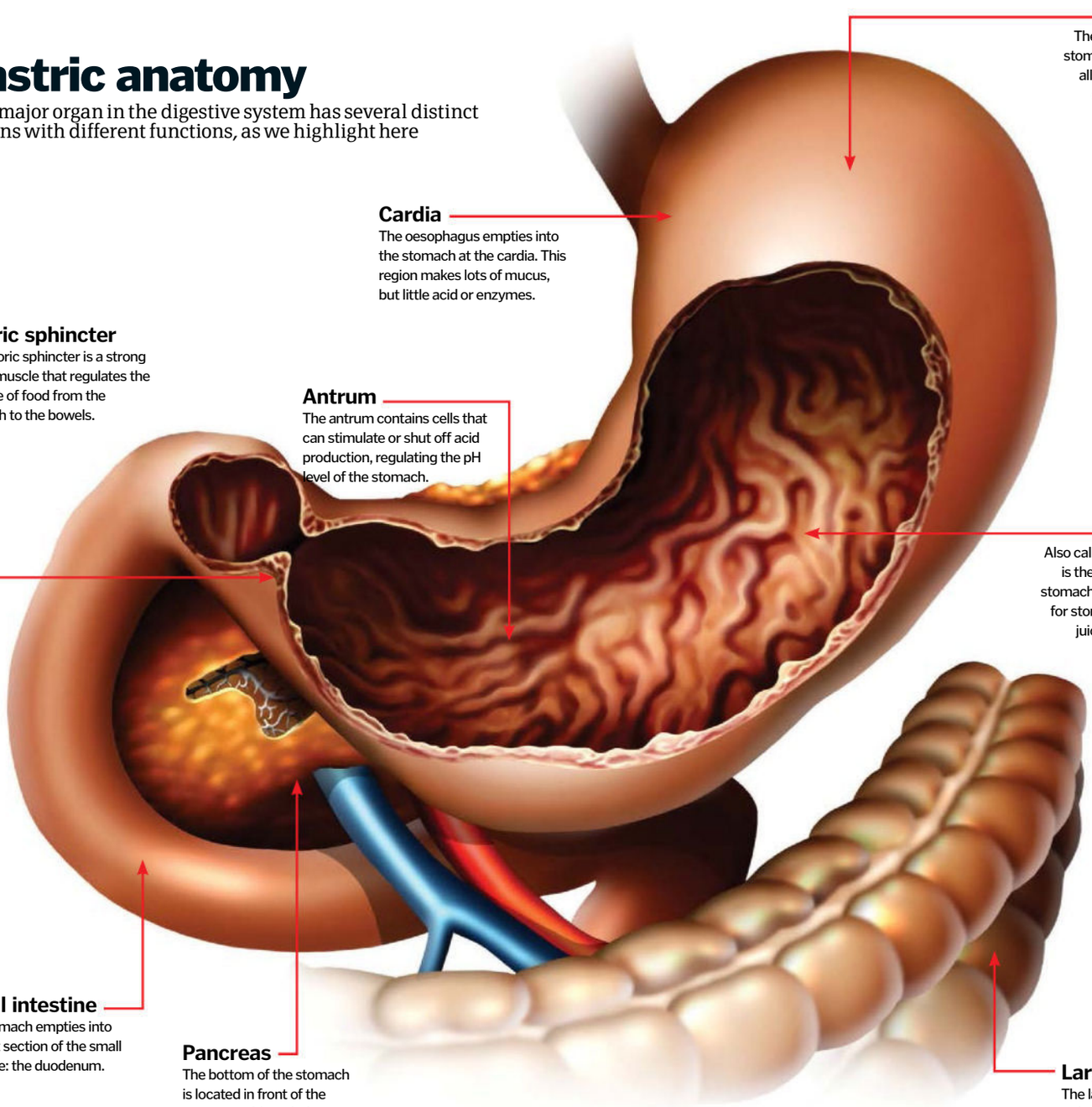
Lining under the microscope

The stomach is much more than just a storage bag. Take a look at its complex microanatomy now...



Gastric anatomy

This major organ in the digestive system has several distinct regions with different functions, as we highlight here



Fundus
The top portion of the stomach curves up and allows gases created during digestion to be collected.

Cardia
The oesophagus empties into the stomach at the cardia. This region makes lots of mucus, but little acid or enzymes.

Pyloric sphincter
The pyloric sphincter is a strong ring of muscle that regulates the passage of food from the stomach to the bowels.

Antrum
The antrum contains cells that can stimulate or shut off acid production, regulating the pH level of the stomach.

Body
Also called the corpus, this is the largest part of the stomach and is responsible for storing food as gastric juices are introduced.

Small intestine
The stomach empties into the first section of the small intestine: the duodenum.

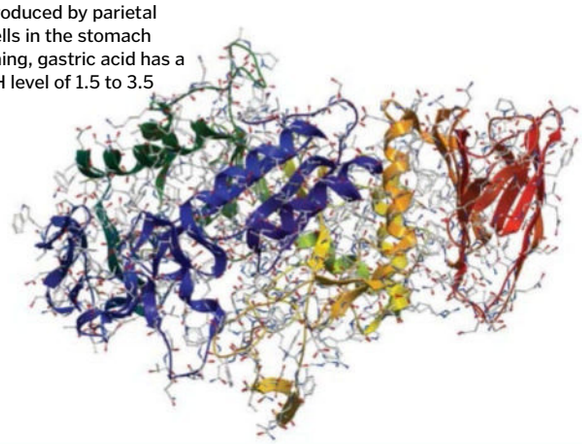
Pancreas
The bottom of the stomach is located in front of the pancreas, although the two aren't directly connected.

Large intestine
The large intestine curls around and rests just below the stomach in the abdomen.

Why doesn't it digest itself?

Your stomach is full of corrosive acid and enzymes capable of breaking down protein – if left unprotected the stomach lining would quickly be destroyed. To prevent this from occurring, the cells lining the stomach wall produce carbohydrate-rich mucus, which forms a slippery, gel-like barrier. The mucus contains bicarbonate, which is alkaline and buffers the pH at the surface of the stomach lining, preventing damage by acid. For added protection, the protein-digesting enzyme pepsin is created from a zymogen (the enzyme in its inactive form) – pepsinogen; it only becomes active when it comes into contact with acid, a safe distance away from the cells that manufacture it.

Produced by parietal cells in the stomach lining, gastric acid has a pH level of 1.5 to 3.5



Vomit reflex step-by-step

Vomiting is the forceful expulsion of the stomach contents up the oesophagus and out of the mouth. It's the result of three co-ordinated stages. First, a deep breath is drawn and the body closes the glottis, covering the entrance to the lungs. The diaphragm then contracts, lowering pressure in the thorax to open up the oesophagus. At the same time, the muscles of the abdominal wall contract, which squeezes the stomach. The combined shifts in pressure both inside and outside the stomach forces any contents upwards.

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The human hand

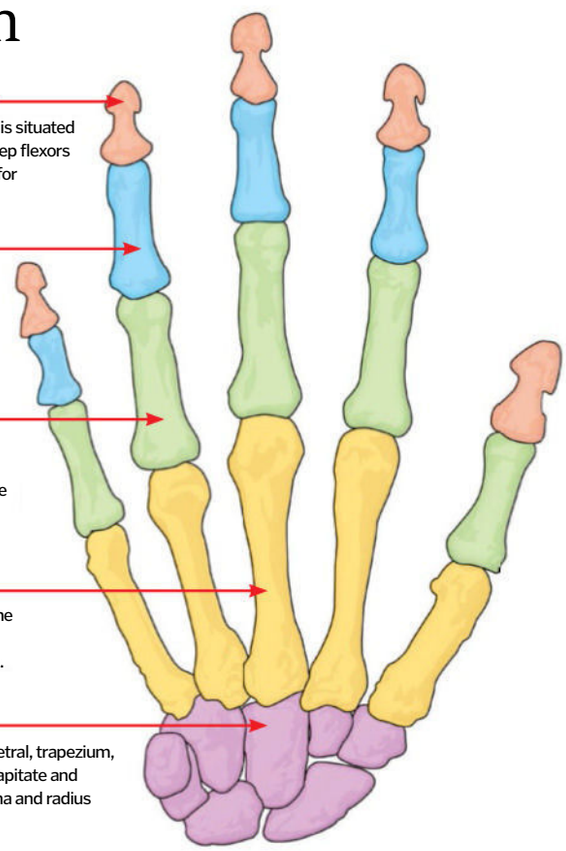
We take our hands for granted, but they are actually quite complex and have been crucial in our evolution

The human hand is an important feature of the human body, which allows individuals to manipulate their surroundings and also to gather large amounts of data from the environment that the individual is situated within. A hand is generally defined as the terminal aspect of the human arm, which consists of prehensile digits, an opposable thumb, and a wrist and palm. Although many other animals have similar structures, only primates and a limited number of other vertebrates can be said to have a 'hand' due to the need for an opposable thumb to be present and the degree of extra articulation that the human hand can achieve. Due to this extra articulation, humans have developed fine motor skills allowing for much increased control in this limb. Consequently we see improved ability to grasp and grip items and development of skills such as writing.

A normal human hand is made up of five digits, the palm and wrist. It consists of 27 bones, tendons, muscles and nerves, with each fingertip of each digit containing numerous nerve endings making the hand a crucial area for gathering information from the environment using one of man's most crucial five senses: touch. Muscles interact together with tendons to allow fingers to bend, straighten, point and, in the case of the thumb, rotate. However, the hand is an area that sees many injuries due to the number of ways we use it, one in ten injuries in A&E being hand related, and there are also several disorders that can affect the hand development in the womb, such as polydactyly, where an individual is born with extra digits, which are often in perfect working order.

Bones in the hand

The human hand contains 27 bones, and these divide up into three distinct groups: the carpals, metacarpals and phalanges. These also then further break down into three: the proximal phalanges, intermediate phalanges and distal phalanges. Eight bones are situated in the wrist and these are collectively called the carpals. The metacarpals, which are situated in the palm of the hand account for a further five out of the 27, and each finger has three phalanges, the thumb has two. Intrinsic muscles and tendons interact to control movement of the digits and hand, and attach to extrinsic muscles that extend further up into the arm, which flex the digits.



Distal phalanges
A distal phalange (fingertip) is situated at the end of each finger. Deep flexors attach to this bone to allow for maximum movement.

Intermediate phalanges
This is where the superficial flexors attach via tendons to allow the digit to bend.

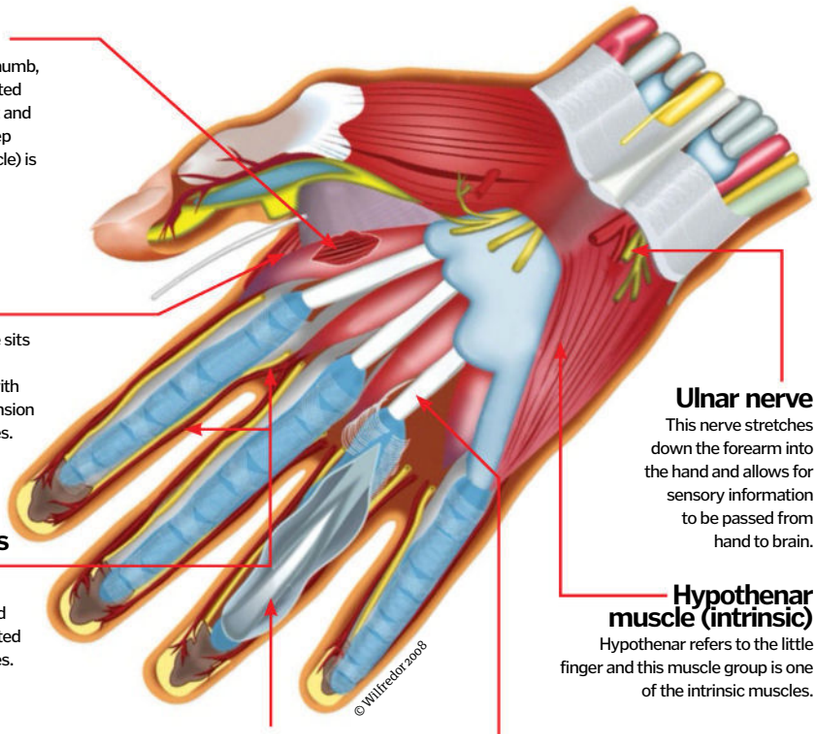
Proximal phalanges
Each finger has three phalanges, and this phalange joins the intermediate to its respective metacarpal.

Metacarpals
These five bones make up the palm, and each one aligns with one of the hand's digits.

Carpals
The carpals (scaphoid, triquetral, trapezium, trapezoid, lunate, hamate, capitate and pisiform) sit between the ulna and radius and the metacarpals.

Muscles and other structures

The movements and articulations of the hand and by the digits are controlled by tendons and two muscle groups situated within the hand and wrist. These are the extrinsic and intrinsic muscle groups, so named as the extrinsics are attached to muscles which extend into the forearm, whereas the intrinsics are situated within the hand and wrist. The flexors and extensors, which make up the extrinsic muscles, use either exclusively tendons to attach to digits they control (flexors) or a more complex mix of tendons and intrinsic muscles to operate (extensors). These muscles will contract in order to cause digit movement, and flexors and extensors work in a pair to complement each to straighten and bend digits. The intrinsic muscles are responsible for aiding extrinsic muscle action and other movements in the digits and have three distinct groups; the thenar and hypothenar (referring to the thumb and little finger respectively), the interossei and the lumbrical.



Thenar space
Thenar refers to the thumb, and this space is situated between the first digit and thumb. One of the deep flexors (extrinsic muscle) is located in here.

Interossei muscle (intrinsic)
This interossei muscle sits between metacarpal bones and will unite with tendons to allow extension using extrinsic muscles.

Arteries, veins and nerves
These supply fresh oxygenated blood (and take away deoxygenated blood) to hand muscles.

Insertion of flexor tendon
This is where the tendon attaches the flexor muscle to the finger bones to allow articulation.

Ulnar nerve
This nerve stretches down the forearm into the hand and allows for sensory information to be passed from hand to brain.

Hypothenar muscle (intrinsic)
Hypothenar refers to the little finger and this muscle group is one of the intrinsic muscles.

Mid palmar space
Tendons and intrinsic muscles primarily inhabit this space within the hand.

Opposable thumbs

Increased articulation of the thumb has been heralded as a key factor in human evolution. It allowed for increased grip and control, and for tool use to develop among human ancestors as well as other primates. This has later also facilitated major cultural advances, such as writing. Alongside the four other flexible digits, the opposable thumb makes the human hand one of the most dexterous in the world. A thumb can only be classified as opposable when it can be brought opposite to the other digits.

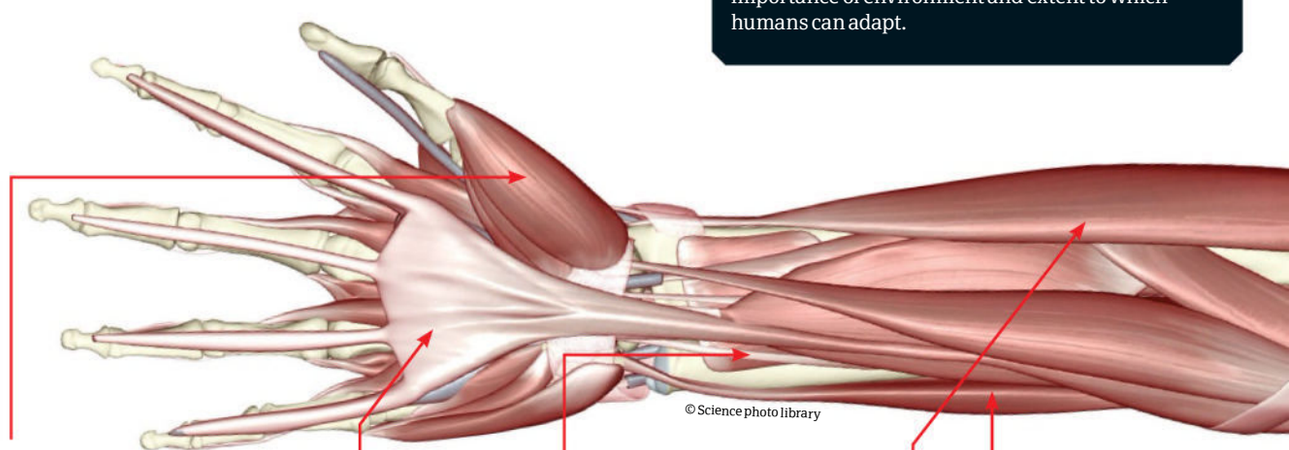
Left handed or right handed?

The most common theory for why some individuals are left handed is that of the 'disappearing twin'. This supposes that the left-handed individual was actually one of a set of twins, but that in the early stages of development the other, right handed, twin died. However, it's been found that dominance of one hand is directly linked with hemisphere dominance in the brain, as in many other paired organs.

Individuals who somehow damage their dominant hand for extended periods of time can actually change to use the other hand, proving the impact and importance of environment and extent to which humans can adapt.

Forearm muscles

Extrinsic muscles are so called because they are primarily situated outside the hand, the body of the muscles situated along the underside or front of the forearm. This body of muscles actually breaks down into two quite distinct groups: the flexors and the extensors. The flexors run alongside the underside of the arm and allow for the bending of the digits, whereas the extensor muscles' main purpose is the reverse this action, to straighten the digits. There are both deep and superficial flexors and extensors, and which are used at any one time depends on the digit to be moved.



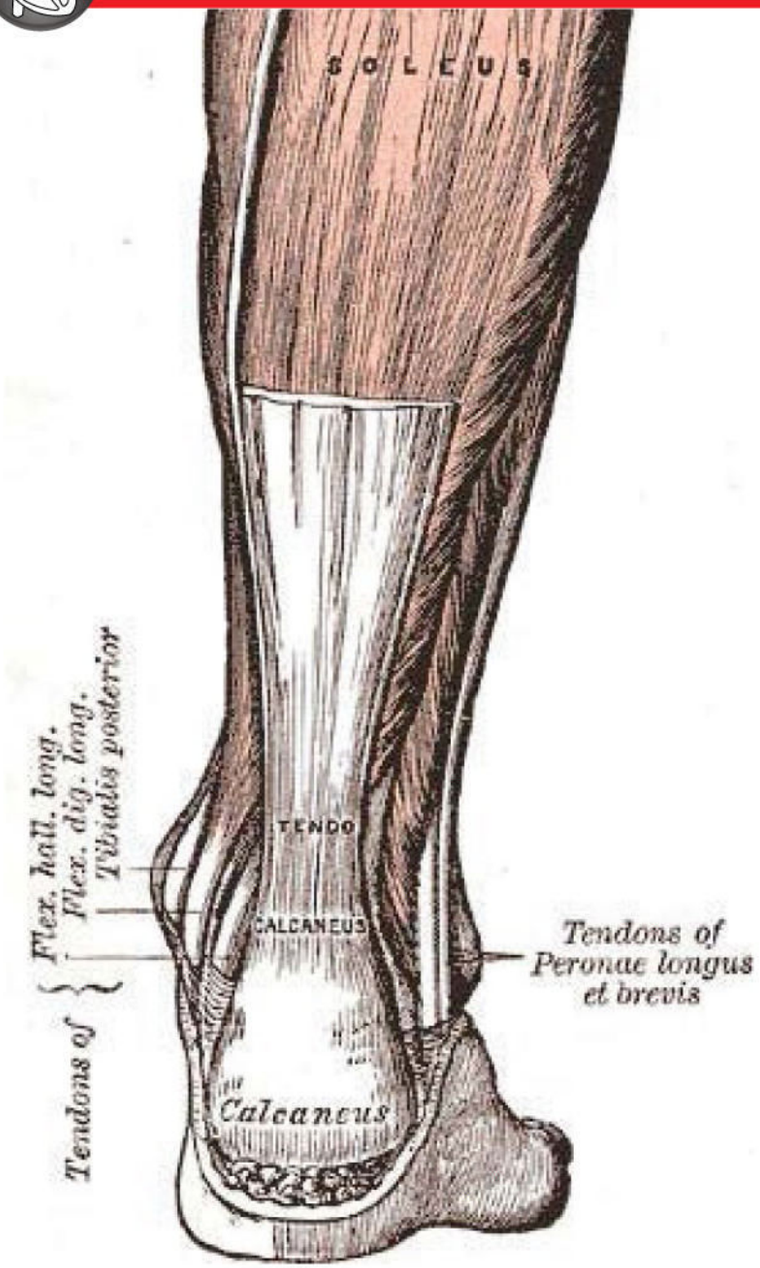
Tendons and intrinsics
These attach the flexor muscles to the phalanges, and facilitate bending. Tendons also interact with the intrinsics and extensors in the wrist, palm and forearm to straighten the digits.

Thenars
The intrinsic group of muscles is used to flex the thumb and control its sideways movement.

Superficial flexors
The other flexor that acts on the digits is the superior flexor, which attaches to the intermediate phalanges.

Deep flexors
The digits have two extrinsic flexors that allow them to bend, the deep flexor and the superficial. The deep flexor attaches to the distal phalanges.

Extensors
Extensors on the back of the forearm straighten the digits. Divided into six sections, their connection to the digits is complex.



What does the Achilles' tendon do?

Is it really a weak spot and how important is it?

This tendon, the strongest in your body, connects the calf muscles to the heel. When everything is fine, it pulls the back of the foot up when the calf muscles contract. This way, your heel raises and your weight goes to your toes.

It enables us to do such things as sprinting, hopping or jumping. It also stores elastic energy to do these tasks more efficiently. Biological anthropologists believe all this was very important for the way we evolved to run around on two legs and survive.

The Achilles' tendon is seemingly named thus after the mythological Greek character of Achilles, who during the Trojan War - made famous by Homer's epic poem *The Illiad* - is shot by a poisoned arrow in his unprotected heel - hence the common phrase describing a person's weak point.

What are our fingernails made of?

And how are they formed?

Fingernails are made of a tough protein called keratin (from the Greek word 'Kera', meaning horn). Keratin is also what animals hooves and horns are made from. Most animals have a supportive bone structure in their horns, although rhinoceros horns are made completely of keratin compacted together. The only other biological material which has a similar toughness to keratinised tissue is chitin, the main component of exoskeletons belonging to arthropods. The half-moon shape that you can see at the bottom of your nail (apart from maybe your little finger) is called the lanula. This is a group of cells that produce keratin and other living cells. As these living cells are pushed forward by newer cells, they die and merge with the keratin to become keritinised. They then become flattened, stiff and known as your fingernails.

"The half-moon shape that you can see at the bottom of your nail is called the lanula"

DID YOU KNOW? *Knee injuries are common within the sporting world due to the constant muscle strain*

Inside the knee

How do our knee joints allow us to walk and run?

The knee is the largest and also one of the most complex joints in the body, allowing us bipedal humans to move around and get from point A to point B. Three different bones meet at the knee joint and work together to allow for movement and protection. At the top of the knee is the lower part of the thighbone (femur). This rotates on top of the shinbone (tibia) and the kneecap (patella), the latter of which moves in a groove between the femur and tibia. Cartilage within the knee cushions it from shock caused by motion, while ligaments prevent damage occurring to the joint in case of unusual or erratic motion. Muscles running from the hip down to the knee joint are responsible for working the knee joint and allowing our legs to bend, stretch, and ultimately allowing us to walk, run and skip.

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The knee structure

How does everything work in tandem to allow for movement?

The patella, seen separated above, is also known as the kneecap

How do your feet work?

Feet are immensely complex structures, yet we put huge amounts of pressure on them every day. How do they cope?

The human foot and ankle is crucial for locomotion and is one of the most complex structures of the human body. This intricate structure is made up of no less than 26 bones, 20 muscles, 33 joints – although only 20 are articulated – as well as numerous tendons and ligaments. Tendons connect the muscles to the bones and facilitate movement of the foot, while ligaments hold the tendons in place and help the foot move up and down to initiate walking. Arches in the foot are formed by ligaments, muscles and foot bones and help to distribute weight, as well as making it easier for the foot to operate efficiently when walking and running. It is due to the unique structure of the foot and the way it distributes pressure throughout all aspects that it can withstand constant pressure throughout the day.

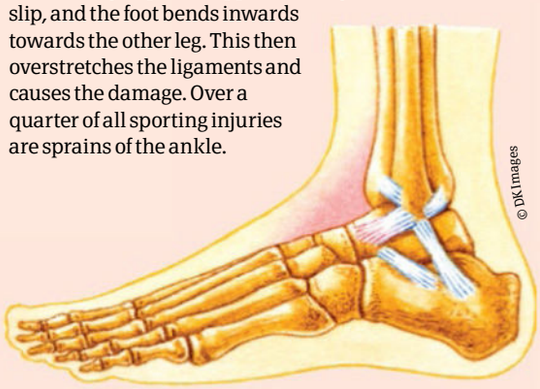
One of the other crucial functions of the foot is to aid balance, and toes are a crucial aspect of this. The big toe in particular helps in this area, as we can grip the ground with it if we feel we are losing balance.

The skin, nerves and blood vessels make up the rest of the foot, helping to hold the shape and also supplying it with all the necessary minerals, oxygen and energy to help keep it moving easily and constantly.

What happens when you sprain your ankle?

A sprained ankle is the most common type of soft tissue injury. The severity of the sprain can depend on how you sprained the ankle, and a minor sprain will generally consist of a stretched or only partially torn ligament. However, more severe sprains can cause the ligament to tear completely, or even force a piece of bone to break off.

Generally a sprain happens when you lose balance or slip, and the foot bends inwards towards the other leg. This then overstretches the ligaments and causes the damage. Over a quarter of all sporting injuries are sprains of the ankle.



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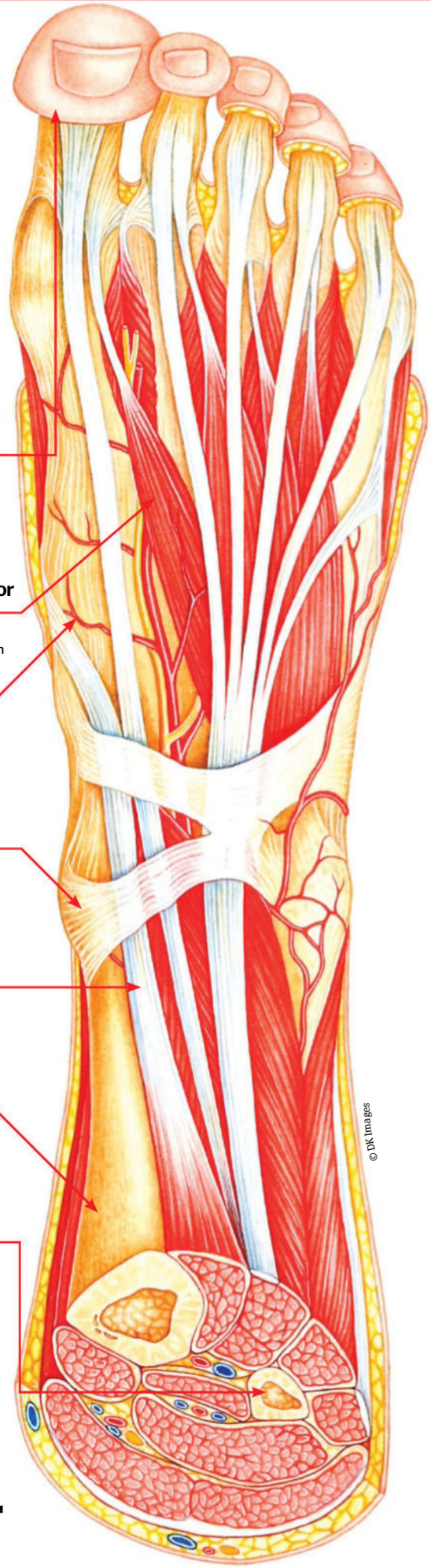

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Toes
Terminal aspects of the foot that aid balance by grasping onto the ground. They are the equivalent of fingers in the foot structure.

Muscles – including the extensor digitorum brevis muscle
Muscles within the foot help the foot lift and articulate as necessary. The extensor digitorum brevis muscle sits on the top of the foot, and helps flex digits two-four on the foot.

Blood vessels
These supply blood to the foot, facilitating muscle operation by supplying energy and oxygen and removing deoxygenated blood.

Ligaments
Ligaments support the tendons and help to form the arches of the foot, spreading weight across it.

Tendons (extensor digitorum longus, among others)
Fibrous bands of tissue which connect muscles to bones. They can withstand a lot of tension and link various aspects of the foot, facilitating movement.

Tibia
The larger and stronger of the lower leg bones, this links the knee and the ankle bones of the foot.

Fibula
This bone sits alongside the tibia, also linking the knee and the ankle.

The structure of the foot and how the elements work together

DID YOU KNOW? *In a lifetime, a person will walk the equivalent of four times around the globe – more than 100,000 miles!*

The structure of the foot enables us to stay balanced

How do we walk?

'Human gait' is the term to describe how we walk. This gait will vary between each person, but the basics are the same

1. Heel lift
The first step of walking is for the foot to be lifted off the ground. The knee will raise and the calf muscle and Achilles tendon, situated on the back of the leg, will contract to allow the heel to lift off the ground.

2. Weight transfer
The weight will transfer fully to the foot still in contact with the ground, normally with a slight leaning movement of the body.

3. Foot lift
After weight has transferred and the individual feels balanced, the ball of the first foot will then lift off the ground, raising the thigh.

4. Leg swing
The lower leg will then swing at the knee, under the body, to be placed in front of the stationary, weight- bearing foot.

5. Heel placement
The heel will normally be the part of the foot that's placed first, and weight will start to transfer back onto this foot as it hits the ground.

6. Repeat process
The process is then repeated with the other foot. During normal walking or running, one foot will start to lift as the other starts to come into contact with the ground.

Bones of the foot

A baby is born with 22 out of a total 26 bones in each foot

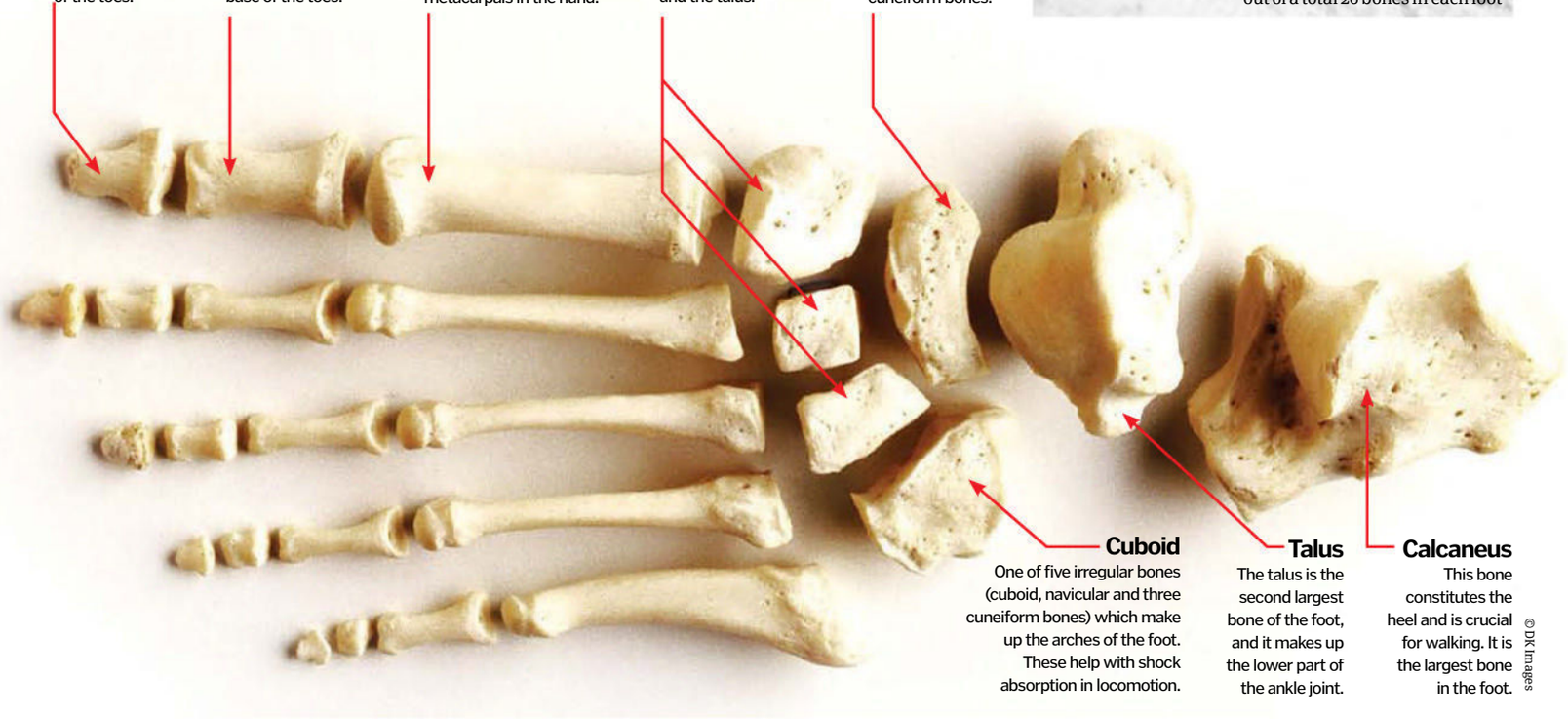
Distal phalanges
The bones which sit at the far end of the foot and make up the tips of the toes.

Proximal phalanges
These bones link the metatarsals and the distal phalanges and stretch from the base of the toes.

Metatarsals
The five, long bones that are the metatarsals are located between the tarsal bones and the phalanges. These are the equivalent of the metacarpals in the hand.

Cuneiforms bones (three)
Three bones that fuse together during bone development and sit between the metatarsals and the talus.

Navicular
This bone, which is so named due to its resemblance to a boat, articulates with the three cuneiform bones.



Cuboid
One of five irregular bones (cuboid, navicular and three cuneiform bones) which make up the arches of the foot. These help with shock absorption in locomotion.

Talus
The talus is the second largest bone of the foot, and it makes up the lower part of the ankle joint.

Calcaneus
This bone constitutes the heel and is crucial for walking. It is the largest bone in the foot.

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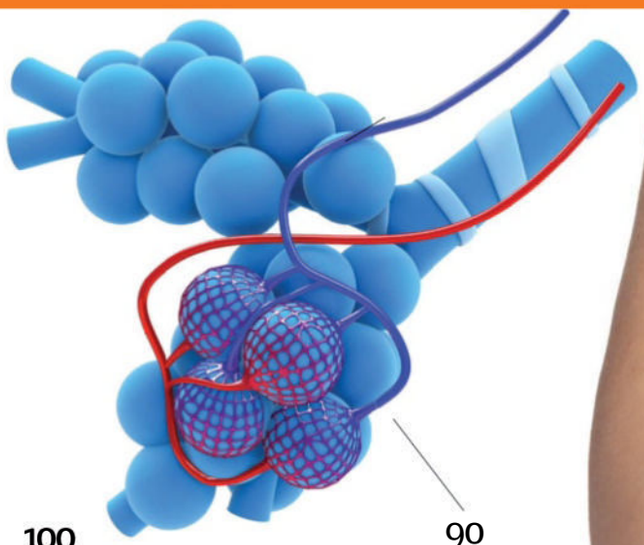
THE BODY AT WORK



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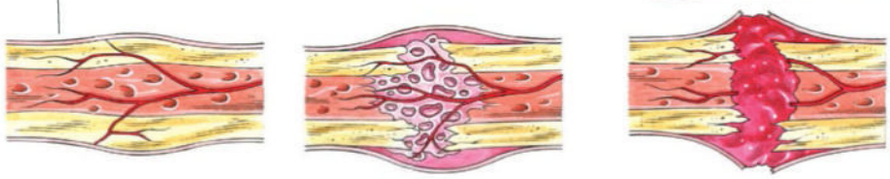

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"The cell damage from viruses causes diseases"

The science of Sleep

Unravelling the mysteries behind insomnia, sleepwalking, dreams and more

We spend around a third of our lives sleeping. It is vital to our survival, but despite years of research, scientists still aren't entirely sure why we do it. The urge to sleep is all-consuming, and if we are deprived of it, we will eventually slip into slumber even if the situation is life-threatening.

Sleep is common to mammals, birds and reptiles and has been conserved through evolution, despite preventing us from performing tasks such as eating, reproducing and raising young. It is as important as food and, without it, rats will die within two or three weeks – the same period it takes to die of starvation.

There have been many ideas and theories proposed about why humans sleep, from a way to rest after the day's activities or a method for saving energy, to simply a way to fill time until we can be doing something useful. But all of these ideas are somewhat flawed. The body repairs itself just as well when we are sitting quietly, we only save around 100 calories a night by sleeping, and we wouldn't need to catch up on sleep during the day if it were just to fill empty time at night.

One of the major problems with sleep deprivation is a resulting decline in cognitive ability – our brains just don't work properly without sleep. We will find ourselves struggling with memory, learning,

Theories of why we sleep

Theory 1

Energy conservation

We save around 100 calories per night by sleeping; metabolic rate drops, the digestive system is less active, heart and breathing rates slow, and body temperature drops. However, the calorie-saving equates to just one cup of milk, which from an evolutionary perspective does not seem worth the accompanying vulnerability.

Theory 3

Restoration

One of the major problems with sleep deprivation is a decline in cognitive function, accompanied by a drop in mood, and there is mounting evidence that sleep is involved in restoring the brain. However, there is little evidence to suggest that the body undergoes more repair during sleep compared to rest or relaxation.

Theory 2

Evolutionary protection

An early idea about the purpose of sleep is that it is a protective adaptation to fill time. For example, prey animals with night vision might sleep during the day to avoid being spotted by predators. However, this theory cannot explain why sleep-deprived people fall asleep in the middle of the day.

Theory 4

Memory consolidation

One of the strongest theories regarding sleep is that it helps with consolidation of memory. The brain is bombarded with more information during the day than it is possible to remember, so sleep is used to sort through this information and selectively practise parts that need to be stored.

planning and reasoning. A lack of sleep can have severe effects on our mood and performance of everyday tasks, ranging from irritability, through to long term problems such as an increased risk of heart disease and even a higher incidence of road traffic accidents.

Sleep can be divided into two broad stages: non-rapid eye movement (NREM), and rapid eye movement (REM) sleep. The vast majority of our sleep (around 75 to 80 per cent) is NREM, characterised by electrical patterns in the brain known as 'sleep spindles' and high, slow delta waves. This is the time when we sleep the deepest. Without NREM sleep, our ability to form declarative memories, such as learning to associate pairs of words, can be seriously impaired. Deep sleep is important for transferring short-term memories into long-term storage. Deep sleep is also the time of peak growth hormone release in the body, which is important for cell reproduction and repair.

The purpose of REM sleep is unclear, with the effects of REM sleep deprivation proving less severe than NREM deprivation; for the first two weeks humans report little in the way of ill effects. REM sleep is the period during the night when we have our most vivid dreams, but people dream during both NREM and REM sleep. One curiosity is that during NREM sleep, dreams tend to be more concept-based, whereas REM sleep dreams are more vivid and emotional.

Some scientists argue that REM sleep allows our brains a safe place to practice dealing with situations or emotions that we might not encounter during our daily lives. During REM sleep our muscles are temporarily paralysed, preventing us acting out these emotions. Others think that it might be a way to unlearn memories, or to process unwanted feelings or emotions. Each of these ideas has its flaws, and no one knows the real answer.

Over the next few pages we will delve into the science of sleep and attempt to make sense of the mysteries of the sleeping brain.

The sleep cycle

During the night, you cycle through five separate stages of sleep every 90 to 110 minutes

The five stages of sleep can be distinguished by changes in the electrical activity in your brain, measured by electroencephalogram (EEG). The first stage begins with drowsiness as you drift in and out of consciousness, and is followed by light sleep and then by two stages of deep sleep. Your brain activity starts to slow down, your breathing, heart rate and temperature drop, and you become progressively more difficult to wake up. Finally, your brain perks up again, resuming activity that looks much more like wakefulness, and you enter rapid eye movement (REM) sleep – the time when your most vivid dreams occur. This cycle happens several times throughout the night, and each time, the period of REM sleep grows longer.

Growth hormone release
After you fall asleep, the pituitary gland ramps up its production of growth hormone.

Different when dreaming
During REM sleep, your heart rate rises, but your larger muscles are paralysed. This mean just your fingers, toes and eyes twitch as you dream.

Slow breathing
As you fall into deeper and deeper sleep, your breathing becomes slower and more rhythmic and your heart rate drops.

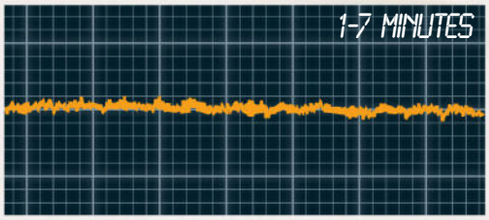
How much time is spent in each sleep stage?

Low temperature
Body temperature falls just before you fall asleep, and is maintained at a lower level throughout the night.

Limited movement
Muscle tone drops during sleep, but you still change position, tossing and turning.

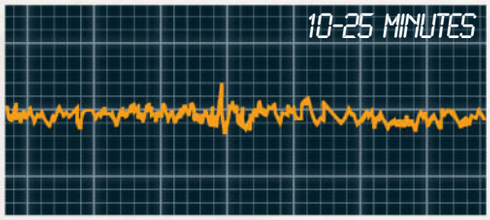
Stages of sleep

Not all sleep is the same. There are five separate stages, divided by brain activity



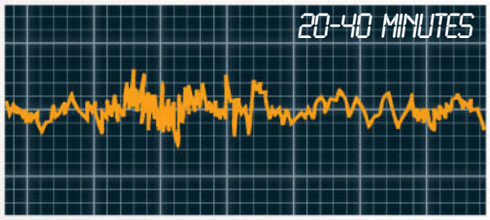
1 Drowsiness

During the first stage of sleep you are just drifting off; your eyelids are heavy and your head starts to drop. During this drowsy period, you are easily woken and your brain is still quite active. The electrical activity on an electroencephalogram (EEG) monitor starts to slow down, and the cortical waves become taller and spikier. As the sleep cycle repeats during the night, you re-enter this drowsy half-awake, half-asleep stage.



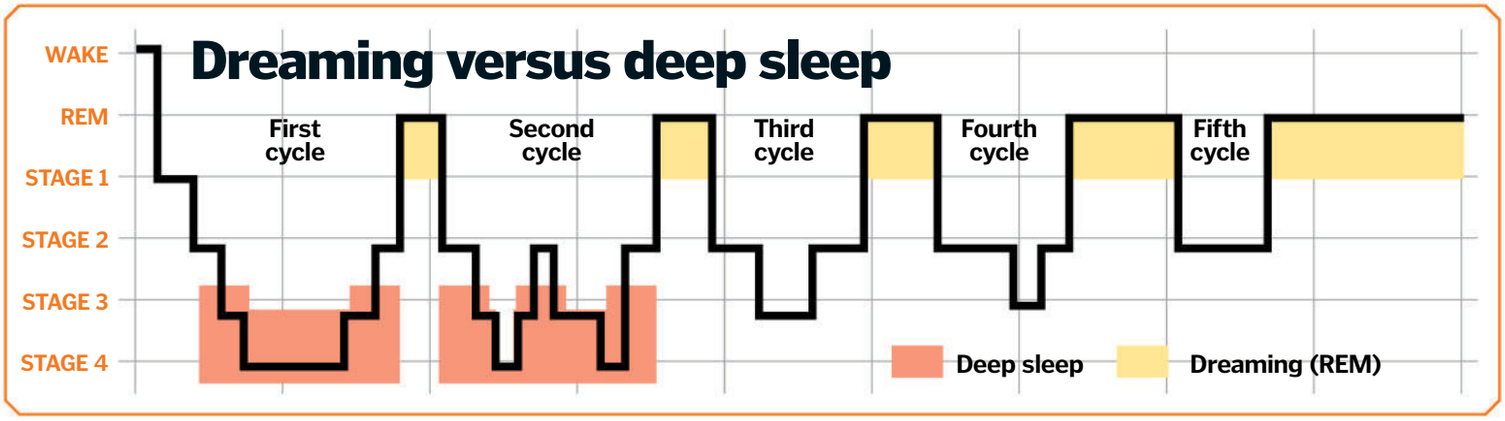
2 Light sleep

After a few minutes, your brain activity slows further, and you descend into light sleep. On the EEG monitor, this stage is characterised by further slowing in the waves, with an increase in their size and short one- or two-second bursts of activity known as 'sleep spindles'. By the time you are in the second phase of sleep, your eyes stop moving, but you can still be woken quite easily.



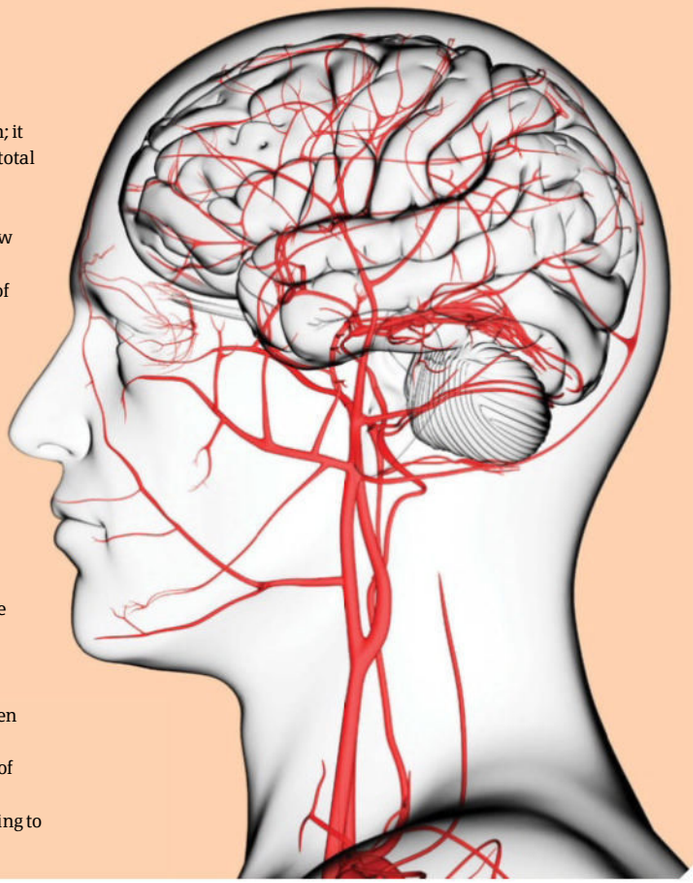
3 Moderate sleep

As you start to enter this third stage, your sleep spindles stop, showing that your brain has entered moderate sleep. This is then followed by deep sleep. The trace on the EEG slows still further as your brain produces delta waves with occasional spikes of smaller, faster waves in between. As you progress through stage-three sleep, you become much more difficult to wake up.

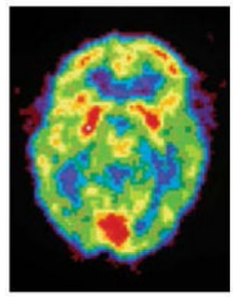


Clearing the mind

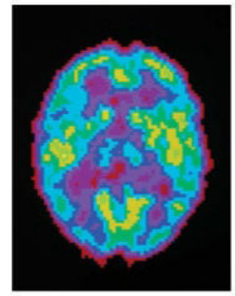
The brain is a power-hungry organ; it makes up only two per cent of the total mass of the body, but it uses an enormous 25 per cent of the total energy supply. The question is, how does it get rid of waste? The Nedergaard Lab at the University of Rochester in New York thinks sleep might be a time to clean the brain. The rest of the body relies on the lymphatic drainage system to help remove waste products, but the brain is a protected area, and these vessels do not extend upward into the head. Instead, your central nervous system is bathed in a clear liquid called cerebrospinal fluid (CSF), into which waste can be dissolved for removal. During the day, it remains on the outside, but the lab's research has shown that, during sleep, gaps open up between brain cells and the fluid rushes in, following paths along the outside of blood vessels, sweeping through every corner of the brain and helping to clear out toxic molecules.



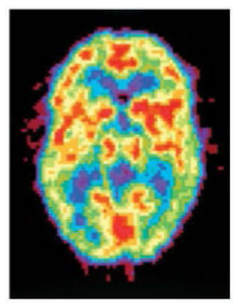
Brain activity



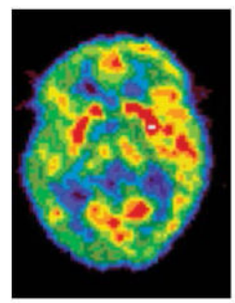
Wide awake
The red areas in this scan show areas of activity in the waking human brain, while the blue areas represent areas of inactivity.



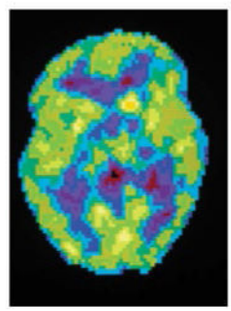
Deep sleep
During the later stages of NREM sleep, the brain is less active, shown here by the cool blue and purple colours that dominate the scan.



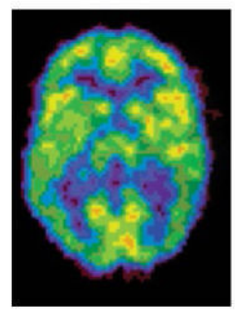
REM (dream) sleep
When dreaming, the human brain shows a lot of activity, displaying similar red patterns of activity to the waking brain.



Light sleep
In the first stages of NREM sleep, the brain is less active than when awake, but you remain alert and easy to wake up.

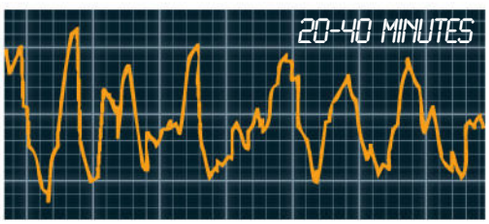


Sleep deprivation
The sleep-deprived brain looks similar to the brain during NREM sleep, showing patterns of inactivity.



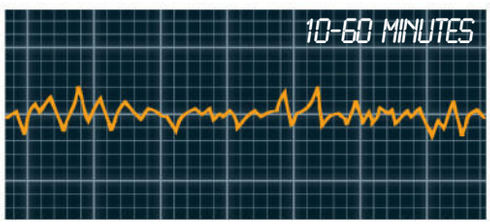
NREM sleep
As you descend through the four stages of NREM sleep, your brain becomes progressively less active.

© Science Photo Library; Alamy; Thinkstock



4 Deep sleep

There is some debate as to whether sleep stages three and four are really separate, or whether they are part of the same phase of sleep. Stage four is the deepest stage of all, and during this time you are extremely hard to wake. The EEG shows tall, slow waves known as delta waves; your muscles will relax and your breathing becomes slow and rhythmic, which can lead to snoring.



5 REM sleep

After deep sleep, your brain starts to perk up and its electrical activity starts to resemble the waking brain. This is the period of the night when most dreams happen. Your muscles are temporarily paralysed, and your eyes dart around, giving it the name rapid eye movement (REM) sleep. You cycle through the stages of sleep about every 90 minutes, experiencing between three and five dream periods each night.

Sleep disorders

There are over 100 different disorders that can get in the way of a good night's sleep

Sleep is necessary for our health, so disruptions to the quality or quantity of our sleep can have a serious negative impact on daily life, affecting both physical health and mental wellbeing.

Sleep disorders fall into four main categories: difficulty falling asleep, difficulty staying awake, trouble sticking to a regular sleep pattern and abnormal sleep behaviours. Struggling with falling asleep or staying asleep is known as insomnia, and is one of the most familiar sleep disorders; around a third of the population will experience it during their lifetime. Difficulty staying awake, or hypersomnia, is less common. The best-known example is narcolepsy, which is when sufferers experience excessive daytime sleepiness, accompanied by uncontrollable short periods of sleep during the day. Trouble sticking to a regular sleeping pattern can either be caused by external disruption to normal day-to-day rhythms, for example by jet lag or shift work. It can also be the result of an internal problem with the part of the brain responsible for setting the body clock.

Abnormal sleep behaviours include problems like night terrors, sleepwalking and REM-sleep behaviour disorder. Night terrors and sleepwalking most commonly affect children, and tend to resolve themselves with age, but other sleep behaviours persist into adulthood. In REM-sleep behaviour disorder, the normal muscle paralysis that accompanies dreaming fails, and people begin to act out their dreams.

Treatment for different sleep disorders varies depending on the particular problem, and can be as simple as making the bedroom environment more conducive to restful sleep.

"Treatment for different sleep disorders varies"

A continuous positive airway pressure (CPAP) machine pumps air into a close-fitting mask, preventing the airway from collapsing

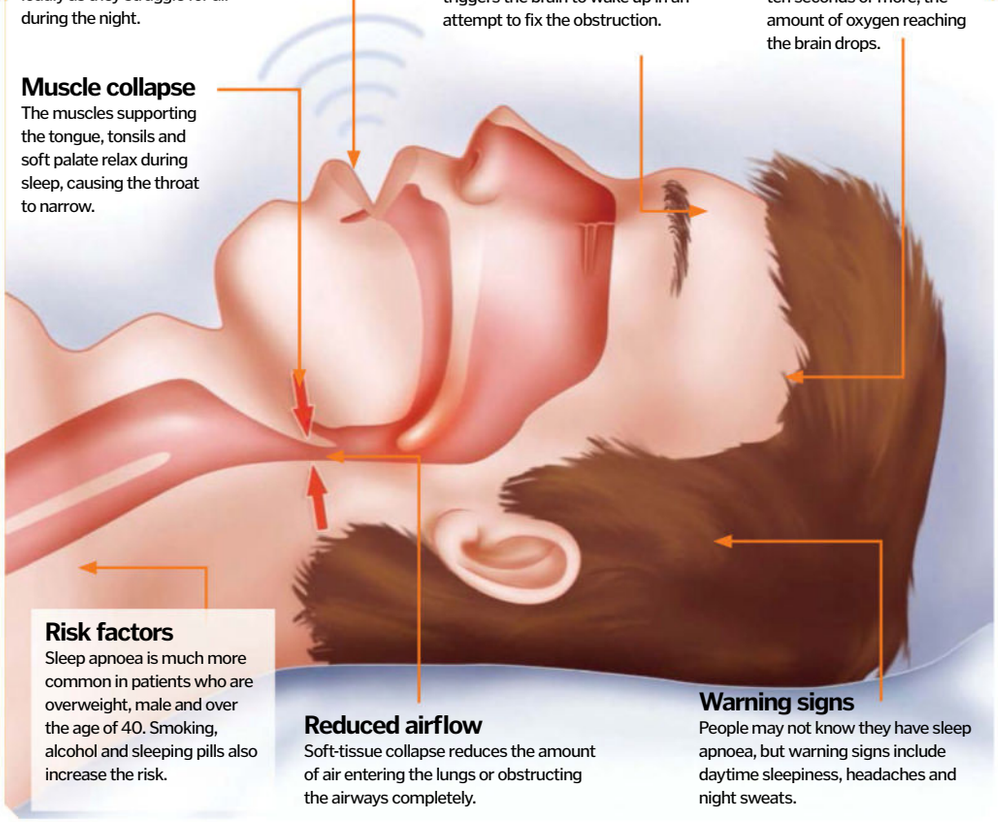
Sleepwalking

Sleepwalking affects between one and 15 per cent of the population, and is much more common in children than in adults, tending to happen less and less after the age of 11 or 12. Sleepwalkers might just sit up in their bed, but can sometimes perform complex behaviours, such as walking, getting dressed, cooking, or even driving a car. Although sleepwalkers seem to be acting out their dreams, sleepwalking tends to occur during the deep-sleep phase of NREM sleep and not during REM sleep.

Sleepwalkers can perform complicated actions while in deep NREM sleep

Sleep apnoea

Sleep apnoea is a dangerous sleep disorder. It is when the walls of the airways relax so much during the night that breathing is interrupted for ten seconds or more, restricting the supply of oxygen to the brain. The lack of oxygen initiates a protective response, pulling the sufferer out of deep sleep to protect them from damage. This can cause people to wake up, but often it will just put them into a different sleep stage, interrupting their rest and causing feelings of tiredness the next day.



DID YOU KNOW? *After 24 sleepless hours your cognition is at the same level as a person with a blood alcohol content of 0.10%*

Narcolepsy

Narcolepsy is a chronic condition that causes people to suddenly fall asleep during the daytime. In the United States, it affects one in every 3,000 people. Narcoleptics report excessive daytime sleepiness, accompanied by a lack of energy and impaired ability to concentrate. They fall asleep involuntarily for periods lasting just a few seconds at a time, and some can continue to perform tasks such as writing, walking, or even driving during these microsleeps. In 70 per cent of cases, narcolepsy is accompanied by cataplexy, where the muscles go limp and become difficult to control. It has been linked to low levels of the neurotransmitter hypocretin, which is responsible for promoting wakefulness in the brain.

People with narcolepsy fall asleep involuntarily during the day

Insomnia

Insomniacs have difficulty falling asleep or staying asleep. Sufferers can wake up during the night, wake up unusually early in the morning, and report feeling tired and drained during the day. Stress is thought to be one of the major causes of this sleep disruption, but it is also associated with mental health problems like depression, anxiety and psychosis, and with underlying medical conditions ranging from lung problems to hormone imbalances. After underlying causes have been ruled out, management of insomnia generally involves improving 'sleep hygiene' by sticking to regular sleep patterns, avoiding caffeine in the evening and keeping the bedroom free from light and noise at night.

One in three people in the UK will experience insomnia in their lifetime

Sleep studies

The most common type of sleep study is a polysomnogram (PSG), which is an overnight test performed in a specialist sleep facility. Electrodes are placed on the chin, scalp and eyelids to monitor brain activity and eye movement, while pads are placed on the chest to track heart rate and breathing. Blood pressure is also monitored throughout the night, and the amount of oxygen in the bloodstream can be tracked using a device worn on the finger. The equipment monitors how long it takes a patient to fall asleep, and then to follow their brains and bodies as they move through each of the five sleep stages.

Electrodes monitor brain activity, eye movement, heart rate and breathing in sleep studies

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How to get a good night's sleep

Understanding your biological clock is the key to a healthy night's sleep

Your body is driven by an internal circadian master clock known as the suprachiasmatic nucleus, which is set on a time scale of roughly 24 hours. This biological clock is set by sunlight; blue light hits special receptors in your eyes, which feed back to the master clock and on to the pineal gland. This suppresses the production of the sleep hormone melatonin and tells your brain that it is time to wake up.

Disruptions in light exposure can play havoc with your sleep, so it is important to ensure that your bedroom is as dark as possible. Many electronic devices produce enough light to reset your biological clock, and using backlit screens late at night can confuse your brain, preventing the production of melatonin and delaying your sleep.

Ensuring you see sunlight in the morning can help to keep your circadian clock in line, and sticking to a regular sleep schedule, even at the weekends, helps to keep this rhythm regular.

Another important factor in a good night's sleep is winding down before bed. Stimulants like caffeine and nicotine keep your brain alert and can seriously disrupt your sleep. Even depressants like alcohol can have a negative effect; even though it calms the brain, it interferes with normal sleep cycles, preventing proper deep and REM sleep.

The blue light from televisions, mobile phones and computer screens disrupts your circadian rhythm

The dangers of sleep deprivation

Lack of sleep doesn't just make you tired – it can have dangerous unseen effects

1 IMPAIRED JUDGEMENT

Sleep deprivation impacts your visual working memory, making it hard to distinguish between relevant and irrelevant stimuli, affecting emotional intelligence, behaviour and stress management.

2 WEIGHT GAIN

Sleep deprivation affects the levels of hormones involved in regulating appetite. Levels of leptin (the hormone that tells you how much stored fat you have) drop, and levels of the hunger hormone ghrelin rise.

3 RAISED BLOOD PRESSURE

Poor sleep can raise blood pressure, and in the long term is associated with an increased risk of diseases such as coronary heart disease and stroke. This danger is increased in people with sleep apnoea.

4 INCREASED ACCIDENTS

In the USA it is estimated that 100,000 road accidents each year are the result of driver fatigue, and over a third of drivers have admitted to falling asleep behind the wheel.

5 MOOD DISORDERS

Mental health problems are linked to sleep disorders, and sleep deprivation can play havoc with neurotransmitters in the brain, mimicking the symptoms of depression, anxiety and mania.

6 HALLUCINATIONS

Severe sleep deprivation can lead to hallucinations – seeing things that aren't really there. In rare cases , it can lead to temporary psychosis or symptoms that resemble paranoid schizophrenia.

DID YOU KNOW? *Sleep deprivation was found to have played a significant role in the nuclear meltdown at Chernobyl in 1986*

Sleep myths debunked

The science behind five of the most common myths relating to sleep

"Counting sheep helps you sleep"

This myth was put to the test by the University of Oxford, who challenged insomniacs to either count sheep, imagine a relaxing scene, or do nothing as they tried to fall asleep. When they imagined a relaxing scene, the participants fell asleep an average of 20 minutes earlier than when they tried either of the other two methods.

MYTH DEBUNKED

"Yawning wakes you up"

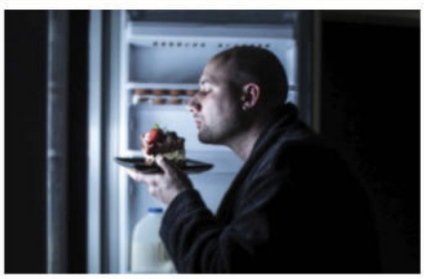
MYTH DEBUNKED

Yawning has long been associated with tiredness and was fabled to provide more oxygen to a sleepy brain, but this is not the case. New research suggests that we actually yawn to cool our brains down, using a deep intake of breath to keep the brain running at its optimal temperature.

"Teenagers are lazy"

MYTH DEBUNKED

Sleep habits start to change just before puberty, and between the ages of ten and 25, people need around nine hours of sleep every night. Teens can also experience a shift in their circadian rhythm, called sleep phase delay, pushing back their natural bedtime by around two hours, and encouraging them to sleep in.



"You should never wake a sleepwalker"

Many people have heard that waking a sleepwalker might kill them, but there is little truth behind these tales. Waking a sleepwalker can leave them confused and disorientated, but the act of sleepwalking in itself can be much more dangerous. Gently guiding a sleepwalker back to their bed is the safest option, but waking them carefully shouldn't do any harm.

MYTH DEBUNKED

"Cheese gives you nightmares"

MYTH DEBUNKED

The British Cheese Board conducted a study in an attempt to debunk this myth by feeding 20g (0.7oz) of cheese to 200 volunteers every night for a week and asking them to record their dreams. There were no nightmares, but strangely 75 per cent of men and 85 per cent of the women who ate Stilton reported vivid dreams.

SLEEP STATS

What are the most common sleeping positions?

41% Foetus

15% Log

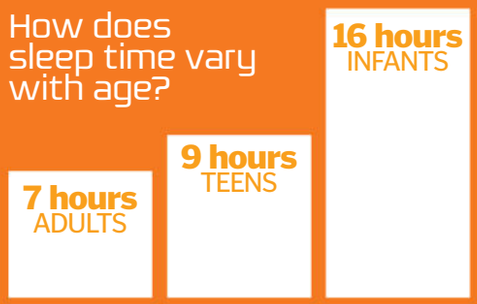
13% Yearner

8% Soldier

7% Freefaller

5% Starfish

How does sleep time vary with age?



What keeps the UK up at night?

67% Discomfort

36% Noise

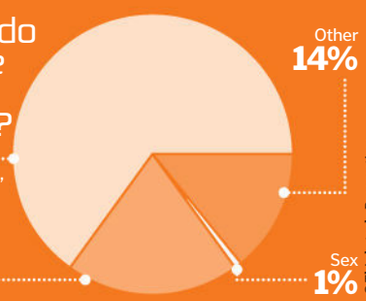
13% Partner

34% Temperature

19% Light

Which country sleeps the longest?

What do people dream about?



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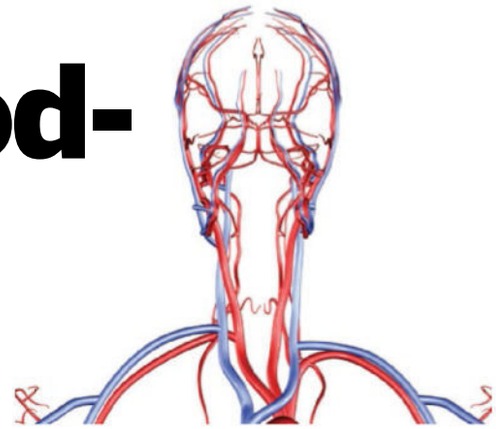
What is the blood-brain barrier?

How does this gateway control the molecules that pass from the blood into the brain

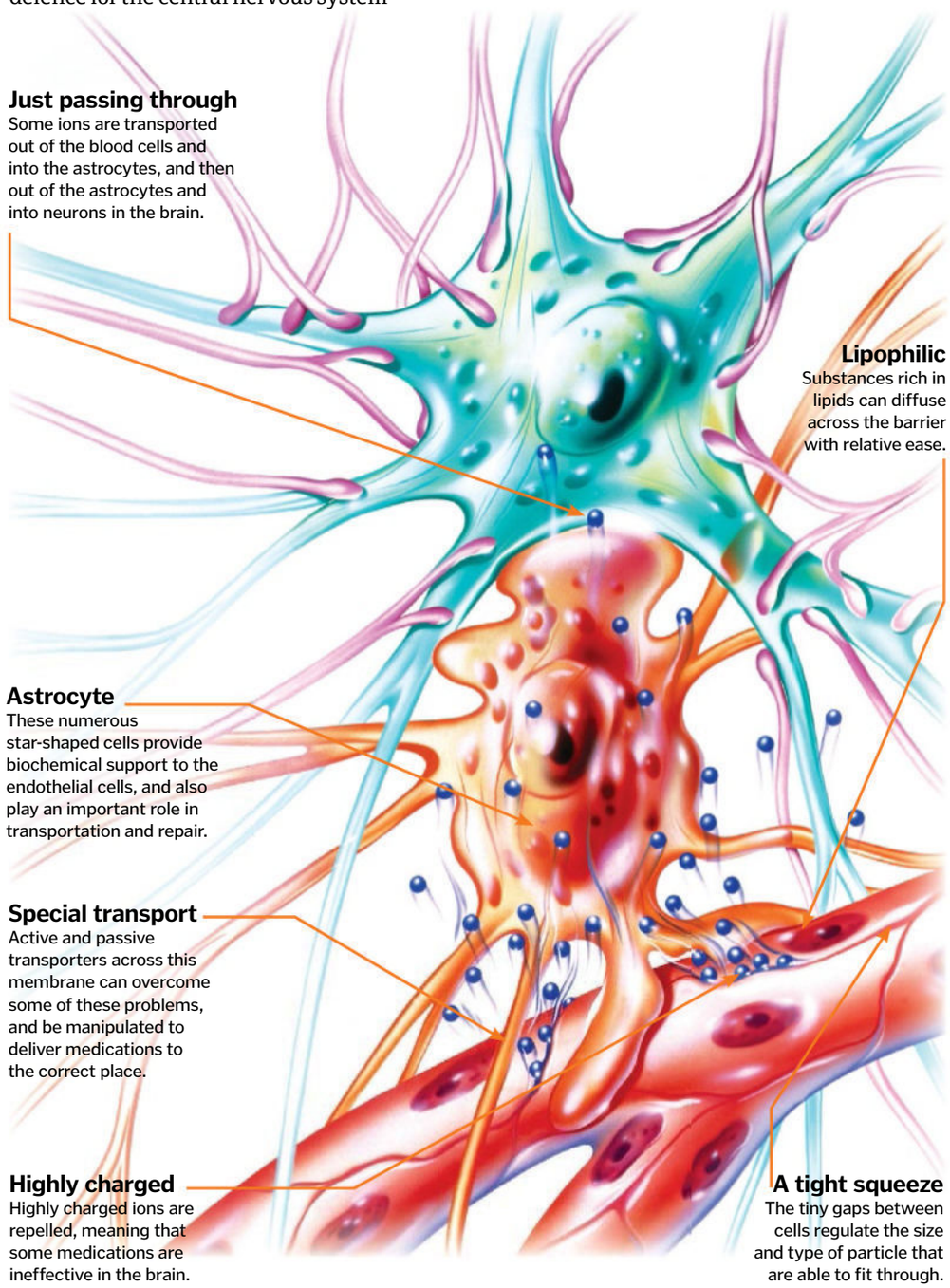


The blood-brain barrier (BBB) is an essential group of cells that line the blood vessels in the central nervous system (brain and spinal cord). They allow passage of materials between the clear fluid surrounding the brain (cerebrospinal fluid) and the red blood cells in arteries, veins and capillaries. The key advantage of having such a barrier is that it prevents large micro-organisms passing into the brain and causing infections. While infections in other areas are common (such as after a cut finger, or mild chest infections), those affecting the brain are much rarer. However when they do occur (eg meningitis), they are potentially life threatening as they are very difficult to treat.

The tight junctions between cells regulate the size and type of particle that pass between them, including oxygen molecules, carbon dioxide molecules, nutrients and hormones. Since it's so effective, it also stops medications from entering the brain (such as certain antibiotics), so while they are effective in the rest of the body, they are ineffective in this vital organ. Overcoming this is a major aim of doctors in the next decade, and the battle has already started. Manipulating the blood-brain barrier's natural transport mechanisms and delivering drugs within nanoparticles to squeeze through the tight junctions are just two examples of the modern techniques that are under development.

Breaking down the barrier

This built-in gateway is the main line of defence for the central nervous system



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Crossing the BBB

The endothelial lining of the blood-brain barrier loves lipids (fatty molecules), but it hates particles with high electrical charges (ions) and large substances. Thus the ideal substance is small, rich in lipids and has a low electrical charge. Barbiturates are such an example, as they freely flow across the blood-brain barrier to suppress brain function; they act as sedatives and antidepressants. However this free movement comes with risks – too much of it will accumulate and slow the brain to a point where you can lose consciousness and even stop breathing.

DID YOU KNOW? *In fish, the intermediate lobe controls skin colour change, while birds have no intermediate lobe at all*

Pituitary gland up close

What does this hormone factory do and why couldn't we live without it?

The pea-sized pituitary gland is found at the base of the brain, close to the hypothalamus. It looks a relatively insignificant part of the brain, but it plays a role in many vital systems.

Often referred to as the 'master gland', it not only releases hormones that control various functions, but it also prompts the activity of other glands like the ovaries and testes.

The pituitary gland comprises three sections called lobes: the anterior, the posterior and the intermediate – the latter of which is considered part of the anterior lobe in humans. These work together with the hypothalamus, which monitors hormones in the blood and stimulates the pituitary gland to produce/release the appropriate hormone(s) if levels fall too low.

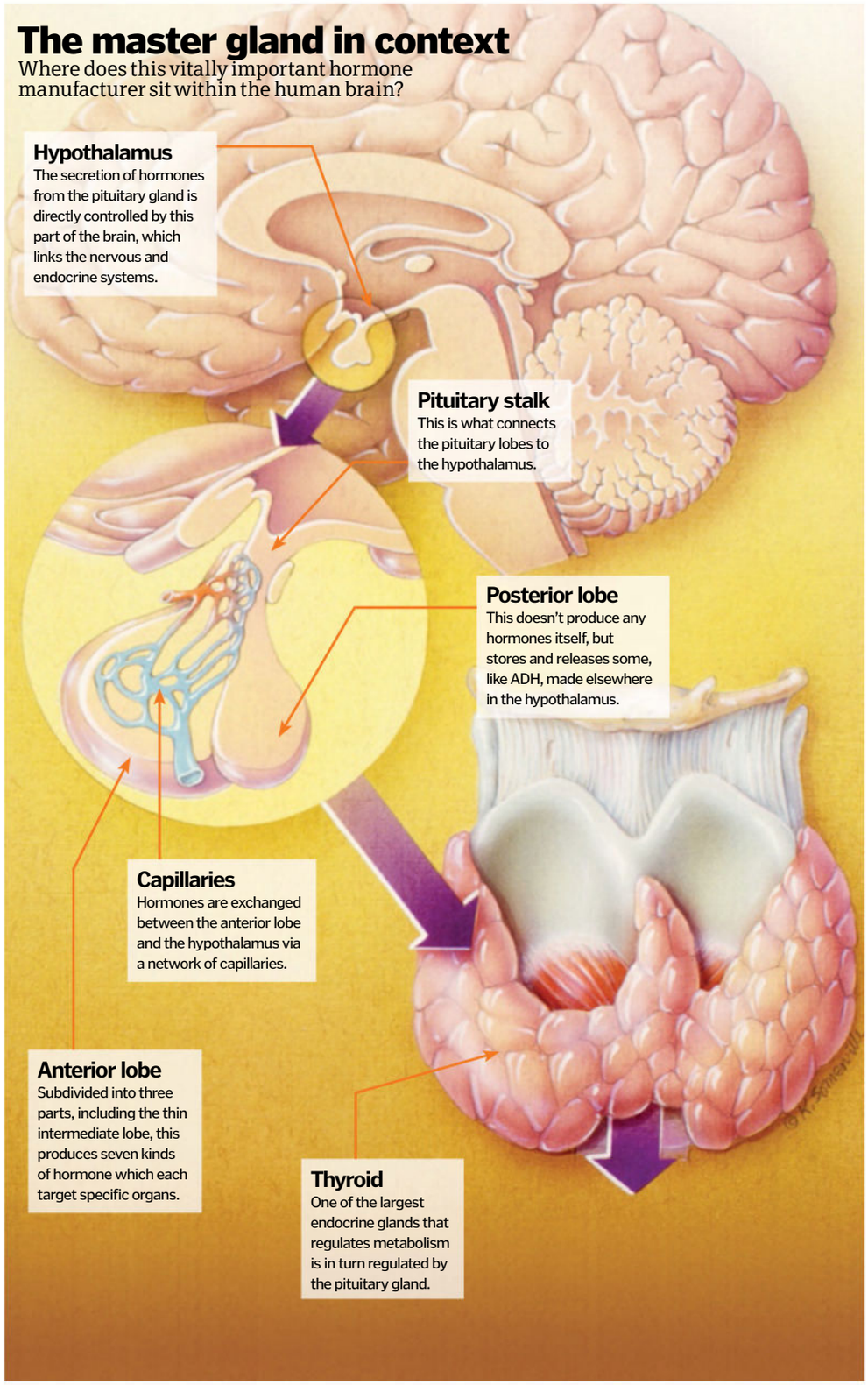
The anterior lobe produces seven important hormones, which include those that regulate growth and reproduction. Adrenocorticotropic hormone (ACTH) targets the adrenal glands to produce cortisol and controls metabolism, while luteinising hormone triggers ovulation in women and stimulates testosterone production in men. The posterior lobe, meanwhile, doesn't *generate* any hormones itself, but stores two: antidiuretic hormone (ADH), which decreases urine production by making the kidneys return more water to the blood, and oxytocin, which tells the uterus to contract during childbirth and also prompts milk production.

Gigantism in focus

The pituitary gland also produces growth hormone, which in adults controls the amount of muscle and fat in the body and plays a key role in the immune system. In children, of course, growth hormone has a very noticeable effect in increasing height and bulk until adulthood. However, sometimes the pituitary gland becomes hyperactive – often as a result of a benign tumour – and produces excess growth hormone. In these cases, a person can grow to a far-beyond-average height, with hands, feet and facial features growing proportionally. While this might not seem so bad, gigantism is nearly always accompanied by other health issues, such as skeletal problems, severe headaches and more life-threatening conditions like heart disorders. If diagnosed early, treatment such as drugs that inhibit growth hormone production and surgical removal of the tumour can help avert the more serious conditions of gigantism.

The master gland in context

Where does this vitally important hormone manufacturer sit within the human brain?



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Human digestion

How does food get turned into energy?

The digestive system is a group of organs that process food into energy that the human body can use to operate. It is an immensely complex system that stretches all the way between the mouth and the anus.

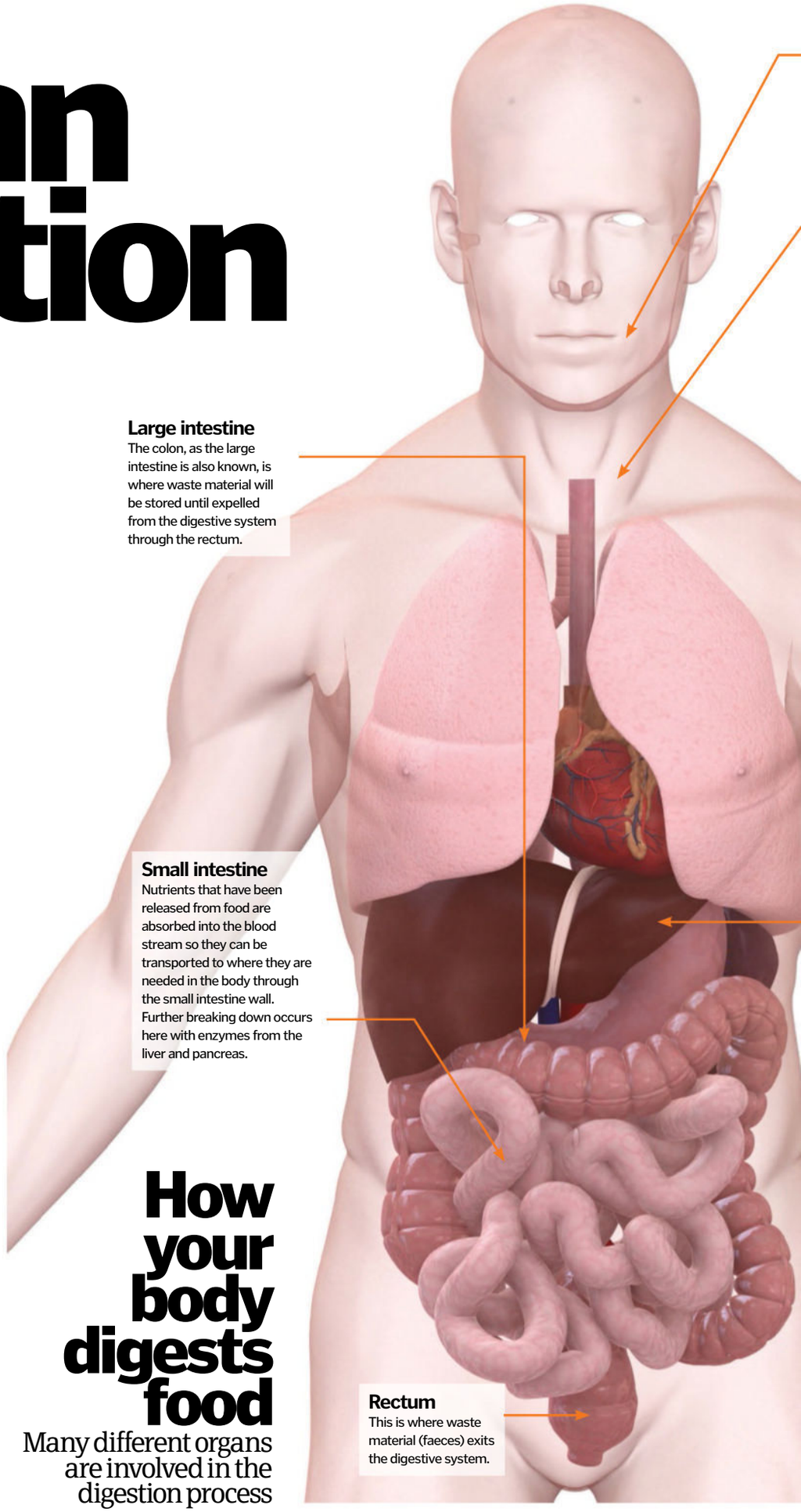
Primary organs that make up the system are the mouth, oesophagus, stomach, small intestine, large intestine and the anus. Each organ has a different function so that the maximum amount of energy is gained from the food, and the waste can be safely expelled from the body. Secondary organs, such as the liver, pancreas and gall bladder, aid the digestive process alongside mucosa cells, which line all hollow organs and produce a secretion which helps the food pass smoothly through them. Muscle contractions called peristalsis also help to push the food throughout the system.

The whole digestive process starts when food is taken into the body through the mouth. Mastication (chewing) breaks down the food into smaller pieces and saliva starts to break starch in these pieces of food into simpler sugars as they are swallowed and move into the oesophagus. Once the food has passed through the oesophagus, it passes into the stomach. It can be stored in the stomach for up to four hours.

The stomach will eventually mix the food with the digestive juices that it produces, which will break down the food further into simpler molecules. These molecules then move into the small intestine slowly, where the final stage of chemical breakdown occurs through exposure to juices and enzymes released from the pancreas, liver and glands in the small intestine. All the nutrients are then absorbed through the intestinal walls and transported around the body through the blood stream.

After all nutrients have been absorbed from food through the small intestine, resulting waste material, including fibre and old mucosa cells, is then pushed into the large intestine where it will remain until expelled by a bowel movement.

> "Nutrients are then absorbed through the intestinal walls and transported around the body"



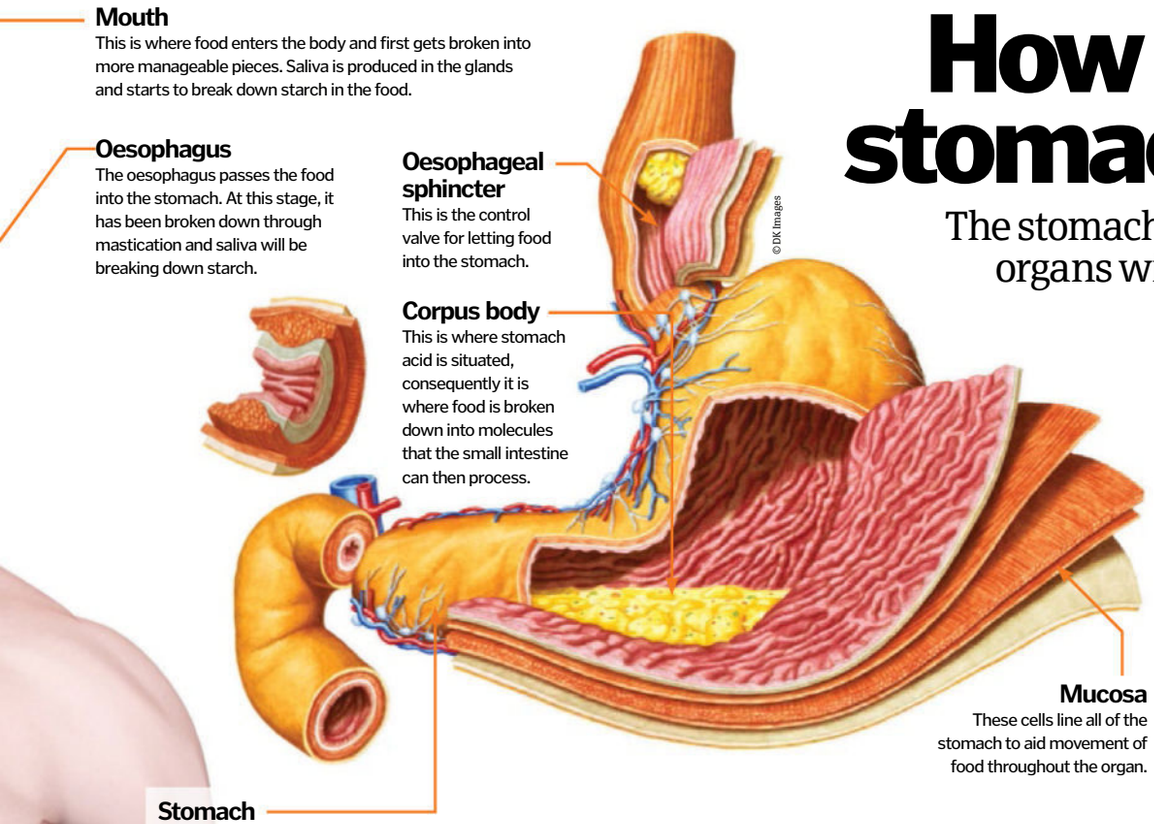
How your body digests food

Many different organs are involved in the digestion process

How does our stomach work?

The stomach is one of the most crucial organs within the digestive system

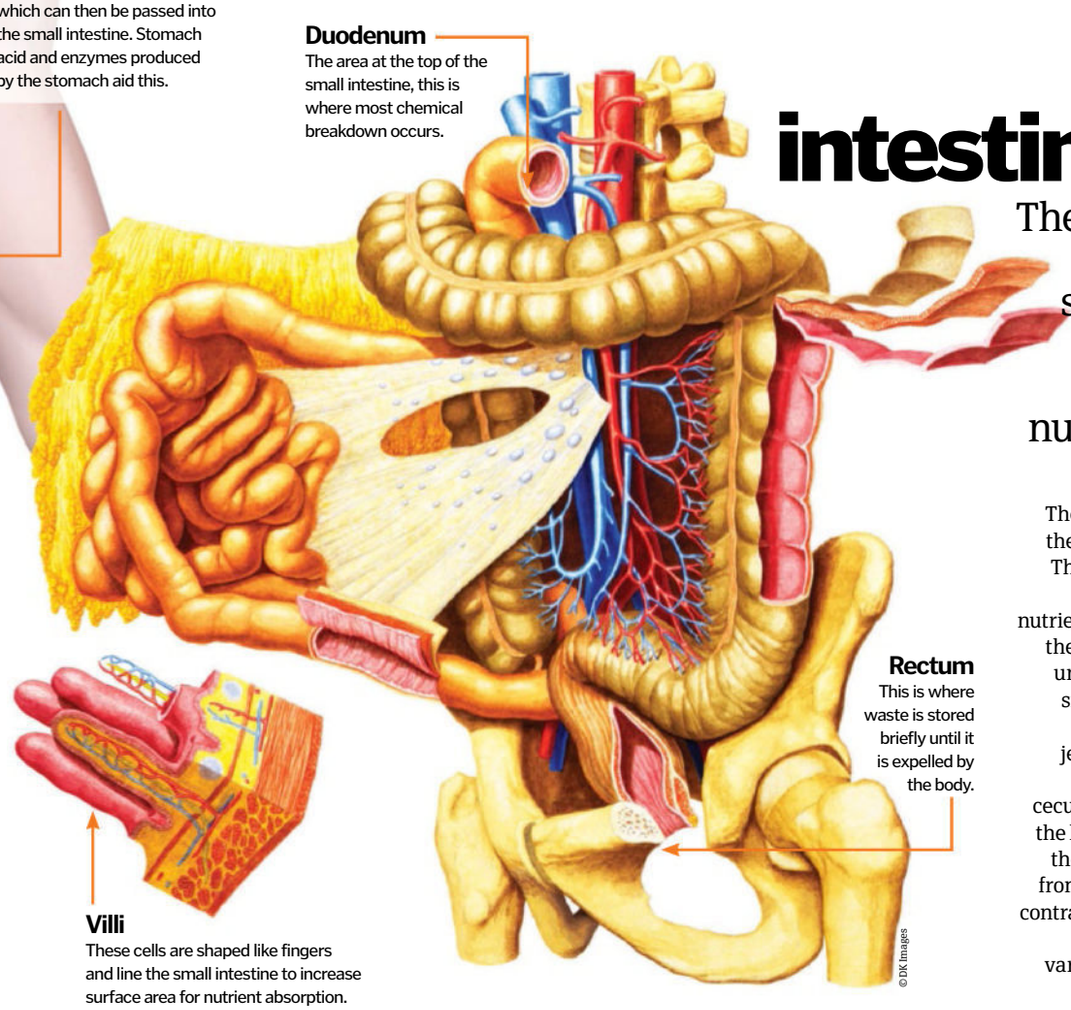
The stomach's function is to break down food into simple molecules before it moves into the small intestine where nutrients are absorbed. The organ actually splits into four distinct parts, all of which have different functions. The uppermost section is the cardia, where food is first stored, the fundus is the area above the corpus body, which makes up the main area of the stomach where food is mixed with stomach acid. The final section is the antrum, containing the pyloric sphincter, which is in control of emptying the stomach contents into the small intestine. Food is passed down into the stomach by mucosa and peristalsis through the oesophageal sphincter, and then mixed in the stomach with acids and juices by muscle contractions.



How the intestine works

The intestine is a crucial part of the digestive system that is heavily involved in breaking down and absorbing nutrients released from ingested food

The intestine splits into two distinct parts, the small intestine and the large intestine. The small intestine is where the food goes through final stages of digestion and nutrients are absorbed into the blood stream, the large intestine is where waste is stored until expelled through the anus. Both the small and large intestines can be further divided into sections, the duodenum, jejunum and ileum are the three distinct sections of the small intestine and the cecum, colon and rectum are the sections of the large intestine. As well as storing waste, the large intestine removes water and salt from the waste before it is expelled. Muscle contractions and mucosa are essential for the intestine to work properly, and we see a variation of mucosa, called villi, present in the lower intestine.



What causes altitude sickness?

Discover the effects that dizzying heights can have on the human body

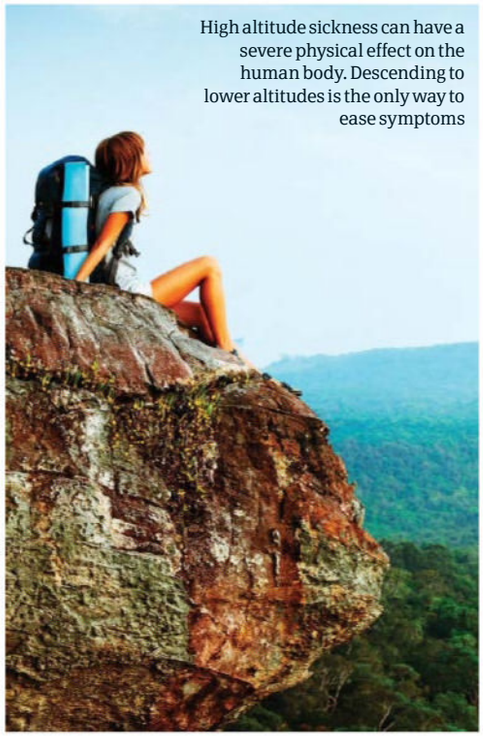
Adventurous explorers can spend months training prior to scaling mountain peaks, but regardless of fitness level, high altitudes can take its toll on the human body.

Between around 1,524 and 3,505 metres (5,000 and 11,500 feet) above sea level is considered 'high altitude'. At this level, most travellers will start to feel the effects of high altitude sickness as they attempt to acclimatise to the change in atmosphere that happens at this height.

The most common symptom is shortness of breath, which is due to a lack of atmospheric pressure. At these heights, air molecules are more dispersed, so less oxygen can be inhaled. In order to compensate, your heart rate will increase and the body will produce more red blood cells, making it easier to transport oxygen around the body.

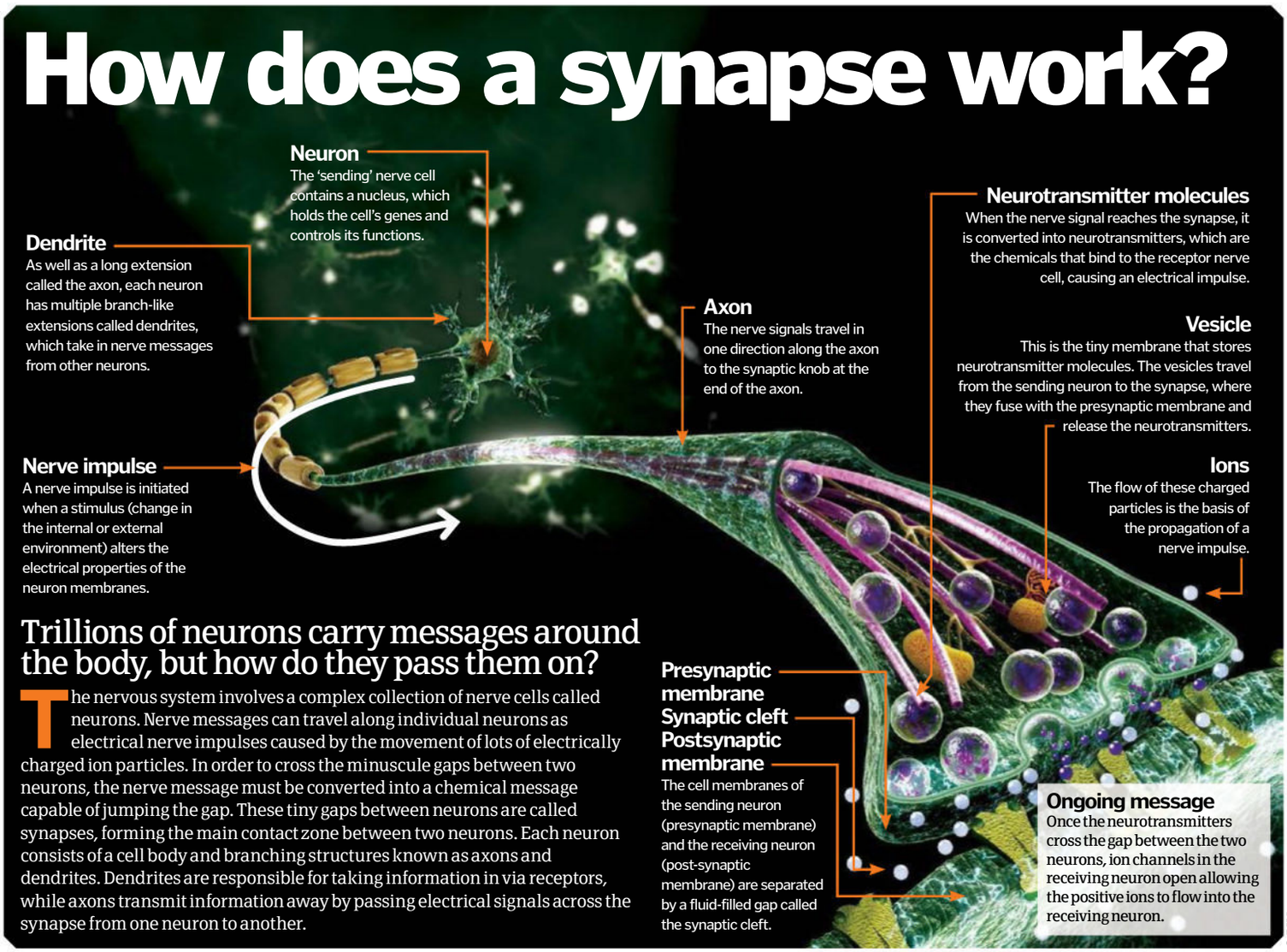
The low humidity levels at high altitude can also cause moisture in the skin and lungs to evaporate quicker, so dehydration is a real threat. Your face, legs and feet may start to swell as the body attempts to retain fluid by holding more water and sodium in the kidneys.

Difficulty sleeping is also common, and symptoms of high altitude sickness can get progressively worse the higher you climb, including mood changes, headaches, dizziness, nausea and loss of appetite.



High altitude sickness can have a severe physical effect on the human body. Descending to lower altitudes is the only way to ease symptoms

How does a synapse work?



Trillions of neurons carry messages around the body, but how do they pass them on?

The nervous system involves a complex collection of nerve cells called neurons. Nerve messages can travel along individual neurons as electrical nerve impulses caused by the movement of lots of electrically charged ion particles. In order to cross the minuscule gaps between two neurons, the nerve message must be converted into a chemical message capable of jumping the gap. These tiny gaps between neurons are called synapses, forming the main contact zone between two neurons. Each neuron consists of a cell body and branching structures known as axons and dendrites. Dendrites are responsible for taking information in via receptors, while axons transmit information away by passing electrical signals across the synapse from one neuron to another.

© DK Images

Adrenaline

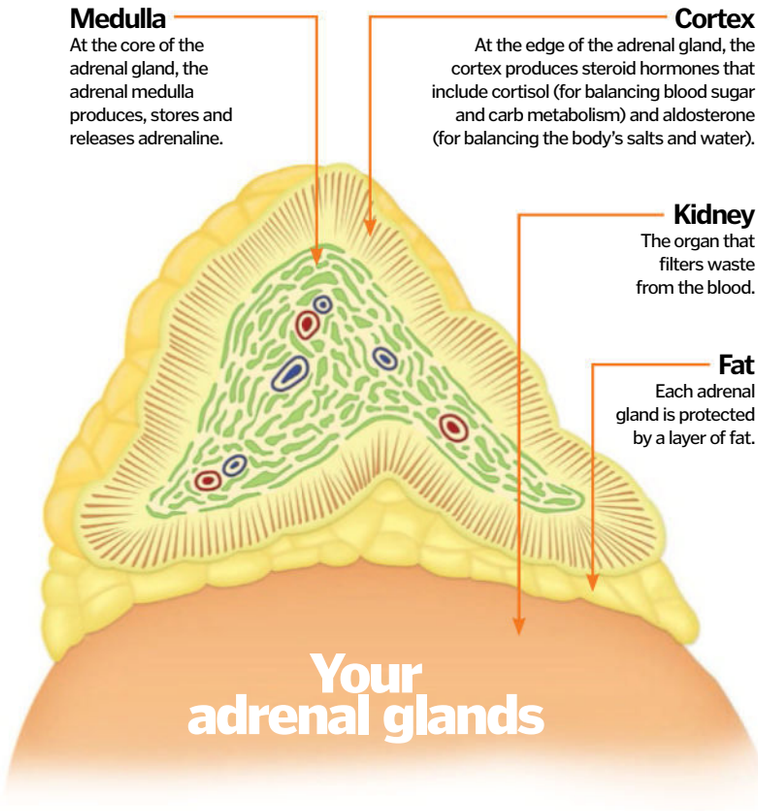
Discover the science behind your body's amazing chemical coping mechanism

Nestling on a layer of fat located just above each of your kidneys are the body's adrenal glands. Around 8cm long, the adrenal glands produce hormones that affect your body's consumption of energy as well as your stress responses.

Adrenal glands consist of two main layers of hormone-secreting cells: the outer cortex and the inner medulla. While the cortex produces energy-balancing hormones, the medulla produces a chemical called epinephrine, which we know better as adrenaline. Identified in 1900, adrenaline is a fast-acting hormone that helps the body deal with unexpected stresses – not to mention high levels of excitement – by upping your heart rate and the flow of blood to your muscles.

The effect of this is that your blood vessels and air passages dilate, meaning that more blood passes to the muscles and more oxygen gets to the lungs quicker, temporarily improving the body's physical performance and potentially saving your life.

"Adrenaline is a fast-acting hormone that helps the body deal with stresses"



Human respiration

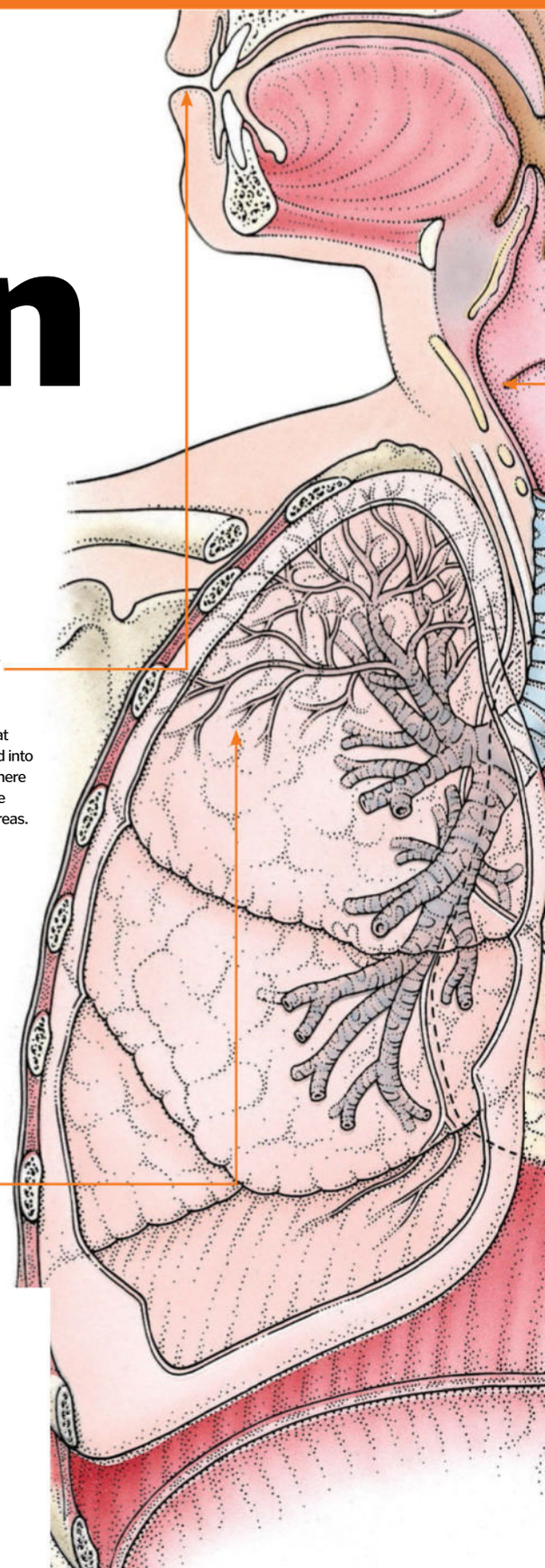
Respiration is crucial to an organism's survival. The process of respiration is the transportation of oxygen from the air that surrounds us into the tissue cells of our body so that energy can be broken down

The primary organs used for respiration in humans are the lungs. Humans have two lungs, with the left lung being divided into two lobes and the right into three. Lungs have between 300–500 million alveoli, which is where gas exchange occurs.

Respiration of oxygen breaks into four main stages: ventilation, pulmonary gas exchange, gas transportation and peripheral gas exchange. Each stage is crucial in getting oxygen to the body's tissue, and removing carbon dioxide. Ventilation and gas transportation need energy to occur, as the diaphragm and the heart are used to facilitate these actions, whereas gas exchanging is passive. As air is drawn into the lungs at a rate of between 10-20 breaths per minute while resting, through either your mouth or nose by diaphragm contraction, and travels through the pharynx, then the larynx, down the trachea, and into one of the two main bronchial tubes. Mucus and cilia keep the lungs clean by catching dirt particles and sweeping them up the trachea.

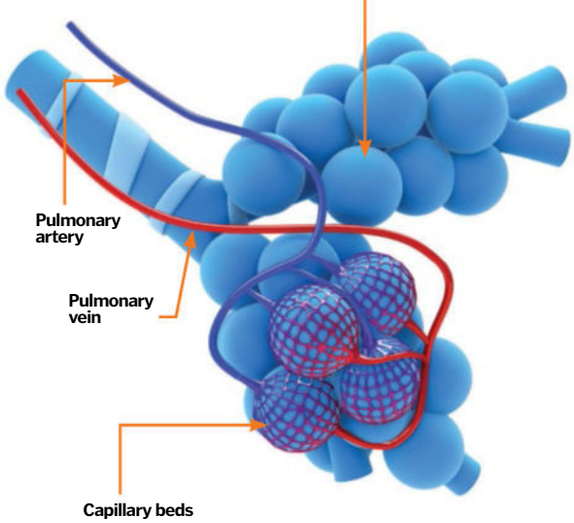
When air reaches the lungs, oxygen is diffused into the bloodstream through the alveoli and carbon dioxide is diffused from the blood into the lungs to be exhaled. Diffusion of gases occurs because of differing pressures in the lungs and blood. This is also the same when oxygen diffuses into tissue around the body. When blood has been oxygenated by the lungs, it is transferred around the body to where it is most needed in the bloodstream. If the body is exercising, the breathing rate increases and, consequently, so does the heart rate to ensure that oxygen reaches tissues that need it. Oxygen is then used to break down glucose to provide energy for the body. This happens in the mitochondria of cells. Carbon dioxide is one of the waste products of this, which is why we get a build up of this gas in our body that needs to be transported back into the lungs to be exhaled.

The body can also respire anaerobically, but this produces far less energy and instead of producing CO_2 as a byproduct, lactic acid is produced. The body then takes time to break this down after exertion has finished as the body has a so-called oxygen debt.



1. Nasal passage/ oral cavity
These areas are where air enters into the body so that oxygen can be transported into and around the body to where it's needed. Carbon dioxide also exits through these areas.

5. Alveoli
The alveoli are tiny little sacs which are situated at the end of tubes inside the lungs and are in direct contact with blood. Oxygen and carbon dioxide transfer to and from the blood stream through the alveoli.



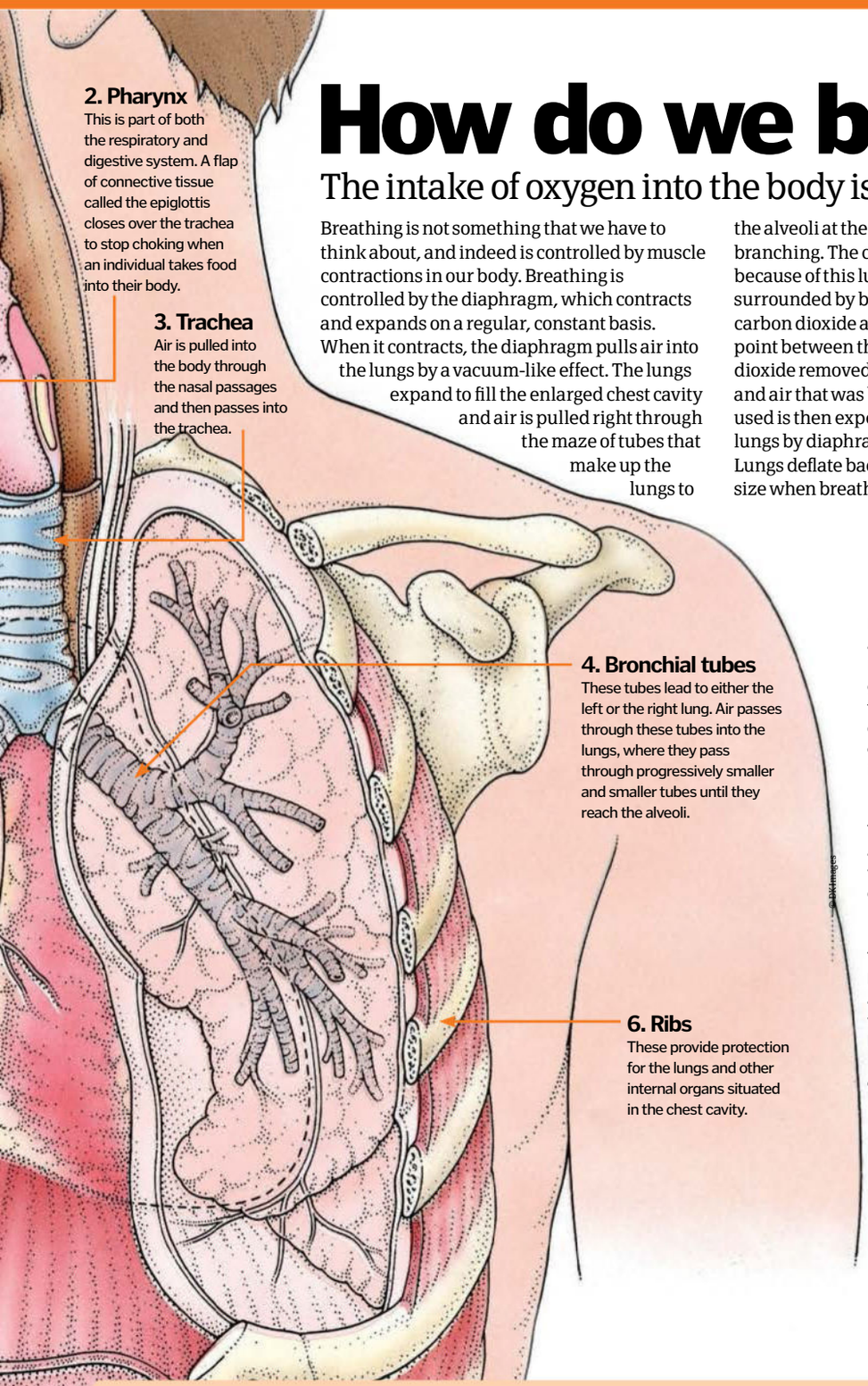
How our lungs work

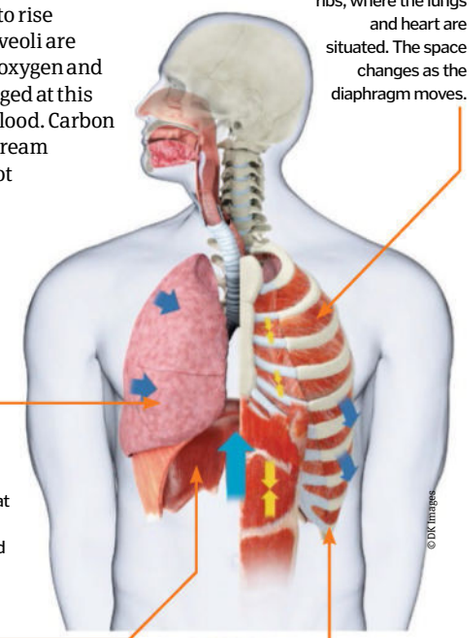
Lungs are the major respiratory organ in humans

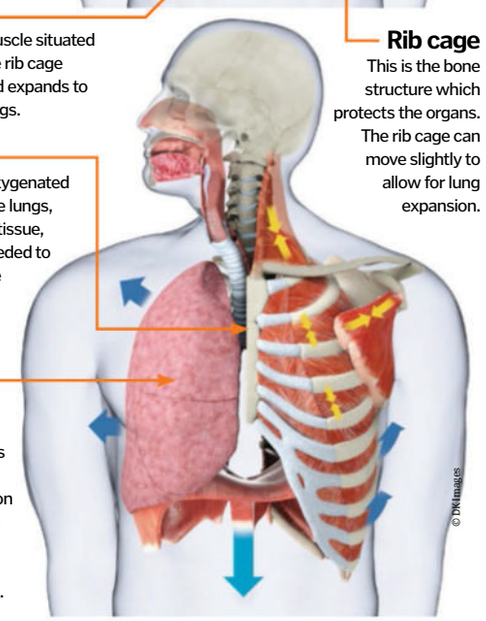
How do we breathe?

The intake of oxygen into the body is complex

Breathing is not something that we have to think about, and indeed is controlled by muscle contractions in our body. Breathing is controlled by the diaphragm, which contracts and expands on a regular, constant basis. When it contracts, the diaphragm pulls air into the lungs by a vacuum-like effect. The lungs expand to fill the enlarged chest cavity and air is pulled right through the maze of tubes that make up the lungs to the alveoli at the ends, which are the final branching. The chest will be seen to rise because of this lung expansion. Alveoli are surrounded by blood vessels, and oxygen and carbon dioxide are then interchanged at this point between the lungs and the blood. Carbon dioxide removed from the blood stream and air that was breathed in but not used is then expelled from the lungs by diaphragm expansion. Lungs deflate back to a reduced size when breathing out.





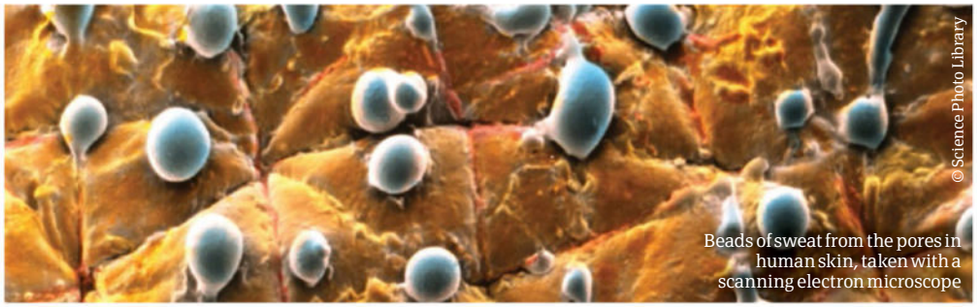


Why do we need oxygen?

We need oxygen to live as it is crucial for the release of energy within the body

Although we can release energy through anaerobic respiration temporarily, this method is inefficient and creates an oxygen debt that the body must repay after excess exercise or exertion has ceased. If oxygen supply is cut off for more than a few minutes, an individual will die. Oxygen is pumped around the body to be used in cells that need to break down glucose so that energy is provided for the tissue. The equation that illustrates this is:

$$C_6H_{12}O_6 + 6O_2 = 6CO_2 + 6H_2O + \text{energy}$$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Beads of sweat from the pores in human skin, taken with a scanning electron microscope

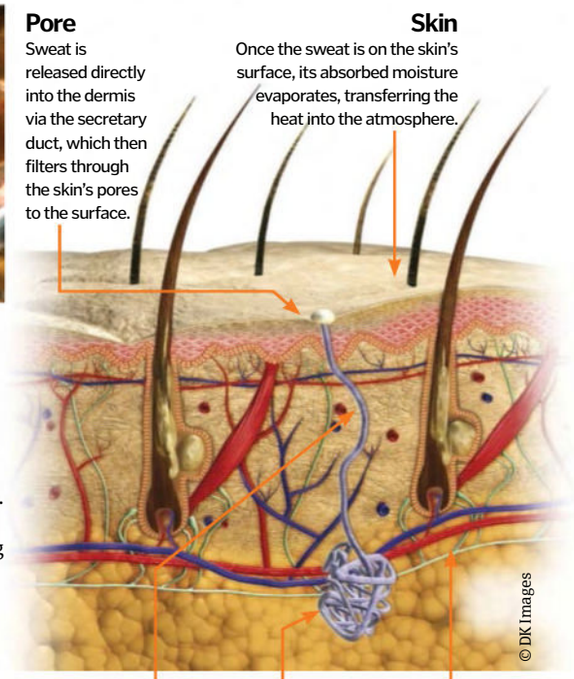
Why do we sweat?

As your doctor may tell you, it's glandular…

Sweat is produced by dedicated sweat glands, and is a mechanism used primarily by the body to reduce its internal temperature. There are two types of sweat gland in the human body, the eccrine gland and the apocrine gland. The former regulates body temperature, and is the primary source of excreted sweat, with the latter only secreting under emotional stresses, rather than those involved with body dehydration.

Eccrine sweat glands are controlled by the sympathetic nervous system and, when the internal temperature of the body rises, they secrete a salty, water-based substance to the skin's surface. This liquid then cools the skin and the body through evaporation, storing and then transferring excess heat into the atmosphere.

Both the eccrine and apocrine sweat glands only appear in mammals and, if active over the majority of the animal's body, act as the primary thermoregulatory device. Certain mammals such as dogs, cats and sheep only have eccrine glands in specific areas – such as paws and lips – warranting the need to pant to control their temperature.



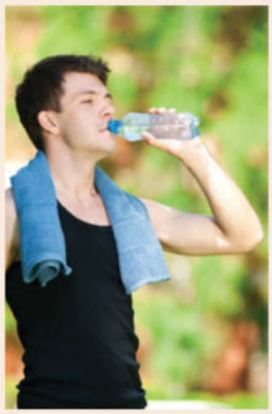
Dehydration

What happens if we don't drink enough?

Just by breathing, sweating and urinating, the average person loses ten cups of water a day. With H2O making up as much as 75 per cent of our body, dehydration is a frequent risk. Water is integral in maintaining our systems and it performs limitless functions.

Essentially, dehydration strikes when your body takes in less fluid than it loses. The mineral balance in your body becomes upset with salt and sugar levels going haywire. Enzymatic activity is slowed, toxins accumulate more easily and your breathing can even become more difficult as the lungs are having to work harder.

Babies and the elderly are most susceptible as their bodies are not as resilient as others. It has been recommended to have eight glasses of water or two litres a day. More recent research is undecided as to how much is exactly needed.

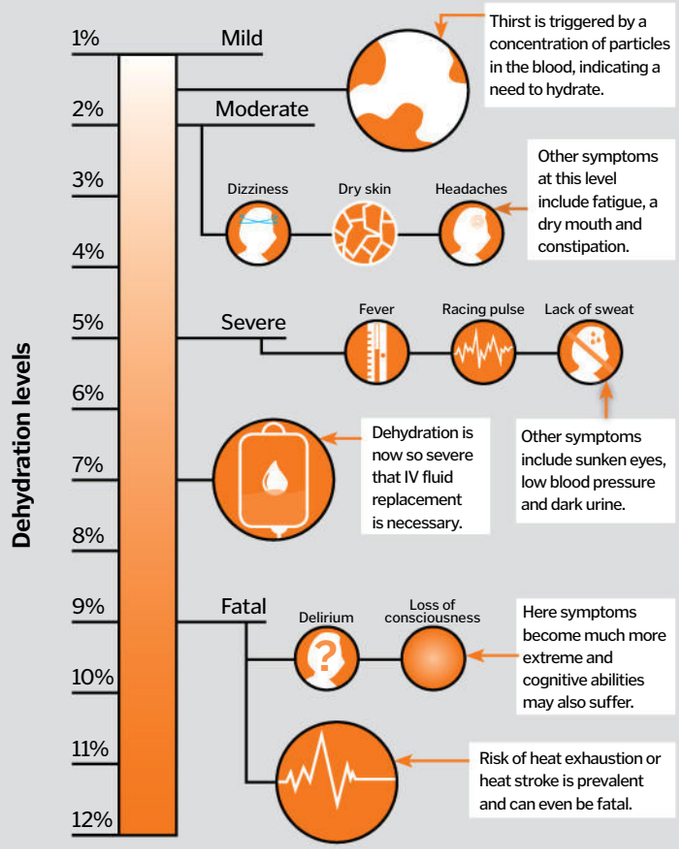


Too much H_2O?

Hydration is all about finding the perfect balance. Too much hydration can be harmful as well as too little; this is known as water intoxication. If too much liquid is in your body, nutrients such as electrolytes and sodium are diluted and the body suffers. Your cells bloat and expand and can even burst, and it can be fatal if untreated. The best treatment is to take on IV fluids containing electrolytes.

Dangers of dehydration

How does a lack of water vary from mild to fatal?



Why does skin scar?

Scars are made up of the same proteins as normal skin, so why do they look so different?

Scars are a natural part of the healing process, with most of us having some form of them on our body. The reason why scars look different compared to normal skin stems from their proteins' composition.

Normal skin benefits from a weaved protein structure, whereas the proteins in scars are aligned in one direction. This results in a different appearance compared to normal, healthy skin. Scars are smoother due to a lack of sweat glands and hair follicles, so they can often become itchy. There are also a number of different types of scar that can form. The most common is a flat scar – these tend to initially be dark and raised, but will fade and flatten over time as the scar matures. A hypertrophic scar can be identified by its red appearance and elevated nature. This scar type typically forms when the dermis is damaged, and this can become itchy and painful over time.

Keloid scars are by far the most extreme scar type when compared to the others. Unlike most scars, they extend beyond the confines of the original injury and are formed due to excessive scar tissue being produced. Keloid scars are raised above the surrounding skin, and are hard, shiny and hairless. The reason behind why keloids form is poorly understood, but it is known that people with darker skin tones are more likely to form keloids.

Pitted scars are generally formed from acne or chicken pox, and tend to be numerous in areas where these conditions were prevalent. Scar contractures, meanwhile, usually form after a burn, and are caused by the skin shrinking and tightening. The severity of these kinds of scars can depend on their bodily location; if they form around a joint they can lead to movement being restricted.

Clotting
Clotting occurs due to a combination of proteins in the blood, which help a scab to form, protecting the wound from infection.

Epithelial cells
By rapidly multiplying, the epithelial cells fill in over the newly formed granulation tissue.

Newly formed scar
Once the newly formed epithelium thickens, the area contracts and forms a scar on the skin's surface.

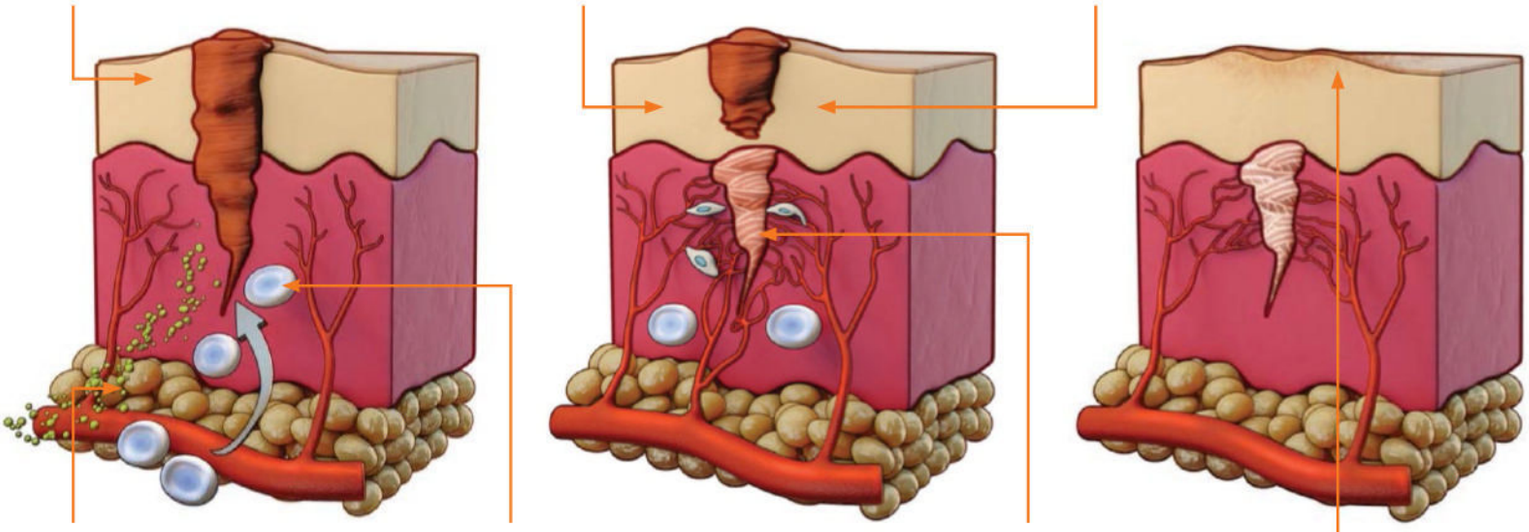


Illustration by Nicholas Forder

Inflammatory chemicals
The body recognises that it has sustained an injury, and white blood cells release inflammatory chemicals to help protect the area.

White blood cells
To help fight off potential infection, white blood cells seep into the area and flock to the wound.

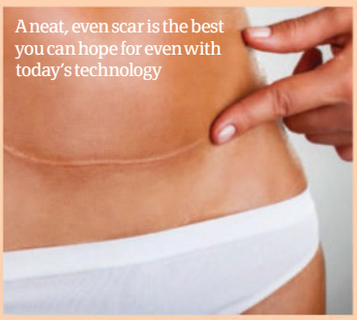
Granulation tissue
The new granulation tissue replaces the clotted blood, and helps restore the blood supply to the damaged area.

Scar tissue
Once fully formed, this tissue is known as scar tissue. Due to excessive collagen production this tissue often lacks in flexibility, which can lead to pain and dysfunction.

Can scars be treated?

Scars cannot be stopped from forming, but there are various treatments available to help reduce their appearance. Silicone gels or sheets have been shown to effectively minimise scar formation and are often used when people have been burnt. These must be applied or worn throughout the scar's maturation phase to maximise their efficacy. Corticosteroid injections can be used to reduce any inflammation (swelling) around the scar and to flatten it as well. A riskier treatment for scars is surgery. This can be used to change the shape of the scar, however there is a risk of worsened scarring if unsuccessful.

There are also certain steps that can be taken to help reduce the risk of an unsightly scar forming from an injury. By cleaning dirt and dead tissue away from the wound, you are increasing the chance that the scar will form neatly. It is also vital that you don't pick or scratch the scar, as this will slow down its formation, resulting in a more obvious appearance.



A neat, even scar is the best you can hope for even with today's technology

© Dreamstime

How your immune system works

Physical defences

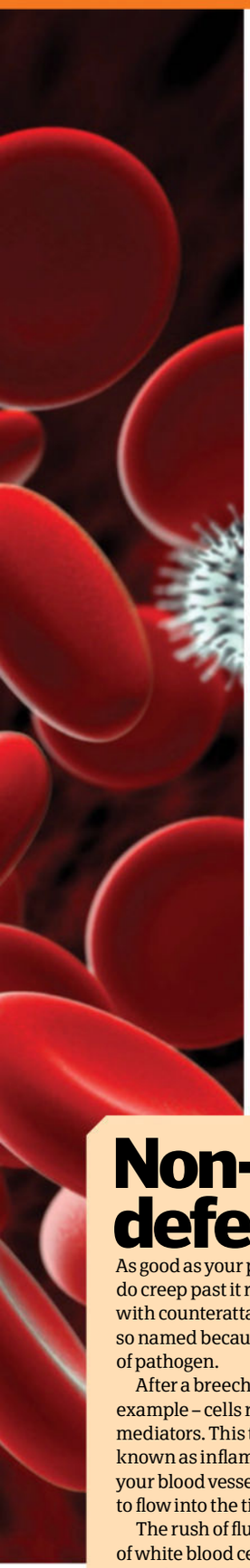
Human anatomy subscribes to the notion that good fences make good neighbours. Your skin, made up of tightly packed cells and an antibacterial oil coating, keeps most pathogens from ever setting foot in body. Your body's openings are well-fortified too. Pathogens that you inhale face a wall of mucus-covered membranes in your respiratory tract, optimised to trap germs. Pathogens that you digest end up soaking in a bath of potent stomach acid. Tears flush pathogens out of your eyes, dousing bacteria with a harsh enzyme for good measure.

Your body is locked in a constant war against a viscous army

It's true: while you're sitting around watching TV, trillions of foreign invaders are launching a full scale assault on the trillions of cells that constitute 'you'. Collectively known as pathogens, these attackers include bacteria, single-celled creatures that live to eat and reproduce; protists, larger single-cell organisms; viruses, packets of genetic information that take over host cells and replicate inside them; and fungi, a type of plant life.

Bacteria and viruses are by far the very worst offenders. Dangerous bacteria release toxins in the body that cause diseases such as E. coli, anthrax, and the black plague. The cell damage from viruses causes measles, the flu and the common cold, among numerous other diseases.

Just about everything in our environment is teeming with these microscopic intruders... including you. The bacteria in your stomach alone outnumber all the cells in your body, ten-to-one. Yet, your scrappy microscopic soldiers usually win the day against pathogens, through a combination of sturdy barriers, brute force, and superior battlefield intelligence, collectively dubbed the immune system.



The adaptive immune system

Fighting the good fight, and white blood cells are right on the front line…

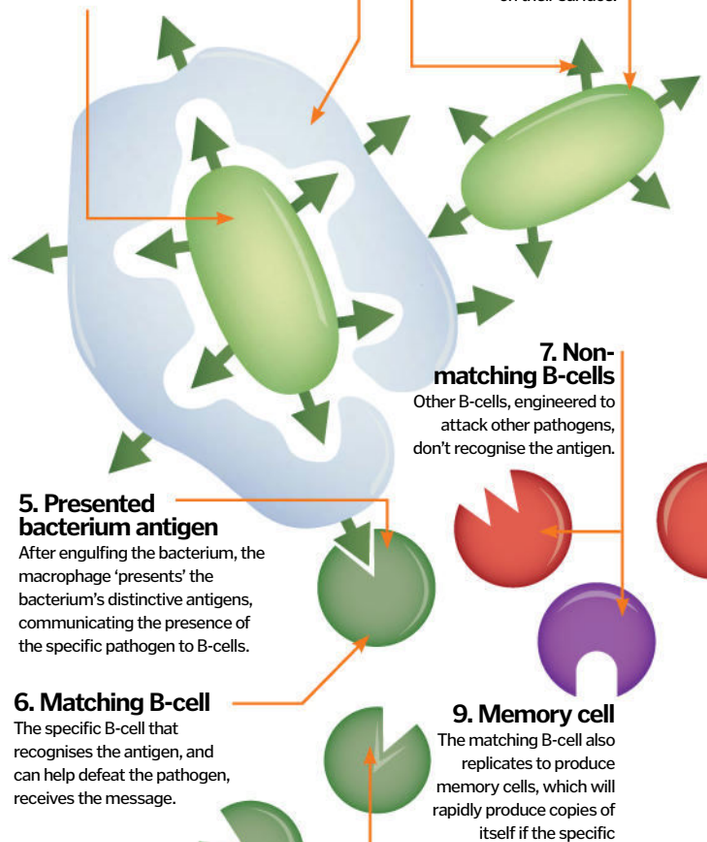
When a pathogen is tough, wily, or numerous enough to survive non-specific defences, it's up to the adaptive immune system to clean up the mess. The key forces in the adaptive immune system are white blood cells called lymphocytes. Unlike their macrophage cousins, lymphocytes are engineered to attack only one specific type of pathogen. There are two types of lymphocytes: B-cells and T-cells.

These cells join the action when macrophages pass along information about the invading pathogen, through chemical messages called interleukins. After engulfing a pathogen, a macrophage communicates details about the pathogen's antigens – telltale molecules that characterise a particular pathogen. Based on this information, the immune system identifies specific B-cells and T-cells equipped to recognise and battle the pathogen. Once they are successfully identified, these cells rapidly reproduce, assembling an army of cells that are ready and equipped to take down the attacker.

The B-cells flood your body with antibodies, molecules that either disarm a specific pathogen or bind to it, marking it as a target for other white blood cells. When T-cells find their target, they lock on and release toxic chemicals that will destroy it. T-cells are especially adept at destroying your body's cells that are infected with a virus.

This entire process takes several days to get going and may take even longer to conclude. All the while, the raging battle can make you feel terrible. Fortunately, the immune system is engineered to learn from the past. While your body is producing new B-cells and T-cells to fight the pathogens, it also produces memory cells – copies of the B-cells and T-cells, which stay in the system after the pathogen is defeated. The next time that pathogen shows up in your body, these memory cells help launch a counter-attack much more quickly. Your body can wipe out the invaders before any infection takes hold. In other words, you develop immunity.

Vaccines accomplish the same thing by giving you just enough pathogen exposure for you to develop memory cells, but not enough to make you sick.



Non-specific defences

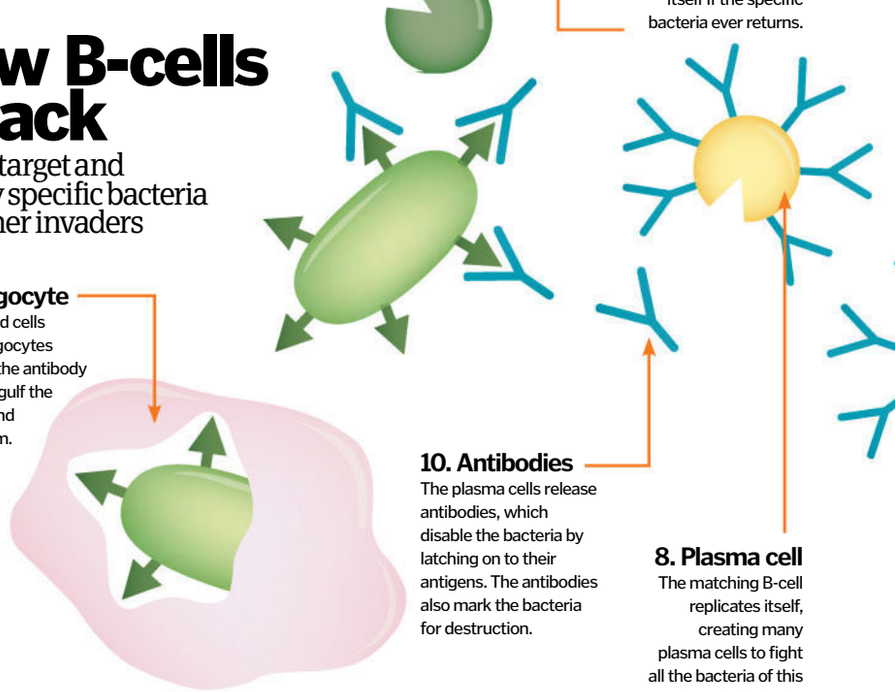
As good as your physical defence system is, pathogens do creep past it regularly. Your body initially responds with counterattacks known as non-specific defences, so named because they don't target a specific type of pathogen.

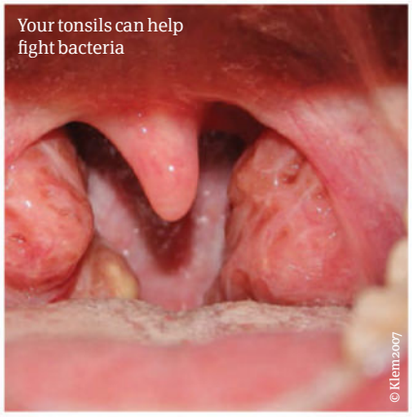
After a breech – bacteria rushing in through a cut, for example – cells release chemicals called inflammatory mediators. This triggers the chief non-specific defence, known as inflammation. Within minutes of a breach, your blood vessels dilate, allowing blood and other fluid to flow into the tissue around the cut.

The rush of fluid in inflammation carries various types of white blood cells, which get to work destroying intruders. The biggest and toughest of the bunch are macrophages, white blood cells with an insatiable appetite for foreign particles. When a macrophage detects a bacterium's telltale chemical trail, it grabs the intruder, engulfs it, takes it apart with chemical enzymes, and spits out the indigestible parts. A single macrophage can swallow up about 100 bacteria before its own digestive chemicals destroy it from within.

How B-cells attack

B-cells target and destroy specific bacteria and other invaders




Your tonsils can help fight bacteria

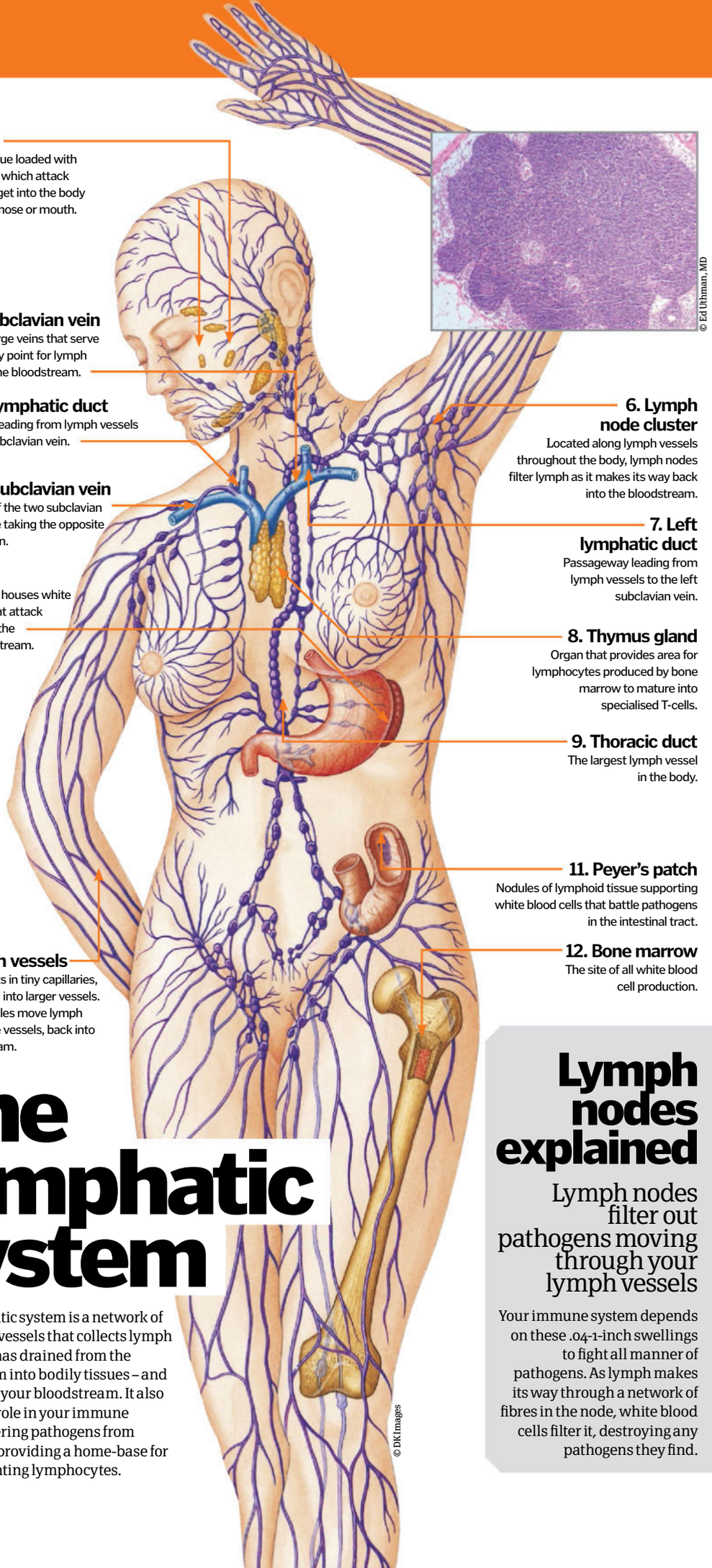
© Klem 2007

Disorders of the immune system

Who watches the watchmen?

The immune system is a powerful set of defences, so when it malfunctions, it can do as much harm as a disease. Allergies are the result of an overzealous immune system. In response to something relatively benign, like pollen, the immune system triggers excessive measures to expel the pathogen. On the extreme end, allergies may cause anaphylactic shock, a potentially deadly drop in blood pressure, sometimes accompanied by breathing difficulty and loss of consciousness. In autoimmune disorders such as rheumatoid arthritis, the immune system fails to recognise the body's own cells and attacks them.

In an allergic reaction, the body may resort to sneezing to expel a fairly harmless pathogen



The lymphatic system

The lymphatic system is a network of organs and vessels that collects lymph – fluid that has drained from the bloodstream into bodily tissues – and returns it to your bloodstream. It also plays a key role in your immune system, filtering pathogens from lymph and providing a home-base for disease-fighting lymphocytes.

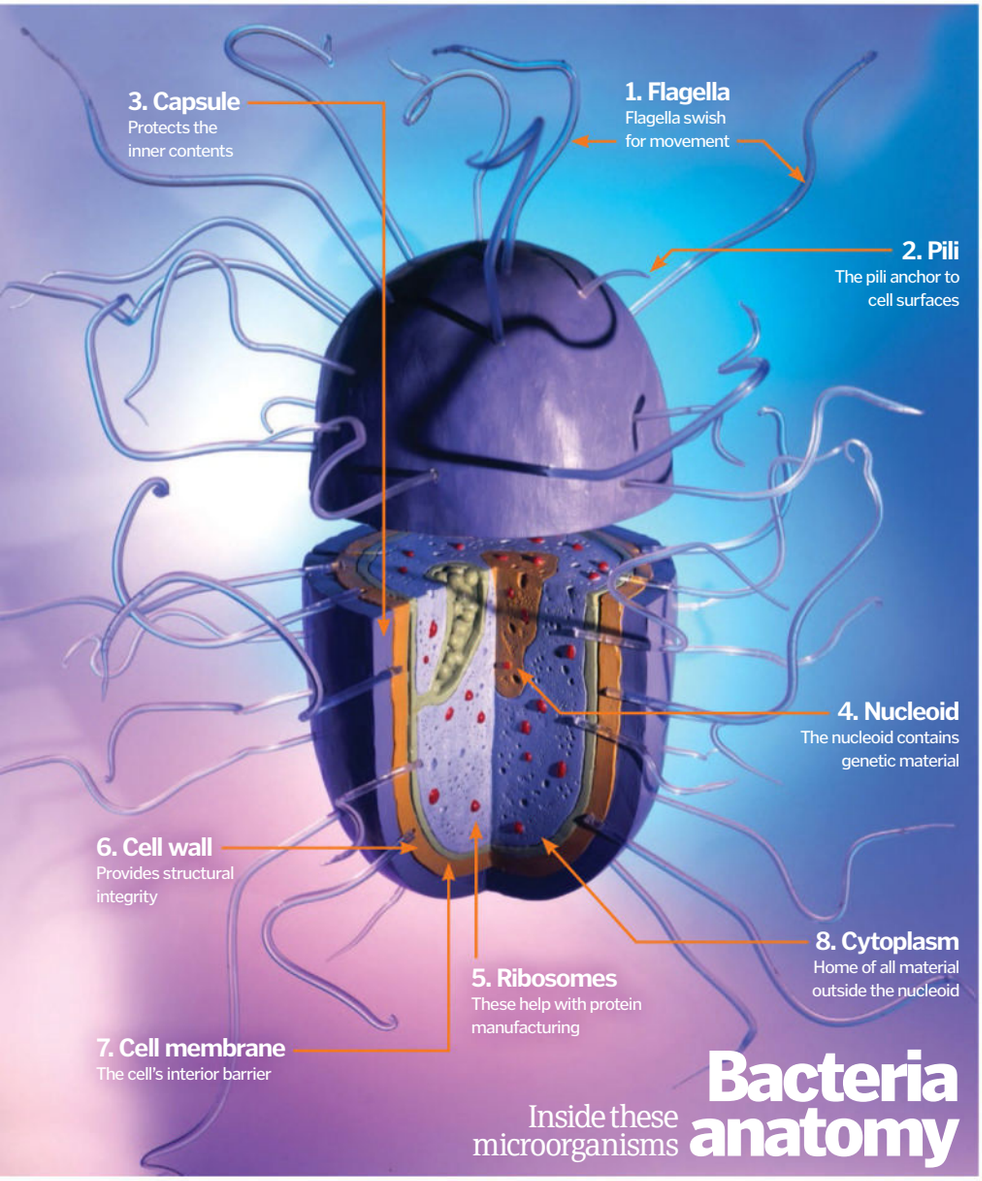
Lymph nodes explained

Lymph nodes filter out pathogens moving through your lymph vessels

Your immune system depends on these .04-1-inch swellings to fight all manner of pathogens. As lymph makes its way through a network of fibres in the node, white blood cells filter it, destroying any pathogens they find.

Know your enemy: Bacteria

Bacteria are the smallest and, by far, the most populous form of life on Earth. Right now, there are trillions of the single-celled creatures crawling on and in you. In fact, they constitute about four pounds of your total body weight. To the left is a look at bacteria anatomy...

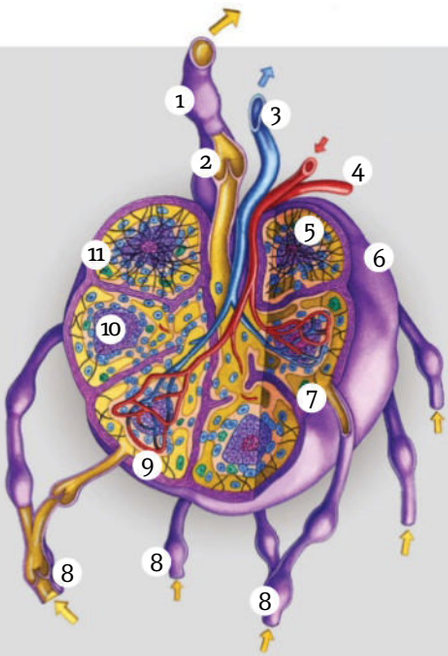


What is HIV...

... and how does it affect the immune system?

The human immunodeficiency virus (HIV) is a retrovirus (a virus carrying ribonucleic acid, or RNA as it's known), transmitted through bodily fluids. Like other deadly viruses, HIV invades cells and multiplies rapidly inside. Specifically, HIV infects cells with CD4 molecules on their surface, which includes infection-fighting helper T-cells. HIV destroys the host cell, and the virus copies go on to infect other cells. As the virus destroys helper T-cells, it steadily weakens the immune system. If enough T-cells are lost, the body becomes highly susceptible to a range of infections, a condition known as acquired immune deficiency syndrome (AIDS).

Scanning electron micrograph of HIV-1 budding (in green) from cultured lymphocyte. This image has been coloured to highlight the most important features. Multiple round bumps on the cell surface represent sites of assembly and budding of virions.



Major points of the lymph node

1. Outgoing lymph vessel
The vessel that carries filtered lymph out of the lymph node

2. Valve
A structure that prevents lymph from flowing back into the lymph node

3. Vein
Passageway for blood leaving the lymph node

4. Artery
Supply of incoming blood for the lymph node

5. Reticular fibres
Divides the lymph node into individual cells

6. Capsule
The protective, shielding fibres that surround the lymph node

7. Sinus
A channel that slows the flow of lymph, giving macrophages the opportunity to destroy any detected pathogens

8. Incoming lymph vessel
A vessel that carries lymph into the lymph node

9. Lymphocyte
The T-cells, B-cells and natural killer cells that fight infection

10. Germinal centre
This is the site of lymphocyte multiplication and maturation

11. Macrophage
Large white blood cells that engulf and destroy any detected pathogens

Bone fracture healing process

Learn how your body mends broken bones

If a bone has too much pressure put on it, or is hit or landed on in a particular way, there is a chance it will break. Your body has ways of repairing these breaks, but it takes time and care. There are different kinds of break, ranging from a hairline fracture to a fully shattered bone, but they all mend in a similar way.

As a bone breaks, the blood vessels are also severed. Blood leaks out and forms a clot called a fracture haematoma. This stops blood flow to the area and also helps keep both pieces of bone aligned, ready for healing.

The body then makes fibrous cells and cartilage, which reinforce the bond and strengthen it. This creates a callus, which is essentially a weakened bone. Over time, the callus builds up and the two parts of the bone gradually fuse together, like a bridge being constructed from either side of a river until both ends meet in the middle.

Once both sections of bone are connected again, specialised cells called osteoblasts enter to produce bone cells. These new cells replace the callus, returning the bone to its original shape.

Much like repairing a broken toy with glue, the bone needs to be kept straight and steady for the fusion to happen correctly. This is why doctors will put a cast on the broken bone. The cast provides essential support, protection and stability, ensuring the broken bone doesn't move. A cast will generally stay on for a few weeks until the bond has become strong enough, but it could take months for a properly set bone to fully recover.

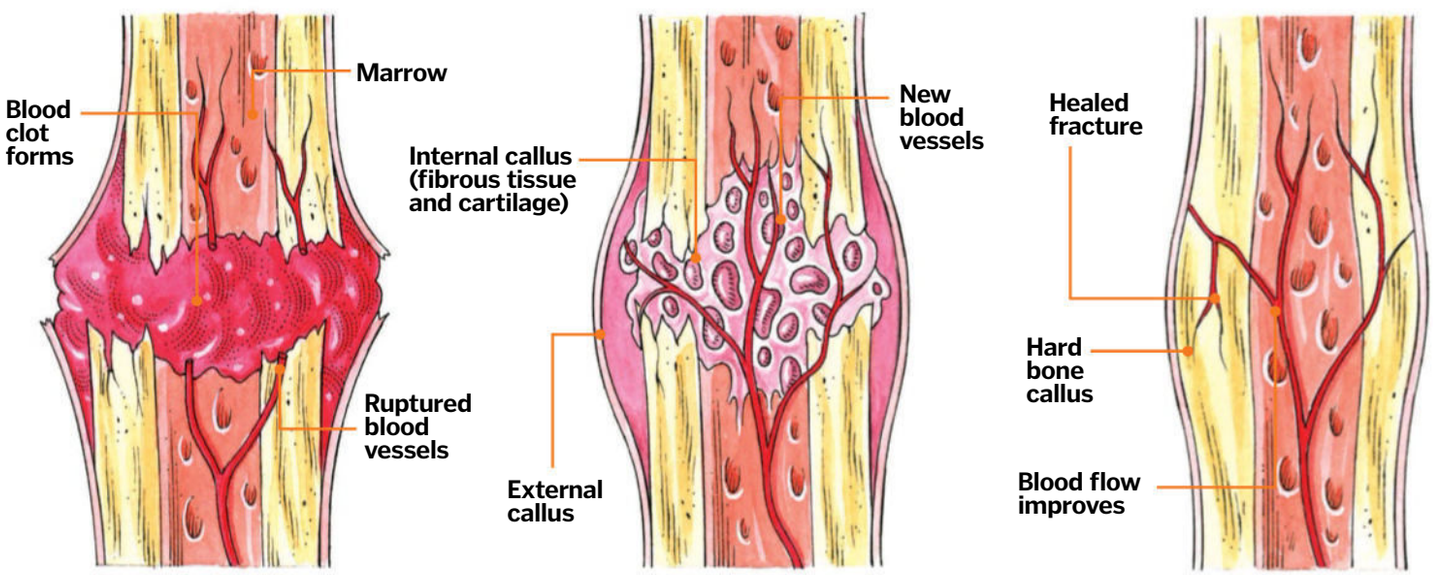
All-star cast

Most breaks on an arm or a leg will have a plaster cast put on them to prevent the bone from setting at a wonky angle or not setting at all.

It will generally be made from plaster of Paris. This is a mixture of water and gypsum that sets really hard once it has dried. The broken bone is bandaged and the wet mixture is applied to the gauze. Once it has dried then it should provide safety and stability for the bone.

Fibreglass is an increasingly common cast material. As with the plaster cast, the broken bone is bandaged up. Next, another bandage, made of fibreglass and layered with resin, is soaked in water. This makes it flexible enough to be wrapped around the bone before it hardens as it dries. This is much lighter than a plaster cast and the outer layer is waterproof.

The stages of bone repair



Blood clot
When a bone breaks, the blood vessels that run through the bone are severed. The blood forms a clot to align the bones. This creates a solid yet weak structure to prepare for mending. The clot also cuts off blood flow to the edges of the broken bone, so these cells die.

Tissue growth
A few days later, the blood clot – called the fracture haematoma – is gradually replaced by tougher tissue, which becomes a soft callus. Fibrous tissue and cartilage are produced that begin to bridge the gap between the fractured ends. New blood vessels begin to form and the callus usually lasts around three weeks.

Remodelling
Bone-forming cells called osteoblasts work in teams to build a new bone, creating a more solid structure called a hard bone callus. It takes several months to fill the cavity with harder bone, strengthened by nutrients like calcium and phosphorus. However, it may take longer for the bone to be completely healed.

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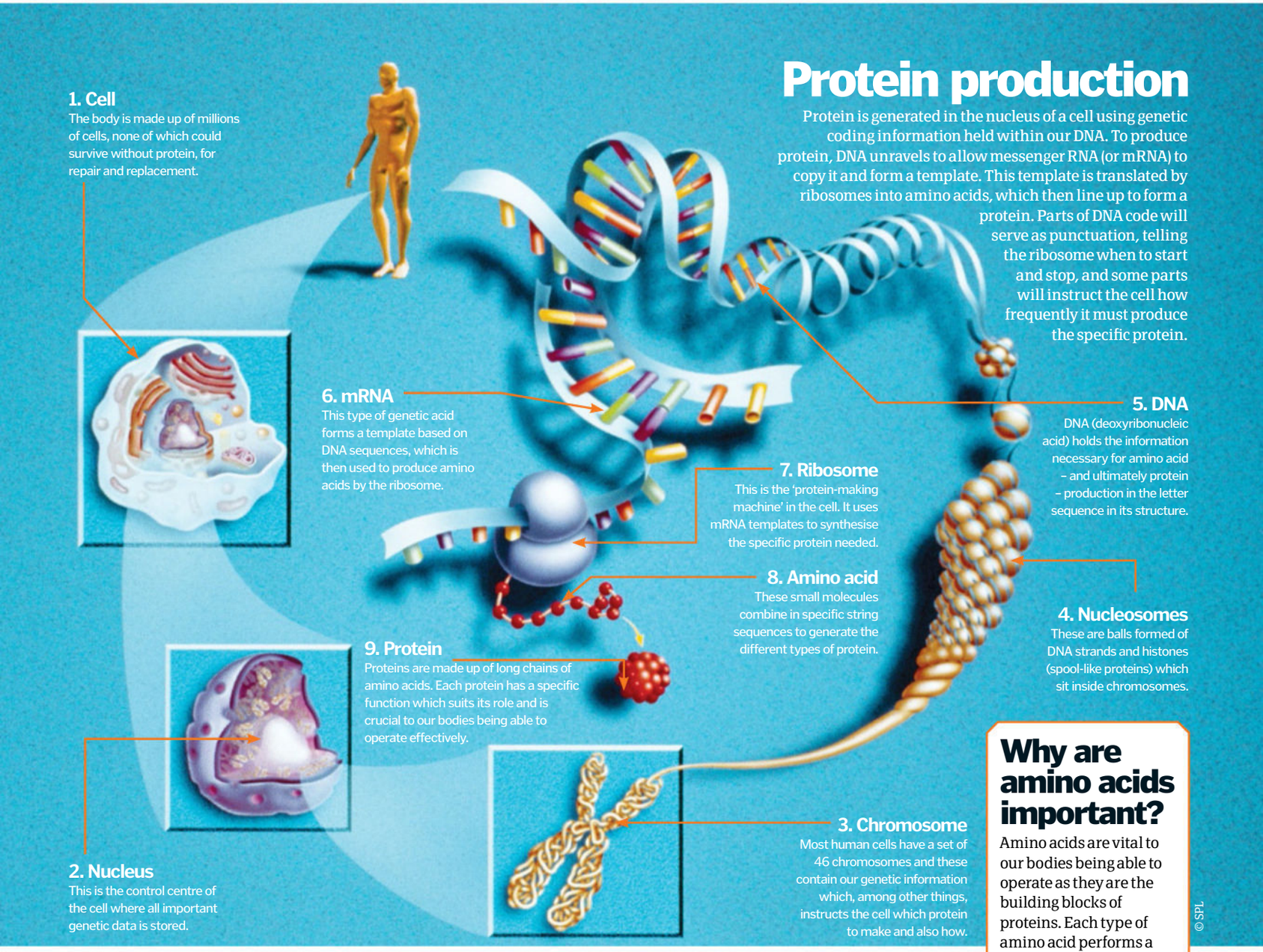

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How do we make protein?

Proteins are the building blocks of the human body, but how do we go about manufacturing them?

Proteins are large complex molecules made up of a chain of amino acids. Every cell in our body needs protein to stay alive as it is necessary for tissue repair and replacing dead cells.

They have many other functions as well as aiding cell repair and production including forming antibodies to help fight off disease, forming enzymes which speed up or trigger chemical reactions and co-ordinating processes within the body (via hormone regulation, for instance). Proteins also provide support for cells and form structural elements of the body, such as nails and teeth, as well as facilitating the transportation of some small molecules around various systems.

We build proteins using information encoded in our genetic code. DNA code utilises groups of three letters (a mix of A, G, C and T) and these short sequences, which are known as triplets or codons, then code mRNA templates; these templates are 'translated' by cell ribosomes into amino acids.

Each protein is made up of hundreds of thousands of amino acids, which are in long chains. There are 20 different types of amino acid that can be combined to build a protein and it is the sequence of amino acids that determines each protein's unique three-dimensional structure and its function.

However, not all amino acids can be made by the body. The ones that need to be consumed via our diet are called essential amino acids. If possible, the body will also conserve energy by using amino acids from food rather than producing them itself. Protein deficiency can cause diseases such as kwashiorkor, a form of malnutrition common in poverty-stricken areas.

Why are amino acids important?

Amino acids are vital to our bodies being able to operate as they are the building blocks of proteins. Each type of amino acid performs a different job, which aids protein activity in the body and determines the protein's primary function(s). Without these, proteins would not be able to help the body with movement, defence against disease, processing food or co-ordinating general growth and development.

There are nine essential amino acids for humans that must be absorbed from external protein sources (eg meat/fish) as they cannot be synthesised by the body. Without the required amount of amino acids, the body can really suffer.

The cell cycle

Inside one of the body's most vital processes

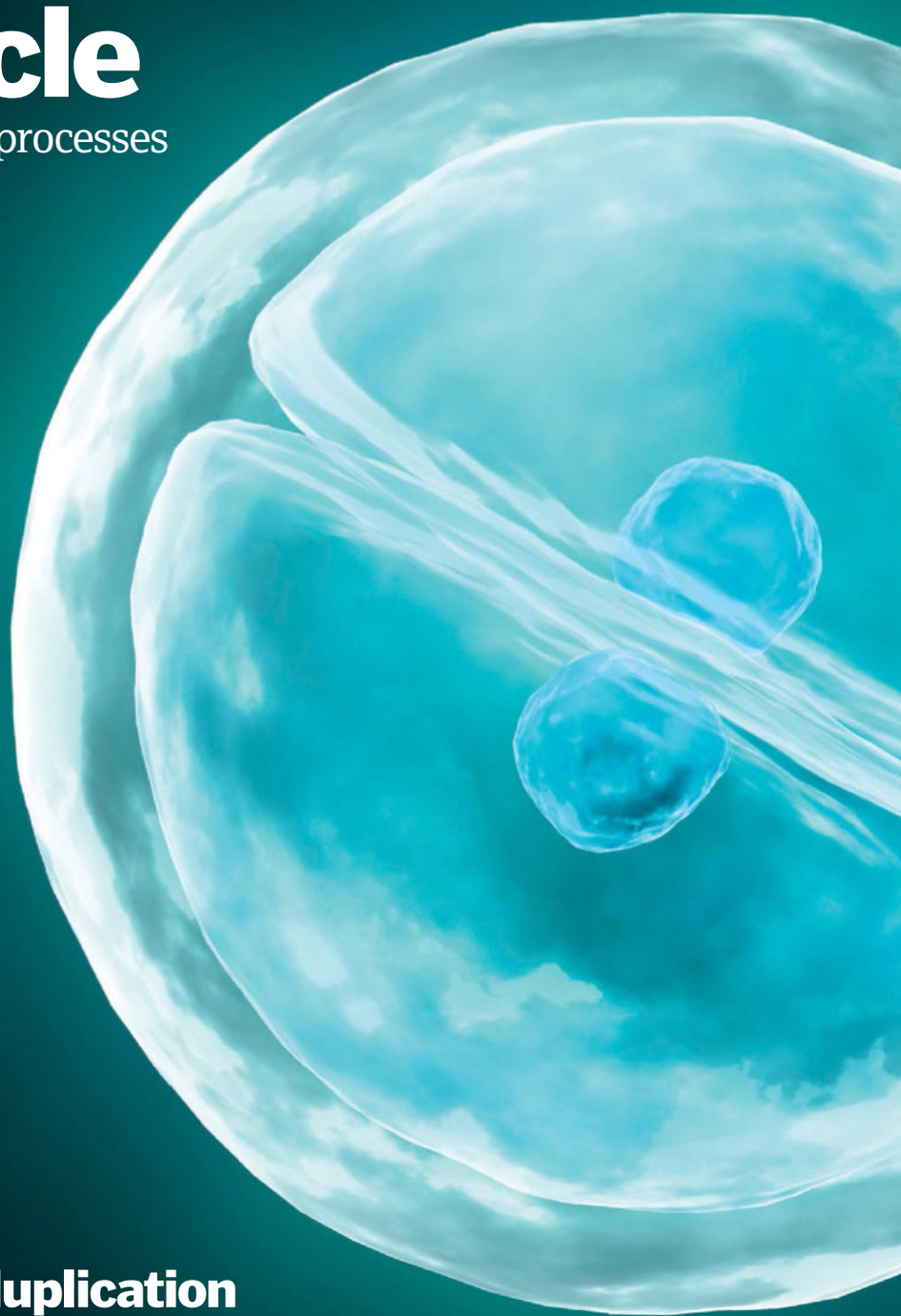
The continuous cycle of cell division and growth is essential to all life on Earth. Without it, no organism on the planet would be able to reproduce or develop. The cell cycle consists of three main stages: interphase, mitosis and cytokinesis.

During interphase, the cell expands and makes the new proteins and organelles it will need for division. It then makes copies of its chromosomes, doubling the amount of DNA in the cell and ensuring the conditions are right to begin the next phase.

In mitosis, the membrane surrounding the nucleus breaks down, exposing the chromosomes, which are pulled to opposite sides of the cell by tiny spindle fibres. A new nuclear envelope then forms around the chromosomes at each end of the cell. During cytokinesis the cytoplasm splits in half to create two 'daughter' cells, each with their own nucleus and organelles.

The cycle is managed by regulating enzymes known as CDKs . These act as a checkpoint between the phases of division, giving the signal for the next stage in the cycle to begin.

The cell cycle of prokaryotic cells (those without a nucleus) is slightly different. Bacteria and other prokaryotes divide via a process called binary fission, in which the cell duplicates its genetic material before doubling in size and splitting in two. Meiosis is another type of cell division and is concerned with sexual reproduction as opposed to the asexual organic growth of tissue in mitosis.

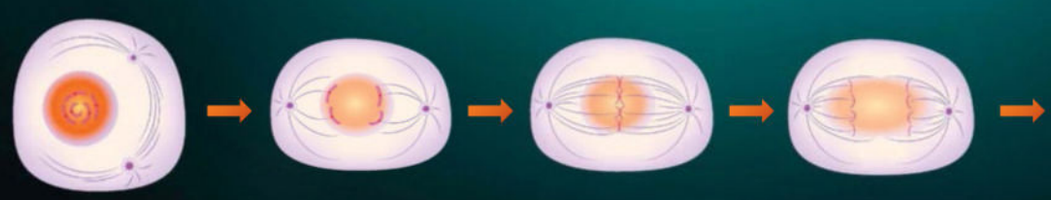


Cancer and the cycle

If the cell cycle goes wrong, cancerous tumours are a possible consequence. It all depends on the levels of proteins in the cycle. A protein called p53 halts the process if DNA is damaged. This provides time for the protein to repair the DNA as the cells are then killed off and the cycle begins anew. On the rare occasions this process fails, cells can reproduce at a rapid rate and tumours can form. Chemo- and radiotherapy work by destroying these mutated cells. A p53 mutation is the most frequent one leading to cancer. An extreme case is Li Fraumeni syndrome, where a genetic defect in p53 leads to a high frequency of cancer in those affected.

Cell duplication

Explore the key stages of mitosis now



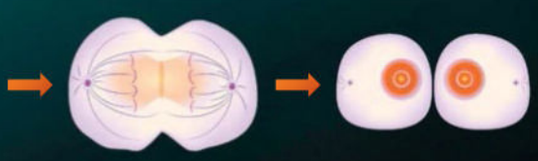
Prophase
Chromosomes condense, becoming thicker and shorter. Sister chromatids form when the chromosomes replicate themselves.

Prometaphase
The nuclear envelope breaks down and spindle fibres extend from either side of the cell to attach to the middle of each chromatid.

Metaphase
In this phase, all the spindle fibres are attached and the chromosomes are arranged in a line along the equator of the cell.

Anaphase
Now, the spindle fibres pull the chromosomes apart, with the chromatids moving to opposite ends or 'poles' of the cell.

Every step of the cell division cycle is vital for life as we know it



Telophase
The two new sets of chromosomes form groups at each pole and a new envelope forms around each as the spindle disappears.

Cytokinesis
The cytoplasm divides and two or more daughter cells are produced. Mitosis and the cell cycle have now reached their end.

An expert's view

Paul Nurse, Nobel Prize winner and director of the Francis Crick Institute, chats about cell cycle

What is the cell cycle?
The cell is the basic unit of life for all living things. One of its many properties is the ability to reproduce. The cell cycle is a series of processes that occur between the birth of the cell and its division into two.

What is mitosis?
Mitosis describes what happens near the end of the cycle. The replicated chromosomes are separated from each other into opposite ends of the cell just before the cell divides.

What are the different parts of the cycle?
The other major part occurs before mitosis and is the process in which the DNA that makes up the chromosomes replicates itself. This is called the S-phase or DNA synthetic phase [which is part of interphase]. The S-phase replicates and mitosis separates and divides.

What is the difference between mitosis and meiosis and does cell division occur in both?
Meiosis is usually considered to be the mitotic full cycle and also leads towards cell reproduction. However, in meiosis there are two M-phases or divisions so the number of DNA and chromosomes are halved. Meiosis uses gametes for fertilisation in diploid cells in animal and plants.

Does it occur in eukaryotic or prokaryotic cells?
Only in eukaryotic cells. In prokaryotic cells there is a cell cycle but it is not mitosis. This [process] is simply the copying of DNA and then a much less obvious separation of the copied DNA into the two divided cells.

Why did you use yeast in your experiments?
Yeast is a very simple eukaryote, which reproduces in much the same way as more complex cells in us. It only has 5,000 genes compared to our 25,000. It simplifies cell division so is extremely convenient to study. It's got fantastic genetics and genomics, which allow you to investigate complicated processes like the cell cycle.

Why do skin cells divide so quickly and nerve cells so slowly?
Cells change at varying rates and some nerve cells barely divide at all. This is one reason why it is difficult to regenerate the nervous system when it becomes damaged. Because the body has to deal with cuts and abrasions, it is much easier to get skin cells to divide.

What is tissue culture and why is it important?
It is simply a way of growing cells from animals and plants in test tubes. They will divide under these circumstances so you can study the cell cycle away from the complexities of an animal or plant.

What are the differences between plant and animal cell cycles?
Fundamentally, not very much. They both undergo the same processes but are subject to different overall controls.

What is proteolysis and how does that mechanism help the cell cycle?
It is a biochemical mechanism that breaks down protein. It takes away certain proteins as part of a regulatory system for a variety of biological process such as the cell cycle. It is used at the end of the cycle to destroy excess protein and prepare for the next cycle.

You discovered CDK (Cyclin-dependent kinase). How do they contribute to the cell cycle?
CDK is a type of enzyme and my research group was involved in discovering that they were the major regulators in the cycle. CDK brings about the S-phase and mitosis and controls them.

How can the cycle help understand potential cures for cancer?
To understand cancer, you have to be able to understand the cell cycle. Crudely blocking the cell cycle is a problem as a therapy as our body is full of other cells that have to divide.

Paul Nurse is also the former director of Cancer Research UK and president of the Royal Society

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Human pregnancy

Nine months of change and growth

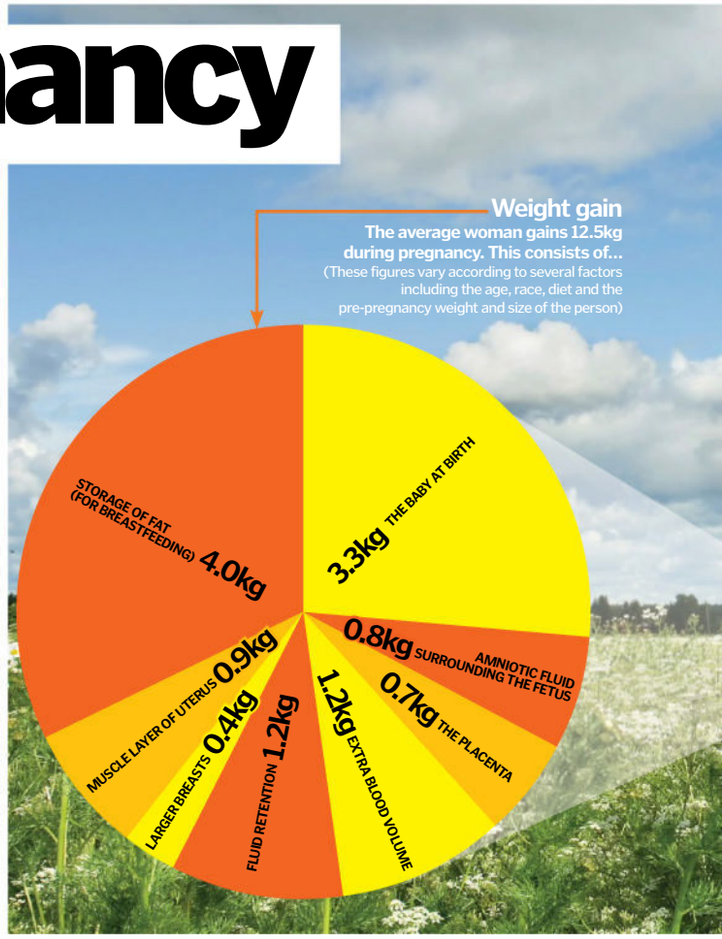
Pregnancy is a unique period in a woman's life that brings about physical and emotional changes. When it occurs, there is an intricate change in the balance of the oestrogen and progesterone hormones, which causes the cessation of menstruation and allows the conditions in the uterus (womb) to become suitable for the growth of the fetus. The lining of the uterus, rather than being discharged, thickens and enables the development of the baby.

At first, it is a collection of embryonic cells no bigger than a pinhead. By week four the embryo forms the brain, spinal cord and heart inside the newly fluid-filled amniotic sac. Protected by this cushion of fluid, it becomes recognisably human and enters the fetal stage by week eight.

Many demands are put on the mother's body and she is likely to experience sickness, tiredness, lower-back pain, heartburn, increased appetite and muscle cramps, as well as the enlargement of her breasts and stretch marks. Her blood sugar levels, heart rate and breathing also increase to cope with the growing demands of the fetus.

As the date of labour approaches, the mother feels sudden contractions known as Braxton-Hicks, and the neck of her uterus begins to soften and thin out. Meanwhile, the lungs of the fetus fill with surfactant. This substance enables the lungs to soften, making them able to inflate when it takes its first breath of air. Finally, chemical signals from the fetus trigger the uterus to go into labour.

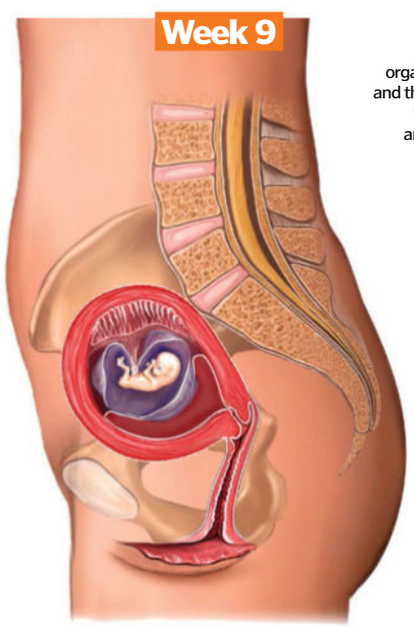
"At first, it is a collection of embryonic cells no bigger than a pinhead"



FIRST TRIMESTER (0–12 weeks)

This begins after the last menstrual period, when an egg is released and fertilised. It takes about nine weeks for the resulting embryo to develop into a fetus. During this period, the mother will be prone to sickness and mood swings due to hormonal changes.

Head
Face begins to look human and the brain is developing rapidly.



Heart
All the internal organs are formed and the heart is able to pump blood around its body.

Movement
Fetus moves around to encourage muscle development.

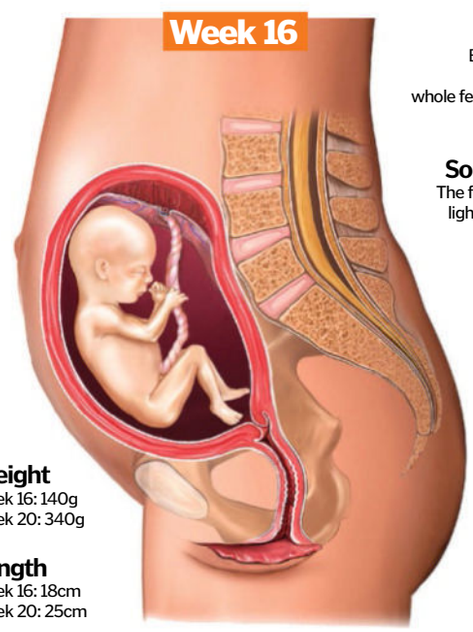
Weight
10g

Length
5.5cm

SECOND TRIMESTER (13–27 weeks)

The fetus grows rapidly and its organs mature. By week 20 its movements can be felt. At week 24 it can suck its thumb and hiccup, and can live independently of the mother with medical support.

Hair and teeth
At 16 weeks, fine hair (lanugo) grows over the fetal body. By 20 weeks, teeth start forming in the jaw and hair grows.



Movement
By week 16 the eyes can move and the whole fetus makes vigorous movements.

Sound and light
The fetus will respond to light and is able to hear sounds such as the mother's voice.

Vernix
By 20 weeks, this white, waxy substance covers the skin, protecting it from the surrounding amniotic fluid.

Weight
Week 16: 140g
Week 20: 340g

Length
Week 16: 18cm
Week 20: 25cm

Sweating
An increase in blood circulation causes mother to sweat more.

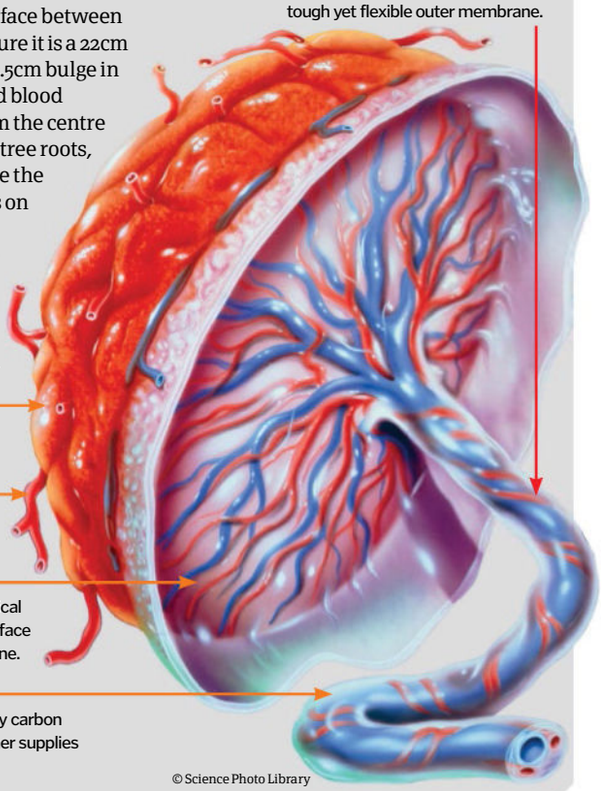
4xtrimester images © Science Photo Library

DID YOU KNOW? 200 extra calories a day are needed in mid-pregnancy, which is 10 per cent more than the usual

The placenta

The placenta is an essential interface between the mother and fetus. When mature it is a 22cm diameter, flat oval shape with a 2.5cm bulge in the centre. The three intertwined blood vessels from the cord radiate from the centre to the edges of the placenta. Like tree roots, these villous structures penetrate the placenta and link to 15 to 20 lobes on the maternal surface.

The five major functions of the placenta deal with respiration, nutrition, excretion of waste products, bacterial protection and the production of hormones.



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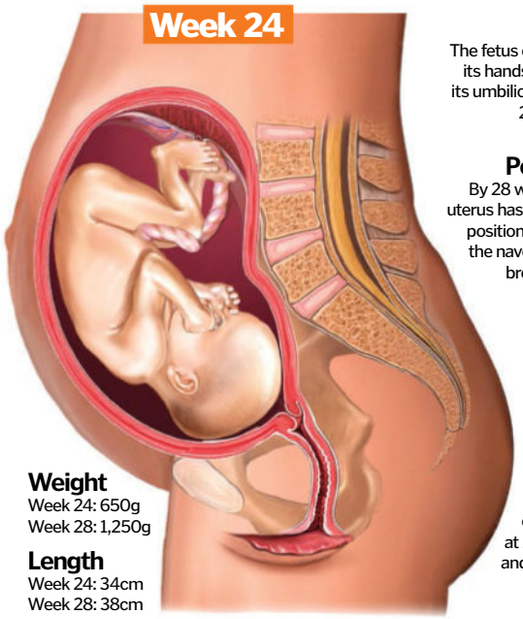
THIRD TRIMESTER (28–40 weeks)

Breathlessness
The increased size of the fetus by 24 weeks causes compression of rib cage and discomfort for mother.

Movement
By the 28th week, due to less room in uterus, the fetus will wriggle if it feels uncomfortable.

Week 24



Hands
The fetus can move its hands to touch its umbilical cord at 24 weeks.

Position
By 28 weeks, the uterus has risen to a position between the navel and the breastbone.

Weight
Week 24: 650g
Week 28: 1,250g

Length
Week 24: 34cm
Week 28: 38cm

Head
The head can move at 28 weeks and the eyes can open and see.

Now almost at full term, the fetus can recognise and respond to sounds and changes in light. Fat begins to be stored under the skin and the lungs are the very last organs to mature.

Week 32

Weight
1,500g

Length
41cm

"The three intertwined blood vessels radiate from the centre to the edges of the placenta"

Under pressure
Pressure on the diaphragm and other organs causes indigestion and heartburn in the mother. She will find it difficult to eat a lot.

Position
Head positions itself downwards, in preparation for labour.

Sleep patterns
Fetus will sleep and wake in 20-minute cycles.

How does an embryo develop?

Discover how a fertilised egg transforms into an embryo and eventually a new human being

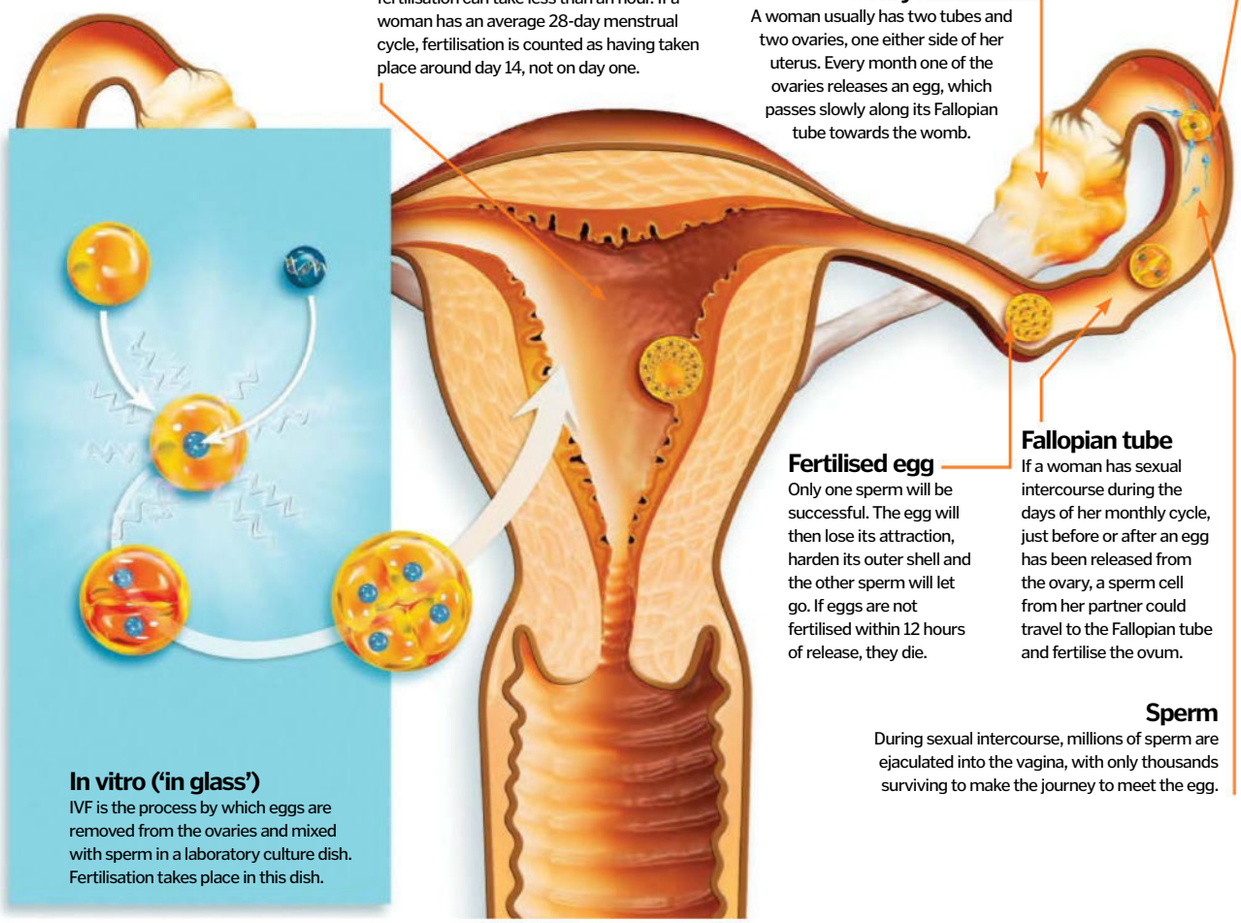
After fertilisation, the single-celled zygote splits into two, then the two cells double to four, four to eight and so on. The journey along the fallopian tube is quite slow, while growth continues. On its way, the zygote divides to make a clump of 32 cells, known as the morula stage. If the early embryo splits into two clumps before this, it may develop into identical twins. Every cell in the morula could still become part of the growing embryo.

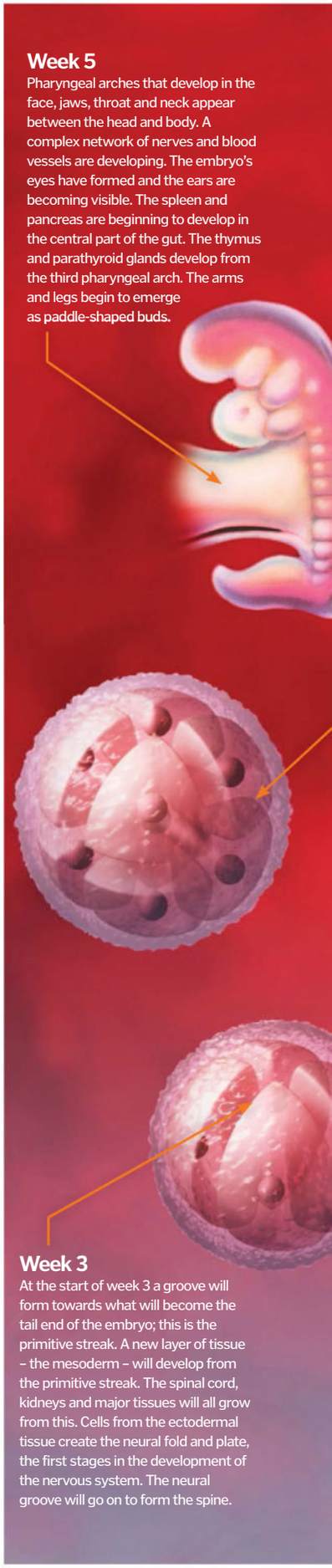
By the time the womb cavity is reached, the cell cluster becomes hollow and filled with fluid. It is now referred to as the blastocyst, which is an embryo that has reached the stage where it has two different cell types. The surface cells, or outer coat, will become, among other things, the placenta that nourishes the baby; the inner cells, known as the inner cell mass, will become the foetus itself. On contact, the blastocyst burrows into the uterine wall for nourishment in a process known as implantation. Blastocyst formation usually occurs on the fifth day after fertilisation.

The embryonic stage begins in the fifth week. From weeks five to eight, development is rapid, as major organs and systems begin to emerge. At this time, the first bone cells will also appear. By the end of the eighth week, the embryo is known as a foetus and increasingly looks like a mini human.

Fertilisation and IVF explained

Natural fertilisation takes place via sexual intercourse. An egg, or ovum, is released by an ovary and is fertilised by a sperm. Fertilisation occurs when the sperm and egg unite in one of the female's Fallopian tubes. The fertilised egg, known as a single-celled zygote, then travels to the uterus, where it implants into the uterine lining. In vitro fertilisation (IVF) is a form of assisted reproductive technology, where the sperm nucleus is combined with an egg cell in a lab. The resultant embryo is manually introduced to the uterus, where it develops in the same way as a natural conception.





Journey of an embryo

The first eight weeks is an immense time of change for a just-conceived human

Week 7

The embryo's eyelids begin to form from a single membrane that remains fused for several days. At this stage in development, the limb muscles are beginning to form. The chest cavity will be separated from the abdominal cavity by a band of muscles; this will later develop into the diaphragm.

Week 8

Between the fourth and eighth weeks, the brain has grown so rapidly that the head is extremely large in proportion to the rest of the body. The gonads, or sex glands, will now start to develop into ovaries or testes. The elbows, fingers, knees and toes are really taking shape. Inside the chest cavity, the lungs are developing too. At the end of the eight-week period, the embryo becomes a foetus.

Week 6

42 tissue blocks have formed along the embryo's back and the development of the backbone, ribs and muscles of the torso begins. The length of the embryo is now 7-8mm (0.3in) . The embryo's heart has established a regular rhythm and the stomach is in place. Ears, nose, fingers and toes are just beginning to appear.

Week 4

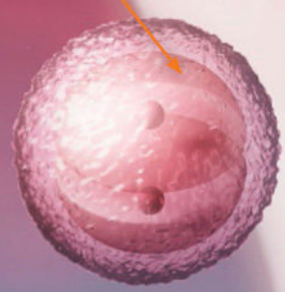
The kidneys are forming from mesodermal tissue and the mouth is emerging. A basic spinal cord and gut now run from the head to the tail. The head and tail fold downward into a curve as a result of the embryo developing more rapidly from the front. The heart tube bends into a U shape and blood begins to circulate around the body.

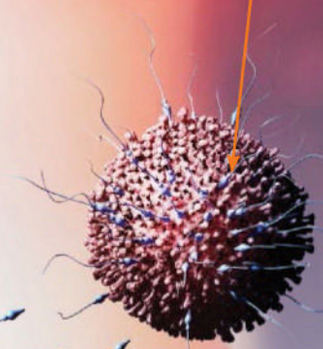
Week 2

The inner cells of the embryo divide into two layers: the ectoderm and the endoderm. The tissues and organs of the body will eventually develop from these. The amniotic sac, which will soon form a protective bubble around the embryo, also starts to develop. The embryo, now completely embedded in the womb, is a disc-shaped mass of cells, measuring roughly 0.2mm (0.008in) in diameter.

Week 1

Within one week of conception, the fertilised egg, known as a blastocyst, will make its way to the uterus. Within days the cells will arrange themselves into two masses: the outer coat will become the placenta, while the inner cell mass becomes the foetus. All being well, the developing embryo will settle into the folds of the womb lining.





What is amniotic fluid?

The amniotic sac is a bag of fluid in the uterus, where the unborn baby develops. It's filled with a colourless fluid – mainly made of water – that helps to cushion the foetus and provides fluids which enable the baby to breathe and swallow. The fluid also guards against infection to either the foetus or the uterus. Amniotic fluid plays a vital role in the development of internal organs, such as the lungs and kidneys; it also maintains a constant temperature. The amniotic sac starts to form and fill with fluid within days of conception.

The body of this foetus is really taking shape, safe within the amniotic sac

3x © SPL

The five basic human tastes

Building an in-depth map of the tongue

There is general agreement that humans have five basic tastes, although the fifth taste 'primary' has only been recently officially recognised. Sweetness, bitterness, sourness and saltiness were joined by savouriness in 2002. Other sensation are not classified as tastes.

Sweetness is associated primarily with simple carbohydrates – of which sugar is one of the most common. The way sweetness is detected is complex and only recently has the current model of multiple binding sites between the receptors and sweet substance itself been proposed and accepted. A sweet taste infers that the substance is high in energy and studies have shown that newborns in particular, who need a high calorie intake to grow, demonstrate a preference for sugar concentrations sweeter than lactose, which is found in breast milk.

Bitterness can be detected in very low levels and is generally perceived to be an unpleasant or sharp taste. Many toxic substances in nature are known to be bitter and there is an argument proposed by evolutionary scientists that bitterness sensitivity is an evolutionary defence mechanism. Humans, however, have now developed various techniques to make previous inedible bitter substances edible through reducing their toxicity, often through cooking.

The taste of saltiness is produced by the presence of sodium ions, or other closely related alkali metal ions. Potassium and lithium produce a similar taste as they are most closely related to sodium.

Sourness detects acidity. The way we measure the degree of sourness is through rating sour substances against dilute hydrochloric. The mechanism involved in detecting sourness is similar to saltiness in that taste is caused by a concentration of ions – in this case hydrogen ions. Savouriness is the newest of the recognised basic tastes and the taste is produced by fermented or aged foods. Glutamate is a common compound that can cause this taste and consequently savouriness is considered fundamental to Eastern cuisine.

How do taste buds work?

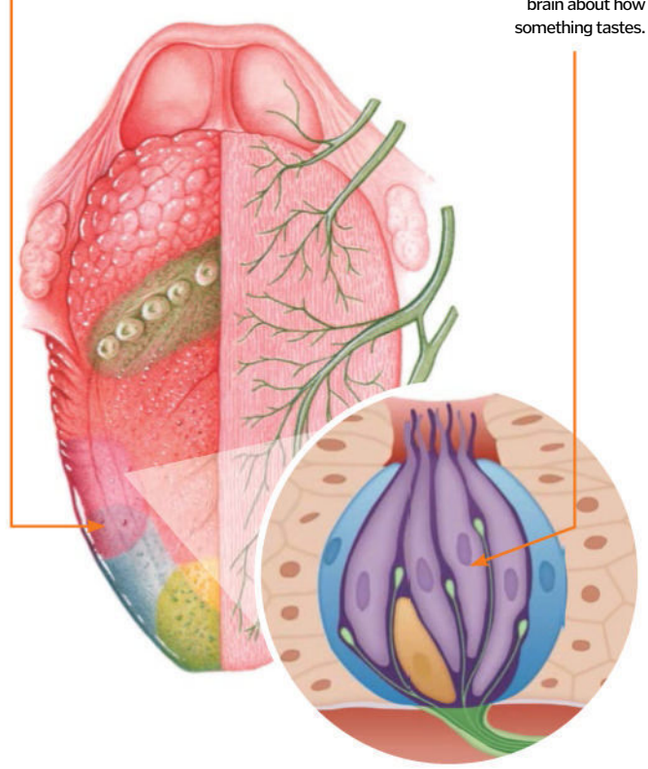
Discover how we distinguish between flavours

Taste buds are sensory organs that are found in the little bumps (or papillae) on the tongue. The tongue contains about 8,000 taste buds and they're replaced approximately every two weeks. Sensitive microscopic hairs on the taste buds (microvilli) pick up dissolved chemicals from food and send electrical signals to the brain that distinguishes between five different tastes: sweet, bitter, savoury (umami), salty and sour. Varying sensitivity to these tastes occurs across the whole of the tongue. But taste buds alone cannot tell us the exact flavour of food. Other factors such as smell, spiciness, temperature and texture also contribute to the eventual taste. So if you hold your nose while you eat then your brain won't get the full taste story!

"Factors such as smell, spiciness and texture also contribute to taste"

Taste qualities are found in all areas of the tongue, although some regions are more sensitive than others.

Your taste buds have very tiny, sensitive hairs called microvilli which send messages to your brain about how something tastes.



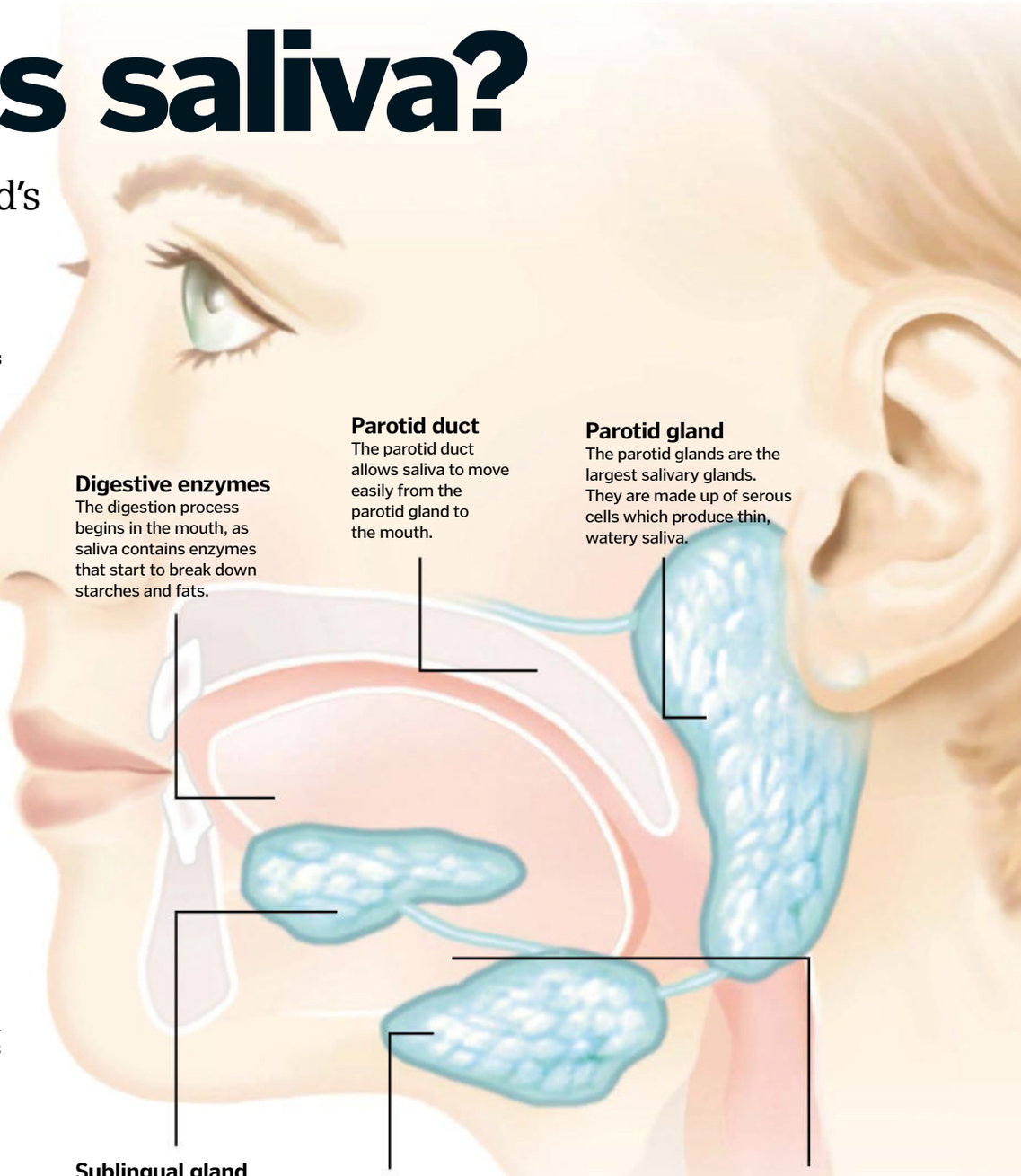
What is saliva?

Find out this frothy liquid's vital role in maintaining human health

Humans can produce an incredible two litres (half a gallon) of saliva each day. It is made up of 99.5 per cent water, so how is it able to perform so many important functions in our mouths? The answer lies in the remaining 0.5 per cent, which contains a host of enzymes, proteins, minerals and bacterial compounds. These ingredients help to digest food and maintain oral hygiene.

As soon as food enters the mouth, saliva's enzymes start to break it down into its simpler components, while also providing lubrication to enable even the driest snack to slide easily down the throat. Saliva is also important in oral health, as it helps to protect teeth from decay and also controls bacterial levels in the mouth to reduce the risk of infection. Without sufficient saliva, tongue and lip movements are not as smooth, which, in extreme cases, can make it very difficult to speak.

With advanced scientific techniques and research, an individual's saliva can reveal a great deal of information. New studies have shown that a saliva test can be used to find out whether a person is at risk of a heart attack, as it contains C-reactive protein (CRP). This can be an indicator of heart disease when found at elevated levels in the blood. A saliva test is much less intrusive than a blood test and gives doctors a rough estimate of the health of a patient's heart. What's more, saliva contains your entire genetic blueprint. Even tiny amounts, equivalent to less than half a teardrop, can provide a workable DNA sample that can be frozen and thawed multiple times without breaking down.



Saliva performs a variety of functions and can actually help wounds to heal

Can saliva speed up healing?

Many animals do it instinctively, but it turns out that there is a benefit to humans licking their wounds. A study found that there is a compound in human saliva, namely histatin, which can speed up the healing process. Scientists conducted an experiment using epithelial cells from a volunteer's inner cheek, creating a wound in the cells so that the healing process could be monitored. They created two dishes of cells, one that was treated with saliva and one that was left open. The scientists were astounded when after 16 hours the saliva-treated wound was almost completely closed, yet the untreated wound was still open. This demonstrated that saliva does aid the healing of at least oral wounds, something that has been suspected but unproven until this study.

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Neurotransmitters and your feelings

Are our moods and emotions really just brain chemistry?

Messages are passed from one nerve cell to the next by chemical messengers called neurotransmitters. Each has a slightly different effect and by looking at what happens when neurotransmitter levels change, we are discovering that different combinations play a role in a range of complex emotions.

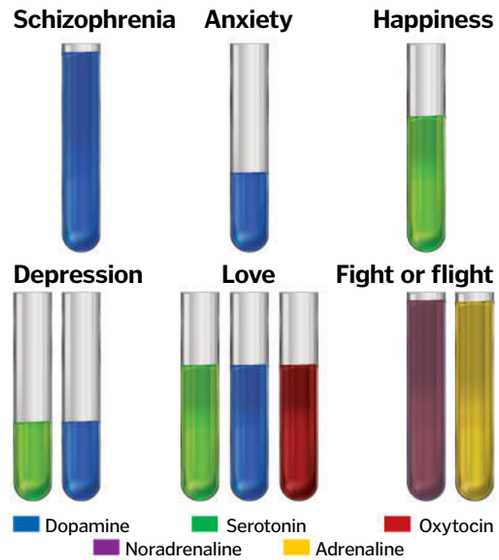
Acetylcholine excites the nerve cells that it touches, triggering more electrical activity. It plays a role in wakefulness, attention, learning and memory, and abnormally low levels are found in the brains of people with dementia caused by Alzheimer's disease.

Dopamine is a chemical that also excites nerve cells. It plays a vital role in the control of movement and posture, and low levels of dopamine underlie the muscle rigidity that exists in Parkinson's disease. Dopamine is also used in the brain's reward circuitry and is one of the chemicals responsible for the good feelings that are normally associated with more addictive behaviour types.

Noradrenaline is similar in structure to the hormone adrenaline and is involved in the 'fight or flight' response. In the brain, it keeps us alert and focussed. In contrast, GABA reduces the activity of the nerves that it interacts with and is thought to reduce feelings of fear or anxiety.

Serotonin is sometimes known as the 'happy hormone' and transmits signals involved in body temperature, sleep, mood and pain. People with depression have been found to have lower serotonin levels than normal, though raising serotonin levels with antidepressant medications does not always help.

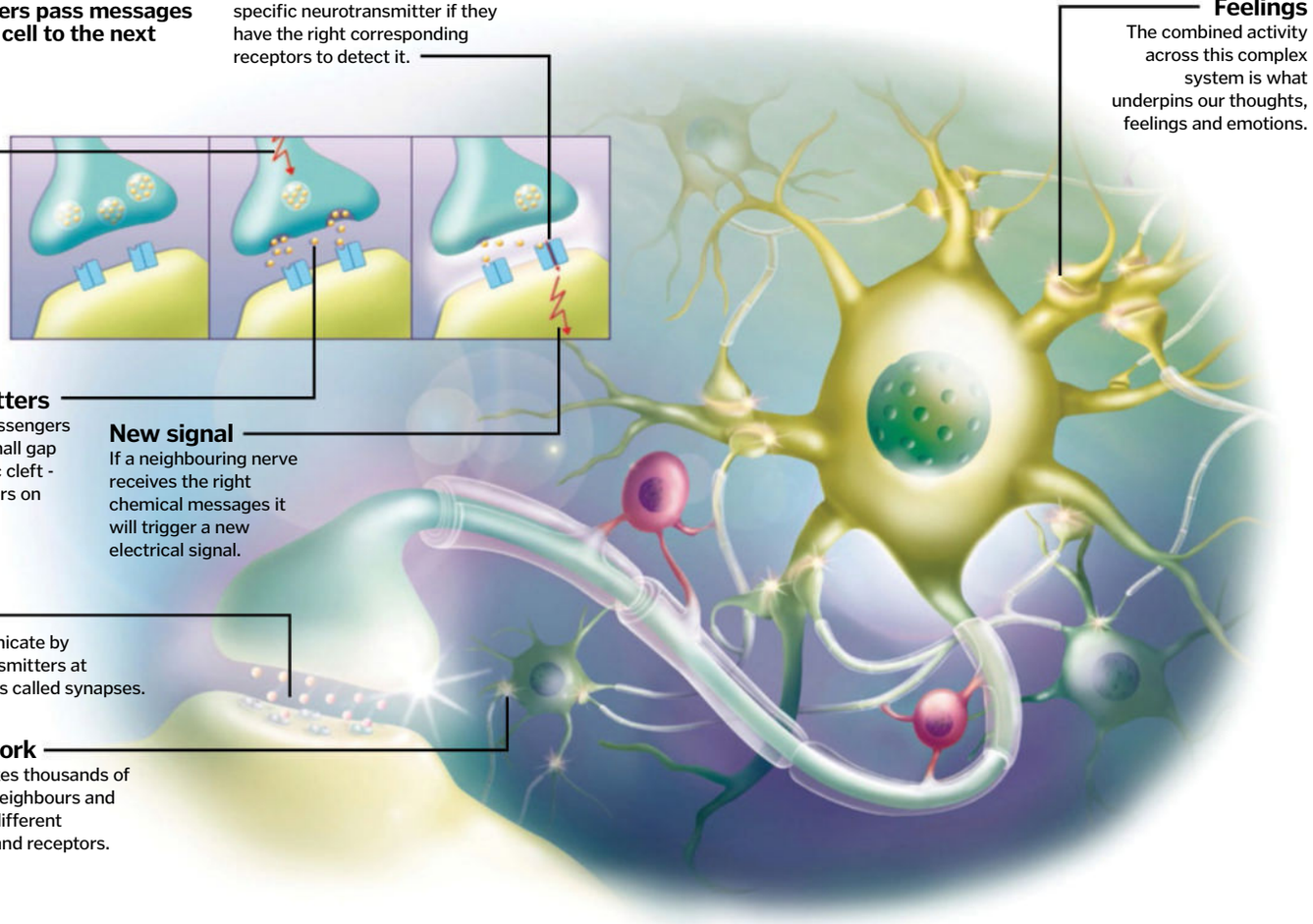
There are many more neurotransmitters in the brain and other chemicals like hormones can also influence the behaviour of nerve cells. It is these interactions that are thought to underlie the huge range of human emotions.



Different levels of neurotransmitters have been associated with different mental states

The synapse

Neurotransmitters pass messages from one nerve cell to the next



Receptor
Nerve cells can only respond to a specific neurotransmitter if they have the right corresponding receptors to detect it.

Feelings
The combined activity across this complex system is what underpins our thoughts, feelings and emotions.

Incoming signal
Neurotransmitter release is only triggered when there is enough electrical activity in the nerve cell.

Neurotransmitters
These chemical messengers travel across the small gap - called the synaptic cleft - and stick to receptors on nearby nerve cells.

New signal
If a neighbouring nerve receives the right chemical messages it will trigger a new electrical signal.

Synapse
Nerve cells communicate by releasing neurotransmitters at specialised junctions called synapses.

Part of a network
Each nerve cell makes thousands of connections to its neighbours and has its own mix of different neurotransmitters and receptors.

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Short-term memory

Find out how the brain decides what to remember and what to forget

As you read this, you store the words at the beginning of each sentence in your short-term memory while you work your way through to the end, enabling you to understand the text. At the same time, you are probably ignoring the feeling of the glossy pages against your skin as you hold the magazine.

Short-term memory acts somewhat like a gatekeeper between incoming sensory information and long-term storage. You are constantly bombarded by information, and the incoming traces from your sensory receptors last for just fractions of a second before they are lost. You don't have time to process all of it, so short-term memory allows you to pass small amounts of important information in a temporary loop while your brain decides what to do with it.

Short-term memory has two major limitations. The first is that you can only store a small amount of information, and the second is that the memory decays over time. If you pay attention, your short-term memory can hold around four chunks of new information for between ten and 20 seconds, but if you are distracted, you will rapidly forget it all.

Rehearsing the information inside your head effectively resets the timer and restarts the memory loop, allowing you to extend this time. A part of the brain called the hippocampus then decides which bits are important enough commit to longer-term storage, and which to forget.

Extending your short-term memory

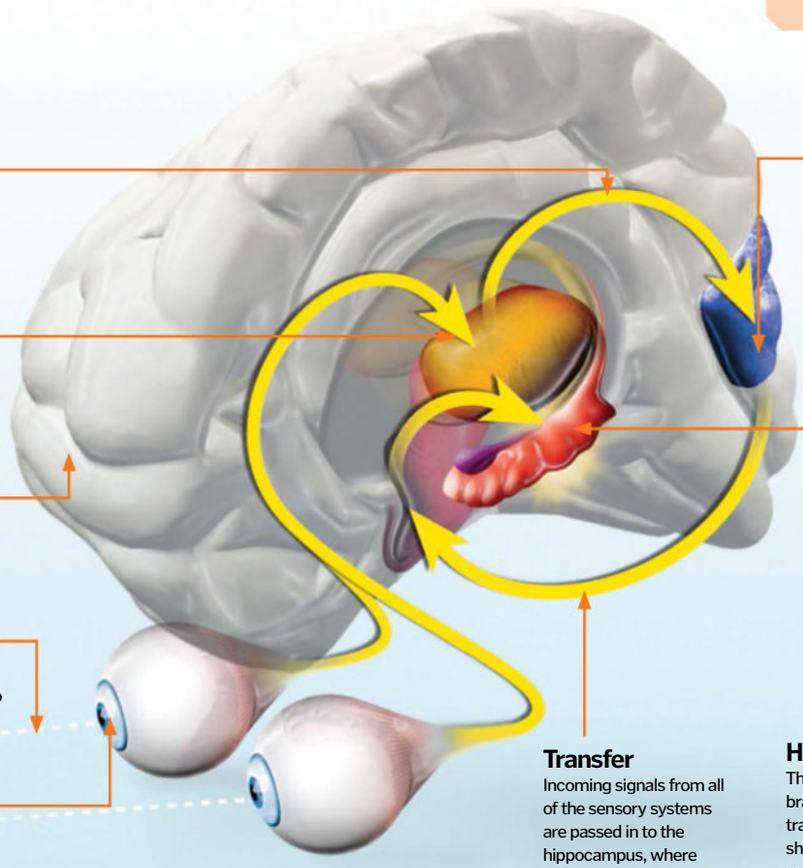
You can hold four items of information in your memory for around ten seconds without trying, but memorising a sheet of 20 words can prove challenging. Your short-term memory has its limitations, but you can improve it with a few simple tricks.

Instead of overloading your memory by trying to memorise them one-by-one, divide the images into linked chunks, for example, office objects or things that fly. Categorising the words like this helps by tapping into your long-term memory, which mainly stores linked concepts and is triggered by cues and associations.

Short-term memory tends to be encoded verbally, and you might find yourself repeating the names of the items in the pictures inside your head in order to help with recall, but you can improve still further if you take advantage of visual encoding. By creating a scene inside your head and visiting each item in turn, you start to remember the words more easily.

Making memories

Find out how incoming visual information becomes memory



Processing
The incoming signals from the eyes are passed to the occipital lobes for processing.

Thalamus
The thalamus is involved in attention and the early stages of short-term memory formation.

Prefrontal cortex
This part of the brain has a crucial role in coordinating short-term memory and in rehearsing information.

Attention
In order to transfer information from sensory memory to short-term memory you need to be paying active attention.

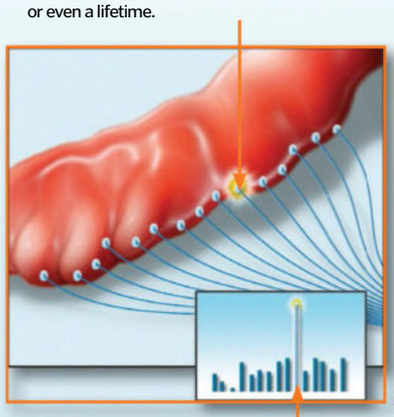
Input
Incoming information is stored for less than a second in your sensory memory.

Transfer
Incoming signals from all of the sensory systems are passed in to the hippocampus, where they are combined as a single 'experience'.

Hippocampus
This region of the brain is involved in transferring short-term memories into long-term storage.

Occipital lobe
The occipital lobes process incoming visual information.

Storage
Short-term memories are rapidly turned into long-term memories that can last days, weeks or even a lifetime.



Long-term memories
Memories are stored throughout the cortex as groups of nerve cells that fire together in coordinated patterns.

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How do white blood cells work?

One of the body's main defences against infection and foreign pathogens, how do these cells protect our bodies?

White blood cells, or leukocytes, are the body's primary form of defence against disease. When the body is invaded by a pathogen of any kind, the white blood cells attack in a variety of ways; some produce antibodies, while others surround and ultimately devour the pathogens whole.

In total, there are five types of white blood cell (WBC), and each cell works in a different way to fight a variety of threats. These five cells sit in two groupings: the granulocytes and the agranulocytes. The groups are determined based on whether a cell hxas 'granules' in the cytoplasm. These granules are digestive enzymes that help break down pathogens. Neutrophils, eosinophils and basophils are all granulocytes, the enzymes in which also give them a distinct colouration which the agranulocytes do not have.

As the most common WBC, neutrophils make up between 55 and 70 per cent of the white blood cells in a normal healthy individual, with the other four types (eosinophils, basophils, monocytes and lymphocytes) making up the rest. Neutrophils are the primary responders to infection, actively moving to the site of infection following a call from mast cells after a pathogen is initially discovered. They consume bacteria and fungus that has broken through the body's barriers in a process called phagocytosis.

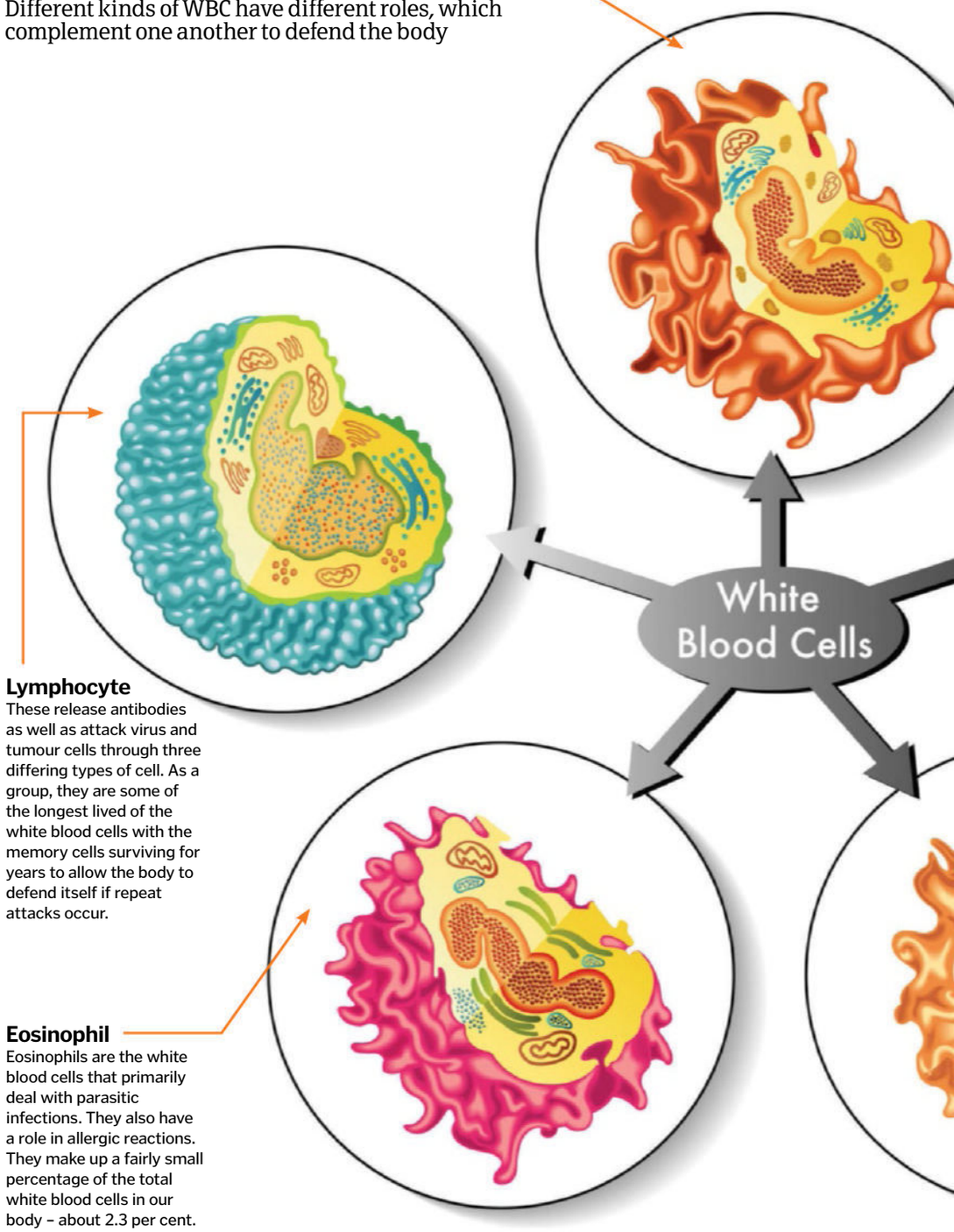
Lymphocytes – the second-most common kind of leukocyte – possess three types of defence cells: B cells, T cells and natural killer cells. B cells release antibodies and activate T cells, while T cells attack diseases such as viruses and tumours when directed, and regulatory T cells ensure the immune system returns to normal after an attack. Natural killer cells, meanwhile, aid T cell response by also attacking virus-infected and tumour cells, which lack a marker known as MHC.

The remaining types of leukocyte release chemicals such as histamine, preparing the body for future infection, as well as attacking other causes of illness like parasites.

"Natural killer cells aid T cell response by also attacking virus-infected and tumour cells"

Types of leukocyte

Different kinds of WBC have different roles, which complement one another to defend the body



Monocyte
Monocytes help prepare us for another infection by presenting pathogens to the body, so that antibodies can be created. Later in their life, monocytes move from the bloodstream into tissue, and then evolve into macrophages which can conduct phagocytosis.

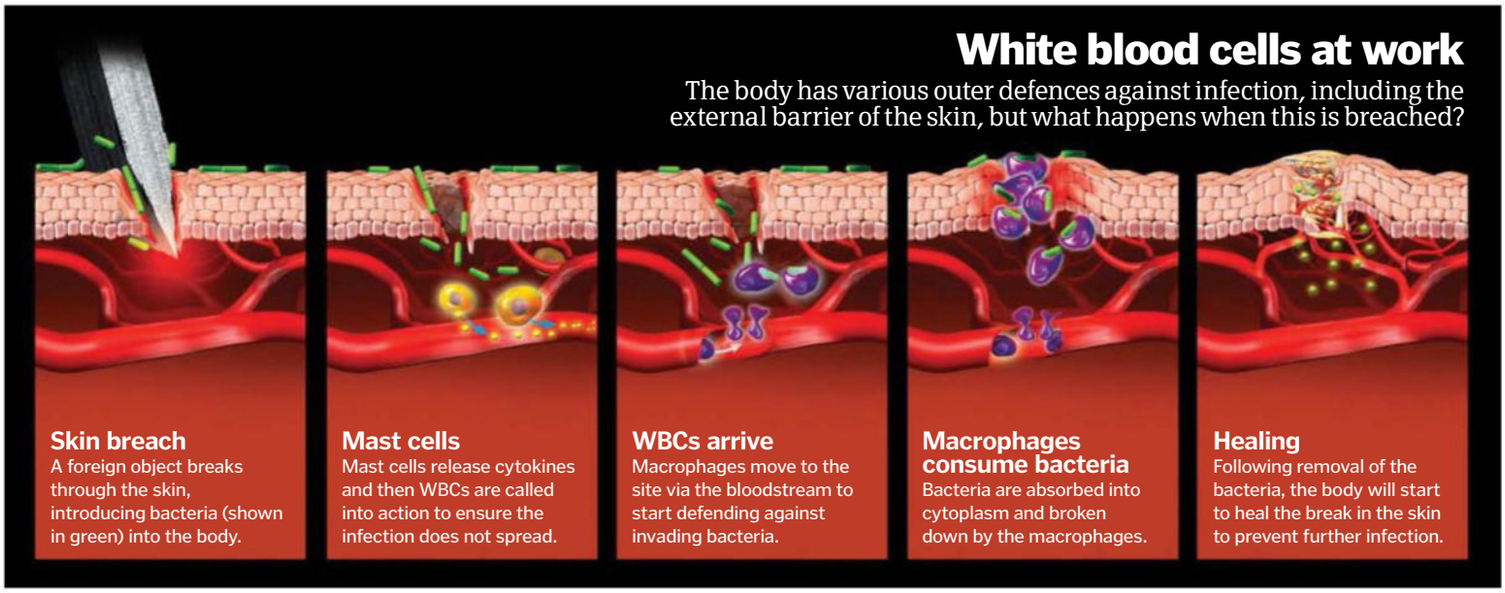
Lymphocyte
These release antibodies as well as attack virus and tumour cells through three differing types of cell. As a group, they are some of the longest lived of the white blood cells with the memory cells surviving for years to allow the body to defend itself if repeat attacks occur.

Eosinophil
Eosinophils are the white blood cells that primarily deal with parasitic infections. They also have a role in allergic reactions. They make up a fairly small percentage of the total white blood cells in our body – about 2.3 per cent.

DID YOU KNOW? *WBCs have colour but appear white when blood is put through a centrifuge, hence their group name*

White blood cells at work

The body has various outer defences against infection, including the external barrier of the skin, but what happens when this is breached?



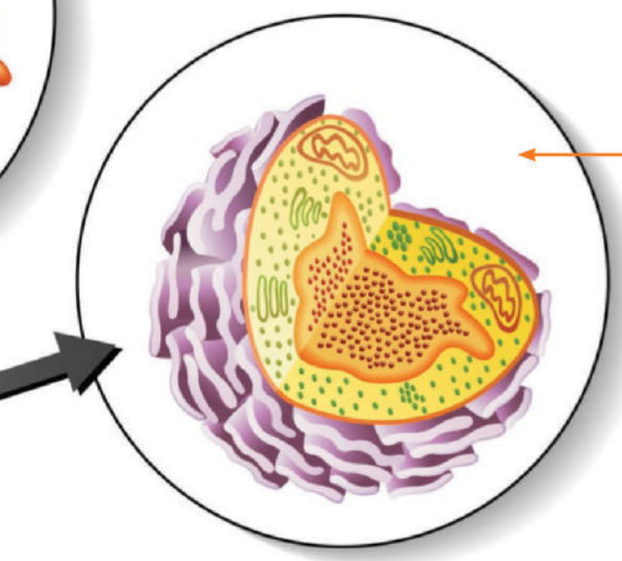
Skin breach
A foreign object breaks through the skin, introducing bacteria (shown in green) into the body.

Mast cells
Mast cells release cytokines and then WBCs are called into action to ensure the infection does not spread.

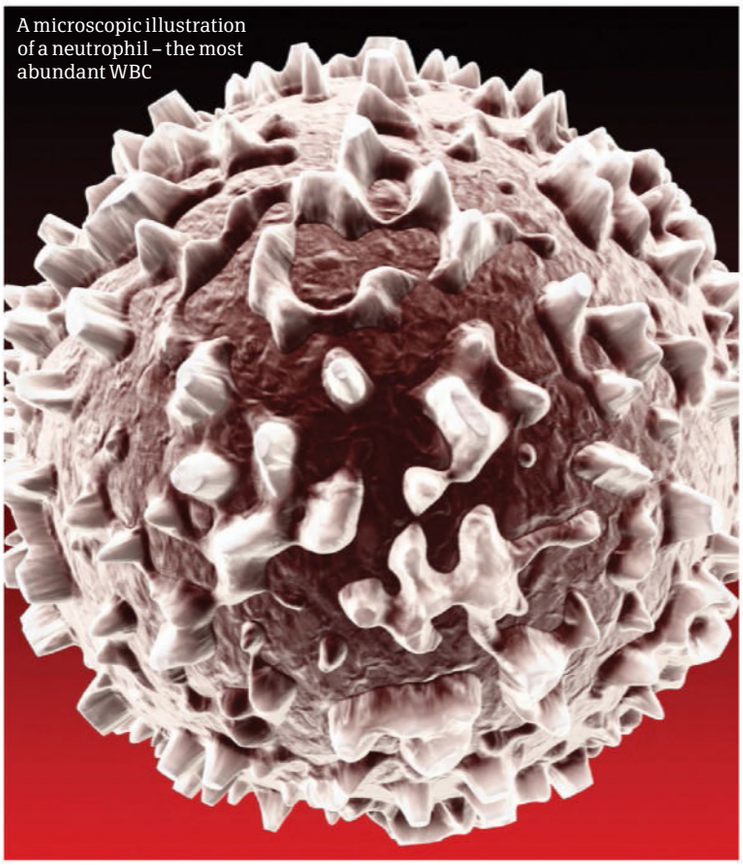
WBCs arrive
Macrophages move to the site via the bloodstream to start defending against invading bacteria.

Macrophages consume bacteria
Bacteria are absorbed into cytoplasm and broken down by the macrophages.

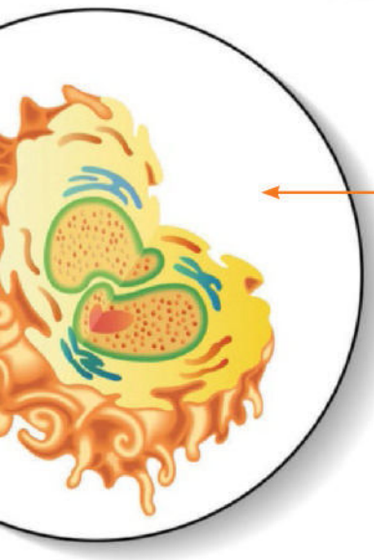
Healing
Following removal of the bacteria, the body will start to heal the break in the skin to prevent further infection.



Basophil
Basophils are involved in allergic response via releasing histamine and heparin into the bloodstream. Their functions are not fully known and they only account for 0.4 per cent of the body's white blood cells. Their granules appear blue when viewed under a microscope.



A microscopic illustration of a neutrophil – the most abundant WBC



Neutrophil
Neutrophils are the most common of the leukocytes. They have a short life span so need to be constantly produced by the bone marrow. Their granules appear pink and the cell has multi-lobed nuclei which make them easily differentiated from other types of white blood cell.

A faulty immune system

If the immune system stops working properly, we are at risk of becoming ill. However, another problem is if the immune system actually goes into overdrive and starts attacking the individual's cells, mistaking them for pathogens. There are a large number of autoimmune ailments seen across the world, such as Crohn's disease, psoriasis, lupus and some cases of arthritis, as well as a large number of diseases that are suspected to have autoimmune roots.

We can often treat these conditions with immunosuppressants, which deactivate elements of the immune system to stop the body attacking itself. However, there are drawbacks with this treatment as, if the person exposes themselves to another pathogen, they would not have the normal white blood cell response. Consequently, the individual is less likely to be able to fight normally low-risk infections and, depending on the pathogen, they can even be fatal.

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GENETICS

From inheritance to genetic diseases, what secrets are hidden in our genes and how do they determine who we are?

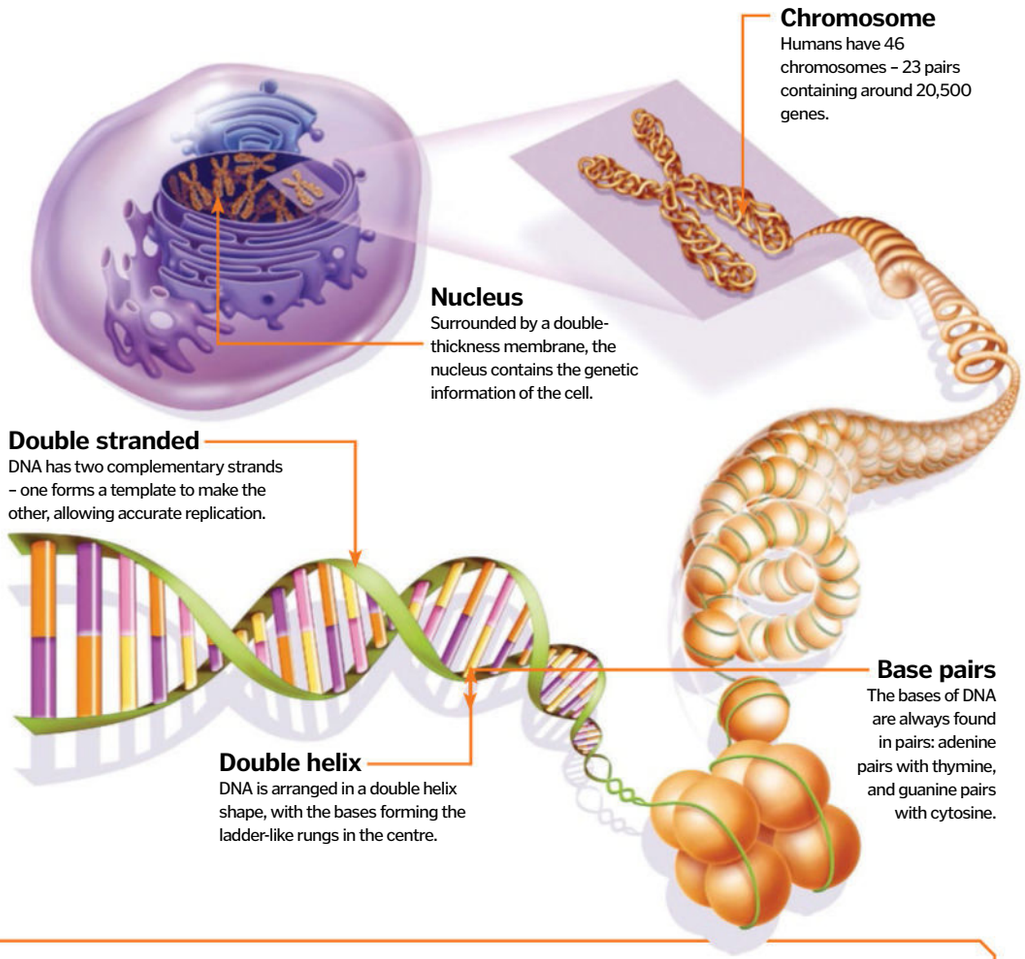
Genes define who we are. They are the basic unit of heredity, each containing a coded set of instructions to make a protein. Humans have an estimated 20,500 genes, varying in length from a few hundred to more than 2 million base pairs. They affect all aspects of our physiology, providing the code that determines our physical appearance, the biochemical reactions that occur inside our cells and even, many argue, our personalities.

Every individual has two copies of every gene – one inherited from each parent. Within the population there are several alleles of each gene – that is, different forms of the same code, with a number of minor alterations in the sequence. These alleles perform the same underlying function, but it is the subtle differences that make each of us unique.

Inside each of our cells (except red blood cells) is a nucleus, the core which contains our genetic information: deoxyribonucleic acid (DNA). DNA is a four-letter code made up of bases: adenine (A), guanine (G), cytosine (C) and thymine (T). As molecular biologist Francis Crick once put it, "DNA makes RNA, RNA makes protein and proteins make us." Our genes are stored in groups of several thousand on 23 pairs of chromosomes in the nucleus, so when a cell needs to use one particular gene, it makes a temporary copy of the sequence in the form of ribonucleic acid (RNA). This copy contains all of the information required to

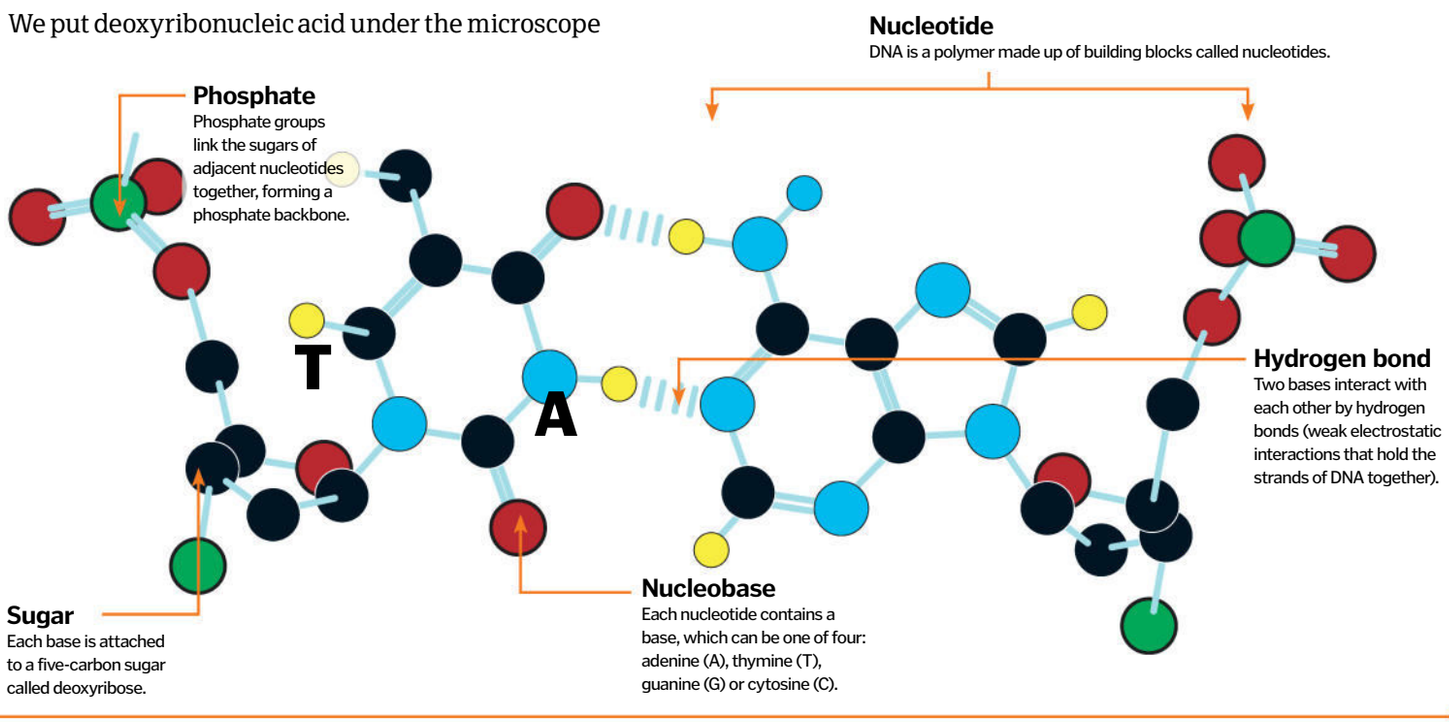
How is our genetic code stored?

Genetic information is coded into DNA using just four nucleobases: A, C, G and T



DNA's chemical structure

We put deoxyribonucleic acid under the microscope



make a protein – the building blocks of the human body.

The Human Genome Project aimed to map the entire human genome; this map is effectively a blueprint for making a human. Using the information hidden within our genetic code, scientists have been able to identify genes that contribute to various diseases. By logging common genetic variation in the human population, researchers have been able to identify over 1,800 disease-associated genes, affecting illnesses ranging from breast cancer to Alzheimer's. The underlying genetic influences that affect complex diseases like heart disease are not yet fully understood, but having the genome available to study is making the task of identifying genetic risk factors much easier.

Interestingly, the Human Genome Project discovered we have far fewer genes than first predicted; in fact, only two per cent of our genome codes for proteins. The remainder of the DNA is known as 'non-coding' and serves other functions. In many human genes are non-coding regions called introns, and between genes there is intergenic DNA. One proposed function is that these sequences act as a buffer to protect the important genetic information from mutation. Other non-coding DNA acts as switches, helping the cell to turn genes on and off at the right times.

Genetic mutations are the source of variation in all organisms. Most genetic mutation occurs as the DNA is being copied, when cells prepare to divide. The molecular machinery responsible for duplicating DNA is prone to errors, and often makes mistakes, resulting in changes to the DNA sequence. These can be as simple as accidentally substituting one base for another (eg A for G), or can be much larger errors, like adding or deleting bases. Cells have repair machinery to correct errors as they occur, and even to kill the cell if it makes a big mistake, but despite this some errors still slip through.

Throughout your life you will acquire many cell mutations. Many of these are harmless, either occurring in non-coding regions of DNA,

The Human Genome Project

The Human Genome Project, an initiative to map the sequence of the entire human genetic code, began in 1990 and was completed in 2003. The 3.3-billion base pair sequence was broken into sections of around 150,000 base pairs in length and the sequence for each identified. These were then joined and used to map the information on to chromosomes to determine which genes were found on each – and in what order. The genome map (right) shows a human chromosome compared with other animals; the colours are a 'heat map' demonstrating areas where genetic information has been conserved through evolution (the more fragmented the pattern, the more differences there are in the genetic code).

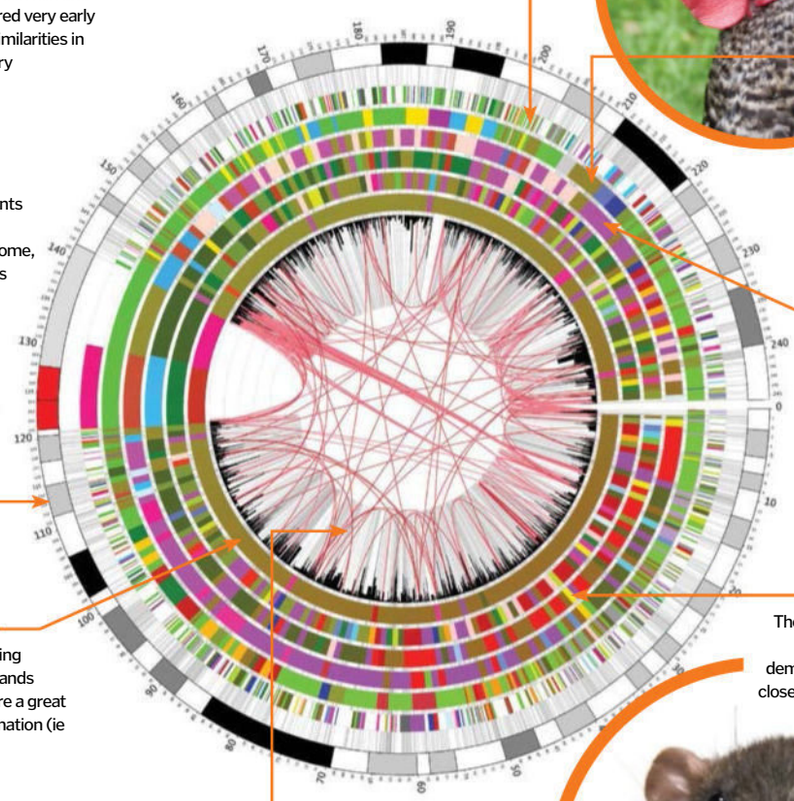
Mapping the human genome

How does our genetic makeup compare to that of other creatures?

Zebrafish
Divergence between fish and mammals occurred very early in evolution, so similarities in our genes are very fragmented.

Chicken
Despite the fact that we are not closely related to birds, the chicken still has regions of DNA that are quite similar to ours.

Human
This ring represents the genes on a human chromosome, with the numbers providing a representation of scale.



Dog
Some regions of the canine genome are very different to ours, but the pink bands show an area that has been conserved.

Rat
The mouse and rat genomes have similar patterns, demonstrating these rodents' close evolutionary relationship.

Chimpanzee
One of our closest living relatives – the solid bands demonstrate we share a great deal of genetic information (ie 98 per cent).

Mouse
There is less in common between human and mouse (90 per cent), but we are sufficiently similar that mice make a good scientific model for studying human disease.

or changing the gene so nominally that the protein is virtually unaffected. However, some mutations do lead to disease.

If mutations are introduced into the sperm and egg cells they can be passed on to the next generation. However, not all mutations are bad, and this process of randomly introduced changes in the DNA sequence provides the biological underpinning that supports Darwin's theory of evolution. This is most easily observed in animals. Take, for example, the peppered moth. Before the Industrial Revolution the majority of these moths had white wings, enabling them to hide against light-coloured trees and lichens. A minority had a mutant gene, which gave them black wings; this made them an easy target for predators. When factories began to cover the trees in soot, the light-coloured moths struggled to hide themselves against the darker environment, so black moths flourished. They survived much longer, enabling them to pass on their mutation to their offspring and altering the gene pool.

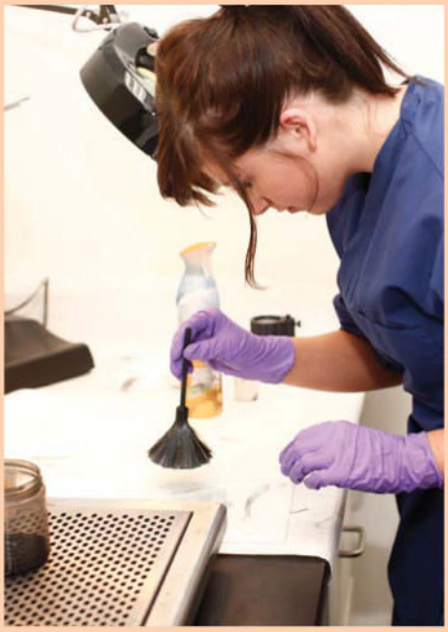
"Before the Industrial Revolution the majority had white wings"

It is easy to see how a genetic change like the one that occurred in the peppered moth could give an advantage to a species, but what about genetic diseases? Even these can work to our advantage. A good example is sickle cell anaemia – a genetic disorder that's quite common in the African population.

A single nucleotide mutation causes haemoglobin, the protein involved in binding oxygen in red blood cells, to misfold. Instead of forming its proper shape, the haemoglobin clumps together, causing red blood cells to deform. They then have trouble fitting through narrow capillaries and often become damaged or destroyed. However, this genetic mutation persists in the population because it has a protective effect against malaria. The malaria parasite spends part of its life cycle inside red blood cells and, when sickle cells rupture, it prevents the parasite from reproducing. Individuals with one copy of the sickle cell gene and one copy of the healthy haemoglobin gene have few symptoms of sickle cell anaemia,

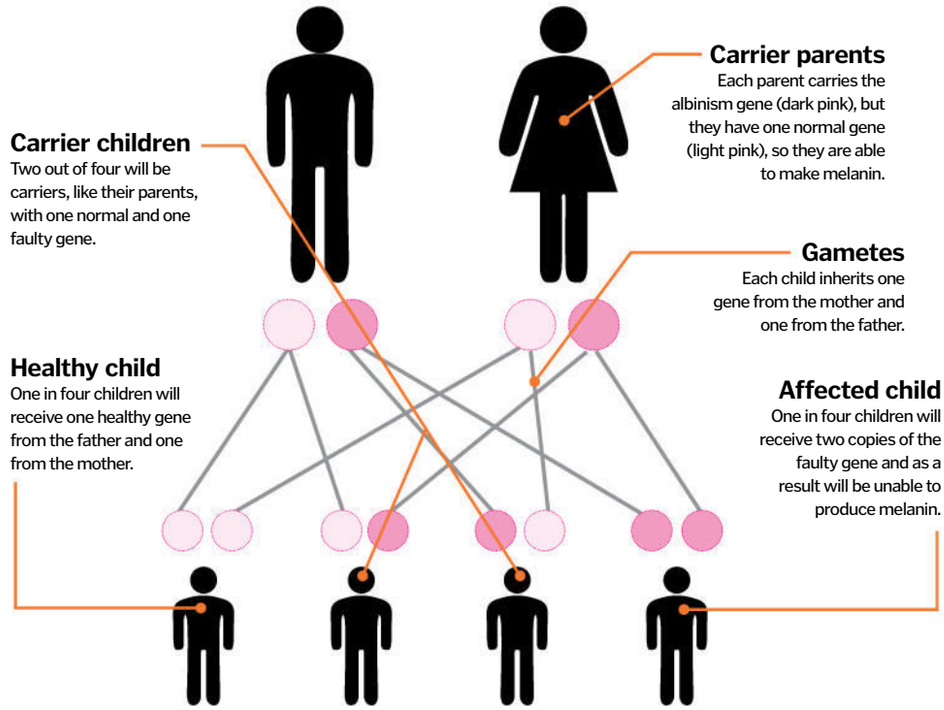
Using genetics to convict criminals

Forensic scientists can use traces of DNA to identify individuals involved in criminal activity. Only about 0.1 per cent of the genome differs between individuals, so rather than sequencing the entire genome, scientists take 13 DNA regions that are known to vary between different people in order to create a 'DNA fingerprint'. In each of these regions there are two to 13 nucleotides in a repeating pattern hundreds of bases long – the length varies between individuals. Small pieces of DNA – referred to as probes – are used to identify these repeats and the length of each is determined by a technique called polymerase chain reaction (PCR). The odds that two people will have exactly the same 13-region profile is thought to be one in a billion or even less, so if all 13 regions are found to be a match then scientists can be fairly confident that they can tie a person to a crime scene.



Why do we look like our parents?

It's a common misconception that we inherit entire features from our parents – eg "You have your father's eyes." Actually inheritance is much more complicated – several genes work together to create traits in physical appearance; even eye colour isn't just down to one gene that codes for 'blue', 'brown' or 'green', etc. The combinations of genes from both of our parents create a mixture of their traits. However, there are some examples of single genes that do dictate an obvious physical characteristic all on their own. These are known as Mendelian traits, after the scientist Gregor Mendel who studied genetic inheritance in peas in the 1800s. One such trait is albinism – the absence of pigment in the skin, hair and eyes due to a defect in the protein that makes melanin.



but are protected from malaria too, allowing them to pass the gene on to their children.

Genetics is a complex and rapidly evolving field and more information about the function of DNA is being discovered all the time. It is now known that environmental influences can alter the way that DNA is packaged in the cell, restricting access to some genes and altering protein expression patterns. Known as epigenetics, these modifications do not actually alter the underlying DNA sequence, but regulate how it is accessed and used by the cell. Epigenetic changes can be passed on from one cell to its offspring, and thus provide an additional mechanism by which genetic information can be modified across generations of humans.

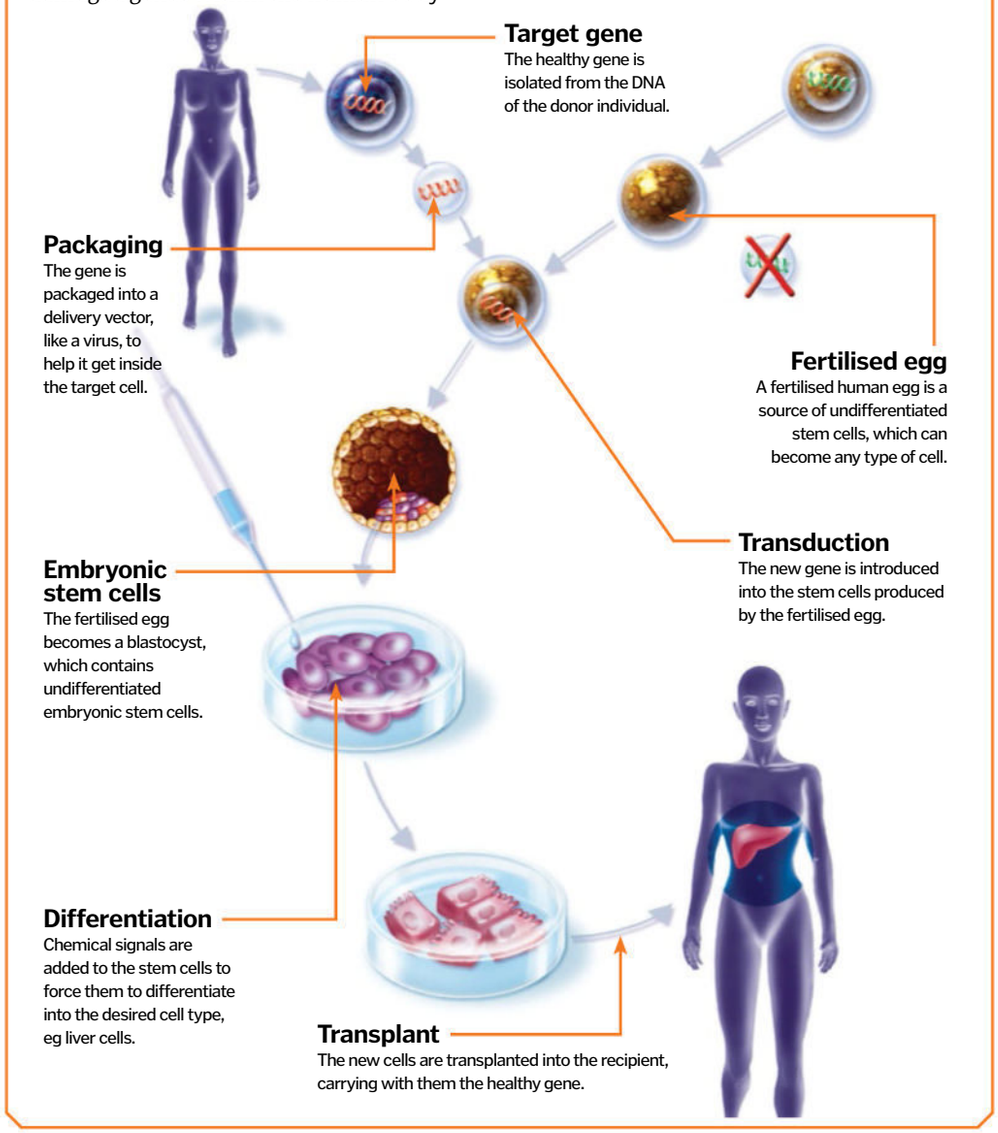
When our genes go wrong...

Cancer is not just the result of one or two genetic mutations – in fact, it takes a whole series of mistakes for a tumour to form. Cells contain oncogenes and tumour suppressor genes, whose healthy function is to tell the cell when it should and should not divide. If these become damaged, the cell cannot switch off its cell division programme and it will keep making copies of itself indefinitely. Each time a cell divides there is a risk that it will make a mistake when copying its DNA, and gradually the cell makes more and more errors, accumulating mutations that allow the tumour to progress into malignant cancer.

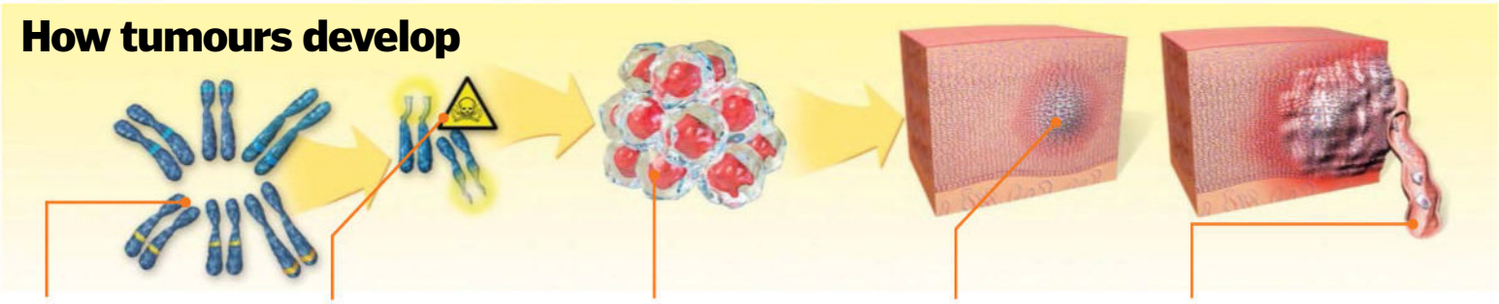
"Environmental influences can alter the way that DNA is packaged"

Repairing faulty genes

We reveal how donated cells can be used to mend any damaged genes within the human body



How tumours develop



Tumour-associated genes
Genes normally involved in regulating cell behaviour can go on to cause cancer if they become mutated.

Mutagens
Environmental factors, or mutagens – such as radiation and chemicals – can cause damage to the DNA, leading to mutations in key genes.

Localised
Cancer usually starts with just one or a few mutated cells; these begin to divide uncontrollably in their local area creating a tumour.

Invasion
As the tumour grows in size it starts to invade the surrounding area, taking over neighbouring tissues.

Metastasis
Further mutations allow cells of the tumour to break free and enter the bloodstream. From here they can be distributed throughout the body.

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What is anxiety?

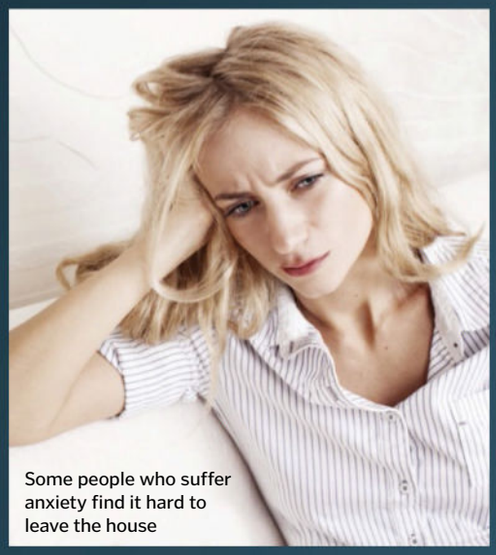
How our brains trigger a fight or flight response

Anxiety affects a huge number of people and can be so severe that it stops many sufferers from leaving their homes or doing their jobs. In the US, over 40 million people aged 18 or over endure an anxiety related disorder, while in the UK one in 20 people are affected. Some researchers believe that modern day technology has influenced the rise of anxiety related conditions; we are constantly on high alert with texts, emails, social media and news updates.

Anxiety is a natural human response that serves a purpose. From a biological point of view, it functions to create a heightened sense of awareness, preparing us for potential threats. In a way, it's nature's panic button.

When we become anxious our fight or flight response is triggered, flooding our bodies with epinephrine (adrenaline), norepinephrine (noradrenaline) and cortisol, which help increase your reflexes and reaction speed. Your body prepares itself to deal with danger by increasing the heart rate, pumping more blood to the muscles and by getting the lungs to hyperventilate.

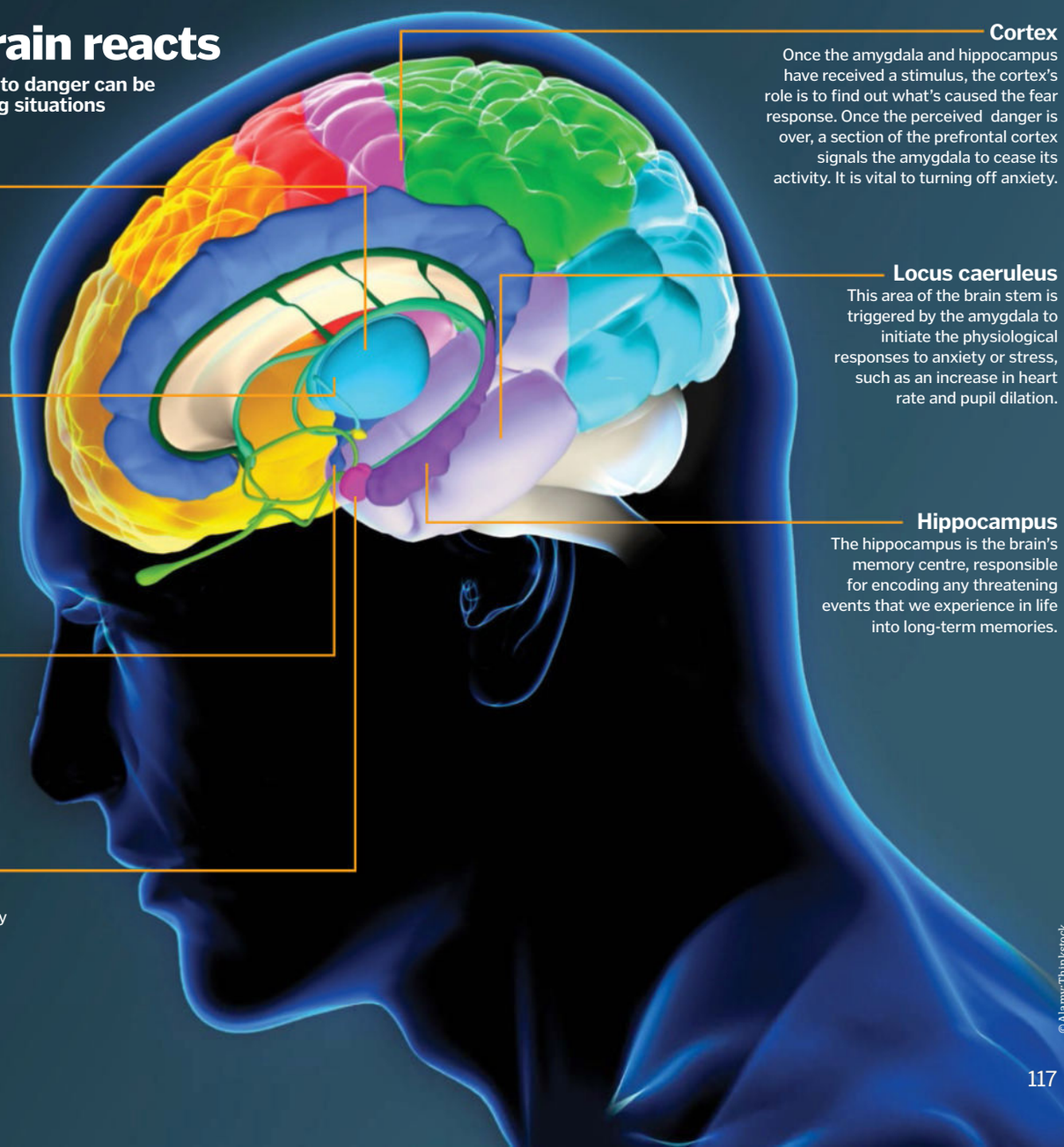
At the same time, the brain stops thinking about pleasurable things, making sure that all of its focus is on identifying potential threats. In extreme cases, the body will respond to anxiety by emptying the digestive tract by any means necessary, as this ensures that no energy is wasted on digestion.



Some people who suffer anxiety find it hard to leave the house

How your brain reacts

The body's primal response to danger can be triggered by non-threatening situations



Cortex
Once the amygdala and hippocampus have received a stimulus, the cortex's role is to find out what's caused the fear response. Once the perceived danger is over, a section of the prefrontal cortex signals the amygdala to cease its activity. It is vital to turning off anxiety.

Thalamus
Visual and auditory stimuli are first processed by the thalamus which filters the incoming information and sends it to the areas where it can be interpreted.

Locus caeruleus
This area of the brain stem is triggered by the amygdala to initiate the physiological responses to anxiety or stress, such as an increase in heart rate and pupil dilation.

Two paths
A startling signal such as a sudden loud noise will be sent from the thalamus via two paths: one travels directly to the amygdala - where it can quickly initiate the fear response - and the other passes through the cortex to be processed more thoroughly.

Hippocampus
The hippocampus is the brain's memory centre, responsible for encoding any threatening events that we experience in life into long-term memories.

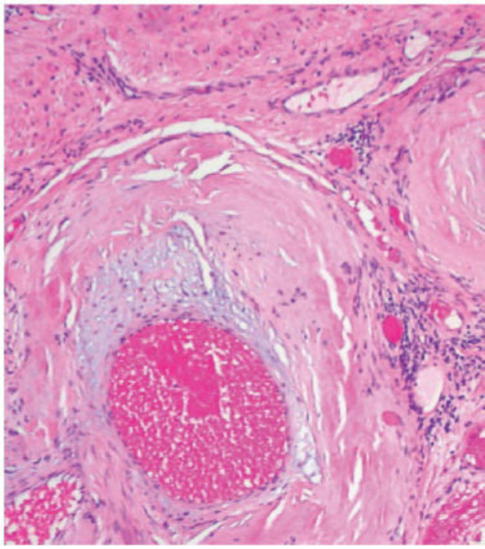
Stria terminalis
The bed nucleus of the stria terminalis (BNST) is responsible for maintaining fear once this emotion has been stimulated by the amygdala, leading to longer-term feelings of anxiety.

Amygdala
This is where the fear response is triggered. The amygdala can quickly put your body on high alert, and research suggests that if this area of the brain is overactive, it may cause an anxiety disorder.

© Alamy; Thinkstock

Inside the circulatory system

Most of the amyloid consisted of acellular pink globules that effaced and expanded the node, but this image shows the characteristic involvement of blood vessel walls



© Ed Uthman, MD

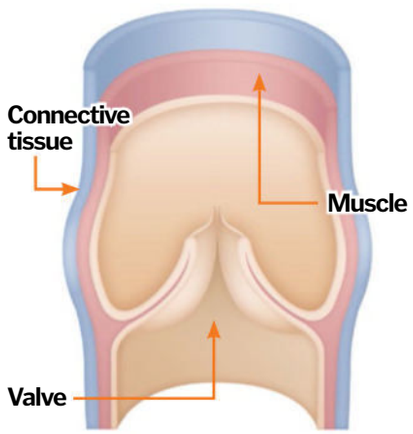
Arteries and veins form the plumbing system that carries blood around the body. Find out more about the circular journey it takes...

The network of blood vessels in the human body must cope with different volumes of blood travelling at different pressures. These blood vessels come in a multitude of different sizes and shapes, from the large, elastic aorta down to very tiny, one-cell-thick capillaries.

Blood is the ultimate multitasker. It carries oxygen for various tissues to use, nutrients to provide energy, removes waste products and even helps you warm up or cool down. It also carries vital clotting factors which stop us bleeding. Blood comes in just two varieties; oxygen-rich (oxygenated) blood is what the body uses for energy, and is bright red. After it has been used, this oxygen-depleted (deoxygenated) blood is returned for recycling and is dark red (not blue, as is often thought).

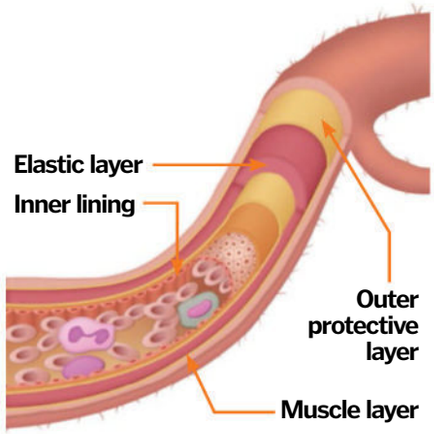
Blood is carried in vessels, of which there are two main different types – arteries and veins. Arteries carry blood away from the heart and deal with high pressures, and so have strong elastic walls. Veins carry blood back towards the heart and deal with lower pressures, so have thinner walls. Tiny capillaries connect arteries and veins together, like small back-roads connecting motorways to dual carriageways.

Arteries and veins are constructed differently to cope with the varying pressures, but work in tandem to ensure that the blood reaches its final destination. However, sometimes things go wrong, lead to certain medical problems: varicose veins from failing valves; deep vein thrombosis from blood clots blocking the deep venous system; heart attacks from blocked arteries; and lastly life-threatening aneurysms from weak artery walls.



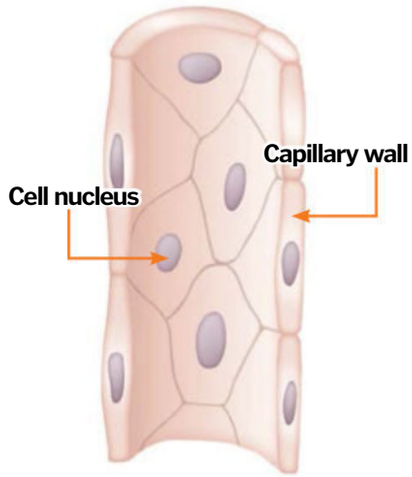
How do veins work?

Veins carry low pressure blood. They contain numerous one-way valves which stop backwards flow of blood, which can occur when pressure falls in-between heartbeats. Blood flows through these valves towards the heart but cannot pass back through them in the other direction. Valves can fail over time, especially in the legs. This leads to saggy, unsightly veins, known as varicose veins.



Arteries – under pressure!

Arteries cope with all of the pressure generated by the heart and deliver oxygen-rich blood to where it needs to be 24 hours a day. The walls of arteries contain elastic muscles, allowing them to stretch and contract to cope with the wide changes in pressure generated from the heart. Since the pressure is high, valves are unnecessary, unlike the low-pressure venous system.



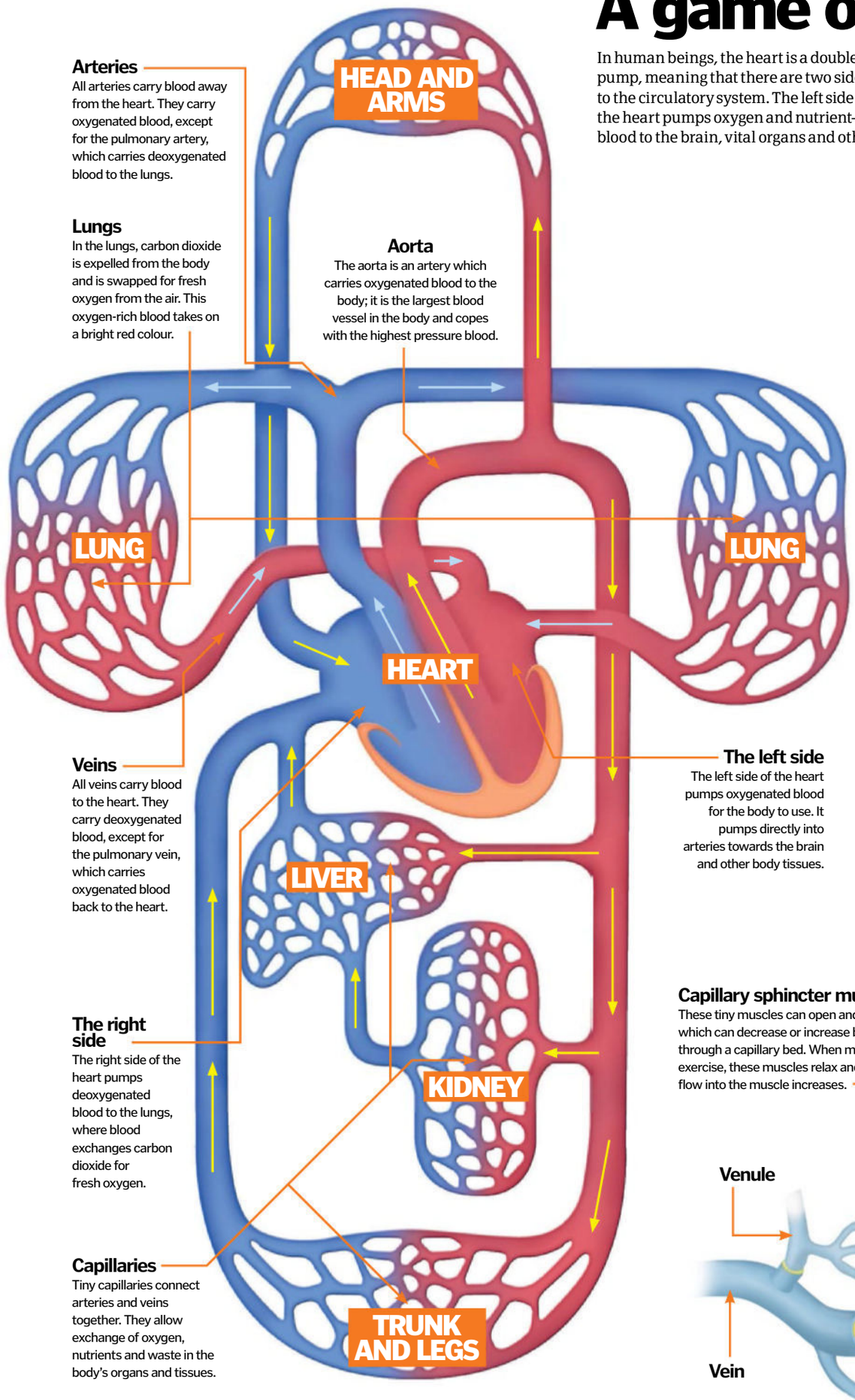
Connecting it all together

Capillaries are the tiny vessels which connect small arteries and veins together. Their walls are only one cell thick, so this is the perfect place to trade substances with surrounding tissues. Red blood cells within these capillaries trade water, oxygen, carbon dioxide, nutrients, waste and even heat. Because these vessels are only one cell wide, the cells have to line up to pass through.

A game of two halves

In human beings, the heart is a double pump, meaning that there are two sides to the circulatory system. The left side of the heart pumps oxygen and nutrient-rich blood to the brain, vital organs and other body tissues (the systemic circulation). The right side of the heart pumps deoxygenated blood towards the lungs, so it can pick up new oxygen molecules to be used again (the pulmonary circulation).

"Plasma carries all of the different types of cells"



Arteries
All arteries carry blood away from the heart. They carry oxygenated blood, except for the pulmonary artery, which carries deoxygenated blood to the lungs.

Lungs
In the lungs, carbon dioxide is expelled from the body and is swapped for fresh oxygen from the air. This oxygen-rich blood takes on a bright red colour.

Aorta
The aorta is an artery which carries oxygenated blood to the body; it is the largest blood vessel in the body and copes with the highest pressure blood.

Veins
All veins carry blood to the heart. They carry deoxygenated blood, except for the pulmonary vein, which carries oxygenated blood back to the heart.

The left side
The left side of the heart pumps oxygenated blood for the body to use. It pumps directly into arteries towards the brain and other body tissues.

The right side
The right side of the heart pumps deoxygenated blood to the lungs, where blood exchanges carbon dioxide for fresh oxygen.

Capillaries
Tiny capillaries connect arteries and veins together. They allow exchange of oxygen, nutrients and waste in the body's organs and tissues.

What's in blood?

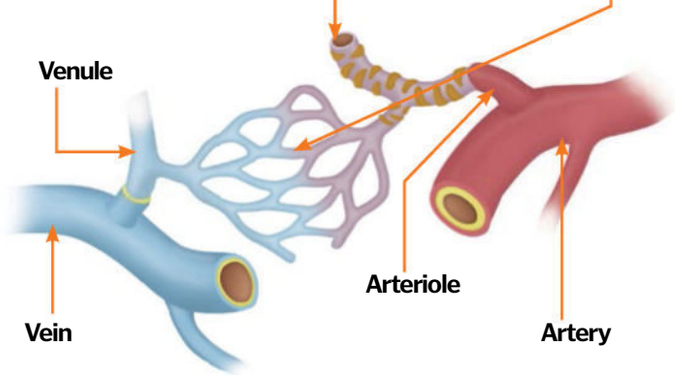
It's only the iron in red blood cells which make blood red – take these cells away and what you're left with is a watery yellowish solution called plasma. Plasma carries all of the different types of cells and also contains sugars, fats, proteins and salts. The main cell types are red blood cells (formed from iron and haemoglobin, which carries oxygen around the body), white blood cells (which fight infection from bacteria, viruses and fungi) and platelets (tiny cell fragments which stop bleeding by forming clots at the sites of any damage).

Blood vessels

Different shapes and sizes

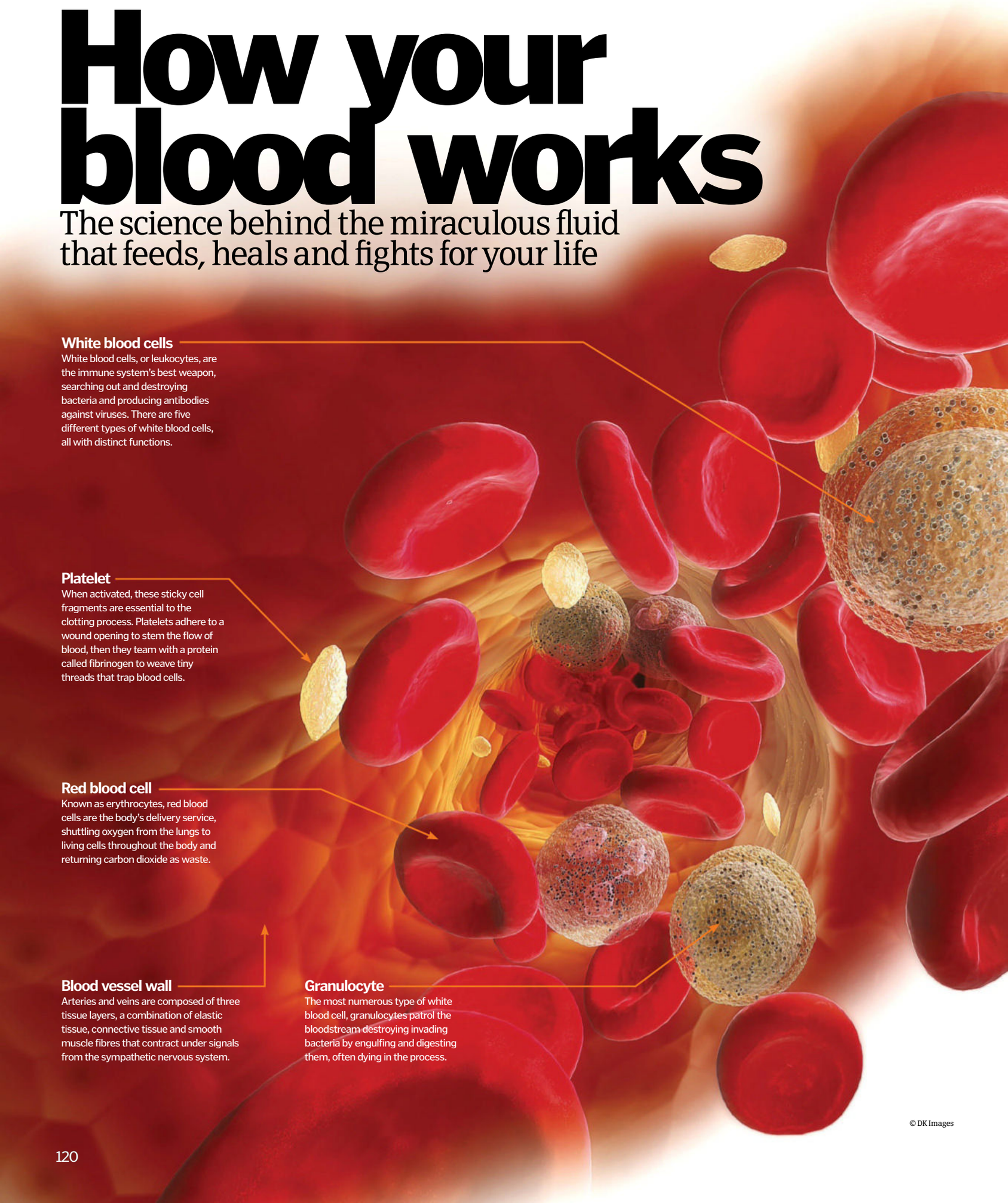
Capillary sphincter muscles
These tiny muscles can open and close, which can decrease or increase blood flow through a capillary bed. When muscles exercise, these muscles relax and blood flow into the muscle increases.

Capillary bed
This is the capillary network that connects the two systems. Here, exchange of various substances occurs with surrounding tissues, through the one-cell thick walls.



How your blood works

The science behind the miraculous fluid that feeds, heals and fights for your life



White blood cells
White blood cells, or leukocytes, are the immune system's best weapon, searching out and destroying bacteria and producing antibodies against viruses. There are five different types of white blood cells, all with distinct functions.

Platelet
When activated, these sticky cell fragments are essential to the clotting process. Platelets adhere to a wound opening to stem the flow of blood, then they team with a protein called fibrinogen to weave tiny threads that trap blood cells.

Red blood cell
Known as erythrocytes, red blood cells are the body's delivery service, shuttling oxygen from the lungs to living cells throughout the body and returning carbon dioxide as waste.

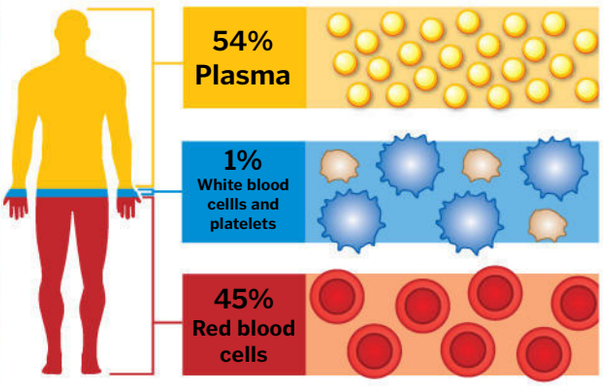
Blood vessel wall
Arteries and veins are composed of three tissue layers, a combination of elastic tissue, connective tissue and smooth muscle fibres that contract under signals from the sympathetic nervous system.

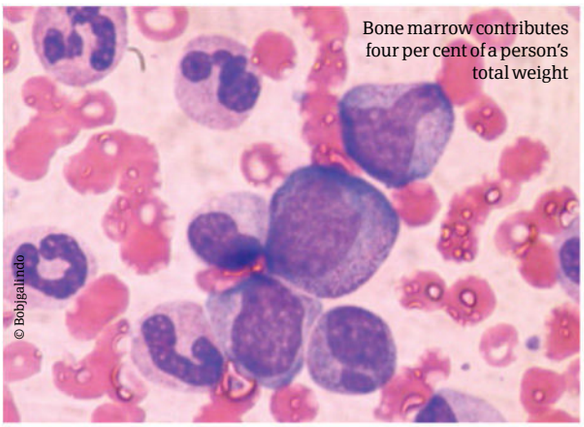
Granulocyte
The most numerous type of white blood cell, granulocytes patrol the bloodstream destroying invading bacteria by engulfing and digesting them, often dying in the process.

© DK Images

Components of blood

Blood is a mix of solids and liquids, a blend of highly specialised cells and particles suspended in a protein-rich fluid called plasma. Red blood cells dominate the mix, carrying oxygen to living tissue and returning carbon dioxide to the lungs. For every 600 red blood cells, there is a single white blood cell, of which there are five different kinds. Cell fragments called platelets use their irregular surface to cling to vessel walls and initiate the clotting process.





Bone marrow contributes four per cent of a person's total weight

"Red blood cells are so numerous because they perform the most essential function of blood"

Blood is the river of life. It feeds oxygen and essential nutrients to living cells and carries away waste. It transports the foot soldiers of the immune system, white blood cells, which seek out and destroy invading bacteria and parasites. And it speeds platelets to the site of injury or tissue damage, triggering the body's miraculous process of self-repair.

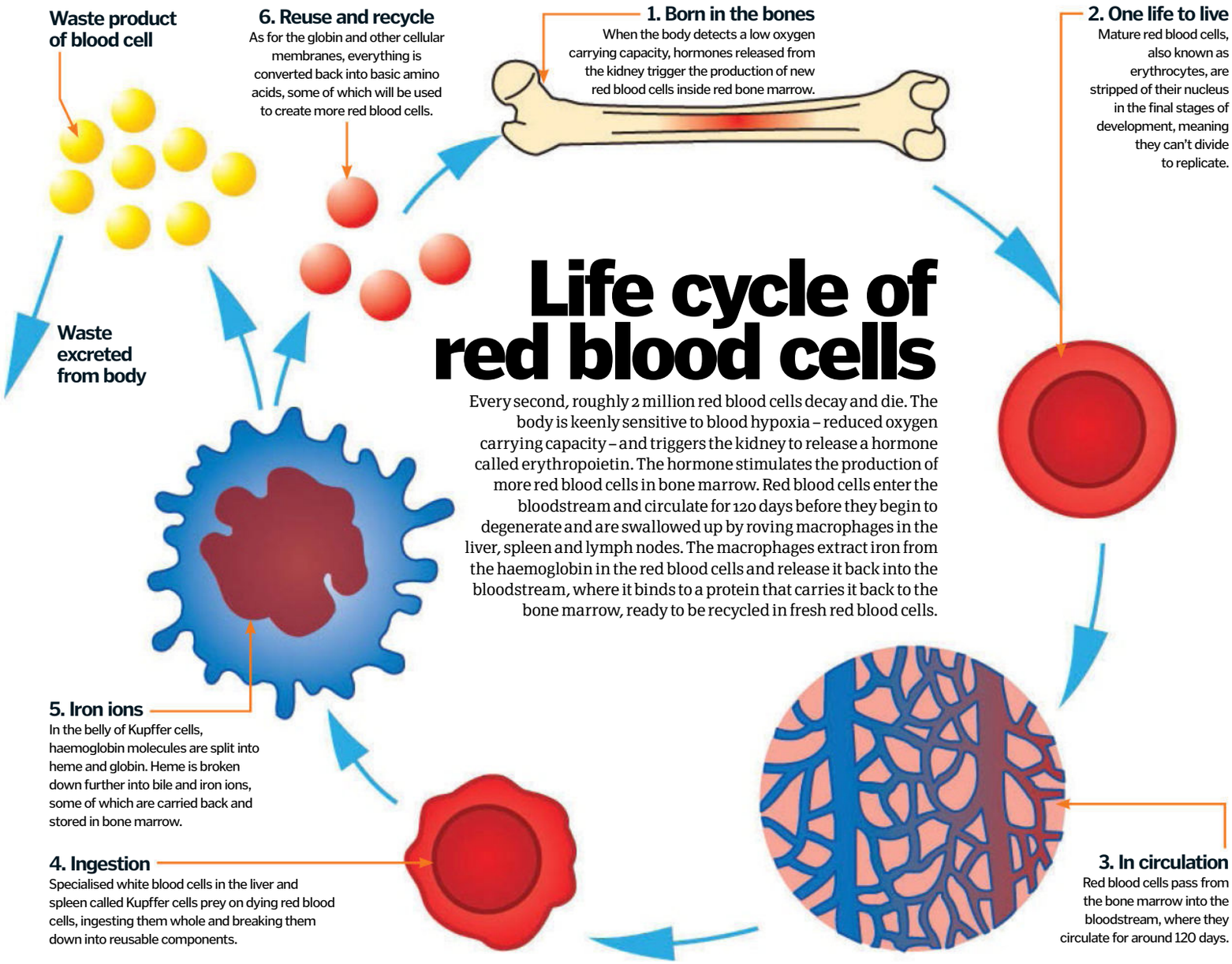
Blood looks like a thick, homogenous fluid, but it's more like a watery current of plasma – a straw-coloured, protein-rich fluid – carrying billions of microscopic solids consisting of red blood cells, white blood cells and cell fragments called platelets. The distribution is far from equal. Over half of blood is plasma, 45 per cent is red blood cells and a tiny fragment, less than one per cent, is composed of white blood cells and platelets.

Red blood cells are so numerous because they perform the most essential function of blood, which is to deliver oxygen to every cell in the body and carry away carbon dioxide. As an adult, all of your red blood cells are produced in red bone marrow, the spongy tissue in the bulbous ends of long bones and at the centre of flat bones like hips and ribs. In the marrow, red blood cells start out as undifferentiated stem cells called hemocytoblasts. If the body detects a minuscule drop in oxygen carrying capacity, a hormone is released from the kidneys that triggers the stem cells to become red blood cells. Because red blood cells only live 120 days, the supply must be continuously replenished; roughly 2 million red blood cells are born every second.

A mature red blood cell has no nucleus. The nucleus is spit out during the final stages of the cell's two-day development before taking on the shape of a concave, doughnut-like disc. Like all cells, red blood cells are mostly water, but 97 per cent of their solid matter is haemoglobin, a complex protein that carries four atoms of iron. Those iron atoms have the ability to form loose, reversible

Life cycle of red blood cells

Every second, roughly 2 million red blood cells decay and die. The body is keenly sensitive to blood hypoxia – reduced oxygen carrying capacity – and triggers the kidney to release a hormone called erythropoietin. The hormone stimulates the production of more red blood cells in bone marrow. Red blood cells enter the bloodstream and circulate for 120 days before they begin to degenerate and are swallowed up by roving macrophages in the liver, spleen and lymph nodes. The macrophages extract iron from the haemoglobin in the red blood cells and release it back into the bloodstream, where it binds to a protein that carries it back to the bone marrow, ready to be recycled in fresh red blood cells.



bonds with both oxygen and carbon dioxide – think of them as weak magnets – making red blood cells such an effective transport system for respiratory gasses. Haemoglobin, which turns bright red when oxygenated, is what gives blood its characteristic colour.

To provide oxygen to every living cell, red blood cells must be pumped through the body's circulatory system. The right side of the heart pumps CO_2-heavy blood into the lungs, where it releases its waste gasses and picks up oxygen. The left side of the heart then pumps the freshly oxygenated blood out into the body through a system of arteries and capillaries, some as narrow as a single cell. As the red blood cells release their oxygen, they pick up carbon dioxide molecules, then course through the veins back toward the heart, where they are pumped back into the lungs to 'exhale' the excess CO_2 and collect some more precious O_2.

White blood cells are greatly outnumbered by red blood cells, but they are critical to the function of the immune system. Most white blood cells are also produced in red bone marrow, but white blood cells – unlike red blood cells – come in five different varieties, each with its own specialised immune function. The first three varieties, collectively called granulocytes, engulf and digest bacteria and parasites, and play a role in allergic reactions. Lymphocytes, another type of white blood cell, produce anti-bodies that build up our immunity to repeat intruders. And monocytes, the largest of the white blood cells, enter organ tissue and become macrophages, microbes that ingest bad bacteria and help break down dead red blood cells into reusable parts.

Platelets aren't cells at all, but fragments of much larger stem cells found in bone marrow. In their resting state, they look like smooth oval plates, but when activated to form a clot they take on an irregular form with many protruding arms called pseudopods. This shape helps them stick to blood vessel walls and to each other, forming a physical barrier around wound sites. With the help of proteins and clotting factors found in plasma, platelets weave a mesh of fibrin that stems blood loss and triggers the formation of new collagen and skin cells.

But even these three functions of blood – oxygen supplier, immune system defender and wound healer – only begin to scratch the surface of the critical role of blood in each and every bodily process. When blood circulates through the small intestine, it absorbs sugars from digested food, which are transported to the liver to be stored as energy. When blood passes through the kidneys, it is scrubbed of excess urea and salts, waste that will leave the body as urine. The proteins transport vitamins, hormones, enzymes, sugar and electrolytes.

Blood disorders

Blood is a delicate balancing act, with the body constantly regulating oxygen flow, iron content and clotting ability. Unfortunately, there are several genetic conditions and chronic illnesses that can disturb the balance, sometimes with deadly consequences.

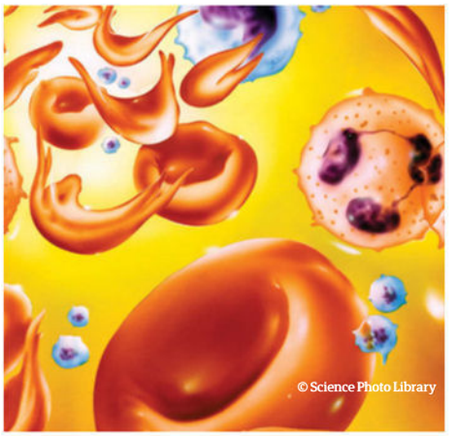
"Platelets weave a mesh of fibrin that stems blood loss"

Haemophilia

This rare genetic blood disorder severely inhibits the clotting mechanism of blood, causing excessive bleeding, internal bruising and joint problems. Platelets are essential to the clotting and healing process, producing threads of fibrin with help from proteins in the bloodstream called clotting factors. People who suffer from haemophilia – almost exclusively males – are missing one of those clotting factors, making it difficult to seal off blood vessels after even minor injuries.

Sickle cell anaemia

Anaemia is the name for any blood disorder that results in a dangerously low red blood cell count. In sickle cell anaemia, which afflicts one out of every 625 children of African descent, red blood cells elongate into a sickle shape after releasing their oxygen. The sickle-shaped cells die prematurely, leading to anaemia, or sometimes lodge in blood vessels, causing terrible pain and even organ damage. Interestingly, people who carry only one gene for sickle cell anaemia are immune to malaria.



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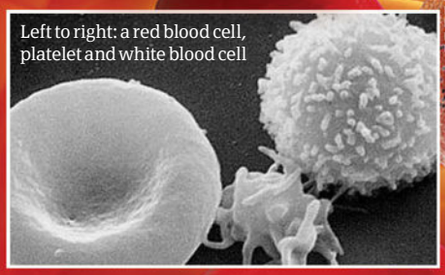


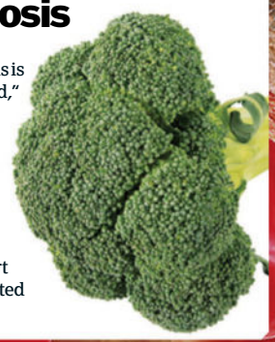
Left to right: a red blood cell, platelet and white blood cell

Thalassemia

Another rare blood disorder affecting 100,000 newborns worldwide each year, thalassemia inhibits the production of haemoglobin, leading to severe anaemia. People who are born with the most serious form of the disease, also called Cooley's anaemia, suffer from enlarged hearts, livers and spleens, and brittle bones. The most effective treatment is frequent blood transfusions, although a few lucky patients have been cured through bone marrow transplants from perfectly matching donors.

Hemochromatosis

One of the most common genetic blood disorders, hemochromatosis is the medical term for "iron overload," in which your body absorbs and stores too much iron from food. Severity varies wildly, and many people experience few symptoms, but others suffer serious liver damage or scarring (cirrhosis), irregular heartbeat, diabetes and even heart failure. Symptoms can be aggravated by taking too much vitamin C.



Deep vein thrombosis

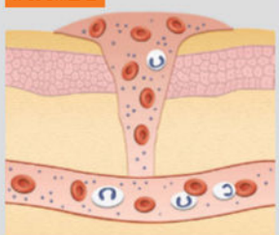
Thrombosis is the medical term for any blood clot that is large enough to block a blood vessel. When a blood clot forms in the large, deep veins of the upper thigh, it's called deep vein thrombosis. If such a clot breaks free, it can circulate through the bloodstream, pass through the heart and become lodged in arteries in the lung, causing a pulmonary embolism. Such a blockage can severely damage portions of the lungs, and multiple embolisms can even be fatal.

Blood and healing

More than a one-trick pony, your blood is a vital cog in the healing process

Think of blood as the body's emergency response team to an injury. Platelets emit signals that encourage blood vessels to contract, stemming blood loss. The platelets then collect around the wound, reacting with a protein in plasma to form fibrin, a tissue that weaves into a mesh. Blood flow returns and white blood cells begin their hunt for bacteria. Fibroblasts create beds of fresh collagen and capillaries to fuel skin cell growth. The scab begins to contract, pulling the growing skin cells closer together until damaged tissue is replaced.

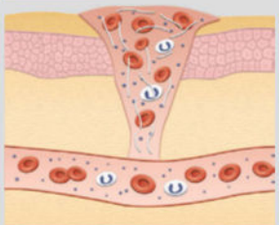
STAGE 1



INJURY

When the skin surface is cut, torn or scraped deeply enough, blood seeps from broken blood vessels to fill the wound. To stem the flow of bleeding, the blood vessels around the wound constrict.

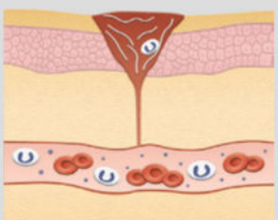
STAGE 2



HAEMOSTASIS

Activated platelets aggregate around the surface of the wound, stimulating vasoconstriction. Platelets react with a protein in plasma to form fibrin, a web-like mesh of stringy tissue.

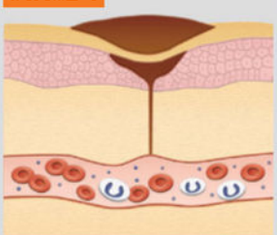
STAGE 3



INFLAMMATORY STAGE

Once the wound is capped with a drying clot, blood vessels open up again, releasing plasma and white blood cells into the damaged tissue. Macrophages digest harmful bacteria and dead cells.

STAGE 4



PROLIFERATIVE STAGE

Fibroblasts lay fresh layers of collagen inside the wound and capillaries begin to supply blood for the forming of new skin cells. Fibrin strands and collagen pull the sides of the wound together.

Inside a blood vessel

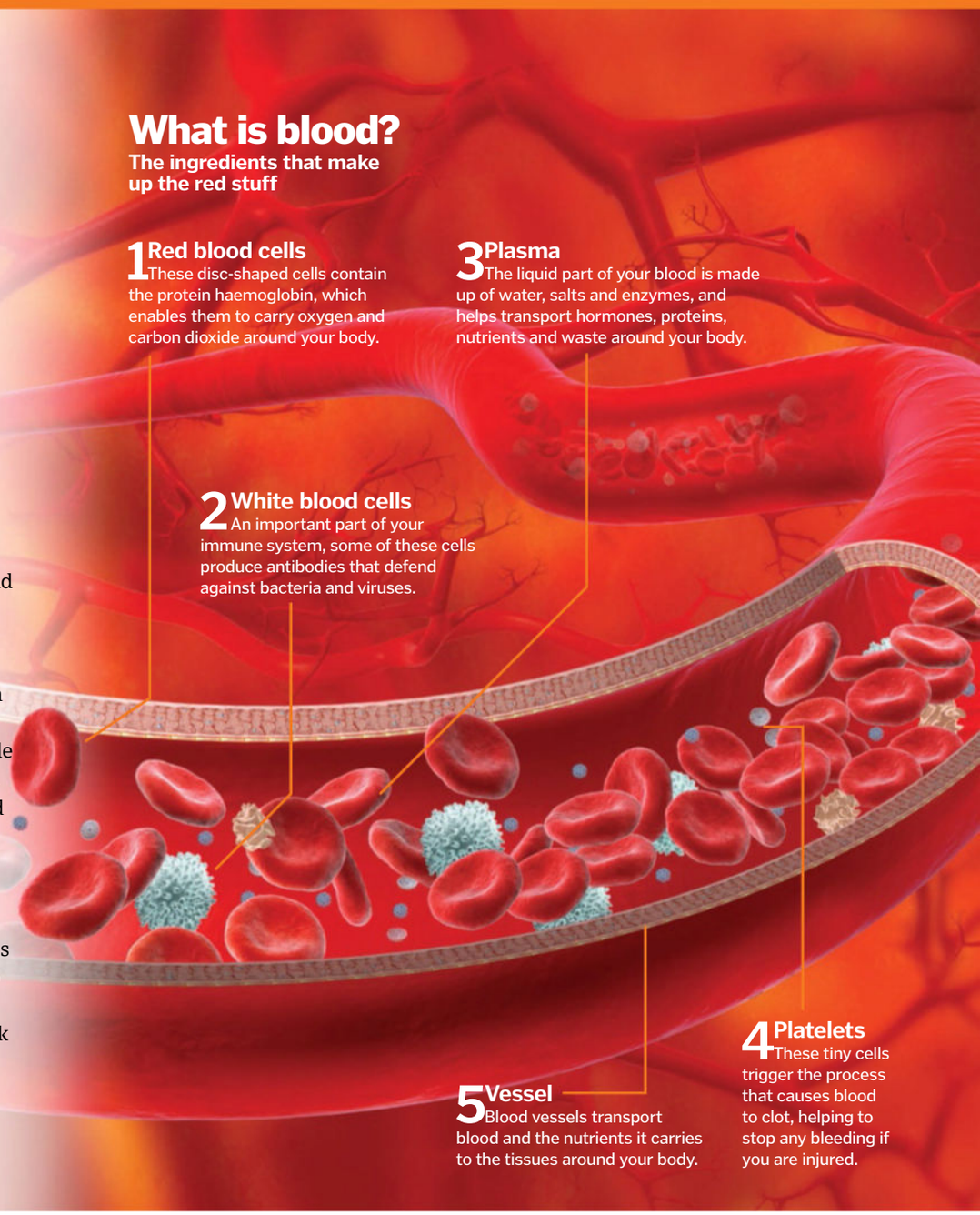
Discover what happens every time your heart beats

Inside your body there is a vast network of blood vessels that, if laid end to end, could easily wrap twice around the Earth. They are an important part of your circulatory system, carrying the equivalent of more than 14,000 litres of blood around your body every day to transport vital nutrients to where they are needed.

There are five main types of blood vessel. In general, arteries carry oxygenated blood away from the heart and have special elastic fibres in their walls to help squeeze it along when the heart muscle relaxes. The arteries then branch off into arterioles, which pass the blood into the capillaries, tiny blood vessels that transport nutrients from the blood into the body's tissues via their very thin walls.

As well as nourishing the tissue cells, capillaries also remove their waste products, passing the now deoxygenated blood on to the venules. These vessels drain the blood into the veins, which, with the help of valves that stop the blood flowing in the reverse direction, carry it back to the heart where it can pick up more oxygen.

In contrast to the other blood vessels in the body, the pulmonary artery takes deoxygenated blood from the heart to the lungs, where it is oxygenated and carried back to the heart via the pulmonary veins.



What is hyperventilation?

Find out why it's not always best to reach for the paper bag

Also known as over-breathing, hyperventilation is a common side effect of a panic attack or strong feelings of anxiety. When you feel breathless, you breathe more rapidly in an attempt to get more oxygen into your system. However, rather than increasing the levels of oxygen in your blood, this instead causes the carbon dioxide levels to decrease. As a result, the pH of your blood becomes more alkaline, causing the red blood cells to cling on to their oxygen instead of passing it on to the tissue cells as they would normally. This simply exacerbates the problem, causing you to try to breathe in more oxygen and lowering your carbon dioxide levels further.

One way to stop the vicious cycle is to breathe into a paper bag, forcing you to re-breathe some of your exhaled carbon dioxide. However, this will only work if the hyperventilation was brought on by anxiety or a panic attack. Over-breathing can also be caused by asthma, infections, bleeding or heart attacks, and in these cases, increased levels of carbon dioxide are dangerous. Therefore, the best course of treatment is to try to stay calm and slow your breathing, and seek medical help if the problem persists.

Breathing into a paper bag can be a dangerous way to treat hyperventilation

© Dreamstime; DK

Tracheotomy surgery

Discover the science and tech behind this life-saving procedure

If the upper airway is blocked, by trauma, cancer or inflammation, an alternative route must be found for air to enter the lungs.

Planned tracheotomies are performed under general anaesthesia or sedation. The neck is extended backwards to allow the surgeon to easily identify the structures in the throat and to make an accurate incision (see diagram). First, a vertical cut is made in the skin, below the tracheal cartilage, and the underlying muscle and blood vessels are carefully moved out of the way to expose the trachea.

The trachea is normally held open by C-shaped rings of cartilage, which prevent the airway from collapsing. A hole is made between the third and fourth rings, allowing the surgeon access to the airway without disrupting the cartilage supports. A tracheotomy tube is then inserted into the airway and secured to the neck. If the tracheal opening is going to be a permanent feature rather than temporary then a piece of cartilage may be removed to allow the tube to sit more comfortably.

The vocal cords sit just behind the tracheal cartilage, above the tracheotomy incision site, but in order to talk, air must be able to pass through the vocal cords to make them vibrate. Some tracheotomy tubes contain unidirectional valves, enabling the patient to breathe in through the tube and out through their mouth, which provides good air supply to the lungs, without hampering speech.

If the patient is unable to breathe unaided, a ventilator may be attached to mechanically move air in and out of the lungs.

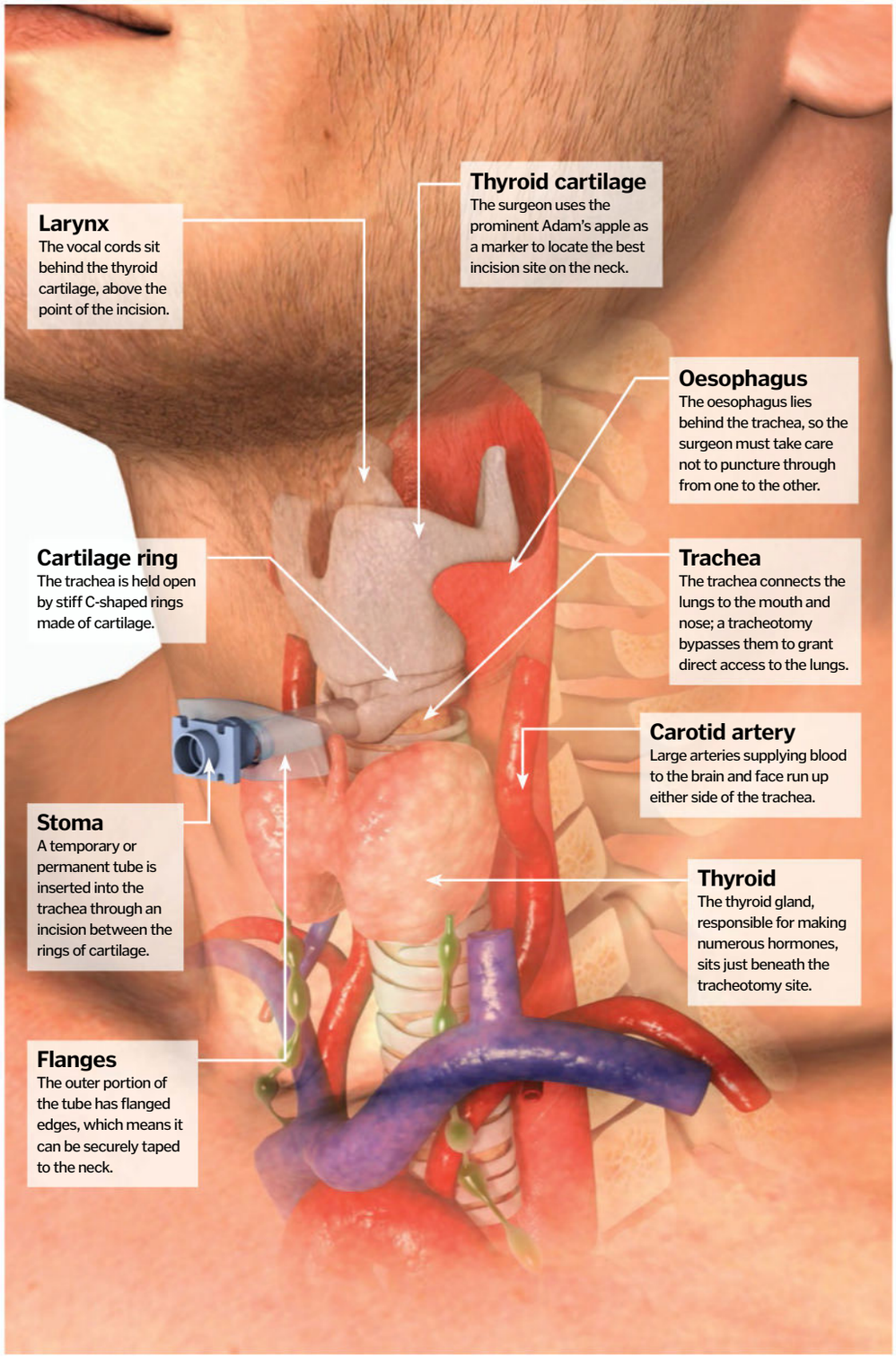
Have you got a pen?

A tracheotomy is a complex procedure, so in life-threatening, emergency situations a faster procedure – known as a cricothyrotomy (also called cricothyroidotomy) – may be performed. A higher incision is made just below the thyroid cartilage (Adam's apple) and then through the cricothyroid membrane, directly into the trachea.

It is possible to perform this procedure with a sharp instrument and any hollow tube, such as a straw or a ballpoint pen case. However, finding the correct location to make the incision is challenging, and without medical training there is great risk of damaging major blood vessels, the oesophagus or the vocal cords.

Anatomy of a tracheotomy

The trachea is surrounded by a minefield of major blood vessels, nerves, glands and muscles



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Hormones

How the human endocrine system develops and controls the human body

The glands in the endocrine system use chemicals called hormones to communicate with and control the cells and organs in our bodies. They are ductless glands that secrete different types of hormone directly into the bloodstream and target specific organs.

The target organs contain hormone receptors that respond to the chemical instructions supplied by the hormone. There are 50 different types of hormone in the body and they consist of three basic types: peptides, amines and steroids.

Steroids include the testosterone hormone. This is secreted by the cortex of the adrenal gland, the male and female reproductive organs and by the placenta in pregnant women. The majority of hormones are peptides that consist of short chains of amino acids. They are secreted by the pituitary and parathyroid glands. Amine hormones are secreted by the thyroid and adrenal medulla and are related to the fight or flight response.

The changes that are caused by the endocrine system act more slowly than the nervous system as they regulate growth, moods, metabolism, reproductive processes and a relatively constant stable internal environment for the body (homeostasis). The pituitary, thyroid and adrenal glands combine to form the major elements of the body's endocrine system along with various other elements such as the male testes, the female ovaries and the pancreas.

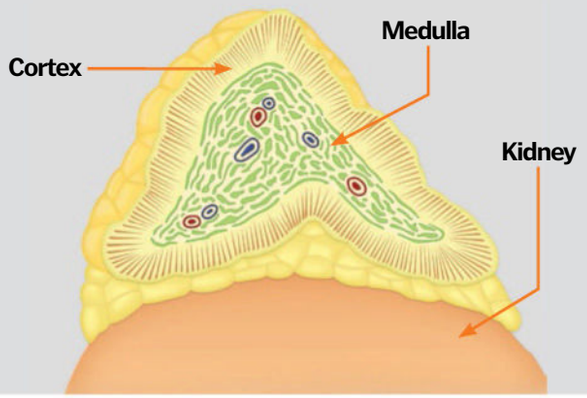
"Amine hormones are secreted by the thyroid and adrenal medulla"

Adrenal gland

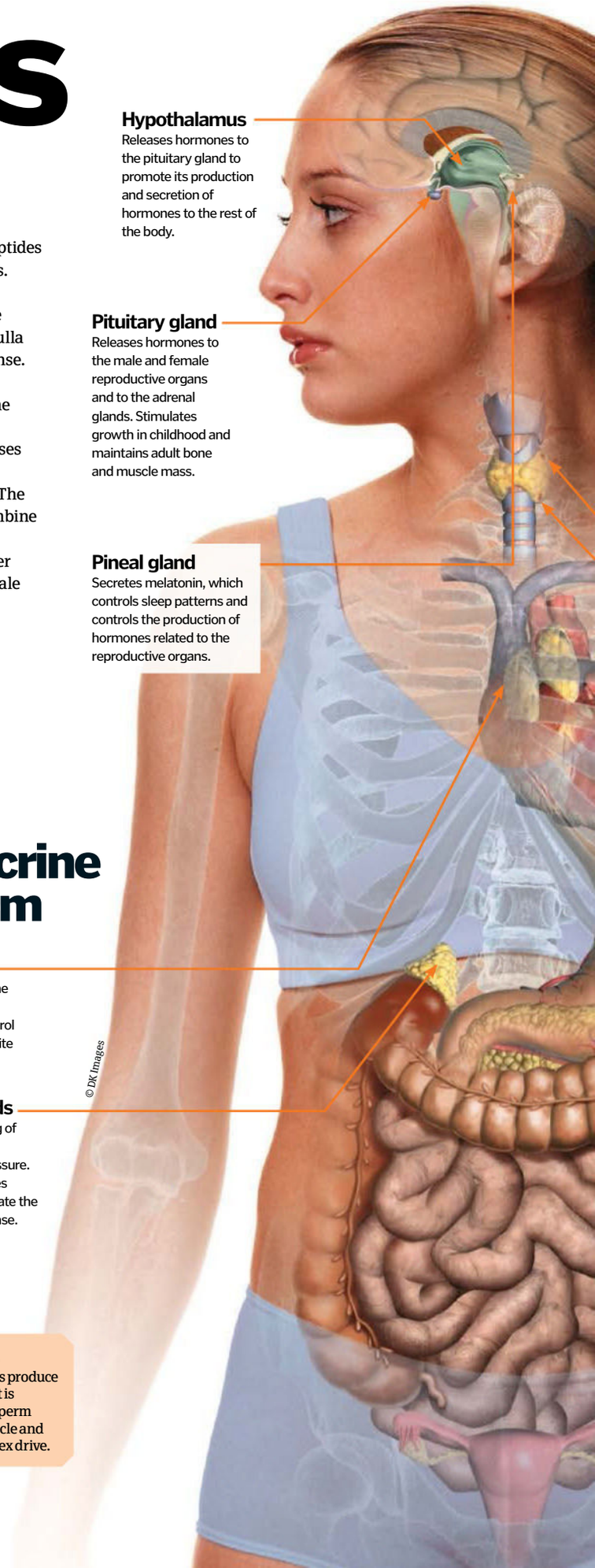
We have two adrenal glands that are positioned on top of both kidneys. The triangular-shaped glands each consist of a two-centimetre thick outer cortex that produces steroid hormones, which include testosterone, cortisol and aldosterone.

The ellipsoid shaped, inner part of the gland is known as the medulla, which produces noradrenaline and adrenaline. These hormones increase the heart rate, and the body's levels of oxygen and glucose while reducing non-essential body functions.

The adrenal gland is known as the 'fight or flight' gland as it controls how we respond to stressful situations, and prepares the body for the demands of either fighting or running away as fast as you can. Prolonged stress over-loads this gland and causes illness.



The endocrine system



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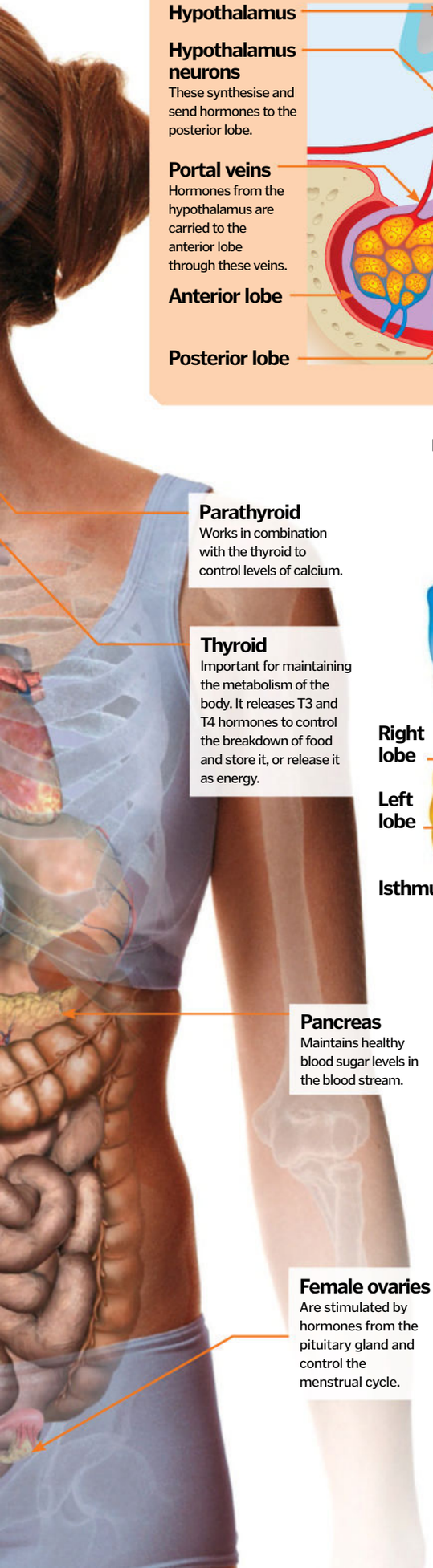
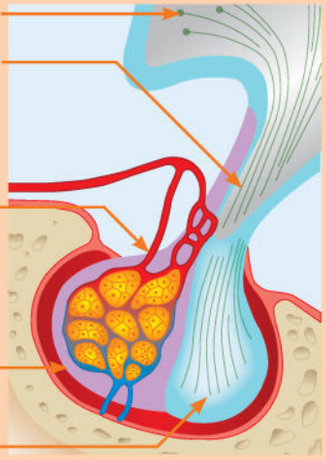


Pituitary gland

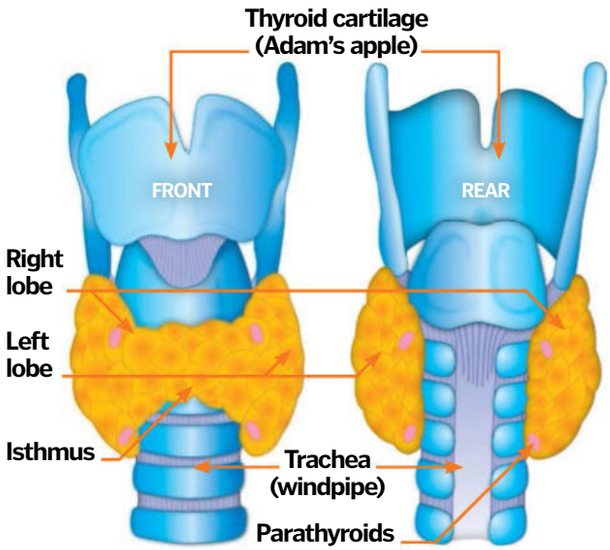


The pea-sized pituitary gland is a major endocrine gland that works under the control of the hypothalamus. The two organs inside the brain work in concert and mediate feedback loops in the endocrine system to maintain control and stability within the body.

The pituitary gland features an anterior (front) lobe and a posterior (rear) lobe. The anterior lobe secretes growth hormones that stimulate the development of the muscles and bones; it also stimulates the development of ovarian follicles in the female ovary. In males, it stimulates the production of sperm cells. The posterior lobe stores vasopressin and oxytocin that is supplied by the hypothalamus. Vasopressin allows the retention of water in the kidneys and suppresses the need to excrete urine. It also raises blood pressure by contracting the blood vessels in the heart and lungs.

Oxytocin influences the dilation of the cervix before giving birth and the contraction of the uterus after birth. The lactation of the mammary glands are stimulated by oxytocin when mothers begin to breastfeed.

Thyroid and parathyroids



The two lobes of the thyroid sit on each side of the windpipe and are linked together by the isthmus that runs in front of the windpipe. It stimulates the amount of body oxygen and energy consumption, thereby keeping the metabolic rate of the body at the current levels to keep you healthy and active.

The hypothalamus and the anterior pituitary gland are in overall control of the thyroid and they respond to changes in the body by either suppressing or increasing thyroid stimulating hormones. Overactive thyroids cause excessive sweating, weight loss and sensitivity to heat, whereas underactive thyroids cause sensitivity to hot and cold, baldness and weight gain. The thyroid can swell during puberty and pregnancy or due to viral infections or lack of iodine in a person's diet.

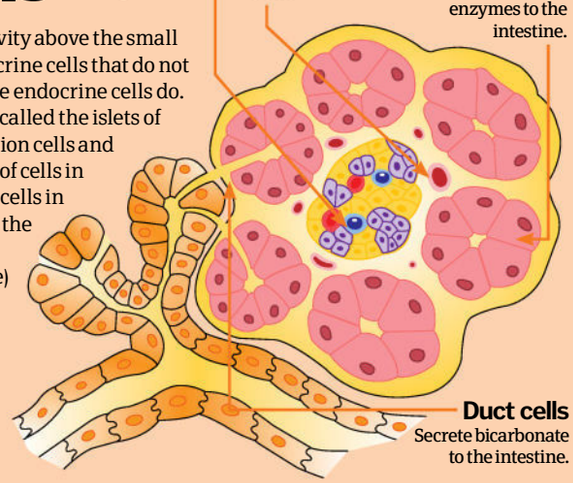
The four small parathyroids regulate the calcium levels in the body; it releases hormones when calcium levels are low. If the level of calcium is too high the thyroid releases calcitonin to reduce it. Therefore, the thyroid and parathyroids work in tandem.

Pancreatic cells

The pancreas is positioned in the abdominal cavity above the small intestine. It consists of two types of cell, the exocrine cells that do not secrete their output into the bloodstream but the endocrine cells do.

The endocrine cells are contained in clusters called the islets of Langerhans. They number approximately 1 million cells and are only one or two per cent of the total number of cells in the pancreas. There are four types of endocrine cells in the pancreas. The beta cells secrete insulin and the alpha cells secrete glucagon, both of which stimulate the production of blood sugar (glucose) in the body. If the Beta cells die or are destroyed it causes type 1 diabetes, which is fatal unless treated with insulin injections.

The other two cells are the gamma and delta cells. The former reduces appetite and the latter reduces the absorption of food in the intestine.



Exploring the sensory system

The complex senses of the human body and how they interact is vital to the way we live day to day

The sensory system is what enables us to experience the world. It can also warn us of danger, trigger memories and protect us from damaging stimuli, such as hot surfaces. The sensory system is highly developed, with many components detecting both physical and emotional properties of the environment. For example, it can interpret chemical molecules in the air into smells, moving molecules of sound into noises and pressure placed on the skin into touch. Indeed, some of our senses are so finely tuned they allow reactions within milliseconds of detecting a new sensation.

The five classic senses are sight, hearing, smell, taste and touch. We need senses not only to interpret the world around us, but also to function within it. Our senses enable us to modify our movements and thoughts, and sometimes they directly feed signals into muscles. The sensory nervous system that lies behind this is made up of receptors, nerves and dedicated parts of the brain.

There are thousands of different stimuli that can trigger our senses, including light, heat, chemicals in food and pressure. These 'stimulus modalities' are then detected by specialised receptors, which convert them into sensations such as hot and cold, tastes, images and touch. The incredible receptors – like the eyes, ears, nose, tongue and skin – have adapted over time to work seamlessly together and without having to be actively 'switched on'.

However, sometimes the sensory system can go wrong. There are hundreds of diseases of the senses, which can have both minor effects, or a life-changing impact. For example, a blocked ear can affect your balance, or a cold your ability to smell – but these things don't last for long.

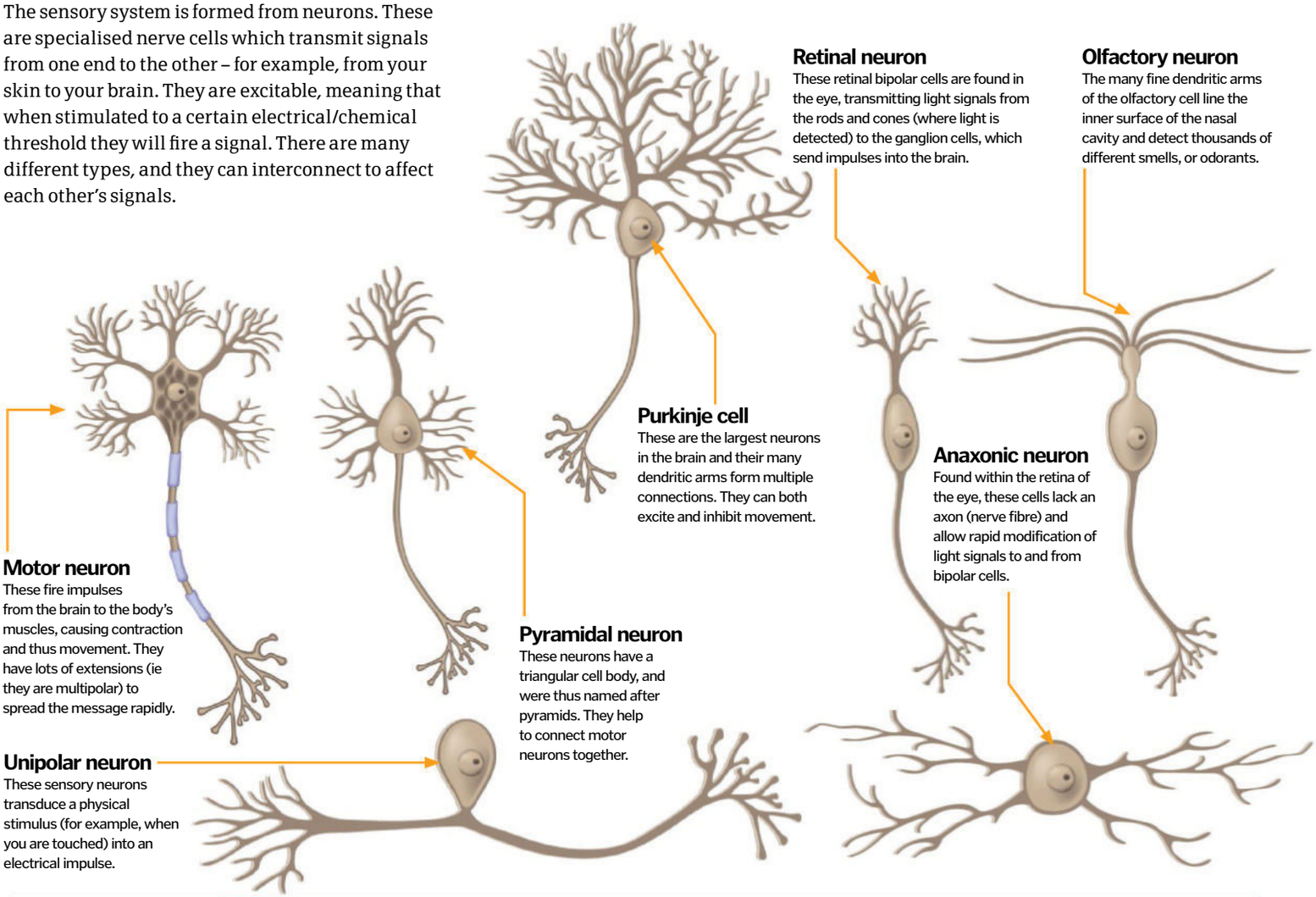
In contrast, say, after a car accident severing the spinal cord, the damage can be permanent. There are some very specific problems that the sensory system can bring as well. After an amputation, the brain can still detect signals from the nerves that used to connect to the lost limb. These sensations can cause excruciating pain; this particular condition is known as phantom limb syndrome.

However the sensory system is able to adapt to change, with the loss of one often leading to others being heightened. Our senses normally function to gently inhibit each other in order to moderate individual sensations. The loss of sight from blindness is thought to lead to strengthening of signals from the ears, nose and tongue. Having said this, it's certainly not universal among the blind, being more common in people who have been blind since a young age or from birth. Similarly, some people who listen to music like to close their eyes, as they claim the loss of visual input can enhance the audio experience.

Although the human sensory system is well developed, many animals out-perform us. For example, dogs can hear much higher-pitched sounds, while sharks have a far better sense of smell – in fact, they can sniff out a single drop of blood in a million drops of water!

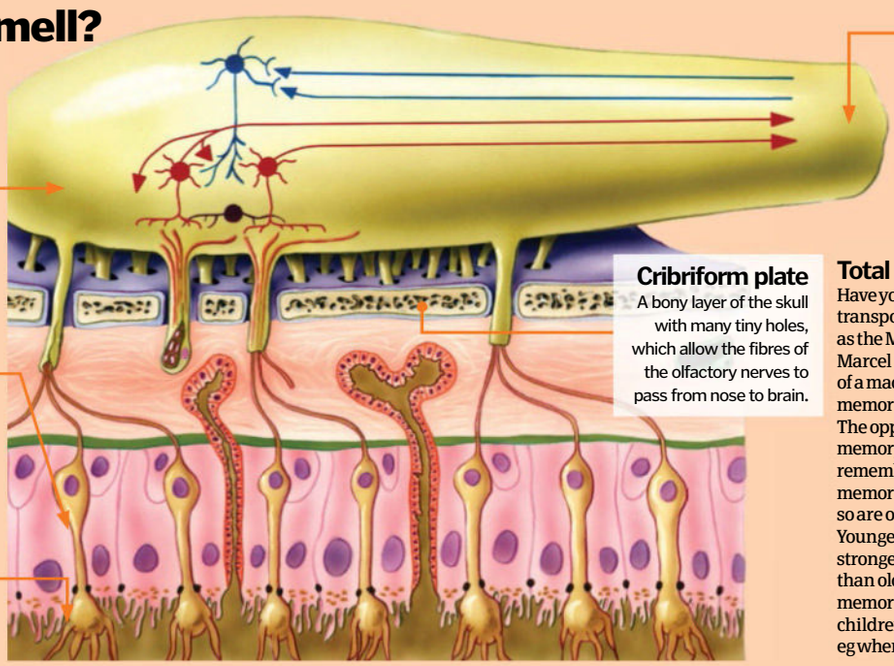
Body's messengers

The sensory system is formed from neurons. These are specialised nerve cells which transmit signals from one end to the other – for example, from your skin to your brain. They are excitable, meaning that when stimulated to a certain electrical/chemical threshold they will fire a signal. There are many different types, and they can interconnect to affect each other's signals.



How do we smell?

Find out how our nose and brain work together to distinguish scents



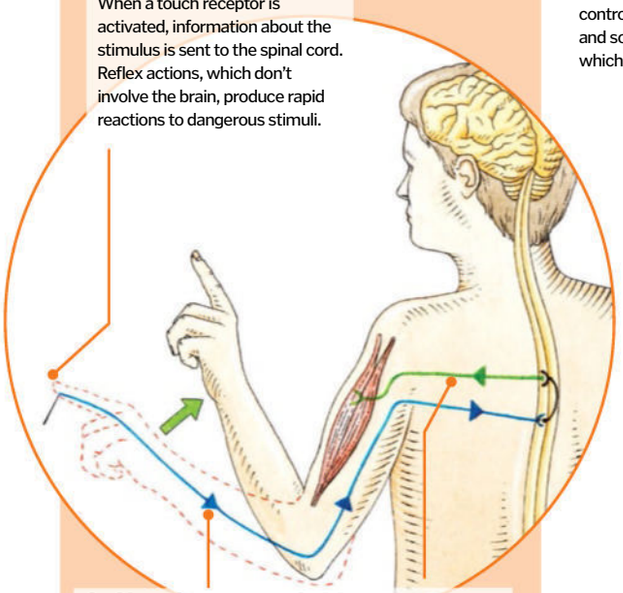
Total recall

Have you ever smelt something that transported you back in time? This is known as the Madeleine effect because the writer Marcel Proust once described how the scent of a madeleine cake suddenly evoked strong memories and emotions from his childhood. The opposite type of recall is voluntary memory, where you actively try and remember a certain event. Involuntary memories are intertwined with emotion and so are often the more intense of the two. Younger children under the age of ten have stronger involuntary memory capabilities than older people, which is why these memories thrust you back to childhood. Older children use voluntary memory more often, eg when revising for exams.

Understanding lightning reflexes

Have you ever felt something scorching hot or freezing cold, and pulled your hand away without even thinking about it? This reaction is a reflex. Your reflexes are the most vital and fastest of all your senses. They are carried out by the many 'reflex arcs' located throughout the body.

For example, a temperature-detecting nerve in your finger connects to a motor nerve in your spine, which travels straight to your biceps, creating a circular arc of nerves. By only having two nerves in the circuit, the speed of the reflex is as fast as possible. A third nerve transmits the sensation to the brain, so you know what's happened, but this nerve doesn't interfere with the arc; it's for your information only. There are other reflex arcs located within your joints, so that, say, if your knee gives way or you suddenly lose balance, you can compensate quickly.



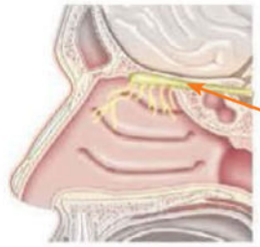
1. Touch receptor
When a touch receptor is activated, information about the stimulus is sent to the spinal cord. Reflex actions, which don't involve the brain, produce rapid reactions to dangerous stimuli.

2. Signal sent to spine
When sensory nerve endings fire, information passes through nerve fibres to the spinal cord.

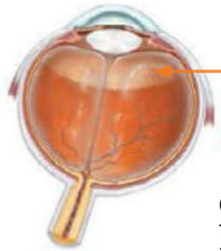
3. Motor neurons feed back
The signals trigger motor neurons that initiate their own impulses that feed back to the muscle, telling it to move the body part.

Key nerves

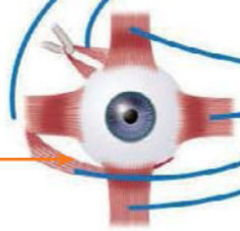
These transmit vital sensory information to our brain while also sending motor function signals all around the body



Olfactory nerve
Starting in the nose, this nerve converts chemical molecules into electrical signals that are interpreted as distinct odours via chemoreceptors.

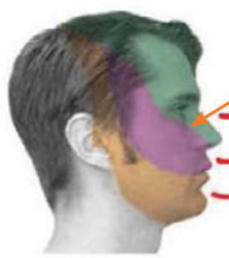


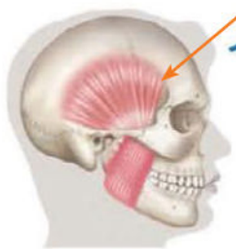
Optic nerve
The optic nerves convert light signals into electrical impulses, which are interpreted in the occipital lobe at the back of the brain. The resulting image is seen upside down and back to front, but the brain reorients the image.

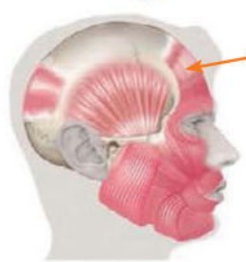


Eye movements
The trochlear, abducent and oculomotor nerves control the eye muscles and so the direction in which we look.

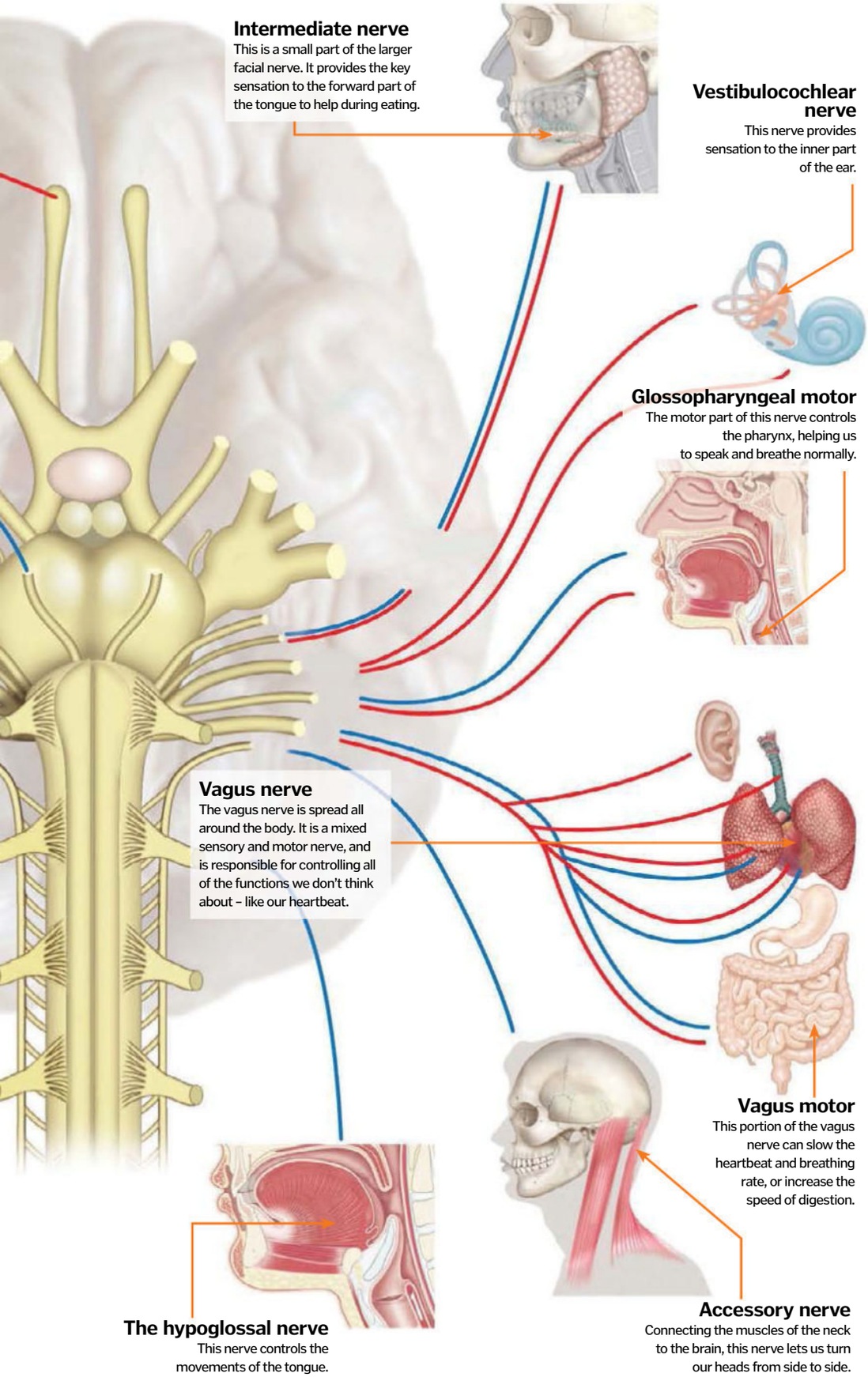
Trigeminal nerve
This nerve is an example of a mechanoreceptor, as it fires when your face is touched. It is split into three parts, covering the top, middle and bottom thirds of your face.







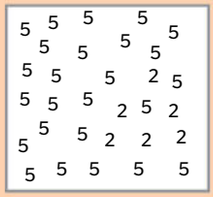
Facial and trigeminal motors
The motor parts of these nerves control the muscles of facial expression (for example, when you smile), and the muscles of the jaw to help you chew.



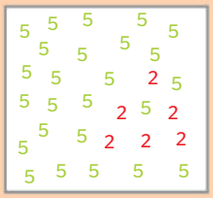
Crossed senses

Synaesthesia is a fascinating, if yet completely understood, condition. In some people, two or more of the five senses become completely linked so when a single sensation is triggered, all the linked sensations are activated too. For example, the letter 'A' might always appear red, or seeing the number '1' might trigger the taste of apples. Sights take on smells, a conversation can take on tastes and music can feel textured.

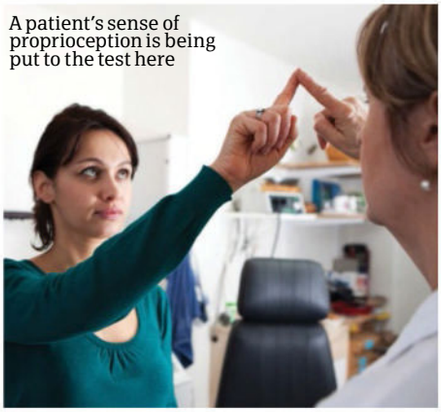
People with synaesthesia certainly don't consider it to be a disorder or a disease. In fact, many do not think what they sense is unusual, and they couldn't imagine living without it. It often runs in families and may be more common than we think. More information about the condition is available from the UK Synaesthesia Association (**www.uksynaesthesia.com**).



Non-synaesthetes struggle to identify a triangle of 2s among a field of number 5s.



But a synaesthete who sees 2s as red and 5s as green can quickly pick out the triangle.



A patient's sense of proprioception is being put to the test here

Is there really a 'sixth sense'?

Our sense of balance and the position of our bodies in space are sensations we rarely think about and so are sometimes thought of as a 'sixth sense'. There is a whole science behind them though, and they are collectively called proprioception. There are nerves located throughout the musculoskeletal system (for example, within your muscles, tendons, ligaments and joints) whose job it is to send information on balance and posture back to the brain. The brain then interprets this information rapidly and sends instructions back to the muscles to allow for fine adjustments in balance. Since you don't have to think about it and you can't switch it off, you don't know how vital these systems are until they're damaged. Sadly some medical conditions, including strokes, can affect our sense of proprioception, making it difficult to stand, walk, talk and move our limbs.

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Understanding chickenpox

Discover the biology behind the infamous childhood ailment and why it never really goes away…

Chickenpox is a strain of the Varicella zoster virus, which many of us have experienced during our youth. Most prominent in children, the virus is contracted through coughing and sneezing or transferred on shared objects, which makes schools a prime location.

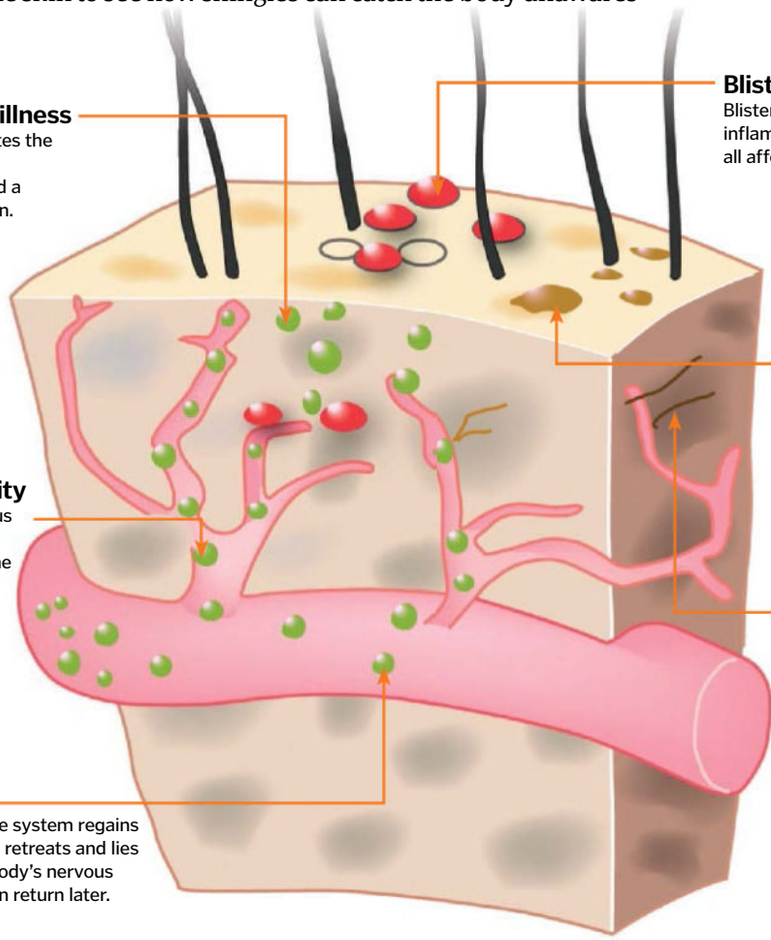
The most famous symptom is the appearance of small itchy red spots, which vary in size from 10-20 millimetres (0.4-0.8 inches) across. The extent can vary but in most cases they cover the face, arms, legs, stomach and back. These develop into fluid-filled blisters and are often accompanied by a fever. The blisters burst, scab over and fall off within a few days, but new waves of spots can emerge to replace them; it usually takes one to two weeks for the body to regain control. Chickenpox is rarely serious but it is important not to interfere with the scabs as infection can make it more severe.

A vaccine is only offered in extreme circumstances when an individual may have a weak immune system or be particularly vulnerable to the disease.

After the outbreak, chickenpox doesn't disappear entirely. The disease lies in a dormant state within the body as your immune system keeps it under wraps. The infection can break out again later and reappear as shingles. A rash builds up on a certain point of the body and the symptoms return, most commonly in people over 50. On average, three in every 1,000 people contract shingles in the UK each year.

When chickenpox strikes back…

Get under the skin to see how shingles can catch the body unawares



Start of the illness
The virus infiltrates the skin and causes inflammation and a burning sensation.

Blisters emerge
Blisters become visible and inflamed rashes appear on all affected areas.

Don't scratch!
The blisters then harden into scabs and fall off. Scratching at the spots makes the healing process slower.

Low immunity
The Varicella virus becomes active when the immune system is weak, overcoming the body's natural defences.

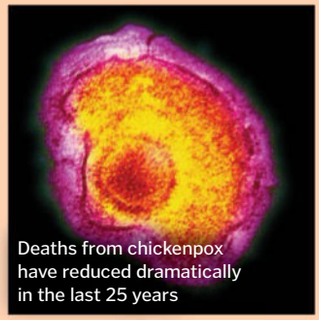
Future effects
In around 10-20 per cent of people who have shingles, the nerve fibres become damaged which can lead to postherpetic neuralgia (nerve pain).

Dormancy
Once the immune system regains control, the virus retreats and lies dormant in the body's nervous system, but it can return later.

Grown-up chickenpox

90 per cent of adults are immune if they've had the disease as a child but it still affects adults and teenagers. If you develop chickenpox at a later age, all the symptoms are more severe, with more chronic pain, headaches and sore throats; therefore, there is greater need for treatment, such as pain relief and soothing creams.

The disease tends to affect adults more dramatically as it can now mutate into a variety of other strains, such as shingles or, in extreme cases, lead to encephalitis, postherpetic neuralgia or pneumonia. However, the chances of this happening are only around ten per cent.



Deaths from chickenpox have reduced dramatically in the last 25 years

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DID YOU KNOW? *The average person will produce 140-280g (5-10oz) of basal tears per day to keep the eyes moist*

Why do we cry?

Find out how our tears have been helping to protect us since the dawn of time

Whether it's a sad film, a joyous reunion or simply that you've just banged your knee on a coffee table, everyone has cried at some point in their life. But why have we evolved to do it?

There's a theory that it stems right back as far as our pre-evolved days, where tears streaming down our primitive eyes and blurring our vision was a sign of surrender, proving that we meant our aggressor no harm.

But moving on to the present day, the science shows that there are a number of sound biological reasons for tearing up.

There are reflex tears, the stream caused by getting smoke or sulphenic acid from a chopped onion into your eye. When this happens, sensory nerves in your cornea send a signal to the brain that the eyes need protecting. The brain then releases hormones into the lacrimal glands located behind the eyelid, which produces tears to provide a layer of protection and to water down the irritant.

However, the more common form of crying is the emotional kind. When strong emotions are brought about – whether through happiness, sadness or pain – the brain's cerebrum is aware that you are undergoing a strong emotional reaction to a stimulus. The endocrine system releases a set of hormones to the lacrimal gland, which secretes liquid onto the eye. Excess water can escapes down the nose, via the tear ducts.

Studies of tears have shown there is a biochemical reason for emotional crying. While reflex tears are 98 per cent water, emotional tears contain several chemicals, including adrenocorticotropic hormones present in times of stress, and leucine-enkephalin – an endorphin that releases pain and improves your mood. Therefore, crying appears to be a way of releasing hormones and toxins that build up during times of intense emotion.

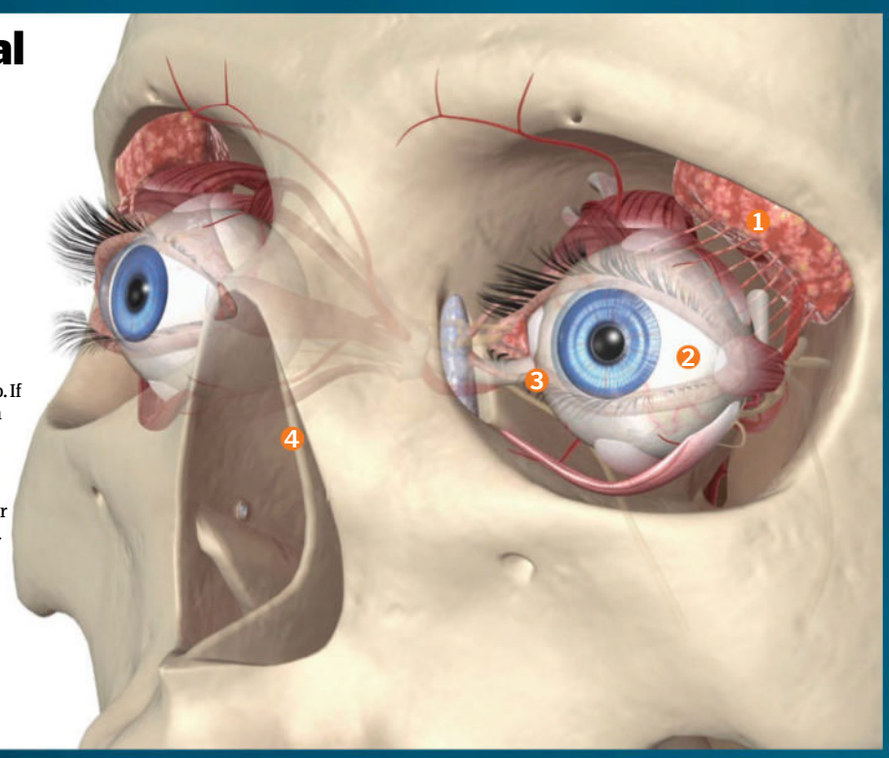
The lacrimal system

1 Lacrimal gland
This gland receives the message from the cerebrum to produce tears.

2 Cornea
Tears help protect the surface of the eye.

3 Tear ducts
This is where the water flows to. If there's too much, it flows down the face.

4 Runny nose
Tears that flow through the tear ducts go down a nasal passage, which is what causes a runny nose.



Battle of the sexes

While there is a stereotype that women are tearier than men, there is some science to explain the reasons behind this. Studies have shown that women cry about four times as often as men and, while there are cultural factors to be taken into consideration, there are biological factors too. Until their adolescent years, boys and girls cry fairly equally. As testosterone levels rise in boys, they are more likely to get angry than upset. Meanwhile, girls gain increased oestrogen levels, which modifies endorphin production, often leading to more emotional responses to stimuli.

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THE OTHER SENSES

Discover the ten senses you never knew you had

The five classic human senses get all of the attention, so it might surprise you to know that there are several more senses working quietly in the background. Take something as simple as sitting down to eat your dinner. All five senses are active, taking in the sight and smell of the food on your plate, the taste and feel as you put it into your mouth, and the sound as you chew, but without your other senses, the experience would not be the same.

The simple act of sitting at the table and getting the food from the plate to your mouth is a sensory feat. You can't keep an eye on your limbs all the time, so the positions of your joints and the tension on your muscles is constantly measured, enabling you to eat without having to closely watch what you are doing. In order to stay balanced as you reach across the table, sensory information is quietly gathered by specialist structures in the inner ear.

Once the food is inside your mouth, one set of sensors provide information about the temperature, and another set of specialist nerves called nociceptors quickly alert you if the mouthful is dangerously hot or cold. At the same time, your blood and the fluid surrounding your central nervous system are monitored to make sure that levels of carbon dioxide and oxygen remain within normal limits, and your breathing rate is subconsciously adjusted.

As your stomach starts to fill up, stretch sensors feed back to the brain, turning down the signals that are telling you to keep eating, and when the part-digested food starts to hit your small intestine, sensors trigger the production of a hormone that flicks the switch telling you that you have had enough. The build-up of waste products is also closely monitored, and long after your meal is completed, sensors will alert you when it is time to get rid of anything that is left over.

So while the traditional five senses are the ones that we rely on most in our conscious interactions with the world around us, there are several more that work quietly in the background as we go about our daily lives.

DID YOU KNOW? *Otolith is ancient Greek for 'ear stone' and describes the gravity-detecting crystals of calcium inside the ear*

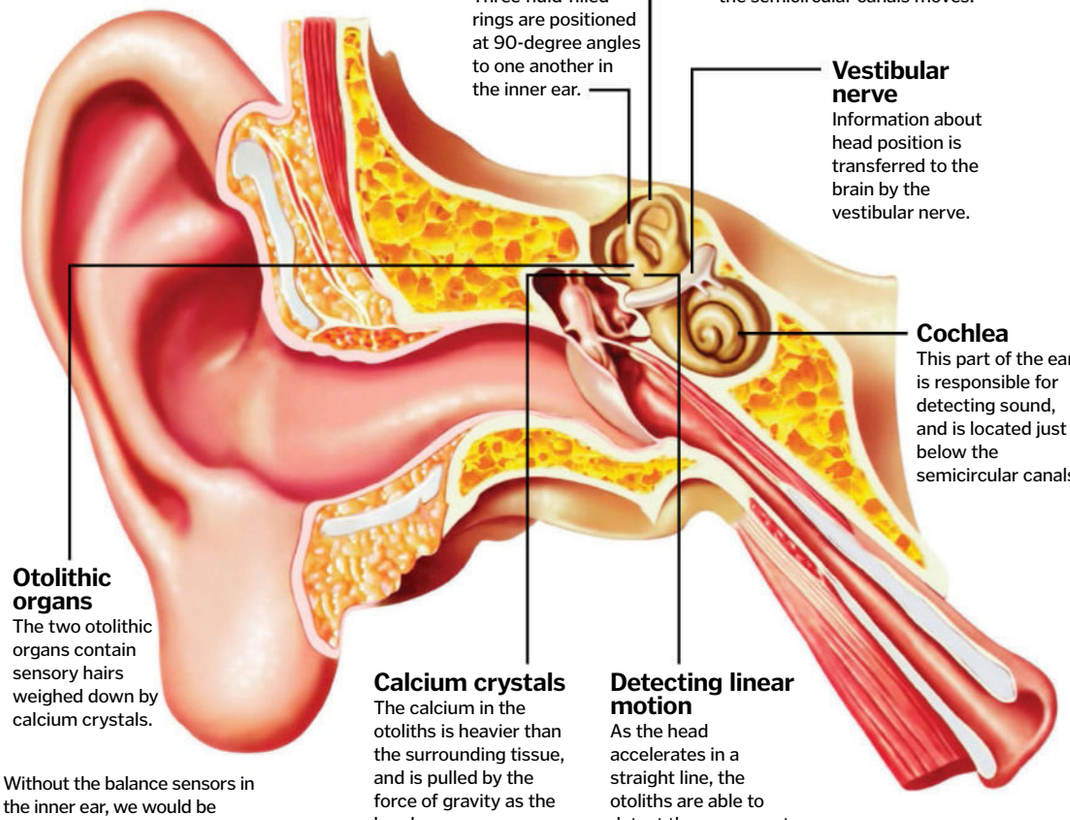
The brain uses a combination of signals from the eyes, ears, joints and muscles to maintain balance

Balance
(equilibrioception)

Our sense of balance is handled by the vestibular system in the inner ear, and provides vital feedback about head position and movement. Inside the ear there are three semicircular canals; each is filled with fluid. At one end of each canal is a bulge supporting a series of sensitive hairs. As you move your head, the fluid moves too, bending the tiny hairs and sending information about head rotation to the brain. There are also two organs called otoliths on each side of the head. These contain sensory hairs weighed down by calcium crystals that help to tell which way is up.

The sense of balance

The inner ear contains specialised structures that detect head movements



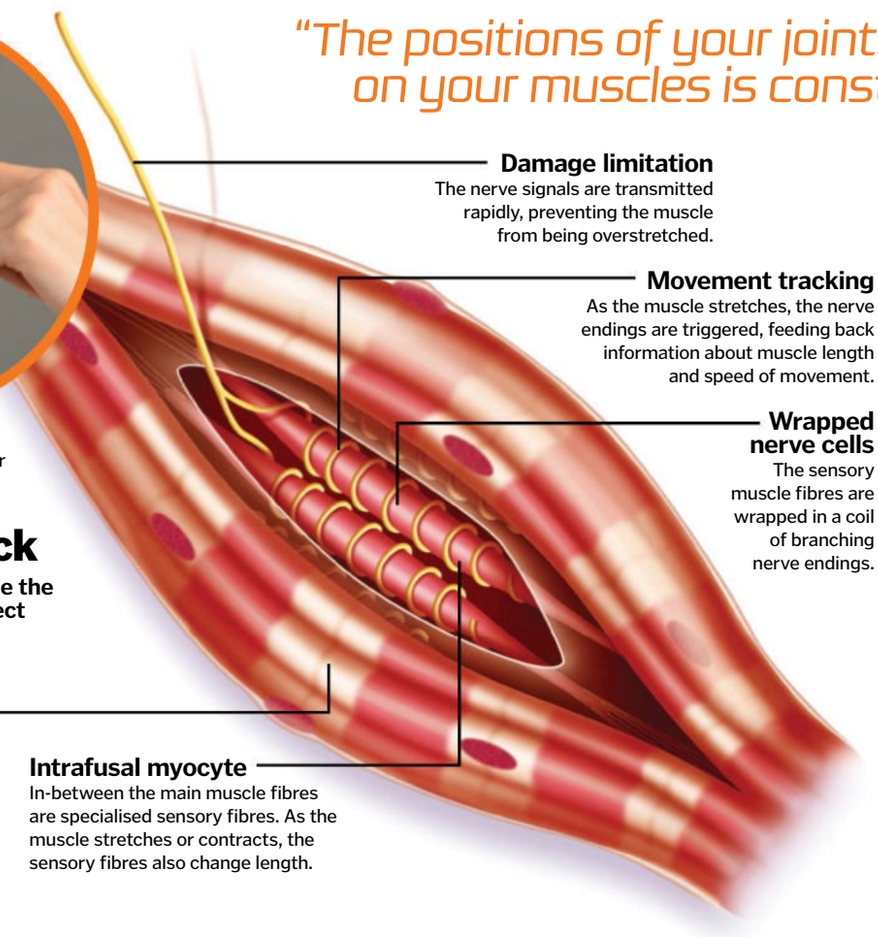
Without the balance sensors in the inner ear, we would be constantly dizzy and disorientated

"The positions of your joints and the tension on your muscles is constantly measured"

Without proprioception, you wouldn't be able to touch your nose with your eyes closed

Keeping track

Specialised fibres inside the muscle are able to detect stretch and movement



Movement
(proprioception)

Even the simplest movements would be a challenge without this sense; proprioception allows us to keep track of the position of our bodies in space without looking. This enables us to make the tiny adjustments that keep us from falling over when we are standing still, helps us to judge the distance each time we take a step, and allows us to coordinate complex movements like riding a bike or playing the piano. The receptors responsible are found in the joints, muscles and skin, and help to relay information about the angle and position of each joint, and the tension on our tendons and muscles, providing the brain with constant feedback.

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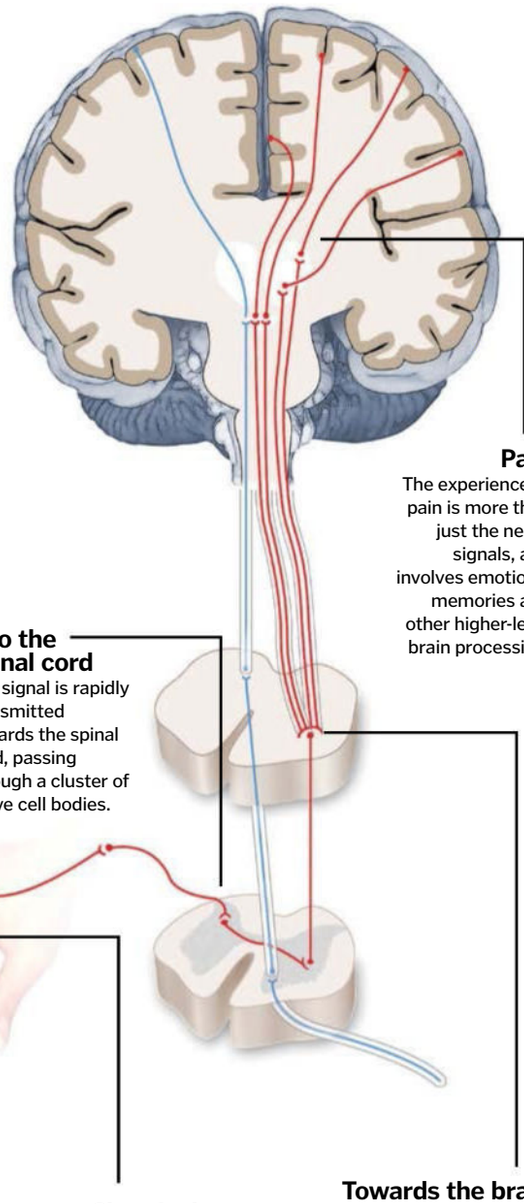
Pain (nociception)

This sense allows us to tell the difference between a harmless touch and potential damage

Specialised nerve endings called nociceptors are found in the skin and organs. Unlike normal sensory nerves, these are not activated by low-level stimulation, and instead wait until the temperature, pressure or level of a toxic substance is enough to cause the body harm. Activation of these nerves can trigger a swift withdrawal reflex, prompting us to move away from the harmful stimulus, and in the long term it acts as a deterrent, teaching us to avoid whatever it was that caused the unpleasant sensation in the first place. The ability to sense damaging stimuli is different from the feeling of pain, and the sensation that we are all familiar with involves a significant amount of further processing in the brain.

How we feel pain

Detecting damage helps to keep our bodies safe



Pain
The experience of pain is more than just the nerve signals, and involves emotions, memories and other higher-level brain processing.

Into the spinal cord
The signal is rapidly transmitted towards the spinal cord, passing through a cluster of nerve cell bodies.

Pain receptor
Nociceptors are only activated if tissue damage is imminent, alerting the body to potential danger.

Heat
Some nerves respond specifically to heat, becoming active at temperatures above 40-45 degrees Celsius (104-113 degrees Fahrenheit).

Cold
Other nerves respond to cold temperatures, and start to fire when temperatures drop below five degrees Celsius (41 degrees Fahrenheit).

Pressure
Some nociceptors respond to pressure, triggering when parts of the body are dangerously compressed.

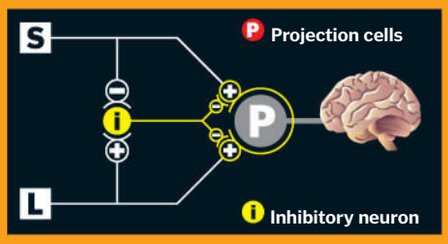
Chemical
Some nociceptors respond to chemical signals of tissue damage, like the presence of acid, or the lack of oxygen.

Towards the brain
The incoming signal can induce a rapid withdrawal reflex just by reaching the spinal cord, but the feeling of pain relies on signals travelling onwards to the brain.

"The ability to sense damaging stimuli is different from the feeling of pain"

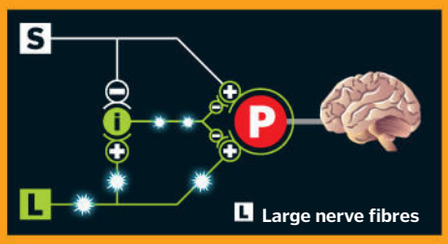
Numbing the pain

Have you ever put your finger in your mouth after shutting it in a door, or grabbed hold of your foot after stubbing your toe? Incoming signals from our other senses can switch off pain signals, preventing some of them from reaching the brain.



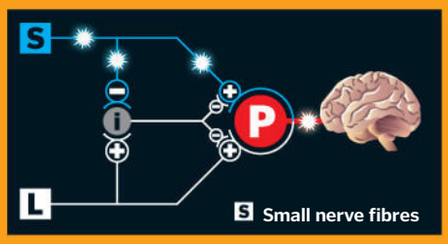
Pain gate

Nociceptive (pain-detecting) nerves send their signals towards the spinal cord before they go on to the brain, but in order to reach the brain they have to travel through a biological gate.



Inhibition of pain

Touch-sensitive nerves pass their messages through the same region as the pain signals. These nerve cells are larger and faster, and are able to close the gate, overriding the pain signals.



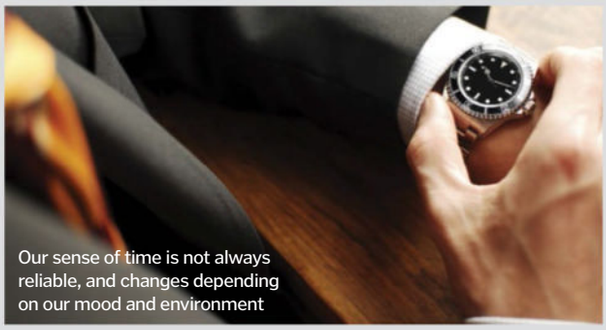
Pain signal

Without the input from the large nerve fibres, the gate is opened. This allows pain messages travelling along the smaller nerve fibres to pass through the spinal cord and onwards towards the brain.

Time (Chronoception)

Internal clocks help us to keep track of time

Even without a watch, we have a sense of the passage of time, but our body clock is not like any normal timepiece. The suprachiasmatic nucleus in the brain is the master clock, and it governs our daily cycle, or circadian rhythm. This 24-hour clock controls daily peaks and troughs in our hormone levels, influencing many behaviours, from eating to sleeping. For shorter tasks, scientists think that we might have several internal stopwatches keeping time inside our brains. As yet, the parts of the brain responsible for keeping these rhythms have not been discovered.



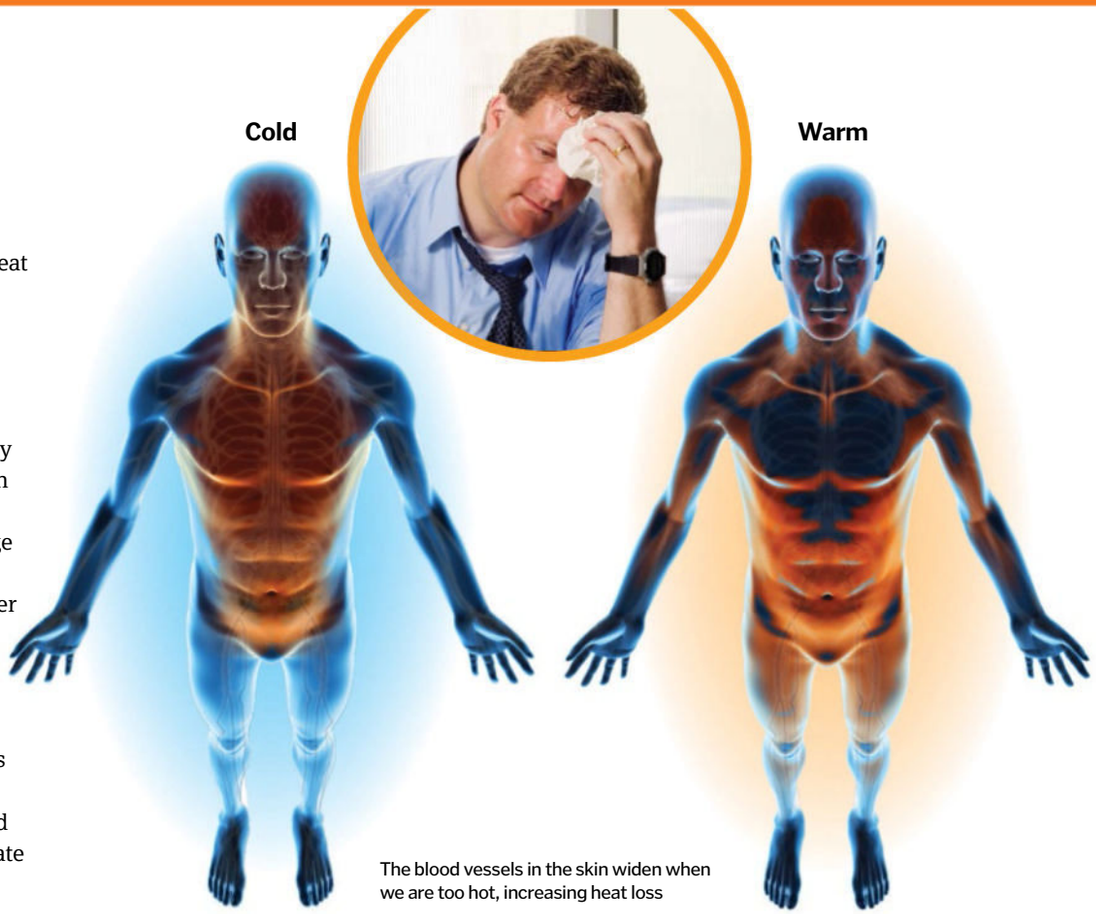
Our sense of time is not always reliable, and changes depending on our mood and environment

Temperature
(thermoception)

An internal thermostat keeps our body temperature at a constant 37°C (98.6°F)

It is crucial for our bodies to be able to detect heat and cold, firstly to ensure that our internal organs are kept at the right temperature to function properly, and secondly to prevent us being damaged by extremes. We are able to detect the temperature of our extremities by a series of nerves in the skin, while our core body temperature is monitored by a part of the brain known as the hypothalamus.

As warm-blooded animals, we generate huge amounts of heat as we burn sugars to release energy. This helps to keep us warm, but in order to maintain a constant temperature, adjustments need to be made continually to make up for changes in the environment or changes in our level of activity. For immediate changes in body temperature, the brain orders the body to shiver or sweat, and for more long-term regulation, the production of thyroid hormone is ramped up or down, altering the rate at which we burn sugars and generate heat.



The blood vessels in the skin widen when we are too hot, increasing heat loss

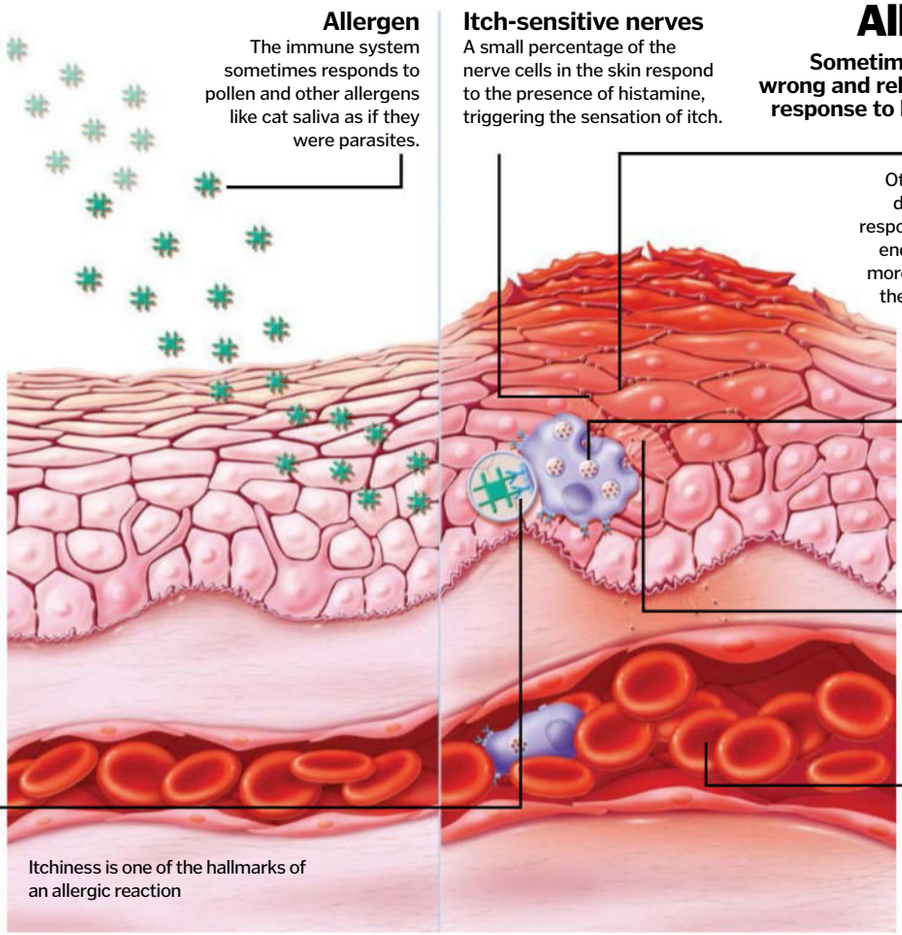
Itchiness

This unusual sensation is closely related to pain

Itchiness is the body's way of alerting us to parasites and irritants. It prompts a reflex scratch response, which scientists think is to draw our attention to that area of the body so any irritant can be eliminated. The exact science of itching is still unclear, but one of the most well studied culprits is a molecule known as histamine. Parasites like biting insects and worms often produce chemicals known as proteases, which help them to break through the barrier of the skin. These proteases trigger white blood cells to release histamine, which in turn activates our body's itch-sensitive nerve cells.

Allergic itch

Sometimes the body gets it wrong and releases histamine in response to harmless allergens



Allergen
The immune system sometimes responds to pollen and other allergens like cat saliva as if they were parasites.

Itch-sensitive nerves
A small percentage of the nerve cells in the skin respond to the presence of histamine, triggering the sensation of itch.

Extra sensitive
Other chemicals released during the inflammatory response sensitise the nerve endings, making them fire more easily and magnifying the sensation of itchiness.

Mast cell
These specialised immune cells behave like sentry towers in the skin. Their normal function is to respond rapidly to the presence of parasites.

Histamine
This small molecule is responsible for the itchiness associated with allergic reactions.

Leaky vessels
Histamine also makes local blood vessels leaky, allowing more white blood cells to enter the area.

Allergen detection
The immune system sometimes mistakenly produces antibodies to attack harmless allergens. Mast cells then use these antibodies to detect when more allergens arrive.

Itchiness is one of the hallmarks of an allergic reaction

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Internal sensors

Specialist sensory cells inside the body supply the brain with information about vital systems

We are all familiar with the senses that allow us to interact with our external environment, but behind the scenes, we need to constantly keep track of events happening on the inside. If we didn't, our tissues would quickly run out of fuel and oxygen, and waste products would start to build up. The state of the body is constantly monitored by specialised sensory cells in the brain and organ systems, ensuring that any imbalances are quickly noticed and corrected, helping to ensure that the supply of food, water, and oxygen always meets the demand.

Thirst

Sensing the water level in our bodies prevents dangerous dehydration

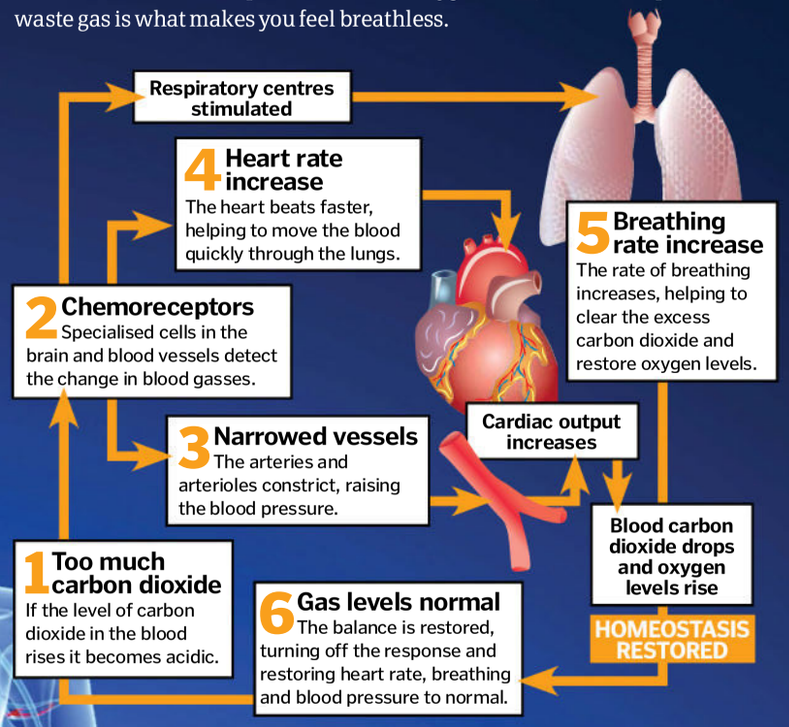
The ability to detect when we need to drink is crucial for survival. When we don't have enough water, the salts, sugars and proteins inside our bodies become more concentrated, and function starts to decline.

Minute changes in water level are detected by special cells in the brain called osmoreceptors, triggering the feeling of thirst. To prevent further water loss, the body releases a hormone known as vasopressin, which acts on the kidneys to stop water being excreted as urine. A hormone called angiotensin is also produced, making the blood vessels constrict and raising the blood pressure to compensate for the lack of water until more arrives.

Breathing

The ability to sense blood gases helps to keep oxygen and carbon dioxide levels normal

Breathing is controlled by the respiratory centres in the brain. Sensors in this area, along with sensors in the carotid artery and the aorta, detect the levels of gases in the blood and in the fluid that surrounds the brain. The carbon dioxide level is more important than the oxygen level, as a build up of this waste gas is what makes you feel breathless.



Hunger and fullness

Digestive sensors help to prevent us overeating, but they are easy to ignore

The feeling of hunger is controlled by a part of the brain called the hypothalamus. It produces two types of molecules: orexigens, which make you feel hungry; and anorexigens, which make you feel full. The hypothalamus decides which molecules to produce based on information sent by the digestive system.

When you haven't eaten for a while, the top part of the stomach starts to produce a molecule called ghrelin, signalling to the hypothalamus that you need to take in more food. After a meal, stretch receptors in your stomach help to signal that you are full, and when fat and protein start to enter the first part of the small intestine, a molecule called cholecystokinin (CCK) helps to switch the hungry feeling off.

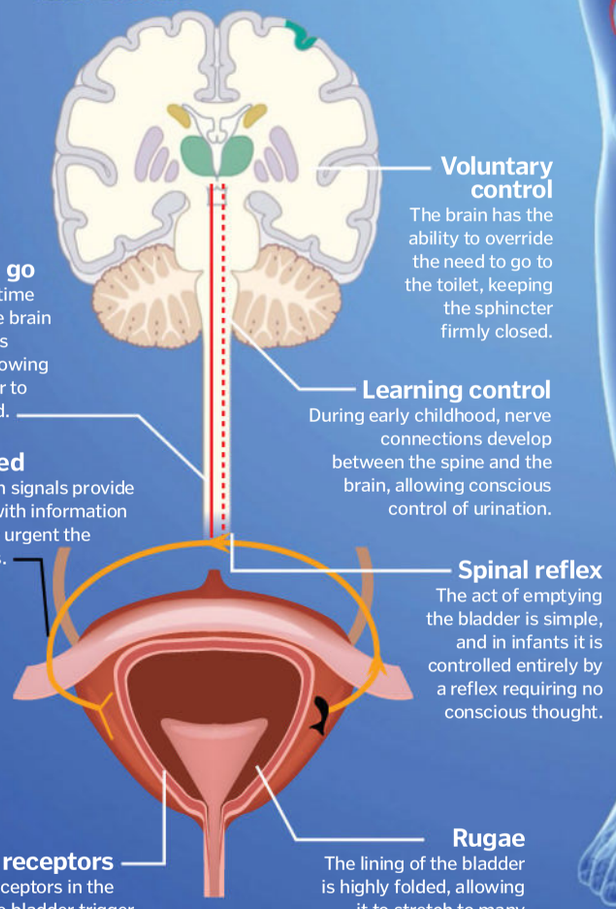
Excretion

Internal sensors help to time the elimination of waste products from the body

It is vital to remove waste products from the body before they start to build up, and there are several internal systems responsible for sensing, processing, and removing waste. Some leave via the lungs, some via the back passage, and some via the bladder.

Control of waste disposal

Bladder emptying is timed using a specialised sense of touch



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Fat produces a hormone called leptin, which helps the brain keep track of how much energy is stored

Animal senses

Magnetoreception

This incredible sense allows animals to detect Earth's magnetic field, and is shared by a diverse array of species, from honeybees to sea turtles. Birds may actually be able to see Earth's magnetic field lines by detecting the subtle changes that they make to the light, helping them to navigate in unfamiliar territory.

Electroreception

Muscle movements are powered by electrical impulses, and in water, dissolved ions can transmit the tiny currents. Many aquatic species are able to detect these subtle pulses, alerting them to danger or guiding them to their prey. Sharks, skates and rays have jelly-filled pores known as ampullae of Lorenzini, capable of detecting the slight differences in voltage as a fish swims past.

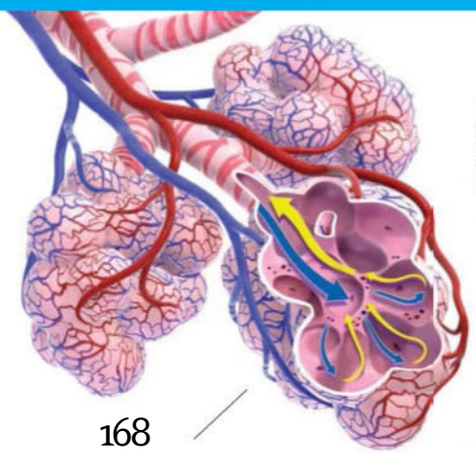
Heat vision

This specialised sense is used by pit vipers and some other snakes to detect the heat signature given off by their prey. Tiny pits on either side of the snake's head contain thousands of nerve endings that pick up infrared radiation, detecting changes in temperature of just fractions of a degree.

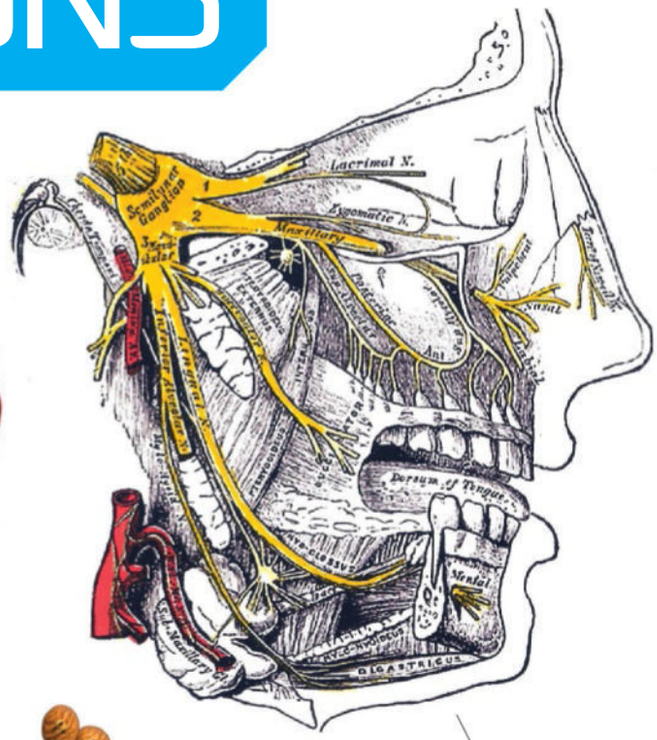
DID YOU KNOW? *Monotremes – the platypus and the echidnas – are the only mammals that can sense electrical currents*

CURIOUS QUESTIONS

145 **What makes your nose run?**

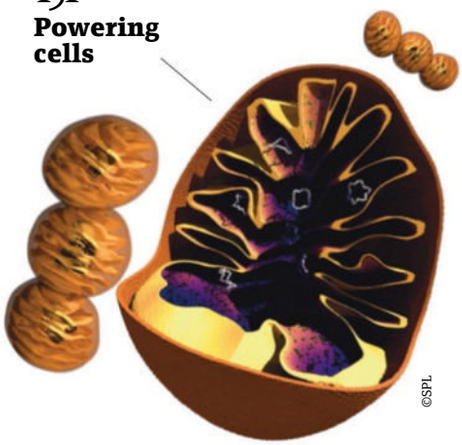


168 **What do alveoli do?**



144 **Brain freeze explained**

151 **Powering cells**



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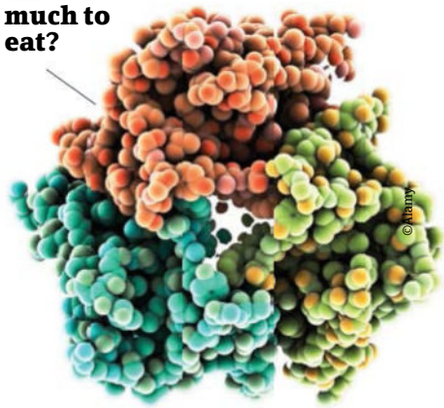
173 **How do we know how much to eat?**



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The truth behind thinking

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What makes feet smell?

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What causes blisters to appear?

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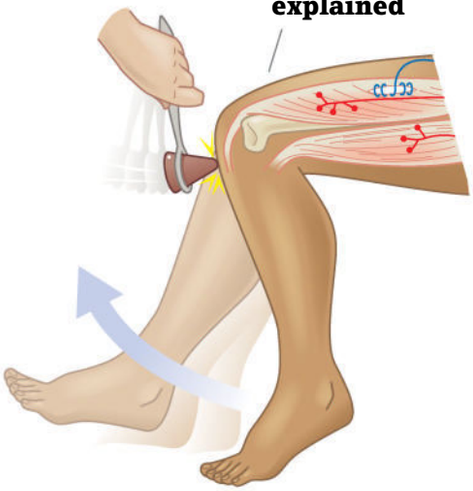
Do our brains control us?



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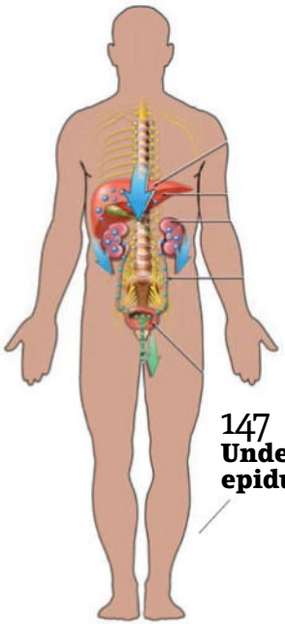

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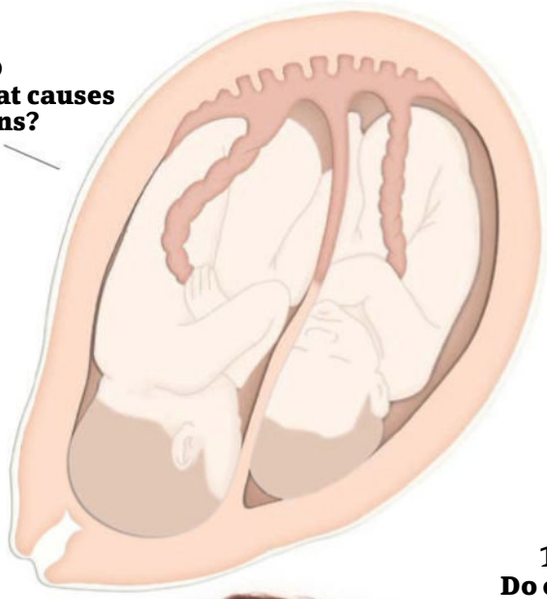
Understand epidurals



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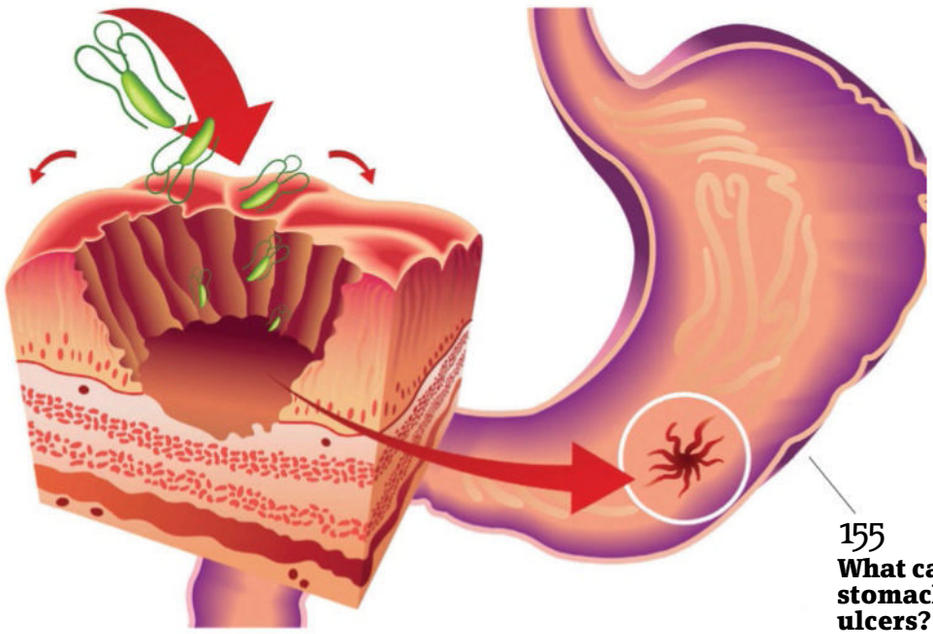
What causes twins?



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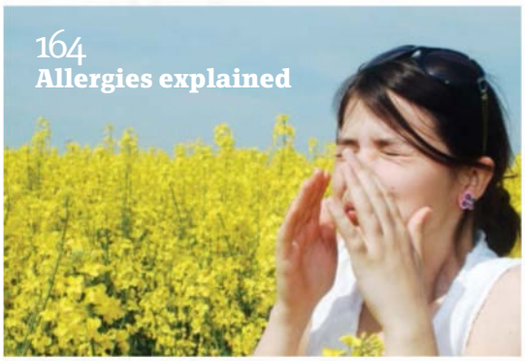

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Allergies explained

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Left or right brained?

Actually, you're neither. Discover the truth behind the way we think

It's true that the different sides of the brain perform different tasks, but do these anatomical asymmetries really define our personalities? Some psychologists argue that creative, artistic individuals have a more developed right hemisphere, while analytical, logical people rely more heavily on the left side of the brain, but so far, the evidence for this two-sided split has been lacking.

In a study published in the journal PLOS ONE, a team at the University of Utah attempted to answer the question. They divided the brain up into 7,000 regions and analysed the fMRI scans of over 1,000 people, in order to determine whether the networks on one side of the brain were stronger than the networks on the other.

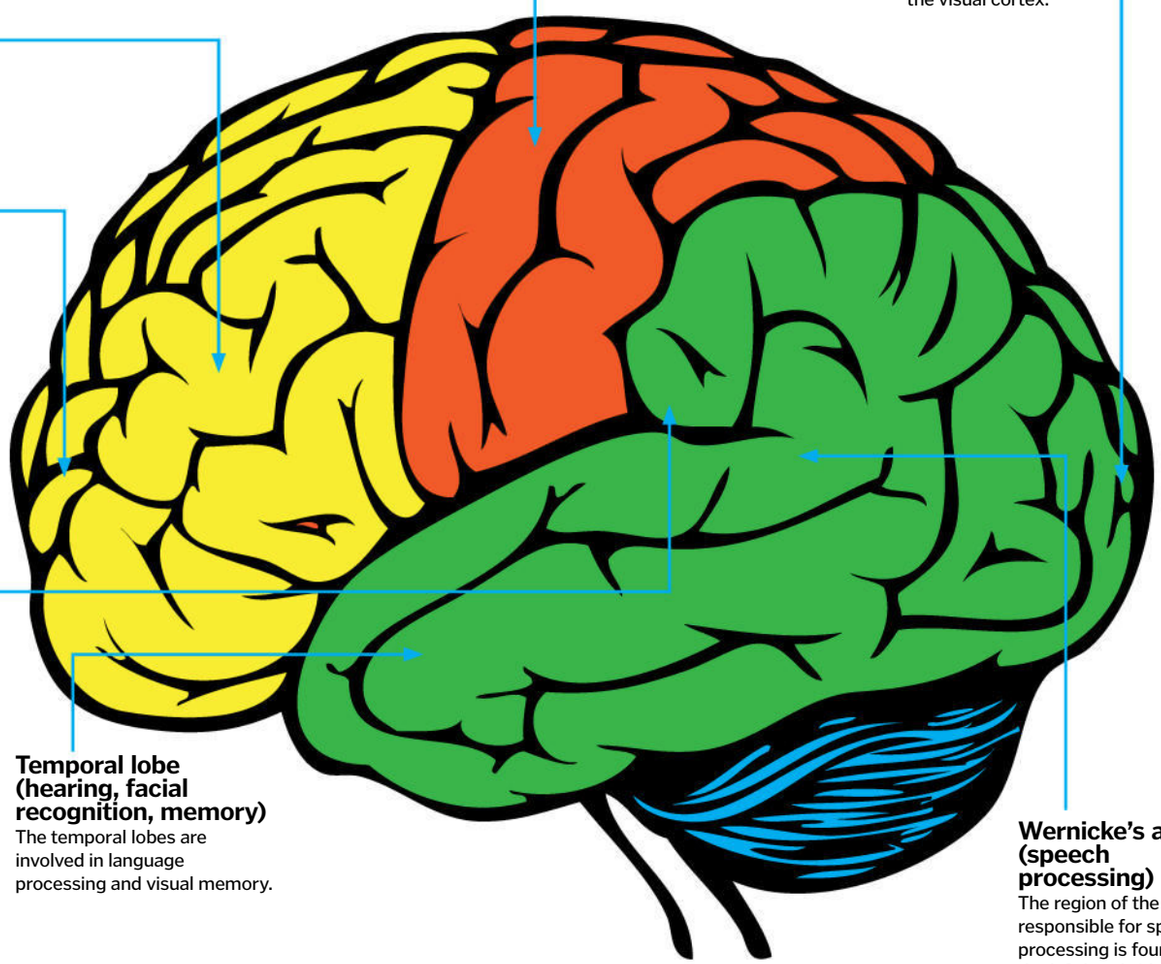
Despite the popularity of the left versus right brain myth, the team found no difference in the strength of the networks in each hemisphere, or in the amount we use either side of our brains. Instead, they showed that the brain is more like a network of computers. Local nerves can communicate more efficiently than distant ones, so instead of sending every signal across from one hemisphere of the brain to the other, neurones that need to be in constant communication tend to develop into organised local hubs, each responsible for a different set of functions.

Hubs with related functions cluster together, preferentially developing on the same side of the brain, and allowing the nerves to communicate rapidly on a local scale. One example is language processing – in most people, the regions of the brain involved in speech, communication and verbal reasoning are all located on the left-hand side.

Some areas of the brain are less symmetrical than others, but both hemispheres are used relatively equally. There is nothing to say you can't be a brilliant scientist and a great artist.

Examining the human brain

What do the different parts of the brain actually do?



Parietal lobe (pressure, taste)
The parietal lobes handle sensory information and are involved in spatial awareness and navigation.

Occipital lobe (vision)
Incoming information from the eyes is processed at the back of the brain in the visual cortex.

Broca's area (speech)
Broca's area is responsible for the ability to speak and is almost always found on the left side of the brain.

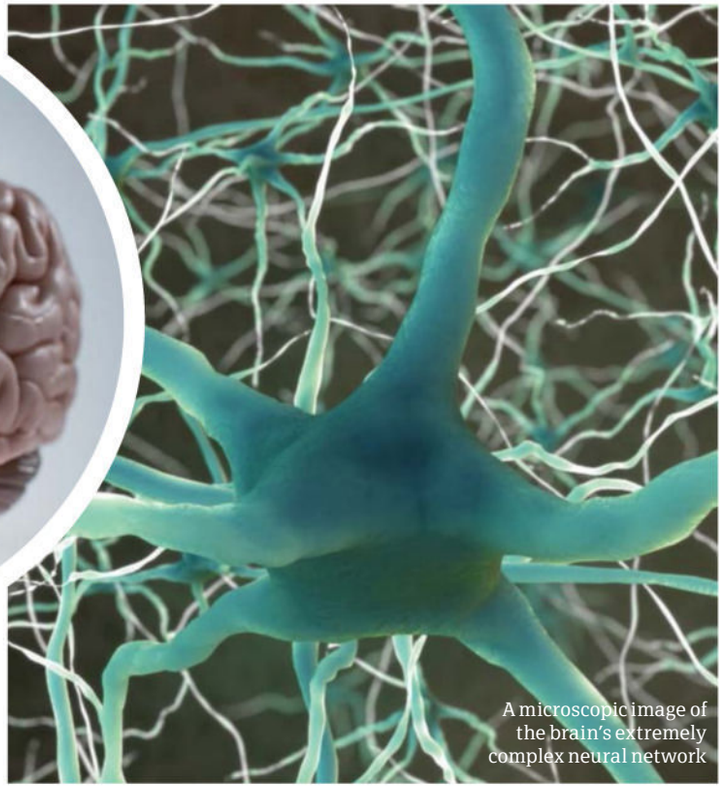
Frontal lobe (planning, problem solving)
At the front of each hemisphere is a frontal lobe, the left side is more heavily involved in speech and verbal reasoning, while the right side handles attention.

Auditory cortex (hearing)
The auditory cortex is responsible for processing information from the ears and can be found on both sides of the brain, in the temporal lobes.

Temporal lobe (hearing, facial recognition, memory)
The temporal lobes are involved in language processing and visual memory.

Wernicke's area (speech processing)
The region of the brain responsible for speech processing is found on the left-hand side.

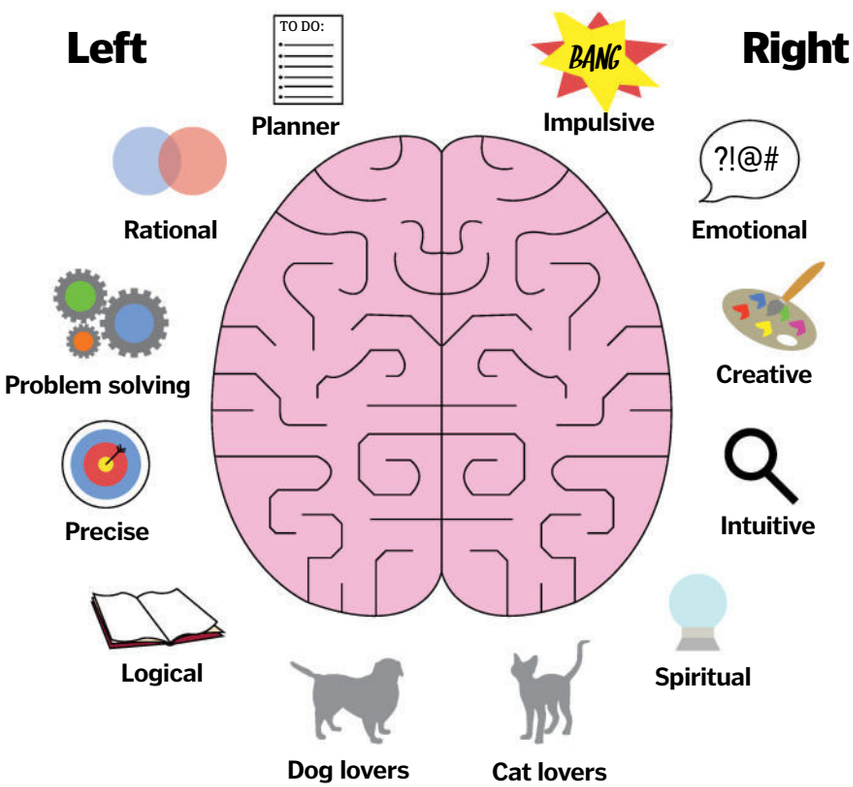
It took 82,944 computer processors 40 minutes to simulate just one second of human brain activity, it's that powerful



A microscopic image of the brain's extremely complex neural network

Myth-taken identity

The left vs right brain personality myth is actually based on Nobel Prize-winning science. In the 1940s, a radical treatment for epilepsy was trialled; doctors severed the corpus callosum of a small number of patients, effectively splitting their brains in two. If a patient was shown an object in their right field of view, they had no difficulty naming it, but if they were shown the same object from the left, they couldn't describe it. Speech and language are processed on the left side of the brain, but the information from the left eye is processed on the right. The patients were unable to say what they saw, but they could draw it. Psychologists wondered whether the differences between the two hemispheres could create two distinctive personality types, left-brained and right-brained.



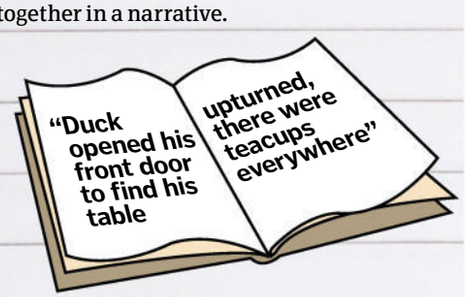
Give your brain a fun workout

1 Boost your memory

Look at this list of items for one minute, then cover the page and see how many you can remember:

Coin	Telephone	Grape
Duck	Potato	Pillowcase
Key	Teacup	Bicycle
Pencil	Match	Table

Difficult? Try again, but this time, make up a story in your head, linking the objects together in a narrative.



...You get the idea. Make it as silly as you like; strange things are much more memorable than the mundane.

2 Slow brain ageing

Learning a new language is one of the best ways to keep your brain active. Here are four new ways to say hello:

- Polish: Cześć! (che-sh-ch)
- Russian: Zdravstvuj (zdrah-stvooy)
- Arabic: Marhaba (mar-ha-ba)
- Swahili: Hujambo (hud-yambo)

© Corbis; Thinkstock

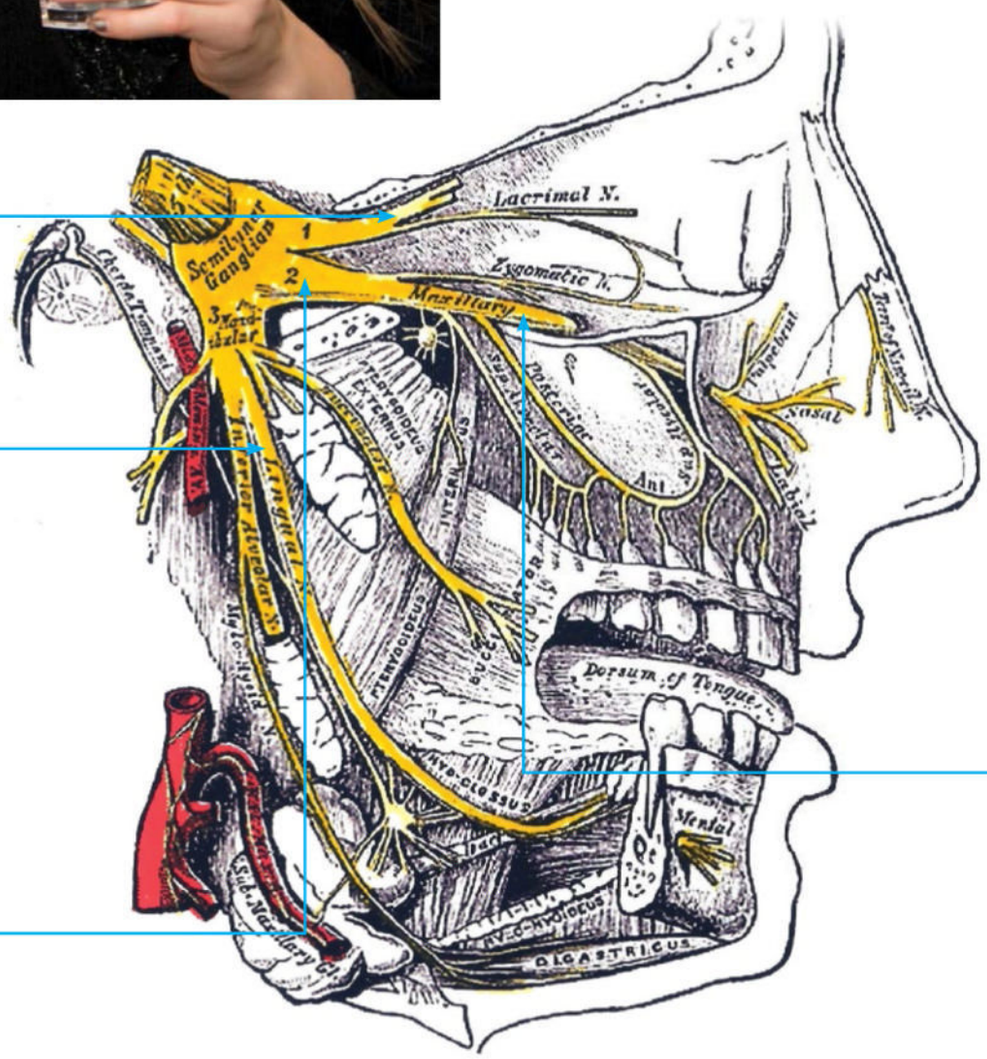
What is 'brain freeze'?

That intense pain you sometimes get when you eat ice cream too fast is technically called sphenopalatine ganglioneuralgia, and it's related to migraine headaches

The pain of a brain freeze, also know as an ice cream headache, comes from your body's natural reaction to cold. When your body senses cold, it wants to conserve heat. One of the steps it takes to accomplish this is constricting the blood vessels near your skin. With less blood flowing near your skin, less heat is carried away from your core, keeping you nice and warm.

The same thing happens when something really cold hits the back of your mouth. The blood vessels in your palate constrict rapidly. When the cold goes away (because you swallowed the ice cream or cold beverage), they rapidly dilate back to their standard, normal state.

This is harmless, but a major facial nerve called the trigeminal lies close to your palate and this nerve interprets the constriction/dilation process as pain. The location of the trigeminal nerve can cause the pain to seem like its coming from your forehead. Doctors believe this same misinterpretation of blood vessel constriction/dilation is the cause of the intense pain of a migraine headache.



The Ophthalmic branch carries sensory messages from the eyeball, tear gland, upper nose, upper eyelid, forehead, and scalp.

The Mandibular branch carries sensory signals from the skin, teeth and gums of the lower jaw, as well as tongue, chin, lower lip and skin of the temporal region.

The trigeminal facial nerve is positioned very close to the palate. This nerve interprets palate blood vessel constriction and dilation as pain.

The Maxillary branch carries sensory messages from the skin, gums and teeth of the upper jaw, cheek, upper lip, lower nose and lower eyelid.

"A major facial nerve called the trigeminal lies close to your palate"

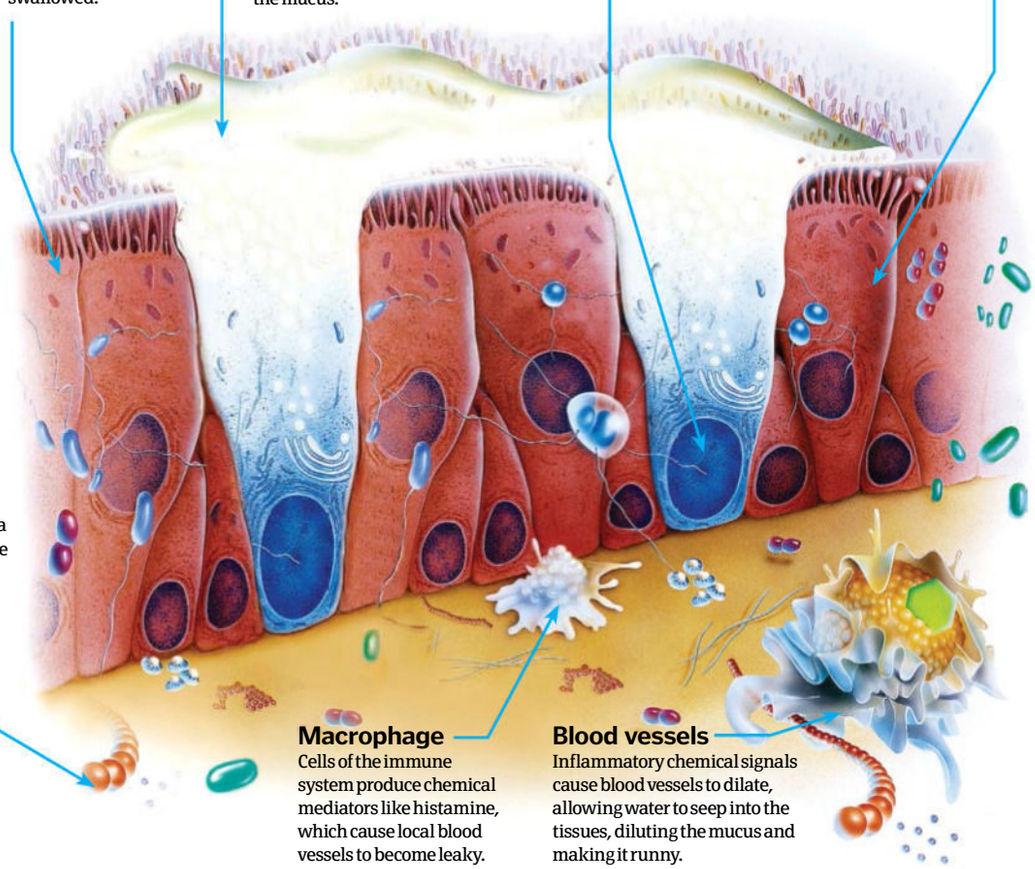
What makes your nose run?

Discover what is going on inside a blocked nose and why it gets runny when we're ill

It surprises many people but the main culprit responsible for a blocked and runny nose is typically not excess mucus but swelling and inflammation.

If the nose becomes infected, or an allergic reaction is triggered, the immune system produces large quantities of chemical messengers that cause the local blood vessels in the lining of the nose to dilate. This enables more white blood cells to enter the area, helping to combat the infection, but it also causes the blood vessels to become leaky, allowing fluid to build up in the tissues.

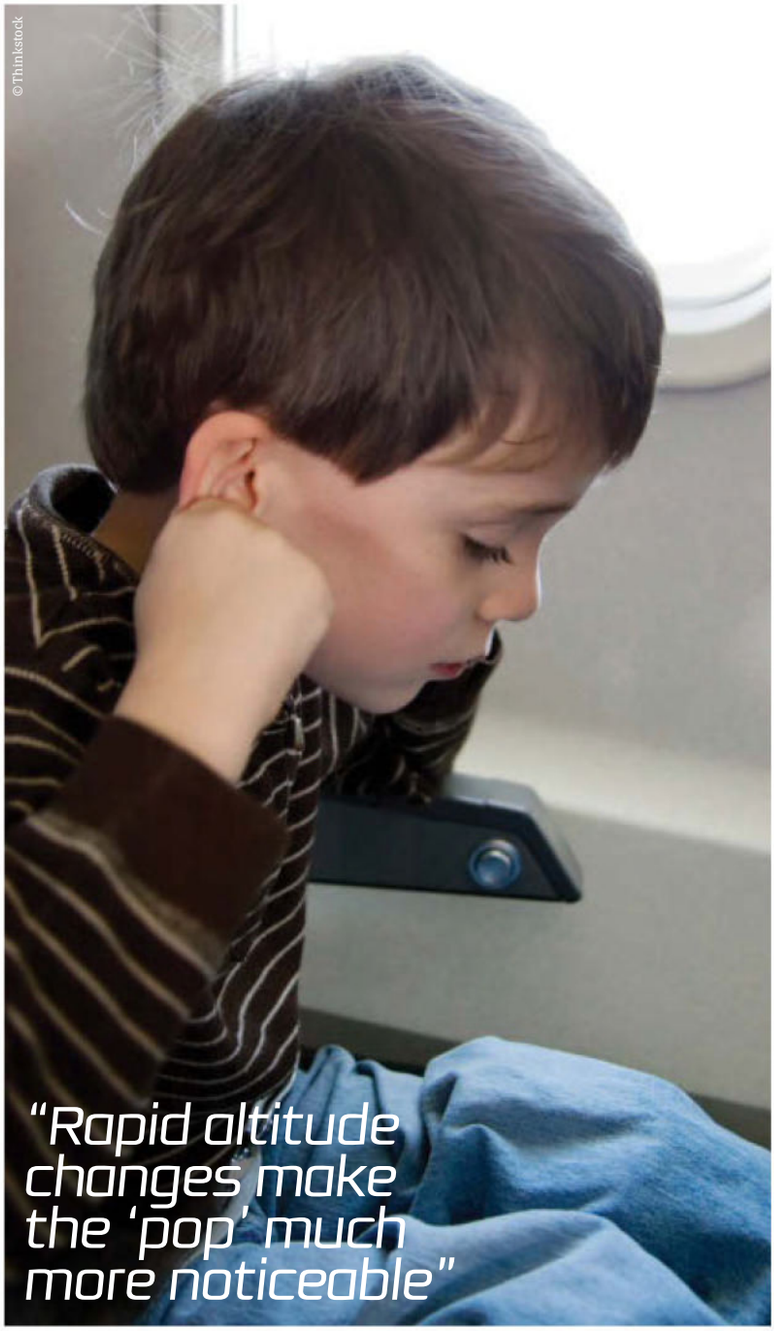
Decongestant medicine contains a chemical that's similar to adrenaline, which causes the blood vessels to constrict, stopping them from leaking.



How is a person brought out of a coma?

When we talk about 'bringing someone out of a coma', we are referencing medically induced comas. A patient with a traumatic brain injury is deliberately put into a deep state of unconsciousness to reduce swelling and allow the brain to rest. When the brain is injured, it becomes inflamed. The swelling damages the brain because it is squashed inside the skull.

Doctors induce the coma using a controlled dose of drugs. To bring the person out of the coma, they simply stop the treatment. Bringing the patient out of the coma doesn't wake them immediately. They gradually regain consciousness over days, weeks or longer. Some people make a full recovery, others need rehabilitation or lifetime care and others may remain unaware of their surroundings.



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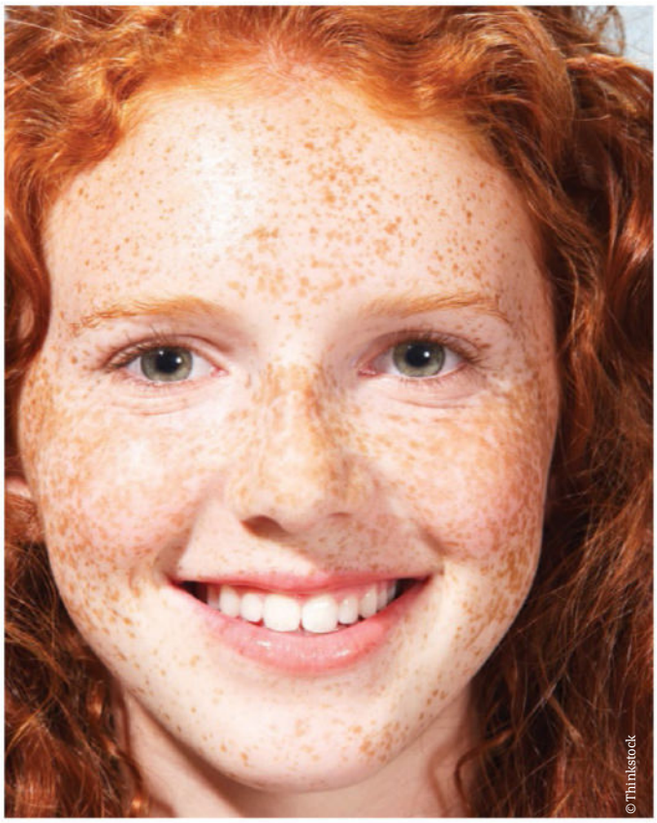
Why do our ears 'pop' on planes?

The eardrum is a thin membrane that helps to transmit sound. Air pressure is exerted on both sides of the eardrum; with the surrounding atmospheric pressure pushing it inwards while air being delivered via a tube between the back of your nose and the eardrum pushes it outwards. This tube is called the Eustachian tube, when you swallow ot opens and a small bubble of air is able to move causing a 'pop'.

Rapid altitude changes in planes make the 'pop' much more noticeable due to bigger differences in pressure. Air pressure decreases as a plane ascends; hence air must exit the Eustachian tubes to equalise these pressures, again causing a 'pop'. Conversely, as a plane descends, the air pressure starts to increase; therefore the Eustachian tubes must open to allow through more air in order to equalise the pressure again, causing another 'pop'.

What are freckles?

Freckles are clusters of the pigment melanin. It is produced by melanocytes deep in the skin, with greater concentrations giving rise to darker skin tones, and hence, ethnicity. Melanin protects the skin against harmful ultraviolet sunlight, but is also found in other locations around the body,. Freckles are mostly genetically inherited, but not always. They become more prominent during sunlight exposure, as the melanocytes are triggered to increase production of melanin, leading to a darker complexion. People with freckles generally have pale skin tones, and if they stay in the Sun for too long they can damage their skin cells, leading to skin cancers like melanoma.



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Why does hot honey and lemon help your throat when it's sore?

Honey and lemon can be drank warm as a comfort remedy, and is a popular drink with many who are feeling unwell. The idea is that honey coats the throat and therefore any inflamed areas will be 'protected' by a layer of honey, while at the same time soothing painful areas. This means it will be less painful when these areas come into contact with other surfaces when you eat or swallow. Lemon also helps to settle the stomach too, as it contains acid, which can be particularly helpful when experiencing an upset stomach from the effects of a cold or other digestion-related illness.

What is an epidural?

The science behind blocking pain explained

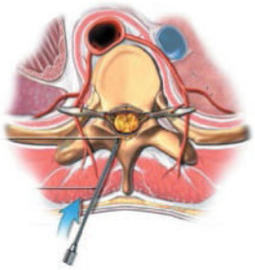
An epidural (meaning 'above the dura') is a form of local anaesthetic used to completely block pain while a patient remains conscious. It involves the careful insertion of a fine needle deep into an area of the spine between two vertebrae of the lower back.

This cavity is called the epidural space. Anaesthetic medication is injected into this cavity to relieve pain or numb an area of the body by reducing sensation and blocking the nerve roots that transmit signals to the brain.

The resulting anaesthetic medication causes a warm feeling and numbness leading to the area being fully anaesthetised after about 20 minutes. Depending on the length of the procedure, a top-up may be required.

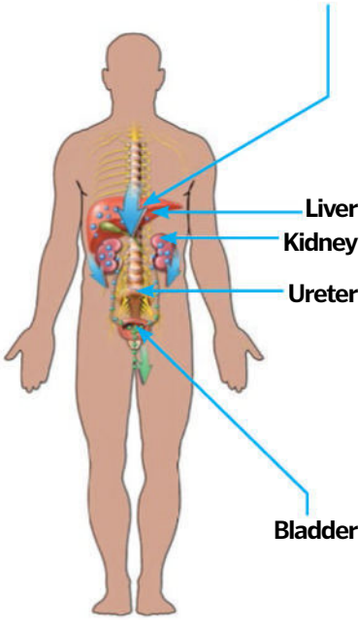
This form of pain relief has been used widely for many years, particularly post-surgery and during childbirth.

1. Epidural space
The outer part of the spinal canal, this cavity is typically about 7mm (0.8in) wide in adults.

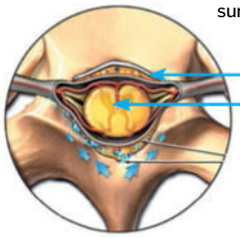


2. Epidural needle
After sterilising the area, a needle is inserted into the interspinous ligament until there is no more resistance to the injection of air or saline solution.

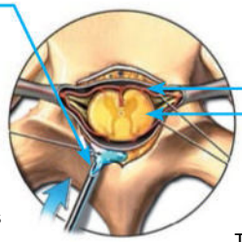
6. Processing
Anaesthetic in the blood is filtered out by theliver and kidneys, then leaves the body in urine. The effects usually wear off a couple of hours after the initial injection.



3. Anaesthetic
Through a fine catheter in the needle, anaesthetic is carefully introduced to the space surrounding the spinal dura.



4. Absorption
Over about 20 minutes the anaesthetic medication is broken down and absorbed into the local fatty tissues.



5. Radicular arteries
The anterior and posterior radicular arteries run with the ventral and dorsal nerve roots, respectively, which are blocked by the drug.

What is a memory?

Memory is the brain's ability to recall information from the past and it generally falls into three categories – sensory, short-term and long-term.

Look at this page then close your eyes and try to remember what it looks like. Your ability to recall what this page looks like is an example of your sensory memory. Depending on whether or not this page is important to you will be the determining factor in how likely it is that it will get passed on to your short-term memory.

Can you remember the last thing you did before reading this? That is your short-term memory and is a bit like a temporary storage facility where the less-important stuff can decay, whereas the more important stuff can end up in the long-term memory.

Our senses are constantly being bombarded with information. Electrical and chemical signals travel from our eyes, ears, nose, touch and taste receptors and the brain then makes sense of these signals. When we remember something, our brain refires the same neural pathways along which the original information travelled. You are almost reliving the experience by remembering it.

How does toothpaste for sensitive teeth work?

Imagine just one of your teeth. It has two primary sections: the crown located above the gum line and the root below it. The crown comprises the following layers from top to bottom: enamel, dentine and the pulp gum. Nerves branch from the root to the pulp gum. The dentine runs to the root and contains a large number of tubules or microscopic pores, which run from the outside of the tooth right to the nerve in the pulp gum.

People with sensitive teeth experience pain when their teeth are exposed to something hot, cold or when pressure is applied. Their layer of enamel may be thinner and they may have a receded gum line exposing more dentine. Therefore, the enamel and gums offer less protection and, as such, this is what makes their teeth sensitive.

Sensitive toothpaste works by either numbing tooth sensitivity, or by blocking the tubules in the dentine. Those that numb usually contain potassium nitrate, which calms the nerve of the tooth. The toothpastes that block the tubules in the dentine usually contain a chemical called strontium chloride. Repeated use builds up a strong barrier by plugging the tubules more and more.

Why and how do we blush?

Blushing occurs when an excess of blood flows into the small blood vessels just under the surface of the skin. Facial skin has more capillary loops and vessels, and vessels are nearer the surface so blushing is most visible on the cheeks, but may be seen across the whole face. The small muscles in the vessels are controlled by the nervous system.

Blushing can be affected by factors such as heat, illness, medicines, alcohol, spicy foods, allergic reactions and emotions. If you feel guilty, angry, excited or embarrassed, you will involuntarily release adrenaline, which sends the automatic nervous system into overdrive. Your breathing will increase, heart rate quicken, pupils dilate, blood will be redirected from your digestive system to your muscles, and you blush because your blood vessels dilate to improve oxygen flow around the body; this is all to prepare you for a fight or flight situation. The psychology of blushing remains elusive; some scientists even believe we have evolved to display our emotions, to act as a public apology.

"Blushing can be affected by heat, illness, medicines and spicy foods"

What makes caffeine so addictive?

When we are awake the naturally occurring brain chemical adenosine is drawn to fast moving receptors in the brain. As adenosine attaches to the receptors it slows them down, which causes us to feel sleepy.

The receptor cells confuse caffeine for adenosine cells and as such willingly bond to it. The action doesn't slow down the receptor's movement as adenosine would and as the space is usurped they are unable to sense adenosine so the cells speed up, increasing neuron firing in the brain. The pituary gland interprets this as a fight or flight scenario so releases hormones to alert the adrenal glands to produce adrenaline. This results in dilated pupils, a racing heart and an increase in blood pressure. The liver also releases sugar into the bloodstream for an instant energy boost.

What makes us faint?

Fainting, or 'syncope', is a temporary loss of consciousness due to a lack of oxygen to the brain. It is preceded by dizziness, nausea, sweating and blurred vision.

The most common cause is overstimulation of the body's vagus nerve. Possible triggers of this include intense stress and pain, standing up for long periods or exposure to something unpleasant. Severe coughing, exercise and even urinating can sometimes produce a similar response. Overstimulation of the vagus nerve results in dilation of the body's blood vessels and a reduction of the heart rate. These two changes together mean that the body struggles to pump blood up to the brain against gravity. A lack of blood to the brain means there is not enough oxygen for it to function properly and fainting occurs.

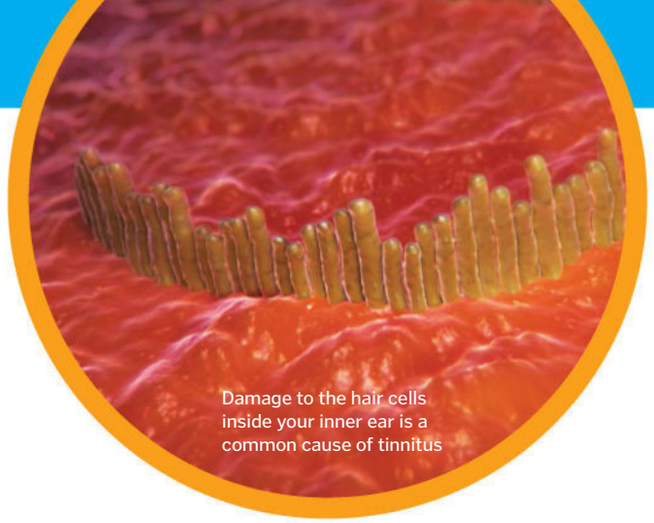
What is tinnitus?

Find out why your ears ring after a concert

Tinnitus is a sound you can hear that isn't caused by an outside source and often manifests as a buzzing, ringing, whistling or humming noise. One of the most common causes of tinnitus is exposure to loud noises, which is why you often experience a ringing in your ears after going to a music concert.

The loud music can temporarily damage the hair cells inside your ear and cause your brain to create phantom sounds that aren't really there. They usually disappear after a while, but prolonged exposure to loud noises can damage the hair cells permanently, resulting in a buzzing that never goes away. There is currently no cure for this type of tinnitus as the hair cells are unable to repair or replace themselves. Therefore, if you're regularly exposed to loud noises, it's important to wear earplugs to protect your delicate ears.

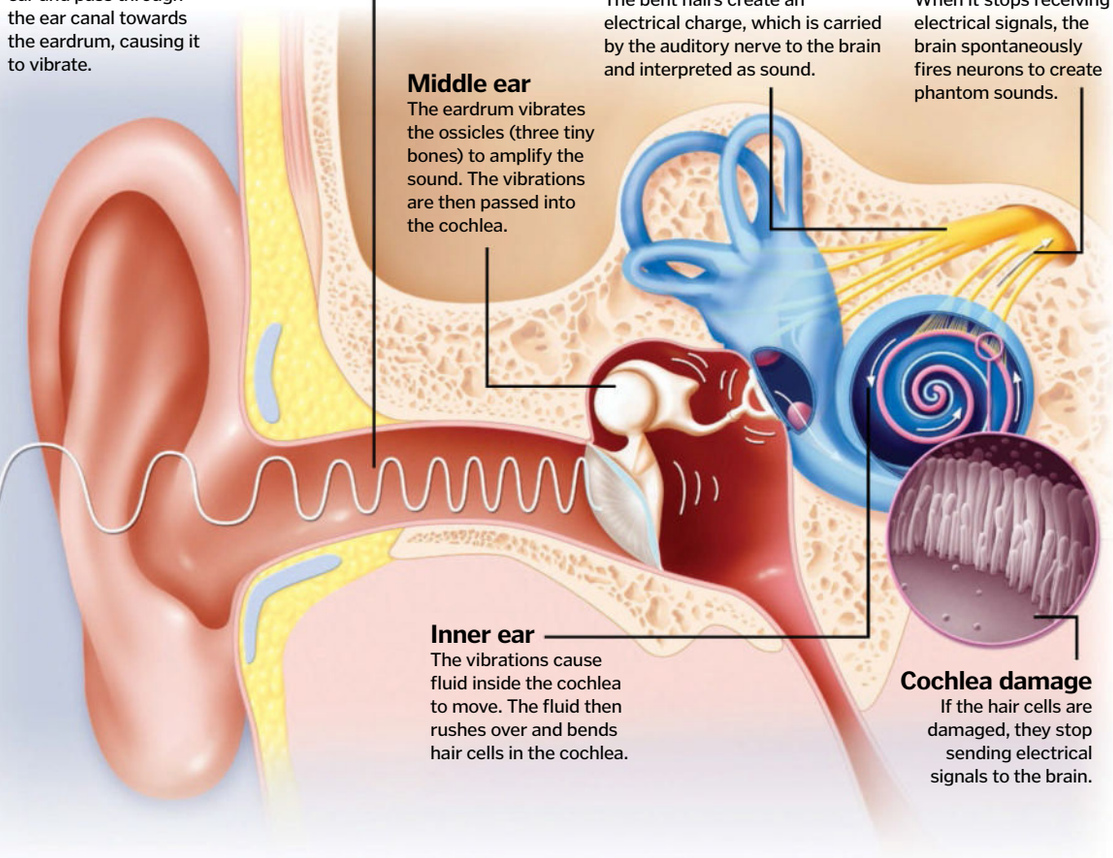
Loud noises are not the only cause of tinnitus, though. Other factors including a build-up of earwax, an ear infection, certain medications, a head injury or even high blood pressure, can also affect the inner workings of your ear and cause phantom sounds.



Damage to the hair cells inside your inner ear is a common cause of tinnitus

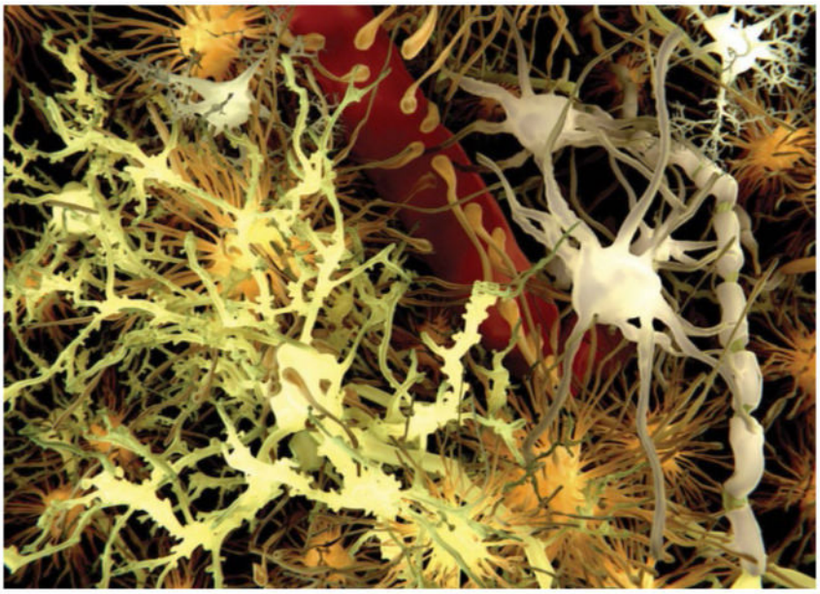
What's that buzzing?

How your ears and brain interpret real and phantom sounds



When does your brain stop growing?

By the time a child is two years old, their brain is around 80 per cent of its adult size, but it continues to grow right up until they reach their mid-20s. However, most of this growth is not driven by the nerve cells themselves. Babies are born with almost all of the nerve cells that their brains will ever need, and the increase in size is mostly down to an increase in the number of support cells, also known as glial cells. These fill the gaps between nerve cells, and play a vital role in cleaning up debris, providing nutrition, and physically supporting and insulating the neurons in the brain. As children develop, new connections are also made between neighbouring nerve cells, contributing to brain growth.



Nerve cells in the brain are supported by glial cells

How 72-hour deodorants work

Discover the chemistry that helps us combat body odour for up to days at a time

Deodorants prevent the odour associated with sweating, either by masking it, or by killing the bacteria responsible. To make the effects last longer, the active ingredients are sometimes encased within microcapsules. As the capsules take up water from sweat they burst, releasing deodorising chemicals. By including capsules of a variety of sizes, each requiring a different amount of water to burst, the duration can be extended.

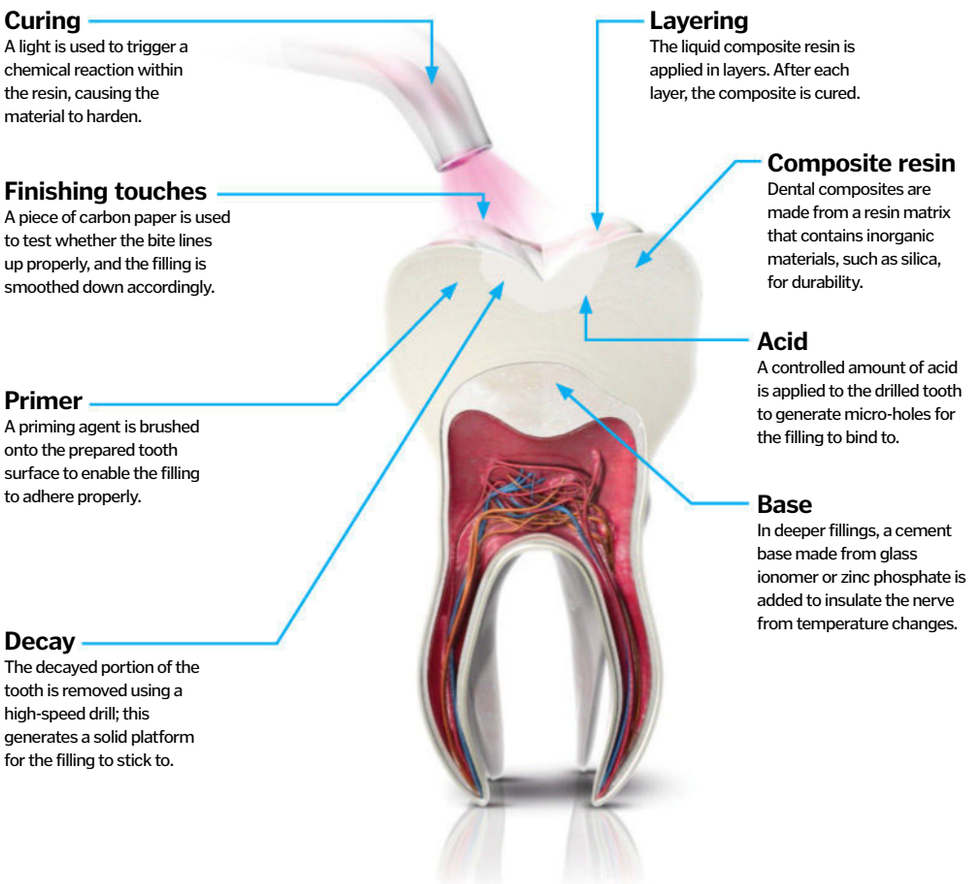
Most deodorants also contain antiperspirants, which prevent sweating from occurring at all. These are usually aluminium-based compounds. The aluminium is taken up by the cells that line the openings of the ducts that carry sweat to the surface of the skin.

As the aluminium moves into the cells, it takes water with it, causing the cells to swell and closing off the ducts. Depending on the type of aluminium compound used, the effect will last for different lengths of time.

Antiperspirants cause cells to swell and the ducts to close up, preventing sweating altogether

Modern fillings

Composite resins are replacing traditional metal fillings, but what are they made of?



Is metal bad?

Traditional silver-coloured 'amalgam' fillings are made from mixed metals, and are often comprised of around 50 per cent mercury. Historical evidence suggests that this type of filling has been in use since around 650 A.D, and despite the advances in composite materials, the amalgam filling is still in use to this day.

There has been much controversy over the biological safety of amalgam fillings though, and concerns have been raised regarding mercury released into the body, as well as into the environment. However, as it stands, no causal link between health complaints and amalgam fillings has been proven. In fact, they still provide some advantages over composite fillings, and require significantly less repair and replacement.

Amalgam fillings require much less upkeep than their composite counterparts

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What powers your cells?

Discover how mitochondria produce all the energy your body needs

Mitochondria are known as the batteries of cells because they use food to make energy. Muscle fibres need energy for us to move and brain cells need power to communicate with the rest of the body. They generate energy, called adenosine triphosphate (ATP), by combining oxygen with food molecules like glucose.

However, mitochondria are true biological multi-taskers, as they are also involved with signalling between cells, cell growth and the cell cycle. Theyperform all of these functions by regulating metabolism - the processes that maintain life - by controlling Krebs Cycle which is the set of reactions that produce ATP.

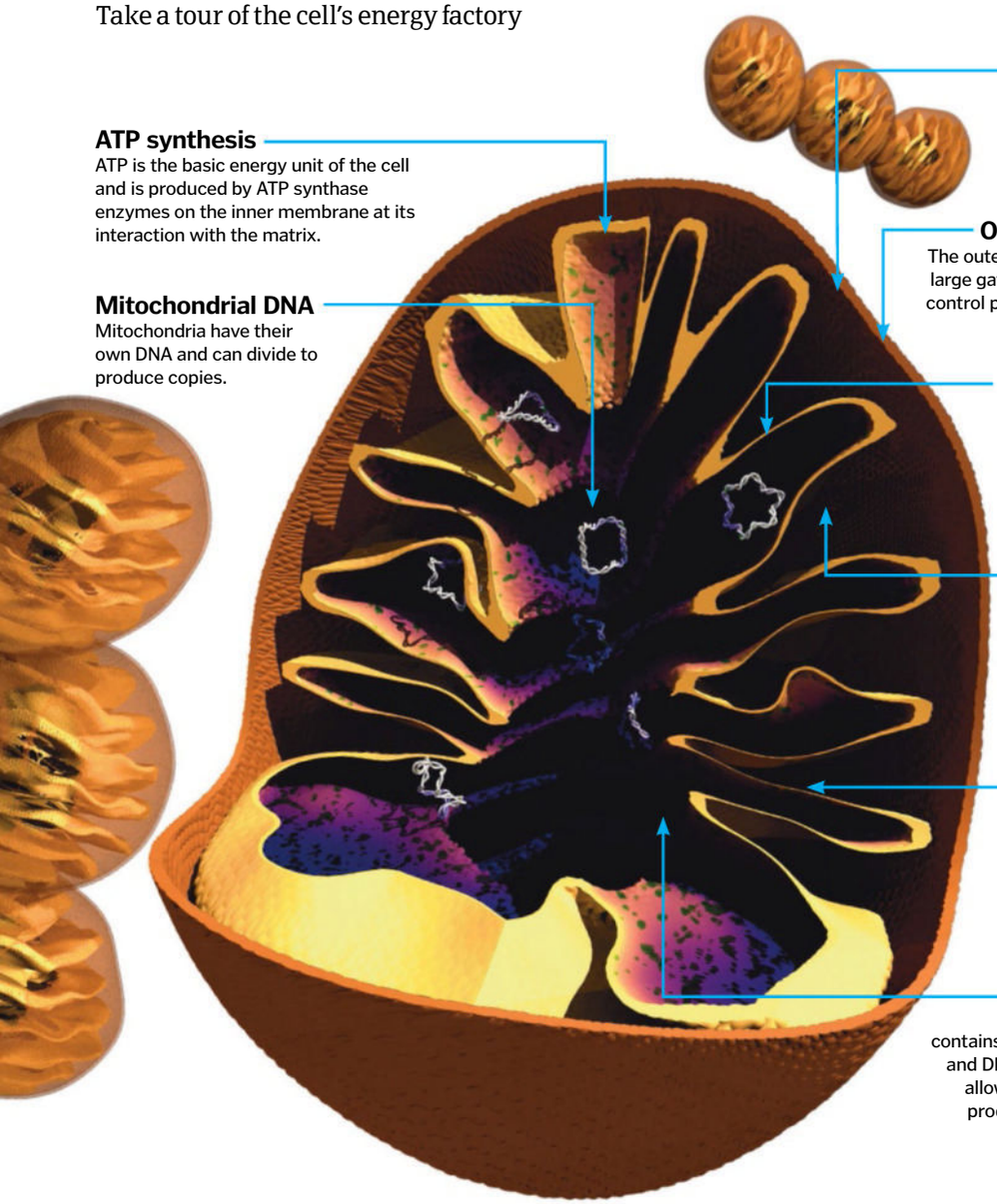
Mitochondria are found in nearly every cell in your body. They are found in most eukaryotic cells, which have nucleus and other organelles bound by a cell membrane. This means cells without these features, such as red blood cells, don't contain mitochondria. Their numbers also vary based on the individual cell types, with high-energy cells, like heart cells, containing many thousands. Mitochondria are vital for most life – human beings, animals and plants all have them, although bacteria don't.

They are deeply linked with evolution of all life. It is believed mitochondria formed over a billion years ago from two different cells, where the larger cell enveloped the other. The outer cell became dependent on the inner one for energy, while the inner cell was reliant on the outer one for protection.

This inner cell evolved to become a mitochondrion, and the outer cells evolved to form building blocks for larger cell structures. This process is known as the endosymbiotic theory, which is Ancient Greek for 'living together within.'

Inside the mitochondria

Take a tour of the cell's energy factory



Mitochondria produce fuel for everyday activities such as exercise

How many are in a cell?

The number of mitochondria in a cell depends on how active that particular cell is and how much energy it requires to function. As a general rule, they can either be low energy without a single mitochondrion, or high energy with thousands per cell. Examples of high-energy cells are heart muscles or the busy liver cells, which are active even when you're asleep, and are packed with mitochondria to keep functioning. If you train your muscles at the gym, those cells will develop more mitochondria as an adaptive mechanism to help provide energy.

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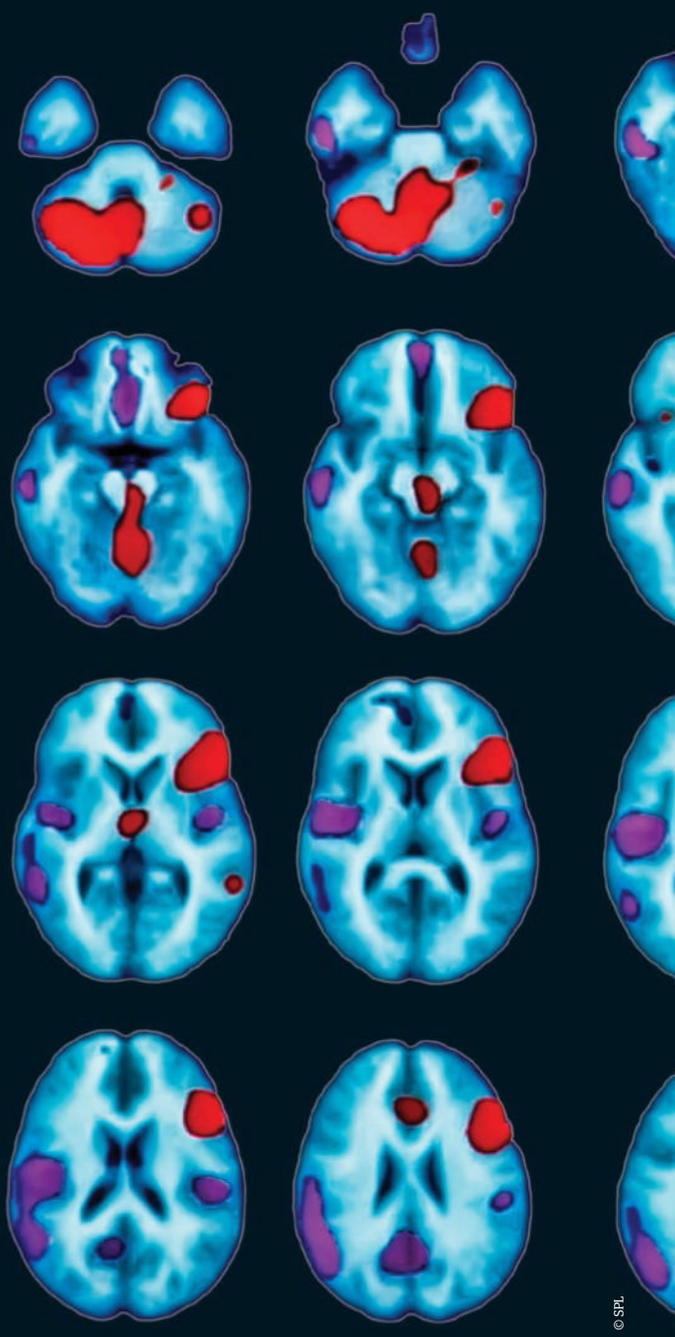
Is it possible to see our thoughts?

This CT scan of the brain has fused PET images over it, showing activity of different regions when the patient is exposed to a range of stimuli



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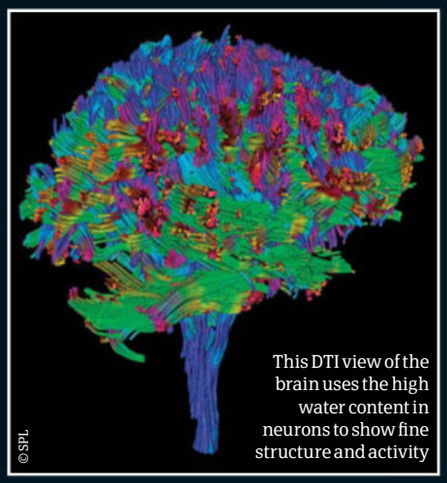
The brain is perhaps the most vital of the body's vital organs, yet in many ways it's also the least understood

At its most simple level, the brain is a series of interconnecting neurons that relay electrical signals between one another. They are 'all or none' transmitters as, like a computer, they either transmit a signal (like a binary '1') or do not ('0'). Different neurons are receptive to different stimuli, such as light, touch and pain. The complex activity of these neurons is then interpreted by various parts of the brain into useful information. For example, light images from the eye are relayed via the optic nerve to the occipital cortex located in the back of the skull, for interpretation of the scene in front of you.

The generation and interpretation of thoughts is a more complex and less well understood process. In fact, it is a science of its own, where there are many definitions of what a 'thought' is, and of what defines consciousness. In an effort to better define these, doctors, scientists and psychologists have turned to novel imaging techniques to better understand the function of our minds. Research into understanding brain activity and function has led to some of the most advanced imaging techniques available. This has helped to treat conditions such as Alzheimer's dementia, epilepsy and stroke, as well as mental illnesses where there is not necessarily a physical problem within the brain. It has also led to benefits for imaging other diseases in other parts of the body, including several forms of cancer.

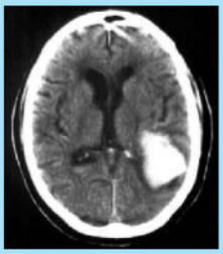


This DTI view of the brain uses the high water content in neurons to show fine structure and activity

© SPL

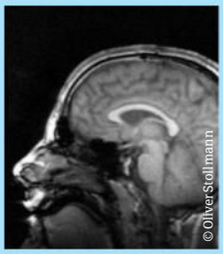
These advanced imaging techniques include scans to produce images of the anatomical structure of the brain, and interpretation of energy patterns to determine activity or abnormalities. Scientists have started to ascertain which parts of the brain function as we form different thoughts and experience different emotions. This means we are very much on the brink of seeing our own thoughts.

How can we view the brain?



Computed tomography (CT)

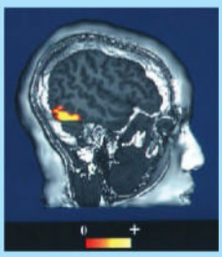
This combines multiple X-rays to see the bones of the skull and soft tissue of the brain. It's the most common scan used after trauma, to detect injuries to blood vessels and swelling. However, it can only give a snapshot of the structure so can't capture our thoughts.



© Oliver Stollmann

Magnetic resonance imaging (MRI)

MRI uses strong magnetic fields to align the protons in water molecules in various body parts. When used in the brain, it allows intricate anatomical detail to be visualised. It has formed the basis of novel techniques to visualise thought processes.



Functional MRI (fMRI)

This form of MRI uses blood-oxygen-level-dependent (BOLD) contrast, followed by a strong magnetic field, to detect tiny changes in oxygen-rich and oxygen-poor blood. By showing pictures to invoke certain emotions, fMRI can reveal which areas are active during particular thoughts.

Picking apart the brain

© Alamy

The frontal lobes
The frontal lobes of the folded cerebral cortex take care of thought, reasoning, decisions and memories. This area is believed to be largely responsible for our individual personalities.

The sensory and motor cortexes
The pre- and post-central gyri receive the sensory information from the body and then dispatch orders to the muscles, in the form of signals through motor neurons.

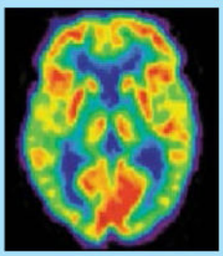
The occipital cortex
In the posterior fossa of the skull, this cortex receives impulses from the optic nerves to form images. These images are in fact seen upside down, but this area enables them to be interpreted the right way up.

The brainstem
Formed from the midbrain, pons and medulla oblongata, the brainstem maintains the vital functions without us having to think about them. These include respiration and heart function; any damage to it leads to rapid death.

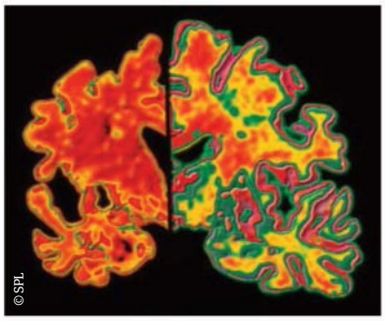
The cerebellum
The cerebellum is responsible for fine movements and co-ordination. Without it, we couldn't write, type, play musical instruments or perform any task that requires precise actions.

The pituitary gland
This tiny gland is responsible for hormone production throughout the body, which can thus indirectly affect our emotions and behaviours.

Diffusion tensor imaging (DTI)
This MRI variant relies on the direction of water diffusion within tissue. When a magnetic gradient is applied, the water aligns and, when the field is removed, the water diffuses according to a tissue's internal structure. This allows a 3D image of activity to be built up.



Positron emission tomography (PET)
This bleeding-edge technology detects gamma rays emitted from biologically active tissues based on glucose. It can pick up unusual biological activity, such as that from cancer. There have been recent advances to combine PET with CT or MRI to obtain lots of data quickly.



© SPL

Imaging Alzheimer's

Alzheimer's disease is a potentially debilitating condition, which can lead to severe dementia. The ability to diagnose it accurately and early on has driven the need for modern imaging techniques. The above image shows a PET scan. The right-hand side of the image (as you look at it) shows a normal brain, with a good volume and activity range. On the left-hand side is a patient affected by Alzheimer's. The brain is shrunken with fewer folds, and a lower range of activity – biologically speaking, there are far fewer neurons firing.

How anaesthesia works

By interfering with nerve transmission these special drugs stop pain signals from reaching the brain during operations

Anaesthetics are a form of drug widely used to prevent pain associated with surgery. They fall into two main categories: local and general. Local anaesthetics can be either applied directly to the skin or injected. They are used to numb small areas without affecting consciousness, so the patient will remain awake throughout a procedure.

Local anaesthetics provide a short-term blockade of nerve transmission, preventing sensory neurons from sending pain signals to the brain. Information is transmitted along nerves by the movement of sodium ions down a carefully maintained electrochemical gradient. Local anaesthetics cut off sodium channels, preventing the ions from travelling through the membrane and stopping electrical signals travelling along the nerve.

Local anaesthesia isn't specific to pain nerves, so it will also stop information passing from the brain to the muscles, causing temporary paralysis.

General anaesthetics, meanwhile, are inhaled and injected medications that act on the central nervous system (brain and spinal cord) to induce a temporary coma, causing unconsciousness, muscle relaxation, pain relief and amnesia.

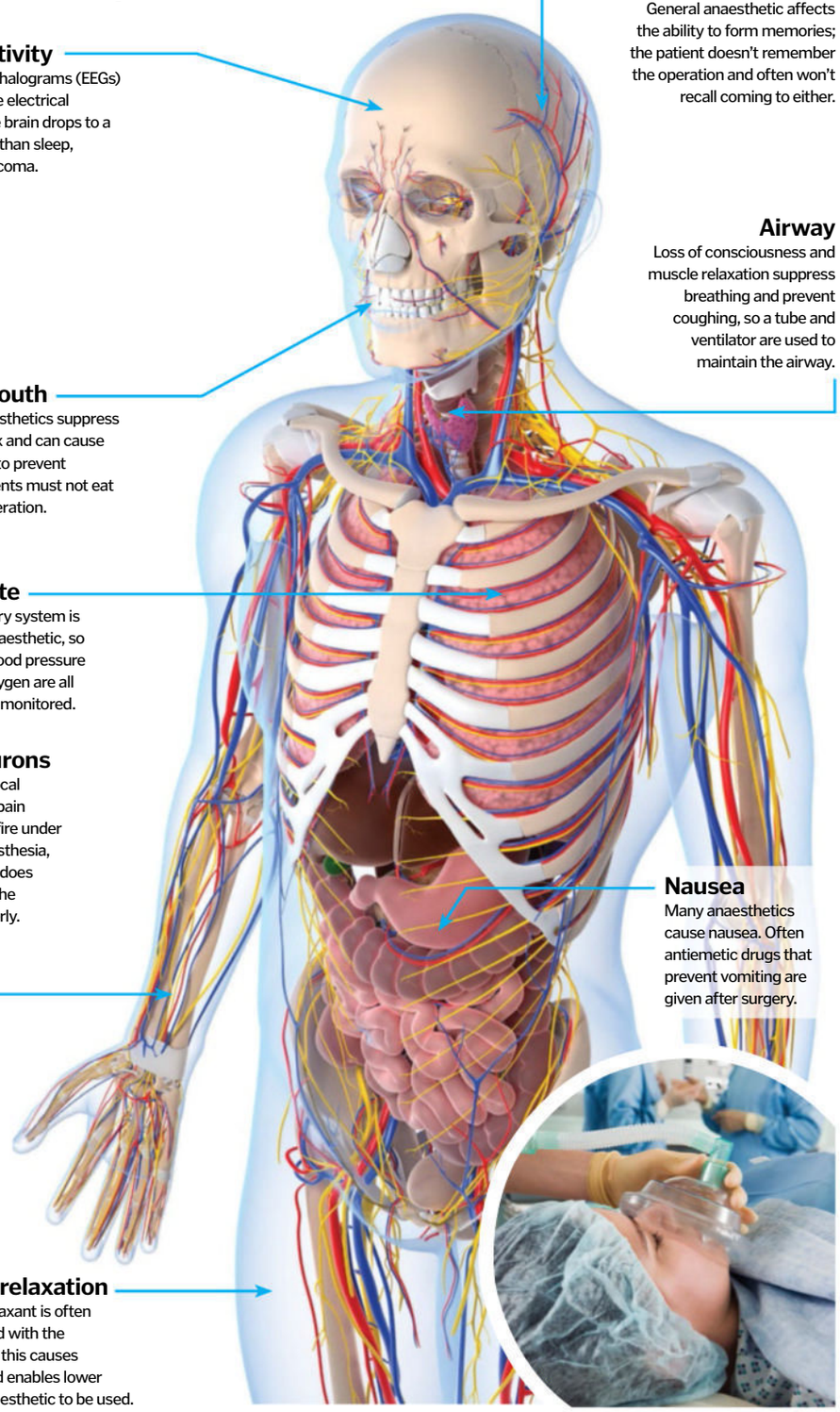
It's not known for sure how general anaesthetics 'shut down' the brain, but there are several proposed mechanisms. Many general anaesthetics dissolve in fats and are thought to interfere with the lipid membrane that surrounds nerve cells in the brain. They also disrupt neurotransmitter receptors, altering transmission of the chemical signals that let nerve cells communicate with one another.

Comfortably numb

If large areas need to be anaesthetised while the patient is still awake, local anaesthetics can be injected around bundles of nerves. By preventing transmission through a section of a large nerve, the signals from all of the smaller nerves that feed into it can't reach the brain. For example, injecting anaesthetic around the maxillary nerve will not only generate numbness in the roof of the mouth and all of the teeth on that side, but will stop nerve transmission from the nose and sinuses too. Local anaesthetics can also be injected into the epidural space in the spinal canal. This prevents nerve transmission through the spinal roots, blocking the transmission of information to the brain. The epidural procedure is often used to mollify pain during childbirth.

The body under general anaesthetic

What happens to various parts of the body when we're put under?



Brain activity
Electroencephalograms (EEGs) show that the electrical activity in the brain drops to a state deeper than sleep, mimicking a coma.

Memory
General anaesthetic affects the ability to form memories; the patient doesn't remember the operation and often won't recall coming to either.

Airway
Loss of consciousness and muscle relaxation suppress breathing and prevent coughing, so a tube and ventilator are used to maintain the airway.

Nil by mouth
General anaesthetics suppress the gag reflex and can cause vomiting, so to prevent choking patients must not eat before an operation.

Heart rate
The circulatory system is slowed by anaesthetic, so heart rate, blood pressure and blood oxygen are all continuously monitored.

Pain neurons
Unlike with local anaesthetic, pain neurons still fire under general anaesthesia, but the brain does not process the signals properly.

Nausea
Many anaesthetics cause nausea. Often antiemetic drugs that prevent vomiting are given after surgery.

Muscle relaxation
A muscle relaxant is often administered with the anaesthetic; this causes paralysis and enables lower doses of anaesthetic to be used.

© Getty

What causes stomach ulcers?

Originally thought to be the result of stress, we now know that bacteria are the culprits…

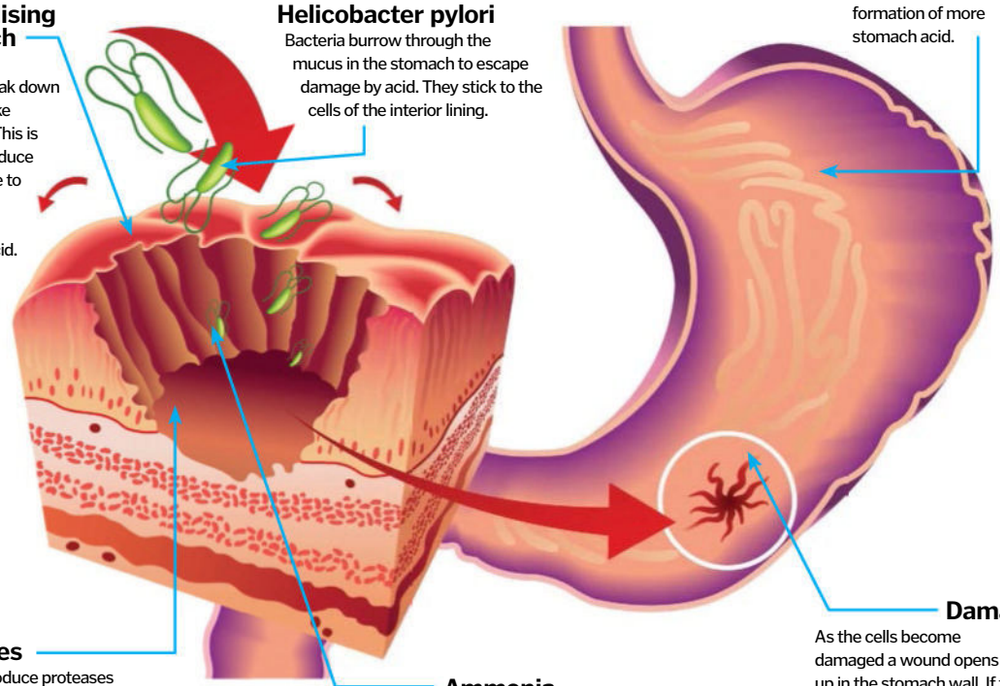
Normally a thick layer of alkaline mucus effectively protects the cells lining the stomach from the low pH of stomach acid. If this mucus becomes disrupted, however, acid comes into contact with the organ's lining, damaging the cells and resulting in an ulcer.

Around 60 per cent of stomach ulcers are caused by inflammation due to chronic infection by the bacterium Helicobacter pylori. Bacterial by-products damage the cells lining the stomach, causing a breakdown of the top layers of tissue.

Non-steroidal anti-inflammatory drugs (NSAIDs), like ibuprofen and aspirin, also cause stomach ulcers in large doses. They disrupt the enzymes responsible for mucus production, diminishing the protective barrier.

An ulcer in the making

Once bacteria breach the stomach lining, it can no longer protect itself from its acidic contents…



Neutralising stomach acid
H pylori break down urea to make ammonia. This is used to produce bicarbonate to neutralise dangerous stomach acid.

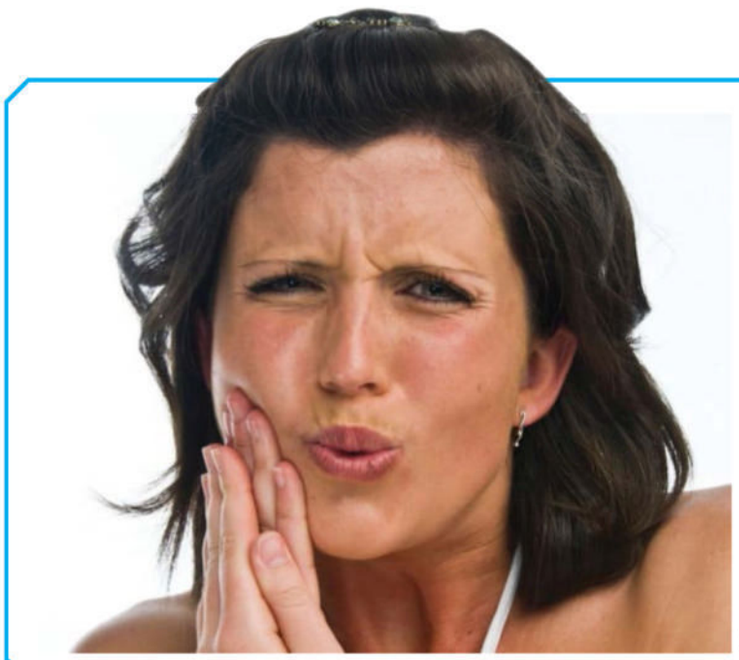
Helicobacter pylori
Bacteria burrow through the mucus in the stomach to escape damage by acid. They stick to the cells of the interior lining.

Gastrin
The inflammatory response increases production of the hormone gastrin. This in turn stimulates the formation of more stomach acid.

Enzymes
H pylori produce proteases and phospholipases – enzymes that damage the proteins and cell membranes of the stomach cells.

Ammonia
The ammonia made by the bacteria as a defence against acid damages the cells lining the stomach, causing inflammation.

Damage
As the cells become damaged a wound opens up in the stomach wall. If this becomes deep enough it can perforate blood vessels causing bleeding.



© Alamy

Why do we sometimes get mouth ulcers?

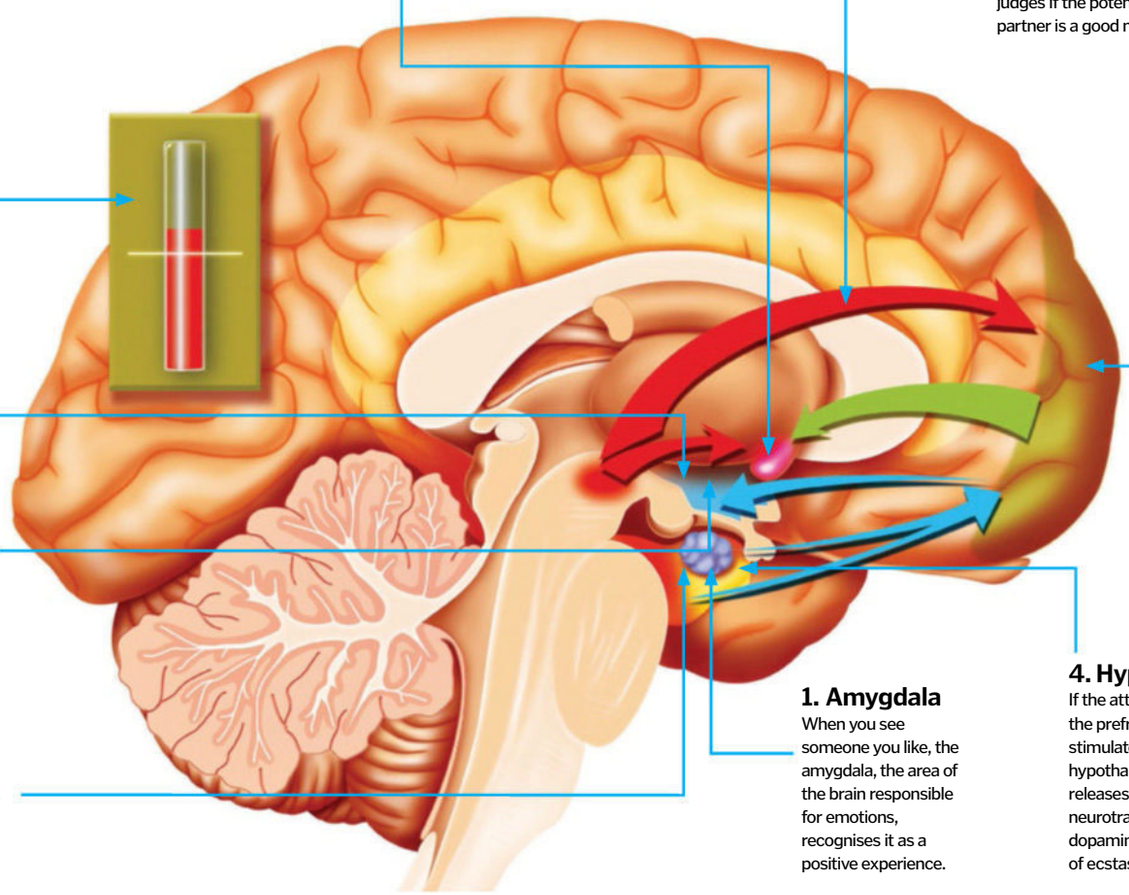
Ulcers are small lesions usually triggered by physical damage to the inside of the mouth, for example biting your cheek accidentally, eating sharp food or brushing your teeth. They are very rarely contagious and usually heal within ten days. Recurrent ulcers have a variety of causes, the most common being stress and hormonal changes.

In other cases, recurrent ulcers may be symptomatic of conditions including B12 or iron deficiencies, gastrointestinal diseases or immunosuppressant diseases such as HIV. Ulcers are sometimes triggered by sensitivity to certain foods including strawberries, almonds, tomatoes, cheese, chocolate and coffee.

"They are rarely contagious and usually heal in ten days"

Why do we feel love?

The hormones and chemicals that cause us to fall head over heels



7. Nucleus accumbens
The secretion of dopamine stimulates the nucleus accumbens, an area of the brain that plays a vital role in addiction.

8. Deactivate prefrontal cortex
The nucleus accumbens then pushes the prefrontal cortex for action, but it deactivates, suspending feelings of criticism and doubt.

3. Prefrontal cortex
Messages are then sent to the prefrontal cortex, the brain's decision-making centre, where it judges if the potential romantic partner is a good match.

6. Hormone levels
As dopamine levels increase, levels of serotonin, the hormone responsible for mood and appetite, decrease, causing feelings of obsession.

2. Hippocampus
The hippocampus, the memory forming area of the brain, records this pleasant experience making you want to seek it out again.

5. Norepinephrine
Norepinephrine, another neurotransmitter similar to adrenalin, is also released, which gets your heart racing and causes you to sweat.

9. Deactivate amygdala
The amygdala also deactivates, reducing the ability to feel fear and stress and creating a more happy, carefree attitude.

1. Amygdala
When you see someone you like, the amygdala, the area of the brain responsible for emotions, recognises it as a positive experience.

4. Hypothalamus
If the attraction is there, the prefrontal cortex stimulates the hypothalamus, which releases the neurotransmitter dopamine, causing feeling of ecstasy.

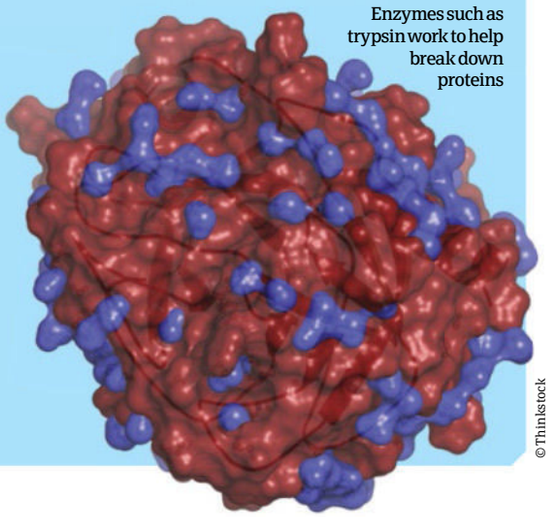
How do enzymes keep you alive?

The proteins that speed up your body's chemical reactions

Enzymes increase the speed of reactions that take place inside cells by lowering the energy-activation requirement for molecular reactions. Molecules need to react with each other to reproduce, but our bodies provide neither the heat nor the pressure required for these reactions.

Each cell contains thousands of enzymes, which are amino acid strings rolled up into a ball called a globular protein. Each enzyme contains a gap called an active site into which a molecule can fit. Once inside the crack, the molecule – which becomes known as a substrate – undergoes a reaction such as dividing or merging with another molecule without having to expel energy in a collision with another molecule. The enzyme releases it and floats on within the cell's cytoplasm. The molecule and active site need to match up perfectly in order for the sped-up reaction to take place. For example, a lactose molecule would fit into a lactase enzyme's active site, but not that of a maltase enzyme.

Interestingly enough, enzymes don't get used up in the process, so they can theoretically continue to speed up reactions indefinitely.



Enzymes such as trypsin work to help break down proteins

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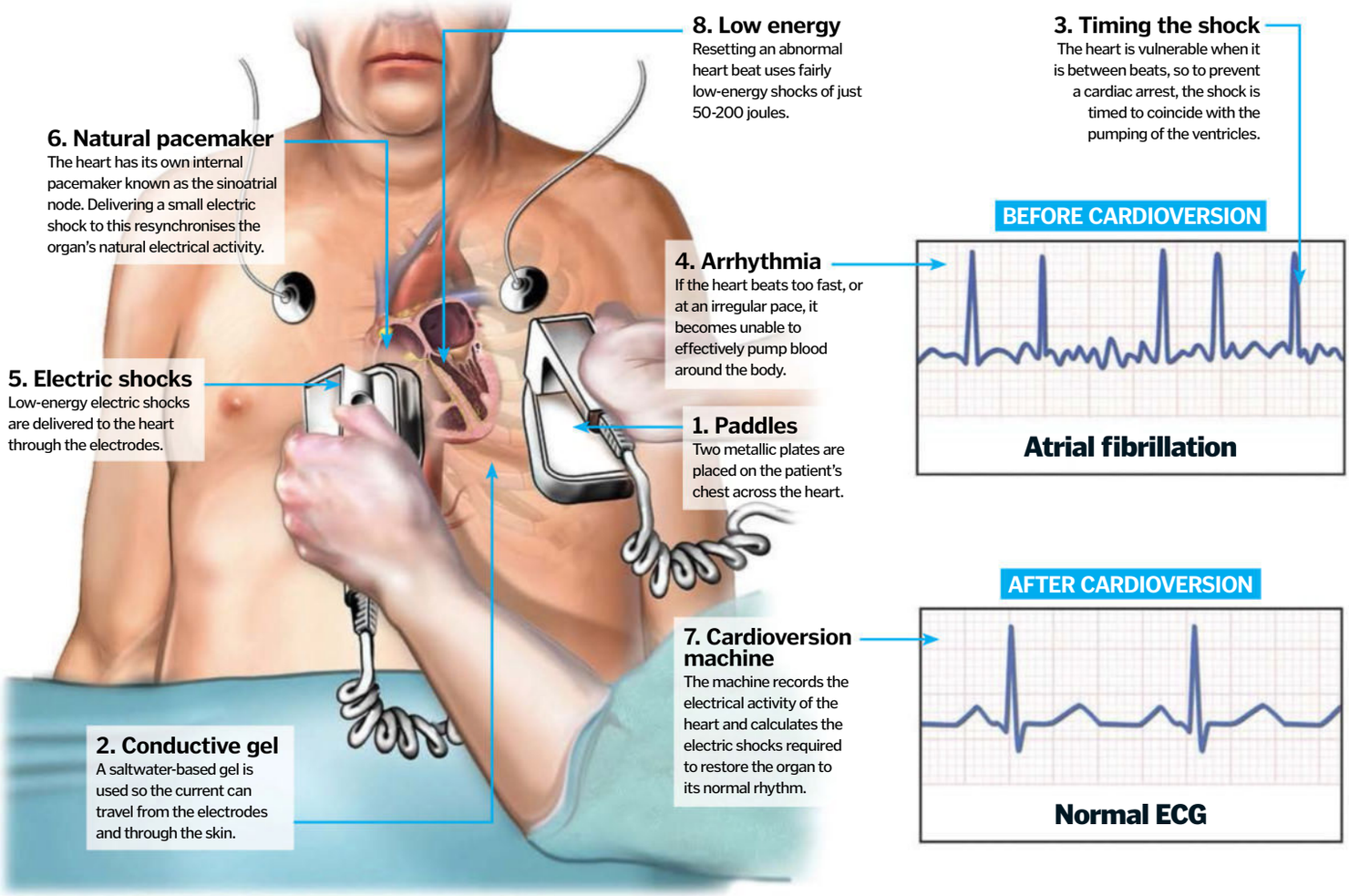
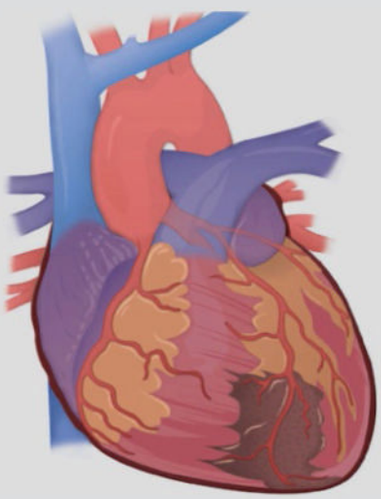
Correcting heart rhythms

How can a little electricity be used to fix a heart that's beating off-kilter?



Why's salt bad for the heart?



Simply put, too much salt is bad for you as it increases the demand on your heart to pump blood around the body. This is because when you eat salt it causes retention of increased quantities of water, which increases your blood pressure, and this places more strain on your heart. Most doctors recommend moderating salt intake.

Do women have Adam's apples?

You may not realise, but actually everyone has an Adam's apple, but men's are usually easier to see in their throat. It's a bump on the neck that moves when you swallow, named after the biblical Adam. Supposedly, it's a chunk of the Garden of Eden's forbidden fruit stuck in his descendants' throats, but it's actually a bump on the thyroid cartilage surrounding the voice box. Thyroid cartilage is shield-shaped and the Adam's apple is the bit at the front.

Why do men's Adam's apples stick out more? This is partly because they have bonier necks, but it is also because their larynxes grow differently from women's during puberty to accommodate their longer, thicker vocal cords, which give them deeper voices.

What causes a rumbling stomach?

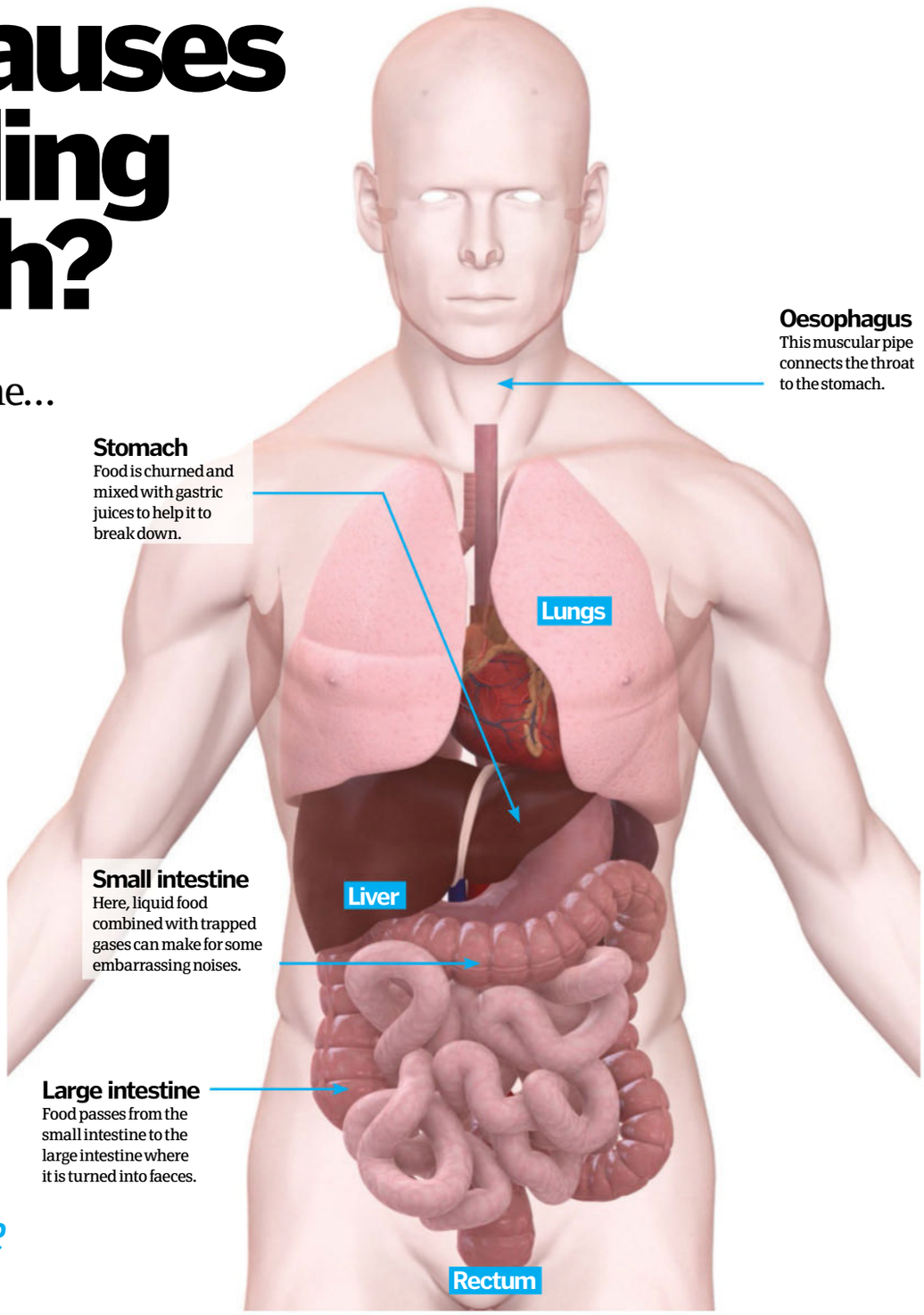
Discover how the small intestine is really to blame…

Waves of involuntary muscle contractions called peristalsis churn the food we eat to soften it and transport it through the digestive system. The contractions are caused by strong muscles in the oesophagus wall, which take just ten seconds to push food down to the stomach. Muscles in the stomach churn food and gastric juices to break it down further.

Then, after four hours, the semi-digested liquefied food moves on to the small intestine where yet more powerful muscle contractions force the food down through the intestine's bends and folds. This is where the rumbling occurs. Air from gaseous foods or that swallowed when we eat – often due to talking or inhaling through the nose while chewing food – also ends up in the small intestine, and it's this combination of liquid and gas in a small space that causes the gurgling noise.

Rumbling is louder the less food present in the small intestine, which is partly why people associate rumbling tummies with hunger. The other reason is that although the stomach may be clear, the brain still triggers peristalsis at regular intervals to rid the intestines of any remaining food. This creates a hollow feeling that causes you to feel hungry.

"After four hours, the semi-digested liquefied food moves to the small intestine"



Are seasickness and altitude sickness the same thing?

No, they're not – altitude sickness is a collection of symptoms brought on when you're suddenly exposed to a high-altitude environment with lower air pressure so less oxygen enters our body. The symptoms can include a headache, fatigue, dizziness and nausea.

Seasickness, on the other hand, is a more general feeling of nausea that's thought to be caused when your brain and senses get 'mixed signals' about a moving environment – for instance, when your eyes tell you that your immediate surroundings (such as a ship's cabin) are still as a rock, while your sense of balance (and your stomach!) tells you something quite different.

This is the reason why closing your eyes or taking a turn out on deck will often help, as it reconciles the two opposing sensations.

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How do cravings work?

Is a child destined to develop a taste for all things sweet?

Hunger and cravings are two very different things. While one is about survival, the other satisfies the nagging need for something sugary. It's believed we all develop a taste for sweetness in infancy. This stems from the predominant sweet taste of our mother's milk; when we taste it, the brain's reward centres light up, causing us to derive pleasure from this experience. As we continue to consume our mother's milk this pleasure is reinforced, which could explain how our sugar cravings originate.

Our mothers' diet can influence our preferences for certain foods. Scientists have found that flavours are transmitted from mother to baby via the amniotic fluid surrounding the foetus in the womb. Once born, the probability of the child disliking the flavours they have already experienced is reduced.

Our gut also plays a large role in cravings. The gut contains an almost separate autonomous system that governs the digestion lining. This vast network of 100 million neurones constantly samples the ingested food, relaying this information to the brain. This endless conversation can cause our appetite and cravings to change. The gut bacteria are also heavily involved; when they break down large quantities of fibre, they produce a specific compound that is sent to the brain, triggering it to feel full and satisfied from the recently ingested meal.

So should we consider cravings as a sign of food addiction? Although high-sugar and high-fat foods exhibit some of the hallmarks of addiction, the consensus is that it's actually the behaviour around eating these foods that we are addicted to.

People commonly crave the sweet taste and melt-in-the-mouth texture of chocolate

Can the latest technology stop cravings?

One of the most recent inventions is a microchip that aims to control cravings, developed by Kings College London's Centre for Bio-Inspired Technology. Once implanted in the body, the chip will use electrodes to monitor the signals that are consistently passing between the gut and the brain. By 'listening' to the communication between the two organs, the microchip will be able to recognise signals for cravings and alter these before they reach the brain.

Ghrelin is the body's hunger-inducing hormone. By using a ghrelin antagonist, scientists aim to suppress this hormone's activity, stopping cravings from ever materialising. This research has implications for cravings of other substances too. Scientists have hypothesised that due to the similarities between this system and that responsible for craving nicotine and alcohol, it may be possible to switch off these cravings as well as those related to food.

Tricking our senses

Does a spoon's colour change the way yoghurt tastes? In reality it doesn't, but the colour of cutlery can alter how you think something tastes. A recent study fed a group of volunteers the same yoghurt using a white and a black spoon. The results showed that the yoghurt was perceived to taste sweeter on the white spoon. Altering the spoon's weight was then tested. The lighter spoons caused the participants to feel the yoghurt was denser and more luxurious. Scientists are unsure what mechanism causes these bizarre results, and want to carry out further research into why we make these associations.

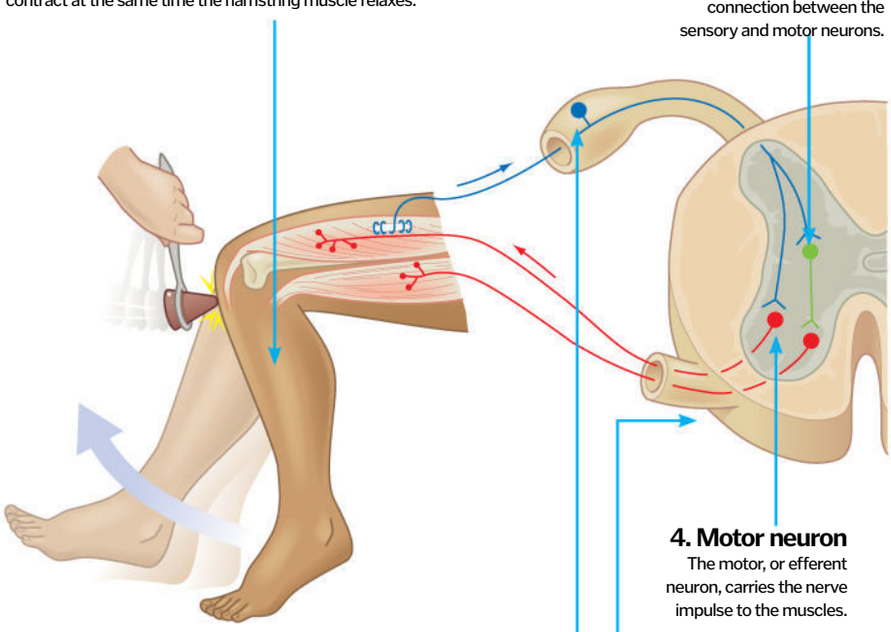
© Science Museum; Thinkstoc

What causes the knee-jerk reaction?

Why does your leg kick out when the doctor taps just below your knee?

Doctors often test the knee-jerk, or patellar reflex, to look for potential neurological problems. Lightly tapping your patellar tendon just below the kneecap stretches the femoral nerve located in your thigh, which in turn causes your thigh muscle (quadriceps) to contract and the lower leg to extend. When struck, impulses travel along a pathway in the dorsal root ganglion, a bundle of nerves in the L4 level of the spinal cord. Reflex actions are performed independently of the brain. This allows them to happen almost instantaneously – within about 50 milliseconds in the case of the knee-jerk reflex. This reflex helps you to maintain balance and posture when you walk, without having to think about every step you take.

The knee-jerk step-by-step



"Reflex actions are performed independently of the brain"

Why do feet smell?

Producing up to a pint of sweat each day, no wonder your feet get a bit whiffy

Sweat actually keeps the skin of our feet moist and flexible to cope with the constantly changing pressure when we walk. Without this moisture the skin would dry and crack, and walking would become extremely painful. Despite the huge number of glands (250,000 per foot) and amount of sweat that comes from our feet, remember it's still just salt and water. The odour comes from the bacteria that live on human skin which, while unsettling, are perfectly natural.

Our socks are a dark, moist-infested feast for them, as they eat sweat and dead skin. It is the waste products they excrete from this consumption that are what smells bad. The more the bacteria eat the worse our feet smell. To keep the smell down, make sure you change your socks and let your shoes air for 24 hours if you can. Also, wash your feet and spray them with antiperspirant!

The wonderful smell of freshly cut grass, daisies and feet...

Blisters shouldn't be burst as they are the body's way of protecting deeper skin layers

What are blisters?

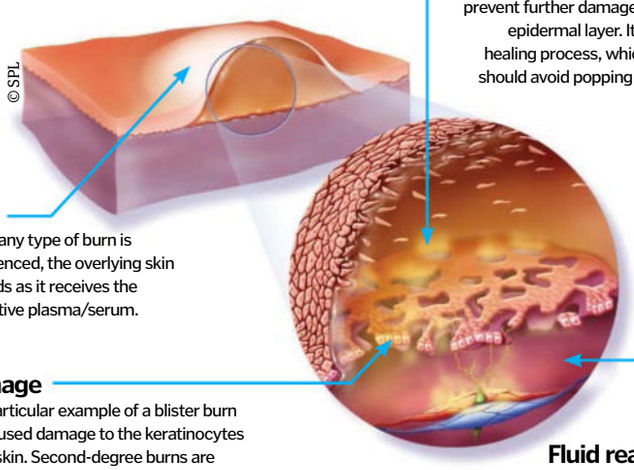
Why do burns cause bubbles to develop below the surface of the skin?

Though our skin is an amazing protector against the elements, it can become damaged by such factors as heat, cold, friction, chemicals, light, electricity and radiation, all of which 'burn' the skin. A blister is the resulting injury that develops in the upper layers of the skin as a result of such burns.

The most common example of a blister, which we've no doubt all experienced at some time, is due to the repeated friction caused by the material of a pair of shoes rubbing against, and irritating, the skin. The resulting water blister is a kind of plasma-filled bubble that appears just below the top layers of your skin. The plasma, or serum – which is a component of your blood – is released by the damaged tissue cells and fills the spaces between the layers of skin to cushion the underlying skin and protect it from further damage. As more and more serum pours into the space, the skin begins to inflate under the pressure, forming a small balloon full of the serous liquid. Given time to heal, the skin will reabsorb the plasma after about 24 hours.

Similarly, a blood blister is a variation of the same injury where the skin has been forcefully pinched or crushed but not pierced, causing small blood vessels to rupture, leaking blood into the skin. All blisters can be tender but should never be popped to drain the fluid as this leaves the underlying skin unprotected and invites infection into the open wound.

Blister caused by second-degree burns



© SPL

Plasma
Serum is released by the damaged tissues into the upper skin layers to prevent further damage below in the epidermal layer. It also aids the healing process, which is why you should avoid popping your blisters.

Skin
When any type of burn is experienced, the overlying skin expands as it receives the protective plasma/serum.

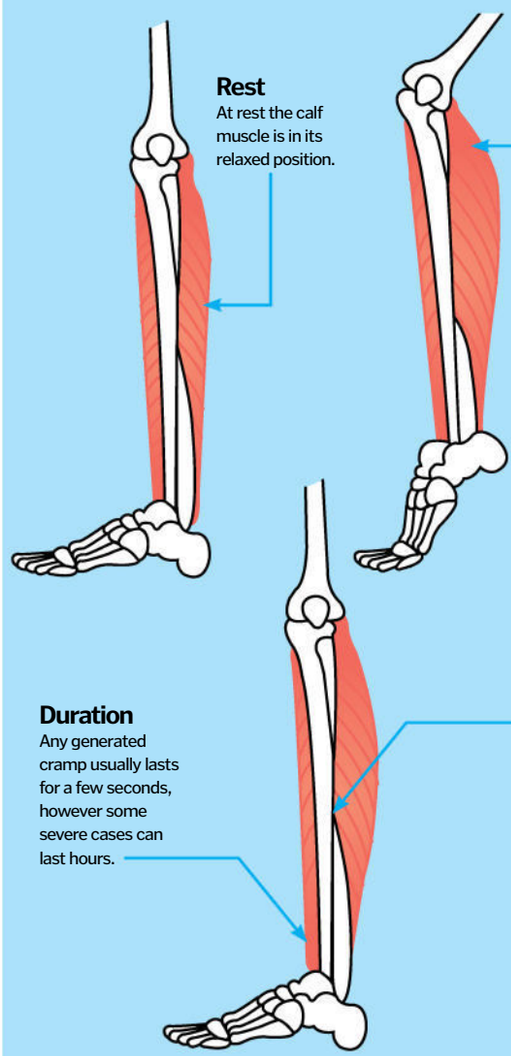
Damage
This particular example of a blister burn has caused damage to the keratinocytes in the skin. Second-degree burns are most often caused when the skin comes into contact with a hot surface, such as an iron or boiling water, or even after exposure to excessive sunlight.

Fluid reabsorbed
After a day or so the serum will be absorbed back into the body and the raised skin layers will dry out and flake off in their own time.

Cramp explained

Why do our muscles tense up?

Cramp is an involuntary contraction of a muscle, often in a limb such as the leg, that can cause pain and discomfort for seconds, minutes or, in extreme cases, for several hours. They are most common after or during exercise, coinciding with low blood sugar levels, dehydration and a high loss of salt from sweating. Although the full range of causes is something of a mystery due to limited research in the area, cramp is believed to be the result of muscle fatigue. If a muscle has been shortened through prolonged use, but is repeatedly stimulated, it isn't able to properly relax. A reflex arc from the central nervous system to the muscle informs it to continue contracting when it is not necessary, leading to a painful spasm known as cramp as the muscle continually attempts to contract. This is why athletes pushed beyond their limits, such as football players who have to play extra time in a match, will often experience this condition.



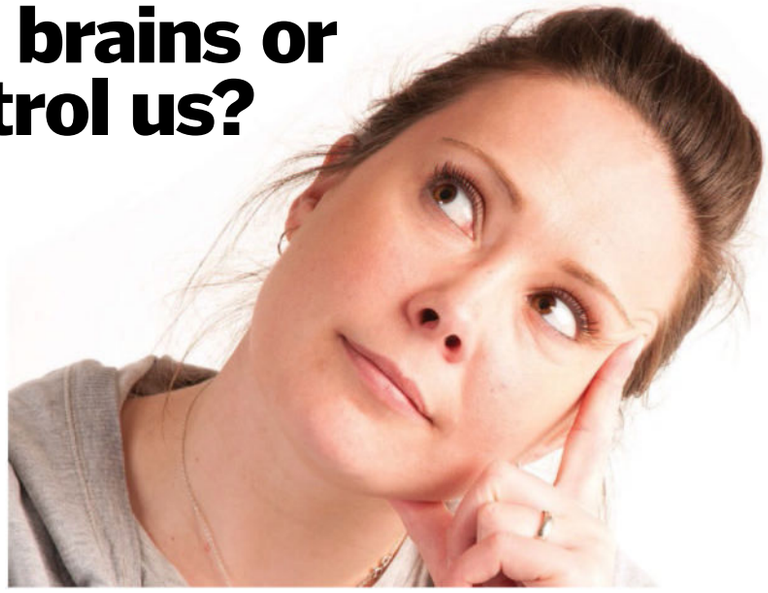
Rest
At rest the calf muscle is in its relaxed position.

Stretch
When the leg is bent or stretched the calf muscle will contract, and then relax when it is not.

Duration
Any generated cramp usually lasts for a few seconds, however some severe cases can last hours.

Cramp
Prolonged stretching of the leg prevents the calf muscle from relaxing, which can lead to cramp.

Do we control our brains or do our brains control us?



An experiment at the Max Planck Institute, Berlin, in 2008 showed that when you decide to move your hand, the decision can be seen in your brain, with an MRI scanner, before you are aware you have made a decision. The delay is around six seconds. During that time, your mind is made up but your consciousness doesn't acknowledge the decision until your hand moves. One interpretation of this is that your consciousness – the thing you think of as 'you' – is just a passenger inside a deterministic automaton. Your unconscious brain and your body get on with running your life, and only report back to your conscious mind to preserve a sense of free will. But it's just as valid to say that when you make a decision, there's always background processing going on, which the conscious mind ignores for convenience. In the same way, your eye projects an upside-down image onto your retina, but your unconscious brain turns it the right way around.

Gelotology is the study of laughter and its effects on the human body

© Alamy

What happens when we laugh?

Which muscles react when we find something funny and why is laughter so hard to fake?

Laughing can sometimes be completely involuntary and involves a complex series of muscles, which is why it's so difficult to fake and also why an active effort is required to suppress laughter in moments of sudden hilarity at inopportune moments.

In the face, the zygomaticus major and minor anchor at the cheekbones and stretch down towards the jaw to pull the facial expression upward; on top of this, the zygomaticus major also pulls the upper lip upward and outward.

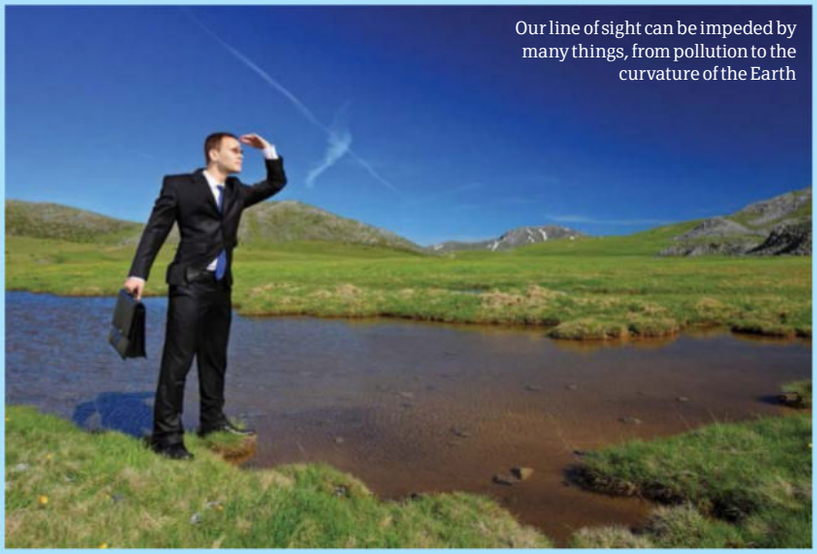
The sound of our laugh is produced by the same mechanisms which are used for coughing and speaking: namely, the lungs and the larynx. When we're breathing normally, air from the lungs passes freely through the completely open vocal cords in the larynx. When they close, air cannot pass, however when they're partially open, they generate some form of sound. Laughter is the result when we exhale while the vocal cords close, with the respiratory muscles periodically activating to produce the characteristic rhythmic sound of laughing.

The risorius muscle is used to smile, but affects a smaller portion of the face and is easier to control than the zygomatic muscles. As a result, the risorius is more often used to feign amusement, hence why fake laughter is easy to detect by other humans.

"Laughter is produced by the same mechanisms used for coughing and speaking"

What is the maximum distance the human eye can see?

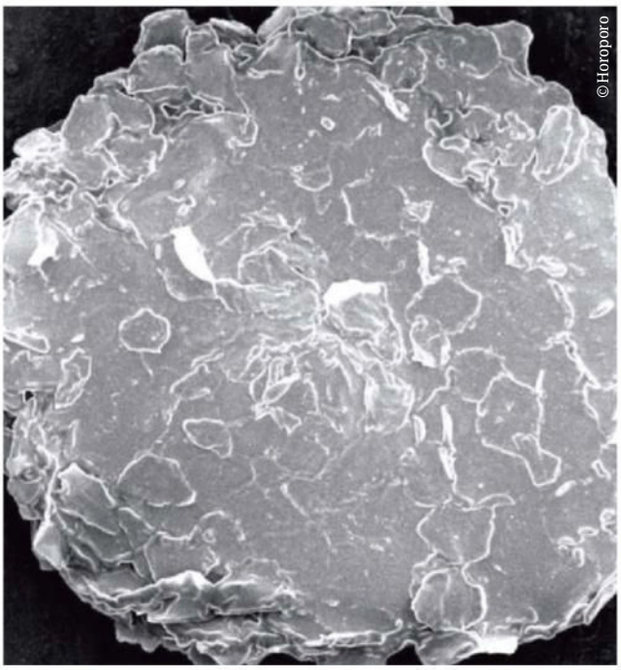
Dust, water vapour and pollution in the air will rarely let you see more than 20 kilometres, even on a clear day. Often, the curvature of the Earth gets in the way first – eg at sea level, the horizon is only 4.8km away. On the top of Mt Everest, you could theoretically see for 339km, but in practice cloud gets in the way. For a truly unobstructed view, look up. On a clear night, you can see the Andromeda galaxy with the naked eye, which is 2.25 million light years away.



Our line of sight can be impeded by many things, from pollution to the curvature of the Earth

What is dandruff?

Dandruff is when dead skin cells fall off the scalp. This is normal, as our skin is always being renewed. About half the population of the world suffers from an excessive amount of this shedding, which can be triggered by things like temperature or the increased activity of a microorganism that normally lives in everyone's skin, known as malassezia globosa. Dandruff is not contagious and there are many treatments available, the most common is specialised shampoo.



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Why do eyes take a while to adjust to dark?

At the back of the eye on the retina, there are two types of photoreceptors (cells which detect light). Cones deal with colour and fine detail and act in bright light, while rods deal with vision in low-light situations. In the first few minutes of moving into a dark room, cones are responsible for vision but provide a poor picture. Once the rods become more active, they take over and create a much better picture in poor light. Once you move back into light, the rods are reset and so dark-adaption will take a few moments again. Soldiers are trained to close or cover one eye at night when moving in and out of a bright room, or when using a torch, to protect their night vision. Once back in the dark, they reopen the closed eye with the rods still working and, as a result, maintain good vision. This allows them to keep operating in a potentially hostile environment at peak operational efficiency. Give it a try next time you get up in the middle of the night, it may help you avoid tripping over in the dark.

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Why do some people have allergies and some don't?

Allergies can be caused by two things: host and environmental factors. Host is if you inherit an allergy or are likely to get it due to your age, sex or racial group.Environmental factors can include things such as pollution, epidemic diseases and diet.

People who are likely to develop allergies have a condition known as 'atopy'. Atopy is not an illness but an inherited feature, which makes individuals more likely to develop an allergic disorder. Atopy tends to run in families.

The reason why atopic people have a tendency to develop allergic disorders is because they have the ability to produce the allergy antibody called 'Immunoglobulin E' or 'IgE' when they come into contact with a particular substance. However, not everyone who has inherited the tendency to be atopic will develop an allergic disorder.

"People who are likely to develop allergies have a condition known as 'atopy'"

Eczema explained

What causes the skin to react to otherwise harmless material?

Eczema is a broad term for a range of skin conditions, but the most common form is atopic dermatitis. People with this condition have very reactive skin, which mounts an inflammatory response when in contact with irritants and allergens. Mast cells release histamine, which can lead to itching and scratching, forming sores open to infection.

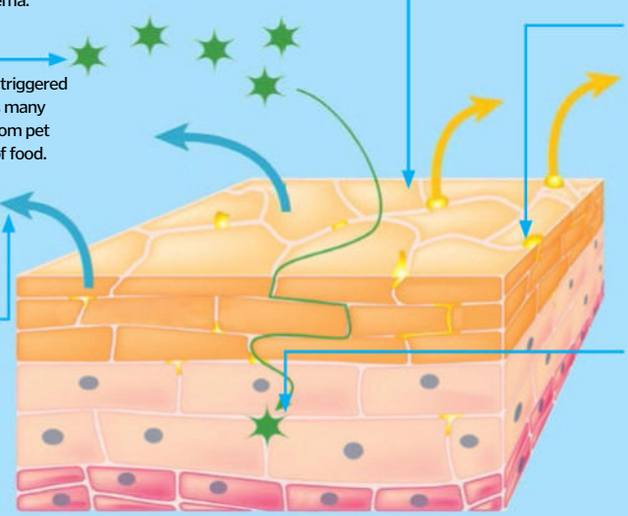
There is thought to be a genetic element to the disease and a gene involved in retaining water in the skin has been identified as a potential contributor, but there are many factors.

Eczema can be treated with steroids, which suppress immune system activity, dampening the inflammation so skin can heal. In serious cases, immunosuppressant drugs – used to prevent transplant rejection – can actually be used to weaken the immune system so it no longer causes inflammation in the skin.

The histamine increase can cause itching, leading to open sores

Under the skin

What happens inside the body when eczema flares up?



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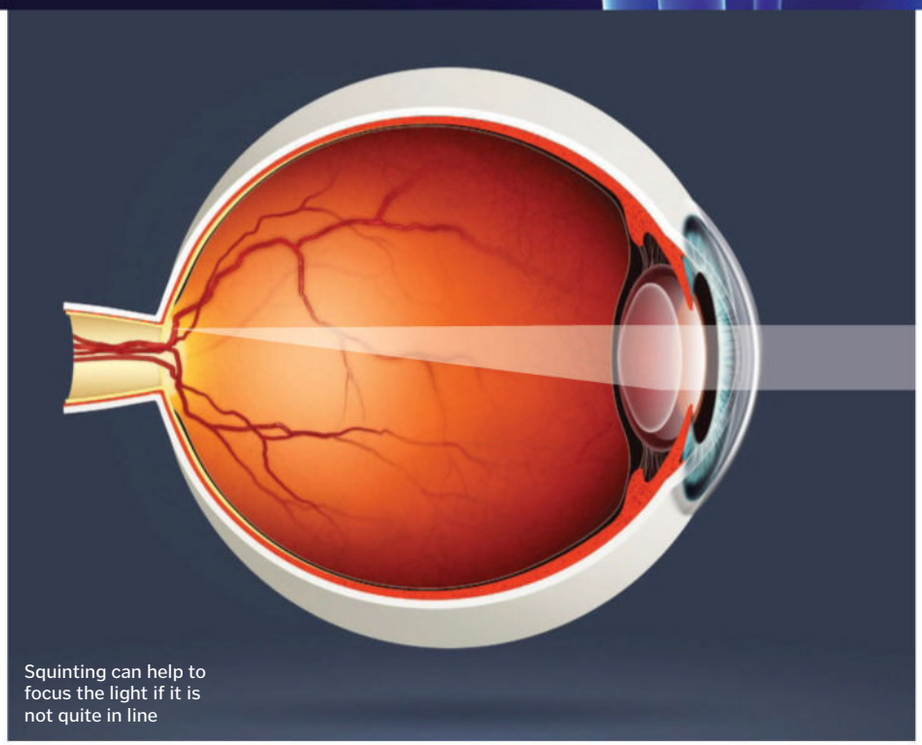
It turns out that growing pains don't have much to do with growth after all

What are growing pains?

The medical name for growing pains is 'recurrent nocturnal limb pain in children', and it describes the sensation of aching, crampy pain most often felt at night in the lower half of the legs.

Children and preteens are often told that they experience these aches and pains because they are growing, but this is untrue. If the pain really were caused by growth itself, doctors would expect to be visited by children that were going through a growth spurt, but there does not seem to be any link between periods of rapid bone growth and experience of 'growing pains'.

The pain is not in the bones or joints but is actually in the muscles and soft tissues, and one of the best explanations is that the pain is the result of strain or overuse of the muscles and joints during the day.



Squinting can help to focus the light if it is not quite in line

Why can we see clearer when we squint?

It doesn't work for everyone, but for some people things come into focus when they half close their eyes. This is because of the way that the eye focuses light.

A flexible lens bends the light as it passes into the eye, focusing it on a highly sensitive spot on the retina, called the fovea. The lens changes shape depending on the distance to the object, ensuring that the light is always concentrated on this spot.

As we get older, the lens becomes less flexible and cannot focus the light as well. By half closing our eyelids, we can put a little pressure on our eyeballs, changing their shape manually and helping to bring the light into focus.

Monozygotic twins are a rarity

What are twins?

Twins are becoming more prevalent due to medical developments, but how and why do they occur?

The number of twins, or multiples, being born is actually on the rise due to the increase in use of fertility treatments such as IVF as people wait longer to have children. The number of twins surviving early births is also increasing due to improved medical knowledge.

However, twins are still a relatively rare occurrence making up only around two per cent of the living world's population. Within this, monozygotic twins (from one ovum) make up around eight per cent with dizygotic (from two ovum) seen to be far more common.

While there is no known reason for the occurrence of the split of the ovum that causes monozygotic twins, the chances of having twins is thought to be affected by several different factors. It is believed twins 'run in the family', often seeming to skip generations, while the age, weight, height, race and even diet of the mother are thought to potentially impact the chances of conceiving dizygotic twins. Also, if the mother is going through fertility treatments, she is much more likely to become pregnant with multiples.

It will become apparent quite early on that a mother is carrying twins as this is often picked up during early ultrasound scans. There can be other indications such as increased weight gain or extreme fatigue. Although twins are often born entirely healthy and go on to develop without problems later in life due to medical advances, twins can be premature and smaller than single births due to space constrictions within the womb during development.

"It is believed twins 'run in the family', often seeming to skip generations"

Strange, but true...

There are many stories of identical twins being separated at birth and then growing up to lead very similar lives. One example described in the 1980 January edition of *Reader's Digest* tells of two twins separated at birth, both named James, who both pursued law-enforcement training and had a talent for carpentry. One named his son James Alan, and the other named his James Allan and both named their dogs Toy. There were also the Mowforth twins, two identical brothers who lived 80 miles apart in the UK, dying of exactly the same symptoms on the same night within hours of each other.

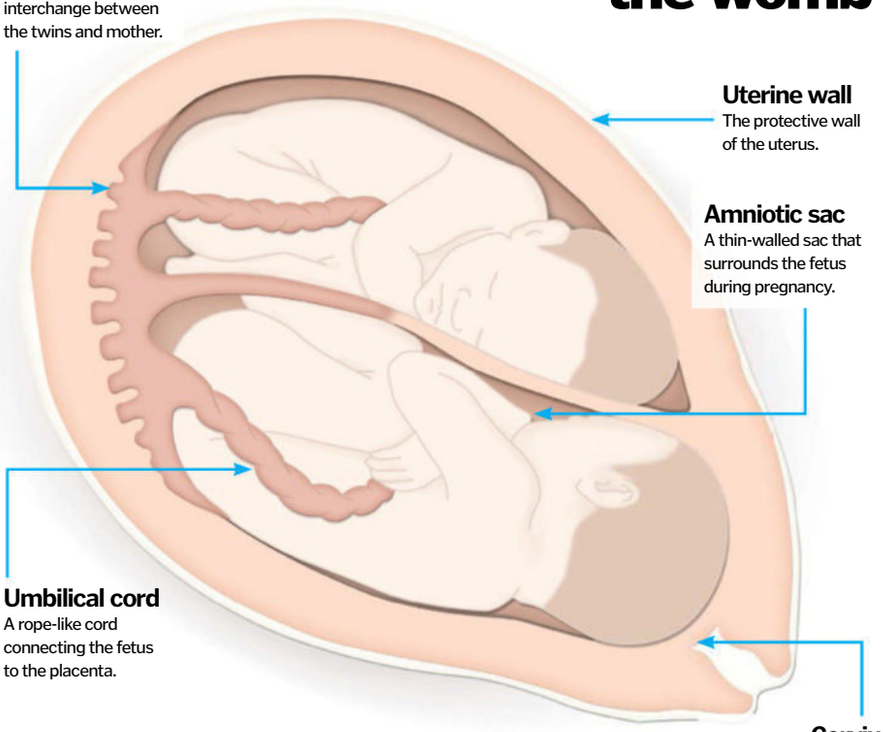
Multiple pregnancies, multiple problems?

There are many difficulties with twin pregnancies – mainly due to the limited size of the mother's womb. Multiple pregnancies rarely reach full term due to these limits, twins averaging at around 37 weeks. Also, because of the lack of space and eggs splitting in the womb, further complications such as conjoined twins can occur. Conjoined twins can be a problem dependant on where they're joined. If it is by a vital organ or bone structure, one or both may die following birth as they grow – or during an operation to separate them.

It is also suspected that as many as one in eight pregnancies may have started out as a potential multiple birth, but one or more of the foetuses does not progress through development to full term.

"Conjoined twins can be a problem dependant on where they're joined"

Twins inside the womb



Genetically identical, but why do twins differ?

From studying identical, monozygotic twins, we can attempt to decipher the level of impact environment has on an individual and the influence genes have. As the genetics of the individuals would be identical, we can say that differences displayed between two MZ twins are likely to be down to environmental influences.

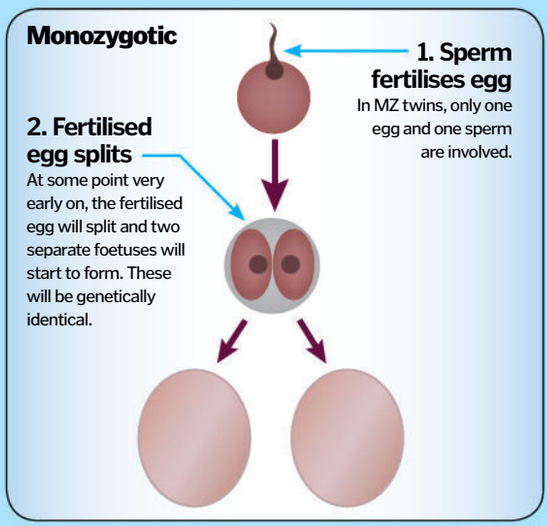
Some of the most interesting studies look at twins that have been separated at birth, often when individuals have been adopted by different parents. Often we see a similar IQ and personality displayed, whether or not they grow up together, but even these and other lifestyle choices can vary dependant on environment.

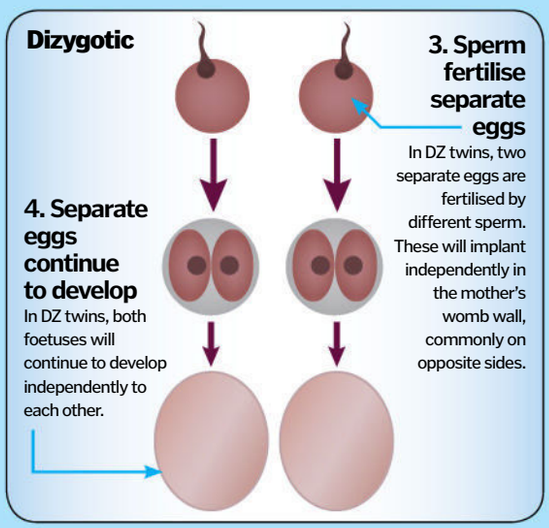
Ultimately, it is hard to draw firm conclusions from twin studies as they will be an unrepresentatively small sample within a much larger population and we often find that both environment and genetics interact to influence an individual's development.

Formation of identical and fraternal twins

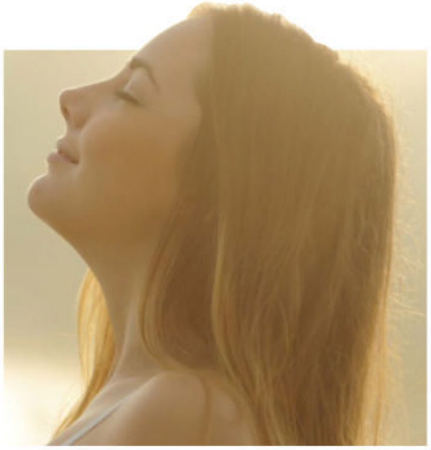
Monozygotic (MZ), or identical, twins are formed by the egg splitting soon after fertilisation, and from those identical split groups of cells, two separate foetuses will start to grow. Monozygotic twins are therefore genetically identical and will be the same sex, except when mutations or very rare syndromes occur during gestation. No reason is known for the occurrence of the split of the ovum, and the father has no influence over whether identical twins are produced.

Dizygotic (DZ) twins, however, are produced when the female's ovaries release two ovum and both are fertilised and implanted in the womb wall. They can be known as fraternal twins as genetically they are likely to only be as similar as siblings. They will also have separate placentas, where MZ twins will share one, as they are entirely separate to each other – they are just sharing the womb during gestation. This kind of twin is far more common.





How do alveoli help you breathe?



The lungs are filled with tiny balloon-like sacs that keep you alive

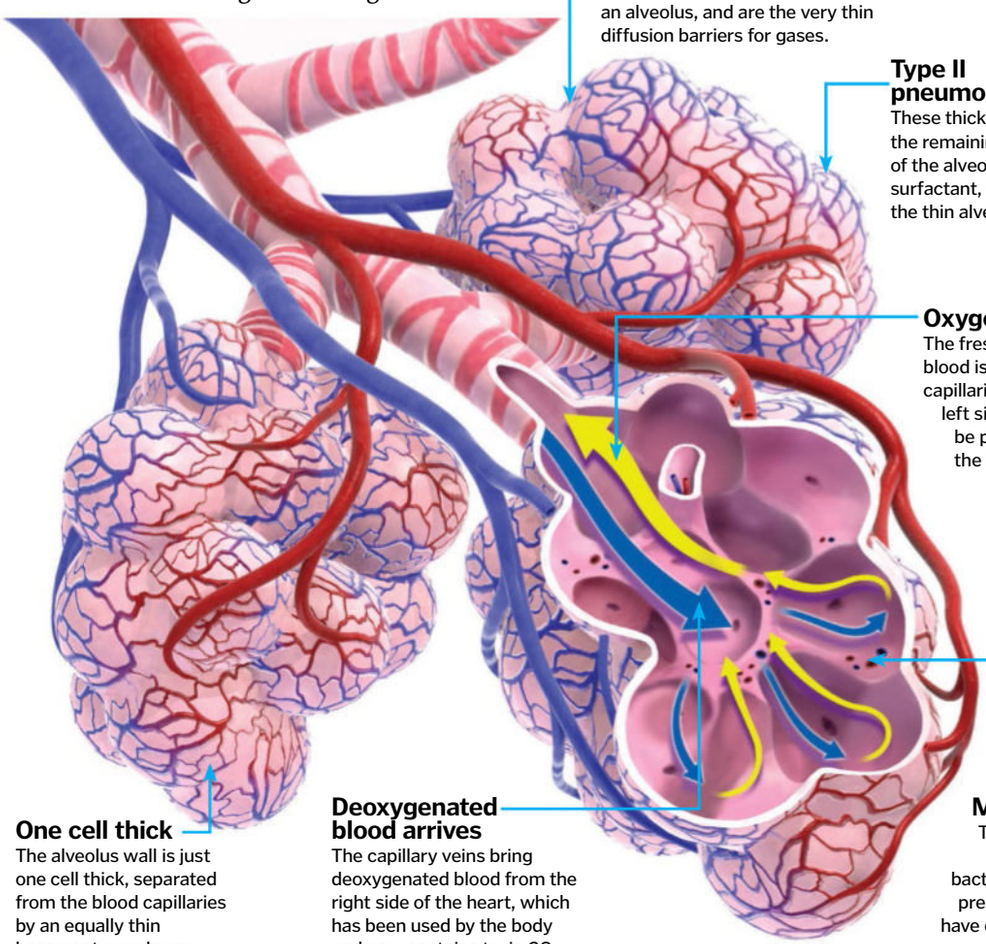
Gas exchange occurs in the lungs, where toxic gases (carbon dioxide) are exchanged for fresh air with its unused oxygen content. Of all the processes in the body that keep us functioning and alive, this is the most important. Without it, we would quickly become unconscious through accumulation of carbon dioxide within the bloodstream, which would poison the brain.

The two lungs (left and right) are made up of several lobes, and the fundamental building blocks of each are the tiny alveolus. They are the final point of the respiratory tract, as the bronchi break down into smaller and smaller tubes, leading to the alveoli, which are grouped together and look like microscopic bunches of grapes. Around the alveoli is the epithelial layer – which is amazingly only a single cell thick – and this is surrounded by extremely small blood vessels called capillaries. It is here that vital gas exchange takes place between the fresh air in the lungs and the deoxygenated blood within the capillary venous system on the other side of the epithelial layer.

The alveoli of the lungs have evolved to become specialised structures, maximising their efficiency. Their walls are extremely thin and yet very sturdy. Pulmonary surfactant is a thin liquid layer made from lipids and proteins that coats of all the alveoli, reduces their surface tension and prevents them crumpling when we breathe out. Without them, the lungs would collapse.

Alveoli anatomy

How alveoli enable gas exchange



Type I pneumocytes
These large, flattened cells form 95 per cent of the surface area of an alveolus, and are the very thin diffusion barriers for gases.

Type II pneumocytes
These thicker cells form the remaining surface area of the alveoli. They secrete surfactant, which prevents the thin alveoli collapsing.

Oxygenated blood
The freshly oxygenated blood is taken away by capillaries and enters the left side of the heart, to be pumped through the body.

One cell thick
The alveolus wall is just one cell thick, separated from the blood capillaries by an equally thin basement membrane.

Deoxygenated blood arrives
The capillary veins bring deoxygenated blood from the right side of the heart, which has been used by the body and now contains toxic CO_2.

Macrophages
These are defence cells that digest bacteria and particles present in air, or that have escaped from the blood capillaries.

Breathe in, breathe out

The alveoli function to allow gas exchange, but since they're so small, they can't move new air inside and out from the body without help. That's what your respiratory muscles and ribs do, hence why your chest moves as you breathe. The diaphragm, which sits below your heart and lungs but above your abdominal organs, is the main muscle of respiration. When it contracts, the normally dome-shaped diaphragm flattens and the space within the chest cavity expands. This reduces the pressure compared to the outside atmosphere, so air rushes in. When the diaphragm relaxes, it returns to its dome shape, the pressure within the chest increases and the old air – now full of expired carbon dioxide – is forced out again. The muscles between the ribs (called intercostal muscles) are used when forceful respiration is required, such as during exercise Try taking a deep breath and observe how both your chest expands to reduce the pressure!

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DID YOU KNOW? *More than 90 per cent of migraine sufferers cannot function during an attack*

How do dilating eye drops work?

Discover how they are used to diagnose and treat eye conditions

Sight is one our most important senses, so maintaining good eye health is absolutely essential. However, eyesight problems can be difficult to detect or treat on the surface, so specialist eye doctors will often use dilating eye drops in order to get a better look inside the eye at the lens, retina and optic nerve.

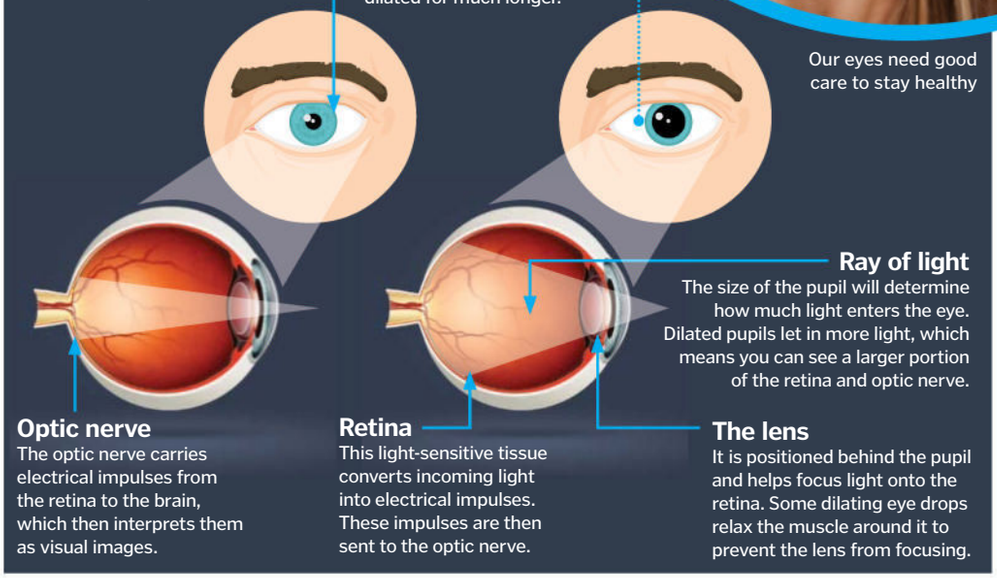
The drops contain the active ingredient atropine, which works by temporarily relaxing the muscle that constricts the pupil, enabling it to remain enlarged for a longer period of time so a thorough examination can be performed. Some dilating eye drops also relax the muscle that focuses the lens inside the eye, which allows an eye doctor or optometrist to measure a prescription for young children who can't perform traditional reading tests.

Dilating eye drops are not only used to help perform procedures, they may also be administered after treatment, as they can prevent scar tissue from forming. They are also occasionally prescribed to children with lazy-eye conditions, as they will temporarily blur vision in the strong eye, causing the brain to use and strengthen the weaker eye.

Our eyes need good care to stay healthy

Before and after

A better look inside the eye



Why do we get migraines?

Discover how these mega-headaches strike

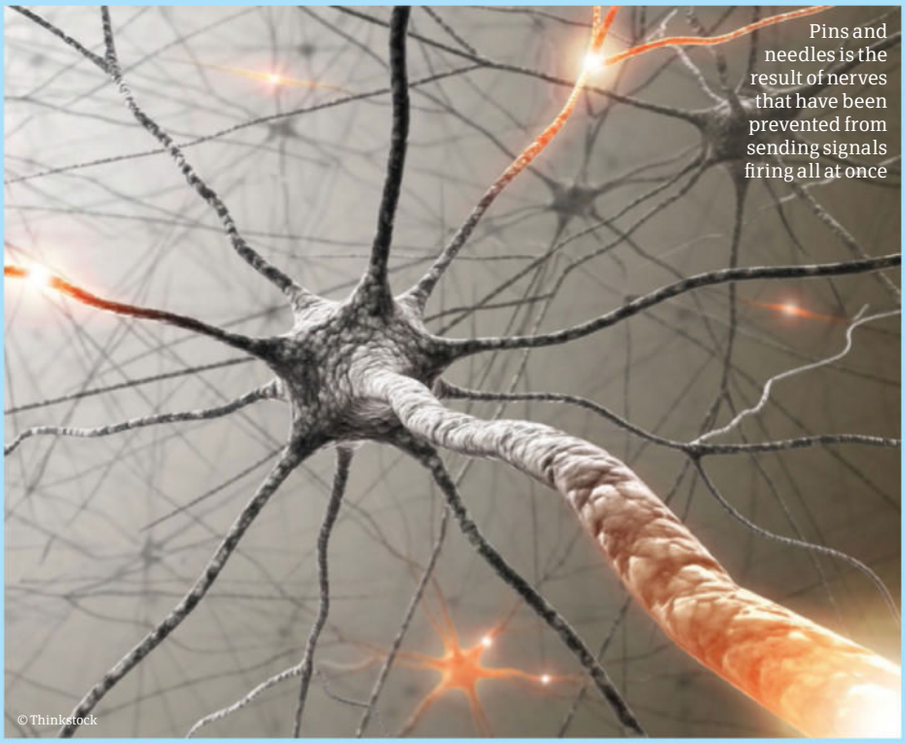
Those who suffer from migraines know they are a constant concern as they are liable to strike at any time. Essentially, a migraine is an intense pain at the front or on one side of the head. This usually takes the form of a heavy throbbing sensation and can last as little as an hour or two and up to a few days. Other symptoms of a migraine include increased sensitivity to light, sound and smell, so isolation in a dark and quiet room often brings relief. Nausea and vomiting is also often reported, with pain sometimes subsiding after the sufferer has been sick.

It is thought that migraines occur when levels of serotonin in the brain drop rapidly. This causes blood vessels in the cortex to narrow, which is caused by the brain spasming. The blood vessels widen again in response, causing the intense headache. Emotional upheaval is often cited as a cause for the drop in serotonin in the brain, as is a diet in which blood-sugar levels rise and fall dramatically.

What are 'pins and needles'?

The numb sensation of your leg 'going to sleep' isn't caused by cutting off the blood circulation. It's the pressure on the nerves that is responsible. This squeezes the insulating sheath around the nerve and 'shorts it out', blocking nerve transmission. When pressure is released, the nerves downstream from the pinch point suddenly all begin firing at once. This jumble of unco-ordinated signals is a mixture of pain and touch, hot and cold all mixed together, which is why it's excruciating.

"This squeezes the insulating sheath around the nerve and 'shorts it out'"



Pins and needles is the result of nerves that have been prevented from sending signals firing all at once

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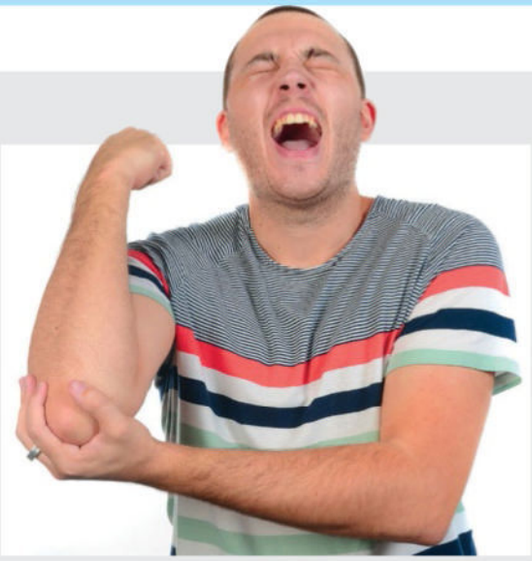
Why do paper cuts hurt so much?

Paper can cut your skin as it is incredibly thin and, if you were to look at it under a high-powered microscope, it has serrated edges. Critically though, a sheet of loose paper is far too soft and flexible to exert enough pressure to pierce the skin, hence why they are not a more frequent occurrence. However, if the paper is fixed in place – maybe by being sandwiched within a pack of paper – a sheet can become stiff enough to attain skin-cutting pressure. Paper cuts are so painful once inflicted as they stimulate a large number of pain receptors – nociceptors send nerve signals to the spinal cord and brain – in a very small area due to the razor-type incision. Because paper cuts tend not to be deep, bleeding is limited, leaving pain receptors open to the environment.



Are there other 'funny bones' in the body?

The term 'funny bone' is misleading because it refers to the painful sensation you experience when you trap your ulnar nerve between the skin and the bones of the elbow joint. This happens in the so-called cubital tunnel, which directs the nerve over the elbow but has little padding to protect against external impacts. The ulnar nerve takes its name from the ulna bone, which is one of two bones that runs from the wrist to the elbow; the other is the radial bone, or radius.

No other joint in the human skeleton combines these conditions and duplicates the this erroneously named reaction so we only have one 'funny bone'.

Why do our muscles ache?

Learn what causes stiffness and pain in our muscles for days after exercise

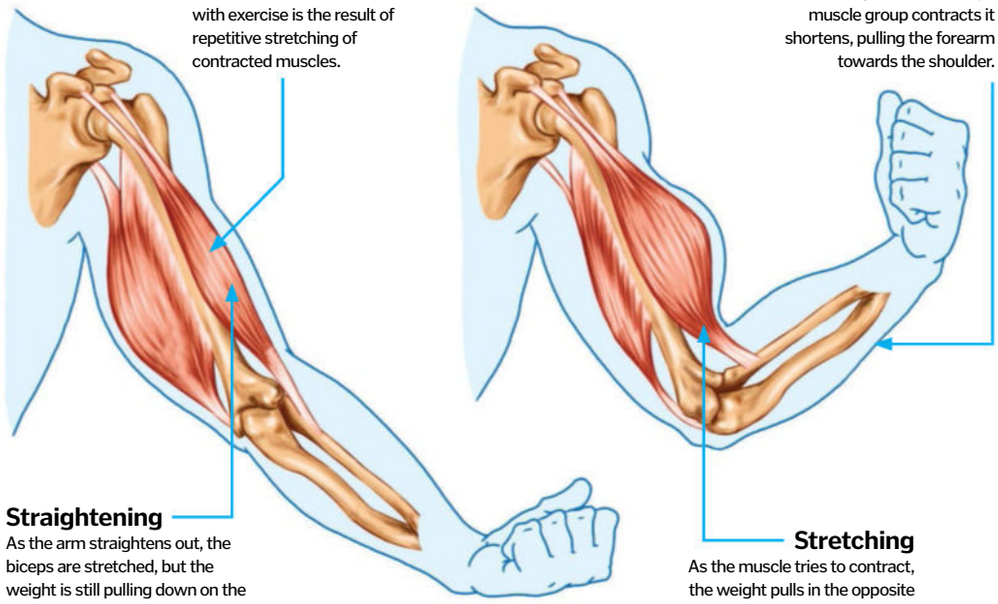
Normally, when our muscles contract they shorten and bulge, much like a bodybuilder's biceps. However, if the muscle happens to be stretched as it contracts it can cause microscopic damage.

The quadriceps muscle group located on the front of the thigh is involved in extending the knee joint, and usually contracts and shortens to straighten the leg. However, when walking down a steep slope, say, the quadriceps contract to support your body weight as you step forward, but as the knee bends, the muscles are pulled in the opposite direction. This tension results in tiny tears in the muscle and this is the reason that downhill running causes so much delayed-onset pain.

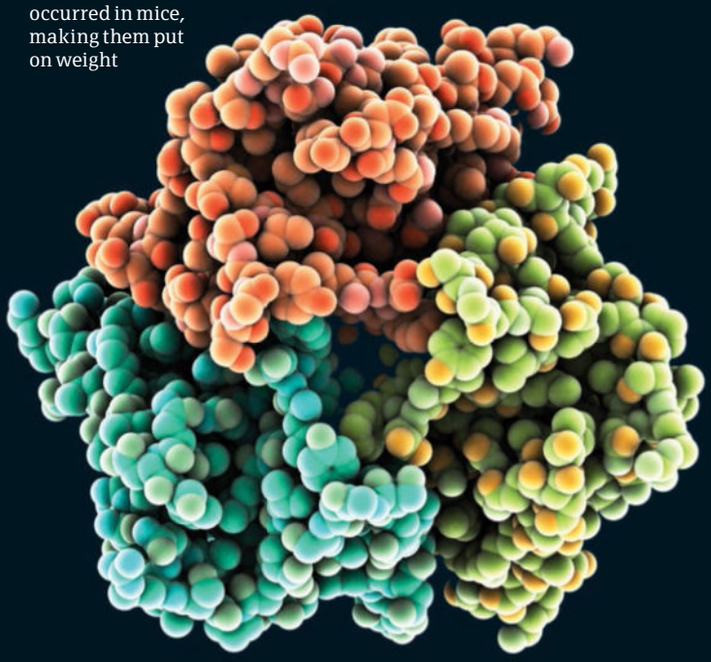
At the microscopic level, a muscle is made up of billions of stacked sarcomeres, containing molecular ratchets that pull against one another to generate mechanical force. If the muscle is taut as it tries to contract, the sarcomeres get pulled out of line, causing microscopic damage. The muscle becomes inflamed and fills with fluid, causing stiffness and activating pain receptors – hence that achy feeling you get after unfamiliar exercise.

Weight lifting and the body

What happens to your biceps when you pump iron?



The leptin (LEP) gene was originally discovered when a random mutation occurred in mice, making them put on weight



The fat hormone

Discover how the body manages to keep track of its energy reserves

In order to know how much food to eat, the human body needs a way of assessing how much energy it currently has in storage. Leptin – more commonly known as the 'fat hormone' – essentially acts as our internal fuel gauge. It is made by fat cells and tells the brain how much fat the body contains, and whether the supplies are increasing or being used up.

Food intake is regulated by a small region of the brain called the hypothalamus. When fat stores run low and leptin levels drop, the hypothalamus stimulates appetite in an attempt to increase food intake and regain lost energy. When leptin levels are high, appetite is suppressed, reducing food intake and encouraging the body to burn up fuel.

It was originally thought that leptin could be used as a treatment for obesity. However, although it is an important regulator of food intake, our appetite is affected by many other factors, from how full the stomach is to an individual's emotional state or their food preferences. For this reason, it's possible to override the leptin message and gain weight even when fat stores are sufficient.

© Alamy

Why do the upper arm and upper leg have only one bone?

The makeup of the human skeleton is a fantastic display of evolution that has left us with the ability to perform incredibly complex tasks without even thinking about them. There are several different types of joint between bones in your body, which reflect their function; some are strong and allow little movement, others are weak but allow free movement. The forearm and lower leg have two bones, which form plane joints at the wrist and ankle. This type of joint allows for a range of fine movements, including gliding and rotation. The hinge joints at your elbows and knees allow for less lateral movement, but they are strong. Shoulders and hips, though, are ball-and-socket joints, which allow for a wide range of motion.

"Laughter is produced by the same coughing"

Why shouldn't we eat raw meat?

Meat can harbour many different bacteria, viruses and even parasites. Cooking meat properly destroys them, making meat much safer for consumption. Bacteria and viruses can make you ill, while parasites can grow inside your gut and even migrate to your brain. Food poisoning is a very serious business and by not cooking meat thoroughly, you are greatly increasing your chances of getting something nasty. People quite often eat raw meat such as steak tartare, but it requires extra care in the preparation. Besides safety, cooking meat also makes it taste better. By cooking meat and other foods, humans can get much more energy than from chewing raw food alone.

How do inoculations work?

The terms 'inoculation' and 'vaccination' are used interchangeably. They involve introducing a foreign substance (antigens) into the body, causing antibody production. These can either be dead, made less harmful, or just contain certain bits that cause disease.

White blood cells called B lymphocytes recognise these antigens, and produce antibodies to neutralise them. After the initial encounter, a group of B lymphocytes are made called 'memory cells', which produce antibodies faster if exposed to the same antigen again.

"They involve introducing antigens into the body"

What causes insomnia?

Why checking your phone before bed could be spoiling your sleep

Most of us experience insomnia at some point in our lives, finding it difficult to drift off and stay asleep, despite having plenty of opportunity to. Typical causes of insomnia include stress and anxiety, but did you know that your gadgets could be to blame, too?

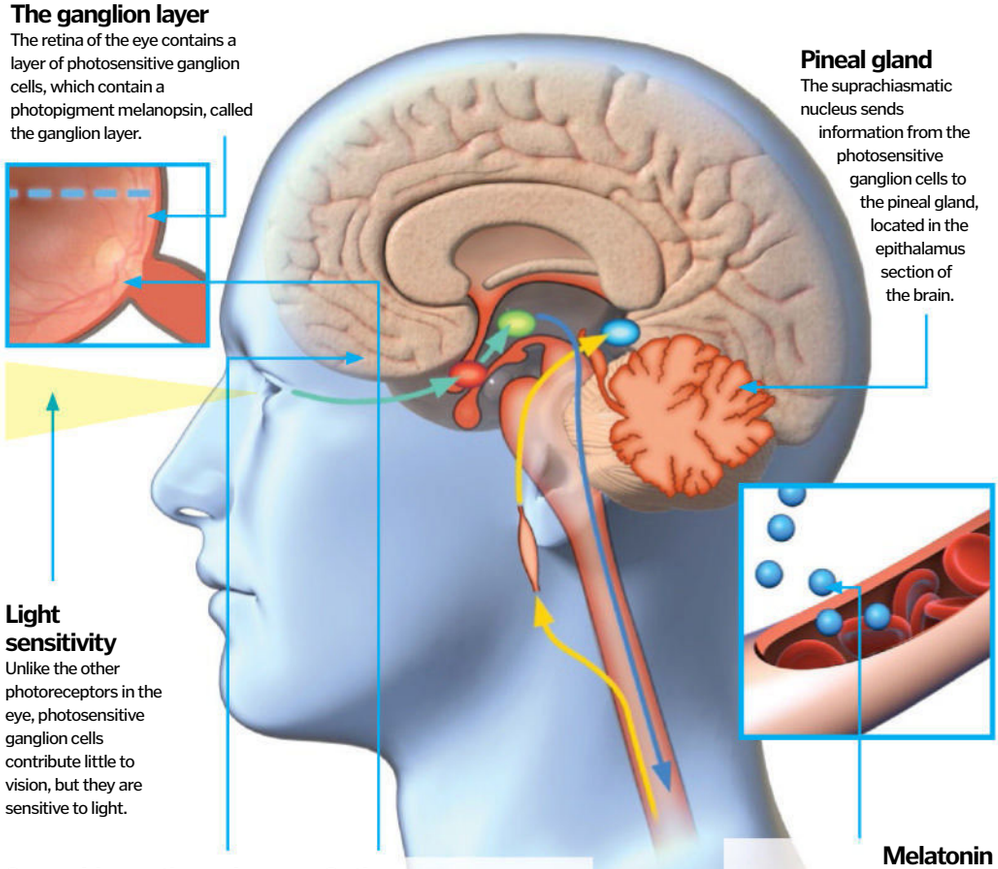
Our sleepiness and wakefulness throughout the day and night is regulated by our circadian rhythm. This is essentially our body clock, creating physical, mental and behavioural changes that occur in our bodies over a roughly 24-hour cycle. Circadian rhythms are found in most living things, including animals, plants and many tiny microbes, and they are created by natural factors in the body. However, they also respond to signals from the environment, such as light, so that we remain in sync with the Earth's rotation.

All forms of light, both natural and artificial, affect our body clock, as when the photosensitive retinal ganglion cells in our eyes detect light, they send this information to the suprachiasmatic nucleus (SCN) – the group of nerves in the brain that control circadian rhythms. When light is detected, the SCN will delay the production of melatonin, a hormone that sends us to sleep. However, the retinal ganglion cells have been found to be particularly sensitive to the blue light with a short wavelength of 480 nanometres emitted by most computer, smartphone and tablet screens. Exposure to a lot of this type of light in the hours before we go to bed has been proven to suppress melatonin levels, making it difficult for us to get to sleep.

> "Laughter is produced by the same coughing"

Light sensitivity

How light affects your ability to sleep



The ganglion layer
The retina of the eye contains a layer of photosensitive ganglion cells, which contain a photopigment melanopsin, called the ganglion layer.

Pineal gland
The suprachiasmatic nucleus sends information from the photosensitive ganglion cells to the pineal gland, located in the epithalamus section of the brain.

Light sensitivity
Unlike the other photoreceptors in the eye, photosensitive ganglion cells contribute little to vision, but they are sensitive to light.

Suprachiasmatic nucleus
The suprachiasmatic nucleus is a tiny area of neurons, located in the hypothalamus area of the brain, which controls circadian rhythms.

Optic nerve
The photosensitive ganglion cells have long fibres that connect to the optic nerve and eventually reach the suprachiasmatic nucleus.

Melatonin
When the photosensitive ganglion cells detect darkness, a message is sent to the pineal gland to produce melatonin, a hormone that can cause drowsiness.

Blocking blue light

The best way to reduce your exposure to blue light is to avoid staring at a screen within two hours prior to going to bed. Instead, illuminate the room with the warmer, longer-wavelength light from regular incandescent bulbs or even candles. However, if you just can't resist staring at your computer or phone before bed, there are ways that you can do so and still get a good night's sleep. Wearing special glasses with amber-coloured lenses will filter out blue, low-wavelength light, allowing you to stare at your screen for as long as you like. Companies such as Uvex (uvex-safety.co.uk) make blue-blocking glasses and goggles in a range of styles. Alternatively, you could use computer software such as f.lux (justgetflux.com) and smartphone apps such as Twilight (play.google.com) that automatically adjusts your screen to filter out blue light between sunset and sunrise, replacing it with a softer red light.

Filter out blue light with a pair of amber-tinted glasses

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How quickly does human hair grow?

Human hair grows on average 1.25 centimetres (0.5 inches) per month, which is equivalent to about 15 centimetres (six inches) per year. There are several variables that can affect hair's growth rate such as age, health and genetics. Each hair grows in three stages, the first being the anagen phase where most growth occurs. The longer your hair remains in this stage dictates how long and quickly it develops; this can last between two and eight years and is followed by the catagen (transitional) and telogen (resting) phases. Hair growth rates vary across different areas of the head, with that on the crown growing the fastest.

"Each hair grows in three stages, the first being the anagen phase"

Why does blonde hair look darker when it's wet?

Dry blonde hair has a rough, tiled surface – something like fish scales. When light rays hit these scales, they bounce off in all directions. Some of the light reaches your eyes and makes the hair look brighter; it's like shining a torch on the hair.

When you wash your hair, a thin film of water forms around each fibre. Light rays pass into the film of water, bounce around inside, and there's a chance they'll get absorbed by the hair. Since the light gets trapped inside the water, less of it reaches your eyes, so the hair actually appears a lot darker.

"A thin film of water forms around each fibre"

Why do we get angry?

How does this primal emotion override our normal thought processes?

As far as we know, anger is one of the oldest and most primitive forms of emotion. It is believed to have been hard-wired in our brains many thousands of years ago, to help us survive tougher times. Back then, resources like food, potential mates and shelter were relatively scarce. Anger was therefore a vital emotion, giving our ancestors the necessary drive and power to survive when their safety, or chance to mate, was threatened.

Although our lives are less frequently in danger than our ancestors', our brains still react to certain anger triggers, one of which is being treated unfairly. As soon as someone shouts at you or gives you an angry look, the amygdala in your brain sounds the alarm, prompting the release of two key hormones – adrenaline and testosterone – which prime the body for physical aggression.

As well as the amygdala, the prefrontal cortex is also activated by the anger trigger. This part of the brain is responsible for decision-making and reasoning, making sure you don't react irrationally to the situation. According to studies, the time between initially getting angry and the more measured response from the prefrontal cortex is less than two seconds. This would explain the popularity of the age-old advice of counting to ten if you feel your blood boiling.

It's widely accepted that men and women feel anger differently. Women are more likely to feel anger slowly build up, which takes time to diffuse, whereas men are more likely to describe the feeling as a fire raging within them that quickly eases. This is thought to be due to men having a larger amygdala than women, and is why a man is statistically more likely to be aggressive than a woman.

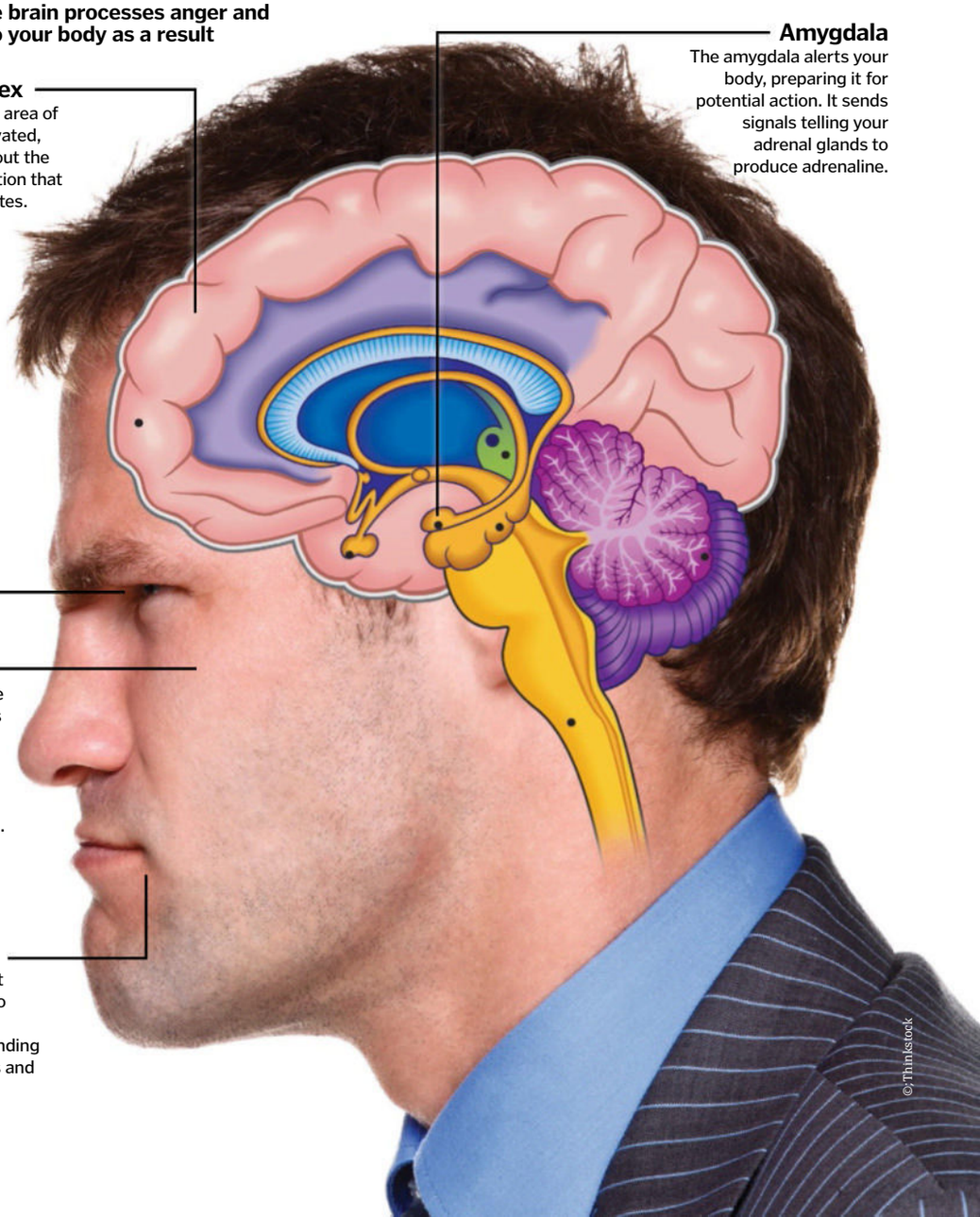
Can getting angry be good for you?

Many people view anger as a negative emotion that wastes energy and has no benefits. Yet as with all human emotions, anger has evolved to serve an evolutionary purpose. Having said this, getting angry will only have a positive effect if it is used in the correct way. If we sit down and discuss why someone or something has made us angry, then anger is working in the right way; if we can't regulate our anger response, it's unlikely to improve a situation in the long run. Studies have shown that releasing anger in a rational way is actually good for you. On the other hand, storing anger up is known to negatively affect certain people, potentially leading to depression. Constant, chronic anger can lead to high blood pressure and even heart disease in the long term.

Explaining why something has made you angry is much more likely to resolve an issue than exploding with rage

Inside your brain

Find out how the brain processes anger and what happens to your body as a result



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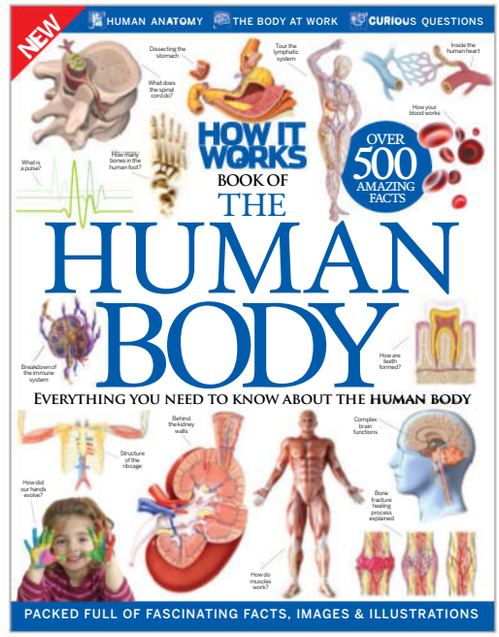

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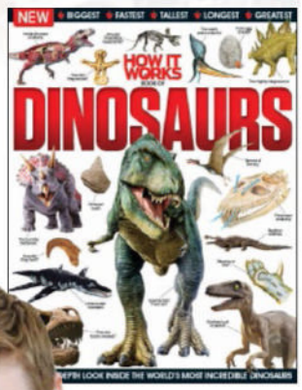

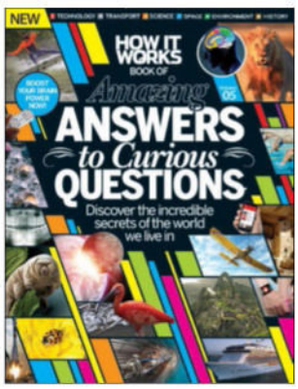

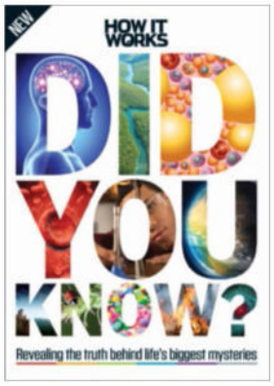

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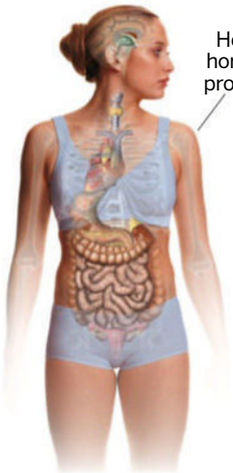
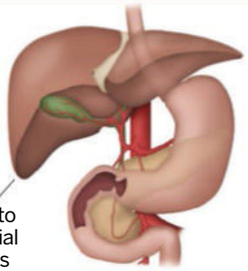
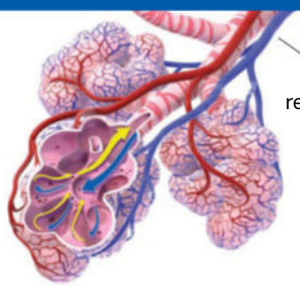


How are hormones produced?

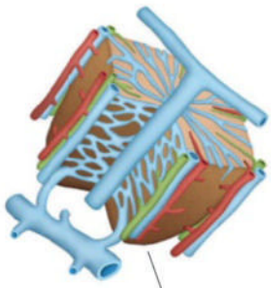


Guide to essential organs

HOW IT WORKS BOOK OF THE HUMAN BODY



Human respiration



Explore liver structure

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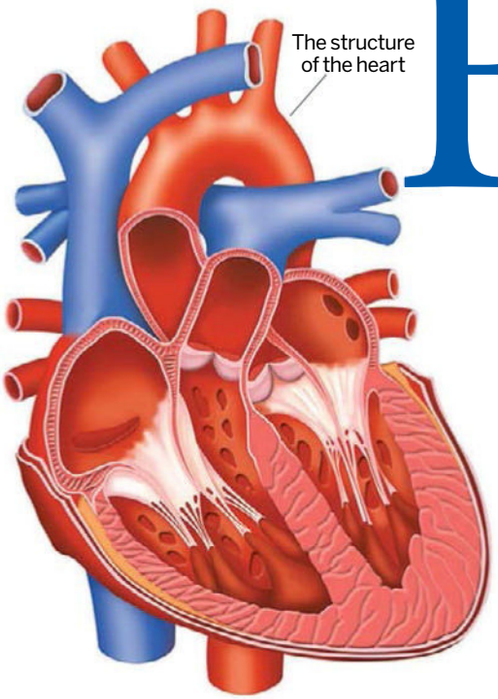
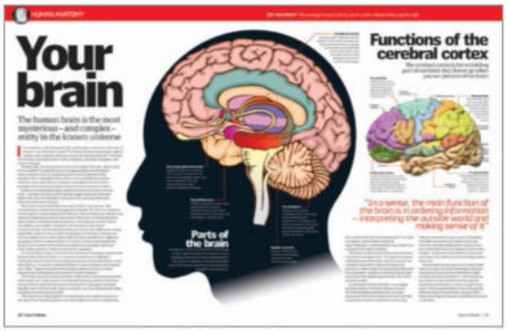
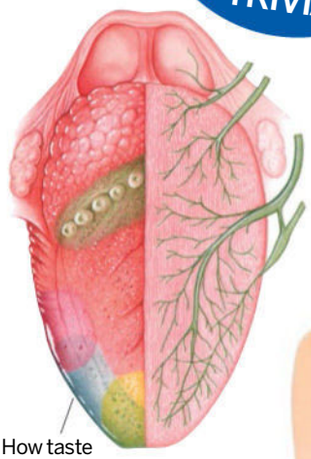


The structure of the heart



Human anatomy

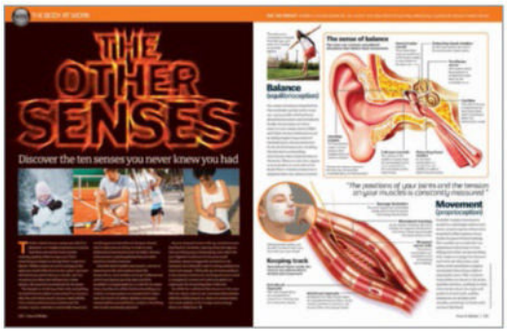
Get to know the essentials of the human body, from the structure of each cell to the functions of the large intestine



How taste works

What makes the nose run?

The lining of vessel walls

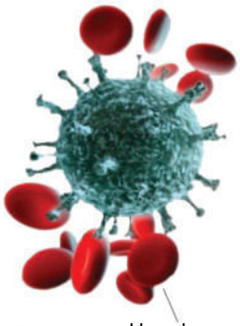


The body at work

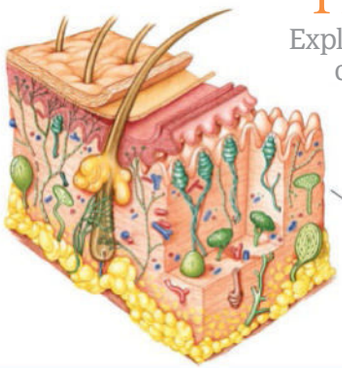
Explore the intimate details behind complex systems, processes and behaviours

Curious questions

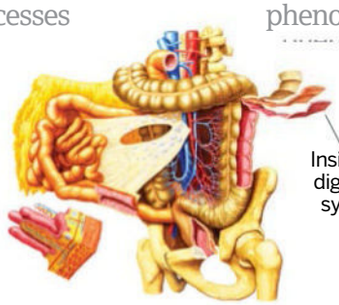
Understand the weird and wonderful phenomena of the human body, from bruises to hiccups



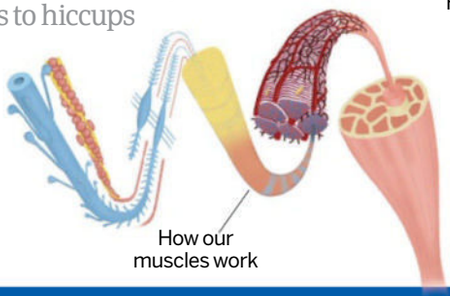
How do we combat viruses?



Take a look under the skin



Inside the digestive system



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Preface to the Seventh Edition

This new edition was revised and structured anew in different ways. Each chapter is provided with an introductory front page to give an overview of the topics of the chapter and short descriptions. The whole introductory chapter "General Anatomy" was newly arranged and supported with introductory texts, thus facilitating students to better understand the complicated "world" of gross anatomy. The large chapter 2 "Head and Neck" was split into 5 sub-chapters with an introductory page each. Furthermore, the drawings were revised and improved in many chapters and depicted more consistently. In most of the chapters new photographs taken from newly dissected specimens were incorporated.

The general structure and arrangement of the Atlas were maintained. The chapters of regional anatomy are consequently placed behind the systematic descriptions of the anatomical structures so that students can study – e.g. before dissecting an extremity – the systematic anatomy of bones, joints, muscles, nerves and vessels. For studying the photographs of the specimens the use of a magnifier might be helpful. The enormous plasticity of the photos is surprising, especially at higher magnifications.

In many places new MRI and CT scans were added to give consideration to the new imaging techniques which become more and more important for the student in preclinics. We would like to express our sincere thanks to Prof. Heuck, Munich, who provided us with the MRI scans.

In the underlying seventh edition photographs of the surface anatomy of the human body were included again. We omitted marks and indications in order not to affect the quality of the pictures.

Despite numerous additions and amendments the size of the volume did not increase so that students both in preclinics and in clinics are offered an atlas easy to handle and cope with.

While preparing this new edition, the authors were reminded of how precisely, beautifully, and admirably the human body is constructed. If this book helps the student or medial doctor to appreciate the overwhelming beauty of the anatomical architecture of tissues and organs in the human, then it greatly fulfils its task. Deep interest and admiration of the anatomical structures may create the "love for man", which alone can be considered of primary importance for daily medical work.

We would like to express our great gratitude to all coworkers for their skilled work. Without their help the improvements of the *Color Atlas of Anatomy* would not have been possible. We would also like to express our sincere thanks to those at Schattauer GmbH, Stuttgart, Germany, Lippincott, Williams & Wilkins, Baltimore, Maryland, USA, and Igaku-Shoin, Tokyo, Japan, who always listened to our suggestions and invested again a great deal of their effort into improving this book.

Acknowledgements

We would like to express our great gratitude to all coworkers who helped to make the *Color Atlas of Anatomy* a success. We are particularly indebted to those who dissected new specimens with great skill and knowledge, particularly to Jeff Bryant (member of our staff) and Dr. Martin Rexer (now Klinikum Fürth, Germany), who prepared most of the new specimens of the fifth, sixth and seventh edition. We would also like to thank Dr. K. Okamoto (now Nagasaki, Japan), who dissected many excellent specimens of the fourth edition, also included in the fifth edition. Furthermore, we are greatly indebted to Prof. W. Neuhuber and his coworkers for their great efforts in supporting our work.

The specimens of the previous editions also depicted in this volume were dissected with great skill and enthusiasm by Prof. Dr. S. Nagashima (now Nagasaki, Japan), Dr. Mutsuko Takahashi (now Tokyo, Japan), Dr. Gabriele Lindner-Funk (Erlangen, Germany), Dr. P. Landgraf (Erlangen, Germany), and Miss Rachel M. McDonnell (now Dallas, Texas, USA).

We are greatly indebted to Prof. Kyung Won Chung, Ph.D., Director of Medical Gross Anatomy, University of Oklahoma, USA, Dept. of Cell Biology, for his careful corrections of the proofs of the new edition.

We would also like to express our many thanks to Prof. W. Bautz (Radiologisches Institut, University Erlangen-Nürnberg, Germany) and Prof. A. Heuck (Radiologisches Zentrum, München-Pasing, Germany), who provided the newly included excellent CT and MRI scans.

We are also greatly indebted to Mr. Hans Sommer (SOMSO Co., Coburg, Germany), who kindly provided a number of excellent bone specimens.

Finally, we would like to express our great gratitude to our photographer, Mr. Marco Gößwein, who contributed the very excellent macrophotos. Excellent and untiring work was done by our secretaries, Mrs. Lisa Köhler and Elisabeth Wascher, and as well by our artists, Mr. Jörg Pekarsky and Mrs. Annette Gack, who not only performed excellent new drawings but revised effectively the layout of the new edition.

Last but not least, we would like to express our sincere thanks to all scientists, students, and other coworkers, particularly to the ones at the publishing companies themselves.

Erlangen, Germany; Spring 2010

J. W. Rohen
C. Yokochi
E. Lütjen-Drecoll

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Preface to the First Edition

Today there exist any number of good anatomic atlases. Consequently, the advent of a new work requires justification. We found three main reasons to undertake the publication of such a book.

First of all, most of the previous atlases contain mainly schematic or semischematic drawings which often reflect reality only in a limited way; the third dimension, i.e., the spatial effect, is lacking. In contrast, the photo of the actual anatomic specimen has the advantage of conveying the reality of the object with its proportions and spatial dimensions in a more exact and realistic manner than the "idealized", colored "nice" drawings of most previous atlases. Furthermore, the photo of the human specimen corresponds to the student's observations and needs in the dissection courses. Thus he has the advantage of immediate orientation by photographic specimens while working with the cadaver.

Secondly, some of the existing atlases are classified by systemic rather than regional aspects. As a result, the student needs several books each supplying the necessary facts for a certain region of the body. The present atlas, however, tries to portray macroscopic anatomy with regard to the regional and stratigraphic aspects of the object itself as realistically as possible. Hence it is an immediate help during the dissection courses in the study of medical and dental anatomy.

Another intention of the authors was to limit the subject to the essential and to offer it didactically in a way that is self-explanatory. To all regions of the body we added schematic drawings of the main tributaries of nerves and vessels, of the course and mechanism of the muscles, of the nomenclature of the various regions, etc. This will enhance the understanding of the details seen in the photographs. The complicated architecture of the skull bones, for example, was not presented in a descriptive way, but rather through a series of figures revealing the mosaic of bones by adding one bone to another, so that ultimately the composition of skull bones can be more easily understood.

Finally, the authors also considered the present situation in medical education. On one hand there is a universal lack of cadavers in many departments of anatomy, while on the other hand there has been a considerable increase in the number of students almost everywhere. As a consequence, students do not have access to sufficient illustrative material for their anatomic studies. Of course, photos can never replace the immediate observation, but we think the use of a macroscopic photo instead of a painted, mostly idealized picture is more appropriate and is an improvement in anatomic study over drawings alone.

The majority of the specimens depicted in the atlas were prepared by the authors either in the Dept. of Anatomy in Erlangen, Germany, or in the Dept. of Anatomy, Kanagawa Dental College, Yokosuka, Japan. The specimens of the chapter on the neck and those of the spinal cord demonstrating the dorsal branches of the spinal nerves were prepared by Dr. K. Schmidt with great skill and enthusiasm. The specimens of the ligaments of the vertebral column were prepared by Dr. Th. Mokrusch, and a great number of specimens in the chapter of the upper and lower limb was very carefully prepared by Dr. S. Nagashima, Kurume, Japan.

Once again, our warmest thanks go out to all of our coworkers for their unselfish, devoted and highly qualified work.

Erlangen, Germany; Spring 1983

J. W. Rohen
C. Yokochi

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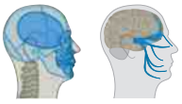

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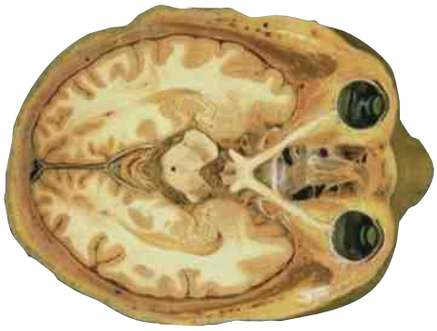
1 General Anatomy

Three general principles are recognizable in the architecture of the human organism:

1. **The principle of polarity:** Polarity is reflected mainly in the formal and functional contrast between the head (predominantly spherical form) and the extremities (radially arranged skeletal elements). In the phylogenetic development of the upright position of the human body, polarity developed also among the extremities: The lower extremities provide the basis for locomotion whereas the upper extremities are not needed anymore for locomotion, so they can be used for gesture, manual and artistic activities.
2. **The principle of segmentation:** This principle dominates in the trunk. The anatomical structures (vertebrae, pairs of ribs, muscles, and nerves) are arranged segmentally and replicate rhythmically in a similar way.
3. **The principle of bilateral symmetry:** Both sides of the body are separated by a midsagittal plane and resemble each other like image and mirror-image.



Horizontal section through the head at the level of the eyes.

There are also different principles in the architecture and function of the inner organs:
The **skull** contains the brain and the sensory organs. They are arranged like mirror and mirror-image and are the basis of our consciousness.

Coronal section through the thoracic and abdominal cavity.

The **thorax** contains the organs of the rhythmic system (heart, lung), which are only to some extent bilaterally organized. The consciousness (feeling, etc.) is located in-between.
In the **abdominal cavity,** the most important abdominal organs (intestinal tract, liver, pancreas) are arranged unpaired. Their functions remain subconscious.

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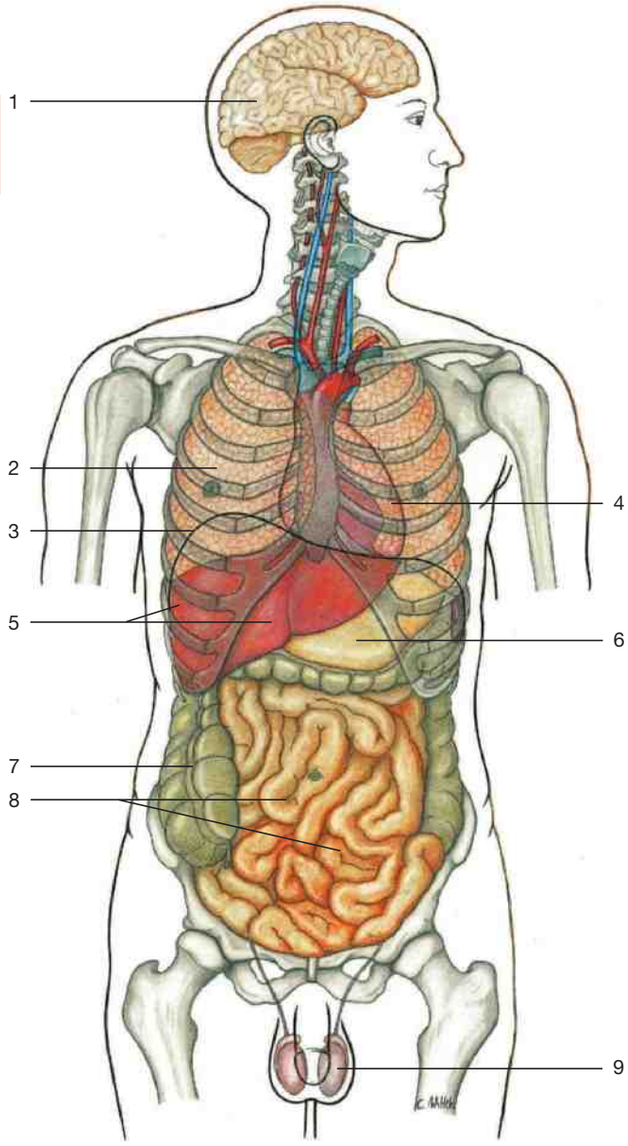
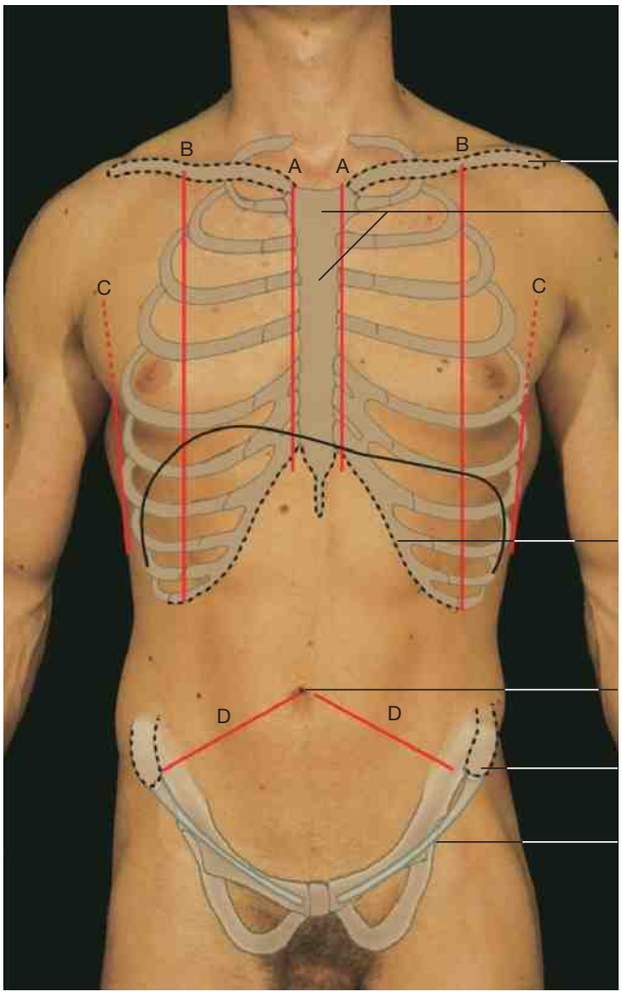


Position of the inner organs of the human body (anterior aspect). The main cavities of the body and their contents.



Regional lines and palpable points at the ventral side of the human body.

Regional lines
A = parasternal line
B = midclavicular line
C = anterior axillary line
D = umbilical-pelvic line

The bones of the skeletal system are palpable through the skin at different points. This enables physicians to localize the inner organs. On the **ventral side,** the clavicle, sternum, ribs, and intercostal spaces are palpable. Furthermore, the anterior iliac spine and the symphysis can be localized. For better orientation, several **lines of orientation** are used, e.g., the parasternal line, the midclavicular line, the anterior axillary line, the umbilical-pelvic line.
By means of these lines, the heart and the position of the vermiform process can be localized.

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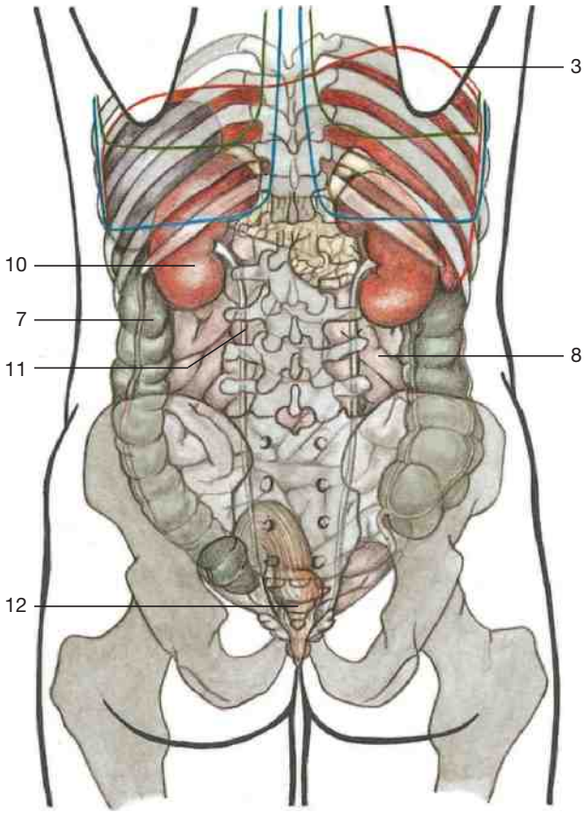
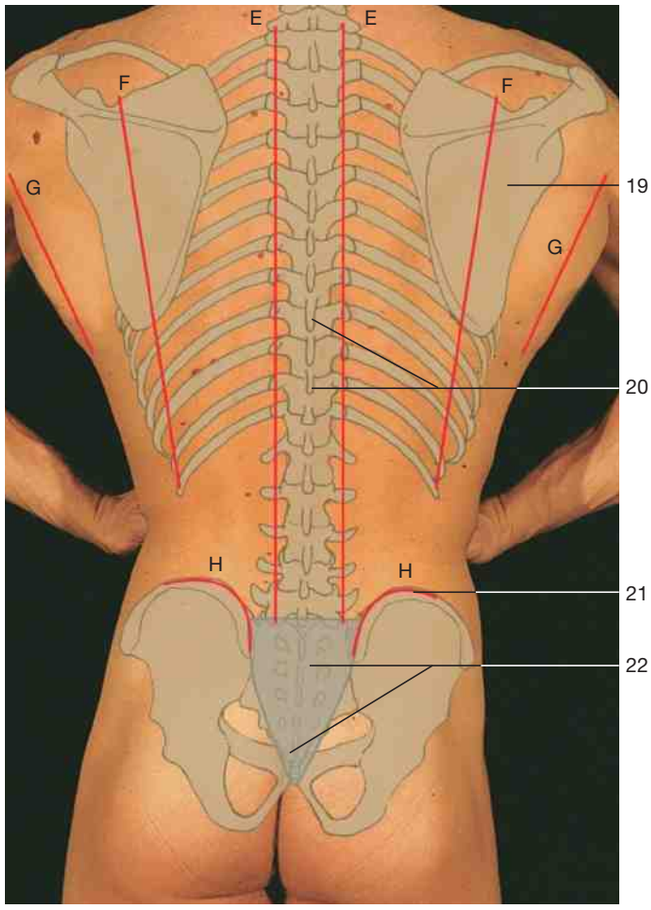


Position of the inner organs of the human body (posterior aspect).



Regional lines and palpable points at the dorsal side of the human body.

Regional lines
E = paravertebral line
F = scapular line
G = posterior axillary line
H = iliac crest

1 Brain
2 Lung
3 Diaphragm
4 Heart
5 Liver
6 Stomach
7 Colon
8 Small intestine
9 Testis
10 Kidney
11 Ureter
12 Anal canal
13 Clavicle
14 Manubrium sterni
15 Costal arch
16 Umbilicus
17 Anterior superior iliac spine
18 Inguinal ligament
19 Scapular spine
20 Spinous processes
21 Iliac crest
22 Coccyx and sacrum

At the **dorsal side** of the body, the posterior spines of the vertebral column, the ribs, the scapula, the sacrum, and the iliac crest are palpable. **Lines of orientation** are the paravertebral line, the scapular line, the posterior axillary line, and the iliac crest.

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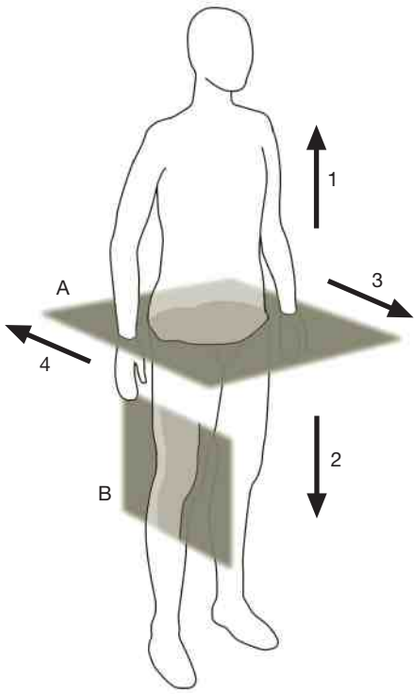
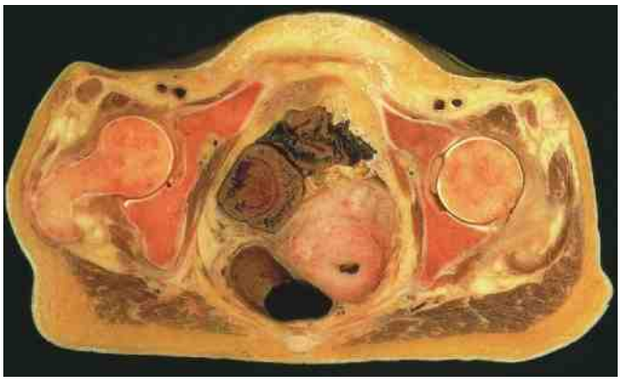


Planes of the body:
A = horizontal or axial or transverse plane
B = sagittal plane (at the level of the knee joint)

Directions:

1 = cranial	3 = anterior (ventral)
2 = caudal	4 = posterior (dorsal)



Horizontal section through the pelvic cavity and the hip joints.

MRI scan through the pelvic cavity and the hip joints (horizontal or axial or transverse plane).

Sagittal section through the knee joint.

MRI scan through the knee joint (sagittal plane).

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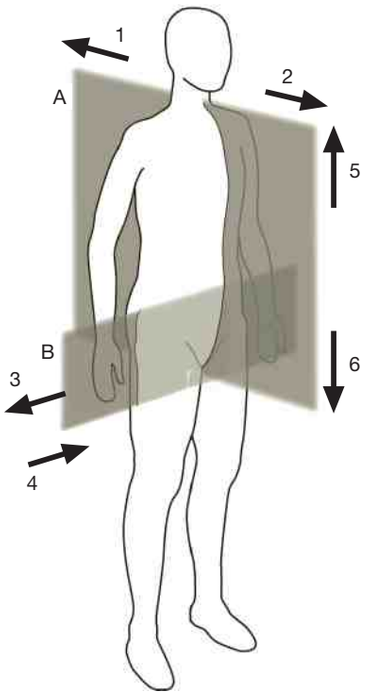

Planes of the body:
A = midsagittal or median plane
B = frontal or coronal plane (through the pelvic cavity)

Directions:

1 = posterior (dorsal)	4 = medial
2 = anterior (ventral)	5 = cranial
3 = lateral	6 = caudal

MRI scan through the pelvic cavity and the hip joints (frontal or coronal plane).

Median section through the trunk of a female.

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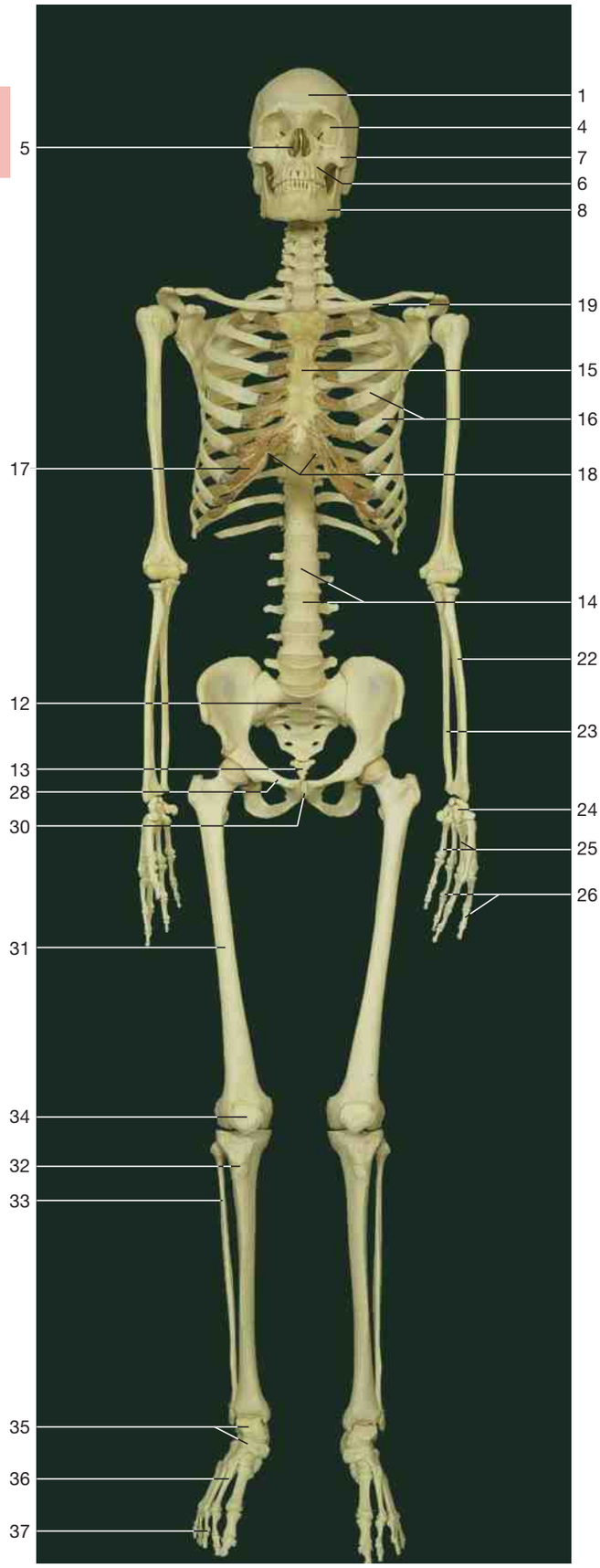
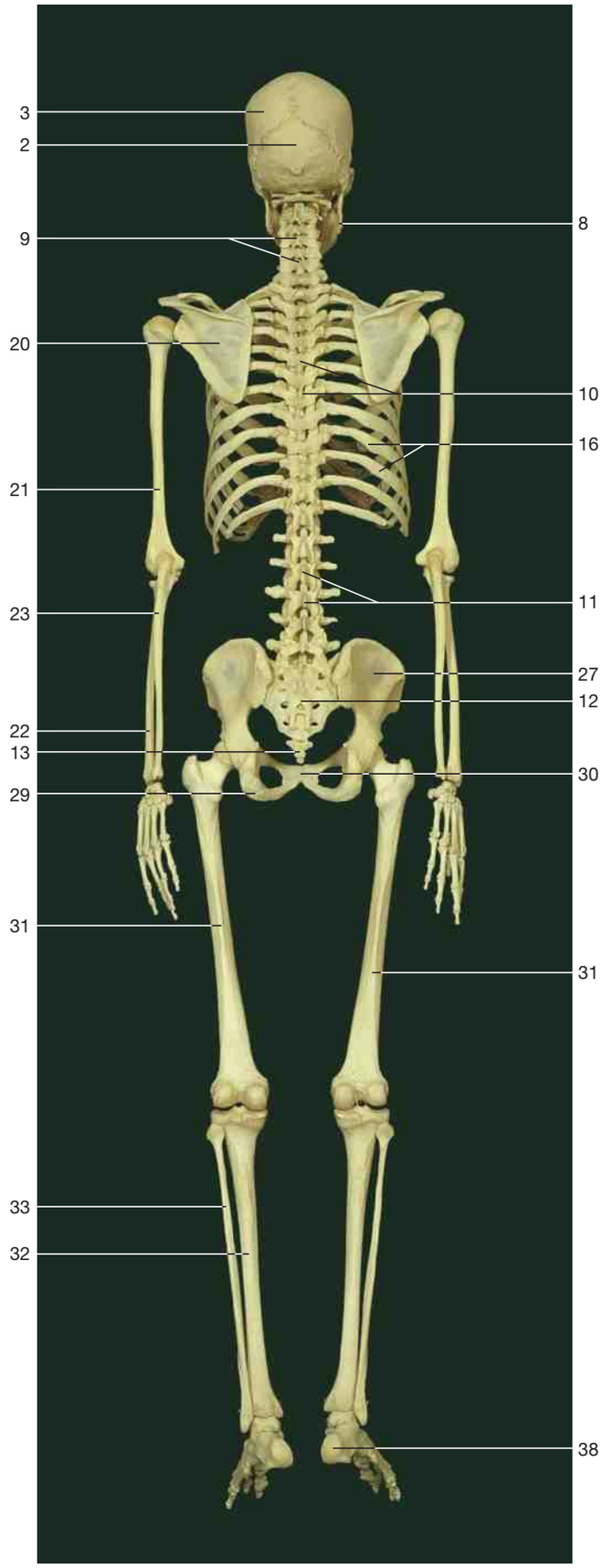


Skeleton of a female adult (anterior aspect).



Skeleton of a female adult (posterior aspect).

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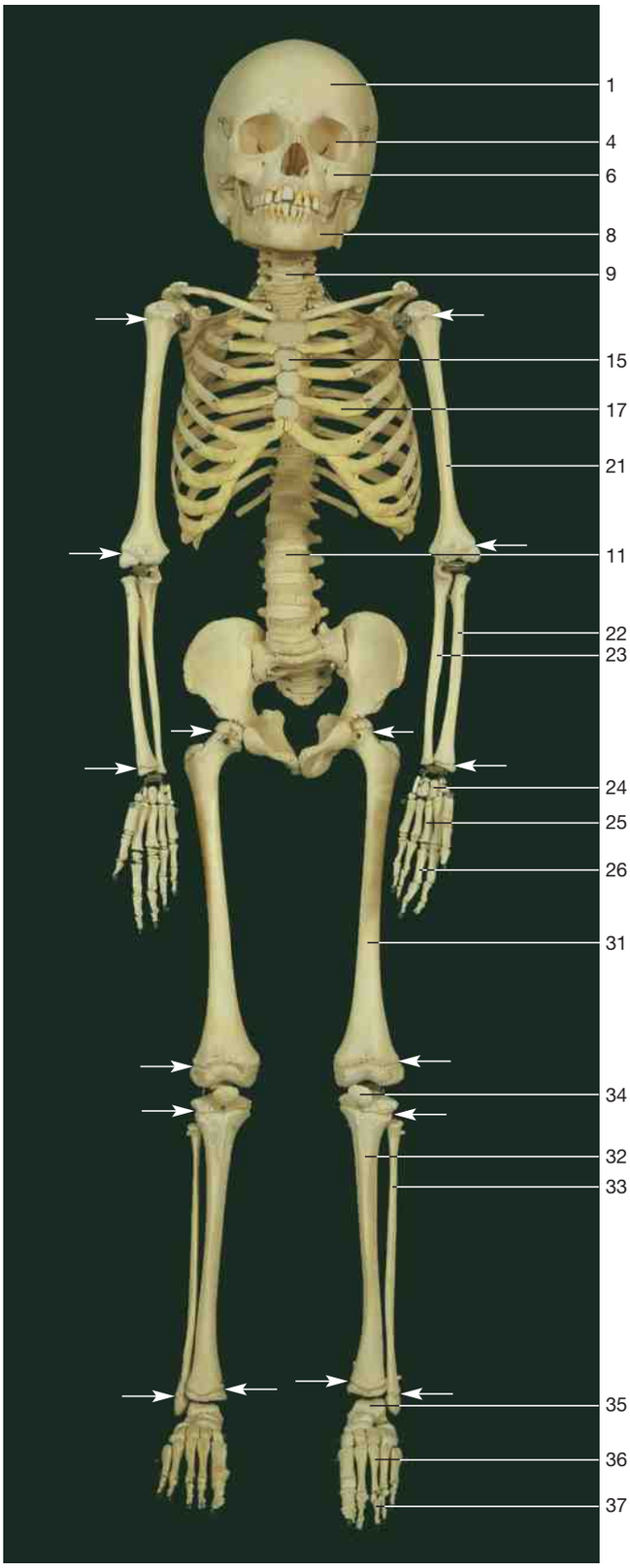

Skeleton of a 5-year-old child (anterior aspect).
The zones of the cartilaginous growth plates are seen (arrows).
In contrast to the adult, the ribs show a predominantly horizontal position.

Axial skeleton

Head

1 Frontal bone
2 Occipital bone
3 Parietal bone
4 Orbit
5 Nasal cavity
6 Maxilla
7 Zygomatic bone
8 Mandible

Trunk and thorax

Vertebral column

9 Cervical vertebrae
10 Thoracic vertebrae
11 Lumbar vertebrae
12 Sacrum
13 Coccyx
14 Intervertebral discs

Thorax

15 Sternum
16 Ribs
17 Costal cartilage
18 Infrasternal angle

Appendicular skeleton

Upper limb and shoulder girdle

19 Clavicle
20 Scapula
21 Humerus
22 Radius
23 Ulna
24 Carpal bones
25 Metacarpal bones
26 Phalanges of the hand

Lower limb and pelvis

27 Ilium
28 Pubis
29 Ischium
30 Symphysis pubis
31 Femur
32 Tibia
33 Fibula
34 Patella
35 Tarsal bones
36 Metatarsal bones
37 Phalanges of the foot
38 Calcaneus

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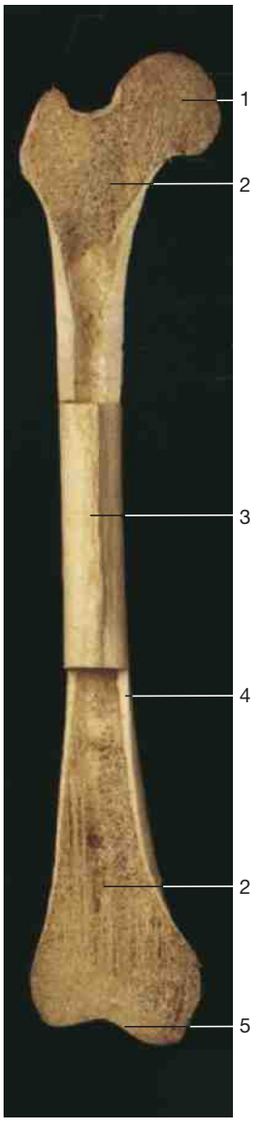
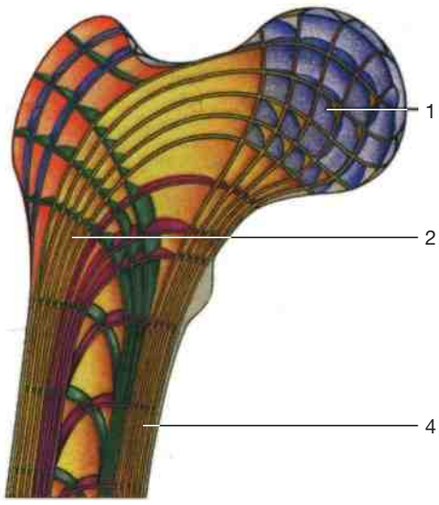


◁ **Femur of the adult.** Coronal section of the proximal and distal epiphyses displaying the spongy bone and the medullary cavity.

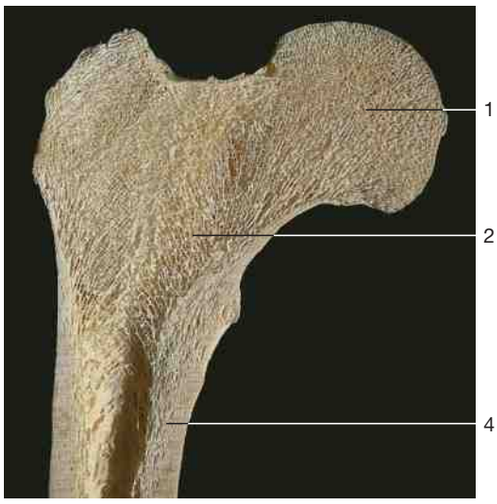
MRI scan of the right femur and the hip joint (coronal section) (from Heuck et al., MRT-Atlas, 2009).

X-ray of the right femur and the hip joint (a.-p. direction).

1 Head of the femur
2 Spongy bone
3 Diaphysis of the femur
4 Compact bone
5 Articular cartilage



Three-dimensional representation on the trajectorial lines of the femoral head (according to B. Kummer).



Coronal section through the proximal end of the adult femur showing the characteristic structure of the spongy bone.

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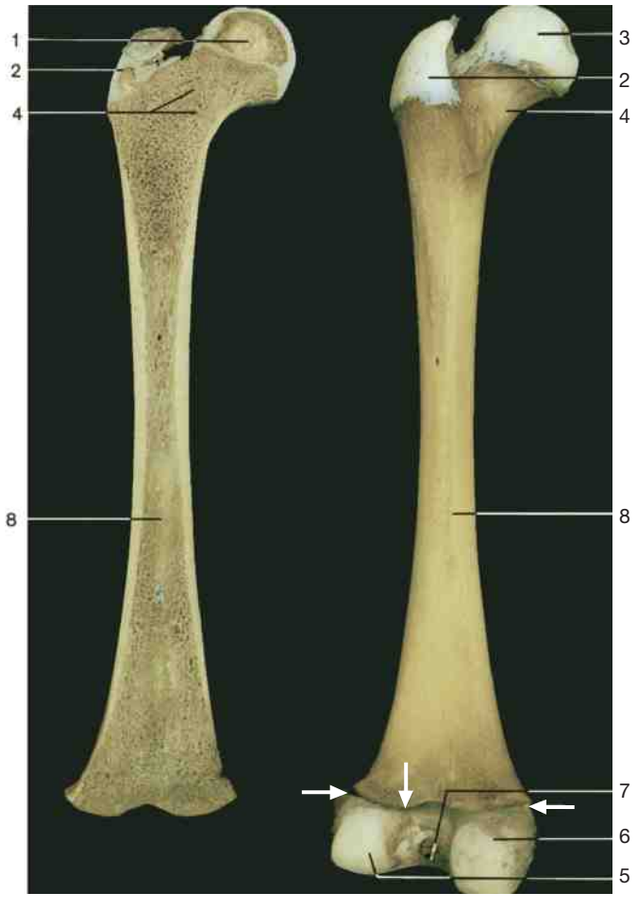
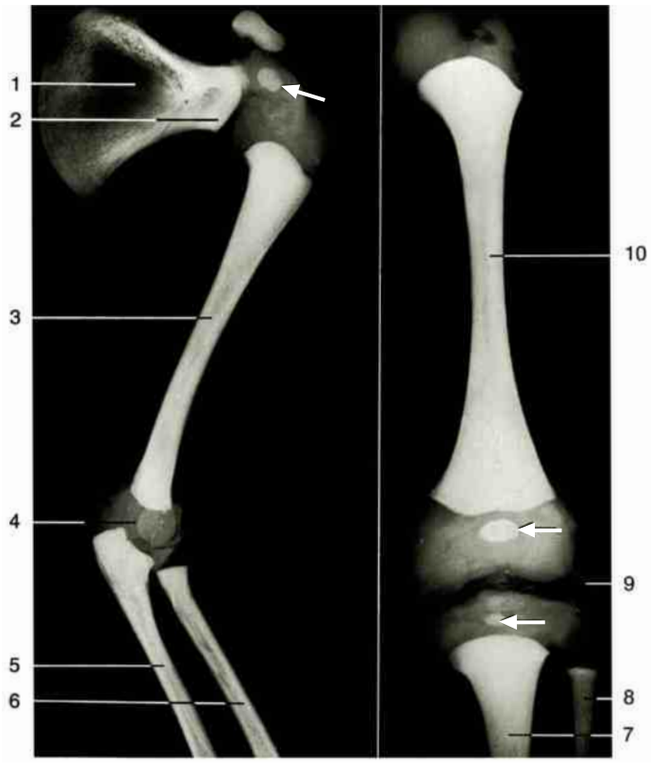
The **ossification of the bones** of the limbs starts within the ossification centers of the primary cartilagenous bones. Here, the medullary cavity develops. The ossification process of limb bones is not finished at birth.



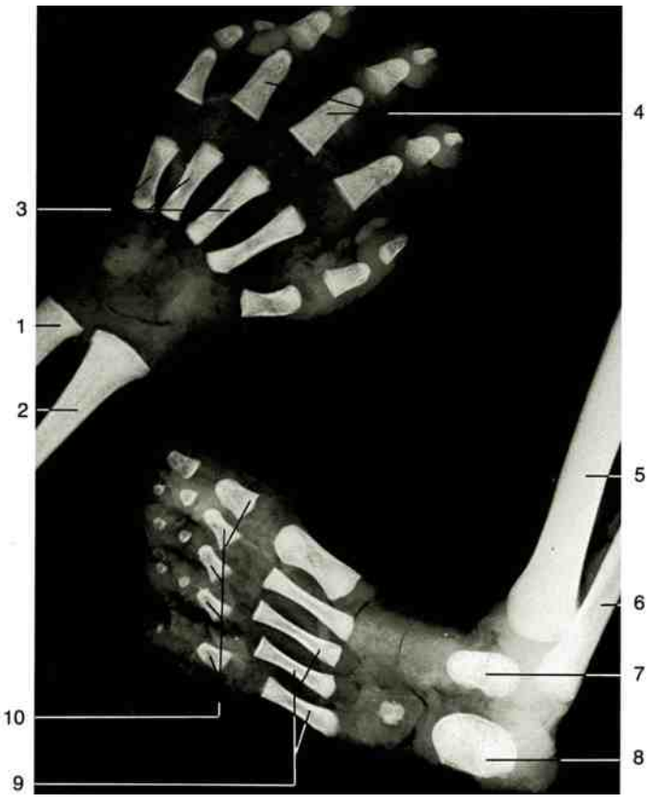
Ossification of the femur (left: coronal section, right: posterior view of the femur). Arrows: distal epiphysis.

◁ 1 Ossification center in the head of the femur
2 Greater trochanter
3 Head of the femur
4 Neck of the femur
5 Lateral condyle
6 Medial condyle
7 Intercondylar notch
8 Diaphysis



X-ray of the upper and lower limb of a newborn child (left: upper limb, right: lower limb). Arrows: ossification centers.

1 Scapula
2 Shoulder joint
3 Humerus
4 Elbow joint
5 Ulna
6 Radius
7 Tibia
8 Fibula
9 Knee joint
10 Femur



◁ 1 Ulna
2 Radius
3 Metacarpals
4 Phalanges
5 Tibia
6 Fibula
7 Talus
8 Calcaneus
9 Metatarsals
10 Phalanges

X-ray of hand and foot of a newborn.

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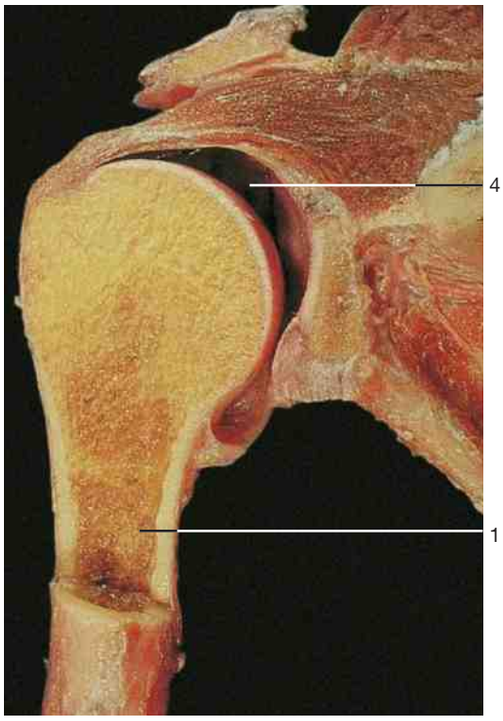
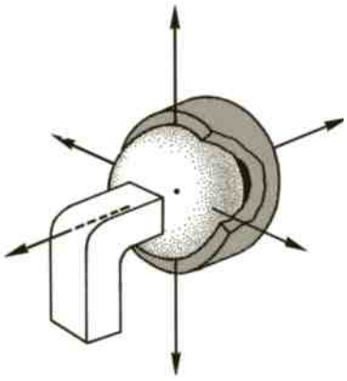
Skeleton of the right arm and shoulder girdle (anterior aspect).

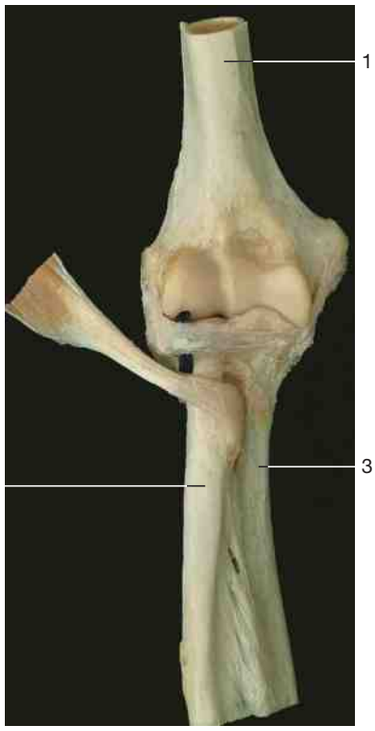


Shoulder joint as an example of a multiaxial ball-and-socket joint (coronal section).



Ball-and-socket joint with its different axes (schematic drawing). Arrows: axes of movement.

1 Humerus
2 Radius
3 Ulna
4 Articular cavity (shoulder joint)
5 Metacarphalangeal joint
6 Joints of fingers



Elbow joint with ligaments as an example of a hinge joint (monaxial humero-ulnar joint) in combination with a pivot joint (monaxial radio-ulnar joint), which allows rotation.

Coronal section of the elbow joint (MRI scan, courtesy of Prof. Heuck, Munich). The possibilities of movement are shown in the schematic drawings on p. 11.

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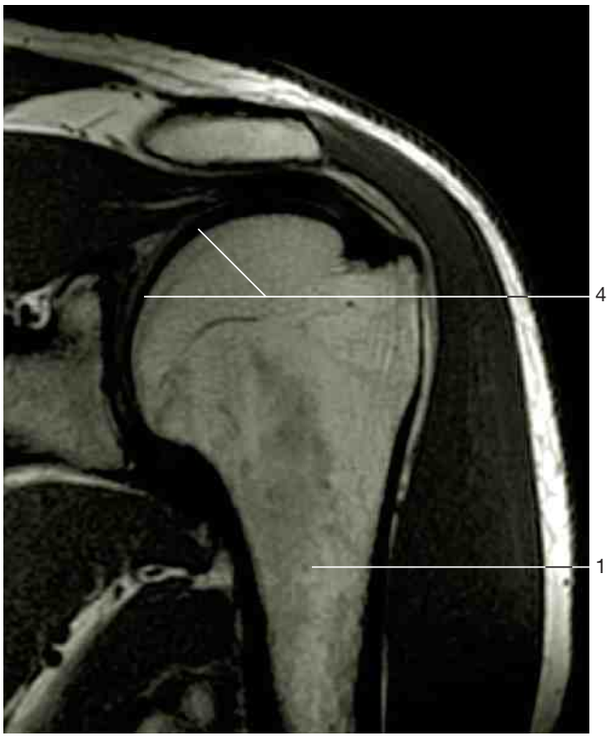
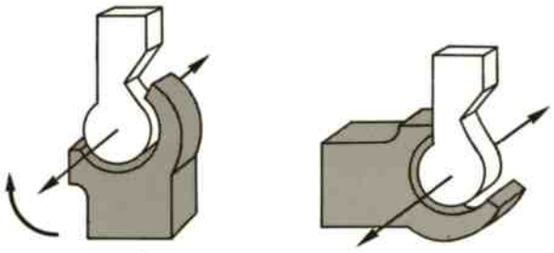
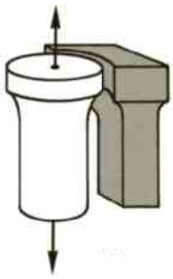


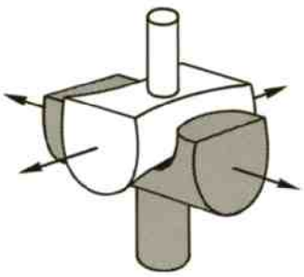
Coronal section of the shoulder joint
(MRI scan, from Heuck et al., MRT-Atlas, 2009).



Hinge joint
(e.g. humero-ulnar joint). Left: extension, right: flexion.
Arrows: axes of movement.



Pivot joint
(e.g. radio-ulnar joint).



Saddle joint
(e.g. carpometacarpal joint of the thumb).

Skeleton of right wrist and hand (medial aspect). The metacarpophalangeal joints are biaxial, as is the carpometacarpal joint of the thumb (✻ in the figure). The joints of the fingers, however, are monaxial.

Joints exhibit a variety of functions. In general, mobility becomes reduced in the direction from proximal to distal. The hip joint, e.g., is multiaxial; the knee joint is biaxial, and the joints of toes and fingers are monaxial.

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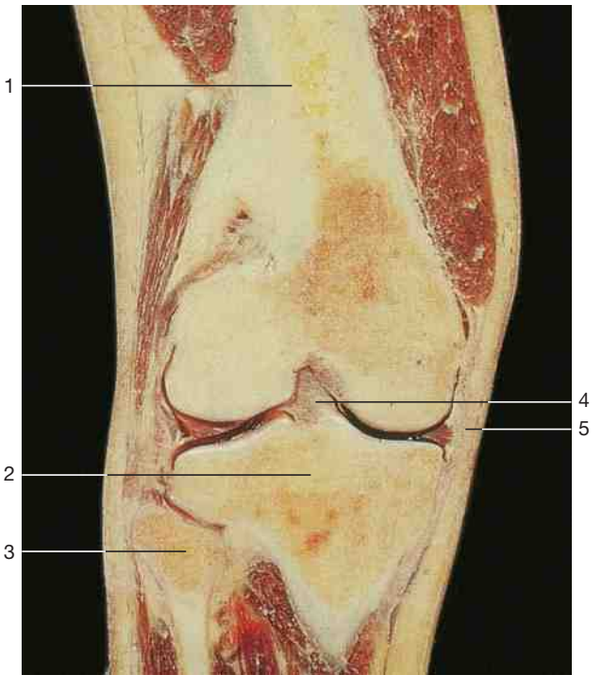
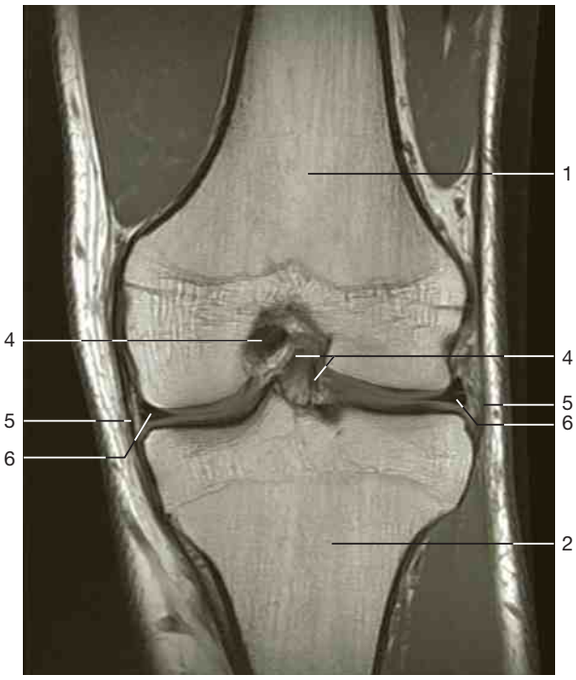


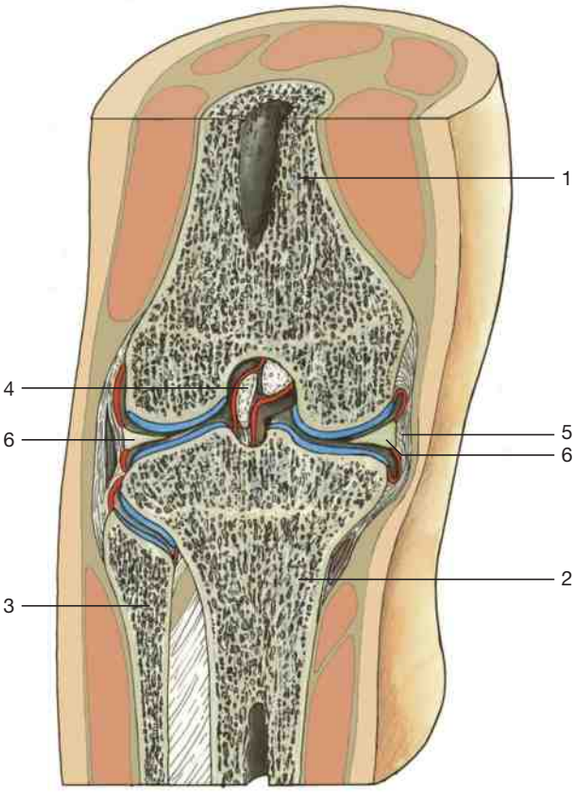
Coronal section through the knee joint (anterior aspect of the right joint in extension).



MRI scan of the knee joint (coronal plane) (from Heuck et al., MRT-Atlas, 2009).

1 Femur
2 Tibia
3 Fibula
4 Cruciate ligaments
5 Collateral ligaments
6 Meniscus

Joints are places of articulation allowing movements between bones. Synovial joints are characterized by a joint cavity enclosed by a joint capsule containing synovial fluid, which is produced by the articular capsule. The kind of movements depends not only on form and structure of the articulating bones but also on ligaments incorporated into the articular capsule. In some synovial joints, fibrocartilagenous articular discs develop, when the articulating surfaces of the bones are incongruous.



Schematic drawing of the knee joint as an example of a synovial joint, characterized by a joint cavity enclosed by a joint capsule (red) containing synovial fluid. Blue = articular cartilage.

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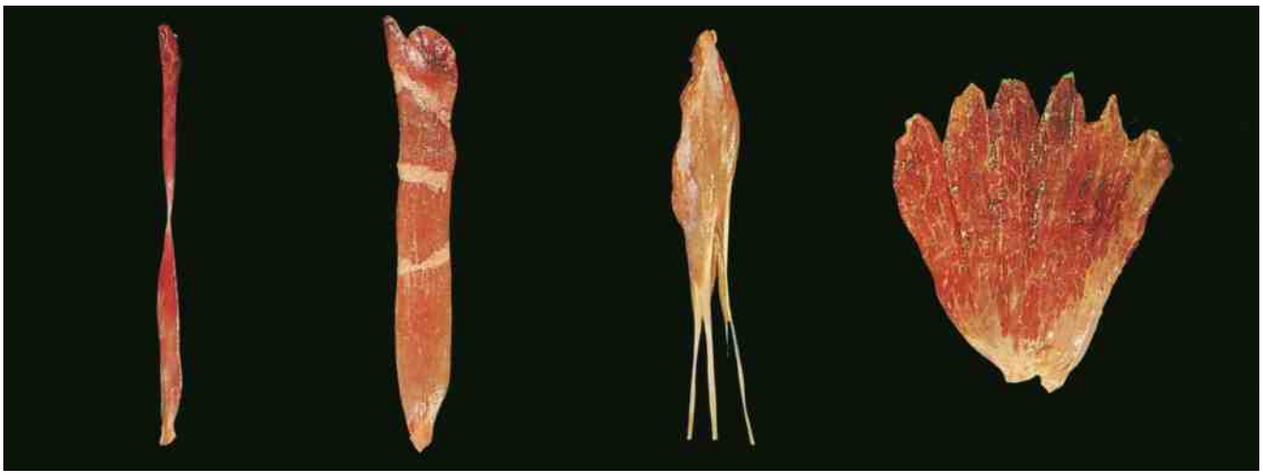
Fusiform (palmaris longus) | Bicipital (biceps brachii) | Tricipital (triceps surae, gastrocnemius, and soleus) | Quadricipital (quadriceps femoris)



Digastric (omohyoideus) | Multiventral (rectus abdominis) | Multicaudal (flexor digitorum prof.) | Serrated (serratus anterior)

Bipennate (tibialis anterior) | Unipennate (semimembranosus) | Semitendinous (semitendinosus) | Broad, flat muscle (latissimus dorsi) | Ring-like (sphincter ani externus)

The human body possesses **a great variety of muscles.** The architecture of the muscles depends on the functional systems in which they are involved, i.e., the kind of movements, the form of the joints with their specific ligaments, etc. The movements themselves vary to a great extent individually.

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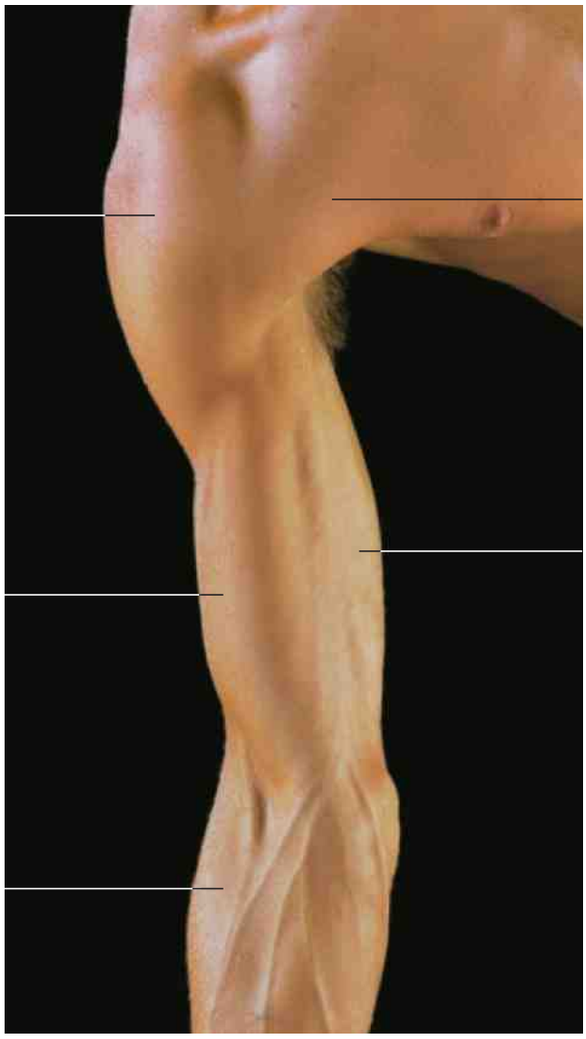


Ventral aspect of the right arm. The biceps muscle appears slightly contracted. In the area of the elbow joint, several subcutaneous veins can be recognized.

1 Deltoid muscle
2 Biceps brachii muscle
3 Brachioradialis muscle
4 Humerus
5 Triceps brachii muscle
6 Elbow joint
7 Brachialis muscle
8 Pectoralis major muscle
9 Radius
10 Ulna

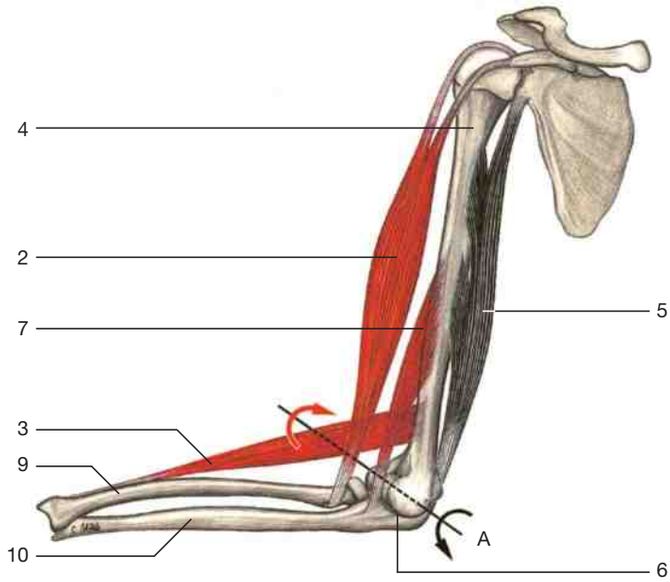
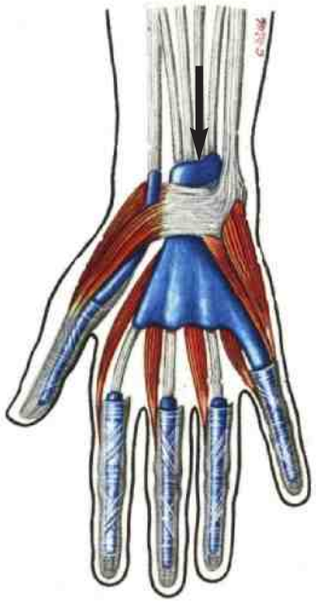


Diagram illustrating the position of the flexor and extensor muscles of the arm and their effect on the elbow joint.
A = axis of humero-ulnar joint; arrows = direction of movements; red = flexion; black = extension.



Synovial sheaths of flexor tendons (palmar aspect of right hand, semischematic drawing). **The flexor retinaculum** protects the flexor tendons passing through the carpal tunnel (arrow).

Joints are moved by muscles. The highly differentiated movements are coordinated by special groups of muscles (**synergists**). Their counterparts are called **antagonists**. Movements can only be carried out harmoniously if the contraction of the synergists are supported by a corresponding dilatation of the antagonists. This interaction is controlled by the nervous system. In order to carry out certain directions of movements, often the tendons of muscles have to be directed by ligaments. At those places, the tendons often develop synovial sheaths, e.g., at the wrist joint or at the fingers.

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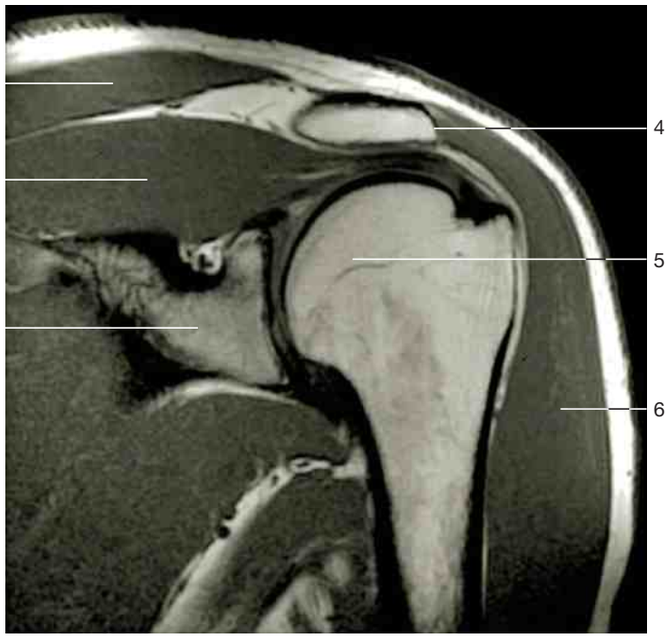
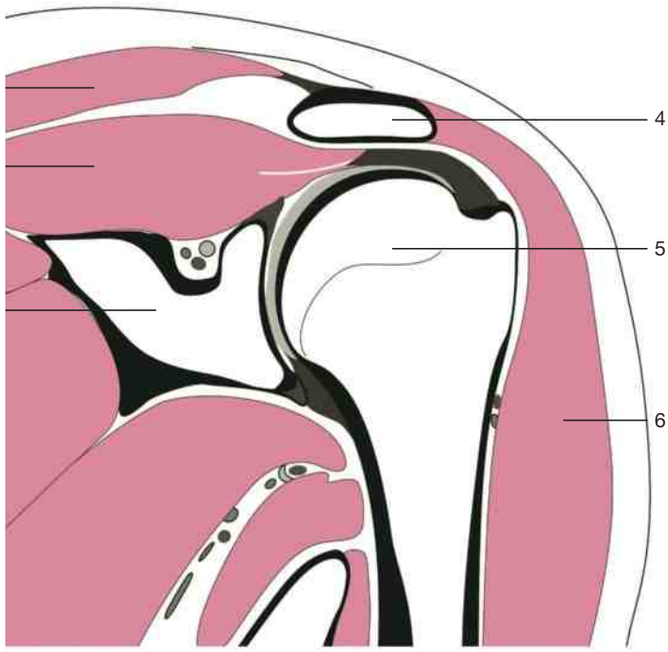


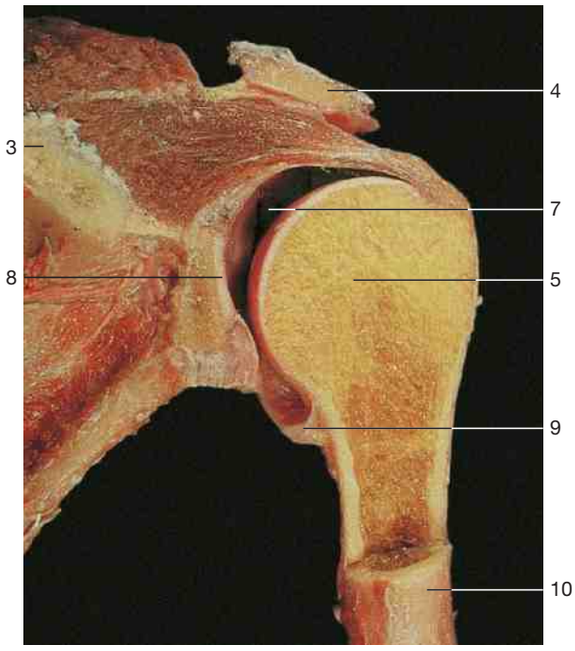
Shoulder joint (MRI scan, coronal section) (from Heuck et al., MRT-Atlas, 2009).

Shoulder joint (X-ray, a.-p. direction) (courtesy of Dr. Holik, Spardorf).

1 Trapezius muscle
2 Supraspinatus muscle
3 Scapula
4 Acromion
5 Head of humerus
6 Deltoid muscle
7 Cavity of shoulder joint
8 Articular cartilage
9 Articular cavity
10 Humerus



Shoulder joint (schematic drawing of the MRI scan above) (from Heuck et al., MRT-Atlas, 2009).



Frontal section of the shoulder joint (compare with the two pictures above).

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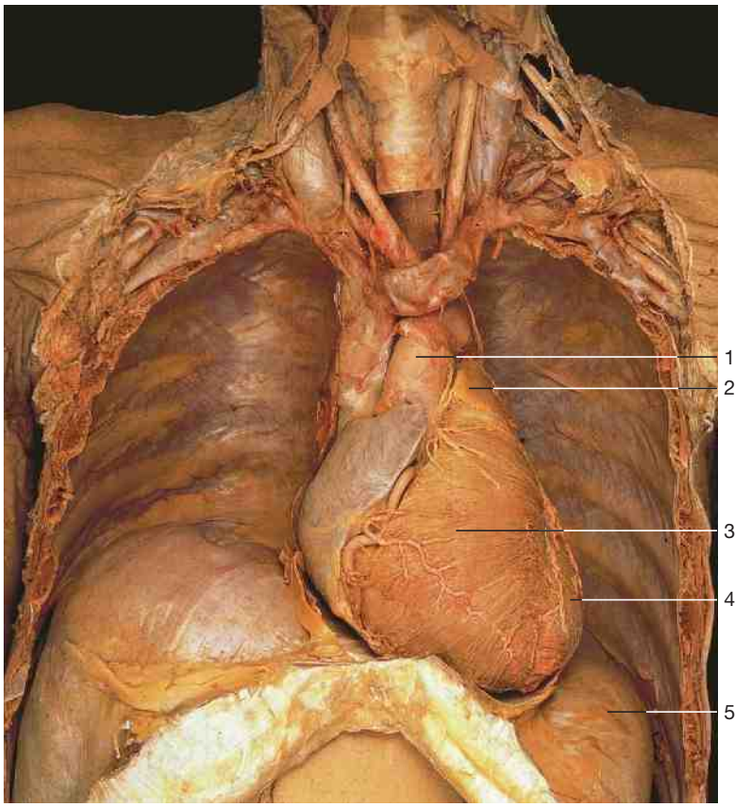
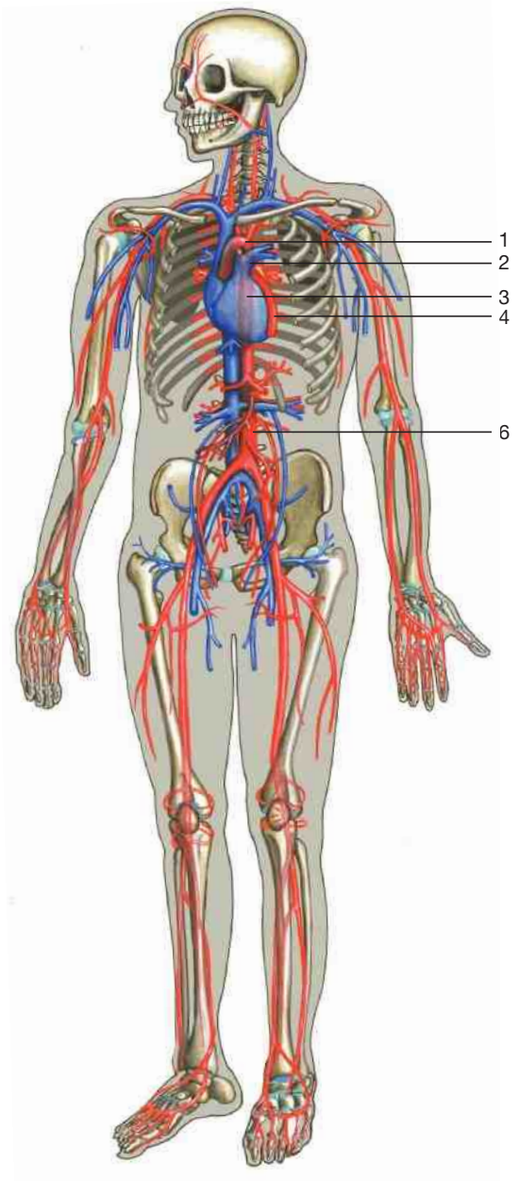
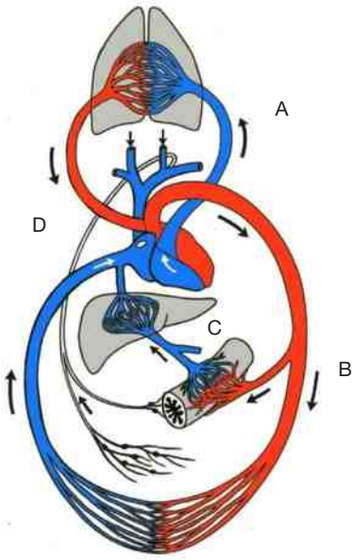


Heart and related vessels in situ (anterior aspect). Anterior thoracic wall, pericardium, and epicardium have been removed. The trachea is divided.

1 Aorta
2 Pulmonary artery
3 Right heart
4 Left heart
5 Diaphragm
6 Abdominal aorta



Organization of the circulatory system with the heart in the center. Red = arteries; blue = veins (from Lütjen-Drecoll, Rohen, Innenansichten des menschlichen Körpers, 2010).



Organization of the circulatory systems in the human body. The center of this system represents the heart. Red = arteries; blue = veins (from Lütjen-Drecoll, Rohen, Innenansichten des menschlichen Körpers, 2010).

A = pulmonary circulation
B = systemic circulation
C = portal circulation
D = lymphatic circulation

The center of the circulatory system is the heart, which is situated in the thoracic cavity and in contact with the diaphragm. In the right ventricle, the venous blood is collected and pumped through the pulmonary artery and into the lung where the blood is oxygenated. The veins of the lung transport the blood to the left ventricle, where it is pumped through the aorta and its branches (arteries) in the human body. Arteries and veins mostly run parallel. The venous blood from the intestine reaches the liver via the portal vein.

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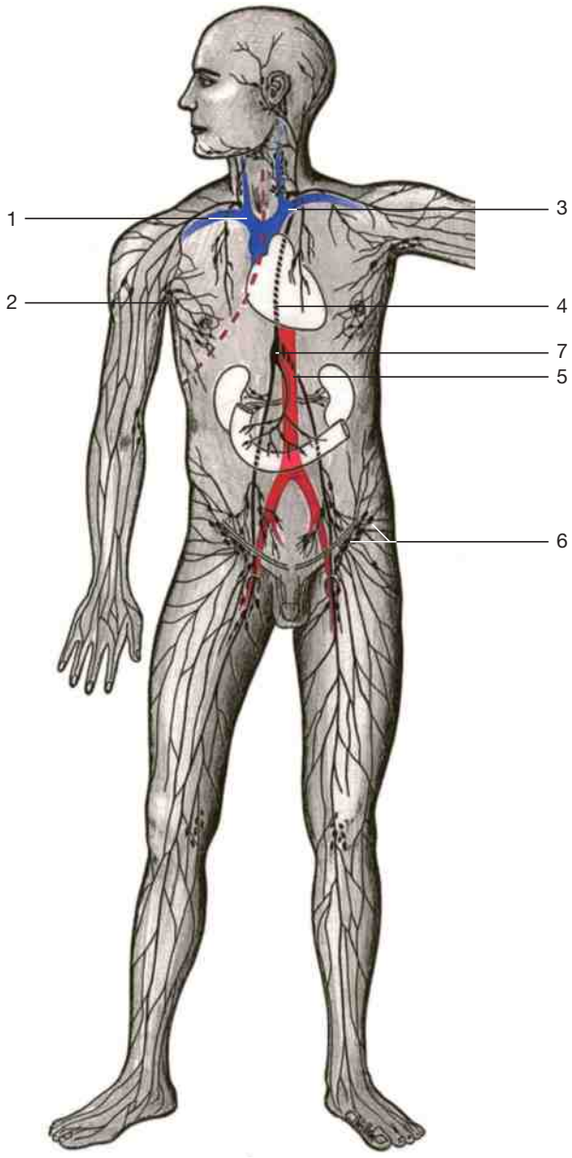
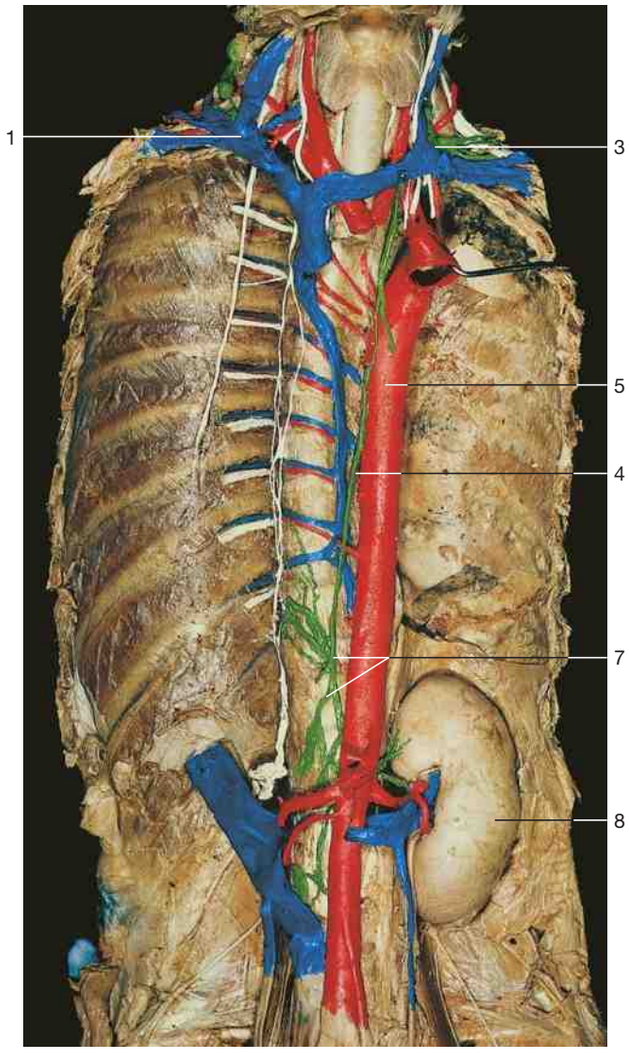


Organization of the lymphatic system.
Course of the main lymphatic vessels and lymph nodes in the body. Dotted red line = border between lymphatic vessels draining toward the right and the left venous angles.



Major lymph vessels of the trunk (green). Blue = veins, red = arteries, white = nerves.

1 Right venous angle
2 Axillary lymph nodes
3 Left venous angle
4 Thoracic duct
5 Aorta
6 Inguinal lymph nodes
7 Cisterna chyli
8 Left kidney

Lymphatic vessels originate in the tissue spaces (lymph capillaries) and unite to form larger vessels (lymphatics). These resemble veins but have a much thinner wall, more valves, and are interrupted by lymph nodes at various intervals. Large groups of lymph nodes are located in the inguinal and axillary regions, deep to the mandible and sternocleidomastoid muscle, and within the root of the mesentery of the intestine. The lymphatic vessels of the right half of the head and neck, the right thorax, and the right upper limb drain toward the right venous angle; those of the rest of the body, toward the left venous angle.

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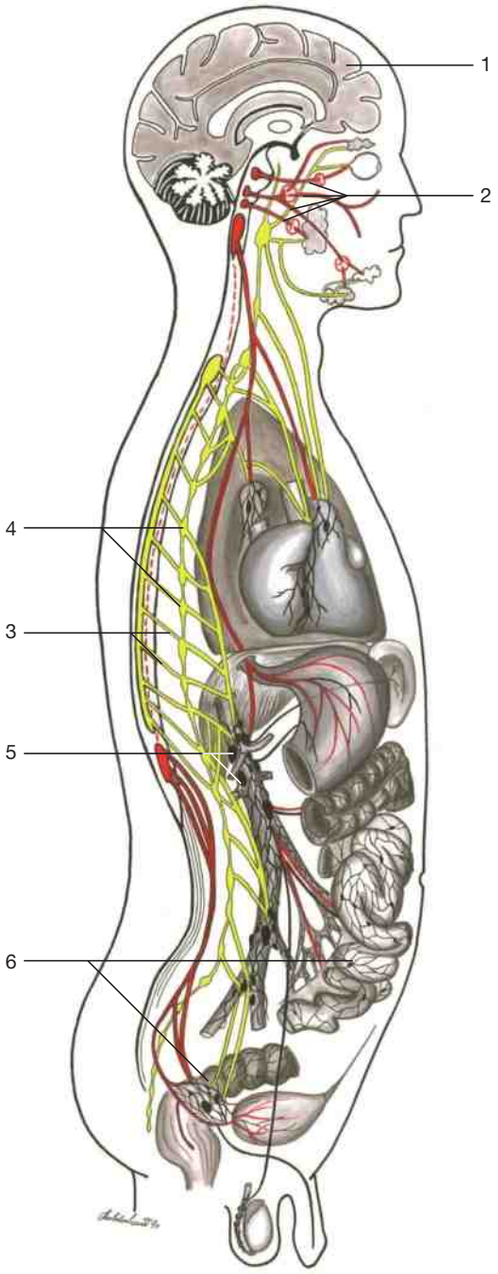
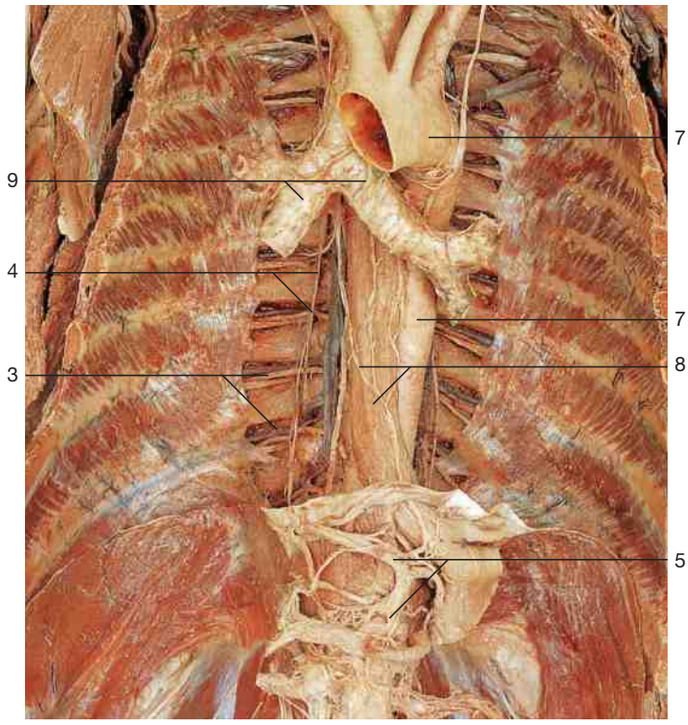


Diagram illustrating the **localization of the three functional portions of the nervous system** (brain, spinal cord and autonomic nervous system). Yellow = sympathetic system; red = parasympathetic system.



Posterior part of the trunk. The **solar plexus** with its connection to the vagus nerve and the sympathetic trunk has been dissected.

1 Cerebrum
2 Cranial nerves
3 Spinal nerves
4 Sympathetic trunk
5 Solar plexus
6 Nervous plexus of the autonomic system
7 Aorta
8 Vagus nerve and esophagus
9 Bifurcation of trachea

The nervous system can be divided into three functionally distinct parts:

1. The cranial part, which comprises the great sensory organs and the brain.
2. The spinal cord, which shows a segmental structure and serves predominantly as a reflex organ.
3. The autonomic nervous system, which controls the involuntary functions (subconscious control) of organs and tissues. The autonomic part of the nervous system forms many delicate plexuses near or within the organs. At certain places these plexuses contain aggregations of nerve cells (prevertebral and intramural ganglia).

The spinal nerves leave the spinal cord at regular intervals. The ventral rami of the spinal nerves form the cervical and brachial plexus, which innervates the upper extremity, and the ventral rami of the lumbar and sacral spinal nerves form the lumbosacral plexus, which innervates the pelvis and genital organs and the lower extremity.

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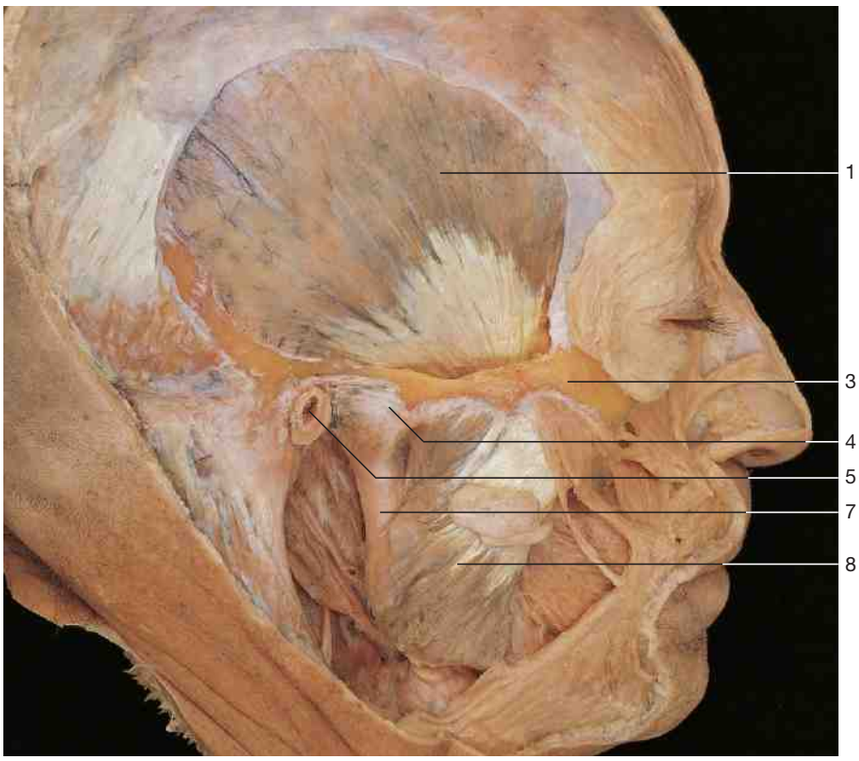
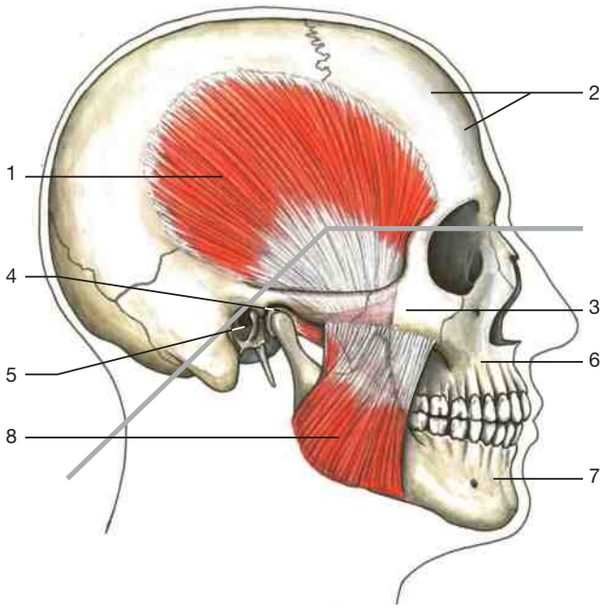
2 Head and Neck

2.1 Skull and Muscles of the Head



Muscles of mastication and facial muscles (lateral aspect).
The auricle has been removed.

The head contains the brain and the great sensory organs (neurocranium). Anteriorly, the facial bones, the facial muscles, and the muscles of mastication have been developed (viscerocranium). The base of the skull is slightly bent so that the structures of the viscerocranium become located underneath the neurocranium, a specifity of the human head. Therefore mimic movements are possible in the human face.



1 Temporalis muscle
2 Frontal bone
3 Zygomatic bone
4 Temporomandibular joint
5 External acoustic meatus
6 Maxilla
7 Mandible
8 Masseter muscle

Lateral aspect of the skull with muscles of mastication
(temporalis and masseter muscles = red).
The base of the skull is bent (grey line).

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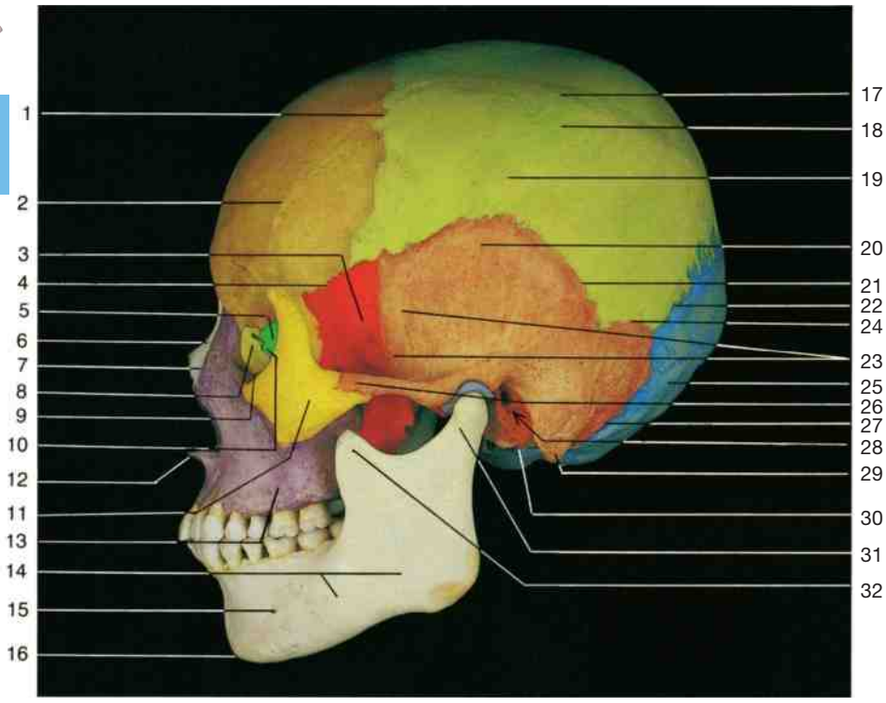
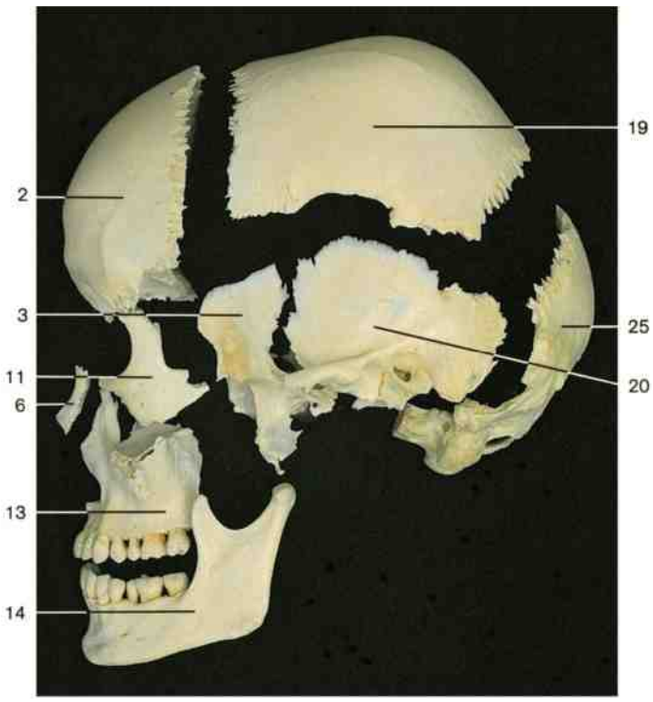


General architecture of the skull (lateral aspect). The different bones are indicated in color (numbers cf. table).

1 Coronal suture
2 Frontal bone
3 Sphenoidal bone
4 Sphenofrontal suture
5 Ethmoidal bone
6 Nasal bone
7 Nasomaxillary suture
8 Lacrimal bone
9 Lacrimomaxillary suture
10 Ethmoidolacrimal suture
11 Zygomatic bone
12 Anterior nasal spine
13 Maxilla
14 Mandible
15 Mental foramen
16 Mental protuberance
17 Superior temporal line
18 Inferior temporal line
19 Parietal bone
20 Temporal bone
21 Squamous suture
22 Lambdoid suture
23 Temporal fossa
24 Parietomastoid suture
25 Occipital bone
26 Zygomatic arch
27 Occipitomastoid suture
28 External acoustic meatus
29 Mastoid process
30 Tympanic portion of temporal bone
31 Condylar process of mandible
32 Coronoid process of mandible



Lateral aspect of the disarticulated skull (palatine bone, lacrimal bone, ethmoidal bone, and vomer are not depicted).

2 Frontal bone (orange) 19 Parietal bone (light yellow) 3 Greater wing of sphenoidal bone (red) 25 Squama of occipital bone (blue) 20 Squama of temporal bone (brown)		Cranial bones
5 Ethmoidal bone (dark green) 3 Sphenoidal bone (red) Temporal bone excluding squama (brown) 30 Tympanic portion of temporal bone (dark brown) Occipital bone excluding squama (blue)		Base of skull
6 Nasal bone (white) 8 Lacrimal bone (light yellow) Inferior nasal concha Vomer 11 Zygomatic bone (dark yellow) Palatine bone 13 Maxilla (violet) 14 Mandible (white)		Facial bones
Malleus Incus Stapes	within petrous portion of temporal bone	Auditory ossicles
Hyoid		

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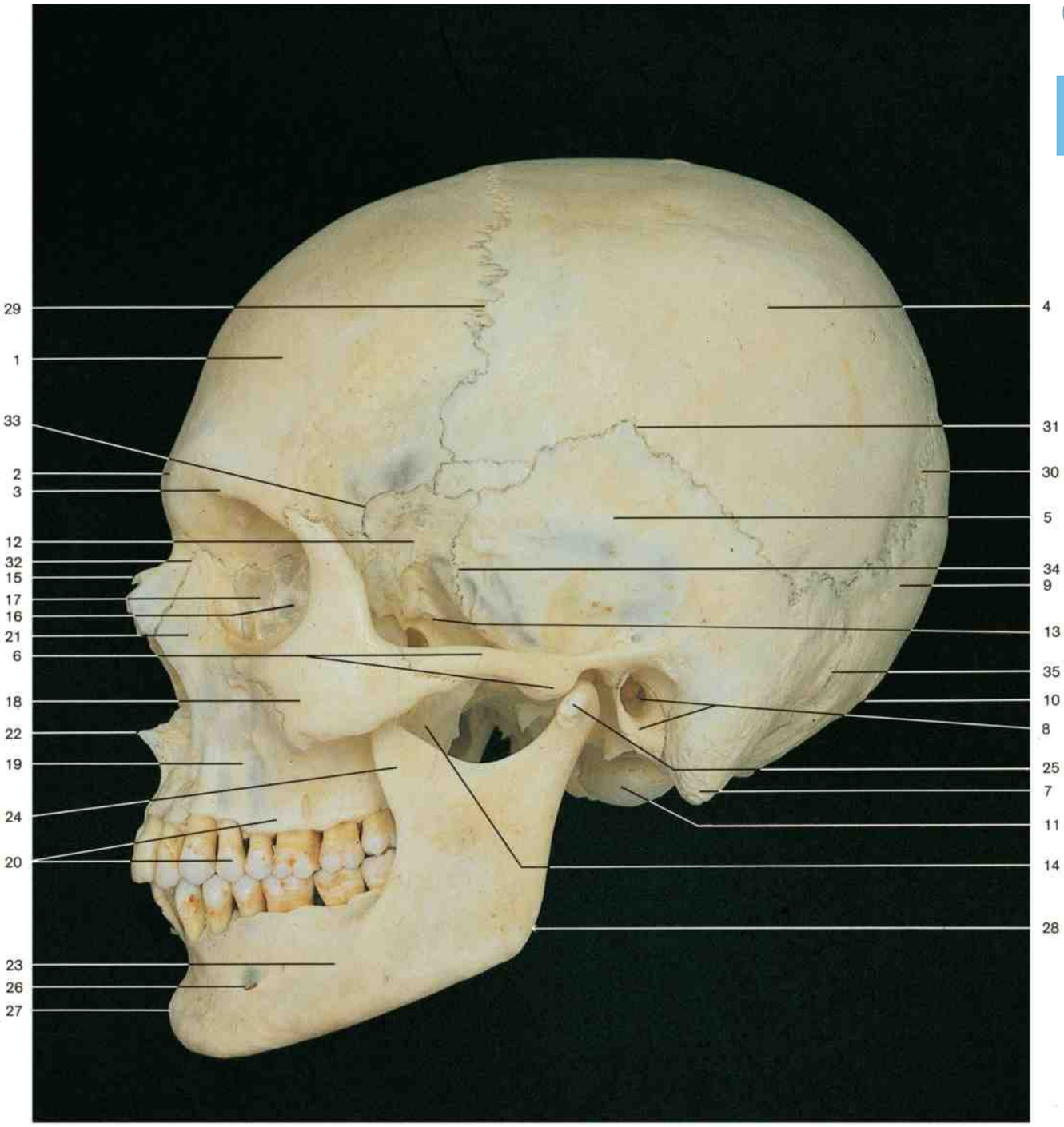

Lateral aspect of the skull.

1 Frontal bone
2 Glabella
3 Supraorbital margin
4 Parietal bone
5 Temporal bone (squamous part)
6 Zygomatic process (articular tubercle)
7 Mastoid process
8 Tympanic part (tympanic plate) and external acoustic meatus
9 Occipital bone (squamous part)
10 External occipital protuberance
11 Occipital condyle
12 Sphenoidal bone (greater wing)
13 Infratemporal crest of sphenoid
14 Pterygoid process (lateral pterygoid plate)
15 Nasal bone
16 Ethmoidal bone (orbital part)
17 Lacrimal bone
18 Zygomatic bone
19 Maxilla (body)
20 Alveolar process and teeth
21 Frontal process
22 Anterior nasal spine
23 Mandible (body)
24 Coronoid process
25 Condylar process
26 Mental foramen
27 Mental protuberance
28 Angle of the mandible

Sutures

29 Coronal suture
30 Lambdoid suture
31 Squamous suture
32 Nasomaxillary suture
33 Frontosphenoid suture
34 Sphenosquamosal suture
35 Occipitomastoid suture

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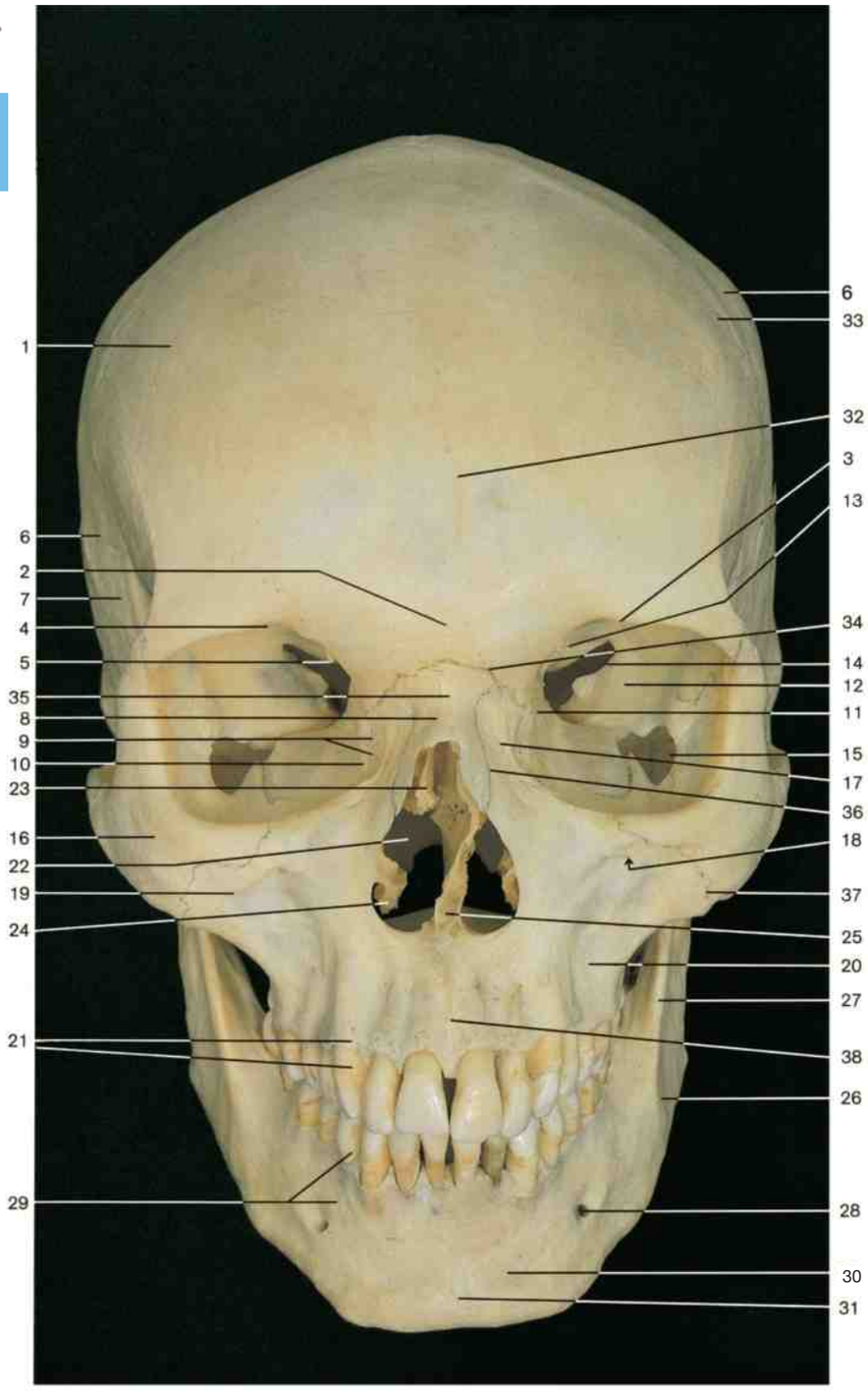

Anterior aspect of the skull.

1 Frontal bone
2 Glabella
3 Supra-orbital margin
4 Supra-orbital notch
5 Trochlear spine
6 Parietal bone
7 Temporal bone
8 Nasal bone

Orbit
9 Lacrimal bone
10 Posterior lacrimal crest
11 Ethmoidal bone

Sphenoidal bone
12 Greater wing of sphenoidal bone
13 Lesser wing of sphenoidal bone
14 Superior orbital fissure
15 Inferior orbital fissure
16 Zygomatic bone

Maxilla
17 Frontal process
18 Infra-orbital foramen
19 Zygomatic process
20 Body of maxilla
21 Alveolar process with teeth

Nasal cavity
22 Anterior nasal aperture
23 Middle nasal concha
24 Inferior nasal concha
25 Nasal septum, vomer

Mandible
26 Body of mandible
27 Ramus of mandible
28 Mental foramen
29 Alveolar part with teeth
30 Base of mandible
31 Mental protuberance

Sutures
32 Frontal suture
33 Coronal suture
34 Frontonasal suture
35 Internasal suture
36 Nasomaxillary suture
37 Zygomaticomaxillary suture
38 Intermaxillary suture

The skull comprises a mosaic of numerous complicated bones that form the cranial cavity protecting the brain **(neurocranium)** and several cavities such as the nasal and oral cavities in the facial region. The neurocranium consists of large bony plates that develop directly from the surrounding sheets of connective tissue **(desmocranium).** The bones of the skull base are formed out of cartilaginous tissue **(chondrocranium),** which ossifies secondarily. The **visceral skeleton,** which in fish gives rise to the gills, has in higher vertebrates been transformed into the bones of the masticatory and auditory apparatus (maxilla, mandible, auditory ossicles, and hyoid bone).

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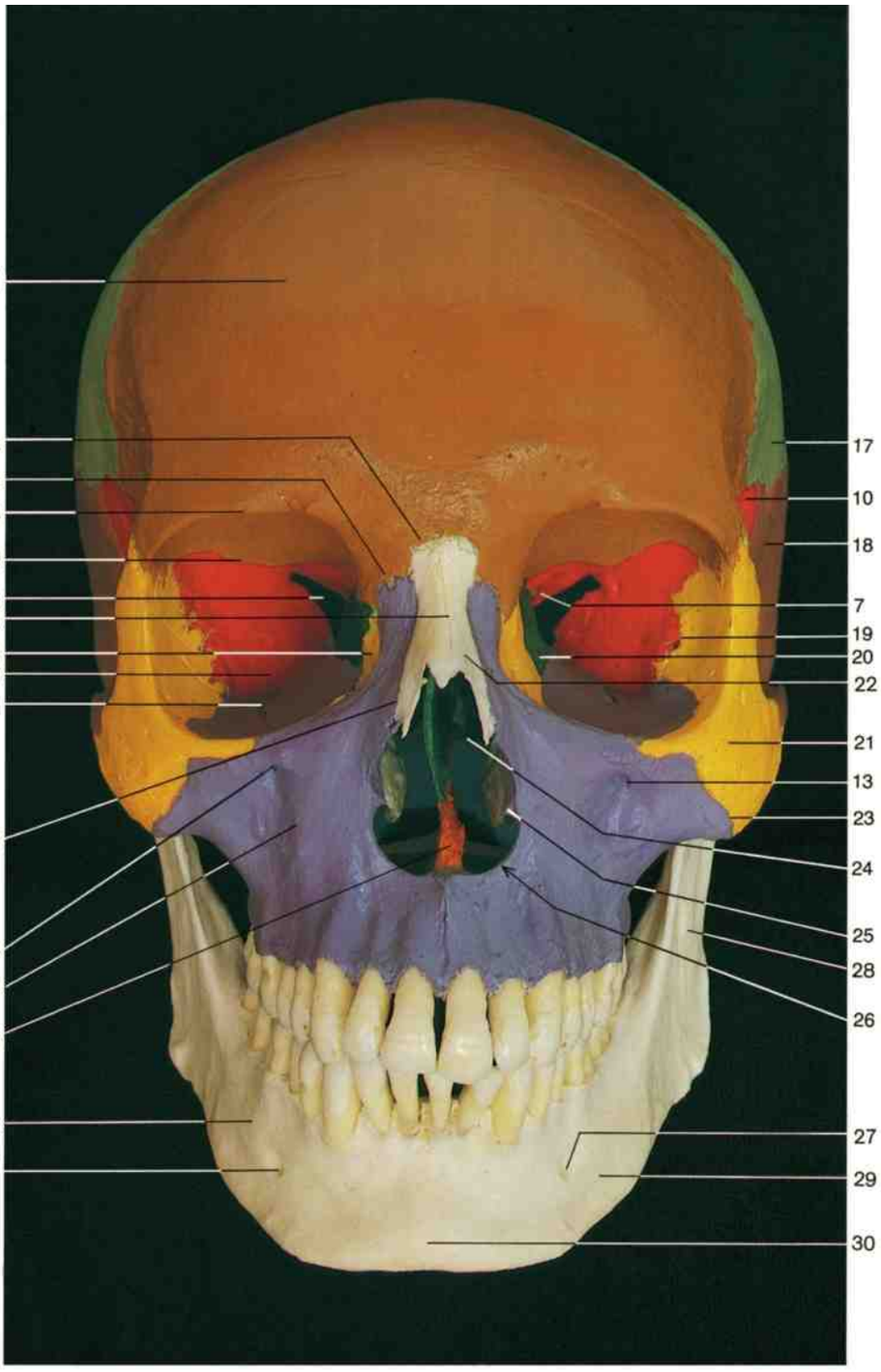

Anterior aspect of the skull (individual bones indicated by color).

1 Frontal bone
2 Frontonasal suture
3 Frontomaxillary suture
4 Supra-orbital margin
5 Internasal suture
6 Sphenofrontal suture
7 Optic canal in lesser wing of sphenoidal bone
8 Superior orbital fissure
9 Lacrimal bone
10 Sphenoidal bone (greater wing)
11 Inferior orbital fissure
12 Nasomaxillary suture
13 Infra-orbital foramen
14 Maxilla
15 Vomer
16 Body of mandible
17 Parietal bone
18 Temporal bone
19 Sphenozygomatic suture
20 Ethmoidal bone
21 Zygomatic bone
22 Nasal bone
23 Zygomaticomaxillary suture
24 Middle nasal concha
25 Inferior nasal concha
26 Anterior nasal aperture
27 Mental foramen
28 Ramus of mandible
29 Base of mandible
30 Mental protuberance

Bones

Brown	=	frontal bone
Light green	=	parietal bone
Dark brown	=	temporal bone
Red	=	sphenoidal bone
Yellow	=	zygomatic bone
Dark green	=	ethmoidal bone
Yellow	=	lacrimal bone
Orange	=	vomer
Violet	=	maxilla
White	=	nasal bone
White	=	mandible

The following series of figures are arranged so that the mosaic-like pattern of the skull becomes understandable. It starts with the bones of the **skull base** (sphenoidal and occipital bones) to which the other bones are added step by step. The facial skeleton is built up by the ethmoidal bone to which the palatine bone and maxilla are attached laterally; the small nasal and lacrimal bones fill the remaining spaces. Cartilages remain only in the external part of the nose.

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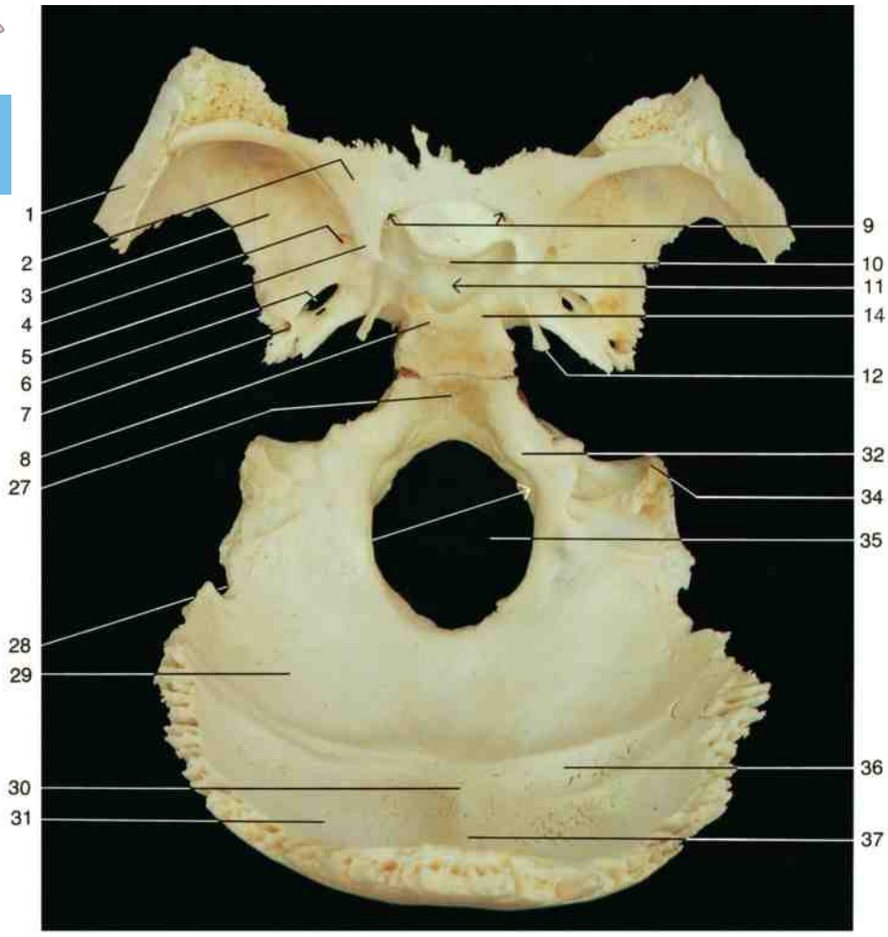

Sphenoidal and occipital bone (from above).

Sphenoidal and occipital bone in connection with the atlas and axis (1st and 2nd cervical vertebrae) (left lateral view).

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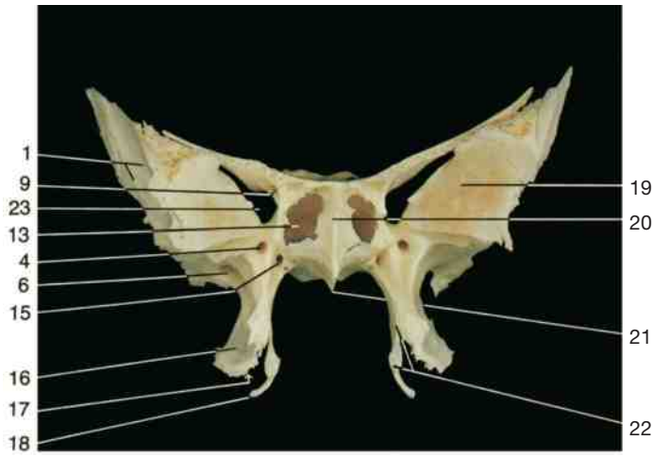
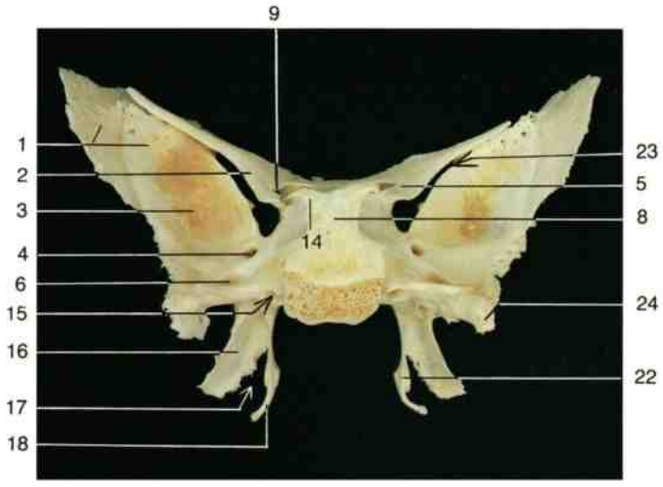
Sphenoidal bone
1 Greater wing
2 Lesser wing
3 Cerebral or superior surface of greater wing
4 Foramen rotundum
5 Anterior clinoid process
6 Foramen ovale
7 Foramen spinosum
8 Dorsum sellae
9 Optic canal
10 Chiasmatic groove (sulcus chiasmatis)
11 Hypophysial fossa (sella turcica)
12 Lingula
13 Opening of sphenoidal sinus
14 Posterior clinoid process
15 Pterygoid canal
16 Lateral pterygoid plate of pterygoid process
17 Pterygoid notch
18 Pterygoid hamulus
19 Orbital surface of greater wing
20 Sphenoidal crest
21 Sphenoidal rostrum
22 Medial pterygoid plate
23 Superior orbital fissure
24 Spine of sphenoid
25 Temporal surface of greater wing
26 Infratemporal crest

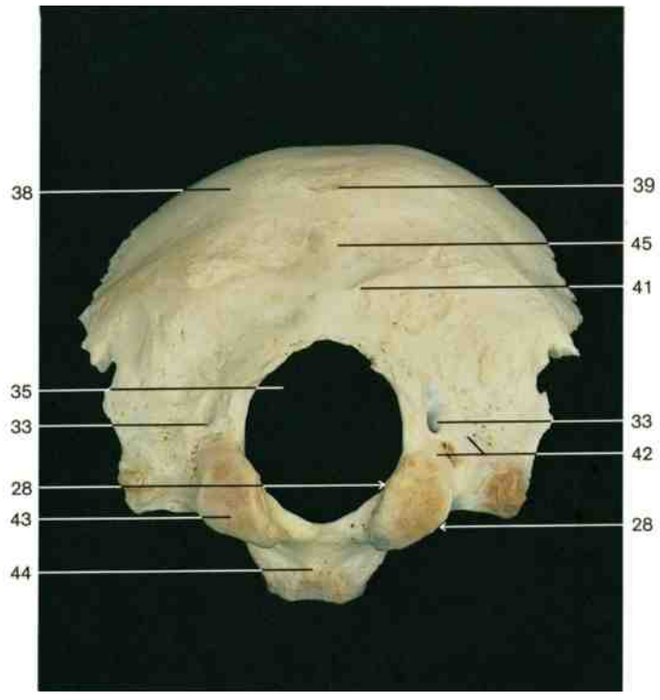
Occipital bone
27 Clivus with basilar part of occipital bone
28 Hypoglossal canal
29 Fossa for cerebellar hemisphere
30 Internal occipital protuberance
31 Fossa for cerebral hemisphere
32 Jugular tubercle
33 Condylar canal
34 Jugular process
35 Foramen magnum
36 Groove for transverse sinus
37 Groove for superior sagittal sinus
38 Squamous part of the occipital bone
39 External occipital protuberance
40 Superior nuchal line
41 Inferior nuchal line
42 Condylar fossa
43 Condyle
44 Pharyngeal tubercle
45 External occipital crest



Sphenoidal bone (anterior aspect).



Sphenoidal bone (posterior aspect).



Occipital bone (from below).

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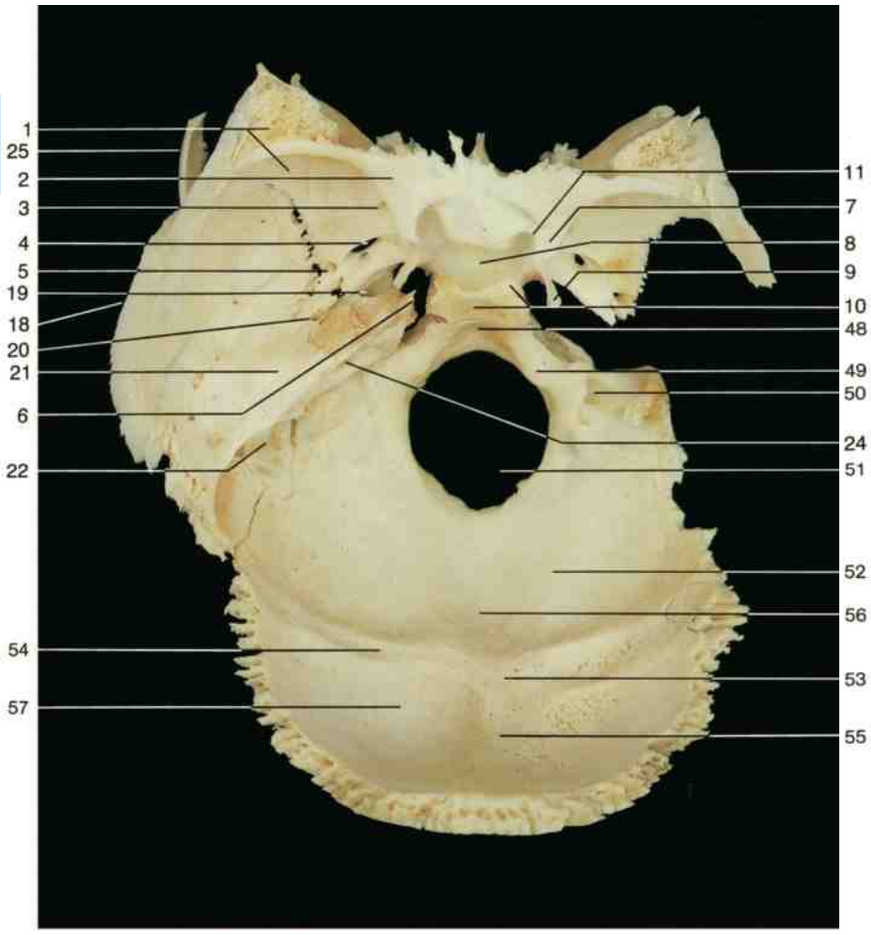
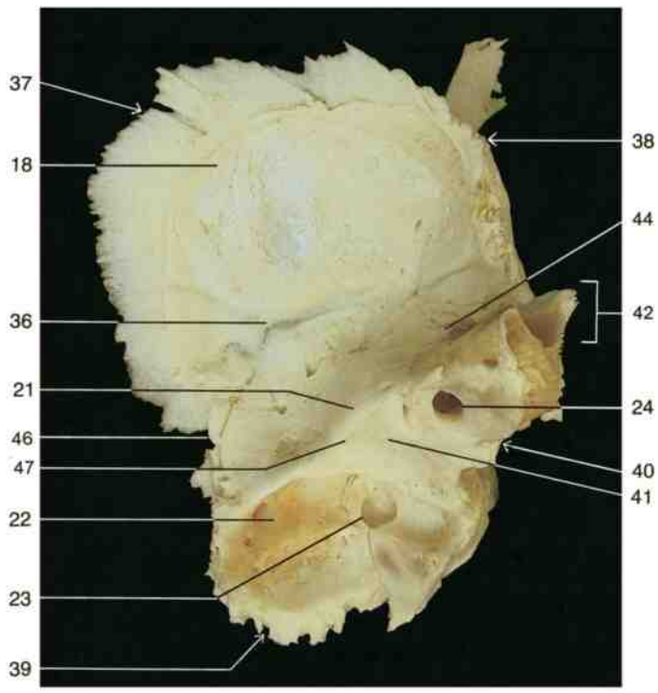


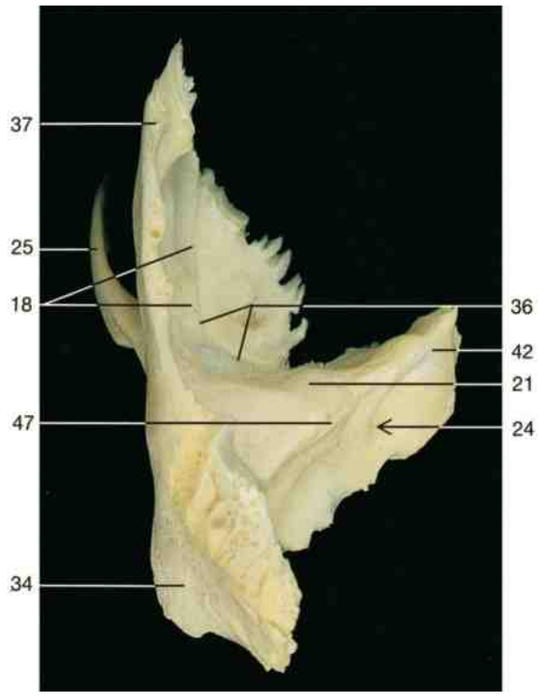
Sphenoidal, occipital, and left temporal bone (from above). Internal aspect of the base of the skull. The left temporal bone has been added to the preceding figure.

Sphenoidal bone

1 Greater wing
2 Lesser wing
3 Foramen rotundum
4 Foramen ovale
5 Foramen spinosum
6 Foramen lacerum
7 Anterior clinoid process
8 Hypophysial fossa (sella turcica)
9 Lingula
10 Dorsum sellae and posterior clinoid process
11 Optic canal
12 Sphenoidal rostrum
13 Medial pterygoid plate
14 Lateral pterygoid plate
15 Pterygoid hamulus
16 Infratemporal crest
17 Body of the sphenoidal bone



Left temporal bone (medial aspect).



Left temporal bone (from above).

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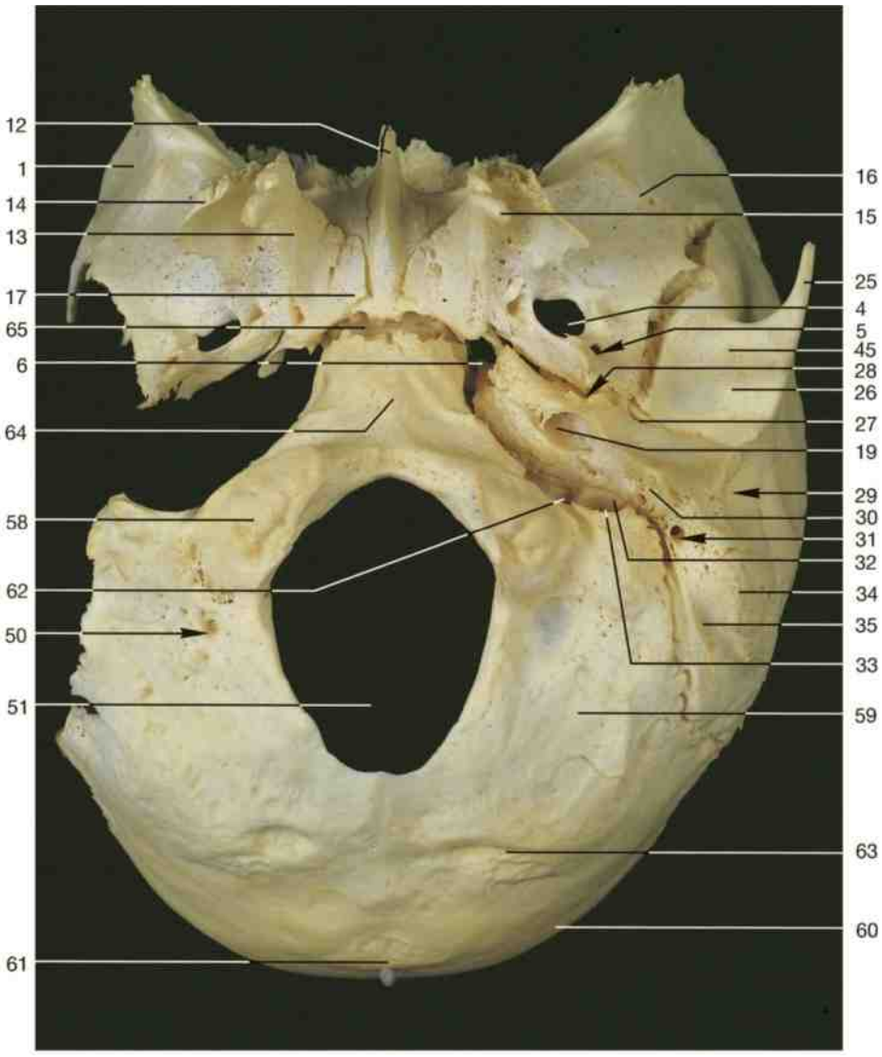
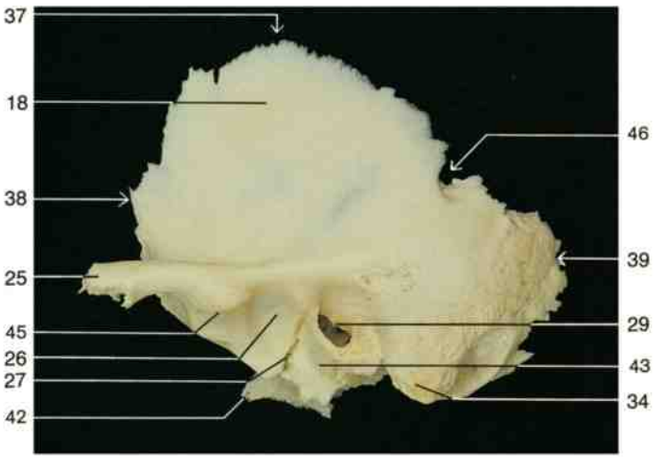


Sphenoidal, occipital, and left temporal bone. Base of the skull (external aspect).



Left temporal bone (lateral aspect).

Temporal bone

18 Squamous part
19 Carotid canal
20 Hiatus of facial canal (for the greater petrosal nerve)
21 Arcuate eminence
22 Groove for the sigmoid sinus
23 Mastoid foramen
24 Internal acoustic meatus
25 Zygomatic process
26 Mandibular fossa
27 Petrotympanic fissure
28 Canalis musculotubarius (bony part of auditory tube)
29 External acoustic meatus
30 Styloid process (remnant only)
31 Stylomastoid foramen
32 Mastoid canaliculus
33 Jugular fossa
34 Mastoid process
35 Mastoid notch
36 Groove for middle meningeal vessels
37 Parietal margin
38 Sphenoidal margin
39 Occipital margin
40 Cochlear canaliculus
41 Aqueduct of the vestibule
42 Apex of the petrous part
43 Tympanic part
44 Trigeminal impression
45 Articular tubercle
46 Parietal notch
47 Groove for the superior petrosal sinus

Occipital bone

48 Clivus
49 Jugular tubercle
50 Condylar canal
51 Foramen magnum
52 Lower part of squamous occipital bone (cerebellar fossa)
53 Internal occipital protuberance
54 Groove for the transverse sinus
55 Groove for the superior sagittal sinus
56 Internal occipital crest
57 Upper part of squamous occipital bone (cerebral fossa)
58 Condyle
59 Nuchal plane
60 Superior nuchal line
61 External occipital protuberance
62 Jugular foramen
63 Inferior nuchal line
64 Pharyngeal tubercle
65 Spheno-occipital synchondrosis

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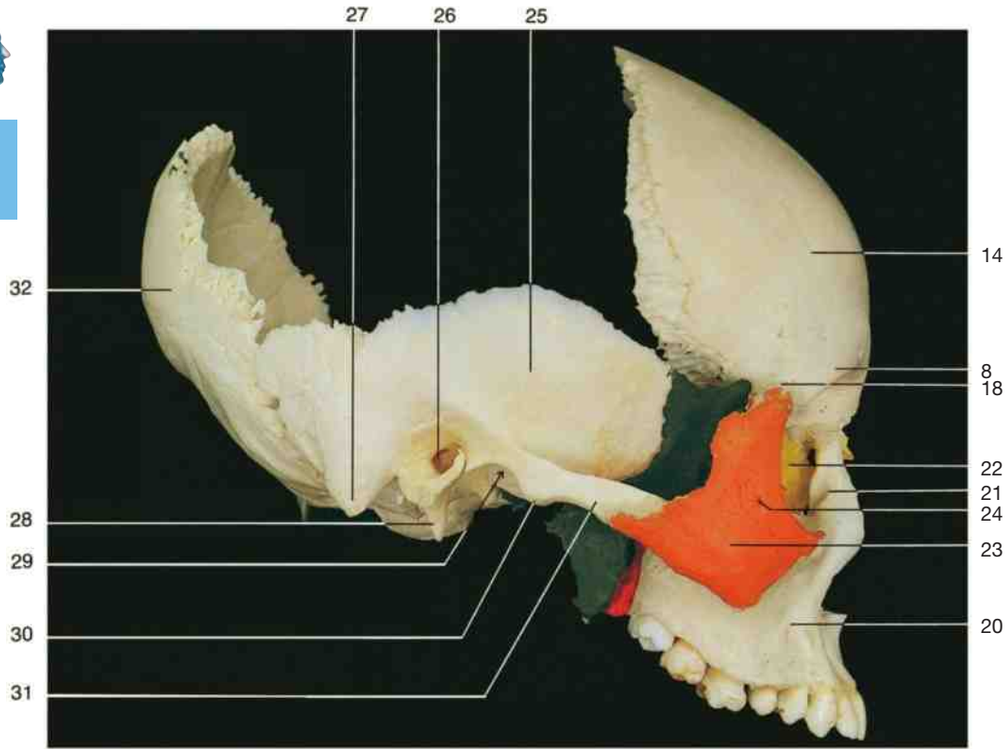
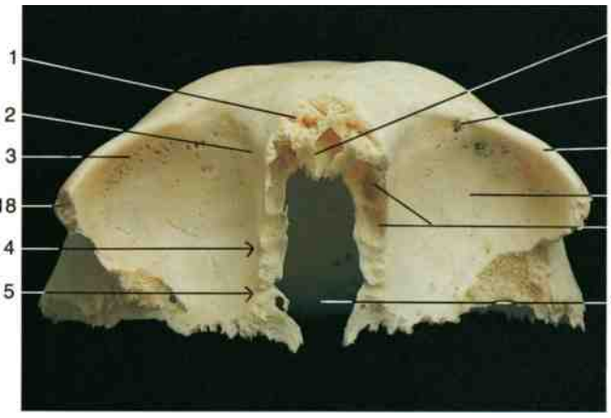
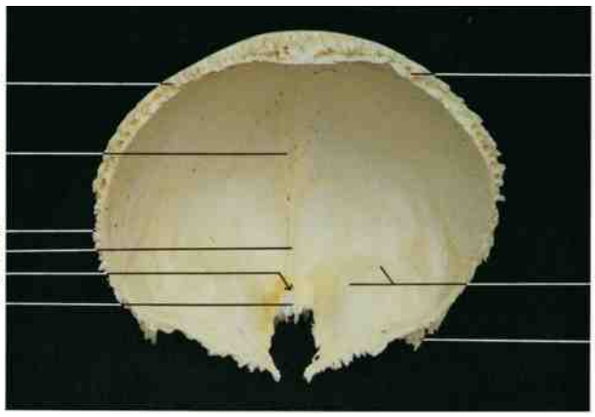


Part of a disarticulated skull (right lateral aspect). The frontal bone and the maxilla are connected with the temporal bone by the zygomatic bone (orange). Sphenoidal bone (black), palatine bone (red), lacrimal bone (yellow).



Frontal bone (inferior aspect). The ethmoidal foveolae cover the ethmoidal cavities of the ethmoidal bone.



Frontal bone (posterior aspect).

Frontal bone
1 Nasal margin
2 Trochlear fossa
3 Fossa for lacrimal gland
4 Anterior ethmoidal foramen
5 Posterior ethmoidal foramen
6 Nasal spine
7 Supra-orbital notch
8 Supra-orbital margin
9 Orbital plate
10 Roofs of the ethmoidal air cells
11 Ethmoidal notch
12 Parietal margin
13 Groove for superior sagittal sinus
14 Squamous part of frontal bone
15 Frontal crest
16 Foramen cecum
17 Nasal spine
18 Zygomatic process of frontal bone
19 Juga cerebralia

Facial bones
20 Maxilla
21 Frontal process of maxilla
22 Lacrimal bone (yellow)
23 Zygomatic bone (orange)
24 Zygomaticofacial foramen

Temporal bone
25 Squamous part of temporal bone
26 External acoustic meatus
27 Mastoid process
28 Styloid process
29 Mandibular fossa
30 Articular tubercle
31 Zygomatic process

Occipital bone
32 Squamous part of occipital bone

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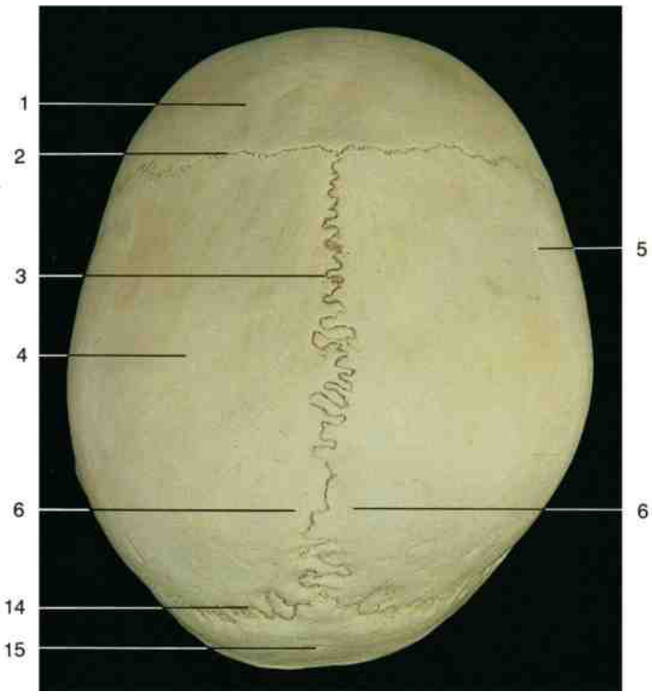
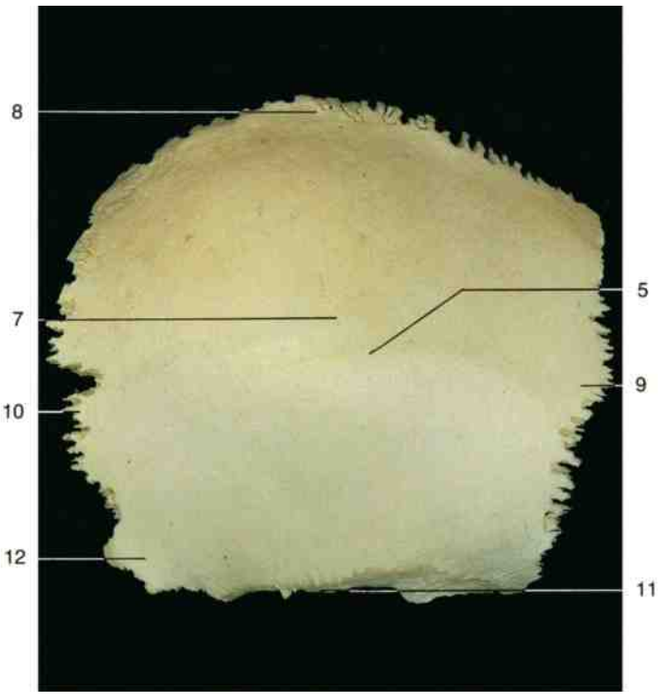
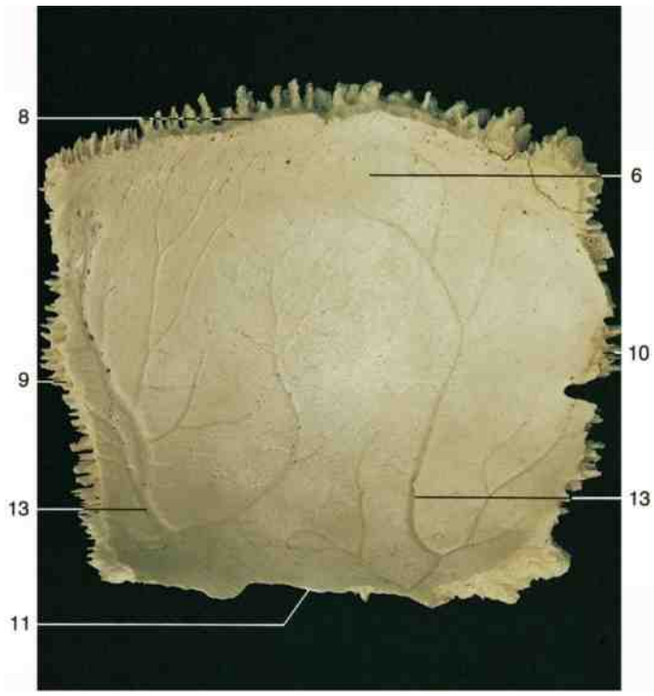


Calvaria (superior aspect).

Calvaria (posterior aspect).



Left parietal bone (external aspect).



Left parietal bone (internal aspect).

1 Frontal bone
2 Coronal suture
3 Sagittal suture
4 Parietal bone
5 Superior temporal line
6 Parietal foramen
7 Parietal tuber or eminence
8 Sagittal margin
9 Occipital margin
10 Frontal margin
11 Squamous margin
12 Sphenoidal angle
13 Groove for middle meningeal artery
14 Lambdoid suture
15 Occipital bone
16 External occipital protuberance
17 Inferior nuchal line
18 Occipitomastoid suture
19 Temporal bone
20 Mastoid process
21 Mastoid notch

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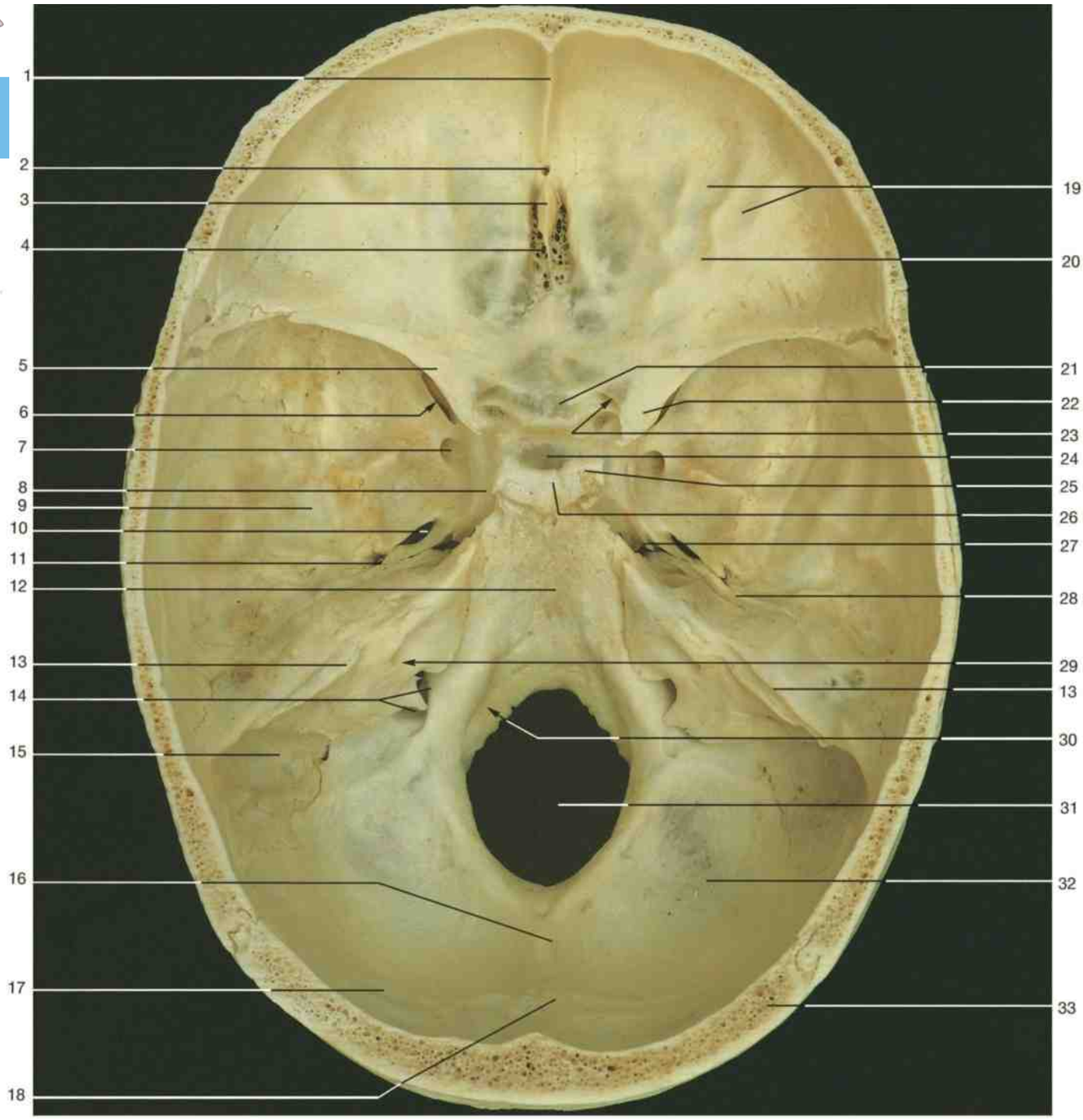

Base of the skull, calvaria removed (internal aspect).

1 Frontal crest
2 Foramen cecum
3 Crista galli
4 Cribriform plate of ethmoidal bone
5 Lesser wing of sphenoidal bone
6 Superior orbital fissure
7 Foramen rotundum
8 Carotid sulcus
9 Middle cranial fossa
10 Foramen ovale
11 Foramen spinosum
12 Clivus
13 Groove for superior petrosal sinus
14 Jugular foramen
15 Groove for sigmoid sinus
16 Internal occipital crest
17 Groove for transverse sinus
18 Internal occipital protuberance
19 Digitate impressions
20 Anterior cranial fossa
21 Chiasmatic sulcus
22 Anterior clinoid process
23 Optic canal
24 Sella turcica (hypophysial fossa)
25 Posterior clinoid process
26 Dorsum sellae
27 Foramen lacerum
28 Groove for greater petrosal nerve
29 Internal acoustic meatus
30 Hypoglossal canal
31 Foramen magnum
32 Posterior cranial fossa
33 Diploe

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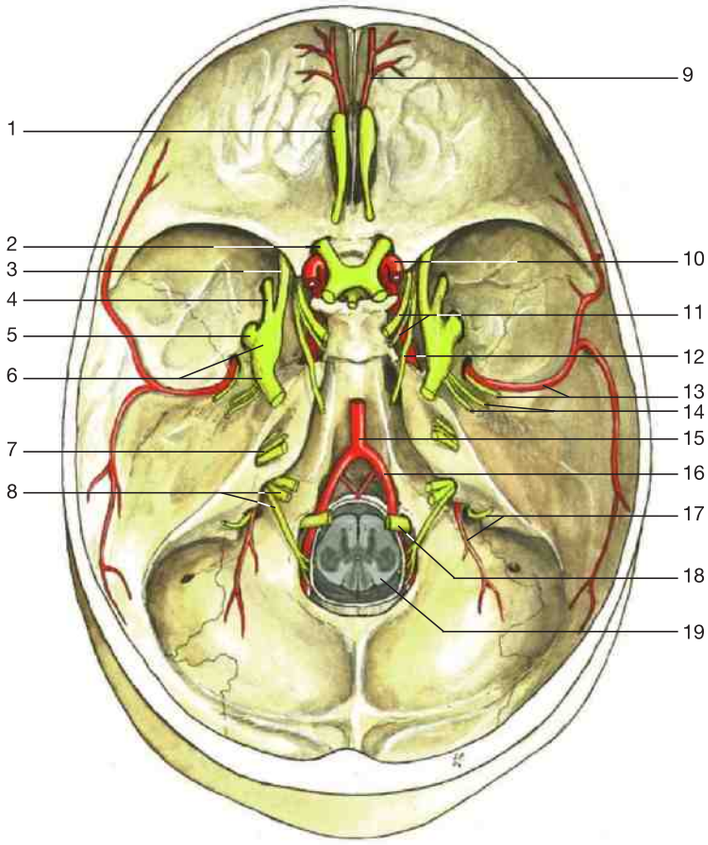

1 Olfactory bulb
2 Optic nerve (n. II)
3 Ophthalmic nerve (n. V_1)
4 Maxillary nerve (n. V_2)
5 Mandibular nerve (n. V_3)
6 Trigeminal nerve (n. V) with trigeminal ganglion
7 Facial nerve (n. VII) and vestibulocochlear nerve (n. VIII)
8 Glossopharyngeal nerve (n. IX), vagus nerve (n. X) and accessory nerve (n. XI)
9 Anterior meningeal artery
10 Internal carotid artery
11 Oculomotor nerve (n. III) and trochlear nerve (n. IV)
12 Abducent nerve (n. VI)
13 Middle meningeal artery and meningeal branch of mandibular nerve
14 Greater and lesser petrosal nerves
15 Basilar artery
16 Vertebral artery
17 Posterior meningeal artery and recurrent meningeal nerve
18 Hypoglossal nerve (n. XII)
19 Medulla oblongata

Base of the skull with cranial nerves and meningeal arteries (internal aspect, schematic drawing).

	Cranial nerves and vessels	Related foramina	Related regions
Anterior cranial fossa	Olfactory nerves (n. I), Anterior ethmoidal artery, vein, and nerve, Anterior meningeal artery	Lamina cribrosa	Nasal cavity
Middle cranial fossa	Optic nerve (n. II), Ophthalmic artery	Optic canal	Orbit
	Oculomotor nerve (n. III), Trochlear nerve (n. IV), Abducent nerve (n. VI), Ophthalmic nerve (n. V_1), Superior ophthalmic vein	Superior orbital fissure	Orbit
	Maxillary nerve (n. V_2)	Foramen rotundum	Pterygopalatine fossa
	Mandibular nerve (n. V_3)	Foramen ovale	Infratemporal fossa
	Middle meningeal artery, Meningeal branch of mandibular nerve (n. V_3)	Foramen spinosum	Infratemporal fossa
	Internal carotid artery	Carotid canal	Cavernous sinus, Base of skull
Posterior cranial fossa	Facial nerve (n. VII), Vestibulocochlear nerve (n. VIII), Artery and vein of the labyrinth	Internal acoustic meatus, Stylomastoid foramen, Facial canal	Inner ear, Face
	Glossopharyngeal nerve (n. IX), Vagus nerve (n. X), Accessory nerve (n. XI), Internal jugular vein, Posterior meningeal artery	Jugular foramen	Parapharyngeal region
	Hypoglossal nerve (n. XII)	Hypoglossal canal	Tongue
	Accessory nerve (n. XI, spinal root), Vertebral arteries, Anterior and posterior spinal arteries, Medulla oblongata	Foramen magnum	Base of skull

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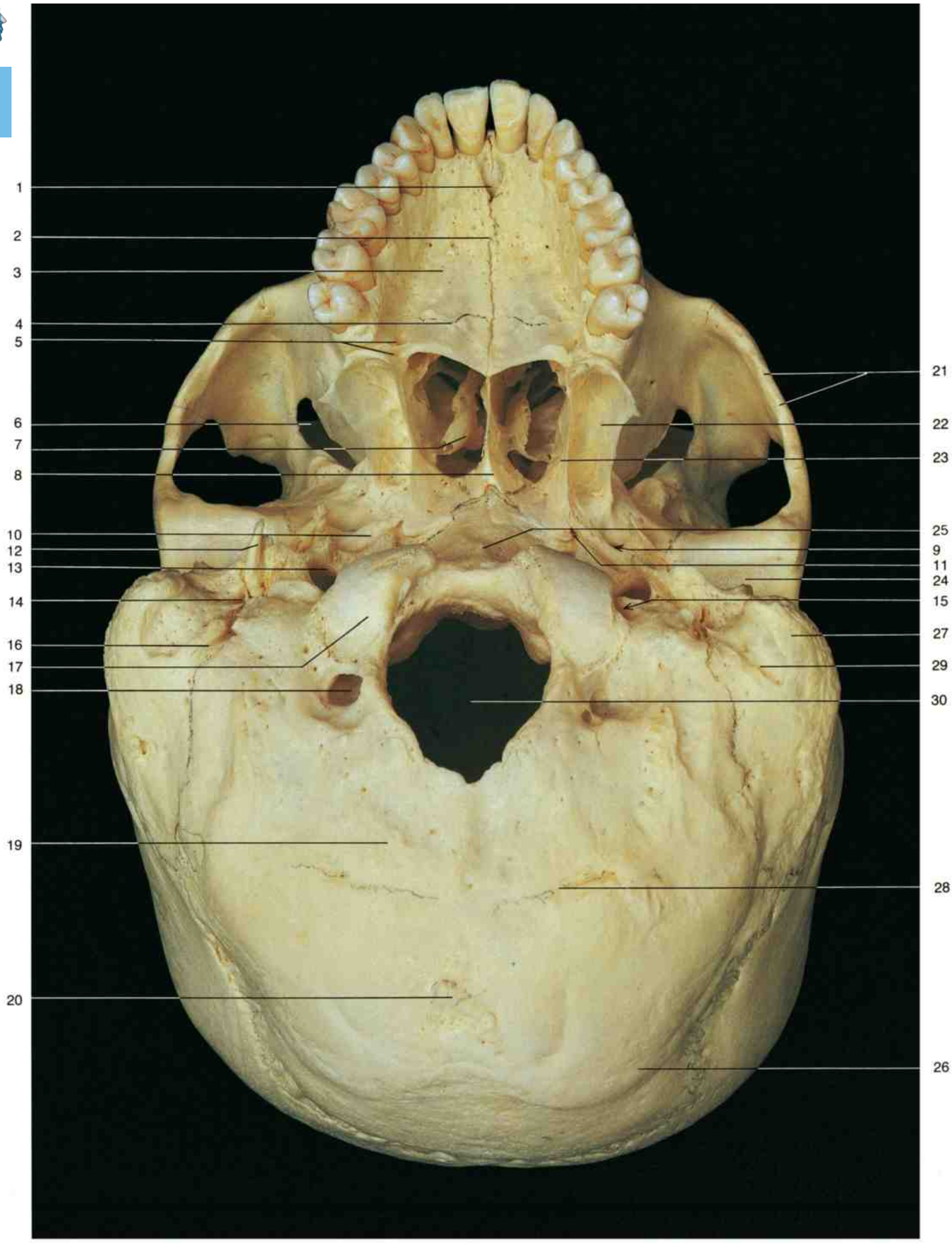

Base of the skull (inferior aspect).

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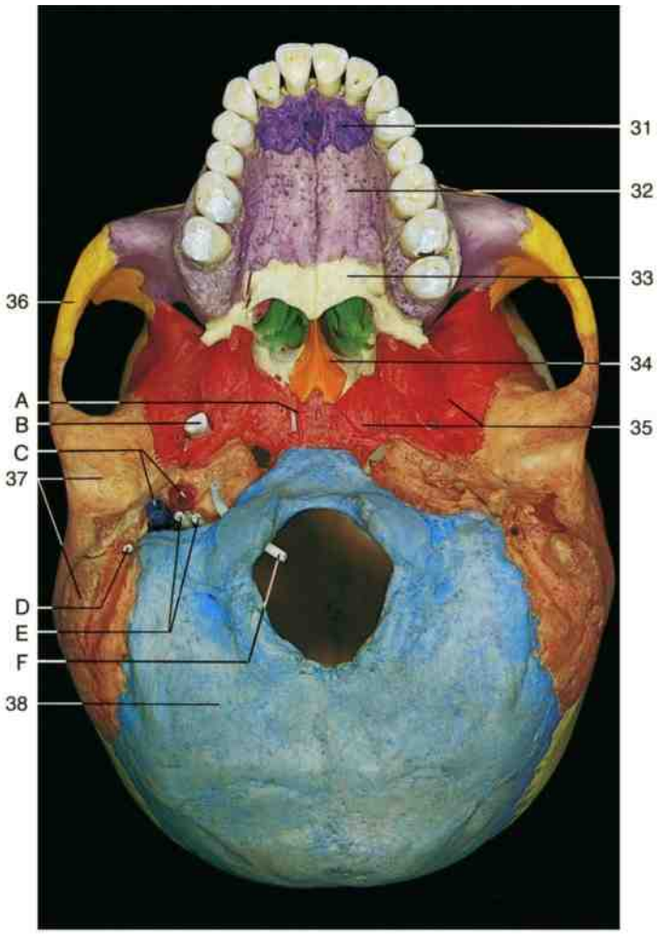
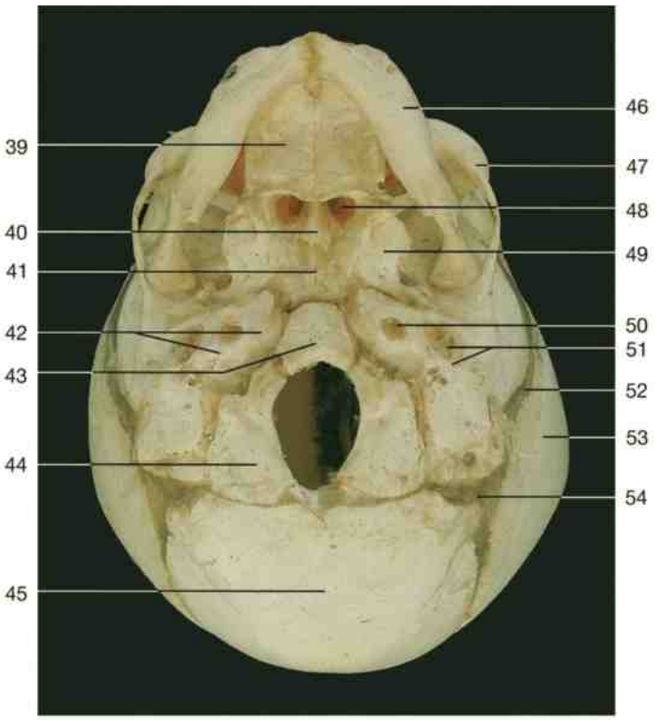


Base of the skull (from below). The individual bones are indicated by different colors.

A = **pterygoid canal**
B = **foramen ovale**
C = internal carotid artery within **carotid canal** and internal jugular vein within the venous part of jugular foramen
D = **stylomastoid foramen** (facial nerve)
E = **jugular foramen** (glossopharyngeal, vagus and accessory nerves)
F = **hypoglossal canal** (hypoglossal nerve)

1 Incisive canal
2 Median palatine suture
3 Palatine process of maxilla
4 Palatomaxillary suture
5 Greater and lesser palatine foramina
6 Inferior orbital fissure
7 Middle concha (process of ethmoidal bone)
8 Vomer
9 Foramen ovale
10 Groove for auditory tube
11 Pterygoid canal
12 Styloid process
13 Carotid canal
14 Stylomastoid foramen
15 Jugular foramen
16 Groove for occipital artery
17 Occipital condyle
18 Condylar canal
19 Nuchal plane
20 External occipital protuberance
21 Zygomatic arch
22 Lateral pterygoid plate
23 Medial pterygoid plate
24 Mandibular fossa
25 Pharyngeal tubercle
26 Superior nuchal line
27 Mastoid process
28 Inferior nuchal line
29 Mastoid notch
30 Foramen magnum
31 Incisive bone or premaxilla (dark violet)
32 Maxilla (violet)
33 Palatine bone (white)
34 Vomer (orange)
35 Sphenoidal bone (red)
36 Zygomatic bone (yellow)
37 Temporal bone (brown)
38 Occipital bone (blue)
39 Palatine process of maxilla
40 Vomer
41 Sphenoidal bone
42 Petrous part of temporal bone
43 Basilar part } of occipital bone
44 Lateral part } of occipital bone
45 Squamous part } of occipital bone
46 Mandible
47 Zygomatic arch
48 Choana
49 Pterygoid process of sphenoidal bone
50 Carotid canal
51 External acoustic meatus (tympanic anulus)
52 Sphenoidal fontanelle
53 Parietal bone
54 Mastoid fontanelle



Skull of the newborn (inferior aspect).

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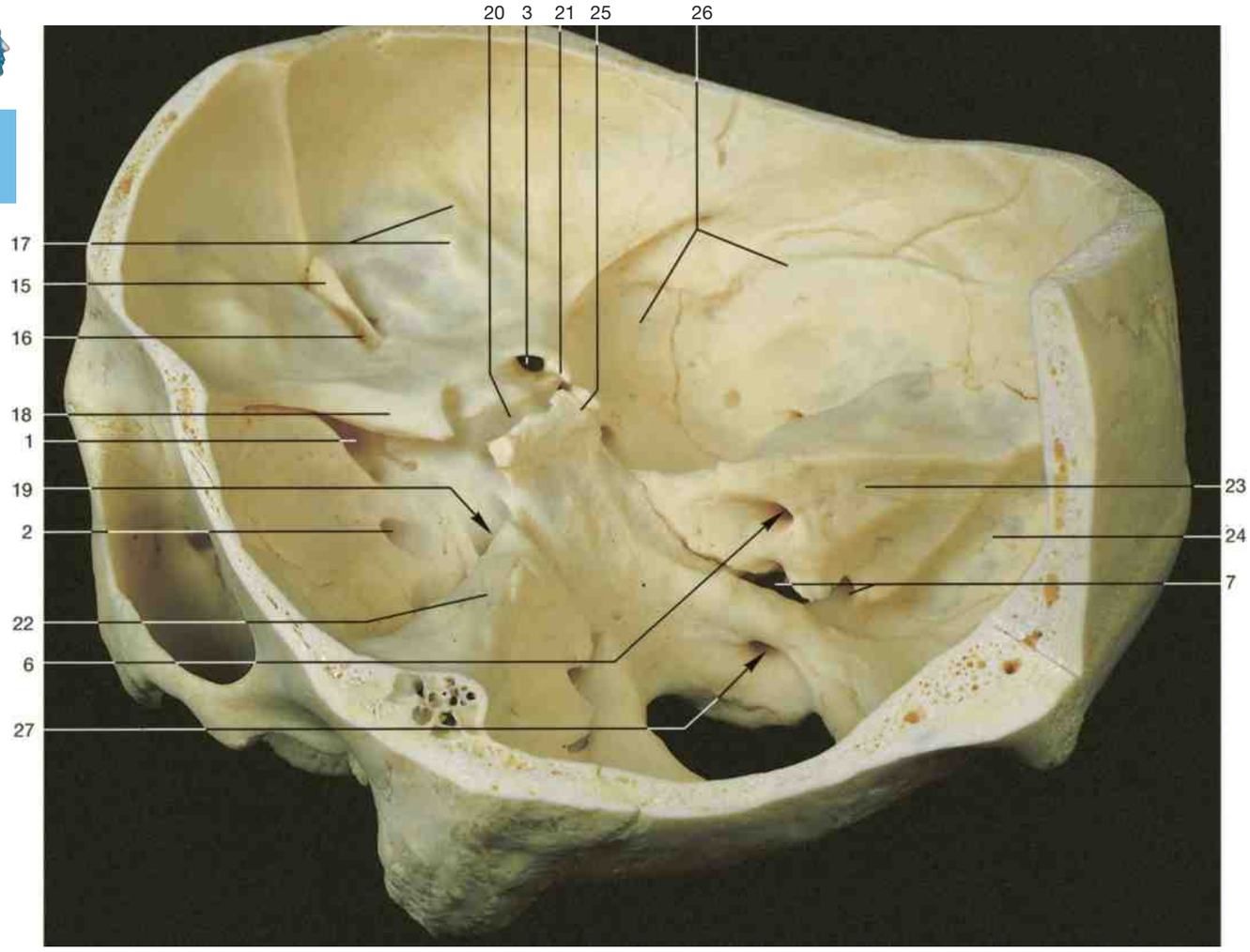
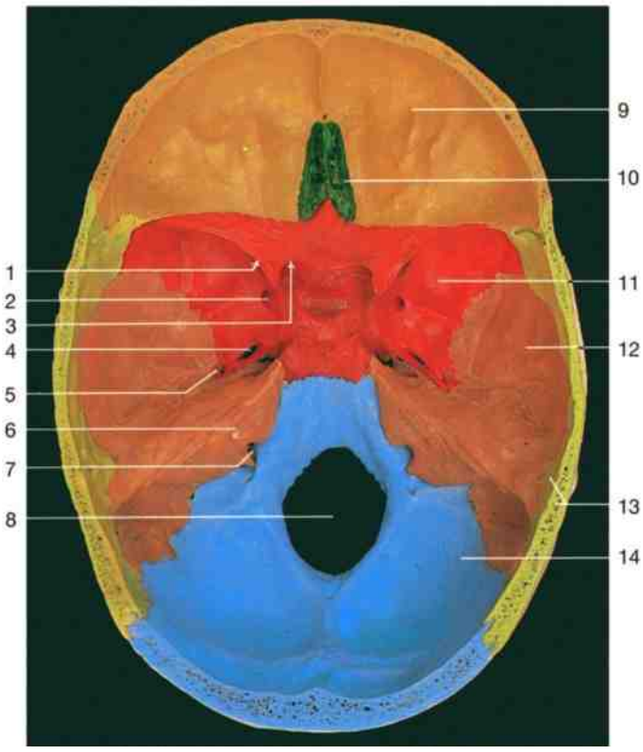


Base of the skull (internal aspect, oblique lateral view from left side).



Canals, fissures, and foramina of the base of the skull

1 Superior orbital fissure
2 Foramen rotundum
3 Optic canal
4 Foramen ovale
5 Foramen spinosum
6 Internal acoustic meatus
7 Jugular foramen
8 Foramen magnum

Bones

9 Frontal bone (orange)
10 Ethmoidal bone (dark green)
11 Sphenoidal bone (red)
12 Temporal bone (brown)
13 Parietal bone (yellow)
14 Occipital bone (blue)

Details of bones

15 Crista galli
16 Cribriform plate
17 Digitate impressions (frontal bone)
18 Lesser wing of sphenoidal bone
19 Foramen lacerum
20 Hypophysial fossa (sella turcica)
21 Anterior clinoid process
22 Trigeminal impression
23 Petrous part of temporal bone
24 Groove for sigmoid sinus
25 Dorsum sellae (posterior clinoid process)
26 Greater wing of sphenoidal bone, groove for middle meningeal artery
27 Hypoglossal canal

Base of the skull (internal aspect, superior view). Individual bones indicated by color.

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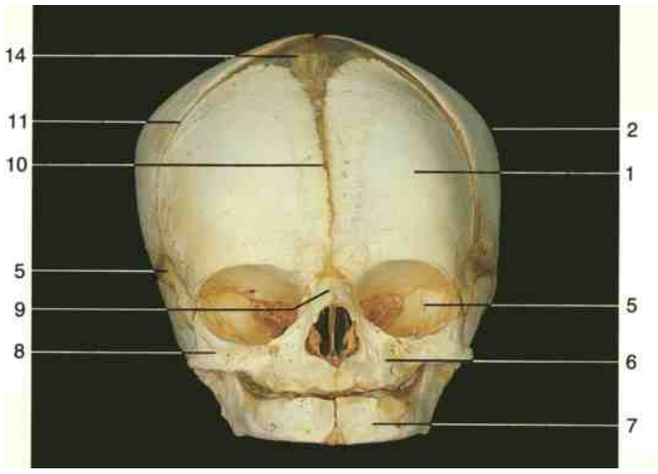
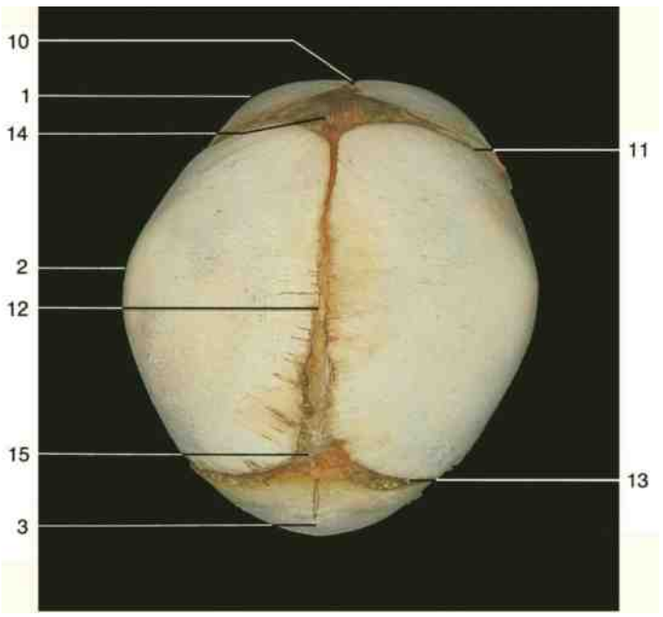
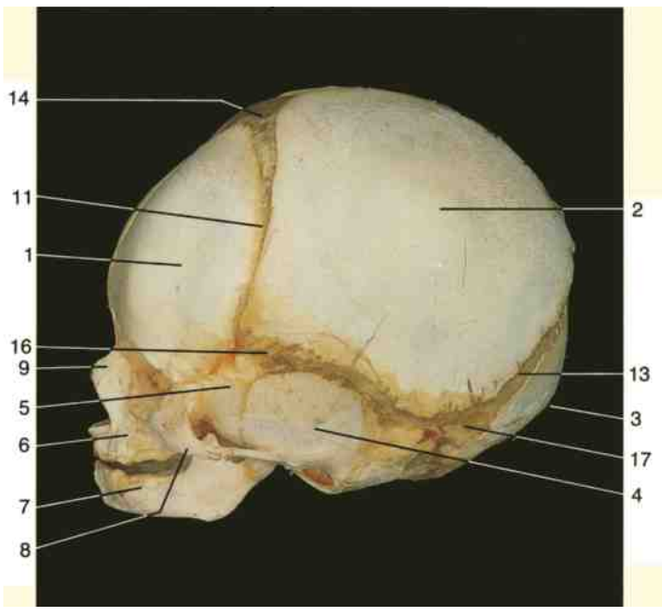


Skull of the newborn (anterior aspect).



Skull of the newborn (superior aspect). Calvaria.



Skull of the newborn (lateral aspect).

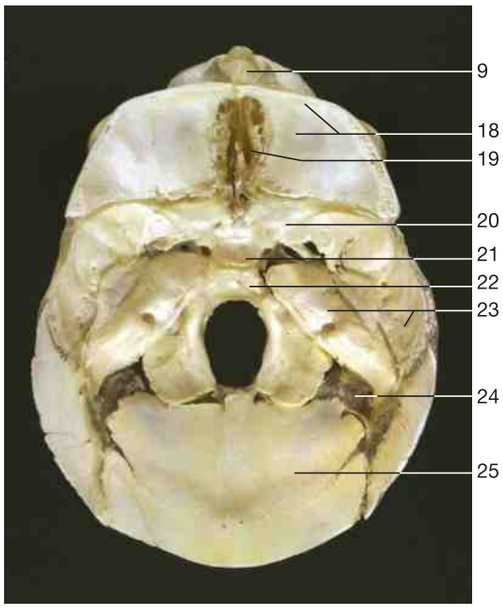
Cranial skeleton
1 Frontal tuber or eminence
2 Parietal tuber or eminence
3 Occipital tuber or eminence
4 Squamous part of temporal bone
5 Greater wing of sphenoidal bone

Facial skeleton
6 Maxilla
7 Mandible
8 Zygomatic bone
9 Nasal bone

Sutures and fontanelles
10 Frontal suture
11 Coronal suture
12 Sagittal suture
13 Lambdoid suture
14 Anterior fontanelle
15 Posterior fontanelle
16 Sphenoidal (anterolateral) fontanelle
17 Mastoid (posterolateral) fontanelle

Base of the skull
18 Frontal bone
19 Ethmoidal bone
20 Sphenoidal bone
21 Hypophysial fossa (sella turcica)
22 Dorsum sellae
23 Temporal bone
24 Mastoid (posterolateral) fontanelle
25 Occipital bone

In the newborn, the facial skeleton, in contrast to the cranial skeleton, appears relatively small. There are no teeth presenting. The bones of the cranium are separated by wide fontanelles.



Base of the skull of the newborn (internal aspect).

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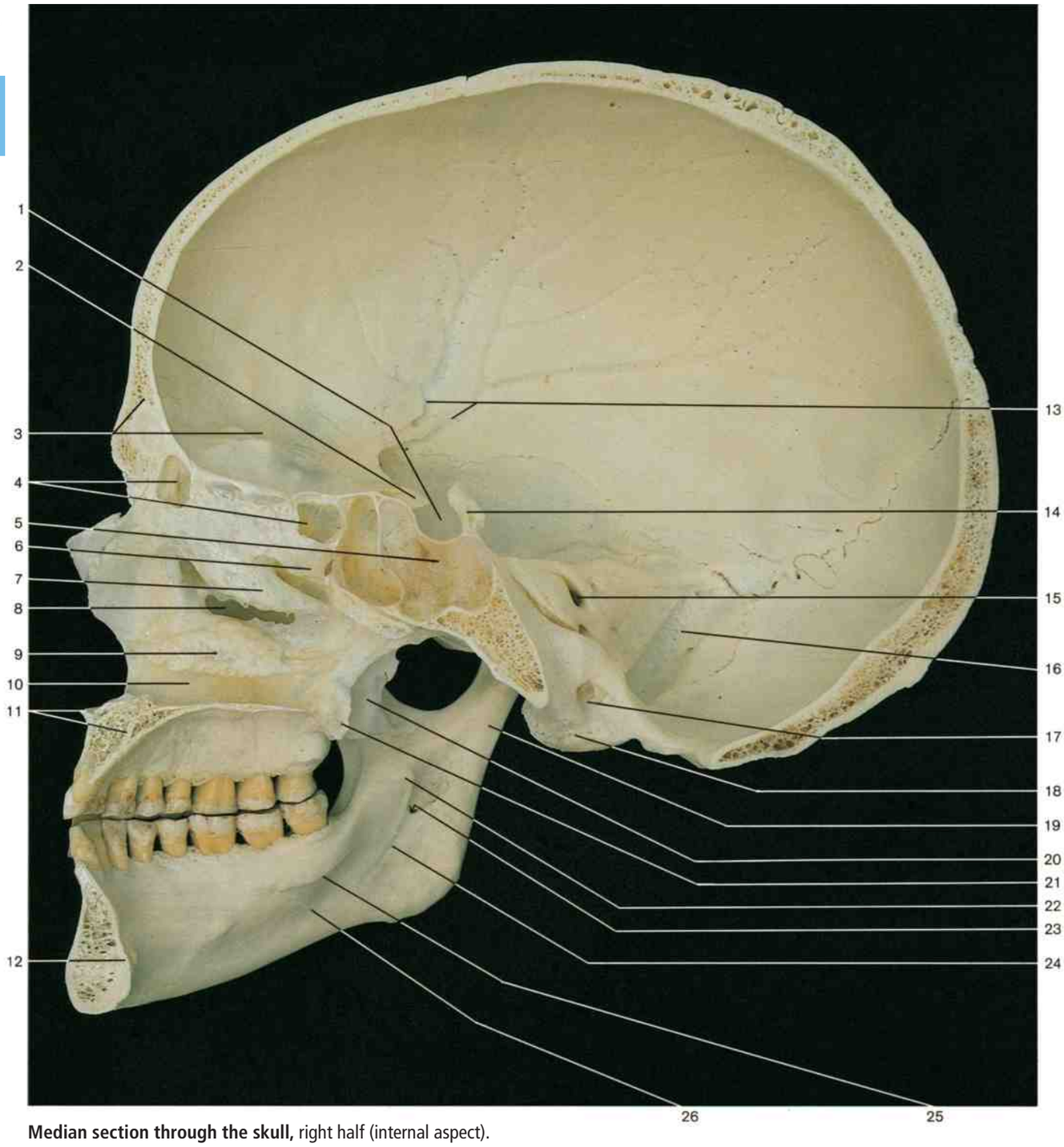

Median section through the skull, right half (internal aspect).

1 Hypophysial fossa (sella turcica)
2 Anterior clinoid process
3 Frontal bone
4 Ethmoidal air cells
5 Sphenoidal sinus
6 Superior concha
7 Middle concha
8 Maxillary hiatus
9 Inferior concha
10 Inferior meatus
11 Anterior nasal spine and maxilla
12 Mental spine or genial tubercle
13 Groove for middle meningeal artery
14 Dorsum sellae
15 Internal acoustic meatus
16 Groove for sigmoid sinus
17 Hypoglossal canal
18 Occipital condyle
19 Condylar process
20 Lateral pterygoid plate } of pterygoid process
21 Medial pterygoid plate } of pterygoid process
22 Lingula of mandible
23 Mandibular foramen
24 Mylohyoid groove
25 Mylohyoid line
26 Submandibular fovea

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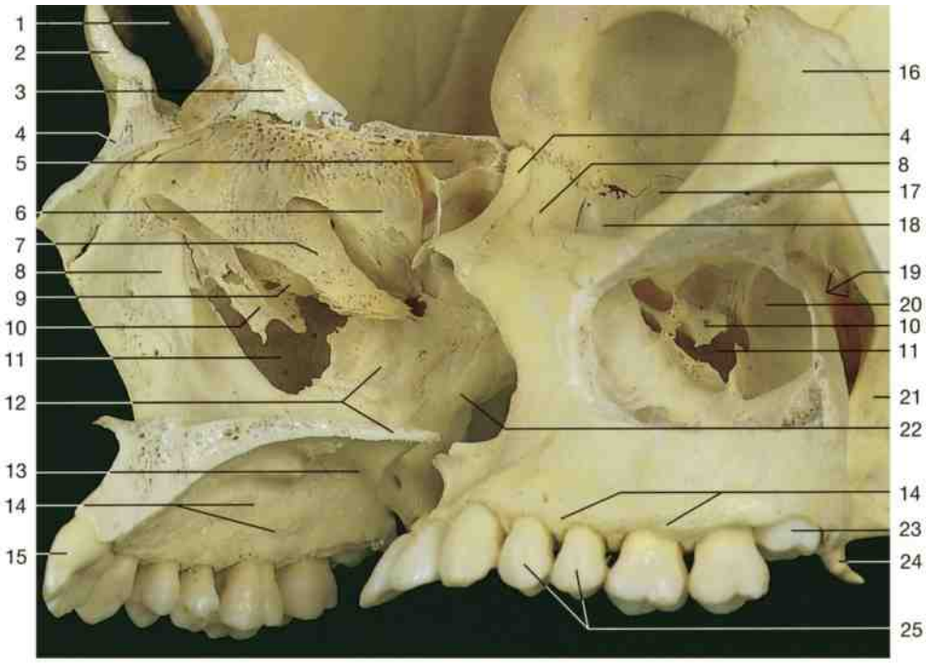
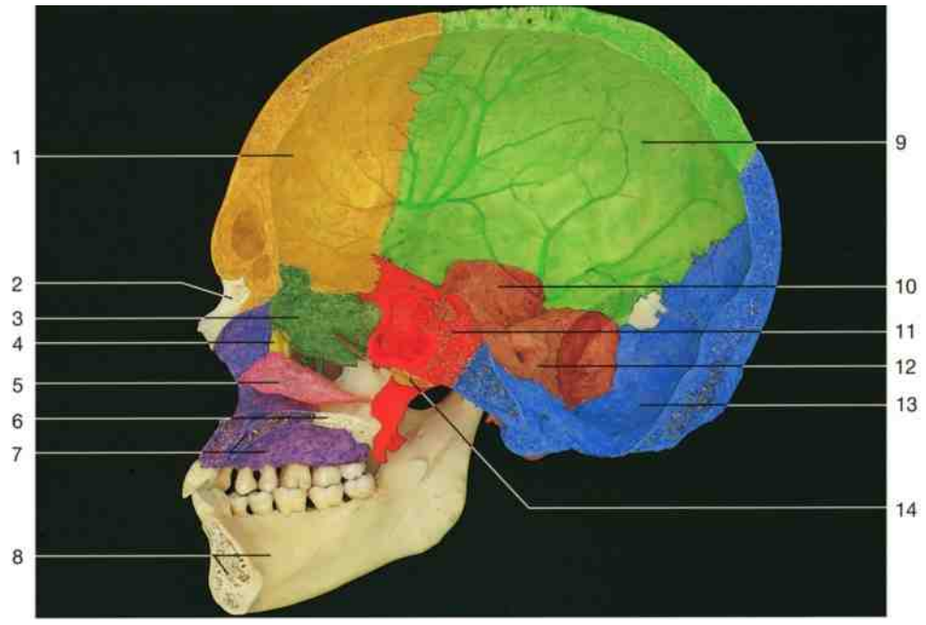


Facial part of the skull (viscerocranium), divided in two halves (lateral and medial aspect). Right inferior concha has been removed to show the maxillary hiatus. Left maxillary sinus opened.

1 Frontal sinus
2 Frontal bone
3 Crista galli
4 Nasal bone
5 Sphenoidal sinus
6 Superior concha } of ethmoidal bone
7 Middle concha } of ethmoidal bone
8 Frontal process of maxilla
9 Ethmoidal bulla
10 Uncinate process
11 Maxillary hiatus
12 Palatine bone
13 Greater palatine foramen
14 Alveolar process of maxilla
15 Central incisor
16 Zygomatic bone
17 Ethmoidal bone
18 Lacrimal bone
19 Pterygopalatine fossa
20 Maxillary sinus
21 Lateral pterygoid plate
22 Medial pterygoid plate
23 Third molar tooth
24 Pterygoid hamulus
25 Two premolar teeth



Median section through the skull. The nasal septum has been removed. Bones indicated by colors.

Bones (indicated by colors)
1 Frontal bone (yellow)
2 Nasal bone (white)
3 Ethmoidal bone (dark green)
4 Lacrimal bone (yellow)
5 Inferior nasal concha (pink)
6 Palatine bone (white)
7 Maxilla (violet)
8 Mandible (white)
9 Parietal bone (light green)
10 Temporal bone (brown)
11 Sphenoidal bone (red)
12 Petrous part of temporal bone (brown)
13 Occipital bone (blue)
14 Ala of vomer (light brown)

Because of the upright posture that the human developed in the course of evolution, the cranial cavity greatly increased in size, whereas the facial skeleton decreased. As a result, the base of the skull developed an angulation of about 120° between the clivus and the cribriform plate (see drawing on page 19). The hypophysial fossa containing the pituitary gland lies at the angle formed between these two planes.

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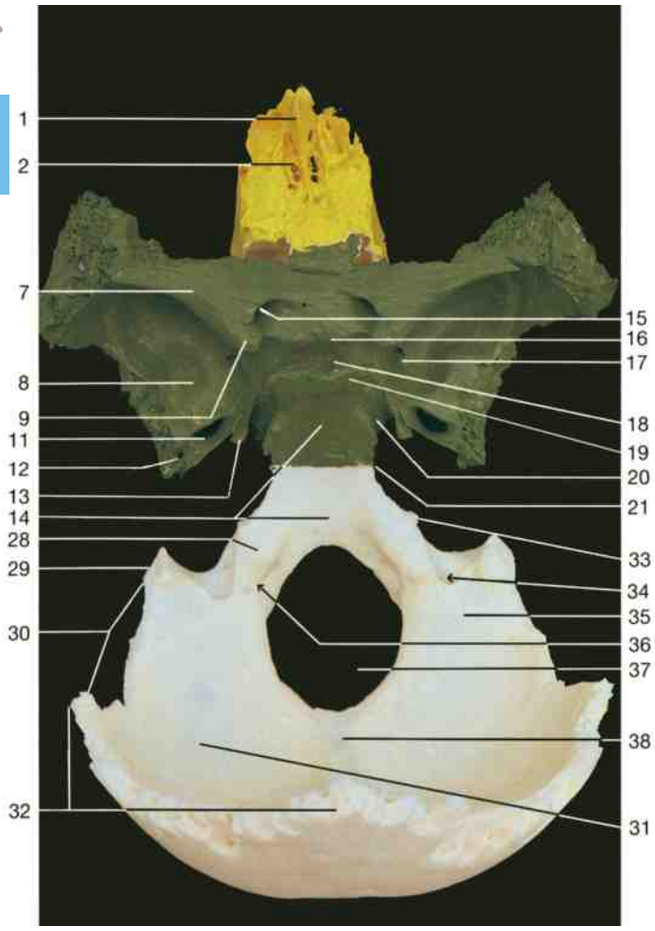
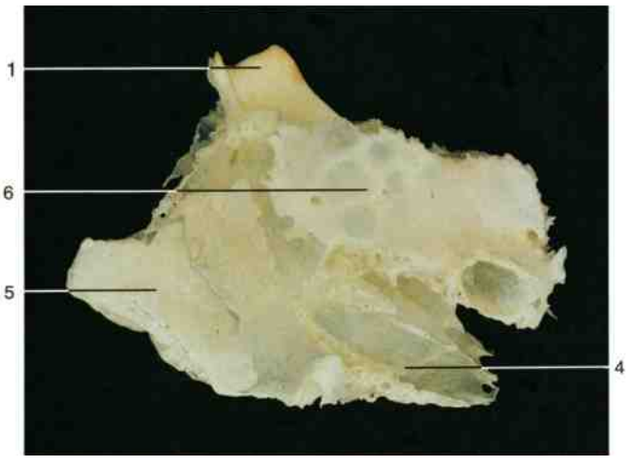
Disarticulated Skull II: Ethmoidal Bone



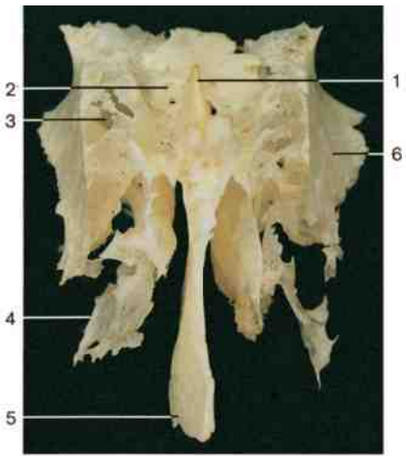
Part of the disarticulated base of the skull.
Ethmoidal, sphenoidal, and occipital bones (from above).
Green = sphenoidal bone; yellow = ethmoidal bone.

Ethmoidal bone
1 Crista galli
2 Cribriform plate
3 Ethmoidal air cells
4 Middle concha
5 Perpendicular plate (part of nasal septum)
6 Orbital plate

Sphenoidal bone
7 Lesser wing
8 Greater wing
9 Anterior clinoid process
10 Posterior clinoid process
11 Foramen ovale
12 Foramen spinosum
13 Lingula of the sphenoidal bone
14 Clivus
15 Optic canal
16 Tuberculum sellae
17 Foramen rotundum (right side)
18 Hypophysial fossa (sella turcica)
19 Dorsum sellae
20 Carotid sulcus
21 Spheno-occipital synchondrosis
22 Lateral pterygoid plate
23 Greater wing of sphenoidal bone (orbital surface)
24 Greater wing of sphenoidal bone (maxillary surface)
25 Foramen rotundum (left side)
26 Superior orbital fissure
27 Infratemporal crest of the greater wing



Ethmoidal bone (lateral aspect), posterior portion to the right.



Ethmoidal bone (anterior aspect).

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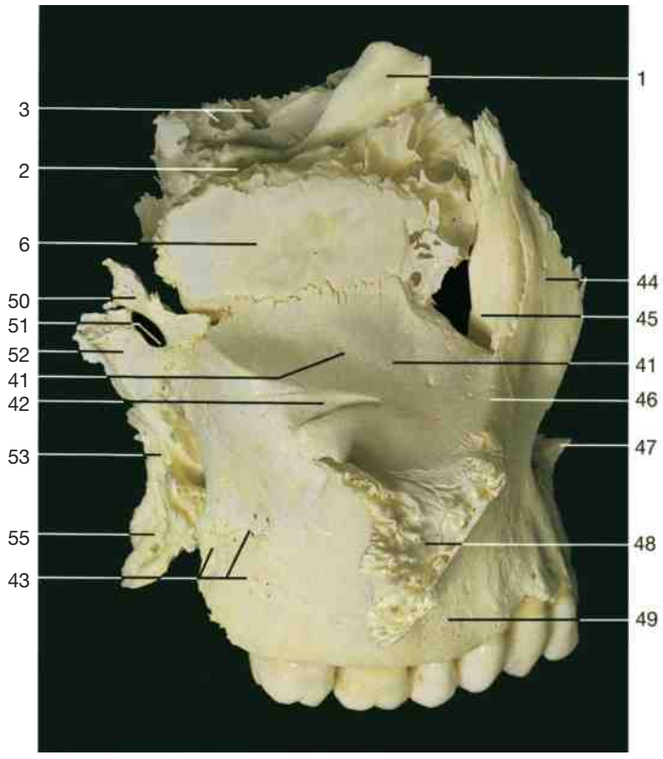
Disarticulated base of the skull (anterior aspect). Green = sphenoidal bone; yellow = ethmoidal bone; red = palatine bone.

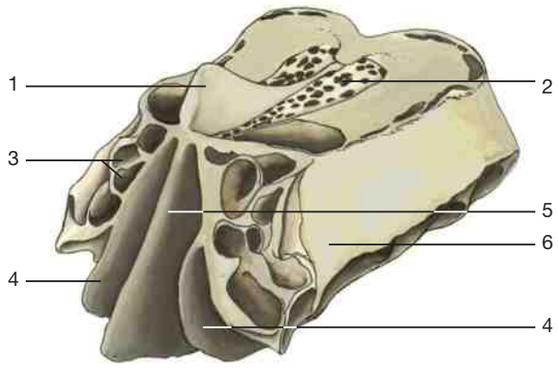
Occipital bone
28 Jugular tubercle
29 Jugular process
30 Mastoid margin
31 Posterior cranial fossa
32 Lambdoid margin
33 Intrajugular process
34 Condylar canal
35 Lateral part of occipital bone
36 Hypoglossal canal
37 Foramen magnum
38 Internal occipital crest
39 Squamous part of occipital bone
40 Internal occipital protuberance

Maxilla
41 Orbital surface
42 Infra-orbital groove
43 Maxillary tuberosity with foramina
44 Frontal process
45 Nasolacrimal groove
46 Infra-orbital margin
47 Anterior nasal spine
48 Zygomatic process
49 Alveolar process

Palatine bone
50 Orbital process
51 Sphenopalatine notch
52 Sphenoidal process
53 Perpendicular plate
54 Horizontal plate
55 Pyramidal process



Right maxilla, ethmoidal, and palatine bone (lateral aspect).



Ethmoidal bone (oblique anterior aspect). (Schematic drawing.)

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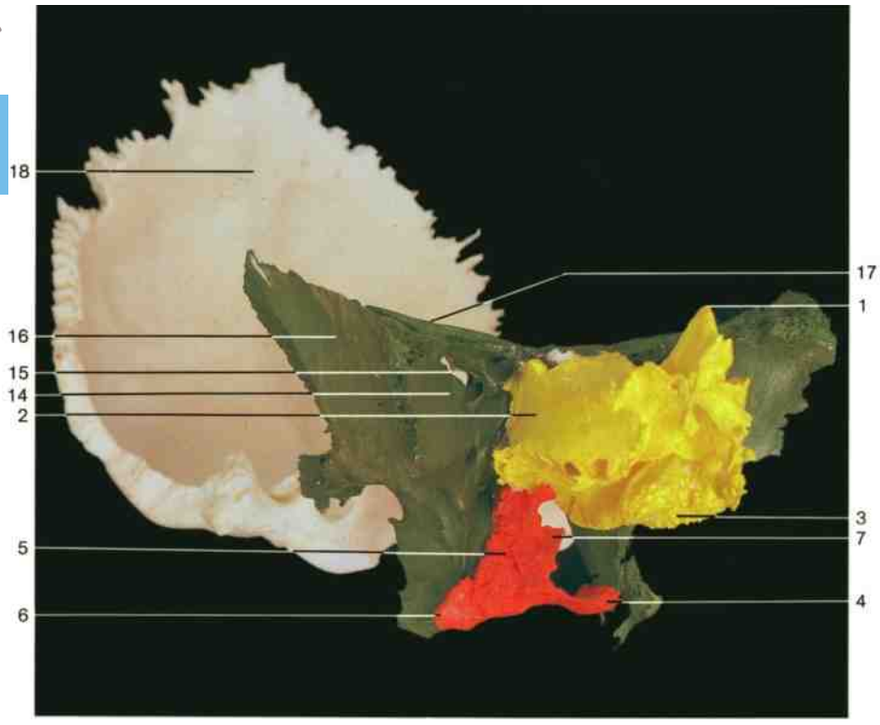


Part of a disarticulated skull base, similar to the preceding figures, but with palatine bone. Green = sphenoidal bone; yellow = ethmoidal bone; red = palatine bone.

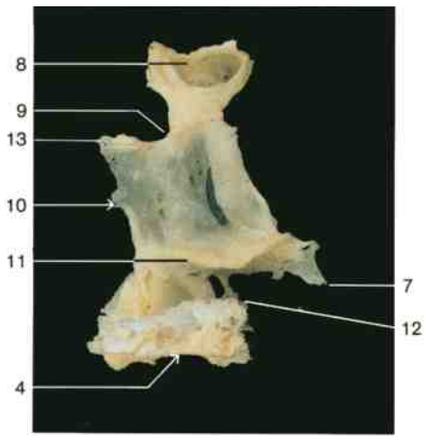
Ethmoidal bone
1 Crista galli
2 Orbital plate
3 Middle concha

Palatine bone
4 Horizontal plate of palatine bone
5 Greater palatine canal
6 Pyramidal process
7 Maxillary process
8 Orbital process
9 Sphenopalatine notch
10 Perpendicular plate of palatine bone
11 Conchal crest
12 Nasal crest
13 Sphenoidal process

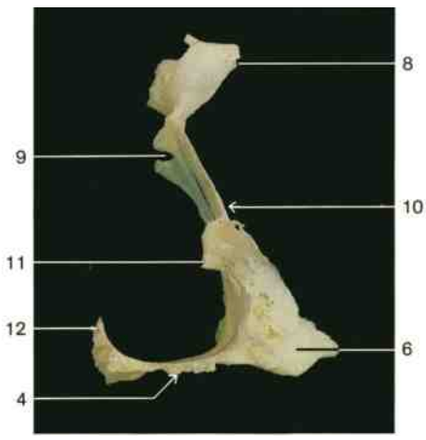
Sphenoidal bone
14 Greater wing
15 Superior orbital fissure
16 Greater wing (orbital surface)
17 Lesser wing

Occipital bone
18 Squamous part of occipital bone

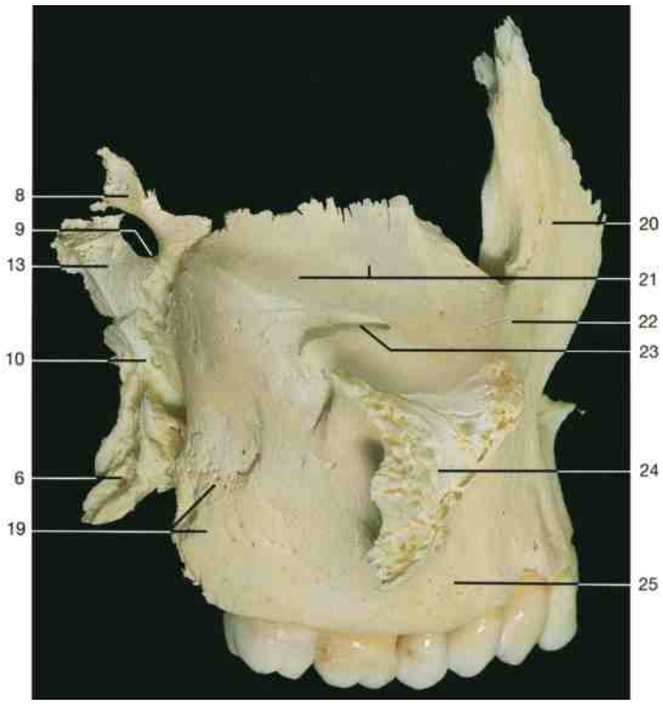
Maxilla
19 Maxillary tuberosity
20 Frontal process
21 Orbital surface
22 Infra-orbital margin
23 Infra-orbital groove
24 Zygomatic process
25 Alveolar process



Left palatine bone (medial aspect, posterior aspect to the left).



Left palatine bone (anterior aspect).



Right maxilla and right palatine bone (lateral aspect).

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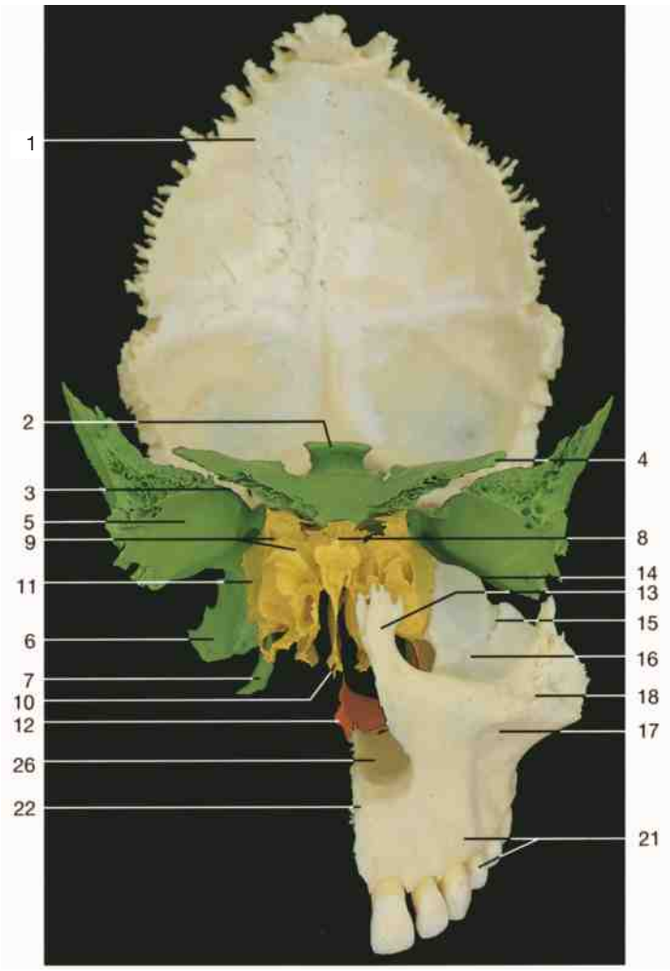


Part of a disarticulated skull.
The left **maxilla** is added to the preceding specimen.

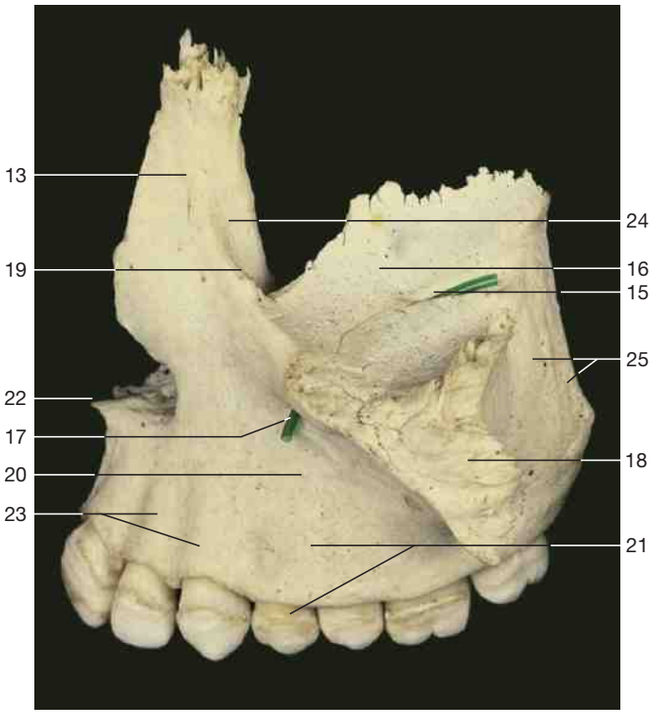
Occipital bone
1 Squamous part

Sphenoidal bone
2 Dorsum sellae
3 Superior orbital fissure
4 Lesser wing
5 Greater wing (orbital surface)
6 Lateral pterygoid plate
7 Medial pterygoid plate

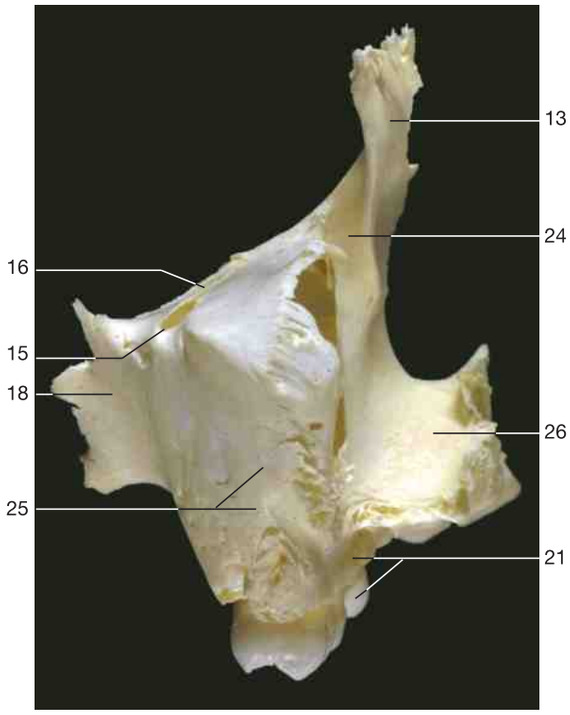
Ethmoidal bone
8 Crista galli
9 Ethmoidal air cells
10 Perpendicular plate
11 Orbital plate

Palatine bone
12 Horizontal plate (nasal crest)

Maxilla
13 Frontal process
14 Inferior orbital fissure
15 Infra-orbital groove
16 Orbital surface
17 Infra-orbital foramen
18 Zygomatic process
19 Anterior lacrimal crest
20 Canine fossa
21 Alveolar process with teeth
22 Anterior nasal spine
23 Juga alveolaria (elevations formed by roots of teeth)
24 Lacrimal groove
25 Maxillary tuberosity with alveolar foramina
26 Palatine process of maxilla



Left maxilla (lateral aspect). Probe = infra-orbital canal.



Left maxilla (posterior aspect).

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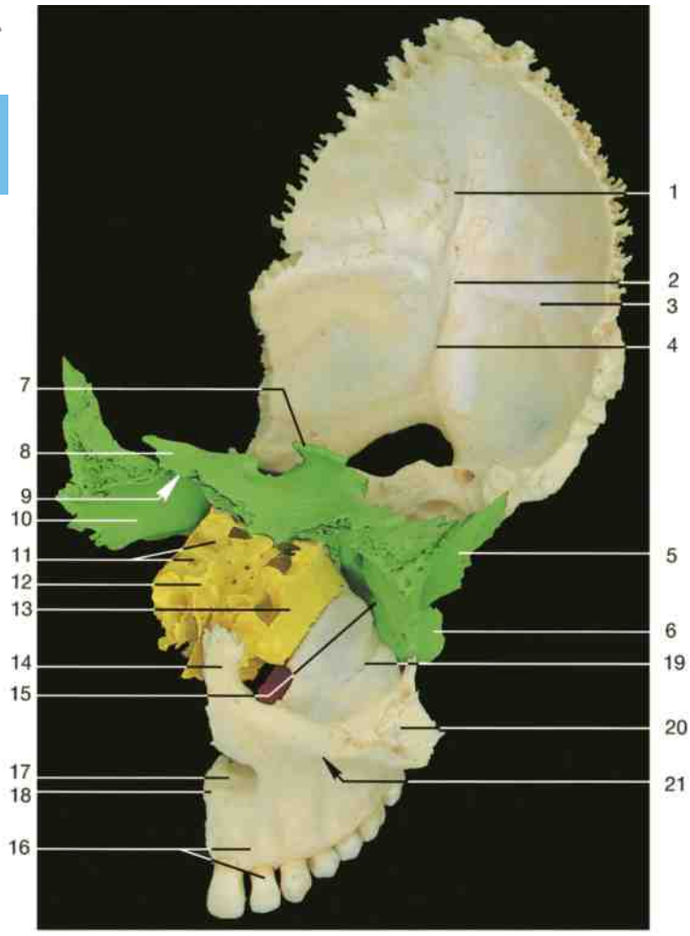
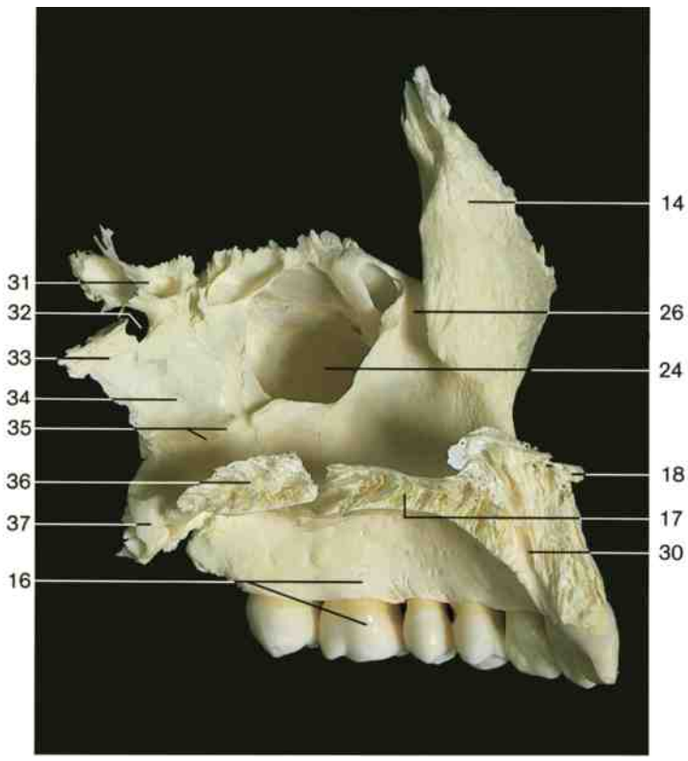


Part of a disarticulated base of skull. The mosaic of the facial bones [sphenoidal bone (green), ethmoidal bone (yellow), and palatine bone (red)] is seen from the antero-lateral aspect.



Left maxilla and palatine bone (medial aspect).

Occipital bone
1 Groove for superior sagittal sinus
2 Internal occipital protuberance
3 Groove for transverse sinus
4 Internal occipital crest

Sphenoidal bone
5 Greater wing (temporal surface)
6 Lateral pterygoid plate
7 Dorsum sellae
8 Lesser wing
9 Superior orbital fissure
10 Greater wing (orbital surface)

Ethmoidal bone
11 Ethmoidal air cells
12 Crista galli
13 Orbital plate

Maxilla
14 Frontal process
15 Inferior orbital fissure
16 Alveolar process with teeth
17 Palatine process
18 Anterior nasal spine
19 Infra-orbital groove
20 Zygomatic process
21 Location of infra-orbital foramen
22 Middle nasal meatus
23 Inferior nasal meatus
24 Maxillary hiatus (leading to maxillary sinus)
25 Third molar
26 Lacrimal groove
27 Conchal crest
28 Body of maxilla (nasal surface)
29 Nasal crest
30 Incisive canal

Palatine bone
31 Orbital process
32 Sphenopalatine notch
33 Sphenoidal process
34 Perpendicular plate
35 Conchal crest
36 Horizontal plate
37 Pyramidal process

Frontal bone
38 Squamous part
39 Supra-orbital foramen
40 Frontal notch
41 Frontal spine

Inferior nasal concha
42 Inferior nasal concha with maxillary process

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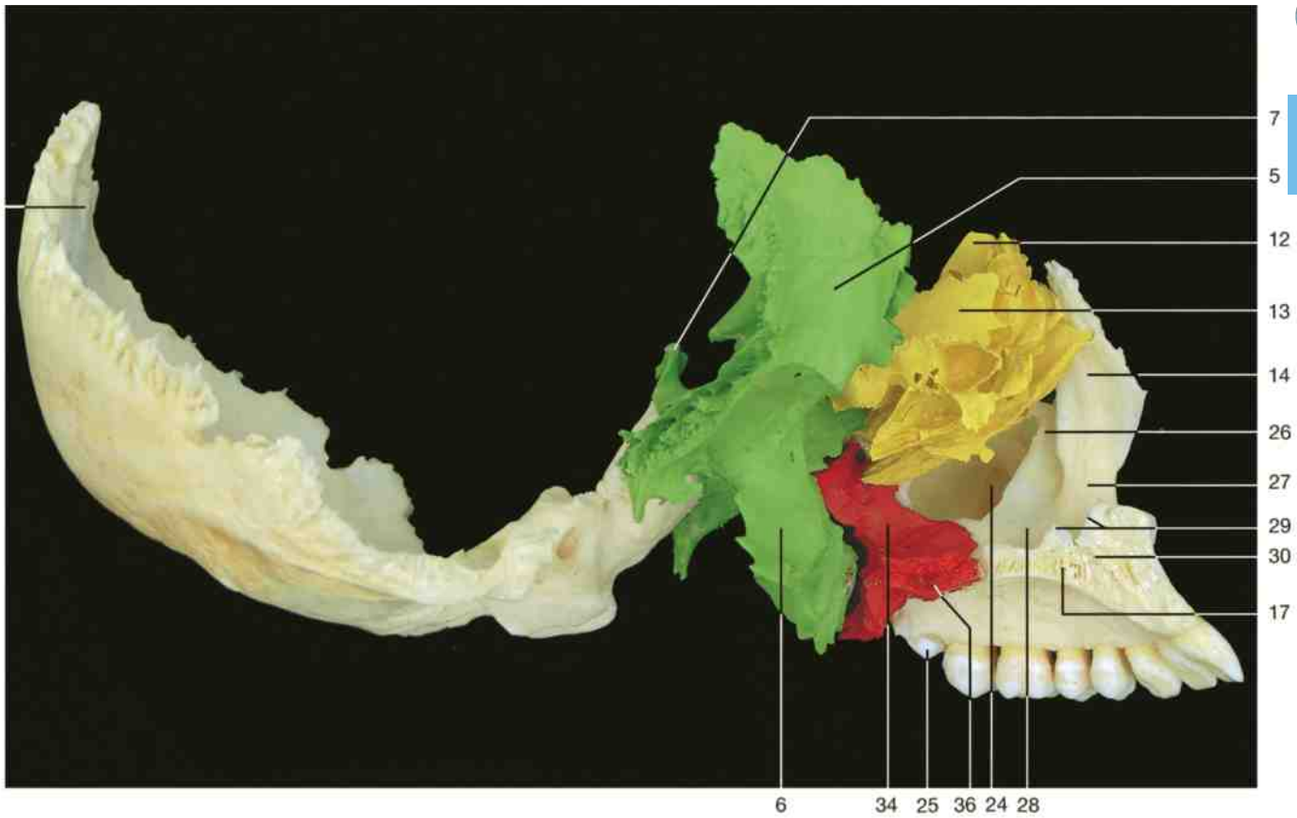
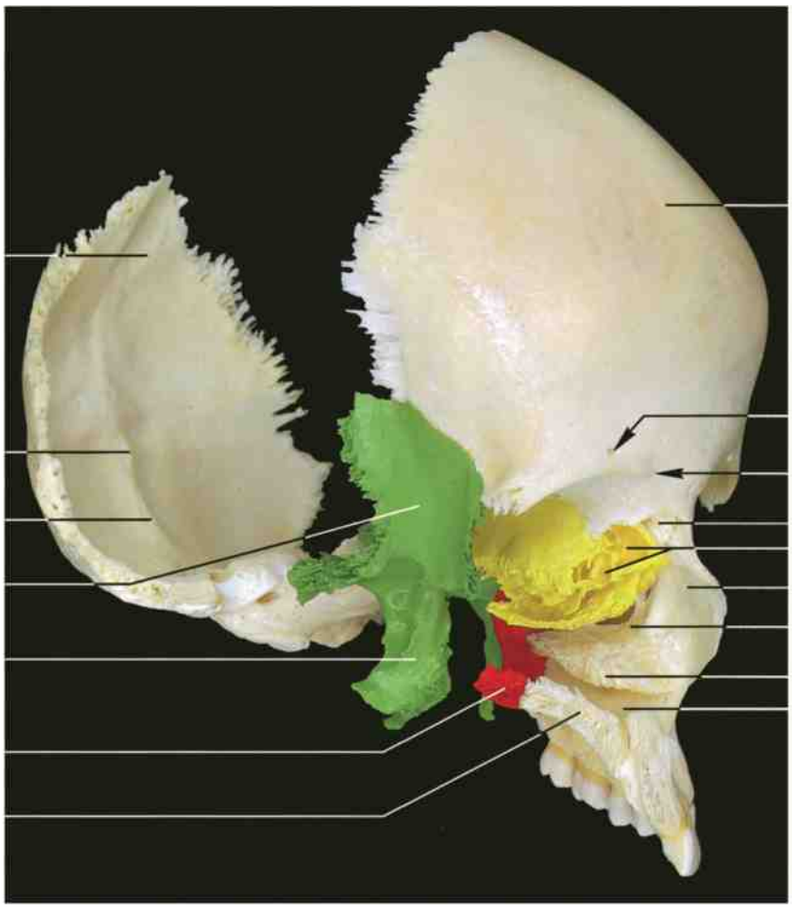


Part of a disarticulated base of skull (medial aspect). Green = sphenoidal bone; yellow = ethmoidal bone; red = palatine bone; natural colored = left maxilla.



Part of a disarticulated base of skull. The same specimen as shown above but with frontal bone (oblique-lateral aspect).

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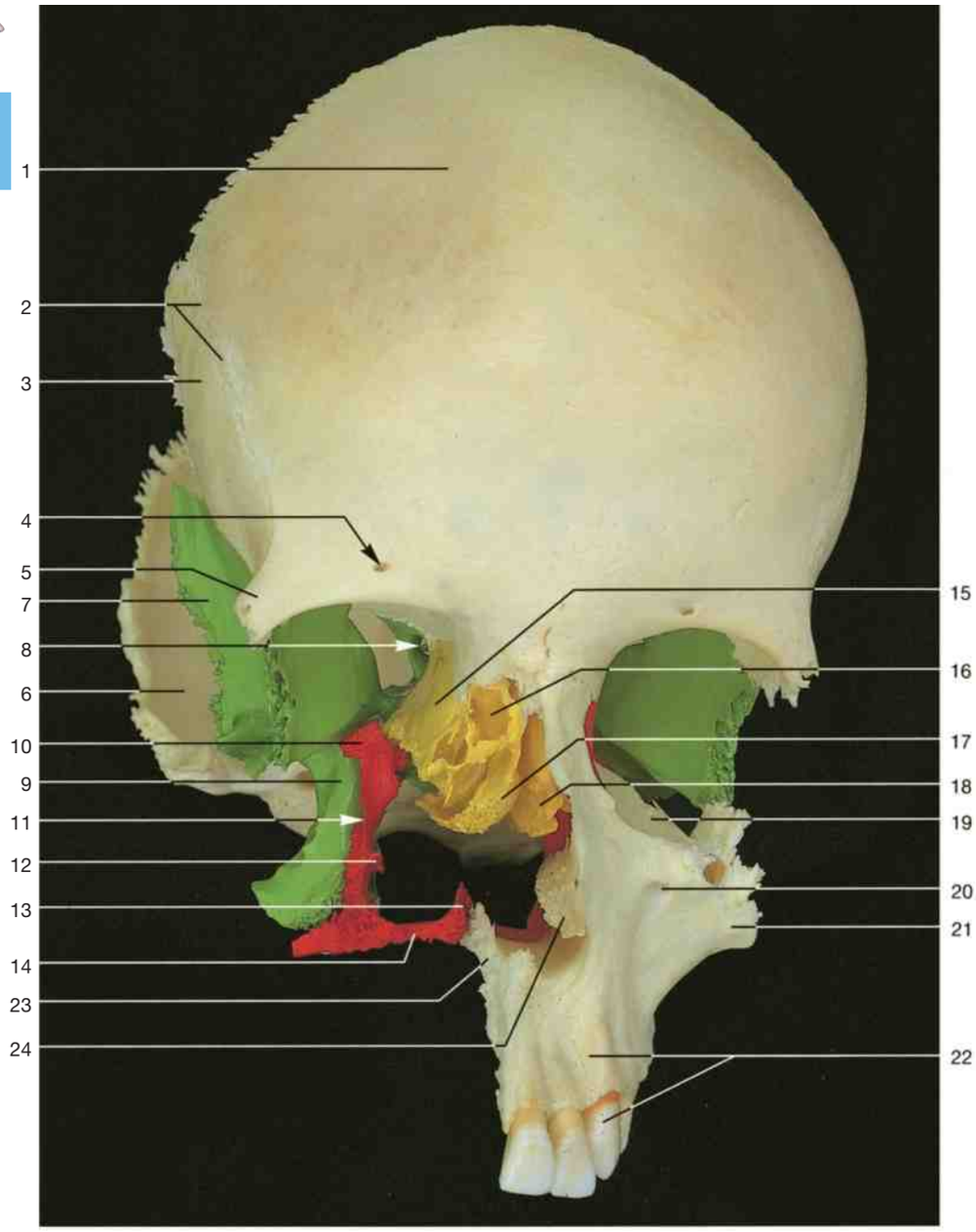
Disarticulated Skull II: Sphenoidal, Ethmoidal, and Palatine Bones



Part of a disarticulated skull showing the connection of the palatine bone (red) and the maxilla with ethmoidal bone (yellow) and sphenoidal bone (green) (anterior aspect).

Frontal bone
1 Squamous part
2 Inferior temporal line
3 Temporal surface
4 Supra-orbital foramen
5 Zygomatic process

Occipital bone
6 Squamous part

Sphenoidal bone
7 Greater wing (temporal surface)
8 Optic canal within the lesser wing
9 Lateral pterygoid plate

Palatine bone
10 Orbital process
11 Perpendicular plate
12 Conchal crest
13 Nasal crest
14 Horizontal plate

Ethmoidal bone
15 Orbital plate
16 Ethmoidal air cell
17 Middle concha
18 Perpendicular plate (part of bony nasal septum)

Maxilla
19 Infra-orbital groove
20 Infra-orbital foramen
21 Zygomatic process
22 Alveolar process with teeth
23 Palatine process

Left inferior nasal concha
24 Anterior part of inferior concha

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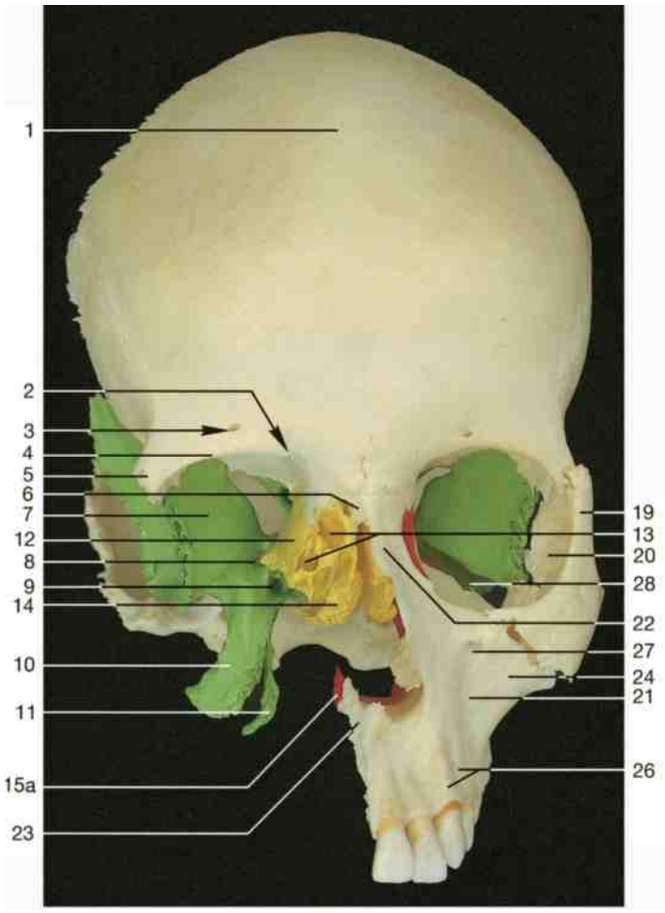


Anterior view of a disarticulated skull showing the connection of the maxilla with the frontal and zygomatic bones. Yellow = ethmoidal bone; red = palatine bone; green = sphenoidal bone.

Frontal bone
1 Squamous part
2 Frontal notch
3 Supra-orbital foramen
4 Supra-orbital margin
5 Zygomatic process
6 Frontal spine

Sphenoidal bone
7 Greater wing (orbital surface)
8 Foramen rotundum
9 Pterygoid or Vidian canal
10 Lateral pterygoid plate
11 Medial pterygoid plate

Ethmoidal bone
12 Orbital plate
13 Ethmoidal air cells
14 Middle concha

Palatine bone
15 Horizontal plate
15a Nasal crest
16 Pyramidal process
17 Lesser palatine foramen
18 Greater palatine foramen

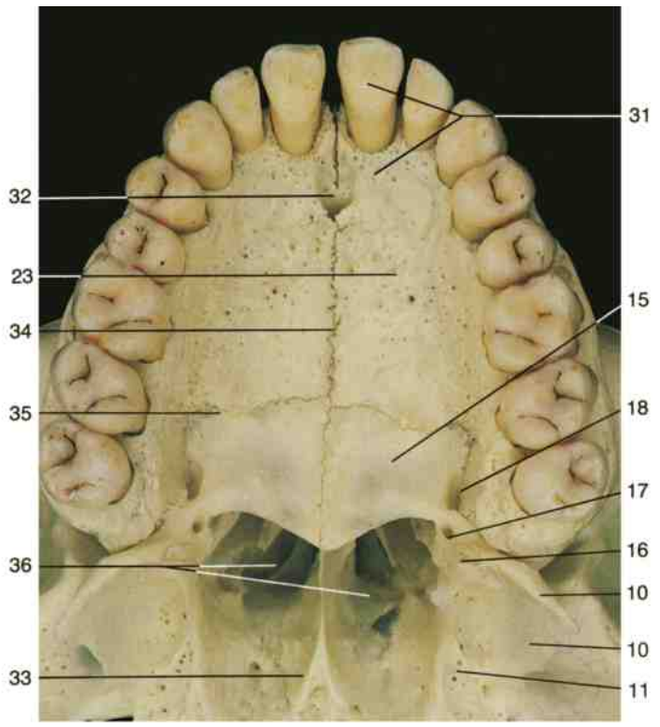
Zygomatic bone
19 Frontal process
20 Orbital surface

Maxilla
21 Canine fossa
22 Frontal process
23 Palatine process
24 Zygomatic process
25 Alveolar process and teeth
26 Juga alveolaria
27 Infra-orbital foramen
28 Infra-orbital groove
29 Anterior nasal aperture
30 Anterior nasal spine

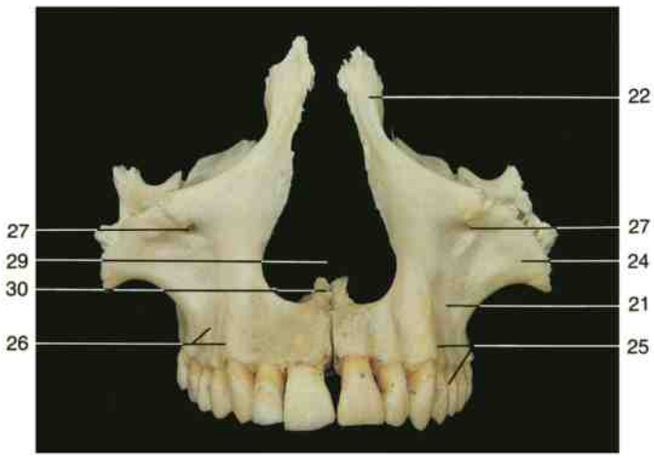
Incisive bone
31 Central incisor and incisive bone or premaxilla
32 Incisive fossa

Vomer
33 Ala of the vomer

Sutures and choanae
34 Median palatine suture
35 Transverse palatine suture
36 Choanae



Bony palate and teeth of the maxillae (from below).



Anterior view of both maxillae forming the anterior bony aperture of the nose.

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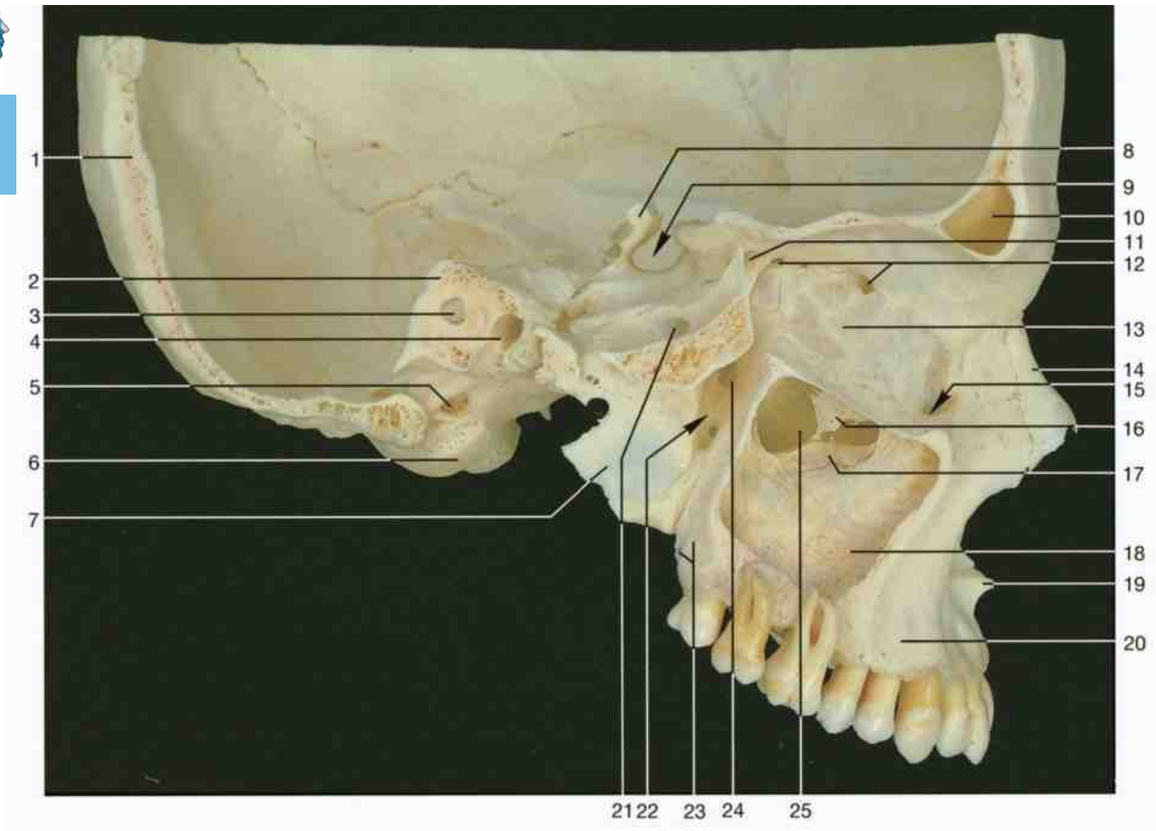

Paramedian section through the skull, right side (lateral aspect). Frontal and maxillary sinuses are opened.

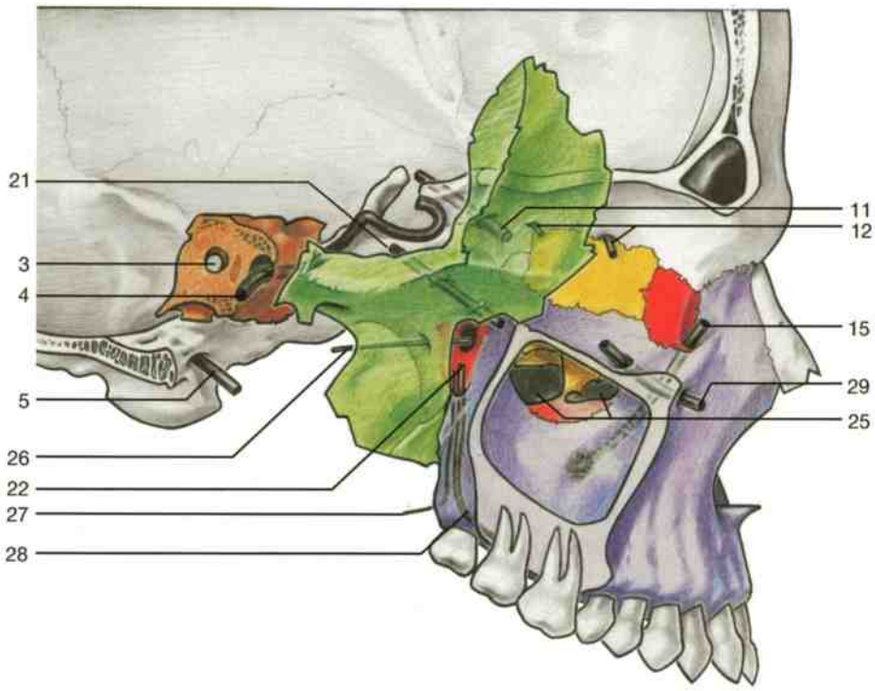

Illustration of canals and foramina connected with the right orbit and pterygopalatine fossa (compare the above figure). The greater wing of sphenoidal bone (green) is shown as being transparent. Brown = temporal bone; yellow = ethmoidal bone; red = lacrimal bone; light red = inferior nasal concha; violet = maxilla; red = palatine bone.

1 Occipital bone
2 Temporal bone (petrous part)
3 Internal acoustic meatus
4 Carotid canal
5 Hypoglossal canal
6 Occipital condyle
7 Lateral plate of pterygoid process
8 Dorsum of sella turcica
9 Sella turcica
10 Frontal sinus
11 Optic canal
12 Posterior and anterior ethmoidal foramina
13 Orbital plate of ethmoidal bone
14 Nasal bone
15 Nasolacrimal canal
16 Uncinate process
17 Inferior nasal concha (maxillary process)
18 Maxillary sinus
19 Anterior nasal spine
20 Alveolar process of maxilla
21 Foramen rotundum
22 Pterygopalatine fossa
23 Tuberosity of maxilla with alveolar foramina
24 Sphenopalatine foramen
25 Maxillary hiatus
26 Pterygoid or Vidian canal
27 Lesser palatine canal
28 Greater palatine canal
29 Infra-orbital canal

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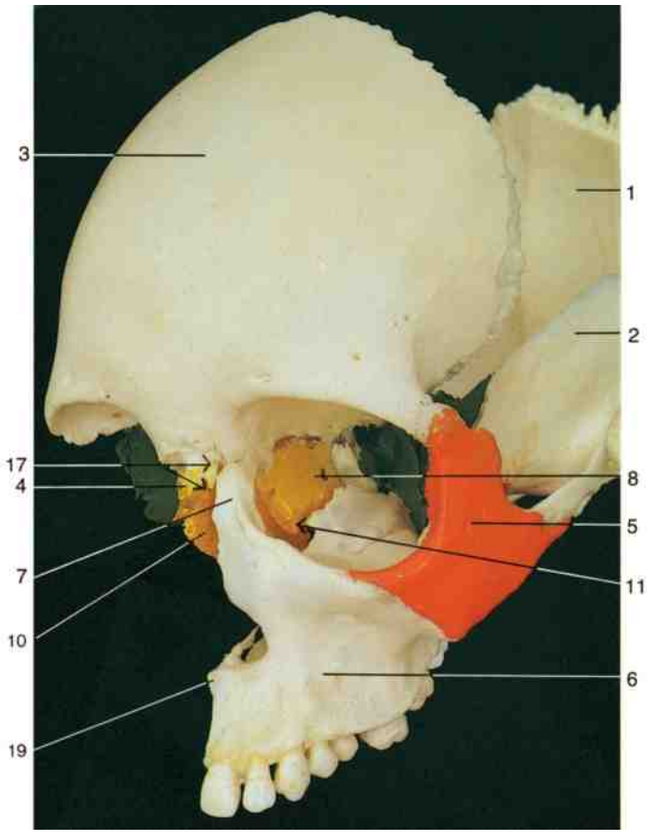
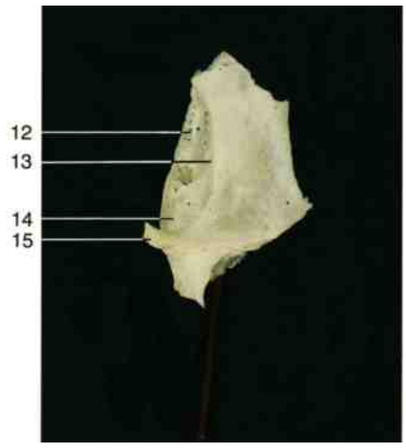
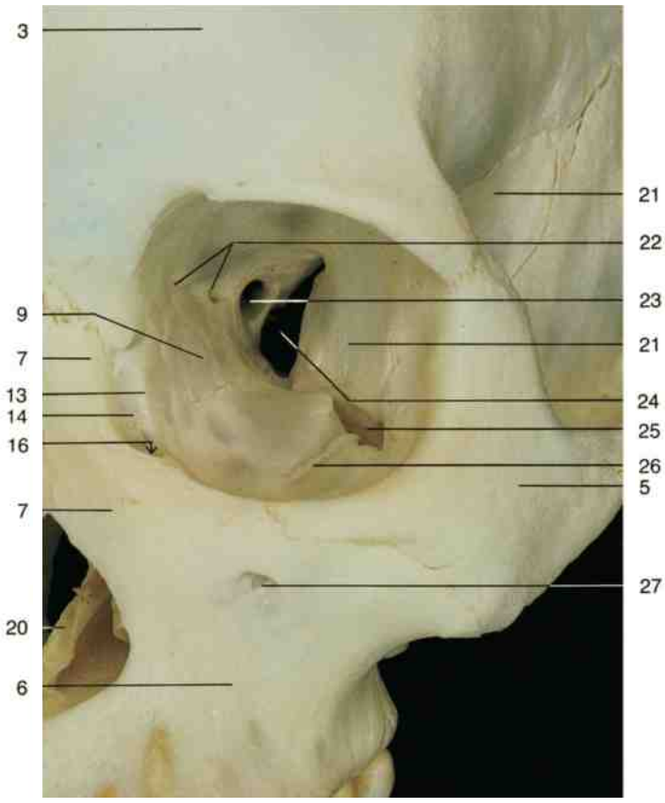


Anterior part of a disarticulated skull.
Orange = zygomatic bone; yellow = ethmoidal bone; dark green = sphenoidal bone. The arrows indicate the locations of the lacrimal bone (11) and the nasal bone (17).

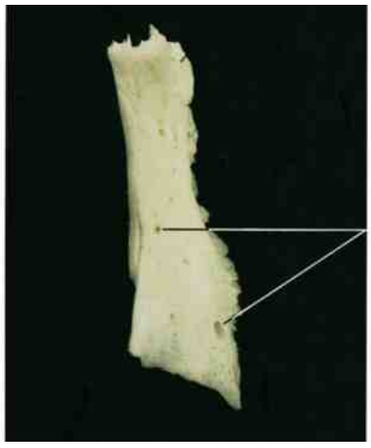
1 Occipital bone
2 Temporal bone
3 Frontal bone
4 Nasal spine of frontal bone
5 Zygomatic bone
6 Maxilla
7 Frontal process of maxilla
8 Ethmoidal bone
9 Orbital plate of ethmoidal bone
10 Perpendicular plate of ethmoidal bone
11 Site of lacrimal bone
12 Lacrimal groove of lacrimal bone
13 Posterior lacrimal crest
14 Fossa for lacrimal sac
15 Lacrimal hamulus
16 Nasolacrimal canal
17 Site of nasal bone
18 Nasal foramina of nasal bone
19 Anterior nasal spine of maxilla
20 Vomer
21 Greater wing of sphenoidal bone
22 Anterior and posterior ethmoidal foramina
23 Optic canal
24 Superior orbital fissure
25 Inferior orbital fissure
26 Infra-orbital groove
27 Infra-orbital foramen



Left lacrimal bone (anterior aspect).



Left orbit (anterior aspect).



Left nasal bone (anterior aspect).

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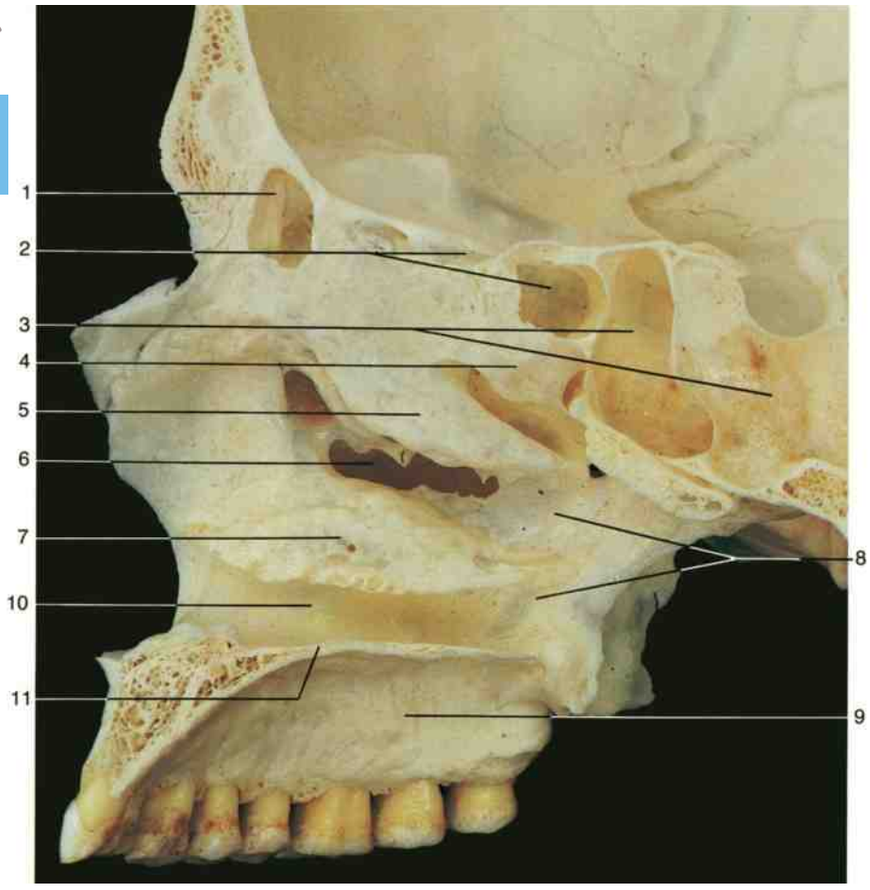
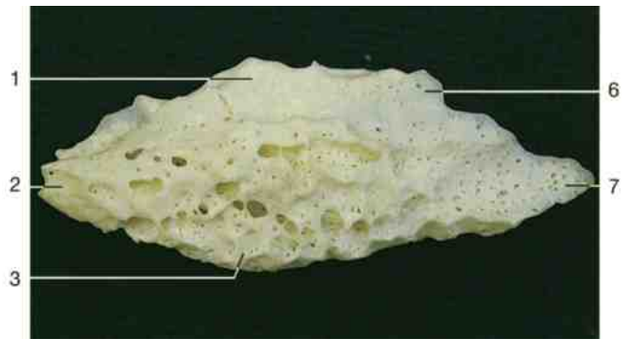


Lateral wall of the nasal cavity. Median section through the skull.

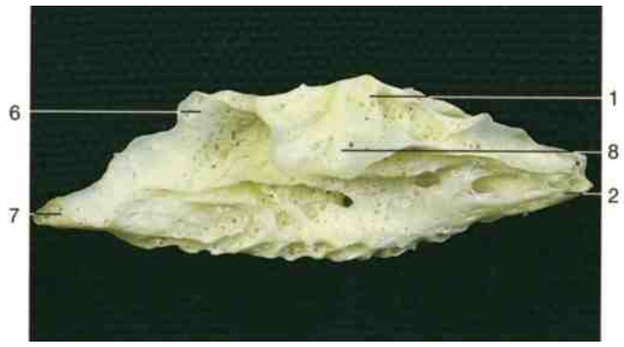
1 Frontal sinus
2 Ethmoidal air cells
3 Sphenoidal sinus
4 Superior nasal concha
5 Middle nasal concha
6 Maxillary hiatus
7 Inferior nasal concha
8 Palatine bone
9 Maxilla
10 Inferior meatus
11 Palatine process of the maxilla

▷
To page 49:

Blue	=	occipital bone
Light green	=	parietal bone
Yellow	=	frontal bone
Dark brown	=	temporal bone
Red	=	sphenoidal bone
Dark green	=	ethmoidal bone
Light blue	=	nasal bone
Pink	=	inferior concha
Orange	=	vomer
Violet	=	maxilla
White	=	palatine bone
White	=	mandible

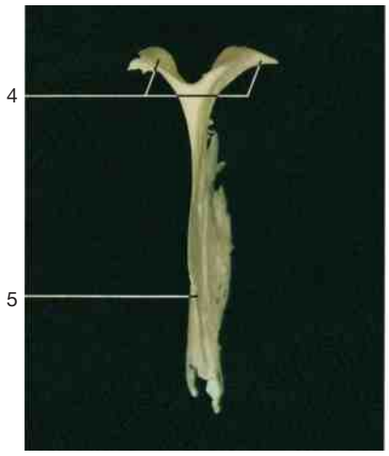


Right inferior nasal concha (medial aspect). Anterior part to the left.



Right inferior nasal concha (lateral aspect). Anterior part to the right.

Inferior concha and vomer
1 Ethmoidal process
2 Anterior part of concha
3 Inferior border
4 Ala of vomer
5 Posterior border of nasal septum
6 Lacrimal process
7 Posterior part of concha
8 Maxillary process



Vomer (posterior aspect).

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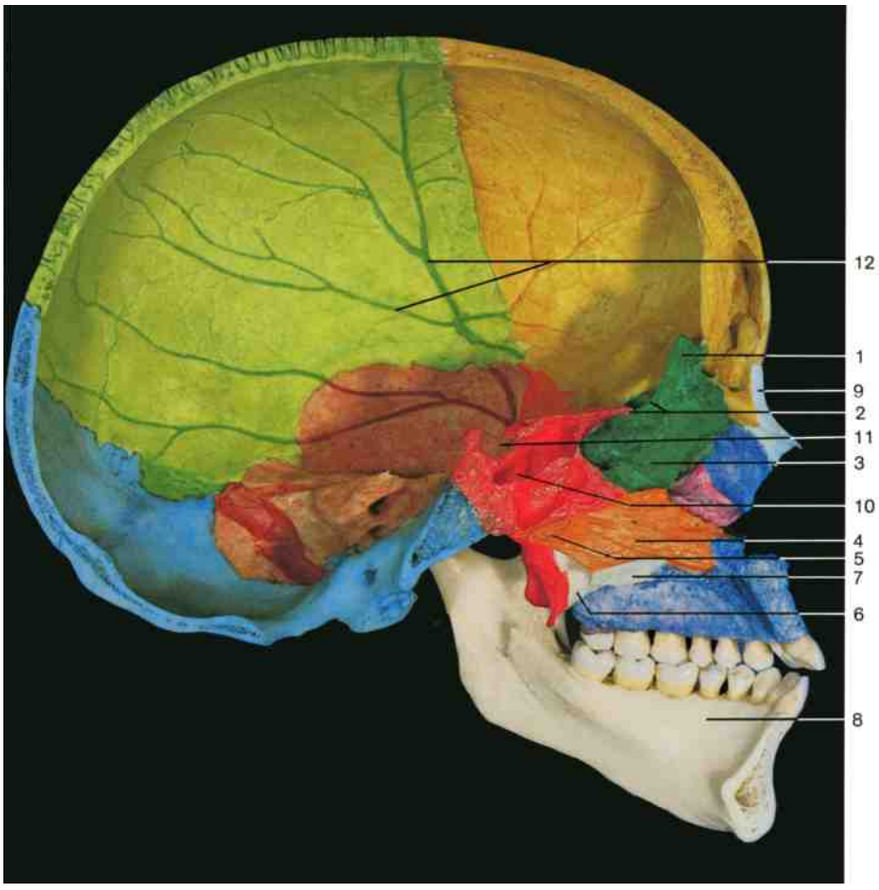
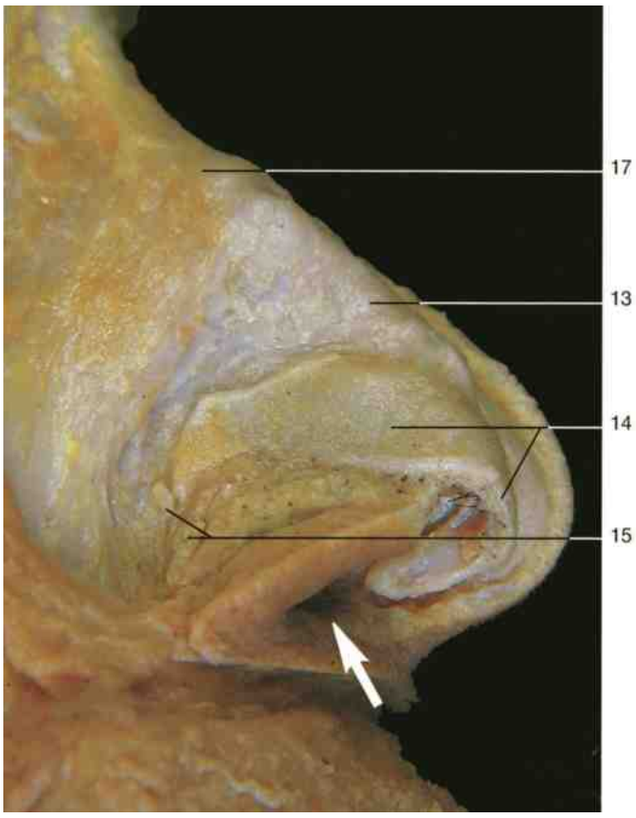


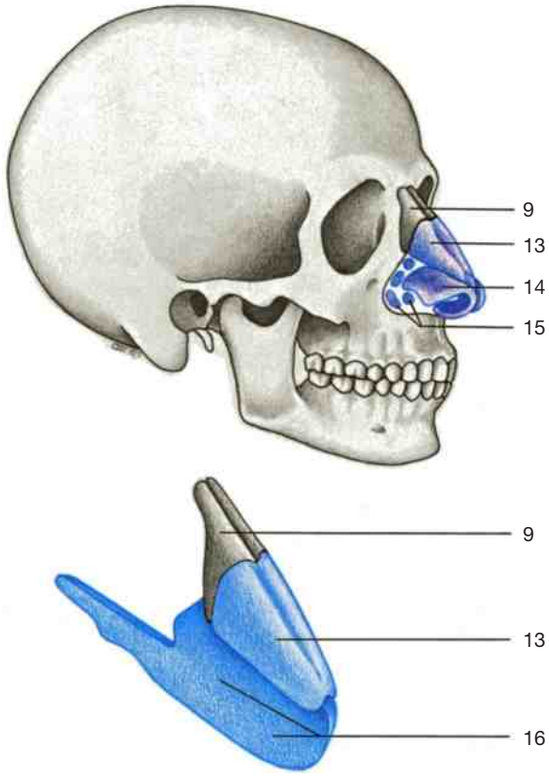
1 Crista galli
2 Cribriform plate of ethmoidal bone
3 Perpendicular plate of ethmoidal bone
4 Vomer
5 Ala of the vomer
6 Palatine bone (perpendicular process)
7 Palatine bone (horizontal plate)
8 Mandible
9 Nasal bone
10 Sphenoidal sinus
11 Hypophysial fossa (sella turcica)
12 Grooves for the middle meningeal artery

Cartilages of the nose
13 Lateral nasal cartilage
14 Greater alar cartilage
15 Lesser alar cartilages
16 Septal cartilage
17 Location of nasal bone

Paramedian sagittal section through the skull including the nasal septum.



Cartilages of the nose (right anterior aspect). Arrow = nostril, framed by nasal wing.



Cartilages of the nose
(schematic diagram of the external nose).

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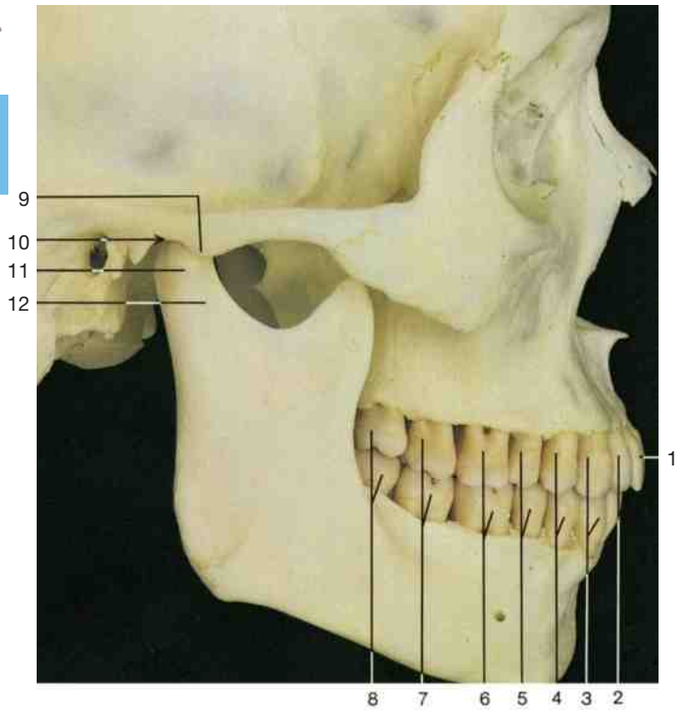
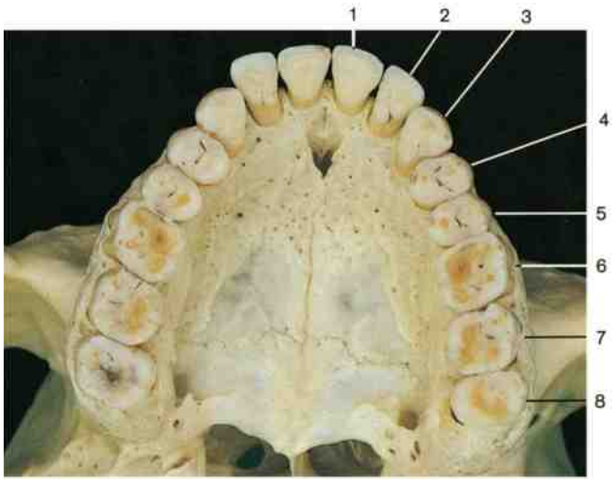
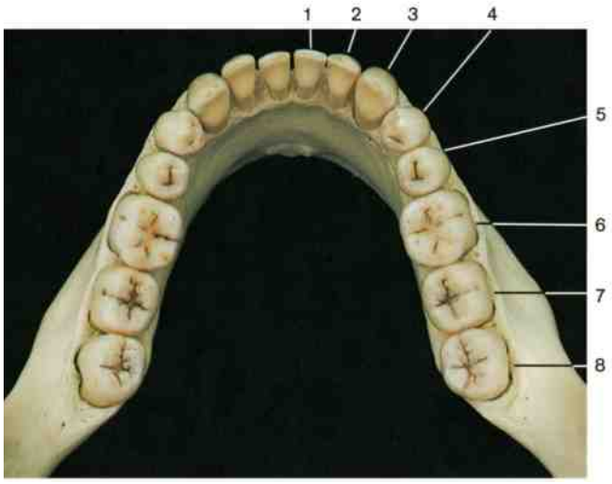


Normal position of teeth. Dentition in centric occlusion (lateral view).

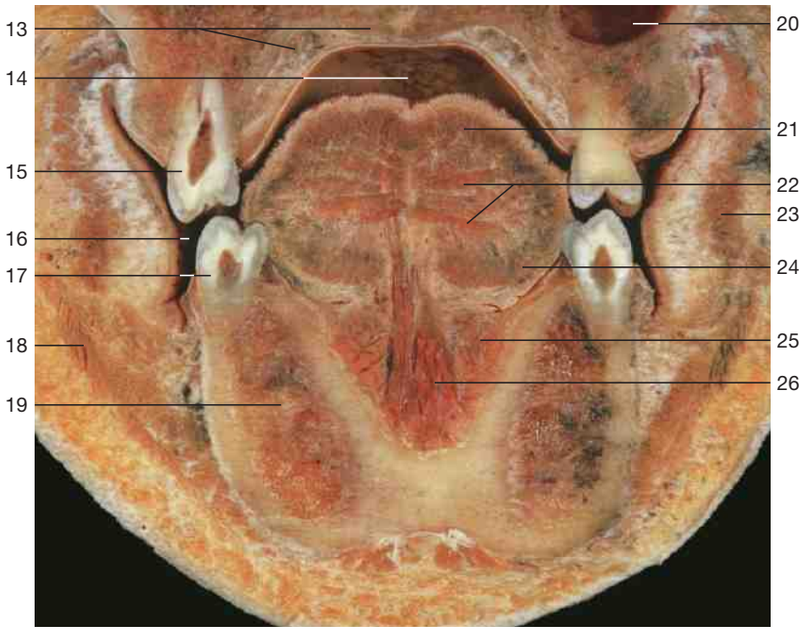


Upper teeth of the adult (inferior aspect).



Lower teeth of the adult (superior aspect).

1 Central incisor
2 Lateral incisor
3 Canines
4 First premolars or bicuspids
5 Second premolars or bicuspids
6 First molars
7 Second molars
8 Third molars
9 Articular tubercle
10 Mandibular fossa
11 Head of mandible
12 Condylar process
13 Hard palate and palatine glands
14 Oral cavity
15 Upper molar
16 Oral vestibule
17 Lower molar
18 Platysma muscle
19 Mandible
20 Maxillary sinus
21 Superior longitudinal muscle of tongue
22 Transverse muscle of tongue
23 Buccinator muscle
24 Inferior longitudinal muscle of tongue
25 Sublingual gland
26 Genioglossus muscle



Coronal section through the oral cavity.

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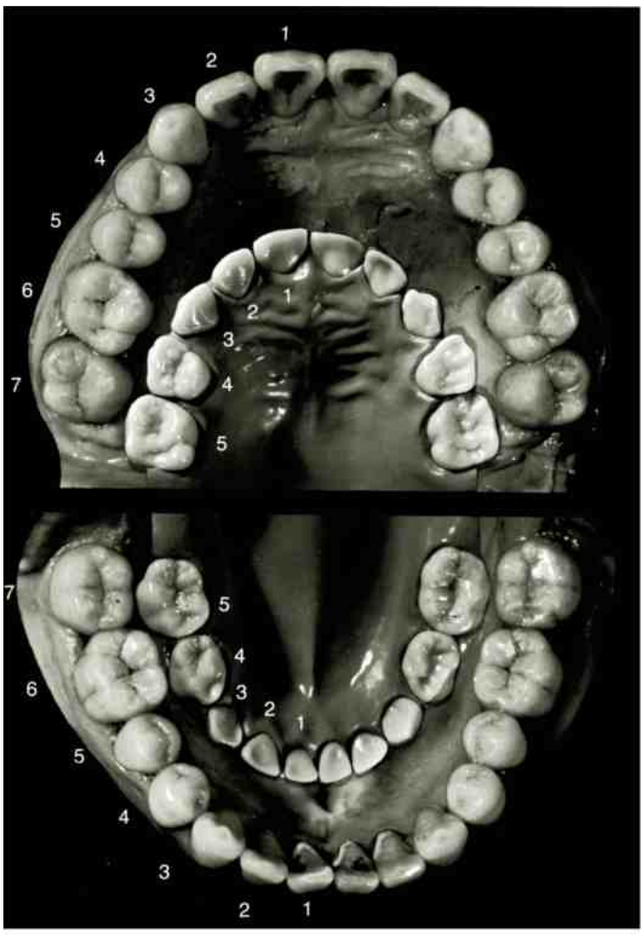
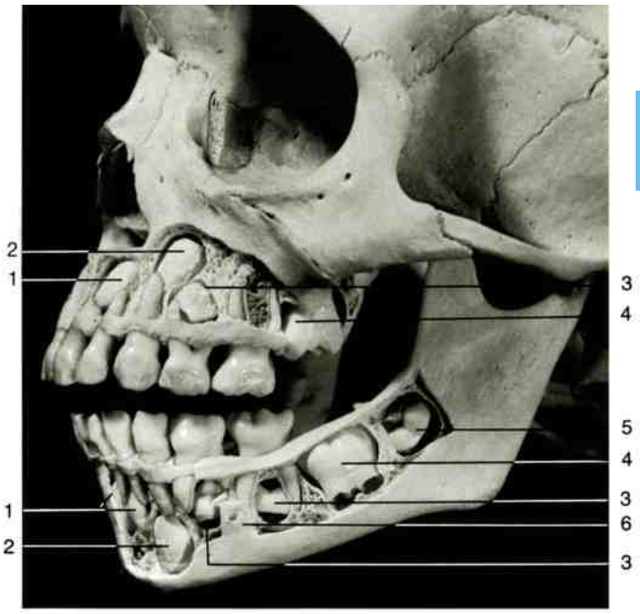
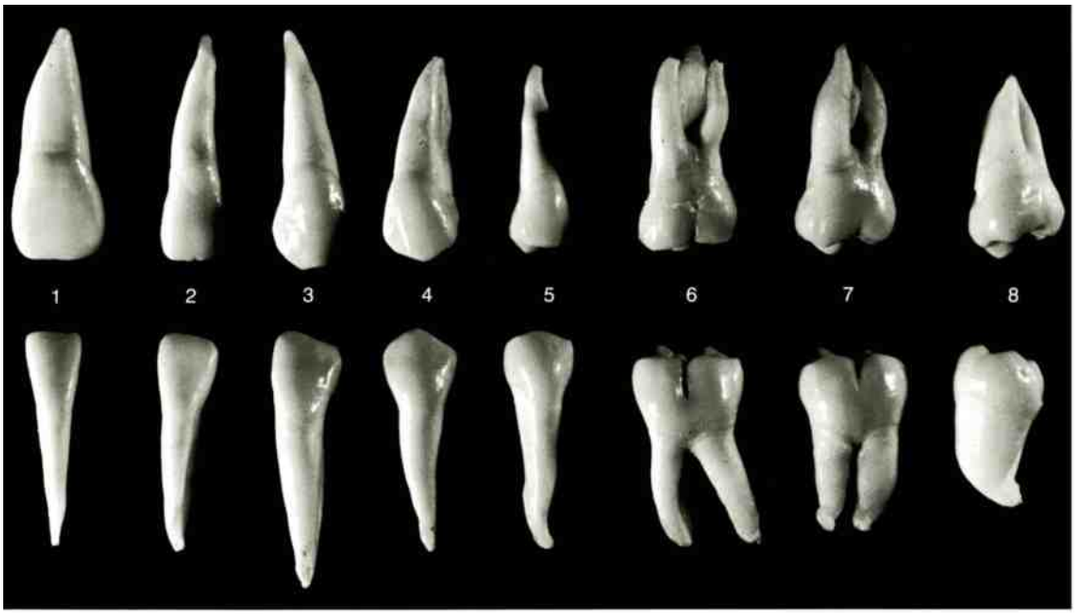


Comparison of the deciduous and permanent teeth.
Notice that the breadth of the alveolar arch of the child's mandible and maxilla holding the deciduous teeth is nearly the same as the comparable portion in the jaws of the adult. Note the emergence of the third molars. The numbers of the teeth correspond to the numbers in the figure below.



Deciduous teeth in child's skull. The developing crowns of the permanent teeth are displayed in their crypts in the maxilla and mandible.

1 Permanent incisors
2 Permanent cuspid (canine)
3 Premolars
4 First permanent molar
5 Second permanent molar
6 Mental foramen



Isolated teeth of the alveolar part of the maxilla (top row) and the mandible (lower row), labial surface of the teeth.

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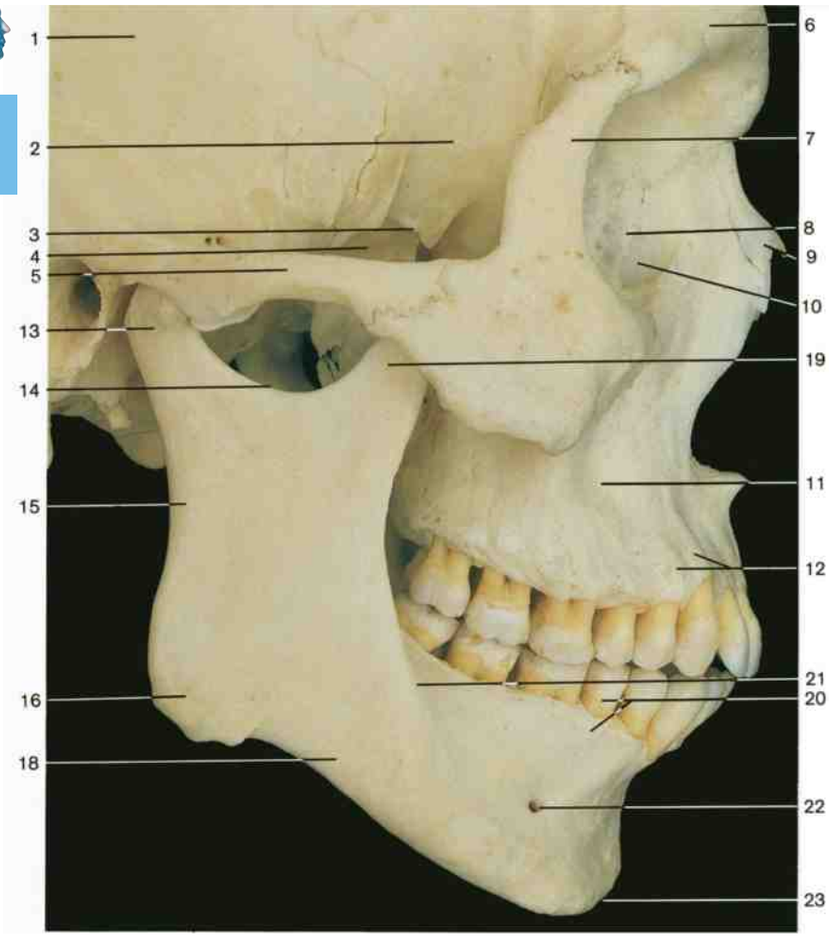
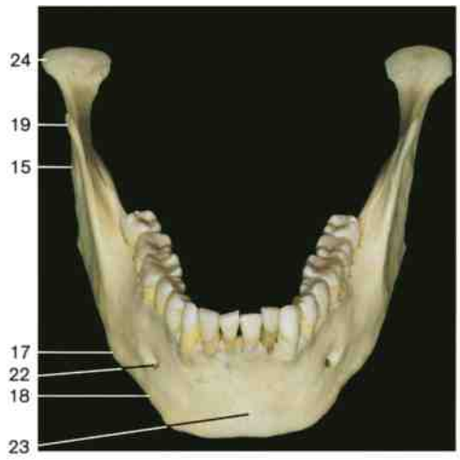
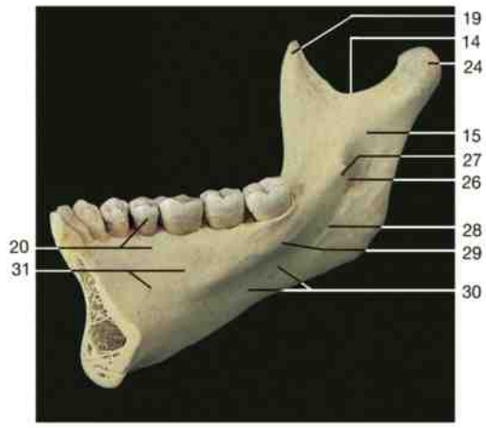


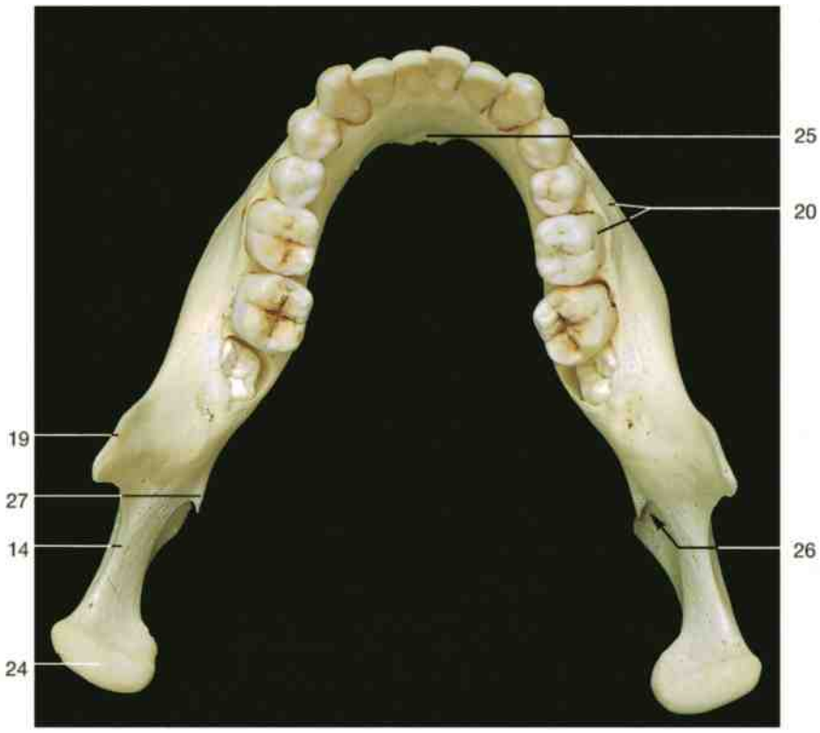
Lateral aspect of the facial bones. Mandible and teeth in the position of occlusion. Upper and lower jaw occluded.



Mandible of the adult (anterior aspect).



Right half of mandible (medial aspect).



Mandible of the adult (superior aspect).

1 Temporal bone
2 Temporal fossa (greater wing of sphenoidal bone)
3 Infratemporal crest
4 Infratemporal fossa
5 Zygomatic arch
6 Frontal bone
7 Zygomatic bone (frontal process)
8 Lacrimal bone
9 Nasal bone
10 Lacrimal groove
11 Maxilla (canine fossa)
12 Alveolar process of maxilla

Mandible

13 Condylar process
14 Mandibular notch
15 Ramus of the mandible
16 Masseteric tuberosity
17 Angle of the mandible
18 Body of the mandible
19 Coronoid process
20 Alveolar process including teeth
21 Oblique line
22 Mental foramen
23 Mental protuberance
24 Head of the mandible
25 Genial tubercle or mental spine
26 Mandibular foramen (entrance to mandibular canal)
27 Lingula
28 Mylohyoid sulcus
29 Mylohyoid line
30 Submandibular fossa
31 Sublingual fossa

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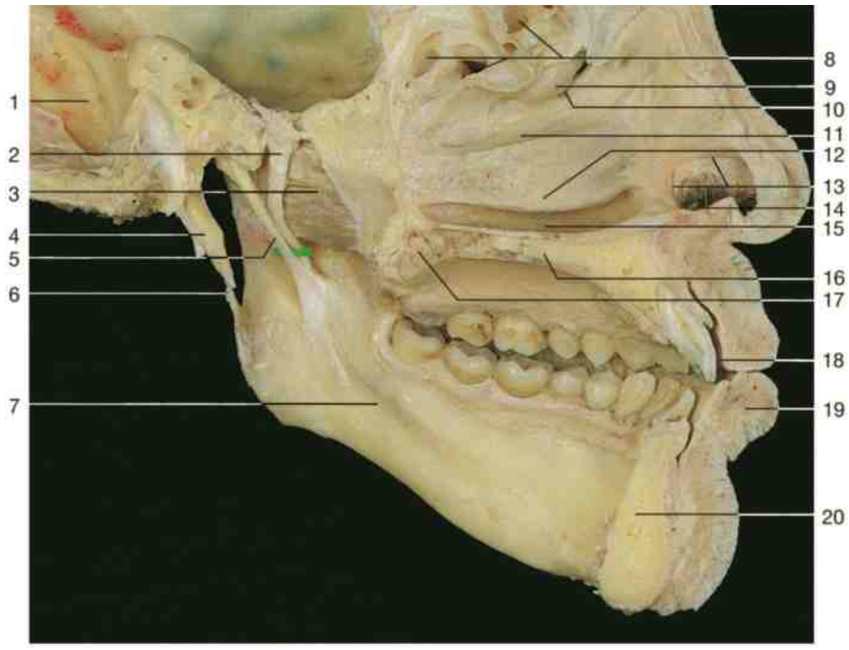
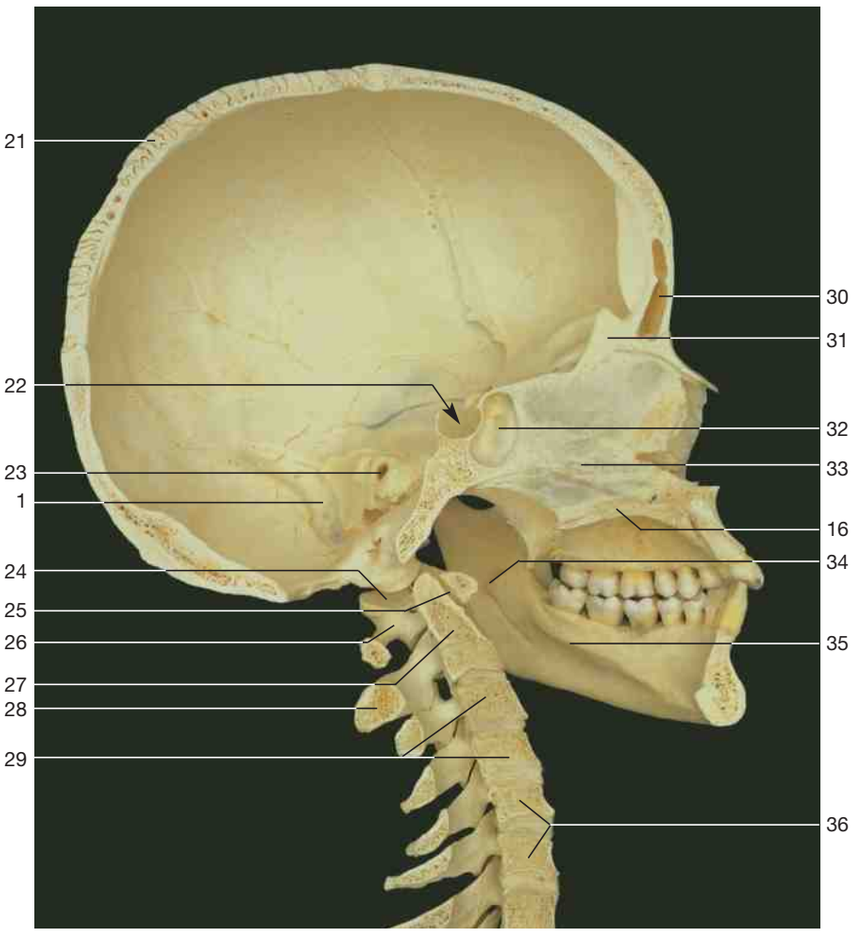
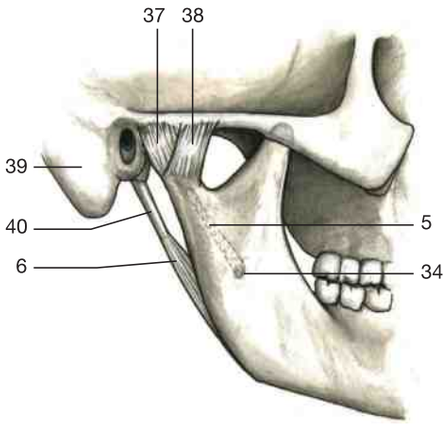


Ligaments of temporomandibular joint. Left half of the head (medial aspect).

1 Groove for sigmoid sinus
2 Mandibular nerve
3 Lateral pterygoid muscle
4 Styloid process
5 Sphenomandibular ligament
6 Stylomandibular ligament
7 Mylohyoid groove
8 Ethmoidal air cells
9 Ethmoidal bulla
10 Hiatus semilunaris
11 Middle meatus
12 Inferior nasal concha
13 Limen nasi
14 Vestibule with hairs
15 Inferior meatus
16 Hard palate
17 Soft palate
18 Vestibule of oral cavity
19 Lower lip
20 Mandible
21 Calvaria with diploe
22 Sella turcica
23 Internal acoustic meatus
24 Atlanto-occipital articulation
25 Median atlanto-axial articulation
26 Atlas (C_1)
27 Dens of axis (C_2)
28 Spinous process of axis (C_2)
29 Cervical vertebrae (C_3, C_4)
30 Frontal sinus
31 Crista galli
32 Sphenoidal sinus
33 Nasal septum
34 Mandibular foramen
35 Mylohyoid line
36 Bodies of cervical vertebrae (C_5, C_6)
37 Articular capsule
38 Lateral ligament
39 Mastoid process
40 Styloid process



Head and cervical vertebral column (median section through skull and cervical vertebrae, medial aspect).



Ligaments related to the temporomandibular joint (schematic drawing).

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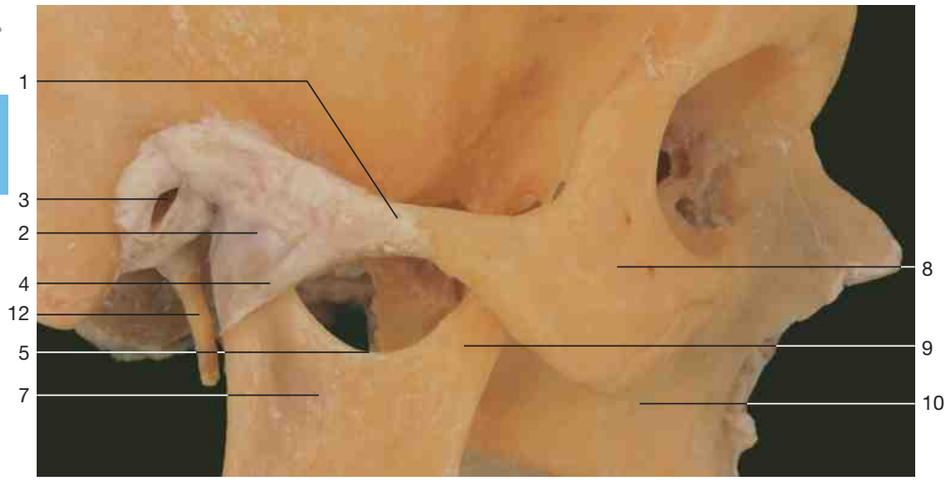
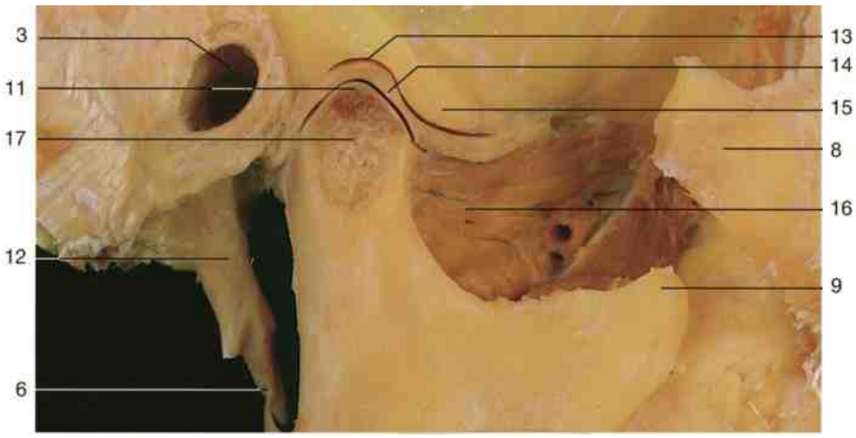
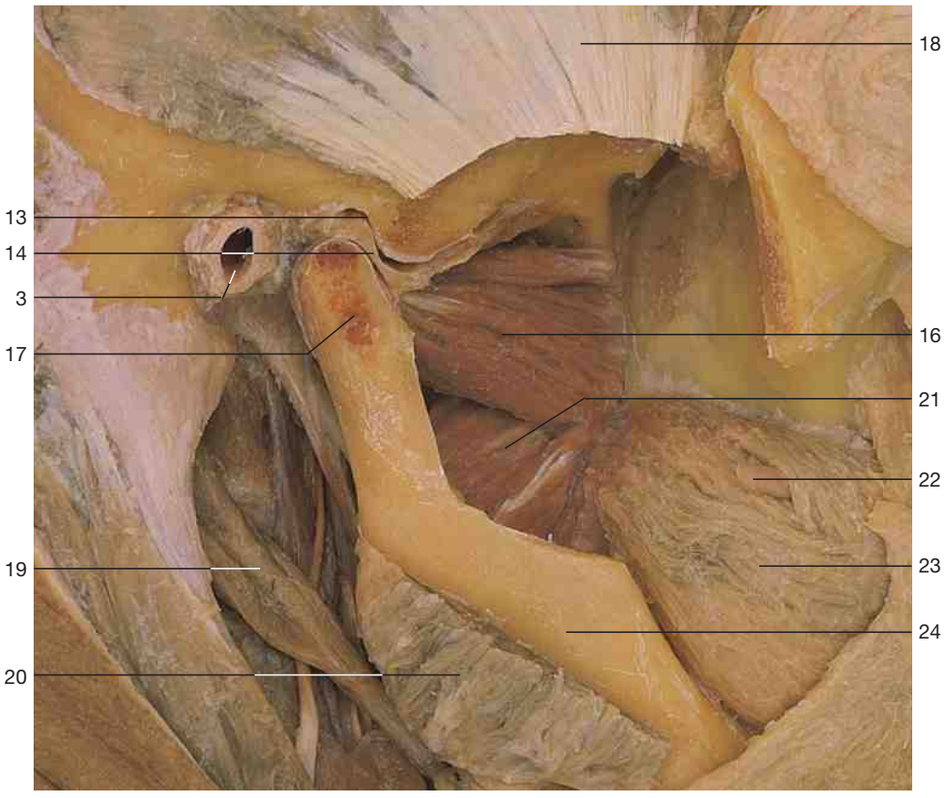


Temporomandibular joint with ligaments.



Temporomandibular joint, sagittal section.



1 Zygomatic arch
2 Articular capsule
3 External acoustic meatus
4 Lateral ligament
5 Mandibular notch
6 Stylomandibular ligament
7 Ramus of the mandible
8 Zygomatic bone
9 Coronoid process
10 Maxilla
11 Articular cartilage of condylar process
12 Styloid process
13 Mandibular fossa
14 Articular disc
15 Articular tubercle
16 Lateral pterygoid muscle
17 Condylar process of mandible
18 Temporalis muscle
19 Digastric muscle, posterior belly
20 Masseter muscle
21 Medial pterygoid muscle
22 Parotid duct
23 Buccinator muscle
24 Mandible

Temporomandibular joint.
Dissection of the articular disc and the related muscles (lateral aspect).

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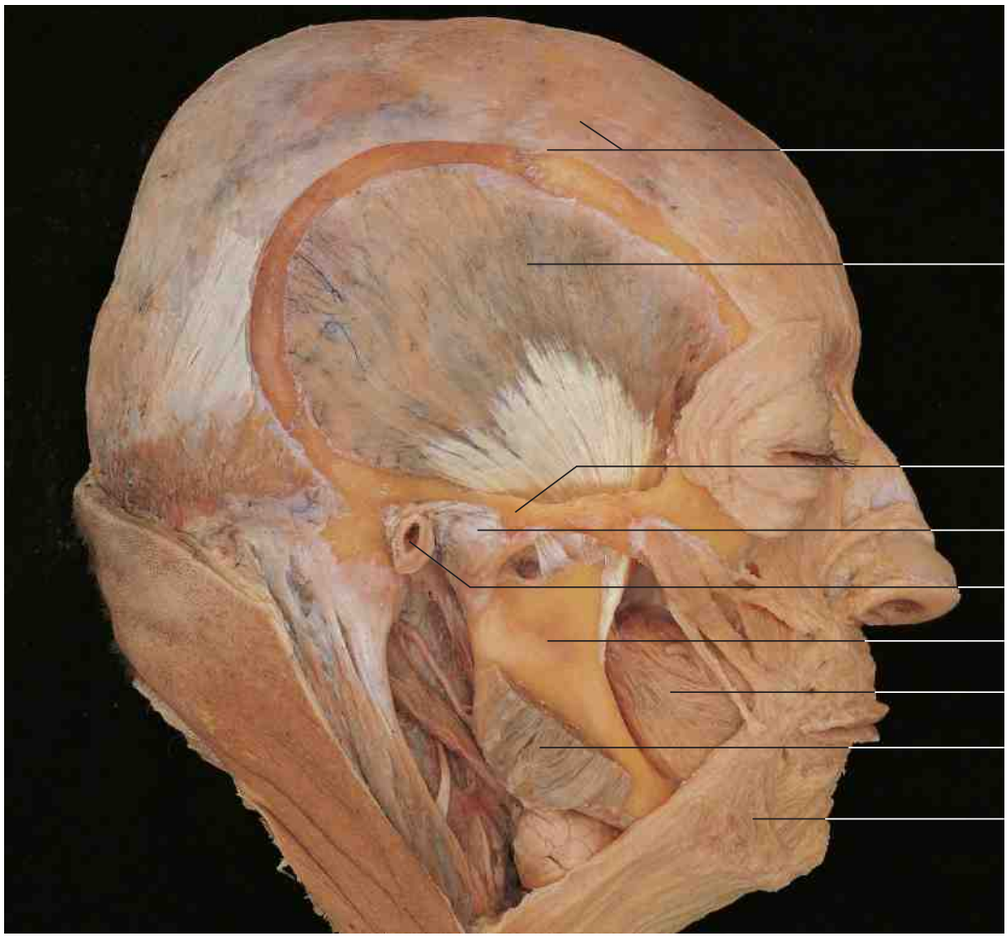
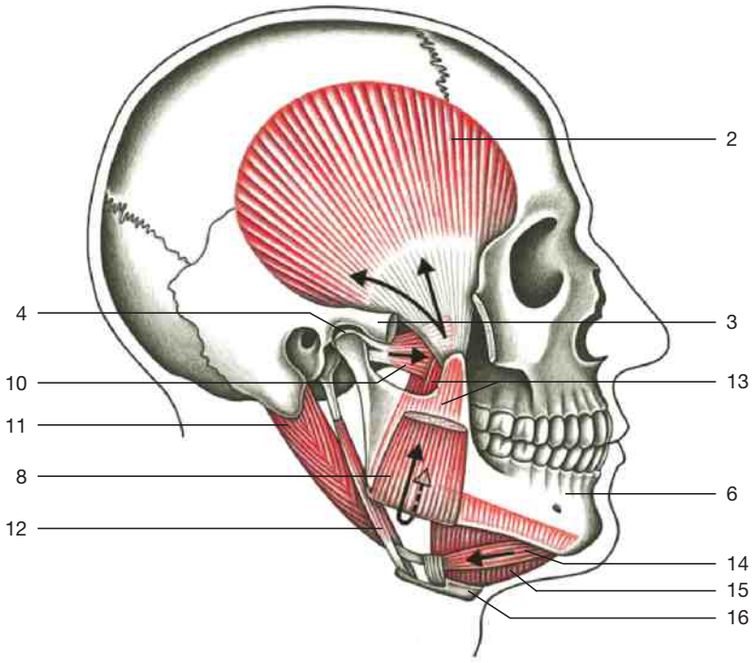


Muscles of mastication and temporomandibular joint. Masseter muscle partly removed.

1 Galea aponeurotica
2 Temporalis muscle
3 Zygomatic arch
4 Temporomandibular joint
5 External acoustic meatus
6 Mandible
7 Buccinator muscle
8 Masseter muscle (cut)
9 Platysma muscle
10 Lateral pterygoid muscle
11 Posterior belly of digastric muscle
12 Stylohyoid muscle
13 Medial pterygoid muscle
14 Anterior belly of digastric muscle
15 Mylohyoid muscle
16 Hyoid bone



Effect of the masticatory muscles on the temporomandibular joint (arrows).

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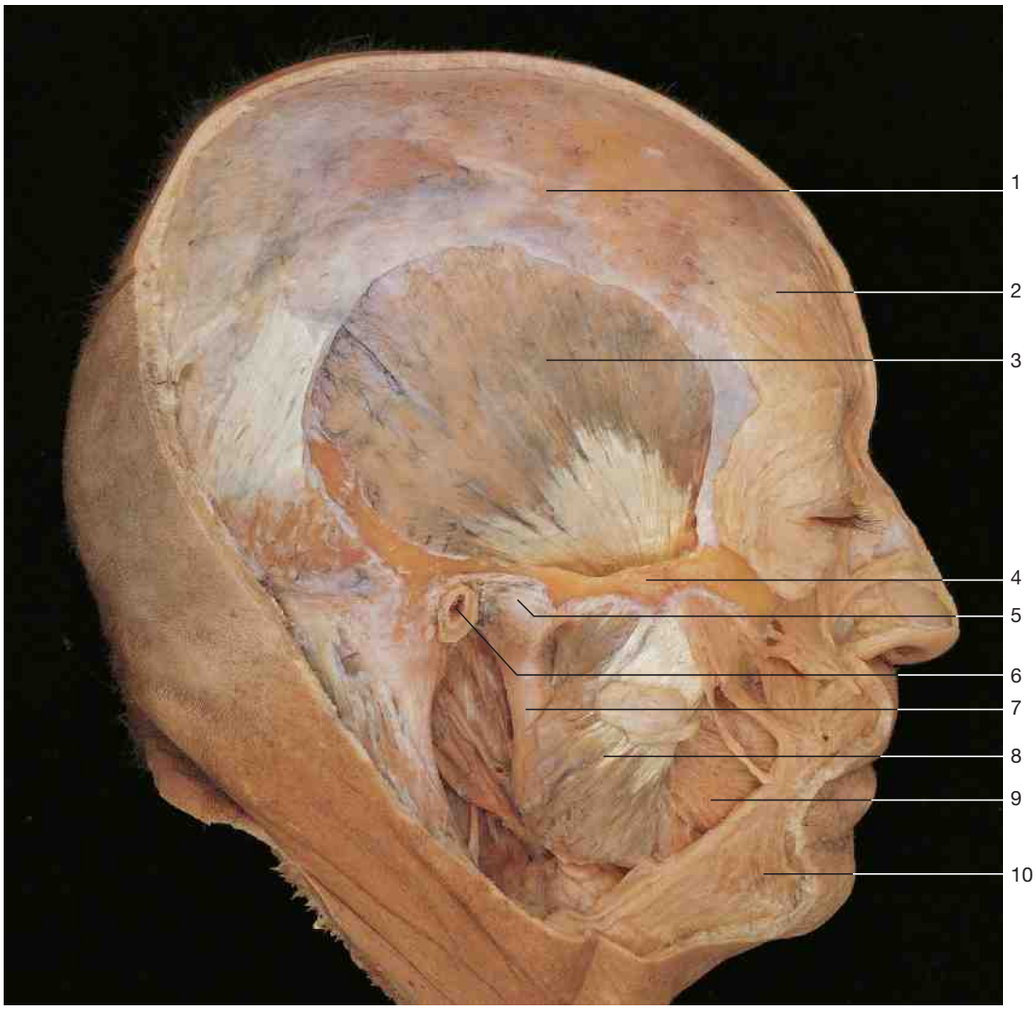
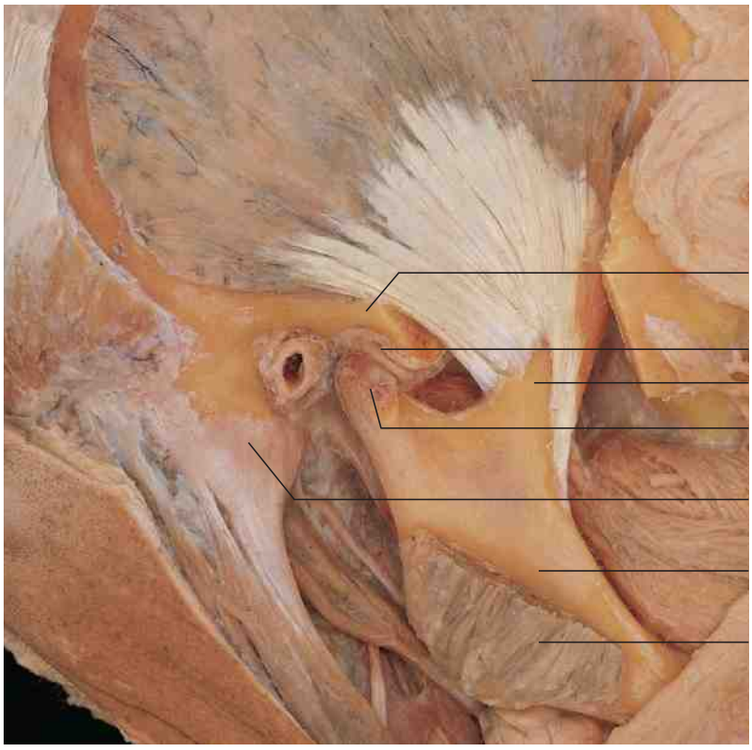


Muscles of mastication. The temporomandibular joint and the masseter and temporalis muscles are shown.



1 Galea aponeurotica
2 Frontal belly of occipitofrontalis muscle
3 Temporalis muscle
4 Zygomatic arch
5 Temporomandibular joint
6 External acoustic meatus
7 Mandible
8 Masseter muscle
9 Buccinator muscle
10 Platysma muscle
11 Articular disc of temporomandibular joint
12 Coronoid process of mandible
13 Condylar process of mandible
14 Mastoid process

Temporalis muscle with insertion at the mandible and the temporomandibular joint. Zygomatic arch and masseter muscle have been partly removed.

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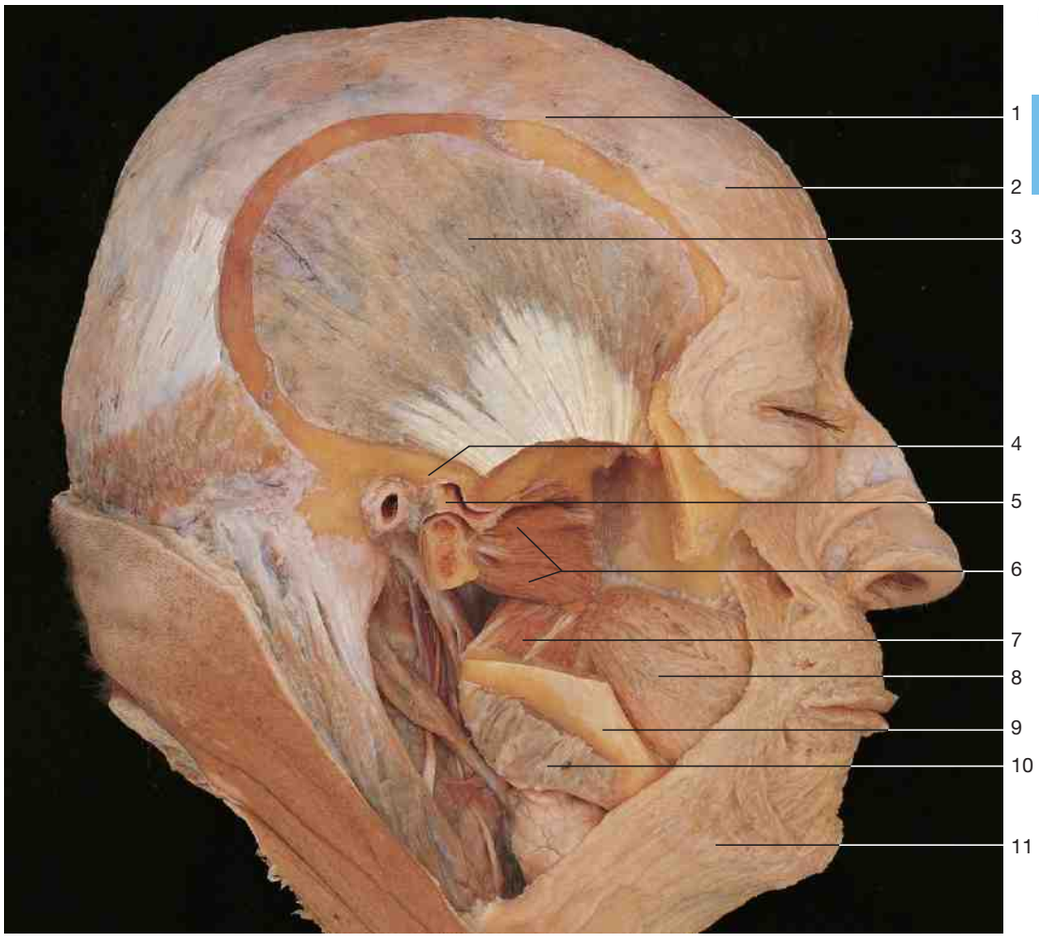
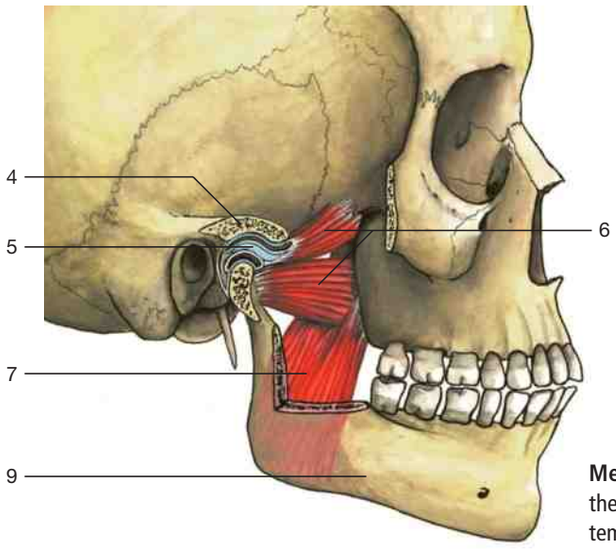


Muscles of mastication. The zygomatic arch and part of the mandible have been removed to reveal the medial and lateral pterygoid muscles.

1 Galea aponeurotica
2 Frontal belly of occipitofrontalis muscle
3 Temporalis muscle
4 Zygomatic arch
5 Articular disc of temporomandibular joint
6 Lateral pterygoid muscle
7 Medial pterygoid muscle
8 Buccinator muscle
9 Mandible
10 Masseter muscle
11 Platysma muscle



Medial and lateral pterygoid muscles and their connections with the articular disc of the temporomandibular joint (schematic drawing).

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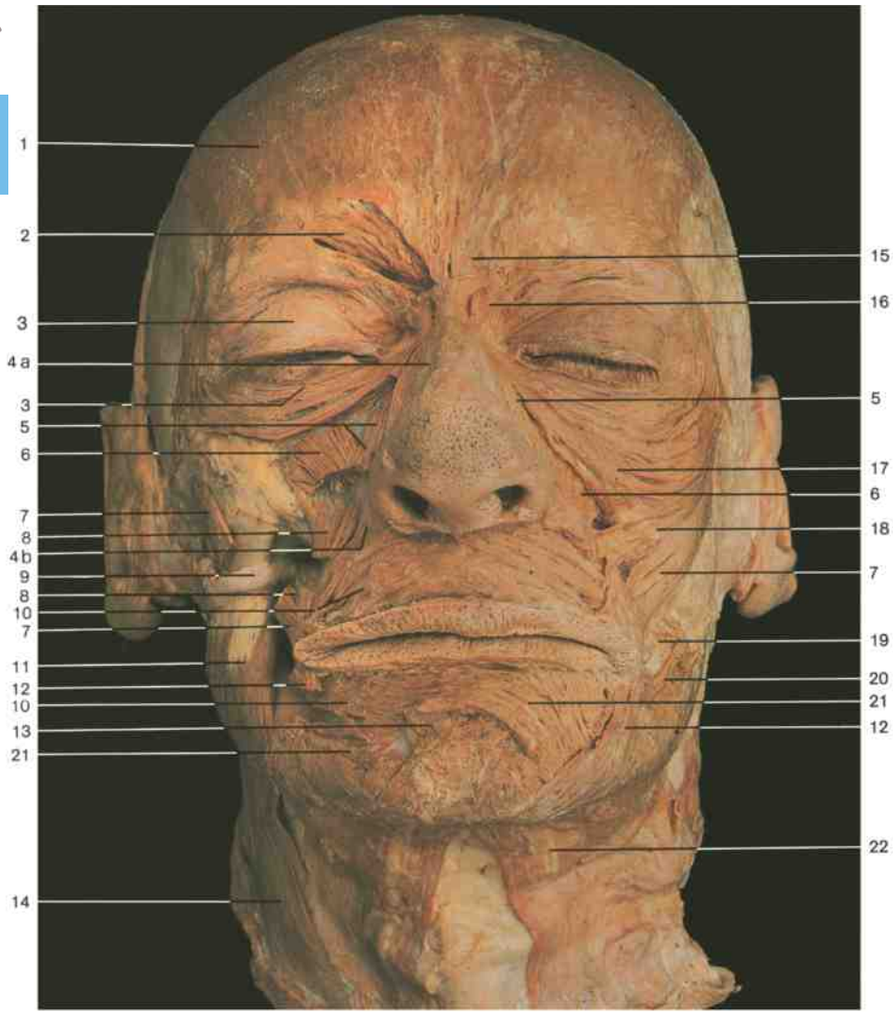
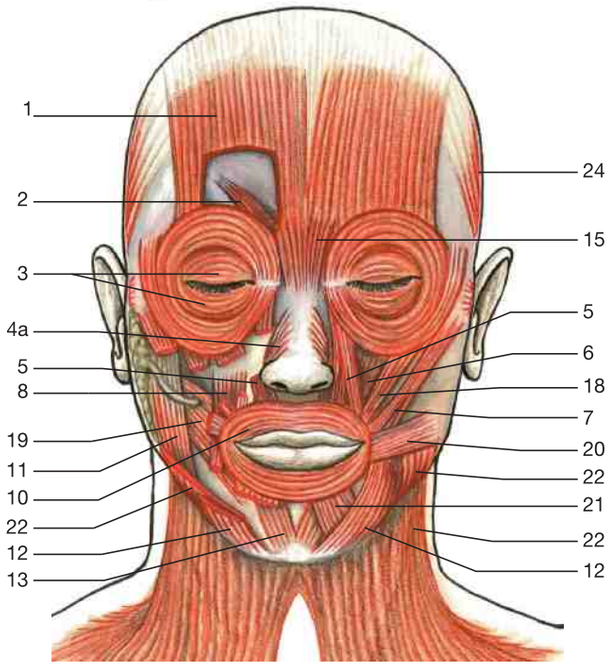
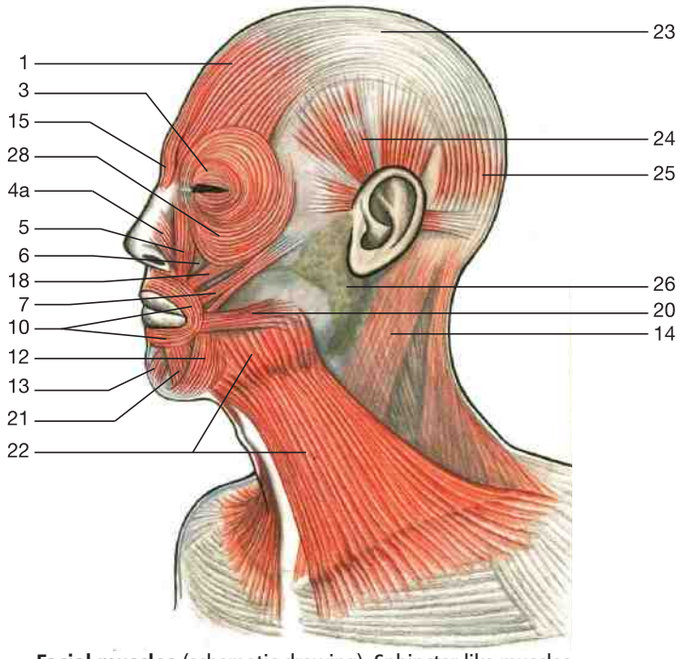


1 Frontal belly of occipitofrontalis muscle
2 Corrugator supercilii muscle
3 Palpebral part of orbicularis oculi muscle
4a Transverse part of nasalis muscle
4b Alar part of nasalis muscle
5 Levator labii superioris alaeque nasi muscle
6 Levator labii superioris muscle
7 Zygomaticus major muscle
8 Levator anguli oris muscle
9 Parotid duct
10 Orbicularis oris muscle
11 Masseter muscle
12 Depressor anguli oris muscle
13 Mentalis muscle
14 Sternocleidomastoid muscle
15 Procerus muscle
16 Depressor supercilii muscle
17 Orbital part of orbicularis oculi muscle
18 Zygomaticus minor muscle
19 Buccinator muscle
20 Risorius muscle
21 Depressor labii inferioris muscle
22 Platysma muscle
23 Galea aponeurotica
24 Temporoparietalis muscle
25 Occipital belly of occipitofrontalis muscle
26 Parotid gland with fascia
27 Temporal fascia
28 Orbicularis oculi muscle
29 Parotid duct and masseter muscle

Facial muscles (anterior aspect). Left side: superficial layer, right side: deeper layer.



Facial muscles (schematic drawing).
Left side: superficial layer, right side: deeper layer.



Facial muscles (schematic drawing). Sphincter-like muscles surround the orifices of the head. Radially arranged muscles work as their antagonists.

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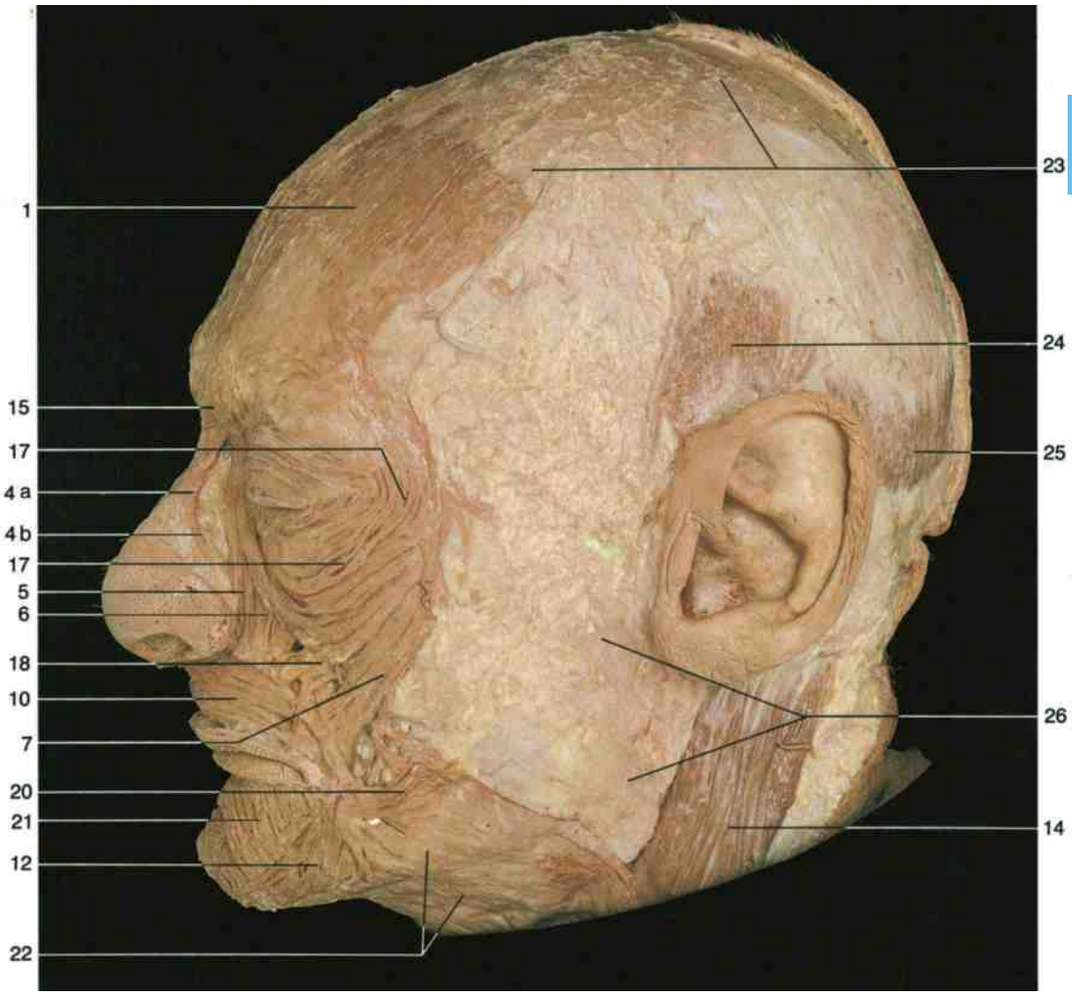
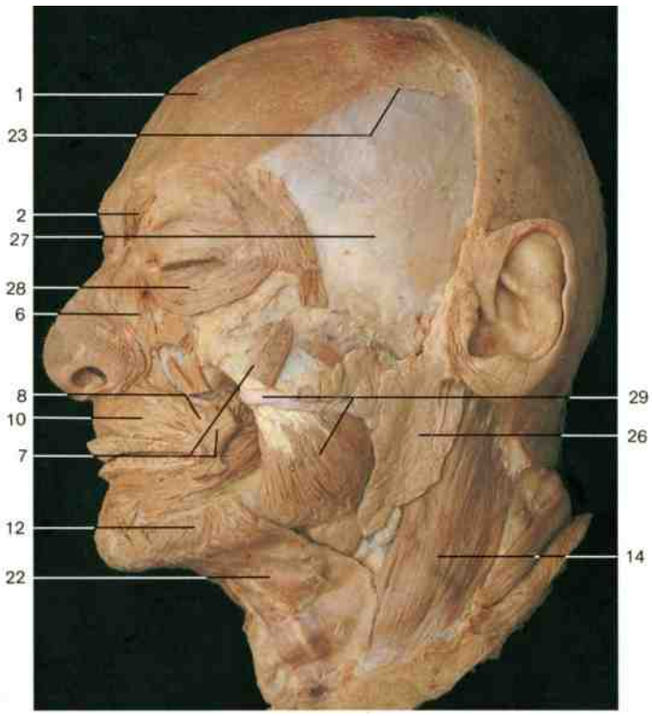
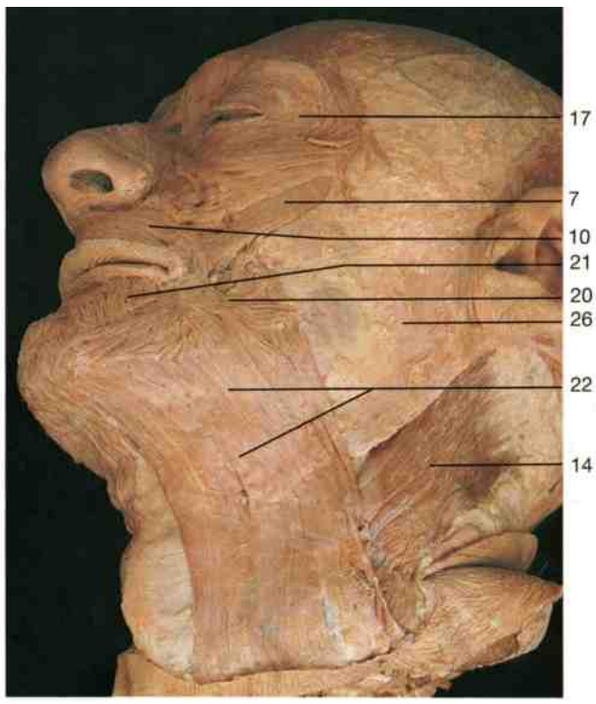


Facial muscles (lateral aspect).



Facial muscles and parotid gland (lateral aspect).



Platysma muscle (oblique lateral aspect). Superficial lamina of cervical fascia partly removed.

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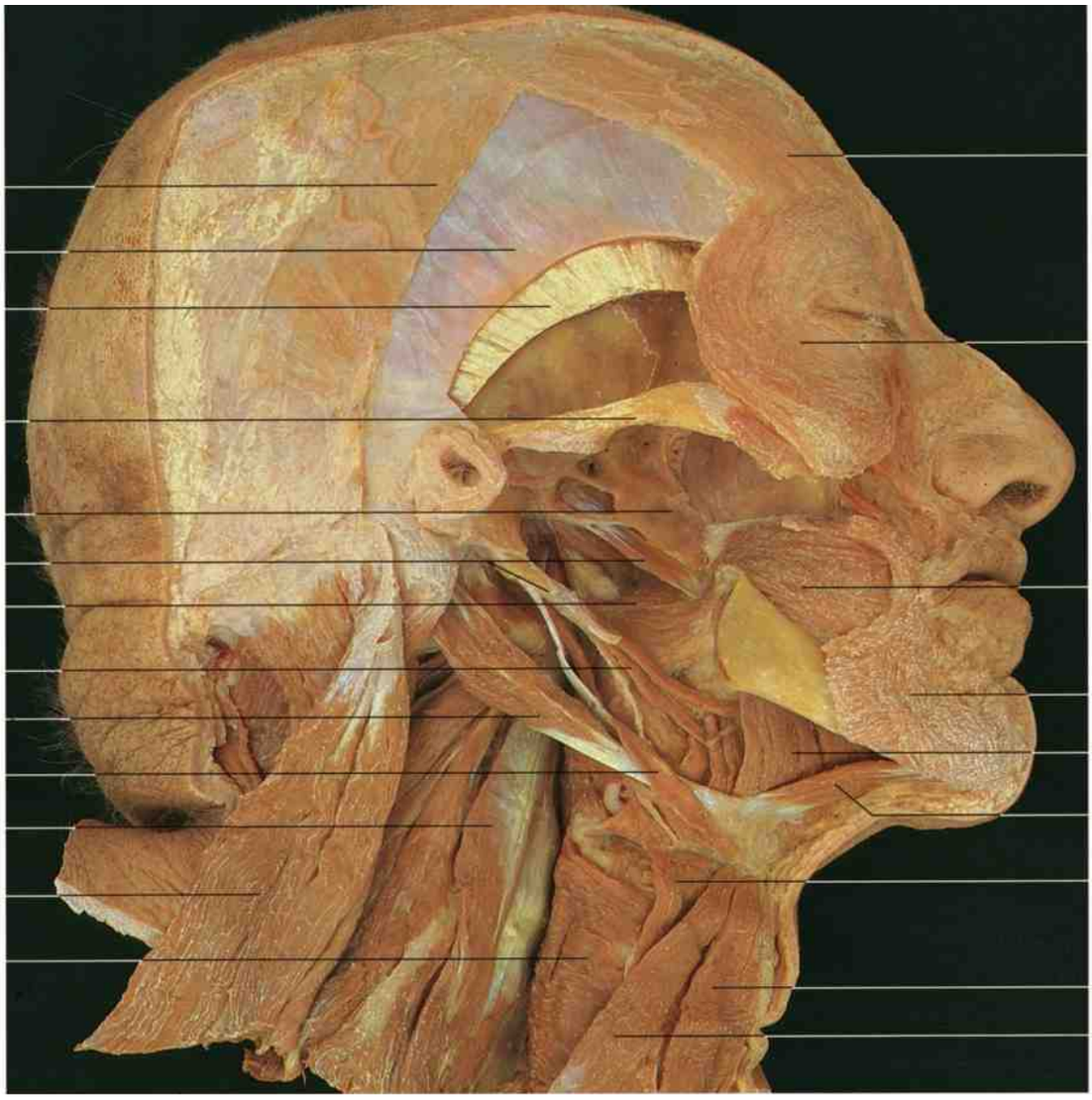
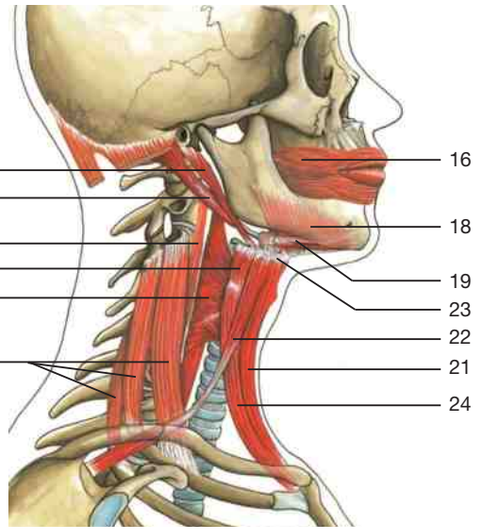


Supra- and infrahyoid muscles and pharynx (lateral aspect). Ramus of mandible, pterygoid muscles, and insertion of temporalis muscle removed.



Supra- and infrahyoid muscles (schematic drawing).

1 Galea aponeurotica
2 Temporal fascia
3 Tendon of temporalis muscle
4 Zygomatic arch
5 Lateral pterygoid plate
6 Tensor veli palatini muscle (styloid process)
7 Superior constrictor muscle of pharynx
8 Styloglossus muscle
9 Posterior belly of digastric muscle
10 Stylohyoid muscle
11 Longus capitis muscle
12 Sternocleidomastoid muscle (reflected)
13 Inferior constrictor of pharynx
14 Frontal belly of occipitofrontalis muscle
15 Orbital part of orbicularis oculi muscle
16 Buccinator muscle
17 Depressor anguli oris muscle
18 Mylohyoid muscle
19 Anterior belly of digastric muscle
20 Thyrohyoid muscle
21 Sternohyoid muscle
22 Omohyoid muscle
23 Hyoid bone
24 Sternothyroid muscle
25 Scalenus muscles

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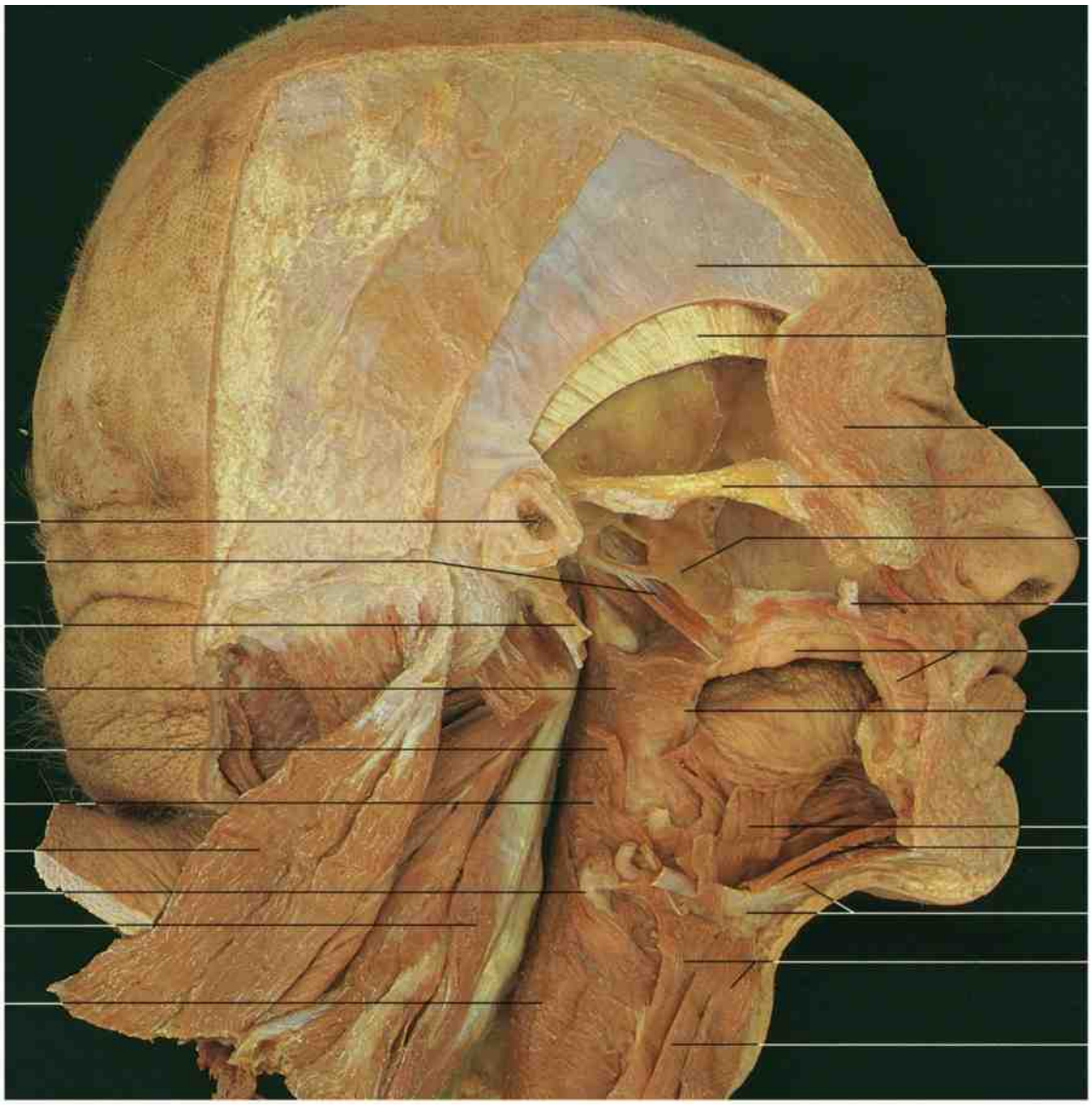

Supra- and infrahyoid muscles and pharynx (lateral aspect). Buccinator muscle removed; oral cavity opened.

1 External acoustic meatus
2 Tensor veli palatini muscle
3 Styloid process
4 Superior constrictor muscle of pharynx
5 Stylopharyngeus muscle (divided)
6 Middle constrictor muscle of pharynx
7 Sternocleidomastoid muscle
8 Greater horn of hyoid bone
9 Longus capitis muscle
10 Inferior constrictor muscle of pharynx
11 Temporal fascia
12 Tendon of temporalis muscle
13 Orbicularis oculi muscle
14 Zygomatic arch
15 Lateral pterygoid plate
16 Parotid duct
17 Gingiva of upper jaw (without teeth), buccinator muscle (divided)
18 Pterygomandibular raphe
19 Hyoglossus muscle
20 Mylohyoid muscle
21 Anterior belly of digastric muscle (hyoid bone)
22 Sternohyoid and thyrohyoid muscles
23 Omohyoid muscle

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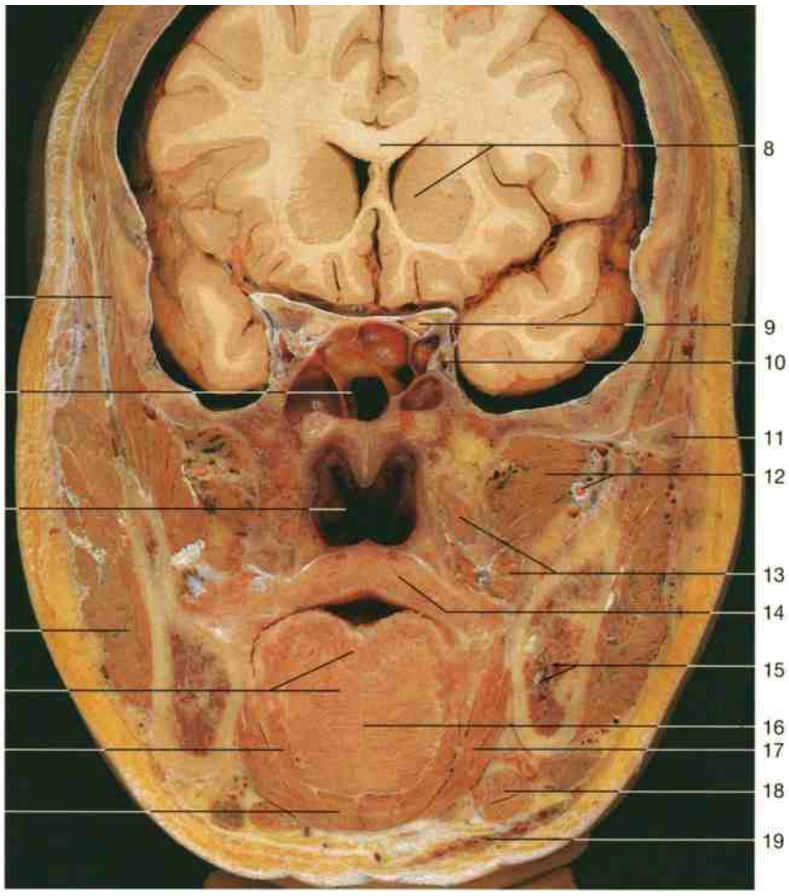
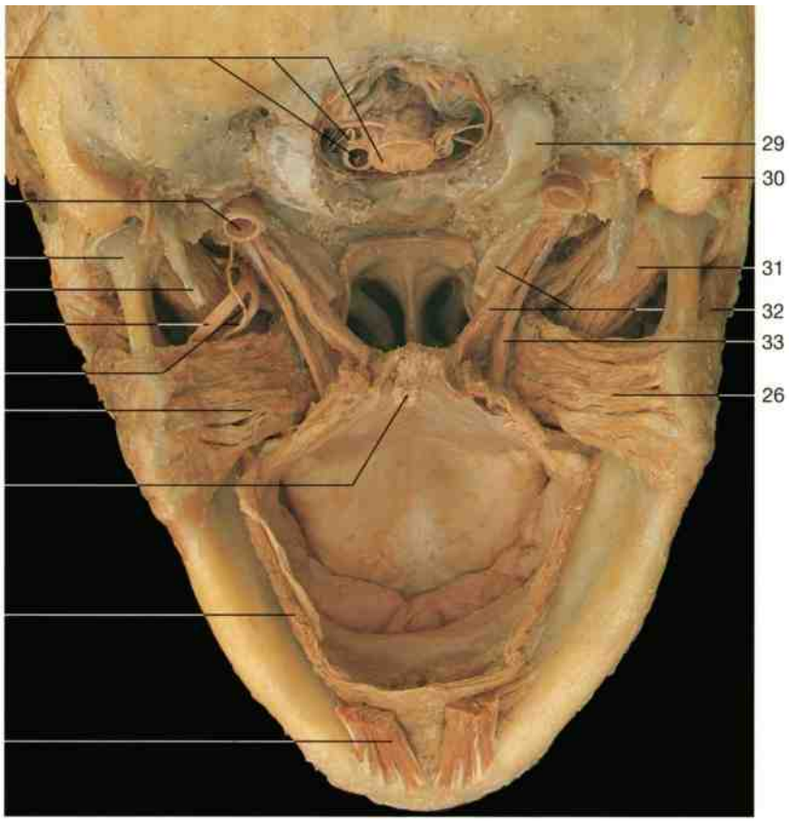


Coronal section through cranial, nasal, and oral cavities at the level of sphenoidal sinus.



Pterygoid and palatine muscles (posterior aspect).

1 Temporalis muscle
2 Sphenoidal sinus
3 Nasopharynx
4 Masseter muscle
5 Superior longitudinal, transverse and vertical muscles of tongue
6 Hyoglossus muscle
7 Geniohyoid muscle
8 Corpus callosum (caudate nucleus)
9 Optic nerve
10 Cavernous sinus
11 Zygomatic arch
12 Cross section of lateral pterygoid muscle and maxillary artery
13 Section of medial pterygoid muscle
14 Soft palate
15 Mandible and inferior alveolar nerve
16 Septum of the tongue
17 Mylohyoid muscle
18 Submandibular gland
19 Platysma muscle
20 Foramen magnum, vertebral artery and spinal cord
21 Internal carotid artery
22 Head of mandible
23 Styloid process
24 Inferior alveolar nerve
25 Lingual nerve and chorda tympani nerve
26 Medial pterygoid muscle
27 Uvula
28 Anterior belly of digastric muscle (cut)
29 Condyle of occipital bone
30 Mastoid process
31 Lateral pterygoid muscle
32 Auditory tube and levator veli palatini muscle
33 Tensor veli palatini muscle

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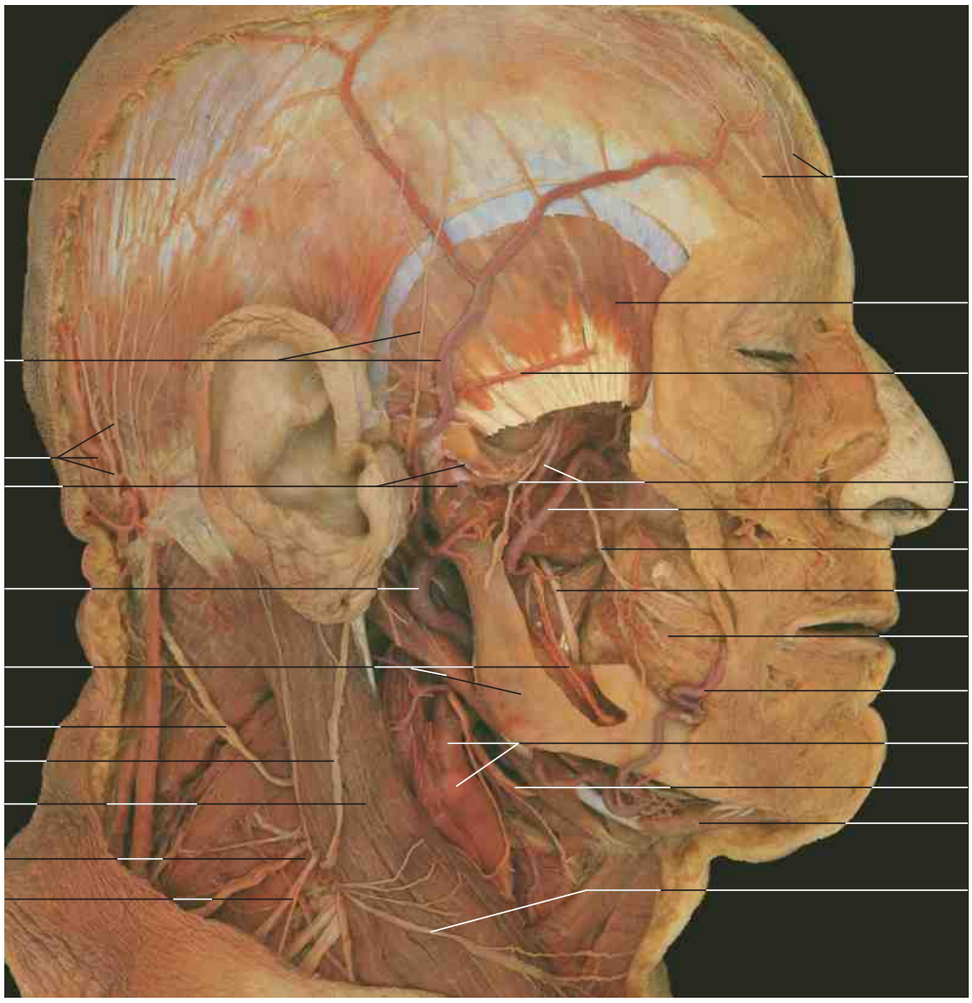
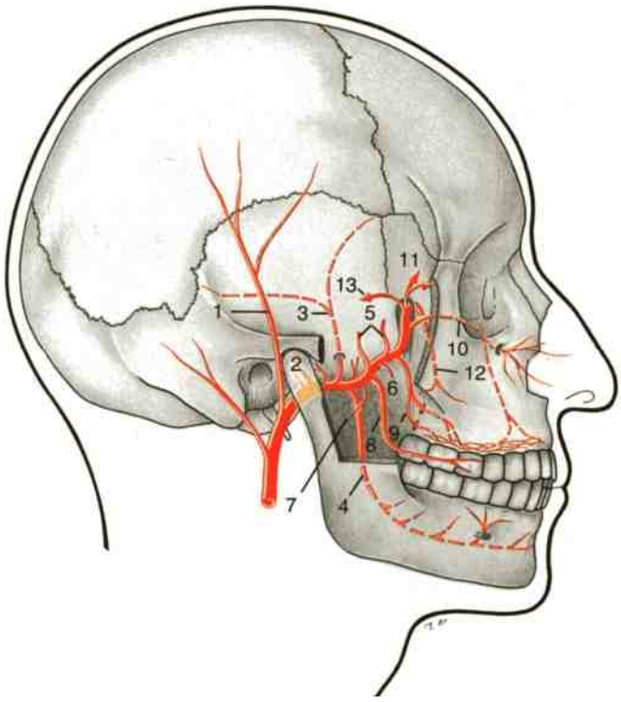


Dissection of maxillary artery (lateral aspect). Ramus mandibulae partly removed and canalis mandibulae opened.

1 Galea aponeurotica
2 Superficial temporal artery and auriculo-temporal nerve
3 Occipital artery and greater occipital nerve (C_2)
4 Temporomandibular joint (opened)
5 External carotid artery
6 Mandible and inferior mandibular artery and nerve
7 Accessory nerve (Var.)
8 Great auricular nerve
9 Sternocleidomastoi-deus muscle
10 Punctum nervosum
11 Supraclavicular nerves
12 Supra-orbital nerves
13 Temporalis muscle
14 Transverse facial artery
15 Masseteric nerve and deep temporal branch of maxillary artery
16 Maxillary artery
17 Buccal nerve
18 Lingual nerve
19 Buccinator muscle
20 Facial artery
21 External carotid artery and sinus caroticus
22 Hypoglossal nerve
23 Digastric muscle
24 Transverse cervical nerves



Main branches of maxillary artery (schematic drawing).

1 Superficial temporal artery

Branches of the first part
2 Deep auricular artery and anterior tympanic artery
3 Middle meningeal artery
4 Inferior alveolar artery

Branches of the second part
5 Deep temporal branches
6 Pterygoid branches
7 Masseteric artery
8 Buccal artery

Branches of the third part
9 Posterior superior alveolar artery
10 Infra-orbital artery
11 Sphenopalatine artery and branches to the nasal cavity
12 Descending palatine artery
13 Artery of the pterygoid canal

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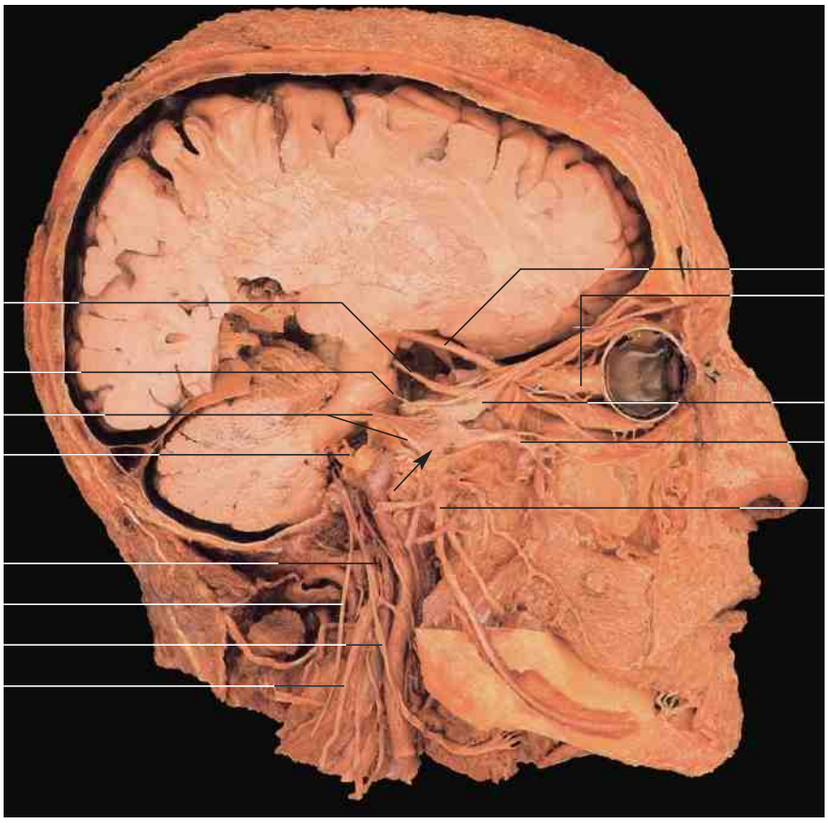
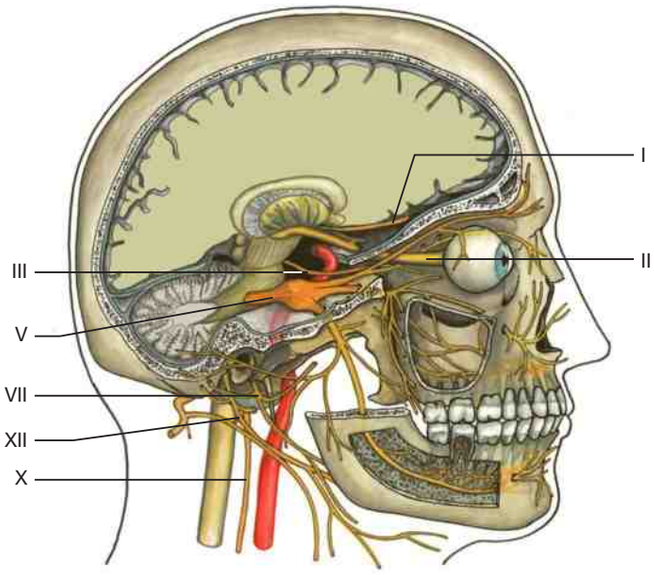
2.2 Cranial Nerves



Dissection of the cranial nerves (indicated by I–XII) (lateral aspect). Brain, brain stem, and cerebellum have been partly removed (from Lütjen-Drecoll, Rohen, Innenansichten des menschlichen Körpers, 2010).

The twelve cranial nerves emerge from the brain stem and penetrate the skull at different places. The olfactory nerves (n. I) pass the lamina cribrosa innervating the upper part of the nasal mucous membrane. The optic nerve (n. II) is related to the eye. The external ocular muscles are innervated by the oculomotor, trochlear, and abducent nerves (n. III, n. IV, and n. VI). Facial skin and masticatory muscles are innervated by the trigeminal nerve (n. V) while the facial nerve (n. VII) innervates mainly the mimic musculature. The stato-acoustic organ is related to the vestibulocochlear nerve (n. VIII). The vagus nerve (n. X) is one of the longest cranial nerves, running through the lateral neck region to reach the thoracic and abdominal cavities. It belongs to the parasympathetic part of the autonomic nervous system. The glossopharyngeal (n. IX), accessory (n. XI), and hypoglossal (n. XII) nerves innervate the muscles of the neck, the tongue, and the pharynx. During human evolution, they were incorporated secondarily into the brain cavity.



Schematic drawing of the cranial nerves (indicated by I–XII) (lateral aspect).

Cranial nerves

I = Olfactory nerves
II = Optic nerve
III = Oculomotor nerve
IV = Trochlear nerve
V = Trigeminal nerve
VI = Abducent nerve
VII = Facial nerve
VIII = Vestibulocochlear nerve
IX = Glossopharyngeal nerve
X = Vagus nerve
XI = Accessory nerve
XII = Hypoglossal nerve

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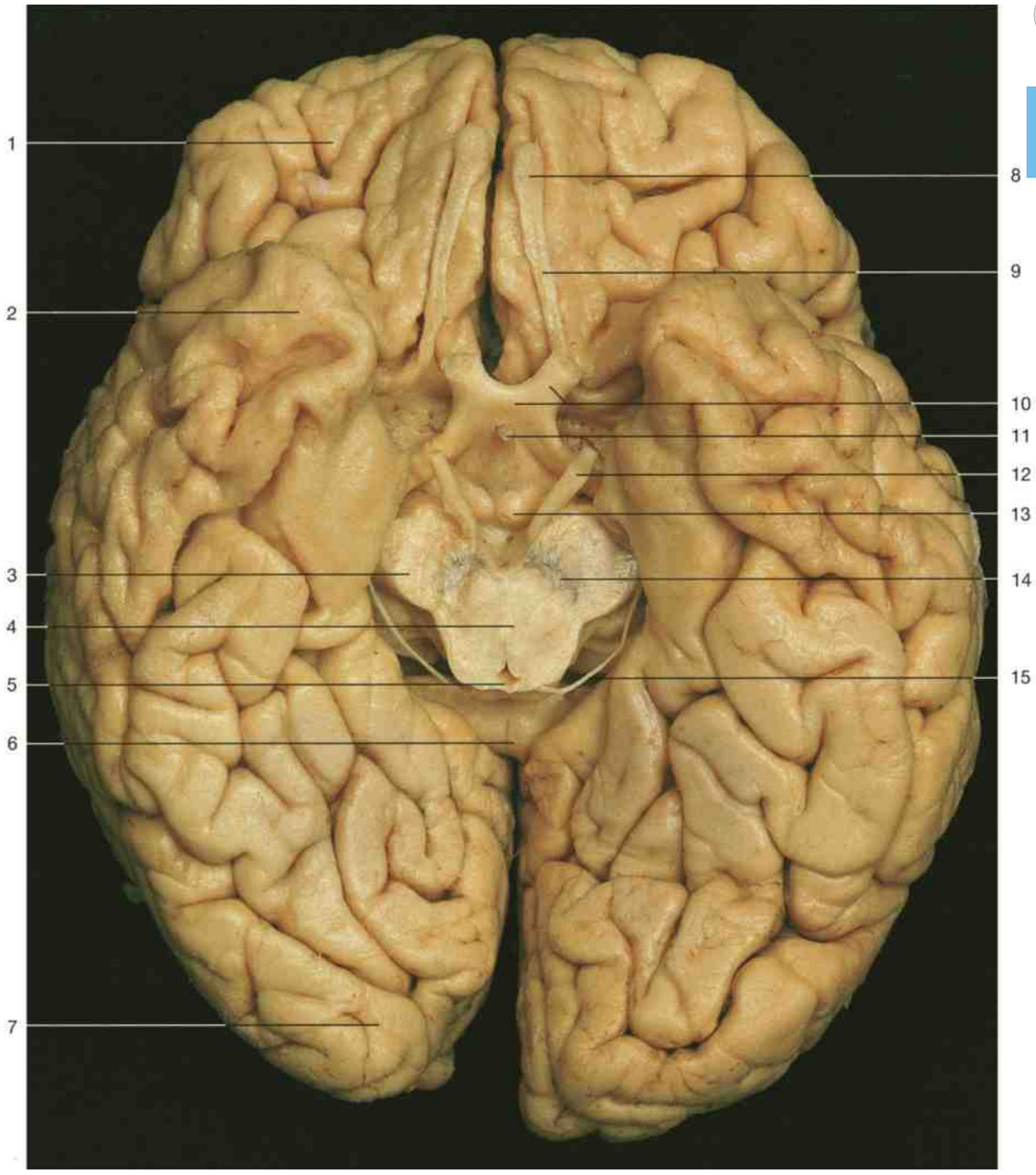

Inferior aspect of the brain with cranial nerves. Midbrain divided.

1 Frontal lobe
2 Temporal lobe
3 Pedunculus cerebri
4 Midbrain (divided)
5 Cerebral aqueduct
6 Splenium of corpus callosum
7 Occipital lobe
8 Olfactory bulb
9 Olfactory tract
10 Optic nerve and optic chiasma
11 Infundibulum
12 Oculomotor nerve (n. III)
13 Mamillary body
14 Substantia nigra
15 Trochlear nerve (n. IV)

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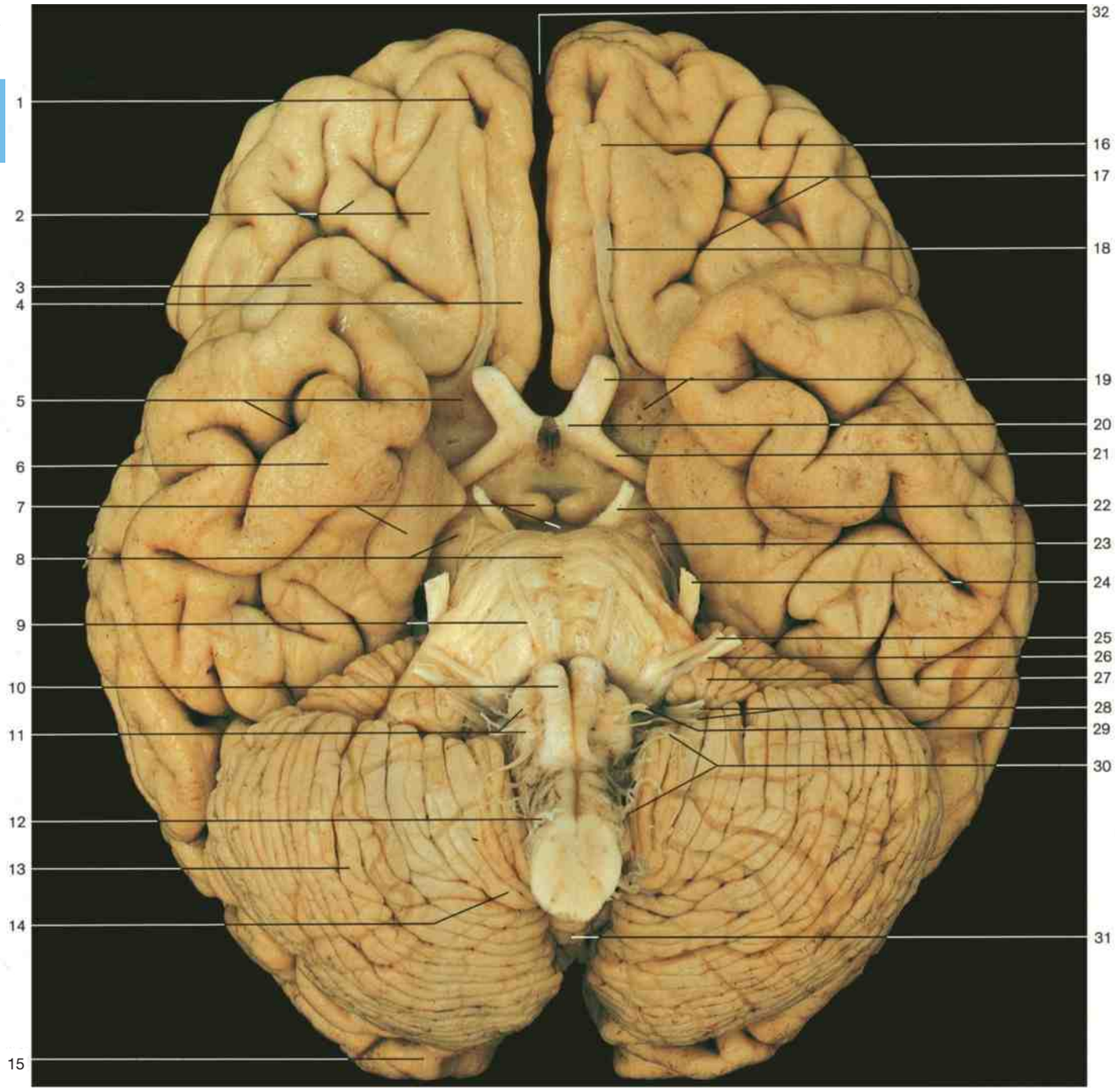

Cranial nerves. Brain (inferior aspect).

1 Olfactory sulcus (termination)
2 Orbital gyri
3 Temporal lobe
4 Straight gyrus
5 Olfactory trigone and inferior temporal sulcus
6 Medial occipitotemporal gyrus
7 Parahippocampal gyrus, mamillary body, and interpeduncular fossa
8 Pons and cerebral peduncle
9 Abducent nerve (n. VI)
10 Pyramid
11 Inferior olive
12 Cervical spinal nerves
13 Cerebellum
14 Tonsil of cerebellum
15 Occipital lobe (posterior pole)
16 Olfactory bulb
17 Orbital sulci of frontal lobe
18 Olfactory tract
19 Optic nerve (n. II) and anterior perforated substance
20 Optic chiasma
21 Optic tract
22 Oculomotor nerve (n. III)
23 Trochlear nerve (n. IV)
24 Trigeminal nerve (n. V)
25 Facial nerve (n. VII)
26 Vestibulocochlear nerve (n. VIII)
27 Flocculus of cerebellum
28 Glossopharyngeal nerve (n. IX) and vagus nerve (n. X)
29 Hypoglossal nerve (n. XII)
30 Accessory nerve (n. XI)
31 Vermis of cerebellum
32 Longitudinal fissure

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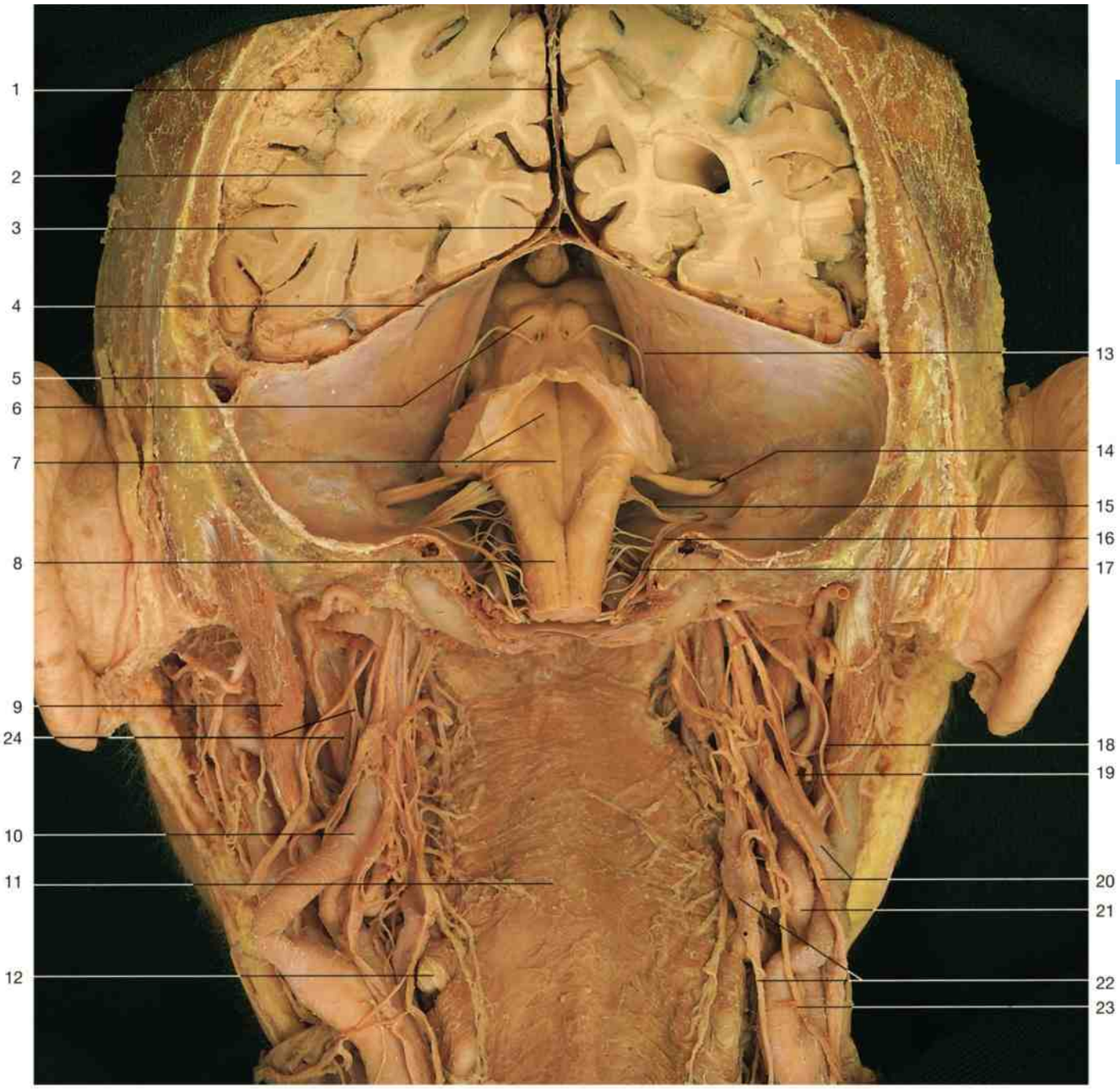

Brain stem and pharynx with cranial nerves (posterior aspect). Cranial cavity opened and cerebellum removed.

1 Falx cerebri
2 Occipital lobe
3 Straight sinus
4 Tentorium cerebelli
5 Transverse sinus
6 Inferior colliculus of midbrain
7 Rhomboid fossa
8 Medulla oblongata
9 Posterior belly of digastric muscle
10 Internal carotid artery
11 Pharynx (middle constrictor muscle)
12 Hyoid bone (greater horn)
13 Trochlear nerve (n. IV)
14 Facial nerve (n. VII) and vestibulocochlear nerve (n. VIII)
15 Glossopharyngeal nerve (n. IX) and vagus nerve (n. X)
16 Accessory nerve (intracranial portion) (n. XI)
17 Hypoglossal nerve (intracranial portion) (n. XII)
18 Accessory nerve (n. XI)
19 Hypoglossal nerve (n. XII)
20 Vagus nerve (n. X) and internal carotid artery
21 External carotid artery
22 Sympathetic trunk and superior cervical ganglion
23 Ansa cervicalis (superior root of hypoglossal nerve)
24 Glossopharyngeal nerve (n. IX) and stylopharyngeus muscle

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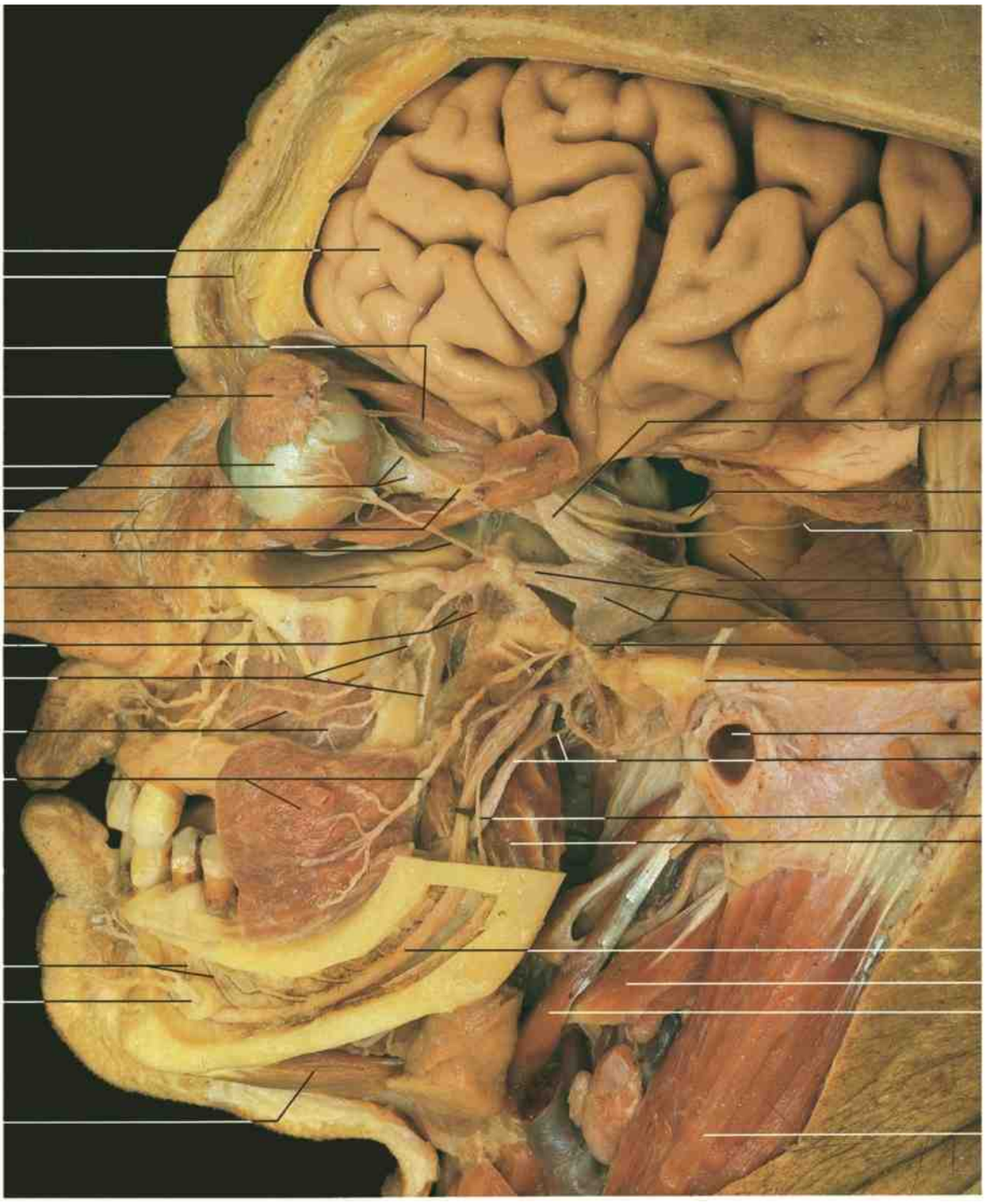

Dissection of the trigeminal nerve in its entirety. Lateral wall of cranial cavity, lateral wall of orbit, zygomatic arch, and ramus of the mandible have been removed and the mandibular canal opened.

1 Frontal lobe of cerebrum
2 Supra-orbital nerve
3 Lacrimal nerve
4 Lacrimal gland
5 Eyeball
6 Optic nerve and short ciliary nerves
7 External nasal branch of anterior ethmoidal nerve
8 Ciliary ganglion
9 Zygomatic nerve
10 Infra-orbital nerve
11 Infra-orbital foramen and terminal branches of infra-orbital nerve
12 Pterygopalatine ganglion and pterygopalatine nerves
13 Posterior superior alveolar nerves
14 Superior dental plexus
15 Buccinator muscle and buccal nerve
16 Inferior dental plexus
17 Mental foramen and mental nerve
18 Anterior belly of digastric muscle
19 Ophthalmic nerve (n. V_1)
20 Oculomotor nerve (n. III)
21 Trochlear nerve (n. IV)
22 Trigeminal nerve and pons
23 Maxillary nerve (n. V_2)
24 Trigeminal ganglion
25 Mandibular nerve (n. V_3)
26 Auriculotemporal nerve
27 External acoustic meatus (divided)
28 Lingual nerve and chorda tympani
29 Mylohyoid nerve
30 Medial pterygoid muscle
31 Inferior alveolar nerve
32 Posterior belly of digastric muscle
33 Stylohyoid muscle
34 Sternocleidomastoid muscle

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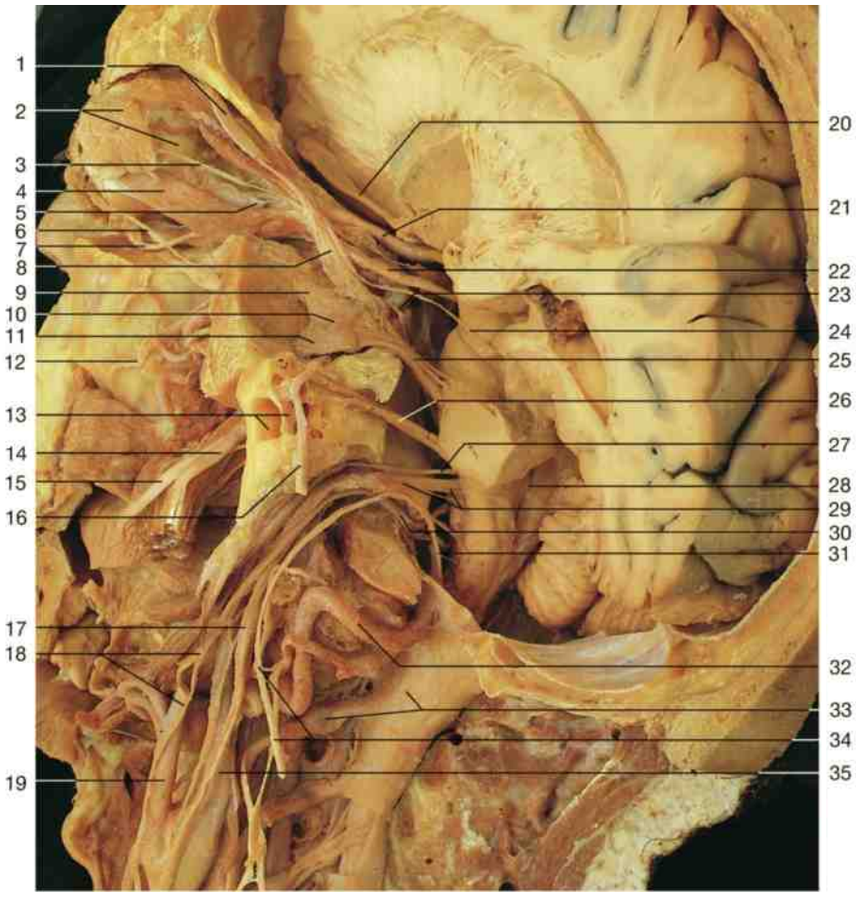
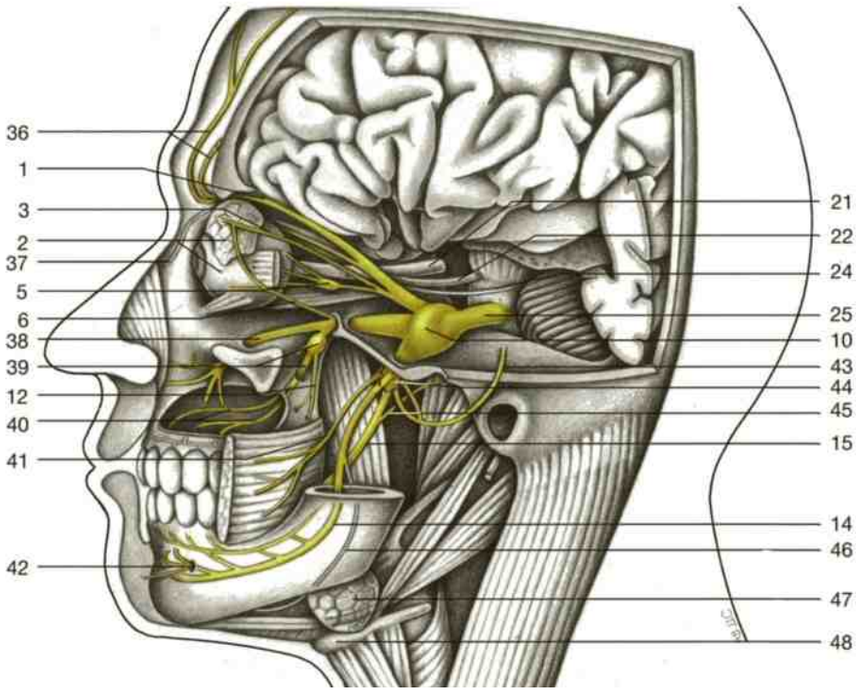


Cranial nerves in connection with the brain stem. Left side (lateral superior aspect). Left half of brain and head partly removed. Notice the location of trigeminal ganglion.



Main branches of trigeminal nerve (schematic drawing of figure on opposite page).

1 Frontal nerve
2 Lacrimal gland and eyeball
3 Lacrimal nerve
4 Lateral rectus muscle
5 Ciliary ganglion lateral to optic nerve
6 Zygomatic nerve
7 Inferior branch of oculomotor nerve
8 Ophthalmic nerve (n. V_1)
9 Maxillary nerve (n. V_2)
10 Trigeminal ganglion
11 Mandibular nerve (n. V_3)
12 Posterior superior alveolar nerves
13 Tympanic cavity, external acoustic meatus, and tympanic membrane
14 Inferior alveolar nerve
15 Lingual nerve
16 Facial nerve (n. VII)
17 Vagus nerve (n. X)
18 Hypoglossal nerve (n. XII) and superior root of ansa cervicalis
19 External carotid artery
20 Olfactory tract (n. I)
21 Optic nerve (n. II) (intracranial part)
22 Oculomotor nerve (n. III)
23 Abducent nerve (n. VI)
24 Trochlear nerve (n. IV)
25 Trigeminal nerve (n. V)
26 Vestibulocochlear nerve (n. VIII) and facial nerve (n. VII)
27 Glossopharyngeal nerve (n. IX) (leaving brain stem)
28 Rhomboid fossa
29 Vagus nerve (n. X) (leaving brain stem)
30 Hypoglossal nerve (n. XII) (leaving medulla oblongata)
31 Accessory nerve (n. XI) (ascending from foramen magnum)
32 Vertebral artery
33 Spinal ganglion and dura mater of spinal cord
34 Accessory nerve (n. XI)
35 Internal carotid artery
36 Lateral and medial branch of supra-orbital nerve
37 Infratrochlear nerve
38 Infra-orbital nerve
39 Pterygopalatine ganglion and middle superior alveolar nerve
40 Middle superior alveolar nerves (entering superior dental plexus)
41 Buccal nerve
42 Mental nerve and mental foramen
43 Auriculotemporal nerve
44 Otic ganglion (dotted line)
45 Chorda tympani
46 Mylohyoid nerve
47 Submandibular gland
48 Hyoid bone

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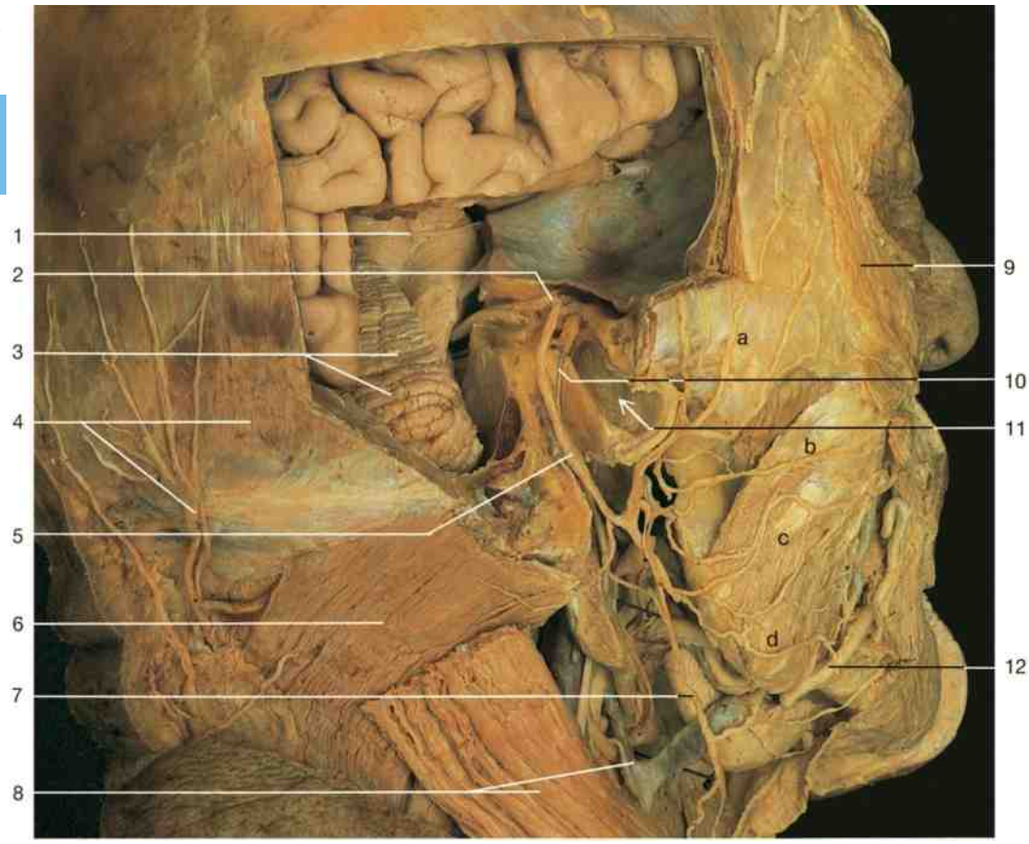
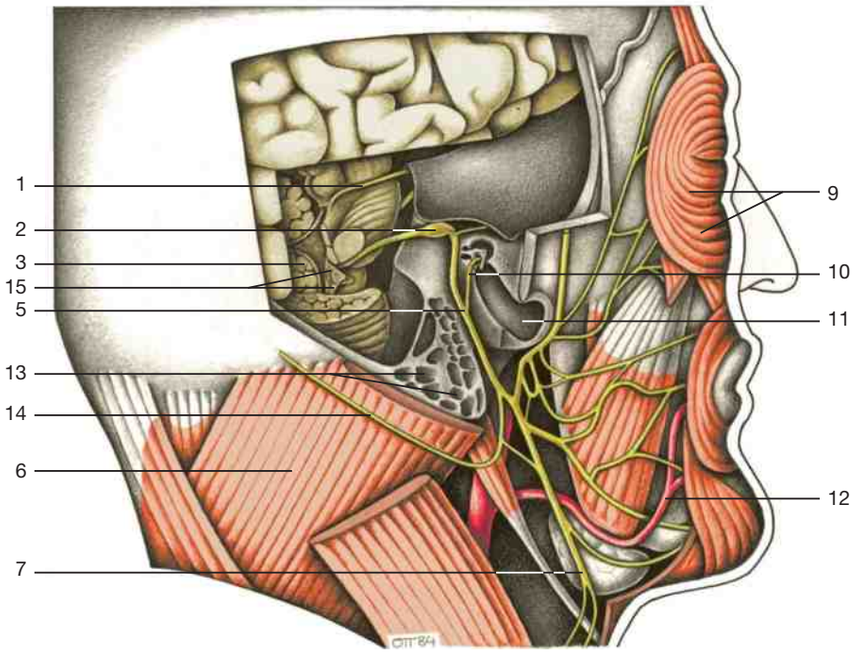


Dissection of facial nerve in its entirety. Cranial cavity fenestrated; temporal lobe partly removed. Facial canal and tympanic cavity opened, posterior wall of external acoustic meatus removed.
Branches of facial nerve: a = temporal branch; b = zygomatic branches; c = buccal branches; d = marginal mandibular branch.



Facial nerve (schematic drawing of the dissection above).

1 Trochlear nerve
2 Facial nerve with geniculate ganglion
3 Cerebellum (right hemisphere)
4 Occipital belly of occipitofrontalis muscle and greater occipital nerve
5 Facial nerve at stylomastoid foramen
6 Splenius capitis muscle
7 Cervical branch of facial nerve
8 Sternocleidomastoid muscle and retromandibular vein
9 Orbicularis oculi muscle
10 Chorda tympani
11 External acoustic meatus
12 Facial artery
13 Mastoid air cells
14 Posterior auricular nerve
15 Nucleus and genu of facial nerve

Cranial nerves in connection with the brain stem (oblique-lateral aspect). Lateral portion of the skull, brain, neck and facial structures, lateral wall of orbit and oral cavity have been removed. The tympanic cavity has been opened. The mandible has been divided and the muscles of mastication have been removed.

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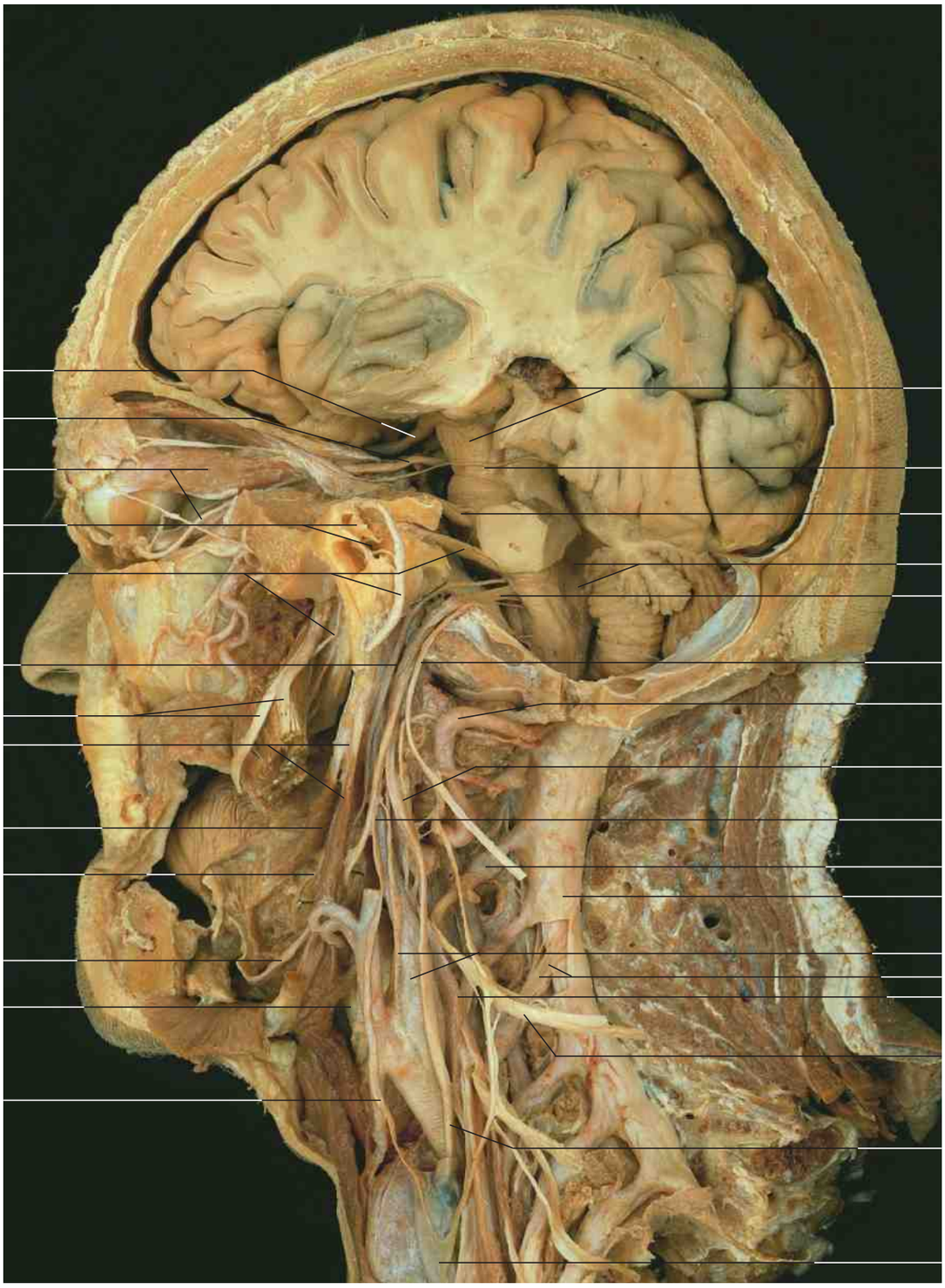

1 Optic tract
2 Oculomotor nerve (n. III)
3 Lateral rectus muscle and inferior branch of oculomotor nerve
4 Malleus and chorda tympani
5 Chorda tympani, facial nerve (n. VII), and vestibulocochlear nerve (n. VIII)
6 Glossopharyngeal nerve (n. XI)
7 Lingual nerve and inferior alveolar nerve
8 Styloid process and stylohyoid muscle
9 Styloglossus muscle
10 Lingual branches of glossopharyngeal nerve
11 Lingual branch of hypoglossal nerve
12 External carotid artery
13 Superior root of ansa cervicalis (branch of hypoglossal nerve, derived from C_1)
14 Lateral ventricle with choroid plexus and cerebral peduncle
15 Trochlear nerve (n. IV)
16 Trigeminal nerve (n. V)
17 Fourth ventricle and rhomboid fossa
18 Vagus nerve (n. X)
19 Accessory nerve (n. XI)
20 Vertebral artery
21 Superior cervical ganglion
22 Hypoglossal nerve (n. XII)
23 Spinal ganglion with dural sheath
24 Dura mater of spinal cord
25 Internal carotid artery and carotid sinus branch of glossopharyngeal nerve
26 Dorsal roots of spinal nerve
27 Sympathetic trunk
28 Branch of cervical plexus (ventral primary ramus of third cervical spinal nerve)
29 Ansa cervicalis

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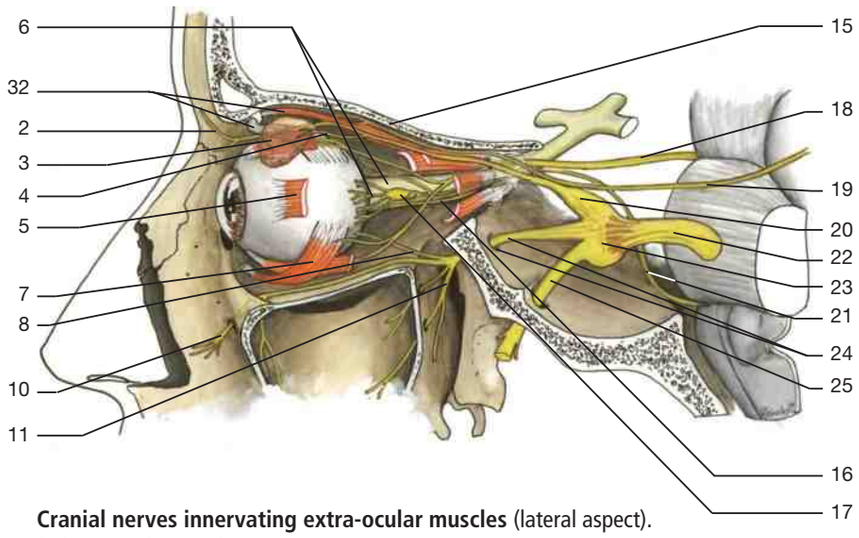
Cranial nerves of the orbit and pterygopalatine fossa. Left orbit (lateral aspect). Note the zygomaticolacrimal anastomosis (arrow).

1 Frontal lobe
2 Supra-orbital nerve
3 Lacrimal gland
4 Lacrimal nerve
5 Lateral rectus muscle (divided)
6 Optic nerve and short ciliary nerves
7 Inferior oblique muscle
8 Zygomatic nerve
9 Inferior branch of oculomotor nerve and inferior rectus muscle
10 Infra-orbital nerve
11 Posterior superior alveolar nerves
12 Branches of superior alveolar plexus adjacent to mucous membrane of maxillary sinus
13 Central sulcus of insula
14 Superior rectus muscle
15 Periorbita (roof of orbit)
16 Nasociliary nerve
17 Ciliary ganglion
18 Oculomotor nerve (n. III)
19 Trochlear nerve (n. IV)
20 Ophthalmic nerve (n. V_1)
21 Abducent nerve (n. VI) (divided)
22 Trigeminal nerve (n. V)
23 Trigeminal ganglion
24 Maxillary nerve (n. V_2) and foramen rotundum
25 Mandibular nerve (n. V_3)
26 External acoustic meatus
27 Pterygopalatine nerves
28 Deep temporal nerves
29 Buccal nerve
30 Masseteric nerve
31 Auriculotemporal nerve
32 Trochlea and superior oblique muscle



Cranial nerves innervating extra-ocular muscles (lateral aspect). (Schematic drawing.)

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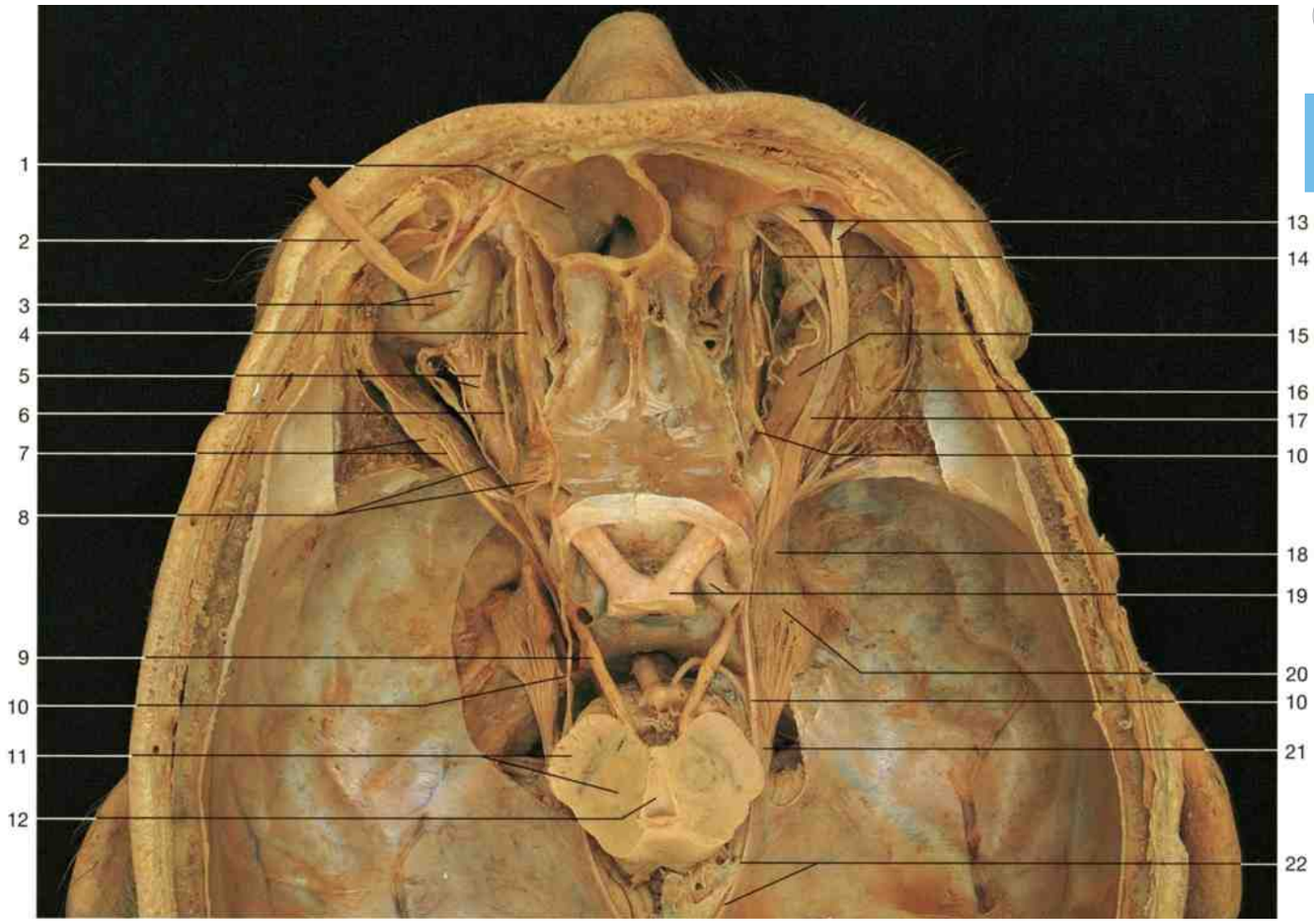
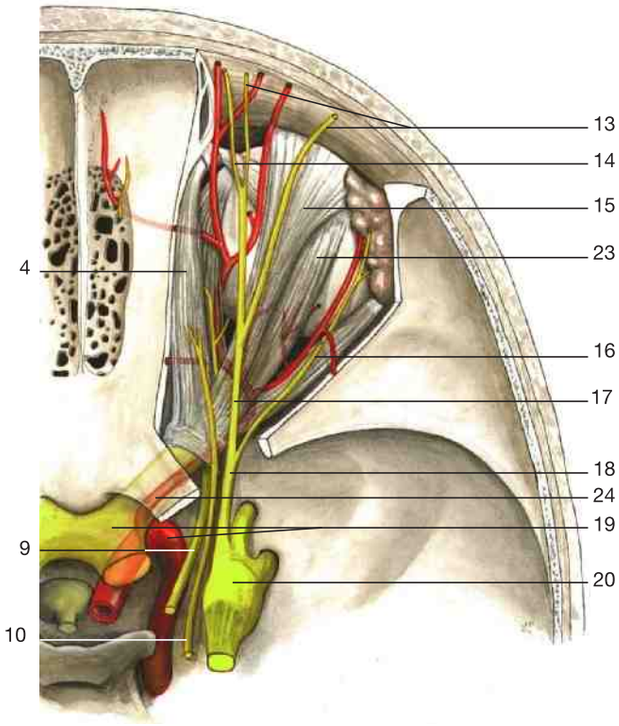


Cranial nerves of the orbit (superior aspect). Right side: superficial layer, left side: middle layer of the orbit (superior rectus muscle and frontal nerve divided and reflected). Tentorium and dura mater partly removed.



Cranial nerves within the orbit (superior aspect).

1 Frontal sinus (enlarged)
2 Frontal nerve (divided and reflected)
3 Superior rectus muscle (divided) and eyeball
4 Superior oblique muscle
5 Short ciliary nerves and optic nerve (n. II)
6 Nasociliary nerve
7 Abducent nerve (n. VI) and lateral rectus muscle
8 Ciliary ganglion and superior rectus muscle (reflected)
9 Oculomotor nerve (n. III)
10 Trochlear nerve (n. IV)
11 Crus cerebri and midbrain
12 Inferior wall of the third ventricle connected with cerebral aqueduct
13 Lateral and medial branches of supra-orbital nerve
14 Supratrochlear nerve
15 Superior levator palpebrae muscle
16 Lacrimal nerve
17 Frontal nerve
18 Ophthalmic nerve (n. V_1)
19 Optic chiasma and internal carotid artery
20 Trigeminal ganglion
21 Trigeminal nerve (n. V)
22 Tentorial notch
23 Superior rectus muscle
24 Ophthalmic artery

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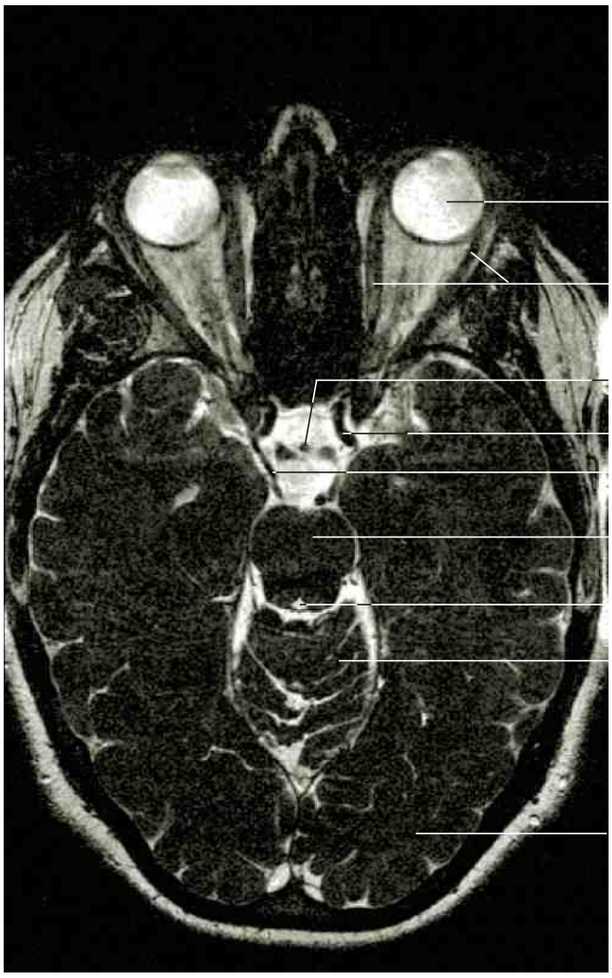
Cranial nerves at the base of the skull. The brain stem was divided and the tentorium fenestrated. Both hemispheres were removed.



1 Infundibulum
2 Optic chiasma and internal carotid artery
3 Olfactory tract
4 Oculomotor nerve (n. III)
5 Ophthalmic nerve (n. V1)
6 Trigeminal ganglion
7 Falx cerebri
8 Tentorial notch
9 Trochlear nerve (n. IV)
10 Trigeminal nerve (n. V)
11 Cerebellum
12 Eyeball
13 Medial and lateral rectus muscles
14 Internal carotid artery
15 Oculomotor nerve (n. III)
16 Midbrain
17 Cerebral aqueduct
18 Vermis of cerebellum
19 Occipital lobe of the cerebrum
20 Basilar artery

Section through the head at the level of the sella turcica demonstrating cranial nerves (MRI scan, University of Erlangen, Dpt. of Neurosurgery).

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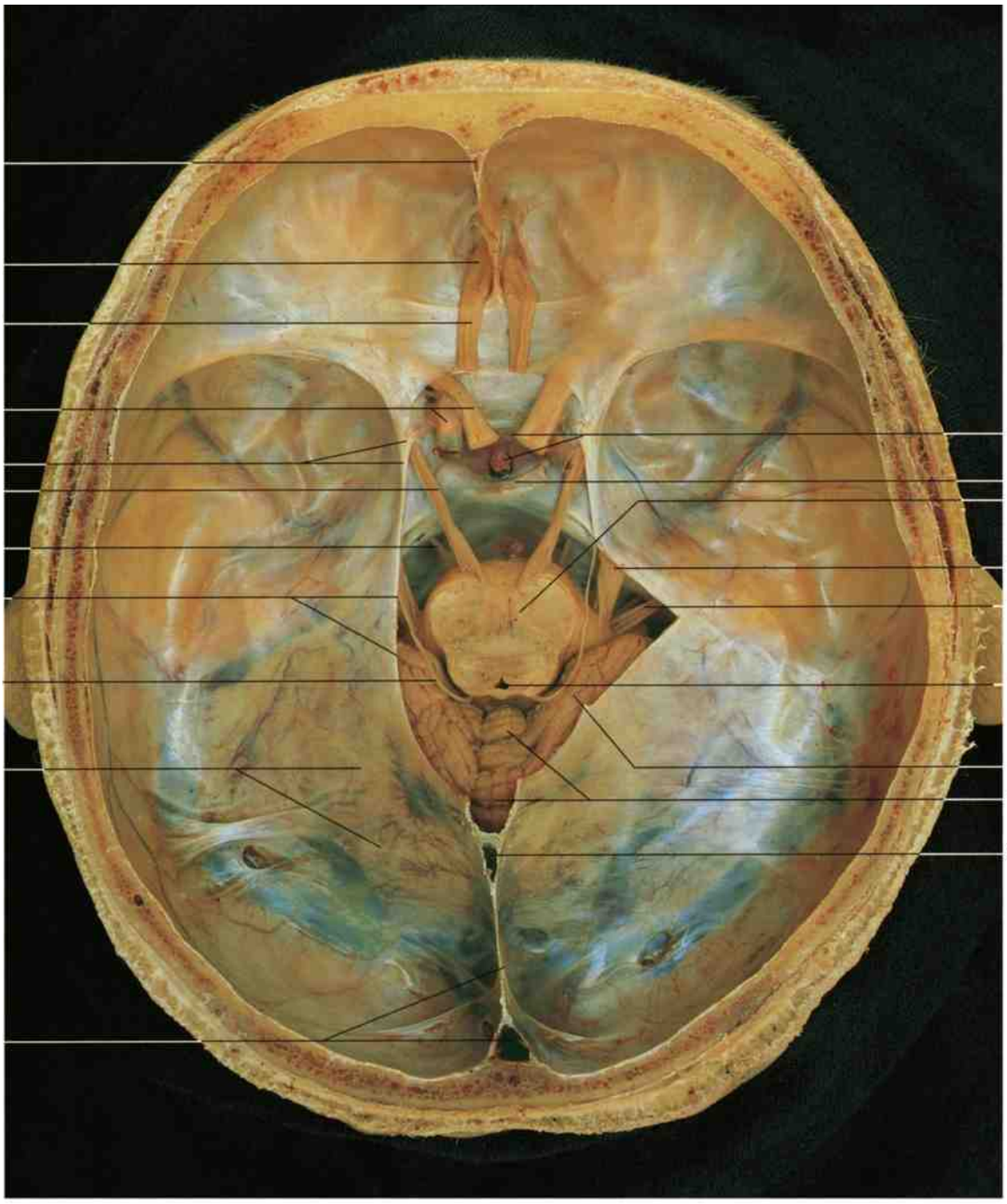

Base of the skull with cranial nerves (internal aspect). Both cerebral hemispheres and upper part of the brain stem removed. Incision on the right tentorium cerebelli to display the cranial nerves of the infratentorial space.

1 Superior sagittal sinus with falx cerebri
2 Olfactory bulb
3 Olfactory tract
4 Optic nerve and internal carotid artery
5 Anterior clinoid process and anterior attachment of tentorium cerebelli
6 Oculomotor nerve (n. III)
7 Abducent nerve (n. VI)
8 Tentorial notch (incisura tentorii)
9 Trochlear nerve (n. IV)
10 Tentorium cerebelli
11 Falx cerebri and confluence of sinuses
12 Hypophysial fossa, infundibulum, and diaphragma sellae
13 Dorsum sellae
14 Midbrain (divided)
15 Trigeminal nerve (n. V)
16 Facial nerve (n. VII), nervus intermedius, and vestibulocochlear nerve (n. VIII)
17 Cerebral aqueduct
18 Right hemisphere of cerebellum
19 Vermis of cerebellum
20 Straight sinus

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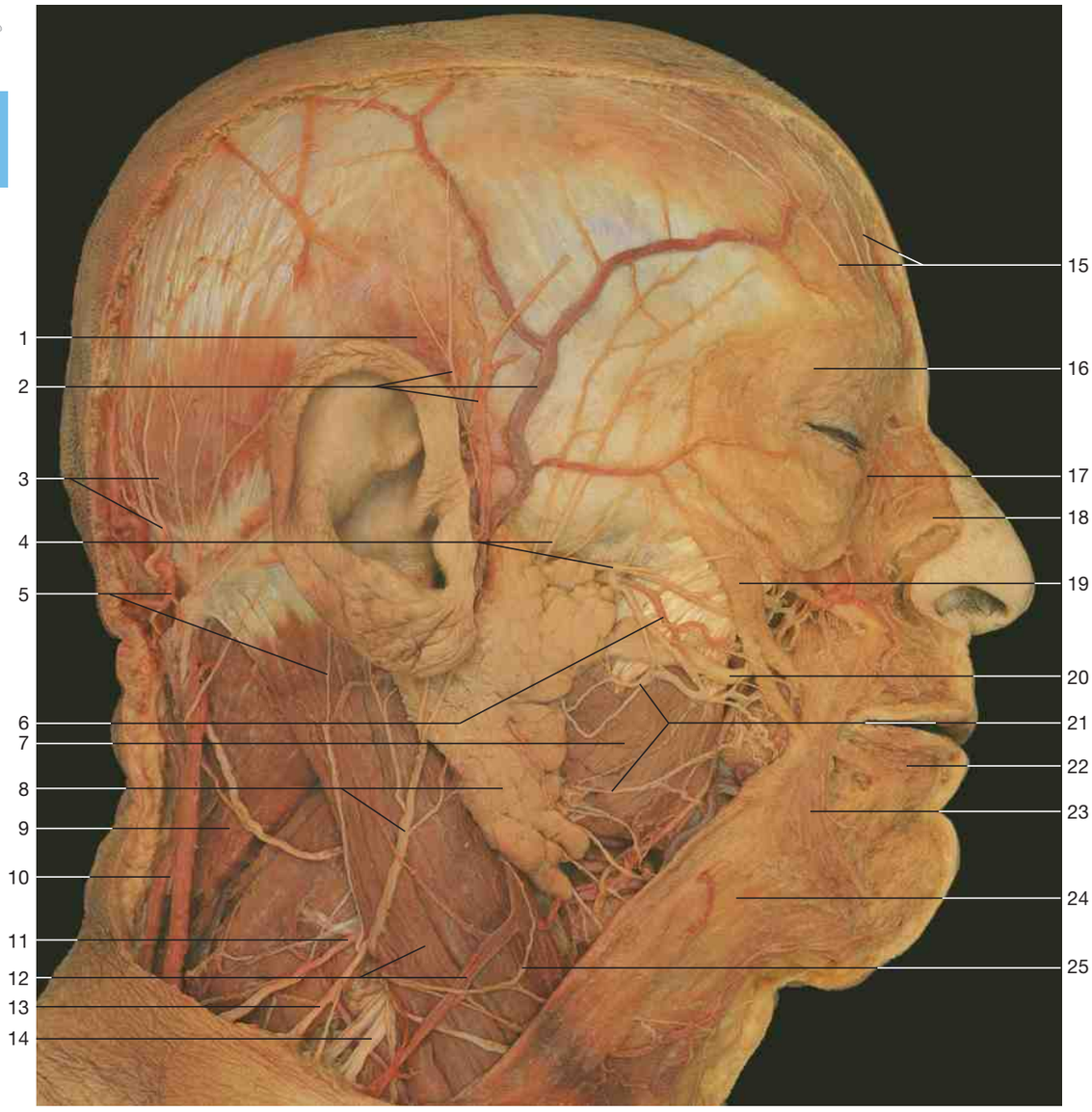
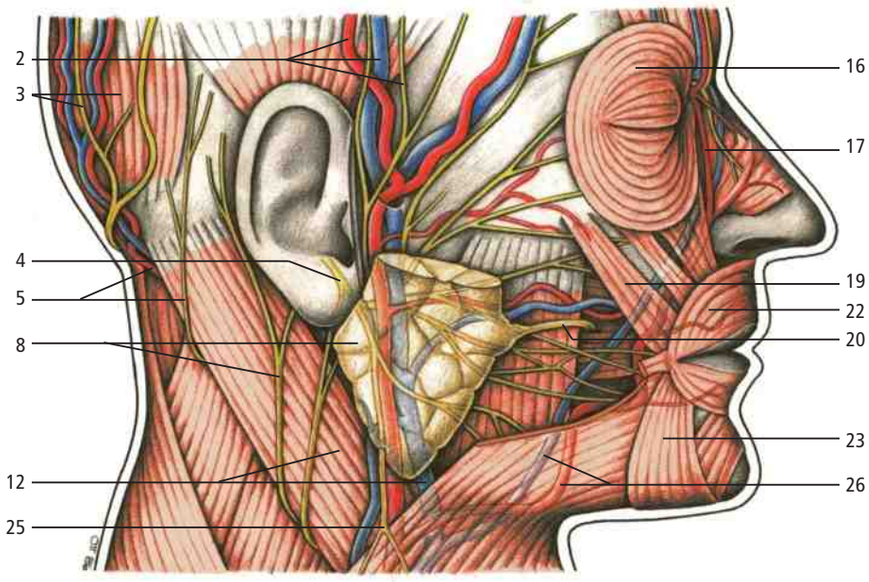


Lateral superficial aspect of the face. Peripheral distribution of facial nerve (n. VII).



Superficial region of the face. Note the facial plexus within the parotid gland (semischematic drawing).

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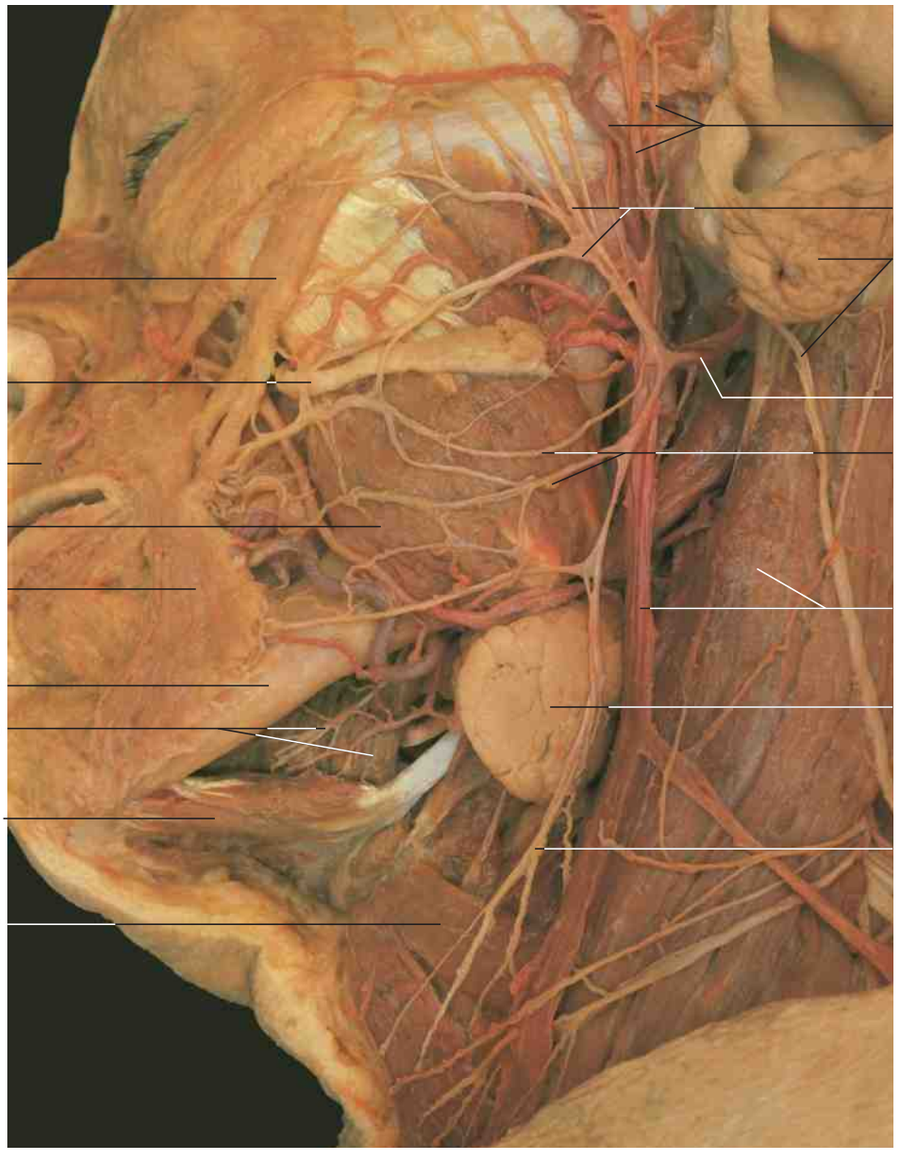
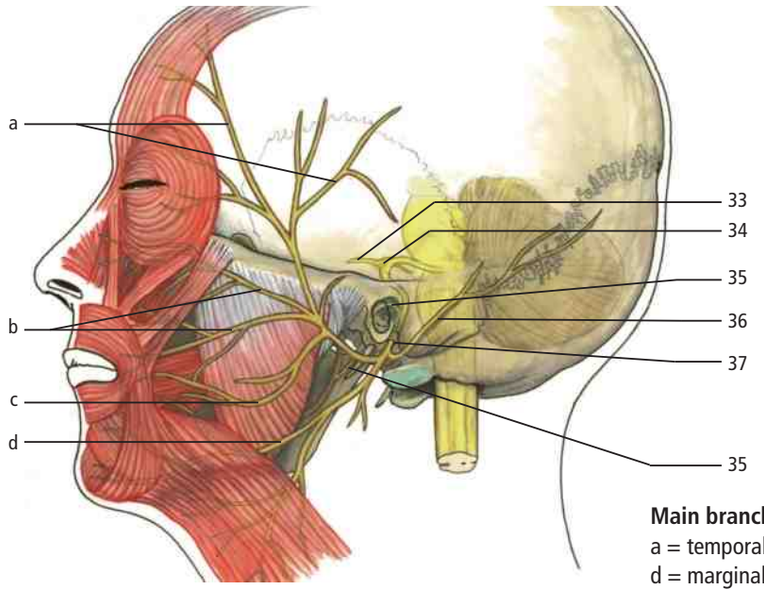


Deep dissection of facial nerve. Retromandibular and submandibular regions of the head (lateral aspect). The parotid gland has been removed.

1 Temporoparietalis muscle
2 Superficial temporal artery and vein, and auriculotemporal nerve
3 Occipital belly of occipitofrontalis muscle and greater occipital nerve (C_2)
4 Facial nerve (n. VII)
5 Lesser occipital nerve and occipital artery
6 Transverse facial artery
7 Masseter muscle
8 Parotid gland and great auricular nerve
9 Splenius capitis muscle
10 Trapezius muscle
11 Punctum nervosum, point of distribution of cutaneous nerves of cervical plexus
12 Sternocleidomastoid muscle and external jugular vein
13 Supraclavicular nerves
14 Brachial plexus
15 Supra-orbital nerves
16 Orbicularis oculi muscle
17 Angular artery (terminal branch of facial artery)
18 Nasalis muscle
19 Zygomaticus major muscle
20 Parotid duct
21 Zygomatic and buccal branches of facial nerve
22 Orbicularis oris muscle
23 Depressor anguli oris muscle
24 Platysma muscle
25 Cervical branch of facial nerve (anastomosing with transverse cervical nerve of cervical plexus)
26 Facial artery and vein
27 Temporal branches of facial nerve
28 Submandibular gland
29 Mandible
30 Mylohyoideus muscle and nerve
31 Anterior belly of digastric muscle
32 Omohyoid muscle
33 Greater petrosal nerve
34 Geniculate ganglion
35 Chorda tympani
36 Posterior auricular nerve
37 Stylomastoid foramen
38 Sternocleidomastoid muscle and retromandibular vein



Main branches of facial nerve (schematic drawing).
a = temporal branches; b = zygomatic branches; c = buccal branches; d = marginal mandibular branch.

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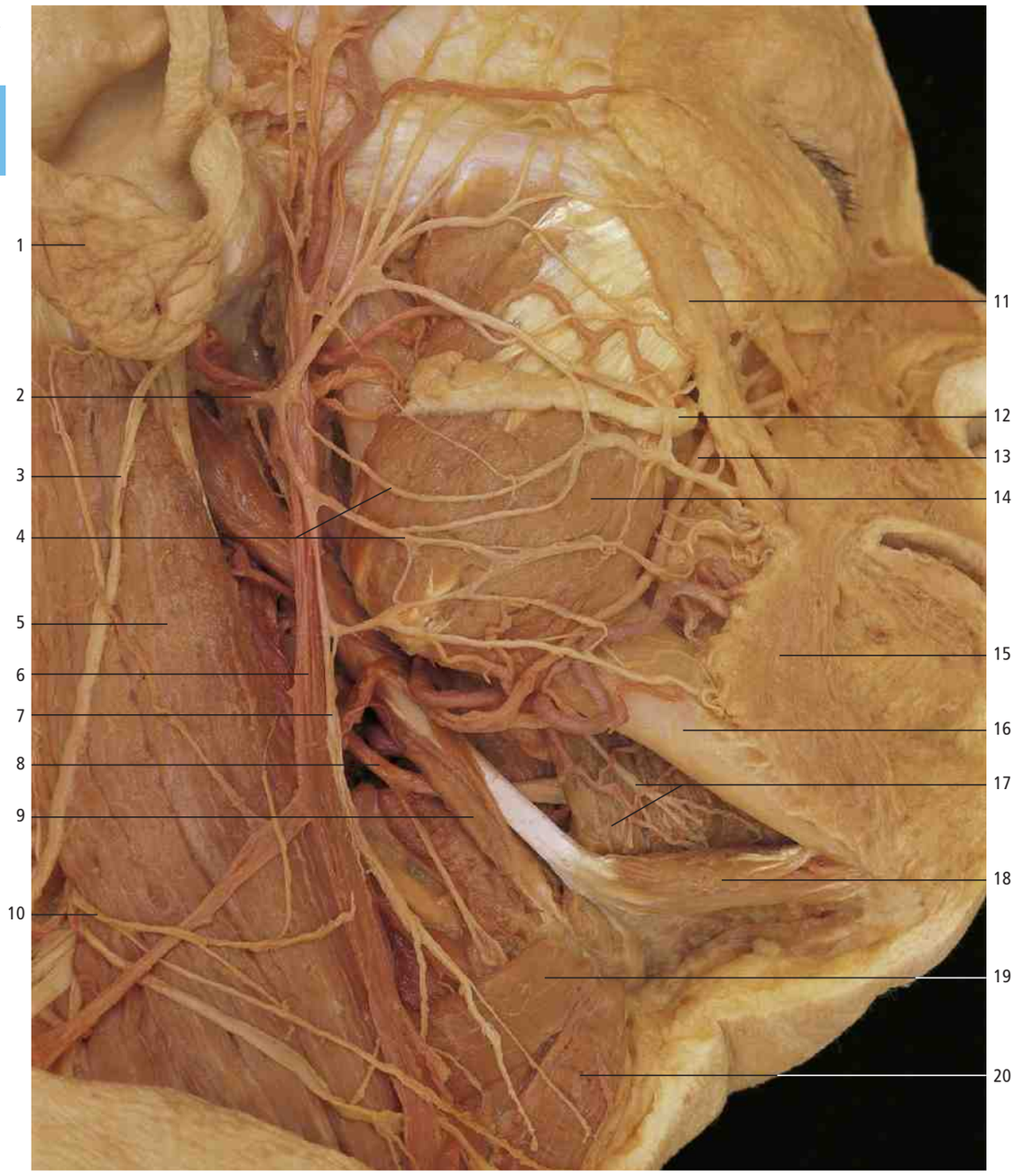

Deep dissection of facial nerve. Retromandibular and submandibular regions of the head (lateral aspect). The parotid gland and the submandibular gland have been removed. The parotid plexus (4) is formed by anastomosis of the temporal, zygomatic, buccal, marginal mandibular, and cervical branches of the facial nerve, arising in the parotid gland.

1 Parotid gland
2 Facial nerve (n. VII)
3 Great auricular nerve
4 Parotid plexus
5 Sternocleidomastoid muscle
6 Retromandibular vein
7 Cervical branch of facial nerve
8 Hypoglossal nerve (n. XII)
9 Stylohyoid muscle
10 Transverse cervical nerve
11 Zygomaticus major muscle
12 Parotid duct
13 Facial artery
14 Masseter muscle
15 Depressor anguli oris muscle
16 Mandible
17 Mylohyoid muscle and nerve
18 Anterior belly of digastric muscle
19 Omohyoid muscle
20 Sternohyoid muscle

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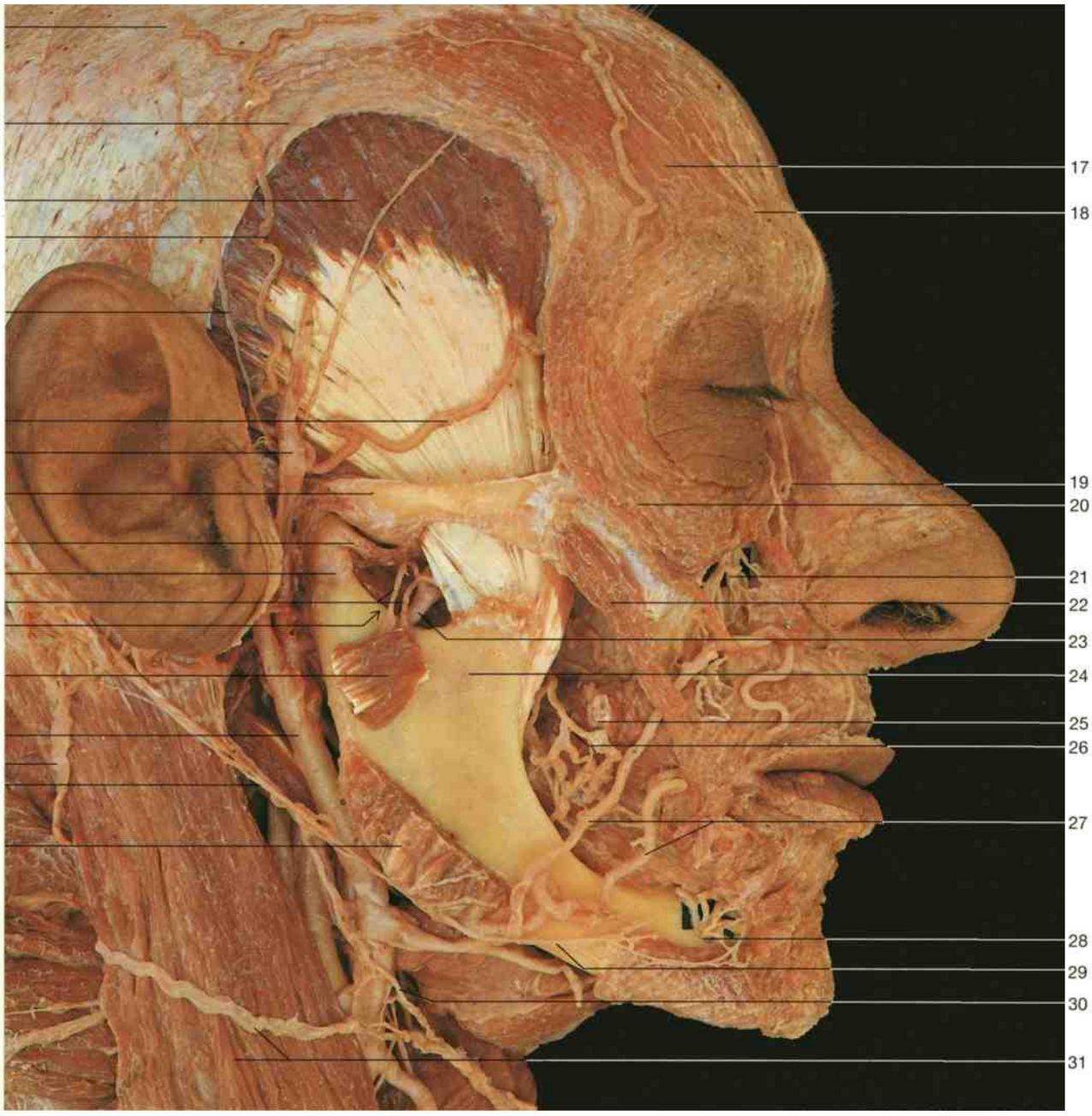

Lateral superficial aspect of the face. Masseter muscle and temporal fascia have been partly removed to display the masseteric artery and nerve.

1 Galea aponeurotica
2 Temporal fascia
3 Temporalis muscle
4 Parietal branch of superficial temporal artery
5 Auriculotemporal nerve
6 Frontal branch of superficial temporal artery
7 Superficial temporal vein
8 Zygomatic arch
9 Articular disc of temporomandibular joint
10 Head of mandible
11 Masseteric artery and nerve
12 Mandibular notch
13 Masseter muscle (divided)
14 External carotid artery
15 Great auricular nerve
16 Facial nerve (reflected)
17 Frontal belly of occipitofrontalis muscle
18 Medial branch of supra-orbital nerve
19 Angular artery
20 Orbicularis oculi muscle
21 Infra-orbital nerve
22 Zygomaticus major muscle
23 Maxillary artery
24 Coronoid process
25 Parotid duct (divided)
26 Buccal nerve
27 Facial artery and vein
28 Mental nerve
29 Mandibular branch of facial nerve
30 Cervical branch of facial nerve
31 Transverse cervical nerve (communicating branch with facial nerve) and sternocleidomastoid muscle

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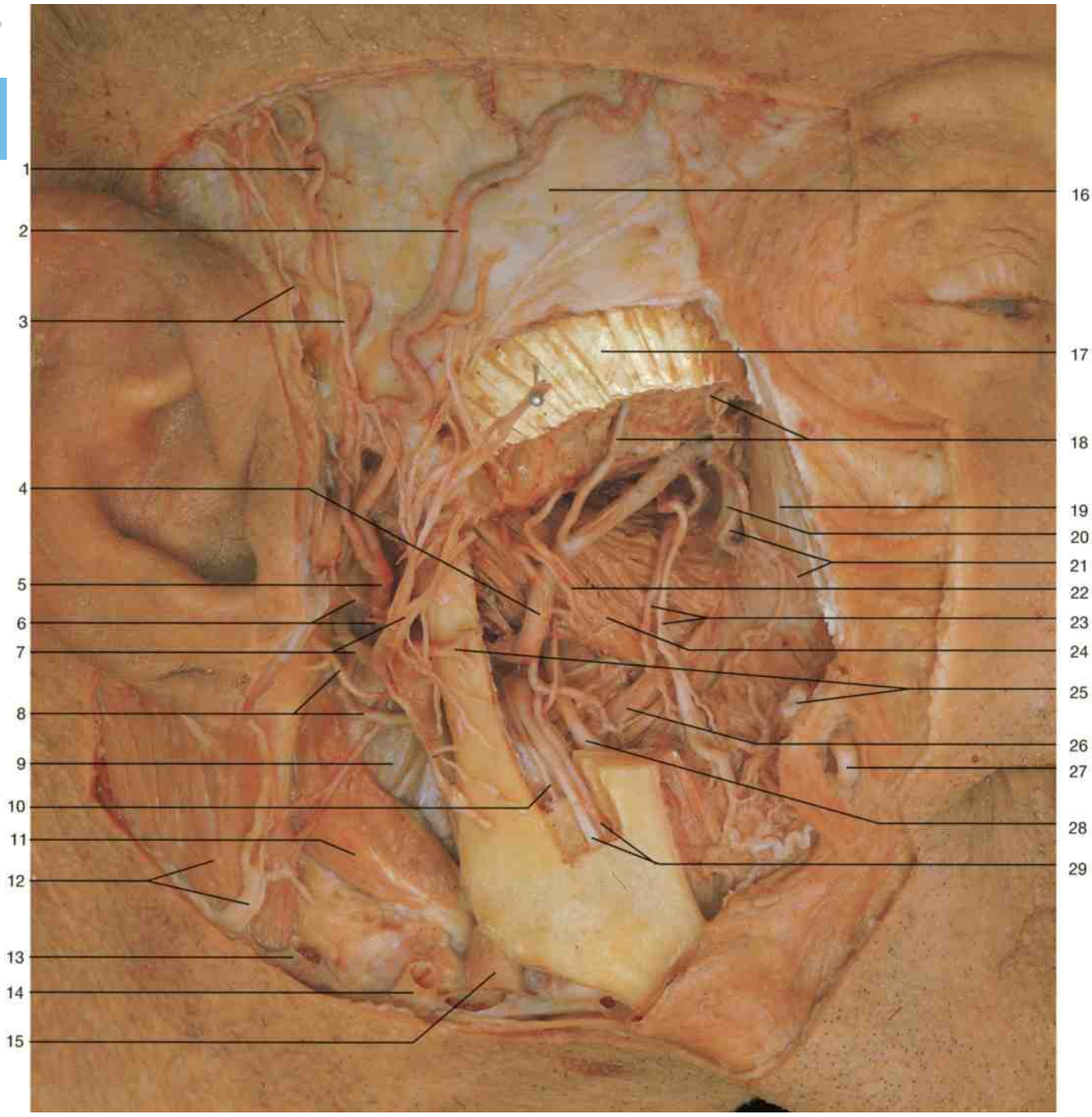

Deep dissection of facial and retromandibular regions. The coronoid process together with the insertions of temporalis muscle have been removed to display the maxillary artery. The upper part of the mandibular canal has been opened.

1 Parietal branch of the superficial temporal artery
2 Frontal branch of the superficial temporal artery
3 Auriculotemporal nerve
4 Maxillary artery
5 Superficial temporal artery
6 Communicating branches between facial and auriculotemporal nerves
7 Facial nerve
8 Posterior auricular artery and anterior auricular branch of superficial temporal artery
9 Internal jugular vein
10 Mylohyoid nerve
11 Posterior belly of digastric muscle
12 Great auricular nerve and sternocleidomastoid muscle
13 External jugular vein
14 Retromandibular vein
15 Submandibular gland
16 Temporal fascia
17 Temporalis tendon
18 Deep temporal arteries
19 Posterior superior alveolar nerve
20 Sphenopalatine artery
21 Posterior superior alveolar arteries
22 Masseteric artery and nerve
23 Buccal nerve and artery
24 Lateral pterygoid
25 Transverse facial artery and parotid duct (divided)
26 Medial pterygoid muscle
27 Facial artery
28 Lingual nerve
29 Inferior alveolar artery and nerve (mandibular canal opened)

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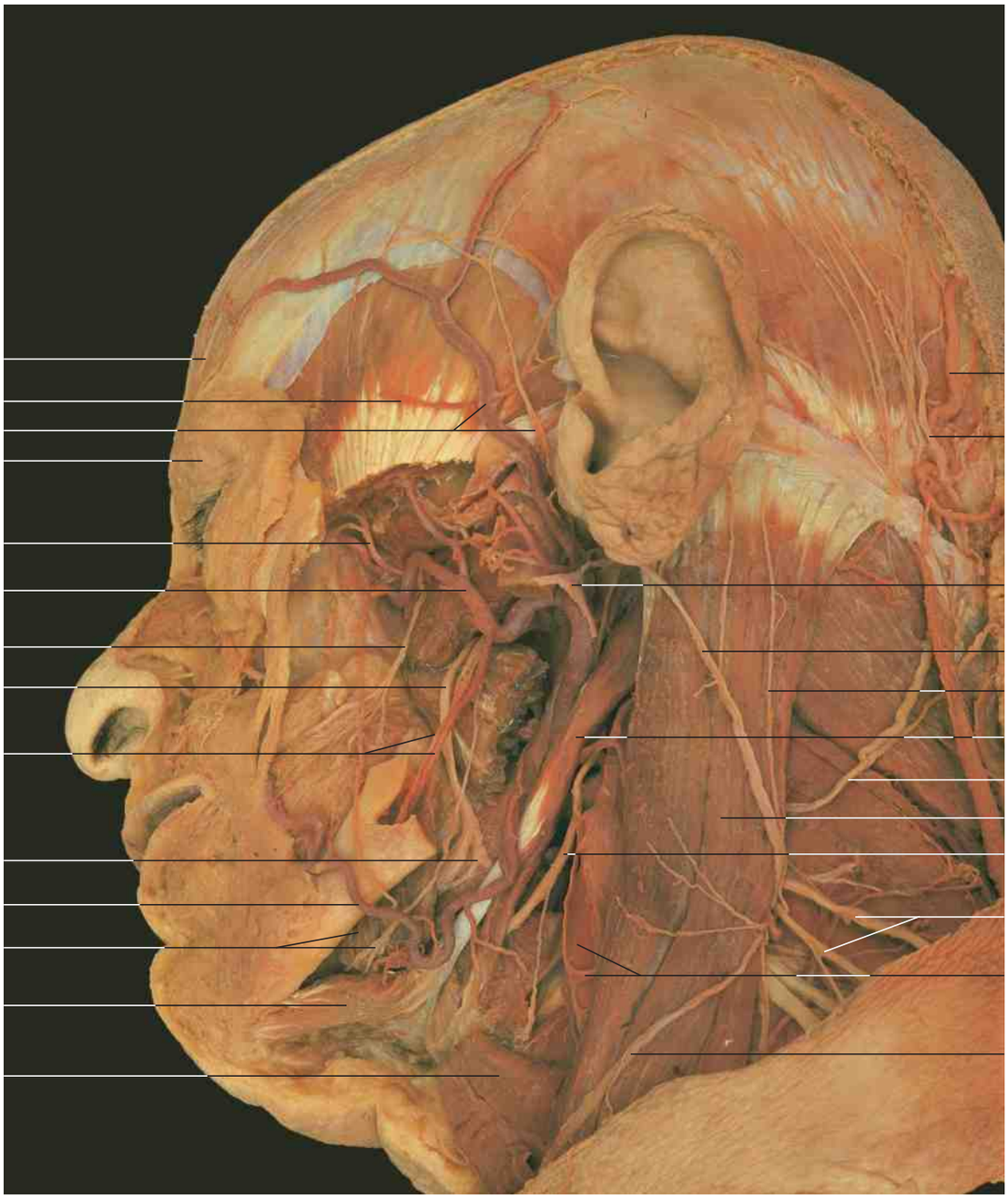

Peripharyngeal and retromandibular regions. The mandible has been partly removed (oblique lateral aspect).

1 Supra-orbital nerve (medial branch)
2 Temporalis muscle
3 Superficial temporal artery and auriculotemporal nerve
4 Orbicularis oculi muscle
5 Anterior deep temporal artery
6 Maxillary artery
7 Buccal nerve
8 Lingual nerve
9 Inferior alveolar nerve and artery
10 Submandibular ganglion
11 Facial artery
12 Mylohyoid muscle and nerve
13 Anterior belly of digastric muscle
14 Omohyoid muscle
15 Occipital artery
16 Greater occipital nerve (C_2)
17 Facial nerve (cut) (n. VII)
18 Great auricular nerve
19 Lesser occipital nerve
20 Posterior belly of digastric muscle
21 Accessory nerve (Var.)
22 Sternocleidomastoid muscle
23 Hypoglossus nerve (n. XII)
24 Supraclavicular nerves (lateral and intermedial branches)
25 Internal jugular vein and ansa cervicalis
26 Anterior supraclavicular nerve

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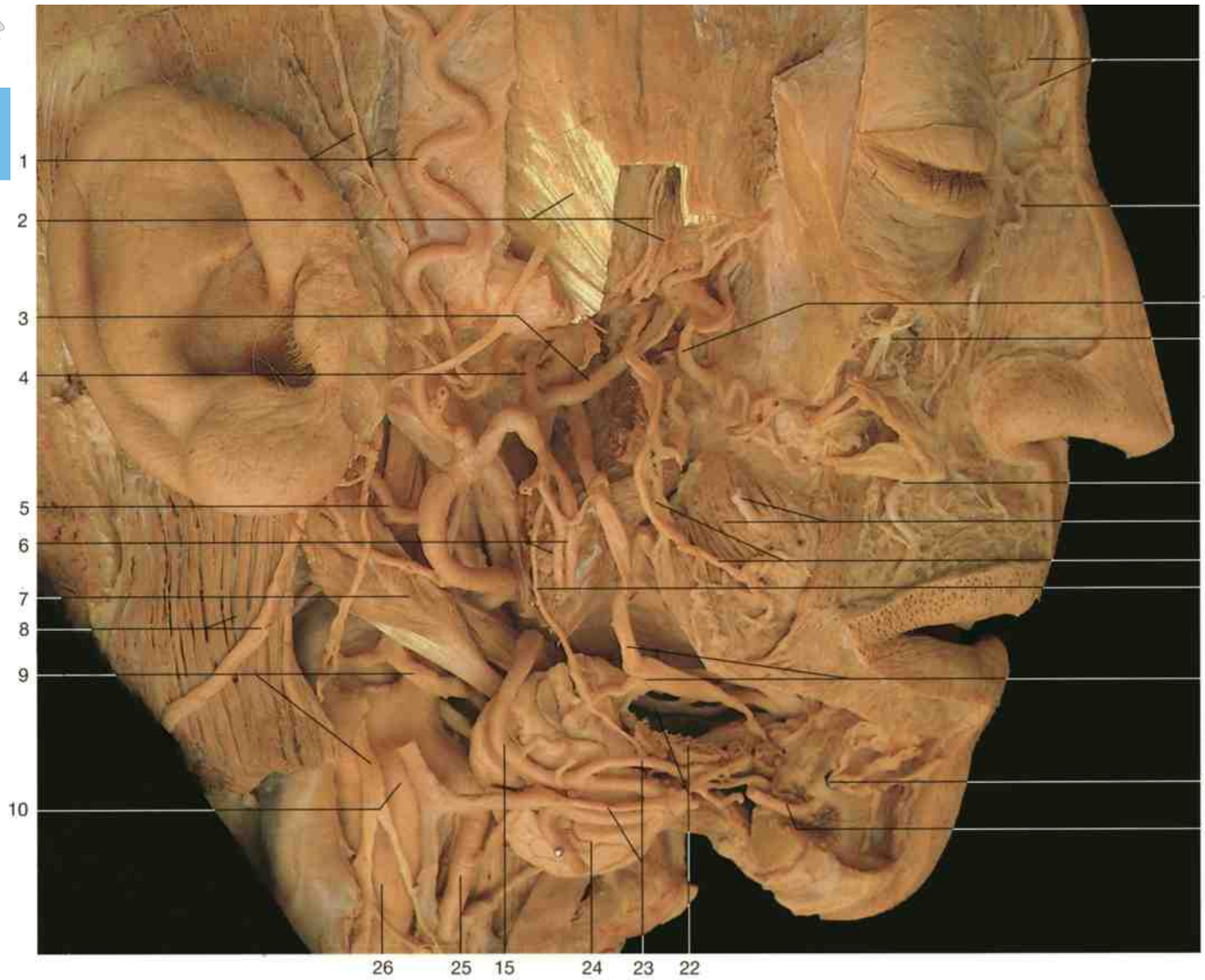
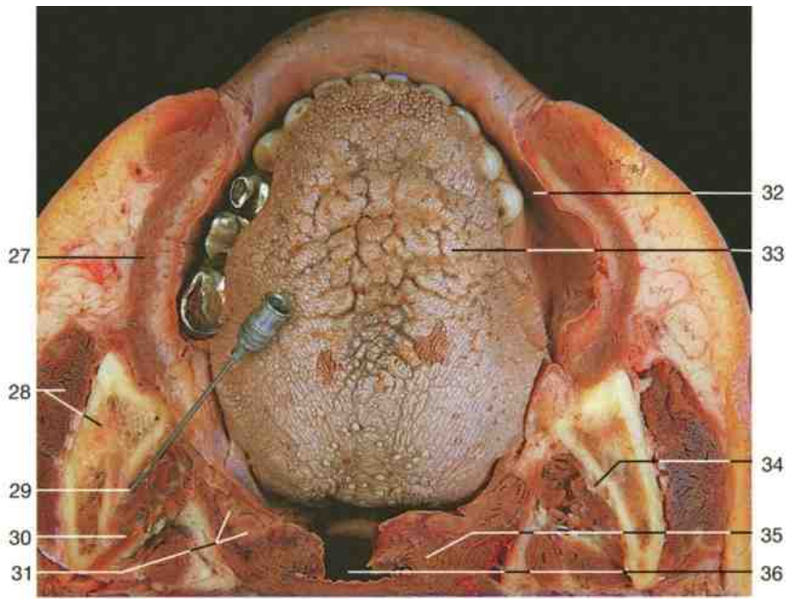


Dissection of deep facial and retromandibular regions after removal of mandible. Pterygoid muscles removed, temporalis muscle fenestrated.



Transverse section through oral cavity and pharynx. The location of inferior alveolar nerve and artery is indicated by a needle.

1 Superficial temporal artery and vein and auriculotemporal nerve
2 Temporalis tendon, deep temporal nerves and artery
3 Maxillary artery
4 Middle meningeal artery
5 Occipital artery
6 Inferior alveolar artery and nerve
7 Posterior belly of digastric muscle
8 Great auricular nerve and sternocleidomastoid muscle
9 Hypoglossal nerve and superior root of ansa cervicalis
10 External carotid artery
11 Supratrochlear nerve and medial branch of supra-orbital artery
12 Angular artery
13 Posterior superior alveolar artery
14 Infra-orbital nerve
15 Facial artery
16 Parotid duct (divided) and buccinator muscle
17 Buccal artery and nerve

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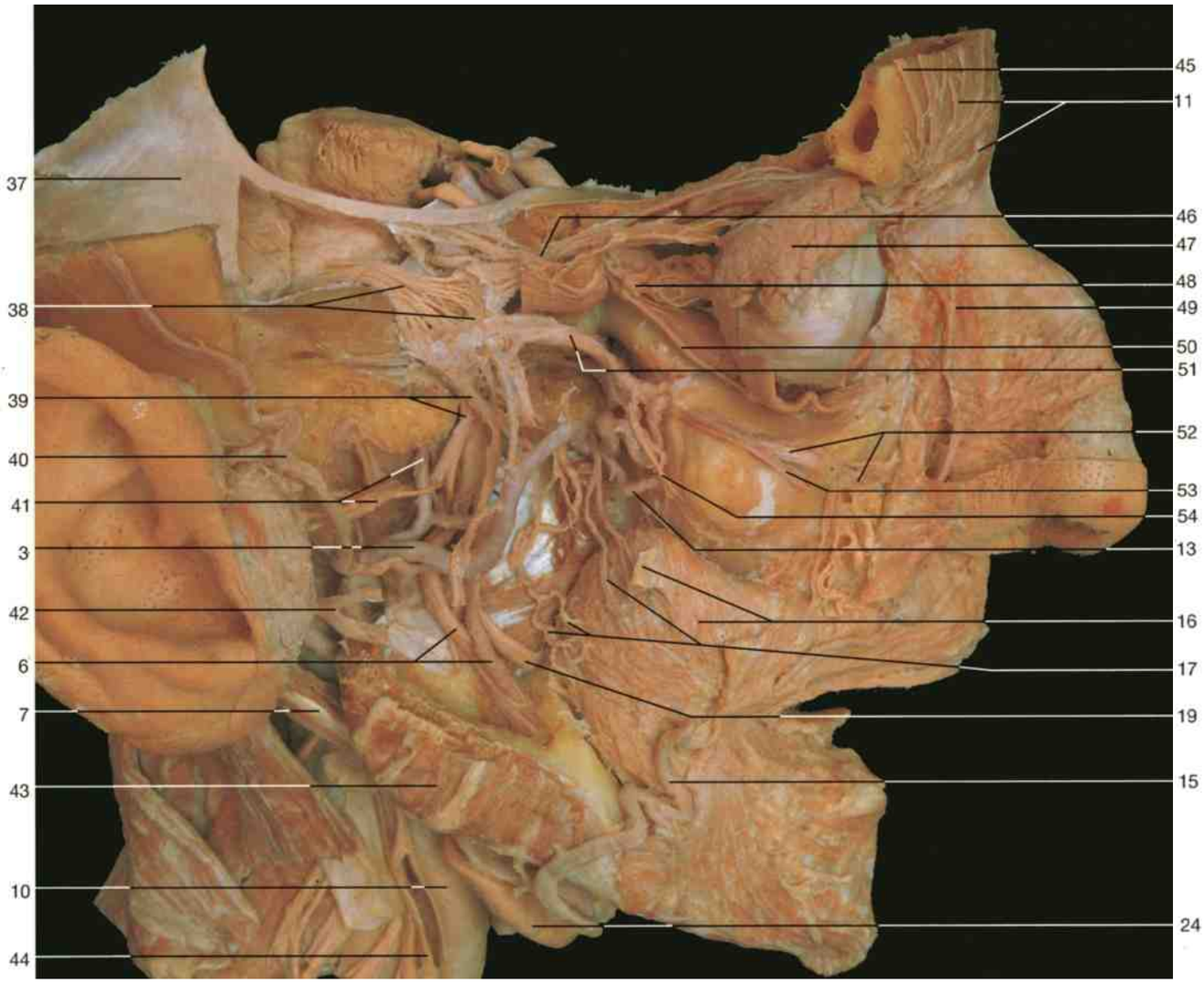

Para- and retropharyngeal regions. The mandible and the lateral wall of the orbit have been removed. The main branches of the trigeminal nerve and its ganglion are displayed.

18 Mylohyoid nerve
19 Lingual nerve and submandibular ganglion
20 Mental nerve and mental foramen
21 Inferior alveolar nerve
22 Mylohyoid muscle (divided) and hypoglossal nerve
23 Submental artery and vein
24 Submandibular gland
25 Superior thyroid artery
26 Common carotid artery
27 Buccinator muscle
28 Masseter muscle and mandible
29 Entrance of mandibular canal
30 Medial pterygoid muscle
31 Palatine tonsil
32 Oral vestibule
33 Tongue
34 Inferior alveolar nerve, artery, and vein
35 Pharyngeal constrictor muscle
36 Pharynx
37 Tentorium of cerebellum
38 Trigeminal nerve and ganglion
39 Mandibular nerve
40 Superficial temporal artery
41 Auriculotemporal nerve and middle meningeal artery
42 Facial nerve (divided)
43 Masseter muscle
44 Superior root of ansa cervicalis
45 Lateral branch of supra-orbital nerve
46 Ophthalmic nerve
47 Lacrimal gland
48 Ciliary ganglion and short ciliary nerves
49 Angular artery
50 Inferior branch of oculomotor nerve
51 Maxillary nerve
52 Infra-orbital nerve
53 Anterior superior alveolar nerve
54 Posterior superior alveolar nerve

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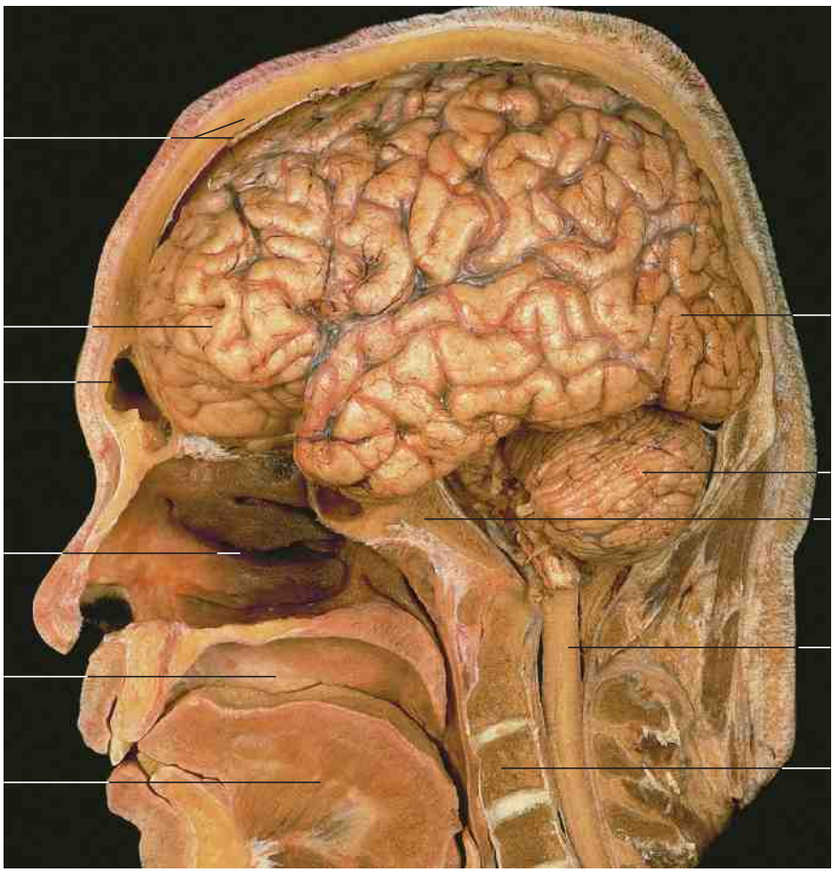
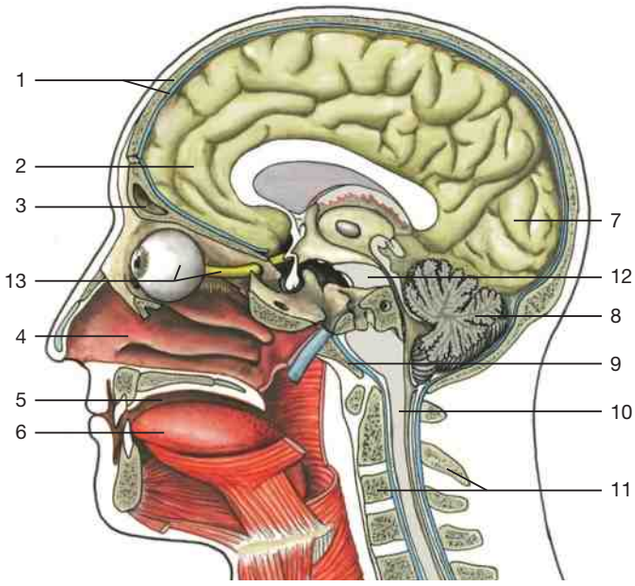
2.3 Brain and Sensory Organs



Dissection of the brain with pia mater and arachnoid in situ. The head is cut in half except for the brain, which is shown in its entirety.

The cranial cavity harbours the brain, the cerebellum, and the brain stem from where the cranial nerves emerge and exit the skull through various openings and fissures. The great sensory organs are located within the orbit (eye), the nasal cavity (olfactory system), and the petrous portion of the temporal bone (vestibulocochlear organ). The brain is enwrapped by the pia mater containing the brain vessels. The dura mater is firmly attached to the skull and provides shelter and stabilization for the brain. Interposed between pia and dura mater lies the arachnoid containing the cerebrospinal fluid.



Sagittal section through the head with brain and sensory organs (schematic drawing). The eye with the optic nerve is located within the orbit; the labyrinth organ, within the petrous bone.

1 Vertex of the skull and dura mater
2 Frontal lobe covered by arachnoid and pia mater
3 Frontal sinus
4 Nasal cavity
5 Oral cavity
6 Tongue
7 Occipital lobe
8 Cerebellum
9 Base of skull
10 Spinal cord
11 Vertebral column
12 Brain stem
13 Eye and optic nerve (n. II)

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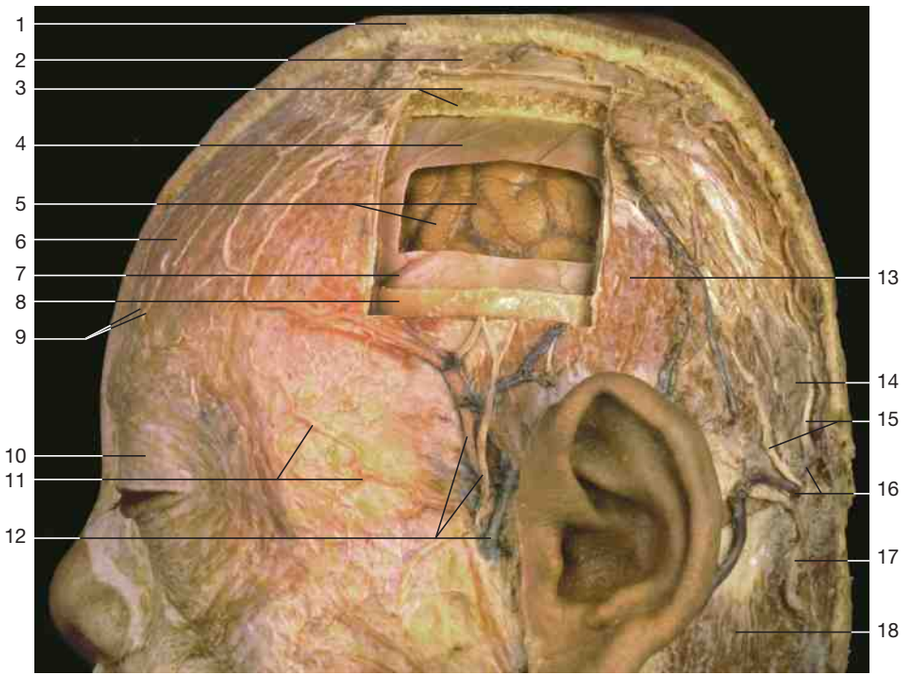
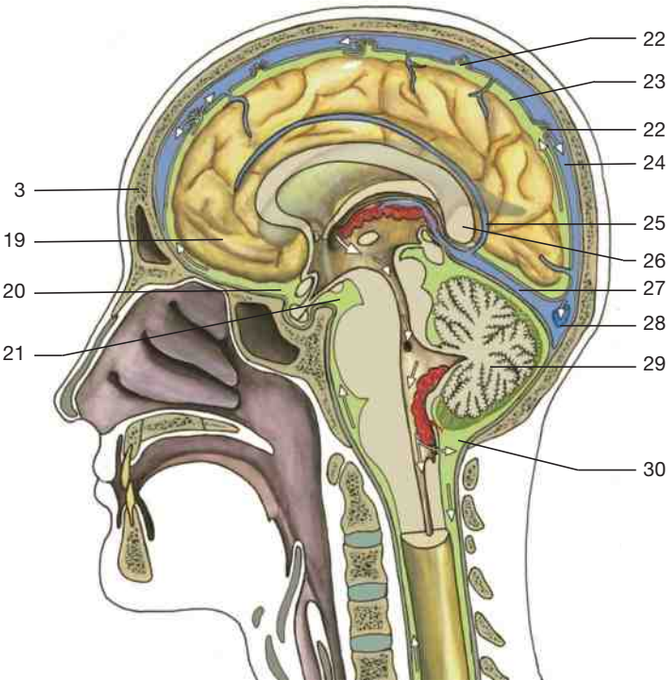
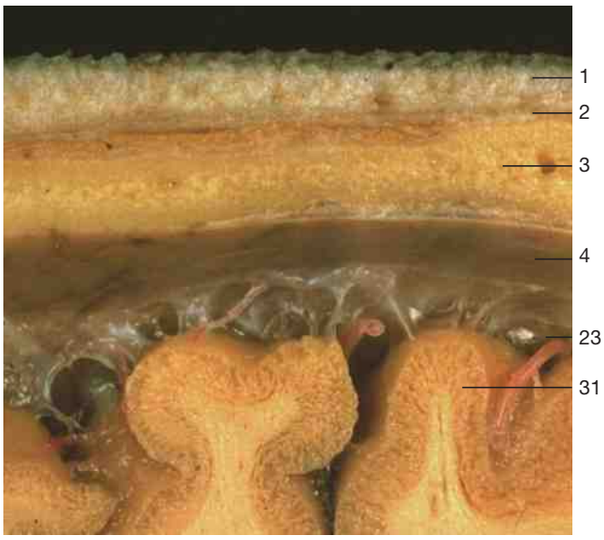


Lateral aspect of the head. Scalp, vertex of the skull, and meninges are demonstrated by a series of window-like openings.

1 Skin
2 Galea aponeurotica
3 Skull diploe
4 Dura mater
5 Arachnoid and pia mater with cerebral vessels
6 Frontal belly of occipitofrontalis muscle
7 Branch of middle meningeal artery
8 Pericranium (periosteum)
9 Lateral and medial branches of supra-orbital nerve
10 Orbicularis oculi muscle
11 Zygomatico-orbital artery
12 Auriculotemporal nerve and superficial temporal artery and vein
13 Superior auricular muscle
14 Occipital belly of occipitofrontalis muscle
15 Occipital nerve
16 Occipital artery and vein
17 Greater occipital nerve
18 Sternocleidomastoid muscle
19 Frontal lobe
20 Chiasmatic cistern
21 Interpeduncular cistern
22 Arachnoid granulations
23 Subarachnoid space
24 Superior sagittal sinus
25 Inferior sagittal sinus
26 Corpus callosum
27 Straight sinus
28 Confluence of sinuses
29 Cerebellum
30 Cerebellomedullar cistern
31 Cerebral cortex



Subarachnoid cisterns of the brain (midsagittal section). Green = cisterns; blue = dural sinus and ventricles; red = choroid plexus of third and fourth ventricles; arrows = flow of cerebrospinal fluid.



Cross section of the scalp and the meninges. The subarachnoid space (23) is shown.

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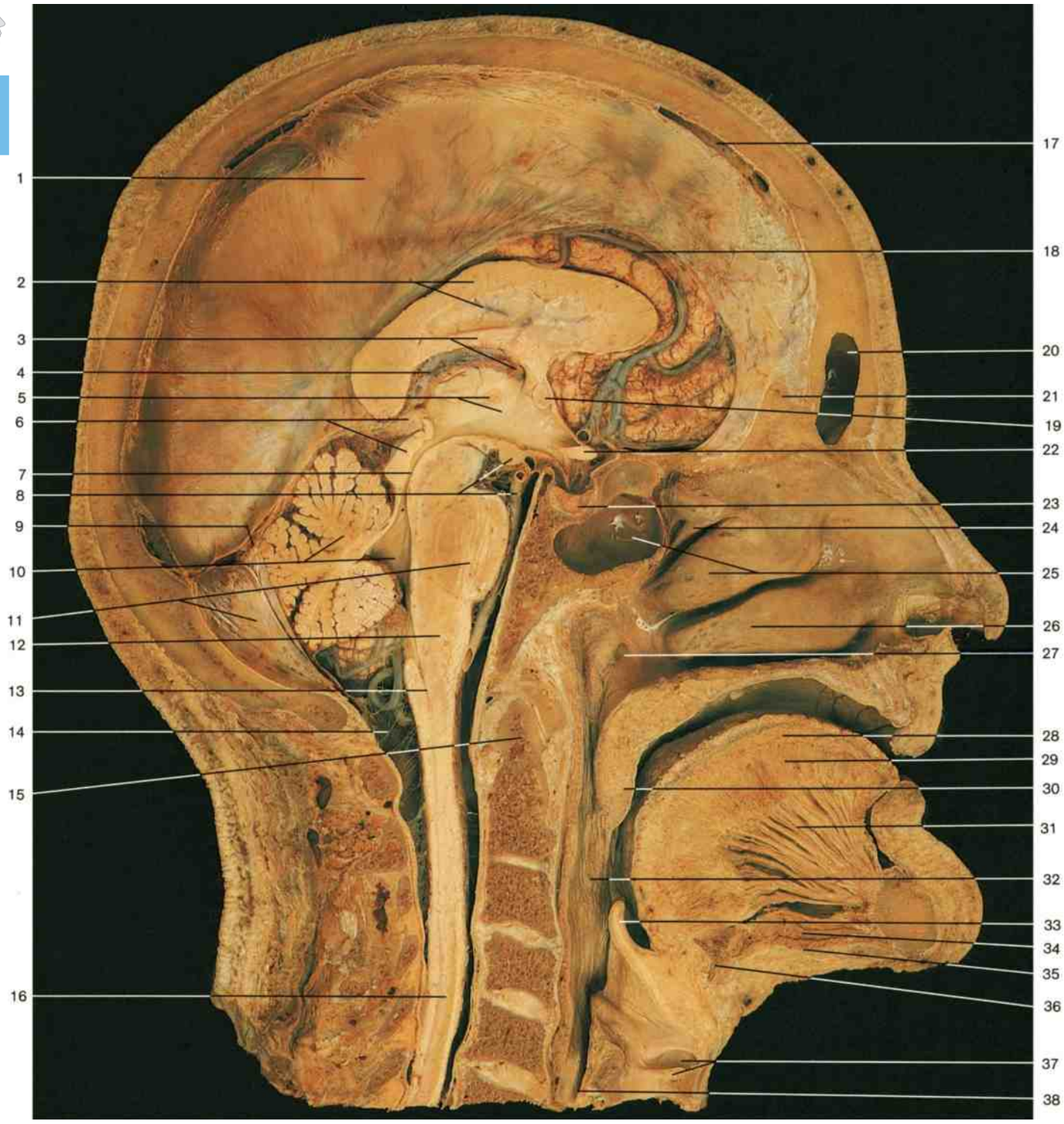

Median sagittal section through the head and neck.

1 Falx cerebri
2 Corpus callosum and septum pellucidum
3 Interventricular foramen and fornix
4 Choroid plexus of third ventricle and internal cerebral vein
5 Third ventricle and interthalamic adhesion
6 Pineal body and colliculi of the midbrain
7 Cerebral aqueduct
8 Mamillary body and basilar artery
9 Straight sinus
10 Fourth ventricle and cerebellum
11 Pons and falx cerebelli
12 Medulla oblongata
13 Central canal
14 Cerebellomedullary cistern
15 Dens of the axis (odontoid process)
16 Spinal cord
17 Superior sagittal sinus
18 Anterior cerebral artery
19 Anterior commissure
20 Frontal sinus
21 Crista galli
22 Optic chiasma
23 Pituitary gland (hypophysis)
24 Superior nasal concha
25 Middle nasal concha and sphenoid sinus
26 Inferior nasal concha
27 Pharyngeal opening of auditory tube
28 Superior longitudinal muscle of tongue
29 Vertical muscle of the tongue
30 Uvula
31 Genioglossus muscle
32 Pharynx
33 Epiglottis
34 Geniohyoid muscle
35 Mylohyoid muscle
36 Hyoid bone
37 Vocal fold and sinus of larynx
38 Esophagus

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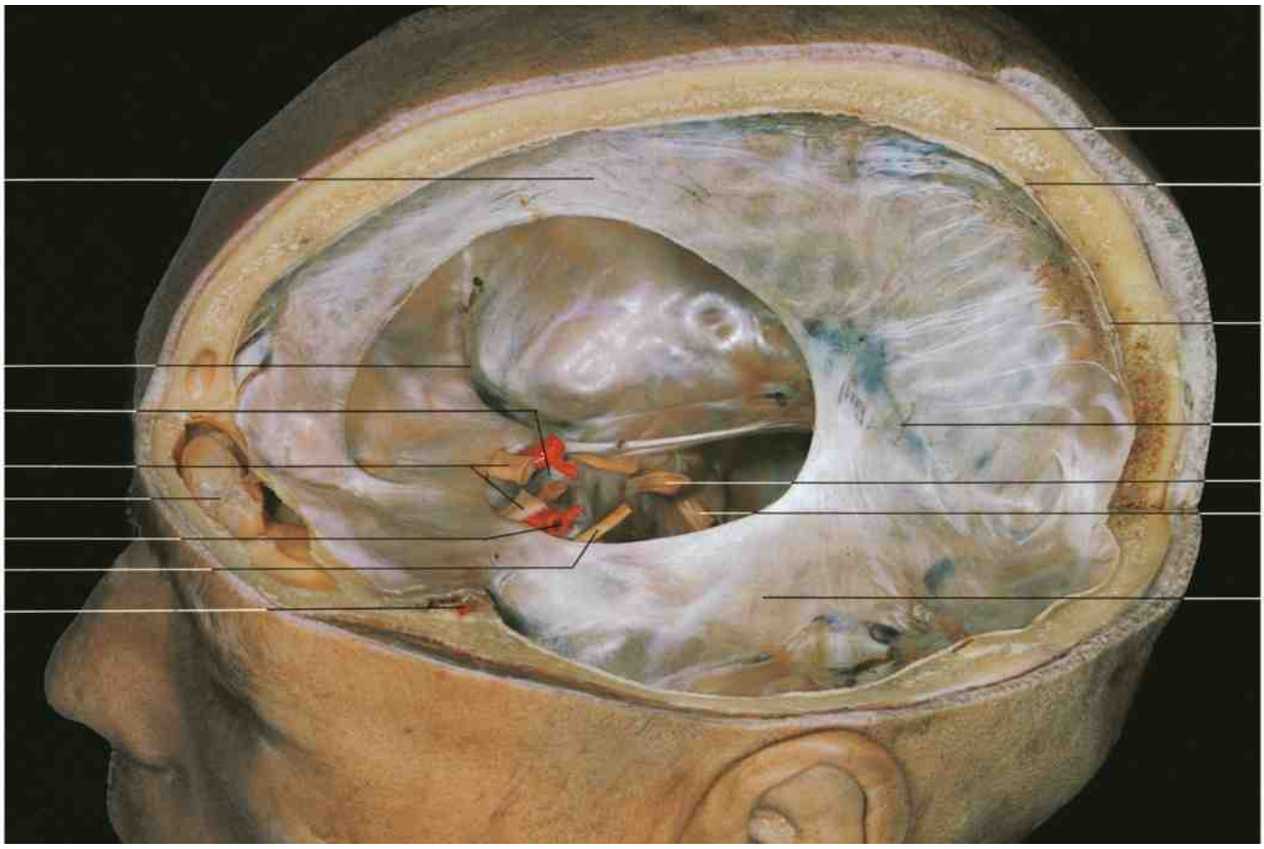
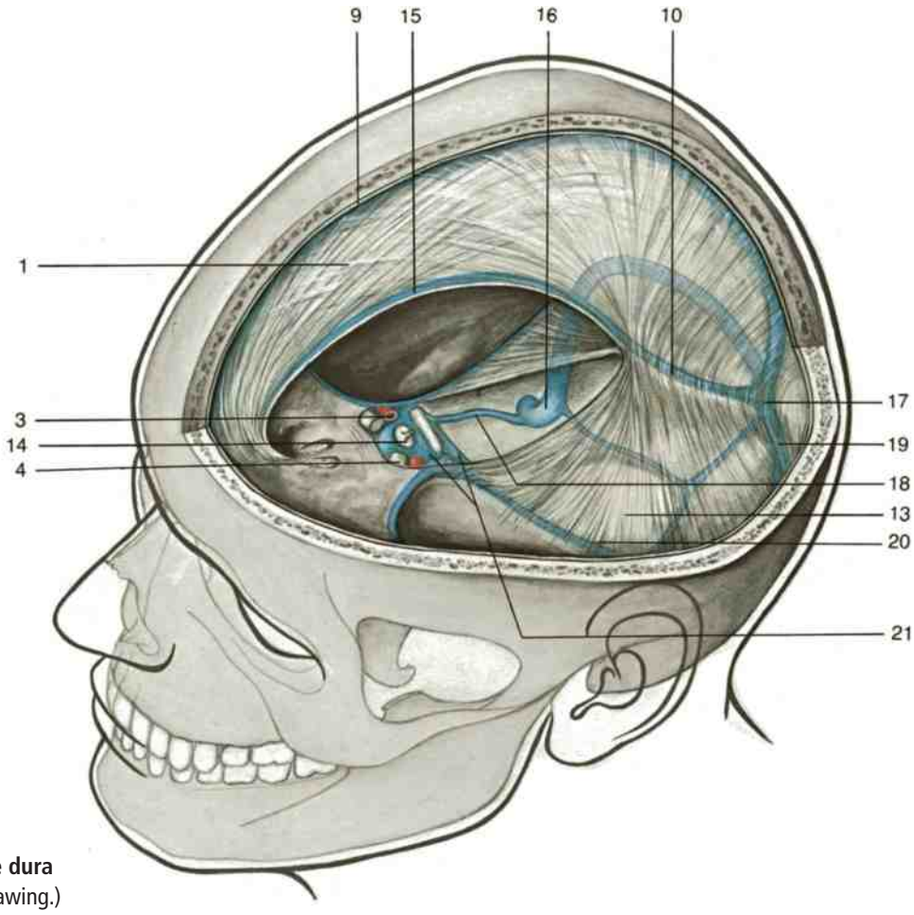


Dura mater and venous sinuses of the dura mater. The brain has been removed (oblique lateral aspect).

1 Falx cerebri
2 Position of middle meningeal artery and vein
3 Internal carotid artery
4 Optic nerve (n. II)
5 Frontal sinus
6 Oculomotor nerve (n. III)
7 Diploe
8 Dura mater
9 Superior sagittal sinus
10 Straight sinus
11 Trigeminal nerve (n. V)
12 Facial and vestibulocochlear nerve (n. VII and n. VIII)
13 Tentorium cerebelli
14 Pituitary gland (hypophysis)
15 Inferior sagittal sinus
16 Sigmoid sinus
17 Confluence of sinuses
18 Inferior petrosal sinus
19 Transverse sinus
20 Superior petrosal sinus
21 Cavernous and intercavernous sinuses



Dura mater and venous sinuses of the dura mater (left lateral aspect). (Schematic drawing.)

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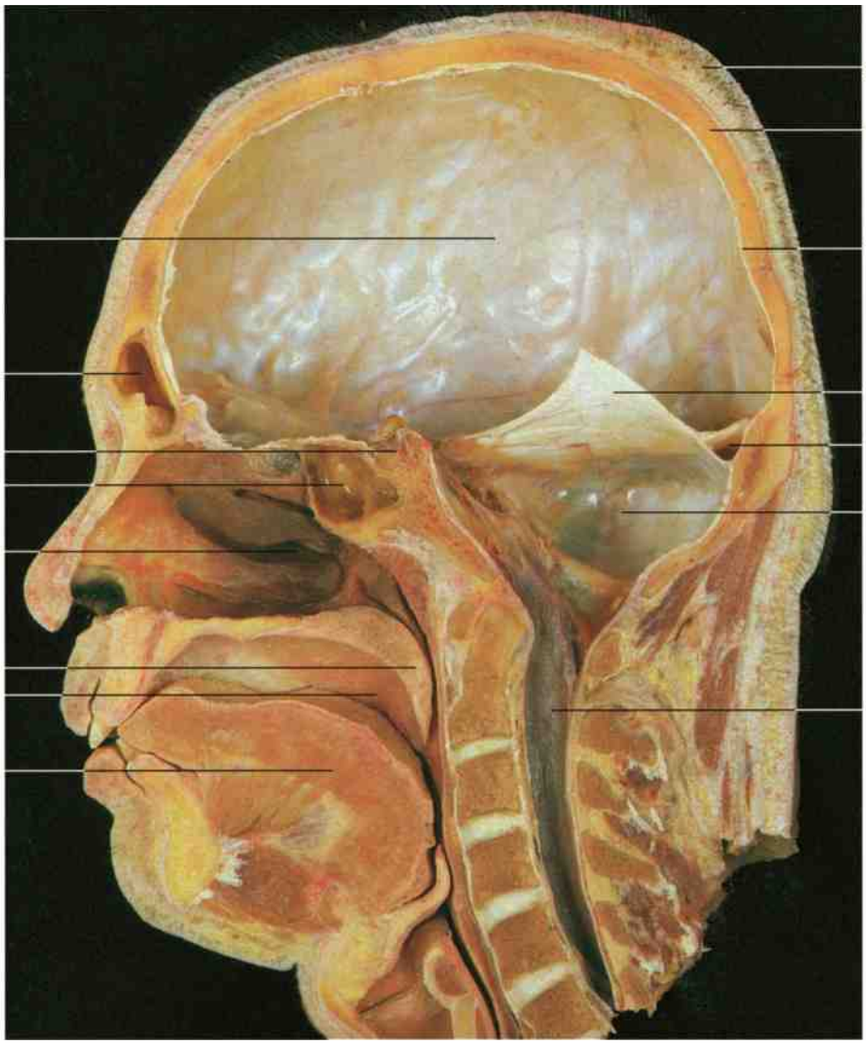
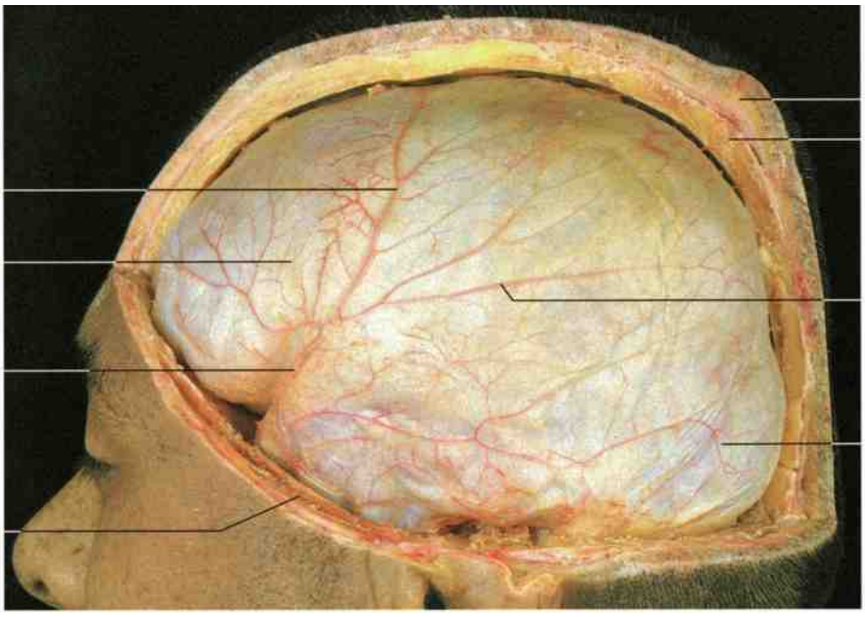


1 Cranial cavity with dura mater (right cerebral hemisphere has been removed)
2 Frontal sinus
3 Hypophysial fossa with pituitary gland
4 Sphenoidal sinus
5 Nasal cavity
6 Soft palate (uvula)
7 Oral cavity
8 Tongue
9 Skin
10 Calvaria
11 Dura mater
12 Tentorium cerebelli
13 Confluence of sinuses
14 Infratentorial space (cerebellum and part of the brain stem have been removed)
15 Vertebral canal
16 Frontal branch of middle meningeal artery and veins
17 Middle meningeal artery
18 Diploe
19 Parietal branch of middle meningeal artery and vein
20 Occipital pole of left hemisphere covered with dura mater

Median section through the head. Demonstration of dura mater covering the cranial cavity. Brain and spinal cord are removed (right half of the head, as seen from medial).



Dissection of dura mater and meningeal vessels. Left half of calvaria removed.

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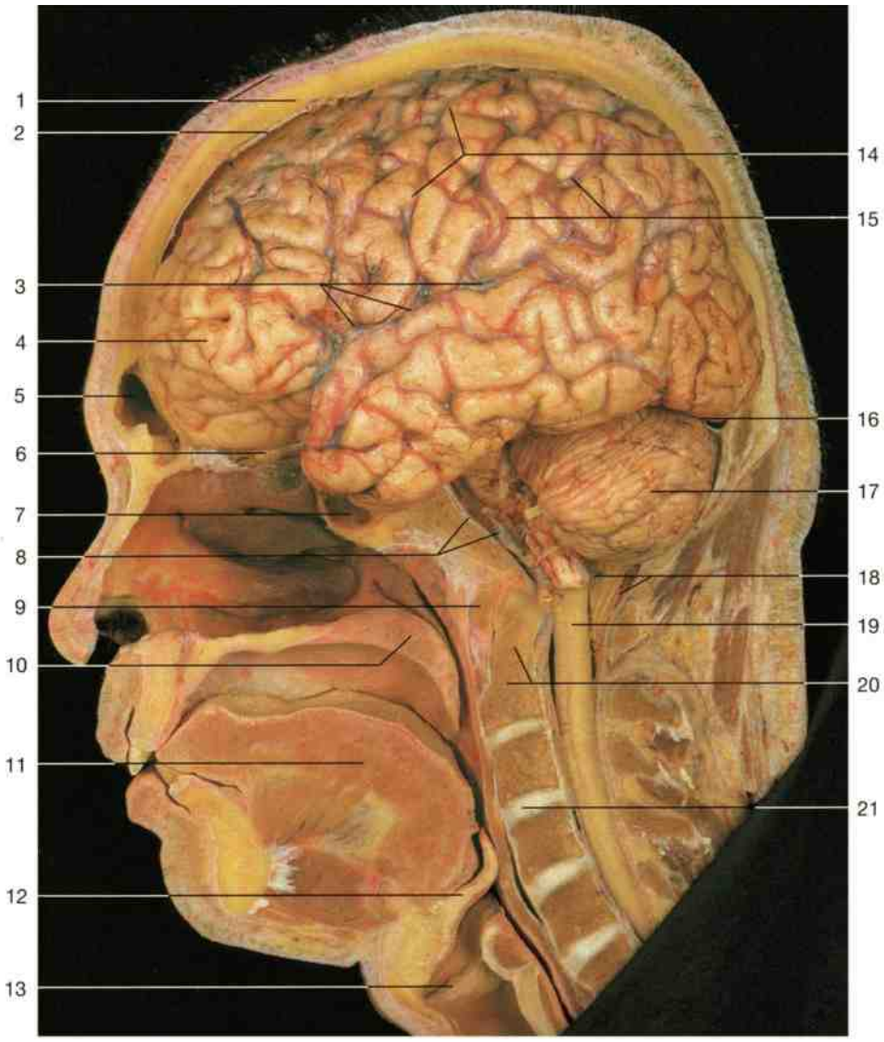
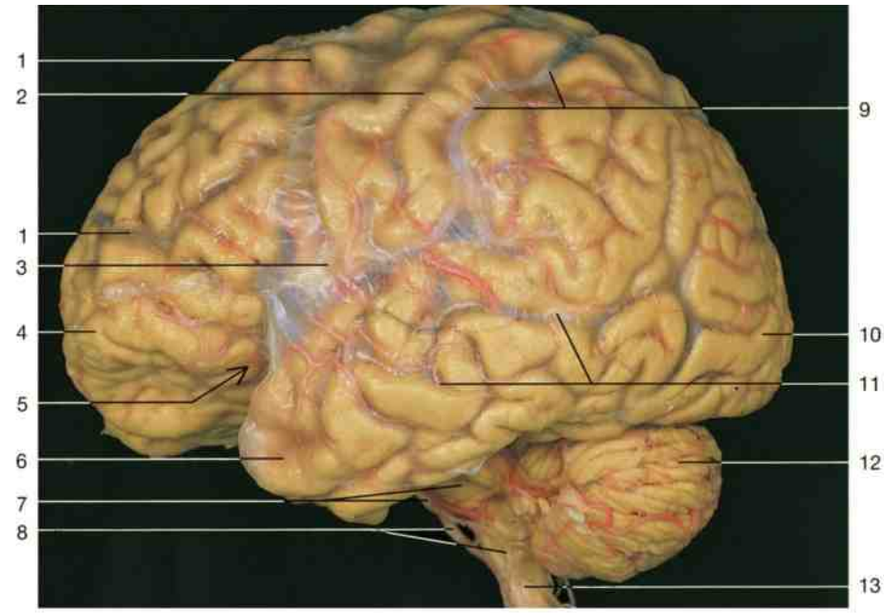


Dissection of the brain with pia mater and arachnoid in situ. The head is cut in half except for the brain, which is shown in its entirety.

1 Calvaria and skin of the scalp
2 Dura mater (divided)
3 Position of lateral sulcus
4 Frontal lobe covered by arachnoid and pia mater
5 Frontal sinus
6 Olfactory bulb
7 Sphenoidal sinus
8 Dura mater on clivus and basilar artery
9 Atlas (anterior arch, divided)
10 Soft palate
11 Tongue
12 Epiglottis
13 Vocal fold
14 Position of central sulcus
15 Superior cerebral veins
16 Tentorium (divided)
17 Cerebellum
18 Cerebellomedullary cistern
19 Position of foramen magnum and spinal cord
20 Dens of axis
21 Intervertebral disc



Brain with pia mater and arachnoid. Frontal pole to the left (lateral aspect).

1 Superior cerebral veins
2 Position of central sulcus
3 Position of lateral sulcus and cistern of lateral cerebral fossa
4 Frontal pole
5 Lateral sulcus (arrow)
6 Temporal pole
7 Pons and basilar artery
8 Vertebral arteries
9 Superior anastomotic vein
10 Occipital pole
11 Inferior cerebral veins
12 Hemisphere of cerebellum
13 Medulla oblongata

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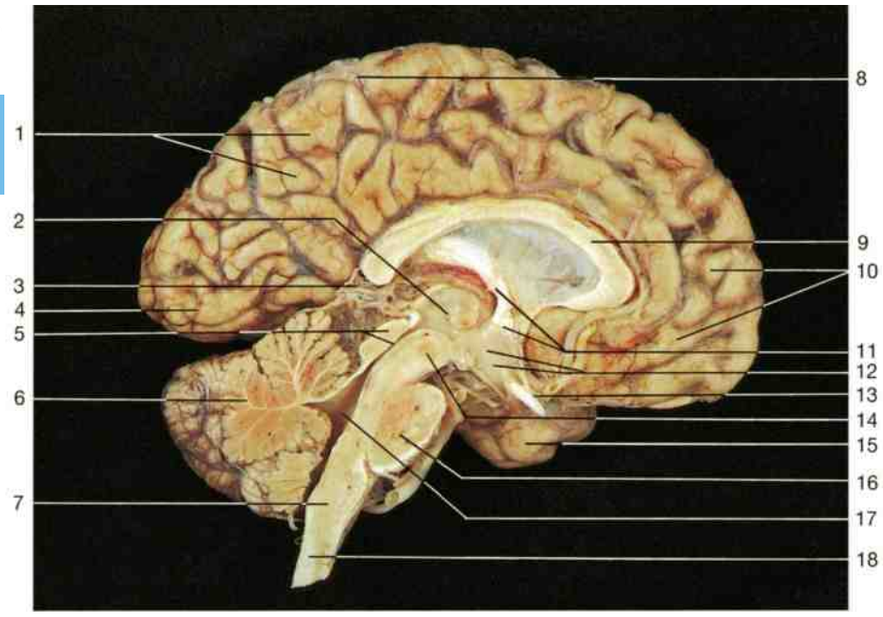
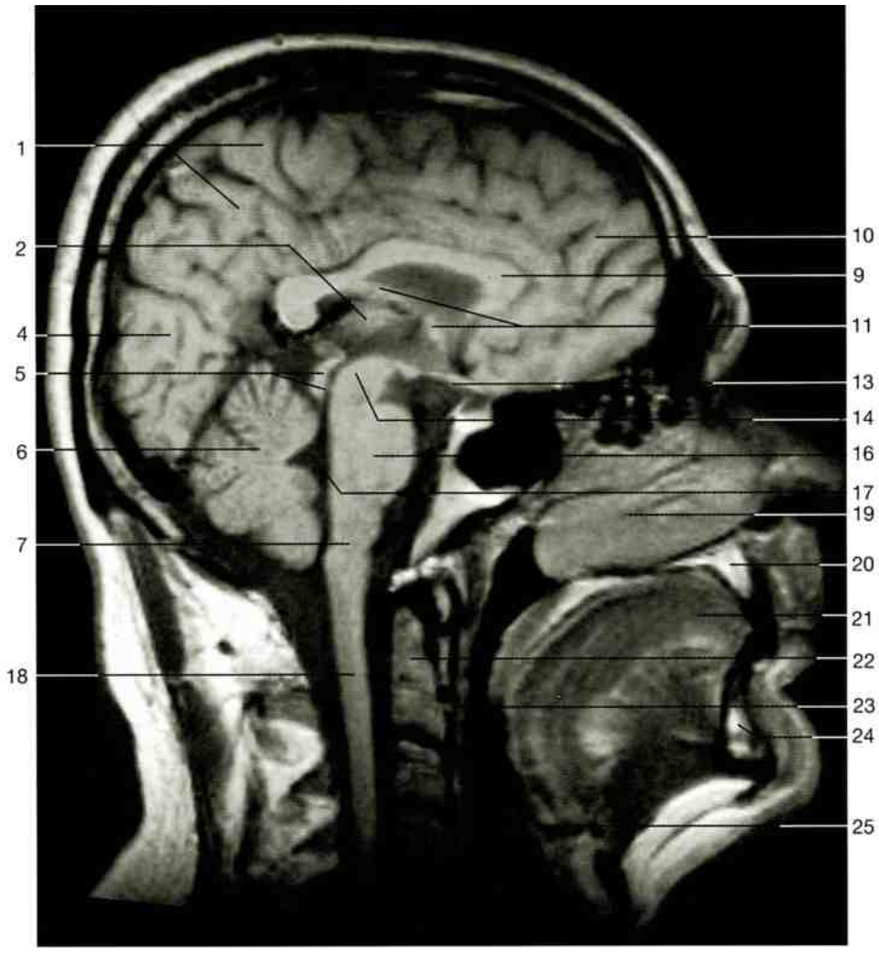


Brain and brain stem, median section. Frontal pole to the right.

1 Parietal lobe
2 Thalamus, third ventricle, and intermediate mass
3 Great cerebral vein
4 Occipital lobe
5 Colliculi of the midbrain and cerebral aqueduct
6 Cerebellum
7 Medulla oblongata
8 Central sulcus
9 Corpus callosum
10 Frontal lobe
11 Fornix and anterior commissure
12 Hypothalamus
13 Optic chiasma
14 Midbrain
15 Temporal lobe
16 Pons
17 Fourth ventricle
18 Spinal cord
19 Inferior concha and nasal cavity
20 Alveolar process of maxilla
21 Tongue
22 Dens of axis
23 Oral part of pharynx
24 Alveolar process of mandible
25 Epiglottis



Median section through the head. (MRI scan, cf. section on opposite page.)

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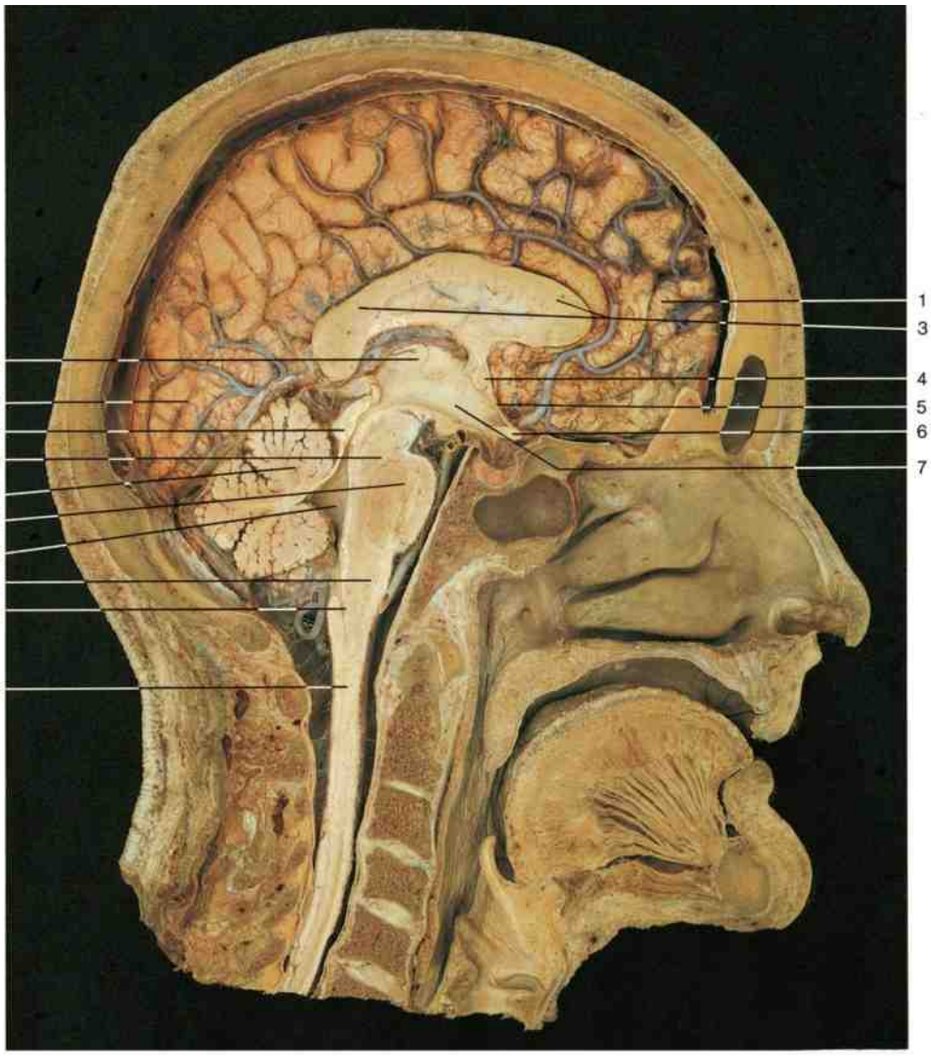
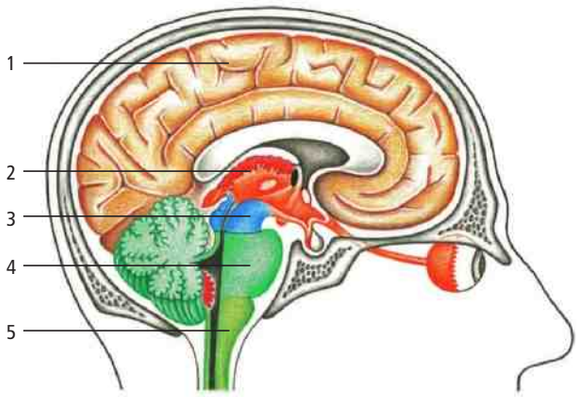


1 Frontal lobe of cerebrum
2 Occipital lobe of cerebrum
3 Corpus callosum
4 Anterior commissure
5 Lamina terminalis
6 Optic chiasma
7 Hypothalamus
8 Thalamus and third ventricle
9 Colliculi of the midbrain
10 Midbrain (inferior portion)
11 Cerebellum
12 Pons
13 Fourth ventricle
14 Medulla oblongata
15 Central canal
16 Spinal cord

Median section through the head. Regions of the brain. Falx cerebri removed.



Scheme of brain divisions (cf. table). (Schematic drawing.) Red = choroidal plexus.

1 Telencephalon (yellow) with lateral ventricles
2 Diencephalon (orange) with third ventricle, optic nerve, and retina
3 Mesencephalon (blue) with cerebral aqueduct
4 Metencephalon (green) with fourth ventricle
5 Myelencephalon (yellow-green)

I. Prosencephalon (forebrain)	1. Telencephalon (cerebral hemispheres, striatum, etc.) 2. Diencephalon (thalamus, metathalamus, hypothalamus, etc.)
II. Mesencephalon (midbrain)	3. Mesencephalon (colliculi, cerebral peduncles, tegmentum)
III. Rhombencephalon (hindbrain)	4. Metencephalon (pons, cerebellum) 5. Myelencephalon (medulla oblongata)

Main divisions of the brain
I–III = primary brain vesicles; 1–5 = secondary brain vesicles

Diencephalon, midbrain, pons, and medulla oblongata are collectively termed the **brain stem.**

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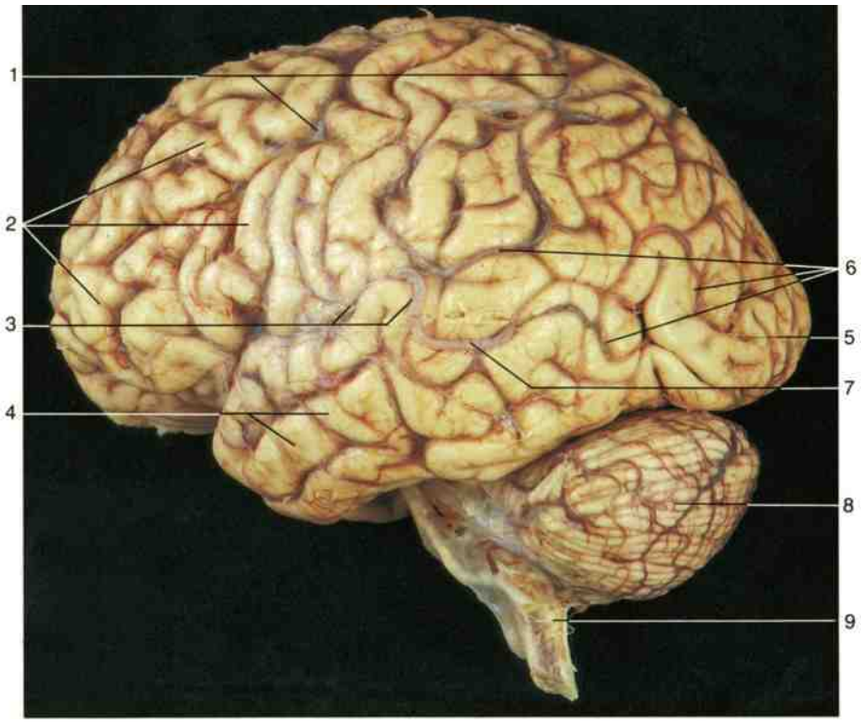
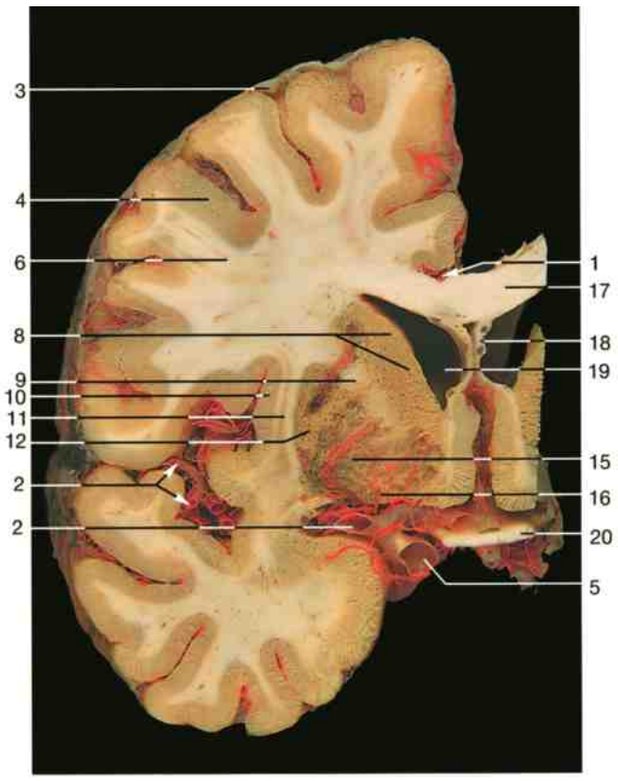
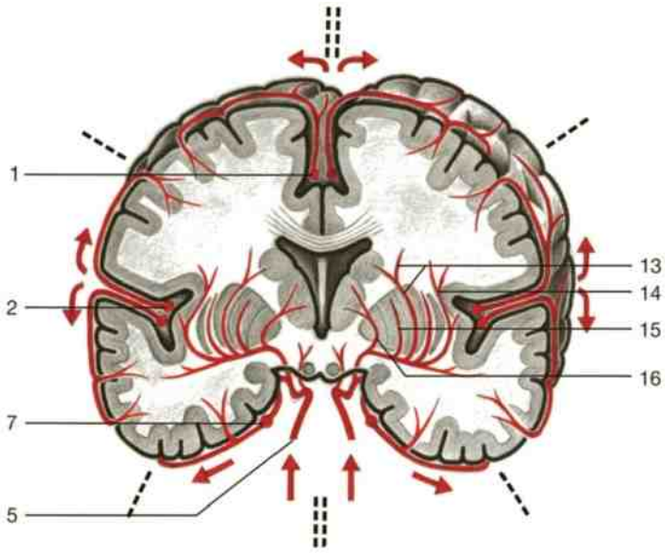


1 Superior cerebral veins and parietal lobe
2 Frontal lobe
3 Superficial middle cerebral vein and cistern of lateral cerebral fossa
4 Temporal lobe
5 Occipital lobe
6 Inferior cerebral veins and transverse occipital sulcus
7 Inferior anastomotic vein
8 Cerebellum
9 Medulla oblongata

Brain with pia mater. Cerebral veins (bluish). In the lateral sulcus the cistern of the lateral fossa is recognizable. Frontal lobe to the left.





Arteries of the brain. Coronal section. Areas supplied by cortical and central arteries. Dotted lines indicate boundaries of arterial supply areas; arrows = direction of blood flow.

◁ **Coronal section through the right hemisphere,** showing arachnoid, pia mater, and the arterial blood supply (anterior aspect).

1 Anterior cerebral artery
2 Middle cerebral arteries
3 Arachnoid
4 Cortex
5 Internal carotid artery
6 Frontal lobe (white matter)
7 Posterior cerebral artery
8 Caudate nucleus
9 Internal capsule
10 Insular lobe
11 Claustrum
12 Putamen
13 Posterior striate branch
14 Insular artery
15 Pallidostriate artery
16 Thalamic artery
17 Corpus callosum
18 Septum pellucidum
19 Lateral ventricle
20 Optic chiasma

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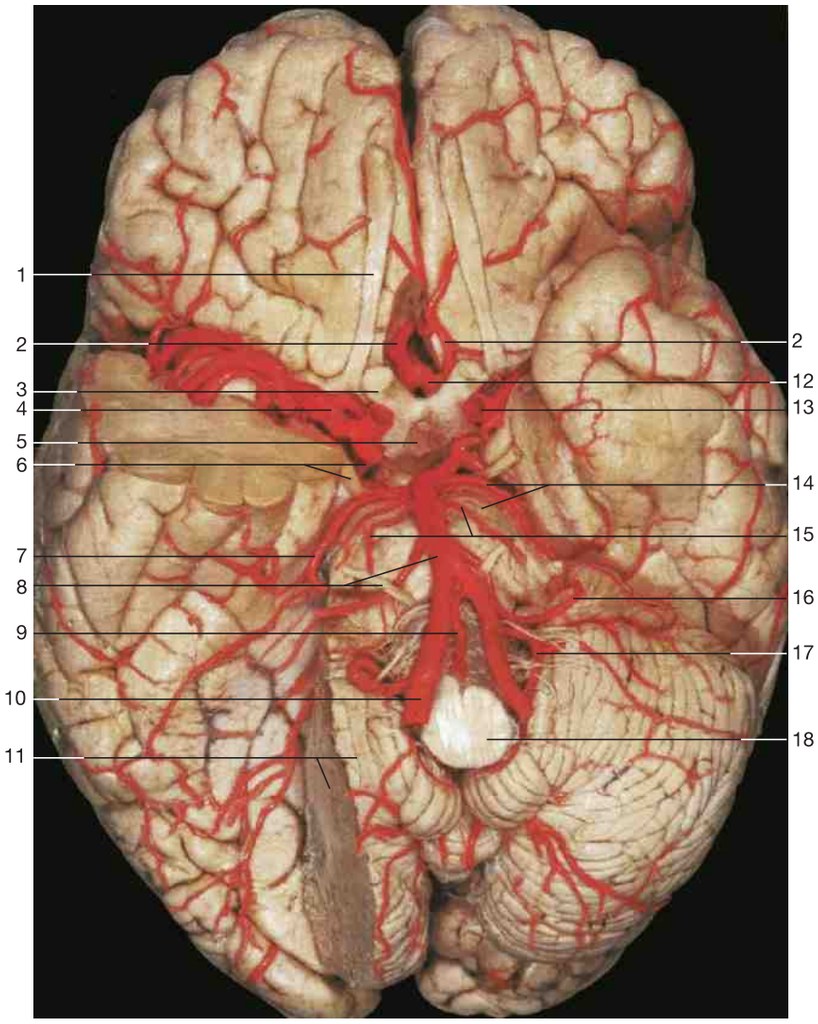
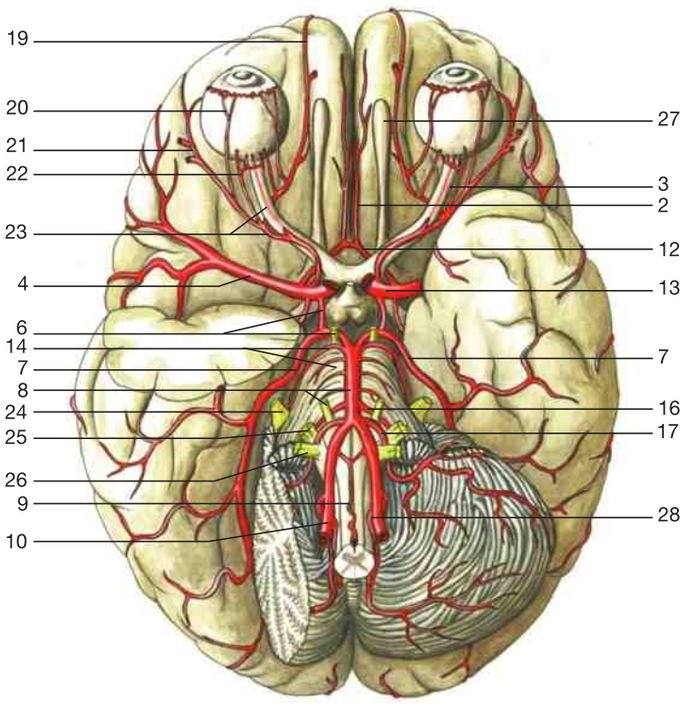


Arteries of the brain (inferior aspect, frontal pole above). Right temporal lobe and cerebellum partly removed.

1 Olfactory tract
2 Anterior cerebral artery
3 Optic nerve (n. II)
4 Middle cerebral artery
5 Infundibulum
6 Oculomotor nerve (n. III) and posterior communicating artery
7 Posterior cerebral artery
8 Basilar artery and abducent nerve (n. VI)
9 Anterior spinal artery
10 Vertebral artery
11 Cerebellum
12 Anterior communicating artery
13 Internal carotid artery
14 Superior cerebellar artery and pons
15 Labyrinthine arteries
16 Inferior anterior cerebellar artery
17 Inferior posterior cerebellar artery
18 Medulla oblongata
19 Supratrochlear artery
20 Anterior ciliary arteries
21 Lacrimal artery
22 Posterior ciliary arteries
23 Ophthalmic artery with central retinal artery
24 Trigeminal nerve (n. V)
25 Facial nerve (n. VII) and vestibulocochlear nerve (n. VIII)
26 Glossopharyngeal nerve (n. IX), vagus nerve (n. X), and accessory nerve (n. XI)
27 Olfactory bulb
28 Posterior spinal artery



Arteries of the brain (inferior aspect). Right temporal lobe and cerebellum partly removed. Note the arterial circle of Willis around the infundibulum.

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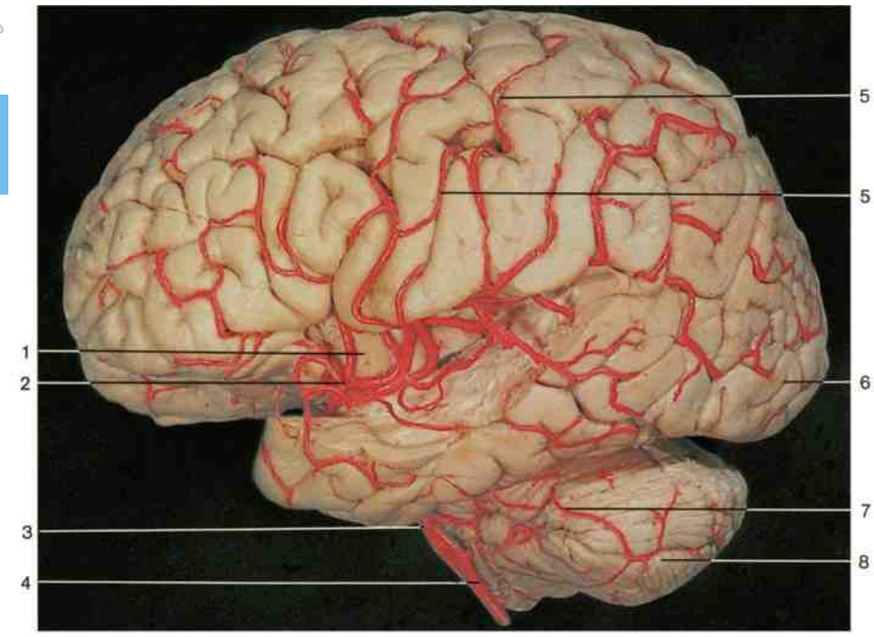
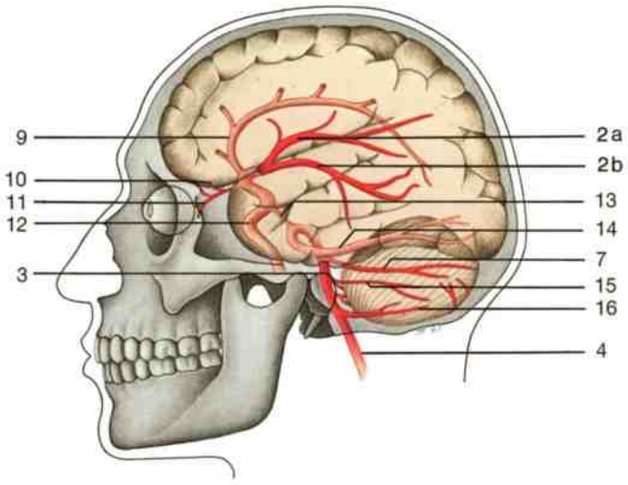
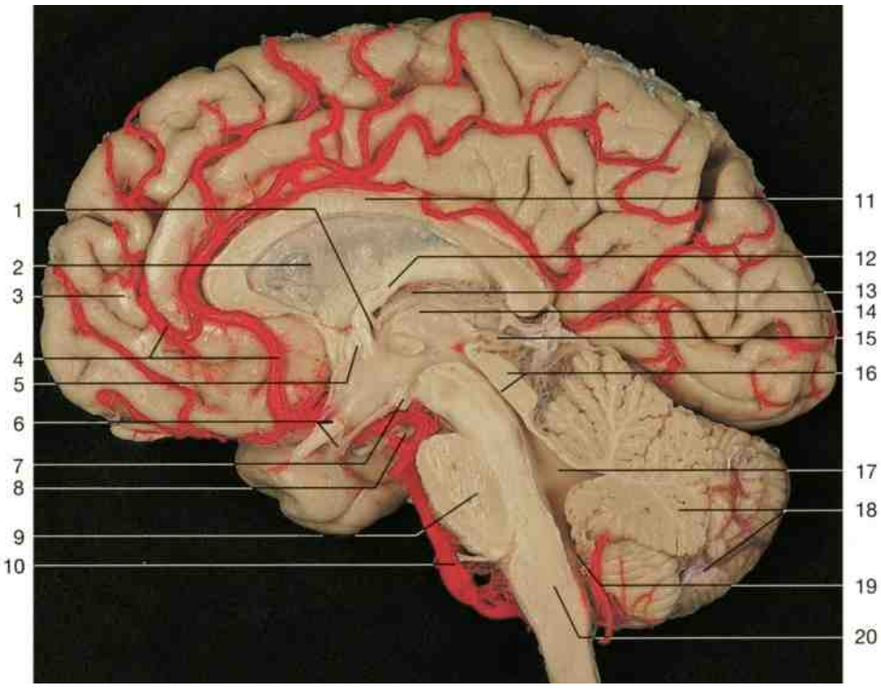


1 Insula
2 Middle cerebral artery (2 branches:
a Parietal branches,
b Temporal branches)
3 Basilar artery
4 Vertebral artery
5 Central sulcus
6 Occipital lobe
7 Superior cerebellar artery
8 Cerebellum
9 Anterior cerebral artery
10 Ethmoidal arteries
11 Ophthalmic artery
12 Internal carotid artery
13 Posterior communicating artery
14 Posterior cerebral artery
15 Anterior inferior cerebellar artery
16 Posterior inferior cerebellar artery

Cerebral arteries. Lateral aspect of the left hemisphere. The upper part of the temporal lobe has been removed to display the insula and cerebral arteries.



◁ **Arteries of the brain.**



1 Interventricular foramen
2 Septum pellucidum
3 Frontal lobe
4 Anterior cerebral artery
5 Anterior commissure
6 Optic chiasma and infundibulum
7 Mamillary body
8 Oculomotor nerve (n. III)
9 Pons
10 Basilar artery
11 Corpus callosum
12 Fornix
13 Choroid plexus
14 Third ventricle
15 Pineal body
16 Tectum and cerebral aqueduct
17 Fourth ventricle
18 Cerebellum (arbor vitae, vermis)
19 Median aperture of Magendie
20 Medulla oblongata

Median section through the brain and brain stem. Cerebral arteries injected with red resin.

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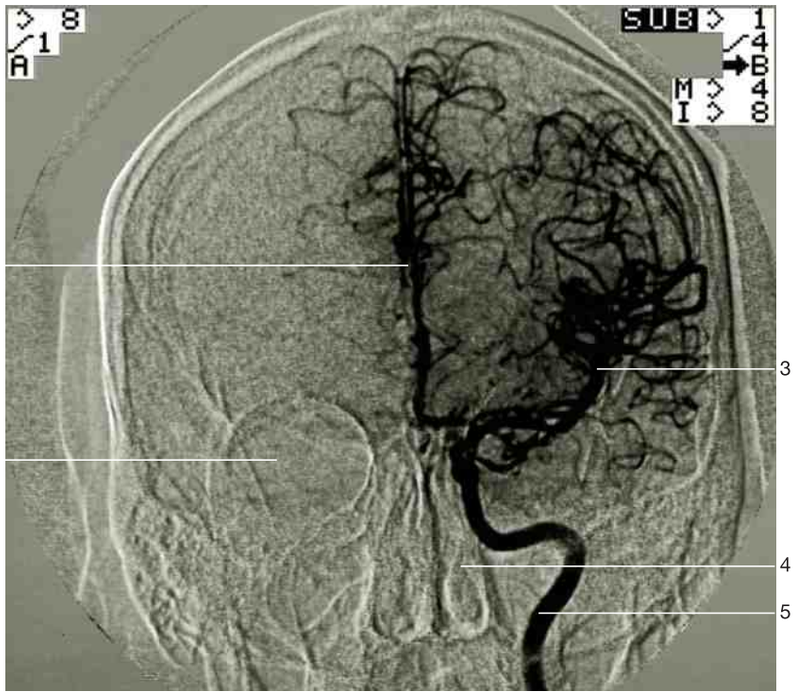
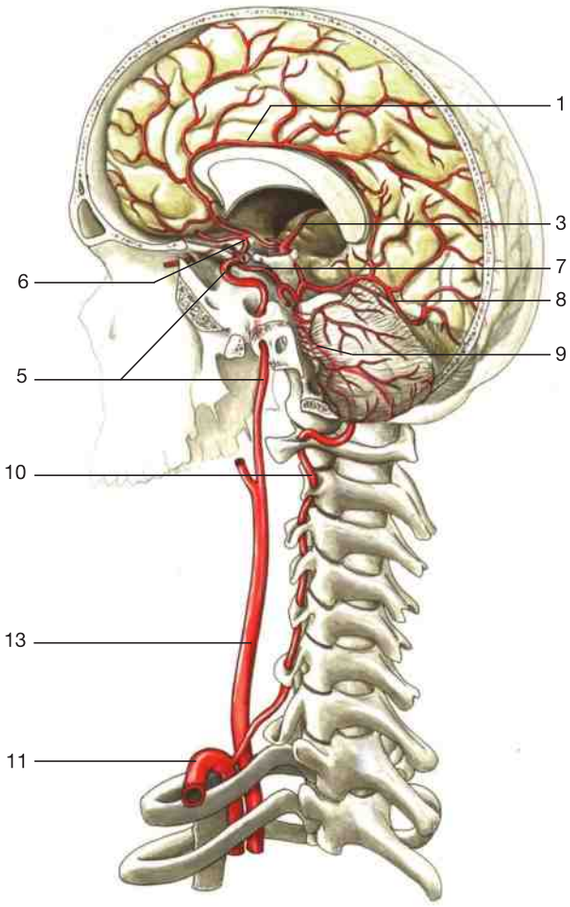
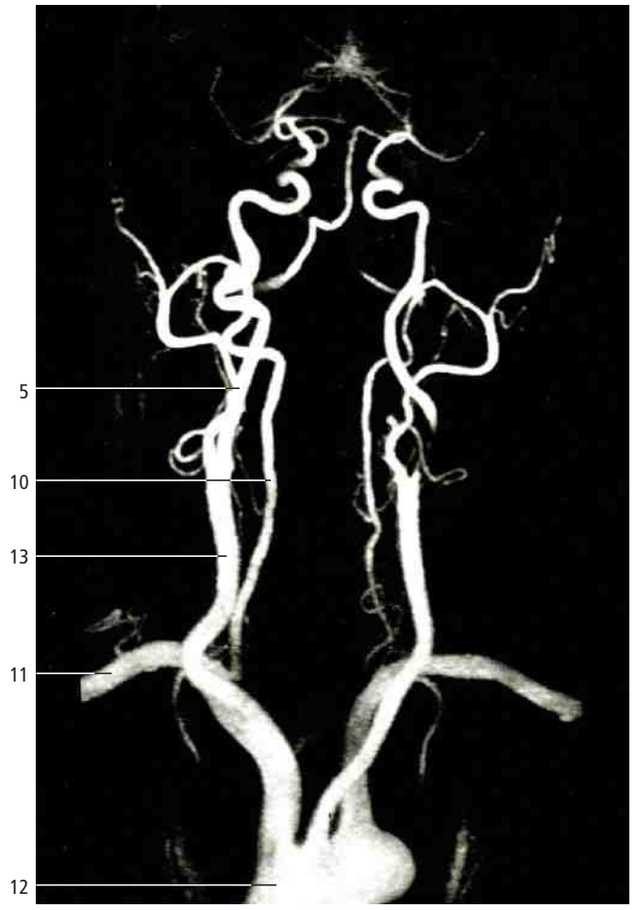


1 Anterior cerebral artery
2 Orbit
3 Middle cerebral artery
4 Nasal cavity
5 Internal carotid artery
6 Arterial circle of Willis
7 Posterior communicating artery
8 Posterior cerebral artery
9 Basilar artery
10 Vertebral artery
11 Subclavian artery
12 Aortic arch
13 Common carotid artery

Arteries of the brain. Angiogram of the internal carotid artery (anterior aspect) (courtesy of Prof. Dr. W. Huk, University of Erlangen-Nürnberg).



Cerebral arteries (schematic drawing).
Left hemisphere and brain stem have been removed.
Note the arterial circle of Willis around the sella turcica.



Main arteries for brain supply (MRI angiograph, anterior aspect, courtesy of Prof. Dr. W. Bautz, University of Erlangen-Nürnberg).

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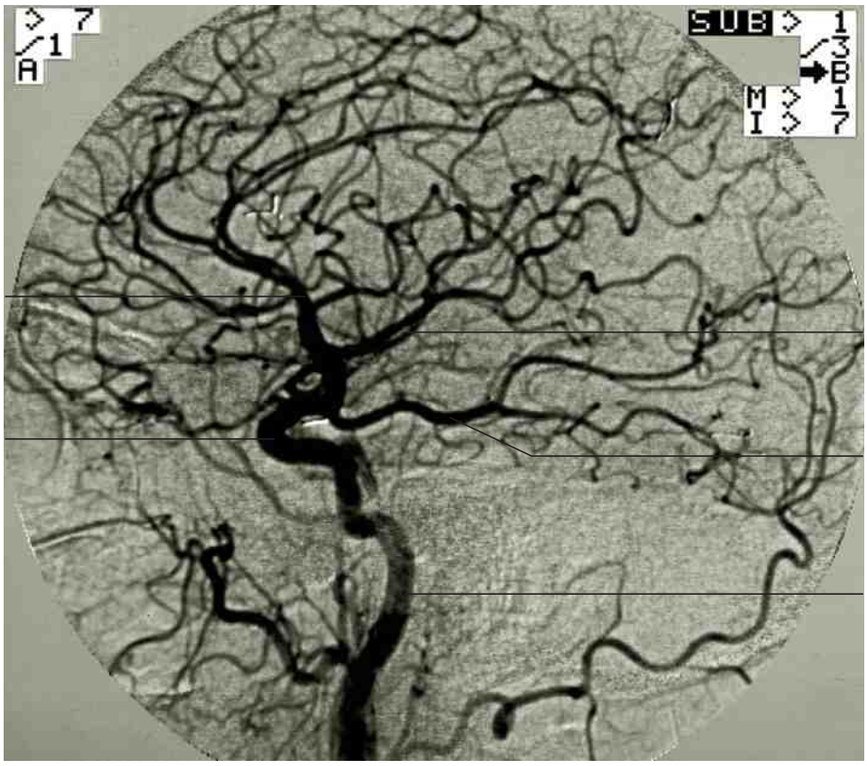
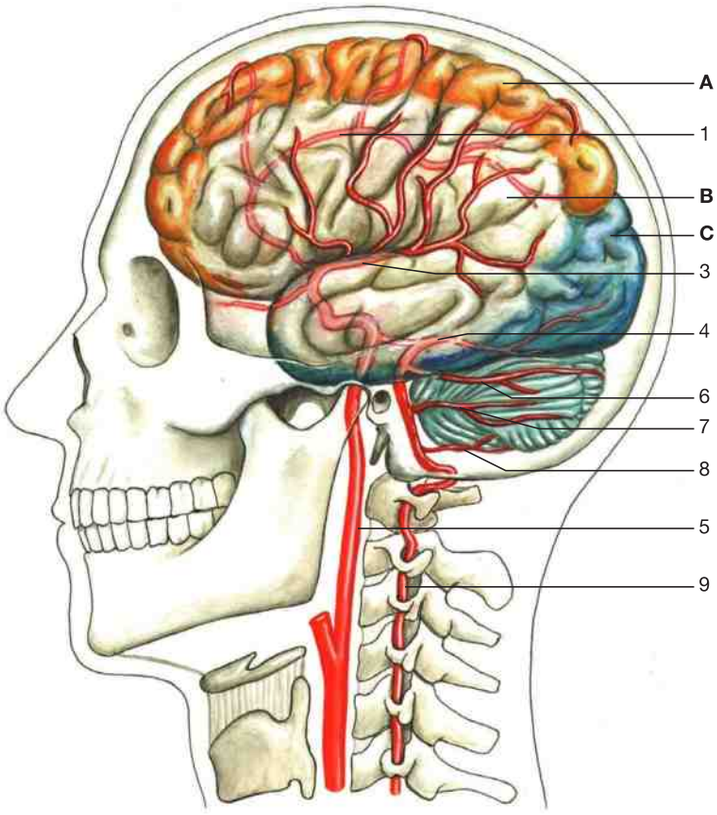


1 Anterior cerebral artery
2 Loop of the internal carotid artery
3 Middle cerebral artery
4 Posterior cerebral artery
5 Internal carotid artery
6 Superior cerebellar artery
7 Anterior inferior cerebellar artery
8 Posterior inferior cerebellar artery
9 Vertebral artery

Arteries of the brain. Angiogram of the internal carotid artery (lateral aspect) (courtesy of Prof. Dr. W. Huk, University of Erlangen-Nürnberg).



Cerebral arteries. The areas supplied by the main arteries are indicated by different colors (lateral aspect).

Areas of blood supply of the brain (cerebellum = light blue).

A = anterior cerebral artery (upper and medial parts of the cortex) (orange)

B = middle cerebral artery (lateral areas of the frontal, parietal, and temporal lobes) (white)

C = posterior cerebral artery (occipital lobe and inferior parts of the temporal lobe) (blue)

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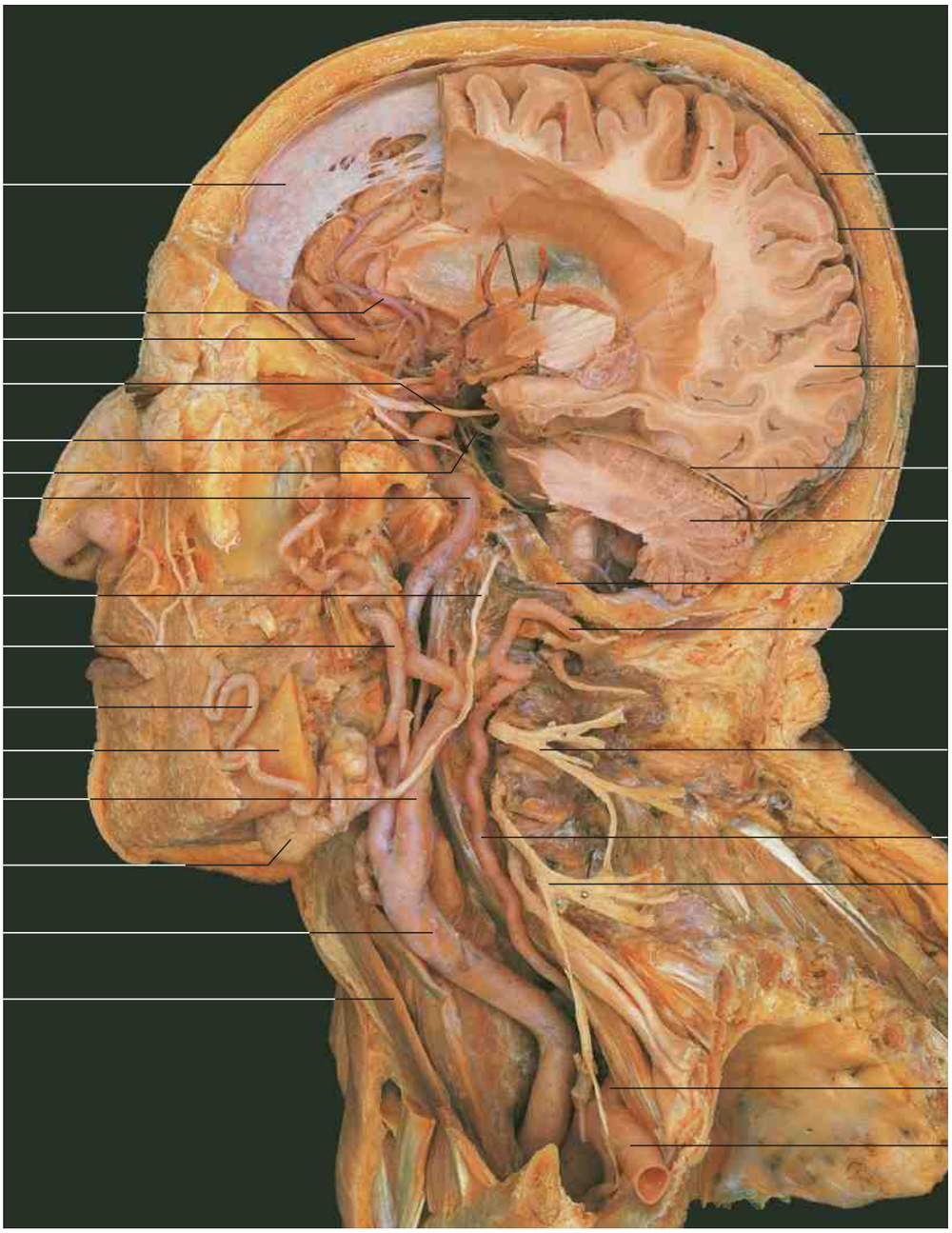

Dissection of the arteries of the brain and head (lateral aspect, superficial layers of facial region and left hemisphere and cerebellum partly removed).

1 Falx cerebri
2 Anterior cerebral artery
3 Frontal lobe
4 Oculomotor nerve (n. III)
5 Abducent nerve (n. VI)
6 Posterior cerebral artery
7 Internal carotid artery, entering sinus cavernosus
8 Hypoglossus nerve (n. XII)
9 Maxillary artery
10 Facial artery
11 Mandible
12 External carotid artery
13 Submandibular gland
14 Common carotid artery
15 Sternohyoid muscle
16 Calvaria
17 Dura mater
18 Subarachnoidal space
19 Occipital lobe
20 Tentorium of cerebellum
21 Cerebellum
22 Base of skull
23 Vertebral artery (on the posterior arch of the atlas)
24 Cervical plexus
25 Vertebral artery (removed from the cervical vertebrae)
26 Brachial plexus
27 Vertebral artery (branching from the subclavian artery)
28 Subclavian artery

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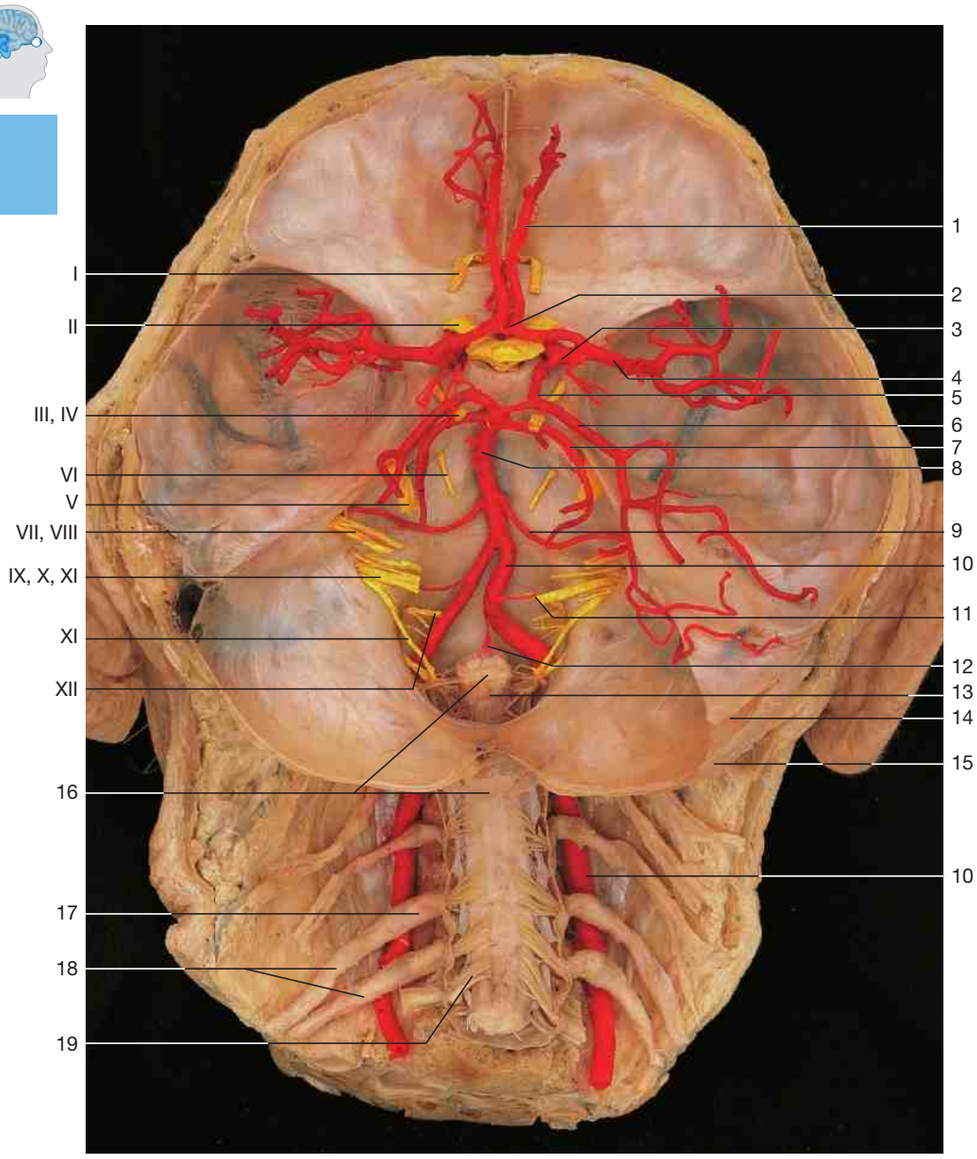
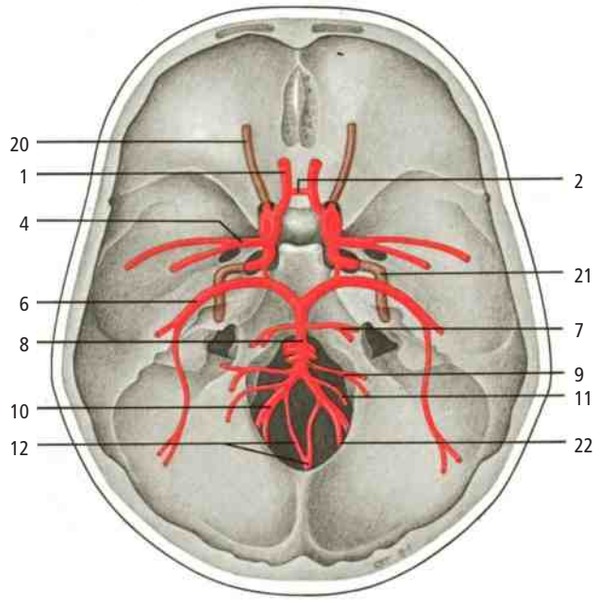


1 Anterior cerebral artery
2 Anterior communicating artery
3 Internal carotid artery
4 Medial cerebral artery
5 Posterior communicating artery
6 Posterior cerebral artery
7 Superior cerebellar artery
8 Basilar artery
9 Anterior inferior cerebellar artery with the artery of the labyrinth
10 Vertebral artery
11 Posterior inferior cerebellar artery
12 Anterior spinal artery
13 Pia mater of spinal cord
14 Tentorium cerebelli
15 Dura mater of the cranial cavity
16 Spinal cord
17 Spinal ganglion
18 Spinal nerves (C_3, C_4)
19 Posterior root filaments (fila radicularia post.)
20 Ophthalmic artery (within the orbit)
21 Internal carotid artery (within carotid canal)
22 Posterior spinal artery

I Olfactory tract
II Optic nerve
III Oculomotor nerve
IV Trochlear nerve
V Trigeminal nerve
VI Abducent nerve
VII Facial nerve
VIII Vestibulocochlear nerve
IX Glossopharyngeal nerve
X Vagus nerve
XI Accessory nerve
XII Hypoglossus nerve

Dissection of the arterial circle of the cerebrum at the base of the skull
(from above; calvaria and brain have been removed; arteries are colored in red, cranial nerves [n. I–XII] in yellow).



Arterial circle of Willis (superior aspect).
(Schematic drawing.)

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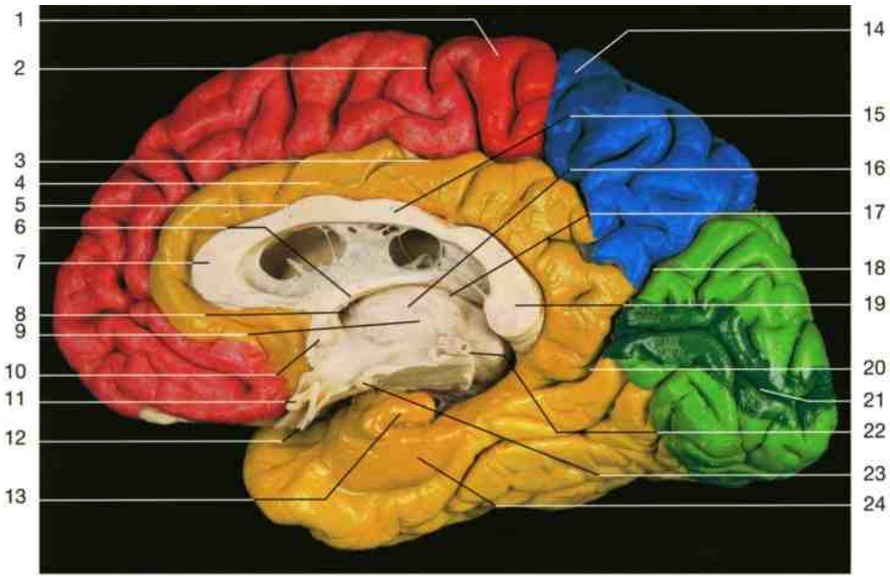
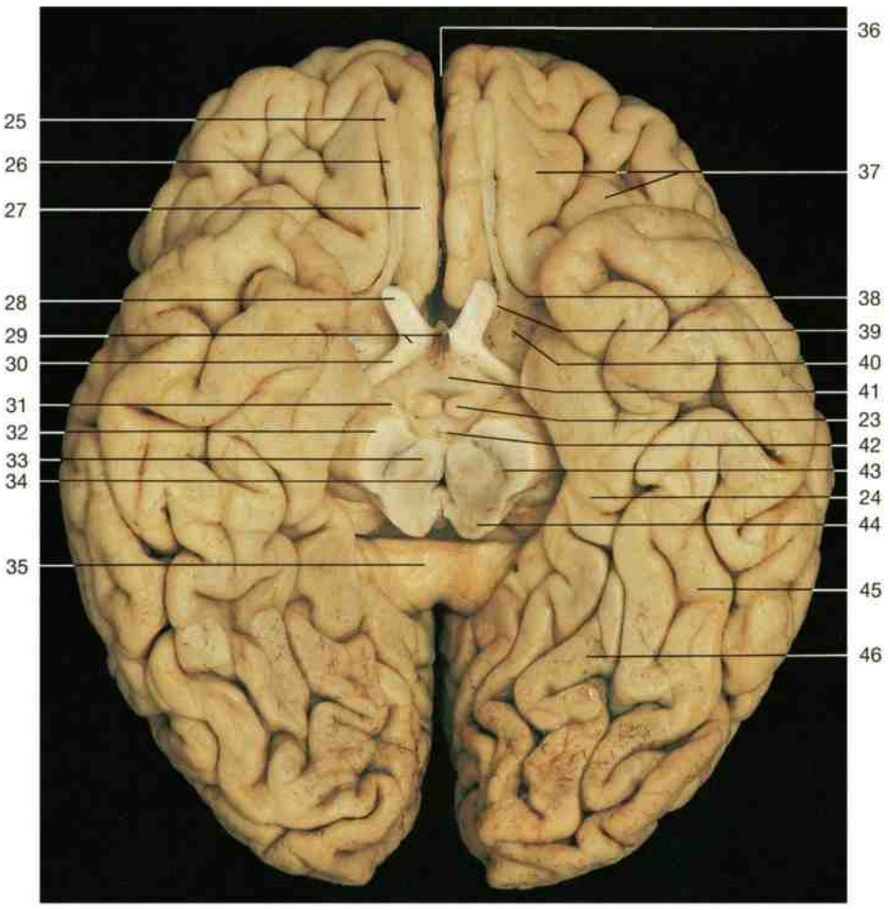


Brain, right hemisphere (medial aspect). Frontal pole to the left (midbrain divided, cerebellum and inferior part of brain stem removed).

Red	=	Frontal lobe	Dark blue	=	Postcentral lobe
Blue	=	Parietal lobe	Dark green	=	Calcarine sulcus
Green	=	Occipital lobe	Dark yellow	=	Limbic cortex (cingulate and parahippocampal gyri)
Yellow	=	Temporal lobe			
Dark red	=	Precentral lobe			



Brain (inferior aspect). Midbrain divided. Cerebellum and inferior part of brain stem removed. Frontal pole at the top.

1 Precentral gyrus
2 Precentral sulcus
3 Cingulate sulcus
4 Cingulate gyrus
5 Sulcus of corpus callosum
6 Fornix
7 Genu of corpus callosum
8 Interventricular foramen
9 Intermediate mass
10 Anterior commissure
11 Optic chiasma
12 Infundibulum
13 Uncus hippocampi
14 Postcentral gyrus
15 Body of corpus callosum
16 Third ventricle and thalamus
17 Stria medullaris
18 Parieto-occipital sulcus
19 Splenium of corpus callosum
20 Communication of calcarine and parieto-occipital sulcus
21 Calcarine sulcus
22 Pineal body
23 Mamillary body
24 Parahippocampal gyrus
25 Olfactory bulb
26 Olfactory tract
27 Gyrus rectus
28 Optic nerve
29 Infundibulum and optic chiasma
30 Optic tract
31 Oculomotor nerve
32 Pedunculus cerebri
33 Red nucleus
34 Cerebral aqueduct
35 Corpus callosum
36 Longitudinal fissure
37 Orbital gyri
38 Lateral root of olfactory tract
39 Medial root of olfactory tract
40 Olfactory tubercle and anterior perforated substance
41 Tuber cinereum
42 Interpeduncular fossa
43 Substantia nigra
44 Colliculi of the midbrain
45 Lateral occipitotemporal gyrus
46 Medial occipitotemporal gyrus

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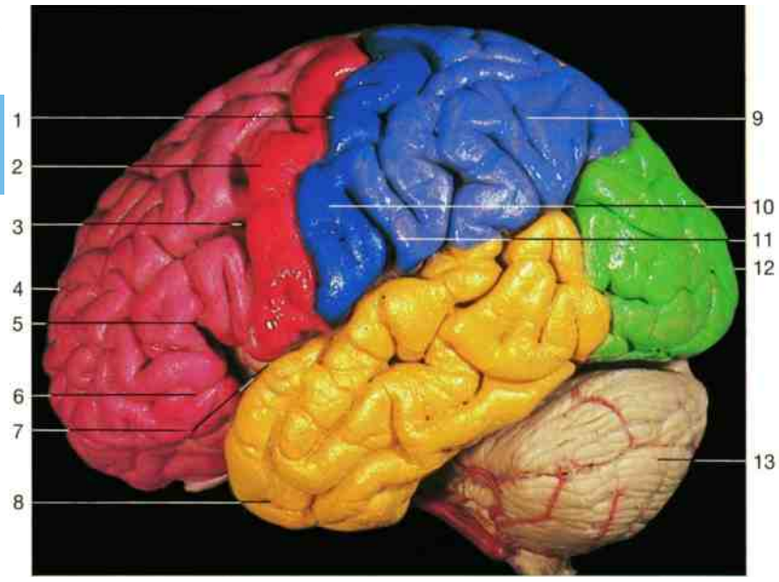
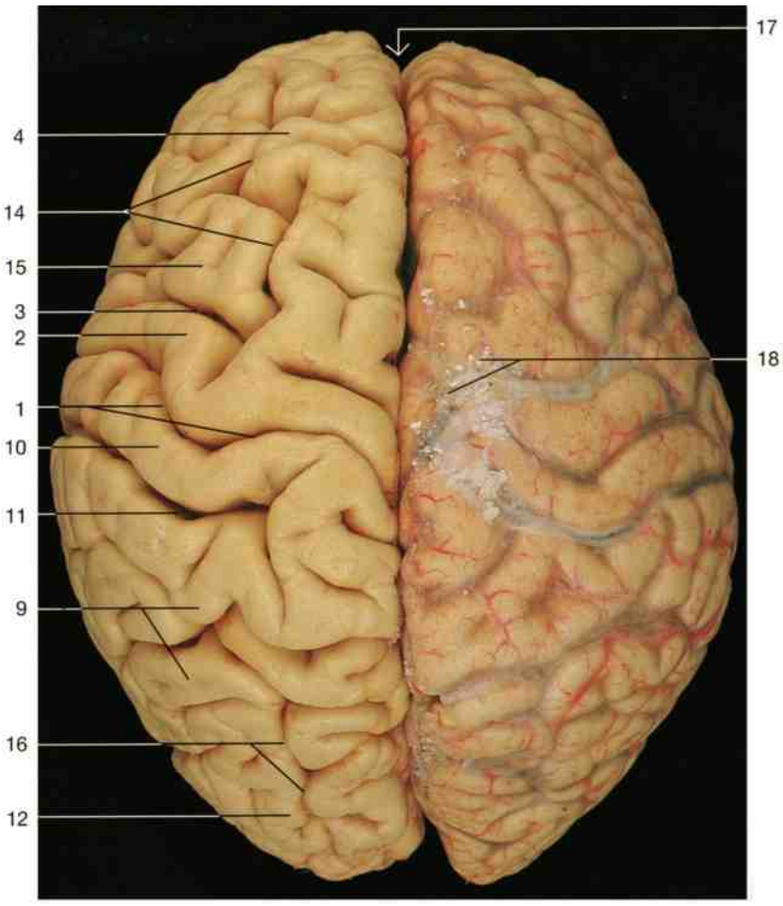
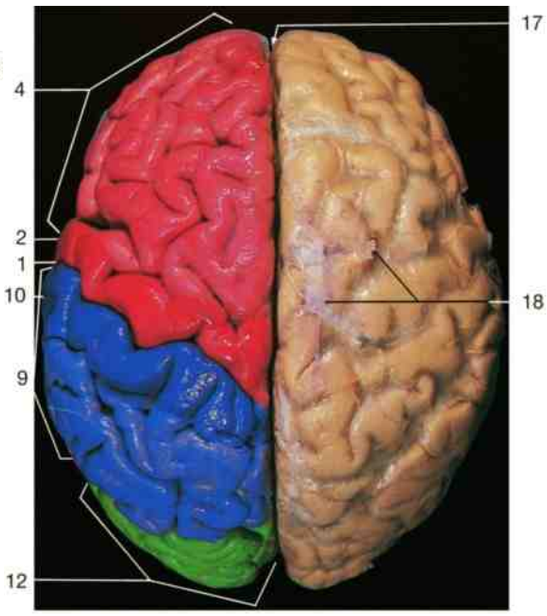


1 Central sulcus
2 Precentral gyrus
3 Precentral sulcus
4 Frontal lobe
5 Anterior ascending ramus of lateral sulcus
6 Anterior horizontal ramus of lateral sulcus
7 Lateral sulcus
8 Temporal lobe
9 Parietal lobe
10 Postcentral gyrus
11 Postcentral sulcus
12 Occipital lobe
13 Cerebellum
14 Superior frontal sulcus
15 Middle frontal gyrus
16 Lunate sulcus
17 Longitudinal fissure
18 Arachnoid granulations

Brain, left hemisphere (lateral aspect). Frontal pole to the left.



Pink = Frontal lobe
Blue = Parietal lobe
Green = Occipital lobe
Yellow = Temporal lobe
Dark red = Precentral gyrus
Dark blue = Postcentral gyrus



Brain (superior aspect). Right hemisphere with arachnoid and pia mater.

Brain (superior aspect). Lobes of the left hemisphere indicated by color; right hemisphere is covered with arachnoid and pia mater.

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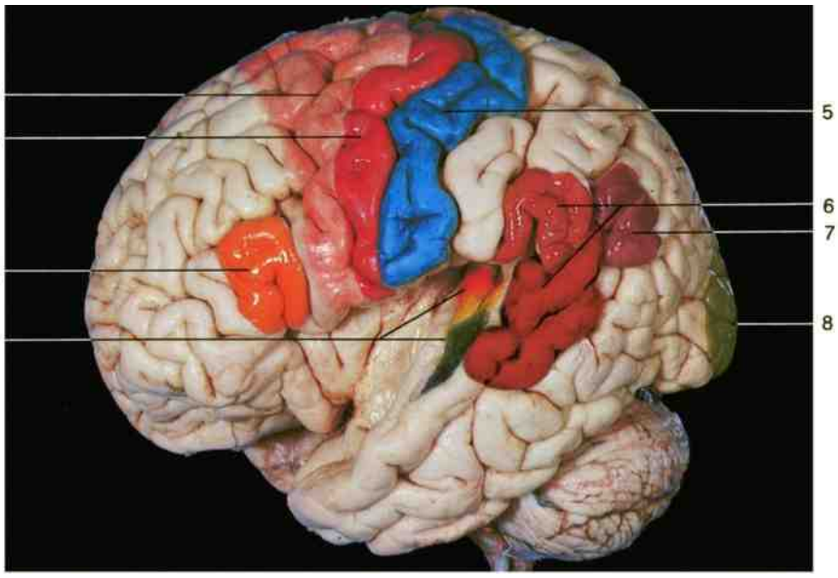
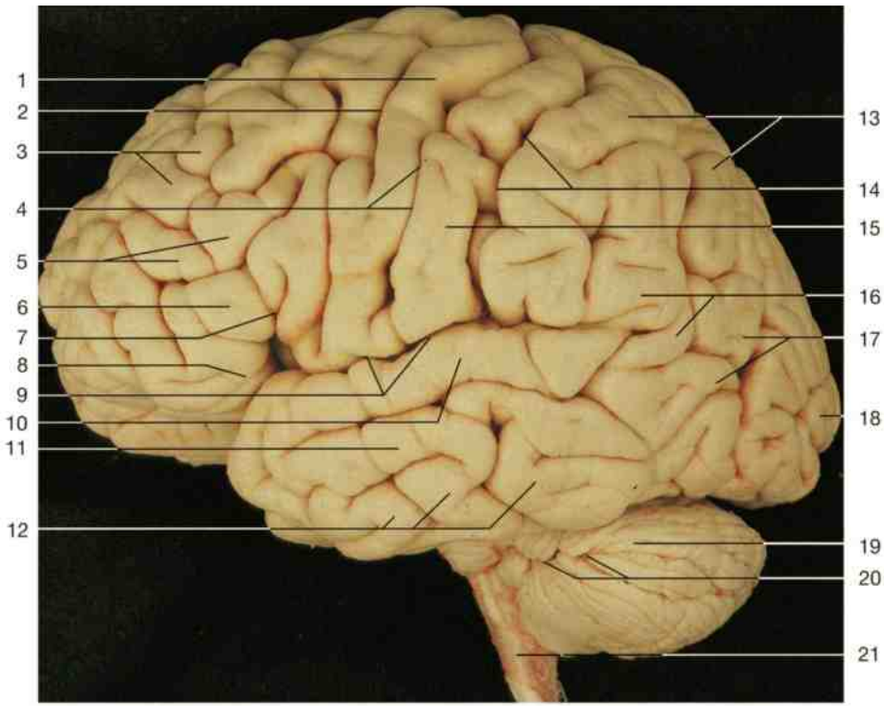


1 Premotor area
2 Somatomotor area
3 Motor speech area of Broca
4 Acoustic area
(red: high tone, dark green: low tone)
5 Somatosensory area
6 Sensory speech area of Wernicke
7 Reading comprehension area
8 Visuosensory area

Brain, left hemisphere (lateral aspect). **Main cortical areas** are colored.
The lateral sulcus has been opened to display the insula and the inner surface of the temporal lobe.



1 Precentral gyrus
2 Precentral sulcus
3 Superior frontal gyrus
4 Central sulcus
5 Middle frontal gyrus
6 Inferior frontal gyrus
7 Ascending ramus } of lateral sulcus
8 Horizontal ramus } of lateral sulcus
9 Posterior ramus } of lateral sulcus
10 Superior temporal gyrus
11 Middle temporal gyrus
12 Inferior temporal gyrus
13 Parietal lobe
14 Postcentral sulcus
15 Postcentral gyrus
16 Supramarginal gyrus
17 Angular gyrus
18 Occipital lobe
19 Cerebellum
20 Horizontal fissure of cerebellum
21 Medulla oblongata

Brain, left hemisphere (lateral aspect). Frontal pole to the left.

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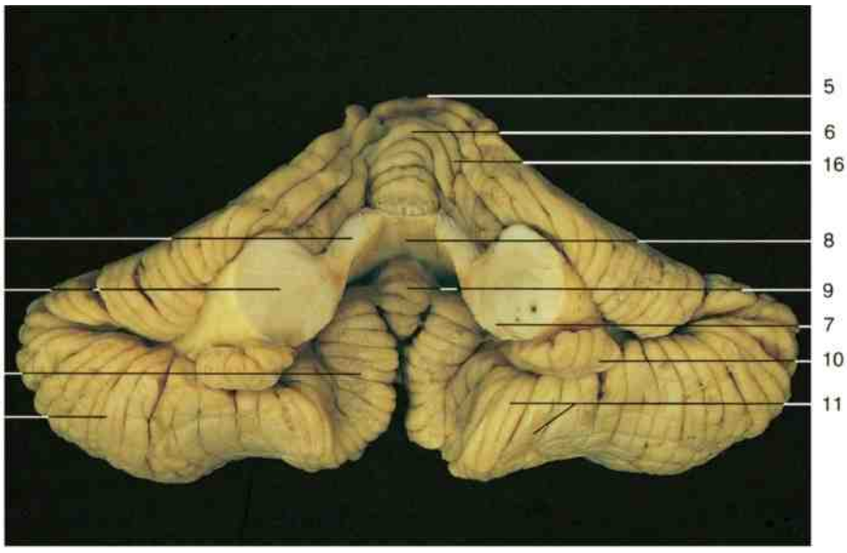
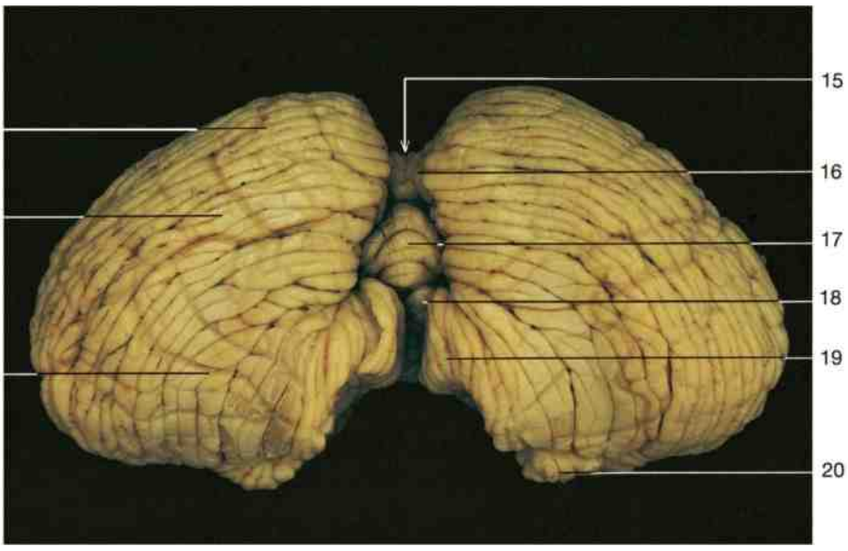
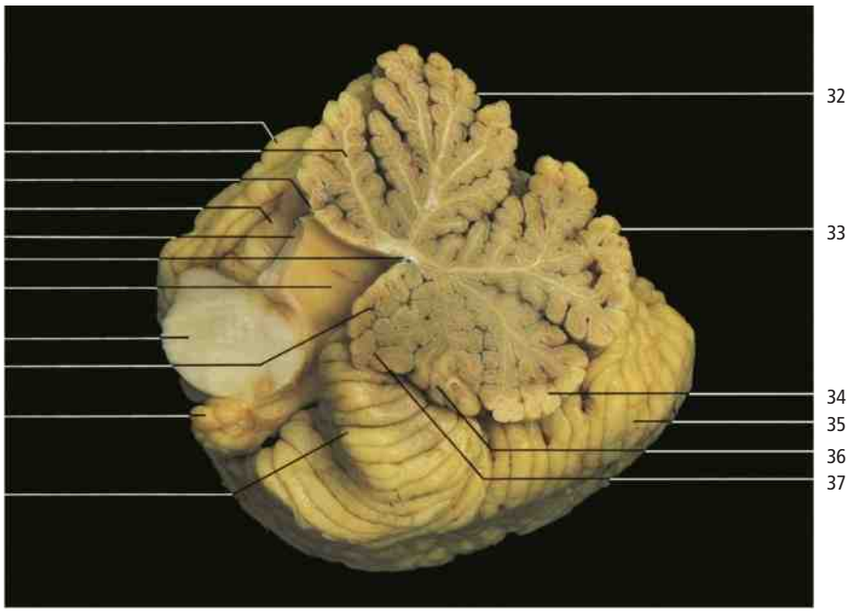


Cerebellum (inferior anterior aspect). The cerebellar peduncles have been severed.



Cerebellum (inferior posterior aspect).



Median section through the cerebellum. Right cerebellar hemisphere and right half of vermis.

1 Superior cerebellar peduncle
2 Middle cerebellar peduncle
3 Cerebellar tonsil
4 Inferior semilunar lobule
5 Vermis
6 Central lobule of vermis
7 Inferior cerebellar peduncle
8 Superior medullary velum
9 Nodule of vermis
10 Flocculus of cerebellum
11 Biventral lobule
12 Left cerebellar hemisphere
13 Inferior semilunar lobule
14 Biventral lobule
15 Vermis of cerebellum
16 Tuber of vermis
17 Pyramid of vermis
18 Uvula of vermis
19 Tonsil of cerebellum
20 Flocculus of cerebellum
21 Right cerebellar hemisphere
22 Vermis (central lobule)
23 Cerebellar lingula
24 Ala of central lobule
25 Superior cerebellar peduncle
26 Fastigium
27 Fourth ventricle
28 Middle cerebellar peduncle
29 Nodule of vermis
30 Flocculus of cerebellum
31 Cerebellar tonsil
32 Culmen of vermis
33 Declive of vermis
34 Tuber of vermis
35 Inferior semilunar lobule
36 Pyramid of vermis (cut)
37 Uvula of vermis

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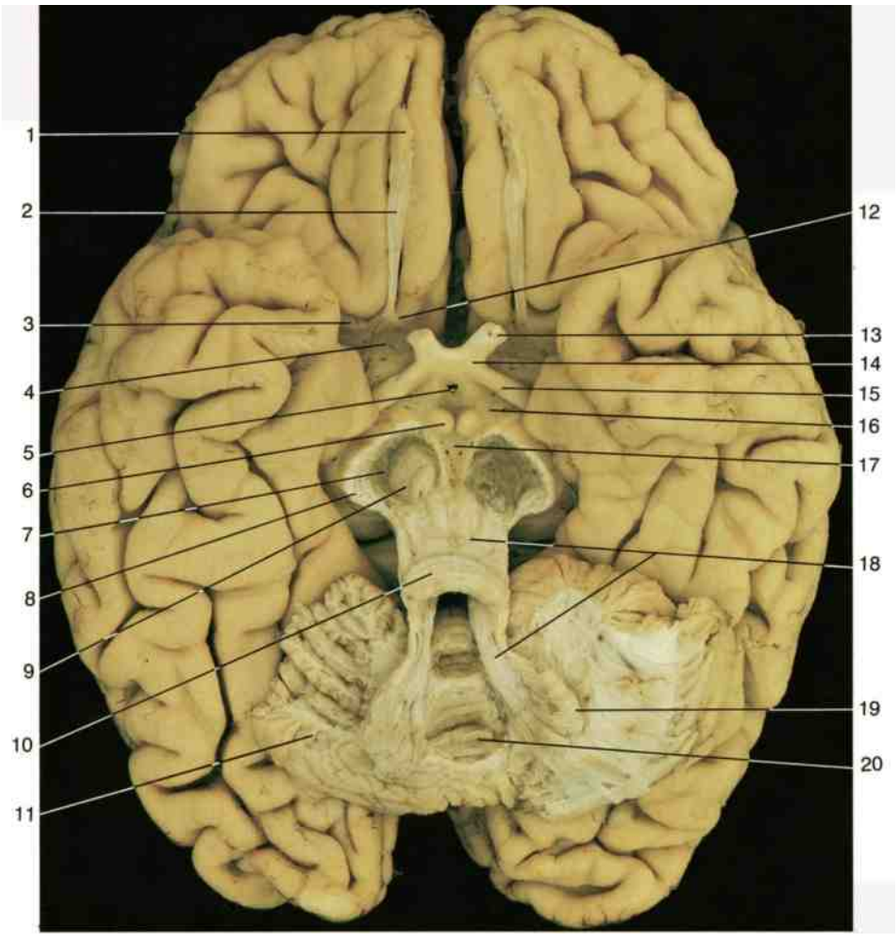
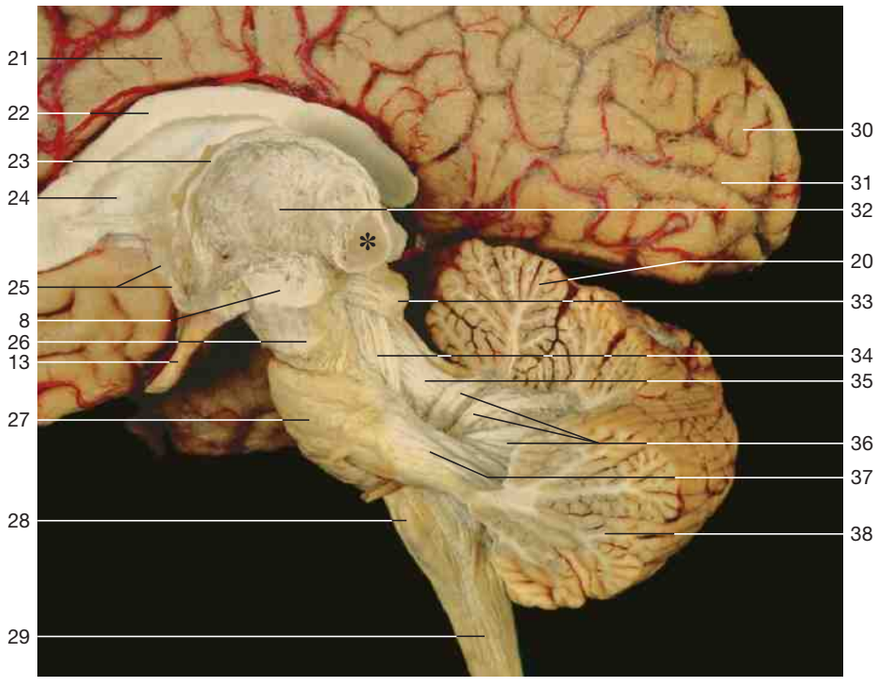


Brain and cerebellum (inferior aspect). Parts of the cerebellum have been removed to display the dentate nucleus and the main pathway to the midbrain (cerebellorubral tract).



Dissection of the cerebellar peduncles and their connection with midbrain and diencephalon. A small part of pulvinar thalami (*) has been cut to show inferior brachium.

1 Olfactory bulb
2 Olfactory tract
3 Lateral olfactory stria
4 Anterior perforated substance
5 Infundibulum (divided)
6 Mamillary body
7 Substantia nigra
8 Cerebral peduncle (cut)
9 Red nucleus
10 Decussation of superior cerebellar peduncle
11 Cerebellar hemisphere
12 Medial olfactory stria
13 Optic nerve
14 Optic chiasma
15 Optic tract
16 Posterior perforated substance
17 Interpeduncular fossa
18 Superior cerebellar peduncle and cerebellorubral tract
19 Dentate nucleus
20 Vermis of cerebellum
21 Cingulate gyrus
22 Corpus callosum
23 Stria terminalis
24 Septum pellucidum
25 Columna fornicis
26 Cerebral peduncle at midbrain level
27 Pons
28 Inferior olive
29 Medulla oblongata with lateral pyramidal tract
30 Occipital lobe
31 Calcarine sulcus
32 Thalamus
33 Inferior colliculus with brachium
34 Medial lemniscus
35 Superior cerebellar peduncle
36 Inferior cerebellar peduncle
37 Middle cerebellar peduncle
38 Cerebellar hemisphere

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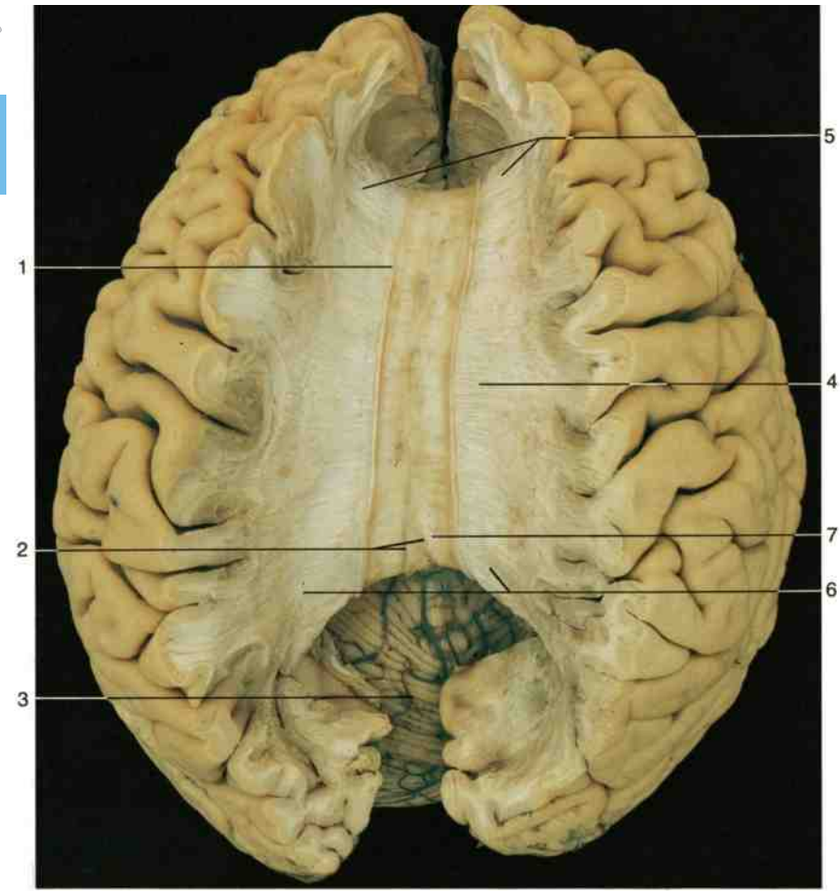
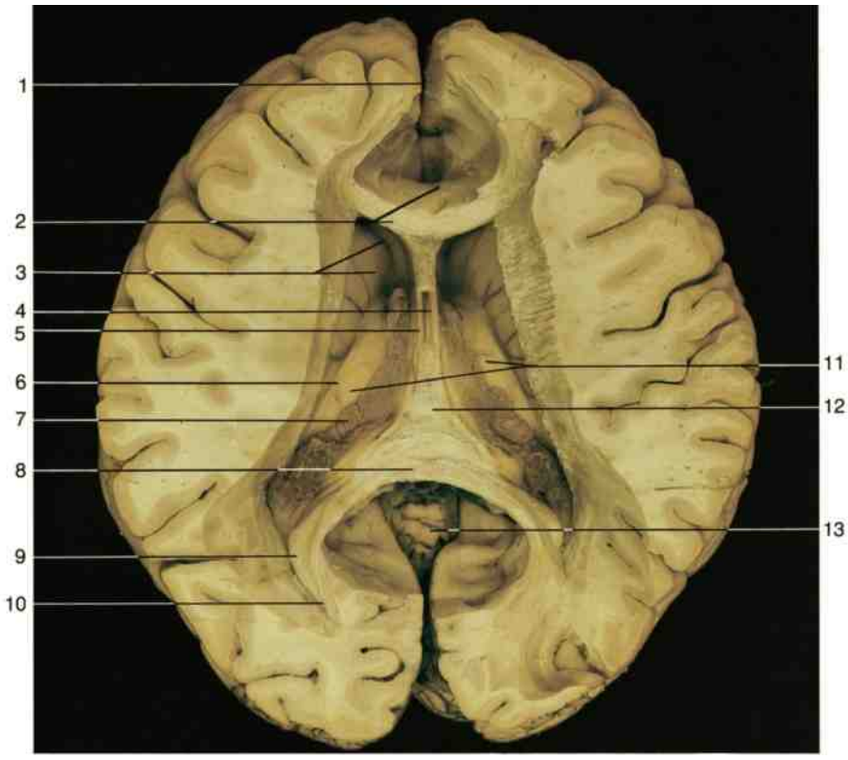


1 Lateral longitudinal stria of indusium griseum
2 Medial longitudinal stria of indusium griseum
3 Cerebellum
4 Radiating fibers of the corpus callosum
5 Forceps minor of corpus callosum
6 Forceps major of corpus callosum
7 Splenium of corpus callosum

Dissection of the brain I. The fiber system of the corpus callosum has been displayed by removing the cortex lying above it. Frontal pole at the top.



1 Longitudinal cerebral fissure
2 Genu of corpus callosum
3 Head of caudate nucleus and anterior horn of lateral ventricle
4 Cavum of septum pellucidum
5 Septum pellucidum
6 Stria terminalis
7 Choroid plexus of lateral ventricle
8 Splenium of corpus callosum
9 Calcar avis
10 Posterior horn of lateral ventricle
11 Thalamus (lamina affixa)
12 Commissure of fornix
13 Vermis of cerebellum

Dissection of the brain II. The lateral ventricles and subcortical nuclei of the brain are dissected. The corpus callosum has been partly removed. Frontal pole at the top.

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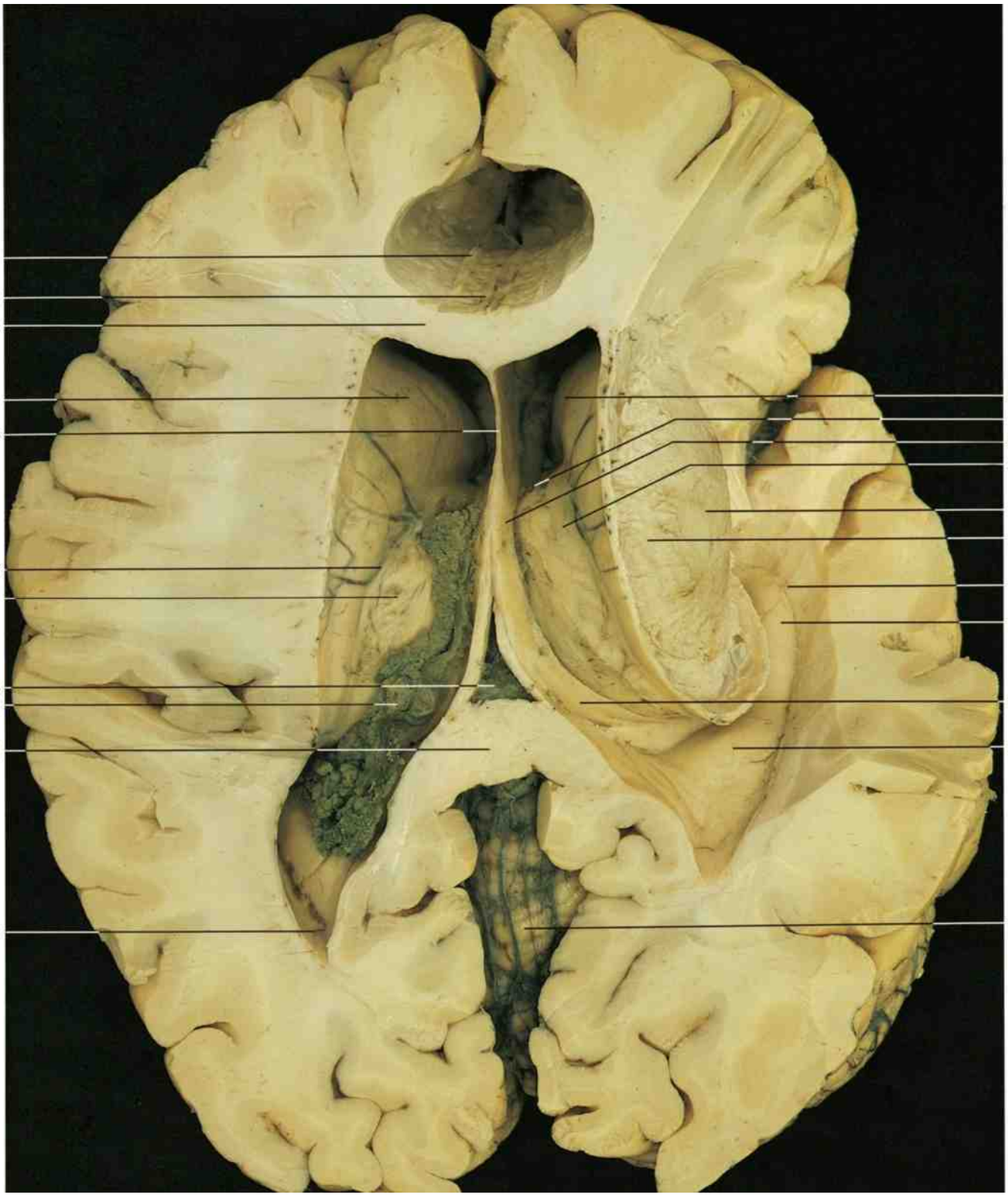

Dissection of the brain III (superior view of lateral ventricle and subcortical nuclei of the brain). Corpus callosum partly removed. At right, the entire lateral ventricle has been opened, the insula with claustrum and the extreme and external capsules have been removed, exposing the lentiform nucleus and the internal capsule.

1 Lateral longitudinal stria
2 Medial longitudinal stria
3 Genu of corpus callosum
4 Head of caudate nucleus
5 Septum pellucidum
6 Stria terminalis
7 Thalamus (lamina affixa)
8 Choroid plexus of third ventricle
9 Choroid plexus of lateral ventricle
10 Splenium of corpus callosum
11 Posterior horn of lateral ventricle
12 Anterior horn of lateral ventricle (head of caudate nucleus)
13 Putamen of lentiform nucleus
14 Internal capsule
15 Inferior horn of lateral ventricle
16 Pes hippocampi
17 Crus of fornix
18 Vermis of cerebellum with arachnoid and pia mater
19 Interventricular foramen
20 Right column of fornix
21 Collateral eminence

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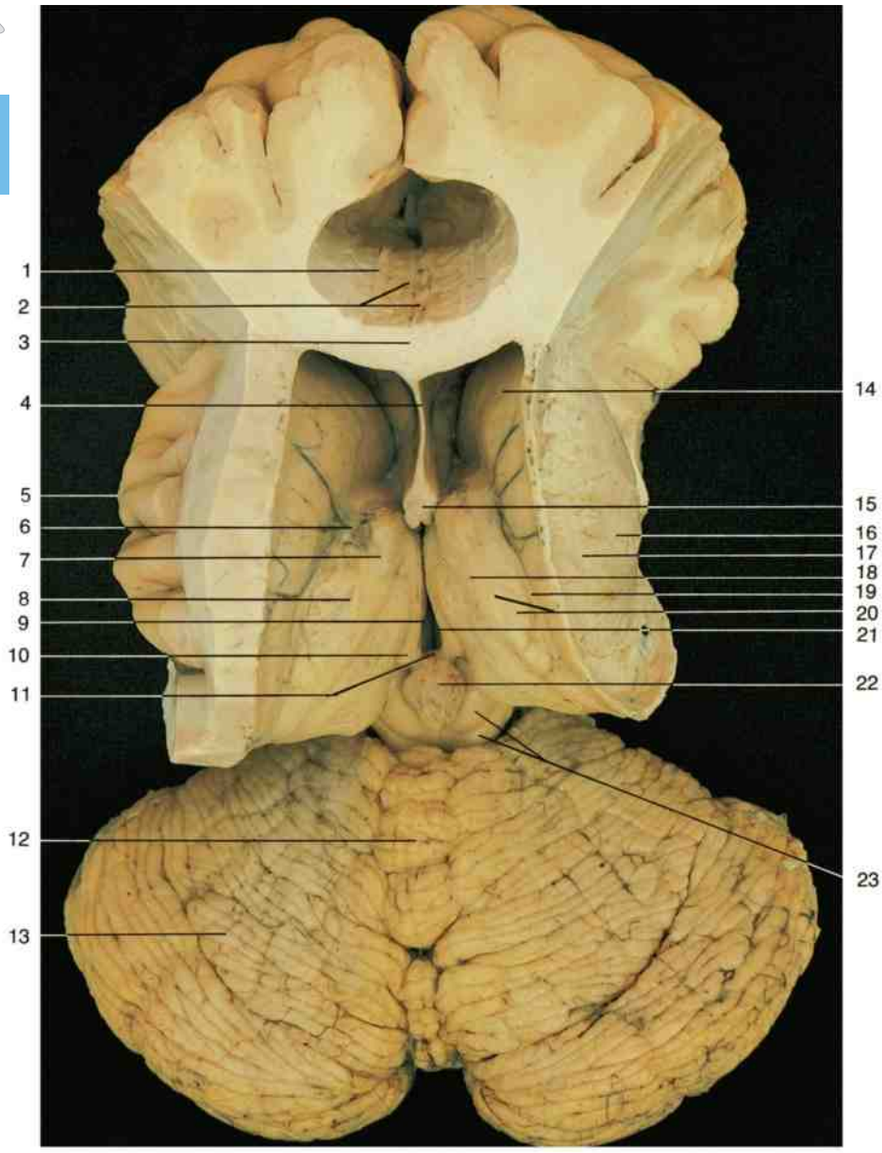
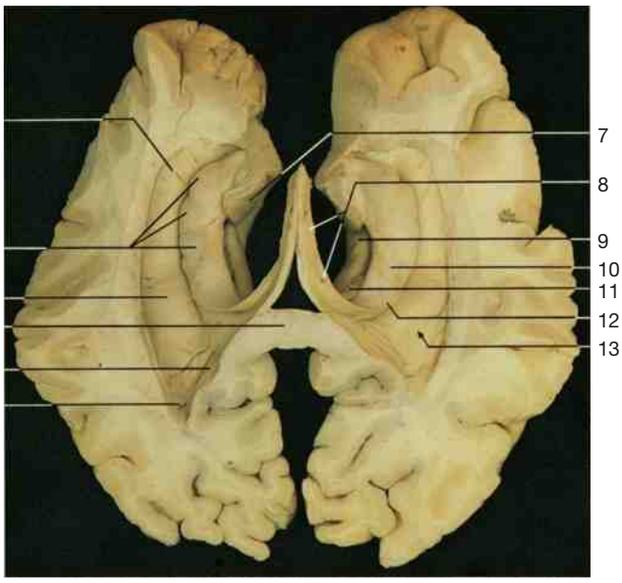


1 Lateral longitudinal stria
2 Medial longitudinal stria
3 Corpus callosum
4 Septum pellucidum
5 Insular gyri
6 Thalamostriate vein
7 Anterior tubercle of thalamus
8 Thalamus
9 Stria medullaris of thalamus
10 Habenular trigone
11 Habenular commissure
12 Vermis of cerebellum
13 Left hemisphere of cerebellum
14 Head of caudate nucleus
15 Columns of fornix
16 Putamen of lentiform nucleus
17 Internal capsule
18 Taenia of choroid plexus
19 Stria terminalis and thalamostriate vein
20 Lamina affixa
21 Third ventricle
22 Pineal body
23 Superior and inferior colliculus of midbrain

Dissection of the brain IVa. Temporal lobe, fornix, and the posterior corpus callosum have been removed (this part of the specimen is depicted below). Frontal pole at top (superior aspect).



1 Inferior horn of lateral ventricle
2 Hippocampal digitations
3 Collateral eminence
4 Splenium of corpus callosum
5 Calcar avis
6 Posterior horn of lateral ventricle
7 Uncus of parahippocampal gyrus
8 Body and crus of fornix
9 Parahippocampal gyrus
10 Pes hippocampi
11 Dentate gyrus
12 Hippocampal fimbria
13 Lateral ventricle

Dissection of the brain IVb. Depicted is the portion of the brain removed from the specimen above. **Temporal lobe and limbic system** (superior aspect). Columns of fornix are cut.

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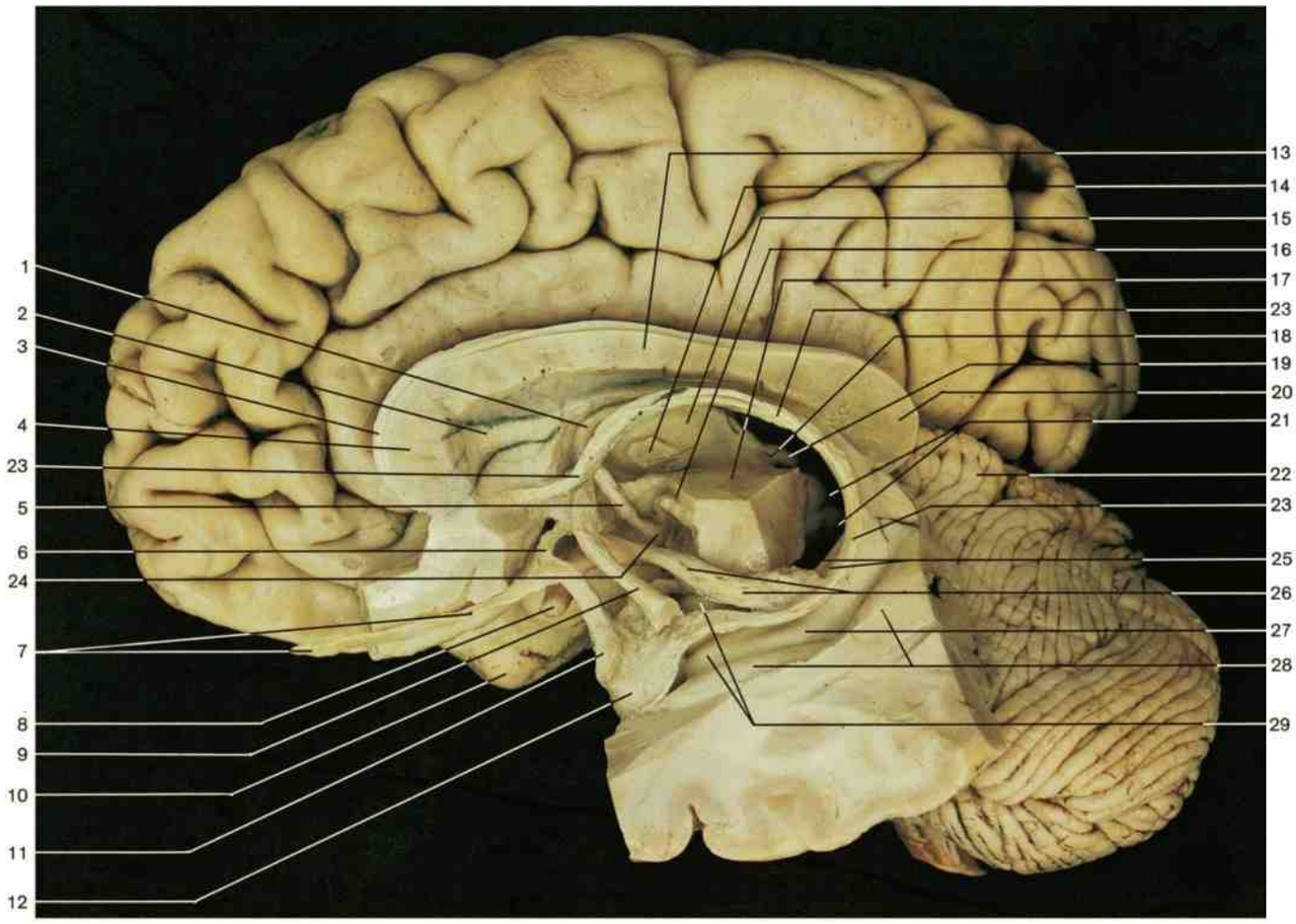
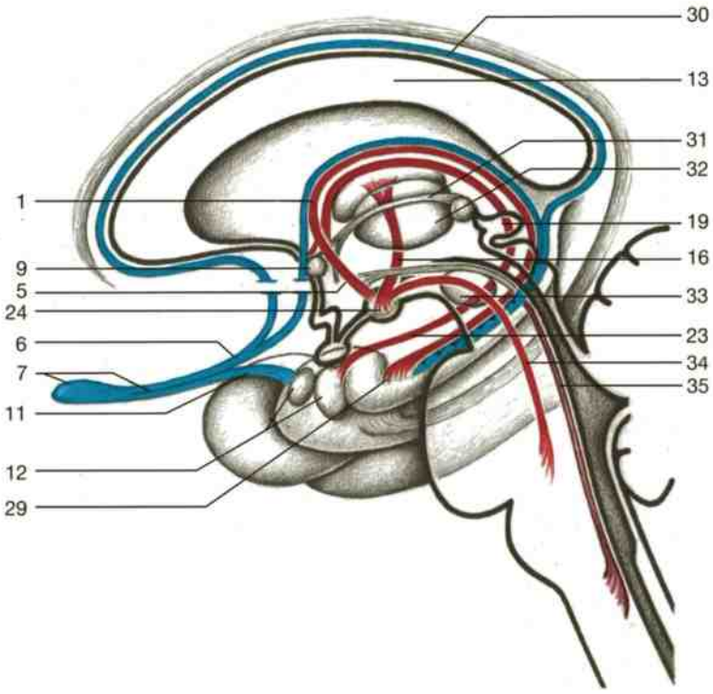


Dissection of the limbic system. Left side, lateral aspect. Corpus callosum has been cut in the median plane. The left thalamus and the left hemisphere have been partly removed.



Main pathways of limbic and olfactory system (schematic drawing). Blue = afferent pathways; red = efferent pathways.

1 Body of fornix
2 Septum pellucidum
3 Lateral longitudinal stria
4 Genu of corpus callosum
5 Column of fornix
6 Medial olfactory stria
7 Olfactory bulb and olfactory tract
8 Optic nerve
9 Anterior commissure (left half)
10 Right temporal lobe
11 Lateral olfactory stria
12 Amygdala
13 Body of corpus callosum
14 Interthalamic adhesion
15 Third ventricle and right thalamus
16 Mamillothalamic fasciculus
17 Part of the thalamus
18 Habenular commissure
19 Pineal body
20 Splenium of corpus callosum
21 Colliculi of midbrain
22 Vermis of cerebellum
23 Stria terminalis
24 Mamillary body
25 Fimbria of hippocampus and pes hippocampi
26 Left optic tract and lateral geniculate body
27 Lateral ventricle and parahippocampal gyrus
28 Collateral eminence
29 Hippocampal digitations
30 Supracallosal gyrus (longitudinal stria)
31 Stria medullaris of thalamus
32 Thalamus
33 Red nucleus
34 Mamillotegmental fasciculus
35 Dorsal longitudinal fasciculus (Schütz)

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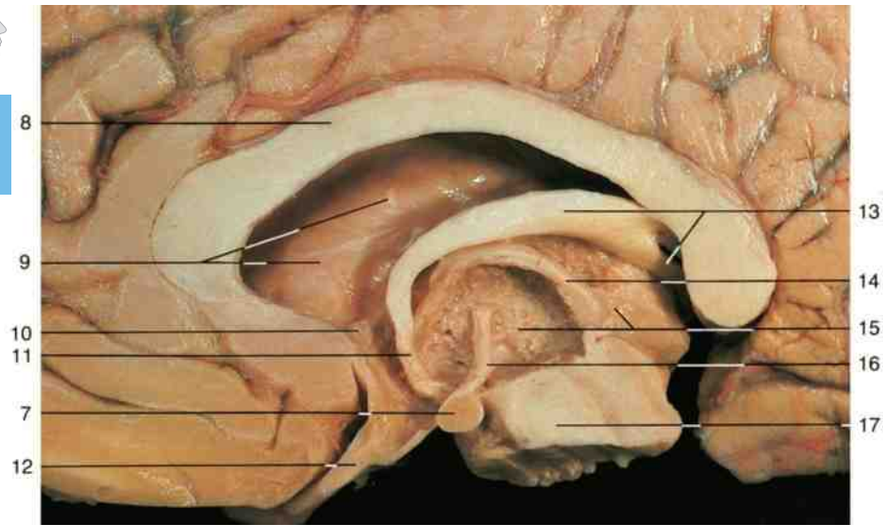
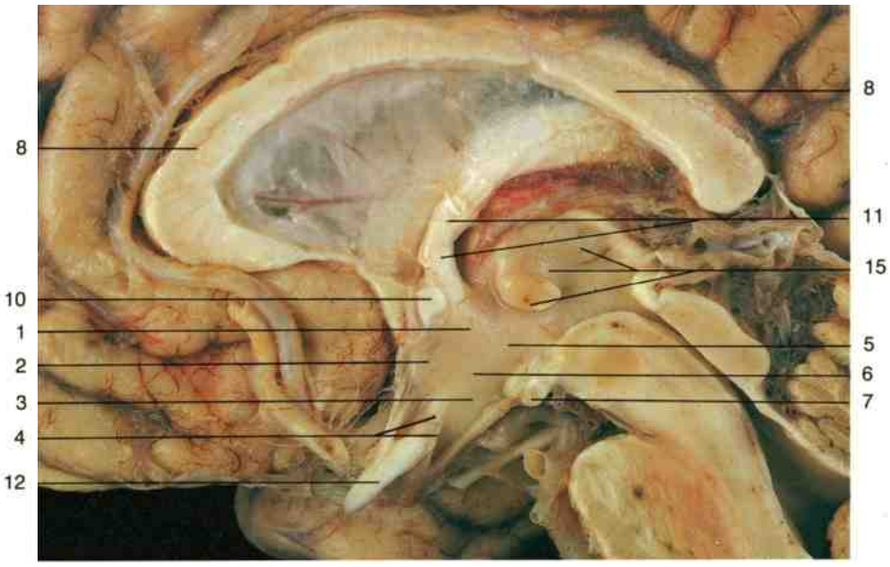
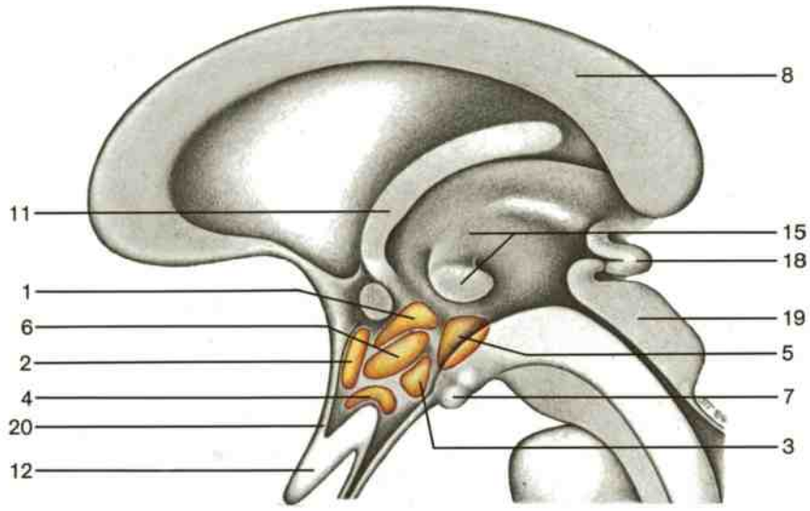


Median section through the diencephalon. Medial part of the thalamus and septum pellucidum have been removed to show the fornix and mamillothalamic fasciculus.

1 Paraventricular nucleus
2 Pre-optic nucleus
3 Ventromedial nucleus
4 Supra-optic nucleus
5 Posterior nucleus
6 Dorsomedial nucleus
} Hypothalamic nuclei
7 Mamillary body
8 Corpus callosum
9 Lateral ventricle (showing caudate nucleus)
10 Anterior commissure
11 Column of fornix
12 Optic chiasma
13 Crus of fornix
14 Stria medullaris of thalamus
15 Thalamus and interthalamic adhesion
16 Mamillothalamic fasciculus of Vicq d'Azyr
17 Cerebral peduncle
18 Pineal body
19 Tectum of midbrain
20 Lamina terminalis



Median section through the diencephalon and midbrain; location of hypothalamic nuclei.



Position of main hypothalamic nuclei (schematic drawing).

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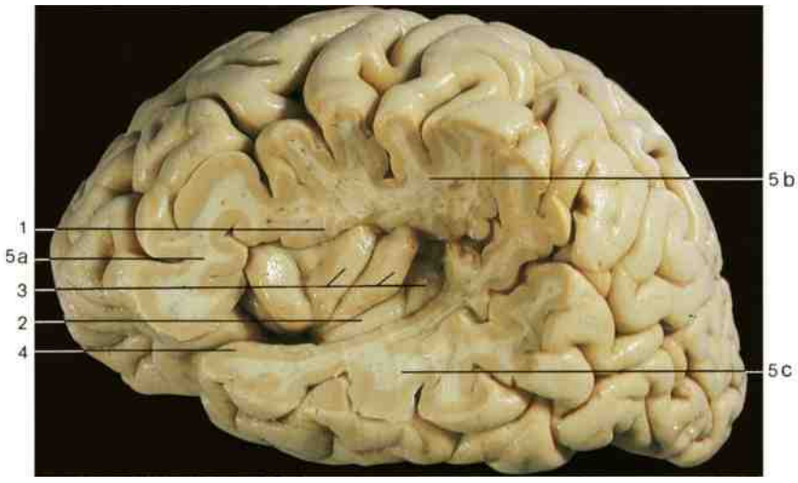
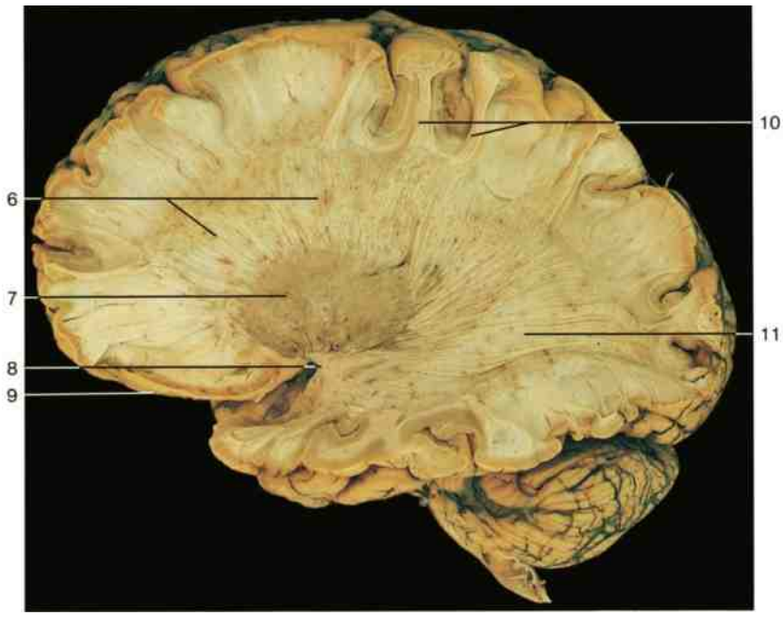
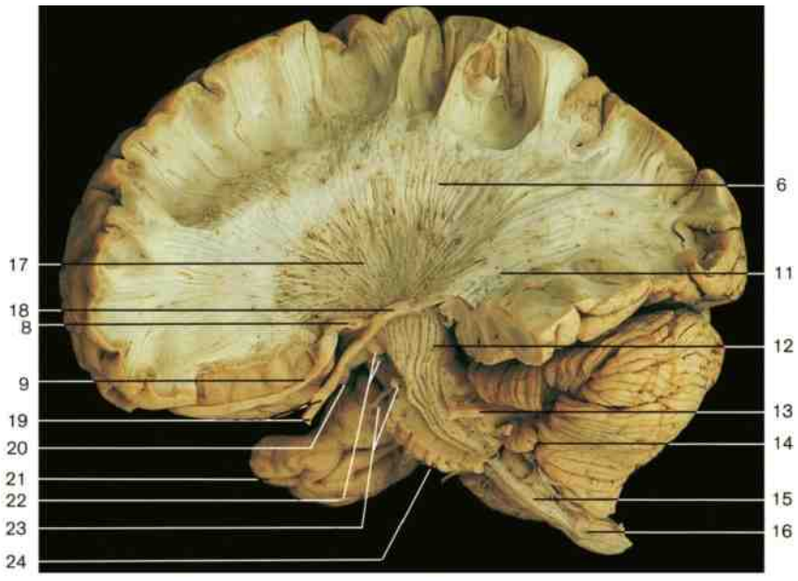


Insula (Reili). The opercula of the frontal, parietal, and temporal lobes have been removed to display the insular gyri. Left hemisphere.



Dissection of the corona radiata, left hemisphere. Frontal pole on the left.



1 Circular sulcus of insula
2 Long gyrus of insula
3 Short gyri of insula
4 Limen insulae
5 Opercula (cut)
  a Frontal operculum
  b Frontoparietal operculum
  c Temporal operculum
6 Corona radiata
7 Lentiform nucleus
8 Anterior commissure
9 Olfactory tract
10 Cerebral arcuate fibers
11 Optic radiation
12 Cerebral peduncle
13 Trigeminal nerve (n. V)
14 Flocculus of cerebellum
15 Pyramidal tract
16 Decussation of pyramidal tract
17 Internal capsule
18 Optic tract
19 Optic nerve (n. II)
20 Infundibulum
21 Temporal lobe (right side)
22 Mamillary bodies
23 Oculomotor nerve (n. III)
24 Transverse fibers of pons

◁ **Corona radiata and internal capsule,** left hemisphere. Lentiform nucleus removed (frontal pole to the left).

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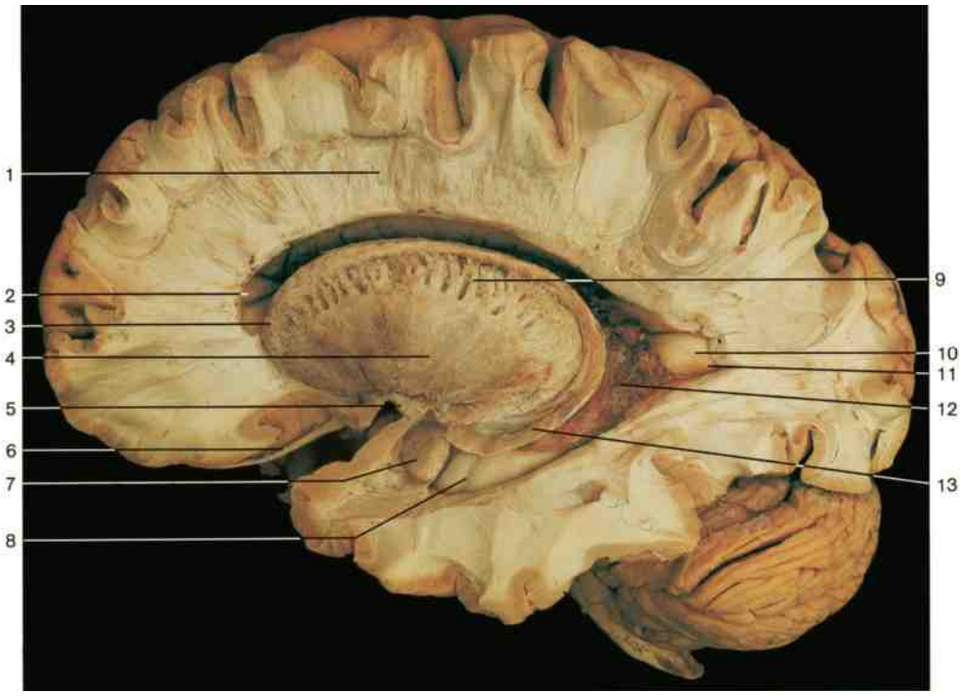
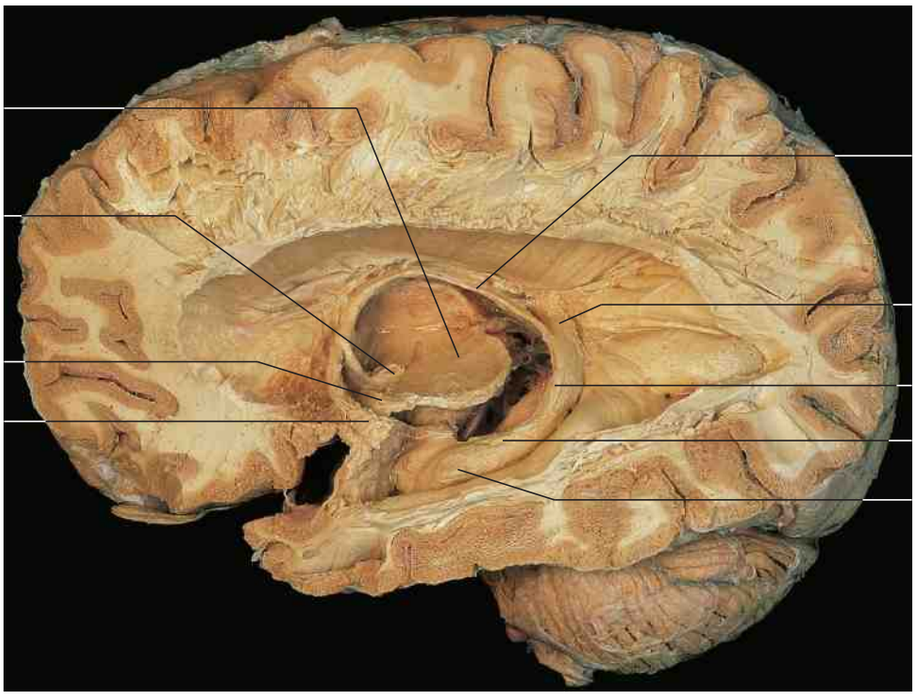


1 Corona radiata
2 Anterior horn of lateral ventricle
3 Head of caudate nucleus
4 Putamen
5 Anterior commissure
6 Olfactory tract
7 Amygdala
8 Hippocampal digitations
9 Internal capsule
10 Calcar avis
11 Posterior horn of lateral ventricle
12 Choroid plexus of lateral ventricle
13 Caudal extremity of caudate nucleus
14 Pulvinar of thalamus
15 Mamillary body
16 Optic tract
17 Anterior commissure
18 Fornix
19 Longitudinal stria
20 Dentate gyrus
21 Hippocampal fimbria
22 Pes hippocampi

Dissection of the subcortical nuclei and internal capsule, left hemisphere (lateral aspect). Frontal pole to the left. The lateral ventricle has been opened, and the insular gyri and claustrum have been removed, revealing the lentiform nucleus and the internal capsule.



Dissection of the limbic system and the fornix (lateral aspect). Frontal pole to the left.

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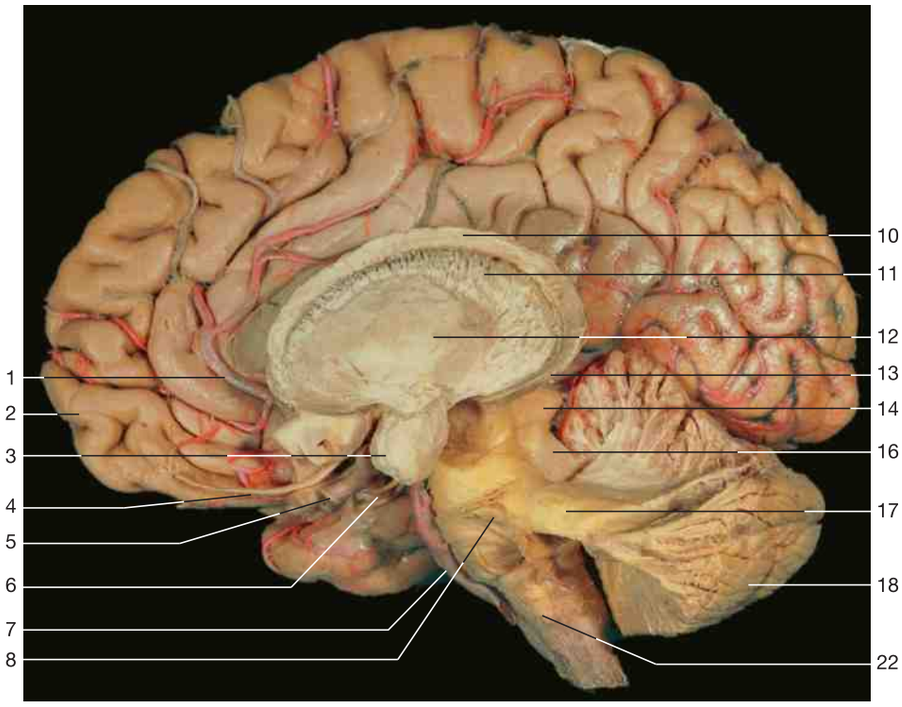
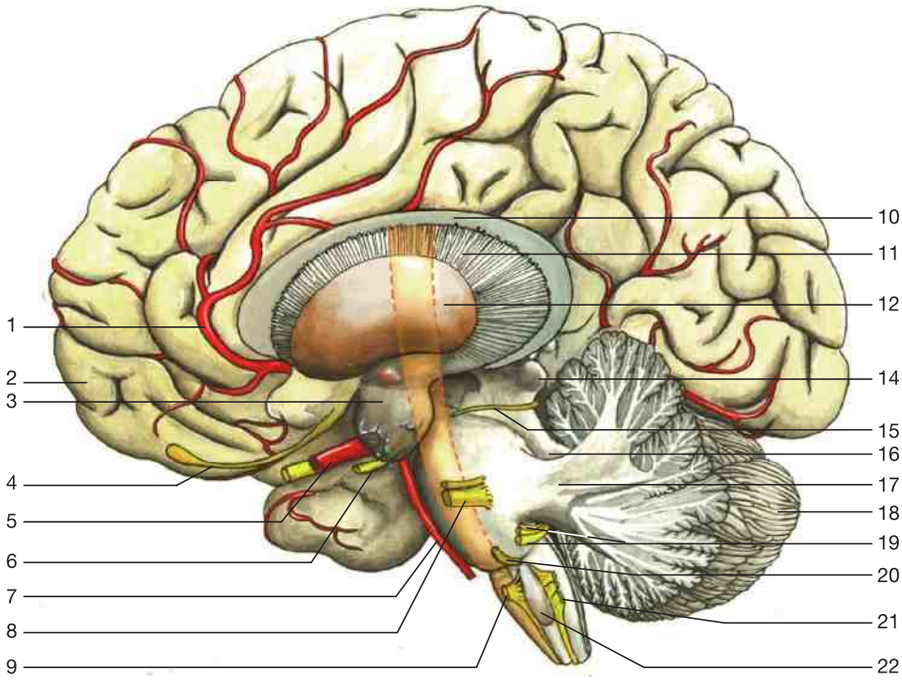


Right hemisphere together with brain stem and cerebellum (lateral aspect).
The connections of the brain stem with the cerebellum are dissected. The amygdala of the left hemisphere is shown. The corpus callosum has been partly removed.

1 Anterior cerebral artery
2 Frontal lobe
3 Amygdala (amygdaloid body)
4 Olfactory tract
5 Internal carotid artery
6 Oculomotor nerve (n. III)
7 Basilar artery
8 Trigeminal nerve (n. V)
9 Hypoglossal nerve (n. XII)
10 Caudate nucleus
11 Internal capsule
12 Lentiform nucleus
13 Caudal extremity of caudate nucleus
14 Inferior colliculus of midbrain
15 Trochlear nerve (n. IV)
16 Superior cerebellar peduncle
17 Middle cerebellar peduncle
18 Cerebellum
19 Facial nerve (n. VII) and vestibulocochlear nerve (n. VIII)
20 Abducent nerve (n. VI)
21 Glossopharyngeal nerve (n. IX), vagus nerve (n. X), and accessory nerve (n. XI)
22 Inferior olive



Schematic drawing of the dissected brain shown above (lateral aspect).
The course of the pyramidal tracts is indicated in red. Cranial nerves = yellow.

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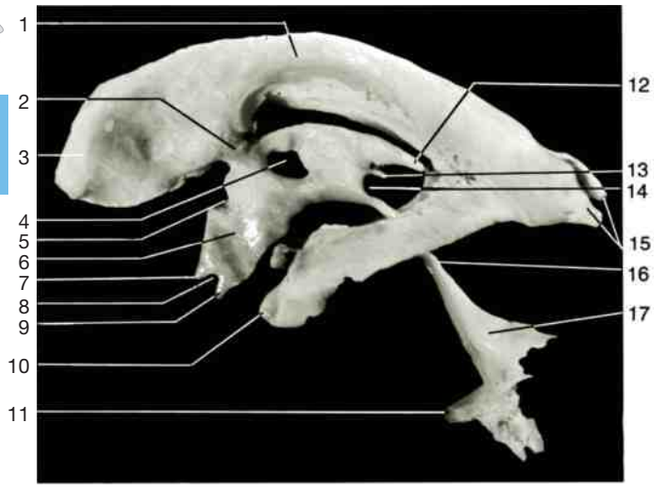
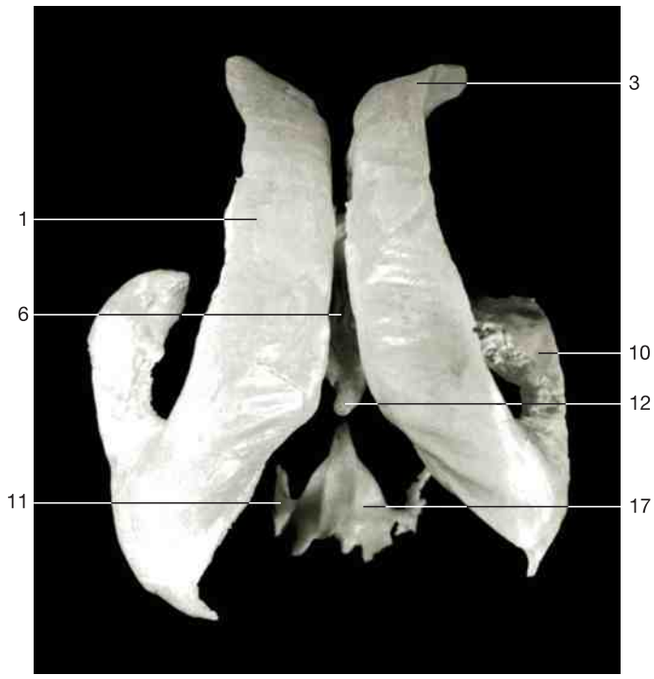


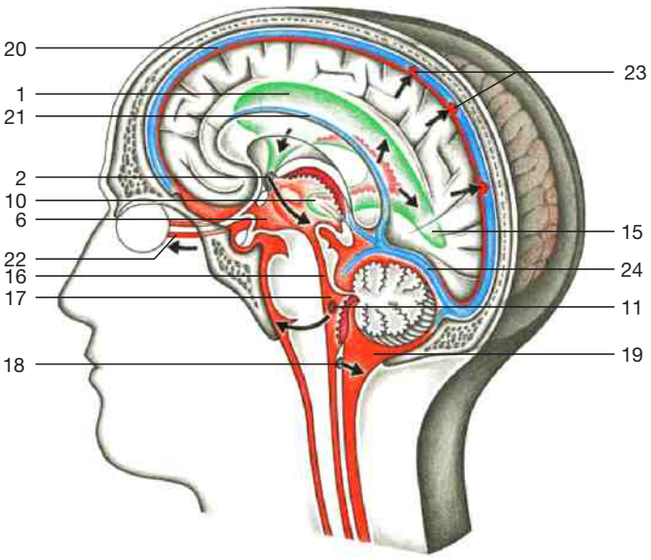
Cast of ventricular cavities of the brain (lateral aspect), frontal pole to the left.

1 Central part of the lateral ventricle
2 Interventricular foramen of Monro
3 Anterior horn of the lateral ventricle
4 Site of interthalamic adhesion
5 Notch for anterior commissure
6 Third ventricle
7 Optic recess
8 Notch for optic chiasma
9 Infundibular recess
10 Inferior horn of lateral ventricle with indentation of amygdaloid body
11 Lateral recess and lateral aperture of Luschka
12 Suprapineal recess
13 Pineal recess
14 Notch for posterior commissure
15 Posterior horn of lateral ventricle
16 Cerebral aqueduct

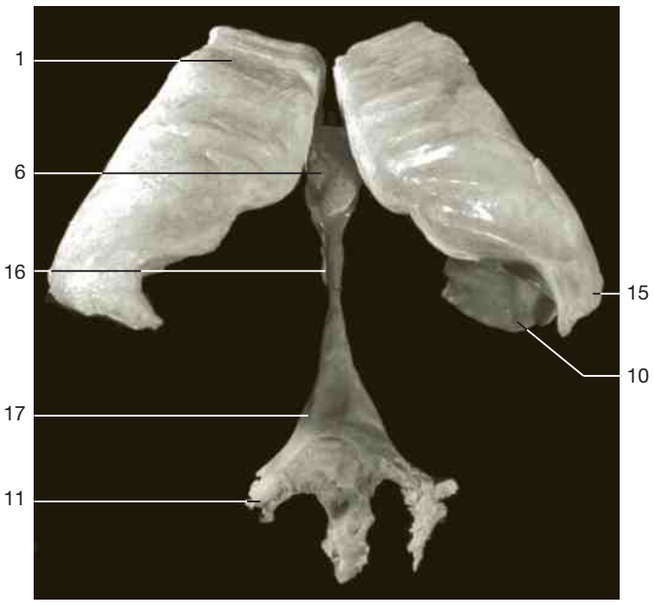


Cast of ventricular cavities of the brain (superior aspect), frontal pole at top.

17 Fourth ventricle
18 Median aperture of Magendie
19 Cerebellomedullary cistern
20 Superior sagittal sinus
21 Inferior sagittal sinus
22 Intervaginal space of optic nerve
23 Arachnoid granulations of Pacchioni
24 Straight sinus



Position of ventricular cavities (schematic drawing). The direction of flow of cerebrospinal fluid is indicated by arrows. Green = right lateral ventricle; red = choroidal plexus with cerebrospinal fluid.



Cast of ventricular cavities of the brain (posterior aspect).

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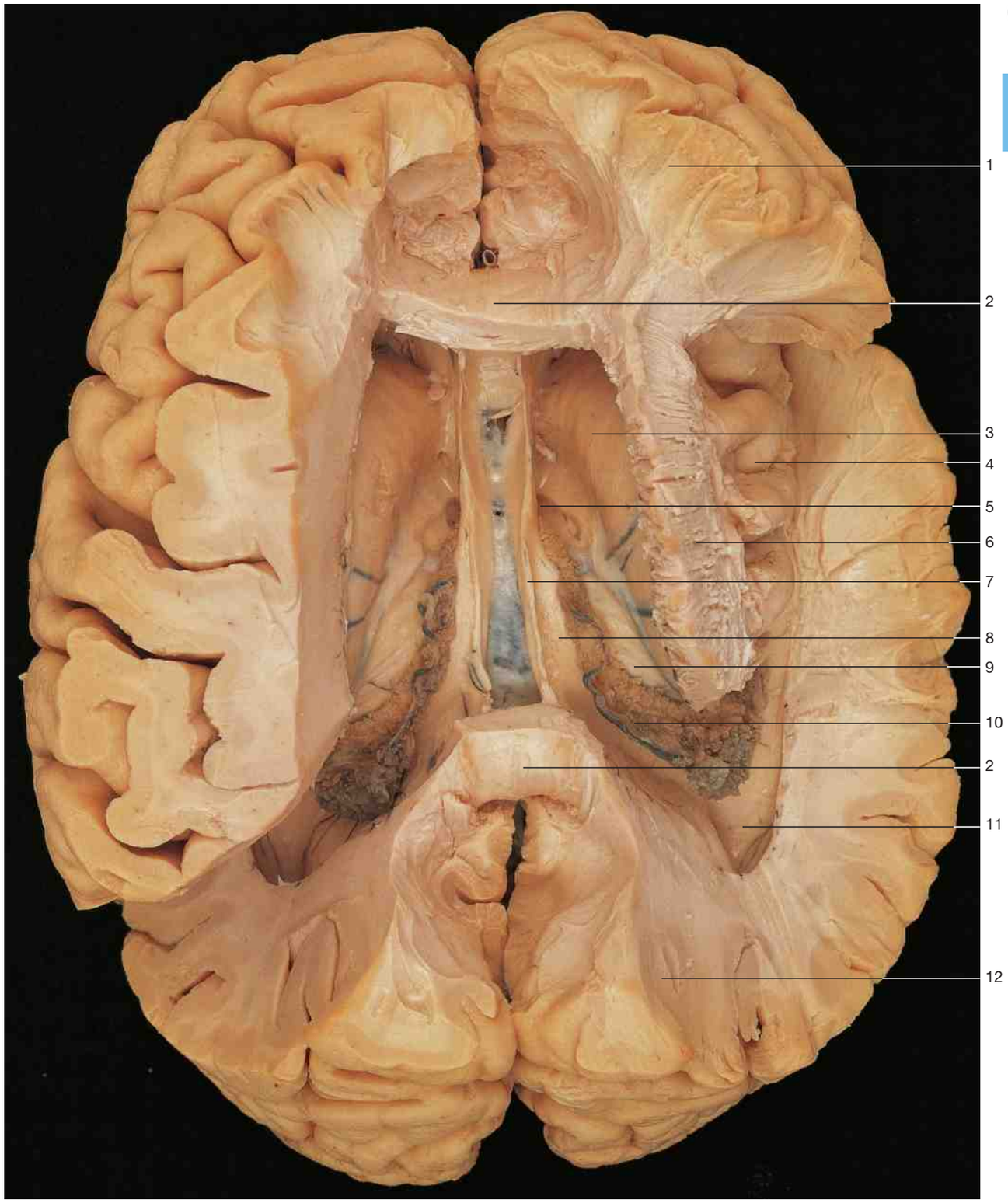

Dissection of the brain (superior view of the lateral ventricle and of the subcortical nuclei of the brain). Corpus callosum partly removed. Fornix and choroid plexus of the left lateral ventricle are shown.

1 Frontal lobe of brain
2 Corpus callosum
3 Caudate nucleus (head)
4 Insular cortex
5 Interventricular foramen
6 Internal capsule
7 Lateral longitudinal stria
8 Body of fornix
9 Thalamus
10 Choroid plexus
11 Lateral ventricle (occipital horn)
12 Occipital lobe of brain

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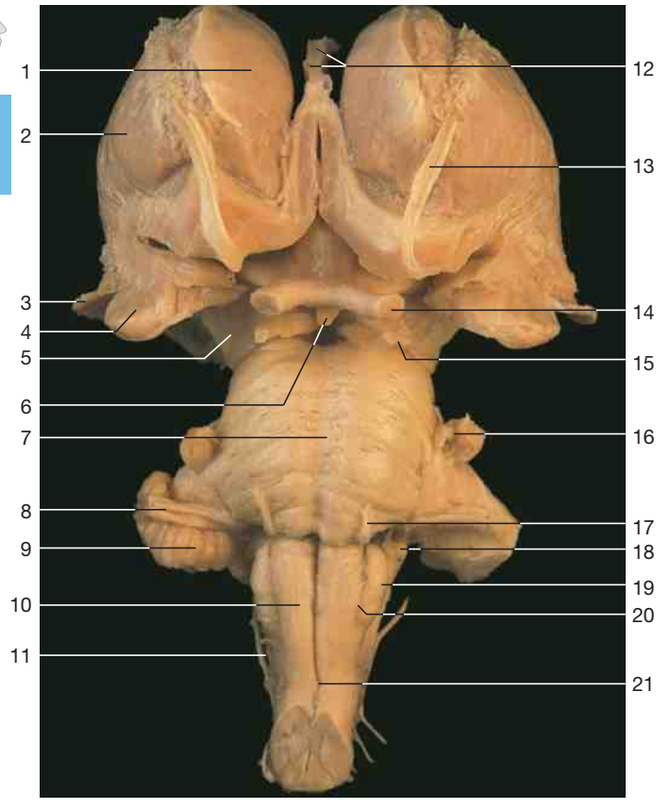
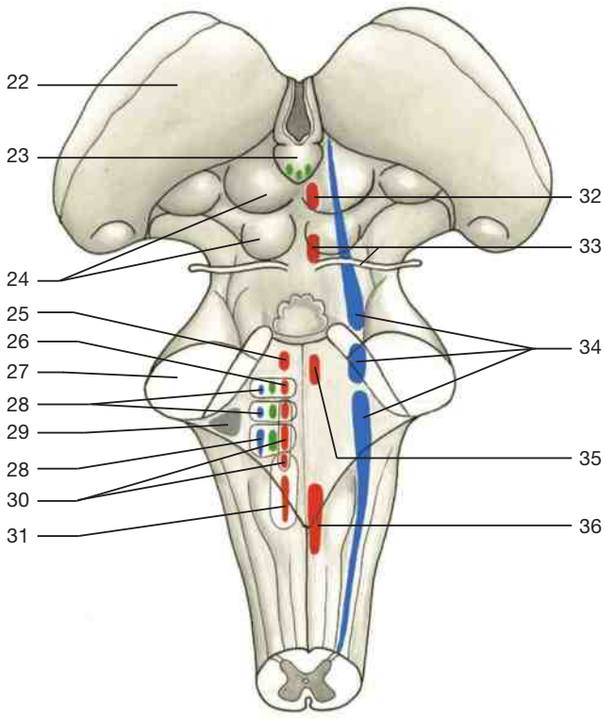


Brain stem (ventral aspect).

1 Caudate nucleus
2 Lentiform nucleus
3 Caudal extremity of caudate nucleus
4 Amygdaloid body
5 Cerebral peduncle
6 Infundibulum
7 Pons
8 Facial nerve (n. VII) and vestibulocochlear nerve (n. VIII)
9 Cerebellar flocculus
10 Medulla oblongata
11 Accessory nerve (n. XI)
12 Fornix and column of fornix
13 Olfactory tract
14 Optic nerve (n. II)
15 Oculomotor nerve (n. III)
16 Trigeminal nerve (n. V)
17 Abducent nerve (n. VI)
18 Glossopharyngeal nerve (n. IX) and vagus nerve (n. X)
19 Inferior olive
20 Hypoglossal nerve (n. XII)
21 Decussation of the pyramids
22 Thalamus
23 Epiphysis
24 Tectum of midbrain (superior and inferior colliculus)
25 Motor nucleus of trigeminal nerve (n. V)
26 Facial nucleus (n. VII)
27 Middle cerebellar peduncle
28 Visceral nucleus of glossopharyngeal and vagus nerves (n. IX and n. X), salivatory nucleus
29 Vestibular nucleus (n. VIII)
30 Ambiguus nucleus (n. IX, n. X, n. XI)
31 Spinal nucleus of accessory nerve (n. XI)
32 Motor nucleus of oculomotor nerve (n. III)
33 Trochlear nucleus and nerve (n. IV)
34 Sensory nucleus of trigeminal nerve (n. V)
35 Abducent nucleus (n. VI)
36 Hypoglossal nucleus (n. XII)



Brain stem (dorsal aspect, schematic drawing). Location of cranial nerve nuclei.

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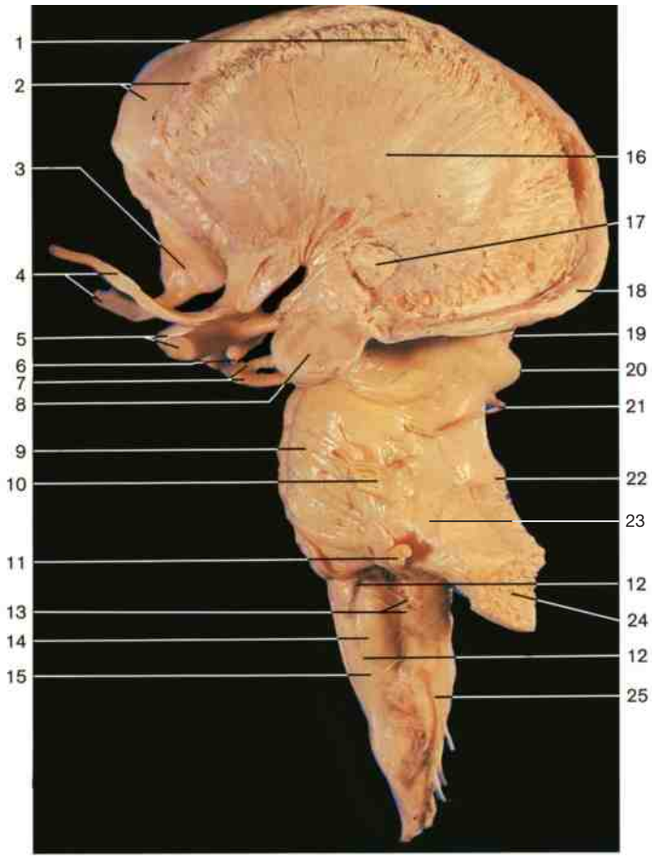
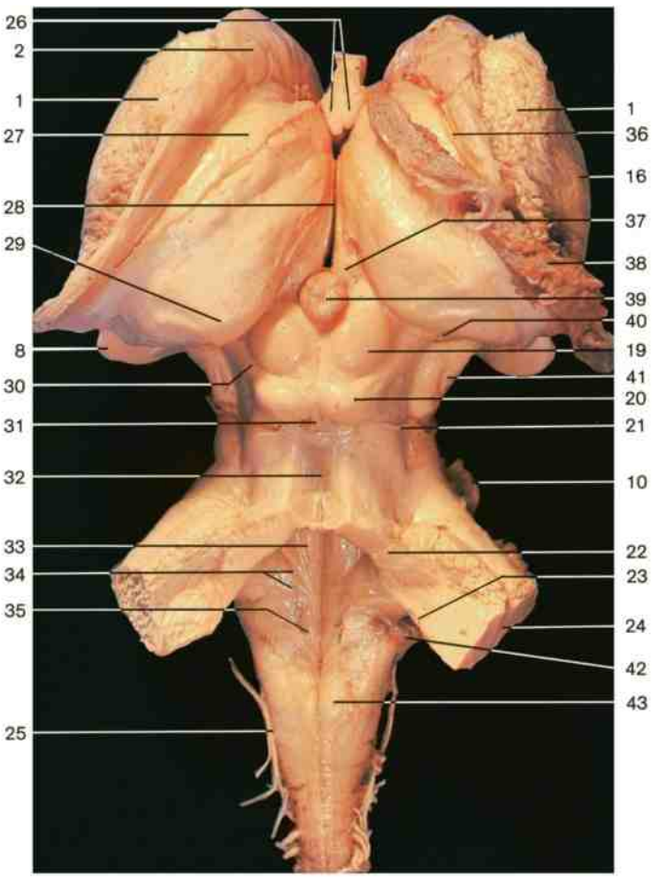
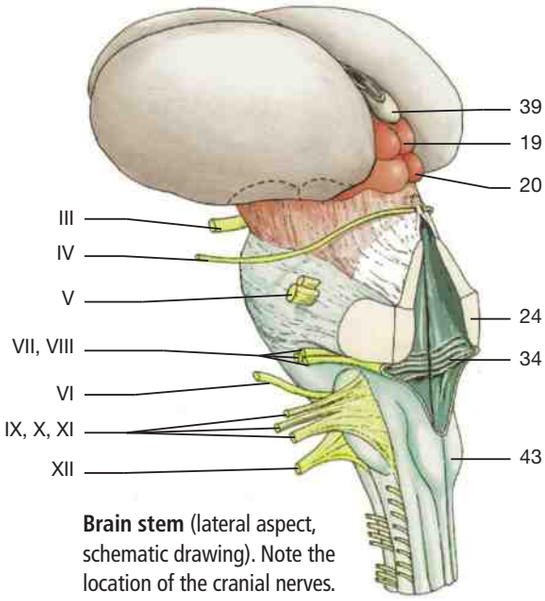


Brain stem (left lateral aspect). Cerebellar peduncles have been severed, cerebellum and cerebral cortex have been removed.



Brain stem (dorsal aspect). Cerebellum removed.



Brain stem (lateral aspect, schematic drawing). Note the location of the cranial nerves. III–XII = cranial nerves.

1 Internal capsule
2 Head of the caudate nucleus
3 Olfactory trigone
4 Olfactory tracts
5 Optic nerves (n. II)
6 Infundibulum
7 Oculomotor nerve (n. III)
8 Amygdaloid body
9 Pons
10 Trigeminal nerve (n. V)
11 Facial and vestibulocochlear nerves (n. VII, n. VIII)
12 Hypoglossal nerve (n. XII)
13 Glossopharyngeal and vagus nerves (n. IX, n. X)
14 Inferior olive
15 Medulla oblongata
16 Lentiform nucleus
17 Anterior commissure
18 Tail of caudate nucleus
19 Superior colliculus
20 Inferior colliculus
21 Trochlear nerve (n. IV)
22 Superior cerebellar peduncle
23 Inferior cerebellar peduncle
24 Middle cerebellar peduncle
25 Accessory nerve (n. XI)
26 Columns of fornix (divided)
27 Lamina affixa
28 Third ventricle
29 Pulvinar of thalamus
30 Inferior brachium
31 Frenulum veli
32 Superior medullary velum
33 Facial colliculus
34 Striae medullares and rhomboid fossa
35 Hypoglossal trigone
36 Stria terminalis and thalamostriate vein
37 Habenular trigone
38 Choroid plexus of lateral ventricle
39 Pineal body
40 Medial geniculate body
41 Cerebral peduncle
42 Choroid plexus of fourth ventricle
43 Clava

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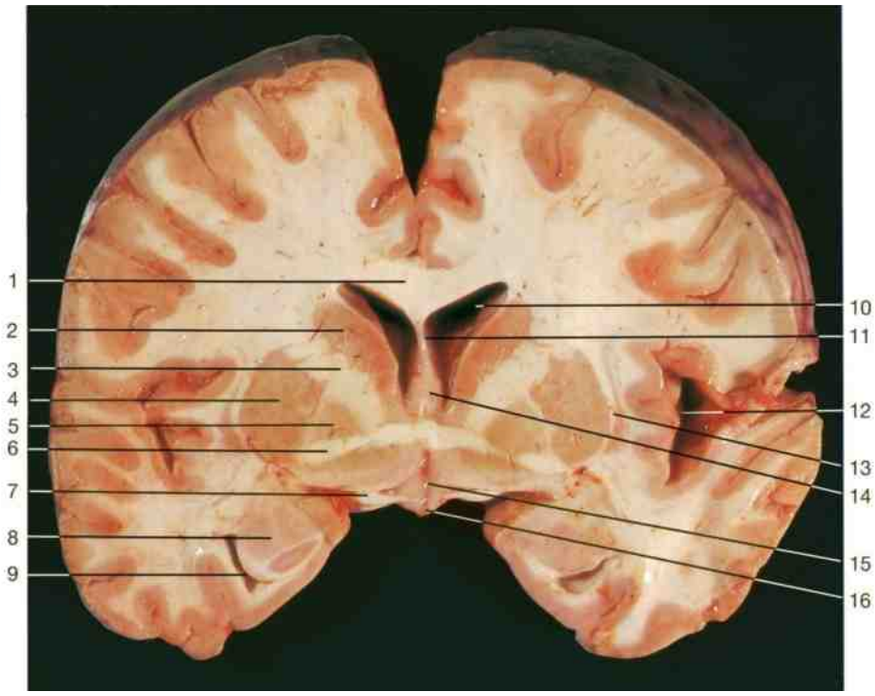
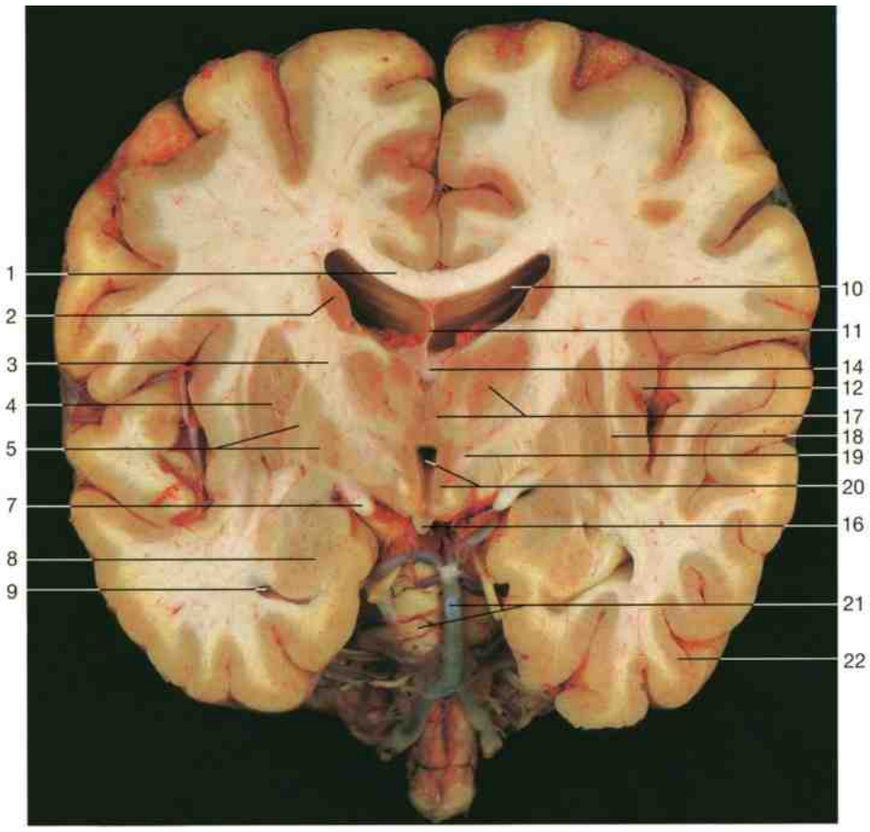


Coronal section through the brain at the level of the anterior commissure. Section 1.



Coronal section through the brain at the level of the third ventricle and the interthalamic adhesion. Section 2.

1 Corpus callosum
2 Head of caudate nucleus
3 Internal capsule
4 Putamen
5 Globus pallidus
6 Anterior commissure
7 Optic tract
8 Amygdaloid body
9 Inferior horn of lateral ventricle
10 Lateral ventricle
11 Septum pellucidum
12 Lobus insularis (insula)
13 External capsule
14 Column of fornix
15 Optic recess
16 Infundibulum
17 Thalamus
18 Claustrum
19 Lenticular ansa
20 Third ventricle and hypothalamus
21 Basilar artery and pons
22 Cortex of temporal lobe
23 Inferior colliculus
24 Superior colliculus
25 Cerebral aqueduct
26 Red nucleus
27 Substantia nigra
28 Cerebral peduncle
29 Trochlear nerve (n. IV)
30 Gray matter
31 Nucleus of oculomotor nerve
32 Fibers of oculomotor nerve (n. III)
33 Vermis of cerebellum
34 Fourth ventricle
35 Reticular formation
36 Pons and transverse pontine fibers
37 Emboliform nucleus
38 Dentate nucleus
39 Middle cerebellar peduncle
40 Choroid plexus
41 Hypoglossal nucleus at rhomboid fossa
42 Medial longitudinal fasciculus
43 Trigeminal nerve (n. V.)
44 Inferior olivary nucleus
45 Corticospinal fibers and arcuate fibers
46 Fourth ventricle with choroid plexus
47 Vestibular nuclei
48 Nucleus and tractus solitarius
49 Inferior cerebellar peduncle (restiform body)
50 Reticular formation
51 Medial lemniscus
52 Cuneate nucleus of Burdach
53 Central canal
54 Pyramidal tract
55 Flocculus of cerebellum
56 Cerebellar hemisphere with pia mater
57 "Arbor vitae" of cerebellum
58 Nucleus gracilis of Goll
59 Lateral recess of choroid plexus of fourth ventricle
60 Posterior inferior cerebellar artery
61 Choroid plexus of lateral ventricle

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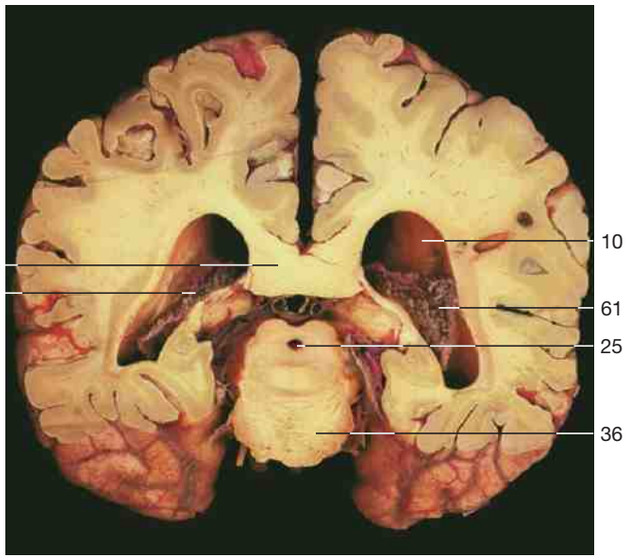
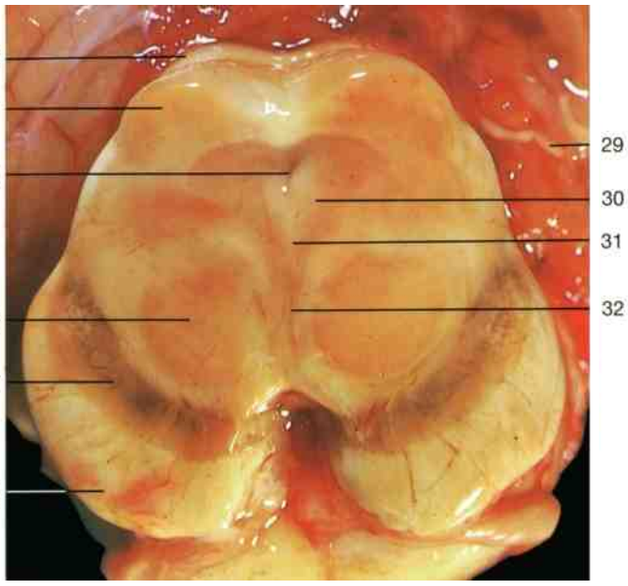
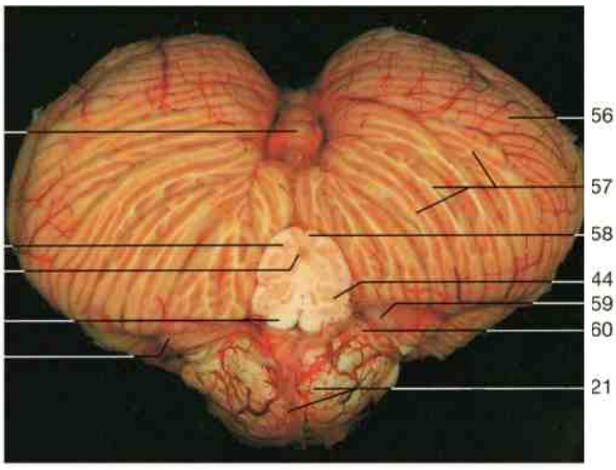


Coronal section through the brain at the level of the inferior colliculus (posterior aspect). Section 3.

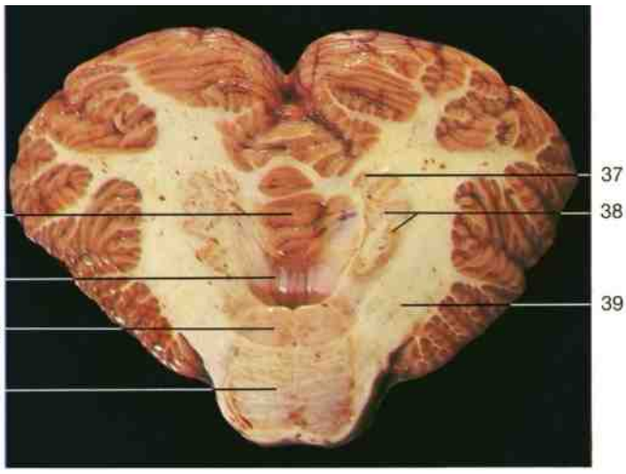
Cross section of the rhombencephalon at the level of the olive (inferior aspect). Section 6.



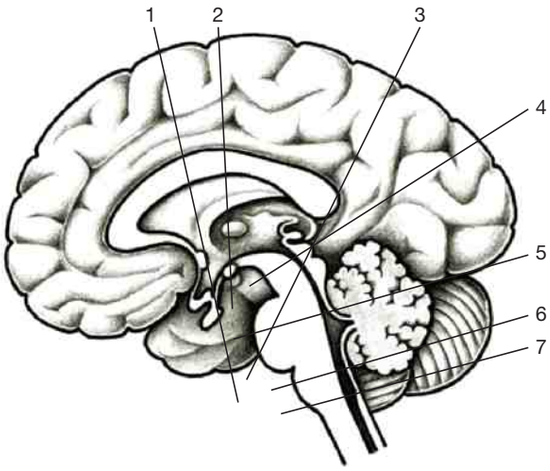
Cross section of the midbrain (mesencephalon) at the level of the superior colliculus (superior aspect). Section 4.



Cross section through medulla oblongata and cerebellum (inferior aspect). Section 7.



Cross section through the rhombencephalon at the level of the pons (inferior aspect). Section 5.



Right half of the brain. Levels of the sections are indicated.

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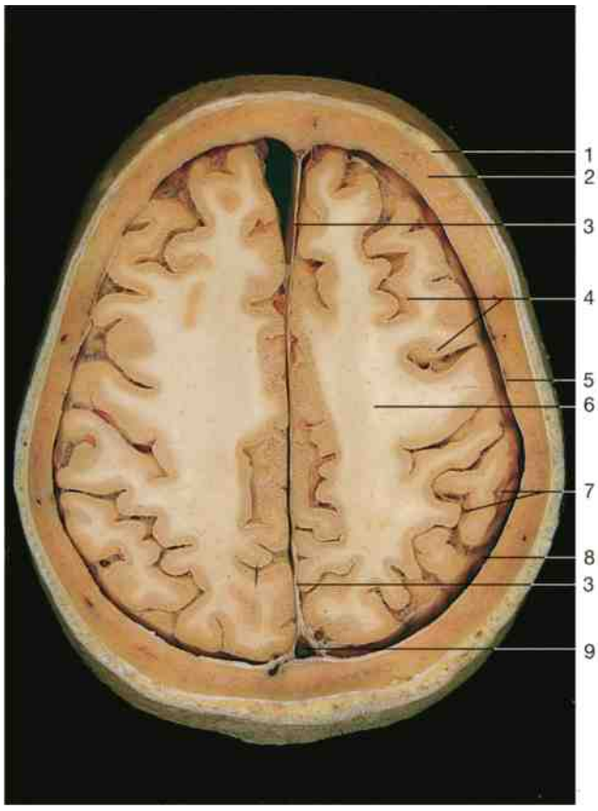
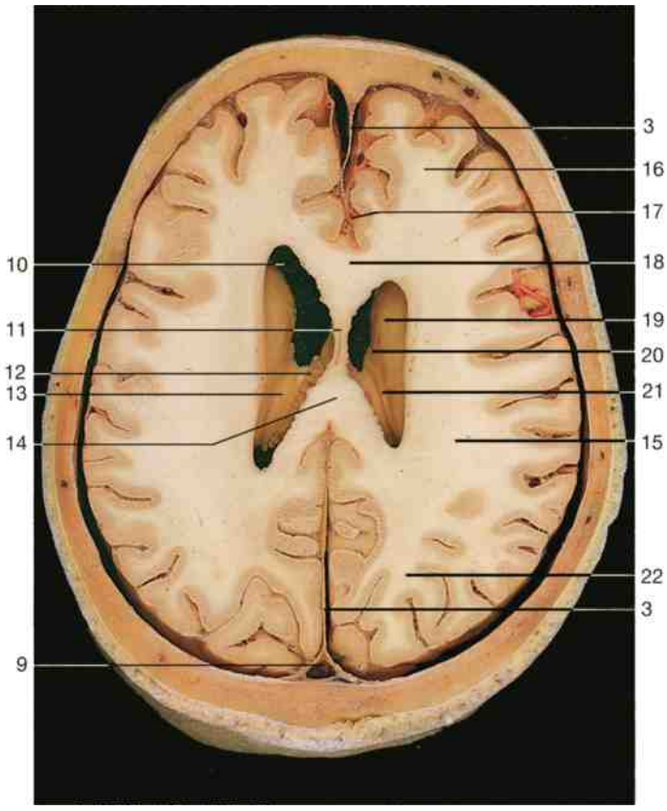
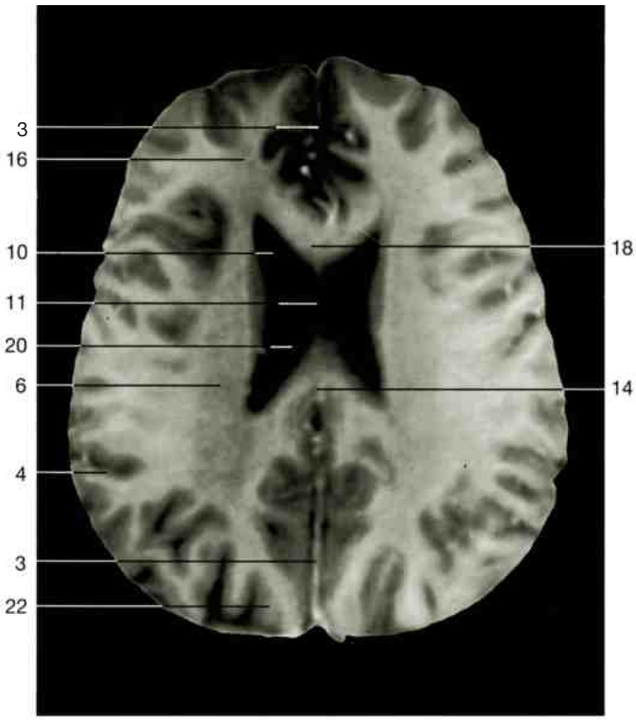


Horizontal section through the head.
Section 1.



Horizontal section through the head.
Section 2.



MRI scan of the human head at the level of section 2.

1 Skin of scalp
2 Calvaria (diploe of the skull)
3 Falx cerebri
4 Gray matter of brain (cortex)
5 Dura mater
6 White matter of brain
7 Arachnoid and pia mater with vessels
8 Subdural space (slightly expanded due to shrinkage of the brain)
9 Superior sagittal sinus
10 Anterior horn of lateral ventricle
11 Septum pellucidum
12 Choroid plexus
13 Thalamus
14 Splenium of corpus callosum
15 Parietal lobe
16 Frontal lobe
17 Anterior cerebral artery
18 Genu of corpus callosum
19 Caudate nucleus
20 Central part of lateral ventricle
21 Stria terminalis
22 Occipital lobe

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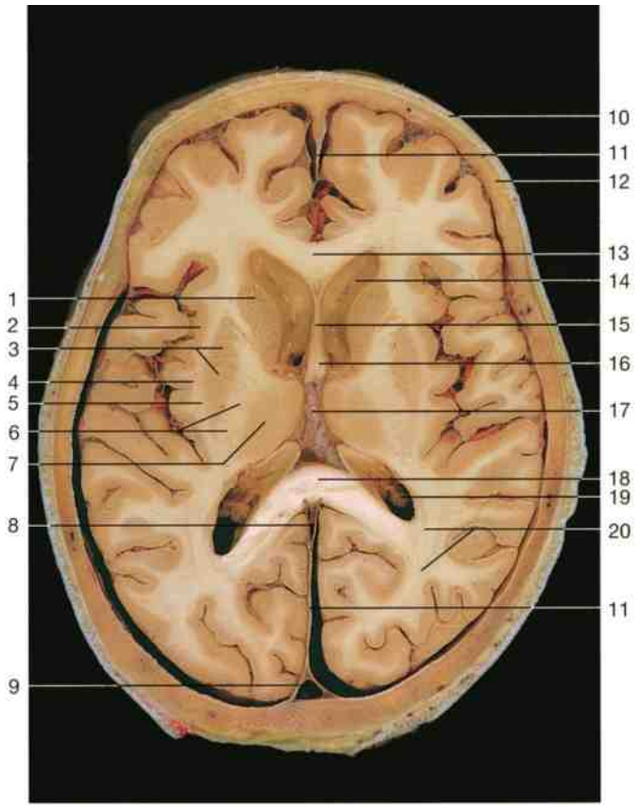
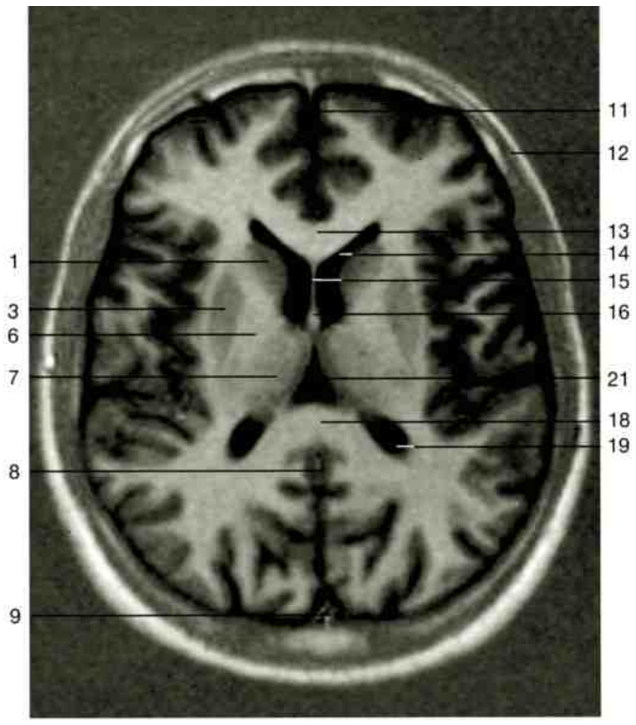
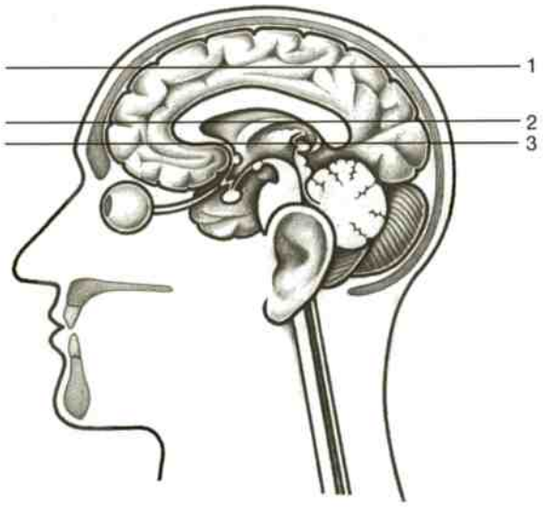


Horizontal section through the head at the level of third ventricle of internal capsule and neighboring nuclei.
Section 3.

1 Caudate nucleus
2 Lobus insularis (insula)
3 Lentiform nucleus
4 Claustrum
5 External capsule
6 Internal capsule
7 Thalamus
8 Inferior sagittal sinus
9 Superior sagittal sinus
10 Skin of scalp
11 Falx cerebri
12 Calvaria (diploe of skull)
13 Genu of corpus callosum
14 Anterior horn of lateral ventricle
15 Septum pellucidum
16 Column of fornix
17 Choroid plexus of third ventricle
18 Splenium of corpus callosum
19 Entrance to inferior horn of lateral ventricle with choroid plexus
20 Optic radiation
21 Third ventricle



MRI scan at the corresponding level to the above figure.
Section 3.



Sagittal section through the head.
Levels of the horizontal sections are indicated.

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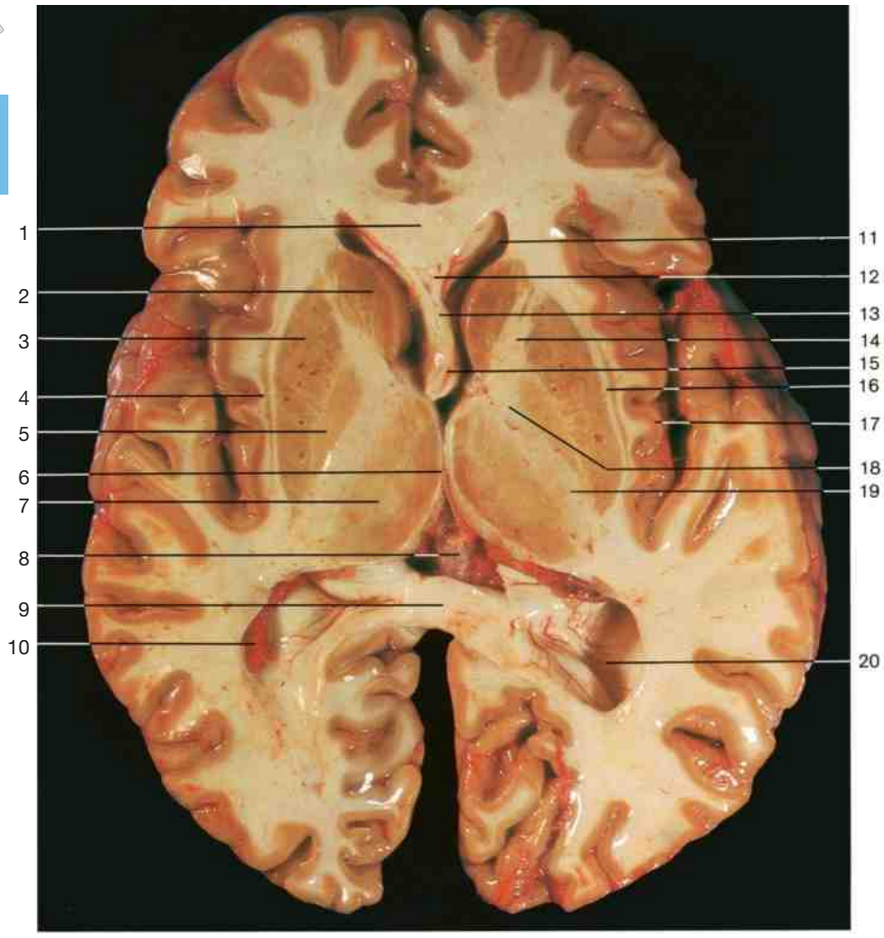
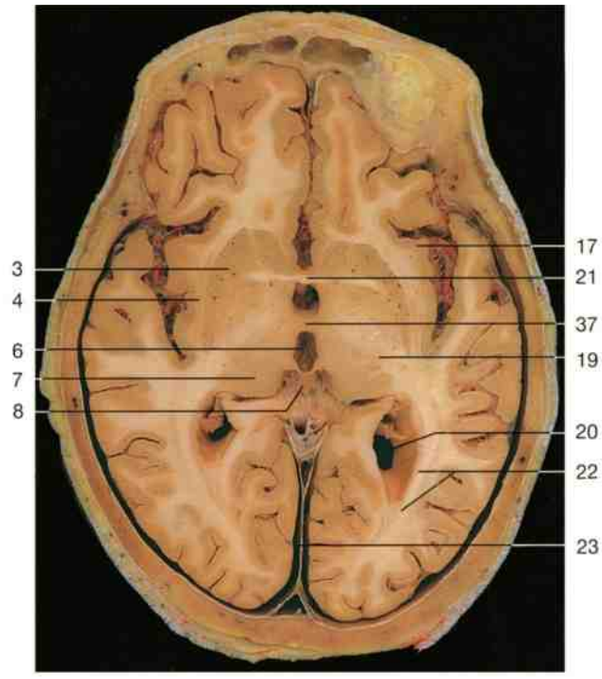
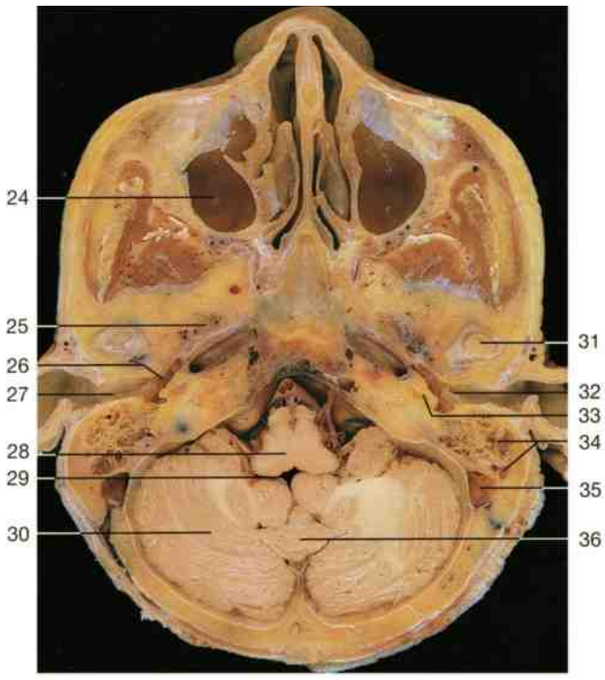


Horizontal section through the brain, showing the subcortical nuclei and internal capsule. Section 1.

1 Genu of corpus callosum
2 Head of caudate nucleus
3 Putamen
4 Claustrum
5 Globus pallidus
6 Third ventricle
7 Thalamus
8 Pineal body
9 Splenium of corpus callosum
10 Choroid plexus of the lateral ventricle
11 Anterior horn of lateral ventricle
12 Cavity of septum pellucidum
13 Septum pellucidum
14 Anterior limb of internal capsule
15 Column of fornix
16 External capsule
17 Lobus insularis (insula)
18 Genu of internal capsule
19 Posterior limb of internal capsule
20 Posterior horn of lateral ventricle
21 Anterior commissure
22 Optic radiation
23 Falx cerebri
24 Maxillary sinus
25 Position of auditory tube
26 Tympanic cavity
27 External acoustic meatus
28 Medulla oblongata
29 Fourth ventricle
30 Cerebellum (left hemisphere)
31 Temporomandibular joint
32 Tympanic membrane
33 Base of cochlea
34 Mastoid air cells
35 Sigmoid sinus
36 Vermis of cerebellum
37 Intermediate mass



Horizontal section through the head. Section 2.



Horizontal section through the head. Section 4.

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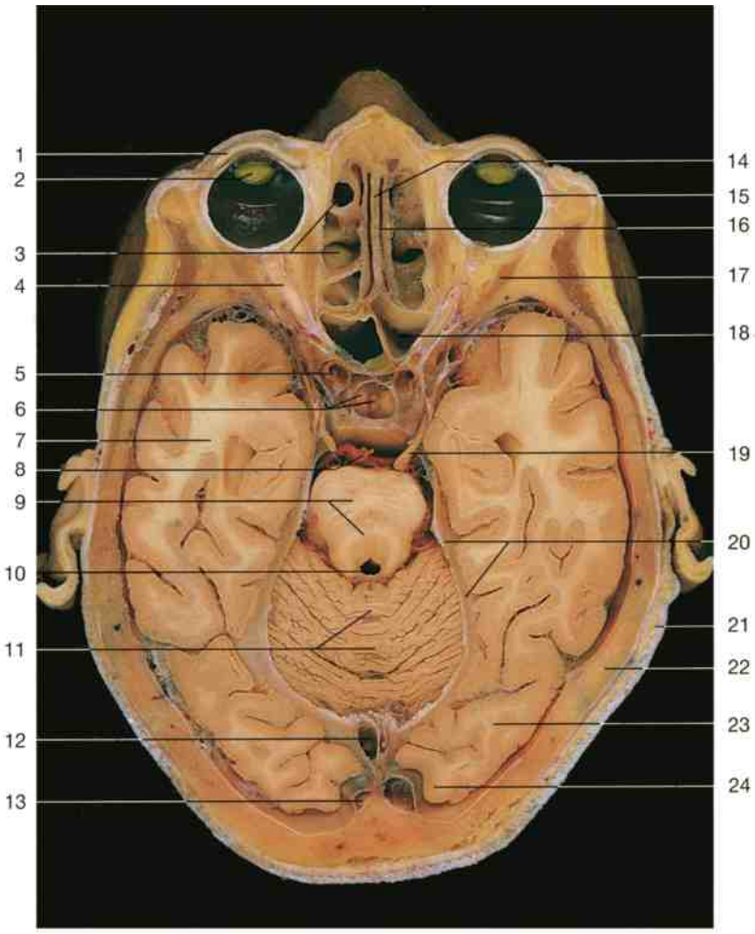
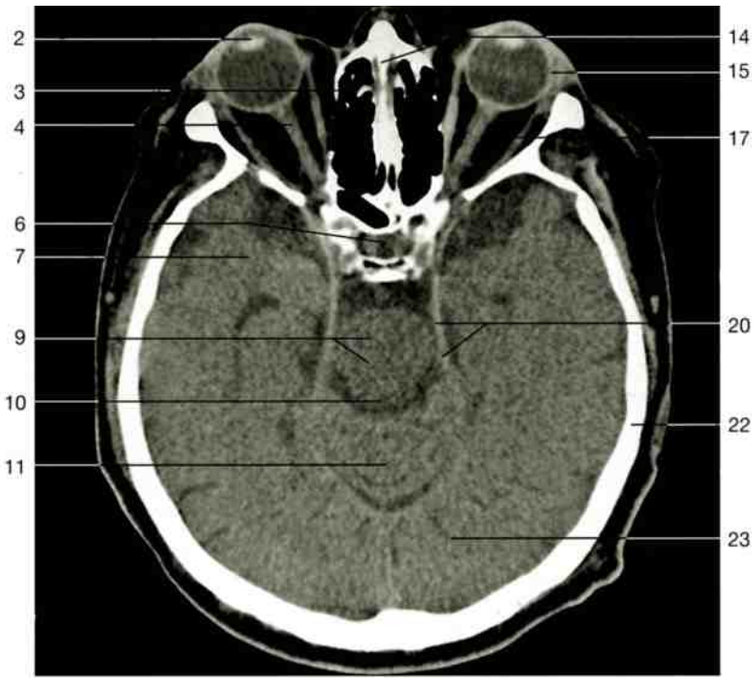
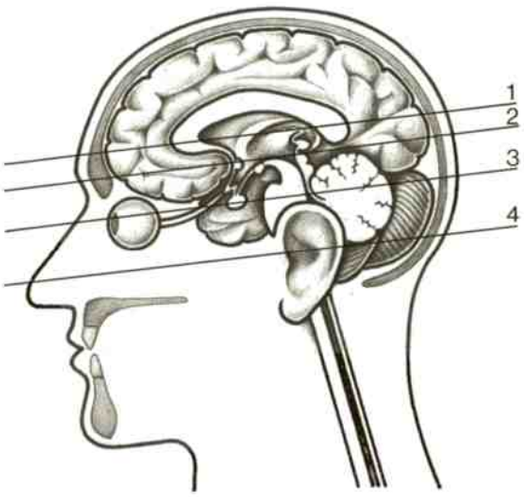


Horizontal section through the head. Section 3.

1 Upper lid (tarsal plate)
2 Lens
3 Ethmoidal sinus
4 Optic nerve (n. II)
5 Internal carotid artery
6 Infundibulum and pituitary gland
7 Temporal lobe
8 Basilar artery
9 Pons (cross section of brain stem)
10 Cerebral aqueduct (beginning of fourth ventricle)
11 Vermis of cerebellum
12 Straight sinus
13 Transverse sinus
14 Nasal septum
15 Eyeball (sclera)
16 Nasal cavity
17 Lateral rectus muscle
18 Sphenoidal sinus
19 Oculomotor nerve (n. III)
20 Tentorium of cerebellum
21 Skin of scalp
22 Calvaria
23 Occipital lobe
24 Striate cortex (visual cortex)



Horizontal section through the head. (CT scan.) Section 3.



Sagittal section through the head.
Levels of the horizontal sections are indicated.

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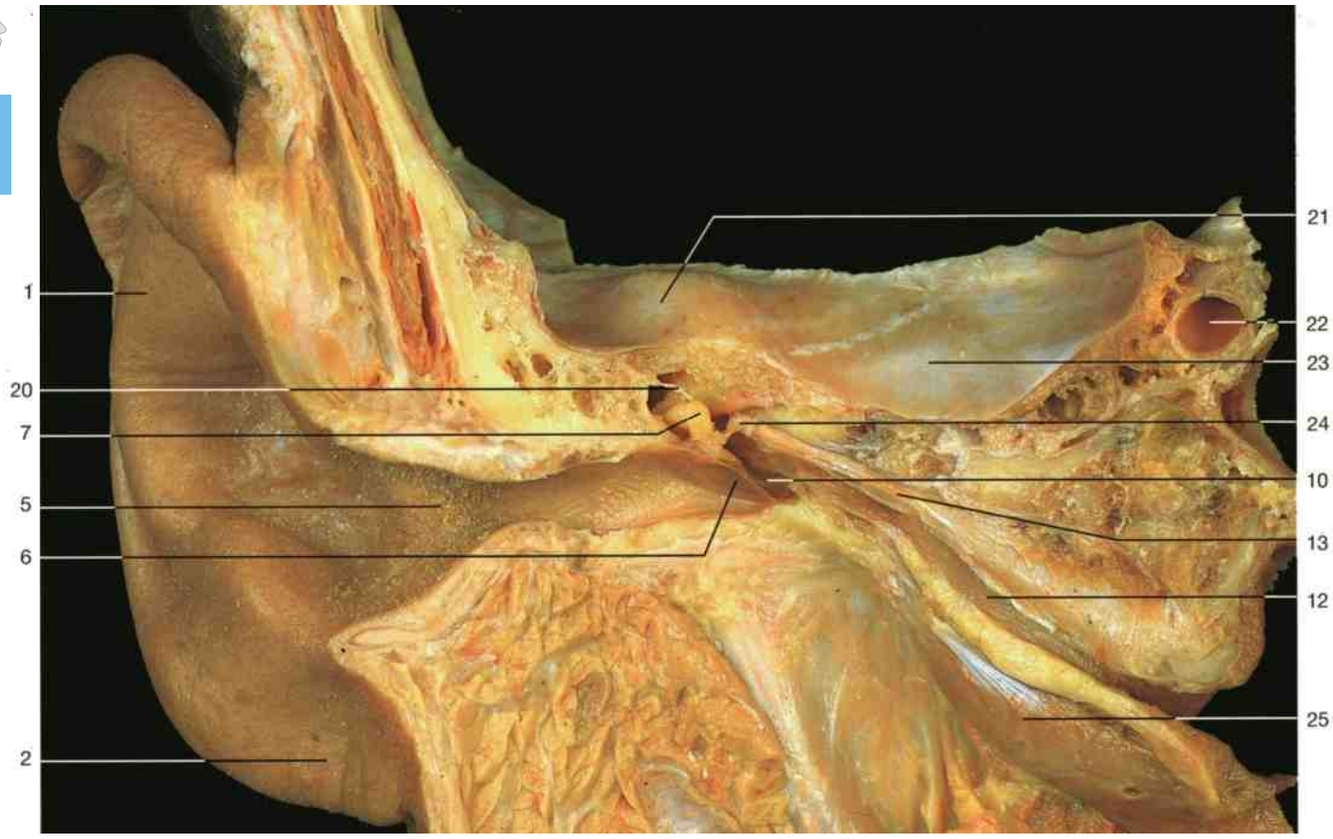
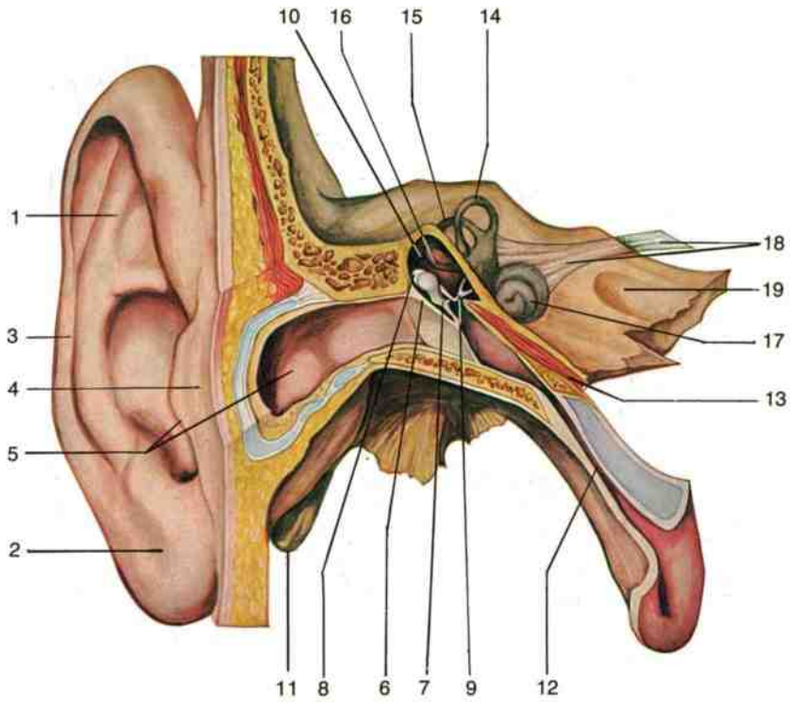


Longitudinal section through the right temporal bone. The outer and middle ear and auditory ossicles and tube are shown (anterior aspect).



Right auditory and vestibular apparatus (anterior aspect). (Schematic drawing.)

Outer ear
1 Auricle
2 Lobule of auricle
3 Helix
4 Tragus
5 External acoustic meatus

Middle ear
6 Tympanic membrane
7 Malleus
8 Incus
9 Stapes
10 Tympanic cavity
11 Mastoid process
12 Auditory tube
13 Tensor tympani muscle

Inner ear
14 Anterior semicircular duct
15 Posterior semicircular duct
16 Lateral semicircular duct
17 Cochlea
18 Vestibulocochlear nerve
19 Petrous part of the temporal bone

Additional structures
20 Superior ligament of malleus
21 Arcuate eminence
22 Internal carotid artery
23 Anterior surface of pyramid with dura mater
24 Stapes
25 Levator veli palatini muscle

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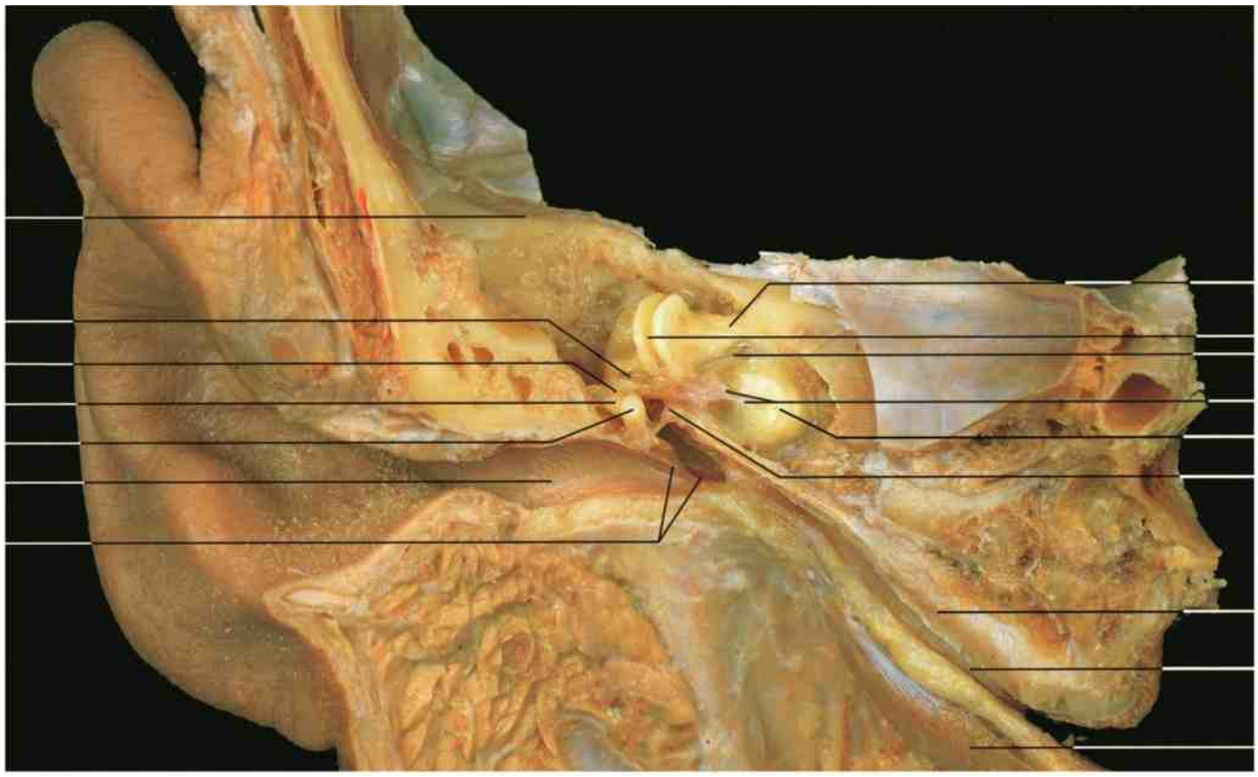
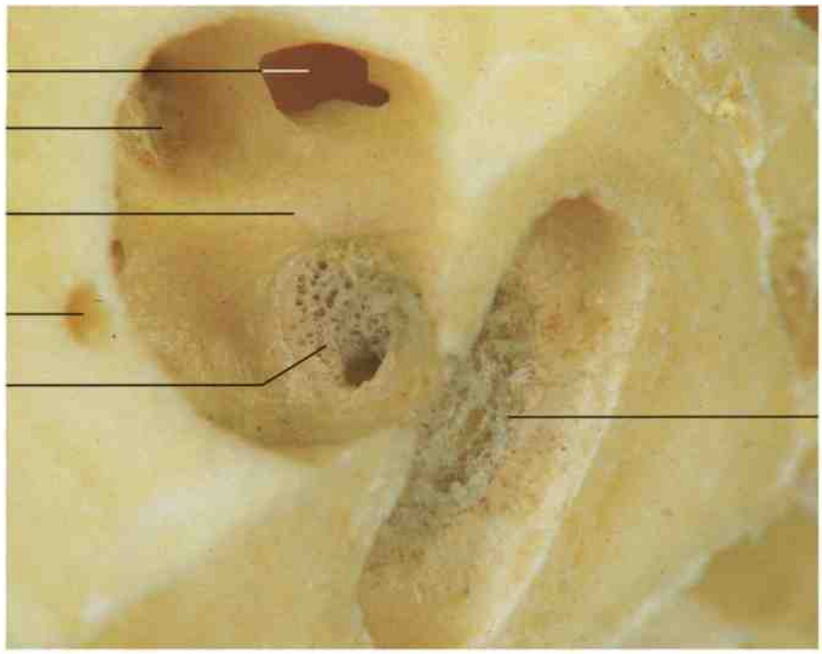


Longitudinal section through the right outer, middle, and inner ear. The cochlea and semicircular canals have been further dissected (anterior aspect).



Internal acoustic meatus, left side. The bone was partly removed to show the bottom of the meatus.

1 Roof of tympanic cavity
2 Lateral osseous semicircular canal
3 Facial nerve
4 Incus
5 Malleus
6 External acoustic meatus
7 Tympanic cavity and tympanic membrane
8 Vestibulocochlear nerve
9 Anterior osseous semicircular canal
10 Geniculate ganglion and greater petrosal nerve
11 Cochlea
12 Stapes
13 Tensor tympani muscle
14 Auditory tube
15 Levator veli palatini muscle
16 Area of facial nerve
17 Superior vestibular area
18 Transverse crest
19 Foramen singulare
20 Foraminous spiral tract (outlet of cochlear part of vestibulocochlear nerve)
21 Base of cochlea

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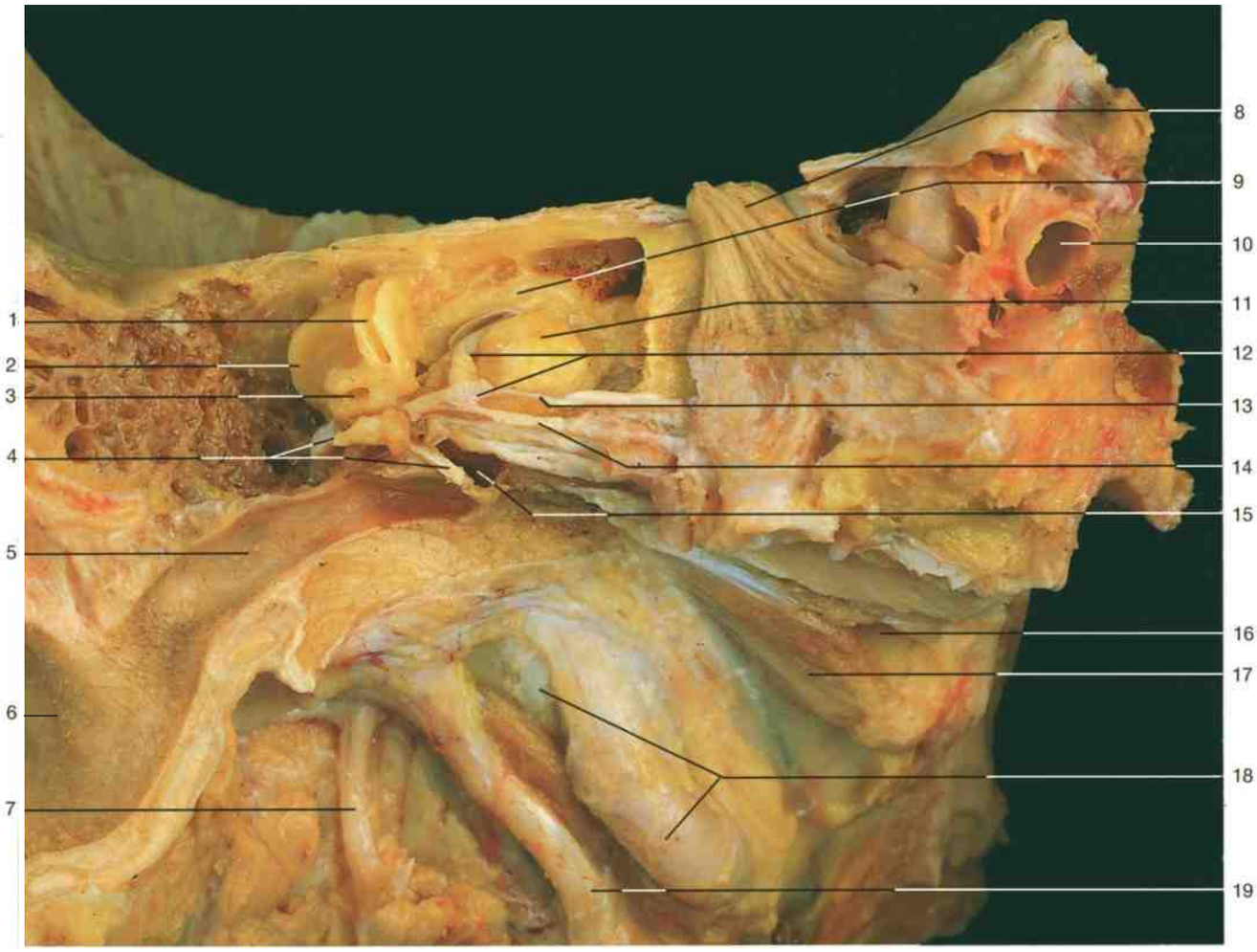
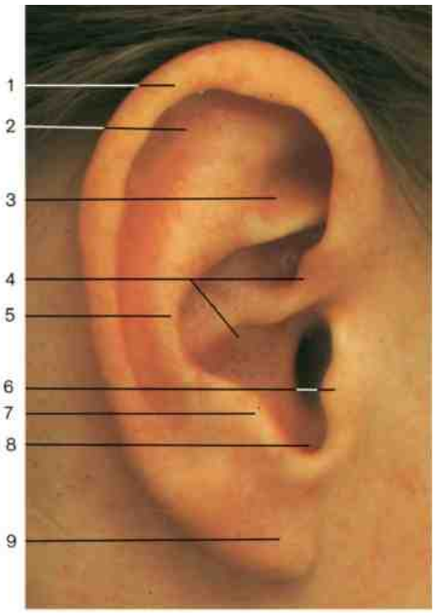


Longitudinal section through the outer, middle, and inner ear. Deeper dissection to display facial nerve and lesser and greater petrosal nerves (anterior aspect).



Right auricle (lateral aspect).

◁

1 Helix
2 Scaphoid fossa
3 Triangular fossa
4 Concha
5 Antihelix
6 Tragus
7 Antitragus
8 Intertragic notch
9 Lobule

△

1 Anterior osseous semicircular canal (opened)
2 Posterior osseous semicircular canal
3 Lateral osseous semicircular canal (opened)
4 Facial nerve and chorda tympani
5 External acoustic meatus
6 Auricle
7 Facial nerve
8 Trigeminal nerve
9 Bony base of internal acoustic meatus
10 Internal carotid artery within cavernous sinus
11 Cochlea
12 Facial nerve with geniculate ganglion
13 Greater petrosal nerve
14 Lesser petrosal nerve
15 Tympanic cavity
16 Auditory tube
17 Levator veli palatini muscle
18 Internal carotid artery and internal jugular vein
19 Styloid process

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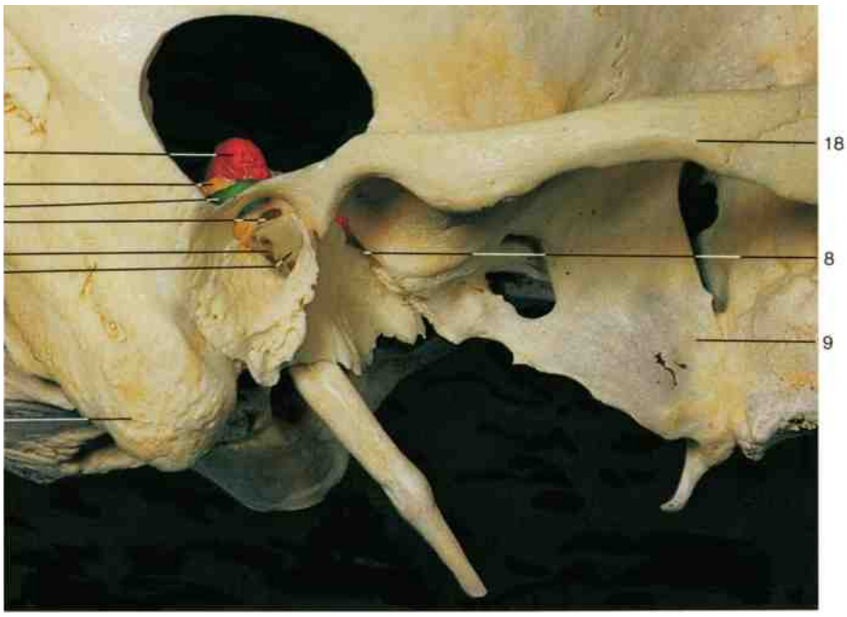
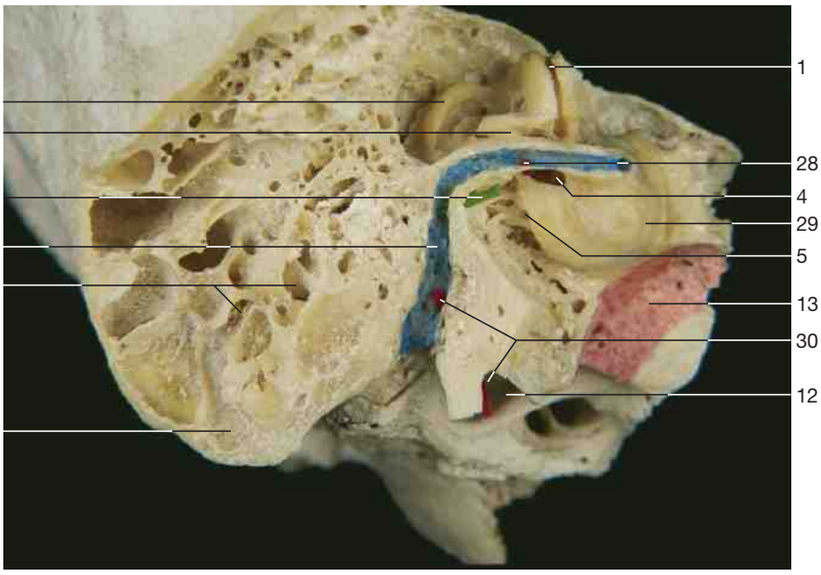
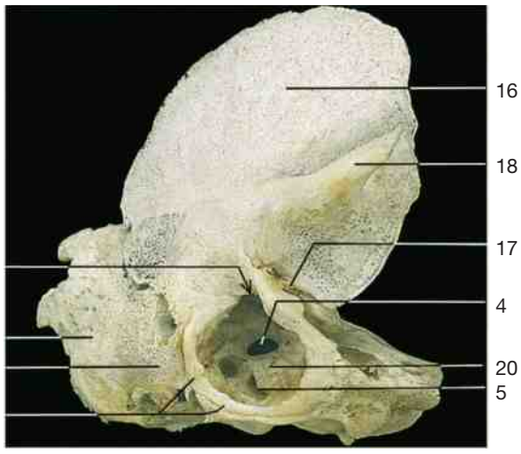


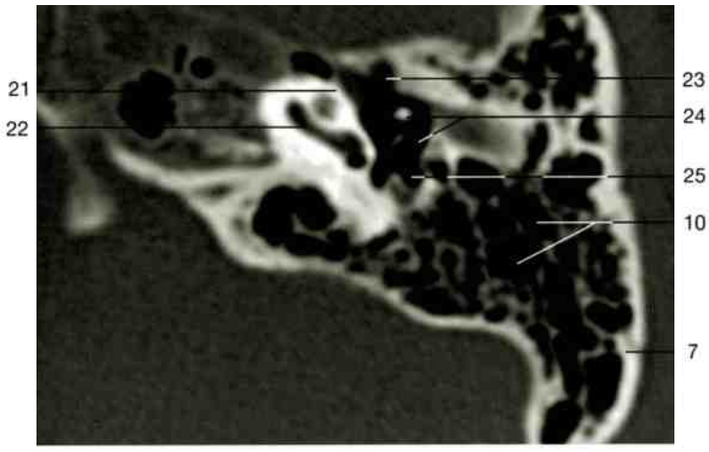
Right temporal bone (lateral aspect). Petrosquamous portion has been partly removed to display the semicircular canals.



Right temporal bone (lateral aspect). Mastoid air cells and facial canal had been opened. The three semicircular canals were dissected.



Right temporal bone of the newborn (lateral aspect).



Frontal section through petrous part. (CT scan.)

1 Anterior semicircular canal (red)
2 Posterior semicircular canal (yellow)
3 Lateral or horizontal semicircular canal (green)
4 Fenestra vestibuli
5 Fenestra cochleae
6 Tympanic cavity
7 Mastoid process
8 Petrotympanic fissure (red probe: chorda tympani)
9 Lateral pterygoid plate
10 Mastoid air cells
11 Facial canal (blue)
12 Foramen ovale
13 Carotid canal (red)
14 Tympanic ring
15 Petromastoid part of temporal bone
16 Squamous part of temporal bone
17 Squamomastoid suture
18 Zygomatic process of temporal bone
19 Incisure of tympanic ring
20 Promontory
21 Apex of cochlea (cupula)
22 Spiral canal of cochlea at base of cochlea
23 Epitympanic recess
24 Auditory ossicles and tympanic cavity
25 Hypotympanic recess
26 Canaliculus chordae tympani (green probe)
27 Mastoid process
28 Canaliculus for stapedius nerve (red)
29 Cochlea
30 Canaliculus mastoideus (red probe)

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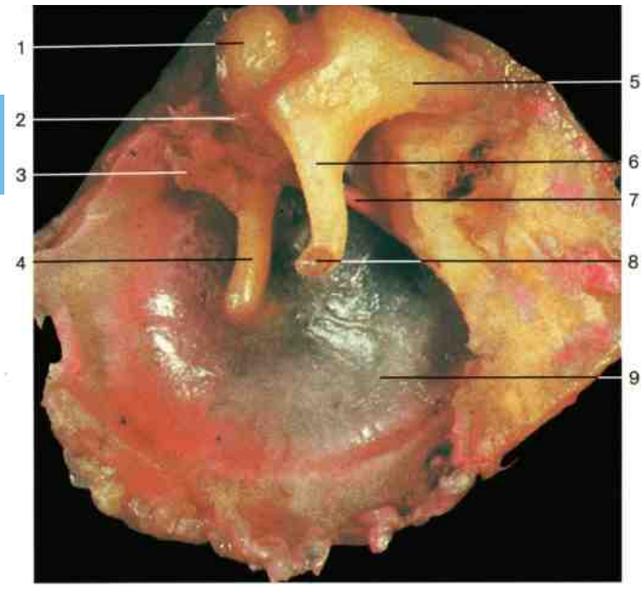
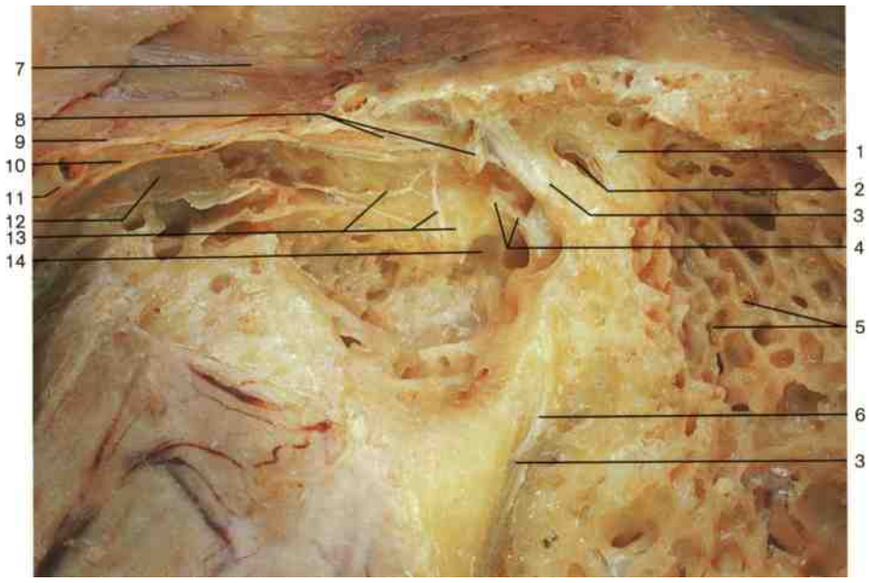


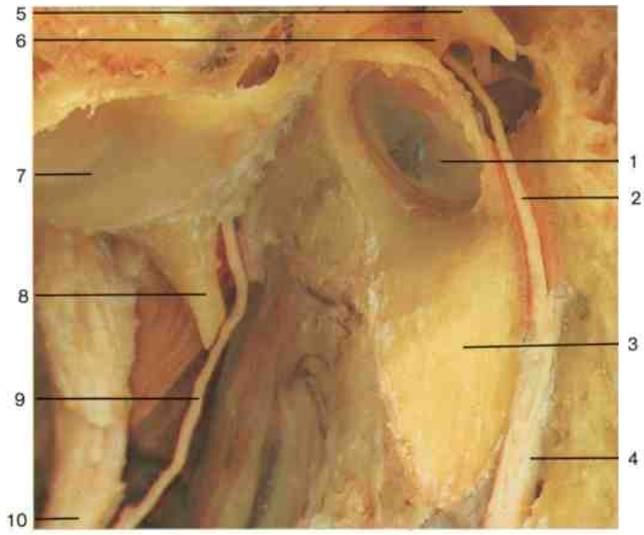
1 Head of malleus
2 Anterior ligament of malleus
3 Tendon of tensor tympani muscle
4 Handle of malleus
5 Short crus of incus
6 Long crus of incus
7 Chorda tympani
8 Lenticular process
9 Tympanic membrane

Tympanic membrane with malleus and incus (internal aspect; right side).



1 Tympanic antrum
2 Lateral semicircular canal (opened)
3 Facial canal
4 Stapes with tendon of stapedius
5 Mastoid air cells
6 Chorda tympani (intracranial part)
7 Greater petrosal nerve
8 Tensor tympani muscle (processus cochleariformis)
9 Lesser petrosal nerve
10 Anterior tympanic artery
11 Middle meningeal artery
12 Auditory tube
13 Promontory with tympanic plexus
14 Fenestra cochleae

Tympanic cavity, medial wall. External acoustic meatus and lateral wall of tympanic cavity together with incus. Malleus and tympanic membrane have been removed; mastoid air cells are opened (left side).



1 Tympanic membrane
2 Chorda tympani (intracranial part)
3 Floor of the external acoustic meatus
4 Facial nerve and facial canal
5 Incus
6 Head of malleus
7 Mandibular fossa
8 Spine of sphenoid
9 Chorda tympani (extracranial part)
10 Styloid process

Tympanic membrane (lateral aspect). External acoustic meatus and facial canal have been opened to expose the chorda tympani (magn. ~1.5×) (left side).

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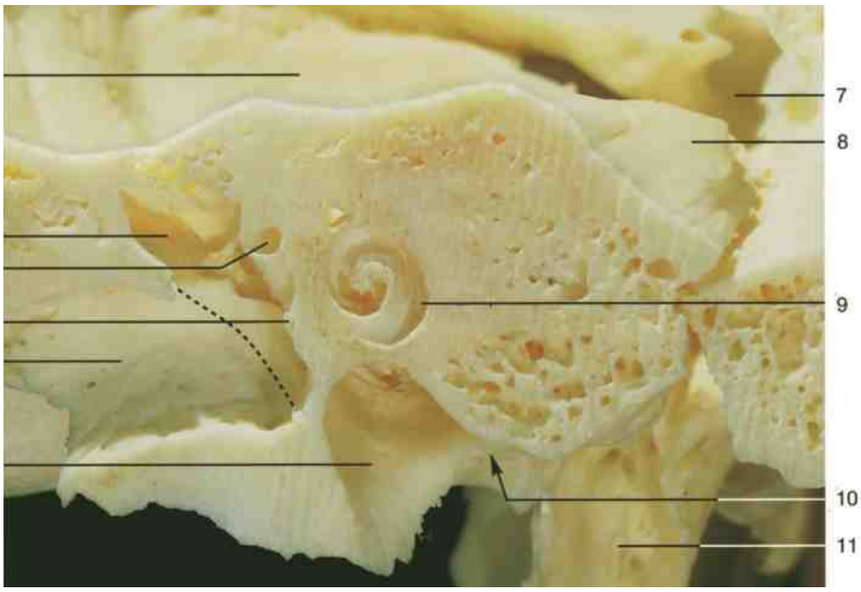
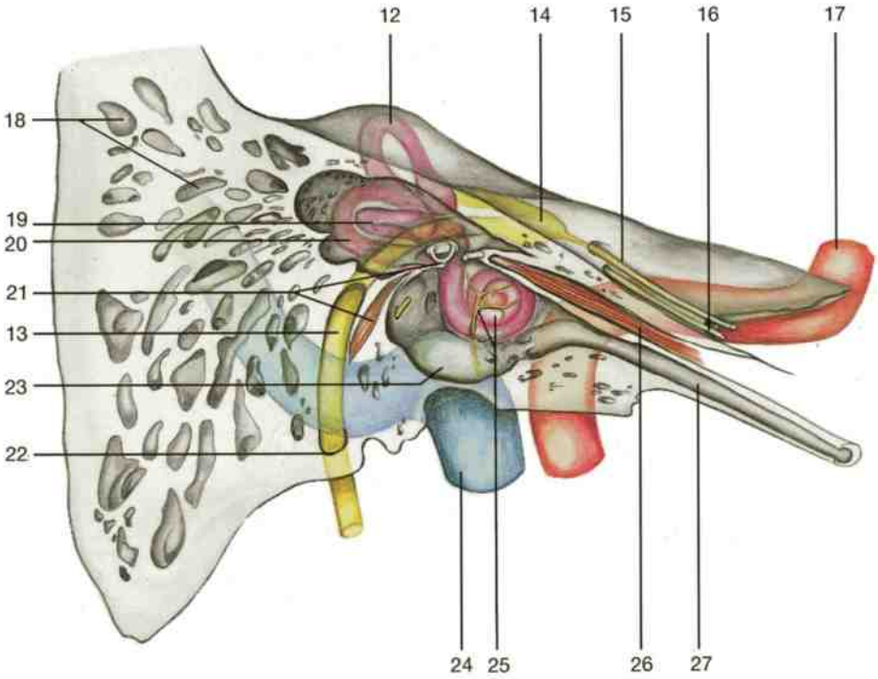


Frontal section through the petrous part of the left temporal bone at the level of the cochlea (posterior aspect). Position of tympanic membrane indicated by dotted line.



Medial wall of tympanic cavity and its relation to neighboring structures of the inner ear, facial nerve, and blood vessels (schematic drawing). Frontal section through the right temporal bone (anterior aspect).

1 Anterior surface of the pyramid
2 Mastoid antrum
3 Lateral semicircular canal
4 Cochleariform process
5 External acoustic meatus
6 Jugular fossa
7 Foramen lacerum
8 Apex of petrous part
9 Position of cochlea (modiolus with crista spiralis ossea)
10 Carotid canal
11 Pterygoid process
12 Anterior semicircular duct
13 Facial nerve
14 Geniculate ganglion
15 Greater petrosal nerve
16 Lesser petrosal nerve
17 Internal carotid artery
18 Mastoid air cells
19 Lateral semicircular duct
20 Posterior semicircular duct
21 Stapes with stapedius muscle
22 Stylomastoid foramen
23 Inferior recess of tympanic cavity (hypotympanon)
24 Internal jugular vein
25 Promontory with tympanic plexus (position of cochlea)
26 Tensor muscle of tympanum
27 Auditory tube

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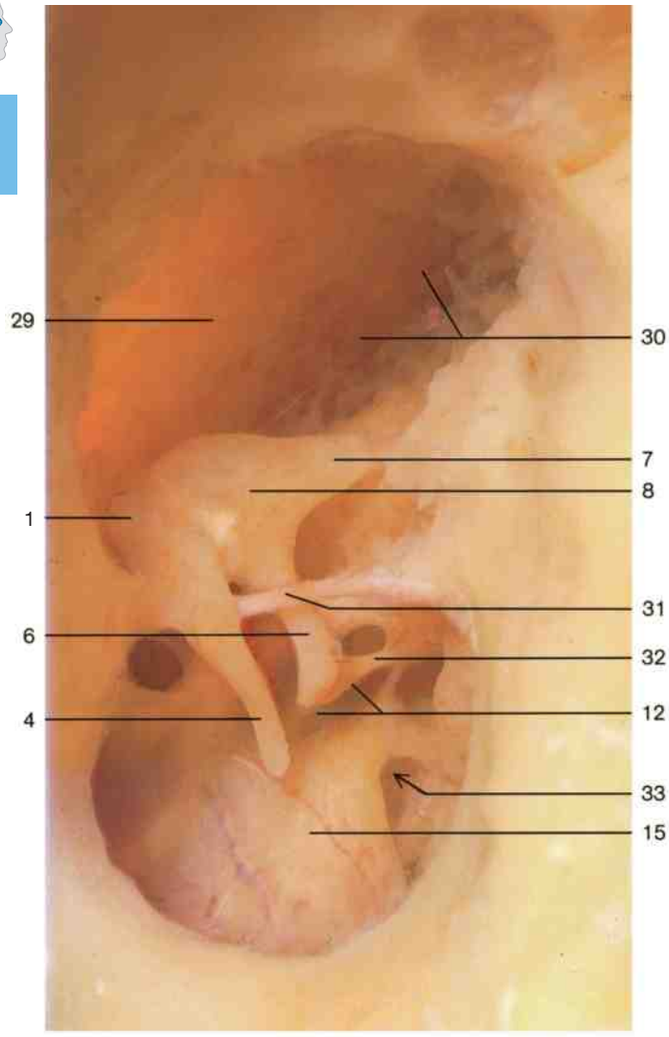
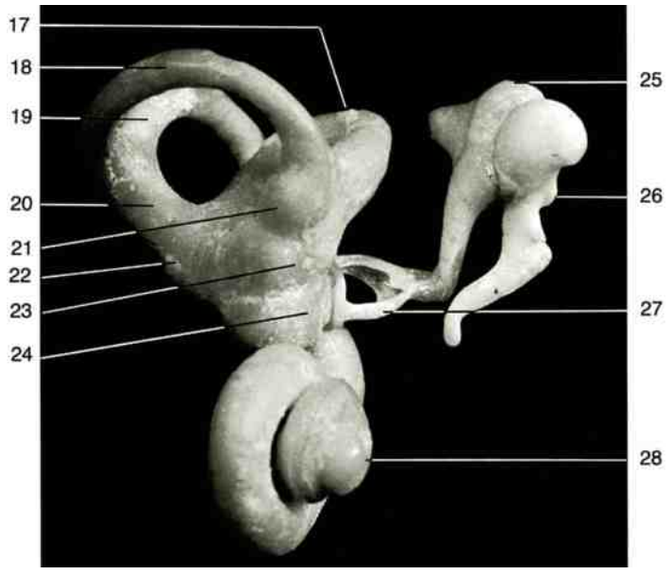
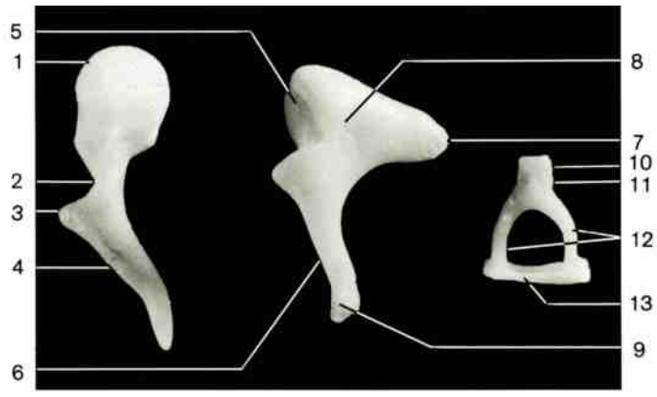


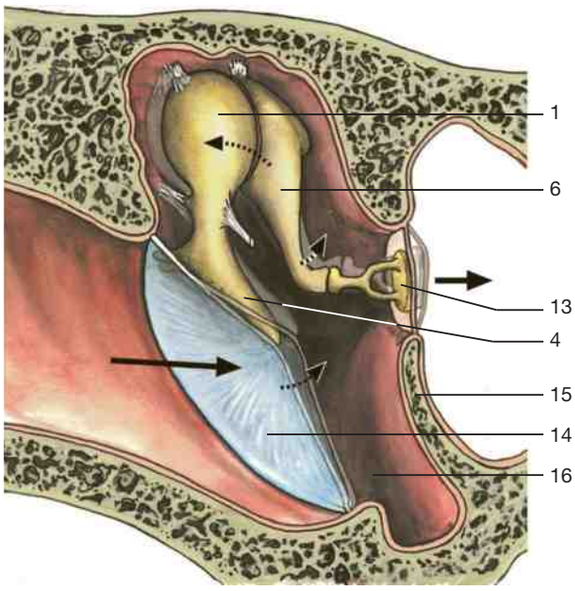
Tympanic cavity with malleus, incus, and stapes, left side (lateral aspect). Tympanic membrane removed, mastoid antrum opened.



Chain of auditory ossicles in connection with the inner ear, left side (antero-lateral aspect).



Auditory ossicles (isolated).



Position and movements of the auditory ossicles (schematic drawing).

Malleus
1 Head
2 Neck
3 Lateral process
4 Handle

Incus
5 Articular facet for malleus
6 Long crus
7 Short crus
8 Body
9 Lenticular process

Stapes
10 Head
11 Neck
12 Anterior and posterior crura
13 Base

Walls of tympanic cavity
14 Tympanic membrane
15 Promontory
16 Hypotympanic recess of tympanic cavity

Internal ear (labyrinth)
17 Lateral semicircular duct
18 Anterior semicircular duct
19 Posterior semicircular duct
20 Common crus
21 Ampulla
22 Beginning of endolymphatic duct
23 Utricular prominence
24 Saccular prominence
25 Incus
26 Malleus
27 Stapes
28 Cochlea

Tympanic cavity
29 Epitympanic recess
30 Mastoid antrum
31 Chorda tympani
32 Tendon of stapedius muscle
33 Round window (fenestra cochleae)

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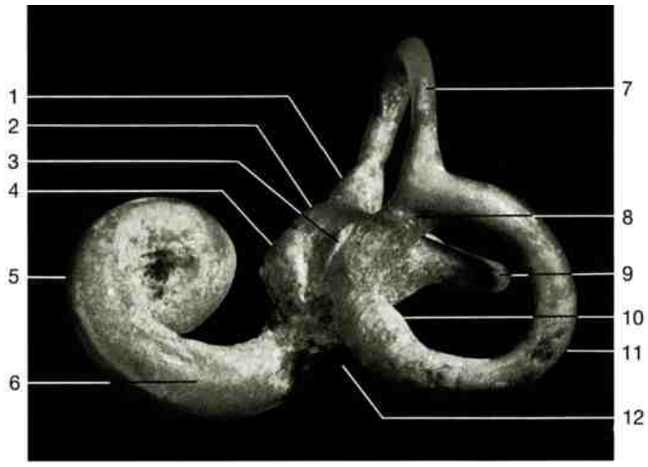
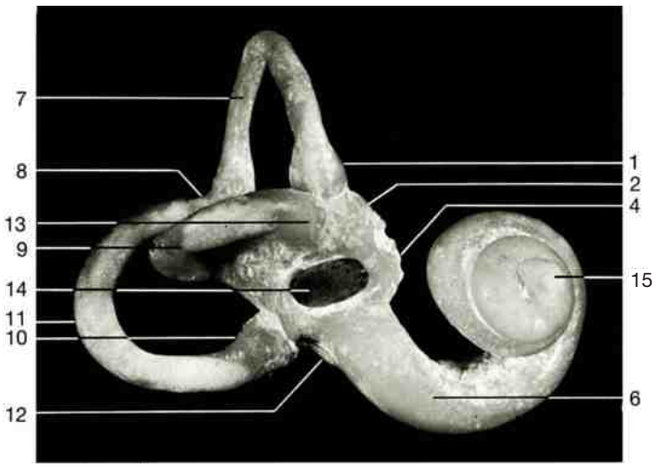
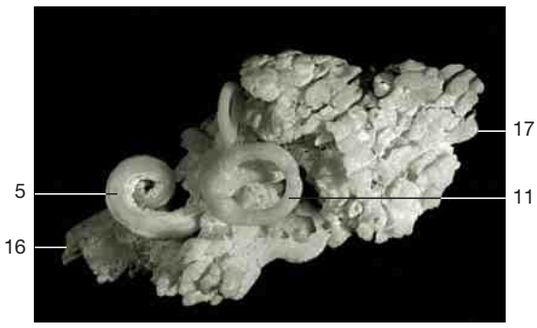


Cast of the right labyrinth (postero-medial aspect).

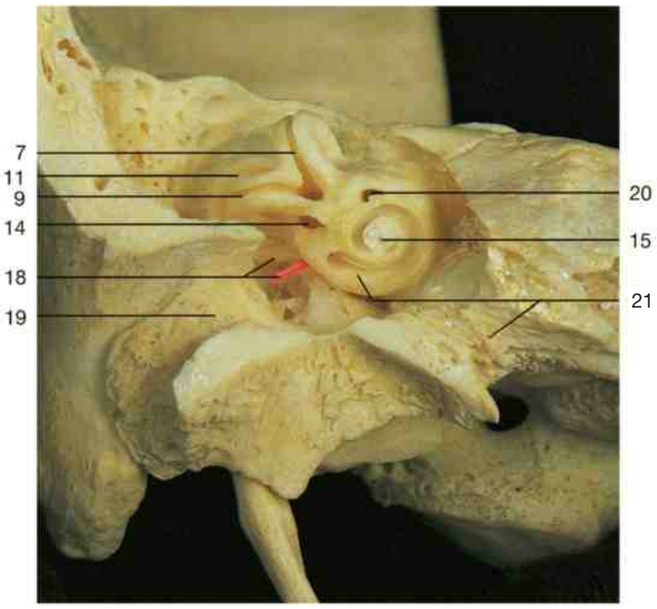
1 Ampulla (anterior semicircular canal)
2 Elliptical recess
3 Aqueduct of the vestibule
4 Spherical recess
5 Cochlea
6 Base of cochlea
7 Anterior semicircular canal
8 Crus commune or common limb
9 Lateral semicircular canal
10 Posterior bony ampulla
11 Posterior semicircular canal (posterior canal)
12 Fenestra cochleae
13 Bony ampulla
14 Fenestra vestibuli
15 Cupula of cochlea
16 External acoustic meatus
17 Mastoid air cells
18 Tympanic cavity and fenestra cochleae (probe)
19 External acoustic meatus
20 Facial canal
21 Base of cochlea and musculotubal canal
22 Malleus and incus
23 Stapes
24 Tympanic membrane
25 Tympanic cavity
26 Aqueduct of cochlea
27 Endolymphatic sac
28 Endolymphatic duct
29 Macula of utricle
30 Macula of saccule



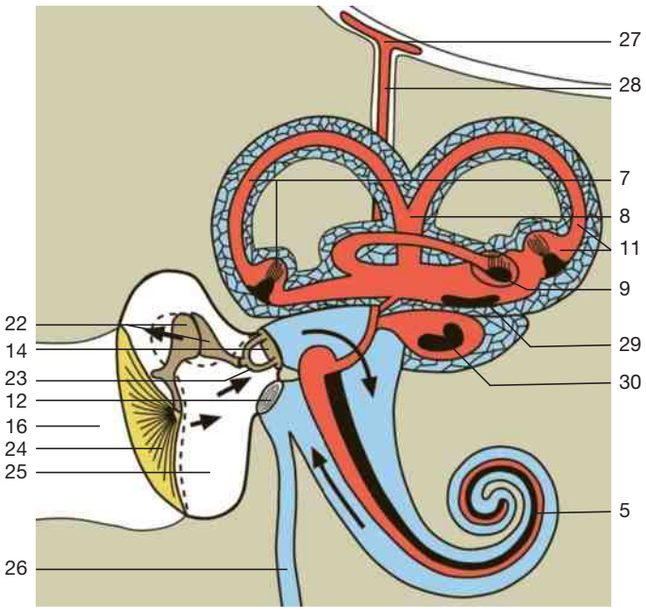
Cast of the right labyrinth (lateral aspect).



Cast of the labyrinth and mastoid cells. Life size (posterior aspect).



Dissection of bony labyrinth in situ. Semicircular canals and cochlear duct opened.



Auditory and vestibular apparatus. Arrows = direction of sound waves; blue = perilymphatic ducts (schematic drawing; from Lütjen-Drecoll, Rohen, Innenansichten des menschlichen Körpers, 2010).

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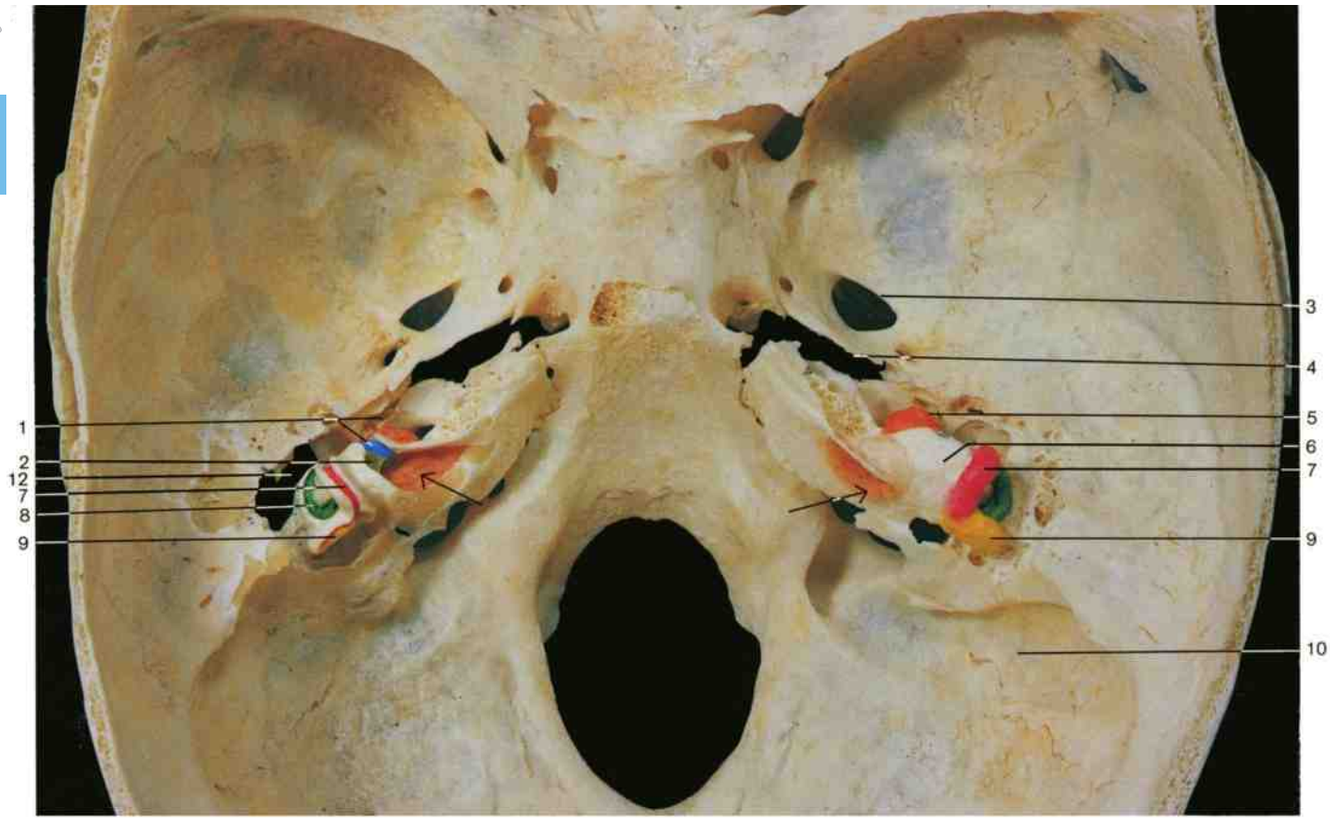
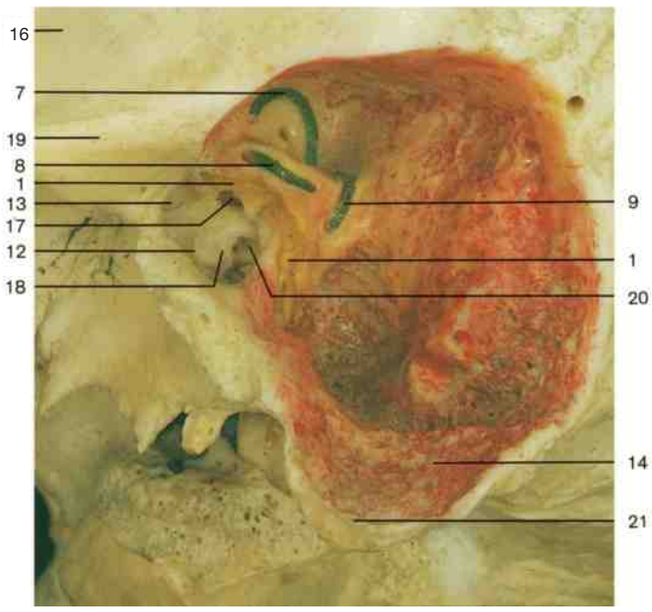
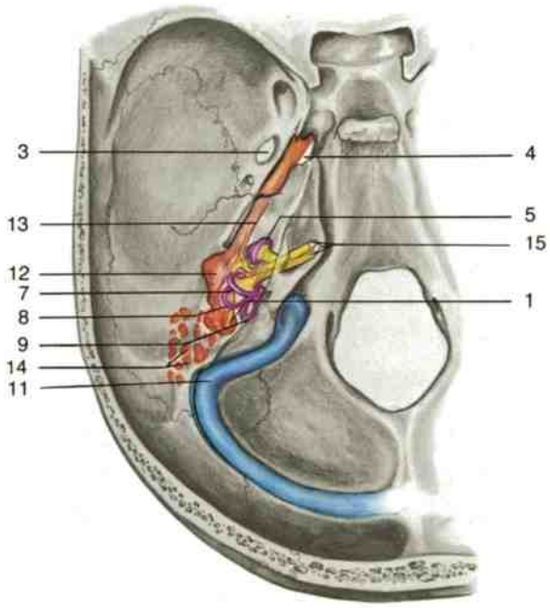


Bony labyrinth, petrous part of the temporal bone (from above). At left: semicircular canals opened; at right: closed. Arrows: internal acoustic meatus.

1 Facial canal and semicanal of auditory tube
2 Superior vestibular area
3 Foramen ovale
4 Foramen lacerum
5 Cochlea
6 Vestibule
7 Anterior semicircular canal
8 Lateral semicircular canal
9 Posterior semicircular canal
10 Groove for sigmoid sinus
11 Sigmoid sinus
12 Tympanic cavity
13 Auditory tube
14 Mastoid air cells
15 Facial and vestibulocochlear nerves
16 Temporal fossa
17 Fenestra vestibuli
18 Promontory
19 Zygomatic process
20 Fenestra cochleae
21 Mastoid process



Bony labyrinth (left lateral aspect). Temporal and tympanic bone partly removed, semicircular canals opened.



Internal ear. Diagram showing the position of the membranous labyrinth and the tympanic cavity.

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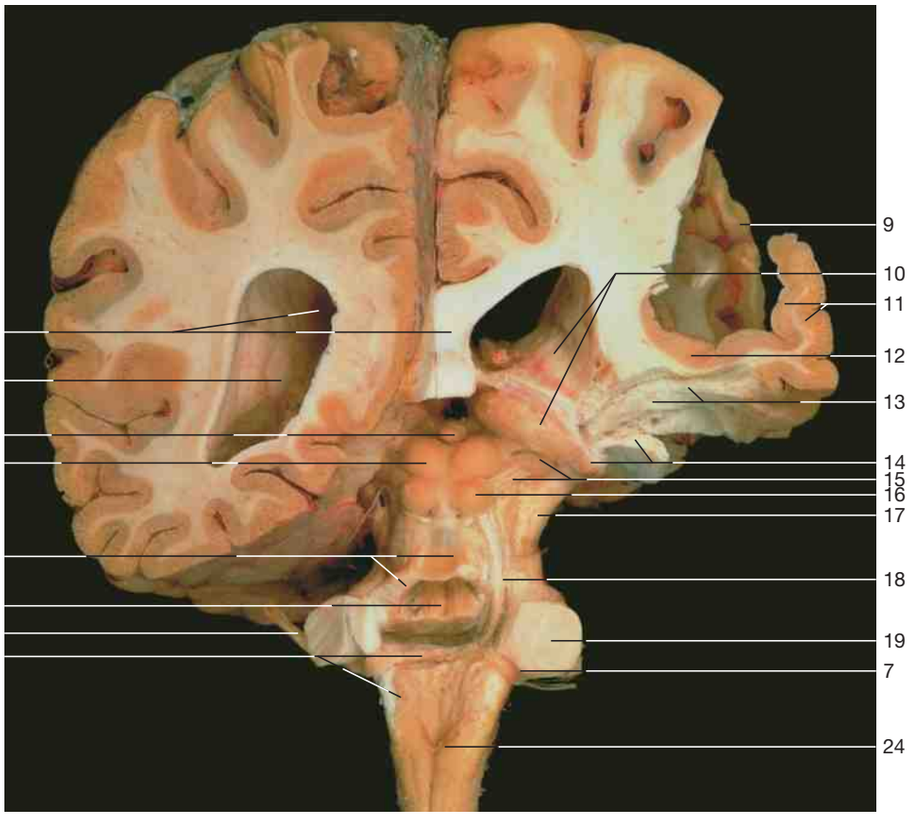
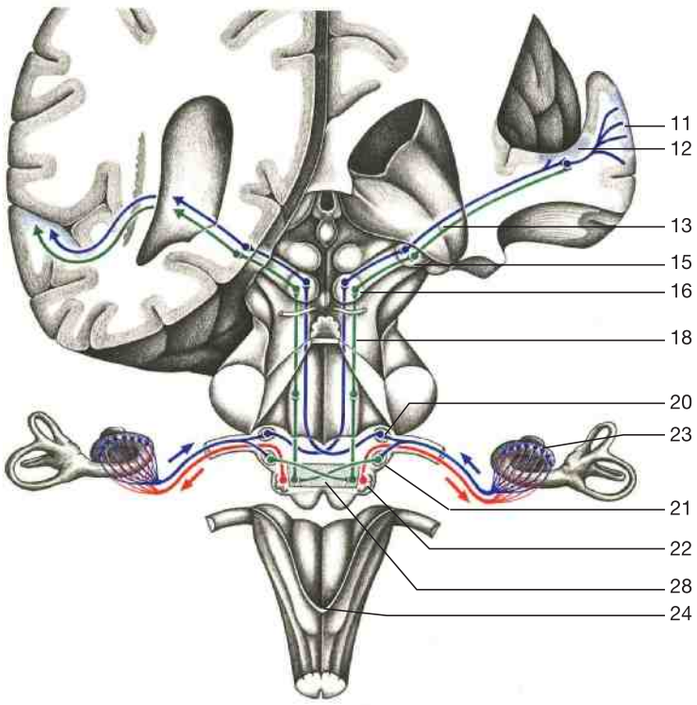
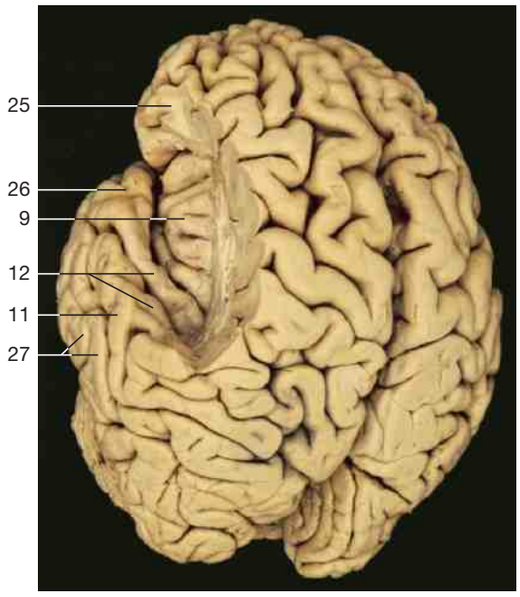


Dissection of the brain stem showing the auditory pathway. Cerebellum and posterior part of the two hemispheres have been removed (dorsal aspect).

1 Left lateral ventricle and corpus callosum
2 Thalamus
3 Pineal gland (epiphysis)
4 Superior colliculus
5 Superior medullary velum and superior cerebellar peduncle
6 Rhomboid fossa
7 Vestibulocochlear nerve (n. VIII)
8 Dorsal acoustic striae and inferior cerebellar peduncle
9 Insular lobe
10 Caudate nucleus and thalamus
11 Temporal lobe (superior temporal gyrus) (area of acoustic centers)
12 Transverse temporal gyri of Heschl (area of primary acoustic centers)
13 Acoustic radiation of internal capsule
14 Lateral geniculate body and optic radiation (cut)
15 Medial geniculate body and brachium of inferior colliculus
16 Inferior colliculus
17 Cerebral peduncle
18 Lateral lemniscus
19 Middle cerebellar peduncle
20 Dorsal (posterior) cochlear nucleus
21 Ventral (anterior) cochlear nucleus
22 Inferior olive with olivo-cochlear tract of Rasmussen (red)
23 Ganglion spirale
24 Obex
25 Frontal lobe
26 Temporal lobe
27 Middle temporal gyrus (area of tertiary acoustic centers)
28 Trapezoid body



Auditory pathway (schematic drawing, compare with figure above). Red = descending (efferent) pathway (olivocochlear tract of Rasmussen); green and blue = ascending (afferent) pathways.



Auditory areas in the left hemisphere (supero-lateral aspect). Parts of the frontal and parietal lobes have been removed.

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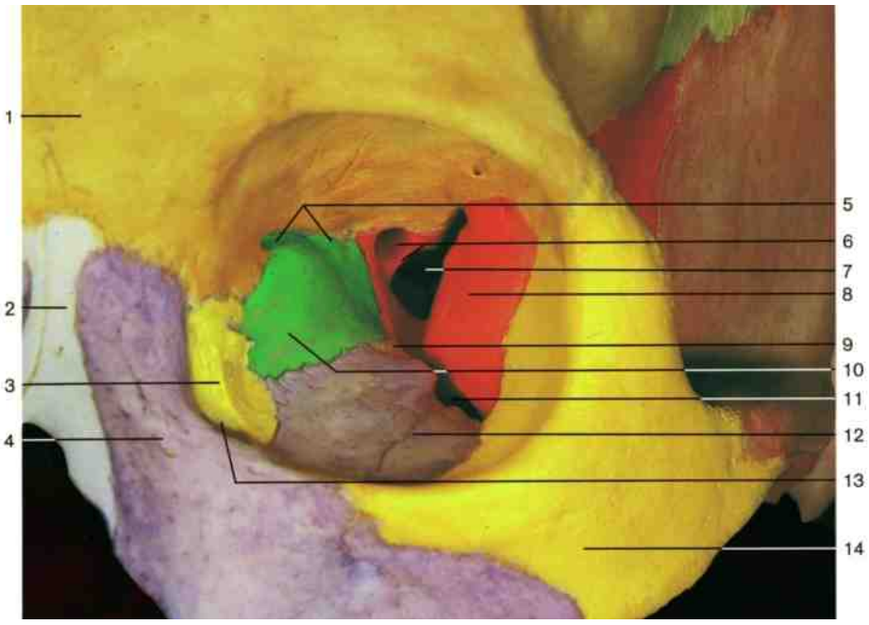
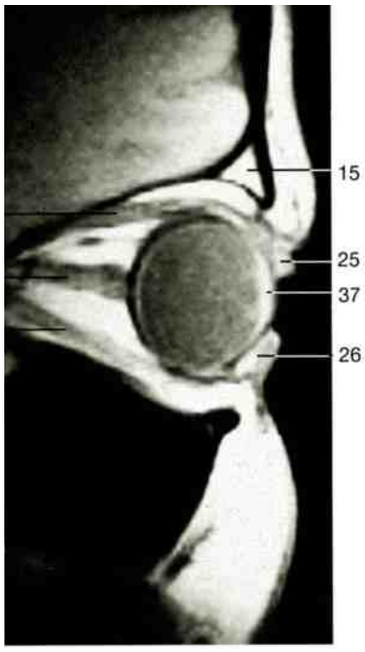


Bones of the left orbit (indicated by different colors).

Frontal section through the posterior part of the orbit.

1 Frontal bone
2 Nasal bone
3 Lacrimal bone
4 Maxilla (frontal process)
5 Ethmoidal foramina
6 Lesser wing of sphenoid bone and optic canal
7 Superior orbital fissure
8 Greater wing of sphenoid bone
9 Orbital process of palatine bone
10 Orbital plate of ethmoid bone
11 Inferior orbital fissure
12 Infra-orbital sulcus
13 Nasolacrimal canal
14 Zygomatic bone
15 Frontal sinus
16 Superior rectus muscle
17 Orbital fatty tissue
18 Optic nerve
19 Sclera
20 Inferior rectus muscle
21 Periorbita and maxilla
22 Maxillary sinus
23 Levator palpebrae superioris muscle
24 Superior conjunctival fornix
25 Superior tarsal plate
26 Inferior tarsal plate
27 Inferior conjunctival fornix
28 Inferior oblique muscle
29 Lateral rectus muscle
30 Medial rectus muscle
31 Superior oblique muscle
32 Nasal septum
33 Middle nasal concha
34 Inferior nasal concha
35 Tenon's space
36 Ophthalmic artery
37 Cornea
38 Lens



Sagittal section through orbit and eyeball. (Right: MRI scan.)

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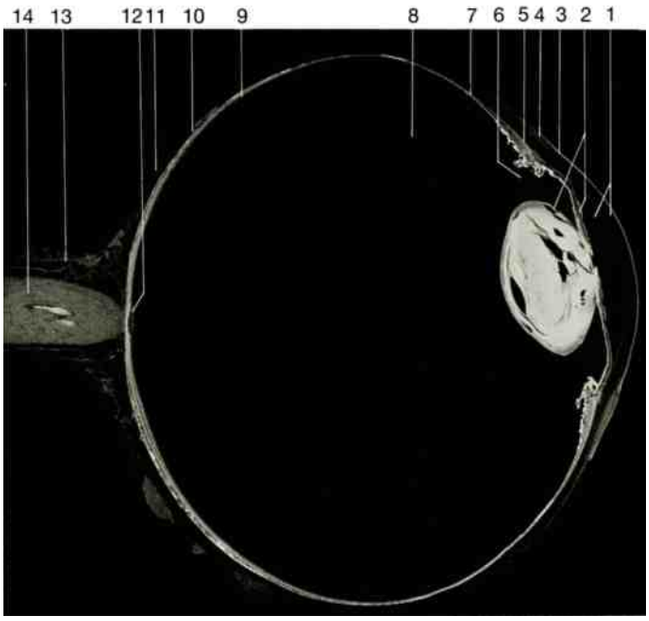
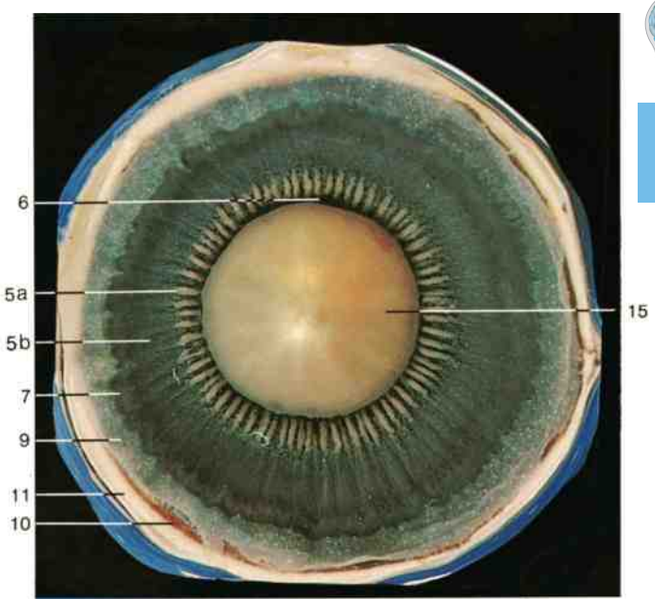
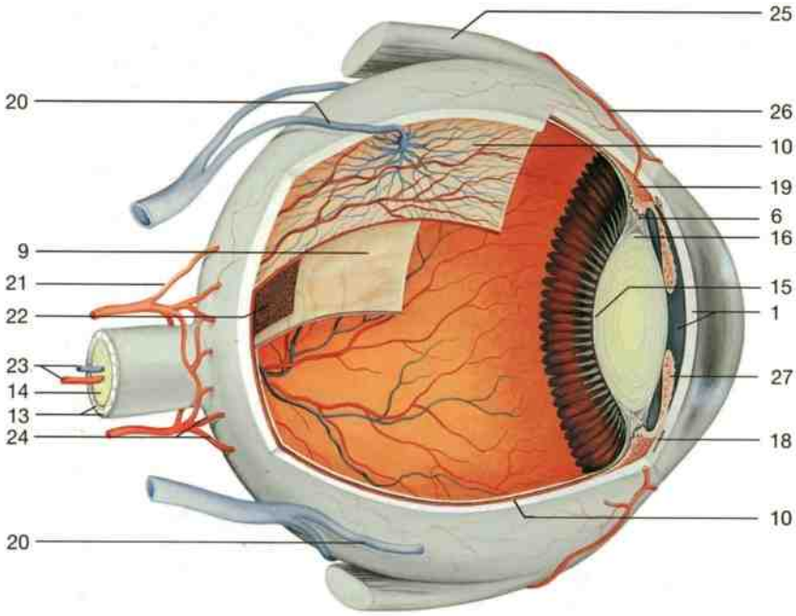


Horizontal section through the human eye (2×).

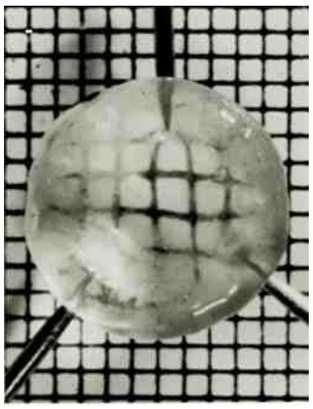


Anterior segment of the eyeball (posterior aspect). The opacity of the lens is an artifact.



◁ **Organization of the eyeball.** Demonstration of vascular tunic of bulb (schematic drawing).

Lens (equatorial aspect), anterior pole to the right.



Lens (frontal aspect). Note the magnification effect.

1 Cornea and anterior chamber
2 Iris and lens
3 Transitional zone between corneal and conjunctival epithelium
4 Conjunctiva of the eyeball
5 Ciliary body
  a Ciliary processes (pars plicata)
  b Ciliary ring (pars plana)
6 Zonular fibers
7 Ora serrata
8 Vitreous body
9 Retina
10 Choroid
11 Sclera
12 Optic disc
13 Dura mater and subarachnoid space
14 Optic nerve (n. II)
15 Lens (posterior pole)
16 Equator of lens
17 Lens (anterior pole)
18 Canal of Schlemm
19 Ciliary muscle
20 Vena vorticosa
21 Long posterior ciliary artery
22 Retinal pigmented epithelium
23 Central retinal artery and vein
24 Short posterior ciliary arteries
25 External ocular muscle
26 Anterior ciliary artery
27 Iris

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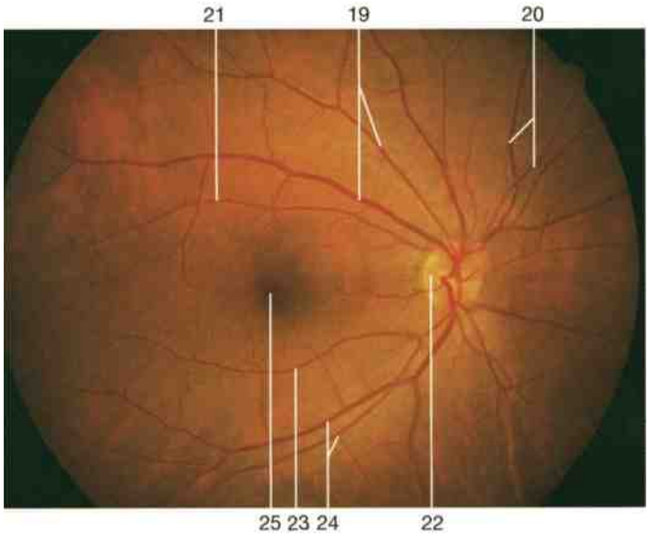
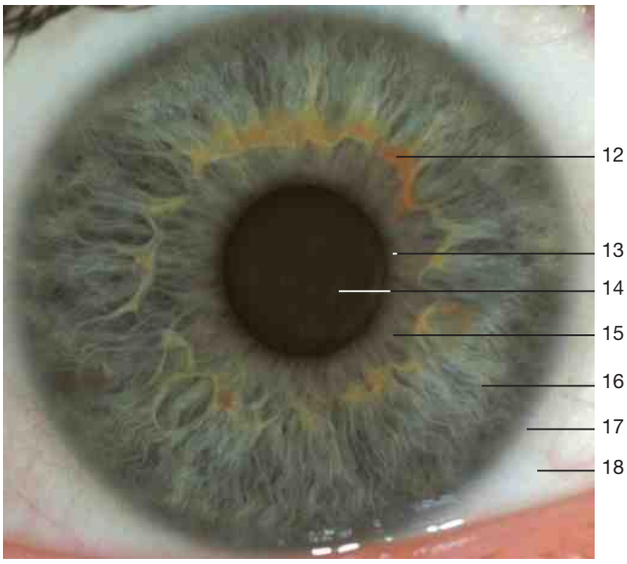
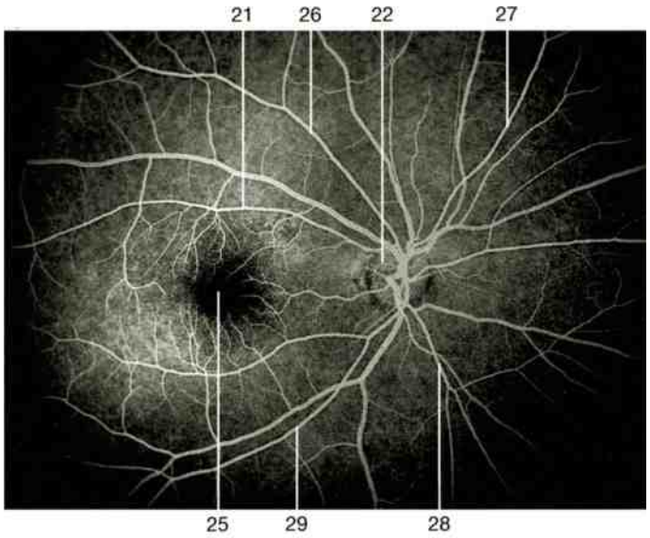


Fundus of a normal right eye (courtesy of Prof. Okamura, Univ. Eye Dept., Kumamoto, Japan). Notice, the arteries are smaller and lighter than the veins.



Anterior segment of the human eye (courtesy of Prof. Naumann, Eye Dept., University of Erlangen, Germany). Note the colored iris (16) and the location of the lens behind the iris (14).



Fluorescent angiography of the right eye; retinal vessels. The same eye as above (courtesy of Prof. Okamura, Univ. Eye Dept., Kumamoto, Japan).

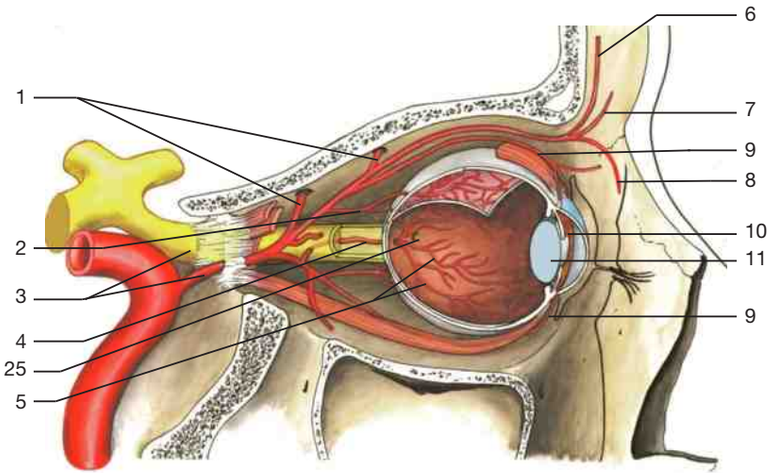


Diagram of the ophthalmic artery and its branches.

1 Posterior and anterior ethmoidal arteries
2 Long and short posterior ciliary arteries
3 Optic nerve and ophthalmic artery
4 Central retinal artery
5 Retinal arteries
6 Supratrochlear artery
7 Supra-orbital artery
8 Dorsal nasal artery
9 Anterior ciliary artery
10 Iridial arteries
11 Lens
12 Iridial fold
13 Pupillary margin of iris
14 Anterior pole of lens
15 Lesser circle of iris
16 Greater circle of iris
17 Margin of cornea or limbus
18 Sclera
19 Superior temporal artery and vein of retina
20 Superior nasal artery and vein of retina
21 Superior macular artery
22 Optic disc
23 Inferior macular artery
24 Inferior temporal artery and vein
25 Fovea centralis and macula lutea
26 Superior temporal artery
27 Superior nasal artery
28 Inferior nasal artery
29 Inferior temporal artery
} of retina

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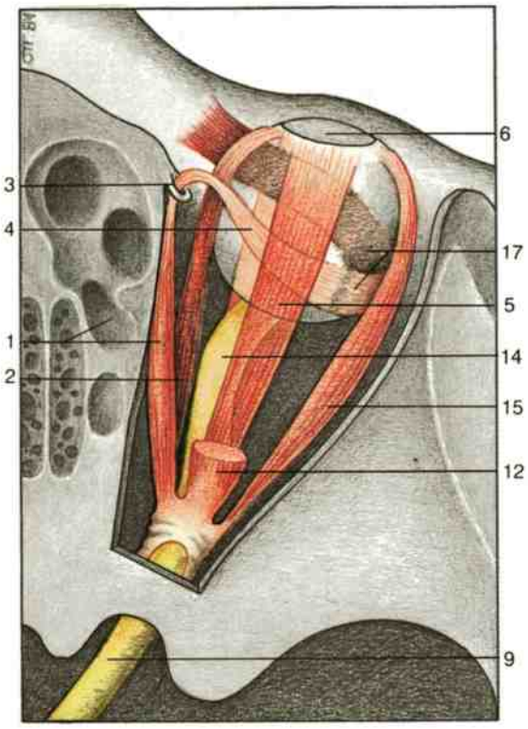
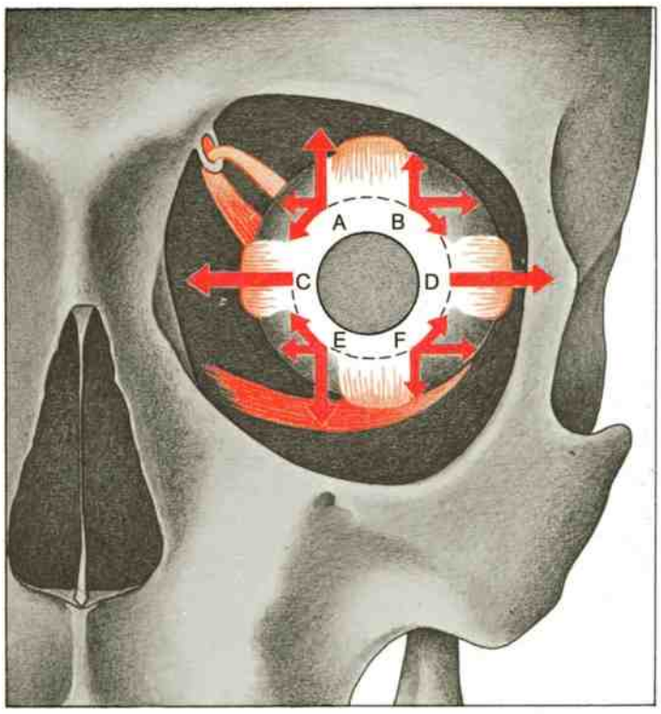
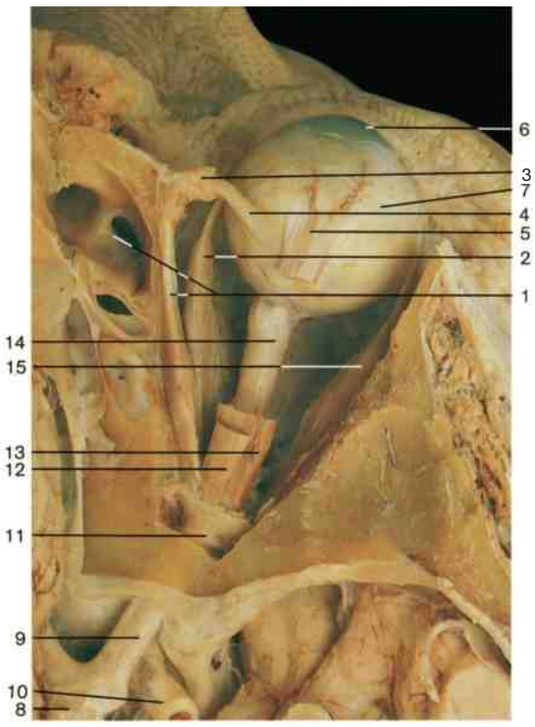


Schematic diagram of the extra-ocular muscles. Right orbit (from above). Levator palpebrae superioris muscle has been severed.

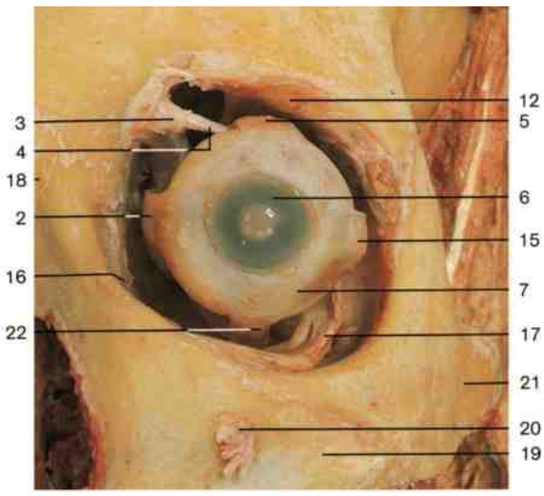


The action of the extra-ocular muscles. Left orbit (anterior aspect).

A = Superior rectus muscle
B = Inferior oblique muscle
C = Medial rectus muscle
D = Lateral rectus muscle
E = Inferior rectus muscle
F = Superior oblique muscle



Right orbit with eyeball and extra-ocular muscles (from above). The roof of the orbit has been removed, the superior rectus muscle and the levator palpebrae superioris muscle have been severed.



Left orbit with eyeball and extra-ocular muscles (anterior aspect). Lids, conjunctiva, and lacrimal apparatus have been removed.

1 Superior oblique muscle and ethmoid air cells
2 Medial rectus muscle
3 Trochlea
4 Tendon of superior oblique muscle
5 Superior rectus muscle
6 Cornea
7 Eyeball
8 Optic chiasma
9 Optic nerve (intracranial part)
10 Internal carotid artery
11 Common annular tendon
12 Levator palpebrae superioris muscle
13 Superior rectus muscle
14 Optic nerve (extracranial part)
15 Lateral rectus muscle
16 Nasolacrimal duct
17 Inferior oblique muscle
18 Nasal bone
19 Maxilla
20 Infra-orbital foramen and nerves
21 Zygomatic bone
22 Inferior rectus muscle

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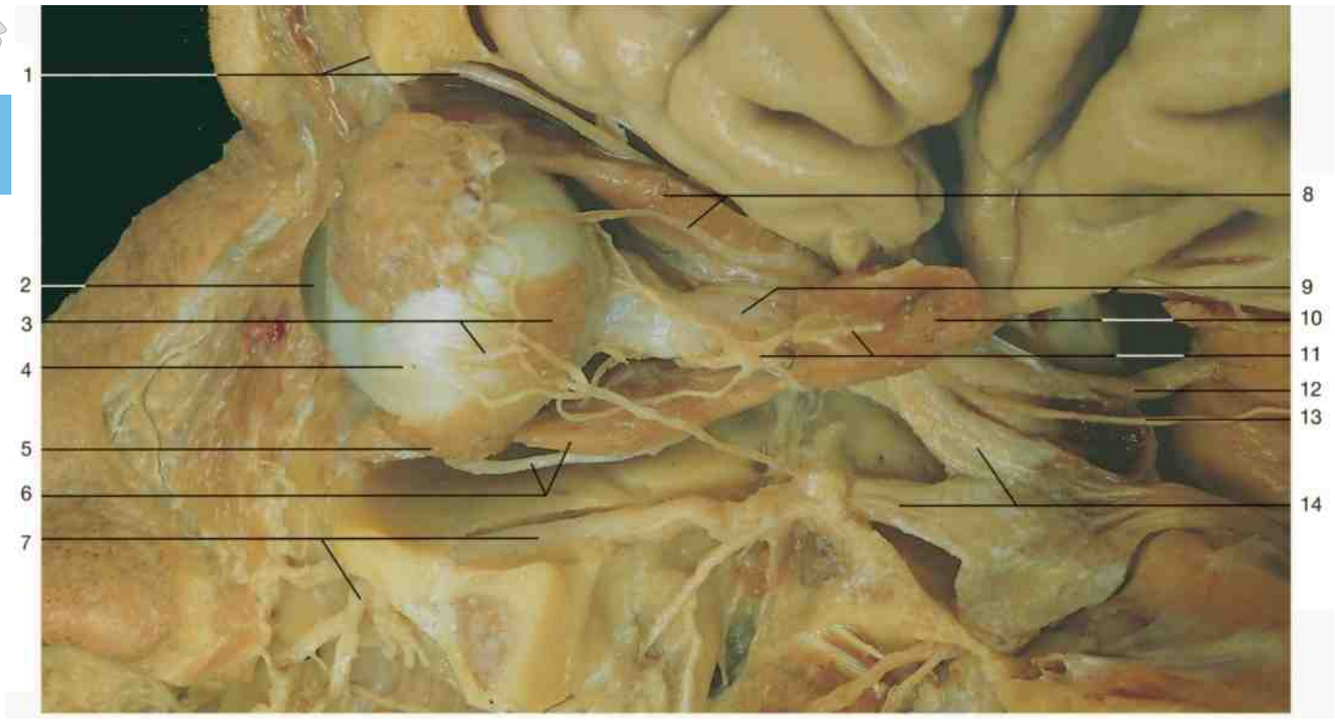
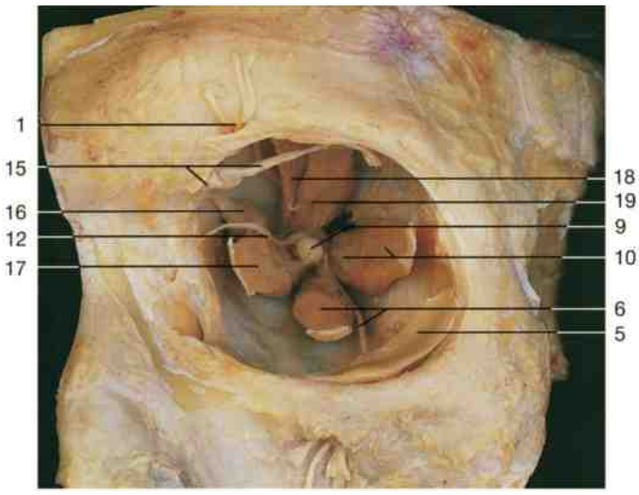
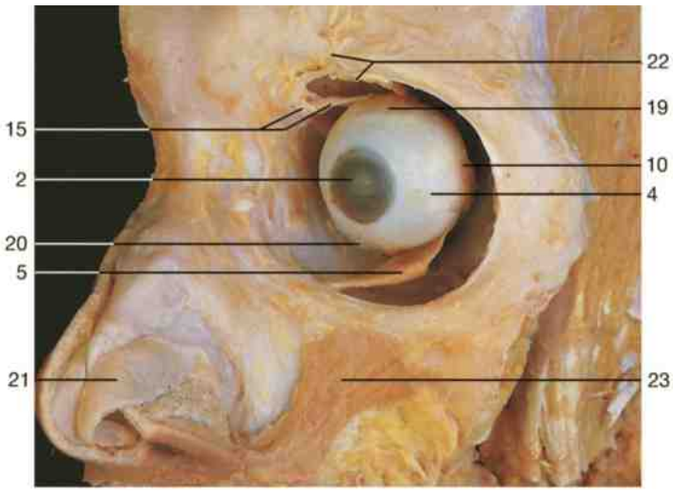


Extra-ocular muscles and their nerves (lateral aspect of left eye). Lateral rectus divided and reflected.



Left orbit with extra-ocular muscles (anterior aspect). Eyeball removed.



Extra-ocular eye muscles (antero-lateral aspect).

1 Supra-orbital nerve
2 Cornea
3 Insertion of lateral rectus muscle
4 Eyeball (sclera)
5 Inferior oblique muscle
6 Inferior rectus muscle and inferior branch of oculomotor nerve
7 Infra-orbital nerve
8 Superior rectus muscle and lacrimal nerve
9 Optic nerve
10 Lateral rectus muscle
11 Ciliary ganglion and abducens nerve (n. VI)
12 Oculomotor nerve (n. III)
13 Trochlear nerve (n. IV)
14 Ophthalmic nerve (n. V_1) and maxillary nerve (n. V_2)
15 Trochlea and tendon of superior oblique muscle
16 Superior oblique muscle
17 Medial rectus muscle
18 Levator palpebrae superioris muscle
19 Superior rectus muscle
20 Inferior rectus muscle
21 Greater alar cartilage
22 Supra-orbital nerve and levator palpebrae superioris muscle
23 Levator labii superioris muscle

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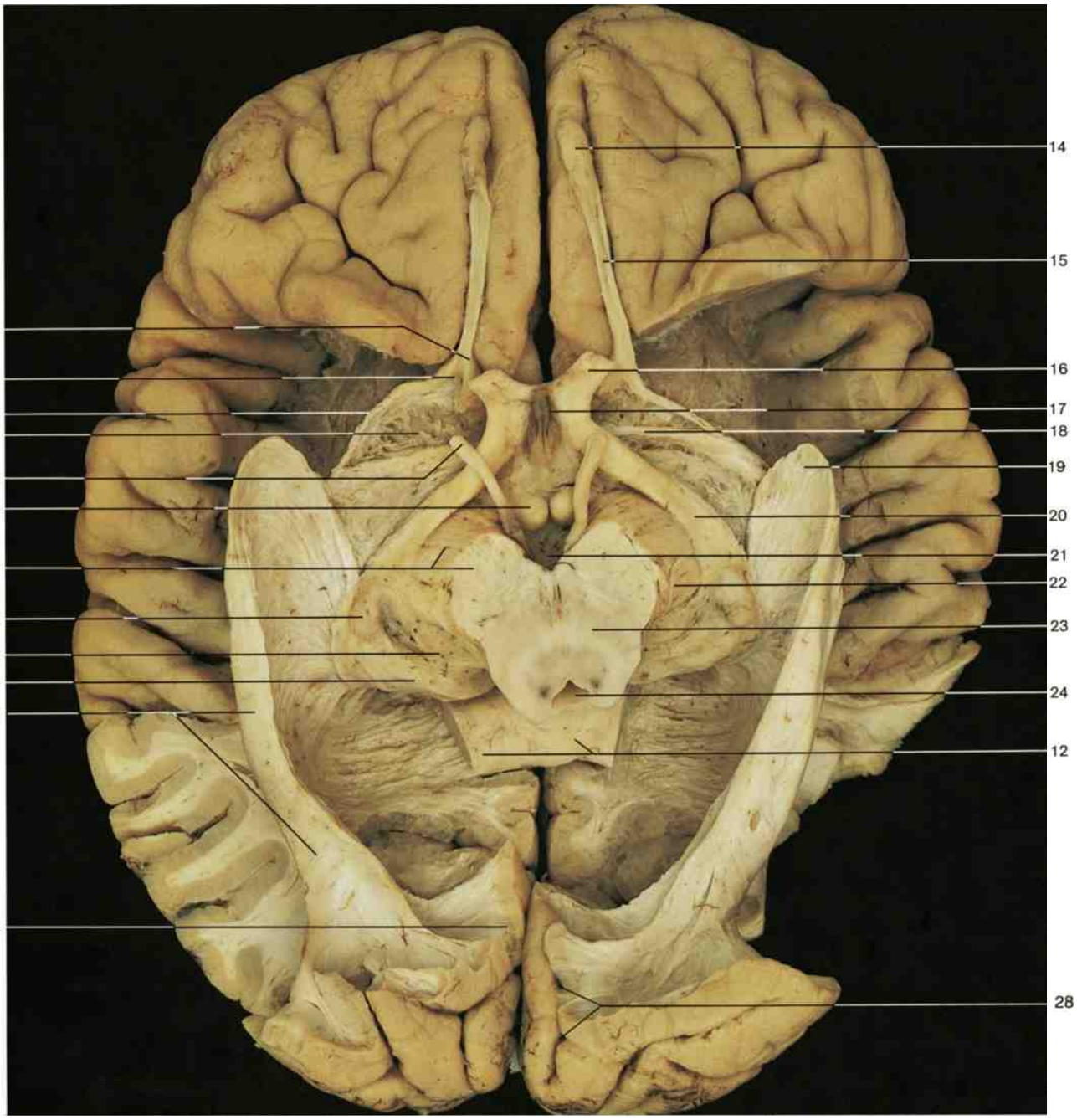
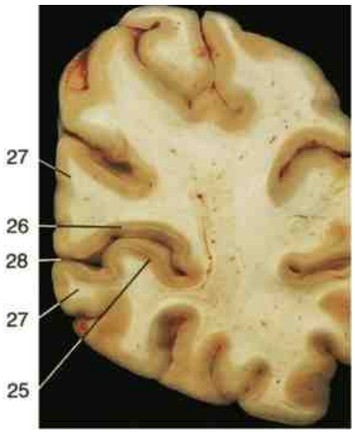


Dissection of the visual pathway (inferior aspect). Frontal pole at top, midbrain divided.

1 Medial olfactory stria
2 Olfactory trigone
3 Lateral olfactory stria
4 Anterior perforated substance
5 Oculomotor nerve (n. III)
6 Mamillary body
7 Cerebral peduncle
8 Lateral geniculate body
9 Medial geniculate body
10 Pulvinar of thalamus
11 Optic radiation
12 Splenium of the corpus callosum (commissural fibers)
13 Cuneus
14 Olfactory bulb
15 Olfactory tract
16 Optic nerve (n. II)
17 Infundibulum
18 Anterior commissure
19 Genu of optic radiation
20 Optic tract
21 Interpeduncular fossa and posterior perforated substance
22 Trochlear nerve (n. IV)
23 Substantia nigra
24 Cerebral aqueduct
25 Visual cortex
26 Line of Gennari
27 Gyrus of striate cortex
28 Calcarine sulcus



Frontal section of the striate cortex at the level of the striate area in the occipital lobe.

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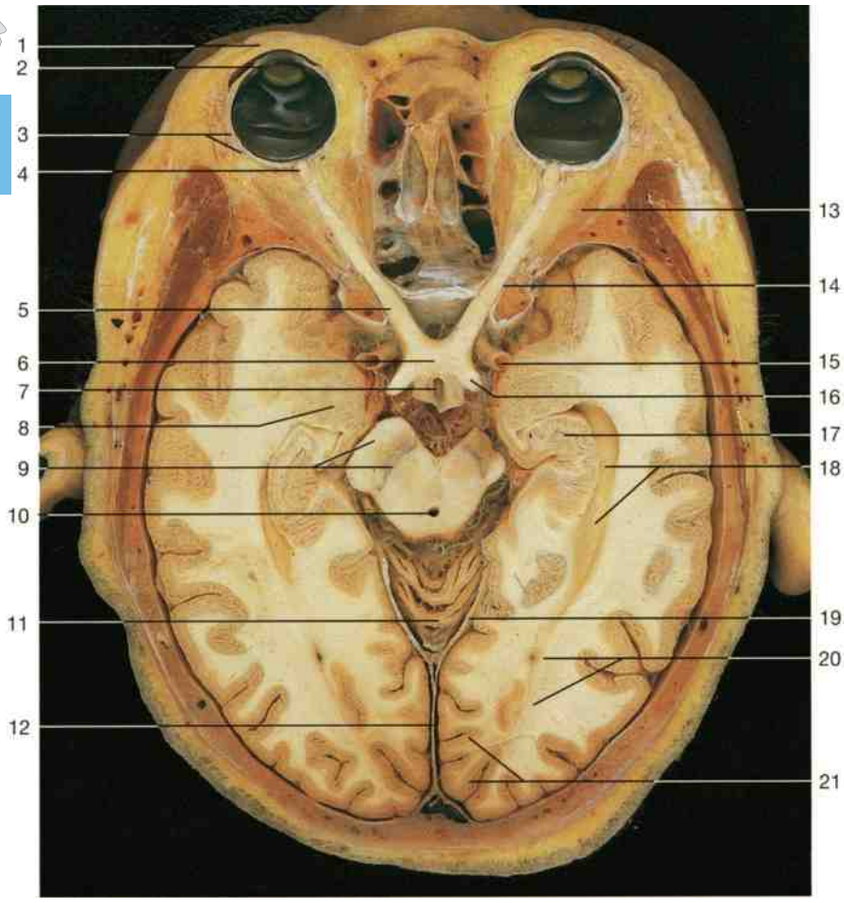
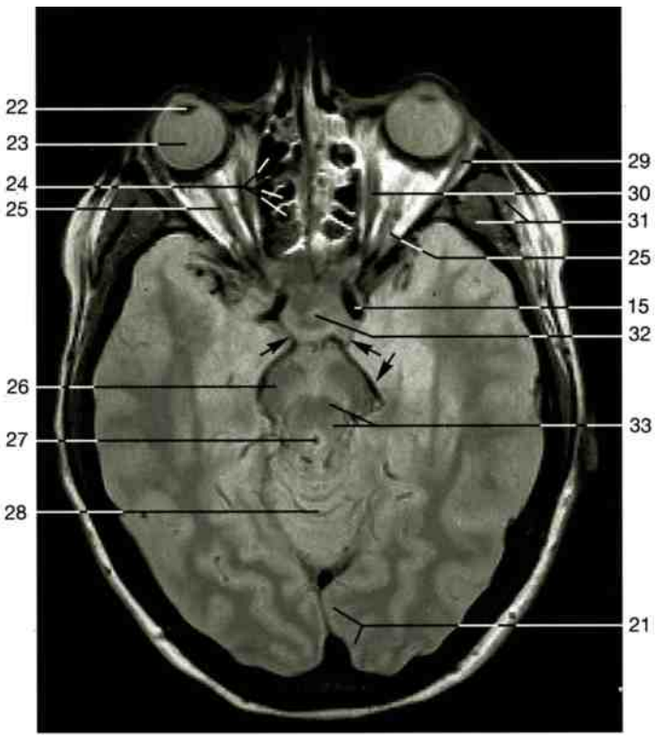


1 Upper lid
2 Cornea
3 Eyeball (sclera, retina)
4 Head of optic nerve
5 Optic nerve
6 Optic chiasma
7 Infundibular recess of hypothalamus
8 Amygdaloid body
9 Substantia nigra and crus cerebri
10 Cerebral aqueduct
11 Vermis of cerebellum
12 Falx cerebri
13 Lateral rectus muscle
14 Optic canal
15 Internal carotid artery
16 Optic tract
17 Hippocampus
18 Inferior horn of lateral ventricle
19 Tentorium cerebelli
20 Optic radiation of Gratiolet
21 Visual cortex (area calcarina, striate cortex)
22 Lens
23 Eyeball
24 Ethmoidal cells
25 Optic nerve with dura sheath
26 Cerebral peduncle
27 Aqueduct of mesencephalon
28 Vermis of cerebellum

Horizontal section through the head at the level of optic chiasma and striate cortex (superior aspect). Note the relationship of hypothalamic infundibulum to optic chiasma.



Horizontal section through the human head (MRI scan, courtesy of Prof. W. J. Huk, Erlangen, Germany). Arrows = branches of arterial circle of Willis.

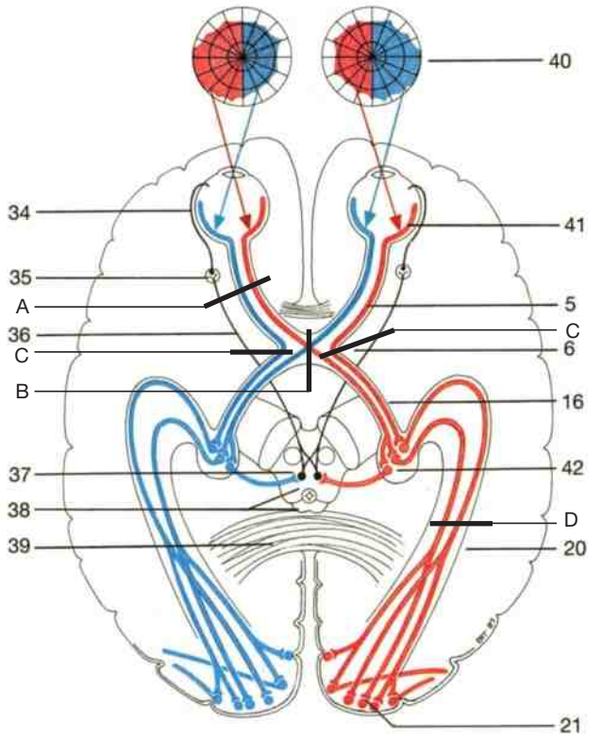


Diagram of the visual pathway and path of the light reflex.

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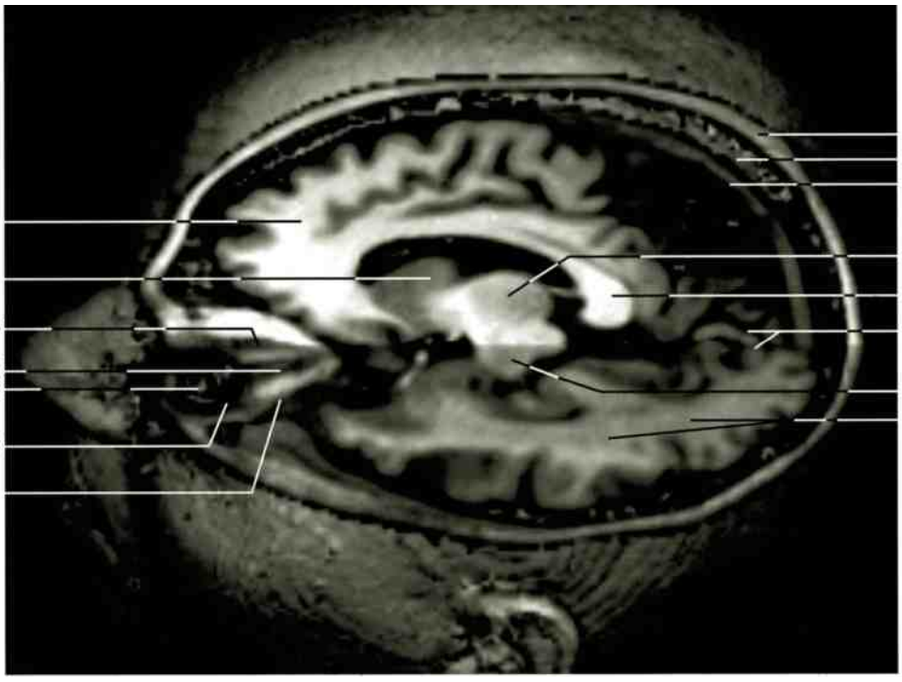
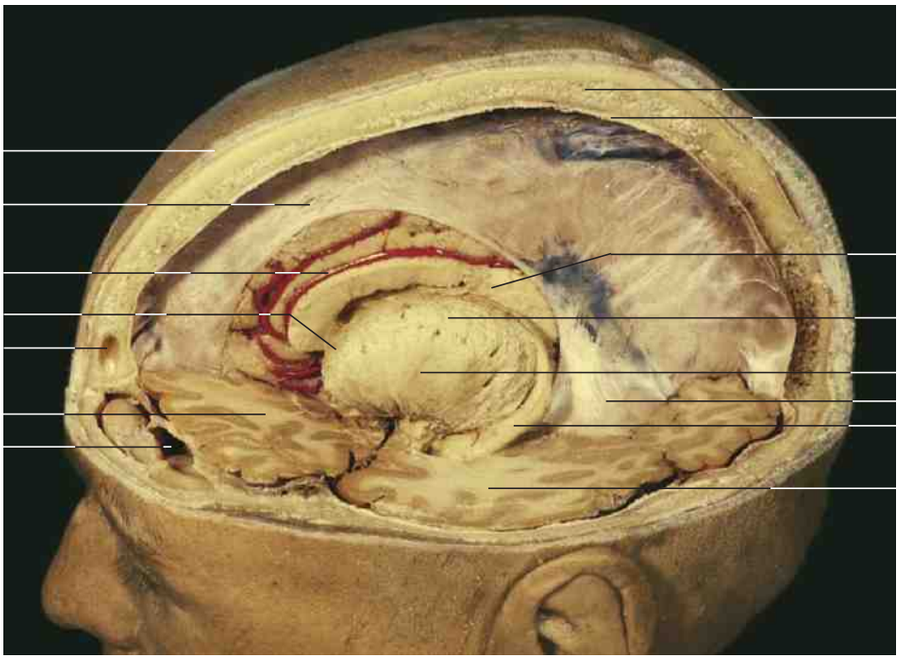


3-D reconstruction of the human visual system (MRI scan flash 40°, courtesy of Prof. Huk, University of Erlangen, Germany).



Dissection of brain stem in situ. Left hemisphere has been partly removed (compare with MRI scan above).

29 Lateral rectus muscle
30 Medial rectus muscle
31 Temporalis muscle
32 Hypophysis (pituitary gland)
33 Midbrain
34 Ciliary nerves (long and short)
35 Ciliary ganglion
36 Oculomotor nerve
37 Accessory oculomotor nucleus
38 Colliculi of midbrain
39 Corpus callosum
40 Visual field
41 Retina
42 Lateral geniculate body
43 Frontal lobe
44 Caudate nucleus
45 Medial rectus muscle
46 Lateral rectus muscle
47 Skin
48 Diploe (skull)
49 Dura mater
50 Thalamus
51 Anterior cerebral artery
52 Caudate nucleus
53 Frontal sinus
54 Internal capsule
55 Lentiform nucleus (putamen)
56 Hippocampus
57 Temporal lobe of left hemisphere

In **binocular vision** the visual field (40) is projected upon portions of both retinae (blue and red in the drawing). In the chiasma the fibers from the two retinal portions are combined to form the left optic tract. The fibers of the two eyes remain separated from each other throughout the entire visual pathway up to their final termination in the calcarine cortex (21). **Injuries on the optic pathway** produce visual defects whose nature depends on the location of the injury. Destruction of one optic nerve (A) produces **blindness in the corresponding eye** with loss of pupillary light reflex. If **lesions of the chiasma** destroy the crossing fibers of the nasal portions of the retina (B), both temporal fields of vision are lost **(bitemporal hemianopsia)**. If both lateral angles of the chiasma are compressed (C), the nondecussating fibers from the temporal retinae are affected, resulting in loss of nasal visual fields **(binasal hemianopsia)**. Lesions posterior to the chiasma (D) (i.e., optic tract, lateral geniculate body, optic radiation, or visual cortex) result in a loss of the entire opposite field of vision **(homonymous hemianopsia)**.

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Superficial layer of the left orbit (superior aspect). The roof of the orbit and a portion of the left tentorium have been removed.

Middle layer of the left orbit (superior aspect). The roof of the orbit has been removed and the superior extra-ocular muscles have been divided and reflected.

1 Lateral branch of frontal nerve
2 Lacrimal gland
3 Lacrimal vein
4 Lacrimal nerve
5 Frontal nerve
6 Superior rectus
7 Middle cranial fossa
8 Abducent nerve (n. VI)
9 Trigeminal nerve (n. V)
10 Trochlear nerve (intracranial part) (n. IV)
11 Frontal sinus
12 Levator palpebrae superioris muscle
13 Branches of supratrochlear nerve
14 Olfactory bulb
15 Superior oblique muscle
16 Trochlear nerve (intra-orbital part) (n. IV)
17 Optic nerve (intracranial part)
18 Pituitary gland and infundibulum
19 Dorsum sellae
20 Oculomotor nerve (n. III)
21 Midbrain
22 Tendon of superior oblique muscle
23 Eyeball
24 Vena vorticosa
25 Short ciliary nerves
26 Optic nerve (extracranial part)
27 Trigeminal ganglion

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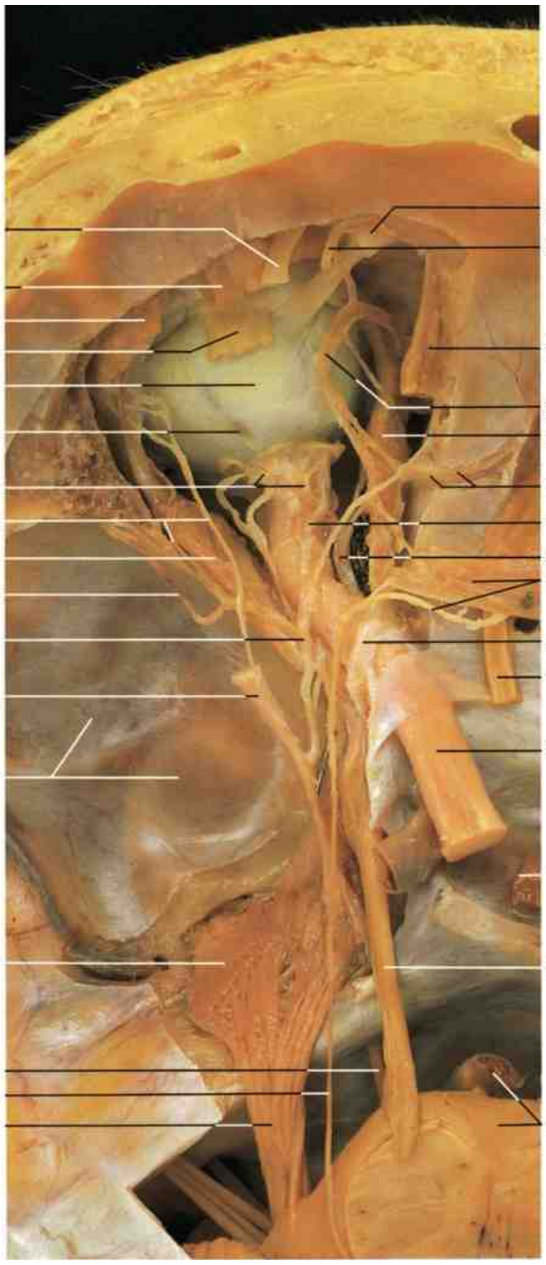
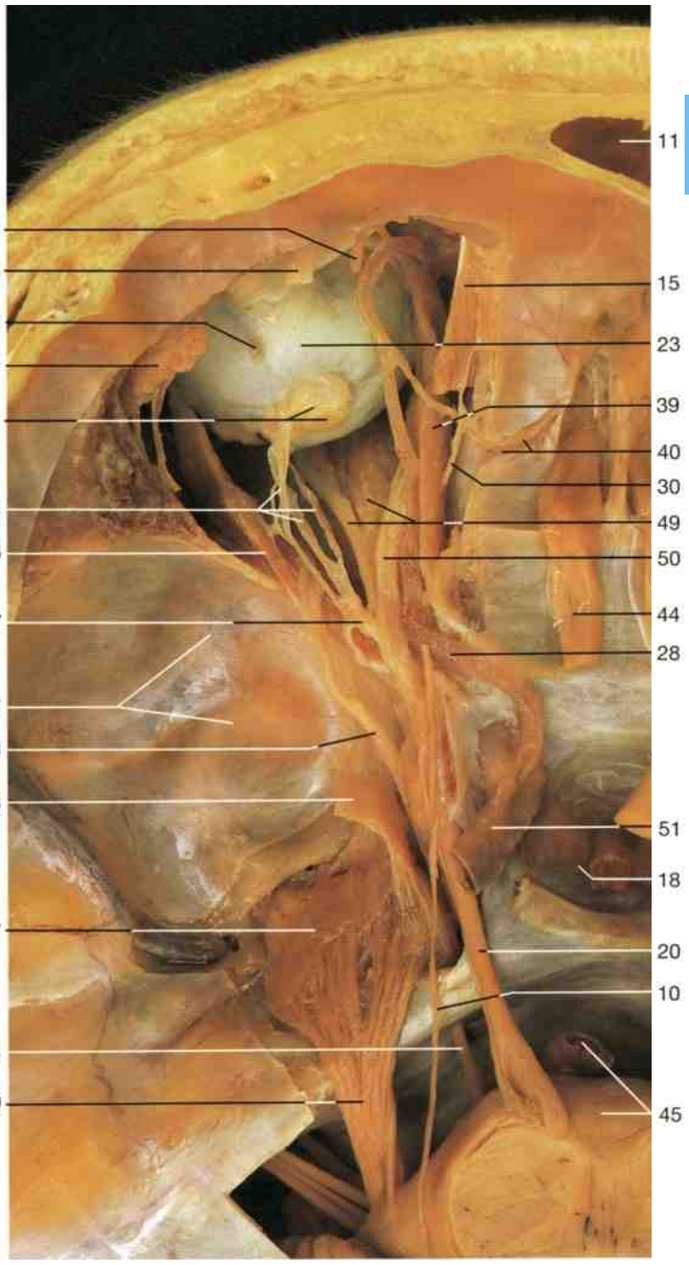


Middle layer of the left orbit (superior aspect). The roof of the orbit and the superior extra-ocular muscles have been removed.



Deeper layer of the left orbit (superior aspect). The optic nerve has now been removed.

28 Ophthalmic artery
29 Superior ophthalmic vein
30 Nasociliary nerve
31 Levator palpebrae superioris muscle (reflected)
32 Superior rectus muscle (reflected)
33 Lateral branch of supra-orbital nerve
34 Lacrimal nerve and artery
35 Lateral rectus muscle
36 Meningolacrimal artery (anastomosing with middle meningeal artery)
37 Trochlea
38 Medial branch of supra-orbital nerve
39 Medial rectus muscle
40 Anterior ethmoidal artery and nerve
41 Long ciliary nerve
42 Superior oblique muscle and trochlear nerve
43 Common tendinous ring
44 Olfactory tract
45 Basilar artery and pons
46 Optic nerve (external sheath of optic nerve, divided)
47 Ciliary ganglion
48 Ophthalmic nerve (divided, reflected)
49 Inferior branch of oculomotor nerve and inferior rectus muscle
50 Superior branch of oculomotor nerve
51 Internal carotid artery

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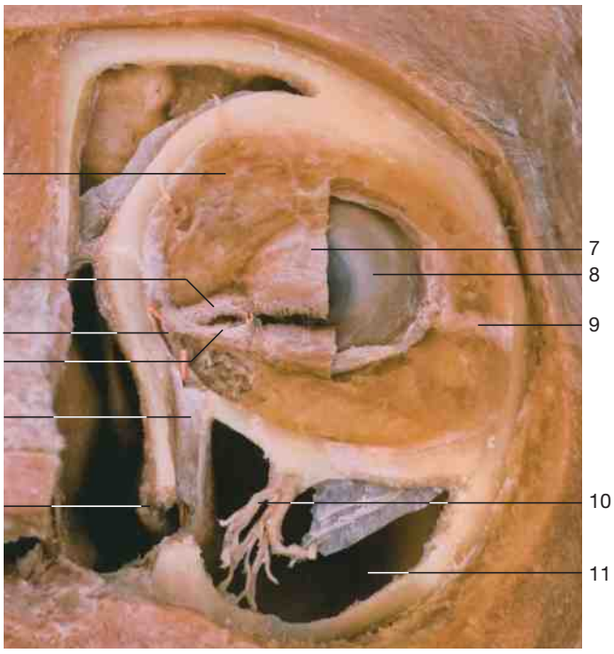
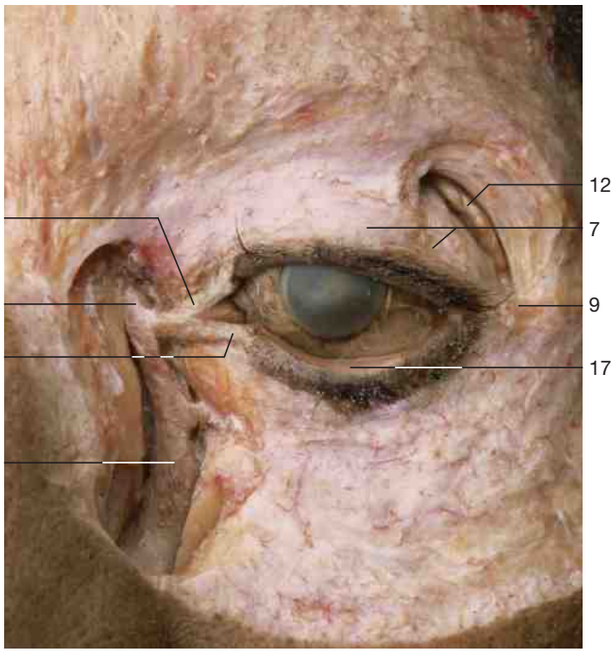
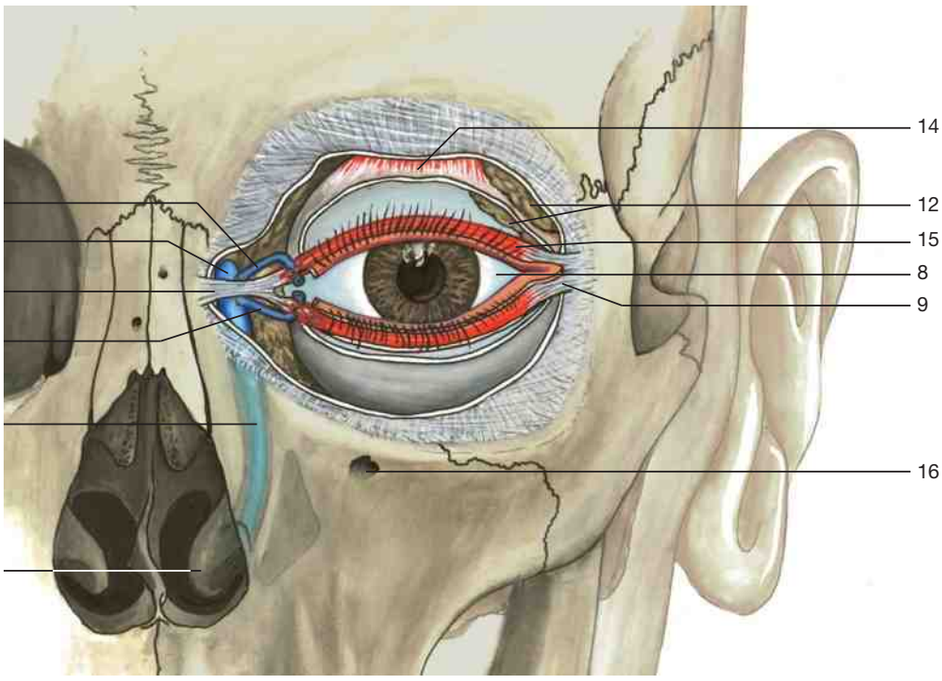


Lids and lacrimal apparatus of the left eye. Parts of the eyelids have been removed to reveal the underlying eyeball. The maxillary sinus has been opened.



Lacrimal apparatus of the left eye.

1 Orbicularis oculi muscle
2 Superior lacrimal canaliculus
3 Lacrimal sac
4 Inferior lacrimal canaliculus
5 Nasolacrimal duct
6 Inferior nasal concha
7 Upper eyelid
8 Eyeball
9 Lateral palpebral ligament
10 Infra-orbital artery and nerve
11 Maxillary sinus
12 Lacrimal gland
13 Medial palpebral ligament
14 Aponeurosis of levator palpebrae superioris muscle
15 Palpebral portion of the orbicularis oculi muscle
16 Infra-orbital foramen
17 Palpebral conjunctiva of lower lid



Lacrimal apparatus of the left eye (schematic drawing). Red = Palpebral portion of the orbicularis oculi muscle.

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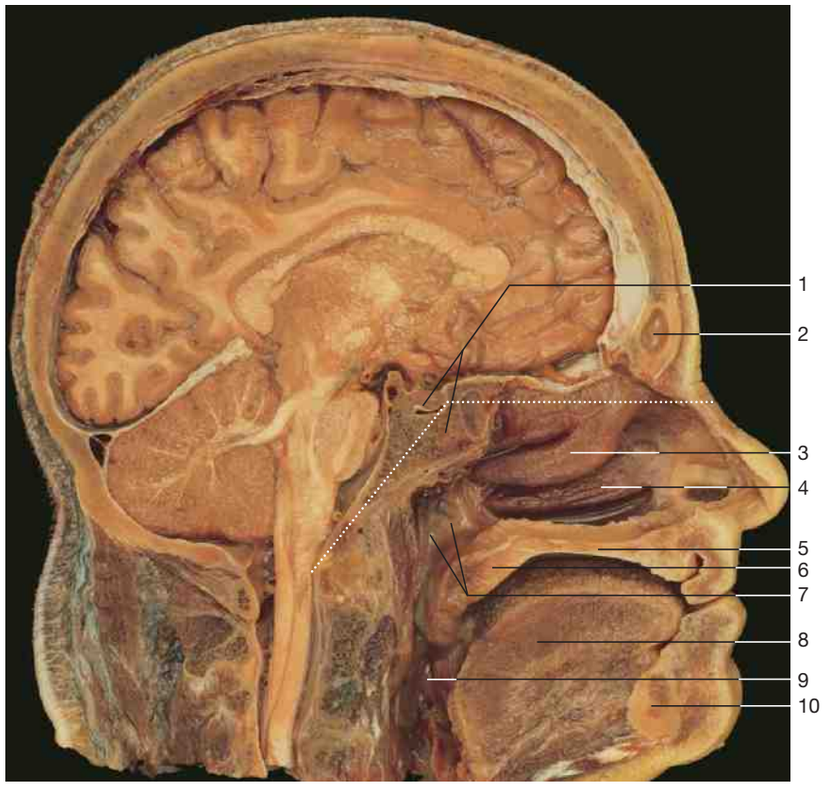
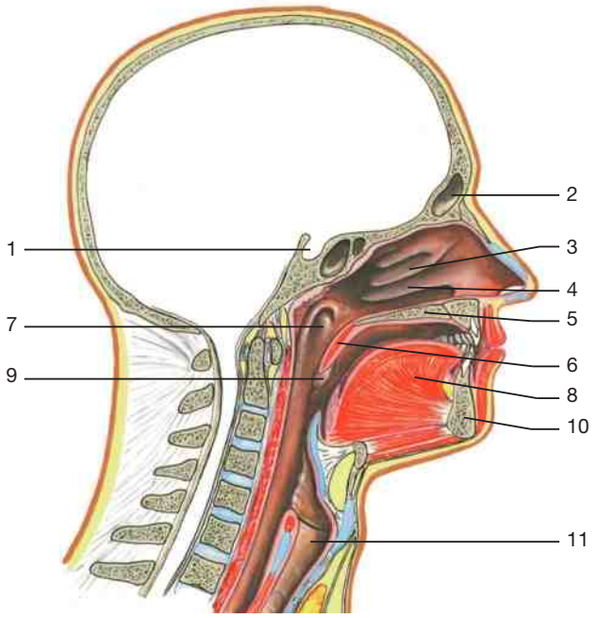
2.4 Oral and Nasal Cavities



Median sagittal section through the head. The palate separates nasal and oral cavities. The base of the skull forms an angle of about 150° at the sella turcica (dotted line).

During evolution, the oral and nasal cavities of the human head were situated upon each other, so the human face developed in the frontal plane. The **nasal cavities** are separated by the nasal septum. They contain three conchae, where openings to the ethmoidal and maxillary sinus are located. Posteriorly the two nasal cavities open into the nasopharynx through the choanae.

The **oral cavity** is separated from the nasal cavity by the palate. When the mouth is closed, the oral cavity is fully occupied by the tongue, which is characterized by its high mobility, necessary for the development of speech and song. Specific lymphatic organs (tonsils) are located at the entrance of the nasopharynx in both the nasal and oval cavities to protect the digestive tract from infection. The respiratory and digestory tracts cross each other within the nasopharynx, the most important requirement for the development of speech.



Median sagittal section through the head (schematic drawing). The tongue has been disposed to show the connection of the oral cavity with the pharynx and the position of the palatine tonsil.

1 Hypophysis within hypophysial fossa
2 Frontal sinus
3 Middle nasal concha
4 Inferior nasal concha
5 Hard palate
6 Soft palate
7 Pharynx with auditory tube
8 Tongue
9 Pharynx with palatine tonsil
10 Mandible
11 Larynx

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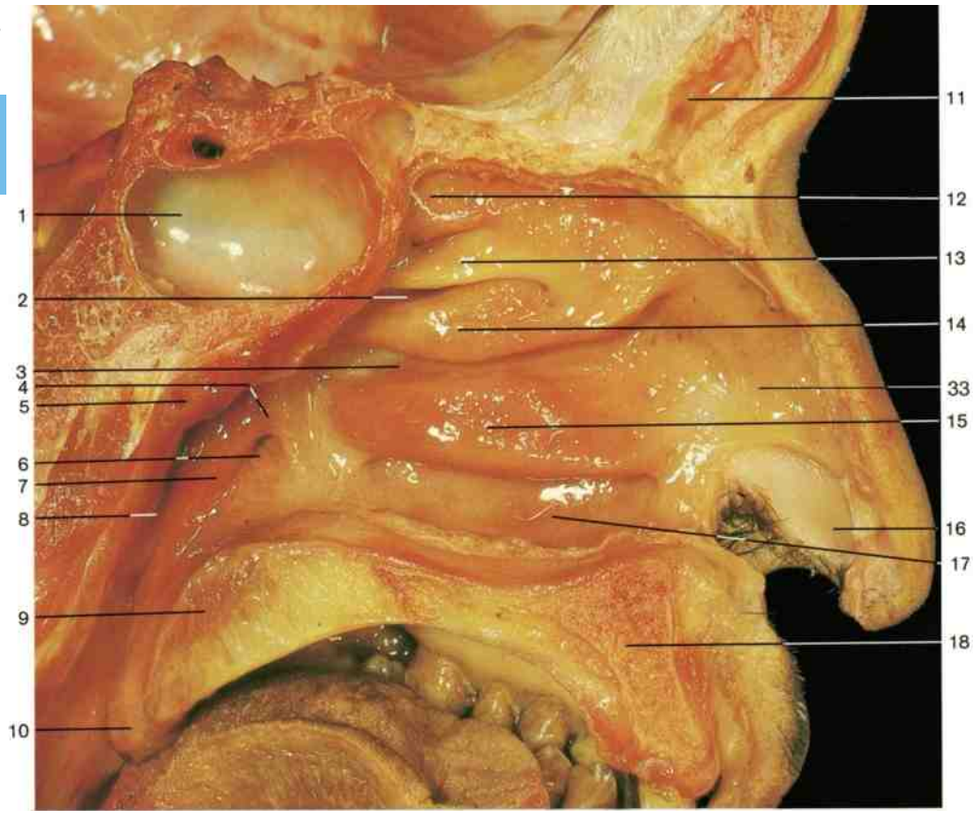
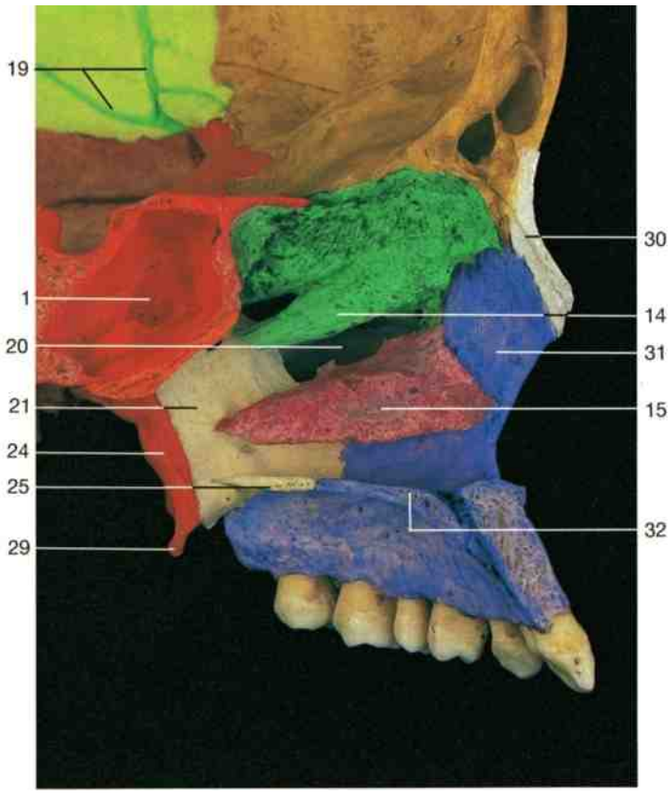
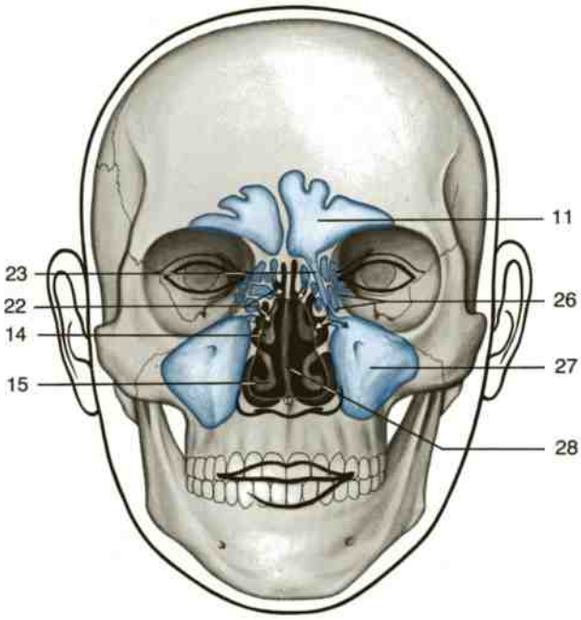


Lateral wall of the nasal cavity. Septum removed.

1 Sphenoidal sinus
2 Superior meatus
3 Middle meatus
4 Tubal elevation
5 Pharyngeal tonsil
6 Pharyngeal orifice of auditory tube
7 Salpingopharyngeal fold
8 Pharyngeal recess
9 Soft palate
10 Uvula
11 Frontal sinus
12 Spheno-ethmoidal recess
13 Superior nasal concha
14 Middle nasal concha
15 Inferior nasal concha
16 Vestibule
17 Inferior meatus
18 Hard palate
19 Grooves for the middle meningeal artery and parietal bone (yellow)
20 Maxillary hiatus
21 Perpendicular process of palatine bone
22 Openings of ethmoidal air cells
23 Opening of frontal sinus
24 Medial pterygoid plate (red)
25 Horizontal plate of palatine process
26 Ethmoidal air cells
27 Maxillary sinus
28 Nasal septum
29 Pterygoid hamulus
30 Nasal bone (white)
31 Frontal process of maxilla (violet)
32 Palatine process of maxilla (violet)
33 Nasal atrium



Bones of left nasal cavity (medial aspect).



Schematic diagram showing the position of paranasal sinuses. Openings indicated by arrows.

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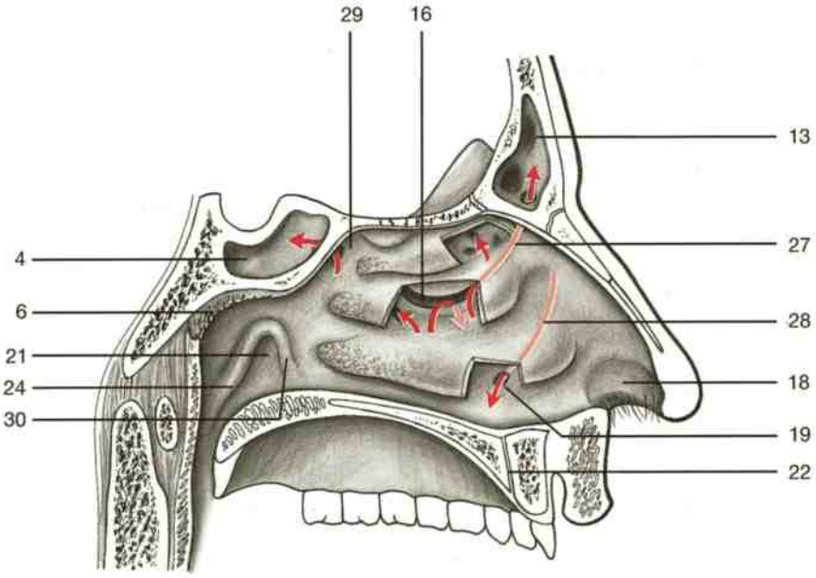
Median section through the head with nasal and oral cavities. The middle and inferior nasal conchae have been partly removed to show the openings of paranasal sinuses.

1 Great cerebral vein (Galen's vein)
2 Tectum of midbrain
3 Straight sinus
4 Sphenoidal sinus
5 Cerebellum
6 Pharyngeal tonsil
7 Cerebellomedullary cistern
8 Median atlanto-axial joint
9 Spinal cord
10 Oral part of pharynx
11 Falx cerebri
12 Corpus callosum and anterior cerebral artery
13 Frontal sinus
14 Optic chiasm and pituitary gland
15 Superior nasal concha and ethmoidal bulla
16 Semilunar hiatus
17 Accessory openings to maxillary sinus and cut edge of middle nasal concha
18 Vestibule
19 Opening of nasolacrimal duct
20 Inferior nasal concha (cut)
21 Opening of auditory tube
22 Incisive canal
23 Levator veli palatini muscle
24 Salpingopharyngeal fold
25 Lingual nerve and submandibular ganglion
26 Submandibular duct
27 Nasofrontal duct
28 Nasolacrimal duct
29 Spheno-ethmoidal recess (of Rosenmüller)
30 Salpingopalatine fold



Lateral wall of nasal cavity. Openings indicated by red arrows (schematic drawing).

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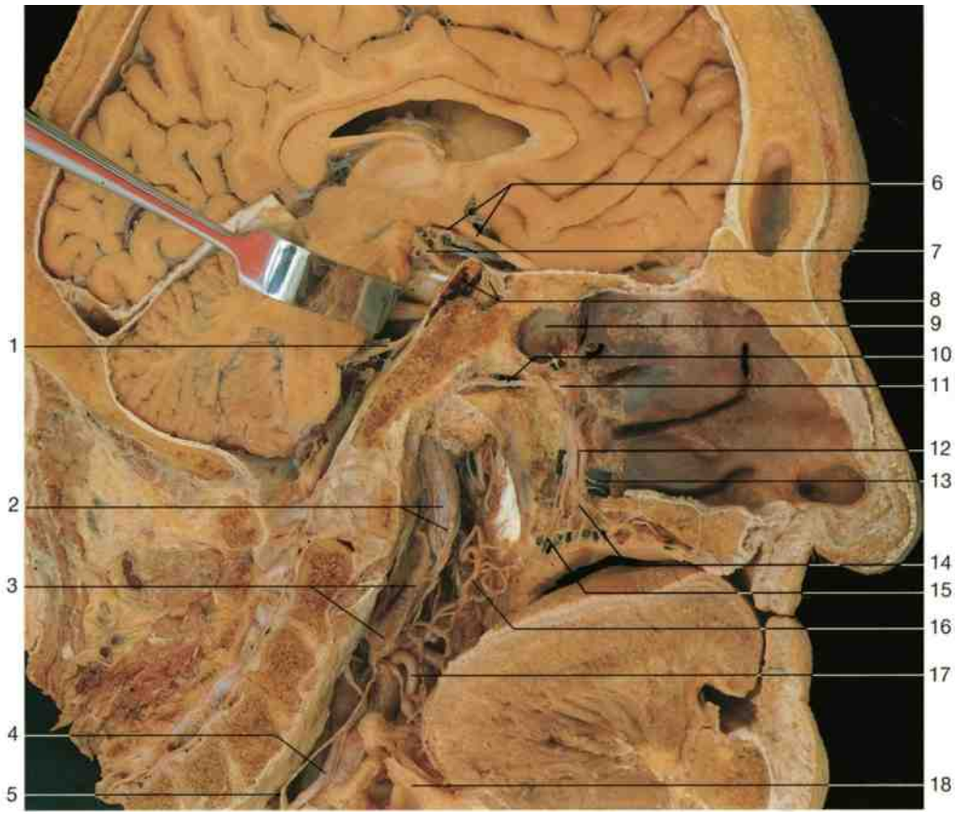

Nerves of the lateral wall of nasal cavity. Sagittal section through the head. Mucous membranes partly removed, pterygoid canal opened.

Nasal septum. Dissection of nerves and vessels.

1 Facial nerve
2 Internal carotid artery and internal carotid plexus
3 Superior cervical ganglion
4 Vagus nerve
5 Sympathetic trunk
6 Optic nerve and ophthalmic artery
7 Oculomotor nerve
8 Internal carotid artery and cavernous sinus
9 Sphenoidal sinus
10 Nerve of the pterygoid canal
11 Pterygopalatine ganglion
12 Descending palatine artery
13 Lateral inferior posterior nasal branches and lateral posterior nasal and septal arteries
14 Greater palatine nerves and artery
15 Lesser palatine nerves and arteries
16 Branches of ascending pharyngeal artery
17 Lingual artery
18 Epiglottis
19 Anterior ethmoidal artery
20 Olfactory bulb
21 Olfactory tract
22 Nasopalatine nerve
23 Choanae
24 Frontal sinus
25 Crista galli
26 Anterior ethmoidal artery and nerve, and nasal branch of anterior ethmoidal artery
27 Nasal septum
28 Septal artery
29 Crest of nasal septum
30 Hard palate
31 Tentorium cerebelli
32 Trochlear nerve
33 Trigeminal nerve with motor root
34 Internal carotid plexus
35 Lingual nerve with chorda tympani
36 Medial pterygoid muscle and medial pterygoid plate
37 Inferior alveolar nerve
38 Sympathetic trunk
39 Oculomotor nerve
40 Palatine nerves
41 Tongue
42 Trigeminal ganglion
43 Trigeminal nerve (n. V)
44 Facial nerve (n. VII)
45 Geniculate ganglion
46 Stylomastoid foramen
47 Medial pterygoid muscle

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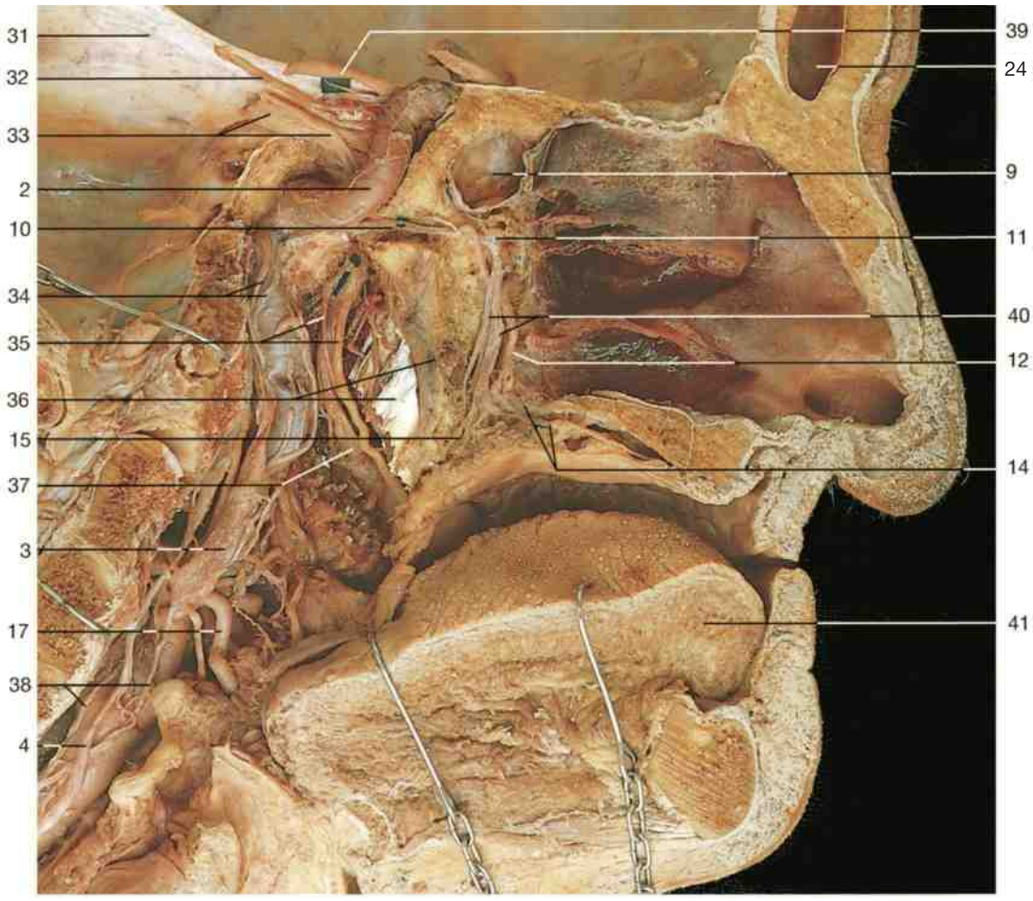
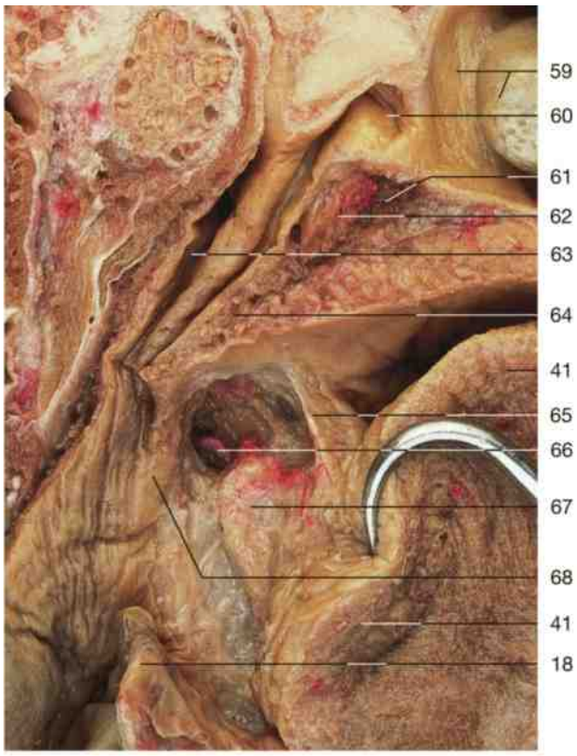
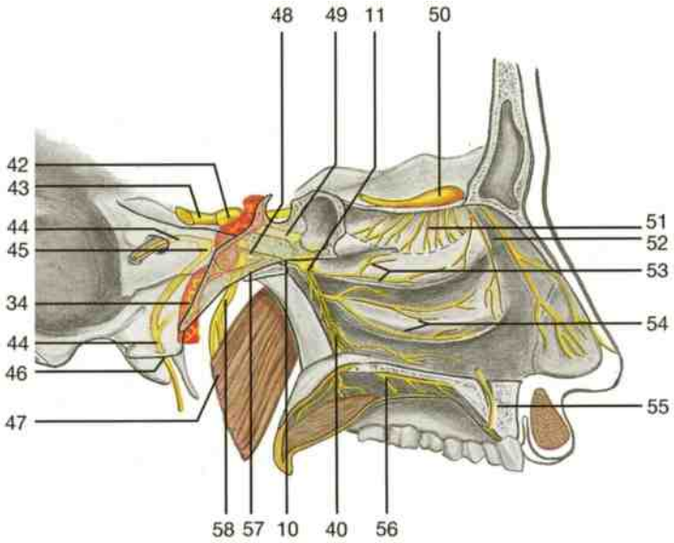


Nerves of the lateral wall of nasal cavity. Carotid canal opened, mucous membranes of pharynx and nasal cavity partly removed.

48 Greater petrosal nerve
49 Maxillary nerve
50 Olfactory bulb
51 Olfactory nerves
52 Internal nasal branches of anterior ethmoidal nerve
53 Lateral superior posterior nasal branches
54 Lateral inferior posterior nasal branches
55 Incisive canal with nasopalatine nerve
56 Greater palatine nerve
57 Deep petrosal nerve
58 Mandibular nerve
59 Nasal cavity and inferior nasal concha
60 Opening of auditory tube
61 Tensor veli palatini muscle
62 Levator veli palatini muscle
63 Pharyngeal recess in the nasopharynx
64 Uvula
65 Palatoglossal arch
66 Tonsillar branch of ascending palatine artery
67 Palatine tonsil
68 Palatopharyngeal arch



Dissection of palatine tonsil located in the lateral wall of the nasopharynx (left side). Root of tongue reflected.



Nerves of the lateral wall of nasal cavity. Body of sphenoid bone appears transparent (schematic drawing).

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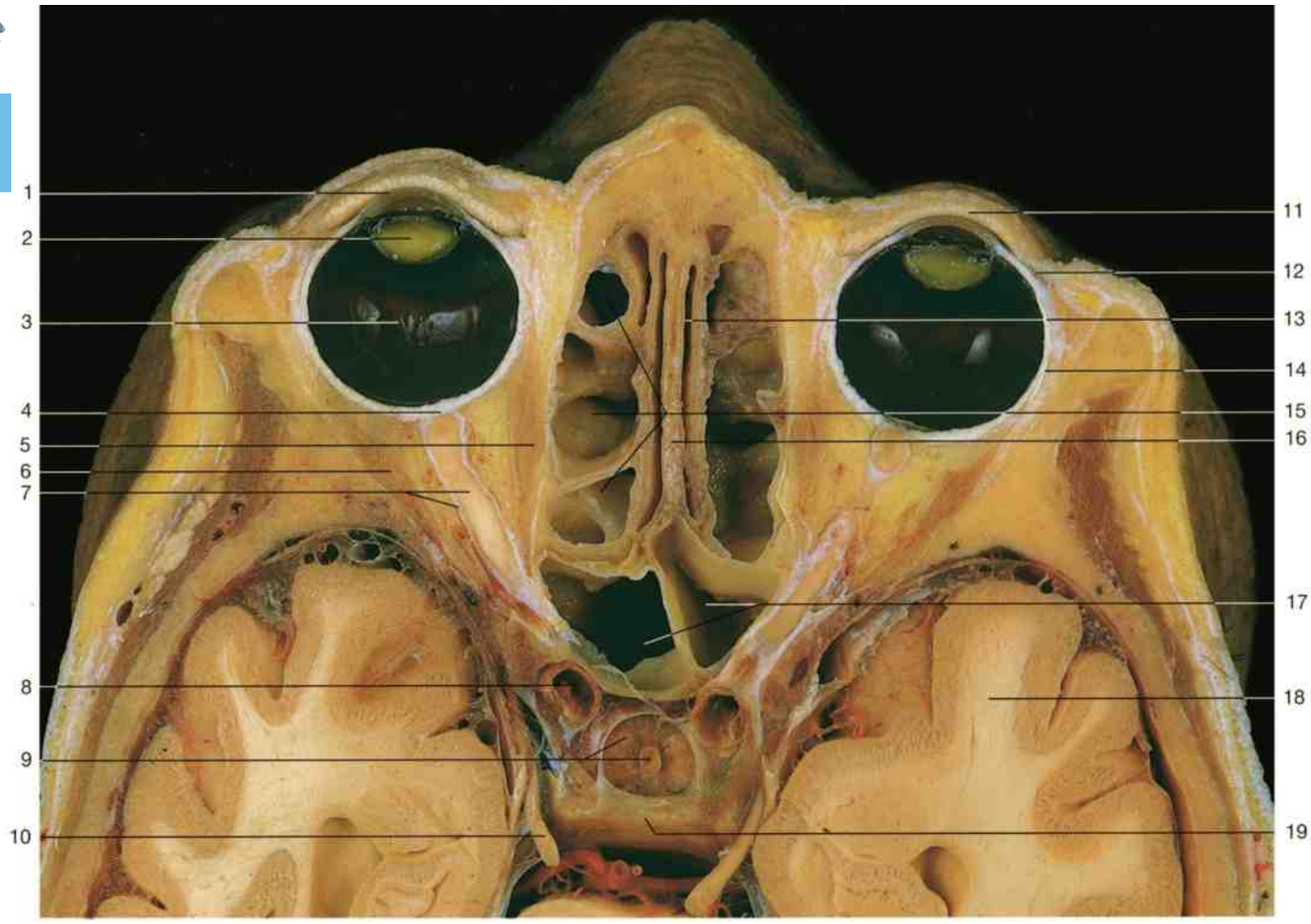
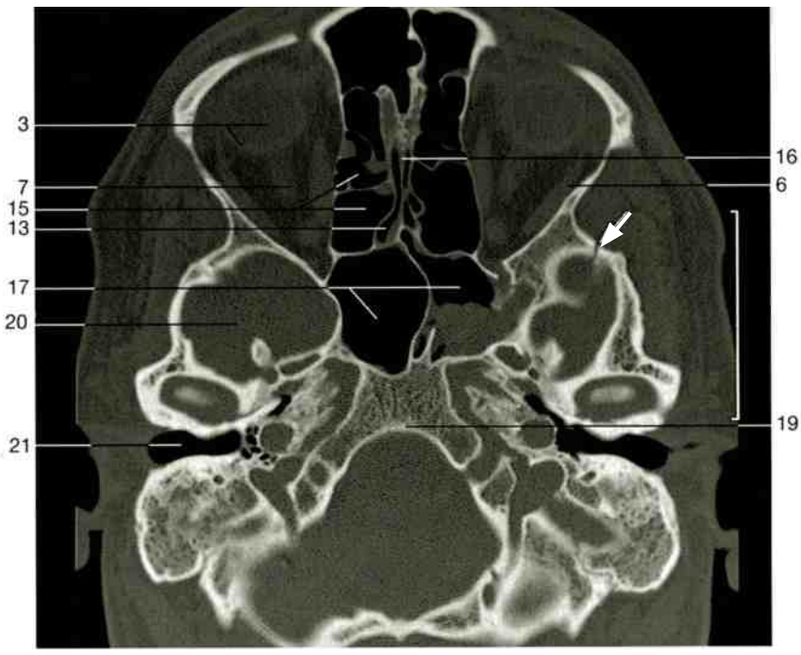


Horizontal section through the nasal cavity, the orbits, and temporal lobes of the brain at the level of pituitary gland.



Horizontal section through the head. CT scan. Bar = 2 cm.
Arrow: fracture.

1 Cornea
2 Lens
3 Vitreous body (eyeball)
4 Head of optic nerve
5 Medial rectus muscle
6 Lateral rectus muscle
7 Optic nerve with dural sheath
8 Internal carotid artery
9 Pituitary gland and infundibulum
10 Oculomotor nerve
11 Superior tarsal plate of eyelid
12 Fornix of conjunctiva
13 Nasal cavity
14 Sclera
15 Ethmoidal sinus
16 Nasal septum
17 Sphenoidal sinus
18 Temporal lobe
19 Clivus
20 Middle cranial fossa
21 External acoustic meatus
22 Superior sagittal sinus
23 Falx cerebri
24 Superior rectus and levator palpebrae superioris muscles
25 Eyeball and lacrimal gland
26 Inferior rectus and inferior oblique muscles
27 Zygomatic bone
28 Maxillary sinus
29 Inferior nasal concha
30 Hard palate

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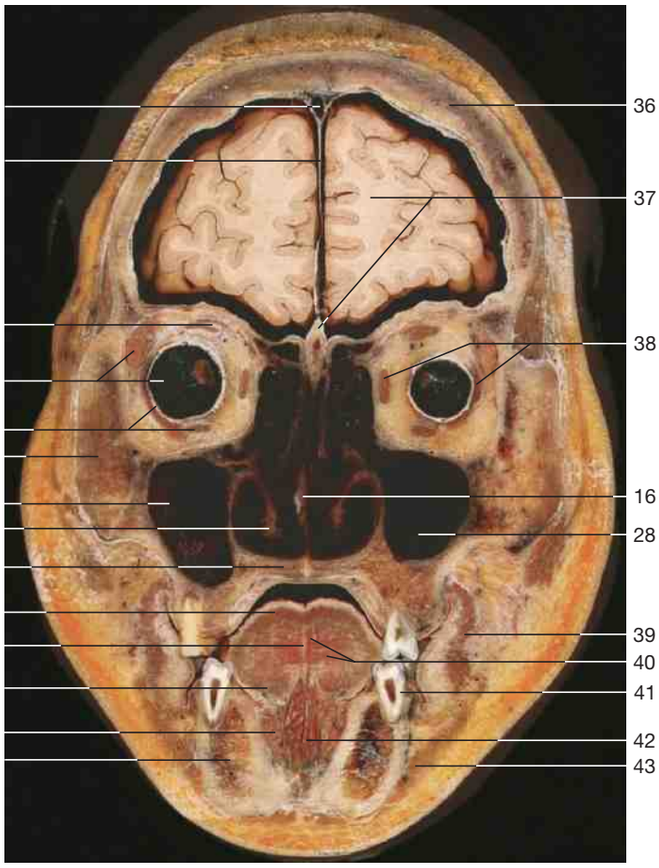
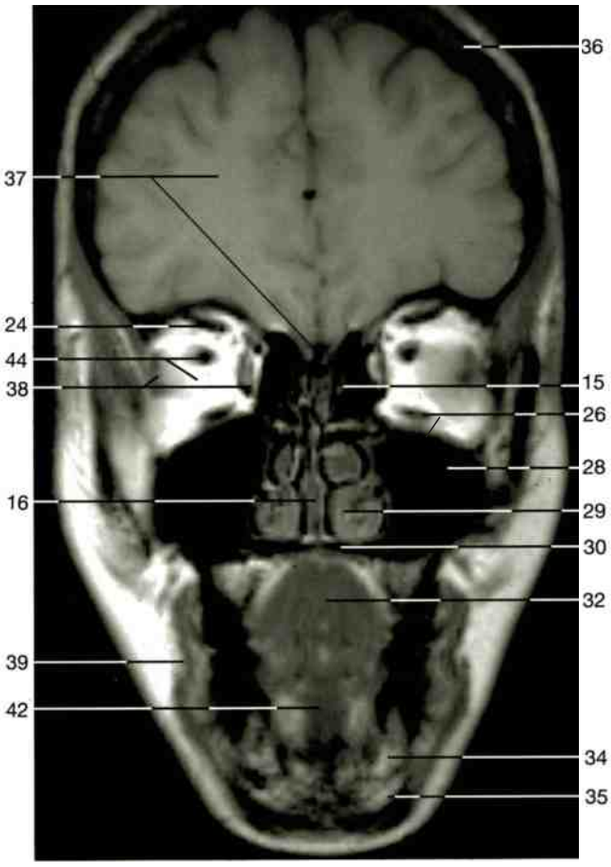
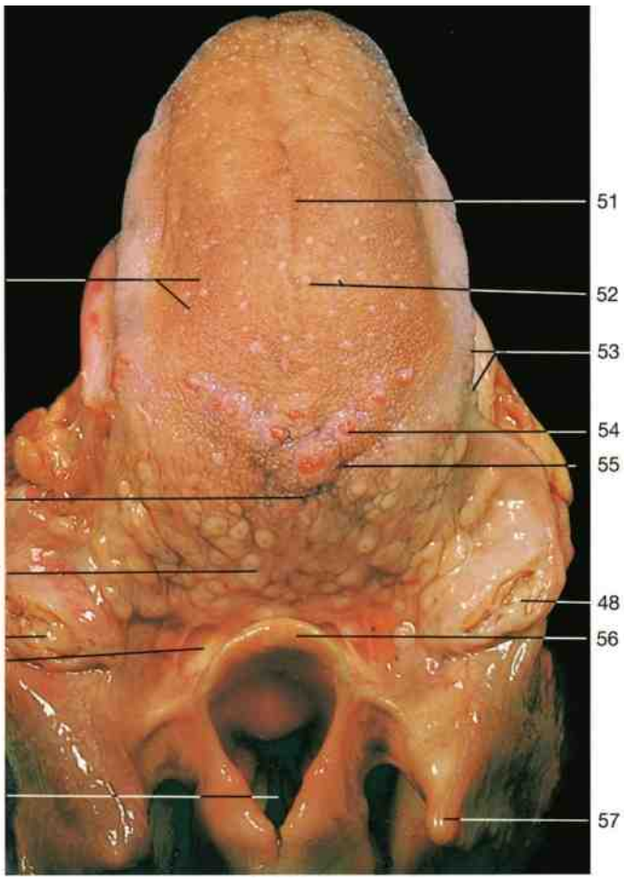


Coronal section through the head at the level of the second premolar of the mandible.



Coronal section through the head (MRI scan, courtesy of Prof. Heuck, Munich, Germany). Note the situation of the head cavities.



31 Superior longitudinal muscle of tongue
32 Lingual septum
33 Inferior longitudinal muscle of tongue
34 Sublingual gland
35 Mandible
36 Calvaria
37 Frontal lobe of brain and crista galli
38 Lateral and medial rectus muscles
39 Buccinator muscle
40 Vertical and transverse muscles of tongue
41 Second premolar of mandible
42 Genioglossus muscle
43 Platysma muscle
44 Orbit and optic nerve
45 Filiform papillae
46 Foramen cecum
47 Root of tongue (lingual tonsil)
48 Palatine tonsil
49 Vallecula of epiglottis
50 Vestibule of larynx
51 Median sulcus of tongue
52 Fungiform papillae
53 Foliate papillae
54 Circumvallate papilla
55 Sulcus terminalis
56 Epiglottis
57 Greater cornu of hyoid bone

◁ **Dorsal surface of the tongue and laryngeal inlet.**

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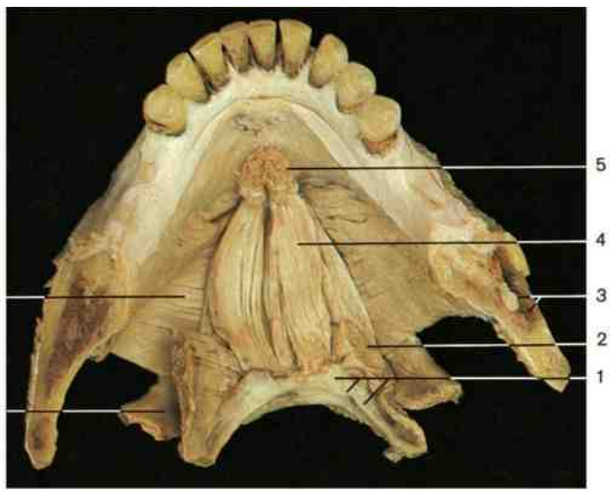
1 Nasal cavity
2 Hard palate
3 Upper lip and orbicularis oris muscle
4 Vestibule of oral cavity
5 First incisor
6 Lower lip and orbicularis oris muscle
7 Mandible
8 Genioglossus muscle
9 Geniohyoid muscle
10 Anterior belly of diagastric muscle
11 Mylohyoid muscle
12 Hyoid bone
13 Nasopharynx
14 Soft palate and uvula
15 Oropharynx
16 Root of tongue and lingual tonsil
17 Laryngopharynx
18 Epiglottis
19 Ary-epiglottic fold
20 Laryngopharynx continuous with esophagus
21 Larynx

Median sagittal section through the oral cavity and pharynx.

Hyoid bone (oblique lateral aspect).

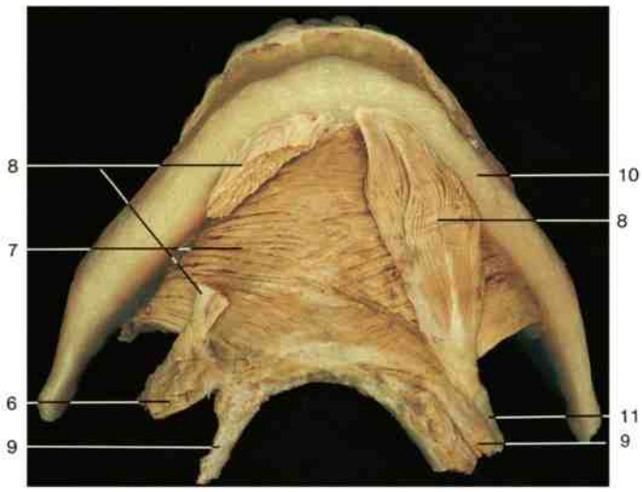
Hyoid bone (anterior aspect).

1 Greater cornu
2 Lesser cornu
3 Body
} of hyoid bone



Muscles of the floor of the oral cavity (superior aspect).

1 Lesser cornu and body of hyoid bone
2 Hyoglossus muscle (divided)
3 Ramus of mandible and inferior alveolar nerve
4 Geniohyoid muscle
5 Genioglossus muscle (divided)
6 Stylohyoid muscle (divided)



Oral diaphragm, muscles (inferior aspect). Cut on the base.

7 Mylohyoid muscle
8 Anterior belly of digastric muscle
9 Hyoid bone
10 Mandible
11 Intermediate tendon of digastric muscle

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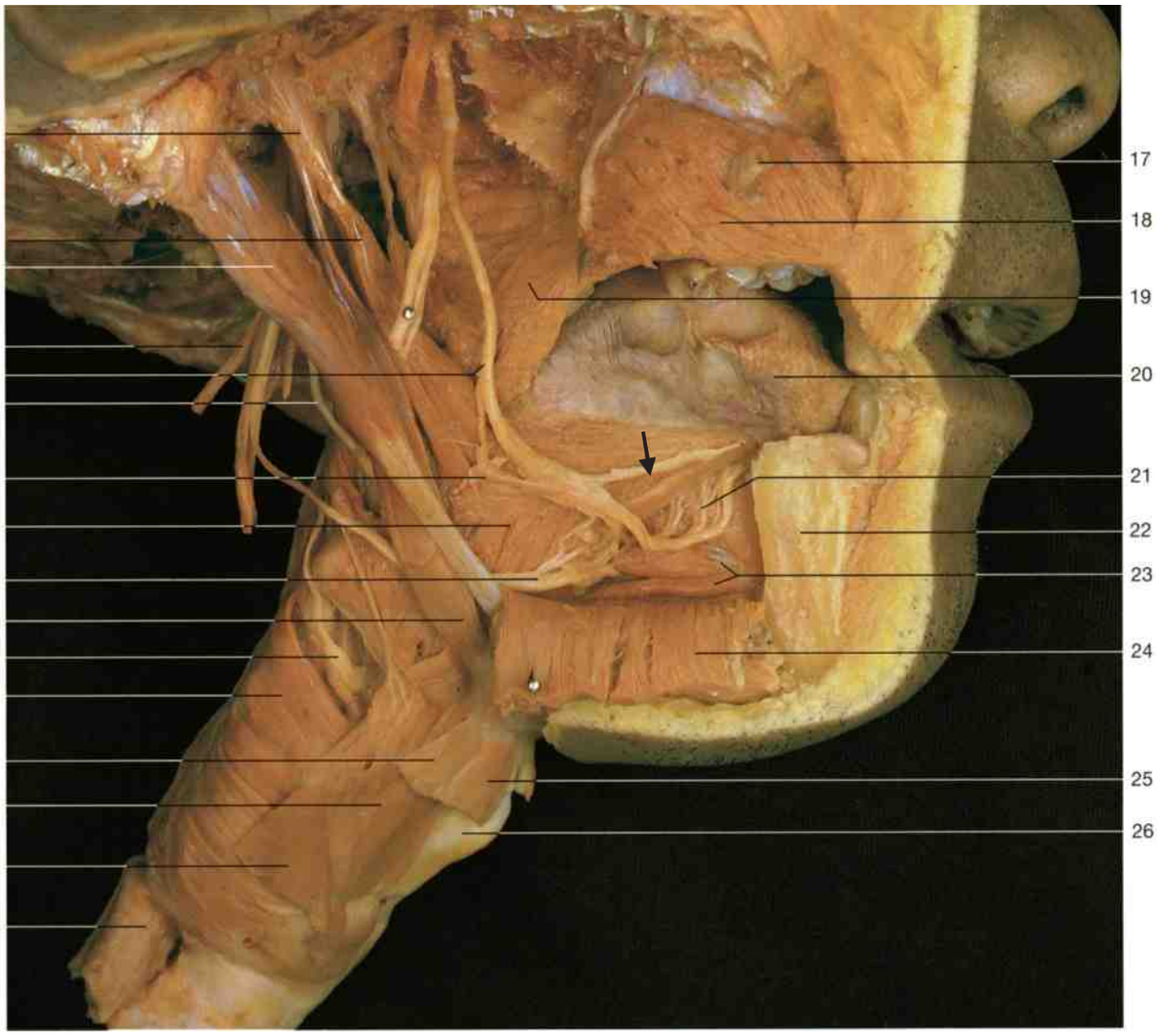
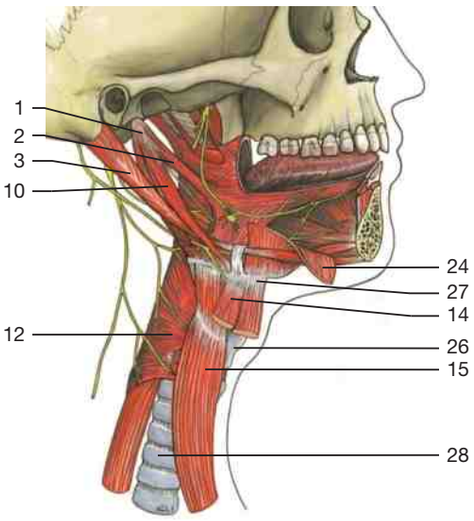


Parapharyngeal and sublingual regions. Innervation of the tongue. Lateral part of face and mandible removed, oral cavity opened. Arrow: submandibular duct.



Supra- and infrahyoid muscles and pharynx (schematic drawing).

1 Styloid process
2 Styloglossus muscle
3 Digastric muscle (posterior belly)
4 Vagus nerve (n. X)
5 Lingual nerve (n. V_3)
6 Glossopharyngeal nerve (n. IX)
7 Submandibular ganglion
8 Hyoglossus muscle
9 Hypoglossal nerve (n. XII)
10 Stylohyoid muscle
11 Internal branch of superior laryngeal nerve (branch of vagus nerve, not visible)
12 Middle constrictor muscle of pharynx
13 Omohyoid muscle (divided)
14 Thyrohyoid muscle
15 Sternothyroid muscle
16 Esophagus
17 Parotid duct (divided)
18 Buccinator
19 Superior constrictor muscle of pharynx
20 Tongue
21 Terminal branches of lingual nerve
22 Mandible (divided)
23 Genioglossus and geniohyoid muscles
24 Mylohyoid muscle (divided and reflected)
25 Sternohyoid muscle (divided)
26 Thyroid cartilage
27 Hyoid bone
28 Trachea

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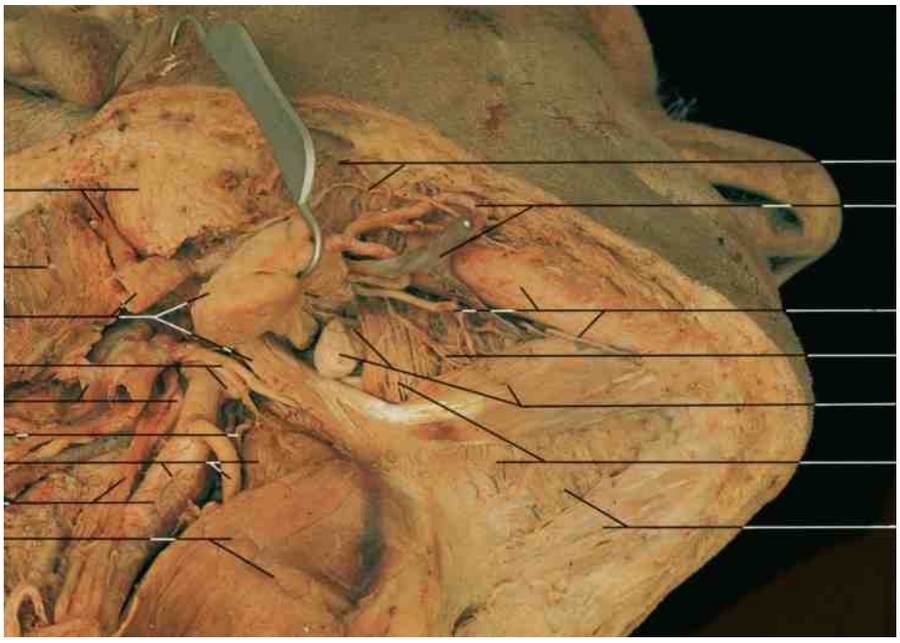
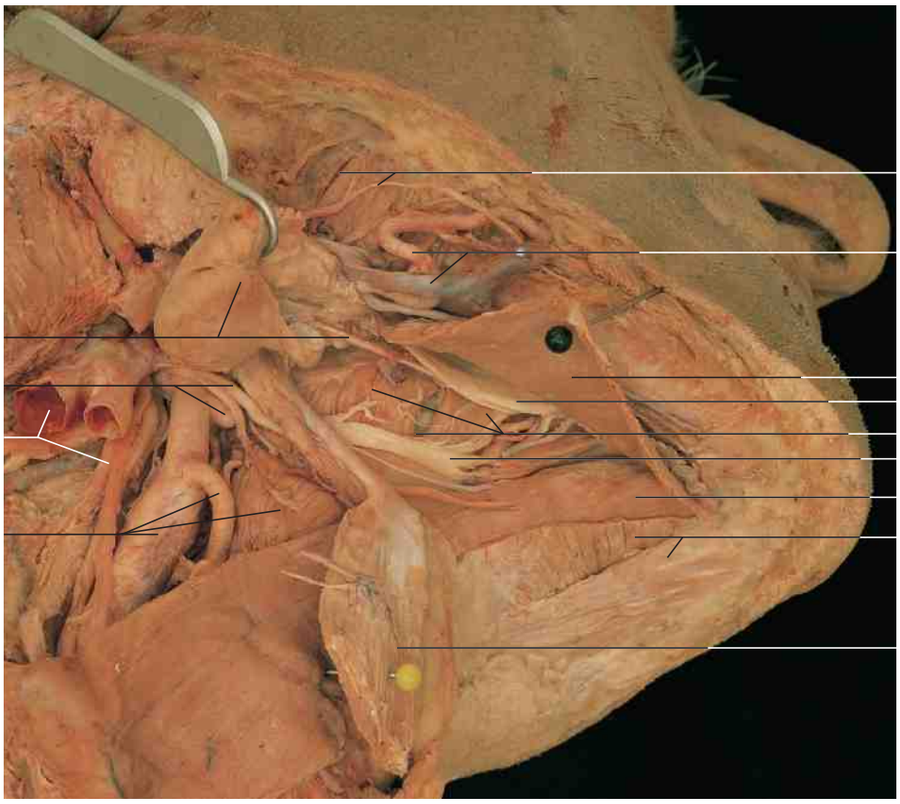


Submandibular triangle, superficial dissection. Right side (inferior aspect). Submandibular gland has been reflected.



Submandibular triangle, deep dissection. Right side (inferior aspect). Mylohyoid muscle has been severed and reflected to display the lingual and hypoglossal nerves.

1 Parotid gland and retromandibular vein
2 Sternocleidomastoid muscle
3 Retromandibular vein, submandibular gland, and stylohyoid muscle
4 Hypoglossal nerve and lingual artery
5 Vagus nerve and internal jugular vein
6 Superior laryngeal artery
7 External carotid artery, thyrohyoid muscle, and superior thyroid artery
8 Common carotid artery and superior root of ansa cervicalis
9 Omohyoid and sternohyoid muscles
10 Masseter muscle and marginal mandibular branch of facial nerve
11 Facial artery and vein
12 Mandible and submental artery and vein
13 Mylohyoid nerve
14 Submandibular duct, sublingual gland, and anterior belly of digastric muscle
15 Mylohyoid muscle
16 Mylohyoid muscle and anterior belly of left digastric muscle
17 Hyoglossus muscle and lingual artery
18 Lingual nerve
19 Hypoglossal nerve
20 Geniohyoid muscle
21 Anterior belly of right digastric muscle
22 Submandibular gland and duct

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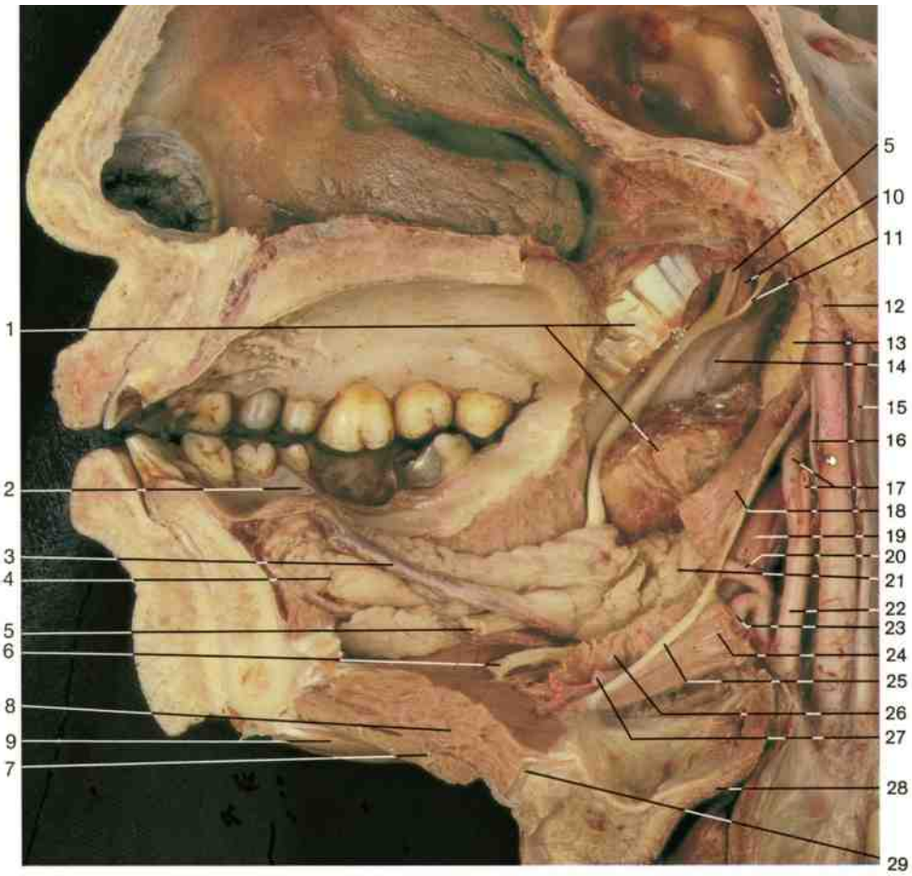
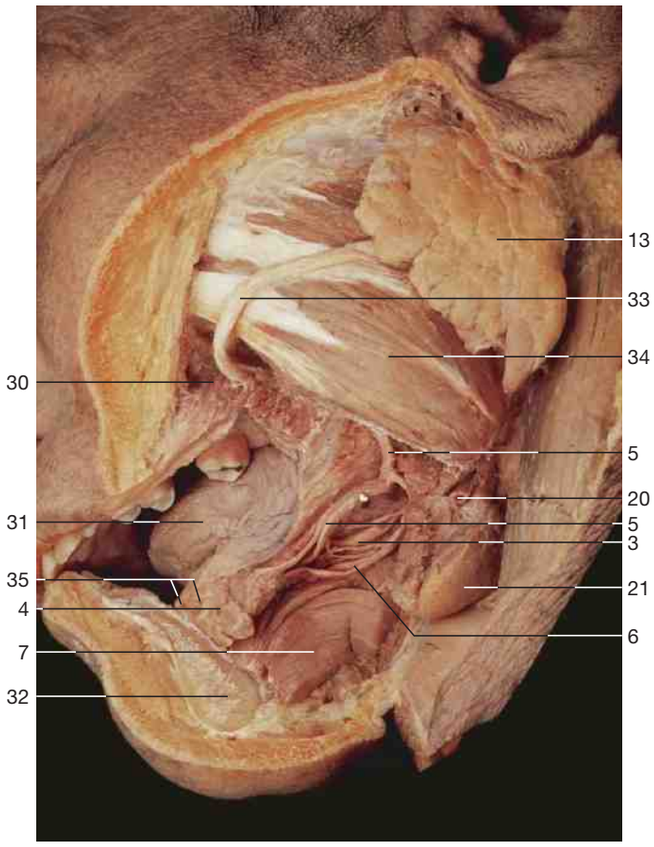
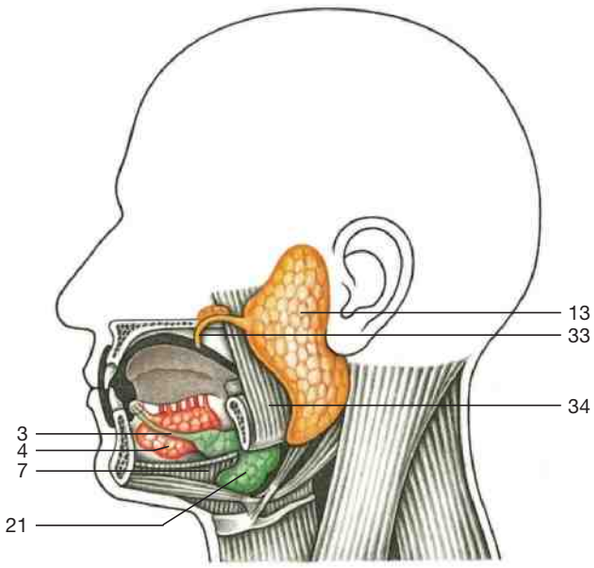


Oral cavity (internal aspect). Tongue and pharyngeal wall removed.

1 Medial pterygoid muscle
2 Sublingual papilla
3 Submandibular duct
4 Sublingual gland
5 Lingual nerve
6 Hypoglossal nerve
7 Mylohyoid muscle
8 Geniohyoid muscle
9 Anterior belly of digastric muscle
10 Inferior alveolar nerve
11 Chorda tympani
12 Internal carotid artery
13 Parotid gland
14 Sphenomandibular ligament
15 Vagus nerve
16 Glossopharyngeal nerve
17 Superficial temporal artery and ascending pharyngeal artery
18 Styloglossus muscle
19 Posterior belly of digastric muscle
20 Facial artery
21 Submandibular gland
22 External carotid artery
23 Lingual artery
24 Middle pharyngeal constrictor muscle
25 Stylohyoid ligament
26 Hyoglossus muscle
27 Deep lingual artery
28 Epiglottis
29 Hyoid bone
30 Buccinator muscle
31 Tongue
32 Mandible (divided)
33 Parotid duct
34 Masseter muscle
35 Right and left sublingual papillae



Dissection of major salivary glands. Left mandible and buccinator muscle partly removed to view the oral cavity (infero-lateral aspect).



Location of the major salivary glands in relation to the oral cavity.

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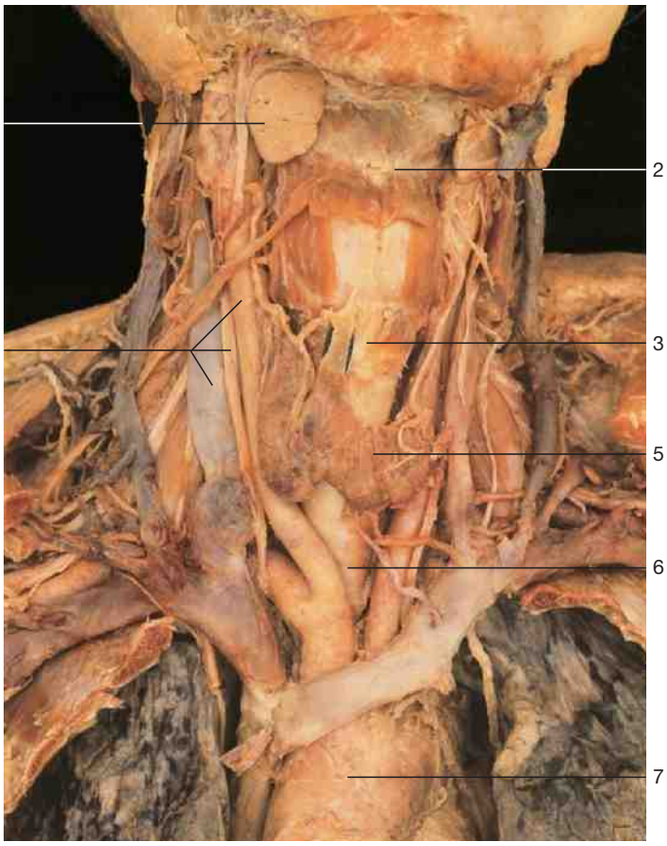
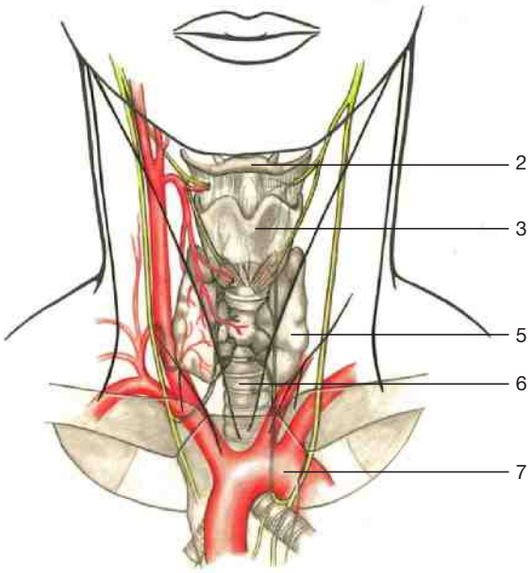
2.5 Neck and Organs of the Neck



Regional anatomy of the neck (anterior aspect). The anteriorly located muscles and the thoracic wall have been removed.

The anterior aspect of the neck contains the trachea and larynx, which are connected to the nasal cavity via the pharynx. Behind the trachea lies the esophagus, which is connected to the oral cavity, again via the pharynx.
The thyroid gland is located anterior to the trachea, whereas the carotid artery and jugular vein together with the vagus nerve are situated laterally, conjoining the head with the thoracic organs and upper limb.
Underneath the sternocleidomastoid muscle, the cervical portion of the spinal nerves forms the cervical and brachial nervous plexuses that give rise to the innervations of neck and upper limb respectively.



Organs of the neck (anterior aspect, schematic drawing). The main arterial trunks are indicated in red.

1 Submandibular gland
2 Hyoid bone
3 Larynx (thyroid cartilage)
4 Nerves and vessels of the neck (carotid artery, internal jugular vein, and vagus nerve)
5 Thyroid gland
6 Trachea
7 Aortic arch

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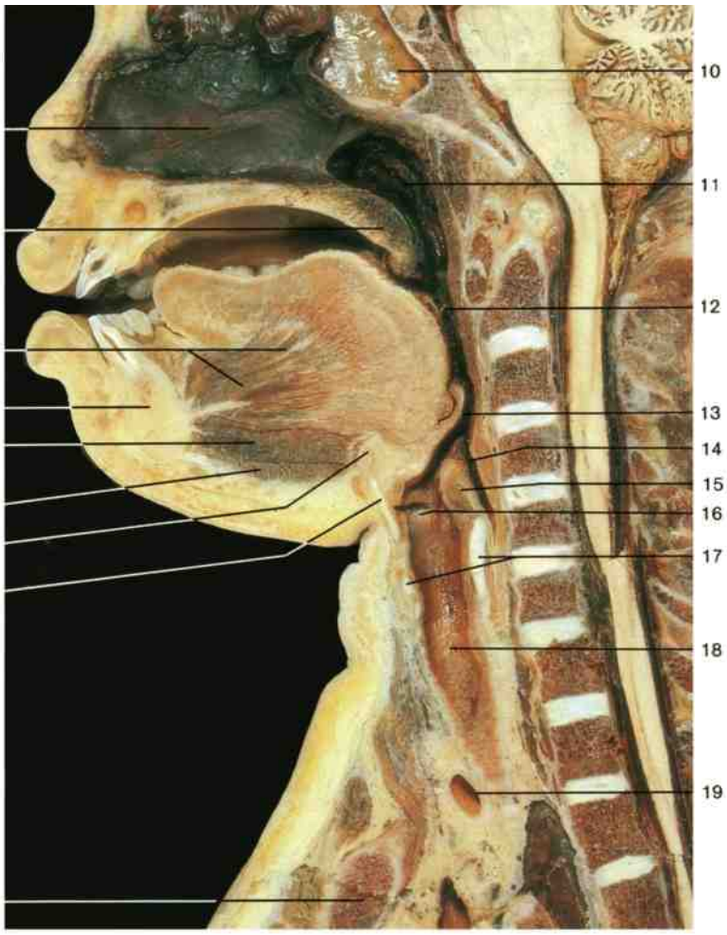
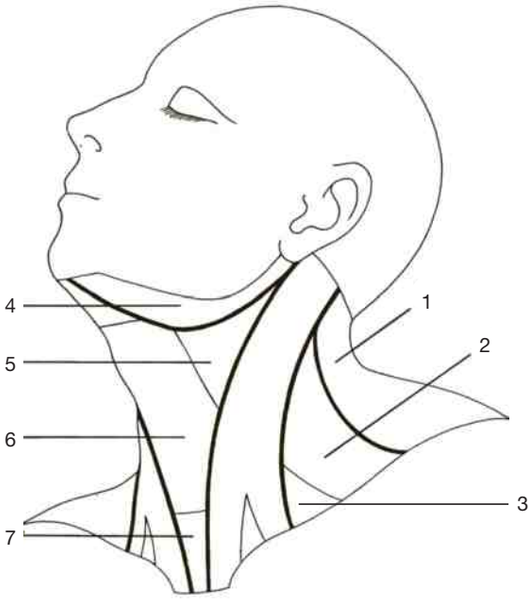
1 Nasal septum
2 Uvula
3 Genioglossus muscle
4 Mandible
5 Geniohyoid muscle
6 Mylohyoid muscle
7 Hyoid bone
8 Thyroid cartilage
9 Manubrium sterni
10 Sphenoidal sinus
11 Nasopharynx
12 Oropharynx
13 Epiglottis
14 Laryngopharynx
15 Arytenoid muscle
16 Vocal fold
17 Cricoid cartilage
18 Trachea
19 Left brachiocephalic vein
20 Thymus
21 Esophagus

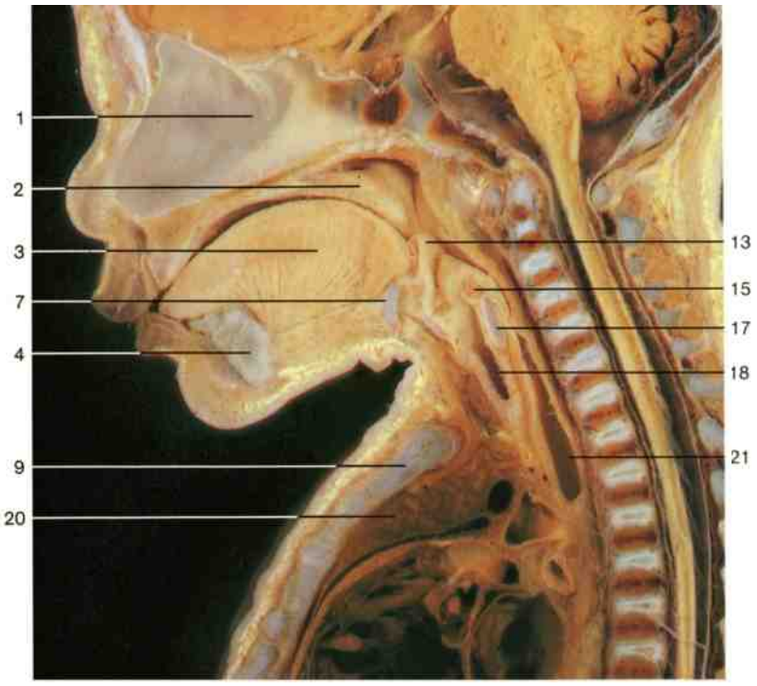


Median section through adult head and neck. Note the low position of the adult larynx when compared with that of the neonate (cf. with the figure below).



Regions and triangles of the neck (schematic drawing).

1 Posterior cervical region
2 Lateral cervical region
3 Supraclavicular triangle
4 Submandibular triangle
5 Carotid triangle
6 Anterior cervical region
7 Jugular fossa



Median section through neonate head and neck. Note the high position of the larynx permitting the epiglottis to nearly reach the uvula (cf. with the figure above).

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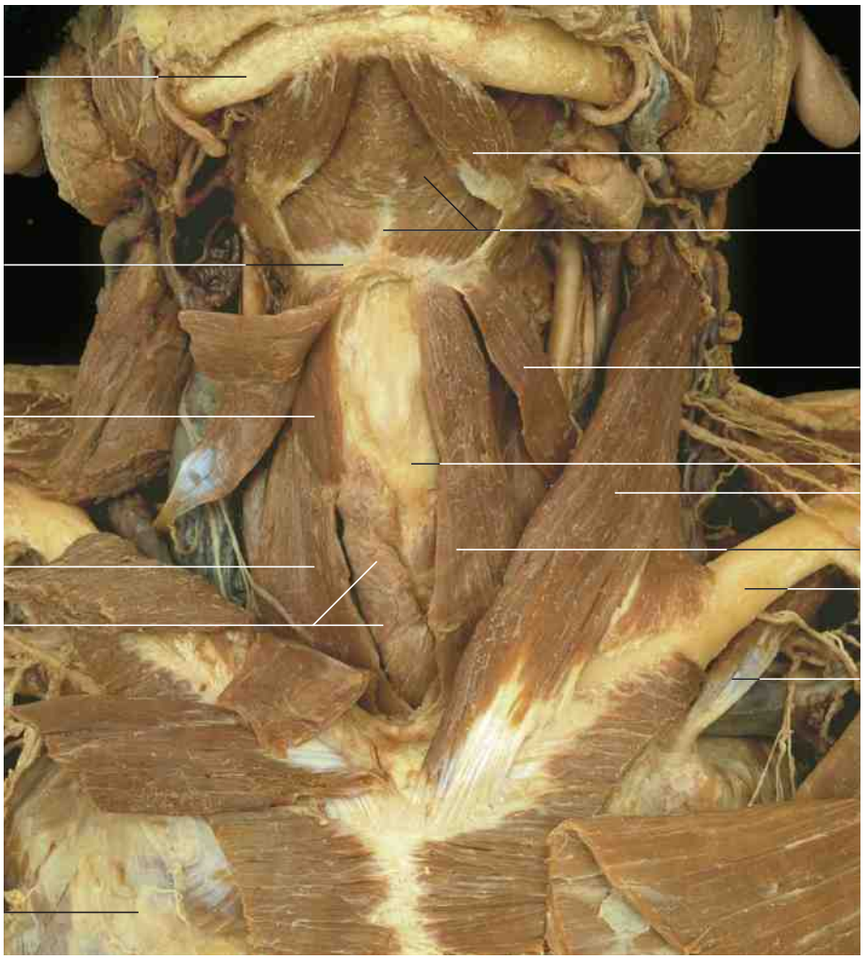
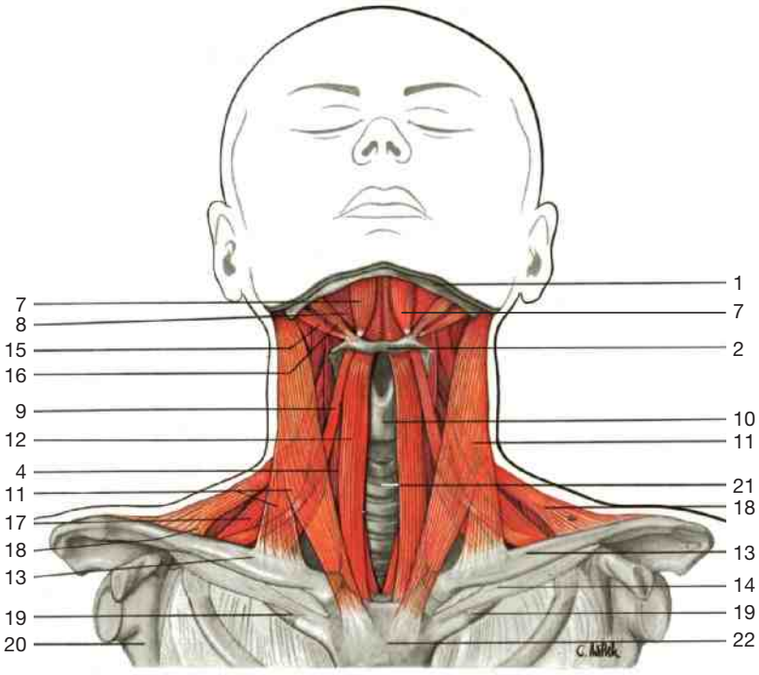


1 Mandible
2 Hyoid bone
3 Thyrohyoid muscle
4 Sternothyroid muscle
5 Thyroid gland
6 Second rib
7 Anterior belly of digastric muscle
8 Mylohyoid muscle (and mylohyoid raphe)
9 Omohyoid muscle
10 Thyroid cartilage
11 Sternocleidomastoid muscle
12 Sternohyoid muscle
13 Clavicle
14 Subclavius muscle
15 Posterior belly of digastric muscle
16 Stylohyoid muscle
17 Scalenus muscles
18 Trapezius muscle
19 First rib
20 Scapula
21 Trachea
22 Manubrium sterni

Muscles of the neck (anterior aspect). Sternocleidomastoid and sternohyoid muscles on the right have been divided and reflected.



Muscles of the neck (anterior aspect, schematic drawing).

The muscles of the neck are complex and highly sophisticated. There are two major groups of muscles to be distinguished according to their functional aspects. One group is constituted by muscles connecting head to the hyoid bone and the larynx. The second category of muscles links the head and the ribcage.

The sternocleidomastoid muscle represents the border between the anterior and posterior cervical triangle.

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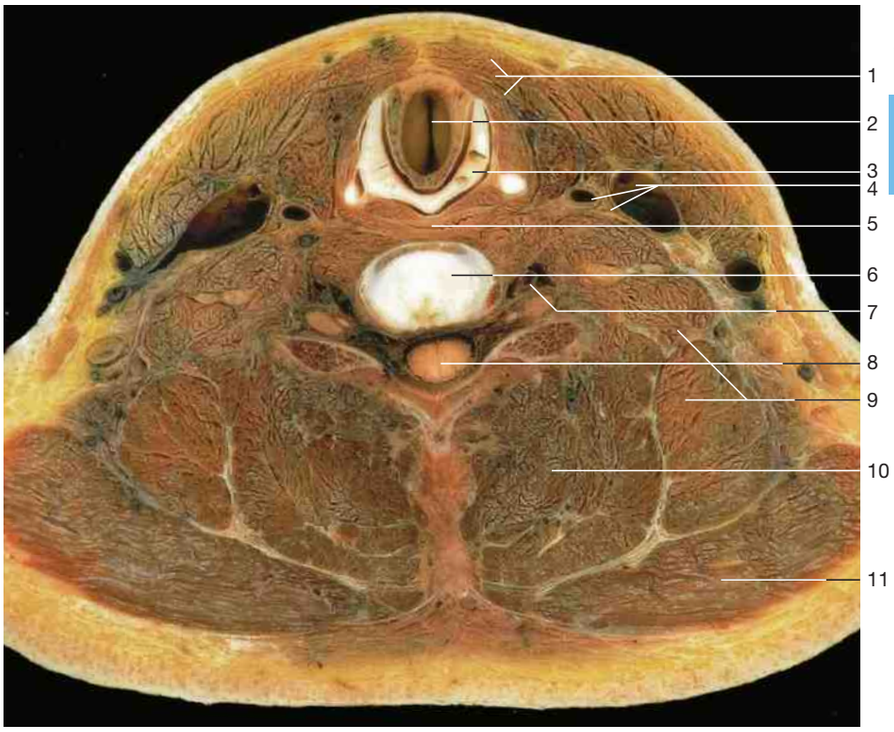
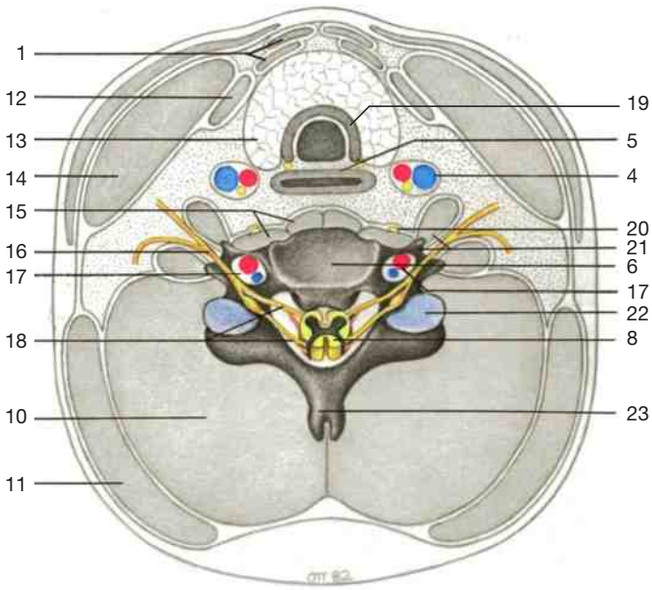
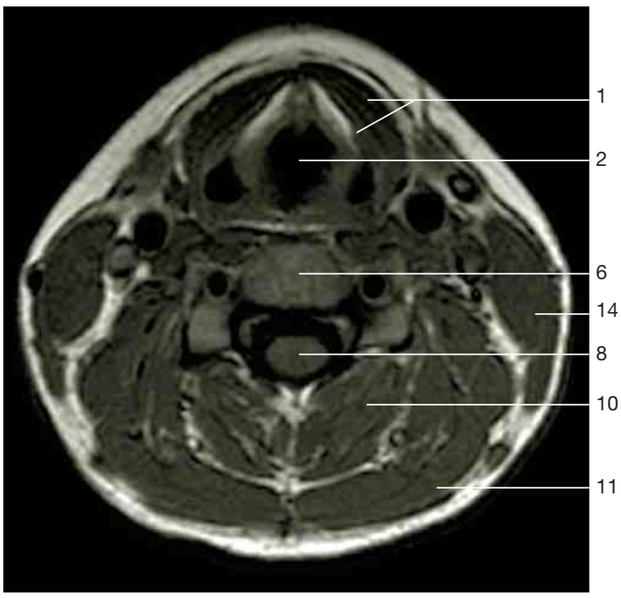
1 Sternohyoid and thyrohyoid muscles
2 Larynx
3 Cricoid cartilage
4 Internal jugular vein, common carotid artery, and vagus nerve
5 Esophagus
6 Body of cervical vertebra
7 Vertebral artery
8 Spinal cord
9 Scalenus posterior muscle
10 Deep muscles of the neck
11 Trapezius muscle
12 Omohyoid muscle
13 Thyroid gland
14 Sternocleidomastoid muscle
15 Longus colli and longus capitis muscles
16 Cervical spinal nerve
17 Vertebral artery and vein, and foramen transversarium
18 Ventral and dorsal root of cervical spinal nerve
19 Trachea
20 Sympathetic trunk
21 Anterior tubercle of transverse process and origin of scalenus anterior and medius muscles
22 Superior facet of articular process
23 Spinous process



Axial section of the neck at the level of the intervertebral disc between the 5th and 6th cervical vertebra (inferior aspect).



Organization of the neck (axial section at the level of the thyroid gland; schematic drawing).



Axial section of the neck at the level of the 4th cervical vertebra (MRI scan; from Heuck et al., MRT-Atlas, 2009).

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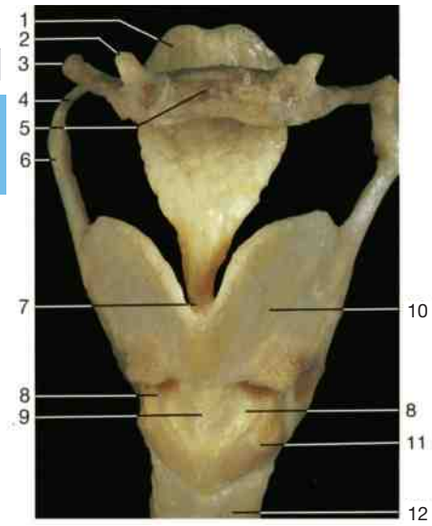
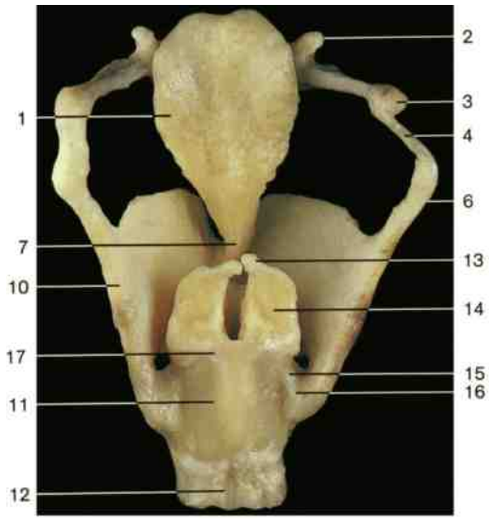
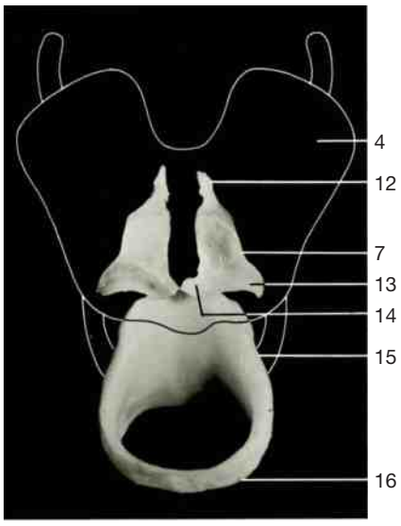


Cartilages of the larynx and the hyoid bone (anterior aspect).

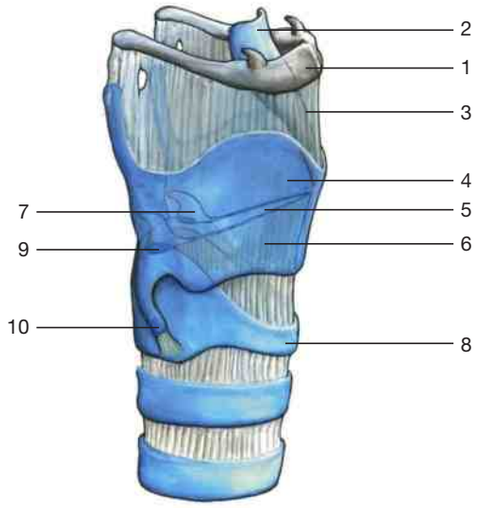


Cartilages of the larynx and the hyoid bone (posterior aspect).

1 Epiglottis
2 Lesser cornu of hyoid bone
3 Greater cornu of hyoid bone
4 Lateral thyrohyoid ligament
5 Body of hyoid bone
6 Superior cornu of thyroid cartilage
7 Thyro-epiglottic ligament
8 Conus elasticus
9 Cricothyroid ligament
10 Thyroid cartilage
11 Cricoid cartilage
12 Trachea
13 Corniculate cartilage
14 Arytenoid cartilage
15 Posterior crico-arytenoid ligament
16 Cricothyroid joint
17 Crico-arytenoid joint

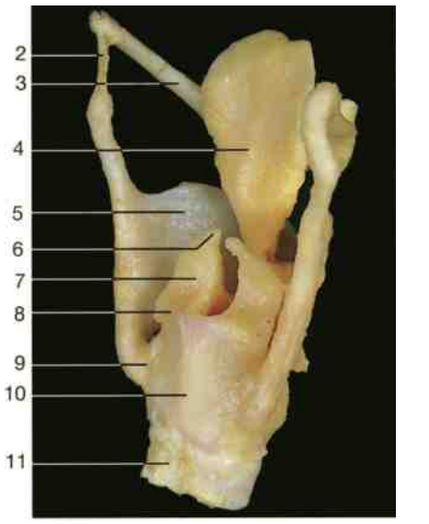


Cartilages of the larynx (anterior aspect). Thyroid cartilage is indicated by the outline.

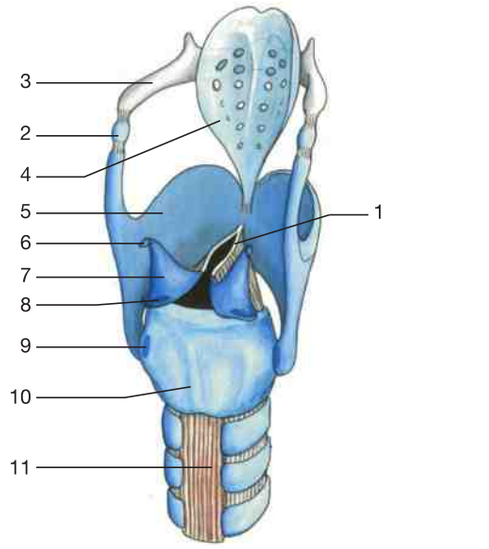


Cartilages and ligaments of the larynx (lateral aspect).

1 Hyoid bone
2 Epiglottis
3 Thyrohyoid membrane
4 Thyroid cartilage
5 Vocal ligament
6 Conus elasticus
7 Arytenoid cartilage
8 Cricoid cartilage
9 Crico-arytenoid joint
10 Cricothyroid joint
11 Tracheal cartilages
12 Corniculate cartilage
13 Muscular process of arytenoid cartilage
14 Vocal process of arytenoid cartilage
15 Lamina of cricoid cartilage
16 Arch of cricoid cartilage



Cartilages of the larynx (oblique-posterior aspect).



Cartilages of the larynx (oblique-posterior aspect).

1 Vocal ligament
2 Lateral thyrohyoid ligament
3 Greater cornu of hyoid bone
4 Epiglottis
5 Thyroid cartilage
6 Corniculate cartilage
7 Arytenoid cartilage
8 Crico-arytenoid joint
9 Cricothyroid joint
10 Cricoid cartilage
11 Trachea

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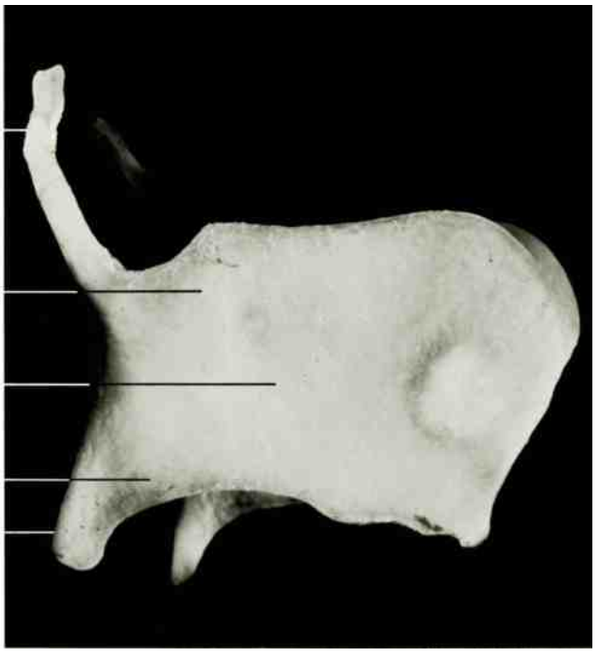
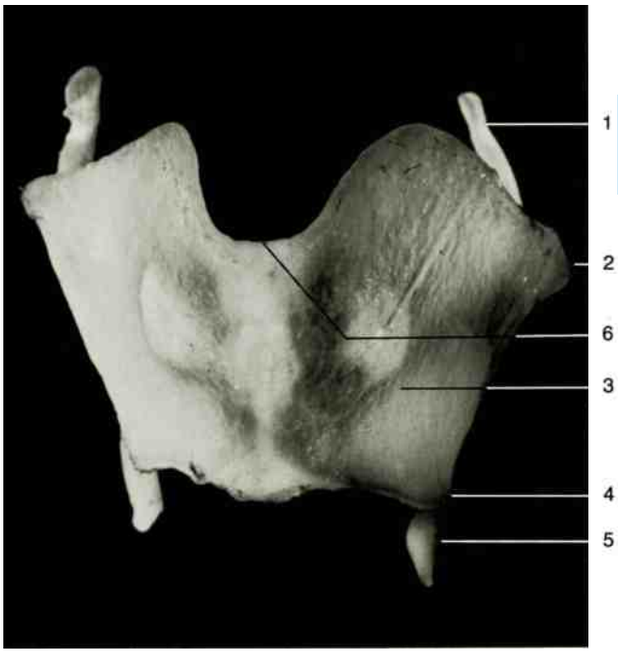


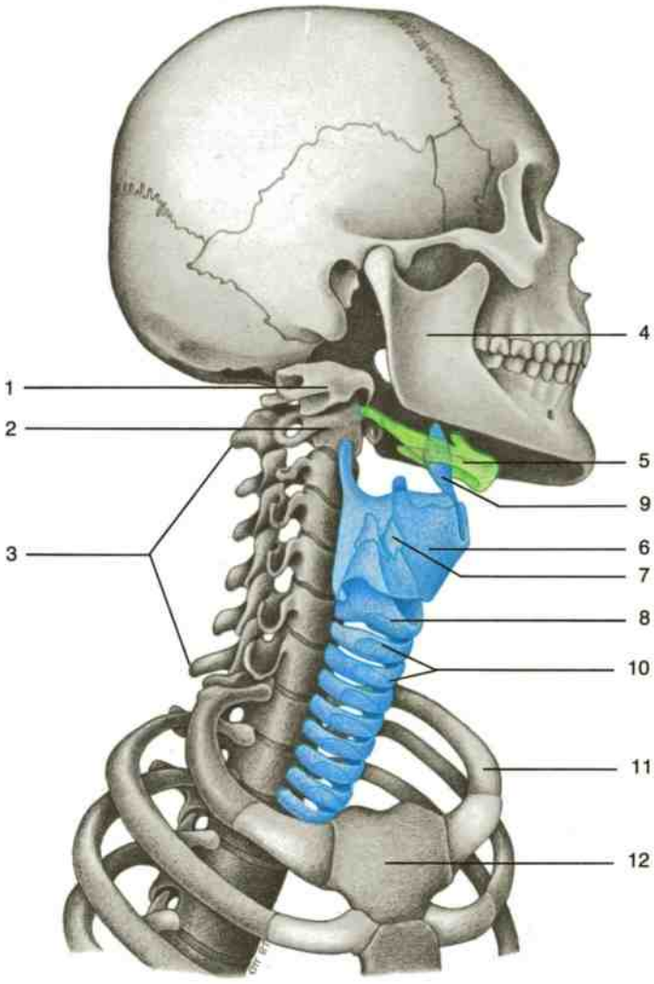
Thyroid cartilage (lateral aspect).

1 Superior cornu
2 Superior thyroid tubercle
3 Lamina of thyroid cartilage



Thyroid cartilage (anterior aspect).

4 Inferior thyroid tubercle
5 Inferior cornu
6 Superior thyroid notch



1 Atlas
2 Axis
3 Cervical vertebrae (C_2–C_7)
4 Mandible
5 Hyoid bone
6 Thyroid cartilage
7 Arytenoid cartilage
8 Cricoid cartilage
9 Epiglottis
10 Tracheal cartilages
11 First rib
12 Manubrium sterni

Position of the larynx in the neck (oblique-lateral aspect). (Schematic drawing.)

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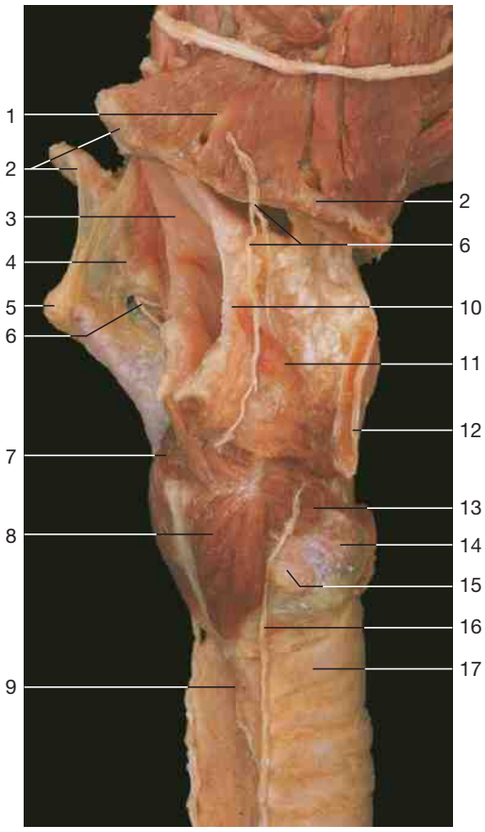
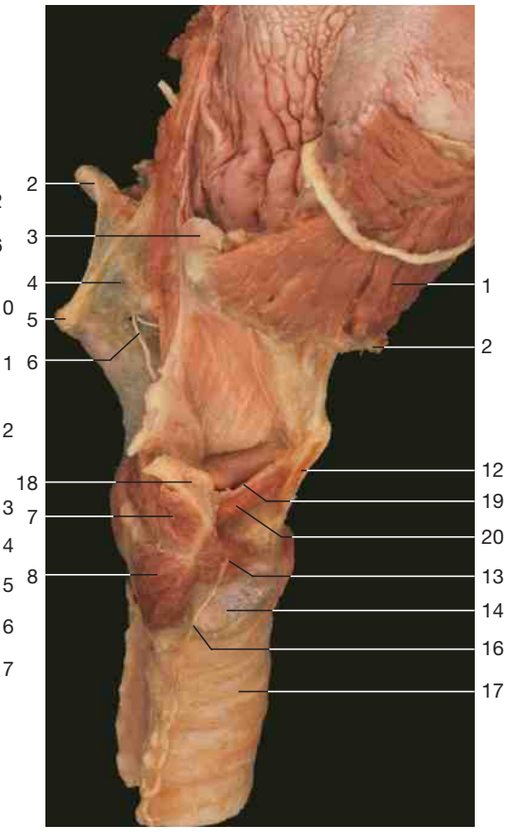
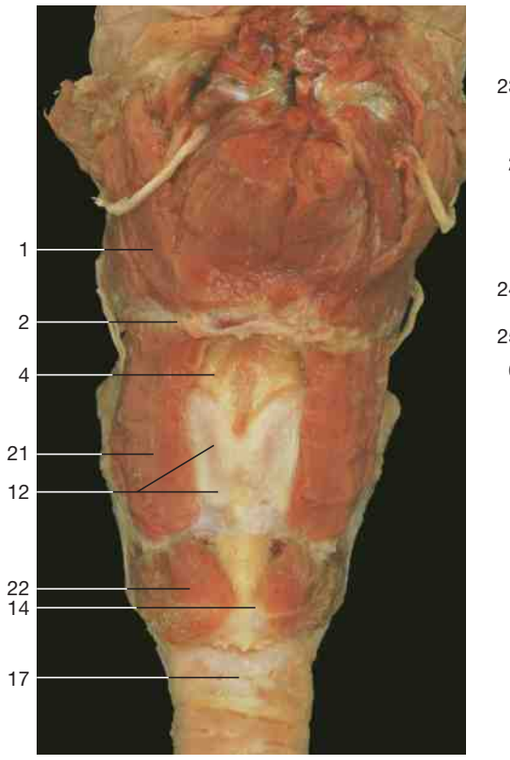


Laryngeal muscles (lateral aspect). Thyroid cartilage (12) and thyro-arytenoid muscle have been partly removed.

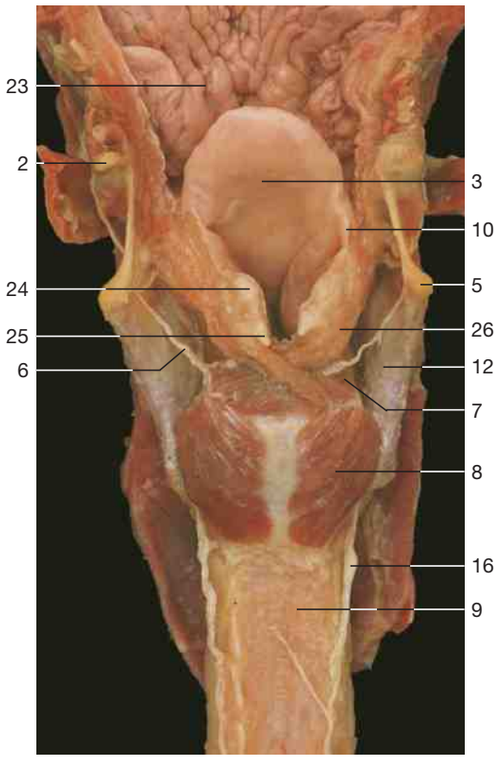


Laryngeal muscles (lateral aspect). Half of the thyroid cartilage (12) has been removed. Dissection of the vocal ligament (19).

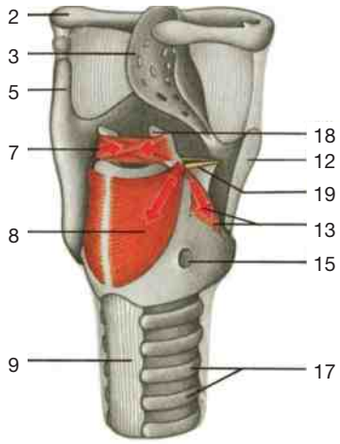
1 Hyoglossus muscle
2 Hyoid bone
3 Epiglottis
4 Thyrohyoid membrane
5 Superior cornu of thyroid cartilage
6 Superior laryngeal nerve
7 Transverse arytenoid muscle
8 Posterior crico-arytenoid muscle
9 Transverse muscle of trachea
10 Ary-epiglottic fold
11 Thyro-epiglottic muscle
12 Thyroid cartilage
13 Lateral crico-arytenoid muscle
14 Cricoid cartilage
15 Articular facet for thyroid cartilage
16 Inferior laryngeal nerve (branch of recurrent nerve)
17 Trachea
18 Arytenoid cartilage
19 Vocal ligament
20 Vocalis muscle (part of thyro-arytenoid muscle)
21 Thyrohyoideus muscle
22 Cricothyroideus muscle
23 Root of tongue
24 Cuneiform tubercle
25 Corniculate tubercle
26 Ary-epiglottic muscle



Laryngeal muscles and larynx (anterior aspect).



Laryngeal muscles and larynx (posterior aspect).



Action of internal muscles of the larynx (schematic drawing).

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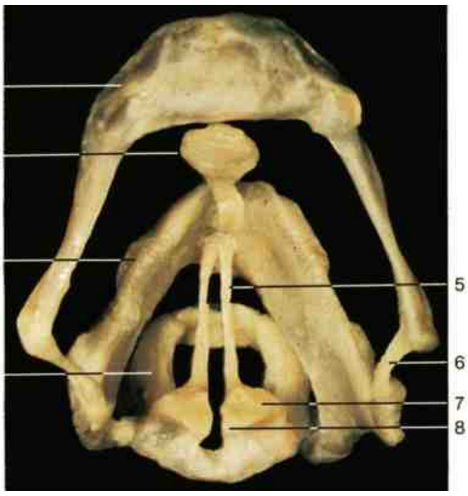
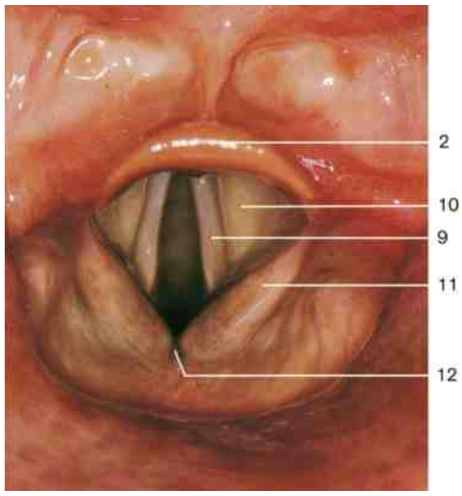
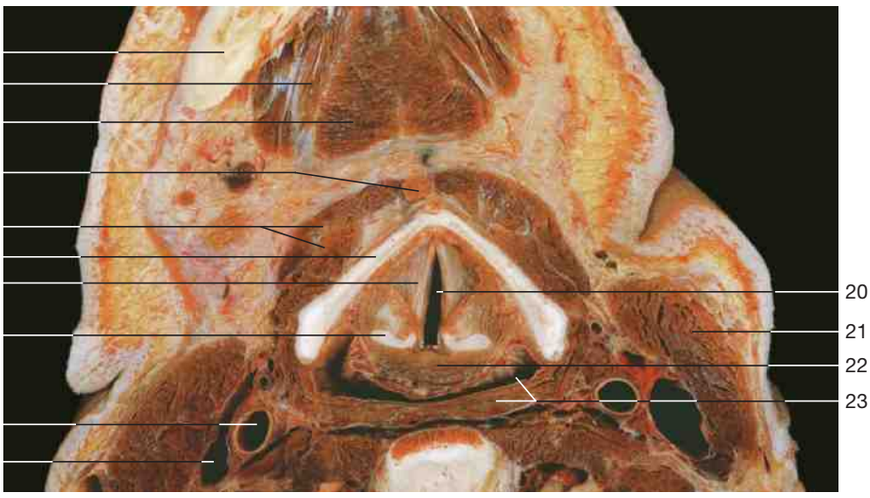


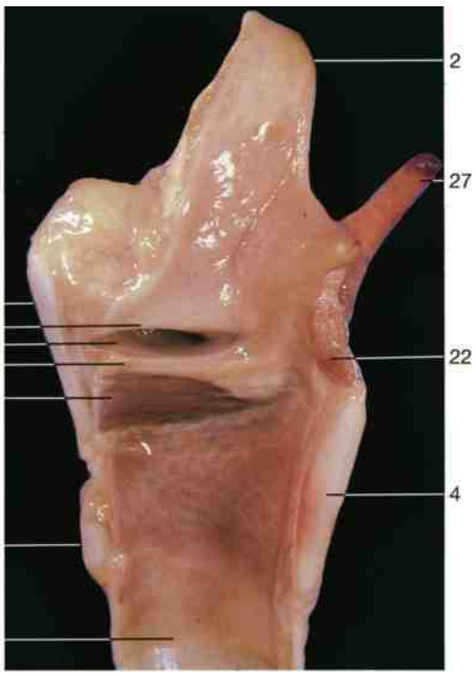
Laryngeal cartilages (superior aspect).



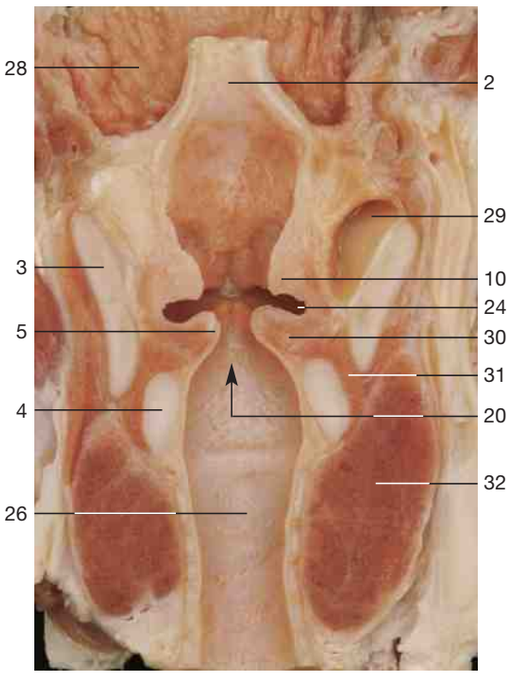
Glottis in vivo (superior aspect).



Horizontal section through the larynx at the level of the vocal folds (superior aspect).



Sagittal section through the larynx.



Coronal section through larynx and trachea.

1 Hyoid bone
2 Epiglottis
3 Thyroid cartilage
4 Cricoid cartilage
5 Vocal ligament
6 Thyrohyoid ligament
7 Arytenoid cartilage
8 Corniculate cartilage
9 Vocal fold
10 Vestibular fold
11 Ary-epiglottic fold
12 Interarytenoid notch
13 Mandible
14 Anterior belly of digastric muscle
15 Mylohyoid muscle
16 Pyramidal lobe of thyroid gland
17 Sternohyoid and sternothyroid muscles
18 Common carotid artery
19 Internal jugular vein
20 Rima glottidis
21 Sternocleidomastoid muscle
22 Transverse arytenoid muscle
23 Pharynx and inferior constrictor muscle
24 Ventricle of larynx
25 Vocalis muscle
26 Trachea
27 Superior cornu of thyroid cartilage
28 Root of tongue (lingual tonsil)
29 Piriform recess
30 Vocalis muscle
31 Lateral crico-arytenoid muscle
32 Thyroid gland

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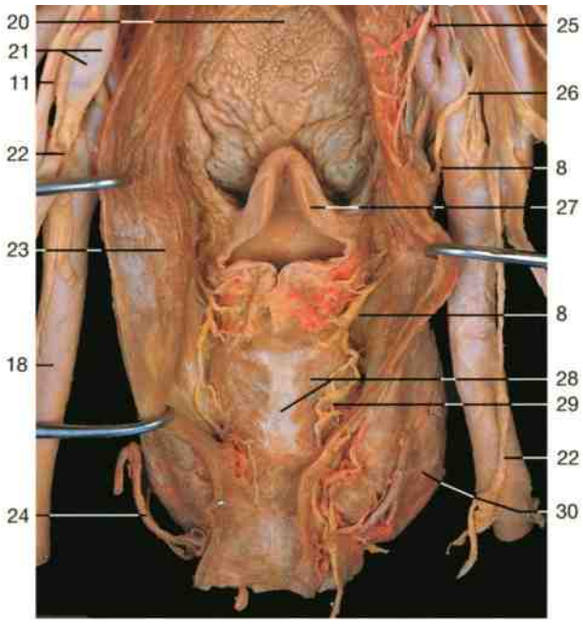
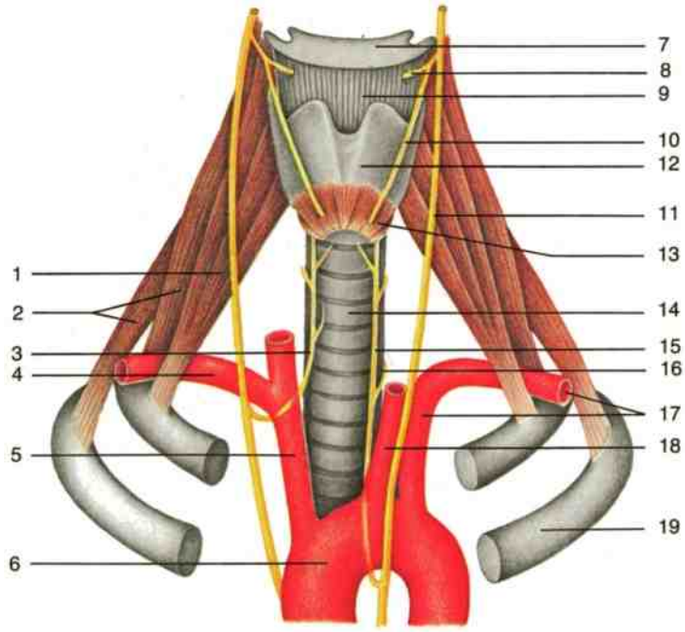
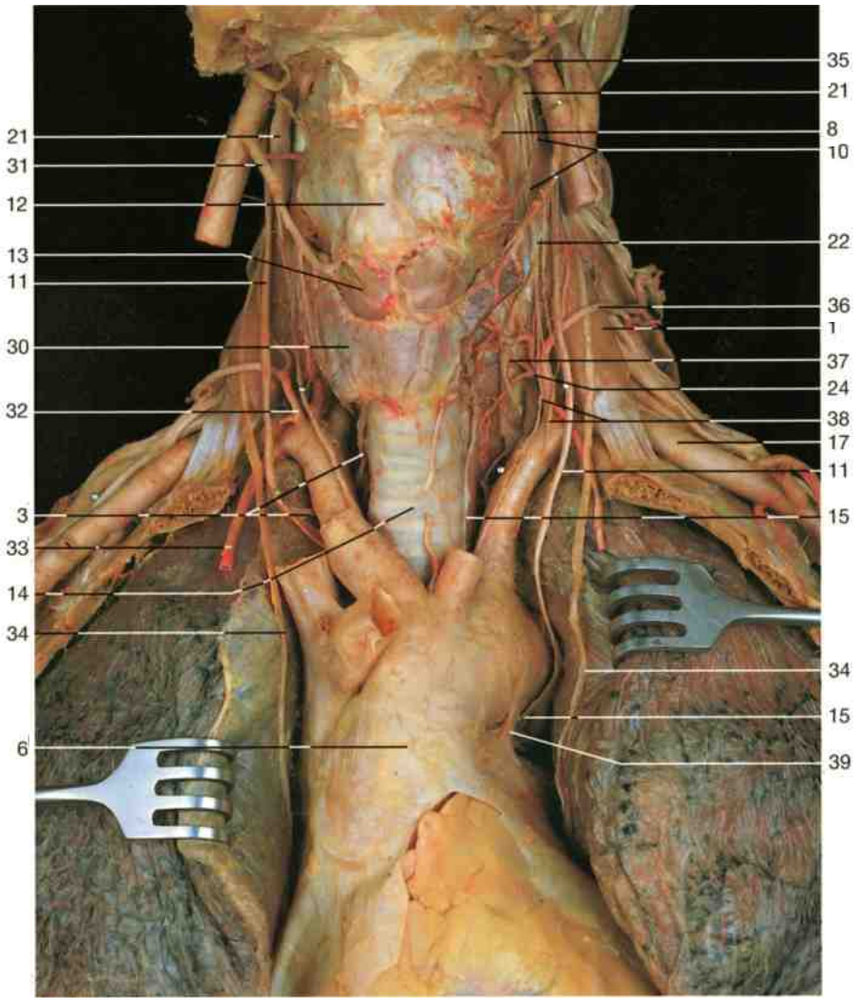


Larynx and its innervation (posterior aspect). Dissection of superior and inferior laryngeal nerves. Pharynx has been opened.



Innervation of the larynx (schematic drawing).



Larynx and thoracic organs (anterior aspect). Dissection of vagus and recurrent laryngeal nerves.

1 Scalenus anterior muscle
2 Scalenus medius and posterior muscles
3 Right recurrent laryngeal nerve
4 Right subclavian artery
5 Brachiocephalic trunk
6 Aortic arch
7 Hyoid bone
8 Internal branch of superior laryngeal nerve
9 Thyrohyoid membrane
10 External branch of superior laryngeal nerve
11 Vagus nerve
12 Thyroid cartilage
13 Cricothyroid muscle
14 Trachea
15 Left recurrent laryngeal nerve
16 Esophagus
17 Left subclavian artery
18 Left common carotid artery
19 Second rib
20 Tongue
21 Superior cervical ganglion
22 Sympathetic trunk
23 Inferior constrictor muscle of pharynx
24 Inferior thyroid artery
25 Glossopharyngeal nerve
26 Superior laryngeal nerve
27 Epiglottis
28 Posterior crico-arytenoid muscle and cricoid cartilage
29 Inferior laryngeal branch of recurrent laryngeal nerve
30 Thyroid gland
31 Superior thyroid artery
32 Thyrocervical trunk
33 Internal thoracic artery
34 Phrenic nerve
35 Hypoglossal nerve
36 Transverse cervical artery
37 Middle cervical ganglion
38 Middle cervical cardiac nerves (branches of sympathetic trunk)
39 Ligamentum arteriosum

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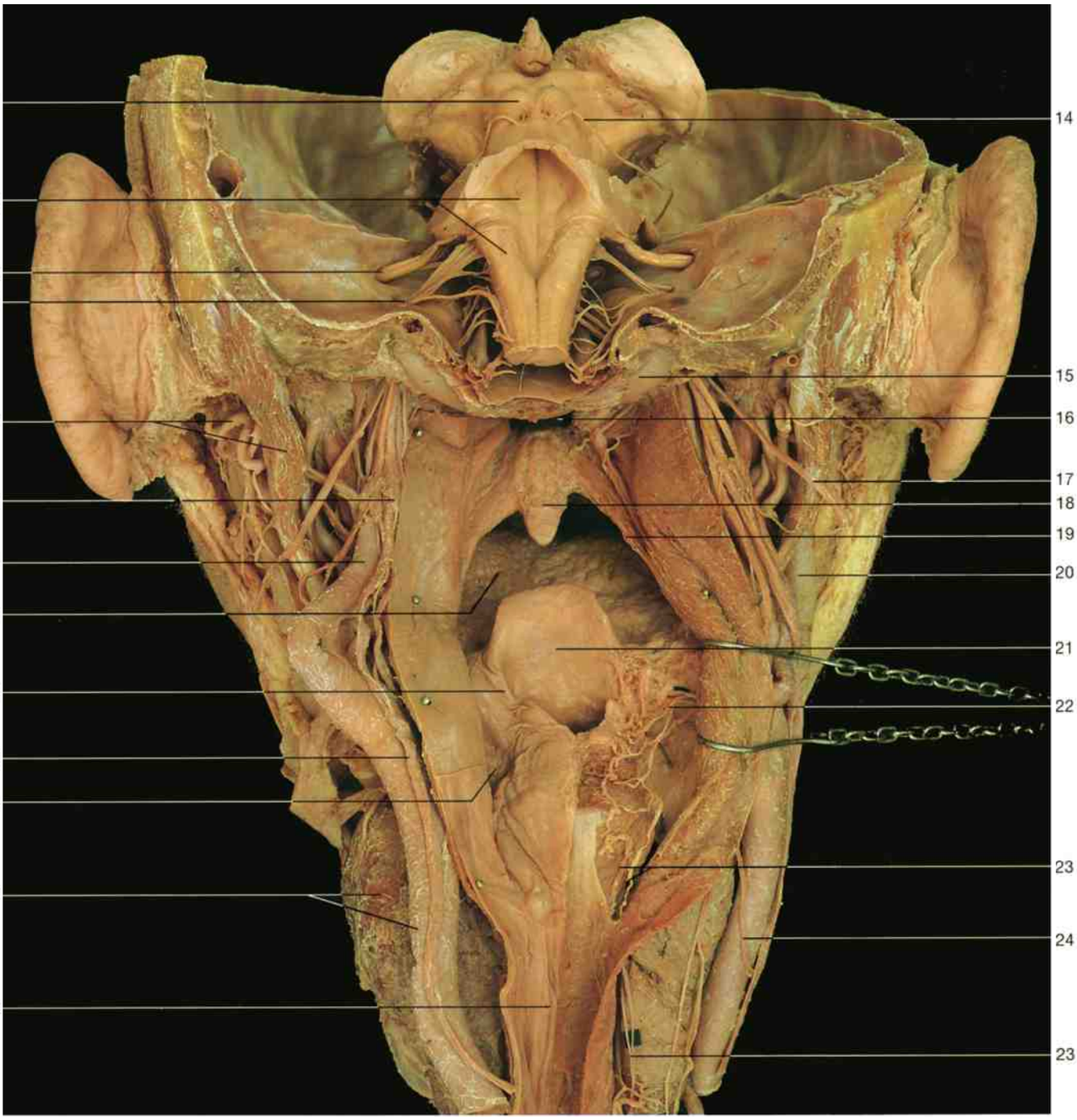

Larynx and oral cavity (posterior aspect). Mucous membrane on the right half of pharynx has been removed.

1 Midbrain (inferior colliculus)
2 Rhomboid fossa and medulla oblongata
3 Vestibulocochlear and facial nerve
4 Glossopharyngeal, vagus, and accessory nerves
5 Occipital artery and posterior belly of digastric muscle
6 Superior cervical ganglion
7 Internal carotid artery
8 Oral cavity (tongue)
9 Ary-epiglottic fold
10 Vagus nerve
11 Piriform recess
12 Thyroid gland and common carotid artery
13 Esophagus
14 Trochlear nerve
15 Occipital condyle
16 Nasal cavity (choana)
17 Accessory nerve
18 Uvula and soft palate
19 Palatopharyngeus muscle
20 External carotid artery
21 Epiglottis
22 Internal branch of superior laryngeal nerve
23 Inferior laryngeal nerve
24 Ansa cervicalis

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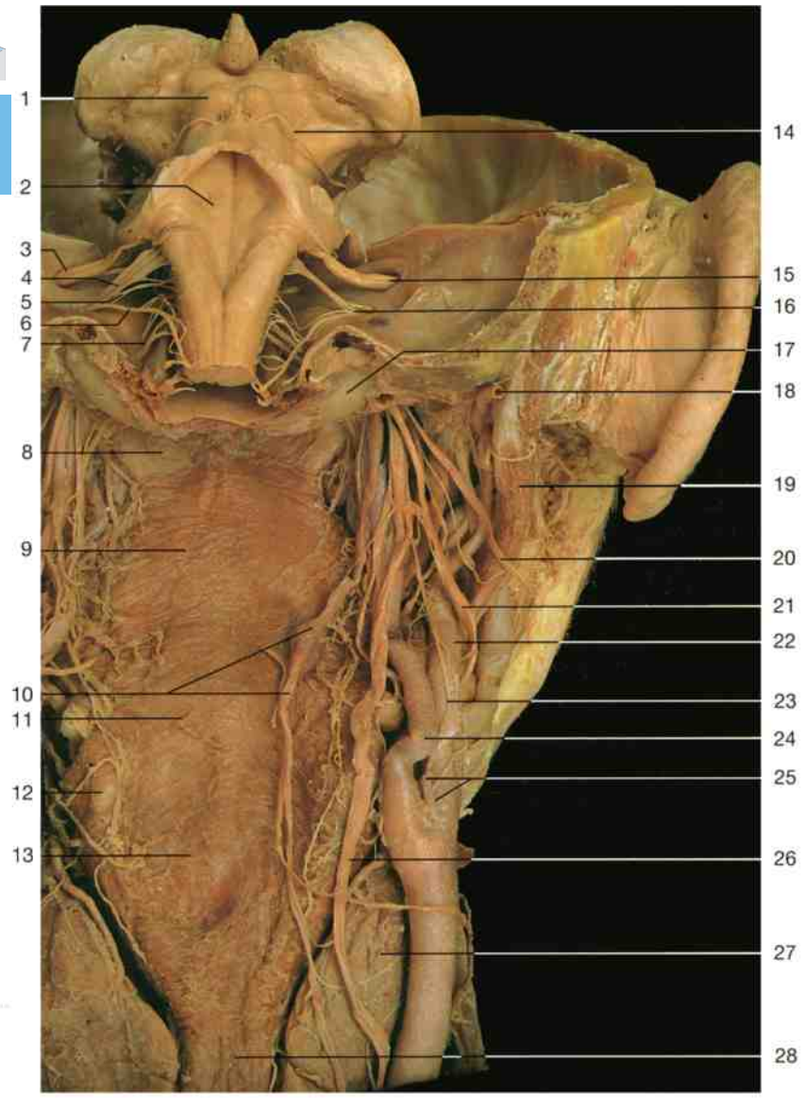
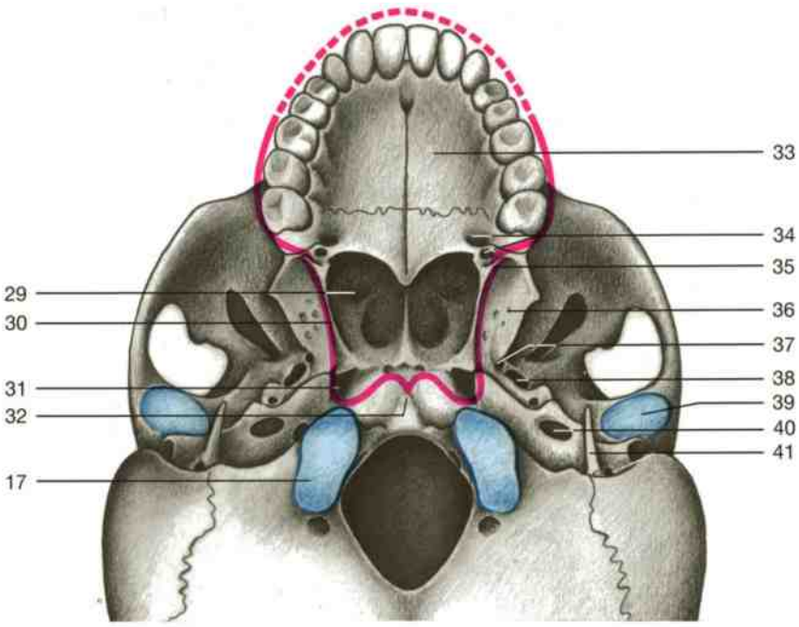


Pharynx and parapharyngeal nerves in connection with brain stem (posterior aspect).

1 Inferior colliculus of midbrain
2 Facial colliculus in floor of rhomboid fossa
3 Vestibulocochlear and facial nerves
4 Glossopharyngeal nerve
5 Vagus nerve
6 Accessory nerve
7 Hypoglossal nerve
8 Pharyngobasilar fascia
9 Superior constrictor muscle of pharynx
10 Sympathetic trunk and superior cervical ganglion (medially displaced)
11 Middle constrictor muscle of pharynx
12 Greater cornu of hyoid bone
13 Inferior constrictor muscle of pharynx
14 Trochlear nerve
15 Internal acoustic meatus with facial and vestibulocochlear nerves
16 Jugular foramen with glossopharyngeal, vagus, and assessory nerves
17 Occipital condyle
18 Occipital artery
19 Posterior belly of digastric muscle
20 Accessory nerve (extracranial part)
21 Hypoglossal nerve (extracranial part)
22 External carotid artery
23 Carotid sinus nerve
24 Internal carotid artery
25 Carotid sinus and carotid body
26 Vagus nerve
27 Thyroid gland
28 Esophagus
29 Choanae
30 Medial pterygoid plate
31 Foramen lacerum
32 Pharyngeal tubercle
33 Hard palate
34 Greater and lesser palatine foramen
35 Pterygoid hamulus
36 Lateral pterygoid plate
37 Pterygoid canal
38 Foramen ovale
39 Mandibular fossa
40 Carotid canal
41 Styloid process and stylomastoid foramen



Inferior aspect of the skull.
Red line = outline of superior constrictor muscle in continuation with buccinator muscle and orbicularis oris muscle (semischematic drawing).

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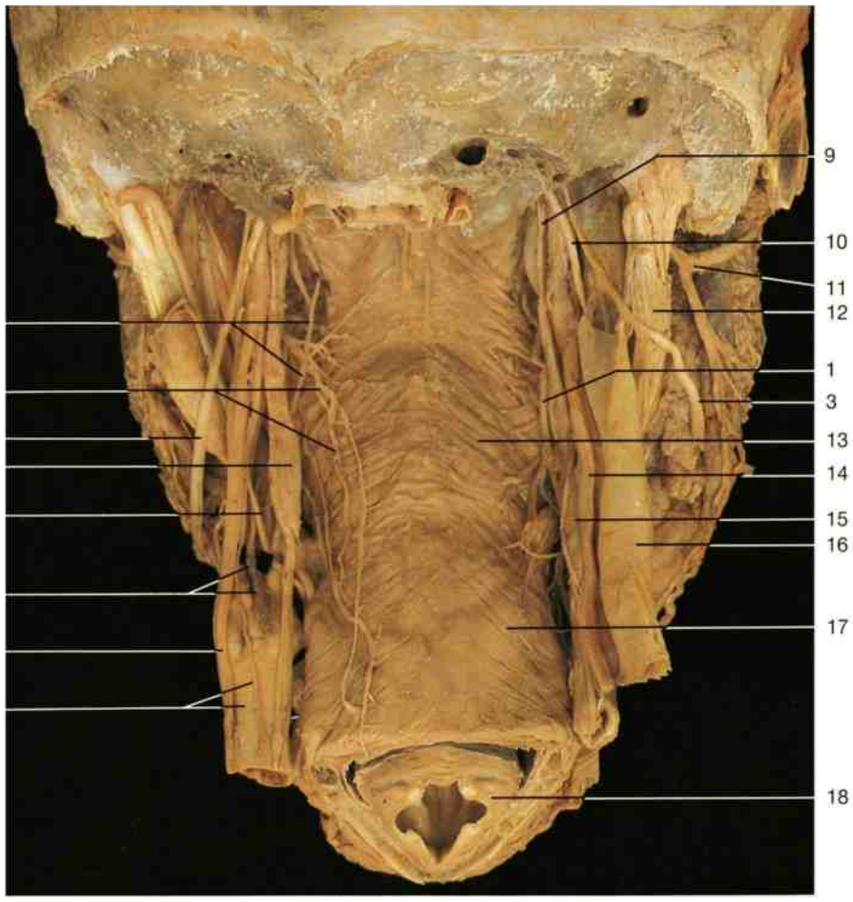
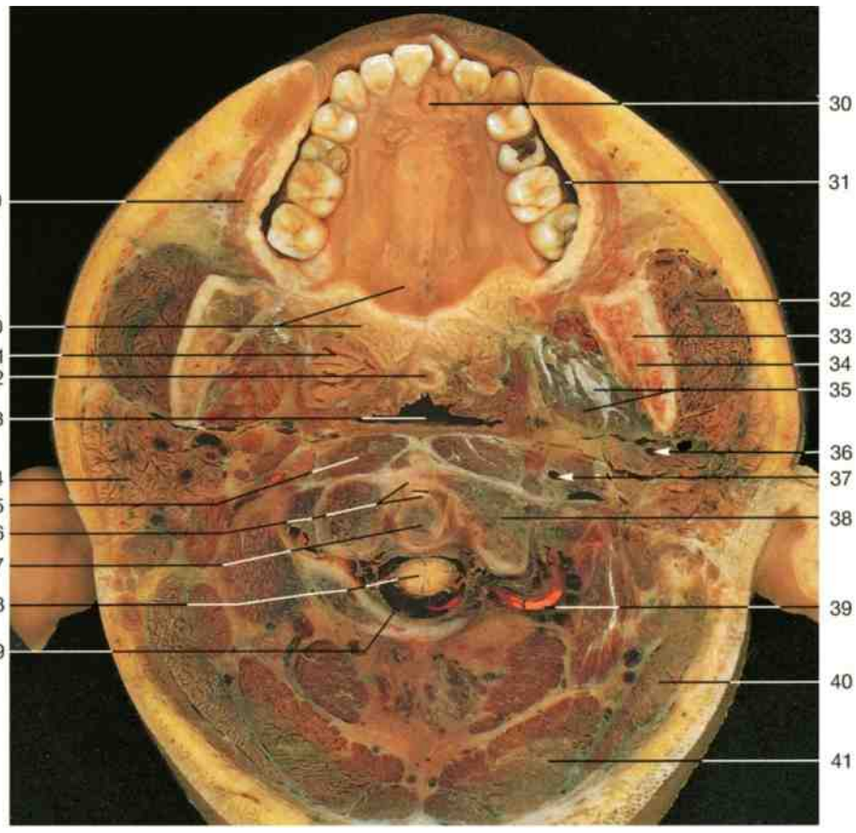


Parapharyngeal nerves and vessels. Dorsal aspect of the pharynx.



Cross section of head and neck at the level of the atlas (inferior aspect).

1 Ascending pharyngeal artery
2 Pharyngeal plexus
3 Accessory nerve
4 Superior cervical ganglion of sympathetic trunk
5 Superior laryngeal nerve
6 Carotid body and carotid sinus nerve
7 Left vagus nerve
8 Common carotid artery and cardiac branch of vagus nerve
9 Glossopharyngeal nerve
10 Hypoglossal nerve
11 Facial nerve
12 Posterior belly of digastric muscle
13 Middle constrictor muscle of pharynx
14 Right vagus nerve
15 Sympathetic trunk
16 Internal jugular vein
17 Inferior constrictor muscle of pharynx
18 Larynx
19 Buccinator muscle
20 Soft palate and palatine glands
21 Palatine tonsil
22 Uvula of palate
23 Pharynx (oral part)
24 Parotid gland
25 Longus capitis muscle
26 Median atlanto-axial joint and anterior arch of atlas
27 Dens of axis
28 Spinal cord
29 Dura mater
30 Incisive papilla
31 Oral vestibule
32 Masseter muscle
33 Mandible
34 Mandibular canal with vessels and nerve
35 Medial pterygoid muscle
36 External carotid artery
37 Internal carotid artery
38 Atlas
39 Vertebral artery
40 Splenius capitis muscle
41 Semispinalis capitis muscle

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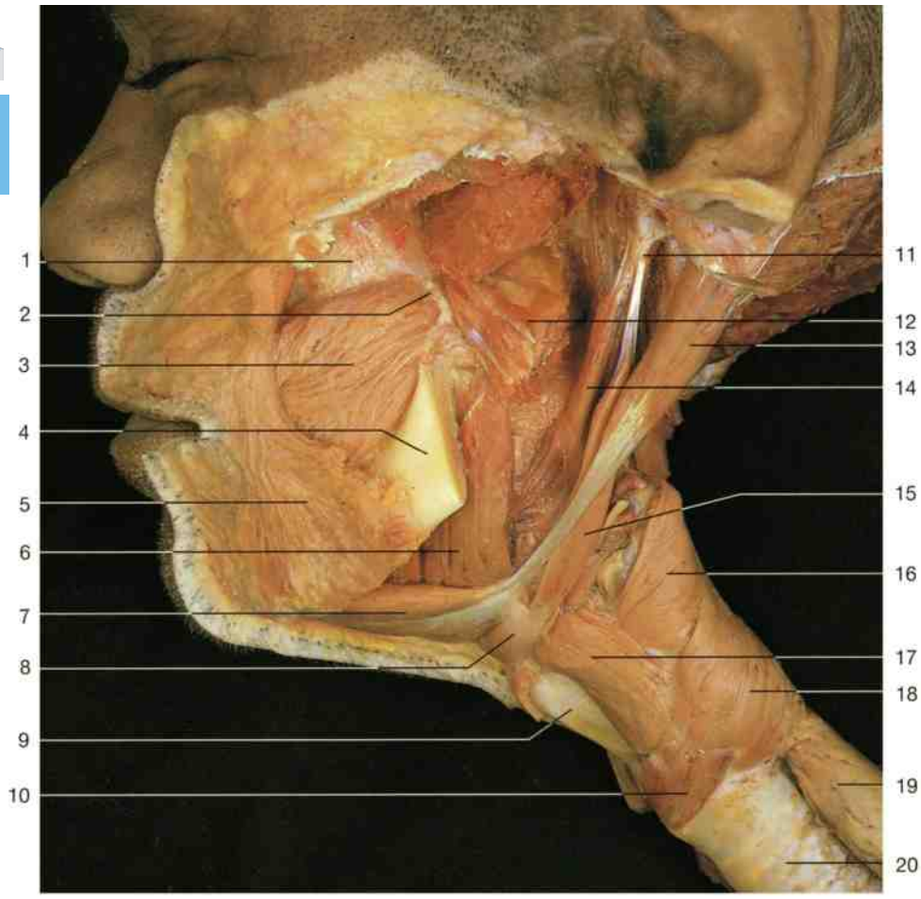
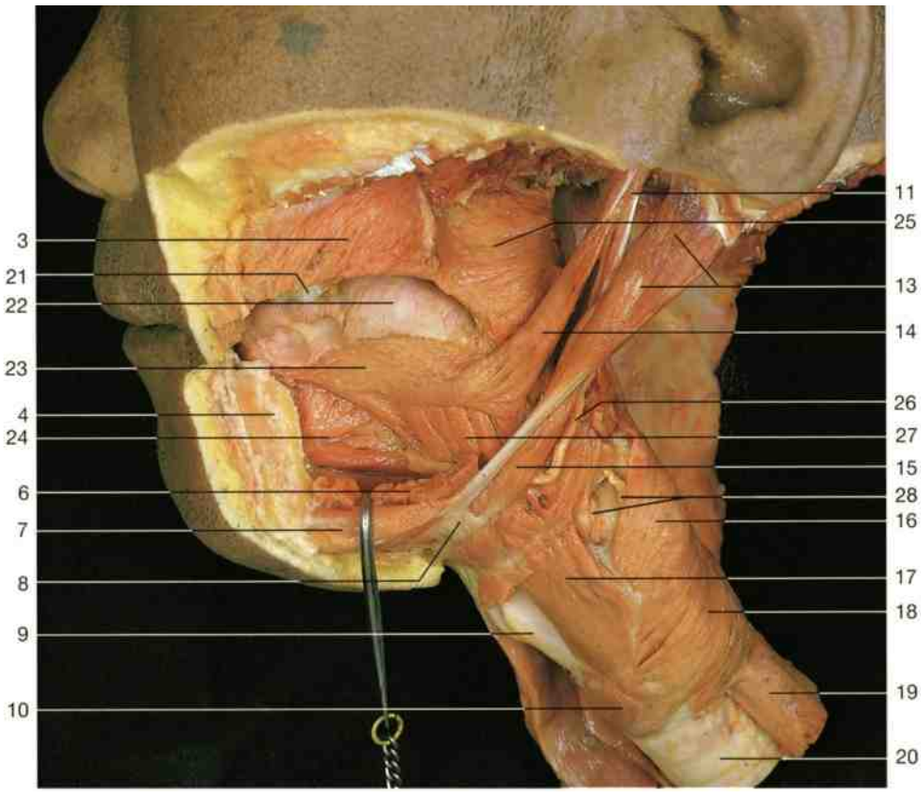


Dissection of pharynx, supra-, and infrahyoid muscles. Mandible partly removed (lateral aspect).



Dissection of pharynx, supra-, and infrahyoid muscles. Oral cavity opened (lateral aspect).

1 Maxilla
2 Pterygomandibular raphe
3 Buccinator muscle
4 Mandible (divided)
5 Depressor anguli oris muscle
6 Mylohyoid muscle
7 Anterior belly of digastric muscle
8 Hyoid bone
9 Thyroid cartilage
10 Cricothyroid muscle
11 Styloid process
12 Medial pterygoid muscle (divided)
13 Posterior belly of digastric muscle
14 Styloglossus muscle
15 Stylohyoid muscle
16 Thyropharyngeal part of inferior constrictor muscle of pharynx
17 Thyrohyoid muscle
18 Cricopharyngeal part of inferior constrictor muscle of pharynx
19 Esophagus
20 Trachea
21 First molar of maxilla
22 Tongue
23 Inferior longitudinal muscle of tongue
24 Genioglossus muscle
25 Superior constrictor muscle of pharynx
26 Hypoglossal nerve
27 Hyoglossus muscle
28 Superior laryngeal nerve and superior laryngeal artery

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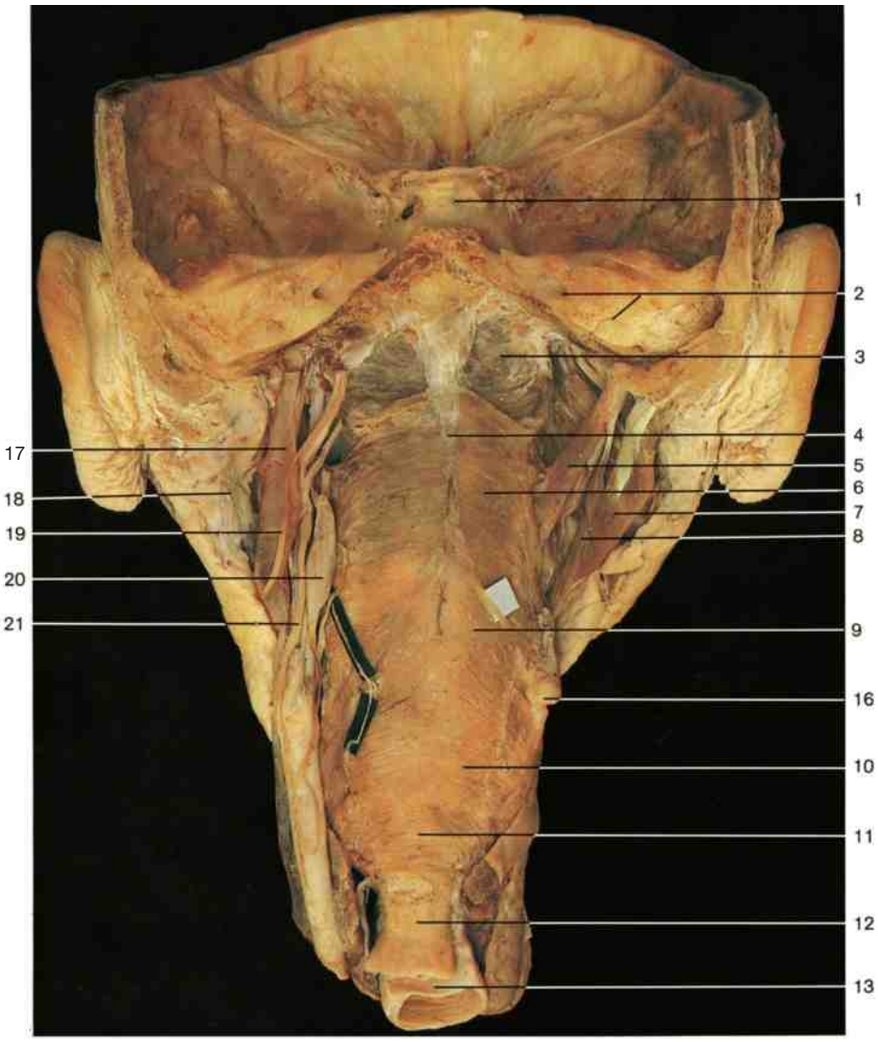
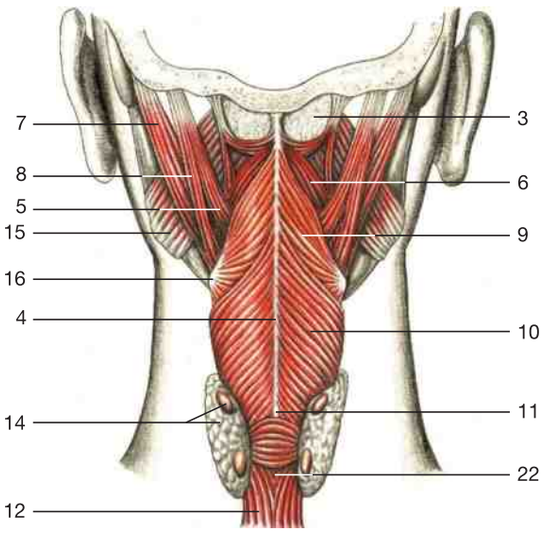
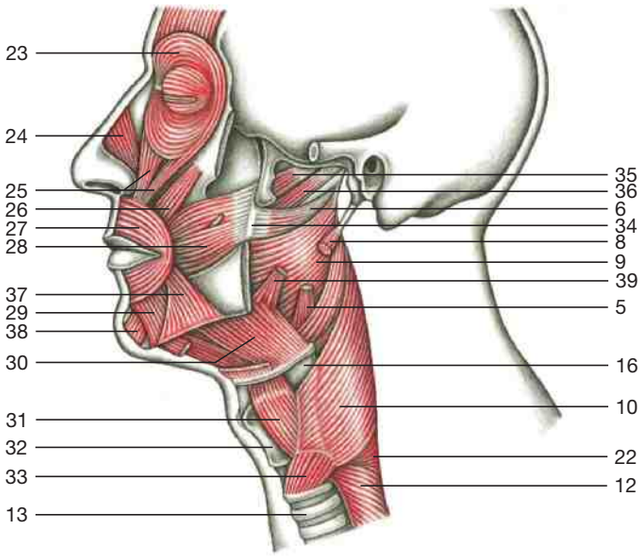


Muscles of the pharynx (posterior aspect).

1 Sella turcica
2 Internal acoustic meatus and petrous part of temporal bone
3 Pharyngobasilar fascia
4 Fibrous raphe of pharynx
5 Stylopharyngeal muscle
6 Superior constrictor muscle of pharynx
7 Posterior belly of digastric muscle
8 Stylohyoid muscle
9 Middle constrictor muscle of pharynx
10 Inferior constrictor muscle of pharynx
11 Muscle-free area (Killian's triangle)
12 Esophagus
13 Trachea
14 Thyroid and parathyroid glands
15 Medial pterygoid muscle
16 Greater horn of hyoid bone
17 Internal jugular vein
18 Parotid gland
19 Accessory nerve
20 Superior cervical ganglion of sympathetic trunk
21 Vagus nerve
22 Laimer's triangle (area prone to developing diverticula)
23 Orbicularis oculi muscle
24 Nasalis muscle
25 Levator labii superioris and levator labii alaeque nasi muscles
26 Levator anguli oris muscle
27 Orbicularis oris muscle
28 Buccinator muscle
29 Depressor labii inferioris muscle
30 Hyoglossus muscle
31 Thyrohyoid muscle
32 Thyroid cartilage
33 Cricothyroid muscle
34 Pterygomandibular raphe
35 Tensor veli palatini muscle
36 Levator veli palatini muscle
37 Depressor anguli oris muscle
38 Mentalis muscle
39 Styloglossus muscle



Muscles of the pharynx (posterior aspect). (Schematic drawing.)



Muscles of the pharynx (lateral aspect). (Schematic drawing.)

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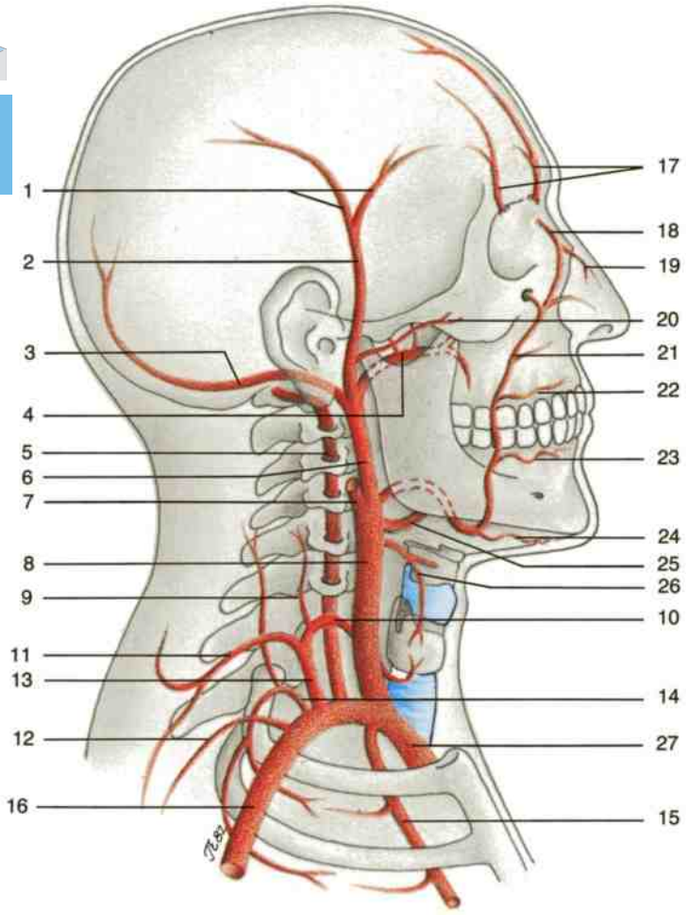

Arteries of head and neck. Diagram of the main branches of external carotid and subclavian arteries.

1 Frontal and parietal branches of superficial temporal artery
2 Superficial temporal artery
3 Occipital artery
4 Maxillary artery
5 Vertebral artery
6 External carotid artery
7 Internal carotid artery
8 Common carotid artery (divided)
9 Ascending cervical artery
10 Inferior thyroid artery
11 Transverse cervical artery with two branches (superficial cervical artery and descending scapular artery)
12 Suprascapular artery
13 Thyrocervical trunk
14 Costocervical trunk with two branches (deep cervical artery and superior intercostal artery)
15 Internal thoracic artery
16 Axillary artery
17 Supra-orbital and supratrochlear arteries
18 Angular artery
19 Dorsal nasal artery
20 Transverse facial artery
21 Facial artery
22 Superior labial artery
23 Inferior labial artery
24 Submental artery
25 Lingual artery
26 Superior thyroid artery
27 Brachiocephalic trunk

▷ **To page 169:**

1 Galea aponeurotica
2 Frontal branch } of superficial
3 Parietal branch } temporal artery
4 Superior auricular muscle
5 Superficial temporal artery and vein
6 Middle temporal artery
7 Auriculotemporal nerve
8 Branches of facial nerve
9 Facial nerve
10 External carotid artery within the retromandibular fossa
11 Posterior belly of digastric muscle
12 Sternocleidomastoid artery
13 Sympathetic trunk and superior cervical ganglion
14 Sternocleidomastoid muscle (divided and reflected)
15 Clavicle (divided)
16 Transverse cervical artery
17 Ascending cervical artery and phrenic nerve
18 Scalenus anterior muscle
19 Suprascapular artery
20 Dorsal scapular artery
21 Brachial plexus and axillary artery
22 Thoraco-acromial artery
23 Lateral thoracic artery
24 Median nerve (displaced) and pectoralis minor muscle (reflected)
25 Frontal belly of occipitofrontalis muscle
26 Orbital part of orbicularis oculi muscle
27 Angular artery and vein
28 Facial artery
29 Superior labial artery
30 Zygomaticus major muscle
31 Inferior labial artery
32 Parotid duct
33 Buccal fat pad
34 Maxillary artery
35 Masseter muscle
36 Facial artery and mandible
37 Submental artery
38 Anterior belly of digastric muscle

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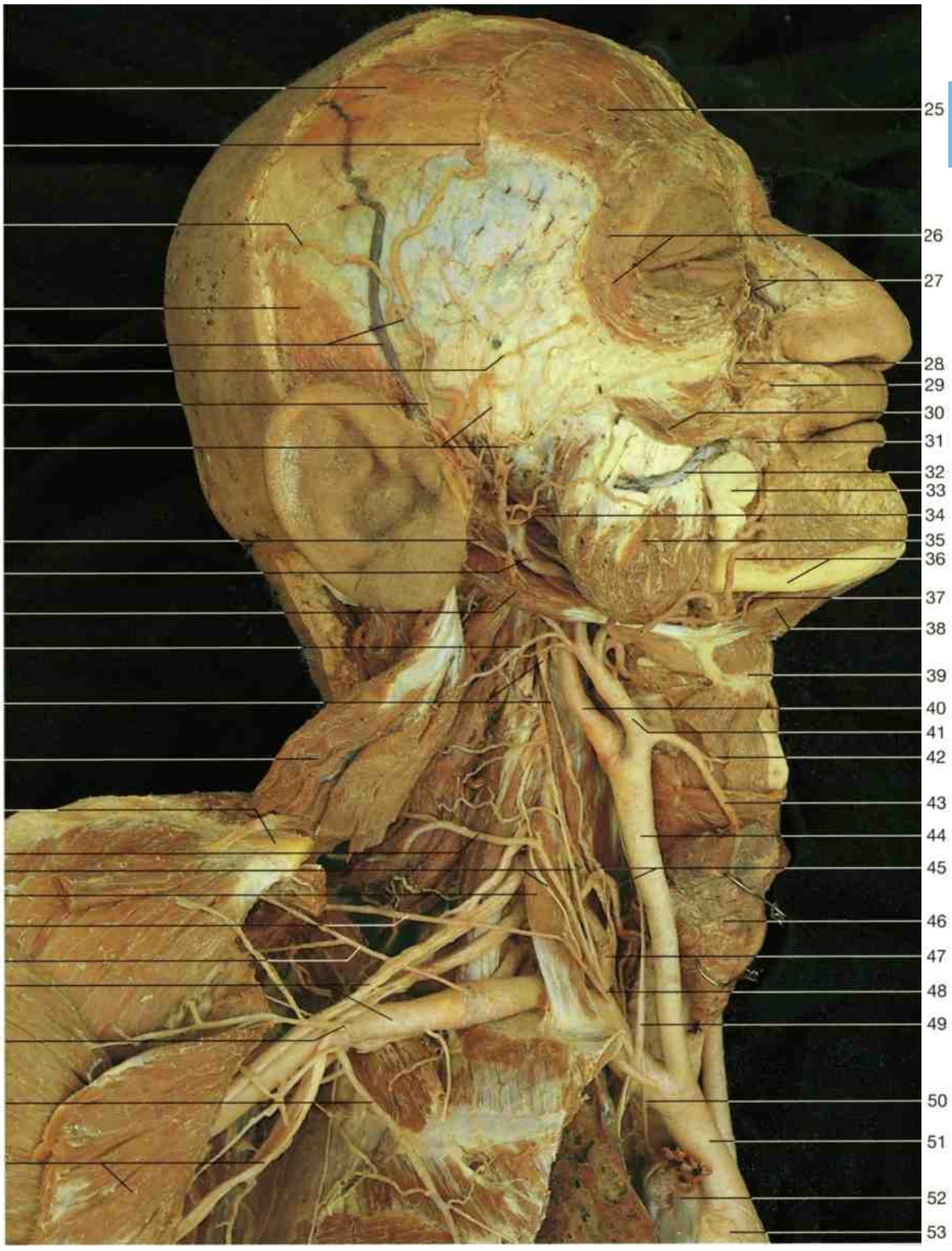

Main branches of head and neck arteries (lateral aspect). Anterior thoracic wall and clavicle partly removed; pectoralis muscles have been reflected to display the subclavian and axillary arteries.

39 Hyoid bone
40 Internal carotid artery
41 External carotid artery
42 Superior laryngeal artery
43 Superior thyroid artery
44 Common carotid artery
45 Thyroid ansa of sympathetic trunk and inferior thyroid artery
46 Thyroid gland (right lobe)
47 Vertebral artery
48 Thyrocervical trunk
49 Vagus nerve
50 Ansa subclavia of sympathetic trunk
51 Brachiocephalic trunk
52 Superior vena cava (divided)
53 Aortic arch

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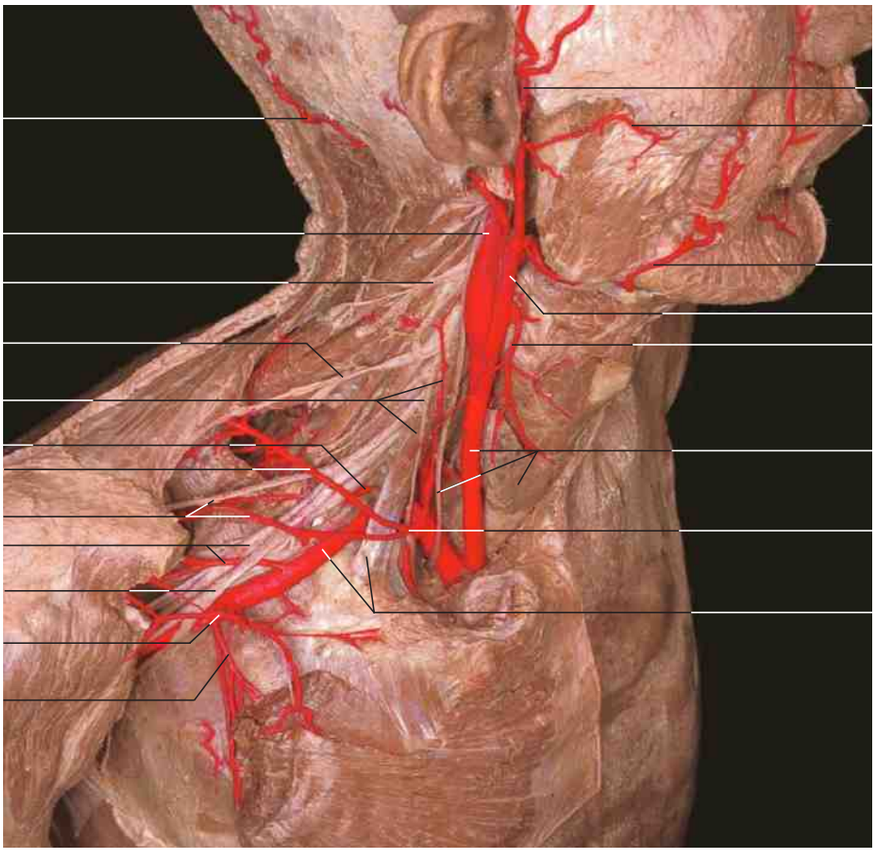
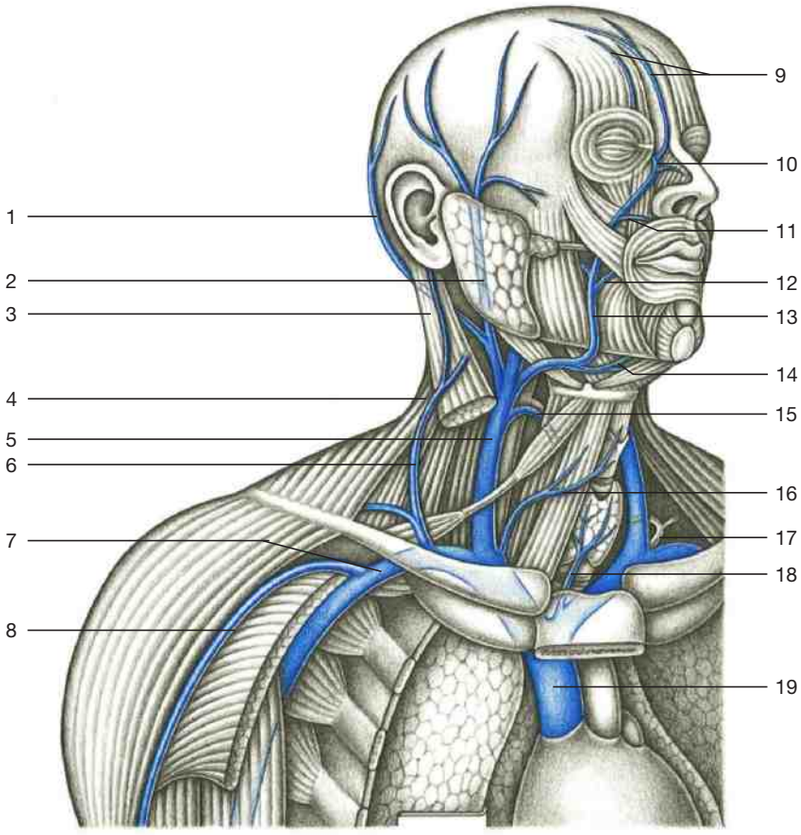


Arteries of head and neck (antero-lateral aspect). Clavicle, sternocleidomastoid muscle, and veins have been partly removed; the arteries have been colored.



Veins of head and neck. Sternocleidomastoid muscle and anterior thoracic wall partly removed. Note the venous connection with the superior vena cava.

1 Occipital vein
2 Superficial temporal vein
3 Sternocleidomastoid muscle
4 Trapezius muscle
5 Internal jugular vein
6 External jugular vein
7 Subclavian vein
8 Cephalic vein
9 Supra-orbital veins
10 Angular vein
11 Superior labial vein
12 Inferior labial vein
13 Facial vein
14 Submental vein
15 Superior thyroid vein
16 Anterior jugular vein
17 Thoracic duct
18 Inferior thyroid vein
19 Superior vena cava
20 Occipital branch of occipital artery
21 Internal carotid artery
22 Cervical plexus
23 Supraclavicular nerve
24 Phrenic nerve and ascending cervical artery on scalenus anterior muscle
25 Superficial cervical artery
26 Suprascapular artery and nerve
27 Brachial plexus and anterior circumflex humeral artery
28 Lateral cord of brachial plexus
29 Thoraco-acromial artery
30 Lateral thoracic artery
31 Superficial temporal artery
32 Transverse facial artery
33 Facial artery
34 External carotid artery
35 Superior thyroid artery
36 Common carotid artery, vagus nerve, and thyroid gland
37 Thyrocervical trunk
38 Subclavian artery and scalenus anterior muscle
39 Parotid gland and facial nerve
40 Great auricular nerve
41 External jugular vein
42 Brachial plexus
43 Cephalic vein in deltopectoral groove
44 Axillary vein and artery
45 Right brachiocephalic vein
46 Superior vena cava
47 Right lung (reflected)
48 Superficial temporal artery and vein
49 Facial artery and vein
50 Cervical branch of facial nerve and submandibular gland
51 Internal jugular vein, common carotid artery, and omohyoid muscle
52 Anterior jugular vein and thyroid gland
53 Jugular venous arch
54 Left brachiocephalic vein
55 Pericardium of heart (location of right atrium)
56 Transverse cervical artery

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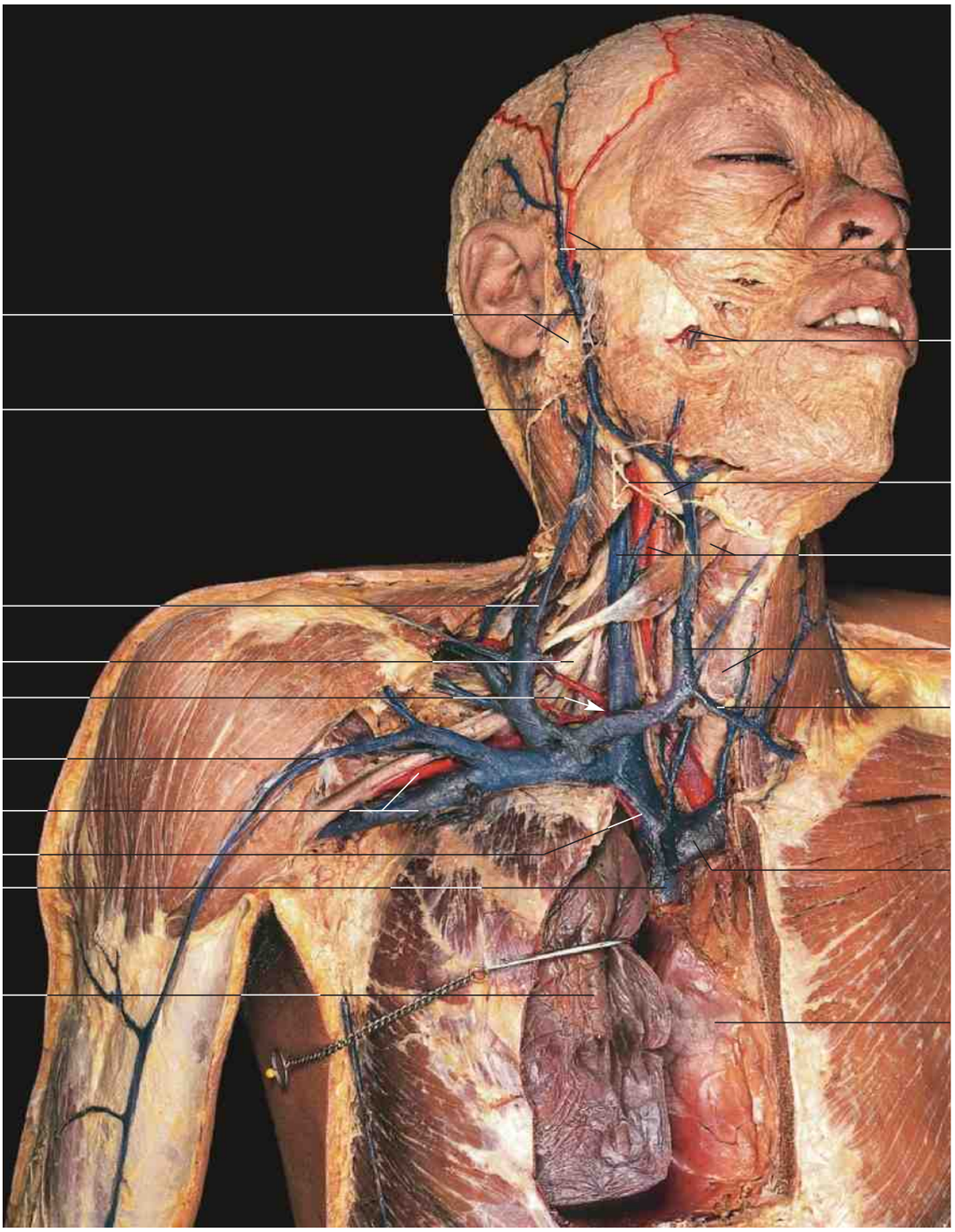

Veins of head and neck (anterior aspect). Part of the thoracic wall, clavicle, and sternocleidomastoid muscle have been removed. Veins are colored blue; arteries, red.

The **internal jugular vein** is the continuation of the sigmoid sinus, which drains most of the venous blood from the brain together with the external cerebrospinal fluid. By joining the subclavian vein, it forms the right brachiocephalic vein, which continues on the right side directly into the superior vena cava. The common way to introduce the lead from a pacemaker device into the heart is by way of the cephalic vein. On the left side, the thoracic duct joins the internal jugular vein at the point where the subclavian vein and the internal jugular vein form the left brachiocephalic vein. Note that the subclavian vein lies in front of the scalenus anterior muscle, whereas the subclavian artery and the brachial plexus lie posterior to that muscle. The **cephalic vein** joins the axillary vein by passing into the deltopectoral triangle. **The subclavian vein** is strongly fixed to the first rib, so it can be punctured with a needle at that point (underneath the sternal end of the clavicle) to introduce a catheter (subclavian line).

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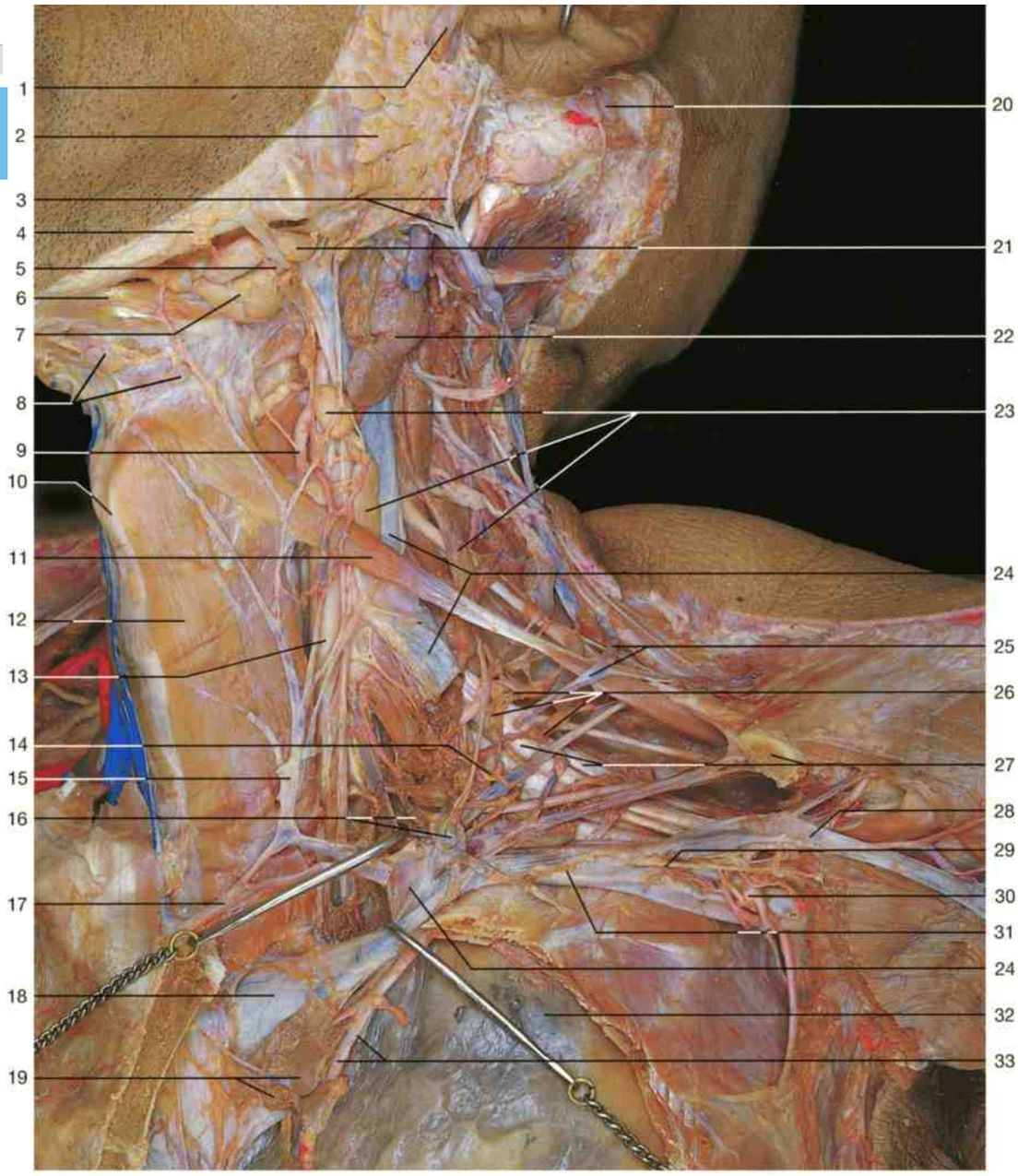

Lymph nodes and lymph vessels of the neck, left side oblique (oblique-lateral aspect). The sternocleidomastoid muscle and the left half of the thoracic wall have been removed. Lower part of the internal jugular vein has been cut and laterally displaced to show the thoracic duct.

1 Superficial parotid lymph node
2 Parotid gland
3 Great auricular nerve
4 Mandible
5 Facial vein
6 Anterior belly of digastric muscle
7 Submandibular gland
8 Submental lymph nodes
9 Superior thyroid artery
10 Thyroid cartilage
11 Omohyoid muscle
12 Sternohyoid muscle
13 Common carotid artery
14 Supraclavicular lymph nodes
15 Anterior jugular vein
16 Thoracic duct and internal jugular vein
17 Jugular venous arch
18 Left brachiocephalic vein
19 Superior mediastinal lymph nodes
20 Retro-auricular lymph nodes
21 Submandibular nodes
22 Superficial cervical lymph nodes
23 Jugulodigastric lymph nodes and jugular trunk
24 Internal jugular vein
25 External jugular vein
26 Jugulo-omohyoid lymph nodes
27 Brachial plexus
28 Cephalic vein
29 Subclavian trunk
30 Infraclavicular lymph nodes
31 Subclavian vein
32 Lung
33 Internal thoracic artery and vein

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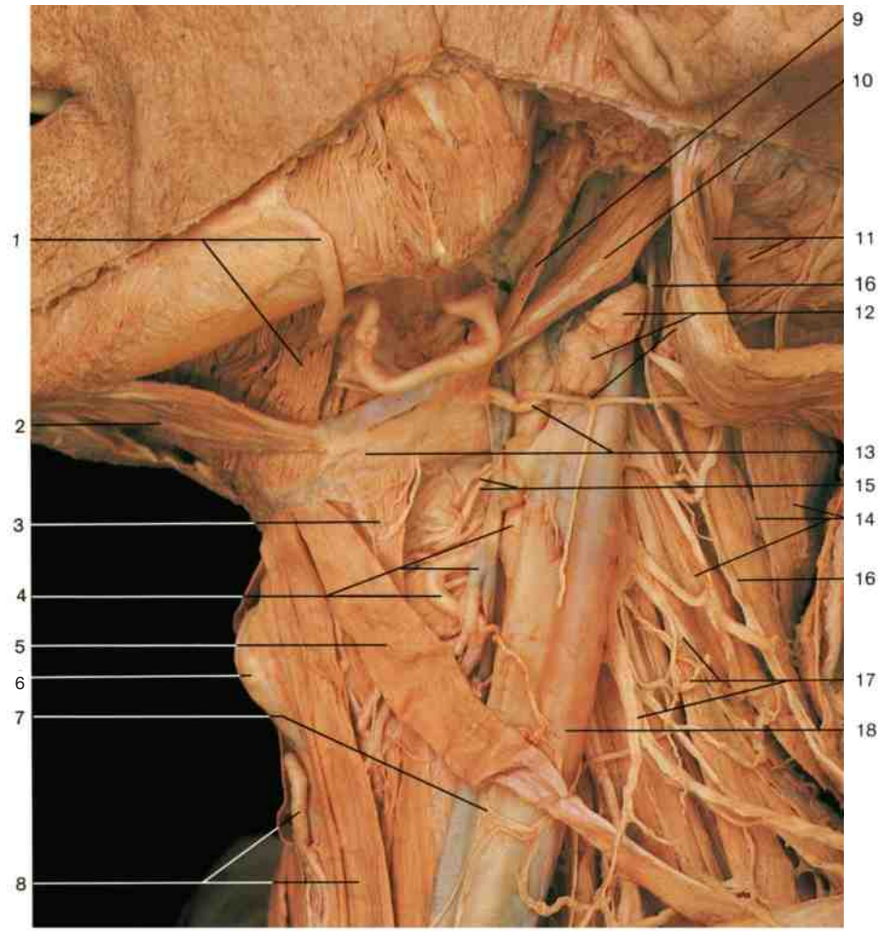
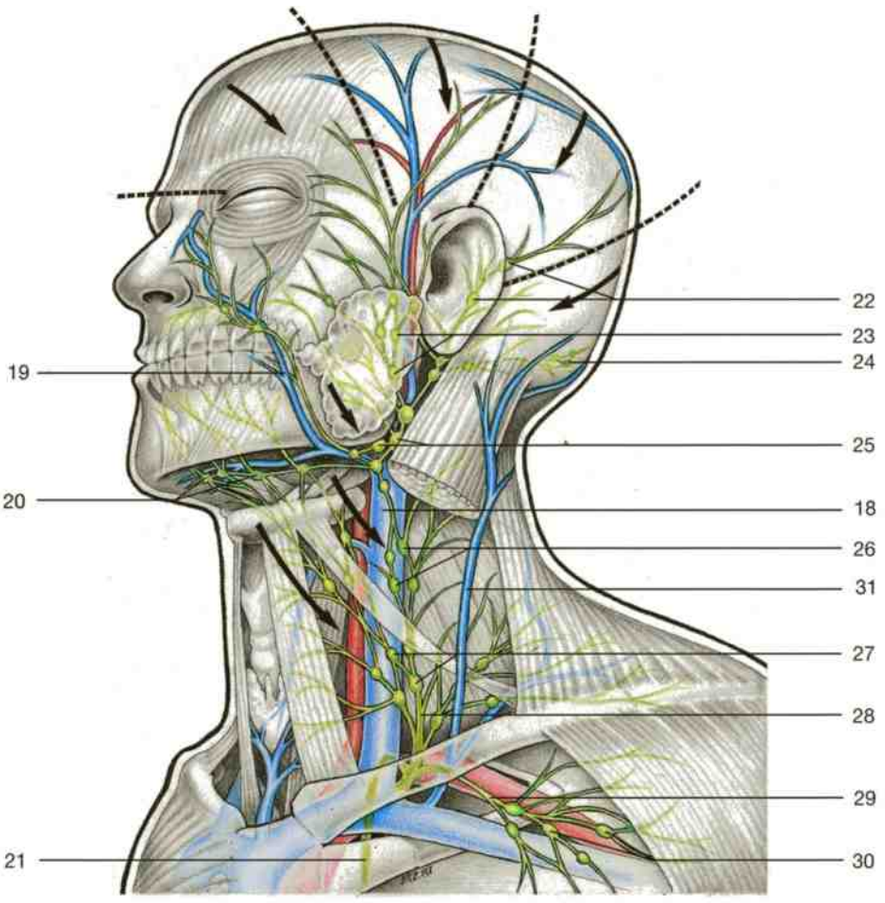


Carotid triangle, left side (lateral aspect). Sternocleidomastoid muscle reflected.

1 Mylohyoid muscle and facial artery
2 Anterior belly of digastric muscle
3 Thyrohyoid
4 External carotid artery, superior thyroid artery, and vein
5 Omohyoid muscle
6 Thyroid cartilage
7 Ansa cervicalis
8 Sternohyoid muscle and superior thyroid artery
9 Stylohyoid muscle
10 Posterior belly of digastric muscle
11 Sternocleidomastoid muscle (reflected)
12 Superior cervical lymph nodes and sternocleidomastoid artery
13 Hyoid bone and hypoglossal nerve (n. XII)
14 Splenius capitis and levator scapulae muscles
15 Superior laryngeal artery and internal branch of superior laryngeal nerve
16 Accessory nerve
17 Cervical plexus
18 Internal jugular vein
19 Facial vein
20 Submental nodes
21 Thoracic duct
22 Retro-auricular nodes
23 Parotid nodes
24 Occipital nodes
25 Submandibular nodes
26 Jugulodigastric nodes } deep cervical
27 Jugulo-omohyoid nodes } nodes
28 Jugular trunk
29 Subclavian trunk
30 Infraclavicular nodes
31 External jugular vein



Lymph nodes and veins of head and neck. Dotted lines = border between irrigation areas; arrows: direction of lymph flow.

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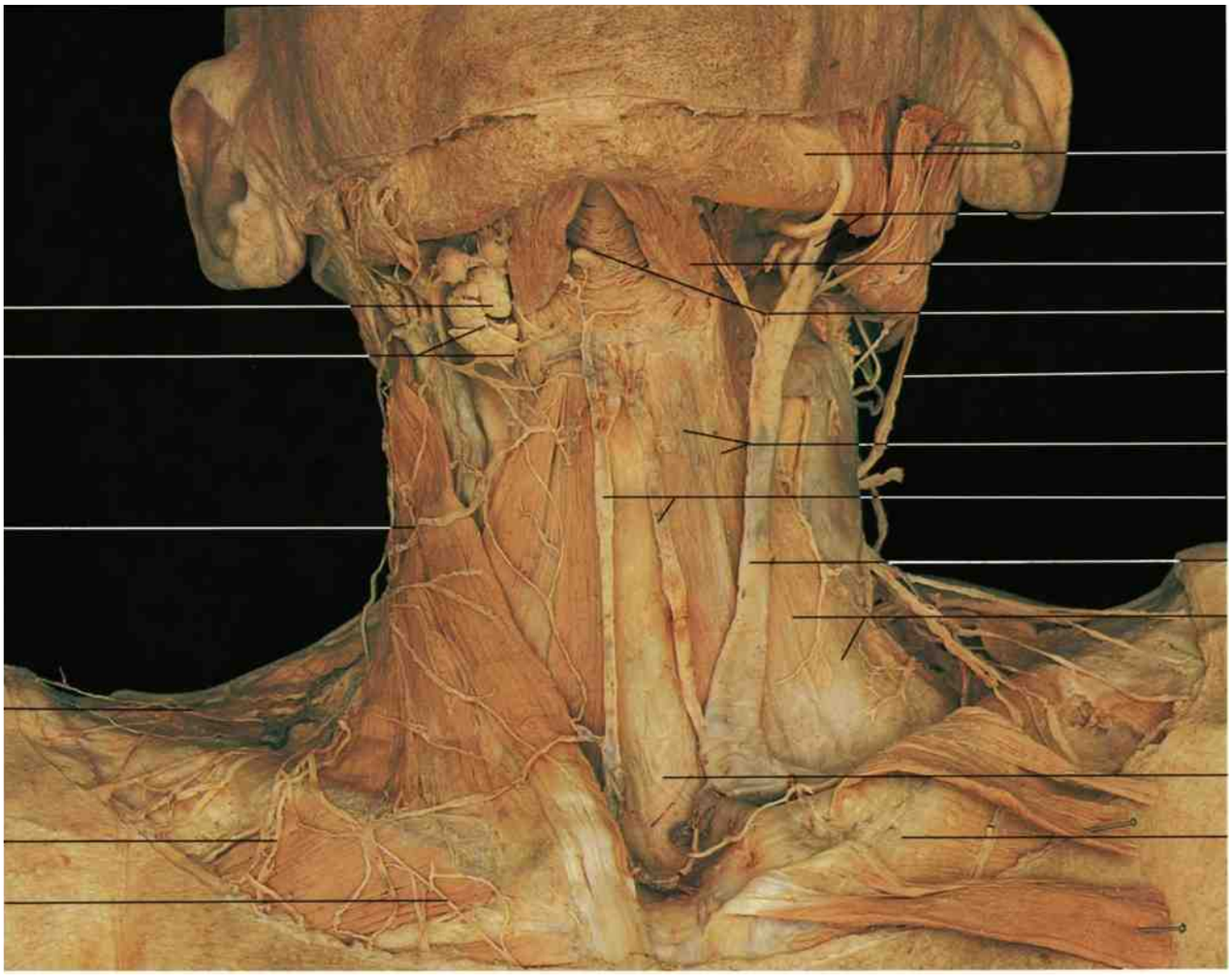
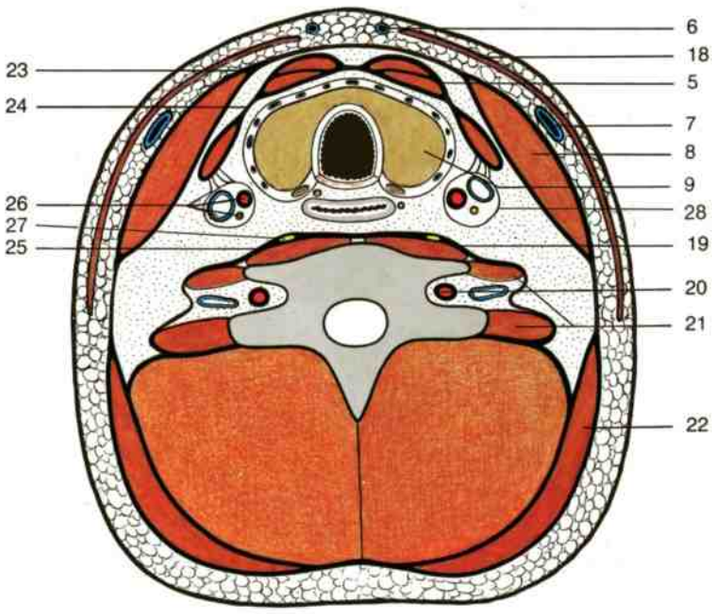


Anterior region of the neck. The superficial fascia has been removed.

1 Mandible
2 Facial artery and vein
3 Anterior belly of digastric muscle
4 Mylohyoid muscle
5 Infrahyoid muscles (sternohyoid, sternothyroid, and omohyoid muscles)
6 Anterior jugular veins
7 External jugular vein
8 Sternocleidomastoid muscle
9 Thyroid gland
10 Submandibular gland
11 Cervical branch of facial nerve
12 Great auricular nerve
13 Transverse cervical nerves
14 Lateral supraclavicular nerves
15 Middle supraclavicular nerves
16 Medical supraclavicular nerves
(12–16: Cutaneous branches of cervical plexus)
17 Clavicle
18 Platysma muscle
19 Prevertebral lamina of cervical fascia, covering longus colli muscle
20 Vertebral artery and vein
21 Scalenus muscles
22 Trapezius muscle
23 Superficial lamina of cervical fascia
24 Pretracheal lamina of cervical fascia
25 Prevertebral lamina of cervical fascia
26 Carotid sheath with common carotid artery, internal jugular vein, and vagus nerve
27 Cervical part of sympathetic trunk
28 Carotid sheath



◁ **Cross section of the neck** at the level of the thyroid gland. Notice the position of the three laminae of cervical fascia (23, 24, 25).

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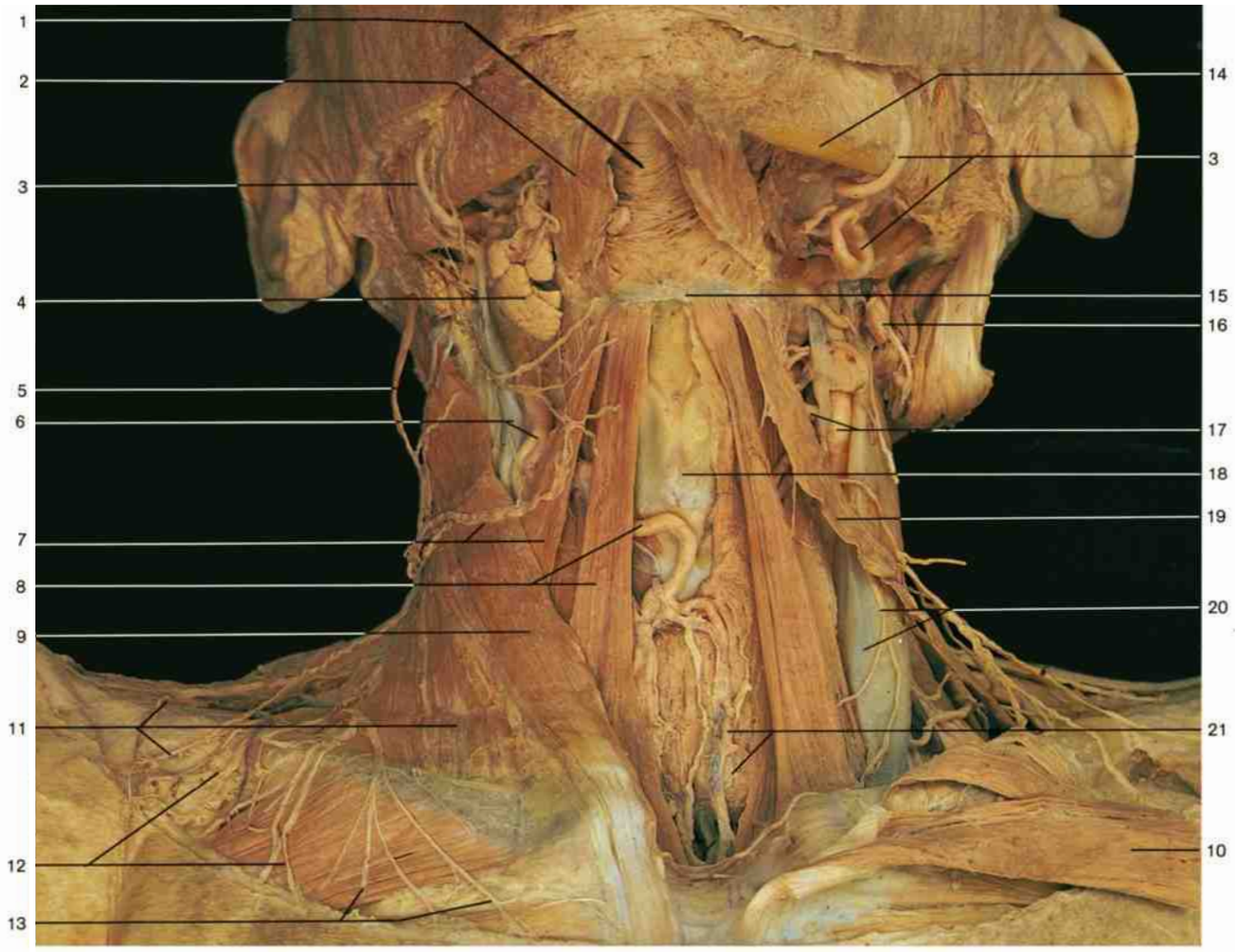
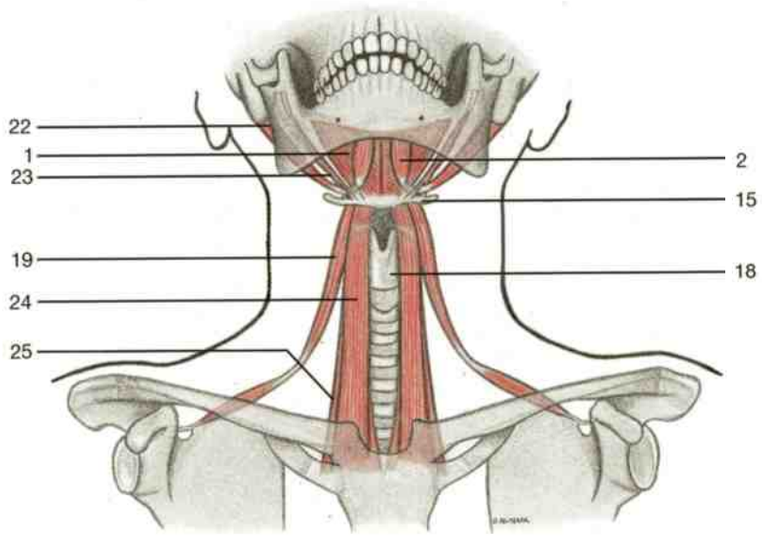


Anterior region of the neck with anterior triangle. The pretracheal lamina of cervical fascia and left sternocleidomastoid muscle have been removed.



Supra- and infrahyoid muscles (schematic drawing).

1 Mylohyoid muscle
2 Anterior belly of digastric muscle
3 Facial artery
4 Submandibular gland
5 Great auricular nerve
6 Internal jugular vein and common carotid artery
7 Transverse cervical nerve and omohyoid muscle
8 Sternohyoid muscle and superior thyroid artery
9 Sternocleidomastoid muscle (sternal head)
10 Left sternocleidomastoid muscle (reflected)
11 Sternocleidomastoid muscle (clavicular head) and lateral supraclavicular nerves
12 Middle supraclavicular nerves
13 Medial supraclavicular nerves
14 Mandible
15 Hyoid bone
16 Superficial cervical lymph nodes
17 Left superior thyroid artery and external carotid artery
18 Thyroid cartilage
19 Omohyoid muscle (superior belly)
20 Internal jugular vein and branches of ansa cervicalis
21 Thyroid gland and unpaired inferior thyroid vein
22 Posterior belly of digastric muscle
23 Stylohyoid muscle
24 Sternohyoid muscle
25 Sternothyroid muscle

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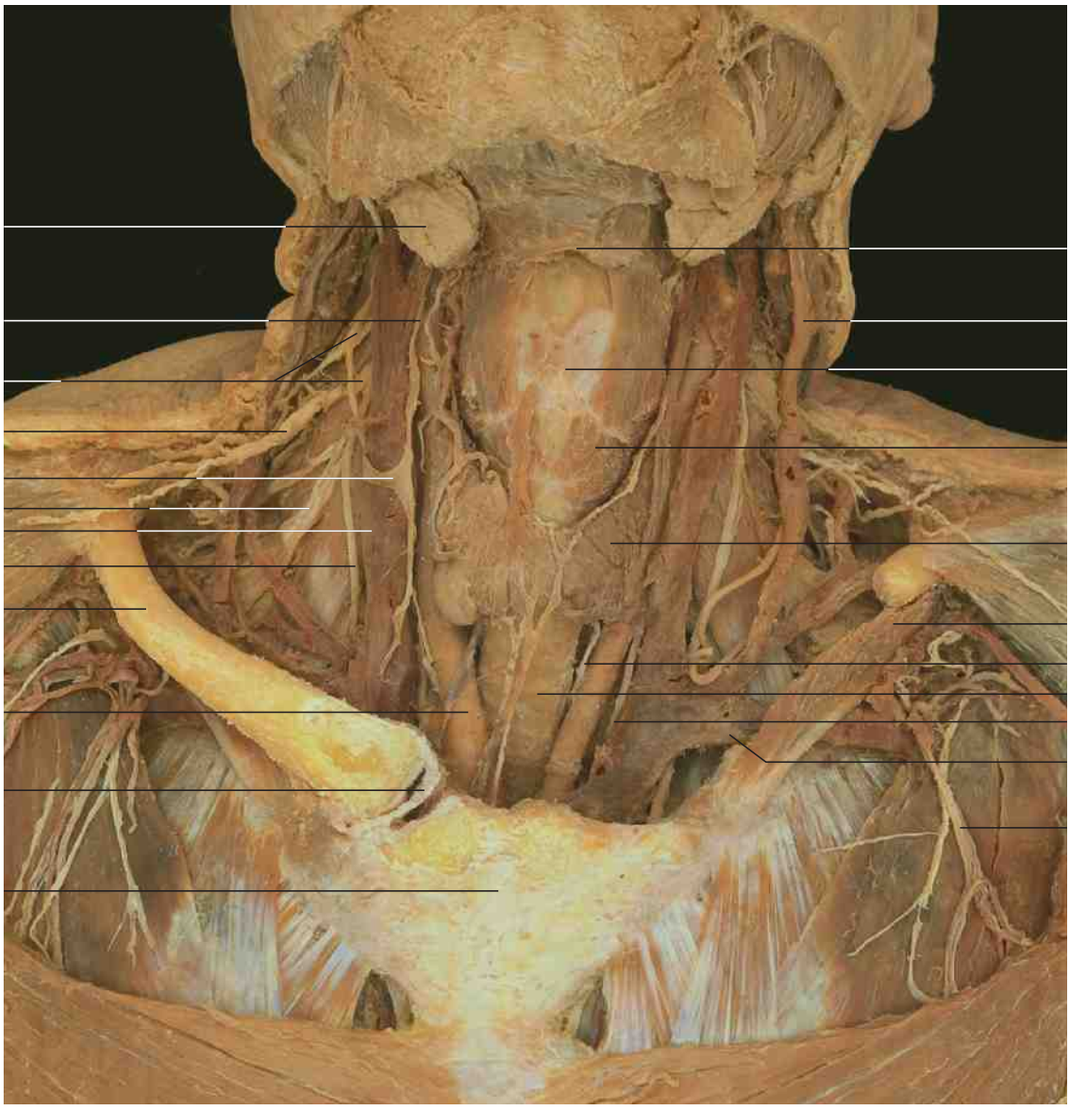
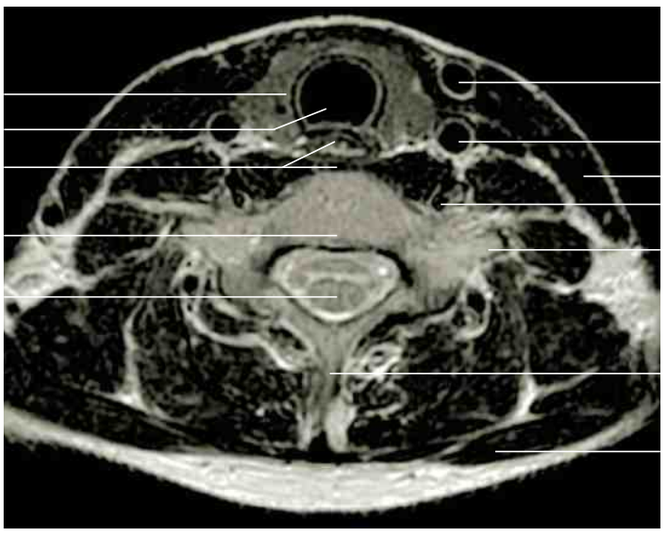


Anterior region of the neck. Sternocleidomastoid muscles and left clavicle have been removed. Thyroid gland in relation to trachea, larynx, and vessels of the neck is shown.



Cross section of the neck at the level of the thyroid gland (MRI scan, courtesy of Prof. Heuck, Munich).

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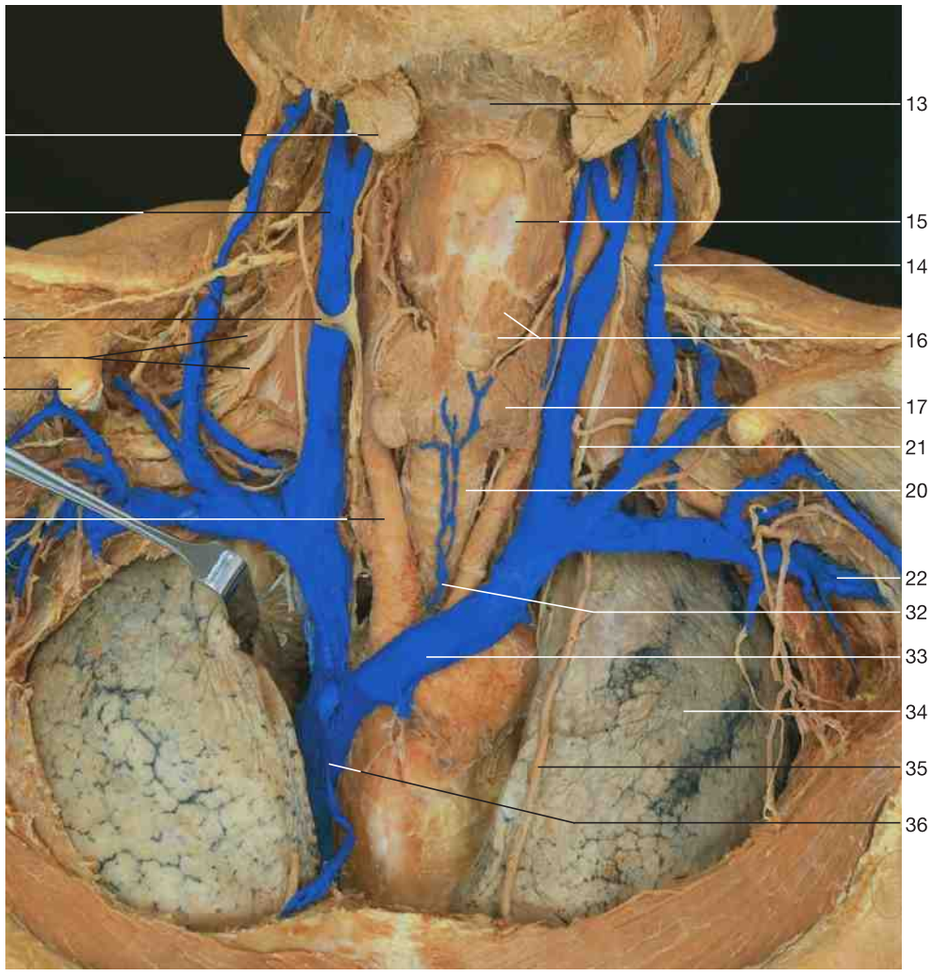
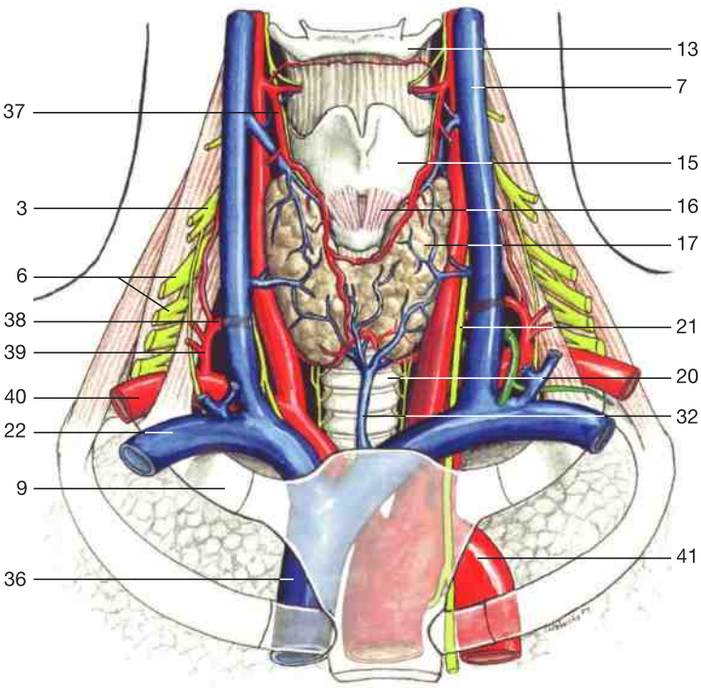


Anterior region of the neck and thoracic cavity. Both clavicles, sternum, and ribs have been removed. Main veins are colored in blue.



Anterior region of the neck (schematic drawing). Regional anatomy of the thyroid gland with related blood vessels.

1 Submandibular gland
2 Cervical branch of facial nerve (n. VII)
3 Cervical plexus
4 Middle supraclavicular nerves
5 Ansa cervicalis
6 Brachial plexus
7 Internal jugular vein
8 Phrenic nerve
9 Clavicle
10 Common carotid artery
11 Sternoclavicular articulation with articular disc
12 Manubrium of sternum
13 Hyoid bone
14 External jugular vein
15 Thyroid cartilage
16 Cricothyroid muscle
17 Thyroid gland
18 Subclavius muscle
19 Recurrent laryngeal nerve
20 Trachea
21 Vagus nerve (n. X)
22 Subclavian vein
23 Middle pectoral nerve
24 Esophagus
25 Body of cervical vertebra
26 Spinal cord
27 Sternocleidomastoid muscle
28 Vertebral artery
29 Transverse process of cervical vertebra
30 Spinous process of cervical vertebra
31 Trapezius muscle
32 Inferior thyroid vein
33 Left brachiocephalic vein
34 Superior lobe of left lung
35 Internal thoracic artery
36 Superior vena cava
37 Superior thyroid artery
38 Inferior thyroid artery
39 Thyrocervical trunk
40 Subclavian artery
41 Aortic arch

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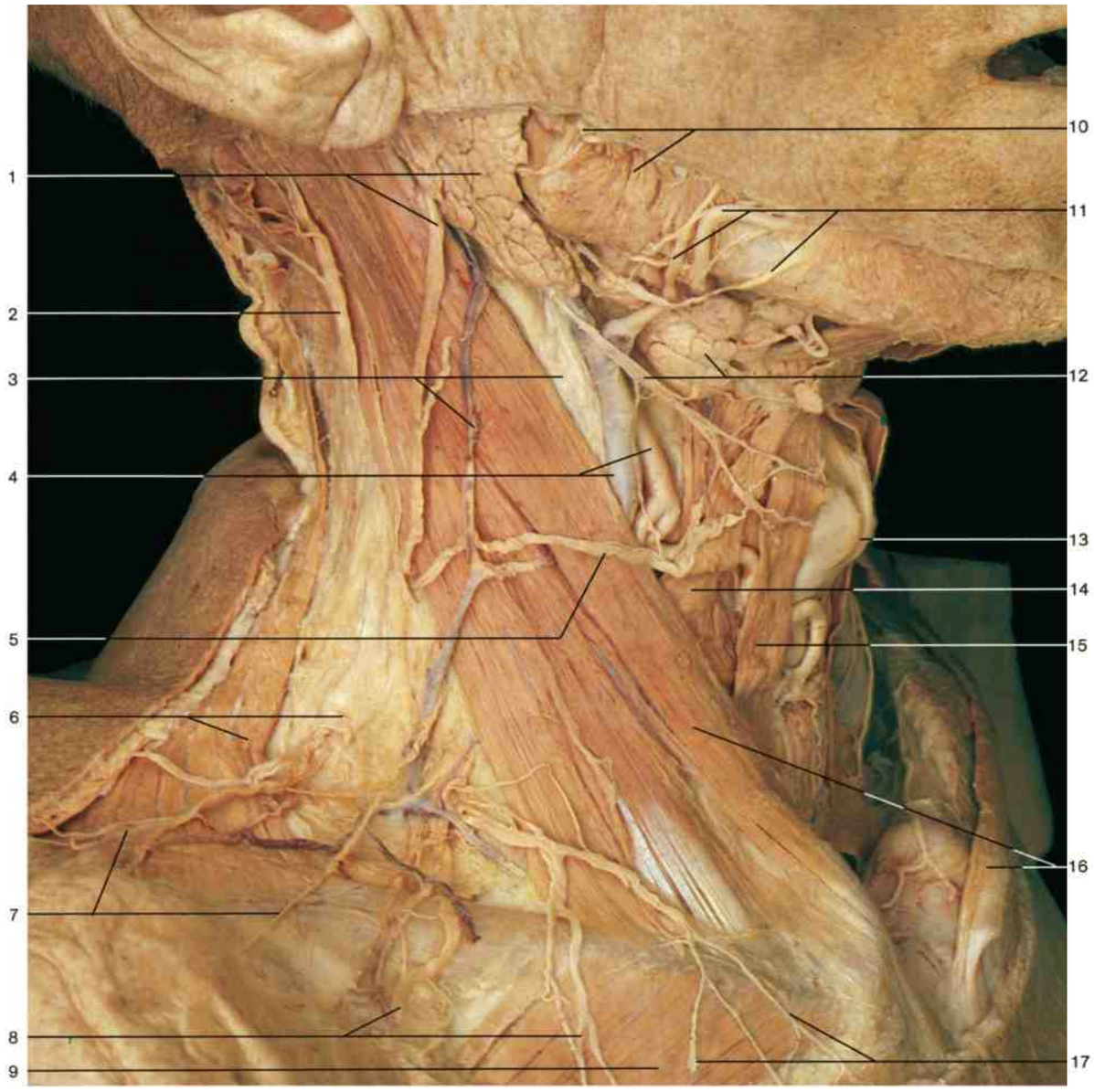
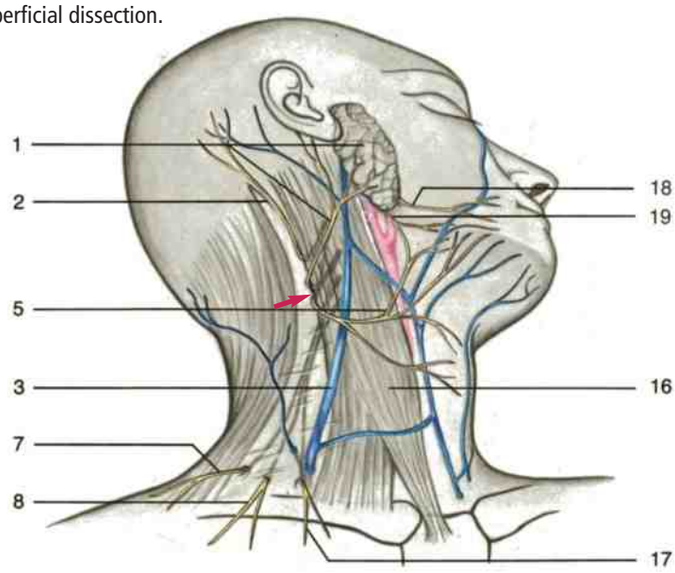


Lateral region of the neck with posterior and carotid triangles. Superficial dissection.

1 Parotid gland and great auricular nerve
2 Lesser occipital nerve
3 Internal and external jugular veins
4 Retromandibular vein and external carotid artery
5 Transverse cervical nerve with communicating branch to cervical branch of facial nerve
6 Trapezius muscle and superficial lamina of cervical fascia
7 Lateral supraclavicular nerves
8 Middle supraclavicular nerves
9 Pectoralis major muscle
10 Buccal branch of facial nerve and masseter muscle
11 Facial artery and vein and mandibular branch of facial nerve
12 Cervical branch of facial nerve and submandibular gland
13 Thyroid cartilage
14 Omohyoid muscle
15 Sternohyoid muscle
16 Sternocleidomastoid muscle
17 Medial supraclavicular nerves
18 Mandibular branch of facial nerve
19 Cervical branch of facial nerve with communicating branch to transverse cervical nerve



Cutaneous branches of cervical plexus. Erb's point is indicated by an arrowhead (schematic drawing).

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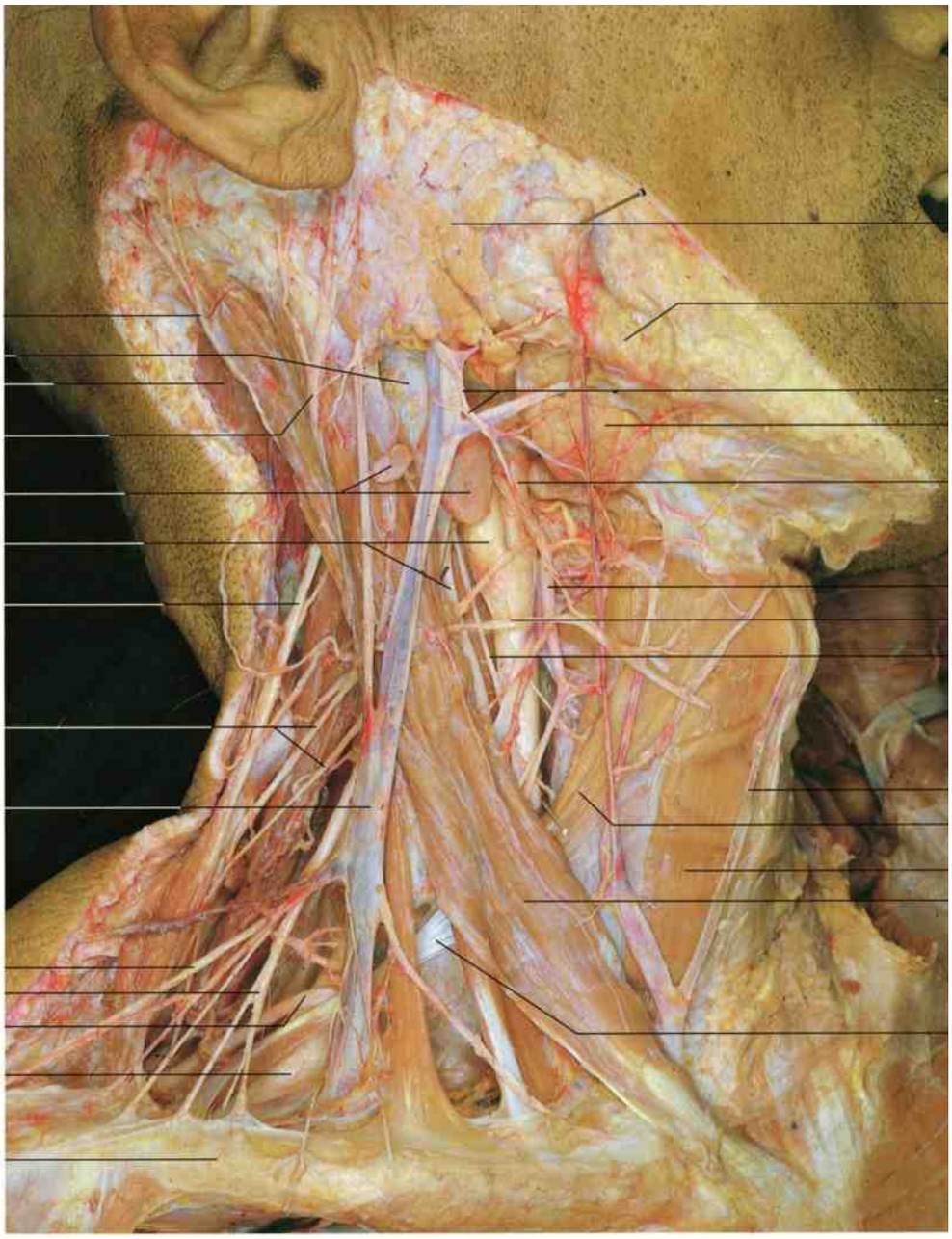

Lateral region of the neck with posterior and carotid triangles. Superficial dissection. The superficial lamina of cervical fascia has been removed to display the cutaneous branches of the cervical plexus and subcutaneous veins.

1 Lesser occipital nerve
2 Internal jugular vein
3 Splenius capitis muscle
4 Great auricular nerve
5 Submandibular nodes
6 Internal carotid artery and vagus nerve
7 Accessory nerve
8 Muscular branches of cervical plexus
9 External jugular vein
10 Posterior supraclavicular nerves
11 Middle supraclavicular nerves
12 Suprascapular artery
13 Pretracheal lamina of fascia of neck
14 Clavicle
15 Parotid gland
16 Mandible
17 Cervical branch of facial nerve
18 Submandibular gland
19 External carotid artery
20 Superior thyroid artery
21 Transverse cervical nerve
22 Superior root of ansa cervicalis
23 Anterior jugular vein
24 Omohyoid muscle
25 Sternohyoid muscle
26 Sternocleidomastoid muscle
27 Intermediate tendon of omohyoid muscle

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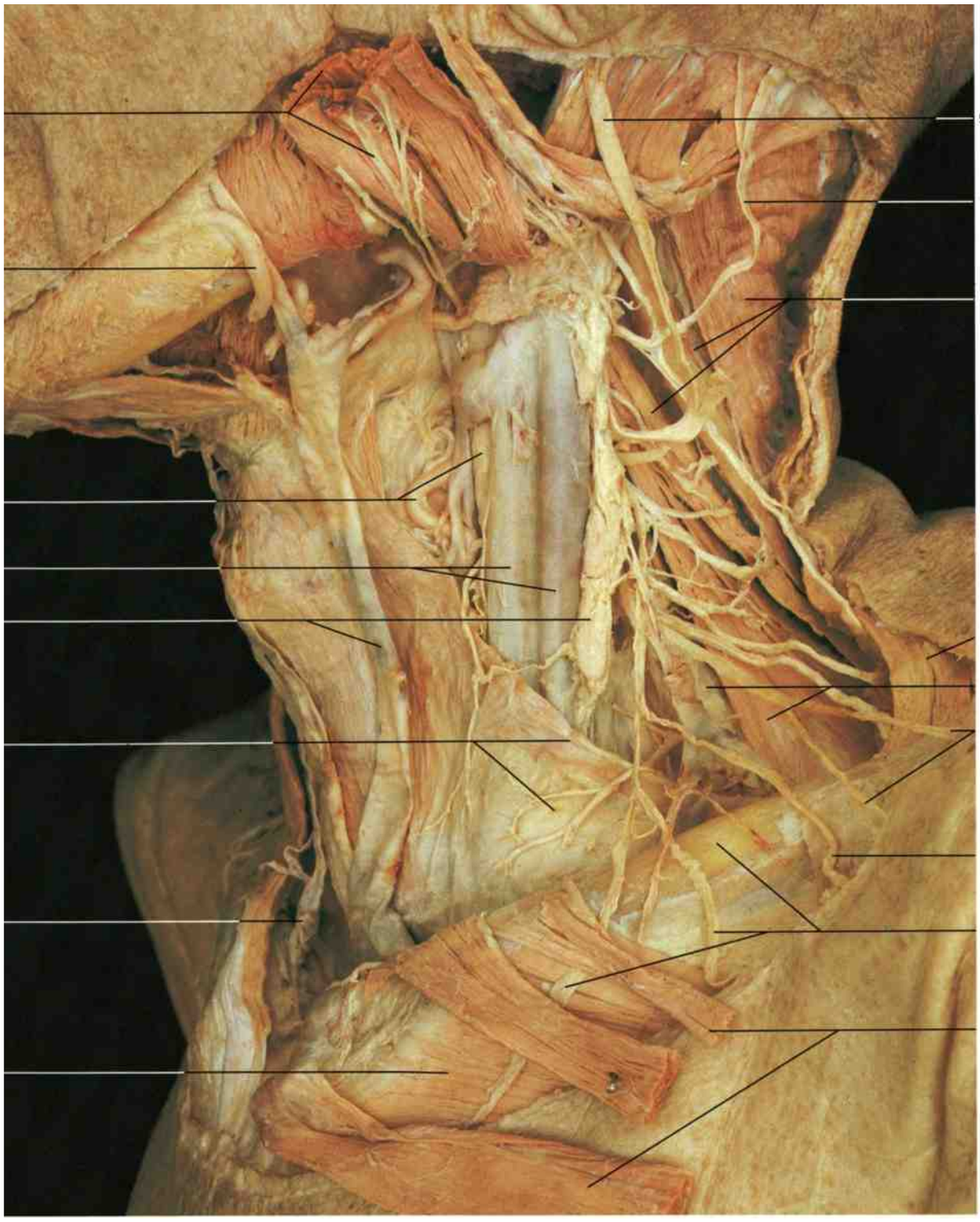

Neck, superficial dissection (lateral aspect). Sternocleidomastoid muscle has been cut and reflected to display the pretracheal lamina of the cervical fascia.

1 Sternocleidomastoid muscle (reflected) and branch of accessory nerve
2 Facial artery
3 External carotid artery and superior thyroid artery
4 Internal jugular vein
5 Deep cervical lymph nodes and external jugular vein
6 Omohyoid muscle and pretracheal lamina of cervical fascia
7 Anterior jugular vein
8 Pectoralis major muscle
9 Great auricular nerve
10 Lesser occipital nerve
11 Splenius capitis and levator scapulae muscles
12 Trapezius muscle
13 Scalenus medius muscle and brachial plexus
14 Posterior supraclavicular nerves
15 Middle supraclavicular nerve
16 Clavicle and anterior supraclavicular nerves
17 Sternocleidomastoid muscle (reflected)

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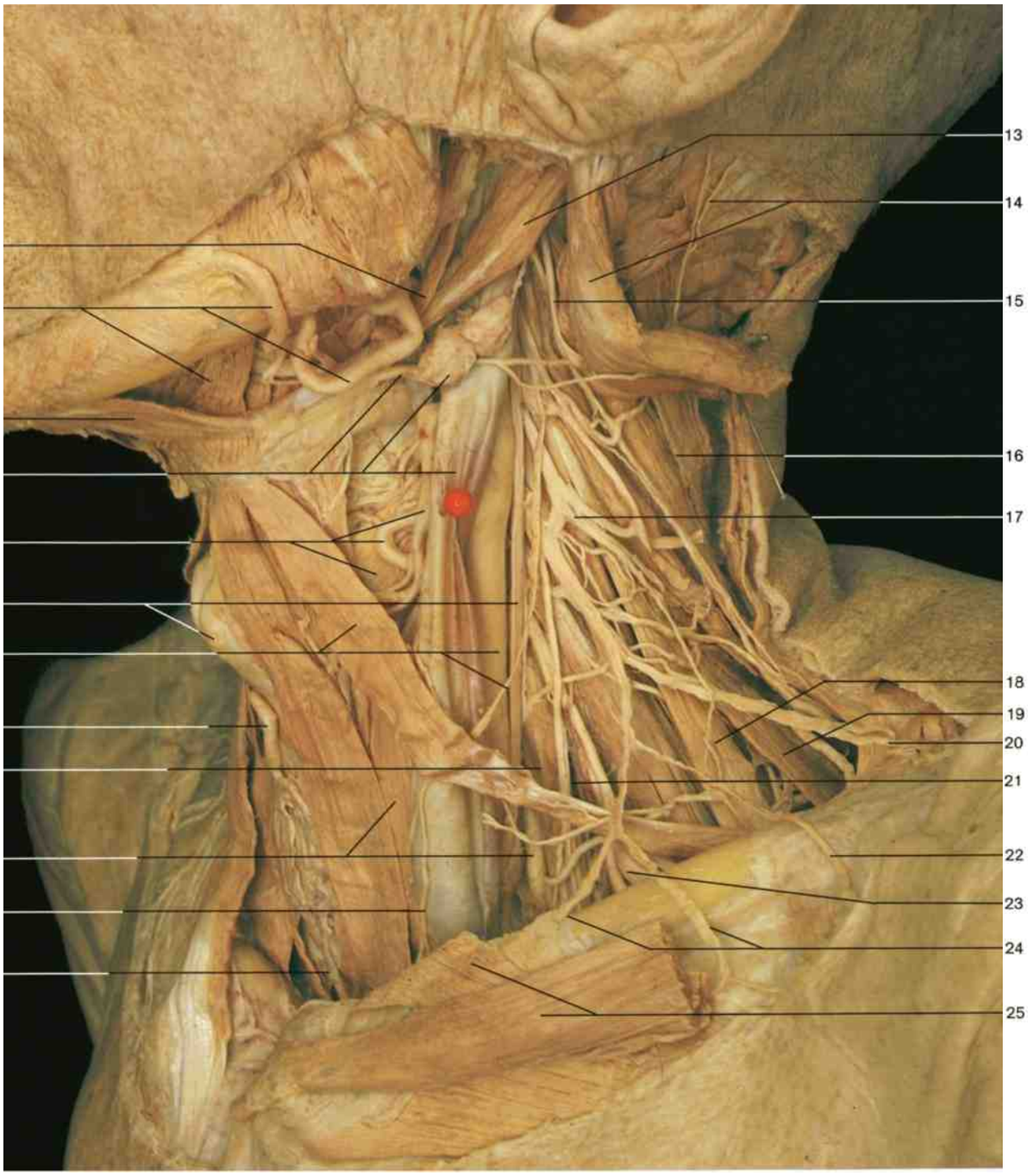

Neck, deep dissection (lateral aspect). The internal jugular vein has been reflected to expose the carotid artery and vagus nerve.

1 Stylohyoid muscle
2 Facial artery and mylohyoid muscle
3 Anterior belly of digastric muscle
4 Internal jugular vein, hypoglossal nerve, and superficial cervical lymph nodes
5 Superior thyroid artery and vein and inferior pharyngeal constrictor muscle
6 Thyroid cartilage and vagus nerve
7 Ansa cervicalis, omohyoid muscle, and common carotid artery
8 Right superior thyroid artery
9 Scalenus anterior muscle
10 Sternothyroid muscle and inferior thyroid artery
11 Muscular branches of ansa cervicalis to the infrahyoid muscles
12 Inferior thyroid vein
13 Posterior belly of digastric muscle
14 Sternocleidomastoid muscle and lesser occipital nerve
15 Accessory nerve
16 Splenius capitis muscle
17 Cervical plexus
18 Scalenus posterior muscle
19 Levator scapulae muscle
20 Posterior supraclavicular nerves
21 Phrenic nerve
22 Middle supraclavicular nerve
23 Brachial plexus
24 Anterior supraclavicular nerves
25 Sternocleidomastoid muscle

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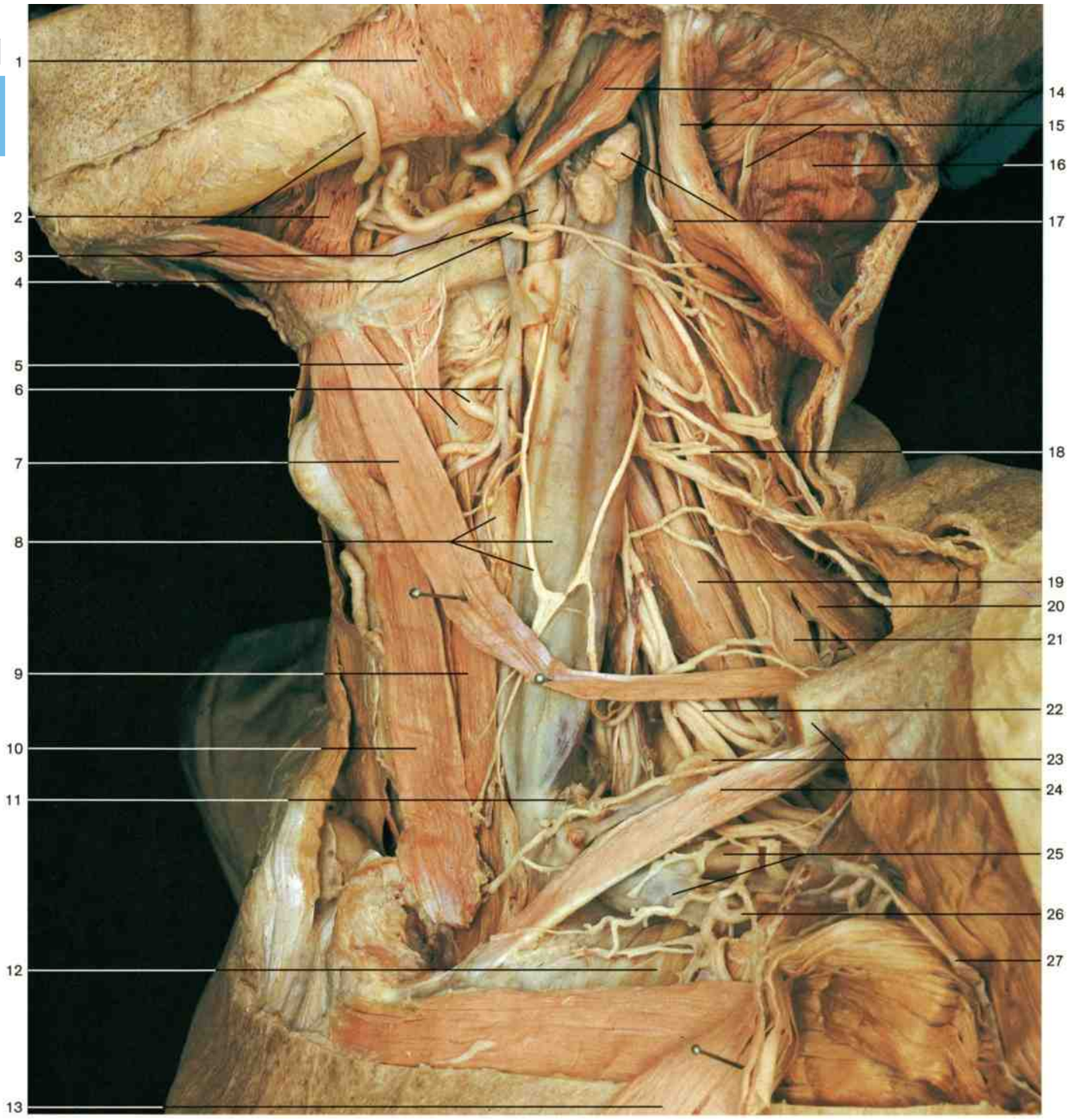

Neck, deeper dissection (lateral aspect). **Ansa cervicalis.** The cervical fascia and the clavicle are partly removed. Ansa cervicalis and infrahyoid muscles are displayed.

1 Masseter muscle
2 Mylohyoid muscle and facial artery
3 External carotid artery and anterior belly of digastric muscle
4 Hypoglossal nerve
5 Thyrohyoid muscle
6 Superior thyroid artery and vein and inferior pharyngeal constrictor muscle
7 Omohyoid muscle (superior belly)
8 Ansa cervicalis, thyroid gland, and internal jugular vein
9 Sternothyroid muscle
10 Sternohyoid muscle
11 Thoracic duct
12 Pectoralis minor muscle
13 Pectoralis major muscle
14 Posterior belly of digastric muscle
15 Sternocleidomastoid muscle and lesser occipital nerve
16 Splenius capitis muscle
17 Superficial cervical lymph nodes and accessory nerve
18 Cervical plexus
19 Scalenus medius muscle
20 Levator scapulae muscle
21 Scalenus posterior muscle
22 Brachial plexus
23 Transverse cervical artery and clavicle
24 Subclavius muscle
25 Subclavian artery and vein
26 Thoraco-acromial artery
27 Cephalic vein

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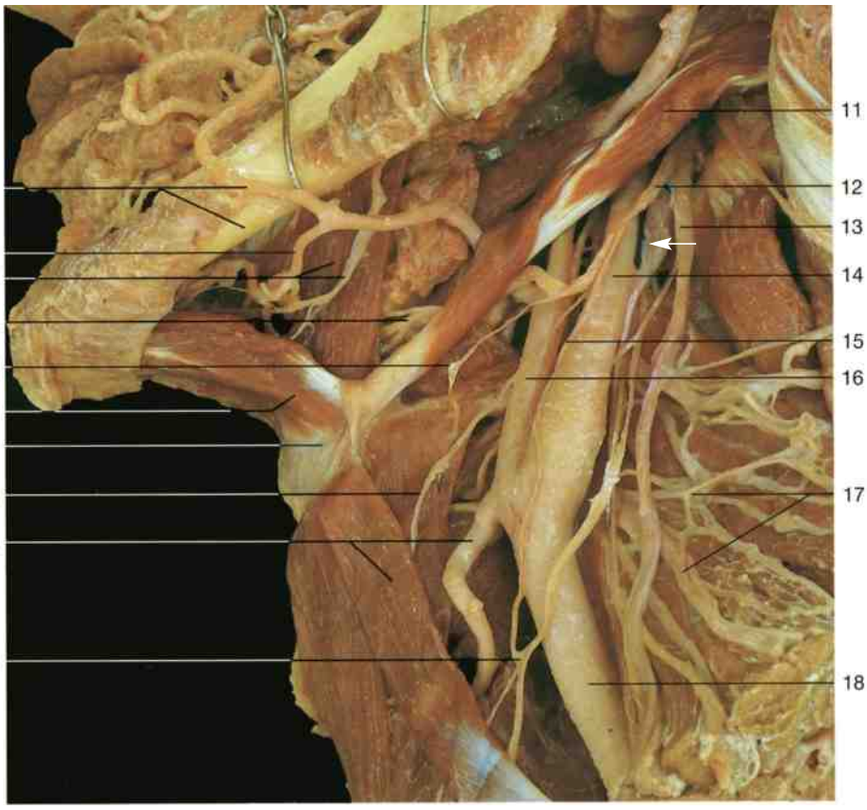
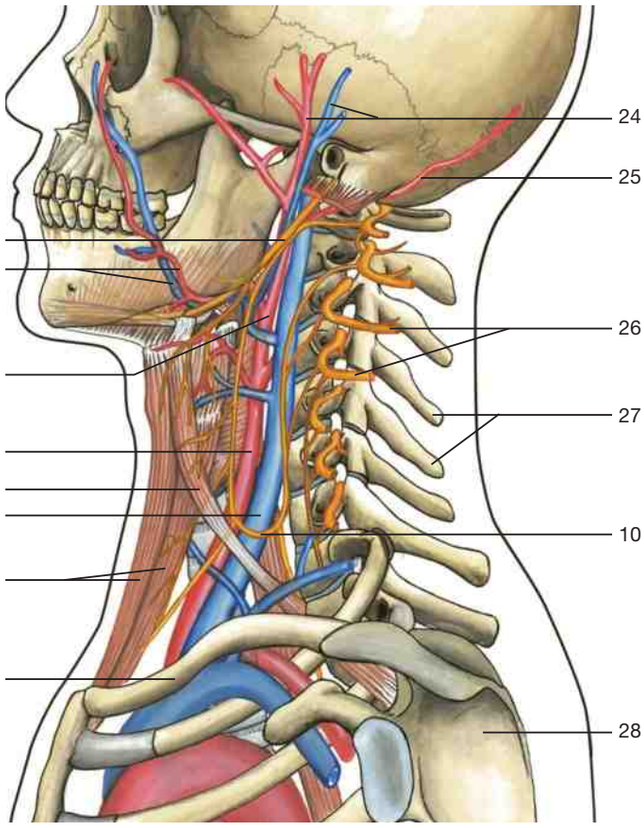


Neck with submandibular region (lateral aspect). **Hypoglossal nerve** (n. XII). Mandible slightly elevated. Arrow = superior cervical ganglion.

1 Facial artery and mandible
2 Submental artery
3 Mylohyoid muscle and nerve
4 Hypoglossal nerve (lingual branches)
5 Thyrohyoid branch of hypoglossal nerve (n. XII)
6 Anterior belly of digastric muscle
7 Hyoid bone
8 Omohyoid branch of hypoglossal nerve (n. XII)
9 Omohyoid muscle and superior thyroid artery
10 Ansa cervicalis
11 Posterior belly of digastric muscle
12 Hypoglossal nerve (n. XII)
13 Vagus nerve (n. X)
14 Internal carotid artery
15 Superior root of ansa cervicalis
16 External carotid artery
17 Cervical plexus
18 Common carotid artery
19 Facial artery and vein
20 Omohyoid muscle
21 Internal jugular vein
22 Sternohyoid and sternothyroid muscles
23 Clavicle
24 Superficial temporal artery and vein
25 Occipital artery
26 Spinal nerves (C_3 and C_4)
27 Spinal processes of cervical vertebrae (C_4 and C_5)
28 Scapula



Nerves and vessels of the neck (lateral aspect). The ansa cervicalis with connection to the spinal nerves is depicted.

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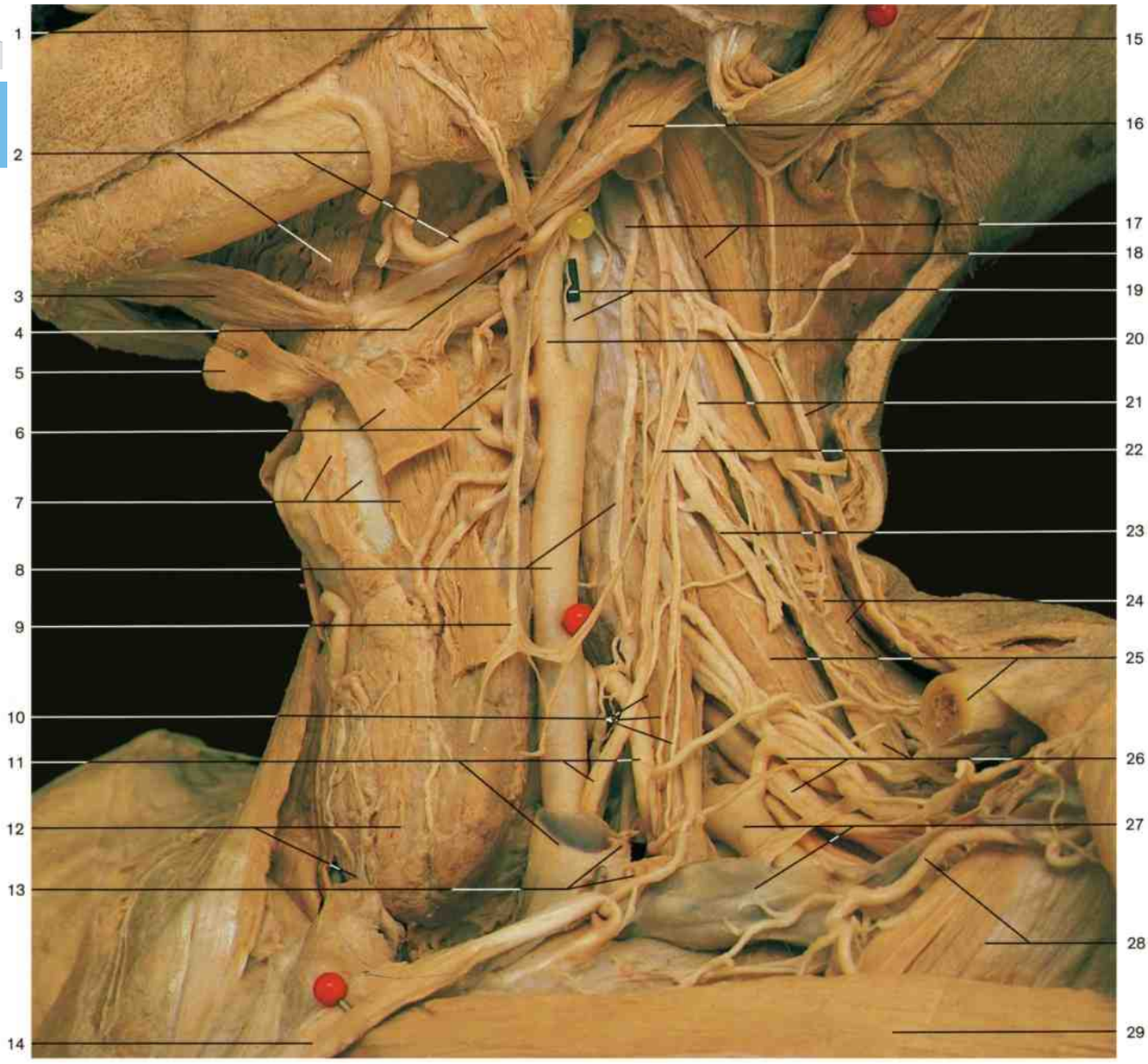

Neck, deeper dissection (lateral aspect). Clavicle partly removed to show the slit between the scalenus muscles. Internal jugular vein removed.

1 Masseter muscle
2 Mylohyoid muscle and facial artery
3 Anterior belly of digastric muscle
4 Hypoglossal nerve
5 Sternohyoid muscle
6 Omohyoid muscle, superior thyroid artery and vein
7 Sternothyroid muscle, thyroid cartilage, and pyramidal lobe of thyroid gland
8 Common carotid artery and sympathetic trunk
9 Ansa cervicalis
10 Phrenic nerve, ascending cervical artery, and anterior scalenus muscle
11 Inferior thyroid artery, vagus nerve, and internal jugular vein (cut)
12 Thyroid gland and unpaired inferior thyroid venous plexus
13 Thoracic duct and left subclavian trunk
14 Subclavius muscle (reflected)
15 Sternocleidomastoid muscle (reflected)
16 Posterior belly of digastric muscle
17 Superior cervical ganglion and splenius muscle
18 Lesser occipital nerve
19 Internal carotid artery and branch of the glossopharyngeal nerve to the carotid body
20 External carotid artery
21 Cervical plexus and accessory nerve
22 Inferior root of ansa cervicalis
23 Supraclavicular nerve
24 Levator scapulae muscle
25 Scalenus medius muscle and clavicle
26 Transverse cervical artery, brachial plexus, and scalenus posterior muscle
27 Subclavian artery and vein
28 Thoraco-acromial artery and pectoralis minor muscle
29 Pectoralis major muscle

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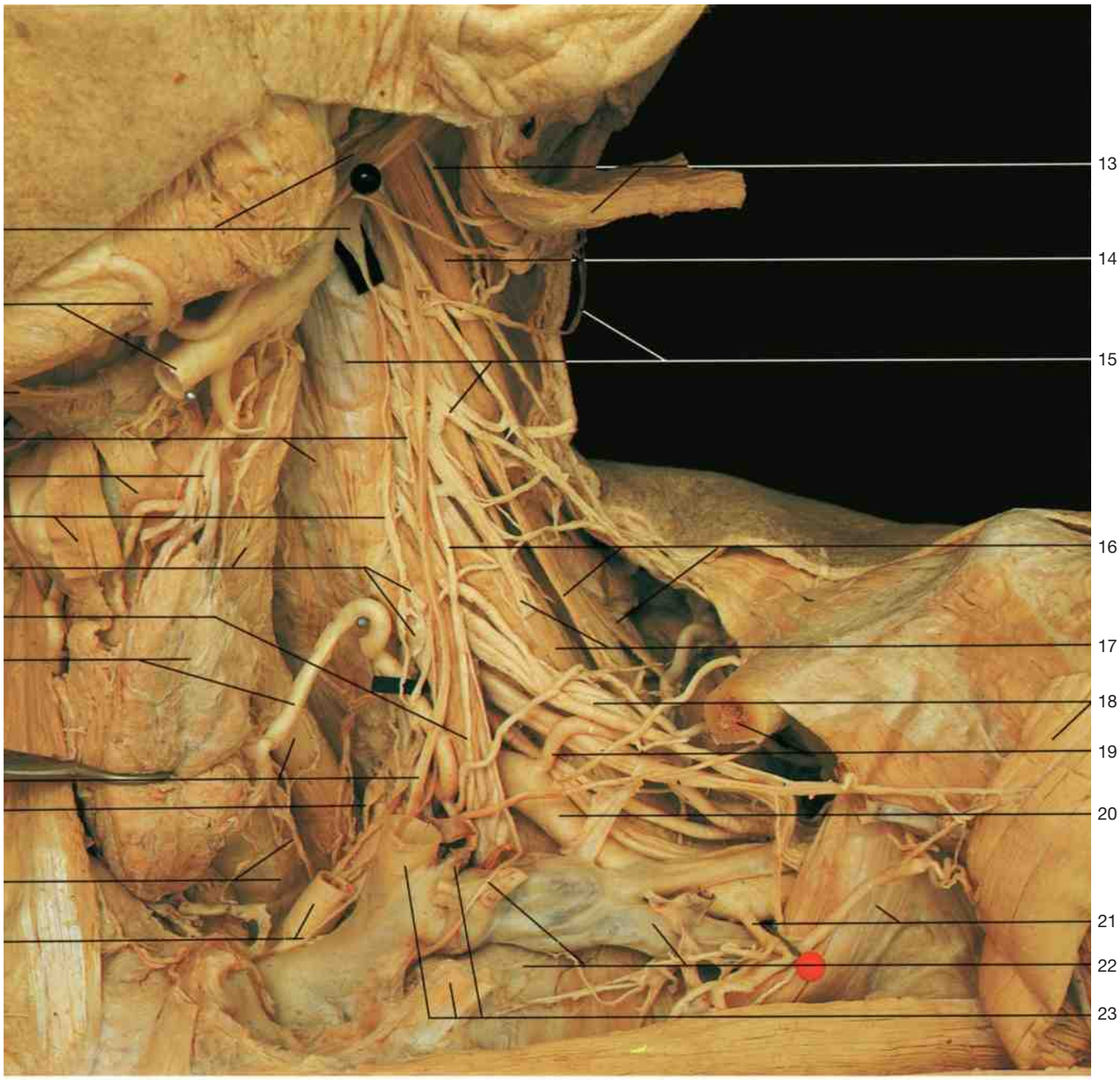

Neck, deepest dissection (antero-lateral aspect). Thyroid gland reflected to expose the esophagus and the recurrent laryngeal nerve.

1 Superior cervical ganglion of sympathetic trunk and posterior belly of digastric muscle
1a Anterior belly of digastric muscle
2 Facial artery and common carotid artery (reflected anteriorly)
3 Ascending cervical artery and longus colli muscle
4 Omohyoid muscle and superior thyroid artery
5 Sympathetic trunk and sternohyoid muscle
6 Middle cervical ganglion and inferior pharyngeal constrictor muscle
7 Scalenus anterior muscle and phrenic nerve
8 Thyroid gland and inferior thyroid artery
9 Vagus nerve and esophagus
10 Stellate ganglion
11 Recurrent laryngeal nerve and trachea
12 Common carotid artery and cervical cardiac branch of vagus nerve
13 Sternocleidomastoid muscle and accessory nerve
14 Splenius capitis muscle
15 Lesser occipital nerve, longus capitis muscle, and cervical plexus
16 Phrenic nerve, scalenus posterior muscle, and levator scapulae muscle
17 Supraclavicular nerves and scalenus medius muscle
18 Brachial plexus and pectoralis major muscle (clavicular head)
19 Transverse cervical artery and clavicle
20 Subclavian artery
21 Thoraco-acromial artery and pectoralis minor muscle
22 First rib, accessory phrenic nerve, and subclavian vein
23 Internal jugular vein, thoracic duct, and subclavius muscle

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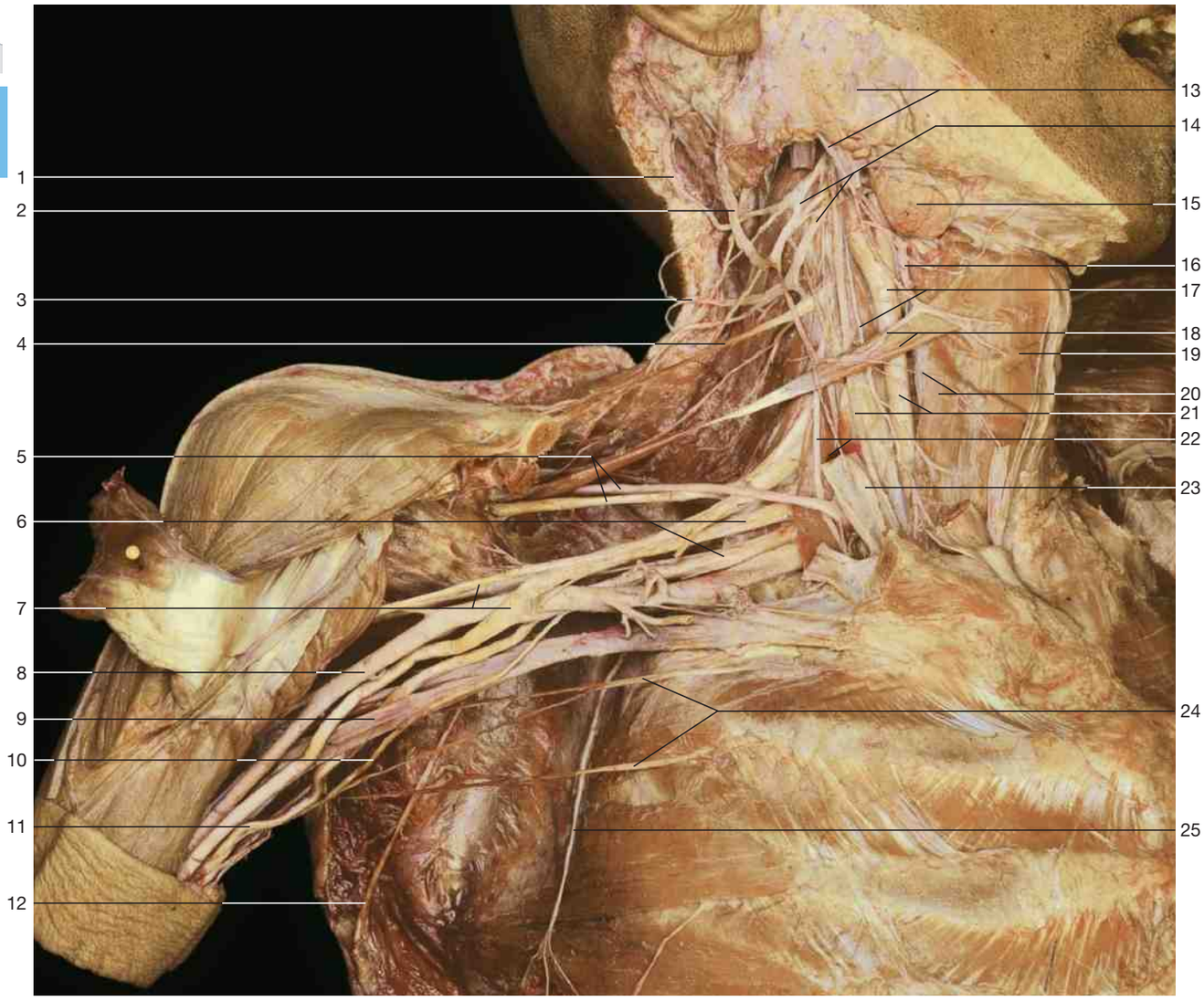

Neck and arm, deepest dissection (antero-lateral aspect). **Cervical and brachial plexuses** and their relation to the blood vessels are shown. Note the location and content of scalene triangle. Sternocleidomastoid muscle and clavicle have been removed; the internal jugular vein was divided to display the roots of cervical and brachial plexuses.

1 Lesser occipital nerve
2 Great auricular nerve
3 Cutaneous branches of cervical plexus
4 Supraclavicular nerve
5 Suprascapular nerve and artery
6 Brachial plexus
7 Median nerve (with two roots) and musculocutaneous nerve
8 Axillary artery
9 Axillary vein
10 Medial brachial cutaneous nerve
11 Ulnar nerve
12 Thoracodorsal nerve
13 Parotid gland and facial nerve (cervical branch)
14 Cervical plexus
15 Submandibular gland
16 Superior thyroid artery
17 Common carotid artery dividing in internal and external carotid artery and superior root of ansa cervicalis
18 Omohyoid muscle and cervical branch of facial nerve joining the transverse cervical nerve (C_2, C_3)
19 Sternohyoid muscle
20 Transverse cervical nerve and sternothyroid muscle
21 Common carotid artery and vagus nerve
22 Phrenic nerve and scalenus anterior muscle
23 Internal jugular vein
24 Intercostobrachial nerves
25 Long thoracic nerve

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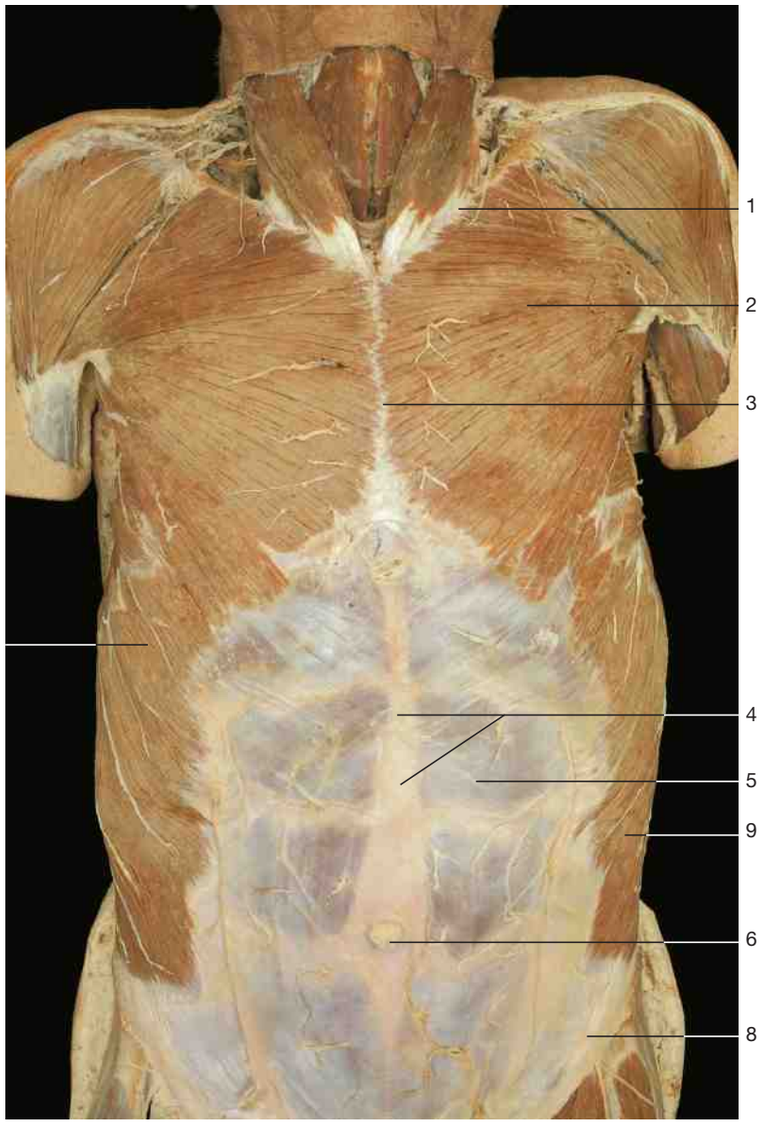
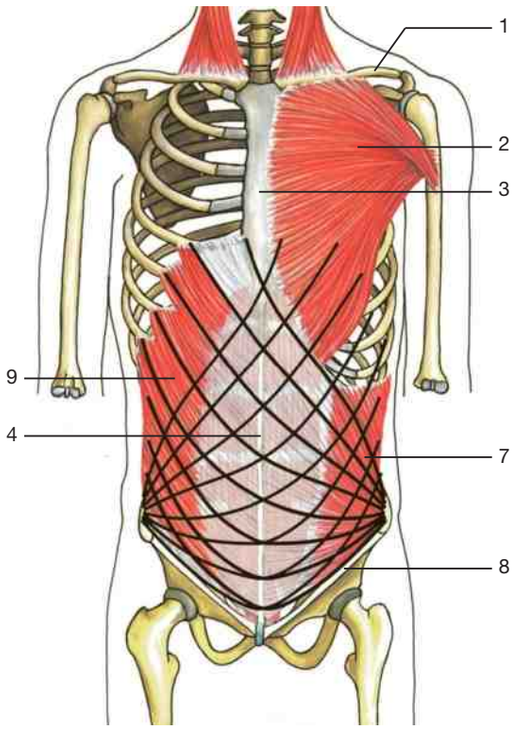
3 Trunk



Anterior thoracic and abdominal walls with superficial musculature.
The fascia of pectoralis major muscle and the abdominal wall have been removed; the anterior layer of the sheath of the rectus abdominis muscle is displayed.

1 Clavicle
2 Pectoralis major muscle
3 Sternum
4 Linea alba
5 Anterior layer of rectus sheath
6 Umbilicus
7 Internal abdominal oblique muscle
8 Inguinal ligament
9 External abdominal oblique muscle

The anterior abdominal and thoracic walls reveal a segmental structure. The ribs are connected by intercostal muscles forming defined skeleto-motoric and neuro-vascular segments.
At the abdominal wall, the segments form great flat muscles, that end anteriorly in strong sheet-like aponeuroses. The aponeurosis interlace at the linea alba with their counterparts from the opposite side to form the tough tendinous sheath of the rectus muscle. Movements of the abdominal wall also support the process of respiration functionally related to the diaphragm.



Organization of the thoracic and abdominal walls.
The architecture of tendon fibers of the two abdominal oblique muscles in the rectus sheath is shown.

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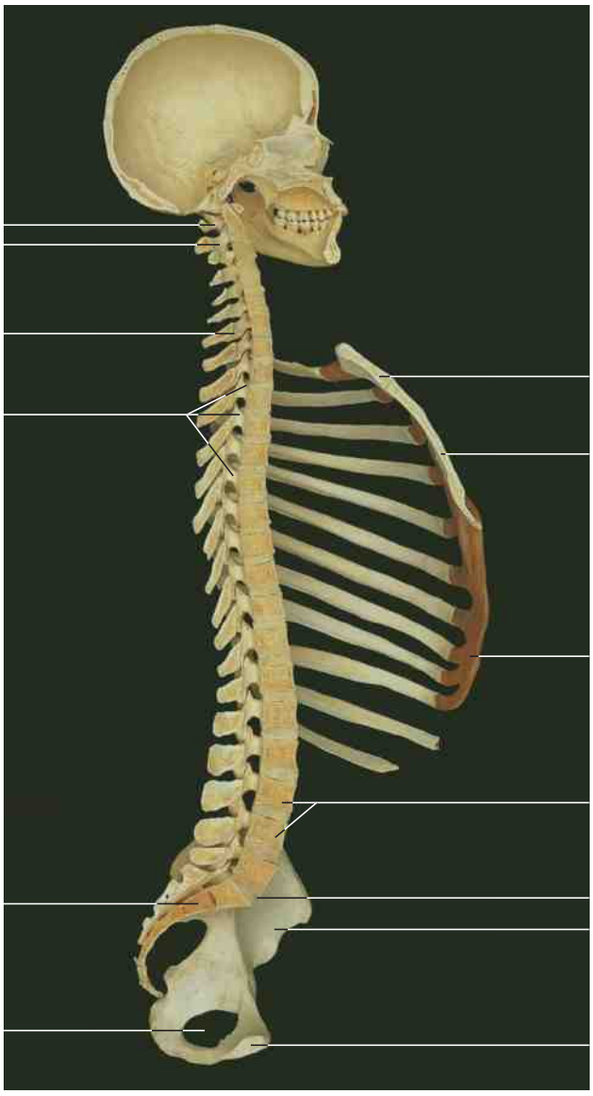
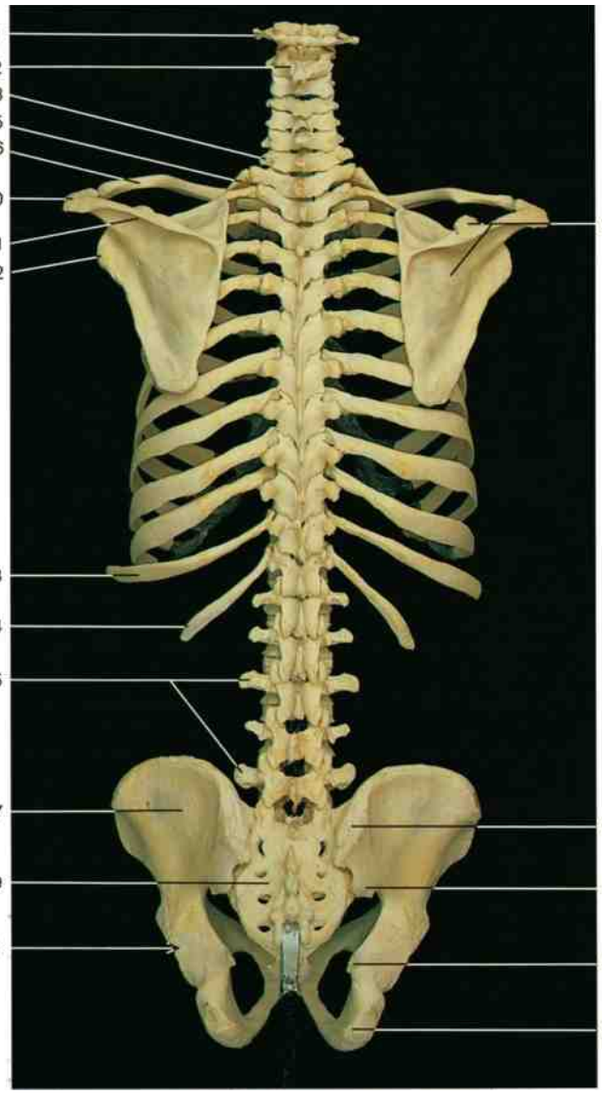


Median sagittal section through the vertebral column, head, and thorax of the adult.



Skeleton of the trunk, vertebral column, thorax, and pelvis (posterior aspect).

1 Atlas
2 Axis
3 Seventh cervical vertebra (vertebra prominens)
4 Vertebral canal
5 First rib
6 Clavicle
7 Manubrium sterni
8 Body of sternum
9 Costal arch
10 Acromion
11 Spine of scapula
12 Glenoid cavity (lateral angle of scapula)
13 Eleventh rib
14 Twelfth rib
15 Lumbar vertebrae
16 Sacral promontory
17 Hip bone
18 Pubic symphysis
19 Sacrum
20 Obturator foramen
21 Acetabulum
22 Scapula with coracoid process
23 Posterior superior iliac spine
24 Posterior inferior iliac spine
25 Ischial spine
26 Ischial tuberosity

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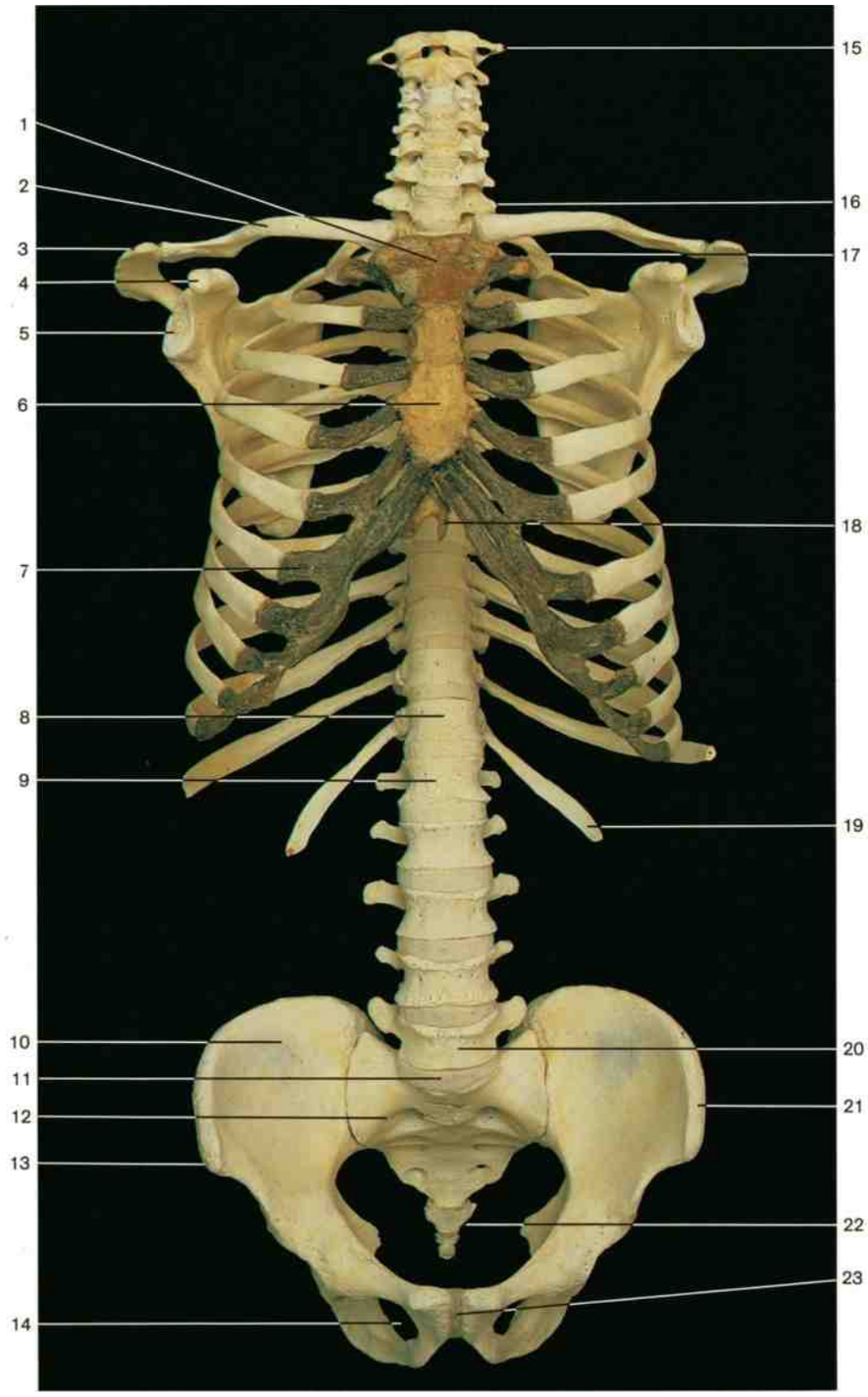

Skeleton of the trunk, vertebral column, pelvis, thorax, and shoulder girdle (anterior aspect).

1 Manubrium sterni
2 Clavicle
3 Acromion
4 Coracoid process
5 Glenoid cavity
6 Body of sternum
7 Costal cartilage
8 Body of the twelfth thoracic vertebra
9 Body of the first lumbar vertebra
10 Hip bone
11 Sacral promontory
12 Sacrum
13 Anterior superior iliac spine
14 Obturator foramen
15 Atlas
16 Seventh cervical vertebra
17 First rib
18 Xiphoid process
19 Twelfth rib
20 Body of the fifth lumbar vertebra
21 Iliac crest
22 Coccyx
23 Pubic symphysis

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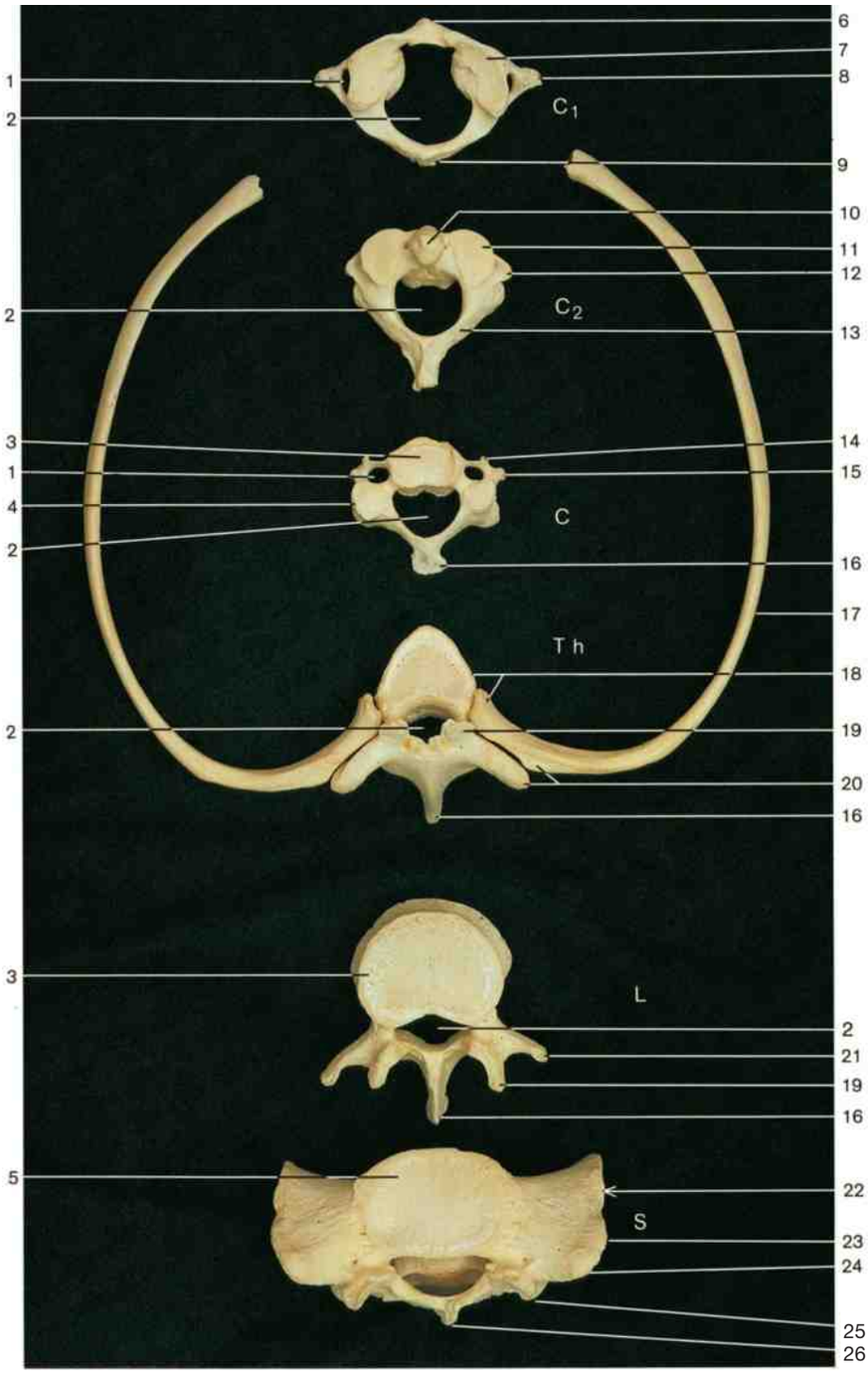
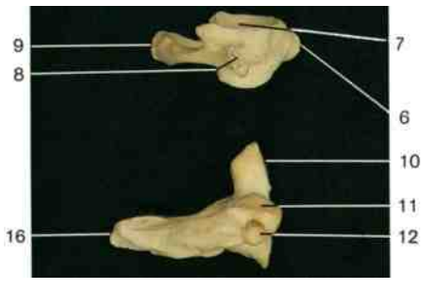
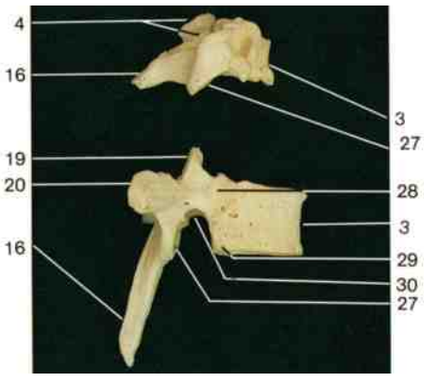


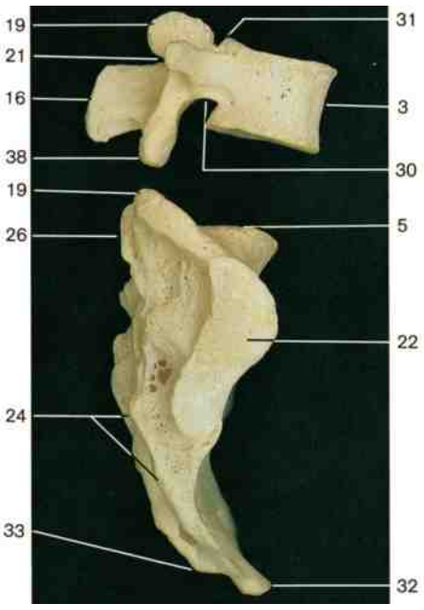
Representative vertebrae from each region of the vertebral column (superior aspect). From top to bottom: atlas (C_1), axis (C_2), cervical vertebra (C), thoracic vertebra (Th), lumbar vertebra (L), and sacrum (S).



Atlas and axis.

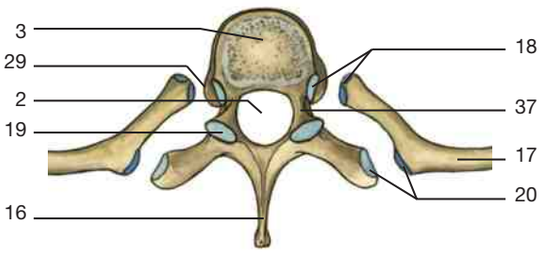


Typical cervical and thoracic vertebrae.



Typical lumbar vertebra and sacrum.

△
Representative vertebrae from each region of the vertebral column (lateral aspect, ventral surface on the right).



General organization of ribs and vertebrae (schematic drawing).

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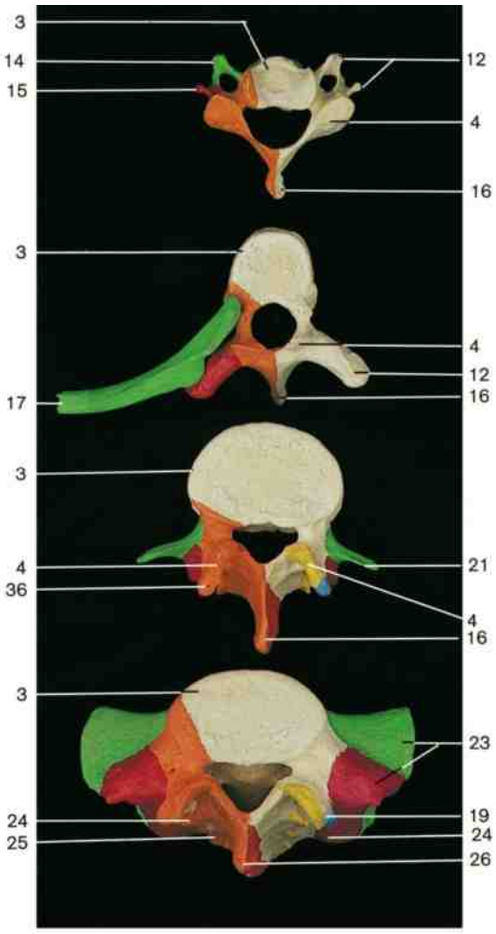
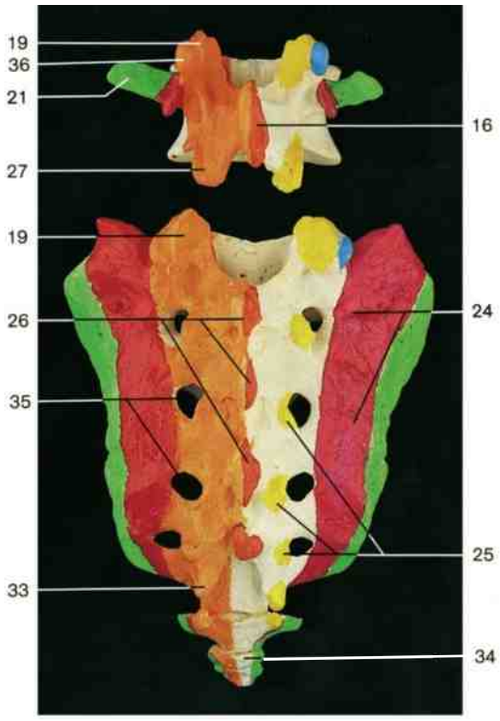


General characteristics of the vertebrae. Typical cervical, thoracic, and lumbar vertebrae and sacrum.



General characteristics of lumbar vertebrae and sacrum (posterior aspect).

Green = ribs or homologous processes
Red = muscular processes (transverse and spinous processes)
Orange = laminae and articular processes
Yellow and blue = articular facets

1 Foramen transversarium
2 Vertebral foramen
3 Body of vertebra
4 Superior articular facet
5 Base of sacrum
6 Anterior tubercle of atlas
7 Superior articular facet of atlas
8 Transverse process
9 Posterior tubercle of atlas
10 Dens of axis
11 Superior articular surface
12 Transverse process
13 Arch of vertebra
14 Anterior tubercle of transverse process
15 Posterior tubercle of transverse process
16 Spinous process
17 Shaft of rib
18 Body of vertebra and head of rib articulating with each other (costovertebral joint)
19 Superior articular process
20 Transverse process and tubercle of rib articulating with each other (costotransverse joint)
21 Costal process
22 Auricular surface
23 Lateral part of sacrum
24 Lateral sacral crest
25 Intermediate sacral crest
26 Median sacral crest
27 Inferior articular facet
28 Superior demifacet for head of rib
29 Inferior demifacet for head of rib
30 Inferior vertebral notch
31 Superior vertebral notch
32 Apex of the sacrum
33 Sacral cornu
34 Coccyx
35 Dorsal sacral foramina
36 Mamillary process
37 Pedicle
38 Inferior articular process

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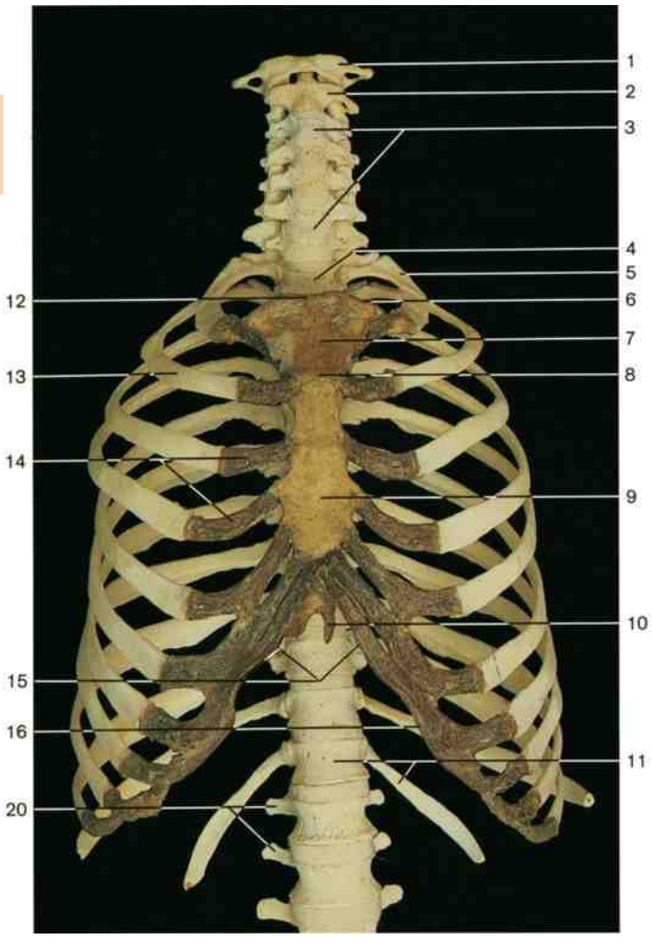
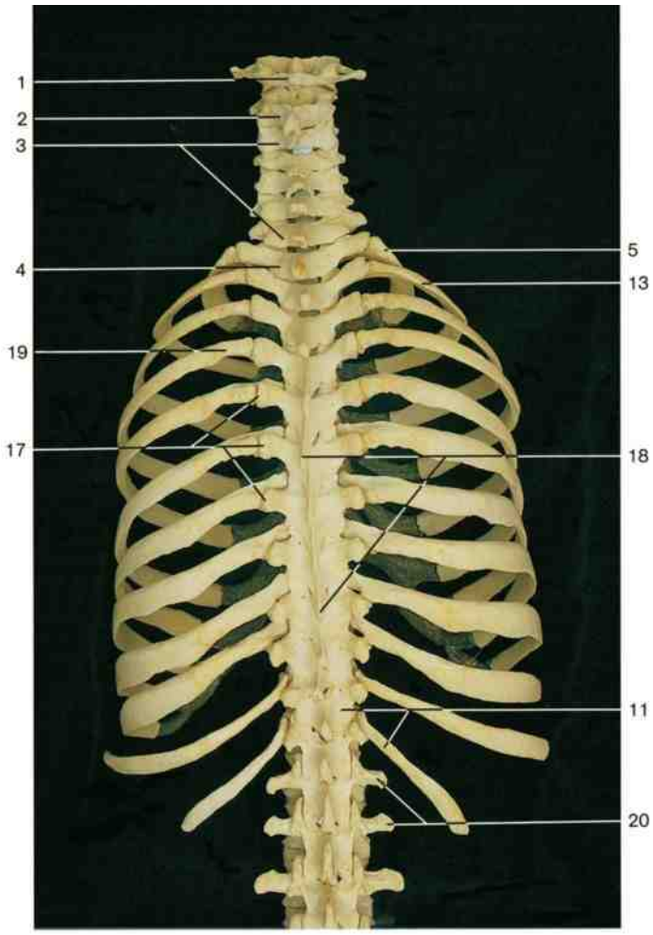
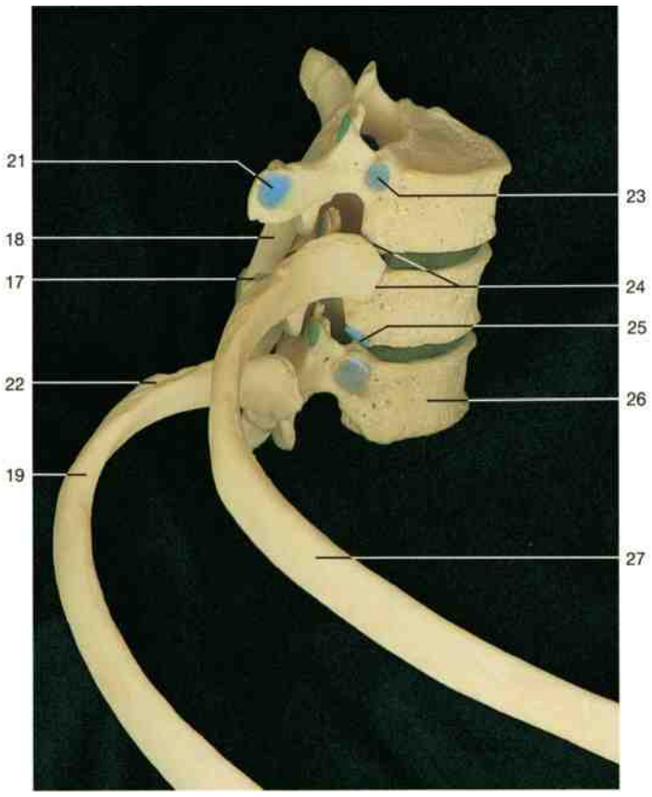


Skeleton of the thorax (anterior aspect).



Skeleton of the thorax (posterior aspect).



Costovertebral articulation (right lateral aspect).

1 Atlas
2 Axis
3 Cervical vertebrae
4 First thoracic vertebra
5 First rib
6 Facet for clavicle and clavicular notch
7 Manubrium sterni
8 Sternal angle
9 Body of sternum
10 Xiphoid process
11 Twelfth thoracic vertebra and rib
12 Jugular notch
13 Second rib
14 Costal cartilages
15 Infrasternal angle
16 Costal arch
17 Costotransverse joints between the transverse processes of thoracic vertebra and the tubercles of the ribs
18 Spinous processes
19 Costal angle
20 Costal processes of lumbar vertebrae
21 Facet for articulation with rib
22 Tubercle of rib
23 Superior facet for articulation with head of rib
24 Articulation of head of rib with two vertebrae
25 Inferior facet for articulation with head of rib
26 Body of thoracic vertebra
27 Body or shaft of rib

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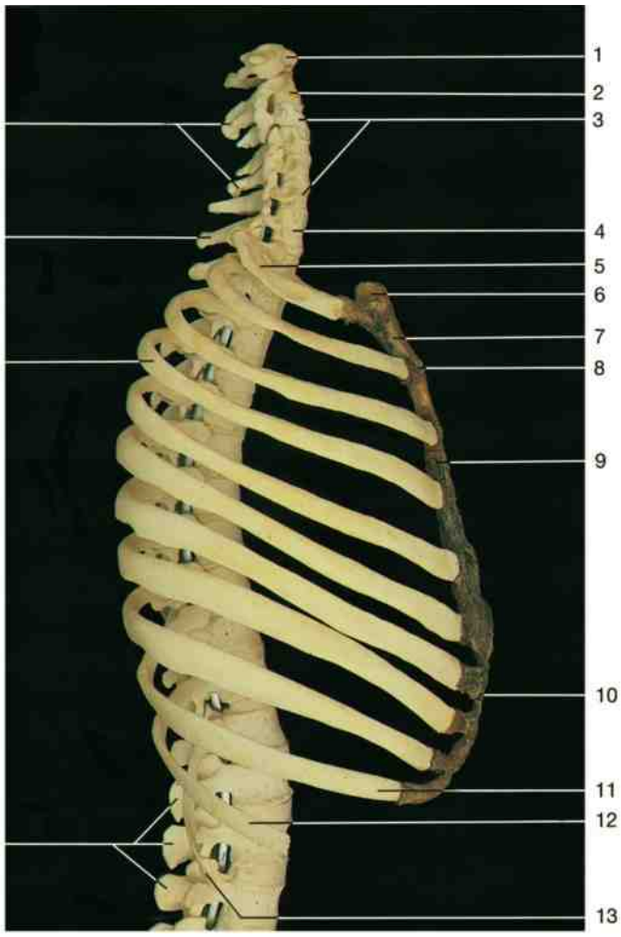
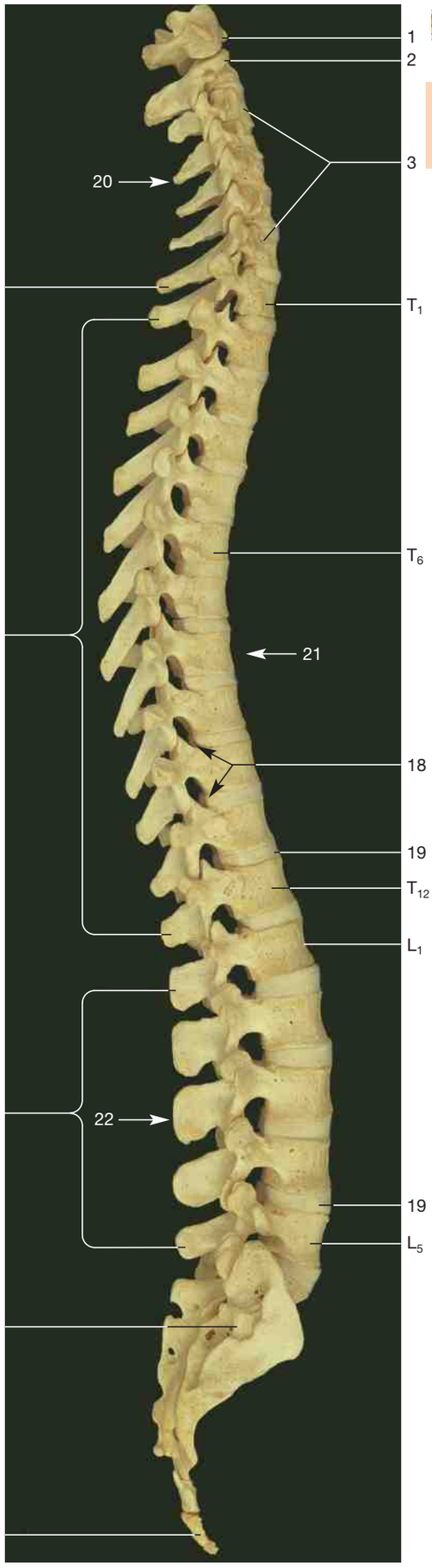


Skeleton of the thorax (right lateral aspect).



Vertebral column (right lateral aspect).

1 Atlas
2 Axis
3 Cervical vertebrae
4 Seventh cervical vertebra (vertebra prominens)
5 First rib
6 Facet for clavicle
7 Manubrium sterni
8 Sternal angle
9 Body of sternum
10 Costal arch
11 Tenth rib
12 Eleventh rib
13 Twelfth rib
14 Spinous processes of cervical vertebrae
15 Spinous processes of thoracic vertebrae
16 Spinous processes of lumbar vertebrae
17 Costal angle
18 Intervertebral foramina
19 Intervertebral discs
20 Cervical curvature
21 Thoracic curvature
22 Lumbar curvature
23 Sacrum
24 Coccyx

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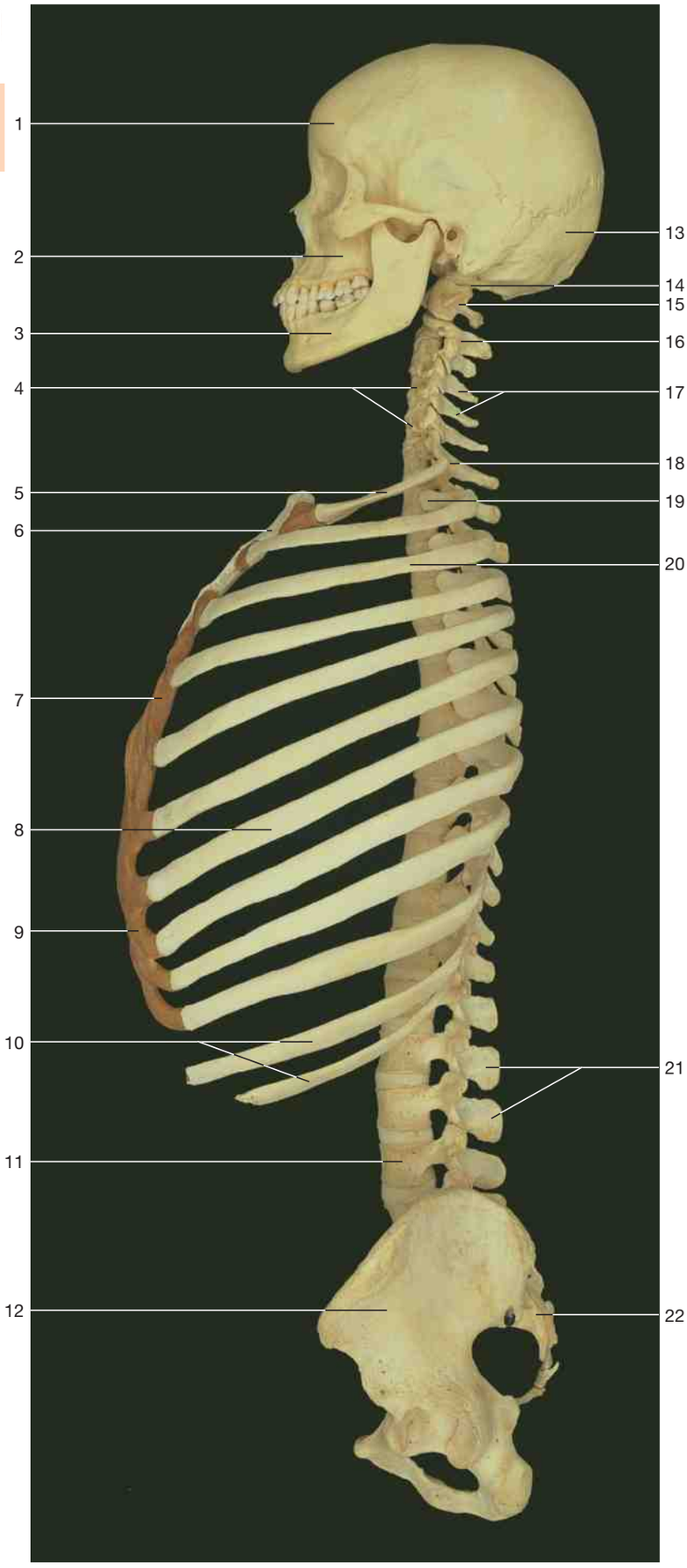

1 Frontal bone
2 Maxilla
3 Mandible
4 Bodies of cervical vertebrae
5 First rib
6 Manubrium of sternum
7 Sternum (corpus sterni)
8 Seventh rib (last of the true ribs)
9 Costal arch (arcus costalis)
10 Floating ribs (costae fluctuantes)
11 Body of fourth lumbar vertebra
12 Pelvis
13 Occipital bone
14 Atlanto-occipital joint
15 Atlas
16 Axis
17 Spinous processes of cervical vertebrae (C_4, C_5)
18 Costotransverse joint of first rib
19 Head of second rib
20 Third rib
21 Spinous processes of lumbar vertebrae (L_2, L_3)
22 Sacrum

Vertebral column and thorax in connection with head and pelvis (lateral aspect).

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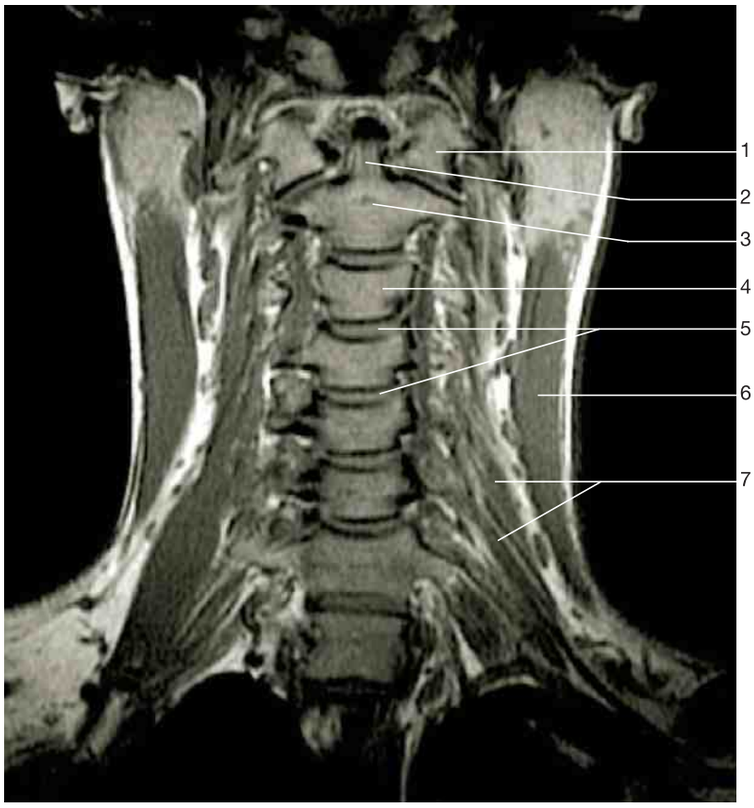
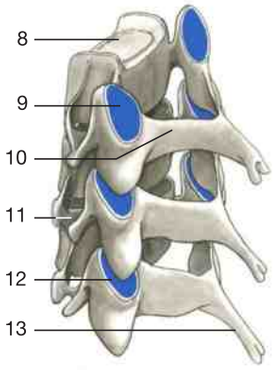
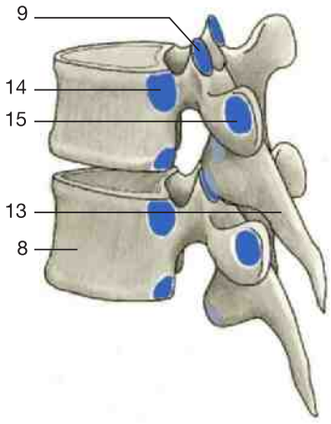
1 Atlas
2 Dens of axis
3 Axis
4 Body of cervical vertebra
5 Intervertebral discs
6 Sternocleidomastoid muscle
7 Scalenus muscles
8 Body of vertebra
9 Superior articular facet
10 Vertebral arch
11 Transverse process of vertebra
12 Zygapophysial joint
13 Spinous process
14 Articular facet of costovertebral joint
15 Transverse process with articular facet of costotransverse joint
16 Costal process of lumbar vertebra
17 Sacrum
18 Median sacral crest
19 Dorsal sacral foramina
20 Coccyx



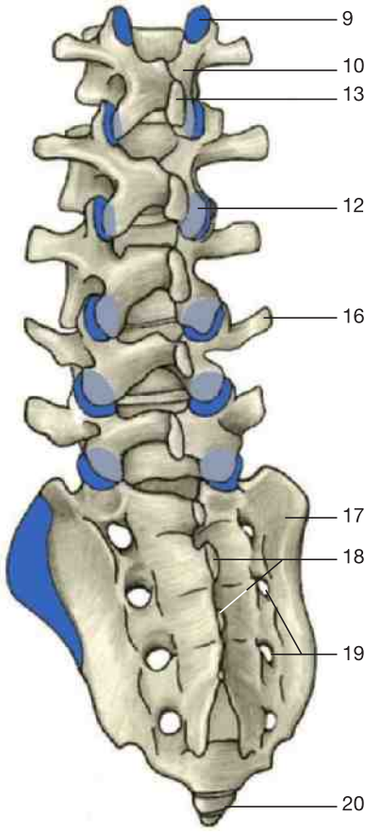
Coronal section through the neck at the level of the cervical vertebrae (MRI scan, courtesy of Prof. Heuck, Munich).



Cervical vertebrae (lateral aspect, articular facets = blue).



Thoracic vertebrae (lateral aspect, articular facets = blue).



Lumbar vertebrae with sacrum and coccyx (posterior aspect, articular facets = blue).

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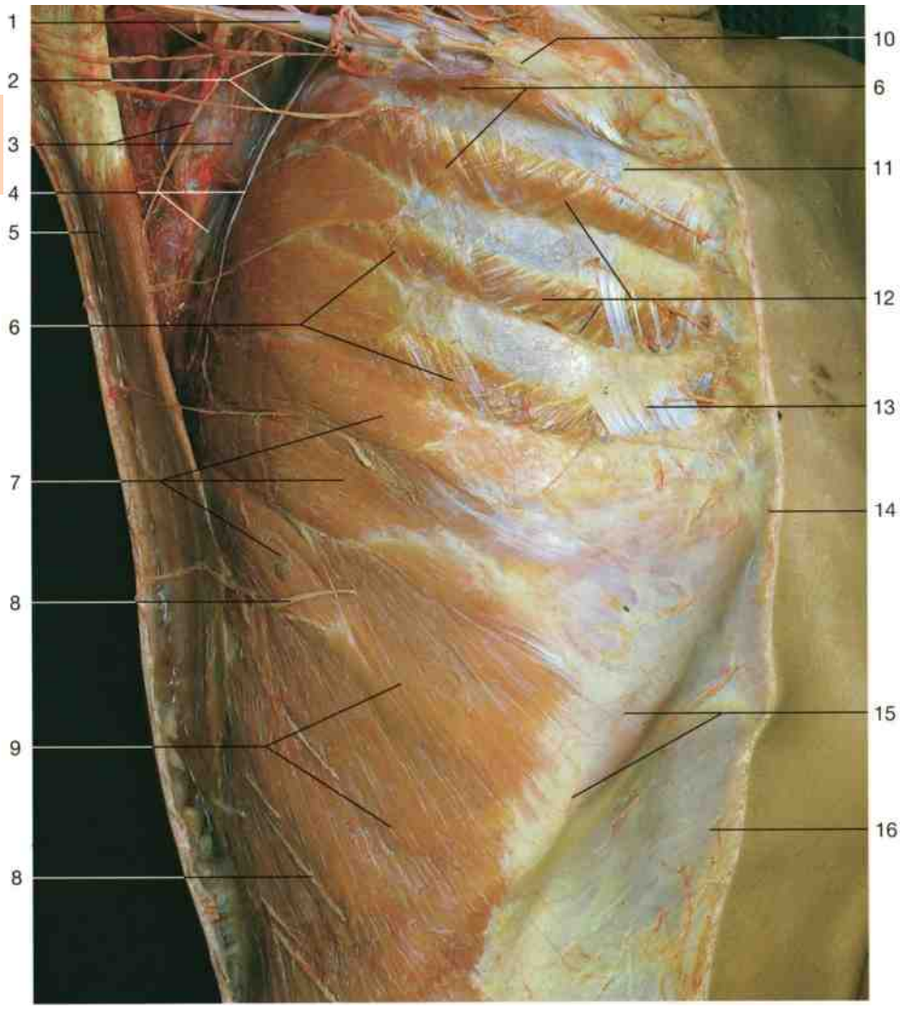
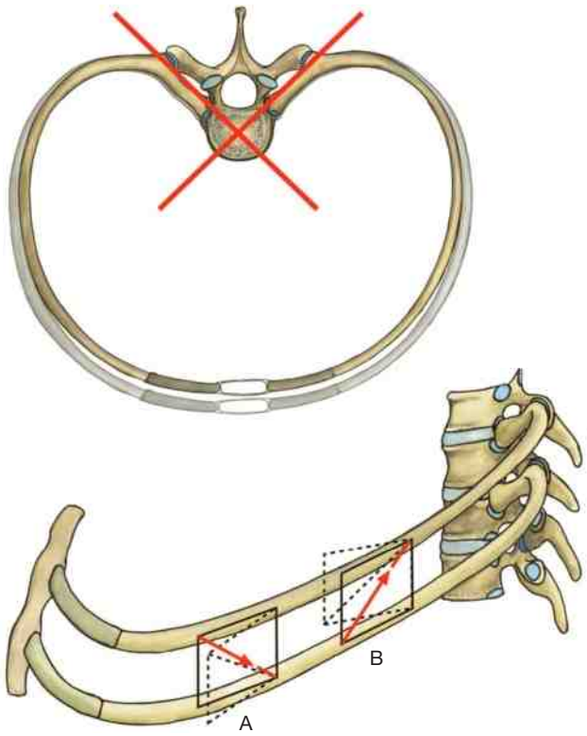


1 Axillary vein
2 Intercostobrachial nerves
3 Subscapularis muscle and thoracodorsal nerve
4 Long thoracic nerve, lateral thoracic artery and vein
5 Latissimus dorsi muscle
6 External intercostal muscles
7 Serratus anterior muscle
8 Lateral cutaneous branches of intercostal nerves
9 External abdominal oblique muscle
10 Clavicle (divided)
11 Second rib (costochondral junction)
12 Internal intercostal muscles
13 External intercostal membrane
14 Position of xiphoid process
15 Costal arch or margin
16 Anterior layer of rectus sheath

Muscles of the thorax, superficial layer (lateral aspect). Upper limb elevated. Pectoralis major and minor muscles have been removed.



Effect of intercostal muscles on the costovertebral and costotransverse joints. Axes of movement indicated by red lines; direction of movements indicated by red arrows.
A = action of internal intercostal muscles (expiration);
B = action of external intercostal muscles (inspiration).

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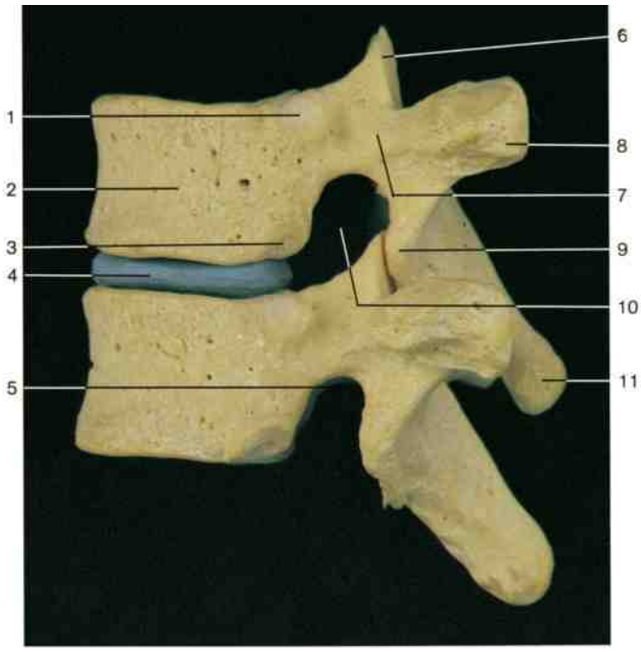
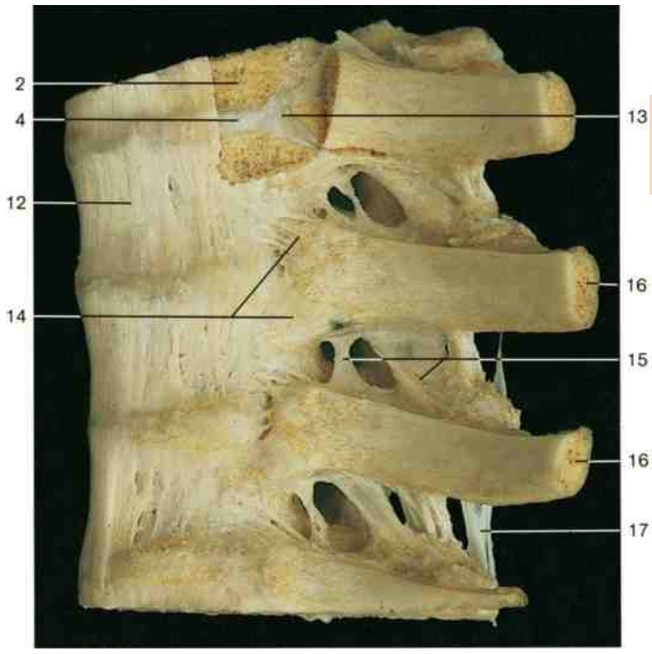


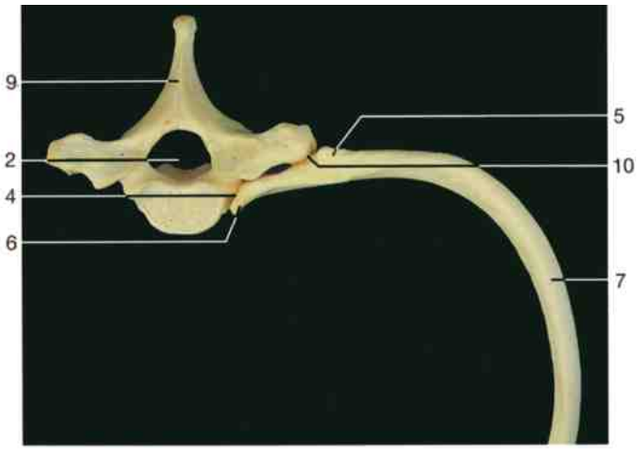
Two thoracic vertebrae (left lateral aspect).

1 Superior demifacet for head of rib
2 Body of vertebra
3 Inferior demifacet for head of rib
4 Intervertebral disc
5 Inferior vertebral notch
6 Superior articular facet and superior articular process
7 Pedicle
8 Transverse process and facet for tubercle of rib
9 Inferior articular process
10 Intervertebral foramen
11 Spinous process
12 Anterior longitudinal ligament
13 Intra-articular ligament
14 Radiate ligament



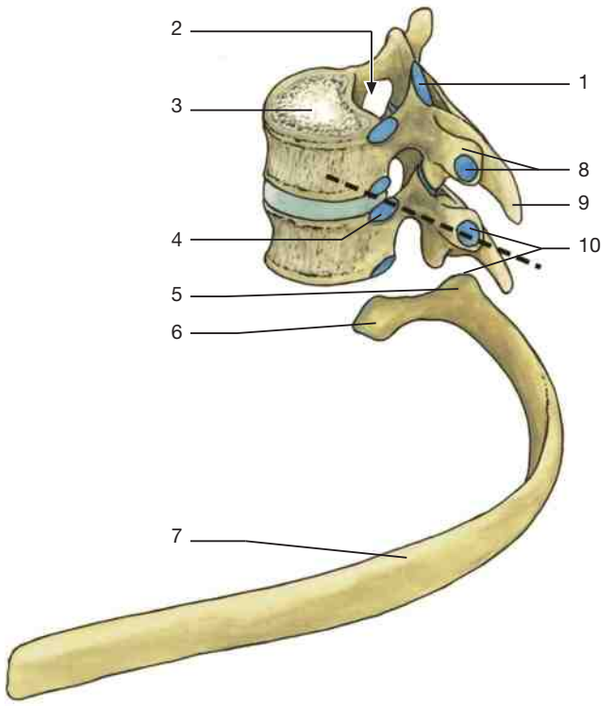
Ligaments of thoracic vertebrae and costovertebral joints (left antero-lateral aspect). In the upper joint, most of the radiate ligament and the anterior part of the head of the rib have been removed to expose the two joint cavities and the interposed intra-articular ligament.

15 Superior costotransverse ligament
16 Body of rib
17 Intertransverse ligament



Location of costovertebral joints (superior aspect).

1 Superior articular process
2 Vertebral canal
3 Body of thoracic vertebra
4 Costovertebral joint (articular facets)
5 Tubercle of rib
6 Head of rib
7 Shaft or body of rib
8 Transverse process with articular facet
9 Spinous process
10 Costotransverse joint (articular facets)



Costovertebral joints (schematic drawing). Two thoracic vertebrae with an articulating rib (separated). Axis of movement indicated by dashed line. Blue = articular facets.

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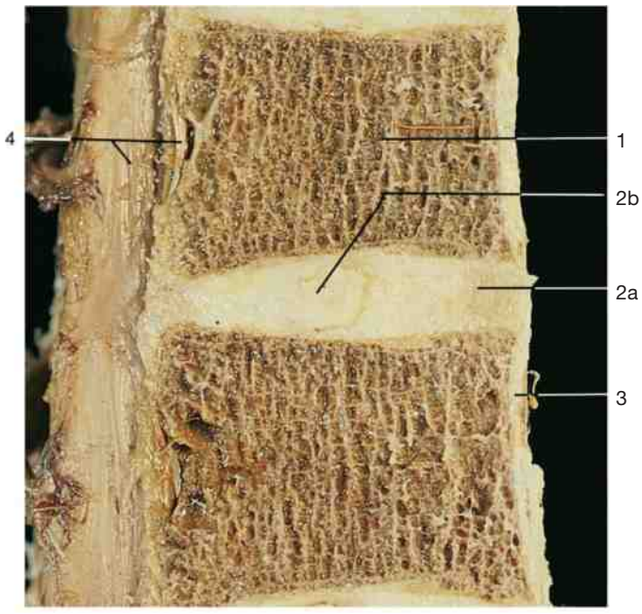
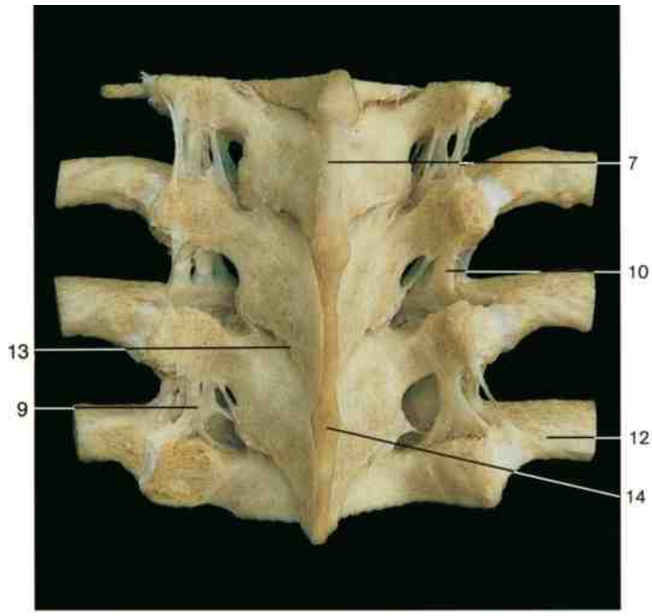
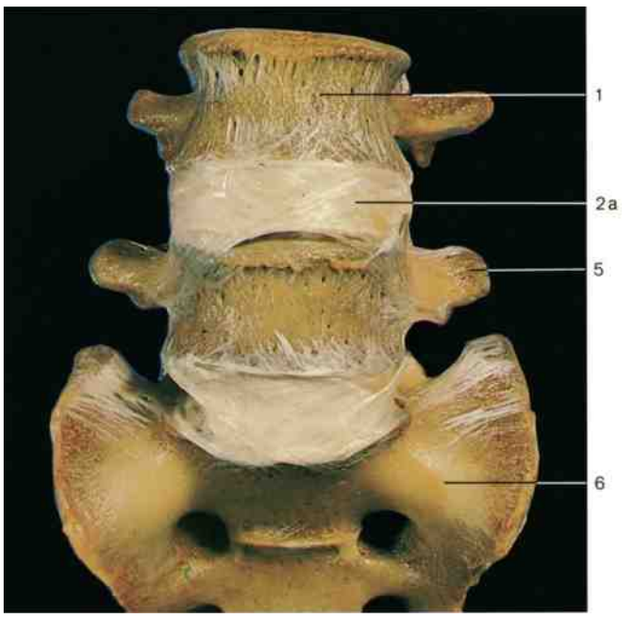


Median-sagittal section of the bodies of the vertebrae, showing the **intervertebral discs,** each of which consists of an outer laminated portion and an inner core.

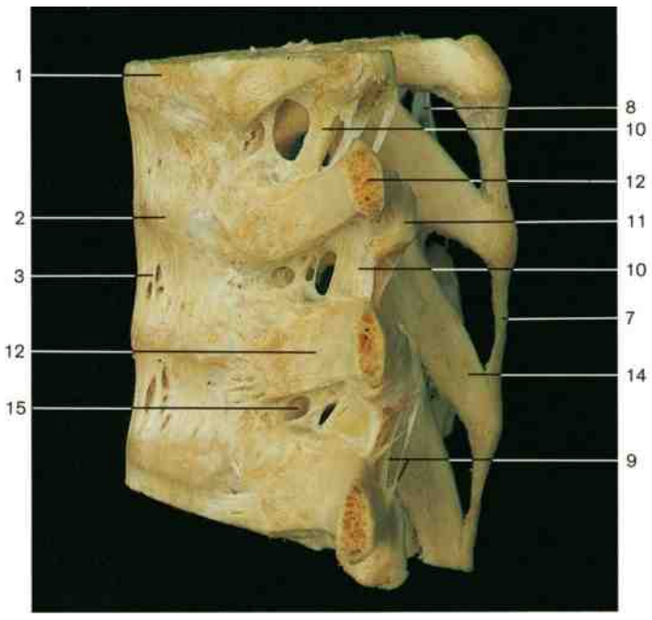


Ligaments of the vertebral column (dorsal aspect).

1 Body of vertebra
2 Intervertebral disc
  a Outer portion (anulus fibrosus)
  b Inner core (nucleus pulposus)
3 Anterior longitudinal ligament
4 Posterior longitudinal ligament and spinal dura mater
5 Costal process of lumbar vertebra
6 Sacrum
7 Supraspinous ligament
8 Interspinous ligament
9 Intertransverse ligament
10 Superior costotransverse ligament
11 Transverse process of thoracic vertebra
12 Rib
13 Ligamentum flavum
14 Spinous process
15 Intervertebral foramen



The two caudal lumbar vertebrae and the sacrum with their intervertebral discs (anterior aspect). Anterior longitudinal ligament removed.



Ligaments of the vertebral column, thoracic part (left lateral aspect).

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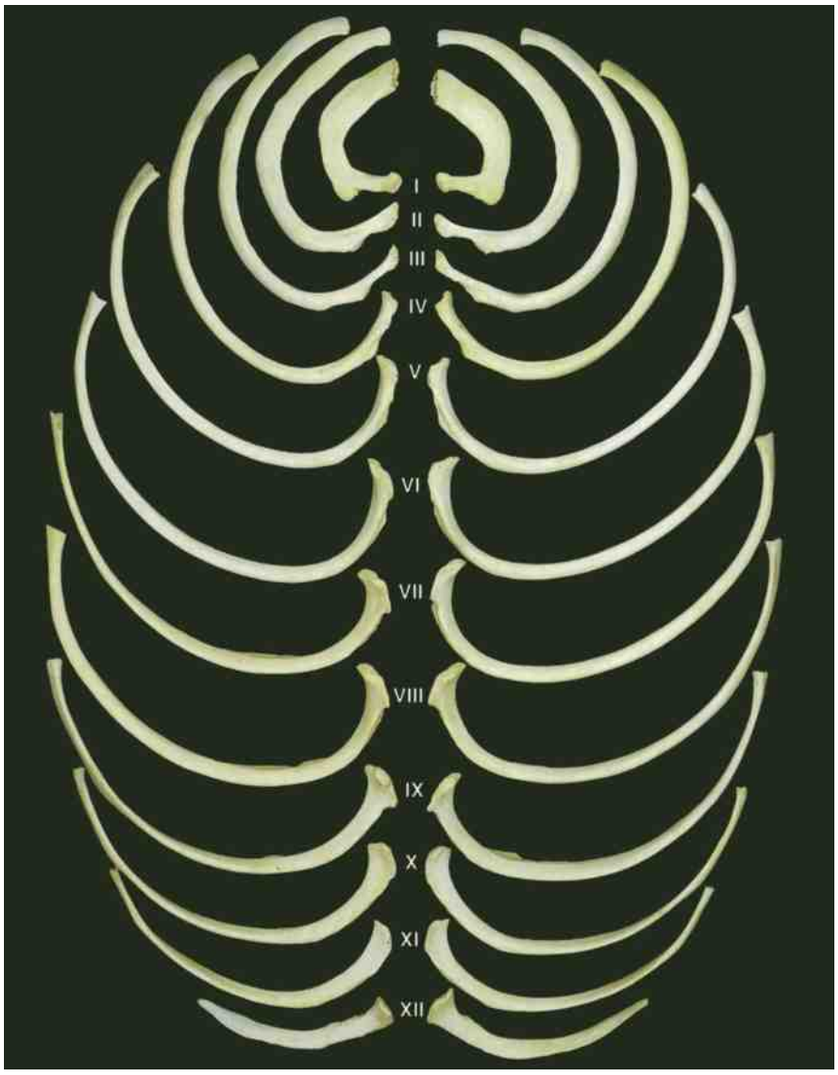
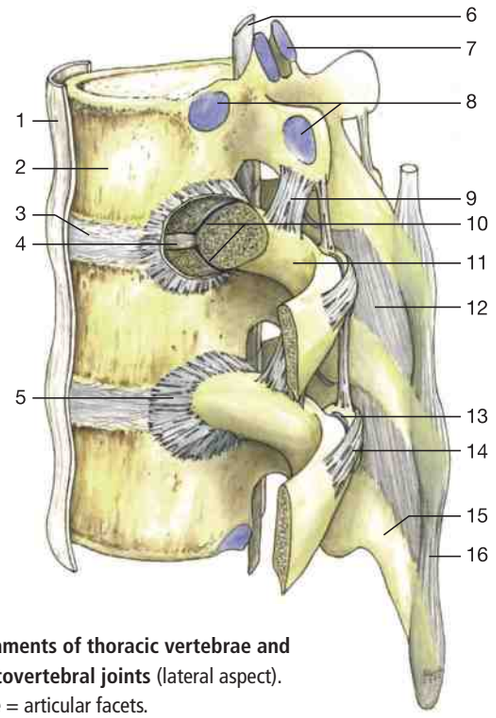
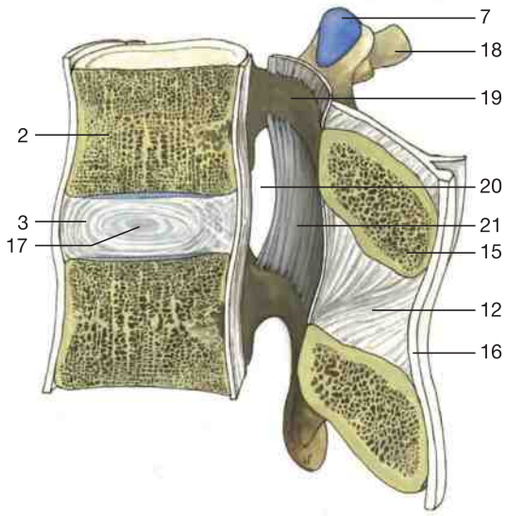
Disarticulated thorax skeleton. ▷
The twelve ribs (I–XII) are arranged in a craniocaudal direction.



1 Anterior longitudinal ligament
2 Body of vertebra
3 Intervertebral disc
4 Intra-articular ligament
5 Radiate ligament
6 Posterior longitudinal ligament
7 Superior articular facet
8 Articular facets of costovertebral joints
9 Superior costotransverse ligament
10 Costovertebral joint
11 Rib
12 Interspinal ligament
13 Costotransverse joint
14 Lateral costotransverse ligament
15 Spinous process
16 Supraspinal ligament
17 Nucleus pulposus
18 Costal process
19 Vertebral arch
20 Intervertebral foramen
21 Intertransverse ligament ▽



Ligaments of thoracic vertebrae and costovertebral joints (lateral aspect). Blue = articular facets.



Median-sagittal section of two lumbar vertebrae showing ligaments and vertebral discs.

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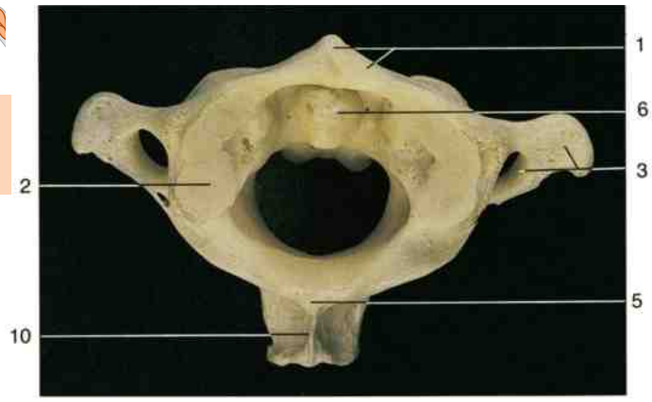
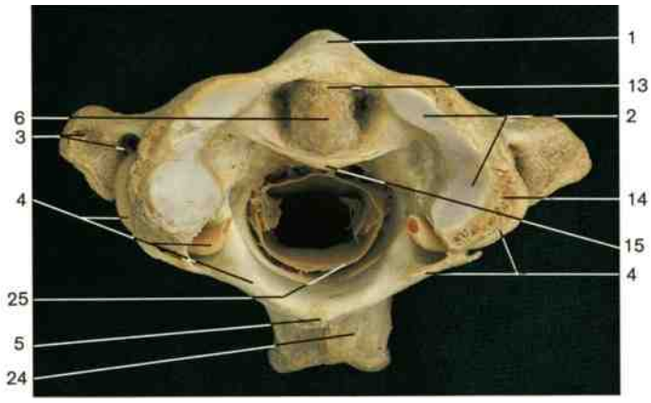
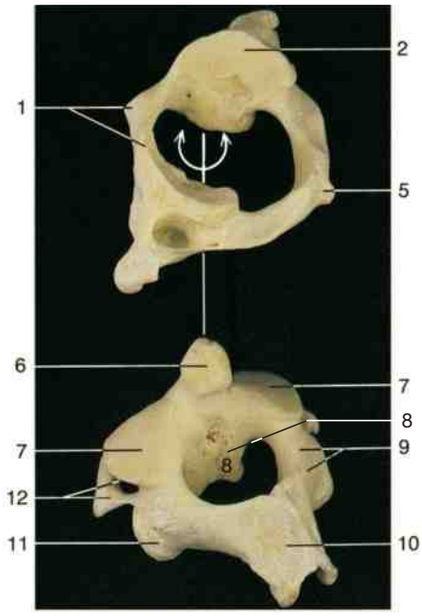


Atlas and axis (from above).

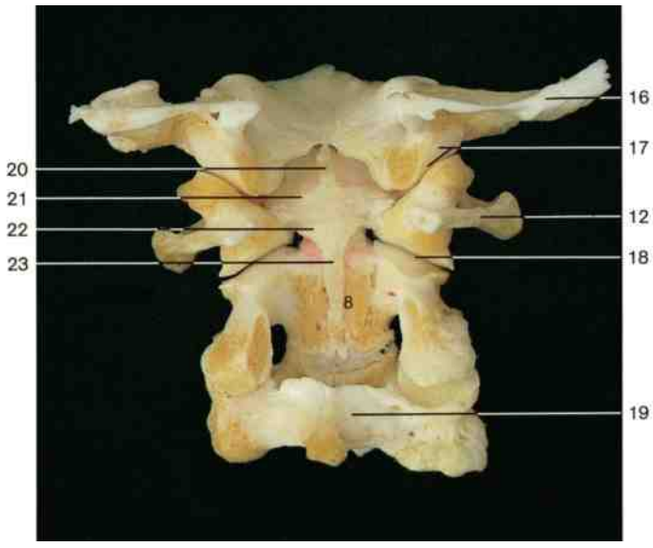


Median atlanto-axial joint and transverse ligament of atlas (from above). Dens of axis partly severed.

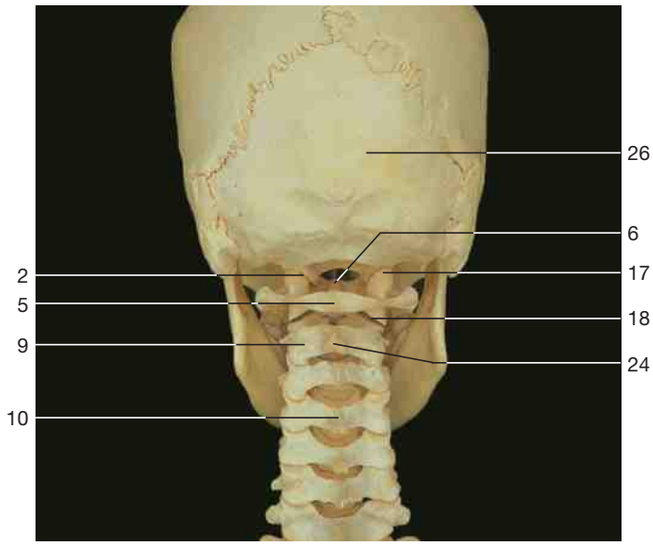


Atlas and axis. Left oblique postero-lateral aspect, demonstrating the articulation of the dens of axis with atlas (cf. arrows).

1 Anterior arch of atlas with anterior tubercle
2 Superior articular facet of atlas
3 Foramen transversarium and transverse process
4 Posterior arch of atlas and vertebral artery
5 Posterior tubercle of atlas
6 Dens of axis
7 Superior articular surface of axis
8 Body of axis
9 Pedicle and lamina of axis
10 Spinous process
11 Inferior articular process
12 Transverse process and foramen transversarium of axis
13 Median atlanto-axial joint (anterior part)
14 Articular capsule of atlanto-occipital joint
15 Transverse ligament of atlas
16 Occipital bone
17 Atlanto-occipital joint
18 Lateral atlanto-axial joint
19 Third cervical vertebra
20 Superior longitudinal band of cruciform ligament
21 Alar ligaments
22 Transverse ligament of atlas
23 Inferior longitudinal band of cruciform ligament
24 Spinous process of axis
25 Dura mater
26 Occipital bone



Atlanto-occipital and atlanto-axial joints (posterior aspect). Posterior part of occipital bone, posterior arch of atlas, and axis have been removed to show the cruciform ligament.



Head and cervical spine (posterior aspect). Bones of atlanto-occipital and atlanto-axial joints.

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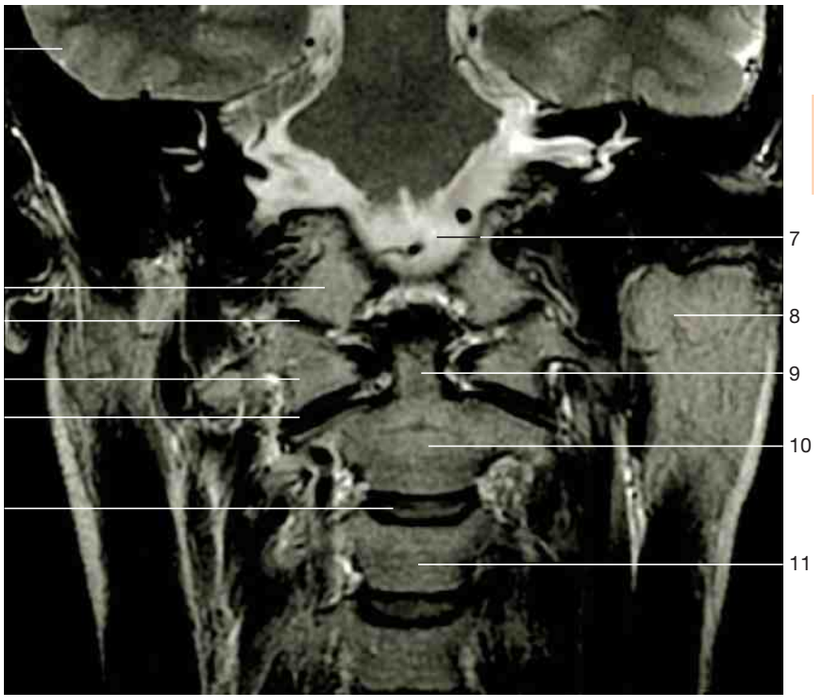
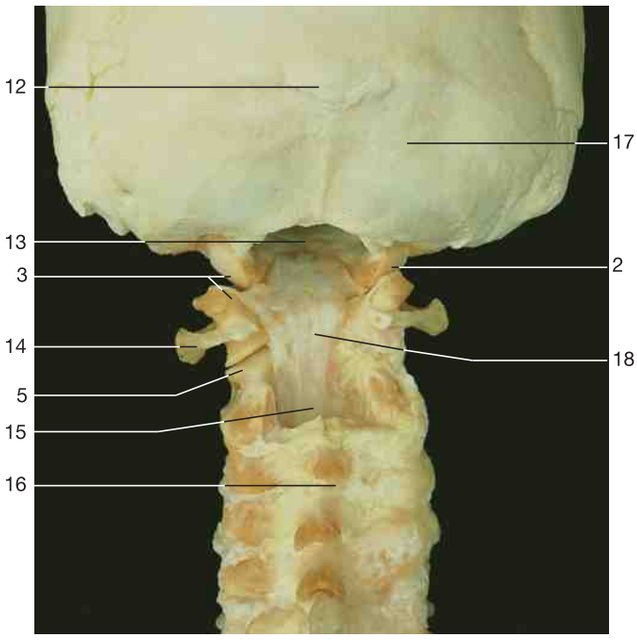
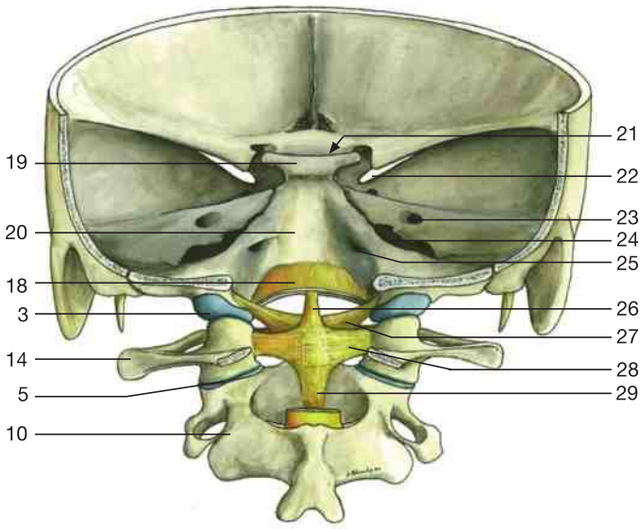
1 Cerebellum
2 Occipital condyle
3 Atlanto-occipital joint
4 Atlas
5 Lateral atlanto-axial joint
6 Intervertebral disc
7 Cistern of pons
8 Head of mandible
9 Dens of axis
10 Axis
11 Body of cervical vertebra (C_3)
12 External occipital protuberance
13 Foramen magnum
14 Transverse process of atlas
15 Posterior longitudinal ligament
16 Spinous process of cervical vertebra
17 Occipital bone
18 Membrana tectoria
19 Dorsum sellae
20 Clivus
21 Sella turcica
22 Superior orbital fissure
23 Internal acoustic meatus
24 Jugular foramen
25 Hypoglossal canal
26 Superior longitudinal band of cruciform ligament
27 Alar ligaments
28 Transverse ligament of atlas
29 Inferior longitudinal band of cruciform ligament



Coronal section of the neck at the level of dens of axis (MRI scan, courtesy of Prof. Heuck, Munich).



Cervical vertebral column and skull with ligaments (posterior aspect). Posterior arches of atlas and axis removed to show the membrana tectoria.



Atlanto-occipital and atlanto-axial joints with ligaments (posterior aspect). Posterior part of occipital bone and posterior arch of atlas have been removed to show the cruciform ligament.

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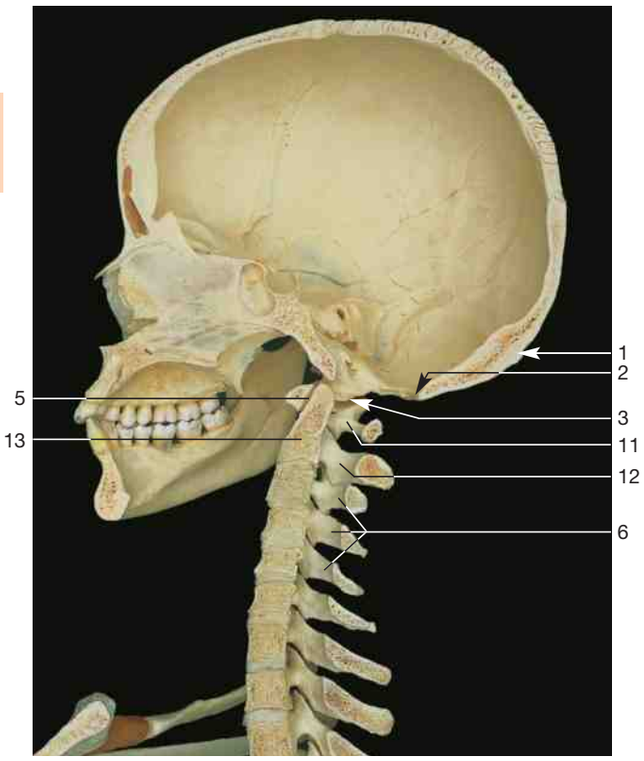
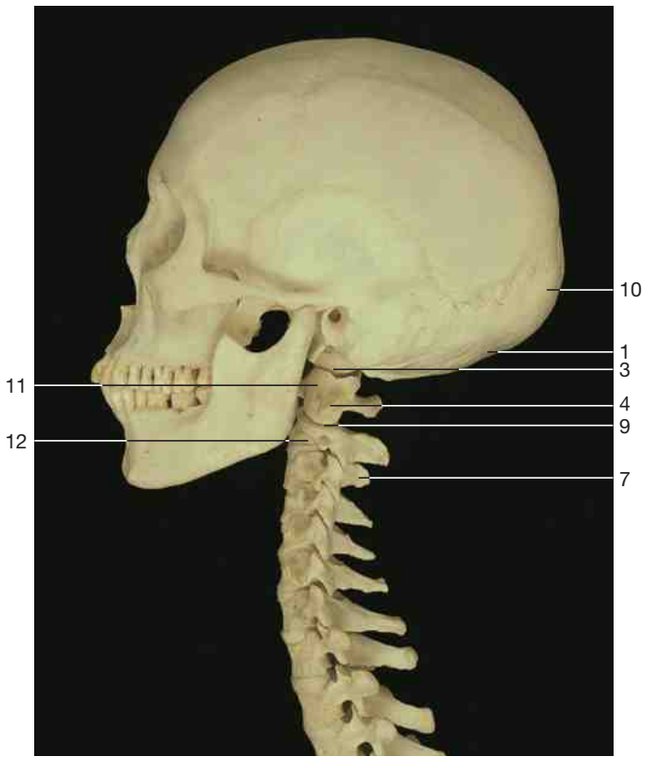
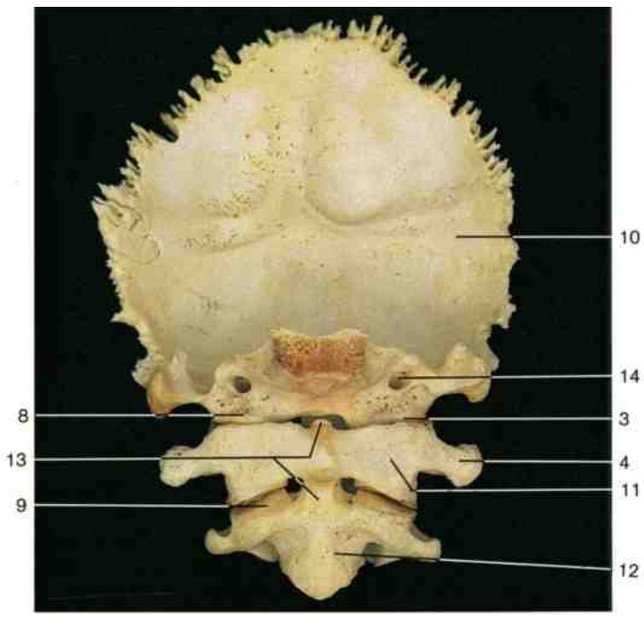


Cervical vertebral column in relation to the head (midsagittal section, medial aspect).



Atlas and axis in relation to the head (lateral aspect).

1 External occipital protuberance
2 Foramen magnum
3 Atlanto-occipital joint
4 Transverse process of atlas
5 Median atlanto-axial joint
6 Vertebral canal
7 Spinous process of third cervical vertebra
8 Occipital condyle
9 Lateral atlanto-axial joint
10 Occipital bone
11 Atlas
12 Axis
13 Dens of axis
14 Hypoglossal canal
15 Spinous process of axis



Occipital bone, atlas, and axis (anterior aspect).

Occipital bone, atlas, and axis (left lateral aspect).

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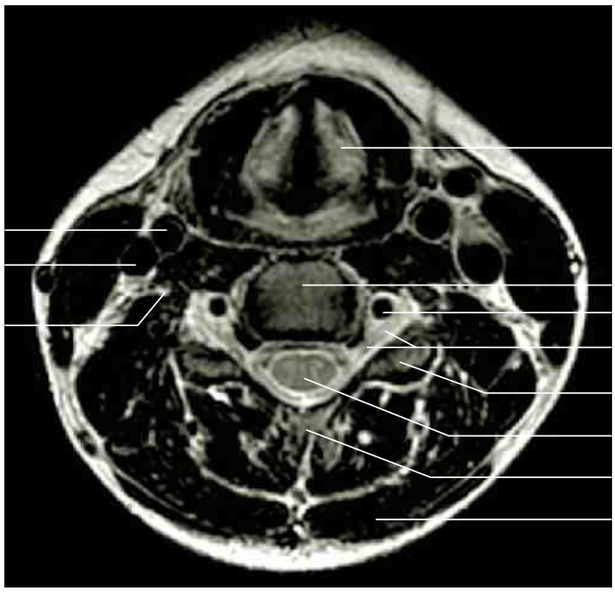
1 Pons
2 Base of skull (clivus)
3 Medulla oblongata
4 Atlas (anterior arch)
5 Dens of axis
6 Intervertebral disc
7 Body of cervical vertebra (C_4)
8 Site of larynx
9 Trachea
10 Cerebellum
11 Cerebellomedullary cistern
12 Spinal cord
13 Trapezius muscle
14 Muscles of the neck
15 Spinous process of cervical vertebra (C_7)
16 Internal jugular vein
17 Common carotid artery
18 Vagus nerve (n. X)
19 Larynx
20 Body of cervical vertebra
21 Vertebral artery
22 Spinal nerve with spinal ganglion
23 Transverse process of cervical vertebra
24 Spinous process of cervical vertebra

Midsagittal section of the neck showing the spinal cord in connection with medulla oblongata (MRI scan, courtesy of Prof. Heuck, Munich).



Horizontal section of the neck at the level of the larynx (MRI scan, courtesy of Prof. Heuck, Munich).

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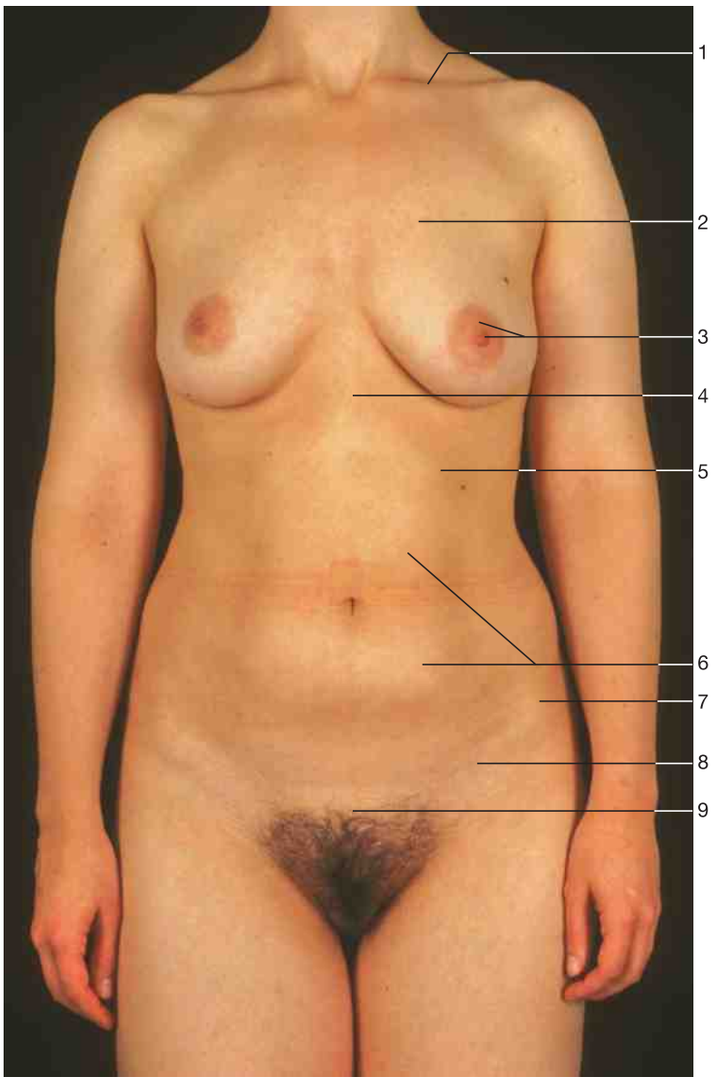
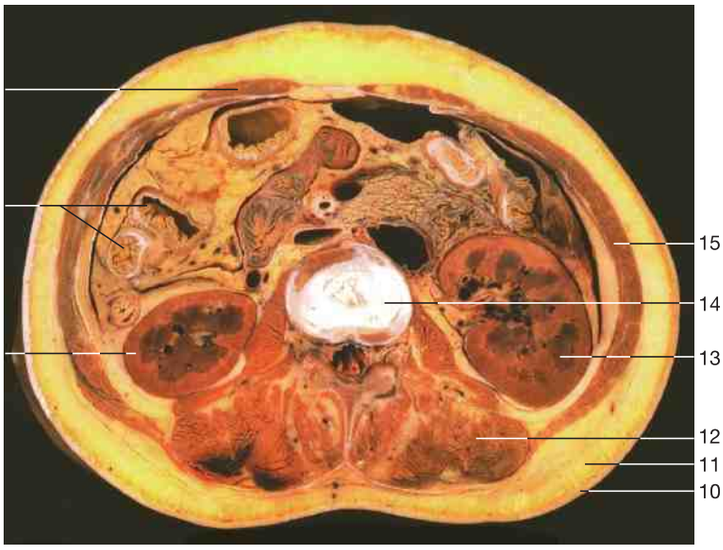


Surface anatomy of the anterior body wall in the female. Note the differences in thickness and structure of skin and hairs (compare with the section below).

1 Clavicle
2 Pectoralis major muscle
3 Areola and nipple
4 Infrasternal angle
5 Costal arch
6 Rectus abdominis muscle
7 Anterior superior iliac spine
8 Inguinal ligament
9 Mons pubis
10 Epidermis
11 Subcutaneous layer
12 Muscles of the back
13 Kidney
14 Body of lumbar vertebra
15 External abdominal oblique muscle
16 Small intestine
17 Deltoid muscle
18 Anterior serratus muscle
19 External intercostal muscle
20 Internal abdominal oblique muscle
21 Transverse abdominal muscle
22 Rectus sheath
23 Spermatic cord
24 Pectoralis minor muscle
25 Linea alba



Cross section of the body at the first lumbar vertebra. Note the differences in thickness of the subcutaneous layers.

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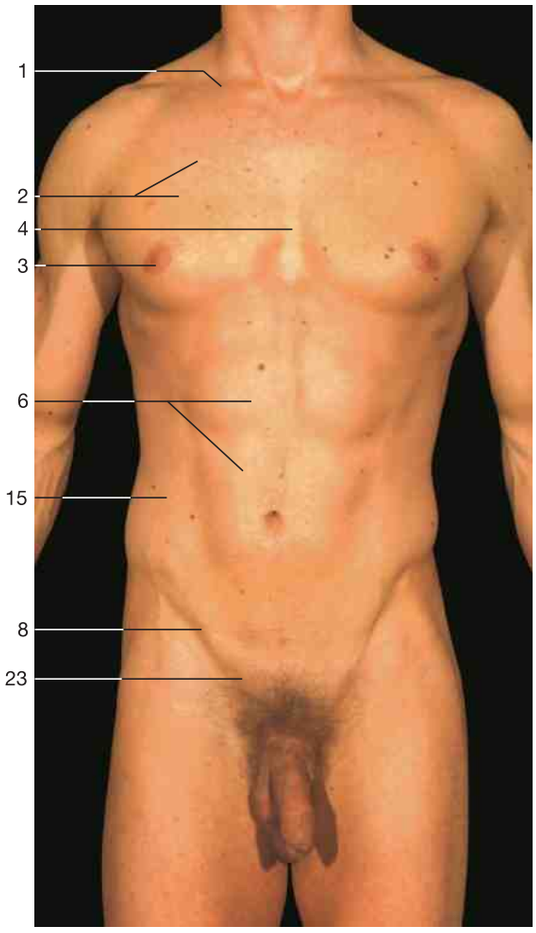
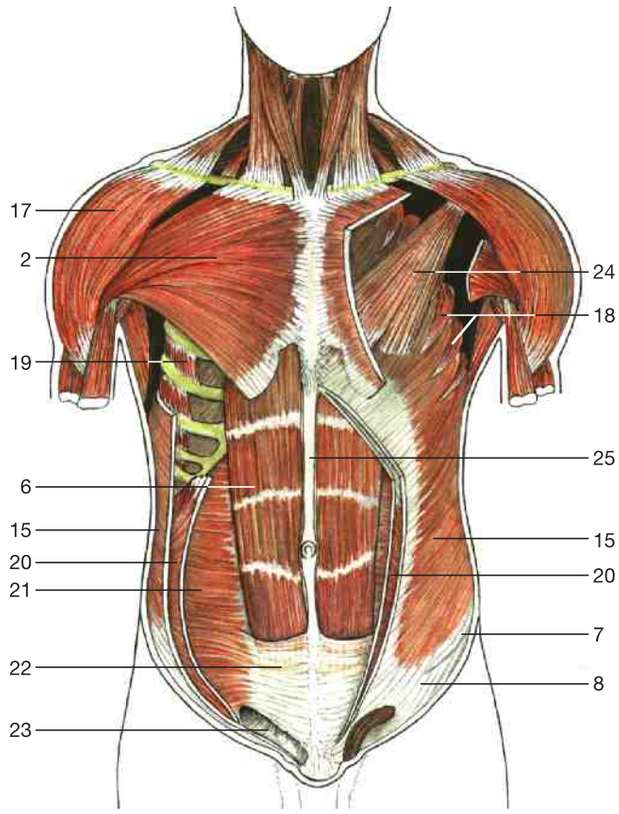
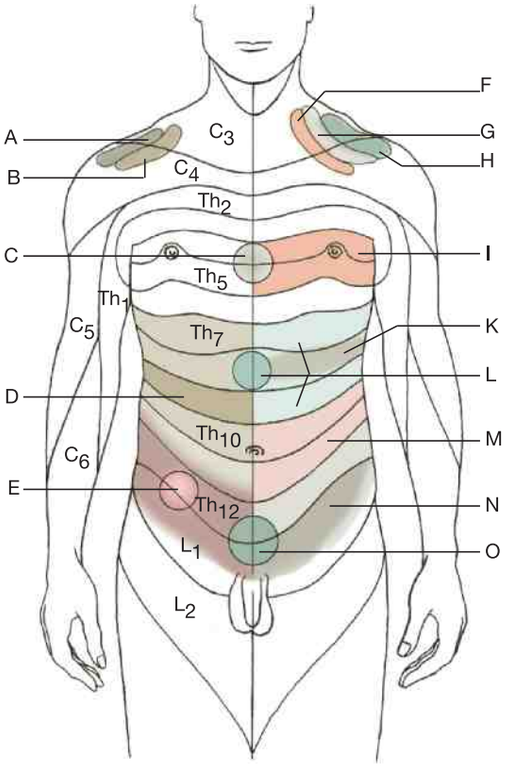


Surface anatomy of the anterior body wall in the male. Localization and structure of the muscles can be identified.



Muscles of the anterior body wall (schematic drawing).



Head's areas

A = duodenum
B = gallbladder, liver (C_3–C_4)
C = esophagus (Th_4, Th_5)
D = liver, gallbladder (Th_6–Th_{11})
E = colon, vermiform appendix (Th_{11-12}, L_1)
F = heart
G = pancreas
H = stomach (C_3, C_4)
I = heart (Th_3, Th_4)
K = pancreas (Th_8)
L = stomach (Th_6–Th_9)
M = small intestine (Th_{10}–L_1)
N = kidney, ureter, testis (Th_{10}–L_1)
O = urinary bladder (Th_{11}–L_1)

◁ **Segments of anterior body wall.** Head's areas are indicated.

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Anterior thoracic wall (posterior aspect). Diaphragm partly removed, posterior layer of rectus sheath fenestrated on both sides.

1 Sternocleidomastoid muscle (divided)
2 Clavicle
3 Sternothyroid muscle
4 Internal intercostal muscle
5 Transversus thoracic muscle
6 Intercostal arteries and nerves
7 Musculophrenic artery
8 Superior epigastric artery and vein
9 Diaphragm (divided)
10 Rectus abdominis muscle
11 Subclavian artery and brachial plexus
12 First rib
13 Internal thoracic artery and vein
14 Sternum
15 Innermost intercostal muscle
16 Intercostal artery and vein
17 Xiphoid process
18 Linea alba and posterior layer of rectus sheath
19 Transversus abdominis muscle

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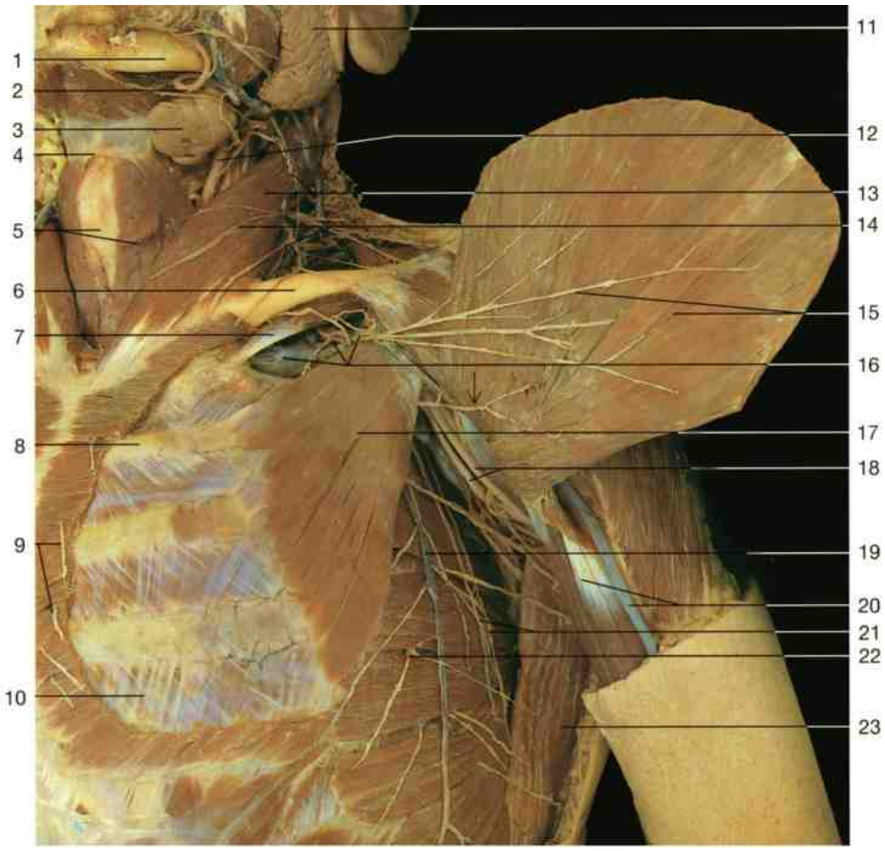
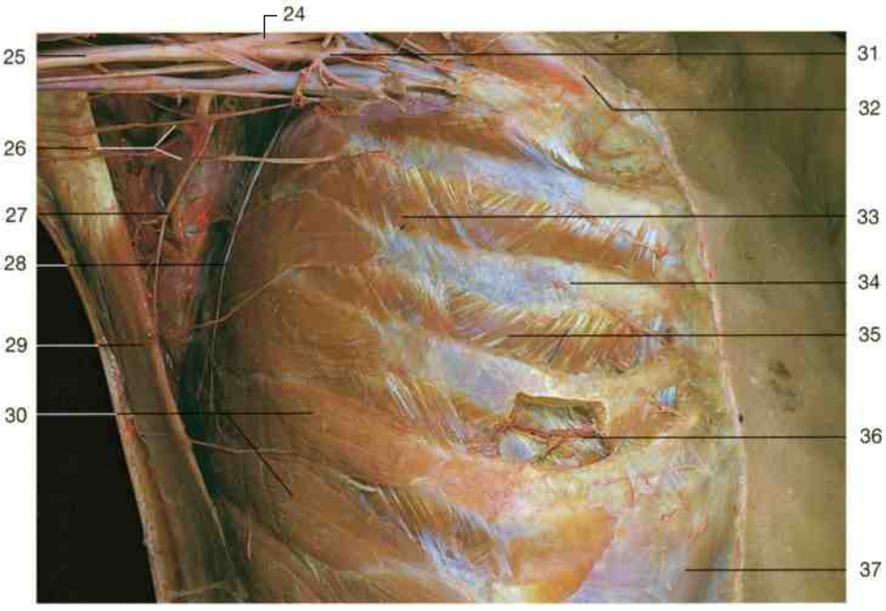


Thoracic wall (anterior aspect). Left pectoralis major muscle has been divided and reflected. Note the connection of the cephalic vein with the subclavian vein.
Arrow: medial pectoral nerve.



Thoracic wall (lateral aspect). Pectoralis major and minor muscles have been removed. A section of the fourth rib has been cut and removed to display the intercostal vessels and nerve.

1 Mandible
2 Facial artery
3 Submandibular gland
4 Hyoid bone
5 Thyroid cartilage and sternohyoid muscle
6 Clavicle
7 Subclavius muscle
8 Second rib
9 Anterior cutaneous branches of intercostal nerves
10 External intercostal membrane
11 Parotid gland
12 External carotid artery
13 Sternocleidomastoid muscle and cutaneous branches of cervical plexus
14 Supraclavicular nerves
15 Pectoralis major muscle and lateral pectoral nerves
16 Thoraco-acromial artery and subclavian vein
17 Pectoralis minor muscle
18 Median and ulnar nerve
19 Thoraco-epigastric vein
20 Cephalic vein and long head of biceps brachii muscle
21 Lateral thoracic artery and long thoracic nerve
22 Lateral cutaneous branches of intercostal nerve
23 Latissimus dorsi muscle
24 Median nerve
25 Axillary artery
26 Intercostobrachial nerves
27 Thoracodorsal nerve
28 Long thoracic nerve
29 Latissimus dorsi muscle
30 Serratus anterior muscle
31 Thoraco-acromial artery
32 Clavicle
33 External intercostal muscle
34 Third rib
35 Internal intercostal muscle
36 Anterior intercostal artery and vein, and intercostal nerve
37 Costal arch or margin

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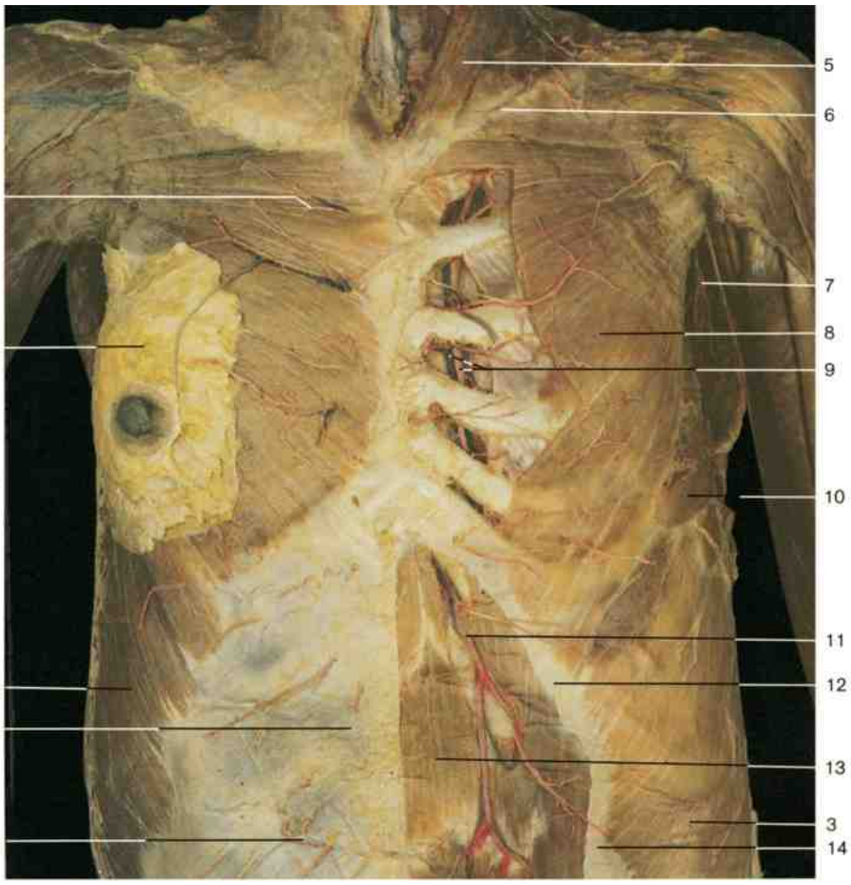
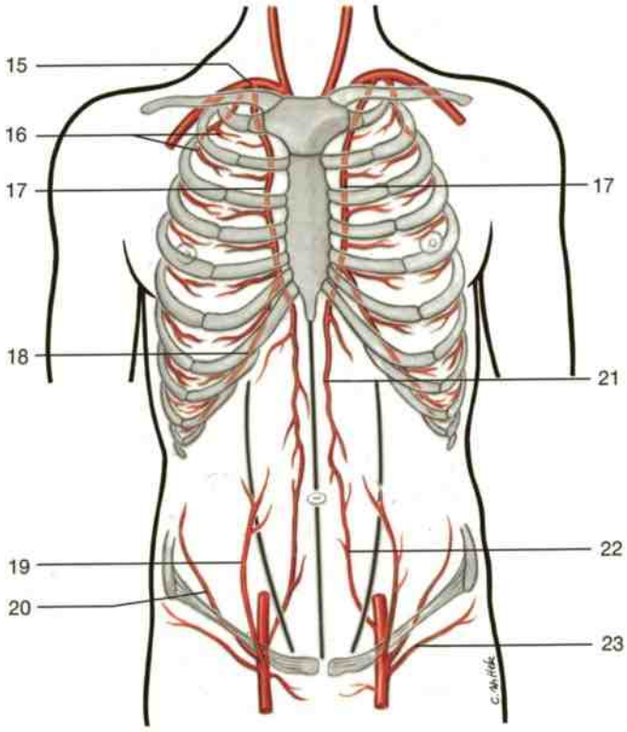


1 Anterior perforating branches of intercostal nerve
2 Mammary gland
3 External abdominal oblique muscle
4 Rectus sheath (anterior layer)
5 Sternocleidomastoid muscle
6 Clavicle
7 Lateral thoracic artery and vein
8 Pectoralis major muscle
9 Internal thoracic artery and vein
10 Serratus anterior muscle
11 Superior epigastric artery and vein
12 Costal margin
13 Rectus abdominis muscle
14 Cut edge of the anterior layer of the rectus sheath
15 Subclavian artery
16 Highest intercostal artery
17 Internal thoracic artery
18 Musculophrenic artery
19 Superficial epigastric artery
20 Deep circumflex iliac artery
21 Superior epigastric artery
22 Inferior epigastric artery
23 Superficial circumflex iliac artery

Thoracic wall (anterior aspect). Dissection of the **internal thoracic artery and vein.** Left pectoralis major muscle partly removed. Anterior lamina of the rectus sheath on the left side has been removed.



Main arteries of thoracic and abdominal walls.

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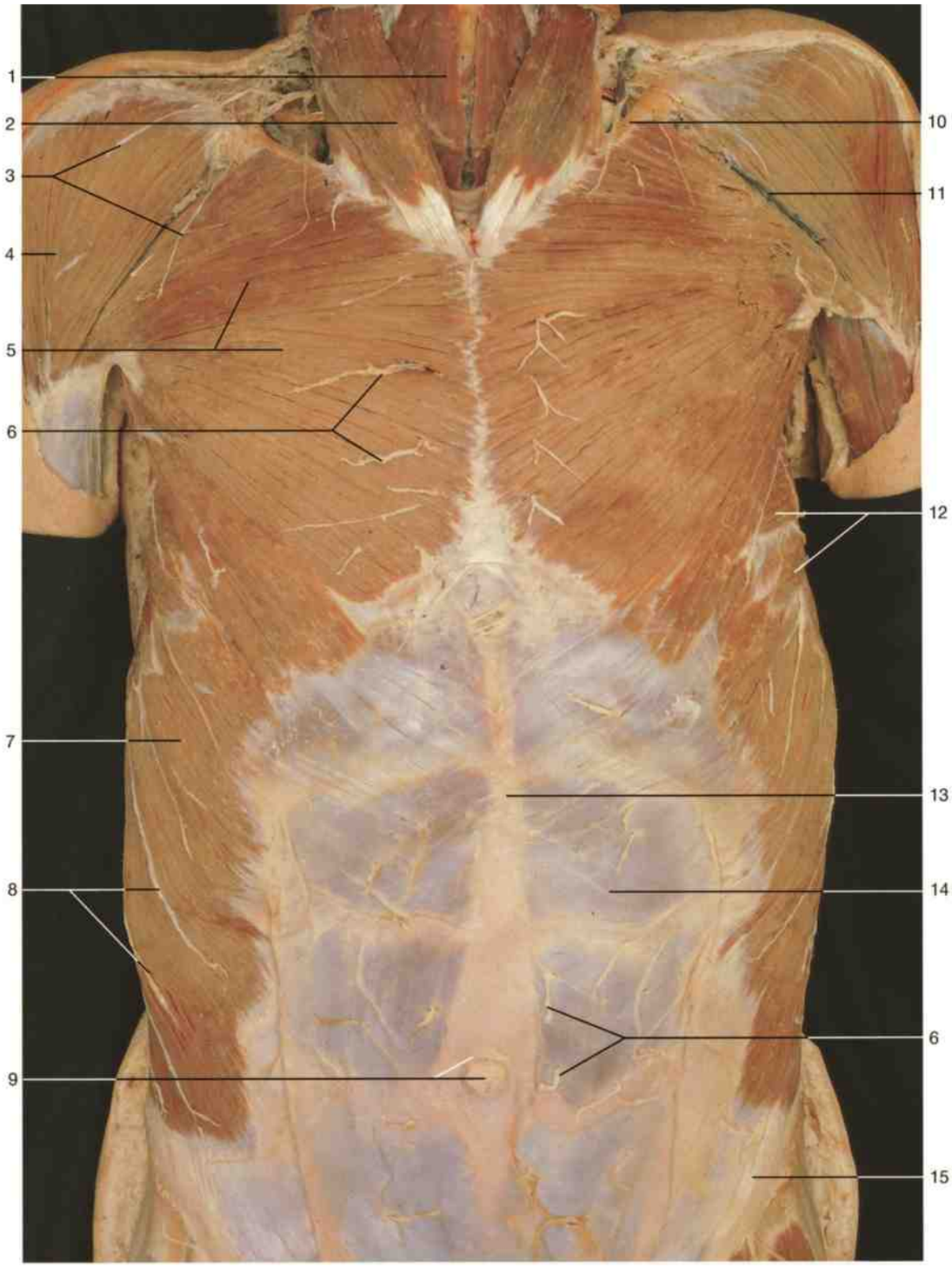

Anterior thoracic and abdominal walls with superficial muscles. The fascia of pectoralis major muscle and the abdominal wall have been removed; the anterior layer of the sheath of the rectus abdominis muscle is displayed.

1 Sternohyoid muscle
2 Sternocleidomastoid muscle
3 Supraclavicular nerves (branches of cervical plexus)
4 Deltoid muscle
5 Pectoralis major muscle
6 Anterior cutaneous branches of intercostal nerves
7 External abdominal oblique muscle
8 Lateral cutaneous branches of intercostal nerves
9 Umbilicus and umbilical ring
10 Clavicle
11 Cephalic vein
12 Serratus anterior muscle
13 Linea alba
14 Sheath of rectus abdominis muscle (anterior layer)
15 Inguinal ligament

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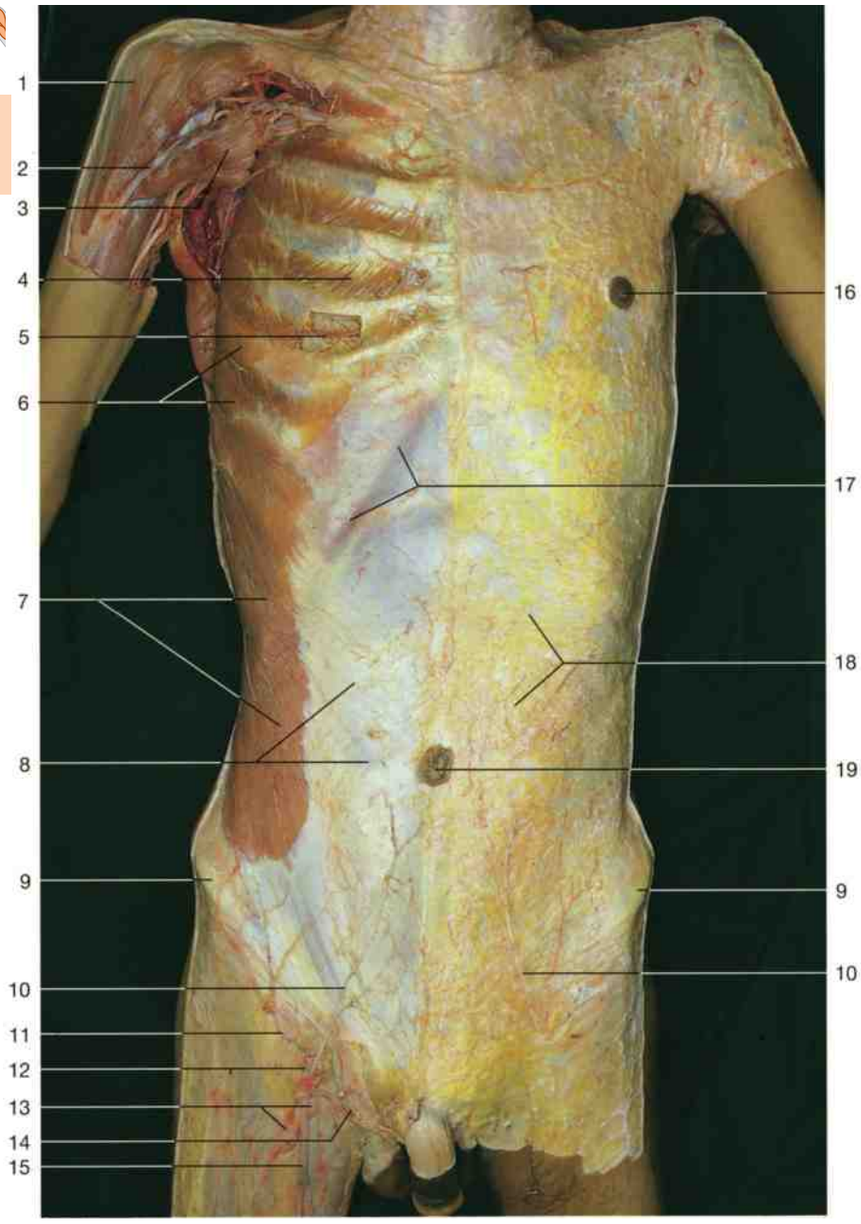
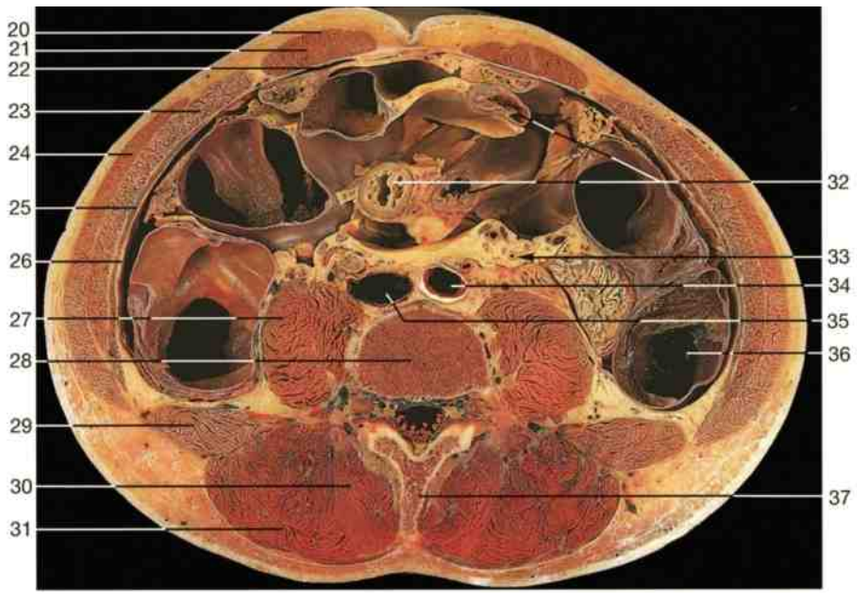


1 Deltoid muscle
2 Cephalic vein
3 Pectoralis major muscle (divided)
4 Internal intercostal muscle
5 Intercostal artery and vein (intercostal space, fenestrated)
6 Serratus anterior muscle
7 External abdominal oblique muscle
8 Anterior layer of rectus sheath
9 Iliac crest
10 Superficial epigastric vein
11 Superficial circumflex iliac vein
12 Saphenous opening
13 Superficial inguinal lymph nodes
14 Superficial external pudendal veins
15 Great saphenous vein
16 Nipple
17 Costal margin
18 Subcutaneous fatty tissue
19 Umbilicus
20 Anterior layer of rectus sheath
21 Rectus abdominis muscle
22 Posterior layer of rectus sheath
23 Internal abdominal oblique muscle
24 External abdominal oblique muscle (cut)
25 Transversus abdominis muscle
26 Transversalis fascia and peritoneum
27 Psoas major muscle
28 Body of lumbar vertebra (L_4)
29 Quadratus lumborum muscle
30 Medial tract of erector spinae muscle
31 Lateral tract of erector spinae muscle (longissimus and iliocostalis muscles)
32 Small intestine
33 Left ureter
34 Abdominal aorta
35 Inferior vena cava
36 Descending colon
37 Spinous process

Thoracic and abdominal walls. Right pectoralis major and minor muscles are divided. Muscles of thoracic and abdominal walls on right side are displayed.



Horizontal section of the trunk at the level of the umbilicus, superior to arcuate line (inferior aspect).

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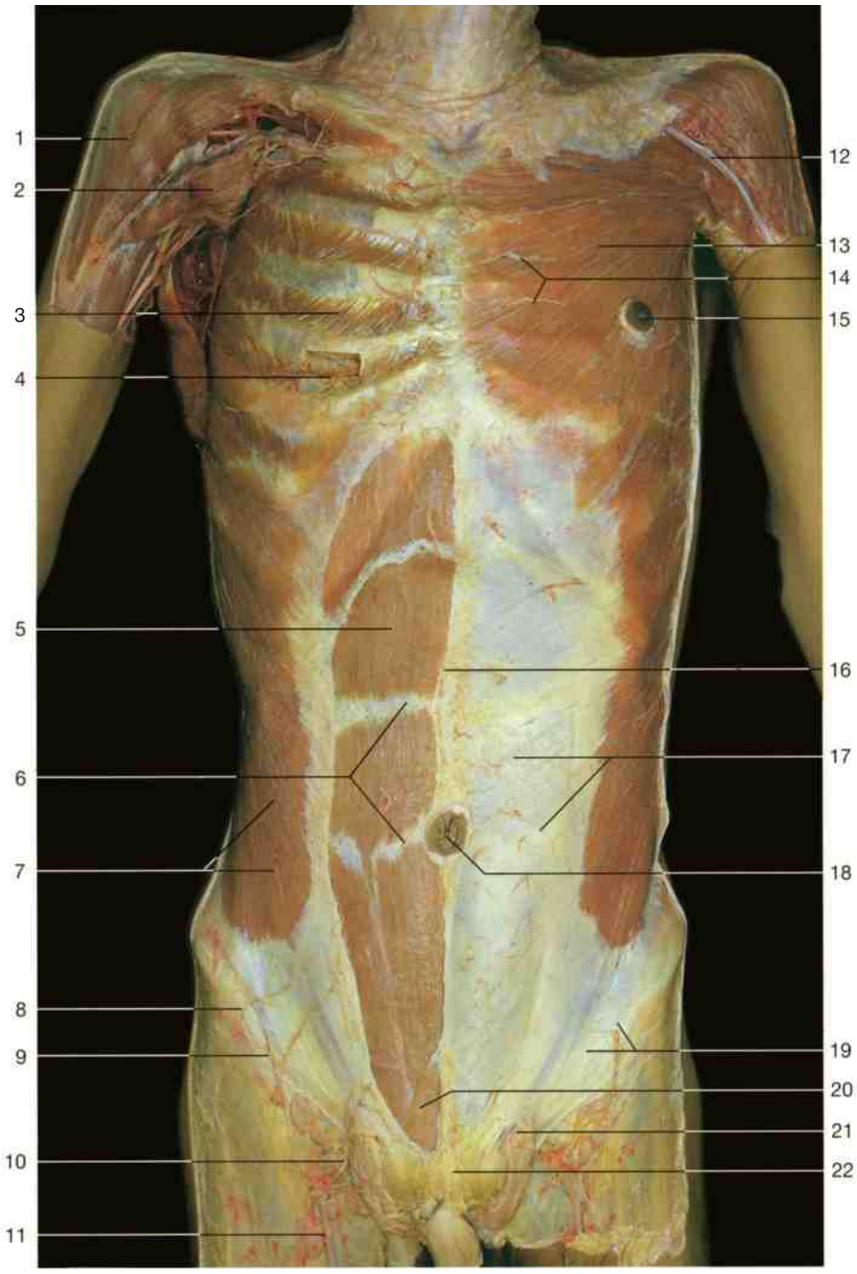

1 Deltoid muscle
2 Pectoralis major muscle (divided)
3 Internal intercostal muscle
4 Intercostal artery and vein
5 Rectus abdominis muscle
6 Tendinous intersections
7 External abdominal oblique muscle
8 Anterior superior iliac spine
9 Superficial circumflex iliac vein
10 Superficial epigastric vein
11 Great saphenous vein
12 Cephalic vein
13 Pectoralis major muscle
14 Anterior cutaneous branches of intercostal nerves
15 Nipple
16 Linea alba
17 Anterior layer of rectus sheath
18 Umbilicus
19 Inguinal ligament
20 Pyramidal muscle
21 Superficial inguinal ring and spermatic cord
22 Suspensory ligament of penis
23 Longissimus and iliocostalis muscles
24 Multifidus muscle
25 Quadratus lumborum muscle
26 Latissimus dorsi muscle
27 Psoas major muscle
28 Spinous process
29 Body of first lumbar vertebra
30 Transversus abdominis muscle
31 Internal abdominal oblique muscle

Thoracic and abdominal walls. Right pectoralis major and minor muscles and anterior layer of rectus sheath have been removed on the right side.

Horizontal section through the body at the level of fourth lumbar vertebra; seen from below. (CT scan.)

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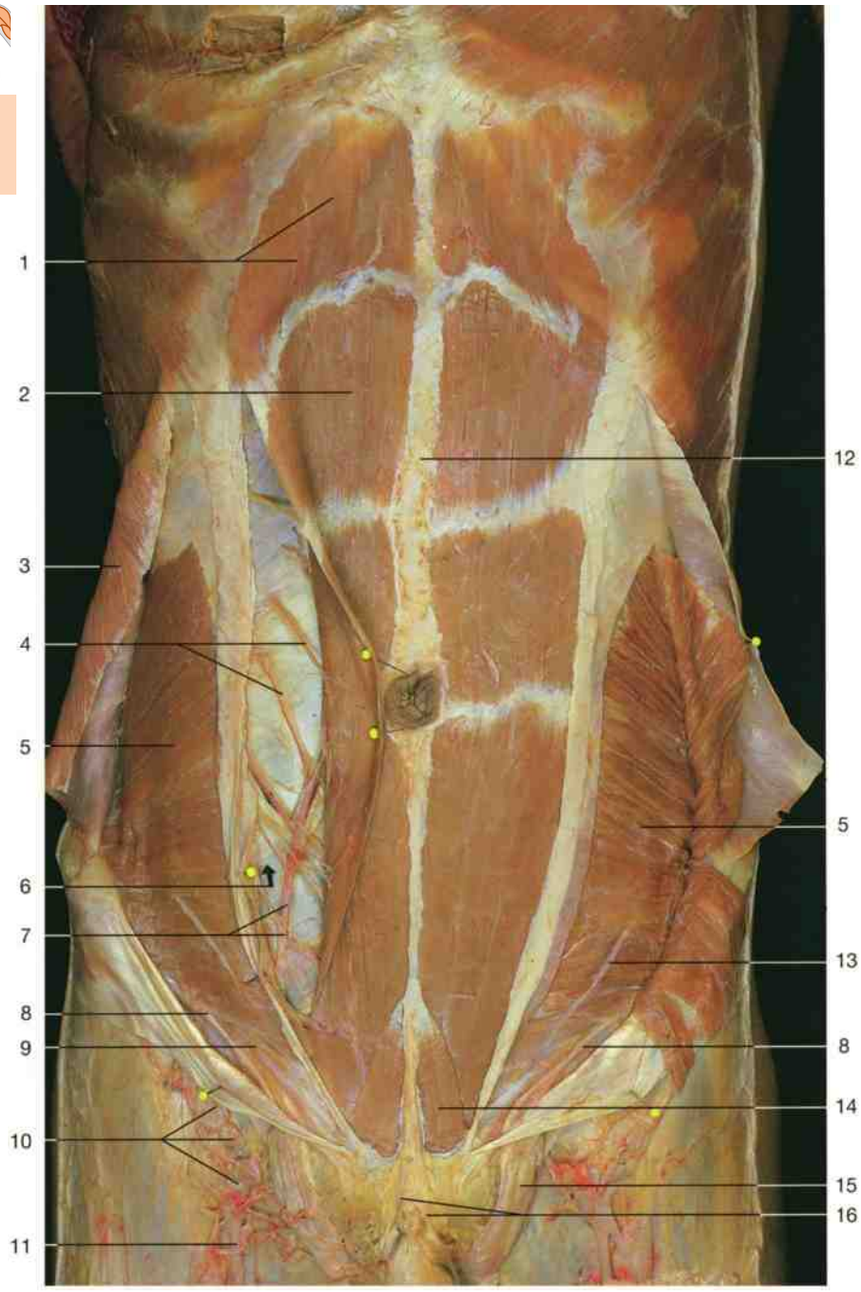
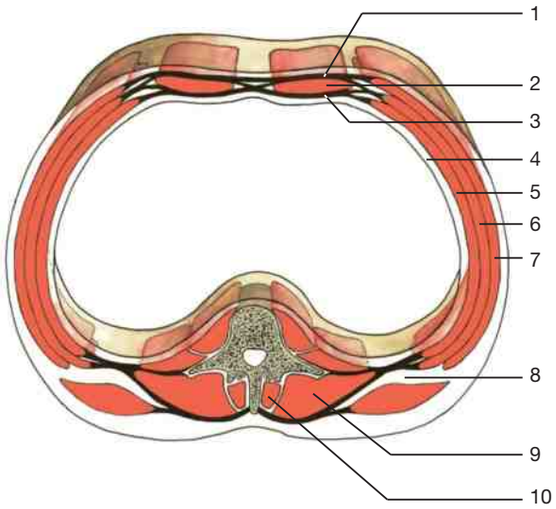


1 Costal margin
2 Rectus abdominis muscle
3 External abdominal oblique muscle (reflected)
4 Thoraco-abdominal (intercostal) nerves with accompanying vessels
5 Internal abdominal oblique muscle
6 Arcuate line (arrow)
7 Inferior epigastric artery and vein
8 Ilio-inguinal nerve
9 Position of deep inguinal ring
10 Superficial inguinal lymph nodes
11 Great saphenous vein
12 Linea alba
13 Iliohypogastric nerve
14 Pyramidal muscle
15 Spermatic cord
16 Fundiform ligament of penis

Thoracic and abdominal walls. External abdominal oblique muscle has been divided and reflected on both sides. The right rectus muscle has been reflected medially to display the posterior layer of rectus sheath. Arrow: location of arcuate line.



1 Anterior layer of rectus sheath
2 Rectus abdominis muscle
3 Posterior layer of rectus sheath
4 Transversalis fascia
5 Transversus abdominis muscle
6 Internal oblique muscle
7 External oblique muscle
8 Thoracolumbar fascia with superficial and deep layer
9 Lateral column of erector spinae muscle
10 Medial column of intrinsic muscles of the back

Horizontal section of the trunk superior to arcuate line (schematic drawing).

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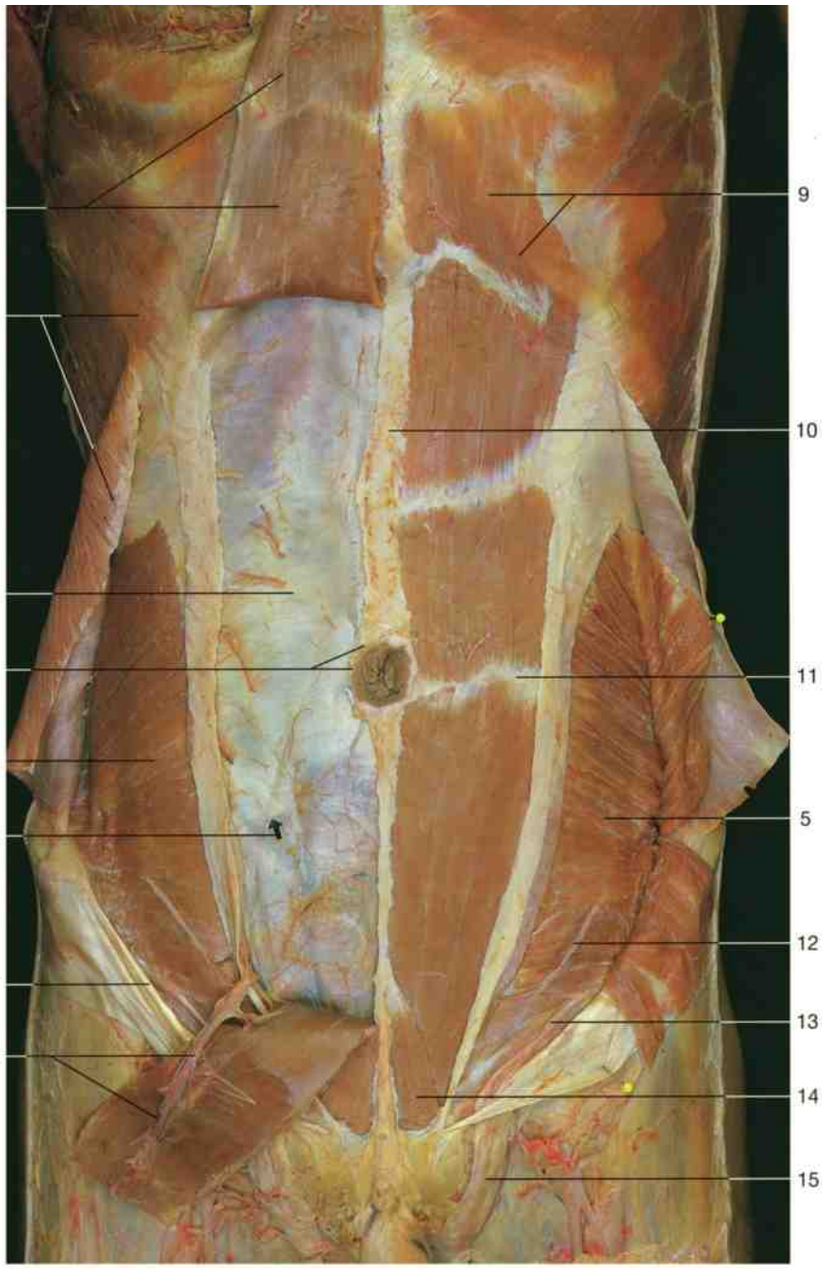
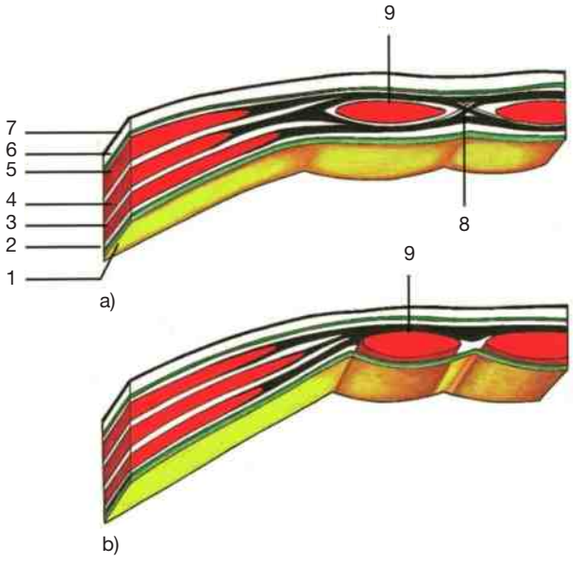


1 Rectus abdominis muscle (reflected)
2 External abdominal oblique muscle (divided)
3 Posterior layer of rectus sheath
4 Umbilical ring
5 Internal abdominal oblique muscle
6 Arcuate line (arrow)
7 Inguinal ligament
8 Inferior epigastric artery and vein and rectus abdominis muscle (divided and reflected)
9 Costal margin
10 Linea alba
11 Tendinous intersection
12 Iliohypogastric nerve
13 Ilio-inguinal nerve
14 Pyramidal muscle
15 Spermatic cord

Thoracic and abdominal walls. External abdominal oblique muscle has been divided and reflected on both sides. The right rectus muscle has been cut and reflected to display the posterior layer of rectus sheath. Arrow: location of arcuate line.



1 Peritoneum
2 Transversalis fascia (green)
3 Transversus abdominis muscle
4 Internal abdominal oblique muscle
5 External abdominal oblique muscle
6 Fascia of external abdominal oblique muscle (green)
7 Skin
8 Linea alba
9 Rectus abdominis muscle

Transverse sections through the abdominal wall superior (a) and inferior (b) to arcuate line.

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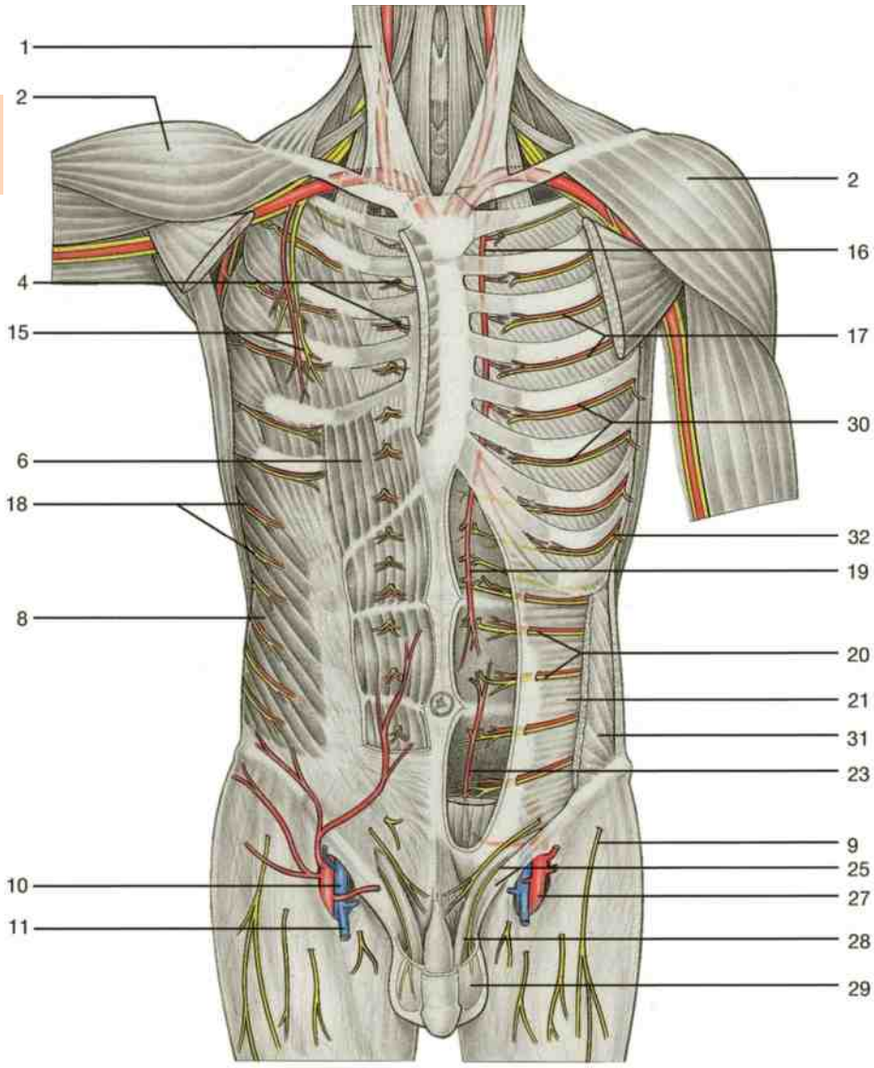
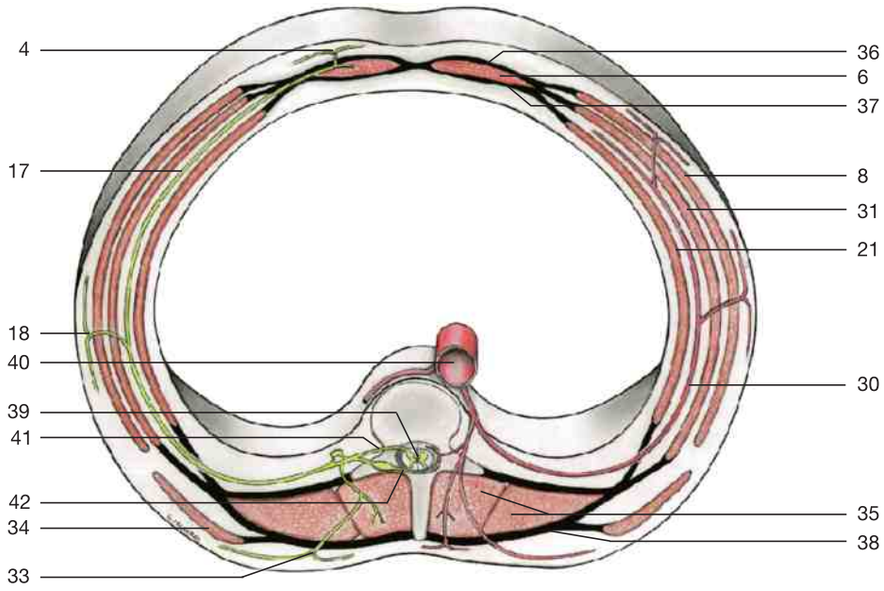


Thoracic and abdominal walls (schematic drawing). Note the segmental organization of the blood vessels and nerves. Right side: superficial layers; left side: deeper layers.

1 Sternocleidomastoid muscle
2 Deltoid muscle
3 Pectoralis major muscle
4 Anterior cutaneous branches of intercostal nerves
5 Cut edge of anterior layer of rectus sheath
6 Rectus abdominis muscle
7 Tendinous intersection
8 External abdominal oblique muscle
9 Lateral femoral cutaneous nerve
10 Femoral vein
11 Great saphenous vein
12 Medial supraclavicular nerves
13 Pectoralis minor muscle (reflected) and medial pectoral nerves
14 Axillary vein
15 Long thoracic nerve and lateral thoracic artery
16 Internal thoracic artery
17 Intercostal nerves
18 Lateral cutaneous branches of intercostal nerves
19 Superior epigastric artery
20 Thoraco-abdominal (intercostal) nerves
21 Transversus abdominis muscle
22 Posterior layer of rectus sheath
23 Inferior epigastric artery
24 Lateral femoral cutaneous nerve
25 Inguinal ligament and ilio-inguinal nerve
26 Femoral nerve
27 Femoral artery
28 Spermatic cord
29 Testis
30 Posterior intercostal arteries
31 Internal abdominal oblique muscle
32 Lateral cutaneous branch of intercostal nerve
33 Dorsal branch of spinal nerve
34 Latissimus dorsi muscle
35 Deep muscles of the back (medial and lateral tract)
36 Anterior layer of rectus sheath
37 Posterior layer of rectus sheath
38 Thoracolumbar fascia
39 Spinal cord
40 Aorta
41 Ventral root } of spinal
42 Dorsal root } nerve



Horizontal section of the abdominal wall (from below) showing the location of the intercostal arteries (left side) and nerves (right side).

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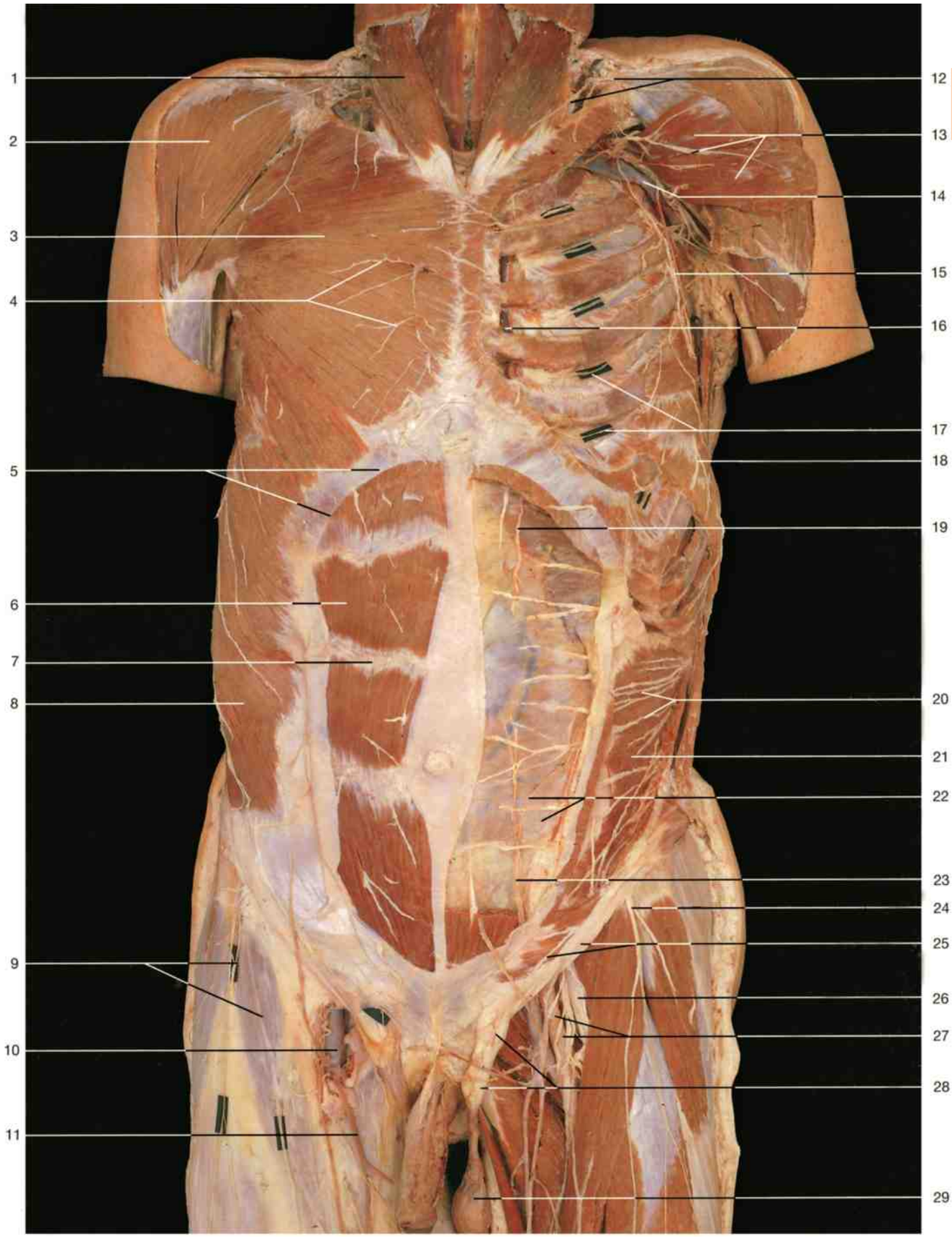

Thoracic and abdominal walls with vessels and nerves (anterior aspect). Right side: superficial layers; left side: deeper layers. Pectoralis major and minor muscles, the external and internal intercostal muscles on the left side have been removed to display the intercostal nerves. The anterior layer of rectus sheath, the left rectus abdominis muscle, and the external and internal abdominal oblique muscles have been removed to show the thoraco-abdominal nerves within the abdominal wall.

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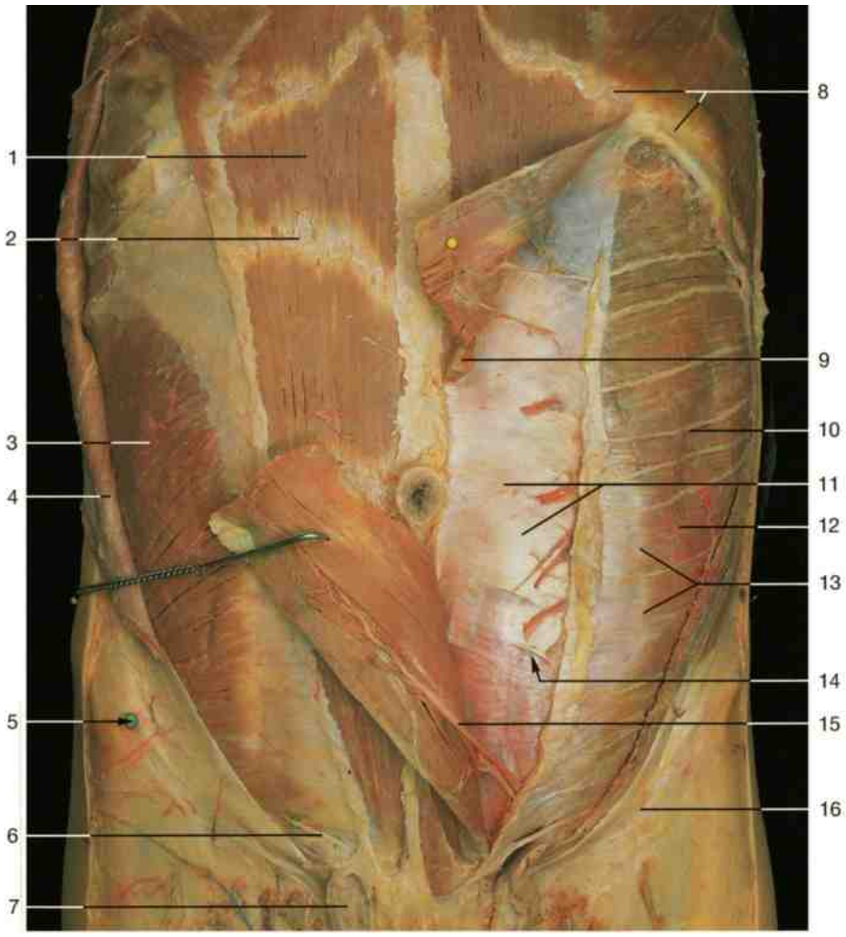
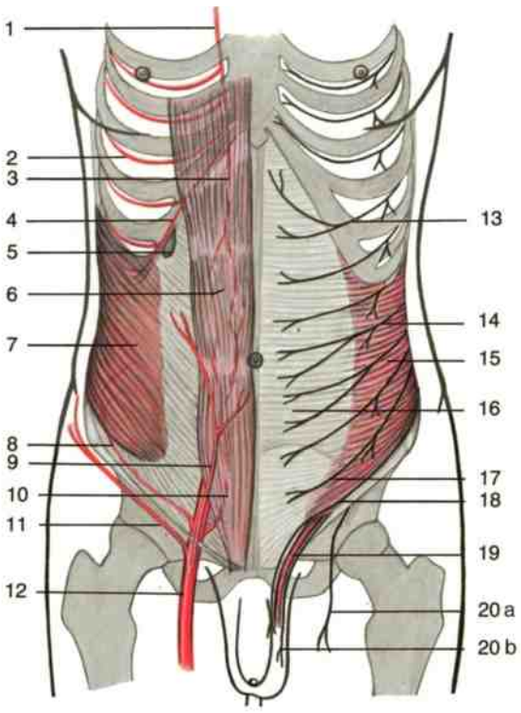


Abdominal wall with vessels and nerves. The left rectus abdominis muscle has been divided and reflected to display the inferior epigastric vessels. The left internal abdominal oblique muscle has been removed to show the thoraco-abdominal nerves.

1 Rectus abdominis muscle
2 Tendinous intersection
3 Internal abdominal oblique muscle
4 External abdominal oblique muscle (reflected)
5 Anterior superior iliac spine
6 Ilio-inguinal nerve
7 Spermatic cord
8 Costal margin
9 Superior epigastric artery
10 Thoraco-abdominal (intercostal) nerves
11 Posterior layer of rectus sheath
12 Transversus abdominis muscle
13 Semilunar line
14 Arcuate line
15 Inferior epigastric artery
16 Inguinal ligament



Arteries and nerves that supply the thoracic and abdominal walls. Note their segmental arrangement (schematic drawing).

1 Internal thoracic artery
2 Intercostal artery
3 Superior epigastric artery
4 Musculophrenic artery
5 Gallbladder
6 Rectus abdominis muscle
7 External abdominal oblique muscle
8 Deep circumflex iliac artery
9 Superficial epigastric artery
10 Inferior epigastric artery
11 Superficial circumflex iliac artery
12 Femoral artery
13 Intercostal nerve
14 Thoraco-abdominal nerve (T_{10})
15 Transversus abdominis muscle
16 Posterior layer of the rectus sheath
17 Iliohypogastric nerve (L_1)
18 Ilio-inguinal nerve (L_1)
19 Spermatic cord
20 Genitofemoral nerve (L_1, L_2)
a Femoral branch
b Genital branch

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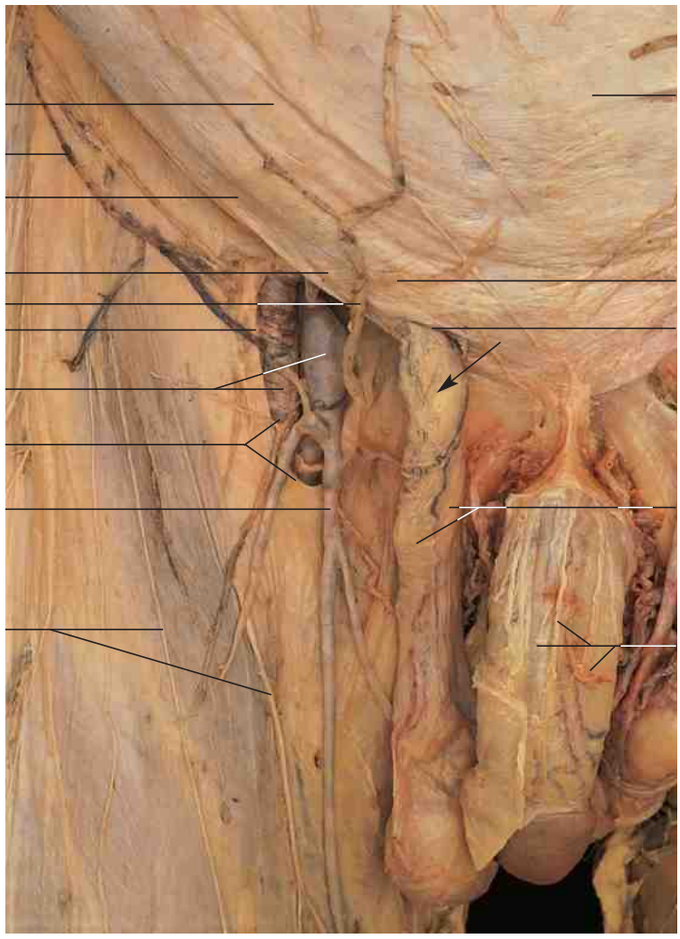
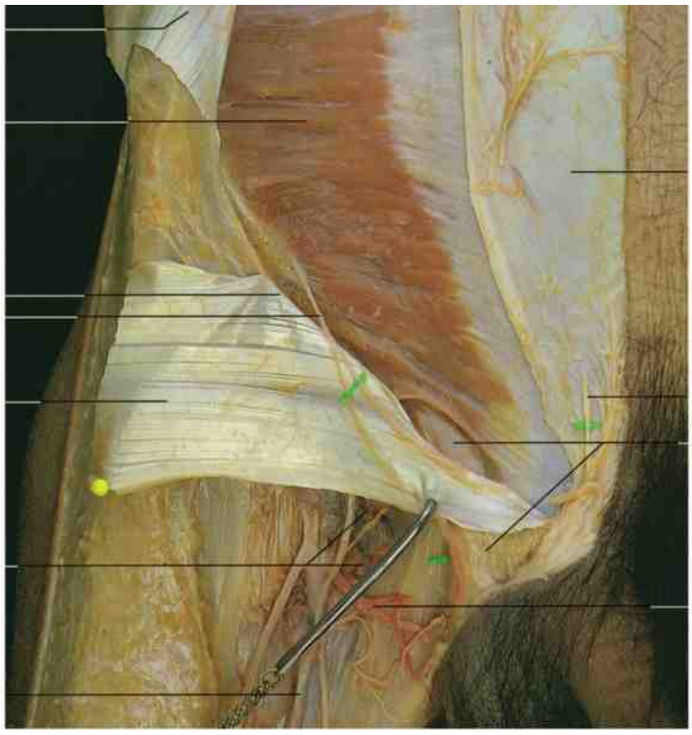
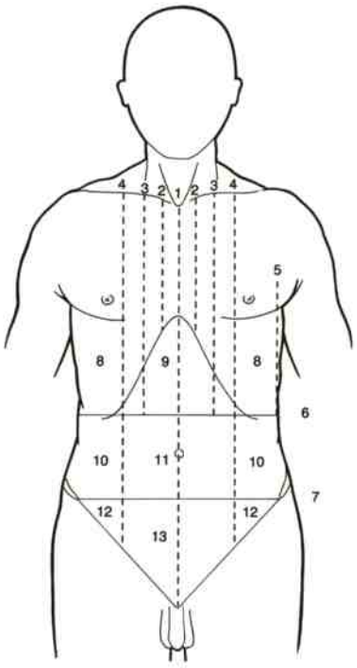


Inguinal canal in the male, right side (superficial layer, anterior aspect). There is a small inguinal hernia (arrow).



Inguinal canal in the male, right side (anterior aspect). The external abdominal oblique muscle has been divided to display the inguinal canal.

1 Aponeurosis of external abdominal oblique muscle
2 Superficial circumflex iliac vein
3 Inguinal ligament
4 Lateral crus of inguinal ring
5 Superficial epigastric vein
6 Saphenous opening
7 Femoral artery and vein
8 Great saphenous vein
9 Anterior cutaneous branches of femoral nerve
10 Anterior layer of rectus sheath
11 Intercrural fibers
12 Superficial inguinal ring
13 Spermatic cord and genital branch of genitofemoral nerve
14 Penis with dorsal nerves and deep dorsal vein of penis
15 Aponeurosis of external abdominal oblique muscle (divided and reflected)
16 Internal abdominal oblique muscle
17 Ilio-inguinal nerve
18 Anterior cutaneous branches of iliohypogastric nerve
19 Superficial external pudendal veins



Regions and reference lines
for delineating surface projections.

1 Median line
2 Lateral sternal line
3 Parasternal line
4 Midclavicular line
5 Axillary line
6 Transpyloric plane
7 Transtubercular plane
8 Hypochondriac region
9 Epigastric region
10 Lumbar region
11 Umbilical region
12 Iliac region
13 Hypogastric region

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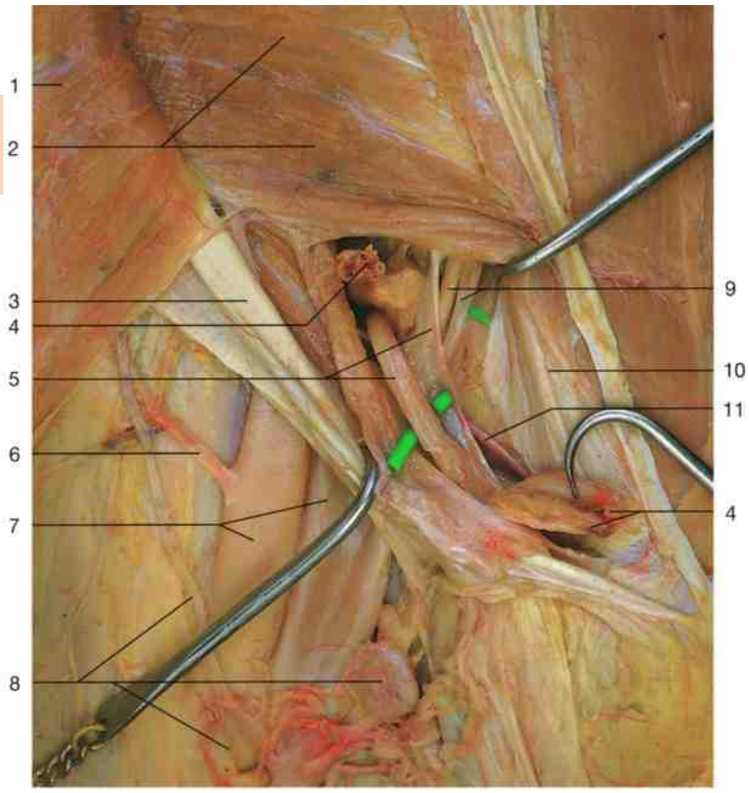
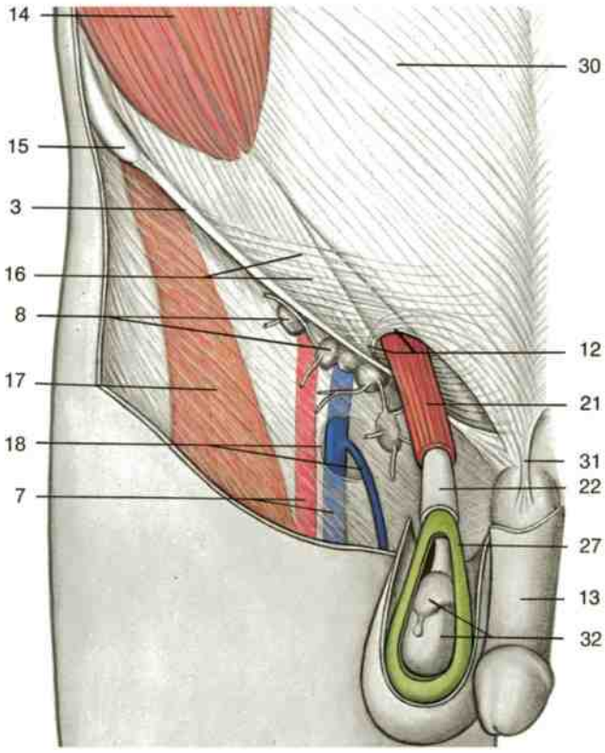


Inguinal canal in the male, right side (deep layer, anterior aspect). Spermatic cord with exception of ductus deferens (probe) has been divided and reflected.

1 Internal abdominal oblique muscle (reflected)
2 Transversus abdominis muscle
3 Inguinal ligament
4 Spermatic cord with the exception of the ductus deferens (divided and reflected)
5 Ductus deferens and interfoveolar ligament
6 Superficial circumflex iliac artery
7 Femoral artery and vein
8 Superficial inguinal lymph nodes and inguinal lymph vessel
9 Inferior epigastric artery and vein
10 Falx inguinalis or conjoint tendon (cut)
11 Pubic branch of inferior epigastric artery
12 Superficial inguinal ring
13 Penis
14 External abdominal oblique muscle
15 Anterior superior iliac spine
16 Intercrural fibers
17 Fascia lata and sartorius muscle
18 Saphenous opening and great saphenous vein
19 Deep inguinal ring
20 Skin of scrotum and dartos muscle
21 Cremaster muscle
22 Internal spermatic fascia
23 Ductus deferens
24 Epididymis
25 Peritoneum (blue)
26 Remnant of processus vaginalis
27 Tunica vaginalis testis
28 Rectus abdominis muscle
29 Spermatic cord with ductus deferens covered by external spermatic fascia
30 Anterior layer of rectus sheath
31 Suspensory ligament of penis
32 Testis and epididymis
33 Ductus deferens
34 Pampiniform venous plexus and testicular artery
35 Inferior epigastric artery
36 Lateral femoral cutaneous nerve
37 Ilio-inguinal nerve
38 Femoral nerve
39 Sartorius muscle
40 Deep dorsal vein of penis



General characteristics of lower part of anterior abdominal wall and inguinal canal (schematic drawing).

Inguinal hernias may either pass through the inguinal canal lateral to the inferior epigastric artery (indirect or lateral inguinal hernias, A and C) or directly penetrate the abdominal wall through the inguinal triangle located medial to the inferior epigastric artery (direct or medial inguinal hernias, B). The lateral hernias can be congenital if the vaginal process remains open (C) or acquired (A) if the hernia develops independently of a patent processus vaginalis.

Femoral hernias generally protrude through the femoral ring below the inguinal ligament. Proper assessment of the site of herniation requires the identification of both the inguinal ligament and the epigastric artery.

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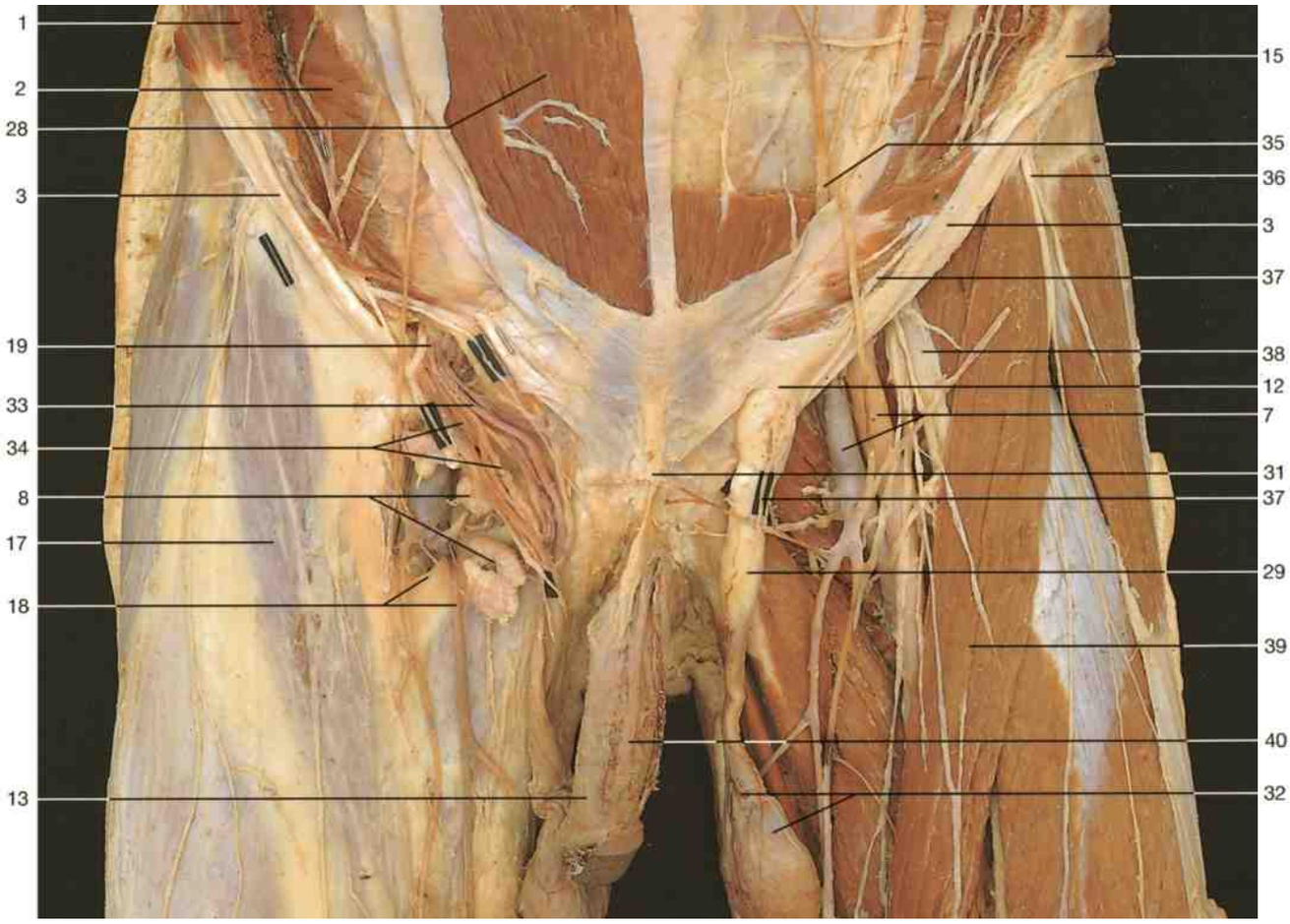
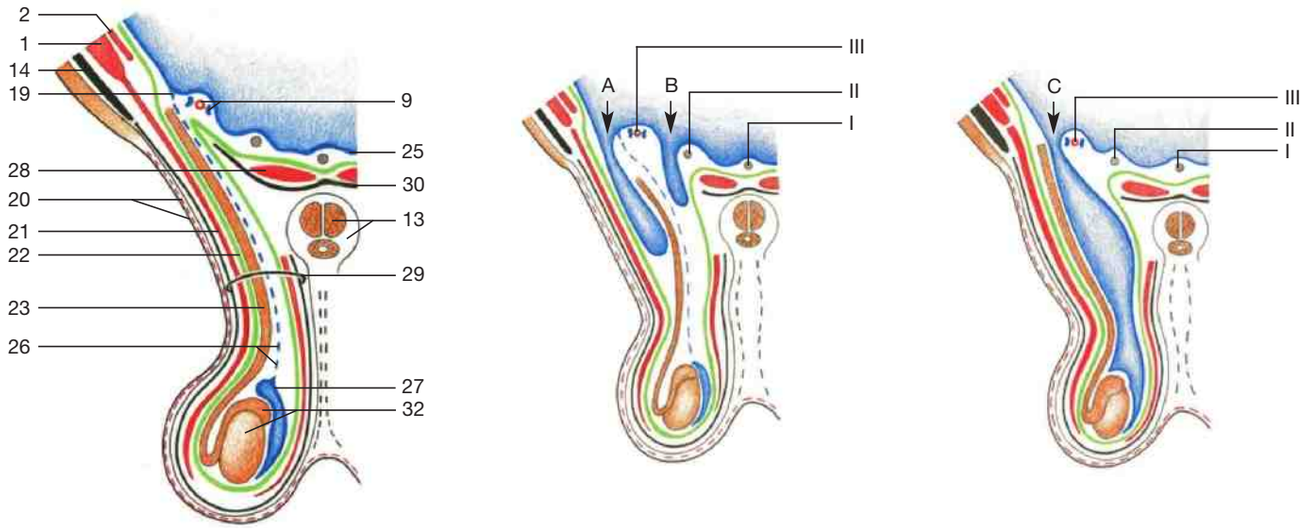


Inguinal and femoral regions in the male (anterior aspect). On the right, the spermatic cord was dissected to display the ductus deferens and the accompanying vessels and nerves. The fascia lata on the left side has been removed.



Layers of spermatic cord and types of hernias. Left: normal situation. Middle: location of acquired inguinal hernias: A = indirect; B = direct inguinal hernia. Right: congenital indirect inguinal hernia (C); the vaginal process remained open.
I = median umbilical fold containing urachus chord.
II = medial umbilical fold with remnants of umbilical artery.
III = lateral umbilical fold with inferior epigastric artery and vein.

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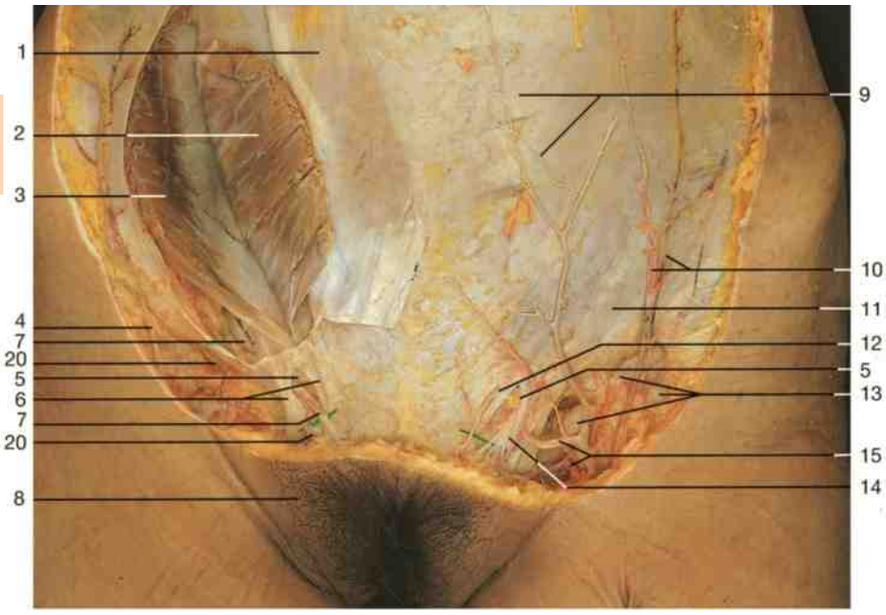
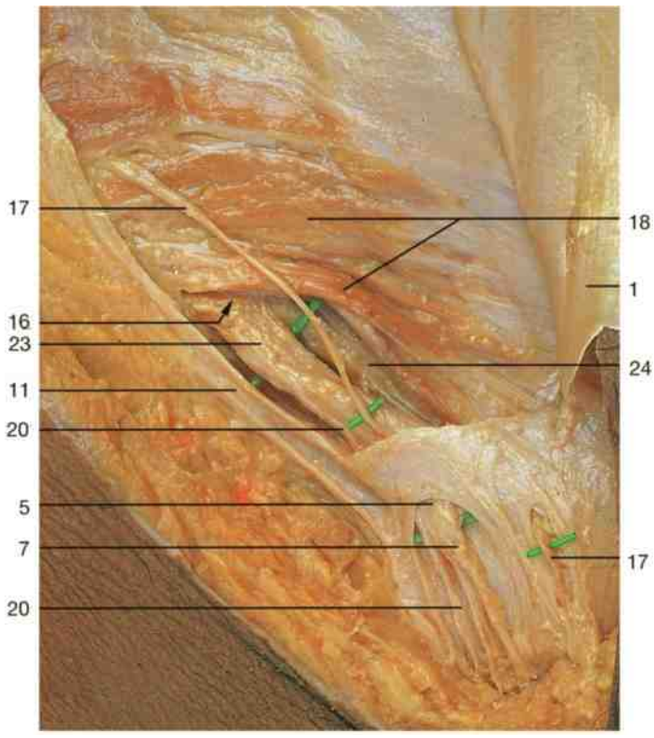


Inguinal region in the female (anterior aspect). Left side: superficial layer; right side: external and internal abdominal oblique muscle divided and reflected.

1 Aponeurosis of external abdominal oblique muscle
2 Internal abdominal oblique muscle (divided and reflected)
3 Transversus abdominis muscle
4 Superficial circumflex iliac artery and vein
5 Superficial inguinal ring with fat pad
6 Medial and lateral crural fibers
7 Round ligament (ligamentum teres uteri)
8 Labium majus pudendi
9 Anterior layer of rectus sheath
10 Superficial epigastric artery and vein
11 Inguinal ligament
12 Cutaneous branch of ilio-inguinal nerve
13 Superficial inguinal lymph nodes
14 Entrance of round ligament into the labium majus
15 External pudendal artery and vein
16 Position of deep inguinal ring
17 Ilio-inguinal nerve
18 Internal abdominal oblique muscle
19 Pubic branch of inferior epigastric artery
20 Genital branch of genitofemoral nerve
21 Fat pad of inguinal canal
22 Ilio-inguinal nerve
23 Sheath of round ligament (inguinal canal)
24 Transversalis fascia

Inguinal canal of the female (anterior aspect, right side). The external abdominal oblique muscle has been divided and reflected, to display the ilio-inguinal nerve and the round ligament.



Inguinal canal of the female (anterior aspect, right side). The external and internal abdominal oblique muscle have been divided and reflected to show the content of the inguinal canal.

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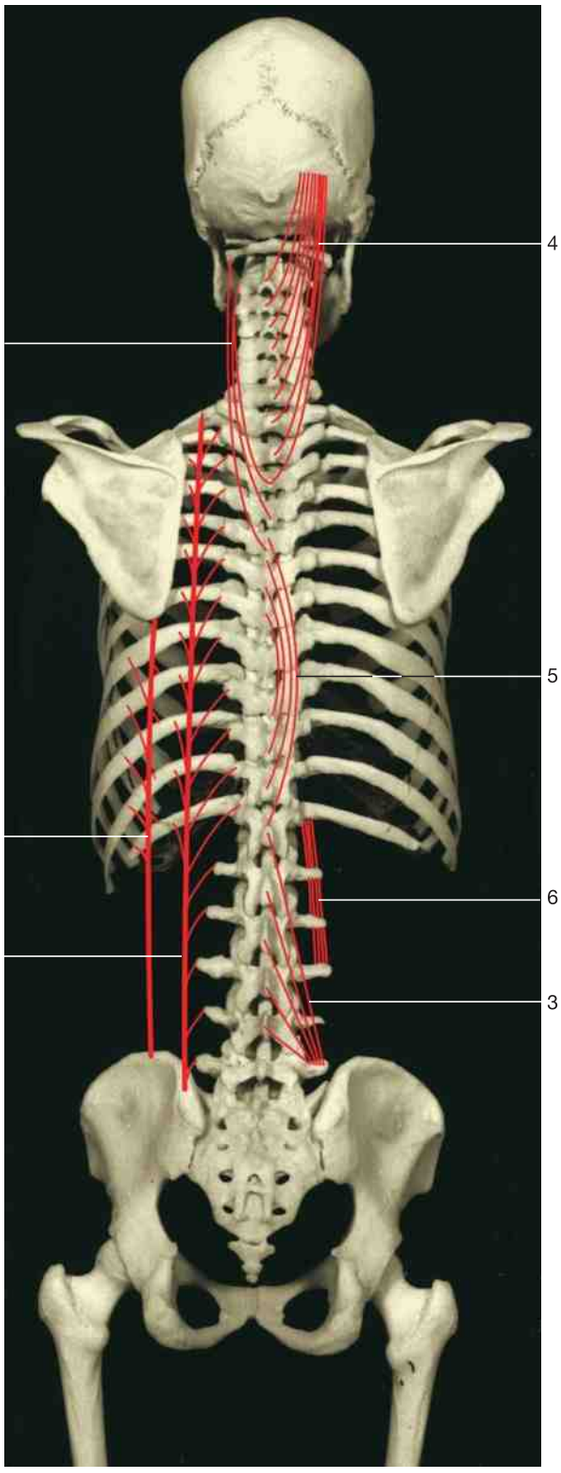

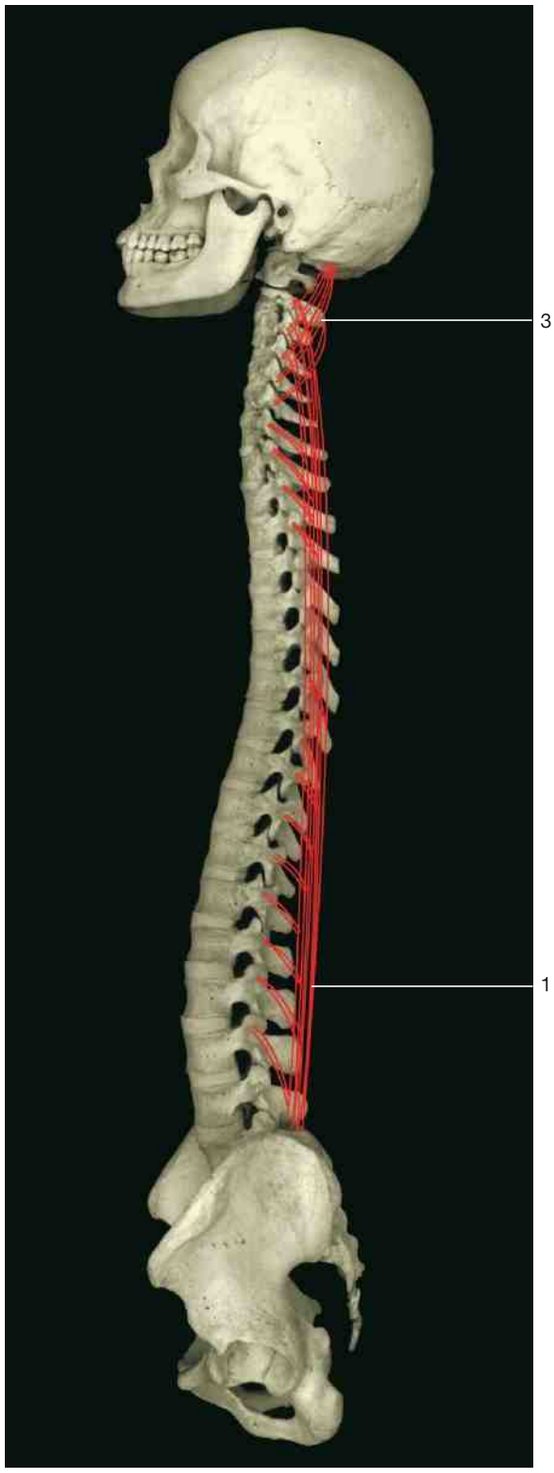

Skeleton of the trunk (dorsal and lateral aspect).
The long muscles of the back [longissimus (1) and iliocostalis (2) muscles] originate at the sacrum and pelvis and insert at the spinous or transverse processes of the vertebrae or at the ribs. There are also muscles that insert at the occipital bone.
The long muscles form the lateral tract, whereas muscles of the medial tract are situated within the groove between the spinous and transverse processes of the vertebrae [transversospinal (3) and spinotransversal (4) muscles] or between the spinous processes [spinalis muscles (5)] or between the transverse processes [intertransversarii muscles (6)] of the vertebrae.

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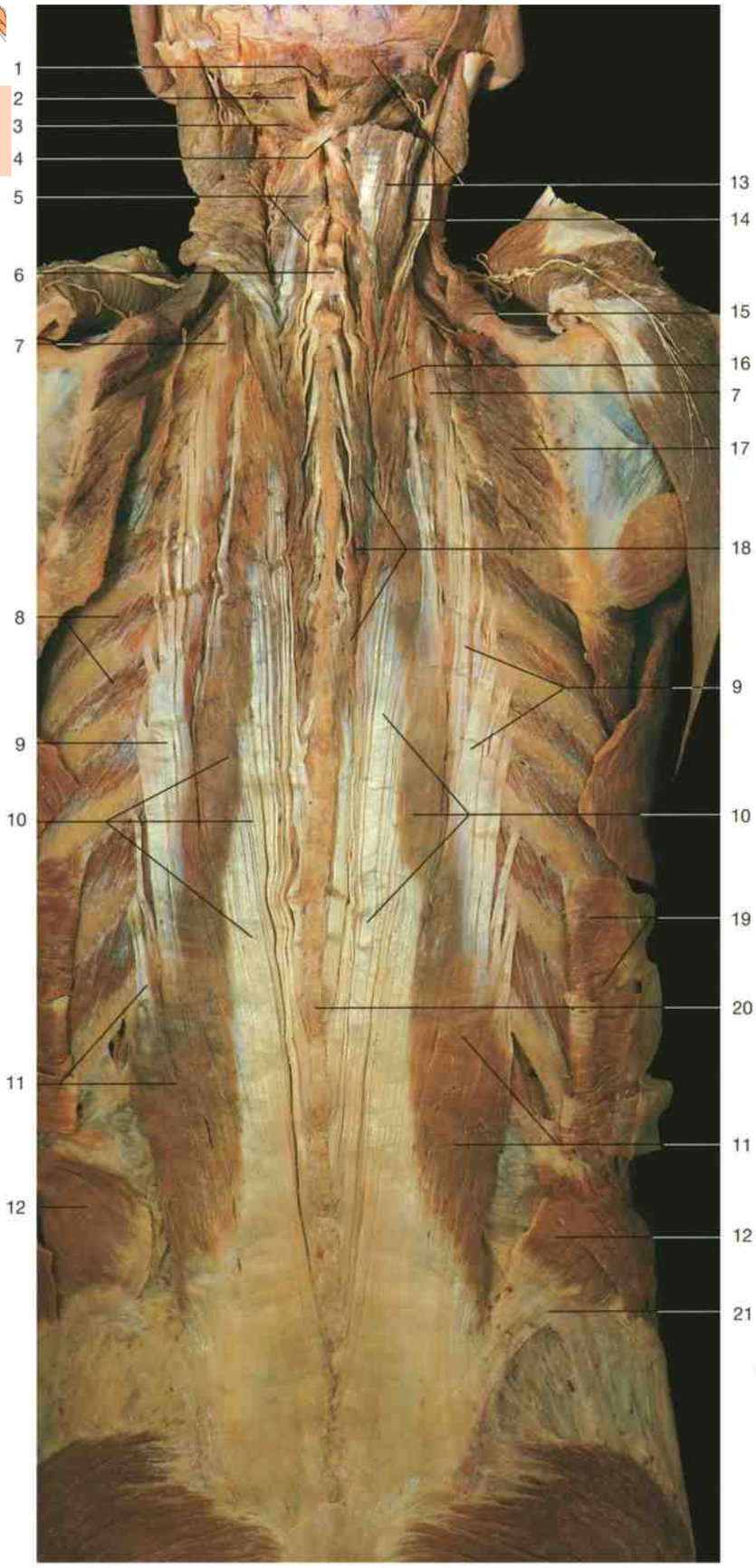
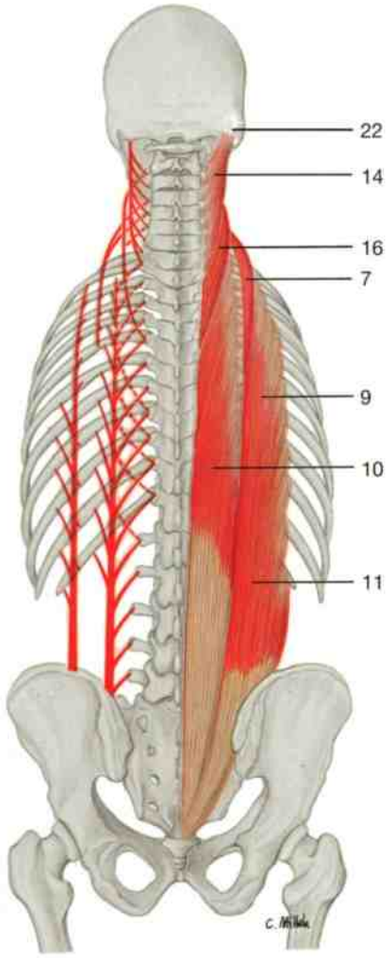


Muscles of the back. Dissection of the erector spinae muscle (lateral column of the intrinsic back muscles).



Origin and insertion of iliocostalis and longissimus muscles (schematic drawing).

1 Rectus capitis posterior minor muscle
2 Rectus capitis posterior major muscle
3 Obliquus capitis inferior muscle
4 Spinous process of axis
5 Semispinalis cervicis muscle
6 Spinous process of seventh vertebra
7 Iliocostalis cervicis muscle
8 External intercostal muscles
9 Iliocostalis thoracis muscle
10 Longissimus thoracis muscle
11 Iliocostalis lumborum muscle
12 Internal abdominal oblique muscle
13 Semispinalis capitis muscle (divided)
14 Longissimus capitis muscle
15 Levator scapulae muscle
16 Longissimus cervicis muscle
17 Rhomboid major muscle
18 Spinalis thoracis muscle
19 Serratus posterior inferior muscle (reflected)
20 Spinous process of second lumbar vertebra
21 Iliac crest
22 Mastoid process

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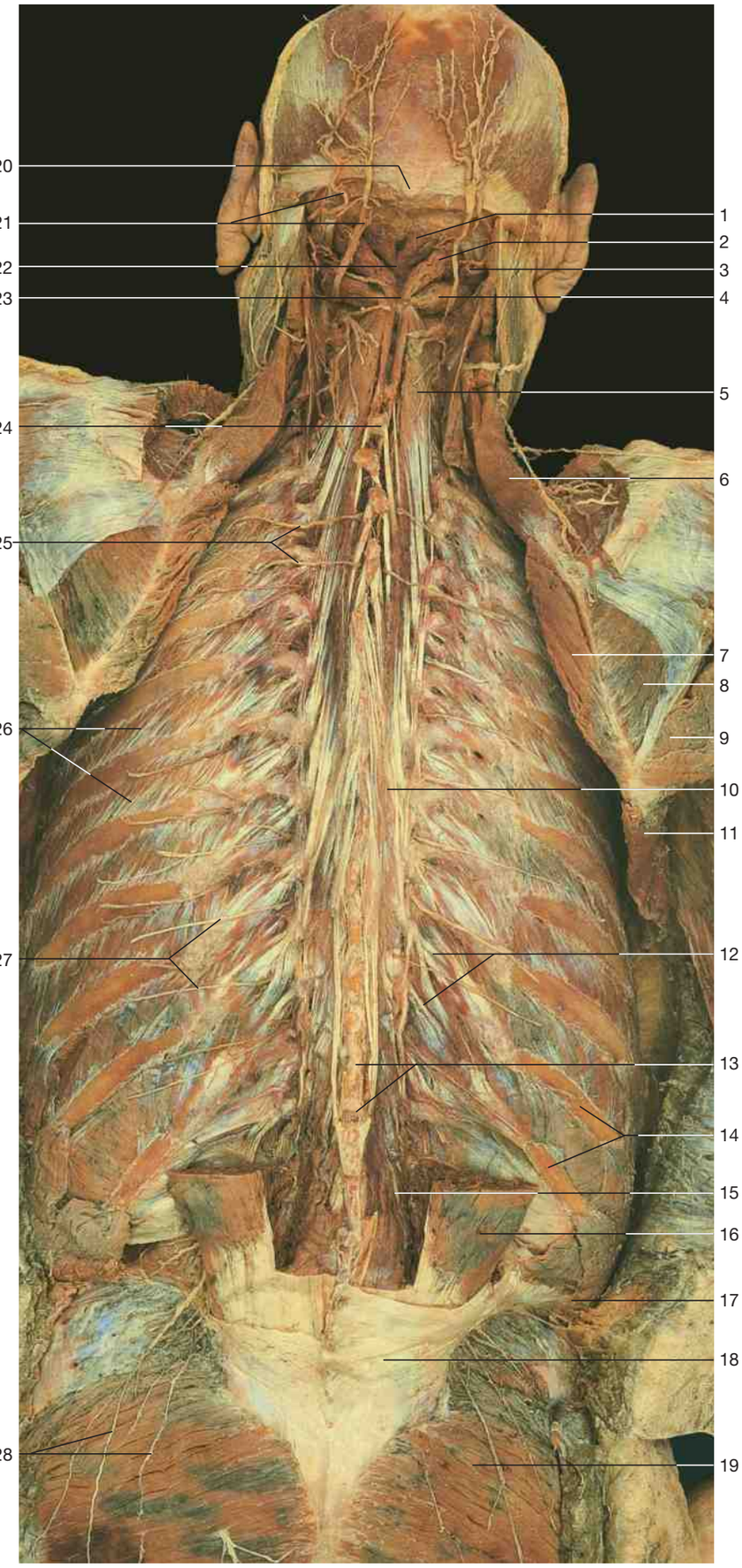

Muscles of the back. Dissection of the deeper layer of the intrinsic muscles of the back (longissimus and iliocostalis muscles are cut).

1 Rectus capitis posterior minor muscle
2 Rectus capitis posterior major muscle
3 Obliquus capitis superior muscle
4 Obliquus capitis inferior muscle
5 Semispinalis cervicis muscle
6 Levator scapulae muscle
7 Rhomboideus major muscle
8 Scapula with infraspinatus muscle
9 Teres major muscle
10 Spinalis muscle
11 Latissimus dorsi muscle
12 Levatores costarum muscles
13 Spinous processes of lumbar vertebrae
14 Ribs (Th_{11}, Th_{12})
15 Multifidus muscle
16 Longissimus and iliocostalis muscles (cut)
17 Iliac crest (lumbar triangle)
18 Thoracolumbar fascia
19 Gluteus maximus muscle
20 Protuberantia occipitalis externa
21 Occipital artery and greater occipital nerve (C_2)
22 Posterior tubercle of atlas
23 Spinous process of axis
24 Spinous process of seventh cervical vertebra (vertebra prominens)
25 Medial branches of dorsal branches of spinal nerves
26 External intercostal muscles
27 Lateral branches of dorsal branches of spinal nerves
28 Superior cluneal nerves

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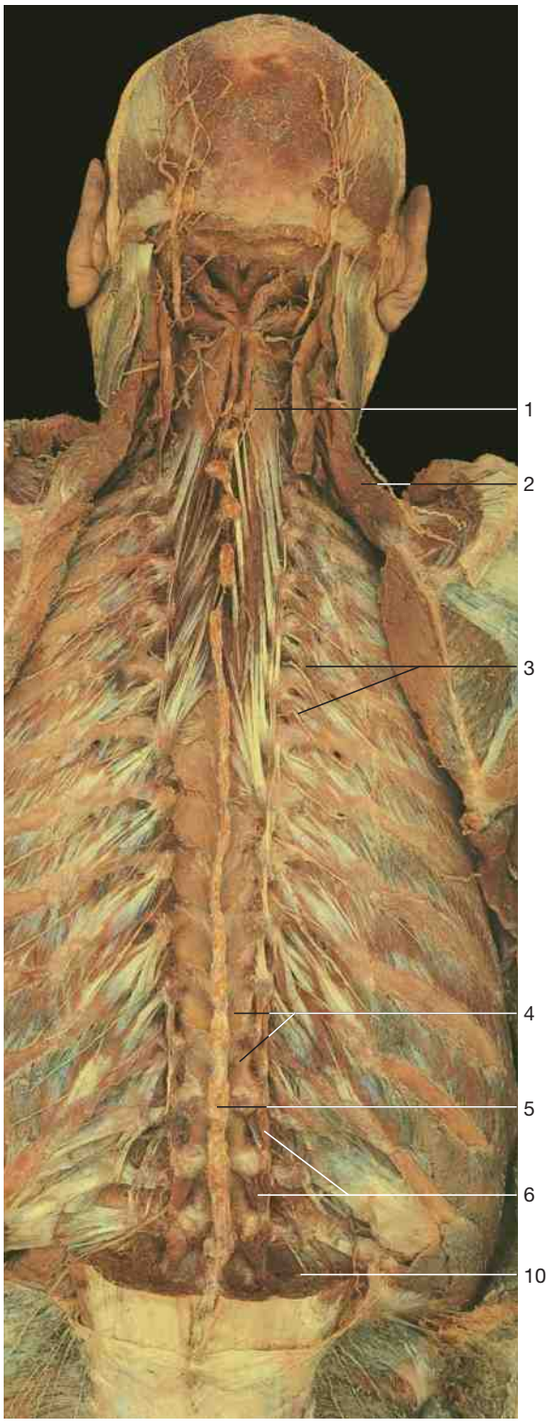
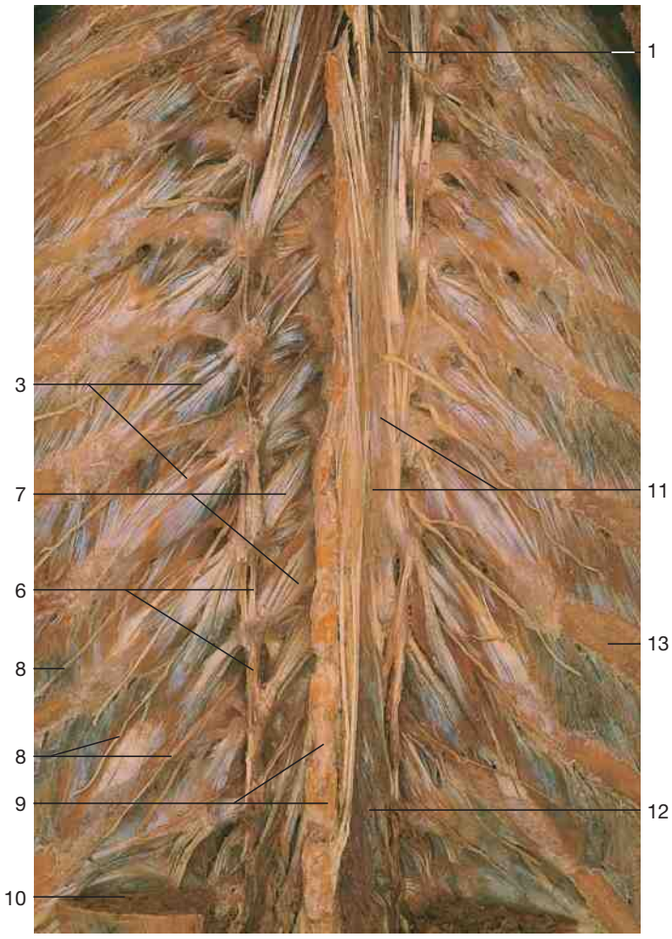


Muscles of the back. Deepest layer.



Muscles of the back. Deepest layer. Lumbar region (higher magnification).

1 Semispinalis cervicis muscle
2 Levator scapulae muscle
3 Levatores costarum muscles
4 Vertebral arches of lumbar vertebrae
5 Supraspinal ligaments
6 Intertransverse lumbar muscles
7 Lumbar rotator muscles
8 Cutaneous branches of spinal nerves
9 Lumbar interspinal muscles
10 Longissimus and iliocostalis muscle (cut)
11 Spinal muscle of the back
12 Multifidus muscle
13 Tenth rib (T_{10})

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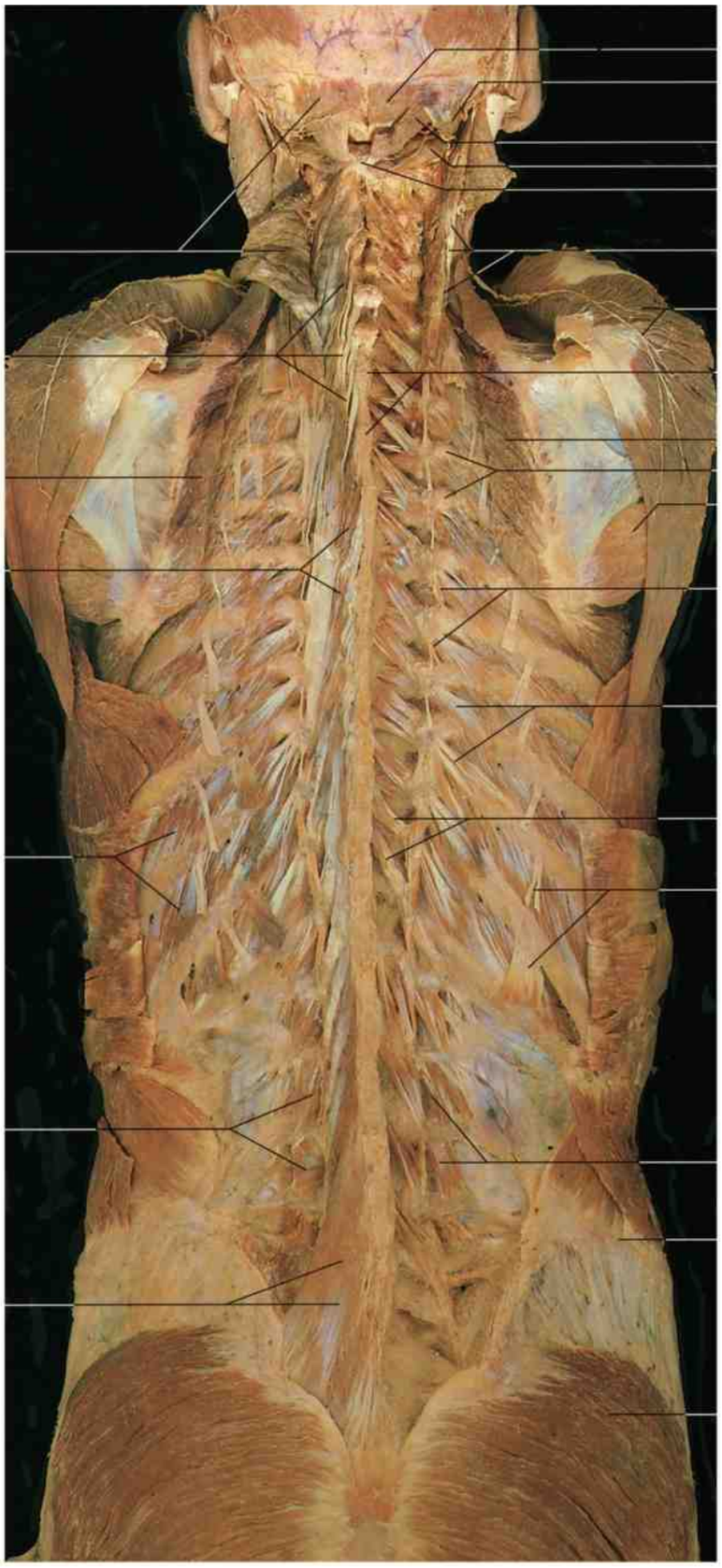
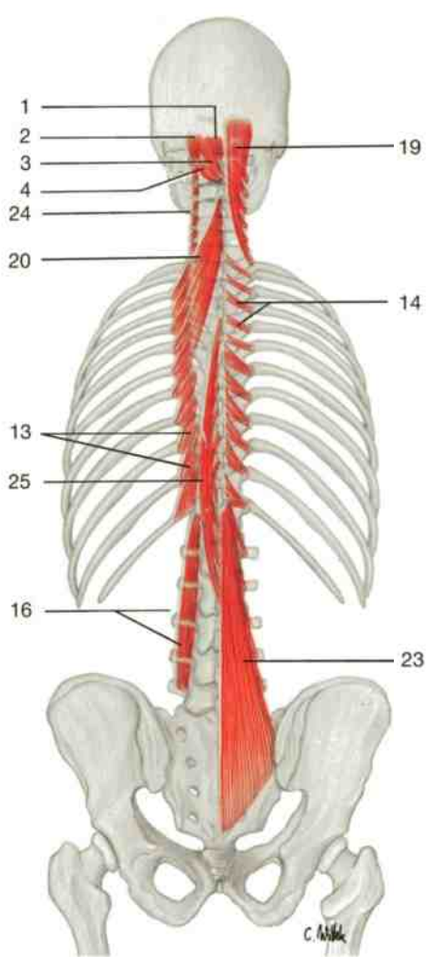


Muscles of the back. Transversospinal muscles, deepest layer on the right, where all parts of semispinalis and multifidus muscles have been removed.



Medial column of intrinsic muscles of the back. Transversospinal and intertransversal system (schematic drawing).

1 Rectus capitis posterior minor muscle
2 Obliquus capitis superior muscle
3 Rectus capitis posterior major muscle
4 Obliquus capitis inferior muscle
5 Spinous process of axis
6 Longissimus capitis muscle
7 Trapezius muscle (reflected) and accessory nerve (n. XI)
8 Spinous processes
9 Rhomboid major muscle
10 Transverse processes of thoracic vertebrae
11 Teres major muscle
12 Intertransverse ligaments
13 Levatores costarum muscles
14 Rotatores muscles
15 Tendons of iliocostalis muscle
16 Intertransversarii lumborum muscles (lateral)
17 Iliac crest
18 Gluteus maximus muscle
19 Semispinalis capitis muscle
20 Semispinalis cervicis muscle
21 Semispinalis thoracis muscle
22 External intercostal muscles
23 Multifidus muscle
24 Posterior cervical intertransversarii muscles
25 Spinalis thoracis muscle

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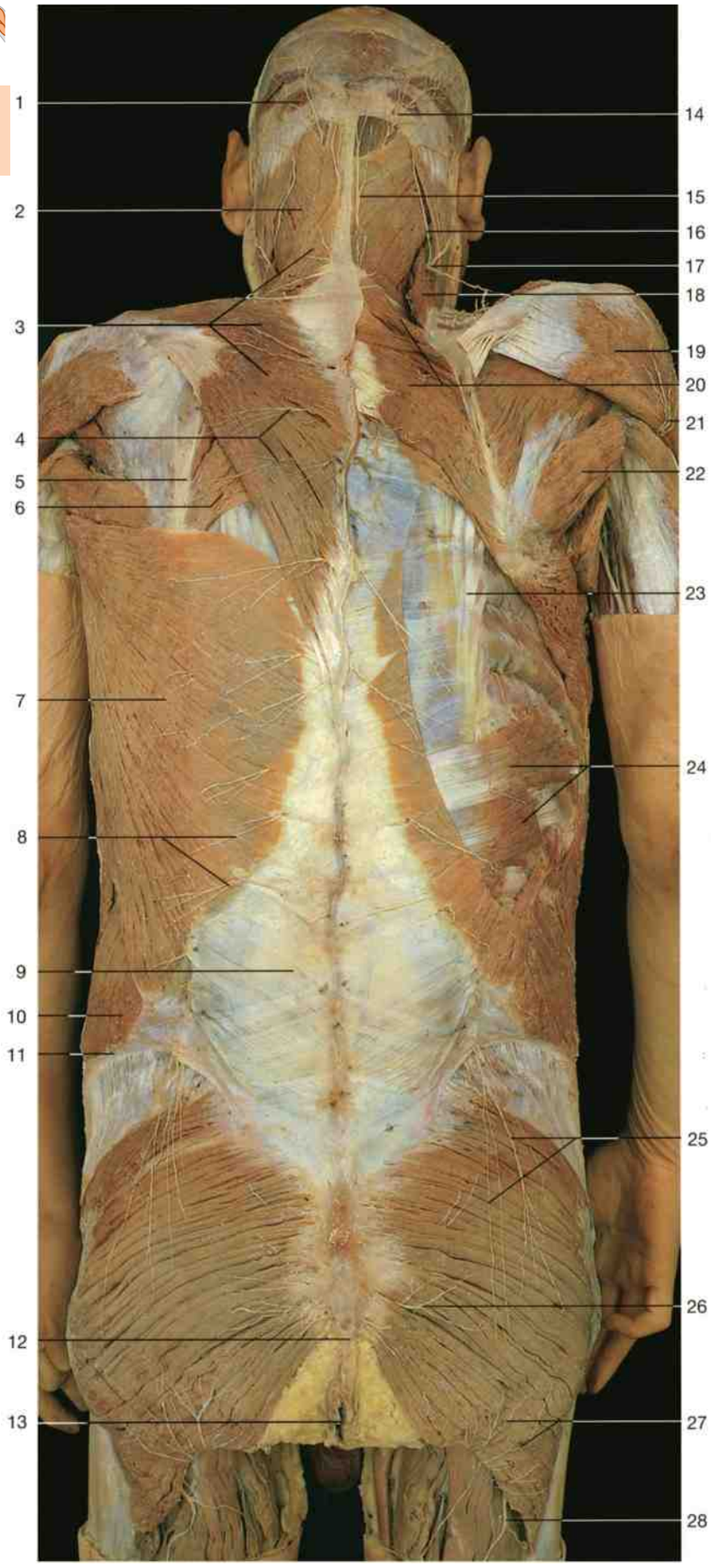

Innervation of the back. Superficial (left) and deeper (right) layers. Right trapezius and latissimus dorsi muscles removed.

1 Occipital belly of occipitofrontalis muscle
2 Splenius capitis muscle
3 Trapezius muscle
4 Medial cutaneous branches of dorsal rami of spinal nerves
5 Medial margin of scapula
6 Rhomboid major muscle
7 Latissimus dorsi muscle
8 Lateral cutaneous branches of dorsal rami of spinal nerves
9 Thoracolumbar fascia
10 External abdominal oblique muscle
11 Iliac crest
12 Last coccygeal vertebra
13 Anus
14 Greater occipital nerve
15 Third occipital nerve
16 Lesser occipital nerve
17 Cutaneous branches of cervical plexus
18 Levator scapulae muscle
19 Deltoid muscle
20 Rhomboid major and minor muscles
21 Upper lateral cutaneous nerve of arm (branch of axillary nerve)
22 Teres major muscle
23 Iliocostalis thoracis muscle
24 Serratus posterior inferior muscle
25 Superior cluneal nerves
26 Middle cluneal nerves
27 Inferior cluneal nerves
28 Posterior femoral cutaneous nerve

▷ **To page 227:**

1 Trapezius muscle
2 Infraspinatus muscle
3 Left latissimus dorsi muscle
4 Thoracolumbar fascia
5 Splenius cervicis muscle
6 Serratus posterior superior muscle
7 Medial branches of dorsal rami of thoracic spinal nerves
8 Lateral branches of dorsal rami of thoracic spinal nerves
9 Iliocostalis muscle
10 Serratus posterior inferior muscle
11 Latissimus dorsi muscle (reflected)

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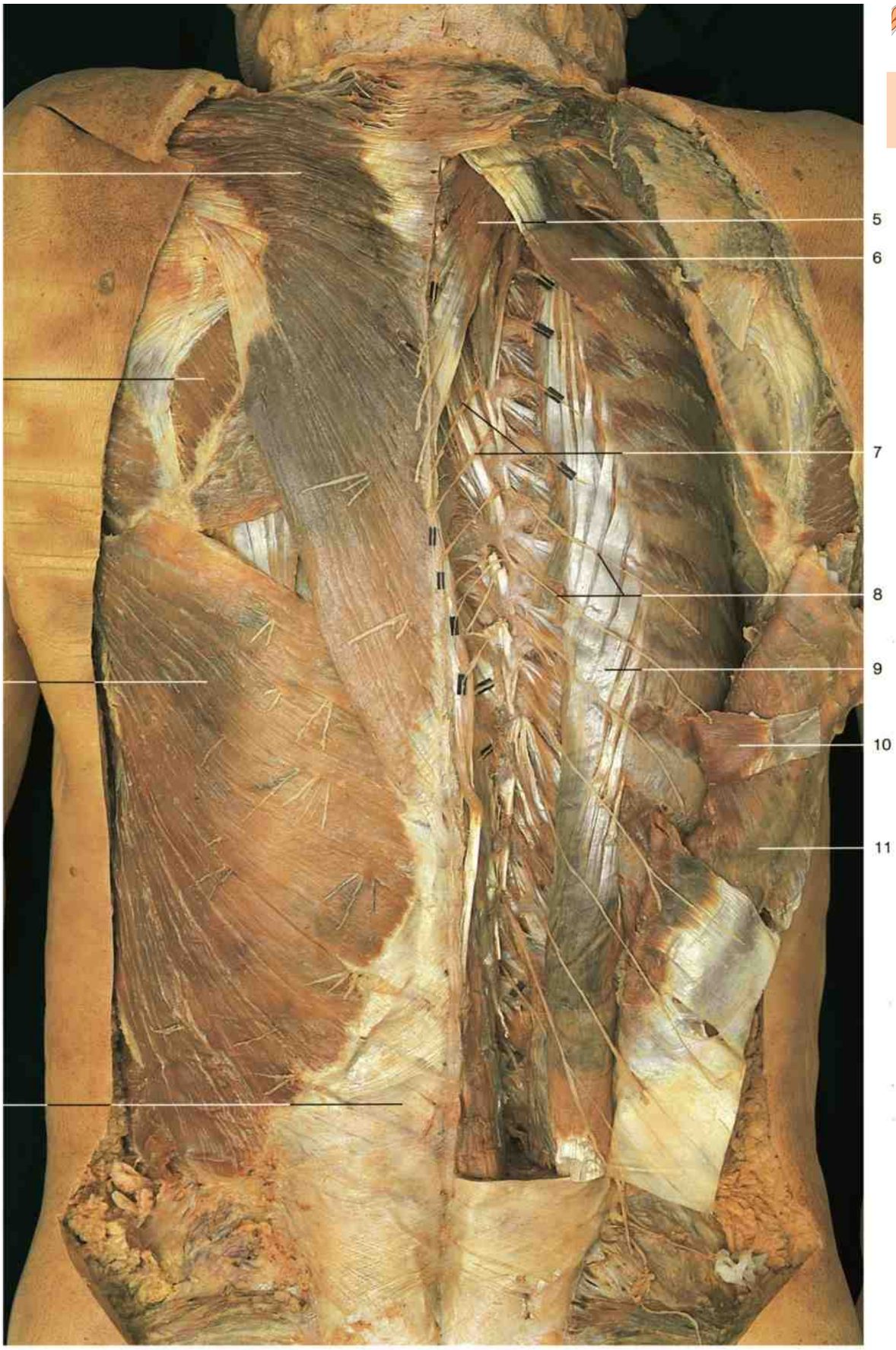

Innervation of the back. Dissection of the dorsal branches of spinal nerves. On the right, longissimus thoracis muscle has been removed and iliocostalis muscle laterally reflected.

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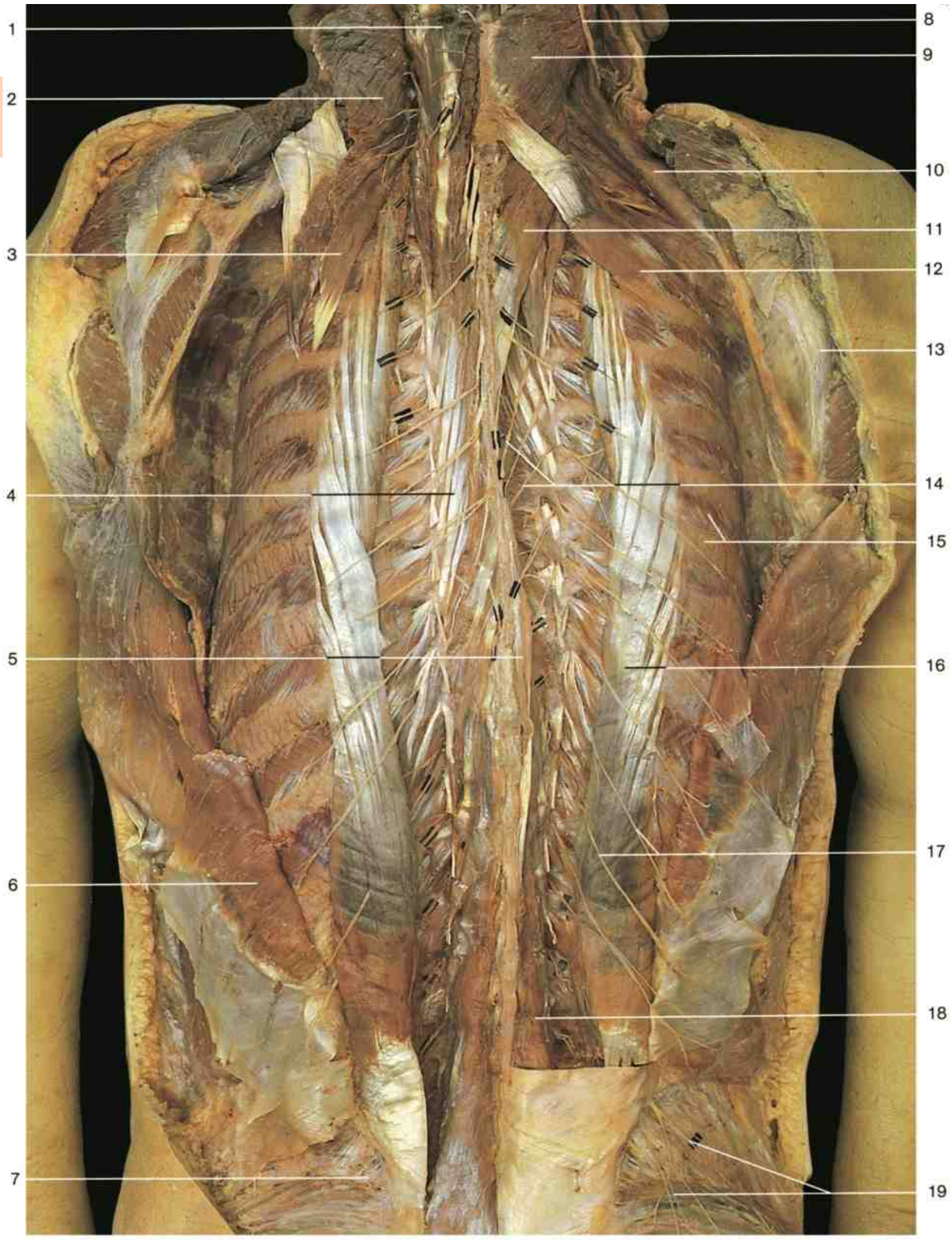

Innervation of the back. Deeper layer (dorsal aspect).

1 Semispinalis capitis muscle
2 Left splenius capitis muscle (cut and reflected)
3 Left splenius cervicis muscle (cut and reflected)
4 Semispinalis thoracis muscle
5 Spinalis thoracis muscle
6 Latissimus dorsi muscle (reflected)
7 Iliac crest
8 Lesser occipital nerve
9 Splenius capitis muscle
10 Levator scapulae muscle
11 Splenius cervicis muscle
12 Serratus posterior superior muscle
13 Scapula
14 Medial branches of dorsal rami of spinal nerves
15 Rib and external intercostal muscle
16 Iliocostalis thoracis muscle
17 Lateral branches of dorsal rami of spinal nerves
18 Multifidus muscle
19 Superior cluneal nerves

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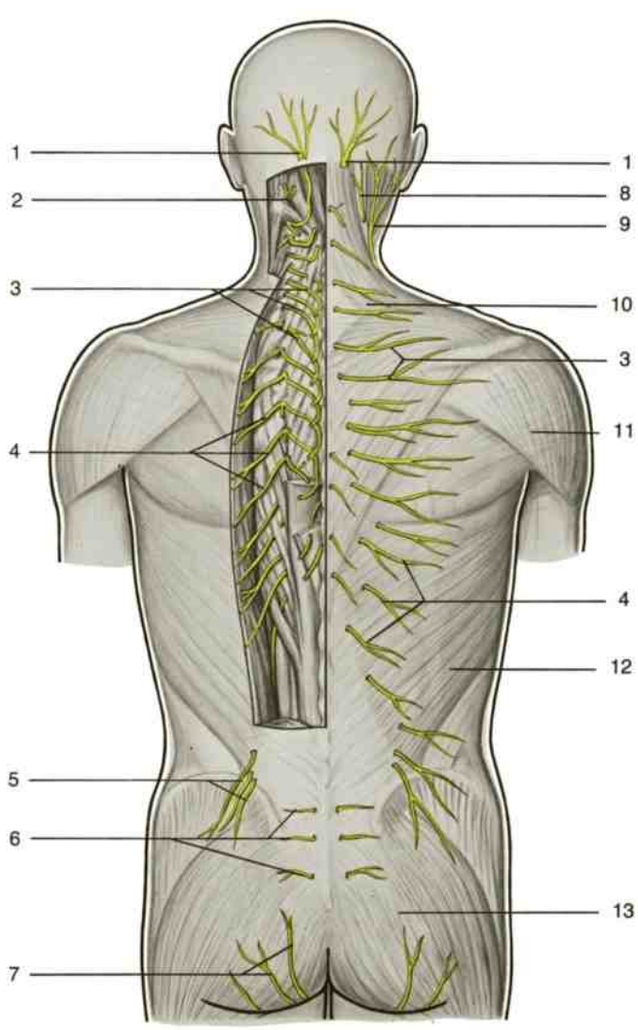
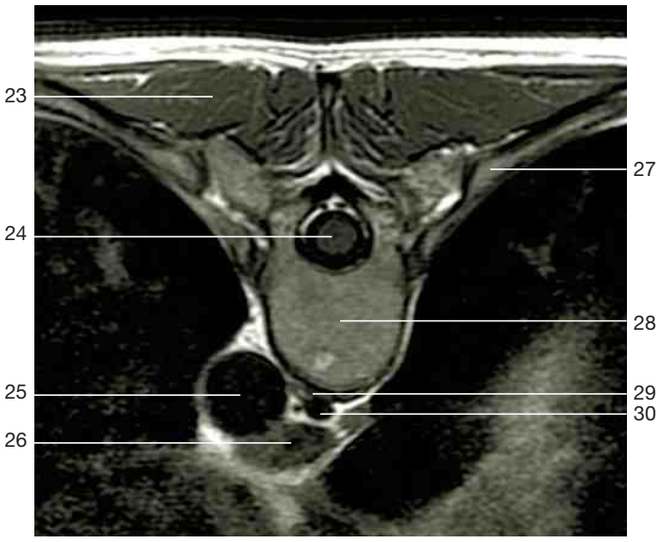
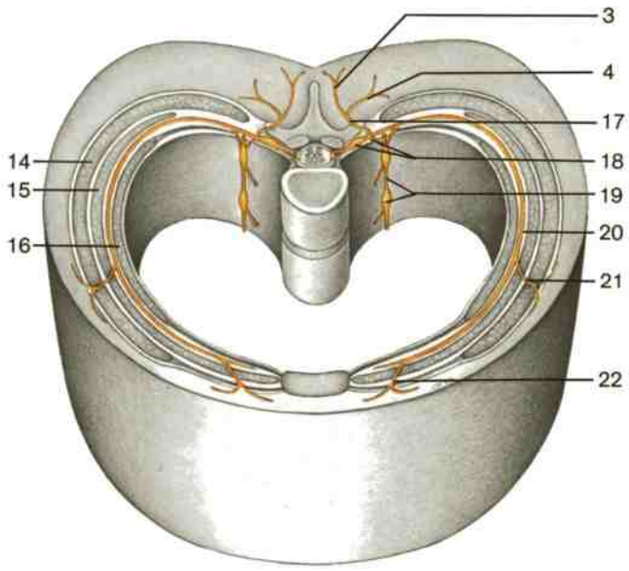
1 Greater occipital nerve (C_2)
2 Suboccipital nerve (C_1)
3 Medial branches of dorsal rami of spinal nerves
4 Lateral branches of dorsal rami of spinal nerves
5 Superior cluneal nerves (L_1–L_3)
6 Middle cluneal nerves (S_1–S_3)
7 Inferior cluneal nerves (derived from branches of the sacral plexus, ventral rami)
8 Lesser occipital nerve
9 Great auricular nerve
10 Trapezius muscle
11 Deltoid muscle
12 Latissimus dorsi muscle
13 Gluteus maximus muscle
14 External intercostal muscle
15 Internal intercostal muscle
16 Innermost intercostal muscle
17 Dorsal ramus of spinal nerve
18 Spinal nerve and spinal ganglion
19 Sympathetic trunk with ganglion
20 Intercostal nerve
21 Lateral cutaneous branch } of intercostal nerve
22 Anterior cutaneous branch } of intercostal nerve
23 Longissimus thoracis muscle
24 Spinal cord
25 Aorta
26 Esophagus
27 Body of rib
28 Thoracic rib
29 Thoracic duct
30 Azygos vein



General characteristics of the innervation of the back. Distribution of dorsal branches of spinal nerves. Note the segmental arrangement of the innervation of the dorsal part of the trunk (schematic drawing).



Posterior part of the thoracic wall (MRI scan, coronal section; from Heuck et al., MRT-Atlas, 2009).



Position and branches of spinal nerves in one segment of thoracic wall (schematic drawing).

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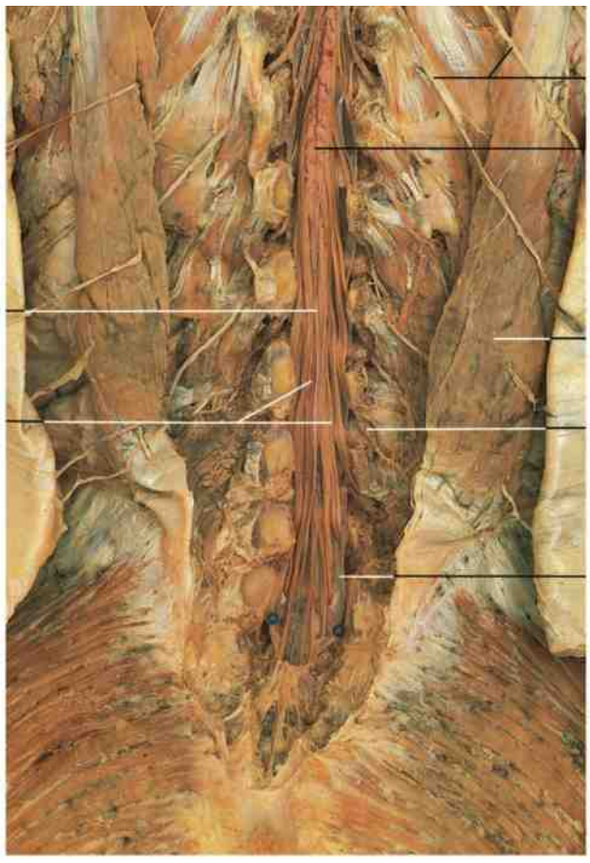
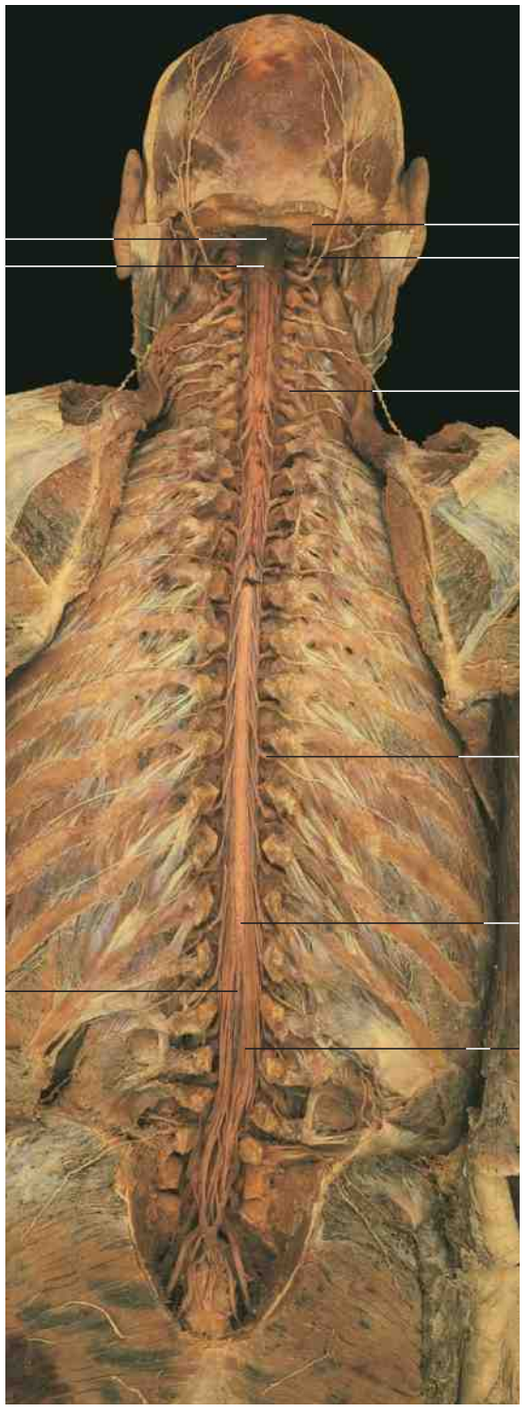
Lumbar portion of spinal cord. Note the relation between the nervous and muscular segments.



Terminal part of spinal cord. Dura removed.



Innervation of the back. Spinal cord in the vertebral canal (opened). Longissimus dorsi and iliocostal muscles have been removed.

1 Cerebellomedullary cistern
2 Medulla oblongata
3 Third cervical nerve (C_3)
4 Greater occipital nerve (C_2)
5 Dorsal primary ramus
6 Dorsal roots
7 Spinal ganglion
8 Spinal dura mater
9 Spinal arachnoid mater
10 Filum terminale
11 Conus medullaris
12 Cauda equina
13 Lateral branches of dorsal rami of spinal nerves
14 Ventral ramus of spinal nerve (intercostal nerve)
15 Iliocostalis muscle

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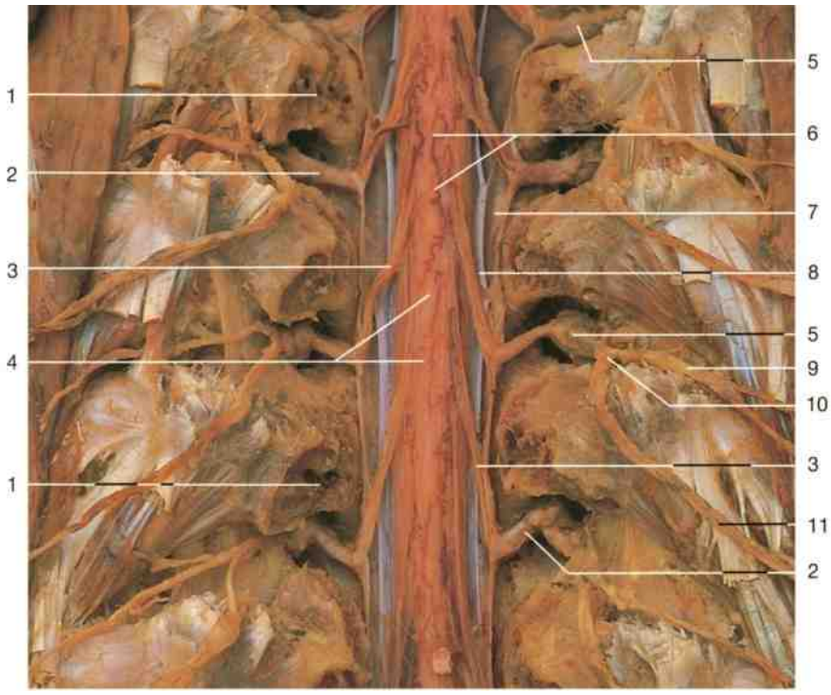
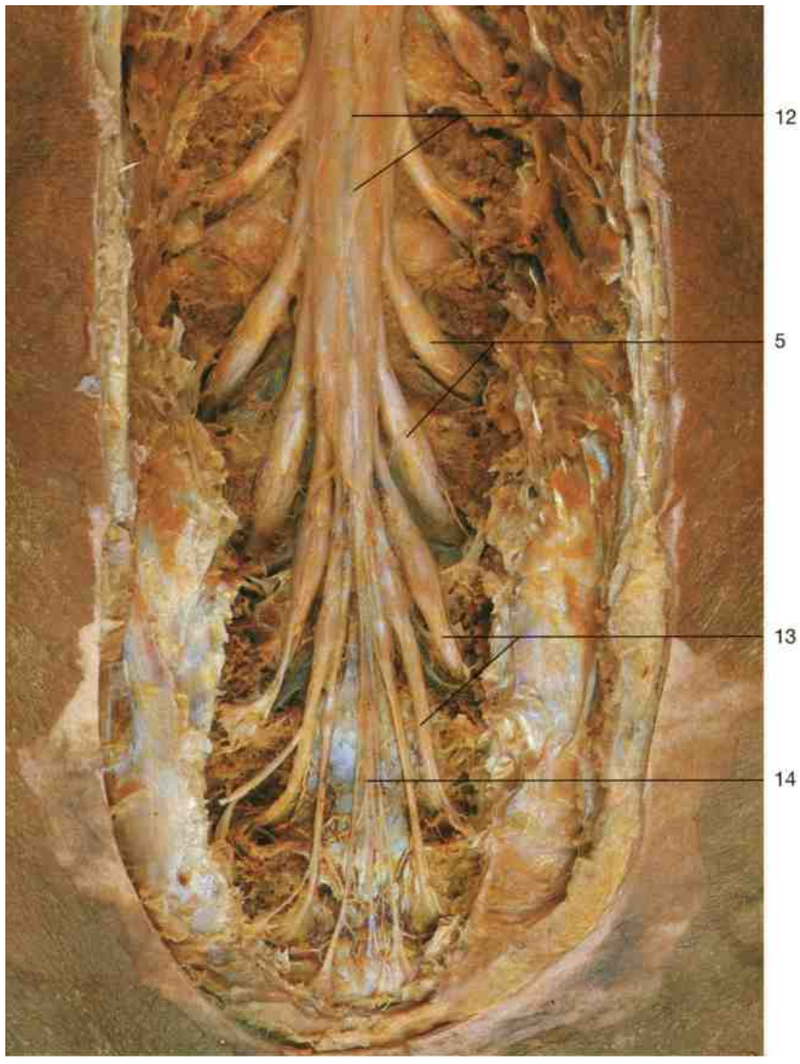


Thoracic portion of spinal cord (dorsal aspect). Vertebral canal and dura mater opened.

1 Arch of vertebra (divided)
2 Spinal nerve with meningeal coverings
3 Dorsal roots of thoracic spinal nerves
4 Spinal cord (thoracic portion)
5 Spinal ganglia with meningeal coverings
6 Pia mater with blood vessels
7 Dura mater (opened)
8 Denticulate ligament
9 Lateral branch of dorsal ramus
10 Dorsal ramus of spinal nerve (dividing into a medial and lateral branch)
11 Medial branch of dorsal ramus of spinal nerve
12 Spinal dura mater
13 Spinal nerves of sacral segments
14 Filum terminale



Terminal part of spinal cord with dura mater (dorsal aspect). Dorsal part of sacrum removed.

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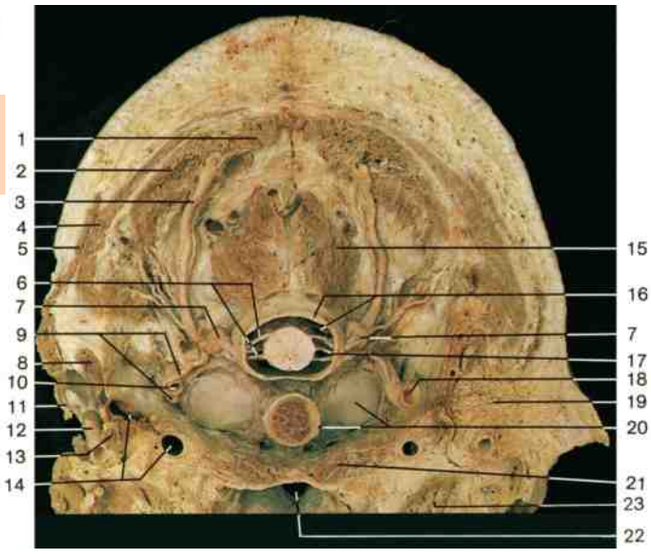
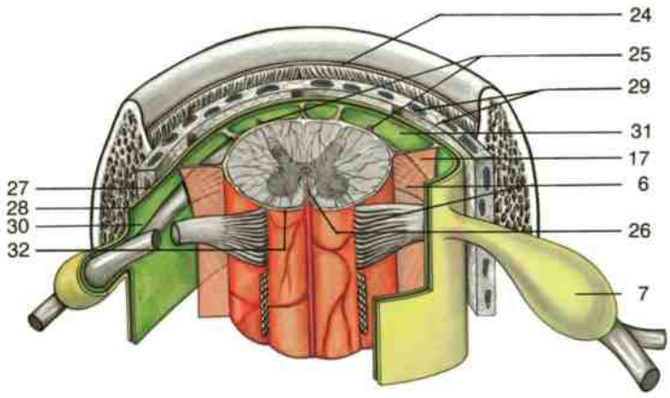


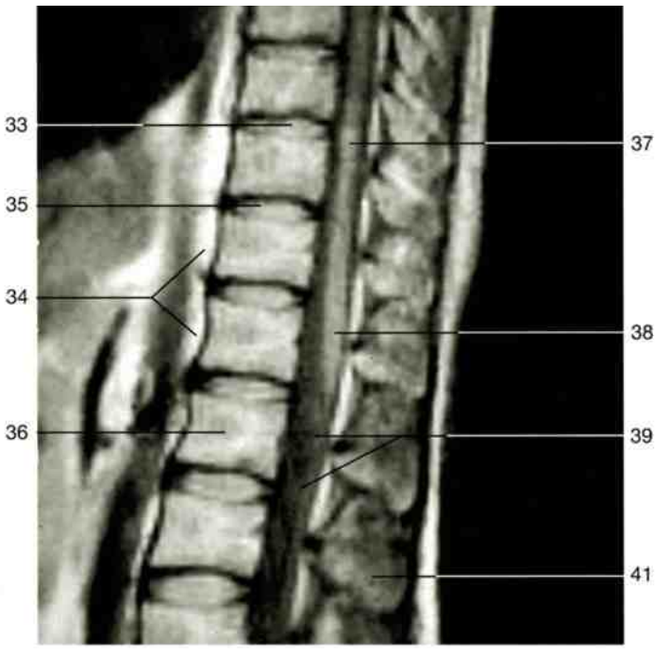
Horizontal section of the neck. Dissection of the second cervical spinal nerve. Posterior surface at top of figure.



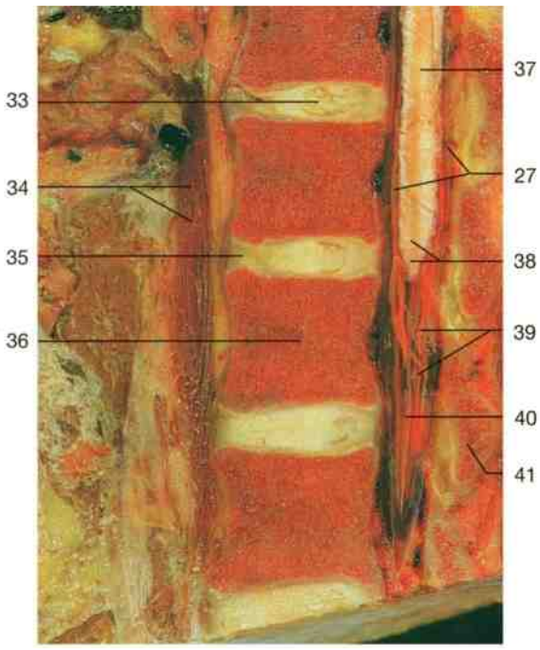
Meningeal coverings of the spinal cord (anterior aspect). (Schematic drawing.)

1 Trapezius muscle
2 Semispinalis capitis muscle
3 Dorsal ramus of spinal nerve
4 Sternocleidomastoid muscle
5 Platysma muscle
6 Dorsal and ventral roots of spinal nerves
7 Spinal ganglion
8 Posterior belly of digastric muscle
9 Ventral ramus of spinal nerve
10 Vertebral artery
11 Great auricular nerve
12 Superficial temporal artery
13 Styloid process
14 Internal jugular vein and internal carotid artery
15 Rectus capitis posterior major muscle
16 Dura mater and subarachnoid space
17 Denticulate ligament
18 Vertebral artery
19 Parotid gland
20 Dens of axis (divided) and inferior articular facet of atlas
21 Longus capitis muscle
22 Pharyngeal cavity
23 Medial pterygoid muscle
24 Periosteum of vertebral canal
25 Posterior spinal arteries
26 Anterior spinal artery

Meningeal coverings
27 Dura mater
28 Subdural space
29 Extradural or epidural space with venous plexus and fatty tissue
30 Arachnoid (green)
31 Subarachnoid space
32 Pia mater (pink)
33 Nucleus pulposus
34 Crus of diaphragm
35 Intervertebral disc
36 Body of first lumbar vertebra
37 Spinal cord
38 Conus medullaris
39 Cauda equina
40 Filum terminale
41 Spinous process



Sagittal section through the vertebral canal, T_9–L_2. (MRI scan.)



Sagittal section through the vertebral canal, T_{12}–L_2. Notice red bone marrow (unfixed).

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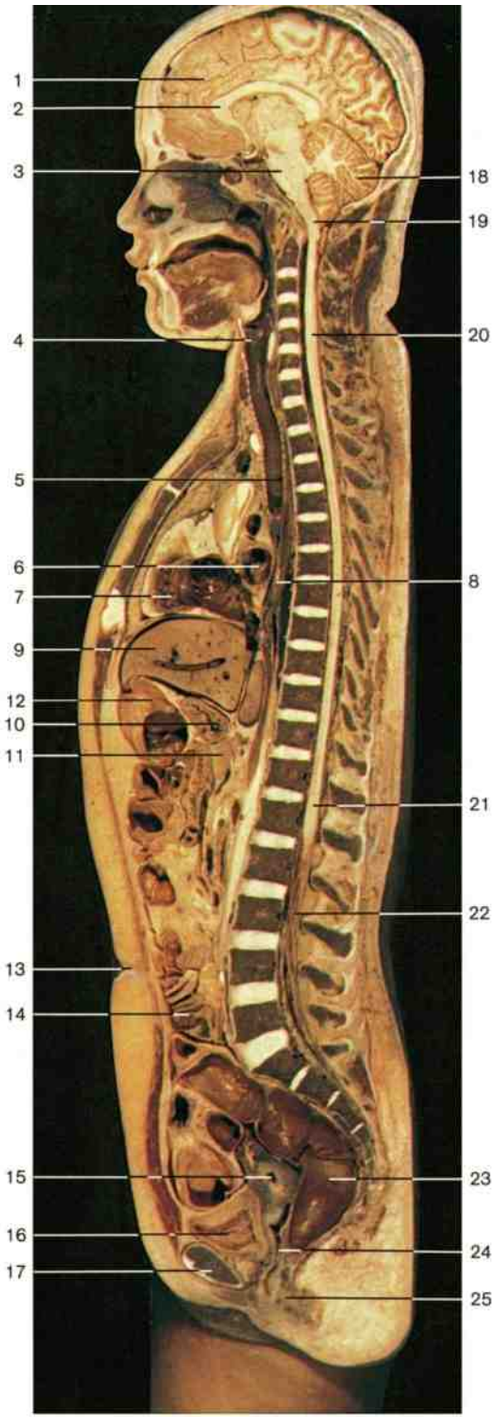
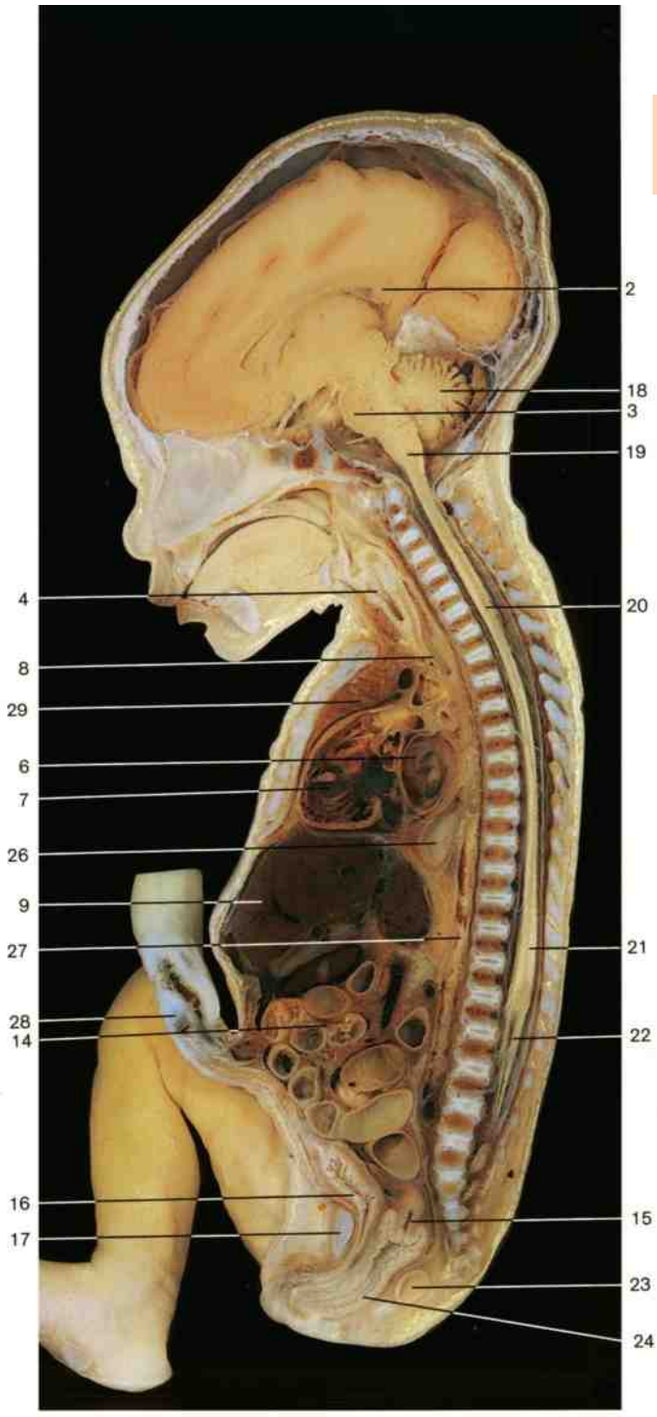


Median section of the head and trunk in the adult (female). The conus medullaris of the spinal cord is located at the level of L_1.



Median section of the head and trunk in the neonate. Note that in the neonate the conus medullaris of the spinal cord extends far more caudally than in the adult.

1 Cerebrum
2 Corpus callosum
3 Pons
4 Larynx
5 Trachea
6 Left atrium
7 Right ventricle
8 Esophagus
9 Liver
10 Stomach
11 Pancreas
12 Transverse colon
13 Umbilicus
14 Small intestine
15 Uterus
16 Urinary bladder
17 Pubic symphysis
18 Cerebellum
19 Medulla oblongata
20 Spinal cord
21 Conus medullaris
22 Cauda equina
23 Rectum
24 Vagina
25 Anus
26 Inferior vena cava
27 Aorta
28 Umbilical cord
29 Thymus

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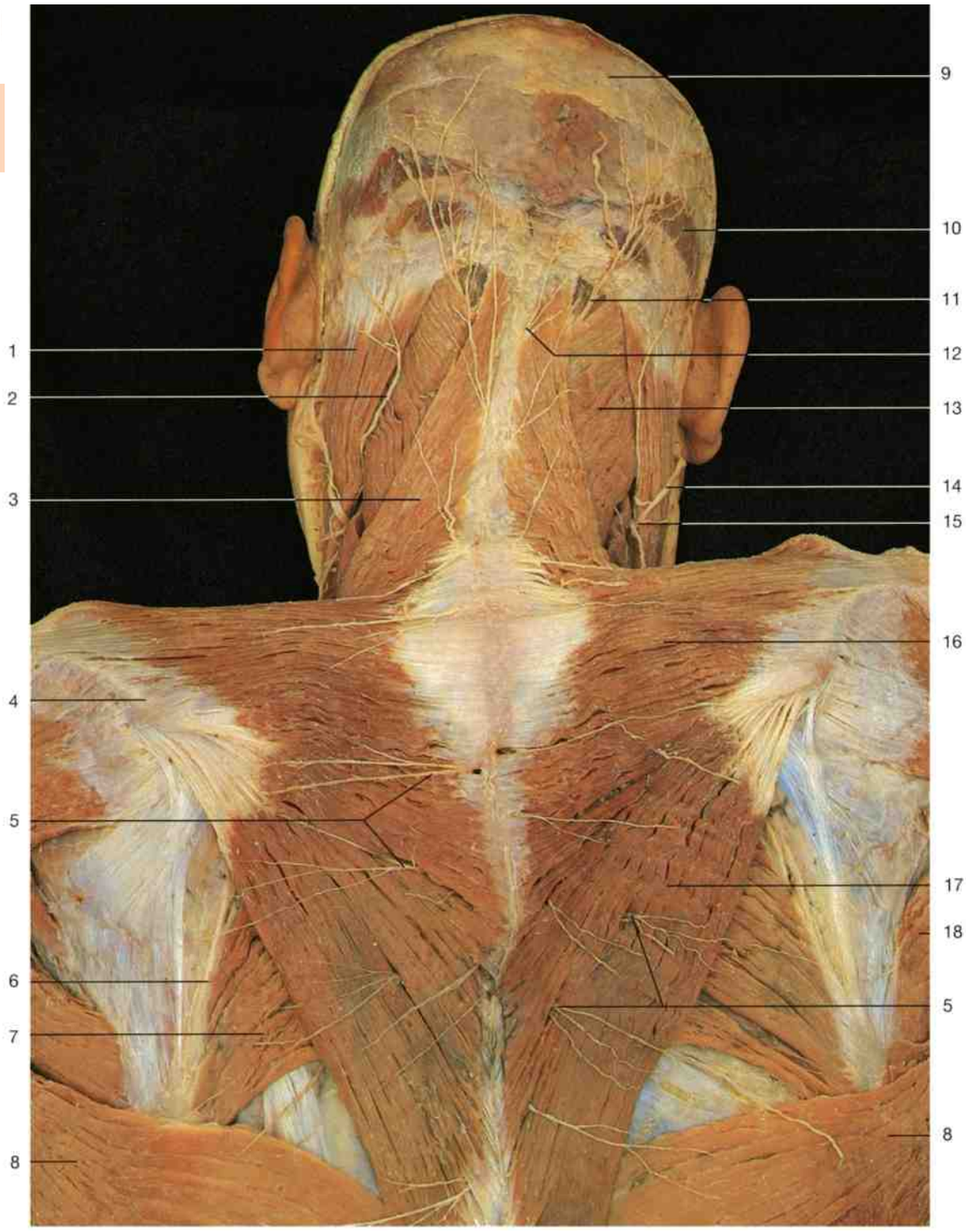

Dorsal aspect of the neck (superficial layer). Nuchal region and shoulder.

1 Sternocleidomastoid muscle
2 Lesser occipital nerve
3 Descending fibers of trapezius muscle
4 Spine of scapula
5 Medial cutaneous branches of dorsal rami of spinal nerves
6 Medial margin of scapula
7 Rhomboid major muscle
8 Latissimus dorsi muscle
9 Galea aponeurotica
10 Occipital belly of occipitofrontalis muscle
11 Greater occipital nerve
12 Third occipital nerve
13 Splenius capitis muscle
14 Great auricular nerve
15 Cutaneous nerves of cervical plexus
16 Transverse fibers of trapezius muscle
17 Ascending fibers of trapezius muscle
18 Teres major muscle

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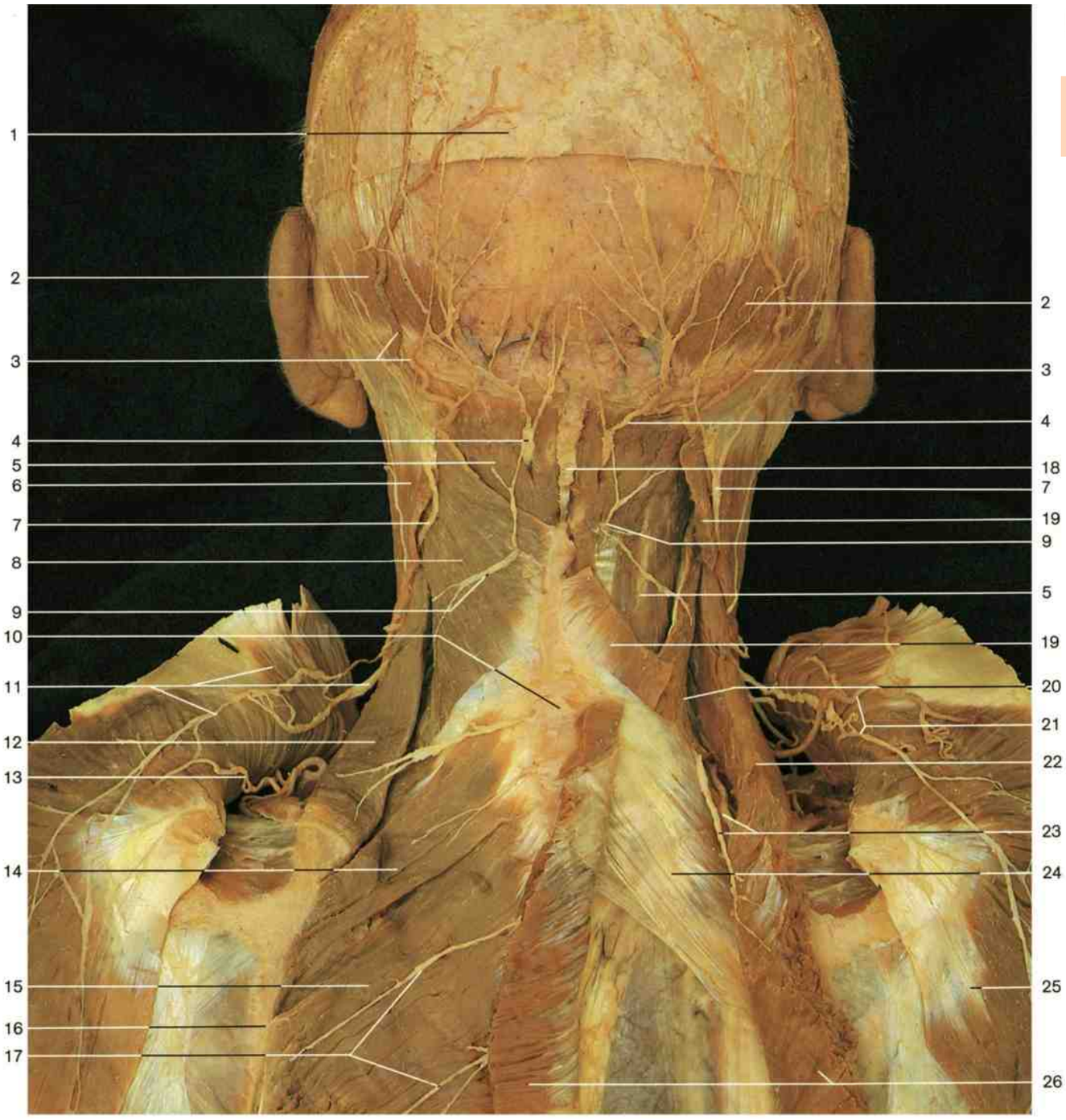

Dorsal aspect of the neck (deeper layer). The left trapezius muscle has been divided and reflected. On the right, trapezius, rhomboid, and splenius muscles have been divided. Right levator scapulae muscle has been slightly reflected.

1 Galea aponeurotica
2 Occipital belly of occipitofrontalis muscle
3 Occipital artery
4 Greater occipital nerve (C_2)
5 Semispinalis capitis muscle
6 Sternocleidomastoid muscle
7 Lesser occipital nerve
8 Left splenius capitis muscle
9 Third occipital nerve (C_3)
10 Spinous process of vertebra prominens (C_7)
11 Left trapezius muscle and accessory nerve
12 Levator scapulae muscle
13 Superficial branch of transverse cervical artery
14 Rhomboid minor muscle
15 Rhomboid major muscle
16 Medial margin of scapula
17 Medial branches of dorsal rami of spinal nerves
18 Ligamentum nuchae
19 Splenius capitis muscle (divided)
20 Splenius cervicis muscle
21 Right accessory nerve and superficial branch of transverse cervical artery
22 Right levator scapulae muscle
23 Dorsal scapular nerve and deep branch of transverse cervical artery
24 Serratus posterior superior muscle
25 Right trapezius muscle (divided and reflected)
26 Right rhomboid major muscle (divided and reflected)

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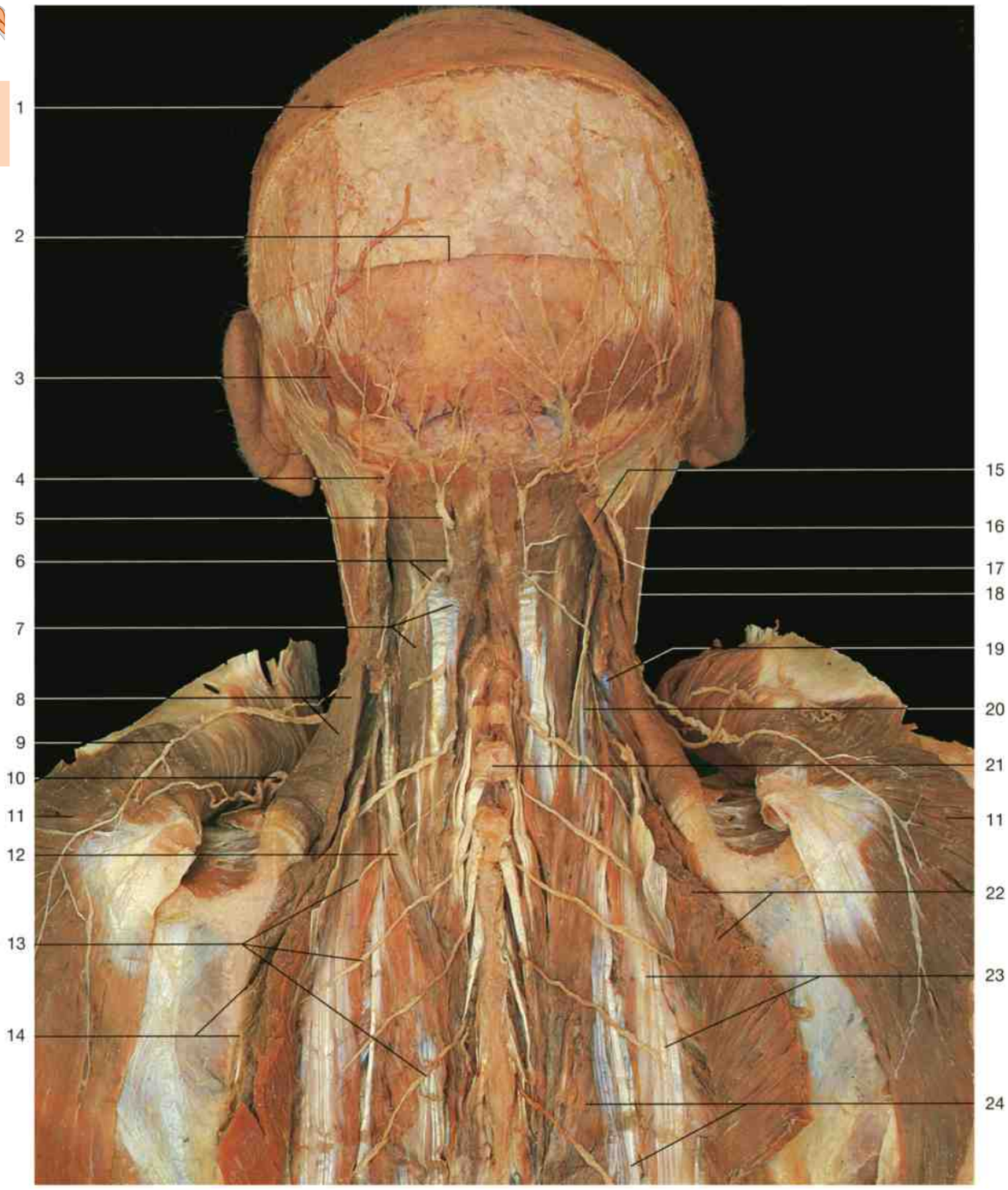

Dorsal aspect of the neck (deepest layer). Trapezius, splenius capitis, and cervicis muscles have been divided and partly removed or reflected.

1 Skin of scalp
2 Galea aponeurotica
3 Occipital belly of occipitofrontalis muscle
4 Occipital artery
5 Greater occipital nerve
6 Third occipital nerve
7 Semispinalis capitis muscle
8 Levator scapulae muscle
9 Accessory nerve (n. XI)
10 Superficial cervical artery
11 Trapezius muscle (reflected)
12 Longissimus cervicis muscle
13 Medial cutaneous branches of dorsal rami of spinal nerves
14 Medial margin of scapula
15 Splenius capitis muscle (divided)
16 Sternocleidomastoid muscle
17 Lesser occipital nerve
18 Great auricular nerve
19 Splenius cervicis muscle
20 Longissimus cervicis muscle
21 Spinous process of seventh cervical vertebra (vertebra prominens)
22 Rhomboid muscles (divided)
23 Iliocostalis thoracis muscle
24 Longissimus thoracis muscle

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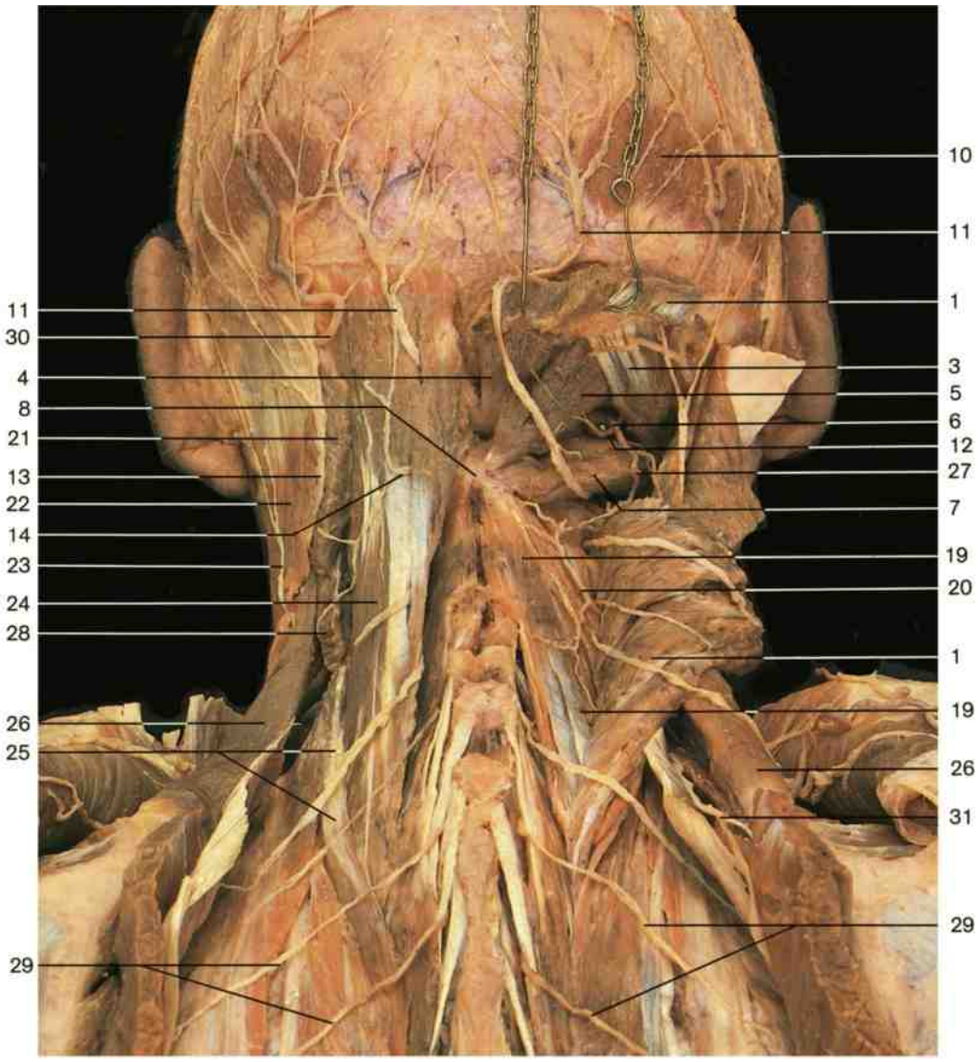
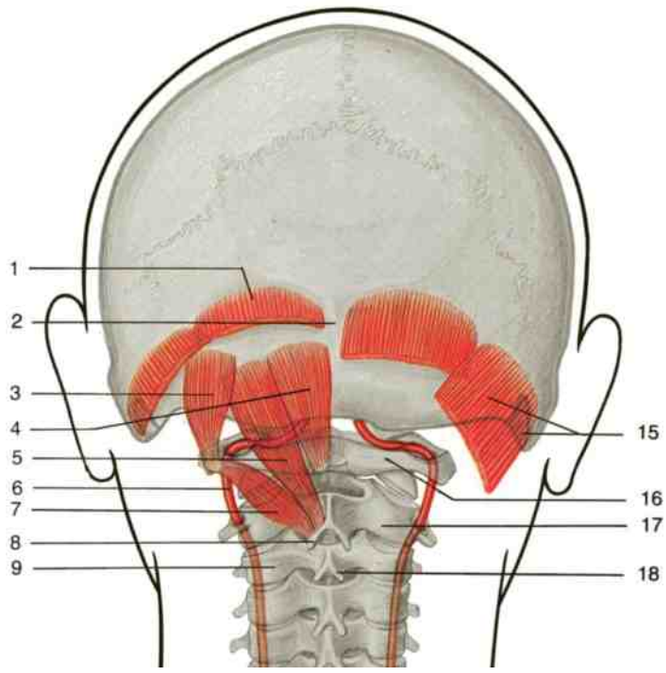


Dorsal aspect of the neck (deepest layer). **Suboccipital triangle.** Right semispinalis capitis muscle divided and reflected.

1 Semispinalis capitis muscle (divided)
2 External occipital protuberance
3 Obliquus capitis superior muscle
4 Rectus capitis posterior minor muscle
5 Rectus capitis posterior major muscle
6 Vertebral artery
7 Obliquus capitis inferior muscle
8 Spinous process of axis
9 Third cervical vertebra
10 Occipital belly of occipitofrontalis muscle
11 Greater occipital nerve
12 Suboccipital nerve (C_1)
13 Lesser occipital nerve
14 Third occipital nerve (C_3)
15 Mastoid process and splenius capitis muscle
16 Atlas
17 Axis
18 Spinous process of third cervical vertebra
19 Right semispinalis cervicis muscle
20 Deep cervical artery
21 Left splenius capitis muscle (divided)
22 Left sternocleidomastoid muscle
23 Great auricular nerve
24 Left semispinalis capitis muscle
25 Left longissimus cervicis muscle
26 Levator scapulae muscle
27 Muscular branch of vertebral artery
28 Left semispinalis cervicis muscle (divided)
29 Medial branches of dorsal rami of spinal nerves
30 Occipital artery
31 Dorsal scapular nerve



Suboccipital triangle and position of the vertebral artery (schematic drawing).

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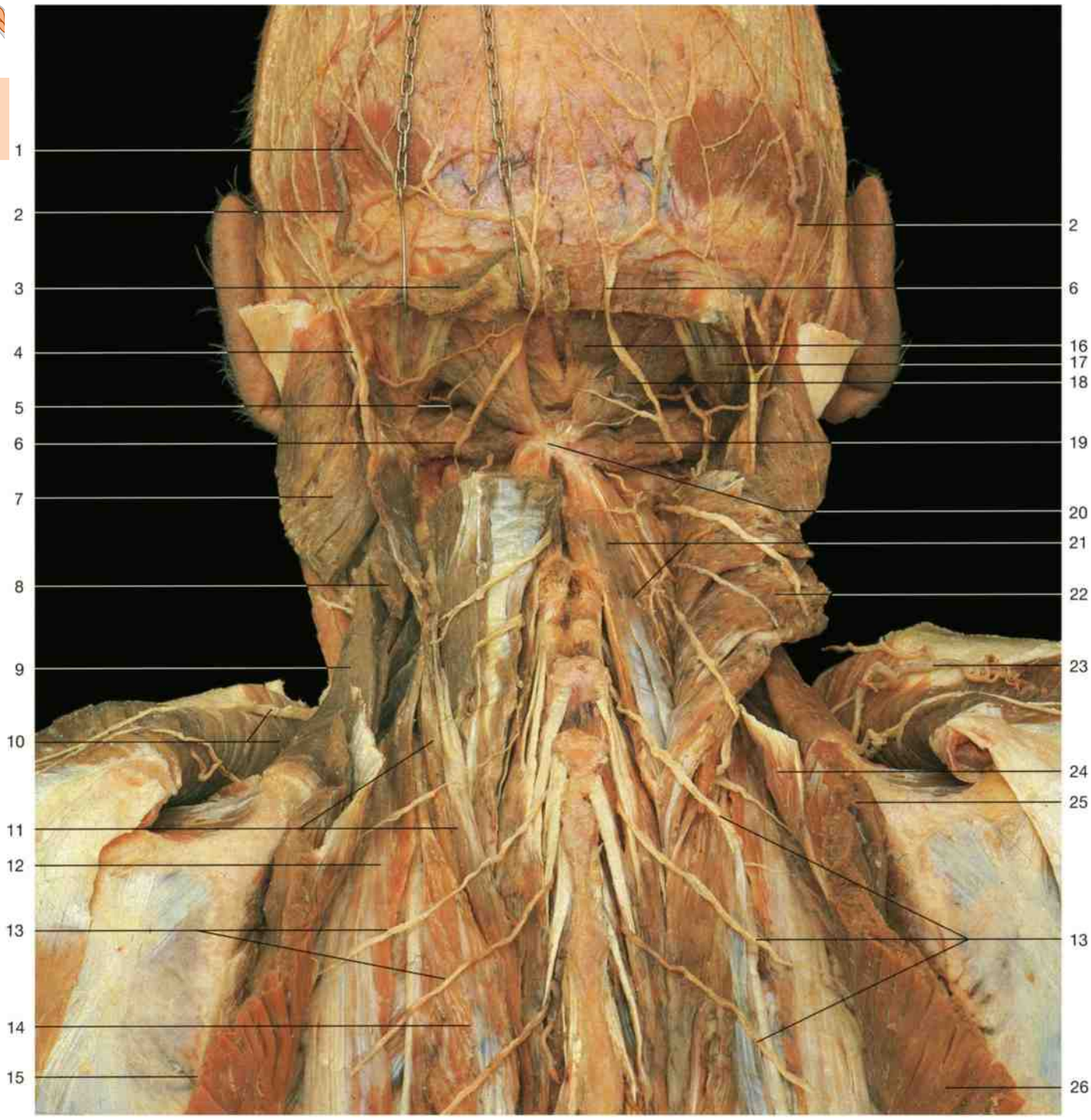

Dorsal aspect of the neck (deepest layer). Dissection of suboccipital triangle on both sides.

1 Occipital belly of occipitofrontalis muscle
2 Occipital artery
3 Insertion of semispinalis capitis muscle (divided)
4 Lesser occipital nerve (from cervical plexus)
5 Suboccipital nerve (C_1)
6 Greater occipital nerve (C_2)
7 Splenius capitis muscle (reflected)
8 Splenius cervicis muscle
9 Levator scapulae muscle
10 Accessory nerve (n. XI), trapezius muscle
11 Longissimus cervicis muscle
12 Iliocostalis cervicis muscle
13 Medial cutaneus branches of dorsal rami of spinal nerves (C_7, C_8)
14 Longissimus thoracis muscle
15 Medial margin of scapula
16 Rectus capitis posterior minor muscle
17 Obliquus capitis superior muscle
18 Rectus capitis posterior major muscle
19 Obliquus capitis inferior muscle
20 Spinous process of axis
21 Semispinalis cervicis muscle
22 Semispinalis capitis muscle (divided and reflected)
23 Transverse cervical artery (superficial branch)
24 Serratus posterior superior muscle (divided and reflected)
25 Rhomboid minor muscle (divided and reflected)
26 Rhomboid major muscle (divided and reflected)

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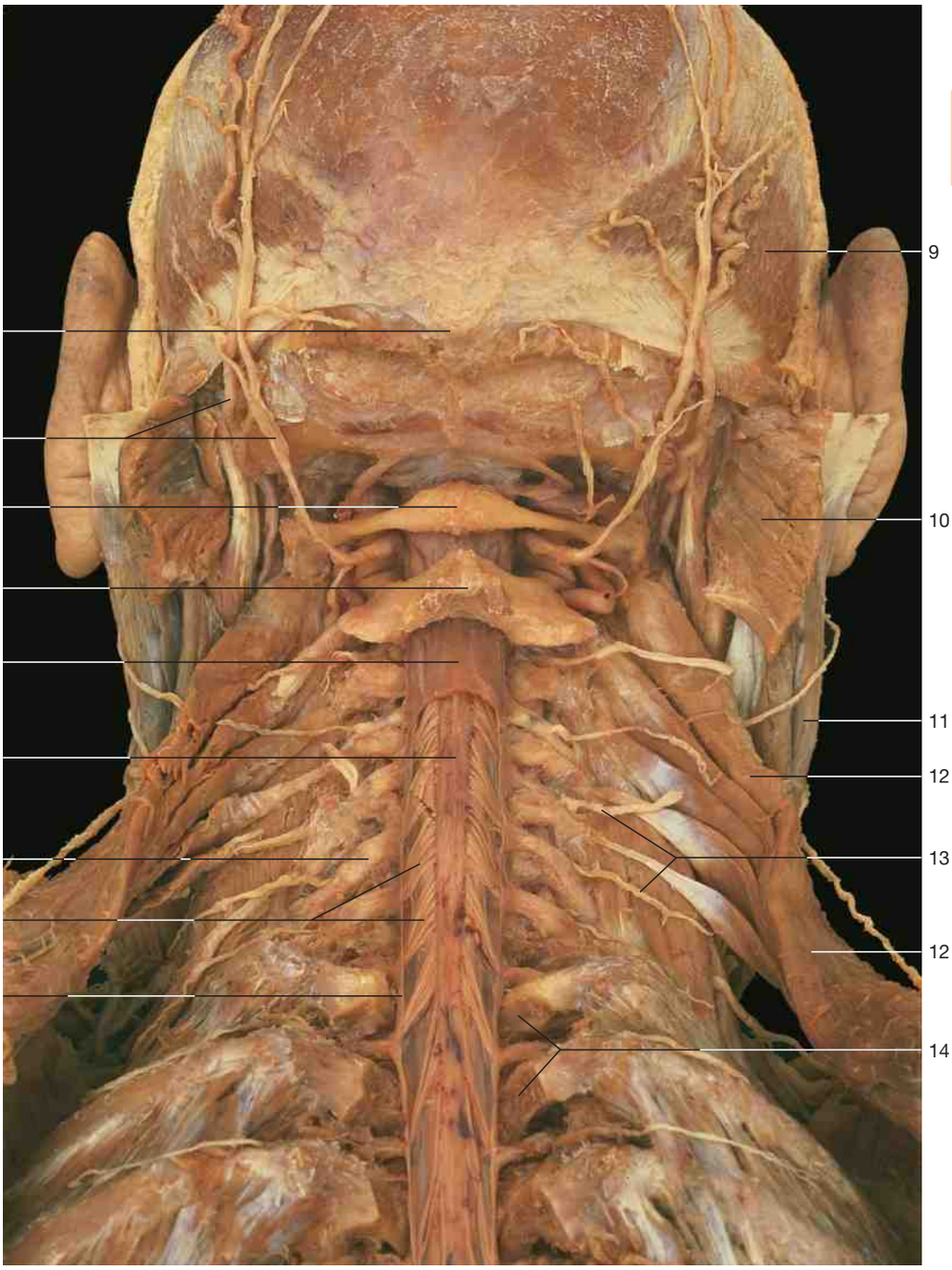

Dorsal aspect of the neck (deepest layer). The vertebral canal caudally of the atlas and axis has been opened to show the spinal cord (dura mater has been partly removed).

1 Protuberantia occipitalis externa
2 Greater occipital nerve (C_2) and occipital artery
3 Atlas (posterior arch)
4 Axis (posterior arch)
5 Dura mater
6 Spinal cord
7 Spinal ganglion
8 Posterior root filaments (fila radicularia posterior)
9 Occipital belly of occipitofrontalis muscle
10 Splenius capitis muscle (cut and reflected)
11 Sternocleidomastoid muscle
12 Levator scapulae muscle
13 Posterior branches of spinal nerves
14 Arches of cervical vertebrae (cut)

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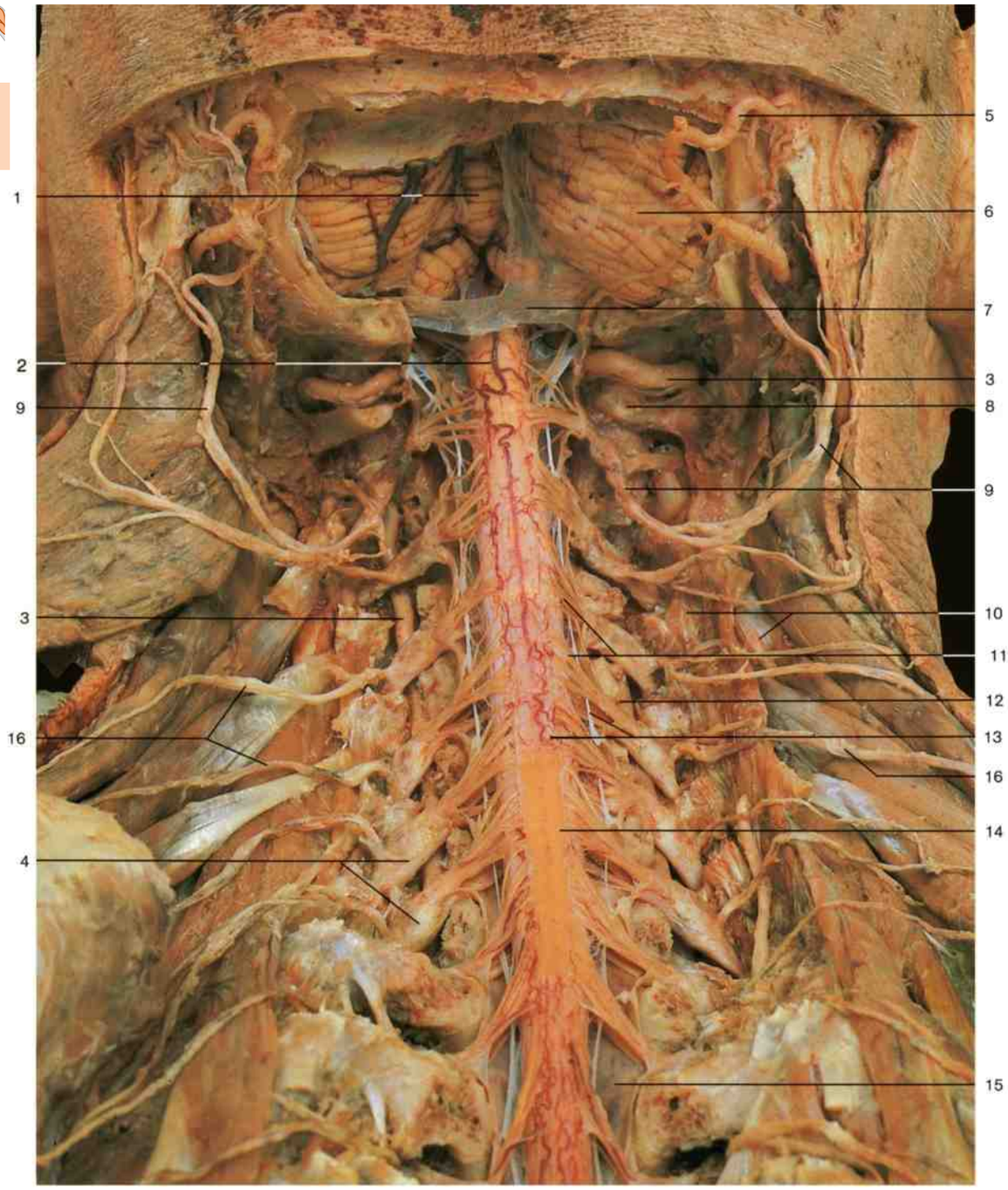

Dorsal aspect of the neck (deepest layer). Dissection of medulla oblongata and spinal cord. Cranial cavity opened.

1 Vermis of the cerebellum
2 Medulla oblongata and posterior spinal artery
3 Vertebral artery
4 Spinal ganglion
5 Occipital artery
6 Cerebellum
7 Cerebellomedullary cistern
8 Atlas
9 Greater occipital nerve (C_2)
10 Levator scapulae muscle and intertransverse ligament
11 Dorsal roots of spinal nerves
12 Vertebral arch
13 Denticulate ligament and arachnoid mater
14 Area where pia mater has been removed
15 Dura mater
16 Dorsal rami of spinal nerves

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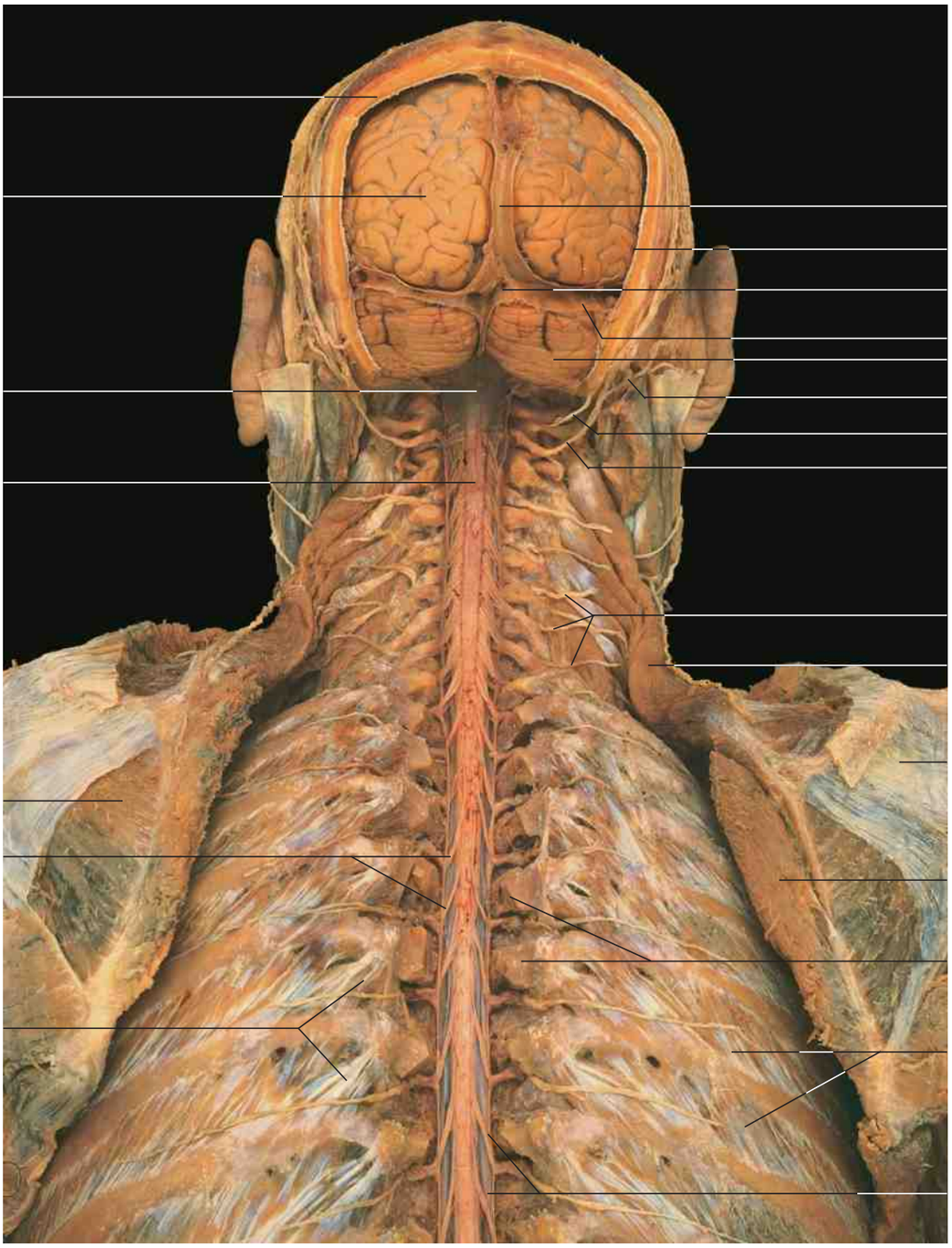

Dorsal aspect of the neck (deepest layer). Dissection of medulla oblongata and spinal cord in relation to the brain.

1 Calvaria
2 Left hemisphere of the brain
3 Cerebellomedullary cistern
4 Spinal cord
5 Scapula with infraspinous muscle
6 Root filaments (fila radicularia posterior)
7 Levatores costarum muscles
8 Falx cerebri with sinus sagittalis superior
9 Subarachnoidal space
10 Confluens sinuum
11 Transverse sinus
12 Cerebellum
13 Occipital artery
14 Suboccipital nerve (C_1)
15 Greater occipital nerve (C_2)
16 Posterior branches of spinal nerves
17 Levator scapulae muscle
18 Deltoid muscle
19 Rhomboid muscles
20 Vertebral arches (cut)
21 External intercostal muscle
22 Dura mater

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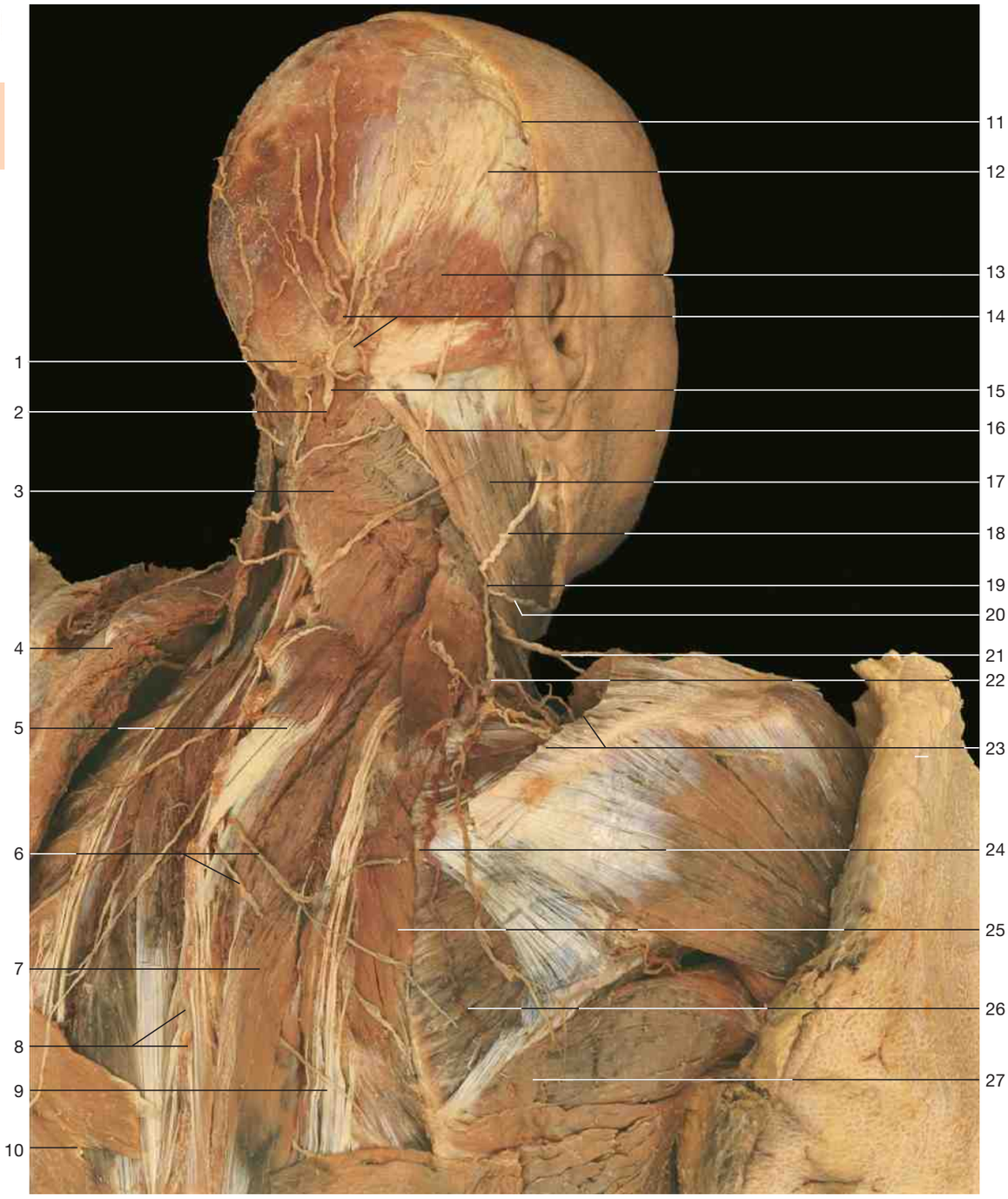

Oblique-lateral aspect of the neck and head (deeper layer). The trapezius muscle has been removed.

1 Protuberantia occipitalis externa
2 Semispinalis capitis muscle
3 Splenius capitis muscle
4 Scapula
5 Splenius cervicis muscle
6 Posterior branches of spinal nerves
7 Longissimus muscle
8 Spinous processes of thoracic vertebrae
9 Iliocostalis muscle
10 Latissimus dorsi muscle
11 Epidermis of the head (scalp)
12 Galea aponeurotica
13 Occipital belly of occipitofrontalis muscle
14 Occipital artery
15 Greater occipital nerve (C_2)
16 Lesser occipital nerve
17 Sternocleidomastoid muscle
18 Great auricular nerve
19 Punctum nervosum
20 Transverse cervical nerve
21 Supraclavicular nerves
22 Accessory nerve (n. XI)
23 Trapezius muscle (cut edge)
24 Medial margin of scapula
25 Rhomboid muscle
26 Infraspinous muscle
27 Teres major muscle

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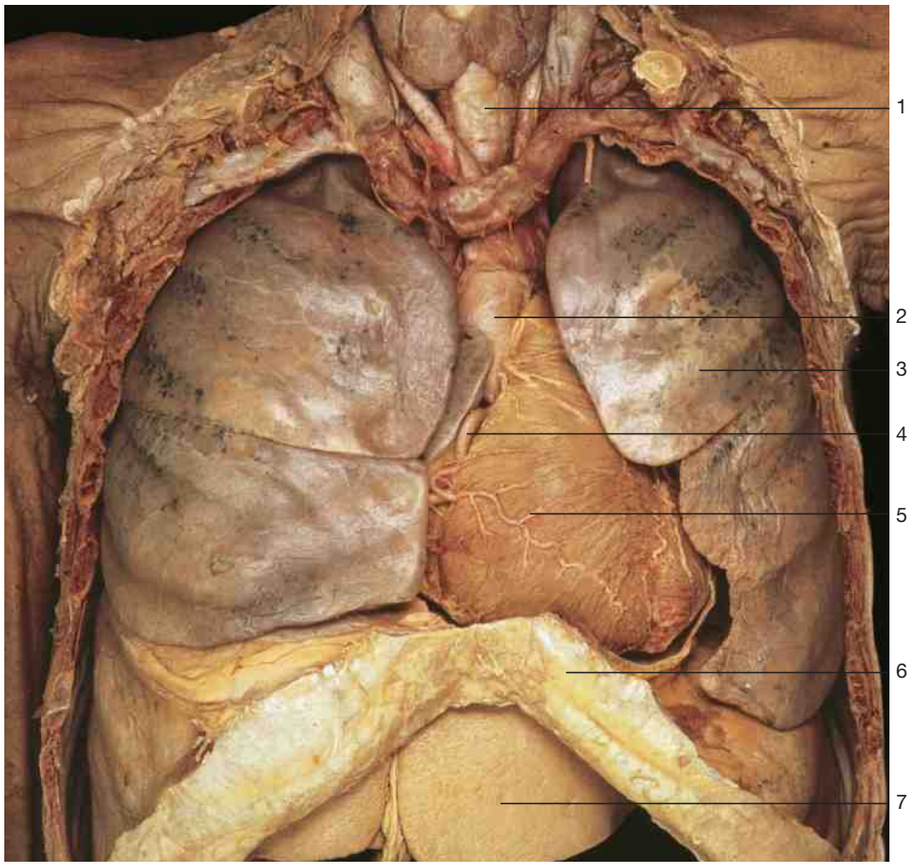
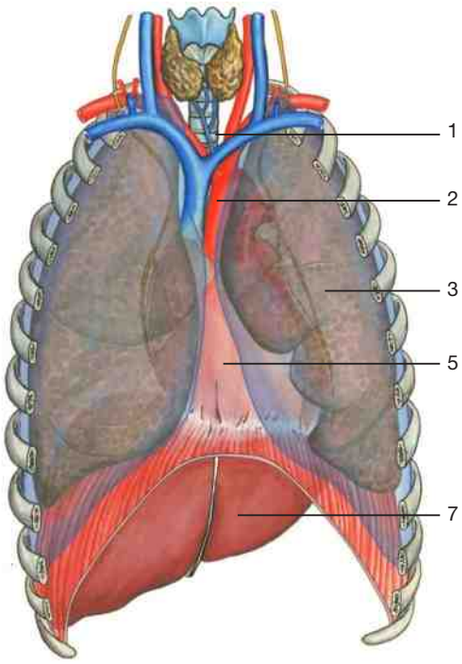
4 Thoracic Organs



Thoracic organs, heart, and lungs in situ (ventral aspect). Anterior thoracic wall, parietal pleura, and pericardium have been removed.

The thoracic cavity contains heart, lungs, and mediastinal organs. The thorax protects all organs but is still movable so that respiration can occur. The respiratory movements of the lung depend on the pleura covering, the thoracic wall, and the surface of the lungs.
The mediastinal organs comprise the esophagus, trachea, and the related nerves and vessels, particularly the aorta, superior vena cava, and the thoracic duct. The thoracic cavity is separated from the abdominal cavity by the diaphragm.



Position of lungs and heart within the thoracic cavity (schematic drawing). The anterior part of the thorax is not depicted.

1 Trachea
2 Ascending aorta
3 Left lung
4 Right coronary artery
5 Heart (right ventricle)
6 Costal arch
7 Liver

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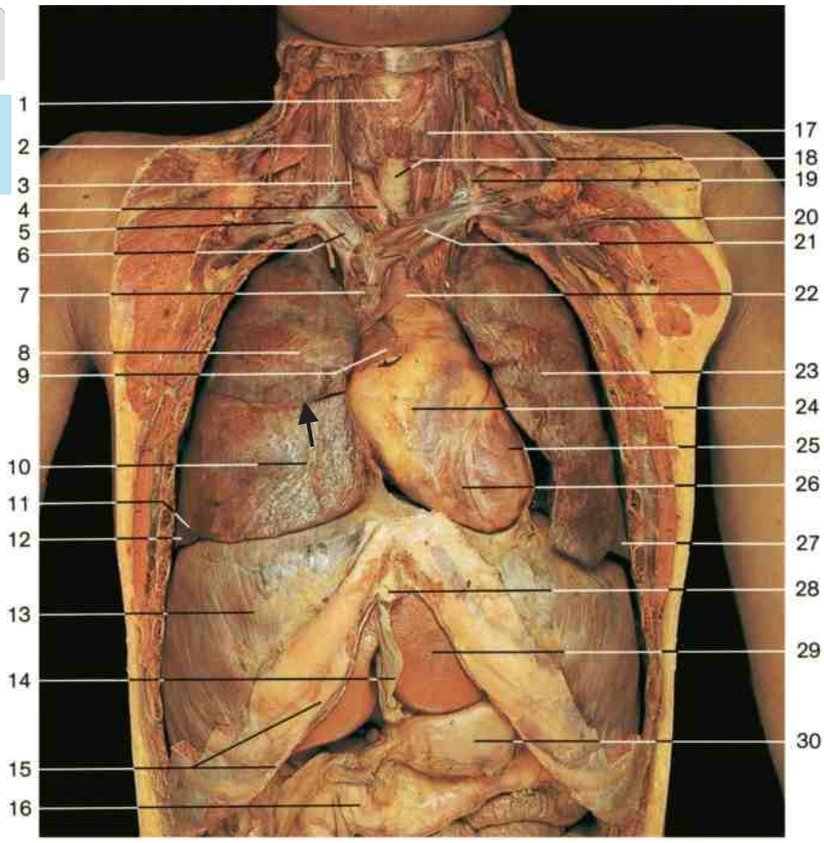
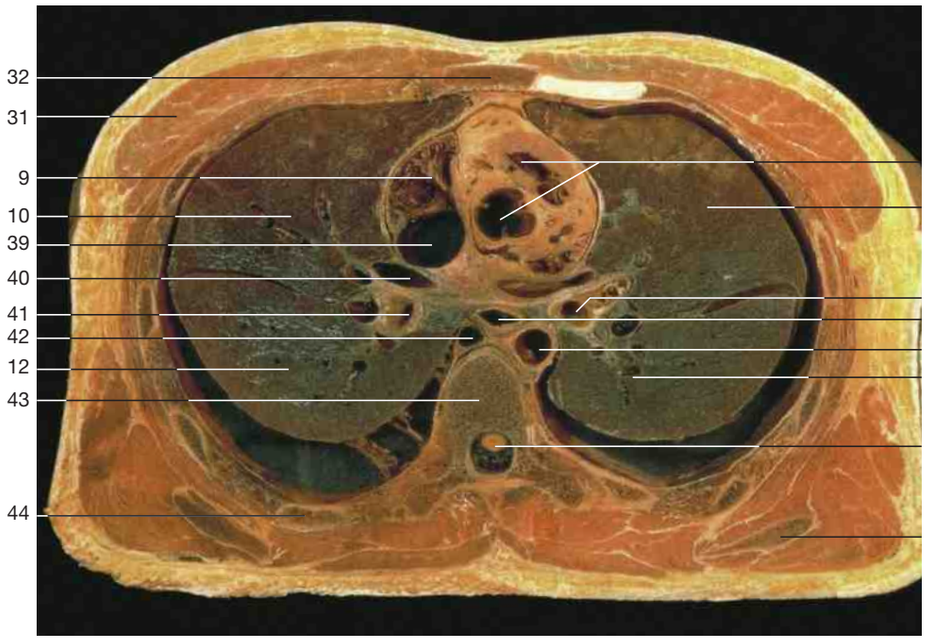


Positions of thoracic organs. The anterior thoracic wall has been removed. Arrow: horizontal fissure of right lung.

1 Cricothyroid muscle
2 Right internal jugular vein
3 Vagus nerve
4 Right common carotid artery
5 Right subclavian vein
6 Right brachiocephalic vein
7 Superior vena cava
8 Upper lobe of right lung
9 Right auricle
10 Middle lobe of right lung
11 Oblique fissure of right lung
12 Lower lobe of right lung
13 Diaphragm
14 Falciform ligament
15 Costal margin
16 Transverse colon
17 Thyroid gland
18 Trachea
19 Left internal jugular vein
20 Left cephalic vein
21 Left brachiocephalic vein
22 Pericardium (cut edge)
23 Upper lobe of left lung
24 Right ventricle
25 Left ventricle
26 Anterior interventricular sulcus
27 Lower lobe of left lung
28 Xiphoid process
29 Liver
30 Stomach
31 Pectoralis major muscle
32 Sternum
33 Left ventricle and bulb of aorta
34 Left main bronchus
35 Esophagus
36 Descending aorta
37 Spinal cord
38 Scapula
39 Right atrium
40 Right pulmonary vein
41 Right main bronchus
42 Azygos vein
43 Body of vertebra
44 Rib



Horizontal section through the thorax at the level of the seventh thoracic vertebra (from below).

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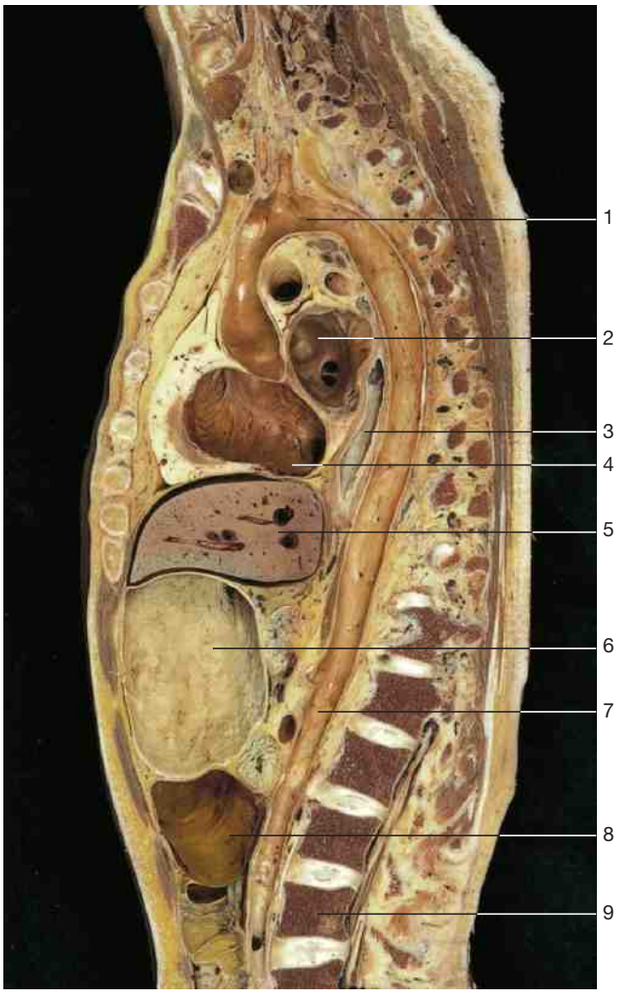
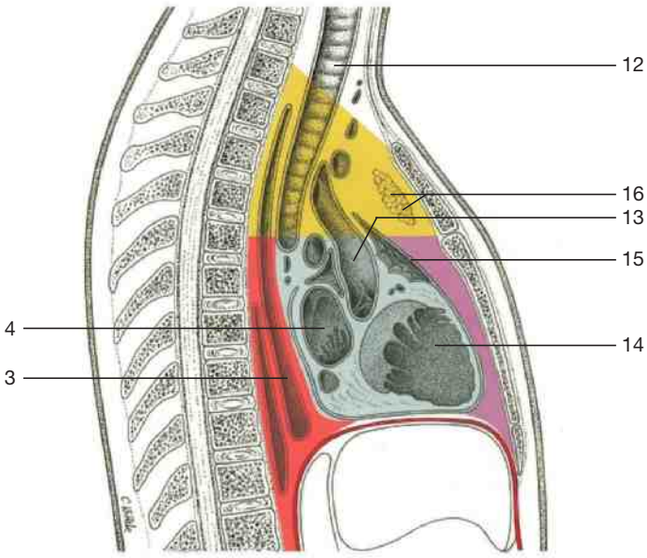


Sagittal section through the thorax, 2 cm lateral to the median plane.

Sagittal section through the thorax (MRI scan).

1 Aortic arch
2 Left atrium of the heart
3 Esophagus
4 Right atrium of the heart
5 Liver
6 Stomach
7 Abdominal aorta
8 Transverse colon (dilated)
9 Lumbar vertebral body
10 Pulmonary trunk
11 Left ventricle of the heart
12 Trachea
13 Ascending aorta
14 Right ventricle of the heart
15 Pericardium
16 Remaining parts of thymus gland



Regional anatomy of the thoracic cavity (midsagittal section). The parts of the mediastinum are indicated by colors.

Parts of mediastinum	Content
Superior mediastinum (yellow)	Trachea, brachiocephalic vein, thymus, aortic arch, esophagus, thoracic duct
Middle portion of mediastinum (light blue)	Heart, ascending aorta, pulmonary trunk, pulmonary veins, phrenic nerves
Posterior mediastinum (red)	Esophagus with vagus nerves, descending aorta, thoracic duct, sympathetic trunks
Anterior portion of mediastinum (light red)	Smaller vessels and nerves, fat and connective tissue, thymus (only in the child)

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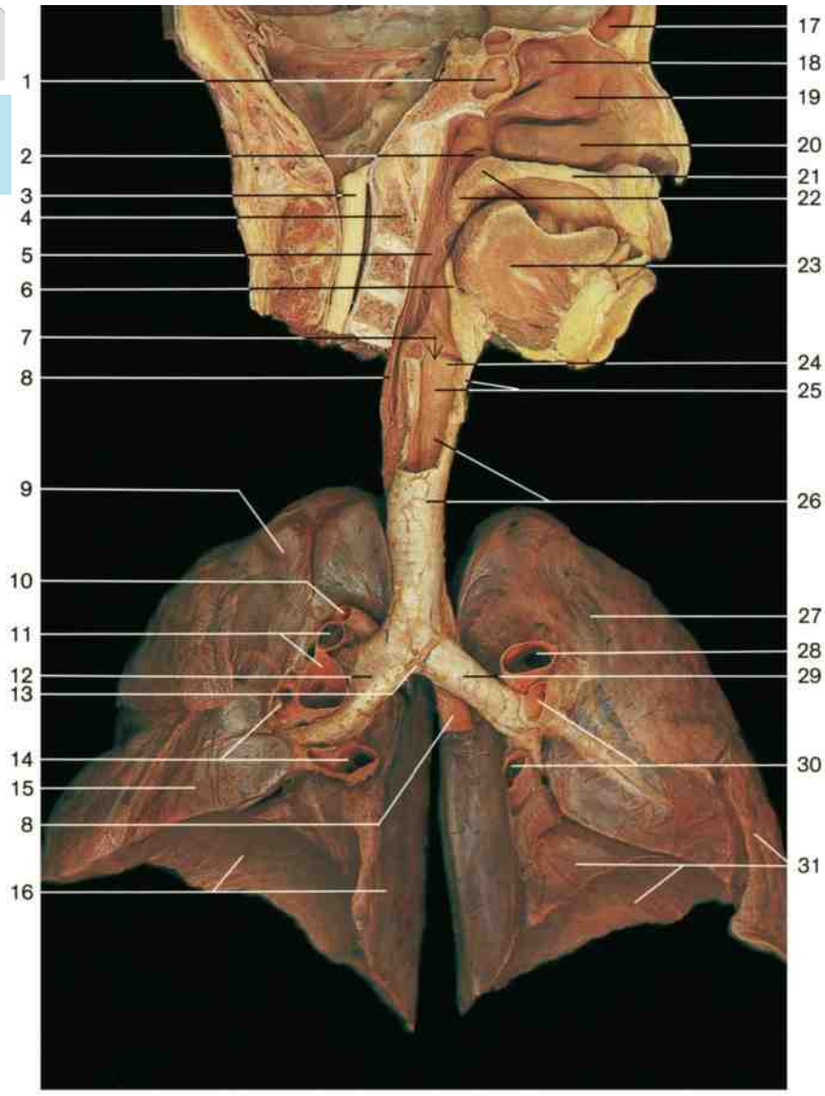
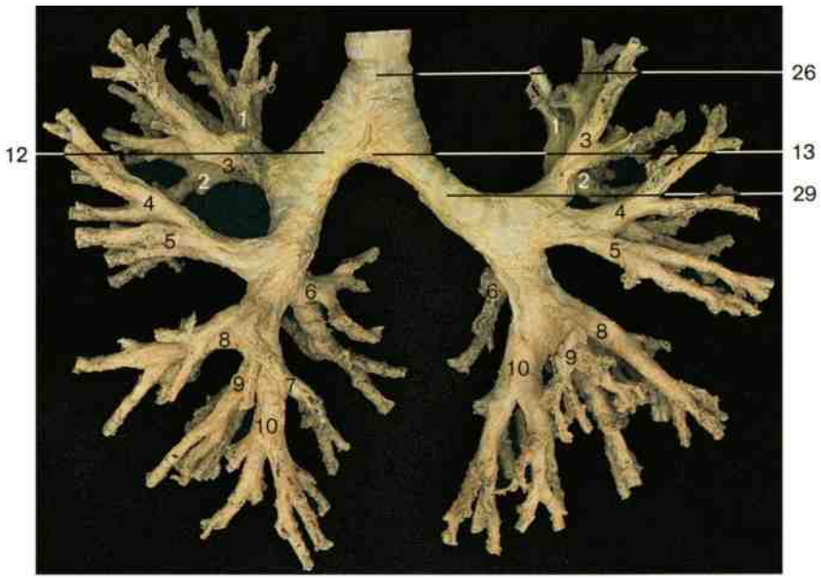


Respiratory system. The lungs have been fixed in expiration and turned laterally. Head bisected and turned laterally.

1 Sphenoid sinus
2 Pharyngeal opening of auditory tube
3 Spinal cord
4 Dens of axis
5 Oropharynx (oropharyngeal isthmus)
6 Epiglottis
7 Entrance of larynx
8 Esophagus
9 Upper lobe of right lung
10 Azygos vein
11 Branches of pulmonary artery
12 Right main bronchus
13 Bifurcation of trachea
14 Tributaries of right pulmonary veins
15 Middle lobe of right lung
16 Lower lobe of right lung
17 Frontal sinus
18 Superior nasal concha
19 Middle nasal concha
20 Inferior nasal concha
21 Hard palate
22 Soft palate with uvula
23 Tongue
24 Vocal fold
25 Larynx
26 Trachea
27 Upper lobe of left lung
28 Left pulmonary artery
29 Left main bronchus
30 Left pulmonary veins
31 Lower lobe of left lung



Bronchial tree (ventral aspect). The lung tissue has been removed. The bronchopulmonary segments are numbered 1–10.

▷ **To page 247:**

1 Nasal cavity
2 Pharynx
3 Larynx (thyroid cartilage)
4 Trachea
5 Upper lobe of right lung
6 Bifurcation of trachea
7 Right main bronchus
8 Horizontal fissure of right lung
9 Middle lobe of right lung
10 Oblique fissures of lungs
11 Lower lobe of right lung
12 Clavicle
13 Upper lobe of left lung
14 Left main bronchus
15 Bronchi supplying bronchopulmonary segments
16 Lower lobe of left lung
17 Costal margin
18 Hyoid bone
19 Right superior lobe bronchus
20 Right middle lobe bronchus
21 Right inferior lobe bronchus
22 Left superior lobe bronchus
23 Left inferior lobe bronchus
24 Segmental bronchi
25 Branches of pulmonary arteries
26 Branches of pulmonary veins

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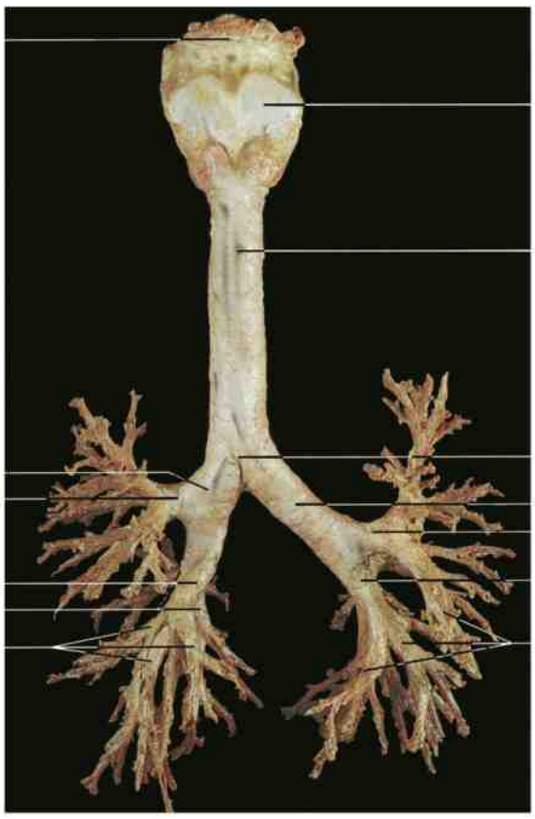
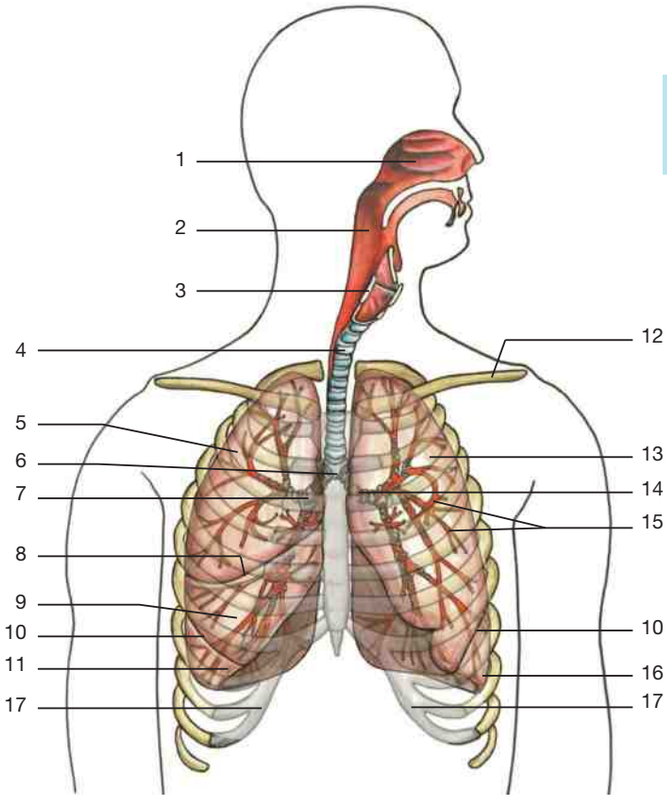
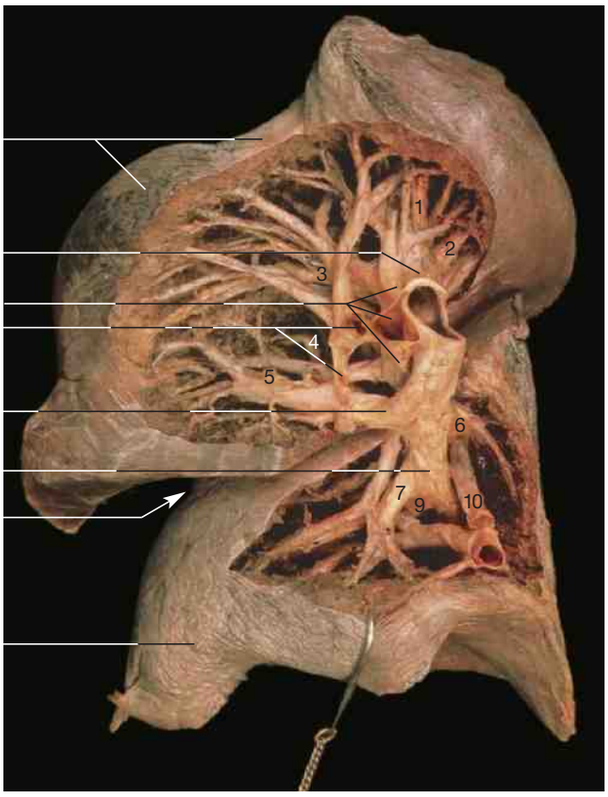
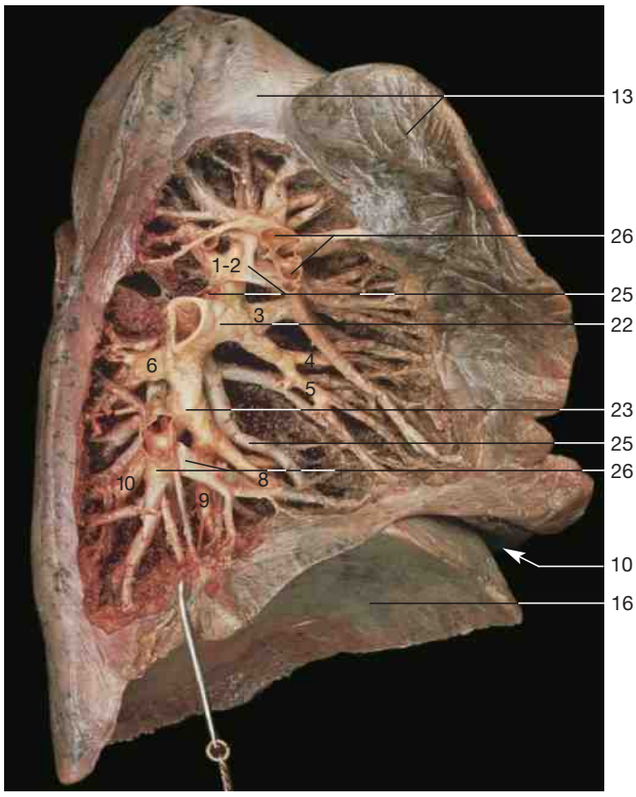


Larynx, trachea, and bronchial tree (anterior aspect).



Organization and positions of respiratory organs (schematic drawing).





Mediastinal dissection of the bronchial tree, pulmonary veins, and pulmonary arteries of right lung (left) and left lung (right) (medial aspect). The bronchopulmonary segments are numbered 1–10.

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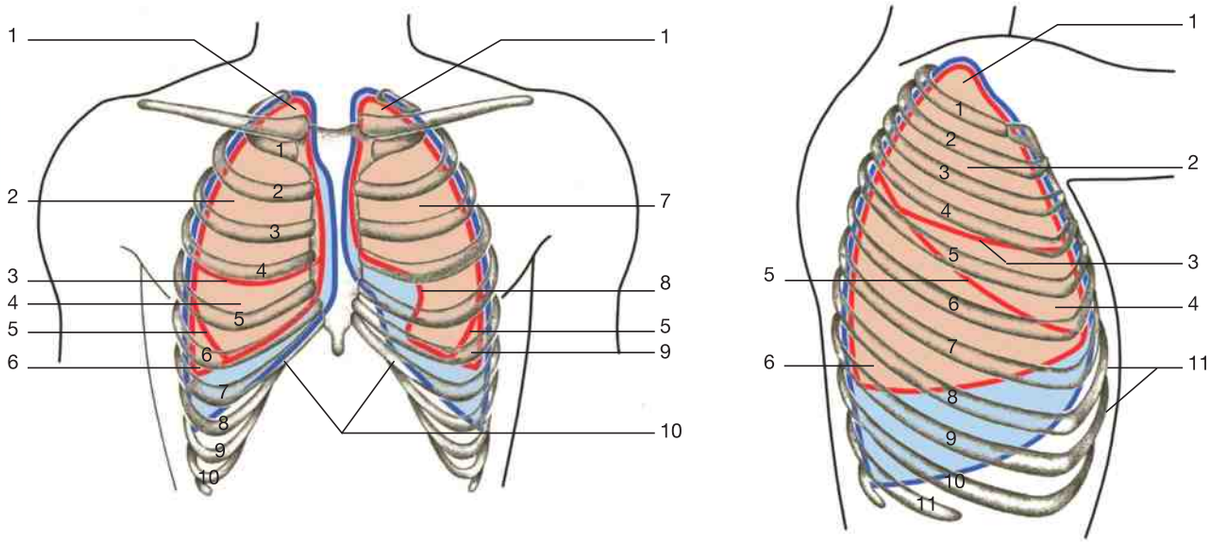
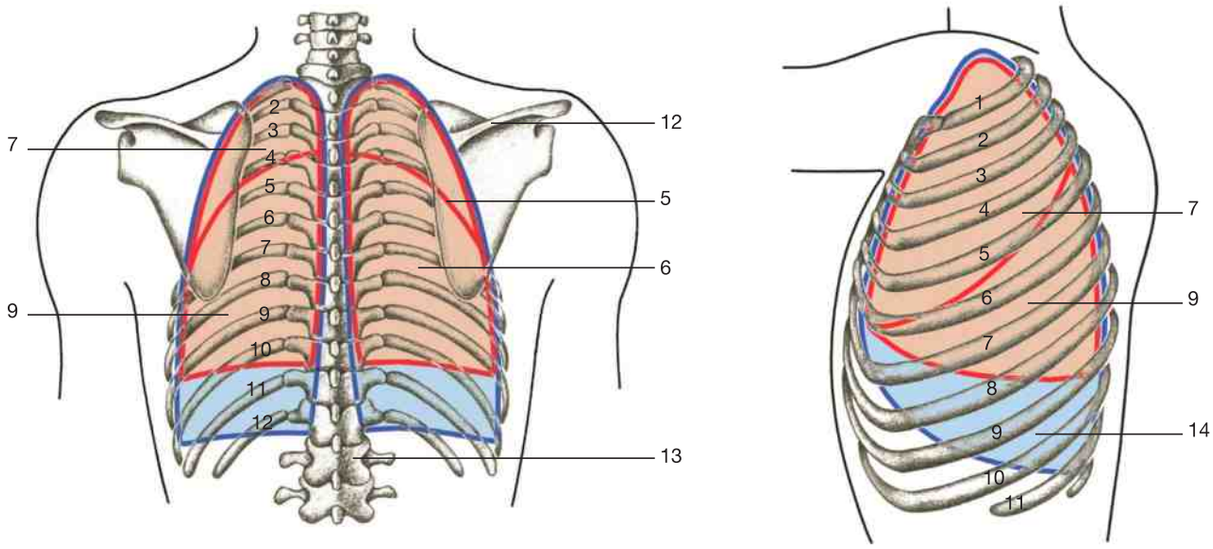


Surface projections of lungs and pleura on the thoracic wall. Left: anterior aspect; right: right-lateral aspect.
Red = margins of the lung; blue = margins of pleura. The numbers indicate ribs.



Surface projections of lungs and pleura on the thoracic wall. Left: posterior aspect; right: left-lateral aspect.
Red = margins of lung; blue = margins of pleura. The numbers indicate ribs.

1 Apex of lung
2 Upper lobe of right lung
3 Horizontal fissure of right lung
4 Middle lobe of right lung
5 Oblique fissures of lungs
6 Lower lobe of right lung
7 Upper lobe of left lung
8 Cardiac notch of left lung
9 Lower lobe of left lung
10 Infrasternal angle
11 Costal margin
12 Spine of scapula
13 First lumbar vertebra
14 Space between border of lung and pleura (costodiaphragmatic recess)

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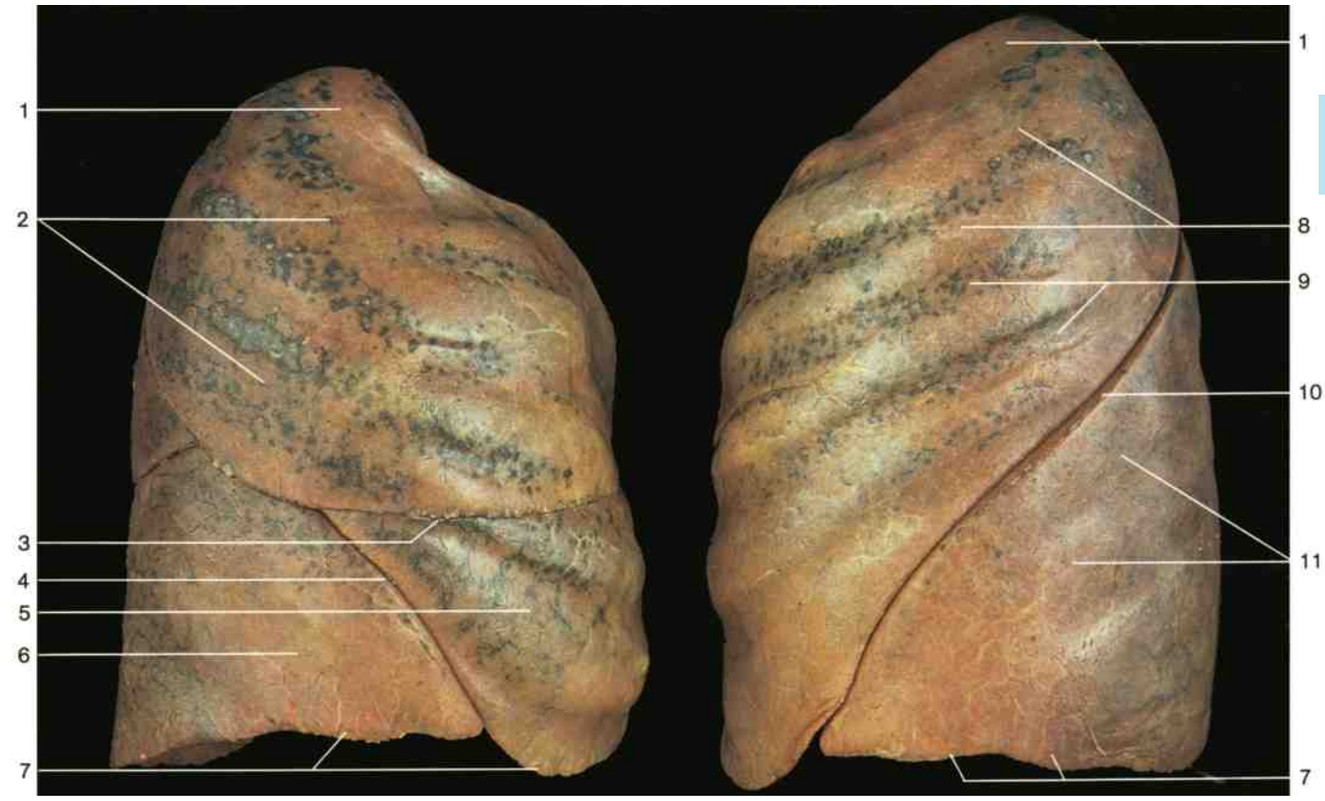
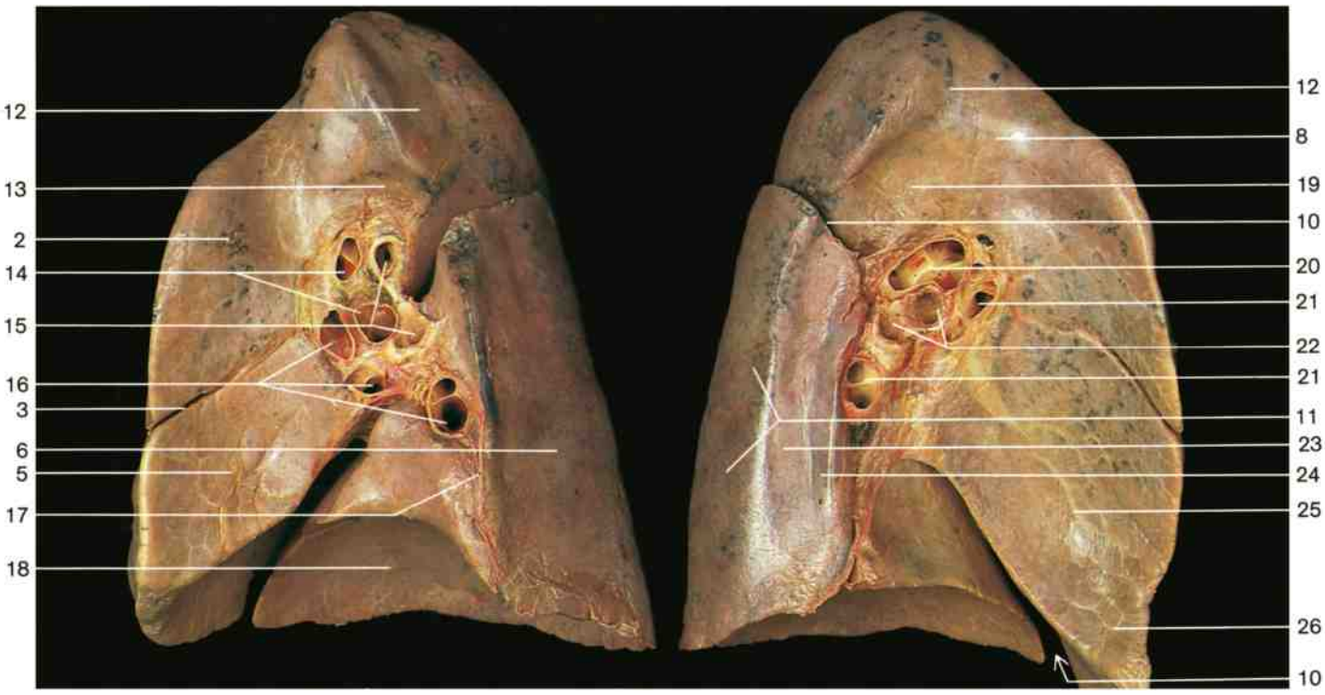


Right lung (lateral aspect).

Left lung (lateral aspect).



Right lung (medial aspect).

Left lung (medial aspect).

1 Apex of lung
2 Upper lobe of right lung
3 Horizontal fissure of right lung
4 Oblique fissure of right lung
5 Middle lobe of right lung
6 Lower lobe of right lung
7 Inferior border
8 Upper lobe of left lung
9 Impressions of ribs
10 Oblique fissure of left lung
11 Lower lobe of left lung
12 Groove of subclavian artery
13 Groove of azygos arch
14 Branches of right pulmonary artery
15 Bronchi
16 Right pulmonary veins
17 Pulmonary ligament
18 Diaphragmatic surface
19 Groove of aortic arch
20 Left pulmonary artery
21 Branches of left pulmonary veins
22 Left secondary bronchi
23 Groove of thoracic aorta
24 Groove of esophagus
25 Cardiac impression
26 Lingula

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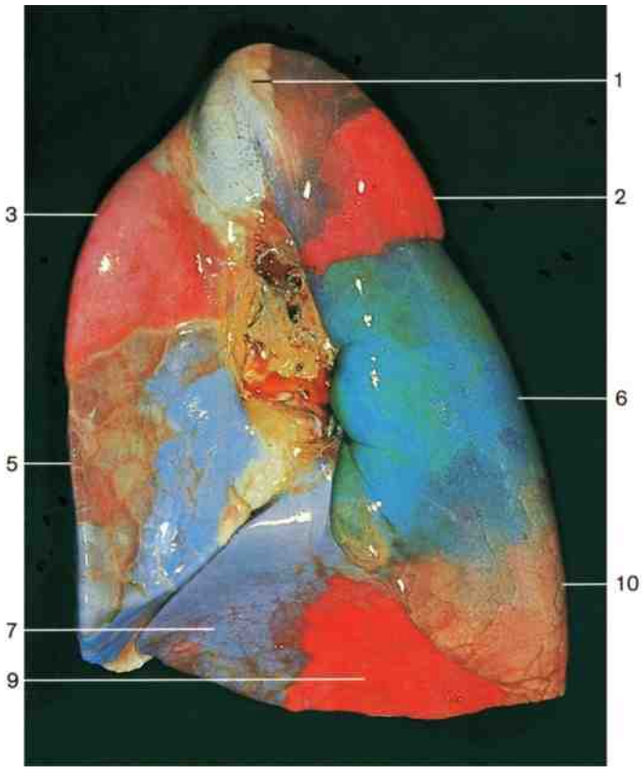
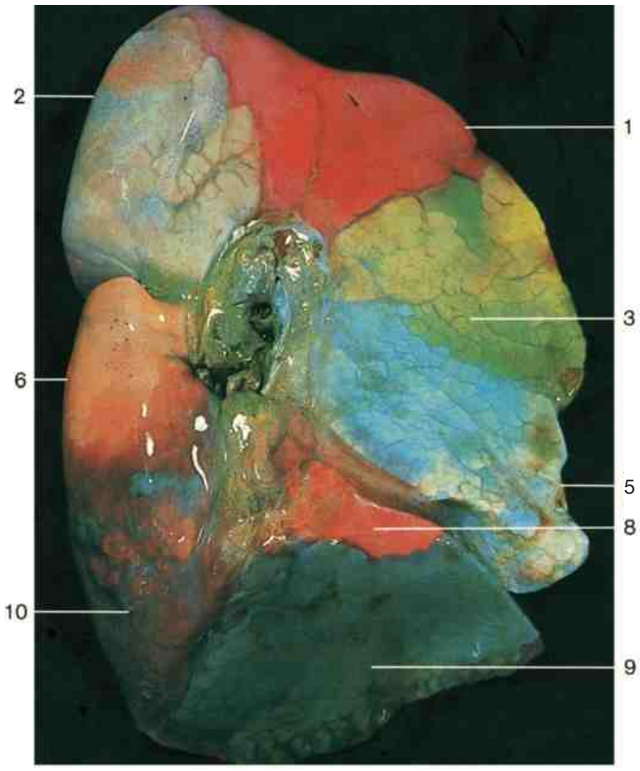
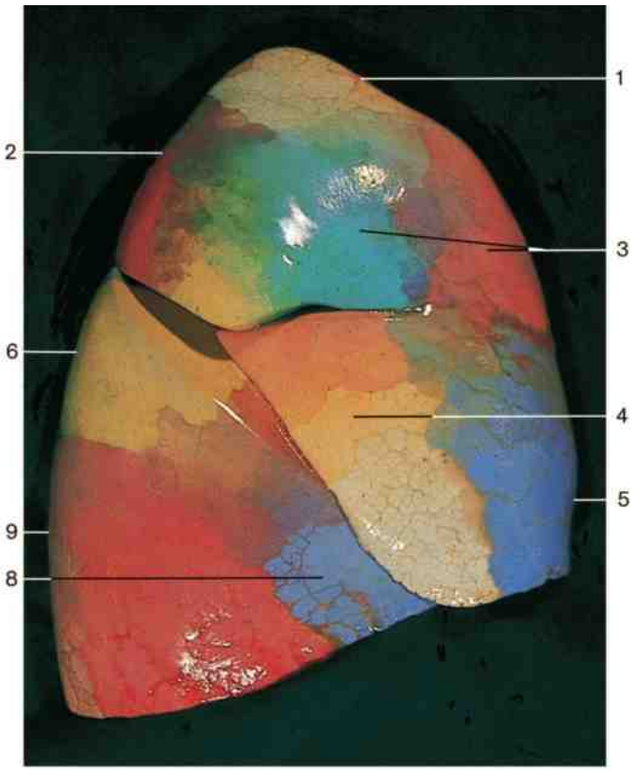


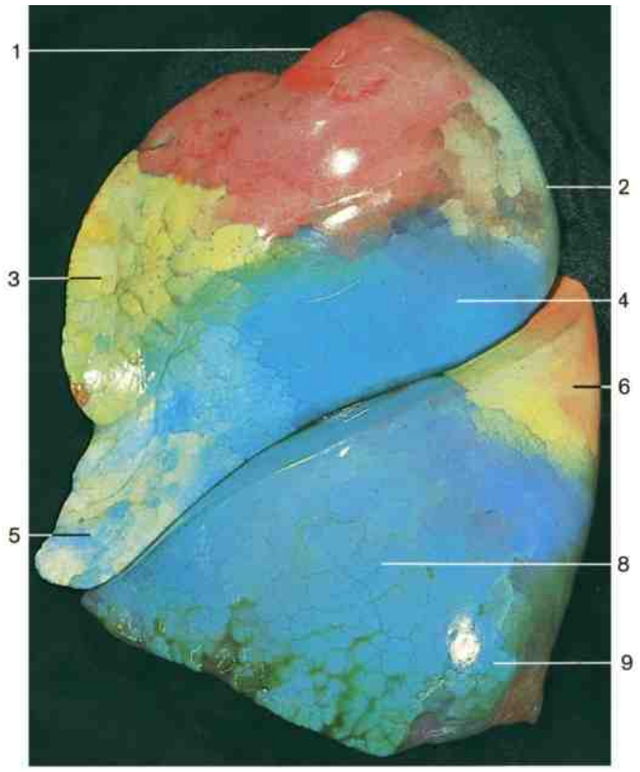
Right lung (medial aspect).



Left lung (medial aspect).



Right lung (lateral aspect).



Left lung (lateral aspect).

The bronchopulmonary segments of the lungs are differentiated by the various colors. Notice that there is no segment in the left lung that corresponds to the seventh segment of the right lung. Compare with the schematic drawing on the facing page.

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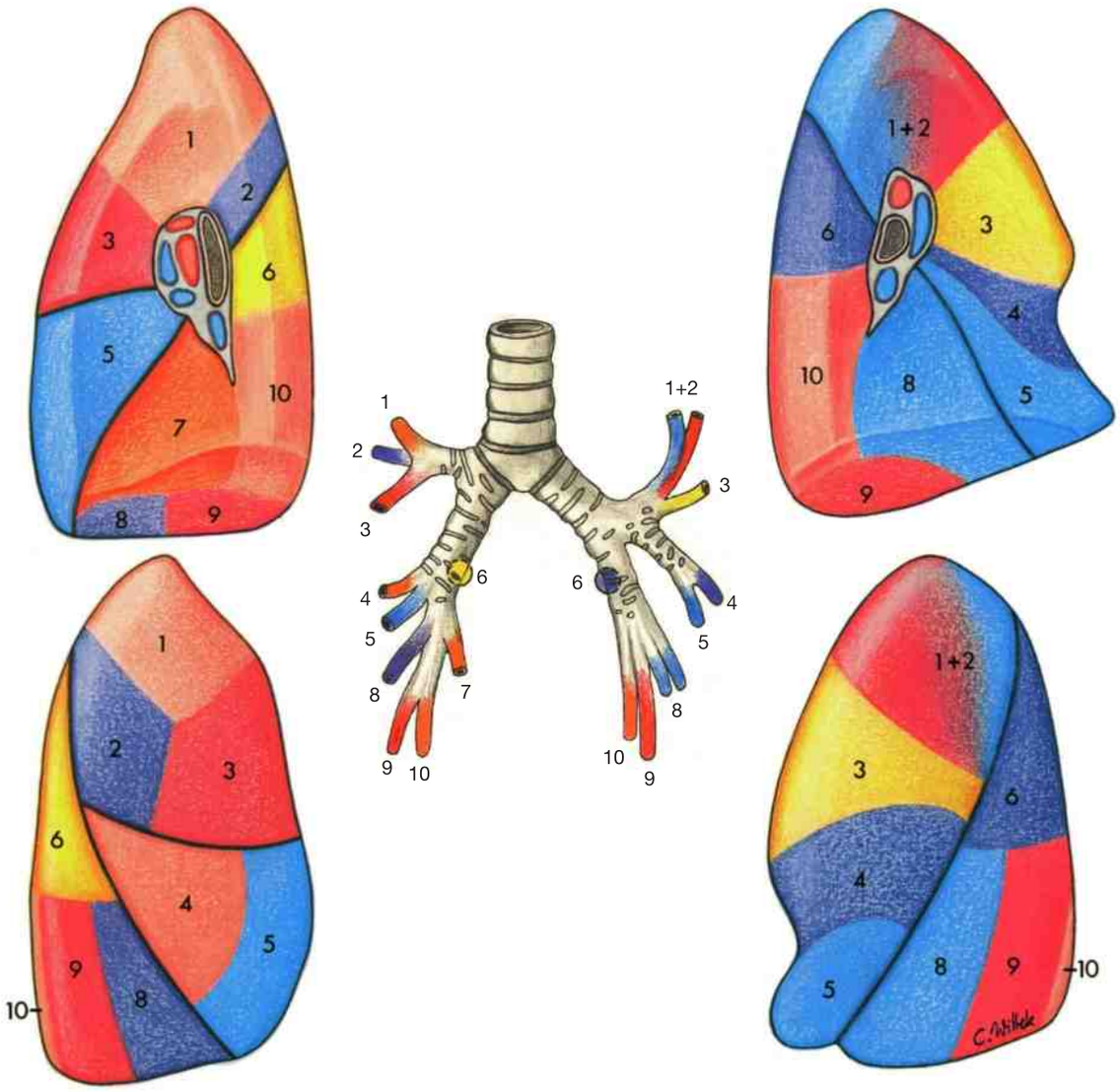

Distribution of bronchopulmonary segments of the lungs and their relation to the bronchial tree (after J. F. Huber).

The bronchopulmonary segments are morphologically and functionally separate, independent respiratory units of the lung tissue. Each segment is surrounded by connective tissue that is continuous with the visceral pleura. The segmental bronchi are centrally located in each segment and are closely accompanied by branches of the pulmonary arteries, whereas the tributaries of the pulmonary veins run **between** the segments. Thus, the veins serve two adjacent segments that drain for the most part into more than one vein. A bronchopulmonary segment is therefore not a complete vascular unit, but segmentation is the result of a specific architecture of the lung vasculature.

Right lung	Left lung
1 Apical segment 2 Posterior segment 3 Anterior segment } Upper lobe bronchus 4 Lateral segment 5 Medial segment } Middle lobe bronchus	1+2 Apicoposterior segment 3 Anterior segment } Superior division 4 Superior lingular segment 5 Inferior lingular segment } Inferior division } Upper lobe bronchus
6 Superior (apical) segment 7 Medial basal segment 8 Anterior basal segment 9 Lateral basal segment 10 Posterior basal segment } Lower lobe bronchus	6 Superior (apical) segment 7 Absent 8 Anteromedial basal segment 9 Lateral basal segment 10 Posterior basal segment } Lower lobe bronchus

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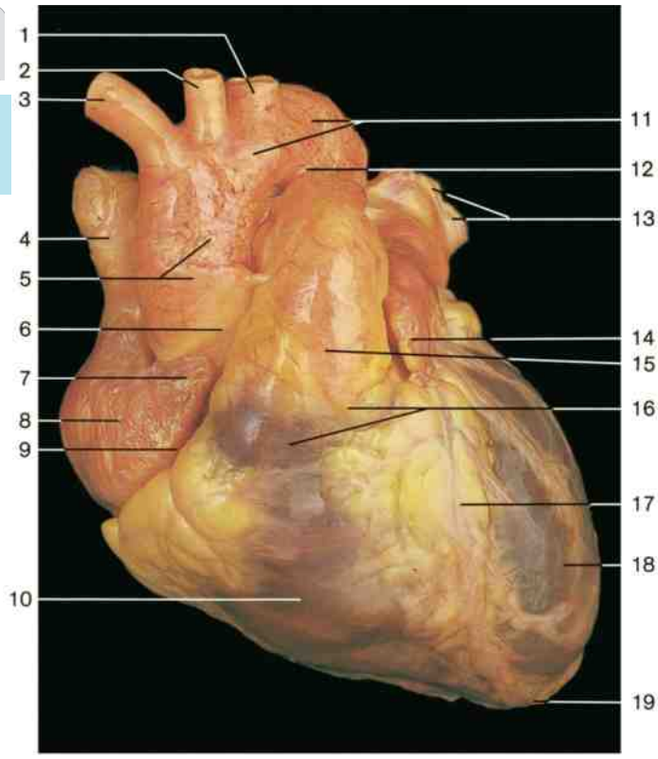
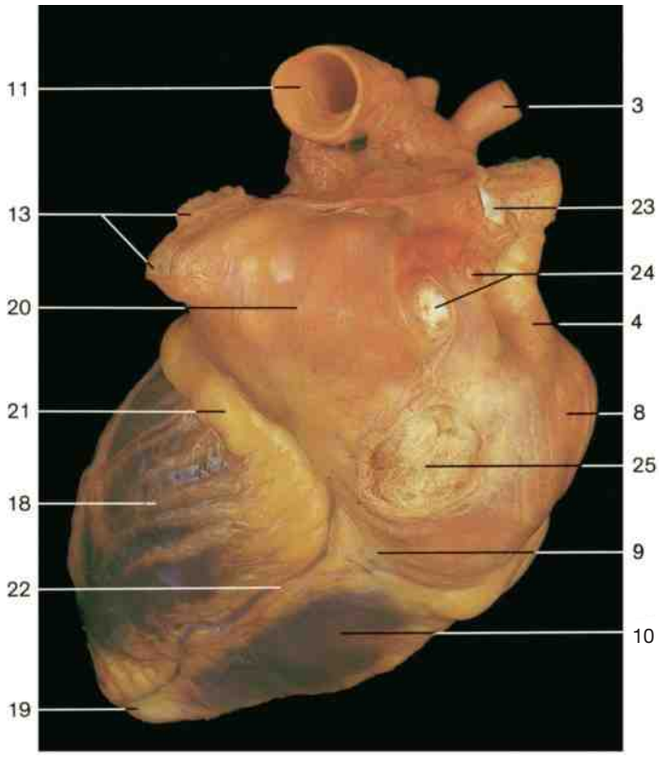
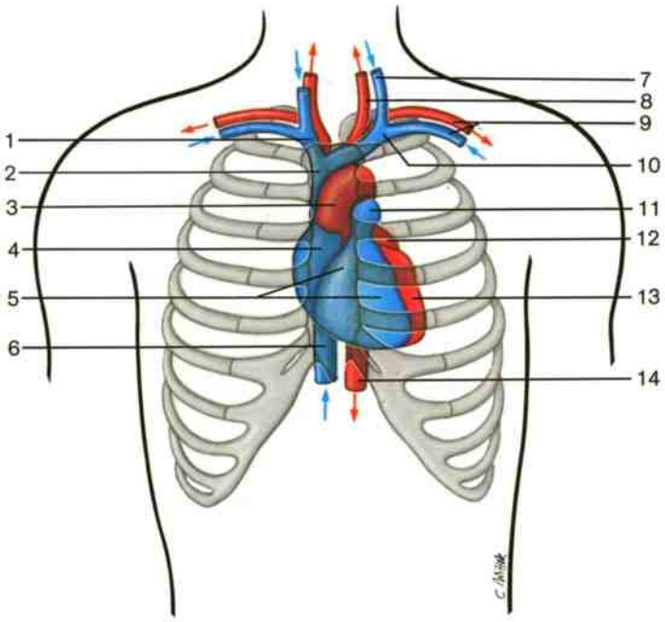


Heart of 30-year-old woman (anterior aspect).



Heart of 30-year-old woman (oblique-posterior view).

1 Left subclavian artery
2 Left common carotid artery
3 Brachiocephalic trunk
4 Superior vena cava
5 Ascending aorta
6 Bulb of the aorta
7 Right auricle
8 Right atrium
9 Coronary sulcus
10 Right ventricle
11 Aortic arch
12 Ligamentum arteriosum
13 Left pulmonary veins
14 Left auricle
15 Pulmonary trunk
16 Sinus of pulmonary trunk
17 Anterior interventricular sulcus
18 Left ventricle
19 Apex of the heart
20 Left atrium
21 Epicardial fat overlying coronary sinus
22 Posterior interventricular sulcus
23 Right pulmonary artery
24 Right pulmonary veins
25 Inferior vena cava



Position of heart and its vessels within the thorax (schematic drawing).

1 Right brachiocephalic vein
2 Superior vena cava
3 Ascending aorta
4 Right atrium
5 Right ventricle
6 Inferior vena cava
7 Left internal jugular vein
8 Left common carotid artery
9 Left axillary artery and vein
10 Left brachiocephalic vein
11 Pulmonary trunk
12 Left auricle
13 Left ventricle
14 Descending aorta

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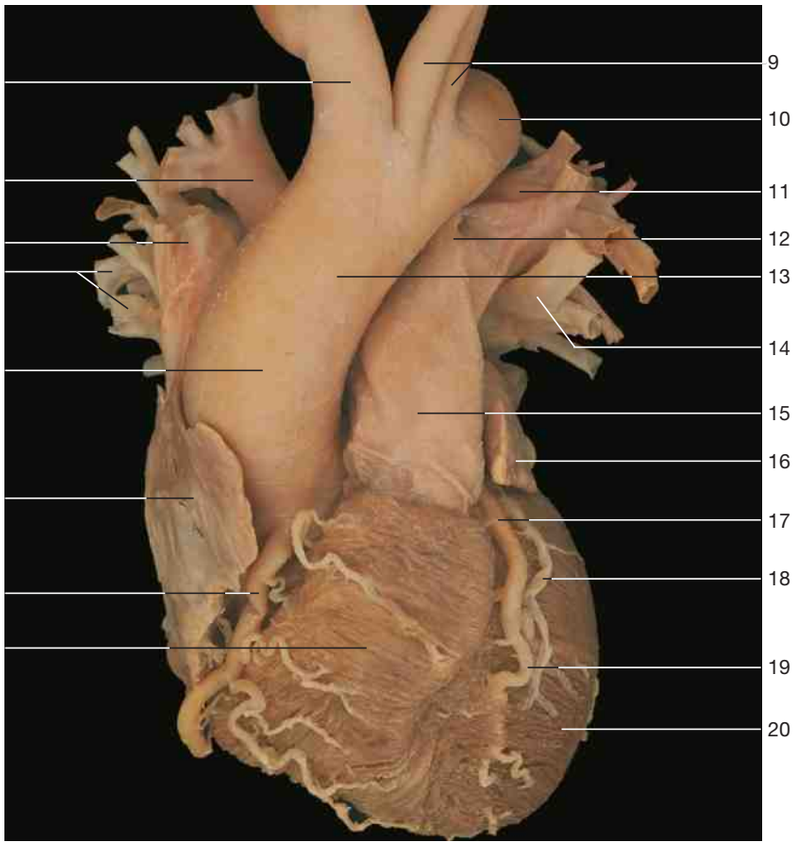
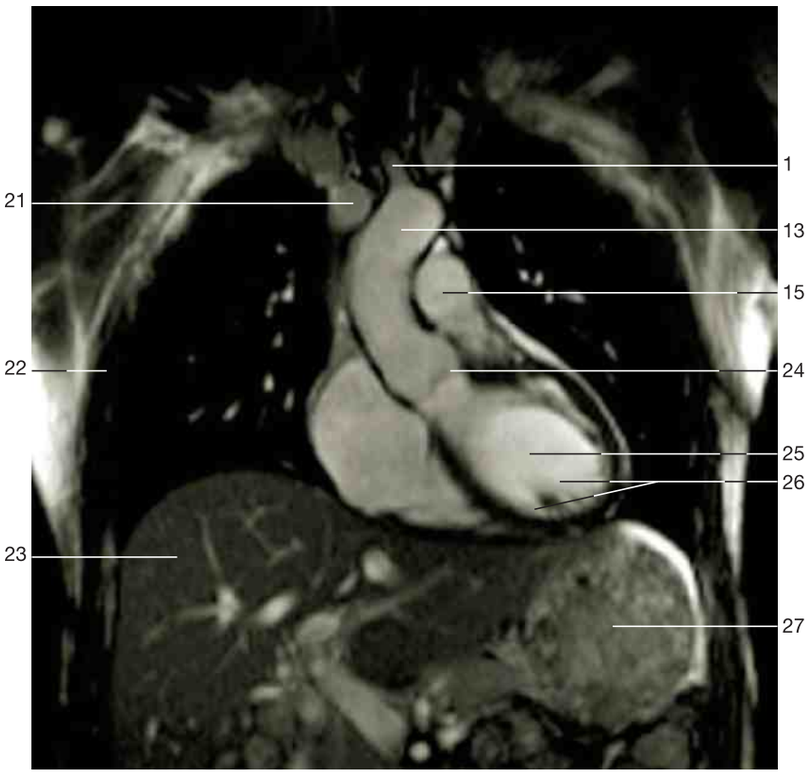


Heart with related vessels. Dissection of coronary arteries (anterior aspect, systolic phase of heart action).

1 Brachiocephalic trunk
2 Right pulmonary artery
3 Superior vena cava
4 Right pulmonary veins
5 Ascending aorta
6 Right atrium
7 Right coronary artery
8 Right ventricle
9 Left common carotid artery and left subclavian artery
10 Descending aorta (thoracic part)
11 Ligamentum arteriosum (remnant of ductus arteriosus Botalli)
12 Left pulmonary artery
13 Aortic arch
14 Left pulmonary veins
15 Pulmonary trunk
16 Left atrium
17 Left coronary artery
18 Diagonal branch of left coronary artery
19 Interventricular branch of left coronary artery
20 Left ventricle
21 Right brachiocephalic vein
22 Thoracic wall
23 Liver
24 Aortic valve
25 Chordae tendineae
26 Papillary muscles
27 Stomach



Coronal section through the thorax at the level of the ascending aorta (MRI scan, courtesy of Prof. W. Bautz and R. Janka, M. D., University of Erlangen, Germany).

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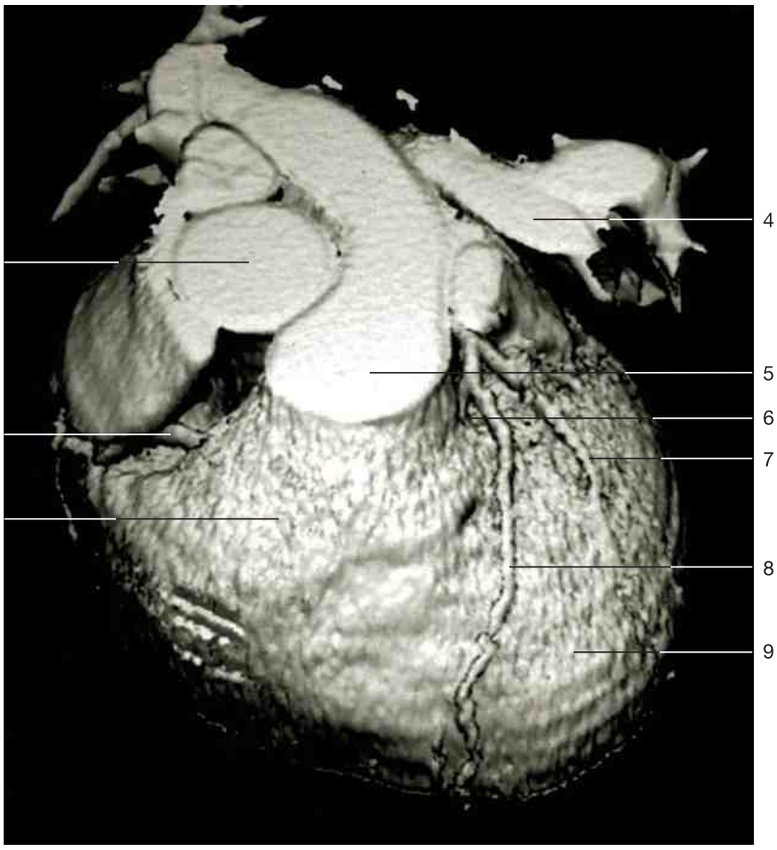
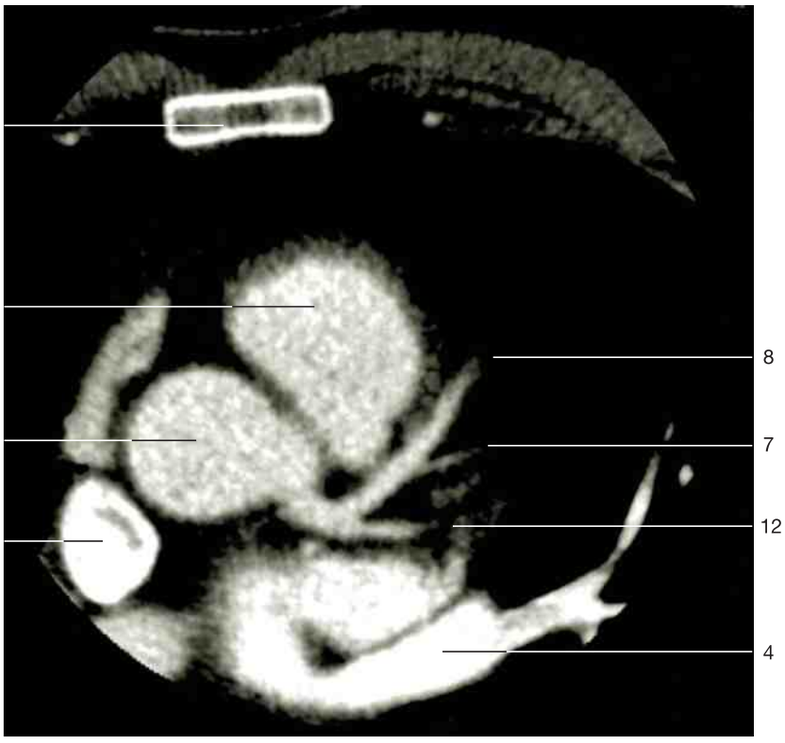


Human heart (3-D reconstruction of electron beam CT scans as "Shaded Surface Display"[1]).

1 Ascending aorta
2 Right coronary artery
3 Right ventricle
4 Left atrium
5 Pulmonary trunk
6 Septal branch of left coronary artery
7 Diagonal branch
8 Anterior interventricular branch of left coronary artery
9 Left ventricle
10 Aortic root
11 Superior vena cava
12 Circumflex branch of left coronary artery
13 Sternum



Electron beam tomographic image of the human heart (axial section after injection of contrast medium[1]).

[1] Courtesy of Drs. W. Moshage, S. Achenbach, and D. Ropers, Dept. of Internal Medicine II, University of Erlangen-Nürnberg, Germany.

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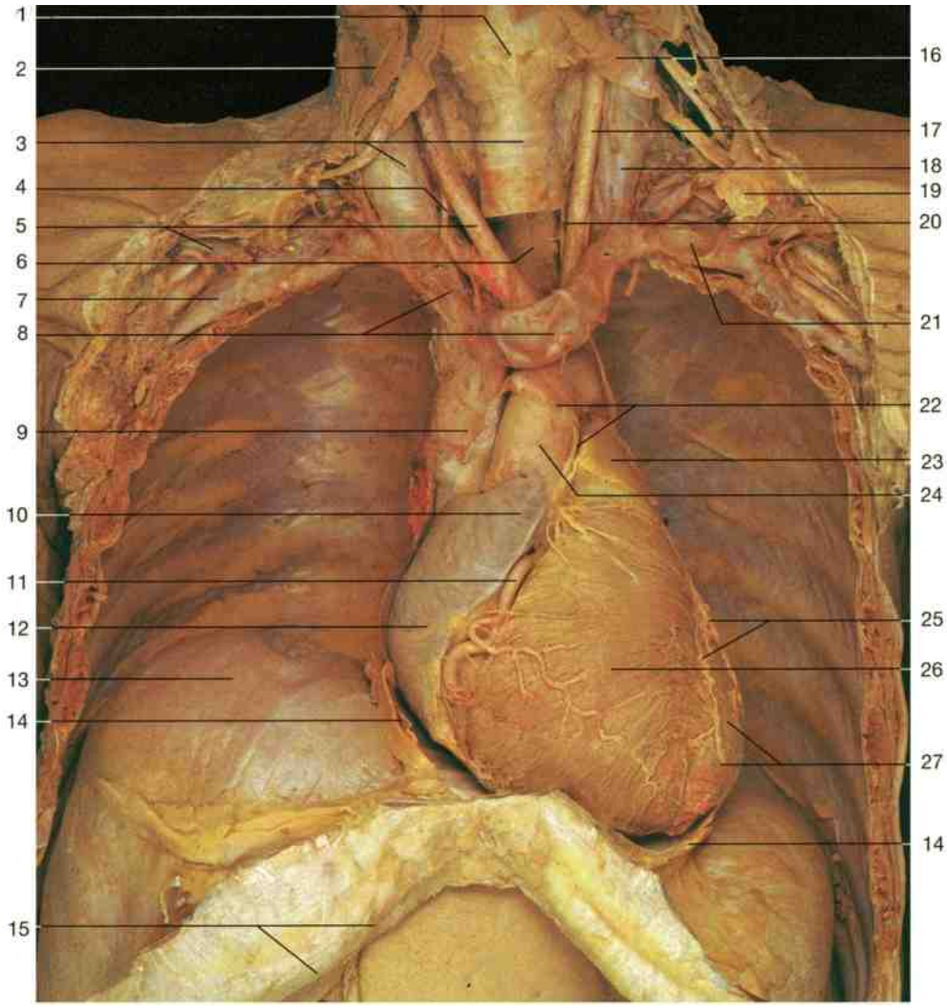
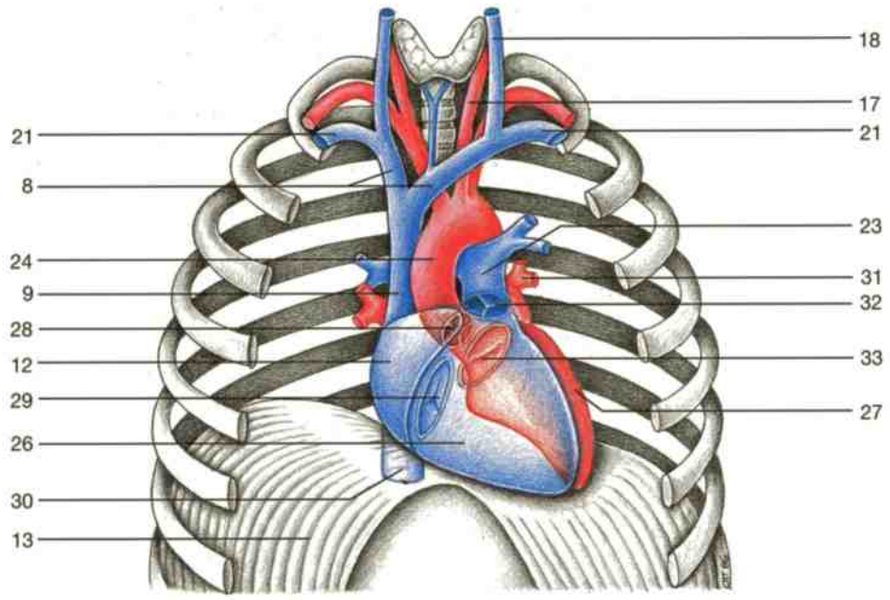


Heart and related vessels in situ (anterior aspect). Anterior thoracic wall, pericardium, and epicardium have been removed; trachea divided.

1 Larynx (thyroid cartilage)
2 Sternocleidomastoid muscle (divided)
3 Trachea (divided) and right internal jugular vein
4 Vagus nerve
5 Right common carotid artery and cephalic vein
6 Esophagus
7 Right axillary vein
8 Right and left brachiocephalic veins
9 Superior vena cava
10 Right auricle
11 Right coronary artery
12 Right atrium
13 Diaphragm
14 Pericardium (cut edges)
15 Costal margin
16 Omohyoid muscle
17 Left common carotid artery
18 Left internal jugular vein
19 Clavicle (divided)
20 Left recurrent laryngeal nerve
21 Subclavian vein
22 Pericardial reflection
23 Pulmonary trunk
24 Ascending aorta
25 Anterior interventricular sulcus and anterior interventricular branch of left coronary artery
26 Right ventricle
27 Left ventricle
28 Aortic valve
29 Tricuspid or right atrioventricular valve
30 Inferior vena cava
31 Pulmonary veins
32 Pulmonary valve
33 Left atrioventricular (bicuspid or mitral) valve



Heart in situ. Position of valves (anterior aspect). (Schematic drawing.)

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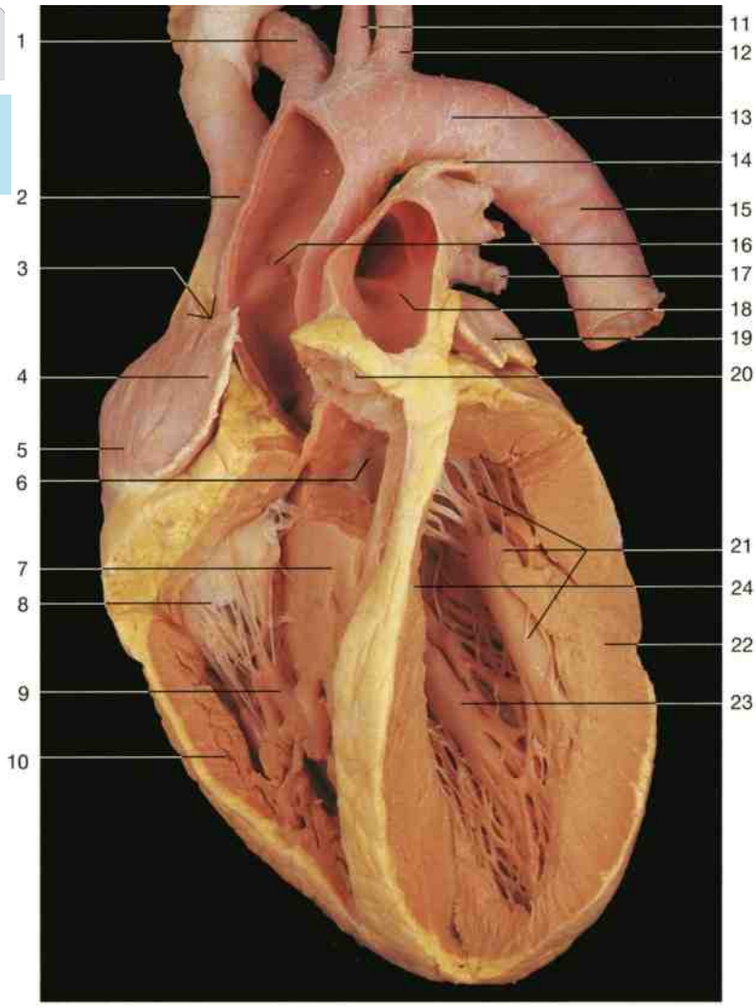
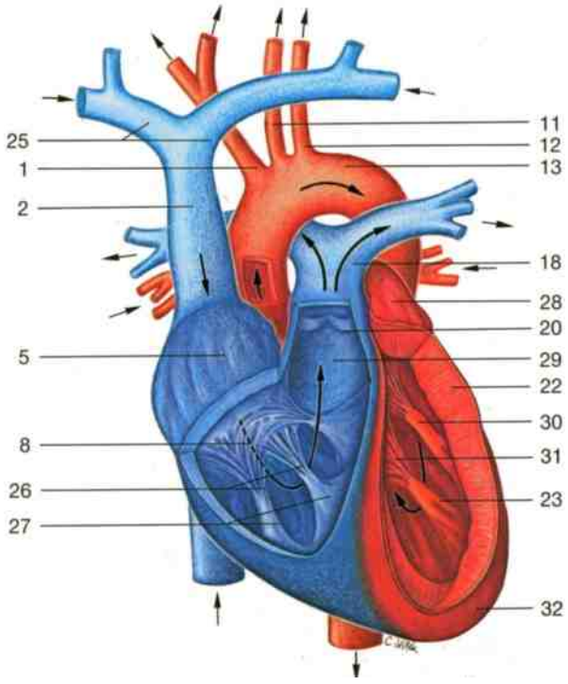
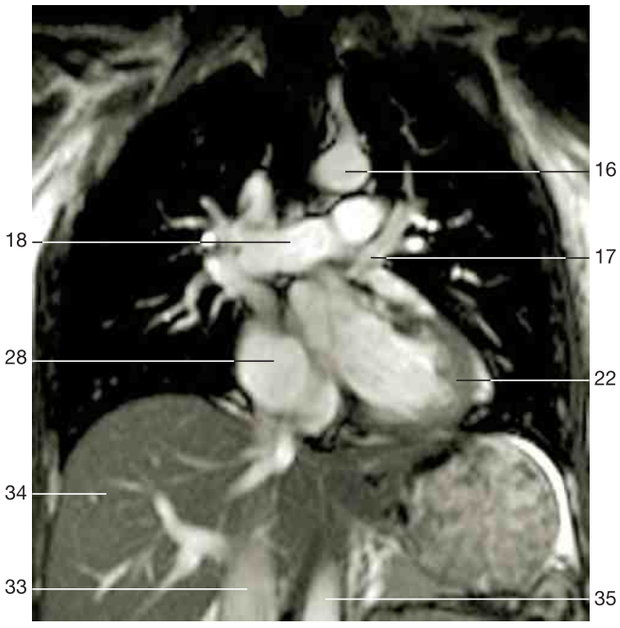


Anterior aspect of the heart. Dissection of the four valves.

1 Brachiocephalic trunk
2 Superior vena cava
3 Sulcus terminalis
4 Right auricle
5 Right atrium
6 Aortic valve
7 Conus arteriosus (interventricular septum)
8 Right atrioventricular (tricuspid) valve
9 Anterior papillary muscle
10 Myocardium of right ventricle
11 Left common carotid artery
12 Left subclavian artery
13 Aortic arch
14 Ligamentum arteriosum (remnant of ductus arteriosus)
15 Thoracic aorta (descending aorta)
16 Ascending aorta
17 Left pulmonary vein
18 Pulmonary trunk
19 Left auricle
20 Pulmonic valve
21 Anterior papillary muscle with chordae tendineae
22 Myocardium of left ventricle
23 Posterior papillary muscle
24 Interventricular septum
25 Right and left brachiocephalic veins
26 Chordae tendineae
27 Papillary muscles of right ventricle
28 Left atrium
29 Infundibulum
30 Anterior papillary muscle of left ventricle
31 Left atrioventricular (bicuspid or mitral) valve and chordae tendineae
32 Apex of heart
33 Inferior vena cava
34 Liver
35 Aorta (pars abdominalis)



Circulation within the heart (anterior aspect). Arrows = direction of blood flow.



MRI scan of the heart (coronal section at the level of the left atrium; courtesy of Prof. W. Bautz and R. Janka, M. D., University of Erlangen, Germany).

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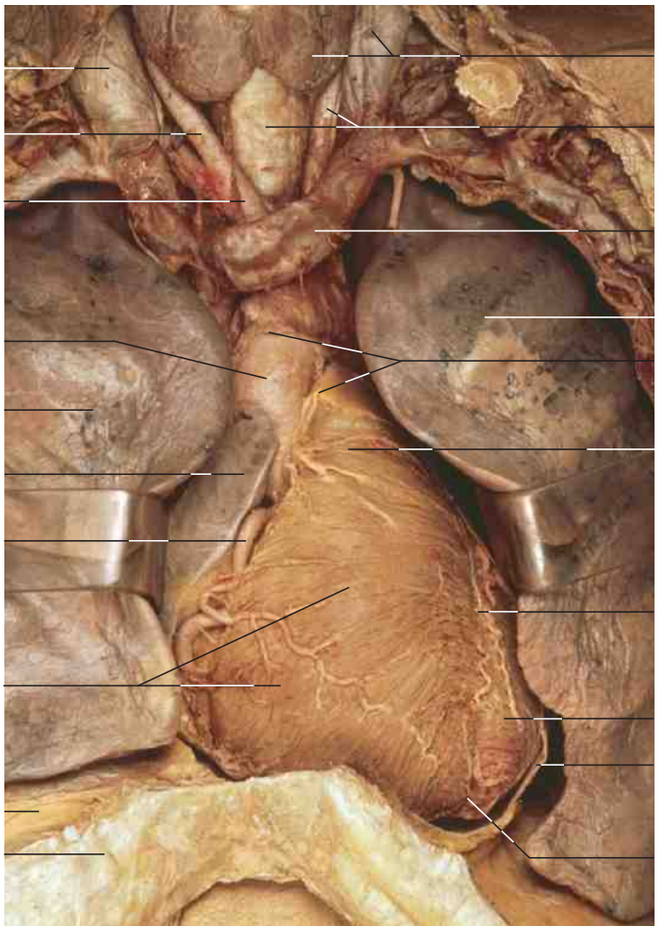
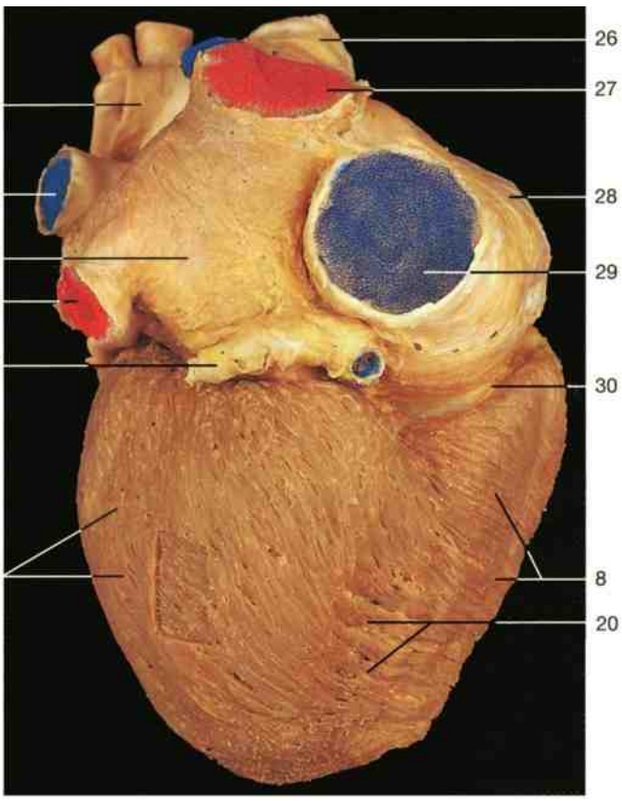
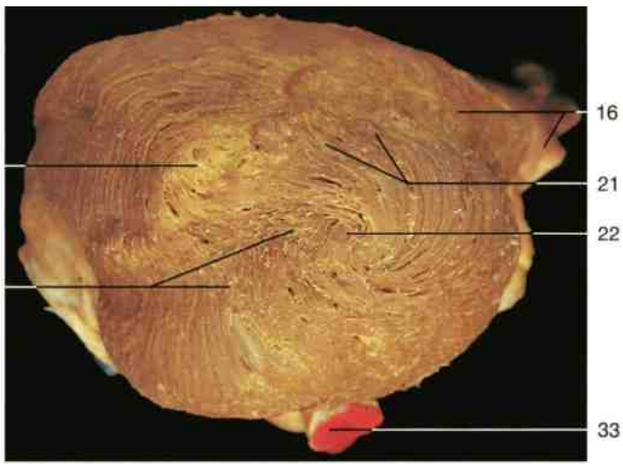


Heart in situ. Myocardium and coronary arteries (anterior aspect).

1 Internal jugular vein
2 Common carotid artery
3 Brachiocephalic trunk
4 Ascending aorta
5 Right lung
6 Right auricle
7 Right coronary artery
8 Myocardium of right ventricle
9 Diaphragm
10 Costal margin
11 Thyroid gland and internal jugular vein
12 Trachea and left common carotid artery
13 Left brachiocephalic vein
14 Left lung
15 Pericardium (cut edge)
16 Pulmonary trunk
17 Anterior interventricular artery
18 Myocardium of left ventricle
19 Muscular vortex (right ventricle)
20 Posterior interventricular sulcus
21 Anterior interventricular sulcus
22 Muscular vortex (left ventricle)
23 Aortic arch
24 Left atrium
25 Coronary sinus
26 Superior vena cava
27 Right pulmonary vein
28 Right atrium
29 Inferior vena cava
30 Coronary sulcus
31 Myocardium of left ventricle
32 Left pulmonary artery
33 Left pulmonary vein
34 Apex of heart



Heart (posterior aspect). The myocardium of the left ventricle has been fenestrated to show the muscle fiber bundles of the deeper layer with their more circular course.



Vortex of cardiac muscle fibers (from below).

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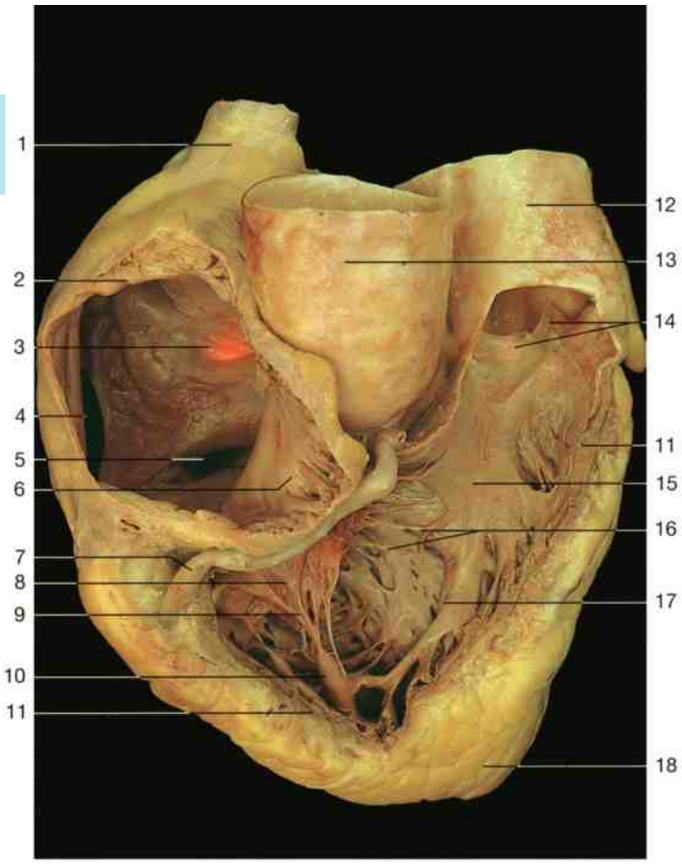
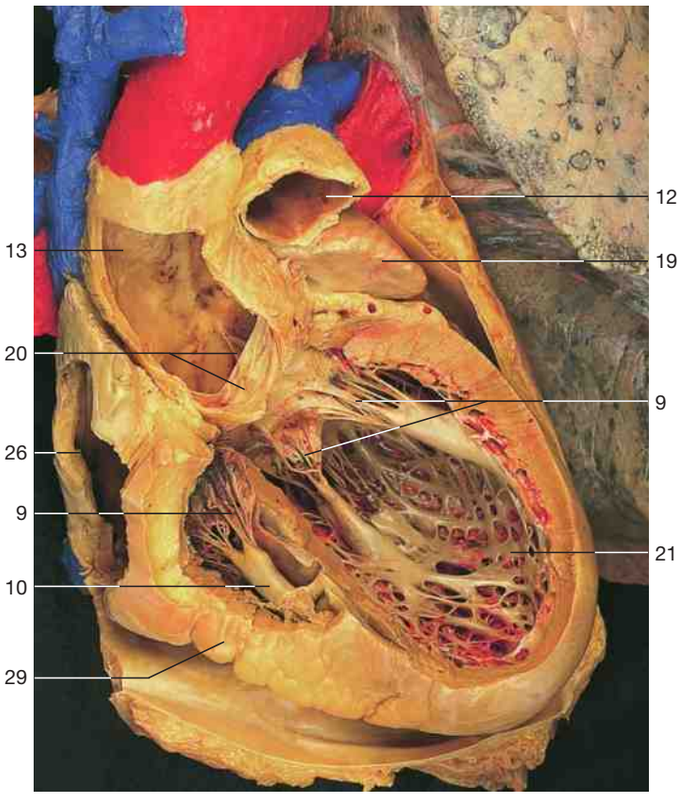
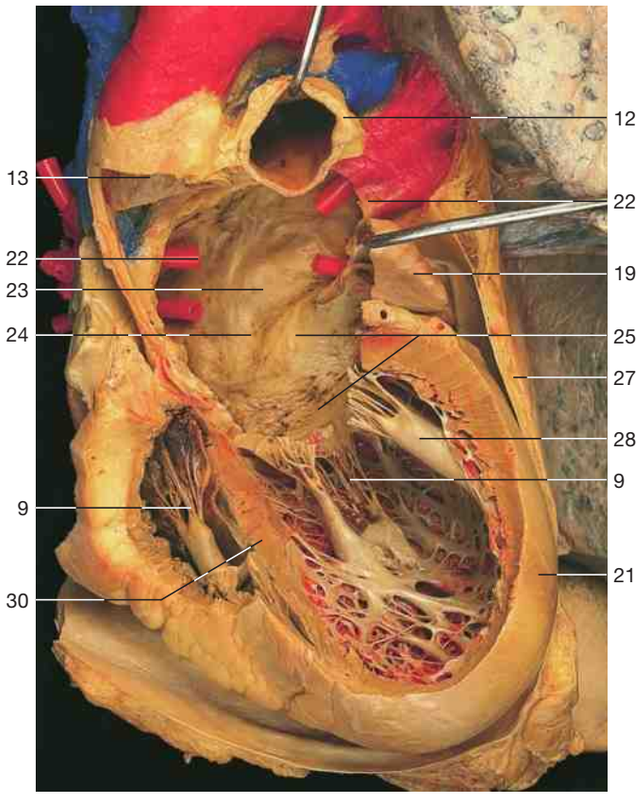


1 Superior vena cava
2 Crista terminalis
3 Fossa ovalis
4 Opening of inferior vena cava
5 Opening of coronary sinus
6 Right auricle
7 Right coronary artery and coronary sulcus
8 Anterior cusp of tricuspid valve
9 Chordae tendineae
10 Anterior papillary muscle
11 Myocardium
12 Pulmonary trunk
13 Ascending aorta
14 Pulmonic valve
15 Conus arteriosus (interventricular septum)
16 Septal papillary muscles
17 Septomarginal trabecula or moderator band
18 Apex of heart
19 Left auricle
20 Aortic valve
21 Left ventricle
22 Pulmonary veins
23 Position of fossa ovalis
24 Left atrium
25 Left atrioventricular (bicuspid or mitral) valve
26 Right atrium
27 Pericardium
28 Posterior papillary muscle
29 Right ventricle
30 Interventricular septum

Right heart (anterior aspect). Anterior wall of right atrium and ventricle removed.



Heart, left ventricle with mitral valve, papillary muscles, and aortic valve (anterior portion of the heart removed).



Heart, left ventricle, and atrium (opened) showing the posterior part of the mitral valve with papillary muscles.

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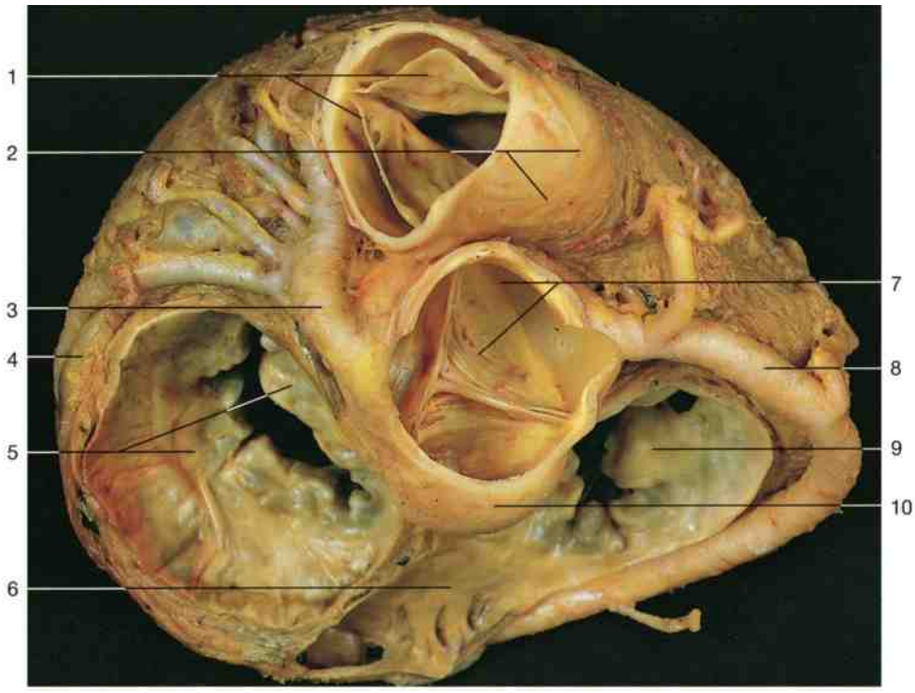
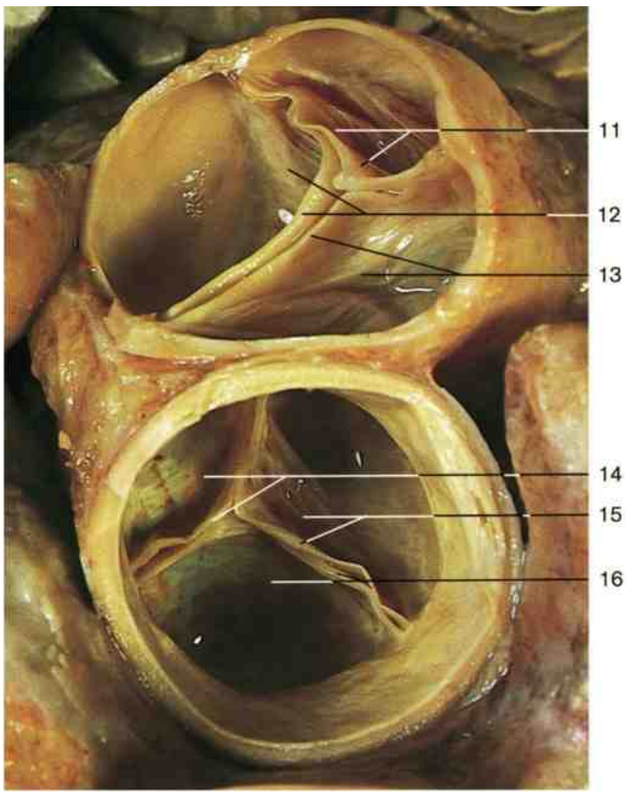
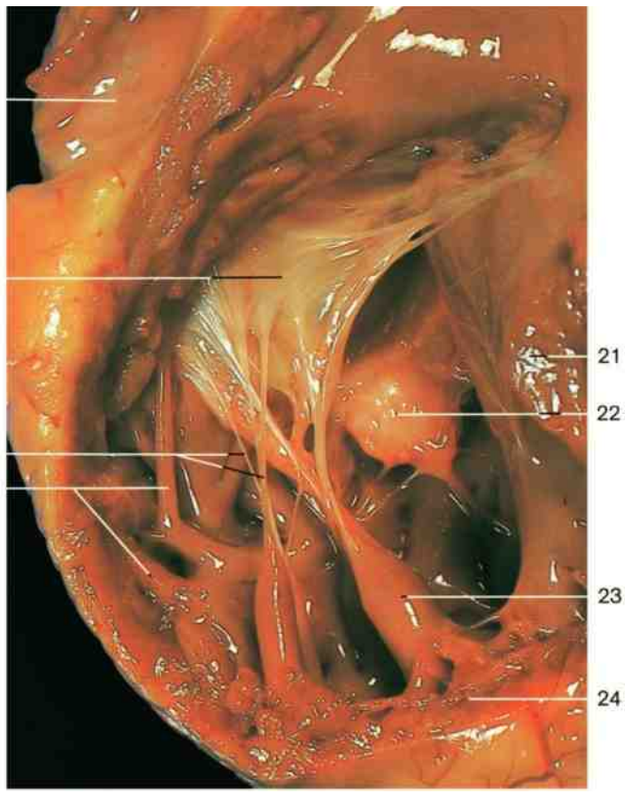


Valves of heart (superior aspect). Left and right atria removed. Dissection of coronary arteries. Above: anterior wall of the heart.

1 Pulmonic valve
2 Sinus of pulmonary trunk
3 Left coronary artery
4 Great cardiac vein
5 Left atrioventricular (mitral) valve
6 Coronary sinus
7 Aortic valve
8 Right coronary artery
9 Right atrioventricular (tricuspid) valve
10 Bulb of aorta
11 Anterior semilunar cusp of pulmonic valve
12 Left semilunar cusp of pulmonic valve
13 Right semilunar cusp of pulmonic valve
14 Left semilunar cusp of aortic valve
15 Right semilunar cusp of aortic valve
16 Posterior semilunar cusp of aortic valve
17 Right atrium
18 Anterior cusp of tricuspid valve
19 Chordae tendineae
20 Trabeculae carneae
21 Interventricular septum
22 Septal cusp of tricuspid valve
23 Anterior papillary muscle
24 Myocardium of right ventricle



Pulmonic and aortic valves (from above). Anterior wall of the heart at the top. Both valves are closed.



Right atrioventricular (tricuspid) valve (anterior aspect after removal of the anterior wall of the right ventricle).

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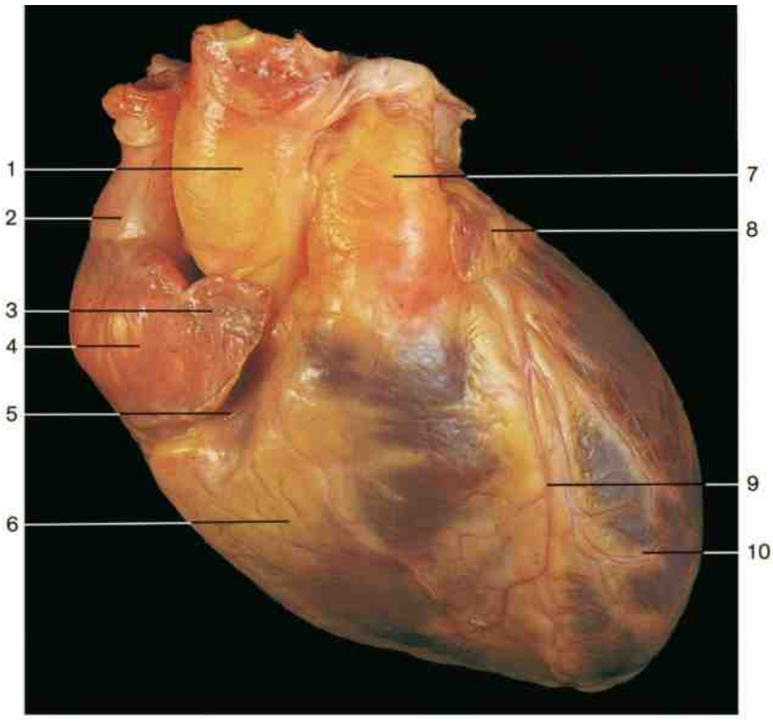
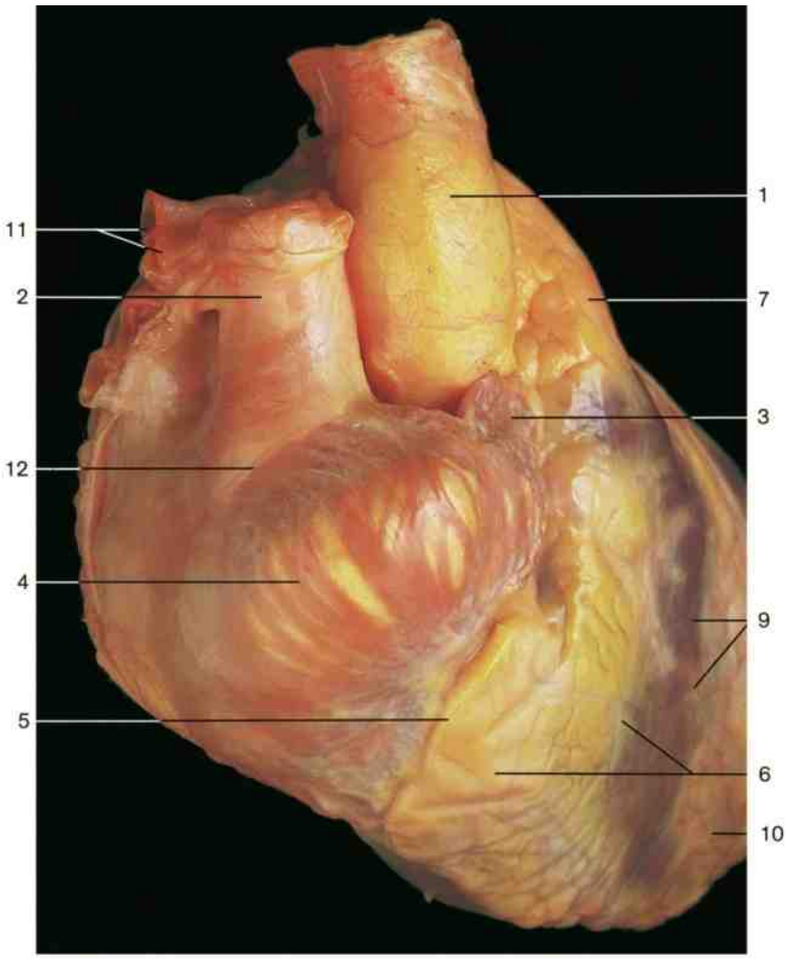
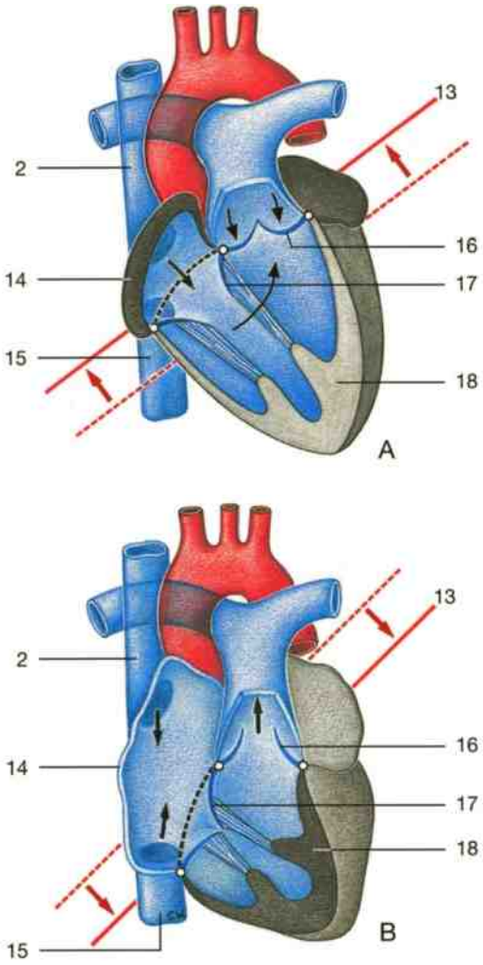


Heart, fixed in **diastole** (anterior aspect). The ventricles are relaxed, atria contracted.



Heart, fixed in **systole** (antero-lateral aspect). The ventricles are contracted, atria dilated.

1 Ascending aorta
2 Superior vena cava
3 Right auricle
4 Right atrium
5 Coronary sulcus
6 Right ventricle
7 Pulmonary trunk
8 Left auricle
9 Anterior interventricular sulcus
10 Left ventricle
11 Right pulmonary artery
12 Sulcus terminalis with sinu-atrial node
13 Line indicating plane of position of valves
14 Myocardium of right atrium
15 Inferior vena cava
16 Valve of pulmonary trunk
17 Tricuspid valve
18 Myocardium of right ventricle



Morphological changes during heart movements. Note the changes in position of the valves (red arrows). Contracted portions of heart are indicated in black.
A. **Diastole:** muscles of the ventricles relaxed, atrioventricular valves open, semilunar valves closed.
B. **Systole:** muscles of ventricles contracted, atrioventricular valves closed, semilunar valves open.

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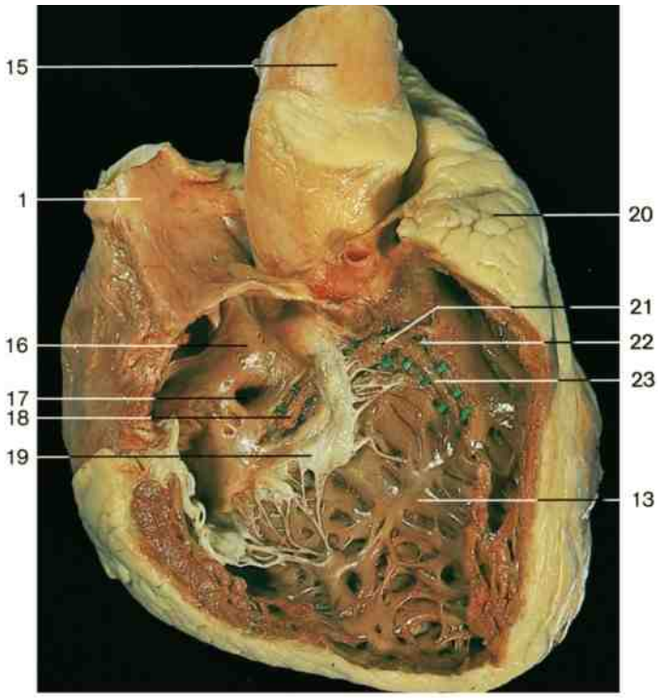
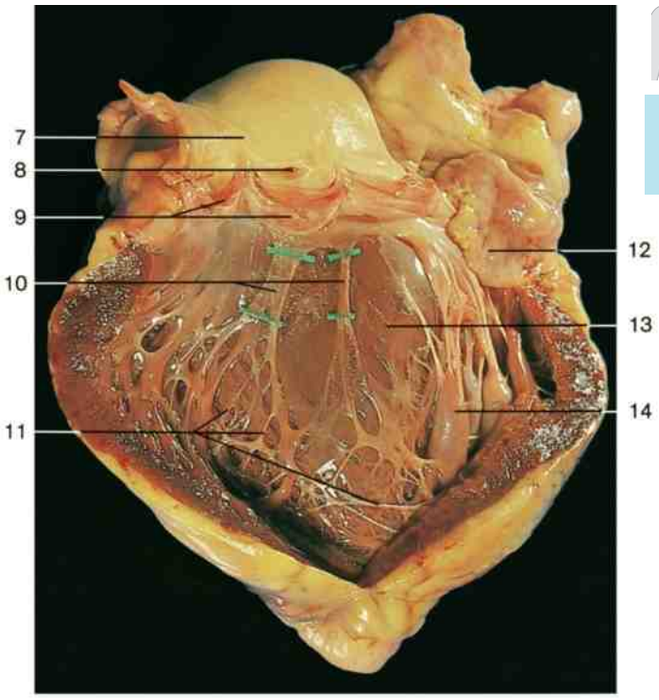


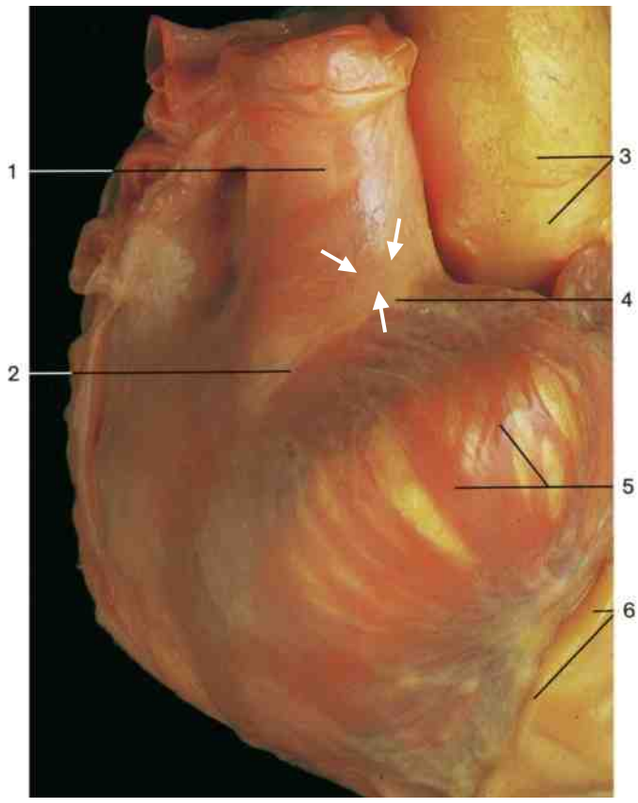
Right ventricle, dissection of **atrioventricular node, atrioventricular bundle (bundle of His),** and **right limb or bundle branch** (probes).

1 Superior vena cava
2 Sulcus terminalis
3 Bulb of aorta
4 Sinu-atrial node (arrows)
5 Muscle fiber bundles of right atrium
6 Coronary sulcus (with right coronary artery)
7 Aortic sinus
8 Entrance to left coronary artery

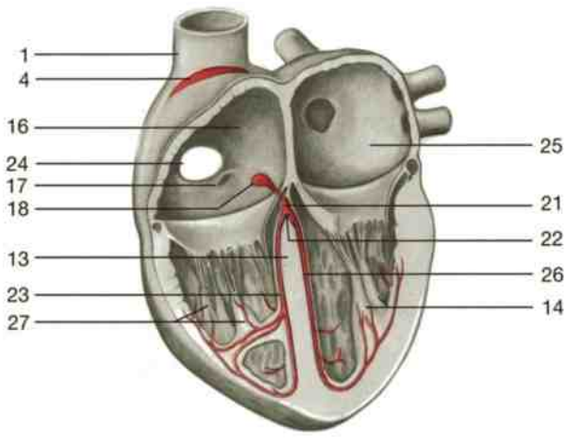


Left ventricle, dissection of left **limb or bundle branch of conducting system** (probes).

9 Aortic valve
10 Branches of left bundle branch
11 Purkinje fibers
12 Left auricle
13 Interventricular septum
14 Papillary muscles
15 Ascending aorta
16 Right atrium
17 Opening of coronary sinus
18 Atrioventricular node
19 Septal cusp of tricuspid valve
20 Pulmonary trunk
21 Atrioventricular bundle (bundle of His)
22 Bifurcation of atrioventricular bundle
23 Right bundle branch
24 Inferior vena cava
25 Left atrium
26 Left bundle branch
27 Papillary muscles with Purkinje fibers



Right atrium, anterior wall, showing the location of the **sinu-atrial node** (arrows).



Conducting system of the heart (schematic drawing).

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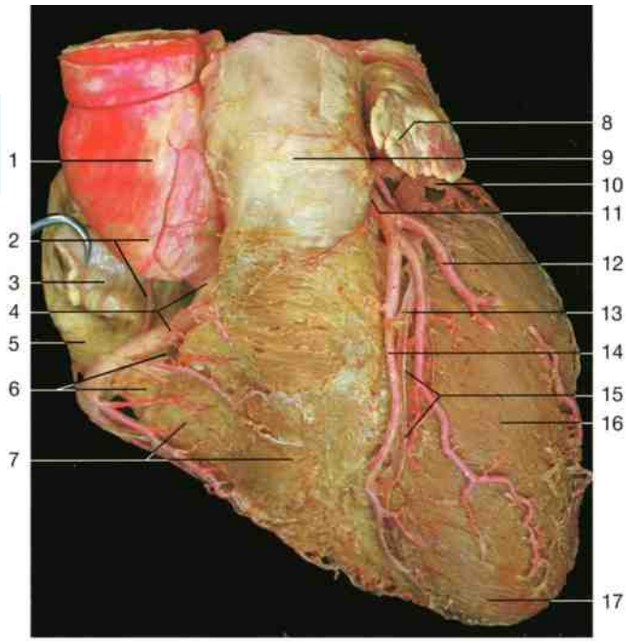
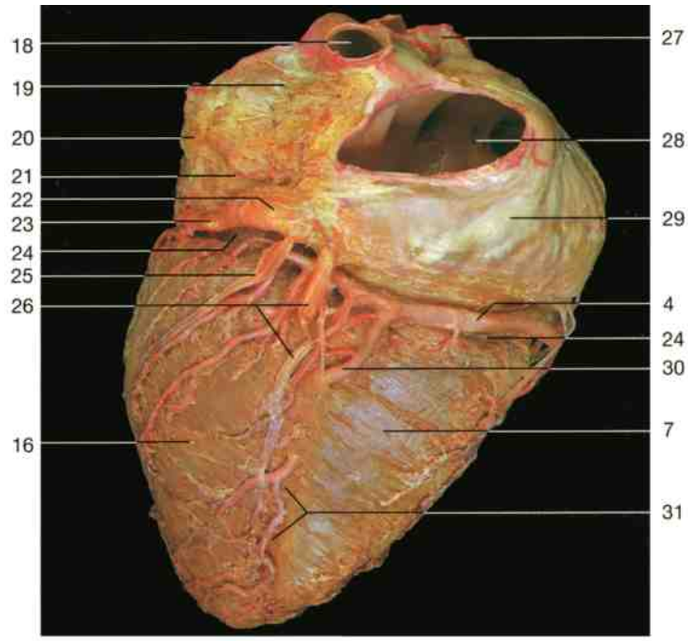
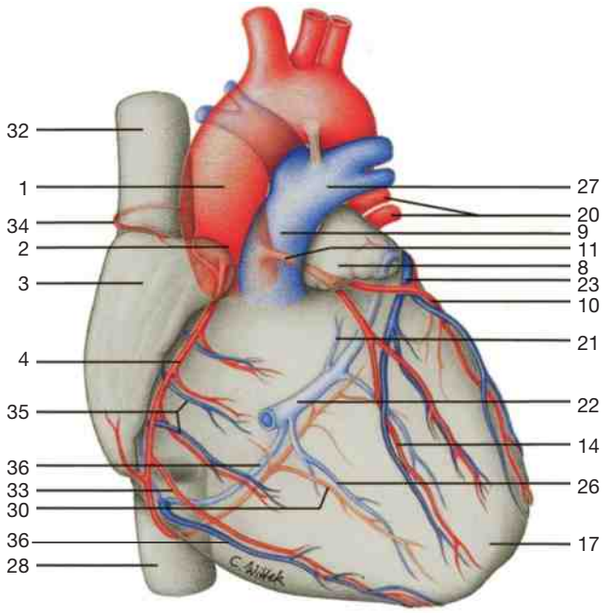


Coronary arteries (anterior aspect). The epicardium and subepicardial fatty tissue have been removed. The arteries have been injected with red resin from the aorta.



Right coronary artery and veins of the heart (dorsal aspect). The epicardium and subepicardial fatty tissue have been removed.



Vessels of the heart. Coronary arteries (red) and veins (blue) of the heart (anterior aspect).

1 Ascending aorta
2 Aortic bulb and (in the above specimen) sinu-atrial branch of right coronary artery
3 Right auricle
4 Right coronary artery
5 Right atrium
6 Coronary sulcus
7 Right ventricle
8 Left auricle
9 Pulmonary trunk
10 Circumflex branch of left coronary artery
11 Left coronary artery
12 Diagonal branch of left artery
13 Great cardiac vein
14 Anterior interventricular artery
15 Anterior interventricular sulcus
16 Left ventricle
17 Apex of heart
18 Right pulmonary vein
19 Left atrium
20 Left pulmonary veins
21 Oblique vein of left atrium (Marshall's vein)
22 Coronary sinus
23 Great cardiac vein
24 Coronary sulcus (posterior portion)
25 Posterior vein of left ventricle
26 Middle cardiac vein
27 Left pulmonary artery
28 Inferior vena cava
29 Right atrium
30 Posterior interventricular branch of right coronary artery
31 Posterior interventricular sulcus
32 Superior vena cava
33 Right marginal branch
34 Branch of sinu-atrial node
35 Minimal cardiac veins
36 Small cardiac vein

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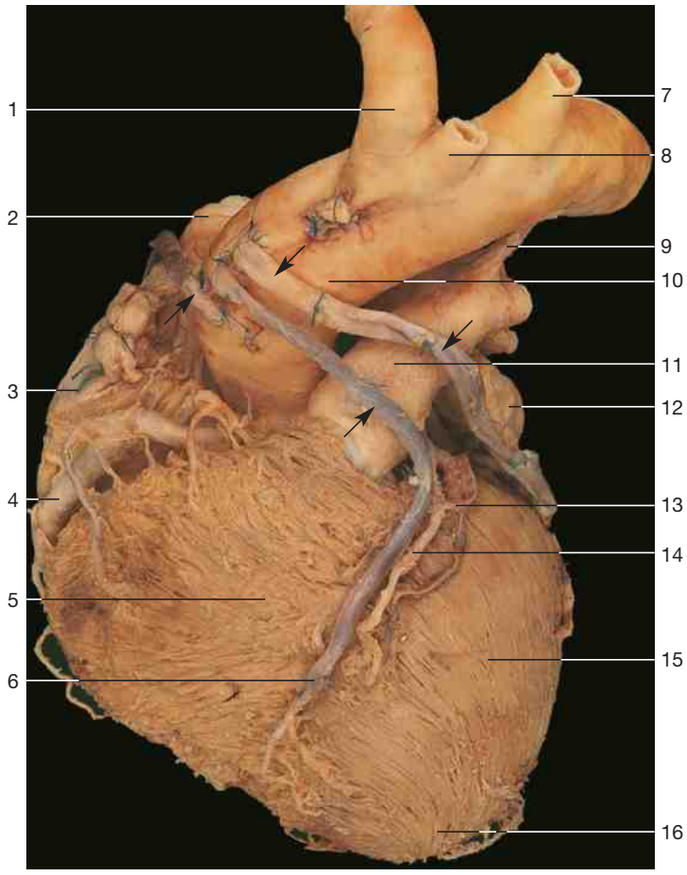
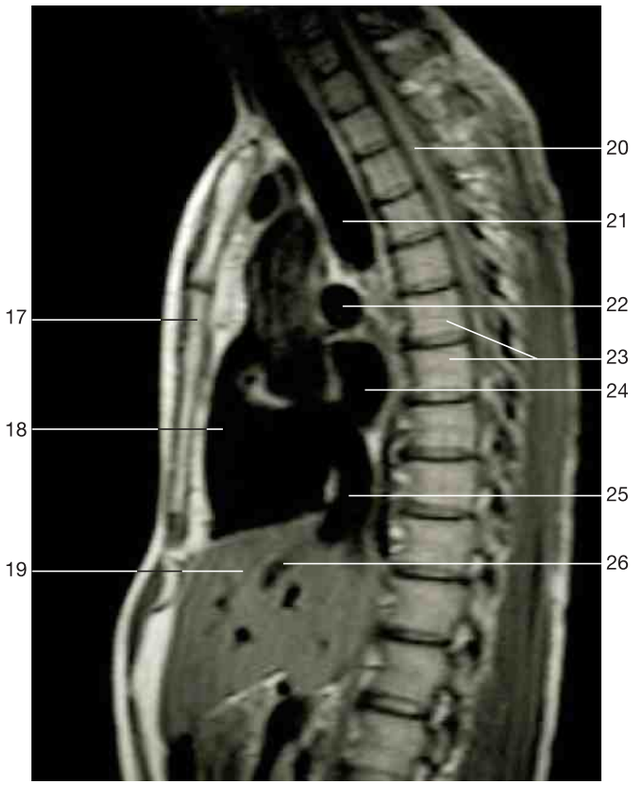
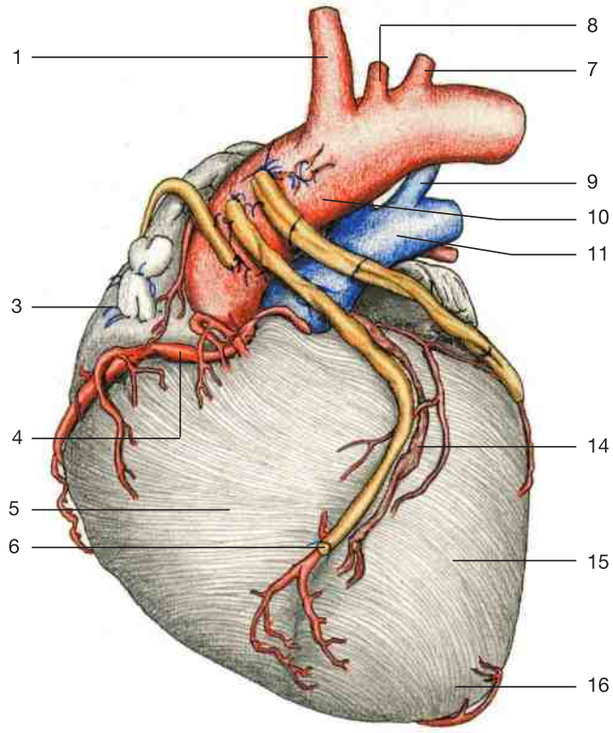


Heart, coronary vessels after implantation of three bypass vessels (anterior aspect). The ductus arteriosus (9) is still open.

1 Brachiocephalic trunk
2 Superior vena cava
3 Right atrium
4 Right coronary artery
5 Right ventricle
6 Connection of one of the bypass vessels with the anterior interventricular artery
7 Left subclavian artery
8 Left common carotid artery
9 Ductus arteriosus (Botalli) (still open)
10 Ascending aorta with three bypass vessels implanted
11 Pulmonary trunk
12 Left atrium
13 Circumflex branch of left coronary artery
14 Anterior interventricular branch of left coronary artery
15 Left ventricle
16 Apex of heart
17 Sternum
18 Right ventricle
19 Liver
20 Spinal cord
21 Trachea
22 Aorta
23 Body of thoracic vertebrae
24 Pulmonary artery
25 Inferior vena cava
26 Hepatic vein



Sagittal section through the thoracic cavity (MRI scan, courtesy of Prof. W. Bautz and R. Janka, M. D., University of Erlangen, Germany).



Heart, coronary vessels after implantation of three bypass vessels (yellow) (schematic drawing of the specimen above).

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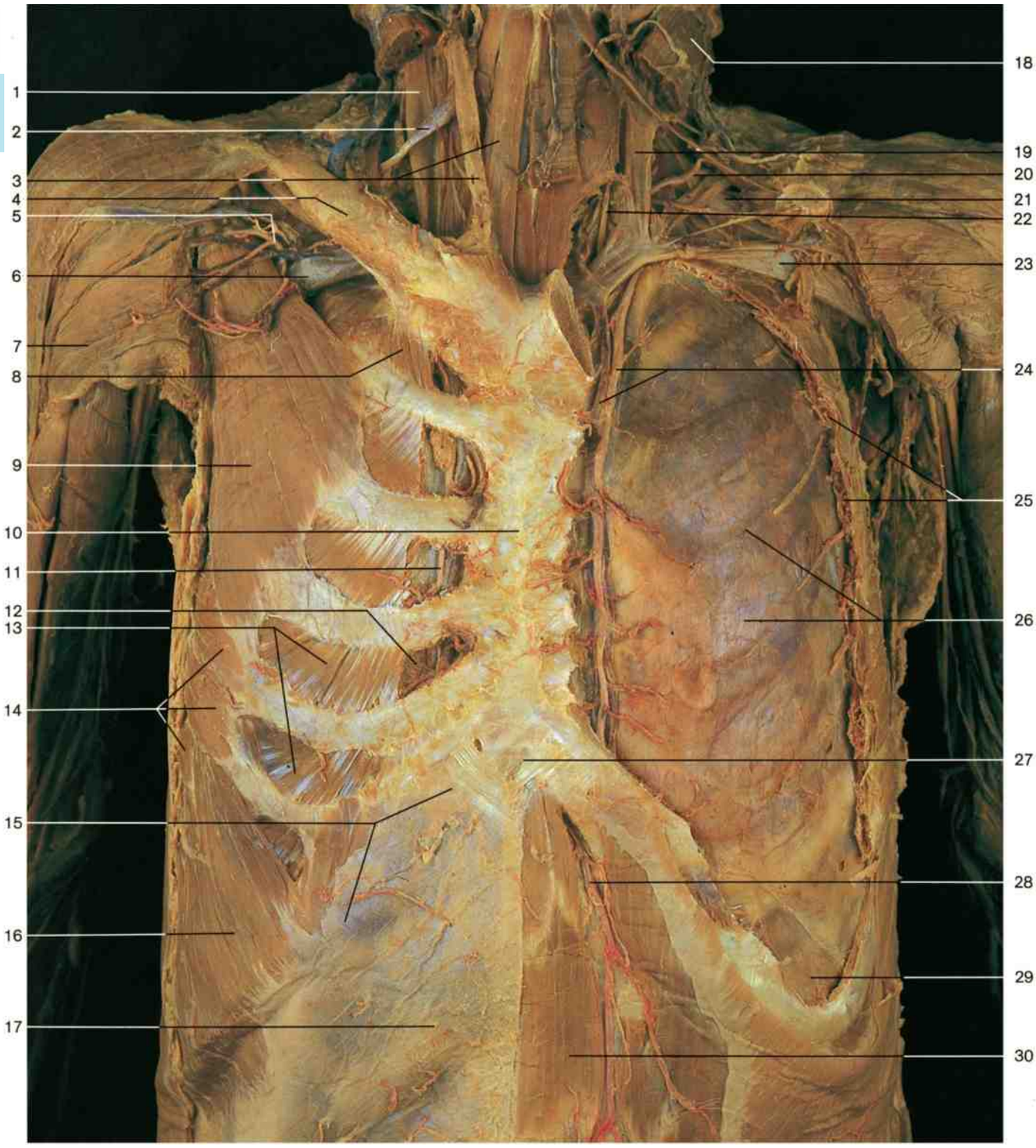

Thoracic organs (ventral aspect). The left clavicle and ribs have been partially removed, and the right intercostal spaces have been opened to show the internal thoracic vein and artery.

1 Right internal jugular vein
2 Omohyoid muscle
3 Sternohyoid muscle and external jugular vein
4 Clavicle
5 Thoraco-acromial artery
6 Right subclavian vein
7 Pectoralis major muscle
8 External intercostal muscle
9 Pectoralis minor muscle
10 Body of sternum
11 Right internal thoracic artery and vein
12 Fascicles of transversus thoracis muscle
13 Internal intercostal muscles
14 Serratus anterior muscle
15 Costal margin
16 External abdominal oblique muscle
17 Anterior sheath of rectus abdominis muscle
18 Sternocleidomastoid muscle
19 Left internal jugular vein
20 Transverse cervical artery
21 Brachial plexus
22 Vagus nerve
23 Left axillary vein
24 Left internal thoracic artery and vein
25 Ribs and thoracic wall (cut)
26 Costal pleura
27 Xiphoid process
28 Superior epigastric artery
29 Diaphragm
30 Rectus abdominis muscle

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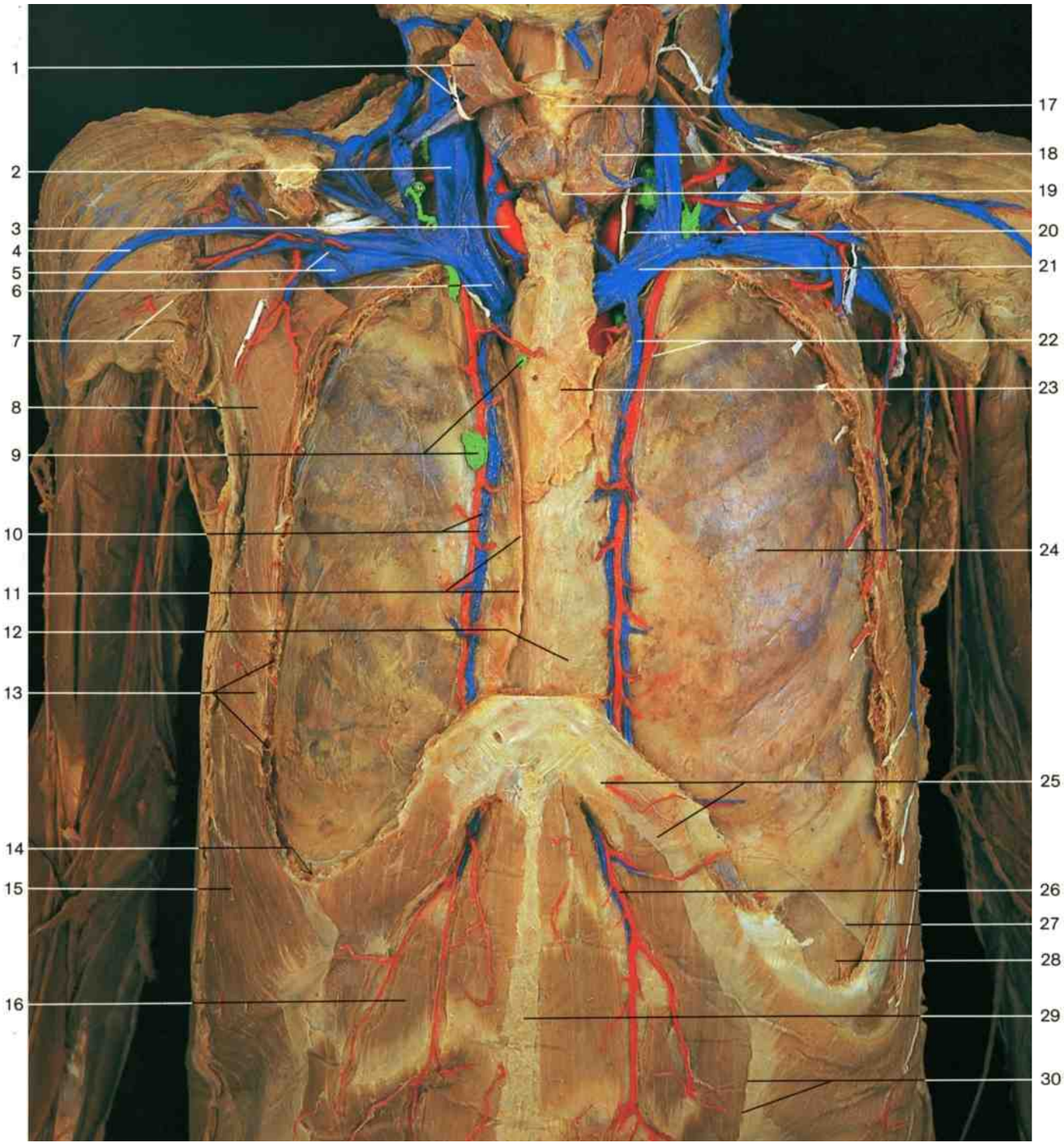

Thoracic organs, anterior mediastinum, and pleura (ventral aspect). Ribs, clavicle, and sternum have been partly removed. Red = arteries; blue = veins; green = lymph vessels and nodes.

1 Sternothyroid muscle and its nerve (a branch of the ansa cervicalis)
2 Right internal jugular vein
3 Right common carotid artery
4 Cephalic vein
5 Right subclavian vein
6 Right brachiocephalic vein
7 Pectoralis major muscle (divided)
8 Pectoralis minor muscle (divided)
9 Parasternal lymph nodes
10 Internal thoracic artery and vein
11 Anterior margin of costal pleura
12 Pericardium
13 Fifth and sixth ribs (divided) and serratus anterior muscle
14 Costodiaphragmatic recess
15 External abdominal oblique muscle
16 Rectus abdominis muscle
17 Larynx (thyroid cartilage)
18 Thyroid gland
19 Trachea
20 Left vagus nerve
21 Left brachiocephalic vein
22 Left internal thoracic artery and vein
23 Thymus
24 Costal pleura
25 Costal margin
26 Superior epigastric artery
27 Margin of costal pleura
28 Diaphragm
29 Linea alba
30 Cut edge of anterior sheath of rectus abdominis muscle

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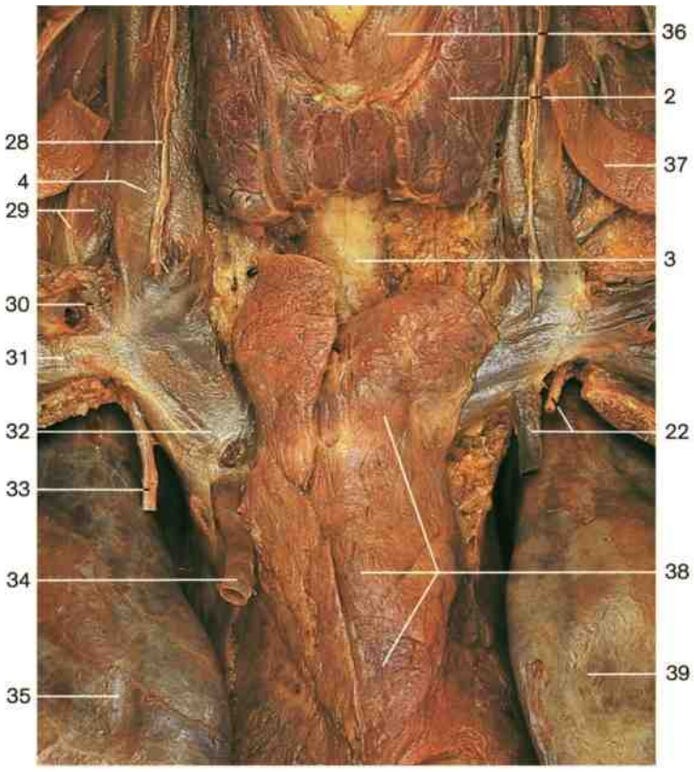
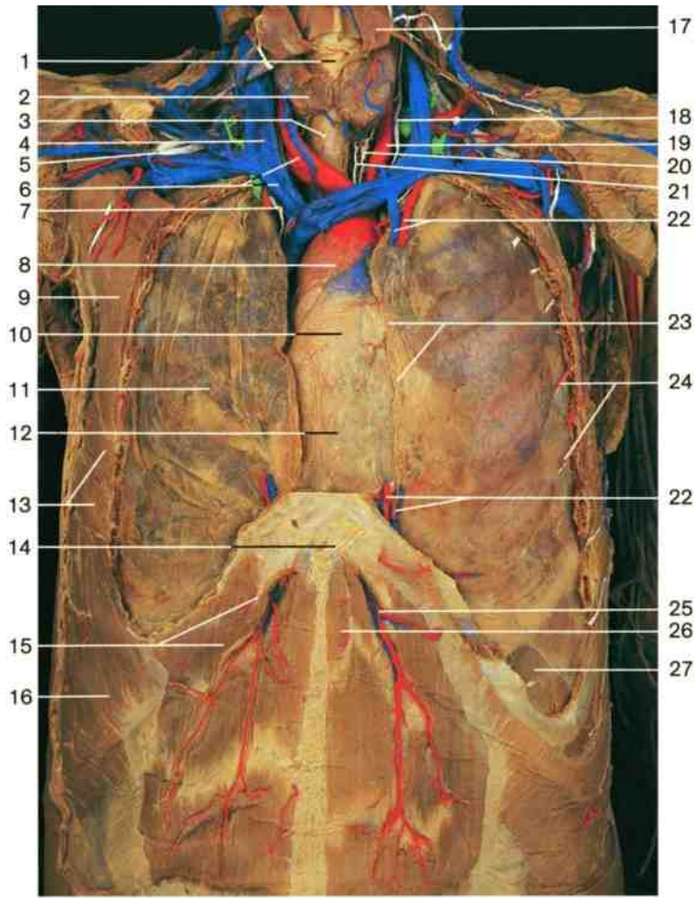


The **thymus** above the heart, showing its position and size.



1 Larynx (thyroid cartilage)
2 Thyroid gland
3 Trachea
4 Internal jugular vein
5 Brachial plexus
6 Right brachiocephalic vein and common carotid artery
7 Right phrenic nerve
8 Ascending aorta
9 Pectoralis minor muscle (divided)
10 Pulmonary trunk (covered by pericardium)
11 Costal pleura
12 Pericardium and heart
13 Serratus anterior muscle
14 Xiphoid process
15 Costal margin
16 External abdominal oblique muscle
17 Sternothyroid muscle (divided and reflected)
18 Vagus nerve
19 Left common carotid artery
20 Left sympathetic trunk
21 Left recurrent laryngeal nerve
22 Left internal thoracic artery and vein (divided)
23 Margin of costal pleura
24 Intercostal nerves and vessels
25 Superior epigastric artery
26 Rectus abdominis muscle
27 Diaphragm
28 Ansa cervicalis
29 Phrenic nerve and scalenus anterior muscle
30 External jugular vein (divided)
31 Right subclavian vein
32 Right brachiocephalic vein
33 Internal thoracic artery (divided)
34 Internal thoracic vein (divided)
35 Right lung
36 Cricothyroid muscle
37 Omohyoid muscle
38 Thymus
39 Left lung

Thoracic organs (ventral aspect). The internal thoracic vessels have been removed, and the anterior margins of the pleura and lungs have been slightly reflected to display the anterior and middle mediastinum, including the heart and great vessels.

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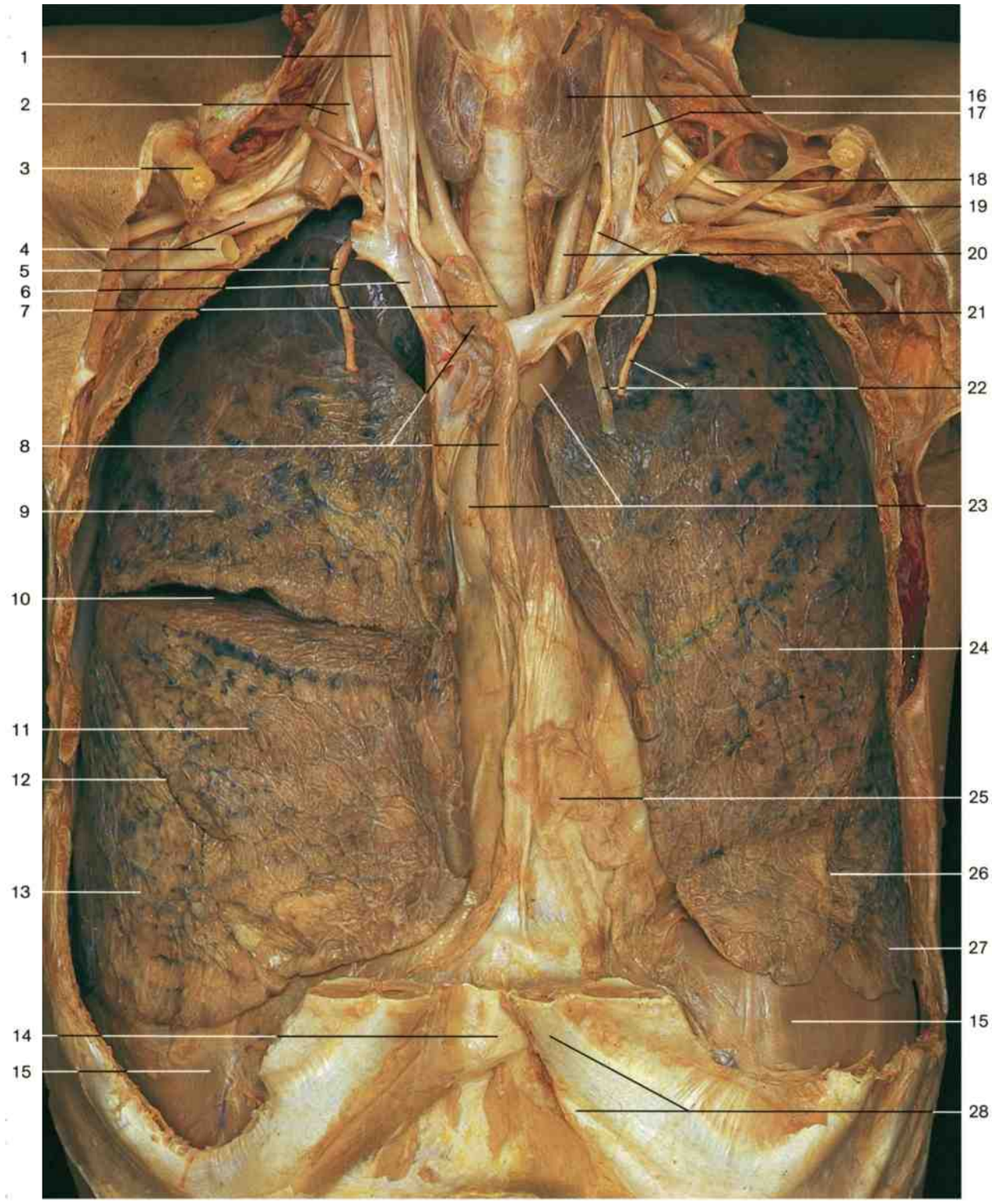

Thoracic organs (ventral aspect). The pleura has been opened and the lungs exposed. Remnants of the thymus and pericardium are seen.

1 Right internal jugular vein
2 Phrenic nerve and scalenus anterior muscle
3 Clavicle (divided)
4 Right subclavian artery and vein
5 Internal thoracic artery
6 Right brachiocephalic vein
7 Brachiocephalic trunk
8 Thymus (atrophic)
9 Upper lobe of right lung
10 Horizontal fissure of right lung (incomplete)
11 Middle lobe of right lung
12 Oblique fissure of right lung
13 Lower lobe of right lung
14 Xiphoid process
15 Diaphragm
16 Thyroid gland
17 Left internal jugular vein
18 Brachial plexus
19 Left cephalic vein
20 Left common carotid artery and vagus nerve
21 Left brachiocephalic vein
22 Internal thoracic artery and vein (divided)
23 Ascending aorta and aortic arch
24 Upper lobe of left lung
25 Pericardium
26 Oblique fissure of left lung
27 Lower lobe of left lung
28 Costal margin

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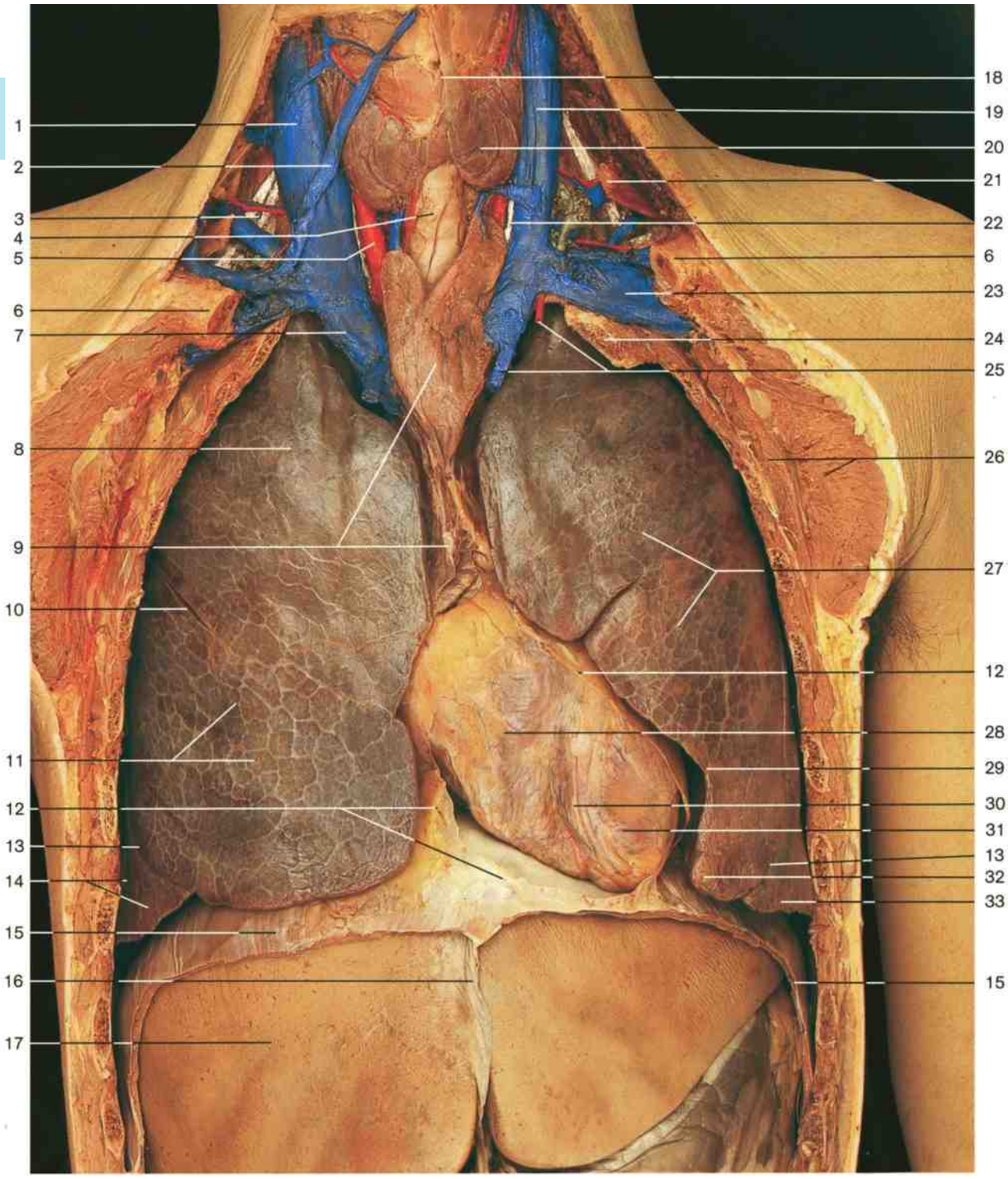

Thoracic organs (ventral aspect). The thoracic wall, costal pleura, pericardium, and diaphragm have been partly removed.

1 Internal jugular vein
2 External jugular vein (displaced medially)
3 Brachial plexus
4 Trachea
5 Right common carotid artery
6 Clavicle (divided)
7 Right brachiocephalic vein
8 Upper lobe of right lung
9 Thymus (atrophic)
10 Horizontal fissure of right lung
11 Middle lobe of right lung
12 Pericardium (cut edges)
13 Oblique fissure of lung
14 Lower lobe of right lung
15 Diaphragm
16 Falciform ligament
17 Liver
18 Location of larynx
19 Left internal jugular vein
20 Thyroid gland
21 Omohyoid muscle (divided)
22 Vagus nerve
23 Left subclavian vein
24 First rib (divided)
25 Internal thoracic artery and vein
26 Pectoralis major and pectoralis minor muscles (cut edges)
27 Upper lobe of left lung
28 Right ventricle
29 Cardiac notch of left lung
30 Interventricular sulcus of heart
31 Left ventricle
32 Lingula
33 Lower lobe of left lung

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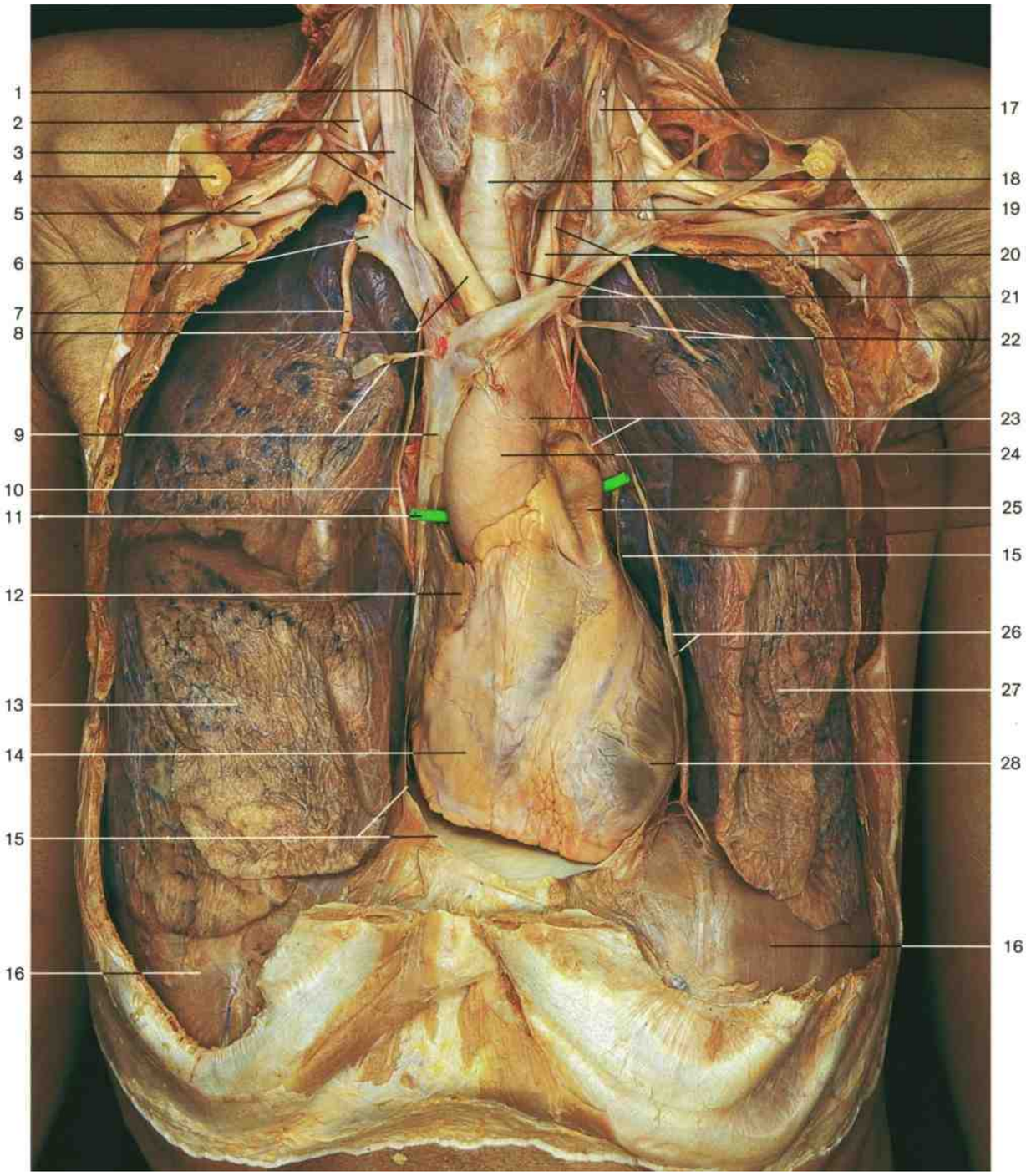

Thoracic organs (ventral aspect). Position of the heart and middle mediastinum. The anterior wall of the thorax, the costal pleura, and the pericardium have been removed and the lungs slightly reflected.

1 Thyroid gland
2 Phrenic nerve and scalenus anterior muscle
3 Vagus nerve and internal jugular vein
4 Clavicle (divided)
5 Brachial plexus and subclavian artery
6 Subclavian vein
7 Internal thoracic artery
8 Brachiocephalic trunk and right brachiocephalic vein
9 Superior vena cava and thymic vein
10 Right phrenic nerve
11 Transverse pericardial sinus (probe)
12 Right auricle
13 Middle lobe of right lung
14 Right ventricle
15 Cut edge of pericardium
16 Diaphragm
17 Internal jugular vein
18 Trachea
19 Left recurrent laryngeal nerve
20 Left common carotid artery and vagus nerve
21 Left brachiocephalic vein and inferior thyroid vein
22 Left internal thoracic artery and vein (divided)
23 Upper margin of pericardial sac
24 Ascending aorta
25 Pulmonary trunk
26 Left phrenic nerve and left pericardiacophrenic artery and vein
27 Upper lobe of left lung
28 Left ventricle

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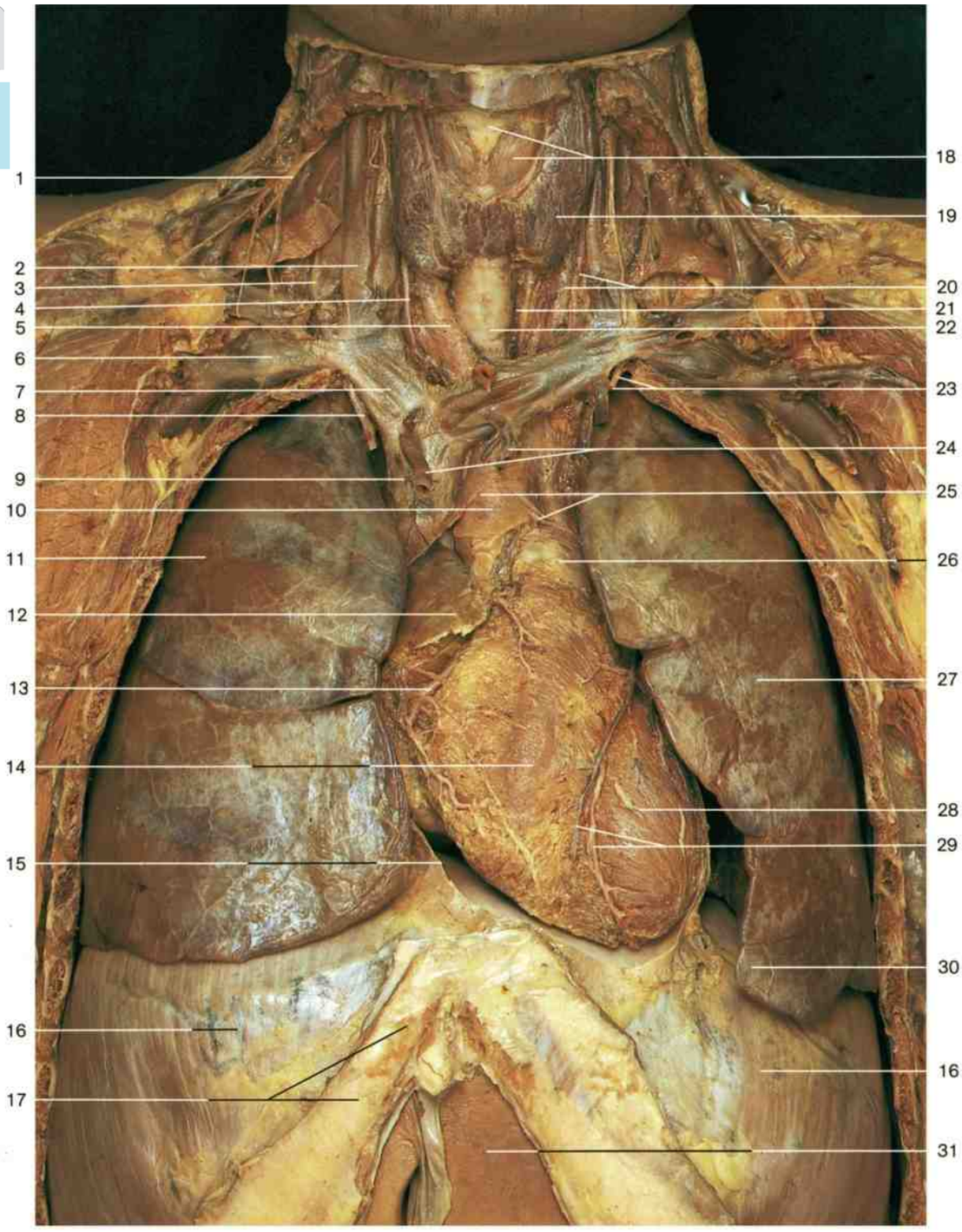

Thoracic organs (ventral aspect). Position of heart, dissection of coronary vessels in situ. The anterior wall of thorax, costal pleura, and pericardium have been removed.

1 Intermediate supraclavicular nerve
2 Internal jugular vein
3 Right phrenic nerve
4 Right vagus nerve
5 Right common carotid artery
6 Right subclavian vein
7 Right brachiocephalic vein
8 Right internal thoracic artery
9 Superior vena cava
10 Ascending aorta
11 Right lung
12 Right atrium
13 Right coronary artery and small cardiac vein
14 Right ventricle
15 Cut edge of pericardium
16 Diaphragm
17 Costal margin
18 Larynx (cricothyroid muscle and thyroid cartilage)
19 Thyroid gland
20 Left common carotid artery and left vagus nerve
21 Left recurrent laryngeal nerve
22 Trachea
23 Left internal thoracic artery and vein (divided)
24 Thymic veins
25 Margin of pericardial sac
26 Pulmonary trunk
27 Left lung
28 Left ventricle
29 Anterior interventricular artery and vein
30 Lingula
31 Liver

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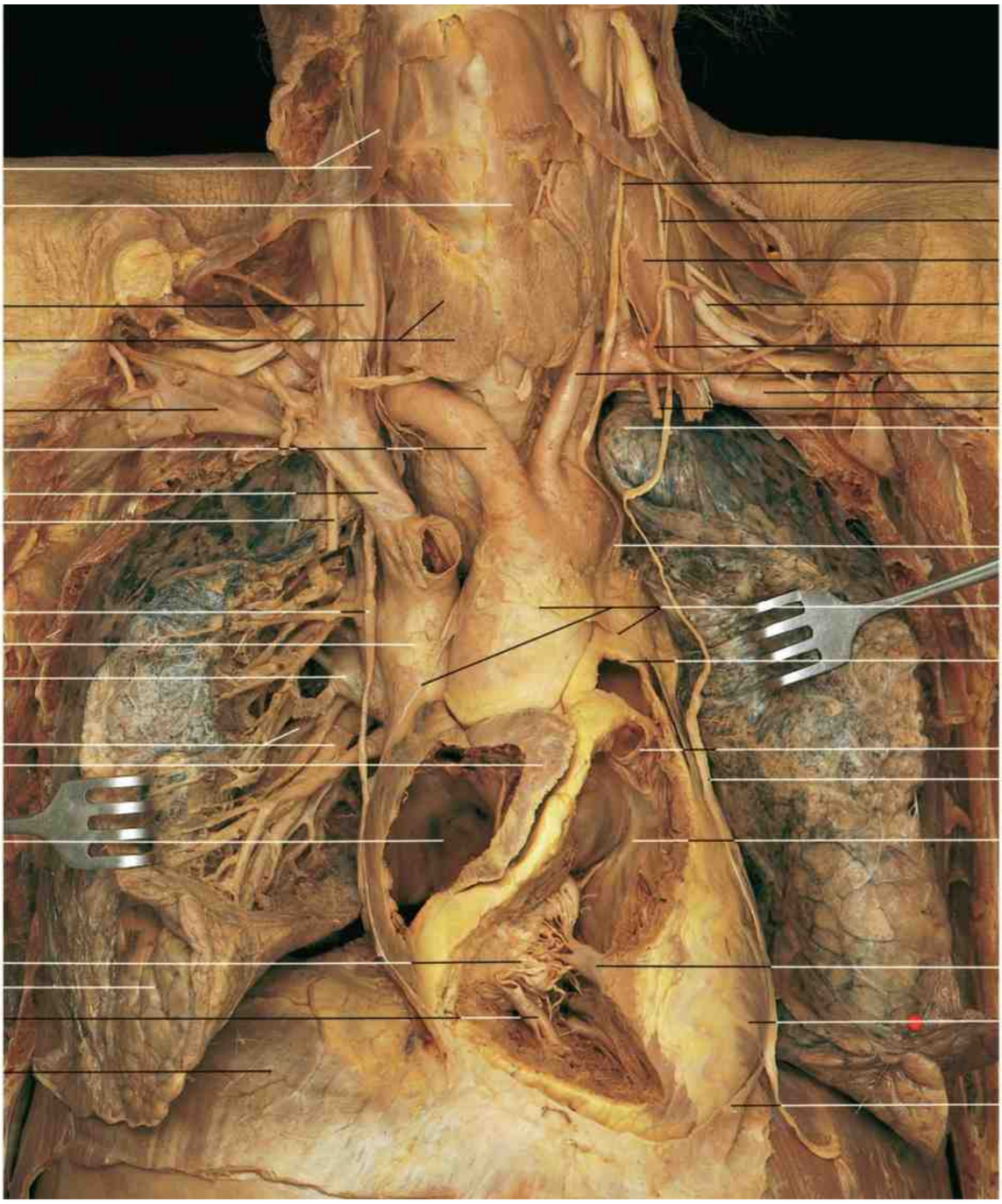

Thoracic organs (ventral aspect). Heart with valves in situ. Anterior wall of thorax, pleura, and anterior portion of pericardium have been removed. The right atrium and ventricle have been opened to show the right atrioventricular and pulmonary valves.

1 Omohyoid muscle
2 Pyramidal lobe of thyroid gland
3 Internal jugular vein
4 Thyroid gland
5 Right subclavian vein
6 Brachiocephalic trunk
7 Right brachiocephalic vein
8 Right internal thoracic artery
9 Right phrenic nerve
10 Superior vena cava
11 Pulmonary vein
12 Branches of pulmonary artery
13 Right auricle
14 Right atrium
15 Right atrioventricular (tricuspid) valve
16 Right lung
17 Posterior papillary muscle
18 Diaphragm
19 Left vagus nerve
20 Left phrenic nerve
21 Scalenus anterior muscle
22 Brachial plexus
23 Thyrocervical trunk
24 Left common carotid artery
25 Left subclavian artery
26 Left internal thoracic artery
27 Apex of left lung
28 Left recurrent laryngeal nerve
29 Cut edge of pericardium
30 Pulmonary trunk (fenestrated)
31 Pulmonic valve
32 Supraventricular crest
33 Anterior papillary muscle
34 Left ventricle

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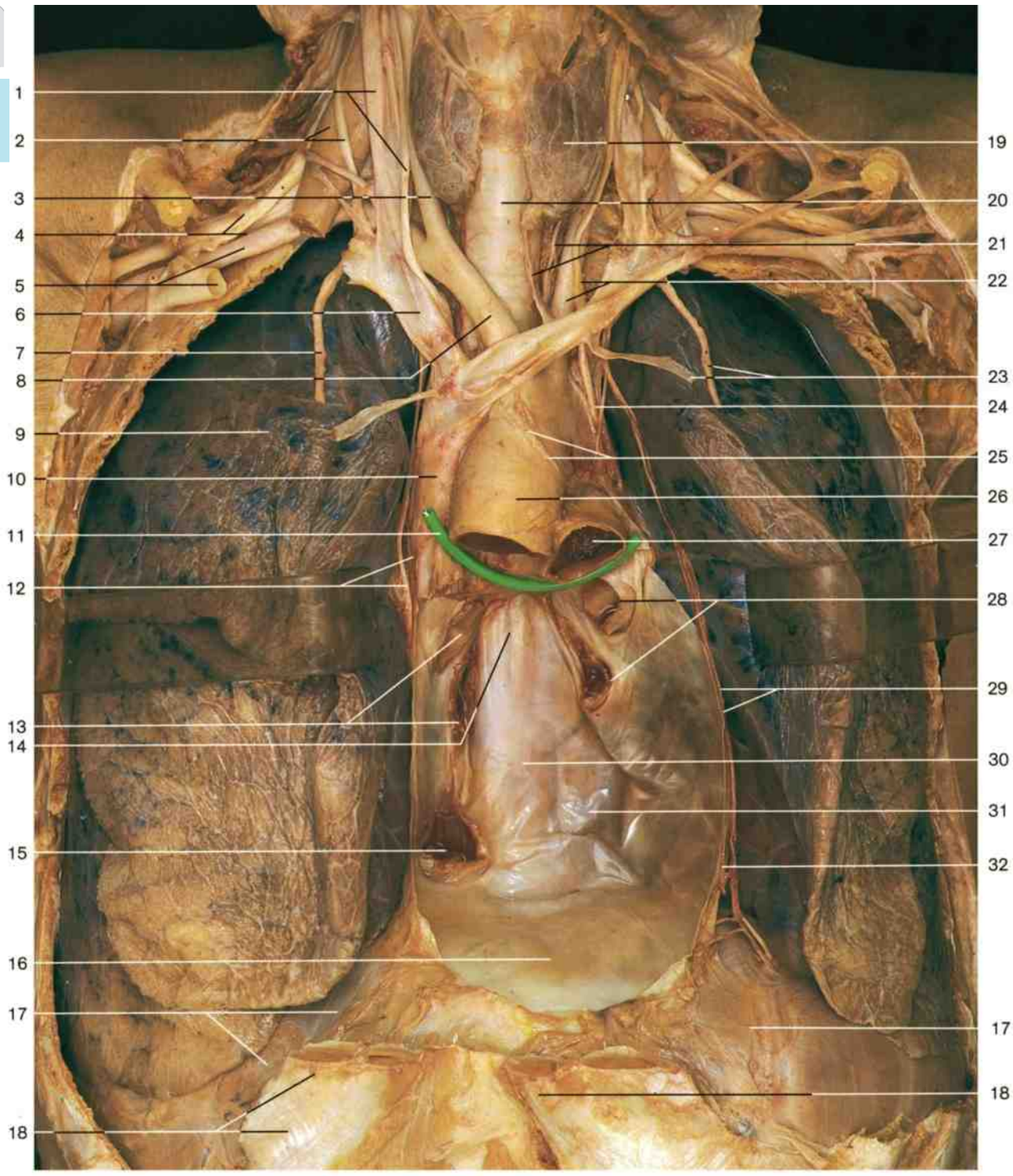

Thoracic organs (ventral aspect). Pericardium and mediastinum. Anterior wall of thorax and heart have been removed and the lungs slightly reflected. Note probe within transverse pericardial sinus.

1 Right internal jugular vein and right vagus nerve
2 Right phrenic nerve and scalenus anterior muscle
3 Right common carotid artery
4 Brachial plexus
5 Right subclavian artery and vein
6 Right brachiocephalic vein
7 Right internal thoracic artery (divided)
8 Brachiocephalic trunk
9 Upper lobe of right lung
10 Superior vena cava
11 Transverse pericardial sinus (probe)
12 Right phrenic nerve and right pericardiacophrenic artery and vein
13 Right pulmonary veins
14 Oblique sinus of pericardium
15 Inferior vena cava
16 Diaphragmatic part of pericardium
17 Diaphragm
18 Costal margin
19 Thyroid gland
20 Trachea
21 Left recurrent laryngeal nerve and inferior thyroid vein
22 Left common carotid artery and left vagus nerve
23 Left internal thoracic artery and vein (divided)
24 Vagus nerve at aortic arch
25 Cut edge of pericardium
26 Ascending aorta
27 Pulmonary trunk (divided)
28 Left pulmonary veins
29 Left phrenic nerve and left pericardiacophrenic artery and vein
30 Contour of esophagus beneath pericardium
31 Contour of aorta beneath pericardium
32 Pericardium (cut edge)

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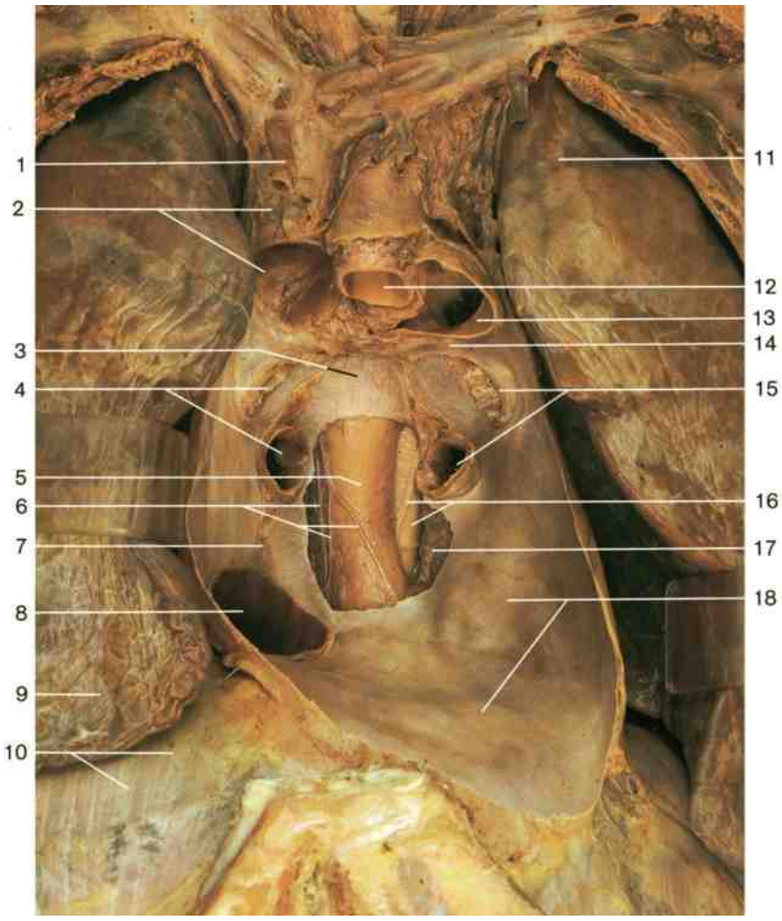
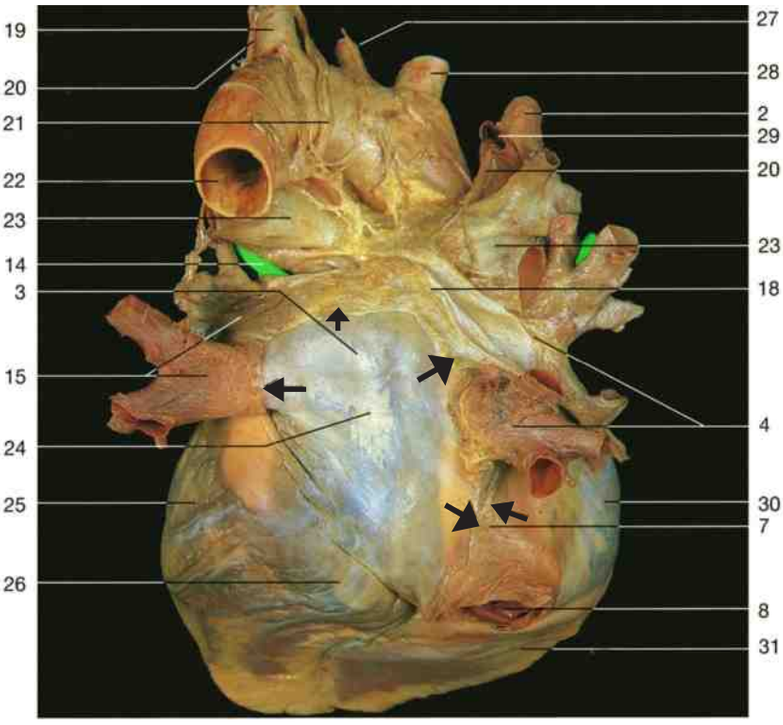
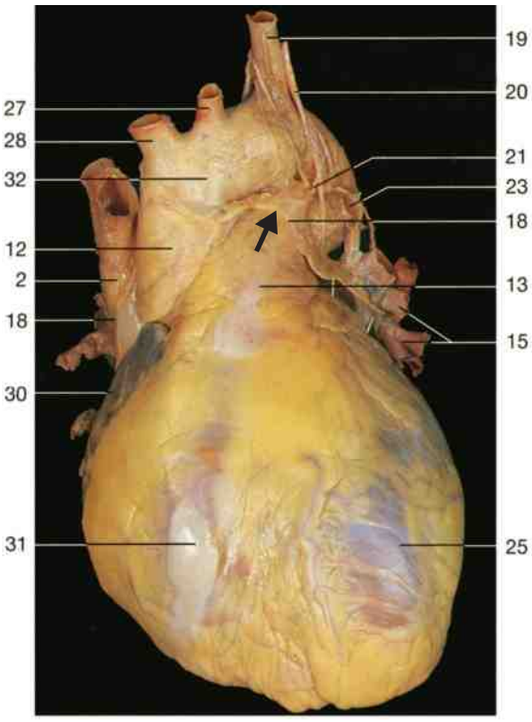


1 Internal thoracic vein
2 Superior vena cava
3 Oblique sinus of pericardium
4 Right pulmonary veins
5 Esophagus
6 Branches of right vagus nerve
7 Mesocardium
8 Inferior vena cava
9 Middle lobe of right lung
10 Diaphragm
11 Upper lobe of left lung
12 Ascending aorta
13 Pulmonary trunk
14 Transverse pericardial sinus
15 Left pulmonary veins
16 Descending aorta and left vagus nerve
17 Left lung (adjacent to pericardium)
18 Pericardium
19 Left subclavian artery
20 Vagus nerve
21 Left recurrent laryngeal nerve
22 Descending aorta
23 Pulmonary artery
24 Left atrium
25 Left ventricle
26 Coronary sinus
27 Left common carotid artery
28 Brachiocephalic trunk
29 Azygos arch
30 Right atrium
31 Right ventricle
32 Aortic arch

Pericardial sac (ventral aspect). The heart has been removed, and the posterior wall of the pericardium has been opened to show the adjacent esophagus and aorta.



Heart with epicardium (posterior aspect). Arrows: oblique sinus.



Heart with epicardium (anterior aspect). Arrow: pericardial reflection.

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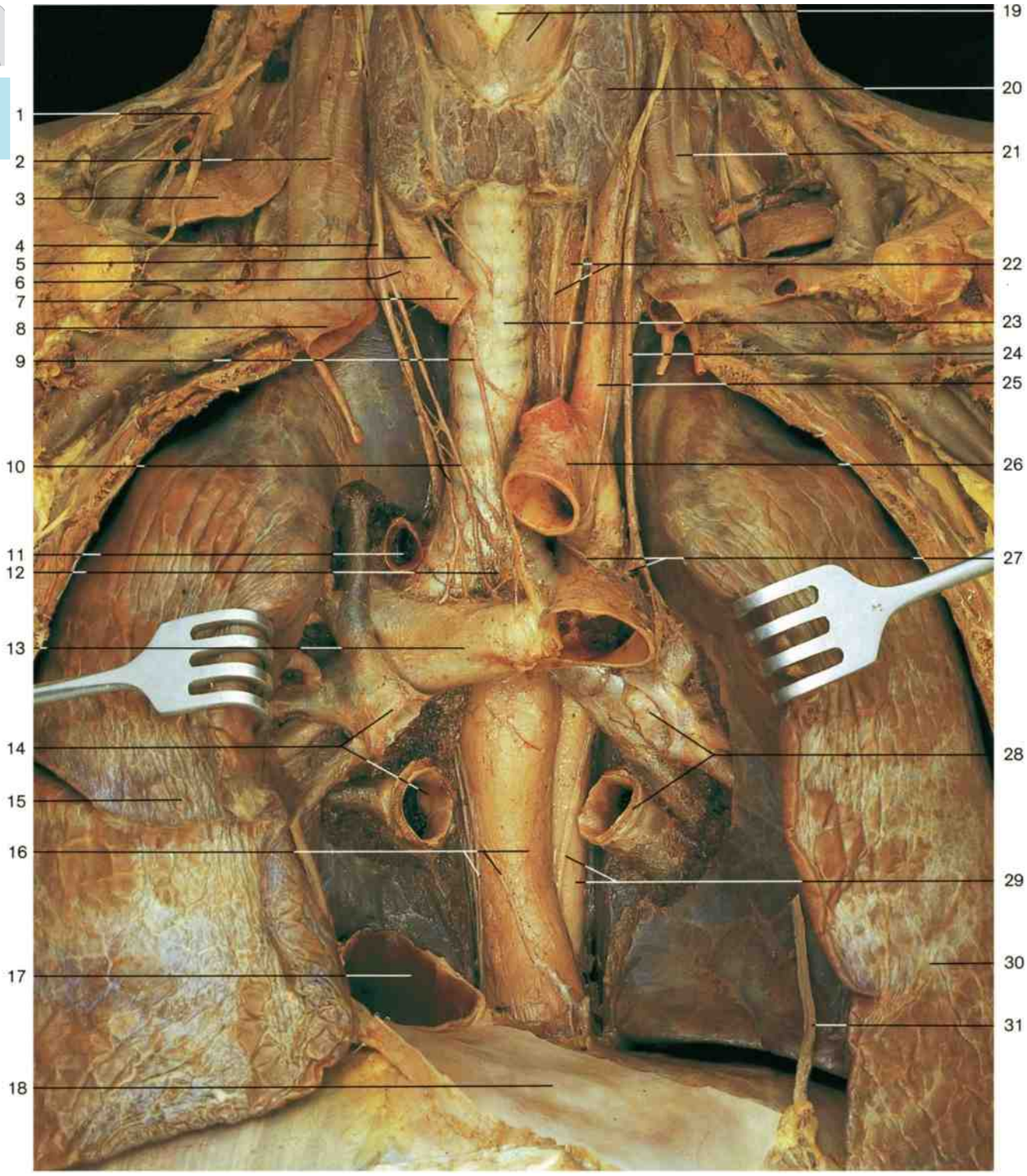

Mediastinal organs after removal of heart and pericardium (ventral aspect). Both lungs have been slightly reflected.

1 Supraclavicular nerves
2 Internal jugular vein
3 Omohyoid muscle
4 Right vagus nerve
5 Right common carotid artery
6 Right subclavian artery
7 Brachiocephalic trunk
8 Right brachiocephalic vein
9 Superior cervical cardiac branch of vagus nerve
10 Inferior cervical cardiac branches of vagus nerve
11 Azygos arch (divided)
12 Bifurcation of trachea
13 Right pulmonary artery
14 Right pulmonary veins
15 Right lung
16 Esophagus and branches of right vagus nerve
17 Inferior vena cava
18 Pericardium
19 Larynx (thyroid cartilage, cricothyroid muscle)
20 Thyroid gland
21 Internal jugular vein
22 Esophagus and left recurrent laryngeal nerve
23 Trachea
24 Left vagus nerve
25 Left common carotid artery
26 Aortic arch
27 Left recurrent laryngeal nerve branching off from vagus nerve
28 Left pulmonary veins
29 Thoracic aorta and left vagus nerve
30 Left lung
31 Left phrenic nerve (divided)

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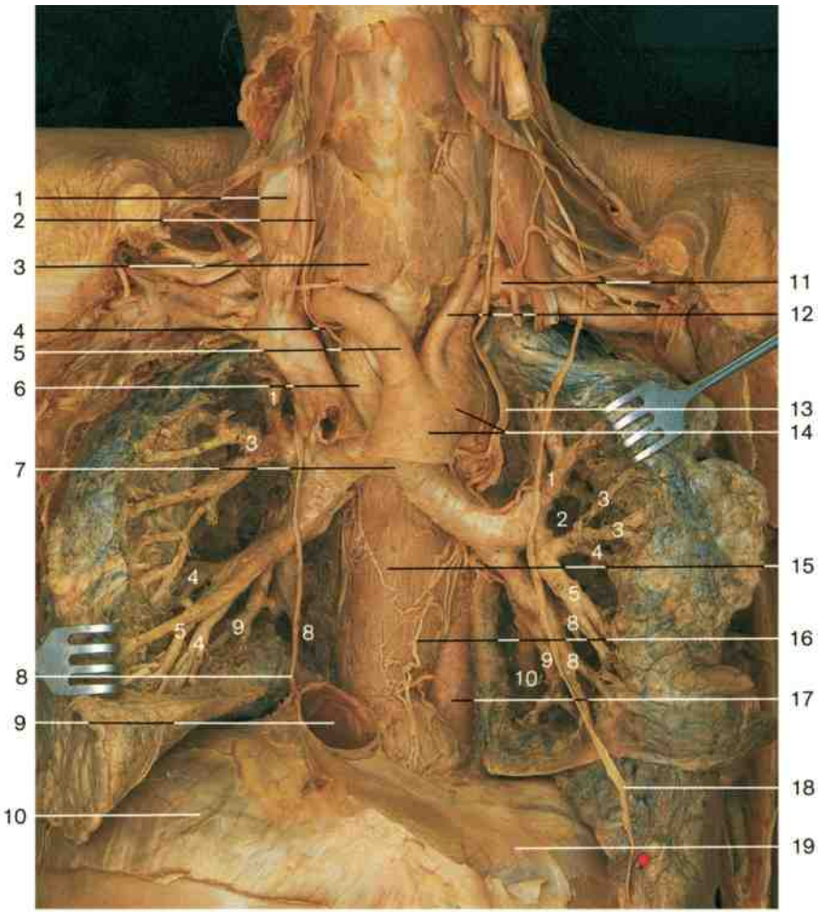
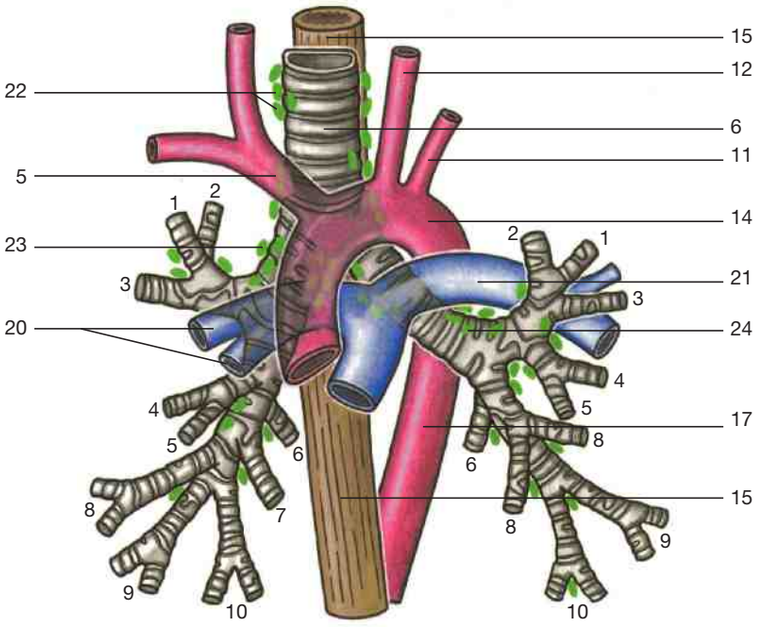


Bronchial tree in situ (ventral aspect). Heart and pericardium have been removed; the bronchi of the bronchopulmonary segments are dissected.
1–10 = numbers of segments (cf. p. 246 and 251).

1 Internal jugular vein
2 Right vagus nerve
3 Thyroid gland
4 Right recurrent laryngeal nerve
5 Brachiocephalic trunk
6 Trachea
7 Bifurcation of trachea
8 Right phrenic nerve
9 Inferior vena cava
10 Diaphragm
11 Left subclavian artery
12 Left common carotid artery
13 Left vagus nerve
14 Aortic arch
15 Esophagus
16 Esophageal plexus
17 Thoracic aorta
18 Left phrenic nerve
19 Pericardium at the central tendon of diaphragm
20 Right pulmonary artery
21 Left pulmonary artery
22 Tracheal lymph nodes
23 Superior tracheobronchial lymph nodes
24 Bronchopulmonary lymph nodes



Relation of aorta, pulmonary trunk, and esophagus to trachea and bronchial tree (schematic drawing).
1–10 = numbers of segments (cf. p. 246 and 251).

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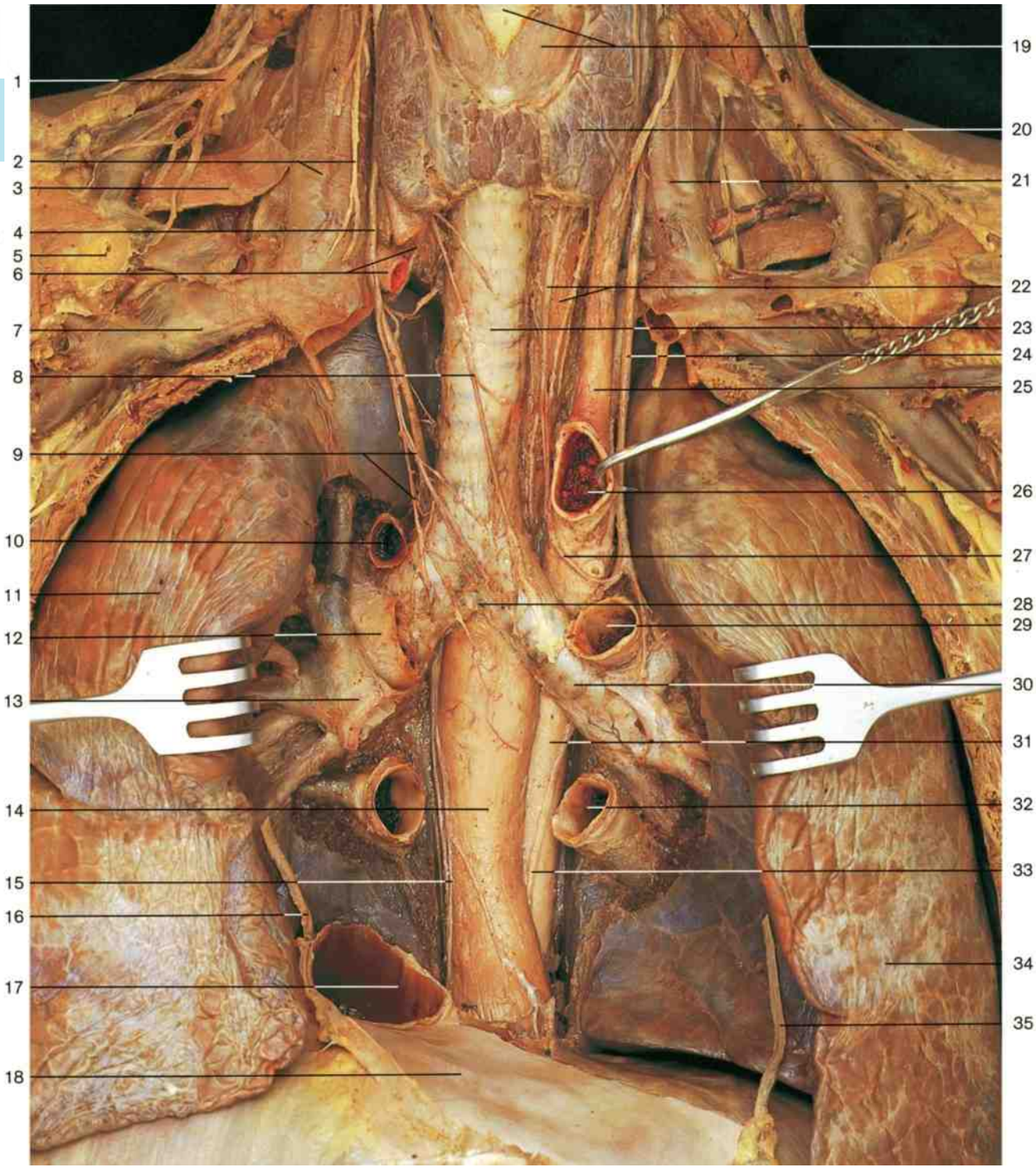

Mediastinal organs (ventral aspect). The heart with the pericardium has been removed, and the lungs and aortic arch have been slightly reflected to show the vagus nerves and their branches.

1 Supraclavicular nerves
2 Right internal jugular vein with ansa cervicalis
3 Omohyoid muscle
4 Right vagus nerve
5 Clavicle
6 Right subclavian artery and recurrent laryngeal nerve
7 Right subclavian vein
8 Superior cervical cardiac branch of vagus nerve
9 Inferior cervical cardiac branch of vagus nerve
10 Azygos arch (divided)
11 Right lung
12 Right pulmonary artery
13 Right pulmonary veins
14 Esophagus
15 Esophageal plexus
16 Right phrenic nerve (divided)
17 Inferior vena cava
18 Pericardium covering the diaphragm
19 Larynx (thyroid cartilage and cricothyroid muscle)
20 Thyroid gland
21 Left internal jugular vein
22 Esophagus and left recurrent laryngeal nerve
23 Trachea
24 Left vagus nerve
25 Left common carotid artery
26 Aortic arch
27 Left recurrent laryngeal nerve
28 Bifurcation of trachea
29 Left pulmonary artery
30 Left primary bronchus
31 Descending aorta
32 Left pulmonary veins
33 Branch of left vagus nerve
34 Left lung
35 Left phrenic nerve (divided)

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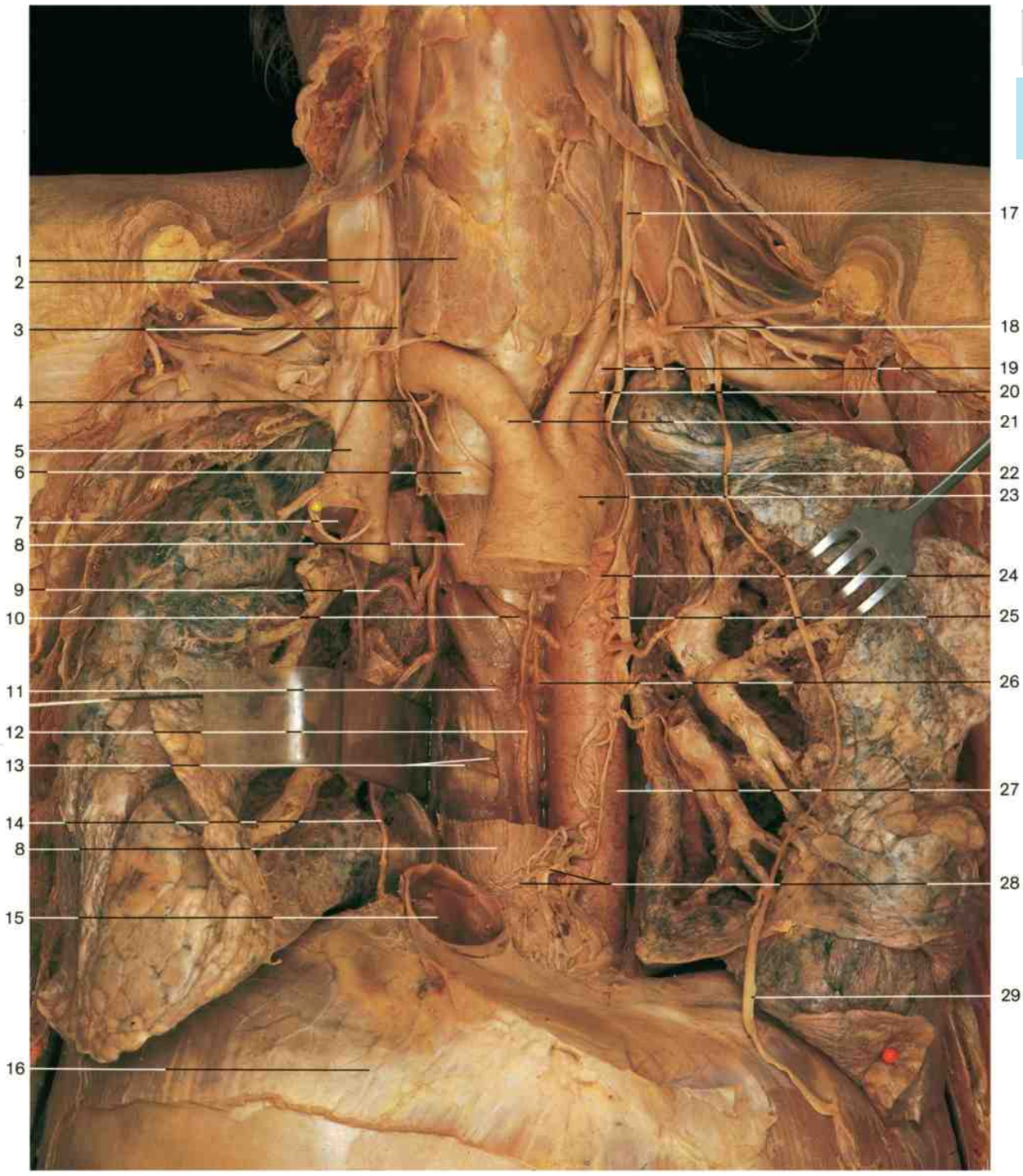

Mediastinal organs (ventral aspect). Heart and distal part of esophagus have been removed to display the vessels and nerves of the posterior mediastinum.

1 Thyroid gland
2 Right internal jugular vein
3 Right vagus nerve
4 Point where right recurrent laryngeal nerve is branching off the vagus nerve
5 Right brachiocephalic vein
6 Trachea
7 Left brachiocephalic vein (reflected)
8 Esophagus
9 Right bronchial artery
10 Posterior intercostal artery
11 Azygos vein
12 Thoracic duct
13 Posterior intercostal artery and vein (in front of the vertebral column)
14 Right phrenic nerve
15 Inferior vena cava
16 Diaphragm
17 Left vagus nerve
18 Thyrocervical trunk
19 Left subclavian artery
20 Left common carotid artery
21 Brachiocephalic trunk
22 Left vagus nerve
23 Aortic arch
24 Left recurrent laryngeal nerve
25 Left bronchial artery
26 Lymph node
27 Thoracic aorta
28 Esophageal plexus
29 Left phrenic nerve

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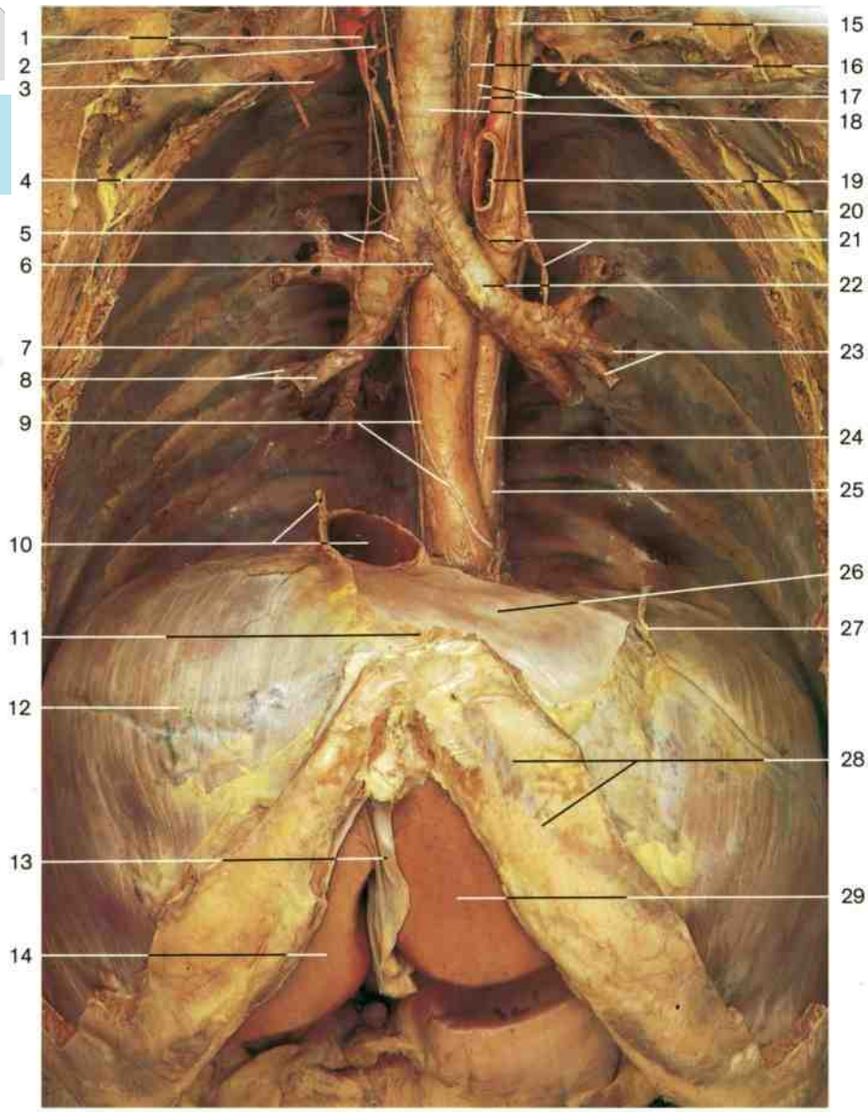
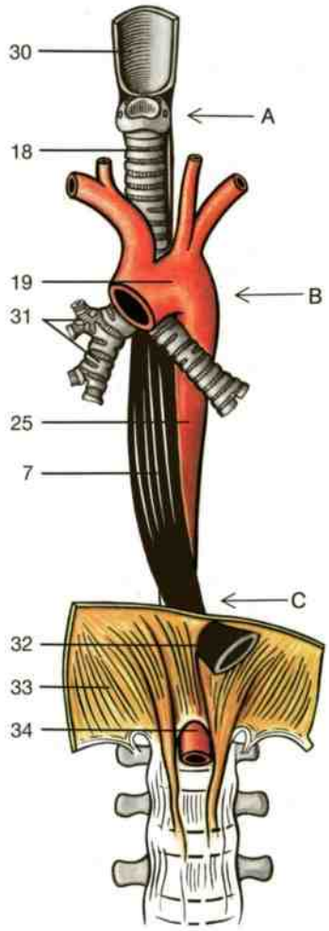


Diaphragm and organs of mediastinum (anterior aspect). Heart and lungs have been removed; the costal margin remains in place. Note the different courses of left and right vagus.



Organs of posterior mediastinum (ventral aspect, schematic drawing). Three regions in which the esophagus is narrowed are shown:
A = termed upper sphincter (at the level of the cricoid cartilage);
B = termed middle sphincter (at the level of the aortic arch);
C = termed lower sphincter (at the level of the diaphragm).

1 Right subclavian artery
2 Right recurrent laryngeal nerve
3 Right brachiocephalic vein
4 Superior cervical cardiac nerve
5 Inferior cervical cardiac nerves and pulmonary branches
6 Bifurcation of trachea
7 Esophagus (thoracic part)
8 Bronchi of lateral and medial segments of middle lobe
9 Esophageal plexus and branches of right vagus nerve
10 Inferior vena cava and right phrenic nerve (cut)
11 Sternal part of diaphragm
12 Costal part of diaphragm
13 Falciform ligament of liver
14 Liver (quadrate lobe)
15 Left common carotid artery
16 Left recurrent laryngeal nerve
17 Esophageal branches of left vagus nerve and esophagus
18 Trachea
19 Aortic arch
20 Left vagus nerve
21 Left recurrent laryngeal nerve with inferior cardiac nerve
22 Left primary bronchus
23 Superior and inferior lingular bronchi
24 Esophageal plexus of left vagus nerve
25 Descending aorta
26 Central tendon of diaphragm covered with pericardium
27 Left phrenic nerve (divided)
28 Costal margin
29 Liver, left lobe
30 Pharynx
31 Secondary bronchi
32 Esophagus (abdominal part)
33 Diaphragm
34 Abdominal aorta

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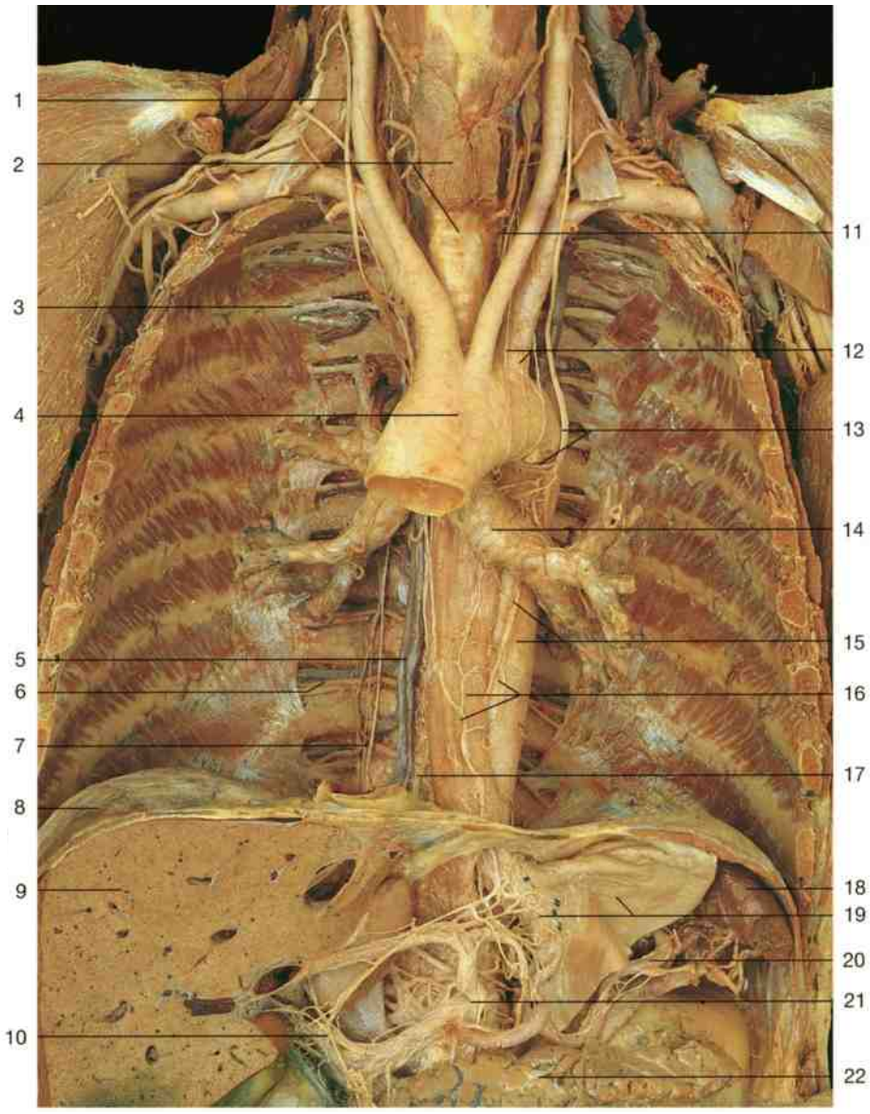
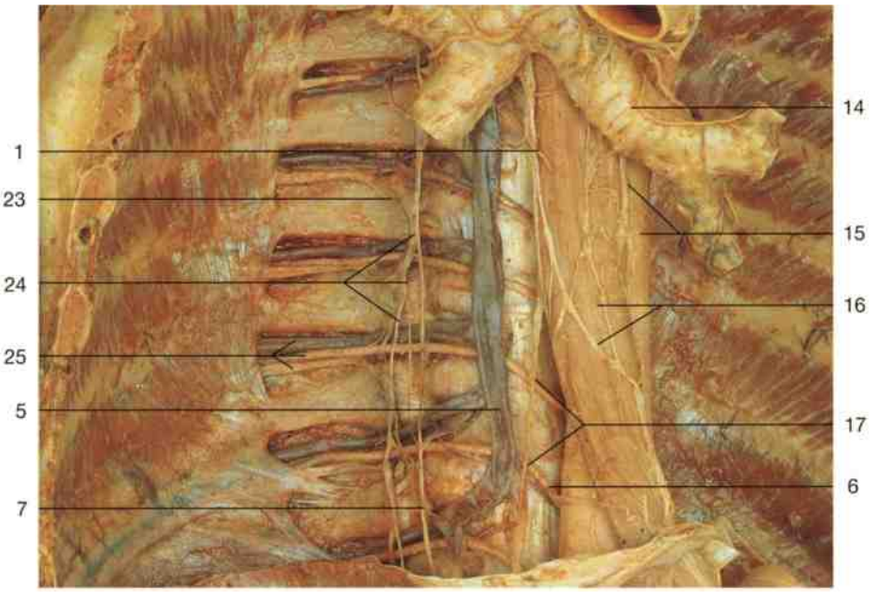
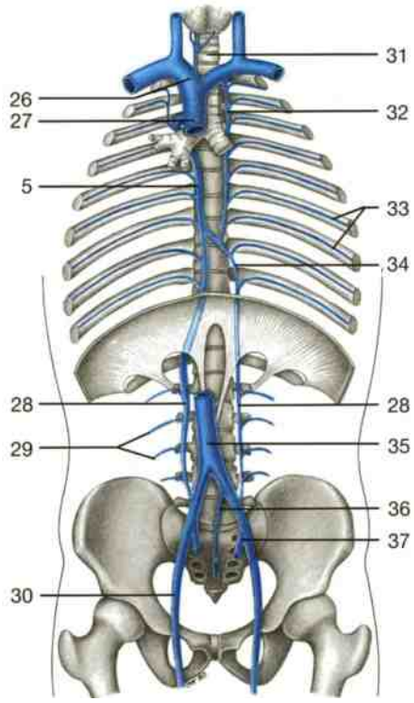


Organs of posterior mediastinum (anterior aspect).



Inferior segment of posterior mediastinum (anterior aspect).



Veins of the posterior wall of thoracic and abdominal cavity (schematic drawing).

1 Right vagus nerve
2 Thyroid gland and trachea
3 Intercostal nerve
4 Aortic arch
5 Azygos vein
6 Posterior intercostal artery
7 Greater splanchnic nerve
8 Diaphragm
9 Liver
10 Proper hepatic artery and hepatic plexus
11 Left recurrent laryngeal nerve
12 Inferior cervical cardiac nerves
13 Left vagus nerve and left recurrent laryngeal nerve
14 Left primary bronchus
15 Thoracic aorta and left vagus nerve
16 Esophagus and esophageal plexus
17 Thoracic duct
18 Spleen
19 Anterior gastric plexus and stomach (divided)
20 Splenic artery and splenic plexus
21 Celiac trunk and celiac plexus
22 Pancreas
23 Ramus communicans
24 Sympathetic trunk and sympathetic ganglion
25 Posterior intercostal vein and artery and intercostal nerve
26 Right brachiocephalic vein
27 Superior vena cava
28 Ascending lumbar vein
29 Lumbar veins
30 Right external iliac vein
31 Trachea
32 Accessory hemiazygos vein
33 Posterior intercostal veins
34 Hemiazygos vein
35 Inferior vena cava
36 Median sacral vein
37 Internal iliac vein

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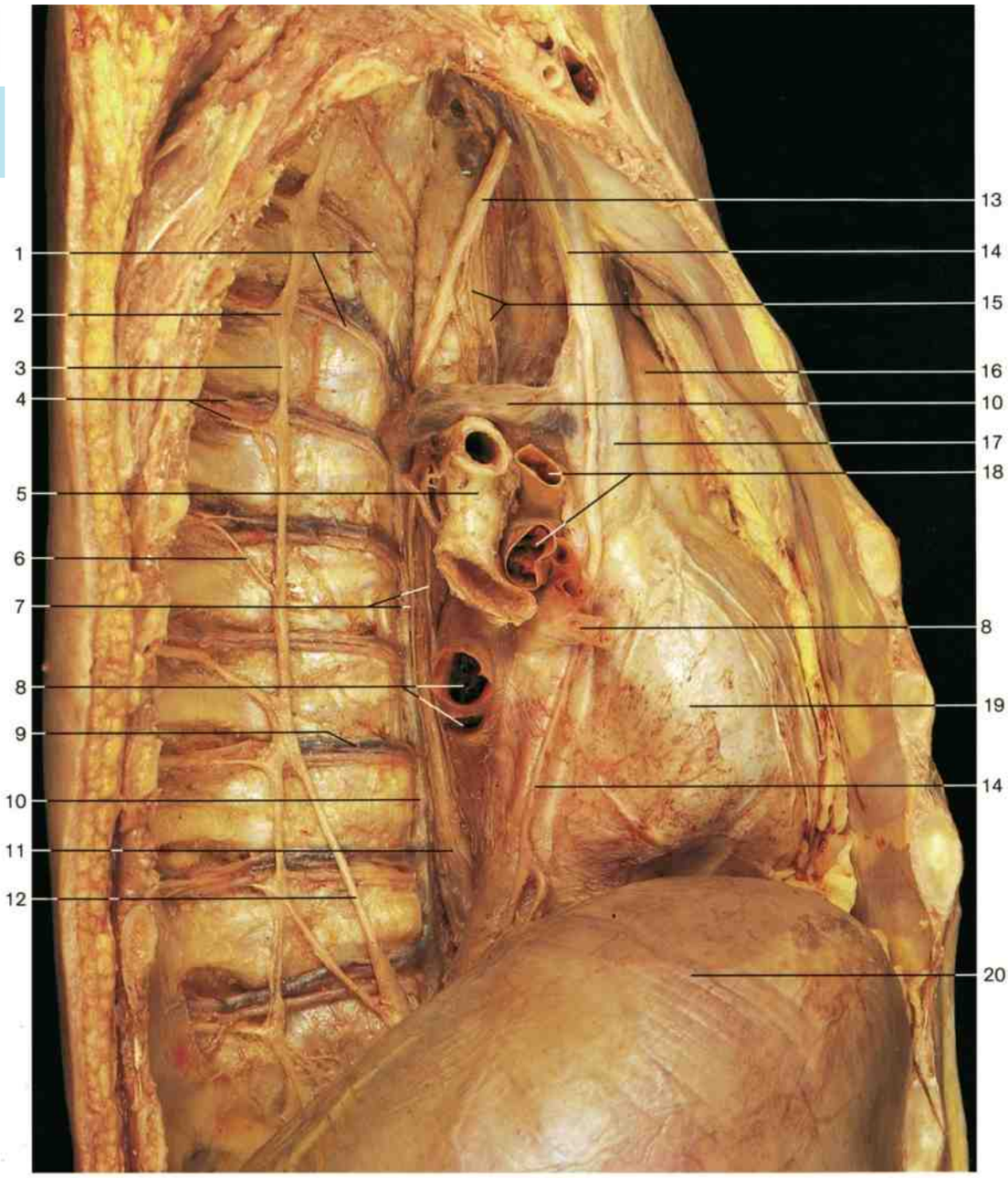

Mediastinal organs (right lateral aspect). Right lung and pleura of right half of the thorax have been removed.

1 Posterior intercostal arteries
2 Ganglion of sympathetic trunk
3 Sympathetic trunk
4 Vessels and nerves of the intercostal space (from above: posterior intercostal vein and artery and intercostal nerve)
5 Right primary bronchus
6 Ramus communicans of sympathetic trunk
7 Esophageal plexus (branches of right vagus nerve)
8 Pulmonary veins
9 Posterior intercostal vein
10 Azygos vein
11 Esophagus
12 Greater splanchnic nerve
13 Right vagus nerve
14 Right phrenic nerve
15 Inferior cervical cardiac branches of vagus nerve
16 Aortic arch
17 Superior vena cava
18 Right pulmonary artery
19 Heart with pericardium
20 Diaphragm

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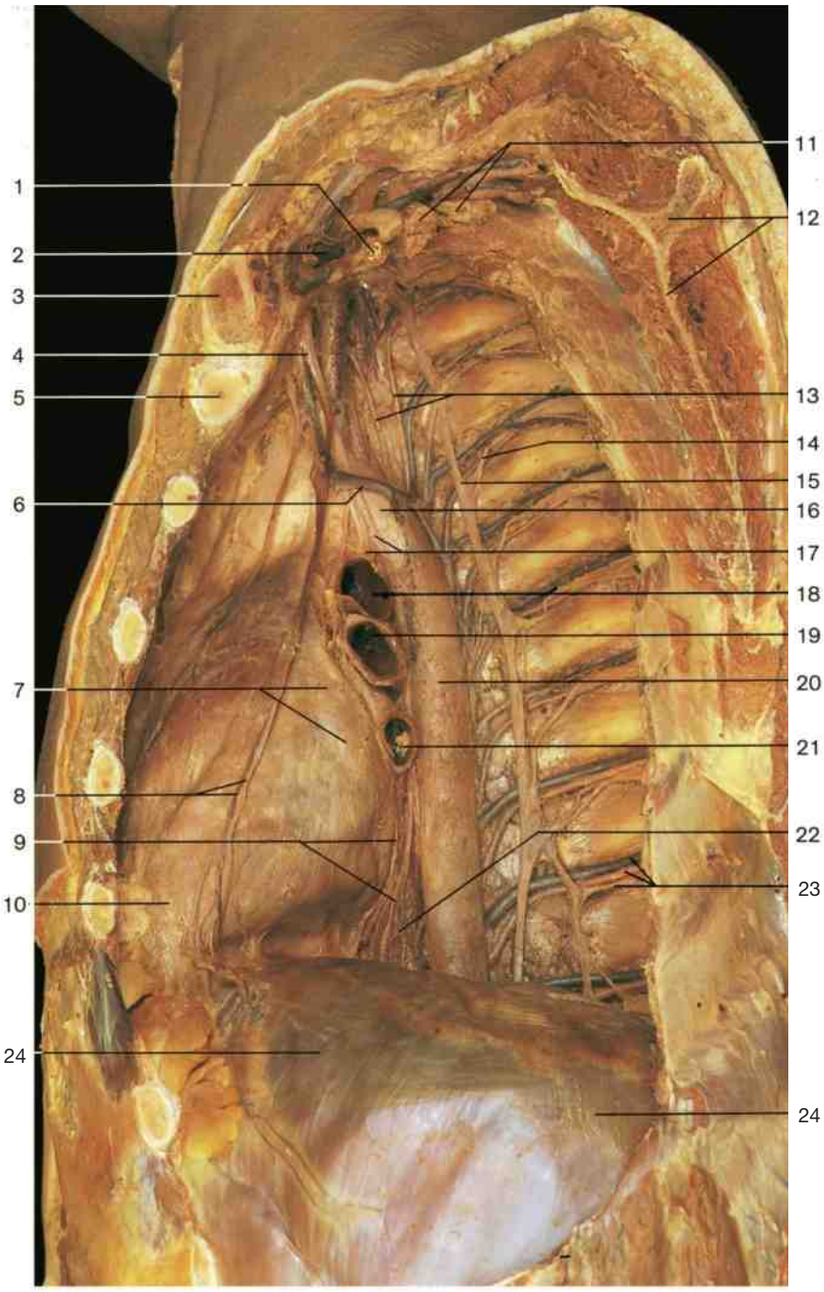
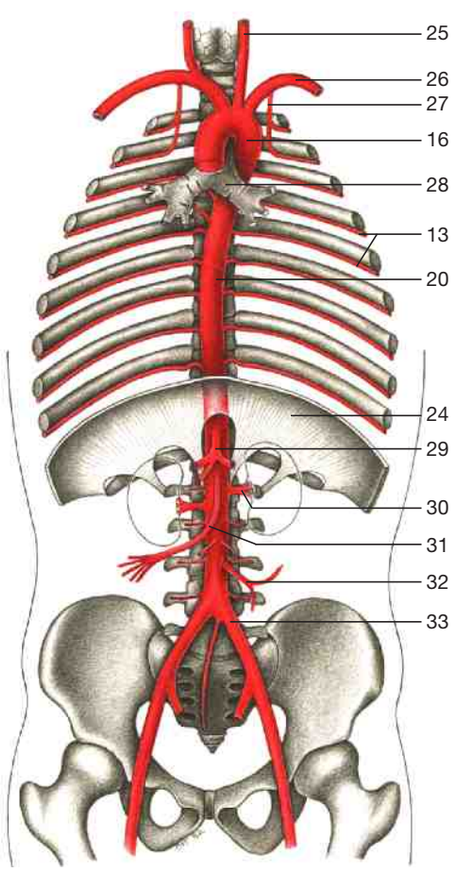


Organs of posterior and superior mediastinum (left lateral aspect).



Main branches of descending aorta (schematic drawing).

1 Subclavian artery
2 Subclavian vein
3 Clavicle (divided)
4 Left vagus nerve
5 First rib (divided)
6 Left superior intercostal vein
7 Left atrium with pericardium
8 Left phrenic nerve and pericardiacophrenic artery and vein
9 Esophageal plexus (branches derived from left vagus nerve)
10 Apex of heart with pericardium
11 Brachial plexus
12 Scapula (divided)
13 Posterior intercostal arteries
14 White ramus communicans of sympathetic trunk
15 Sympathetic trunk
16 Aortic arch
17 Left vagus nerve and left recurrent laryngeal nerve
18 Left pulmonary artery
19 Left primary bronchus
20 Thoracic aorta
21 Pulmonary vein
22 Esophagus (thoracic part)
23 Posterior intercostal artery and vein and intercostal nerve
24 Diaphragm
25 Common carotid artery
26 Subclavian artery
27 Highest intercostal artery
28 Bifurcation of trachea
29 Celiac trunk
30 Renal artery
31 Superior mesenteric artery
32 Inferior mesenteric artery
33 Common iliac artery

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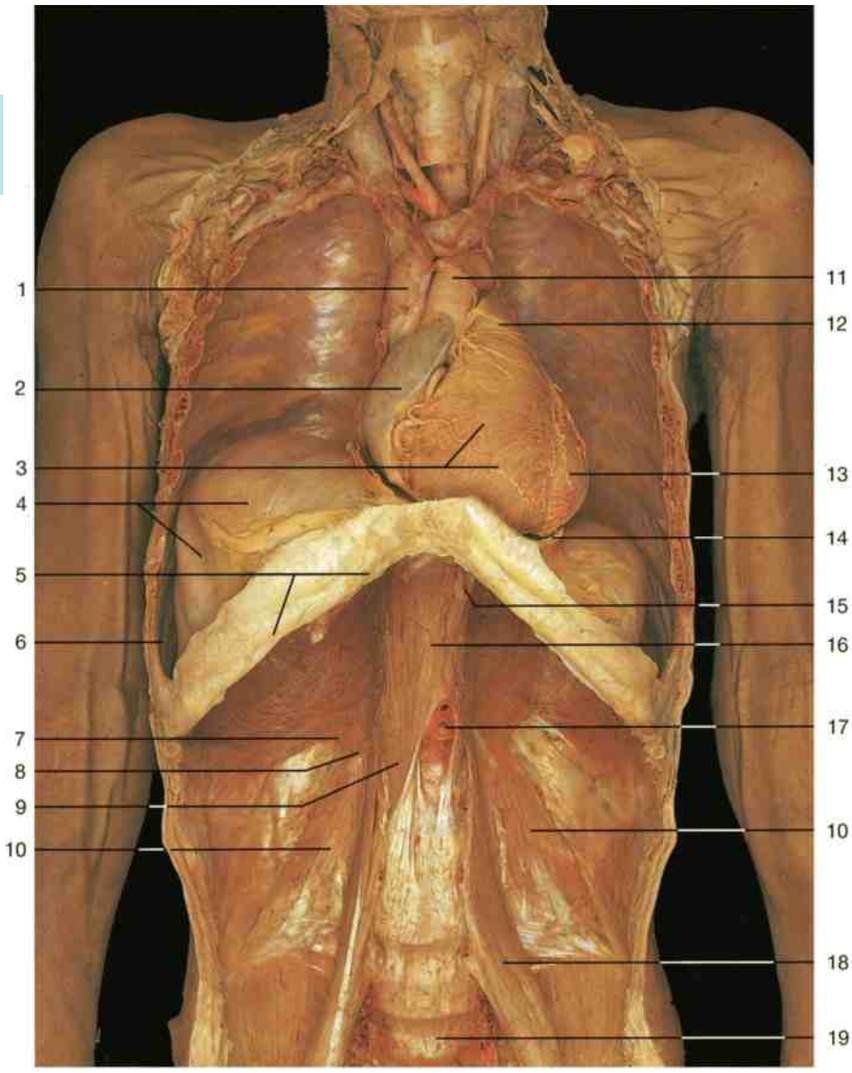
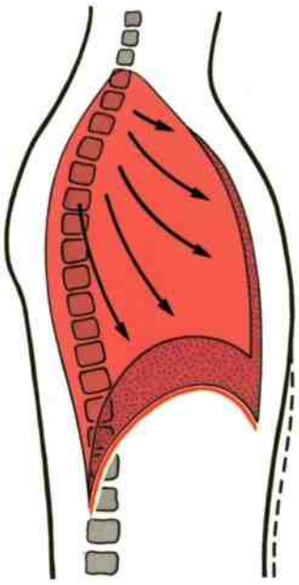
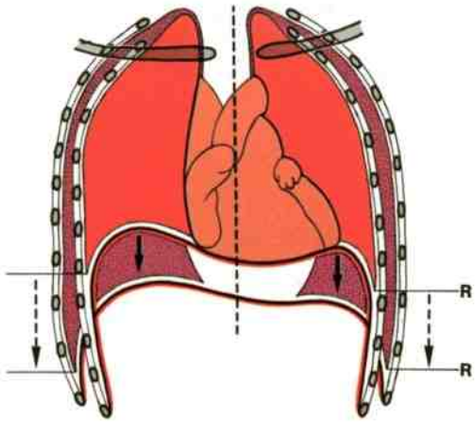


1 Superior vena cava
2 Right atrium
3 Right ventricle
4 Costal part of diaphragm
5 Costal margin
6 Position of costodiaphragmatic recess
7 Lateral arcuate ligament
8 Medial arcuate ligament
9 Right crus of lumbar part of diaphragm
10 Quadratus lumborum muscle
11 Ascending aorta
12 Pulmonary trunk
13 Left ventricle
14 Pericardium, diaphragm
15 Esophageal hiatus and abdominal part of esophagus (cut)
16 Lumbar part of diaphragm
17 Aortic hiatus
18 Psoas major muscle
19 Lumbar vertebra

Diaphragm in situ (anterior aspect). Anterior walls of thoracic and abdominal cavities have been removed. Natural position of the heart above the central tendon on the diaphragm is shown.





Changes in the position of the diaphragm and thoracic cage during respiration. Left: lateral aspect; right: anterior aspect. During inspiration the diaphragm moves downwards and the lower part of the thoracic cage expands forward and laterally, causing the costodiaphragmatic recess (R) to enlarge (cf. dotted arrows).

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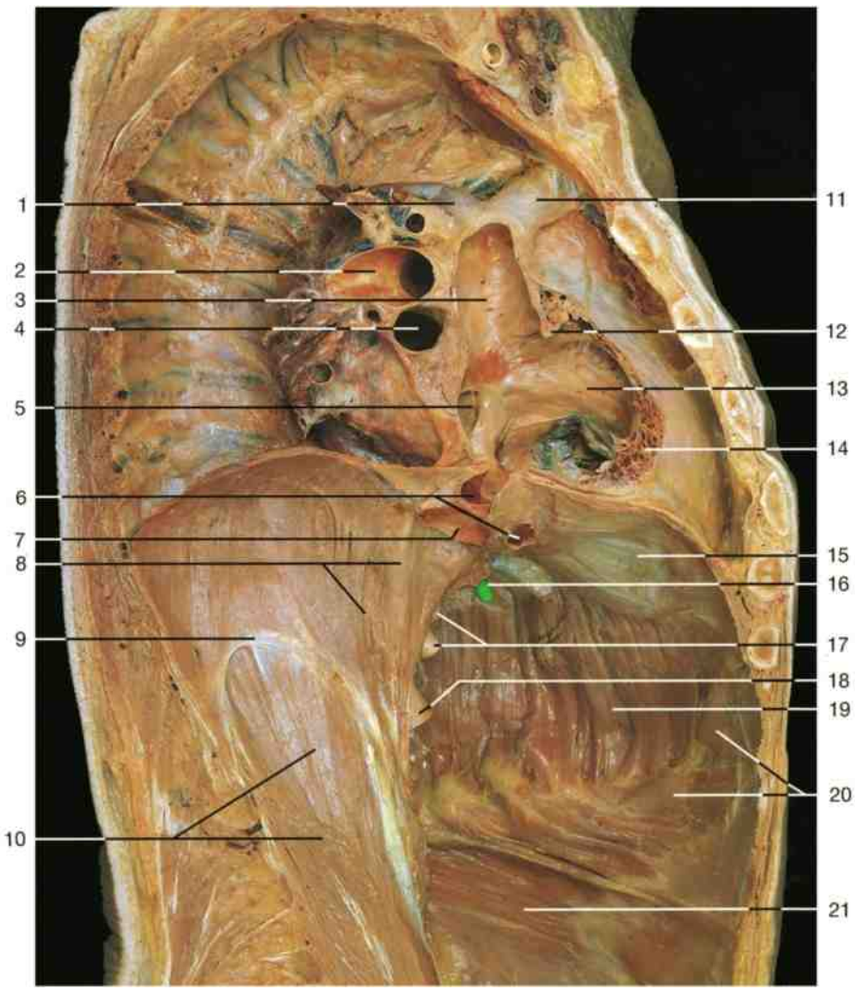
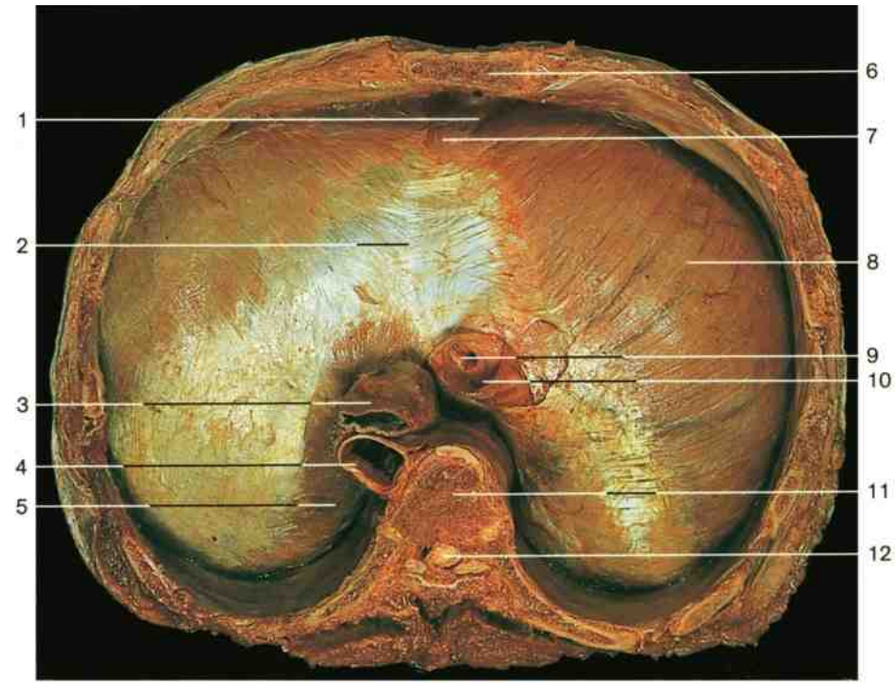


Diaphragm. Paramedian section to the right of the median plane through thoracic and upper abdominal cavities. The plane passes through the superior and inferior vena cava just to the right of the vertebral bodies. Most of the heart remains in situ to the left of this plane (viewed from the right side).

1 Azygos venous arch
2 Right pulmonary artery
3 Superior vena cava
4 Right pulmonary vein
5 Fossa ovalis
6 Hepatic veins
7 Inferior vena cava
8 Right crus of lumbar part of diaphragm
9 Medial arcuate ligament
10 Psoas major muscle
11 Left brachiocephalic vein
12 Terminal crista
13 Right atrium
14 Right auricle
15 Central tendon of diaphragm
16 Esophagus
17 Celiac trunk and superior mesenteric artery
18 Aorta
19 Costal part of diaphragm
20 Costal margin
21 Transversus abdominis muscle



Diaphragm (superior aspect). The pleura and pericardium have been removed.

1 Sternocostal triangle
2 Central tendon (from above)
3 Esophagus
4 Aorta
5 Lumbar part of diaphragm
6 Sternum
7 Sternal part of diaphragm
8 Costal part of diaphragm
9 Entrance of hepatic veins
10 Inferior vena cava
11 Body of 9th thoracic vertebra
12 Spinal cord

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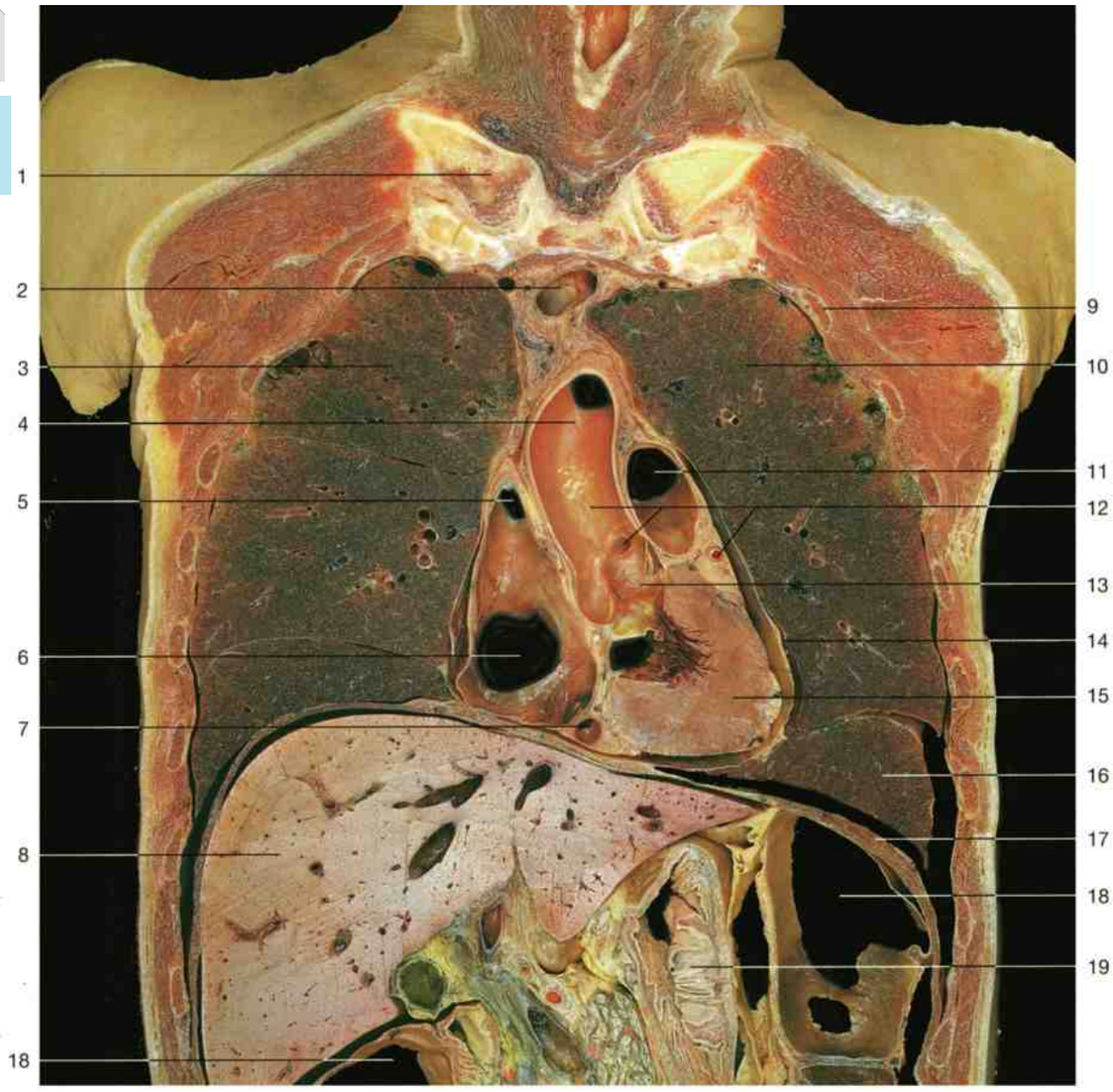

Coronal section through the thorax at the level of ascending aorta (anterior aspect).

Coronal section through the thorax at the level of ascending aorta (MRI scan).

1 Clavicle
2 Left brachiocephalic vein
3 Upper lobe of right lung
4 Aortic arch
5 Superior vena cava
6 Right atrium (entrance of inferior vena cava)
7 Coronary sinus
8 Liver
9 Second rib
10 Upper lobe of left lung
11 Pulmonary trunk
12 Ascending aorta and left coronary artery
13 Aortic valve
14 Pericardium
15 Myocardium of left ventricle
16 Lower lobe of left lung
17 Diaphragm
18 Colic flexures
19 Stomach
20 Brachiocephalic trunk

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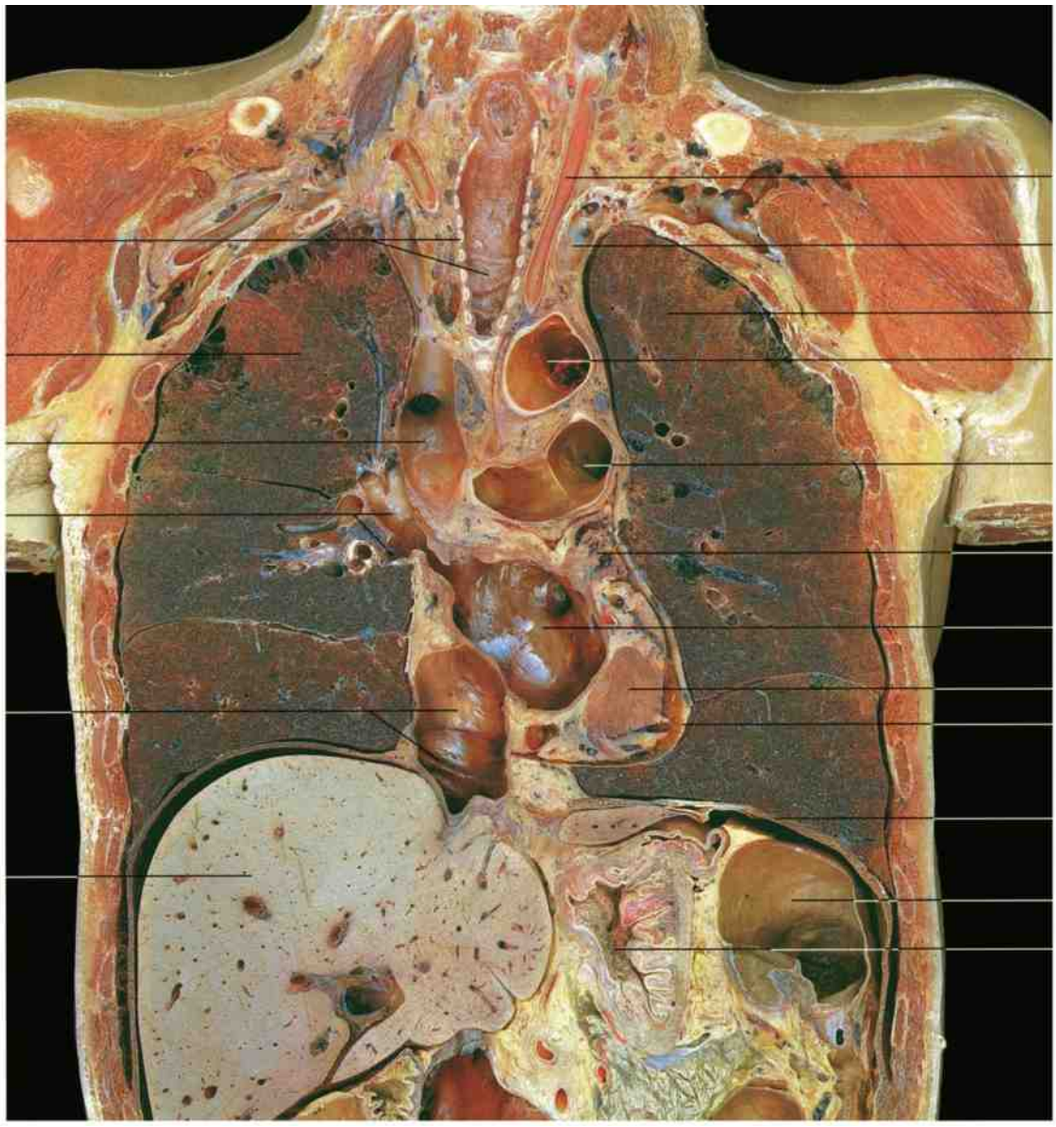

Coronal section through the thorax at the level of superior and inferior vena cava (anterior aspect).

Coronal section through the thorax at the level of superior vena cava (MRI scan). Arrows = metastases of tumor.

1 Trachea
2 Upper lobe of right lung
3 Superior vena cava
4 Right pulmonary veins
5 Inferior vena cava and right atrium
6 Liver
7 Left common carotid artery
8 Left subclavian vein
9 Upper lobe of left lung
10 Aortic arch
11 Left pulmonary artery
12 Left auricle
13 Left atrium with orifices of pulmonary veins
14 Left ventricle (myocardium)
15 Pericardium
16 Diaphragm
17 Left colic flexure
18 Stomach
19 Left subclavian artery

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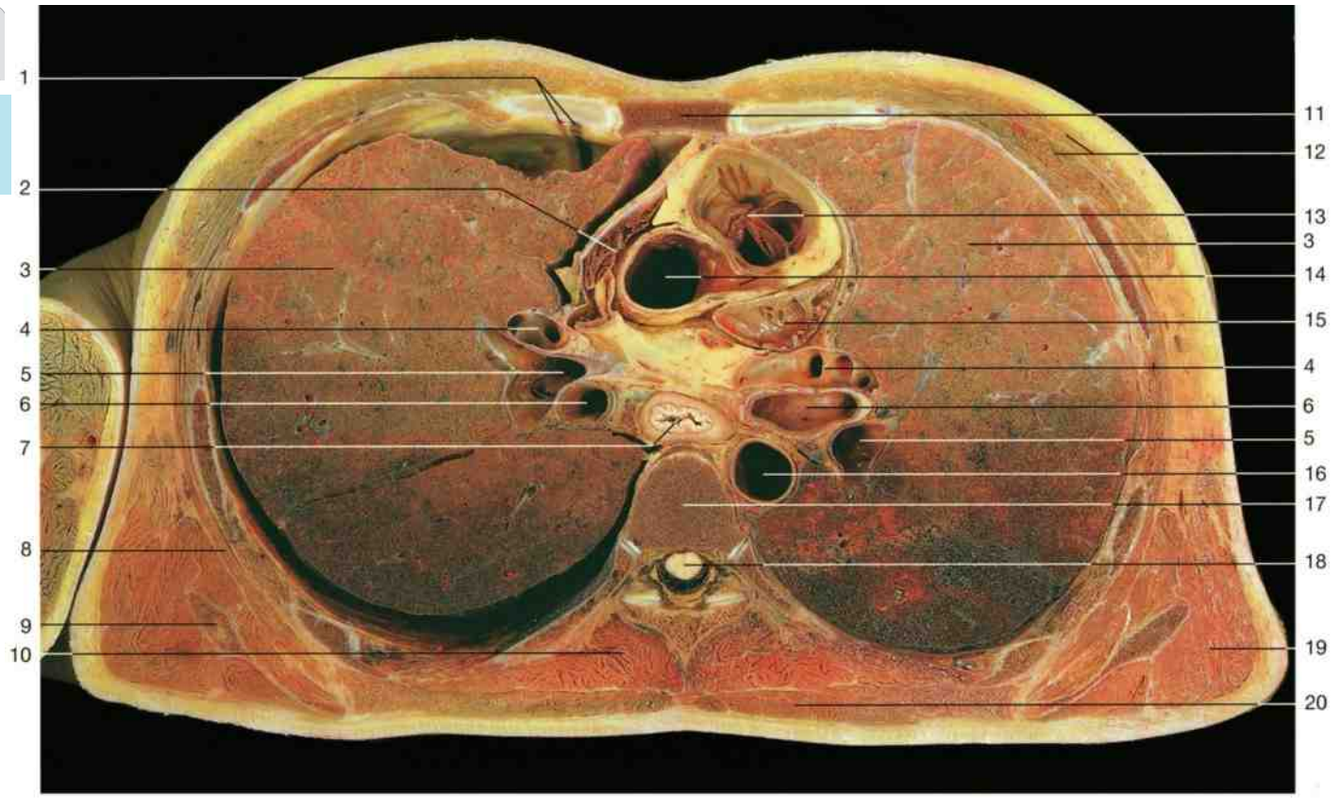
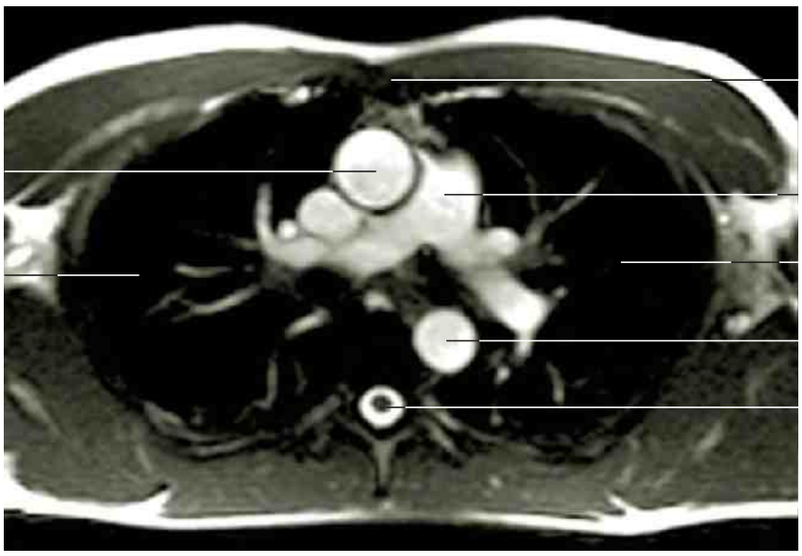


Horizontal section through the thorax at level 1 (from below).



Horizontal section through the thorax at level 1 (from below). (MRI scan, courtesy of Prof. W. Bautz and R. Janka, M. D., University of Erlangen, Germany.)

1 Internal thoracic artery and vein
2 Right atrium
3 Lung
4 Pulmonary artery
5 Pulmonary vein
6 Primary bronchus
7 Esophagus
8 Serratus anterior muscle
9 Scapula
10 Longissimus thoracis muscle
11 Sternum
12 Pectoralis major and minor muscles
13 Conus arteriosus (right ventricle), pulmonic valve
14 Ascending aorta and left coronary artery (only in upper figure)
15 Left atrium
16 Descending aorta
17 Thoracic vertebra
18 Spinal cord
19 Latissimus dorsi muscle
20 Trapezius muscle

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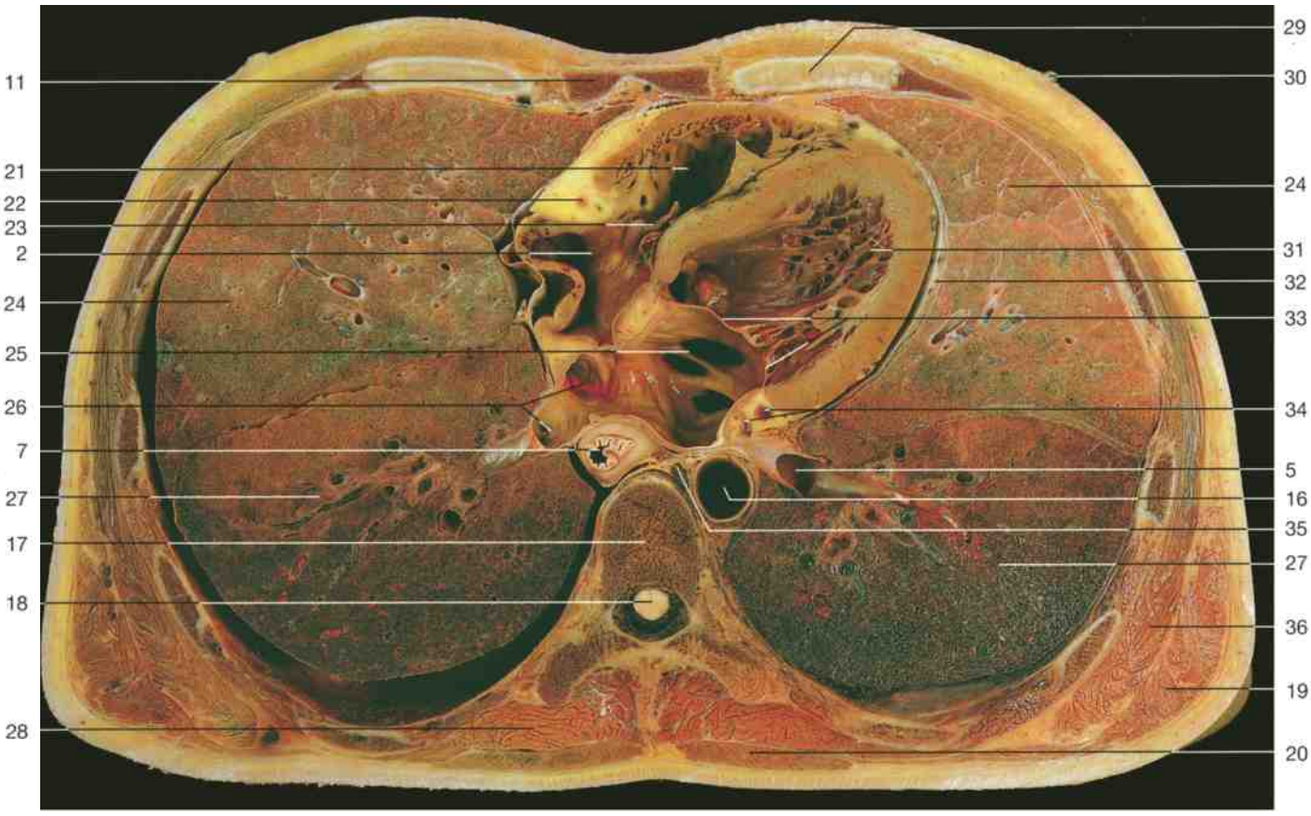
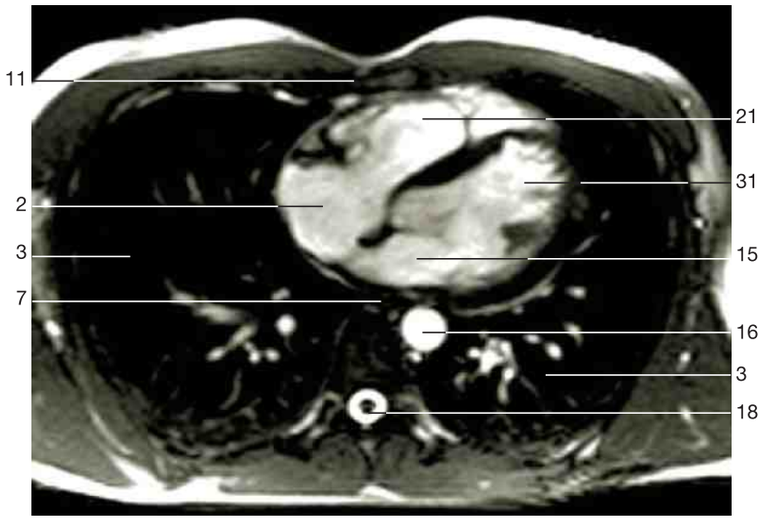
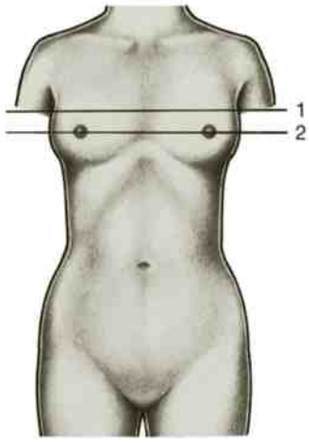


Horizontal section through the thorax at level 2 (from below).



Horizontal section through the thorax at level 2 (from below). (MRI scan, courtesy of Prof. W. Bautz and R. Janka, M. D., University of Erlangen, Germany.)



Levels of sections.

21 Right ventricle
22 Right coronary artery
23 Right atrioventricular valve
24 Lung (upper lobe)
25 Left atrium
26 Pulmonary veins
27 Lung (lower lobe)
28 Erector muscle of spine
29 Third costal cartilage
30 Nipple
31 Left ventricle
32 Pericardium
33 Left atrioventricular valve
34 Left coronary artery and coronary sinus
35 Accessory hemiazygos vein
36 Serratus anterior muscle
37 Pulmonary trunk

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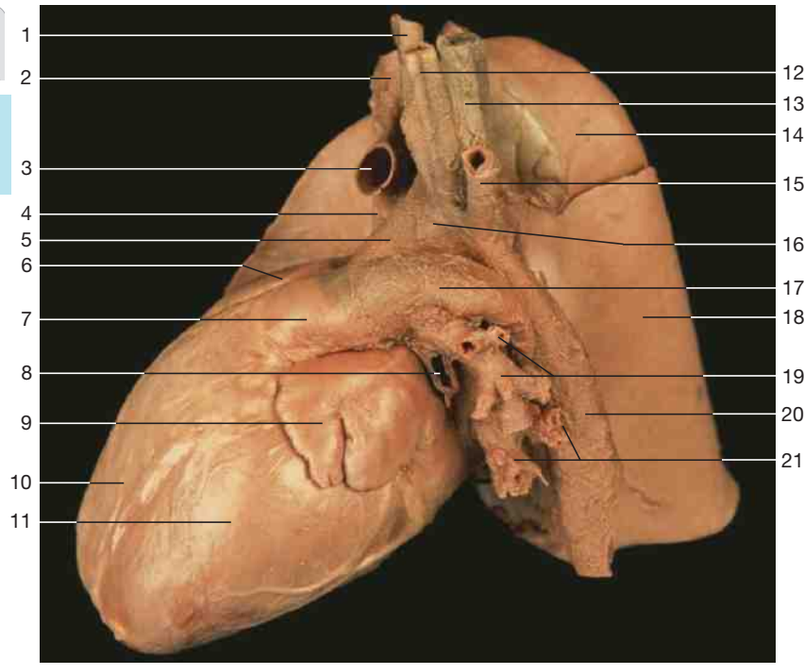
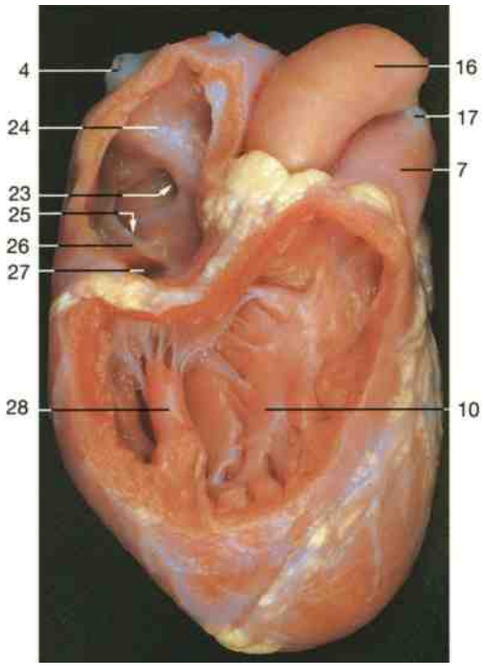
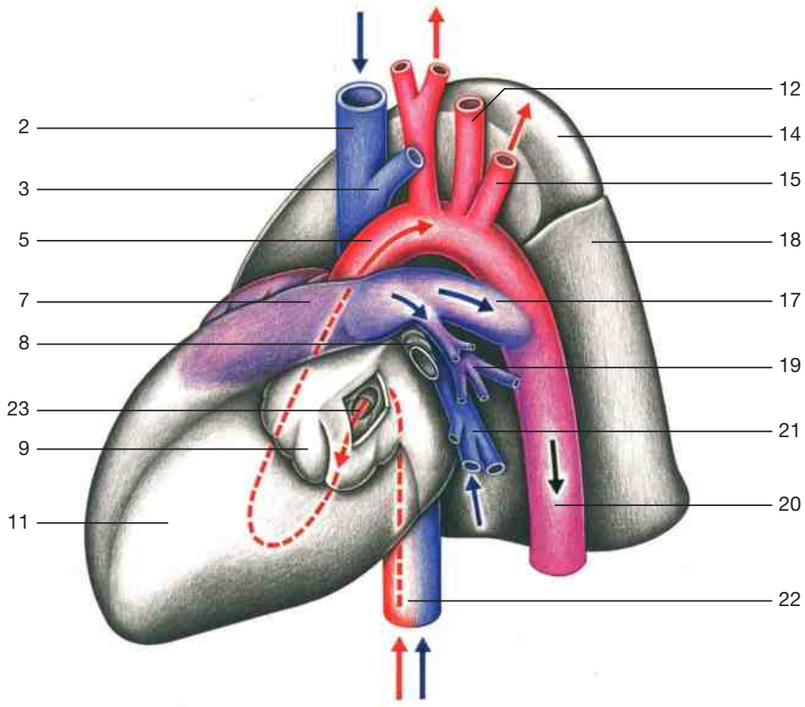


Heart and right lung of the fetus (viewed from left side). The left lung has been removed. Note the ductus arteriosus (Botalli).



Heart of the fetus (anterior aspect). Right atrium and ventricle opened.

Shunts in the fetal circulation system		
1. Ductus venosus (of Arantius)	between umbilical vein and inferior vena cava	bypass of liver circulation
2. Foramen ovale	between right and left atrium	bypass of pulmonary circulation
3. Ductus arteriosus (Botalli)	between pulmonary trunk and aorta	



1 Right common carotid artery
2 Right brachiocephalic vein
3 Left brachiocephalic vein
4 Superior vena cava
5 Ascending aorta
6 Right auricle
7 Pulmonary trunk
8 Left primary bronchus
9 Left auricle
10 Right ventricle
11 Left ventricle
12 Left common carotid artery
13 Trachea
14 Superior lobe of right lung
15 Left subclavian artery
16 Aortic arch
17 Ductus arteriosus (Botalli)
18 Inferior lobe of right lung
19 Left pulmonary artery with branches to the left lung
20 Descending aorta
21 Left pulmonary veins
22 Inferior vena cava
23 Foramen ovale
24 Right atrium
25 Opening of inferior vena cava
26 Valve of inferior vena cava (Eustachian valve)
27 Opening of coronary sinus
28 Anterior papillary muscle of right ventricle

◁ **Heart of the fetus** (schematic drawing). Direction of blood flow indicated by arrows. Note the change in oxygenation of blood after ductus arteriosus entry into aorta.

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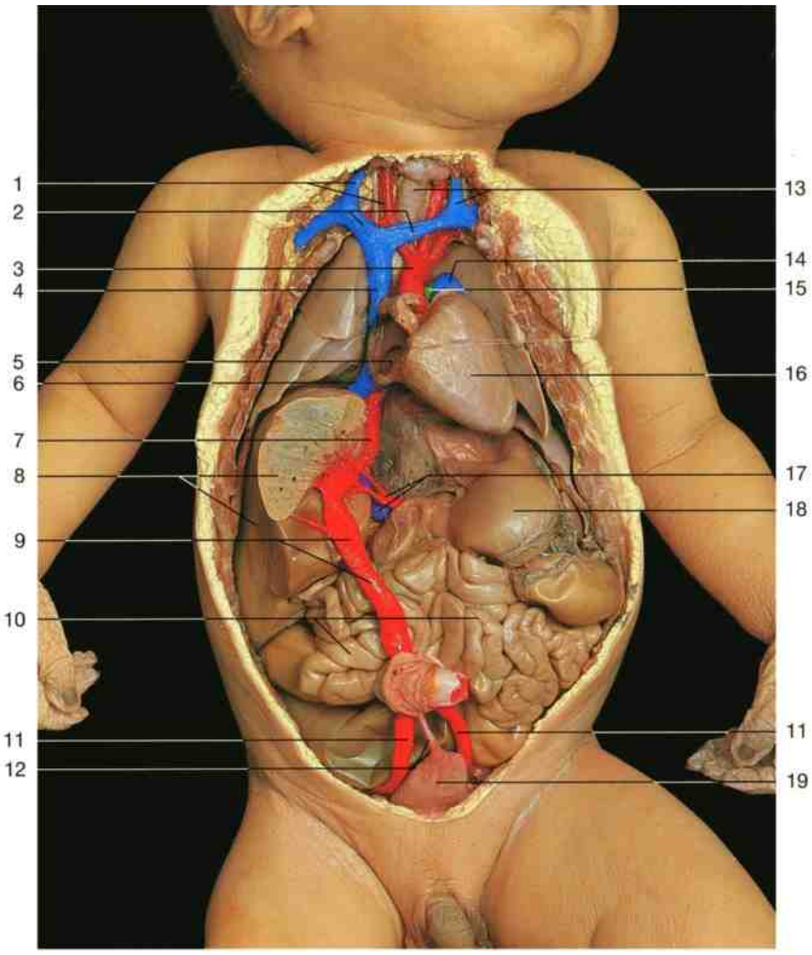
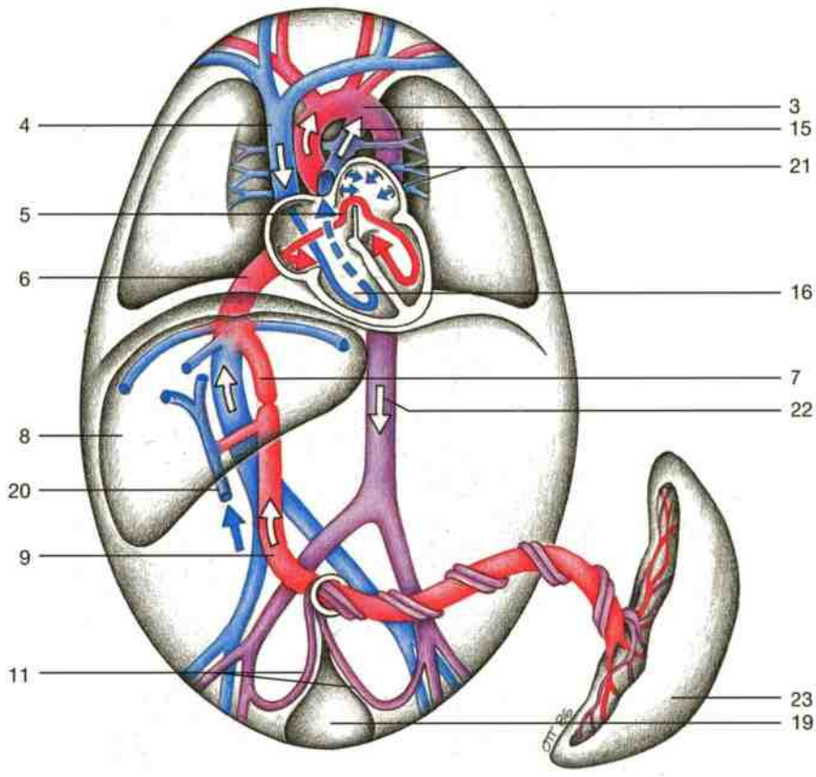


Thoracic and abdominal organs in the newborn (anterior aspect). The right atrium has been opened to show the foramen ovale. The left lobe of the liver has been removed.

1 Internal jugular vein and right common carotid artery
2 Right and left brachiocephalic vein
3 Aortic arch
4 Superior vena cava
5 Foramen ovale
6 Inferior vena cava
7 Ductus venosus
8 Liver
9 Umbilical vein
10 Small intestine
11 Umbilical artery
12 Urachus
13 Trachea and left internal jugular vein
14 Left pulmonary artery
15 Ductus arteriosus (Botalli)
16 Right ventricle
17 Hepatic arteries (red) and portal vein (blue)
18 Stomach
19 Urinary bladder
20 Portal vein
21 Pulmonary veins
22 Descending aorta
23 Placenta



◁ **Fetal circulatory system** (schematic drawing). The oxygen gradient is indicated by color.

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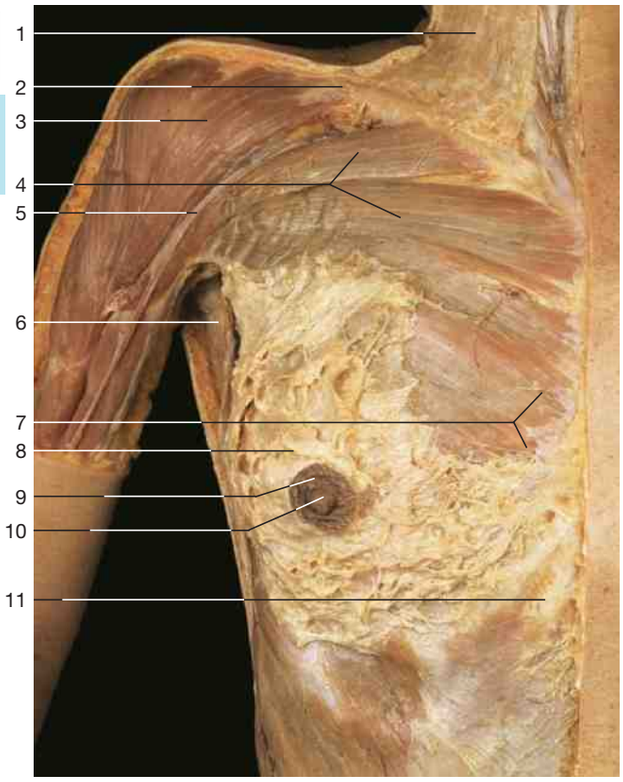
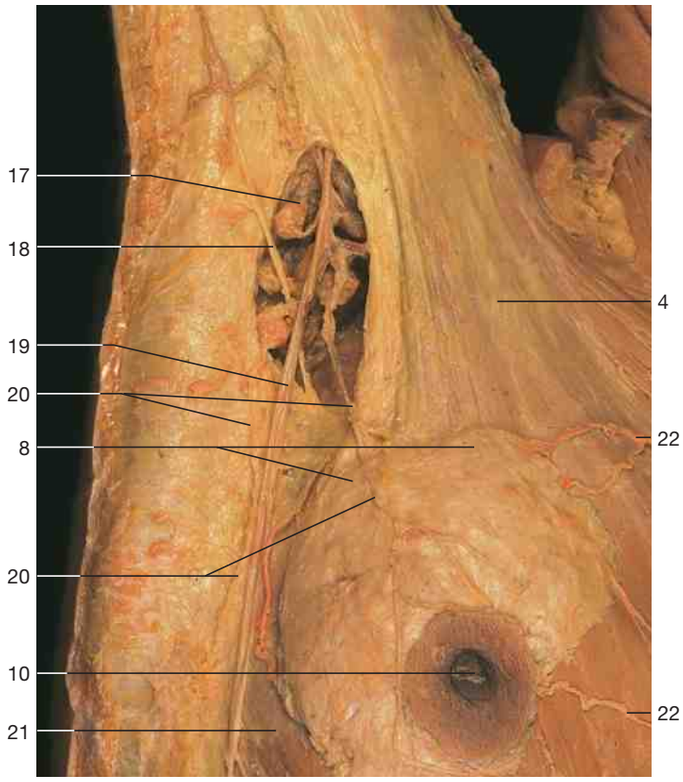
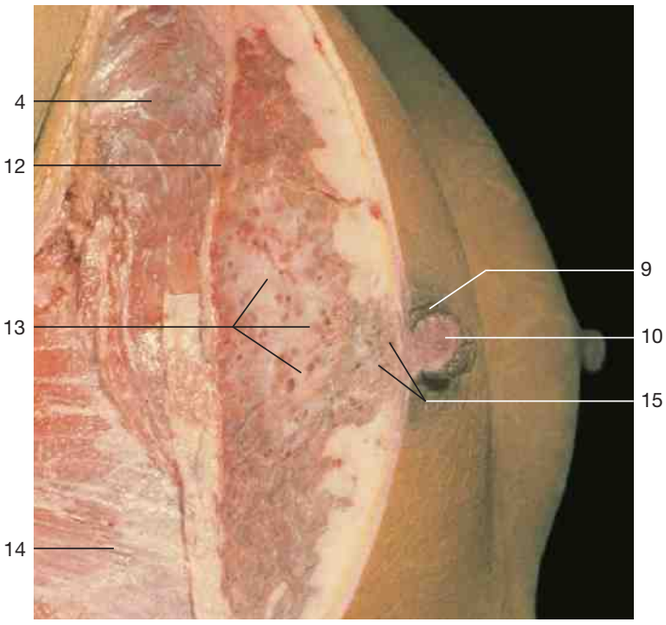


Dissection of mammary gland (anterior aspect).

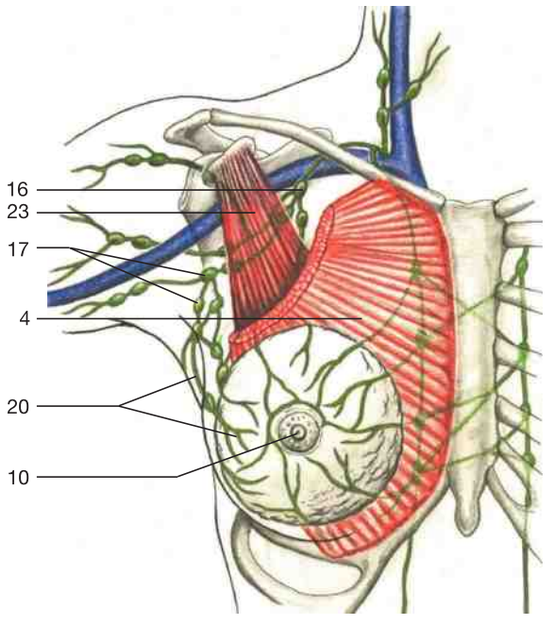


Dissection of mammary gland and axillary lymph nodes.

1 Platysma muscle
2 Clavicle
3 Deltoid muscle
4 Pectoralis major muscle
5 Deltopectoral groove and cephalic vein
6 Latissimus dorsi muscle
7 Medial mammarian branches of intercostal nerves
8 Breast tissue
9 Areola
10 Nipple (papilla)
11 Costal margin
12 Pectoral fascia
13 Mammary gland
14 Serratus anterior muscle (insertion)
15 Lactiferous sinus
16 Apical lymph nodes
17 Axillary lymph nodes
18 Intercostobrachial nerve
19 Lateral thoracic vein
20 Lymph vessels
21 Serratus anterior muscle
22 Medial branches of intercostal arteries
23 Pectoralis minor muscle



Mammary gland (sagittal section) of a pregnant female.



Lymphatics of the breast and axilla. Most lymph vessels drain into the axillary lymph nodes.

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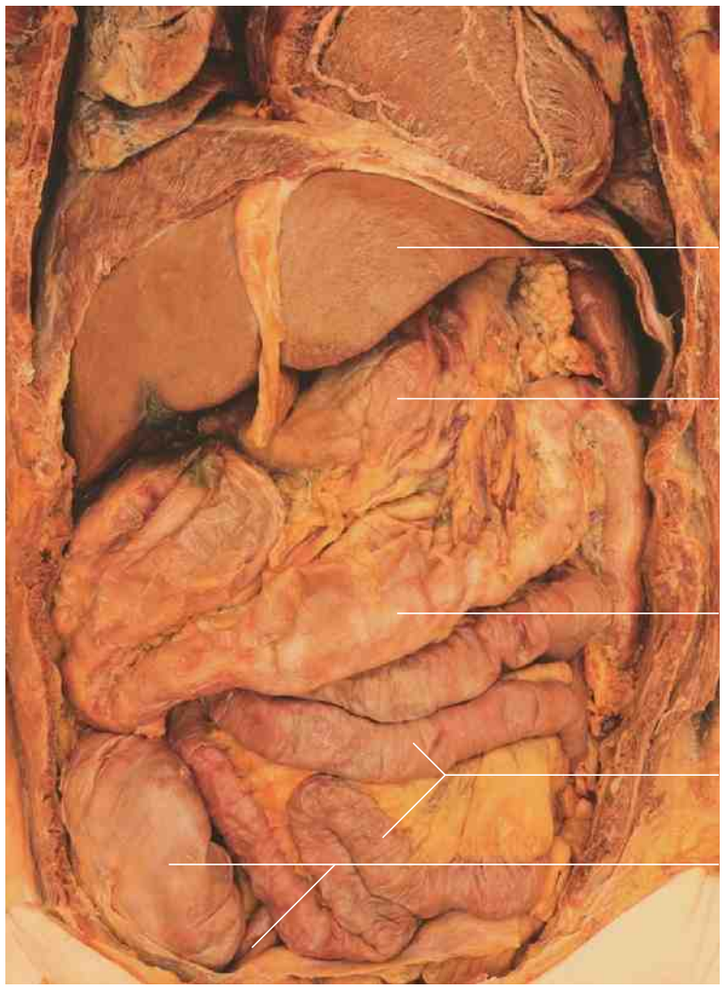
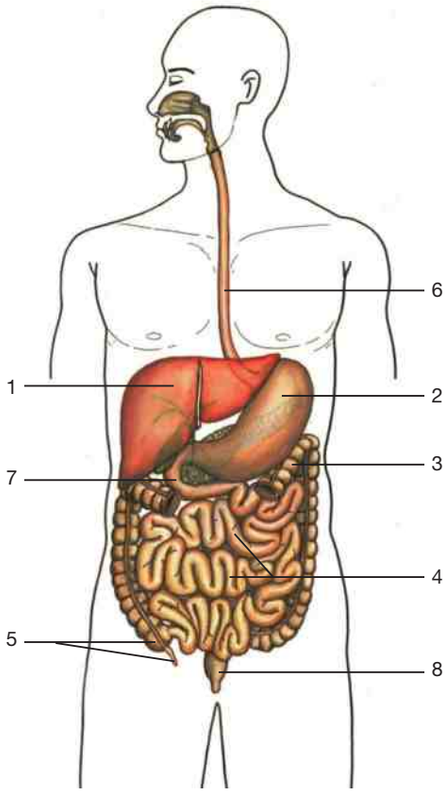
5 Abdominal Organs



Abdominal organs in situ (anterior aspect). The greater omentum and part of the diaphragm have been removed. The heart is in contact with the diaphragm (from Lütjen-Drecoll, Rohen, Innenansichten des menschlichen Körpers, 2010).

1 Liver
2 Stomach
3 Transverse colon
4 Small intestine
5 Hindgut (cecum) with vermiform appendix
6 Esophagus
7 Duodenum
8 Rectum

The abdominal cavity located underneath the diaphragm contains the main organs of the digestive system (liver, spleen, stomach, intestine). The greater omentum partly fixed to the transverse colon covers the small intestine.
The liver, stomach, and superior part of the duodenum are connected to the lesser omentum covering the omental bursa, the entrance of which is the epiploic foramen.
The hepatoduodenal ligament contains the portal vein, the common bile duct, and the hepatic arteries. The spleen is located dorsally underneath the diaphragm.



Organization of the digestive system (anterior aspect). Position of the abdominal organs.

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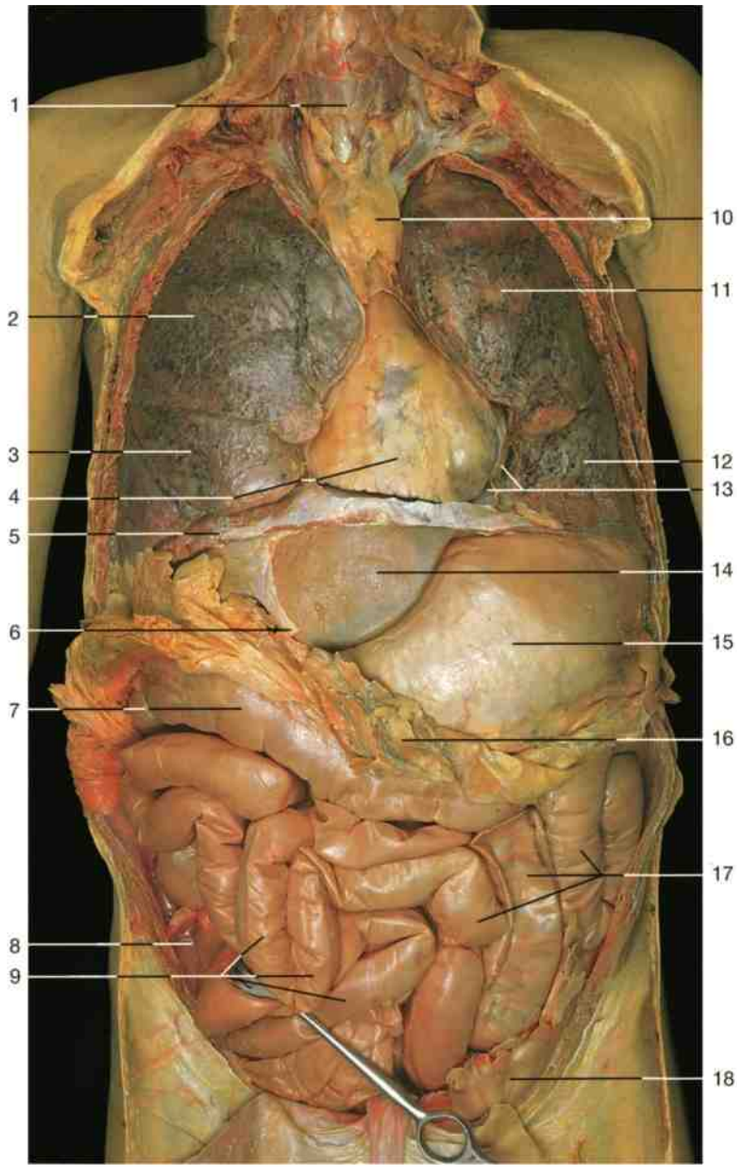
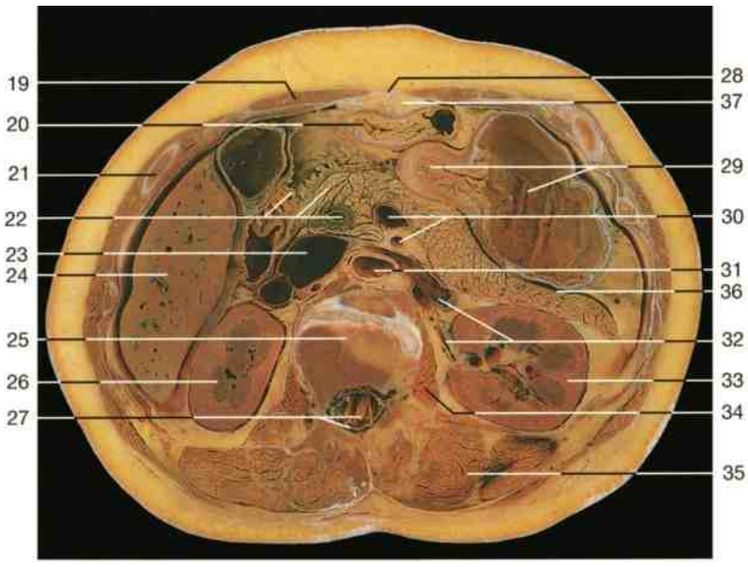


Abdominal organs in situ. The greater omentum has been partly removed or reflected.

1 Thyroid gland
2 Upper lobe of right lung
3 Middle lobe of right lung
4 Heart
5 Diaphragm
6 Round ligament of liver (ligamentum teres)
7 Transverse colon
8 Cecum
9 Small intestine (ileum)
10 Thymus
11 Upper lobe of left lung
12 Lower lobe of left lung
13 Pericardium (cut edge)
14 Liver (left lobe)
15 Stomach
16 Greater omentum
17 Small intestine (jejunum)
18 Sigmoid colon
19 Rectus abdominis muscle
20 Small intestine (section)
21 Rib
22 Common bile duct, duodenum, and pancreas
23 Inferior vena cava
24 Liver
25 Body of second lumbar vertebra
26 Right kidney
27 Cauda equina and dura mater
28 Linea alba
29 Stomach and pylorus
30 Superior mesenteric artery and vein
31 Abdominal aorta
32 Left renal artery and vein
33 Left kidney
34 Psoas major muscle
35 Deep muscles of the back
36 Pancreas adjacent to lesser sac (omental bursa)
37 Falciform ligament with ligamentum teres



Transverse section through the abdominal cavity at the level of the second lumbar vertebra (from below).

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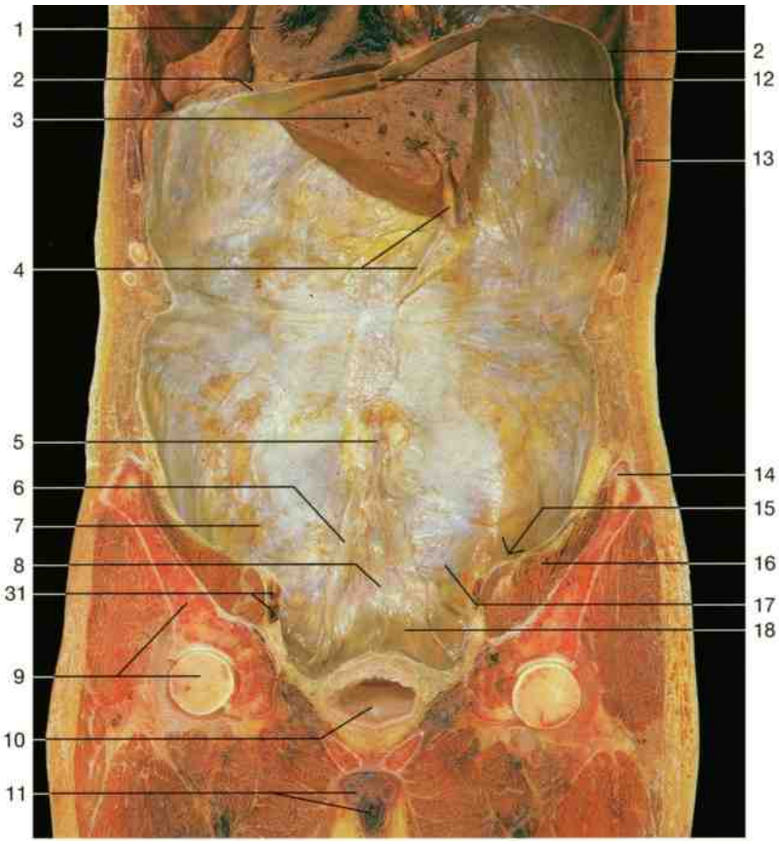

Anterior abdominal wall with pelvic cavity and thigh (frontal section, male) (internal aspect).

1 Left ventricle with pericardium
2 Diaphragm
3 Remnant of liver
4 Ligamentum teres (free margin of falciform ligament)
5 Site of umbilicus
6 Medial umbilical fold (containing the obliterated umbilical artery)
7 Lateral umbilical fold (containing inferior epigastric artery and vein)
8 Median umbilical fold (containing remnant of urachus)
9 Head of femur and pelvic bone
10 Urinary bladder
11 Root of penis
12 Falciform ligament of liver
13 Rib (divided)
14 Iliac crest (divided)
15 Site of deep inguinal ring and lateral inguinal fossa
16 Iliopsoas muscle (divided)
17 Medial inguinal fossa
18 Supravesical fossa
19 Posterior layer of rectus sheath
20 Transversus abdominis muscle
21 Umbilicus and arcuate line
22 Inferior epigastric artery
23 Femoral nerve
24 Iliopsoas muscle
25 Remnant of umbilical artery
26 Femoral artery and vein
27 Tendinous intersection of rectus abdominis muscle
28 Rectus abdominis muscle
29 Interfoveolar ligament
30 Pubic symphysis (divided)
31 External iliac artery and vein

Anterior abdominal wall (male) (internal aspect). The peritoneum and parts of the posterior layer of rectus sheath have been removed. Dissection of inferior epigastric arteries and veins.

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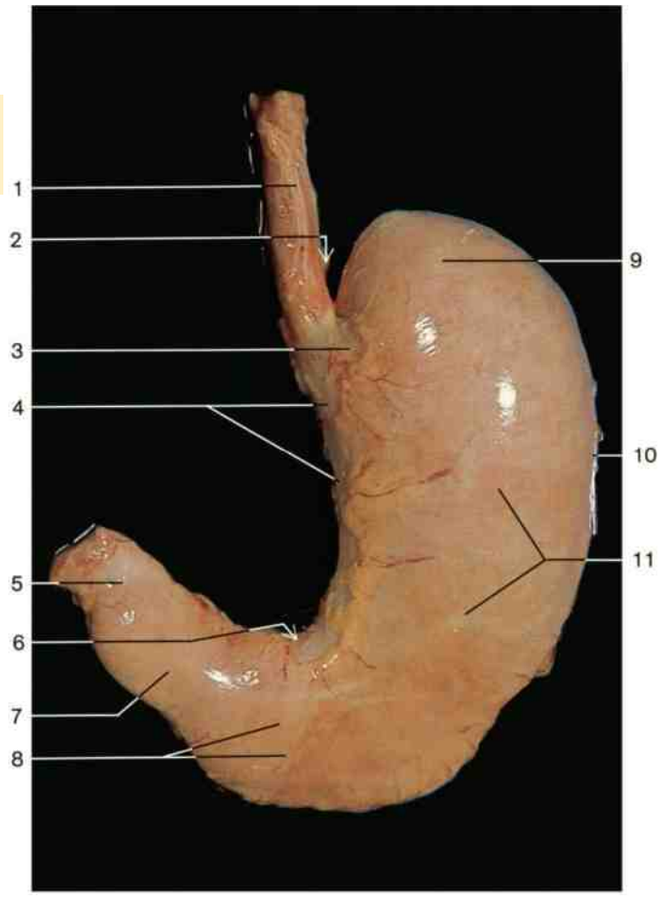
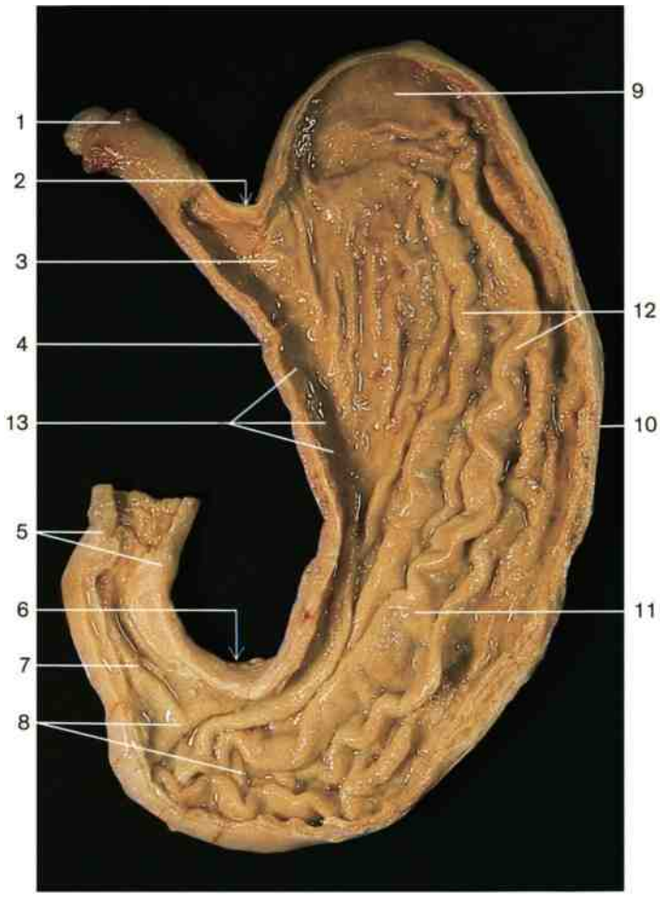
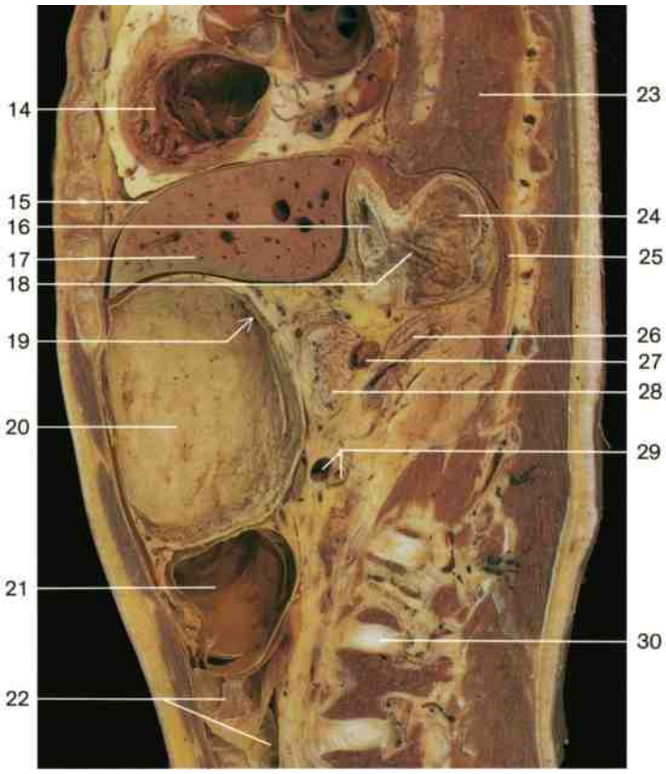


Stomach (ventral aspect).



Mucosa of posterior wall of stomach (ventral aspect).



Position of the stomach. Parasagittal section through upper part of left abdominal cavity 3.5 cm lateral to median plane.

1 Esophagus
2 Cardial notch
3 Cardial part of stomach
4 Lesser curvature of stomach
5 Pyloric sphincter
6 Angular notch (incisura angularis)
7 Pyloric canal
8 Pyloric antrum
9 Fundus of stomach
10 Greater curvature of stomach
11 Body of stomach
12 Folds of mucous membrane (gastric rugae)
13 Gastric canal
14 Right ventricle of heart
15 Diaphragm (cut edge)
16 Abdominal portion of esophagus
17 Liver
18 Cardial part of stomach (cut edge)
19 Position of pyloric canal
20 Body of stomach
21 Transverse colon
22 Small intestine
23 Lung (cut edge)
24 Fundus of stomach (section)
25 Lumbar portion of diaphragm (cut edge)
26 Suprarenal gland
27 Splenic vein
28 Pancreas
29 Superior mesenteric artery and vein
30 Intervertebral disc

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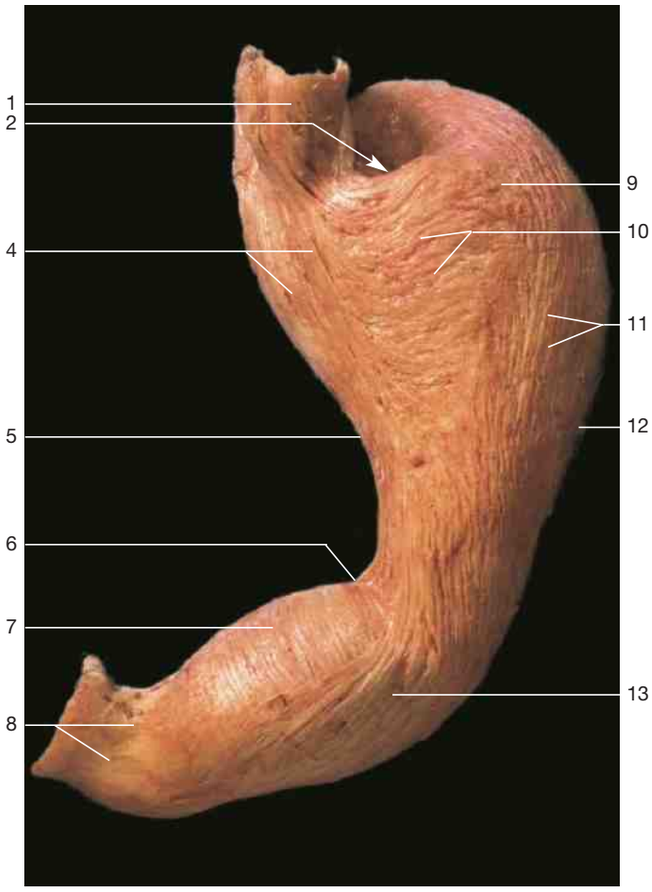
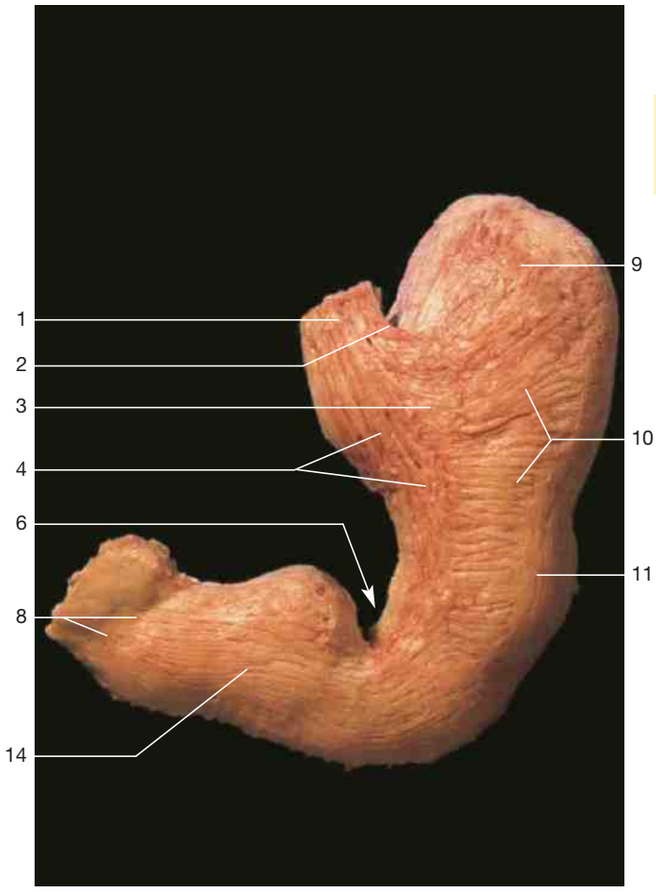
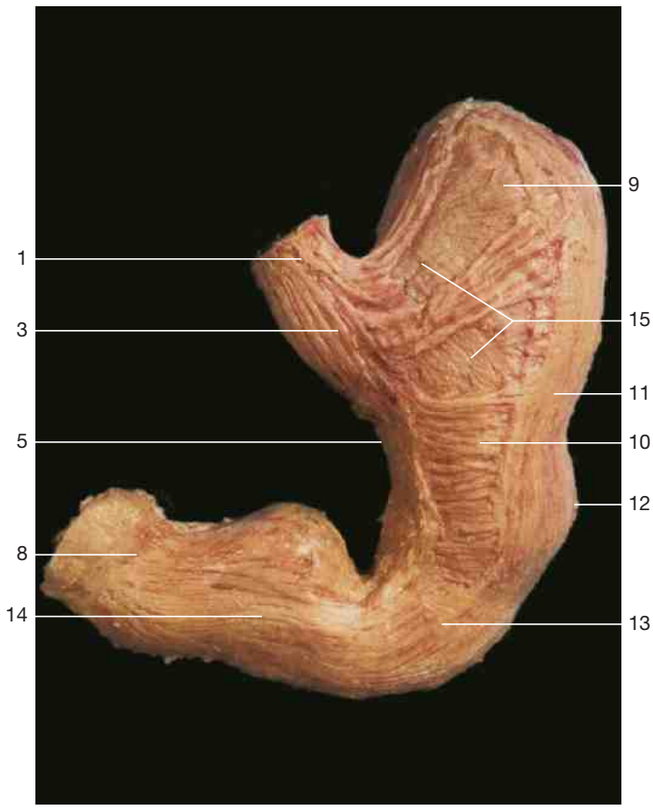


Muscular coat of stomach, outer layer (ventral aspect).



Muscular coat of stomach, middle layer (ventral aspect).



Muscular coat of stomach, inner layer (ventral aspect).

1 Esophagus (abdominal part)
2 Cardial notch
3 Cardial part of stomach
4 Longitudinal muscle layer at lesser curvature of stomach
5 Lesser curvature
6 Incisura angularis
7 Circular muscle layer of pyloric part of stomach
8 Pyloric sphincter muscle
9 Fundus of stomach
10 Circular muscle layer of fundus of stomach
11 Longitudinal muscle layer of greater curvature of stomach
12 Greater curvature of stomach
13 Longitudinal muscle layer (transition from body to pyloric part of stomach)
14 Pyloric part of stomach
15 Oblique muscle fibers

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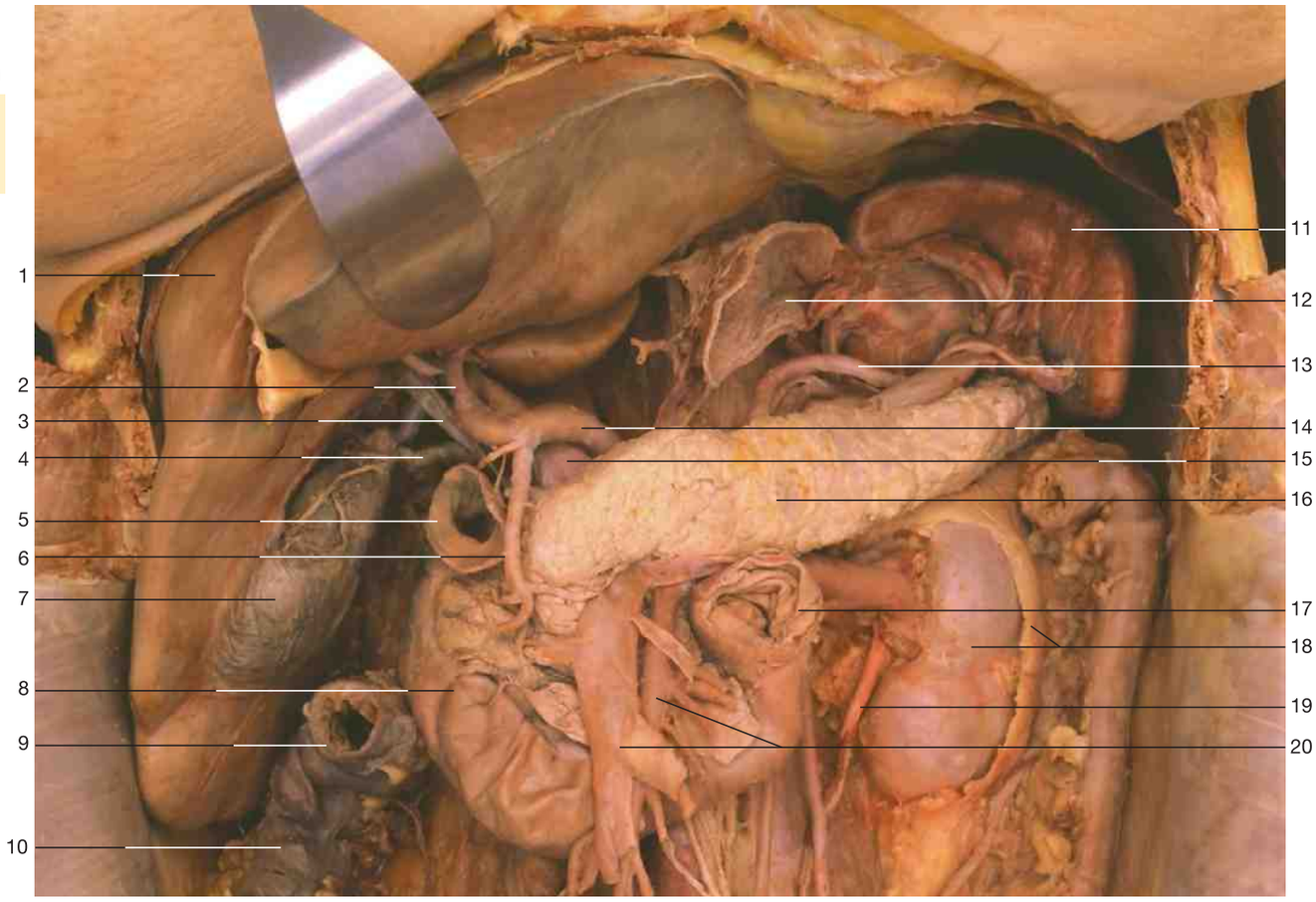
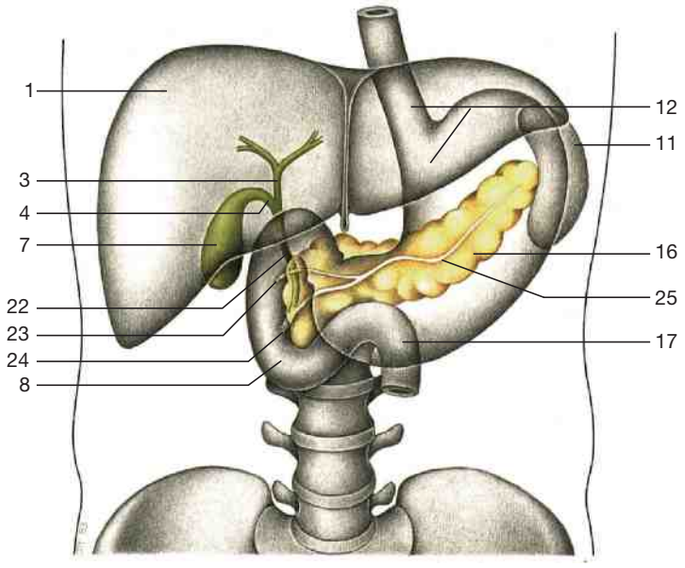


Upper abdominal organs. Pancreas, duodenum, and left kidney are shown. Stomach and transverse colon have been removed, liver elevated; superior mesenteric vein is slightly enlarged.



Pancreas, duodenum, and extrahepatic bile ducts (anterior aspect, schematic drawing).

1 Liver
2 Hepatic artery proper
3 Hepatic duct
4 Cystic duct
5 Pylorus
6 Gastroduodenal artery
7 Gallbladder
8 Duodenum
9 Transverse colon (cut)
10 Ascending colon
11 Spleen
12 Cardia
13 Splenic artery
14 Common hepatic artery
15 Portal vein
16 Pancreas (body)
17 Duodenojejunal flexure
18 Kidney (with capsula adiposa)
19 Ureter
20 Superior mesenteric artery and vein
21 Aorta (abdominal part)
22 Common bile duct
23 Lesser duodenal papilla
24 Greater duodenal papilla
25 Pancreatic duct

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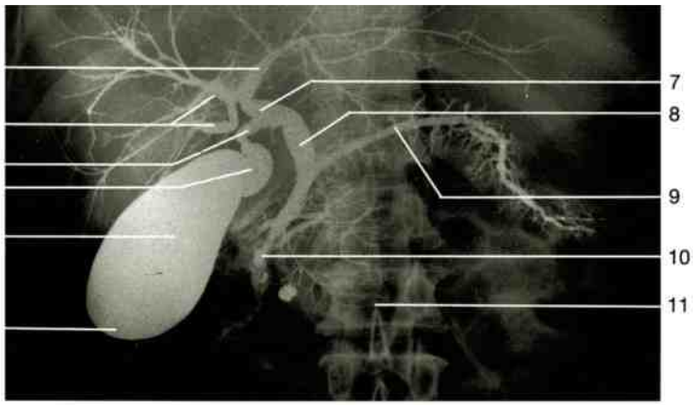
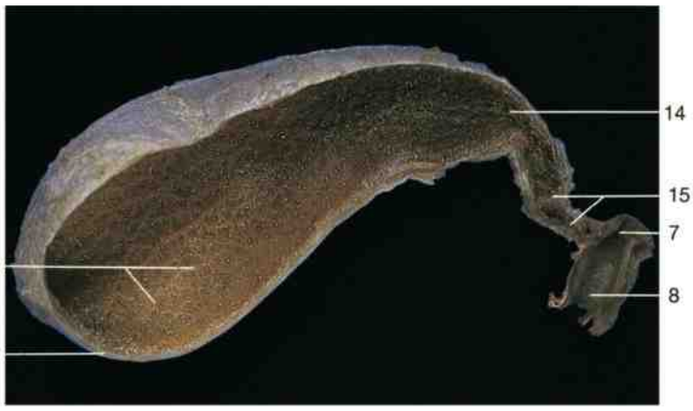
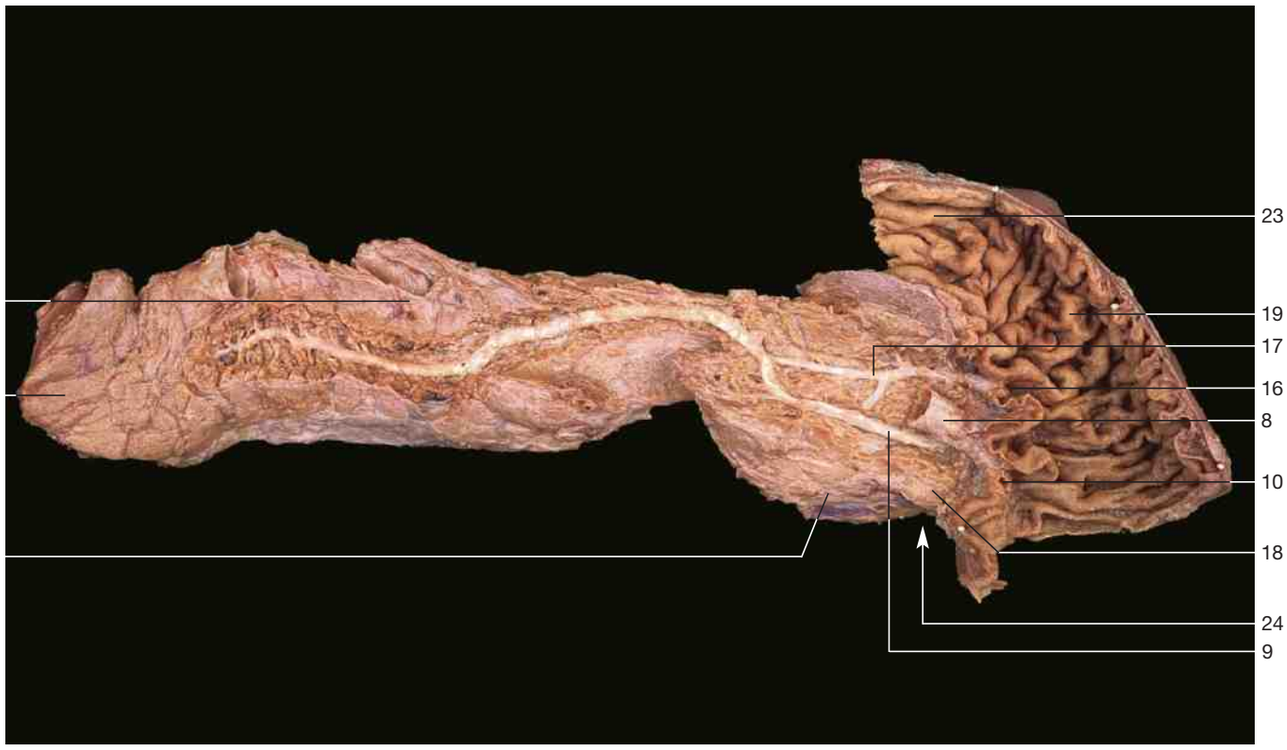


Radiograph of biliary ducts, gallbladder, and pancreatic duct (antero-posterior view).



Isolated gallbladder and cystic duct (anterior aspect).
The gallbladder has been opened to display the mucous membrane.

1 Left hepatic duct
2 Right hepatic duct
3 Cystic duct
4 Neck of gallbladder
5 Body of gallbladder
6 Fundus of gallbladder
7 Common hepatic duct
8 Common bile duct
9 Pancreatic duct
10 Greater duodenal papilla
11 Second lumbar vertebra
12 Folds of mucous membrane of gallbladder
13 Muscular coat of gallbladder
14 Neck of gallbladder (opened)
15 Cystic duct with spiral fold
16 Lesser duodenal papilla
17 Accessory pancreatic duct
18 Uncinate process
19 Plica circularis of duodenum (Kerckring's fold)
20 Head of pancreas
21 Body of pancreas
22 Tail of pancreas
23 Descending part of duodenum
24 Incisure of pancreas



Pancreas with descending part of duodenum (posterior aspect). The duodenum was opened to display the duodenal papillae. Pancreatic duct has been dissected, the common bile duct has been divided. The sphincter of Oddi is shown.

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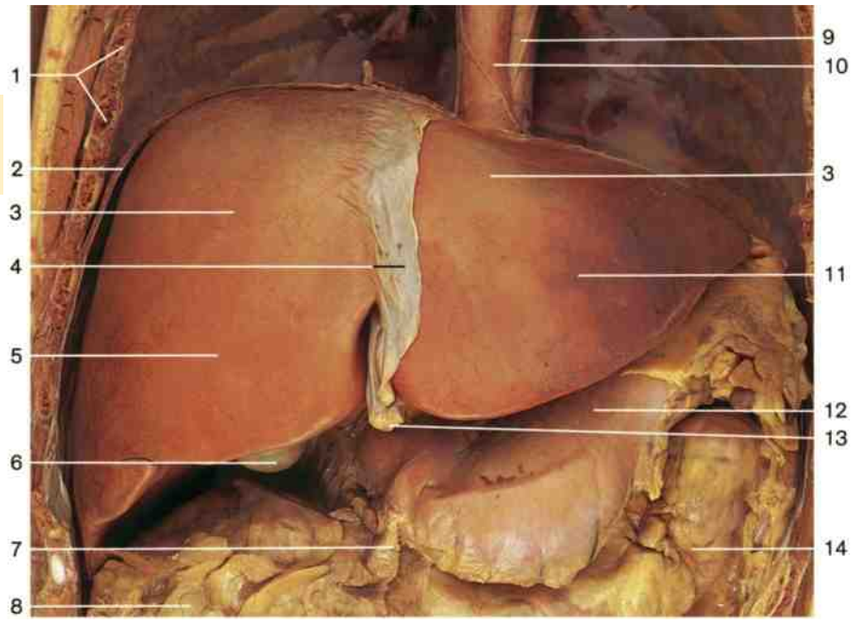
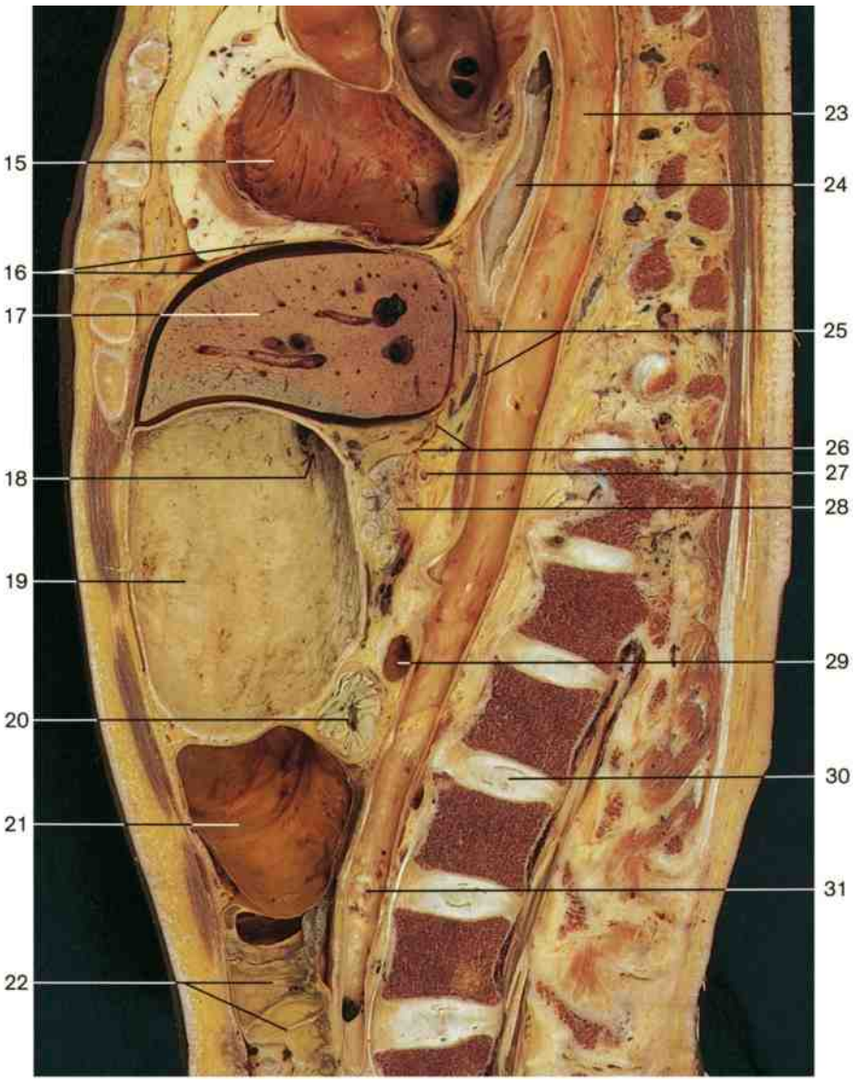


Liver in situ (ventral aspect). Part of the diaphragm has been removed.



Liver in situ. Parasagittal section through the left side of the abdomen 2 cm lateral to median plane.

1 Ribs (cut edges)
2 Diaphragm
3 Diaphragmatic surface of liver
4 Falciform ligament of liver
5 Right lobe of liver
6 Fundus of gallbladder
7 Gastrocolic ligament
8 Greater omentum
9 Aorta
10 Esophagus
11 Left lobe of liver
12 Stomach
13 Ligamentum teres
14 Transverse colon
15 Right atrium of heart
16 Central tendon and sternal portion of diaphragm
17 Liver (cut edge)
18 Entrance to duodenum (pylorus)
19 Stomach
20 Duodenum
21 Transverse colon (divided, dilated)
22 Small intestine
23 Thoracic aorta (longitudinally divided)
24 Esophagus (longitudinally divided)
25 Esophageal hiatus of diaphragm
26 Omental bursa (lesser sac)
27 Splenic artery
28 Pancreas
29 Left renal vein
30 Intervertebral disc
31 Abdominal aorta (longitudinally divided)

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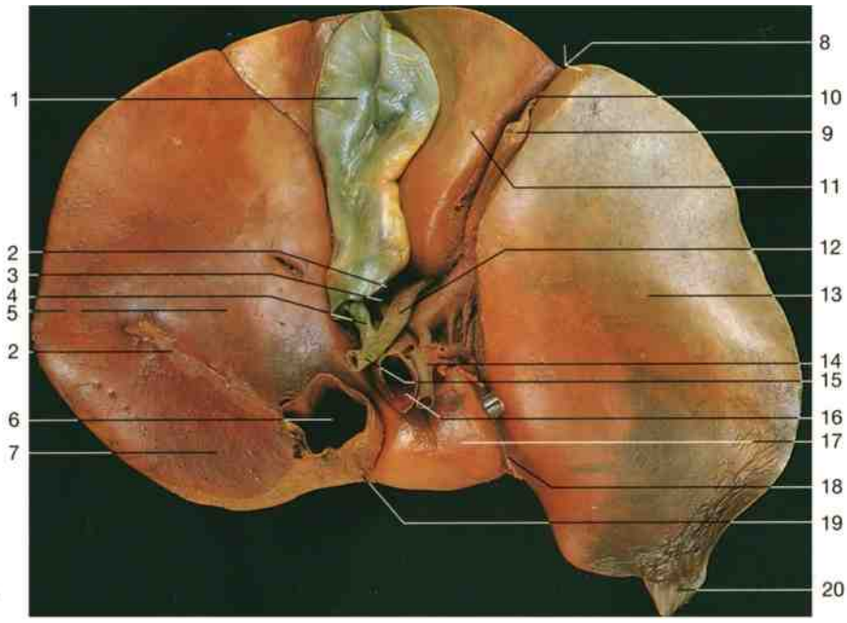
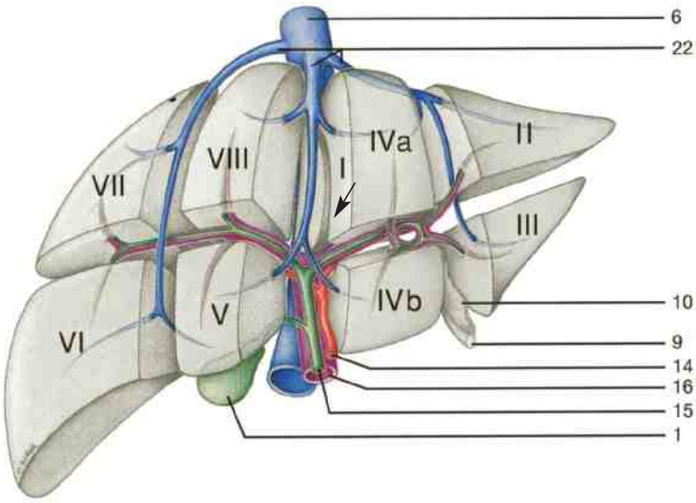
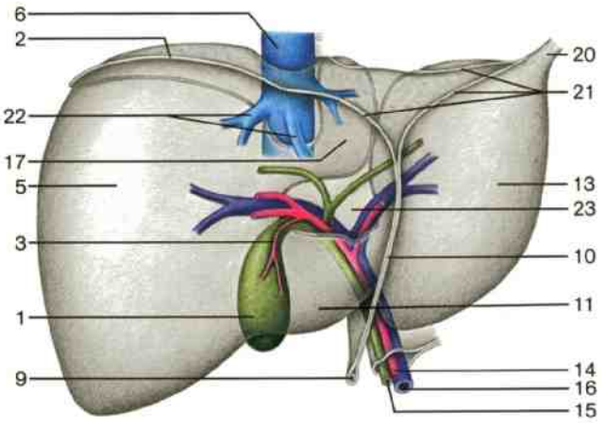


Liver (inferior aspect). Dissection of porta hepatis. Gallbladder partly collapsed. Ventral margin of liver above.

1 Fundus of gallbladder
2 Peritoneum (cut edges)
3 Cystic artery
4 Cystic duct
5 Right lobe of liver
6 Inferior vena cava
7 Bare area of liver
8 Notch for ligamentum teres and falciform ligament
9 Ligamentum teres
10 Falciform ligament of liver
11 Quadrate lobe of liver
12 Common hepatic duct
13 Left lobe of liver
14 Hepatic artery proper } Portal triad
15 Common bile duct } Portal triad
16 Portal vein } Portal triad
17 Caudate lobe of liver
18 Ligamentum venosum
19 Ligament of inferior vena cava
20 Appendix fibrosa (left triangular ligament)
21 Coronary ligament of liver
22 Hepatic veins
23 Porta hepatis



Segmentation of the liver (anterior aspect). Liver segments indicated by Roman numerals.



Liver (ventral aspect) (transparent drawing illustrating margins of peritoneal folds).

It should be noted that the anatomical left and right lobes of the liver do not reflect the internal distribution of the hepatic artery, portal vein, and biliary ducts. With these structures, used as criteria, the left lobe includes both the caudate and quadrate lobes, and thus the line dividing the liver into left and right functional lobes passes through the gallbladder and inferior vena cava. The three main hepatic veins drain segments of the liver that have no visible external markings.

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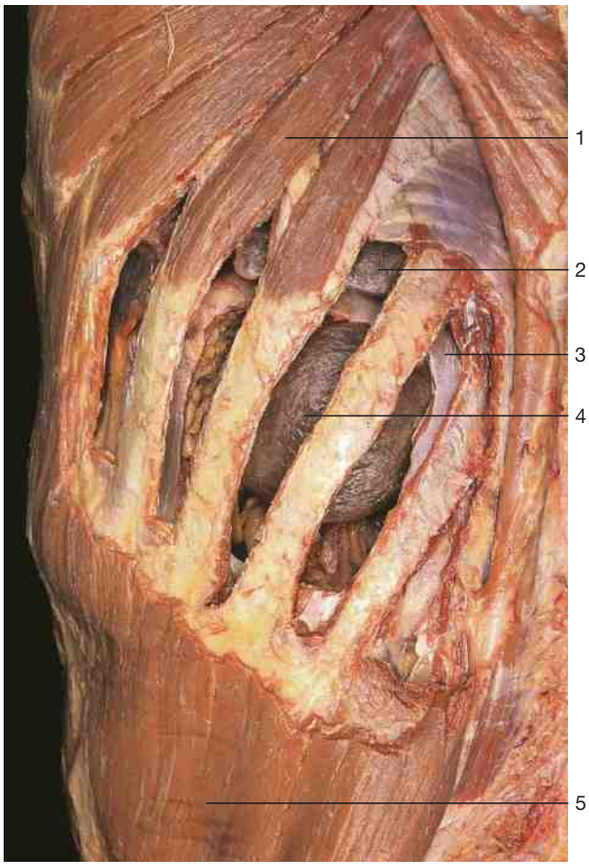
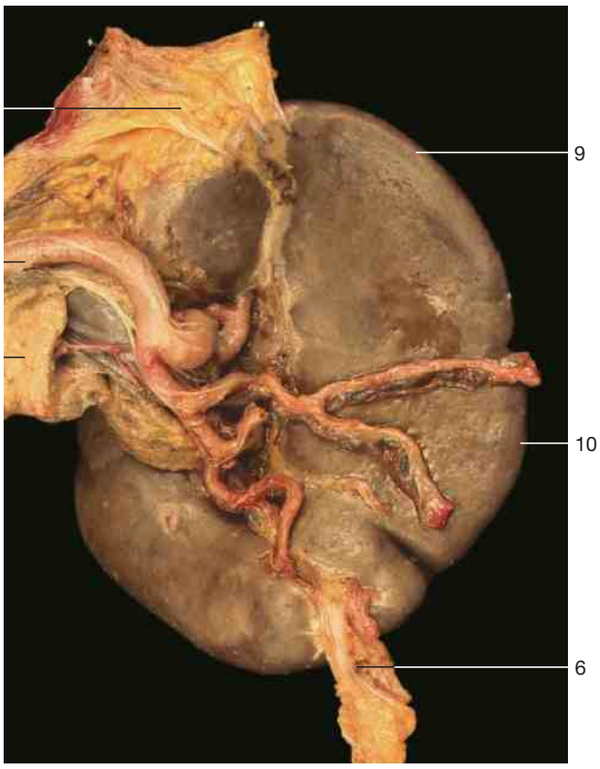


Location of the spleen in situ (left-lateral aspect). Intercostal spaces and diaphragm have been fenestrated.

1 Serratus anterior muscle
2 Left lung
3 Diaphragm
4 Spleen
5 External abdominal oblique muscle
6 Gastrosplenic ligament
7 Splenic artery
8 Pancreas tail
9 Superior margin of spleen
10 Anterior border of spleen
11 Liver
12 Hepatic artery proper
13 Cystic duct
14 Gallbladder
15 Lesser duodenal papilla (probe)
16 Greater duodenal papilla (probe)
17 Duodenum (fenestrated)
18 Cardia
19 Pancreas and pancreatic duct
20 Kidney (with capsula adiposa, capsular fat, adipose tissue)
21 Common bile duct
22 Superior mesenteric artery and vein
23 Ureter
24 Aorta with celiac trunk
25 Suprarenal gland
26 Inferior mesenteric vein



Spleen (visceral surface), hilum of spleen with vessels, nerves, and ligaments.

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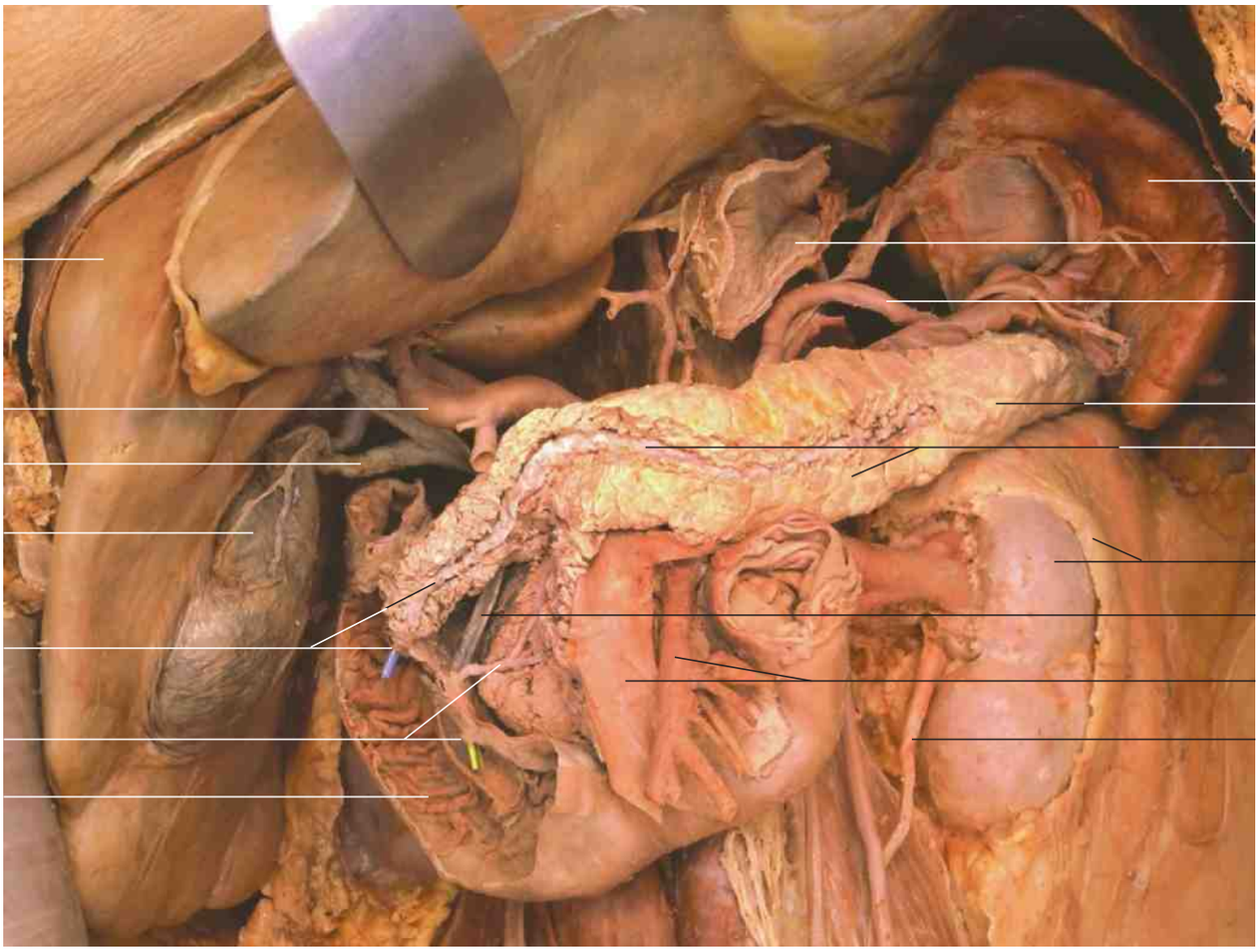
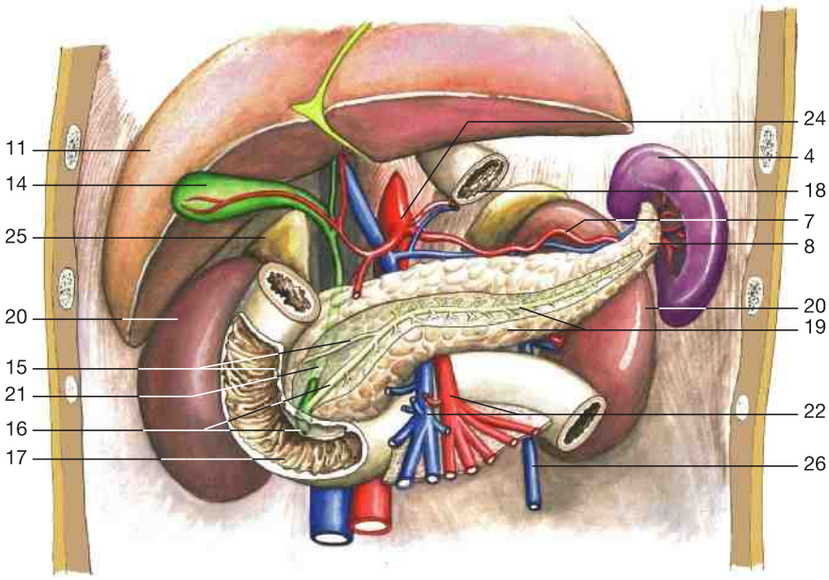


Upper abdominal organs (anterior aspect). Stomach and transverse colon have been removed, the duodenum fenestrated. The liver has been elevated to show the extrahepatic bile ducts. In this case the accessory pancreatic duct represents the main excretory duct of the pancreas.



Upper abdominal organs (anterior aspect). The schematic drawing shows the most common situation of the pancreatic ducts.

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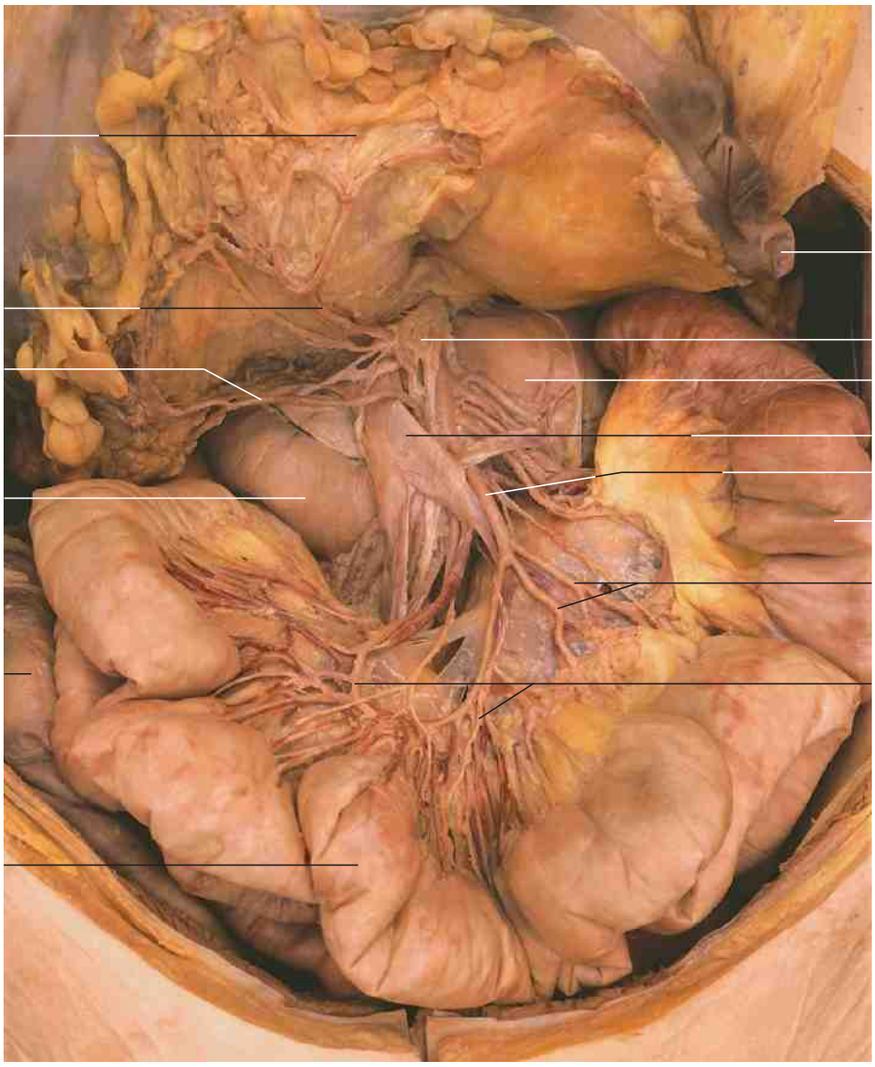
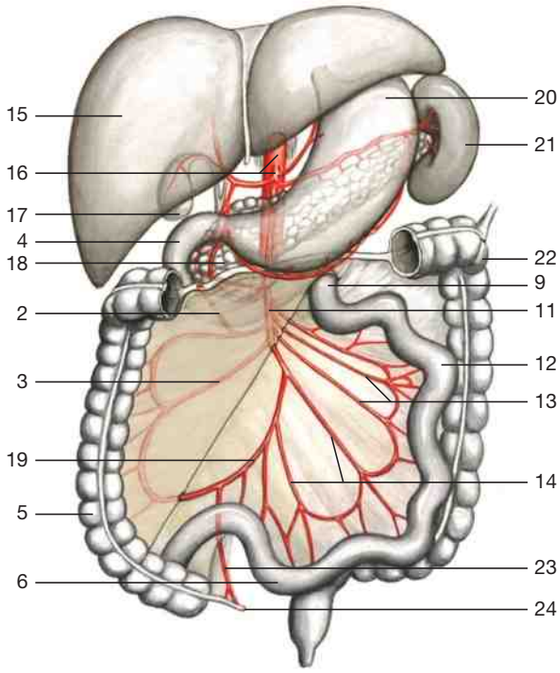


1 Greater omentum
2 Middle colic artery
3 Right colic artery
4 Duodenum
5 Ascending colon
6 Ileum
7 Transverse colon
8 Celiac ganglion
9 Duodenojejunal flexure
10 Superior mesenteric vein
11 Superior mesenteric artery
12 Jejunum
13 Jejunal arteries
14 Ileal arteries
15 Liver
16 Celiac trunk and abdominal aorta
17 Gallbladder
18 Pancreas
19 Ileocolic artery
20 Stomach
21 Spleen
22 Left colic flexure
23 Appendicular artery
24 Vermiform appendix

Vessels of abdominal organs, dissection of superior mesenteric artery and vein.
Greater omentum and transverse colon are reflected.



Main branches of superior mesenteric artery
(schematic drawing).

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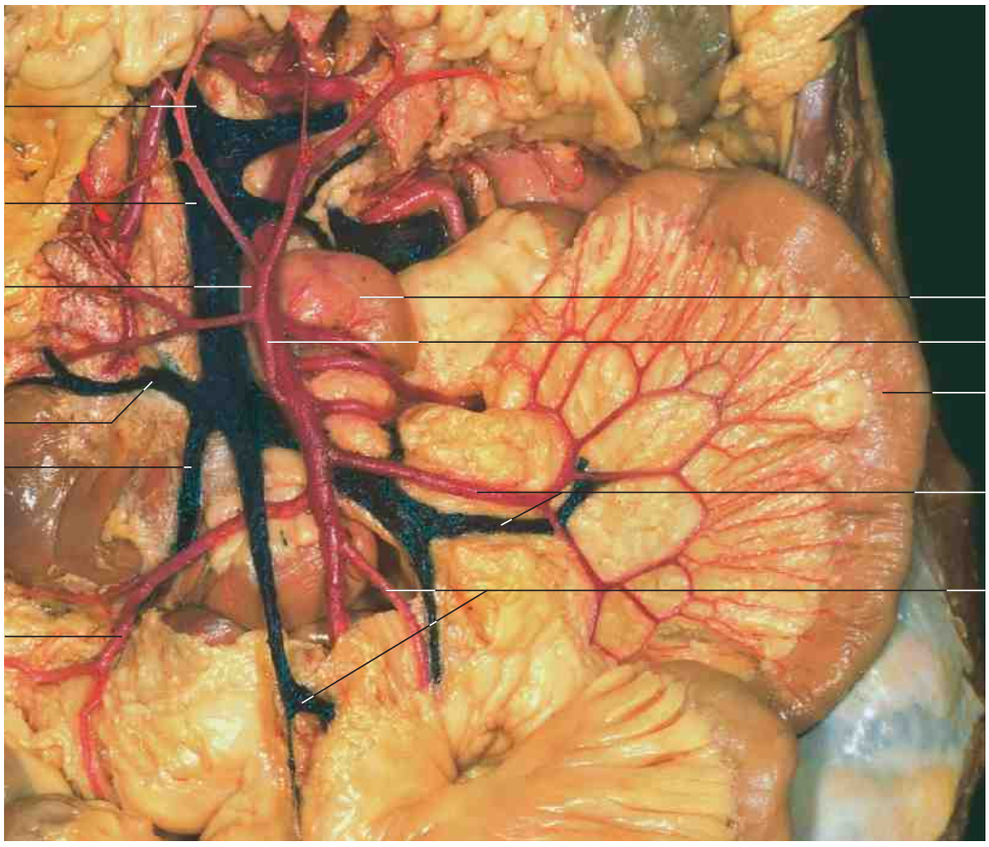
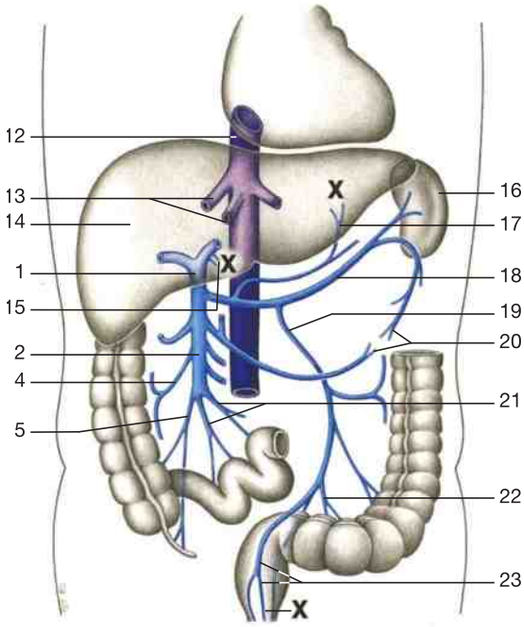


Tributaries of portal vein (blue) **and branches of superior mesenteric artery** (red) (anterior aspect).



Main tributaries of portal vein (blue).
Inferior vena cava = violet; X = sites of portocaval anastomoses.

1 Portal vein
2 Superior mesenteric vein
3 Superior mesenteric artery
4 Right colic vein
5 Ileocolic vein
6 Ileocolic artery
7 Duodenojejunal flexure
8 Middle colic artery
9 Jejunum
10 Jejunal arteries and veins
11 Ileal arteries and veins
12 Inferior vena cava
13 Hepatic veins
14 Liver
15 Para-umbilical veins (located within the ligamentum teres)
16 Spleen
17 Left gastric vein with esophageal branches
18 Splenic vein
19 Inferior mesenteric vein
20 Gastro-omental veins
21 Ileal veins
22 Sigmoid veins
23 Superior rectal vein

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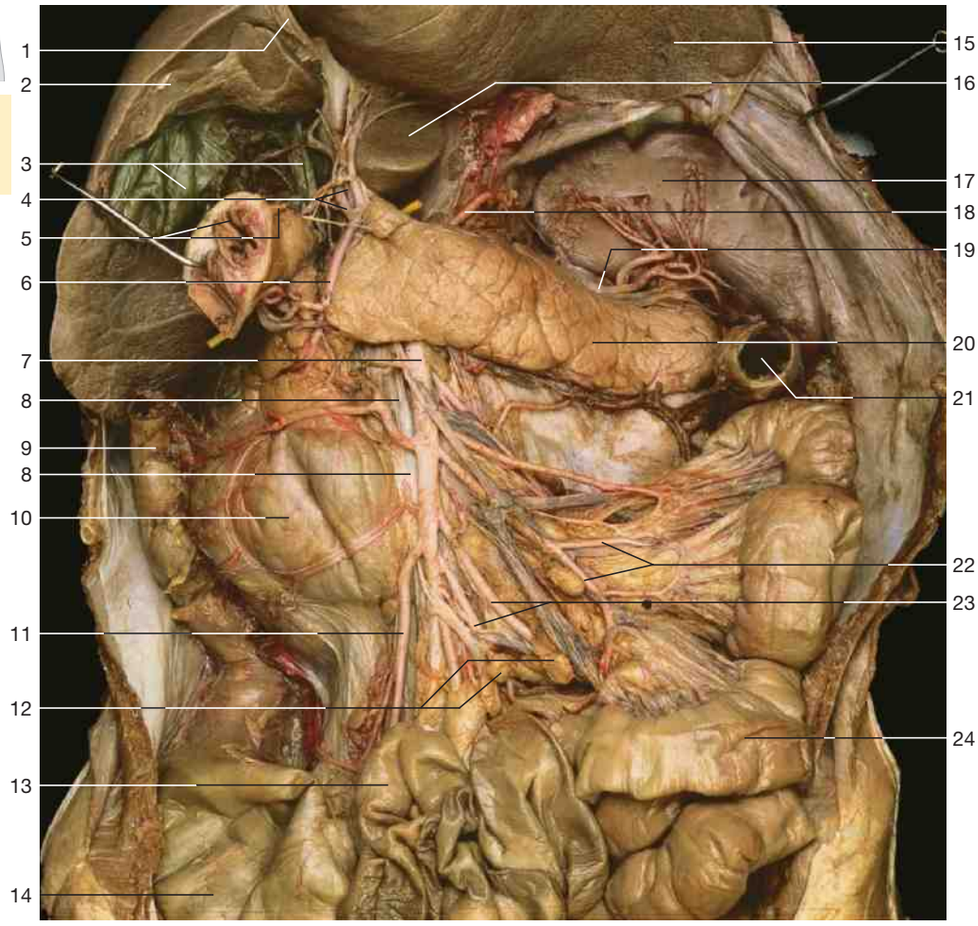
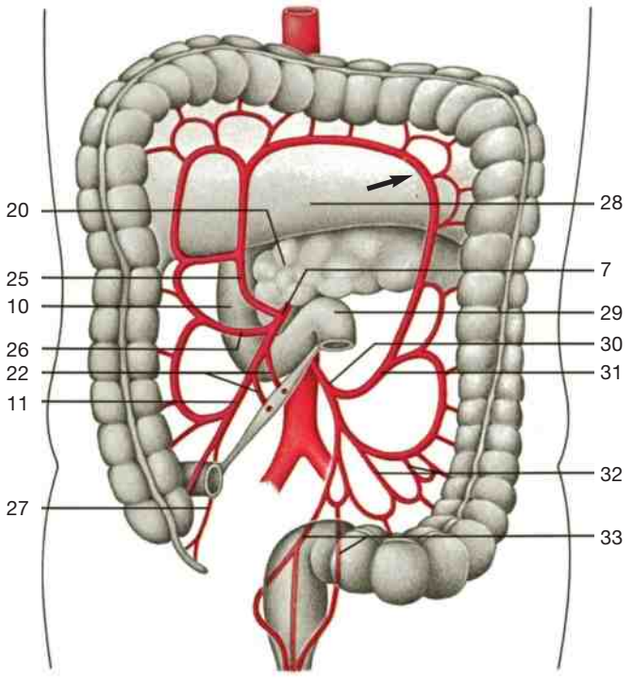


Superior mesenteric artery in relation to pancreas and duodenum. Stomach and transverse colon have been removed and the liver elevated. Note the location of the spleen. A yellow probe is inserted through the omental foramen.

1 Ligamentum teres
2 Liver
3 Gallbladder and common bile duct
4 Hepatic artery proper and portal vein
5 Right gastric artery and pylorus
6 Gastroduodenal artery
7 Superior mesenteric artery
8 Superior mesenteric vein
9 Ascending colon
10 Duodenum
11 Ileocolic artery
12 Lymph nodes
13 Ileum
14 Cecum
15 Left lobe of liver
16 Caudate lobe of liver
17 Spleen
18 Left gastric artery
19 Splenic artery
20 Pancreas
21 Left colic flexure (cut)
22 Jejunal arteries
23 Ileal arteries
24 Jejunum
25 Middle colic artery
26 Right colic artery
27 Appendicular artery
28 Transverse mesocolon
29 Duodenojejunal flexure
30 Inferior mesenteric artery
31 Left colic artery
32 Sigmoid arteries
33 Superior rectal artery
34 Inferior vena cava
35 Abdominal aorta
36 Descending colon
37 Ileum
38 Sigmoid colon
39 Vermiform appendix
40 Cecum



Main branches of superior and inferior mesenteric arteries (schematic drawing). Arrow = Riolan's anastomosis.

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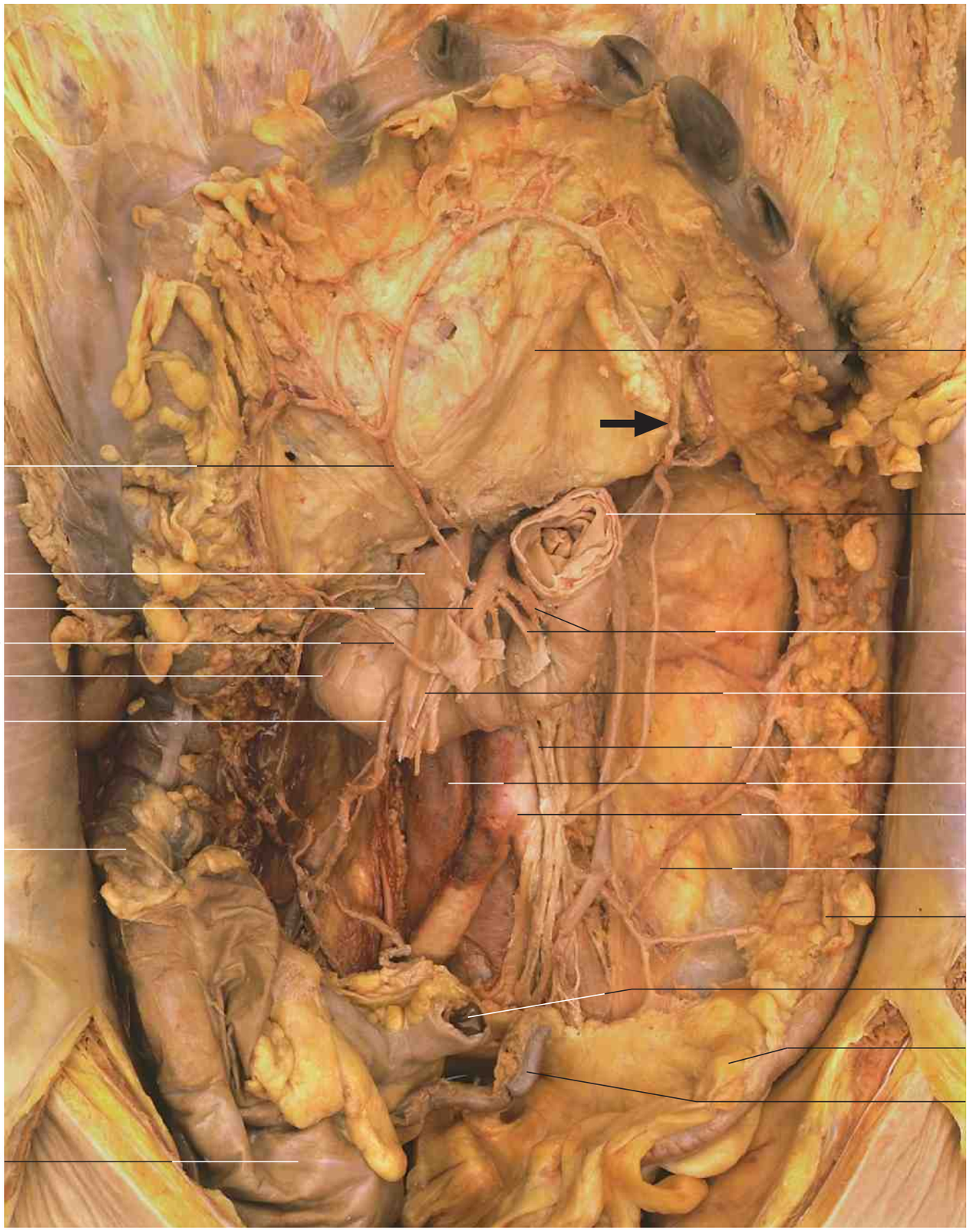

Vessels of the retroperitoneal organs. Direction of the inferior mesenteric artery and its anastomosis with the middle colic artery (arrow = Riolan's anastomosis). Greater omentum and transverse colon have been reflected, the intestine partly removed. The normally retrocecally located vermiform appendix has been replaced anteriorly. The right common iliac artery is partly obstructed by a blood thrombus.

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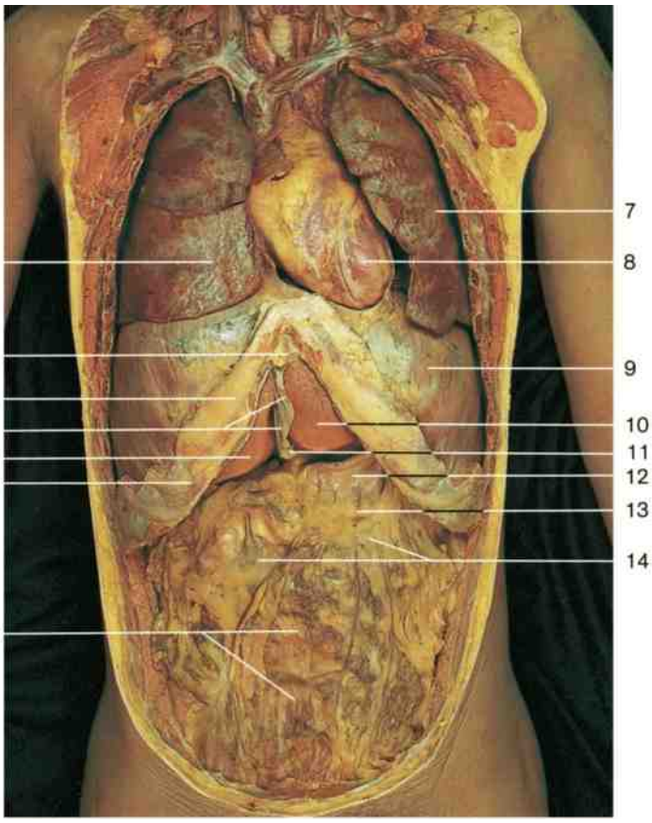
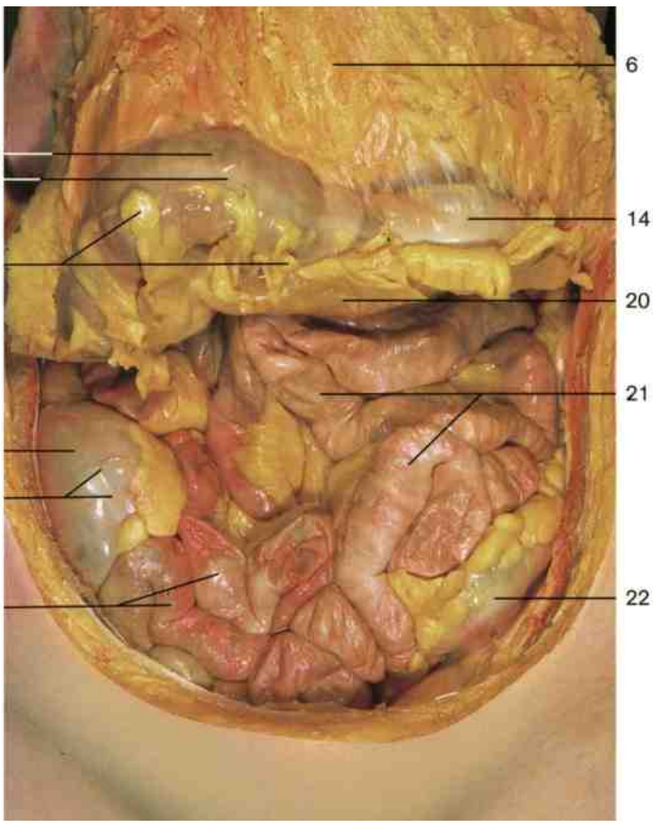
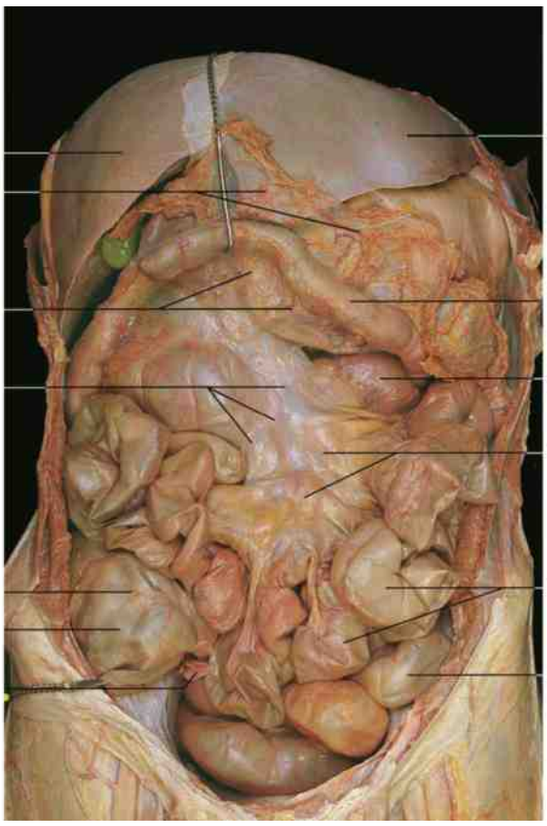


1 Middle lobe of right lung
2 Xiphoid process
3 Costal margin
4 Falciform ligament of liver
5 Quadrate lobe of liver
6 Greater omentum
7 Upper lobe of left lung
8 Heart
9 Diaphragm
10 Left lobe of liver
11 Ligamentum teres
12 Stomach
13 Gastrocolic ligament
14 Transverse colon
15 Taenia coli
16 Appendices epiploicae
17 Cecum
18 Taenia coli
19 Ileum
20 Transverse mesocolon
21 Jejunum
22 Sigmoid colon
23 Position of root of mesentery
24 Vermiform appendix
25 Duodenojejunal flexure
26 Mesentery

Abdominal organs. The anterior thoracic and abdominal walls have been removed.



Abdominal organs (anterior aspect). The greater omentum, which is fixed to the transverse colon, has been raised.



Abdominal organs (anterior aspect). The transverse colon has been reflected.

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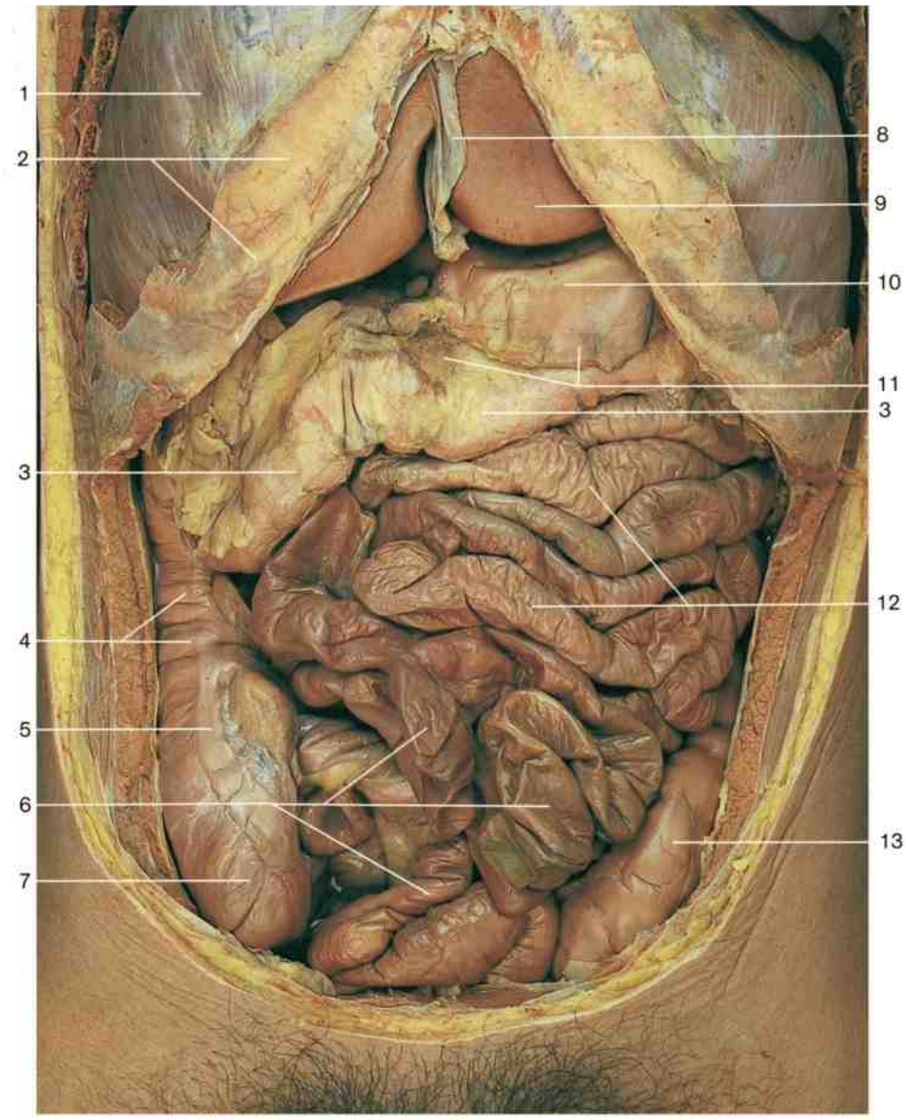
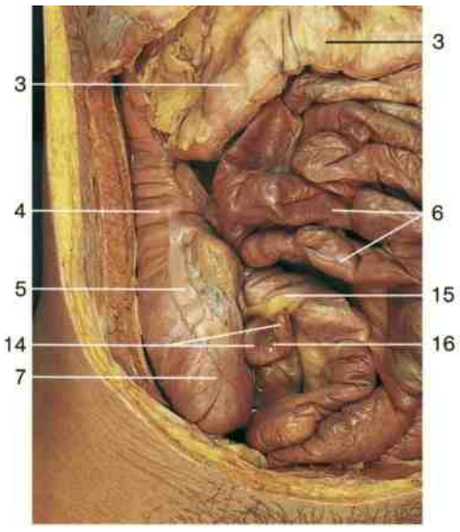
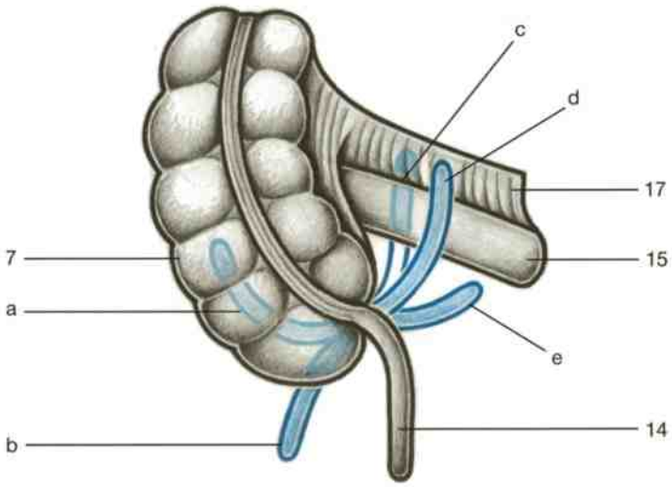


1 Diaphragm
2 Costal margin
3 Transverse colon
4 Ascending colon with haustra
5 Free taenia of cecum
6 Ileum
7 Cecum
8 Falciform ligament of liver
9 Liver
10 Stomach
11 Gastrocolic ligament
12 Jejunum
13 Sigmoid colon
14 Vermiform appendix
15 Terminal ileum
16 Meso-appendix
17 Mesentery

Abdominal organs in situ. The greater omentum has been removed.



Ascending colon, cecum, and vermiform appendix (detail of the preceding figure).



Variations in the position of the vermiform appendix.
a = retrocecal; b = paracolic; c = retro-ileal; d = pre-ileal; e = subcecal.

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Abdominal organs. Dissection of inferior mesenteric artery and autonomic plexus. The transverse colon with mesocolon has been raised and the small intestine reflected.

1 Liver
2 Gallbladder
3 Middle colic artery
4 Jejunal artery
5 Inferior mesenteric artery
6 Sympathetic nerves and ganglia
7 Right common iliac artery
8 Small intestine (ileum)
9 Transverse colon (reflected)
10 Transverse mesocolon
11 Anastomosis between middle and left colic artery
12 Spleen
13 Abdominal aorta
14 Left colic artery
15 Duodenojejunal flexure
16 Descending colon (free taenia of colon)
17 Inferior mesenteric vein
18 Superior hypogastric plexus
19 Superior rectal artery
20 Sigmoid arteries
21 Peritoneum (cut edge)
22 Sigmoid mesocolon
23 Sigmoid colon

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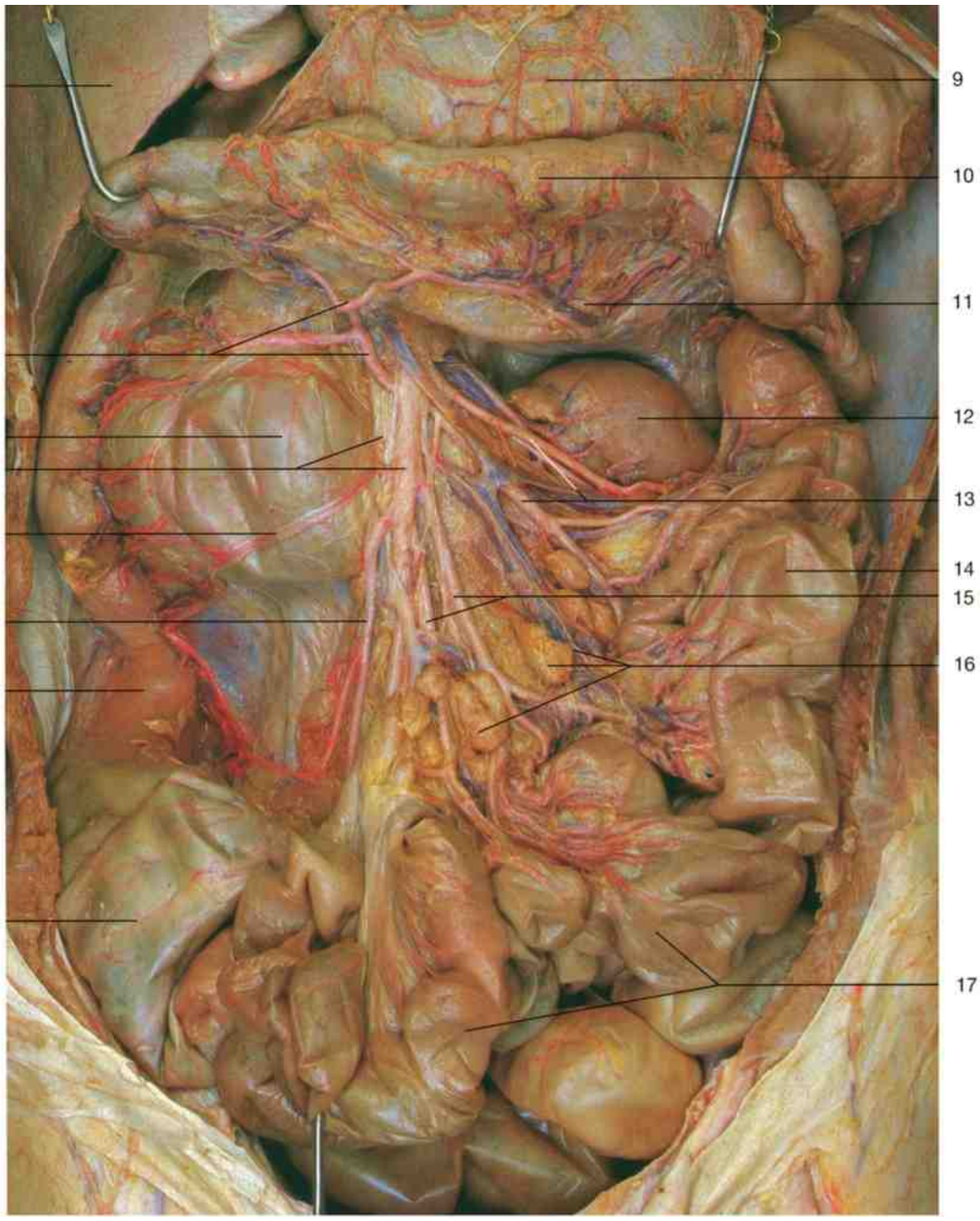
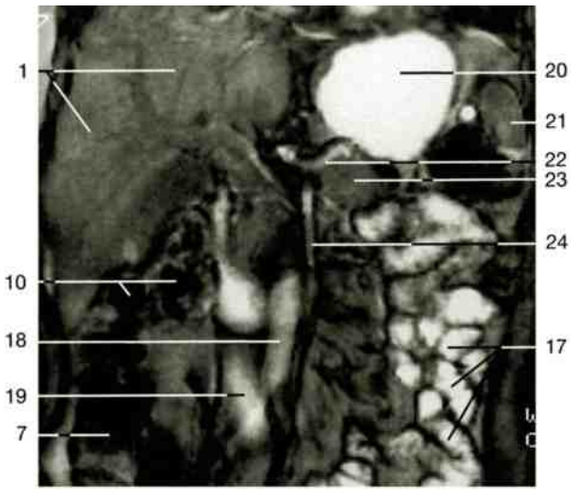


1 Liver
2 Middle colic artery
3 Horizontal part of duodenum (extended)
4 Superior mesenteric artery and vein
5 Right colic artery
6 Ileocolic artery
7 Ascending colon
8 Cecum
9 Greater omentum (reflected)
10 Transverse colon
11 Transverse mesocolon
12 Duodenojejunal flexure
13 Jejunal arteries
14 Jejunum
15 Ileal arteries
16 Mesenteric lymph nodes and lymph vessels
17 Ileum
18 Abdominal aorta
19 Inferior vena cava
20 Stomach
21 Spleen
22 Splenic artery
23 Head of pancreas
24 Superior mesenteric artery

Abdominal organs. Superior mesenteric artery. Mesenteric lymph nodes. Transverse colon reflected.



Frontal section through the abdominal cavity (MRI scan; the intestinal tract and vessels are filled with a paramagnetic substance [Gadolinium]; courtesy of Dr. W. Rödl, Erlangen, Germany).

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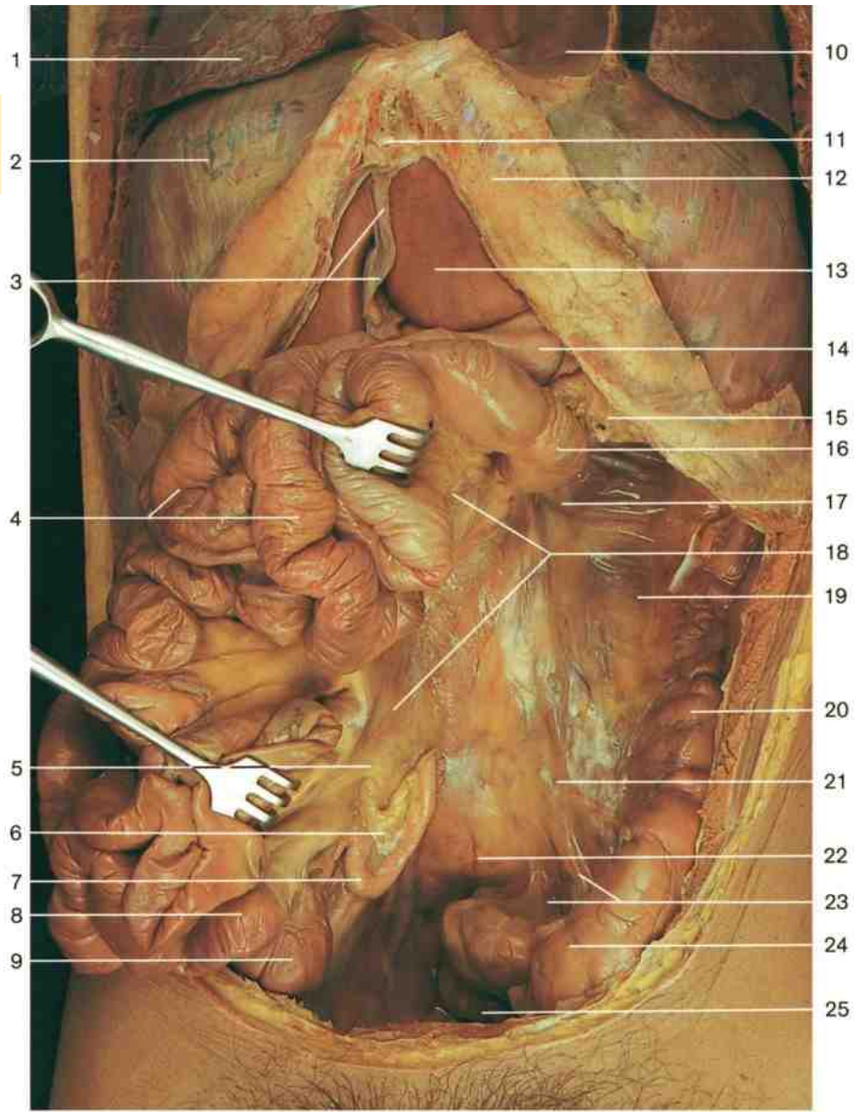
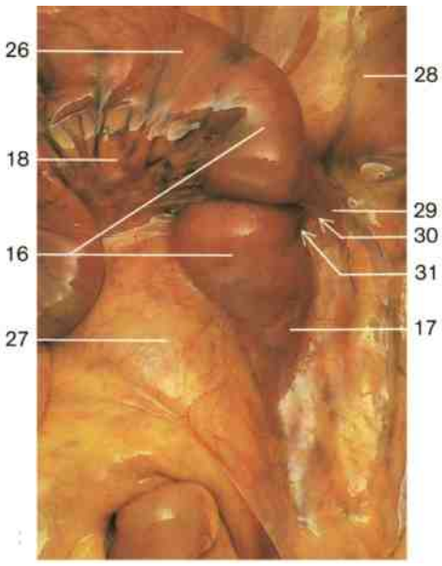
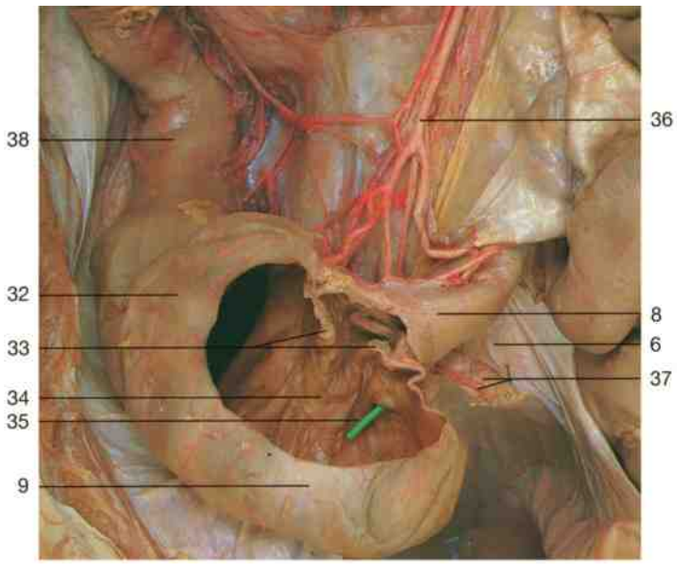


1 Lung
2 Diaphragm
3 Falciform ligament of liver
4 Jejunum
5 Ileocecal fold
6 Meso-appendix
7 Vermiform appendix
8 Ileocecal junction
9 Cecum
10 Pericardial sac
11 Xiphoid process
12 Costal margin
13 Liver
14 Stomach
15 Transverse colon
16 Duodenojejunal flexure
17 Inferior duodenal fold
18 Mesentery
19 Position of left kidney
20 Descending colon
21 Position of left common iliac artery
22 Sacral promontory
23 Sigmoid mesocolon
24 Sigmoid colon
25 Rectum
26 Beginning of jejunum
27 Peritoneum of posterior abdominal wall
28 Transverse mesocolon
29 Superior duodenal fold
30 Superior duodenal recess
31 Retroduodenal recess
32 Free taenia of ascending colon
33 Ileocecal valve
34 Frenulum of ileocecal valve
35 Orifice of vermiform appendix (probe)
36 Ileocolic artery
37 Vermiform appendix with appendicular artery
38 Ascending colon

Abdominal cavity. Mesenteries. The small intestine has been reflected laterally to demonstrate the mesentery.



Duodenojejunal flexure (enlargement of preceding figure).



Ileocecal valve (ventral aspect). The cecum and terminal part of the ileum have been opened.

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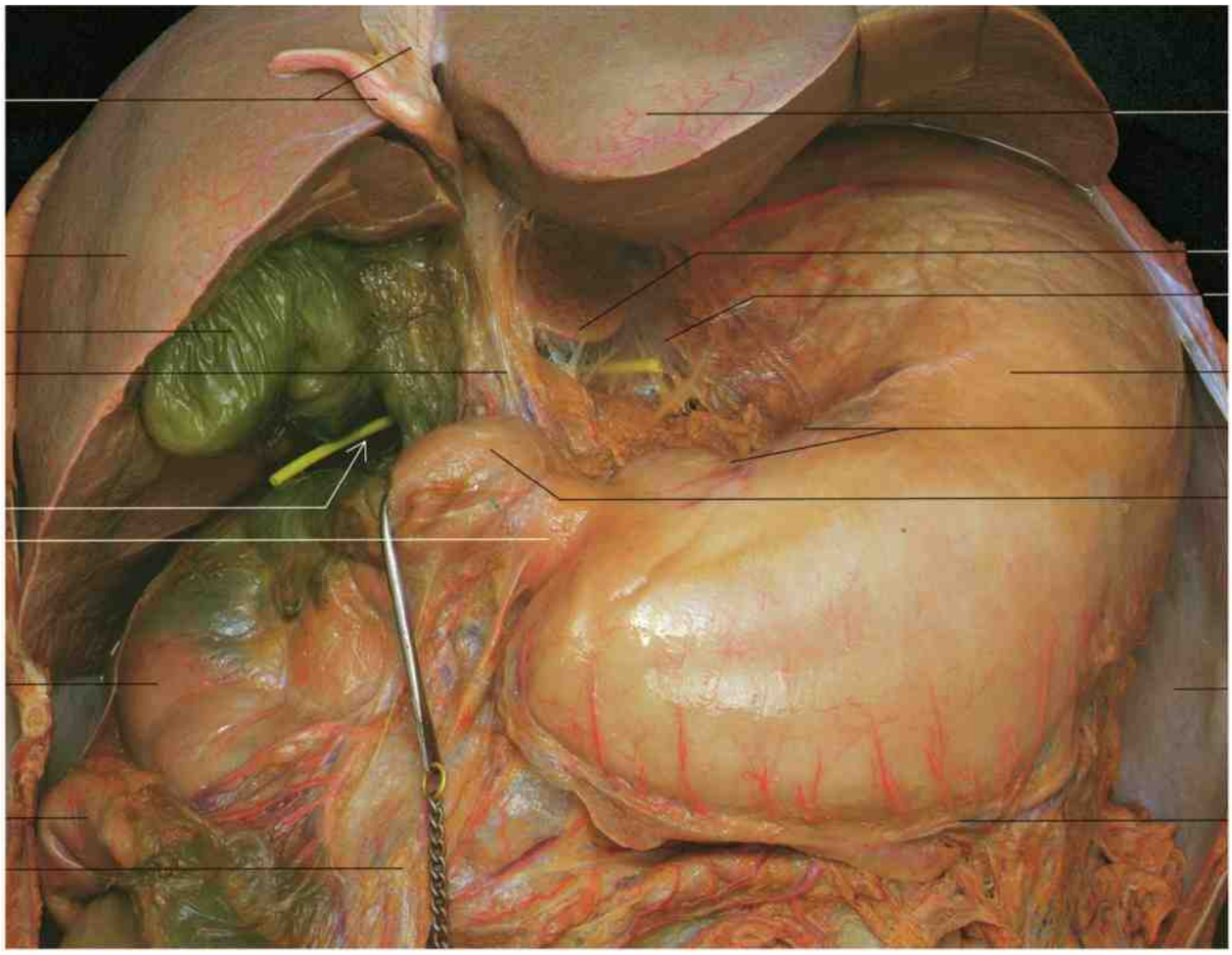
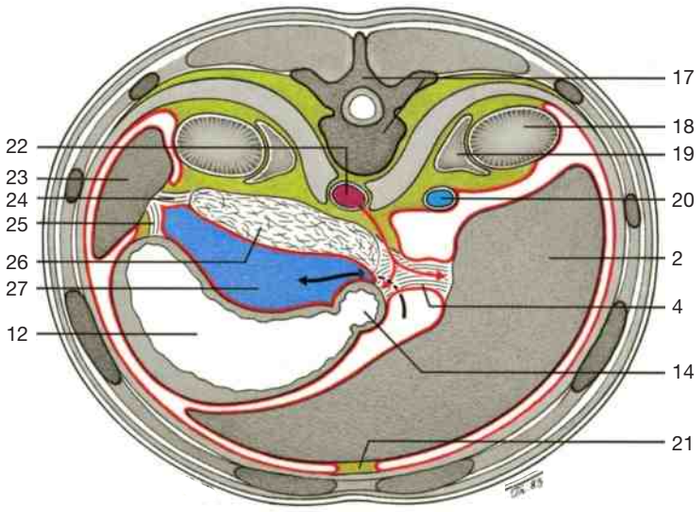


Upper abdominal organs (anterior aspect). Thorax and anterior part of diaphragm have been removed and the liver raised to display the lesser omentum. A probe has been inserted into the epiploic foramen and lesser sac.

1 Falciform ligament and ligamentum teres
2 Liver
3 Gallbladder (fundus)
4 Hepatoduodenal ligament
5 Epiploic foramen (probe)
6 Pylorus
7 Descending part of duodenum
8 Right colic flexure
9 Gastrocolic ligament
10 Caudate lobe of liver (behind lesser omentum)
11 Lesser omentum
12 Stomach
13 Lesser curvature of stomach
14 Superior part of duodenum
15 Diaphragm
16 Greater curvature of stomach with gastro-omental vessels
17 Twelfth thoracic vertebra
18 Right kidney
19 Right suprarenal gland
20 Inferior vena cava
21 Falciform ligament of liver
22 Abdominal aorta
23 Spleen
24 Lienorenal ligament
25 Gastrosplenic ligament
26 Pancreas
27 Lesser sac (omental bursa)



Horizontal section through the lesser sac above the level of epiploic foramen (black arrow). Viewed from above. Red arrows: routes of the arterial branches of celiac trunk to liver, stomach, duodenum, and pancreas (posterior aspect).

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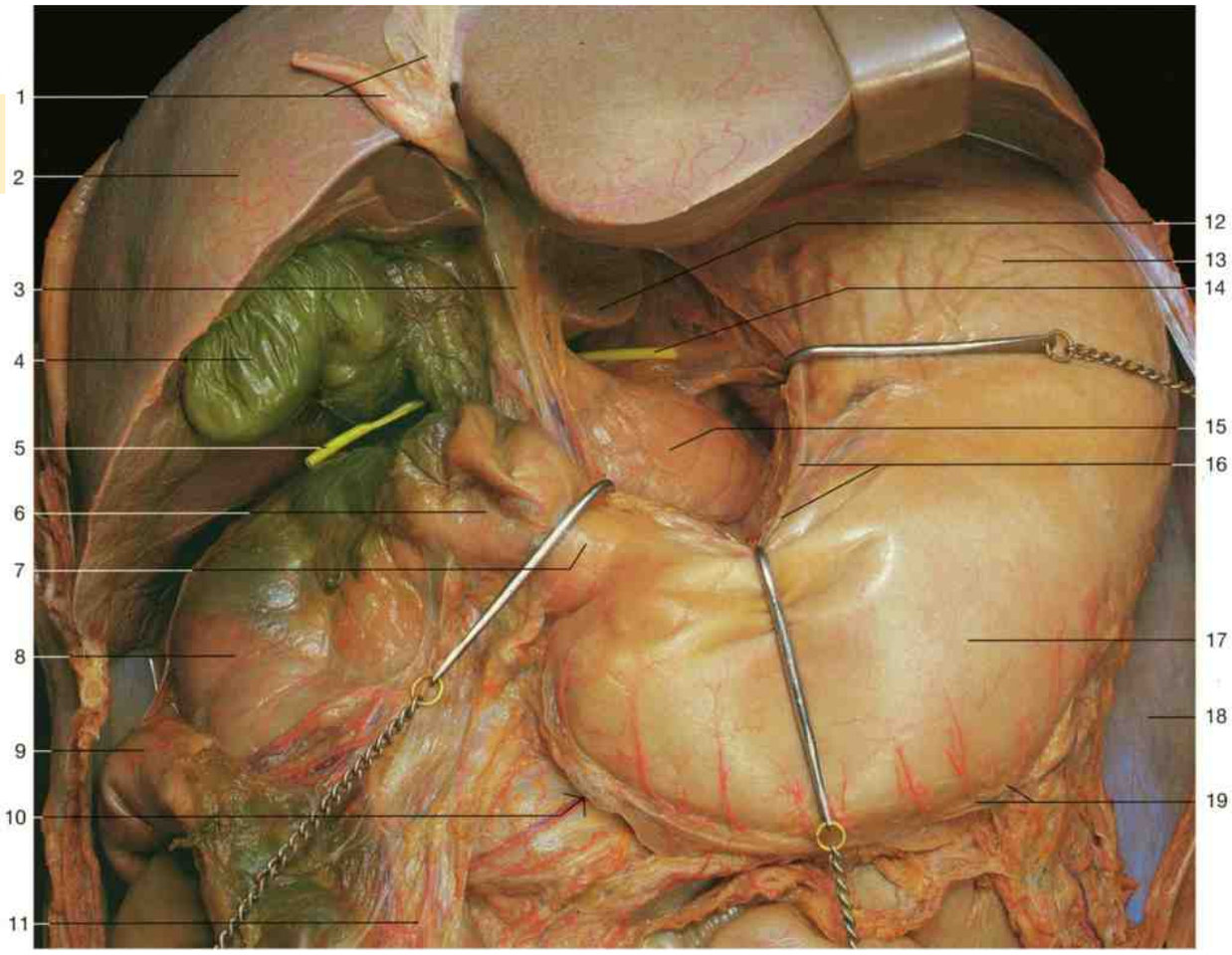

Upper abdominal organs (anterior aspect). **Lesser sac.** Lesser omentum partly removed, liver and stomach slightly reflected.

1 Falciform ligament and ligamentum teres
2 Liver
3 Hepatoduodenal ligament
4 Gallbladder
5 Probe within the epiploic foramen
6 Superior part of duodenum
7 Pylorus
8 Descending part of duodenum
9 Right colic flexure
10 Gastrocolic ligament
11 Greater omentum
12 Caudate lobe of liver
13 Fundus of stomach
14 Probe at the level of the vestibule of lesser sac (through epiploic foramen)
15 Head of pancreas
16 Lesser curvature of stomach
17 Body of stomach
18 Diaphragm
19 Greater curvature with gastro-omental vessels
20 Head of pancreas and gastropancreatic fold
21 Spleen
22 Tail of pancreas
23 Left colic flexure
24 Root of transverse mesocolon
25 Transverse mesocolon
26 Gastrocolic ligament (cut edge)
27 Transverse colon
28 Umbilicus
29 Small intestine
30 Lesser omentum
31 Lesser sac (omental bursa)
32 Duodenum
33 Mesentery
34 Sigmoid colon

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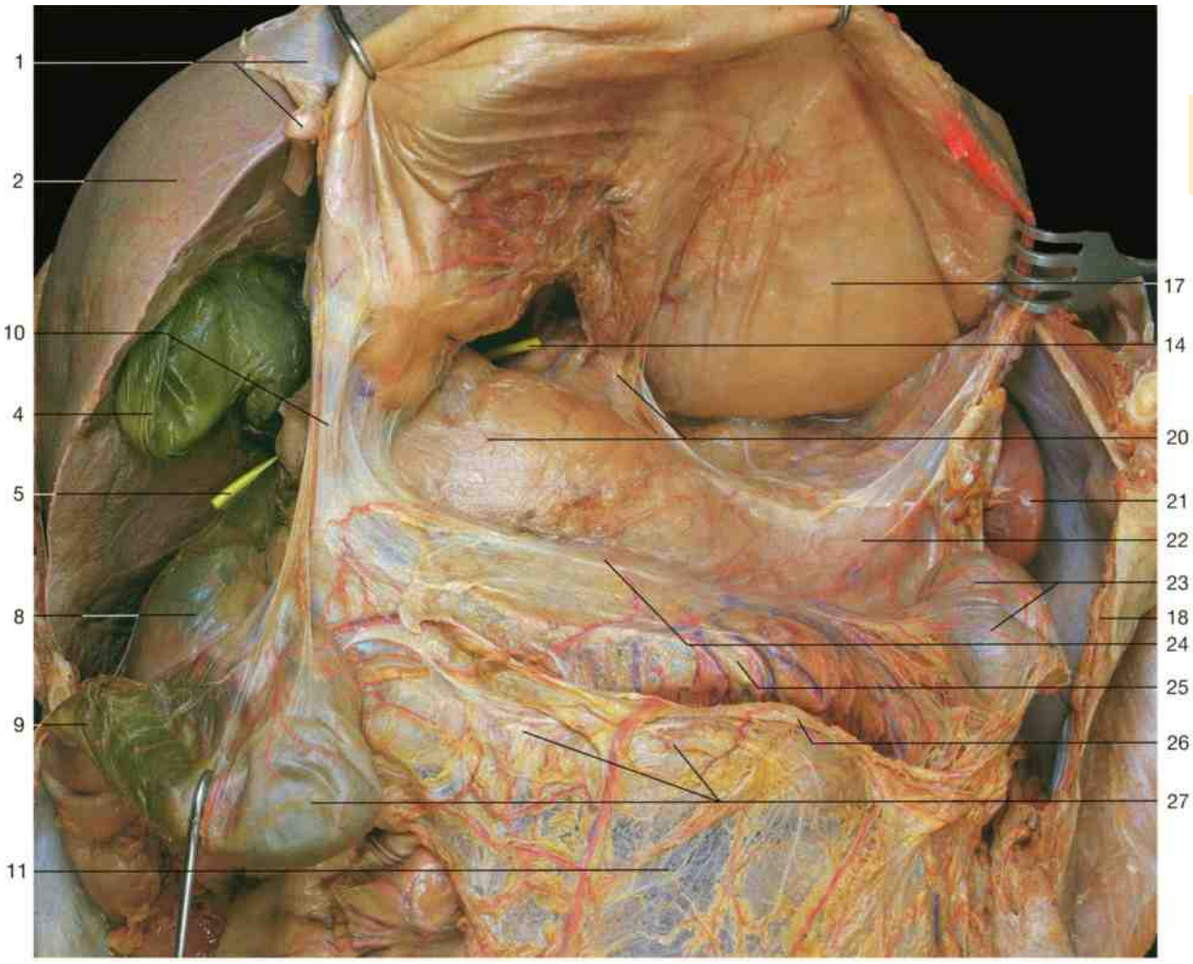
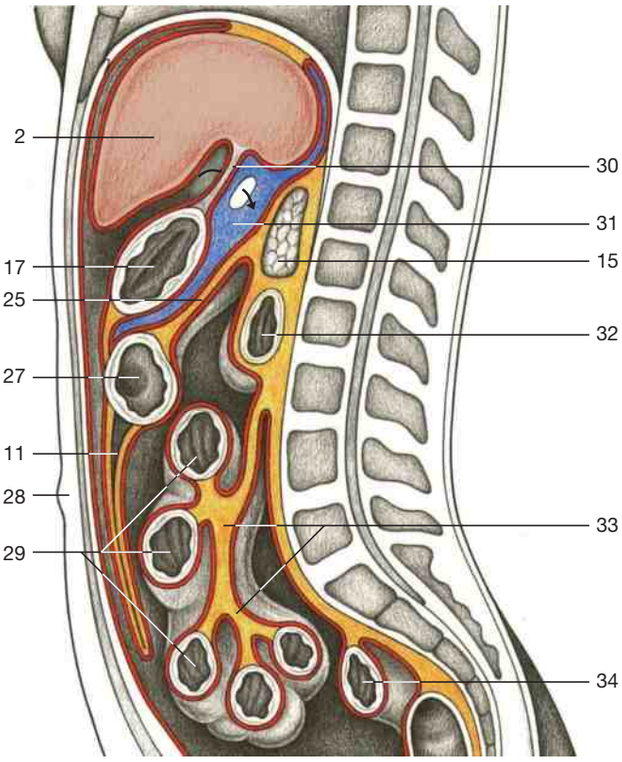


Upper abdominal organs (anterior aspect). **Lesser sac.** The gastrocolic ligament has been divided and the whole stomach raised to display the posterior wall of the lesser sac.



Midsagittal section through abdominal cavity, demonstrating the site of lesser sac (blue). (Schematic drawing.) The epiploic foramen, entrance to the lesser sac, is indicated by an arrow. Red = peritoneum.

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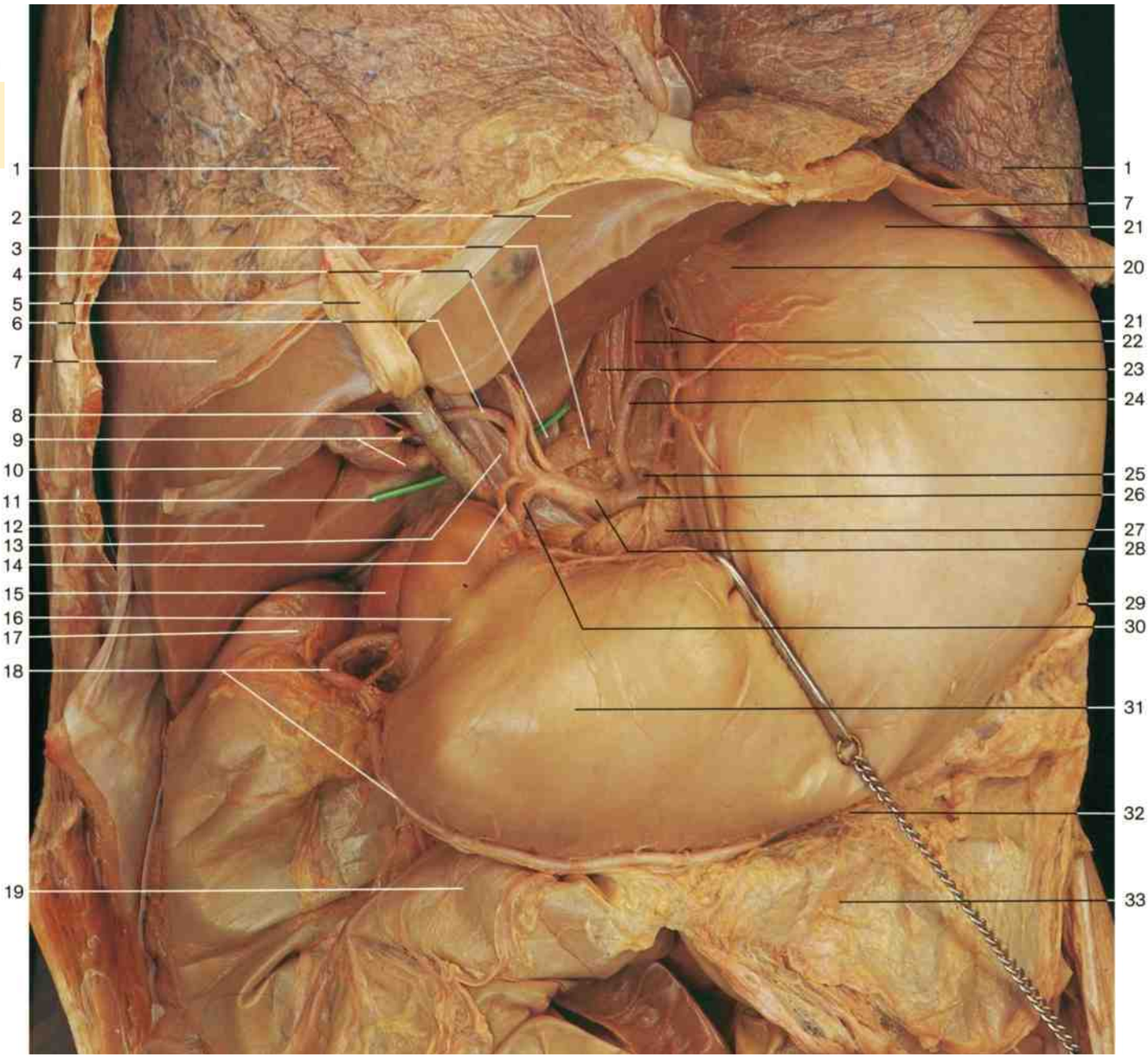
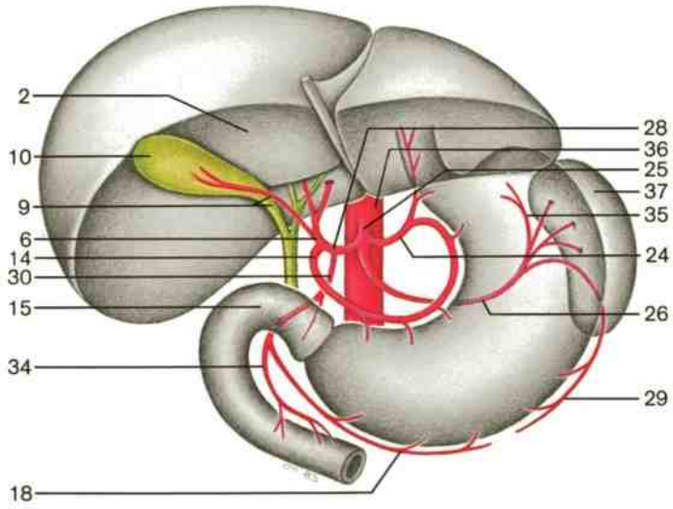


Arteries of upper abdominal organs (anterior aspect). **Dissection of celiac trunk.** The lesser omentum has been removed and the lesser curvature of the stomach reflected to display the branches of the celiac trunk. The probe is situated within the epiploic foramen.



Branches of celiac trunk (schematic drawing).

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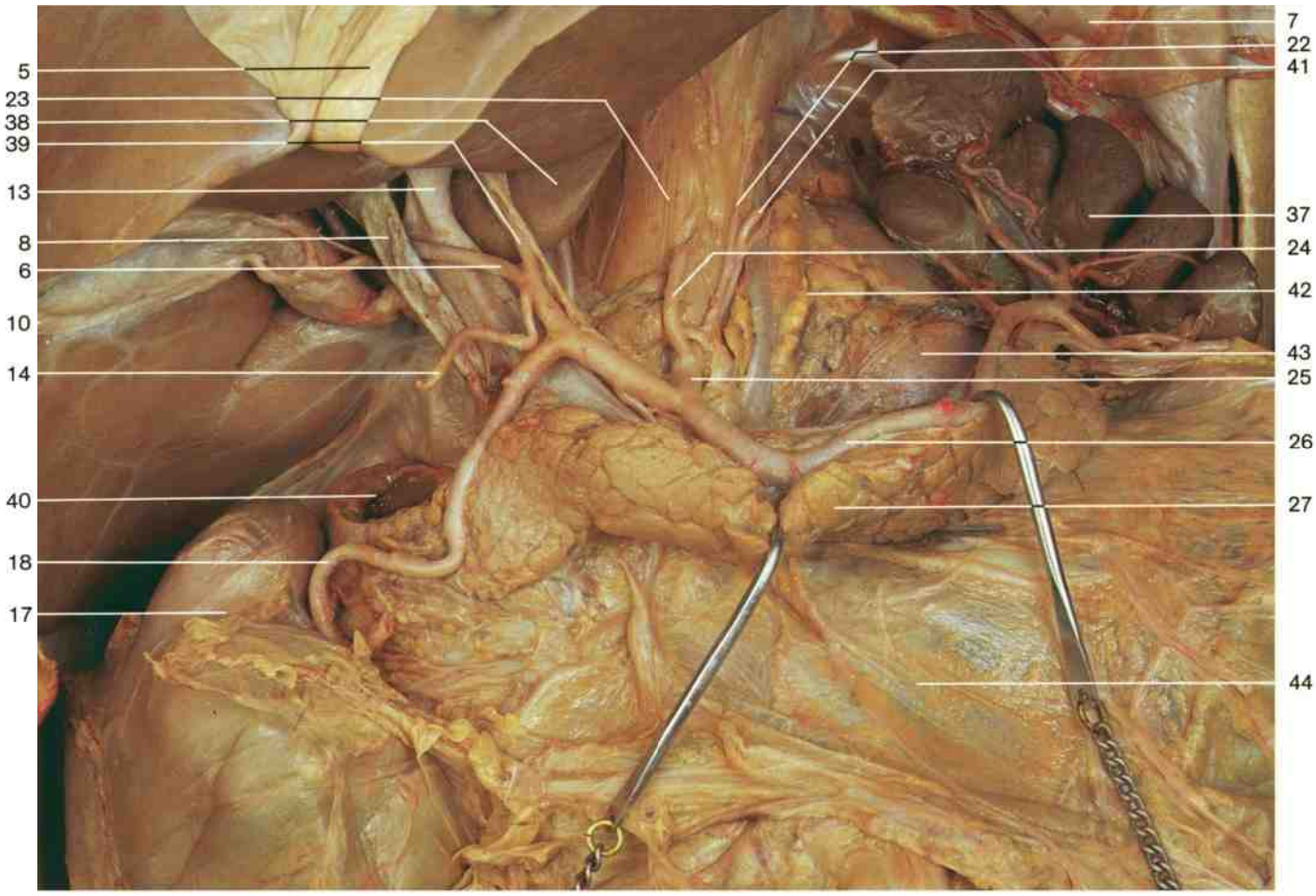

Arteries of upper abdominal organs (anterior aspect). **Branches of celiac trunk; blood supply of liver, pancreas, and spleen.** The stomach, superior part of duodenum, and celiac ganglion have been removed to reveal the anterior aspect of the posterior wall of the lesser sac (omental bursa) and the vessels and ducts of the hepatoduodenal ligament. The pancreas has been slightly reflected anteriorly.

1 Lung
2 Liver (visceral surface)
3 Lymph node
4 Inferior vena cava
5 Ligamentum teres (reflected)
6 Right branch of hepatic artery proper
7 Diaphragm
8 Common hepatic duct (dilated)
9 Cystic duct and artery
10 Gallbladder
11 Probe in epiploic foramen
12 Right lobe of liver
13 Portal vein
14 Right gastric artery
15 Duodenum
16 Pylorus
17 Right colic flexure
18 Right gastro-omental (gastro-epiploic) artery
19 Transverse colon
20 Abdominal part of esophagus (cardiac part of stomach)
21 Fundus of stomach
22 Esophageal branches of left gastric artery
23 Lumbar part of diaphragm
24 Left gastric artery
25 Celiac trunk
26 Splenic artery
27 Pancreas
28 Common hepatic artery
29 Left gastro-omental (gastro-epiploic) artery
30 Gastroduodenal artery
31 Pyloric part of stomach
32 Greater curvature of stomach
33 Gastrocolic ligament
34 Superior pancreaticoduodenal artery
35 Short gastric arteries
36 Aorta
37 Spleen
38 Caudate lobe of liver
39 Left branch of hepatic artery proper
40 Descending part of duodenum (cut)
41 Left inferior phrenic artery
42 Suprarenal gland
43 Kidney
44 Transverse mesocolon

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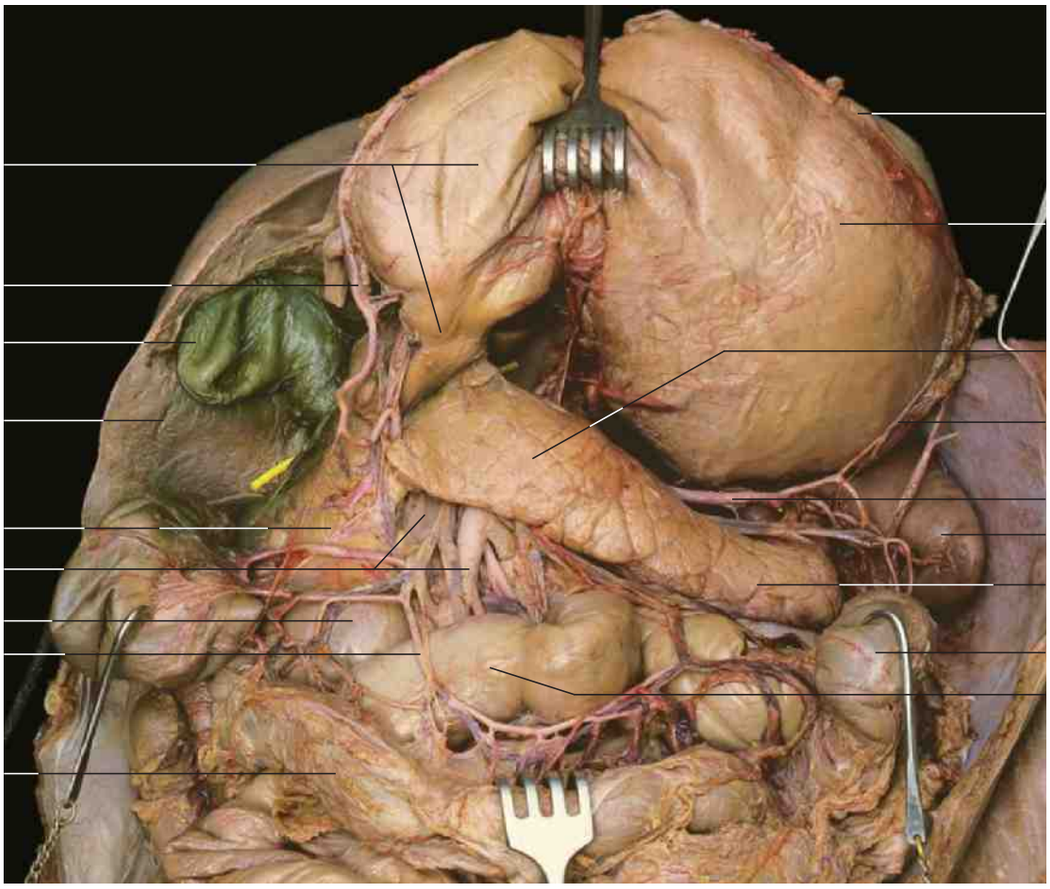
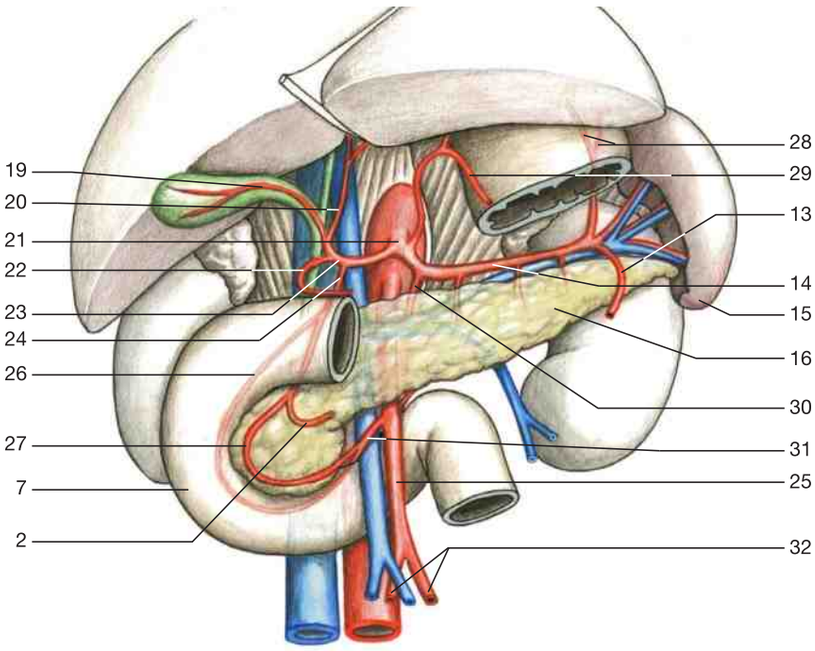


Posterior abdominal wall with pancreas and extrahepatic bile ducts in situ (anterior aspect). The gastrocolic ligament has been divided, the transverse colon and the stomach replaced to display the pancreas and superior mesenteric vessels.



Blood supply of upper abdominal organs (branches of the celiac trunk and superior mesenteric artery). (Schematic drawing.)

1 Stomach (pyloric part) and pylorus
2 Right gastro-omental (gastro-epiploic) artery
3 Fundus of gallbladder
4 Liver (right lobe)
5 Head of pancreas
6 Superior mesenteric artery and vein
7 Duodenum
8 Middle colic artery
9 Transverse colon
10 Greater curvature of stomach (remnants of gastrocolic ligament)
11 Body of stomach
12 Body of pancreas
13 Left gastro-omental (gastro-epiploic) artery
14 Splenic artery
15 Spleen
16 Tail of pancreas
17 Left colic flexure
18 Jejunum
19 Cystic artery
20 Hepatic artery proper
21 Celiac trunk
22 Right gastric artery
23 Common hepatic artery
24 Gastroduodenal artery
25 Superior mesenteric artery
26 Superior posterior pancreaticoduodenal artery
27 Superior anterior pancreaticoduodenal artery
28 Short gastric arteries
29 Left gastric artery
30 Posterior pancreatic branch of splenic artery
31 Inferior pancreaticoduodenal artery
32 Jejunal arteries

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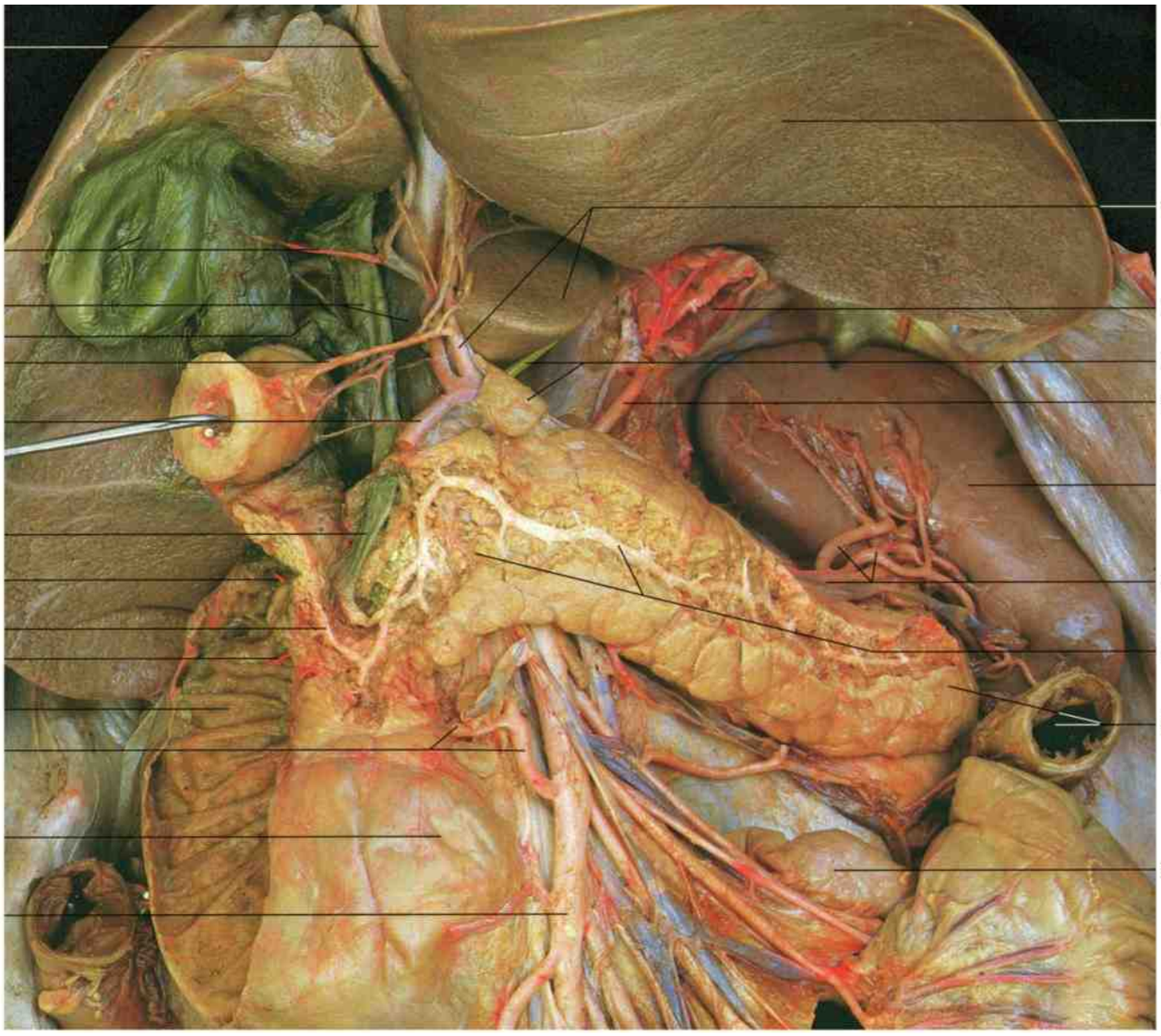

Posterior abdominal wall with duodenum, pancreas, and spleen (anterior aspect). Dissection of pancreatic and common bile duct. The stomach has been removed, the liver raised, and the duodenum anteriorly opened.

1 Ligamentum teres
2 Gallbladder and cystic artery
3 Common hepatic duct and portal vein
4 Cystic duct
5 Right gastric artery (pylorus with superior part of duodenum, cut and reflected)
6 Gastroduodenal artery
7 Common bile duct
8 Probe within the minor duodenal papilla
9 Accessory pancreatic duct
10 Probe within the major duodenal papilla
11 Descending part of duodenum (opened)
12 Middle colic artery and inferior pancreaticoduodenal artery
13 Horizontal part of duodenum (distended)
14 Superior mesenteric artery
15 Liver (left lobe)
16 Caudate lobe of liver and hepatic artery proper
17 Abdominal part of esophagus (cut)
18 Probe in epiploic foramen and lymph node
19 Left gastric artery
20 Spleen
21 Splenic vein and branches of splenic artery
22 Main pancreatic duct and head of pancreas
23 Left colic flexure and tail of pancreas
24 Duodenojejunal flexure

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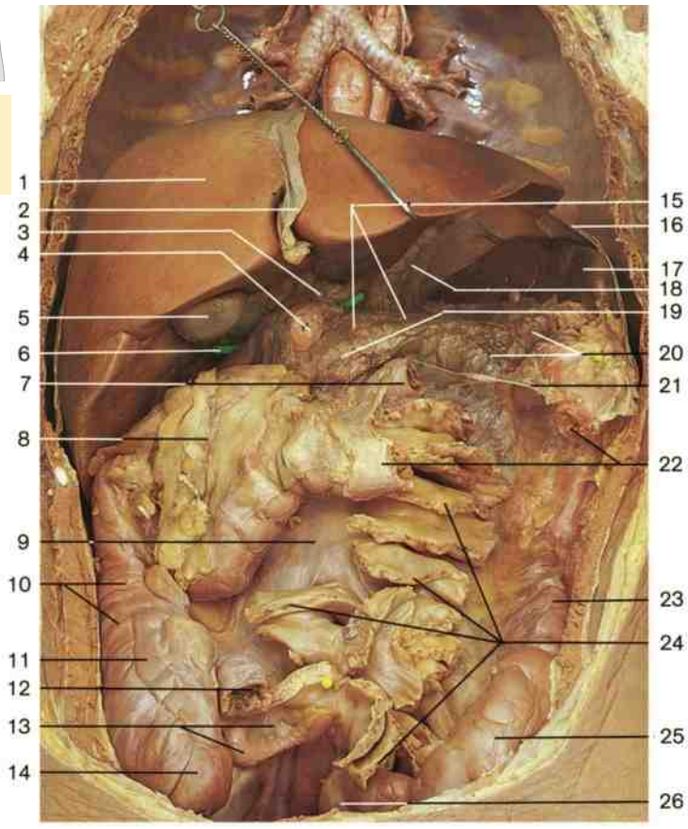
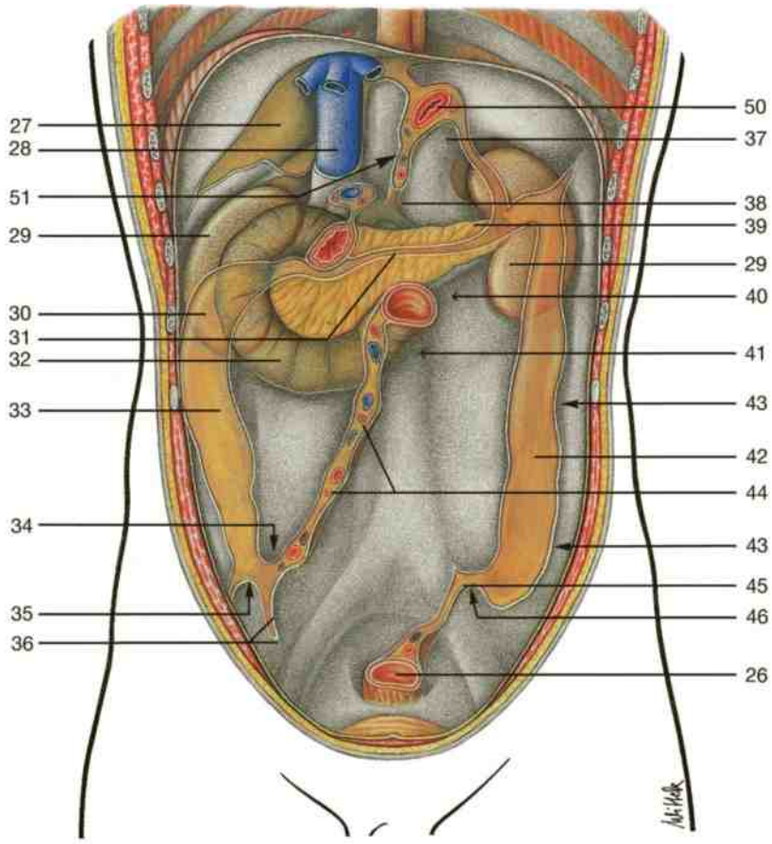


Abdominal cavity after removal of stomach, jejunum, ileum, and part of the transverse colon. Liver has been slightly raised.



1 Liver
2 Falciform ligament
3 Hepatoduodenal ligament
4 Pylorus (divided)
5 Gallbladder
6 Probe within the epiploic foramen
7 Duodenojejunal flexure (divided)
8 Greater omentum
9 Root of mesentery
10 Ascending colon
11 Free colic taenia
12 End of ileum (divided)
13 Vermiform appendix with meso-appendix
14 Cecum
15 Pancreas and site of lesser sac
16 Diaphragm
17 Spleen
18 Cardia (part of stomach, divided)
19 Head of pancreas
20 Body and tail of pancreas
21 Transverse mesocolon
22 Transverse colon (divided)
23 Descending colon
24 Cut edge of mesentery
25 Sigmoid colon
26 Rectum
27 Attachment of bare area of liver
28 Inferior vena cava
29 Kidney
30 Attachment of right colic flexure
31 Root of transverse mesocolon
32 Junction between descending and horizontal parts of duodenum
33 Bare surface for ascending colon
34 Ileocecal recess
35 Retrocecal recess
36 Root of meso-appendix
37 Superior recess } of lesser sac (omental bursa)
38 Isthmus (opening) } of lesser sac (omental bursa)
39 Splenic recess } of lesser sac (omental bursa)
40 Superior duodenal recess
41 Inferior duodenal recess
42 Bare surface for descending colon
43 Paracolic recesses
44 Root of mesentery
45 Root of mesosigmoid
46 Intersigmoid recess
47 Hepatic veins
48 Duodenojejunal flexure
49 Attachment of left colic flexure
50 Esophagus
51 Entrance to lesser sac through the epiploic foramen

Peritoneal reflections from organs and the position of root of mesentery and peritoneal recesses on the posterior abdominal wall (schematic drawing).

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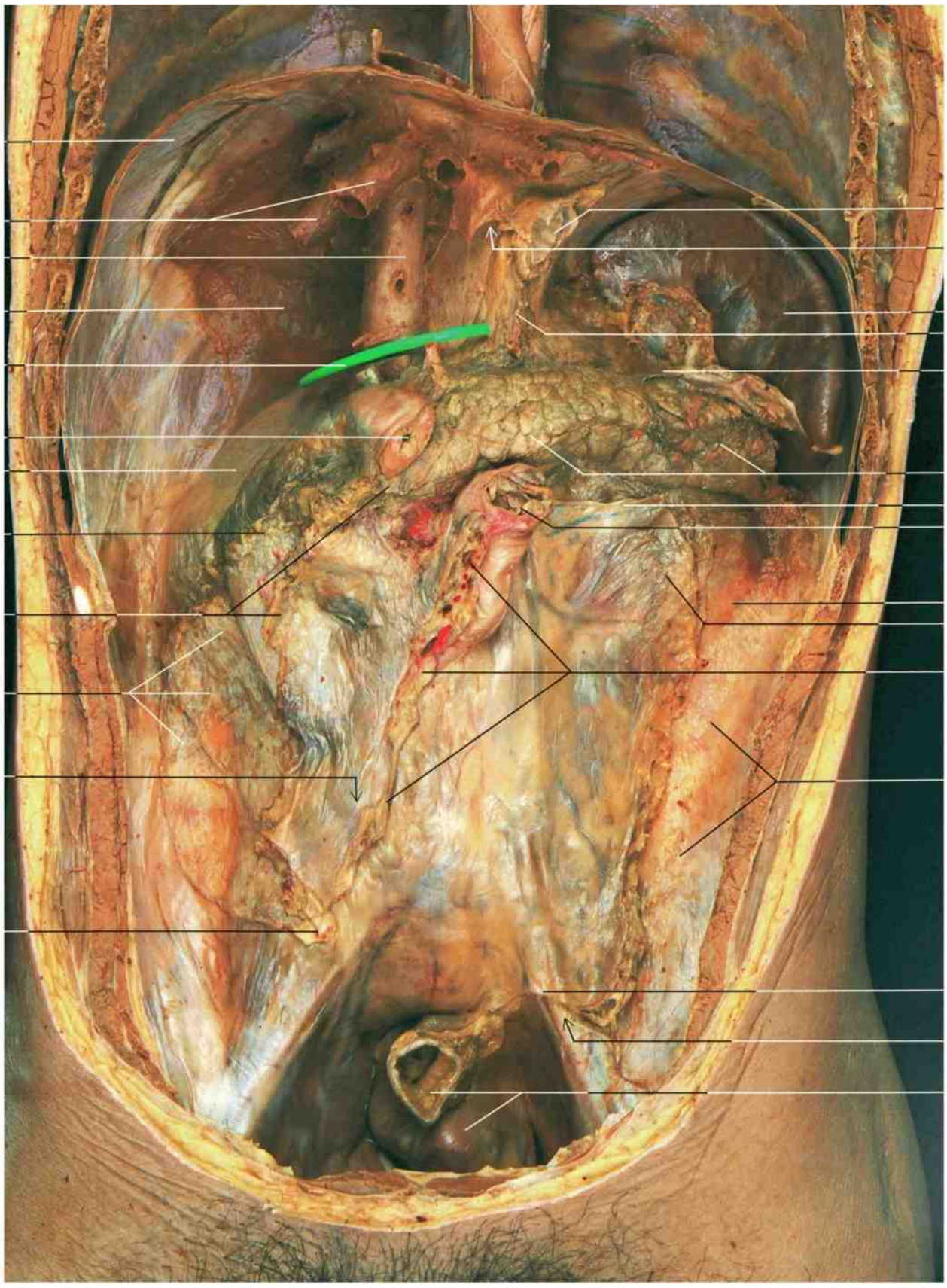

Peritoneal recesses on the posterior abdominal wall. The liver, stomach, jejunum, ileum, and colon have been removed. The duodenum, pancreas, and spleen have been left in place.

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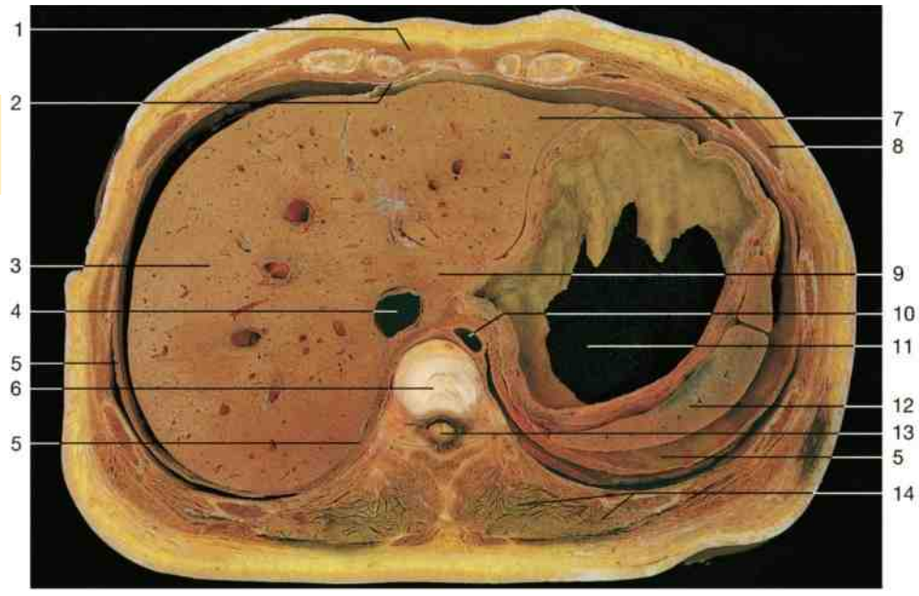
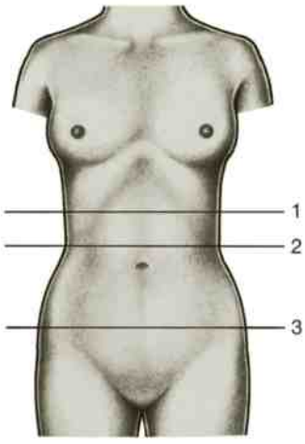


Horizontal section through the abdominal cavity at level 1 (from below).

Horizontal section through the abdominal cavity (MRI scan, corresponding to level 1). Arrow: stomach.

1 Rectus abdominis muscle
2 Falciform ligament
3 Liver (right lobe)
4 Inferior vena cava
5 Diaphragm
6 Intervertebral disc
7 Liver (left lobe)
8 Rib
9 Liver (caudate lobe)
10 Abdominal (descending) aorta
11 Stomach
12 Spleen
13 Spinal cord
14 Longissimus and iliocostalis muscles
15 Body of vertebra
16 Rectus abdominis muscle
17 External abdominal oblique muscle
18 Transverse colon
19 Head of pancreas
20 Greater duodenal papilla
21 Duodenum
22 Suprarenal gland and ureter
23 Kidney
24 Round ligament of liver
25 Superior mesenteric artery and vein
26 Psoas major muscle
27 Descending colon
28 Quadratus lumborum muscle
29 Cauda equina
30 Right renal vein
31 Small intestine
32 Iliacus muscle
33 Ilium
34 Ileocecal valve
35 Cecum
36 Common iliac artery and vein
37 Gluteus medius muscle
38 Vertebral canal and dura mater



Levels of sections.

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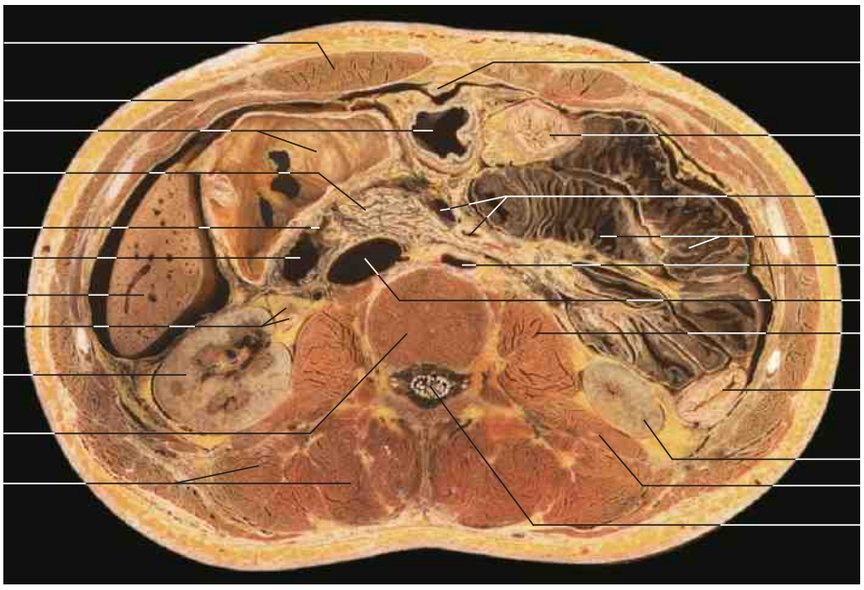
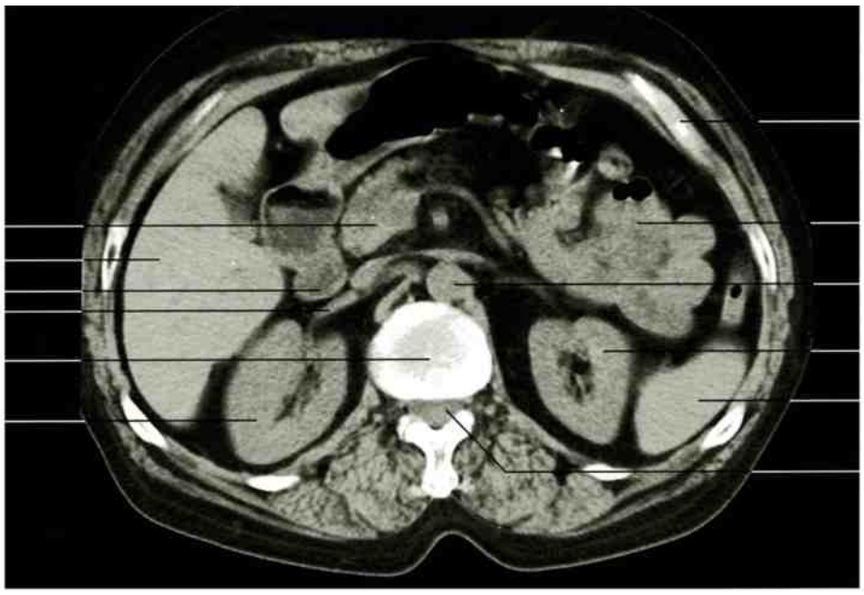
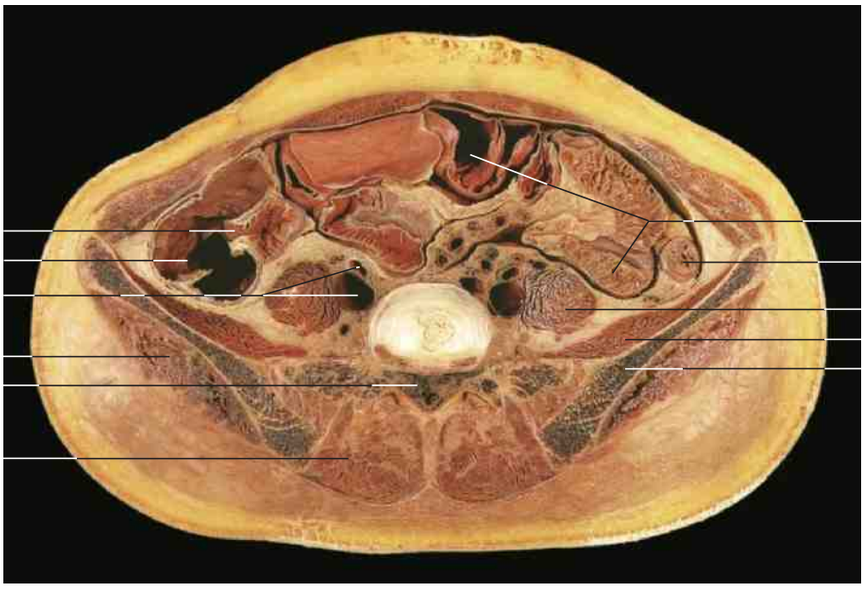


Horizontal section through the abdominal cavity at the level of greater duodenal papilla (from below).



Horizontal section through the abdominal cavity (CT scan, corresponding to level 2).



Horizontal section through the abdominal cavity at level 3 (from below).

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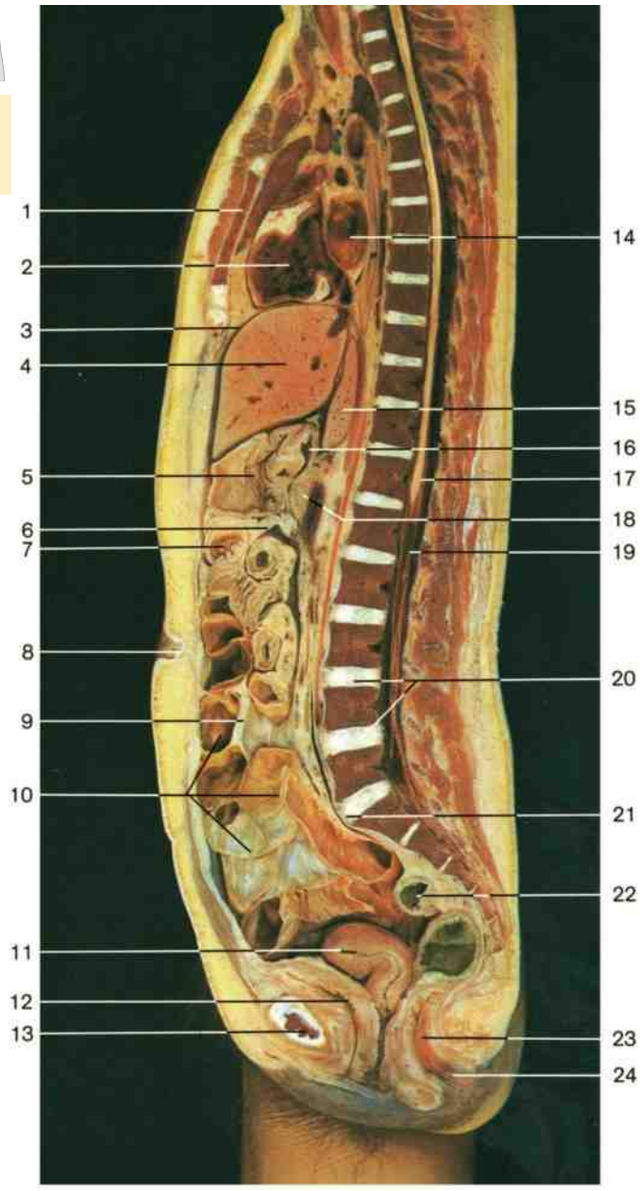
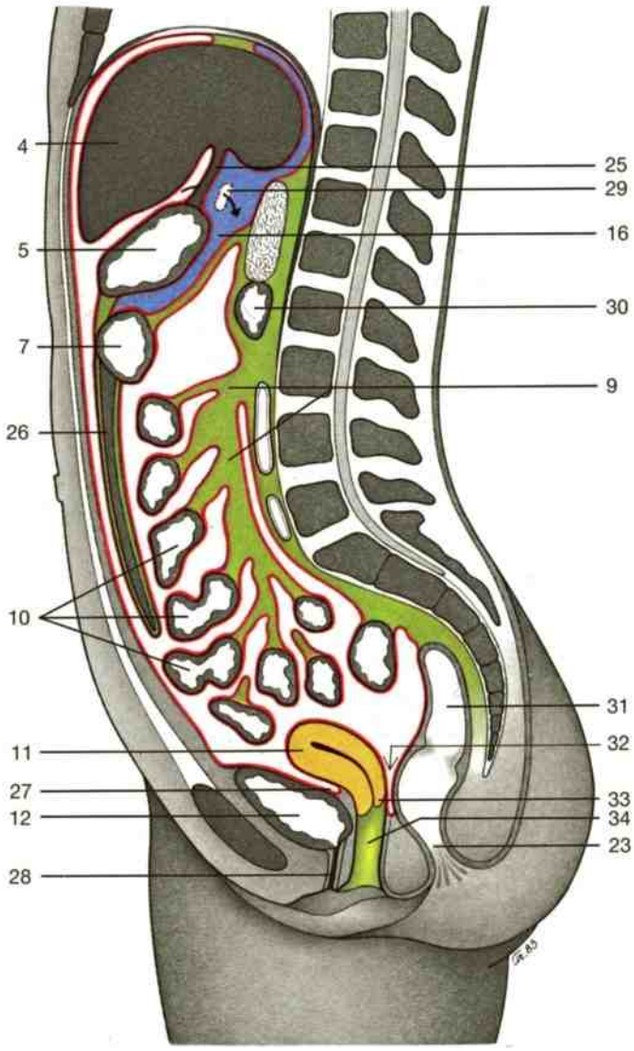


Midsagittal section through the trunk (female).



Midsagittal section through the trunk (female). (Schematic drawing.) Blue = omental bursa; red = peritoneum.

1 Sternum
2 Right ventricle of heart
3 Diaphragm
4 Liver
5 Stomach
6 Transverse mesocolon
7 Transverse colon
8 Umbilicus
9 Mesentery
10 Small intestine
11 Uterus
12 Urinary bladder
13 Pubic symphysis
14 Left atrium of heart
15 Caudate lobe of liver
16 Omental bursa or lesser sac
17 Conus medullaris
18 Pancreas
19 Cauda equina
20 Intervertebral discs (lumbar vertebral column)
21 Sacral promontory
22 Sigmoid colon
23 Anal canal
24 Anus
25 Lesser omentum
26 Greater omentum
27 Vesico-uterine pouch
28 Urethra
29 Epiploic (omental) foramen
30 Duodenum
31 Rectum
32 Recto-uterine pouch
33 Vaginal part of cervix of uterus
34 Vagina

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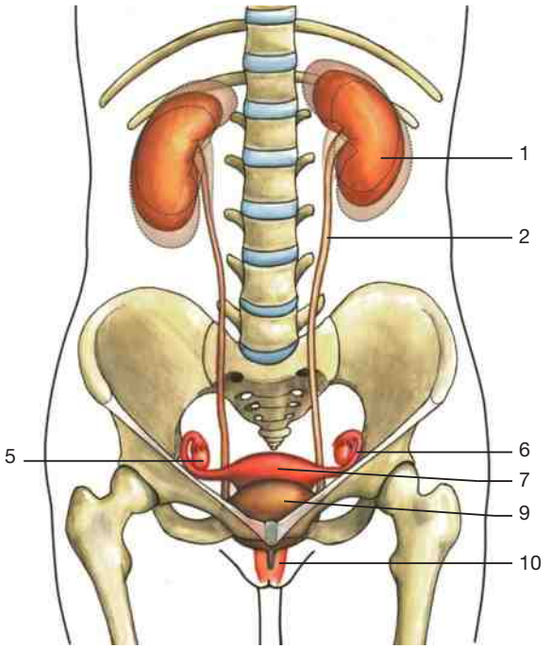
6 Retroperitoneal Organs

Retroperitoneal organs of the female (anterior aspect). View of the female pelvis showing uterus with uterine ligaments, ovary, and urinary bladder (from Lütjen-Drecoll, Rohen, Innenansichten des menschlichen Körpers, 2010).

1 Kidney
2 Ureter
3 Inferior vena cava
4 Abdominal aorta
5 Ovary
6 Uterine tube
7 Uterus
8 Round ligament and inguinal canal
9 Urinary bladder
10 Vagina

The organs of the urinary system (kidney, ureter, and, in the female, genital organs) are located together with vessels and nerves (aorta, inferior vena cava, plexus solaris, etc.) within the retroperitoneal space.
The upper part of the kidneys reaches the level of the margin of the lung. During respiration, the kidneys move slightly within their fasciae of Gerota. Parallel with the vertebral column, the ureter runs towards the urinary bladder. The great center of the autonomic nervous system, the solar plexus (celiac ganglion, etc.), is located in front of the abdominal aorta.
The genital organs of the female (uterus, uterine tube, ovary) are located within the pelvic cavity. In the male, the testis has moved out of the abdominal cavity and penetrated the inguinal canal to be finally located within the extragenital organs.



Position of kidneys, urinary and genital organs in the female (anterior aspect, schematic drawing). The excursions of the kidneys with the respiratory movements of the diaphragm are indicated.

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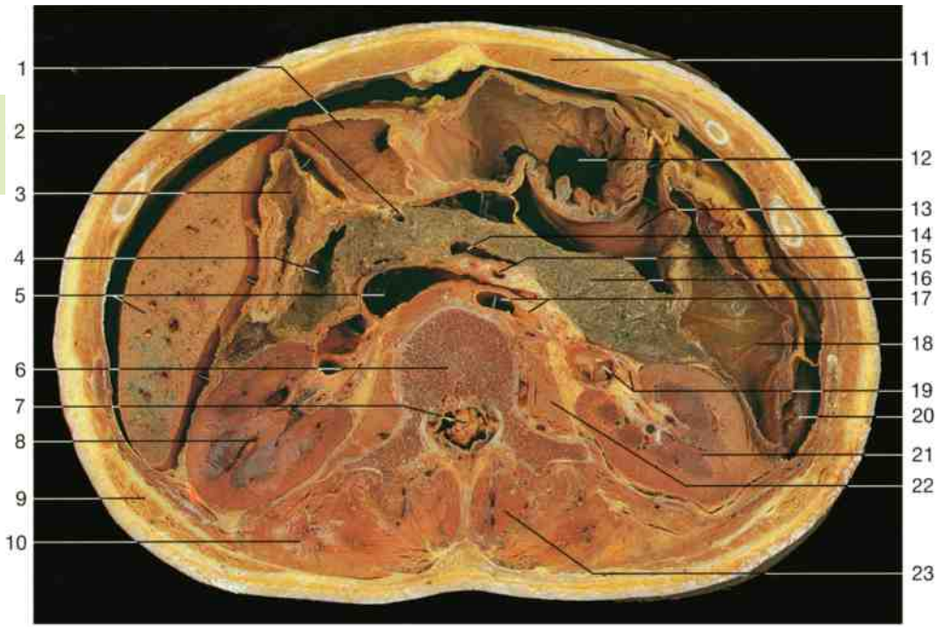
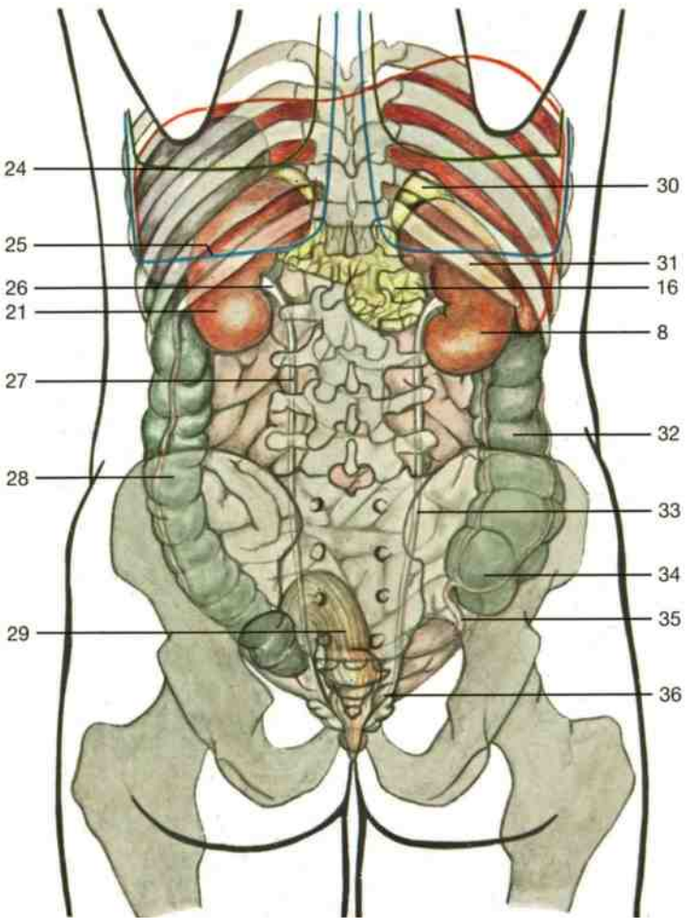
Position of the Urinary Organs

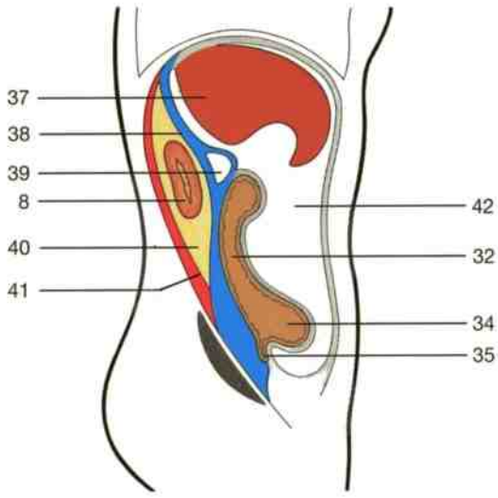


Horizontal section through the abdominal cavity at the level of the first lumbar vertebra (from below).

1 Pyloric antrum
2 Gastroduodenal artery
3 Descending part of duodenum
4 Vestibule of lesser sac
5 Inferior vena cava and liver
6 Body of first lumbar vertebra
7 Cauda equina
8 Right kidney
9 Latissimus dorsi muscle
10 Iliocostalis muscle
11 Rectus abdominis muscle
12 Stomach
13 Lesser sac
14 Splenic vein
15 Superior mesenteric artery
16 Pancreas
17 Aorta and left renal artery
18 Transverse colon
19 Renal artery and vein
20 Spleen
21 Left kidney
22 Psoas major muscle
23 Multifidus muscle
24 Margin of lung
25 Margin of pleura
26 Renal pelvis
27 Left ureter
28 Descending colon
29 Rectum
30 Right suprarenal gland
31 Twelfth rib
32 Ascending colon
33 Right ureter
34 Cecum
35 Vermiform appendix
36 Urinary bladder
37 Liver
38 Anterior layer of renal fascia
39 Duodenum
40 Perirenal fatty tissue
41 Posterior layer of renal fascia
42 Abdominal cavity



Positions of urinary organs (posterior aspect, schematic drawing). Notice that the upper part of the kidney reaches the level of the margin of pleura and lung.



Retroperitoneal tissue, position of the right kidney (schematic drawing).
Yellow = adipose capsule of kidney.

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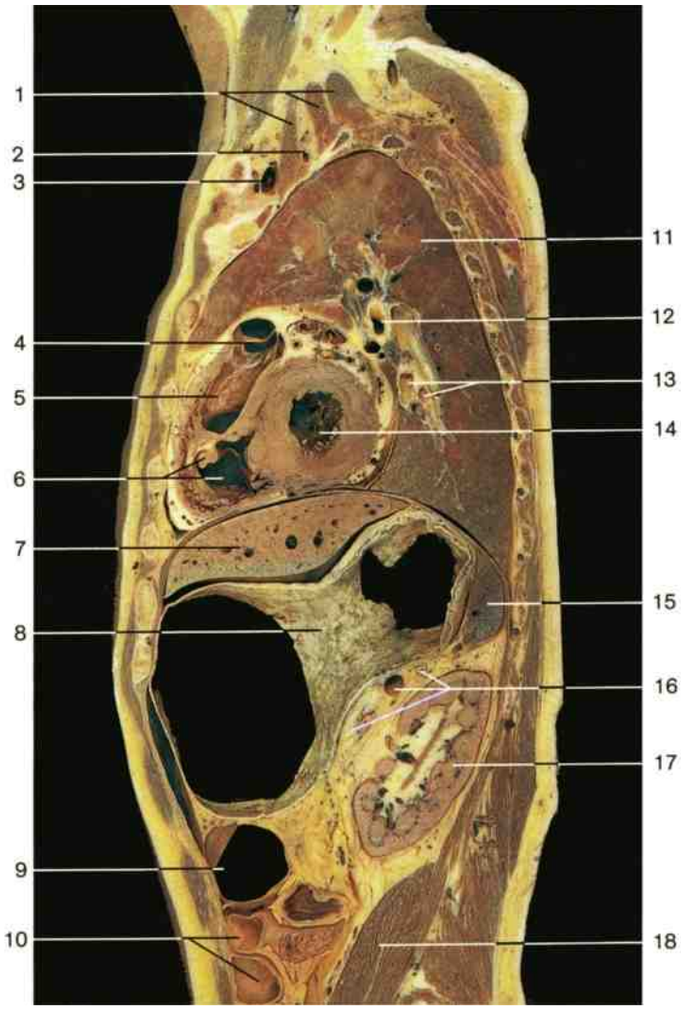
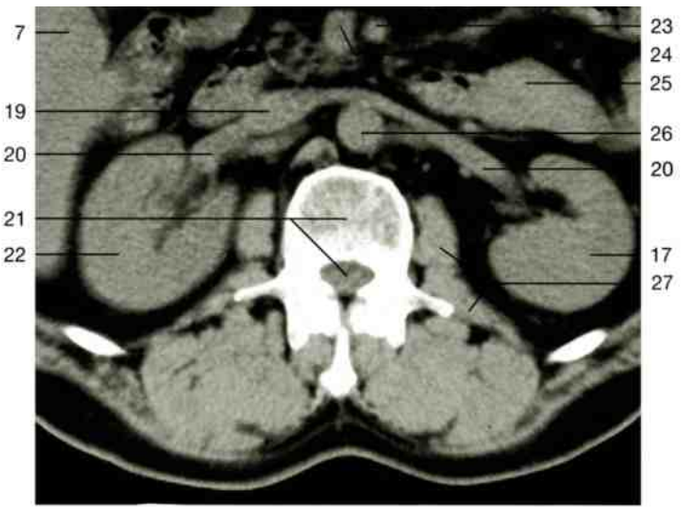
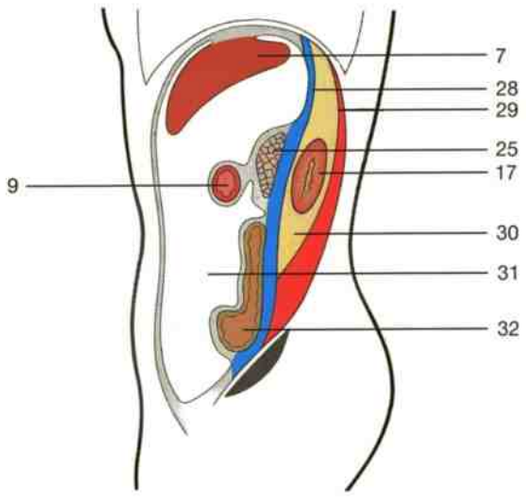


Parasagittal section through the thoracic and abdominal cavities at the level of the left kidney (5.5 cm left of median plane).

1 Scalenus anterior, medius, and posterior muscles
2 Left subclavian artery
3 Left subclavian vein
4 Pulmonic valve
5 Arterial cone
6 Right ventricle of heart
7 Liver
8 Stomach
9 Transverse colon
10 Small intestine
11 Left lung
12 Left main bronchus
13 Branches of pulmonary vein
14 Left ventricle of heart
15 Spleen
16 Splenic artery and vein and pancreas
17 Left kidney
18 Psoas major muscle
19 Inferior vena cava
20 Renal vein
21 Body of twelfth thoracic vertebra and vertebral canal
22 Right kidney
23 Superior mesenteric artery
24 Superior mesenteric vein
25 Pancreas
26 Abdominal aorta
27 Left psoas major and quadratus lumborum muscles
28 Anterior layer of renal fascia } of Gerota
29 Posterior layer of renal fascia } of Gerota
30 Perirenal fatty tissue
31 Abdominal cavity
32 Descending and sigmoid colon



Horizontal section through the retroperitoneal region at the level of 12th thoracic vertebra (CT scan, from below).



Retroperitoneal tissue, position of the left kidney (schematic drawing).

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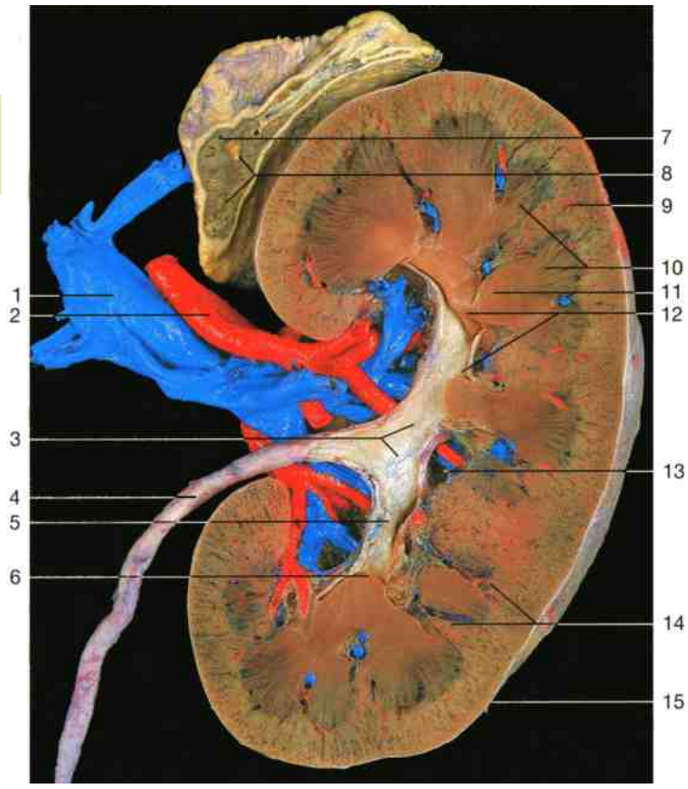
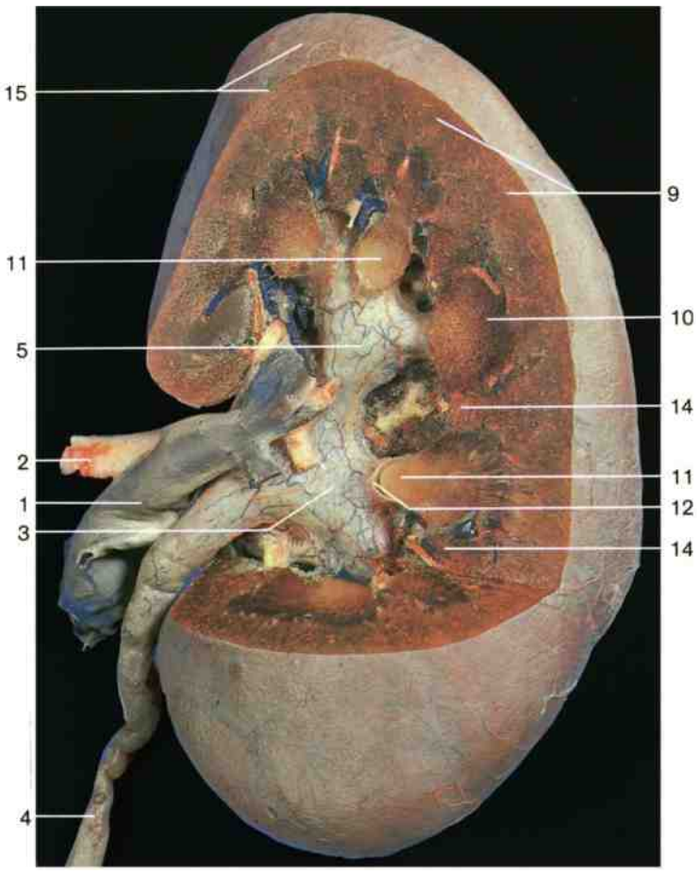


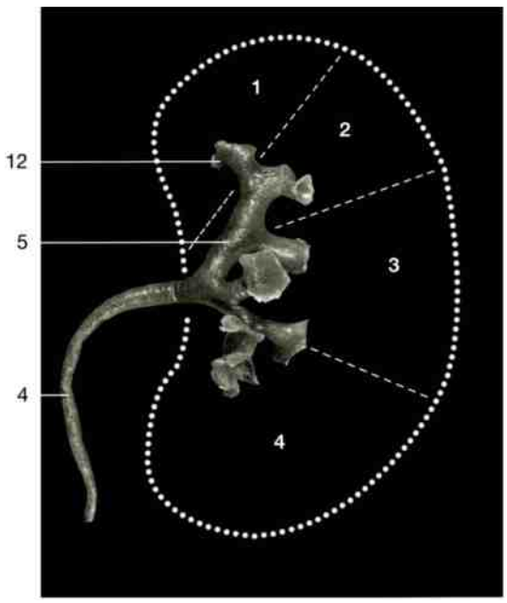
Coronal section through right kidney and suprarenal gland (posterior aspect). The renal pelvis has been opened and the fatty tissue removed to display the renal vessels.

1 Renal vein
2 Renal artery
3 Renal pelvis
4 Abdominal part of ureter
5 Major renal calyx
6 Cribriform area of renal papilla
7 Cortex of suprarenal gland
8 Medulla of suprarenal gland
9 Cortex of kidney
10 Medulla of kidney
11 Renal papilla
12 Minor renal calyx
13 Renal sinus
14 Renal columns
15 Fibrous capsule of kidney



Right kidney (posterior aspect). Partial coronal section to expose internal aspect of the kidney.

Each kidney can be divided into five segments supplied by individual interlobar arteries known as end arteries. Thus, obstruction leads to infarcts marking the trace of segment borders. The anterior kidney surface reveals four segments; the posterior, only three (Nos. 1, 4, and 5).



Cast of renal pelvis and calices.
1–4 = Renal segments on anterior surface.

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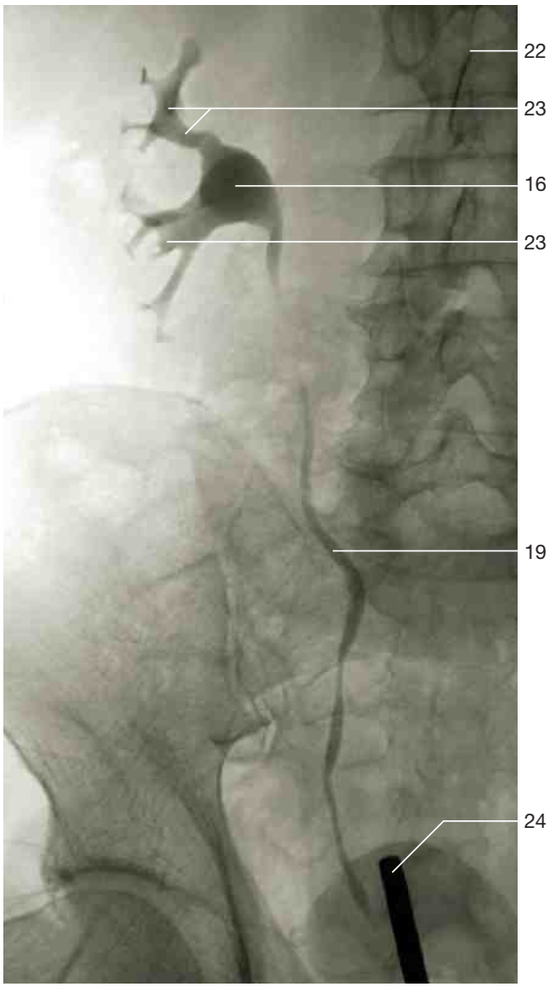
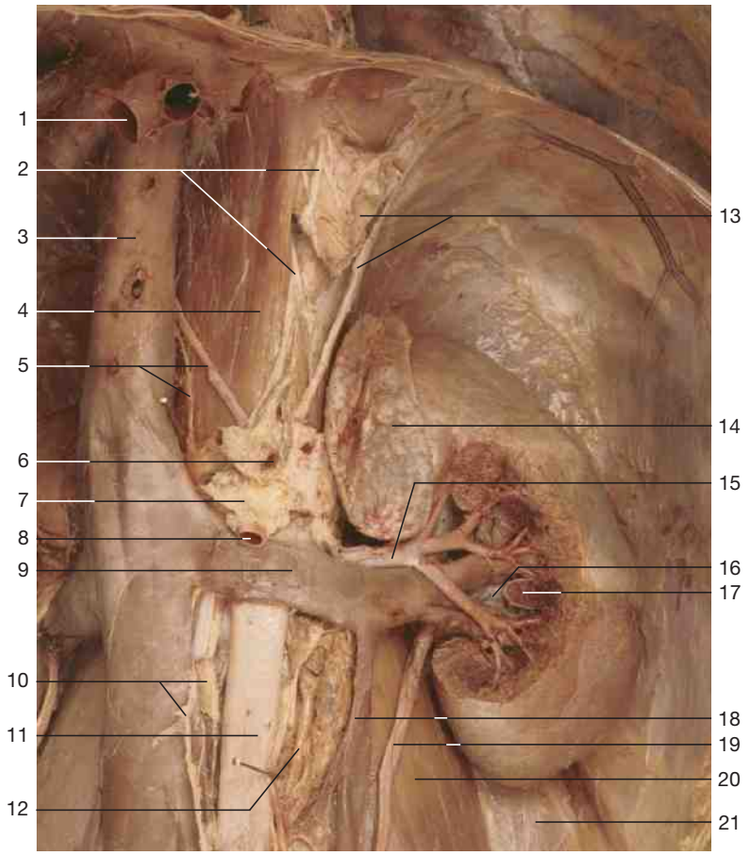


Renal pelvis with calices and ureter (X-ray, retrograde injection; by courtesy of Prof. Herrlinger, Fürth, Germany).

1 Hepatic vein
2 Anterior and posterior vagal trunk
3 Inferior vena cava
4 Lumbar part of diaphragm
5 Right greater and lesser splanchnic nerves
6 Celiac trunk
7 Celiac ganglion and plexus
8 Superior mesenteric artery
9 Left renal vein
10 Right sympathetic trunk and ganglion
11 Abdominal aorta
12 Left sympathetic trunk
13 Esophagus (cut), left greater splanchnic nerve
14 Left suprarenal gland
15 Left renal artery
16 Renal pelvis
17 Renal papilla with minor calyx
18 Left testicular vein
19 Ureter
20 Psoas major muscle
21 Quadratus lumborum muscle
22 Lumbar vertebra (L_2)
23 Renal calyx
24 Catheter

Right kidney (ultrasound image; by courtesy of Prof. Herrlinger, Fürth, Germany).



Left kidney and suprarenal gland in situ. The anterior cortical layer of the kidney has been removed to display the renal pelvis and papillae.

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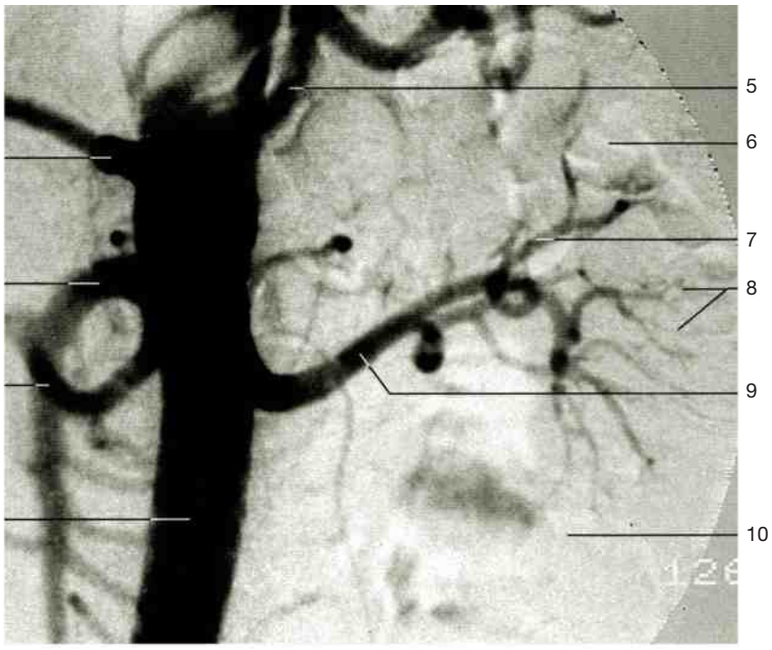
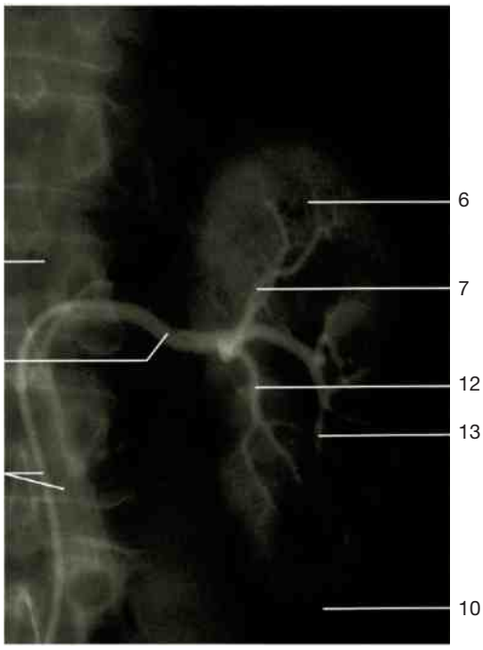
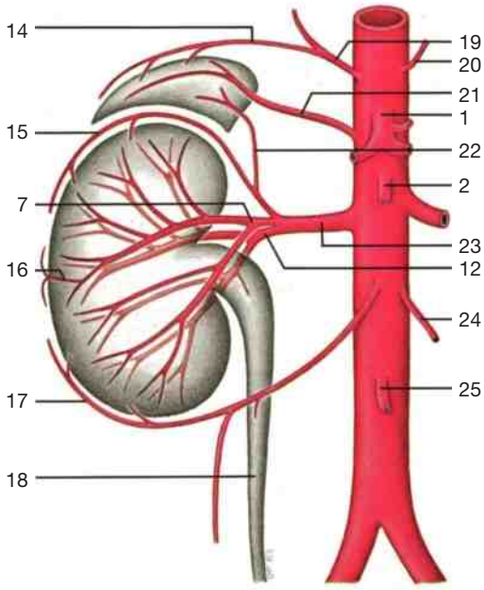


Abdominal aorta (subtraction angiography).

1 Celiac trunk
2 Superior mesenteric artery
3 Middle colic artery
4 Abdominal aorta (with catheter)
5 Splenic artery
6 Upper pole of kidney
7 Anterior branch of renal artery
8 Interlobular arteries
9 Left renal artery
10 Lower pole of kidney
11 Body of first lumbar vertebra
12 Posterior branch of renal artery
13 Anterior inferior segmental artery
14 Superior suprarenal artery
15 Upper capsular artery
16 Perforating artery
17 Lower capsular artery
18 Ureter
19 Right inferior phrenic artery
20 Left inferior phrenic artery
21 Middle suprarenal artery
22 Inferior suprarenal artery
23 Renal artery
24 Left testicular (or ovarian) artery
25 Inferior mesenteric artery



Left kidney (arteriography).



Arteries of kidney and suprarenal gland (schematic drawing).

The kidneys are perfused by app. 1.500–1.800 l of blood per day via the renal arteries. Out of more than 1.2 million renal corpuscles (glomeruli), 1% of this volume (id 150–180 l) is filtered as a cell free fluid. In the tubular system, 99% of this fluid, together with useful substances like glucose and ions, are reabsorbed. Only 1–1.5 l of urine containing waste material is excreted.

Diseases of the renal vascular system may impair the filtering process and thereby the composition of the blood.

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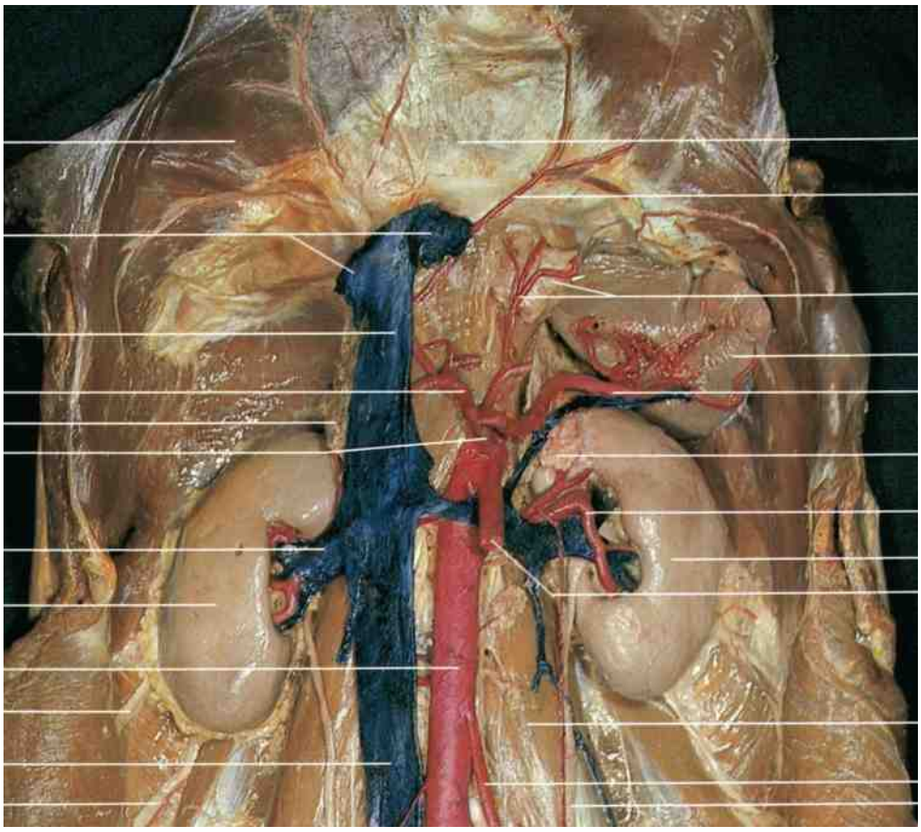
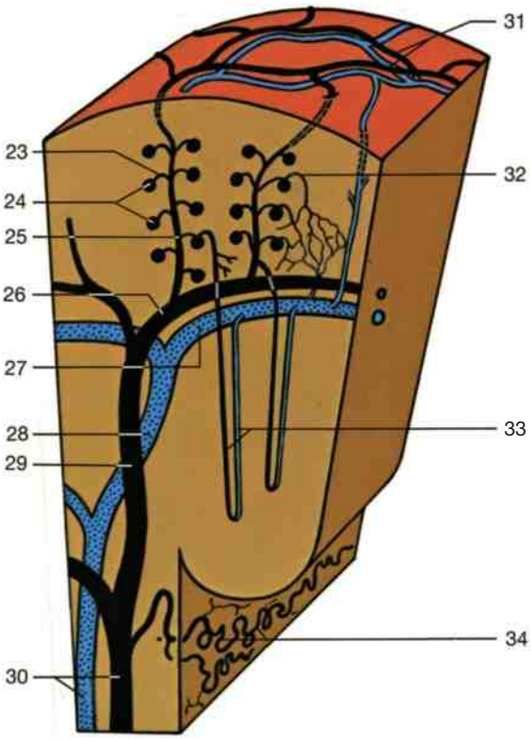
1 Diaphragm
2 Hepatic veins
3 Inferior vena cava
4 Common hepatic artery
5 Suprarenal gland
6 Celiac trunk
7 Right renal vein
8 Kidney
9 Abdominal aorta
10 Subcostal nerve
11 Iliohypogastric nerve
12 Central tendon of diaphragm
13 Inferior phrenic artery
14 Cardic part of stomach
15 Spleen
16 Splenic artery
17 Superior renal artery
18 Superior mesenteric artery
19 Psoas major muscle
20 Inferior mesenteric artery
21 Ureter
22 Glomerulus
23 Afferent arteriole of glomerulus
24 Glomeruli
25 Radiating cortical artery
26 Subcortical or arcuate artery
27 Subcortical or arcuate vein
28 Interlobular vein
29 Interlobular artery
30 Interlobar artery and vein
31 Vessels of renal capsule
32 Efferent arteriole of glomerulus
33 Vasa recta of renal medulla
34 Spiral arteries of renal pelvis



Retroperitoneal organs, kidneys, and suprarenal glands in situ (anterior aspect). Red = arteries; blue = veins.

Glomeruli (210 ×). Scanning electron micrograph showing glomeruli and associated arteries.



Architecture of vascular system of kidney (schematic drawing).

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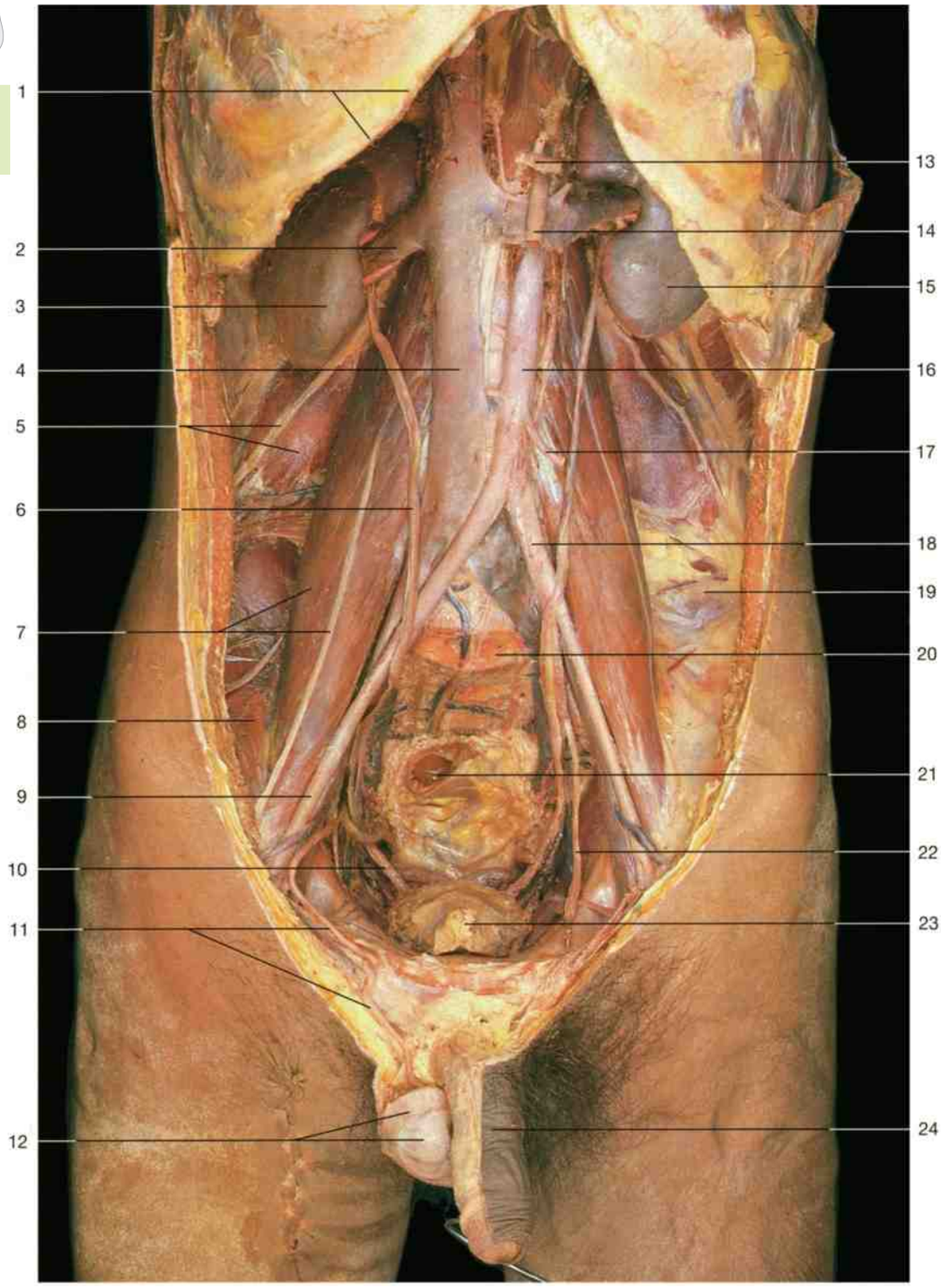

Retroperitoneal organs, urinary system in the male (anterior aspect). The peritoneum has been removed.

1 Costal arch
2 Right renal vein
3 Right kidney
4 Inferior vena cava
5 Iliohypogastric nerve and quadratus lumborum muscle
6 Ureter (abdominal part)
7 Psoas major muscle and genitofemoral nerve
8 Iliacus muscle
9 External iliac artery
10 Ureter (pelvic part)
11 Ductus deferens
12 Testis and epididymis
13 Celiac trunk
14 Superior mesenteric artery
15 Left kidney
16 Abdominal aorta
17 Inferior mesenteric artery
18 Common iliac artery
19 Iliac crest
20 Sacral promontory
21 Rectum (cut)
22 Medial umbilical ligament
23 Urinary bladder
24 Penis

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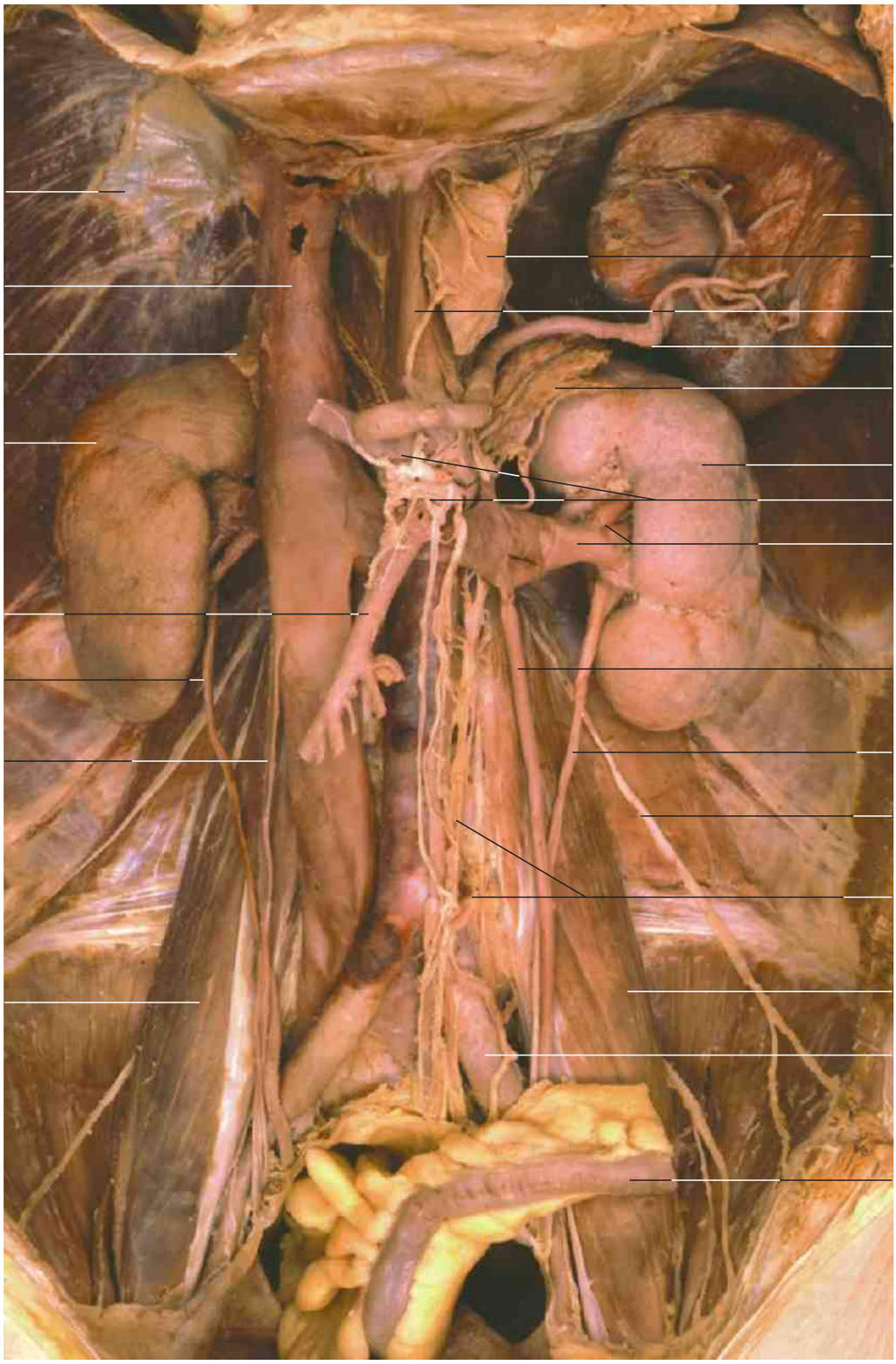

Retroperitoneal organs, urinary system in situ (anterior aspect). The peritoneum has been removed. Note the autonomic plexus and ganglia at the abdominal aorta.

1 Diaphragm
2 Inferior vena cava
3 Suprarenal gland
4 Kidney
5 Superior mesenteric artery
6 Ureter
7 Right spermatic vein
8 Psoas major muscle
9 Spleen
10 Cardiac part of stomach
11 Abdominal aorta
12 Splenic artery
13 Celiac trunk and celiac ganglion
14 Renal artery and vein
15 Left spermatic vein
16 Ilio-inguinal nerve
17 Superior hypogastric plexus and ganglion
18 Left common iliac artery
19 Sigmoid colon

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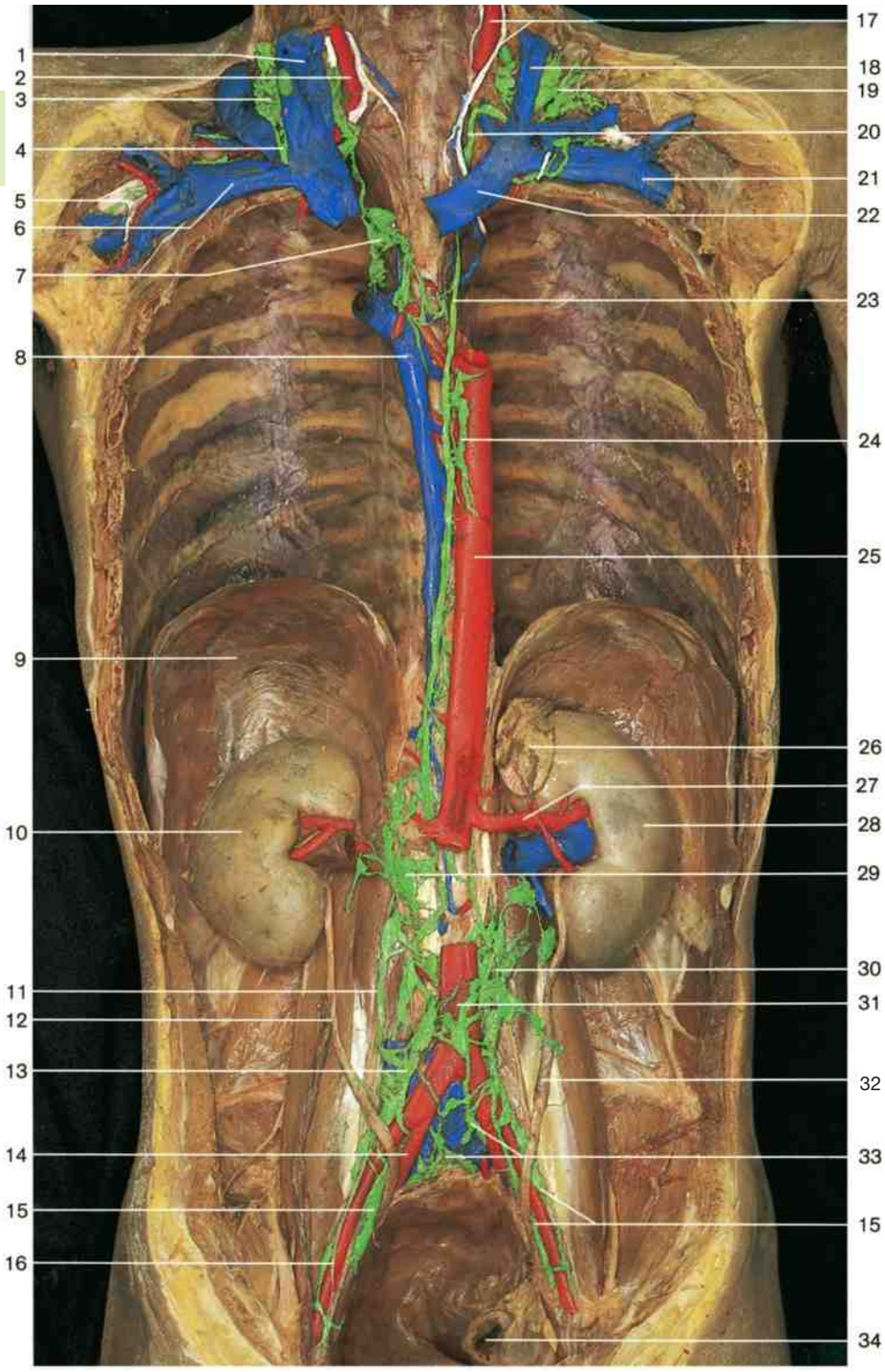

Lymph vessels and lymph nodes of the posterior wall of thoracic and abdominal cavities (anterior aspect). Green = lymph vessels and nodes; blue = veins; red = arteries; white = nerves.

1 Internal jugular vein
2 Right common carotid artery and right vagus nerve
3 Jugulo-omohyoid lymph node
4 Right lymphatic duct
5 Subclavian trunk
6 Right subclavian vein
7 Bronchomediastinal trunk
8 Azygos vein
9 Diaphragm
10 Right kidney
11 Right lumbar trunk
12 Right ureter
13 Common iliac lymph nodes
14 Right internal iliac artery
15 External iliac lymph nodes
16 Right external iliac artery
17 Left common carotid artery and left vagus nerve
18 Internal jugular vein
19 Deep cervical lymph nodes
20 Thoracic duct entering left jugular angle
21 Left subclavian vein
22 Left brachiocephalic vein
23 Thoracic duct
24 Mediastinal lymph nodes
25 Thoracic aorta
26 Left suprarenal gland
27 Left renal artery
28 Left kidney
29 Cisterna chyli
30 Lumbar lymph nodes
31 Abdominal aorta
32 Left ureter
33 Sacral lymph nodes
34 Rectum (cut edge)

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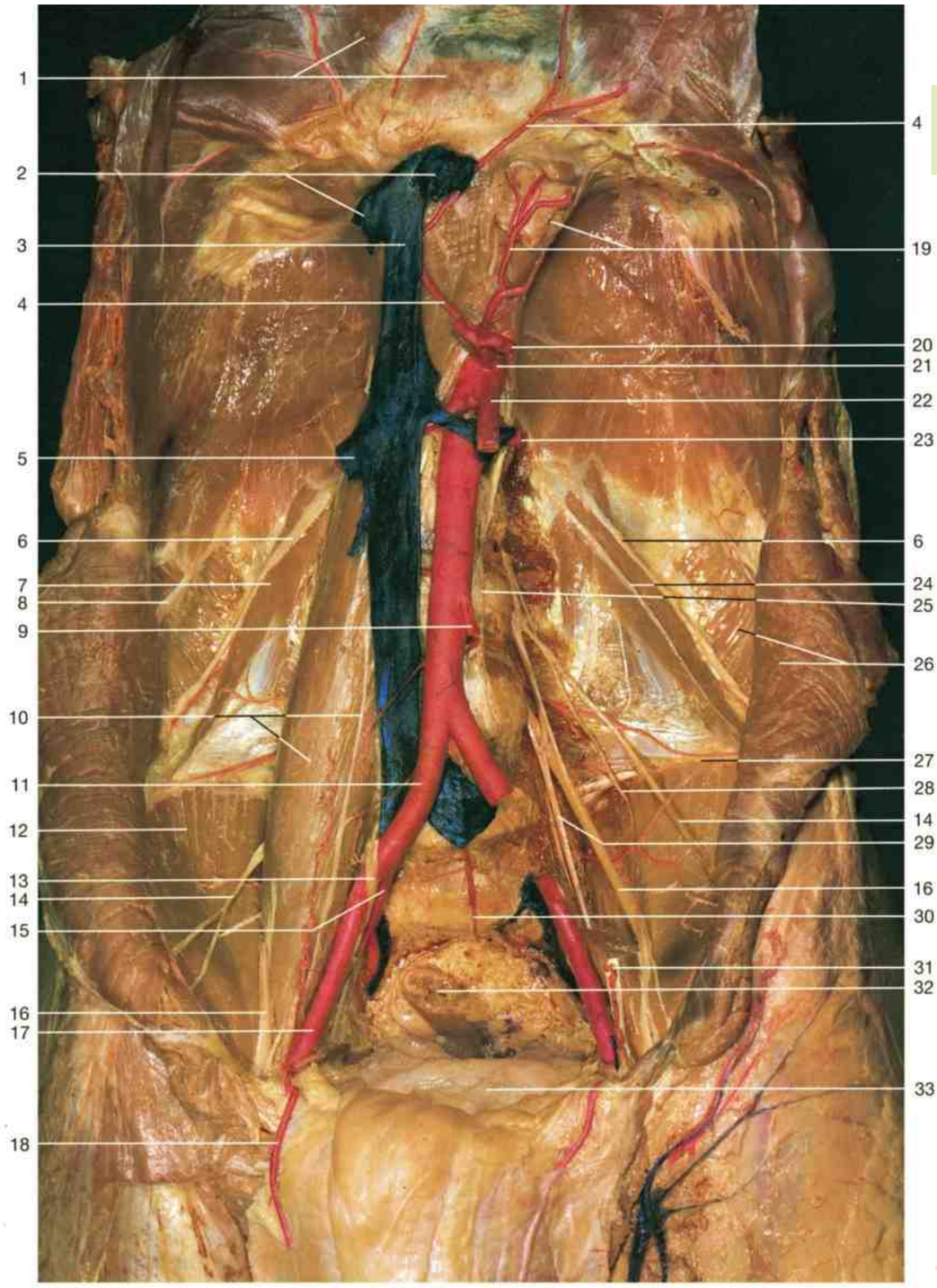

Vessels and nerves of posterior abdominal wall (anterior aspect). Part of the left psoas major muscle has been removed to display the lumbar plexus. Red = arteries; blue = veins.

1 Diaphragm
2 Hepatic veins
3 Inferior vena cava
4 Inferior phrenic artery
5 Right renal vein
6 Iliohypogastric nerve
7 Quadratus lumborum muscle
8 Subcostal nerve
9 Inferior mesenteric artery
10 Right genitofemoral nerve and psoas major muscle
11 Common iliac artery
12 Iliacus muscle
13 Right ureter (divided)
14 Lateral femoral cutaneous nerve
15 Internal iliac artery
16 Femoral nerve
17 External iliac artery
18 Inferior epigastric artery
19 Cardiac part of stomach and esophageal branches of left gastric artery
20 Splenic artery
21 Celiac trunk
22 Superior mesenteric artery
23 Left renal artery
24 Ilio-inguinal nerve
25 Sympathetic trunk
26 Transversus abdominis muscle
27 Iliac crest
28 Left genitofemoral nerve
29 Left obturator nerve
30 Median sacral artery
31 Psoas major muscle (divided) with supplying artery
32 Rectum (cut)
33 Urinary bladder

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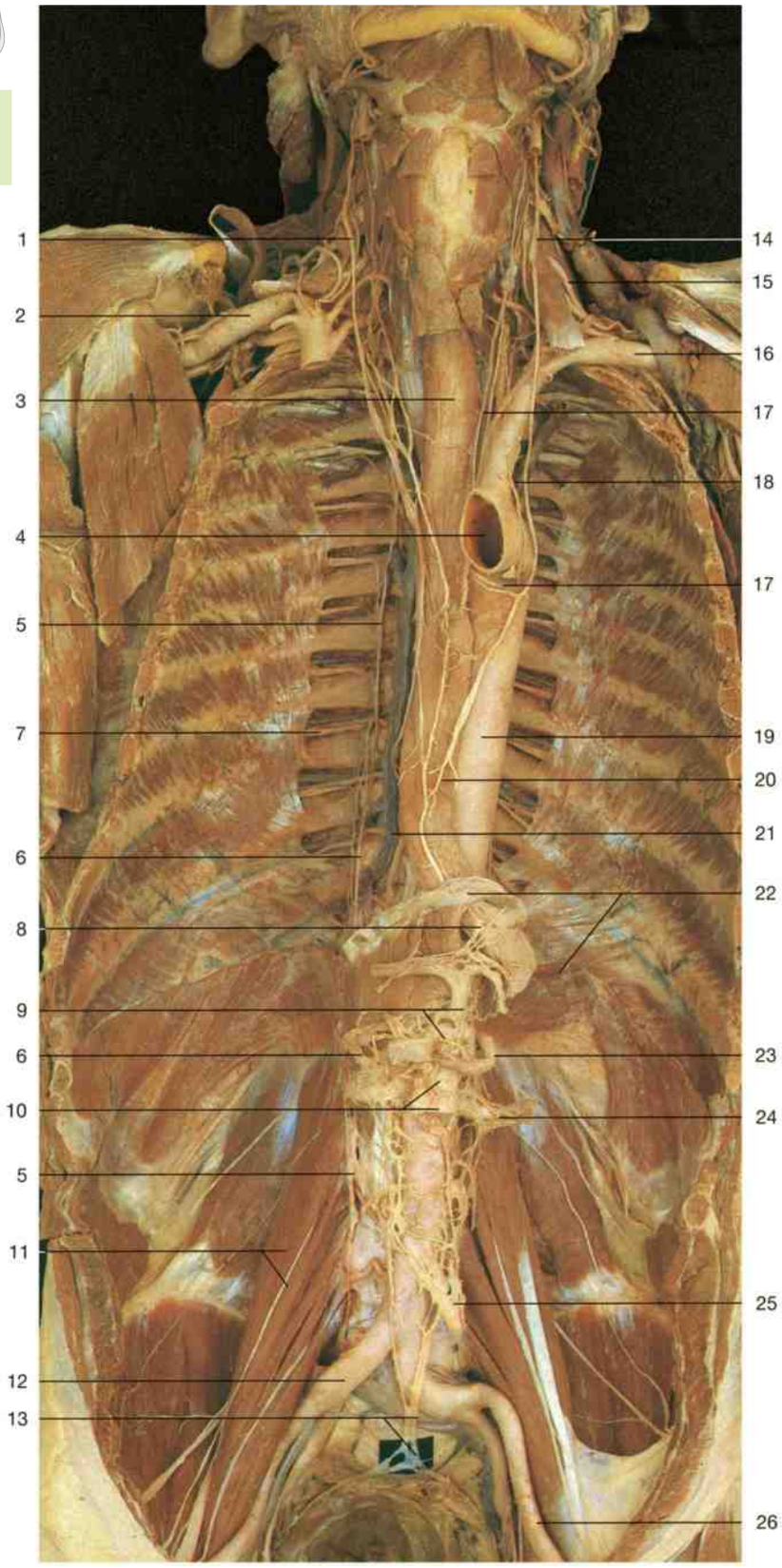
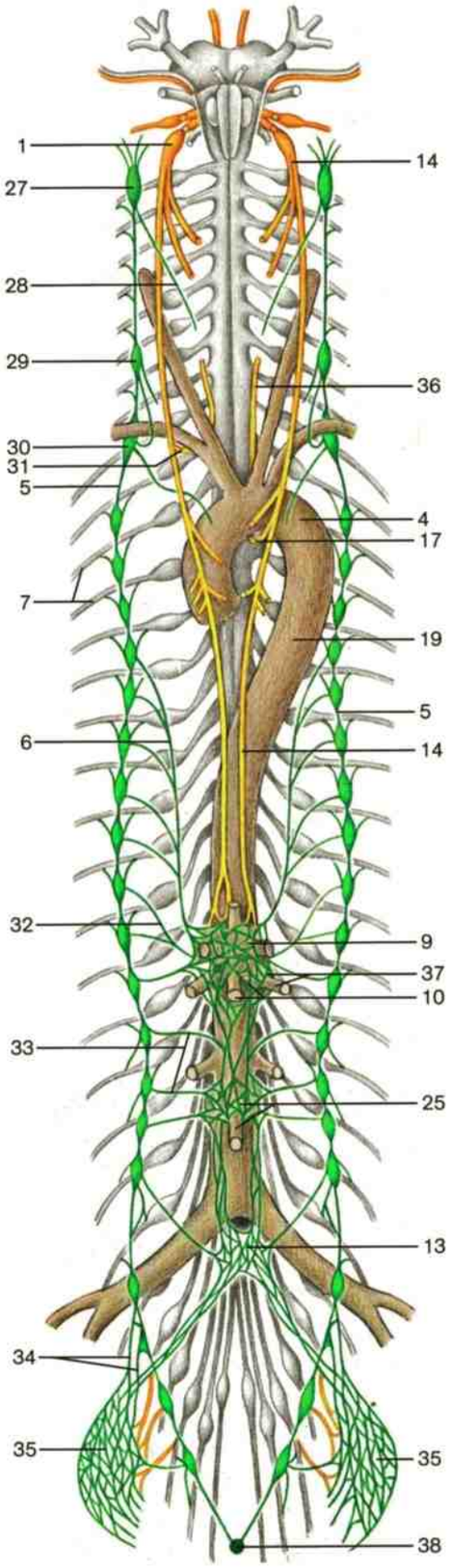


Posterior wall of thoracic and abdominal cavities with sympathetic trunk, vagus nerve, and autonomic ganglia (anterior aspect). Thoracic and abdominal organs removed, except for the esophagus and aorta.



Organization of autonomic nervous system (after Mattuschka). (Schematic drawing.) Yellow = parasympathetic nerves; green = sympathetic nerves.

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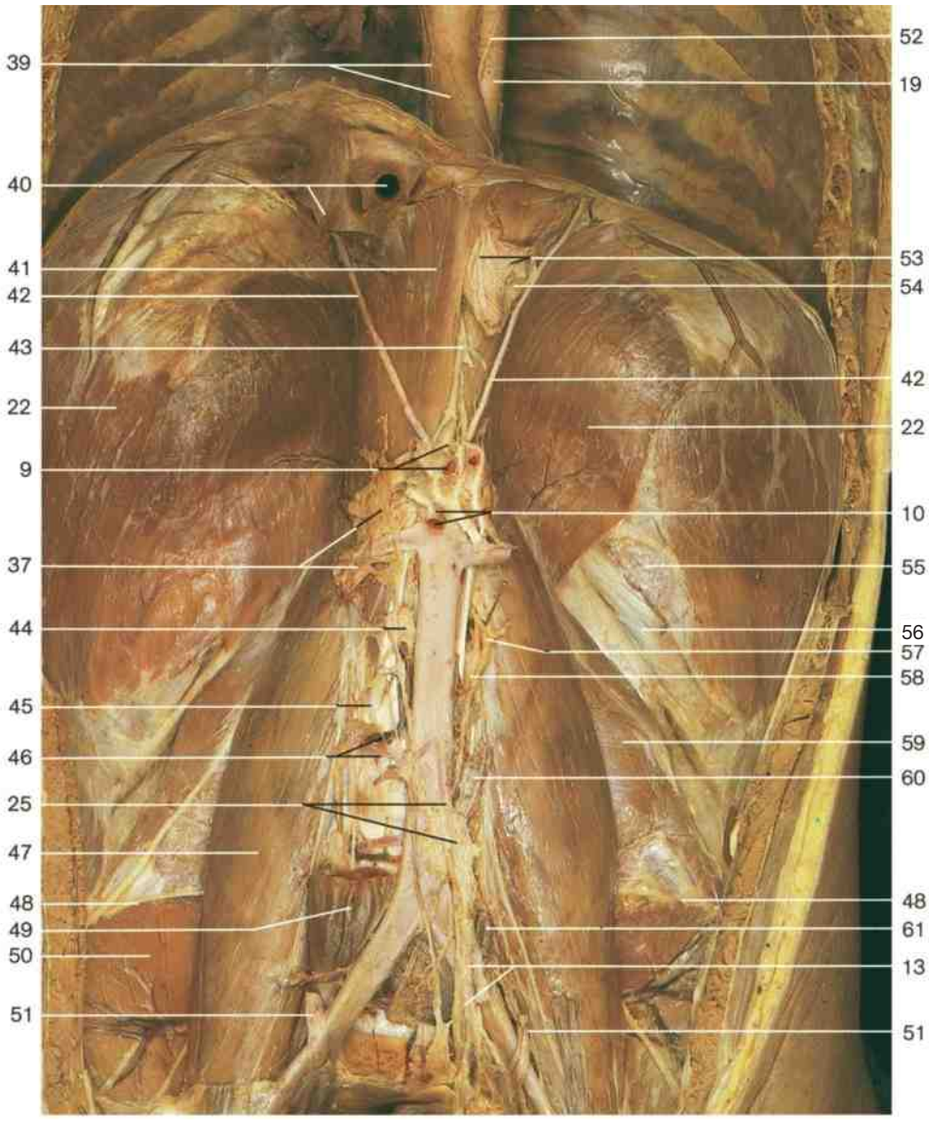

Ganglia and plexus of the autonomic nervous system within the retroperitoneal space (anterior aspect). The kidneys and the inferior vena cava with its tributaries have been removed.

1 Right vagus nerve
2 Right subclavian artery
3 Esophagus
4 Aortic arch
5 Sympathetic trunk
6 Greater splanchnic nerve
7 Intercostal nerve
8 Abdominal part of esophagus and vagal trunk
9 Celiac trunk with celiac ganglion
10 Superior mesenteric artery and ganglion
11 Psoas major muscle and genitofemoral nerve
12 Common iliac artery
13 Superior hypogastric plexus and ganglion
14 Left vagus nerve
15 Brachial plexus
16 Left subclavian artery
17 Left recurrent laryngeal nerve
18 Inferior cervical cardiac nerve
19 Thoracic aorta
20 Esophageal plexus
21 Azygos vein
22 Diaphragm
23 Splenic artery
24 Left renal artery and plexus
25 Inferior mesenteric ganglion and artery
26 Left external iliac artery
27 Superior cervical ganglion of sympathetic trunk
28 Superior cardiac branch of sympathetic trunk
29 Middle cervical ganglion of sympathetic trunk
30 Inferior cervical ganglion of sympathetic trunk
31 Right recurrent laryngeal nerve
32 Lesser splanchnic nerve
33 Lumbar splanchnic nerves
34 Sacral splanchnic nerves
35 Inferior hypogastric ganglion and plexus
36 Left recurrent laryngeal nerve
37 Aorticorenal plexus and renal artery
38 Ganglion impar
39 Esophagus with branches of vagus nerve
40 Hepatic veins
41 Right crus of diaphragm
42 Inferior phrenic artery
43 Right vagus nerve entering the celiac ganglion
44 Right lumbar lymph trunk
45 Lumbar part of right sympathetic trunk
46 Lumbar artery and vein
47 Psoas major muscle
48 Iliac crest
49 Inferior vena cava
50 Iliacus muscle
51 Ureter
52 Left vagus nerve forming the esophageal plexus
53 Left vagus nerve forming the gastric plexus
54 Esophagus continuing into the cardiac part of stomach
55 Lumbocostal triangle
56 Position of twelfth rib
57 Left lumbar lymph trunk
58 Ganglion of sympathetic trunk
59 Quadratus lumborum muscle
60 Lumbar part of left sympathetic trunk
61 Iliac lymph vessels

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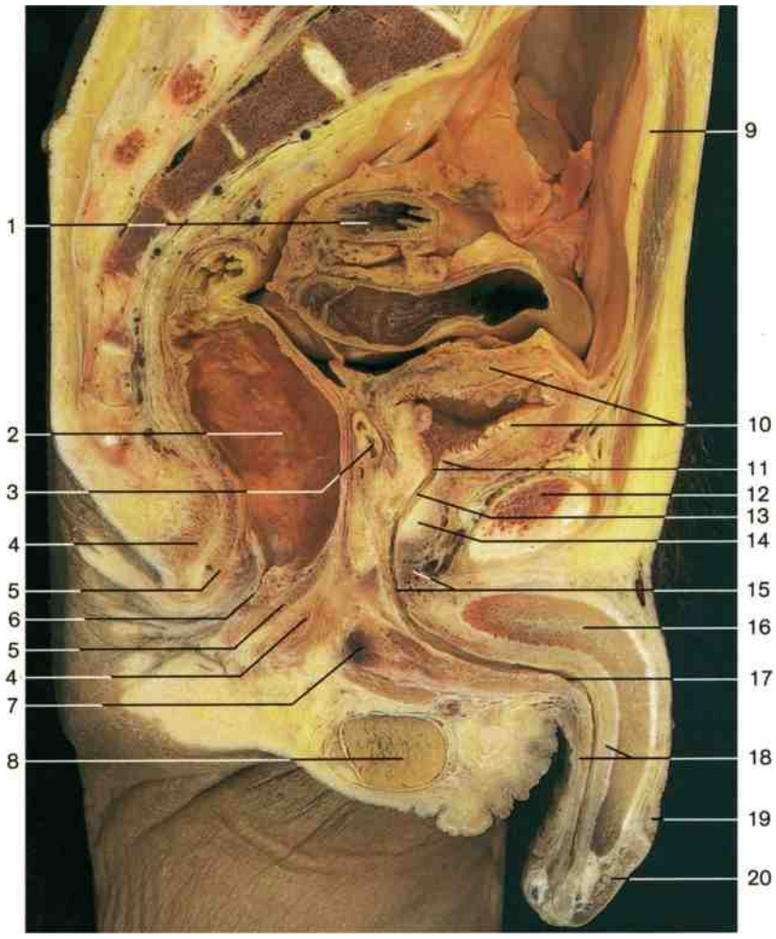
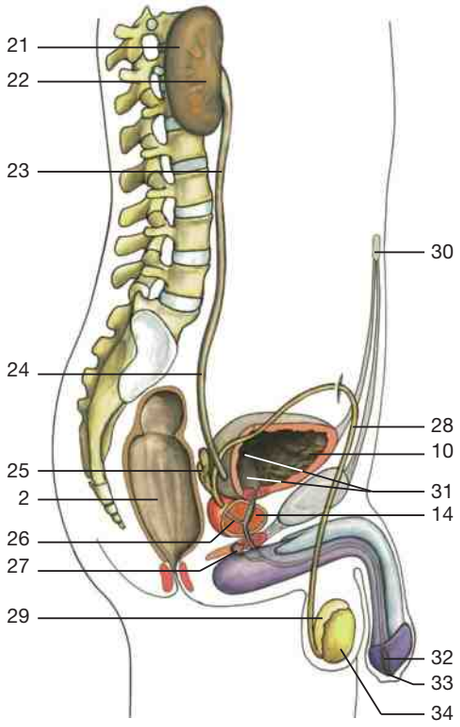


Male urogenital system, midsagittal section through the pelvis.

1 Sigmoid colon
2 Ampulla of rectum
3 Ampulla of ductus deferens
4 External anal sphincter muscle
5 Internal anal sphincter muscle
6 Anal canal
7 Bulb of penis
8 Testis (cut surface)
9 Median umbilical ligament
10 Urinary bladder
11 Internal urethral orifice and sphincter
12 Pubic symphysis
13 Prostatic part of urethra
14 Prostate gland
15 Membranous part of urethra and external urethral sphincter
16 Corpus cavernosum of penis
17 Spongy urethra
18 Corpus spongiosum of penis
19 Foreskin or prepuce
20 Glans penis
21 Kidney
22 Renal pelvis
23 Abdominal part of ureter
24 Pelvic part of ureter
25 Seminal vesicle
26 Ejaculatory duct
27 Bulbo-urethral or Cowper's gland
28 Ductus deferens
29 Epididymis
30 Umbilicus
31 Trigone of bladder and ureteric orifice
32 Navicular fossa of urethra
33 External urethral orifice
34 Testis



Male urogenital system (schematic drawing).

The **prostate** is located between the bladder and urogenital diaphragm. The penis includes the **urethra** and thus serves for both ejaculation and micturition. The internal (involuntary) and external (voluntary) urethral sphincters are widely separated. The **ureter,** having crossed the ductus deferens, enters the urinary bladder at its base. The peritoneum is reflected off of the posterior surface of the bladder and onto the rectum, thus forming the rectovesical pouch.

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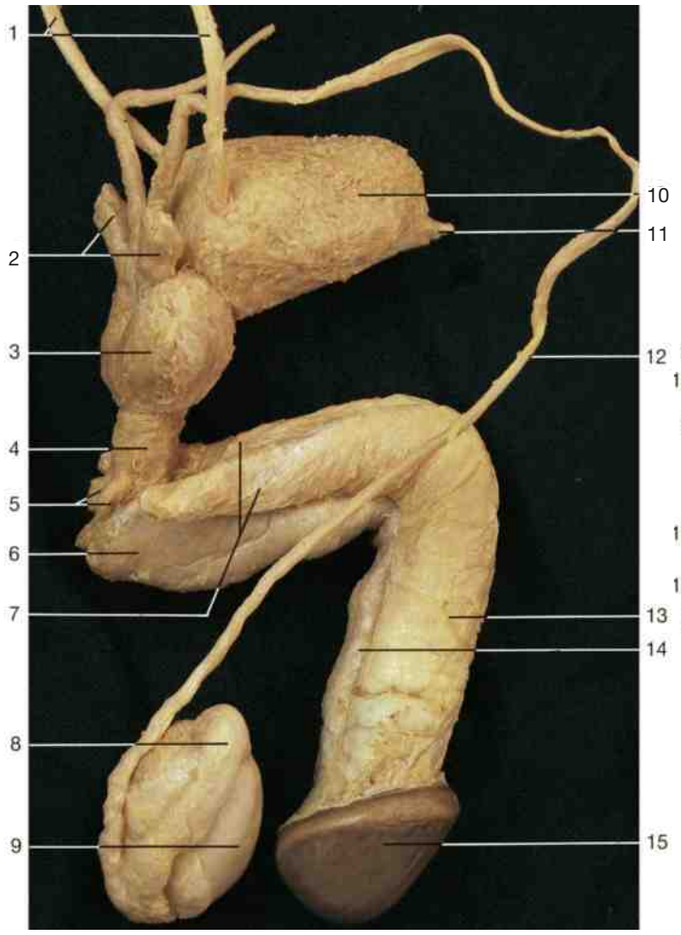
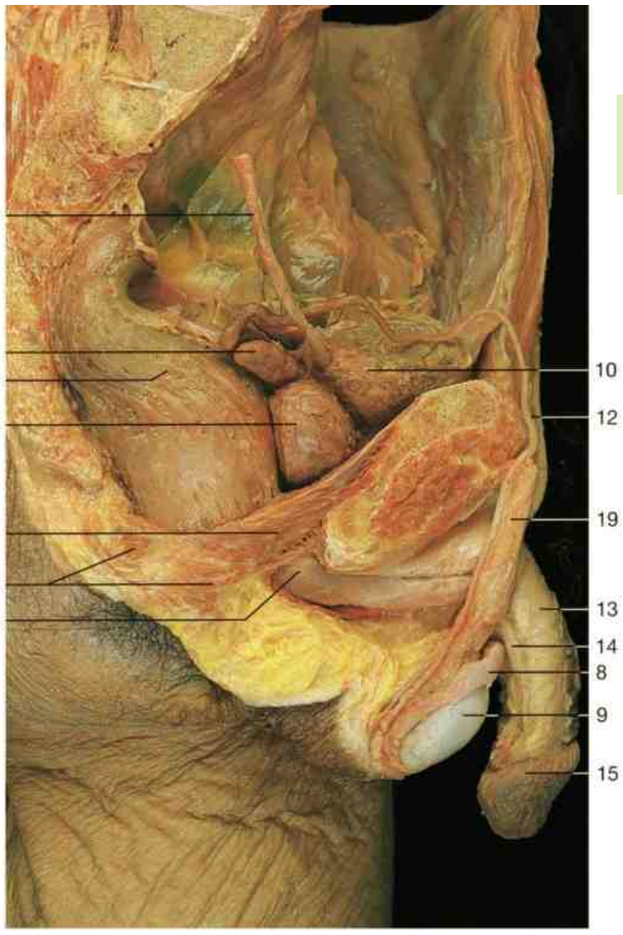
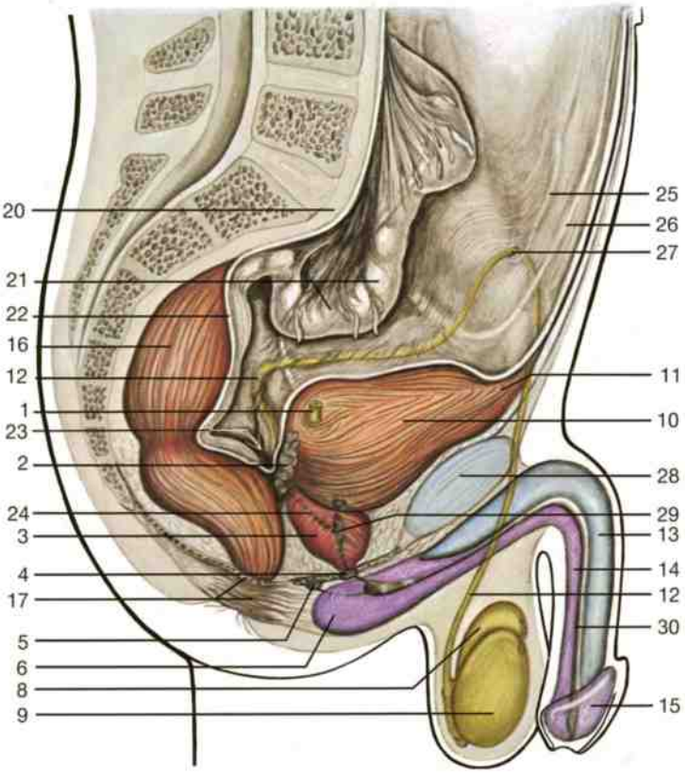


Male genital organs, isolated (right lateral aspect).



Male genital organs in situ (right lateral aspect).



Positions of male genital organs (right lateral aspect).
(Schematic drawing.)

1 Ureter
2 Seminal vesicle
3 Prostate gland
4 Urogenital diaphragm and membranous part of urethra
5 Bulbo-urethral or Cowper's gland
6 Bulb of penis
7 Left and right crus penis
8 Epididymis
9 Testis
10 Urinary bladder
11 Apex of urinary bladder
12 Ductus deferens
13 Corpus cavernosum of penis
14 Corpus spongiosum of penis
15 Glans penis
16 Ampulla of rectum
17 Levator ani muscle
18 Anal canal and external anal sphincter muscle
19 Spermatic cord (cut)
20 Sacral promontory
21 Sigmoid colon
22 Peritoneum (cut edge)
23 Rectovesical pouch
24 Ejaculatory duct
25 Lateral umbilical fold
26 Medial umbilical fold
27 Deep inguinal ring and ductus deferens
28 Pubic symphysis
29 Prostatic part of urethra
30 Spongy urethra

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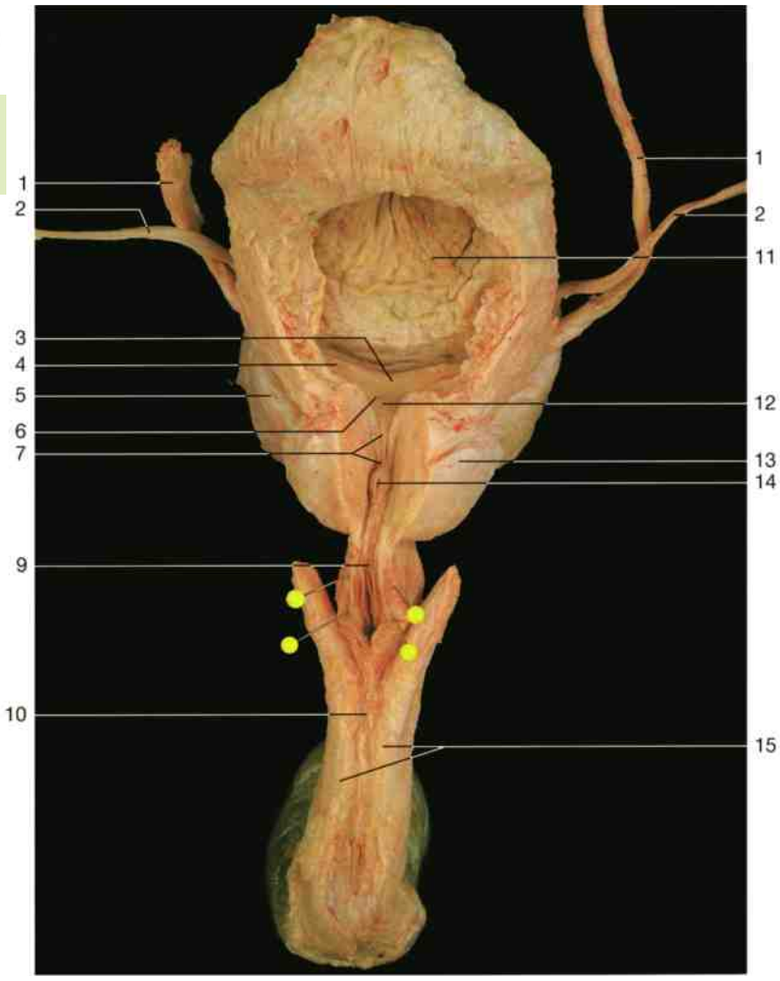
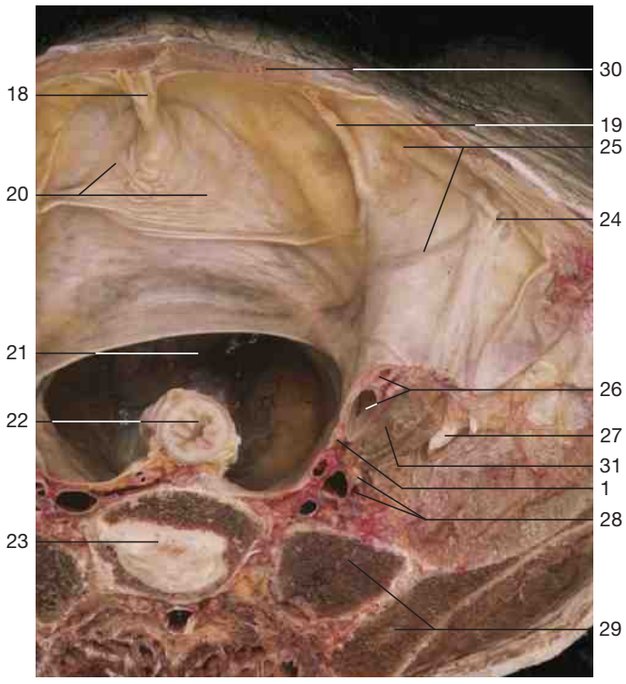
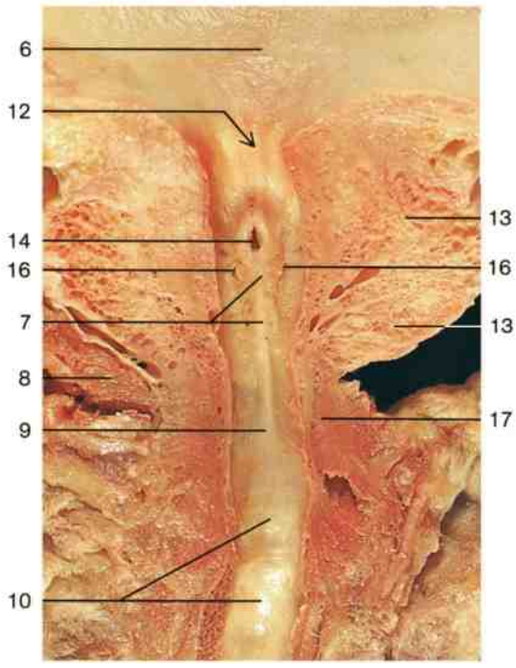


1 Ureter
2 Ductus deferens
3 Interureteric fold
4 Ureteric orifice
5 Seminal vesicle
6 Trigone of bladder
7 Prostatic urethra with seminal colliculus and urethral crest
8 Deep transverse perineal muscle
9 Membranous urethra
10 Spongy urethra
11 Mucous membrane of urinary bladder
12 Internal urethral orifice and uvula of bladder
13 Prostate
14 Prostatic utricle
15 Right and left corpus cavernosum of penis
16 Ejaculatory duct
17 Sphincter urethrae muscle
18 Median umbilical fold with remnant of urachus
19 Medial umbilical fold with remnant of umbilical artery
20 Urinary bladder
21 Rectovesical pouch
22 Rectum
23 Sacrum
24 Deep iliac circumflex artery
25 Deep inguinal ring and ductus deferens
26 External iliac artery and vein
27 Femoral nerve
28 Obturator nerve and internal iliac artery
29 Ilium and sacrum
30 Inferior epigastric artery
31 Iliopsoas muscle

Male urogenital organs, isolated (anterior aspect). Urinary bladder, prostate, and urethra have been opened. The urinary bladder is contracted.



Pelvic cavity in the male (viewed from above).



Posterior half of male urethra and prostate in continuity with neck of bladder (anterior aspect).

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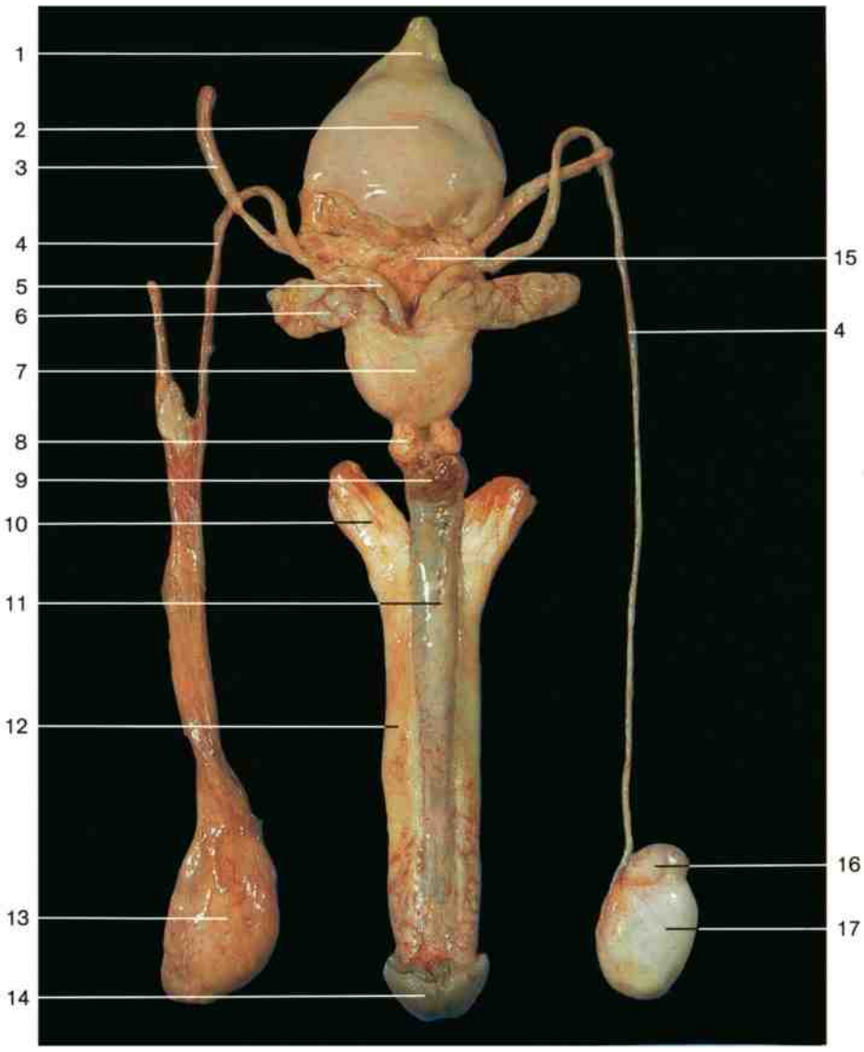
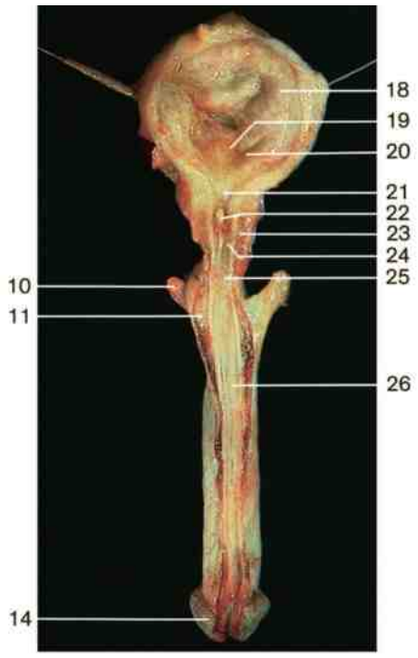
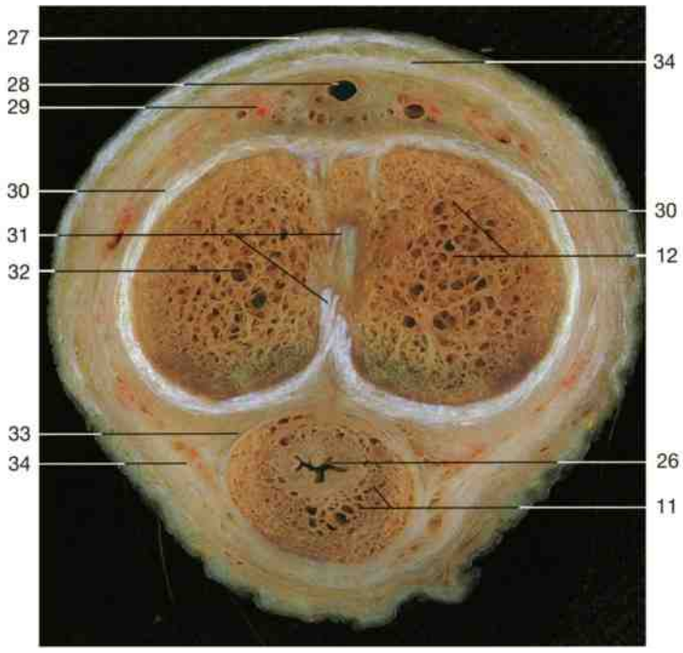


Male genital organs, isolated (posterior aspect).

1 Apex of urinary bladder with urachus
2 Urinary bladder
3 Ureter
4 Ductus deferens
5 Ampulla of ductus deferens
6 Seminal vesicle
7 Prostate
8 Bulbo-urethral or Cowper's gland
9 Bulb of penis
10 Crus penis
11 Corpus spongiosum of penis
12 Corpus cavernosum of penis
13 Testis and epididymis with coverings
14 Glans penis
15 Fundus of bladder
16 Head of epididymis
17 Testis
18 Mucous membrane of bladder
19 Trigone of bladder
20 Ureteric orifice
21 Internal urethral orifice
22 Seminal colliculus
23 Prostate
24 Prostatic urethra
25 Membranous urethra
26 Spongy (penile) urethra
27 Skin of penis
28 Deep dorsal vein of penis (unpaired)
29 Dorsal artery of penis (paired)
30 Tunica albuginea of corpora cavernosa
31 Septum of penis
32 Deep artery of penis
33 Tunica albuginea of corpus spongiosum
34 Deep fascia of penis



Urinary bladder, urethra, and penis (anterior aspect, opened longitudinally).



Cross section of penis (inferior aspect).

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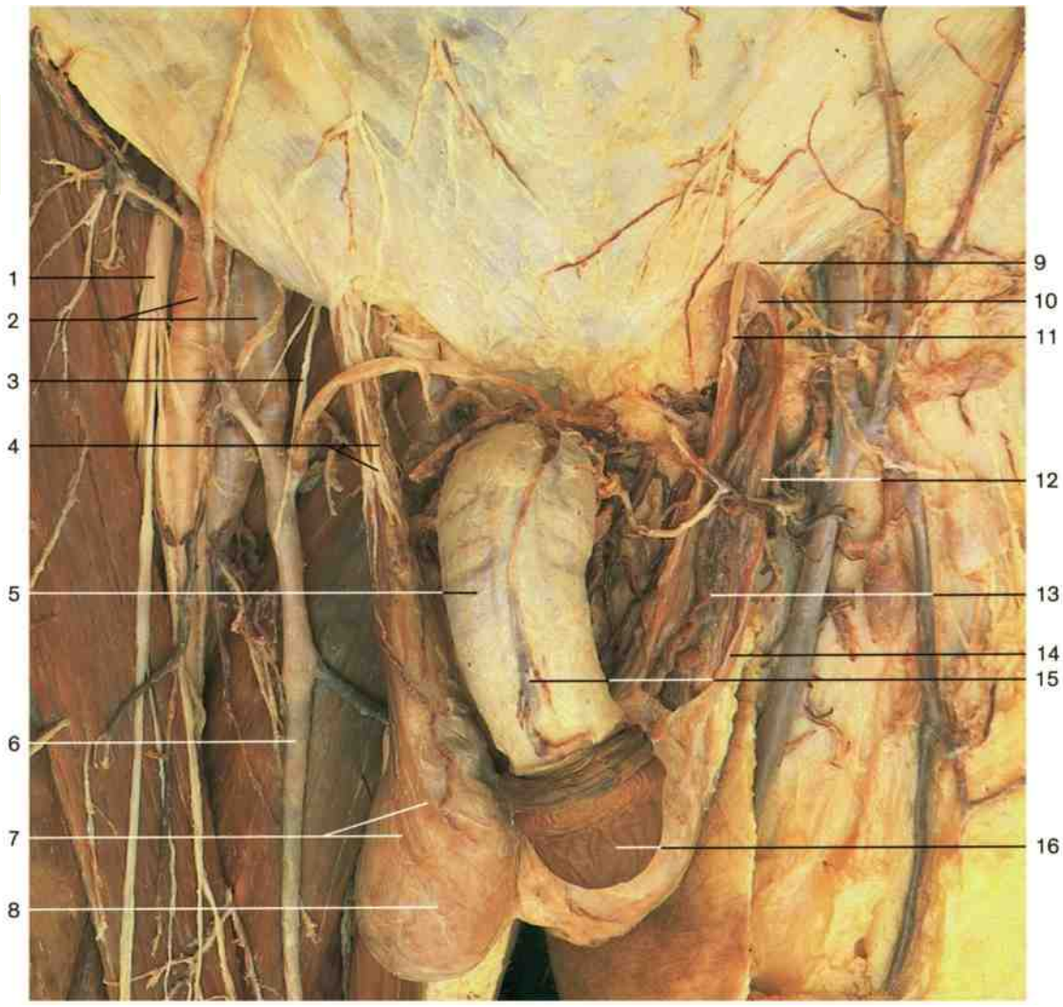
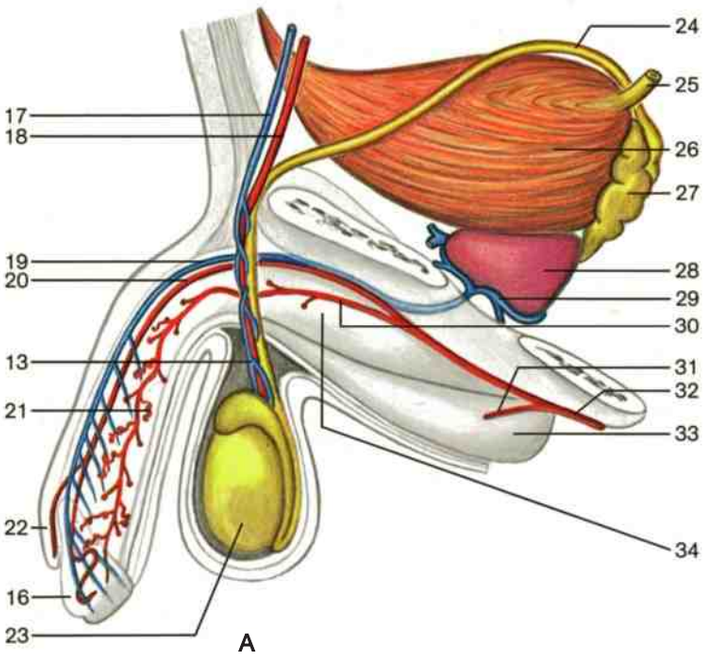
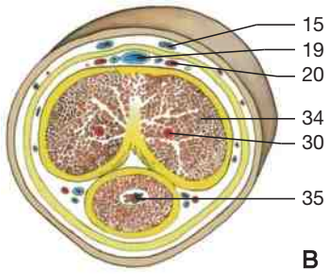


Male external genital organs with penis, testis, and spermatic cord, superficial layers (anterior aspect).





Vessels of male genital organs (schematic drawing).
A = lateral aspect; B = cross section of penis.

1 Femoral nerve
2 Femoral artery and vein
3 Femoral branch of genitofemoral nerve
4 Spermatic cord with genital branch of genitofemoral nerve
5 Penis with deep fascia
6 Great saphenous vein
7 Cremaster muscle
8 Testis with cremaster muscle
9 Superficial inguinal ring
10 Internal spermatic fascia (cut edge)
11 Ilio-inguinal nerve
12 Left spermatic cord
13 Pampiniform venous plexus
14 External spermatic fascia
15 Superficial dorsal vein of penis

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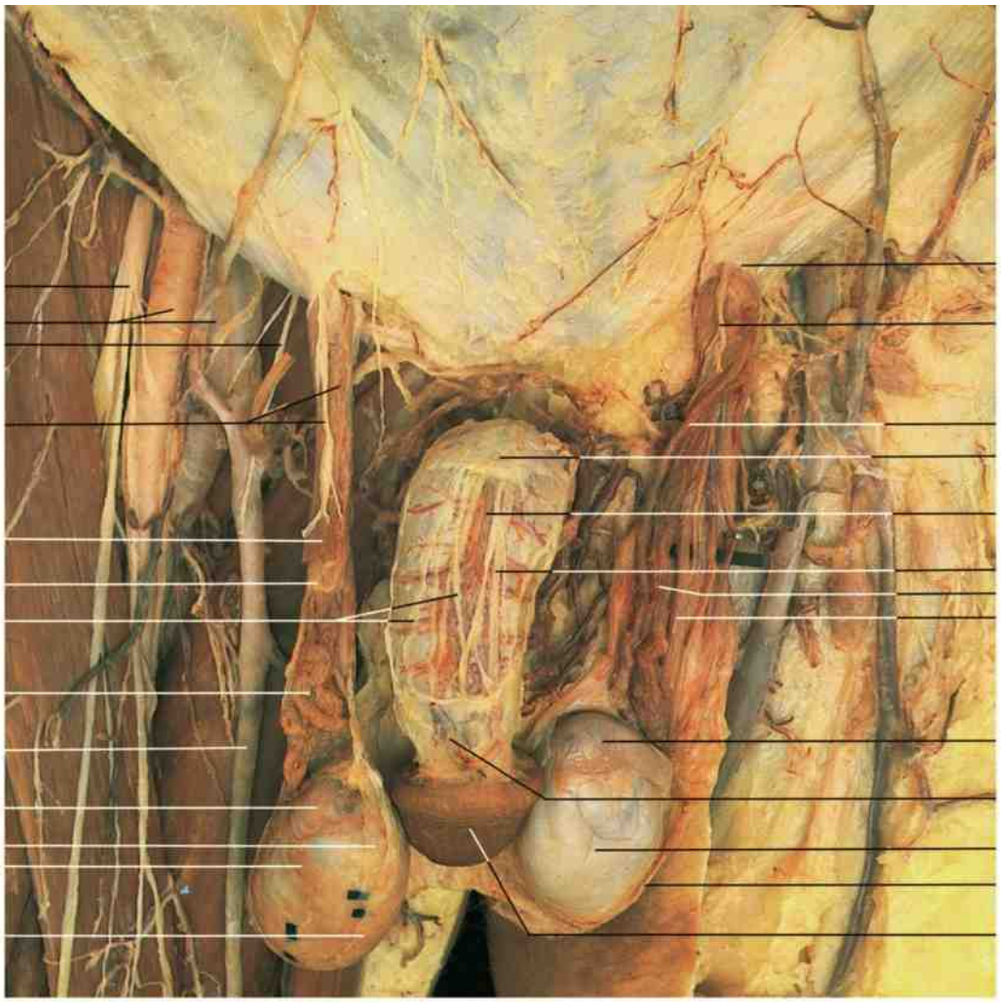
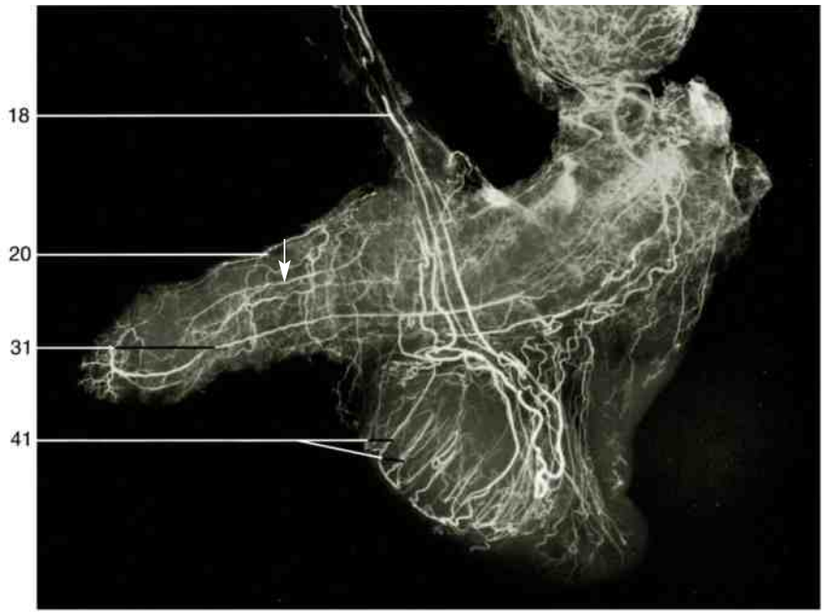


Male external genital organs with penis, testis, and spermatic cord, deeper layers (anterior aspect). The deep fascia of the penis has been opened to display the dorsal nerves and vessels.

16 Glans penis
17 Testicular vein
18 Testicular artery
19 Deep dorsal vein of penis
20 Dorsal artery of penis
21 Helicine arteries
22 Prepuce
23 Testis with tunica albuginea
24 Ductus deferens
25 Ureter
26 Urinary bladder
27 Seminal vesicle
28 Prostate
29 Vesicoprostatic venous plexus
30 Deep artery of penis
31 Artery of bulb of penis
32 Internal pudendal artery
33 Corpus spongiosum of penis
34 Corpus cavernosum of penis
35 Urethra
36 Cremasteric fascia with cremaster muscle
37 Dorsal nerve of penis
38 Epididymis
39 Tunica vaginalis (visceral layer)
40 Tunica vaginalis (parietal layer)
41 Testis with vascular loops



Male genital organs (arteriography, lateral aspect). Arrow = helicine artery.

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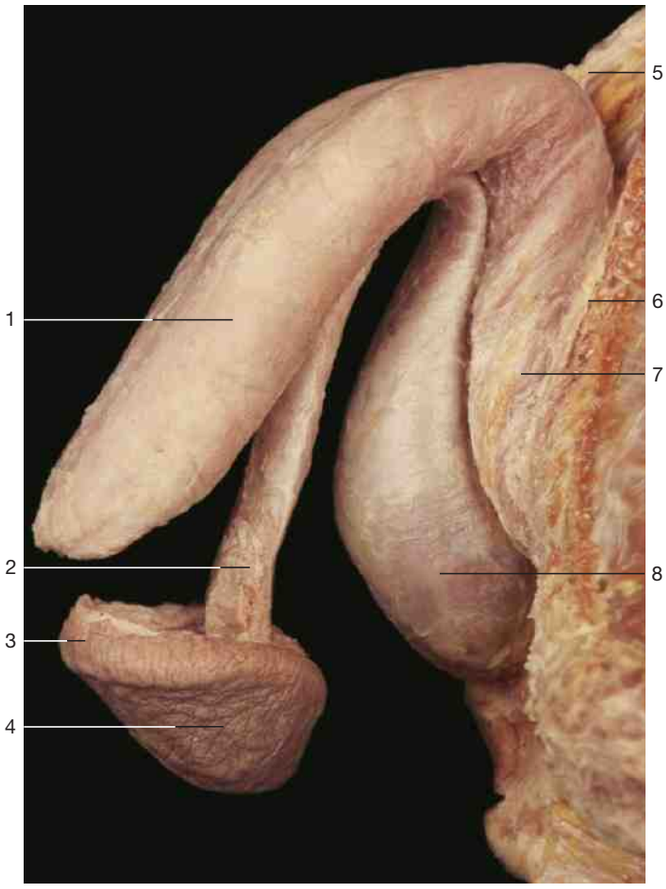
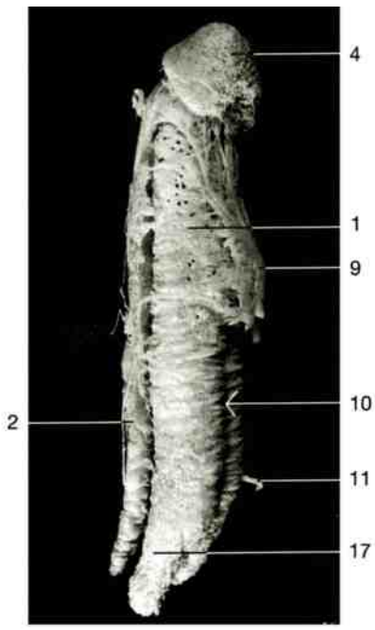
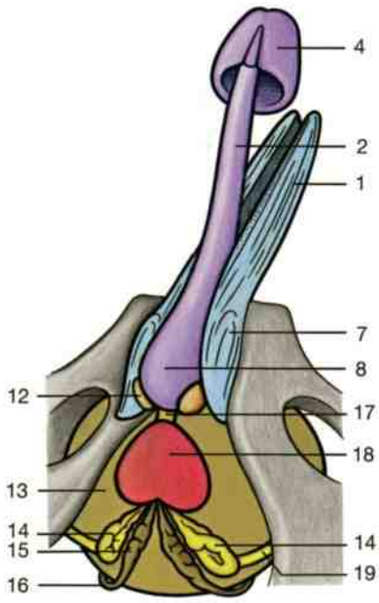


Male external genital organs (lateral aspect). The corpus spongiosum of the penis with the glans penis has been isolated and reflected.

Sagittal section of the pelvic cavity with the male genital organs (MRI scan; from Heuck et al., MRT-Atlas, 2009).



Resin cast of erected penis.



Male external genital organs and accessory glands (schematic drawing).

1 Corpus cavernosum of penis
2 Corpus spongiosum of penis
3 Corona of glans penis
4 Glans penis
5 Suspensory ligament of penis
6 Inferior pubic ramus
7 Crus penis
8 Bulb of penis
9 Deep dorsal vein of penis
10 Septum pectiniforme
11 Dorsal artery of penis
12 Bulbo-urethral or Cowper's gland
13 Urinary bladder
14 Seminal vesicle
15 Ampulla of ductus deferens
16 Ductus deferens
17 Membranous urethra
18 Prostate
19 Ureter
20 Common iliac artery and vein
21 Fifth lumbar vertebral body
22 Intestinal loops
23 Rectus abdominis muscle
24 Pubic symphysis
25 Root of penis
26 Sacral bone
27 Ampulla of rectum
28 Anal canal
29 External anal sphincter muscle

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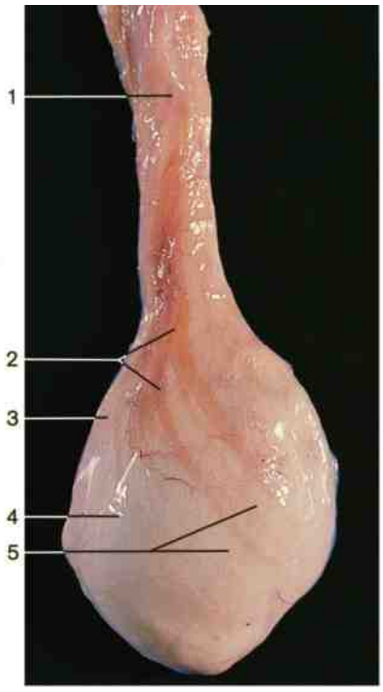
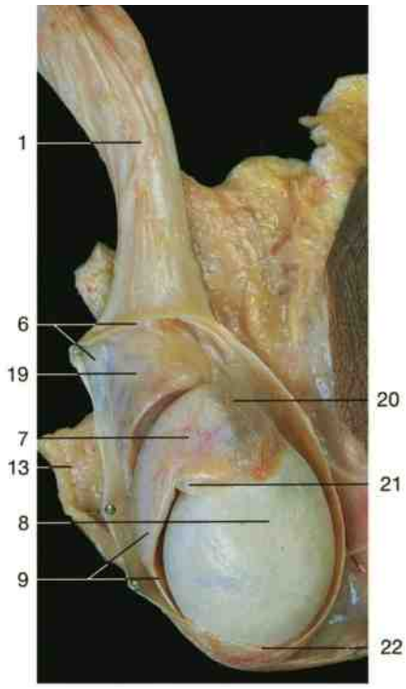


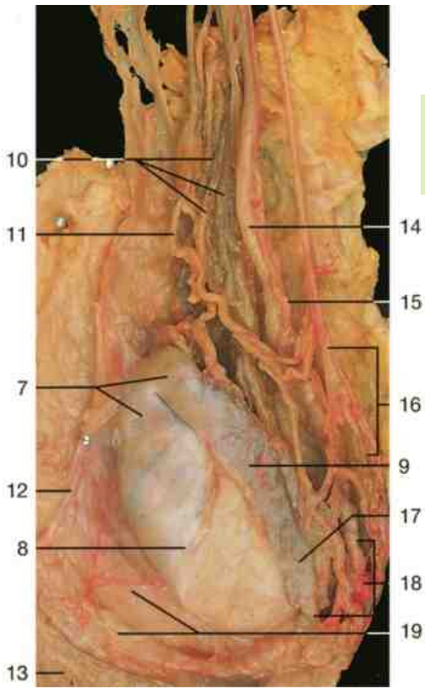
Testis and epididymis with investing layers (lateral aspect).

1 Spermatic cord covered with cremasteric fascia
2 Cremaster muscle
3 Position of epididymis
4 Internal spermatic fascia
5 Position of testis
6 Internal spermatic fascia with adjacent investing layers of testis (cut surface)
7 Head of epididymis



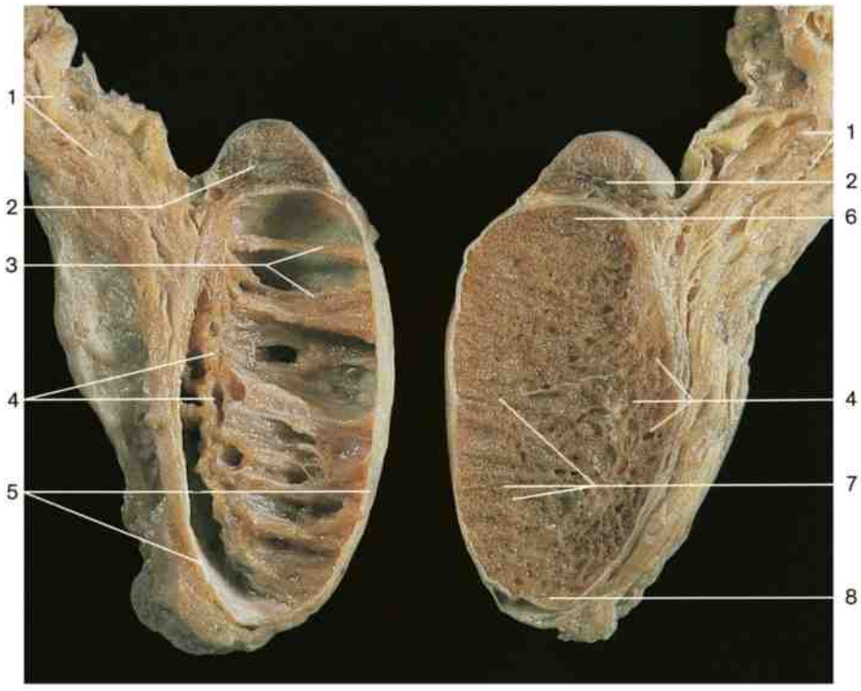
Testis and epididymis (lateral aspect). The tunica vaginalis has been opened.

8 Testis with tunica vaginalis (visceral layer)
9 Body of epididymis
10 Pampiniform venous plexus (anterior veins)
11 Testicular artery
12 Tunica vaginalis (parietal layer, cut edge)
13 Skin and dartos muscle (reflected)
14 Ductus deferens



Testis, epididymis, and spermatic cord (left side, posterolateral aspect). Dissection of spermatic cord and ductus deferens.

15 Artery of ductus deferens
16 Posterior veins of pampiniform plexus
17 Tail of epididymis
18 Transition of epididymal duct to ductus deferens and venous plexus
19 Parietal layer of tunica vaginalis
20 Appendix of epididymis
21 Appendix of testis
22 Gubernaculum testis



Longitudinal section through testis and epididymis. The left figure shows the testicular septa after removal of the seminiferous tubules.

1 Spermatic cord (cut surface)
2 Head of epididymis (cut surface)
3 Septa of testis
4 Mediastinum testis
5 Tunica albuginea
6 Superior pole of testis
7 Convoluted seminiferous tubules
8 Inferior pole of testis

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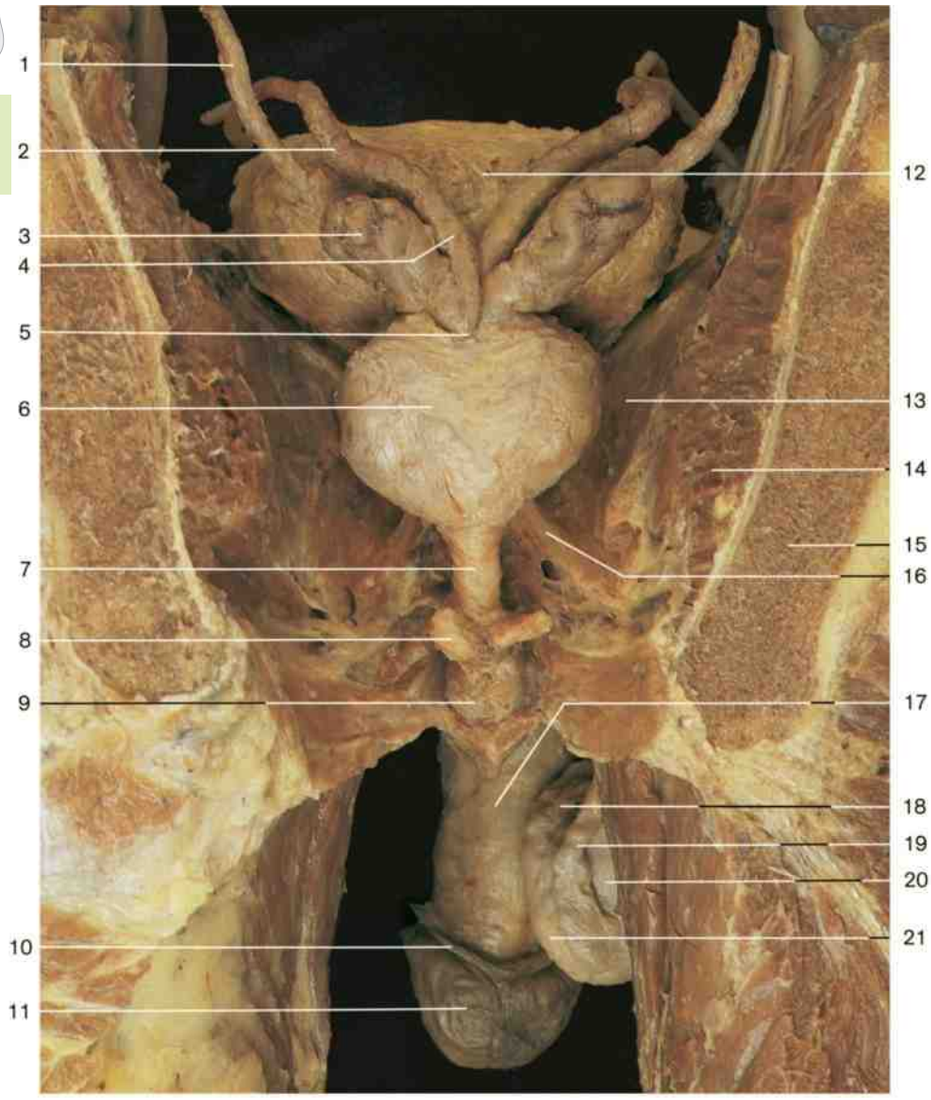

Accessory glands of male genital organs in situ. Coronal section through the pelvic cavity. Posterior aspect of urinary bladder, prostate, and seminal vesicles.

1 Ureter
2 Ductus deferens
3 Seminal vesicle
4 Ampulla of ductus deferens
5 Ejaculatory duct (proximal portion)
6 Prostate
7 Membranous urethra
8 Bulbo-urethral or Cowper's gland
9 Bulb of penis
10 Penis
11 Glans penis
12 Urinary bladder
13 Levator ani muscle
14 Obturator internus muscle
15 Pelvic bone (cut edge)
16 Puboprostatic ligament
17 Corpus spongiosum of penis
18 Head of epididymis
19 Beginning of ductus deferens
20 Testis
21 Tail of epididymis
22 Corpus cavernosum of penis
23 Spermatic cord
24 Pectineus and adductor muscles
25 Pubic bone
26 Prostatic part of urethra (seminal colliculus)
27 Rectum
28 Sciatic nerve
29 Great saphenous vein
30 Sartorius muscle
31 Femoral artery and vein
32 Rectus femoris muscle
33 Tensor fasciae latae muscle
34 Pectineus muscle
35 Iliopsoas muscle
36 Vastus lateralis muscle
37 Obturator externus muscle
38 Femur
39 Ischial tuberosity
40 Gluteus maximus muscle

Horizontal section through pelvic cavity at the level of prostate.

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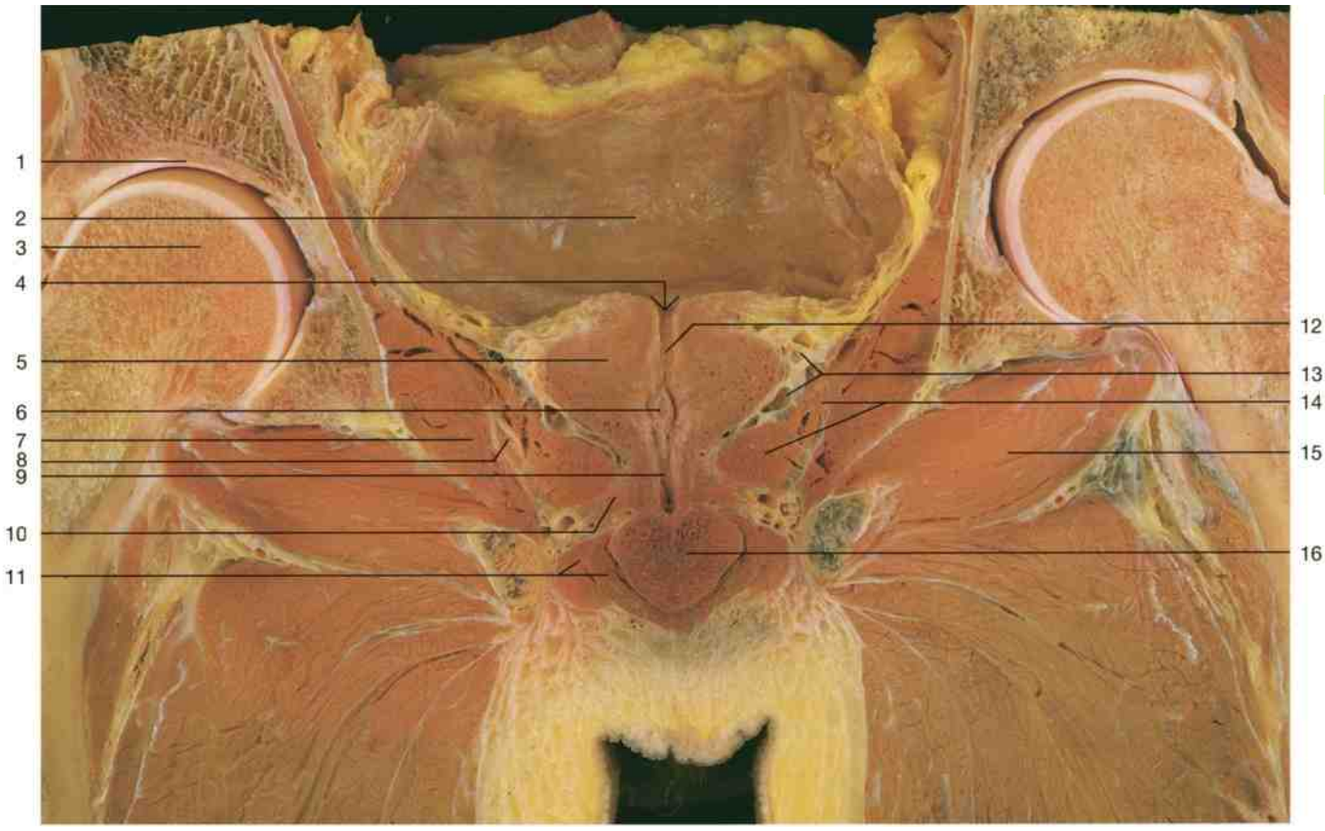
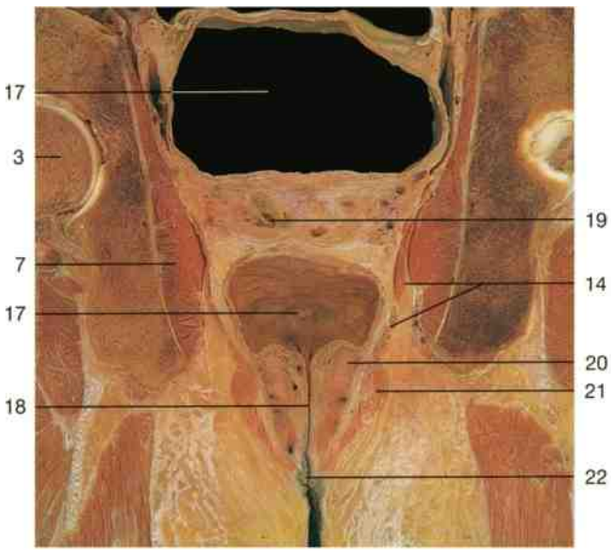


Coronal section through pelvic cavity at the level of prostate and hip joint (anterior aspect).

1 Acetabulum of hip joint
2 Urinary bladder
3 Head of femur
4 Internal urethral orifice
5 Prostate
6 Seminal colliculus
7 Obturator internus muscle
8 Ischiorectal fossa
9 Membranous urethra
10 Deep transverse perineus muscle
11 Crus penis and ischiocavernosus muscle
12 Prostatic part of urethra
13 Prostatic plexus
14 Levator ani muscle
15 Obturator externus muscle
16 Bulb of penis
17 Ampulla of rectum
18 Anal canal
19 Seminal vesicle
20 Internal anal sphincter muscle
21 External anal sphincter muscle
22 Anus
23 Psoas major muscle
24 Intervertebral disc
25 Ilium
26 Ligament of the head of the femur
27 Sacral promontory

Coronal section through pelvic cavity (MRI scan).



Coronal section through anal canal.

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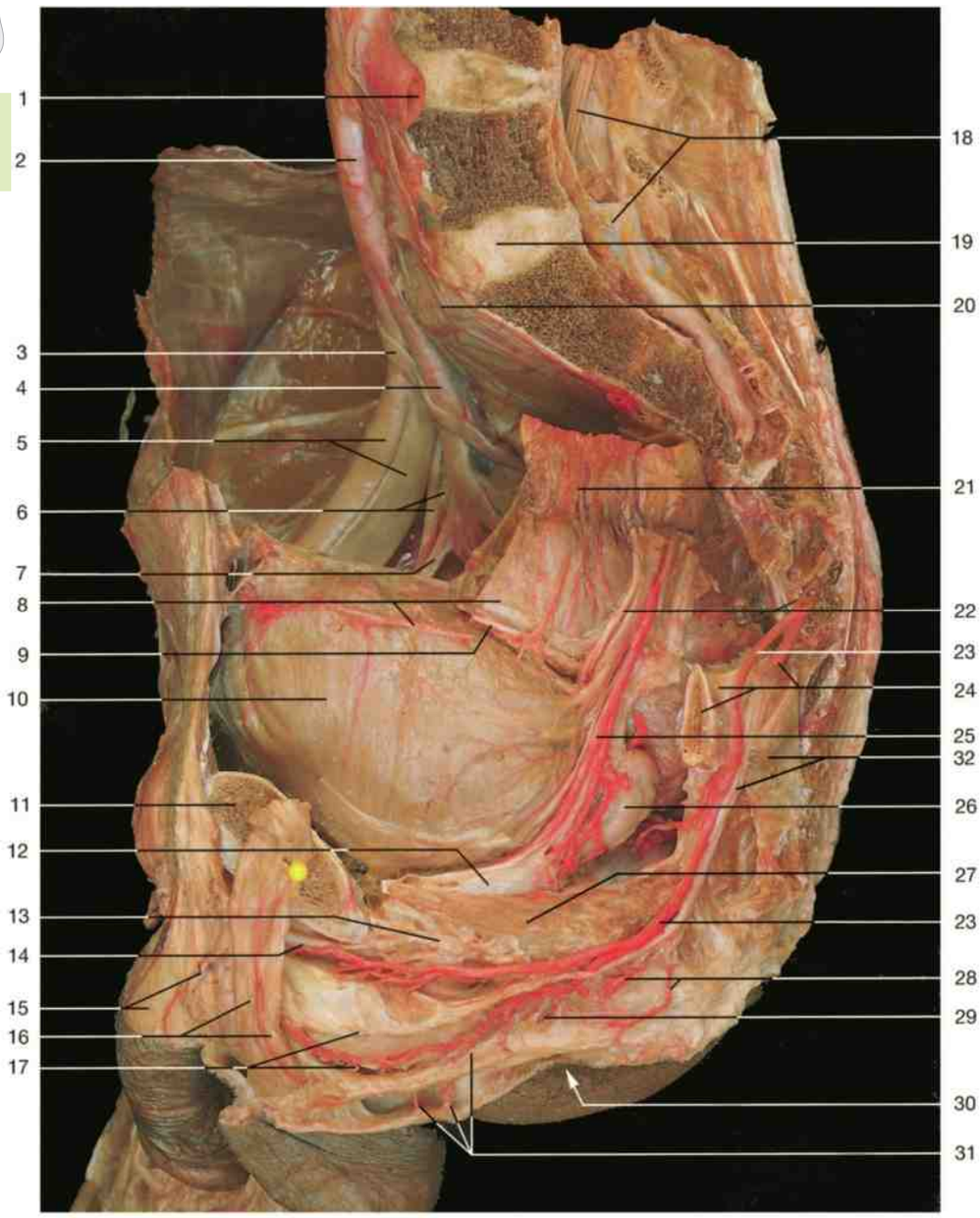

Pelvic cavity in the male (right half of parasagittal section). The arteries have been injected with red resin. The parietal layer of peritoneum has been removed. The urinary bladder is filled to a great extent.

1 Left common iliac artery
2 Right common iliac artery
3 Right ureter
4 Right internal iliac artery
5 Right external iliac artery and vein
6 Right obturator artery and nerve
7 Umbilical artery
8 Sigmoid and superior vesical artery
9 Left ductus deferens
10 Urinary bladder
11 Pubic bone (cut)
12 Prostate
13 Vesicoprostatic venous plexus
14 Deep dorsal vein of penis and dorsal artery of penis
15 Penis and superficial dorsal vein
16 Spermatic cord and testicular artery
17 Bulb of penis and deep artery of penis
18 Cauda equina and dura mater (divided)
19 Intervertebral disc between fifth lumbar vertebra and sacrum
20 Sacral promontory
21 Mesosigmoid
22 Left ureter
23 Left internal pudendal artery
24 Ischial spine (cut), sacrospinal ligament, inferior gluteal artery
25 Left inferior vesical artery
26 Seminal vesicle
27 Levator ani muscle
28 Branches of inferior rectal artery
29 Perineal artery
30 Anus
31 Posterior scrotal branches
32 Pudendal nerve and sacrotuberal ligament

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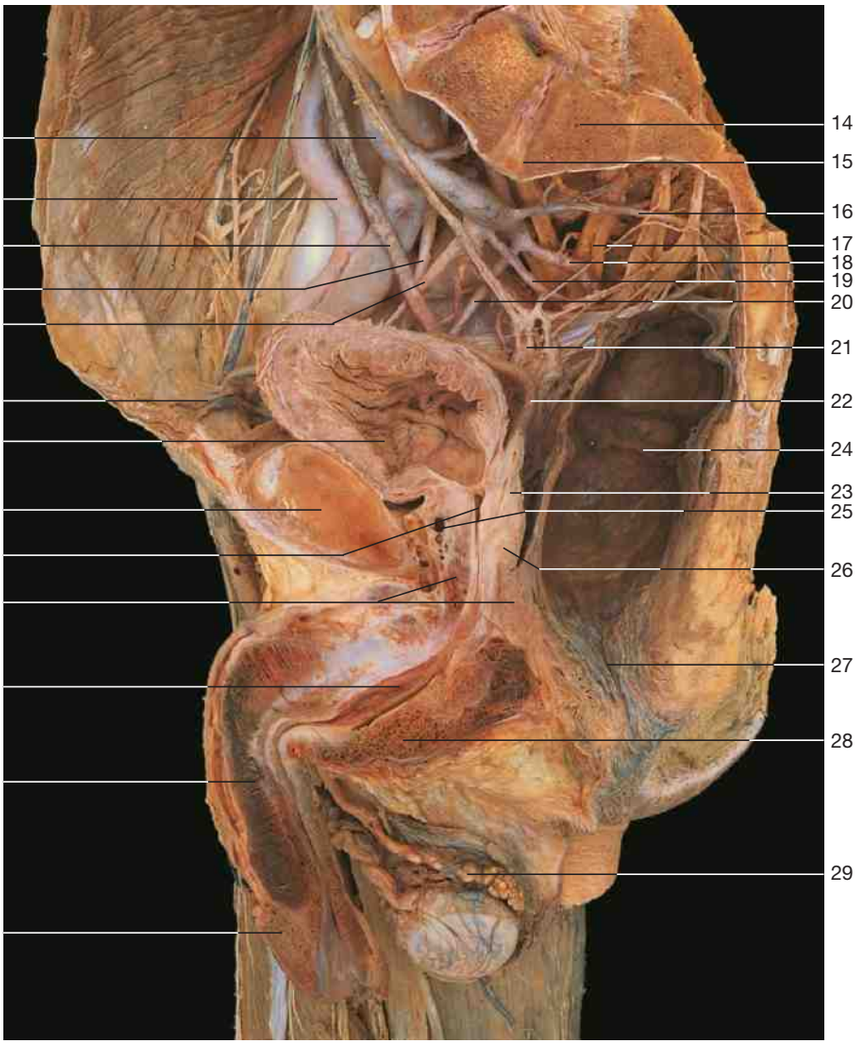
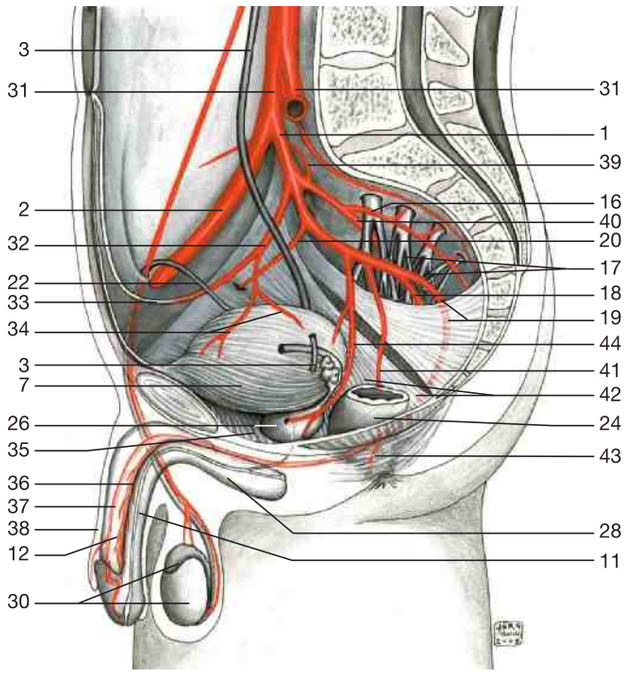


Vessels of the pelvic cavity in the male (medial aspect, midsagittal section). The gluteus maximus muscle has been removed.

1 Internal iliac artery
2 External iliac artery
3 Ureter
4 Obturator nerve
5 Umbilical artery
6 Anulus inguinalis profundus (deep inguinal ring)
7 Urinary bladder (vesica urinaria)
8 Symphysis
9 Prostatic part of urethra
10 Sphincter muscle of urethra
11 Urethra (spongy part)
12 Cavernous body of penis
13 Glans penis
14 Sacrum
15 Promontory
16 Lateral sacral artery
17 Plexus sacralis
18 Inferior gluteal artery
19 Internal pudendal artery
20 Obturator artery
21 Inferior hypogastric plexus
22 Ductus deferens
23 Seminal vesicle (vesicula seminalis)
24 Rectum
25 Prostatic venous plexus
26 Prostate
27 Anal canal
28 Spongy part of penis
29 Pampiniform plexus
30 Testis and epididymis
31 Common iliac artery
32 Umbilical artery
33 Medial umbilical ligament
34 Branches of superior vesical artery
35 Urogenital diaphragm
36 Deep artery of penis
37 Dorsal artery of penis
38 Penis
39 Iliolumbar artery
40 Superior gluteal artery
41 Middle rectal artery
42 Levator ani muscle
43 Inferior rectal artery
44 Inferior vesical artery



Main branches of internal iliac artery in the male (schematic drawing).

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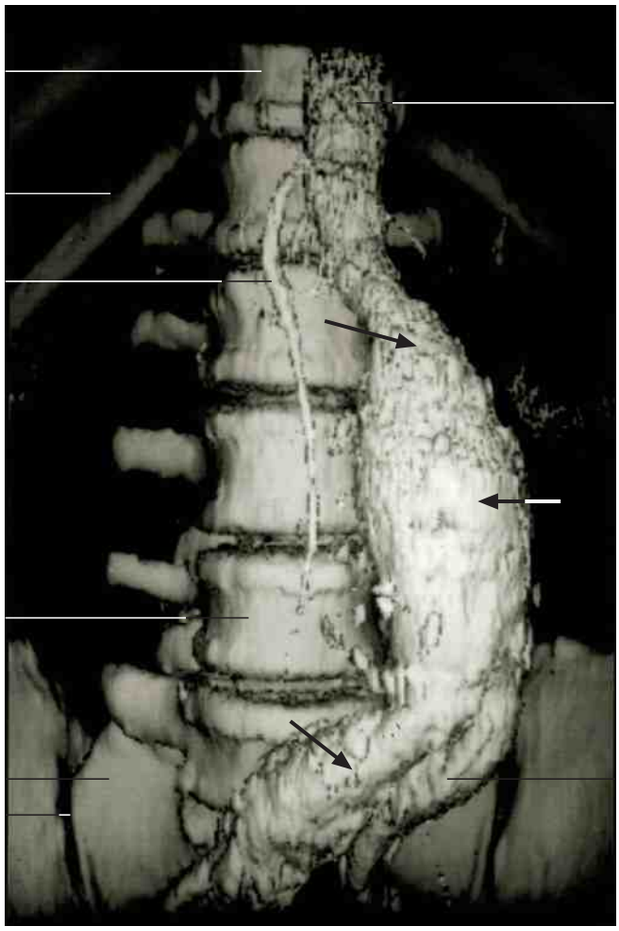
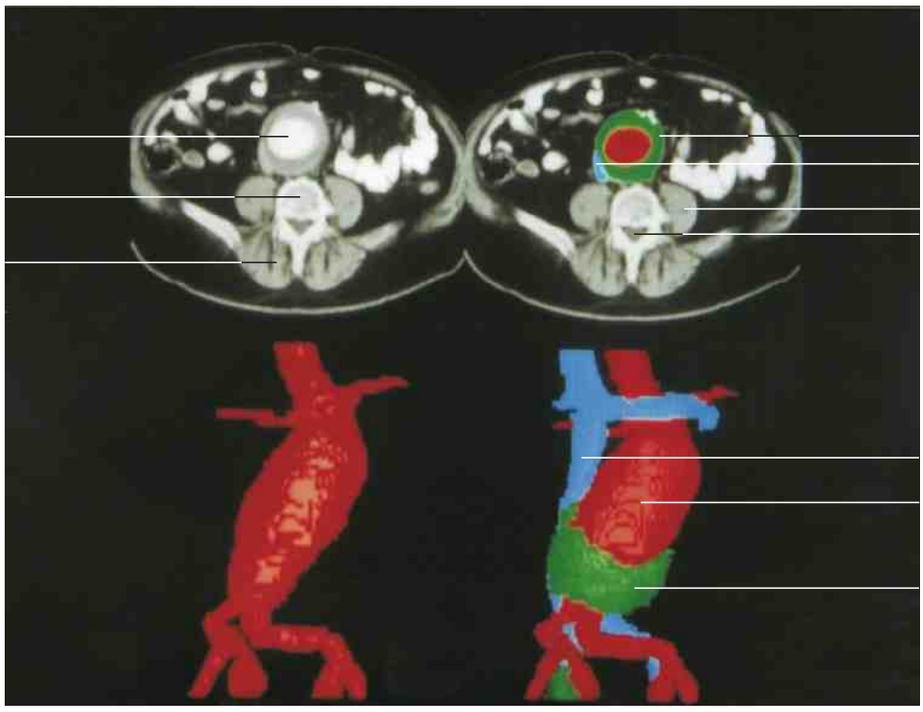


1 Twelfth thoracic vertebra (T_{12})
2 Twelfth rib (rib XII)
3 Inferior mesenteric artery
4 Fourth lumbar vertebra (L_4)
5 Sacrum
6 Sacro-iliac articulation
7 Aorta (abdominal part)
8 Left common iliac artery (included into the aneurysm)
9 Aorta with aneurysm
10 Body of lumbar vertebra
11 Intrinsic muscles of the back
12 Thrombotic part of the aneurysm (green)
13 Inferior vena cava (compressed, blue)
14 Iliopsoas muscle
15 Vertebral canal
16 Aneurysm of the aorta (red)

Abdominal part of the aorta showing an infrarenal aneurysm with involvement of both iliac arteries (arrows) (3-D reconstruction, courtesy of Prof. H. Rupprecht and Dr. M. Rexer, Klinikum Fürth, Germany).



Abdominal part of the aorta with an aneurysm, after injection of contrast medium. Above = horizontal sections through the abdominal cavity, showing different contrast medium concentrations within the aorta and the aneurysm; below = 3-D reconstruction of the aneurysm; red = aorta; green = thrombotic areas; blue = vein (vena cava inferior, partly compressed).

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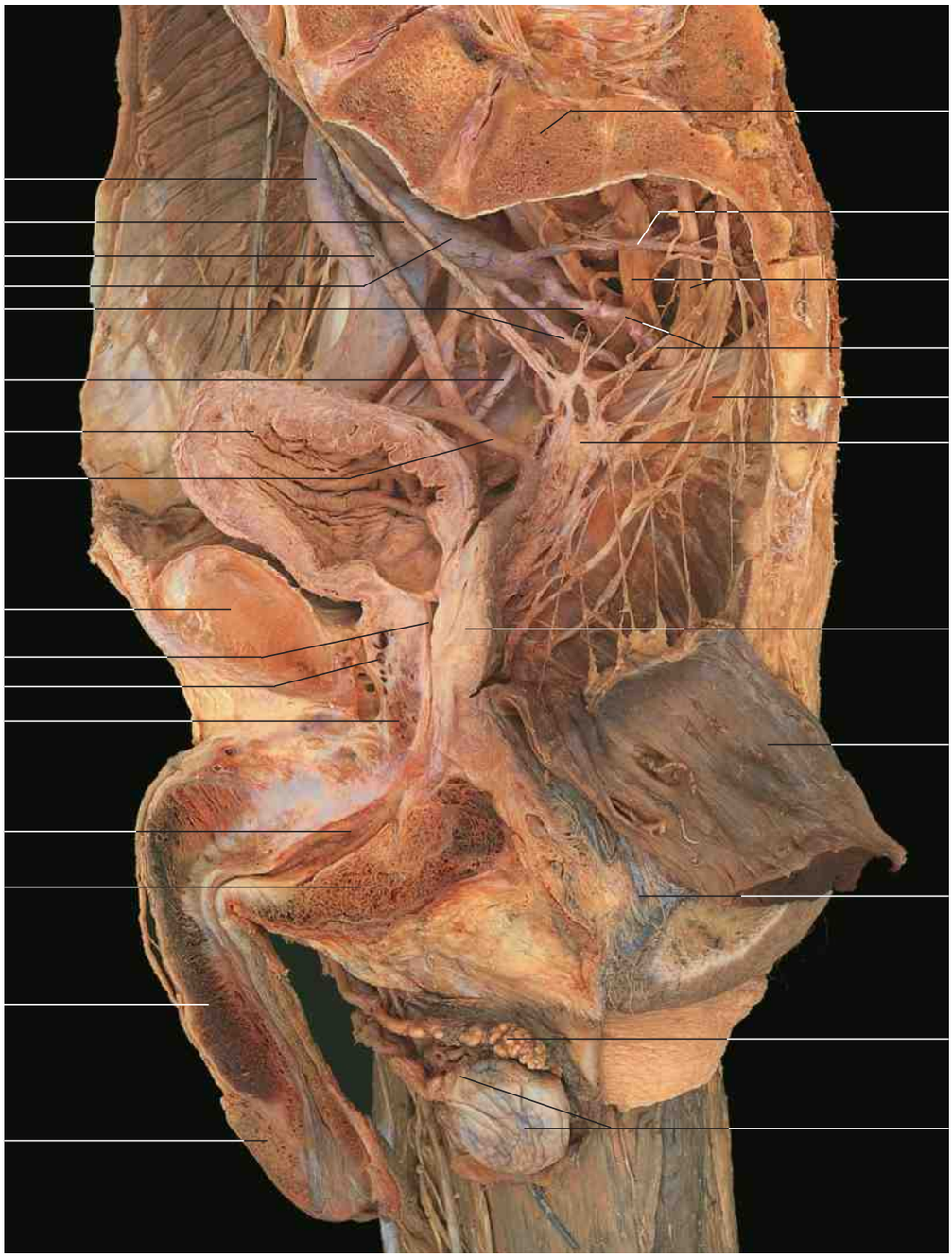

Vessels and nerves of the pelvic cavity in the male (medial aspect, midsagittal section). Rectum reflected to display the inferior hypogastric plexus.

1 External iliac artery
2 Right hypogastric nerve
3 Ureter
4 Internal iliac artery
5 Inferior gluteal artery and internal pudendal artery
6 Obturator artery
7 Urinary bladder
8 Ductus deferens
9 Symphysis pubica
10 Prostatic part of urethra
11 Prostatic venous plexus
12 Sphincter urethrae muscle
13 Spongy part of urethra
14 Corpus spongiosum penis
15 Corpus cavernosum penis
16 Glans penis
17 Sacrum
18 Lateral sacral artery
19 Sacral plexus
20 Pelvic splanchnic nerves (nervi erigentes)
21 Levator ani muscle
22 Inferior hypogastric plexus (pelvic plexus)
23 Prostate
24 Rectum (reflected)
25 Anal canal and external anal sphincter
26 Pampiniform plexus continuous with testicular vein
27 Testis and epididymis

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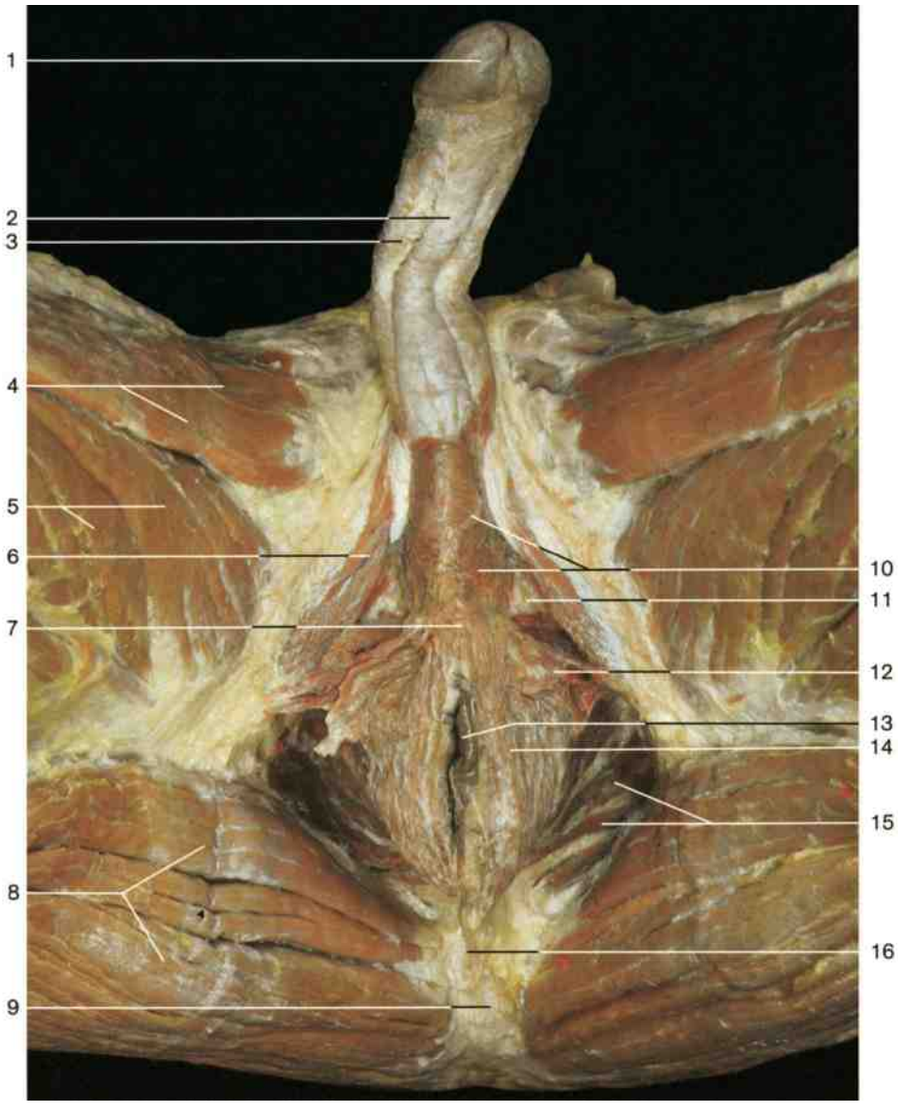
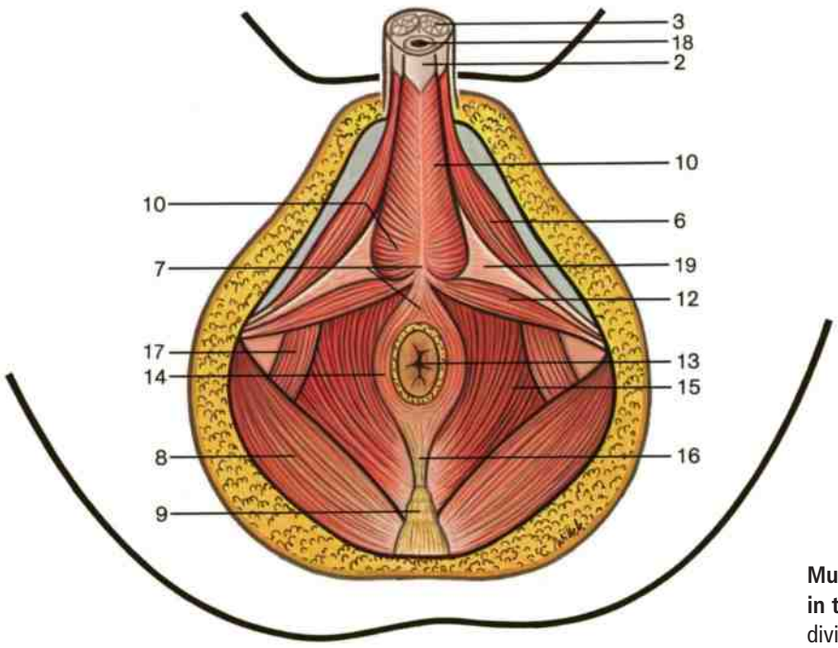


Muscles of urogenital and pelvic diaphragms in the male (from below).

1 Glans penis
2 Corpus spongiosum of penis
3 Corpus cavernosum of penis
4 Gracilis muscle
5 Adductor muscles
6 Ischiocavernosus muscle overlying crus of penis
7 Perineal body
8 Gluteus maximus muscle
9 Coccyx
10 Bulbospongiosus muscle
11 Deep transverse perineus muscle covered by inferior fascia of urogenital diaphragm
12 Superficial transverse perineus muscle
13 Anus
14 External anal sphincter muscle
15 Levator ani muscle
16 Anococcygeal ligament
17 Obturator internus muscle
18 Urethra
19 Deep transverse perineus muscle



Muscles of urogenital and pelvic diaphragms in the male (from below). The penis has been divided (schematic drawing).

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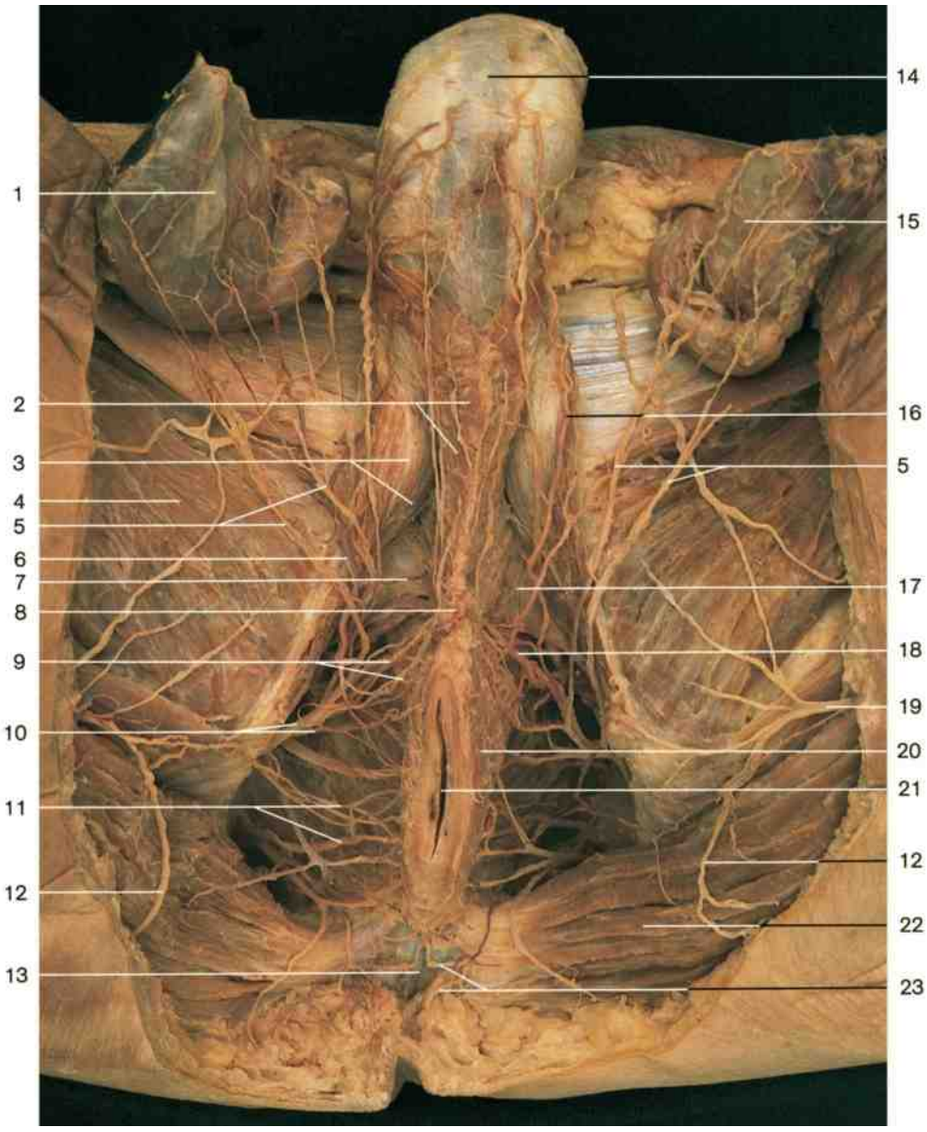
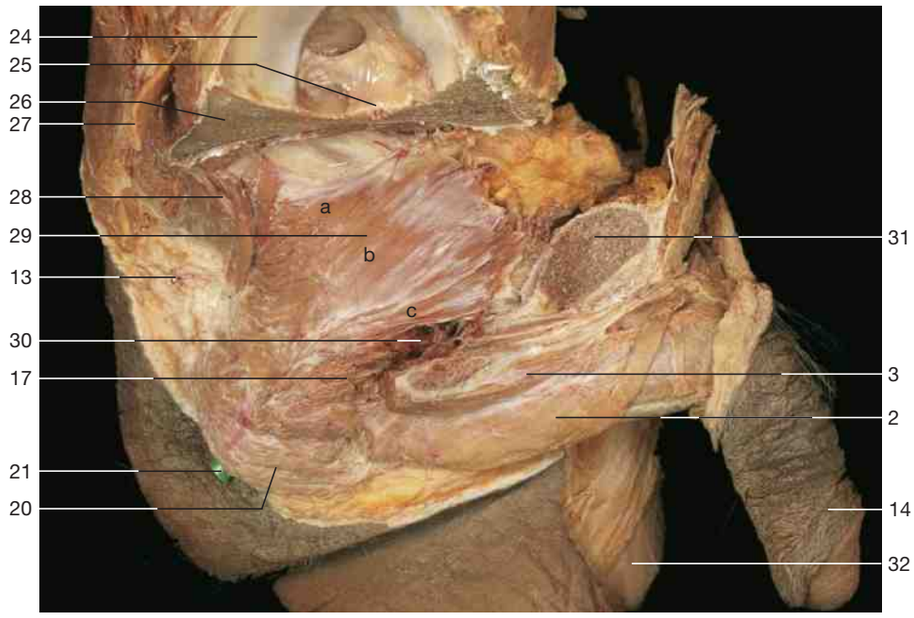


Urogenital diaphragm and external genital organs in the male with vessels and nerves (from below). The testes have been reflected laterally.

1 Right testis (reflected laterally and upward)
2 Bulbospongiosus muscle
3 Ischiocavernosus muscle
4 Adductor magnus muscle
5 Posterior scrotal nerves and superficial perineal arteries
6 Posterior scrotal artery and vein
7 Right artery of bulb of penis
8 Perineal body
9 Perineal branches of pudendal nerve
10 Pudendal nerve and internal pudendal artery
11 Inferior rectal arteries and nerves
12 Inferior cluneal nerve
13 Coccyx (location)
14 Penis
15 Left testis (reflected laterally)
16 Left posterior scrotal artery
17 Deep transverse perineal muscle
18 Left artery of bulb of penis
19 Posterior femoral cutaneous nerve
20 External anal sphincter muscle
21 Anus
22 Gluteus maximus muscle
23 Anococcygeal nerves
24 Acetabulum (femur removed)
25 Ligament of femoral head
26 Body of ischium (cut)
27 Sciatic nerve
28 Coccygeus muscle
29 Levator ani muscle
a iliococcygeus muscle
b pubococcygeus muscle
c puborectalis muscle
30 Prostatic venous plexus
31 Body of pubis
32 Testis



Pelvic diaphragm and external genital organs in the male. The right half of the pelvis including the obturator internus muscle and femur have been removed to display the right half of the levator ani muscle.

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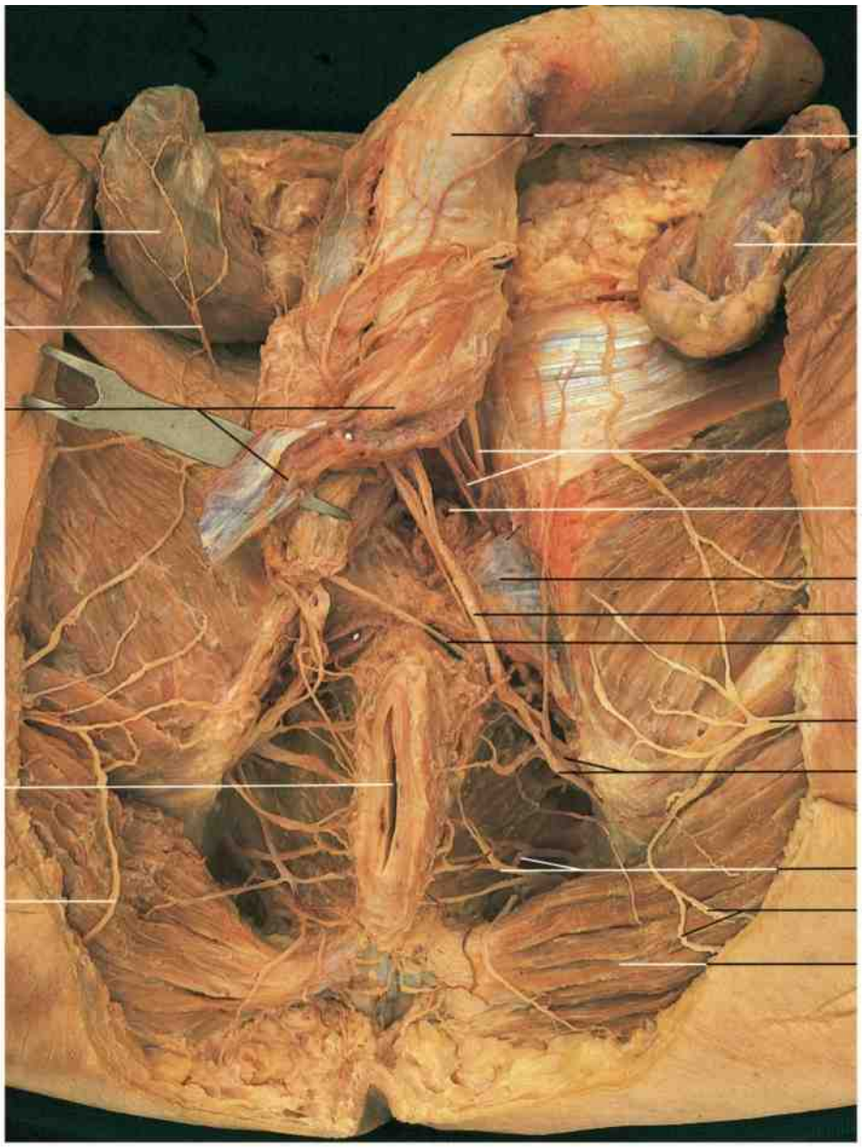
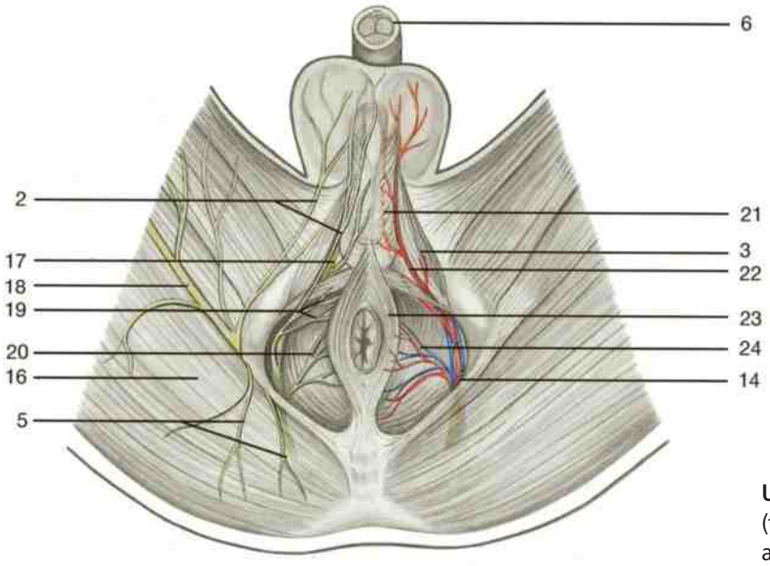


1 Right testis (reflected)
2 Posterior scrotal nerves
3 Left crus penis with ischiocavernosus muscle
4 Anus
5 Inferior cluneal nerves
6 Penis
7 Left testis (reflected)
8 Dorsal artery and nerve of penis
9 Urethra
10 Deep transverse perineus muscle
11 Perineal branch of pudendal nerve
12 Artery of bulb of penis (reflected)
13 Branch of posterior femoral cutaneous nerve
14 Internal pudendal artery and pudendal nerve
15 Inferior rectal arteries and nerves
16 Gluteus maximus muscle
17 Dorsal nerve of penis
18 Posterior femoral cutaneous nerve
19 Perineal branches of pudendal nerve
20 Inferior rectal nerves
21 Bulbospongiosus muscle (inside: dorsal artery of penis)
22 Perineal artery
23 External anal sphincter muscle
24 Inferior rectal artery and veins

Urogenital diaphragm and external genital organs in the male (from below). The left crus penis has been isolated and reflected laterally together with the bulb of the penis. The urethra has been cut.



Urogenital and anal region in the male (from below). Right side: nerves; left side: arteries and veins.

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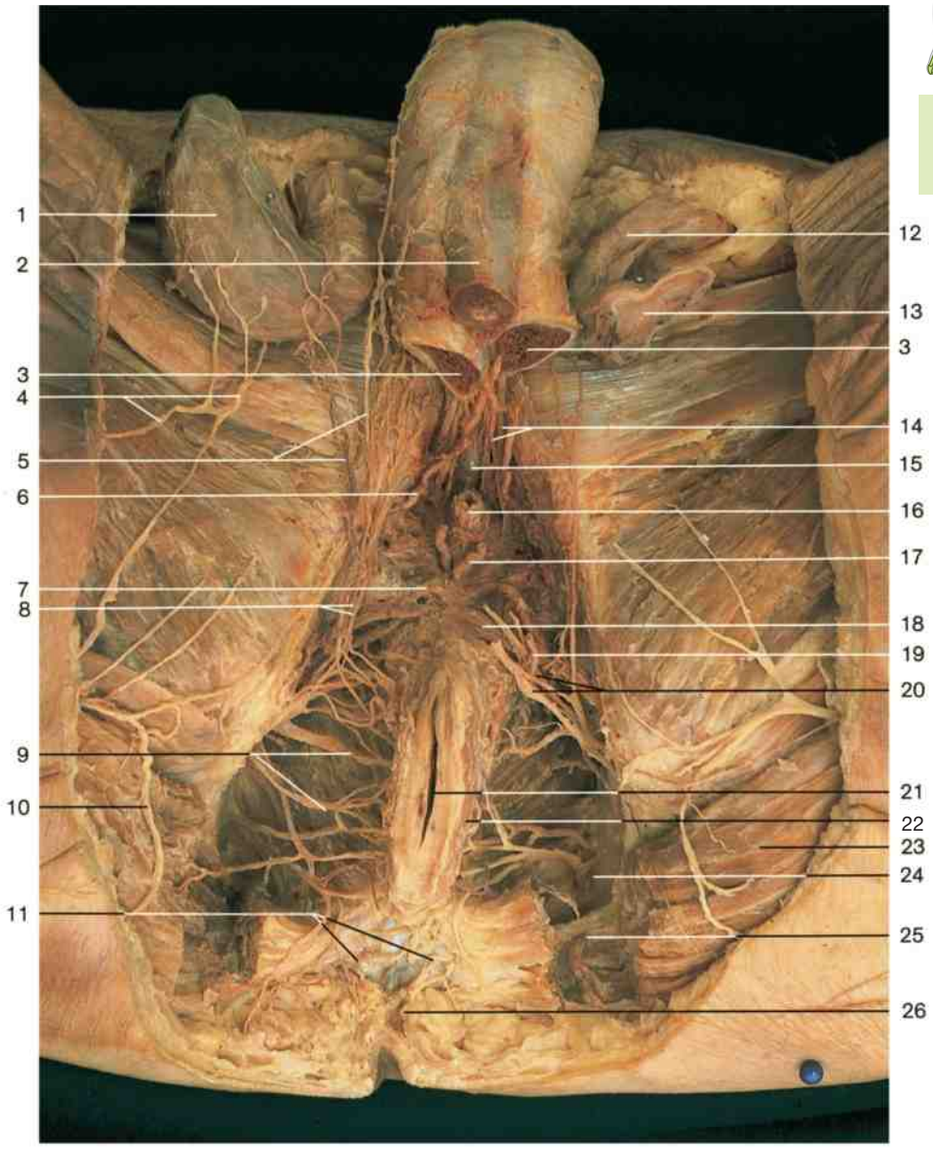
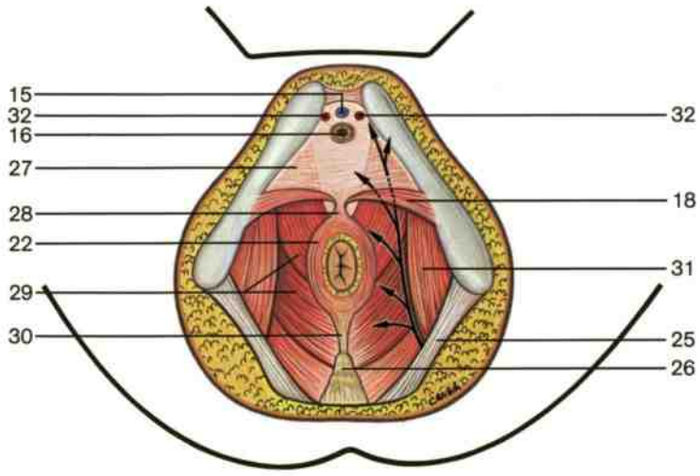
1 Right testis (reflected)
2 Corpus spongiosum of penis
3 Corpus cavernosum of penis
4 Perineal branch of posterior femoral cutaneous nerve
5 Posterior scrotal arteries and nerves
6 Deep artery of penis
7 Deep transverse perineal muscle
8 Right perineal nerves
9 Inferior rectal nerves
10 Inferior cluneal nerve
11 Anococcygeal nerves
12 Left spermatic cord
13 Left testis (cut surface)
14 Dorsal artery and nerve of penis
15 Deep dorsal vein of penis
16 Urethra (cut)
17 Artery of bulb of penis
18 Superficial transverse perineus muscle
19 Left artery of bulb of penis
20 Perineal branch of pudendal nerve
21 Anus
22 External anal sphincter muscle
23 Gluteus maximus muscle
24 Internal pudendal artery and pudendal nerve
25 Sacrotuberous ligament
26 Coccyx
27 Urogenital diaphragm (deep transverse perineus muscle)
28 Tendinous center of perineum (perineal body)
29 Levator ani muscle
30 Anococcygeal ligament
31 Obturator internus muscle
32 Dorsal artery of penis



Urogenital diaphragm and external genital organs in the male (from below). The root of the penis has been cut. Dissection of the urogenital diaphragm.



Urogenital and pelvic diaphragms in the male (from below). The penis has been removed. The arrows indicate the course of vessels and nerves (schematic drawing).

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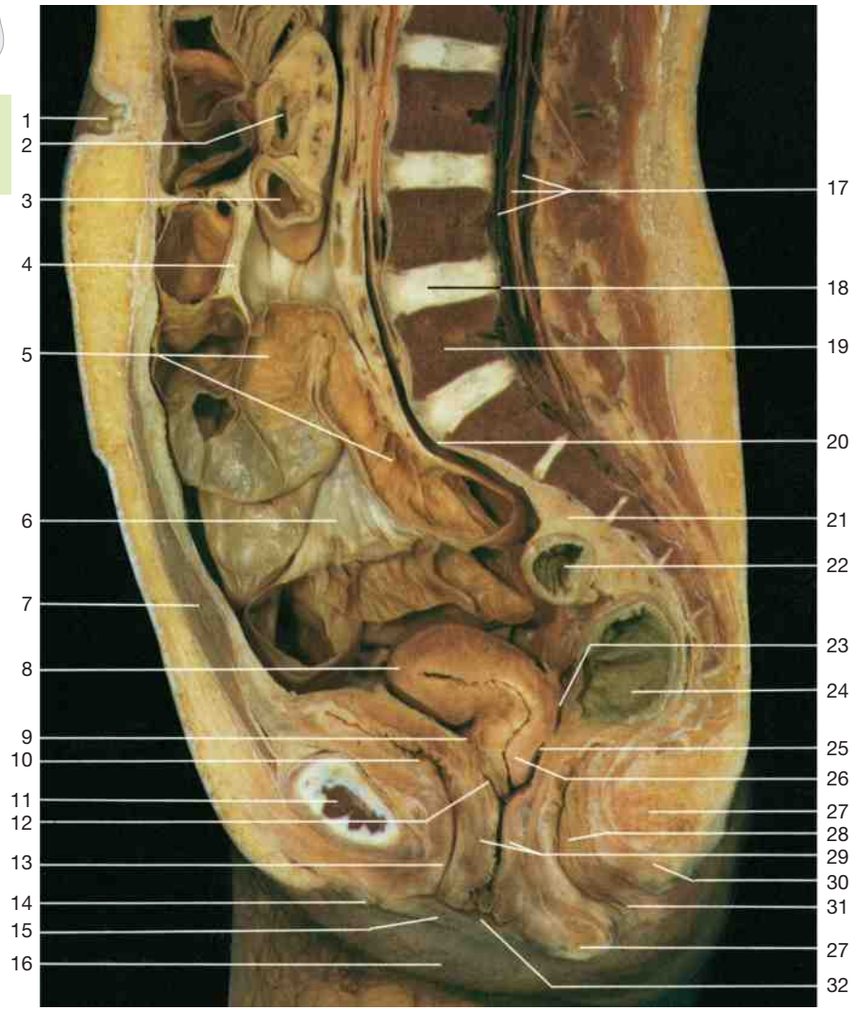
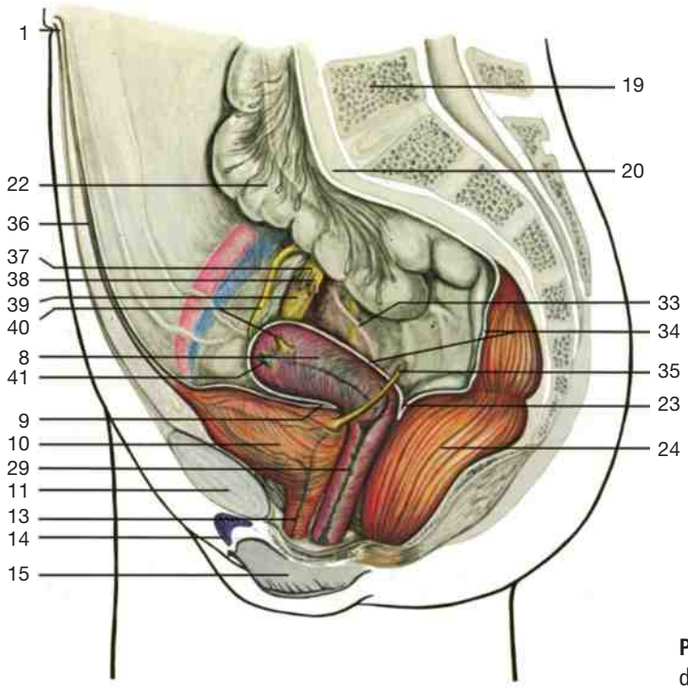


Female urogenital system, midsagittal section through the trunk. The urinary bladder is empty, position and shape of the uterus are normal.

1 Umbilicus
2 Duodenum
3 Ascending part of duodenum
4 Root of mesentery
5 Small intestine
6 Mesentery
7 Rectus abdominis muscle
8 Uterus
9 Vesico-uterine pouch
10 Urinary bladder (collapsed)
11 Pubic symphysis
12 Anterior fornix of vagina
13 Urethra
14 Clitoris
15 Labium minus
16 Labium majus
17 Vertebral canal with cauda equina
18 Intervertebral disc
19 Body of fifth lumbar vertebra
20 Sacral promontory
21 Mesosigmoid
22 Sigmoid colon
23 Recto-uterine pouch (of Douglas)
24 Ampulla of rectum
25 Posterior fornix of vagina
26 Cervix of uterus
27 External anal sphincter muscle
28 Anal canal
29 Vagina
30 Internal anal sphincter muscle
31 Anus
32 Hymen
33 Left ureter
34 Peritoneum (cut edge)
35 Right ureter (divided)
36 Median umbilical fold with urachus
37 Infundibulum of uterine tube
38 Fimbriae of uterine tube
39 Ovary
40 Uterine tube (isthmus)
41 Round ligament of uterus



Positions of female genital organs (medial aspect, schematic drawing).

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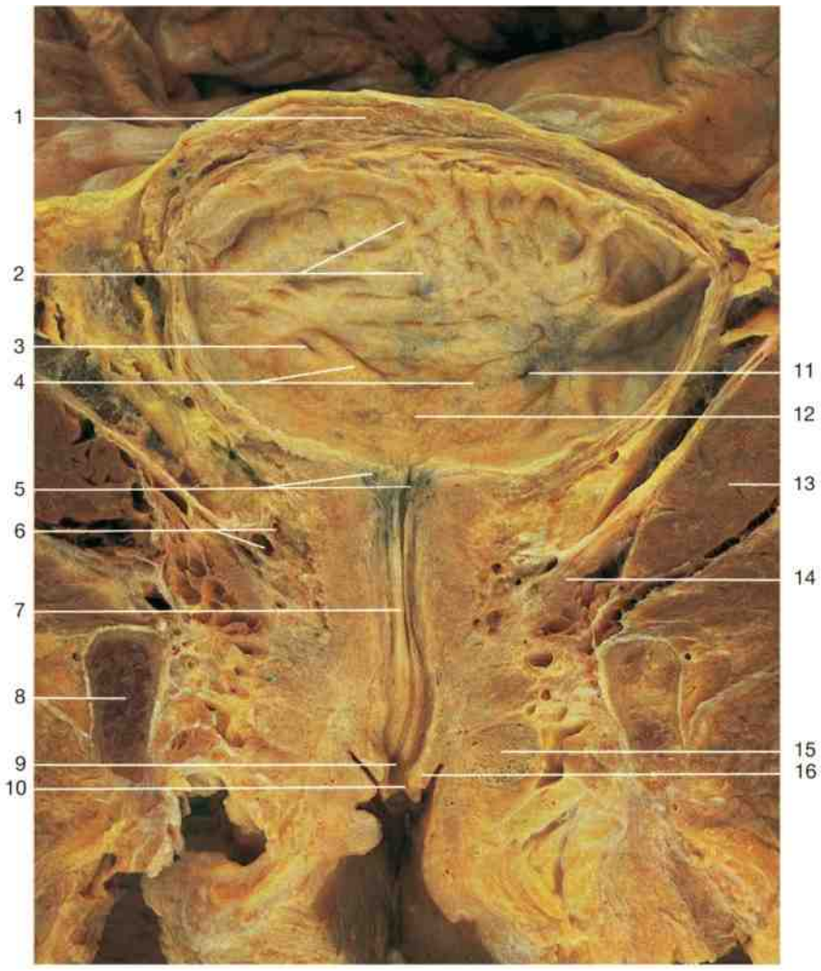
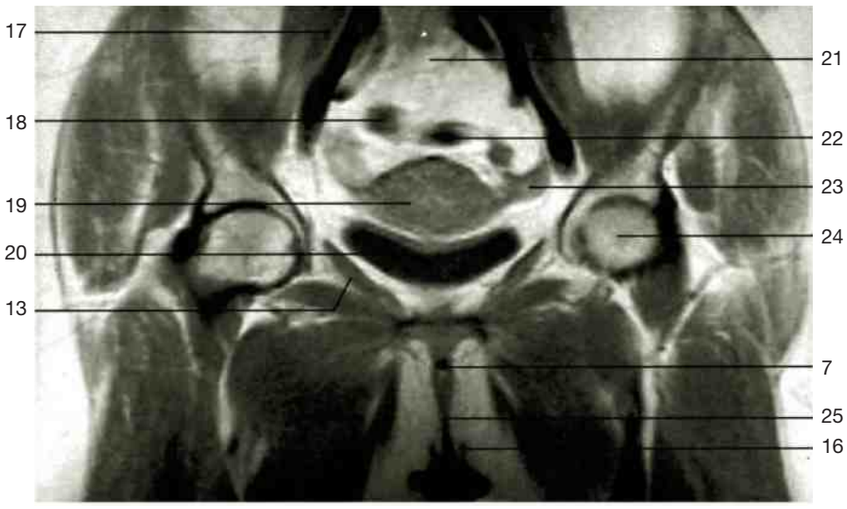


Coronal section through the female urinary bladder and urethra (anterior aspect).

1 Muscular coat of urinary bladder
2 Folds of mucous membrane of urinary bladder
3 Right ureteric orifice
4 Interureteric fold
5 Internal urethral orifice
6 Vesico-uterine venous plexus
7 Urethra
8 Pubic bone (cut edge)
9 External urethral orifice
10 Vestibule of vagina
11 Left ureteric orifice
12 Trigone of bladder
13 Obturator internus muscle
14 Levator ani muscle
15 Bulb of the vestibule
16 Left labium minus
17 Psoas major muscle
18 Ampulla of rectum
19 Uterus
20 Urinary bladder
21 Promontory
22 Sigmoid colon
23 Uterine tube
24 Head of femur
25 Vagina



Coronal section through the pelvic cavity of the female (MRI scan).

The urogenital system of the female differs greatly from that of the male. During embryonal development, the uterus and ovary remain within the pelvic cavity where, after puberty, the ovulation takes place. Therefore, the urinary system remains functionally separated from the genital organs in the female.

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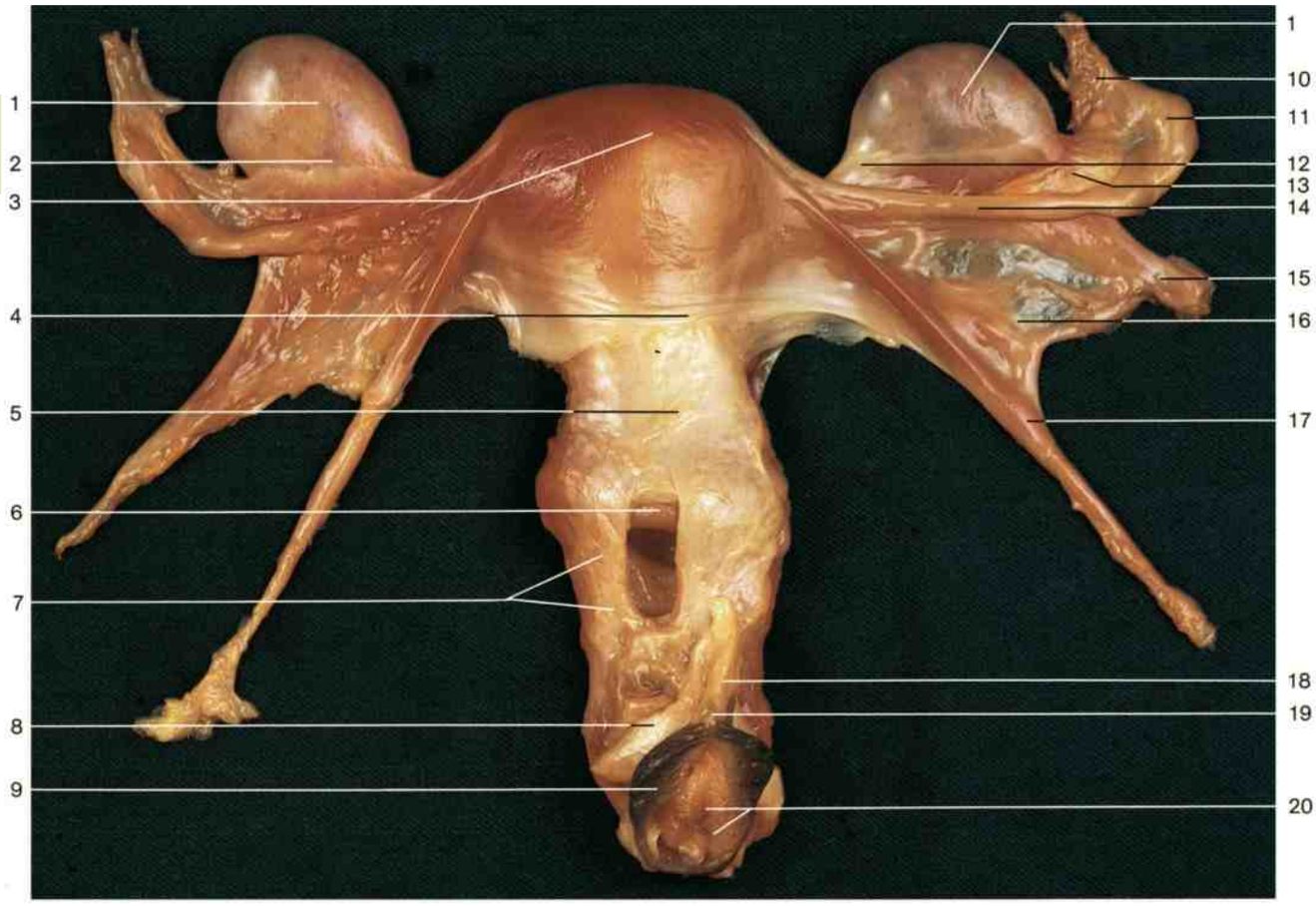
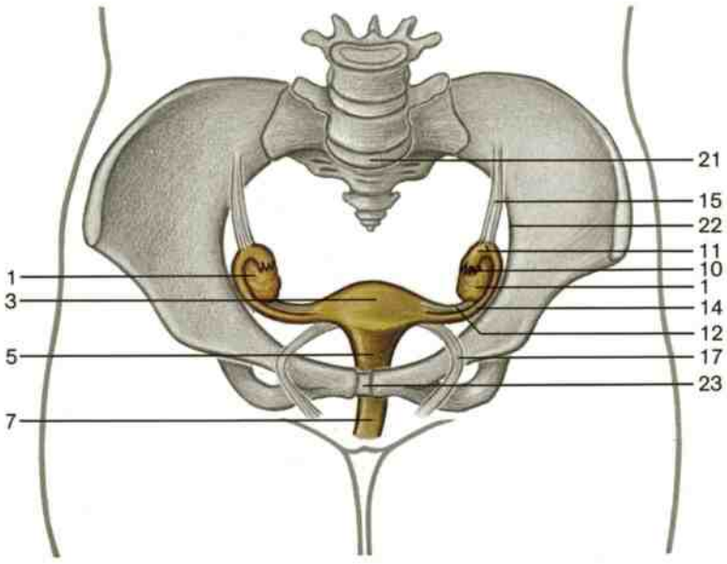


Female genital organs, isolated (anterior aspect). The anterior wall of the vagina has been opened to display the vaginal portion of the cervix.



Female internal genital organs (schematic drawing).

1 Ovary
2 Mesovarium
3 Fundus of uterus
4 Vesico-uterine pouch
5 Cervix of uterus
6 Vaginal portion of cervix
7 Vagina
8 Crus of clitoris
9 Labium minus
10 Fimbriae of uterine tube
11 Infundibulum of uterine tube
12 Ligament of the ovary
13 Mesosalpinx
14 Uterine tube
15 Suspensory ligament of ovary (caudally displaced)
16 Broad ligament of uterus
17 Round ligament of uterus
18 Corpus cavernosum of clitoris
19 Glans of clitoris
20 Hymen, vaginal orifice
21 Promontory
22 Linea terminalis of pelvis
23 Pubic symphysis

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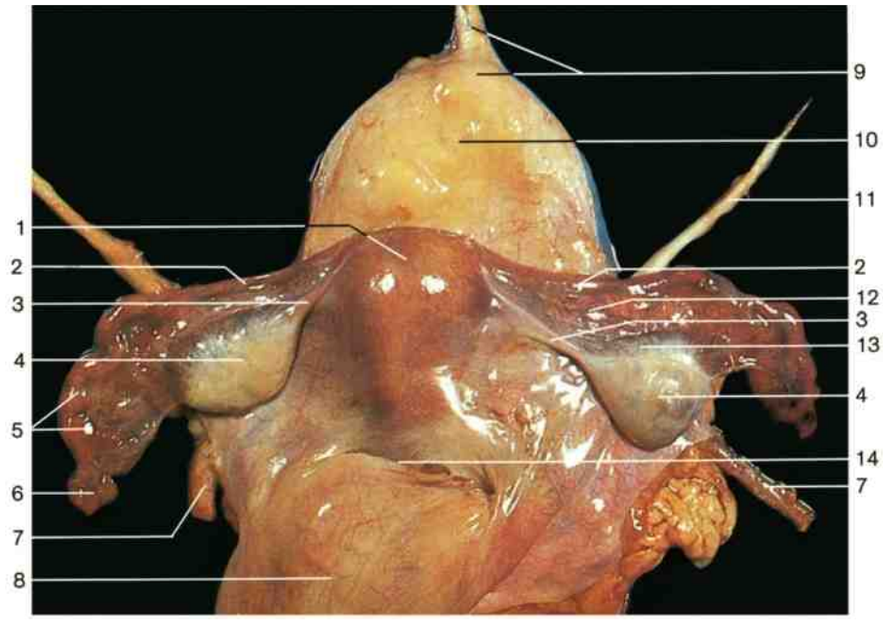
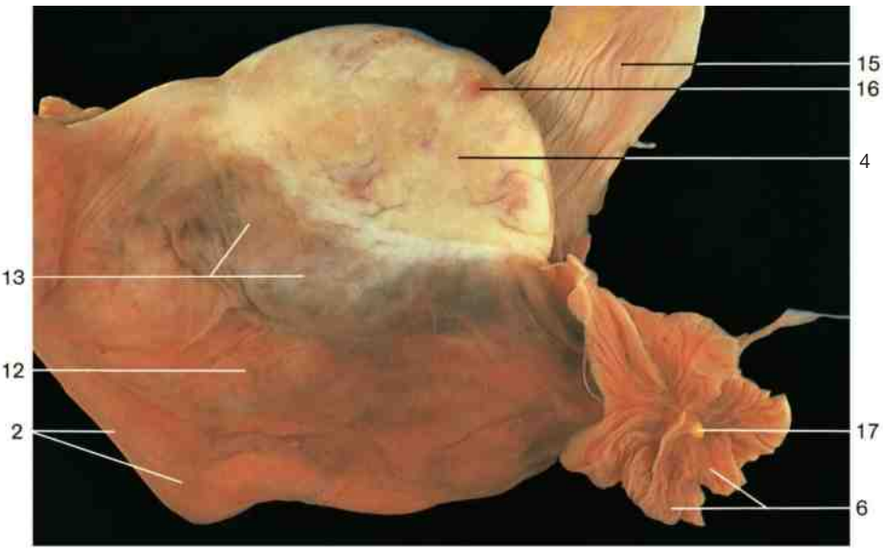
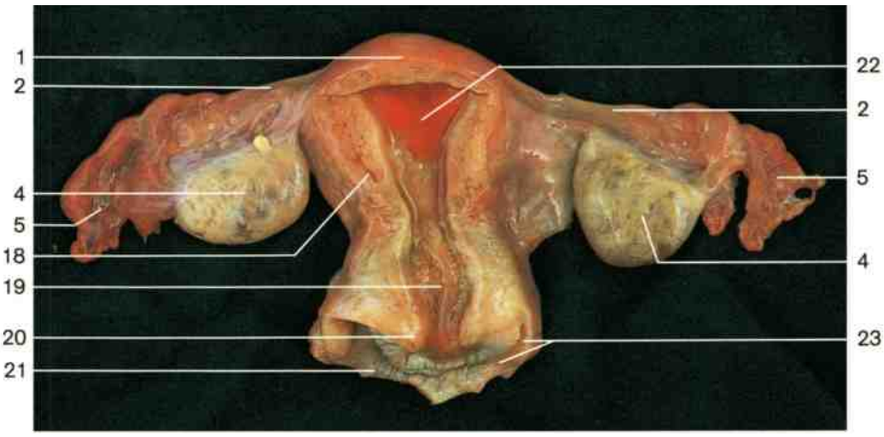


Female genital organs, isolated (supero-posterior aspect).



Right ovary and uterine tube, isolated (supero-posterior aspect). The fimbriae of the uterine tube have been reflected to show the abdominal ostium.



Uterus and related organs (posterior aspect). The posterior wall of the uterus has been opened.

1 Fundus of uterus
2 Uterine tube
3 Ligament of the ovary
4 Ovary
5 Infundibulum of uterine tube
6 Fimbriae of uterine tube
7 Ureter
8 Rectum
9 Apex of urinary bladder and median umbilical ligament
10 Urinary bladder
11 Round ligament of uterus
12 Mesosalpinx
13 Mesovarium
14 Recto-uterine pouch (of Douglas)
15 Suspensory ligament of ovary
16 Scarring of ovary (following ovulation)
17 Abdominal opening of uterine tube
18 Body of uterus
19 Cervical canal
20 Vaginal portion of cervix of uterus (congestion)
21 Vagina
22 Mucous membrane of uterus
23 Anterior fornix of vagina

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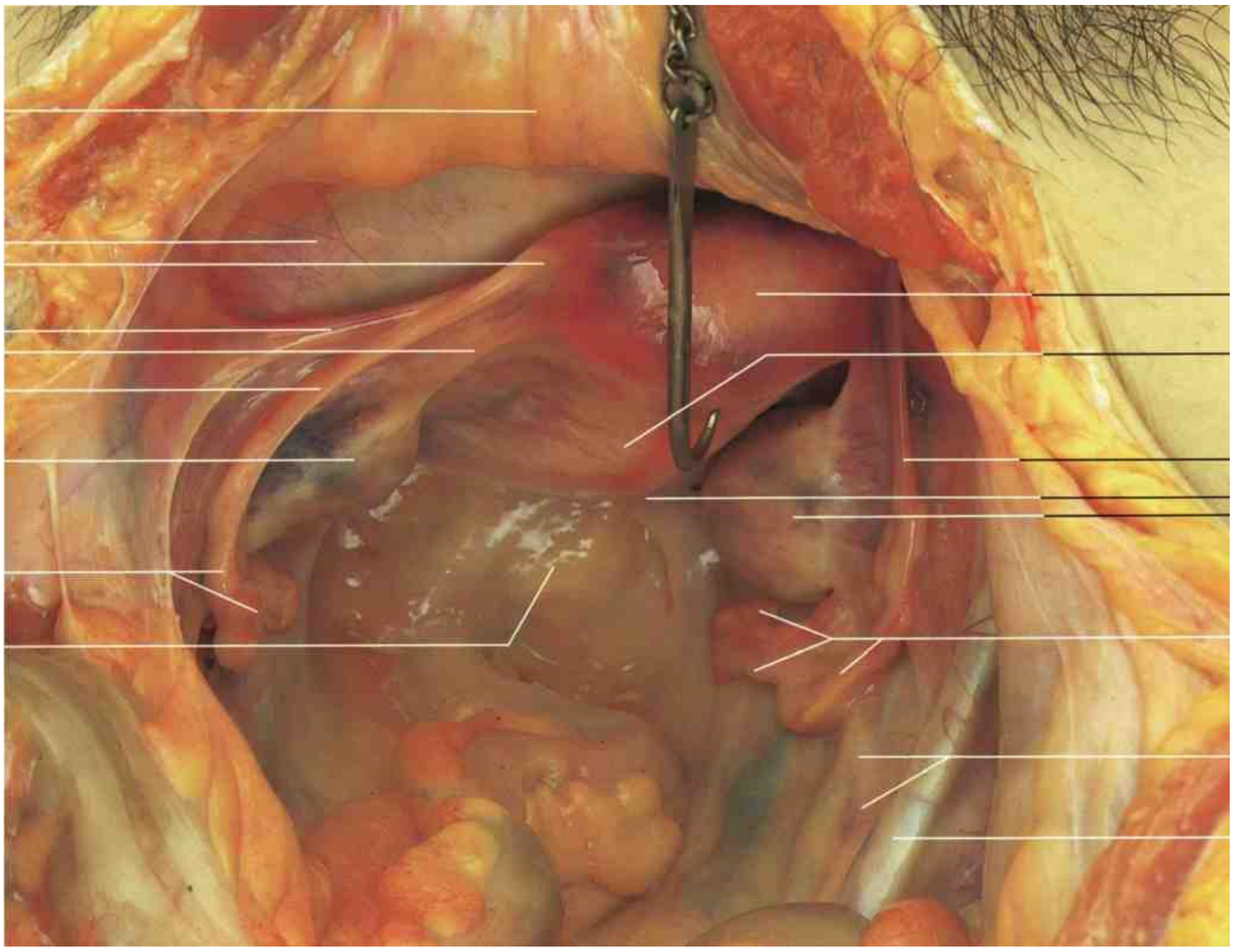
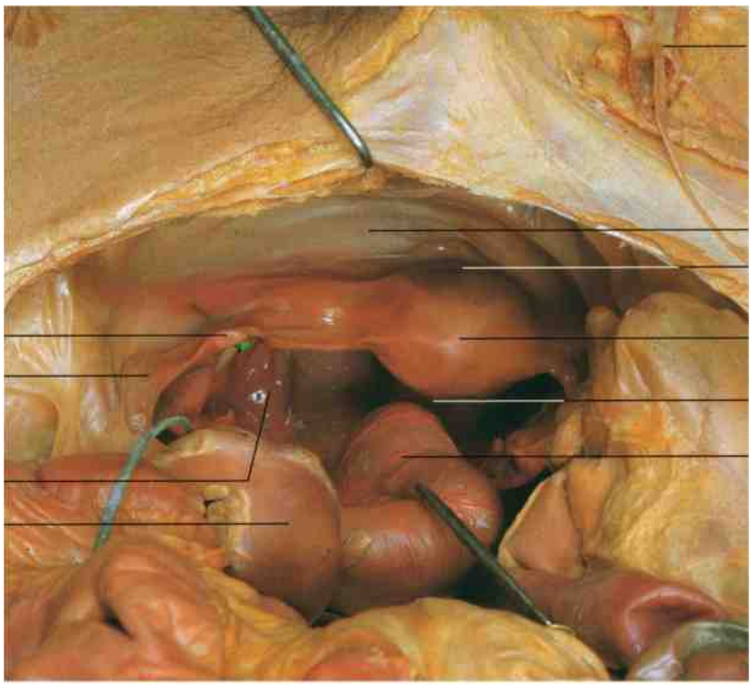


Female internal genital organs. Pelvic cavity (seen from above). The uterus has been reflected to the right.



Female internal genital organs. Pelvic cavity (seen from above).

1 Median umbilical fold with urachus
2 Urinary bladder
3 Insertion of uterine tube at fundus of uterus
4 Round ligament of uterus
5 Ligament of ovary
6 Uterine tube (isthmus)
7 Ovary
8 Ampulla of uterine tube
9 Rectum
10 Uterus
11 Vagina
12 Recto-uterine pouch (of Douglas)
13 Fimbriae of uterine tube
14 Suspensory ligament of ovary
15 Right common iliac artery (covered by peritoneum)
16 Mesosalpinx
17 Sigmoid colon
18 Saphenous opening
19 Vesico-uterine pouch

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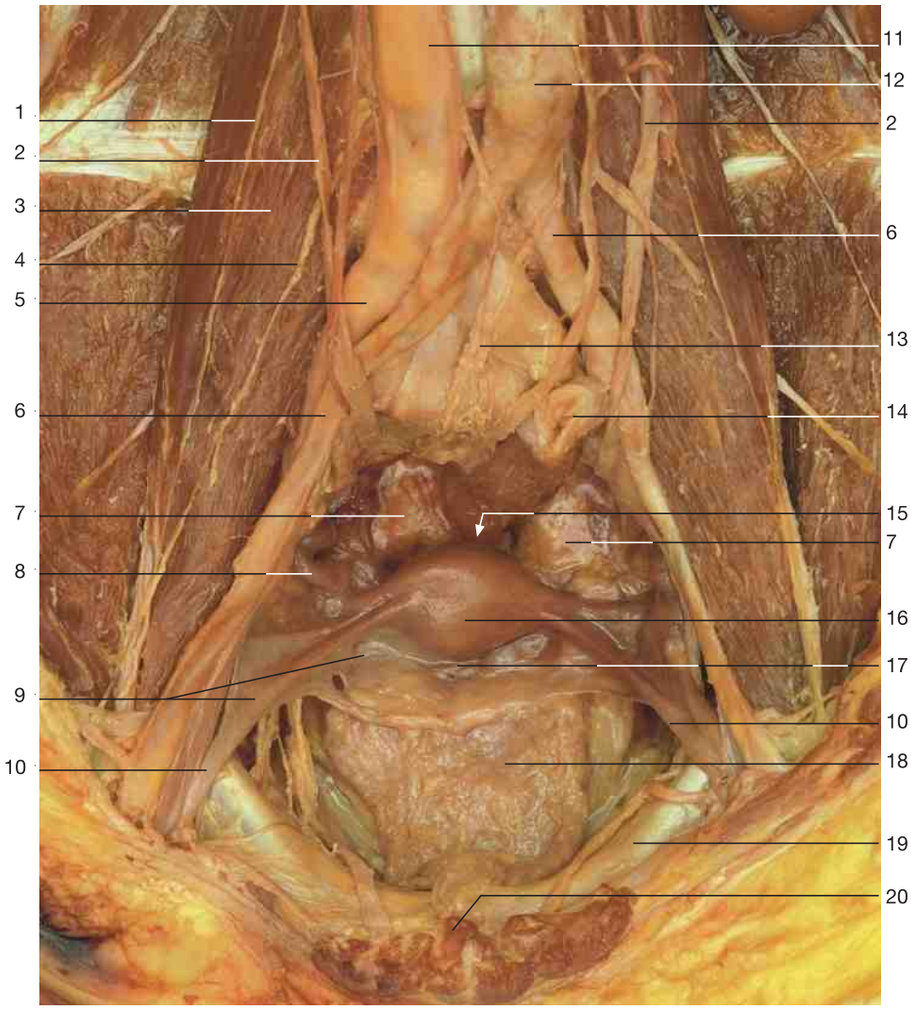
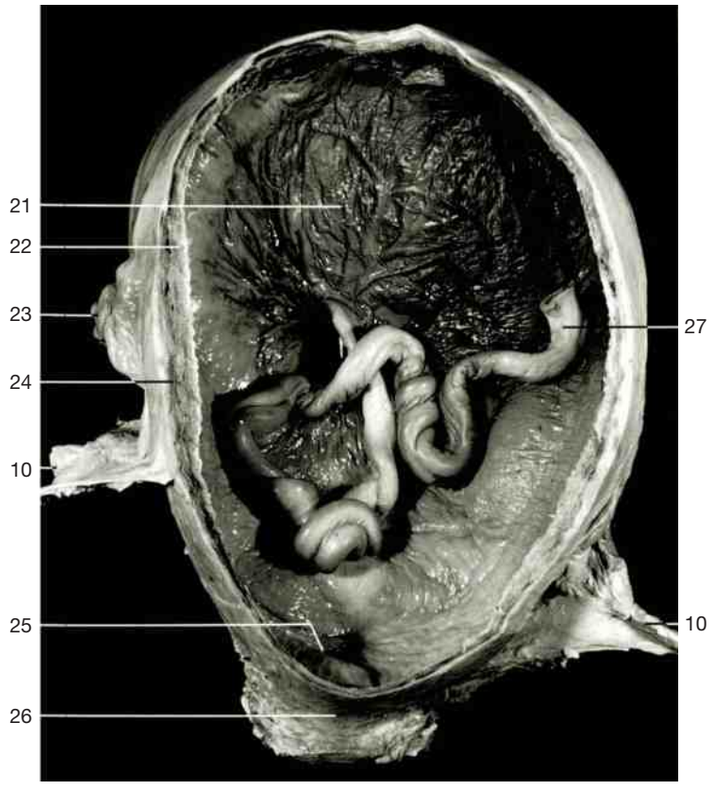


1 Ilio-inguinal nerve
2 Ureter
3 Psoas major muscle
4 Genitofemoral nerve
5 Common iliac vein
6 Common iliac artery
7 Ovary
8 Uterine tube
9 Peritoneum
10 Round ligament of uterus
11 Inferior vena cava
12 Abdominal aorta
13 Superior hypogastric plexus
14 Rectum
15 Recto-uterine pouch (of Douglas)
16 Uterus
17 Vesico-uterine pouch
18 Urinary bladder
19 Iliac crest
20 Pubic symphysis
21 Placenta
22 Amnion and chorion
23 Adnexa of uterus (uterine tube and ovaries)
24 Myometrium
25 Internal orifice of uterus
26 Cervix of uterus
27 Umbilical cord

View of the female pelvis showing uterus and related organs (superior aspect).



Fullterm uterus with placenta (anterior aspect). The anterior wall of the uterus has been removed to show the location of the placenta.

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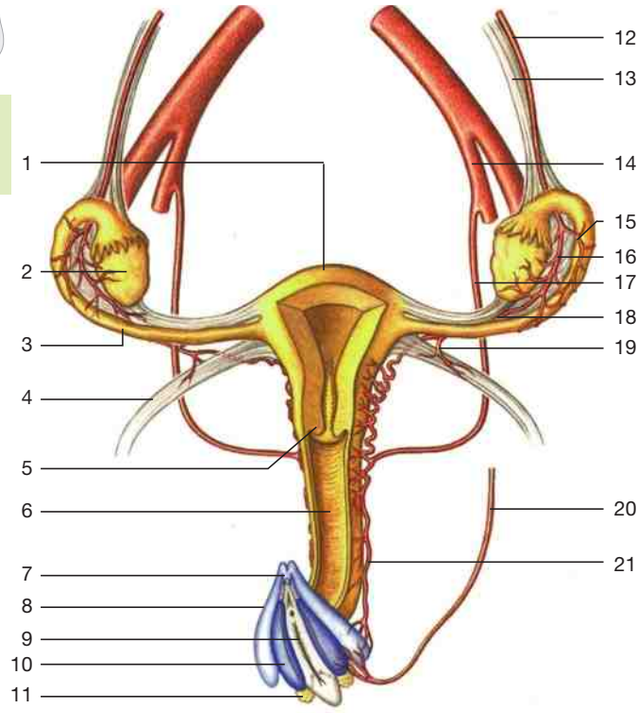
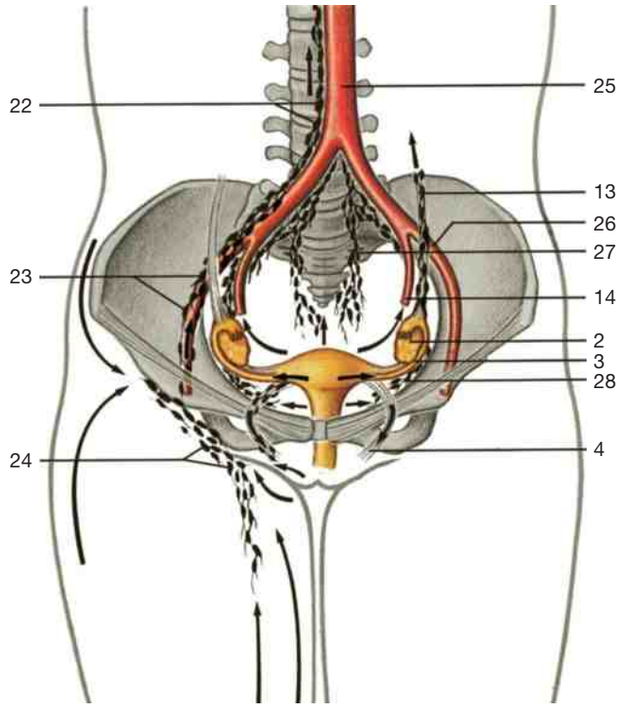


Arteries of female genital organs (schematic drawing).



Main drainage routes of lymph vessels of uterus and its adnexa (indicated by arrows). (Schematic drawing.) Red = arteries; black = lymph vessels and nodes.

1 Uterus
2 Ovary
3 Uterine tube
4 Round ligament of uterus
5 Vaginal portion of cervix of uterus
6 Vagina
7 Clitoris
8 Corpus cavernosum of clitoris
9 Vaginal orifice
10 Bulb of vestibule
11 Greater vestibular gland
12 Ovarian artery
13 Suspensory ligament of ovary
14 Internal iliac artery
15 Tubal branch of ovarian artery
16 Ovarian branch of ovarian artery
17 Uterine artery
18 Ovarian branch of uterine artery
19 Artery of round ligament
20 Internal pudendal artery
21 Vaginal artery
22 Lumbar lymph nodes
23 External iliac lymph nodes
24 Inguinal lymph nodes
25 Abdominal aorta
26 External iliac artery
27 Sacral lymph nodes
28 Internal iliac lymph nodes
29 Superior gluteal artery
30 Obturator artery
31 Inferior gluteal artery
32 Middle sacral artery
33 Femoral artery
34 Vessels of labium majus
35 Femur

Pelvic vessels in the female (arteriography, antero-posterior view).

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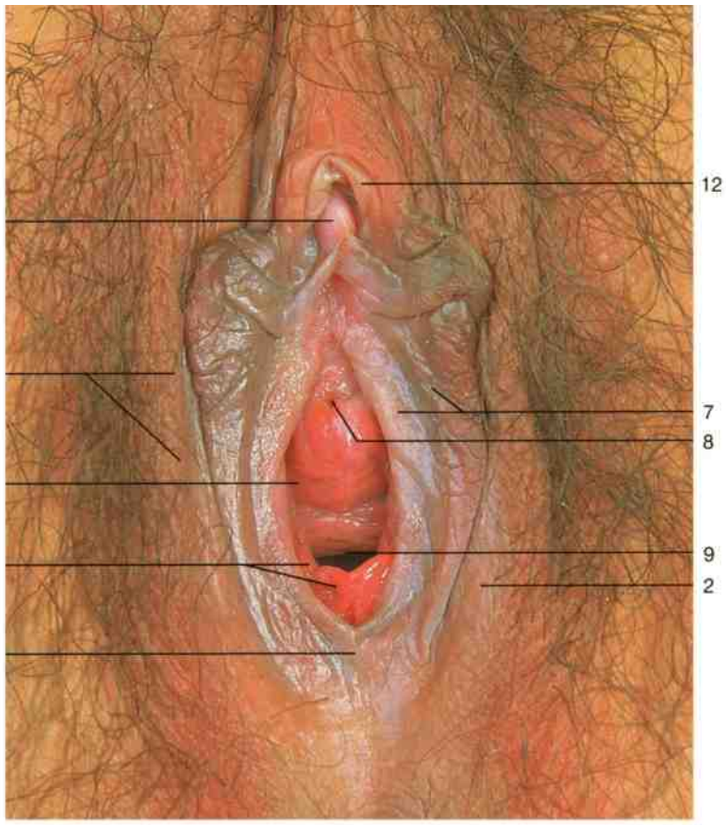
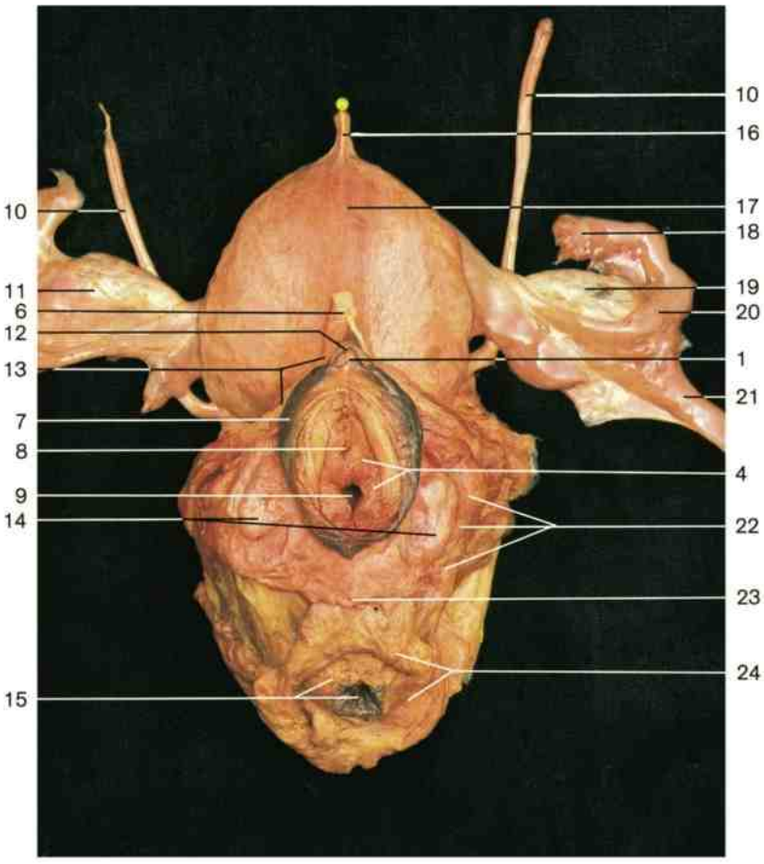


Female external genital organs (anterior aspect). Labia reflected.



Female external genital organs in relation to internal genital organs and urinary system, isolated (anterior aspect).

1 Glans of clitoris
2 Labium majus
3 Vestibule of vagina
4 Hymen
5 Posterior labial commissure
6 Body of clitoris
7 Labium minus
8 External orifice of urethra
9 Vaginal orifice
10 Ureter
11 Adnexa of uterus
12 Prepuce of clitoris
13 Crus of clitoris
14 Greater vestibular glands
15 Anus and internal anal sphincter muscle
16 Median umbilical ligament containing urachus
17 Urinary bladder
18 Infundibulum of uterine tube
19 Ovary
20 Ampulla of uterine tube
21 Suspensory ligament of the ovary
22 Bulbospongiosus muscle and bulb of vestibule
23 Central tendon of perineum (perineal body)
24 External anal sphincter muscle

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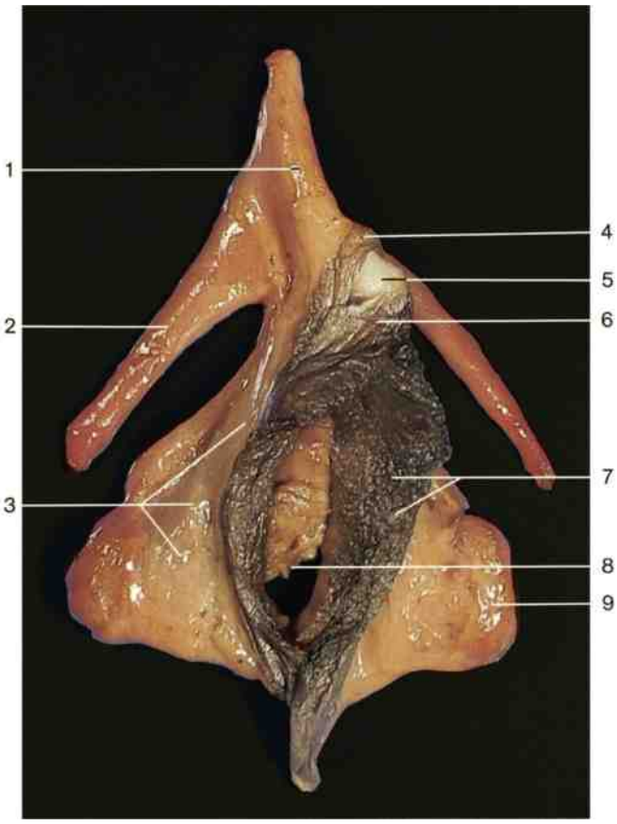
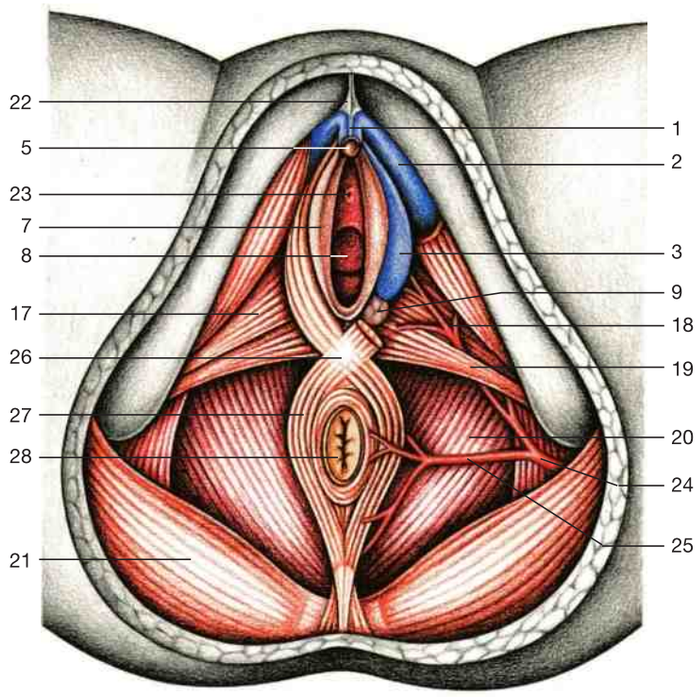
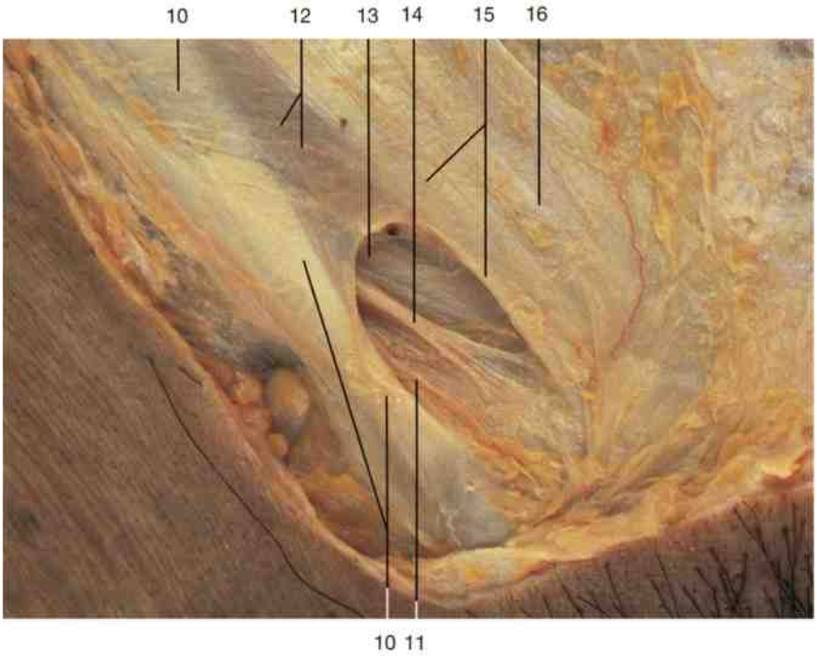


Cavernous tissue of female external genital organs, isolated (anterior aspect).



Urogenital and pelvic diaphragms (anterior aspect, schematic drawing). Blue = cavernous tissue of clitoris and bulb of vestibule.



Inguinal canal and round ligament of uterus in situ (right side, ventral aspect).

1 Body of clitoris
2 Crus of clitoris
3 Bulb of vestibule
4 Prepuce of clitoris
5 Glans of clitoris
6 Frenulum of clitoris
7 Labium minus
8 Vaginal orifice
9 Greater vestibular gland
10 Lateral crus of superficial inguinal ring
11 Ilio-inguinal nerve
12 Intercrural fibers
13 Superficial inguinal ring
14 Round ligament of uterus
15 Medial crus of superficial inguinal ring
16 Aponeurosis of external abdominal oblique muscle
17 Deep transverse perineal muscle with fascia
18 Deep artery of clitoris
19 Superficial transverse perineus muscle
20 Levator ani muscle
21 Gluteus maximus muscle
22 Suspensory ligament of clitoris
23 External orifice of urethra
24 Internal pudendal artery
25 Inferior rectal artery
26 Perineal body
27 External anal sphincter muscle
28 Anus

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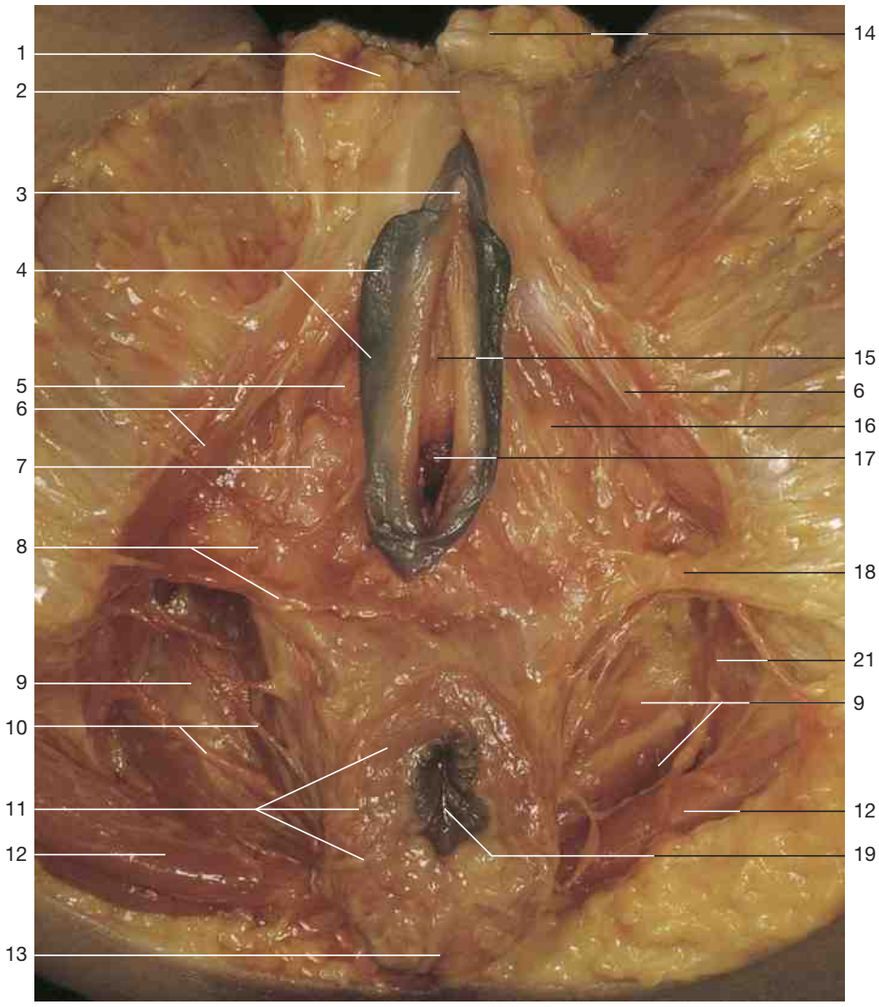
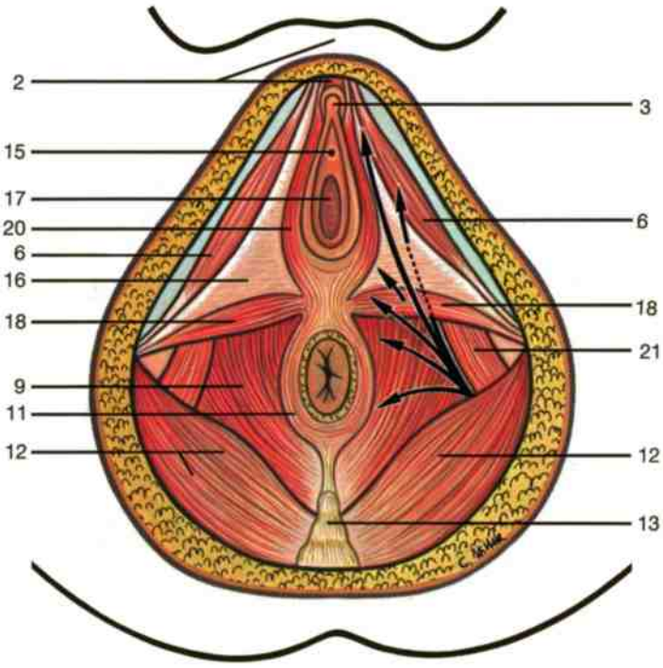


Urogenital diaphragm and external genital organs in the female, superficial layer (from below).



Muscles of pelvic and urogenital diaphragms in the female (from below, schematic drawing).

1 Fatty tissue encasing round ligament
2 Position of pubic symphysis
3 Clitoris
4 Labium minus
5 Bulb of vestibule
6 Ischiocavernosus muscle
7 Greater vestibular gland
8 Perineal branches of pudendal nerve
9 Levator ani muscle
10 Inferior rectal nerves
11 External anal sphincter muscle
12 Gluteus maximus muscle
13 Coccyx
14 Fatty tissue of mons pubis
15 External orifice of urethra
16 Urogenital diaphragm with fascia of deep transverse perineus muscle
17 Vaginal orifice
18 Superficial transverse perineal muscle
19 Anus
20 Bulbospongiosus muscle
21 Obturator internus muscle

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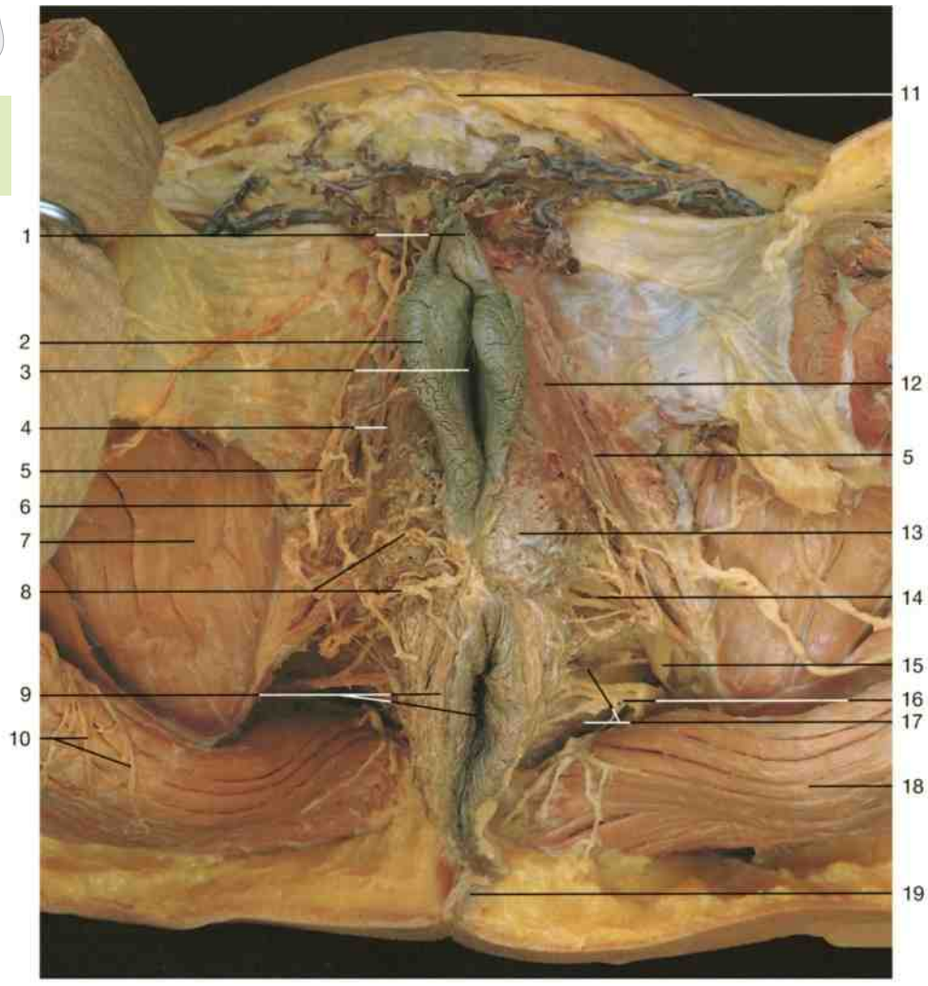
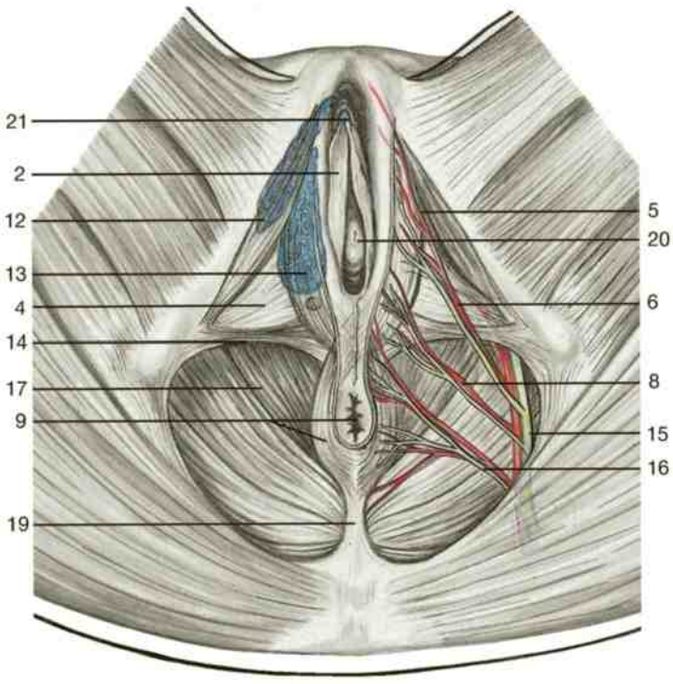


Urogenital diaphragm and external genital organs in the female, superficial layer (from below). On the right side the bulb of vestibule has been removed.



External female genital organs. Position of arteries and nerves; bulb of vestibule in blue (schematic drawing).

1 Prepuce of clitoris
2 Labium minus
3 Vaginal orifice
4 Deep transverse perineus muscle
5 Dorsal nerve of clitoris
6 Posterior labial nerves
7 Great adductor muscle
8 Perineal branches of pudendal nerve
9 Anus and external anal sphincter muscle
10 Inferior cluneal nerves
11 Mons pubis
12 Crus of clitoris with ischiocavernosus muscle
13 Bulb of vestibule
14 Superficial transverse perineus muscle
15 Pudendal nerve and internal pudendal artery
16 Inferior rectal nerves
17 Levator ani muscle
18 Gluteus maximus muscle
19 Anococcygeal ligament
20 External urethral orifice
21 Glans of clitoris

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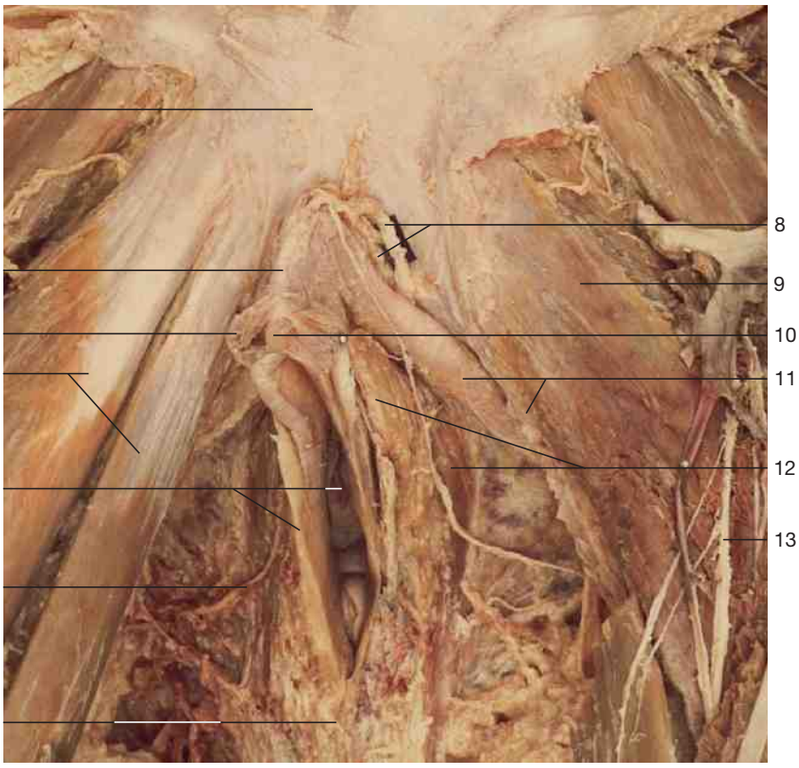
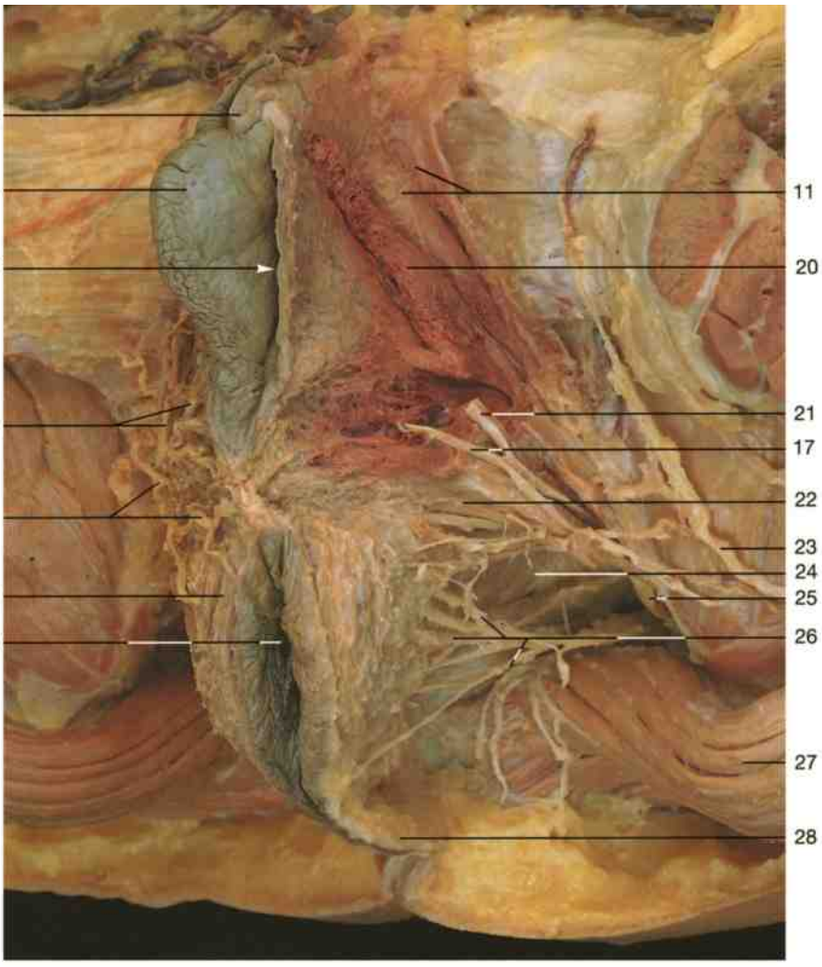


External genital organs in the female (inferior aspect). The clitoris has been dissected and slightly reflected to the right. The prepuce of clitoris has been divided to display the glans.

1 Position of pubic symphysis
2 Body of clitoris
3 Prepuce of clitoris
4 Adductor longus and gracilis muscles
5 External orifice of vagina and labium minus
6 Posterior labial nerve
7 Perineal body
8 Deep artery of clitoris and dorsal nerve of clitoris
9 Adductor brevis muscle
10 Glans of clitoris
11 Crus of clitoris and ischiocavernosus muscle
12 Bulb of vestibule and bulbospongiosus muscle
13 Anterior branch of obturator nerve
14 Labium minus
15 Vaginal orifice
16 Posterior labial nerves
17 Branches of pudendal nerve
18 External sphincter of anus
19 Anus
20 Bulb of vestibule (divided)
21 Dorsal artery of clitoris
22 Superficial transverse perineus muscle
23 Perineal branch of posterior femoral cutaneous nerve
24 Levator ani muscle
25 Pudendal nerve and internal pudendal artery
26 Inferior rectal nerves
27 Gluteus maximus muscle
28 Anococcygeal ligament



Urogenital diaphragm and external genital organs in the female (latero-inferior aspect). The bulb of vestibule has partly been removed; the left labium minus was cut away.

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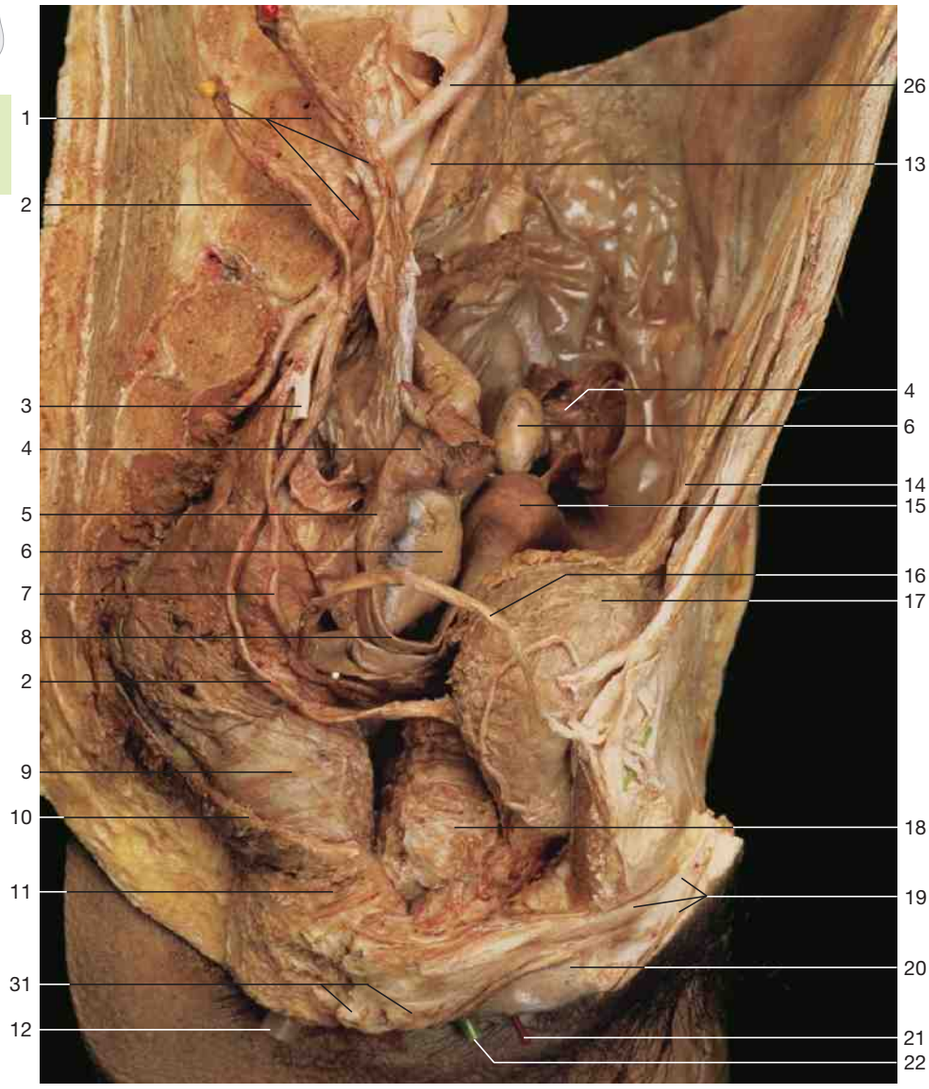
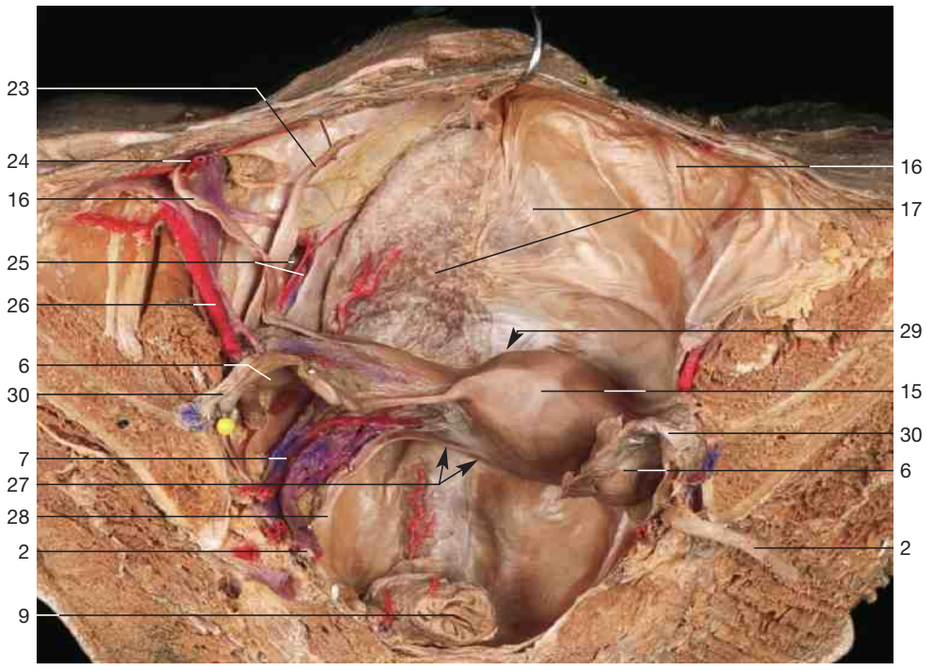


Pelvic cavity in the female, internal genital organs in situ (lateral aspect). Right half of the pelvis and sacrum have been removed.

1 Body of fifth lumbar vertebra, suspensory ligament of ovary, and sacral promontory
2 Ureter
3 Medial umbilical ligament (remnant of umbilical artery) (cut)
4 Infundibulum of uterine tube
5 Ampulla of uterine tube
6 Ovary
7 Uterine artery
8 Uterine tube
9 Rectum
10 Levator ani muscle (pelvic diaphragm – cut edge)
11 External anal sphincter muscle
12 Anus (probe)
13 Internal iliac artery
14 Remnant of urachus (median umbilical ligament)
15 Uterus
16 Round ligament of uterus
17 Urinary bladder
18 Vagina
19 Clitoris
20 Labium minus
21 External orifice of urethra (red probe)
22 Vaginal orifice (green probe)
23 Lateral umbilical ligament
24 Inferior epigastric artery
25 Obturator artery, vein, and nerve
26 External iliac artery
27 Recto-uterine pouch (of Douglas)
28 Recto-uterine fold
29 Vesico-uterine pouch
30 Suspensory ligament of ovary
31 Greater vestibular gland and bulb of the vestibule



Pelvic cavity in the female, internal genital organs in situ (seen from above). The peritoneum at the left half of pelvic cavity has been removed to display uterine tube, vessels, and nerves.

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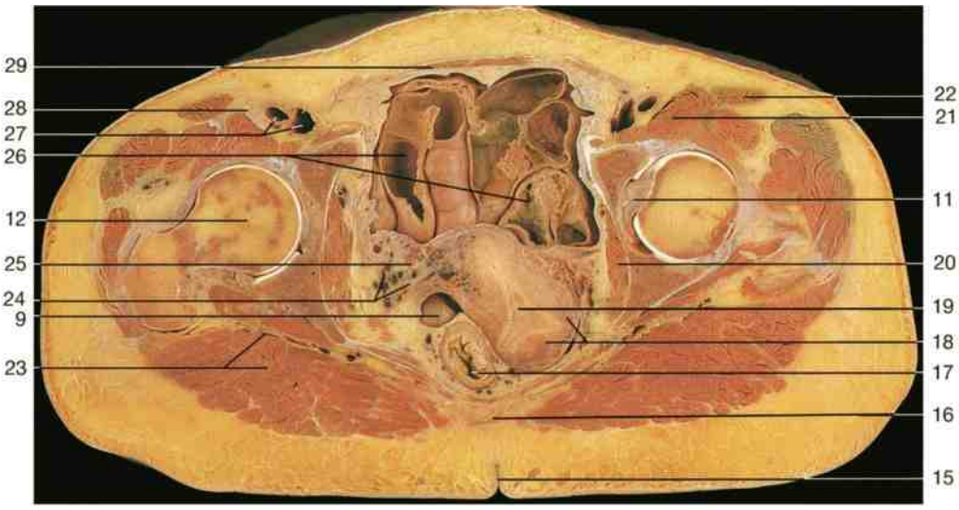
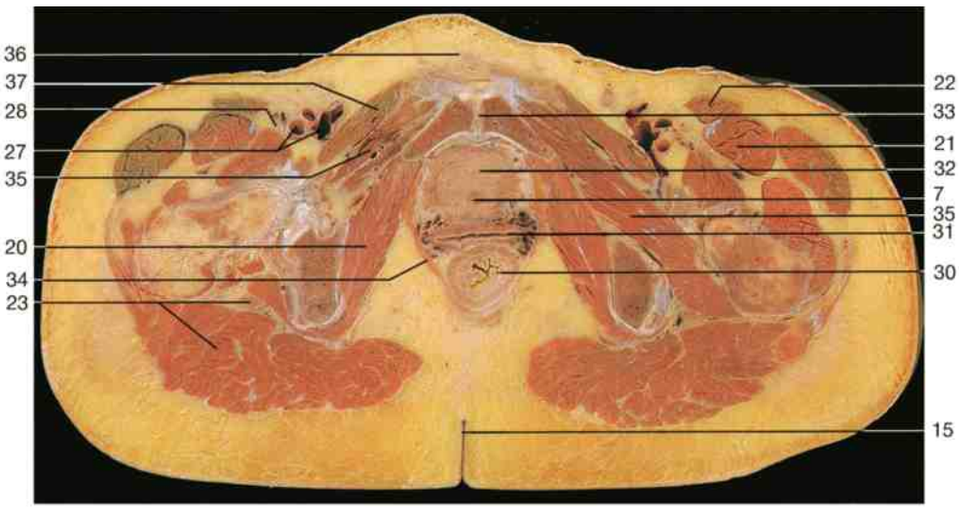
Coronal section through the pelvic cavity of the female (cf. MRI scan on p. 355).



Horizontal section through the pelvic cavity of the female at level of uterus (from below). The uterus is retroverted to the left.



Horizontal section through the pelvic cavity of the female at level of the urethral sphincter and vagina (from below).

1 Ilium
2 Rectum
3 Recto-uterine fold
4 Ovary
5 Uterine tube
6 Urinary bladder
7 Urethra
8 Labium minus
9 Recto-uterine pouch of Douglas
10 Uterus (uterovesical pouch)
11 Ligament of the head of the femur
12 Head of femur
13 Vestibule of vagina
14 Labium majus
15 Anal cleft
16 Coccyx
17 Rectum
18 Myometrium of uterus
19 Uterine cavity
20 Obturator internus muscle
21 Iliopsoas muscle
22 Sartorius muscle
23 Sciatic nerve and gluteus maximus muscle
24 Uterine venous plexus
25 Broad ligament
26 Small intestine
27 Femoral artery and vein
28 Femoral nerve
29 Pyramidalis muscle
30 Rectum (anal canal)
31 Vagina
32 Urethral sphincter muscle (base of urinary bladder)
33 Pubic symphysis
34 Levator ani muscle
35 Obturator externus muscle
36 Mons pubis
37 Pectineus muscle

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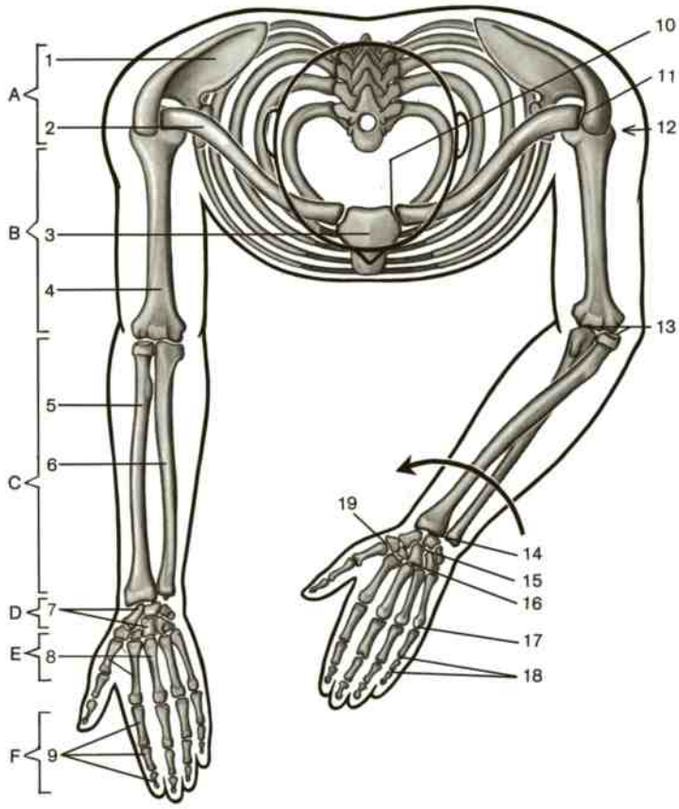
7 Upper Limb

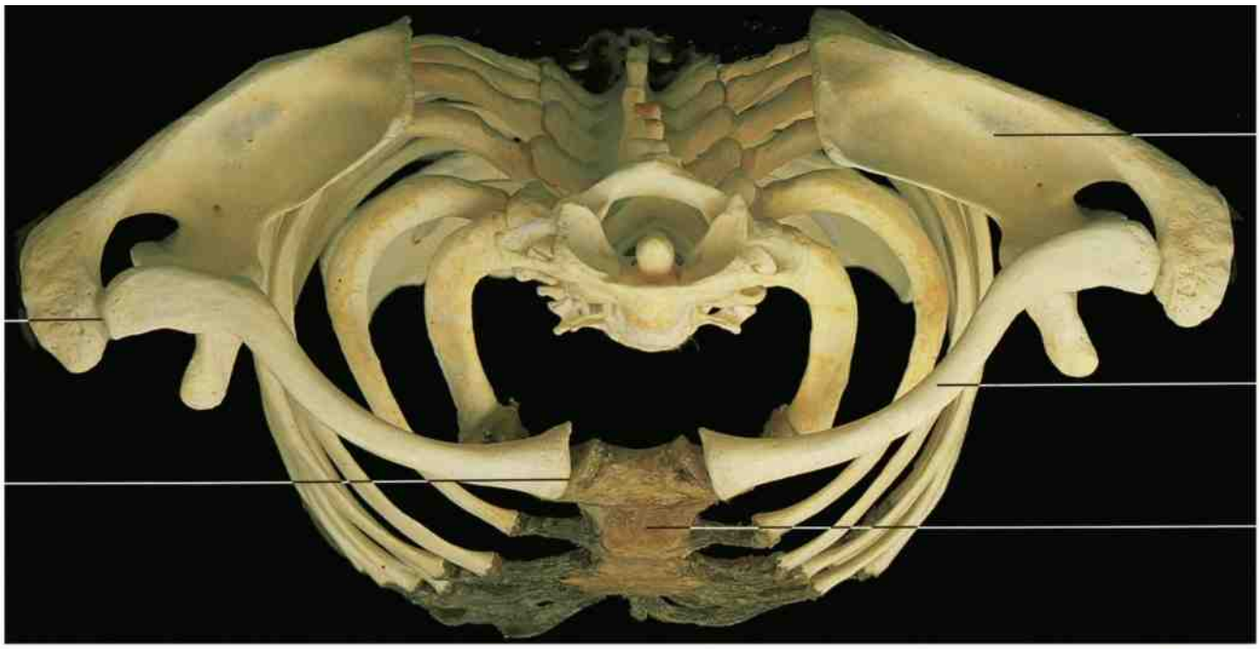


Organization of shoulder girdle and upper limb (superior aspect). The two positions of the forearm essential to manual skills in the human, supination (right arm) and pronation (left arm), are shown.

A = Shoulder girdle
B = Arm
C = Forearm
D = Wrist
E = Palm of hand
F = Finger

Bones
1 Scapula
2 Clavicle
3 Sternum
4 Humerus
5 Radius
6 Ulna
7 Carpal bones
8 Metacarpal bones
9 Phalanges

Joints
10 Sternoclavicular joint
11 Acromioclavicular joint
12 Shoulder joint
13 Elbow joint
14 Wrist joint
15 Midcarpal joint
16 Carpometacarpal joint
17 Metacarpophalangeal joint
18 Interphalangeal joints of the hand
19 Carpometacarpal joint of thumb



Bones of shoulder girdle articulated with the thorax (superior aspect).

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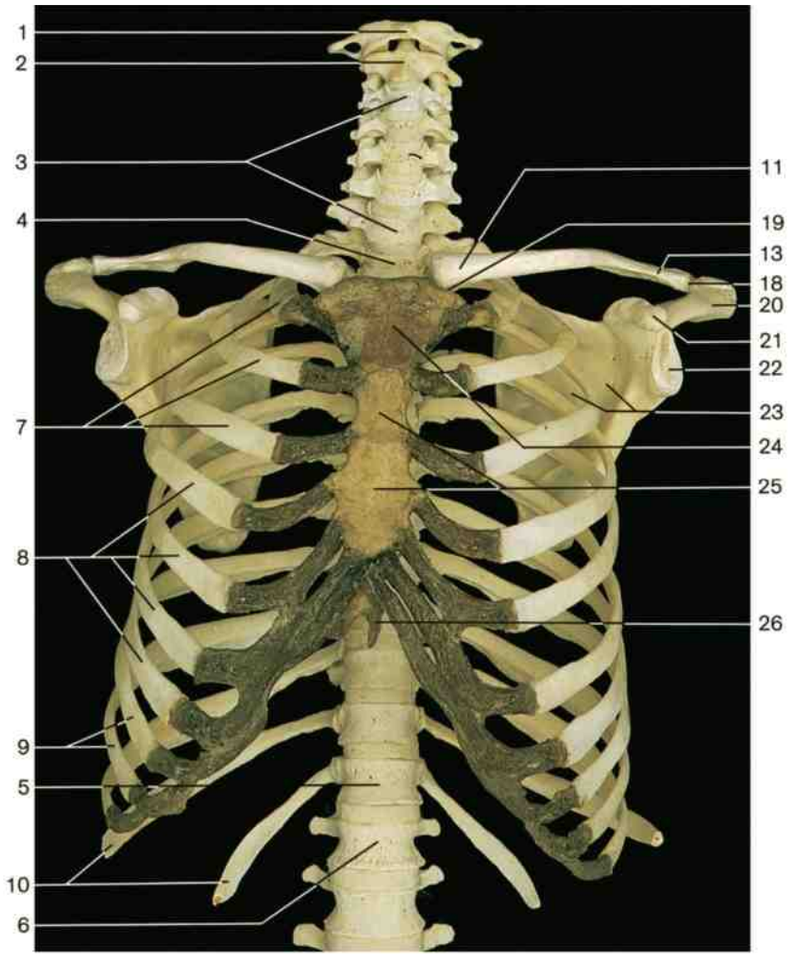

Skeleton of shoulder girdle and thorax (anterior aspect).
The cartilaginous parts of the ribs appear dark brown.

Vertebral column
1 Atlas
2 Axis
3 Third–seventh cervical vertebrae
4 First thoracic vertebra
5 Twelfth thoracic vertebra
6 First lumbar vertebra

Ribs
7 First–third ribs } True ribs
8 Fourth–seventh ribs
9 Eighth–tenth ribs } False ribs
10 Eleventh and twelfth ribs (floating ribs)

Clavicle
11 Sternal end
12 Articular facet for sternum
13 Acromial end
14 Articular facet for acromion
15 Impression for costoclavicular ligament
16 Conoid tubercle
17 Trapezoid line
18 Site of acromioclavicular joint
19 Site of sternoclavicular joint

Scapula
20 Acromion
21 Coracoid process
22 Glenoid cavity
23 Costal surface

Sternum
24 Manubrium
25 Body
26 Xiphoid process

Right clavicle (superior aspect).

Right clavicle (inferior aspect).

Because of the human body's upright posture, the upper limb has developed a high degree of mobility. The shoulder girdle is to a great extent movable in the thorax and is connected with the trunk only by the sternoclavicular joint. A further characteristic of the forearm is the capacity for rotation (i.e., pronation and supination).

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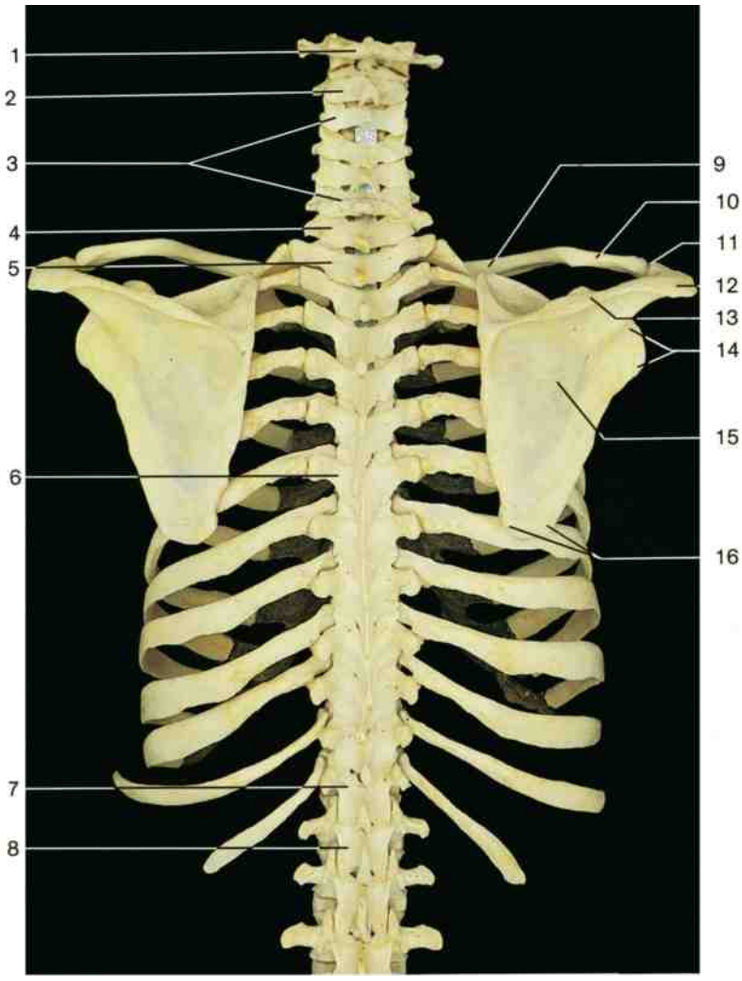
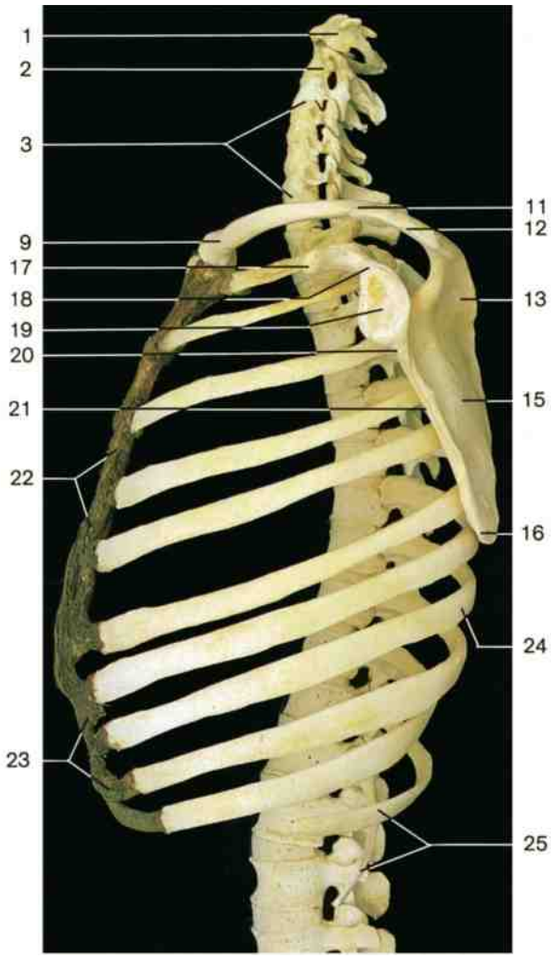


Skeleton of shoulder girdle and thorax (posterior aspect).



Skeleton of shoulder girdle and thorax (lateral aspect).

Vertebral column
1 Atlas
2 Axis
3 Third–sixth cervical vertebrae
4 Seventh vertebra (vertebra prominens)
5 First thoracic vertebra
6 Sixth thoracic vertebra
7 Twelfth thoracic vertebra
8 First lumbar vertebra

Clavicle
9 Sternal end
10 Acromial end
11 Site of acromioclavicular joint

Scapula
12 Acromion
13 Spine of scapula
14 Lateral angle
15 Posterior surface
16 Inferior angle
17 Coracoid process
18 Supraglenoid tubercle
19 Glenoid cavity
20 Infraglenoid tubercle
21 Lateral margin

Thorax
22 Body of sternum
23 Costal arch
24 Angle of ribs
25 Floating ribs

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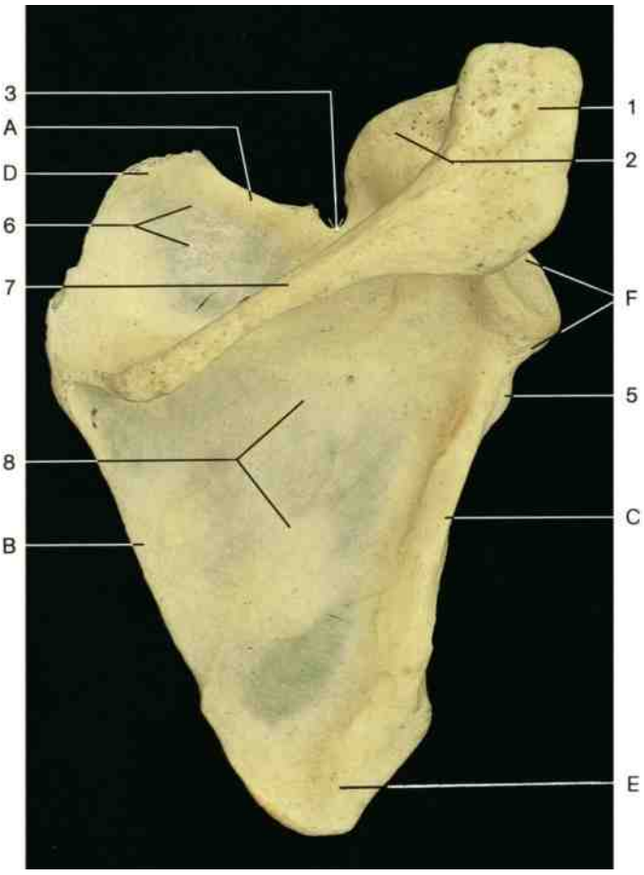
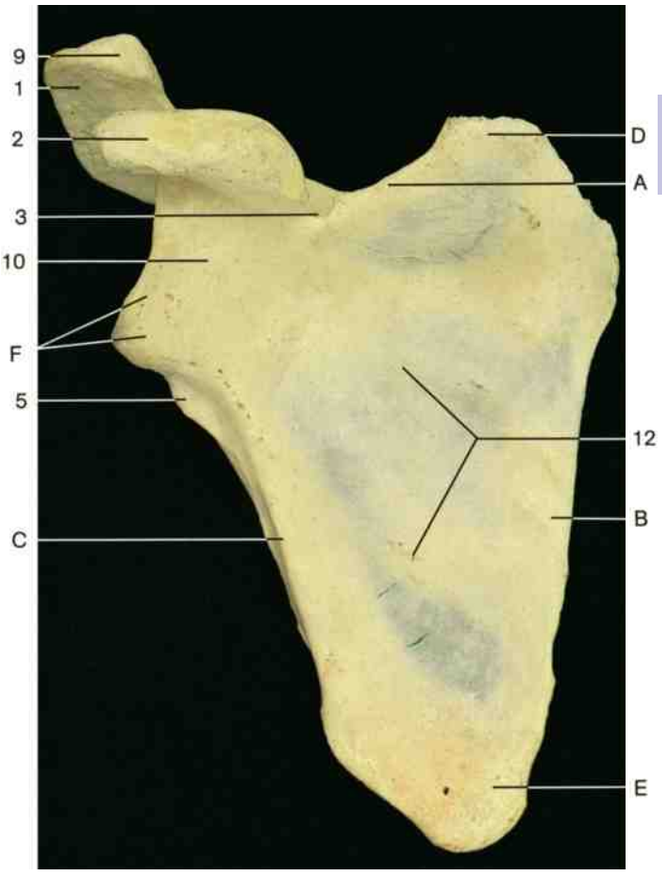
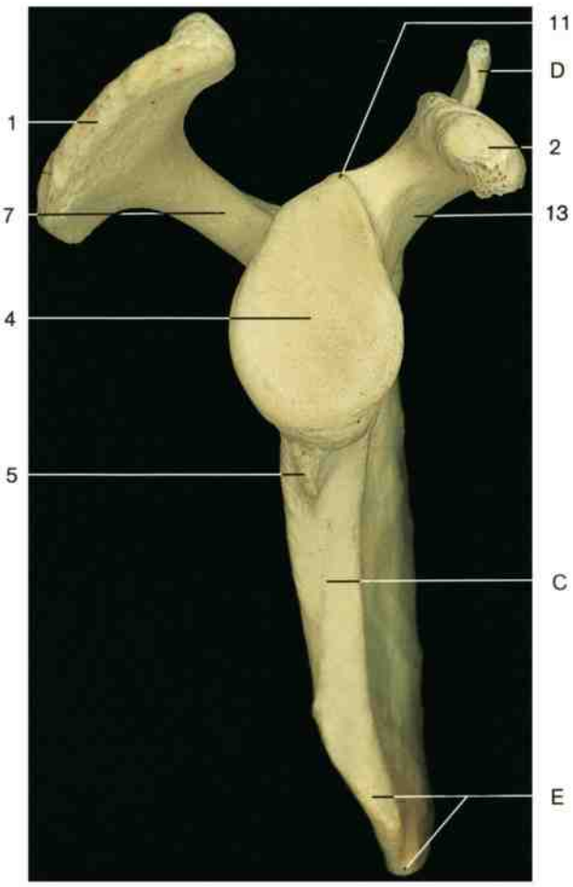


Right scapula (posterior aspect).



Right scapula (anterior aspect, costal surface).



Right scapula (lateral aspect).

Scapula

A = superior border
B = medial border
C = lateral border
D = superior angle
E = inferior angle
F = lateral angle

1 Acromion
2 Coracoid process
3 Scapular notch
4 Glenoid cavity
5 Infraglenoid tubercle
6 Supraspinous fossa
7 Spine
8 Infraspinous fossa
9 Articular facet for acromion
10 Neck
11 Supraglenoid tubercle
12 Costal (anterior) surface
13 Base of coracoid process

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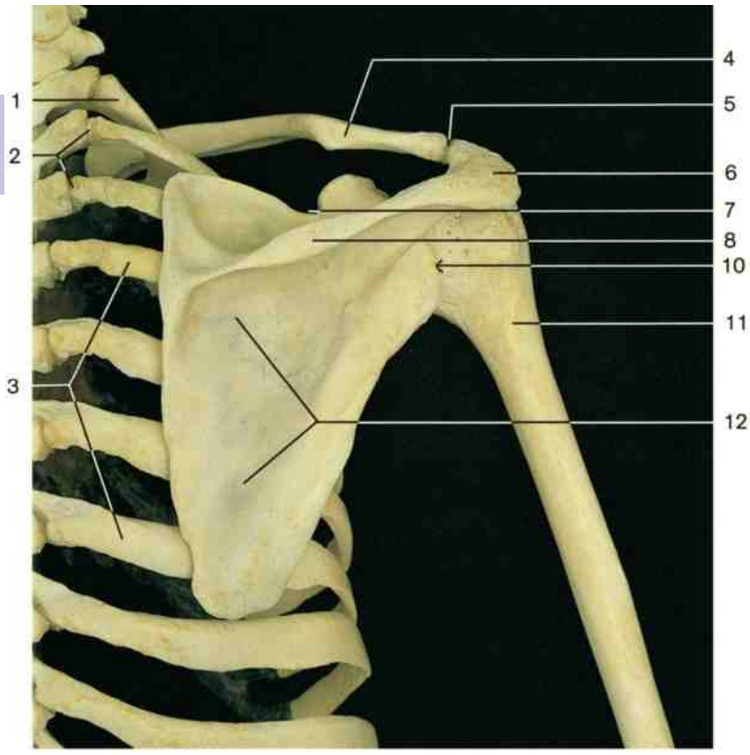
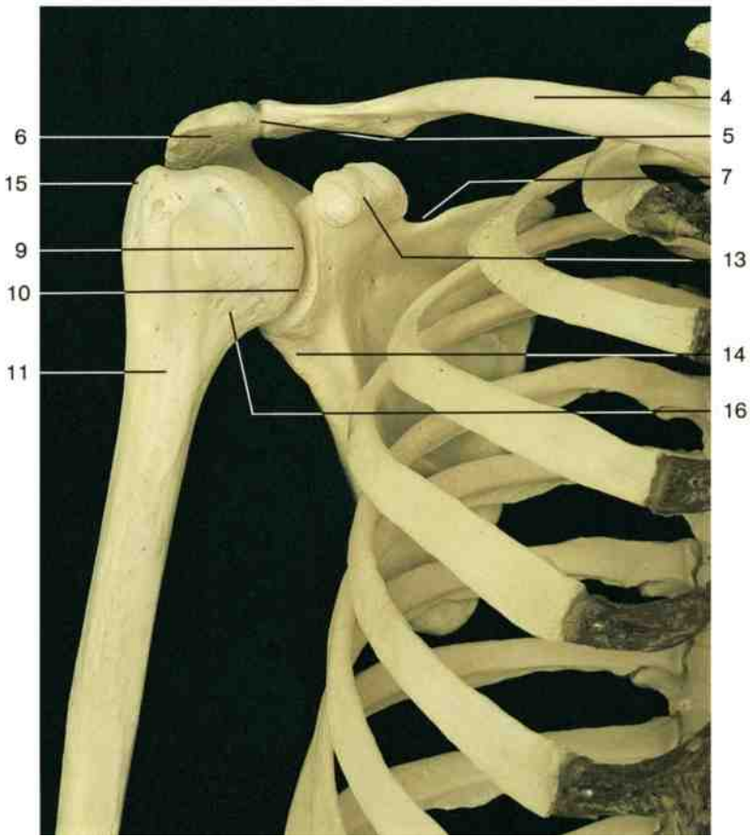


Bones of shoulder joint (posterior aspect).

1 First rib
2 Position of costotransverse joints
3 Fourth–seventh ribs
4 Clavicle
5 Position of acromioclavicular joint
6 Acromion
7 Scapular notch
8 Spine of scapula
9 Head of humerus
10 Glenoid cavity
11 Surgical neck of humerus
12 Posterior surface of scapula
13 Coracoid process
14 Infraglenoid tubercle
15 Greater tubercle of humerus
16 Anatomical neck of humerus



Bones of shoulder joint (anterior aspect).

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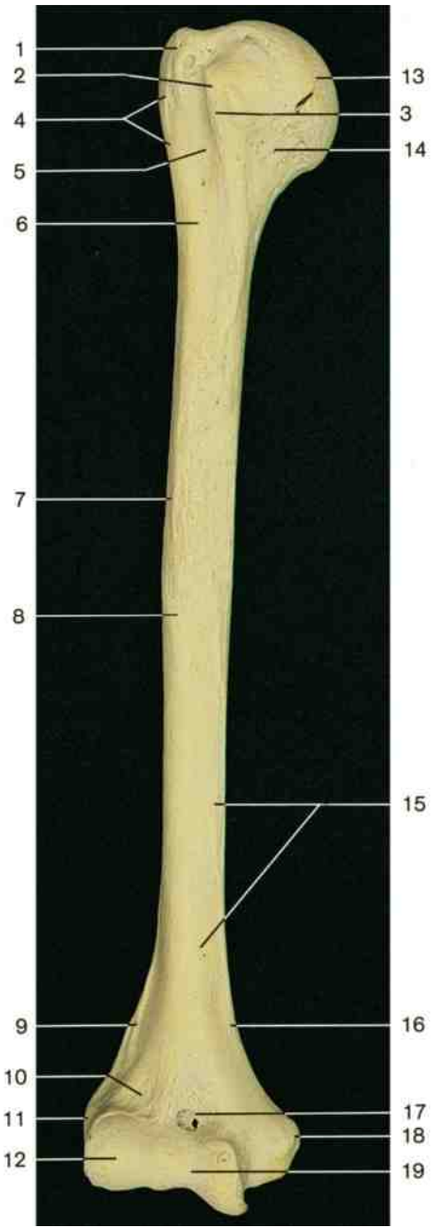
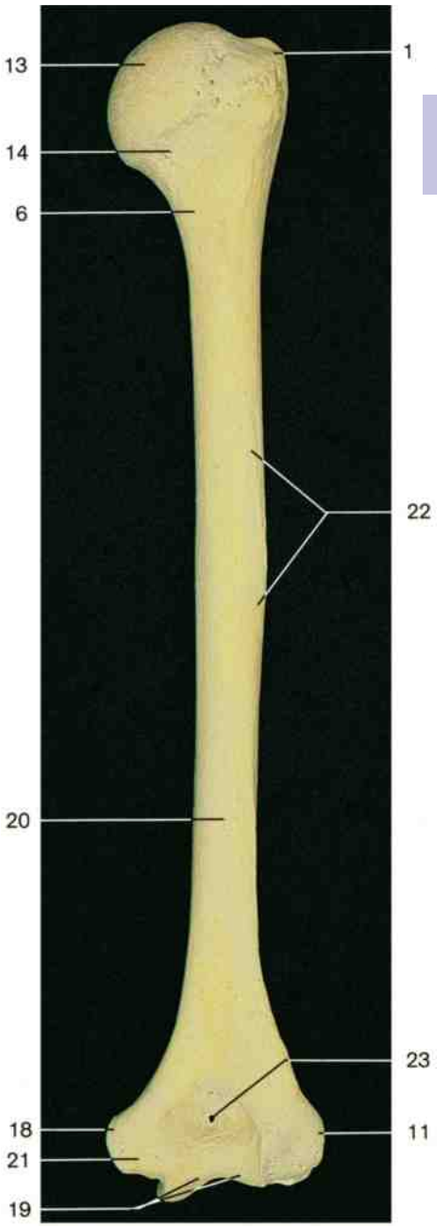


Right humerus (anterior aspect).

Right humerus (medial aspect).



Right humerus (posterior aspect).

Humerus

1 Greater tubercle
2 Lesser tubercle
3 Crest of lesser tubercle
4 Crest of greater tubercle
5 Intertubercular sulcus
6 Surgical neck
7 Deltoid tuberosity
8 Anterolateral surface
9 Lateral supracondylar ridge
10 Radial fossa
11 Lateral epicondyle
12 Capitulum
13 Head
14 Anatomical neck
15 Anteromedial surface
16 Medial supracondylar ridge
17 Coronoid fossa
18 Medial epicondyle
19 Trochlea
20 Posterior surface
21 Groove for ulnar nerve
22 Groove for radial nerve
23 Olecranon fossa

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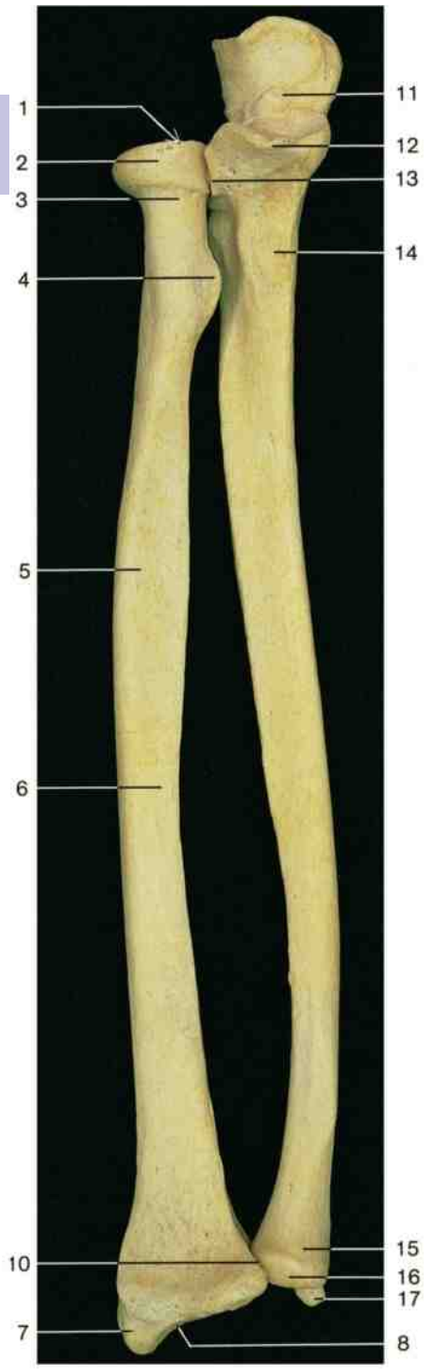
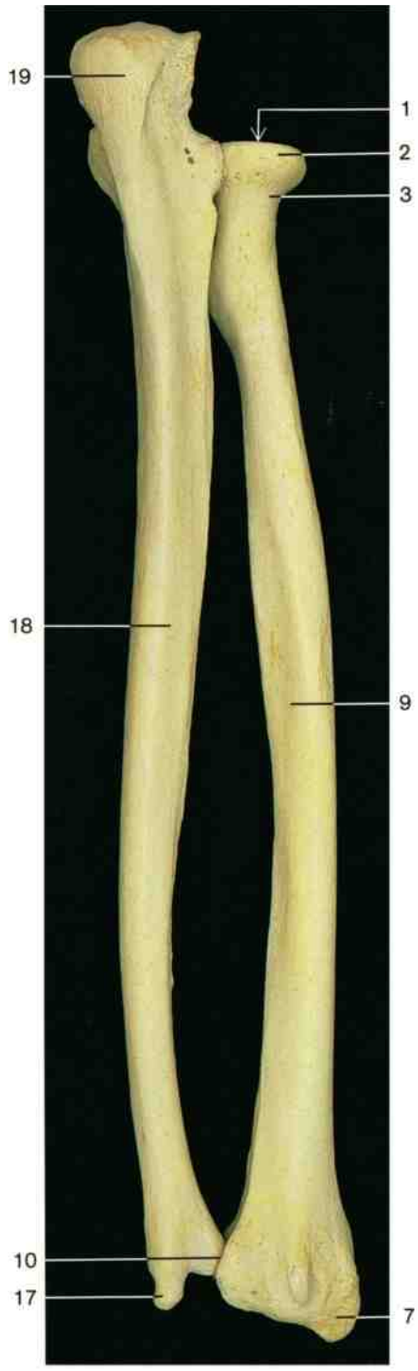


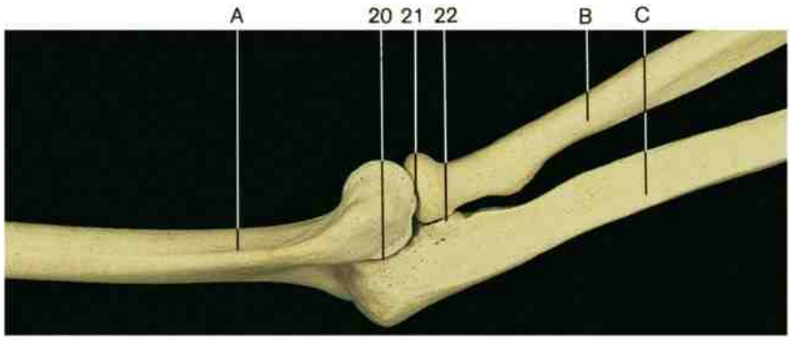
Bones of right forearm, radius, and ulna (anterior aspect).



Bones of right forearm, radius, and ulna (posterior aspect).

Radius
1 Head
2 Articular circumference
3 Neck
4 Radial tuberosity
5 Shaft
6 Anterior surface
7 Styloid process
8 Articular surface
9 Posterior surface
10 Ulnar notch

Ulna
11 Trochlear notch
12 Coronoid process
13 Radial notch
14 Ulnar tuberosity
15 Head
16 Articular circumference
17 Styloid process
18 Posterior surface
19 Olecranon



Bones of right elbow joint (lateral aspect).

Articulations at the right elbow
20 Site of humero-ulnar joint
21 Site of humeroradial joint
22 Site of proximal radio-ulnar joint

A = humerus
B = radius
C = ulna

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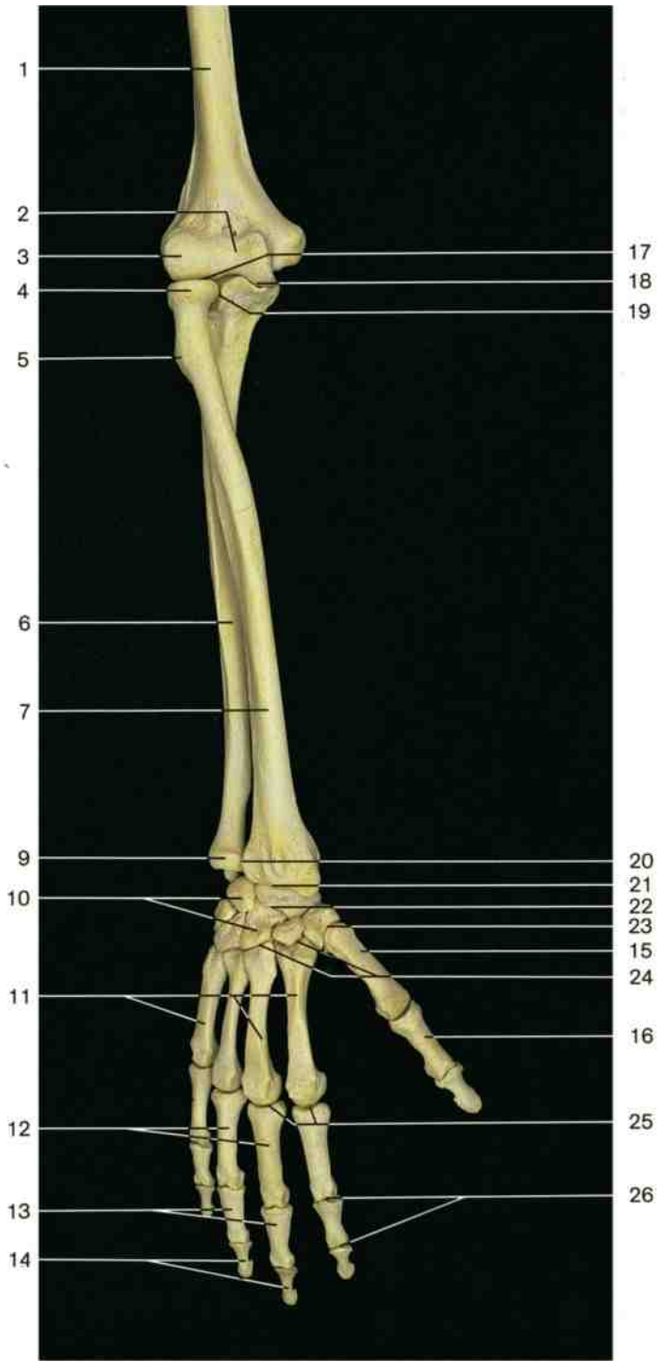
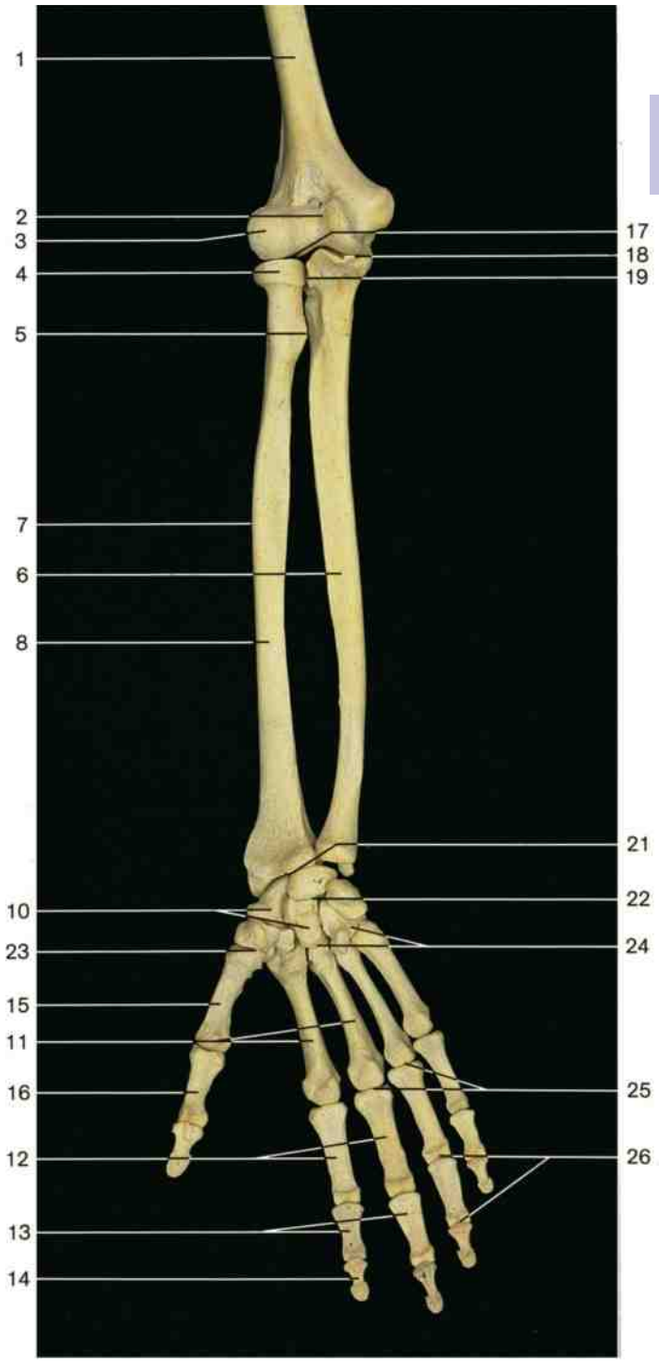


Skeleton of right forearm and hand in pronation.



Skeleton of right forearm and hand in supination.

1 Humerus
2 Trochlea of humerus
3 Capitulum of humerus
4 Articular circumference of radius
5 Radial tuberosity
6 Anterior surface of ulna
7 Posterior surface of radius
8 Anterior surface of radius
9 Articular circumference of ulna
10 Carpal bones
11 Metacarpal bones
12 Proximal phalanges
13 Middle phalanges
14 Distal phalanges
15 Metacarpal bone of thumb
16 Proximal phalanx of thumb

Sites of joints
17 Humeroradial joint
18 Humero-ulnar joint
19 Proximal radio-ulnar joint
20 Distal radio-ulnar joint
21 Wrist joint
22 Midcarpal joint
23 Carpometacarpal joint of thumb
24 Carpometacarpal joints
25 Metacarpophalangeal joints
26 Interphalangeal joints of the hand

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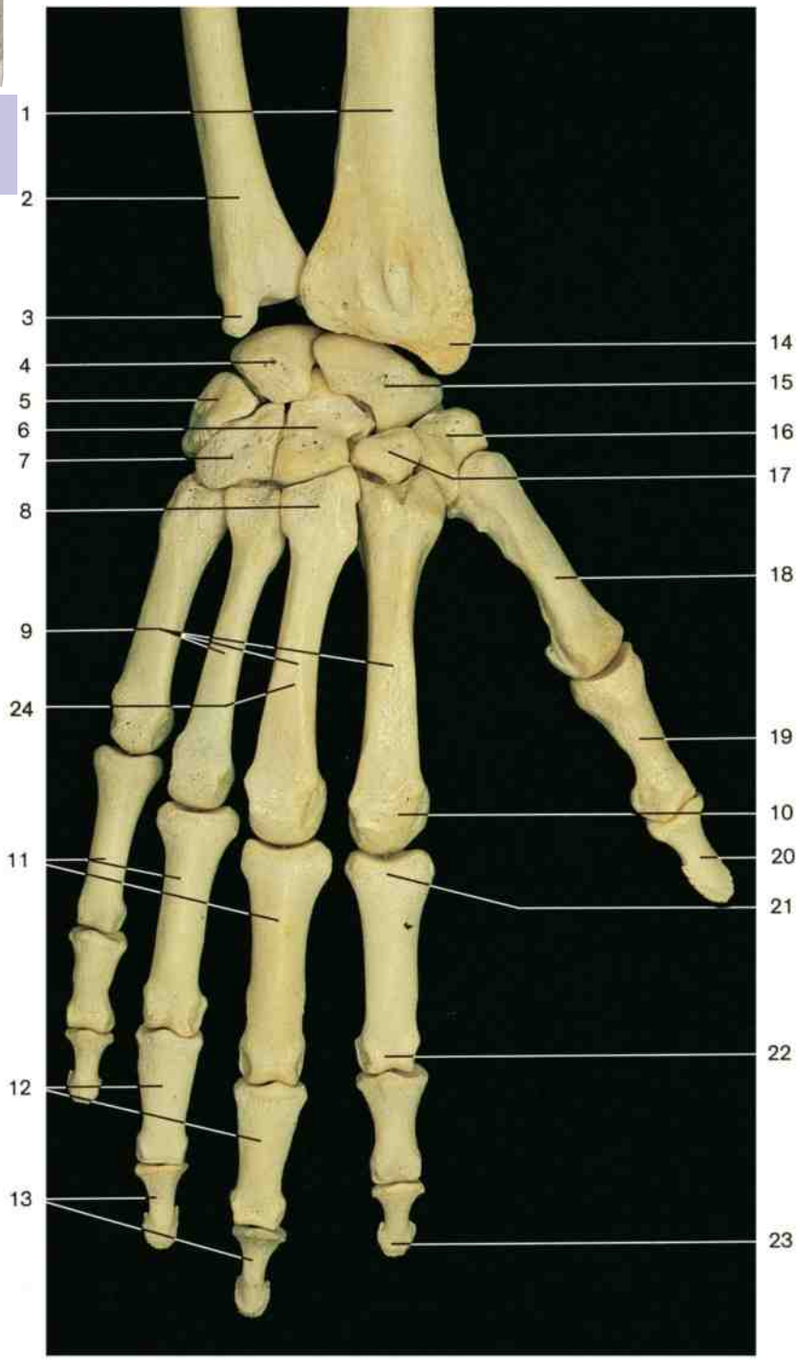
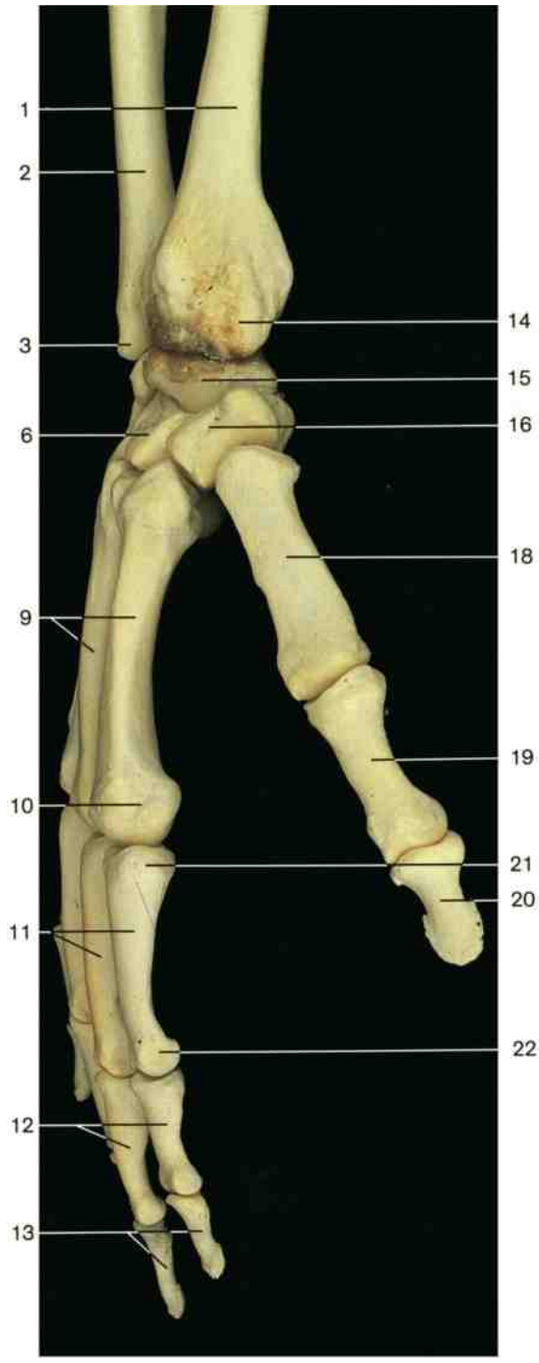


Skeleton of right wrist and hand (dorsal aspect).



Skeleton of right wrist and hand (medial aspect).

1 Radius
2 Ulna
3 Styloid process of ulna
4 Lunate bone
5 Triquetral bone
6 Capitate bone
7 Hamate bone
} Carpal bones
8 Base of third metacarpal bone
9 Metacarpal bones
10 Head of metacarpal bone
11 Proximal phalanges of hand
12 Middle phalanges of hand
13 Distal phalanges of hand
14 Styloid process of radius
15 Scaphoid bone
16 Trapezium bone
17 Trapezoid bone
} Carpal bones
18 Metacarpal bone of thumb
19 Proximal phalanx of thumb
20 Distal phalanx of thumb
21 Base of second proximal phalanx
22 Head of second proximal phalanx
23 Tuberosity of distal phalanx
24 Body of third metacarpal bone

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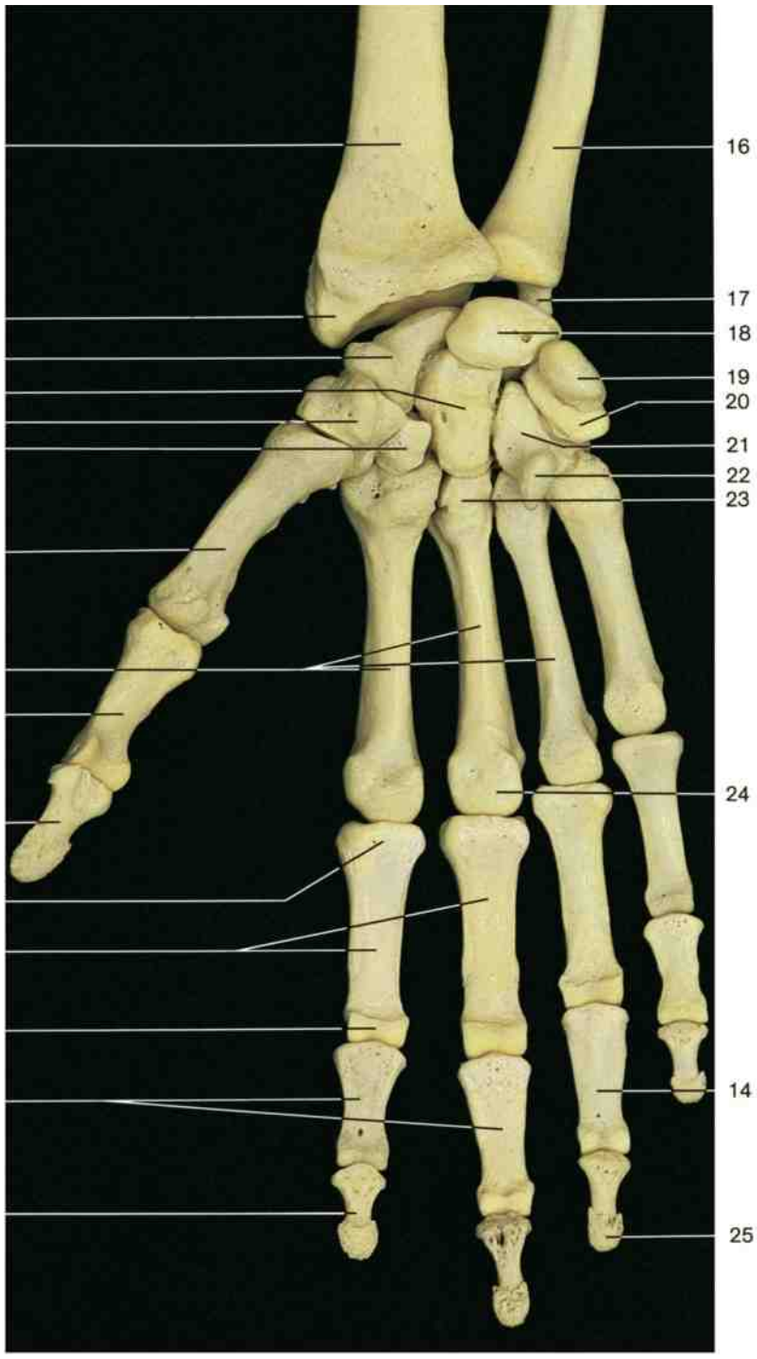

Skeleton of right wrist and hand (palmar aspect).

1 Radius
2 Styloid process of radius
3 Scaphoid bone
4 Capitate bone
5 Trapezium
6 Trapezoid bone
} Carpal bones
7 First metacarpal bone
8 Second to fourth metacarpal bones
9 Proximal phalanx of thumb
10 Distal phalanx of thumb
11 Base of second proximal phalanx
12 Proximal phalanges
13 Head of second proximal phalanx
14 Middle phalanges
15 Distal phalanx
16 Ulna
17 Styloid process of ulna
18 Lunate bone
19 Pisiform bone
20 Triquetral bone
21 Hamate bone
} Carpal bones
22 Hamulus or hook of hamate bone
23 Base of third metacarpal bone
24 Head of metacarpal bone
25 Tuberosity of distal phalanx

The human hand is one of the most admirable structures of the human body. The carpometacarpal joint of the thumb, a saddle joint, enjoys wide mobility so that the thumb can come into contact with all other fingers, thus enabling the hand to become an instrument for grasping and psychologic expression. During evolution, these newly developed functions appeared after the erect posture of the human body was achieved. An inevitable prerequisite for the development of human cultures is not only the differentiation of the brain but also the development of an organ capable of realizing its ideas: the human hand.

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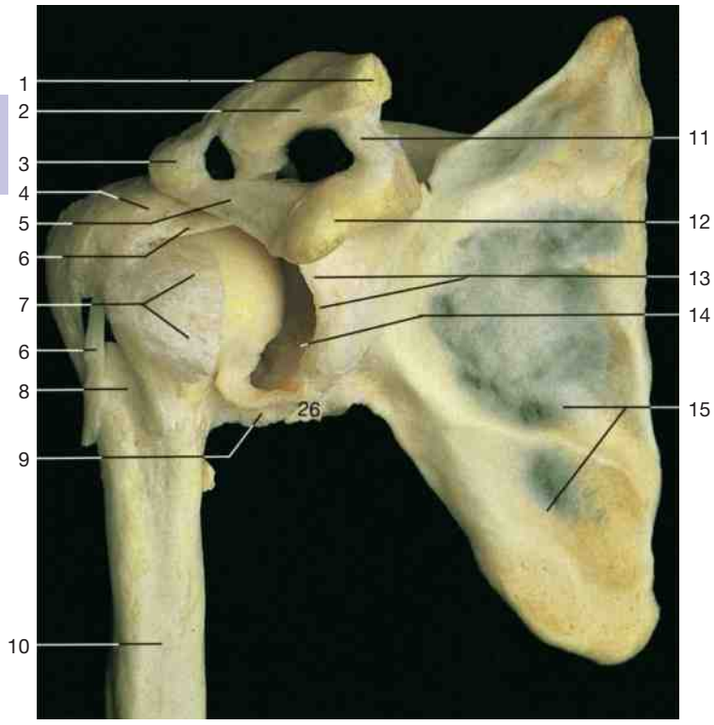
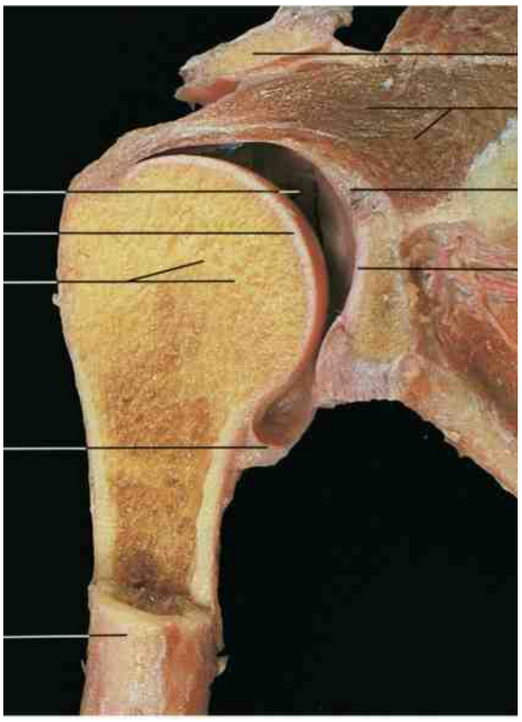


Right shoulder joint. The anterior part of the articular capsule has been removed and the head of the humerus has been slightly rotated outward to show the cavity of the joint.



Coronal section of the right shoulder joint (anterior aspect).

Coronal section of the right shoulder joint (MRI scan; from Heuck et al., MRT-Atlas, 2009).

1 Acromial end of clavicle
2 Acromioclavicular joint
3 Acromion
4 Tendon of supraspinatus muscle (attached to the articular capsule)
5 Coraco-acromial ligament
6 Tendon of long head of biceps brachii muscle
7 Tendon of subscapularis muscle (attached to the articular capsule)
8 Intertubercular sulcus
9 Articular capsule of shoulder joint
10 Humerus
11 Trapezoid ligament
12 Coracoid process
13 Glenoid labrum
14 Shoulder joint (joint cavity)
15 Scapula
16 Head of humerus
17 Epiphysial line
18 Supraspinatus muscle
19 Glenoid cavity
20 Trapezius muscle
21 Suprascapular artery, vein, and nerve
22 Teres major muscle
23 Circumflexa scapular artery and vein
24 Latissimus dorsi muscle
25 Deltoid muscle
26 Tendon of long head of triceps brachii muscle

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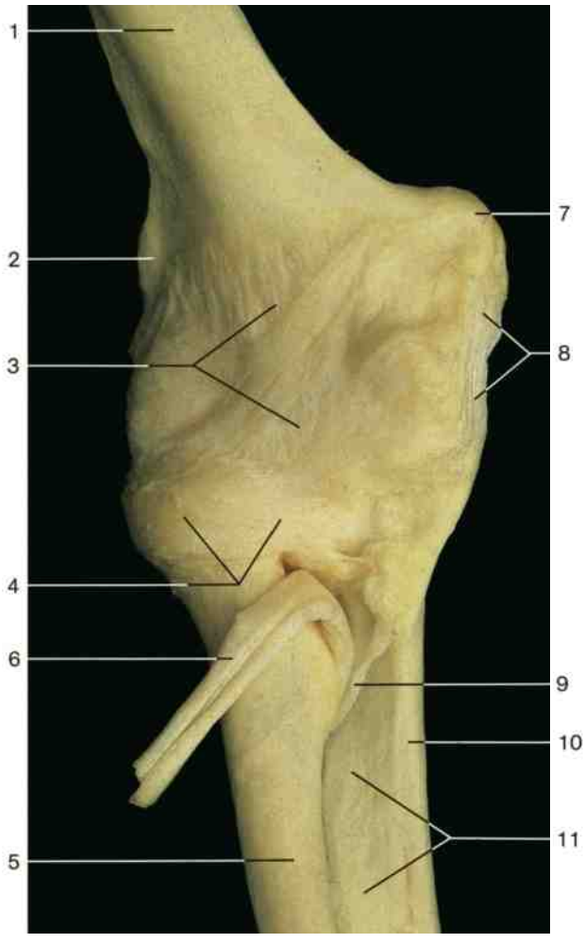
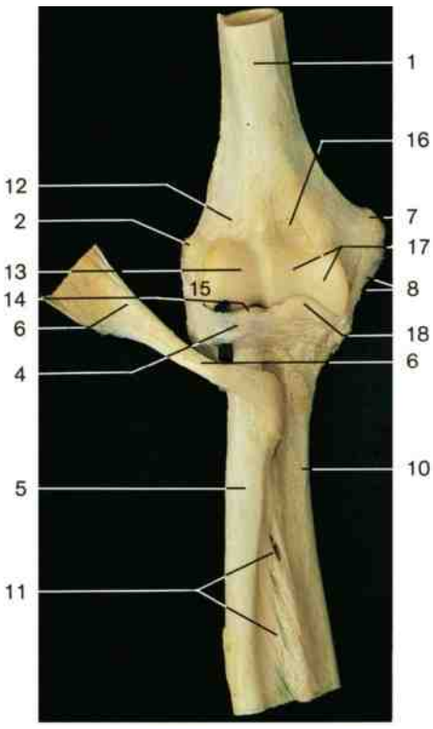


Ligaments of the elbow joint (anterior aspect).

Elbow joint with collateral ligaments (medial aspect).

1 Humerus
2 Lateral epicondyle of humerus
3 Articular capsule
4 Anular ligament of proximal radio-ulnar joint
5 Radius
6 Tendon of biceps brachii muscle
7 Medial epicondyle of humerus
8 Ulnar collateral ligament
9 Oblique chord
10 Ulna
11 Interosseous membrane
12 Radial fossa
13 Capitulum of humerus
14 Head of radius
15 Radial collateral ligament
16 Coronoid fossa
17 Trochlea of humerus
18 Coronoid process of ulna
19 Olecranon
20 Radial tuberosity



Elbow joint with ligaments (anterior aspect). Articular capsule has been removed to show the anular ligament.

Coronal section of the elbow joint (MRI scan, courtesy of Prof. Dr. A. Heuck, Munich).

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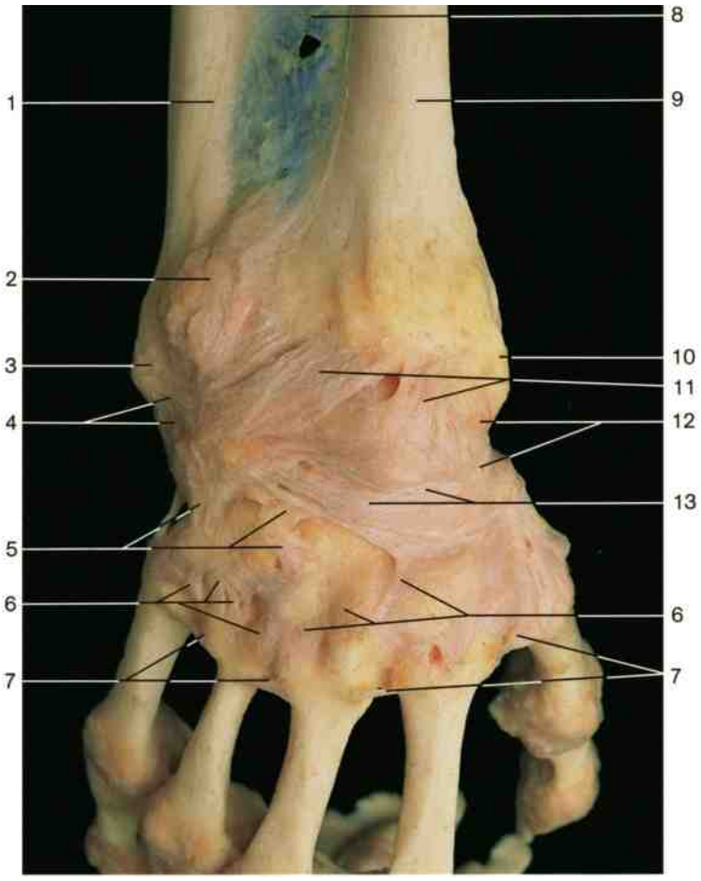
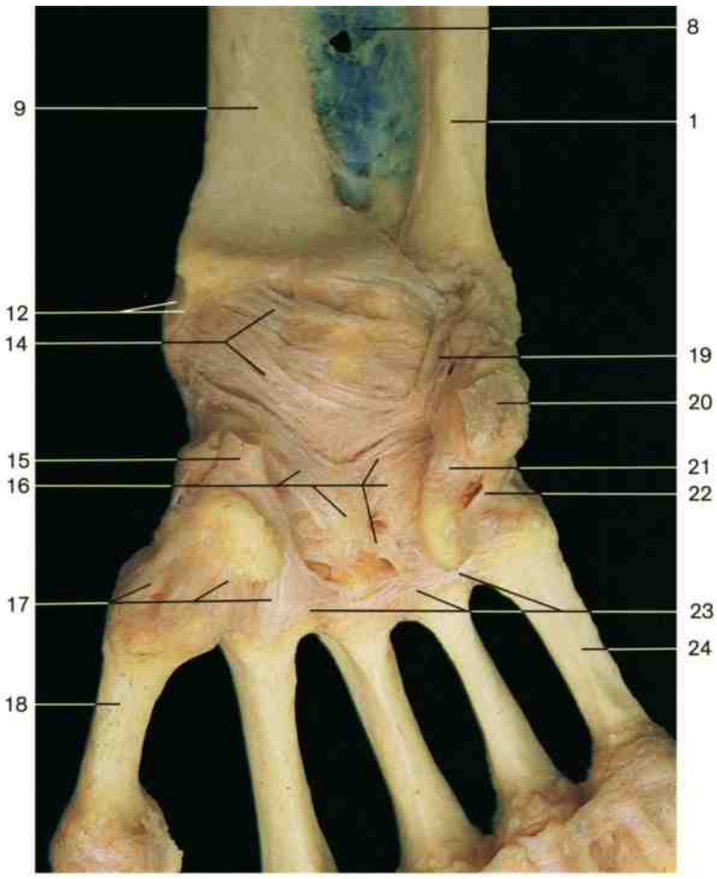
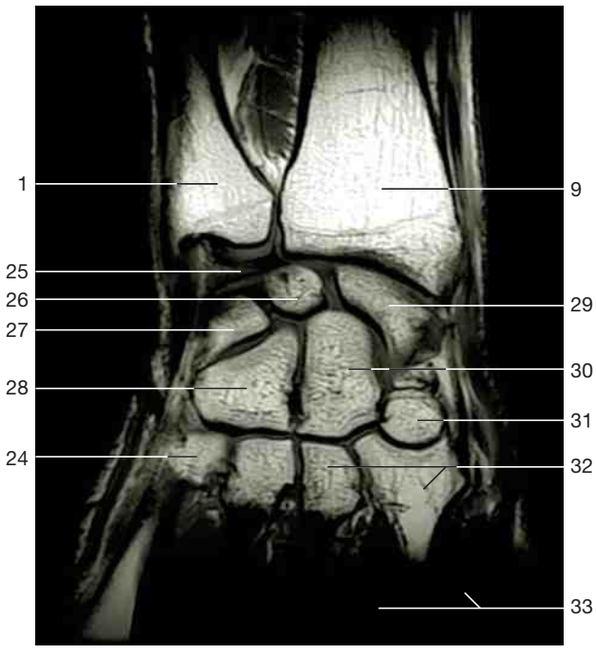


Ligaments of hand and wrist (dorsal aspect).

1 Ulna
2 Exostosis (pathological)
3 Head of ulna
4 Ulnar carpal collateral ligament
5 Deep intercarpal ligaments
6 Dorsal carpometacarpal ligaments
7 Dorsal metacarpal ligaments
8 Interosseous membrane
9 Radius
10 Styloid process of radius
11 Dorsal radiocarpal ligament
12 Radial collateral ligament
13 Articular capsule and dorsal intercarpal ligaments
14 Palmar radiocarpal ligament
15 Tendon of flexor carpi radialis muscle (cut)
16 Radiating carpal ligament
17 Palmar carpometacarpal ligaments
18 First metacarpal bone
19 Palmar ulnocarpal ligament
20 Tendon of flexor carpi ulnaris muscle (cut)
21 Pisohamate ligament
22 Pisometacarpal ligament
23 Palmar metacarpal ligaments
24 Fifth metacarpal bone
25 Articular disc (ulnocarpal)
26 Lunate bone
27 Triquetral bone
28 Hamate bone
29 Scaphoid bone (navicular)
30 Capitate bone
31 Trapezoid bone
32 Second and third metacarpal bones
33 Dorsal interosseus muscles



Ligaments of hand and wrist (palmar aspect).



Coronal section of the hand and wrist (MRI scan; from Heuck et al., MRT-Atlas, 2009). Note the location of the wrist joint.

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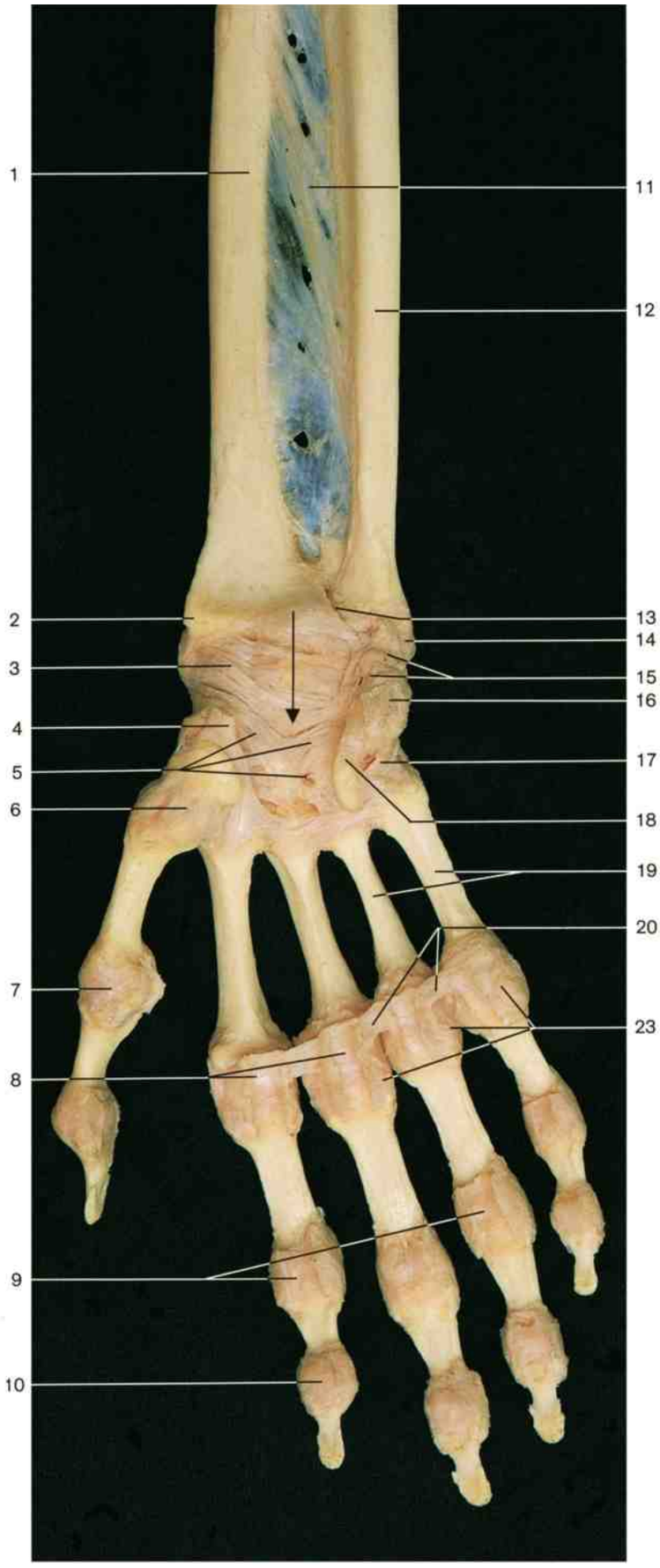
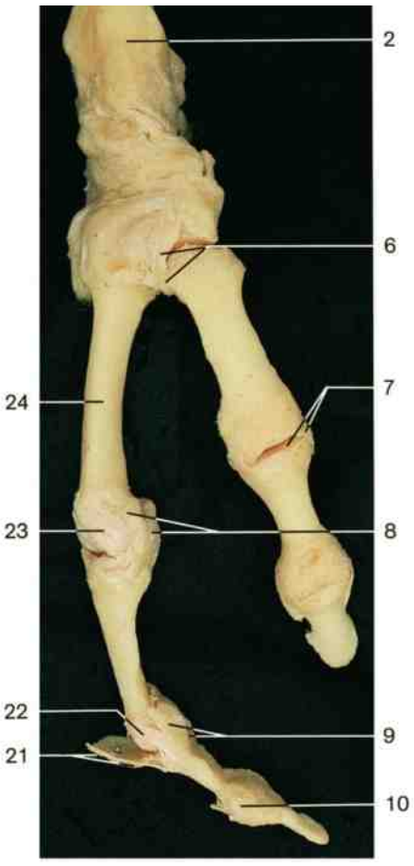


Ligaments of right forearm, hand, and fingers (palmar aspect). The arrow indicates the location of the carpal tunnel.

1 Radius
2 Styloid process of radius
3 Palmar radiocarpal ligament
4 Tendon of flexor carpi radialis muscle (cut)
5 Radiating carpal ligament
6 Articular capsule of carpometacarpal joint of thumb
7 Articular capsule of metacarpophalangeal joint of thumb
8 Palmar ligaments and articular capsule of metacarpophalangeal joints
9 Palmar ligaments and articular capsule of interphalangeal joints
10 Articular capsule
11 Interosseous membrane
12 Ulna
13 Distal radio-ulnar joint
14 Styloid process of ulna
15 Palmar ulnocarpal ligament
16 Pisiform bone with tendon of flexor carpi ulnaris muscle
17 Pisometacarpal ligament
18 Pisohamate ligament
19 Metacarpal bone
20 Deep transverse metacarpal ligament
21 Tendons of extensor muscles and articular capsule
22 Collateral ligament of interphalangeal joint
23 Collateral ligaments of metacarpophalangeal joints
24 Second metacarpal bone



Ligaments of fingers (lateral aspect).

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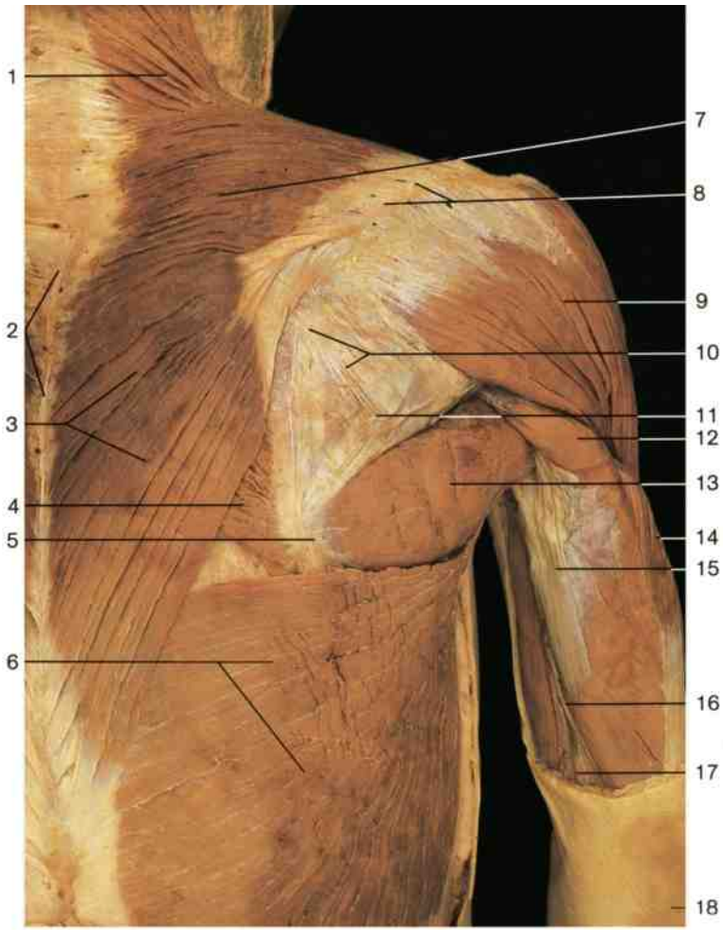
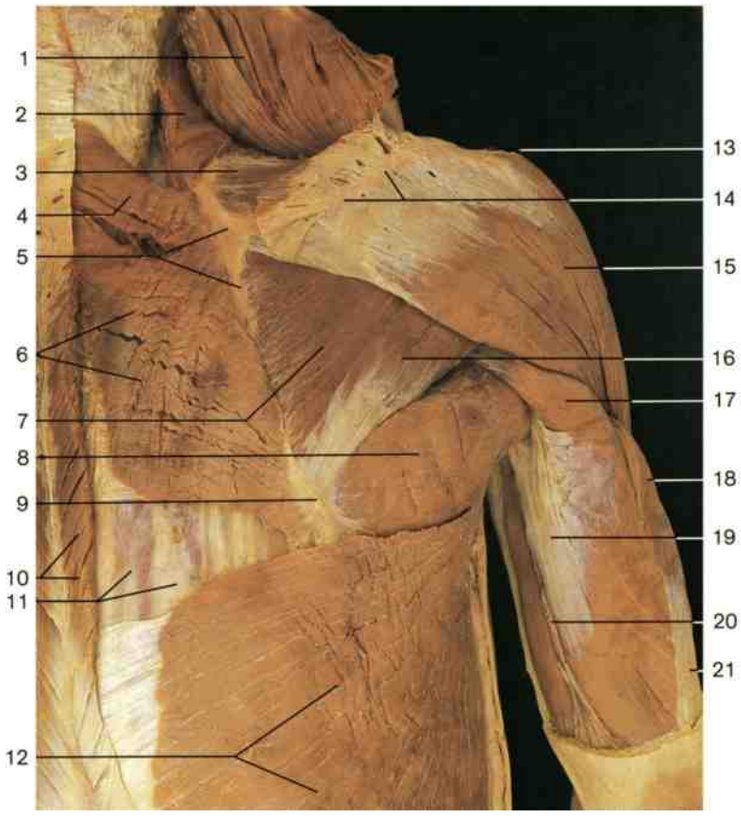


1 Descending fibers of trapezius muscle
2 Spinous processes of thoracic vertebrae
3 Ascending fibers of trapezius muscle
4 Rhomboid major muscle
5 Inferior angle of scapula
6 Latissimus dorsi muscle
7 Transverse fibers of trapezius muscle
8 Spine of scapula
9 Posterior fibers of deltoid muscle
10 Infraspinatus muscle and infraspinous fascia
11 Teres minor muscle and fascia
12 Long head of triceps brachii muscle
13 Teres major muscle
14 Lateral head of triceps brachii muscle
15 Medial head of triceps brachii muscle
16 Medial intermuscular septum
17 Ulnar nerve
18 Olecranon

Muscles of shoulder and arm, superficial layer (right side, dorsal aspect).



1 Trapezius muscle (reflected)
2 Levator scapulae muscle
3 Supraspinatus muscle
4 Rhomboid minor muscle
5 Medial border of scapula
6 Rhomboid major muscle
7 Infraspinatus muscle
8 Teres major muscle
9 Inferior angle of scapula
10 Cut edge of trapezius muscle
11 Intrinsic muscles of back with fascia
12 Latissimus dorsi muscle
13 Acromion
14 Spine of scapula
15 Deltoid muscle
16 Teres minor muscle
17 Long head of triceps brachii muscle
18 Lateral head of triceps brachii muscle
19 Medial head of triceps brachii muscle
20 Medial intermuscular septum
21 Tendon of triceps brachii muscle

Muscles of shoulder and arm, deeper layer (right side, dorsal aspect). The trapezius muscle has been cut near its origin at the vertebral column and reflected upward.

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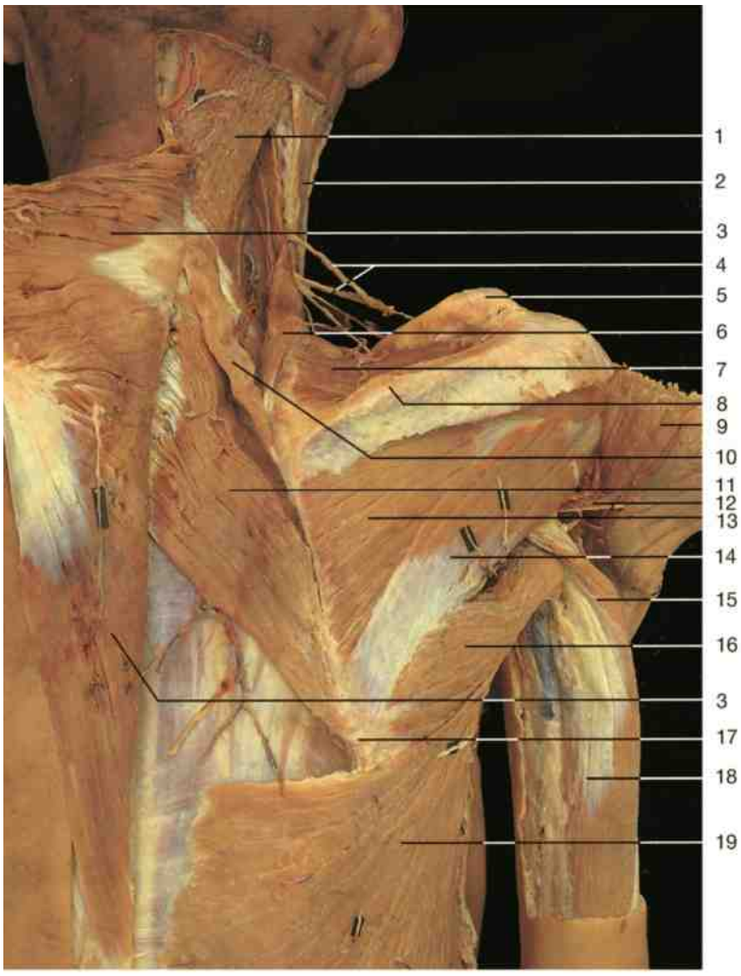
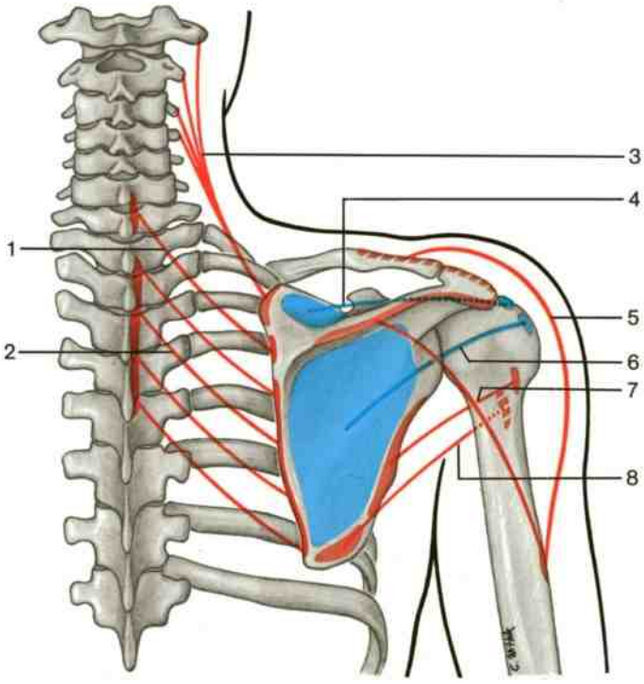


1 Splenius capitis muscle
2 Sternocleidomastoid muscle
3 Trapezius muscle (reflected)
4 Lateral supraclavicular nerves
5 Clavicle
6 Levator scapulae muscle
7 Supraspinatus muscle
8 Spine of scapula
9 Deltoid muscle (reflected)
10 Rhomboid minor muscle
11 Rhomboid major muscle
12 Axillary nerve and posterior circumflex humeral artery
13 Infraspinatus muscle
14 Teres minor muscle
15 Long head of triceps brachii muscle
16 Teres major muscle
17 Inferior angle of scapula
18 Triceps brachii muscle
19 Latissimus dorsi muscle

Muscles of shoulder and arm, deeper layer (right side, dorsal aspect). The trapezius and deltoid muscles have been divided and reflected.



Shoulder muscles, schematic diagram illustrating the course of the main muscles of the dorsal aspect of the shoulder.

◁

1 Rhomboid minor muscle (red)
2 Rhomboid major muscle (red)
3 Levator scapulae muscle (red)
4 Supraspinatus muscle (blue)
5 Deltoid muscle (red)
6 Infraspinatus muscle (blue)
7 Teres minor muscle (red)
8 Teres major muscle (red)

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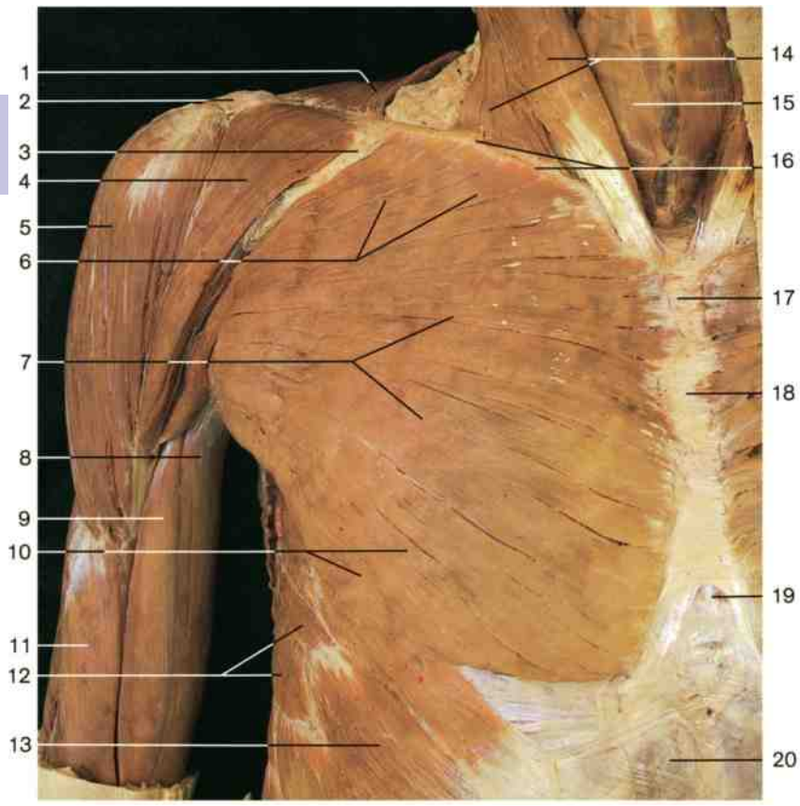
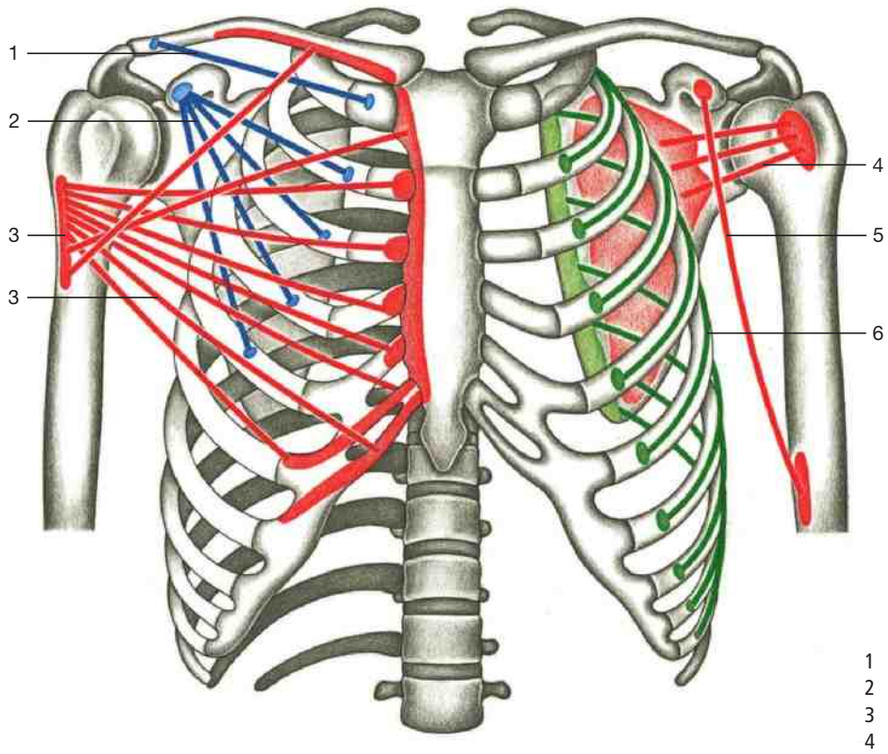


Shoulder, arm, and pectoral muscles, superficial layer (ventral aspect).

1 Trapezius muscle
2 Acromion
3 Deltopectoral triangle
4 Clavicular part of deltoid muscle (anterior fibers)
5 Acromial part of deltoid muscle (central fibers)
6 Clavicular part of pectoralis major muscle
7 Sternocostal part of pectoralis major muscle
8 Short head of biceps brachii muscle
9 Long head of biceps brachii muscle
10 Abdominal part of pectoralis major muscle
11 Brachialis muscle
12 Serratus anterior muscle
13 External abdominal oblique muscle
14 Sternocleidomastoid muscle
15 Infrahyoid muscles
16 Clavicle
17 Manubrium sterni
18 Body of sternum
19 Xiphoid process
20 Anterior layer of sheath of rectus abdominis muscle



Arrangement of pectoral and shoulder muscles (ventral aspect). (Schematic drawing.)

1 Subclavius muscle (blue)
2 Pectoralis minor muscle (blue)
3 Pectoralis major muscle (red)
4 Subscapularis muscle (red)
5 Coracobrachialis muscle (red)
6 Serratus anterior muscle (green)

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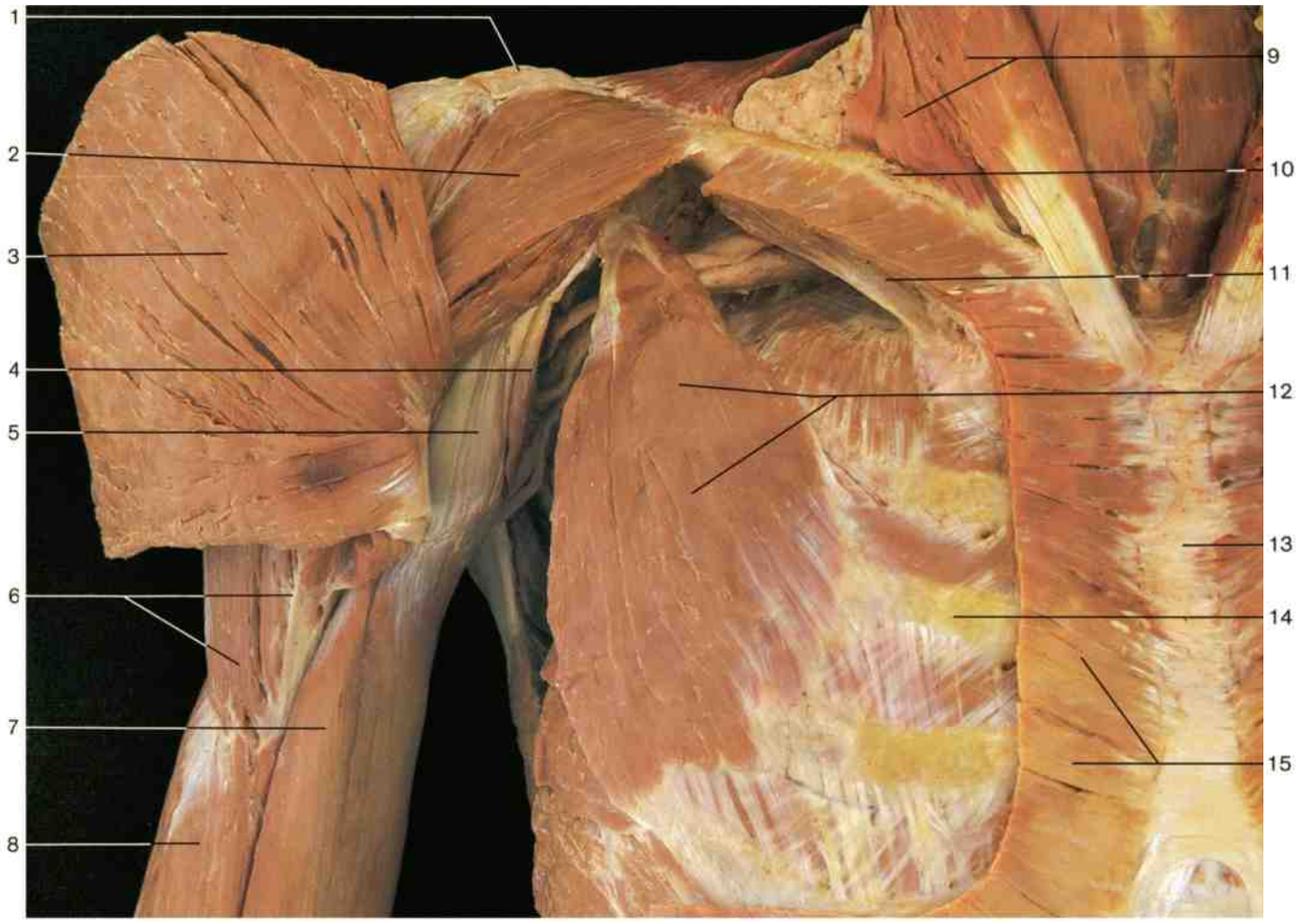
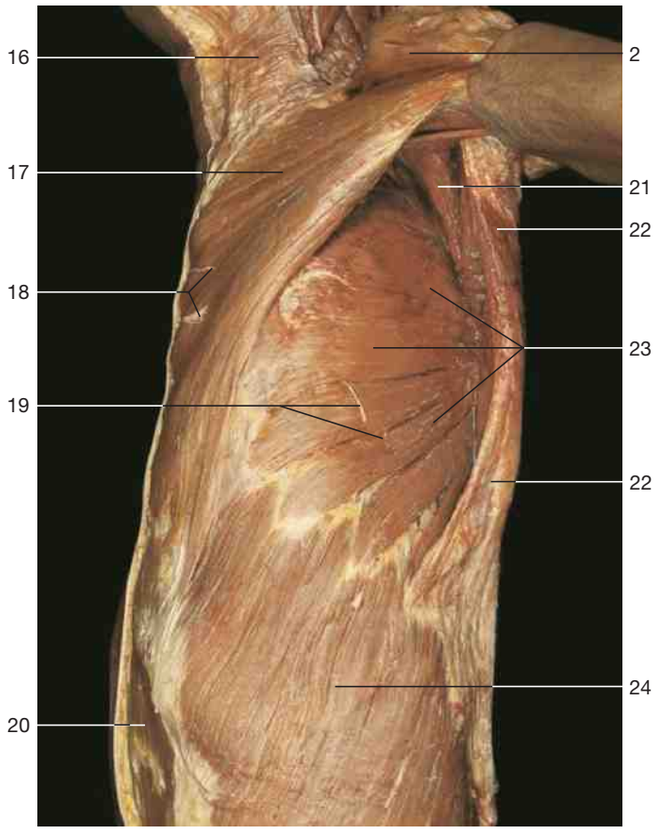


Shoulder, arm, and pectoral muscles, deep layer (ventral aspect).



1 Acromion
2 Clavicular part of deltoid muscle
3 Pectoralis major muscle (reflected)
4 Coracobrachialis muscle
5 Short head of biceps brachii muscle
6 Deltoid muscle (insertion on humerus)
7 Long head of biceps brachii muscle
8 Brachialis muscle
9 Sternocleidomastoid muscle
10 Clavicle
11 Subclavius muscle
12 Pectoralis minor muscle
13 Sternum
14 Third rib
15 Pectoralis major muscle
16 Platysma muscle
17 Pectoralis major muscle forming the anterior axillary fold
18 Anterior cutaneous branches of intercostal nerves
19 Lateral cutaneous branches of intercostal nerves
20 Rectus abdominis muscle
21 Subscapularis muscle
22 Latissimus dorsi muscle forming the posterior axillary fold
23 Serratus anterior muscle forming the medial wall of the axilla
24 External abdominal oblique muscle

Axillary fossa and serratus anterior muscle
(left side, lateral aspect).

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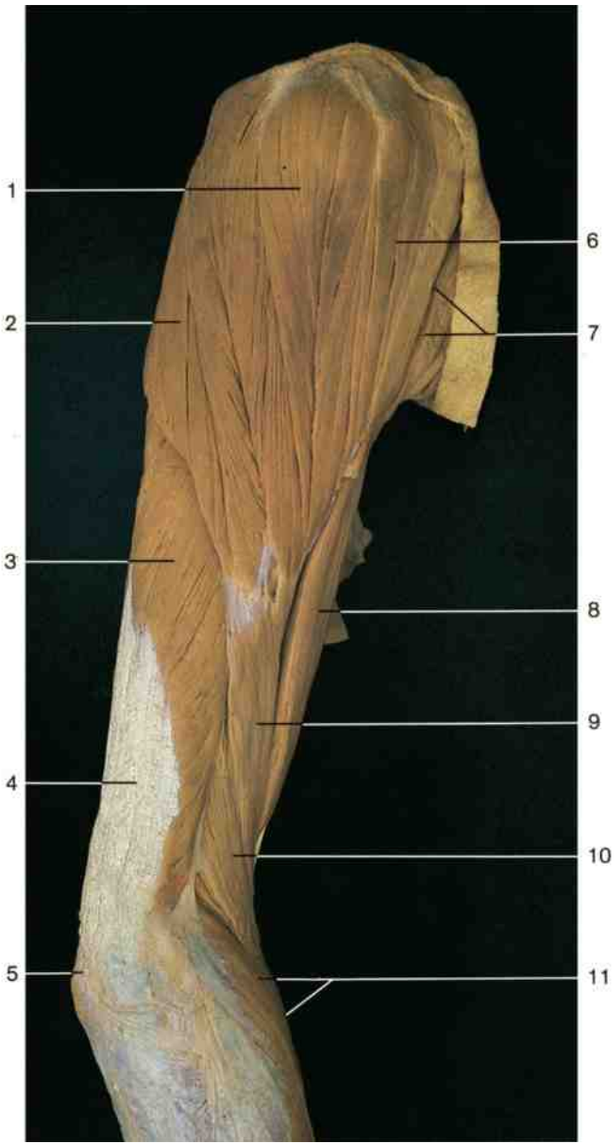
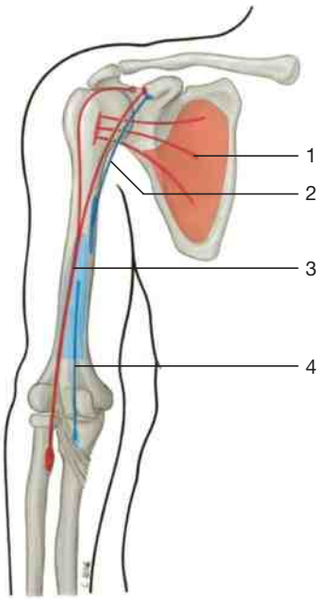


Muscles of the right arm (lateral aspect).

Sagittal section of the right arm (MRI scan; from Heuck et al., MRT-Atlas, 2009).



Position and course of flexors of arm (schematic drawing).

1 Subscapularis muscle (red)
2 Coracobrachialis muscle (blue)
3 Biceps brachii muscle (red)
4 Brachialis muscle (blue)

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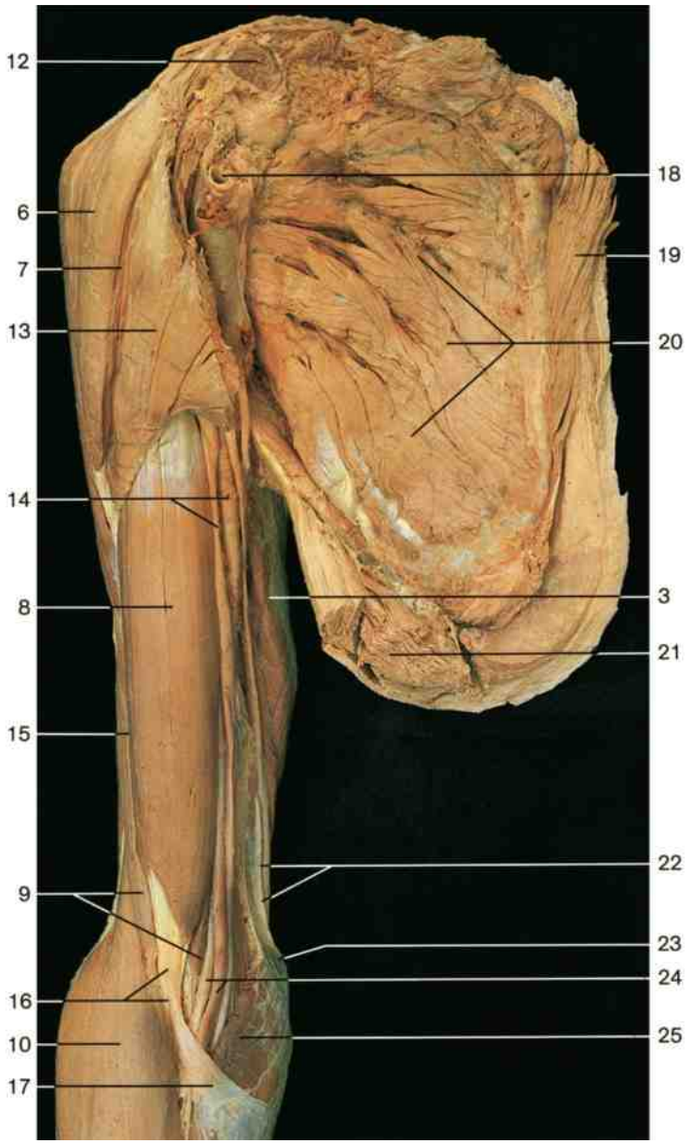
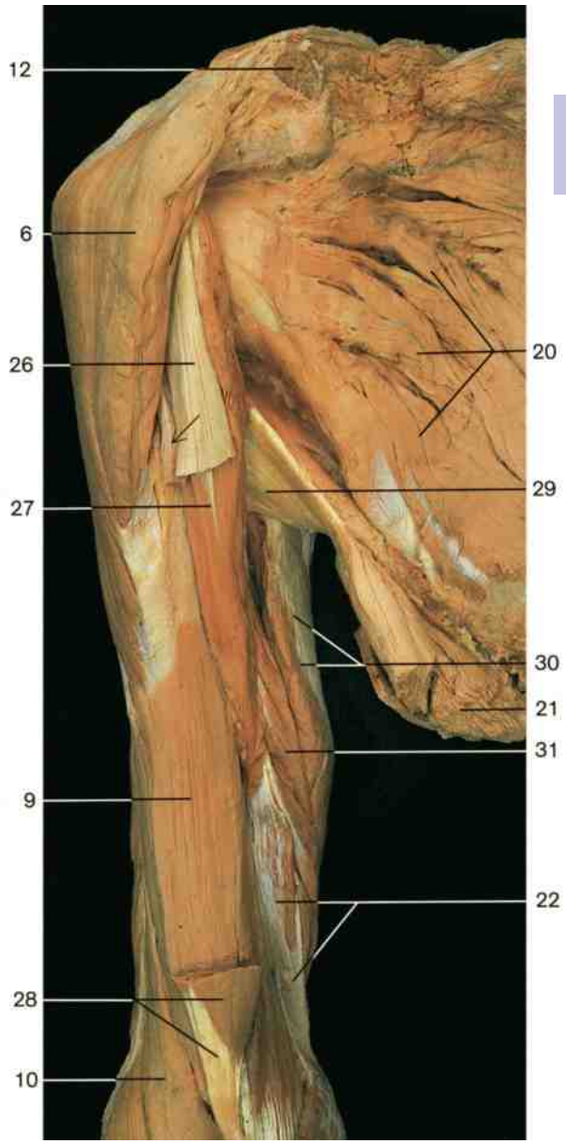


Muscles of the right arm (ventral aspect). The arm with the scapula and attached muscles has been removed from the trunk.



Muscles of the right arm (ventral aspect). Part of the biceps brachii muscle has been removed. Arrow: tendon of long head of biceps brachii muscle.

1 Acromial part of deltoid muscle (central fibers)
2 Scapular part of deltoid muscle (posterior fibers)
3 Triceps brachii muscle
4 Tendon of triceps brachii muscle
5 Olecranon
6 Clavicular part of deltoid muscle (anterior fibers)
7 Deltopectoral groove
8 Biceps brachii muscle
9 Brachialis muscle
10 Brachioradialis muscle
11 Extensor carpi radialis longus muscle
12 Clavicle (divided)
13 Pectoralis major muscle
14 Medial intermuscular septum with vessels and nerves
15 Lateral intermuscular septum
16 Tendon of biceps brachii muscle
17 Bicipital aponeurosis
18 Axillary artery
19 Rhomboid major muscle
20 Subscapularis muscle
21 Latissimus dorsi muscle (divided)
22 Medial intermuscular septum
23 Medial epicondyle of humerus
24 Brachial artery and median nerve
25 Pronator teres muscle
26 Tendon of short head of biceps brachii muscle
27 Coracobrachialis muscle
28 Distal part of biceps brachii muscle
29 Teres major muscle
30 Long head of triceps brachii muscle
31 Medial head of triceps brachii muscle
32 Radius
33 Head of humerus
34 Axillary nerve
35 Humerus
36 Trochlea
37 Ulna

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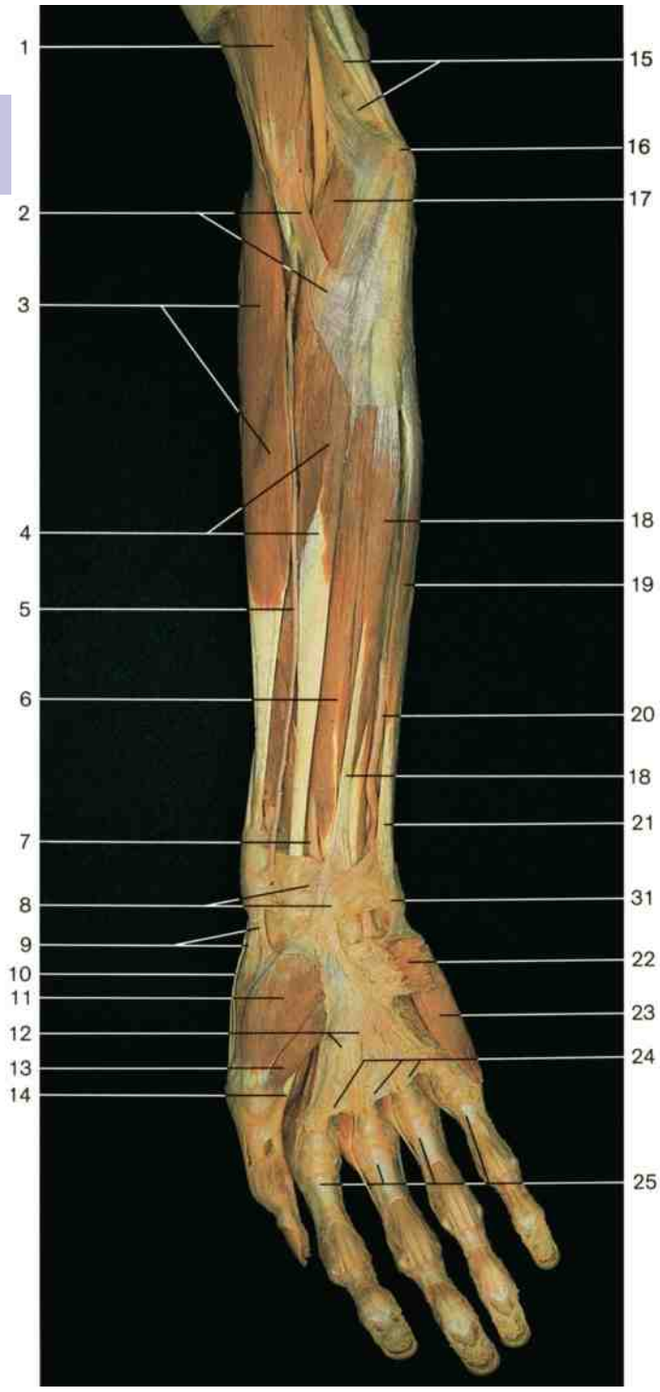
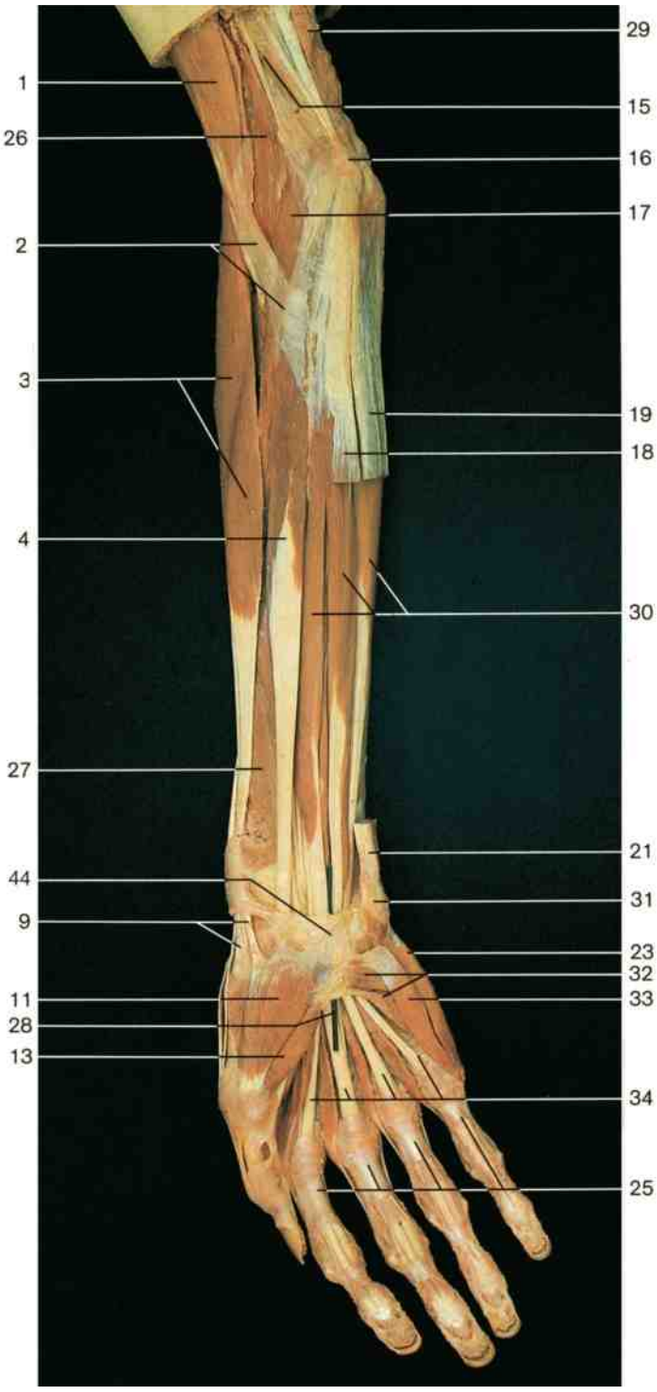


Flexor muscles of forearm and hand, superficial layer (ventral aspect).



Flexor muscles of forearm and hand, superficial layer (ventral aspect). The palmaris longus and flexor carpi ulnaris muscles have been removed.

1 Biceps brachii muscle
2 Bicipital aponeurosis
3 Brachioradialis muscle
4 Flexor carpi radialis muscle
5 Radial artery
6 Flexor digitorum superficialis muscle
7 Median nerve
8 Antebrachial fascia and tendon of palmaris longus muscle
9 Tendon of abductor pollicis longus muscle
10 Tendon of extensor pollicis brevis muscle
11 Abductor pollicis brevis muscle
12 Palmar aponeurosis
13 Superficial head of flexor pollicis brevis muscle
14 Tendon of flexor pollicis longus muscle
15 Medial intermuscular septum
16 Medial epicondyle of humerus
17 Humeral head of pronator teres muscle
18 Palmaris longus muscle
19 Flexor carpi ulnaris muscle
20 Ulnar artery
21 Tendon of flexor carpi ulnaris muscle
22 Palmaris brevis muscle

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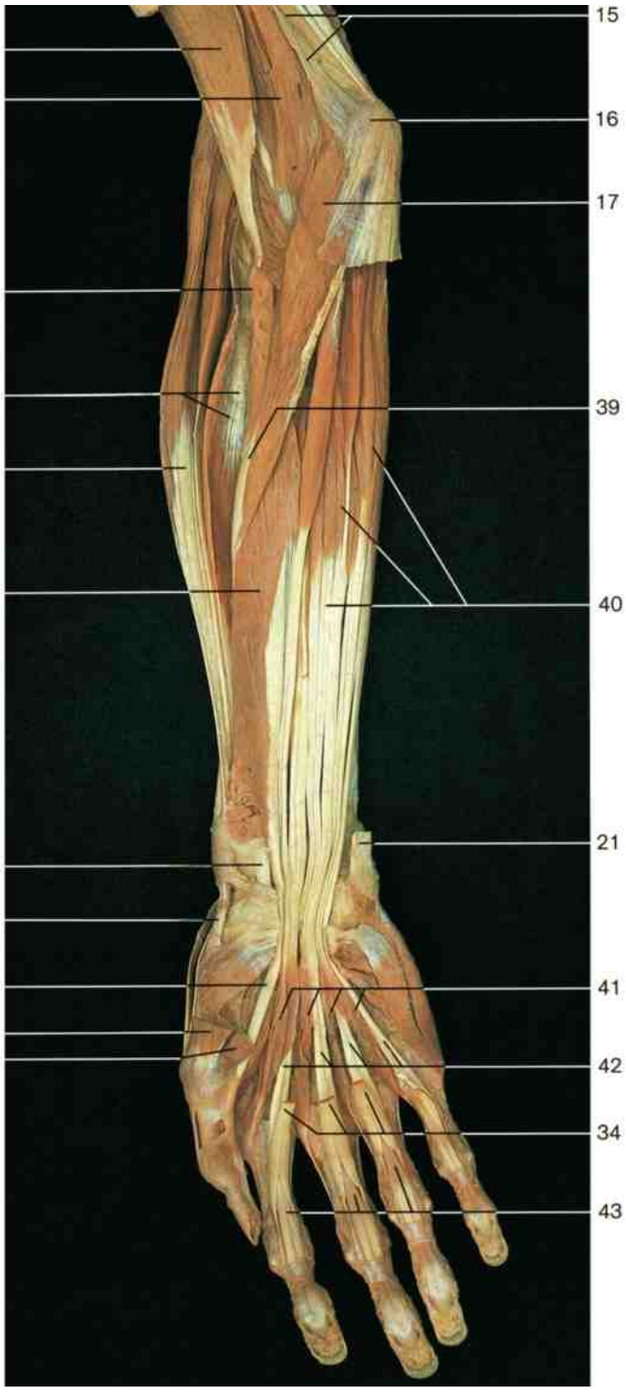
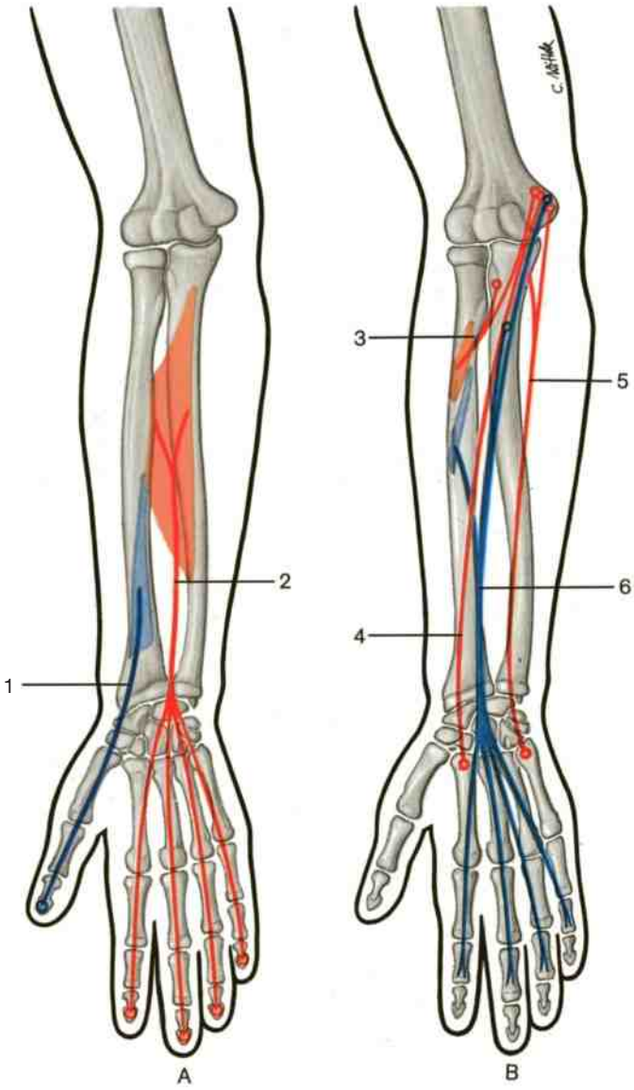


Flexor muscles of forearm and hand, middle layer (ventral aspect). The palmaris longus, flexor carpi radialis, and ulnaris muscles have been removed. The flexor retinaculum has been divided.



Position of flexors of fingers and hand (schematic drawing).

A Deep layer

1 Flexor pollicis longus muscle (blue)
2 Flexor digitorum profundus muscle (red)

B Superficial layer

3 Pronator teres muscle (red)
4 Flexor carpi radialis muscle (red)
5 Flexor carpi ulnaris muscle (red)
6 Flexor digitorum superficialis muscle (blue)

23 Abductor digiti minimi muscle
24 Transverse fasciculi of palmar aponeurosis
25 Digital fibrous sheaths of tendons of flexor digitorum muscle
26 Brachialis muscle
27 Flexor pollicis longus muscle
28 Carpal tunnel (canalis carpi, probe)
29 Triceps brachii muscle
30 Flexor digitorum superficialis muscle
31 Pisiform bone
32 Opponens digiti minimi muscle
33 Flexor digiti minimi brevis muscle
34 Tendons of flexor digitorum superficialis muscle
35 Supinator muscle
36 Extensor carpi radialis brevis muscle
37 Flexor pollicis longus muscle
38 Tendon of flexor carpi radialis muscle
39 Pronator teres muscle (insertion of radius)
40 Flexor digitorum profundus muscle
41 Lumbrical muscles
42 Tendons of flexor digitorum profundus muscle
43 Tendons of flexor digitorum profundus muscle having passed through the divided tendons of the flexor digitorum superficialis muscle
44 Flexor retinaculum

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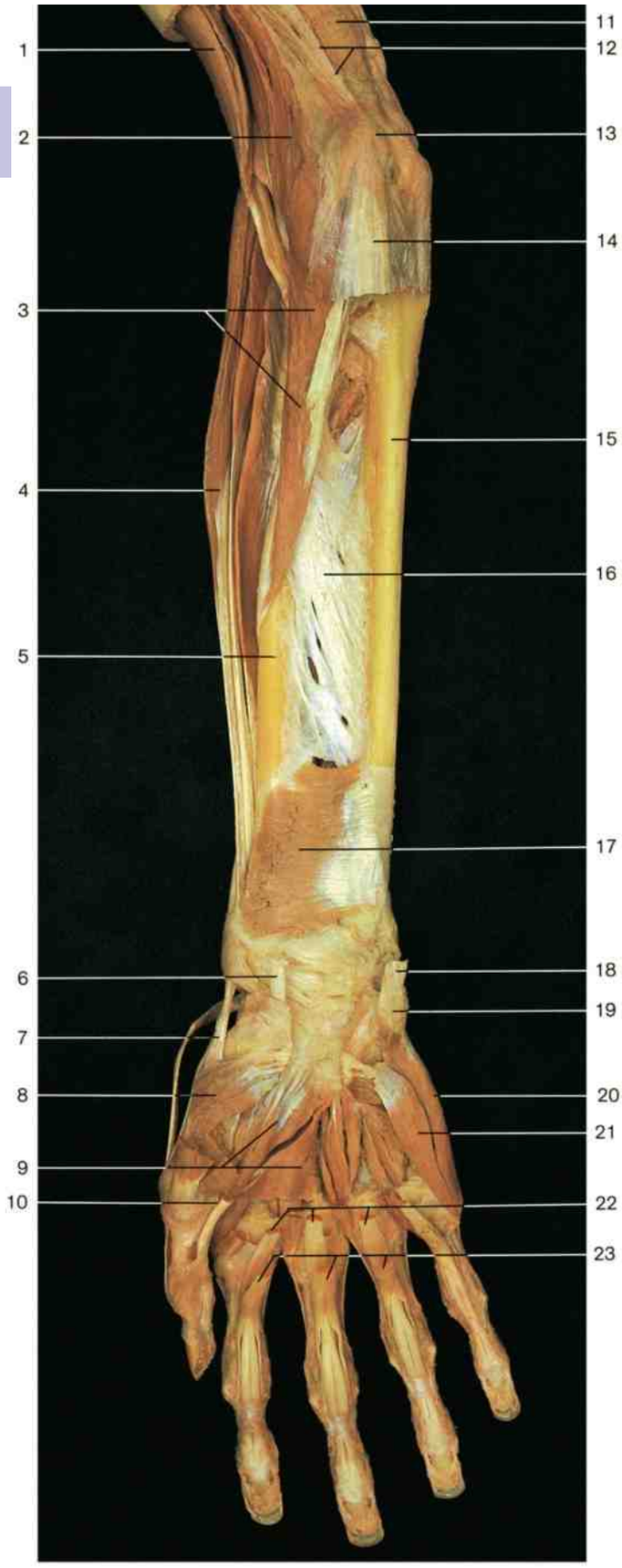
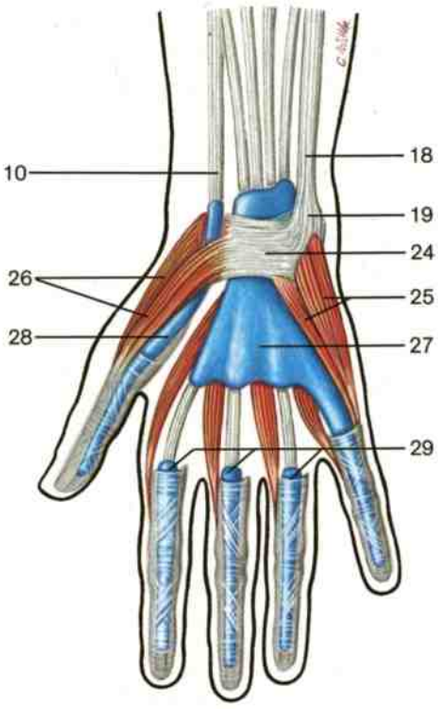


Flexor muscles of forearm and hand, deep layer (ventral aspect). All flexors have been removed to display the pronator quadratus and pronator teres muscles together with the interosseous membrane. Forearm in supination.

1 Biceps brachii muscle
2 Brachialis muscle
3 Pronator teres muscle
4 Brachioradialis muscle
5 Radius
6 Tendon of flexor carpi radialis muscle
7 Tendon of abductor pollicis longus muscle
8 Opponens pollicis muscle
9 Adductor pollicis muscle
10 Tendon of flexor pollicis longus muscle
11 Triceps brachii muscle
12 Medial intermuscular septum
13 Medial epicondyle of humerus
14 Common flexor mass (divided)
15 Ulna
16 Interosseous membrane
17 Pronator quadratus muscle
18 Tendon of flexor carpi ulnaris muscle
19 Pisiform bone
20 Abductor digiti minimi muscle
21 Flexor digiti minimi brevis muscle
22 Tendons of flexor digitorum profundus muscle
23 Tendons of flexor digitorum superficialis muscle
24 Flexor retinaculum
25 Hypothenar muscles
26 Thenar muscles
27 Common synovial sheath of flexor tendons
28 Synovial sheath of tendon of flexor pollicis longus muscle
29 Digital synovial sheaths of flexor tendons



Synovial sheaths of flexor tendons (palmar aspect of right hand, semischematic drawing).

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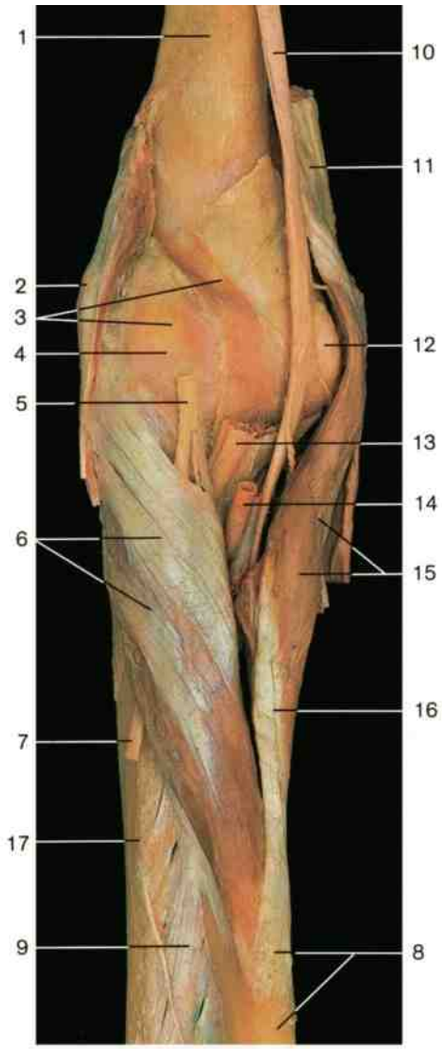
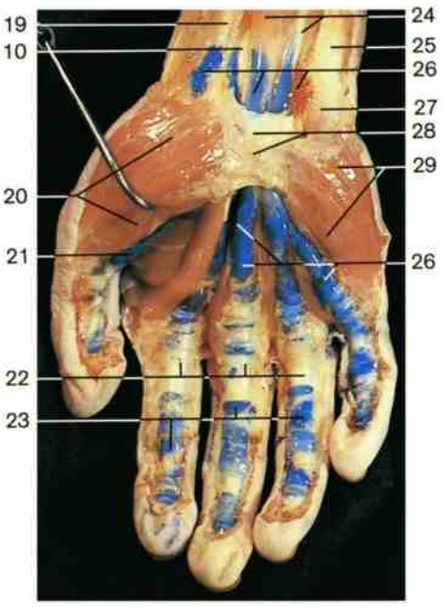
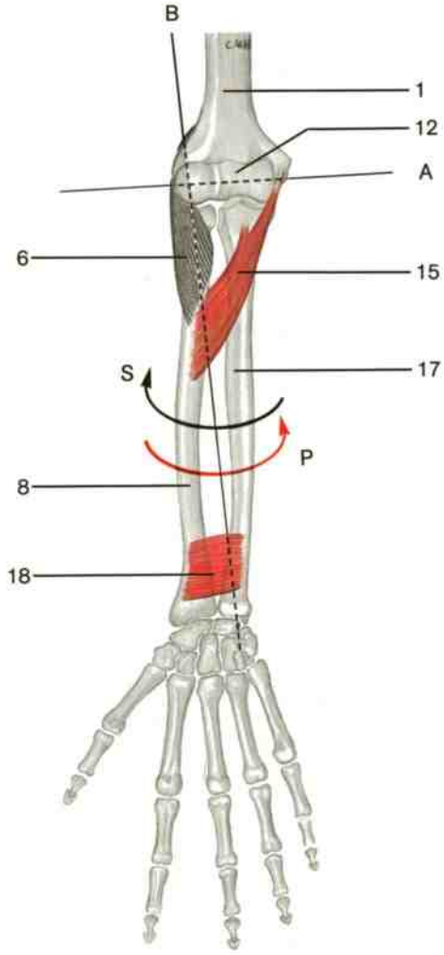


Right supinator and elbow joint (ventral aspect). Forearm in pronation.



Synovial sheaths of flexor tendons (palmar aspect of right hand). Blue PVA solution has been injected into the sheaths.

1 Humerus
2 Lateral epicondyle of humerus
3 Articular capsule
4 Position of capitulum of humerus
5 Deep branch of radial nerve
6 Supinator muscle
7 Entrance of deep branch of radial nerve to extensor muscles
8 Radius and insertion of pronator teres muscle
9 Interosseous membrane
10 Median nerve
11 Triceps brachii muscle
12 Trochlea of humerus
13 Tendon of biceps brachii muscle
14 Brachial artery
15 Pronator teres muscle
16 Tendon of pronator teres muscle
17 Ulna
18 Pronator quadratus muscle
19 Tendon of flexor carpi radialis muscle
20 Thenar muscles
21 Synovial sheath of tendon of flexor pollicis longus muscle
22 Fibrous sheath of flexor tendons
23 Digital synovial sheath of flexor tendons
24 Flexor digitorum superficialis muscle
25 Tendon of flexor carpi ulnaris muscle
26 Common synovial sheath of flexor tendons
27 Position of pisiform bone
28 Flexor retinaculum
29 Hypothenar muscles



A = axis of flexion and extension
B = axis of rotation

Arrows:
S = supination
P = pronation

Diagram illustrating the two axes of the elbow joint.

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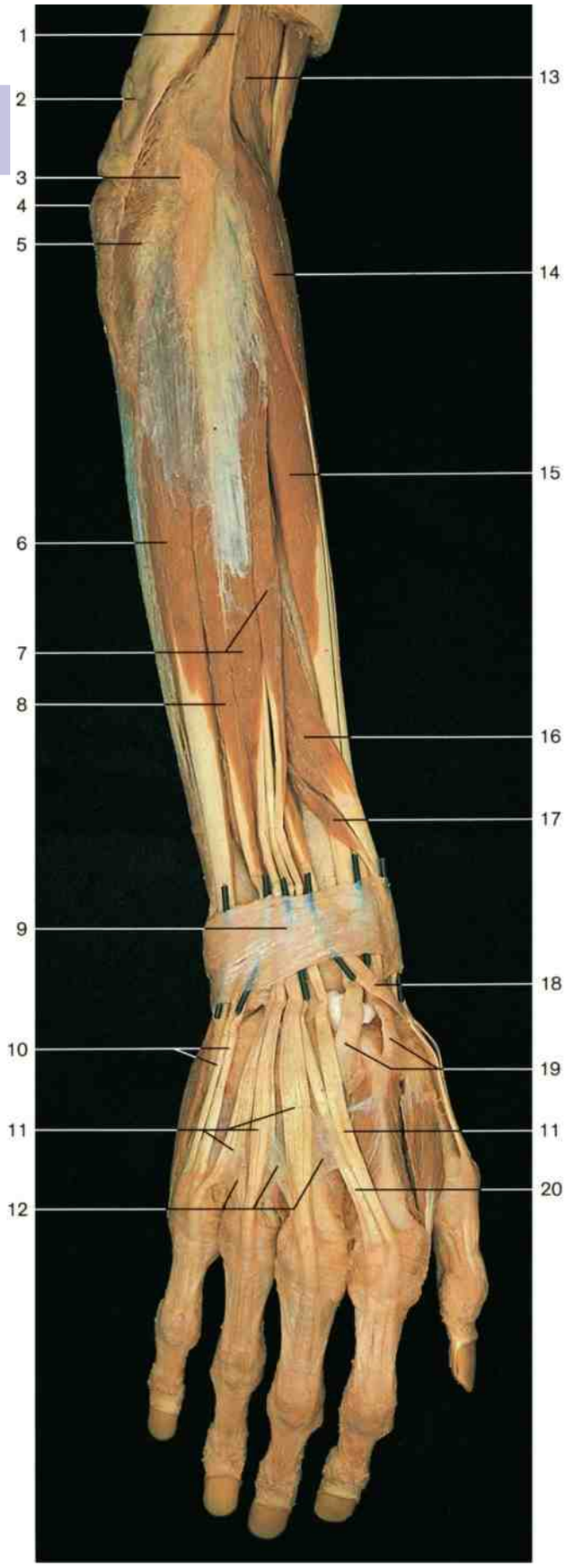
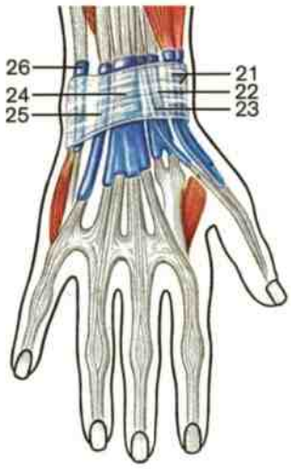
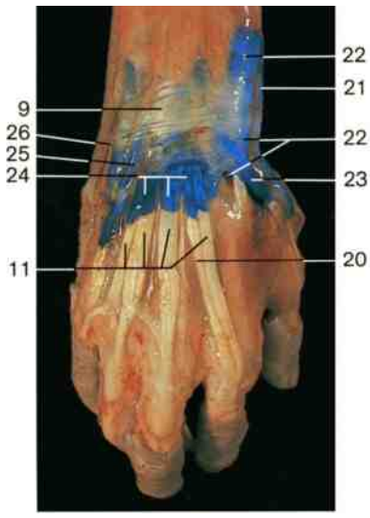


Extensor muscles of forearm and hand, superficial layer (dorsal aspect). Tunnels for extensor tendons indicated by probes.

1 Lateral intermuscular septum
2 Tendon of triceps brachii muscle
3 Lateral epicondyle of humerus
4 Olecranon
5 Anconeus muscle
6 Extensor carpi ulnaris muscle
7 Extensor digitorum muscle
8 Extensor digiti minimi muscle
9 Extensor retinaculum
10 Tendons of extensor digiti minimi muscle
11 Tendons of extensor digitorum muscle
12 Intertendinous connections
13 Brachioradialis muscle
14 Extensor carpi radialis longus muscle
15 Extensor carpi radialis brevis muscle
16 Abductor pollicis longus muscle
17 Extensor pollicis brevis muscle
18 Tendon of extensor pollicis longus muscle
19 Tendons of both extensor carpi radialis longus and extensor carpi radialis brevis muscles
20 Tendon of extensor indicis muscle
21 First tunnel: Abductor pollicis longus muscle, extensor pollicis brevis muscle
22 Second tunnel: Extensor carpi radialis longus and brevis muscles
23 Third tunnel: Extensor pollicis longus muscle
24 Fourth tunnel: Extensor digitorum muscle, extensor indicis muscle
25 Fifth tunnel: Extensor digiti minimi muscle
26 Sixth tunnel: Extensor carpi ulnaris muscle



Synovial sheaths of extensor tendons on the back of the right wrist (indicated in blue). Notice the six tunnels for the passage of the extensor tendons beneath the extensor retinaculum (schematic drawing).



Synovial sheaths of extensor tendons. The sheaths have been injected with blue gelatin.

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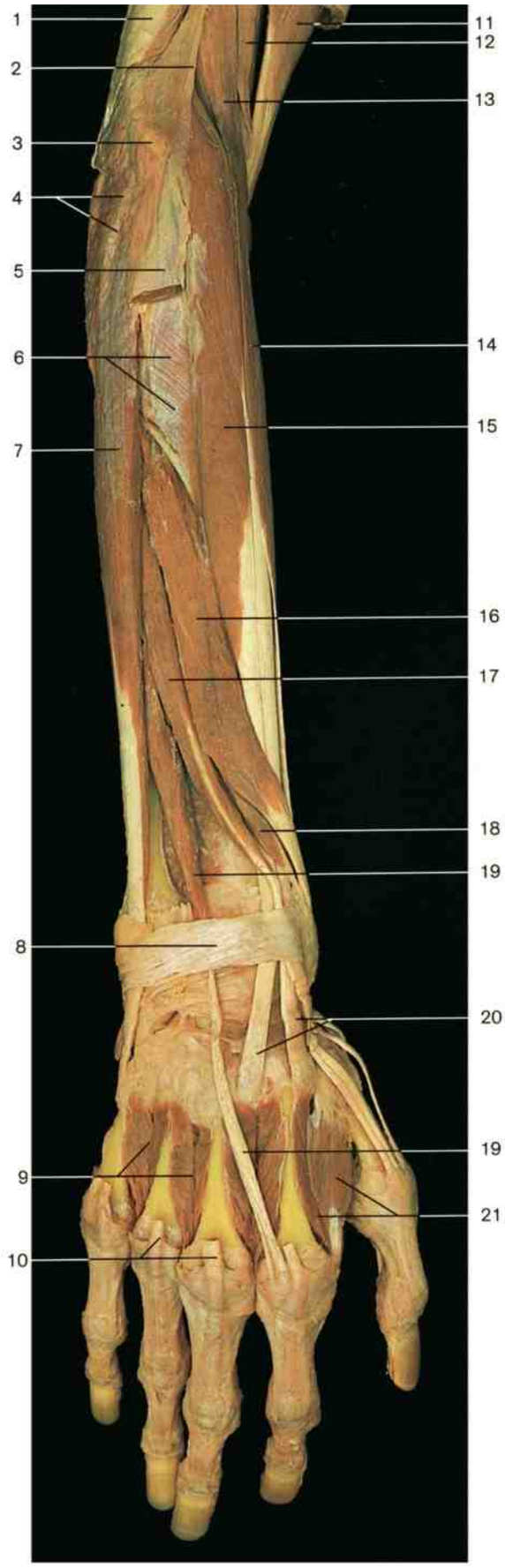
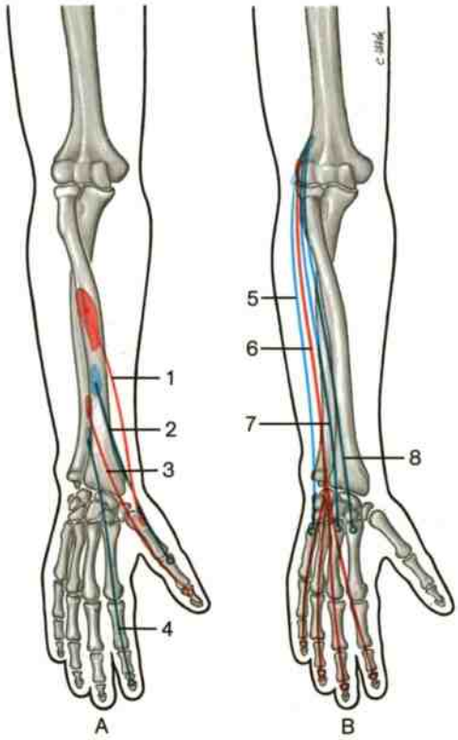


Extensor muscles of forearm and hand, deep layer (dorsal aspect).

1 Triceps brachii muscle
2 Lateral intermuscular septum
3 Lateral epicondyle of humerus
4 Anconeus muscle
5 Extensor digitorum and extensor digiti minimi muscles (cut)
6 Supinator muscle
7 Extensor carpi ulnaris muscle
8 Extensor retinaculum
9 Third and fourth dorsal interosseous muscles
10 Tendons of extensor digitorum muscle (cut)
11 Biceps brachii muscle
12 Brachialis muscle
13 Brachioradialis muscle
14 Extensor carpi radialis longus muscle
15 Extensor carpi radialis brevis muscle
16 Abductor pollicis longus muscle
17 Extensor pollicis longus muscle
18 Extensor pollicis brevis muscle
19 Extensor indicis muscle
20 Tendons of the extensor carpi radialis longus and extensor carpi radialis brevis muscles
21 First dorsal interosseous muscle



Position of extensor muscles of forearm and hand (schematic drawing).

A Extensors of thumb

1 Abductor pollicis longus muscle (red)
2 Extensor pollicis brevis muscle (blue)
3 Extensor pollicis longus muscle (red)
4 Extensor indicis muscle (blue)

B Extensors of fingers and hand

5 Extensor carpi ulnaris muscle (blue)
6 Extensor digitorum muscle (red)
7 Extensor carpi radialis brevis muscle (blue)
8 Extensor carpi radialis longus muscle (blue)

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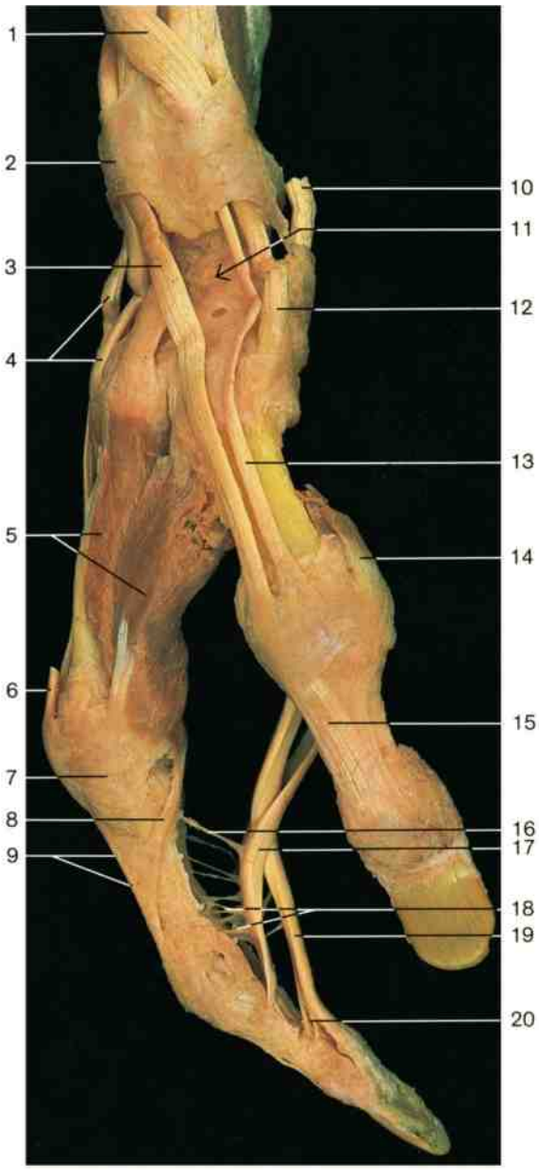
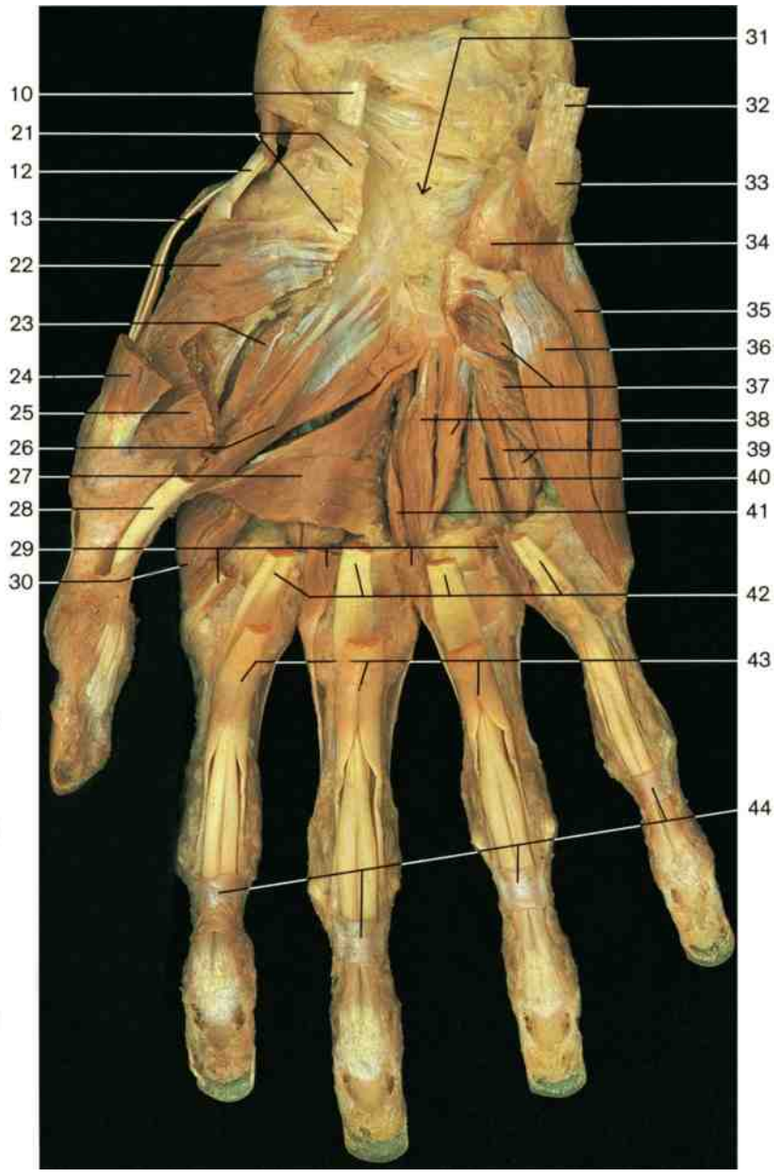


Muscles of thumb and index finger (medial aspect). The tendons of the extensor muscles of the thumb and the insertion of the flexor tendons of the index finger are displayed.



Muscles of right hand (palmar aspect). The tendons of the flexor muscles and parts of the thumb muscles have been removed. The carpal tunnel has been opened.

1 Tendons of extensor pollicis brevis and abductor pollicis longus muscle
2 Extensor retinaculum
3 Tendon of extensor pollicis longus muscle
4 Tendons of extensor carpi radialis longus and brevis muscles
5 First dorsal interosseous muscle
6 Tendon of extensor digitorum muscle for index finger
7 Location of metacarpophalangeal joint
8 Tendon of lumbrical muscle
9 Extensor expansion of index finger
10 Tendon of flexor carpi radialis muscle (cut)
11 Anatomical snuffbox
12 Tendon of abductor pollicis longus muscle
13 Tendon of extensor pollicis brevis muscle
14 Tendon of abductor pollicis brevis muscle
15 Extensor expansion of extensor of thumb
16 Vinculum longum
17 Tendons of flexor digitorum superficialis muscle dividing to allow passage of deep tendons
18 Vincula of flexor tendons
19 Tendon of flexor digitorum profundus muscle
20 Vinculum breve
21 Radial carpal eminence (cut edge of flexor retinaculum)
22 Opponens pollicis muscle
23 Deep head of flexor pollicis brevis muscle
24 Abductor pollicis brevis muscle (cut)
25 Superficial head of flexor pollicis brevis muscle (cut)
26 Oblique head of adductor pollicis muscle
27 Transverse head of adductor pollicis muscle
28 Tendon of flexor pollicis longus muscle (cut)
29 Lumbrical muscles (cut)
30 First dorsal interosseous muscle
31 Position of carpal tunnel
32 Tendon of flexor carpi ulnaris muscle
33 Location of pisiform bone
34 Hook of hamate bone
35 Abductor digiti minimi muscle
36 Flexor digiti minimi brevis muscle
37 Opponens digiti minimi muscle
38 Second palmar interosseous muscle
39 Third palmar interosseous muscle
40 Fourth dorsal interosseous muscle
41 Third dorsal interosseous muscle
42 Tendon of flexor digitorum profundus muscle (cut)
43 Tendons of flexor digitorum superficialis muscle (cut)
44 Fibrous flexor sheaths

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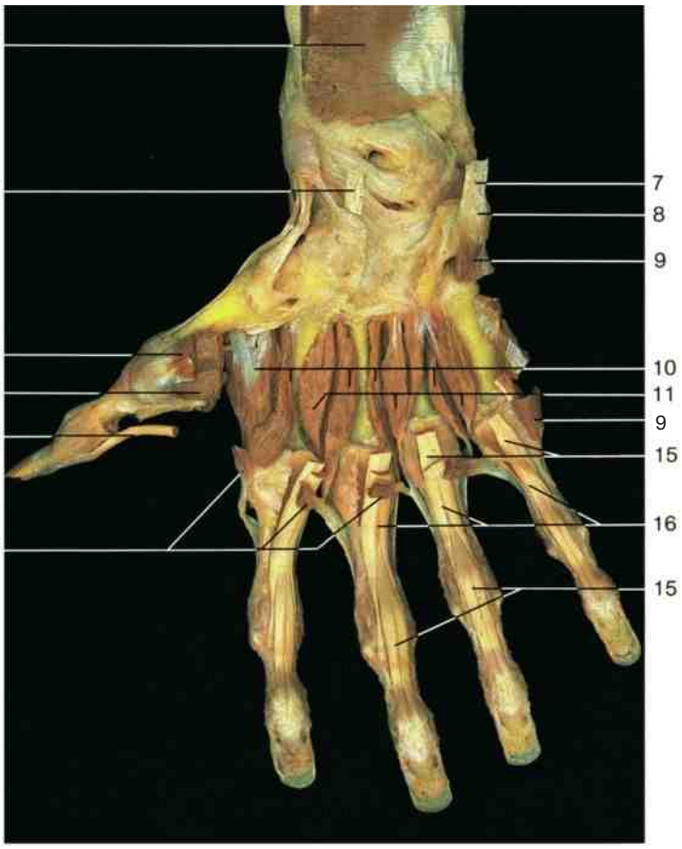
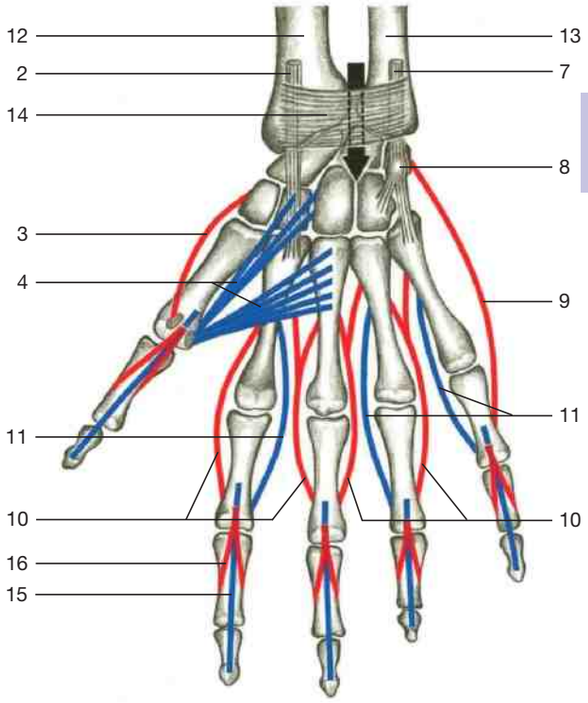
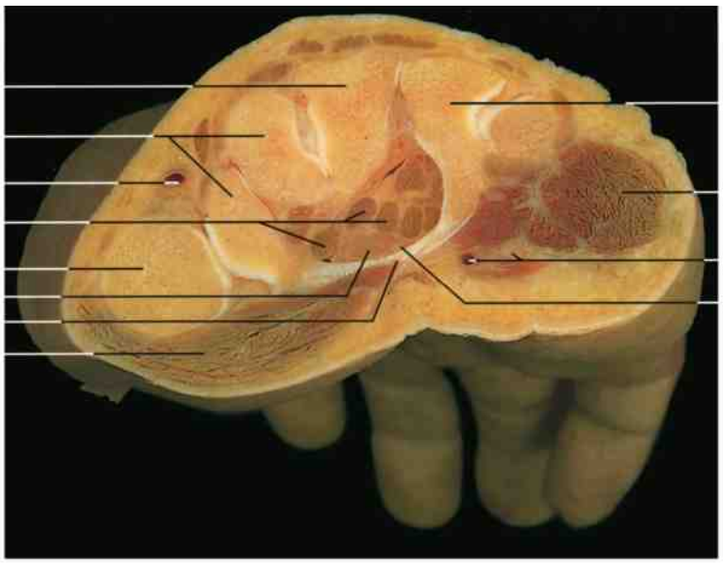


Muscles of right hand, deep layer (palmar aspect). The thenar and hypothenar muscles have been removed to display the interosseous muscles.



Actions of interosseous muscles in abduction and adduction of fingers (palmar aspect, schematic drawing). Arrow: carpal tunnel.
Red = abduction (dorsal interosseous, abductor digiti minimi, and abductor pollicis brevis muscles)
Blue = adduction (palmar interosseous muscles, adductor pollicis muscle)



Transverse section through the right hand, showing the carpal tunnel (canalis carpi).

1 Pronator quadratus muscle
2 Tendon of flexor carpi radialis muscle
3 Abductor pollicis brevis muscle (divided)
4 Adductor pollicis muscle (divided)
5 Tendon of flexor pollicis longus muscle
6 Lumbrical muscles (cut)
7 Tendon of flexor carpi ulnaris muscle
8 Pisiform bone
9 Abductor digiti minimi muscle (divided)
10 Dorsal interosseous muscles
11 Palmar interosseous muscles
12 Radius
13 Ulna
14 Flexor retinaculum
15 Tendons of flexor digitorum profundus muscle
16 Tendons of flexor digitorum superficialis muscle
17 Capitate bone
18 Trapezium bone and trapezoid bone
19 Radial artery
20 Tendon of flexor muscles
21 First metacarpal bone
22 Median nerve
23 Thenar muscles
24 Hamate bone
25 Hypothenar muscles
26 Ulnar artery and nerve
27 Carpal tunnel (canalis carpi)

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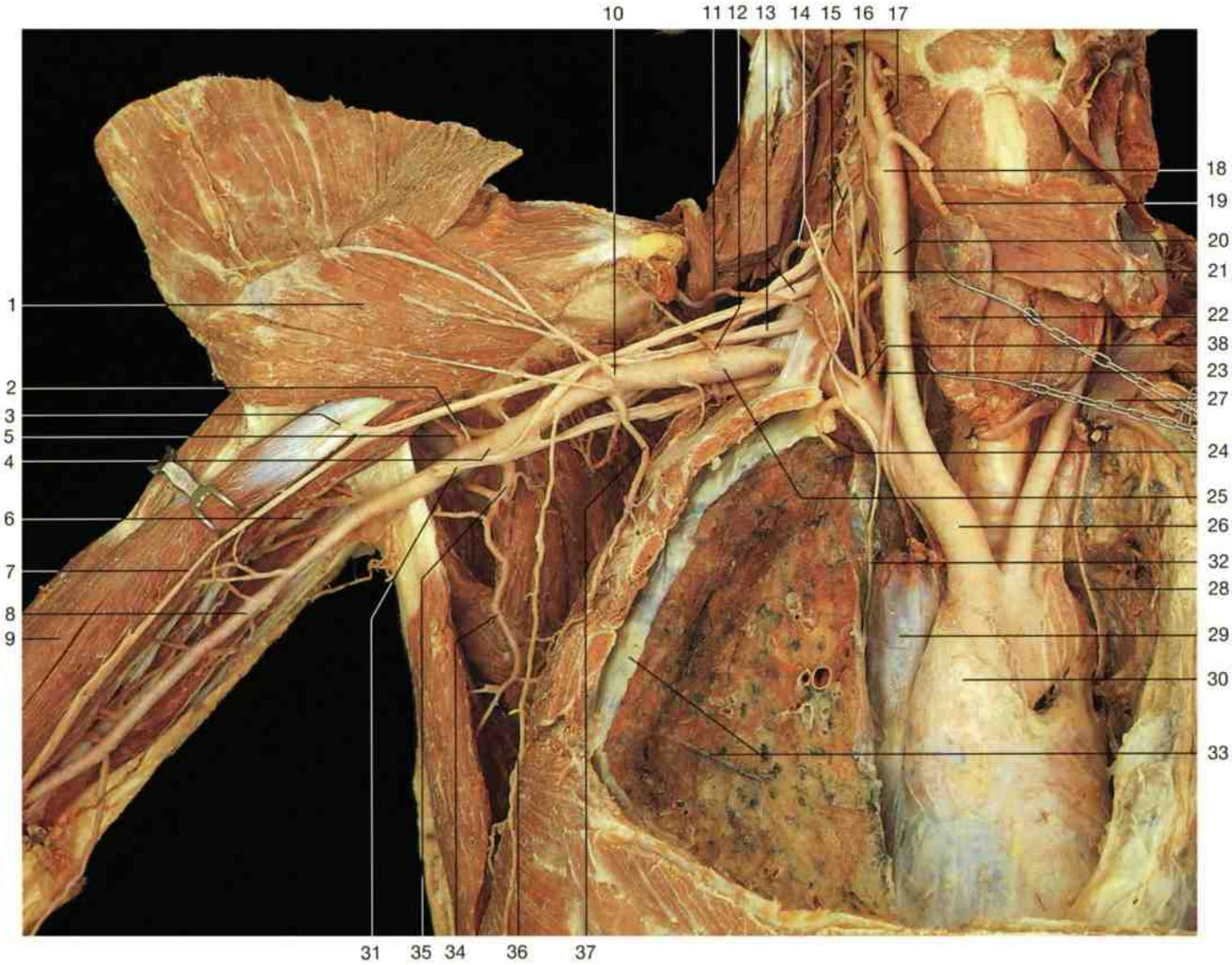

Main branches of right subclavian and axillary arteries (anterior aspect). Pectoralis muscles have been reflected, clavicle and anterior wall of thorax removed, and right lung divided. Left lung with pleura and thyroid gland have been reflected laterally to display aortic arch and common carotid artery with their branches.

1 Pectoralis minor muscle (reflected)
2 Anterior circumflex humeral artery
3 Musculocutaneous nerve (divided)
4 Axillary artery
5 Posterior circumflex humeral artery
6 Profunda brachii artery
7 Median nerve (var.)
8 Brachial artery
9 Biceps brachii muscle
10 Thoraco-acromial artery
11 Suprascapular artery
12 Descending scapular artery
13 Brachial plexus (middle trunk)
14 Transverse cervical artery
15 Scalenus anterior muscle and phrenic nerve
16 Right internal carotid artery
17 Right external carotid artery
18 Carotid sinus
19 Superior thyroid artery
20 Right common carotid artery
21 Ascending cervical artery
22 Thyroid gland
23 Inferior thyroid artery
24 Internal thoracic artery
25 Right subclavian artery
26 Brachiocephalic trunk
27 Left brachiocephalic vein (divided)
28 Left vagus nerve
29 Superior vena cava (divided)
30 Ascending aorta
31 Median nerve (divided)
32 Phrenic nerve
33 Right lung (divided) and pulmonary pleura
34 Thoracodorsal artery
35 Subscapular artery
36 Lateral mammary branches (variant)
37 Lateral thoracic artery
38 Thyrocervical trunk
39 Superior thoracic artery
40 Superior ulnar collateral artery
41 Inferior ulnar collateral artery
42 Middle collateral artery
43 Radial collateral artery
44 Radial recurrent artery
45 Radial artery
46 Anterior and posterior interosseous arteries
47 Princeps pollicis artery
48 Deep palmar arch
49 Common palmar digital arteries
50 Ulnar recurrent artery
51 Recurrent interosseous artery
52 Common interosseous artery
53 Ulnar artery
54 Superficial palmar arch
55 Median nerve and brachial artery
56 Biceps brachii muscle
57 Ulnar nerve
58 Flexor pollicis longus muscle
59 Palmar digital arteries
60 Anterior interosseous artery
61 Flexor carpi ulnaris muscle
62 Superficial palmar branch of radial artery

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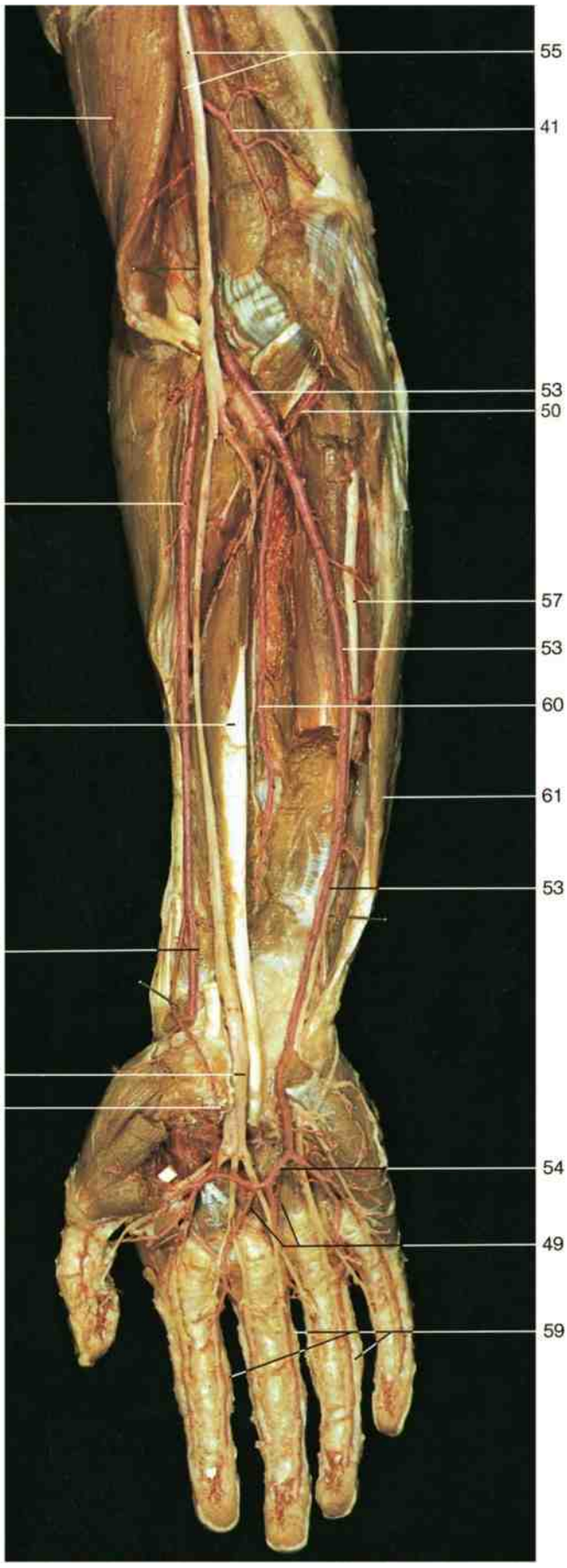
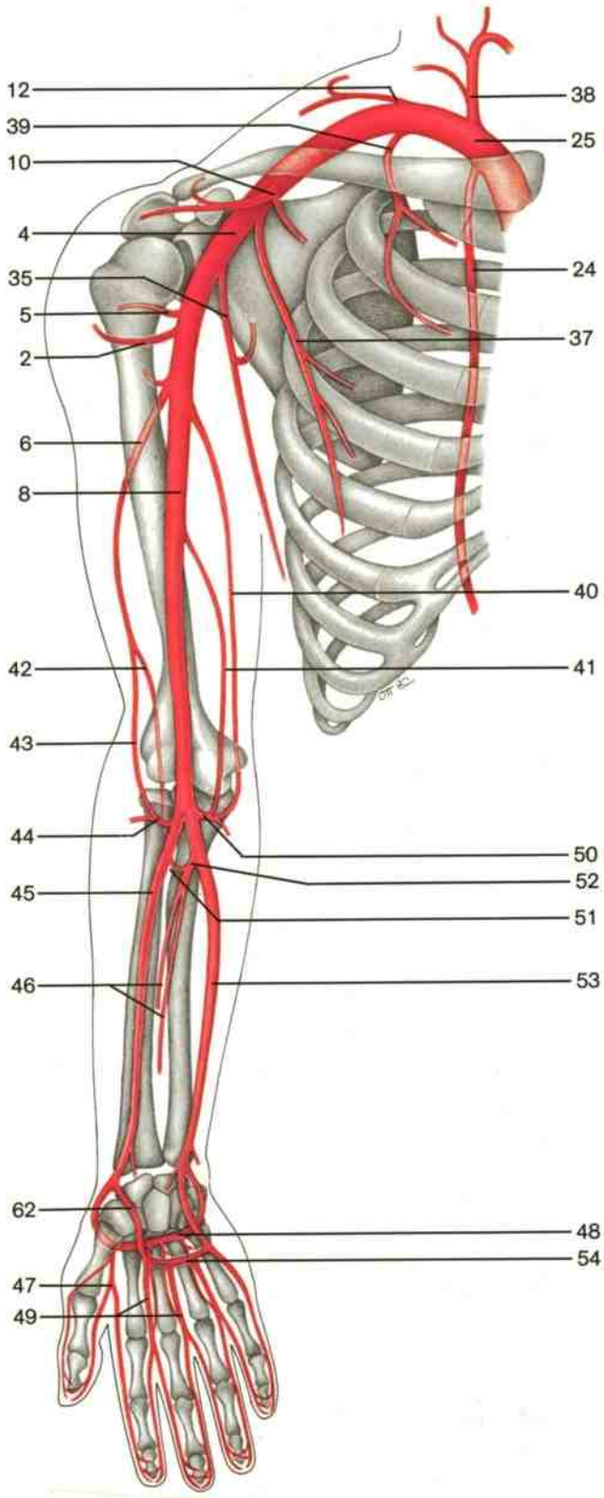


Dissection of the arteries of forearm and hand.
The superficial flexor muscles have been removed, the carpal tunnel opened, and the flexor retinaculum cut. The arteries have been filled with colored resin.



Arteries of the upper limb (schematic drawing).

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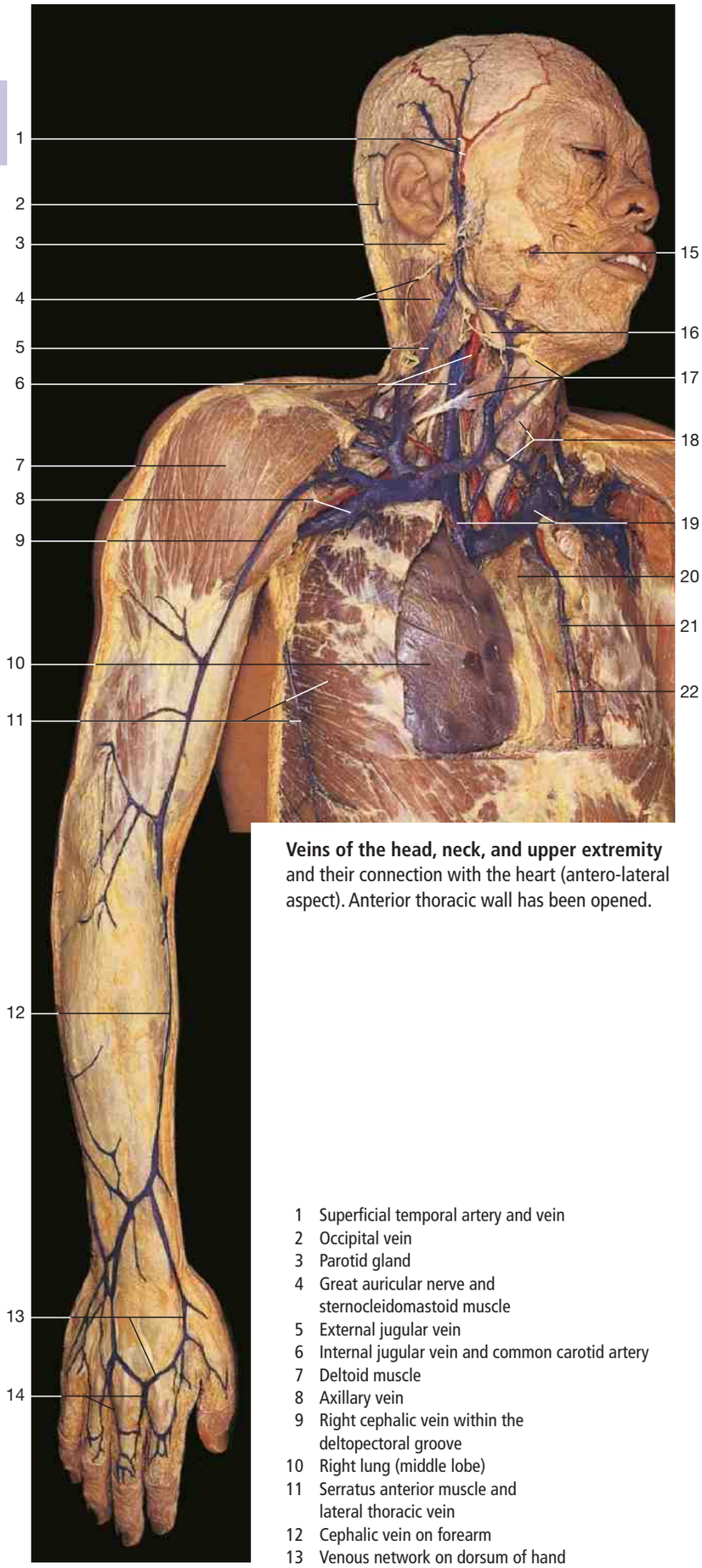
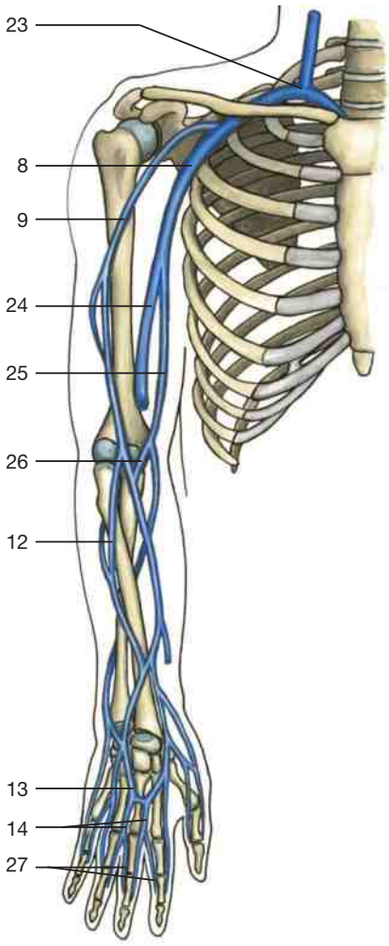


Veins of the head, neck, and upper extremity and their connection with the heart (antero-lateral aspect). Anterior thoracic wall has been opened.



Superficial veins of upper limb (schematic drawing).

1 Superficial temporal artery and vein
2 Occipital vein
3 Parotid gland
4 Great auricular nerve and sternocleidomastoid muscle
5 External jugular vein
6 Internal jugular vein and common carotid artery
7 Deltoid muscle
8 Axillary vein
9 Right cephalic vein within the deltopectoral groove
10 Right lung (middle lobe)
11 Serratus anterior muscle and lateral thoracic vein
12 Cephalic vein on forearm
13 Venous network on dorsum of hand
14 Dorsal metacarpal veins
15 Facial artery and vein
16 Submandibular gland
17 Anterior jugular vein, hyoid bone, and omohyoid muscle
18 Jugular venous arch and thyroid gland
19 Right and left brachiocephalic veins
20 Retrosternal body (remnant of thymus gland)
21 Internal thoracic artery and vein
22 Heart with pericardium
23 Right venous angle
24 Brachial vein
25 Basilic vein
26 Median cubital vein
27 Digital veins

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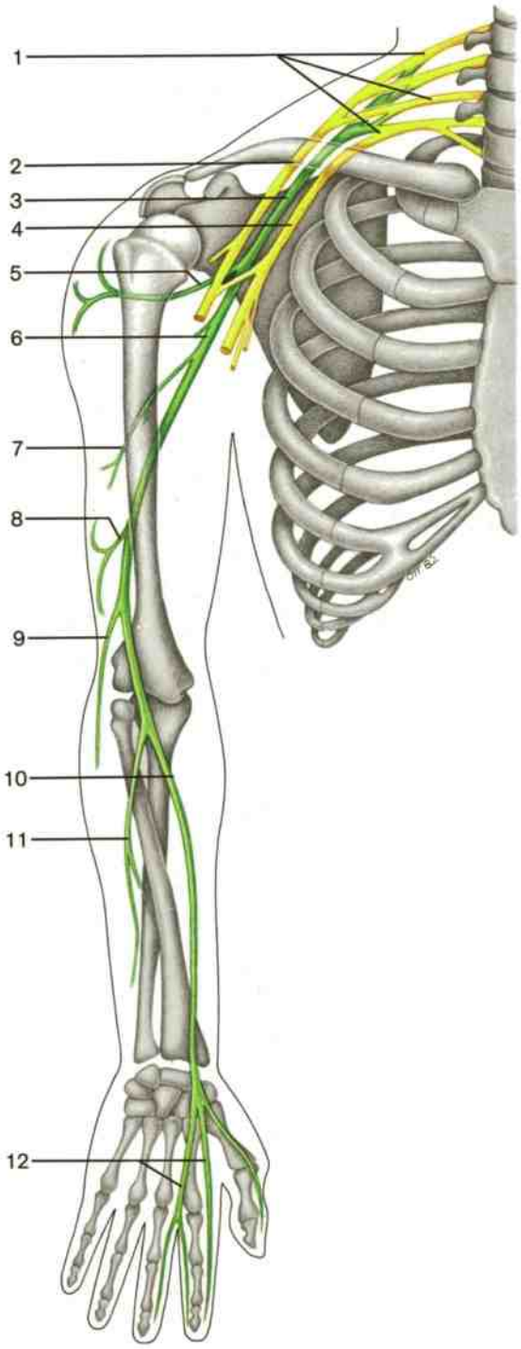
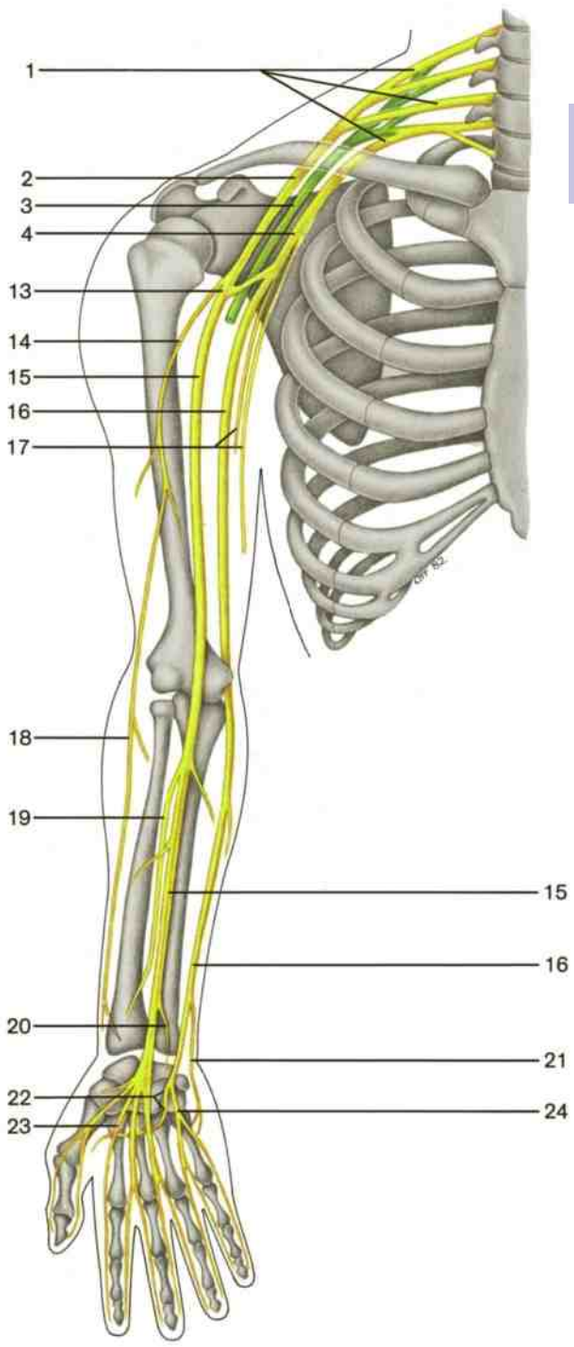


Main branches of radial nerve (schematic drawing).
Posterior divisions of trunks and posterior cord and its branches are indicated in green.



Main branches of musculocutaneous, median, and ulnar nerves (schematic drawing).
Anterior divisions of the trunks and all the components arising from them are indicated in yellow.

1 Brachial plexus
2 Lateral cord of brachial plexus
3 Posterior cord of brachial plexus
4 Medial cord of brachial plexus
5 Axillary nerve
6 Radial nerve
7 Posterior cutaneous nerve of arm
8 Lower lateral cutaneous nerve of arm
9 Posterior cutaneous nerve of forearm
10 Superficial branch of radial nerve
11 Deep branch of radial nerve
12 Dorsal digital nerves

13 Roots of median nerve
14 Musculocutaneous nerve
15 Median nerve
16 Ulnar nerve
17 Medial cutaneous nerves of arm and forearm
18 Lateral cutaneous nerve of forearm
19 Anterior interosseous nerve
20 Palmar branch of median nerve
21 Dorsal branch of ulnar nerve
22 Deep branch of ulnar nerve
23 Common palmar digital nerves of median nerve
24 Superficial branch of ulnar nerve

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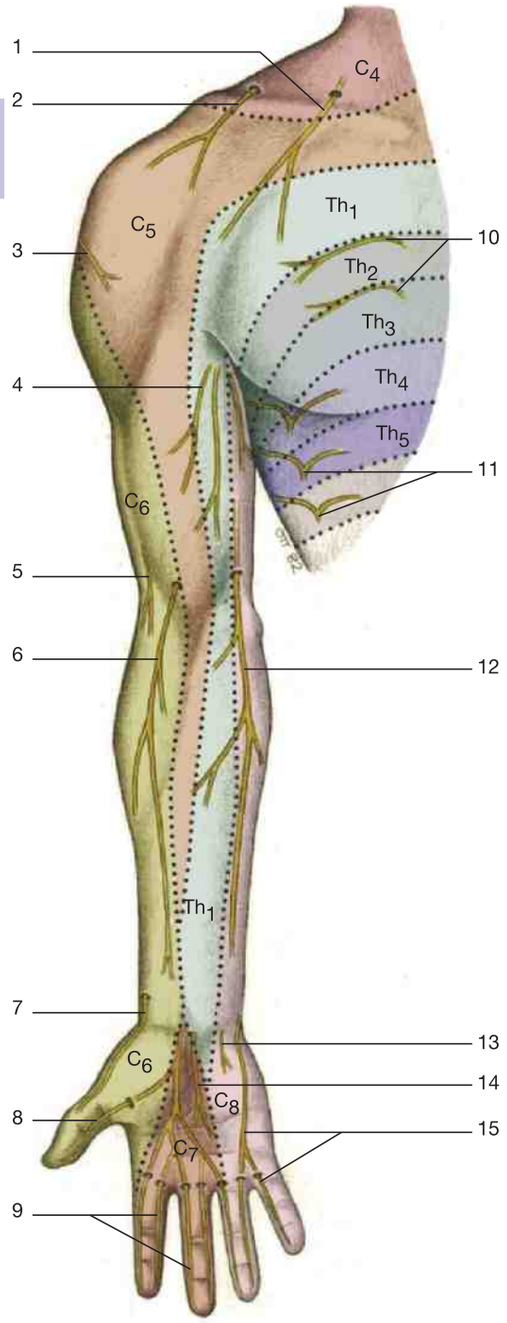
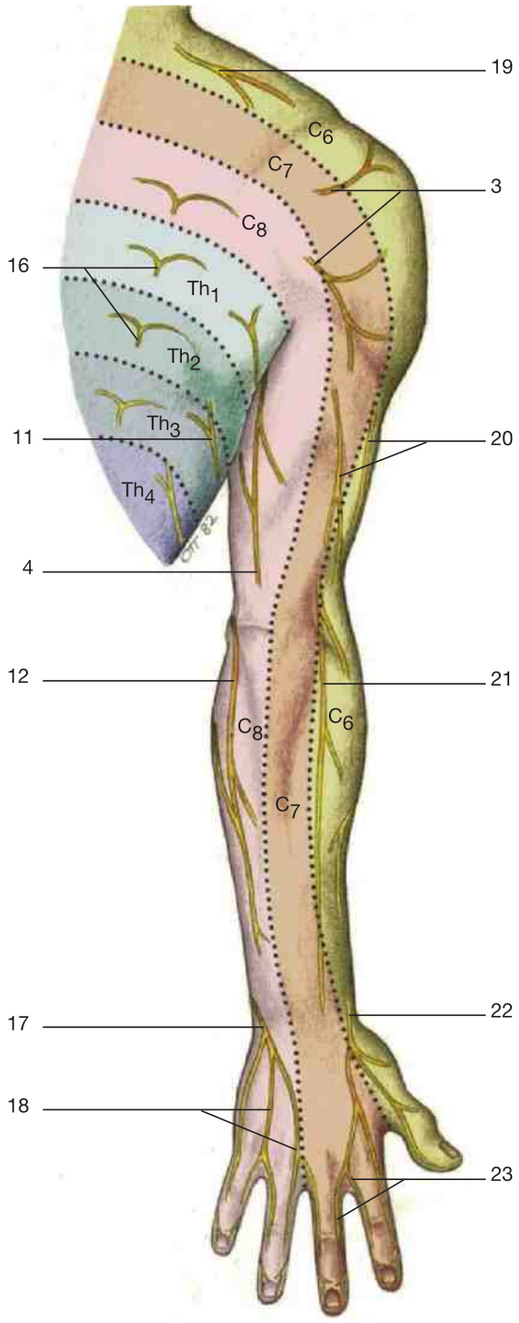


Cutaneous nerves of the right upper limb
(ventral aspect, schematic drawing).



Cutaneous nerves of the right upper limb
(dorsal aspect, schematic drawing).

1 Medial supraclavicular nerve
2 Intermediate supraclavicular nerve
3 Upper lateral cutaneous nerve of arm
4 Terminal branches of intercostobrachial nerves
5 Lower lateral cutaneous nerve of arm
6 Lateral cutaneous nerve of forearm
7 Terminal branch of superficial branch of radial nerve
8 Palmar digital nerve of thumb (branch of median nerve)
9 Palmar digital branches of median nerve
10 Anterior cutaneous branches of intercostal nerves
11 Lateral cutaneous branches of intercostal nerves
12 Medial cutaneous nerve of forearm
13 Palmar cutaneous branch of ulnar nerve
14 Palmar branch of median nerve
15 Palmar digital branches of ulnar nerve
16 Cutaneous branches of dorsal rami of spinal nerves
17 Dorsal branch of ulnar nerve
18 Dorsal digital nerves
19 Posterior supraclavicular nerve
20 Posterior cutaneous nerve of arm
21 Posterior cutaneous nerve of forearm
22 Superficial branch
23 Dorsal digital branches
} from radial nerve

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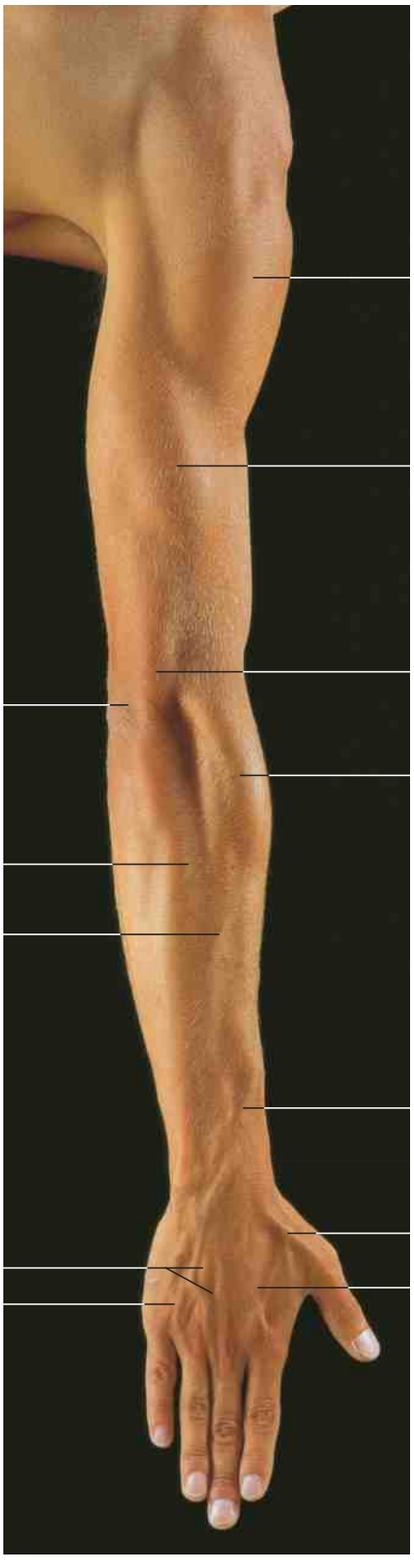
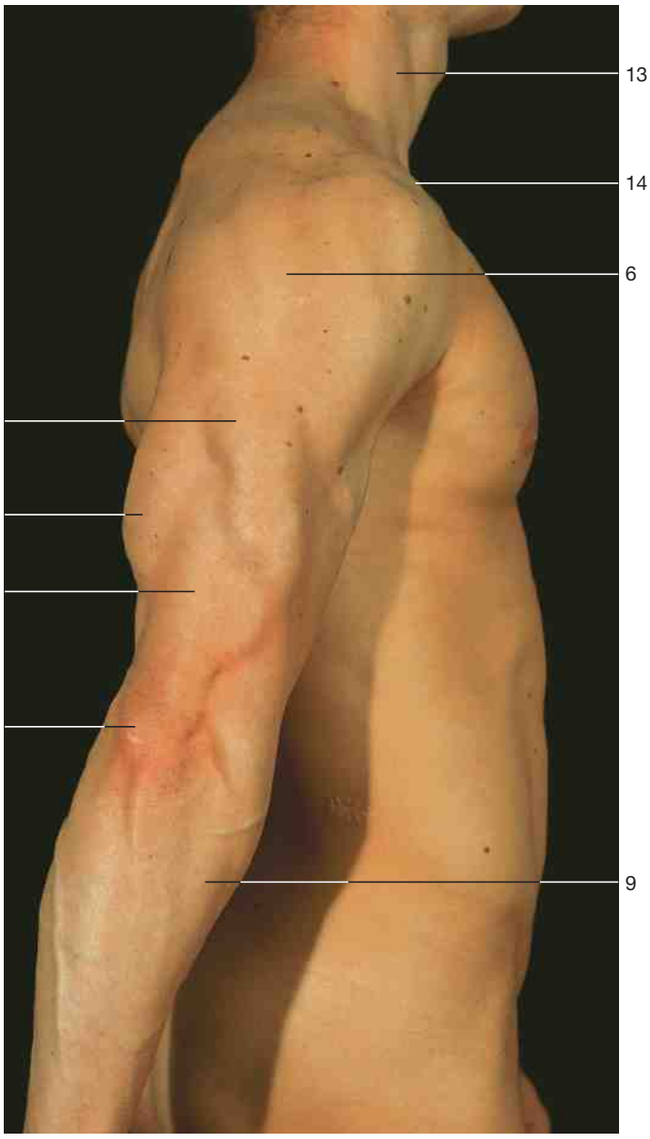


Surface anatomy of the right arm and hand (posterior aspect).



Surface anatomy of the right arm (lateral aspect). Triceps brachii muscle is strongly contracted.

1 Olecranon
2 Extensor muscles of forearm
3 Accessory cephalic vein
4 Tendons of extensor digitorum muscle
5 Dorsal venous network of hand
6 Deltoid muscle
7 Triceps brachii muscle
8 Lateral epicondyle of humerus
9 Brachioradialis muscle
10 Cephalic vein
11 Tendon of abductor pollicis longus muscle
12 Tendon of extensor indicis muscle
13 Sternocleidomastoid muscle
14 Clavicle
15 Lateral head of triceps brachii muscle
16 Medial head of triceps brachii muscle
17 Tendon of triceps brachii muscle

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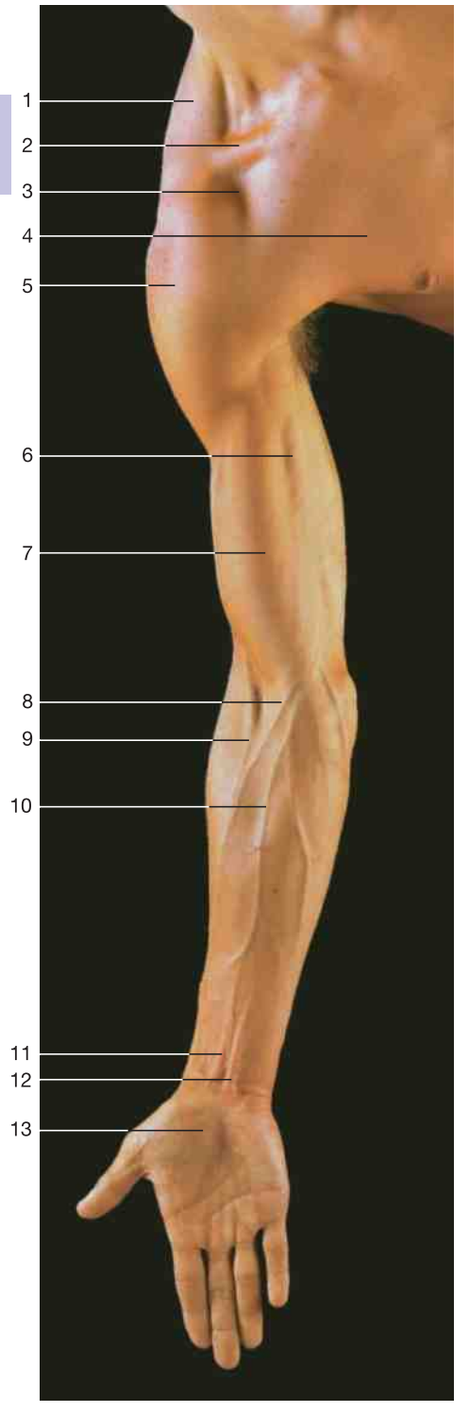
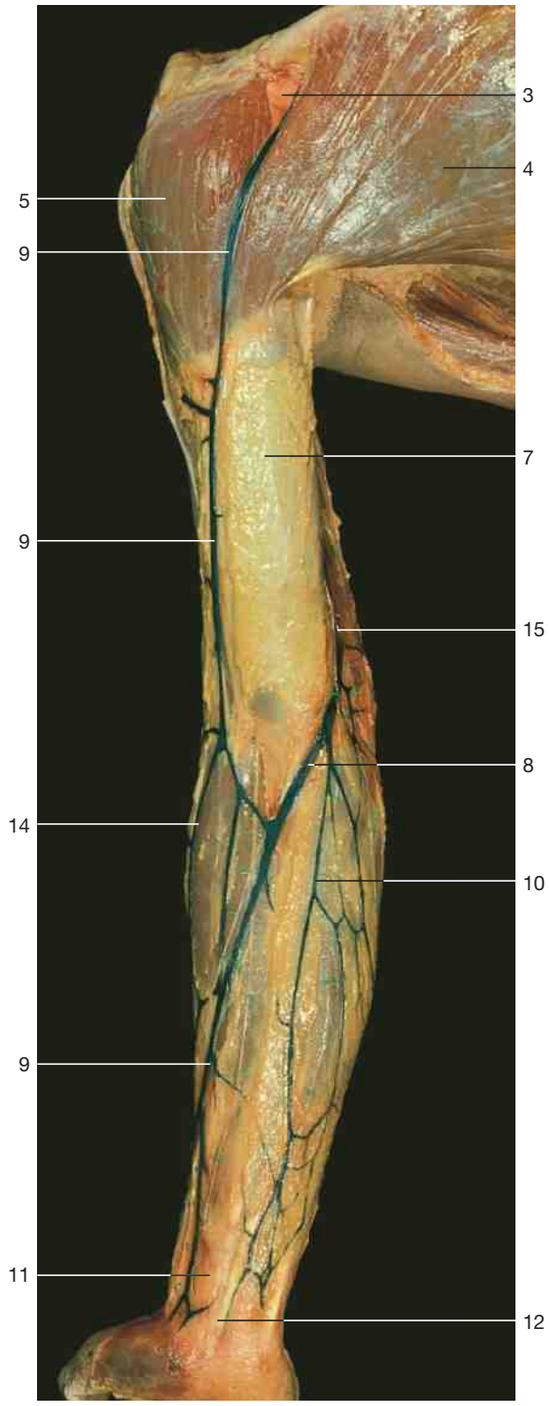


Surface anatomy of the right arm and hand (anterior aspect).



Superficial veins of the right arm, injected with blue gelatine (anterior aspect).

1 Trapezius muscle
2 Clavicle
3 Deltopectoral triangle
4 Pectoralis major muscle
5 Deltoid muscle
6 Brachial vein
7 Biceps brachii muscle
8 Median cubital vein
9 Cephalic vein
10 Median vein of forearm
11 Tendon of flexor carpi radialis
12 Tendon of palmaris longus muscle
13 Location of adductor pollicis muscle
14 Accessory cephalic vein
15 Basilic vein

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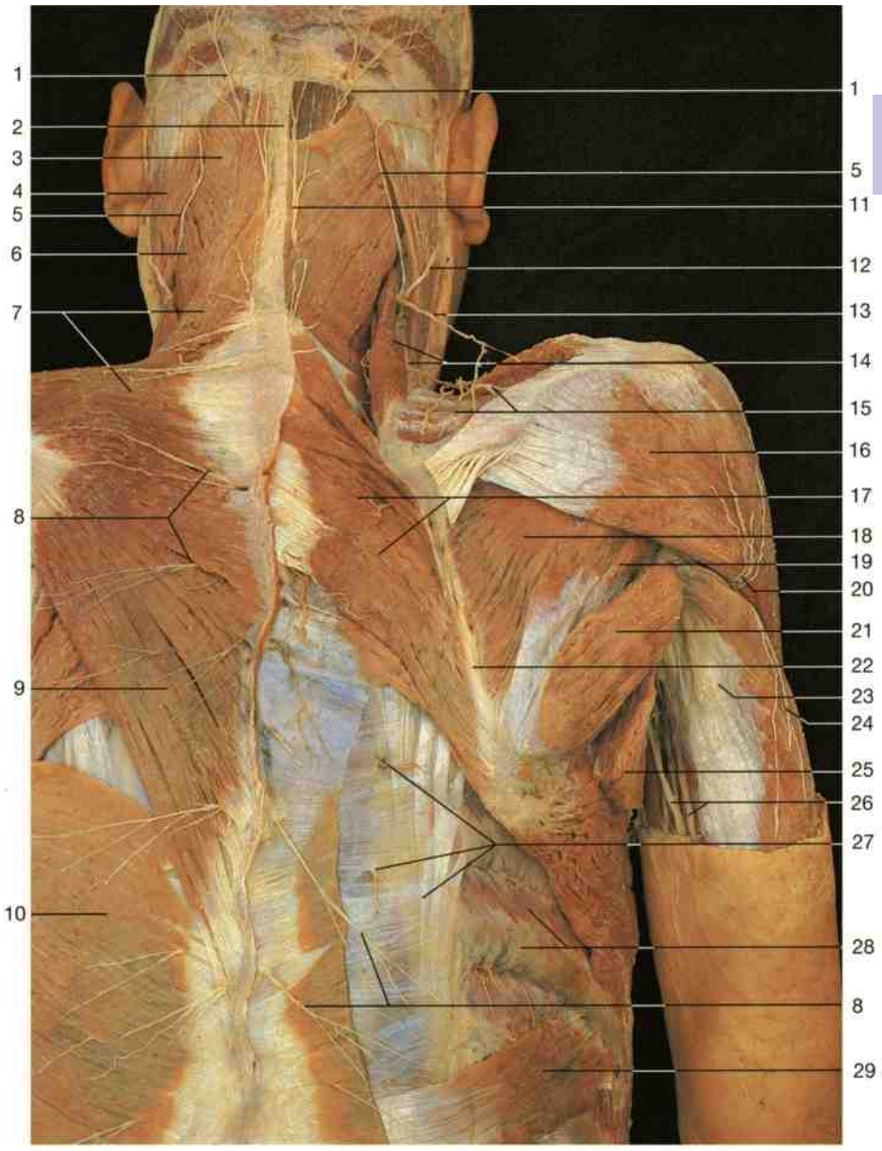

Posterior regions of neck and shoulder (dorsal aspect). Left side: superficial layer. Right side: trapezius and latissimus dorsi muscles have been removed. Dissection of dorsal branches of spinal nerves.

1 Greater occipital nerve
2 Ligamentum nuchae
3 Splenius capitis muscle
4 Sternocleidomastoid muscle
5 Lesser occipital nerve
6 Splenius cervicis muscle
7 Descending and transverse fibers of trapezius muscle
8 Medial cutaneous branches of dorsal rami of spinal nerves
9 Ascending fibers of trapezius muscle
10 Latissimus dorsi muscle
11 Cutaneous branch of third occipital nerve
12 Great auricular nerve
13 Accessory nerve (n. XI)
14 Posterior supraclavicular nerve and levator scapulae muscle
15 Branches of suprascapular artery
16 Deltoid muscle
17 Rhomboid major muscle
18 Infraspinatus muscle
19 Teres minor muscle
20 Upper lateral cutaneous nerve of arm (branch of axillary nerve)
21 Teres major muscle
22 Medial margin of scapula
23 Long head of triceps muscle
24 Posterior cutaneous nerve of arm (branch of radial nerve)
25 Latissimus dorsi muscle (divided)
26 Ulnar nerve and brachial artery
27 Lateral cutaneous branches of dorsal rami of spinal nerves and iliocostalis thoracis muscle
28 External intercostal muscle and seventh rib
29 Serratus posterior inferior muscle

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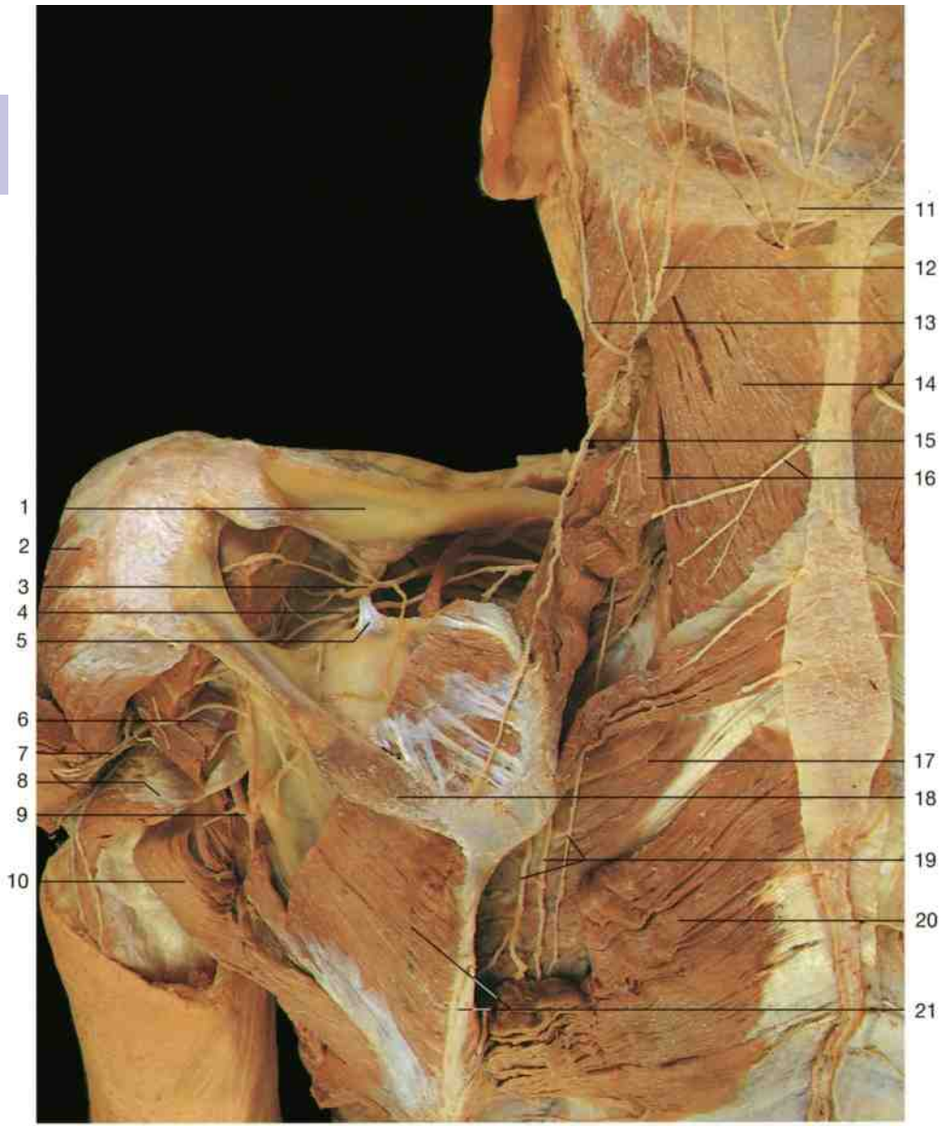
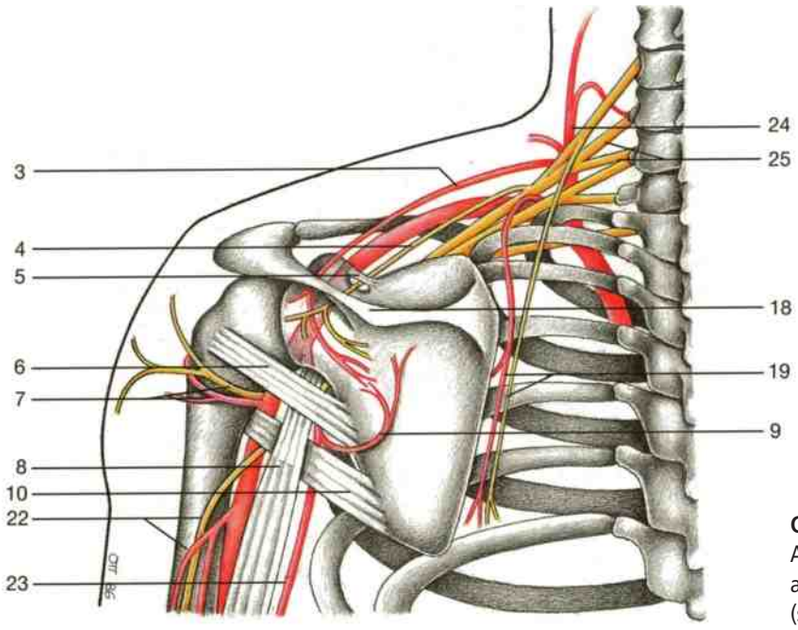


1 Clavicle
2 Deltoid muscle
3 Suprascapular artery
4 Suprascapular nerve
5 Superior transverse scapular ligament
6 Teres minor muscle
7 Axillary nerve and posterior circumflex humeral artery
8 Long head of triceps muscle
9 Circumflex scapular artery
10 Teres major muscle
11 Greater occipital nerve
12 Lesser occipital nerve
13 Great auricular nerve
14 Splenius capitis muscle
15 Accessory nerve (n. XI)
16 Third occipital nerve and levator scapulae muscle
17 Serratus posterior superior muscle
18 Spine of scapula
19 Descending scapular artery and dorsal scapular nerve
20 Rhomboid major muscle
21 Infraspinatus muscle and medial margin of scapula
22 Radial nerve and profunda brachii artery
23 Thoracodorsal artery
24 Thyrocervical trunk
25 Roots of brachial plexus

Posterior region of shoulder, deepest layer. Rhomboid and scapular muscles fenestrated; posterior part of deltoid muscle reflected.



Collateral circulation of shoulder. Anastomosis of suprascapular and circumflex scapular arteries (schematic drawing).

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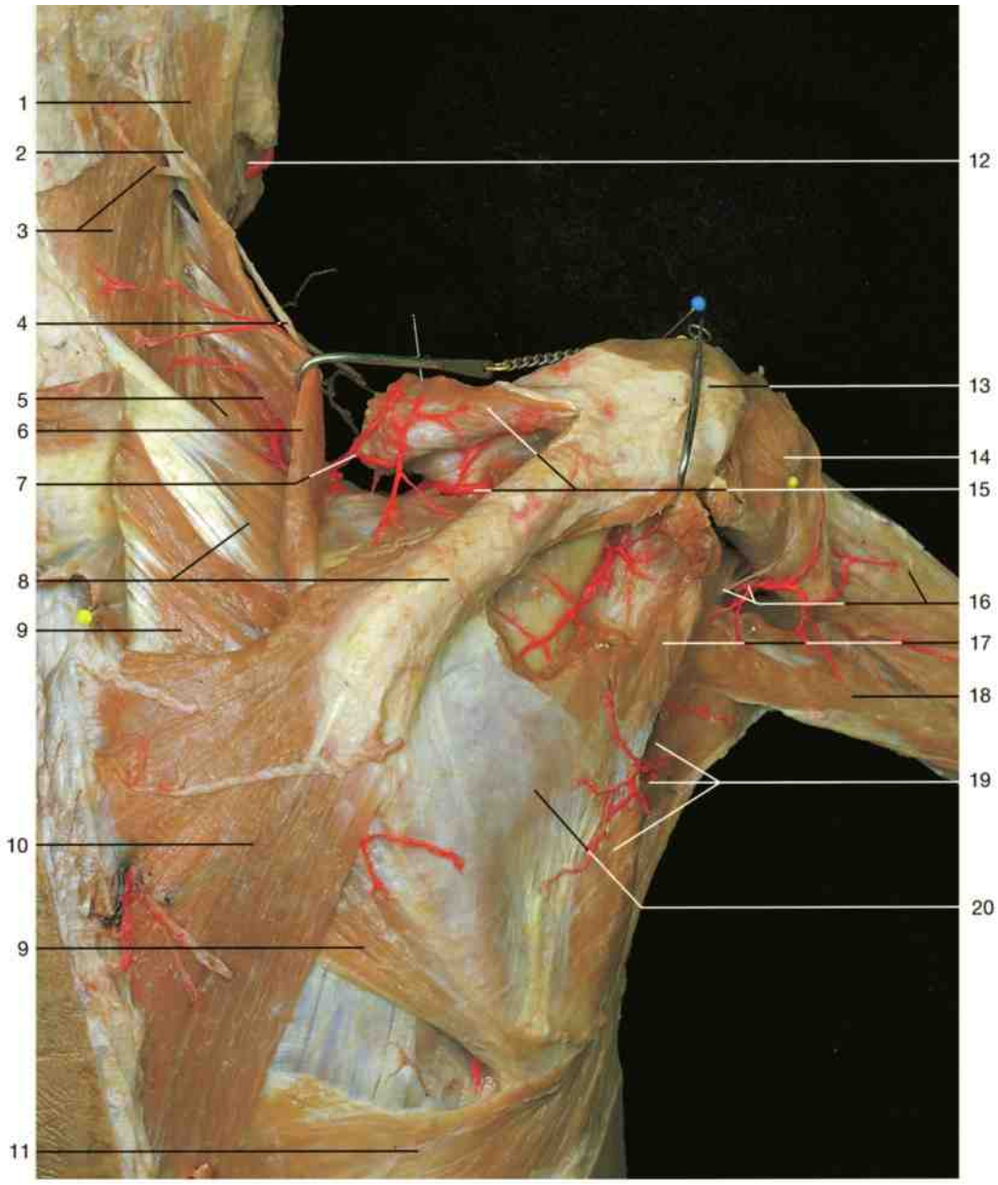

Posterior region of shoulder, deep layer. Arteries of scapular region are injected. Trapezius, deltoid, and infraspinatus muscles are partially removed or reflected.

1 Sternocleidomastoid muscle
2 Lesser occipital nerve
3 Splenius capitis muscle and third occipital nerve
4 Accessory nerve (n. XI)
5 Splenius cervicis muscle and transverse cervical artery (deep branch)
6 Levator of scapula muscle
7 Transverse cervical artery (superficial branch)
8 Spine of scapula and serratus posterior superior muscle
9 Rhomboid major muscle
10 Trapezius muscle
11 Latissimus dorsi muscle
12 Facial artery
13 Acromion
14 Deltoid muscle
15 Suprascapular artery and supraspinatus muscle (reflected)
16 Axillary nerve, posterior circumflex humeral artery, and lateral head of triceps brachii muscle
17 Teres minor muscle
18 Long head of triceps brachii muscle
19 Circumflex scapular artery and teres major
20 Infraspinatus muscle

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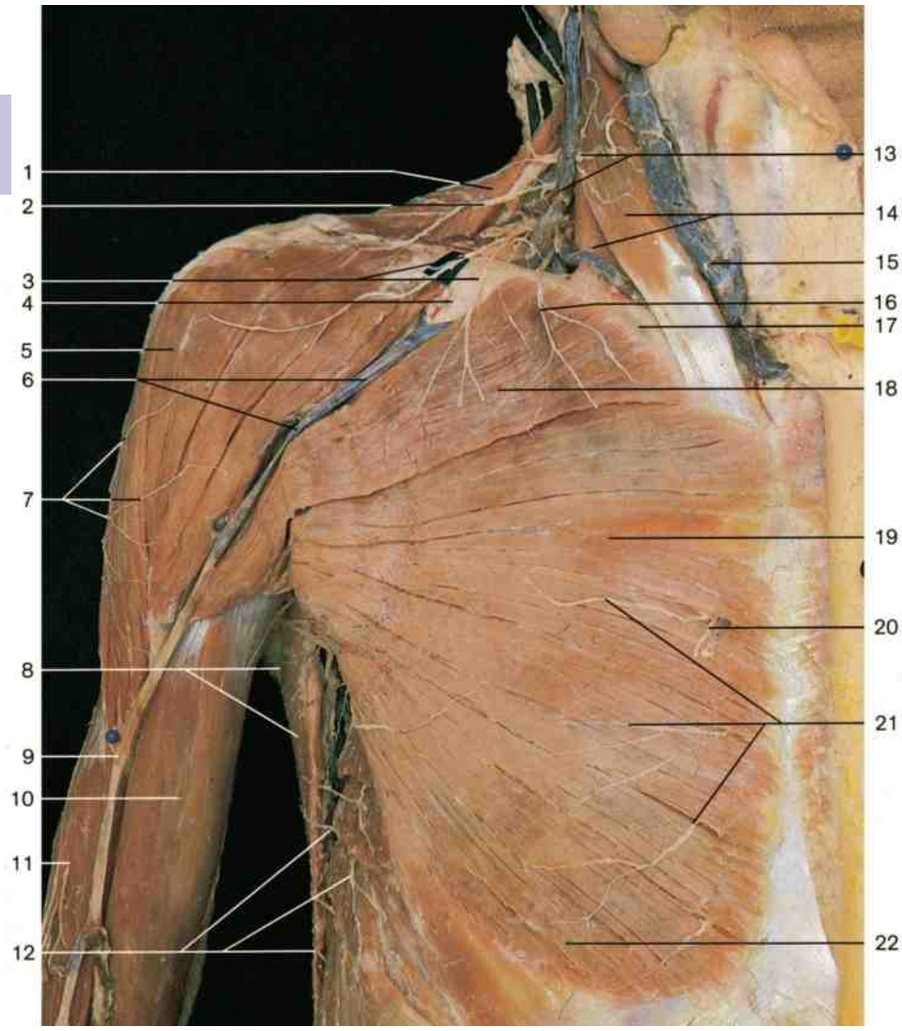
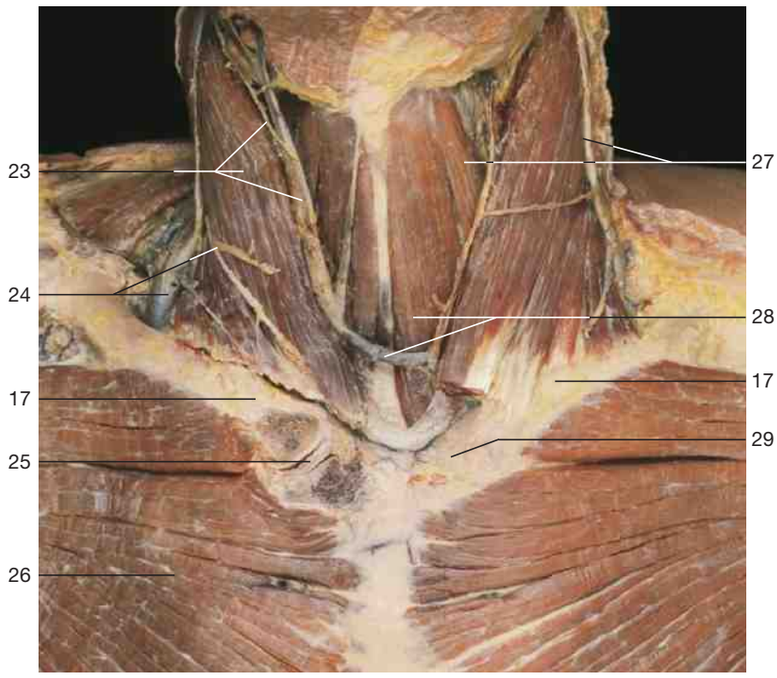


Right shoulder and thoracic wall, superficial layer (anterior aspect). Dissection of the cutaneous nerves and veins.

1 Trapezius muscle
2 Posterior supraclavicular nerve
3 Middle supraclavicular nerve
4 Deltopectoral triangle
5 Deltoid muscle
6 Cephalic vein within the deltopectoral groove
7 Upper lateral cutaneous nerve of arm (branch of axillary nerve)
8 Latissimus dorsi muscle
9 Cephalic vein
10 Biceps brachii muscle
11 Triceps brachii muscle
12 Lateral cutaneous branches of intercostal nerves
13 Transverse cervical nerve and external jugular vein
14 Sternocleidomastoid muscle
15 Anterior jugular vein
16 Anterior supraclavicular nerve
17 Clavicle
18 Clavicular part of pectoralis major muscle
19 Sternocostal part of pectoralis major muscle
20 Perforating branch of internal thoracic artery
21 Anterior cutaneous branches of intercostal nerves
22 Abdominal part of pectoralis major muscle
23 Sternocleidomastoid muscle, cervical branch of facial nerve, and anterior jugular vein
24 External jugular vein and transverse cervical nerve (inferior branch)
25 Sternoclavicular joint (opened) with articular disc
26 Pectoralis major muscle
27 Omohyoid muscle and external jugular vein
28 Jugular venous arch and sternohyoid muscle
29 Sternoclavicular joint (not opened)



Thoracic wall with neck region (anterior aspect). The sternoclavicular joint is depicted. On the right side the joint has been opened by a coronal section. Note the articular disc.

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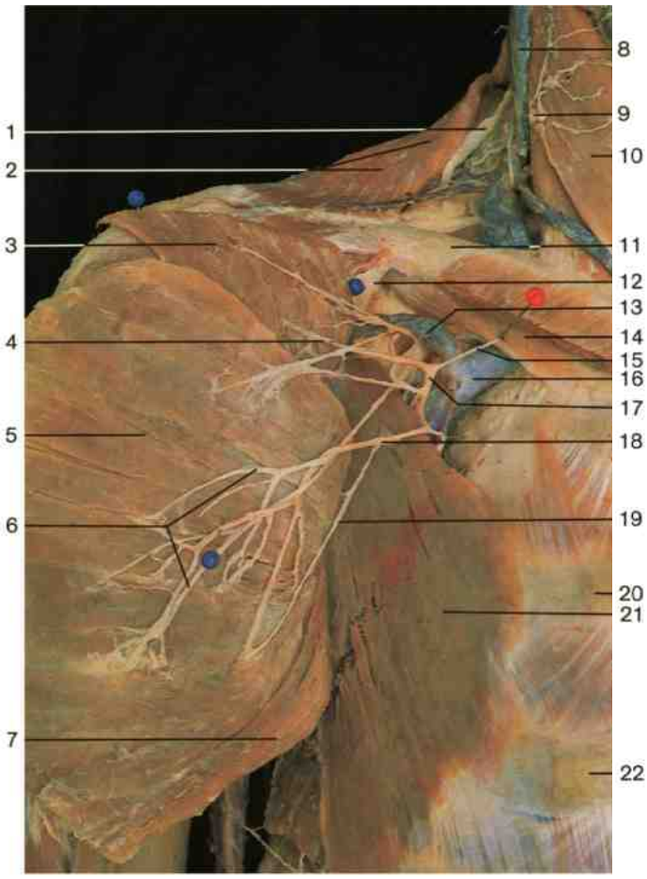
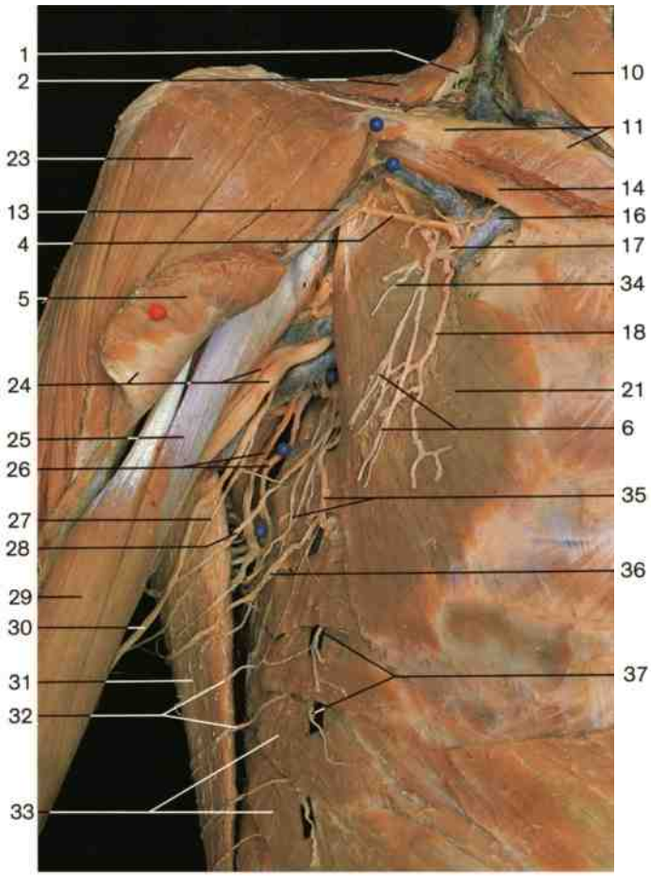


Right deltopectoral triangle, infraclavicular region (anterior aspect). The pectoralis major muscle has been cut and reflected.



Right shoulder and thoracic wall with axillary region, deep layer (anterior aspect). The pectoralis major muscle has been cut and partly removed.

1 Accessory nerve
2 Trapezius muscle
3 Pectoralis major muscle (clavicular part)
4 Acromial branch of thoraco-acromial artery
5 Pectoralis major muscle
6 Lateral pectoral nerves
7 Abdominal part of pectoralis major muscle
8 External jugular vein
9 Cutaneous branches of cervical plexus
10 Sternocleidomastoid muscle
11 Clavicle
12 Clavipectoral fascia
13 Cephalic vein
14 Subclavius muscle
15 Clavicular branch of thoraco-acromial artery
16 Subclavian vein
17 Thoraco-acromial artery
18 Pectoral branch of thoraco-acromial artery
19 Medial pectoral nerve
20 Second rib
21 Pectoralis minor muscle
22 Third rib
23 Deltoid muscle
24 Pectoralis major muscle (reflected), brachial artery, and median nerve
25 Short head of biceps brachii muscle
26 Thoracodorsal artery and nerve
27 Medial cutaneous nerve of arm
28 Intercostobrachial nerve (T_2)
29 Long head of biceps brachii muscle
30 Medial cutaneous nerve of forearm
31 Latissimus dorsi muscle
32 Lateral cutaneous branches of intercostal nerves (posterior branches)
33 Serratus anterior muscle
34 Medial pectoral nerve
35 Long thoracic nerve and lateral thoracic artery
36 Intercostobrachial nerve (T_3)
37 Lateral cutaneous branches of intercostal nerves (anterior branches)

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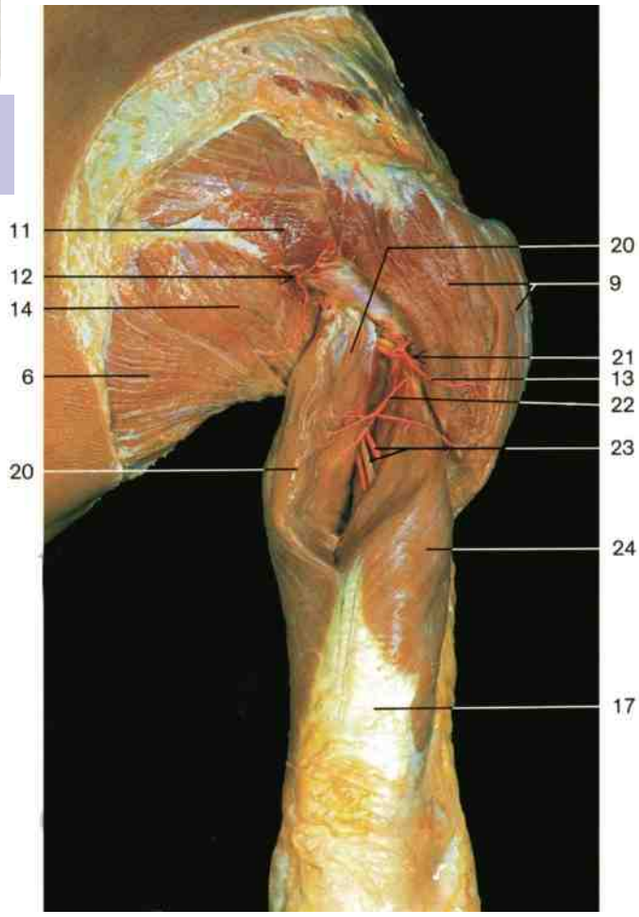
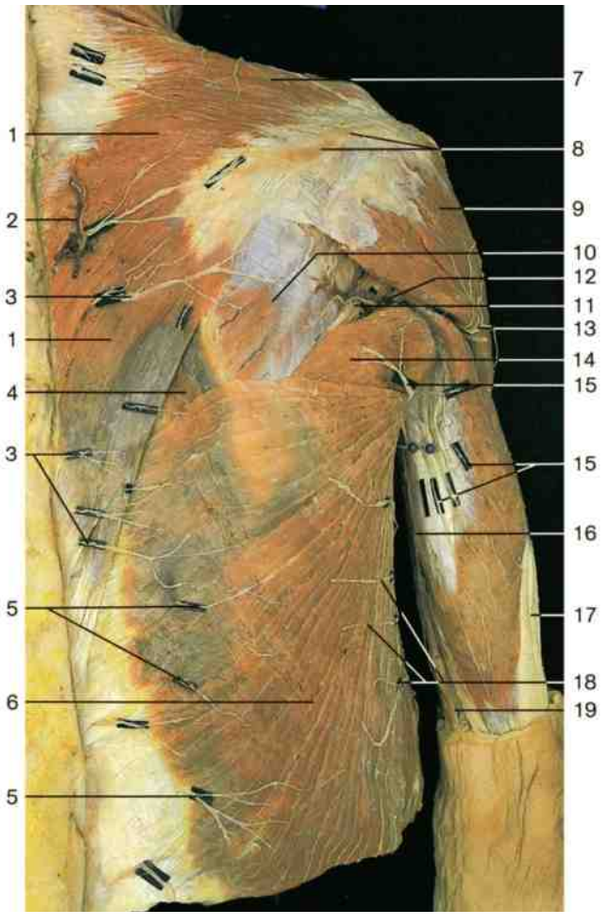
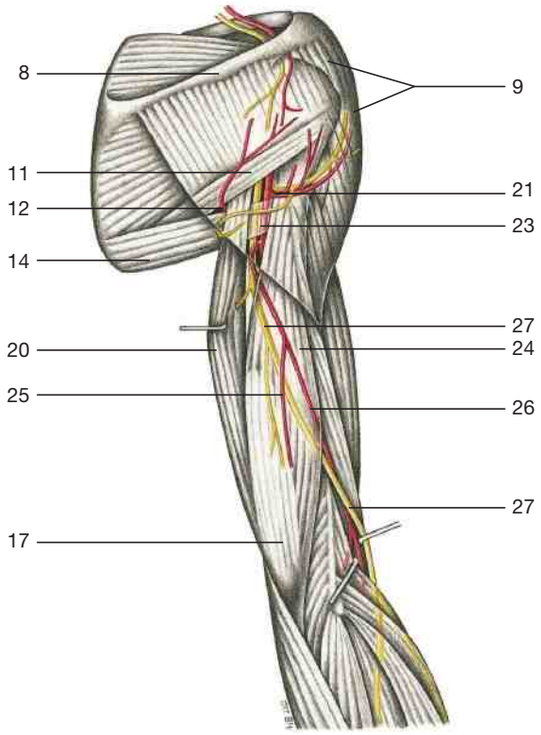


Shoulder and arm (dorsal aspect). Dissection of the quadrangular and triangular spaces of the axillary region.



Posterior region of shoulder and arm, superficial layer. Note the segmental arrangement of the cutaneous nerves of the back.



Regional anatomy of the upper limb (dorsal aspect). Localization of vessels and nerves.

1 Trapezius muscle
2 Dorsal branches of posterior intercostal artery and vein (medial cutaneous branches)
3 Medial branches of dorsal rami of spinal nerves
4 Rhomboid major muscle
5 Lateral branches of dorsal rami of spinal nerves
6 Latissimus dorsi muscle
7 Posterior supraclavicular nerves
8 Spine of scapula
9 Deltoid muscle
10 Infraspinatus muscle
11 Teres minor muscle
12 Triangular space with circumflex scapular artery and vein
13 Upper lateral cutaneous nerve of arm with artery
14 Teres major muscle
15 Terminal branches of intercostobrachial nerve
16 Medial cutaneous nerve of arm
17 Tendon of triceps brachii muscle
18 Lateral cutaneous branches of intercostal nerves
19 Medial cutaneous nerve of forearm
20 Long head of triceps brachii muscle
21 Quadrangular space with axillary nerve and posterior humeral circumflex artery
22 Anastomosis between profunda brachii artery and posterior humeral circumflex artery
23 Course of radial nerve and profunda brachii artery
24 Lateral head of triceps brachii muscle
25 Medial collateral artery
26 Radial collateral artery
27 Radial nerve

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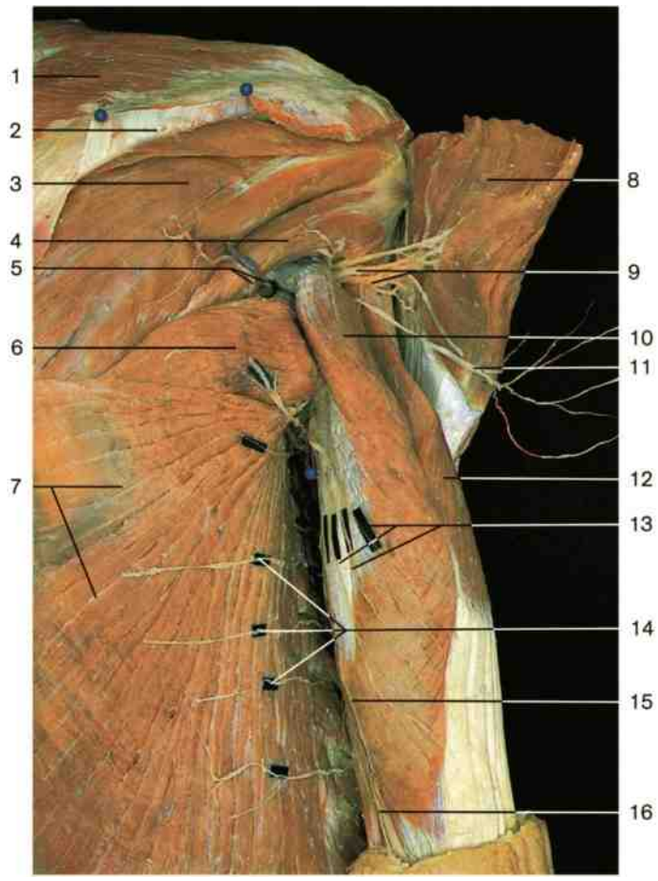
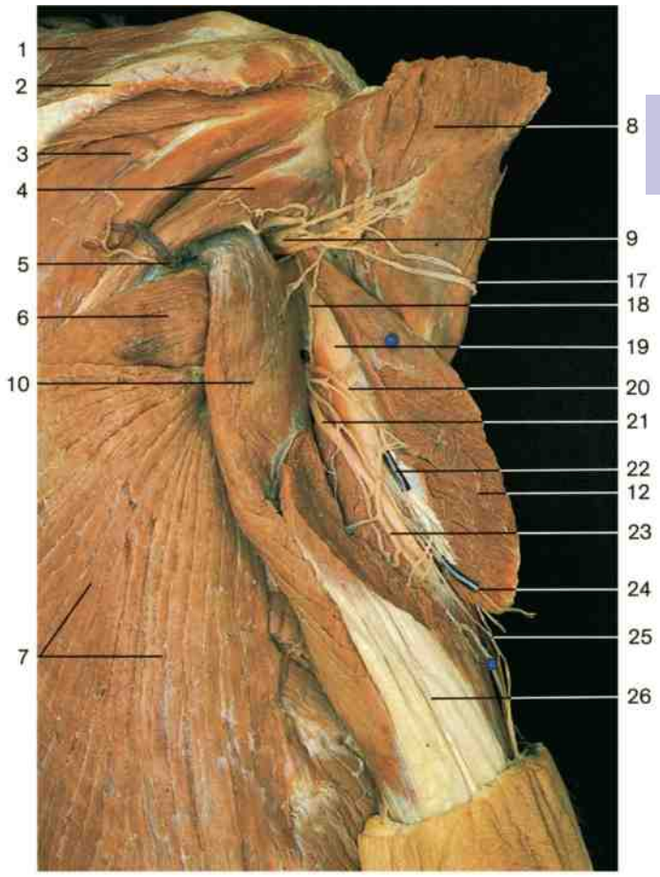


Scapular region, arm and shoulder, deep layer (dorsal aspect). Part of deltoid muscle has been cut and reflected to display the quadrangular and triangular spaces of the axillary region.



Scapular region, arm and shoulder, deep layer (dorsal aspect). The lateral head of the triceps brachii muscle has been cut to display the radial nerve and accompanying vessels.

1 Trapezius muscle
2 Spine of scapula
3 Infraspinatus muscle
4 Teres minor muscle
5 Triangular space containing circumflex scapular artery and vein
6 Teres major muscle
7 Latissimus dorsi muscle
8 Deltoid muscle (cut and reflected)
9 Quadrangular space containing axillary nerve and posterior circumflex humeral artery and vein
10 Long head of triceps brachii muscle
11 Cutaneous branch of axillary nerve
12 Lateral head of triceps brachii muscle
13 Terminal branches of intercostobrachial nerve
14 Lateral cutaneous branches of intercostal nerves
15 Medial cutaneous nerve of arm
16 Medial cutaneous nerve of forearm
17 Upper lateral cutaneous nerve of arm
18 Anastomosis between profunda brachii artery and posterior humeral circumflex artery
19 Humerus
20 Profunda brachii artery
21 Radial nerve
22 Radial collateral artery
23 Middle collateral artery
24 Lower lateral cutaneous nerve of arm
25 Posterior cutaneous nerve of forearm
26 Tendon of triceps brachii muscle

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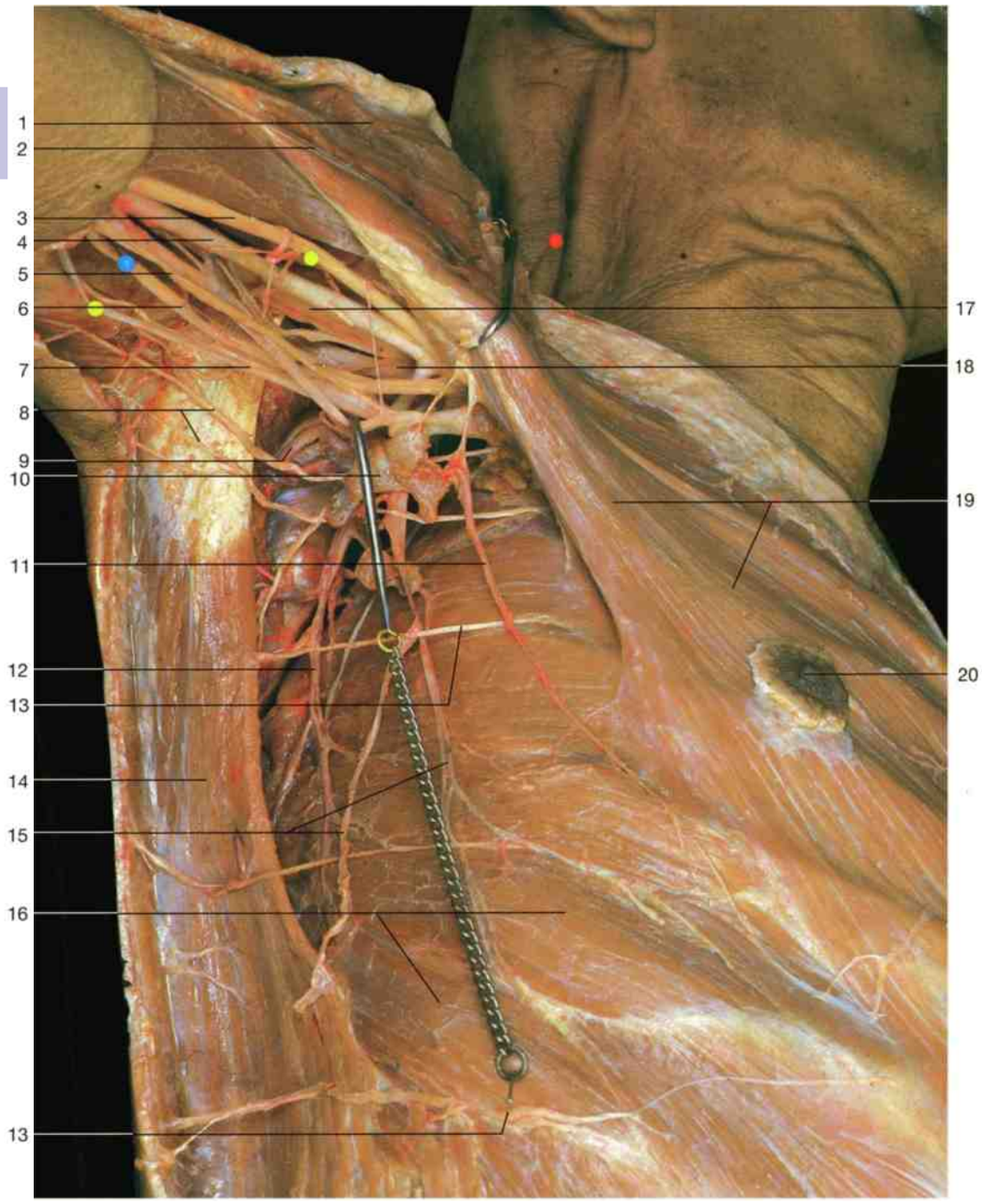

Right axillary region (inferior aspect). **Dissection of superficial axillary nodes and lymphatic vessels.** The pectoralis major muscle has been slightly elevated.

1 Deltoid muscle
2 Cephalic vein
3 Median nerve
4 Brachial artery
5 Medial cutaneous nerves of arm and forearm
6 Ulnar nerve
7 Basilic vein
8 Intercostobrachial nerves
9 Circumflex scapular artery
10 Superficial axillary nodes
11 Lateral thoracic artery
12 Thoracodorsal artery
13 Lateral cutaneous branch of intercostal nerve
14 Latissimus dorsi muscle
15 Thoraco-epigastric vein
16 Serratus anterior muscle
17 Musculocutaneous nerve
18 Radial nerve
19 Pectoralis major muscle
20 Nipple

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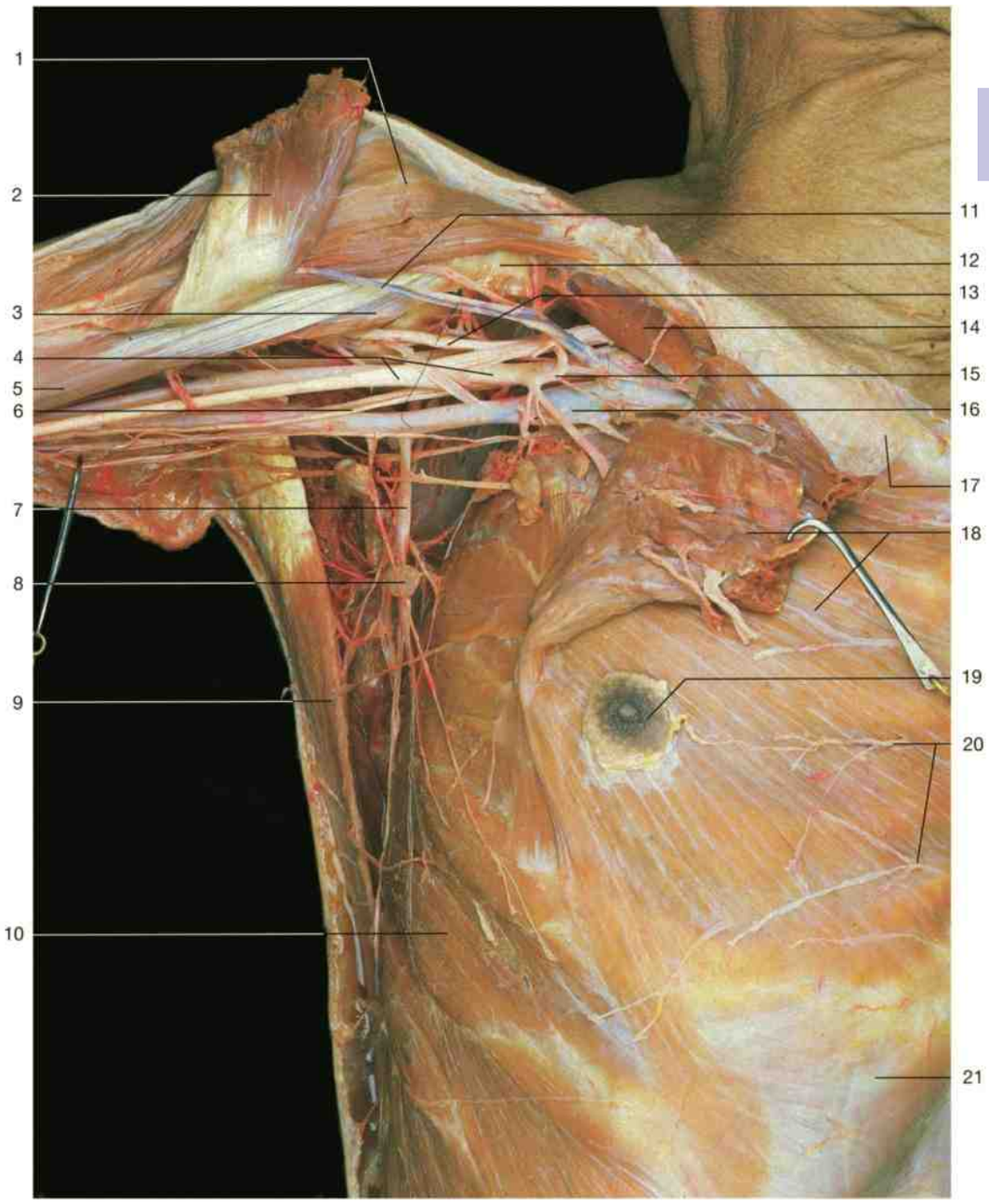

Right axillary region (anterior aspect). **Dissection of deep axillary nodes.** Pectoralis major and minor muscles divided and reflected. Shoulder girdle and arm elevated and reflected.

1 Deltoid muscle
2 Insertion of pectoralis major muscle
3 Coracobrachialis muscle
4 Roots of median nerve, axillary artery
5 Short head of biceps brachii muscle
6 Ulnar nerve and medial cutaneous nerve of forearm
7 Thoraco-epigastric vein
8 Deep axillary node
9 Latissimus dorsi muscle
10 Serratus anterior muscle
11 Cephalic vein
12 Insertion of pectoralis minor muscle (coracoid process)
13 Musculocutaneous nerve
14 Subclavius muscle
15 Thoraco-acromial artery
16 Axillary vein
17 Clavicle
18 Pectoralis major and minor muscles (reflected)
19 Nipple
20 Anterior cutaneous branches of intercostal nerves
21 Anterior layer of rectus sheath

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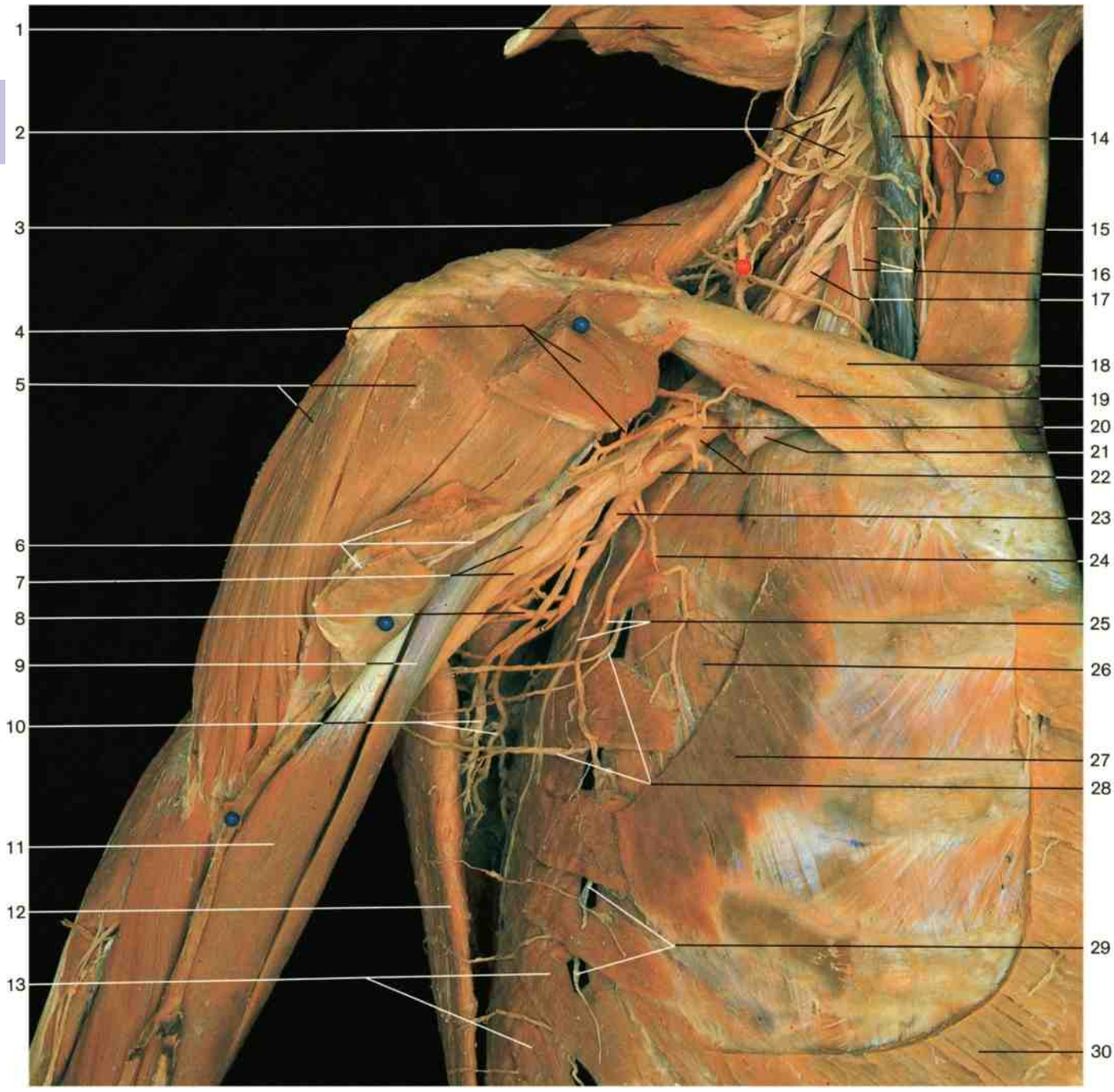

Right axillary region (anterior aspect). The pectoralis major and minor muscles have been cut and reflected to display the vessels and nerves of the axilla.

1 Sternocleidomastoid muscle (cut and reflected)
2 Cervical plexus
3 Trapezius muscle
4 Pectoralis minor muscle and medial pectoral nerve
5 Deltoid muscle
6 Pectoralis major muscle and lateral pectoral nerve
7 Median nerve and brachial artery
8 Circumflex scapular artery
9 Short head of biceps brachii muscle
10 Thoracodorsal artery and nerve
11 Long head of biceps brachii muscle
12 Latissimus dorsi muscle
13 Serratus anterior muscle
14 Internal jugular vein
15 Scalenus anterior muscle
16 Phrenic nerve and ascending cervical artery
17 Brachial plexus (at the levels of the trunks)
18 Clavicle
19 Subclavius muscle
20 Thoraco-acromial artery
21 Subclavian vein (cut)
22 Axillary artery
23 Subscapular artery
24 Superior thoracic artery
25 Lateral thoracic artery and long thoracic nerve
26 External intercostal muscle
27 Insertion of pectoralis minor muscle
28 Intercostobrachial nerves
29 Lateral cutaneous branches of intercostal nerves
30 Insertion of pectoralis major muscle

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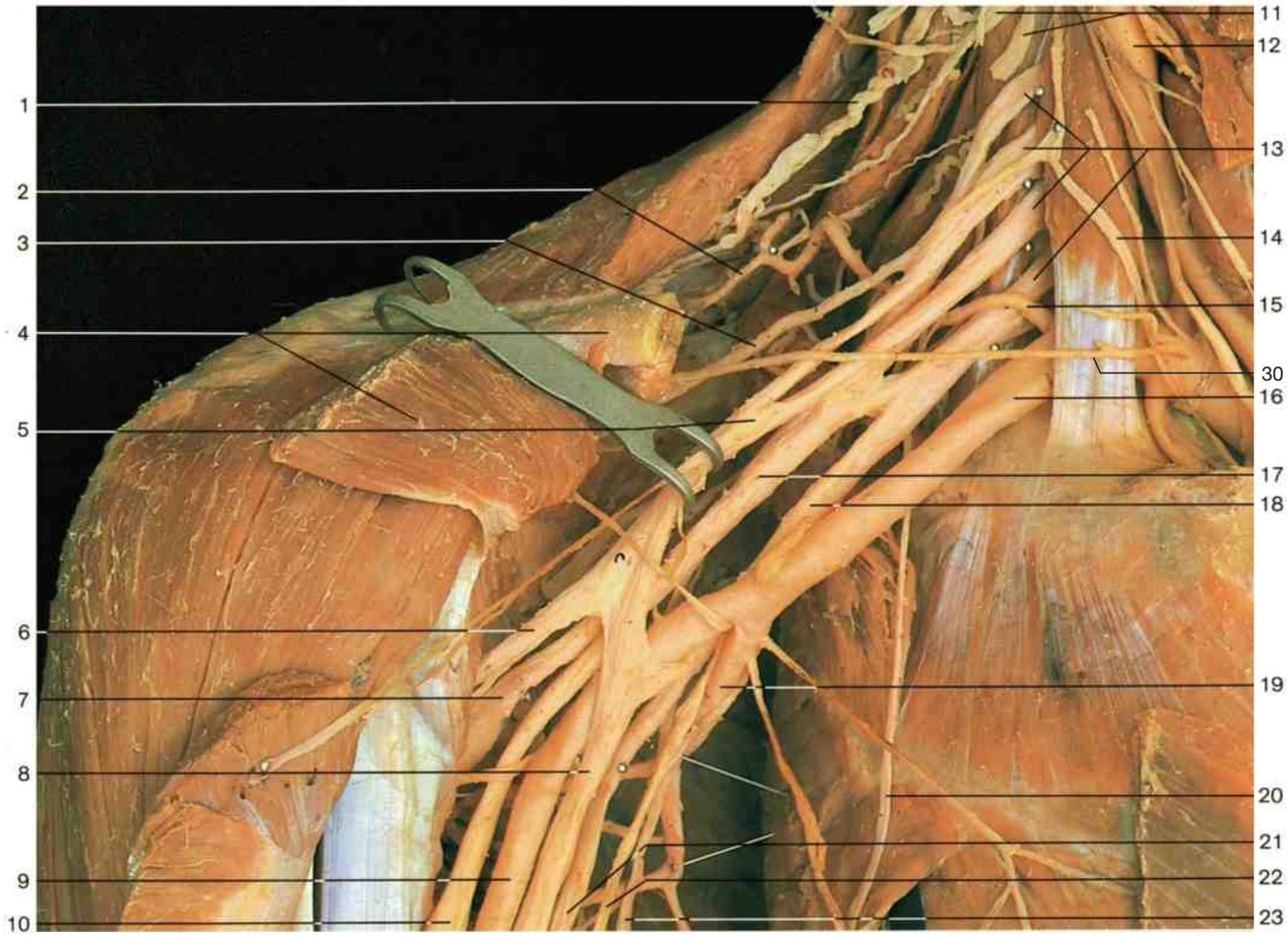
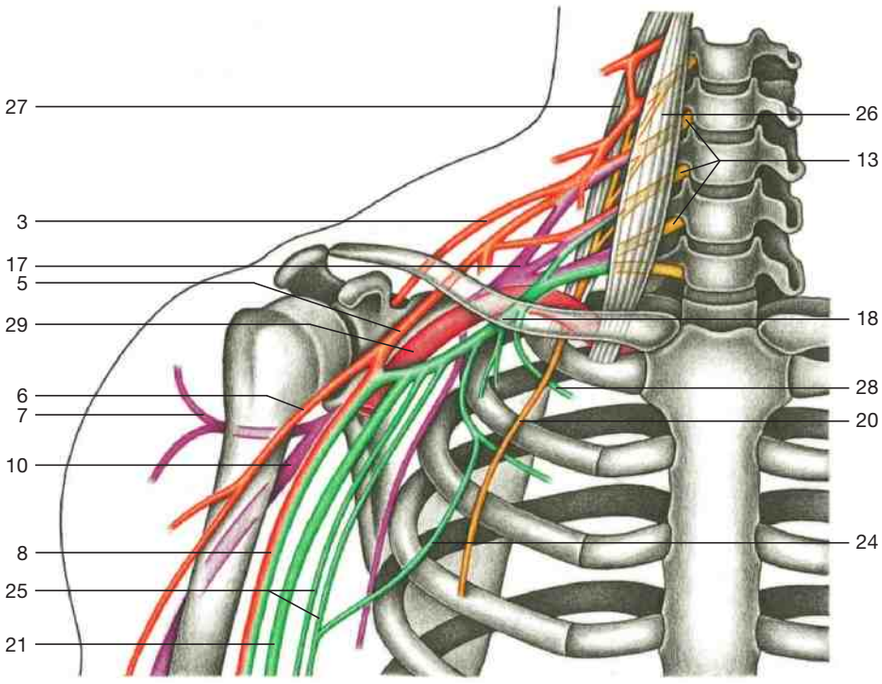


Brachial plexus (anterior aspect). Clavicle and the two pectoralis muscles have been partly removed.



Main branches of brachial plexus. Posterior cord in purple, lateral cord in orange, and medial cord in green (schematic drawing).

1 Accessory nerve
2 Dorsal scapular artery
3 Suprascapular nerve
4 Clavicle and pectoralis minor muscle
5 Lateral cord of brachial plexus
6 Musculocutaneous nerve
7 Axillary nerve
8 Median nerve
9 Brachial artery
10 Radial nerve
11 Cervical plexus
12 Common carotid artery
13 Roots of brachial plexus (C_5–T_1)
14 Phrenic nerve
15 Transverse cervical artery
16 Subclavian artery
17 Posterior cord of brachial plexus
18 Medial cord of brachial plexus
19 Subscapular artery
20 Long thoracic nerve
21 Ulnar nerve
22 Medial cutaneous nerve of forearm
23 Thoracodorsal nerve
24 Intercostobrachial nerve
25 Medial cutaneous nerves of arm and forearm
26 Scalenus anterior muscle
27 Scalenus medius muscle
28 Intercostal nerve (T_1)
29 Axillary artery
30 Suprascapular artery

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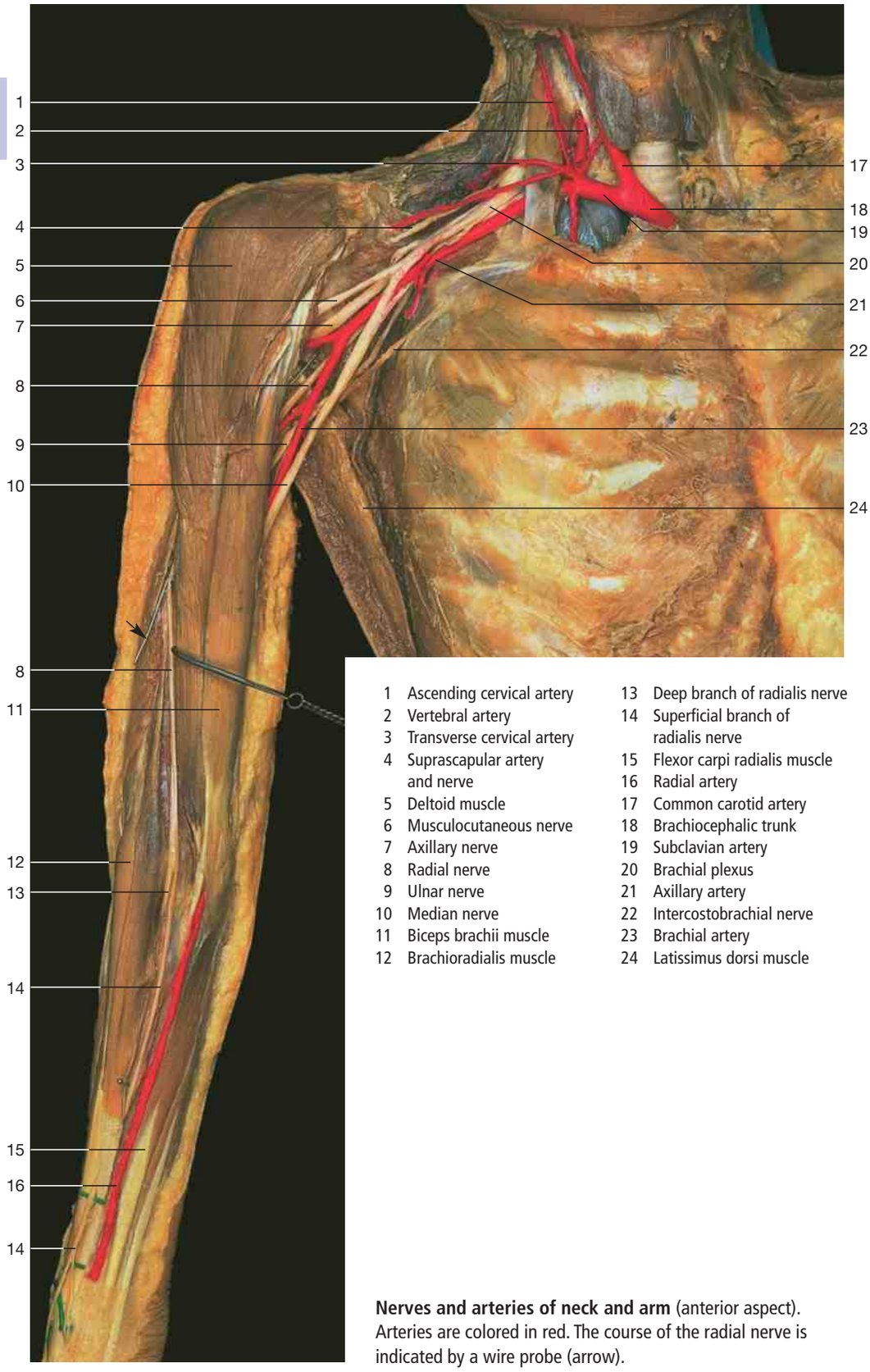

1 Ascending cervical artery
2 Vertebral artery
3 Transverse cervical artery
4 Suprascapular artery and nerve
5 Deltoid muscle
6 Musculocutaneous nerve
7 Axillary nerve
8 Radial nerve
9 Ulnar nerve
10 Median nerve
11 Biceps brachii muscle
12 Brachioradialis muscle
13 Deep branch of radialis nerve
14 Superficial branch of radialis nerve
15 Flexor carpi radialis muscle
16 Radial artery
17 Common carotid artery
18 Brachiocephalic trunk
19 Subclavian artery
20 Brachial plexus
21 Axillary artery
22 Intercostobrachial nerve
23 Brachial artery
24 Latissimus dorsi muscle

Nerves and arteries of neck and arm (anterior aspect). Arteries are colored in red. The course of the radial nerve is indicated by a wire probe (arrow).

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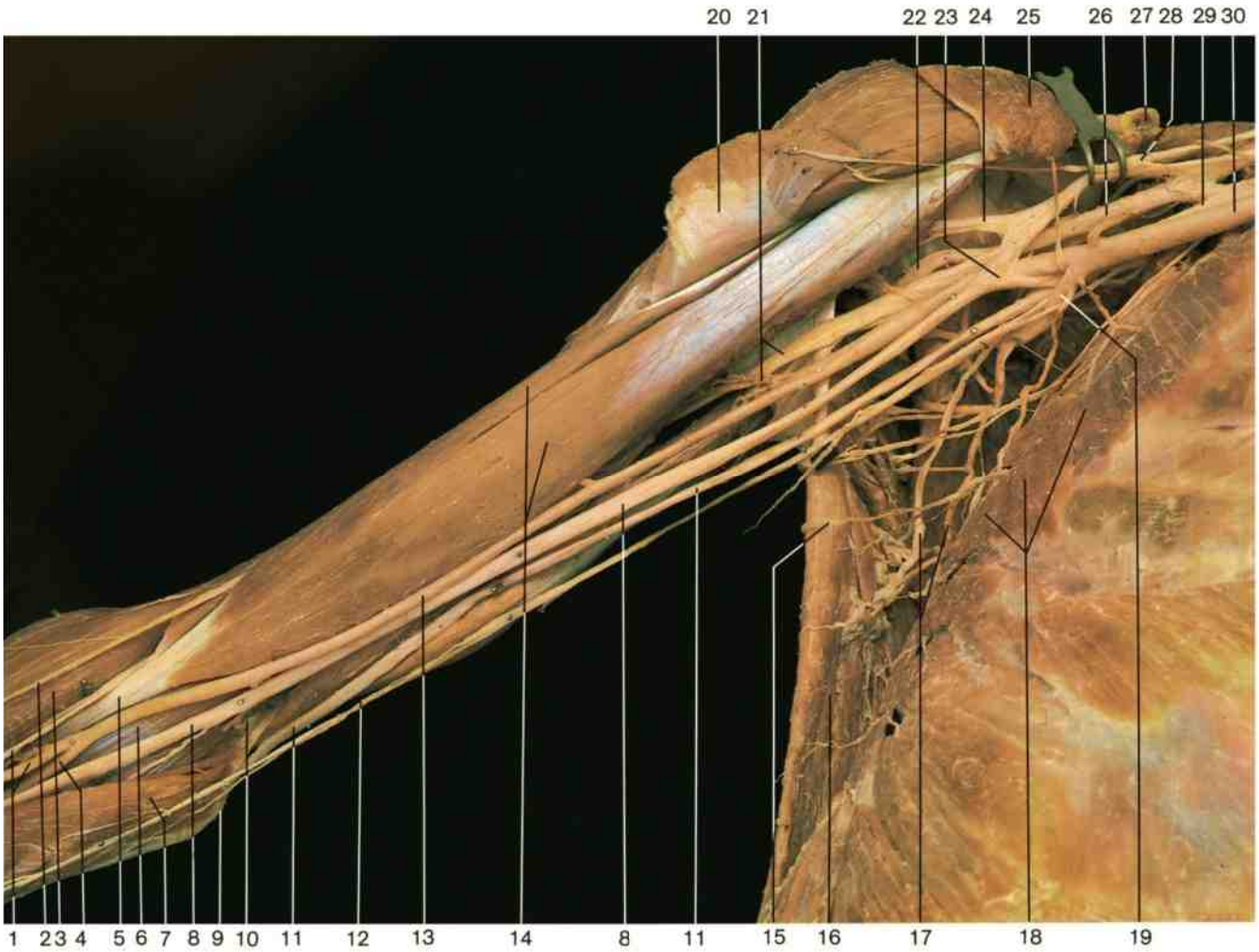
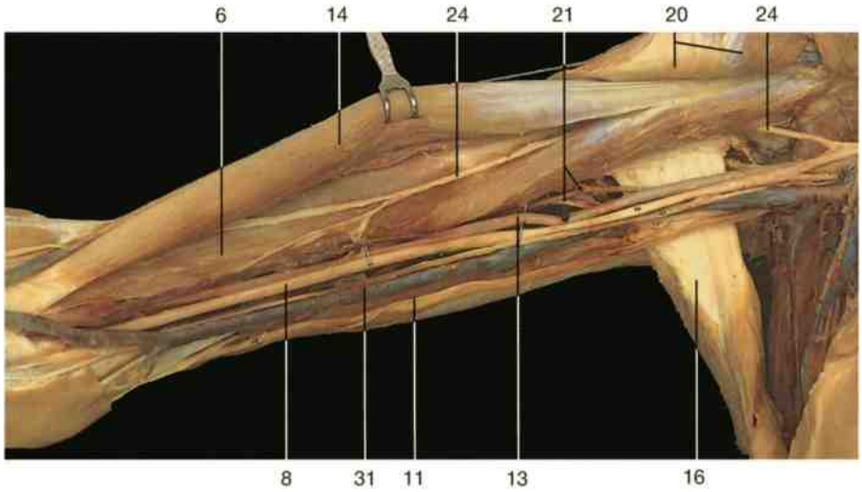


Right arm. Dissection of vessels and nerves (medial aspect). Shoulder girdle has been reflected slightly.



Right arm. Dissection of vessels and nerves, deeper layer. Biceps muscle has been reflected.

1 Radial artery and superficial branch of radial nerve
2 Lateral cutaneous nerve of forearm
3 Brachioradialis muscle
4 Ulnar artery
5 Tendon of biceps brachii muscle
6 Brachialis muscle
7 Pronator teres muscle
8 Median nerve
9 Medial epicondyle of humerus
10 Inferior ulnar collateral artery
11 Ulnar nerve
12 Medial cutaneous nerve of forearm
13 Brachial artery
14 Biceps brachii muscle
15 Intercostobrachial nerve (T_3)
16 Latissimus dorsi muscle
17 Thoracodorsal nerve and artery
18 Serratus anterior muscle
19 Subscapular artery
20 Pectoralis major muscle (reflected) and lateral pectoral nerve
21 Radial nerve and profunda brachii artery
22 Axillary nerve
23 Roots of the median nerve with axillary artery
24 Musculocutaneous nerve
25 Pectoralis minor muscle (reflected) and medial pectoral nerve
26 Posterior cord of brachial plexus
27 Clavicle (cut)
28 Lateral cord of brachial plexus
29 Medial cord of brachial plexus
30 Subclavian artery
31 Brachial vein

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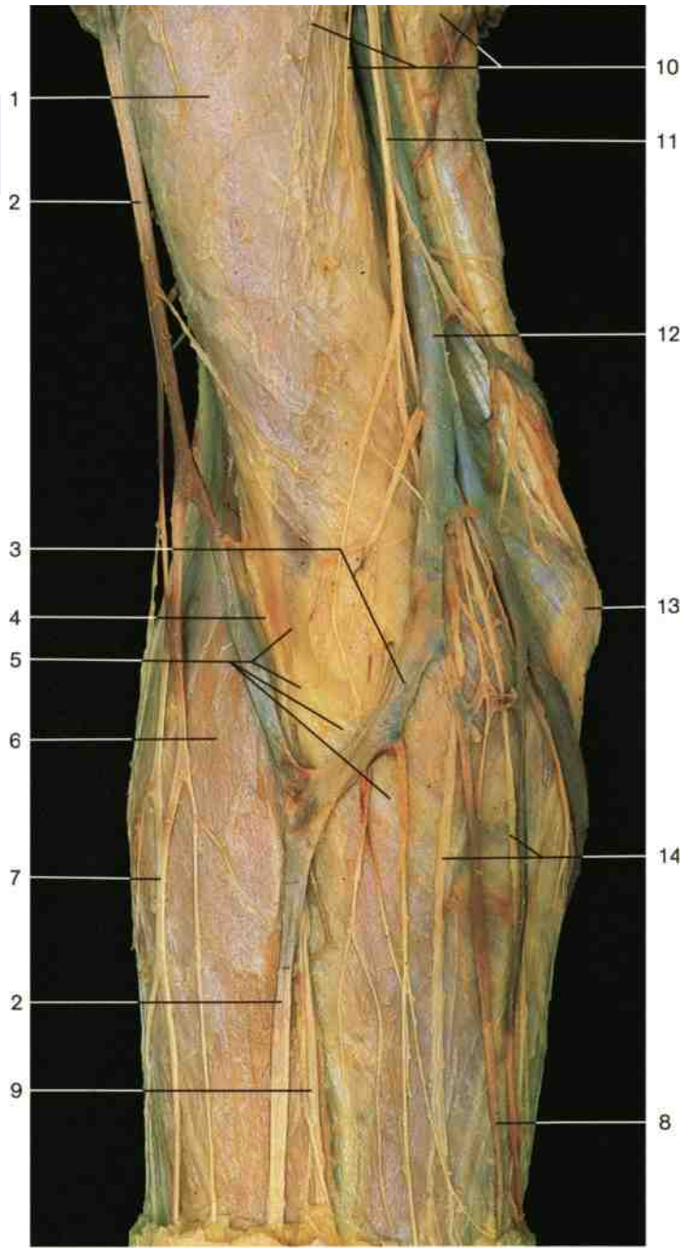
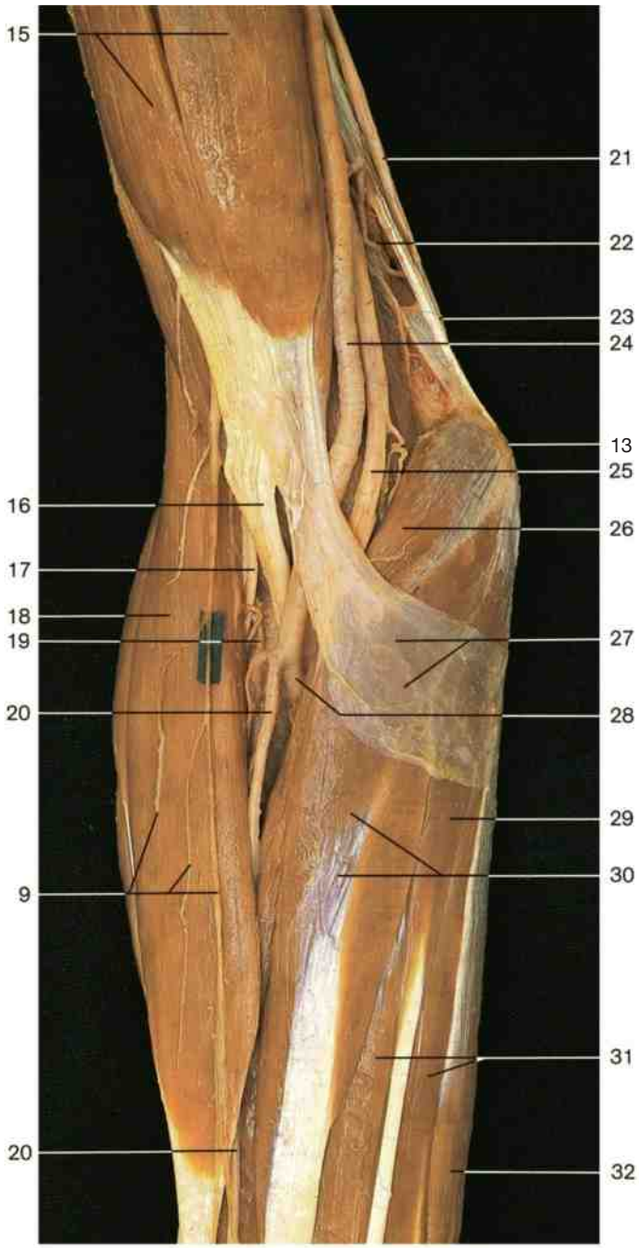


Cubital region (anterior aspect). Dissection of cutaneous nerves and veins.



Cubital region, superficial layer (anterior aspect). The fasciae of the muscles have been removed.

1 Biceps brachii muscle with fascia
2 Cephalic vein
3 Median cubital vein
4 Lateral cutaneous nerve of forearm
5 Tendon and aponeurosis of biceps brachii muscle (covered by the antebrachial fascia)
6 Brachioradialis muscle with fascia
7 Accessory cephalic vein
8 Median vein of forearm
9 Branches of lateral cutaneous nerve of forearm
10 Terminal branches of medial cutaneous nerve of arm
11 Medial cutaneous nerve of forearm
12 Basilic vein
13 Medial epicondyle of humerus
14 Terminal branches of medial cutaneous nerve of forearm
15 Biceps brachii muscle
16 Tendon of biceps brachii muscle
17 Radial nerve
18 Brachioradialis muscle
19 Radial recurrent artery
20 Radial artery
21 Ulnar nerve
22 Superior ulnar collateral artery
23 Medial intermuscular septum
24 Brachial artery
25 Median nerve
26 Pronator teres muscle
27 Bicipital aponeurosis
28 Ulnar artery
29 Palmaris longus muscle
30 Flexor carpi radialis muscle
31 Flexor digitorum superficialis muscle
32 Flexor carpi ulnaris muscle

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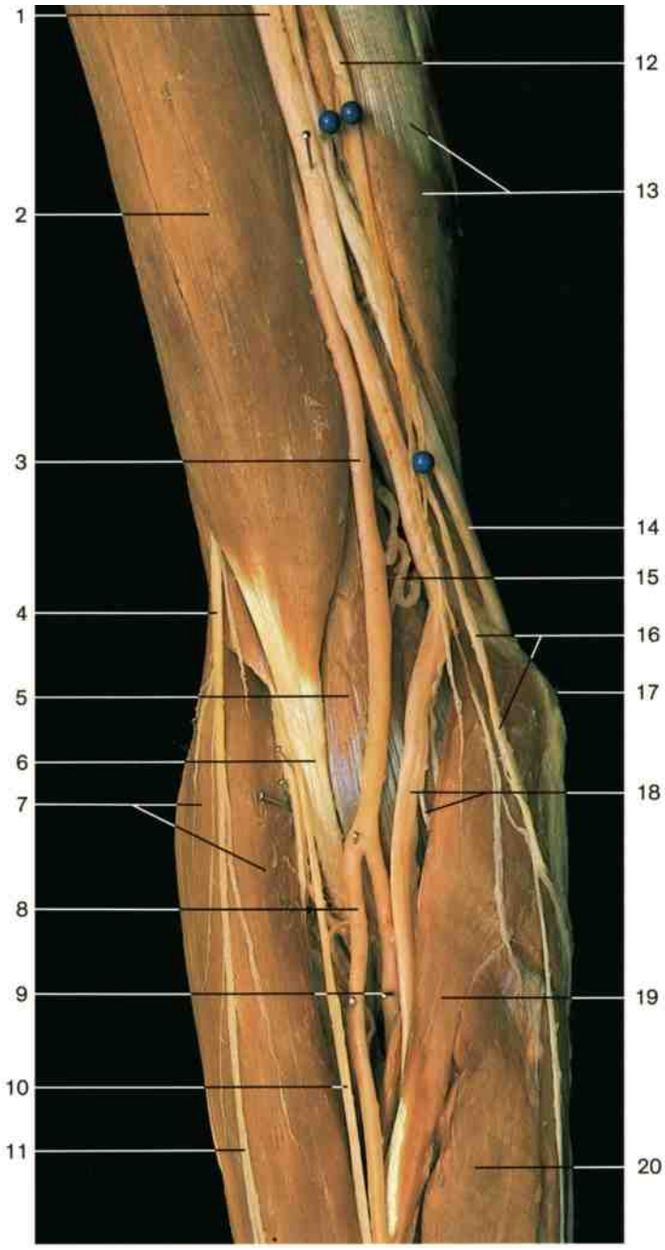
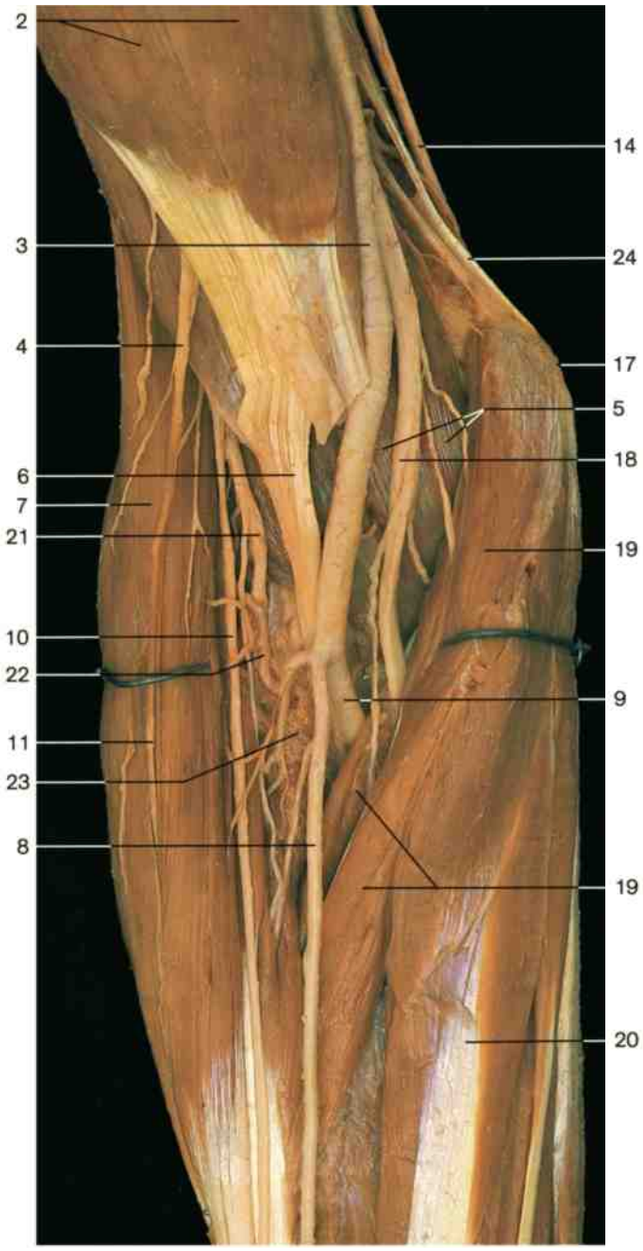


Cubital region, middle layer (anterior aspect). The bicipital aponeurosis has been removed.



Cubital region, middle layer (anterior aspect). The pronator teres and brachioradialis muscles have been slightly reflected.

1 Median nerve
2 Biceps brachii muscle
3 Brachial artery
4 Lateral cutaneous nerve of forearm (terminal branch of musculocutaneous nerve)
5 Brachialis muscle
6 Tendon of biceps brachii muscle
7 Brachioradialis muscle
8 Radial artery
9 Ulnar artery
10 Superficial branch of radial nerve
11 Lateral cutaneous nerve of forearm
12 Medial cutaneous nerve of forearm
13 Triceps brachii muscle
14 Ulnar nerve
15 Inferior ulnar collateral artery
16 Anterior branch of medial cutaneous nerve of forearm
17 Medial epicondyle of humerus
18 Median nerve with branches to pronator teres muscle
19 Pronator teres muscle
20 Flexor carpi radialis muscle
21 Deep branch of radial nerve
22 Radial recurrent artery
23 Supinator muscle
24 Medial intermuscular septum of arm

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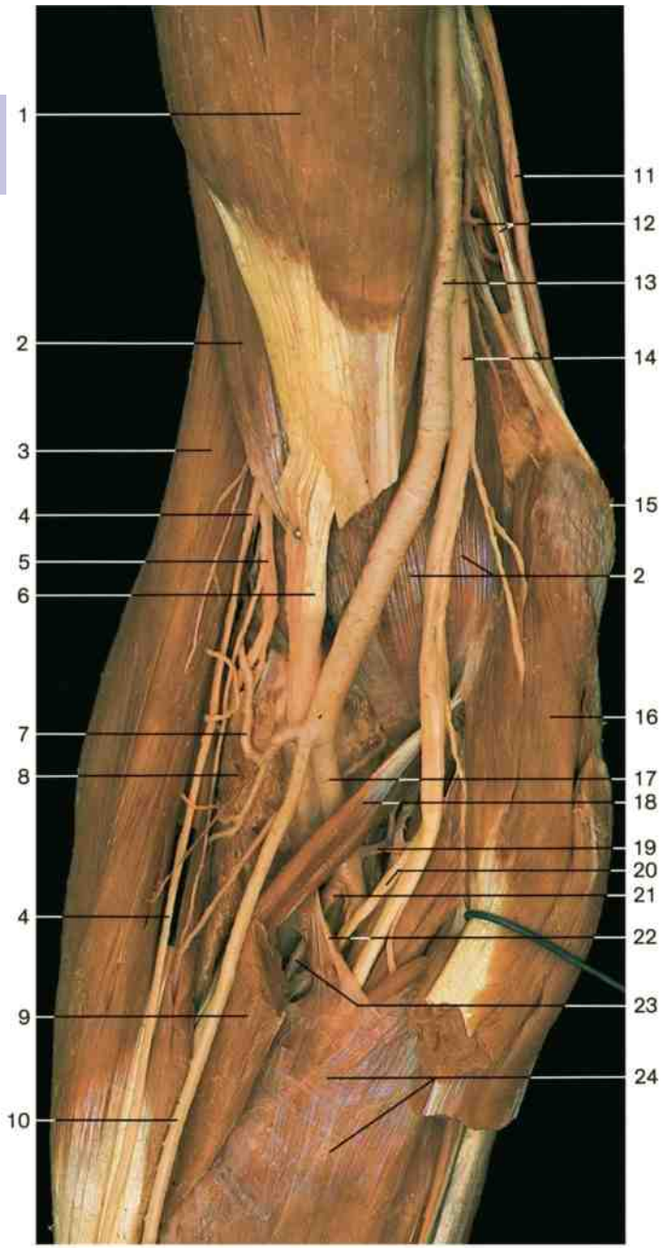
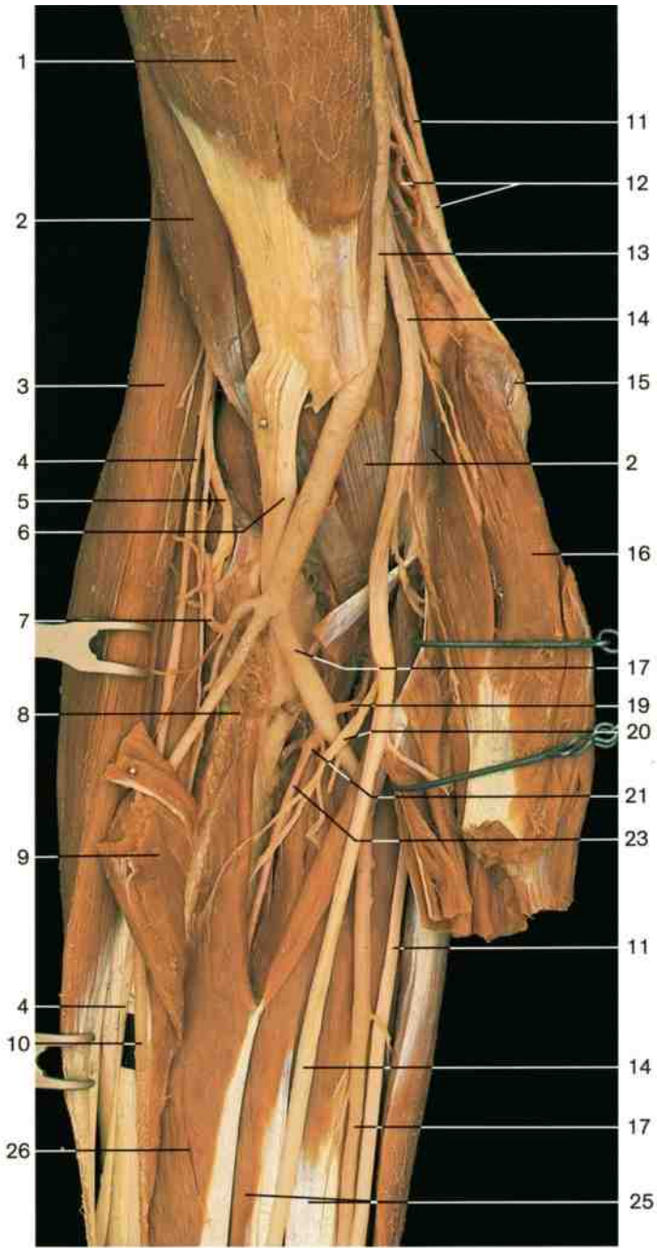


Cubital region, deep layer (anterior aspect). The pronator teres and flexor carpi ulnaris muscles have been cut and reflected.



Cubital region, deepest layer (anterior aspect). The flexor digitorum superficialis muscle and the ulnar head of the pronator teres muscle have been cut and reflected.

1 Biceps brachii muscle
2 Brachialis muscle
3 Brachioradialis muscle
4 Superficial branch of radial nerve
5 Deep branch of radial nerve
6 Tendon of biceps brachii muscle
7 Radial recurrent artery
8 Supinator muscle
9 Insertion of pronator teres muscle
10 Radial artery
11 Ulnar nerve
12 Medial intermuscular septum of arm and superior ulnar collateral artery
13 Brachial artery
14 Median nerve
15 Medial epicondyle of humerus
16 Humeral head of pronator teres muscle
17 Ulnar artery
18 Ulnar head of pronator teres muscle
19 Ulnar recurrent artery
20 Anterior interosseous nerve
21 Common interosseous artery
22 Tendinous arch of flexor digitorum superficialis muscle
23 Anterior interosseous artery
24 Flexor digitorum superficialis muscle
25 Flexor digitorum profundus muscle
26 Flexor pollicis longus muscle

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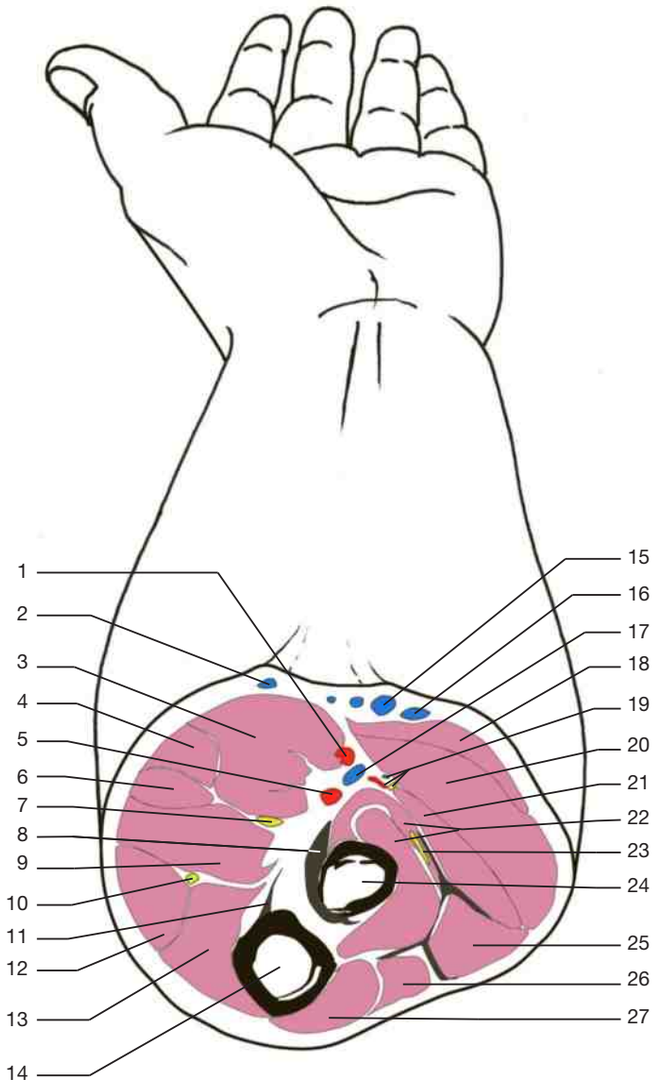
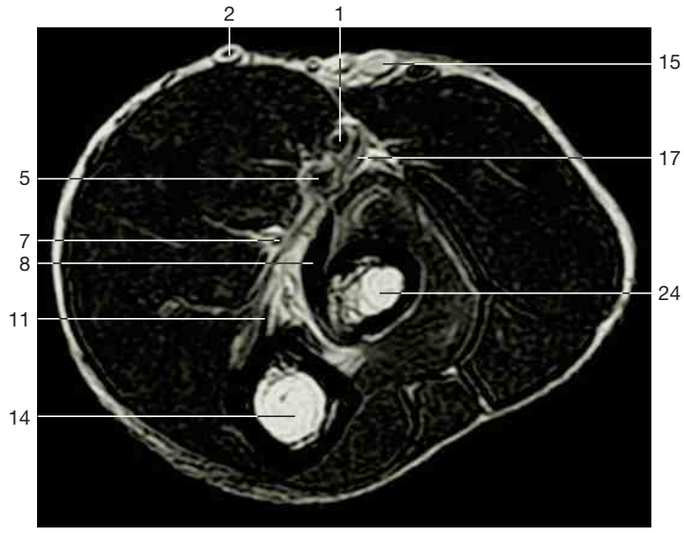


Muscles, nerves, and blood vessels of the forearm (axial section distally of the elbow joint, cf. MRI scan).

1 Radial artery
2 Basilic vein
3 Pronator teres muscle
4 Flexor carpi radialis muscle
5 Ulnar artery
6 Palmaris longus muscle
7 Median nerve
8 Tendon of biceps brachii muscle
9 Flexor digitorum superficialis muscle
10 Ulnar nerve
11 Tendon of brachialis muscle
12 Flexor carpi ulnaris muscle
13 Flexor digitorum profundus muscle
14 Ulna
15 Median cubital vein
16 Cephalic antebrachii vein
17 Radial vein
18 Brachioradialis muscle
19 Superficial branch of radial nerve, radial artery and vein
20 Extensor carpi radialis longus muscle
21 Extensor carpi radialis brevis muscle
22 Supinator muscle
23 Deep branch of radial nerve
24 Radius
25 Extensor digitorum muscle
26 Extensor carpi ulnaris muscle
27 Anconeus muscle



Axial section of the forearm (distally of the elbow joint, MRI scan; from Heuck et al., MRT-Atlas, 2009). For details see schematic drawing above.

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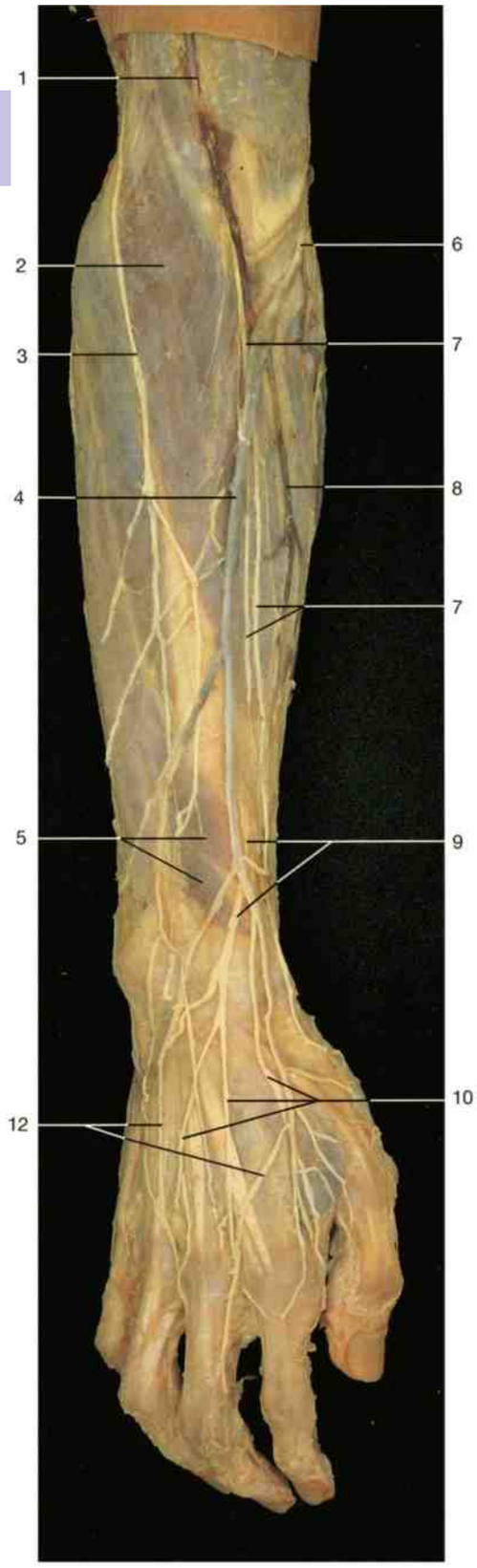
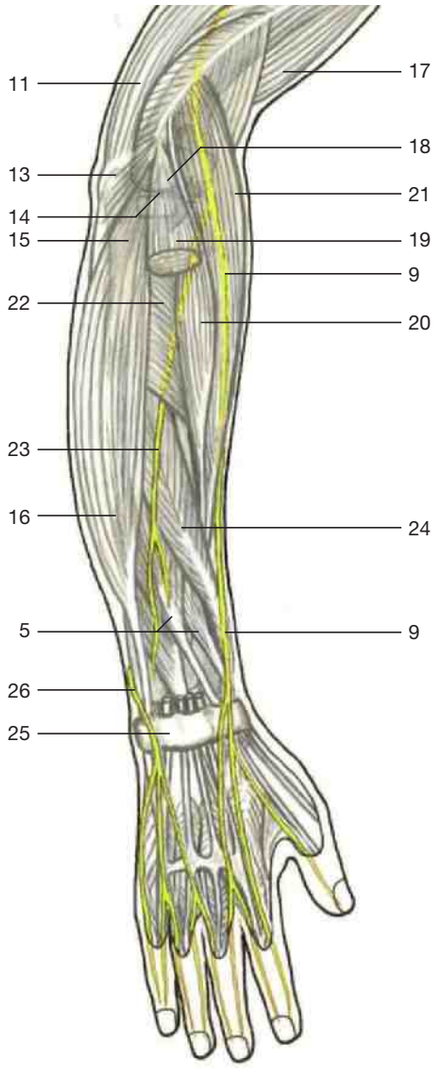


Superficial veins and cutaneous nerves of forearm and hand (posterior aspect).



Course of the nerves to forearm and hand (posterior aspect).
Yellow = radial and ulnar nerves.

1 Cephalic vein
2 Brachioradialis muscle covered by its fascia
3 Posterior cutaneous nerve of forearm (branch of radialis nerve)
4 Cephalic vein of forearm
5 Extensor pollicis longus and brevis muscles covered by their fascia
6 Median cubital vein
7 Lateral cutaneous nerves of forearm (branch of musculocutaneous nerve)
8 Intermedian vein of forearm
9 Superficial branch of radial nerve
10 Dorsal digital branches of radial nerve
11 Triceps brachii muscle
12 Dorsal venous network of hand
13 Olecranon
14 Humeroradial joint
15 Ulna
16 Extensor carpi ulnaris muscle
17 Biceps brachii muscle
18 Trochlea of humerus
19 Extensor digitorum muscle
20 Extensor carpi radialis muscle
21 Brachioradialis muscle
22 Supinator muscle
23 Deep branch of radial nerve
24 Abductor pollicis longus muscle
25 Extensor retinaculum
26 Ulnar nerve

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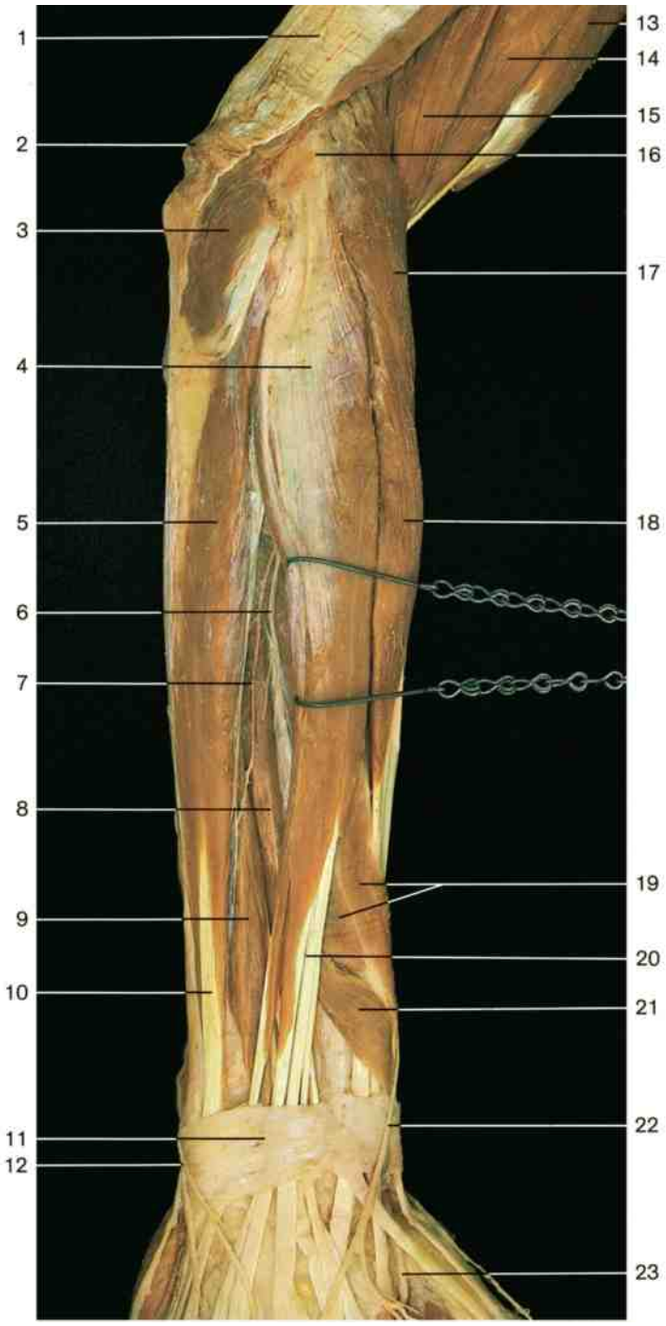
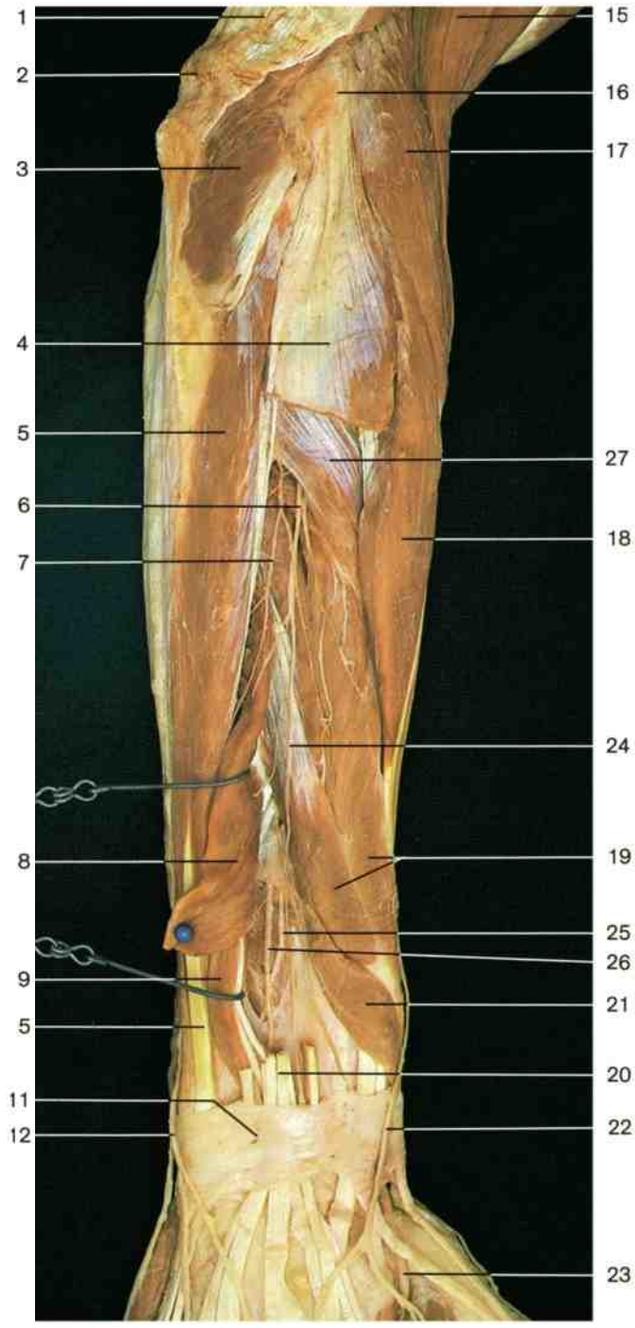


Vessels and nerves of right forearm, superficial layer (posterior aspect).



Vessels and nerves of right forearm, deep layer (posterior aspect).

1 Tendon of triceps brachii muscle
2 Olecranon
3 Anconeus muscle
4 Extensor digitorum muscle
5 Extensor carpi ulnaris muscle
6 Deep branch of radial nerve
7 Posterior interosseous artery
8 Extensor pollicis longus muscle
9 Extensor indicis muscle
10 Tendon of extensor carpi ulnaris muscle
11 Extensor retinaculum
12 Dorsal branch of ulnar nerve
13 Biceps brachii muscle
14 Brachialis muscle
15 Brachioradialis muscle
16 Lateral epicondyle of humerus
17 Extensor carpi radialis longus muscle
18 Extensor carpi radialis brevis muscle
19 Abductor pollicis longus muscle
20 Tendons of extensor digitorum muscle
21 Extensor pollicis brevis muscle
22 Superficial branch of radial nerve
23 Radial artery
24 Posterior interosseous nerve
25 Posterior interosseous branch of radial nerve
26 Posterior branch of anterior interosseous artery
27 Supinator muscle

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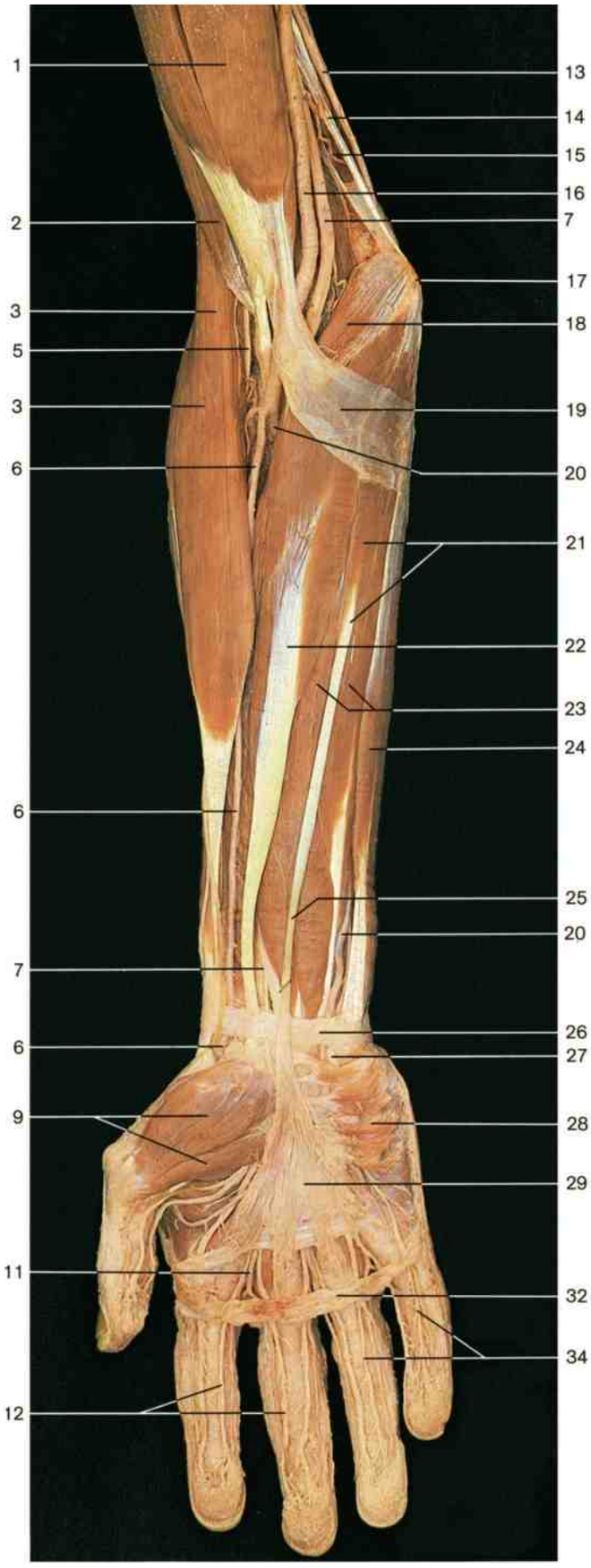
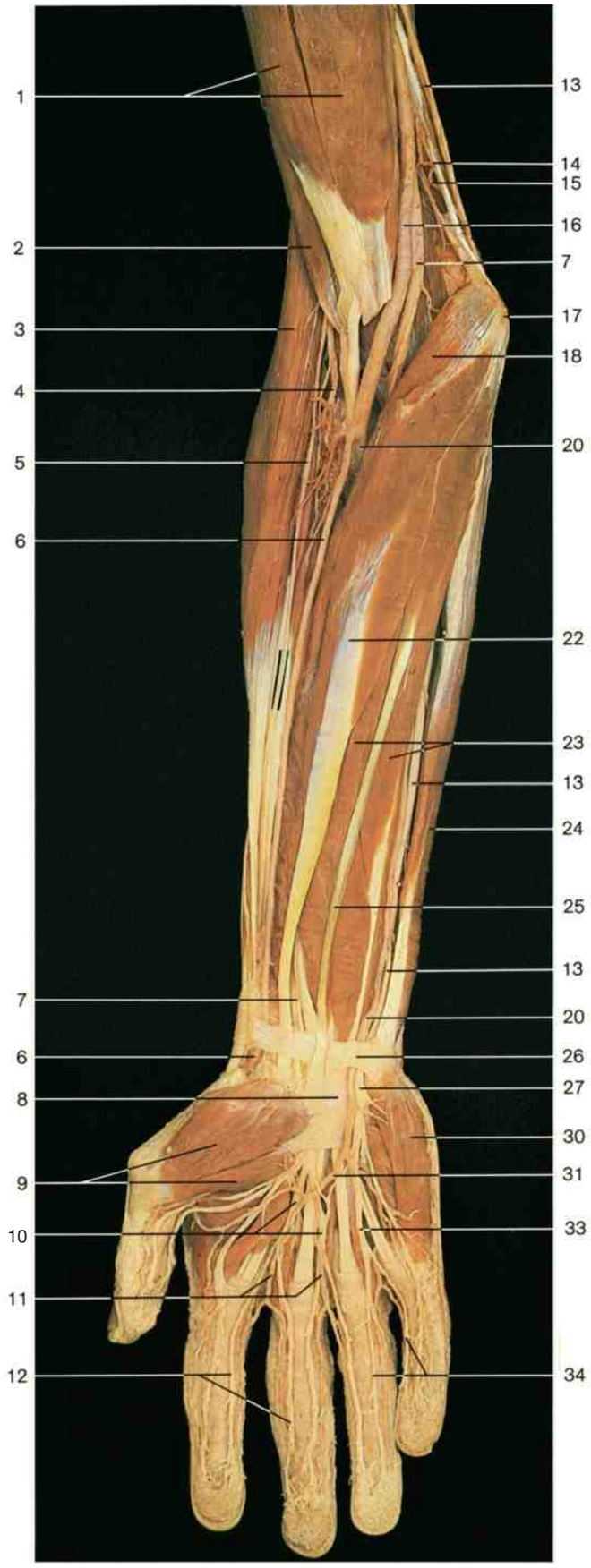


Vessels and nerves of right forearm and hand, superficial layer (palmar aspect).



Vessels and nerves of right forearm and hand, superficial layer (palmar aspect). The palmar aponeurosis of the hand and the bicipital aponeurosis have been removed.

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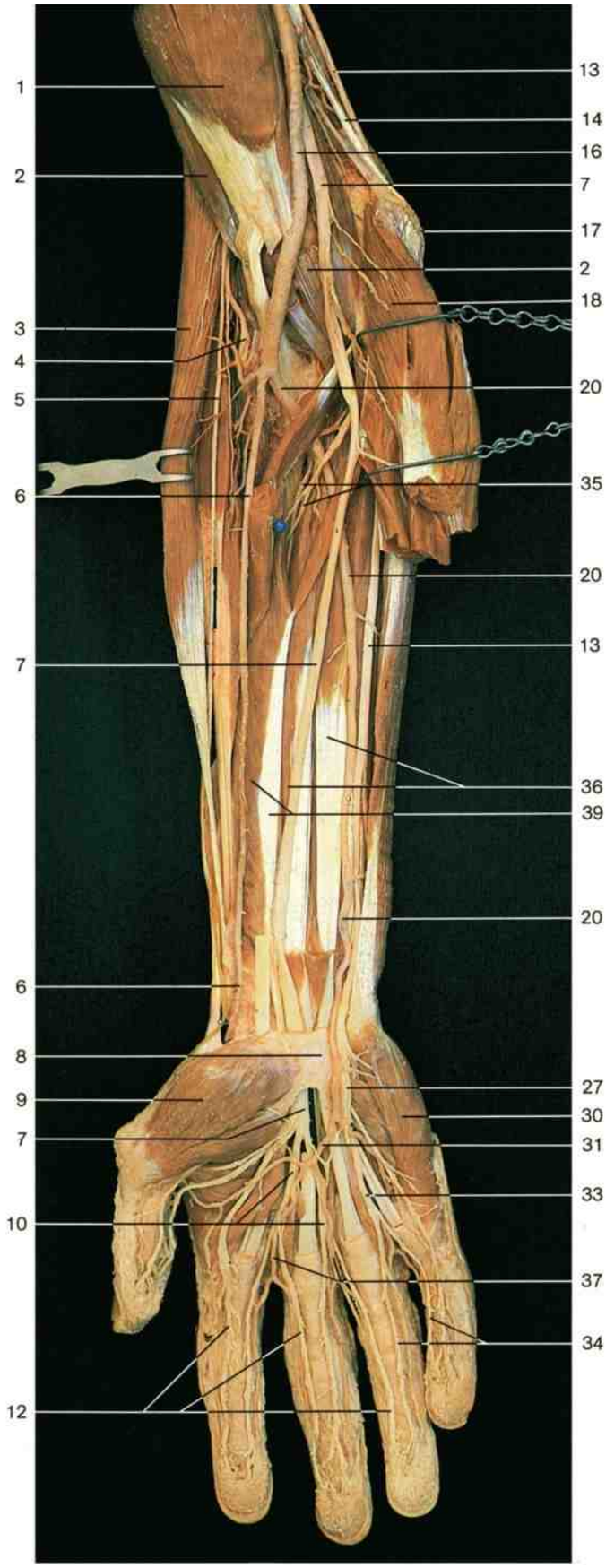
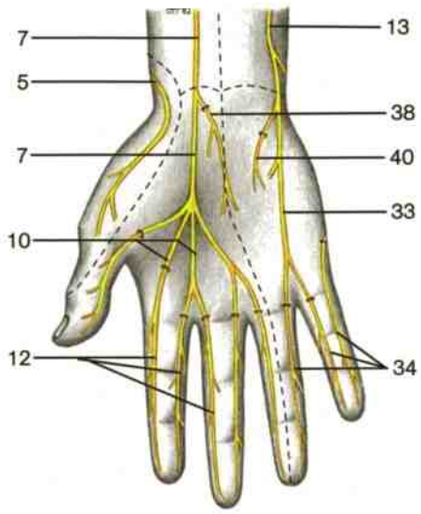


Vessels and nerves of forearm and hand, deep layer (palmar aspect). The superficial layer of the flexor muscles has been removed.

1 Biceps brachii muscle
2 Brachialis muscle
3 Brachioradialis muscle
4 Deep branch of radial nerve
5 Superficial branch of radial nerve
6 Radial artery
7 Median nerve
8 Flexor retinaculum
9 Thenar muscles
10 Common palmar digital branches of median nerve
11 Common palmar digital arteries
12 Proper palmar digital nerves (median nerve)
13 Ulnar nerve
14 Medial intermuscular septum of arm
15 Superior ulnar collateral artery
16 Brachial artery
17 Medial epicondyle of humerus
18 Pronator teres muscle
19 Bicipital aponeurosis
20 Ulnar artery
21 Palmaris longus muscle
22 Flexor carpi radialis muscle
23 Flexor digitorum superficialis muscle
24 Flexor carpi ulnaris muscle
25 Tendon of palmaris longus muscle
26 Remnant of antebrachial fascia
27 Superficial branch of ulnar nerve
28 Palmaris brevis muscle
29 Palmar aponeurosis
30 Hypothenar muscles
31 Superficial palmar arch
32 Superficial transverse metacarpal ligament
33 Common palmar digital branch of ulnar nerve
34 Proper palmar digital branches of ulnar nerve
35 Anterior interosseous artery and nerve
36 Flexor digitorum profundus muscle
37 Common palmar digital arteries
38 Palmar branch of median nerve
39 Flexor pollicis longus muscle
40 Palmar branch of ulnar nerve



Innervation pattern of palmar surfaces of hand. 3½ digits by median nerve, 1½ digits by ulnar nerve.

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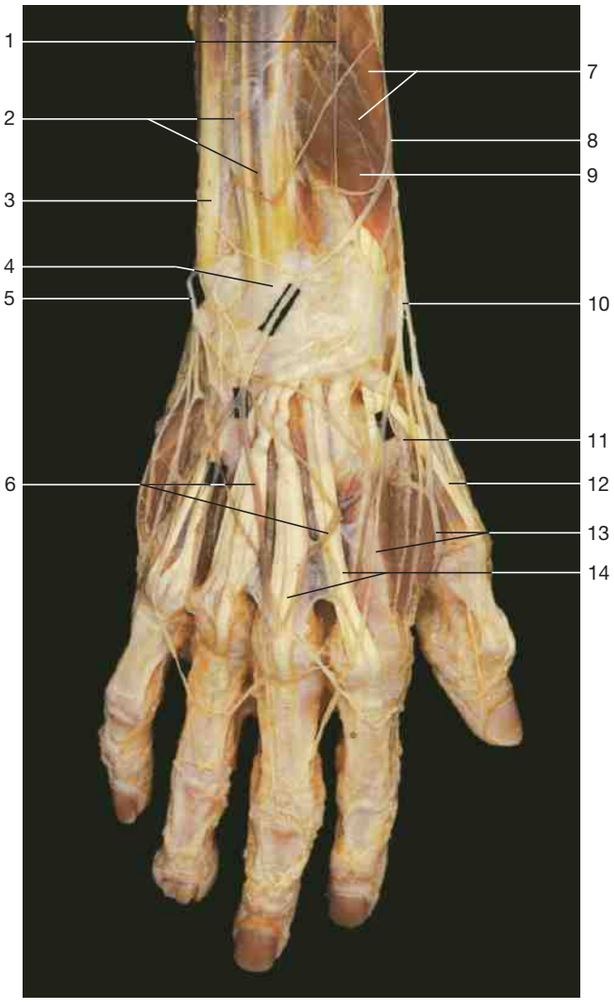
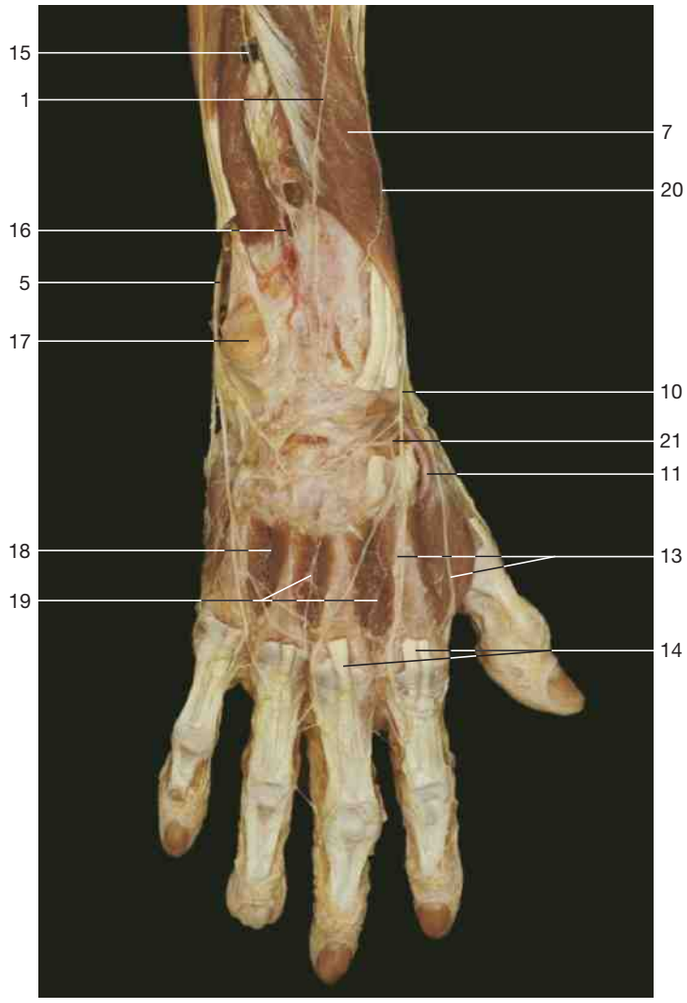
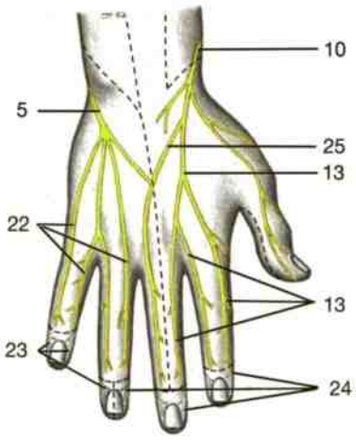


Posterior region of hand (superficial layer). Cutaneous nerves and veins are depicted.



Posterior region of hand (deeper layer). Extensor digitorum muscle has been partly removed.



Innervation pattern of posterior surfaces of hand. $2^1/_2$ digits by radial nerve, $2^1/_2$ digits by ulnar nerve. Note that the terminal branches to the dorsal surfaces of the distal phalanges are derived from the palmar digital nerves. The cutaneous distribution varies; often $3^1/_2$ digits are innervated by the radial and $1^1/_2$ digits by the ulnar nerve.

1 Posterior cutaneous nerve of forearm (branch of radial nerve)
2 Extensor digitorum muscle
3 Tendon of extensor carpi ulnaris muscle
4 Extensor retinaculum
5 Ulnar nerve
6 Dorsal venous network of hand
7 Abductor pollicis longus muscle
8 Cephalic vein
9 Extensor pollicis brevis muscle
10 Radial nerve, superficial branch
11 Radial artery
12 Tendon of extensor pollicis longus muscle
13 Dorsal digital branches of radial nerve
14 Tendons of extensor digitorum muscle with intertendinous connections
15 Posterior interosseus nerve (branch of the deep radial nerve)
16 Posterior interosseous artery
17 Styloid process of ulna
18 Dorsal interosseus muscle IV
19 Dorsal carpal branch of radial artery
20 Lateral cutaneous nerve of forearm (branch of musculocutaneous nerve)
21 Dorsal metacarpal artery
22 Proper dorsal digital branches of ulnar nerve
23 Regions supplied by palmar digital nerves (ulnar nerve)
24 Regions supplied by palmar digital nerves (median nerve)
25 Communicating branch with ulnar nerve

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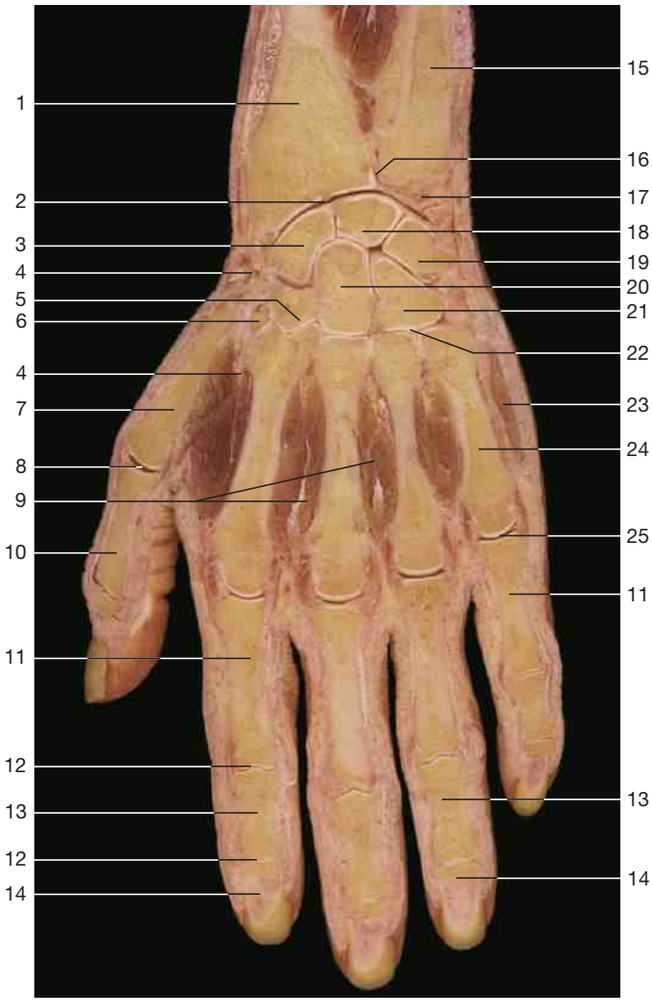
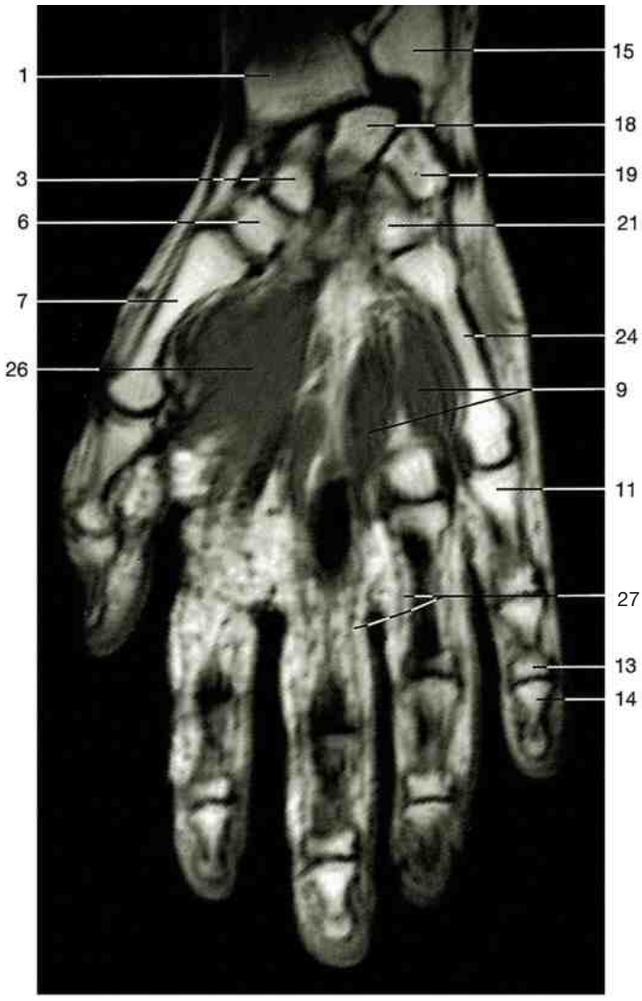
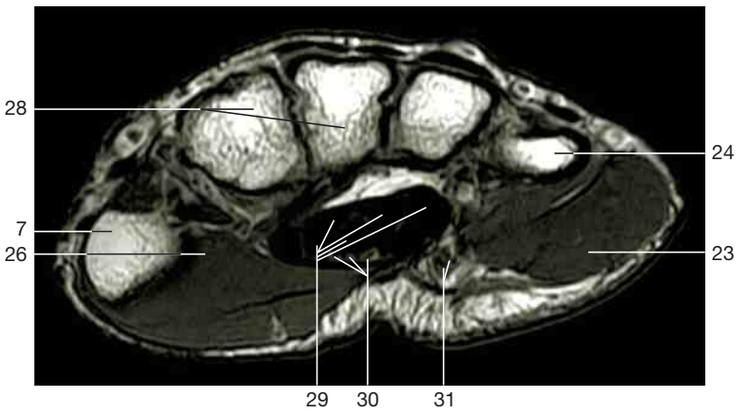


Coronal section through the left hand (posterior aspect).



Coronal section through the left hand (posterior aspect) (MRI scan, courtesy of Prof. Heuck, Munich).



Axial section through the left hand (MRI scan; from Heuck et al., MRT-Atlas, 2009).

1 Radius
2 Wrist joint
3 Scaphoid (navicular) bone
4 Radial artery
5 Trapezoid bone
6 Trapezium bone
7 First metacarpal bone
8 Metacarpophalangeal joint of thumb
9 Interosseous muscles
10 Proximal phalanx of thumb
11 Proximal phalanx of fingers
12 Interphalangeal joints
13 Middle phalanx
14 Distal phalanx
15 Ulna
16 Distal radio-ulnar joint
17 Articular disc
18 Lunate bone
19 Triquetral bone
20 Capitate bone
21 Hamate bone
22 Carpometacarpal joints
23 Abductor digiti minimi muscle
24 Fifth metacarpal bone
25 Metacarpophalangeal joint
26 Adductor pollicis muscle
27 Proper palmar digital arteries
28 Second and third metacarpal bones
29 Tendons of flexor digitorum superficialis and profundus muscles
30 Median nerve
31 Ulnar artery and vein

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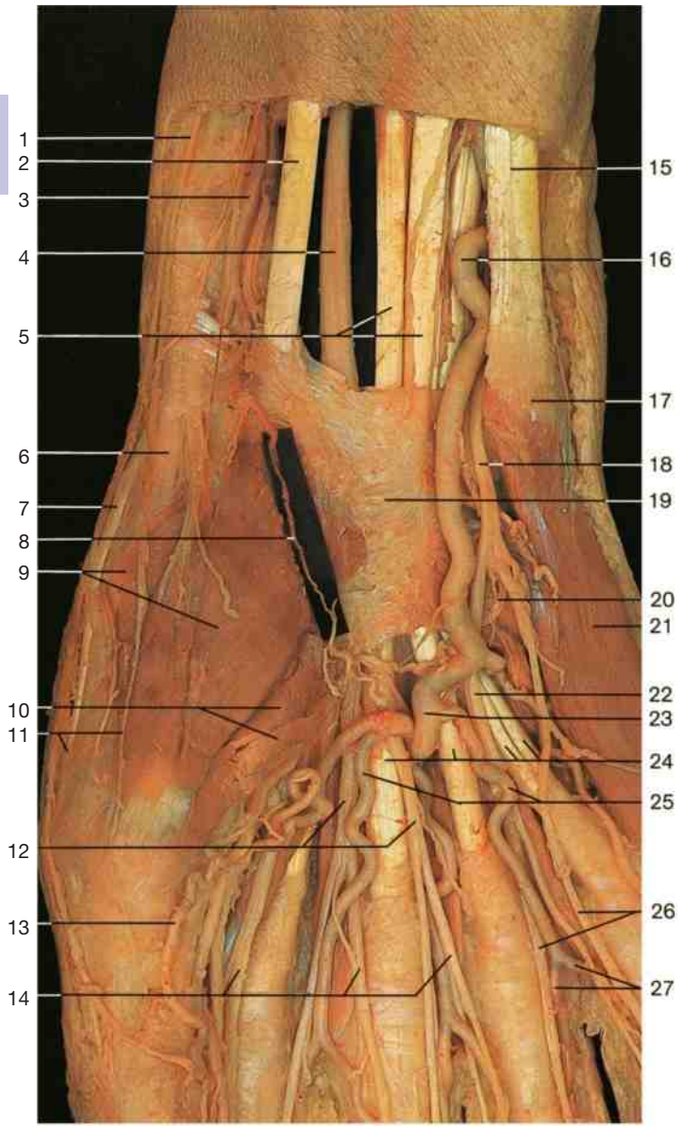
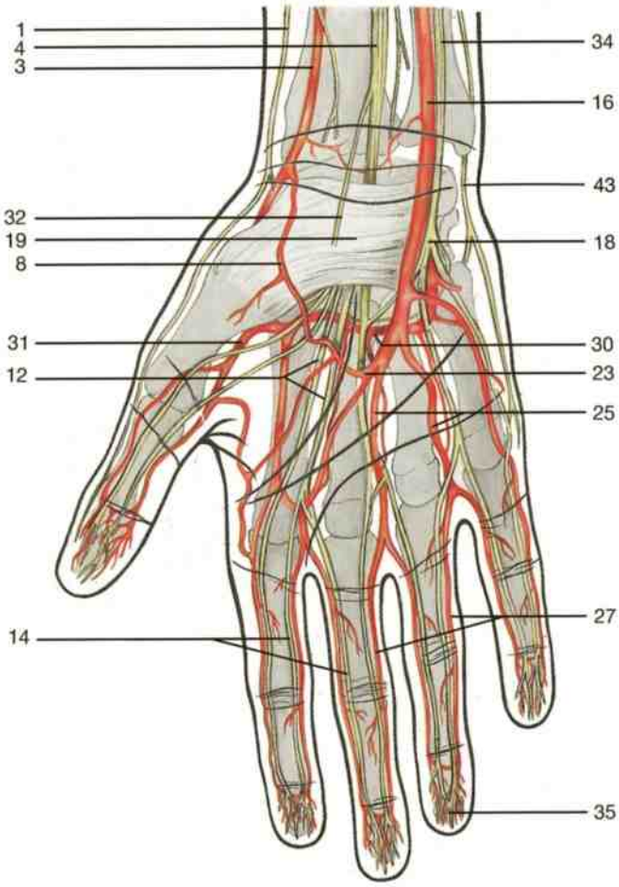
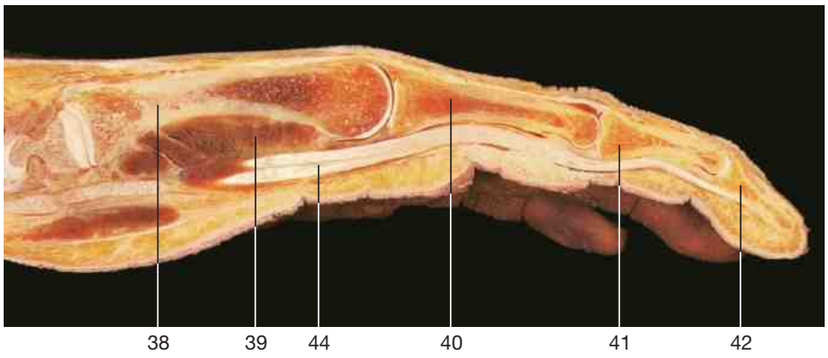




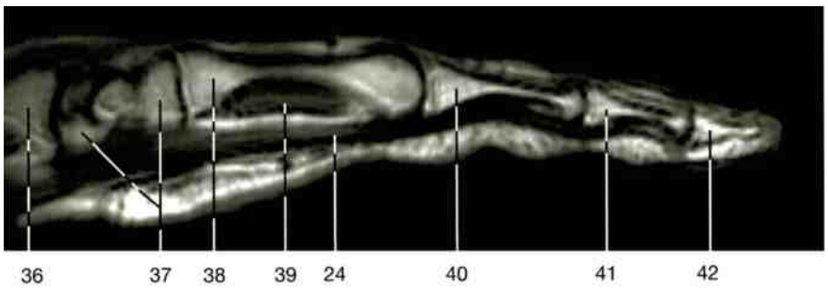
Arteries and nerves of the right hand (palmar aspect, schematic drawing).

◁

Right hand, superficial layer (palmar aspect). Dissection of the superficial palmar arch.



Longitudinal section through the hand at the level of the third finger.



Longitudinal section through the hand at the level of the third finger (MRI scan, courtesy of Prof. Heuck, Munich).

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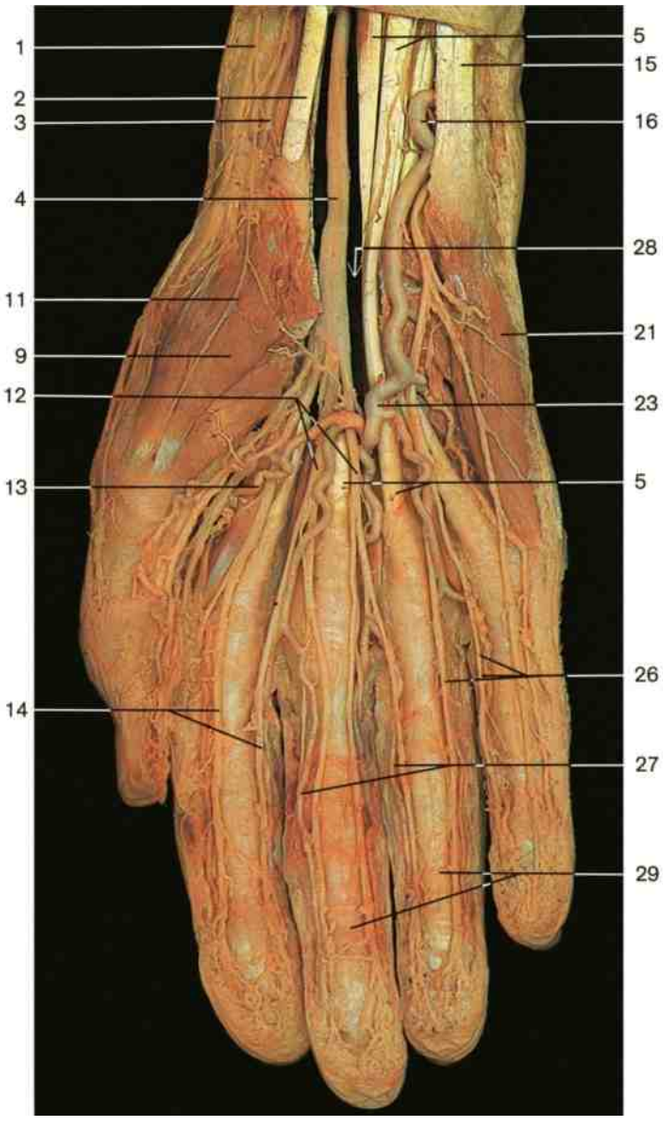
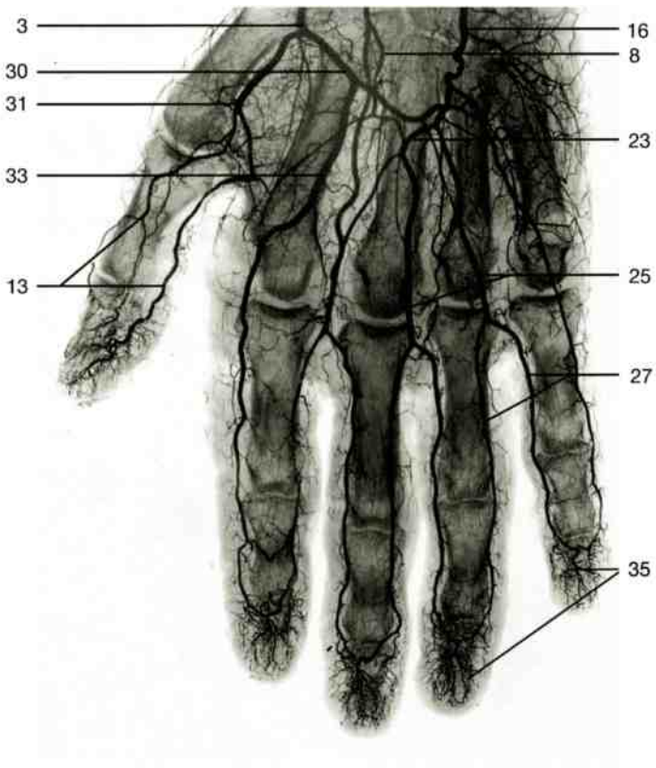


Right hand, middle layer (palmar aspect). The flexor retinaculum has been removed.



Arteriogram of the right hand (palmar aspect).

1 Superficial branch of radial nerve
2 Tendon of flexor carpi radialis muscle
3 Radial artery
4 Median nerve
5 Tendon of flexor digitorum superficialis muscle
6 Tendon of abductor pollicis longus muscle
7 Tendon of extensor pollicis brevis muscle
8 Superficial palmar branch of radial artery
9 Abductor pollicis brevis muscle
10 Superficial head of flexor pollicis brevis muscle
11 Terminal branches of superficial branch of radial nerve
12 Common palmar digital nerves (median nerve)
13 Proper palmar digital arteries of thumb
14 Proper palmar digital nerves (median nerve)
15 Tendon of flexor carpi ulnaris muscle
16 Ulnar artery
17 Position of pisiform bone
18 Superficial branch of ulnar nerve
19 Flexor retinaculum
20 Deep branch of ulnar nerve
21 Abductor digiti minimi muscle
22 Common palmar digital nerves (ulnar nerve)
23 Superficial palmar arch
24 Tendons of flexor digitorum muscles
25 Common palmar digital arteries
26 Palmar digital nerves (ulnar nerve)
27 Proper palmar digital arteries
28 Carpal tunnel
29 Fibrous sheaths for the tendons of flexor digitorum muscles
30 Deep palmar arch
31 Princeps pollicis artery
32 Palmar branch of median nerve
33 Common digital palmar artery
34 Ulnar nerve
35 Capillary network of finger
36 Radius
37 Carpal bones
38 Metacarpal bone
39 Interosseous muscles
40 Proximal phalanx
41 Middle phalanx
42 Distal phalanx
43 Dorsal branch of ulnar nerve
44 Tendons of flexor digitorum profundus (upper) and superficialis (lower) muscles

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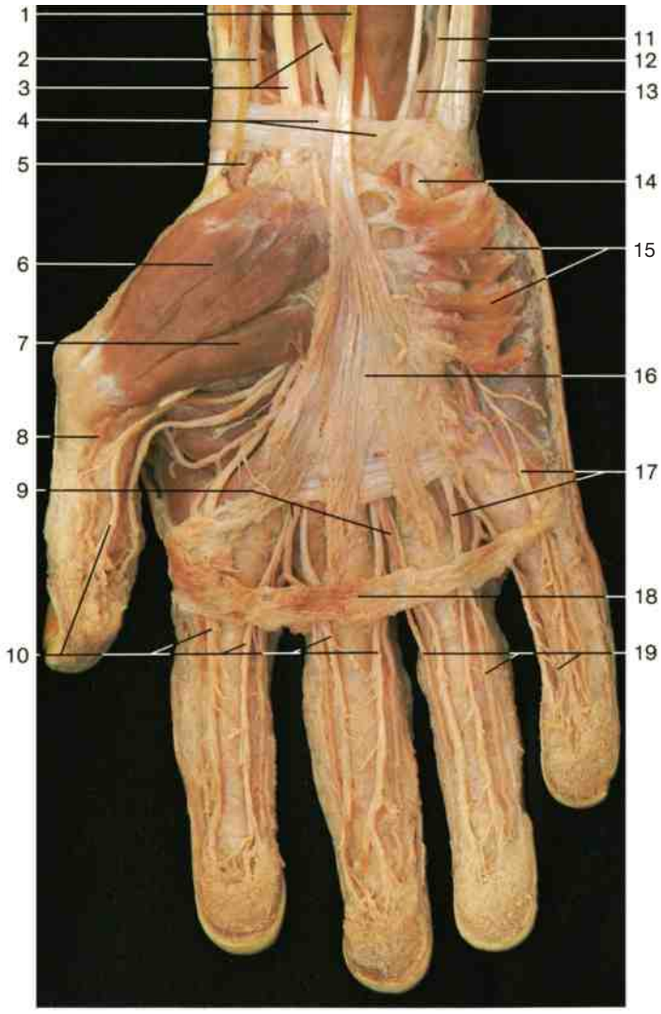
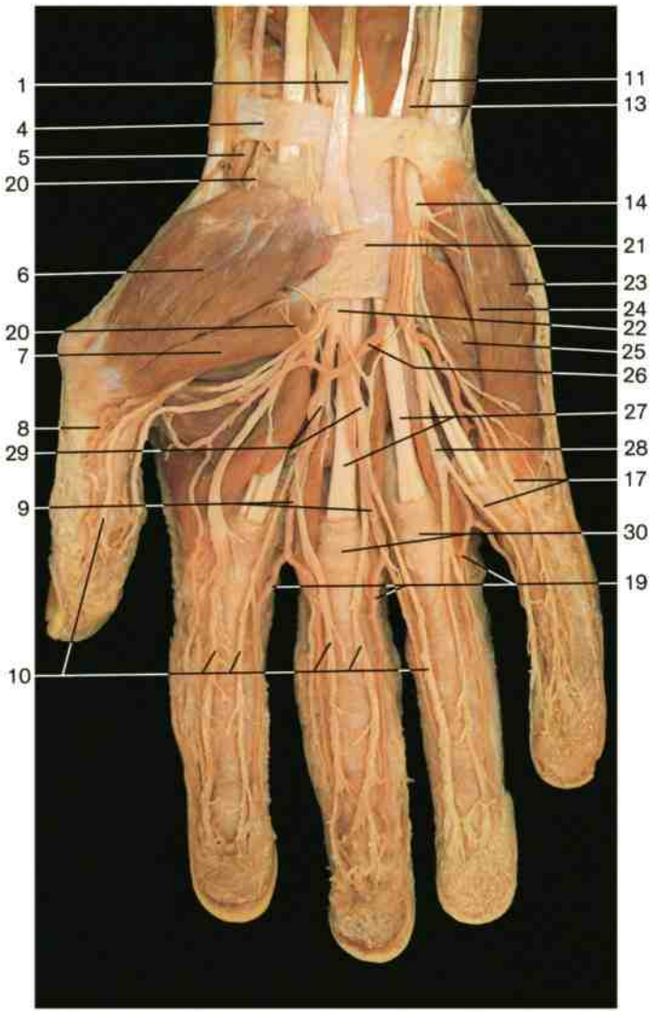


Right hand, superficial layer (palmar aspect). Dissection of vessels and nerves.



Right hand, superficial layer (palmar aspect). Dissection of vessels and nerves. The palmar aponeurosis has been removed to display the superficial palmar arch.

1 Tendon of palmaris longus muscle
2 Radial artery
3 Tendon of flexor carpi radialis muscle and median nerve
4 Distal part of antebrachial fascia
5 Radial artery passing into the anatomical snuffbox
6 Abductor pollicis brevis muscle
7 Superficial head of flexor pollicis brevis muscle
8 Palmar digital artery of thumb
9 Common palmar digital arteries
10 Proper palmar digital nerves (median nerve)
11 Ulnar nerve
12 Tendon of flexor carpi ulnaris muscle
13 Ulnar artery
14 Superficial branch of ulnar nerve
15 Palmaris brevis muscle
16 Palmar aponeurosis
17 Palmar digital nerves (ulnar nerve)
18 Superficial transverse metacarpal ligament
19 Proper palmar digital arteries
20 Superficial palmar branch of radial artery (contributing to the superficial palmar arch)
21 Flexor retinaculum
22 Median nerve
23 Abductor digiti minimi muscle
24 Flexor digiti minimi brevis muscle
25 Opponens digiti minimi muscle
26 Superficial palmar arch
27 Tendons of flexor digitorum superficialis muscle
28 Common palmar digital branch of ulnar nerve
29 Common palmar digital branch of median nerve
30 Fibrous sheath of flexor tendons

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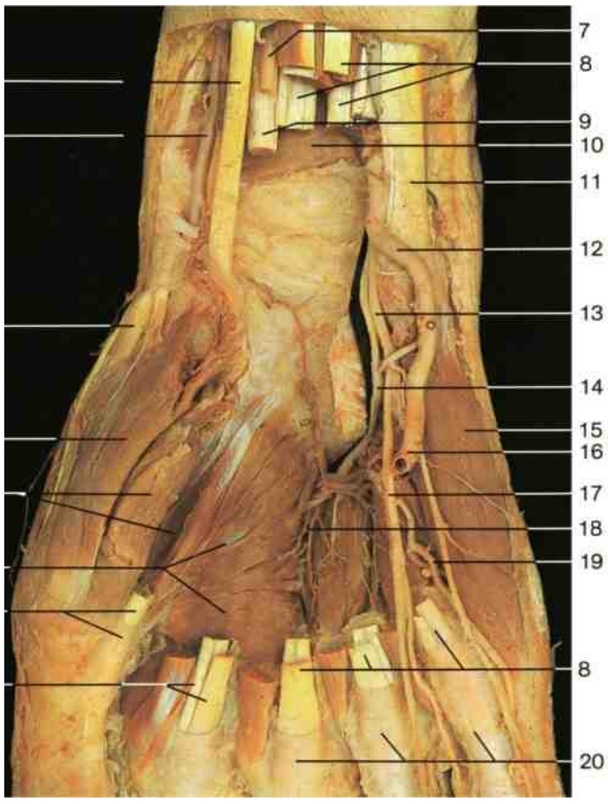
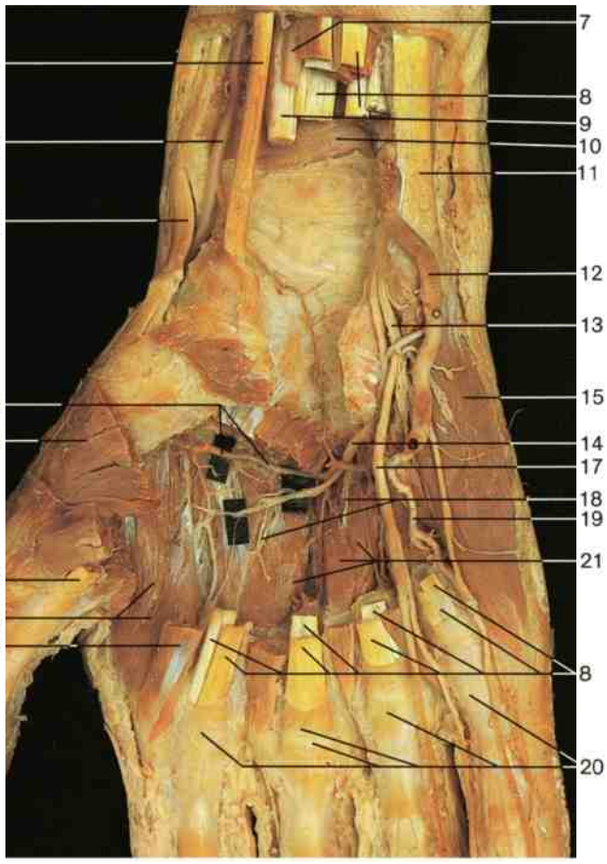


Right hand, deep layer (palmar aspect). The carpal tunnel has been opened, the tendons of the flexor muscles have been removed, and the superficial palmar arch has been cut.



Right hand, deep layer (palmar aspect). Dissection of the deep palmar arch.

1 Tendon of flexor carpi radialis muscle
2 Radial artery
3 Tendon of abductor pollicis longus muscle
4 Abductor pollicis brevis muscle
5 Superficial and deep heads of flexor pollicis brevis muscle
6 Oblique and transverse heads of adductor pollicis muscle
7 Median nerve
8 Tendons of flexor digitorum superficialis and profundus muscles
9 Tendon of flexor pollicis longus muscle
10 Pronator quadratus muscle
11 Tendon of flexor carpi ulnaris muscle
12 Ulnar artery
13 Superficial branch of ulnar nerve
14 Deep branch of ulnar nerve
15 Abductor digiti minimi muscle
16 Superficial palmar arch (cut end)
17 Common palmar digital nerves (ulnar nerve)
18 Palmar metacarpal arteries of deep palmar arch
19 Palmar digital artery of the fifth finger
20 Fibrous sheaths of tendons of flexor muscles
21 Palmar interosseous muscles
22 Opponens pollicis muscle (cut)
23 Deep palmar arch
24 First dorsal interosseous muscle
25 First lumbrical muscle

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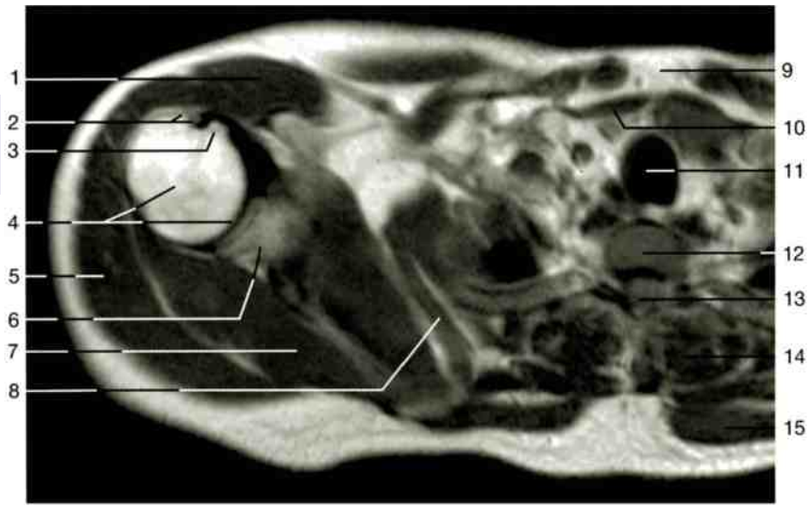
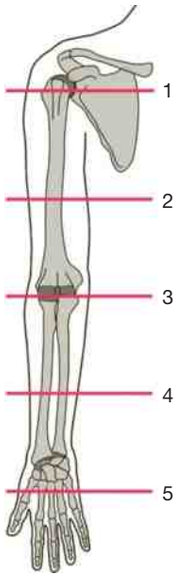
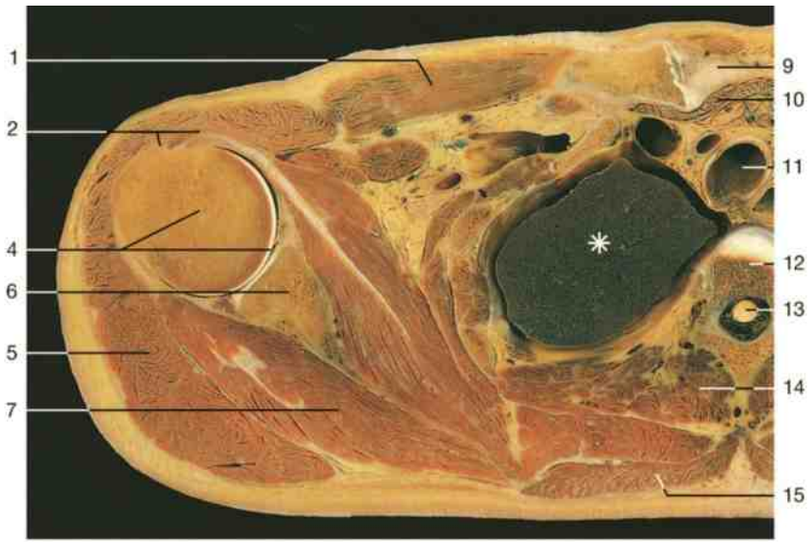


Horizontal section through the right shoulder joint (section 1; MRI scan; inferior aspect).

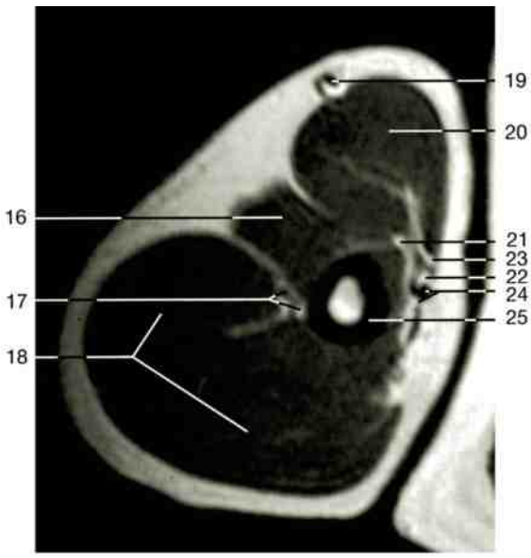


Upper limb, location of sections 1–5 (MRI scans, p. 430: courtesy of Prof. Heuck, Munich, Germany; MRI scans, p. 431: courtesy of Prof. Bautz and R. Janka, M. D., University of Erlangen, Germany).

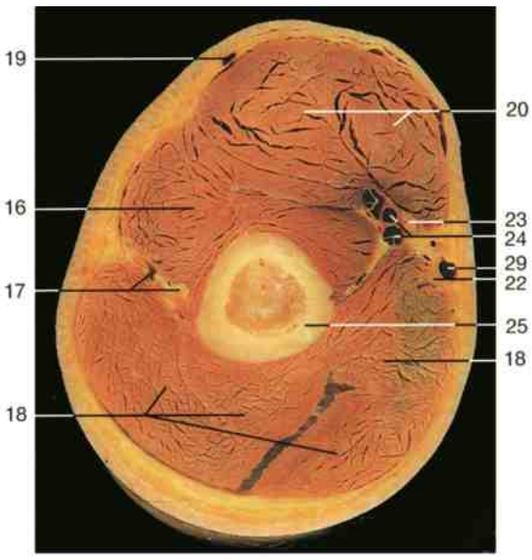


Horizontal section through the right shoulder joint (section 1; inferior aspect).
* = Upper lobe of lung.

1 Pectoralis major muscle
2 Greater tubercle and tendon of biceps muscle
3 Lesser tubercle
4 Head of humerus and articular cavity of shoulder joint
5 Deltoid muscle
6 Scapula
7 Infraspinatus muscle
8 Serratus anterior muscle
9 Sternum
10 Infrahyoid muscles
11 Trachea
12 Body of thoracic vertebra
13 Vertebral canal and spinal cord
14 Deep muscles of the back
15 Trapezius muscle
16 Brachialis muscle
17 Radial nerve and profunda brachii vessels



Axial section through the middle of the right arm (section 2; MRI scan; inferior aspect).



Axial section through the middle of the right arm (section 2; inferior aspect).

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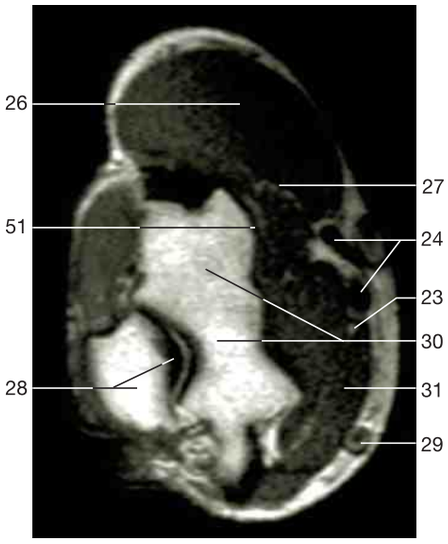
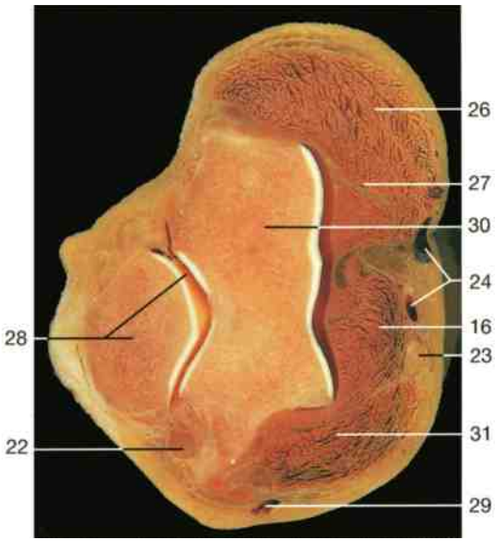
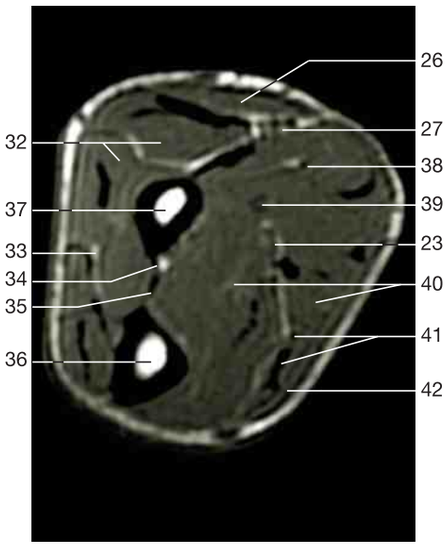


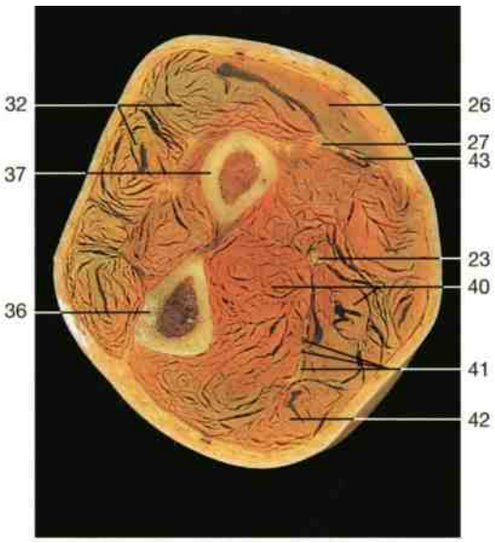
Axial section through the right elbow joint (section 3; MRI scan; inferior aspect).



Axial section through the right elbow joint (section 3; inferior aspect).

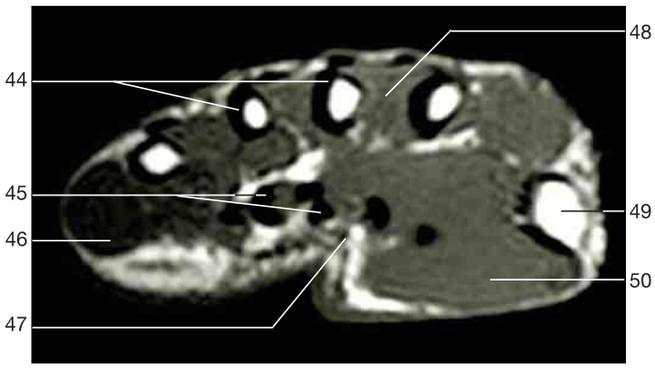


Axial section through the middle of the right forearm (section 4; MRI scan; inferior aspect).

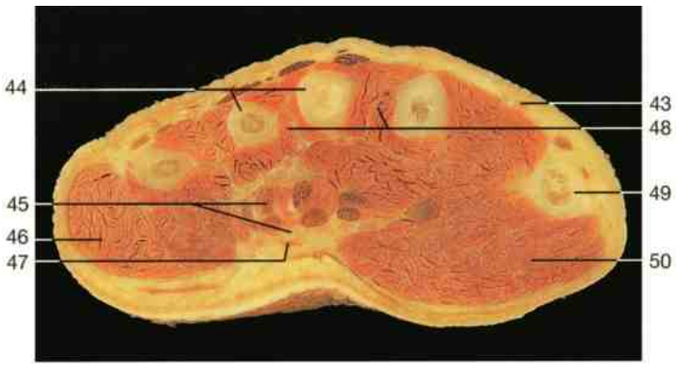


Axial section through the middle of the right forearm (section 4; inferior aspect).

18 Triceps brachii muscle
19 Cephalic vein
20 Biceps brachii muscle
21 Musculocutaneous nerve
22 Ulnar nerve
23 Medianus nerve
24 Brachial artery and vein
25 Shaft of humerus
26 Brachioradialis muscle
27 Radial nerve
28 Olecranon and articular cavity of elbow joint
29 Basilic vein
30 Humerus
31 Pronator teres muscle
32 Extensor muscles of forearm
33 Ramus profundus of radialis nerve
34 Anterior interosseus vessels and nerve
35 Interosseous membrane
36 Ulna
37 Radius
38 Radial artery and superficial branch of radial nerve
39 Flexor pollicis longus muscle
40 Flexor digitorum superficialis and profundus muscles
41 Ulnar nerve, ulnar artery, and vein
42 Flexor carpi ulnaris muscle
43 Radial artery
44 Metacarpal bones III and IV
45 Carpal canal with tendons of flexor digitorum muscles
46 Hypothenar muscle
47 Median nerve
48 Interosseous muscles
49 First metacarpal bone
50 Thenar muscles
51 Articular cavity of humeroradial joint



Axial section through the right hand at the level of the metacarpus (section 5; MRI scan; inferior aspect).



Axial section through the right hand at the level of the metacarpus (section 5; inferior aspect).

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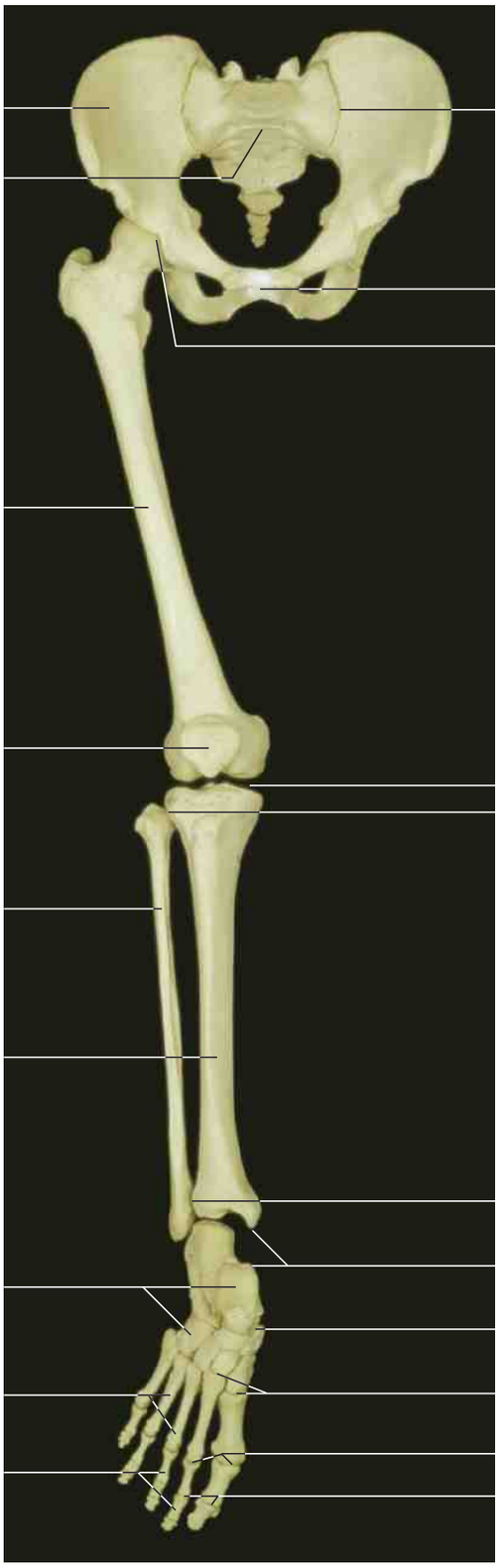
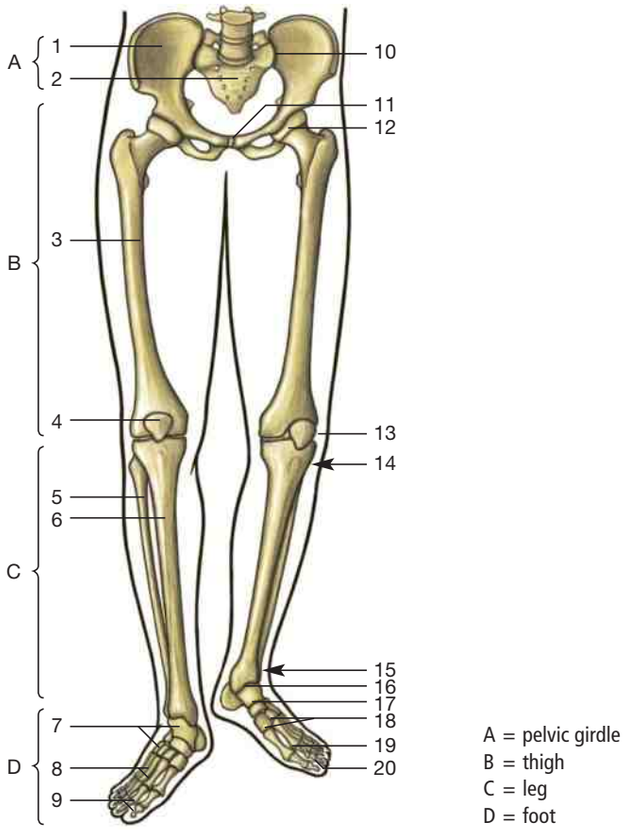
8 Lower Limb



Skeleton of pelvic girdle and lower limb (anterior aspect). The ankle joint has been dislocated.

The lower limb (extremity) is specialized for support of the upright posture, locomotion, and maintaining balance. In contrast to the upper limb, the lower limb is more restricted in its movements, and the joints are tighter and fixed by strong ligaments. The hip joint is a ball-and-socket type of synovial joint between the head of the femur and acetabulum. The knee joint is a hinge type of synovial joint that permits only limited rotation. The talocrural joint is a hinge joint between the talus, fibula, and tibia, only allowing movements of flexion and extension.

The long axis of the foot is at a right angle to that of the leg, thus forming an effective arch for the upright stance of the body.



Organization of pelvic girdle and lower limb.

1 Right hip bone
2 Sacrum
3 Femur
4 Patella
5 Fibula
6 Tibia
7 Tarsal bones
8 Metatarsal bones
9 Phalanges
10 Sacro-iliac joint
11 Pubic symphysis
12 Hip joint
13 Knee joint
14 Proximal tibiofibular joint
15 Distal tibiofibular joint
16 Ankle joint
17 Talocalcaneonavicular joint
18 Tarsometatarsal joints
19 Metatarsophalangeal joints
20 Interphalangeal joints

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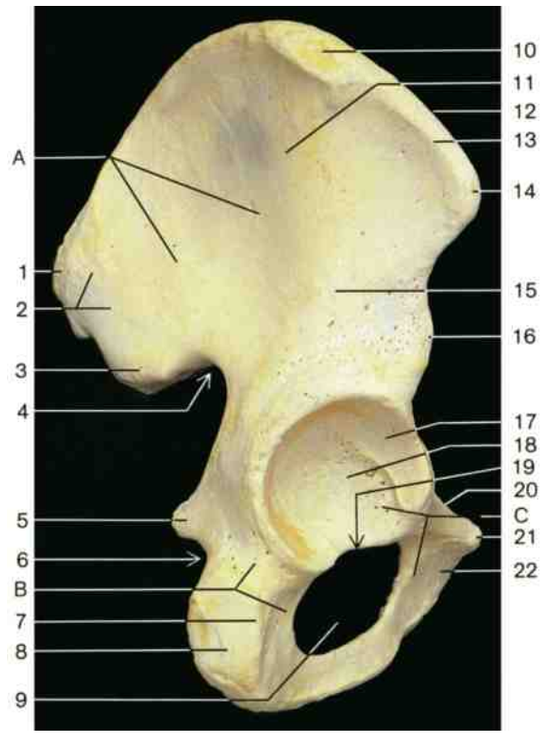
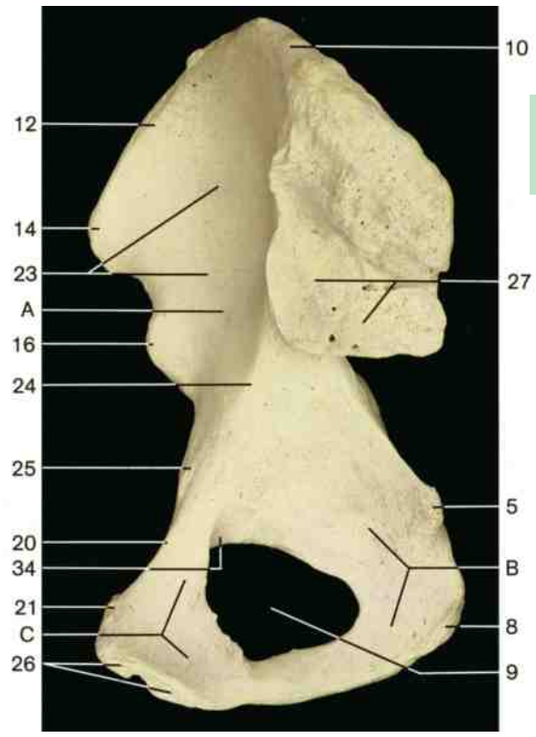
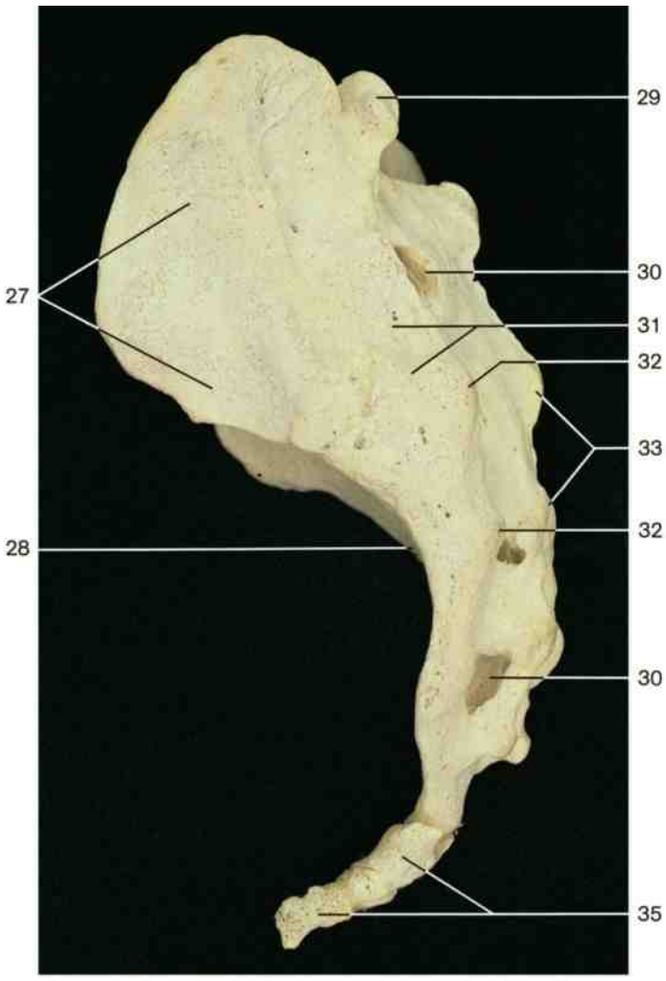


Right hip bone (lateral aspect).



Right hip bone (medial aspect).



Sacrum and coccyx (lateral aspect).

A = ilium
B = ischium
C = pubis

1 Posterior superior iliac spine
2 Posterior gluteal line
3 Posterior inferior iliac spine
4 Greater sciatic notch
5 Ischial spine
6 Lesser sciatic notch
7 Body of ischium
8 Ischial tuberosity
9 Obturator foramen
10 Iliac crest
11 Anterior gluteal line
12 Internal lip of iliac crest
13 External lip of iliac crest
14 Anterior superior iliac spine
15 Inferior gluteal line
16 Anterior inferior iliac spine
17 Lunate surface of acetabulum
18 Acetabular fossa
19 Acetabular notch
20 Pecten pubis
21 Pubic tubercle
22 Body of pubis
23 Iliac fossa
24 Arcuate line
25 Iliopubic eminence
26 Symphysial surface of pubis
27 Auricular surface
28 Pelvic surface of sacrum
29 Superior articular process of sacrum
30 Dorsal sacral foramina
31 Sacral tuberosity
32 Lateral sacral crest
33 Median sacral crest
34 Obturator groove
35 Coccyx

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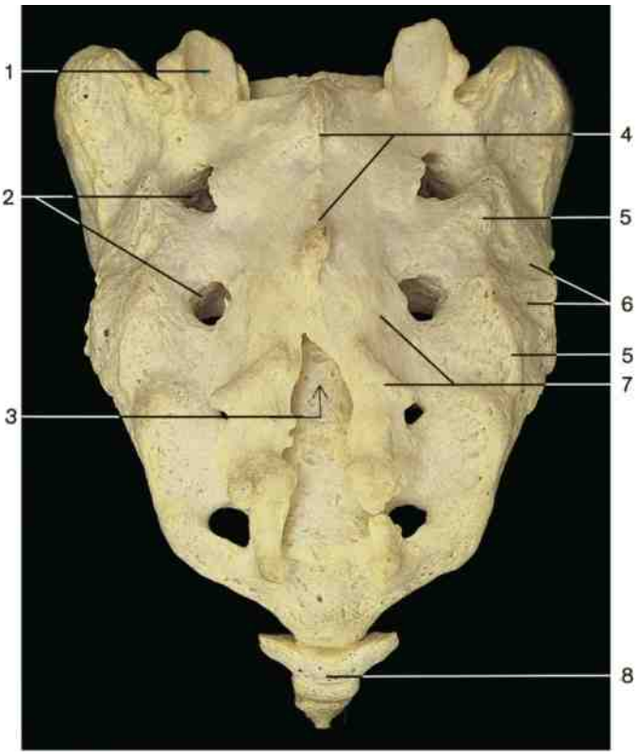
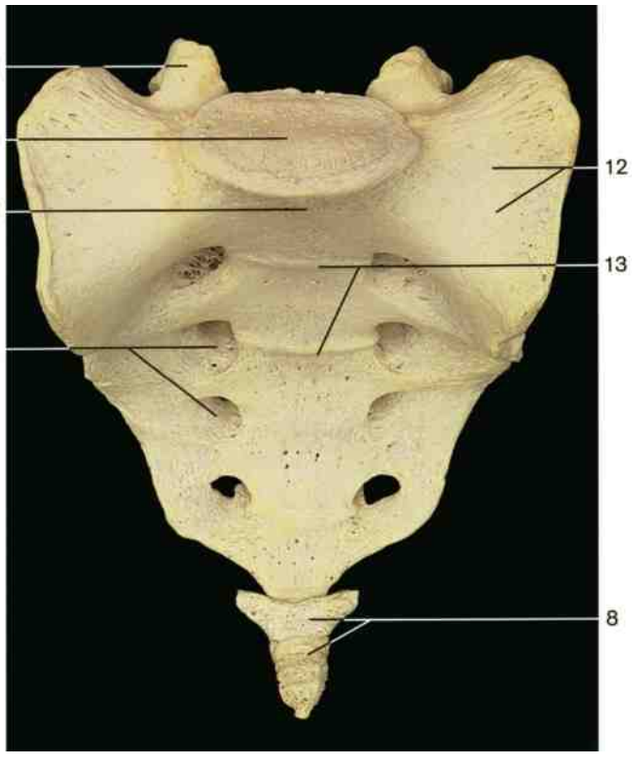
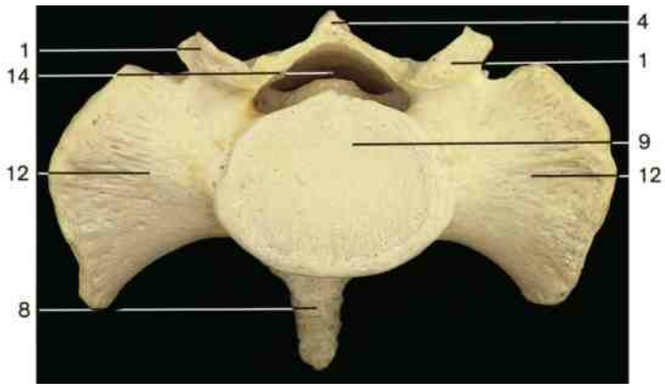


Sacrum (posterior aspect).

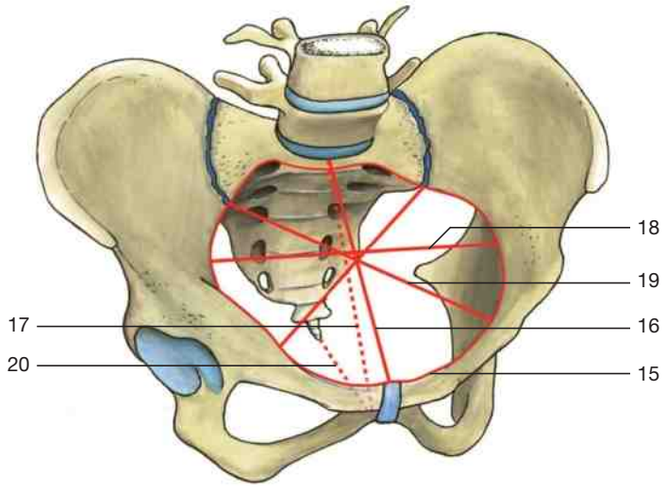


Sacrum (anterior aspect).



Sacrum (superior aspect).

1 Superior articular process of sacrum
2 Dorsal sacral foramina
3 Sacral hiatus
4 Median sacral crest
5 Lateral sacral crest
6 Sacral tuberosity
7 Intermediate sacral crest
8 Coccyx
9 Base of sacrum
10 Sacral promontory
11 Anterior sacral foramina
12 Lateral part of sacrum (ala)
13 Transverse line of sacrum
14 Sacral canal
15 Linea terminalis
16 True conjugate
17 Diagonal conjugate
18 Transverse diameter
19 Oblique diameter
20 Inferior pelvic aperture or outlet



Diameters of pelvis (oblique superior aspect). (Schematic drawing.)

The pelvic girdle is firmly connected to the vertebral column at the sacro-iliac joint. Therefore, the body can be kept upright more easily even if only one limb is used for support (as in walking). The mobility of the lower limb is more limited than that of the upper limb.

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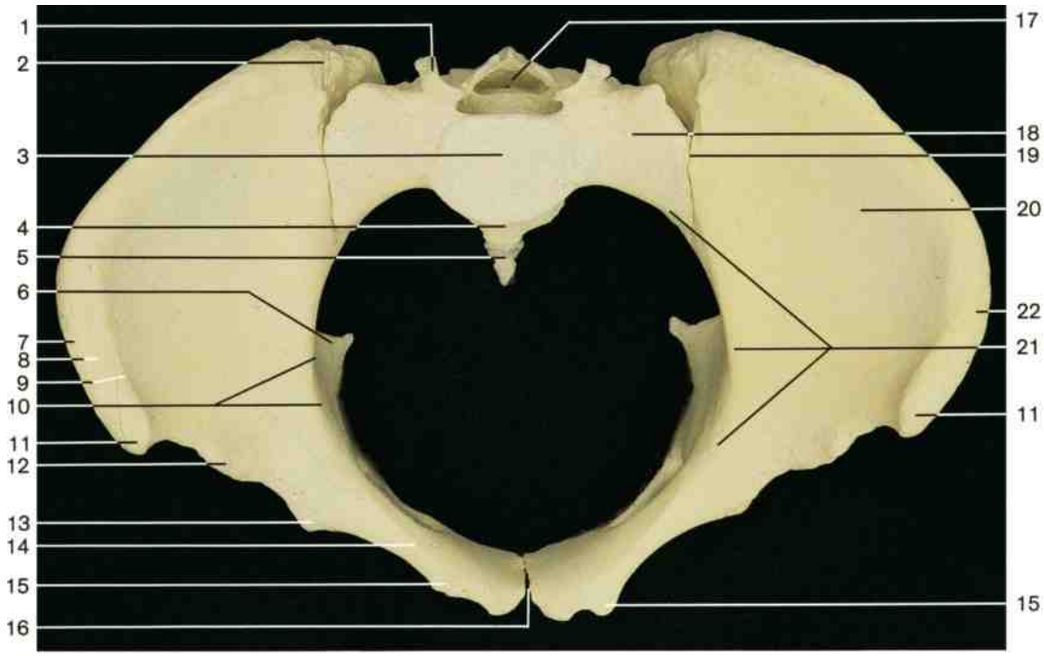
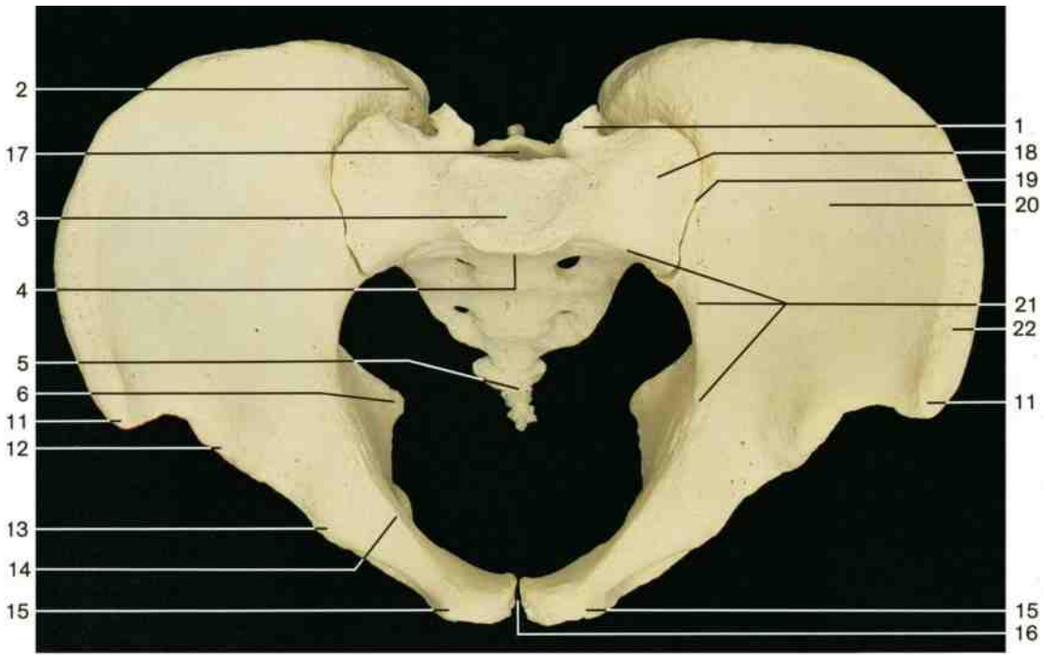


Female pelvis (superior aspect). Note the differences between the male and female pelvis, predominantly in the form and dimensions of the sacrum, the superior and inferior apertures, and the alae of the ilium.



Male pelvis (superior aspect). Compare with the female pelvis (depicted above).

1 Superior articular process of sacrum
2 Posterior superior iliac spine
3 Base of sacrum
4 Sacral promontory
5 Coccyx
6 Ischial spine
7 External lip } of iliac crest
8 Intermediate line } of iliac crest
9 Internal lip } of iliac crest
10 Arcuate line
11 Anterior superior iliac spine
12 Anterior inferior iliac spine
13 Iliopubic eminence
14 Pecten pubis
15 Pubic tubercle
16 Pubic symphysis
17 Sacral canal
18 Ala of sacrum
19 Position of sacro-iliac joint
20 Iliac fossa
21 Linea terminalis
22 Iliac crest

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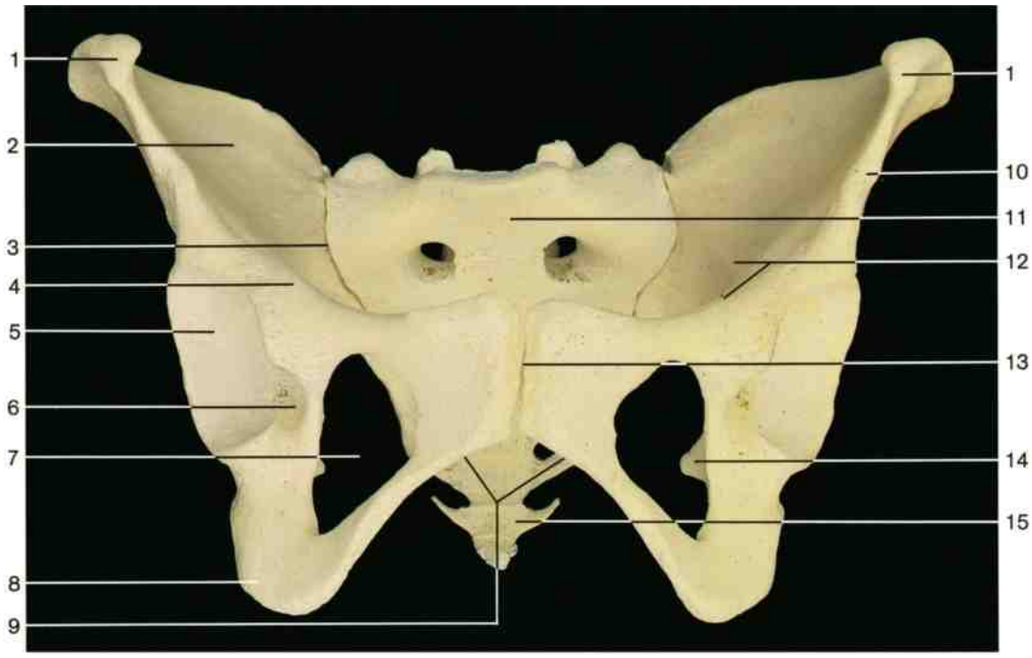
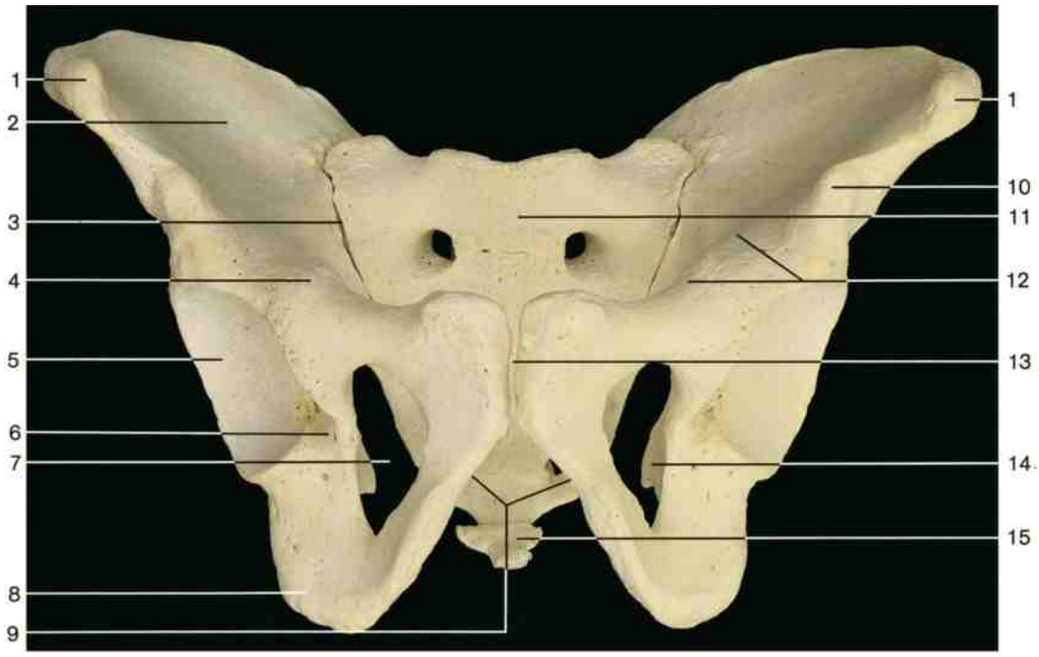


Female pelvis (anterior aspect). Note the differences between the form and dimensions of the male and female pelvis. The female pubic arch is wider than the male. The obturator foramen in the female pelvis is triangular, while that in the male pelvis is ovoid.



Male pelvis (anterior aspect). Compare with the female pelvis (depicted above).

1 Anterior superior iliac spine
2 Iliac fossa
3 Position of sacro-iliac joint
4 Iliopubic eminence
5 Lunate surface of acetabulum
6 Acetabular notch
7 Obturator foramen
8 Ischial tuberosity
9 Pubic arch
10 Anterior inferior iliac spine
11 Sacrum
12 Linea terminalis (at margin of superior aperture)
13 Pubic symphysis
14 Ischial spine
15 Coccyx

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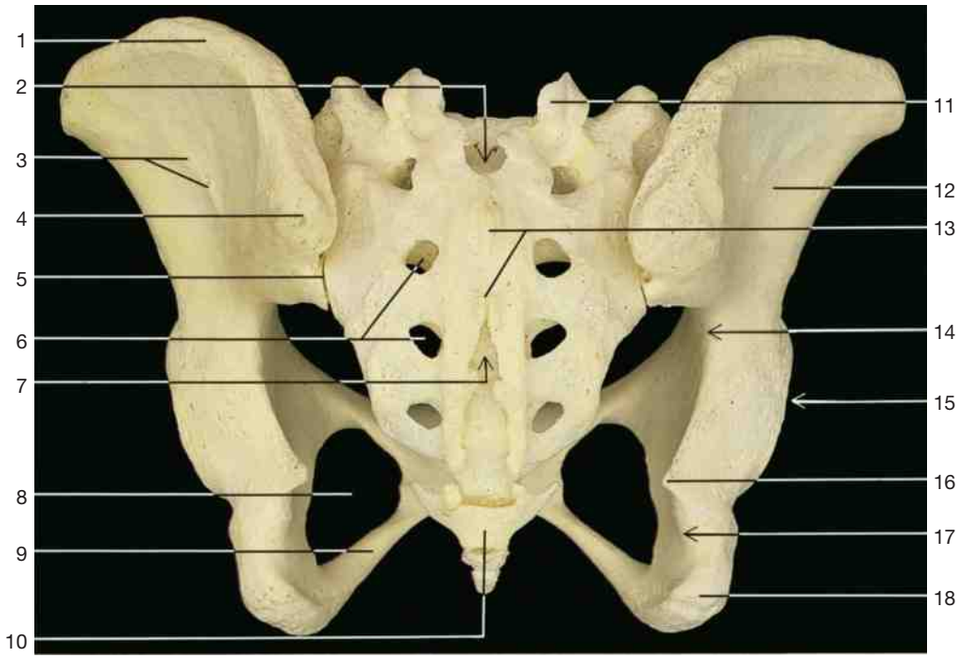
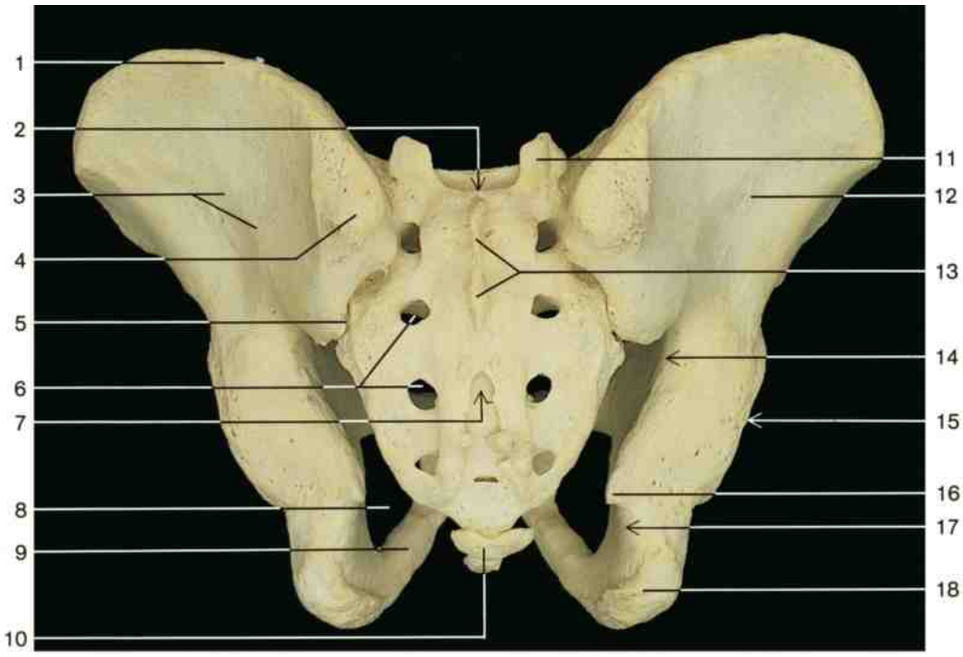


Female pelvis (posterior aspect). Note the differences between the female and male pelvis, especially with respect to the inferior aperture, the shape of the sacrum, the two sciatic notches, and the pubic arch.



Male pelvis (posterior aspect). Compare with the female pelvis (depicted above).

1 Iliac crest
2 Sacral canal
3 Posterior gluteal line
4 Posterior superior iliac spine
5 Position of sacro-iliac joint
6 Dorsal sacral foramina
7 Sacral hiatus
8 Obturator foramen
9 Ramus of ischium
10 Coccyx
11 Superior articular process of sacrum
12 Gluteal surface of ilium
13 Median sacral crest
14 Greater sciatic notch
15 Position of acetabulum
16 Ischial spine
17 Lesser sciatic notch
18 Ischial tuberosity

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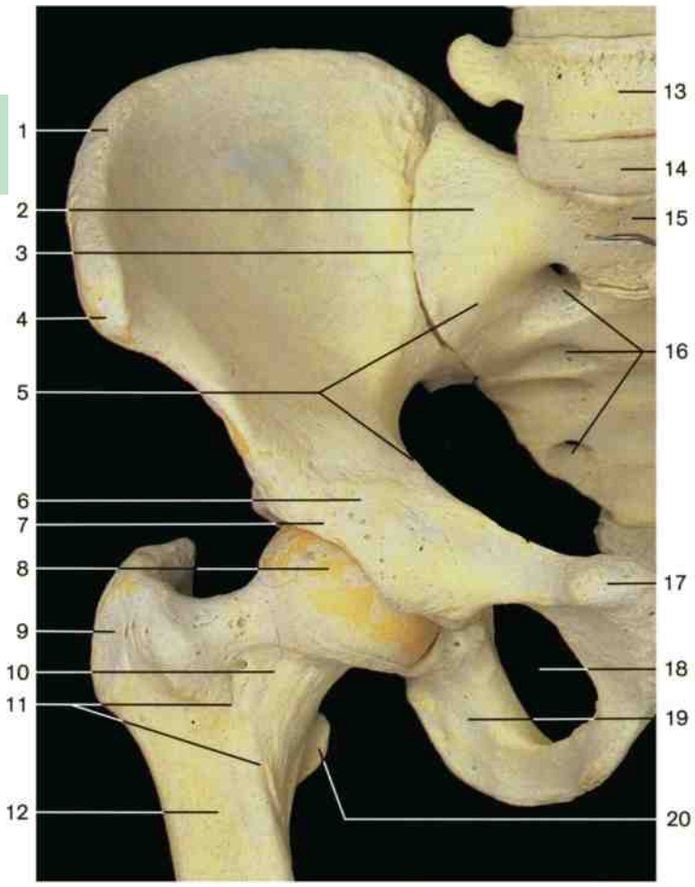
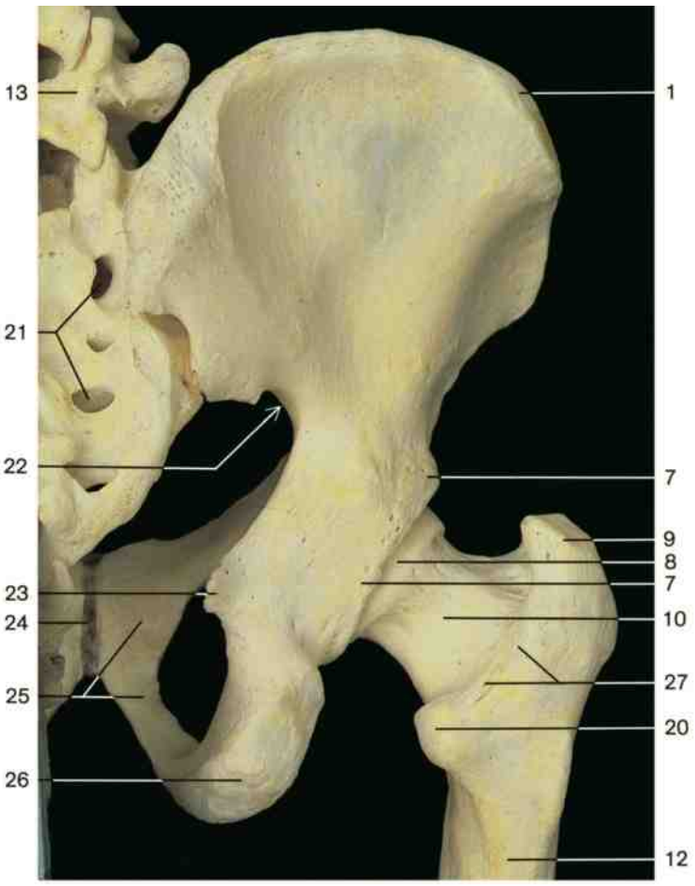


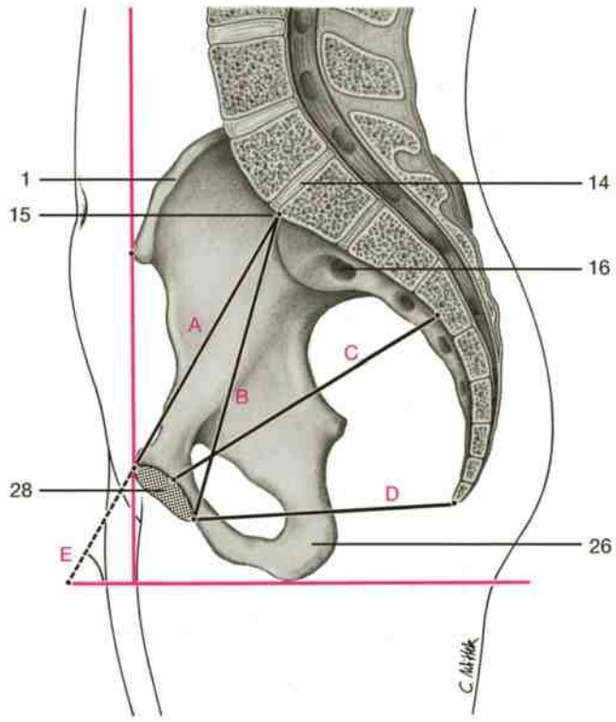
Bones of right hip joint (anterior aspect).



Bones of right hip joint (posterior aspect).

1 Iliac crest
2 Lateral part of sacrum (ala)
3 Position of sacro-iliac joint
4 Anterior superior iliac spine
5 Linea terminalis
6 Iliopubic eminence
7 Bony margin of acetabulum
8 Head of femur
9 Greater trochanter
10 Neck of femur
11 Intertrochanteric line
12 Shaft of femur
13 Fifth lumbar vertebra
14 Imitation intervertebral disc between fifth lumbar vertebra and sacrum
15 Sacral promontory
16 Anterior sacral foramina
17 Pubic tubercle
18 Obturator foramen
19 Ramus of ischium
20 Lesser trochanter
21 Dorsal sacral foramina
22 Greater sciatic notch
23 Ischial spine
24 Pubic symphysis
25 Pubis
26 Ischial tuberosity
27 Intertrochanteric crest
28 Symphysial surface

Diameters of the pelvis
A = true conjugate (11–11.5 cm) (conjugata vera)
B = diagonal conjugate (12.5–13 cm)
C = largest diameter of pelvis
D = inferior pelvic aperture
E = pelvic inclination (60°)



Inclination and diameters of the female pelvis, right half (medial aspect).

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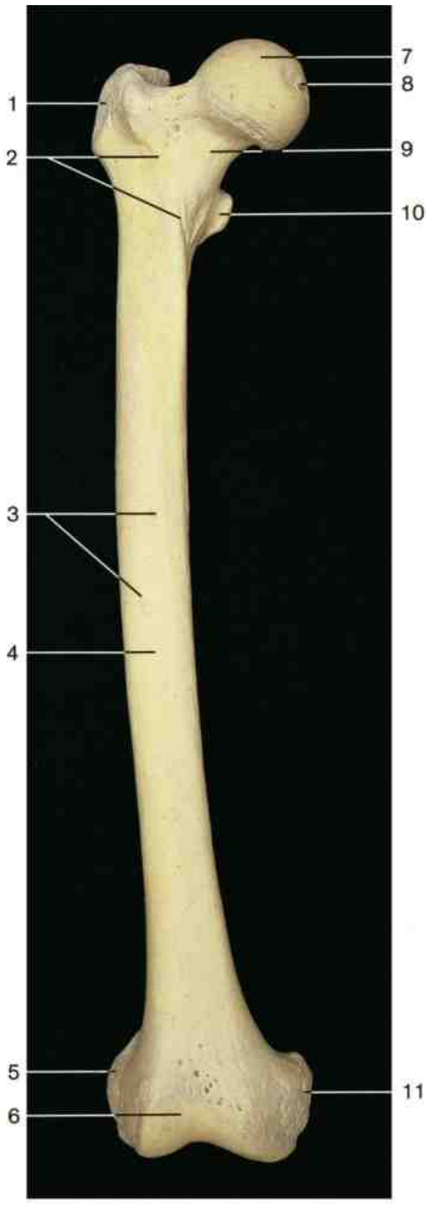
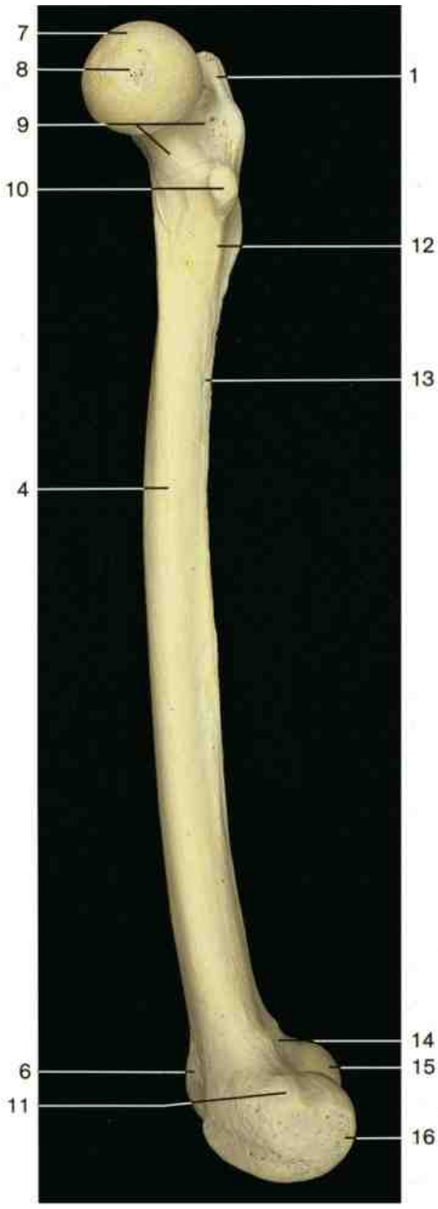
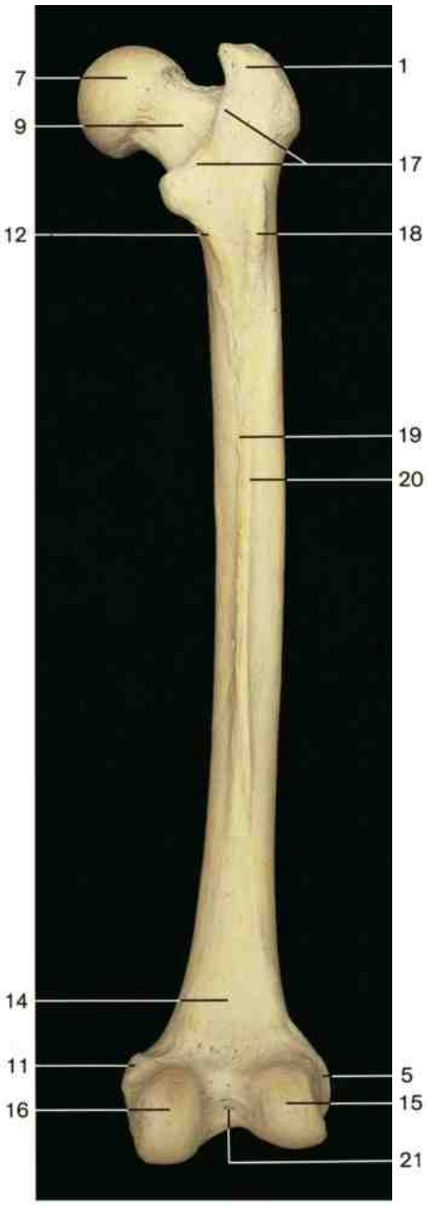


Right femur (anterior aspect).



Right femur (medial aspect).



Right femur (posterior aspect).

1 Greater trochanter
2 Intertrochanteric line
3 Nutrient foramina
4 Shaft of femur (diaphysis)
5 Lateral epicondyle
6 Patellar surface
7 Head
8 Fovea of head
9 Neck
10 Lesser trochanter
11 Medial epicondyle
12 Pectineal line
13 Linea aspera
14 Popliteal surface
15 Lateral condyle
16 Medial condyle
17 Intertrochanteric crest
18 Third trochanter
19 Medial lip of linea aspera
20 Lateral lip of linea aspera
21 Intercondylar fossa

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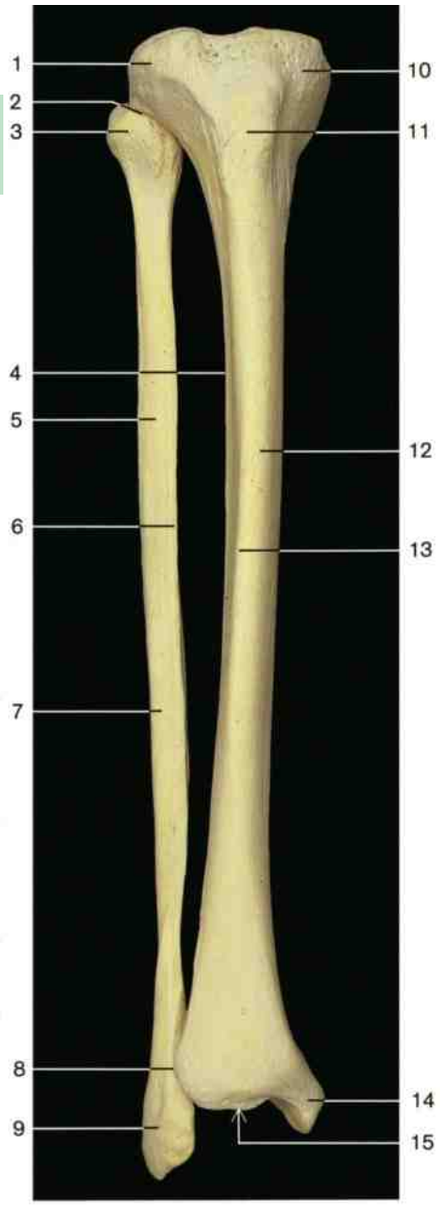
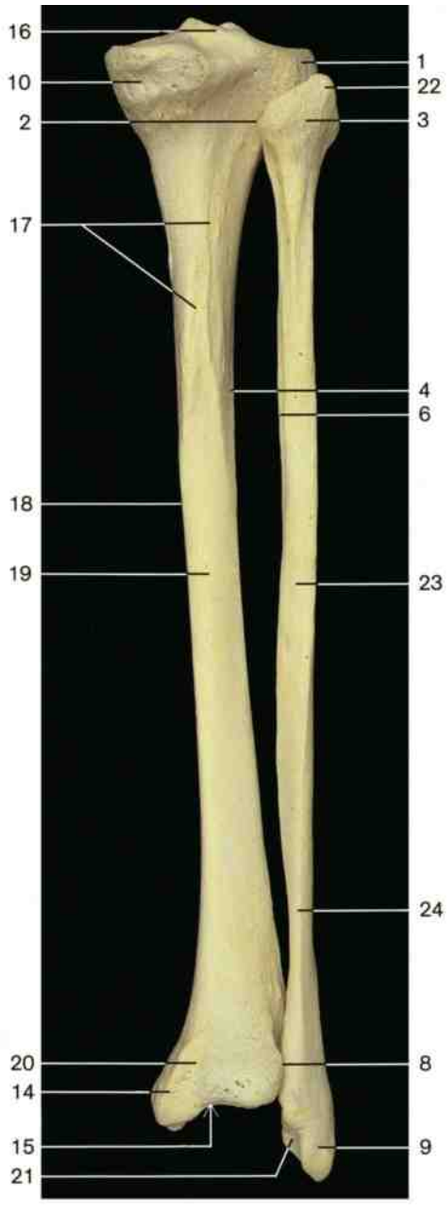
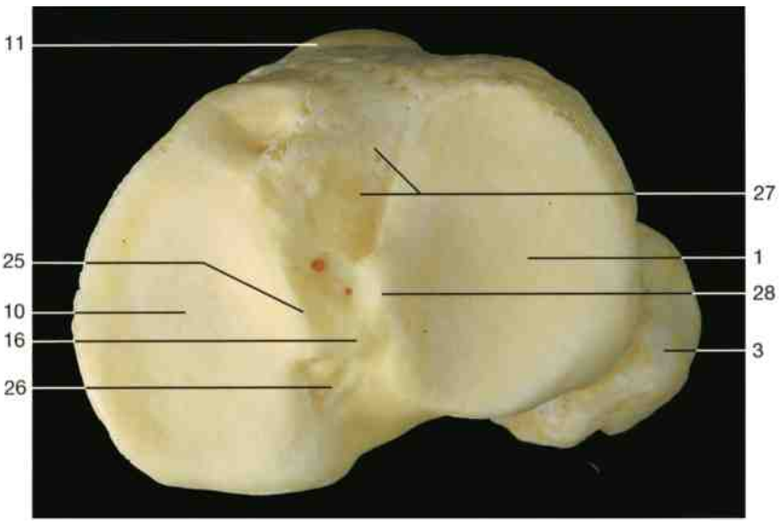


Bones of leg, right tibia, and fibula (anterior aspect).



Bones of leg, right tibia, and fibula (posterior aspect).

1 Lateral condyle of tibia
2 Position of tibiofibular joint
3 Head of fibula
4 Interosseous border of tibia
5 Shaft of fibula
6 Interosseous border of fibula
7 Lateral surface of fibula
8 Position of tibiofibular joint
9 Lateral malleolus
10 Medial condyle of tibia
11 Tuberosity of tibia
12 Shaft of tibia (diaphysis)
13 Anterior margin of tibia
14 Medial malleolus
15 Inferior articular surface of tibia
16 Intercondylar eminence
17 Soleal line
18 Medial border of tibia
19 Posterior surface of tibia
20 Malleolar sulcus of tibia
21 Malleolar articular surface of fibula
22 Apex of head of fibula
23 Posterior surface of fibula
24 Posterior border of fibula
25 Medial intercondylar tubercle
26 Posterior intercondylar area
27 Anterior intercondylar area
28 Lateral intercondylar tubercle



Upper end of right tibia with fibula (from above), anterior margin of tibia above. Superior articular surface of tibia.

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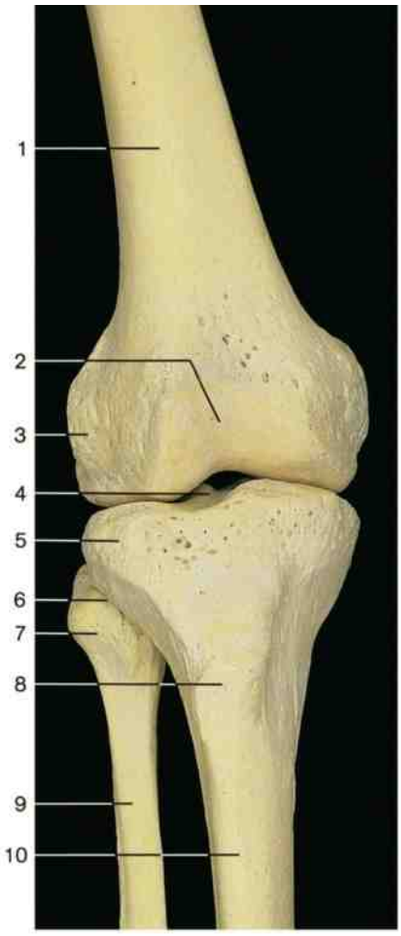
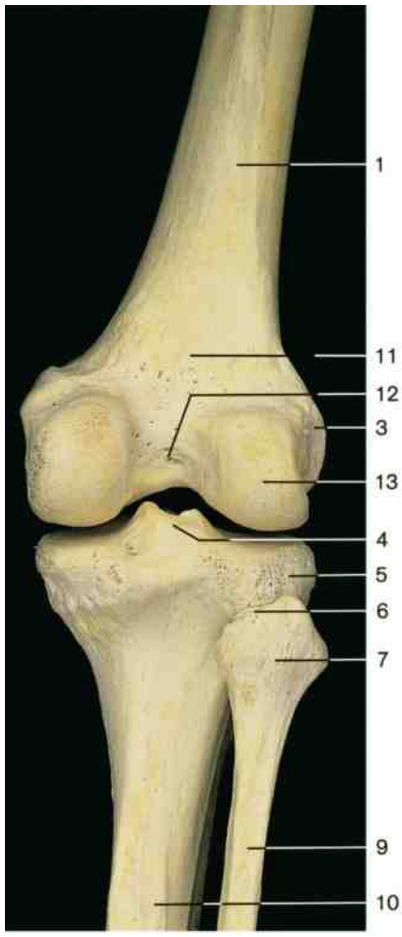
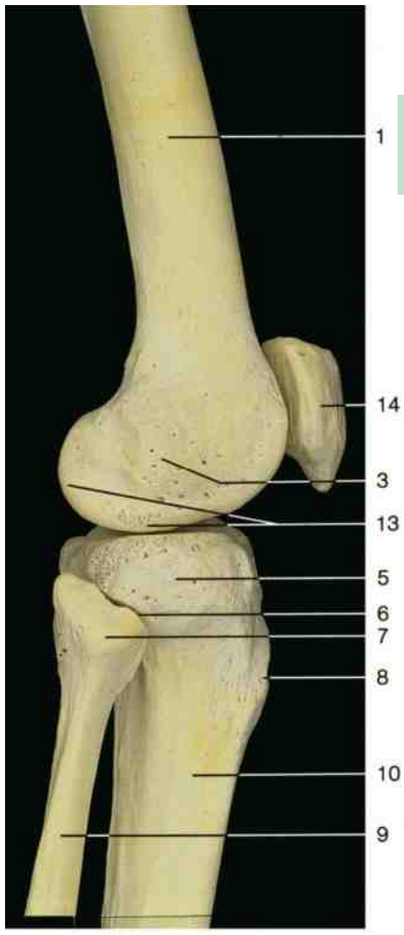


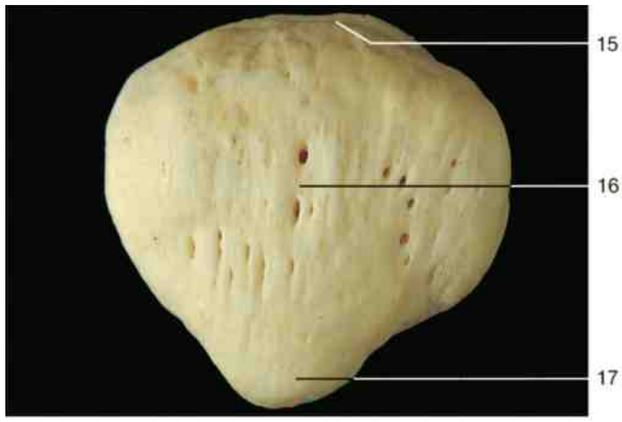
Bones of right knee joint (anterior aspect).



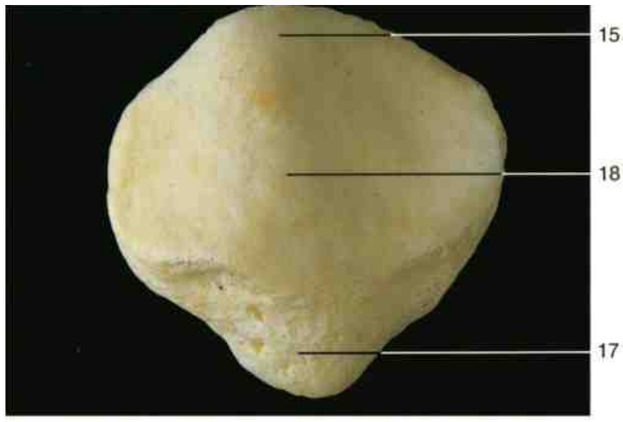
Bones of right knee joint (posterior aspect).



Bones of right knee joint (lateral aspect).



Right patella (anterior aspect).



Right patella (posterior aspect).

1 Femur
2 Patellar surface of femur
3 Lateral epicondyle of femur
4 Intercondylar eminence of tibia
5 Lateral condyle of tibia
6 Position of tibiofibular joint
7 Head of fibula
8 Tuberosity of tibia
9 Fibula
10 Shaft of tibia
11 Popliteal surface of femur
12 Intercondylar fossa of femur
13 Lateral condyle of femur
14 Patella
15 Base of patella
16 Anterior surface of patella
17 Apex of patella
18 Articular surface of patella

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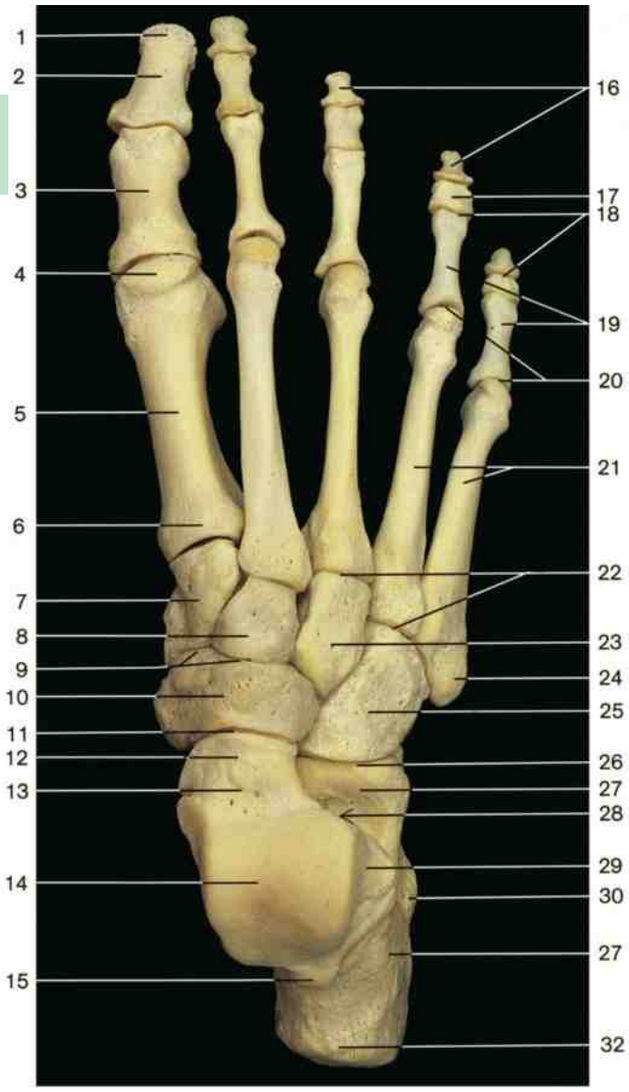
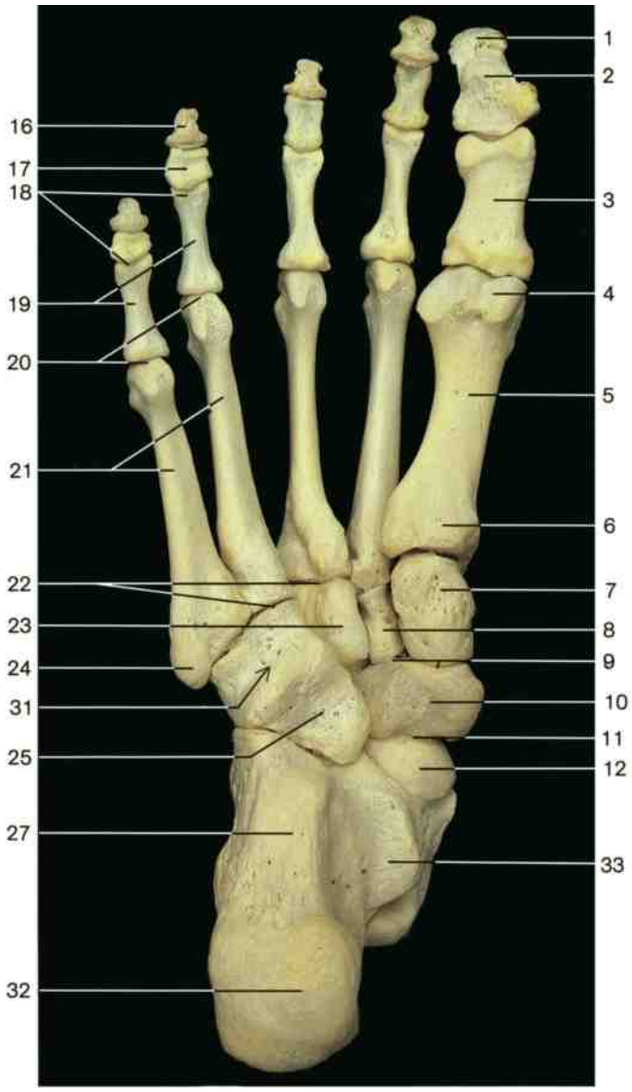
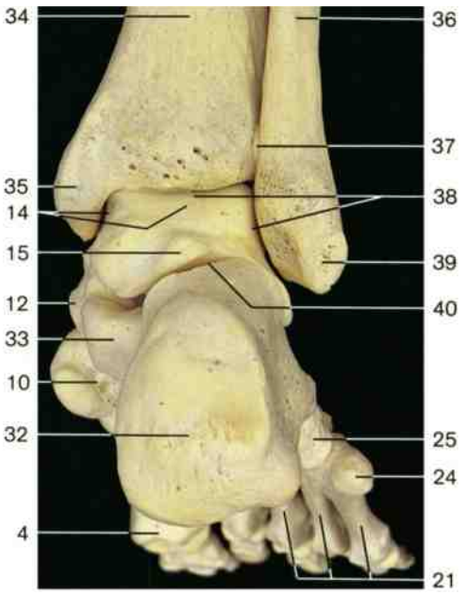


Bones of right foot (dorsal aspect).



Bones of right foot (plantar aspect).



Bones of right foot together with tibia and fibula (posterior aspect).

1 Tuberosity of distal phalanx of great toe
2 Distal phalanx of great toe
3 Proximal phalanx of great toe
4 Head of first metatarsal bone
5 First metatarsal bone
6 Base of first metatarsal bone
7 Medial cuneiform bone
8 Intermediate cuneiform bone
9 Position of cuneonavicular joint
10 Navicular bone

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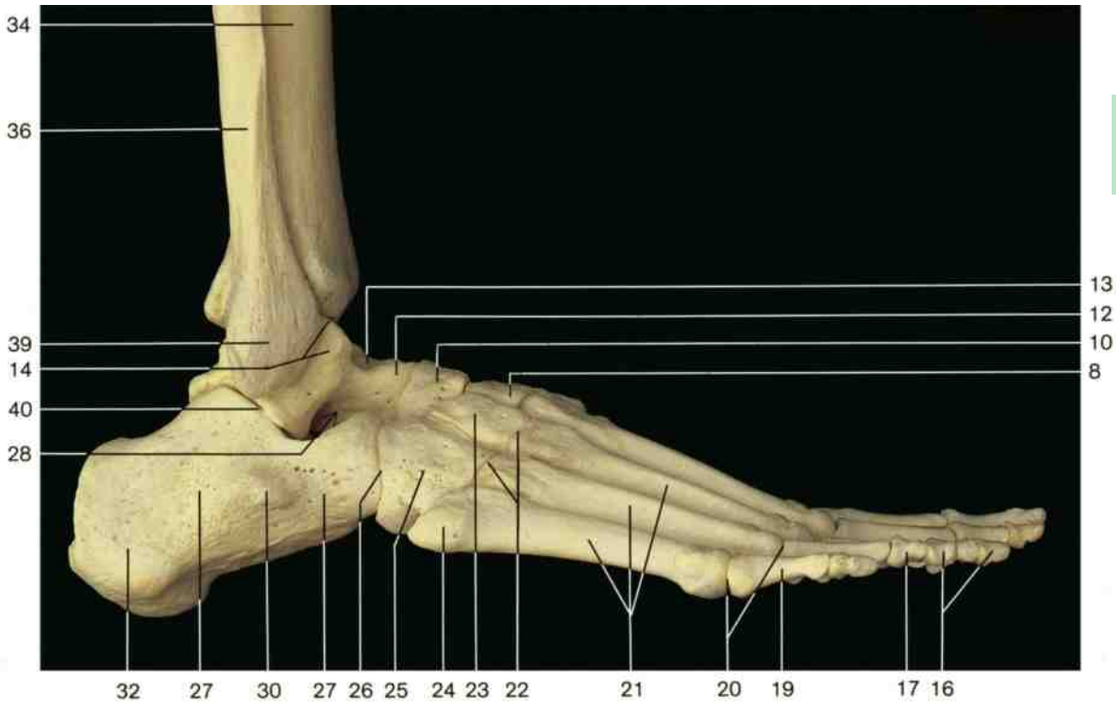
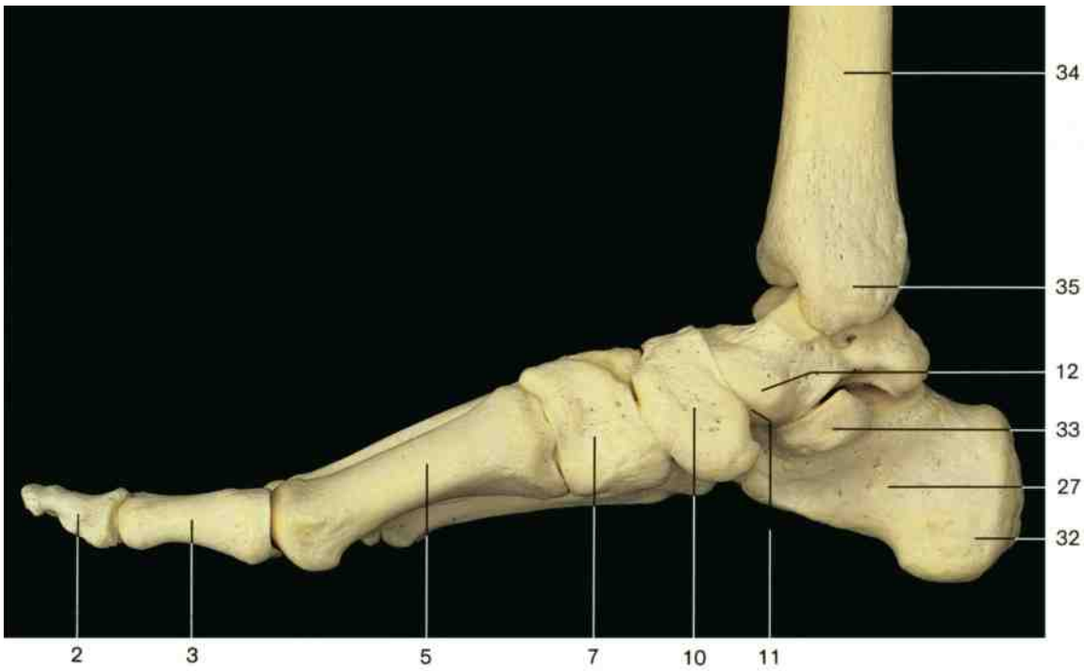


Bones of right foot, tibia, and fibula (lateral aspect).



Bones of right foot, tibia, and fibula (medial aspect).

11 Position of talocalcaneonavicular joint
12 Head of talus
13 Neck of talus
14 Trochlea of talus
15 Posterior talar process
16 Distal phalanges
17 Middle phalanges
18 Position of interphalangeal joints
19 Proximal phalanges
20 Position of metatarsophalangeal joints
21 Metatarsal bones
22 Position of tarsometatarsal joints
23 Lateral cuneiform bone
24 Tuberosity of fifth metatarsal bone
25 Cuboid bone
26 Position of calcaneocuboid joint
27 Calcaneus
28 Tarsal sinus
29 Lateral malleolar surface of talus
30 Peroneal trochlea of calcaneus
31 Groove for tendon of peroneus longus
32 Calcaneal tuberosity
33 Sustentaculum tali
34 Tibia
35 Medial malleolus
36 Fibula
37 Position of tibiofibular syndesmosis
38 Position of ankle joint
39 Lateral malleolus
40 Position of subtalar joint

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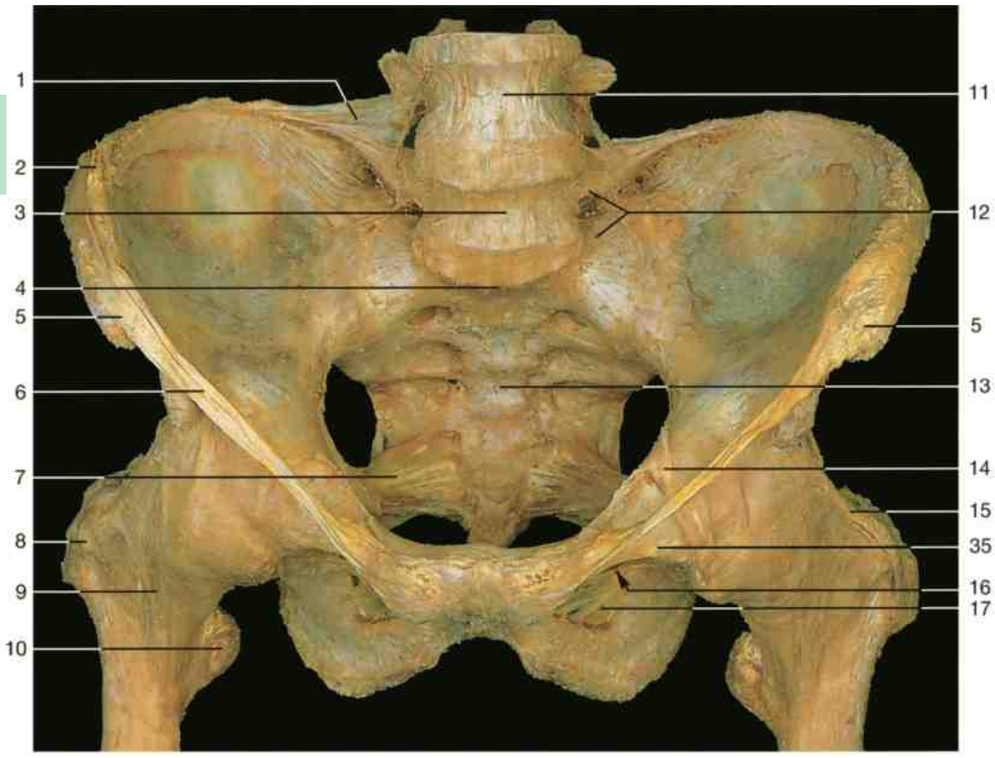
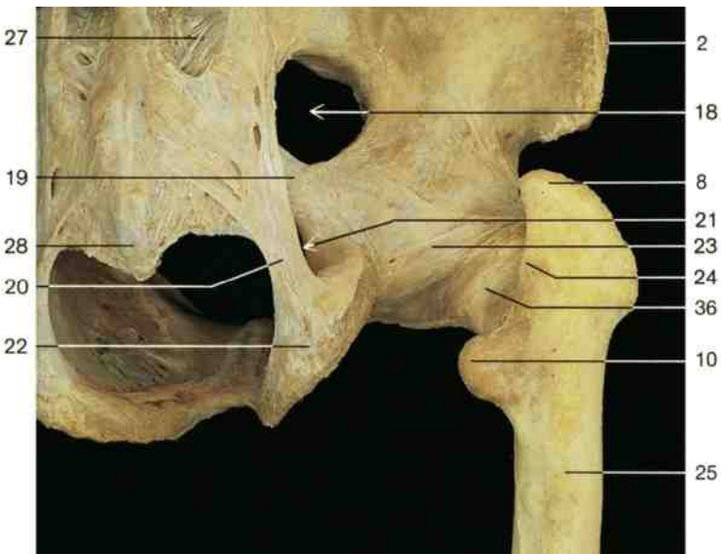
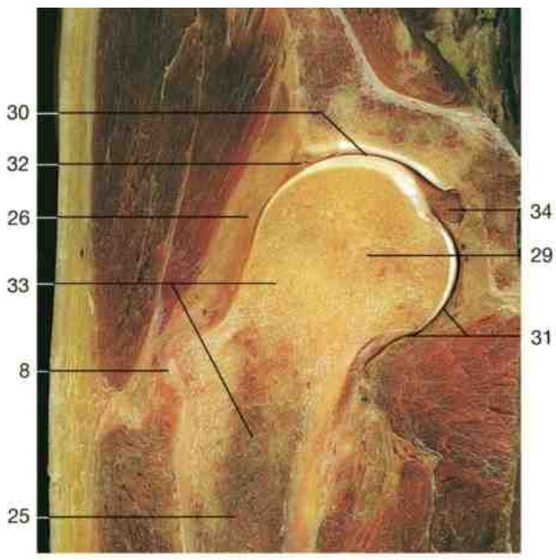


Ligaments of pelvis and hip joint (anterior aspect).

1 Iliolumbar ligament
2 Iliac crest
3 Fifth lumbar vertebra
4 Sacral promontory
5 Anterior superior iliac spine
6 Inguinal ligament
7 Sacrospinous ligament
8 Greater trochanter
9 Iliofemoral ligament (vertical band)
10 Lesser trochanter
11 Fourth lumbar vertebra
12 Iliolumbar and ventral sacro-iliac ligaments
13 Sacrum
14 Iliopectineal arch
15 Iliofemoral ligament (horizontal band)
16 Obturator canal
17 Obturator membrane
18 Greater sciatic foramen
19 Sacrospinous ligament
20 Sacrotuberous ligament
21 Lesser sciatic foramen
22 Ischial tuberosity
23 Ischiofemoral ligament
24 Intertrochanteric crest
25 Femur
26 Articular capsule of hip joint
27 Dorsal sacro-iliac ligaments
28 Coccyx with superficial dorsal sacrococcygeal ligament
29 Head of femur
30 Articular cartilage of head of femur
31 Articular cavity of hip joint
32 Acetabular lip
33 Spongy bone
34 Ligament of head of femur
35 Pubofemoral ligament
36 Zona orbicularis



Ligaments of pelvis and hip joint (right posterior aspect).



Coronal section of right hip joint (anterior aspect).

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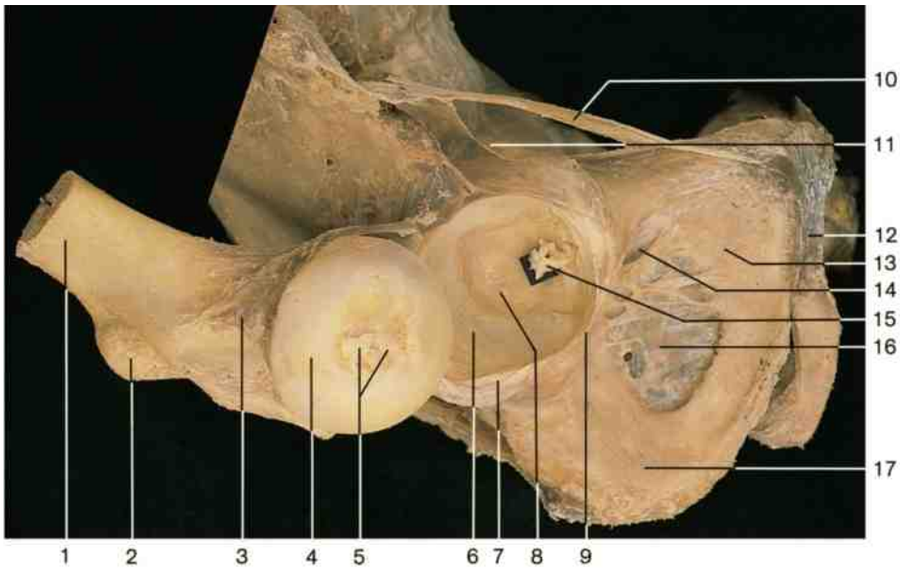
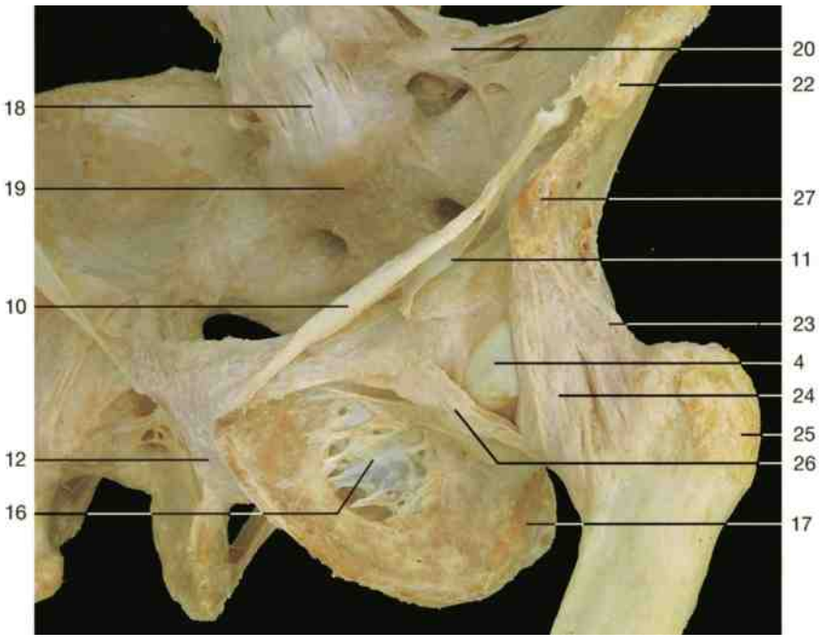
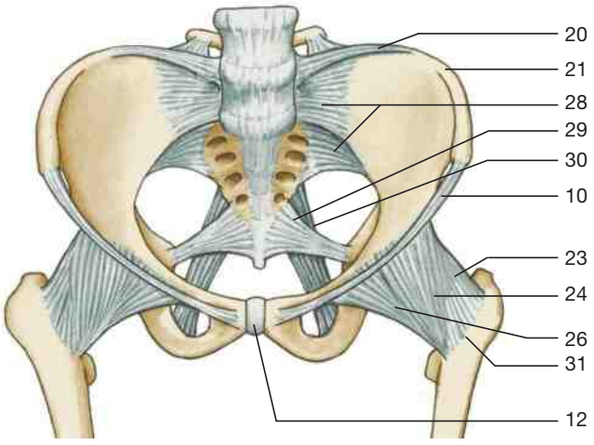


Right hip joint, opened (latero-anterior aspect). The ligament of the head of the femur has been divided, and the femur has been posteriorly reflected.

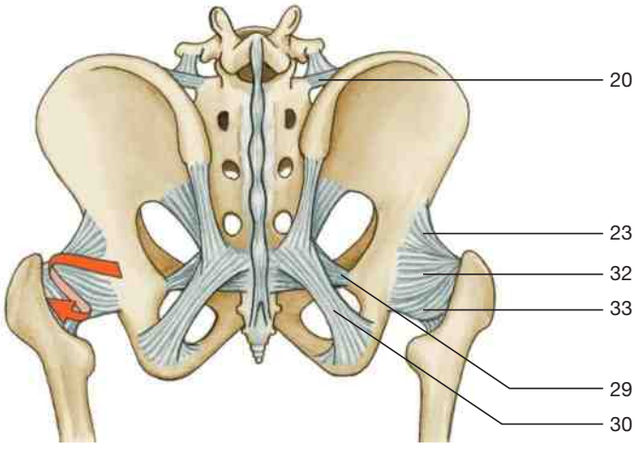


1 Femur
2 Lesser trochanter
3 Neck of femur
4 Head of femur
5 Fovea of head with cut edge of ligament of head
6 Lunate surface of acetabulum
7 Acetabular lip
8 Acetabular fossa
9 Transverse acetabular ligament
10 Inguinal ligament
11 Iliopectineal arch
12 Pubic symphysis
13 Pubic bone
14 Obturator canal
15 Ligament of head of femur
16 Obturator membrane
17 Ischium
18 Anterior longitudinal ligament (level of fifth lumbar vertebra)
19 Sacral promontory
20 Iliolumbar ligament
21 Iliac crest
22 Anterior superior iliac spine
23 Iliofemoral ligament (horizontal band)
24 Iliofemoral ligament (vertical band)
25 Greater trochanter
26 Pubofemoral ligament
27 Anterior inferior iliac spine
28 Ventral sacro-iliac ligaments
29 Sacrospinous ligament
30 Sacrotuberous ligament
31 Intertrochanteric line
32 Ischiofemoral ligament
33 Zona orbicularis

◁ **Ligaments of the pelvis and hip joint** (antero-lateral aspect).



Ligaments of hip joint (anterior aspect, schematic drawing).



Ligaments of hip joint (posterior aspect, schematic drawing).

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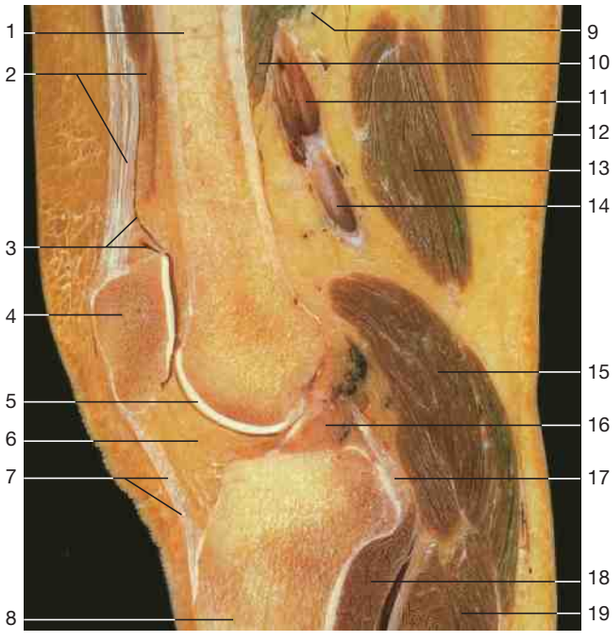
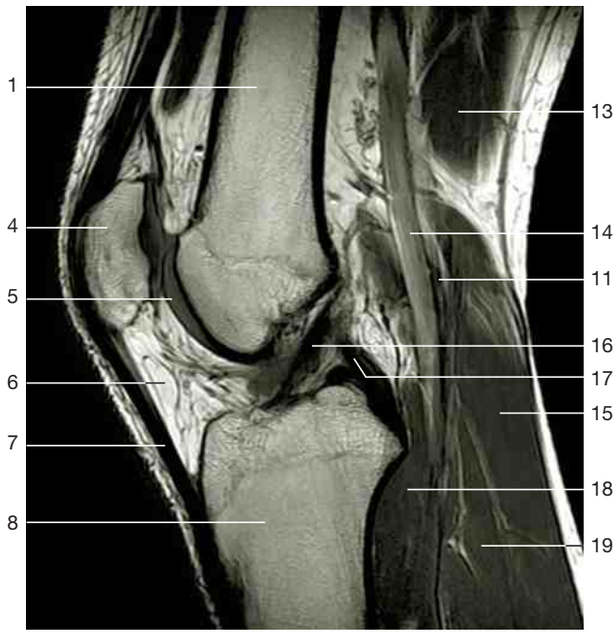
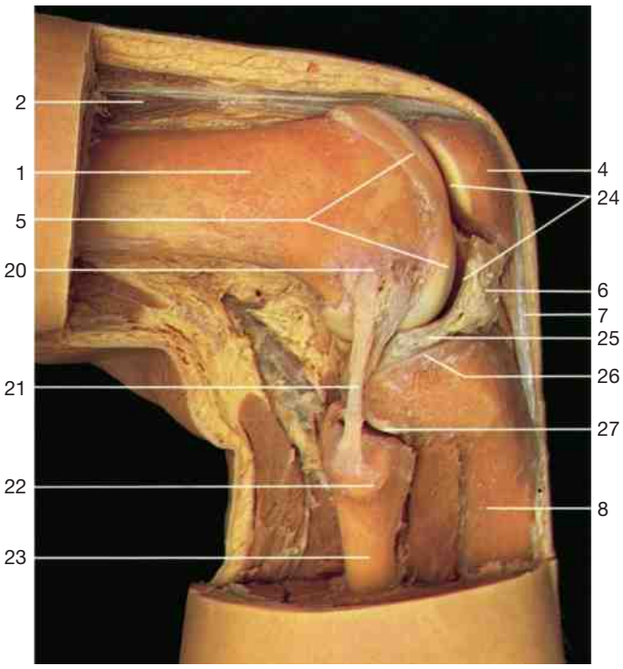


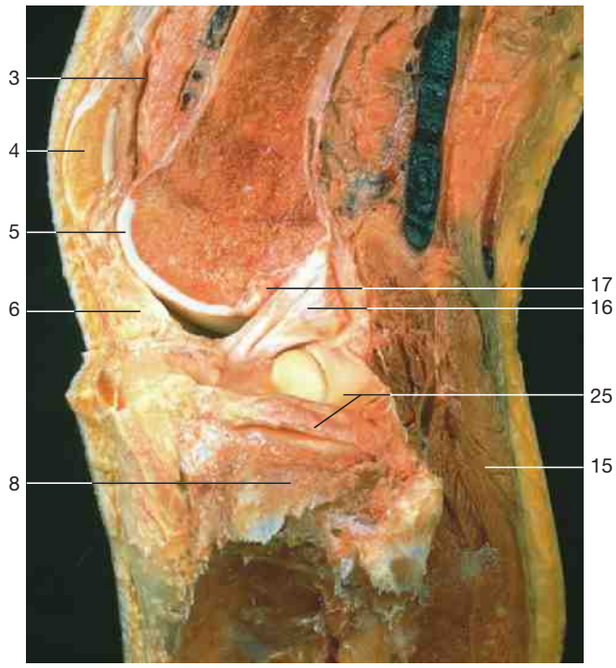
Sagittal section through the knee joint (lateral aspect). Anterior surface to the left.



Sagittal section through the knee joint (MRI scan; from Heuck et al., MRT-Atlas, 2009).



Right knee joint and tibiofibular joint with ligaments (lateral aspect). Note the position of the lateral meniscus.



Left knee joint with anterior cruciate ligament (lateral aspect).

1 Femur
2 Quadriceps femoris muscle
3 Suprapatellar bursa and articular cavity
4 Patella
5 Articular cartilage of femur
6 Infrapatellar fat pad
7 Patellar ligament
8 Tibia
9 Tibial nerve
10 Adductor magnus muscle
11 Popliteal vein
12 Semitendinosus muscle
13 Semimembranosus muscle
14 Popliteal artery
15 Gastrocnemius muscle
16 Anterior cruciate ligament
17 Posterior cruciate ligament
18 Popliteus muscle
19 Soleus muscle
20 Lateral epicondyle of femur
21 Fibular collateral ligament
22 Head of fibula
23 Fibula
24 Articular cavity of knee joint
25 Lateral meniscus of knee joint
26 Lateral condyle of tibia
27 Tibiofibular joint

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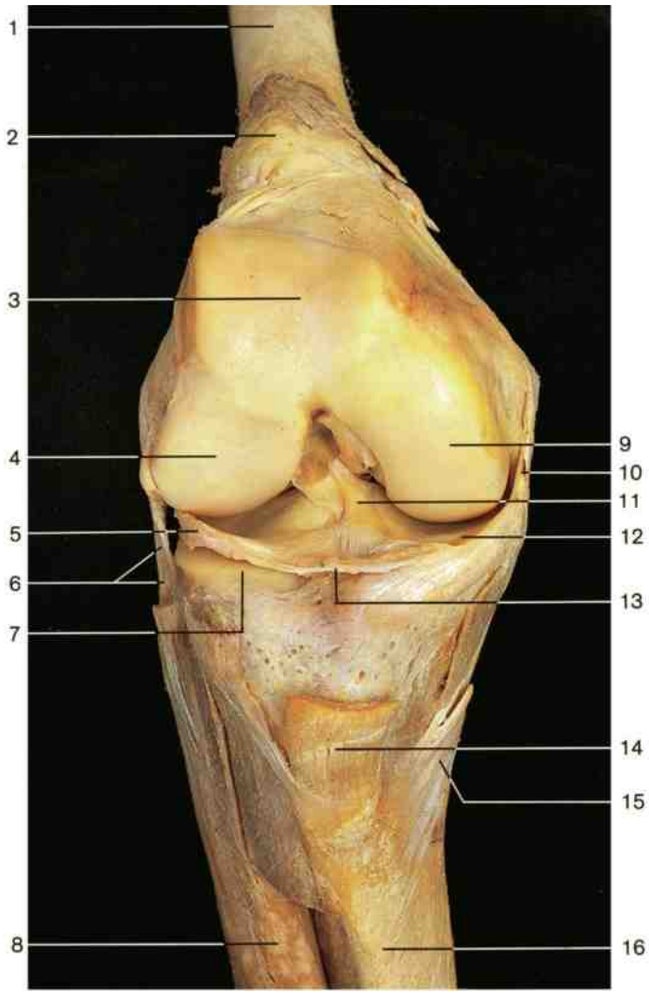
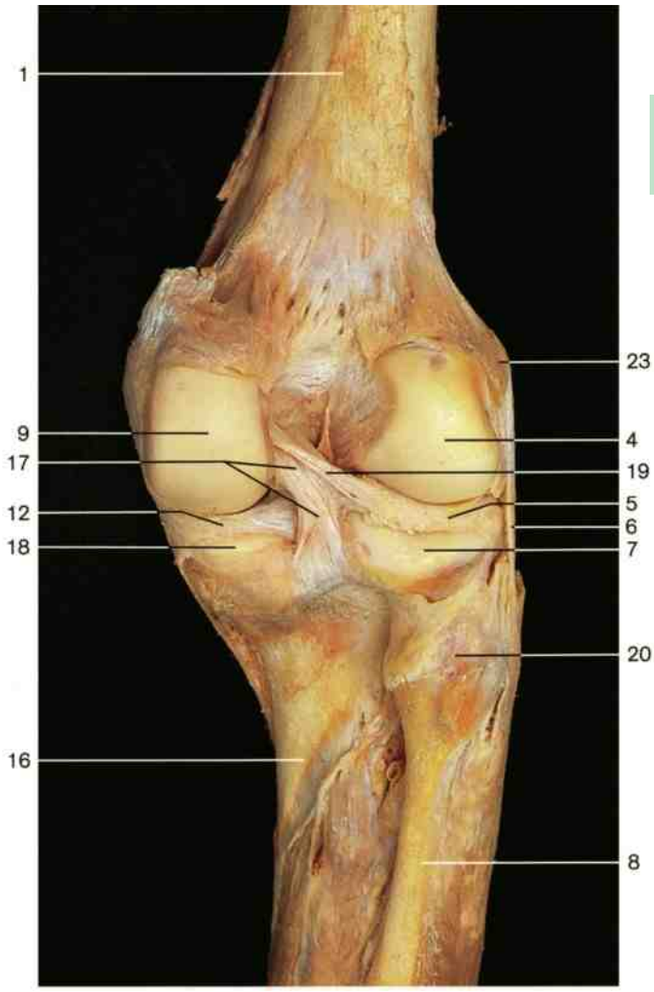


Right knee joint (opened) **with ligaments** (anterior aspect). The patella and articular capsule have been removed and the femur slightly flexed.



Right knee joint with ligaments (posterior aspect). The joint is extended and the articular capsule has been removed.

Articular surface of right tibia, menisci, and cruciate ligaments (superior aspect). Anterior margin of tibia above.

1 Femur
2 Articular capsule with suprapatellar bursa
3 Patellar surface
4 Lateral condyle of femur
5 Lateral meniscus of knee joint
6 Fibular collateral ligament
7 Lateral condyle of tibia (superior articular surface)
8 Fibula
9 Medial condyle of femur
10 Tibial collateral ligament
11 Anterior cruciate ligament
12 Medial meniscus of knee joint
13 Transverse ligament of knee
14 Patellar ligament
15 Common tendon of sartorius, semitendinosus, and gracilis muscles
16 Tibia
17 Posterior cruciate ligament
18 Medial condyle of tibia (superior articular surface)
19 Posterior meniscofemoral ligament
20 Head of fibula
21 Tendon of semimembranosus muscle
22 Posterior attachment of articular capsule of knee joint
23 Lateral epicondyle of femur

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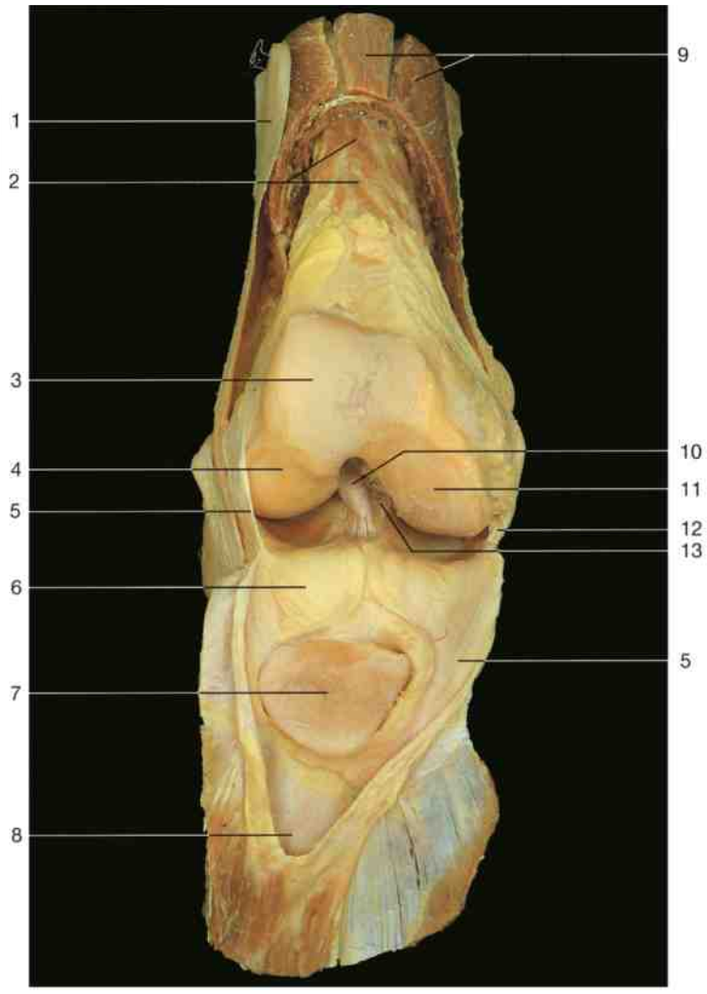
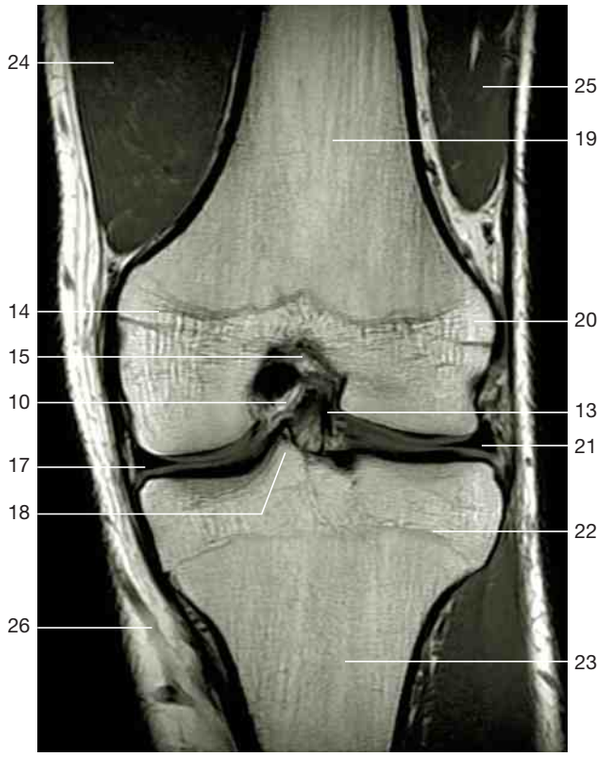
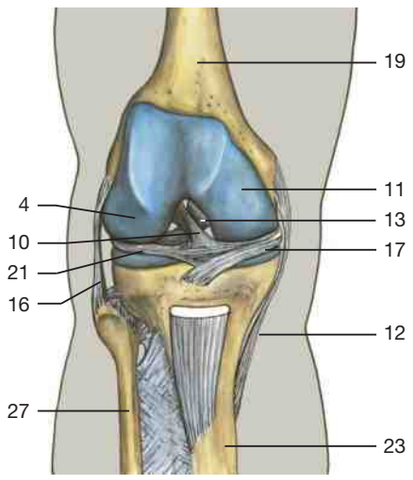


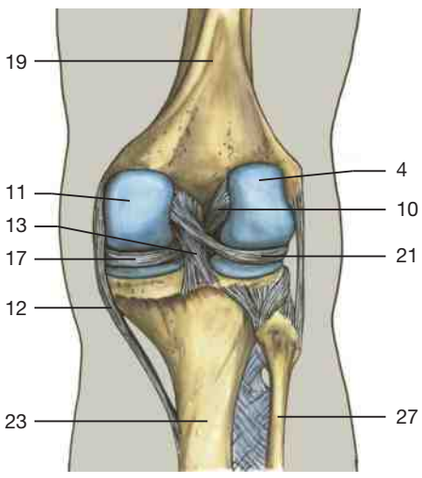
Right knee joint, opened (anterior aspect). Patellar ligament with patella reflected.



Coronal section through the knee joint (MRI scan; from Heuck et al., MRT-Atlas, 2009).



Ligaments of the right knee joint (anterior aspect).



Ligaments of the right knee joint (posterior aspect).

1 Iliotibial tract
2 Articular muscle of knee
3 Patellar surface
4 Lateral condyle of femur
5 Articular capsule
6 Infrapatellar fat pad
7 Patella (articular surface)
8 Suprapatellar bursa
9 Quadriceps femoris muscle
10 Anterior cruciate ligament
11 Medial condyle of femur
12 Tibial collateral ligament
13 Posterior cruciate ligament
14 Medial epicondyle of femur
15 Intercondylar fossa of femur
16 Fibular collateral ligament
17 Medial meniscus of knee joint
18 Medial intercondylar tubercle
19 Femur
20 Lateral epicondyle of femur
21 Lateral meniscus of knee joint
22 Epiphysial line of tibia
23 Tibia
24 Vastus medialis muscle
25 Vastus lateralis muscle
26 Great saphenous vein
27 Fibula

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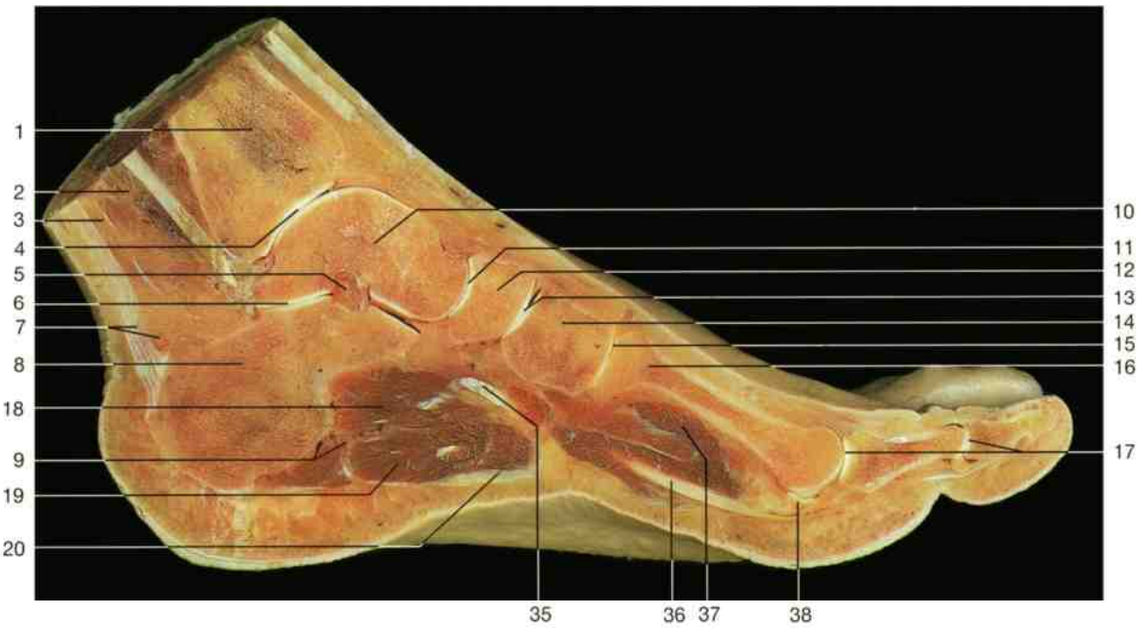
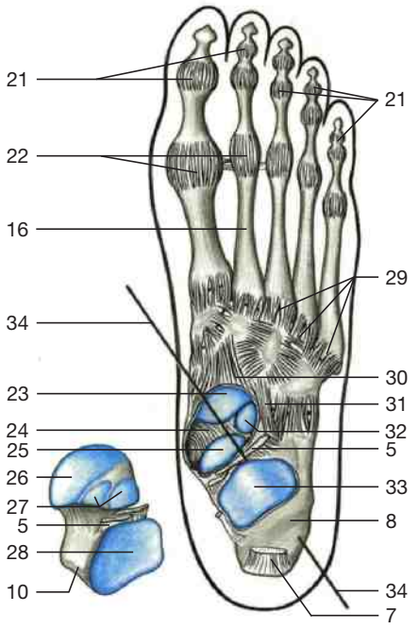


Sagittal section through the foot at the level of first phalanx.

Sagittal section through the foot and leg (MRI scan; from Heuck et al., MRT-Atlas, 2009).



Talocalcaneonavicular joint. The talus has been rotated to show the articular surfaces of the joint.

1 Tibia
2 Deep flexor muscles
3 Superficial flexor muscles
4 Ankle joint
5 Interosseous talocalcaneal ligament
6 Subtalar joint
7 Calcaneal or Achilles tendon and bursa
8 Calcaneus
9 Vessels and nerves of foot
10 Talus
11 Talocalcaneonavicular joint
12 Navicular bone
13 Cuneonavicular joint
14 Intermediate cuneiform bone
15 Tarsometatarsal joints
16 Metatarsal bones
17 Metatarsophalangeal and interphalangeal joints
18 Quadratus plantae muscle with flexor tendons
19 Flexor digitorum brevis muscle
20 Plantar aponeurosis
21 Articular capsules of interphalangeal joints
22 Articular capsules of metatarsophalangeal joints
23 Articular surface of navicular bone
24 Plantar calcaneonavicular ligament
25 Middle talar articular surface of calcaneus
26 Navicular articular surface of talus
27 Anterior and middle calcaneal surfaces of talus
28 Posterior calcaneal surface of talus
29 Dorsal tarsometatarsal ligaments
30 Talonavicular ligament
31 Bifurcate ligament
32 Anterior talar articular surface of calcaneus
33 Posterior talar articular surface of calcaneus
34 Axis for inversion and eversion
35 Tendon of tibialis posterior muscle
36 Tendon of flexor hallucis longus muscle
37 Flexor hallucis brevis muscle
38 Sesamoid bone
39 Cuboid bone

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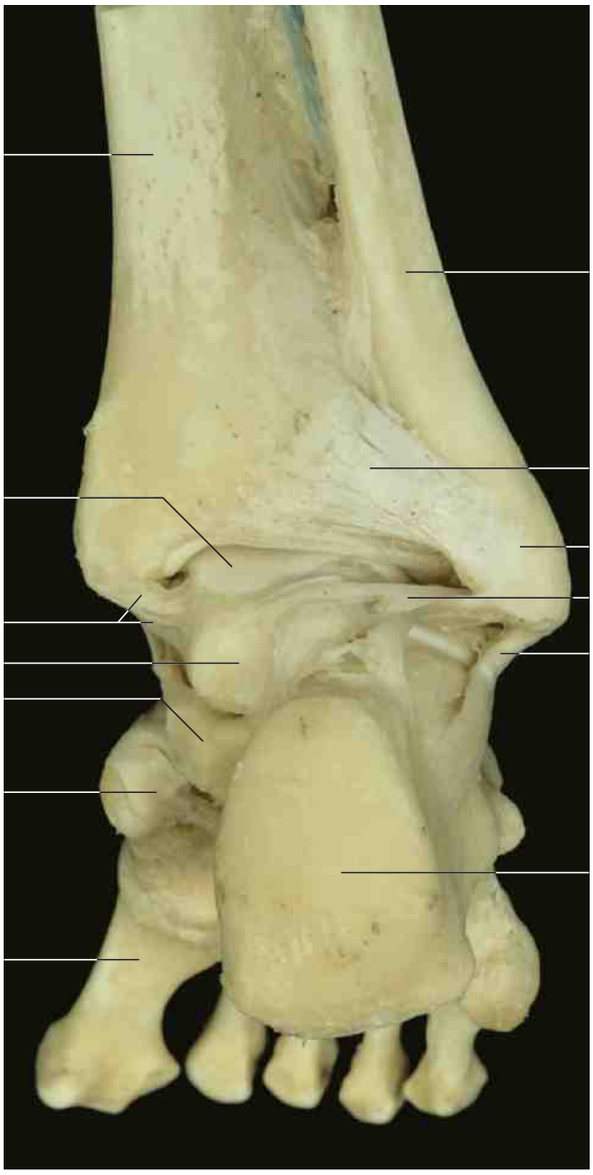

Ligaments of ankle joint, right foot (posterior aspect).

Deep ligaments of the foot, right foot (plantar aspect). The toes have been removed.

1 Tibia
2 Trochlea of talus
3 Deltoid ligament of ankle (posterior tibiotalar part)
4 Talus
5 Sustentaculum tali
6 Navicular bone
7 First metatarsal bone
8 Fibula
9 Posterior tibiofibular ligament
10 Lateral malleolus
11 Posterior talofibular ligament
12 Calcaneofibular ligament
13 Calcaneal tuberosity
14 Plantar tarsometatarsal ligaments
15 Long plantar ligament
16 Plantar cuneonavicular ligaments
17 Plantar calcaneonavicular ligament

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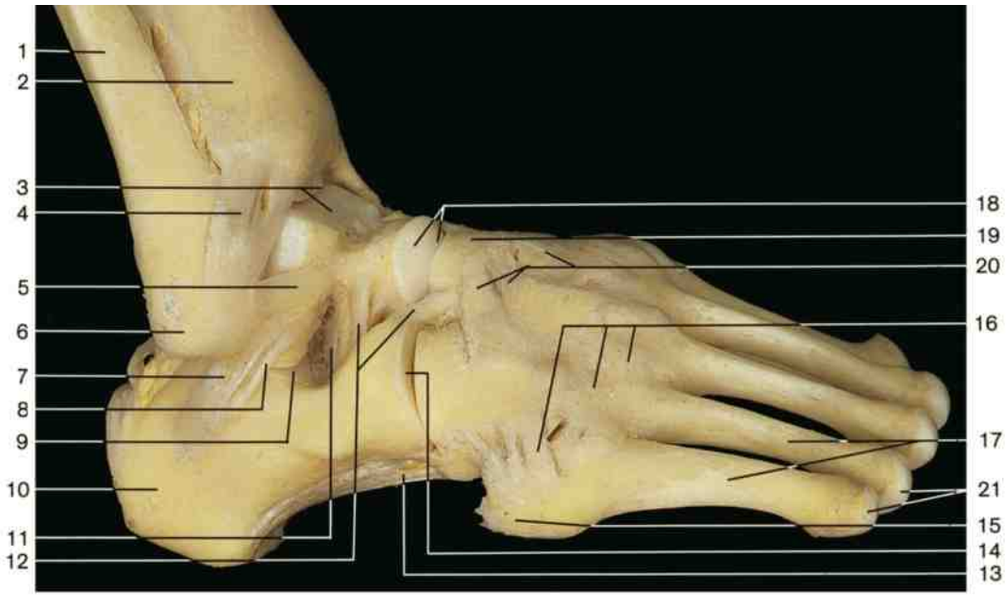
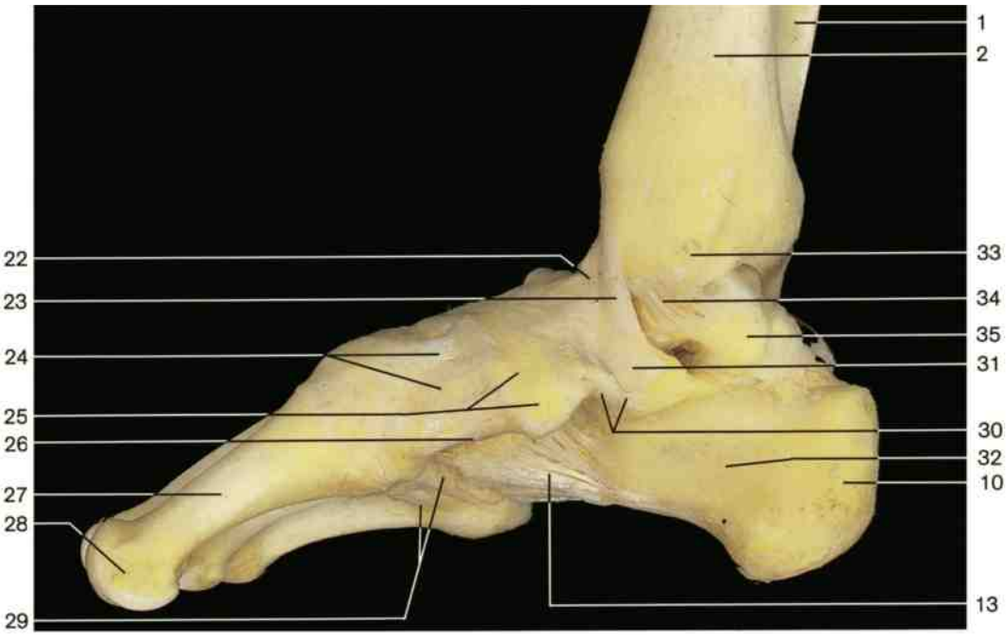


Ligaments of right foot (lateral aspect).



Ligaments of right foot (medial aspect).

1 Fibula
2 Tibia
3 Trochlea of talus and ankle joint
4 Anterior tibiofibular ligament
5 Anterior talofibular ligament
6 Lateral malleolus
7 Calcaneofibular ligament
8 Lateral talocalcaneal ligament
9 Subtalar joint
10 Tuber calcanei
11 Interosseous talocalcaneal ligament
12 Bifurcate ligament
13 Long plantar ligament
14 Calcaneocuboid joint
15 Tuberosity of fifth metatarsal bone
16 Dorsal tarsometatarsal ligaments
17 Metatarsal bones
18 Head of talus and talocalcaneonavicular joint
19 Navicular bone
20 Dorsal cuneonavicular ligaments
21 Heads of metatarsal bones
22 Medial or deltoid ligament of ankle (tibionavicular part)
23 Medial or deltoid ligament of ankle (tibiocalcaneal part)
24 Dorsal cuneonavicular ligaments
25 Navicular bone
26 Plantar cuneonavicular ligament
27 First metatarsal bone
28 Head of first metatarsal bone
29 Plantar tarsometatarsal ligaments
30 Plantar calcaneonavicular ligament
31 Sustentaculum tali
32 Calcaneus
33 Medial malleolus
34 Medial or deltoid ligament of ankle (posterior part)
35 Talus

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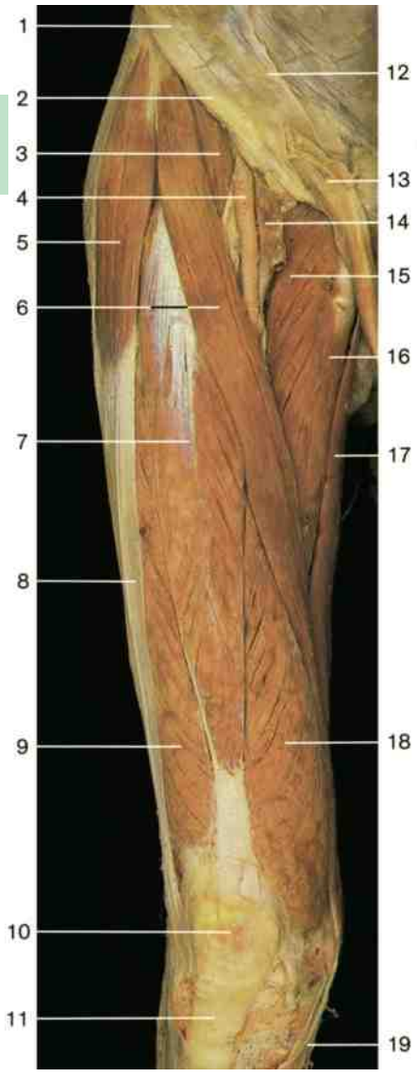
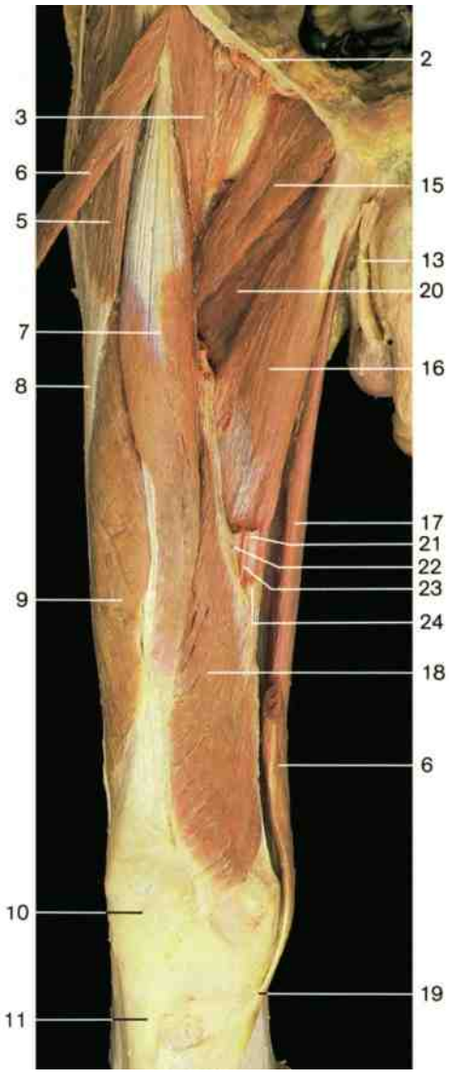
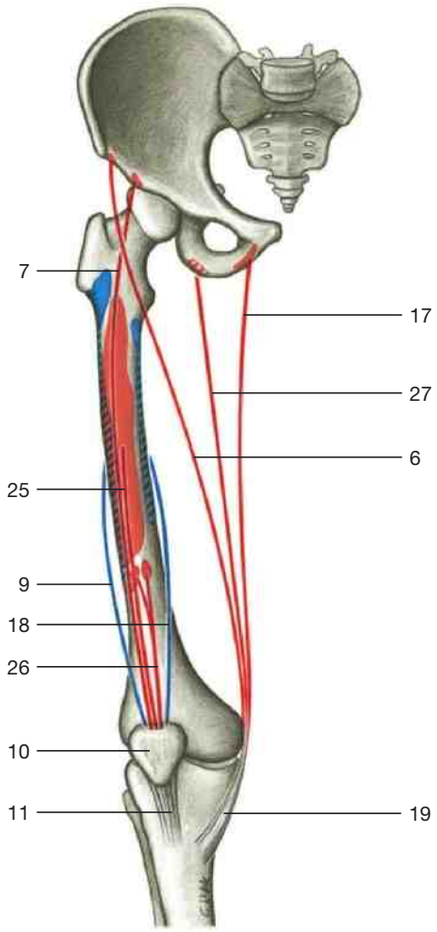


Extensor and adductor muscles of thigh, right thigh (anterior aspect).



Quadriceps muscle and superficial layer of adductor muscles, right thigh (anterior aspect). The sartorius muscle has been divided.



Course of extensor muscles of thigh and muscles inserting with common tendon on tibia (schematic drawing).

1 Anterior superior iliac spine
2 Inguinal ligament
3 Iliopsoas muscle
4 Femoral artery
5 Tensor fasciae latae muscle
6 Sartorius muscle
7 Rectus femoris muscle
8 Iliotibial tract
9 Vastus lateralis muscle
10 Patella
11 Patellar ligament
12 Aponeurosis of external abdominal oblique muscle
13 Spermatic cord
14 Femoral vein
15 Pectineus muscle
16 Adductor longus muscle
17 Gracilis muscle
18 Vastus medialis muscle
19 Common tendon of sartorius, gracilis, and semitendinosus muscles (pes anserinus)
20 Adductor brevis muscle
21 Femoral artery } entering the adductor canal
22 Femoral vein } entering the adductor canal
23 Saphenous nerve } entering the adductor canal
24 Fascia of adductor canal
25 Vastus intermedius muscle
26 Articularis genus muscle
27 Semitendinosus muscle

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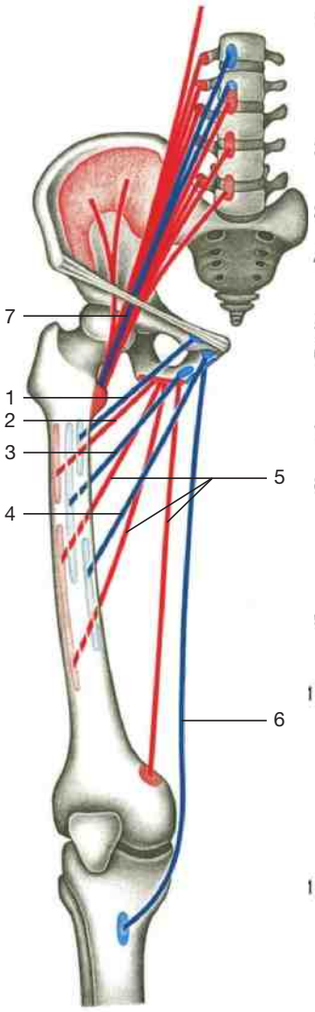
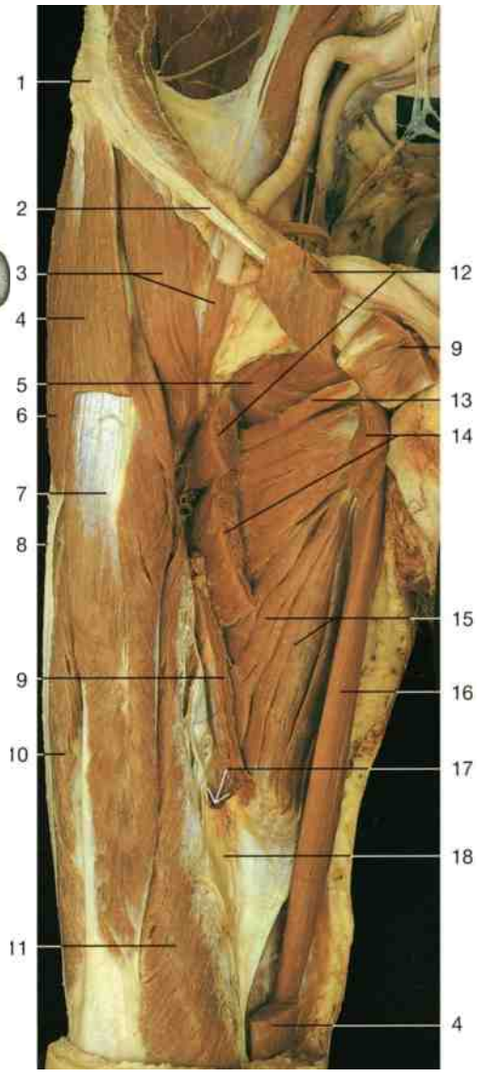


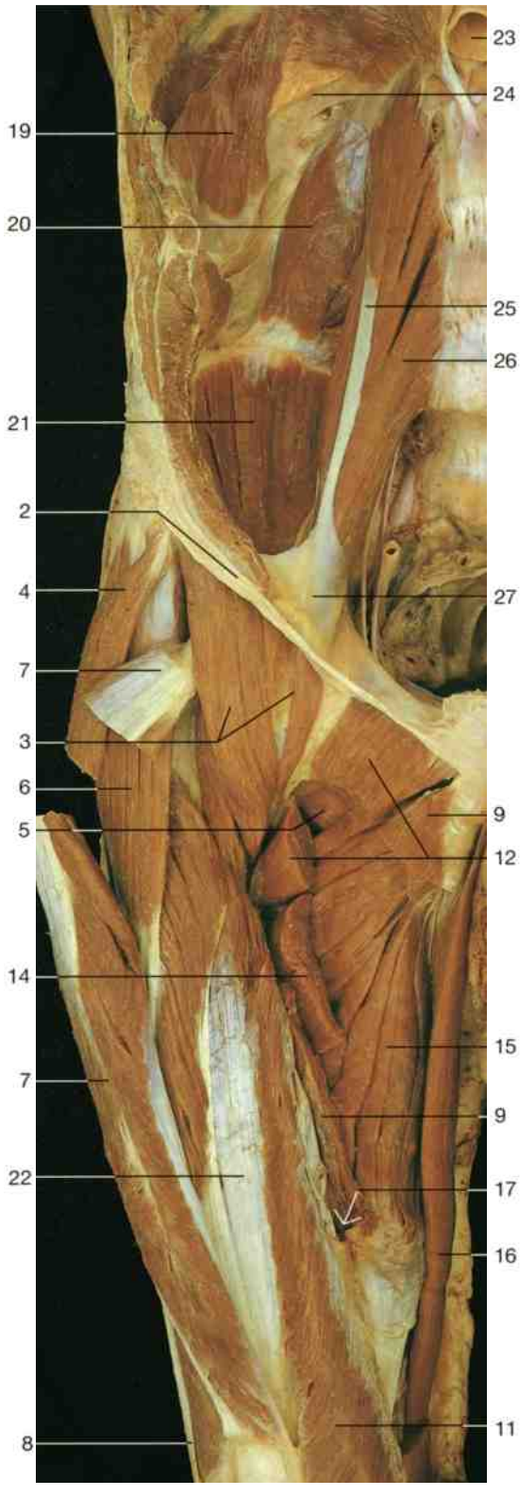
Course of adductor muscles (schematic drawing).

1 Pectineus muscle (blue)
2 Adductor minimus muscle (red)
3 Adductor brevis muscle (blue)
4 Adductor longus muscle (blue)
5 Adductor magnus muscle (red)
6 Gracilis muscle (blue)
7 Iliopsoas muscle (red/blue)



Adductor magnus muscle and deep layer of adductor muscles, right thigh (anterior aspect). Pectineus, adductor longus, and brevis muscles have been divided.

1 Anterior superior iliac spine
2 Inguinal ligament
3 Iliopsoas muscle
4 Sartorius muscle
5 Obturator externus muscle
6 Tensor fasciae latae muscle
7 Rectus femoris muscle
8 Iliotibial tract
9 Adductor longus muscle (divided)
10 Vastus lateralis muscle
11 Vastus medialis muscle
12 Pectineus muscle (divided)
13 Adductor minimus muscle
14 Adductor brevis muscle (cut)
15 Adductor magnus muscle
16 Gracilis muscle
17 Adductor hiatus
18 Vasto-adductor membrane
19 Diaphragm
20 Quadratus lumborum muscle
21 Iliacus muscle
22 Vastus intermedius muscle



Iliopsoas muscle and deepest layer of adductor muscles, right thigh (anterior aspect). Pectineus, adductor longus and brevis, and rectus femoris muscles have been divided.

23 Aorta in aortic hiatus
24 Twelfth rib
25 Psoas minor muscle
26 Psoas major muscle
27 Iliopectineal arch

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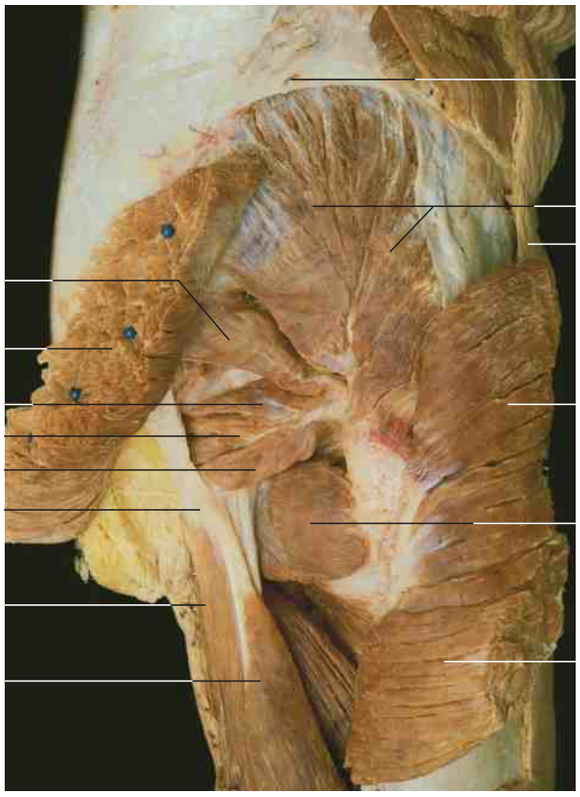
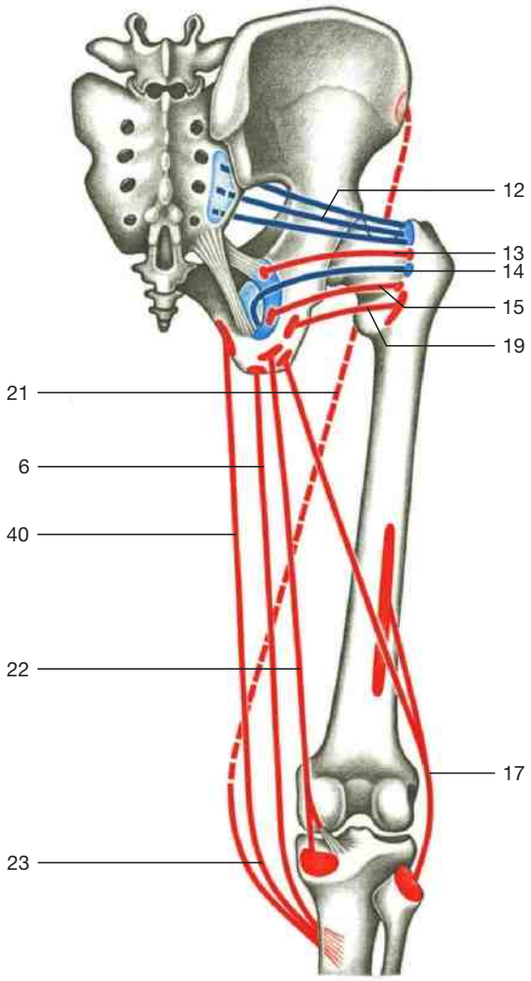
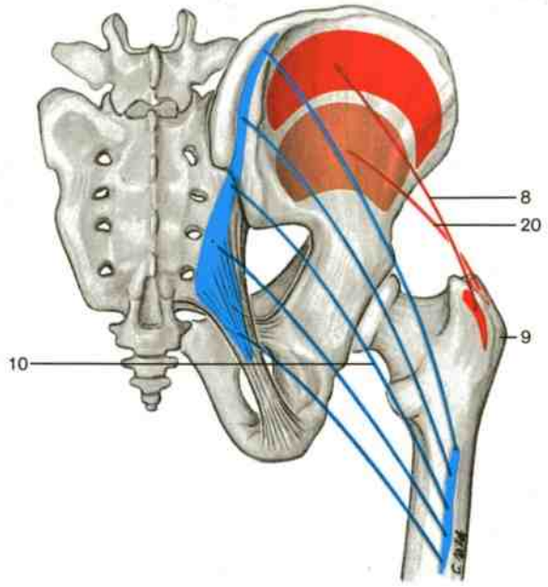
Gluteal muscles, superficial layer (posterior aspect).



Gluteal muscles, deeper layer (posterior aspect).





Course of gluteal muscles
(posterior aspect; schematic drawing).

◁

Course of gluteal muscles (deeper layer) **and of ischiocrural muscles** (posterior aspect). Sartorius muscle is indicated by a dotted line (schematic drawing).

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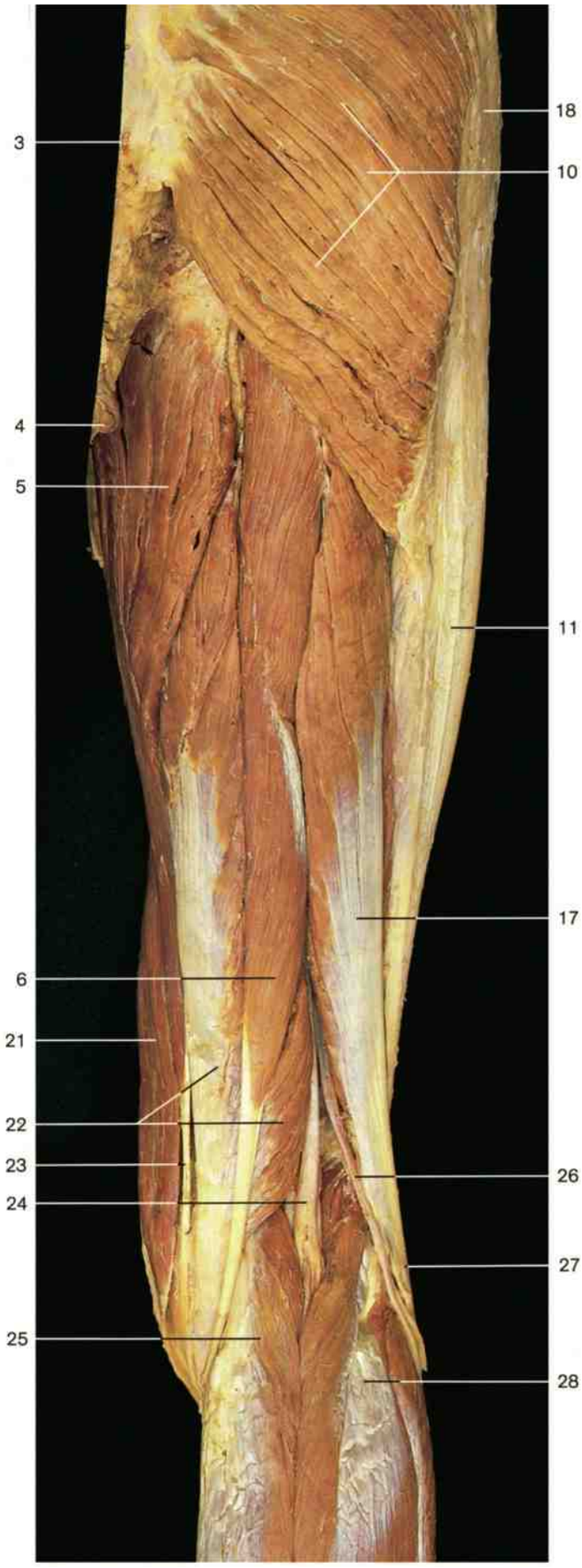
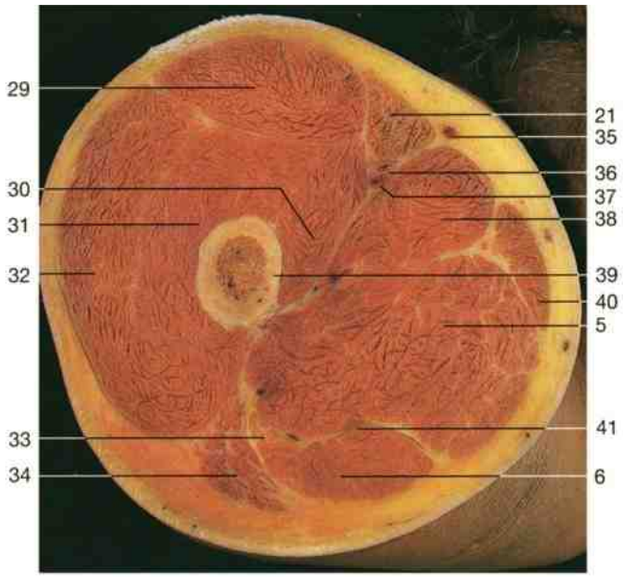


Flexors of the right thigh, superficial layer (posterior aspect).

1 Thoracolumbar fascia
2 Spinous processes of lumbar vertebrae
3 Coccyx
4 Anus
5 Adductor magnus muscle
6 Semitendinosus muscle
7 Iliac crest
8 Gluteus medius muscle
9 Greater trochanter
10 Gluteus maximus muscle
11 Iliotibial tract
12 Piriformis muscle
13 Superior gemellus muscle
14 Obturator internus muscle
15 Inferior gemellus muscle
16 Ischial tuberosity
17 Biceps femoris muscle
18 Tensor fasciae latae muscle
19 Quadratus femoris muscle
20 Gluteus minimus muscle
21 Sartorius muscle
22 Semimembranosus muscle
23 Tendon of gracilis muscle
24 Tibial nerve
25 Medial head of gastrocnemius muscle
26 Common peroneal nerve
27 Tendon of biceps femoris muscle
28 Lateral head of gastrocnemius muscle
29 Rectus femoris muscle
30 Vastus medialis muscle
31 Vastus intermedius muscle
32 Vastus lateralis muscle
33 Sciatic nerve
34 Gluteus maximus muscle (insertion)
35 Great saphenous vein
36 Femoral artery
37 Femoral vein
38 Adductor longus muscle
39 Femur
40 Gracilis muscle
41 Septum between semitendinosus and semimembranosus muscles



Cross section of right thigh (inferior aspect). Anterior side on top.

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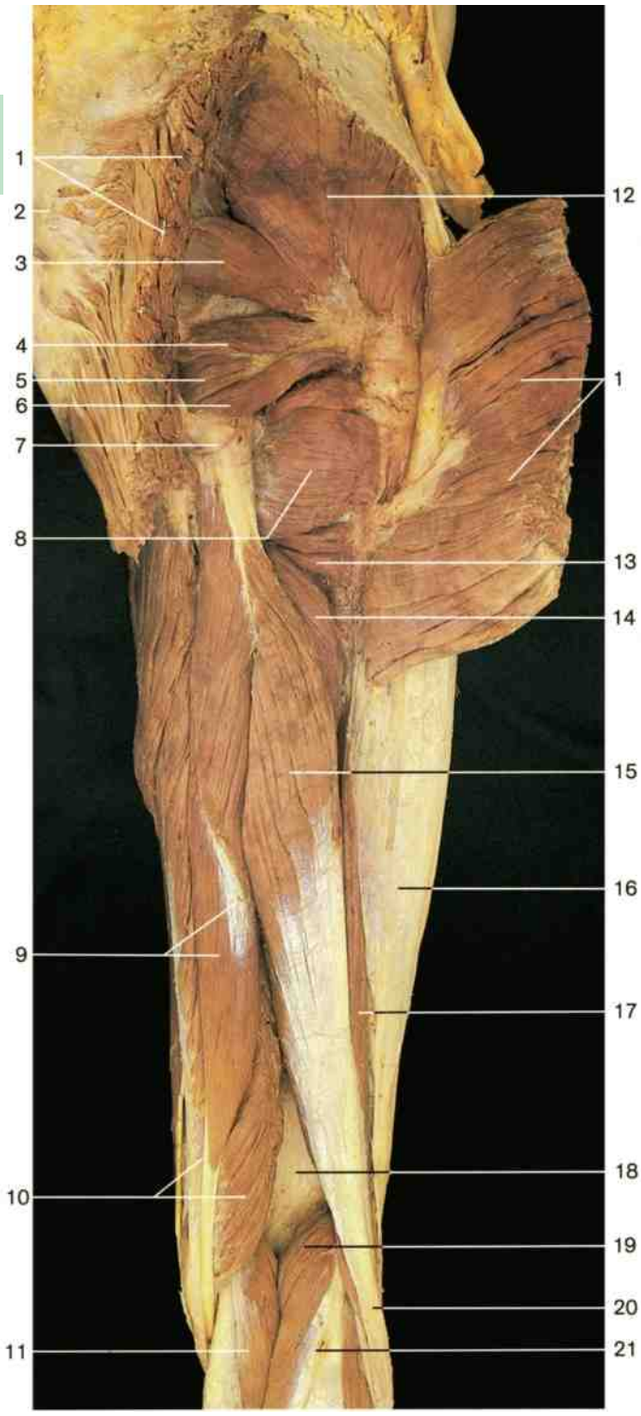
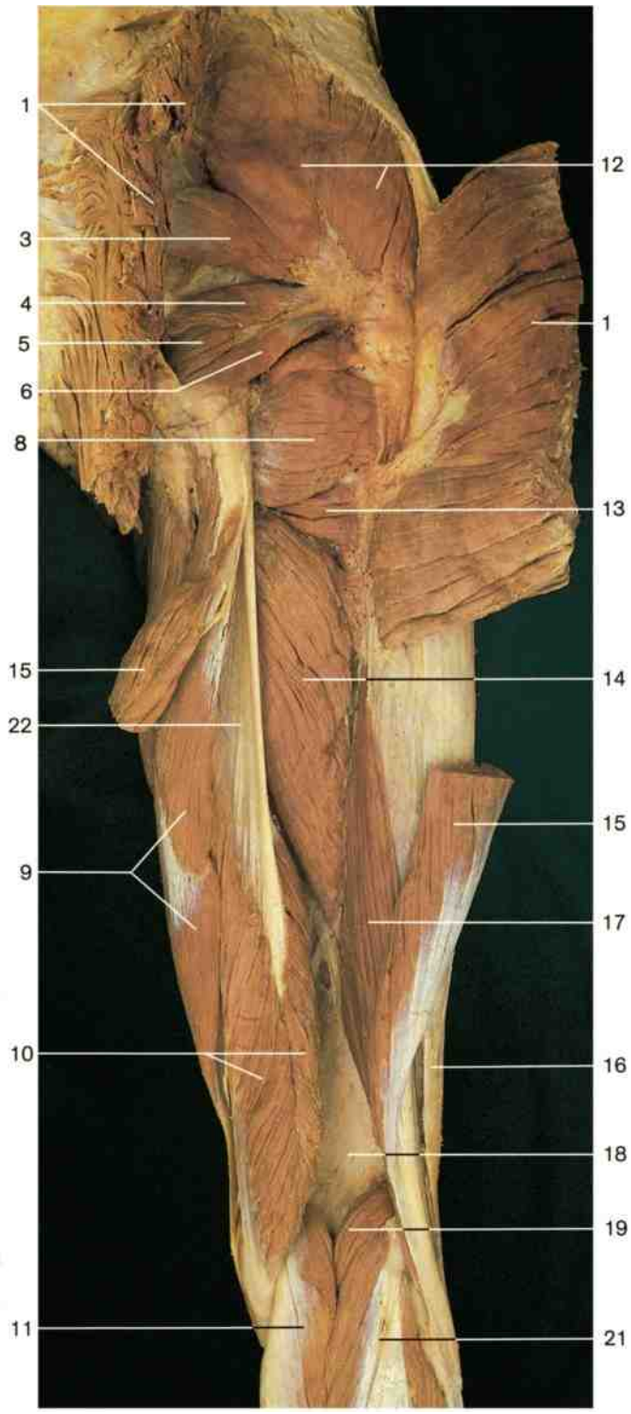


Dorsal muscles of right thigh (posterior aspect).
The gluteus maximus muscle has been cut and reflected.



Dorsal muscles of right thigh (posterior aspect).
The gluteus maximus muscle and the long head of biceps femoris muscle have been divided and displaced.

1 Gluteus maximus muscle (divided)
2 Position of coccyx
3 Piriformis muscle
4 Superior gemellus muscle
5 Obturator internus muscle
6 Inferior gemellus muscle
7 Ischial tuberosity
8 Quadratus femoris muscle
9 Semitendinosus muscle with intermediate tendon
10 Semimembranosus muscle
11 Medial head of gastrocnemius muscle
12 Gluteus medius muscle
13 Adductor minimus muscle
14 Adductor magnus muscle
15 Long head of biceps femoris muscle
16 Iliotibial tract
17 Short head of biceps femoris muscle
18 Popliteal surface of femur
19 Plantaris muscle
20 Tendon of biceps femoris muscle
21 Lateral head of gastrocnemius muscle
22 Membranous part of semimembranosus muscle

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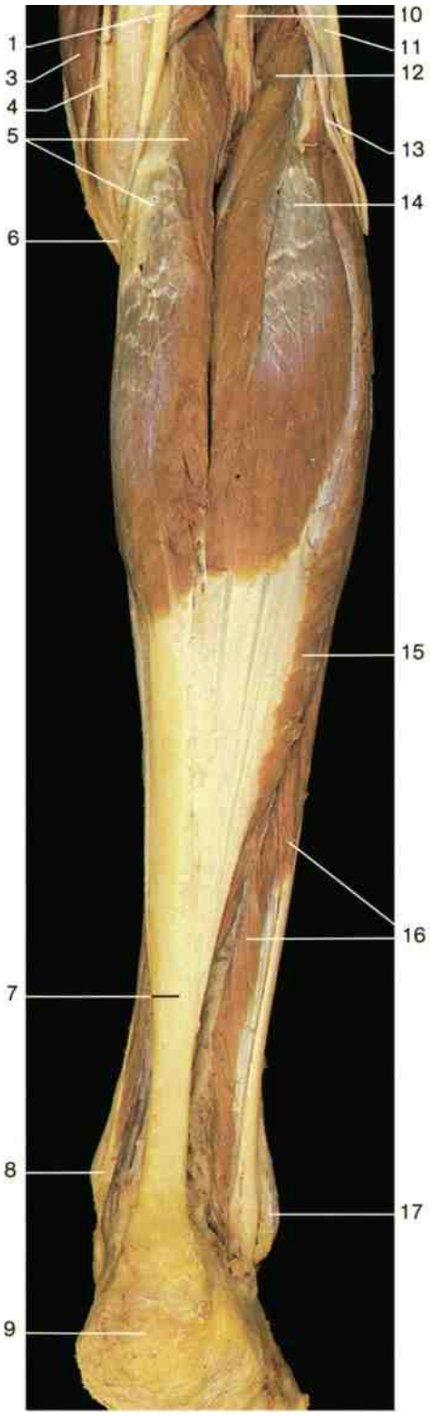
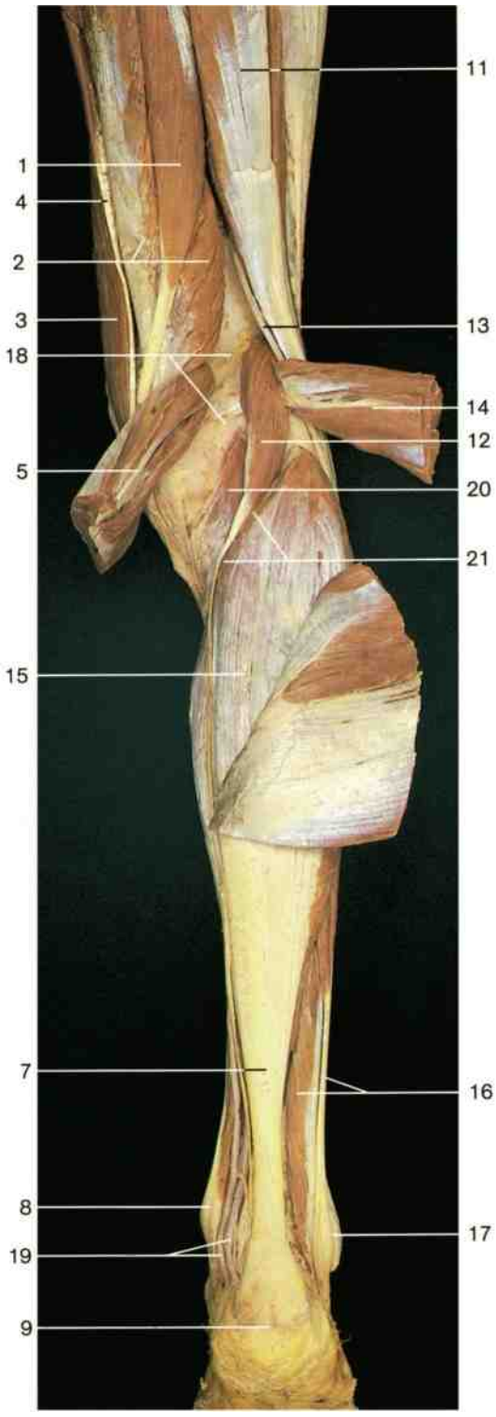
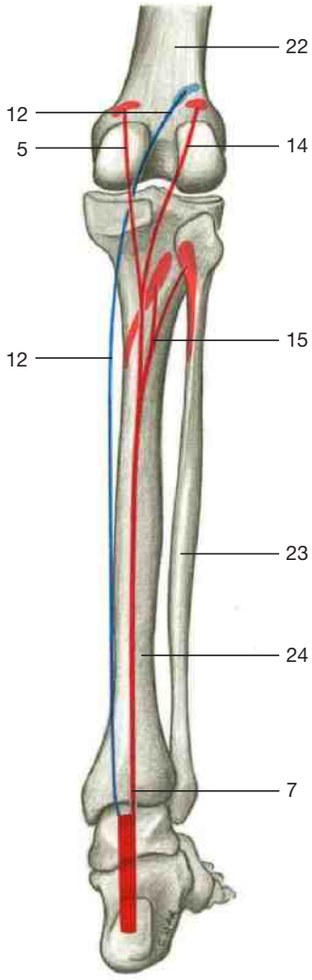


Flexor muscles of right leg (posterior aspect).



Flexor muscles of right leg (posterior aspect). Both heads of the gastrocnemius muscle have been cut and reflected.



Flexor muscles of the leg (right side).

1 Semitendinosus muscle
2 Semimembranosus muscle
3 Sartorius muscle
4 Tendon of gracilis muscle
5 Medial head of gastrocnemius muscle
6 Common tendon of gracilis, sartorius, and semitendinosus muscles
7 Calcaneal or Achilles tendon
8 Medial malleolus
9 Calcaneal tuberosity
10 Tibial nerve
11 Biceps femoris muscle
12 Plantaris muscle
13 Common peroneal nerve
14 Lateral head of gastrocnemius muscle
15 Soleus muscle
16 Peroneus longus and brevis muscles
17 Lateral malleolus
18 Popliteal fossa
19 Tibial nerve and posterior tibial artery
20 Popliteus muscle
21 Tendinous arch of soleus muscle
22 Femur
23 Fibula
24 Tibia

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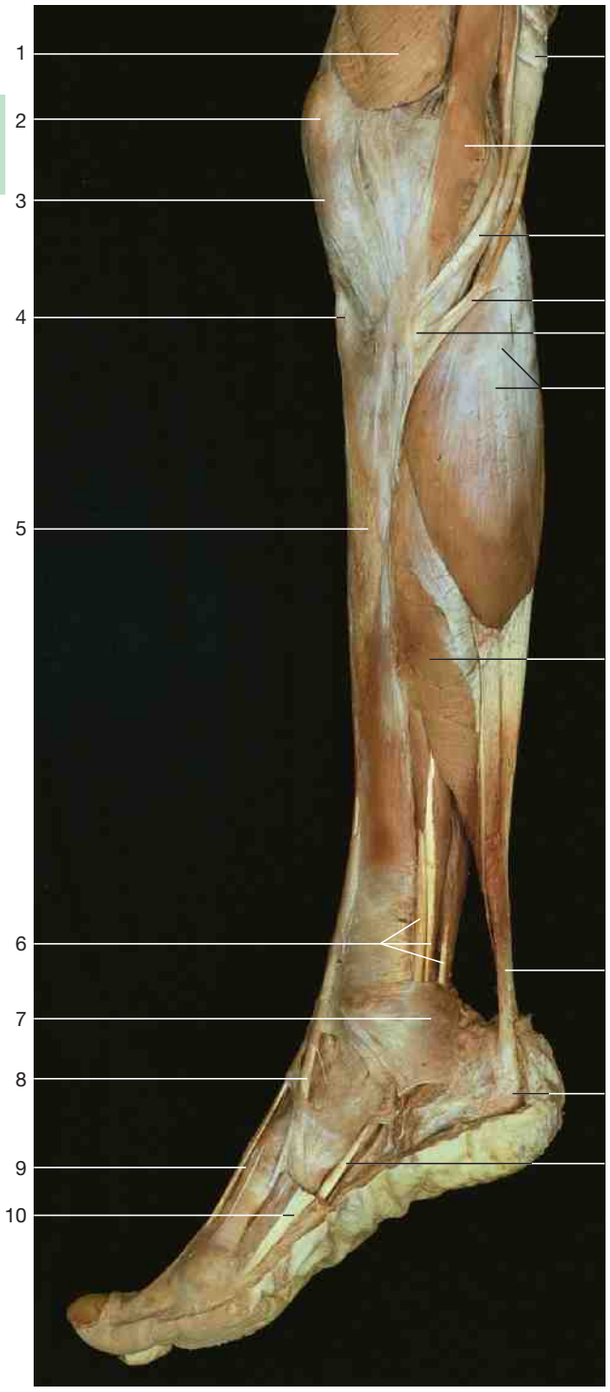
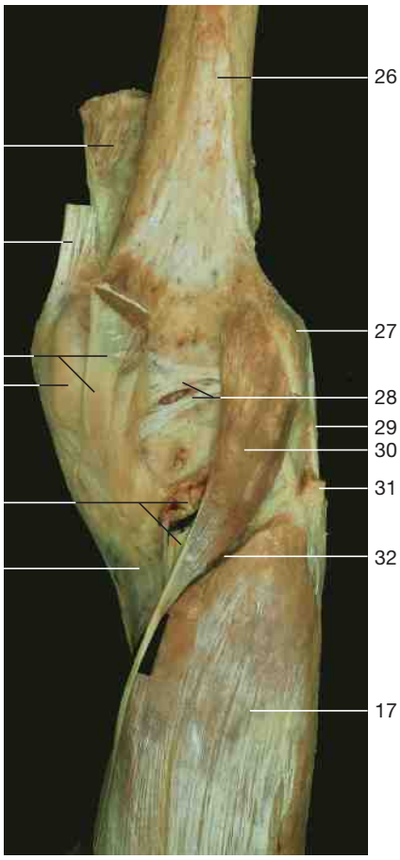


Muscles of right leg and foot (medial aspect).



Popliteal region with plantaris and soleus muscles, right side (dorsal aspect). Notice the insertion of the tendon of semimembranosus muscle.

1 Vastus medialis muscle
2 Patella
3 Patellar ligament
4 Tibial tuberosity
5 Tibia
6 Tendons of deep flexor muscles (from anterior to posterior: 1. tibialis posterior; 2. flexor digitorum longus; 3. flexor hallucis longus muscles)
7 Flexor retinaculum
8 Tendon of tibialis anterior muscle
9 Tendon of extensor hallucis longus muscle
10 Abductor hallucis muscle
11 Semimembranosus muscle
12 Sartorius muscle
13 Tendon of gracilis muscle
14 Tendon of semitendinosus muscle
15 Common tendon of gracilis, semitendinosus, and sartorius muscles
16 Medial head of gastrocnemius muscle
17 Soleus muscle
18 Calcaneal or Achilles tendon
19 Calcaneus muscle
20 Tendon of flexor hallucis longus muscle
21 Quadriceps femoris muscle (divided)
22 Tendon of adductor magnus muscle (divided)
23 Medial condyle of femur
24 Popliteal artery and vein, tibial nerve
25 Tibia
26 Femur
27 Lateral epicondyle of femur
28 Oblique popliteal ligament
29 Lateral (fibular) collateral ligament
30 Plantaris muscle
31 Tendon of biceps femoris muscle (divided)
32 Tendinous arch of soleus muscle

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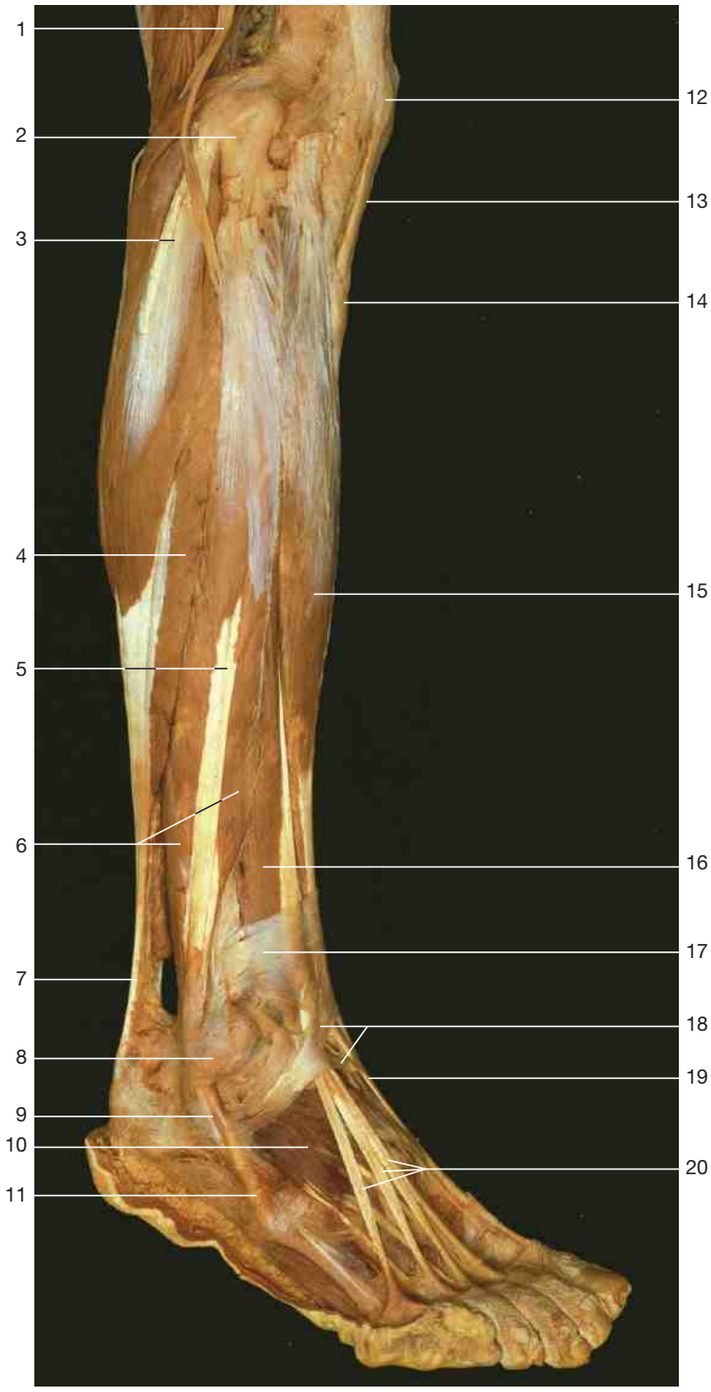
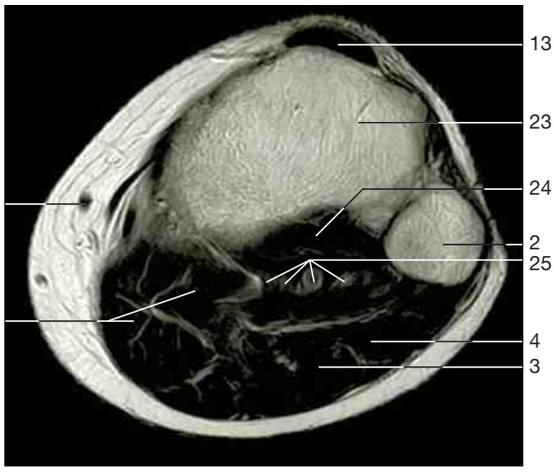
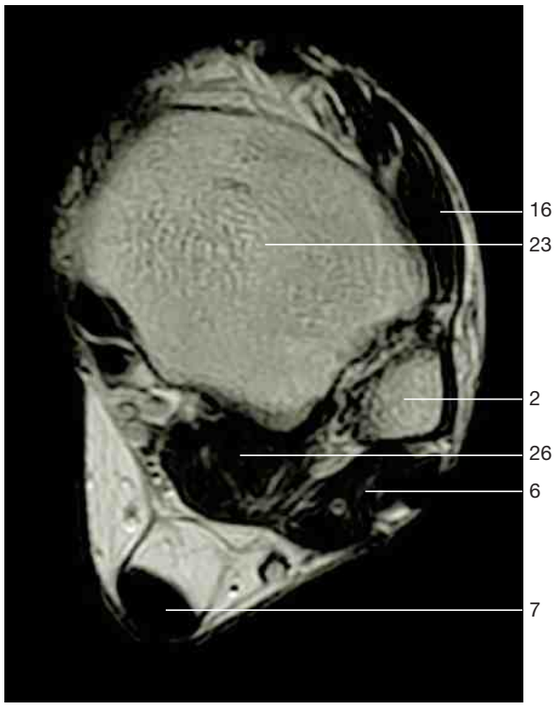


Muscles of right leg and foot (lateral aspect).



Axial section of the right leg distally of the knee joint (MRI scan; from Heuck et al., MRT-Atlas, 2009).



Axial section of the right leg cranially of the ankle joint (MRI scan; from Heuck et al., MRT-Atlas, 2009).

1 Common peroneal nerve
2 Head of fibula
3 Lateral head of gastrocnemius muscle
4 Soleus muscle
5 Peroneus longus muscle
6 Peroneus brevis muscle
7 Calcaneal or Achilles tendon
8 Lateral malleolus muscle
9 Tendon of peroneus longus muscle
10 Extensor digitorum brevis muscle
11 Tendon of peroneus brevis muscle
12 Patella
13 Patellar ligament
14 Tuberosity of tibia
15 Tibialis anterior muscle
16 Extensor digitorum longus muscle
17 Superior extensor retinaculum
18 Inferior extensor retinaculum
19 Tendon of extensor hallucis longus muscle
20 Tendons of extensor digitorum longus muscle
21 Great saphenous vein
22 Medial head of gastrocnemius muscle
23 Tibia
24 Popliteus muscle
25 Tibial nerve, popliteal artery, and veins
26 Flexor hallucis longus muscle

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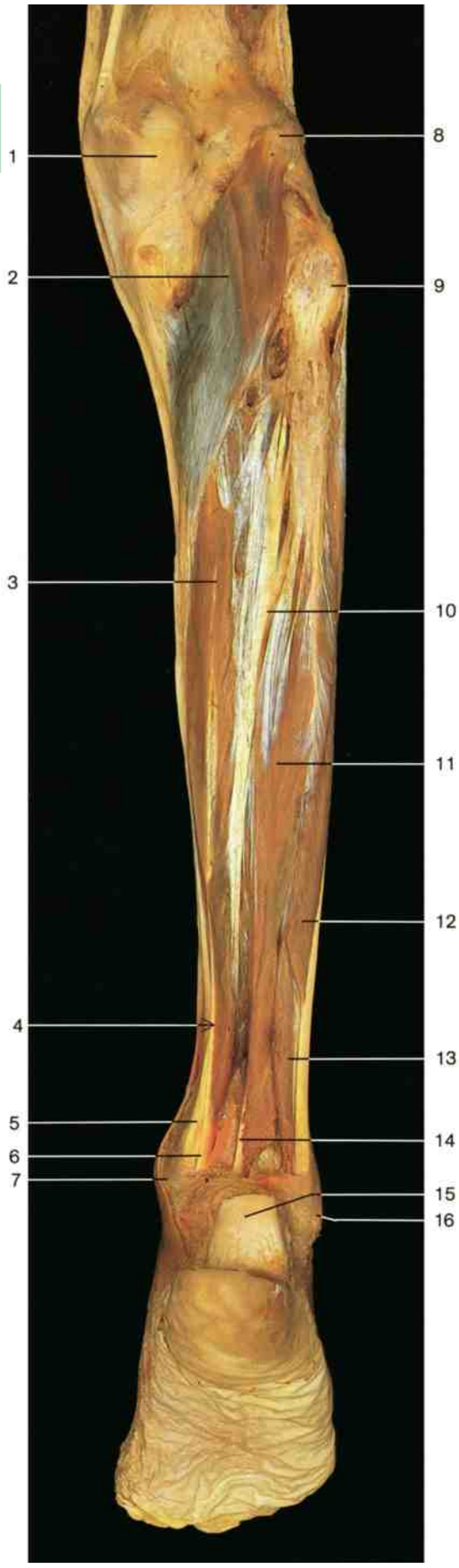
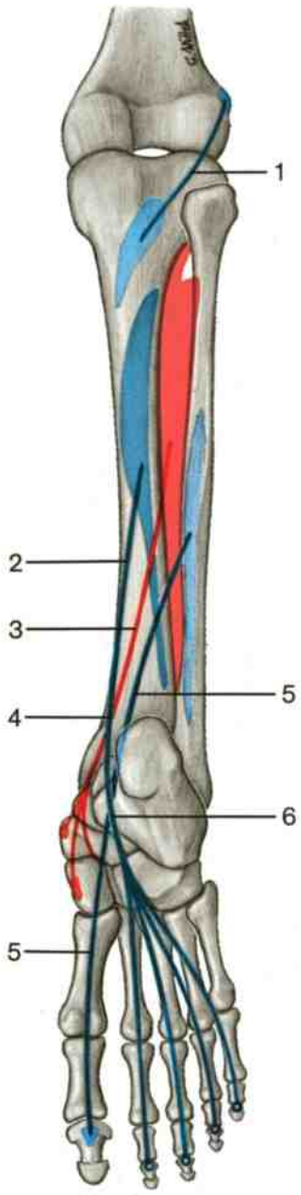


1 Medial condyle of femur
2 Popliteus muscle
3 Flexor digitorum longus muscle
4 Crossing of tendons in leg
5 Tendon of tibialis posterior muscle
6 Tendon of flexor digitorum longus muscle
7 Medial malleolus
8 Lateral condyle of femur
9 Head of fibula
10 Tibialis posterior muscle
11 Flexor hallucis longus muscle
12 Peroneus longus muscle
13 Peroneus brevis muscle
14 Tendon of flexor hallucis longus muscle
15 Calcaneal tendon (divided)
16 Lateral malleolus

Deep flexor muscles of right leg and foot (posterior aspect).



1 Popliteus muscle (blue)
2 Flexor digitorum longus muscle (blue)
3 Tibialis posterior muscle (red)
4 Crossing of tendons in leg
5 Flexor hallucis longus muscle (blue)
6 Crossing of tendons in sole

Course of deep flexor muscles of leg (schematic drawing).

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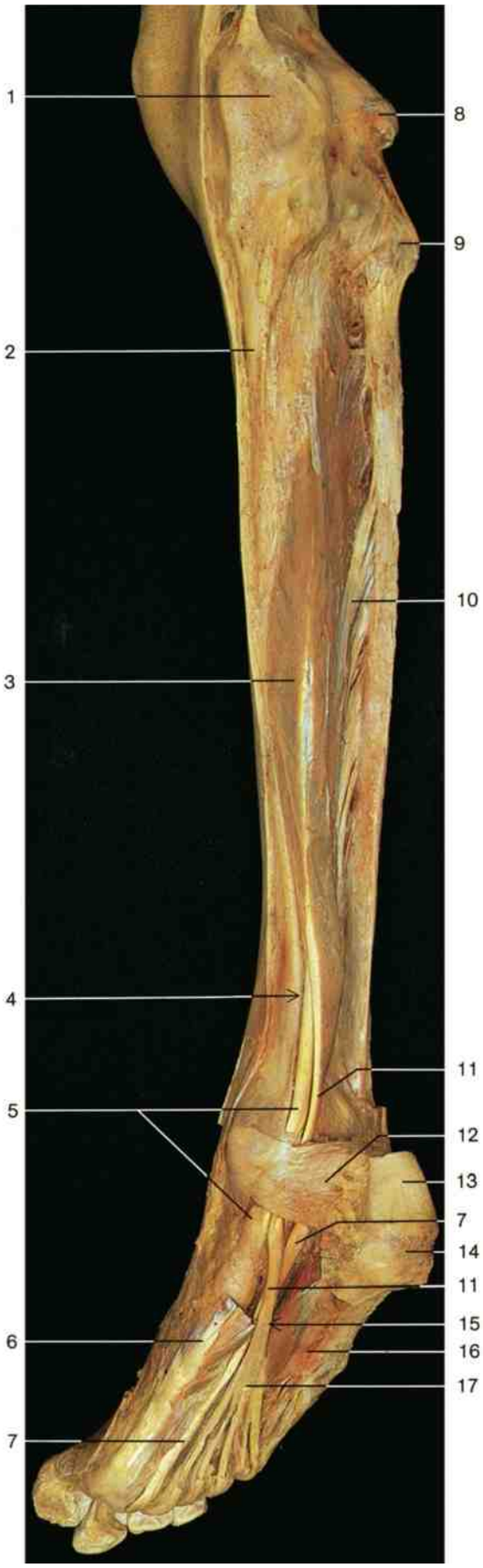

Deep flexor muscles of right leg and foot (posterior oblique medial aspect). Flexor digitorum brevis and flexor hallucis longus muscles have been removed.

Coronal section of the leg (MRI scan; from Heuck et al., MRT-Atlas, 2009).

1 Medial condyle of femur
2 Tibia
3 Flexor digitorum longus muscle
4 Crossing of tendons in leg
5 Tendon of tibialis posterior muscle
6 Abductor hallucis muscle
7 Tendon of flexor hallucis longus muscle
8 Lateral condyle of femur
9 Head of fibula
10 Tibialis posterior muscle
11 Tendon of flexor digitorum longus muscle
12 Flexor retinaculum
13 Calcaneal tendon
14 Calcaneal tuberosity
15 Crossing of tendons in sole
16 Quadratus plantae muscle
17 Tendons of flexor digitorum longus muscle
18 Tendon of tibialis anterior muscle
19 Area of insertion of tibialis posterior muscle
20 Lumbrical muscles
21 Flexor hallucis longus muscle
22 Tibialis anterior muscle
23 Extensor hallucis longus muscle
24 Lateral malleolus of fibula
25 Trochlea of talus

Sole of foot with tendons of long flexor muscles (oblique medial and inferior aspect).

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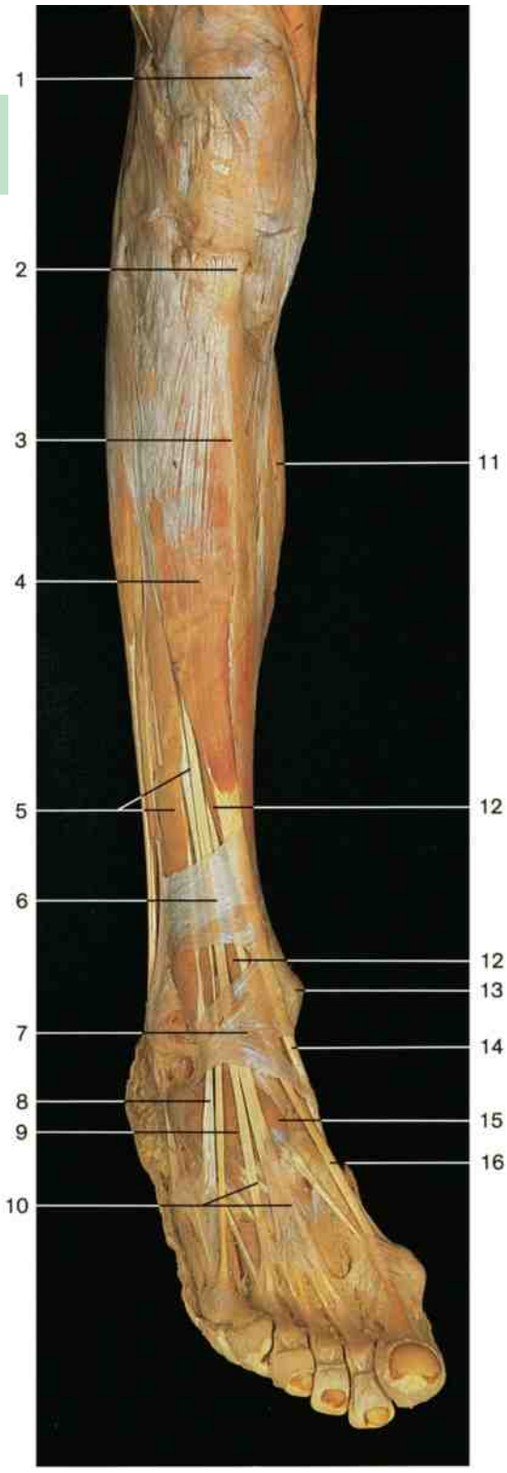
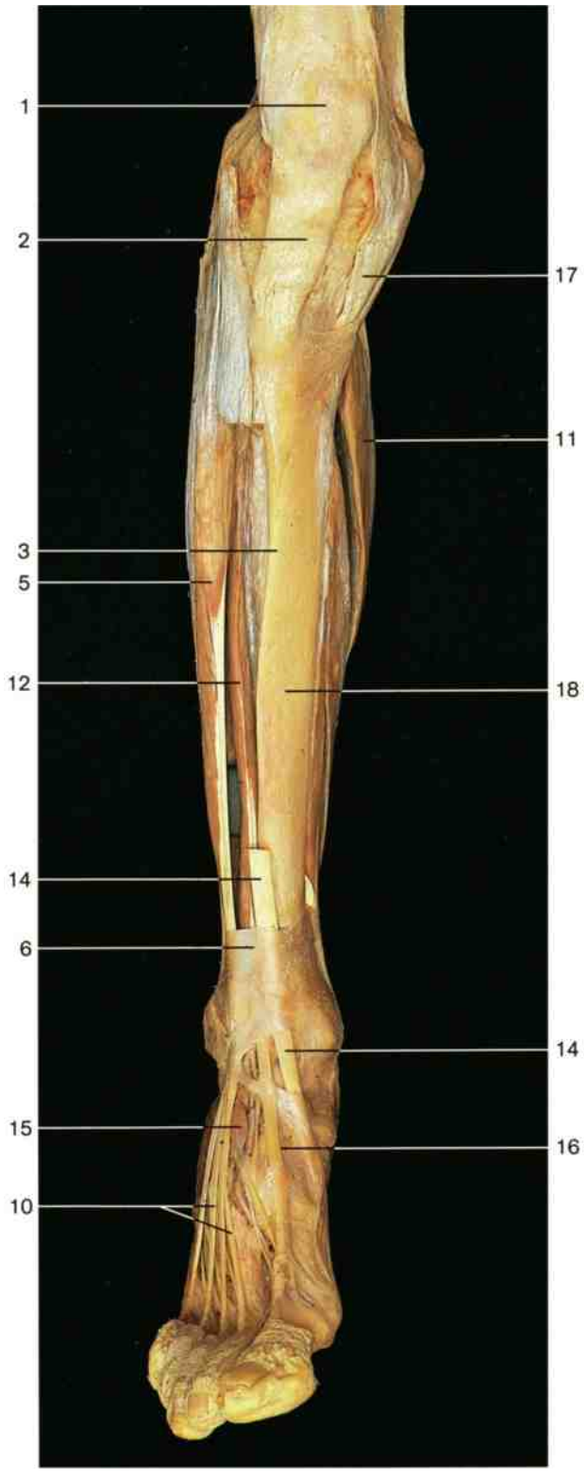


Extensor muscles of right leg and foot (oblique antero-lateral aspect).



Extensor muscles of right leg and foot (anterior aspect). Part of the tibialis anterior muscle has been removed.

1 Patella
2 Patellar ligament
3 Anterior margin of tibia
4 Tibialis anterior muscle
5 Extensor digitorum longus muscle
6 Superior extensor retinaculum
7 Inferior extensor retinaculum
8 Tendon of peroneus tertius muscle
9 Extensor digitorum brevis muscle
10 Tendons of extensor digitorum longus muscle
11 Gastrocnemius muscle
12 Extensor hallucis longus muscle
13 Medial malleolus
14 Tendon of tibialis anterior muscle
15 Extensor hallucis brevis muscle
16 Tendon of extensor hallucis longus muscle
17 Common tendon of gracilis, semitendinosus, and sartorius muscles
18 Tibia

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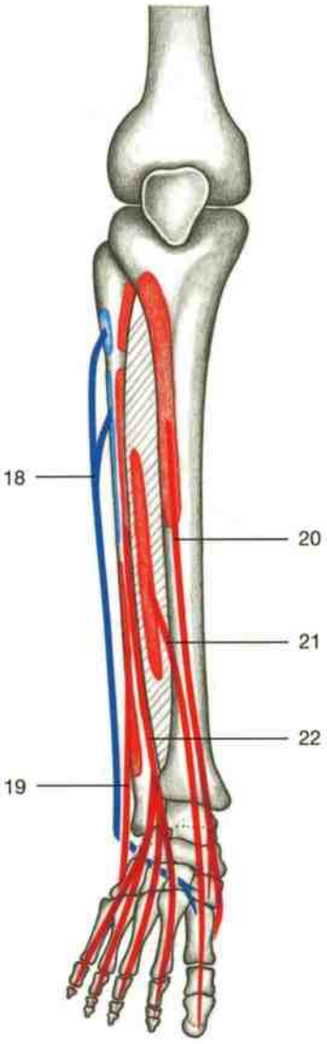
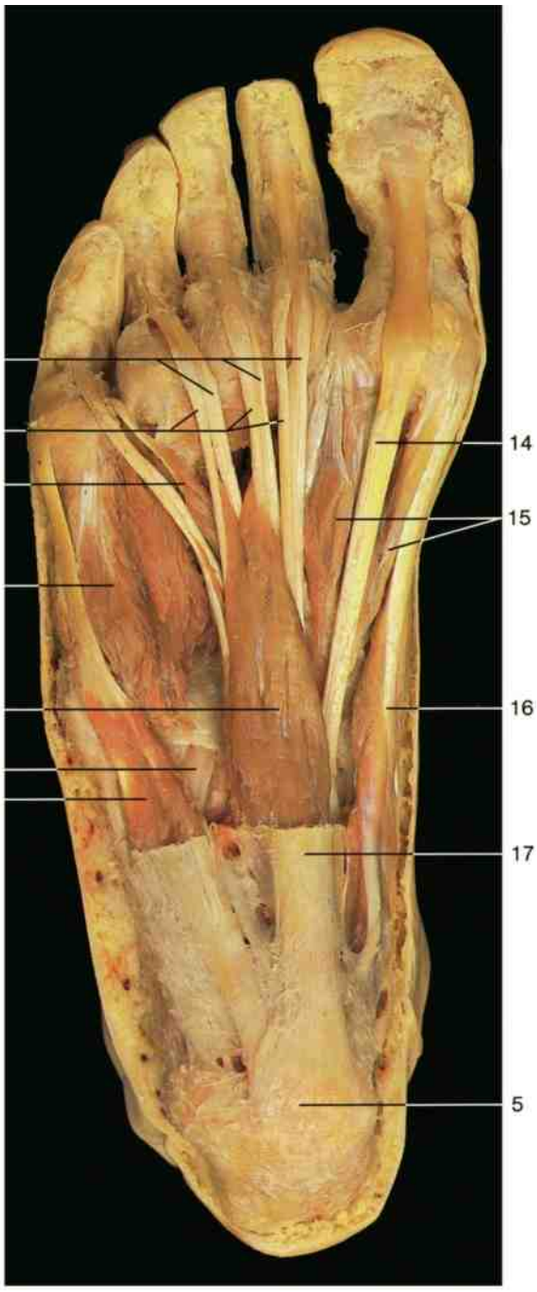
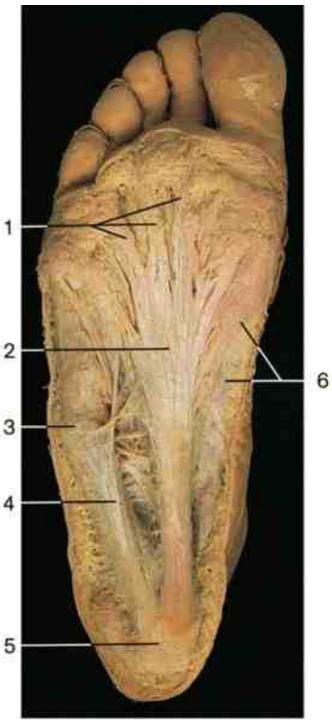


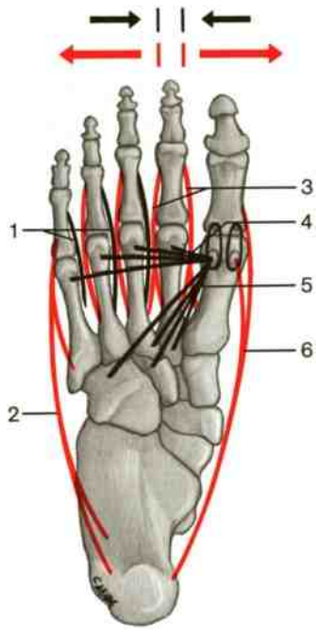
Extensor muscles of the leg (right side).



Muscles of sole of foot, first layer (from below). The plantar aponeurosis and the fasciae of the superficial muscles have been removed.



Sole of foot, plantar aponeurosis (from below).



Course of abductor and adductor muscles of foot (schematic drawing). Red arrows = abduction. Black arrows = adduction.

1 Longitudinal bands of plantar aponeurosis
2 Plantar aponeurosis
3 Position of tuberosity of fifth metatarsal bone
4 Muscles of fifth toe with fascia
5 Calcaneal tuberosity
6 Muscles of great toe with fascia
7 Tendons of flexor digitorum longus muscle
8 Tendons of flexor digitorum brevis muscle
9 Lumbrical muscle
10 Flexor digiti minimi brevis muscle
11 Flexor digitorum brevis muscle
12 Tendon of peroneus longus muscle
13 Abductor digiti minimi muscle
14 Tendon of flexor hallucis longus muscle
15 Flexor hallucis brevis muscle
16 Abductor hallucis muscle
17 Plantar aponeurosis (cut)
18 Peroneus longus muscle
19 Peroneus brevis muscle
20 Tibialis anterior muscle
21 Extensor hallucis longus muscle
22 Extensor digitorum longus muscle

1 Plantar interossei muscles (black)
2 Abductor digiti minimi muscle (red)
3 Dorsal interosseous muscles (red)
4 Transverse head of adductor muscle (black)
5 Oblique head of adductor muscle (black)
6 Abductor hallucis muscle (red)

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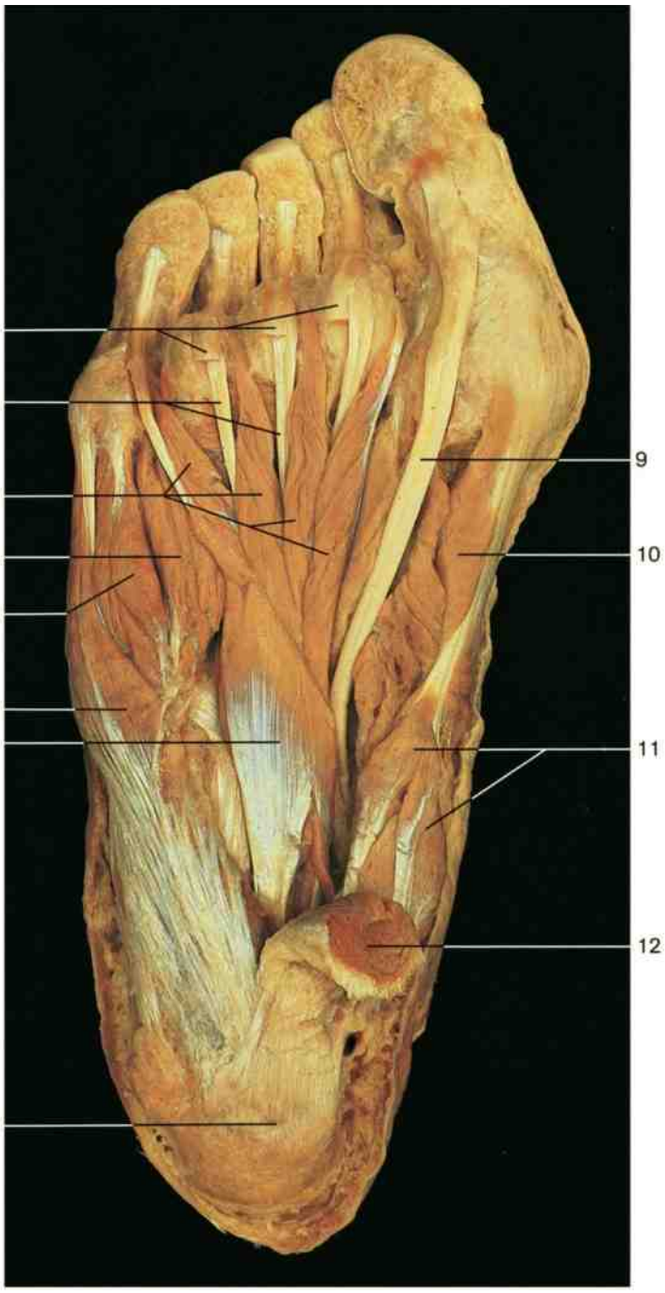
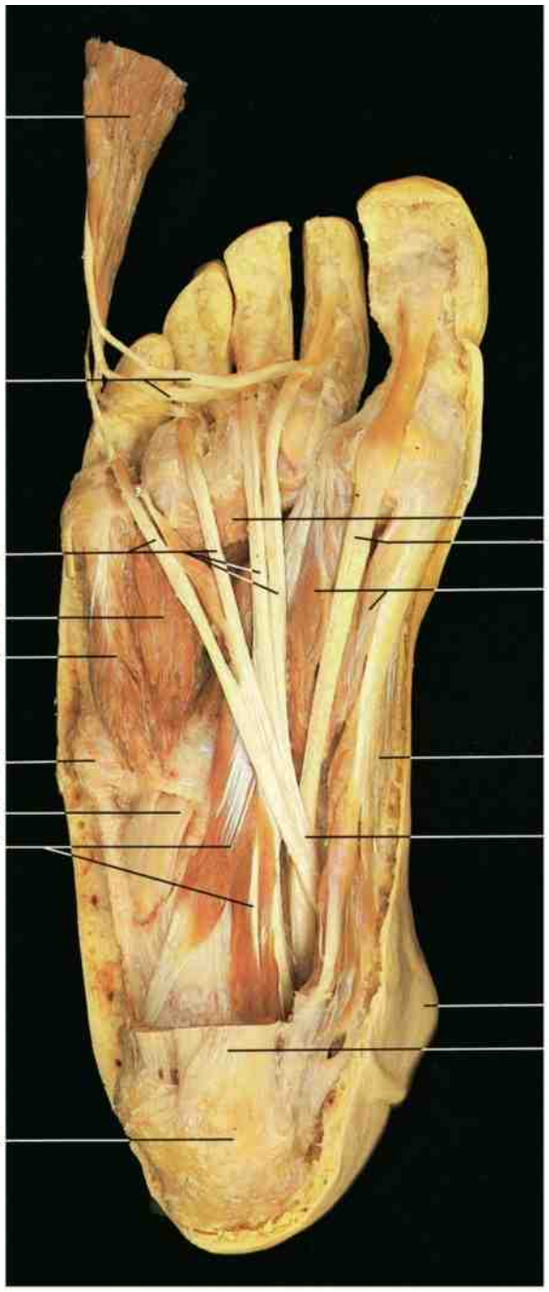


Muscles of sole of foot, second layer (from below). The flexor digitorum brevis muscle has been divided.



Muscles of sole of foot, second layer (from below). The tendons of the flexor muscles and the crossing of tendons are displayed. The flexor digitorum brevis muscle has been divided and reflected.

1 Tendons of flexor digitorum brevis muscle
2 Tendons of flexor digitorum longus muscle
3 Lumbrical muscles
4 Interossei muscles
5 Flexor digiti minimi brevis muscle
6 Abductor digiti minimi muscle
7 Quadratus plantae muscle
8 Calcaneal tuberosity
9 Tendon of flexor hallucis longus muscle
10 Flexor hallucis brevis muscle
11 Abductor hallucis muscle
12 Flexor digitorum brevis muscle (divided)
13 Tuberosity of fifth metatarsal bone
14 Tendon of peroneus longus muscle
15 Transverse head of adductor hallucis muscle
16 Crossing of tendons in sole of foot
17 Medial malleolus
18 Plantar aponeurosis (divided)

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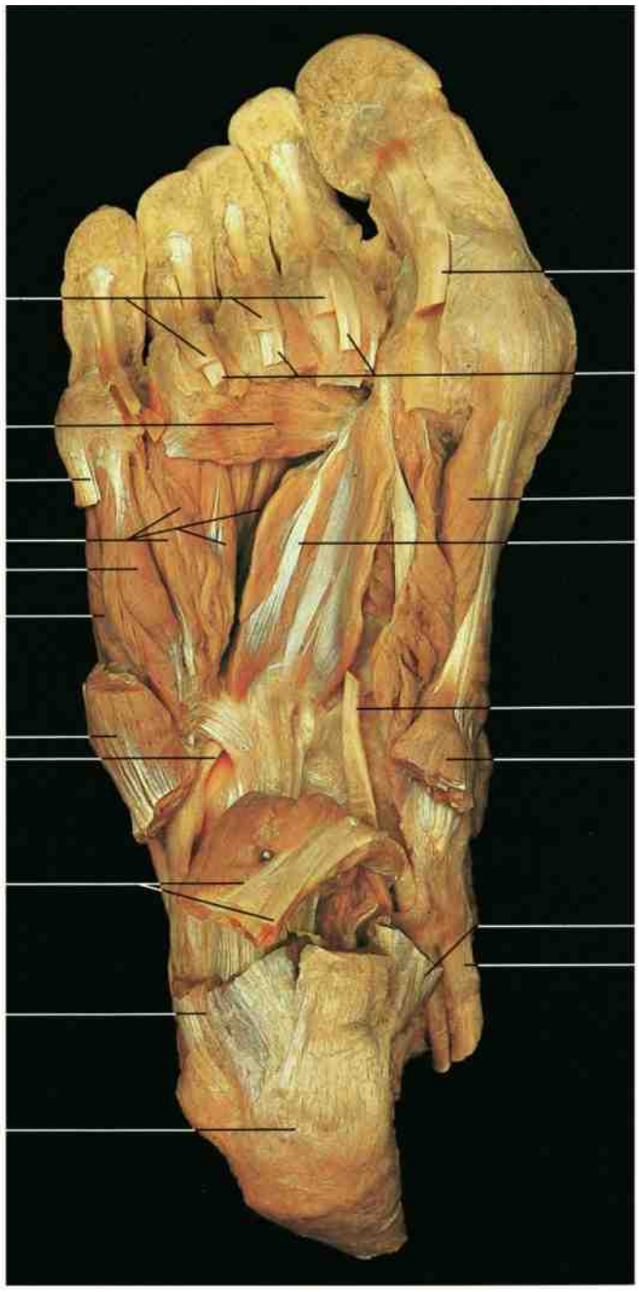
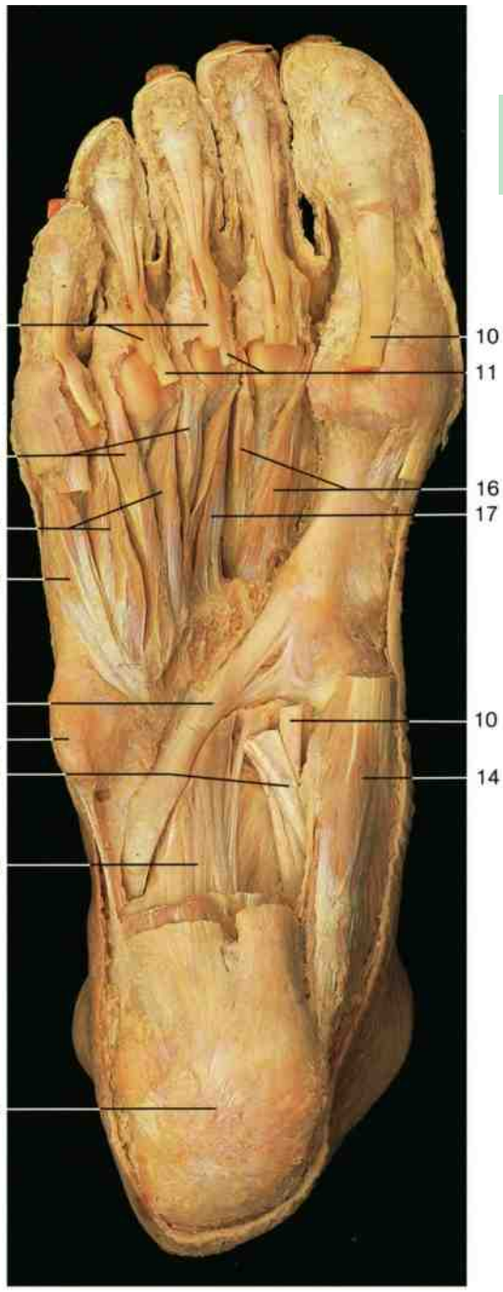


Muscles of sole of foot, third layer (from below). The flexor digitorum brevis muscle has been removed, and the quadratus plantae, abductor hallucis, and digiti minimi muscles have been divided.



Muscles of sole of foot, fourth layer (from below). The interosseous muscles and the canal for the tendon of peroneus longus muscle are shown.

1 Tendons of flexor digitorum brevis muscle
2 Transverse head of adductor hallucis muscle
3 Abductor digiti minimi muscle
4 Interossei muscles
5 Flexor digiti minimi brevis muscle
6 Opponens digiti minimi muscle
7 Tendon of peroneus longus muscle
8 Quadratus plantae muscle with tendon of flexor digitorum longus muscle
9 Calcaneal tuberosity
10 Tendons of flexor hallucis longus muscle (divided)
11 Tendon of flexor digitorum longus muscle
12 Flexor hallucis brevis muscle
13 Oblique head of adductor hallucis muscle
14 Abductor hallucis muscle (cut)
15 Tendon of tibialis posterior muscle
16 Dorsal interossei muscles
17 Plantar interossei muscles
18 Tuberosity of fifth metatarsal bone
19 Tendon of flexor digitorum longus muscle (crossing of plantar tendons)
20 Long plantar ligament

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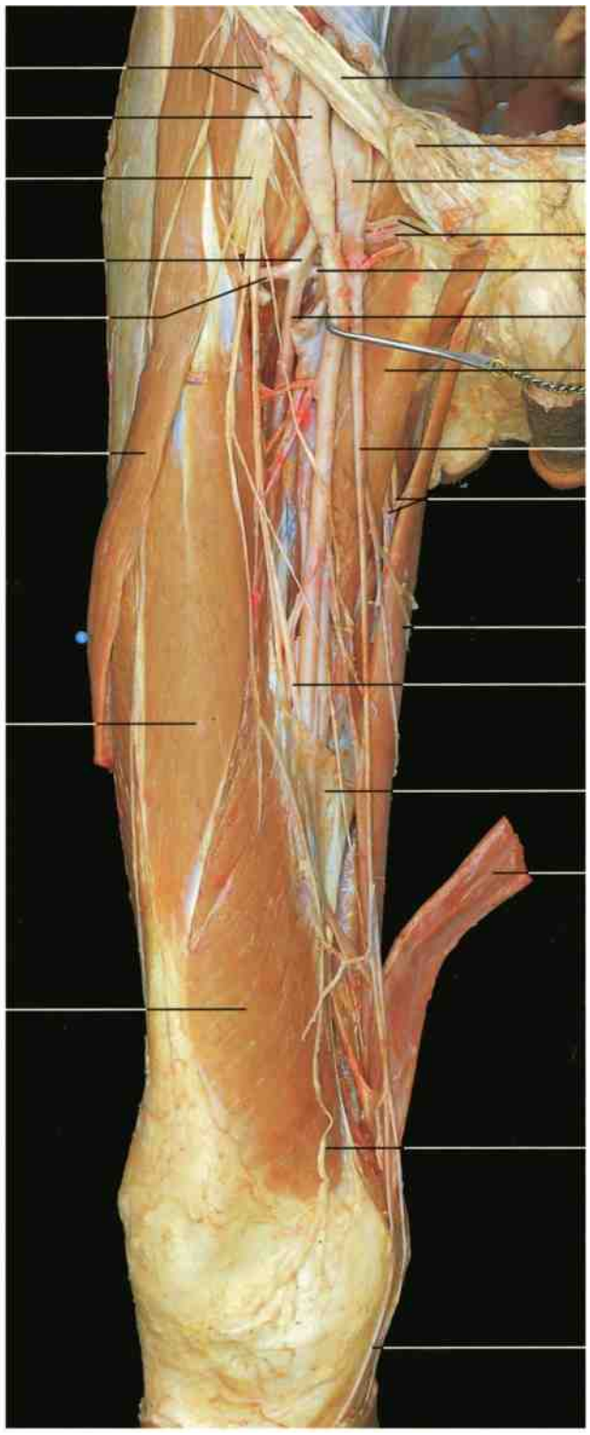
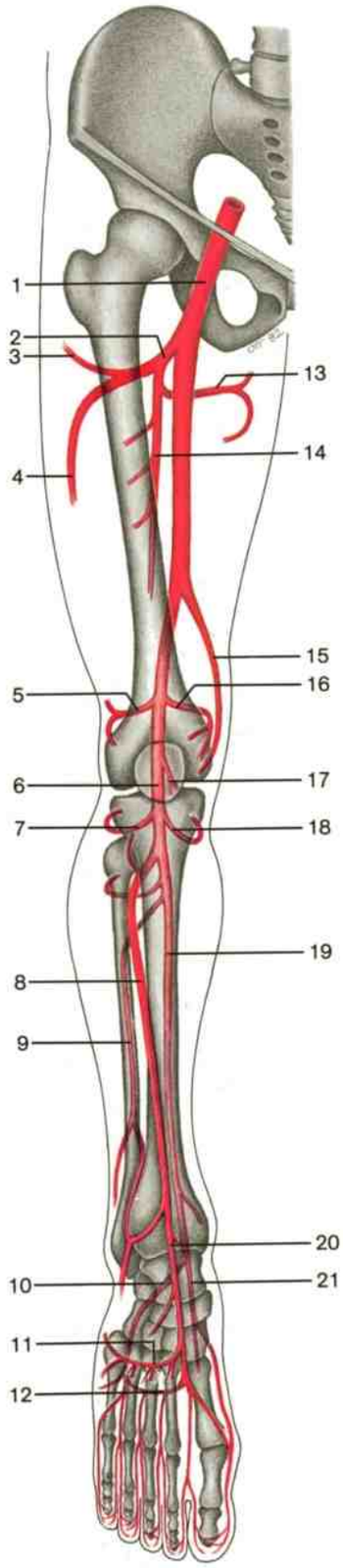


Main arteries and nerves of right thigh (anterior aspect). Sartorius muscle has been divided and reflected. The femoral vein has been partly removed to show the deep femoral artery. Notice: the vessels enter the adductor canal to reach the popliteal fossa.



Main arteries of lower limb, right side (anterior aspect, schematic drawing).

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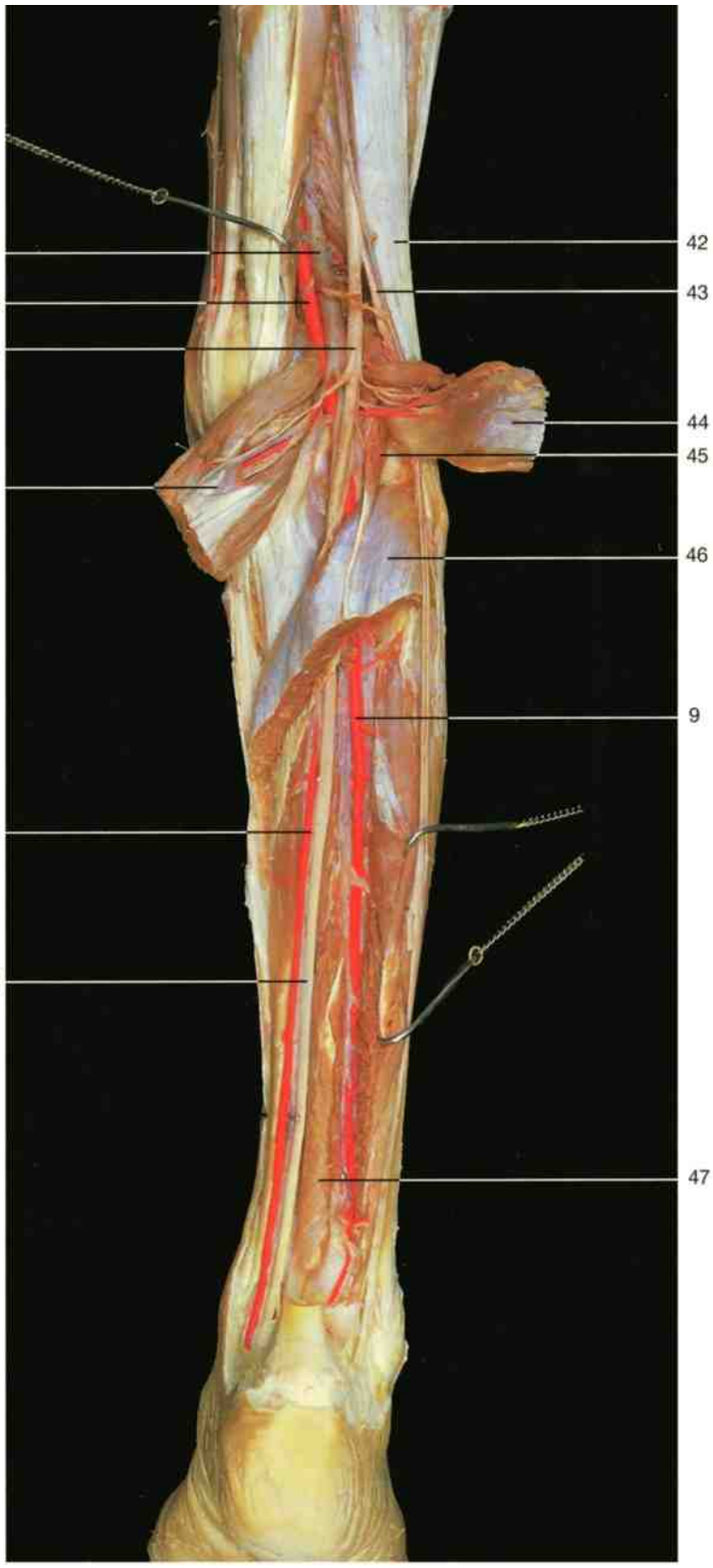

Arteries of the right leg (posterior aspect).

1 Femoral artery
2 Profunda femoris artery
3 Ascending branch of lateral circumflex femoral artery
4 Descending branch of lateral circumflex femoral artery
5 Lateral superior genicular artery
6 Popliteal artery
7 Lateral inferior genicular artery
8 Anterior tibial artery
9 Peroneal artery
10 Lateral plantar artery
11 Arcuate artery with dorsal metatarsal arteries
12 Plantar arch with plantar metatarsal arteries
13 Medial circumflex femoral artery
14 Profunda femoris artery with perforating arteries
15 Descending genicular artery
16 Medial superior genicular artery
17 Middle genicular artery
18 Medial inferior genicular artery
19 Posterior tibial artery
20 Dorsalis pedis artery
21 Medial plantar artery
22 Superficial and deep circumflex iliac arteries
23 Femoral nerve
24 Lateral circumflex femoral artery
25 Sartorius muscle (cut and reflected)
26 Rectus femoris muscle
27 Vastus medialis muscle
28 Inguinal ligament
29 Femoral vein (cut)
30 External pudendal artery and vein
31 Adductor longus muscle
32 Great saphenous vein
33 Obturator artery and nerve
34 Gracilis muscle
35 Saphenous nerve
36 Tendinous wall of adductor canal
37 Anterior cutaneous branch of femoral nerve
38 Infrapatellar branch of saphenous nerve
39 Popliteal vein
40 Tibial nerve
41 Medial head of gastrocnemius muscle
42 Biceps femoris muscle
43 Common peroneal nerve
44 Lateral head of gastrocnemius muscle
45 Plantaris muscle
46 Soleus muscle
47 Flexor hallucis longus muscle
48 Spermatic cord

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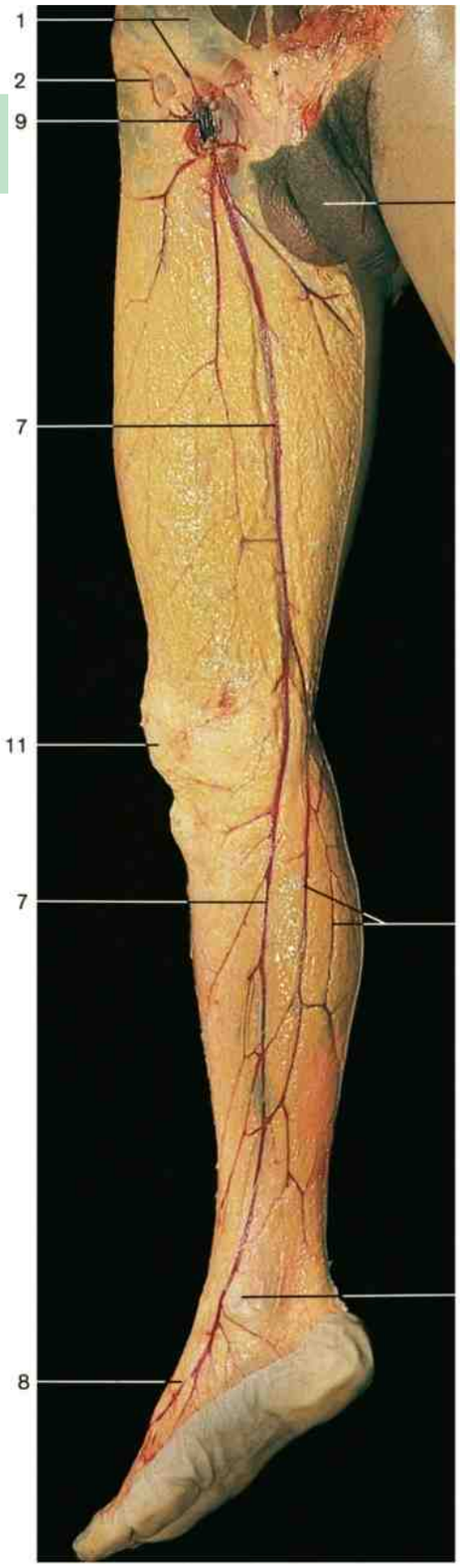
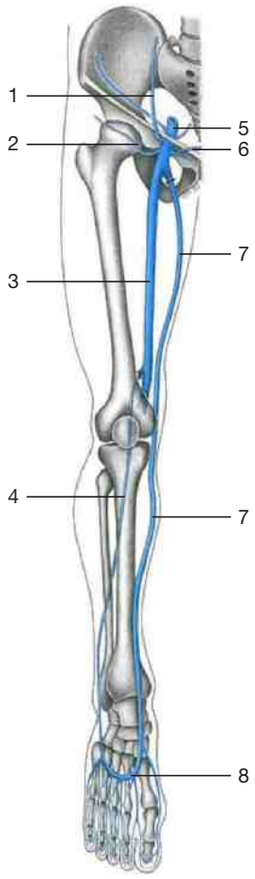


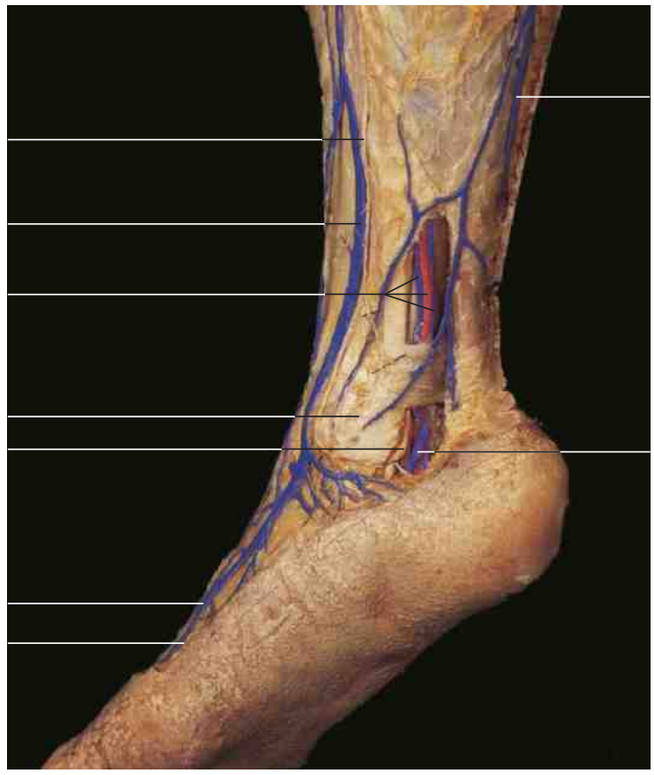
Superficial veins of lower limb, right side (medio-anterior aspect). The veins have been injected with red solution.

Medial malleolar region. Dissection of tibial nerve, posterior tibial vessels, and great saphenous vein (veins injected with blue resin). ▷



Main veins of lower limb, right side (anterior aspect, schematic drawing).

1 Superficial epigastric vein
2 Superficial circumflex iliac vein
3 Femoral vein
4 Small saphenous vein
5 External iliac vein
6 External pudendal vein
7 Great saphenous vein
8 Dorsal venous arch
9 Saphenous opening with femoral vein
10 Venous anastomoses of small saphenous vein with great saphenous vein
11 Patella
12 Penis
13 Medial malleolus
14 Popliteal fossa
15 Perforating veins
16 Lateral malleolus
17 Dorsal digital veins of foot
18 Dorsal venous arch of foot
19 Dorsal metatarsal veins
20 Anterior tibial artery and veins
21 Tibia
22 Posterior tibial artery and veins
23 Fibula
24 Peroneal artery and vein
25 Deep layer of crural fascia
26 Superficial layer of crural fascia
27 Perforating veins I–III (of Cockett)
28 Tibial nerve
29 Arcuate vein
30 Saphenous nerve
31 Medial dorsal cutaneous nerve (branch of superficial peroneal nerve)
32 Posterior tibial vein



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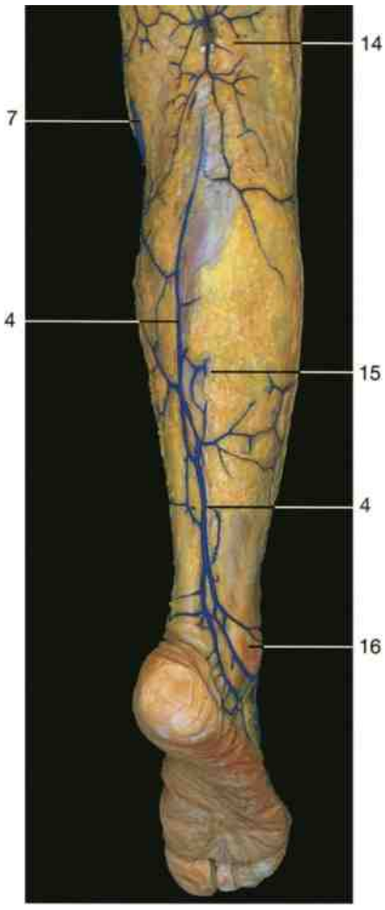
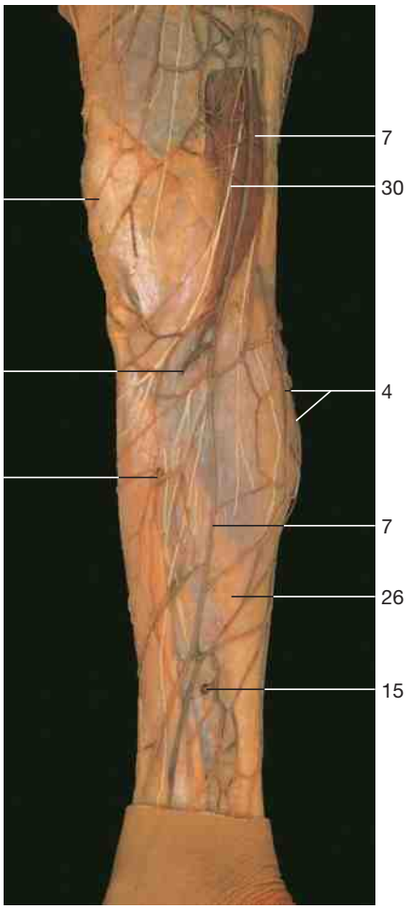
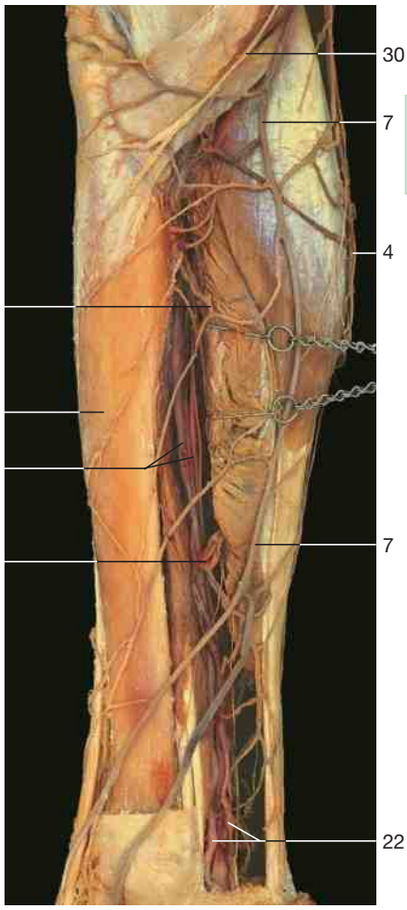


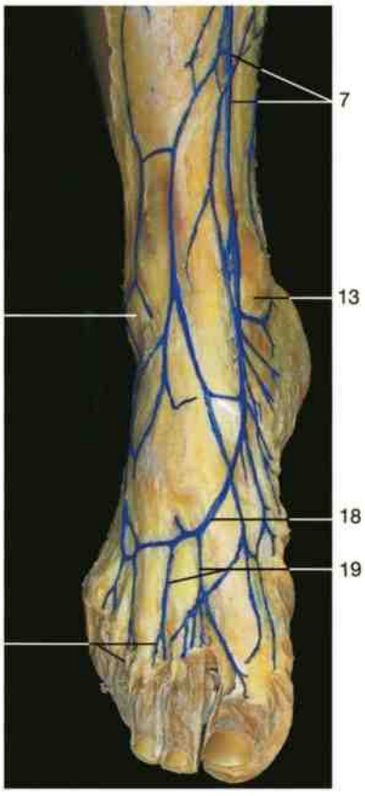
Superficial veins of leg (posterior aspect; veins injected with blue resin).



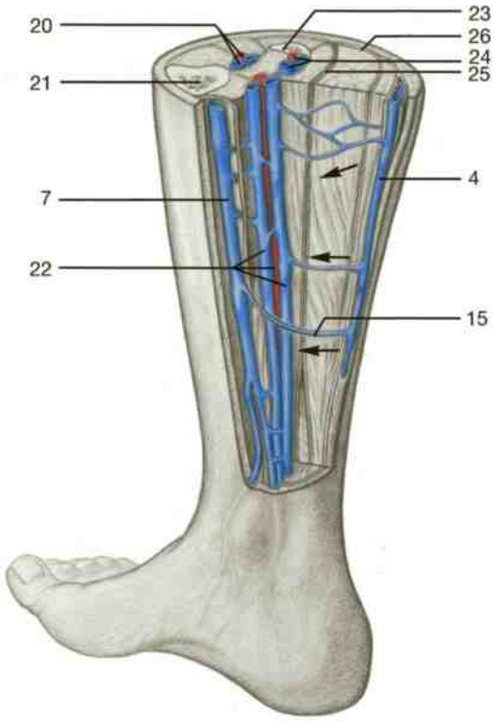
Superficial veins of leg. The perforating veins of Cockett have been dissected (left side, medial aspect).



Veins of leg. The anastomoses between superficial and deeper veins are dissected (left side, medial aspect).



Anastomoses between superficial and deep veins of the leg (schematic drawing, after Aigner).
Arrows: directions of blood flow. ▷



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Superficial veins on dorsum of foot (veins injected with blue resin).

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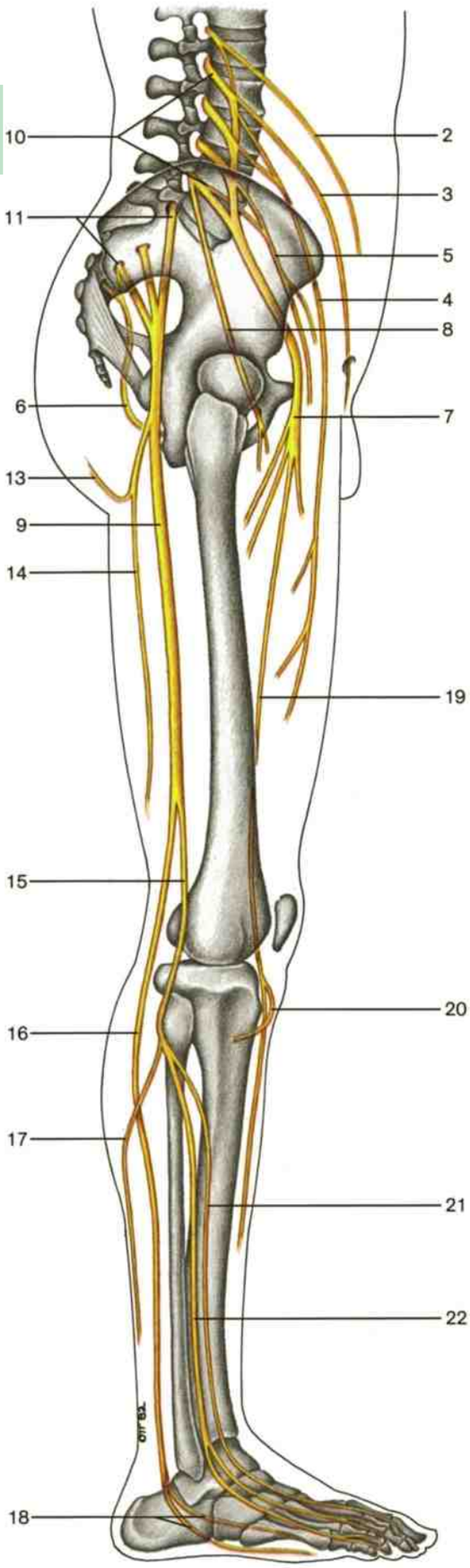
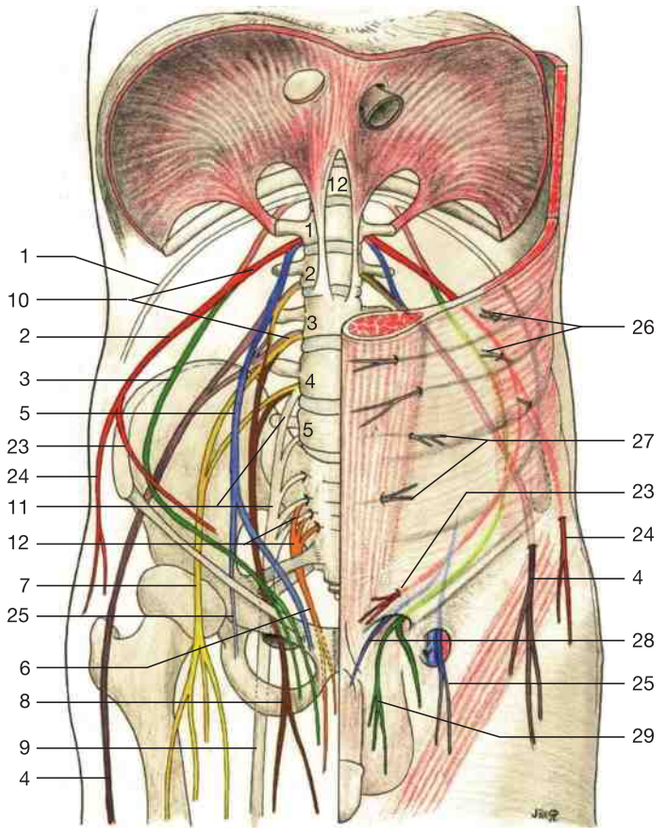


1 Subcostal nerve
2 Iliohypogastric nerve
3 Ilio-inguinal nerve
4 Lateral femoral cutaneous nerve
5 Genitofemoral nerve
6 Pudendal nerve
7 Femoral nerve
8 Obturator nerve
9 Sciatic nerve
10 Lumbar plexus (L_1–L_4) } lumbosacral plexus
11 Sacral plexus (L_4–S_4) } lumbosacral plexus
12 "Pudendal" plexus (S_2–S_4) } lumbosacral plexus
13 Inferior cluneal nerves
14 Posterior femoral cutaneous nerve
15 Common peroneal nerve
16 Tibial nerve
17 Lateral sural cutaneous nerve
18 Medial and lateral plantar nerves
19 Saphenous nerve
20 Infrapatellar branch of saphenous nerve
21 Deep peroneal nerve
22 Superficial peroneal nerve
23 Anterior cutaneous branch of iliohypogastric nerve
24 Lateral cutaneous branch of iliohypogastric nerve
25 Femoral branch of genitofemoral nerve
26 Lateral cutaneous branches of intercostal nerve
27 Anterior cutaneous branches of intercostal nerve
28 Genital branch of genitofemoral nerve
29 Anterior scrotal nerve



Nerves of lower limb, right side (lateral aspect). (Schematic drawing.)

Main branches of lumbosacral plexus (ventral aspect). (Schematic drawing.)

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1 Transversus abdominis muscle
2 Iliohypogastric nerve
3 Ilio-inguinal nerve
4 Femoral nerve
5 Lateral femoral cutaneous nerve
6 Obturator nerve
7 Obturator internus muscle
8 Pubic bone (cut edge)
9 Levator ani muscle (remnant)
10 Dorsal nerve of penis
11 Posterior scrotal nerves
12 Adductor longus muscle
13 Gracilis muscle
14 Body of fourth lumbar vertebra
15 Cauda equina
16 Intervertebral disc
17 Sacral promontory
18 Sympathetic trunk
19 Sacrum
20 Lumbosacral trunk
21 Sacral plexus
22 Coccyx
23 Sacrospinous ligament
24 Pudendal nerve
25 Inferior rectal nerves
26 Perineal nerves
27 Subcutaneous fat tissue of gluteal region

Lumbosacral plexus in situ, right side (medial aspect).
Pelvic organs with peritoneum and part of the levator ani muscle have been removed.

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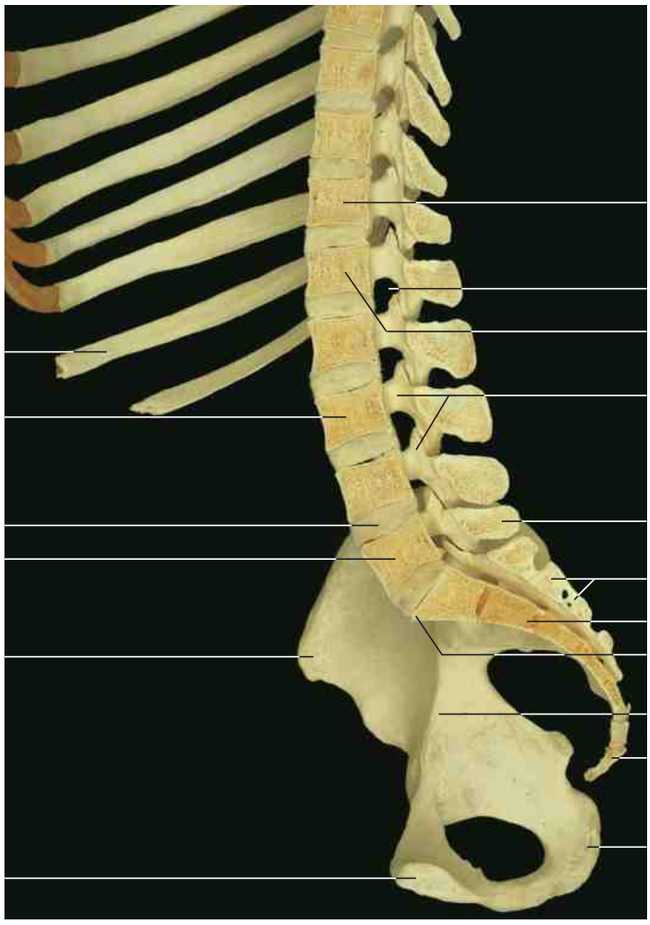
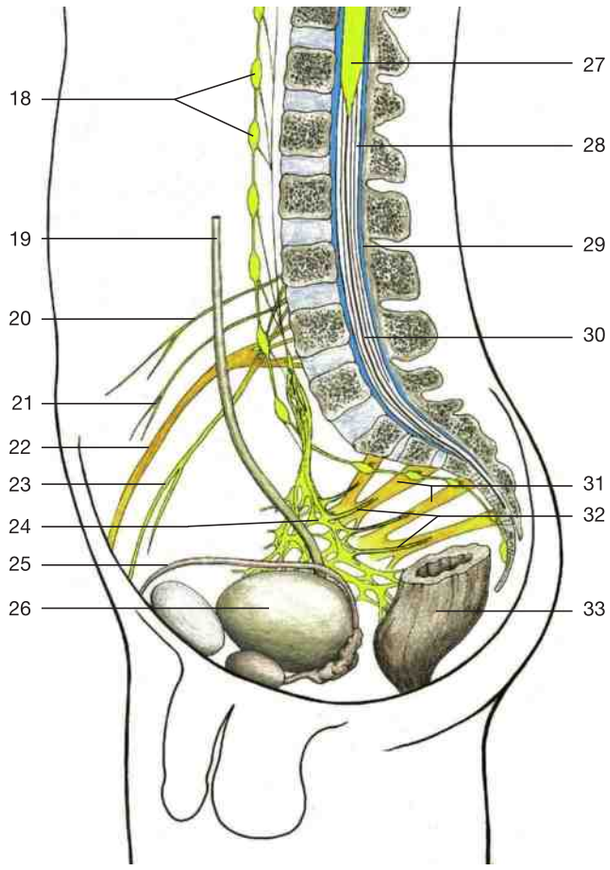


Lumbar part of vertebral column with pelvis (sagittal section, medial aspect).

1 Eleventh rib
2 Body of third lumbar vertebra
3 Intervertebral disc
4 Body of fifth lumbar vertebra
5 Anterior superior iliac spine
6 Symphysial surface
7 Body of twelfth thoracic vertebra
8 Intervertebral foramen
9 Body of first lumbar vertebra
10 Vertebral canal
11 Spinous process of fifth lumbar vertebra
12 Sacrum (median sacral crest)
13 Promontory (promontorium)
14 Sacrum
15 Arcuate line
16 Coccyx
17 Ischial tuberosity
18 Sympathetic trunk with ganglia
19 Ureter
20 Iliohypogastric nerve (Th_{12}, L_1)
21 Ilio-inguinal nerve (L_1)
22 Femoral nerve (L_2–L_4)
23 Genitofemoral nerve (L_1, L_2)
24 Inferior hypogastric plexus
25 Ductus deferens
26 Urinary bladder
27 Medullary cone of spinal cord
28 Root filaments of spinal nerves
29 Subarachnoid space (filled with cerebrospinal fluid) (blue)
30 Terminal filament of spinal cord
31 Sacral plexus
32 Pelvic splanchnic nerves (nervi erigentes)
33 Rectum



Vertebral canal with spinal cord and root filaments. Note the high location of the medullary cone. Sacral plexus and inferior hypogastric plexus are schematically shown.

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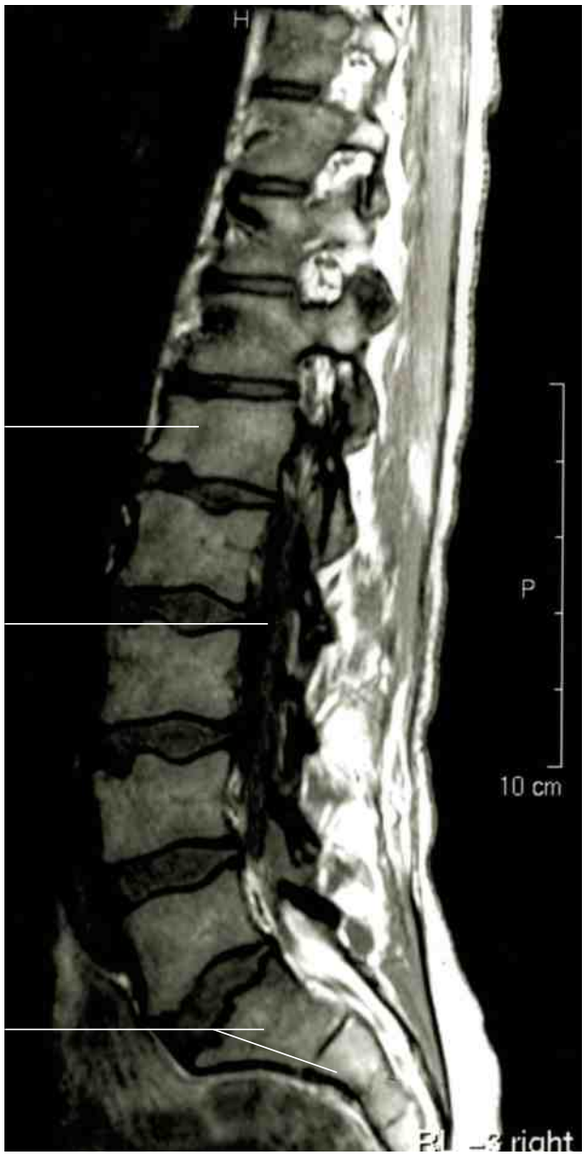
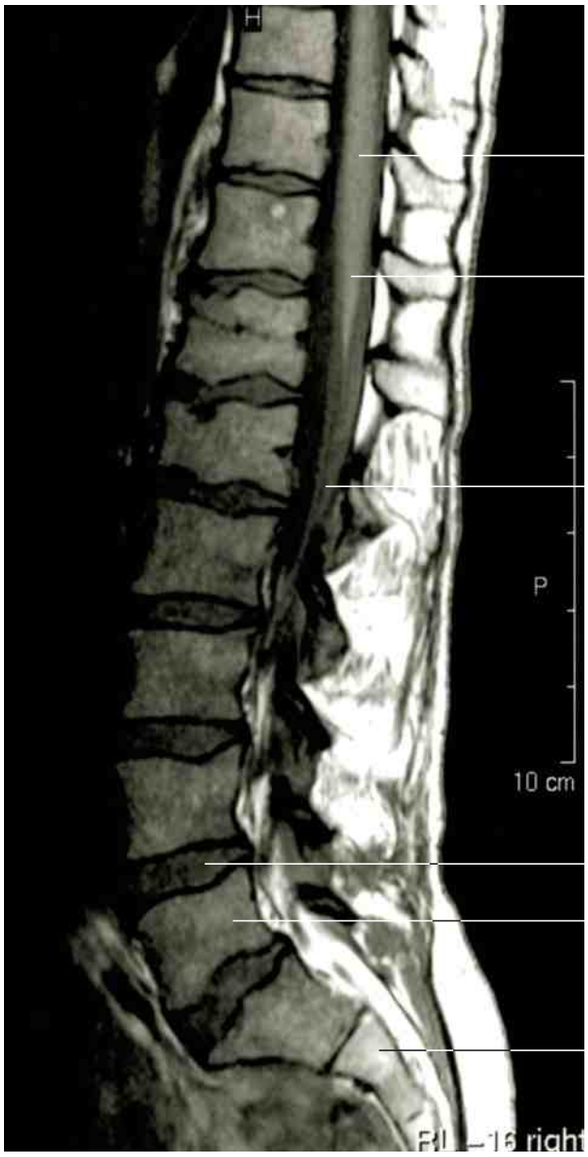
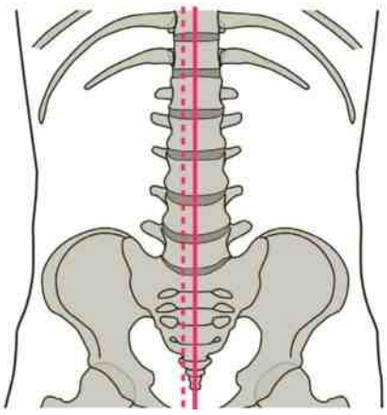


Paramedian section of lumbar part of vertebral canal (MRI scan, dotted line in the schematic drawing below; courtesy of Prof. Bautz, Erlangen, Germany).



Median section of lumbar part of vertebral canal at the level of the medullary cone (MRI scan, continuous line in the schematic drawing below; courtesy of Prof. Bautz, Erlangen, Germany).



1 First lumbar vertebra
2 Root filaments of spinal nerves
3 Sacrum
4 Spinal cord
5 Medullary cone of spinal cord
6 Intervertebral disc between fourth and fifth lumbar vertebra
7 Fifth lumbar vertebra

Location of the sections shown above through the vertebral canal.

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Spinal cord with intercostal nerves. Inferior thoracic region (anterior aspect). Anterior portion of thoracic vertebrae removed, dural sheath opened, and spinal cord slightly reflected to the right to display the dorsal and ventral roots.

1 Dura mater
2 Spinal cord
3 Costotransverse ligament
4 Innermost intercostal muscle
5 Vertebral arches (cut surfaces)
6 Eleventh rib
7 Intercostal nerve
8 Collateral branch of intercostal nerve
9 Intercostal nerve (entering the intermuscular interval)
10 Anterior root filaments
11 Spinal (dorsal root) ganglion
12 Posterior root filaments
13 Arachnoid mater and denticulate ligament
14 Anterior spinal artery

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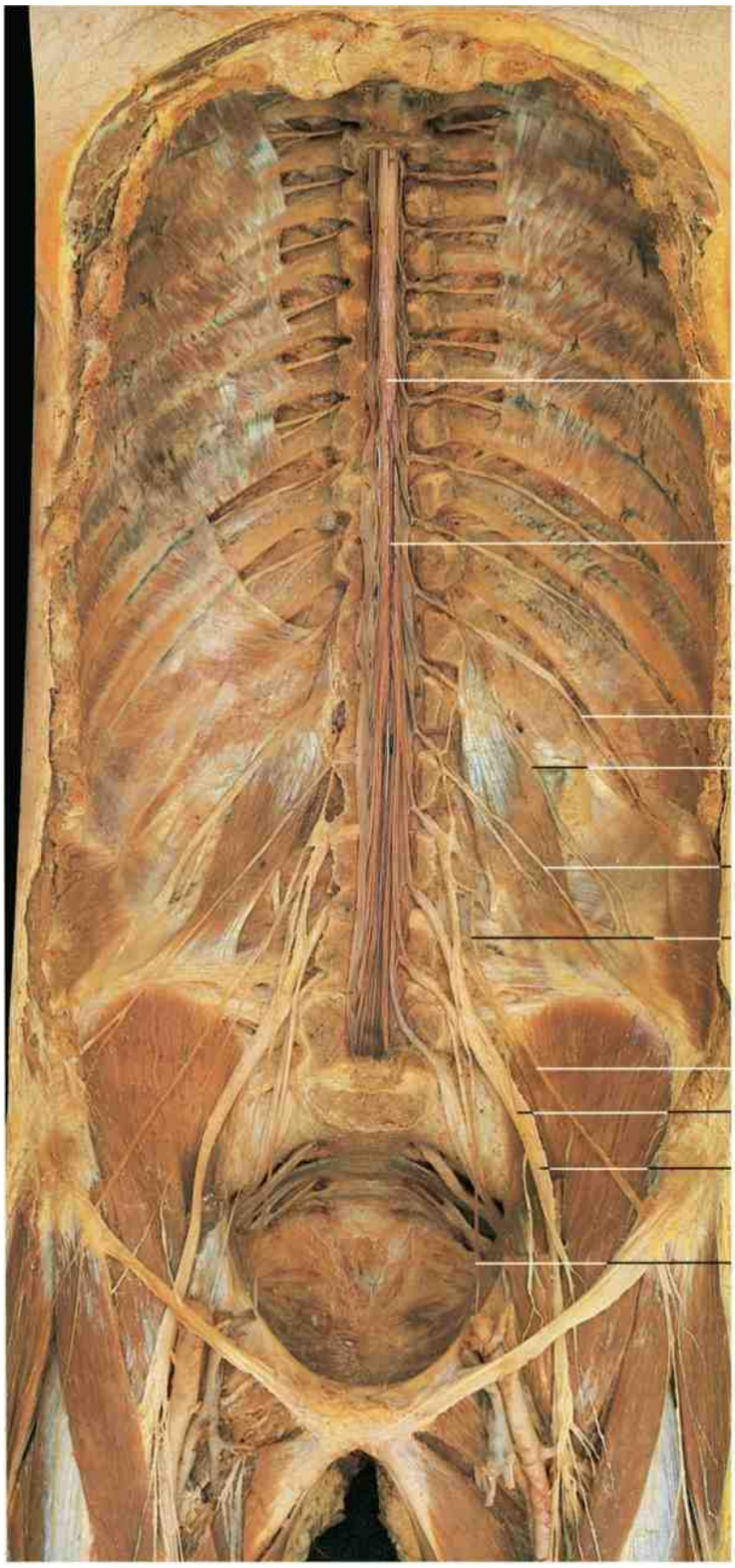
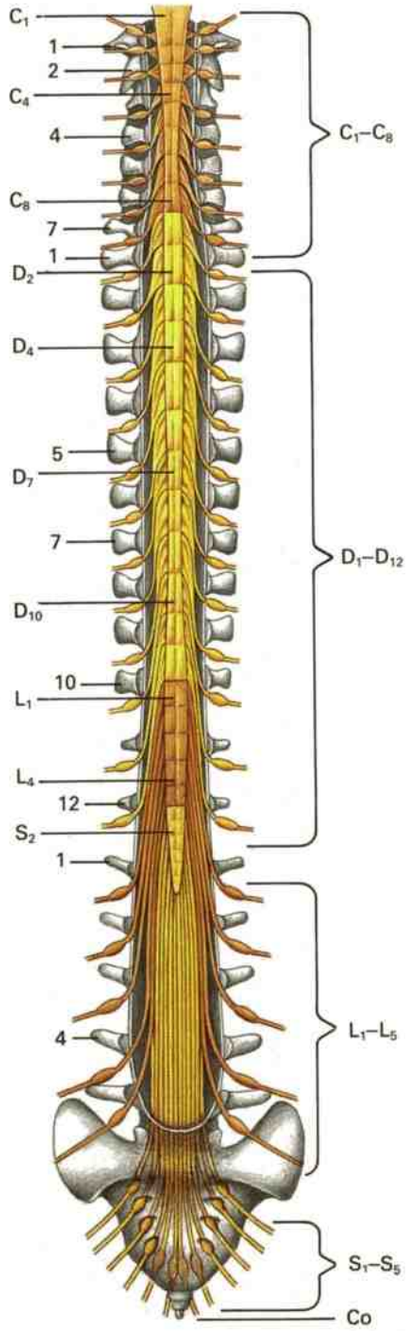


Spinal cord and lumbar plexus in situ (anterior aspect).

1 Conus medullaris
2 Filum terminale
3 Subcostal nerve
4 Iliohypogastric nerve
5 Ilio-inguinal nerve
6 Genitofemoral nerve
7 Lateral femoral cutaneous nerve
8 Femoral nerve
9 Obturator nerve



Organization of spinal cord segments in relation to the vertebral column (anterior aspect). C = cervical; D = thoracic; L = lumbar; S = sacral segments; Co = coccygeal bone. Numbers indicate the related vertebrae.

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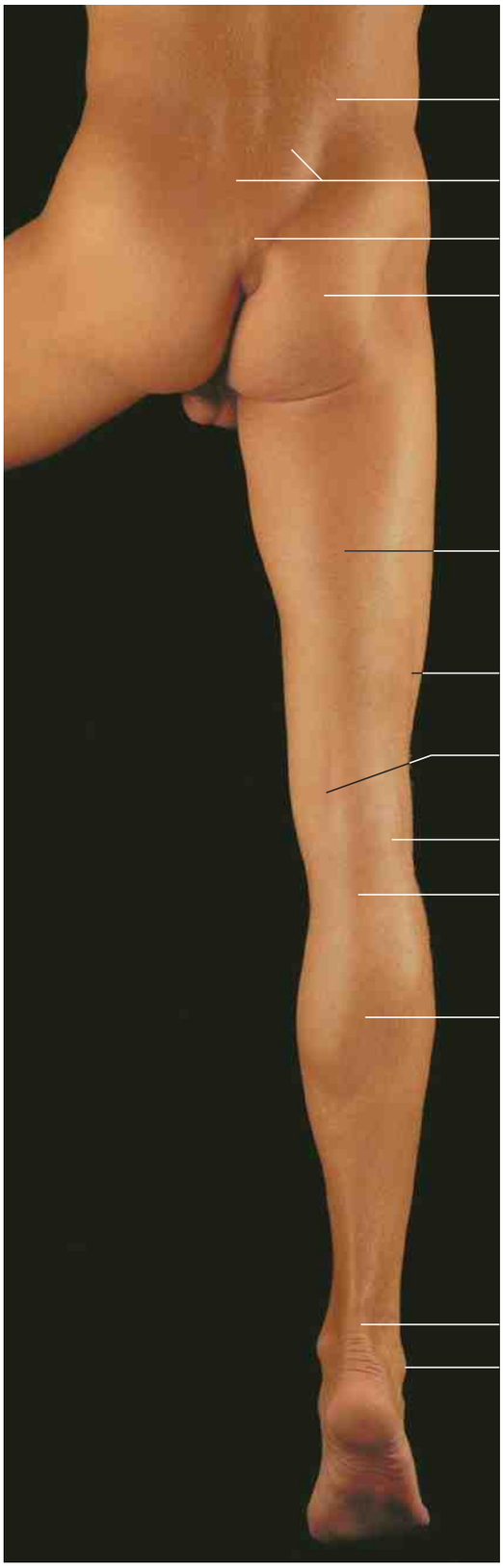
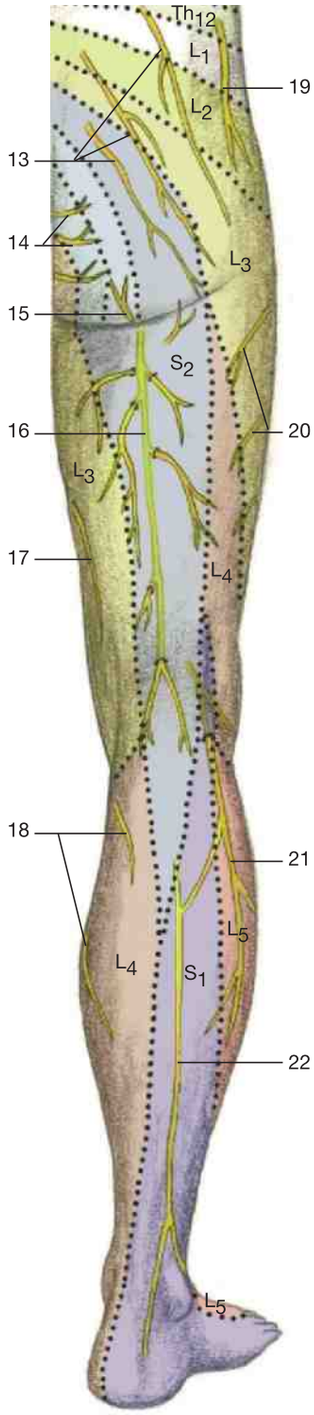


Surface anatomy of the right leg (posterior aspect).
Gluteal muscles contracted.



1 Iliac crest
2 Sacrum
3 Coccyx
4 Gluteus maximus muscle
5 Dorsal muscles of the leg
6 Iliotibial tract
7 Tendon of semimembranosus muscle
8 Tendon of biceps femoris muscle
9 Popliteal fossa
10 Triceps surae muscle
11 Calcaneal or Achilles tendon
12 Lateral malleolus
13 Superior cluneal nerves
14 Middle cluneal nerves
15 Inferior cluneal nerves
16 Posterior femoral cutaneous nerve
17 Obturator nerve
18 Saphenous nerve
19 Iliohypogastric nerve
20 Branch of lateral femoral cutaneous nerves
21 Common peroneal nerve
22 Sural nerve

Cutaneous nerves of the lower limb (posterior aspect).
Dotted lines = border of segments.

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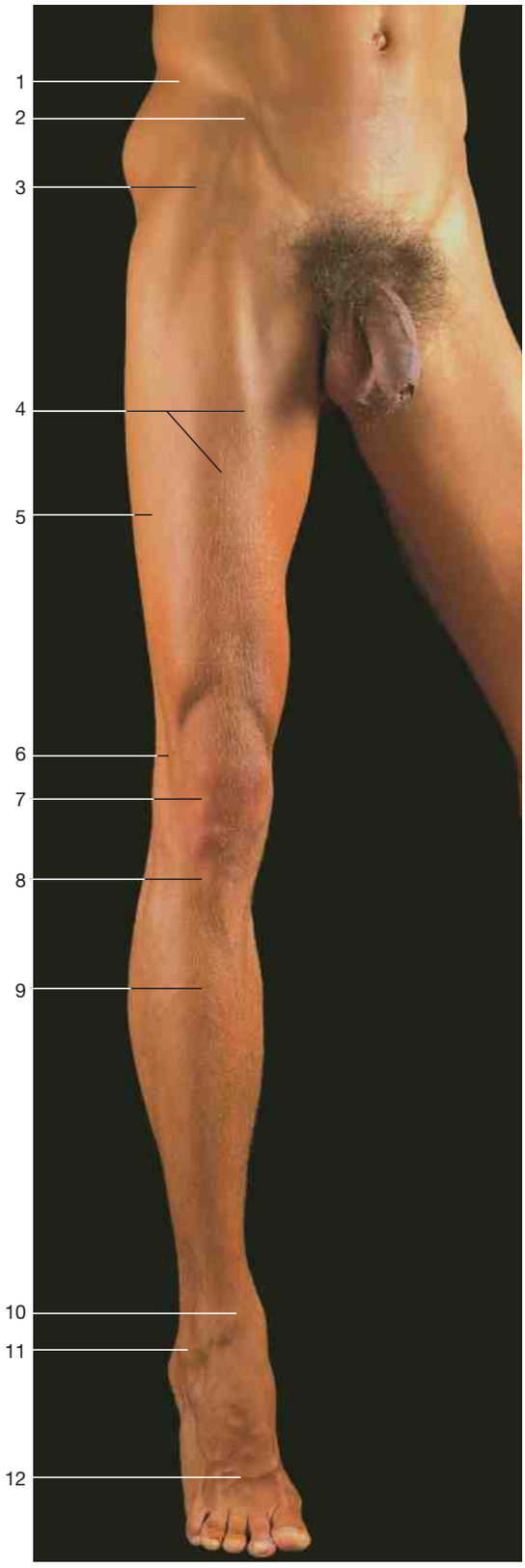
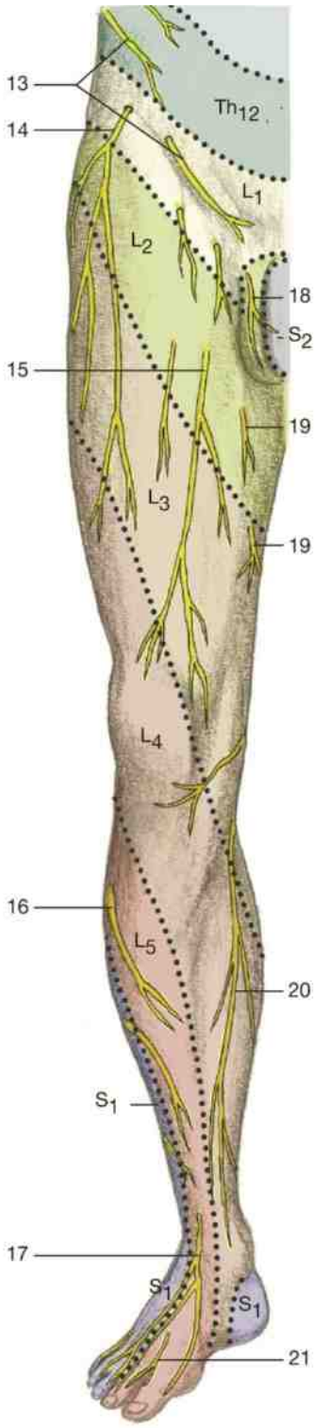


Surface anatomy of the right leg (anterior aspect).



Cutaneous nerves of the lower limb (anterior aspect).
Dotted lines = border of segments.

1 Iliac crest
2 Anterior superior iliac spine
3 Tensor fasciae latae muscle
4 Quadriceps femoris muscle
5 Iliotibial tract
6 Tendon of biceps femoris muscle
7 Patella
8 Patellar ligament
9 Tibia
10 Tendon of tibialis anterior muscle
11 Lateral malleolus
12 Venous network of dorsum of foot
13 Iliohypogastric nerve
14 Lateral femoral cutaneous nerve
15 Femoral nerve
16 Common peroneal nerve
17 Superficial peroneal nerve
18 Ilio-inguinal nerve
19 Obturator nerve
20 Saphenous nerve
21 Deep peroneal nerve

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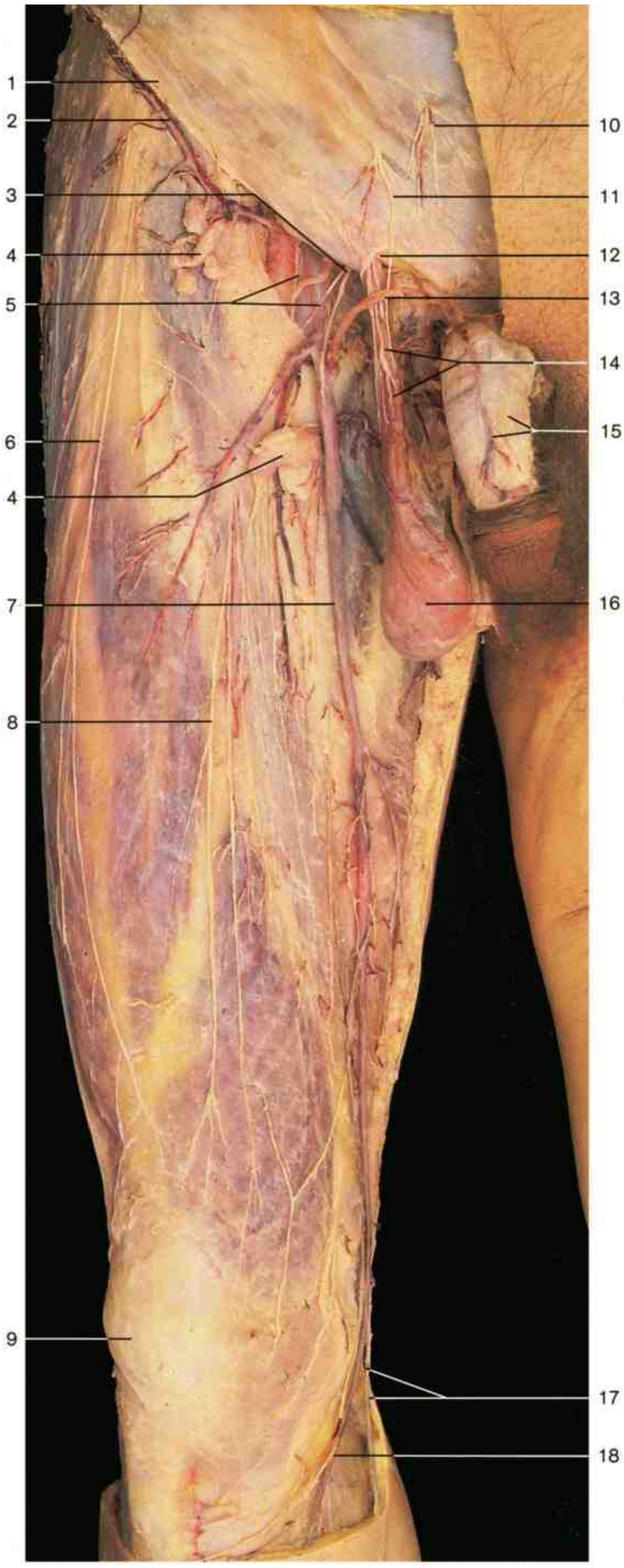
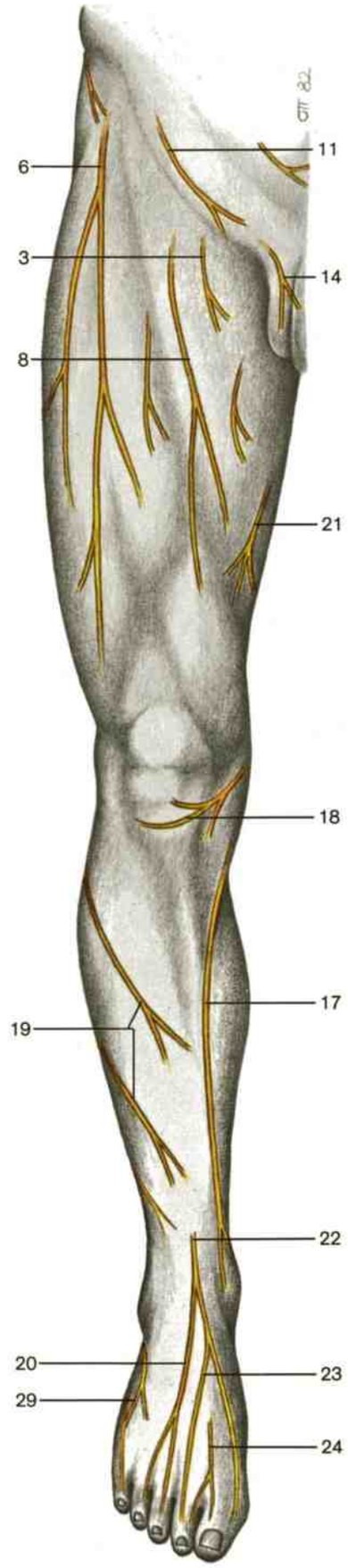


Cutaneous nerves and veins of thigh (anterior aspect).



Cutaneous nerves of lower limb (anterior aspect). (Schematic drawing.)

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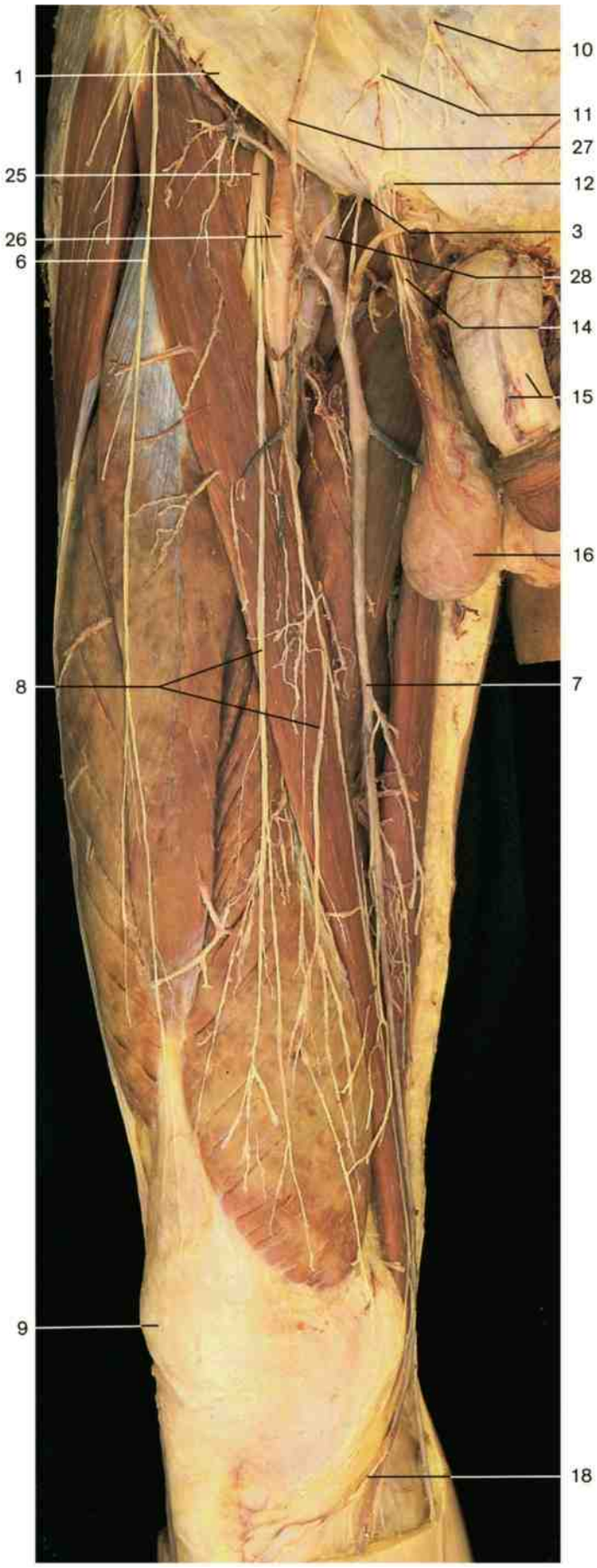
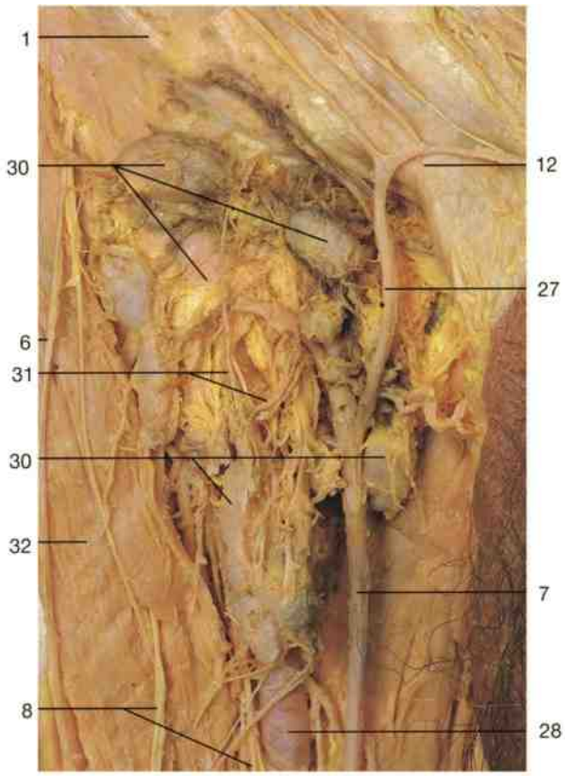


Cutaneous nerves and veins of thigh (anterior aspect). The fascia lata and fasciae of the thigh muscles have been removed.

1 Inguinal ligament
2 Superficial circumflex iliac vein
3 Femoral branch of genitofemoral nerve
4 Superficial inguinal lymph nodes
5 Saphenous opening with femoral artery and vein
6 Lateral femoral cutaneous nerve
7 Great saphenous vein
8 Anterior cutaneous branches of femoral nerve
9 Patella
10 Terminal branches of subcostal nerve
11 Terminal branches of iliohypogastric nerve
12 Superficial inguinal ring
13 External pudendal vein
14 Spermatic cord with genital branch of genitofemoral nerve
15 Penis with superficial dorsal vein of penis
16 Testis and its coverings
17 Saphenous nerve
18 Infrapatellar branch of saphenous nerve
19 Lateral sural cutaneous nerves
20 Intermediate dorsal cutaneous branch of superficial peroneal nerve
21 Cutaneous branch of obturator nerve
22 Superficial peroneal nerve
23 Medial dorsal cutaneous branch of superficial peroneal nerve
24 Deep peroneal nerve
25 Femoral nerve
26 Femoral artery
27 Superficial epigastric vein
28 Femoral vein
29 Lateral dorsal cutaneous branch of sural nerve
30 Inguinal nodes (enlarged)
31 Lympathic vessels
32 Sartorius muscle



Inguinal nodes with lymphatic vessels (anterior aspect).

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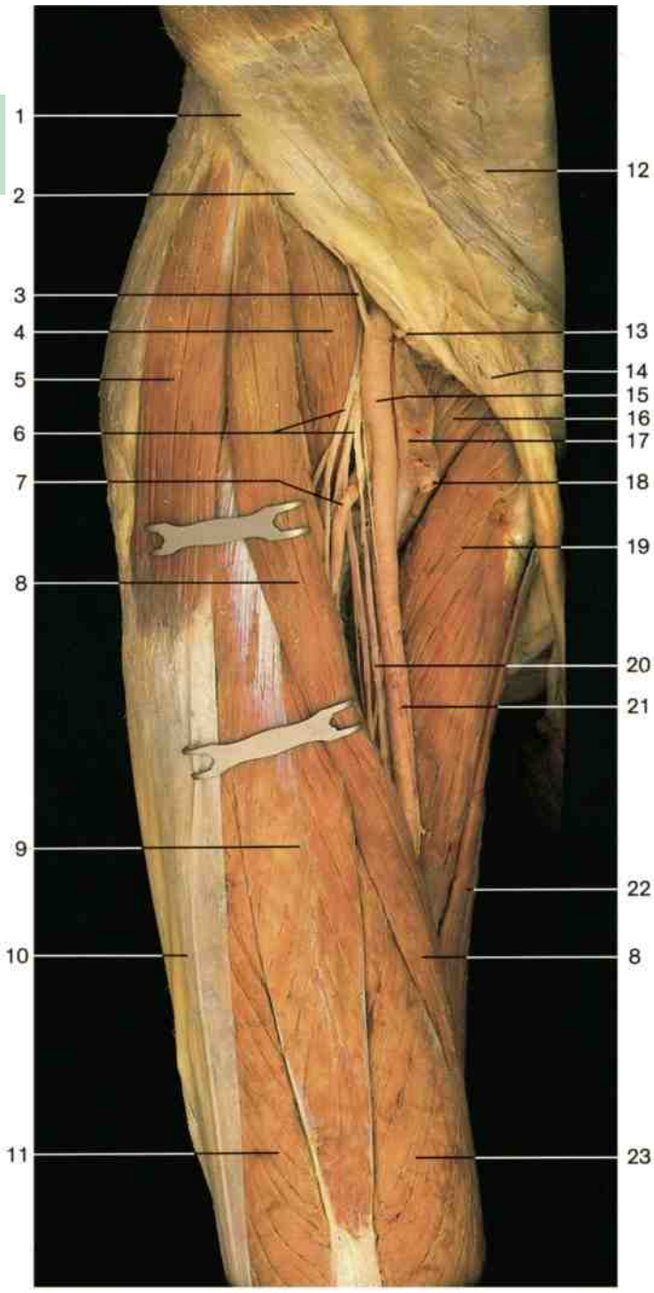
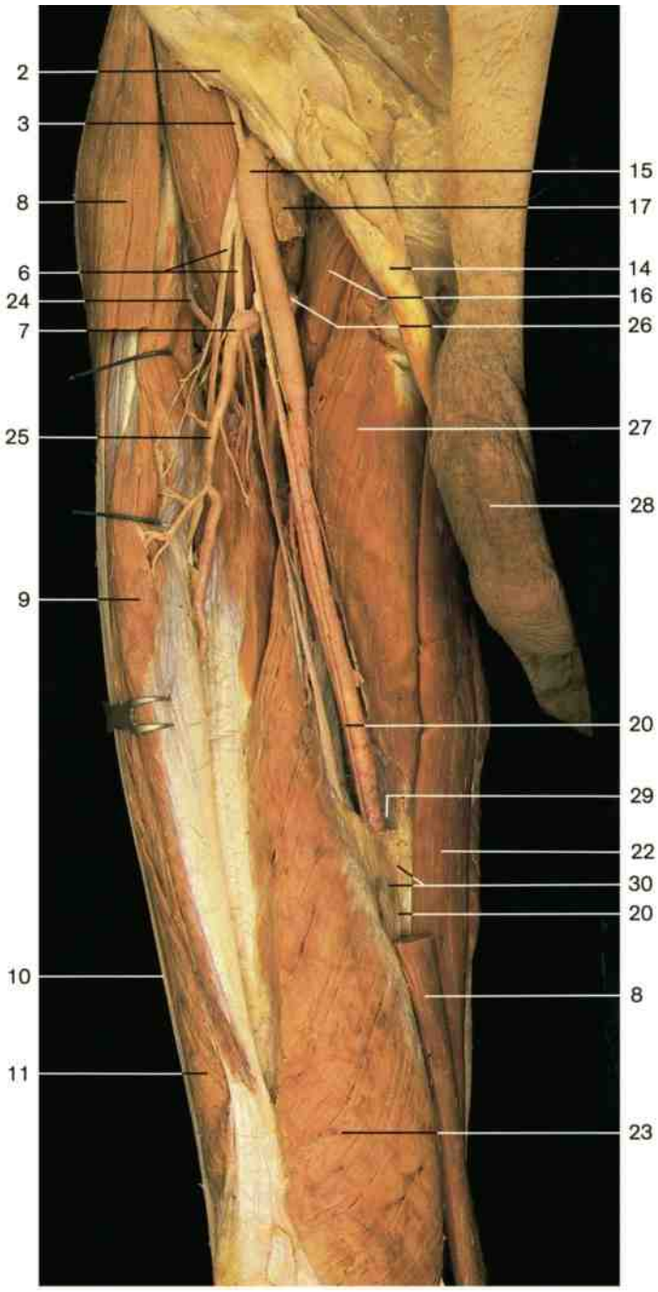


Anterior region of right thigh (anterior aspect). The fascia lata has been removed, and the sartorius muscle has been slightly reflected.



Anterior region of right thigh (anterior aspect). The fascia lata has been removed, and the sartorius muscle has been divided.

1 Anterior superior iliac spine
2 Inguinal ligament
3 Deep circumflex iliac artery
4 Iliopsoas muscle
5 Tensor fasciae latae muscle
6 Femoral nerve
7 Lateral circumflex femoral artery
8 Sartorius muscle
9 Rectus femoris muscle
10 Iliotibial tract
11 Vastus lateralis muscle
12 Anterior sheath of rectus abdominis muscle
13 Inferior epigastric artery
14 Spermatic cord
15 Femoral artery
16 Pectineus muscle
17 Femoral vein
18 Great saphenous vein (divided)
19 Adductor longus muscle
20 Saphenous nerve
21 Muscular branch of femoral nerve
22 Gracilis muscle
23 Vastus medialis muscle
24 Ascending branch of lateral circumflex femoral artery
25 Descending branch of lateral circumflex femoral artery
26 Medial circumflex femoral artery
27 Adductor longus muscle
28 Penis
29 Entrance to adductor canal
30 Vasto-adductor membrane of fascia beneath sartorius muscle

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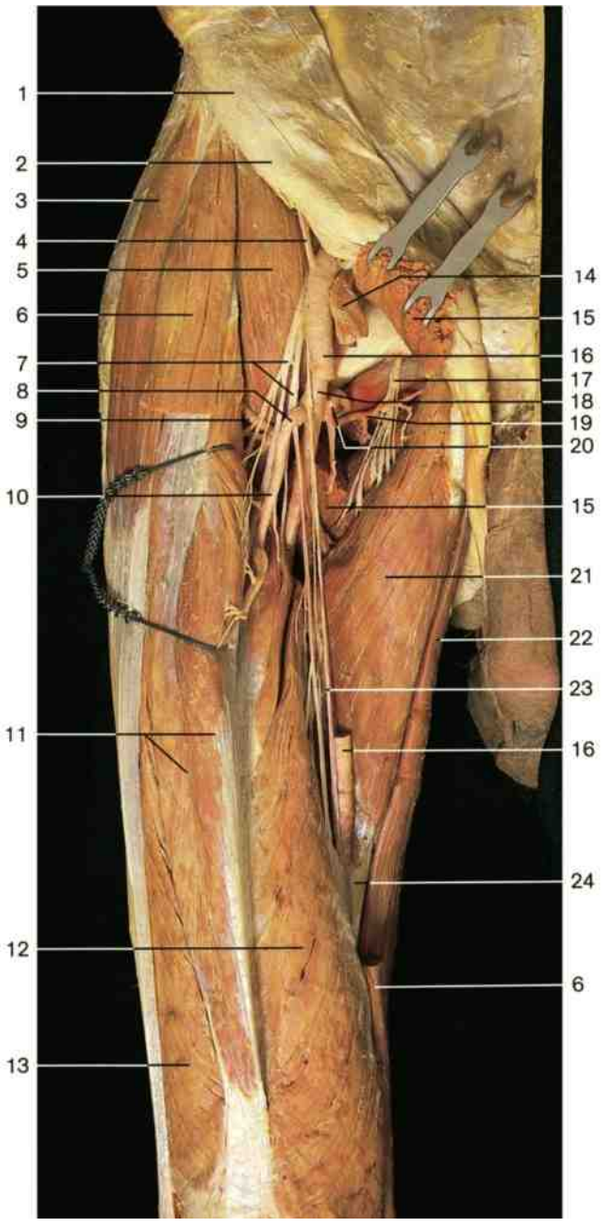
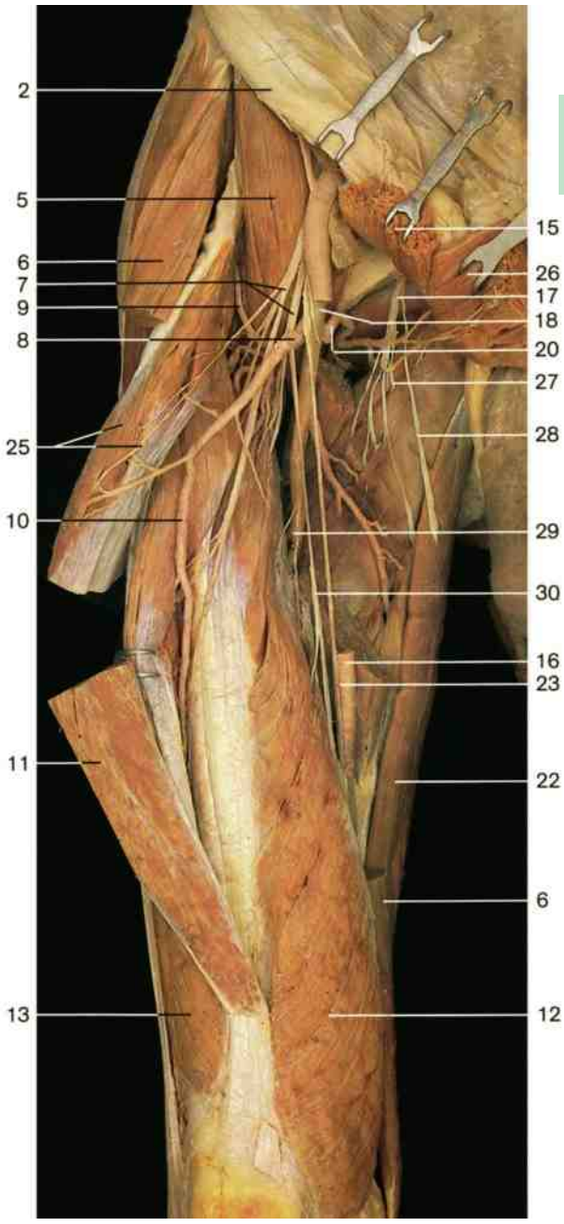


Anterior region of right thigh (anterior aspect). The fascia lata has been removed. Sartorius muscle, pectineus muscle, and femoral artery have been cut to display the deep femoral artery with its branches. The rectus femoris muscle has been slightly reflected.

1 Anterior superior iliac spine
2 Inguinal ligament
3 Tensor fasciae latae muscle
4 Deep circumflex iliac artery
5 Iliopsoas muscle
6 Sartorius muscle (cut)
7 Femoral nerve
8 Lateral circumflex femoral artery
9 Ascending branch of lateral circumflex femoral artery
10 Descending branch of lateral circumflex femoral artery
11 Rectus femoris muscle
12 Vastus medialis muscle
13 Vastus lateralis muscle
14 Femoral vein
15 Pectineus muscle (cut)
16 Femoral artery (cut)



Anterior region of right thigh (anterior aspect). The sartorius, pectineus, adductor longus, and rectus femoris muscles have been divided and reflected. The greater part of the femoral artery has been removed.

17 Obturator nerve
18 Profunda femoris artery
19 Ascending branch of medial circumflex femoral artery
20 Medial circumflex femoral artery
21 Adductor longus muscle
22 Gracilis muscle
23 Saphenous nerve
24 Distal part of vasto-adductor membrane
25 Rectus femoris muscle with muscular branch of femoral nerve
26 Adductor longus muscle (divided)
27 Posterior branch of obturator nerve
28 Anterior branch of obturator nerve
29 Point at which perforating artery branches off from profunda femoris artery
30 Muscular branch of femoral nerve to vastus medialis muscle

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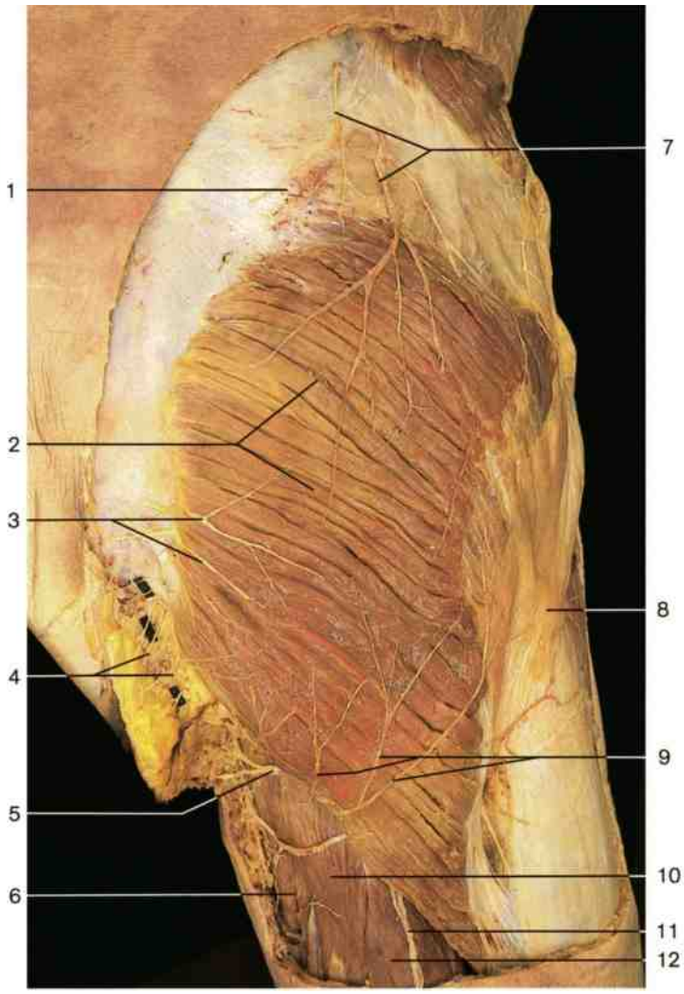
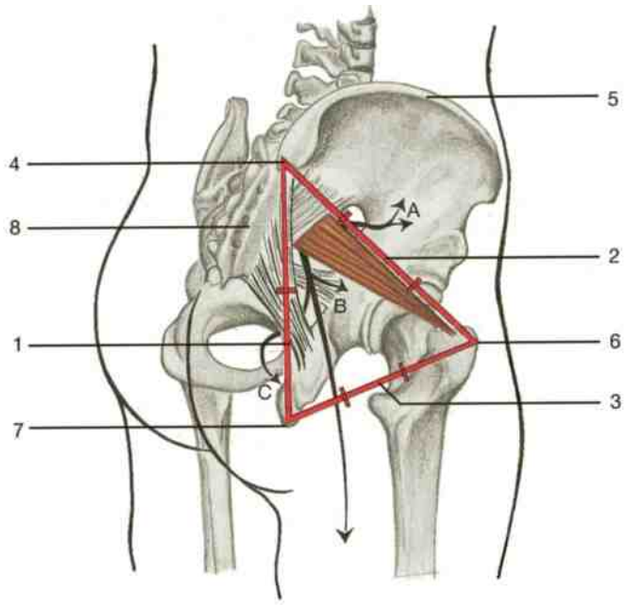


Gluteal region, right side (posterior aspect).

1 Iliac crest
2 Gluteus maximus muscle
3 Middle cluneal nerves
4 Anococcygeal nerves
5 Perineal branch of posterior femoral cutaneous nerve
6 Adductor magnus muscle
7 Superior cluneal nerves
8 Position of greater trochanter
9 Inferior cluneal nerves
10 Semitendinosus muscle
11 Posterior femoral cutaneous nerve
12 Long head of biceps femoris muscle

A	**Suprapiriform foramen** (of greater sciatic foramen) Superior gluteal artery, vein, and nerve
B	**Infrapiriform foramen** (of greater sciatic foramen) Sciatic nerve Inferior gluteal artery, vein, and nerve Posterior femoral cutaneous nerve Internal pudendal artery and vein Pudendal nerve
C	**Lesser sciatic foramen** Pudendal nerve Internal pudendal artery and vein



Gluteal region, right side (postero-lateral aspect). Location of sciatic foramina in relation to the bones (schematic drawing).

Red lines

1 Spine-tuber line:
the infrapiriform foramen is situated in the middle of this line
2 Spine-trochanter line:
the suprapiriform foramen is located in the upper third
3 Tuber-trochanter line:
the ischiadic nerve can be found between the middle and posterior third

Other structures

4 Posterior superior iliac spine
5 Iliac crest
6 Greater trochanter
7 Ischial tuberosity
8 Sacrum

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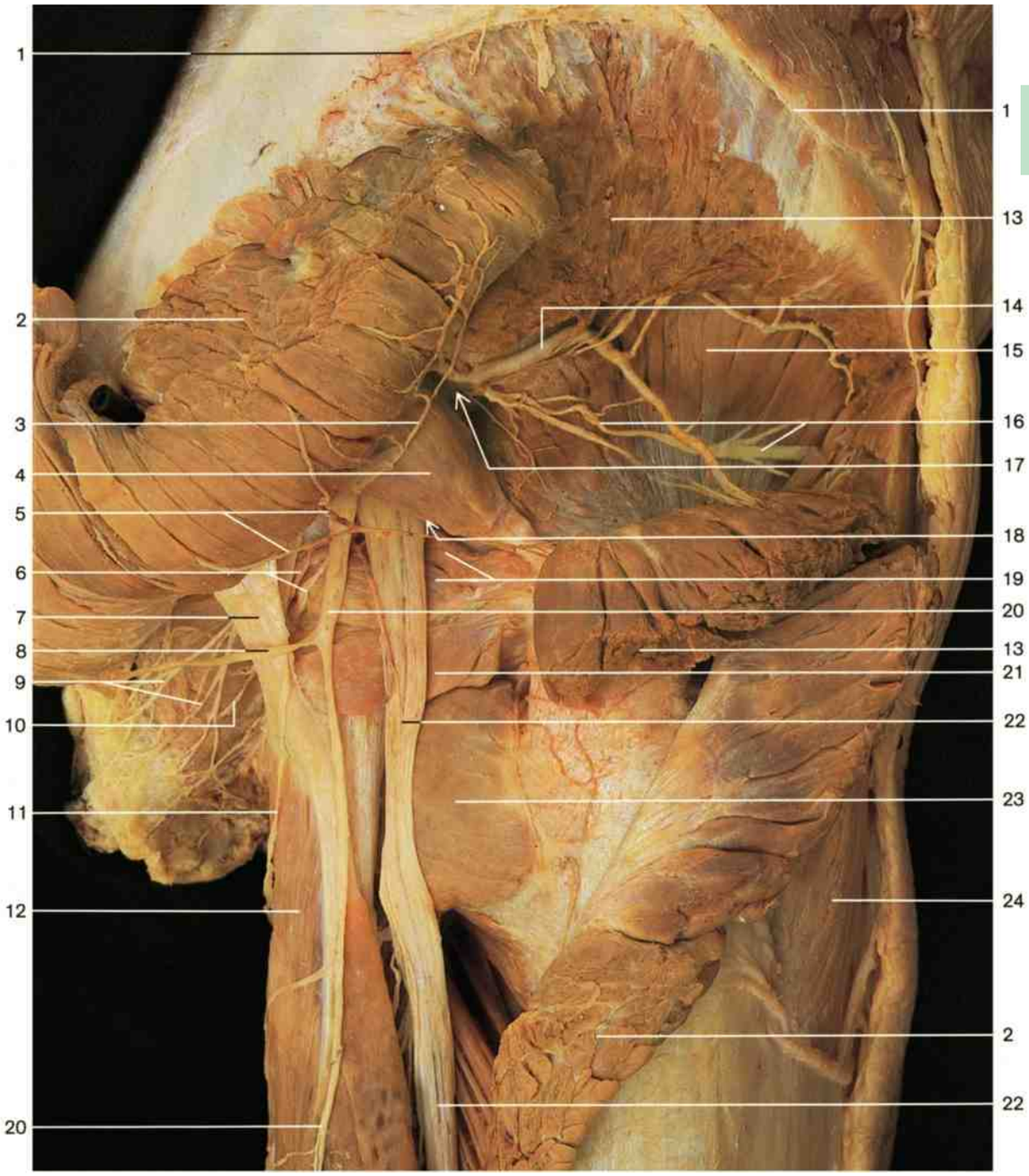

Gluteal region, right side (posterior aspect). The gluteus maximus and gluteus medius muscles have been divided and reflected. Notice the position of the foramina above and below the piriformis muscle and the lesser sciatic foramen.

1 Iliac crest
2 Gluteus maximus muscle (cut)
3 Inferior gluteal nerve
4 Piriformis muscle
5 Muscular branches of inferior gluteal artery
6 Pudendal nerve and internal pudendal artery within the lesser sciatic foramen (entrance to the pudendal canal)
7 Sacrotuberous ligament
8 Inferior cluneal nerve
9 Inferior rectal nerves
10 Inferior rectal arteries
11 Perforating cutaneous nerve
12 Long head of biceps femoris muscle
13 Gluteus medius muscle (cut)
14 Deep branch of superior gluteal artery
15 Gluteus minimus muscle
16 Superior gluteal nerve
17 Suprapiriform foramen } greater sciatic foramen
18 Infrapiriform foramen } greater sciatic foramen
19 Tendon of obturator internus and superior gemellus muscles
20 Posterior femoral cutaneous nerve
21 Inferior gemellus muscle
22 Sciatic nerve
23 Quadratus femoris muscle
24 Tensor fasciae latae muscle

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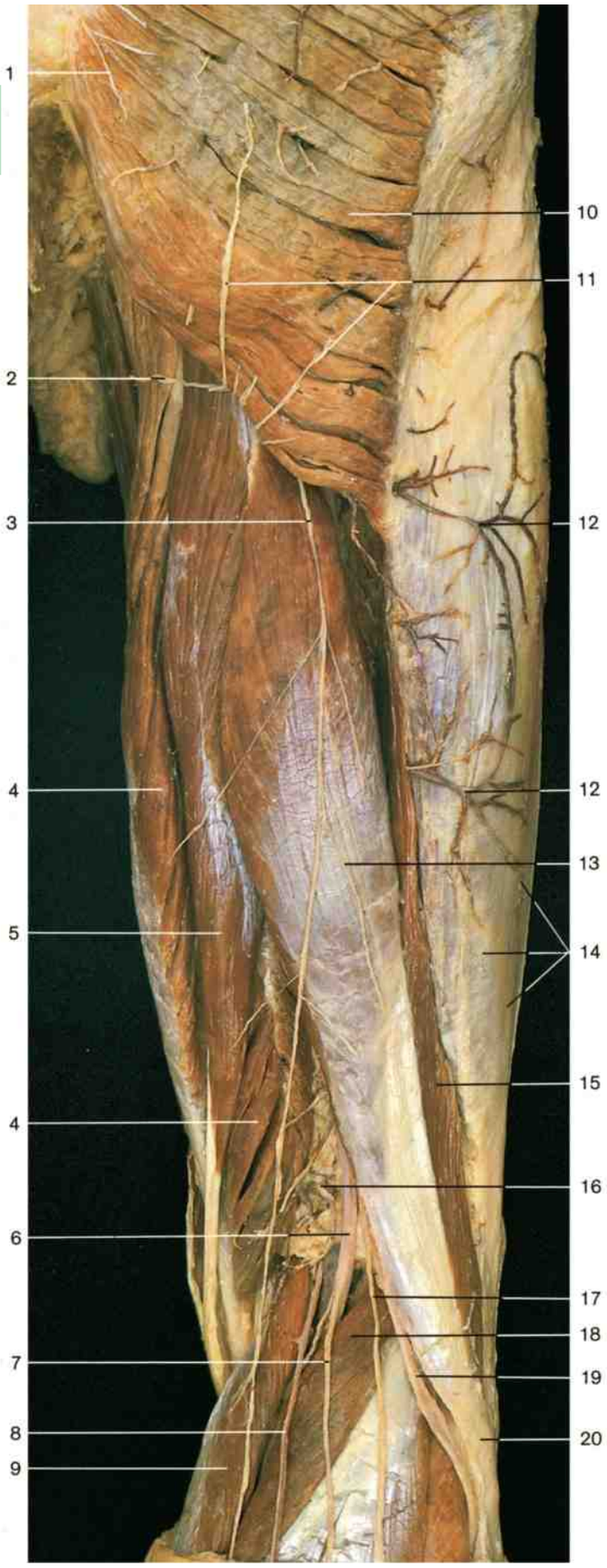

Cutaneous nerves of thigh (posterior aspect).
The fascia lata and the fasciae of muscles have been removed.

1 Middle cluneal nerves
2 Perineal branch of posterior femoral cutaneous nerve
3 Posterior femoral cutaneous nerve
4 Semimembranosus muscle
5 Semitendinosus muscle
6 Tibial nerve
7 Medial sural cutaneous nerve
8 Small saphenous vein
9 Medial head of gastrocnemius muscle
10 Gluteus maximus muscle
11 Inferior cluneal nerves
12 Cutaneous veins
13 Long head of biceps femoris muscle
14 Iliotibial tract
15 Short head of biceps femoris muscle
16 Popliteal fossa
17 Lateral sural cutaneous nerve
18 Lateral head of gastrocnemius muscle
19 Common peroneal nerve
20 Tendon of biceps femoris muscle
21 Inferior gluteal nerve
22 Sacrotuberous ligament
23 Inferior rectal branches of pudendal nerve
24 Anus
25 Gluteus medius muscle
26 Piriformis muscle
27 Sciatic nerve
28 Inferior gluteal artery
29 Gluteus maximus muscle (cut)
30 Quadratus femoris muscle
31 Sciatic nerve dividing into its two branches: the common peroneal nerve and the tibial nerve
32 Muscular branches of sciatic nerve to hamstring muscles
33 Popliteal artery
34 Popliteal vein
35 Small saphenous vein (cut)
36 Long head of biceps femoris muscle (cut)
37 Superficial peroneal nerve

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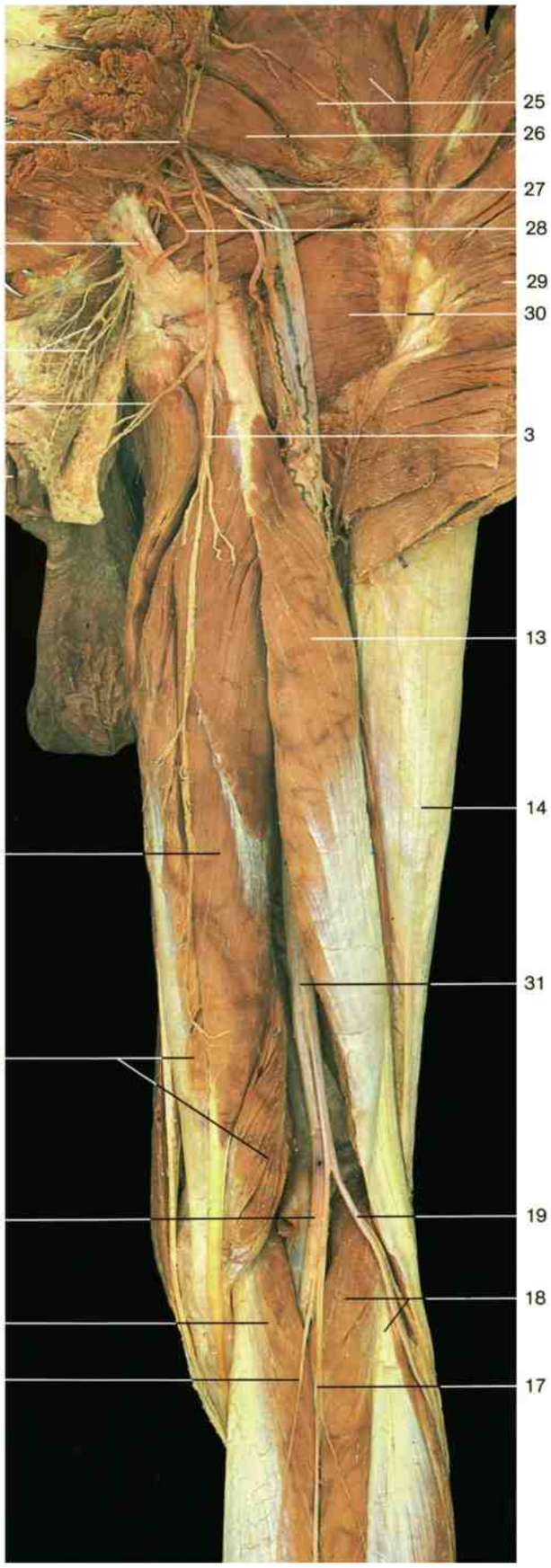
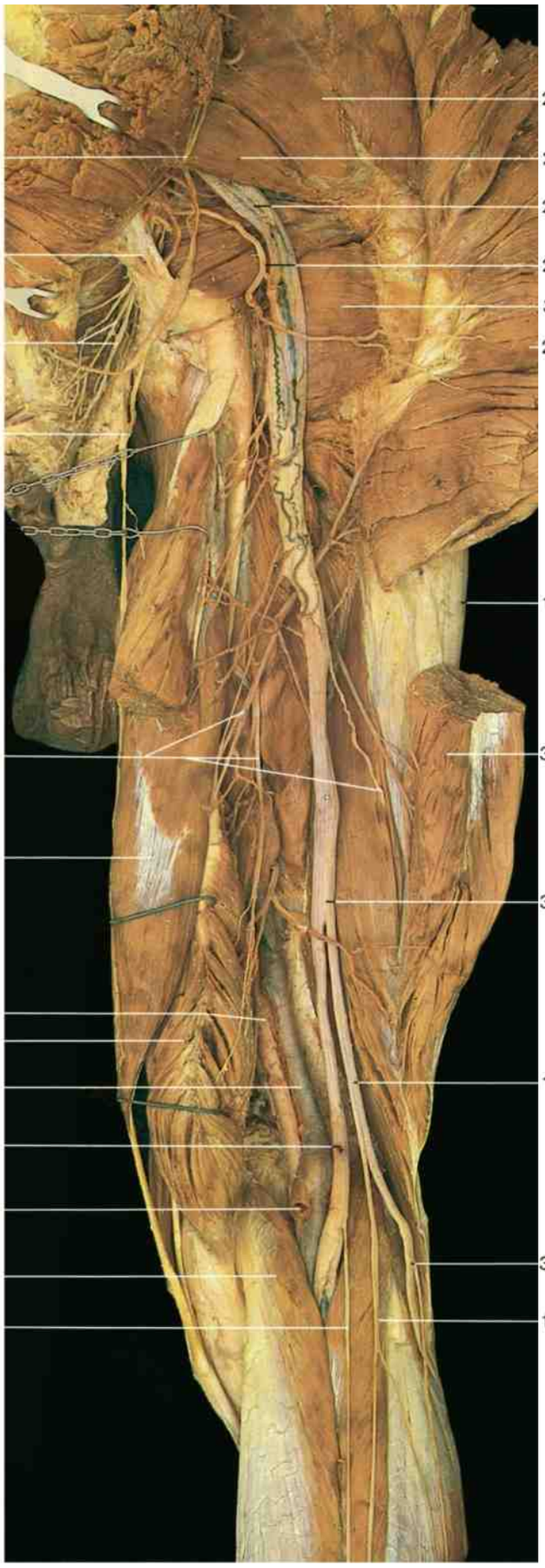


Gluteal region and posterior region of right thigh (posterior aspect). The gluteus maximus muscle has been divided and reflected.



Gluteal region and posterior region of right thigh (posterior aspect). The gluteus maximus muscle and the long head of the biceps femoris muscle have been divided and reflected.

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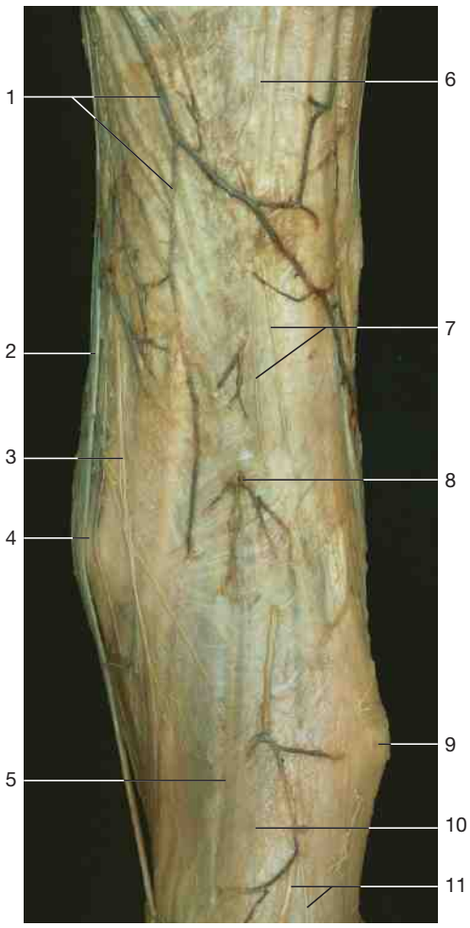
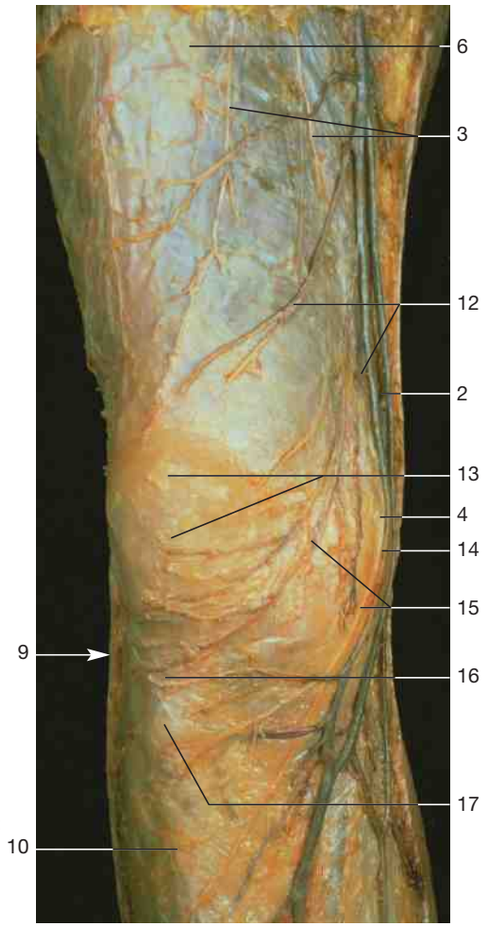


Posterior region of right knee, cutaneous nerves and veins (posterior aspect).



Anterior region of right knee, cutaneous nerves and veins (anterior aspect).

1 Cutaneous veins (tributaries of great saphenous vein)
2 Great saphenous vein
3 Cutaneous branch of femoral nerve
4 Position of medial condyle of femur
5 Position of small saphenous vein
6 Fascia lata
7 Terminal branches of posterior femoral cutaneous nerve
8 Cutaneous veins of popliteal fossa
9 Position of head of fibula
10 Superficial layer of fascia cruris
11 Lateral sural cutaneous nerve
12 Venous network around knee
13 Patella
14 Saphenous nerve
15 Infrapatellar branch of saphenous nerve
16 Patellar ligament
17 Position of tuberosity of tibia
18 Sartorius muscle
19 Semimembranosus muscle
20 Gastrocnemius muscle
21 Popliteal vein
22 Tibial nerve
23 Biceps femoris muscle
24 Popliteal artery
25 Lateral inferior genicular artery
26 Fibula

Coronal section of popliteal fossa (MRI scan; from Heuck et al., MRT-Atlas, 2009).

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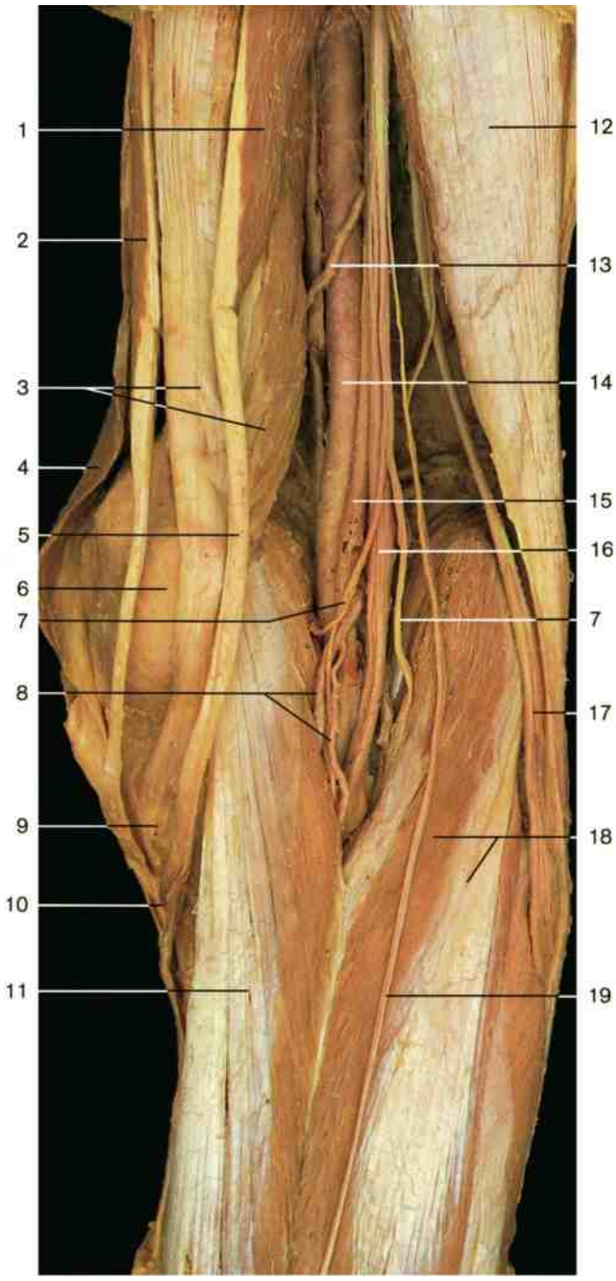
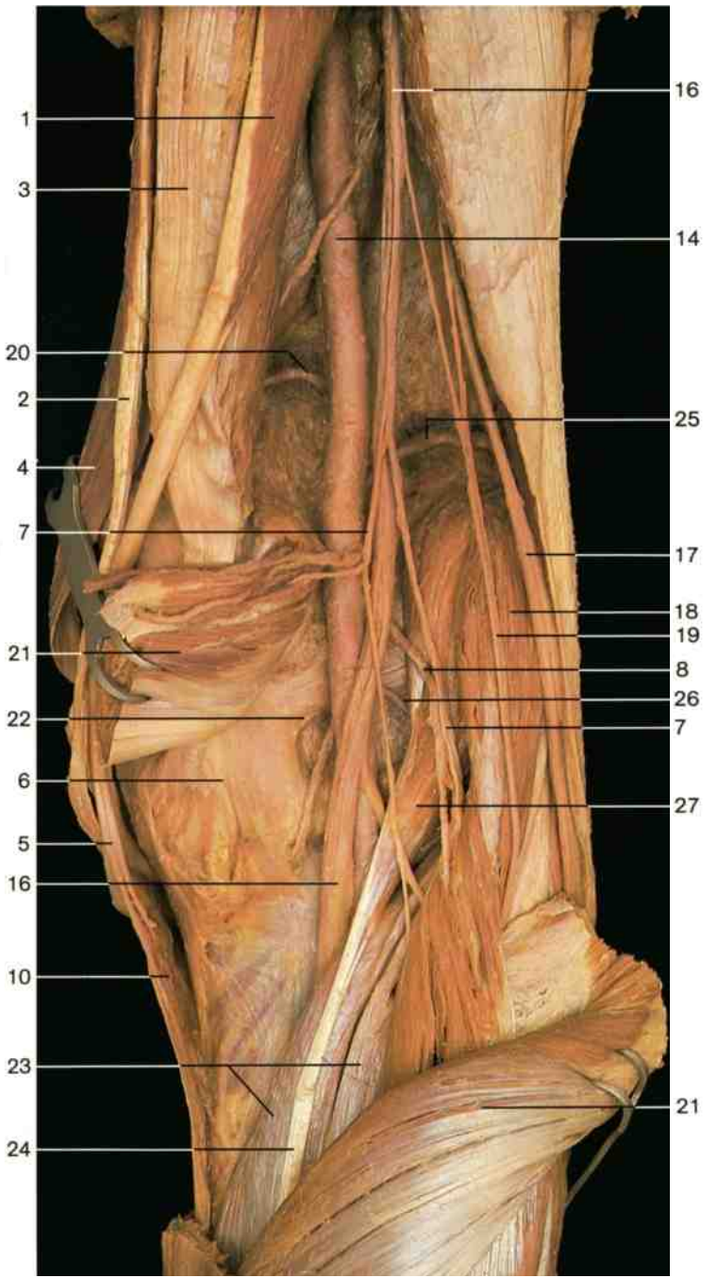


Right leg, popliteal fossa, middle layer (posterior aspect). The gastrocnemius muscle has been divided and reflected.



Right leg, popliteal fossa, deep layer (posterior aspect). The gastrocnemius and the soleus muscles have been divided and reflected.

1 Semitendinosus muscle
2 Gracilis muscle
3 Semimembranosus muscle
4 Sartorius muscle
5 Tendon of semitendinosus muscle
6 Position of medial condyle of femur
7 Muscular branches of tibial nerve
8 Sural arteries and veins
9 Tendon of semimembranosus muscle
10 Common tendon of gracilis, semitendinosus, and sartorius muscles
11 Medial head of gastrocnemius muscle
12 Biceps femoris muscle
13 Muscular branch of popliteal artery
14 Popliteal artery
15 Popliteal vein
16 Tibial nerve
17 Common peroneal nerve
18 Lateral head of gastrocnemius muscle
19 Medial sural cutaneous nerve
20 Medial superior genicular artery
21 Medial head of gastrocnemius muscle (cut and reflected)
22 Medial inferior genicular artery
23 Soleus muscle
24 Tendon of plantaris muscle
25 Lateral superior genicular artery
26 Lateral inferior genicular artery
27 Plantaris muscle

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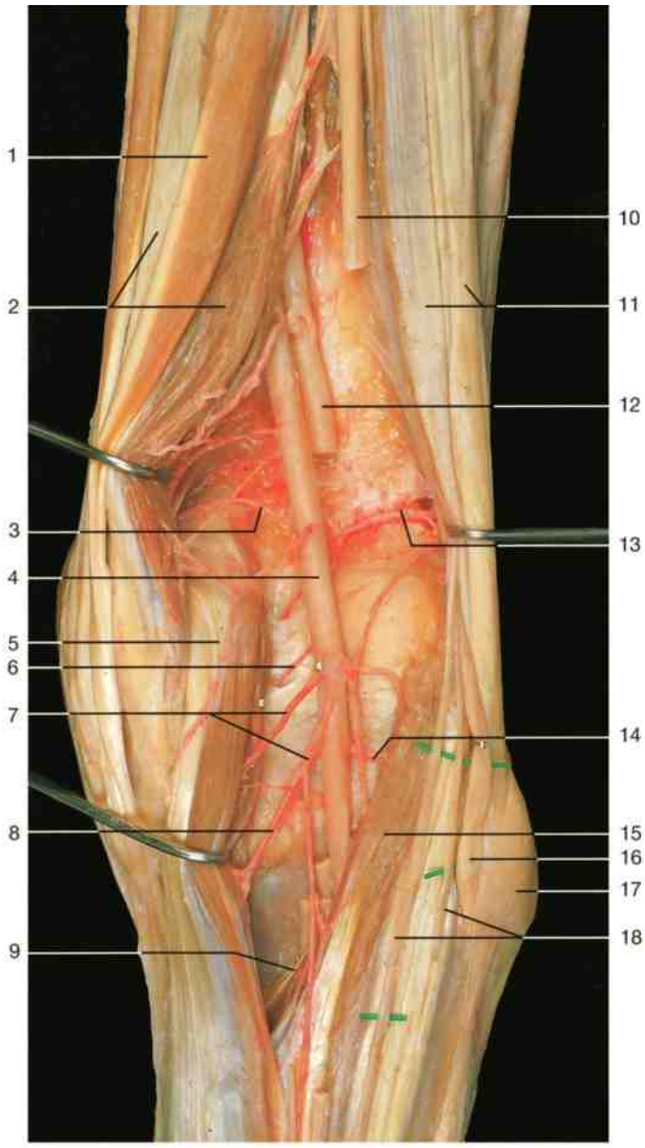
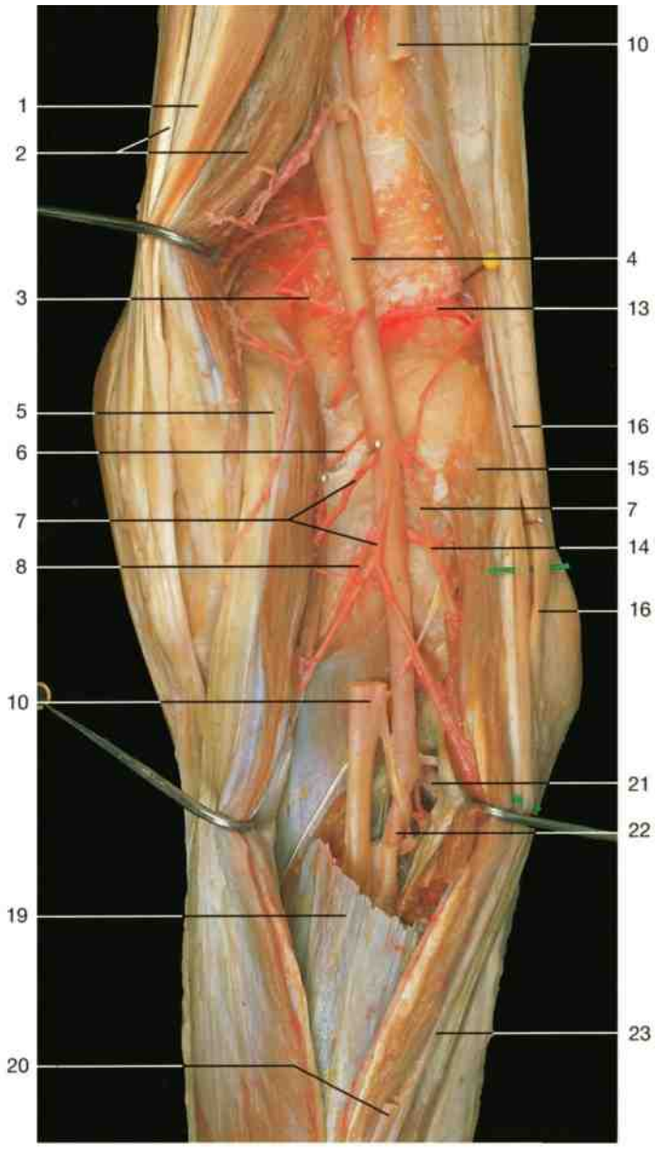


Right leg, popliteal fossa, deep layer (posterior aspect). The muscles have been reflected to display the genicular arteries.



Right leg, popliteal fossa, deepest layer (posterior aspect). Tibial nerve and popliteal vein have been partly removed and a portion of the soleus muscle was cut away to display the anterior tibial artery.

1 Semitendinosus muscle
2 Semimembranosus muscle
3 Medial superior genicular artery
4 Popliteal artery
5 Medial head of gastrocnemius muscle
6 Middle genicular artery
7 Muscular branches
8 Medial inferior genicular artery
9 Tendon of plantaris muscle
10 Tibial nerve (cut)
11 Biceps femoris muscle
12 Popliteal vein (cut)
13 Lateral superior genicular artery
14 Lateral inferior genicular artery
15 Lateral head of gastrocnemius muscle
16 Common peroneal nerve
17 Head of fibula
18 Lateral sural cutaneous nerves
19 Soleus muscle
20 Medial sural cutaneous nerve
21 Anterior tibial artery
22 Posterior tibial artery
23 Lateral sural cutaneous nerve

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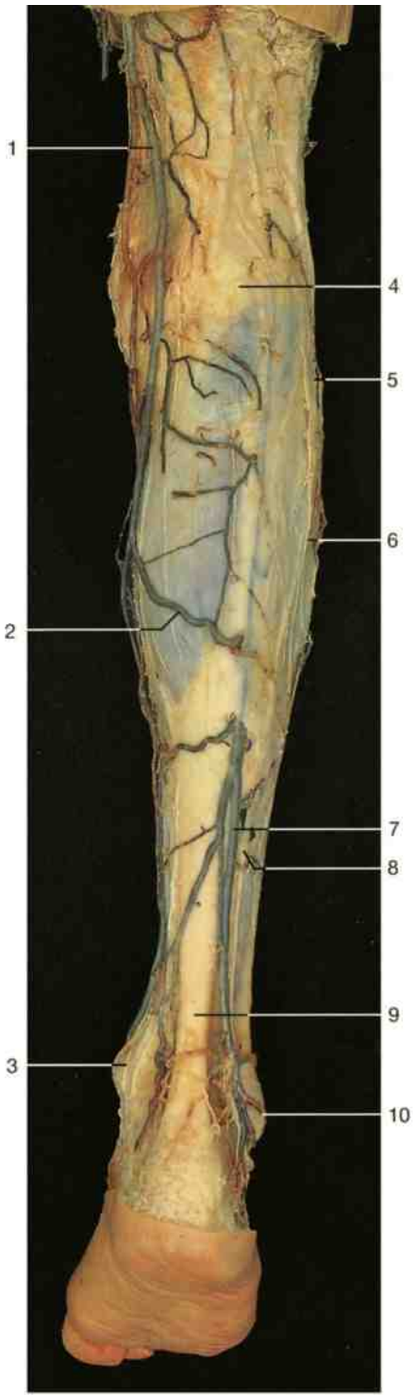
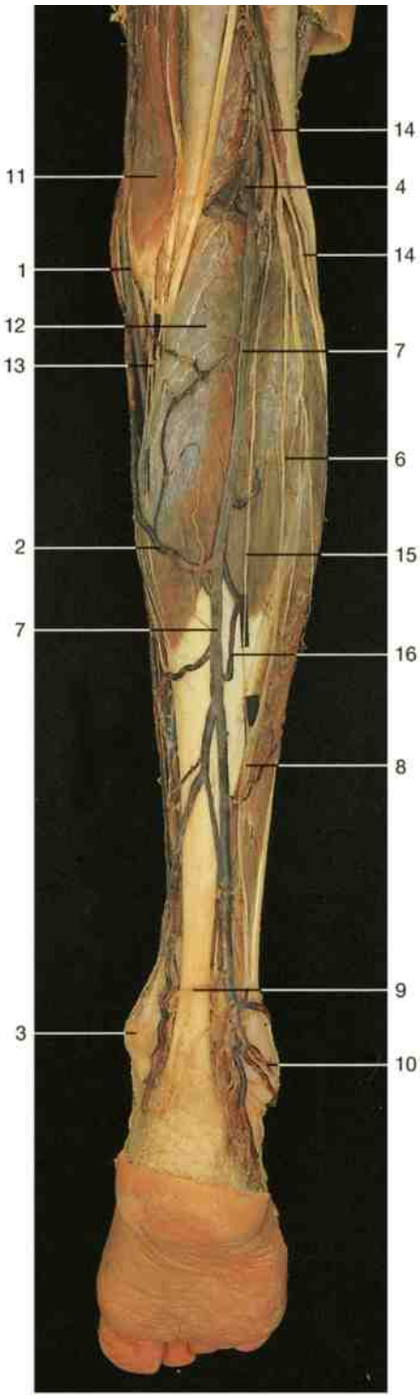
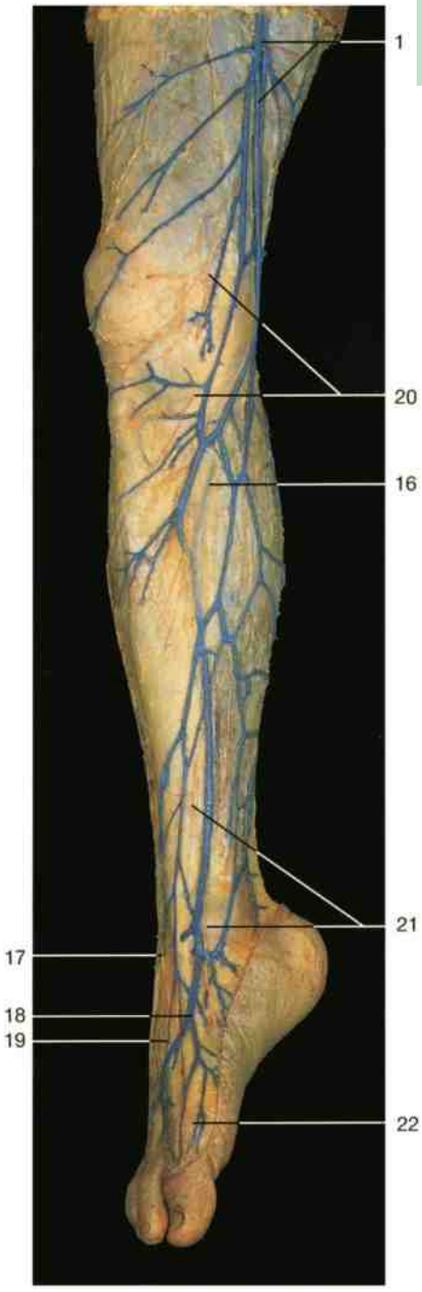


Right leg, cutaneous veins and nerves (posterior aspect).



Right leg, cutaneous veins and nerves (posterior aspect).
The superficial layer of the crural fascia has been removed.



Right leg, cutaneous veins and nerves (antero-medial aspect).

1 Great saphenous vein
2 Venous anastomosis between small and great saphenous veins
3 Medial malleolus
4 Popliteal fossa
5 Position of head of fibula
6 Lateral sural cutaneous nerve
7 Small saphenous vein
8 Sural nerve
9 Calcaneal tendon
10 Lateral malleolus
11 Semitendinosus muscle
12 Medial head of gastrocnemius muscle
13 Saphenous nerve
14 Common peroneal nerve
15 Medial sural cutaneous nerve
16 Perforating veins
17 Superficial peroneal nerve
18 Dorsal venous arch
19 Intermediate dorsal cutaneous nerve
20 Infrapatellar branches of saphenous nerve
21 Terminal branches of saphenous nerve
22 Medial dorsal cutaneous nerve

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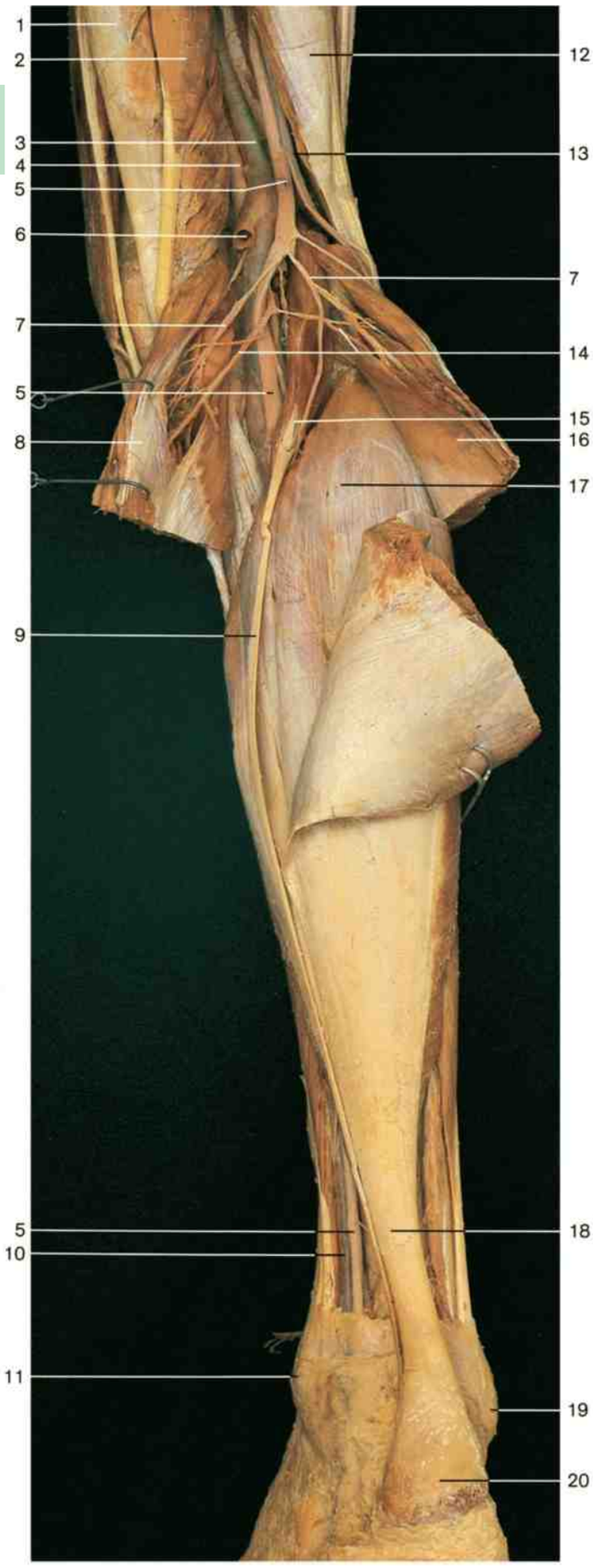
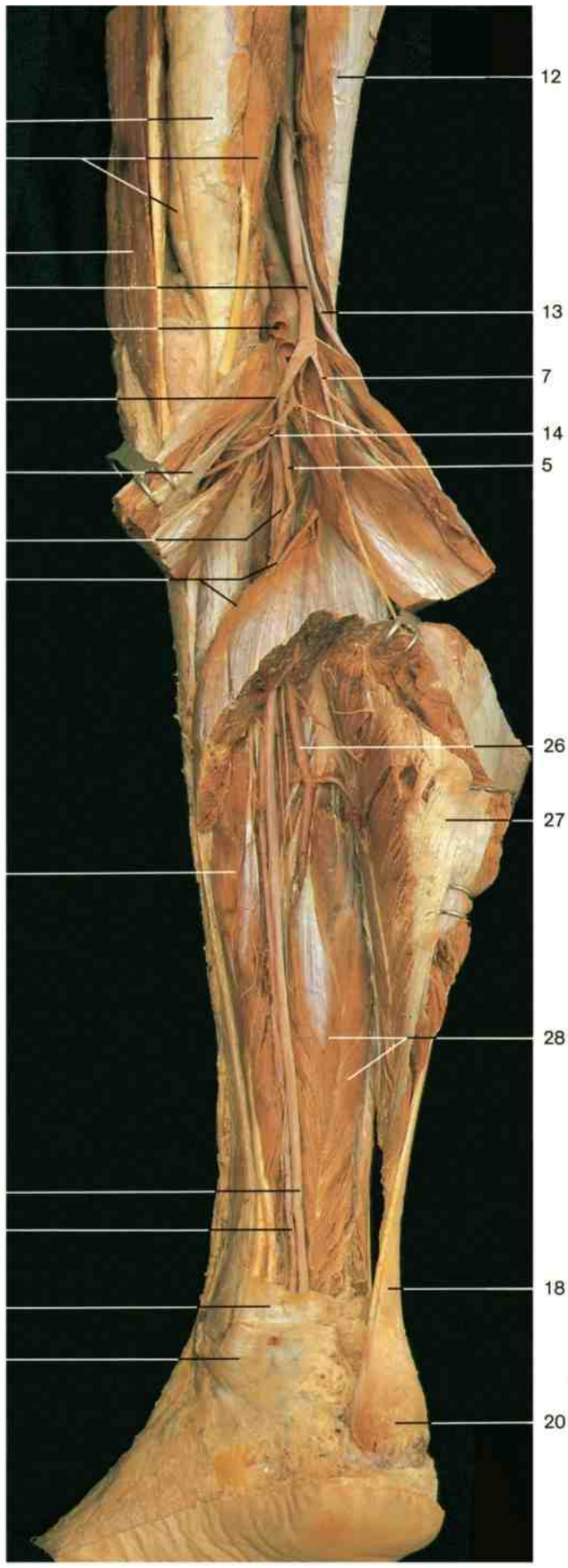


Right leg, posterior crural region, and popliteal fossa, middle layer (posterior aspect). The cutaneous veins and nerves have been removed.



Right leg, posterior crural region, and popliteal fossa, deep layer (posterior aspect). The medial head of gastrocnemius muscle has been divided and reflected.

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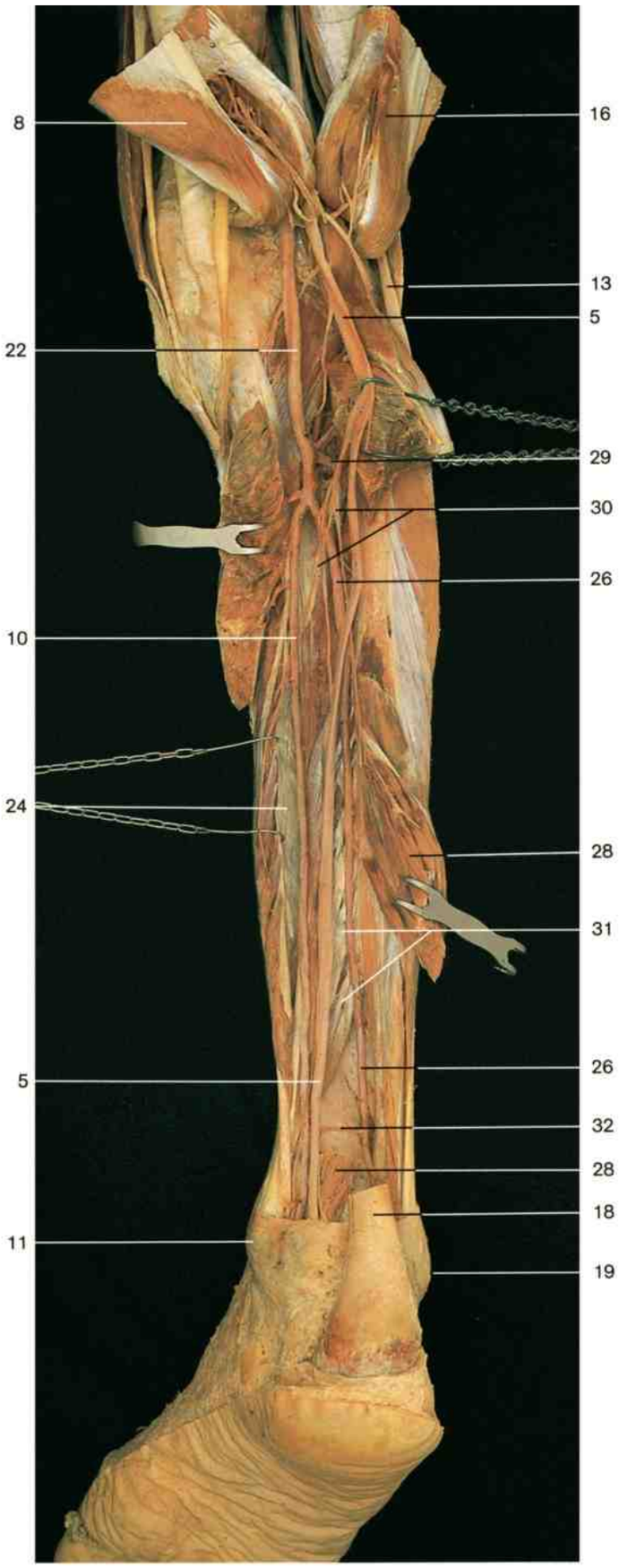
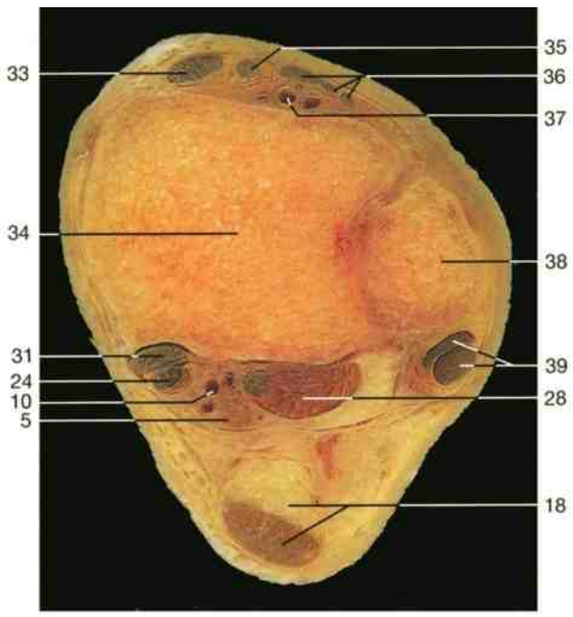


Right leg, posterior crural region, deepest layer (posterior aspect). Triceps surae (gastrocnemius and soleus) and flexor hallucis longus muscles have been cut and reflected.

1 Semimembranosus muscle
2 Semitendinosus muscle
3 Popliteal vein
4 Popliteal artery
5 Tibial nerve
6 Small saphenous vein (cut)
7 Muscular branch of tibial nerve
8 Medial head of gastrocnemius muscle
9 Tendon of plantaris muscle
10 Posterior tibial artery
11 Medial malleolus
12 Biceps femoris muscle
13 Common peroneal nerve
14 Sural arteries
15 Plantaris muscle
16 Lateral head of gastrocnemius muscle
17 Soleus muscle
18 Calcaneal tendon
19 Lateral malleolus
20 Calcaneal tuberosity
21 Sartorius muscle
22 Popliteal artery
23 Tendinous arch of soleus muscle
24 Flexor digitorum longus muscle
25 Flexor retinaculum
26 Peroneal artery
27 Soleus muscle
28 Flexor hallucis longus muscle
29 Anterior tibial artery
30 Muscular branches of tibial nerve
31 Tibialis posterior muscle
32 Communicating branch of peroneal artery
33 Tendon of tibialis anterior muscle
34 Tibia
35 Tendon of extensor hallucis longus muscle
36 Tendons of extensor digitorum longus muscle
37 Anterior tibialis artery
38 Fibula
39 Tendons of peroneus longus and brevis muscles



Cross section of the leg, superior to the malleoli (from below).

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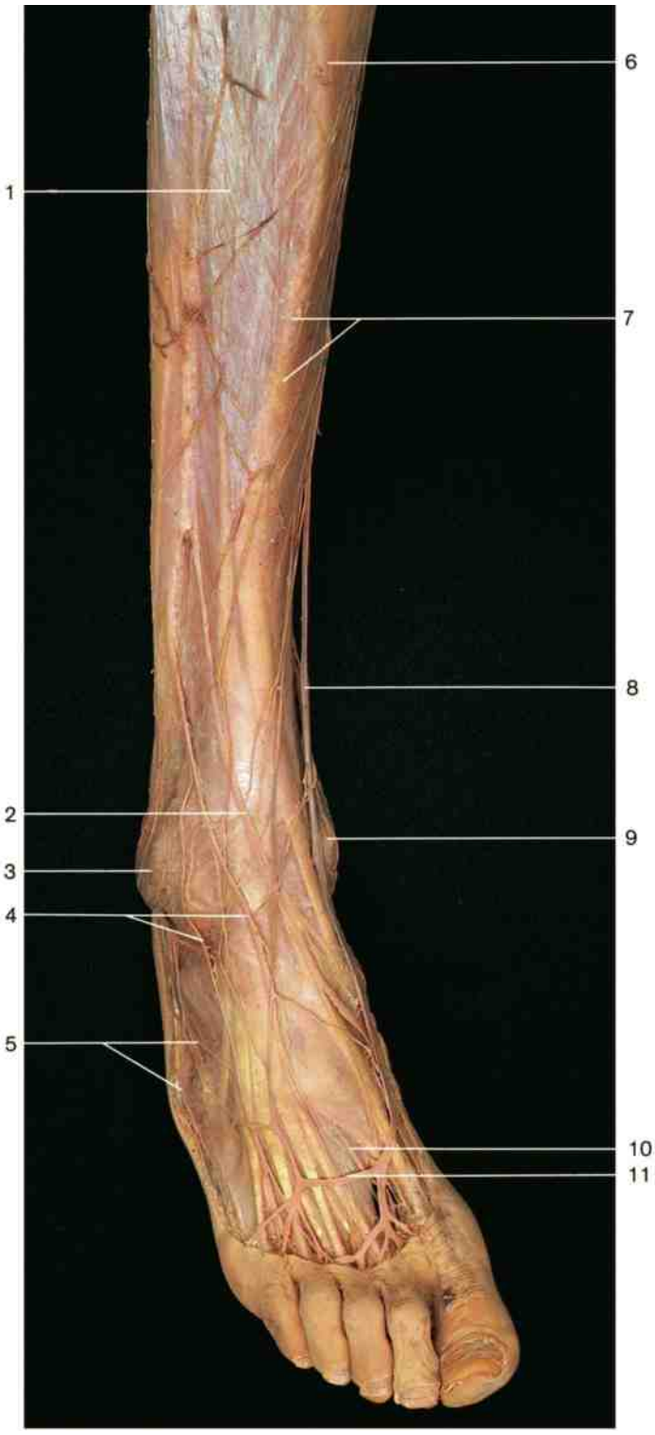
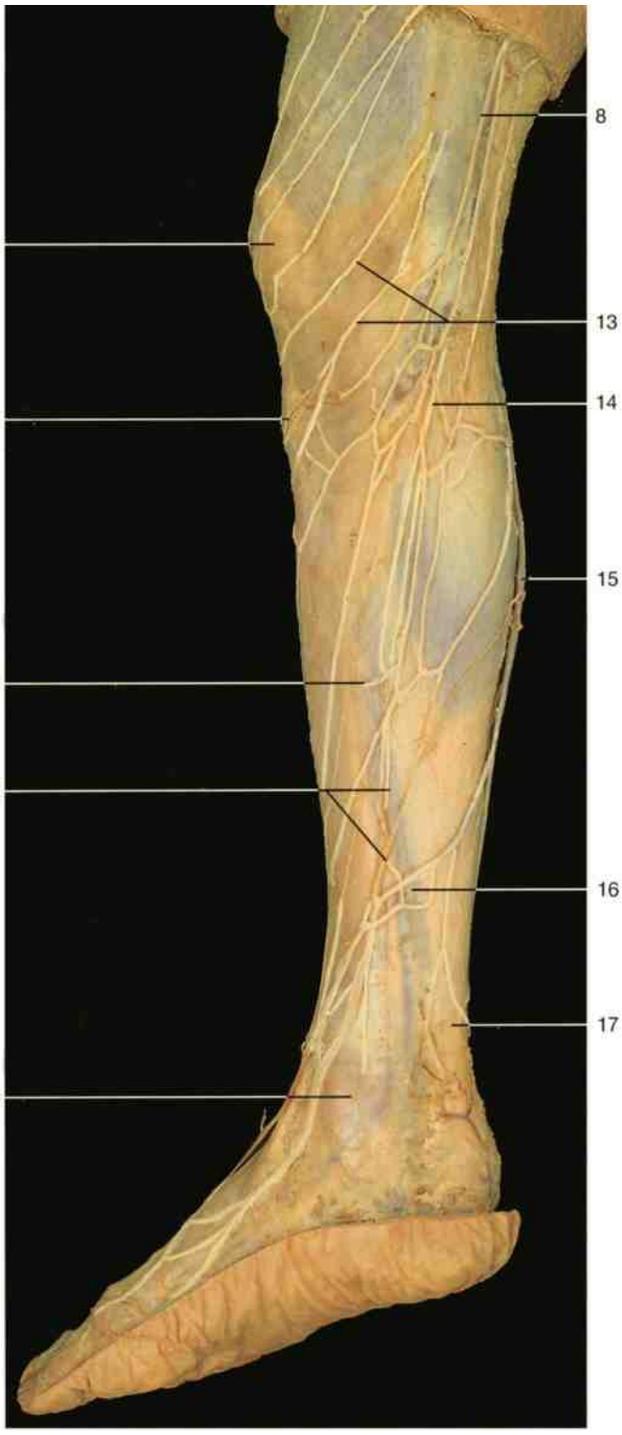


Right leg and foot, anterior crural region and dorsum of foot (anterior aspect). Cutaneous nerves and veins.



Right leg and foot (medial aspect). Cutaneous nerves and veins.

1 Superficial crural fascia
2 Medial cutaneous branch of superficial peroneal nerve
3 Lateral malleolus
4 Lateral cutaneous branch of superficial peroneal nerve
5 Cutaneous branch of sural nerve
6 Position of tuberosity of tibia
7 Anterior margin of tibia
8 Great saphenous vein
9 Medial malleolus
10 Deep peroneal nerve
11 Venous arch of dorsum of foot
12 Position of patella
13 Infrapatellar branches of saphenous nerve
14 Saphenous nerve
15 Small saphenous vein
16 Perforating vein
17 Calcaneal tendon

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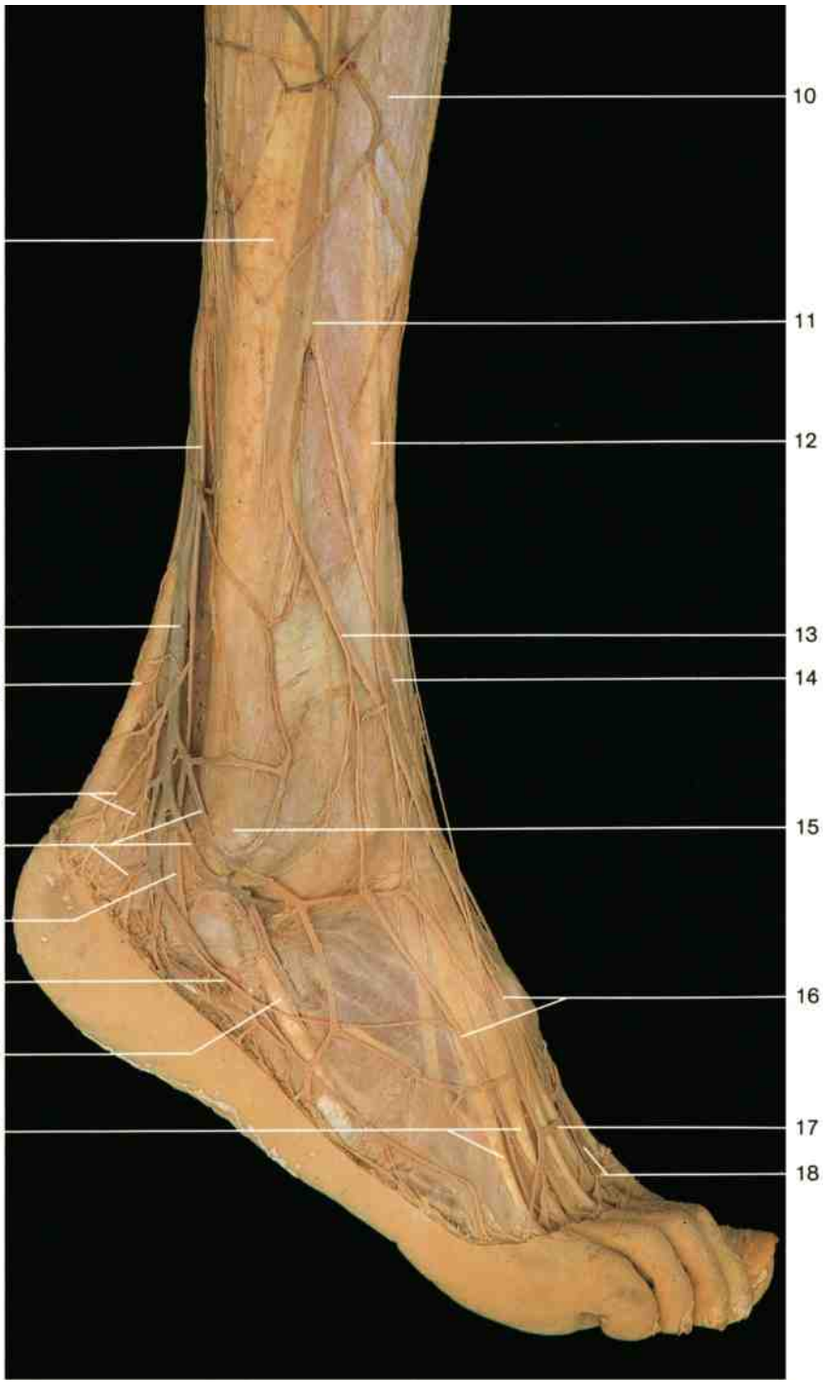
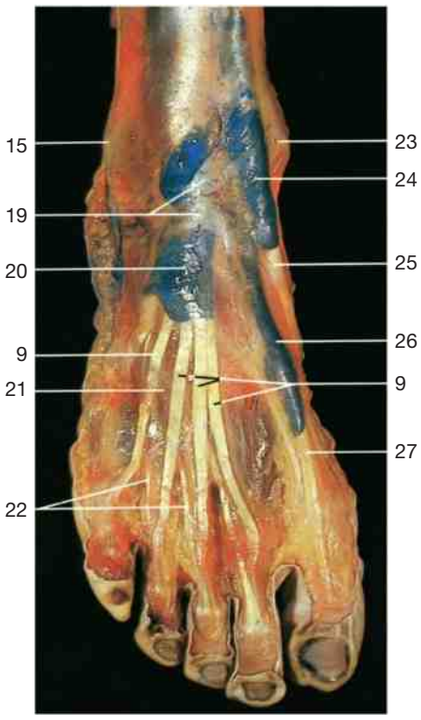


Right leg and foot (lateral aspect). Cutaneous nerves and veins.



Right foot with synovial sheaths of extensor muscles (dorsal aspect). The synovial sheaths have been injected with blue solution.

1 Position of fibula
2 Sural nerve
3 Small saphenous vein
4 Calcaneal tendon
5 Lateral calcaneal branches of sural nerve
6 Venous network at lateral malleolus
7 Cutaneous branch of sural nerve
8 Tendon of peroneus brevis muscle
9 Tendons of extensor digitorum longus muscle
10 Fascia cruris
11 Superficial peroneal nerve
12 Position of tibia
13 Lateral cutaneous branch } of superficial
14 Medial cutaneous branch } peroneal nerve
15 Lateral malleolus
16 Dorsal digital nerves
17 Dorsal venous arch
18 Deep peroneal nerve
19 Inferior extensor retinaculum
20 Common synovial sheath of extensor digitorum longus muscle
21 Extensor digitorum brevis muscle
22 Tendons of extensor digitorum brevis muscle
23 Medial malleolus
24 Synovial sheath of tendon of tibialis anterior muscle
25 Tendon of tibialis anterior muscle
26 Synovial sheath of tendon of extensor hallucis longus muscle
27 Tendon of extensor hallucis longus muscle

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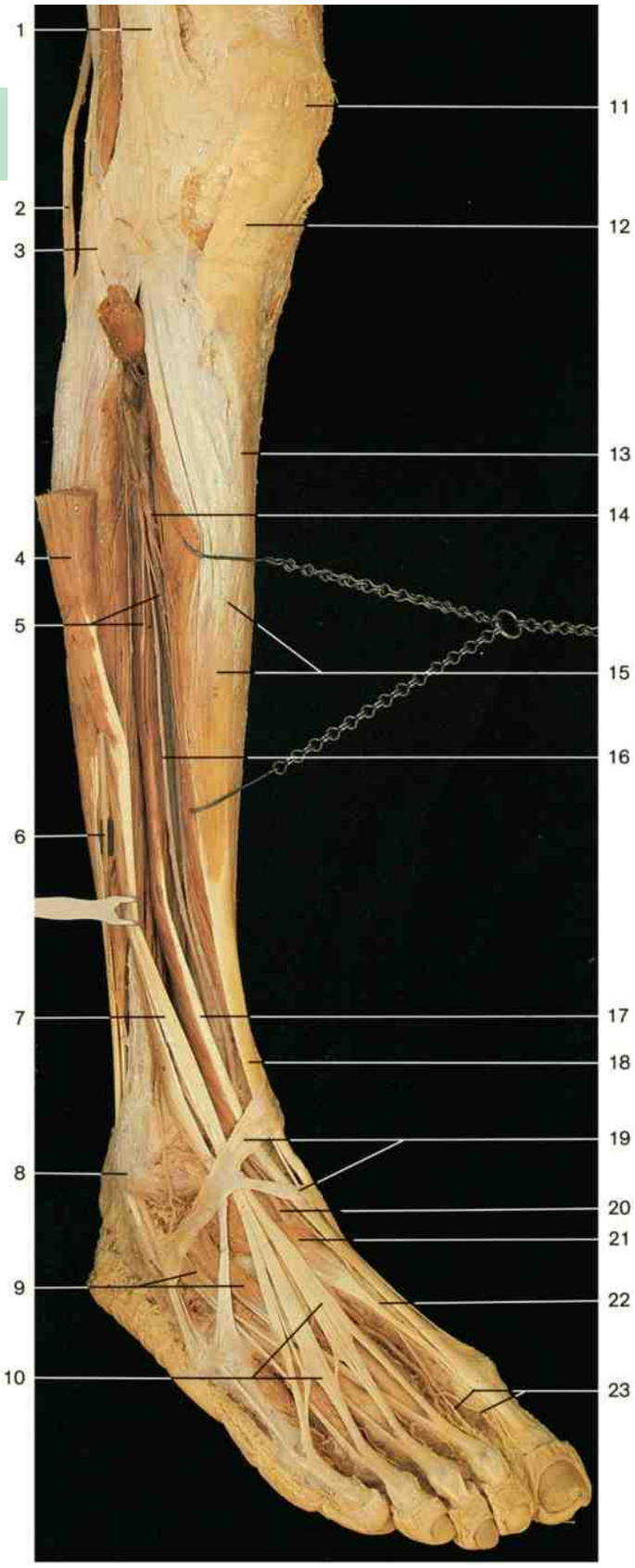
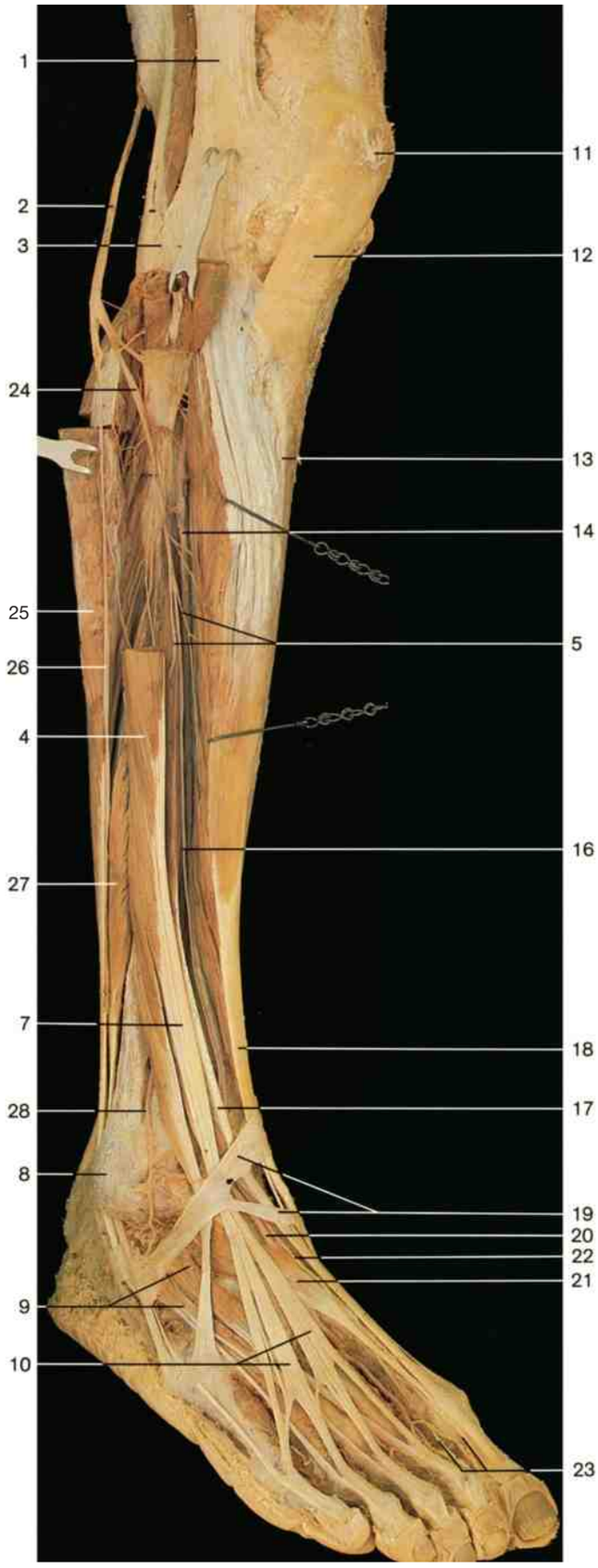


Right leg and foot, anterior crural region and dorsum of foot, middle layer (antero-lateral aspect). The extensor digitorum longus muscle has been divided and reflected laterally.



Right leg and foot, anterior crural region and dorsum of foot, deep layer (antero-lateral aspect). The extensor digitorum longus and peroneus longus muscles have been divided or removed. The common peroneal nerve has been elevated to show its course around the head of fibula.

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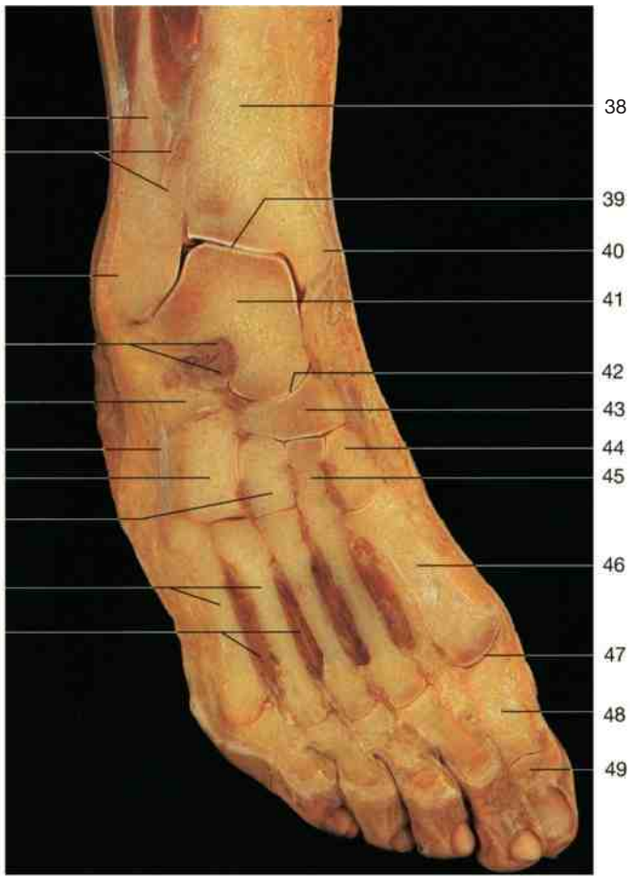
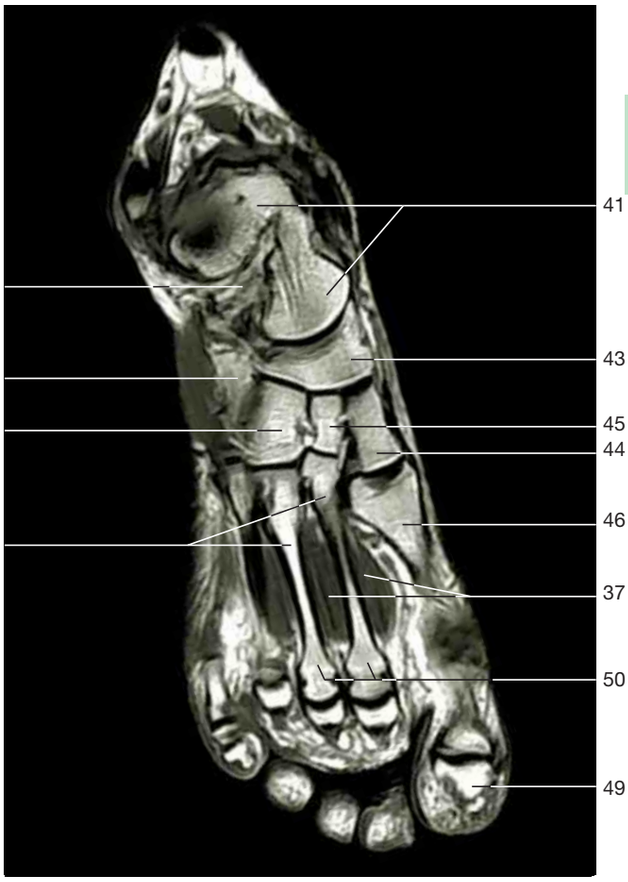


Coronal section through the foot and ankle joint (anterior aspect).



Coronal section through the foot and ankle joint (MRI scan; from Heuck et al., MRT-Atlas, 2009).

1 Iliotibial tract
2 Common peroneal nerve
3 Position of head of fibula
4 Extensor digitorum longus muscle
5 Muscular branches of deep peroneal nerve
6 Superficial peroneal nerve
7 Tendon of extensor digitorum longus muscle
8 Lateral malleolus
9 Extensor digitorum brevis muscle
10 Tendons of extensor digitorum longus muscle
11 Patella
12 Patellar ligament
13 Anterior margin of tibia
14 Anterior tibial artery
15 Tibialis anterior muscle
16 Deep peroneal nerve
17 Extensor hallucis longus muscle
18 Tendon of tibialis anterior muscle
19 Extensor retinaculum
20 Dorsalis pedis artery
21 Extensor hallucis brevis muscle
22 Deep peroneal nerve (on dorsum of foot)
23 Dorsal digital nerves (terminal branches of deep peroneal nerve)
24 Deep peroneal nerve
25 Peroneus longus muscle (cut)
26 Superficial peroneal nerve (with peroneal muscles laterally reflected)
27 Peroneus brevis muscle
28 Lateral anterior malleolar artery
29 Fibula
30 Distal tibiofibular joint (syndesmosis)
31 Talocalcaneal interosseous ligament
32 Calcaneus
33 Tendon of peroneus brevis muscle
34 Cuboid bone
35 Lateral cuneiform bone
36 Metatarsal bones
37 Dorsal interosseous muscles
38 Tibia
39 Ankle joint
40 Medial malleolus
41 Talus
42 Talocalcaneonavicular joint
43 Navicular bone
44 Medial cuneiform bone
45 Intermediate cuneiform bone
46 First metatarsal bone
47 Metatarsophalangeal joint of great toe
48 Proximal phalanx of great toe
49 Distal phalanx of great toe
50 Heads of metatarsal bones II–III

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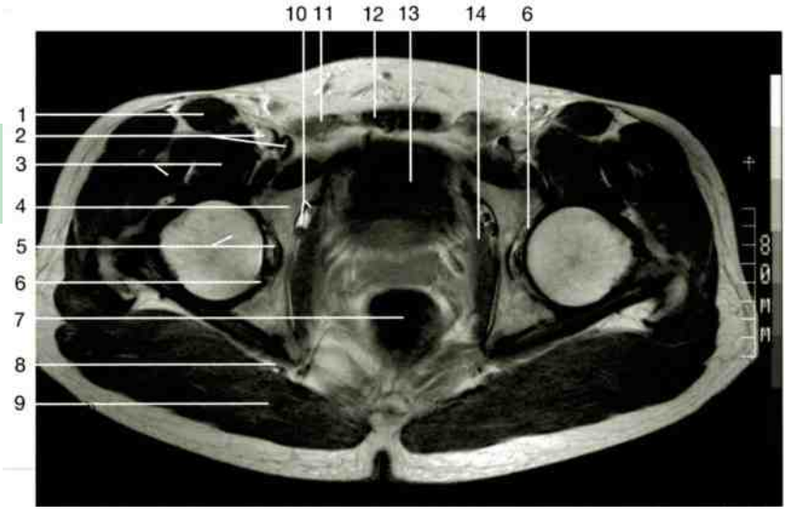
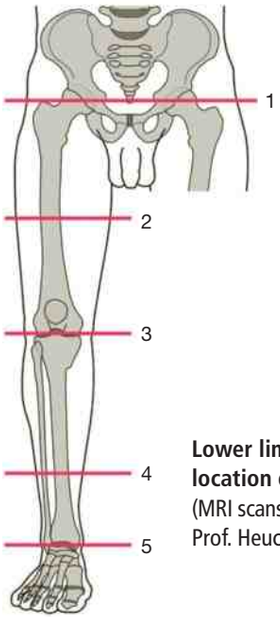
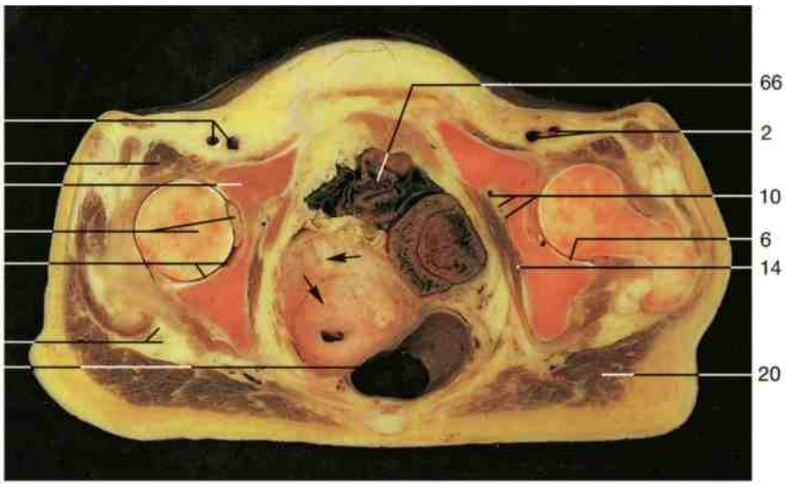


Axial section through the pelvis and the hip joints (section 1; MRI scan; inferior aspect).

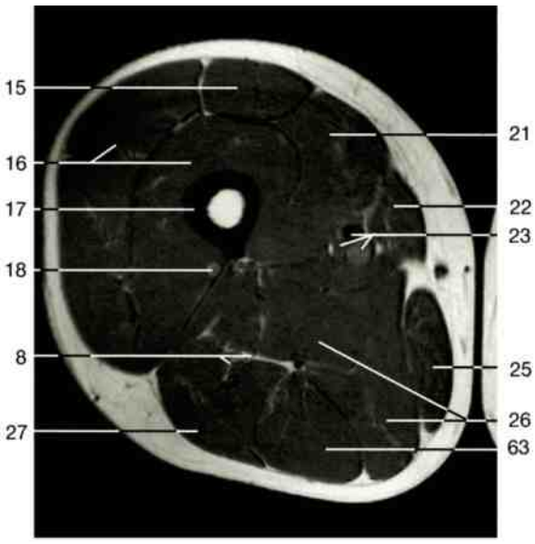


Lower limb, location of sections 1–5 (MRI scans, courtesy of Prof. Heuck, Munich, Germany).

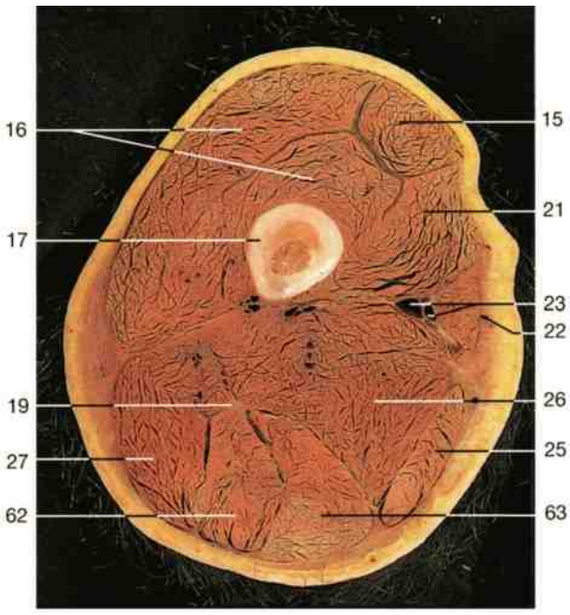


Axial section through the pelvis and the hip joints in the female (section 1; inferior aspect). Arrows: uterus, myometrium with myoma.

1 Sartorius muscle
2 Femoral artery and vein
3 Iliopsoas muscle
4 Pubis (os pubis)
5 Femoral head with ligament of femoral head
6 Articular cavity
7 Rectum
8 Sciatic nerve and accompanying artery
9 Gluteus maximus muscle
10 Obturator vessels and obturator nerve
11 Rectus abdominis muscle
12 Pyramidalis muscle
13 Urinary bladder
14 Obturator internus muscle
15 Rectus femoris muscle
16 Vastus intermedius and vastus lateralis of quadriceps femoris muscle



Axial section through the middle of the right thigh (section 2; MRI scan; inferior aspect).



Axial section through the middle of the right thigh (section 2; inferior aspect).

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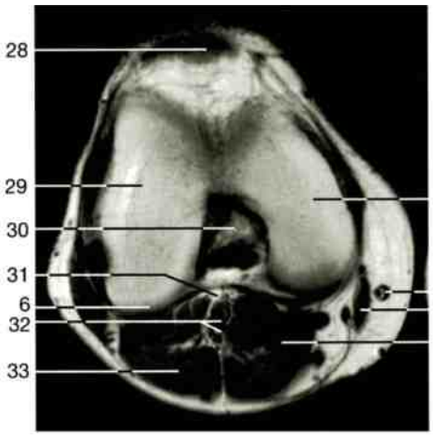
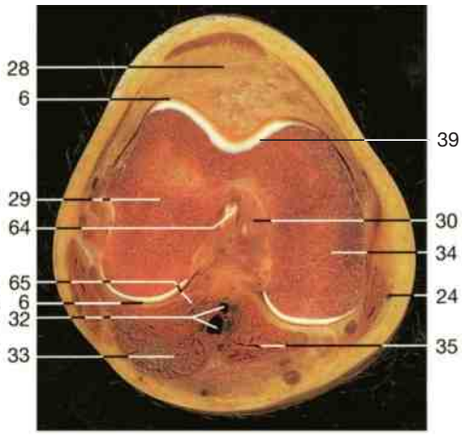
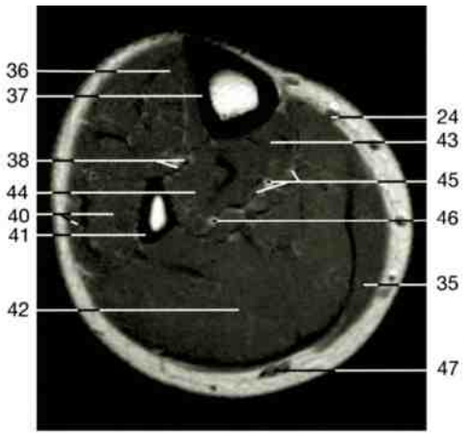


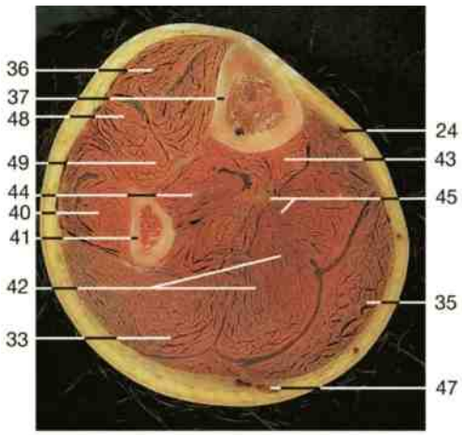
Axial section through the right knee joint (section 3; MRI scan; inferior aspect).



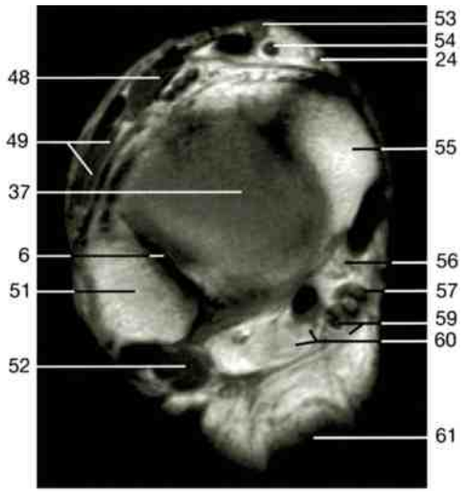
Axial section through the right knee joint (section 3; inferior aspect).



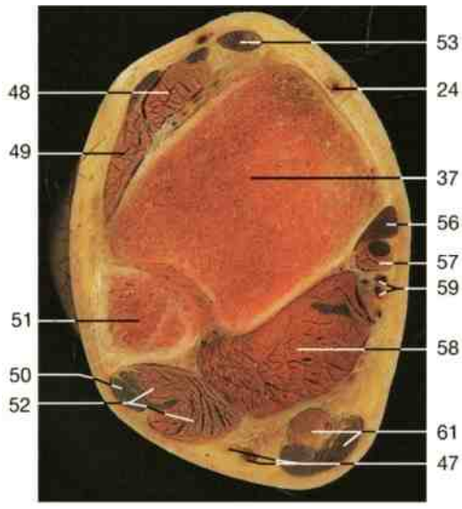
Axial section through the middle of the right leg (section 4; MRI scan; inferior aspect).



Axial section through the middle of the right leg (section 4; inferior aspect).



Axial section through the end of the right leg (section 5; MRI scan; inferior aspect).



Axial section through the end of the right leg (section 5; inferior aspect).

17 Femur
18 Perforating artery
19 Sciatic nerve
20 Gluteus maximus muscle (insertion)
21 Vastus medialis muscle
22 Sartorius muscle
23 Femoral artery and vein
24 Great saphenous vein
25 Gracilis muscle
26 Adductor muscles
27 Biceps femoris muscle
28 Patellar ligament
29 Lateral condyle of femur
30 Posterior cruciate ligament
31 Tibial nerve
32 Popliteal artery and vein
33 Lateral head of gastrocnemius muscle
34 Medial condyle of femur
35 Medial head of gastrocnemius muscle
36 Tibialis anterior muscle
37 Tibia
38 Deep peroneal nerve, anterior tibial artery, and vein
39 Patellar surface
40 Peroneus longus and brevis muscles
41 Fibula
42 Soleus muscle
43 Flexor digitorum longus muscle
44 Tibialis posterior muscle
45 Posterior tibial artery and vein and tibial nerve
46 Peroneal artery
47 Small saphenous vein and sural nerve
48 Extensor hallucis longus muscle
49 Extensor digitorum longus muscle
50 Tendon of peroneus longus muscle
51 Lateral malleolus (fibula)
52 Peroneus brevis muscle
53 Tibialis anterior muscle (tendon)
54 Dorsalis pedis artery
55 Medial malleolus (tibia)
56 Tibialis posterior muscle (tendon)
57 Flexor digitorum longus muscle (tendon with synovial sheath)
58 Flexor hallucis longus muscle
59 Posterior tibial artery and vein
60 Lateral and medial plantar nerves
61 Calcaneal tendon
62 Semitendinosus muscle
63 Semimembranosus muscle
64 Anterior cruciate ligament
65 Plantaris muscle
66 Small intestine

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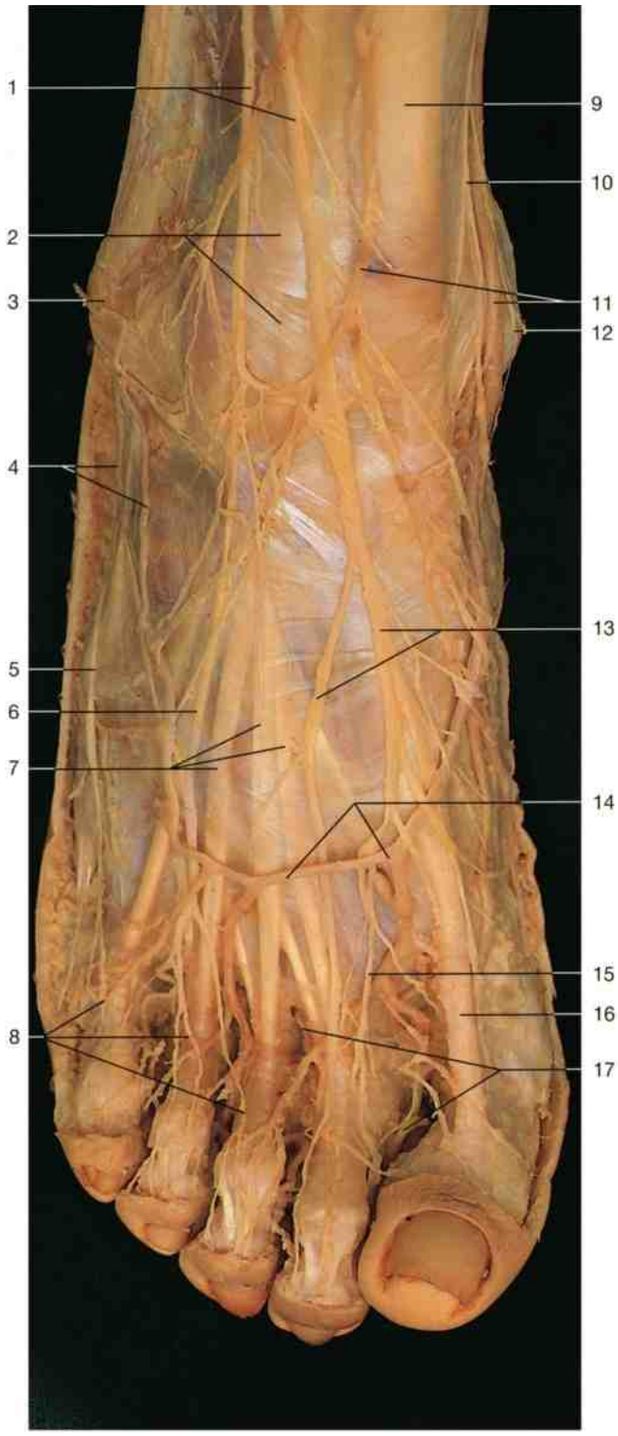
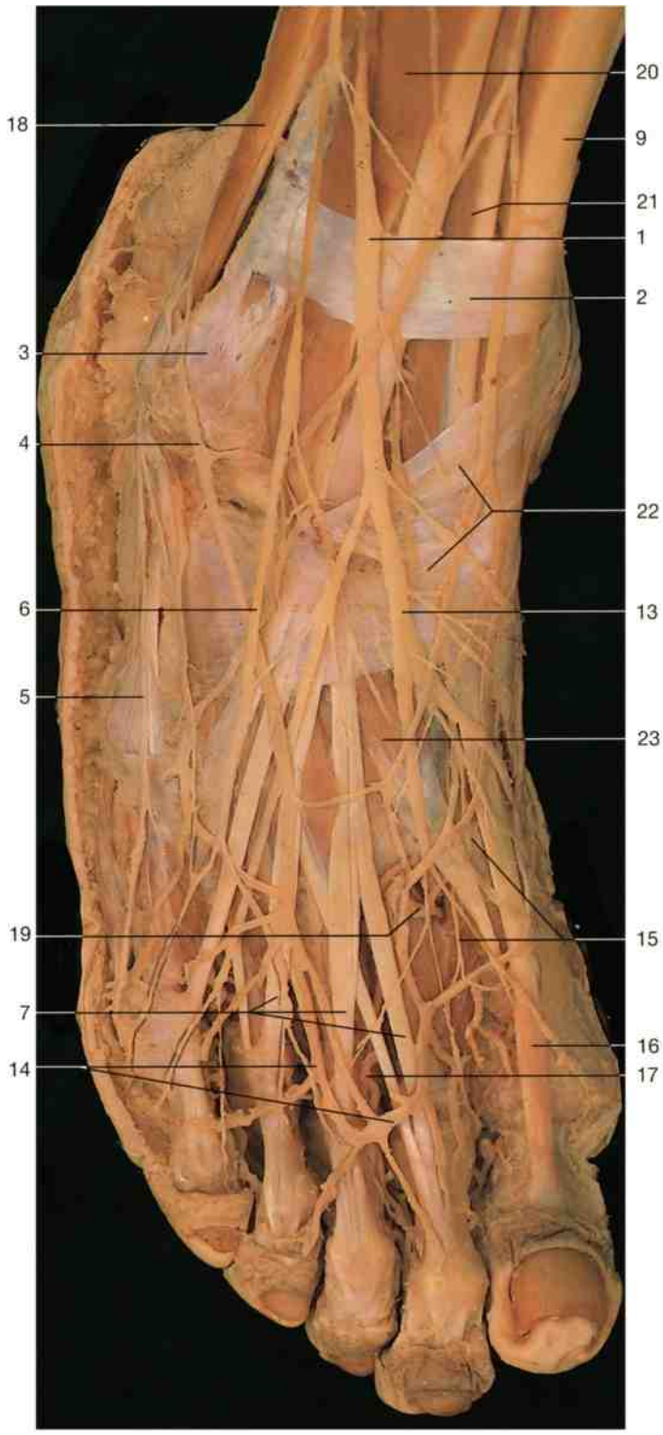


Dorsum of the right foot, superficial layer (anterior aspect).



Dorsum of the right foot, superficial layer (anterior aspect). The fascia of the dorsum has been removed.

1 Superficial peroneal nerve
2 Superior extensor retinaculum
3 Lateral malleolus
4 Venous network of lateral malleolus and tributaries of small saphenous vein
5 Lateral dorsal cutaneous nerve (branch of sural nerve)
6 Intermediate dorsal cutaneous nerve
7 Tendons of extensor digitorum longus muscle
8 Dorsal digital nerves
9 Tendon of tibialis anterior muscle
10 Saphenous nerve
11 Venous network of medial malleolus and tributaries of great saphenous vein
12 Medial malleolus
13 Medial dorsal cutaneous nerves
14 Dorsal venous arch
15 Dorsal digital nerve (of deep peroneal nerve)
16 Tendon of extensor hallucis longus muscle
17 Dorsal digital arteries
18 Peroneal muscles
19 Deep plantar branch of dorsalis pedis artery anastomosing with plantar arch
20 Extensor digitorum longus muscle
21 Extensor hallucis longus muscle
22 Inferior extensor retinaculum
23 Extensor hallucis brevis muscle

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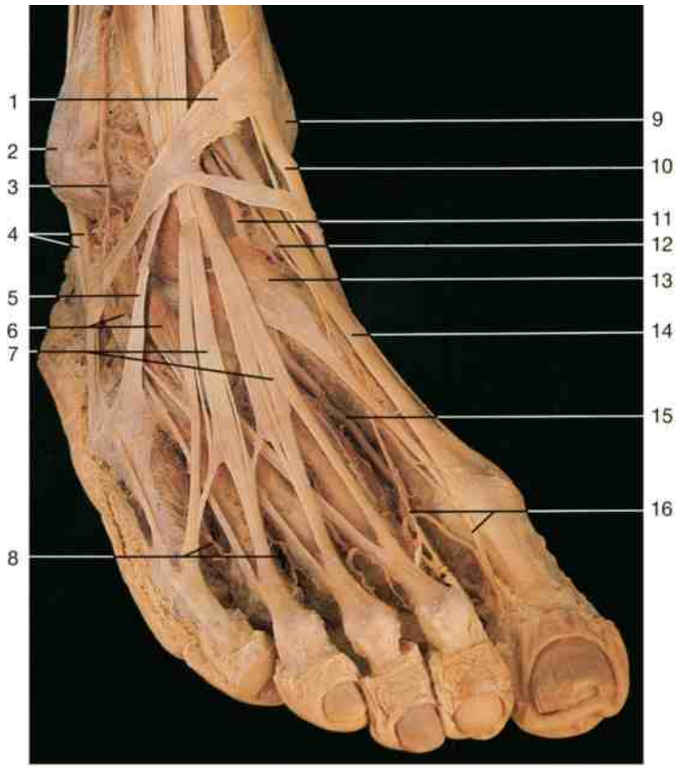
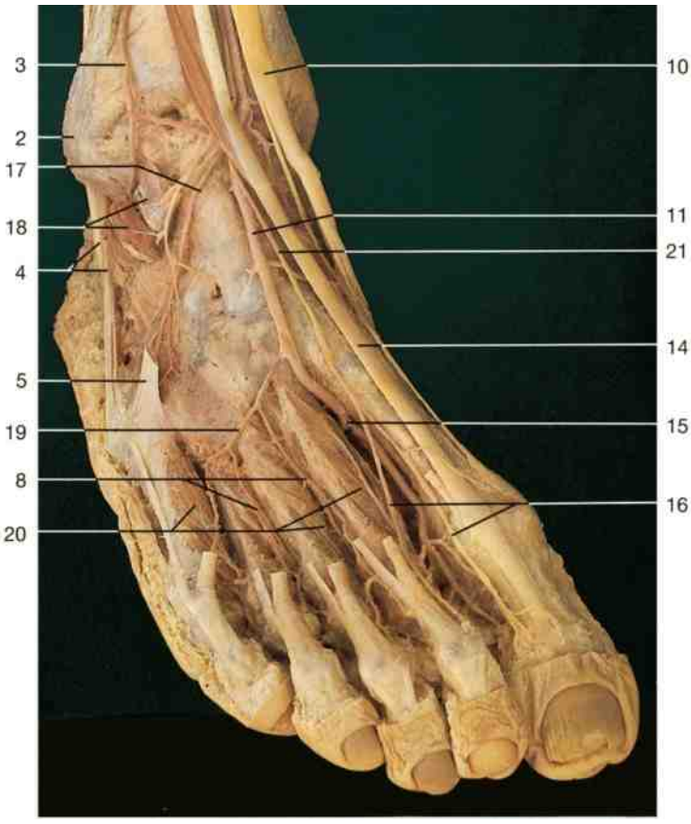
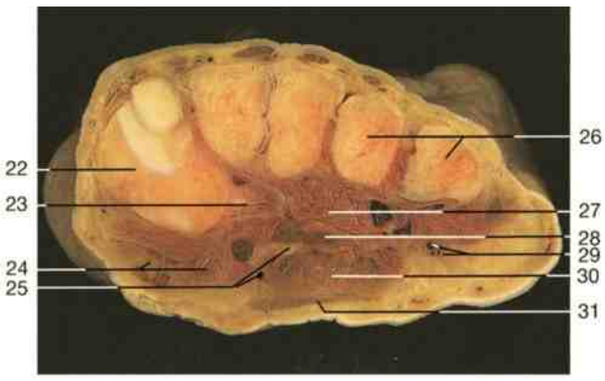


Dorsum of the right foot, middle layer (antero-lateral aspect). The cutaneous nerves have been removed.

1 Extensor retinaculum
2 Lateral malleolus
3 Lateral anterior malleolar artery
4 Tendons of peroneal muscles
5 Tendon of peroneus tertius muscle
6 Extensor digitorum brevis muscle
7 Tendons of extensor digitorum longus muscle
8 Dorsal metatarsal arteries
9 Medial malleolus
10 Tendon of tibialis anterior muscle
11 Dorsalis pedis artery
12 Deep peroneal nerve (on dorsum of foot)
13 Extensor hallucis brevis muscle
14 Tendon of extensor hallucis longus muscle
15 Dorsalis pedis artery with deep plantar branch to the plantar arch
16 Dorsal digital nerves (terminal branches of deep peroneal nerve)
17 Lateral tarsal artery
18 Extensor digitorum brevis muscle (divided)
19 Arcuate artery
20 Dorsal interosseous muscles
21 Deep peroneal nerve
22 Medial cuneiform and first metatarsal bone
23 Tendon of peroneus longus muscle
24 Abductor hallucis and flexor hallucis brevis muscles
25 Medial plantar artery, vein, and nerve
26 Fourth and fifth metatarsal bone
27 Adductor hallucis muscle (oblique head)
28 Tendons of flexor digitorum longus muscle
29 Lateral plantar artery, vein, and nerve
30 Flexor digitorum brevis muscle
31 Plantar aponeurosis



Dorsum of the right foot, deep layer (antero-lateral aspect). The extensor digitorum and hallucis brevis muscles have been removed.



Cross section of the right foot at the level of the metatarsal bones (posterior aspect).

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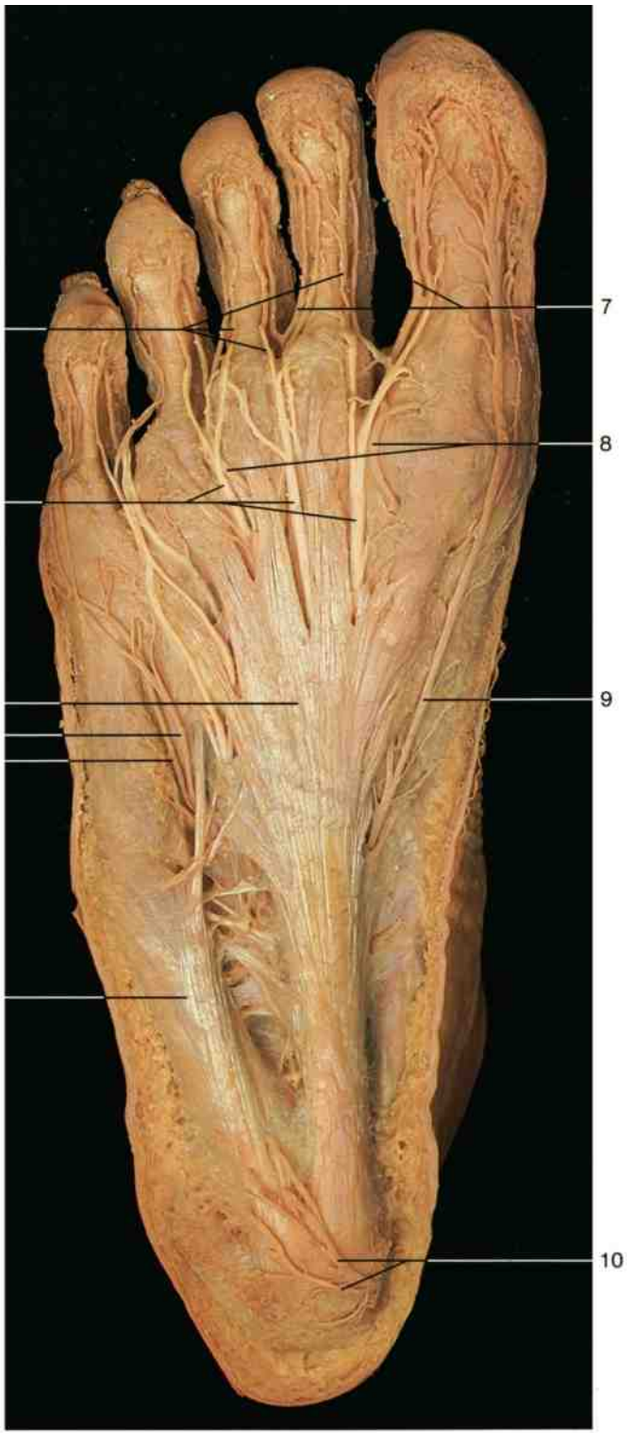
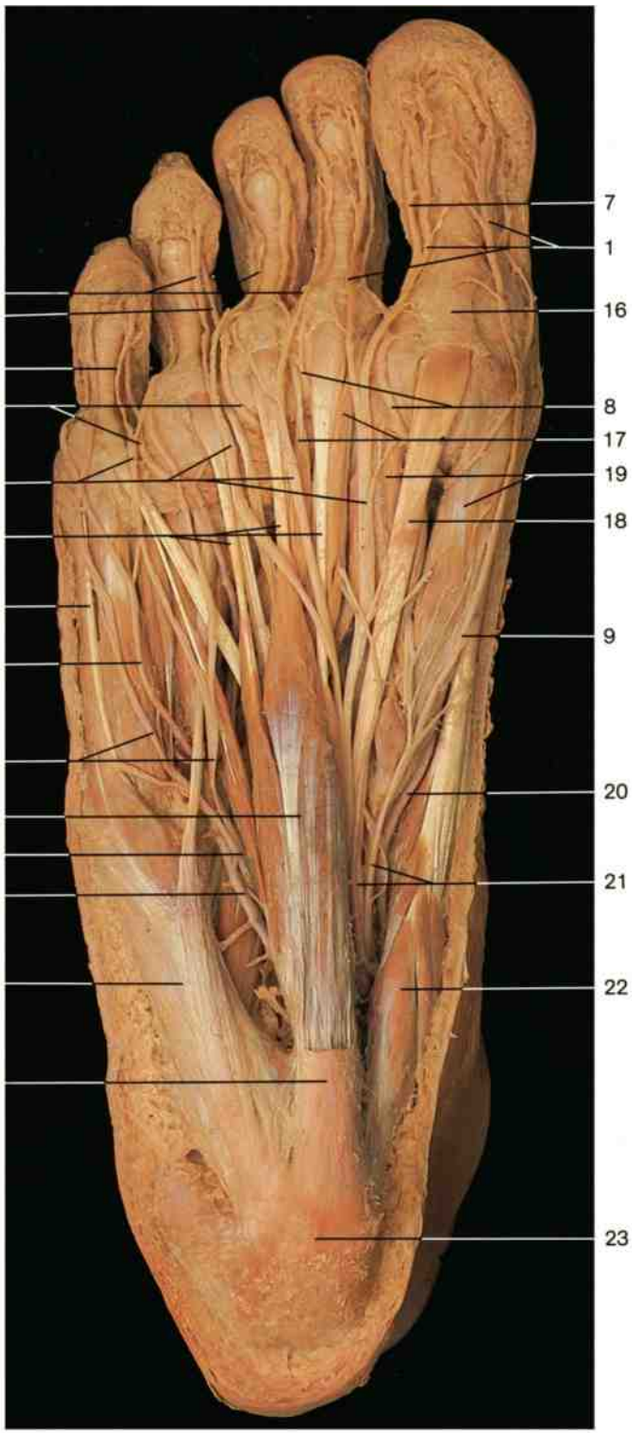


Sole of the right foot, superficial layer (from below). Dissection of cutaneous nerves and vessels.



Sole of the right foot, middle layer (from below). The plantar aponeurosis has been removed.

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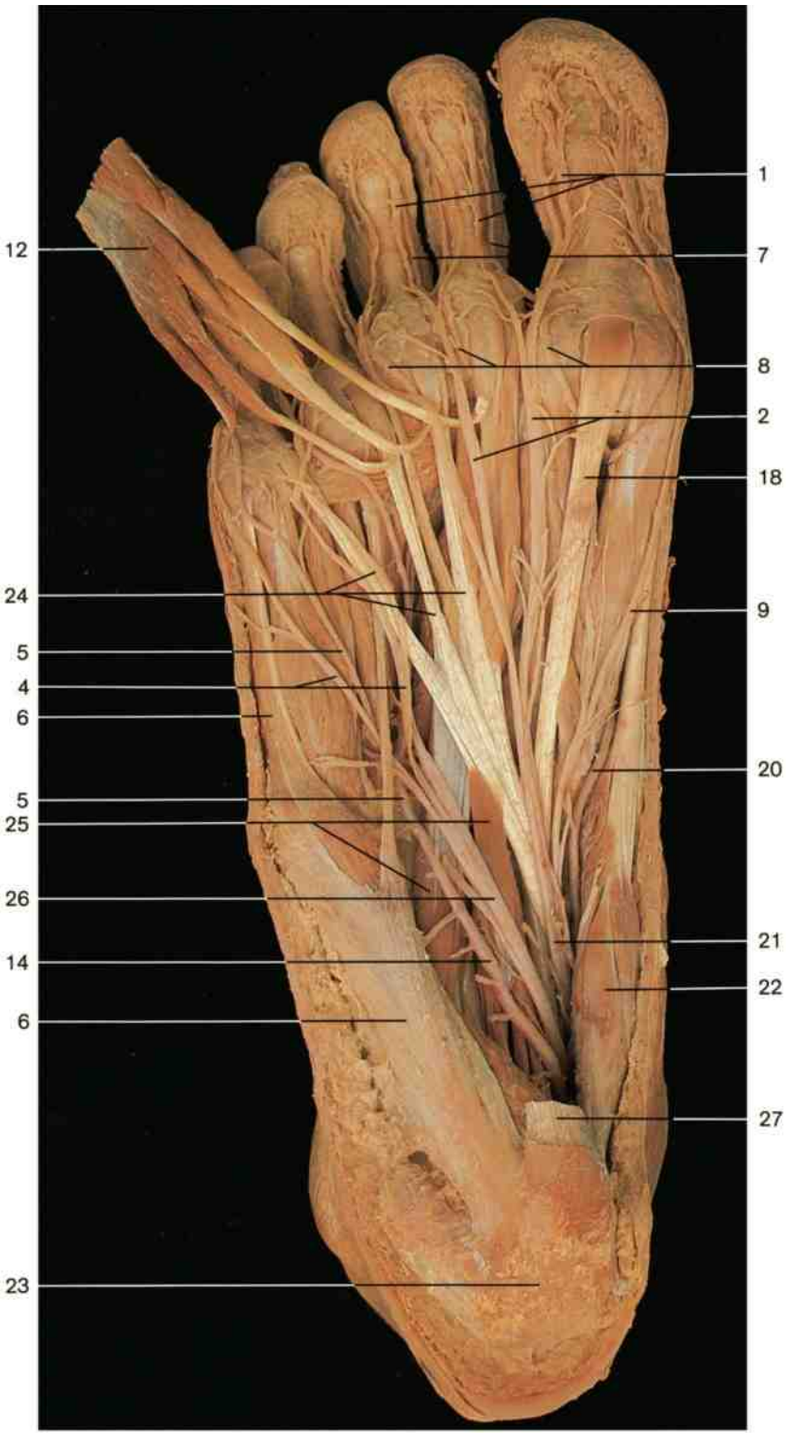
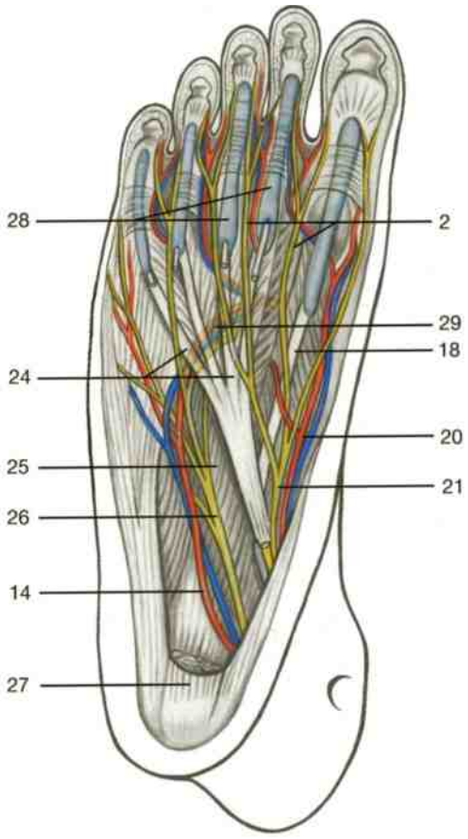


Sole of the right foot, middle layer (from below). Dissection of vessels and nerves. The flexor digitorum brevis muscle has been divided and anteriorly reflected.

1 Proper plantar digital nerves
2 Common plantar digital nerves
3 Plantar aponeurosis
4 Superficial branch of lateral plantar nerve
5 Superficial branch of lateral plantar artery
6 Abductor digiti minimi
7 Proper plantar digital arteries
8 Common plantar digital arteries
9 Digital branch of medial plantar nerve to great toe
10 Medial calcaneal branches
11 Tendons of flexor digitorum brevis muscle
12 Flexor digitorum brevis muscle
13 Superficial branch of lateral plantar nerve
14 Lateral plantar artery
15 Plantar aponeurosis (remnant)
16 Digital synovial sheath
17 Lumbrical muscles
18 Tendon of flexor hallucis longus muscle
19 Flexor hallucis brevis muscle
20 Medial plantar artery
21 Medial plantar nerve
22 Abductor hallucis muscle
23 Calcaneal tuberosity
24 Tendons of flexor digitorum longus muscle
25 Quadratus plantae muscle
26 Lateral plantar nerve
27 Flexor digitorum brevis muscle (cut)
28 Synovial sheaths
29 Plantar arch



Sole of the right foot. Synovial sheaths of flexor tendons indicated in light blue (schematic drawing).

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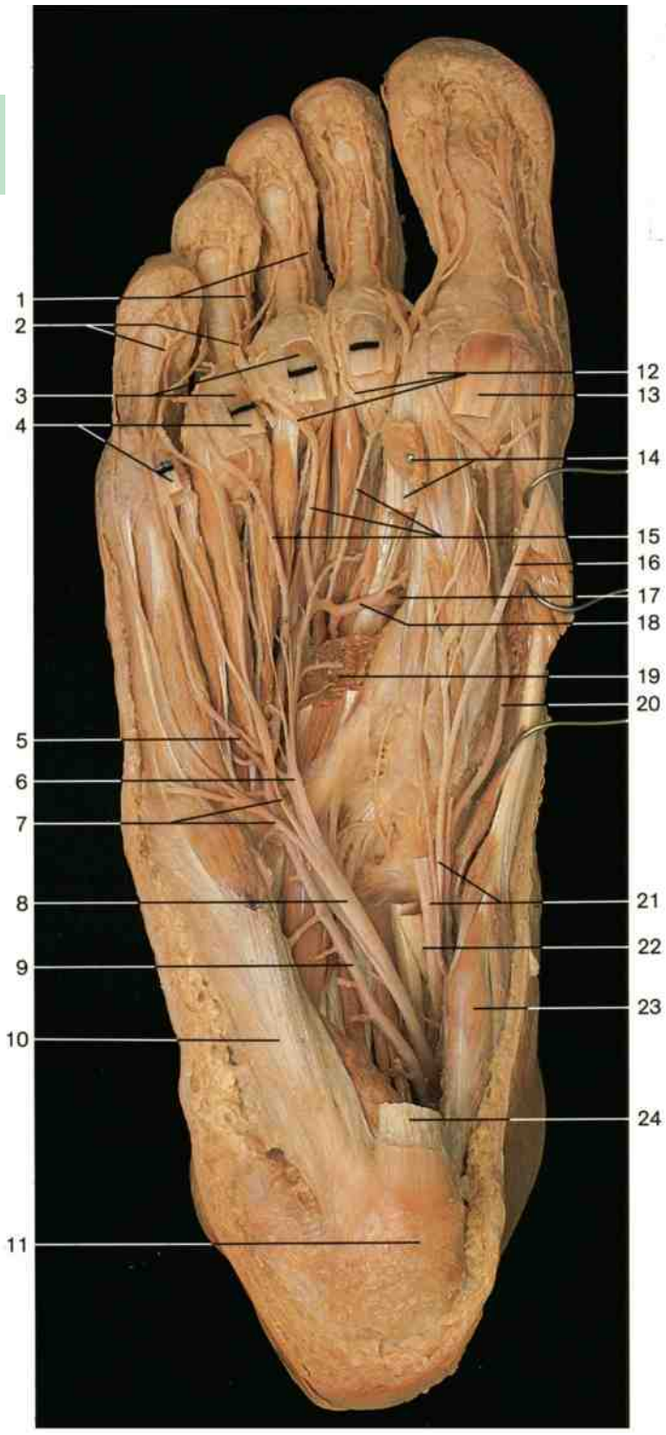

Sole of the right foot, deep layer (from below). Dissection of vessels and nerves. The flexor digitorum brevis muscle, the quadratus plantae muscle with the tendons of the flexor digitorum longus muscle, and some branches of the medial plantar nerve have been removed. The flexor hallucis brevis and adductor hallucis muscles have been cut and portions removed to show the somewhat atypical course of the medial plantar artery and deep muscles of the foot.

1 Proper plantar digital arteries
2 Proper plantar digital nerves
3 Tendons of flexor digitorum brevis muscle
4 Tendons of flexor digitorum longus muscle
5 Superficial branch of lateral plantar artery
6 Deep branch of lateral plantar nerve
7 Superficial branch of lateral plantar nerve
8 Lateral plantar nerve
9 Lateral plantar artery
10 Abductor digiti minimi muscle
11 Calcaneal tuberosity
12 Common plantar digital arteries
13 Tendon of flexor hallucis longus muscle
14 Insertion of both heads of adductor hallucis muscle
15 Plantar metatarsal arteries
16 Medial plantar nerve of great toe
17 Deep plantar branch of dorsalis pedis artery (perforating branch)
18 Plantar arch
19 Oblique head of adductor hallucis muscle (cut)
20 Medial plantar artery
21 Medial plantar nerve
22 Crossing of tendons in sole of foot (flexor hallucis longus and flexor digitorum longus muscles)
23 Abductor hallucis muscle
24 Origin of flexor digitorum brevis muscle

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Second Edition

A Brief Atlas of the HUMAN BODY

A Brief Atlas of the

HUMAN BODY

Matt Hutchinson
Jon Mallatt
Elaine N. Marieb
Patricia Brady Wilhelm

Photographs by
Ralph T. Hutchings and Nina Zanetti

PEARSON
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PREFACE

Building upon our original vision, the second edition of *A Brief Atlas of the Human Body* features 51 soft tissue images and 104 bone images providing a degree of clarity and scale that could never be achieved within a textbook alone. In addition, this edition includes a brand new section, histology of basic tissues and select organs, containing 55 outstanding histology slides photographed by Nina Zanetti of Siena College.

Elaine Marieb chose many of the soft tissue views. Matt Hutchinson, of Washington State University, took on the arduous task of labeling each structure. Jon Mallatt, co-author of the human anatomy text, scrutinized and approved the views, leaders, and labels. References to related atlas images herein can be found in the illustration figure legends of both the human anatomy and the human anatomy and physiology textbooks.

For this edition, Patricia Brady Wilhelm, co-author of the human anatomy text reviewed each photograph for accuracy and chose several new soft tissue images from the collection of Mark Nielsen and Shawn Miller of the University of Utah. She also worked to choose all of the slides included in the histology portion of the Atlas to represent the most useful selection of histology plate for students in the classroom.

Ralph T. Hutchings, formerly with The Royal College of Surgeons of England, photographed each of the bone structures and many of the soft tissue images found in this book. His reputation as an anatomical photographer preceded him, and we certainly were not disappointed—the quality of his work is here for all to see. We are most grateful to him for lending his expertise to this project, and for his good humor and ready willingness to meet our demands. We are grateful to John Martinek of Kirkwood Community College, who contributed his excellent photograph of the internal surface of the stomach (Figure 69a).

The authors would like to thank the following instructors for their expertise and thoughtful feedback in reviewing the Atlas: Andy Beall, University of North Florida; Dennis Carnes, Imperial Valley College; Leslie Hendon, The University of Alabama at Birmingham; H. Rodney Holmes, Waubonsee Community College; Jeff Kent, Volunteer State Community College; Mark Robertson, Delta College; Laura Rosillo, IVY Tech State College; Justine Wilcox, University of North Florida; Joseph Yavornitzky, Baldwin Wallace College; Hillman Mann, Volunteer State Community College; Darrell Davies, Kalamazoo Valley Community College; Louise Russo, Villanova University; Tom Swensen, Ithaca College.

We are hopeful that the second edition of *A Brief Atlas of the Human Body* proves to be a relevant source to students and instructors. Benjamin Cummings would welcome your comments and suggestions, which may be sent to the following address:

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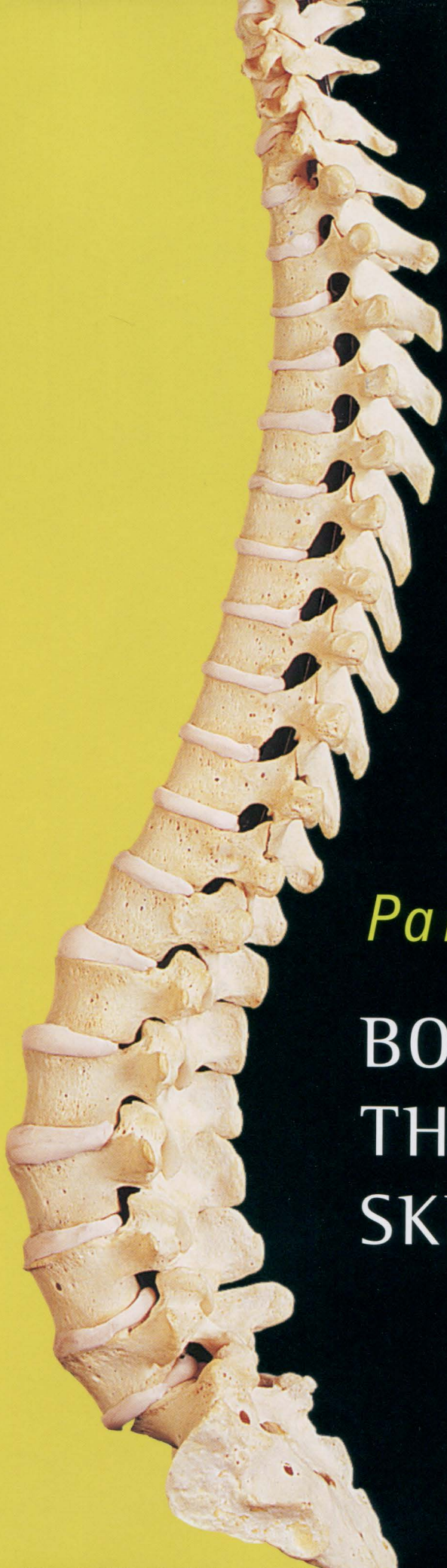


Part II

BONES OF THE HUMAN SKELETON

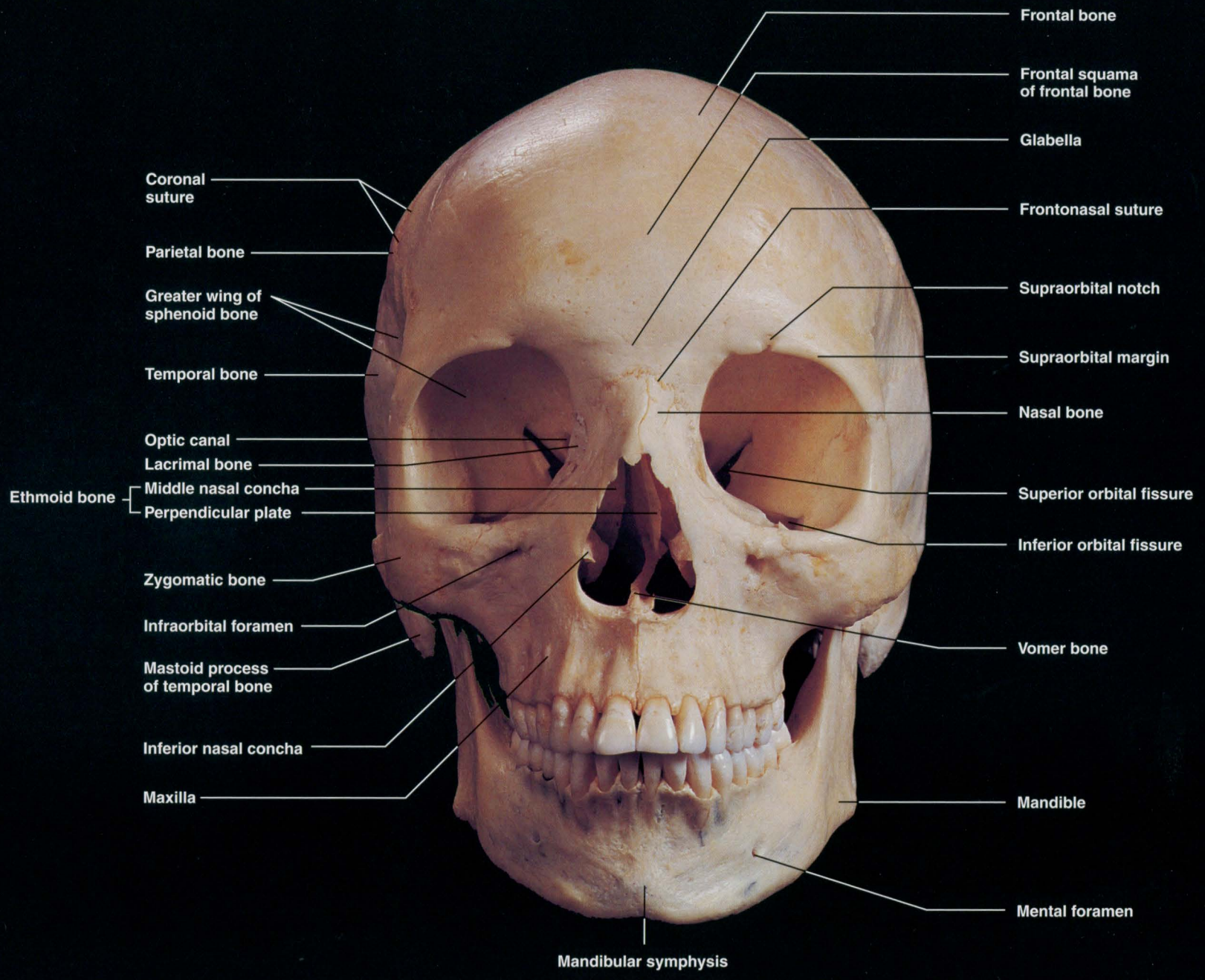


Figure 1 Skull, anterior view.

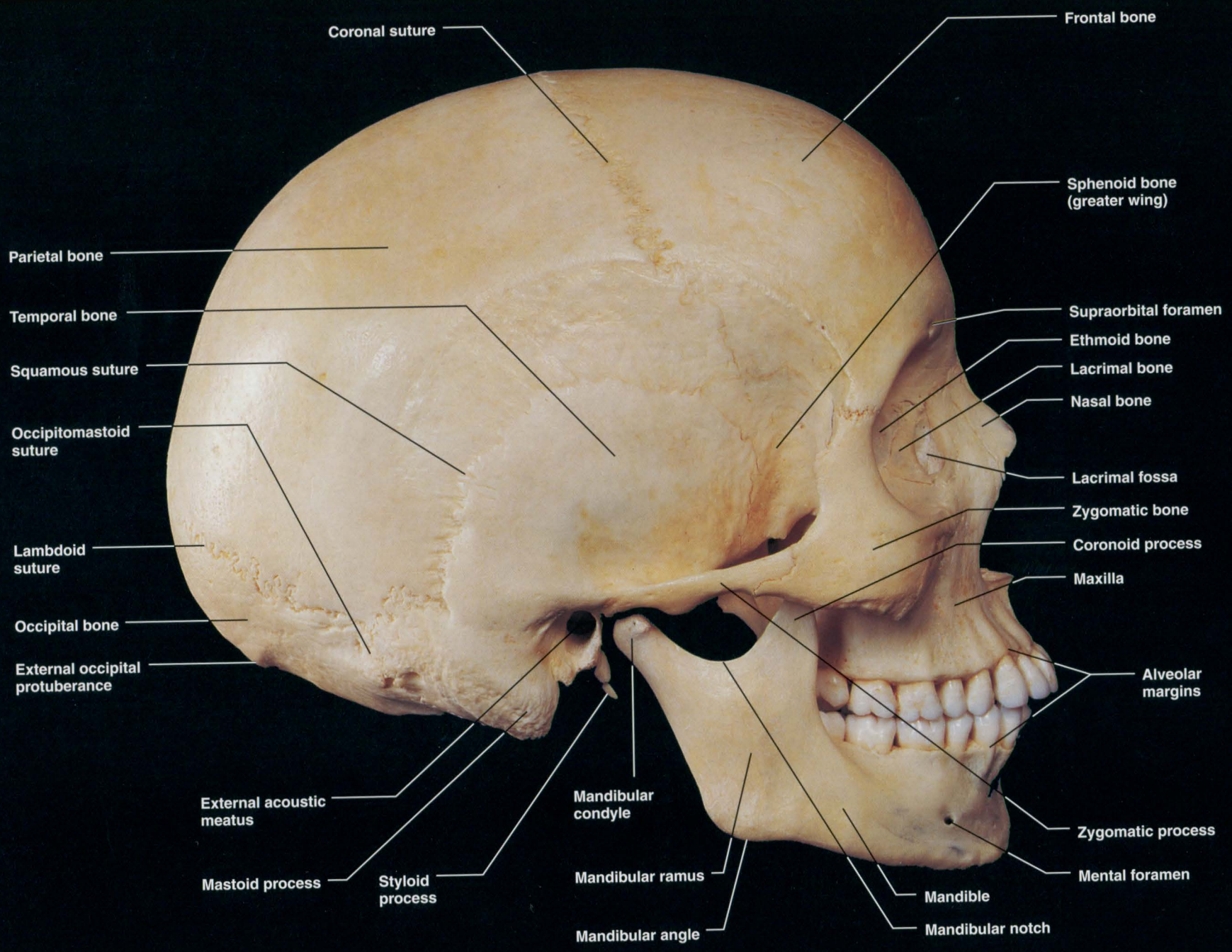


Figure 2 Skull, right external view of lateral surface.

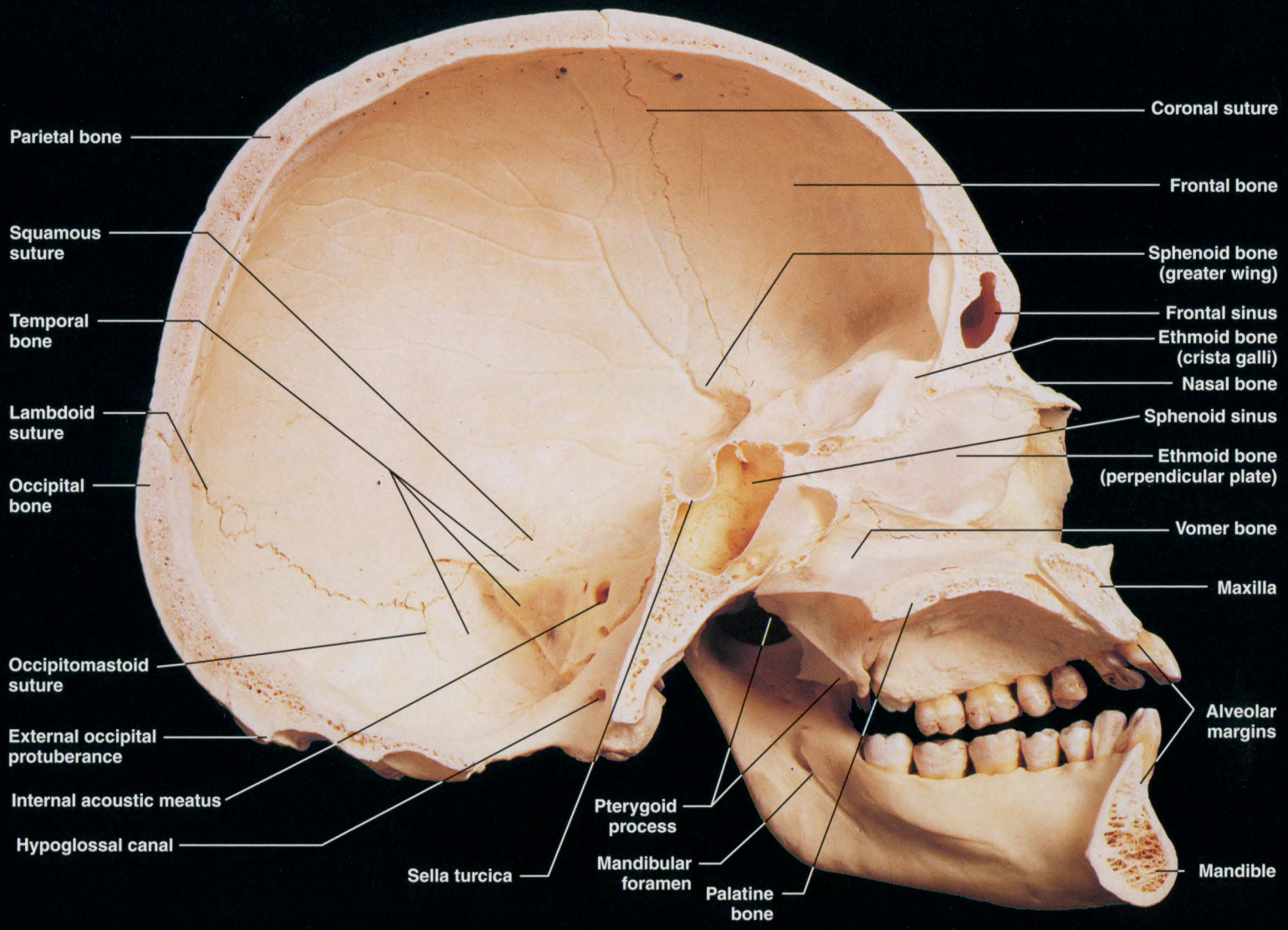


Figure 3 Skull, internal view of left lateral aspect.

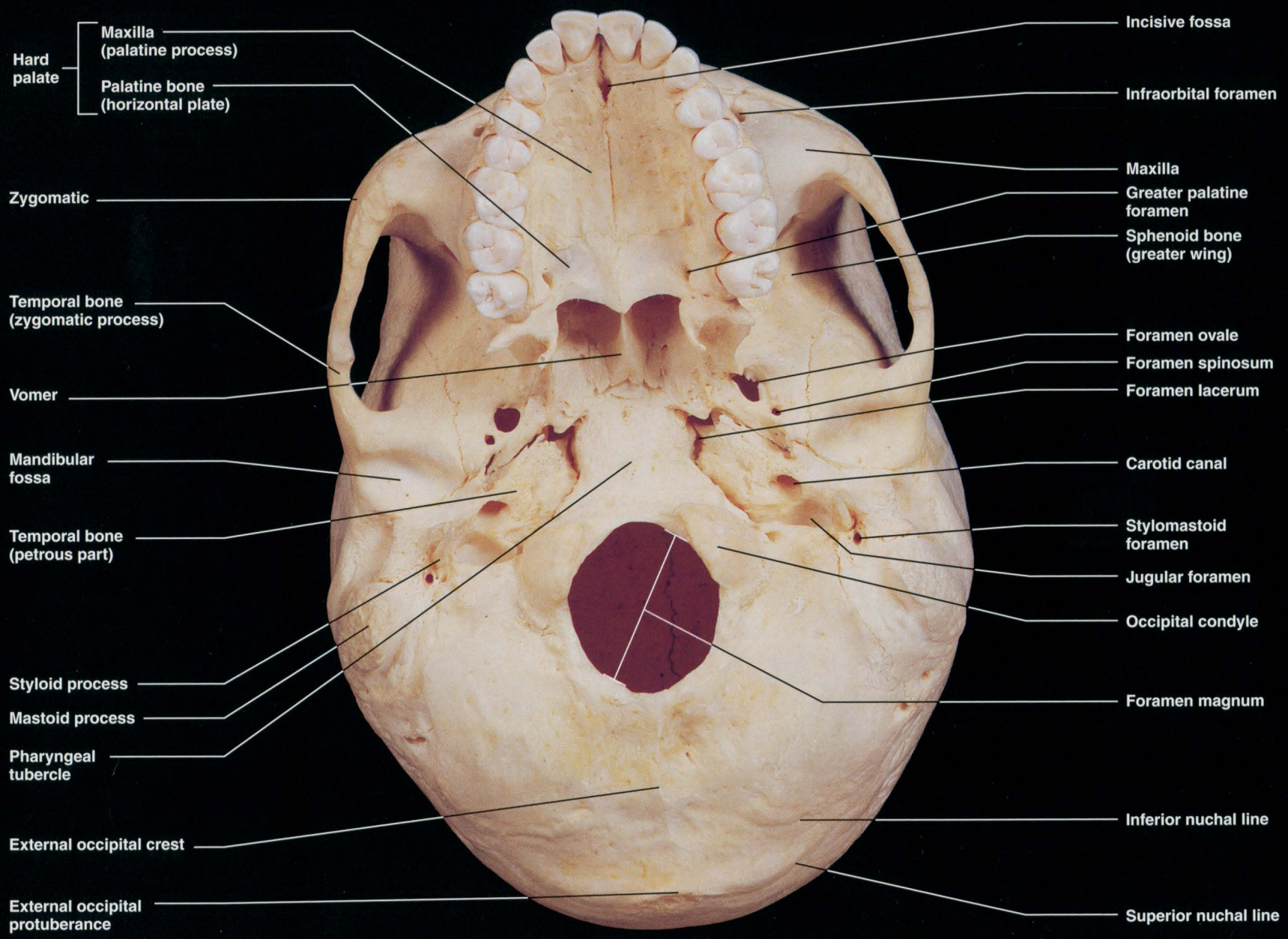


Figure 4 Skull, external view of base.

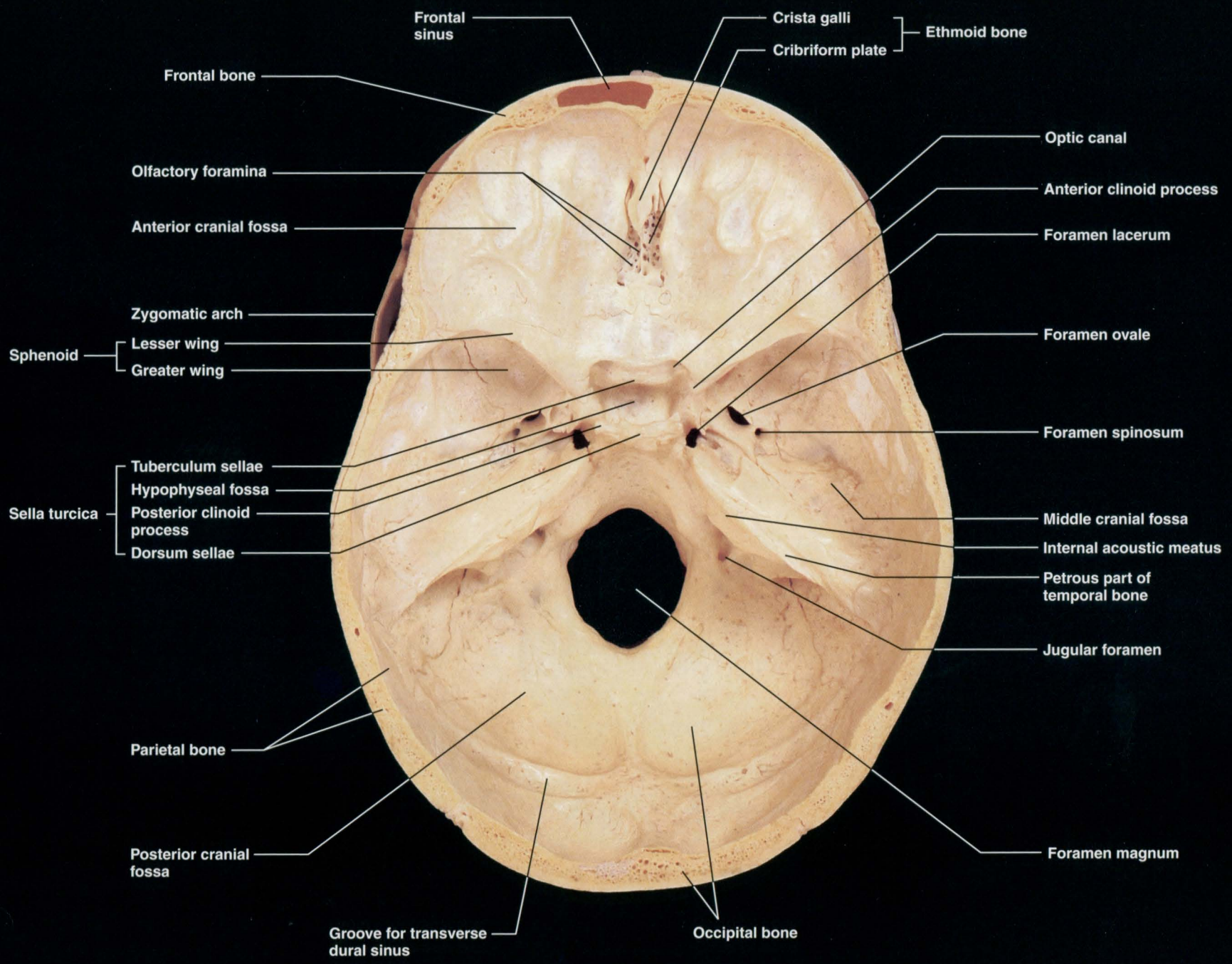
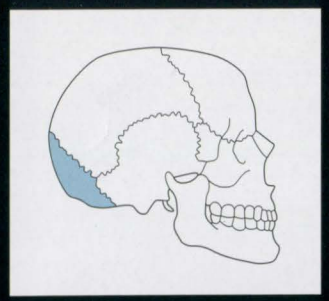


Figure 5 Skull, internal view of base.



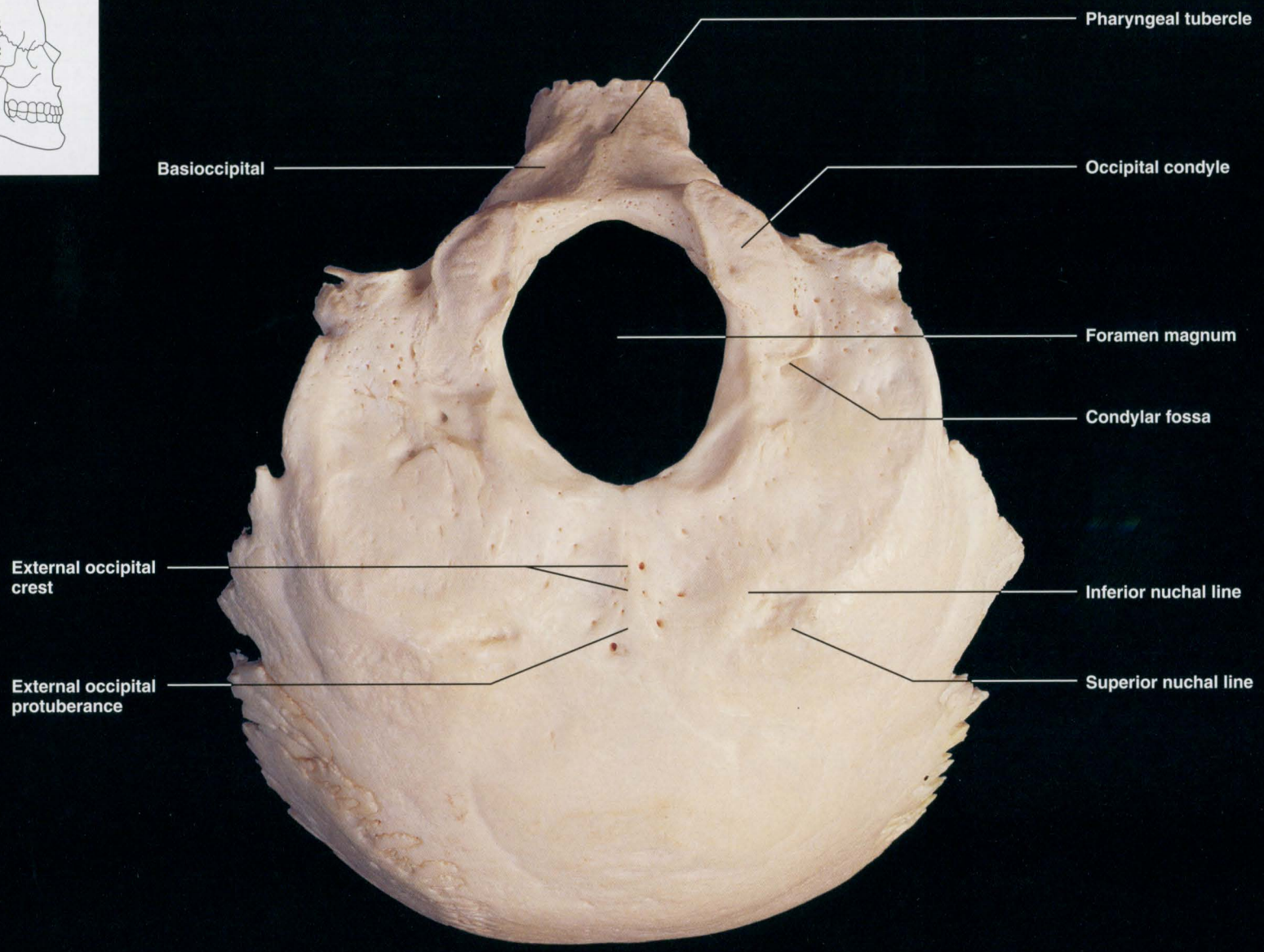
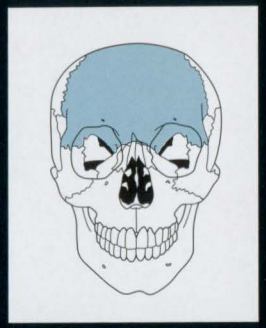
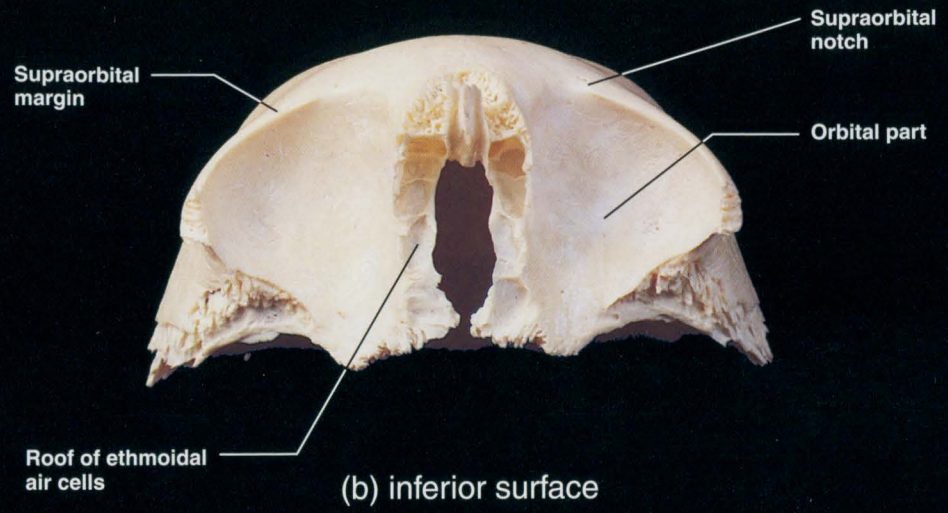


Figure 6 Occipital bone, inferior external view.





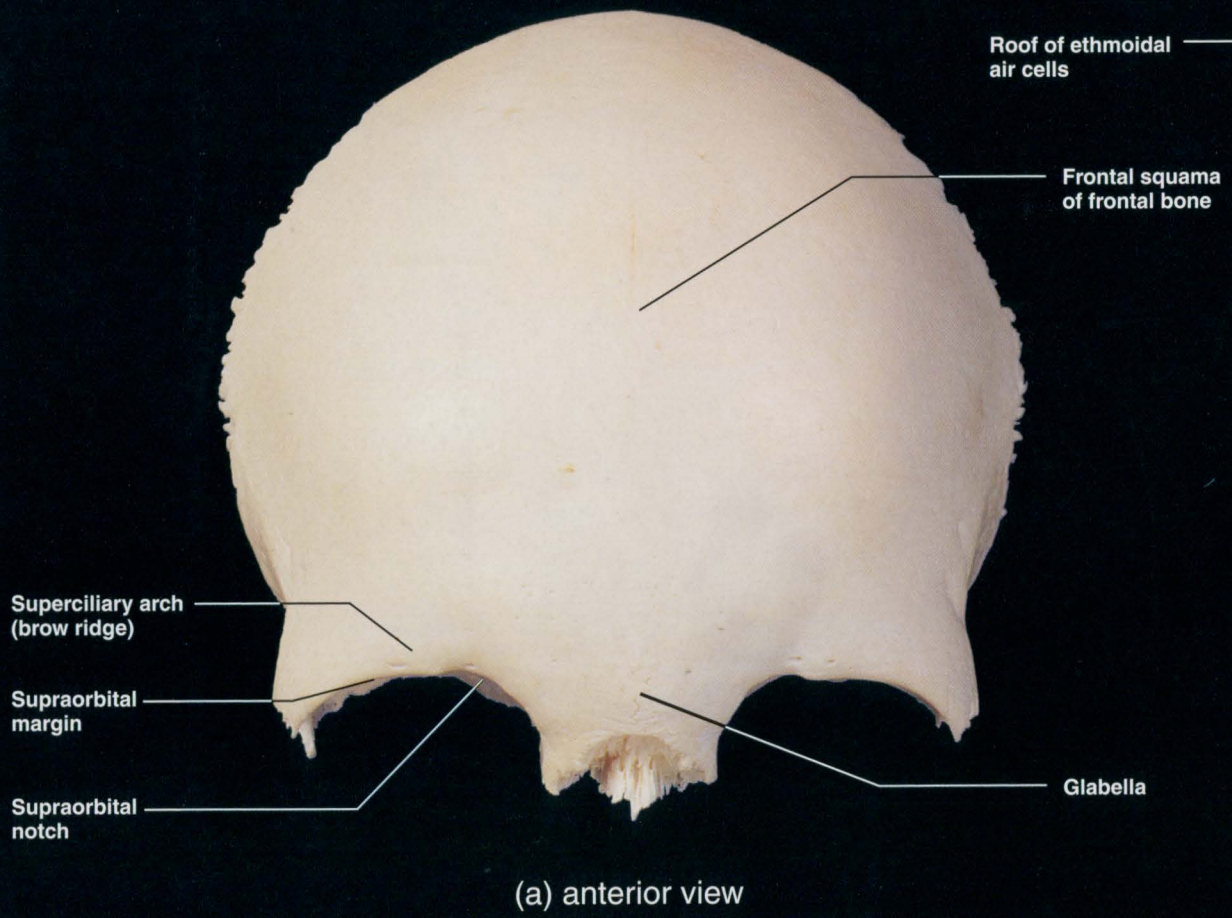
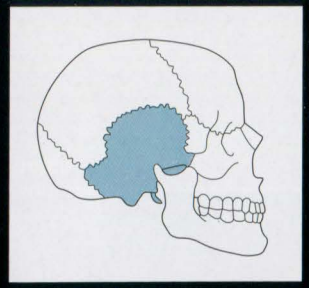
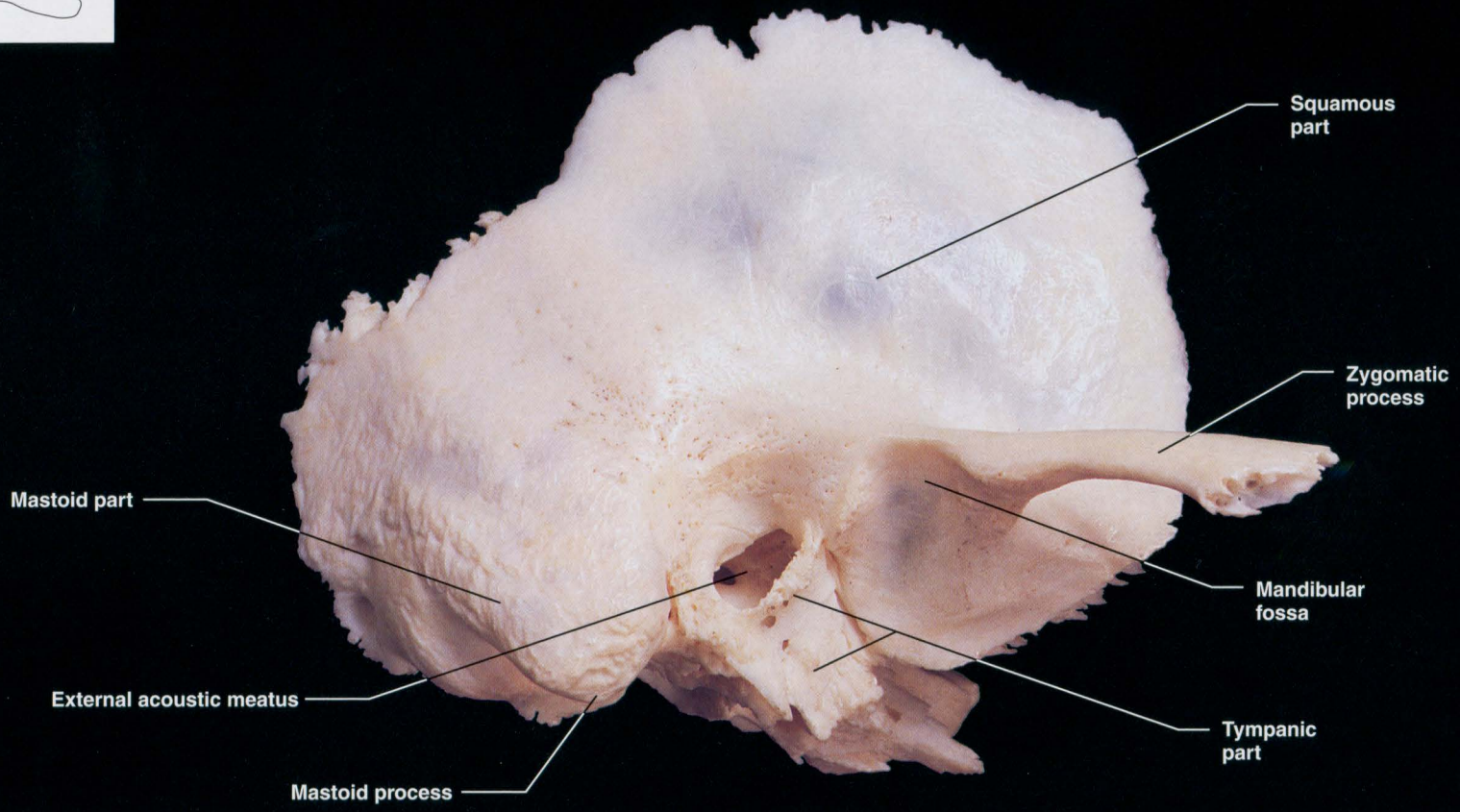
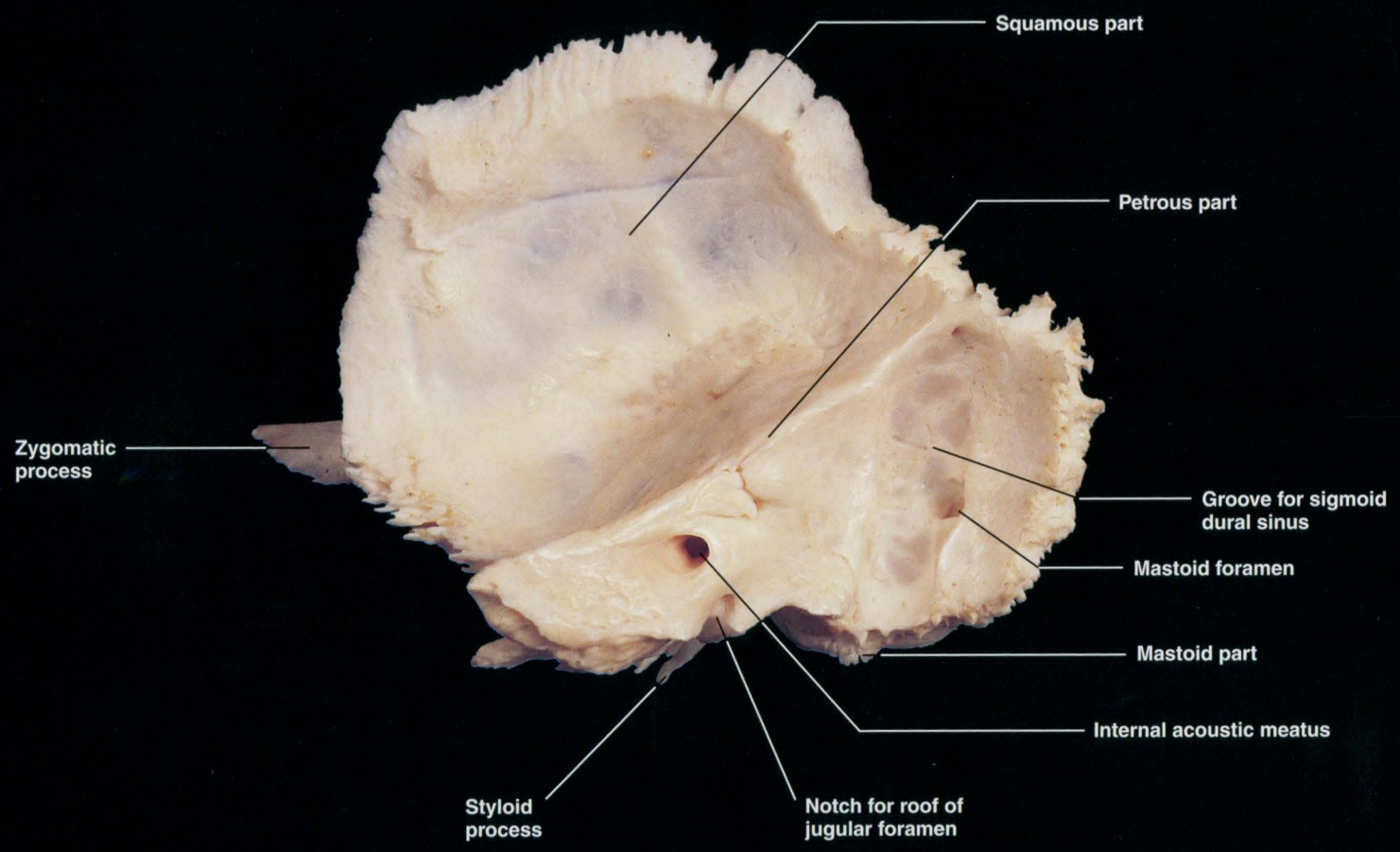


Figure 7 Frontal bone.



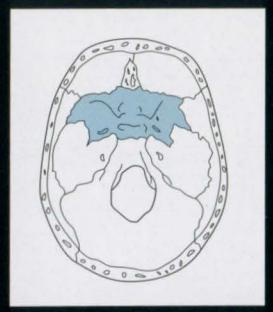


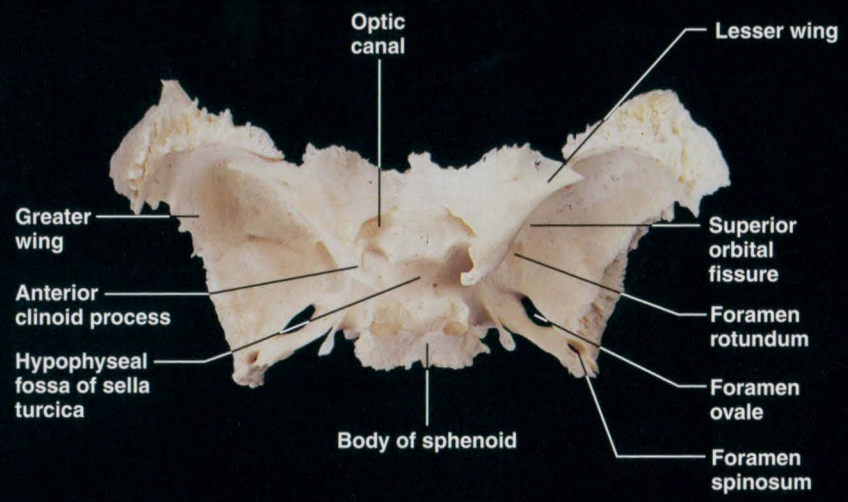
(a) right lateral surface



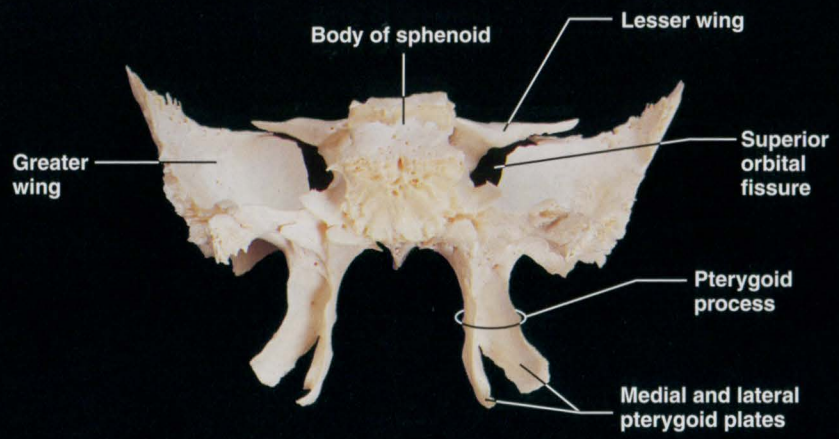
(b) right medial view

Figure 8 Temporal bone.

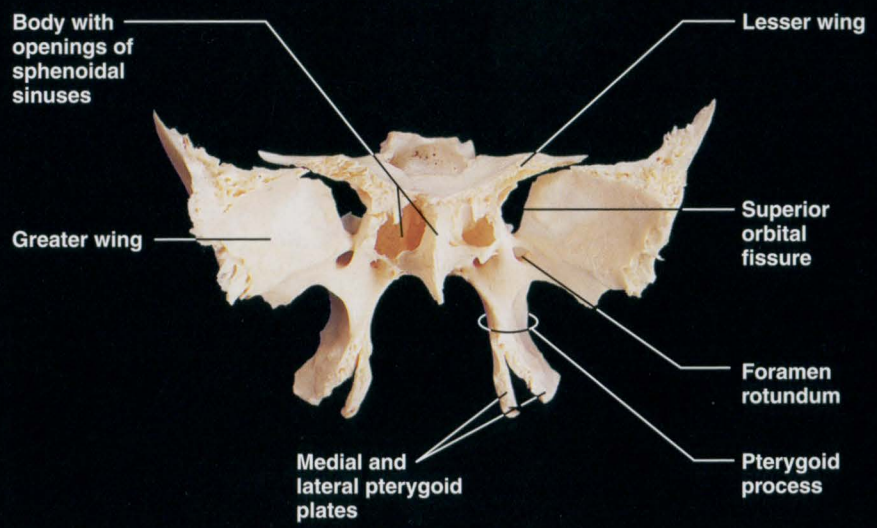




(a) superior view

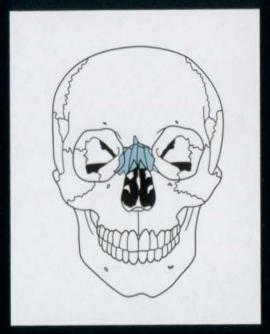


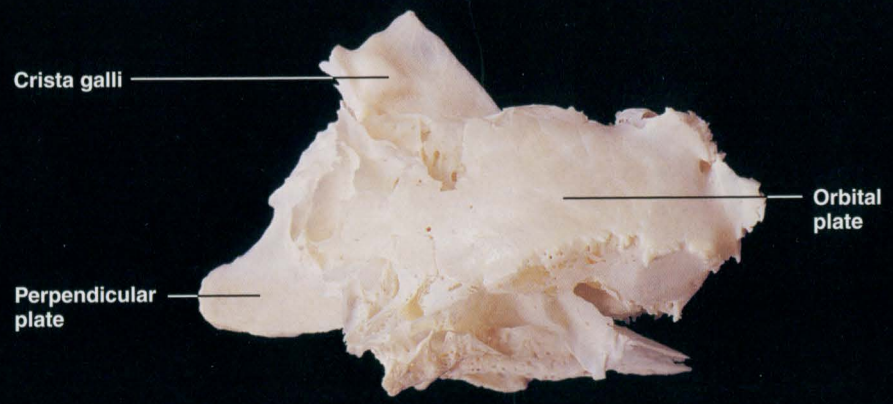
(b) posterior view



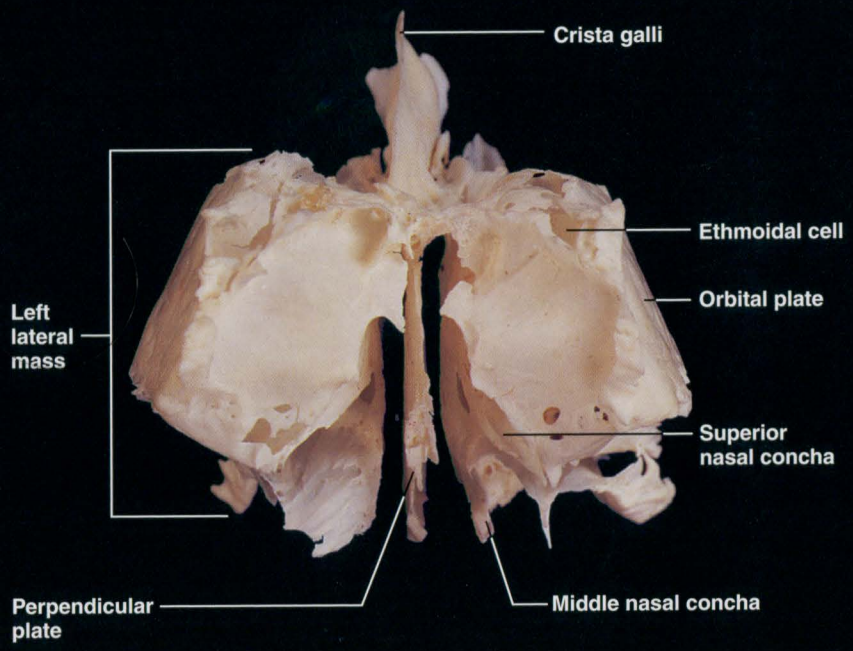
(c) anterior view

Figure 9 Sphenoid bone.

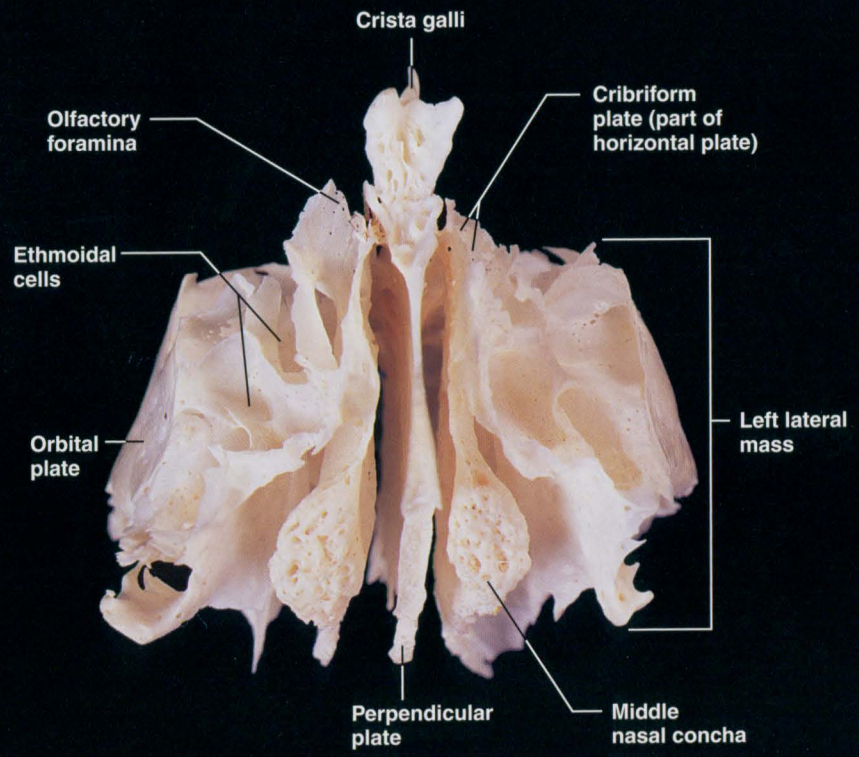




(a) left lateral surface

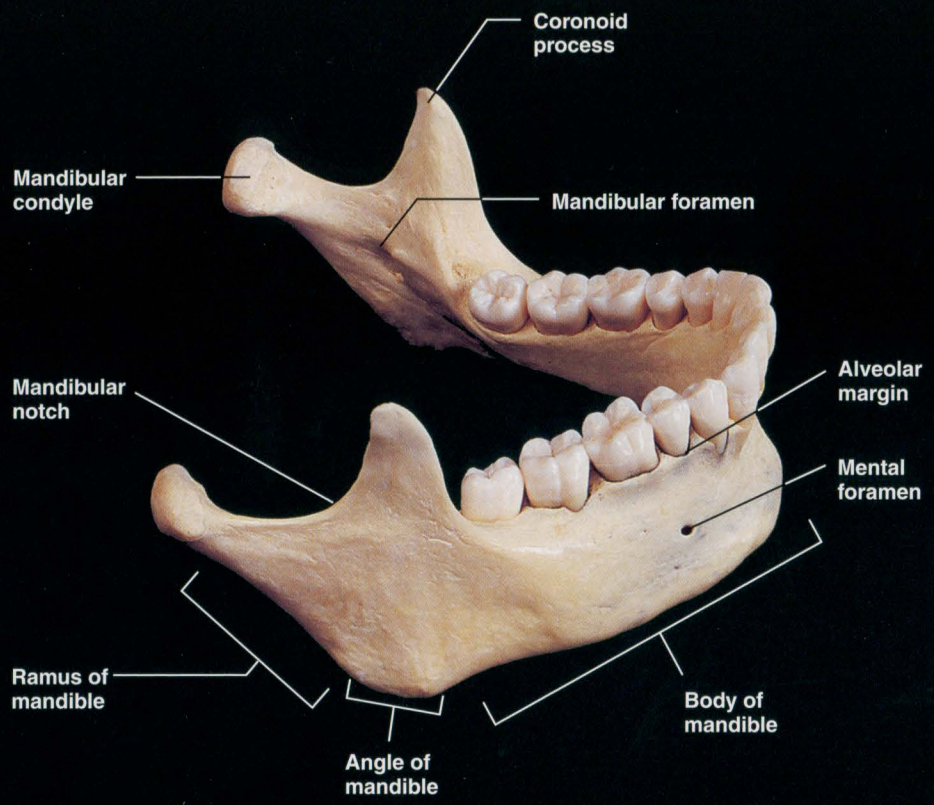


(b) posterior view

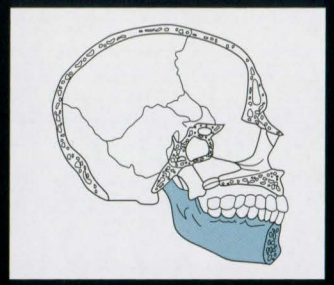


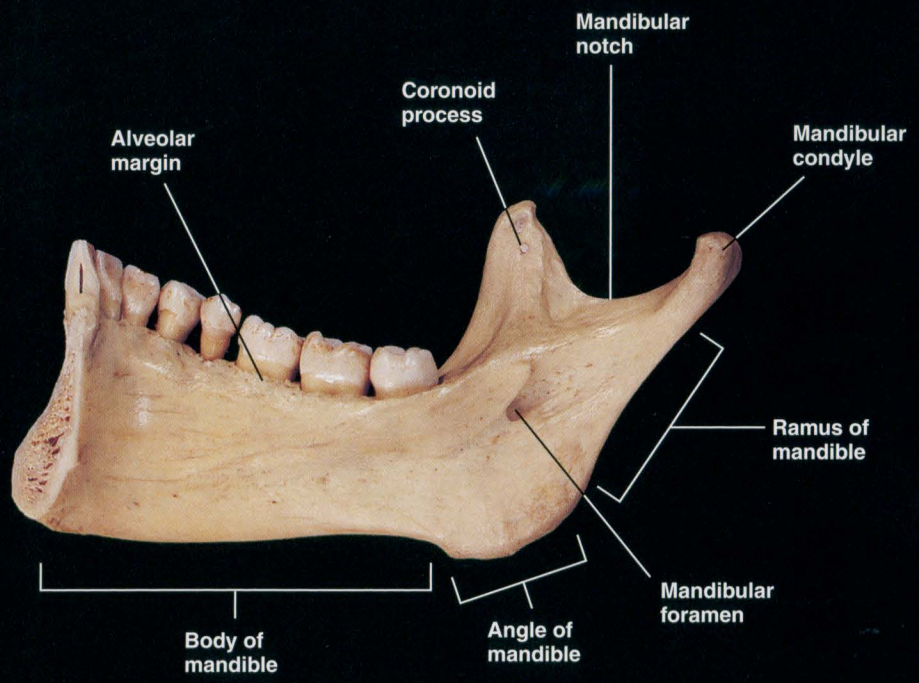
(c) anterior view

Figure 10 Ethmoid bone.



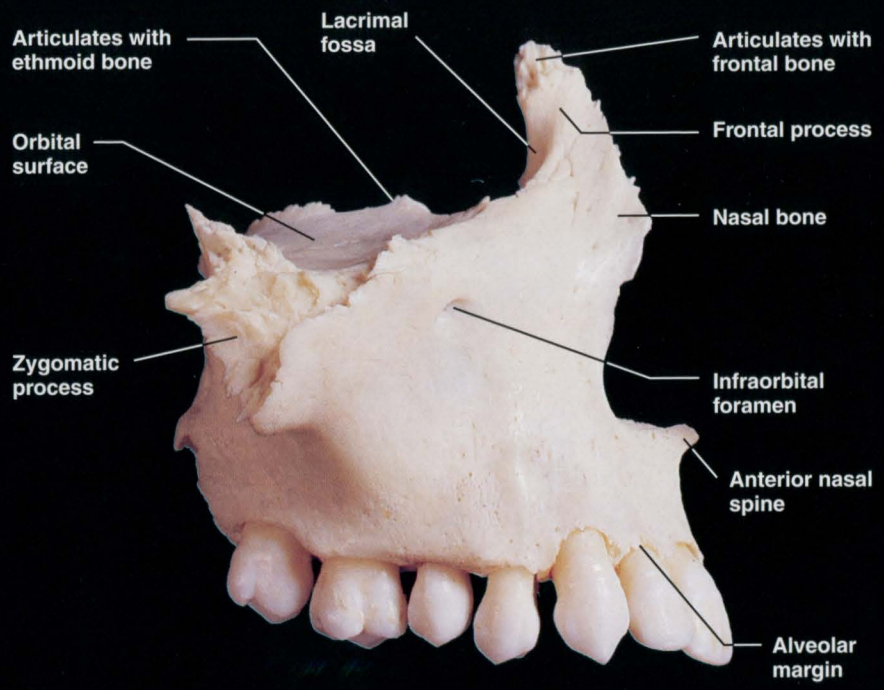
(a) right lateral view



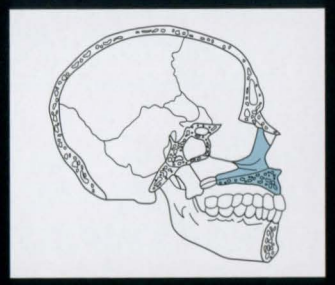


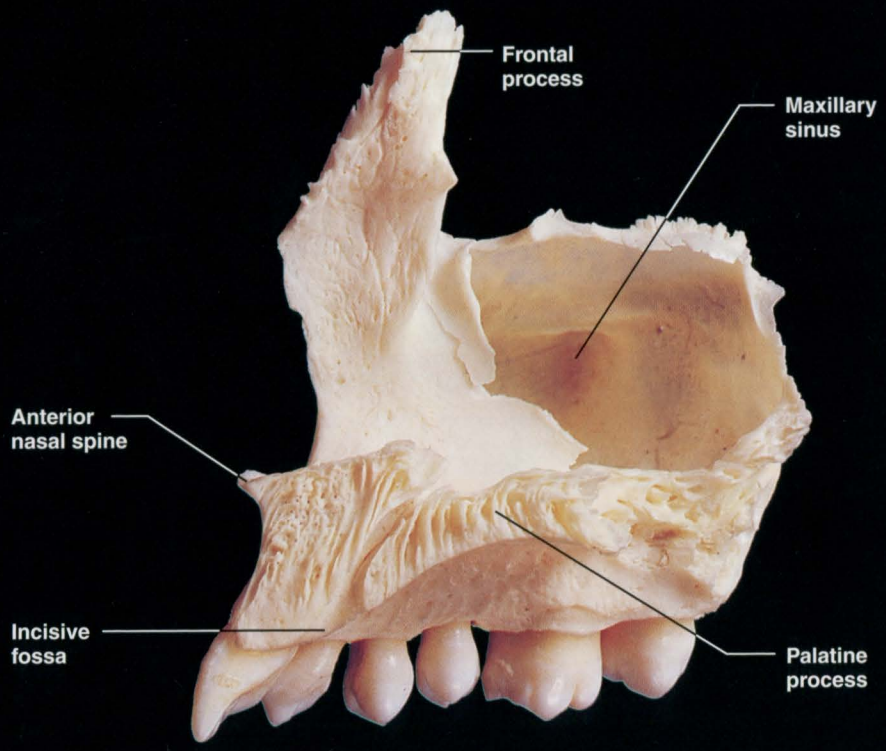
(b) right medial view

Figure 11 Mandible.



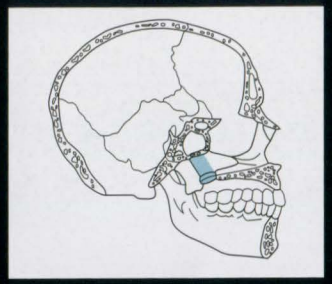
(a) right lateral view

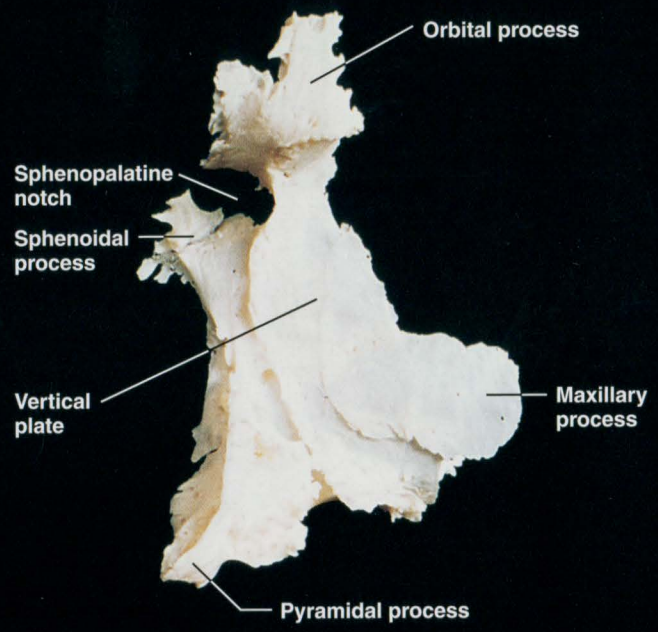




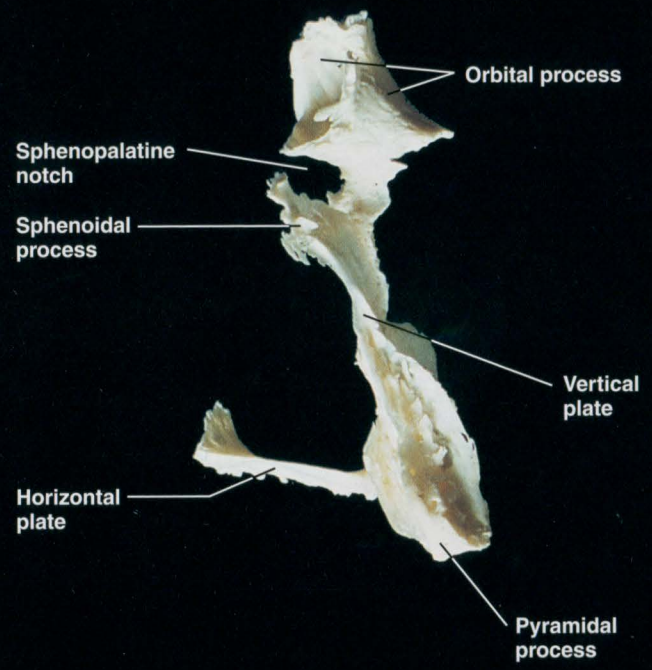
(b) right medial view

Figure 12 Maxilla.



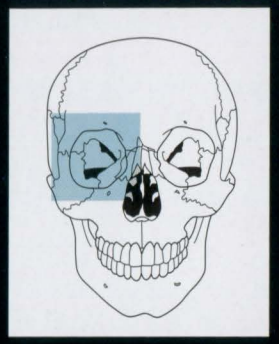


(a) right lateral view



(b) right posterior view

Figure 13 Palatine bone.



Optic canal

Supraorbital notch

Roof of orbit

Orbital plate of frontal bone

Lesser wing of sphenoid bone

Lateral wall of orbit

Zygomatic process of frontal bone

Greater wing of sphenoid bone

Orbital surface of zygomatic bone

Medial wall

Sphenoid body

Orbital plate of ethmoid bone

Frontal process of maxilla

Lacrimal bone

Nasal bone

Floor of orbit

Orbital process of palatine bone

Orbital surface of maxillary bone

Zygomatic bone

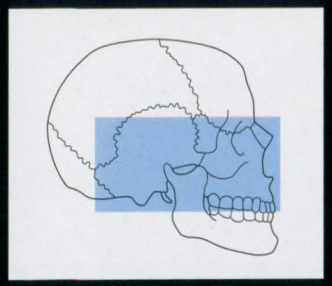
Superior orbital fissure

Inferior orbital fissure

Infraorbital groove

Infraorbital foramen

Figure 14 Bony orbit.



Sphenoid bone (greater wing)

Squamous suture

Frontal bone

Squamous part of temporal bone

Petrous part of temporal bone

Lambdoid suture

Frontal sinus

Crista galli

Occipitomastoid suture

Sphenoid sinus

Ethmoid sinuses

Middle nasal concha

Maxillary sinus

External occipital protuberance

Inferior nasal concha

Internal acoustic meatus

Dorsum sellae

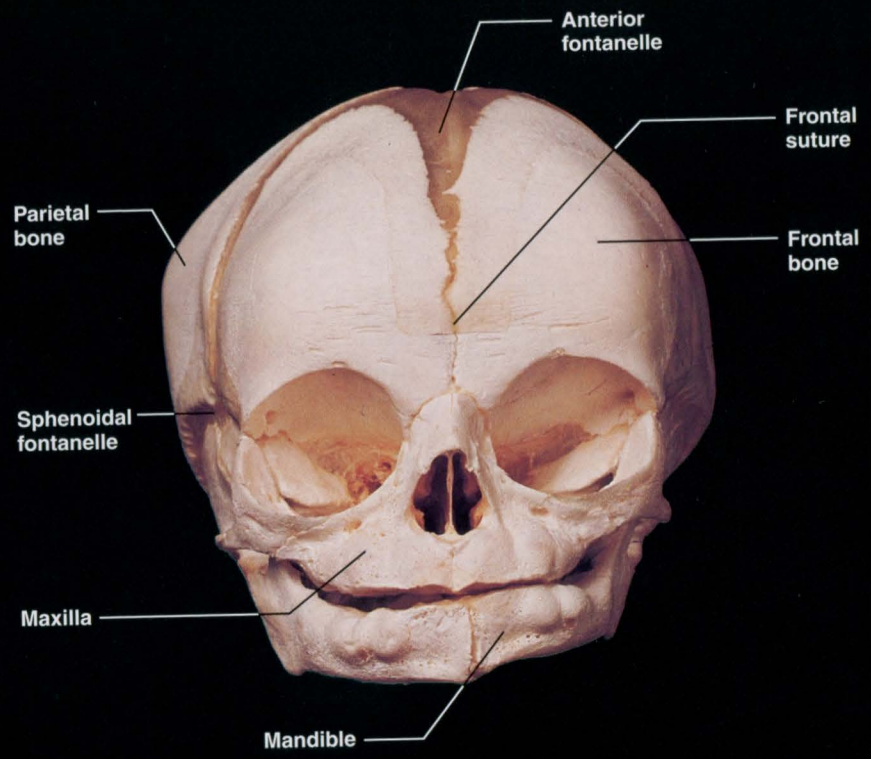
Sella turcica

Medial and lateral pterygoid plates

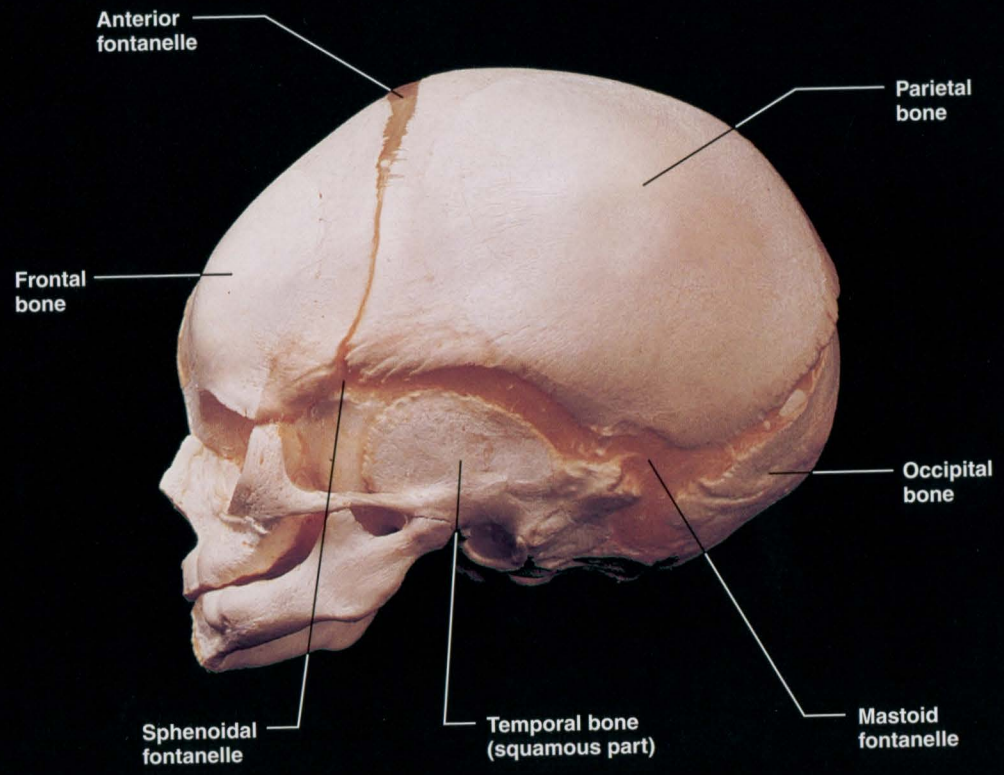
Palatine bone

Maxilla

Figure 15 Nasal cavity, left lateral wall.

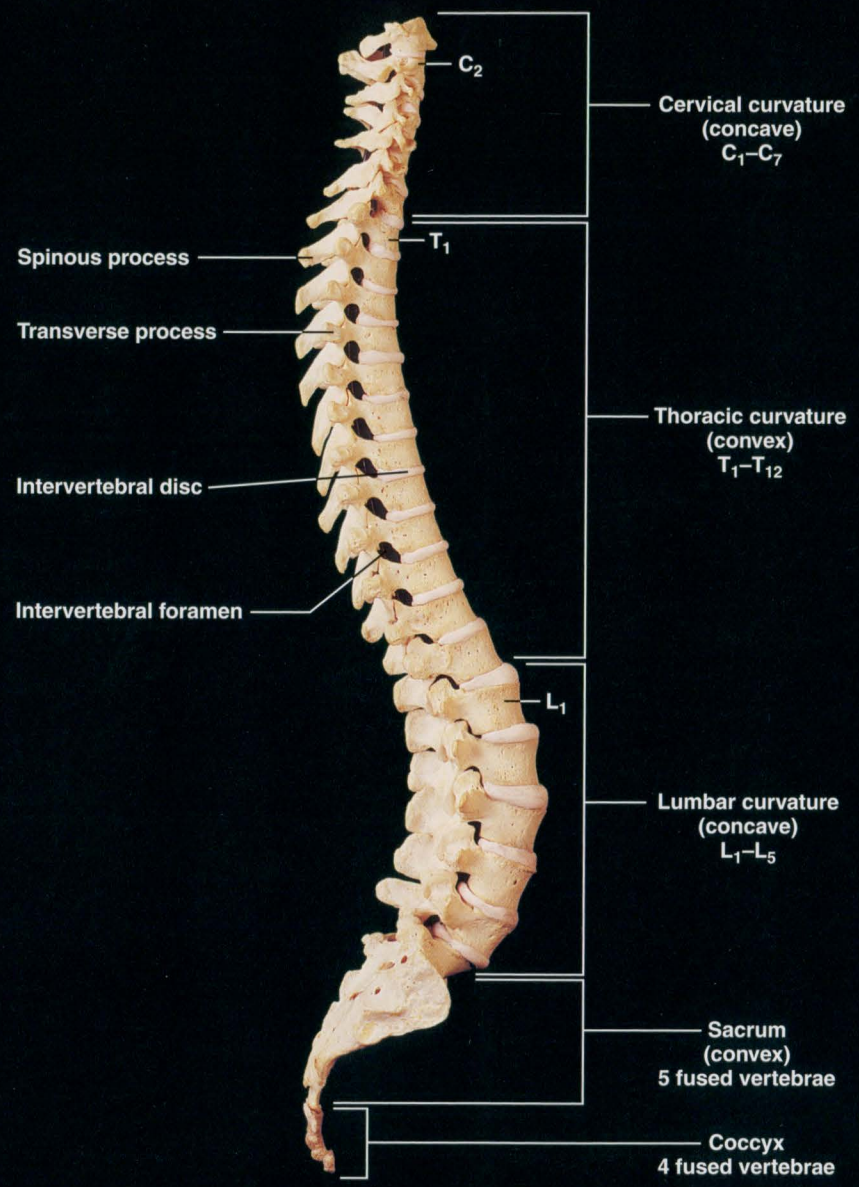


(a) anterior view

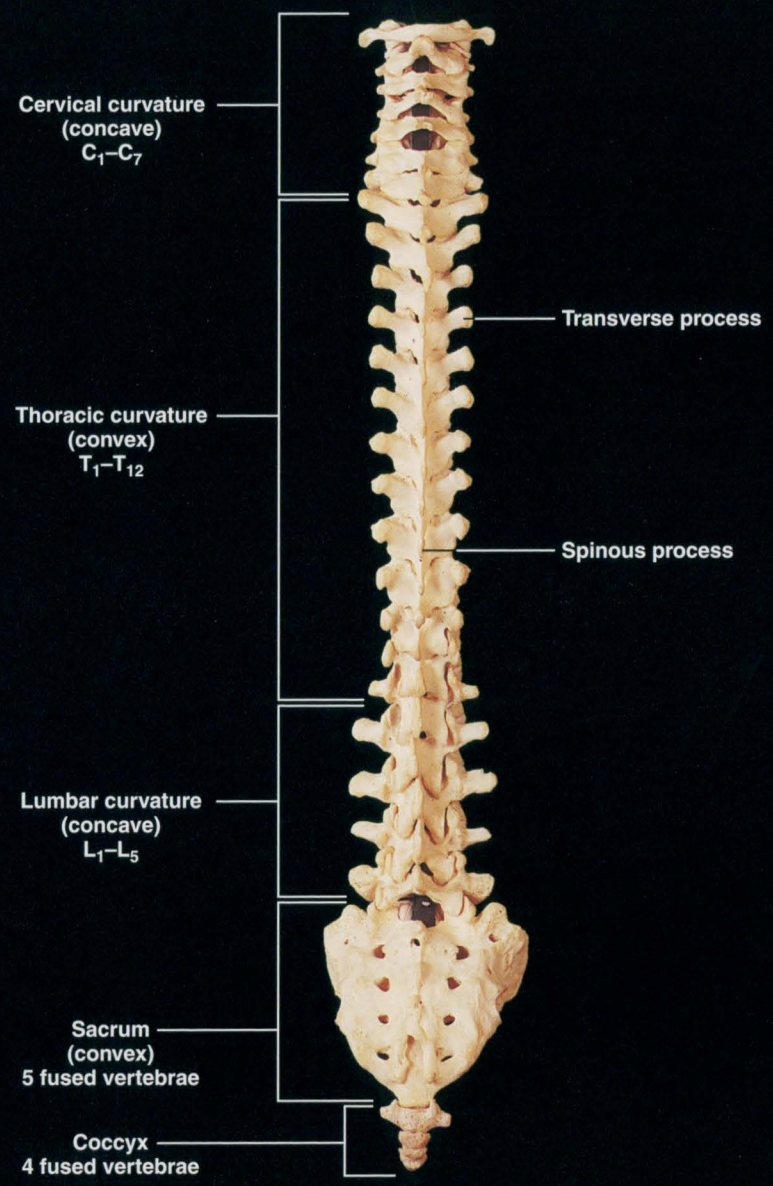


(b) lateral view

Figure 16 Fetal skull.

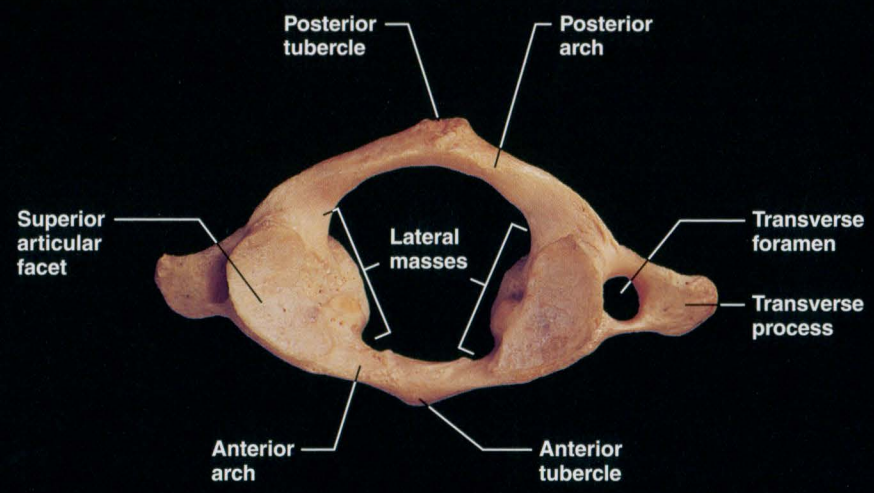


(a) right lateral view

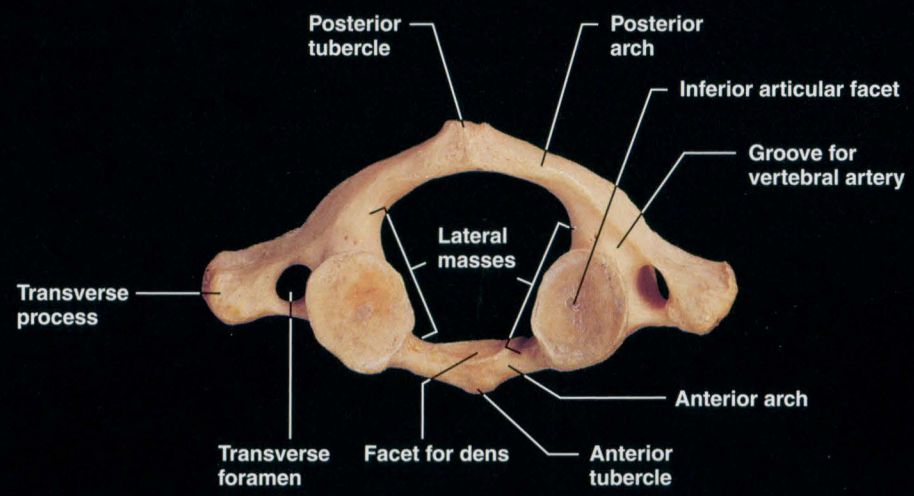


(b) posterior view

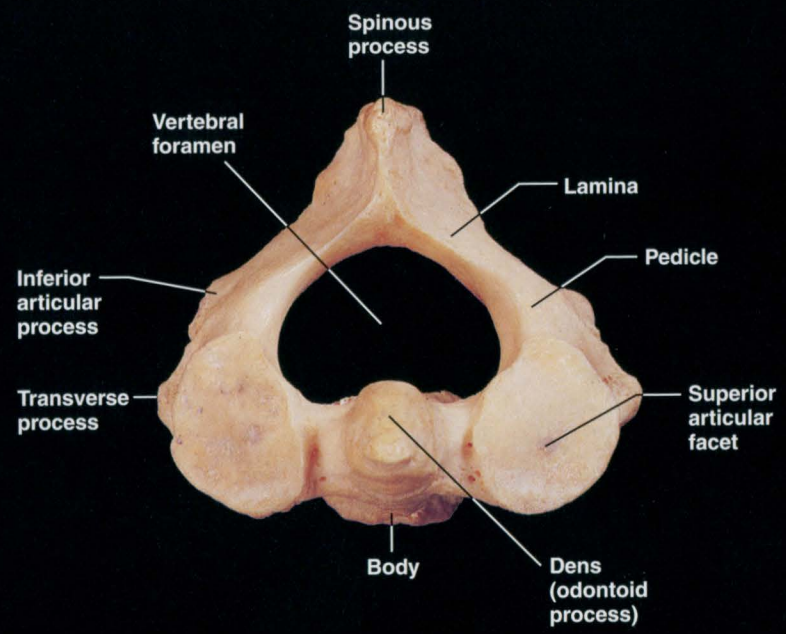
Figure 17 Articulated vertebral column.



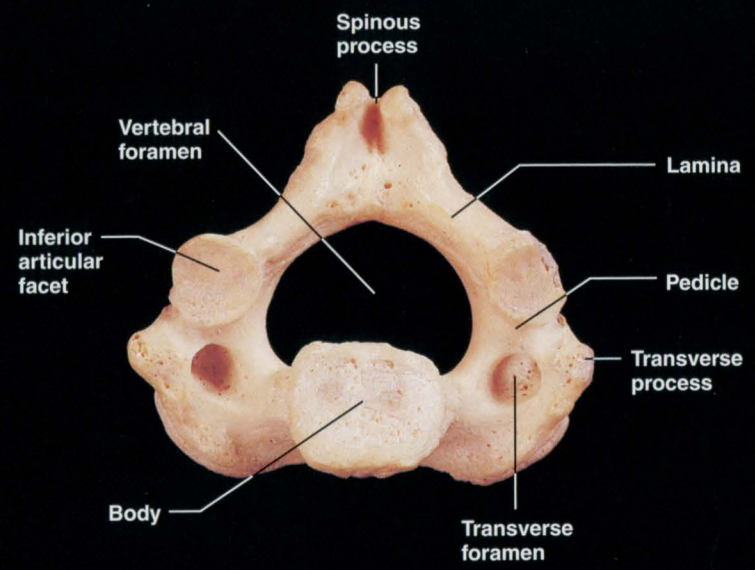
(a) atlas, superior view



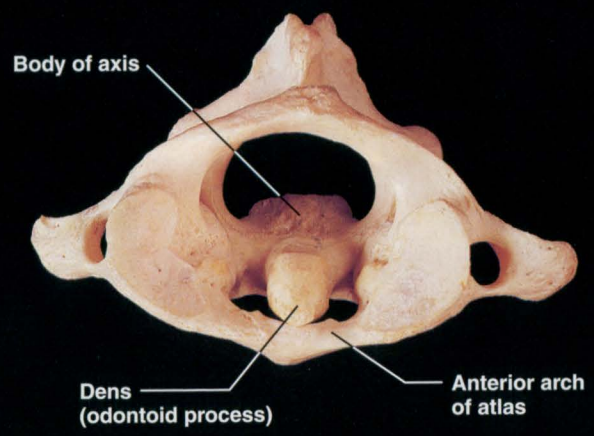
(b) atlas, inferior view



(c) axis, superior view

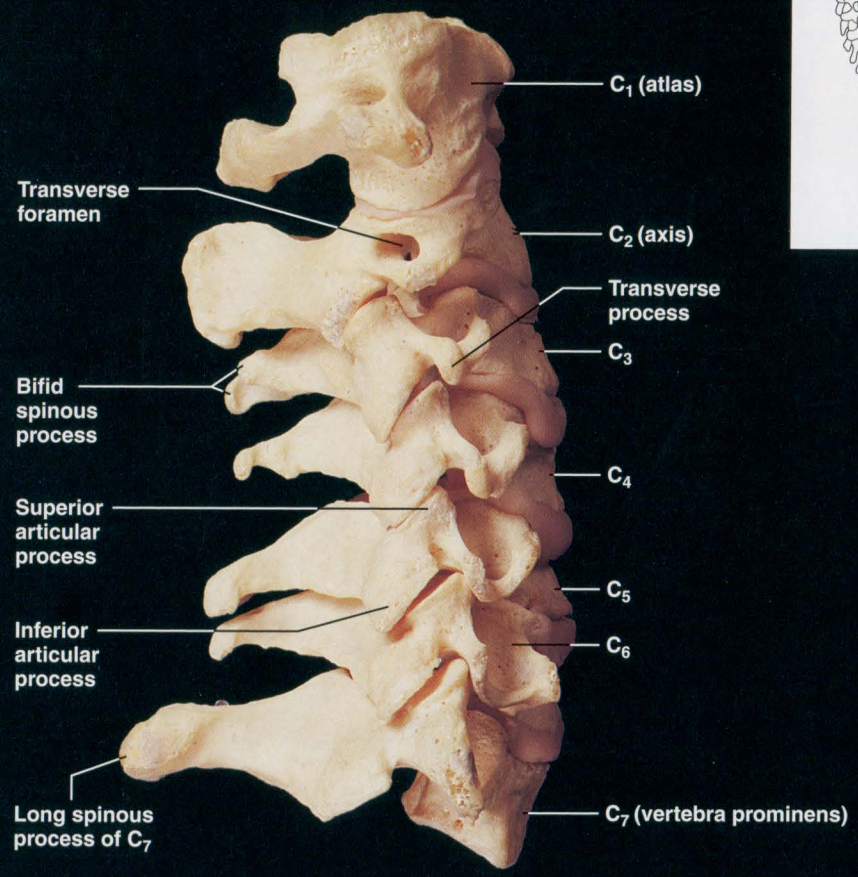


(d) axis, inferior view

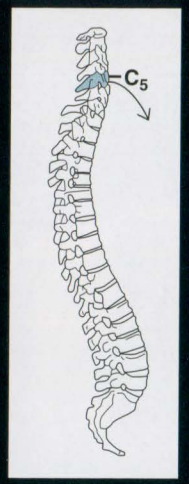


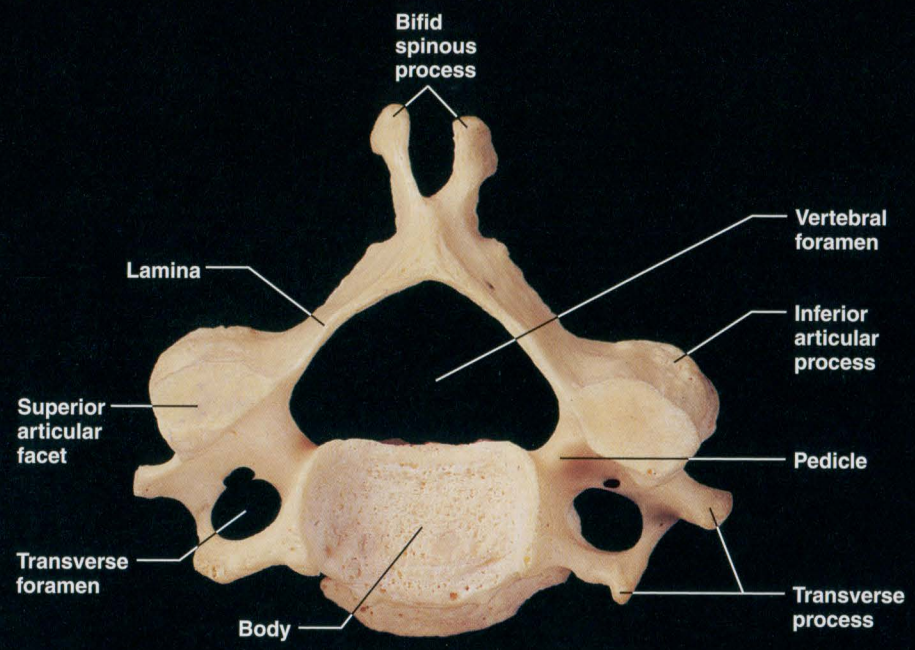
(e) articulated atlas and axis, superior view

Figure 18 Various views of vertebrae C_1 and C_2.

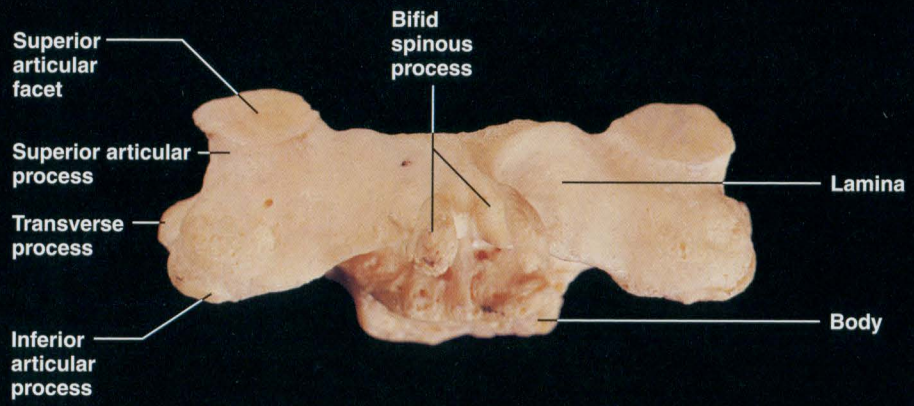


(a) right lateral view of articulated cervical vertebrae

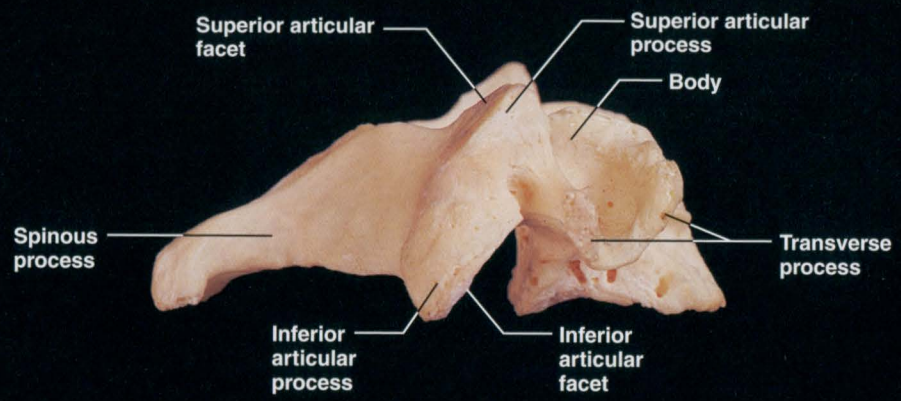




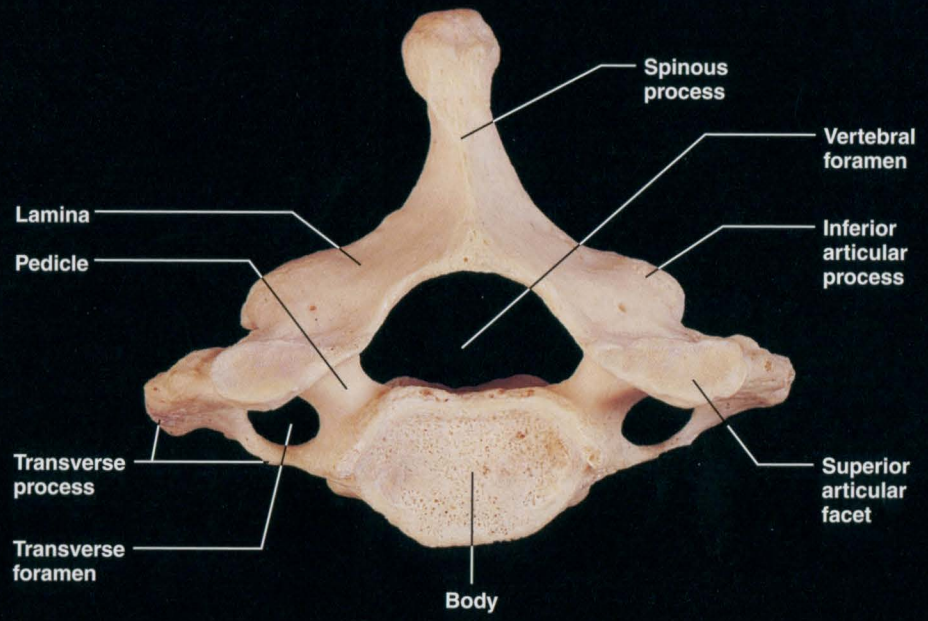
(b) fifth (typical) cervical vertebra, superior view



(c) fifth (typical) cervical vertebra, posterior view

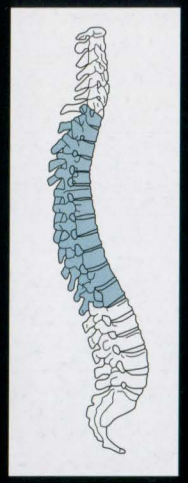


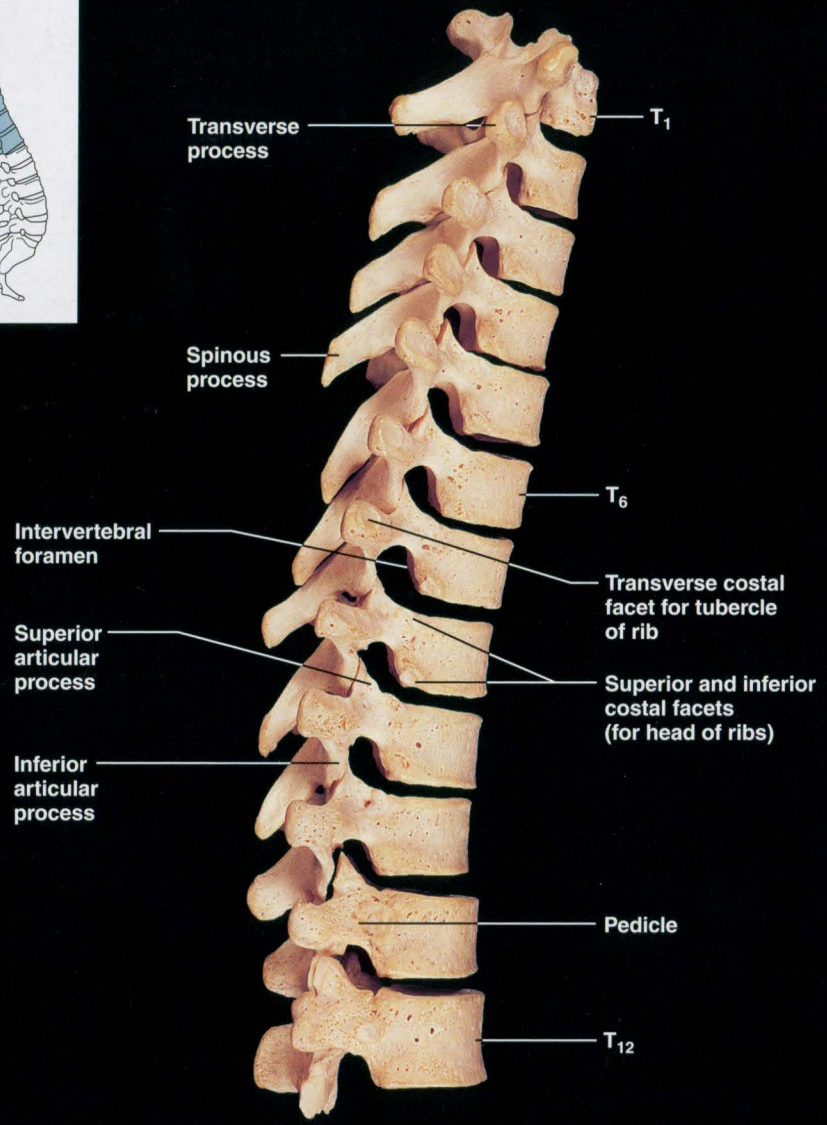
(d) fifth (typical) cervical vertebra, right lateral view



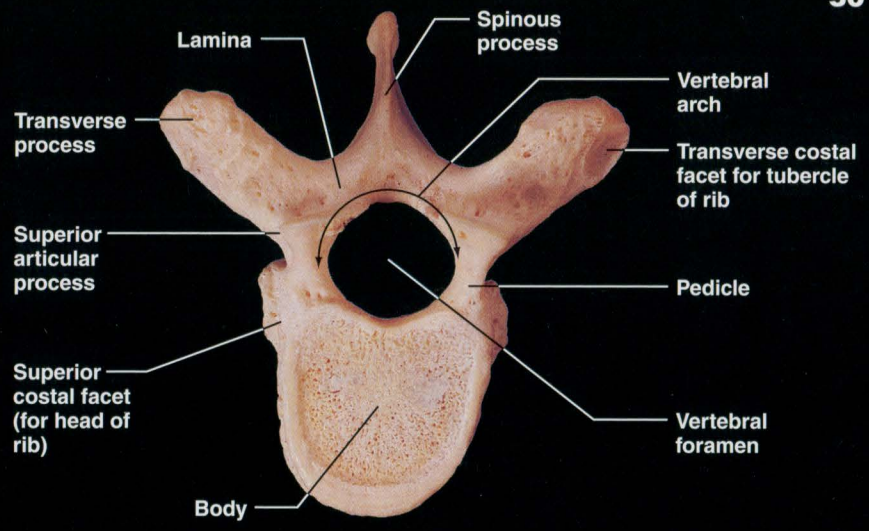
(e) vertebra prominens (C_7), superior view

Figure 19 Cervical vertebrae.

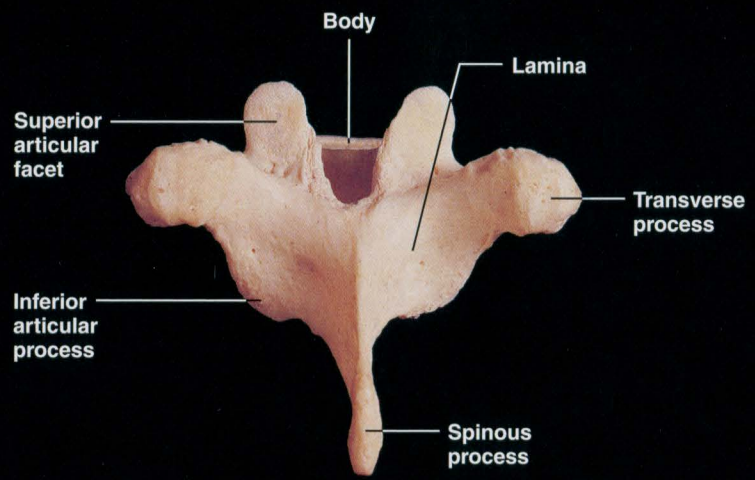




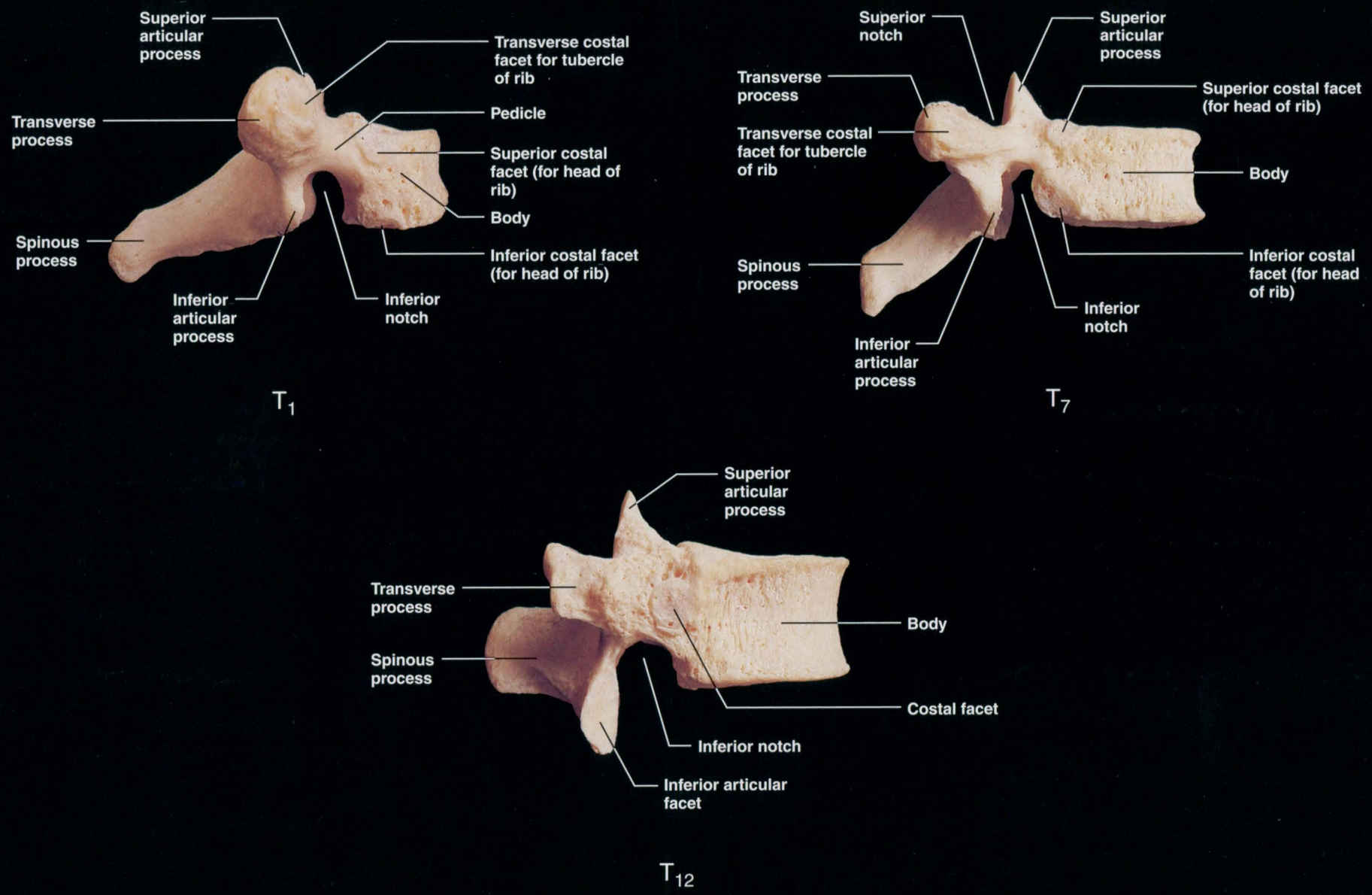
(a) articulated thoracic vertebrae, right lateral view



(b) seventh (typical) thoracic vertebra, superior view

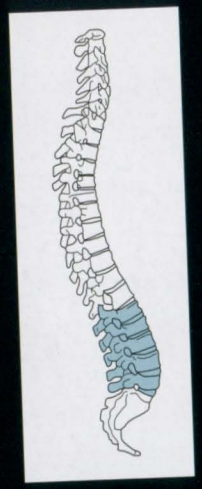


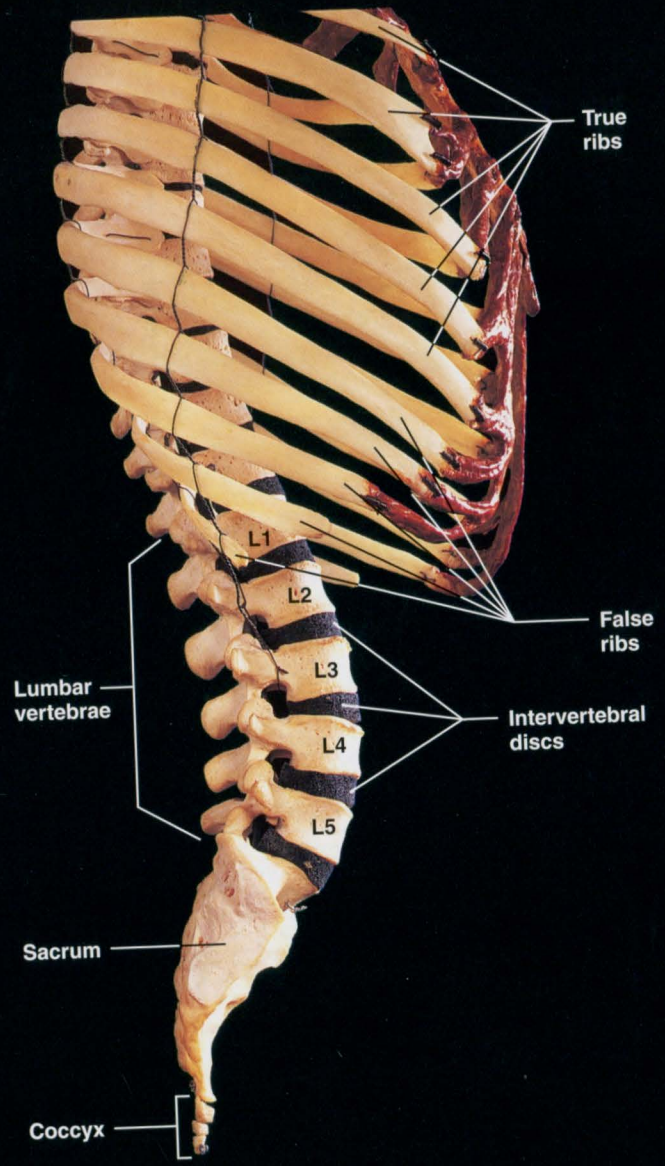
(c) seventh (typical) thoracic vertebra, posterior view



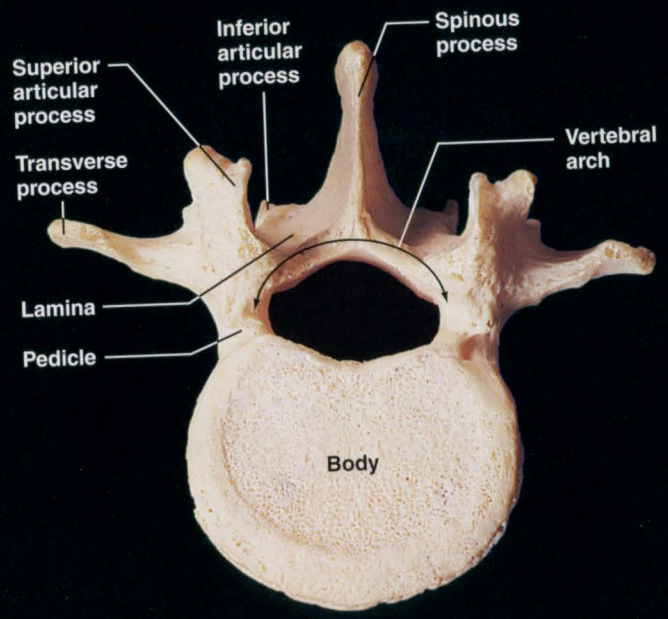
(d) comparison of T_1, T_7, and T_{12} in right lateral views

Figure 20 Thoracic vertebrae.

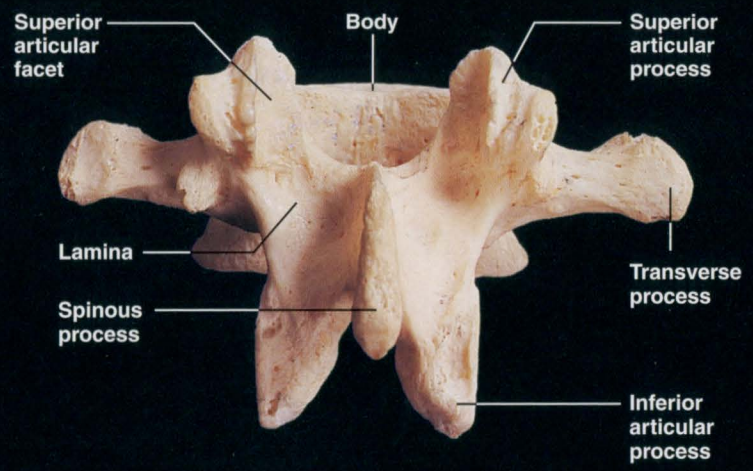




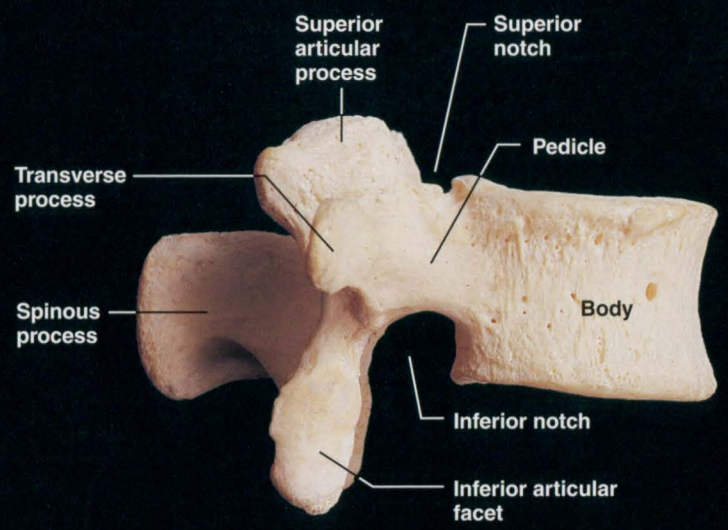
(a) articulated lumbar vertebrae and rib cage, right lateral view



(b) second lumbar vertebra, superior view

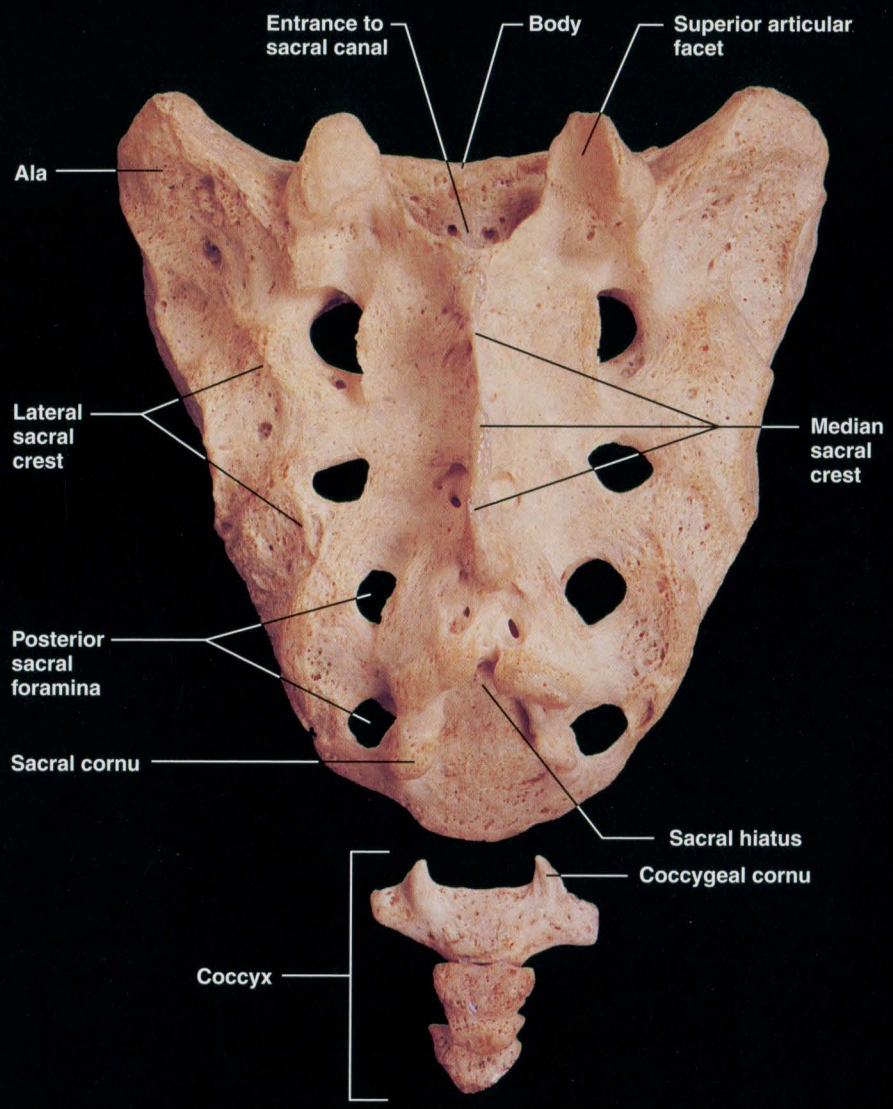


(c) second lumbar vertebra, posterior view

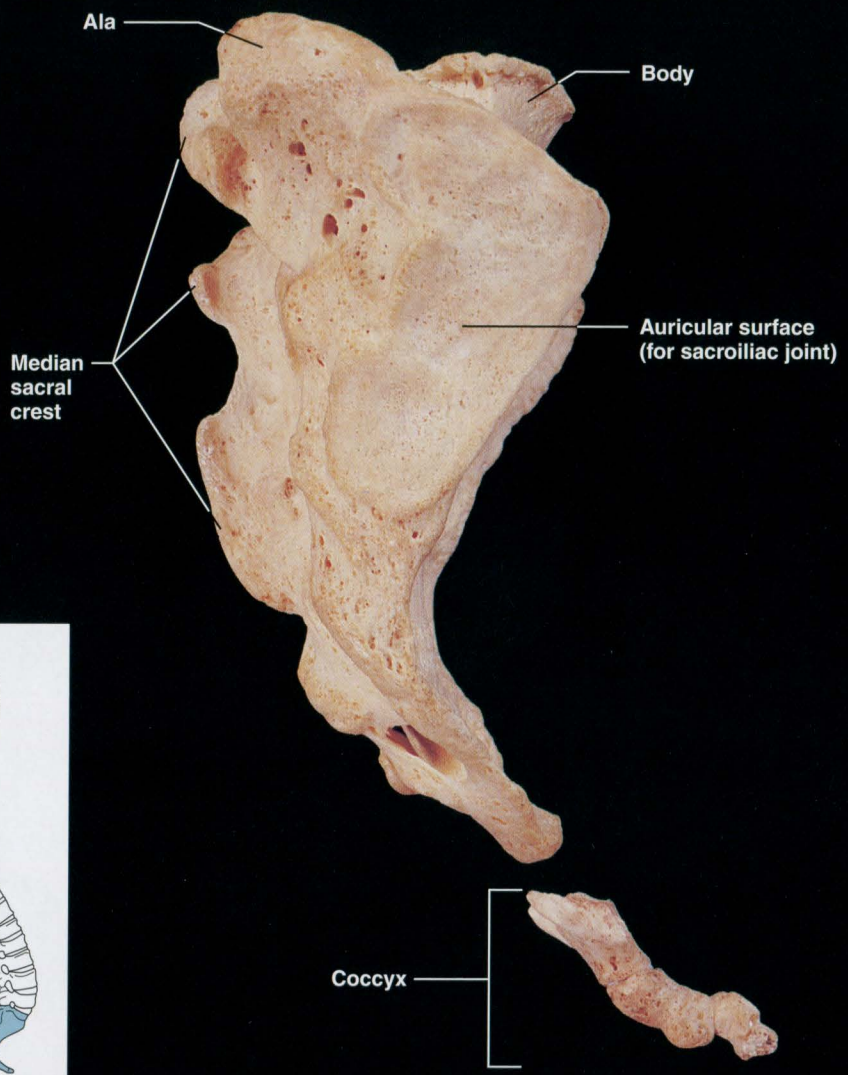


(d) second lumbar vertebra, right lateral view

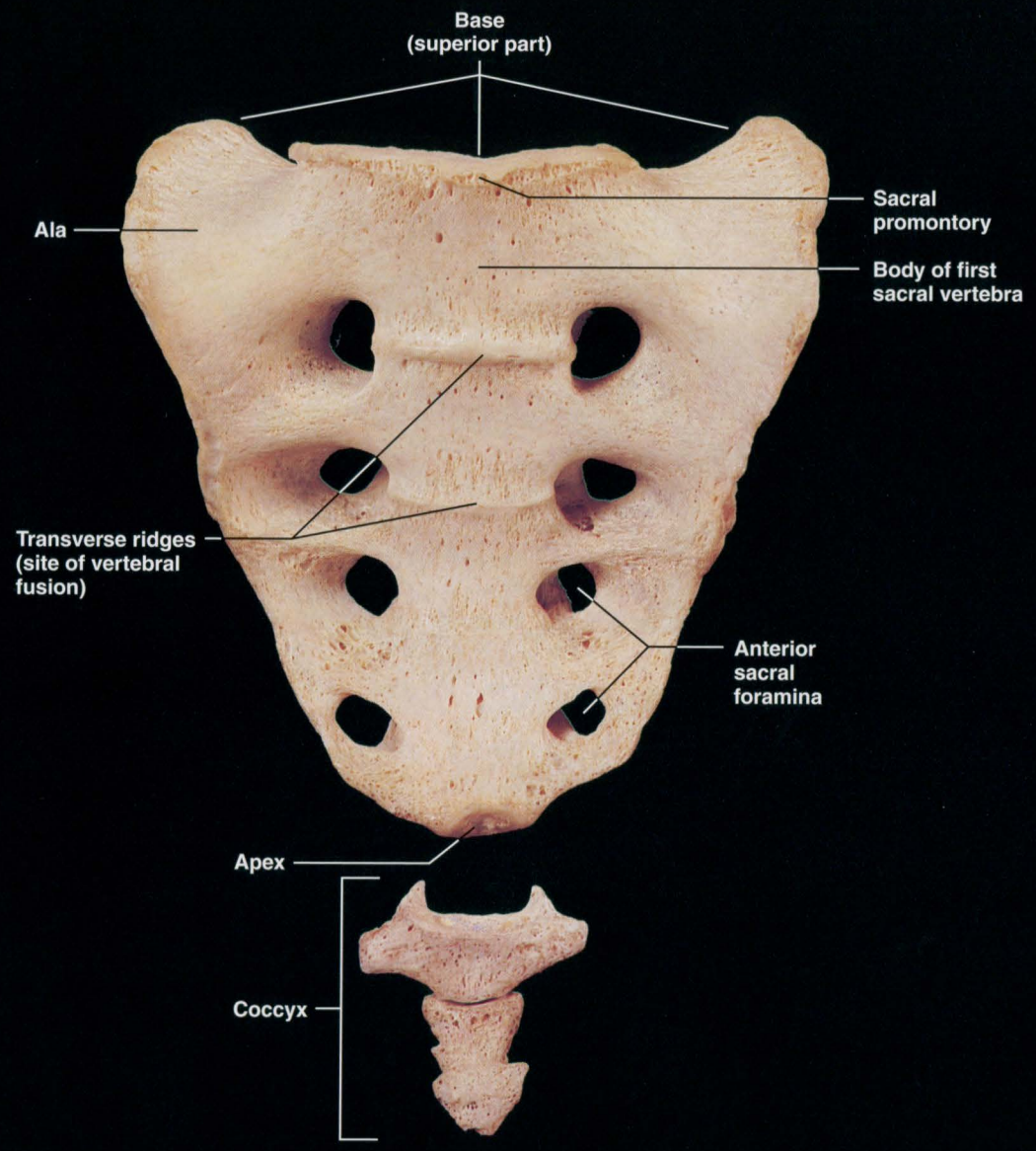
Figure 21 Lumbar vertebrae.



(a) posterior view

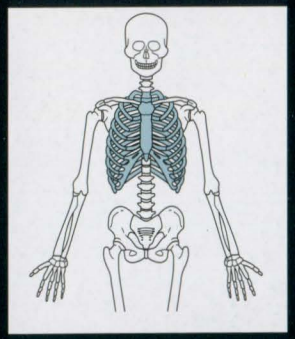


(b) right lateral view



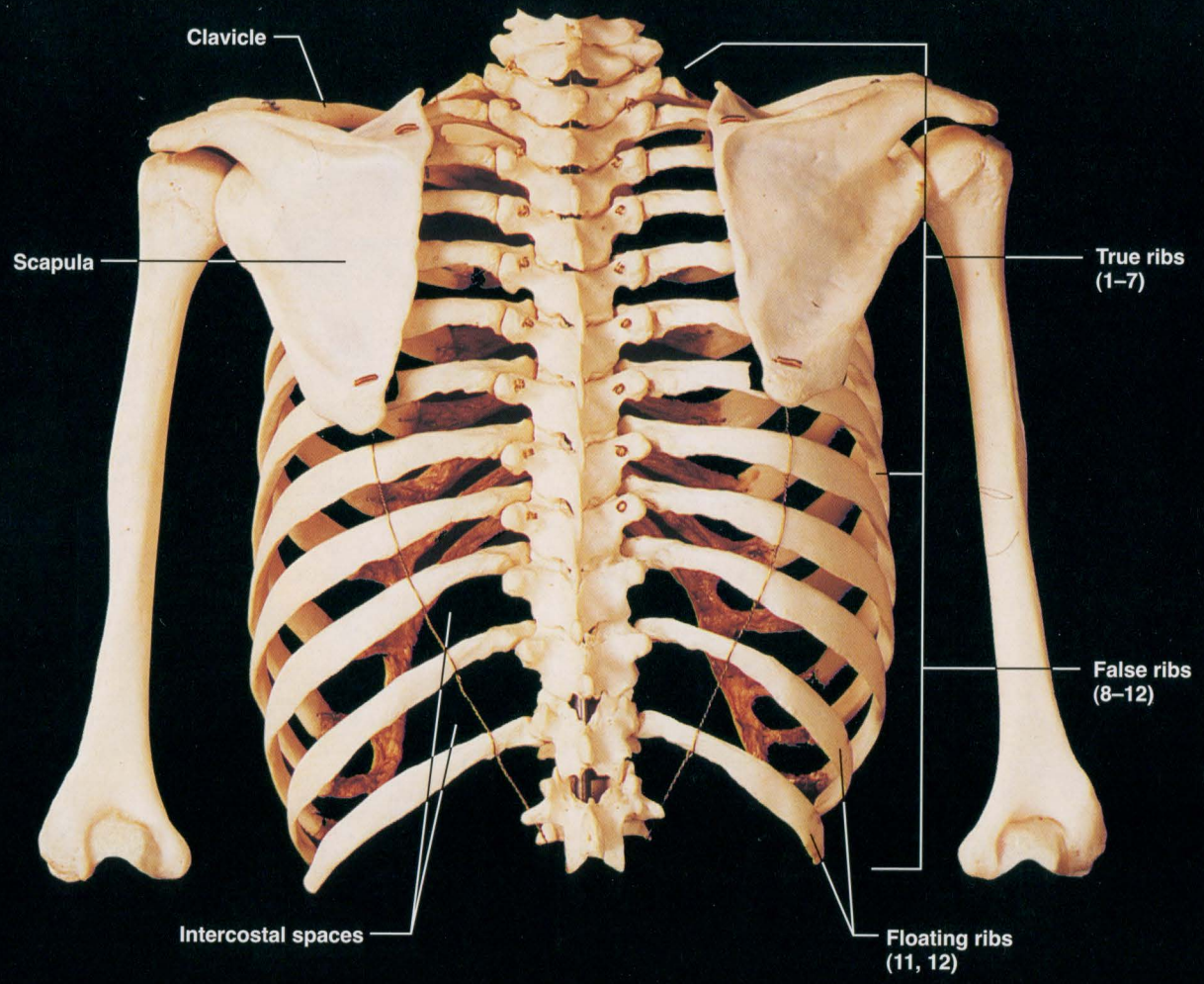
(c) anterior view

Figure 22 Sacrum and coccyx.



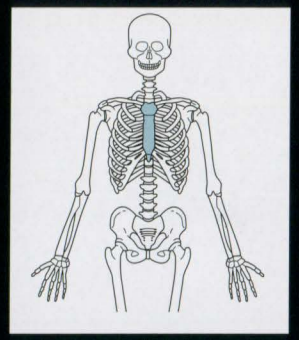
Jugular notch
Clavicular notch
Clavicle
Manubrium
Sternal angle
Body
Xiphisternal joint
Xiphoid process
Sternum
Intercostal spaces
Costal cartilage
Costal margin
True ribs (1–7)
False ribs (8–12)
Floating ribs (11, 12)
L_1

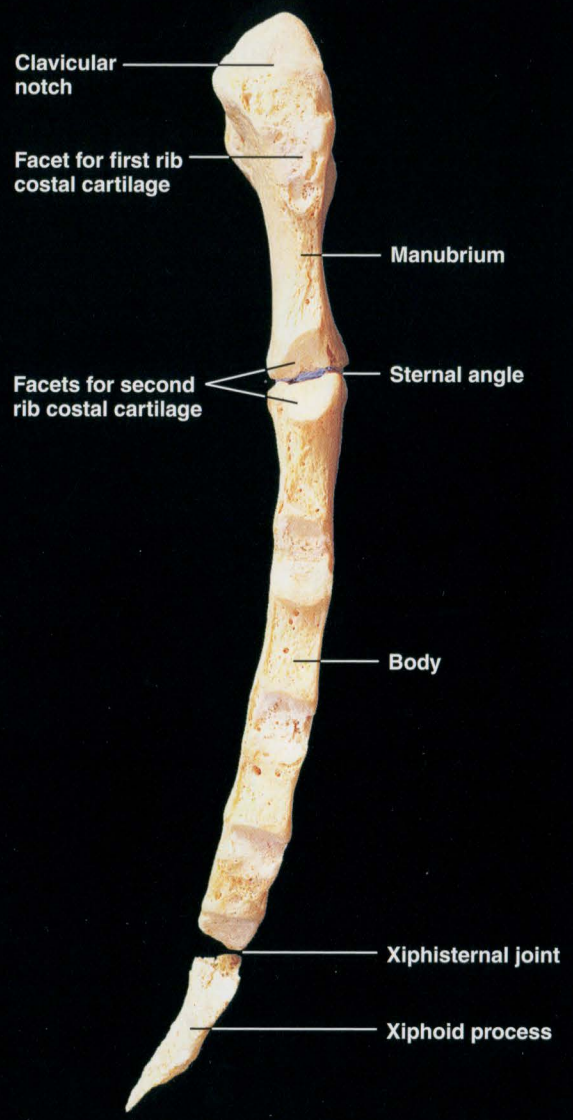
(a) anterior view



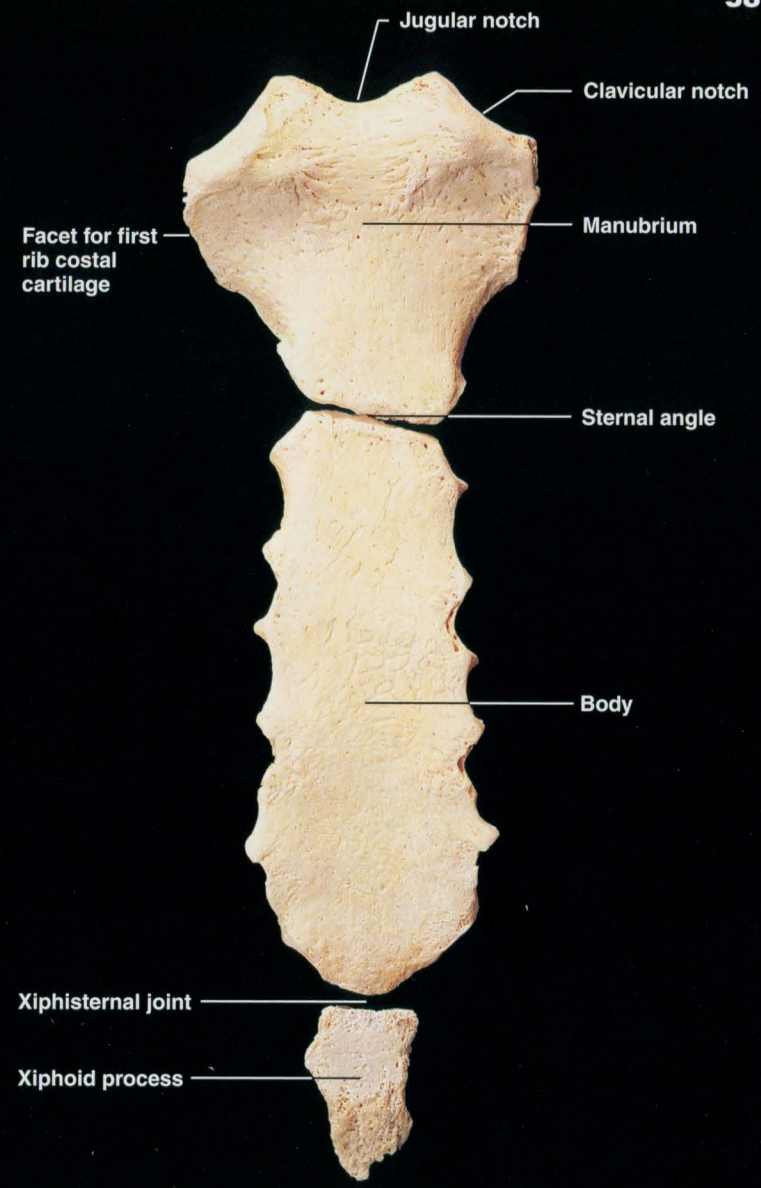
(b) posterior view

Figure 23 Thoracic cage

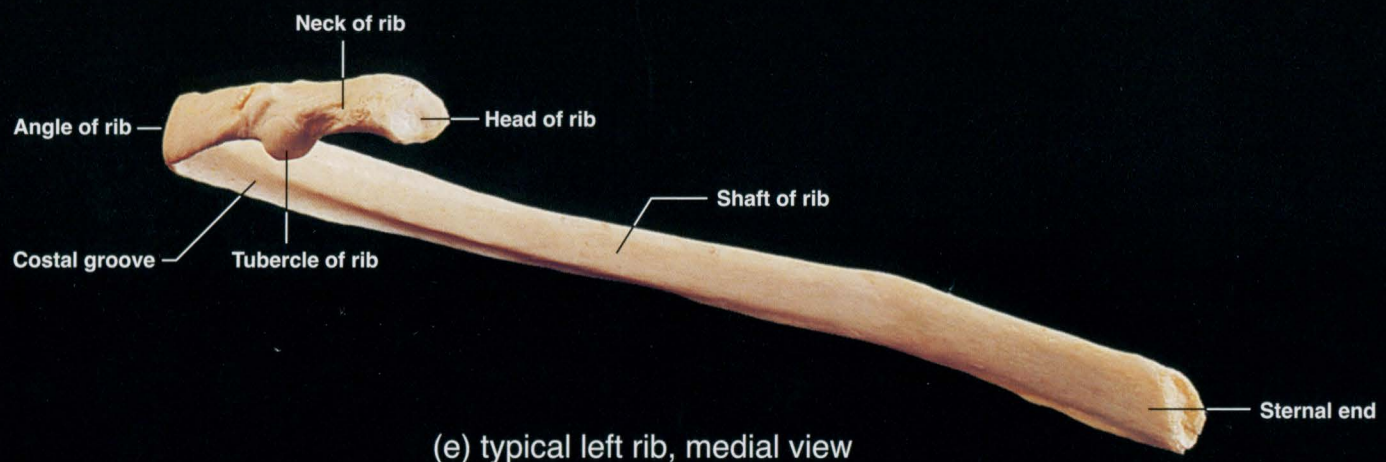




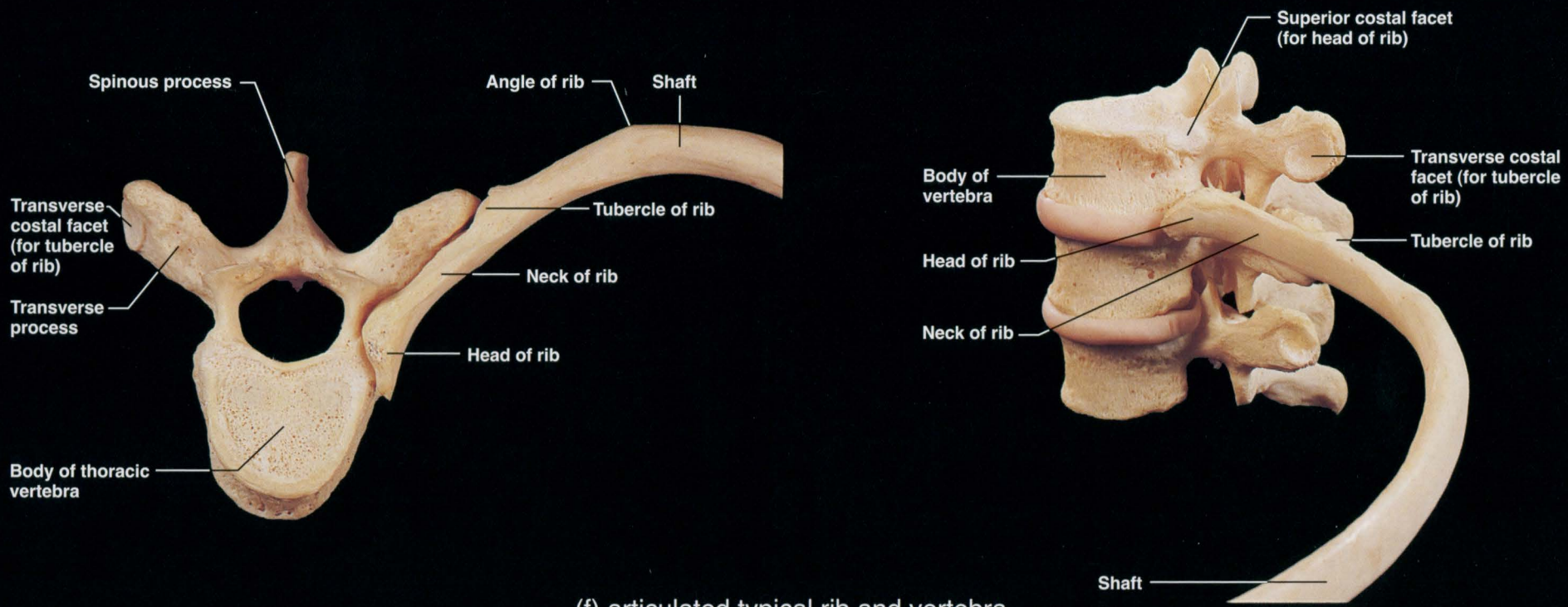
(c) sternum, right lateral view



(d) sternum, anterior view

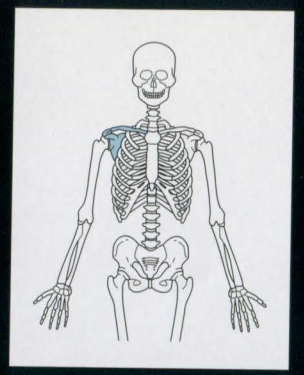


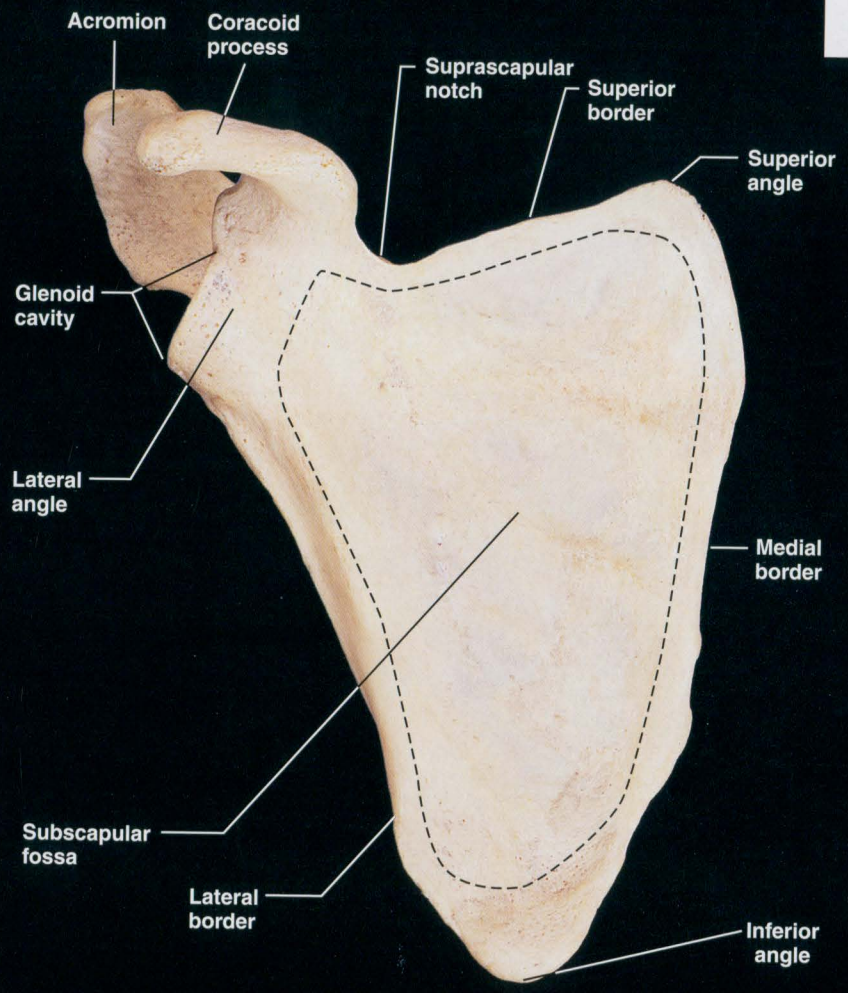
(e) typical left rib, medical view



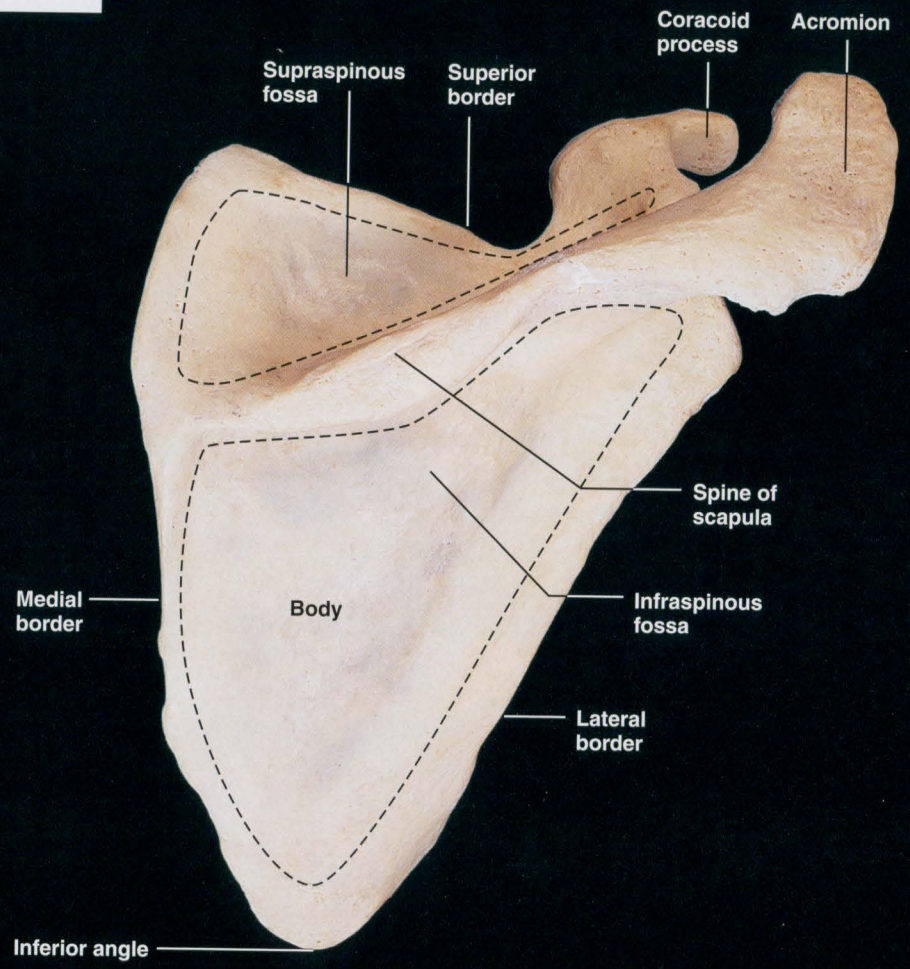
(f) articulated typical rib and vertebra, superior view (left); lateral view (right)

Figure 23 Thoracic cage (continued).

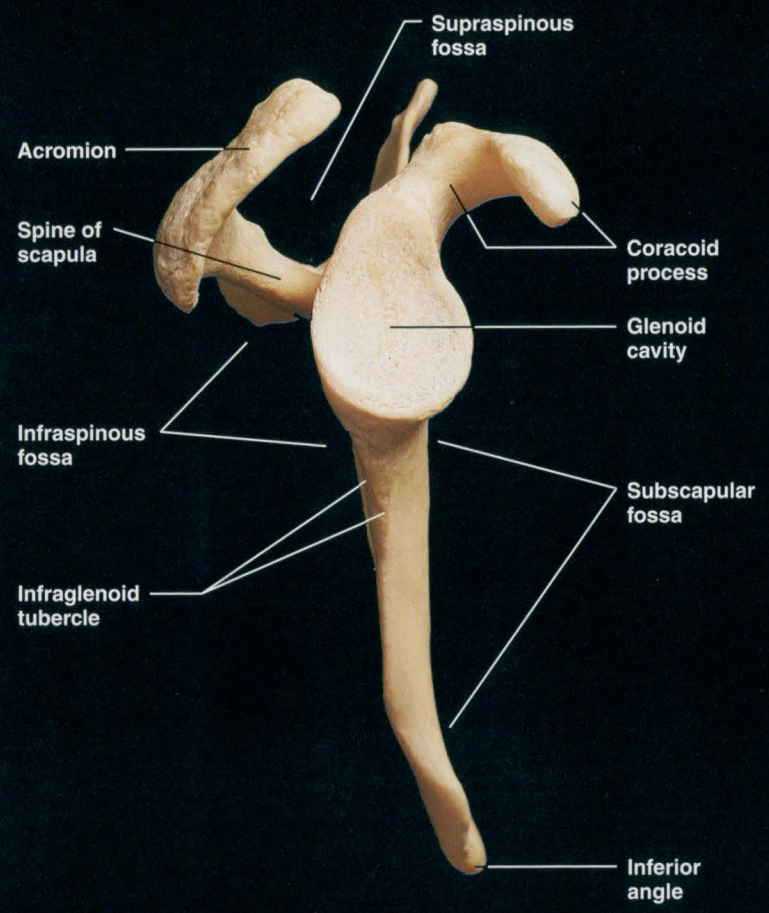




(a) right scapula, anterior view

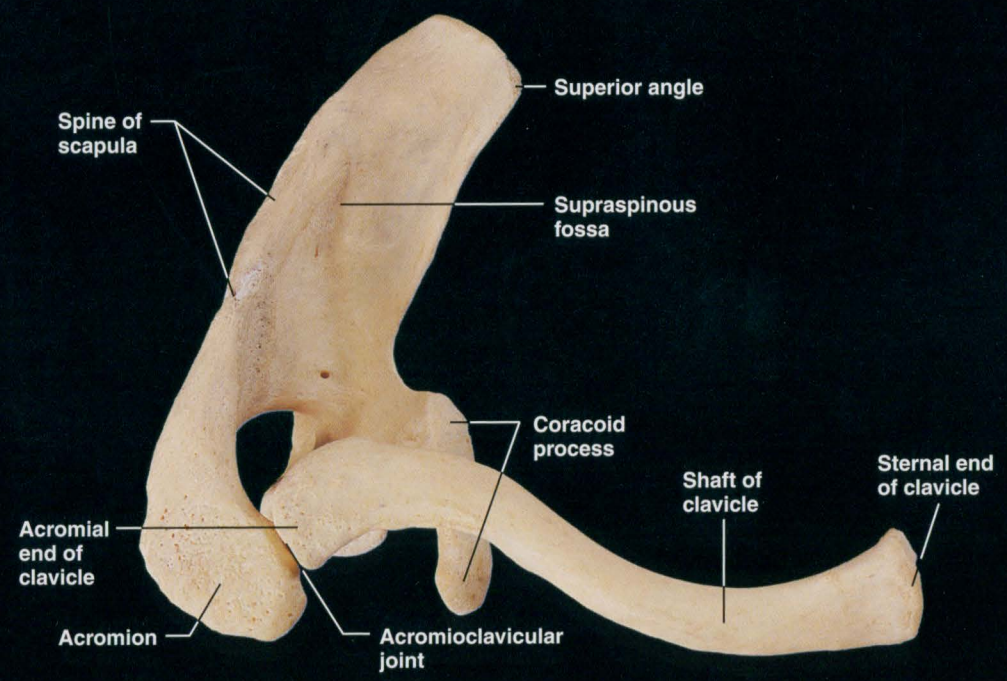


(b) right scapula, posterior view



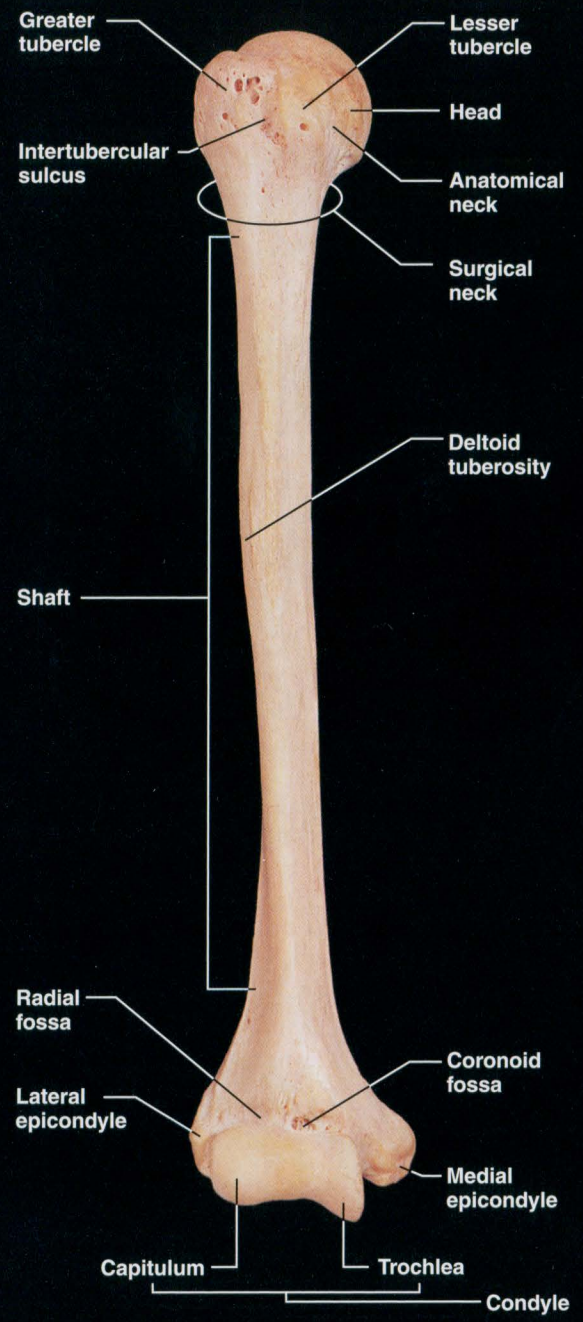
(c) right scapula, lateral aspect

(d) right clavicle, inferior view (top) and superior view (bottom)

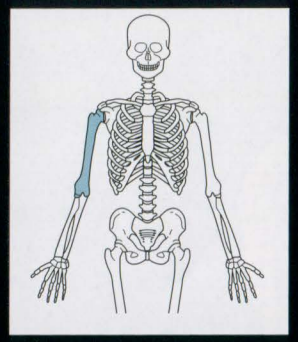


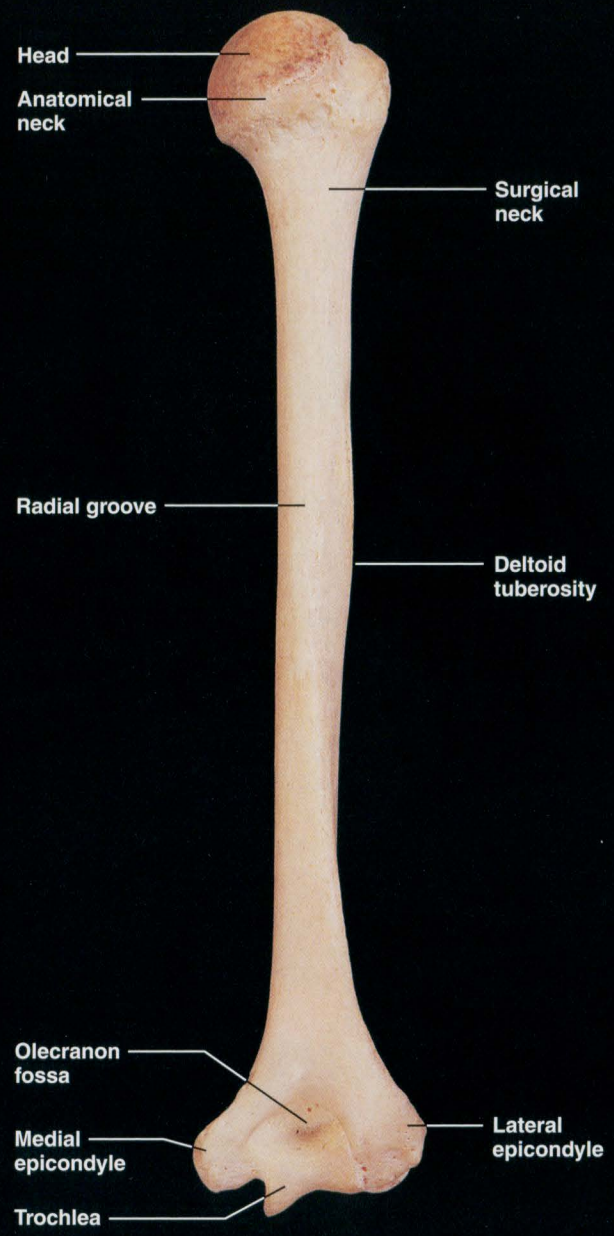
(e) articulated right clavicle and scapula, superior view

Figure 24 Scapula and clavicle.

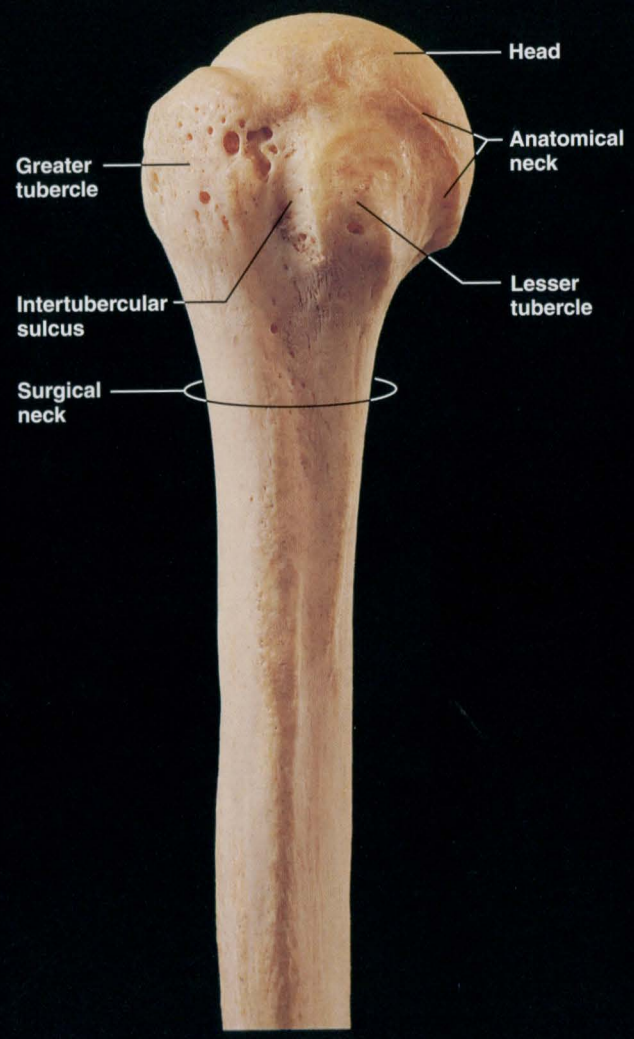


(a) anterior view

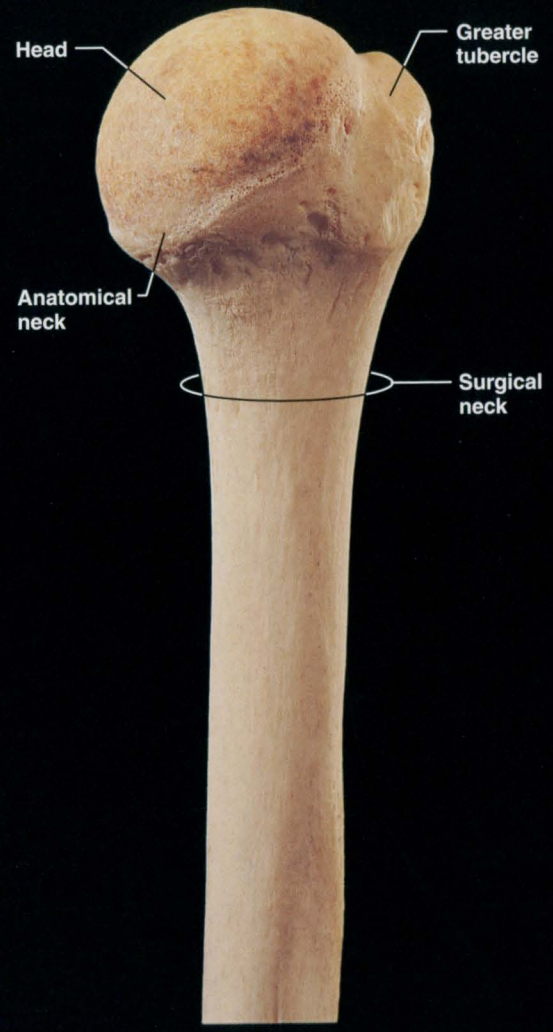




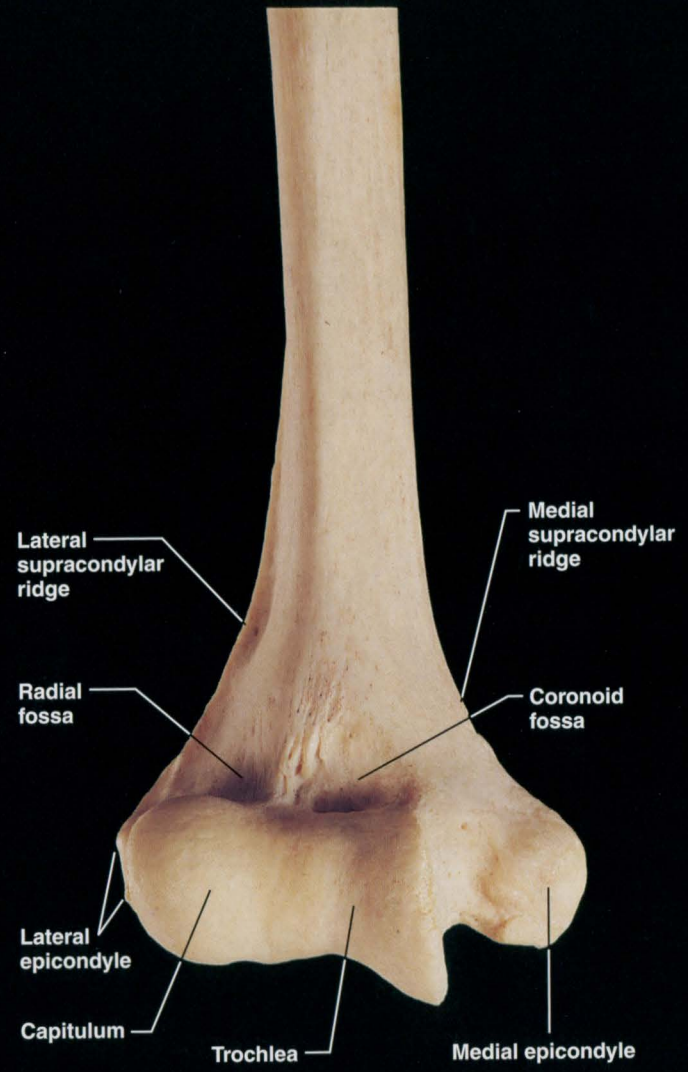
(b) posterior view



(c) proximal end, anterior view

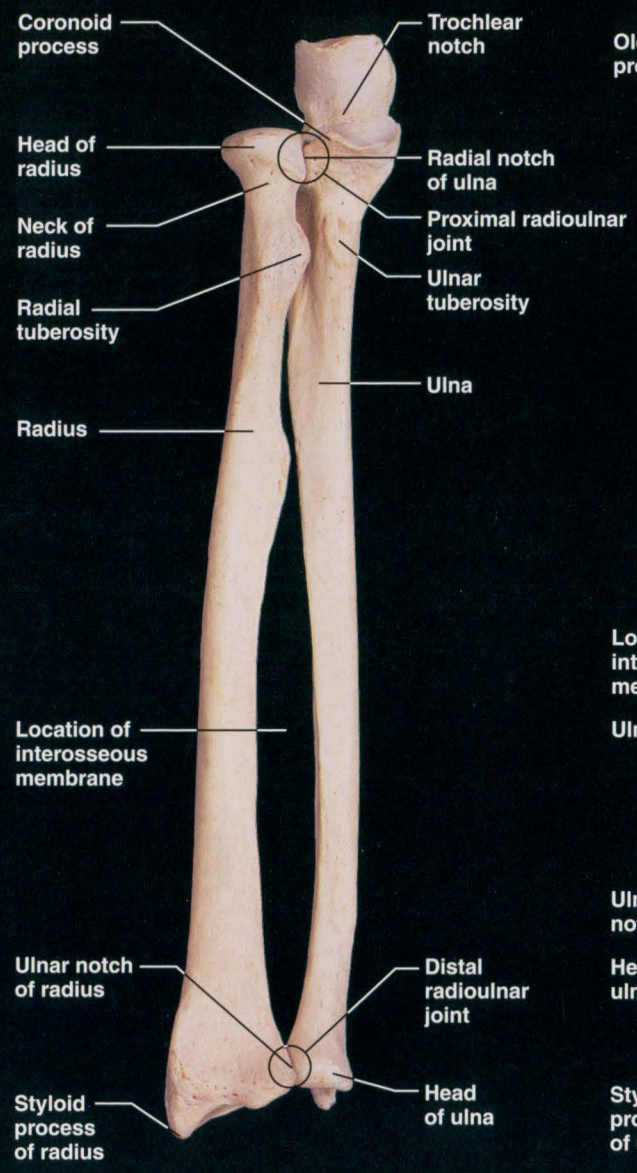


(d) proximal end, posterior view

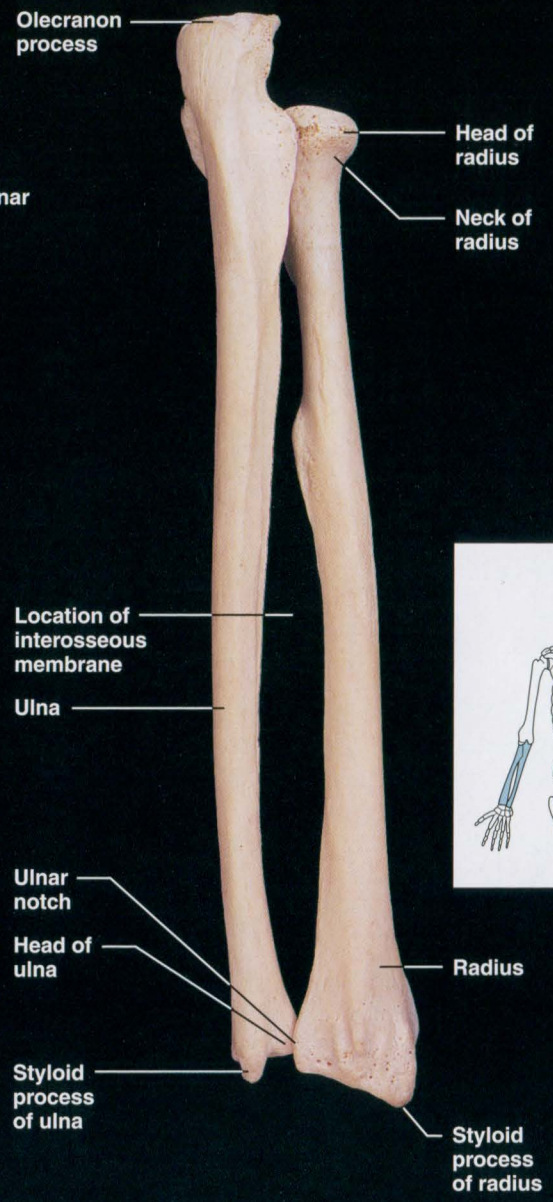


(e) distal end, anterior view

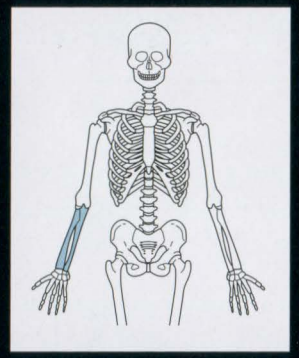
Figure 25 Right humerus.

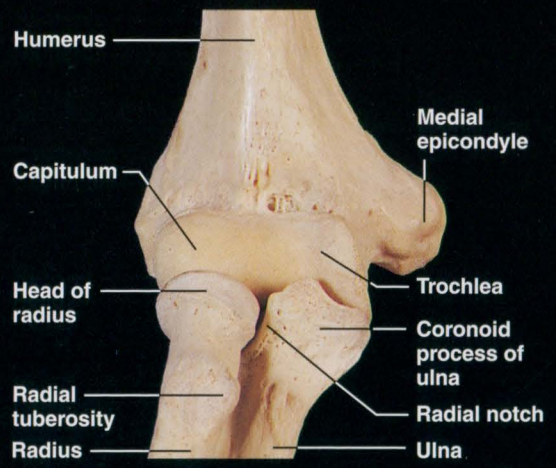


(a) articulated right ulna and radius, anterior view

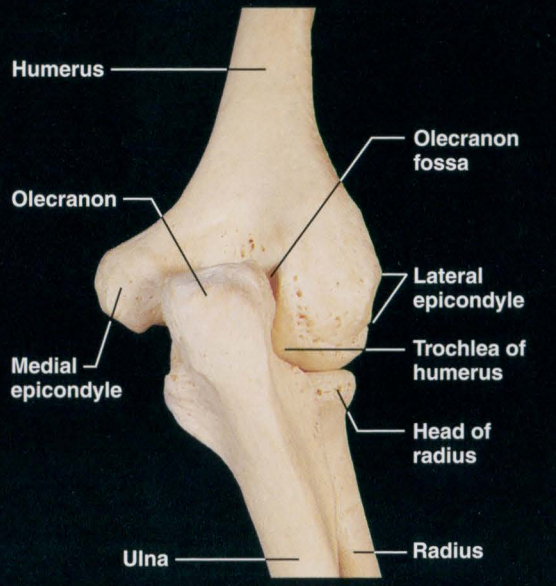


(b) articulated right ulna and radius, posterior view

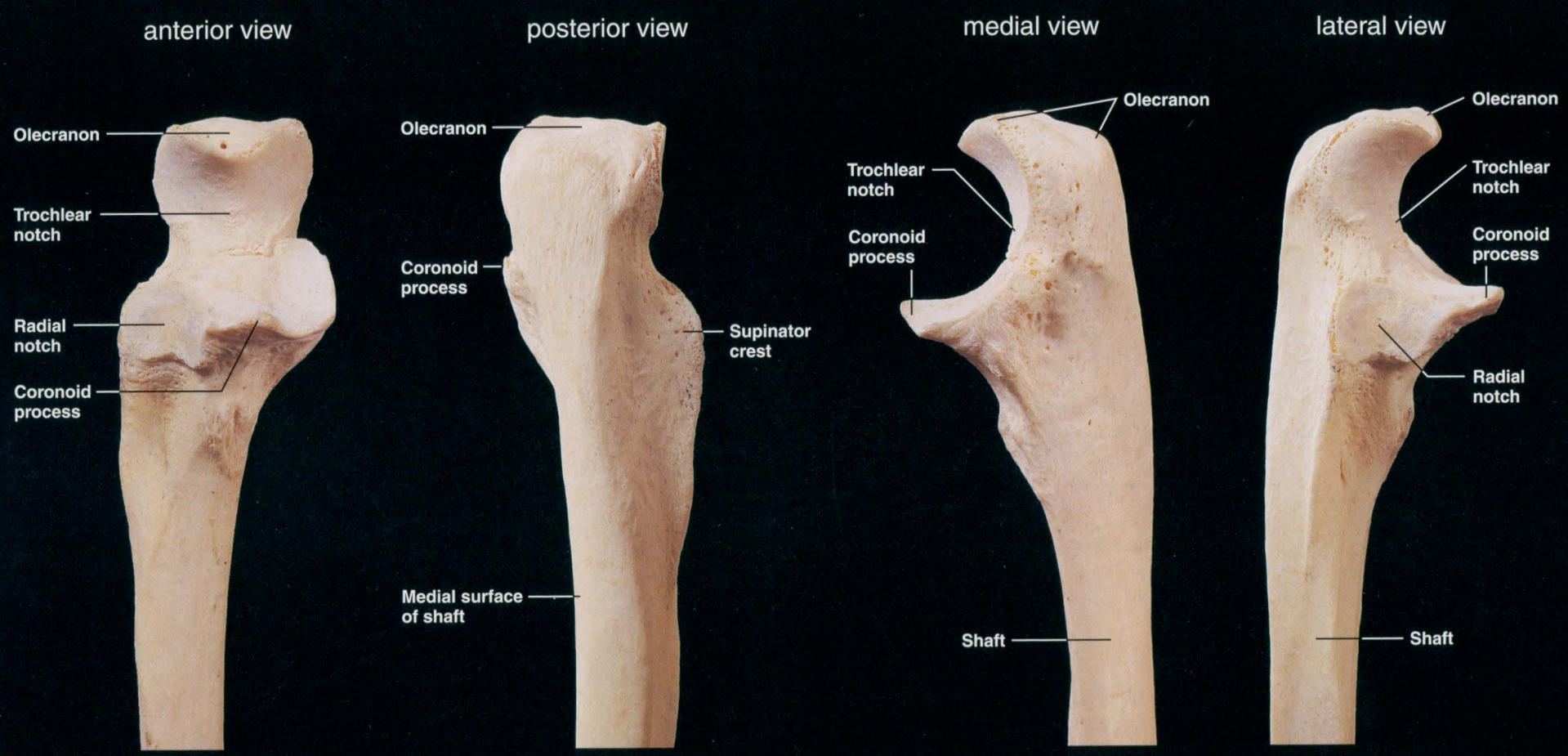




(c) articulated right humerus, ulna, and radius, anterior view



(d) articulated right humerus, ulna, and radius, posterior view



(e) right ulna, proximal end

Figure 26 Right ulna and radius.

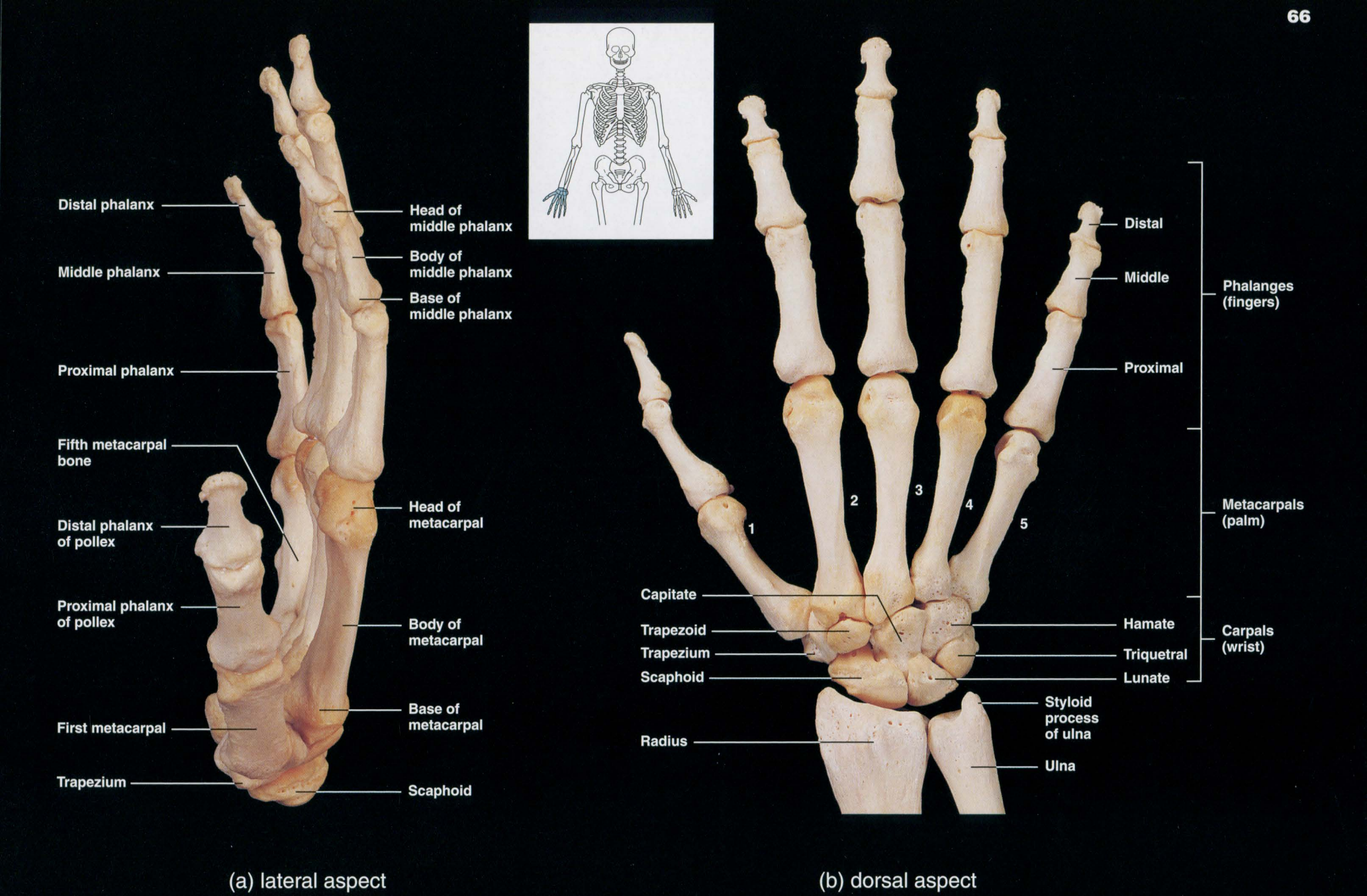
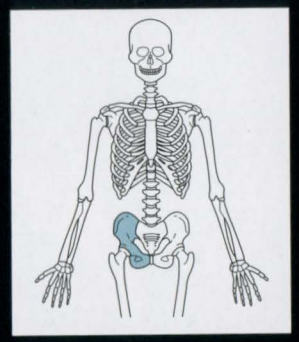
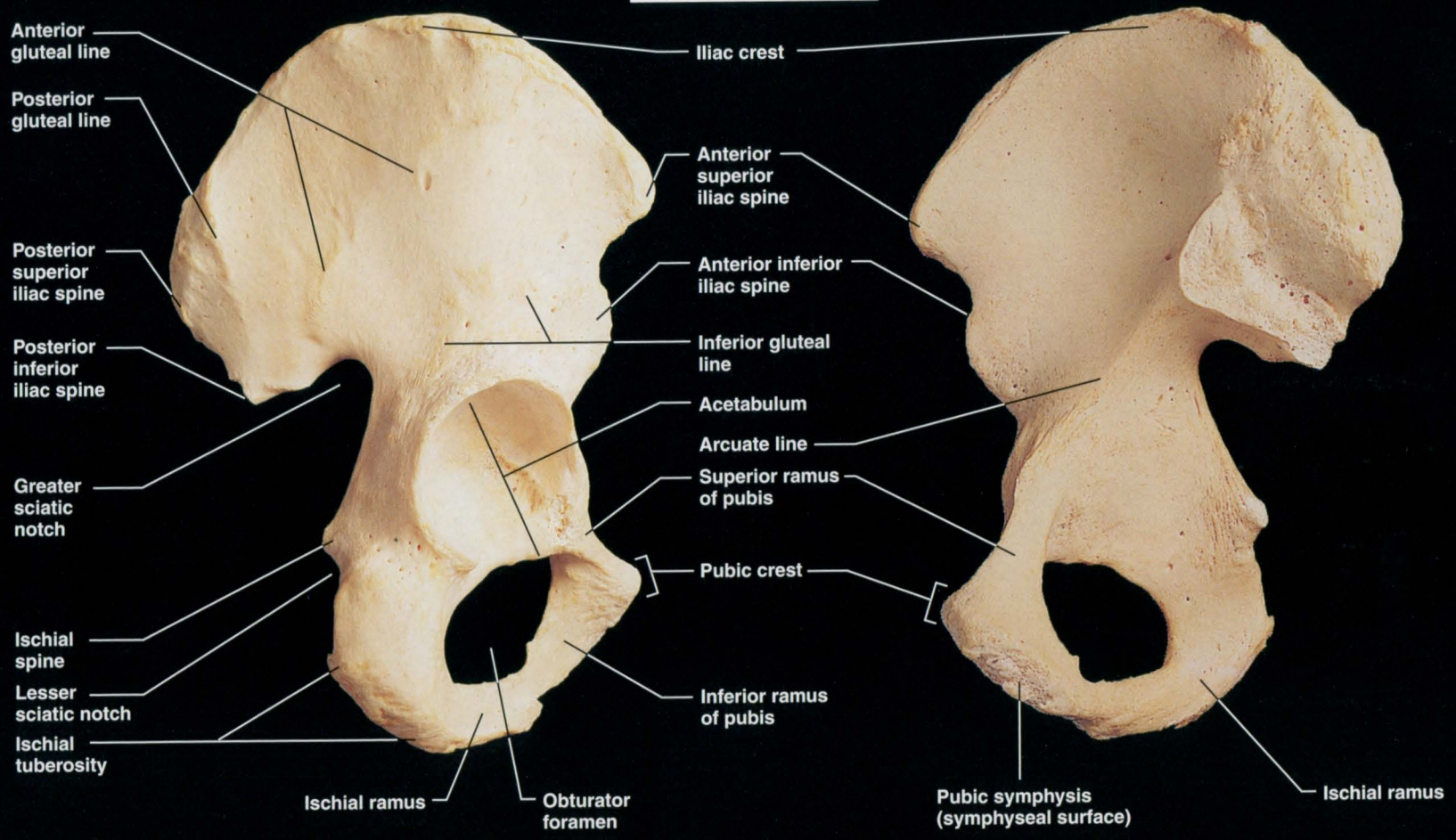


Figure 27 Bones of the right hand.

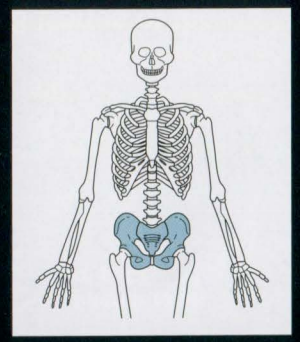


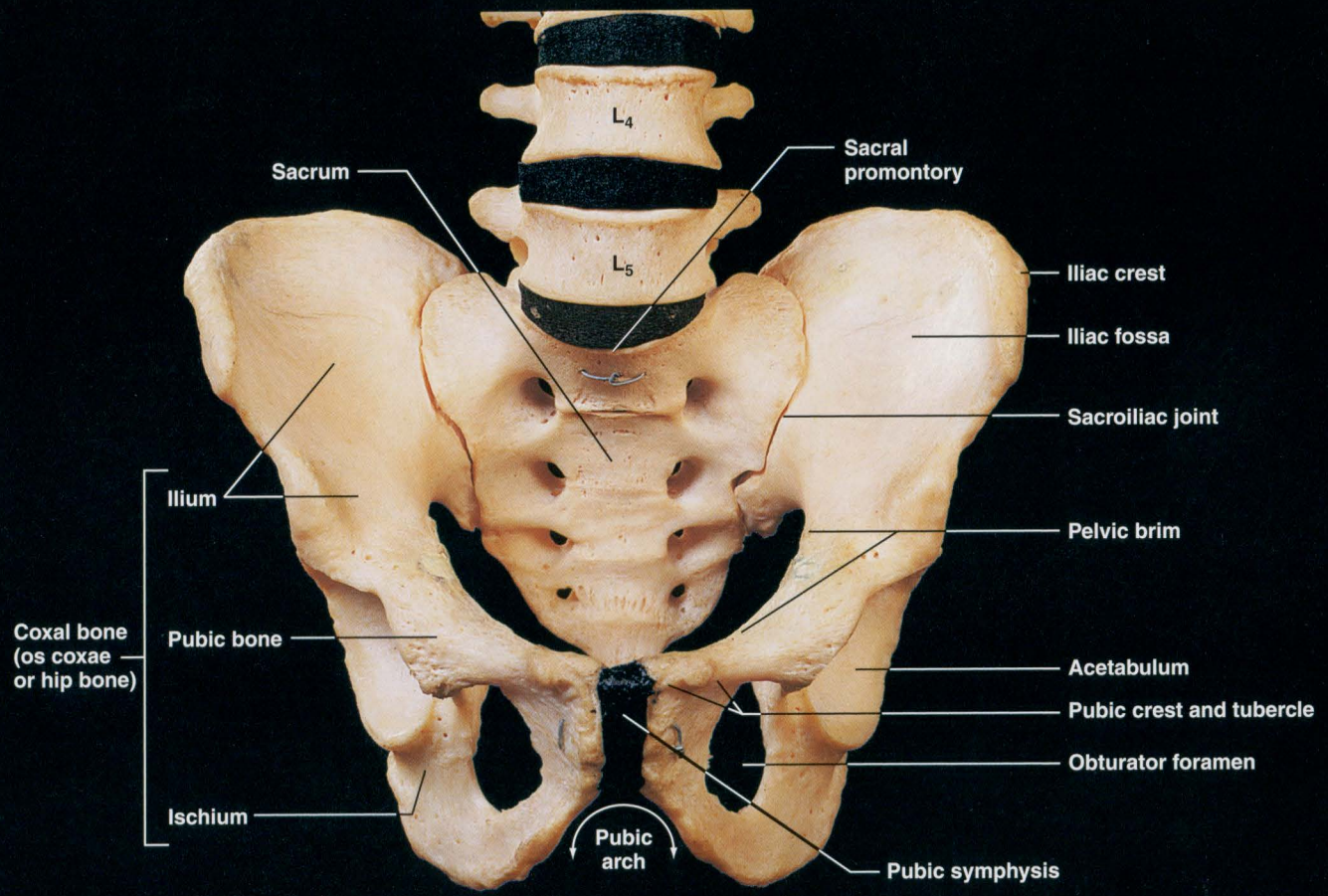


(a) right hip (coxal) bone, lateral view

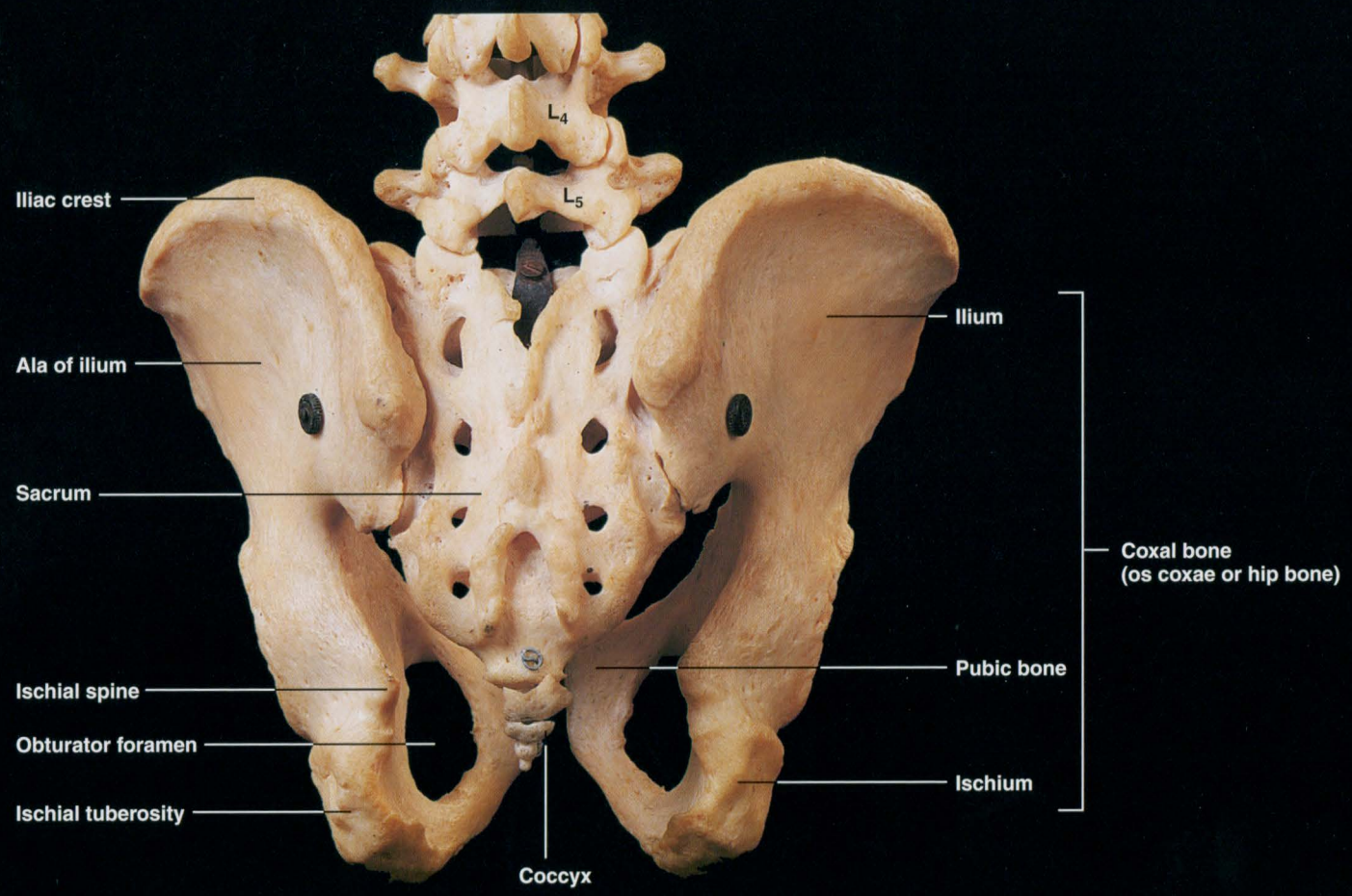
(b) right hip (coxal) bone, medial view

Figure 28 Bones of the male pelvis.



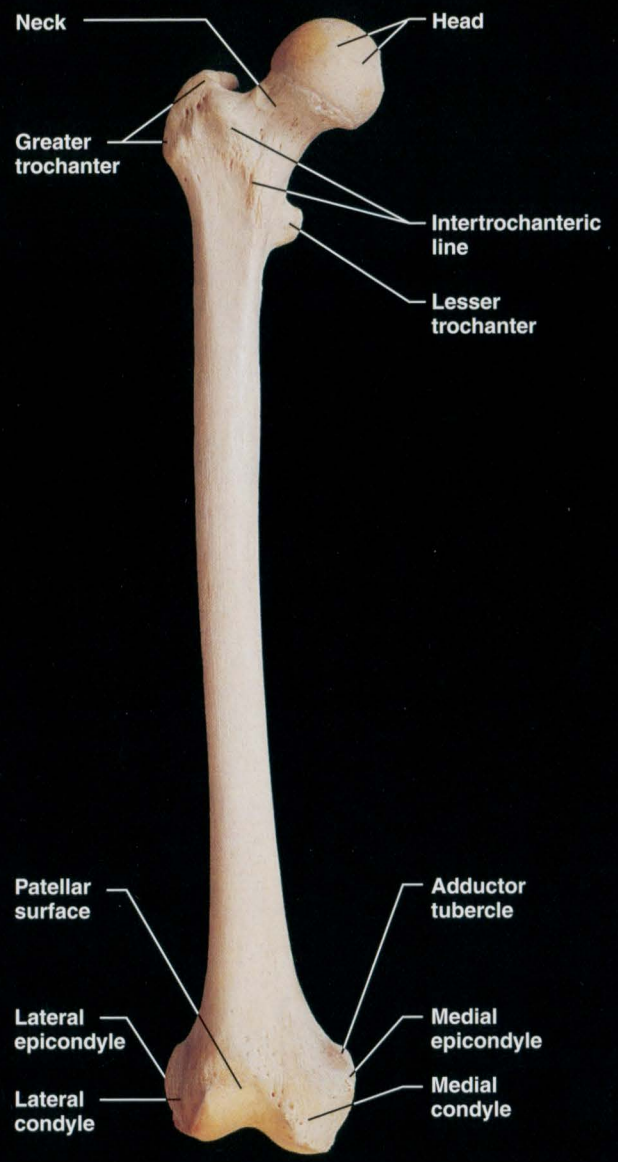


(c) articulated male pelvis, anterior view

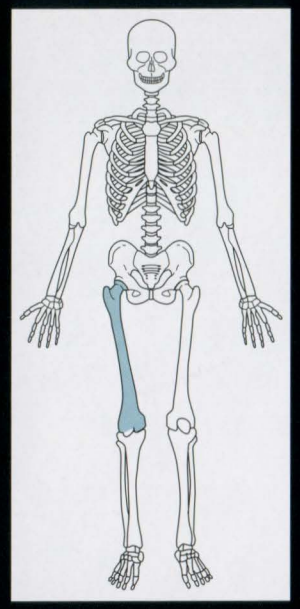


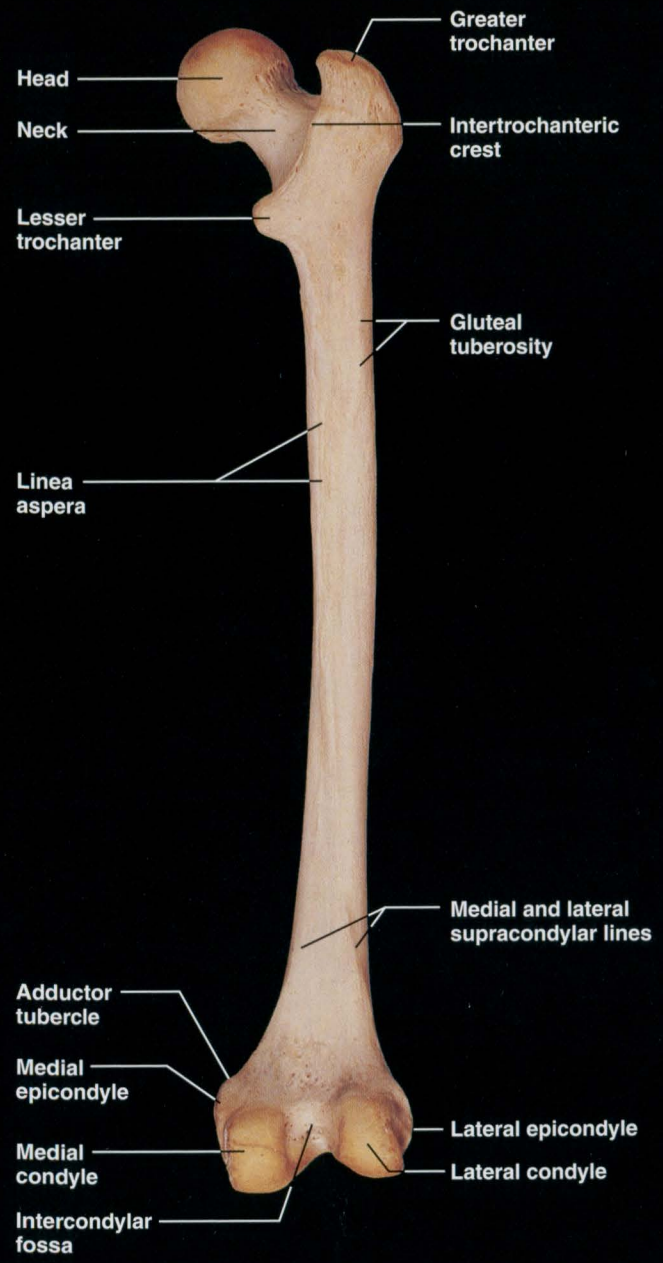
(d) articulated male pelvis, posterior view

Figure 28 Bones of the male pelvis (continued).

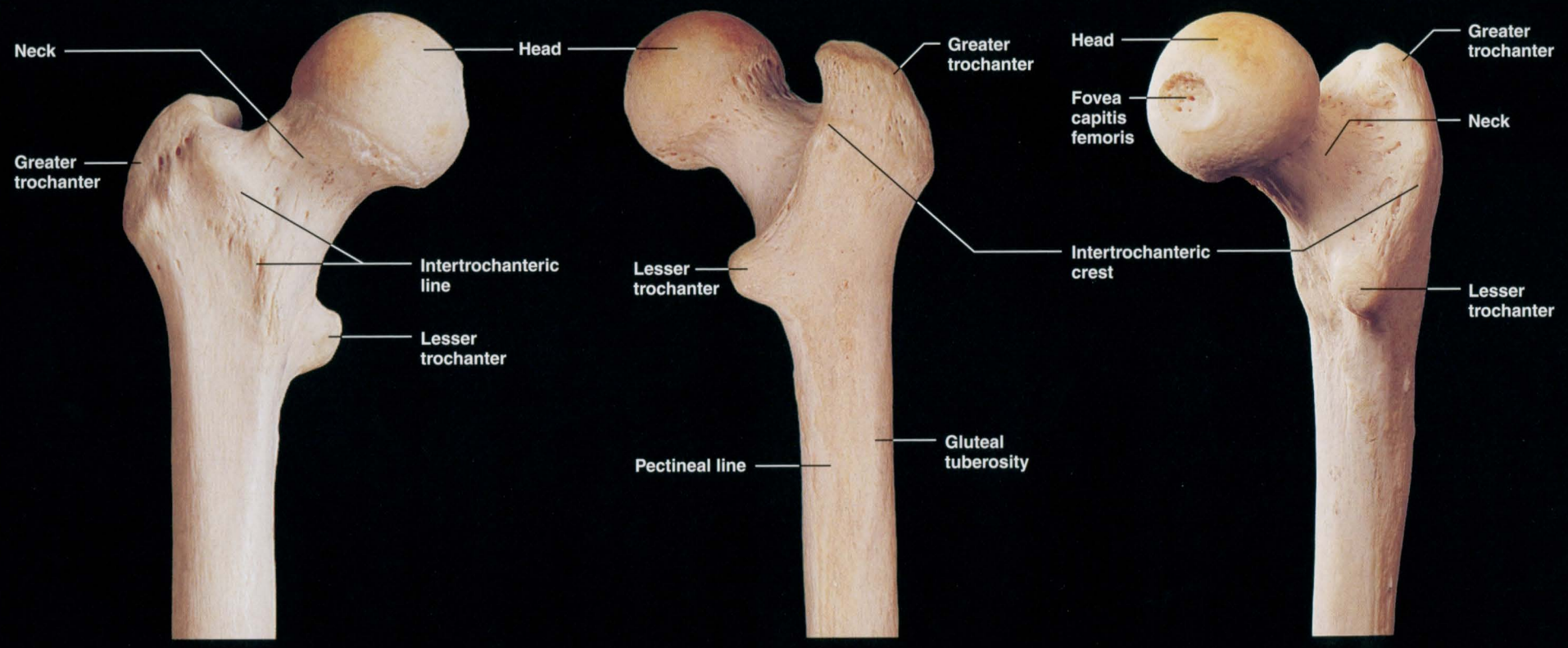


(a) anterior view





(b) posterior view

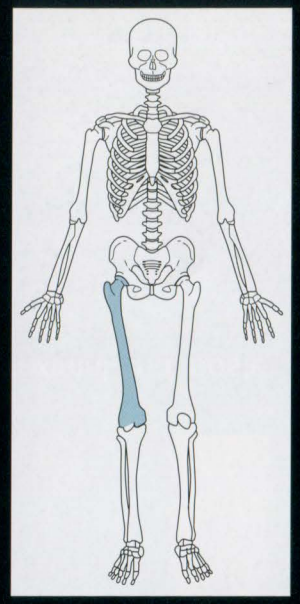


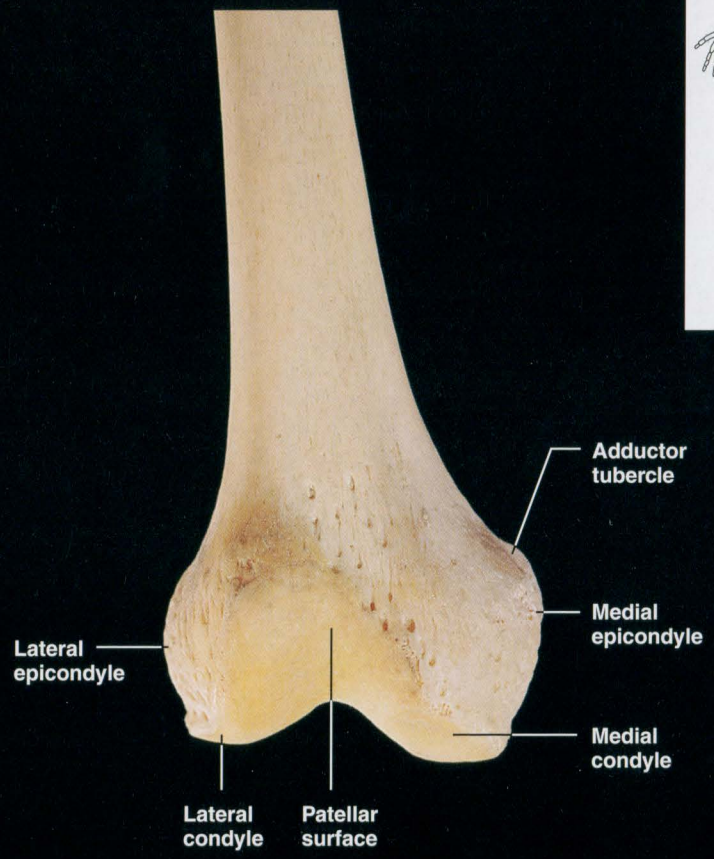
(c) proximal end, anterior view

(d) proximal end, posterior view

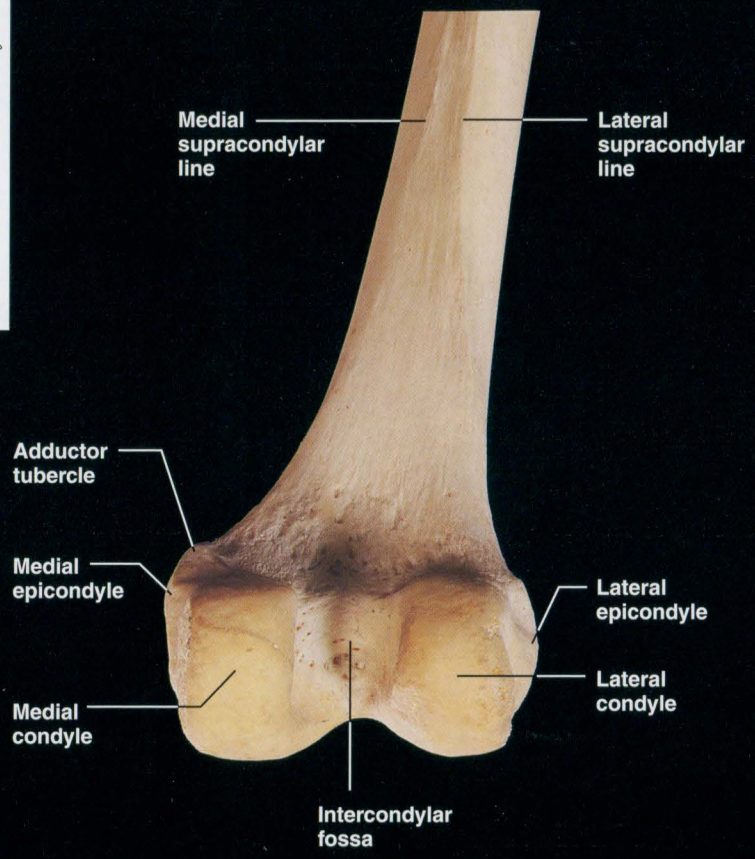
(e) proximal end, medial view

Figure 29 Right femur.

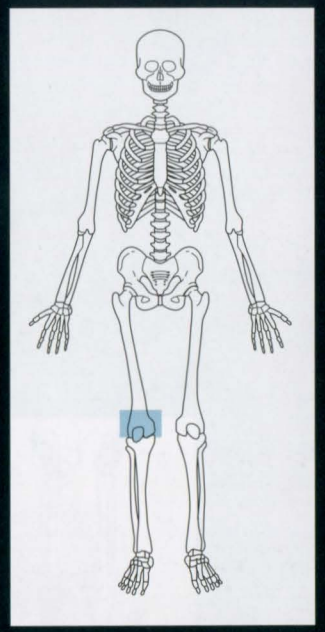


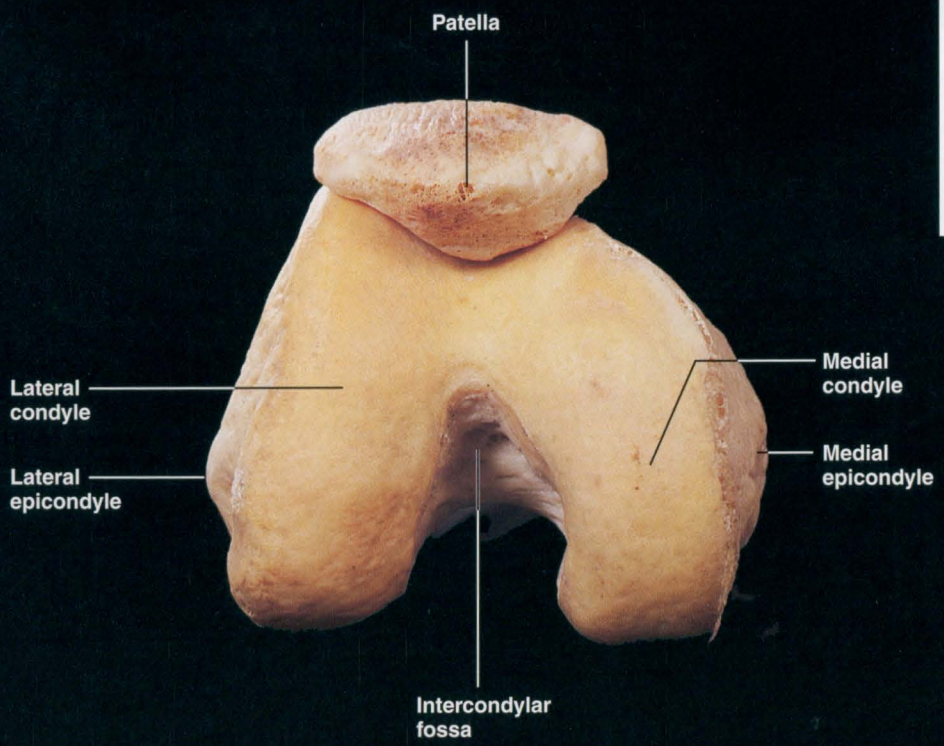


(f) distal end, anterior view



(g) distal end, posterior view

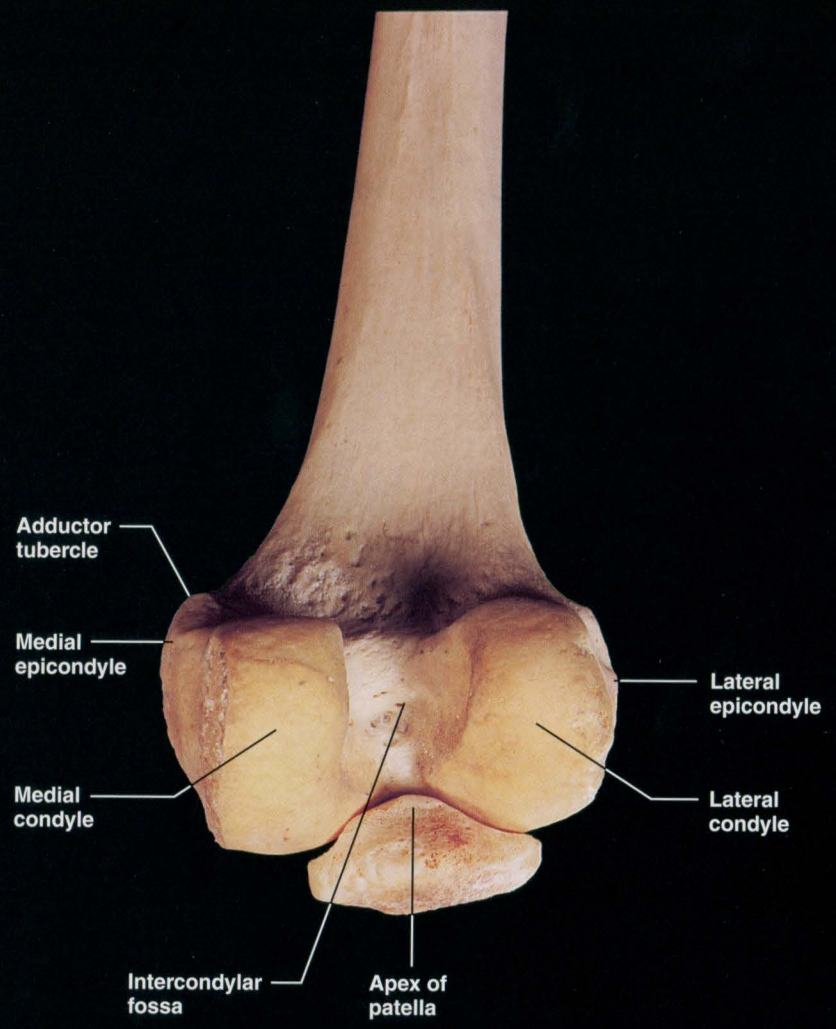




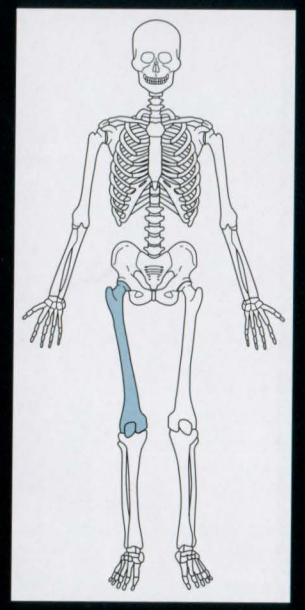
(h) Articulated right femur and patella, inferior view with knee extended

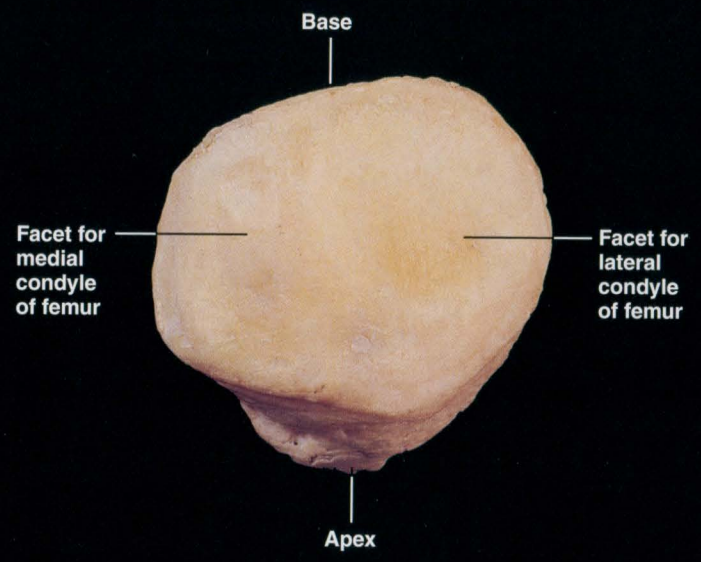
(i) Right patella, anterior surface

Figure 29 Right femur (continued).



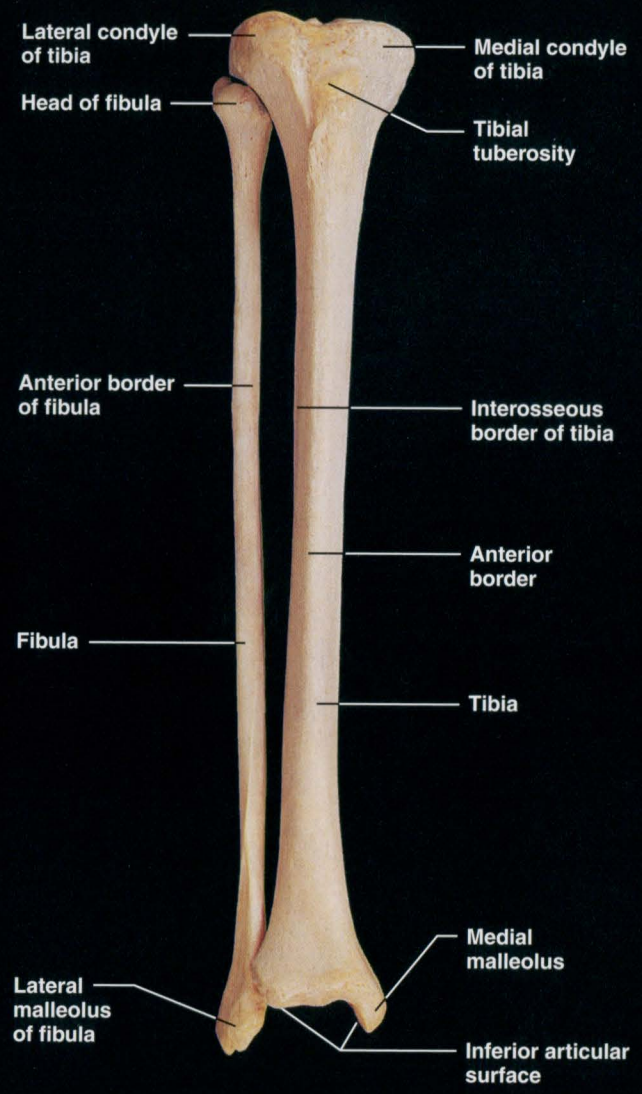
(j) Articulated right femur and patella, inferior posterior view with knee flexed



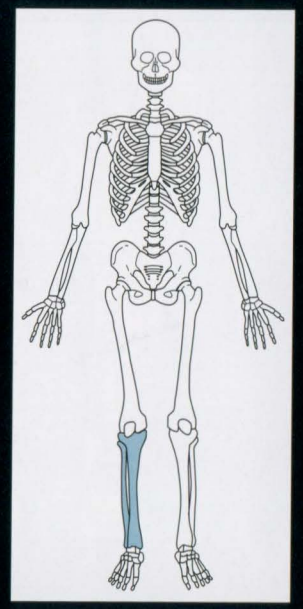


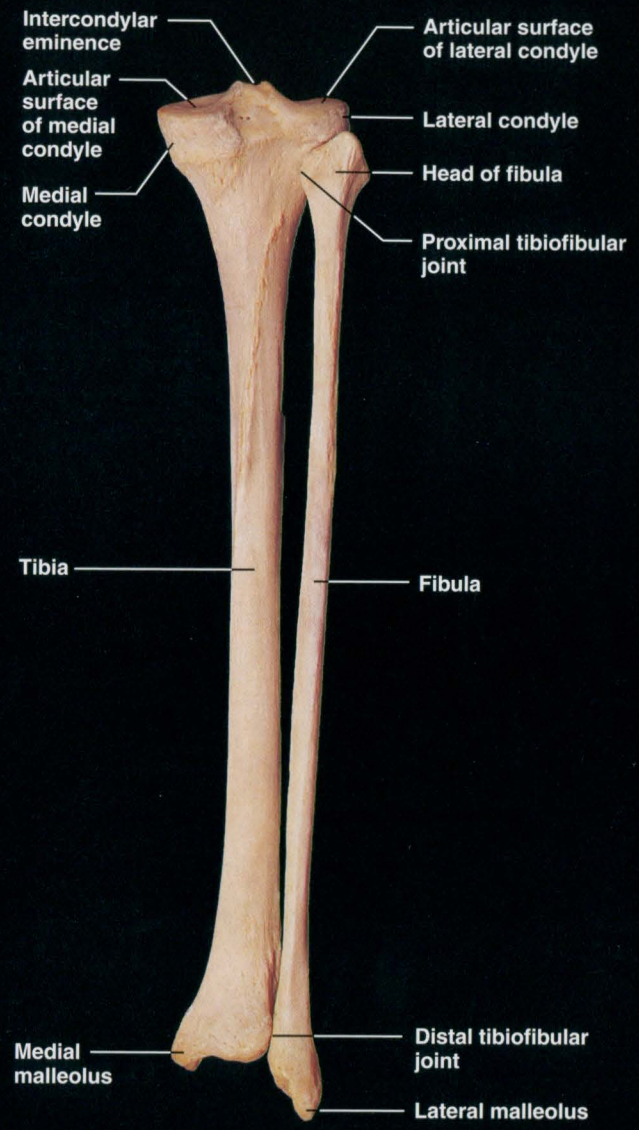
(k) Right patella, posterior surface

Figure 29 Right femur (continued).



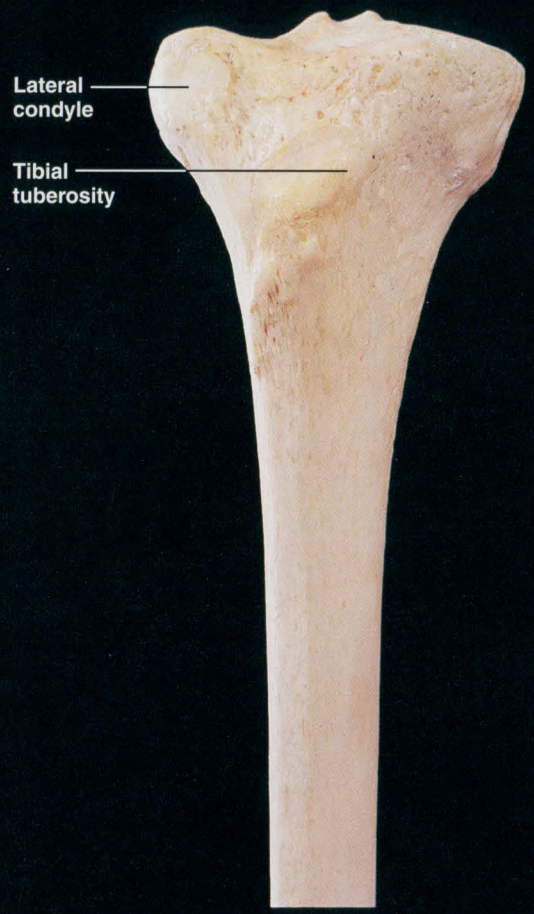
(a) articulated right tibia and fibula, anterior view



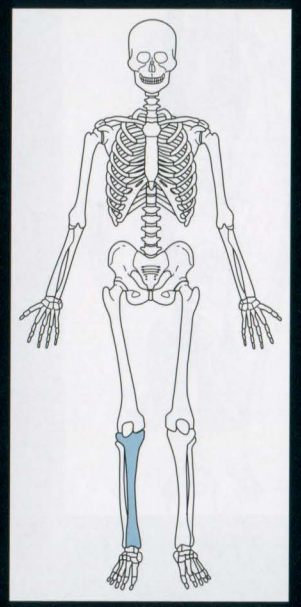


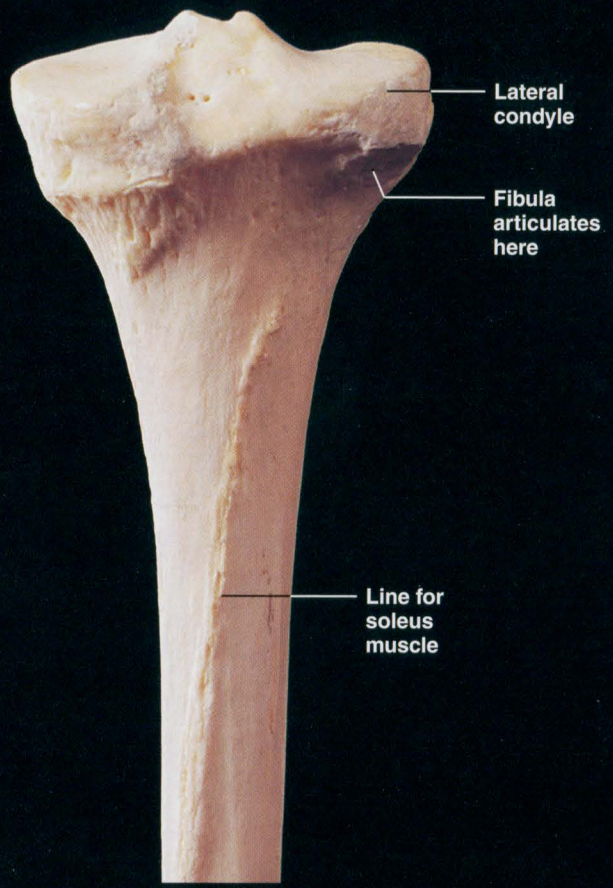
(b) articulated right tibia and fibula, posterior view

Figure 30 Right tibia and fibula.

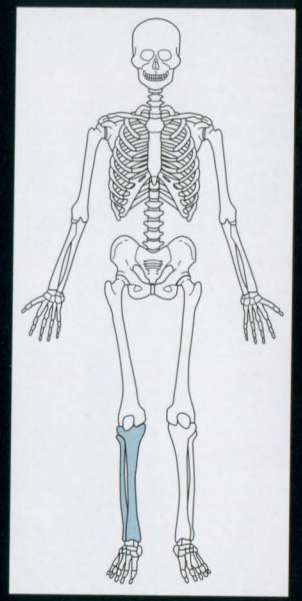


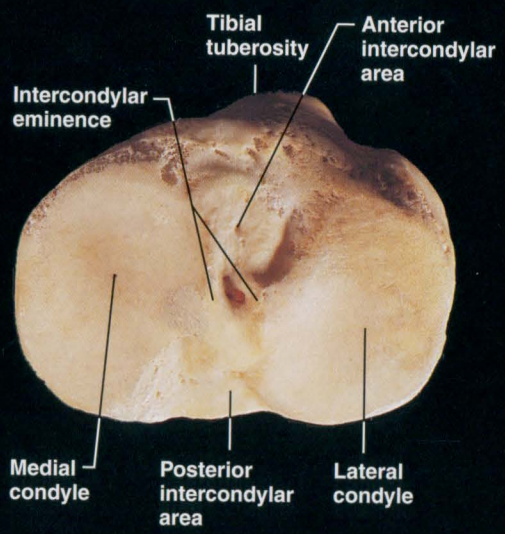
(c) right tibia, proximal end, anterior view



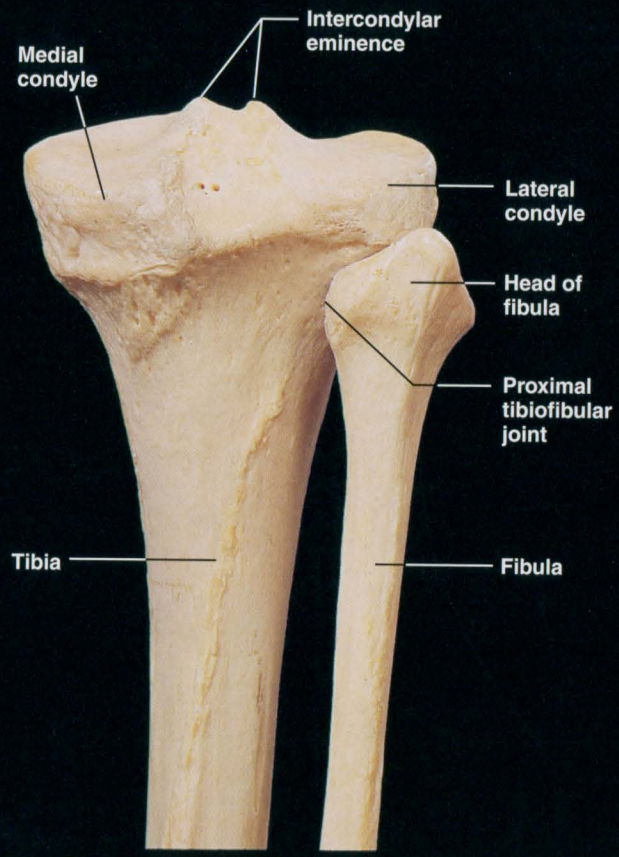


(d) right tibia, proximal end, posterior view

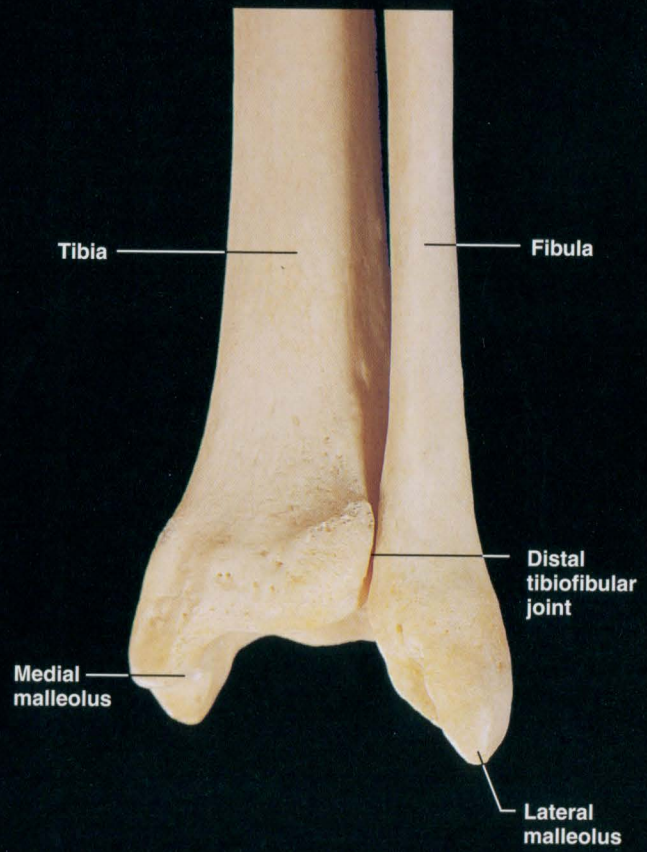




(e) right tibia, proximal end, articular surface

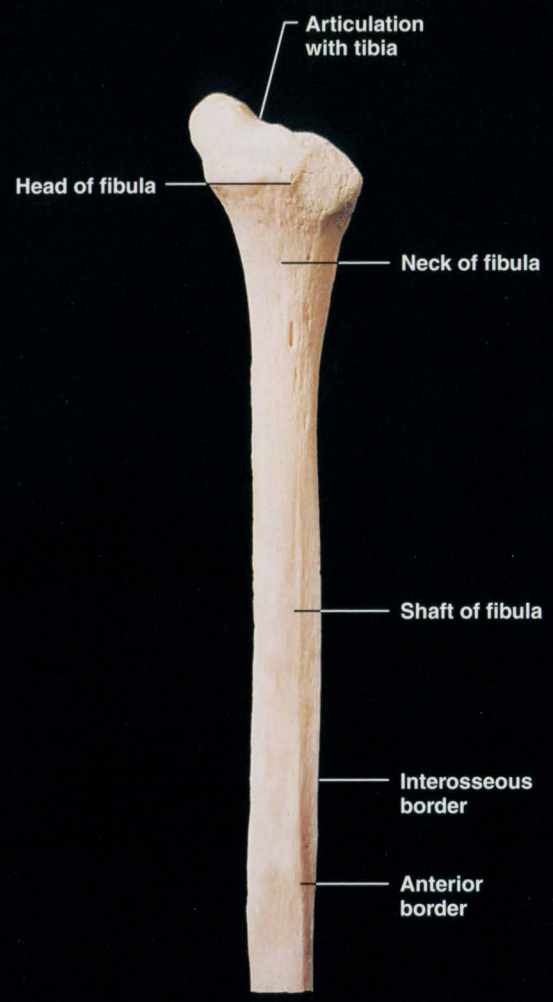


(f) articulated right tibia and fibula, proximal end, posterior view

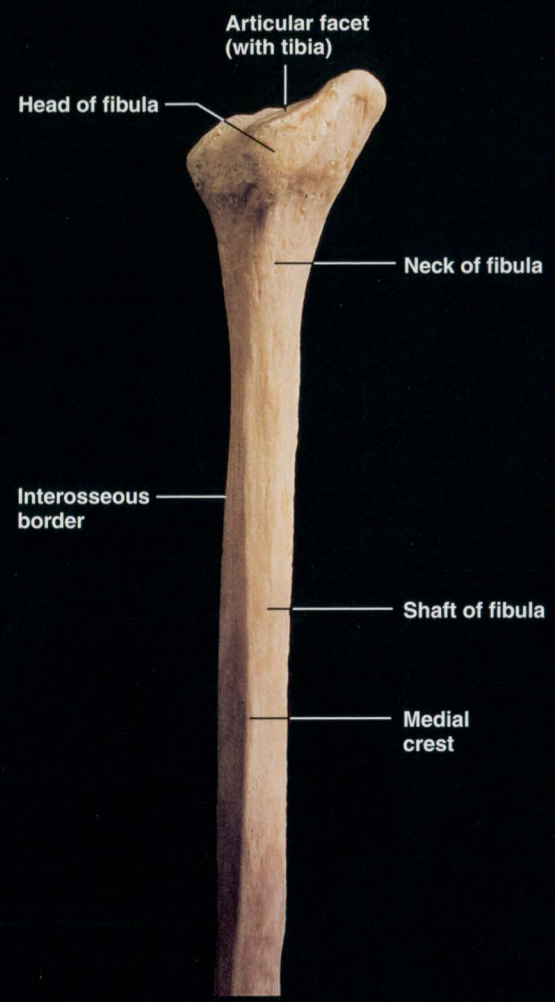


(g) articulated right tibia and fibula, distal end, posterior view

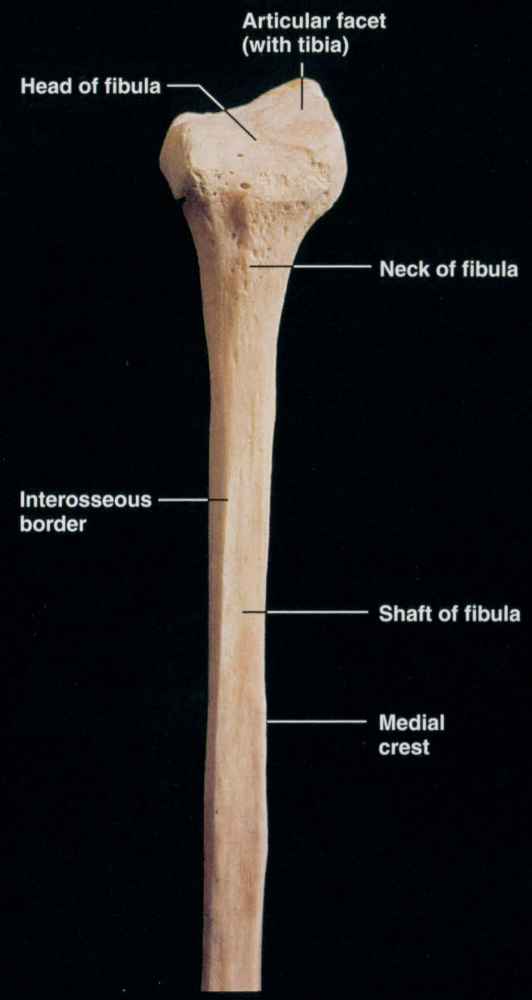
Figure 30 Right tibia and fibula (continued).



(h) right fibula, proximal end, anterior view

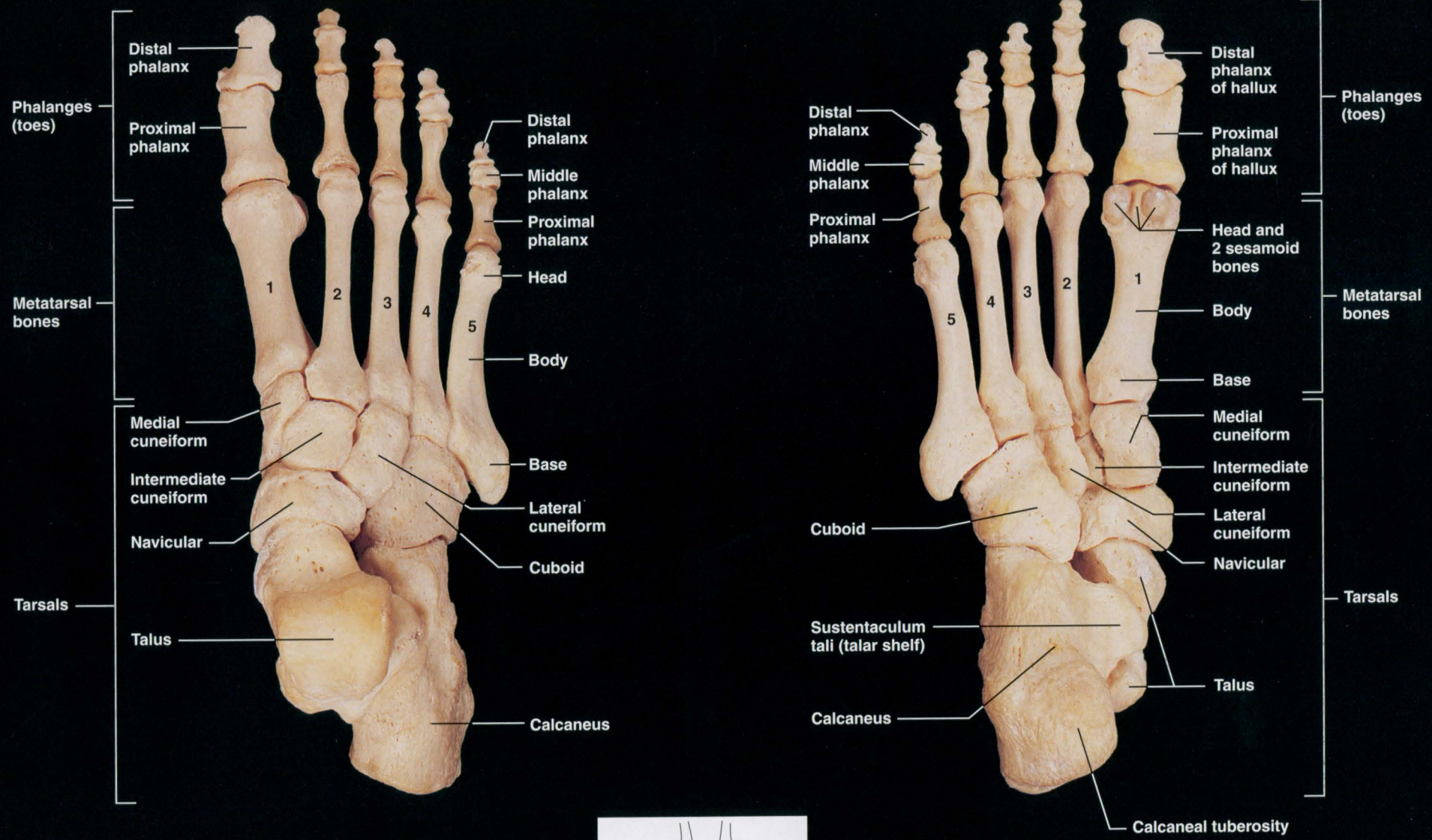


(i) right fibula, proximal end, posteromedial view



(j) right fibula, proximal end, medial view

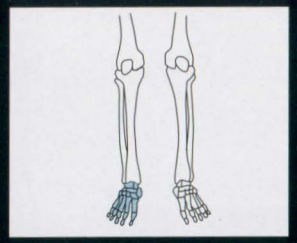
Figure 30 Right tibia and fibula (continued).

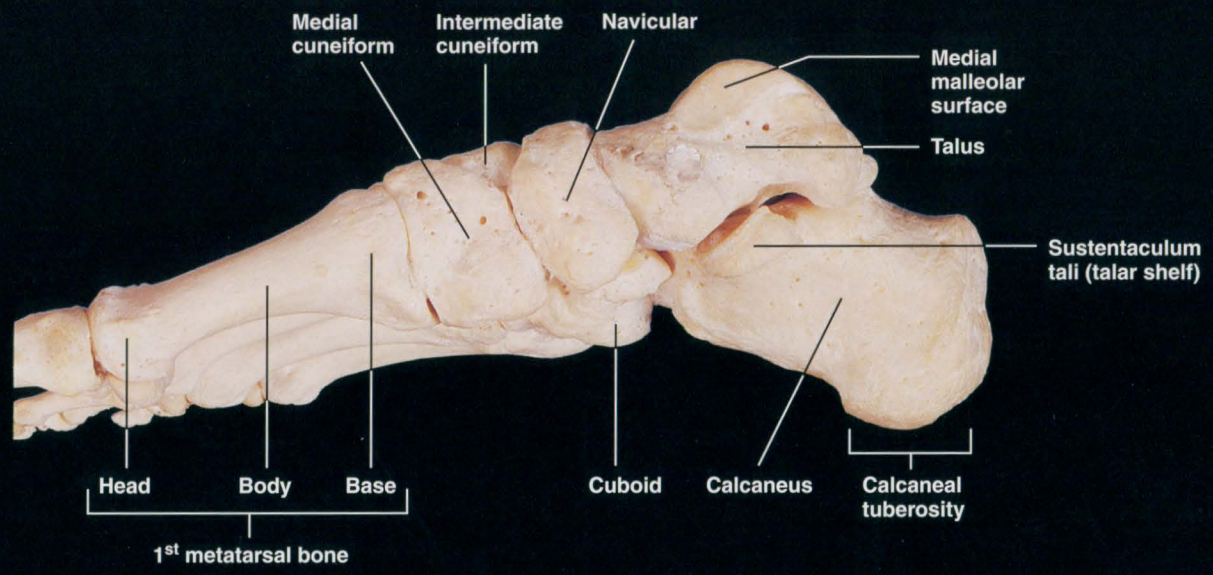


(a) superior surface

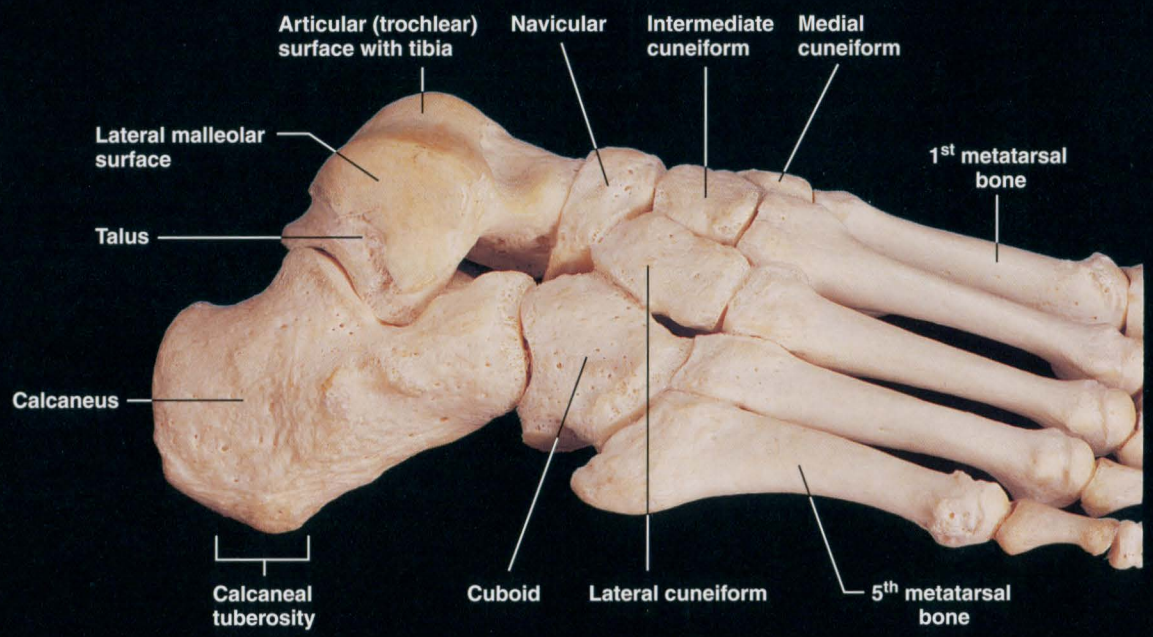
(b) inferior (plantar) surface

Figure 31 Bones of the right ankle and foot.

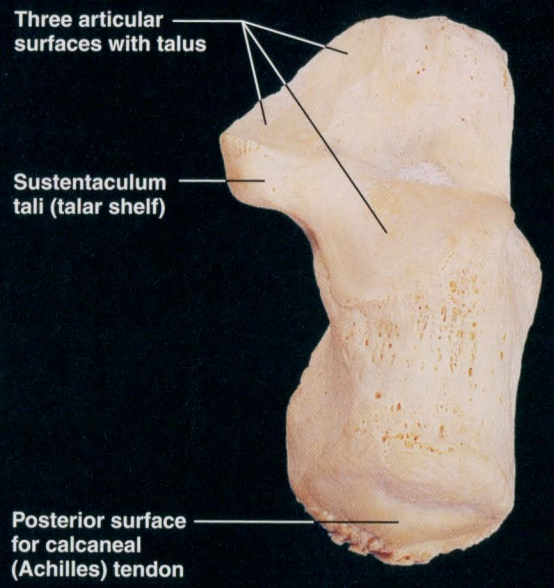




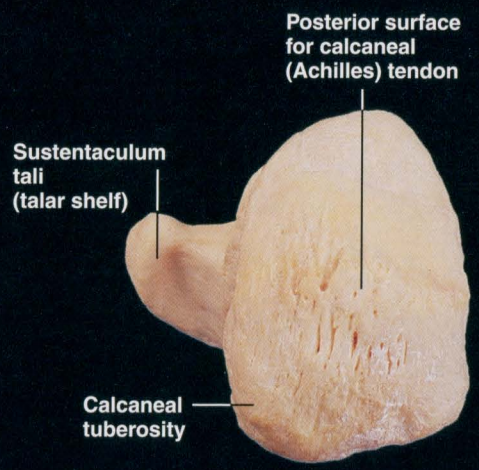
(c) medial view



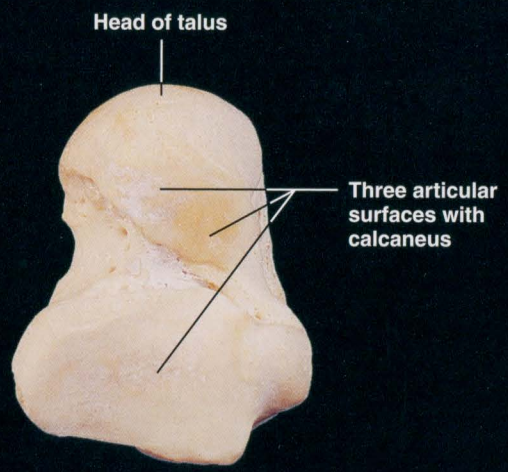
(d) lateral view



(e) right calcaneus, superior aspect

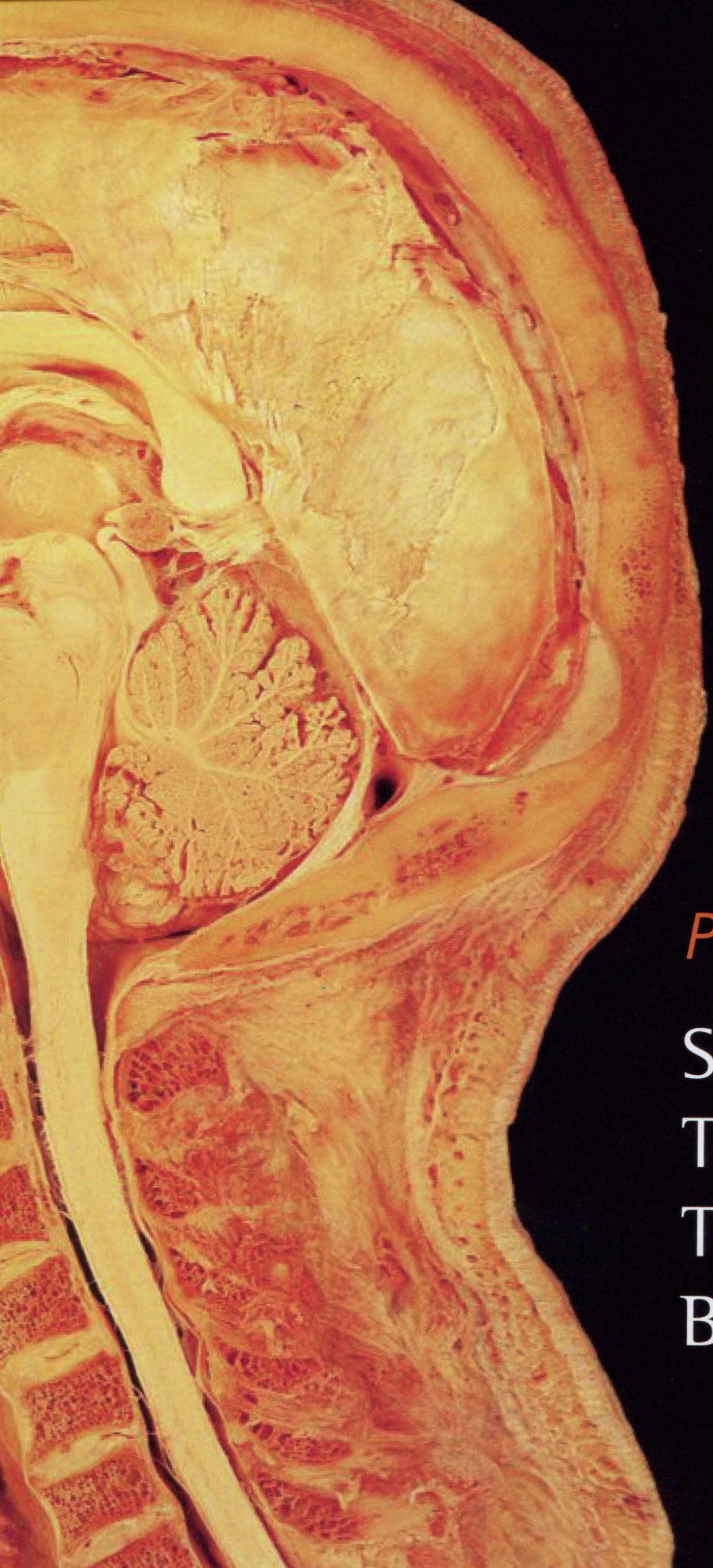


(f) right calcaneus, posterior aspect



(g) right talus, inferior view

Figure 31 Bones of the right ankle and foot (continued).



Part III

SOFT TISSUE OF THE HUMAN BODY

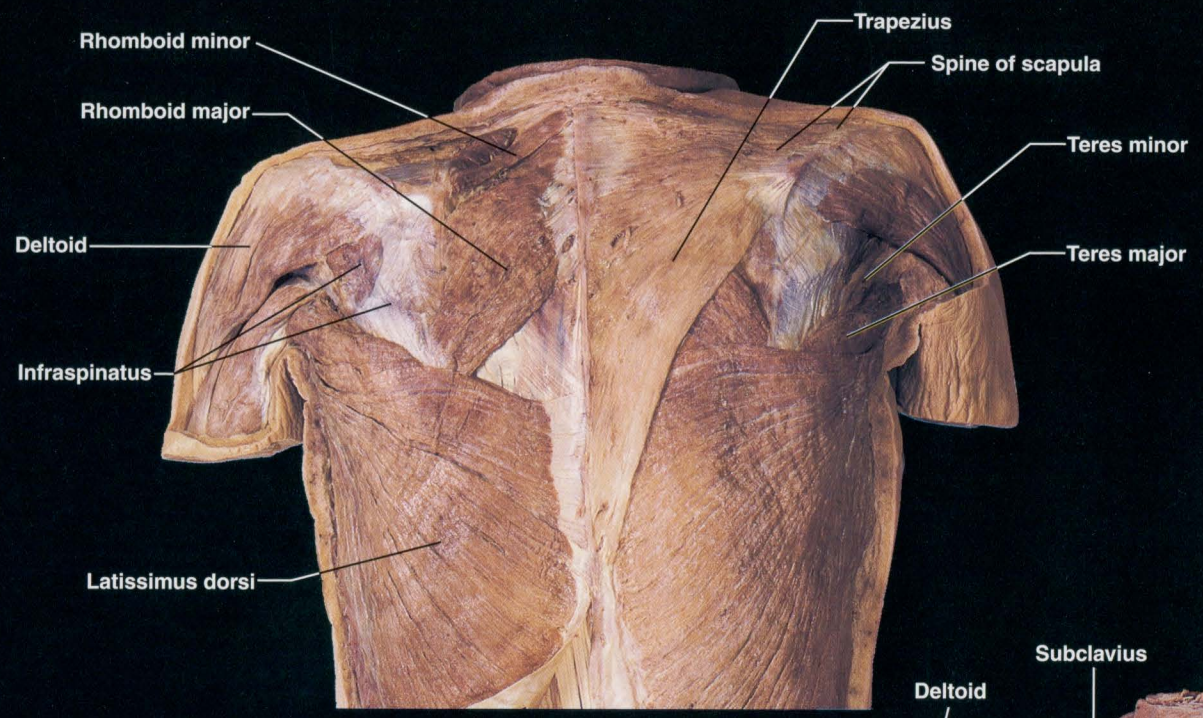


Figure 32 Superficial muscles of the thorax, posterior view.

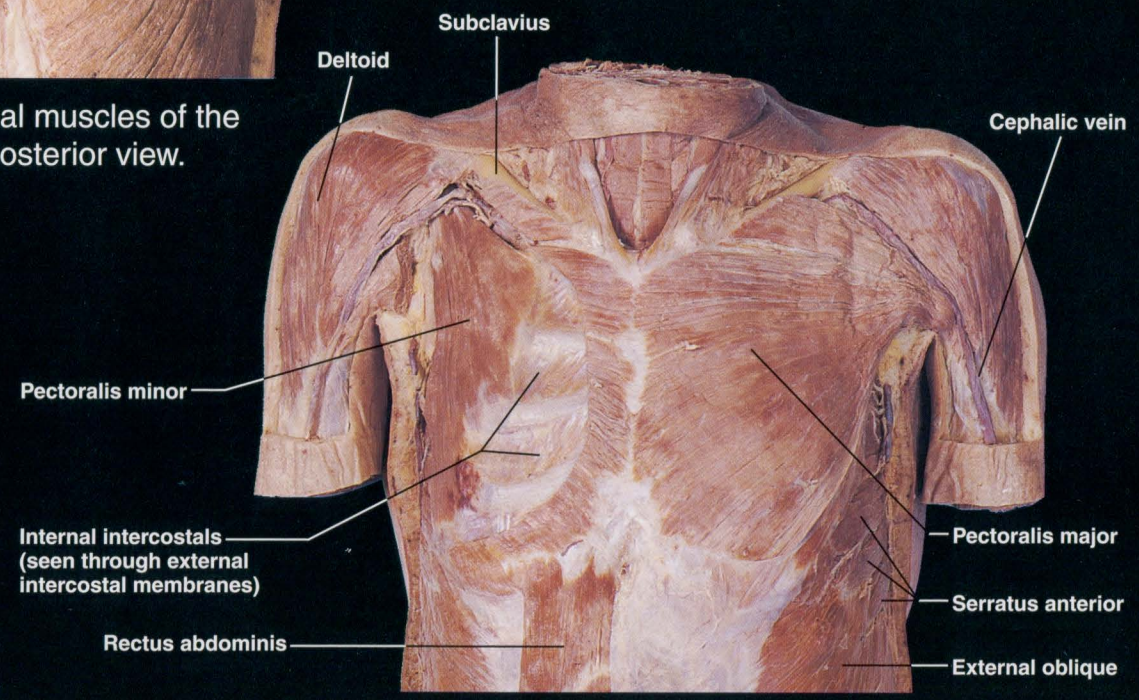


Figure 33 Superficial muscles of the thorax, anterior view.

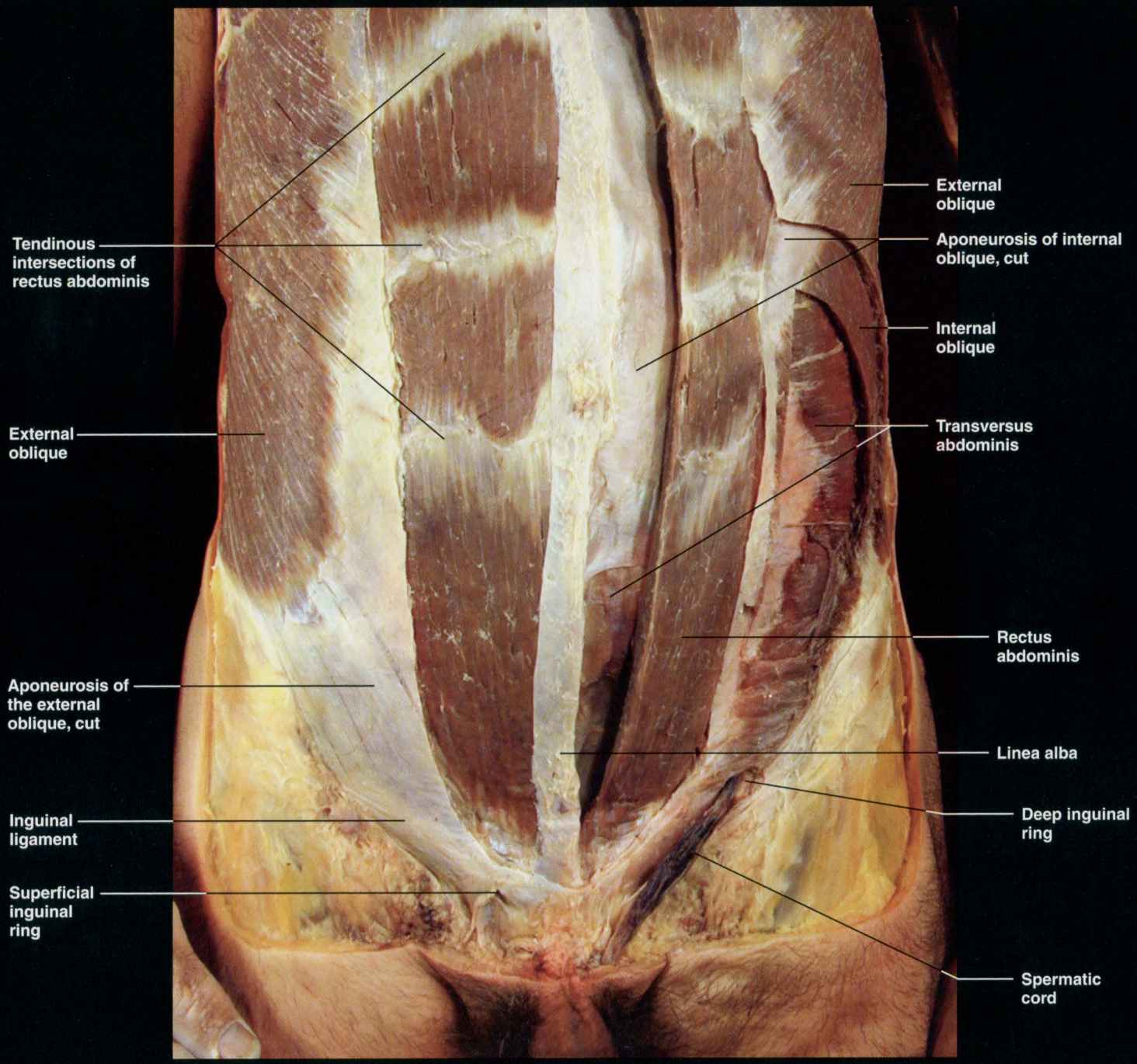
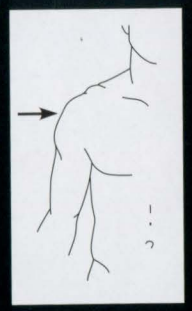


Figure 34 Abdominal muscles.



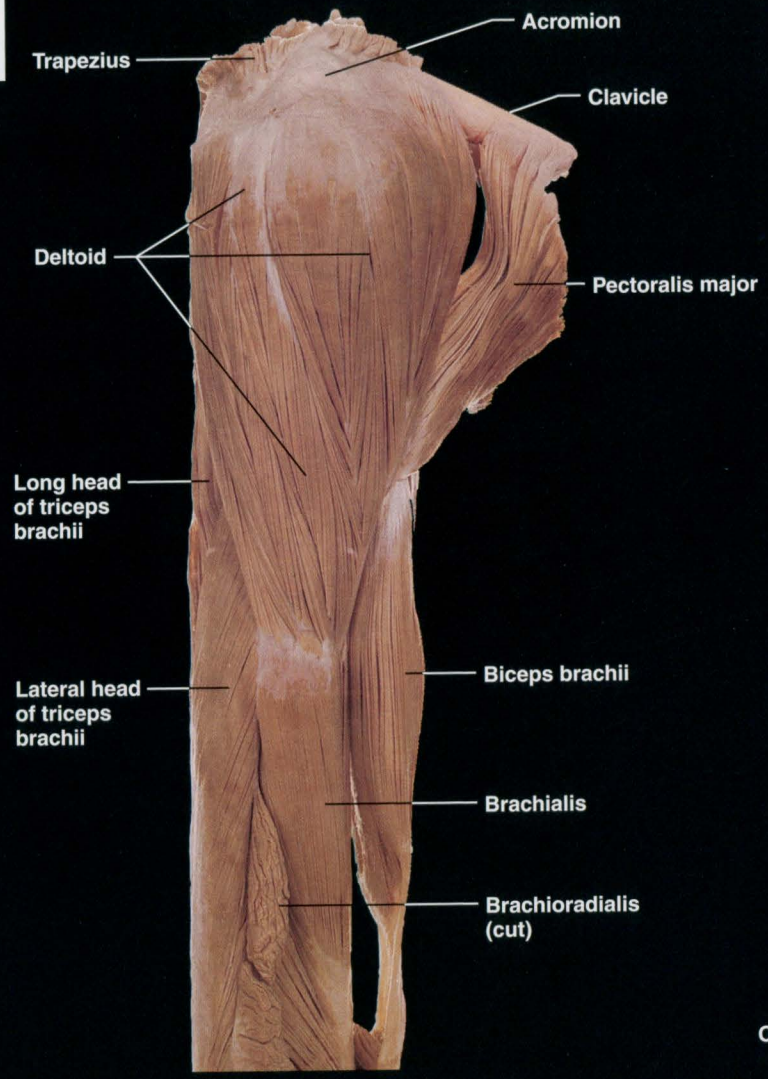


Figure 35 Right shoulder from right, showing deltoid muscle and biceps.

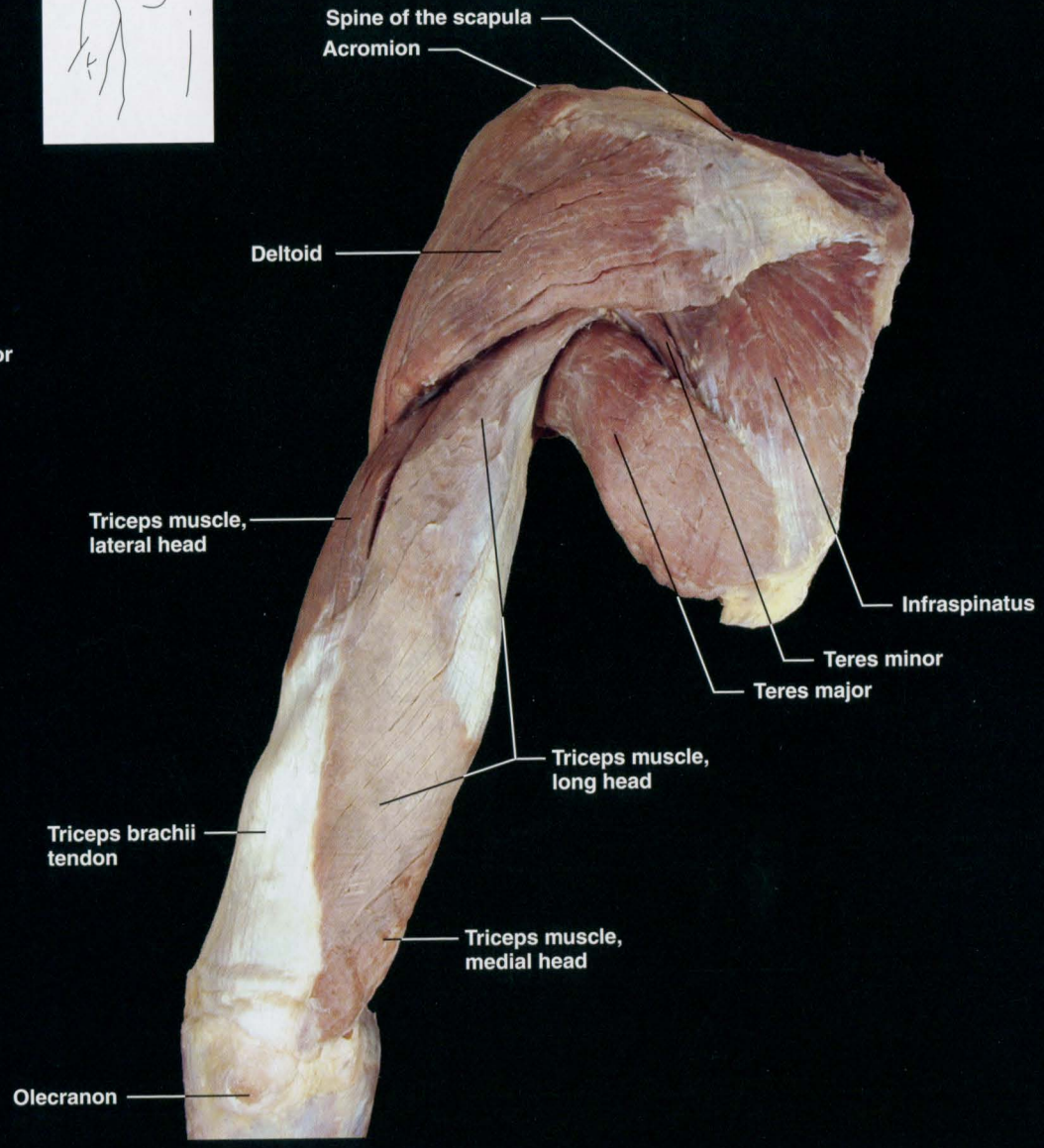
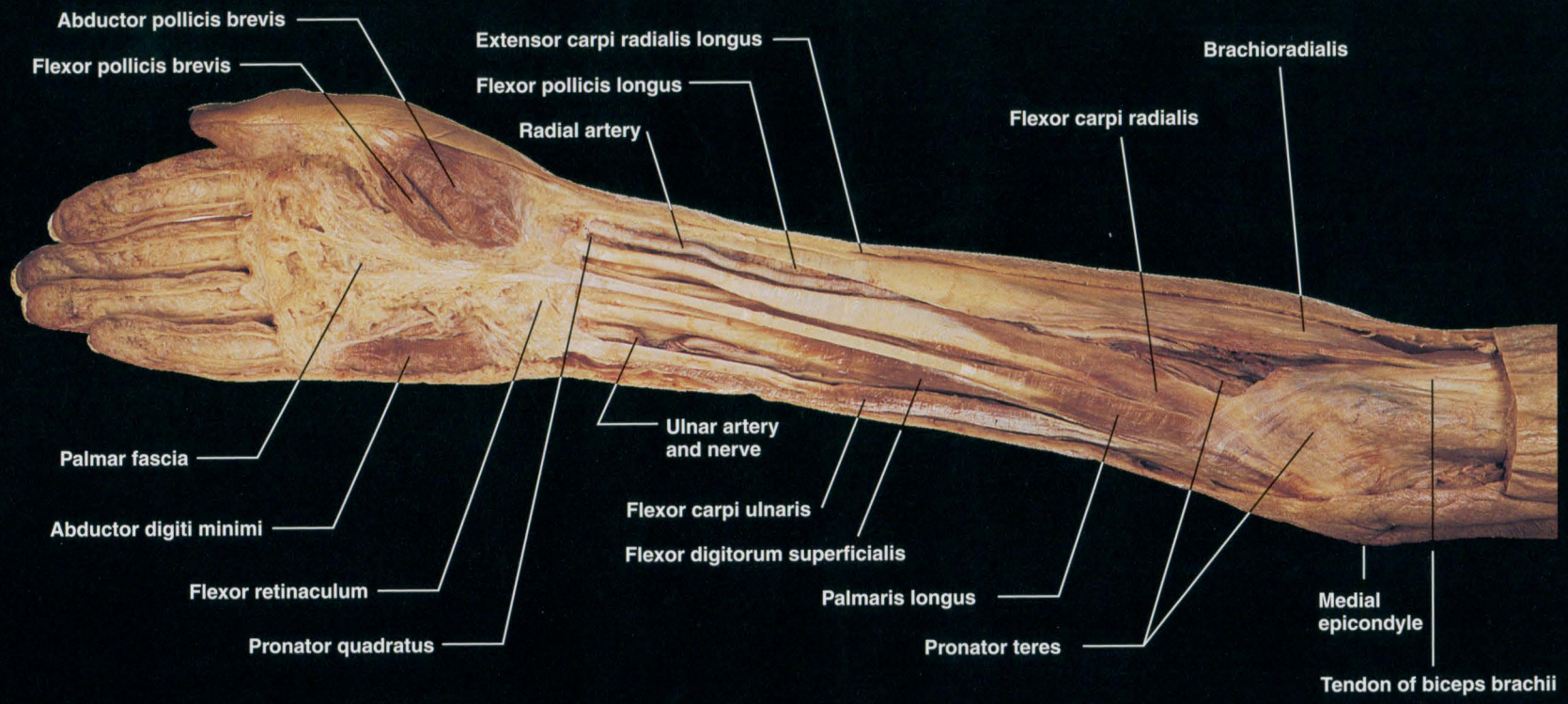
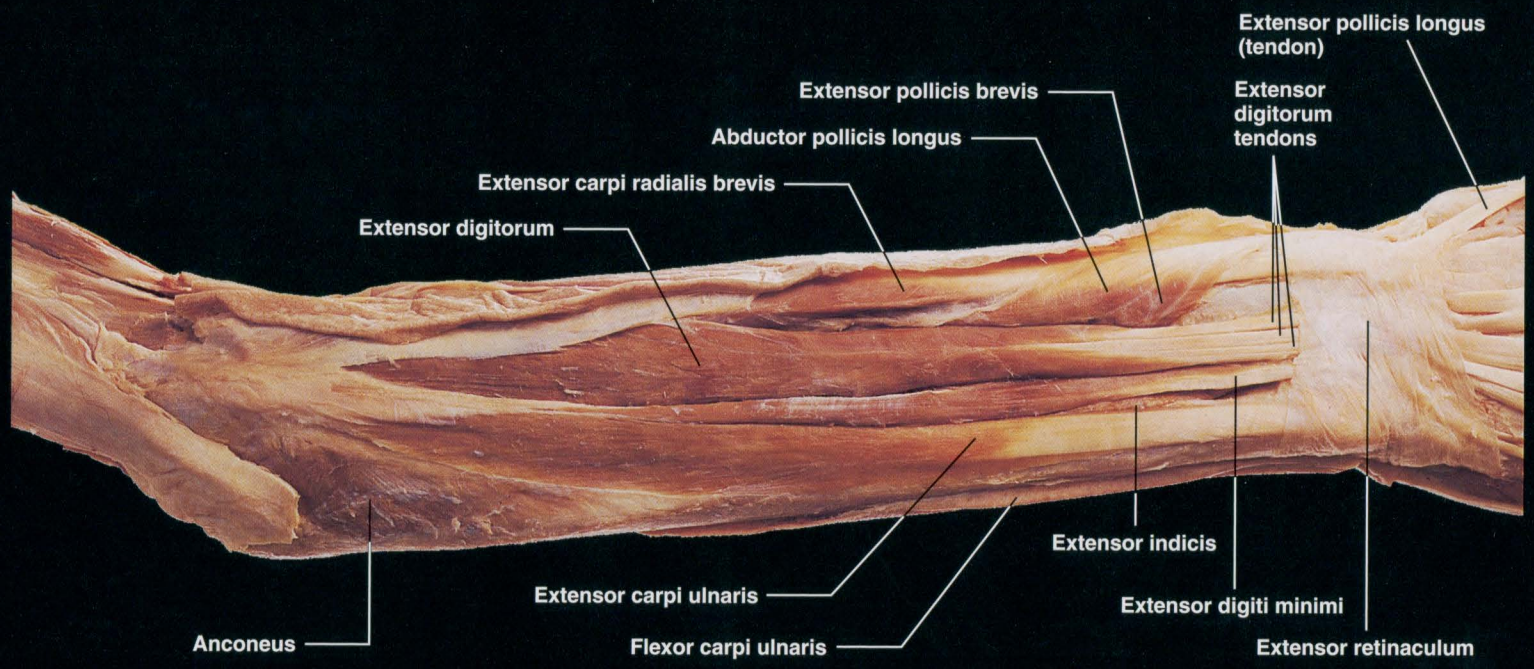


Figure 36 Triceps of the left arm, posterior view.

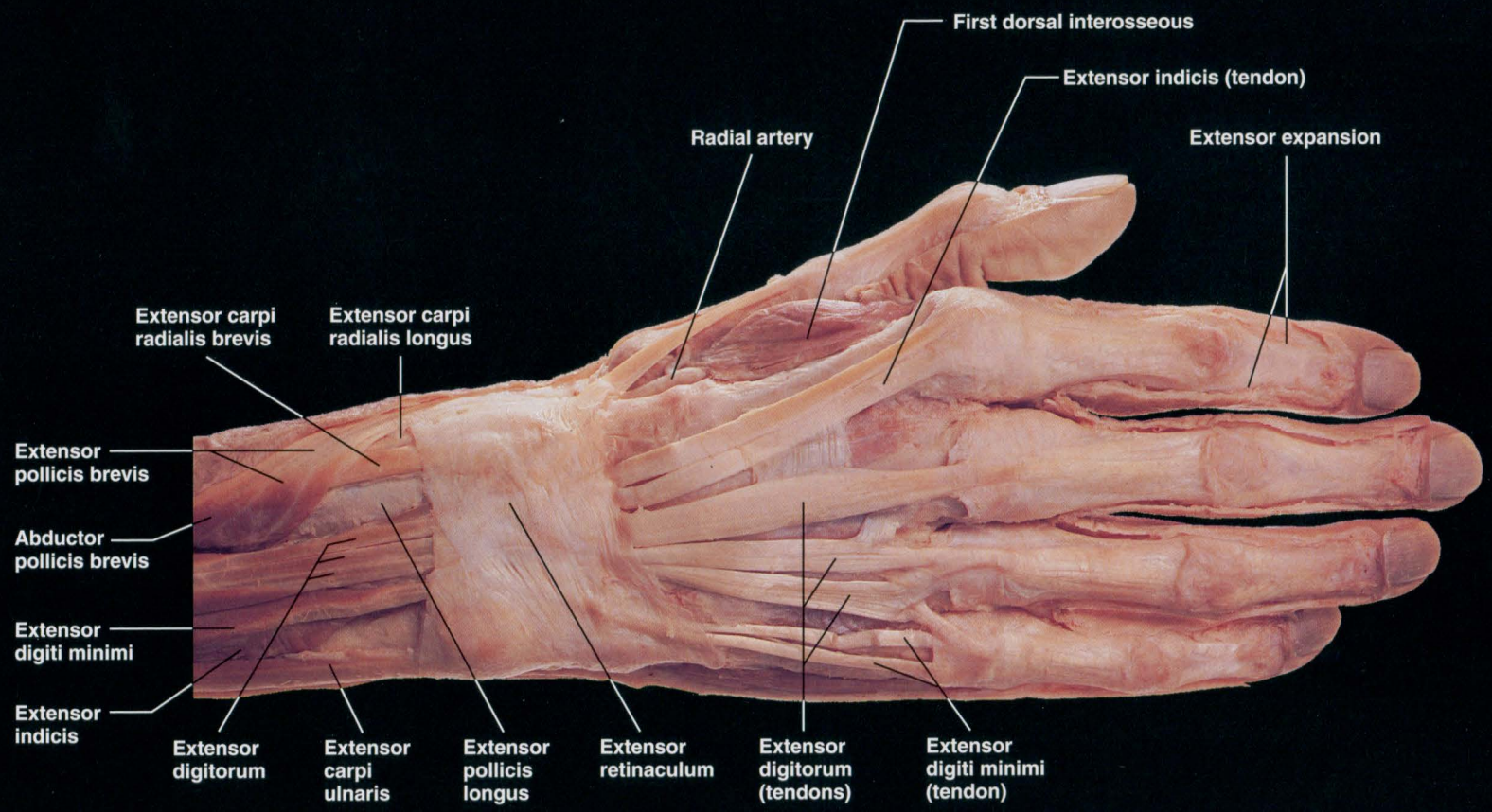


(a) palmar surface

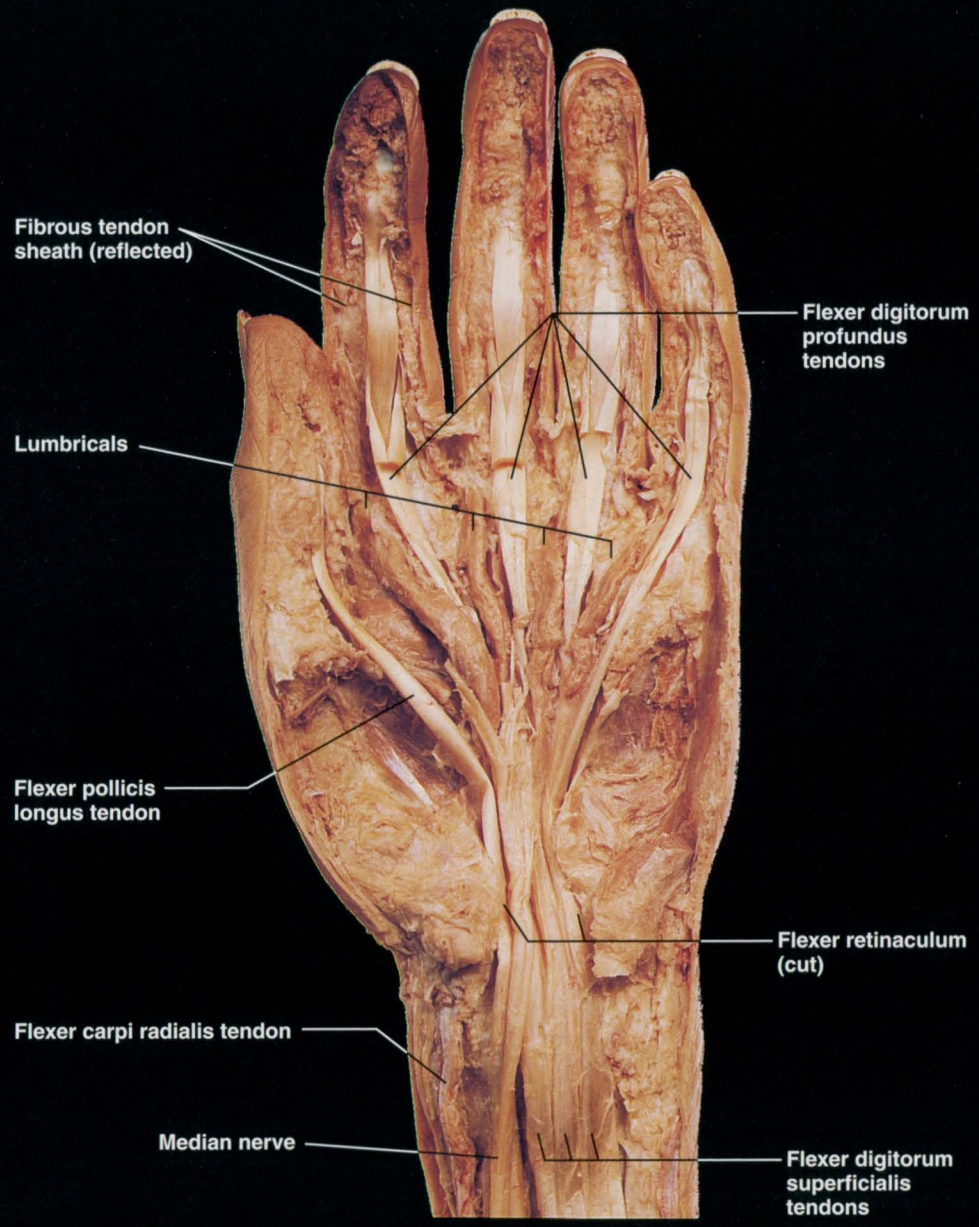


(b) dorsum surface

Figure 37 Right forearm and wrist.



(a) dorsum surface of the right hand and wrist



(b) palmar surface of the left hand and wrist

Figure 38 Wrist and hand.

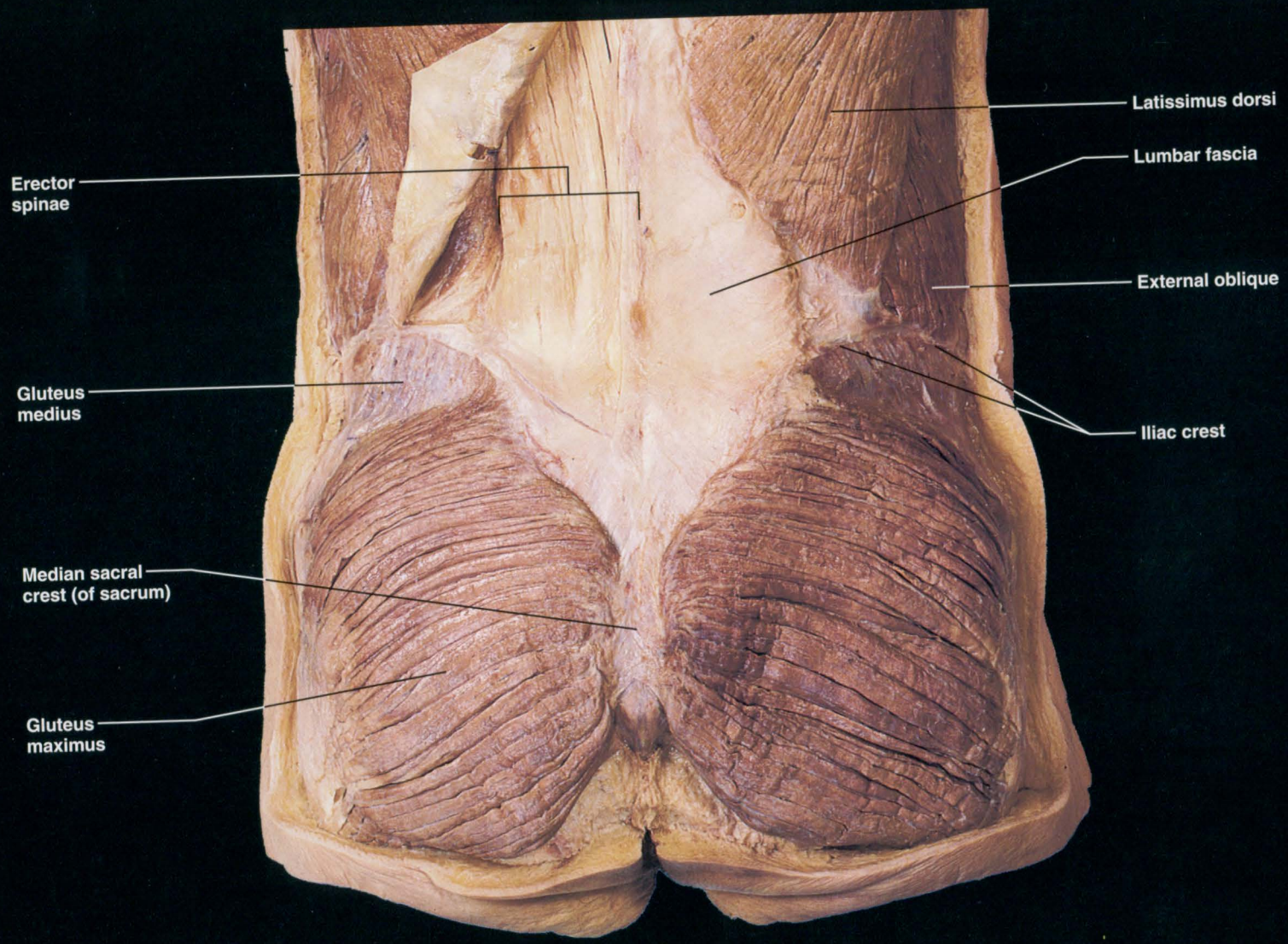


Figure 39 Superficial muscles of the superior gluteal region.

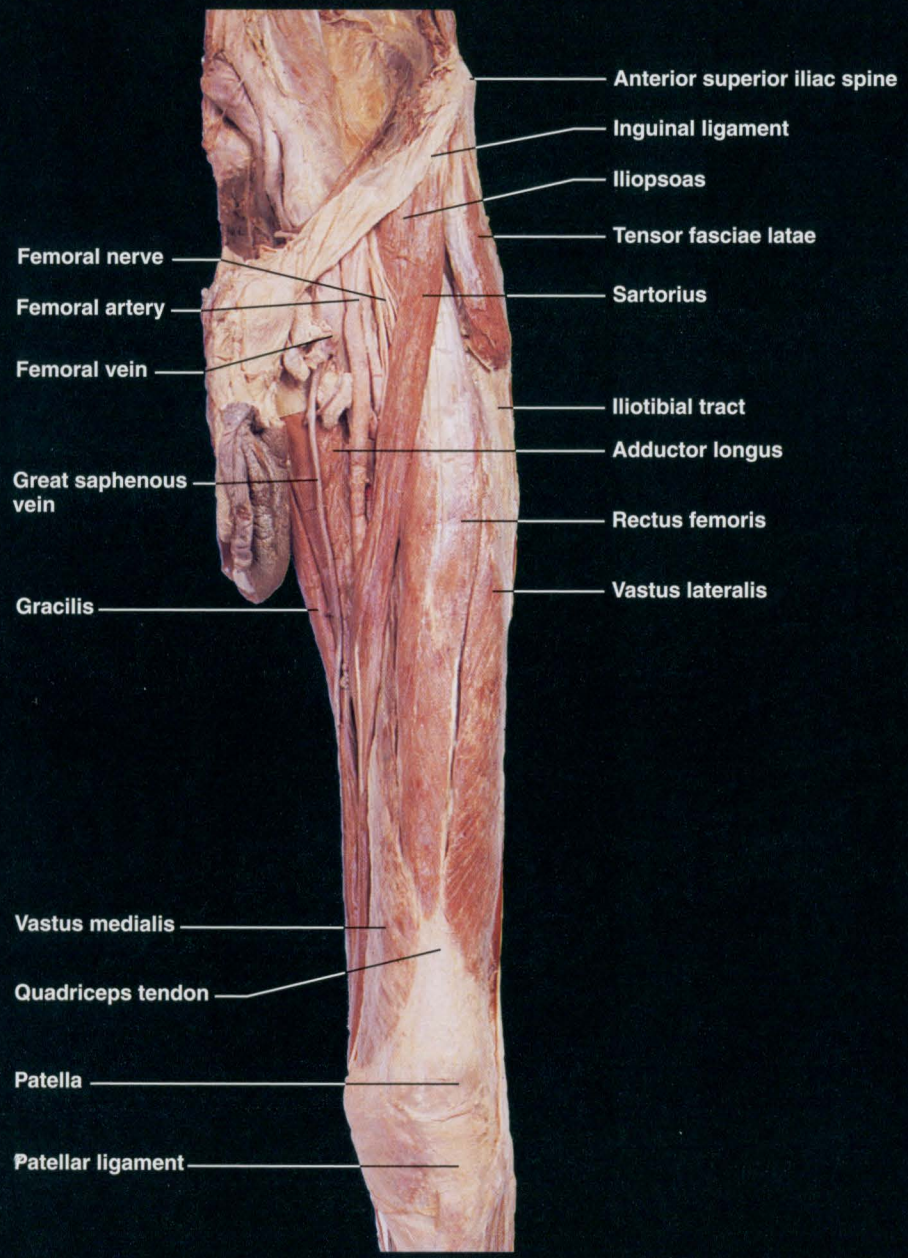


Figure 40 Superficial muscles of the left lower thigh, anterior view.

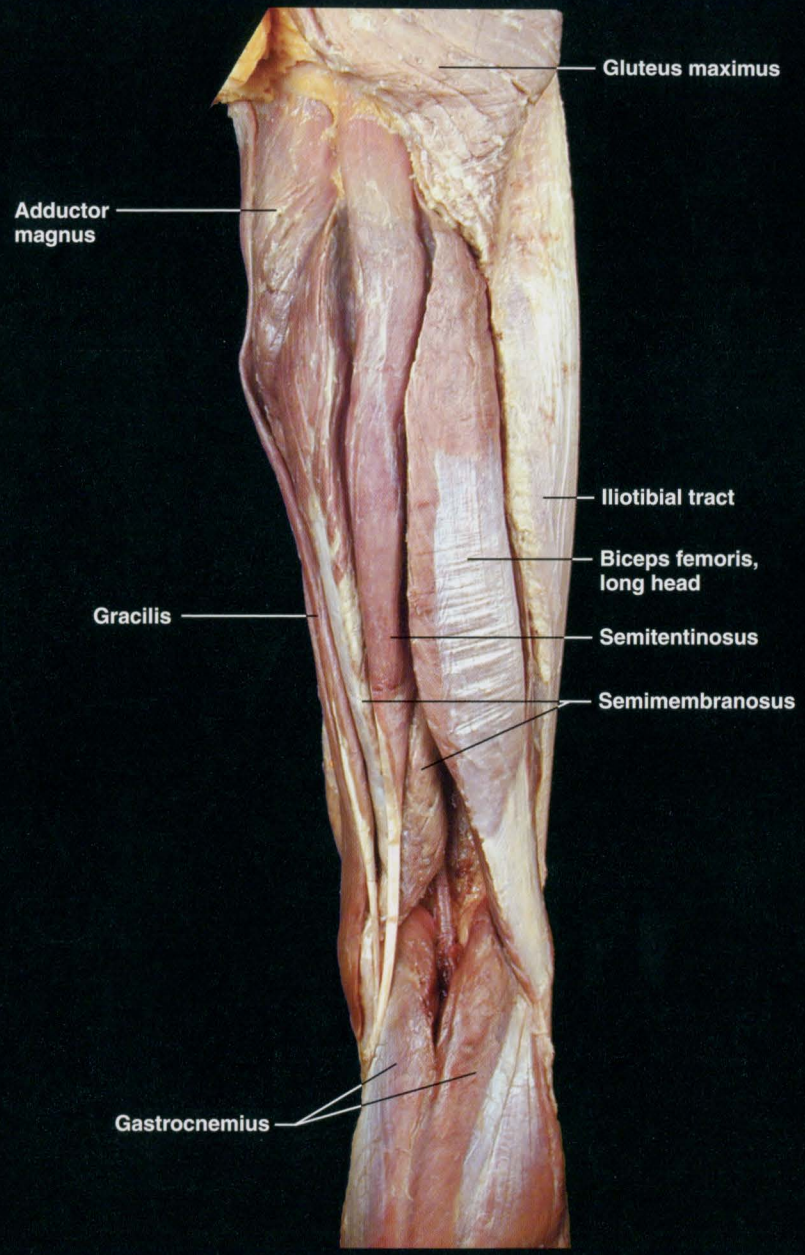
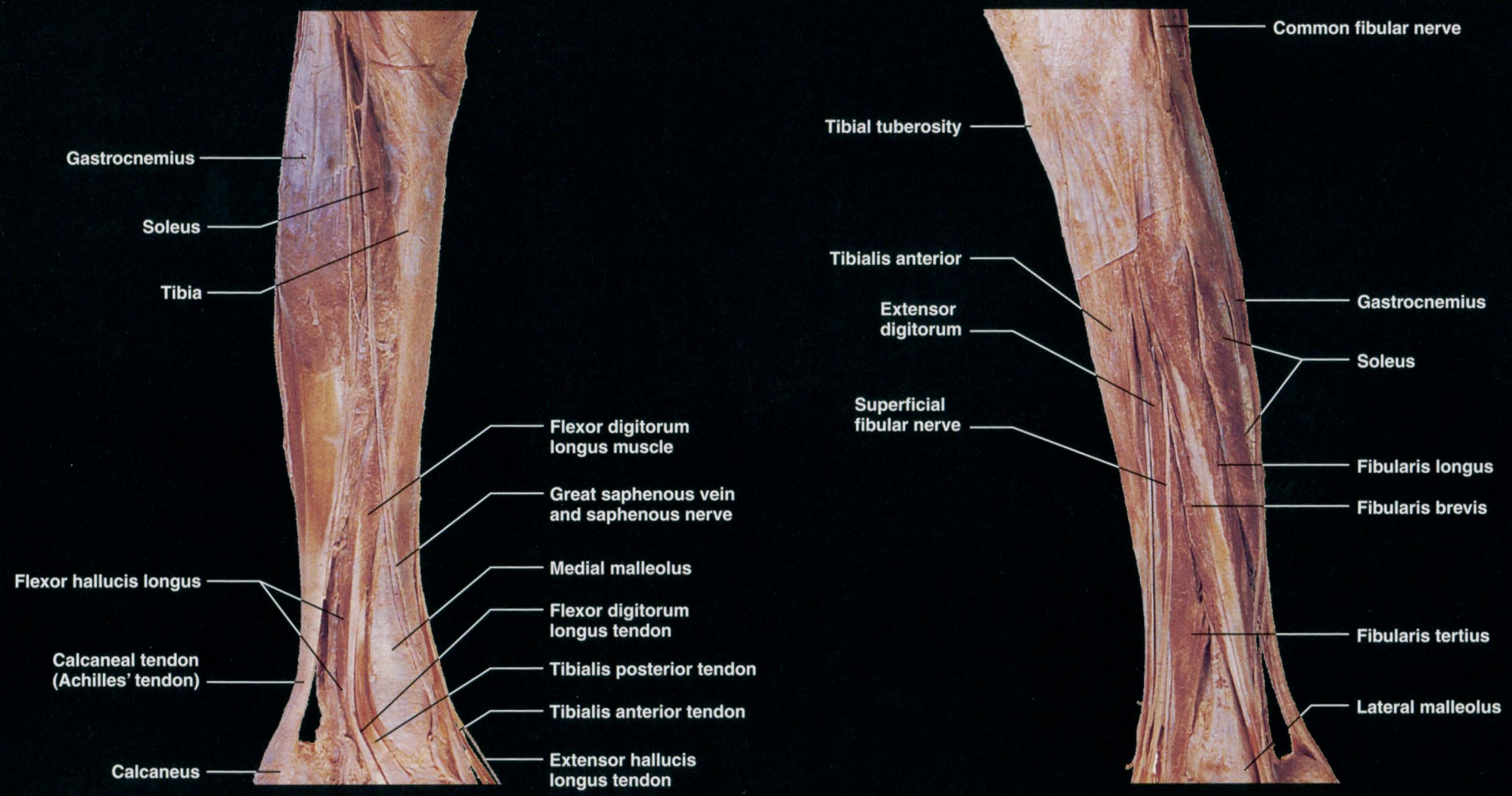


Figure 41 Right upper thigh, posterior view.



(a) medial view

(b) lateral view

Figure 42 Leg.

Figure 43 Foot.

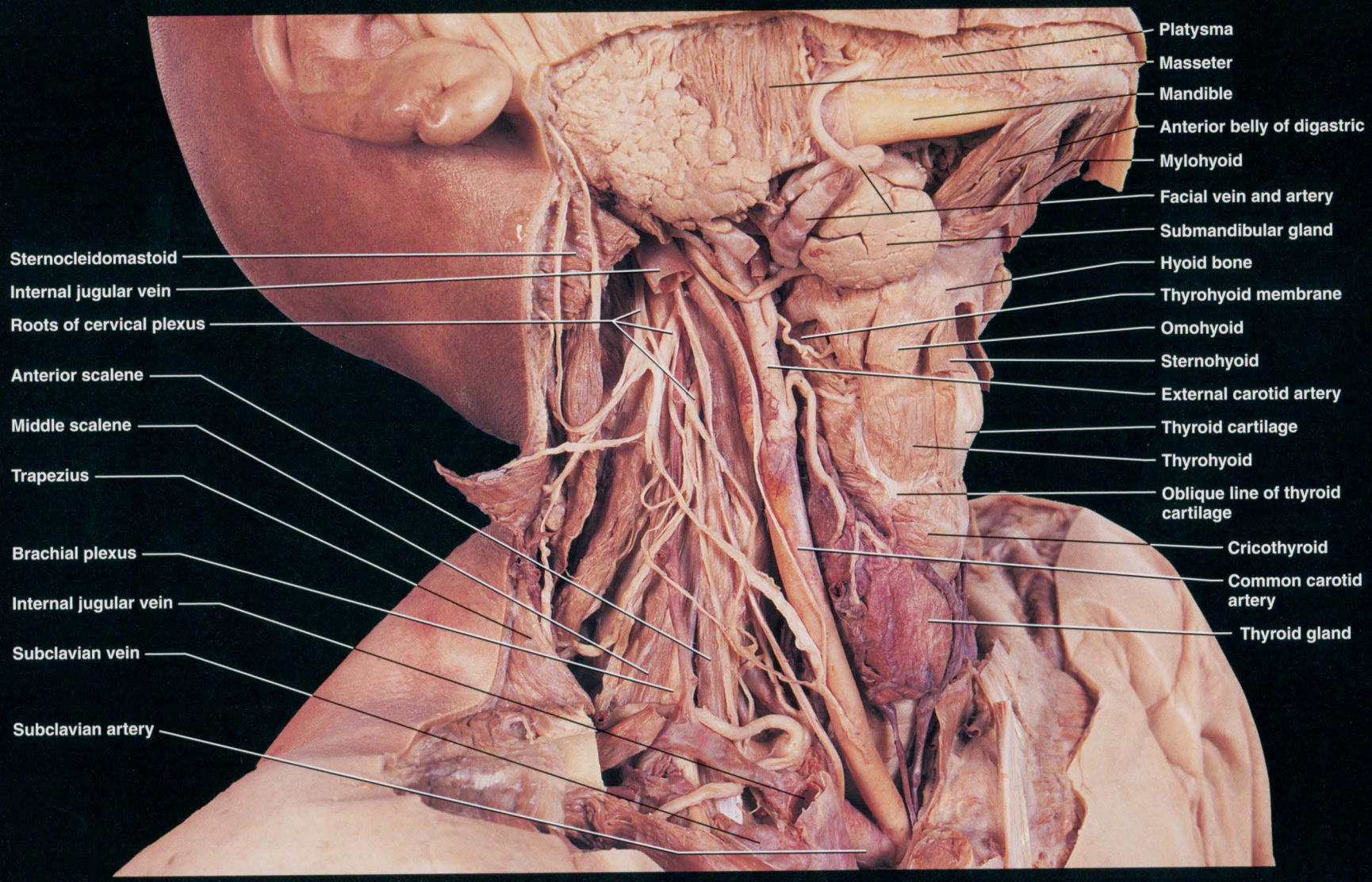


Figure 44 Right lower face and upper neck.

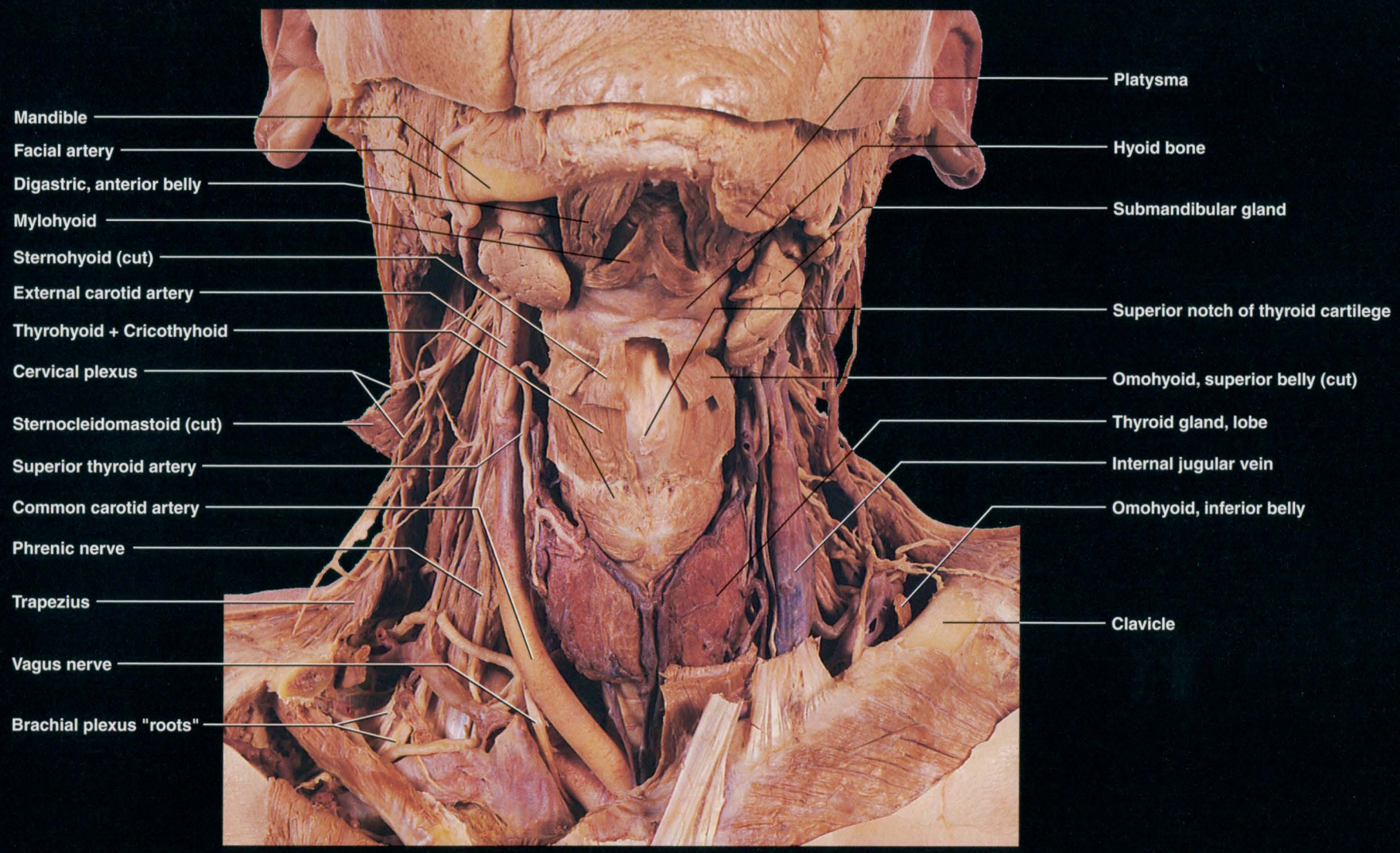


Figure 45 Muscles, blood vessels, and nerves of neck, anterior view.

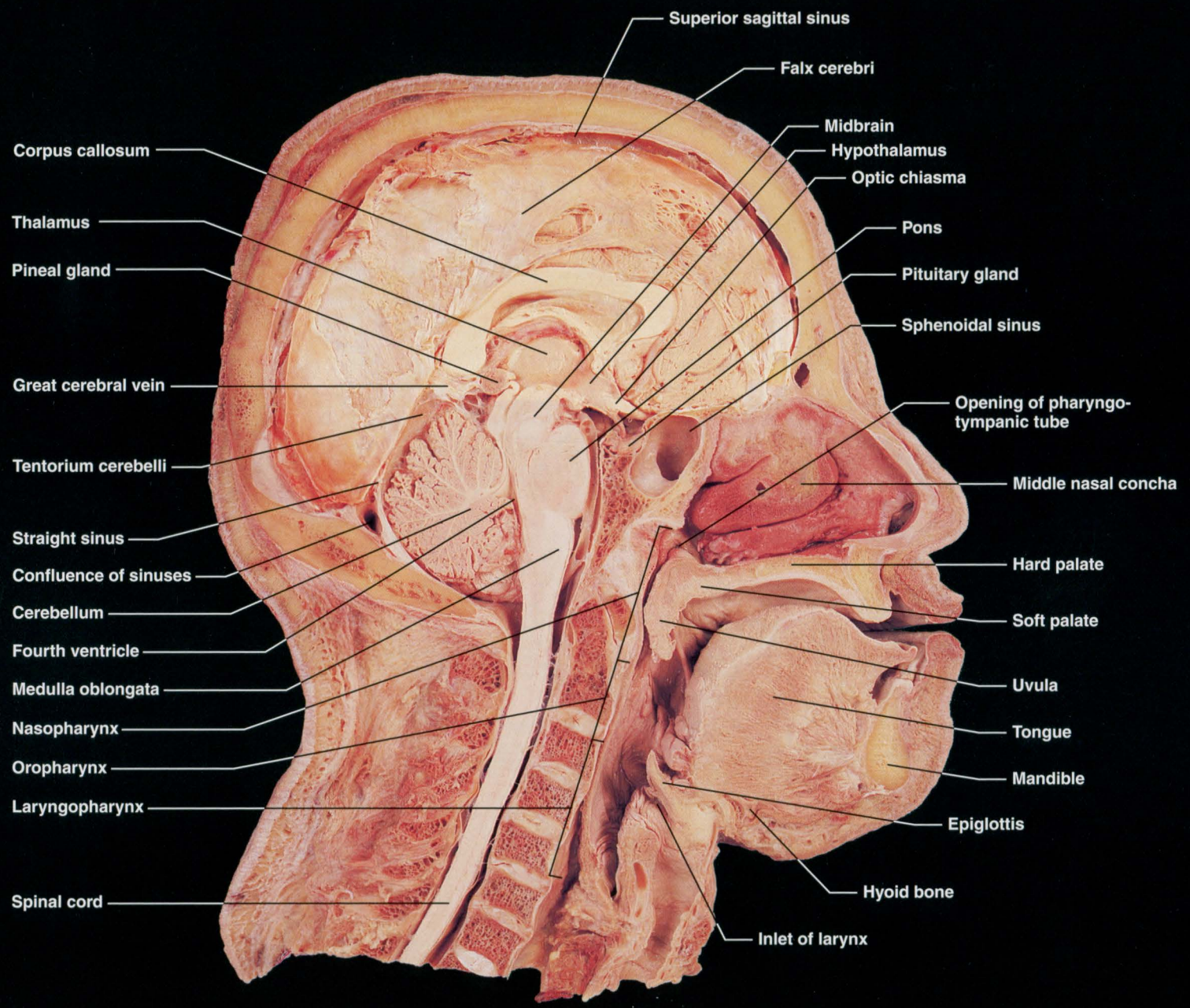
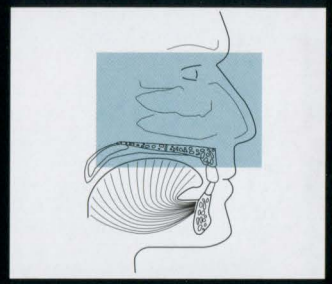


Figure 46 Sagittal section of the head.



Sphenoidal sinus
Frontal sinus
Optic nerve
Pituitary gland
Trigeminal nerve
Abducens nerve
Pharyngeal branch of pterygopalatine ganglion
Soft palate
Uvula
Olfactory nerve fibers in cribriform plate
Superior concha
Superior meatus
Middle concha
Middle meatus
Nasal vestibule
Inferior concha
Inferior meatus
Hard palate
Oral vestibule

Figure 47 Left nasal cavity, lateral wall.

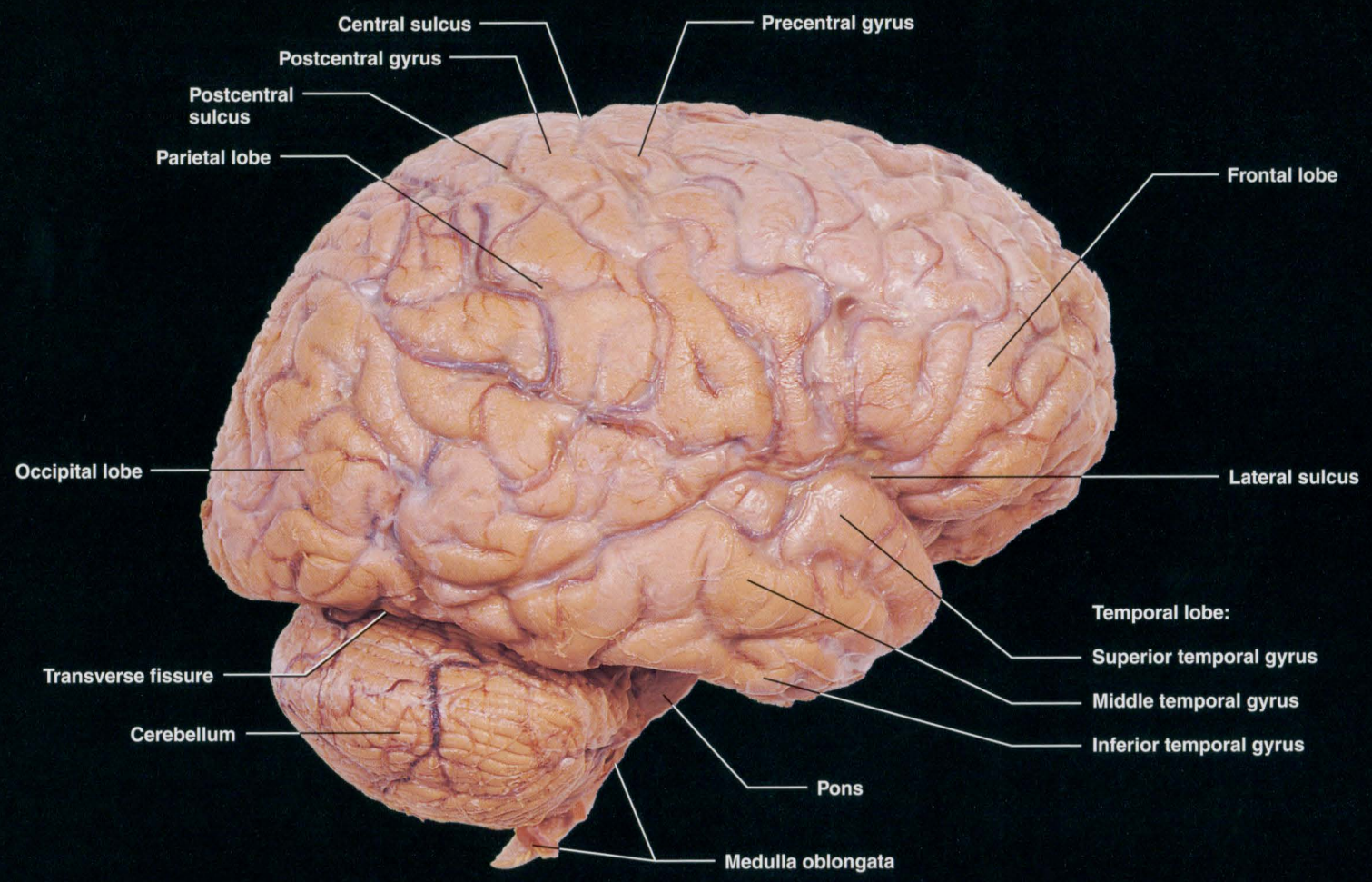
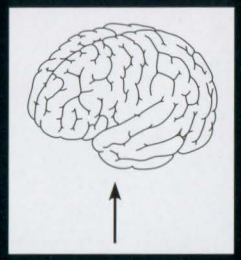


Figure 48 Right cerebral hemisphere (arachnoid mater removed).



Frontal lobe

Optic nerve (II)

Optic chiasma

Infundibulum of pituitary gland

Mammillary body

Basilar artery

Pons

Choroid plexus of fourth ventricle

Medulla oblongata

Olfactory bulb

Olfactory tract

Internal carotid artery

Optic tract

Oculomotor nerve (III)

Trochlear nerve (IV)

Trigeminal nerve (V)

Abducens nerve (VI)

Facial nerve (VII)

Vestibulocochlear nerve (VIII)

Glossopharyngeal nerve (IX)

Vagus nerve (X)

Accessory nerve (XI)

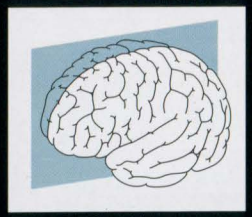
Cerebellum

Hypoglossal nerve roots (XII)

Olive of medulla oblongata

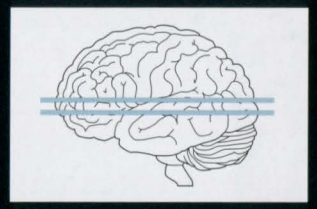
Pyramid of medulla oblongata

Figure 49 Ventral view of the brain.



Cingulate gyrus
Fornix
Central sulcus
Hypothalamus sulcus
Lateral ventricle
Parieto-occipital sulcus
Corpus callosum
Third ventricle
Anterior commissure
Calcarine sulcus
Superior colliculus
Inferior colliculus
Corpora quadrigemina
Hypothalamus
Arbor vitae
Optic nerve and chiasma
Cerebellum
Mammillary body
Fourth ventricle
Uncus
Thalamus
Medulla oblongata
Pons

Figure 50 Midsagittal section of the brain.



ANTERIOR

Anterior horn of lateral ventricle

Cerebral gray matter

Cerebral white matter

Head of caudate nucleus

Interventricular foramen

Corpus callosum

Internal capsule

Lentiform nuclei

Body of caudate nucleus

Insula

Body of fornix

Thalamus

Inferior horn of lateral ventricle

Choroid plexus

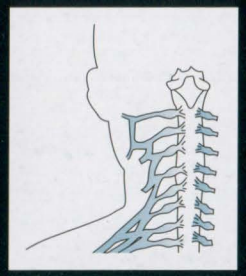
Posterior horn of lateral ventricle

Corpus callosum

Visual area of cerebral cortex

POSTERIOR

Figure 51 Transverse section of the brain, superior view. Left: on a level with the intraventricular foramen; right: about 1.5 cm higher.



Internal acoustic meatus with facial and vestibulocochlear nerves

Fourth ventricle

Sigmoid sinus

Glossopharyngeal, vagus, and accessory nerves

Dorsal rootlets of second cervical nerve

Lateral mass of atlas

Transverse process of atlas

Internal jugular vein

Vagus nerve

Internal carotid artery

External carotid artery

Longus capitus

Dorsal ramus of third cervical nerve

Ventral ramus of third cervical nerve

Dorsal root ganglion of third cervical nerve

Vertebral artery

Dura mater overlying arachnoid mater

Brachial plexus

Seventh cervical vertebra

Posterior inferior cerebellar artery

Edge of foramen magnum

Spinal part of accessory nerve

Anterior scalene

Figure 52 Brainstem and cervical region of the spinal cord, posterior view.

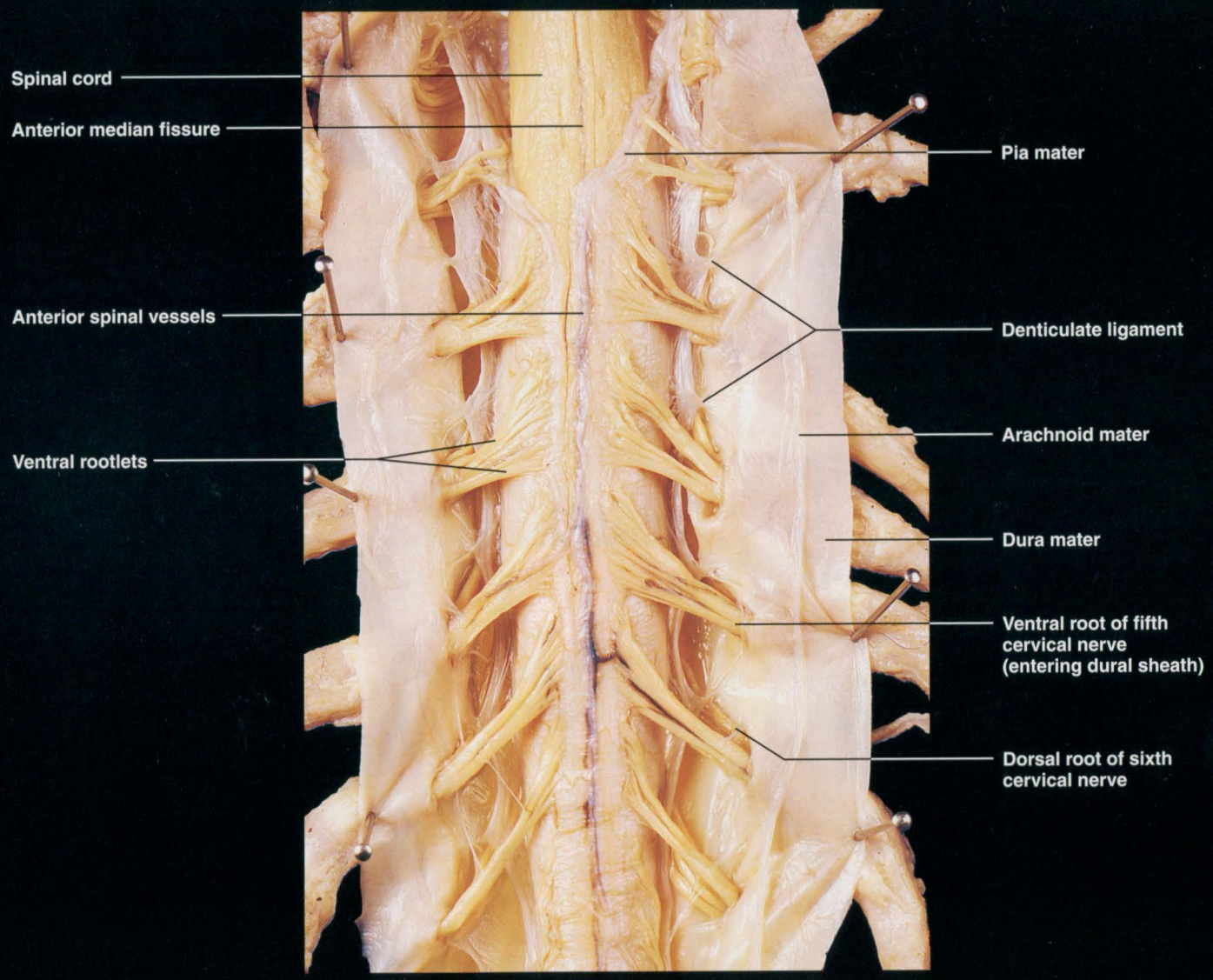
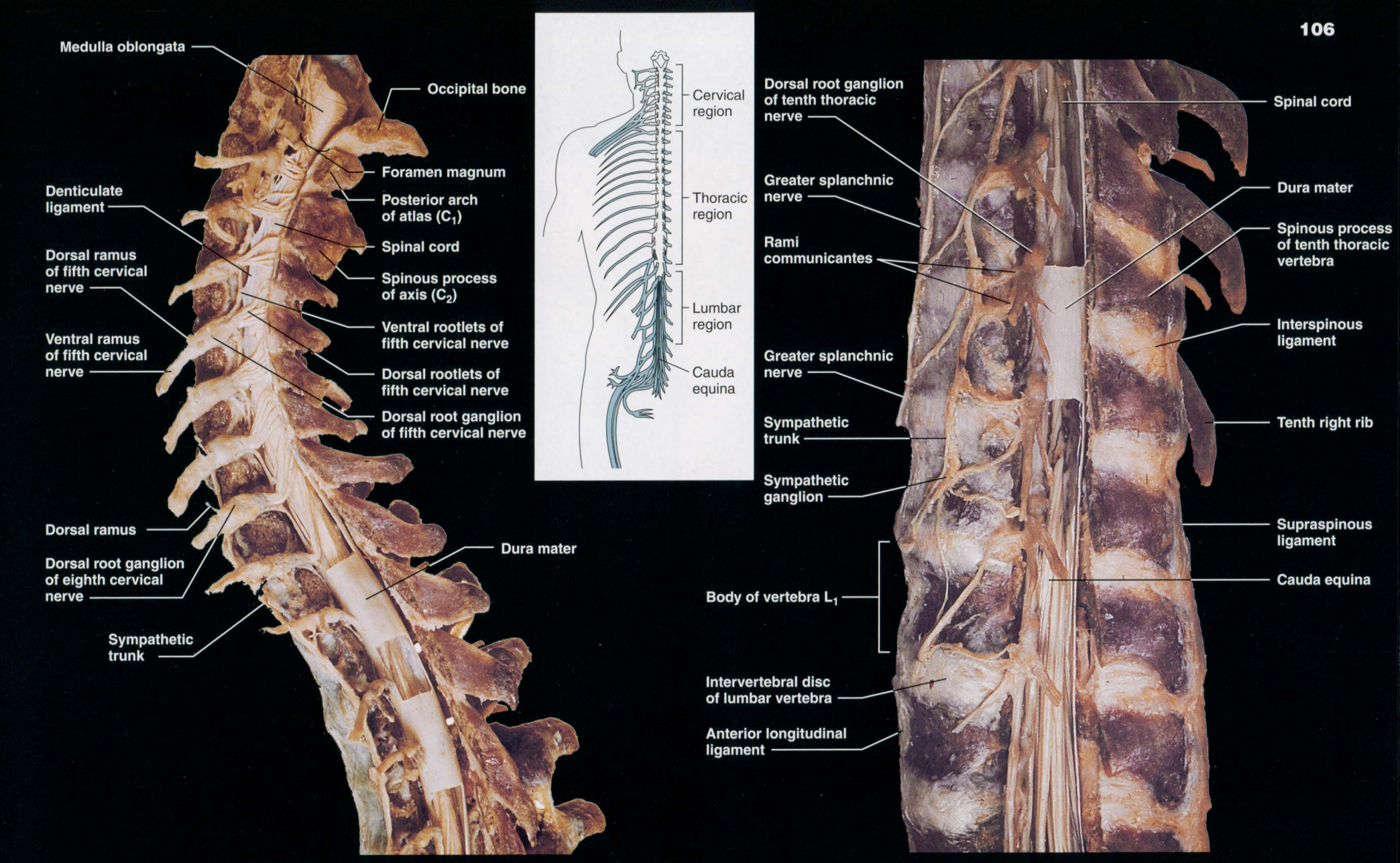


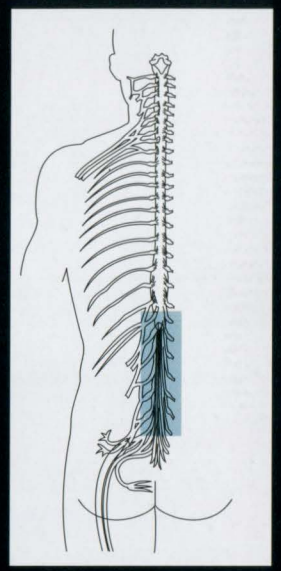
Figure 53 Cervical region of spinal cord, ventral view.



(a) cervical and upper thoracic regions from the left

(b) lower thoracic and upper lumbar regions from the left

Figure 54 Vertebral column and spinal cord.



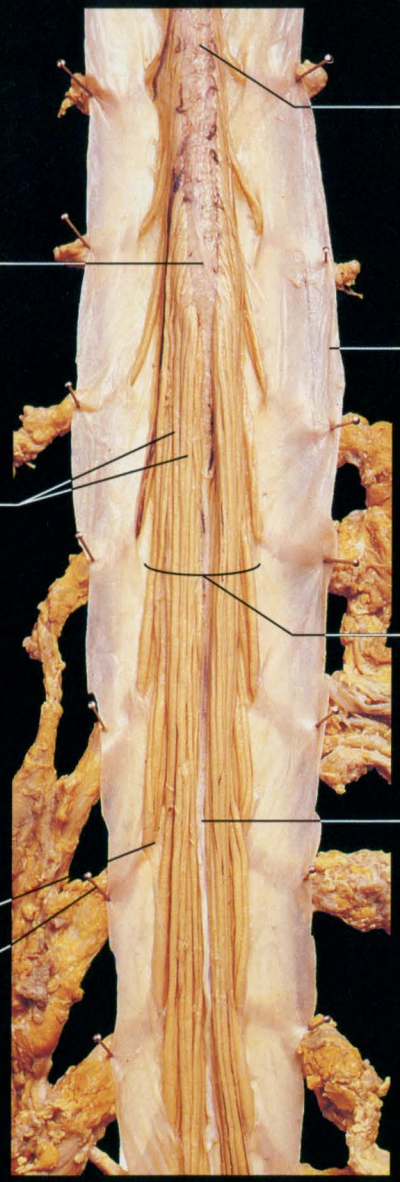


Figure 55 Spinal cord and cauda equina, dorsal view of lower end.

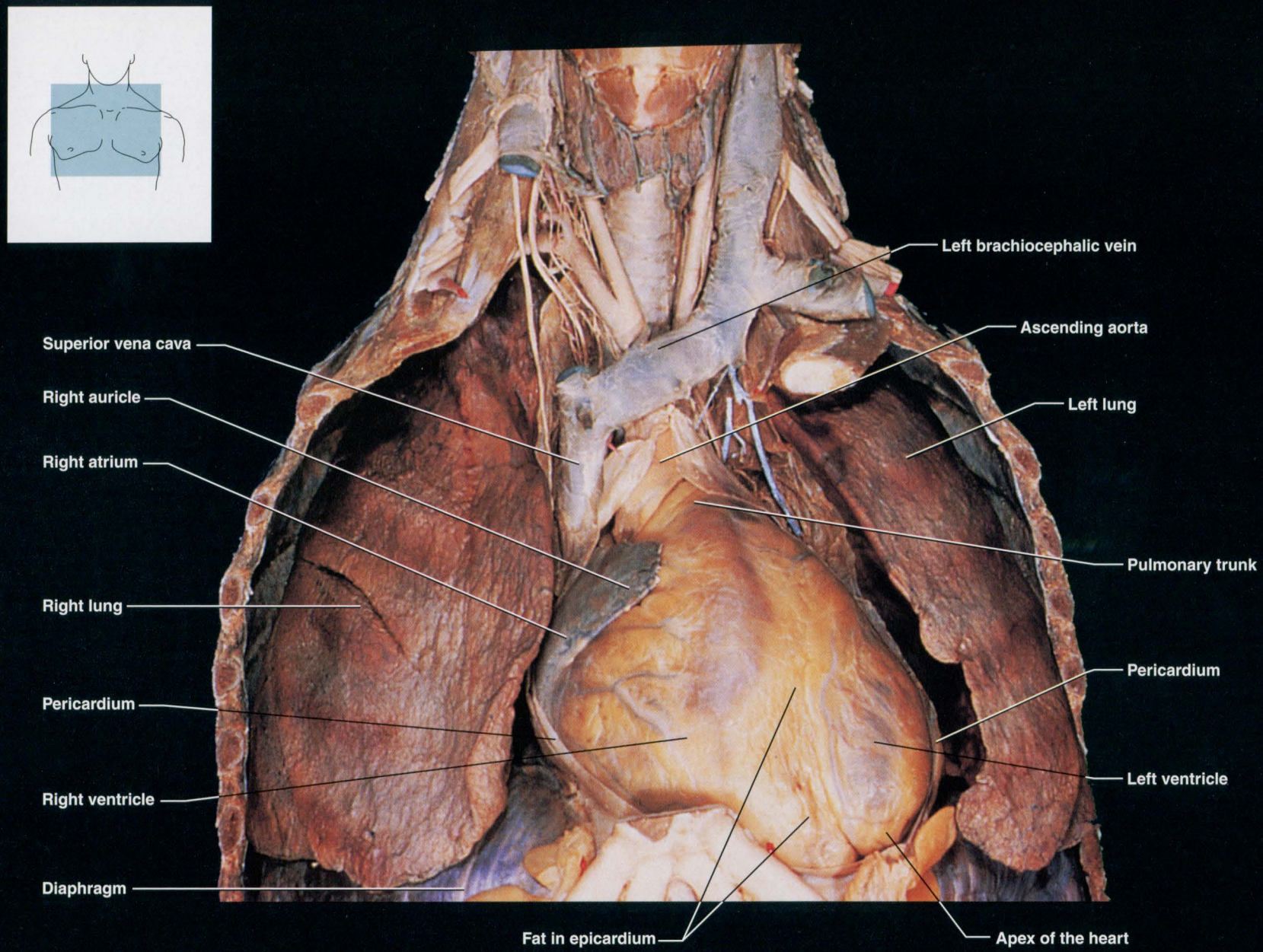


Figure 56 Heart and associated structures in thorax.

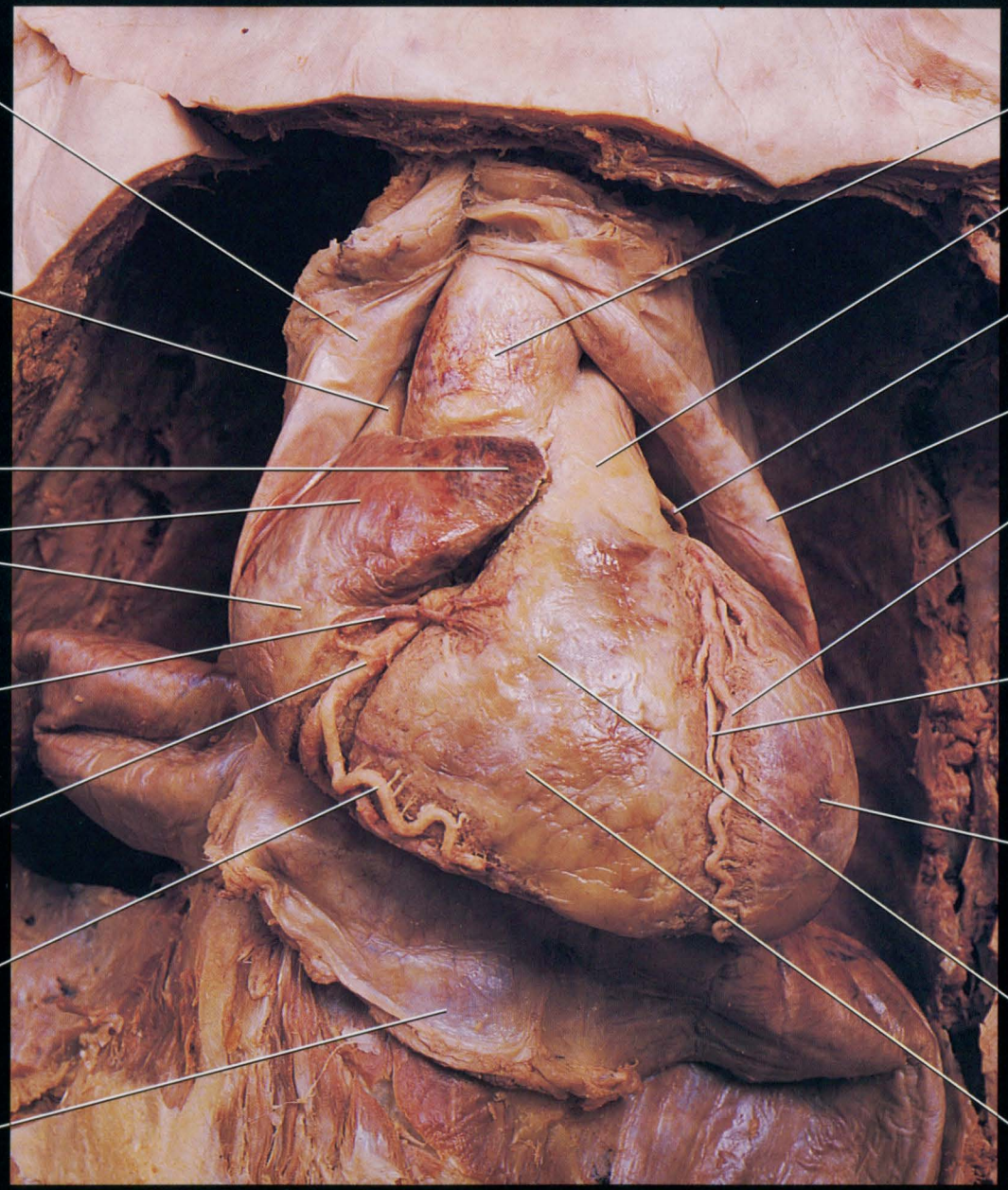


Figure 57 Heart and pericardium, anterior view.

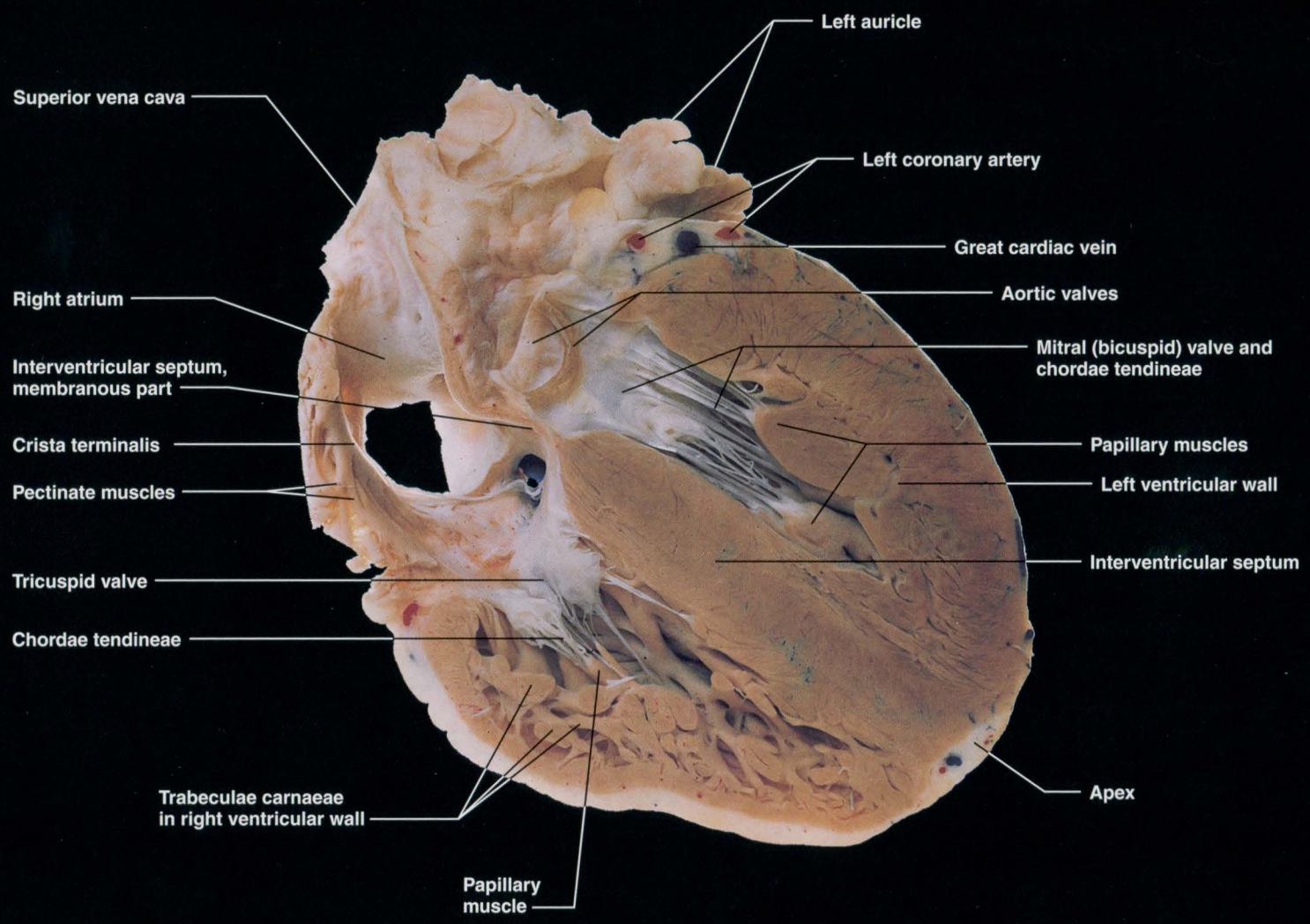


Figure 58 Coronal section of the ventricles, anterior view.

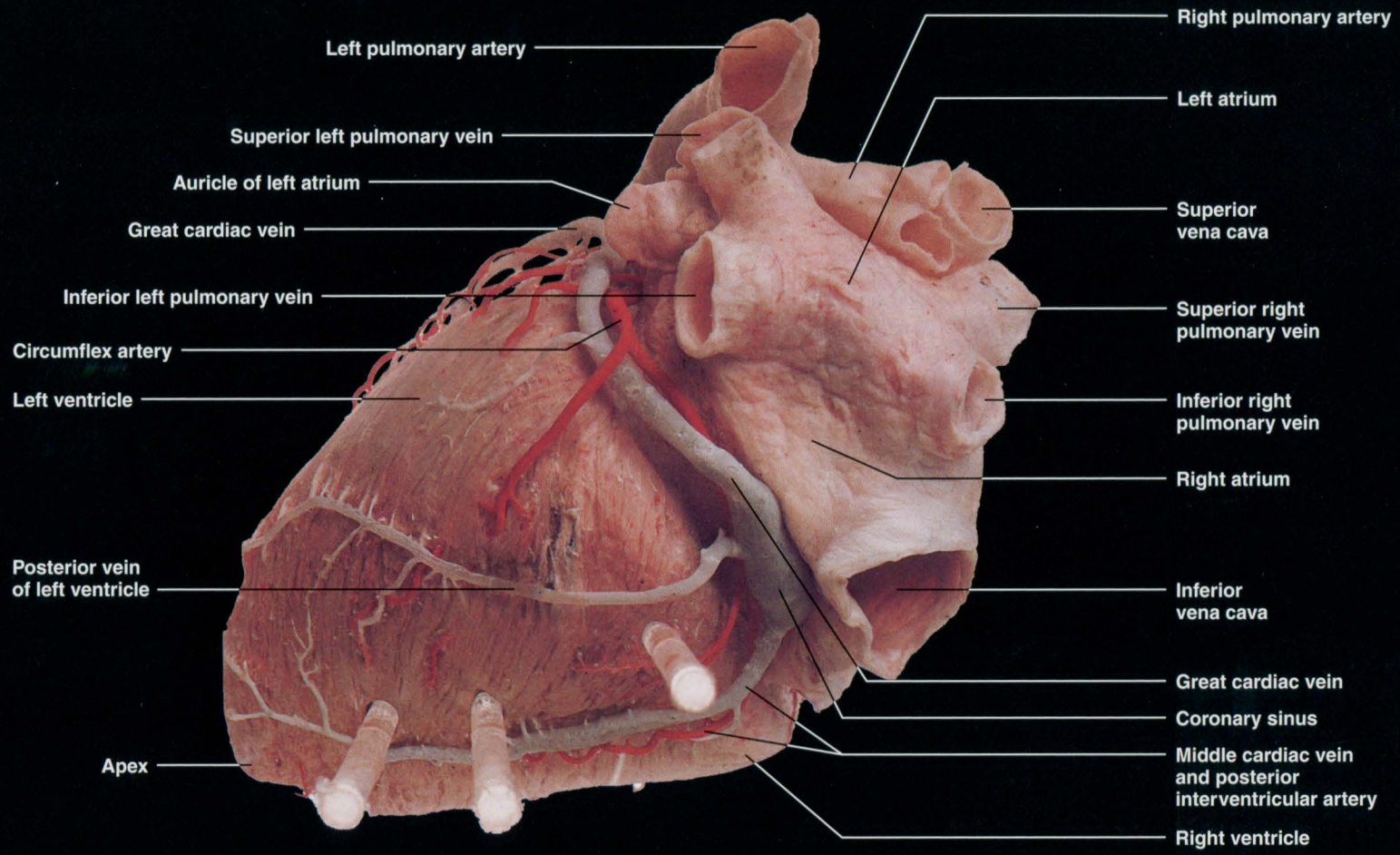
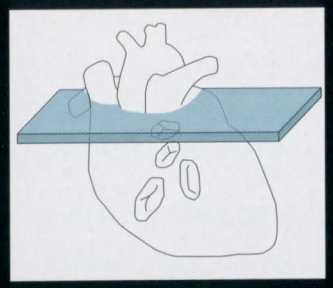


Figure 59 Heart, posterior view (blood vessels injected).



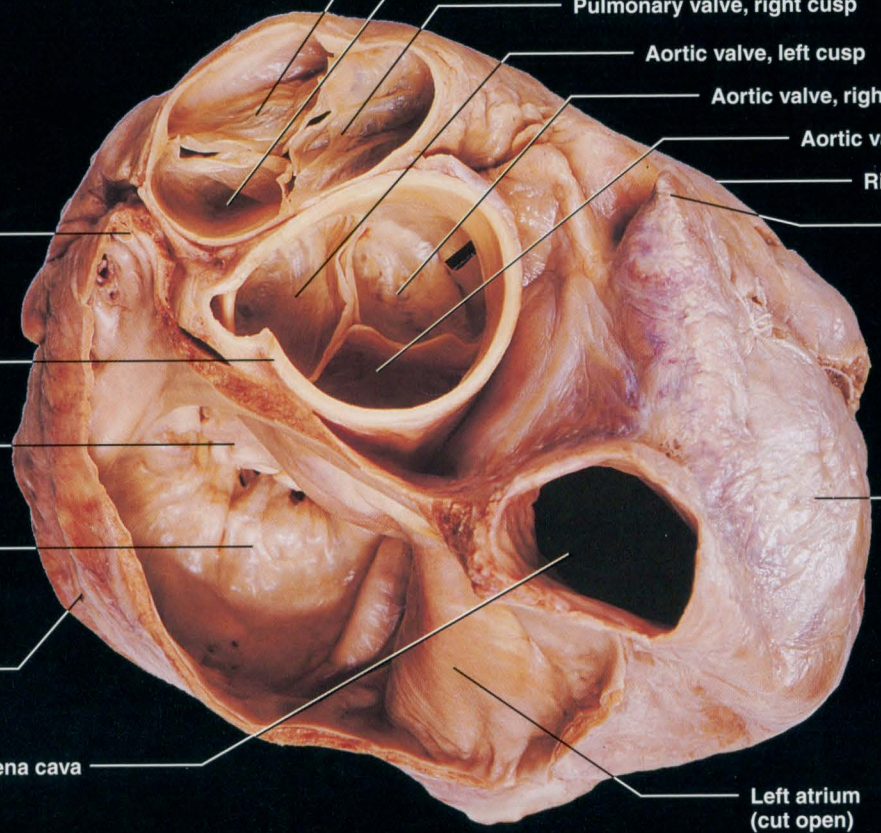
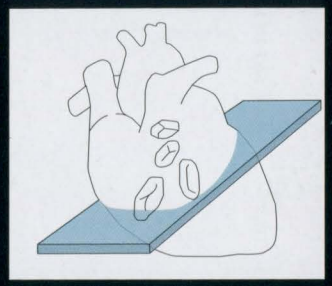


Figure 60 Pulmonary, aortic, and mitral valves of the heart, superior view.



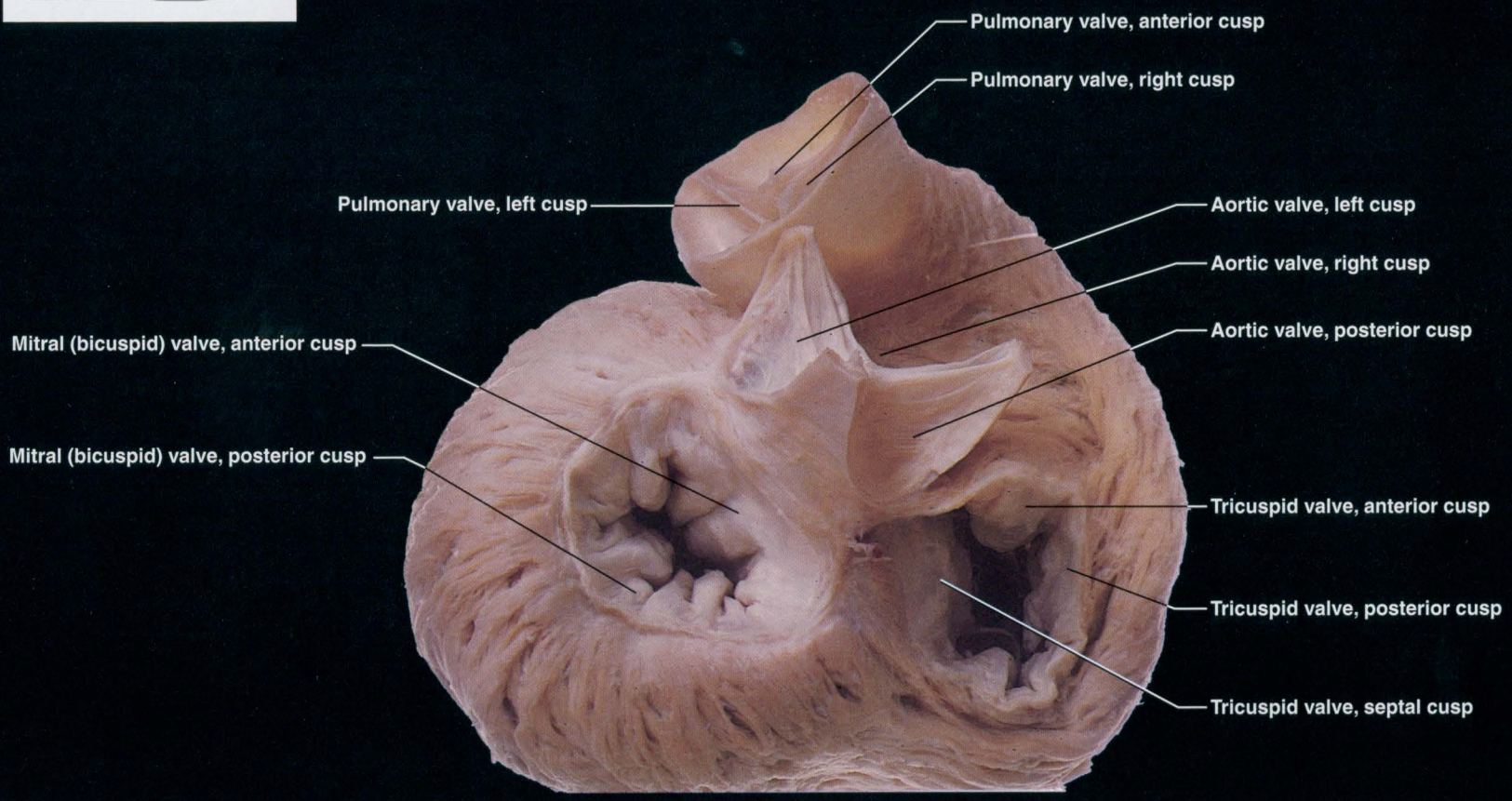
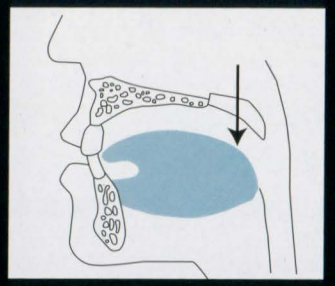


Figure 61 Fibrous framework of the heart (atria removed), posterior view, from the right.



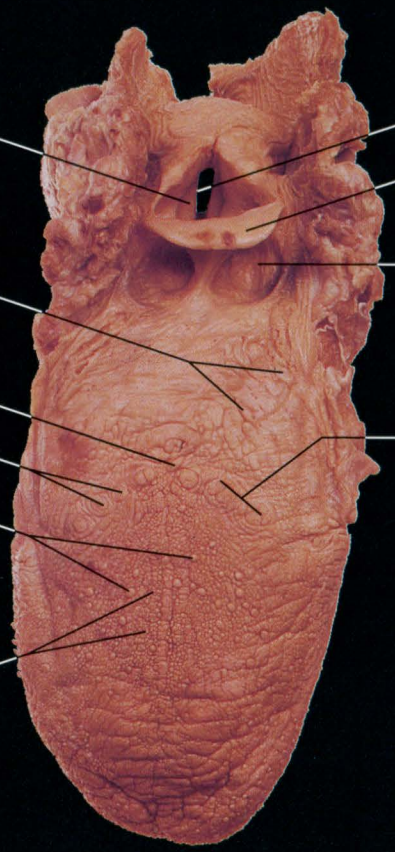


Figure 62 Tongue and laryngeal inlet.

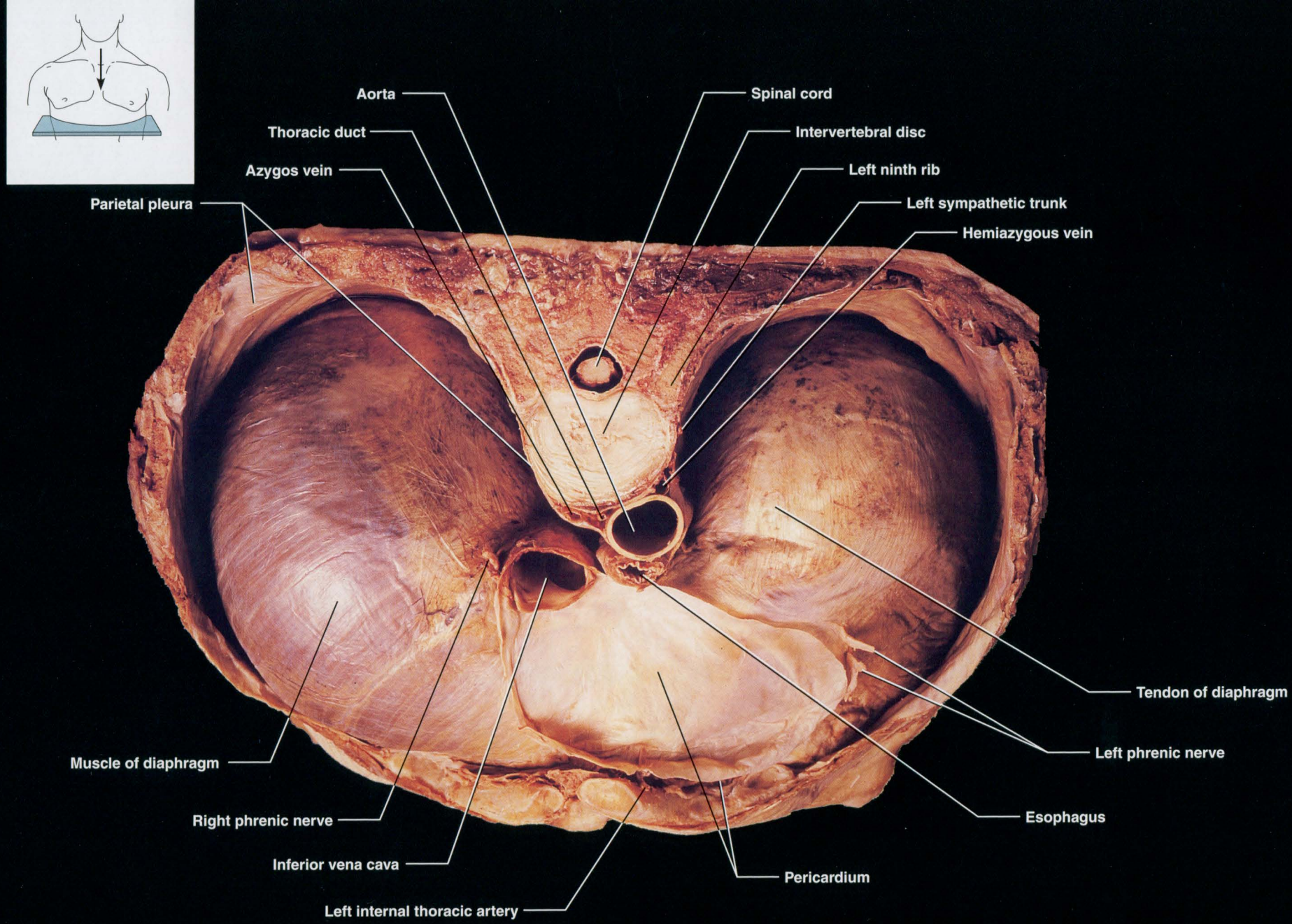
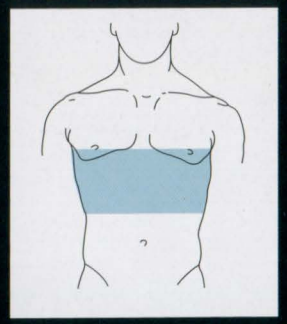
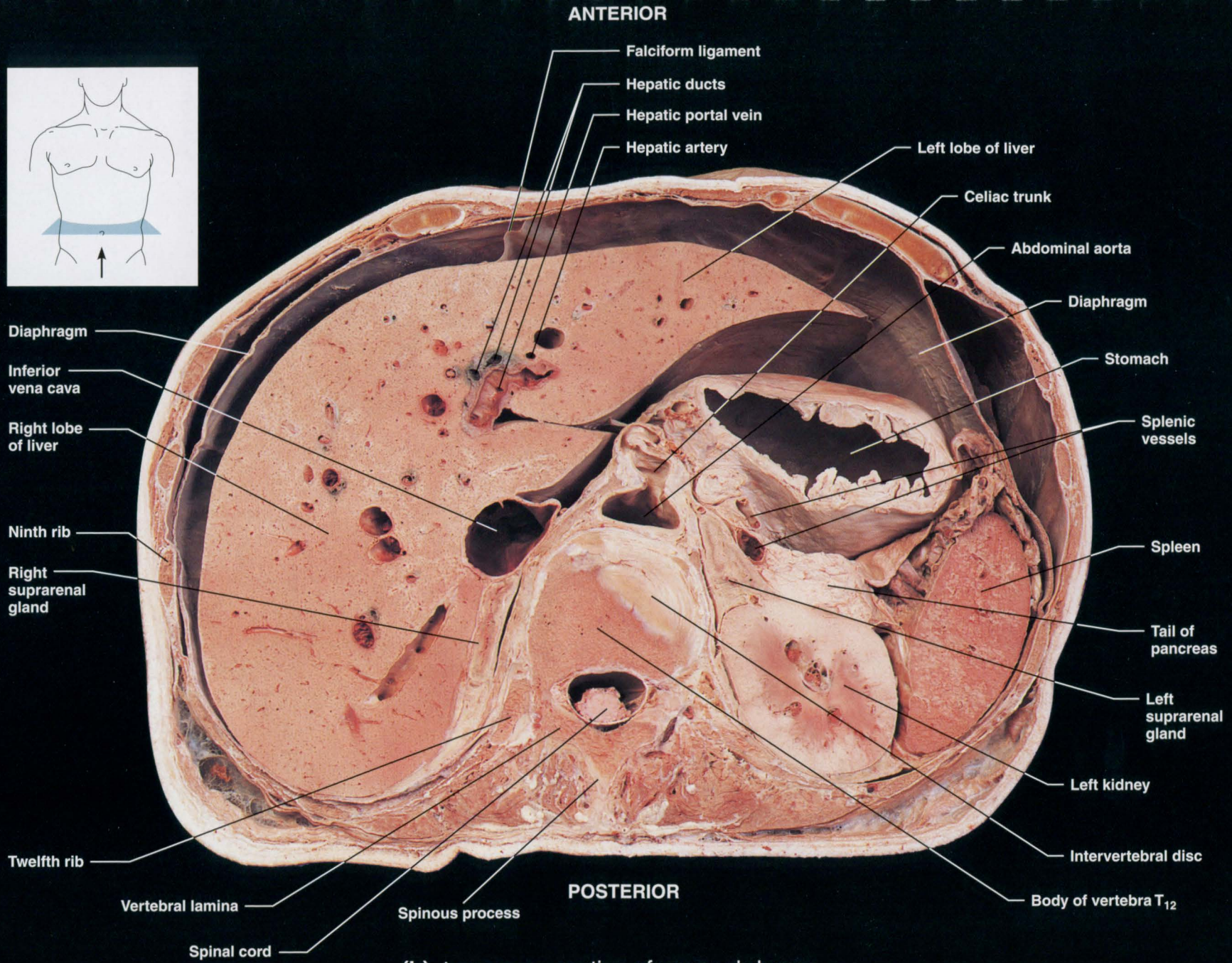


Figure 63 Diaphragm, superior view.

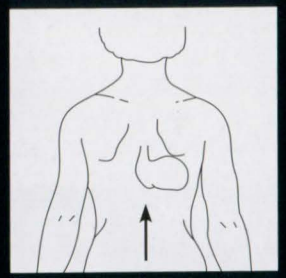


(a) upper abdominal viscera, anterior view



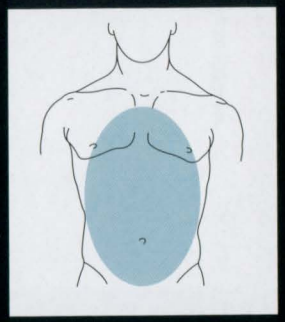
(b) transverse section of upper abdomen, from below, showing liver, stomach, and spleen *in situ*

Figure 64 Upper abdomen.



Left triangular ligament
Diaphragm
Inferior vena cava
Bare area
Caudate lobe
Porta hepatis
Right lobe
Ligamentum venosum in fissure
Left lobe
Hepatic artery
Hepatic portal vein
Common hepatic duct
Ligamentum teres in the falciform ligament
Quadrate lobe
Gallbladder

Figure 65 Liver, posteroinferior view.



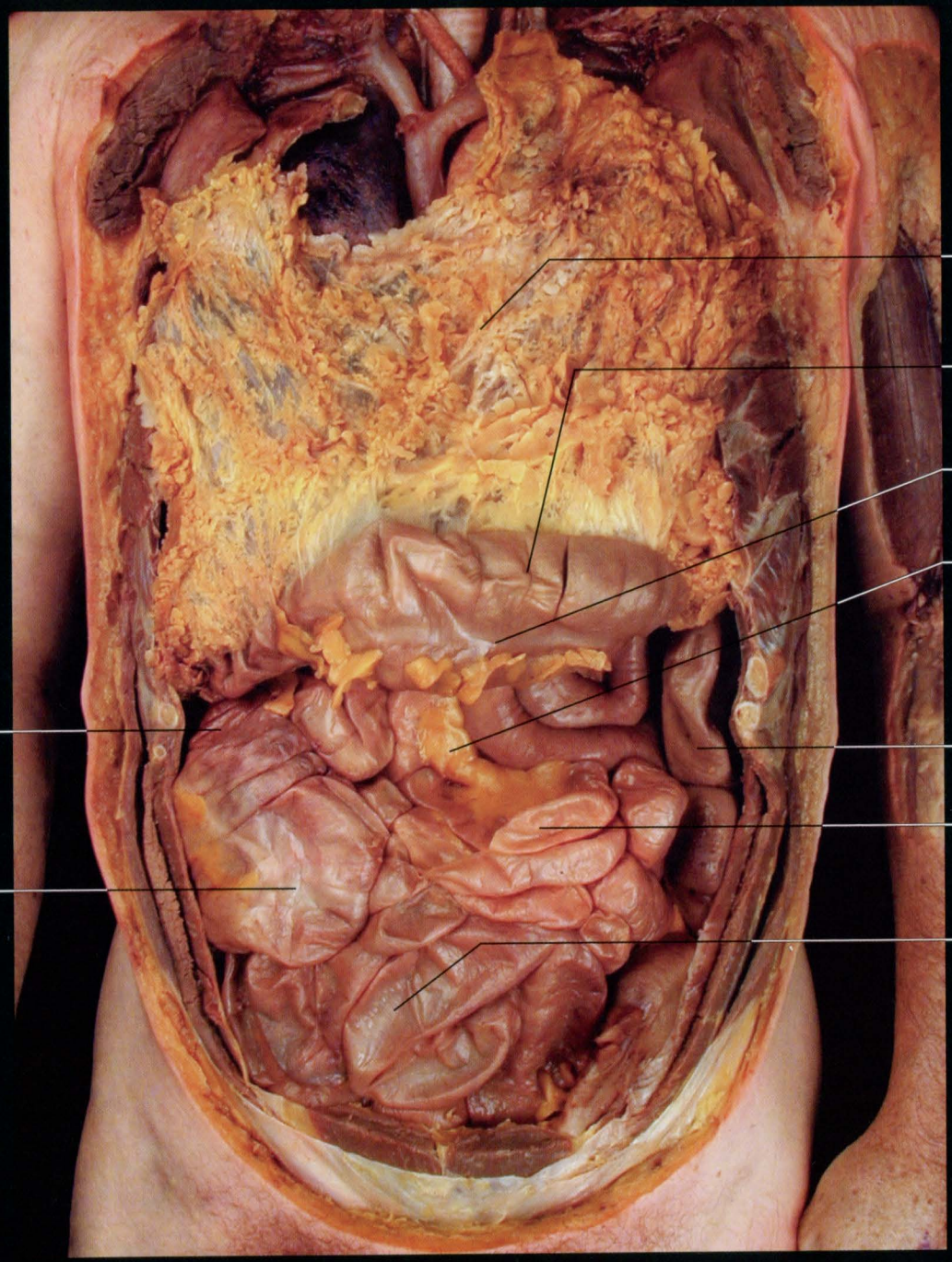
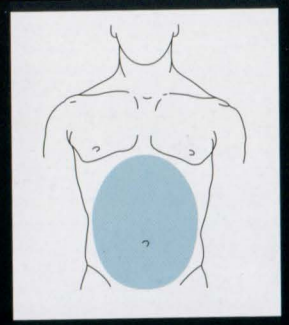


Figure 66 Lower abdominal organs.



Transverse colon

Transverse mesocolon

Ascending colon

Ileocecal junction

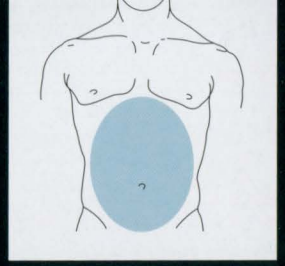
Descending colon

Mesentery

Ileum

Sigmoid colon

Figure 67 Small intestine and colon.



Hepatic portal vein

Superior mesenteric vein

Middle colic artery

Right colic artery

Ileocolic artery

Inferior mesenteric artery

Common hepatic artery

Left gastric artery

Celiac trunk

Splenic artery

Splenic vein

Superior mesenteric artery

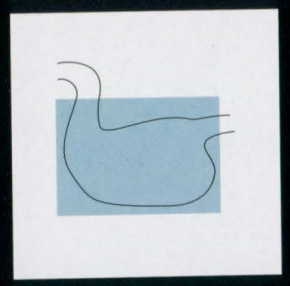
Intestinal arteries (cut)

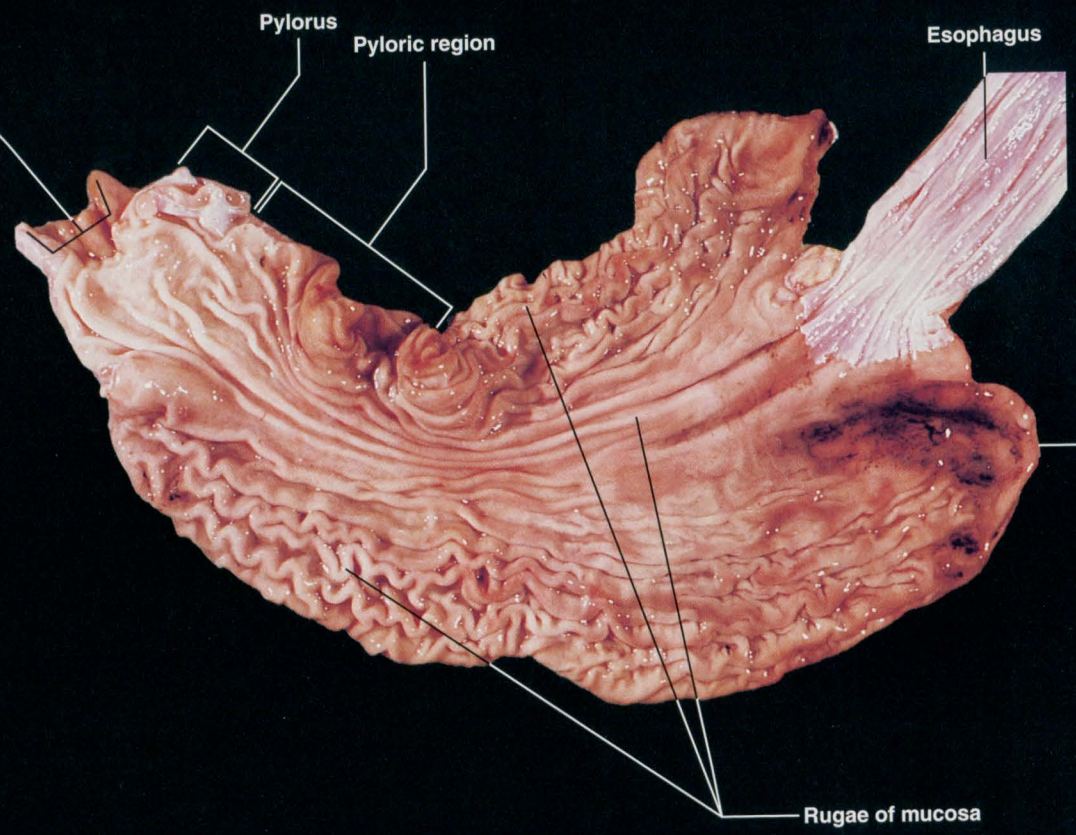
Inferior mesenteric vein

Left colic artery

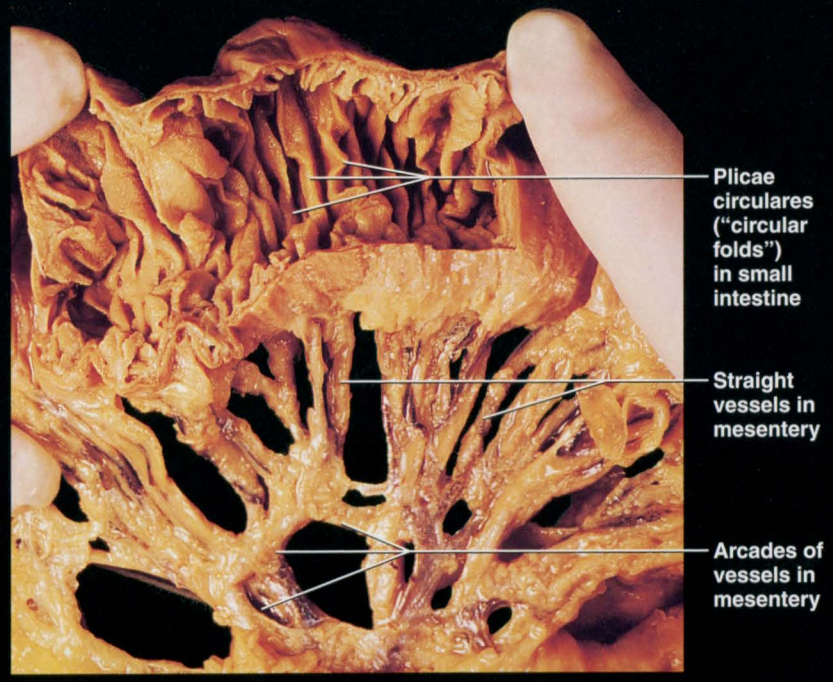
Sigmoidal artery

Figure 68 Vessels of the gastrointestinal organs.



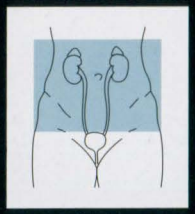


(a) frontal section of the internal surface of the stomach.



(b) small intestine, cut open to show plicae circulares

Figure 69 Internal surfaces of the stomach and small intestine.



Diaphragm
Hepatic vein
Inferior vena cava
Renal veins
Right testicular artery
Inferior mesenteric artery
Common iliac arteries
Common iliac veins
Right external iliac artery
Right internal iliac artery
Abdominal aorta
Celiac trunk
Superior mesenteric artery
Suprarenal (adrenal) gland
Left middle suprarenal artery
Kidney
Left renal arteries
Quadratus lumboreum
Psoas minor
Psoas major
Ureter
Urinary bladder

Figure 70 Retroperitoneal abdominal structures.

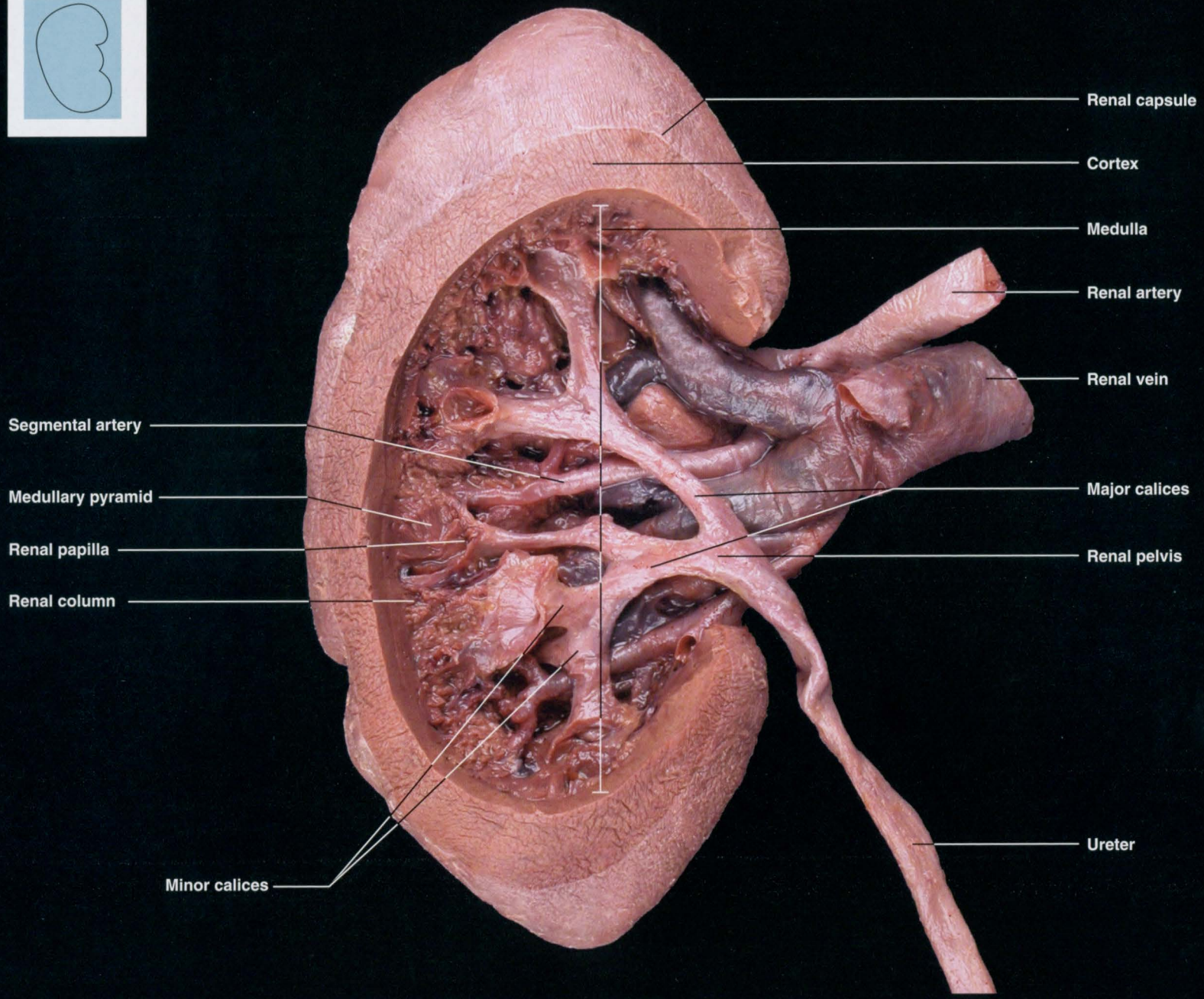
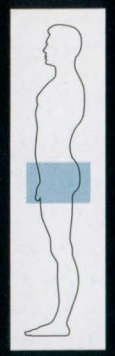


Figure 71 Kidney, internal structure in frontal section



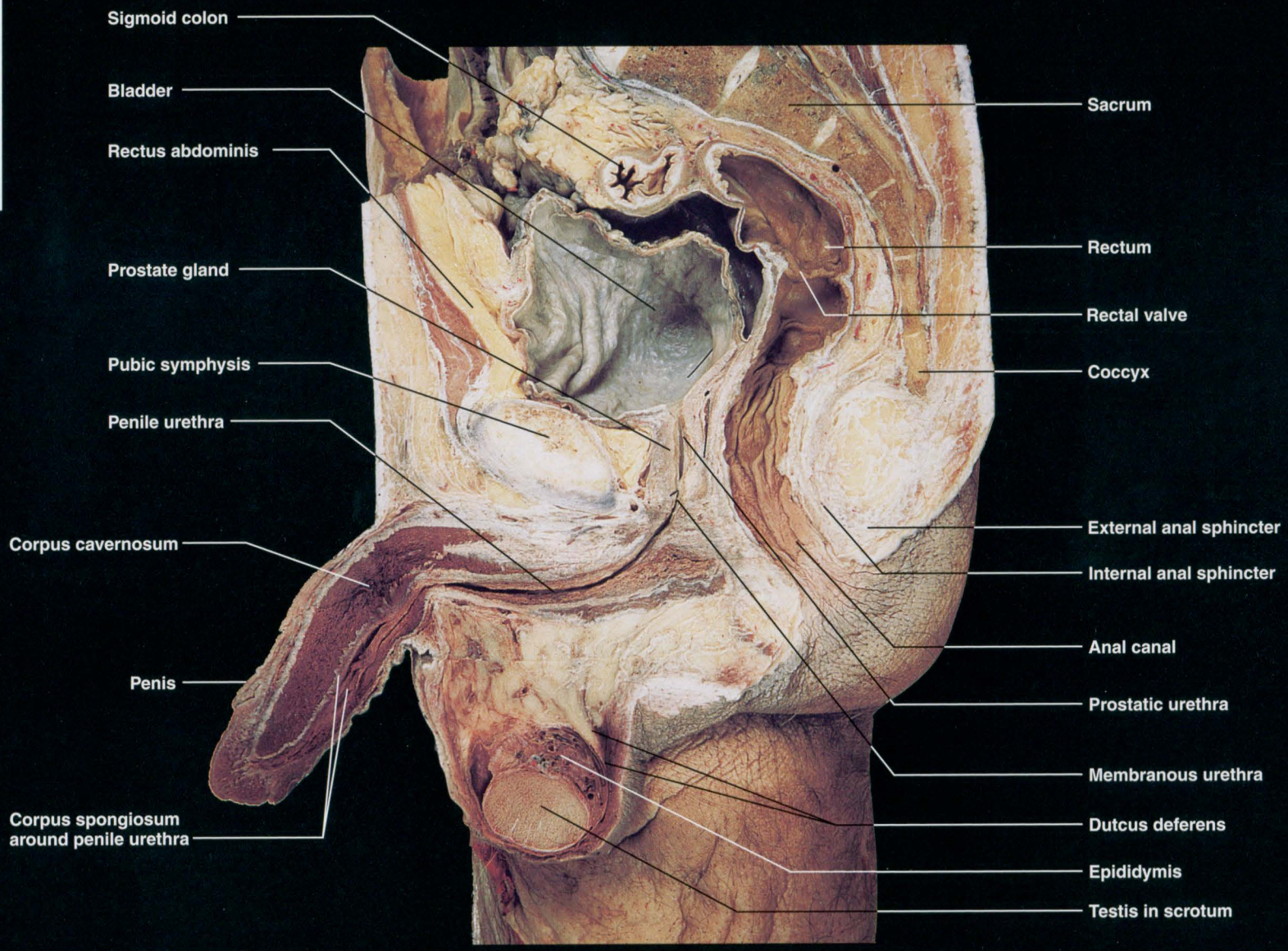
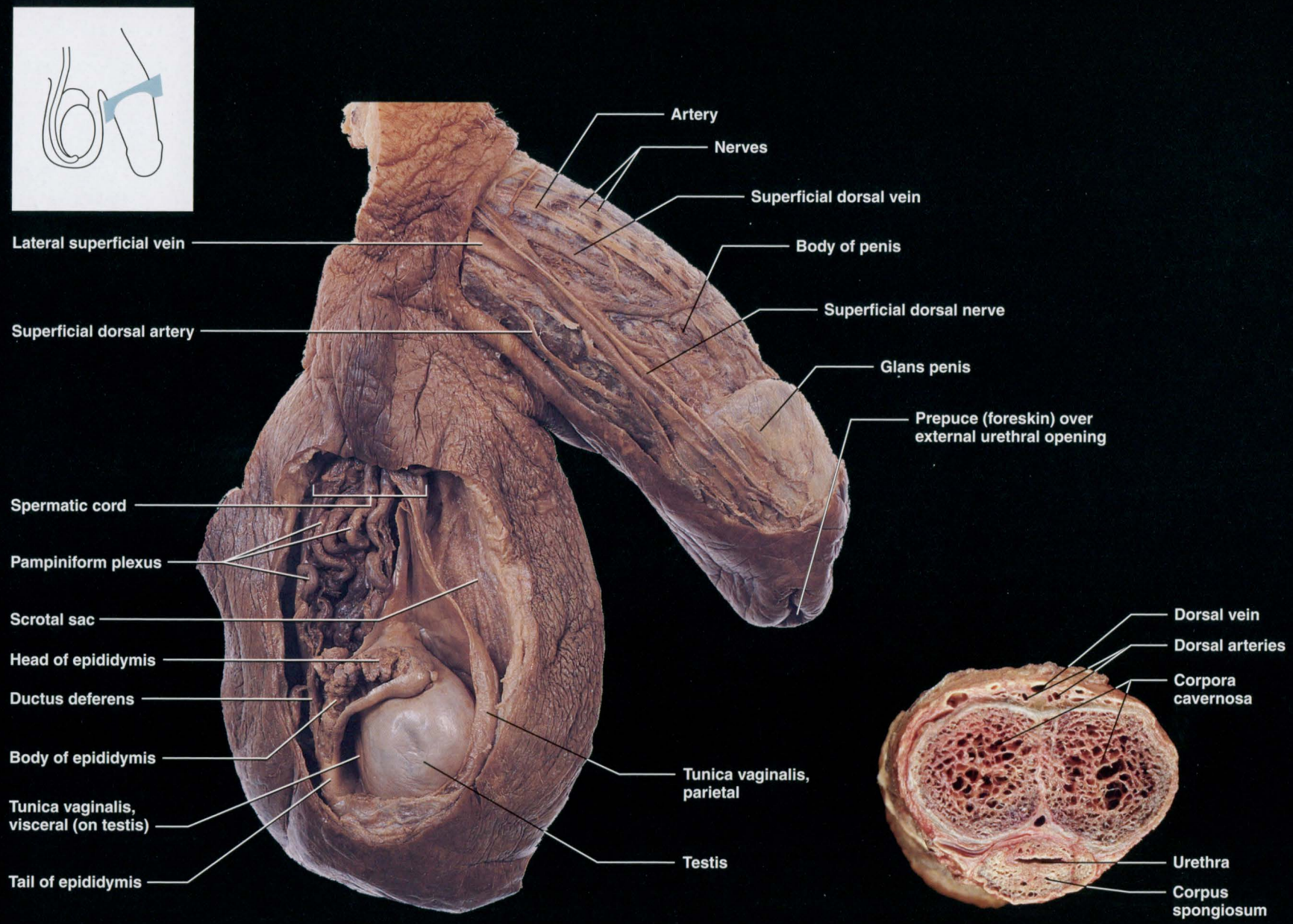


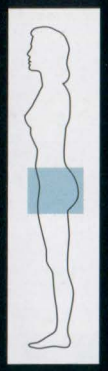
Figure 72 Male pelvis, sagittal section.



(a) section through right testis and epididymis, and the penis

(b) transverse section through penis

Figure 73 Sections through male reproductive structures.



Opening of uterine tube into lumen of uterus

Vesicouterine pouch

Pubic symphysis

Bladder

Urethra

Vagina

Labium minus

Labium majus

Posterior and anterior walls of uterus

Sacrum

Uterosacral ligament

Rectouterine pouch

Rectum

Coccyx

Cervix of uterus

Anus

Figure 74 Female pelvis, sagittal section (uterus points forward in this view).

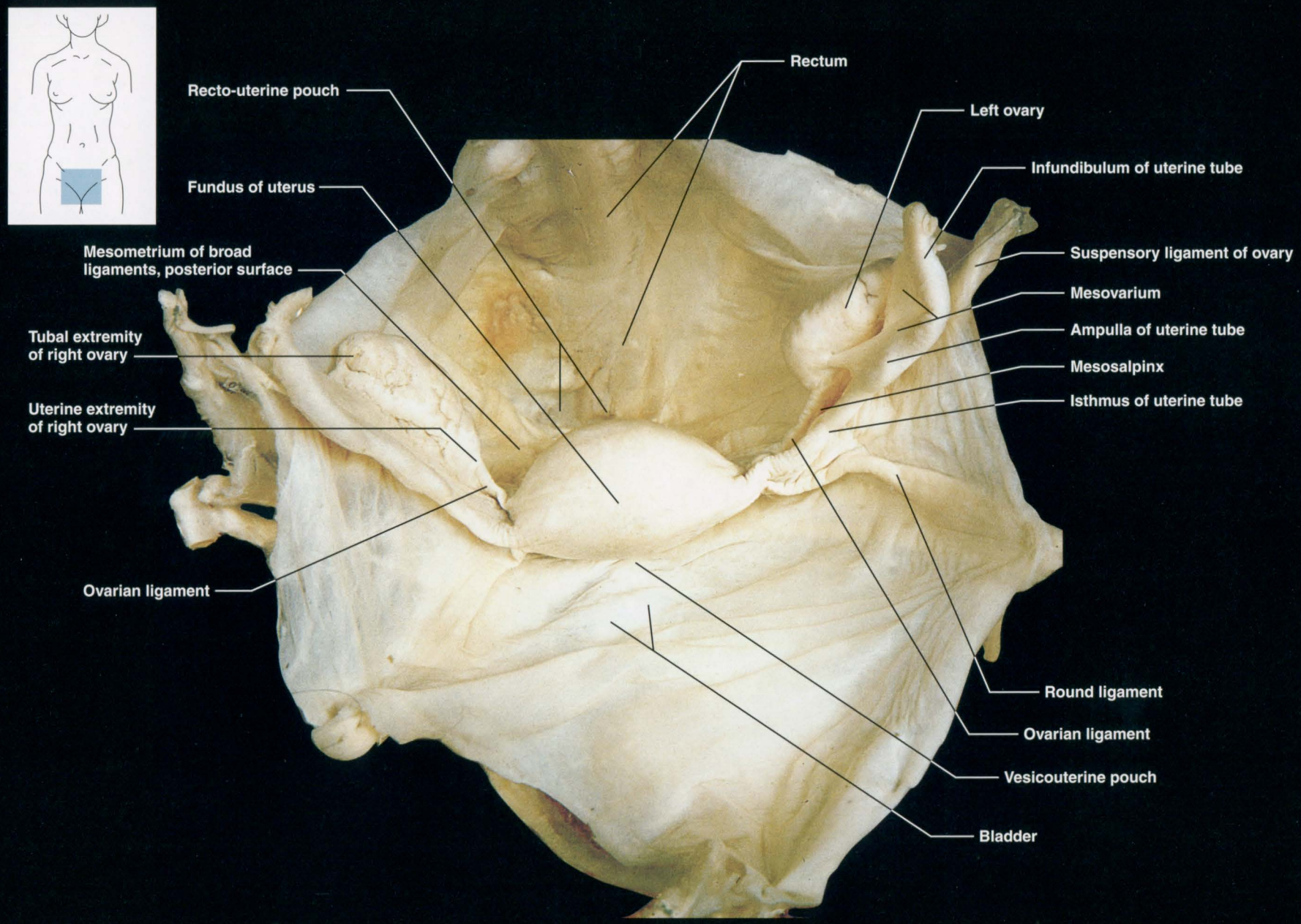


Figure 75 Female pelvic cavity showing the position of the uterus relative to other structures.

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101

ESSENTIAL TIPS

Breaks down the subject into 101 easy-to-grasp tips

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Yoga

101

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Yoga

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101 ESSENTIAL TIPS

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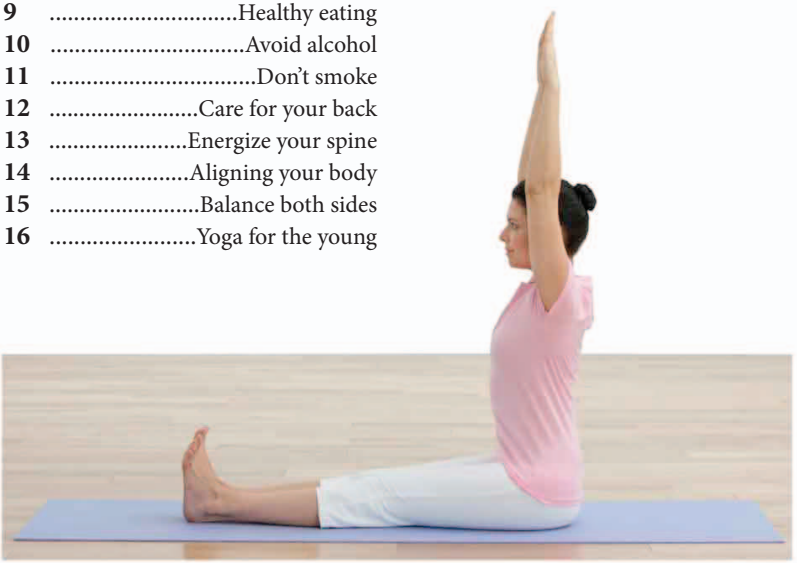

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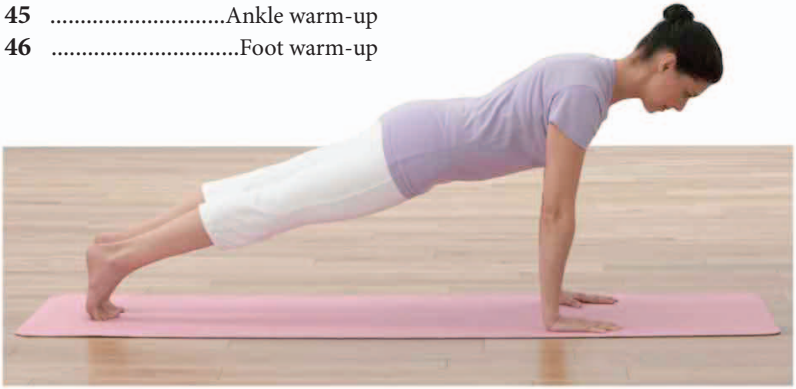

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YOGA & YOU

1 WHAT IS YOGA?

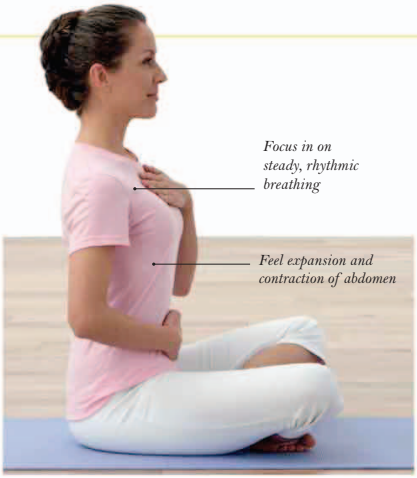
The word "yoga" means "union." Yoga is a form of exercise based on the belief that the body and breath are intimately connected with the mind. By controlling the breath and holding the body in steady poses, or asanas, yoga creates harmony. Yoga consists of five key elements: beneficial exercise, correct breathing, complete relaxation, balanced diet, and positive thinking. The asanas help ease tension, tone internal organs, and improve flexibility.

UNLEASHING YOUR POTENTIAL
Yoga helps create a flexible body coupled with a relaxed but focused mental state, able to tap into the full depths of its potential.

DIG DEEP
To maximize the benefits of yoga practice, hold postures steady for several breaths, reaching for a deeper stretch on each.

2 BENEFICIAL EXERCISE

The aim of yoga practice is to improve suppleness and strength. Each posture is performed slowly in fluid movements. Jerky movements should be avoided, because they produce a buildup of lactic acid, which causes fatigue. It is also important to take into account your existing fitness and stamina. Yoga postures can be modified to make them safe for people of all abilities.



3 CORRECT BREATHING

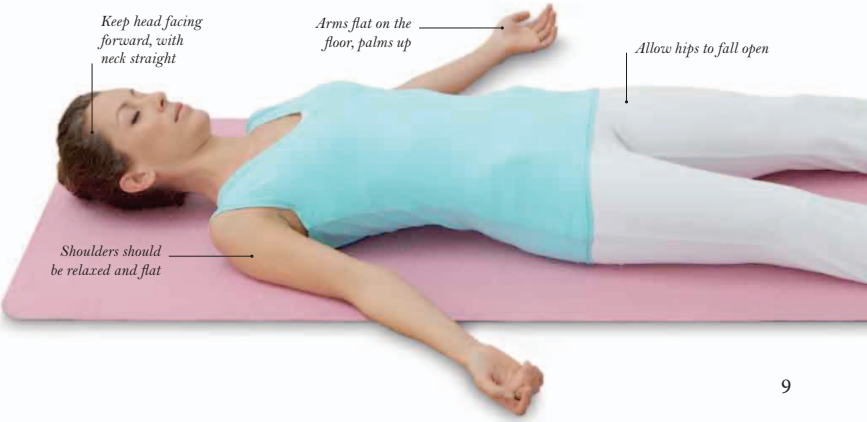
Yogic breathing techniques maximize oxygen levels in your blood. Correct breathing is achieved through proper execution of the asanas, so be aware of the position of your chest, ensuring that you are connecting to the movement of the diaphragm. Deep exhalations also force stale air from the lungs, and breath control facilitates the calming of, and greater ability to focus, the mind.

4 COMPLETE RELAXATION

It is most beneficial to begin and end each yoga session with relaxation. You should also take a little time to relax between asanas. Relaxation sequences apply pressure to those areas of the body that are tense, massaging them in a similar way to acupressure to release the tension held there.

ABSOLUTE MINIMUM

The yoga definition of true relaxation is the point at which the body consumes the minimum amount of energy required to exist.



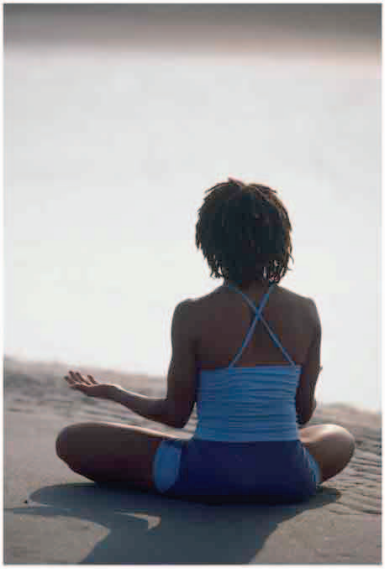
5 BALANCED DIET

The recommended yogic diet is very much in line with current ideas about healthy eating. It is a simple, wholesome vegetarian way of eating, comprised of natural foods that are easy to digest: fresh fruit and vegetables, dairy products, nuts, and legumes. It is also important to eat in moderation and only when hungry, taking time to chew food properly.

EATING HEALTHILY
As much as possible, make the healthy choice, by favoring natural fresh ingredients over processed and canned foods.

6 POSITIVE THINKING

In yoga, much importance is placed on the value of positive thinking in sustaining mental well-being. Through meditation and relaxation, yoga aims to clear the mind of negativity, while at the same time using positive affirmations to increase self-esteem. Some people think this is difficult to achieve, but practicing yoga will eventually bring you to a state of mental harmony and serenity.



TAPPING INTO CREATIVITY
By channeling your thoughts in a positive direction, you will be better able to unlock your creative potential.

7 INCREASING VITALITY

Left unchecked, toxins build up in the body, leading to lethargy. Many yoga postures massage the internal organs that are involved in the elimination of waste products. This helps flush out toxins, thereby increasing vital nourishment to the organs and making your body function far more efficiently.

8 NURTURING THE NERVOUS SYSTEM

Practicing yoga can help the nervous system release blocked energy channels and activate healing. Postures that twist or bend the neck are particularly effective for putting the body into a restorative, healing mode. This state is also activated through the relaxation brought about by yogic breathing techniques.

9 HEALTHY EATING

Consuming the right foods is an important part of bringing the mind and body into harmony. Foods that are beneficial to us are said to be Sattvic, or pure. Impure foods that can upset our physical, emotional, or intellectual balance are identified as being in the categories Tamasic (stale or rotten) and Rajasic (stimulating); foods that fall into these categories should be avoided by those following the yogic philosophy.

Clockwise from top: Sattvic, Rajasic, and Tamasic

FOODS TO EAT
Sattvic foods include the following: grains; fresh fruit and vegetables; natural fruit juices; dairy products such as milk, cheese, and butter; beans, nuts, and legumes; honey; and pure water.

FOODS TO AVOID
Tamasic foods include: meat and fish; mushrooms; and products that have been frozen, preserved, or canned. Rajasic items include: onions and garlic; tobacco; eggs; coffee and tea; strong spices; and chocolate.

10 AVOID ALCOHOL

Alcohol contains fermented products, introducing toxins into the body and overexciting the mind. Consequently, it is both Tamasic and Rajasic. Improve your mental clarity and physical well-being by avoiding alcohol.

Remove all alcohol from your diet

11 DON'T SMOKE

Tobacco is another product that is both Rajasic and Tamasic. By giving up smoking you will eliminate toxins from your body, helping you achieve a calm mind and body.

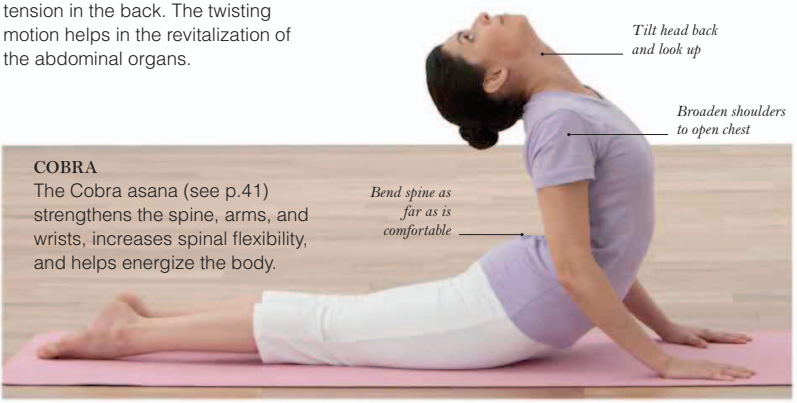
Say no to cigarettes

12 CARE FOR YOUR BACK

Yoga postures flex and extend each section of the spine to help it regain its inherent flexibility. Each of the vertebrae goes through the full range of movement in all directions, although to varying degrees depending on the pose. The increased mobility of the intervertebral disks reduces injuries, since there is less strain on movement. The postures work on toning and strengthening the muscles that support the back, giving additional support to the spine.

HALF SPINAL TWIST
The benefits of this pose (see p.39) include strengthening of the back and thighs, as well as improving your posture.

EASY FLOOR TWIST
This posture (see p.57) helps relieve tension in the back. The twisting motion helps in the revitalization of the abdominal organs.

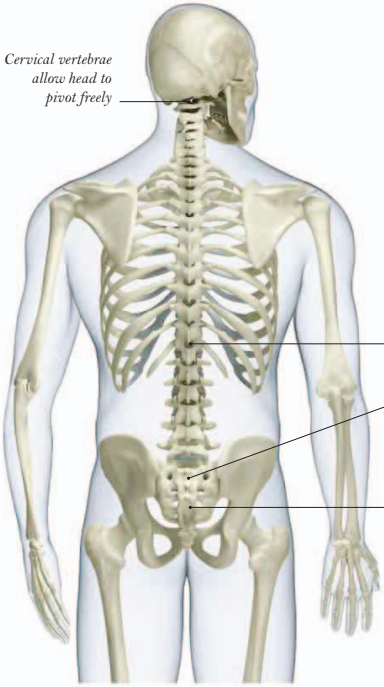


COBRA
The Cobra asana (see p.41) strengthens the spine, arms, and wrists, increases spinal flexibility, and helps energize the body.

13 ENERGIZE YOUR SPINE

Yoga asanas flex and extend different sections of the spine to varying degrees in order to develop spinal flexibility. The poses that offer the most obvious benefits for the spine include back and forward bends and twists. Such postures help maintain and restore the spine's support network, such as the ligaments that bind vertebrae together, spinal joints, and the disks between the vertebrae, as well as the surrounding muscles.

CORRECTING CURVATURE
Yoga poses help correct any abnormal curvatures of the spine that may have developed through poor posture.



NOURISHING THE SPINAL CORD
A flexible spine nourishes the cerebrospinal fluid that surrounds the spinal cord and allows *prana*, or vital energy, to flow freely throughout the body.

14 ALIGNING YOUR BODY

The cornerstone of yoga is learning to hold your body in line. Consider the body as a single unit that is segmented into eight parts—head, torso, arms, forearms, hands, thighs, legs, and feet—and remember that the straight line can be horizontal, vertical, or angled, depending on the particular yoga posture you are attempting.

INTERNAL MIRROR
Try to create a mind-map, or "internal mirror," of your body. Use this to realign the body by working slowly up, from the toes to the head. Make tiny adjustments until you feel grounded and centered. Become aware of your breathing pattern as you ease into correct alignment.

MOUNTAIN POSE
This yoga exercise (see p.30) is perfect for helping achieve spinal alignment, as well as for improving your posture.

15 BALANCE BOTH SIDES

In everyday life, many activities work or emphasize one part or side of the body. However, for balance and harmony, it is important to keep all body parts equally strong. That is why in yoga the same exercises are repeated on both sides of the body.

16 YOGA FOR THE YOUNG

For children, yoga is a great way to develop self-awareness, self-control, and powers of concentration. If you have kids, encourage them to join you in your yoga practice. They are likely to be flexible even if they lack stamina. However, the latter will increase with regular sessions.

COPYCAT KIDS
Children have a natural curiosity and desire to mimic, so they will probably be intrigued enough by your yoga to want to join in.

17 YOGA FOR THE PREGNANT

Practicing yoga during the prenatal period can be a valuable learning experience. Also, it can help ease your pregnancy, as well as the delivery. Work slowly and gently, allowing the poses to relax and strengthen the body and to help it adjust to the changes that are happening within. However, talk to your instructor about which poses should not be attempted while pregnant.

... AND BREATHE
Yogic breathing exercises—always important—come into their own during pregnancy, helping you make the most of your breath.

18 YOGA FOR THE ELDERLY

There is no age limit for yoga, in part because it is noncompetitive and you work at your own pace. Done correctly, there is no risk of injury, and regular practice helps maintain good health and mobility. Additionally, yoga stimulates circulation and reduces the effects of arthritis.

Don't let advancing years deter you

19 YOGA FOR STRESS

Many yoga asanas help relieve stress by releasing tension that has built up in your body. Breathing exercises and meditation are also helpful, since they relax the body and calm the mind. Mental tranquillity can be further encouraged by avoiding stimulants.

20 YOGA FOR RELAXATION

Just as relaxing the body and mind helps get you ready for your yoga practice, your regular sessions make it easier for you to maintain a relaxed state in general—and easier to achieve that relaxed state when you are feeling the stresses and strains of daily life. The warm-up exercises on pp.26–29 are a great start, but see also the poses in Chapter 5, as well as the cool-down relaxation on pp.64–65.

Yoga helps you connect to yourself

21 WHEN TO PRACTICE YOGA

Because yoga should be practiced on an empty stomach, early mornings or evenings tend to be the best times, but you need to consider what suits you best. Morning practice awakens the body and eases stiffness by lubricating the joints and energizing the muscles. Digestion is stimulated and mental alertness is increased, ready for a productive day. Conversely, evening yoga can help counter the stresses of the day, improving the quality of your sleep. Whichever you choose, setting aside a regular time is good for establishing a routine.

22 WHERE TO PRACTICE YOGA

You don't need a special room or fancy equipment for yoga, but there are some things to consider when choosing a practice place. Ideally, opt for a private area away from distractions. If that area is spacious, even better, since this can have a positive effect on the mind and, therefore, help you relax. Try to personalize the space, too, because this can also calm the mind.

LIGHT AND AIRY
Ideally your space should be lit by natural light and have some form of ventilation. The floor should be level, firm, and nonslip.

OPEN-AIR YOGA
If you are lucky enough to be near a quiet, flat open space, take advantage of it. Lay down your mat, and greet the day with open-air yoga.

23 YOGA CLASSES

Regardless of how small or large your class, it is always best to have your yoga practice supervised by a qualified teacher at least until you are confident. This is the only way to learn how to ease your body correctly into and out of the asanas, as well as how to breathe correctly when holding a pose. Your teacher will also make sure you do not strain your limbs.

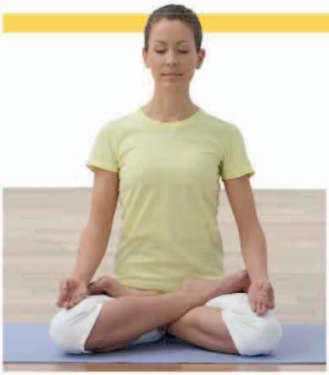
EXPERT HELP
Get your yoga practice off to the best possible start by taking classes. They will also help you improve your technique and build your confidence.

24 YOGA AT HOME

Yoga's portability means that, once you have some experience, you will be able to practice the postures in the comfort of your own home. Indeed, your teacher may even suggest that you work at home with some of the simpler asanas or with the relaxation techniques.

MINIMAL REQUIREMENTS
With just yourself and a mat (or a comfortable floor), it is perfectly possible to practice yoga at home.

GETTING STARTED



25 KNOW YOUR BODY

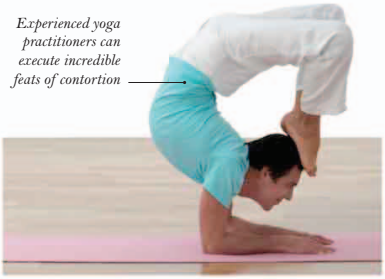
Before you undertake any yoga practice, first take the time to understand your body, bearing in mind any factors that might affect its performance, such as recent surgery, pregnancy, or medical conditions.

CHECK FOR TENSION

While in an asana, check for any tension and try to relax it with your breathing.

26 UNDERSTAND YOUR LIMITS

It is important to know what your body's limits are and not to force yourself to go beyond them. There is no rush; yoga is completely noncompetitive. Continue your regular yoga sessions and you will find your body becomes more flexible with time.



Experienced yoga practitioners can execute incredible feats of contortion

27 CONSULT A DOCTOR

Regardless of age, yoga is perfectly appropriate for everyone. Nevertheless, as with any physical exercise, if you have any medical concerns or conditions, it is a good idea to check with your doctor before beginning a class.

Your doctor may check your blood pressure

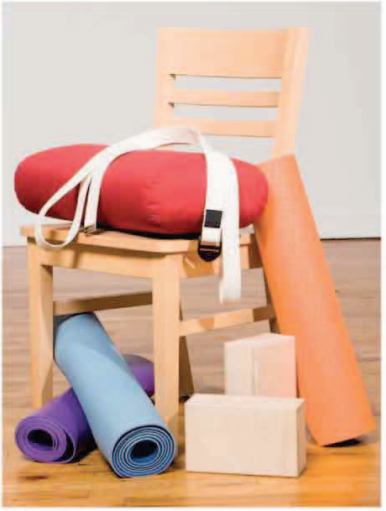
28 ESSENTIAL EQUIPMENT

Yoga equipment will keep you safer and more comfortable while you practice. Some pieces, such as blocks and straps, can also be used to help you achieve poses that would otherwise be beyond your capabilities, as you continue to work on expanding your level of flexibility. Props and supports can also extend the time you can hold a pose with proper body alignment.

YOGA KIT CHECKLIST

The equipment you are most likely to need or find useful in your yoga practice comprises:

- Slip-resistant mat
- Block, usually foam
- Strap or belt
- Cushion
- Towel

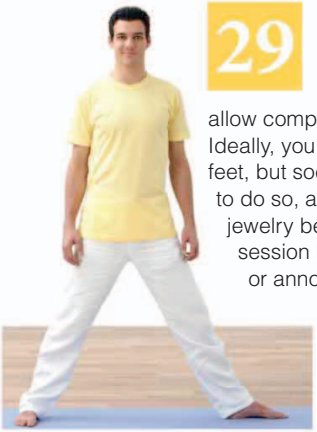


INEXPENSIVE PASTIME

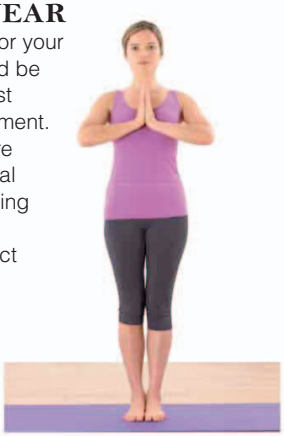
Most yoga teachers will have equipment for use in classes, but it is all affordable enough to make it worth investing in your own.

29 WHAT TO WEAR

Whatever you wear for your yoga sessions should be comfortable and must allow complete freedom of movement. Ideally, you would practice in bare feet, but socks are fine. If practical to do so, also remove any dangling jewelry before beginning your session because it may distract or annoy you.



Lightweight, loose-fitting clothes



Tight, stretch-material clothes

30 PLAN YOUR SESSIONS

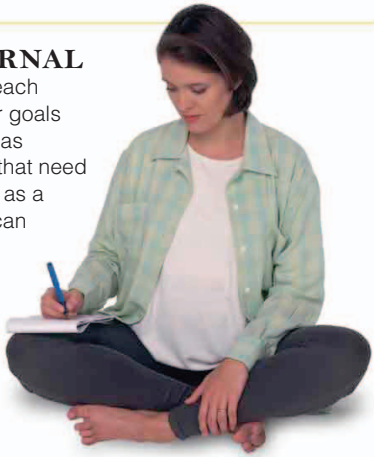
More experienced yoga practitioners working alone may find it useful to create a plan in advance of each session, or to work out the sequence of asanas. This will save time because you don't have to choose between postures during the session.

SAMPLE WORKOUT

1. *Mountain Pose*
2. *Triangle Pose*
3. *Warrior 2*
4. *Extended Side Stretch*
5. *Downward-Facing Dog*
6. *Warrior*
7. *Warrior Lunge*
8. *Cobra*
9. *Cat Balance*
10. *Plank*
11. *Child's Pose*
12. *Cobbler*
13. *Corpse Pose*

31 KEEP A YOGA JOURNAL

Writing in a yoga journal after each session will help you track your goals and accomplishments, as well as allowing you to identify any problem areas that need more attention. A yoga journal can also act as a means of reinforcing your practice so you can more easily tailor it to your own needs.



SET YOUR GOALS

Although yoga is not a competitive pursuit, it can be fun and rewarding to set your own goals in a yoga journal.

32 MONITOR YOUR PROGRESS

It's important when practicing any discipline to have a way of tracking progress. As well as keeping a yoga journal, a good method of self-assessment is to listen to your body. This requires practice and concentration, but once you are attuned to your body, you will be able to identify the benefits of your practice.

REFLECT FOR A MOMENT

Take time to reflect on your progress. This will help you build a firm foundation for your future yoga sessions.

33 SIMPLIFY POSES

When you first start yoga, you will almost certainly experience some stiffness and soreness in the joints. This shows you are working areas that may have been neglected. Building flexibility in these parts requires patience and commitment. If you find a specific pose hard, practice a modified version until you can progress.

Use props such as walls and blankets to modify difficult poses

34 USING PROPS FOR STANDING POSITIONS

Forward bends and other standing postures may be beyond your reach to perform correctly when you first attempt them. Blocks or other means of support—a chair, for example—can be used to modify the posture so that increased flexibility can be gradually attained without injuring yourself.

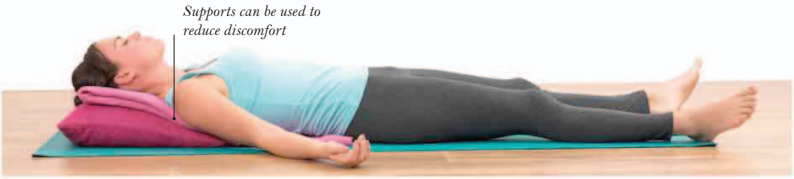
Using a block to support the head

Using a chair for additional support

35 USING PROPS FOR FLOOR POSES

By using a strap or a belt, you can start working toward achieving a posture that would otherwise be impossible for you when you first begin to practice yoga. When lying down, cushions and blankets can help provide the comfort you need in order to relax fully.

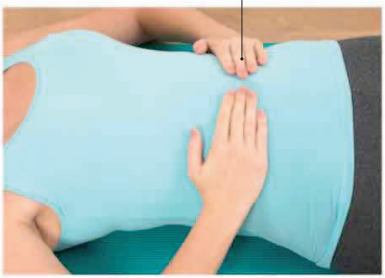
Using a strap



Using a cushion and a folded blanket

36 ABDOMINAL BREATHING

It is important to learn how to breathe efficiently for yoga. Lying on your back, place your hands on either side of your navel. Feel how the abdomen expands as you inhale and contracts as you exhale. By breathing slowly and deeply, you are able to take air into the lowest parts of your lungs, while also exercising your diaphragm.



Inhalation

Exhalation

37 HOW TO INHALE & EXHALE

Inhalation can be used to lengthen and expand within an asana, while exhalation helps release deeper into the pose. Careful and progressive work within postures will allow for a full, easy-flowing breath, which is a crucial indicator of how well the asana is being executed. In this respect, the breath and asana practice must work together.

Inhalation

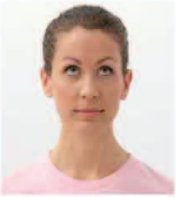
Exhalation

38 THE IMPORTANCE OF WARMING UP

Before beginning a yoga session, make sure you are fully warmed up. Carry out the exercises shown in Tips 39–46. You should also take some time to practice your breathing techniques (see Tips 36 and 37). Mastering breath control will allow you to breathe more deeply, enable you to position yourself correctly in the yoga asanas, and assist you in holding the poses.

39 EYE WARM-UP

This series of exercises is purely for the eyes, so be sure not to move the head or neck while doing them. Look up (below left). Look right (below middle left). Look up diagonally to the right (middle right). Look down (right). Repeat the sequence, this time looking to the left side and up diagonally to the left. Hold each position for a few seconds.



Looking up

Looking right

Looking up and right

Looking down

40 NECK WARM-UP

Sit upright with your back straight. Slowly tilt your head forward, and then backward. Then tilt your head to the right, before repeating the same to the left. Finally, rotate your head 90 degrees to the right and then again to the left side. Hold each position for a few seconds. Never move your neck beyond what is comfortable.

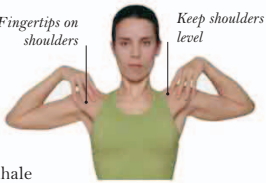
Tilting head forward

Rotating head to the right

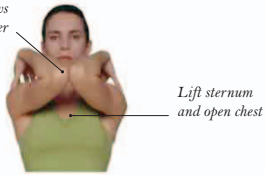
Tilting head to the right

41 SHOULDER WARM-UP

Stand upright with your fingertips on your shoulders and your elbows out to the side. Inhale, bringing your elbows in front of you so they touch. Exhale, lifting the elbows up and apart, stretching them up. Finally, lower the elbows down. Repeat ten times.

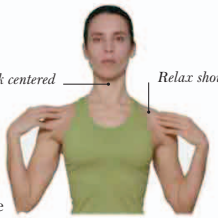


Exhale



Inhale

Exhale



Inhale

42 TORSO WARM-UP

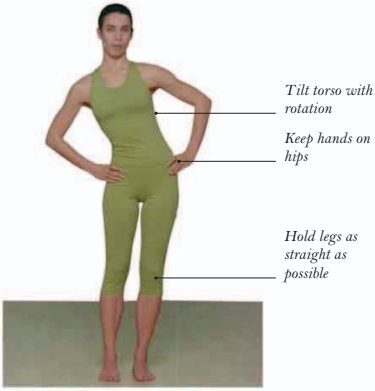
Start by standing with your feet hip-width apart and your palms resting on your hips. Gently and rhythmically, twist your upper body side to side, rotating at the hips, waist, and spine. Perform ten twists on each side, also allowing your head and shoulders to go with the movement.

Twisting to the right

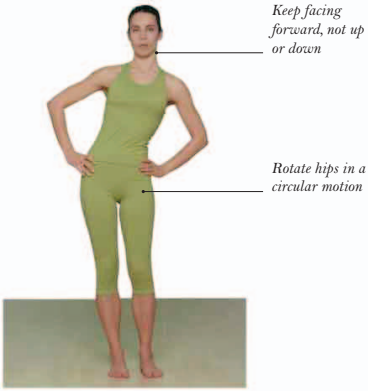
Twisting to the left

43 HIP WARM-UP

Start by standing with your feet hip-width apart, and put your hands on your hips. Keeping your legs straight and kneecaps pulled up, rotate the hips in a circle, ten times clockwise and ten times counterclockwise. Make sure you engage the hips and upper body in the roll.



Rotating the hips clockwise



Rotating the hips counterclockwise

44 KNEE WARM-UP

Stand with your feet together and with your legs slightly bent at the knees. Bring your hands to rest lightly on your kneecaps, with fingers pointing downward. Rotate your knees gently in a circular motion, ten times in each direction, keeping your feet firmly rooted to the ground.

Rotating the knees clockwise

Rotating the knees counterclockwise

45 ANKLE WARM-UP

From a standing position, lift your right leg slightly, keeping the left leg firm. Balance yourself, then gently swing the right leg, toes pointing down. Hold for a few breaths before switching legs. Follow this by gently rotating the right foot at the ankle—first one way, then the other. Repeat with the left foot.

Leg swinging, with toes pointing down

Rotating the right ankle

46 FOOT WARM-UP

The feet should be stretched in both directions. First, stretch the heels a few times. Do this by lifting the right heel up as far as possible, then lowering it. Next, roll onto the front of the right toes, curling and gently pressing them under the foot. Hold for 2–3 breaths, then repeat on the left.

Stretching the heel

Rolling on to the toes

POSES FOR STRENGTH

47 HOW YOGA IMPROVES STRENGTH

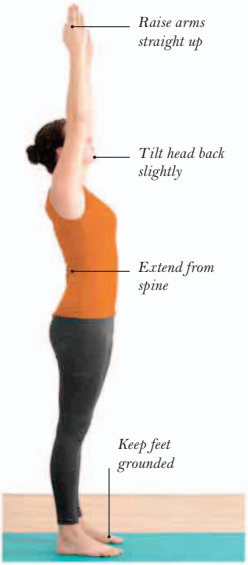
All yoga asanas improve overall strength by engaging the core muscles, as well as other muscle groups depending on the pose. The muscles work to maintain balance and poise, getting stronger by moving through a range of motions while supporting the body's weight. The key to building strength over time is consistent yoga practice. Cardiovascular strength can be enhanced by regularly including the Sun Salutation (see Tip 62) in your practice, increasing both your heart rate and blood flow.

48 MOUNTAIN POSE

This posture is perfect for helping you correct spinal alignment. Start with your arms by your sides, feet hip-width apart, the sides of the legs parallel, and the toes pointing forward and pressed into the ground.

1 Realign your body slowly, from toes to head via ankles, knees, pelvis, chest, shoulders, and neck.

2 Bring your hands in front of your chest in prayer pose. Be sure to keep your head and neck straight.



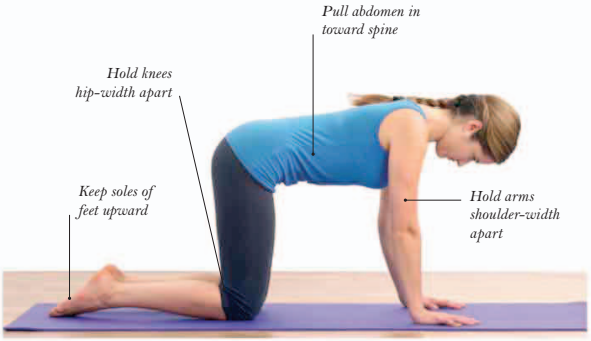
3 Breathe in and stretch the arms up, palms in, and tilt the neck up slightly. Lengthen the spine.

49 PLANK

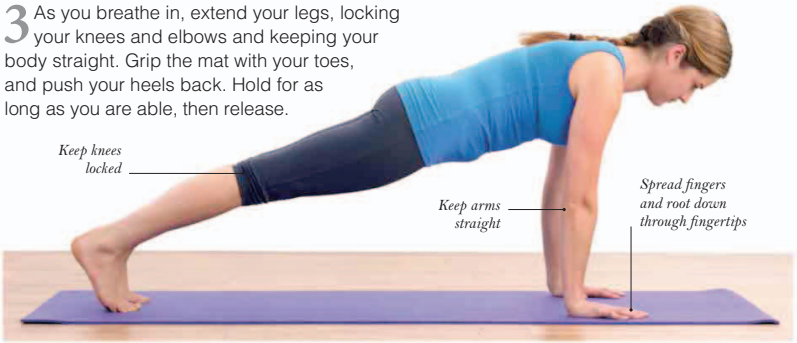
The Plank pose is an all-around strengthening posture. But it is also ideal for releasing stress in the neck, as well as for lengthening the spine.

1 Sit with your legs folded under yourself and with your toes pointing away. Put your hands on your thighs, fingers pointing forward. Straighten your neck and back, keeping your chin parallel to the floor. Allow your breath to flow in and out easily.

2 Position yourself on all fours, keeping your knees hip-width apart and directly under your hips. Your arms should be parallel to your thighs, and your back flat. Pull in your abdomen.

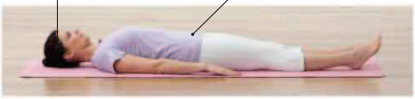


3 As you breathe in, extend your legs, locking your knees and elbows and keeping your body straight. Grip the mat with your toes, and push your heels back. Hold for as long as you are able, then release.



50 LEG RAISE

Elevating the leg provides a strong stretch to the hamstring and calf muscles. This pose develops the flexibility and strength needed for forward-bending poses. Begin by raising each leg three times, synchronizing each movement with your breath.



1 Lie flat on your back with your feet together and your arms on the floor at your sides, palms down. Flex your feet slightly.

2 Inhale as you raise your left leg, then exhale as you lower it. Repeat this action for the right leg. Complete five sets of raises.

51 LEG RAISE 2

In this alternative version of the Leg Raise, you draw the head toward the knee to compress the abdomen. Consequently, this particular exercise strengthens the neck, abdominal, and lumbar muscles. It also helps tone the legs.

1 Lie flat on your back. As you exhale, bend your left leg, bringing the knee into your chest. Take the knee in both hands to help press your left thigh to the abdomen.

2 As you inhale, lift your head toward the knee. Then exhale, slowly lowering head, arms, and leg. Repeat with the right leg. Complete the whole exercise five times.

52 TRIANGLE

This posture is excellent for building strength in the back and core. It also helps improve the flexibility of the hip joints and opens up the chest.

1 Stand with feet together and hands in prayer pose, and focus on your breathing. Jump or walk your feet 3ft (1m) apart, with toes forward and knees locked.

2 Turn your right leg out. Inhale, and raise your arms to shoulder level with your palms facing downward, then place your left hand on your hip. As you exhale, pivot from the hip to the right. Breathe into the stretch.

3 Exhale to bring your right arm down to rest on or behind your right leg, depending on comfort, and extend your left arm straight up. Hold the pose for several breaths. Reverse the movement to release, then repeat on the left side.

53 WARRIOR

The Warrior asana helps strengthen the mind as well as the body. Keep the lower part of the body firmly grounded while allowing the upper body the freedom to move with control and purpose.

1 Start in step 1 of the Mountain Pose (see p.30). Lengthen your spine, and breathe in a gentle rhythm.

2 Exhaling, step forward with your right foot as far as is comfortable. Put your hands on your hips, which should face forward, and lock your knees. Angle your left foot out to about 60 degrees.

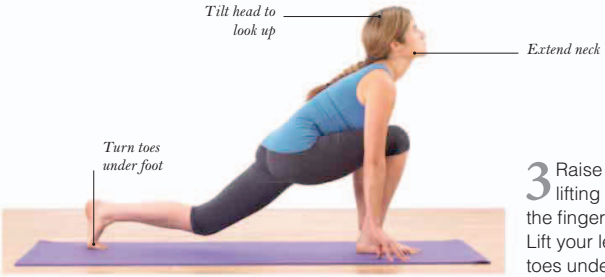
3 Inhale deeply, bending your right knee until it is above your ankle. Raise your arms straight up, palms together. Tilt your head back, and take five breaths. Exhale to release, reversing the steps. Repeat the pose with the left leg.

54 WARRIOR LUNGE

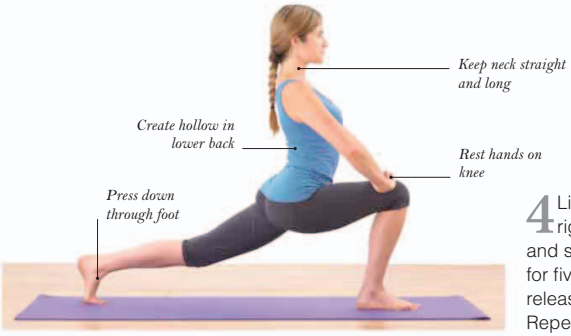
This posture really works the quadriceps, which are the muscles at the front of your thighs, as well as gently stretching your lower back.

1 Start on all fours, with your wrists under your shoulders and your knees under your hips. Draw your navel toward the spine to flatten the back.

2 Exhaling, bring your right foot next to your right thumb. At the same time, lean forward at a 45-degree angle, so the right side of your abdomen is next to the right thigh.



3 Raise your torso slightly by lifting your hands, keeping the fingers pressed into the mat. Lift your left knee and turn your toes under to take the weight.



4 Lift your hands onto your right knee. Look forward and straighten your torso. Hold for five breaths. On exhalation, release and return to all fours. Repeat on the other side.

55

WARRIOR 2

This variant of the Warrior pose helps tone the abdomen, as well as strengthening the limbs and opening the chest and shoulders. Start off in step 2 of Mountain Pose (see p.30). Focus on your breathing, and center yourself, then jump or walk your feet out so they are about 3 ft (1 m) apart.

1 Breathe in and as you do so, raise your arms up, palms down, level with your shoulders. Turn your left foot until it is pointing in the same direction as your left hand. Keep the right foot facing forward.

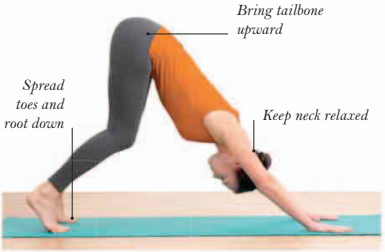
2 Rooting yourself through the feet, bend your left knee until it is directly over the ankle. Turn your head left, and look toward your left hand. Hold for five breaths and release on inhalation. Repeat on the other side.

56 DOWNWARD-FACING DOG

This is one of the best-known of all yoga postures, and for good reason. In addition to being perfect for energizing the entire body, it also helps calm the mind and gives a strong stretch in the shoulders, hamstrings, and calves. Begin on all fours with hands shoulder-width apart and knees hip-width apart.

1 Move your hands slightly ahead of your shoulders, spreading your fingers so that your middle fingers are pointing forward.

2 Turn your toes under your feet, keeping the soles vertical to the floor, and draw your hips back toward your feet.



3 As you exhale, lift your knees, drawing your tailbone up. Keep the knees slightly bent and your heels off the floor.

4 Straighten your arms and legs as much as you are able, and push back into your heels. Relax your neck, and breathe evenly. Every time you exhale, lengthen your spine.

57 EXTENDED SIDE STRETCH

Use this posture to help tone and strengthen your legs, improve lung capacity, and stimulate the organs in the abdomen.

1 Stand with your feet about 3 ft (1 m) apart. As you inhale, raise your arms parallel to the floor, palms down. Turn your left foot in slightly and your right foot out to 90 degrees.

2 Exhale, bending your right knee until it is above your right ankle. Keeping your arms parallel to the floor, stretch them out wide, locked at the elbows. Try also to bring the right thigh parallel to the floor.

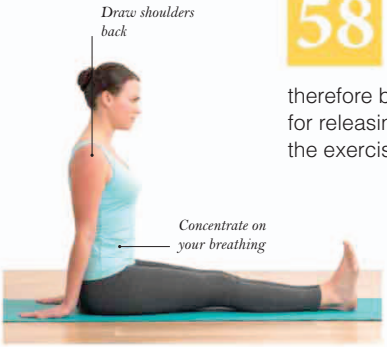
3 Exhale to lean your upper body forward, with the right forearm on your thigh. Bring your left hand into the small of your back.

4 Extend your left arm up and over the back of your left ear, palm down. Stretch from the left heel up to your left fingertips. Look up at your left arm. Inhale and straighten the front leg to release. Repeat on the other side.

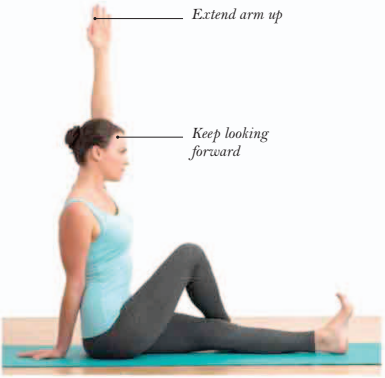
58

HALF SPINAL TWIST

This pose involves a lateral twist along the complete length of the spine. It helps increase your spinal flexibility and therefore benefits overall posture. It is also useful for releasing tension throughout the body. Complete the exercise on both sides.

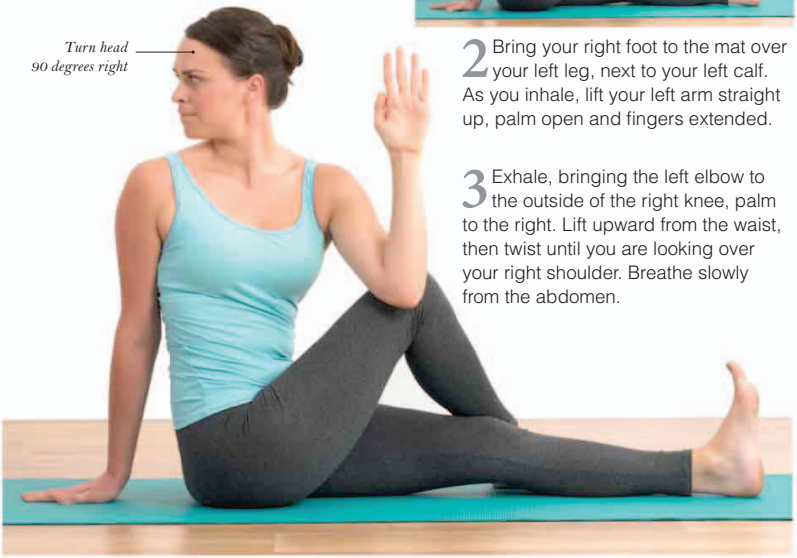


1 Sit with your back straight and your legs extended. Keeping your arms straight, place your palms on the mat behind you, with fingers pointing away from your body. Breathe from the abdomen.



2 Bring your right foot to the mat over your left leg, next to your left calf. As you inhale, lift your left arm straight up, palm open and fingers extended.

3 Exhale, bringing the left elbow to the outside of the right knee, palm to the right. Lift upward from the waist, then twist until you are looking over your right shoulder. Breathe slowly from the abdomen.



59 HORSE

This pose helps strengthen the core and stretch the leg muscles. It also lengthens the spine and opens the hips, making it particularly good for combating the effects of prolonged sitting.

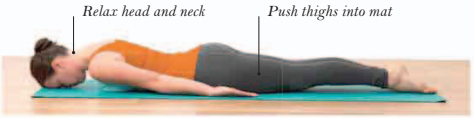
1 Start with your feet about 3 ft (1 m) apart and turned outward to 45 degrees. Inhale and raise the arms 45 degrees, palms forward.

2 Firm your leg muscles, and inhale slowly, sweeping the arms up until the palms are together above the head, arms fully extended.

3 Exhale as you bend your knees, being aware of your body alignment. Lower your arms, and bring your hands into the prayer pose.

60 COBRA

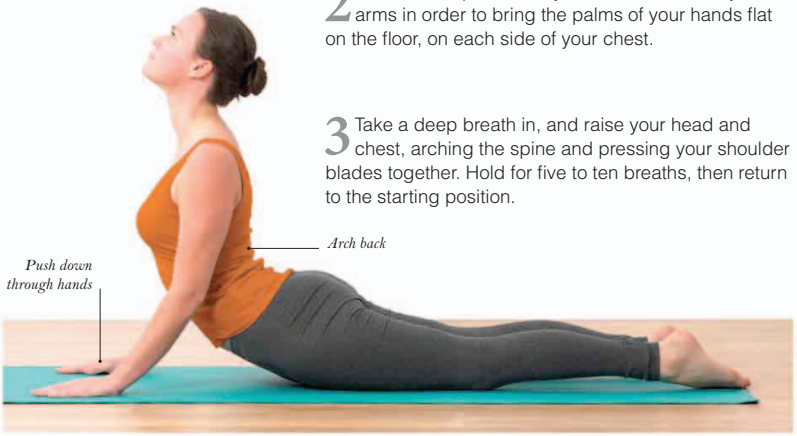
This is a face-down pose that requires that you lift the upper body, curling up and back like a cobra. By holding the posture, you tone and strengthen the muscles of the back and abdomen. It also increases the flexibility of your spine and helps relieve tension.



1 Lie face down, with your forehead resting on the mat and your arms by your sides, palms up. Stretch your legs, and point your toes away from your body.

2 Maintain the position of your head, but bend your arms in order to bring the palms of your hands flat on the floor, on each side of your chest.

3 Take a deep breath in, and raise your head and chest, arching the spine and pressing your shoulder blades together. Hold for five to ten breaths, then return to the starting position.

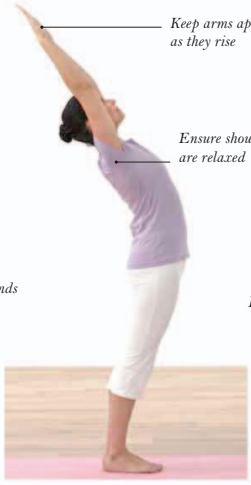


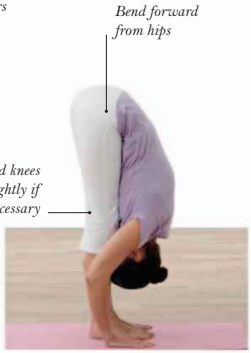
61 PURPOSE OF THE SUN SALUTATION

The Sun Salutation (see overleaf) is a graceful, fluid 12-step routine that brings together several poses to loosen up body and mind in preparation for your yoga session. The positions employed are tied into your breathing pattern, helping instill a feeling of balance and harmony. Furthermore, the order in which the postures are put together leads to a variety of beneficial spinal movements. Once you know the routine, try to complete the Sun Salutation at least six times before each yoga session.

62 SUN SALUTATION

Traditionally performed to greet the rising sun, this sequence of postures helps warm the muscles, flex the spine, and synchronize the breathing with the movement of the body.



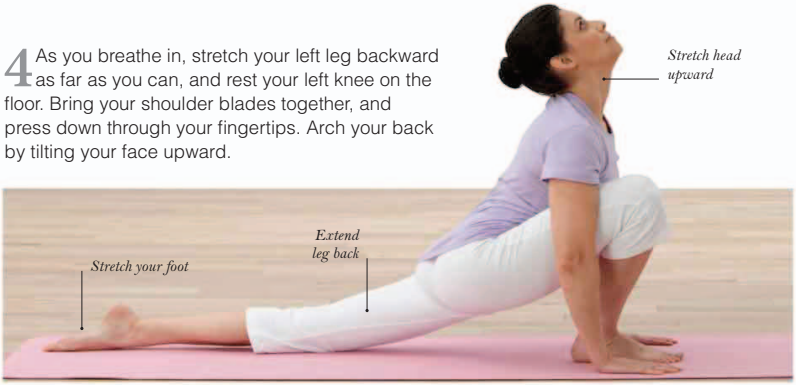


1 Start in step 1 of the Mountain Pose (see p.30). As you breathe out, bring your hands up into the prayer position.

2 Inhale deeply, raising the arms, palms forward, and bend back from the waist, pushing out your hips and keeping the legs straight.

3 Exhaling, bend forward from the hips, and place the palms beside your feet. They stay in this position for the rest of the sequence.

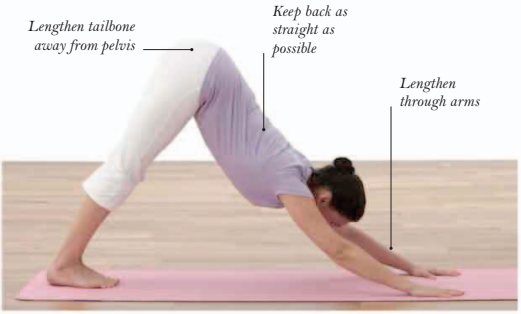
4 As you breathe in, stretch your left leg backward as far as you can, and rest your left knee on the floor. Bring your shoulder blades together, and press down through your fingertips. Arch your back by tilting your face upward.



5 Hold your breath as you bring your right foot back and move onto your toes so that your entire body is in a straight, inclined line.

6 Exhale, lowering your knees to the floor and your chest straight down between your hands, touching your forehead to the mat. Keep your hips raised up.

7 Inhale, lowering your hips and extending your feet backward. Arch your spine to look upward, pushing your chest forward. Keep your abdomen and legs relaxed.



8 Exhale and turn your toes under, raising your hips to make an inverted V-shape. Push your hips back as far as possible. Keep your back straight and heels pressed down.

ENDING THE SUN SALUTATION

The last four steps of the Sun Salutation are essentially repeats of earlier poses. From step 8, move into the position in step 4 but on the other side of the body—by bringing your left leg forward instead of back. From this lunge posture, you then work backward through steps 3, 2, and 1, although excluding the prayer pose.

POSES FOR TONE & STRETCH

63 HOW YOGA IMPROVES BODY TONE

In yoga, muscles are worked dynamically—that is, stretched and strengthened at the same time, which is perfect for muscle tone. Regular practice will lead to greater definition as the muscles become lean and toned. When your strength and flexibility have built up, you can make your practice even more intense by holding poses for longer or by moving more swiftly between asanas. Muscle tone can also be increased through varying the choice of postures in your yoga sessions.

64 STANDING FORWARD BEND

The chief benefit of this asana is the intense stretch that it gives you—from the middle of your back, all the way down your legs to your heels. Once you are in the final position, hold it for several breaths, lengthening the lower back and leg muscles with each.

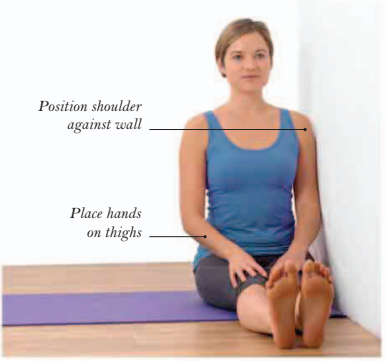
1 Stand in step 1 of Mountain pose (see p30). Center yourself, and focus on your breath as you root down.

2 Inhale deeply, lock your arms at the elbow and slowly sweep them up. Tilt your head to look up at your hands.

3 Exhale, bending forward from the hips, bringing your fingertips to the floor. Lengthen the backs of the legs and place your palms next to your feet.

65 LEGS UP THE WALL POSE

In this posture, the upper body is supported completely by the floor, while the wall partially supports your legs, helping their upward extension. This is an ideal asana as preparation for more advanced inverted poses.



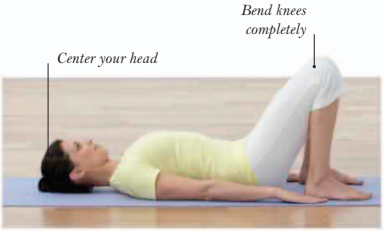
1 Sit fully upright with your left hip and shoulder pressed against the wall. Place your palms on top of your thighs.

2 Place your left hand against the wall, then lean back, lowering yourself down onto your right elbow, and draw up your knees.

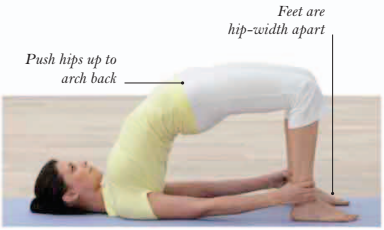
3 Extend your legs up the wall and keep your back flat on the floor, with your hands on your stomach. Keep your legs and heels pressed against the wall, and hold the pose for several breaths.

66 BRIDGE POSE

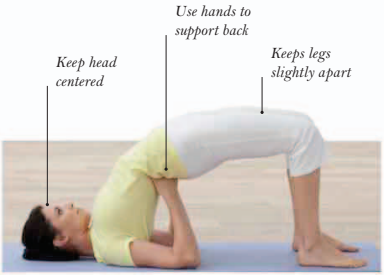
This backward-bend asana promotes relaxation and can help with the reduction of stress. It stretches the spine and the thoracic and lumbar regions, but it is also a good posture to carry out when your feet are feeling tired.



1 Position yourself on your back, with your knees bent and your feet flat on the floor, close to your behind. Extend your arms, palms down, alongside your body.



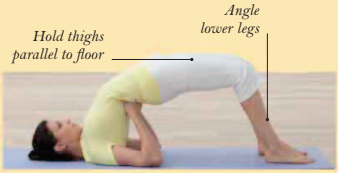
2 Edge the hands to the feet and hold the heels or ankles. Keep your feet firm. Inhale, pushing your hips up and arching the spine to lift the lower back clear of the floor.



3 Release your feet. Keeping your upper arms planted, place your hands as high up your back as you can. Take a few deep breaths before reversing the steps to release.

BRIDGE VARIATIONS

If you would like more of a challenge, these variations on the Bridge work different muscle groups.



Hamstring stretch variation
Once in the Bridge posture, take several deep breaths. Edge your feet away from you to create a 45-degree angle to the floor with your lower legs.

Leg lift variation
From the Bridge pose, raise your left leg 90 degrees to the floor and point your foot. Take five breaths, then release on exhalation. Repeat on the right.

67 COBBLER

This posture is good for stress relief because it helps release tension in the hips, legs, and lower back. Additionally, it opens up the hips and improves circulation.

1 Sit with your legs straight out in front of you and hands by your sides. Bend your knees and draw your feet together, positioning them sole to sole. Keep your back straight.

2 Keeping your feet pressed together, bring your hands around and take a firm hold of them. Your head should remain centered and your spine lengthened.

3 On an outward breath, gently extend your knees, bringing them out and down toward the mat, letting the hips open. Continue to elongate the spine.

4 To end, slowly move the knees up toward your chest, then run your hands up from feet to knees. Rock from side to side, feeling the stretch in your hips.

68 SITTING FORWARD STRETCH

When you need to calm your mind, this is a great go-to asana. It also stretches the hamstrings and the spine, as well as massaging the abdominal organs.

1 Sit with legs extended in front of you. As you inhale, bend your right leg. Take hold of the foot, and bring the heel toward you.

2 Place the sole of the right foot against the left leg. As you inhale, lift both arms straight up, with your palms forward.

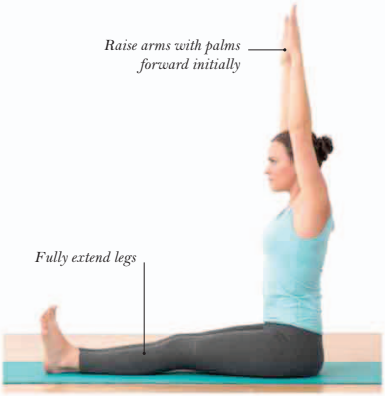
3 On the outward breath, bring your arms to rest on your left shin, bending from the waist. Inhale, stretching through the spine.

4 Exhale, bringing your torso toward your extended leg. Breathe in slowly as you sit back up. Repeat on the other side.

69 EXTENDED SITTING STRETCH

By extending the spine, arms, and legs all at the same time, this posture helps prepare you for other sitting stretch poses that you might include in your session.

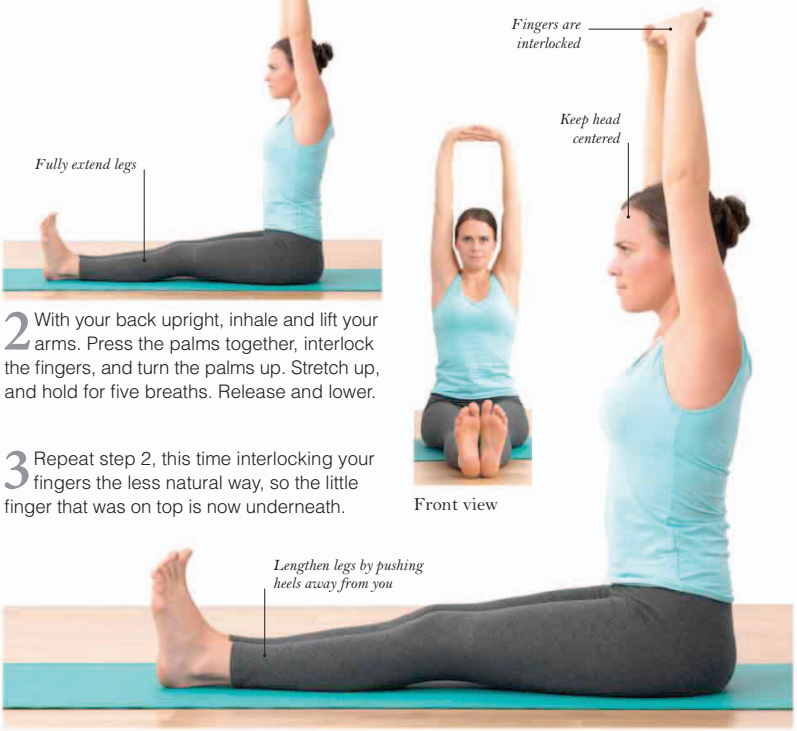
1 Sit with your legs extended in front of you, elbows locked, and palms pressed down. Breathe in deeply to lift and expand the chest.



2 With your back upright, inhale and lift your arms. Press the palms together, interlock the fingers, and turn the palms up. Stretch up, and hold for five breaths. Release and lower.

3 Repeat step 2, this time interlocking your fingers the less natural way, so the little finger that was on top is now underneath.

Front view



70 CAT POSE

In addition to strengthening the lower-back muscles, the Cat gives the spine and abdominal organs a gentle massage. By stretching the back, torso, and neck, it is also a good stress-relieving asana.

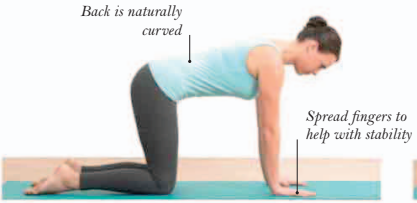
1 Start on all fours, with wrists under the shoulders and knees under the hips. Point the toes away from the body. Flatten your back by drawing the navel up to the spine.

2 As you breathe in, gently curve the spine down by pulling the tailbone up and pushing the chest out. Raise your chin and look up.

3 Exhale, lowering the tailbone and raising the abdomen, creating an upward arch in the spine. Drop your head between your arms without exerting any downward force on it.

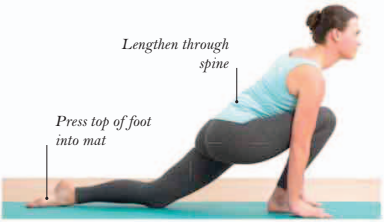
71 LUNGE TWIST

Practice this asana to help tone and strengthen the muscles in the upper legs. It is also a recommended posture for improving the flexibility of the spine. Come out of step 4 after a few breaths by reversing the process, then repeat on the other side.



1 Begin on your hands and knees, with your arms shoulder-width apart and your legs hip-width apart. Look down at your fingers.

2 Inhale, extending the right leg forward, lifting up the torso, and bringing the right knee directly over the ankle. Rest your hands on your right knee.



3 Keeping your feet static, inhale as you lean forward, increasing the right-knee bend. Place a hand on each side of the right foot.

4 On an out breath, push the left hand into the mat, then lift your right arm up to point at the ceiling. Look at the raised hand.

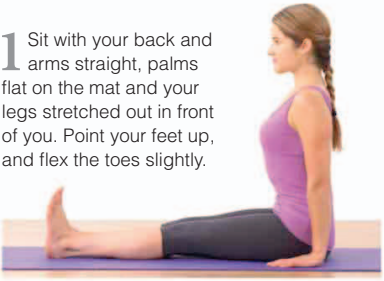
LUNGE TWIST VARIATION

In this variation on (and addition to) step 4, you bring your left elbow over and across the right knee and lower the right arm to come into the prayer pose. Turn your head to look up, until your chin is over the right shoulder. On exhalation, try to open the chest and rotate the torso.

72 SEATED FORWARD BEND

Although it looks like an easy posture, when it is performed correctly, the Seated Forward Bend can work wonders on your hamstring muscles and spine.

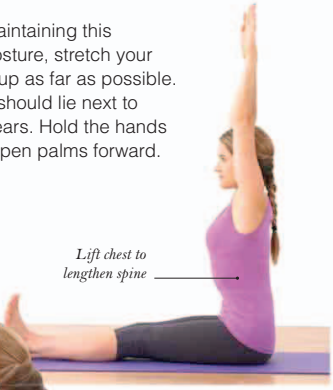
1 Sit with your back and arms straight, palms flat on the mat and your legs stretched out in front of you. Point your feet up, and flex the toes slightly.



SIMPLIFIED FORM

People who are not flexible enough to reach their ankles can still practice this exercise. Place a strap around the balls of both feet and bring your hands as close to your feet as you are able when bending forward with a straight back.

2 Maintaining this posture, stretch your arms up as far as possible. They should lie next to your ears. Hold the hands with open palms forward.



3 Again, making sure to keep your back straight, lean forward from the waist, and reach for your ankles with straight arms. Hold for a few breaths, then release.

73 SEATED FORWARD BEND VARIATION

If you want a little extra stretch in the hamstrings and lower back, try this more difficult variation on the exercise opposite. The secure grip that the hands take on the toes helps you bring your torso farther over your legs.

Correct, secure hand positions

1 Sit with your legs straight out in front of you. On an out breath, bend forward, keeping your back straight and extending your arms. Grasp your big toes with the first two fingers of each hand, as above.

2 Exhaling, bend farther forward to stretch the spine. Bend your elbows so that they help you with the forward movement. Be sure to keep your legs straight, and maintain the grip on your toes.

3 Exhale, bending farther so the elbows come to the mat and the abdomen to the thighs. With each out breath, extend more, focusing on your toes.

POSES FOR RELAXATION

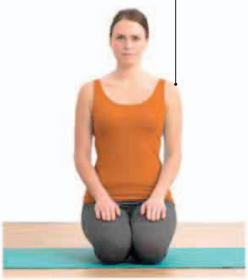
74 HOW YOGA PROMOTES RELAXATION & HARMONY

The purpose of yoga is to unite all the levels of our being, bringing about harmony of mind, body, and spirit. It serves to nourish the entire body and nervous system, through improved circulation and by balancing hormones, which in turn helps promote relaxation. Breathing exercises and meditation bring about mental and spiritual calm. All these aspects work together to create relaxation and harmony within.

75 COW ARMS

This yoga pose exercises both arms simultaneously, at the same time also enhancing upper-body flexibility and awareness of your own posture.

Rear view



1 Kneel, sitting on your heels, with your toes pointing backward. Look forward and soften the muscles of the face. Relax the shoulders as you breathe.

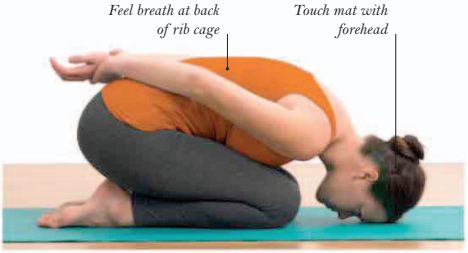
2 Inhale, and raise your left arm up. Work the stretch along the side of your body. Bend your right elbow so that the right hand is on your lower back, palm facing out.

3 Bend your left arm, so the hand is between your shoulders. Push the right arm higher up your back, palm still out, until you can clasp the fingers of both hands together. Pull gently. Exhale to undo, and flick your fingers to release any tension. Switch sides.

76 CHILD'S POSE

This posture offers a useful counter-stretch to backward bends and helps normalize the circulation. The Child's Pose can be used either to prepare for, or recover from, other poses.

1 Kneel, sitting on your heels, with your big toes touching. Keep your spine straight. Clasp one wrist with the other hand.



2 Exhaling deeply, slowly move your head and chest down as far as possible, bending from the hips. Continue folding forward until your forehead rests on the mat.

3 Unclasp your hands, and allow them to rest on the floor, palms up. Focus on your breathing. Hold this position for several minutes.

An easier option

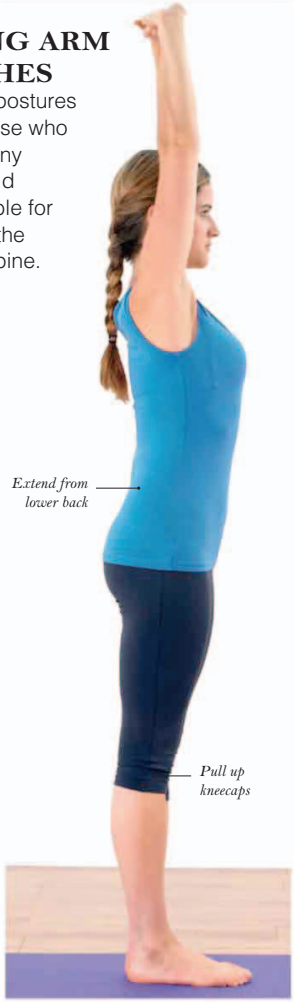
77 STANDING ARM STRETCHES

This series of postures is good for those who want to improve the harmony between their breathing and movement. It is also valuable for the stretch it gives across the shoulders and along the spine.

1 Stand with your feet together, and interlock your fingers. Place your hands on your chest, palms down. Feel the movement of your chest as you breathe.

2 Breathe in, stretching out your arms, with fingers interlocked but palms now facing out. Exhale to bring your arms back to your chest.

3 Repeat the movement in step 2, but this time extending your arms up at an angle of 45 degrees. Inhale on extension, and exhale on return.



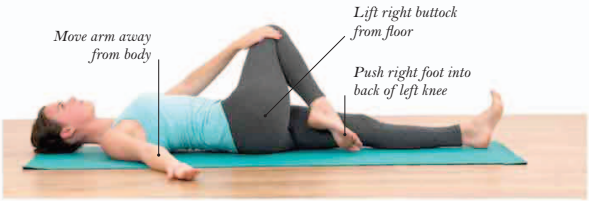
4 With the shoulders relaxed, repeat steps 1 and 2, but this time extending your arms up and lengthening your spine. Exhaling, return to the start position. Do each stretch at least five times.

78 EASY FLOOR TWIST

This exercise is ideal for relieving tension, which it does through stretching and relaxing the spine and legs. The twisting motion across the torso also helps with the detoxification of abdominal organs.

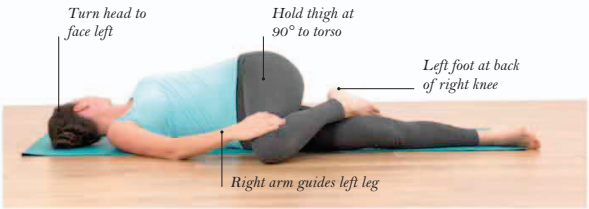
1 Lie flat on your back. Relax your shoulders, and rest your arms beside your body, palms up.

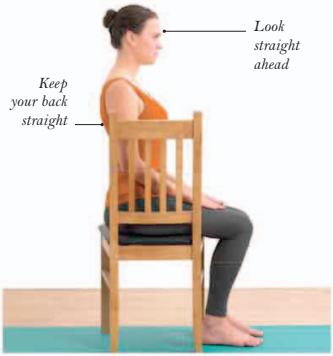
2 Bring your right toes up toward your left knee. Exhale, guiding the right knee over the left leg, with the toes pressing into the left leg. Move the right arm along the floor.



3 Exhale to rotate farther, trying to take your right knee to the floor. Stretch your right arm out at 90 degrees, and turn your head right. Hold for up to ten breaths. Inhale to release.

4 Once back in the starting pose, repeat the exercise, this time bending the left leg. Once completed, inhale and gently reverse the movements.

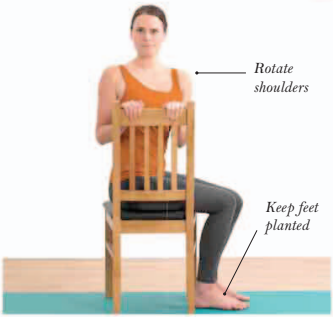




79 CHAIR TWIST

Spinal twists such as this one are easy, effective ways to bring yoga into your day-to-day routine. The Chair Twist can be practiced anywhere in just a few minutes, as long as you have a chair with a straight back. It is a good exercise for stretching the spine and releasing tension in the neck and shoulders. As with all yoga asanas, perform the exercise on both sides of the body.

1 Sit sideways on the chair, with the backrest next to your right arm and your feet on the floor. Place your hands on your thighs, and relax the shoulders.



2 Turn right and take the backrest with both hands, inhale, and lift your chest. Exhale, twisting from the lower back toward the rear of the chair.

3 Stretching the spine up, turn the torso, shoulders, neck, and head as far right as is comfortable, and raise your right arm. Hold for several breaths.

80 CROSSED LEG FORWARD BEND

This pose is beneficial for the practitioner in several ways. Not only does it relieve tension in the lower back but it also improves digestion and helps calm the mind. Additionally, it helps with the opening of the hips and outer thighs.

THINGS TO REMEMBER

When you are attempting to move your head closer to the floor, you may find that the front foot slips forward. Counter this by sitting on a blanket, but with your feet on the mat. Be careful not to pull from the neck when you are lowering your head. The back, neck, and head should remain aligned, and you should keep your back straight throughout the entire exercise.

1 Sit cross-legged and well rooted, with your right ankle in front of the left. Hinge forward from the waist, setting your palms on the floor. Exhale and lean forward.

2 Pushing down through your tailbone, stretch your torso and arms, moving your palms farther forward. As you exhale, try to move farther still. Hold for five to ten breaths before releasing.

POSES FOR BALANCE

81 HOW YOGA IMPROVES BALANCE

Asanas and breathing exercises help build core and overall muscular strength and flexibility. They also improve reflex responses while developing a calm, focused mind and profound bodily awareness. This all leads to better balance and poise, both physically and mentally. Balance is improved by working the body through a range of different postures. With consistent, mindful yoga practice, the body gradually becomes better poised. Combine your practice with meditation to balance yourself mentally as well as physically.

82 TREE POSE

This pose helps aid balance through concentration, by building strength and flexibility in the leg muscles. Start standing with the feet together, and inhale as you transfer your body weight onto your left foot.

1 Bend the right knee and place your right foot on the inside of the left leg, using your right hand to position it as high as is comfortable.

2 Push down through your left leg and breathe deeply, finding your point of balance. Inhale, and bring your hands to the prayer pose.

3 Fix your gaze straight ahead and, inhaling, extend your arms up, touching your palms together. Take a complete breath, then come out of the pose and repeat on the other side.

83 HALF LOTUS TREE

This hip-opening, standing posture requires you to use not strength but concentration and balancing skills.

1 Start with your feet together, and breathe in to transfer your weight to the right foot. Bend the left knee and raise the left foot. Draw your left foot as high up the right leg as you can.

2 Balance yourself, then lift your arms. Press the palms together over your head, and extend and straighten your arms. Hold for five to ten breaths, then gently come out of the pose. Repeat with the right leg.

84 EAGLE

This asana helps strengthen the core and so promotes centering and alignment. The joints are nourished by increased blood flow.

1 From a standing pose, bend your knees slightly and balance on the left foot. Cross the right thigh over your left, hooking the right foot behind it.

2 Lift your arms with the elbows bent. Wrap your right arm and hand under and around the left, pressing the palms together. Repeat on the right.

85 HALF SHOULDER STAND WITH WALL

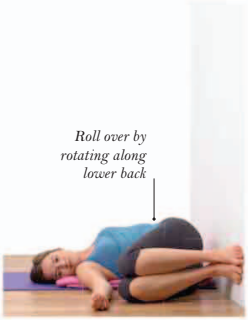
Inverted asanas reverse the direction of blood flow, increasing the supply of blood to the face and brain, as well as to the heart and other organs. Such postures are particularly restorative. This pose is good for improving circulation.

1 Place your mat at right angles to the wall. Put a folded blanket on top of it, with the fold next to the wall. Follow steps 1–3 of Tip 65, but end with your palms flat on the floor, next to the mat.

2 Bend your knees, so your feet are flat to the wall and shins parallel to the floor. Pushing off from your feet, raise your torso and place your hands on the small of your back.

3 Take the time to carefully adjust your position, with the aim of making your back as straight as possible. Then take the left leg from the wall and point it straight up.

4 Bring your right leg beside the left, adjusting your hands for extra support. Breathe. Reverse the steps until you are on your back with legs up the wall.

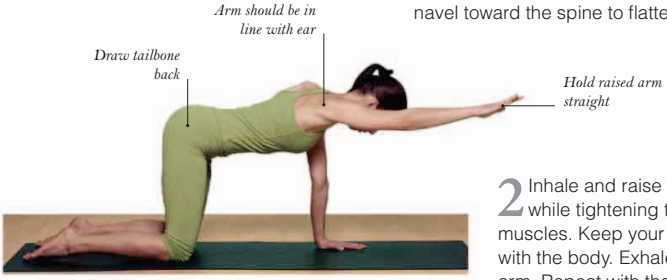


5 As you exhale, bend your knees over the chest. Gently drop the legs sideways until your knees reach the floor. Rest for a few breaths, then sit up.

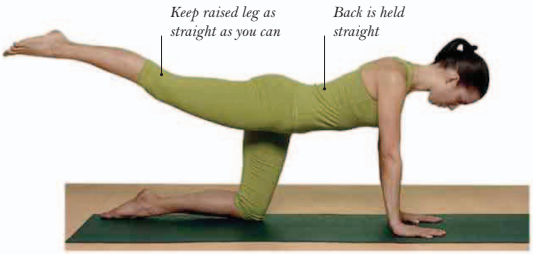
86 CAT BALANCE

Quite a lot of the yoga postures that are good for balance tend to start from a standing position. However, Cat Balance begins on the floor. Practice this asana to develop your core and strengthen your arms and legs. Repeat each step five times, alternating limbs.

1 Position yourself on all fours, with wrists directly below the shoulders and knees under the hips. Point your toes. Draw your navel toward the spine to flatten your back.

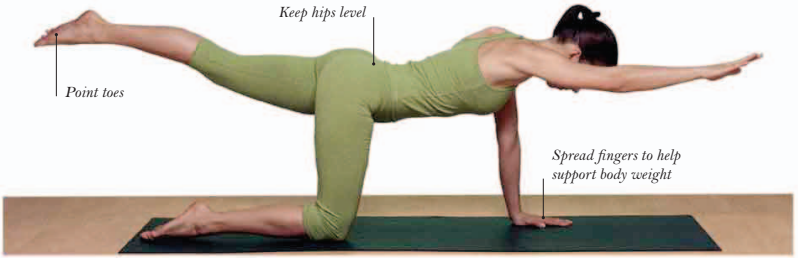


2 Inhale and raise your right arm while tightening the abdominal muscles. Keep your arm in line with the body. Exhale to lower the arm. Repeat with the left arm.



3 Return to the starting pose. Inhale and pull in the abdomen as you raise and stretch your right leg, aligning it to your shoulders. Lower your leg as you exhale.

4 Return to your starting position. On the in breath, extend your left leg and right arm at the same time. Hold for five breaths.



THE COOL-DOWN

87 IMPORTANCE OF THE COOL-DOWN

The cool-down after your yoga practice is an important component of the session, so be sure not to rush or skip it. It will calm your mind and relax your muscles, but it also allows your body to absorb the energy that has been released through the various yoga postures, thereby maximizing the value of the session.

88 PHYSICAL RELAXATION

Assume the Corpse pose (see pp.66–67), then physically tense and relax all the muscles in your body, one body part at a time. Start at the toes and work your way up. Once you have finished, start at the toes again and mentally relax all those same muscles. Last of all, take a few moments to relax your mind.

89 MENTAL RELAXATION

The yoga cool-down, or relaxation stage, is more of a mental exercise than a physical one. This is because it requires you to send mental messages to your body parts, instructing them to tense and relax. Once that is done, you finish the cool-down by relaxing your mind, too.

Take time to relax your mind

90 HOW LONG TO RELAX FOR?

Your end-of-session relaxation is based on the Corpse pose, which should also be employed at the beginning of your yoga practice. Relax fully by resting in this position for at least five minutes.

Knees bent, with feet on the ground

91 ENDING YOUR COOL-DOWN

While in Corpse pose, allow your breath to be full and easy. Wiggle the fingers and toes, gradually waking up the body. Bend your knees, keeping your feet on the ground. Draw the knees to your chest, hug them in, and gently roll from side to side. Roll on to one side and push yourself up into a seated position. End by bringing the hands to prayer pose.

92 CUPPING THE EYES

Just as it is important to warm up the eyes before your yoga session (see p.26), you should also take the time to cool them down after your practice.

1 Sitting comfortably, with your back straight, rub your hands together until they begin to warm up a little.

2 Close your eyes. Breathing easily, place your hands over your eyes for several minutes, completely obscuring your vision.

93 IMPORTANCE OF THE CORPSE POSE

The Corpse pose is the ideal way to end your yoga sessions, as well as being a good start to your workouts. It allows the body the time to absorb all of the good muscle and mind work that has been done during your practice time, letting released energy flow freely and expelling waste products from the muscles. It helps you relax in preparation for the rest of your day.

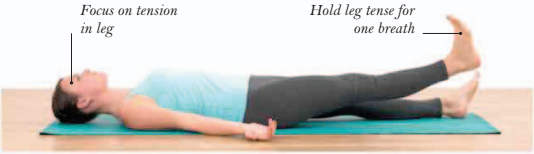
94 CORPSE POSE

In this extended version of the classic Corpse pose, the full length of the body is held in alignment and completely supported by the floor. This allows for deep relaxation in all of the muscles.

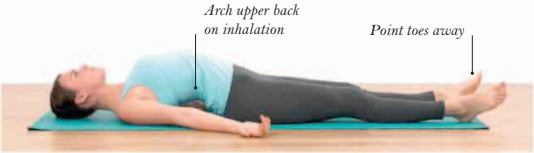
1 Lie with knees bent and feet flat on the floor. Interlock your fingers behind your head. Lift the head to look forward toward your knees.

2 Lie fully extended, with eyes closed if you want. Starting from your feet, work up the body, breathing any tightness out of your muscles.

3 Inhale as you raise your right leg by about 1 ft (30 cm). Tense the right leg, keeping everything else relaxed. Hold, then lower and switch legs.



4 Arch the upper back to lift the chest, pulling the shoulder blades in. Keep the head and bottom on the floor. Hold for one breath, then release.



95 CORPSE POSE: ADDITIONAL RELAXATION

The following postures can be tagged on to your Corpse pose relaxation at the end of your yoga session, or you can pick and choose the steps that you think would most benefit you on any given day, focusing on the areas that feel most tense.

1 Inhale, raising your arms by about 1 ft (30 cm). Tense both arms, making fists with your hands. Hold for one breath, and exhale to lower.

2 Inhale to raise both arms, palms up and fingers apart. Tense your arm muscles. Hold for one breath, then exhale as you take the arms back down.

3 Clench your fists and breathe in as you hunch your shoulders up and raise your arms off the floor. Hold for one breath, then exhale to release.

4 Lie completely relaxed. Free your mind of all concerns. Each time you breathe out, focus on the tension leaving your body. Rest for a few minutes.

5 At the end of your relaxation, bend your knees and roll to one side. Rest a while, then use the hands to push the upper body off the floor and into a kneeling position.

96 USING MEDITATION

Although meditation is perfectly suited to everyone, it is particularly beneficial for those who have busy lives, either because of stressful jobs or because of a vast array of family and household commitments. Meditation helps calm the overactive mind, thereby reenergizing you, increasing your stamina, and improving your powers of concentration. Through the regular use of meditation, it is within your grasp to create a sense of inner peace and have a clear mind.

97 WHAT IS MEDITATION?

A good way to grasp the real essence of true meditation is to consider a lake. Think about how you can clearly see the bottom of the lake when the surface is still. However, when there are a lot of waves, you are unable to see much below the surface at all. This is the perfect analogy for the mind: when your mind is still, you are better able to experience inner calm.

98 WHERE & WHEN TO MEDITATE

You are free to meditate wherever you are comfortable, but there are some considerations to bear in mind. If you choose to meditate indoors, pick a room that is warm, clutter-free, and away from distracting noises. If you go outside, find somewhere with as little activity as possible but where you are safe and able to relax fully. Meditation can be practiced at any time of day or night, but it is easier to train your mind if you are able to set a regular time slot.

MEDITATING TOGETHER
You do not have to meditate alone. It can be done in pairs or even in larger groups. Mass meditations are often held around the world.

99 MEDITATION POSITION

To allow yourself to meditate correctly without any distractions it is important to take a comfortable sitting pose. Your legs should be crossed, and your spine should be straight. Keep your shoulders straight but relaxed. This is an easy, natural pose for children, but adults may require some assistance. If you feel any tension in your lower back, try sitting on the front edge of a cushion.

100 YOGIC BREATHING

Correct breathing is a key part of meditation and concentration. First, oxygenate your brain with 5 minutes of deep abdominal breathing. Next, slow down but still breathe rhythmically, in for 3 seconds, then out for 3 seconds.

101 HAND POSITIONS

The hand positions shown below are all used in meditation. Make your hands as comfortable as you can; this helps you relax. Resting your hands on your knees or in your lap also helps keep the back and shoulders straight.

HANDS CUPPED
Place one hand on top of the other, palms up, and place them in your lap.

HANDS CLASPED
Interlock your fingers gently, and lay your hands in your lap.

CHIN MUDRA
Form a circle from your thumb and index finger, and rest the hands on your knees.

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Fa Jin, an advanced yang style of Tai Chi, complements the physical, mental, and spiritual conditioning available through solo Tai Chi practice and the internal martial arts of Taoism. Fa Jin enables adepts to harness the energy of yin, yang, and the earth in the lower tan tien and discharge it as an extremely close-range yet explosively powerful blow to be used in self-defense and partner practice as well as in healing techniques.

Integrating the teachings of many Taoist masters, including Chang San-Feng, the creator of Tai Chi; Wang Tsung-Yueh, the legendary 19th-century master; Bruce Lee, the actor and martial artist who made the "one-inch punch" technique famous; and the Magus of Java, a living master able to discharge energy in the form of electric shocks, this book explores the history, philosophy, internal exercises, and physical practices of Fa Jin. Drawing on Iron Shirt Chi Kung and Tan Tien Chi Kung techniques, Master Mantak Chia and Andrew Jan reveal the secrets to collecting yin and yang in the lower tan tien and discharging the energy with seemingly effortless yet explosive force. Illustrating several routines of the Tai Chi partner practice of "Push Hands" (Tui Shou), they explain how to apply Fa Jin techniques by "listening" to your opponent's intentions and countering the natural instinct to resist force with force through yielding softness and redirection. The authors also detail how to prepare for this advanced practice through stretching, meditation, breathing, relaxation, and energetic exercises.

Mantak Chia

MANTAK CHIA, world-famous Inner Alchemy and Chi Kung master, founded the Universal Healing Tao System in 1979. He has taught and certified tens of thousands of students and instructors from all over the world and is the author of 40 books, including *Iron Shirt Chi Kung* and *The Inner Structure of Tai Chi*. ANDREW JAN is a senior instructor for the Universal Tao and a former Australian National Tai Chi and Wu Shu Champion. He lives near Perth, Australia.

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Tai Chi Fa Jin

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Tai Chi Fa Jin

Advanced Techniques for Discharging Chi Energy

For Martial Arts and Spiritual Practice

Mantak Chia and Andrew Jan

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Tai Chi Fa Jin

Advanced Techniques for Discharging Chi Energy

Mantak Chia
and
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Dedicated to Tai Chi practitioners everywhere

Putting Tai Chi Fa Jin into Practice

The practices described in this book have been used successfully for thousands of years by Taoists trained by personal instruction. Readers should not undertake the practice without receiving personal transmission and training from a certified instructor of the Universal Healing Tao, since certain of these practices, if done improperly, may cause injury or result in health problems. This book is intended to supplement individual training by the Universal Healing Tao and to serve as a reference guide for these practices. Anyone who undertakes these practices on the basis of this book alone does so entirely at his or her own risk.

The meditations, practices, and techniques described herein are not intended to be used as an alternative to or substitute for professional medical treatment and care. If any readers are suffering from illnesses based on mental or emotional disorders, an appropriate professional health care practitioner or therapist should be consulted. Such problems should be corrected before you start training.

Neither the Universal Healing Tao nor its staff and instructors can be responsible for the consequences of any practice or misuse of the information contained in this book. If the reader undertakes any exercise without strictly following the instructions, notes, and warnings, the responsibility must lie solely with the reader.

This book does not attempt to give any medical diagnosis, treatment, prescription, or remedial recommendation in relation to any human disease, ailment, suffering, or physical condition whatsoever.

Preface

The purpose of this book is to outline the study of discharge power, or *Fa Jin*, through the principles and teachings of the Universal Healing Tao system. In particular, this book draws on the practices of Iron Shirt, Tai Chi, Tan Tien Chi Kung, and meditation.

Teachings from the internal martial art classics and from current masters of these disciplines provide us with clues about the methodology employed in discharge power. However, internal arts are always difficult to describe because they are, by nature, internal and subjective. Descriptions of chi, mind, and specific visualizations vary from master to master within a discipline as well as between different traditions. These variations occur even when the masters are performing essentially similar tasks. Perhaps there are multiple internal methods that achieve the same discharge power. Alternatively, a master may be unable to describe in words the internal happenings that occur with the release of power, or unwilling to reveal too much about this esoteric art. In former years, masters would teach such techniques only to a small number of select students. Consequently, the art of Fa Jin is on the decrease.

To further complicate matters, variations of Fa Jin exist. They range from Bruce Lee's one-inch punch to throwing an opponent in the air to transmitting an electric shock or intense heat. Despite these constraints, this book will nevertheless attempt to outline the methodology of Fa Jin and share this knowledge with all. By building upon the principles of Iron Shirt Chi Kung, the foundational form of Tai Chi Chi Kung, Tan Tien Chi Kung, the Fusion practices, and Kan

and Li practice, we hope to arrange the information in a succinct and understandable way.

This book endeavors to create an original view of Fa Jin by blending the Universal Healing Tao internal training with the yang Tai Chi classics and teachings from present-day masters. The power generated by this blend of insight is practiced in the Tai Chi Chi Kung Discharge Form, which demonstrates five of the eight gates that can express discharge power. Another practice for cultivating discharge power that uses all eight gates is Push Hands. As a part of its discussion of discharge power, this book provides an overview of Push Hands routines and principles.

Many Tai Chi classics are now available in English thanks to authors such as Yang Jwing-Ming, Benjamin Lo, Barbara Davis, and Douglas Wile. This book will make direct references to available English translations of the works of Yang Lu-Chan, Wu Yu-Hsiang,

Iron Shirt Chi Kung

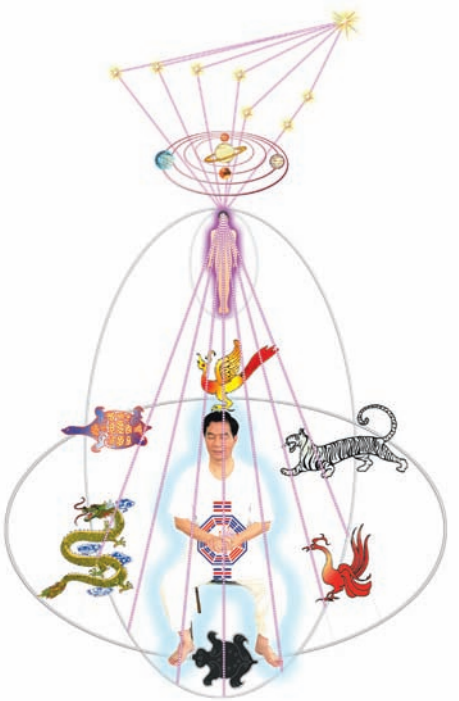
The foundational Tai Chi Chi Kung form

Wu Cheng-Ching, and Li I-Yu. (Please note that spelling in some of the quotations that retain pinyin is altered slightly to maintain consistency with the authors.) The next book in this series will explore the Wu style, focusing on the works of Wu Quan-Yu.

However, translation of historical Tai Chi texts is difficult because there are multiple meanings for many of the original characters. Accurate translation requires an appropriate depth of understanding of Tai Chi principles in order to extract the inner meaning. In other words, the depth of translation can be only as deep as the translator's current mindset. Furthermore, understanding of the principles of Fa Jin can only occur when the student is ready to comprehend. Much of that understanding will come through meditation and the domain of martial interaction that allows hidden forces to materialize in the physical realm.

This book focuses on the reader who has an interest in both Taoist mystical practices and martial practice. It will suit the accomplished Tai Chi practitioner who seeks a deeper understanding of the energetic aspects of Fa Jin training, as well as the practitioner who

Tan Tien Chi Kung



Kan and Li Meditation

has made some accomplishment with meditation and seeks a deeper understanding of the physical and martial domains. The book will be invaluable not only to students of the Universal Healing Tao system, but also to Tai Chi and meditation students of other schools who are searching for a fresh approach to this internal art or wishing to broaden their knowledge.

1

History of the Tai Chi Chi Kung Discharge Form

Discharge power is best known in Chinese as *Fa Jin*, which is translated as "discharge" or "transfer" of power (fig. 1.1). *Fa* means "to issue," while *jin* translates as "internal force." The word *Fa Jin* is thus used to describe the transfer of a large amount of momentum with seemingly little or no external strength. In contrast to Fa Jin, *Li* power uses external strength and gross muscular force. Li power requires outward telegraphing of movement prior to the strike, whereas Fa Jin does not.

筏 劲

Fig. 1.1. Chinese characters for *Fa Jin*

The first purpose of this chapter is to explore the use of Fa Jin—discharge power—in the history of internal martial arts within China. The second purpose is to understand the Universal Healing Tao Yang Discharge Form within this historical framework.

Discharge power is the ability of the practitioner to issue force or power without evident effort. This is the form of practice that is

responsible for those legendary stories of Tai Chi Chi Kung masters hurling their opponents several yards away without even touching them. It involves the cultivation of power deep within and a calculated discharge of that power in a highly focused and carefully executed form.

Discharge power is featured in the three internal Chinese martial arts: Tai Chi Chuan, Ba Gua Zhang, and Hsing Yi Chuan. Tai Chi Chuan can be defined as a soft internal style of martial arts characterized by forms practiced in a slow meditative state of mind. Ba Gua is a style based on the eight trigrams of the I Ching. It has eight palms and is characterized by circular movements. Like Tai Chi, Ba Gua Zhang translates the spiritual aspects of Taoism into physical form. Hsing Yi or "heart mind" boxing involves a more direct, rapid, and staccato approach to fighting. Each of these disciplines draws on classic texts and methods to cultivate and express discharge power.

To understand the nature of discharge power it is useful to use the laws of physics, in which Power = Mass *x* Acceleration × distance within a unit of time (fig. 1.2). In the case of Fa Jin, mass is the weight of the opponent; acceleration is the change in velocity when the opponent is propelled; and distance is the measure of how far the opponent is thrown. Some practitioners are able to discharge huge power with the techniques described in this text.

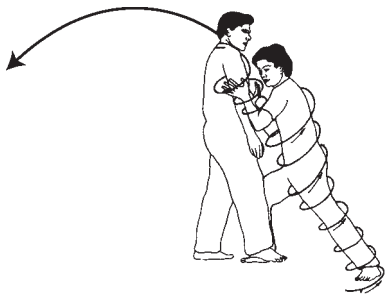


Fig. 1.2. Power = Mass x Acceleration x Distance. The farther the throw, the greater the power.

In martial arts practice, this power can occur with minimal external manifestation and seemingly minimal effort (fig. 1.3). Furthermore, it is not related to the youth or muscle mass of the practitioner.

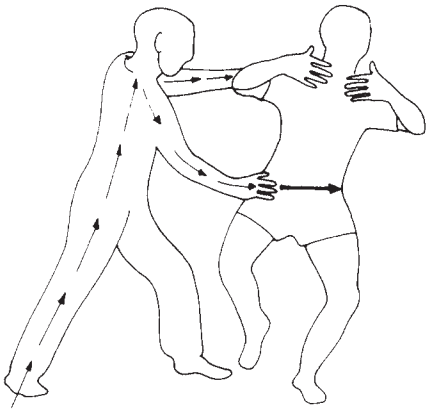


Fig. 1.3. If the force is not grounded, it does not pass through the structure, and the body falls.

Power transfer can be used as a healing force or as a destructive force. When it is used as a healing force, it is called Fa Jia.* When power is transferred to exert a destructive effect on certain acupuncture points, it is called Di Mak.

THE HISTORY OF TAI CHI CHUAN

The practice of Tai Chi Chuan was allegedly created by Chang San-Feng (1279–1368 CE), a Taoist monk who lived at the Wu Tang Mountain—the site of many schools of internal martial arts training (fig. 1.4). Chang San-Feng had also studied at the Shaolin temple, but he reformed their external art techniques (Li power) to incorporate Fa Jin. The principle of including yin techniques in martial arts practice was a paradigm shift that led to notions of softness and yielding, and to the incorporation of slow, meditative forms.

Tai Chi Chuan is an internal martial art based on the philosophical and cosmological concepts of Taoism. The term *Tai Chi* is a philosophical term—arising from Taoist cosmology and creation theory—that is directly translated as "the supreme ultimate." It

*The techniques of Fa Jia are elaborated in the text of *Taoist Cosmic Healing* (Rochester, Vt.: Destiny Books, 2003), and to some extent in the *Chi Nei Tsang* series: *Chi Nei Tsang* (Rochester, Vt.: Destiny Books, 2007), *Advanced Chi Nei Tsang* (Rochester, Vt.: Destiny Books, 2009), and *Karsai Nei Tsang* (Rochester, Vt.: Destiny Books, 2011).

Fig. 1.4. Chang San-Feng

represents the primal duality of yin and yang. According to Taoist cosmology, beneath the nothingness there is the Tao, and from the nothingness arose the yin and yang. The interplay of this duality to facilitate experience of the Tao is the reason why it is regarded as the "supreme ultimate." The internal martial art of Tai Chi Chuan integrates with the philosophical and cosmological concepts of the Tao at many levels. The methods and experiences required to develop within the art of Tai Chi require a deep understanding of these concepts.

The *Tai Chi Chuan Ching* is regarded as the principal Tai Chi Chuan classic and is attributed to Chang San-Feng, though its true authorship is unknown. Many classics of Chinese thought are attributed to legendary immortals, though this cannot be proven in most cases. Perhaps adepts feel that they have been inspired by the forefathers of the discipline—or even that they have channeled the thoughts of the immortals—and humbly attribute ownership to them.

In the *Tai Chi Chuan Ching*, Chang San-Feng says:

> Let there be no hollows or projections; let there be no stops and starts. Its root is in the feet, its issuing from the legs, its control from the *yao* (waist), and its shaping in the fingers.[1]

This passage highlights two basic principles of Tai Chi that are also fundamental teachings of the Universal Healing Tao system. The first principle is Iron Shirt training, which removes segments of tension within the spine and limbs. This tension correlates to the "hollows and projections" described by Chang. The second principle describes the passage of chi from the heels through the body and spine, which is the primary teaching of the foundational form of Tai Chi Chi Kung. It will be discussed in greater detail in chapter 3.

After Chang San-Feng there is a period of several hundred years during which both written classics and legendary Tai Chi masters seem to have disappeared. It is not until the likes of Wang Tsung-Yueh that the available history of Tai Chi Chuan resumes (see fig. 1.5 on page 6). The biography of Wang Tsung-Yueh is uncertain, though it seems that he was a teacher who lived in Shanxi province and taught in Honan province. His exact dates of birth and death are unknown. Chen village and Yang proponents have him existing prior to Chen Wang-Ting somewhere in the Ming Dynasty (1368–1644), hence his position on the lineage tree between Chan San-Feng and Chen Wang-Ting. However Douglas Wile questions this and has him living in the eighteenth century.[2] His classic *Tai Chi Chuan Lun* marks the first verified Tai Chi classic.[3]

Wang comments on the cultivation of jin, saying:

> Yin and yang mutually aid and change each other.
> Then you can say you understand jin (internal force).

The process of interaction between yin and yang energies—between the substantial and insubstantial—is found in the Universal Healing Tao Fusion practices and Kan and Li practice. Fusion practices involve the merging of the various yin and yang elemental forces. Kan and Li practice teaches us to invert yang (fire) beneath the yin (water) energy and then couple them together. This process creates a new energy, which is closer to the Primordial Chi. It creates

an expansion in the tan tien, which is used to fuel the release of jin.*

The oldest of the Tai Chi forms is the Chen style, which was developed by Chen Wang-Ting (1628–1736) in the Chen family village (fig. 1.6).[4] Chen Wang-Ting is said to have learned Tai Chi from Jiang Fa, who had learned it from Chang San-Feng. Alternatively, some scholars believe that Chen Wan-Ting was the true creator of Tai Chi Chuan, rather than Chang San-Feng.[5] There maybe a hidden agenda here, as proponents of this position may be seeking to add authenticity to the Chen family name, but in any case hard evidence of the actual existence and contributions of these legendary Tai Chi forefathers is difficult to come by. Nevertheless, the usefulness of the *Tai Chi Chuan Lun* and the Chen approach to Fa Jin is undeniable.

Fig. 1.5. Wang Tsung-Yueh

Fig. 1.6. Chen Wang-Ting (1628–1736)

To this day, the Chen style carries several forms within its repertoire that make use of Fa Jin, including Cannon Fists, Buddha's

*For more information about the Fusion practices, see *Fusion of the Five Elements* (Rochester, Vt.: Destiny Books, 2007), *Cosmic Fusion* (Rochester, Vt.: Destiny Books, 2007), and *Fusion of the Eight Psychic Channels* (Rochester, Vt.: Destiny Books, 2008). More detailed instruction about Kan and Li practice can be found in *The Taoist Soul Body* (Rochester, Vt.: Destiny Books, 2007).

Warrior Attendant, and Light the Firecrackers. The external manifestation of these forms includes a sudden release of force through the physical musculature, which looks, to the naked eye, like a shaking at the end of the move.

The Yang style was an adaptation of the Chen style created by Yang Lu-Chan (1799–1872) (see fig. 1.8 on page 8). It is alleged that he spied on Chen Chang-Xing (1771–1853) and achieved his skills in discharge power this way.[6] The Yang style is characterized by its more

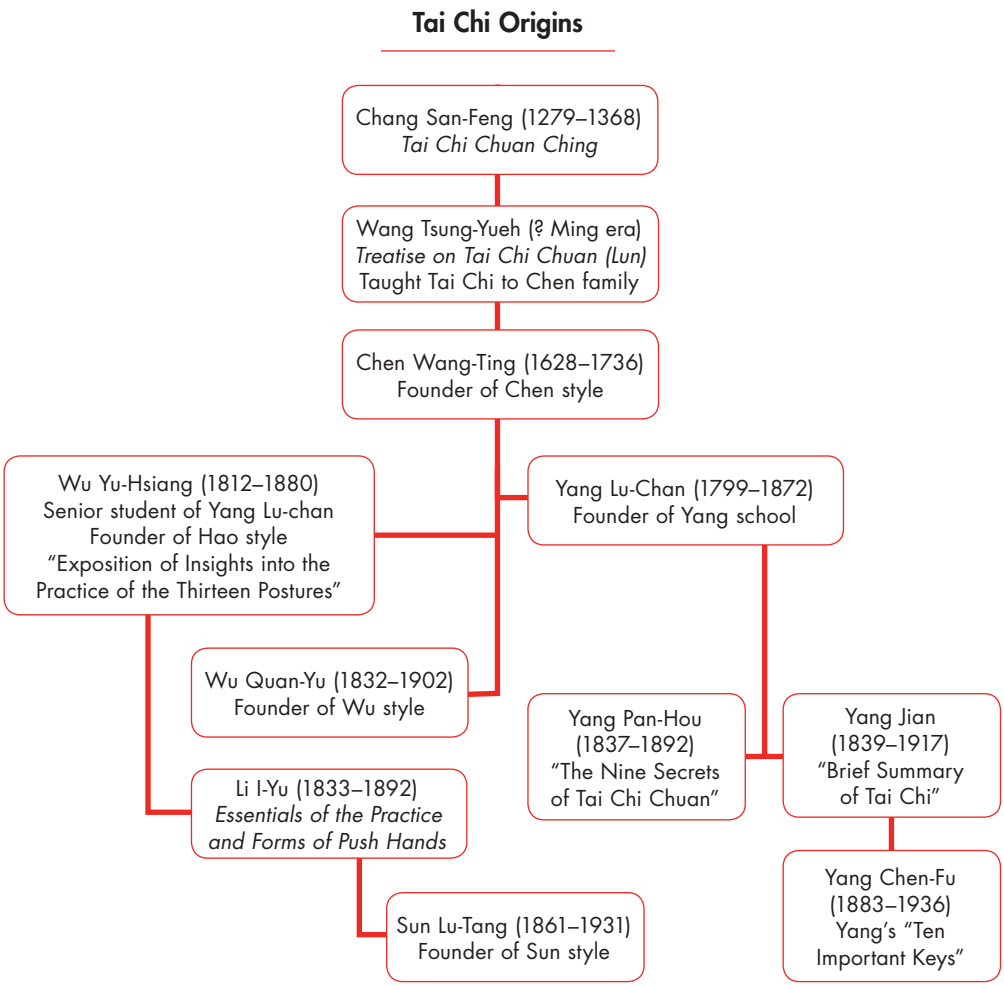


Fig. 1.7. Tai Chi founders and authors of the Tai Chi classics

Fig. 1.8. Yang Lu-Chan (1799–1872)

consistent tempo, which contrasts with the staccato rhythm of the Chen style. It is therefore aligned with Chang San-Feng's principle that "Tai Chi Chuan is like a great river rolling on unceasingly."[7] Each move has that characteristic flow despite the fact that the moves are executed in various directions. The current long 108 form has no overt exhibition of Fa Jin, although the little-known Small-Frame Fast Tai Chi form does. (The Small Frame is a compacted long form that is executed with speed.) Nevertheless, each form in the long form can rehearse and create familiarity with the principles of Fa Jin. On this point, Wang Tsung-Yueh reminds us that "from familiarity with the correct touch, one gradually comprehends the jin."[8] The use of jin begins with the closing of the arms, which assists in the contraction of the tan tien and its consequent expansion, followed by the passage of chi through the spine and structure.

The Universal Healing Tao form is in part derived from the Small-Frame Fast Yang Tai Chi form and the Bird's Tail form from the long Tai Chi form.

Yang Lu-Chan had three sons: Yang Qi (died early), Yang Pan-Hou (1837–1892), and Yang Jian (1839–1917). Yang Pan-Hou was likely the original author of "The Nine Secrets of Tai Chi Chuan,"[9] and a contributor to the *Yang Family Forty Chapters*, which included oral transmissions from the legendary Chang San-Feng (fig. 1.9).[10]

Fig. 1.9. Yang Pan-Hou (1837–1892)

This book, which will be discussed in greater detail in chapter 3, makes the important connection between "closing" and Fa Jin. Closing is the returning of the arms to the torso, which activates and expands the tan tien, providing the power for executing the discharge. Chapter 24 says, "When there is a closing (therefore storing the jin), (the jin) immediately emits."[11]

Yang Lu-Chan's third son, Yang Jian, wrote the work known as the "Brief Summary of Tai Chi." The third son of Yang Jian was Yang Chen-Fu (1883–1936), who gave the oral transmission of "Ten Important Keys to Tai Chi Chuan" and the "Explanation of Tai Chi Chuan's Harmonious Stepping in Four Sides of Push Hands" (fig. 1.10). In the "Ten Important Keys," he says:

Fig. 1.10. Yang Chen-Fu (1883–1936)

> Taijiquan uses the Yi without using the Li. From the beginning until the end, continuous without breaking [when] complete, again repeated from the beginning, cycling without limitation. It [is] what was originally said [to be] "Like the long great river [i.e., Yangtze River], flow fluidly without ending." It is also said: "Transporting the jin as drawing the silk." All of this means the [movements] are threaded through [i.e., together] with a sole Qi.[12]

This excerpt explains some aspects of Fa Jin that are unlike the coordination that occurs in our everyday mind. Instead, Tai Chi—and in particular Fa Jin—requires the use of a deeper state of mind. This state of mind arises when the practitioner is able to relinquish control to an integrated self. This integrated self is called Yi power, and it is formed in the merging of the brain, heart, and lower tan tien. Yi power moves chi, which transports the jin. This movement of chi is a very pleasant sensation, which involves a very delicate yin approach—like drawing fine silk. Paradoxically, it is this delicate yin power that generates the overt maximal yang power.

Yang Lu-Chan taught Wu Yu-Hsiang (1812–1880), who was the author of "Exposition of Insights into the Practice of the Thirteen Postures" (fig. 1.11). This work teaches us that "to Fa Jin, sink, relax completely, and aim in one direction!" The sinking and relaxing is a

Fig. 1.11. Wu Yu-Hsiang (1812–1880)

vital aspect of Fa Jin. Since discharge power is generated from the realm of yin, it is important to embody yin thoroughly—to relax, contract the tan tien, tuck in the coccyx, and sink deeper into one's structure. This gives a sensation of connecting to the earth and even to the vast realm of empty space beyond it. From that space a spark alights within the tan tien, which inflates it at maximal acceleration. Sinking and relaxing is more powerful than using muscular strength or Li power.

Fig. 1.12. Li I-Yu (1832–1892)

Wu Yu-Hsiang taught Li I-Yu (1832–1892), who was the author of many classic works, including "Thirteen Postures," "The Secrets of Withdraw and Release," "Five Key Words," "Important Keys of Stepping and Striking," "Song of Tai Chi Chuan Applications," "Secret of Eight Words," "Song of Transporting and Applying Spirit and Chi," "Song of Random Circle," "The Acclamation of Tai Chi Sparring," and "The Small Forward of Tai Chi Chuan" (fig. 1.12). Li I-Yu says:

> To Fa Jin it is necessary to have root. The jin starts from the foot, is commanded by the waist, and manifested in the fingers and discharged through the spine and back. In the curve seek the straight, store, then discharge, then you are able to follow your hands and achieve a beneficial result. This is called borrowing force to strike the opponent or using four ounces to deflect a thousand pounds.[13]

In this quote we are reminded of the basics of the Universal Healing Tao system. Iron Shirt structure is the foundation that provides the rooting power. The waist, also known as the Chi Belt or Dai Mai, maintains the solid connection between the legs and the torso. As per the foundational form of Tai Chi Chi Kung, the chi is transmitted from the earth through the spine and discharged via the palms. This is done with a sense of the delicate or yin power. By following all these principles, a seemingly minute force is enough to move a large man.

BA GUA ZHANG AND FA JIN

Dong Hai-Chuan (1797–1882), the creator of Ba Gua Zhang and author of the *Thirty-six Songs and Forty-eight Methods*, believed that connections to the eight forces would give a practitioner access to universal power.[14] This power is the same discharge power that is used by the Tai Chi masters.

At times, Dong moves from the mystical to the practical. In song nine, he refers to Fa Jin and reminds readers to "use the 'Hen' and 'Ha' sounds when releasing the power. The whole body's energy rises."[15] Although the use of sound has not been mentioned to this point, it may be a useful adjunct in the manifestation of discharge power. Sound activates the empty force and lower tan tien, which are vital aspects in the release of discharge power.

Dong also says, "Step back to know the situation/small force can deflect much greater power."[16] He reminds us of the importance of reading the opponent correctly, and of choosing the right moment so that only a small amount of effort is required.

To continue with Dong's classic; in chapter eight on the internal power method he says, "Power discharge is from harmony of mind and force."[17] Here he emphasizes but fails to elaborate on the importance of the mind in discharge power. Universal Tao practice teaches that with refinement, force and mind merge: the three minds become one mind. The mind moves the chi, which moves the limbs. Minimal separation exists between intention and actualization of force.

In chapter nine on the power storing method, Dong comments that storing power is just as vital, if not more important, than releasing it.[18] Another way to look at this is to recognize that the tan tien needs to be full. If the tan tien is empty then the execution of discharge power is disabled. Everything is done in moderation and nothing to excess such that the lower tan tien is never depleted.

HSING YI AND FA JIN

Hsing Yi is the third internal art. It is older than Ba Gua Zhang and Tai Chi, and supposedly originated in the tenth century during the Song Dynasty. The founding of Hsing Yi is credited to General Yue Fei. Although it is labeled an internal art, Hsing Yi's forms are more typical of an external martial art. This is because its strikes and blows are linear and aggressive. It demonstrates Fa Jin through explosive strikes rather than the throwing and uprooting of opponents as seen in Tai Chi. However, the cultivation of Fa Jin that is behind these strikes is based on internal softness, stillness, visualizations, and connections to the elements and symbolic animals. The five different types of power released are Pi, Tzuan, Beng, Pau, and Hern; they correspond to the elements of metal, water, wood, fire, and earth. The three main schools of Hsing Yi—Shanxi, Hebei, and Henan—vary in certain details, but the twelve animals generally included are: dragon, chicken, monkey, hawk, sparrow, Tai bird, eagle, bear, snake, tiger, horse, and turtle.

2

Why Practice the Tai Chi Chi Kung Discharge Form?

Students of the Tao may wonder why they should practice a discharge form. "Surely I can experience the Tao through sitting meditation," they may ask. "Why would I ever partake in fighting activities?"

There are, of course, many methods for the discovery of the Tao, and it is legitimate to question whether the pursuit of discharge power is one of them. If it is, where would it fit in the range of Taoist practice? Scholars generally recognize paths of religious Taoism (the worship of Taoist immortals and gods embellished with ritual and hierarchy), and folk Taoism (practiced by the masses), as well as philosophic Taoism, internal alchemy (*nei dan*), and external alchemy (*wei dan*).[1]

Beyond this list of Taoist paths, however, is another way—the so-called way of the warrior, which is a merging of the warrior path with Taoist practice. The writings of Chang San-Feng and the teachings of masters with extraordinary abilities (especially within the Lei Shan Tao/Thunderbolt tradition) are the foundation of this path. While many areas of Taoist practice are involved in the way of the

warrior, the internal alchemy methods are the primary vehicle for this integration.*

THE WAY OF THE WARRIOR

Wars and fighting have influenced cultural development in China just as much as Taoism. While the goals of immortality and merging with the Tao may seem incompatible with the goals of war, there are many examples of productive interchange between the two philosophies. In Sun Tzu's *Art of War*, we find an early example of Taoist thought merging with military strategy. Success in this text incorporates the principles of longevity and the welfare of the people as prime objectives. In Zen Buddhism, we also find a path of enlightenment through martial practice creating a code called the Budo.†

The successful merging of pugilism and spiritual realization can be understood as an archetype of the hero's journey. It requires the resolution of the seemingly impossible paradox of finding peace by engaging in violence. This is possible only through the acceptance of all drives of the self—including the lower desires. This process is akin to the acceptance of sexual feelings, which are transformed, in the Universal Healing Tao system, via the alchemical practices of Fusion and Kan and Li. On the warrior path there is an initial acceptance of the desire to fight. The more compulsive yang side of our nature is incorporated just as much as the thoughtful yin aspects. They all contribute to the whole person.

---

*Chang San-Feng likened battle and alchemy when he wrote, "It is the process of mercury and lead. When we encounter an opponent in battle, the yin and yang of Kan, Li, Dui, and Zhen in the trigrams perform the way of yang seizing yin, and is the four directions [of Tai Chi Chuan]. The yin and yang of Qian, Kun, Gen, and Xun demonstrate the way of yin adopting yang and is the four corners."[2]

†It is worth noting that Zen Buddhism derived from Chang Buddhism, which was itself a fusion of Taoism and Buddhism.

The Discovery of the Self

The discovery of all aspects of the self is an obligatory stage in the realization of the Tao, and therefore also in the way of the warrior. This holistic approach is not unique to Taoism, but is also seen in many other mystical traditions. Plato (428–348 BCE), for instance, divided the psyche into four elements that needed to be united in order to realize the mystical world of eternal forms. Paracelsus (1493–1541) fused all aspects of the psyche with sexual drive to form the philosopher's stone, which was akin to the rebirth of Christ consciousness.[3] Integration of the whole self is also a vital principle in contemporary psychology, as seen in the works of Carl Jung and Sigmund Freud. They both maintained that the discovery and union of the subconscious is vital to healing and to the realization of God.

Taoist cosmology teaches us that the Tao begot the Wu Wei. From the Wu Wei, yin and yang were born. From this duality came a third—now called the three pure ones. Next came the five elements, which are each then further divided into yin and yang subdivisions. The five elements can manifest themselves now as the eight forces. After multiple divisions, life is manifest as the ten thousand things.

In the Taoist framework, wholeness is the awareness, understanding, correct use, and merging of all the multiple forces within us, including those difficult-to-integrate forces like sexual drives and a desire to harm. From an internal alchemical perspective, the eight forces signified by the eight trigrams of the pakua (Ba Gua) represent the multiple aspects of self. The five elemental forces of existence can also represent these aspects of self.

Discovery of the Tao involves firstly the simplification of the ten thousand things into the eight forces or five elements. From there, the process of fusion and the power of sexual union can be employed to reduce the multiple divisions to a duality, from which the unitive experience of the Tao is achieved (fig. 2.1).

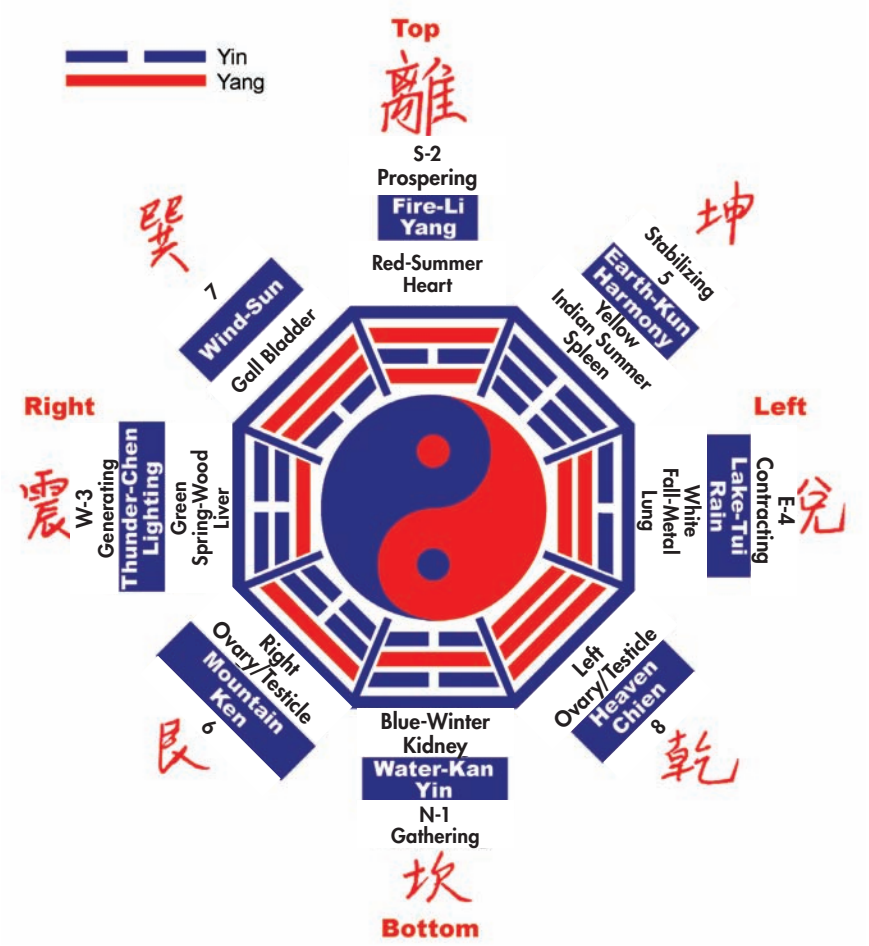


Fig. 2.1. Pakua fusion

This progress toward wholeness and simplicity in the Tao is called self-cultivation. Self-cultivation is a means of achieving sagehood—a full realization of the Tao. In other traditions, this state might be called enlightenment. In the history of Taoism, advanced stages of self-cultivation are frequently associated with achievement of high levels of discharge power, so it may be that the pursuit of Fa Jin can assist the adept in realization of the Tao.

Chang San-Feng discussed the realization of the Tao, saying, "If [you] are capable of doing so, then outside or inside, refined or coarse,

there is no place that cannot be reached, [which allows you to] comprehend [the Tao] suddenly. The wish of reaching sagehood and holiness can be achieved."[4] Chang correlates the outside or coarse world to the postures and forms of martial arts. He states that while his ancestors taught self-cultivation through spiritual and physical practice, they did not teach self-cultivation through martial practice. While acknowledging that self-cultivation can be achieved on many spiritual paths, Chang makes clear that his teachings "should be transmitted as a martial art for self-cultivation."[5] As a part of this effort, Chang correlates the components of cosmological theory and internal alchemy to Tai Chi practice.

Chang describes the thirteen postures of battle, which are the eight gates and five steps. The eight gates have a correspondence to the pakua, and are defined as the eight methods of release of jin. These are the forces of Peng, Lu, Ji, An, Tsai, Lieh, Chou, and Kou, which will be discussed in detail in chapter 3. The five steps are forward steps to the left and right, backward steps to the left and right, and the center. These postures are the manifestation of the forces of the universe in action. When we develop these postures in reference to our relationships with the internal alchemical essences, we facilitate our movement toward the Tao. Chang implies that mastery of the inner worlds and discovery of the Way cannot occur without understanding of—and competence in—its earthly manifestations. Furthermore, he states that the potential for exchange of the yang essence of two males engaged in battle may be a tool for even more rapid development than the paths of exchange in sexual practices.*[6]

Chang further highlights the correlation between mystical meditation and Push Hands practice, saying:

> The eyes view the three unifications (limbs, inward awareness, and external action) and the ears listen to the six ways (six directions). . . . Though they are situated on the surface of the body, the knowledge

*The left- and right-hand paths of single and dual cultivation have been discussed at length in other Universal Healing Tao texts, including *Healing Love through the Tao* (Rochester, Vt.: Destiny Books, 2005).

obtained can lead your innate knowledge back to its origin. The ears, eyes, hands, and feet can be divided into two; this is the two poles. All of these combine together, become a single unit, and become Taiji.[7]

THE UNITIVE STATE

In meditation practice, the Fusion meditations begin with the unification of the senses, inward awareness, and the body. In the Universal Healing Tao practice of the Three Tan Tiens and Six Directions, there is a merging of spatial existence beyond self with the unified mind. In these practices, experience is reduced to a duality before there is perception of the Original Chi. In Push Hands practice, the same principle is employed, except now two people are involved in ever-changing motion. When principles of internal alchemy are applied to martial interaction, they enhance martial skill and also facilitate experience of the unified or unitive state.

Of course, unitive experience is not exclusive to the Taoist system, but occurs in many mystical traditions. Within Western psychology, a unitive experience is described as a "peak" experience. If the metaphor of a mountain can be used to describe the adept's journey, then the peak is the realization of the Tao, while the journey toward it can be called self-cultivation.

The journey of self-cultivation on the warrior path correlates well with progression through psychologist Abraham Maslow's "hierarchy of needs." Maslow describes a hierarchy of goals or needs, which all people strive to meet in the following order: satisfaction or gratification of body needs; safety needs and self-protection; love, affection, warmth, acceptance, and a place in the group; a desire for self-esteem, self-respect, self-confidence, and for the feeling of strength or adequacy; and finally self-actualization, self-fulfillment, and self-expression. With each stage, there comes an experience that provides the self a sense of satiation, or completeness, which then allows progression to the next stage. Of course, the journey is rarely a linear progression, but the hierarchical framework is helpful.

SUMMARY OF MASLOW'S STAGES WITH CHAN SAN-FENG'S CORRELATIONS

STAGE	MASLOW	CHANG SAN-FENG
Basic needs	Self-gratification (food, sexual desire, sleep) and self-preservation (housing, self-defense)	"When the mind and physical body are protected safely"[8]
Knowledge of self	Self-acceptance and self-esteem (to have self worth)	"Know our origin and understand where we are going (it does not matter whether we are smart or stupid, virtuous or not, all can use their capability to approach the Tao."[9]
Development of capabilities	Self-actualization (becoming oneself)	"It is the natural knowledge and capability that (we) are born with."[10]
Peak or transcendental experience	Self-transcendence[11]	"Comprehending the Tao from martial arts"[12]

In the beginning, a martial artist relishes his newly found strength, coordination, and skill. He finds health and joy at being accomplished in the martial arts. However, his emotions and questions of status among his peers remain troubled. "I fight because I am angry. I fight because I am inadequate. I fight yet I am restricted by fear of being hurt or humiliated." With time, maturity, meditation, and self-reflection, the fighter's capabilities and ego begin to melt. The mystical experience of being one with nature, and marvel at the Tao, soften all these sticky emotions and unsolvable problems. Eventually, these human frailties merge with the Tao in such a way that the adept finds peak experiences in the arena of meditation and fighting. In letting go of the desire to be accomplished, one paradoxically becomes accomplished.

In this final step there is working out of one's own fundamental personality—the fulfillment of its potentials, the use of its capacities, and the desire to become the most that one is capable of being. Paradoxically, self-actualization comes with self-transcendence: one finds oneself by moving beyond oneself. The achievement of

self-transcendence is usually associated with a peak or transcendental experience.

In Maslow's heirarchy, "transcendental" or "unitive" experience is the peak experience associated with self-actualization. It is a perception of the unitive state, which can be equated with the mystical experience of the Tao: it is at this moment that the self is dissolved. As occurs with all high level work, the phenomena of paradox reveals itself: to become oneself one loses oneself. The adept lets go without any motivation for sexual desire, self-preservation, or acceptance by others. When the adept genuinely passes through this gate, the skills of the Tao will become manifest.

The following quotation by Bruce Lee (1940–1973) highlights these stages:

> Right then as I was absorbing myself with the lesson of water, another mystic sense of hidden meaning revealed itself to me; should not the thoughts and emotions I had when in front of an opponent pass like the reflection of the bird flying over the water? This was exactly what professor Yip meant by being detached—not being within emotion or feeling, but being one in whom feeling was not sticky or blocked. Therefore in order to control myself I must first accept myself by going with and not against my nature. I lay on the boat and felt that I had united with the Tao; I had become at one with nature. I just laid there and let the boat drift freely according to its own will. For at that moment I had achieved a state of inner feeling in which opposition had become mutually cooperative instead of mutually exclusive, in which there was no longer any conflict in my mind. The whole world to me was one.[13]

In this passage, Bruce Lee finds that zone where negative emotions like fear are only fleeting. The opponent's moves become a part of a spontaneous unrehearsed play within something marvelous and unifying for all. Bruce Lee clearly articulates this sense of unity that was associated with his insight, which could accurately be called a "peak experience."

Further and varied paths to self-cultivation are noted in the classics. In the *Yang Family Forty Chapters*, Yang Pan-Hou divides the journey of self-cultivation and scholarship into three stages: low, middle, and top.[14] Low-level cultivation includes external physical and martial accomplishments. Top-level cultivation involves internal energetic development and spiritual accomplishment. At this level, internal development includes the ability to turn the senses inward and transform them into listening and understanding jin. Yang Pan-Hou equates internal spiritual development with the acquisition of Fa Jin;[15] at this point, neutralization of an opponent's force can be achieved. Important to the Universal Healing Tao practitioner, top-level accomplishment would mean the mastering of Fusion, Kan and Li, and Sealing of the Five Senses meditations.

However, as is the case with most life-long journeys, the ultimate benefits of the path are not recognized at the beginning. Within each warrior there is a deep subconscious attraction that draws him or her—much like the attraction of a lover. But it is only the years of exploration that reveal the wonders of the path itself. The warrior's journey becomes a valid path to self-realization when the principles of self-cultivation and internal alchemy are juxtaposed over a framework of the individual's maturation. The maturation of the warrior may be reflected in the acquisition of skills within the fighting arts that include emotional control, spontaneity, and Fa Jin. The authors acknowledge that this path is not for all adepts seeking the Tao. Deeper unknown portions of our being may determine who chooses to embark on this path; the hero or successful adept along it is the one who finds peace through the fighting arts.

There is another benefit to consider. When you use this form over a period of fifteen or twenty years, it becomes locked in the molecular memory of your cells and is a part of your consciousness. When you ascend—that is, when you die—you will take the Fa Jin form with you to the other realm. What you are indirectly doing with these years of practice is building a protective vortex that will aid you in the next realm. Remember: he who chops his own wood is twice warmed.

3

Principles of Discharge Power

In this chapter, we hope to provide a definition of discharge power and the stages of its expression. The steps required to accomplish Fa Jin will be explained through the lens of practices taught within the Universal Healing Tao system, including Iron Shirt structure, the transfer of power from the tan tien and turning of the waist as taught in the basic form of Tai Chi Chi Kung and Tan Tien Chi Kung, and the coupling of yin and yang as taught in the Fusion practices and Kan and Li meditations. References will be made to teachings of past masters as well as to living ones.

WHAT IS DISCHARGE POWER?

As described in chapter 1, discharge power is the issuing of internal power with seemingly little force, which is characteristic of the three internal martial arts—Tai Chi, Hsing Yi, and Ba Gua Zhang. There is little or no gross external movement or muscle power (li power) involved in the release of this force. Rather, it is transferred from the energetic realm to the opponent via the practitioner's whole structure. In these arts, discharge power is better known by its pinyin name, Fa Jin.

There are various levels of achievement with Fa Jin. At a rudimentary

level, one learns to discharge explosive force so that an opponent sustains a jolting impact. This correlates to a "one-inch" or "three-inch" strike.* At the other extreme, opponents can be thrown meters away with minimal touch or distortion. This is usually accomplished in the context of Push Hands and is known as "uproot and discharge."

The primary teacher for Master Chia's Universal Healing Tao system was Master Yi Eng, who collected various internal alchemical techniques from many masters throughout China. While the Universal Healing Tao system includes aspects of many traditions, it focuses primarily on meditation—and in particular on Internal Alchemy (*jin dan*) and the development of the Immortal Fetus (*yang tan shao*) (fig. 3.1). While the Universal Healing Tao system is comprehensive, it does not specialize in discharge techniques. So while it does teach the basic practice of merging yin and yang chi in the lower tan tien, which is fundamental to any discharge practice, it does not profess to teach students the advanced skills of the Lei Shan Tao/Thunderbolt sect.

Fig. 3.1. The Immortal Fetus

The authors recognize the achievements of masters external to the Universal Healing Tao system in the practice of Fa Jin, and will explore their teachings on its principles here. While the Universal Healing Tao teachings are not geared toward the cultivation of Fa Jin,

*These techniques were brought to the West by Bruce Lee.

its practices can be used to help explain—and learn—this internal art.

The first question that must be asked—and answered—in regard to discharge power is, "What does jin feel like?" Since most martial artists will be seeking jin for the entirety of their careers, learning how to recognize it is an important step. The explosion of jin is often first experienced during deep meditation, when the mind becomes soft and absorbed in the pleasure of connection to the refined energies that can be found in this state. There is a sinking, and a period of relative apnea (cessation of respiration). From this space of deep connection, there is a sudden explosion of chi from the earth and the lower tan tien. It comes from a merging or copulation of the diametric energies of yin and yang.

In the Fusion and Kan and Li practices, this principle is often used to ejaculate the pearl out of the body to form the energy body. In Fa Jin, it is employed to direct an opponent's force or energy to the tan tien and the earth. This is done in a state of pleasure, such that the practitioner's body remains open and relaxed. The yang force from the opponent—along with any tension in your own body—is sunk deeply into the earth. This sinking means all major points of the body are relaxed to the earth: the neck is long, the shoulder and elbows are down, the lumbar vertebrae are tilted back, the coccyx is tucked under, and the *kua* (pelvis) is open. (The kua are the ligaments that connect the sacrum to the pelvis posteriorly and anteriorly between the crest of the ilium along the inguinal area to the pubic bone.)

This yang energy reaches a zenith and finally touches or connects with a deeper aspect of yin. From this yin comes a rapid explosion that is transmitted from the earth—via the tan tien and body structure—to the opponent. Thus Fa Jin is the transformation of an opponent's yang and tension energy, which is neutralized deep in the earth and the lower tan tien, and combined with yin energy. From this coupling there is an explosion of jin, which is then discharged back to the opponent.

LEARNING FROM FA JIN MASTERS

Living and historical masters of Fa Jin can teach us a great deal about what it really is, and how it works. We have selected a few of these masters to help us illustrate the range and principles of discharge power. The adepts we have chosen to profile are:

1. Wu Yu-Hsiang
2. John Chang
3. Master Jiang
4. Chen Man-Ching
5. Chen Xiao-Wang
6. Lama Dondrup Dorje (Sifu Yeung)

Wu Yu-Hsiang (1812–1880)

Wu Yu-Hsiang provides us with a good description of certain aspects of internal power:

> Store up the chin (jin) like drawing a bow.
> Mobilize the chin like pulling silk from a cocoon.
> Release the chin like releasing the arrow.
> To fa chin relax completely and aim in one direction!
> In the curve seek the straight, store then release.[1]

To begin analysis of this quotation, let us figure out the anatomical correlates of the bow and arrow. In figure 3.18 of *Iron Shirt Chi Kung* the string for the bow was the Conception Vessel, while the bow itself was the spine or Governing Vessel.* In the context of Fa Jin, I would like to propose that the anatomical metaphor be reversed. As the body relaxes, the coccyx tucks underneath and the Crown Point gets pulled up, so that the spine is pulled back like a string (fig. 3.2). At a precise

*Mantak Chia, *Iron Shirt Chi Kung* (Rochester, Vt.: Destiny Books, 2006).

moment, the opening and relaxation of the channels results in a conversion to yang and the arrow is released in a forward direction.

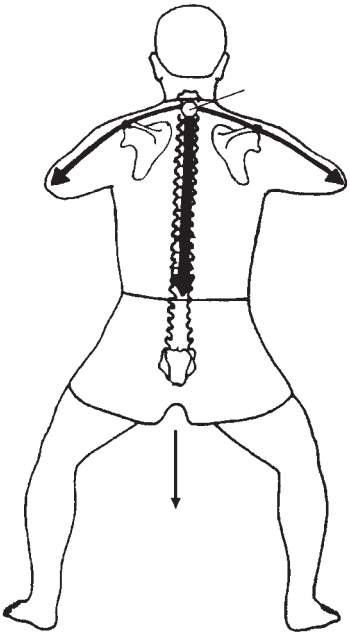


Fig. 3.2. Connect hands, scapulae, and spine to sacrum, then load bow and arrow.

To gather the jin, Wu suggests that the sensation should be akin to the pulling of silk. This silk feeling—described in the silk reeling exercise discussed in chapter 4—can be equated to kidney yin or Ching Chi; it is a step closer to perceiving the Original Chi. The silk feeling is promoted by letting go, and allowing the chi to move the arms and the body rather than using the mind to move the arms directly. Hence, in the returning or closing movement, allow everything to be soft. Allow the chi to move the arms and focus on the pleasant yin sensation in your lower tan tien.

The fourth line tells the practitioner to "relax completely" (*fang sung*). This is a big request, and one that is open to misinterpretation. Relaxing completely is more than just going limp. It implies all of the

above in terms of letting go and allowing the chi to be directed by the Yi power (integrated three minds). It means allowing all tension to fall deep into the tan tien and the earth as your awareness moves beyond self and connects to the earth below. Arguments could also be made that "relax completely" means to release all tension or blockages from the major acupuncture channels. In other words, develop the ability to connect with the Original Chi and open up the Microcosmic Orbit in an instant.

The fifth line tells us, "In the curve seek the straight." This is a phrase we frequently use in Universal Healing Tao practices, including Iron Shirt training and the fundamental form of Tai Chi Chi Kung. As energy or jin passes up through the spine, the arms let go. They find their own coordination pattern. Interestingly, a forward strike does not involve a straight line. It involves a complex coordination of the musculature as the spinal vertebrae move backward, energy rises, the scapulae rotate, and the elbows drop as the wrist rotates.

"Store then release" is the last part of Wu's quotation. This refers to seeking a place of stillness, or placing the tension or yang chi in a quiet place and allowing the transformation magic to occur. From stillness comes movement. The more stillness, the more discharge power.

John Chang (Magus of Java) (1944–)

John Chang is able to demonstrate the release of yang discharge power in the form of heat or an electric shock. He can also discharge yin energy. John Chang describes the foundation of his ability as lying within the tan tien. He practices in the Mo Pai tradition,* which has similarities to the Lei Shan Tao/Thunderbolt sect of Taoism. In the first stage of Mo Pai practice, the lower tan tien is filled with yang chi. In stage 2 the chi becomes solid. In stage 3, the tan tien can be

*Mo Pai was a student of the school of Mo Tzu who successfully merged yin and yang chi.

moved to various places within the abdomen. In stage 4, yin and yang chi are compressed together, resembling the Tai Chi symbol as they mutually change and interact. Stage 4 is associated with the ability to emit an electric shock at a distance, as well as some telekinesis. Higher levels of practice include pyrokinesis. John Chang alleges that Chang San-Feng later reached the highest level achievable—level 72.[2]

On the surface, these stages have correlates with the Universal Healing Tao system. Stage 1 could be the perception of chi in the lower tan tien in the Microcosmic Orbit. Stage 2 occurs in the Fusion practices, as chi condenses to become experienced as a pearl. Stage 3 correlates to the multiple collection points of Fusion. Stage 4 is the Fusion itself, as fire and water or metal and wood are brought together in the lower tan tien.

Yet if these practices are all that is needed to emit a shock, why isn't such an emission achievable by most students? There are many answers to this question including the simple one—that the right intention and the appropriate degree of mastery are needed to be able to juxtapose yin and yang chi in the right way. It may take time for the subtle aspects of these accomplished arts to be fully transmitted to students.

Master Jiang (1967–)

Like John Chang, Master Jiang is able to discharge chi at a distance. I (Andrew Jan) have personally experienced this myself. In our first encounter, he stood a few meters away and emitted chi from a sword finger, aiming it at my chest. I instantly felt a burning electric sensation there, which felt like I had touched a 240-volt AC domestic outlet.

Master Jiang's disciple Wu (a student of Jiang's for sixteen years) gives electric shocks as well, in the context of healing Chi Kung diagnosis and treatment. I watched as he first opened up the Bubbling Spring point by rubbing it with a wet towel, then used a sword-finger technique to emit chi and open the point further. Typically, the patient would then go for a brief jog, jump up and down, and stand on a wet

towel. Wu would engage in a brief warm-up, rolling yin and yang chi between his heart and his lower tan tien, then with some effort would move the chi ball down from his shoulder to his hand. His hand would then go into spasm as he clasped the patient's hand. Immediately, the patient's arm would go into spasm and the patient would report strong electric shocks. Wu could sense whether this shock was passing freely into the patient's tan tien and back to him. He could touch any part of the body and cause contraction of the muscles and a sense of prickly, hot electric shocks.

Master Jiang's teacher displays the ability to burn a hole in a piece of paper at a distance. He can also telekinetically move a small object like a cigarette lighter a small distance across the floor.

Cheng Man-Ching (1902–1975)

The following information comes from Cheng Man-Ching's written work entitled "Master Cheng's Thirteen Chapters on T'ai-Chi Ch'uan."[3] Cheng, who was taught by Yang Chen-Fu, sincerely wished to disclose the secrets of the art. This was in opposition to mainstream masters who would only teach to a select few, often withholding essential teachings. We are therefore indebted to masters like Cheng Man-Ching who are committed to revealing their teachings openly, and thereby keep the study and practice of Fa Jin alive.

Cheng Man-Ching places considerable emphasis on:

- Relaxation
- The metaphor of the two-man saw
- The bow and arrow metaphor
- Using four ounces to deflect a thousand pounds

Relaxation/Fang Sung

As mentioned above, discharge power relies on the body being totally relaxed. This means that when the practitioner is sinking down, all tension and blockages have largely disappeared. The neck becomes

long as the head suspends, the kua (pelvis) opens, and the mind and chi go deeply into the earth. As Universal Healing Tao students learn during the practice of Iron Shirt and Tai Chi, power lives in relaxation, not in tension or willpower alone.

The Two-Man Saw

Cheng introduces this new concept and metaphor. He tells us that "the Rollback, Ward Off, Press, and Push of Push Hands move back and forth like the action of a two-man saw."[4] It seems that discharge power is a two-person phenomena. It is not carried out in isolation (fig. 3.3). If the opponent pulls then you follow and issue energy at just the right moment. Do not use force against force. As the opponent pulls, follow this force and amplify it.

Fig. 3.3. Two-man saw

The Bow and Arrow Metaphor

Cheng expands upon the bow and arrow metaphor used by Wu Yu-Hsiang. He says, "Shooting an arrow relies on the elasticity of the bow and string. The power of the bow and string derives from their softness, aliveness, and elasticity."[5] In other words, the foundation of discharge power is the dissipation of force, blockages, and tension, so that the body and mind are in a state of flowing chi and softness. This

is no easy task, for it requires that the state of being we attain on a long meditation retreat be transposed to this moment of martial interaction, when fear and tension seem to take possession of our being.

Cheng emphasizes that in this state, the practitioner has ". . . the ability to unify the feet, legs, and waist into one flow of chi."[6] In this state of letting go, the body finds its optimum functioning.

Repelling a Thousand Pounds with Four Ounces

This claim is of high importance and is quoted by many who refer to the classics and Fa Jin. To explain it, Cheng uses the metaphor of a bull being led with a rope via a ring in his nose. Transferring this metaphor to a Push Hands or martial situation, Cheng points out that the adept needs to find the circumstances—of both anatomy and timing—within the thirteen postures, wherein four ounces is all that is required to topple an opponent: this equates to the ability to lead a bull with a small force. Circumstances have to be created to reduce the power of the opponent by disrupting his Iron Shirt. These circumstances include the application of force to vital areas such as the elbow or shoulder when the opponent is on the edge of losing balance. Breaking the root can be achieved by disrupting the knee or by pushing or pulling the elbow away from the correct Iron Shirt position (fig. 3.4). Often a push is needed just prior to breaking the opponent's structure.

Chen Xiao-Wang (1945–)

Chen Xiao-Wang is one of the top four Chen masters in the world today. Collectively, Chen Xiao-Wang, Zhu Tian-Cai, Chen Zheng-Lei, and Wang Xi-An are called the "Four Tigers." Chen Xiao-Wang's teachings offer some further insights into discharge power.

Chen style is noted for its training of spiral energy, which begins as large circles that become smaller and smaller with time and prac-

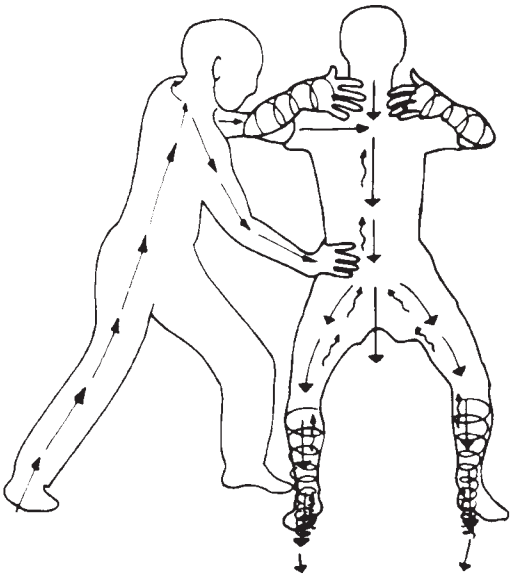


Fig. 3.4. The opponent's force is transferred down to the ground through the bone while maintaining correct structure.

tice, until the initiation of the circle becomes invisible. Davidine Siaw-Voon Sim, author of *Chen Style Taijiquan* and a student of Chen Xiao-Wang, describes it this way: "With the energy generated from the ground through the feet. . . spiraling energy begins in the kidney area of the waist, goes down to the feet, and then rebounds to whichever part is going to express one's power."[7] Ultimately, he says, the outward manifestation of Fa Jin is like "a dog shaking water from its back" or the "crack of a whip." Thus, when the spark appears from stillness, it is spiraled in an instant—like an immediate shiver or chill. It is then released with a shake.[8]

Chen also emphasizes that the jin should be unimpeded on its journey from the earth and tan tien to the chosen endpoint. No resistance or friction must exist along its path. Hence, the body should not fight against itself. To this point he says:

> Tan tien is at the heart of the body's motion
> Once a part moves, the whole body moves
> Joint by joint energy threads through
> Thus the force transmits unimpeded in one action.[9]

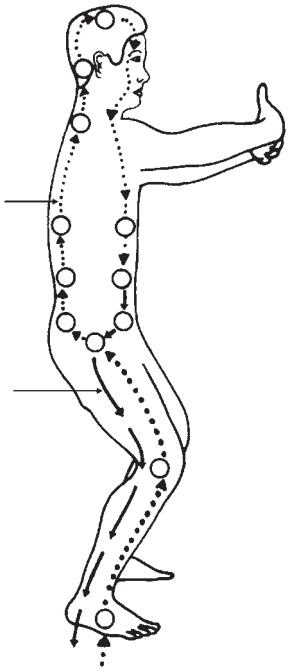


Fig. 3.5. Directing the chi flow

There should be no chi blockages and the body should be very relaxed (fig. 3.5). Chen remarks that Fa Jin is much like the art of calligraphy. Like a brush, the tan tien stores and releases the jin. The chosen point of impact is the endpoint.* The practitioner must be relaxed, open, and integrated, allowing the chi to move the limbs. There must be no stiffness or Fa Jin will be impeded.

Finally, Chen's disciple Sim emphasizes the principle that the monkey mind has no place in Fa Jin. Instead, it must be replaced by the integrated mind, which is a product of the merging of the three tan tiens to create Yi power (fig. 3.6). The integrated mind creates a template for the chi to follow. It can then move the limbs in a relaxed, coordinated, and optimum fashion. To these points, Sim repeats the

*Chen Xiao-Wang says, "Both taiji and calligraphy involve the same 'transportation of qi' (yun qi) in our body. When I fight, I try to transport my qi to the point of impact without friction, still maintaining maximum efficiency. When I write, I try to do the same, except it is the tip of my brush. I practice my calligraphy the same way I do my taiji—with correct postures, relaxation, and efficient yun qi. Both activities complement each other."[10]

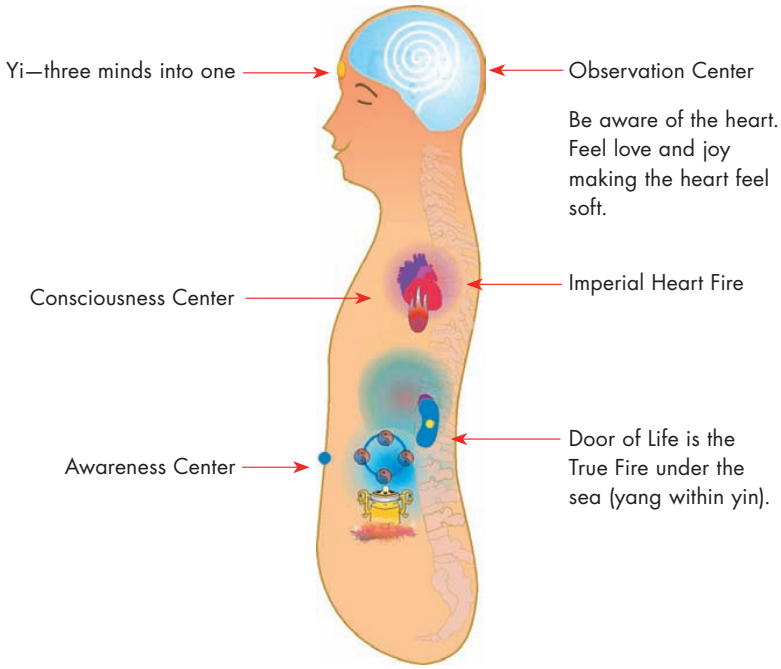


Fig. 3.6. Three minds into one

instruction from the Yang classics about "using the Yi to lead the chi and using the chi to lead the body."*

Lama Dondrup Dorje (Dr. Yeung) (1954–)

Lama Dondrup Dorje has given repeated demonstrations of discharge power that are viewable on his website.† His skill seems almost magical, as he is able to uproot an opponent with minimal or no touch. He defines Fa Jin as:

> The projection of vibrational power that arises from the Ching plane (*the Plane of Primordial Essence*) of the lower tan tien through

*Yang Chen-Fu says, "If you do not use Li but use Yi, when the Yi arrives the chi arrives immediately."[11]

†For biography and video demonstrations of Sifu Yeung's demonstration of discharge power see: http://pathgate.org/LamaDondrupDorje.html.

> integrating the Wei Chi (protective energy) with the triangulated action of tendons, ligaments, and a relaxed yet properly aligned physio-skeletal structure.[12]

We believe that what Lama Dondrup Dorje is explaining here is the intimate and current connection between the Primordial Chi, the lower tan tien, the Defensive Chi (auric field), and the material bodily self. Ching Chi and Primordial Chi are closely related and are sensed as a silk-like feeling within the genitals and lower tan tien. The bubble of the Wei Chi is also connected so that the inner and outer worlds are united. Opponents need only come into contact with the Wei Chi and theoretically they will be uprooted. Lama Dorje's comments on the triad of tendons, ligaments, and bones accord with the basic teachings of Iron Shirt and the fundamental form of Tai Chi Chi Kung.

Lama Dondrup Dorje provides an explanation of the transition from the material Fa Jin to the magical (fig. 3.7). He describes the stages beyond Fa Jin as *Fa Chi* and *Fa Shen*. With Fa Chi, the subtler

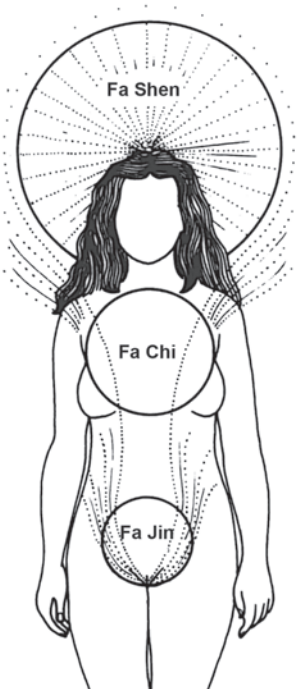


Fig. 3.7. Transformation of Fa Jin into Fa Chi and Fa Shen

powers of the middle or heart tan tien can disrupt an opponent's energetic structure. Likewise with Fa Shen, wherein the refined heavenly and spiritual energies of the upper tan tien or Crystal Palace are used to affect another's energetic existence.[13]

Like the Chen masters, Lama Dorje emphasizes the power of reducing the size of the spiral energies used in Fa Jin. However, he goes a step further and makes a connection to the subtler planes of existence. He quotes Grand Master Wang Xiang-Zhai (1885–1963):

> A big movement is not as effective as a small movement, a small movement is not as effective as the appearance of no movement, and it is the presence of movement within the appearance of no movement that is the real movement.[14]

In the practice of Chi Kung and other energy disciplines, the pathway from the material to the immaterial is fundamentally achievable (fig. 3.8). It requires the practitioner in his alert self to hold the

Fig. 3.8. Spirals getting smaller

earthly world of the senses and objective reality alongside the mystical sense of the void. If he can maintain a simultaneous experience of rapid physical movement and the ultimate stillness of the void, then much progress has been achieved in the journey to discovering Fa Jin.

FINDING THE PRINCIPLES OF UNIVERSAL HEALING TAO PRACTICE IN FA JIN

In the pages above, we have drawn upon fundamentals already taught within the Universal Healing Tao system to help students use skills they already know to understand discharge power. In the subsequent paragraphs and tables, the principles described above will be systematized and summarized. The first section will provide an overview in tabular form and break Fa Jin into stages. Within the table, each principle will be described and the corresponding practices from the Universal Healing Tao system briefly described. The third section will elaborate on these stages and finish with a summary.

STAGES IN THE RELEASE OF FA JIN

STAGE	DESCRIPTION	PRINCIPLE	ASPECT OF UNIVERSAL HEALING TAO TRAINING/ GENERAL COMMENTS
1	Yi creates a template for the chi, which in turn moves the body. Connect, link, adhere, and pursue (***zhan, lian, nian,*** and ***sui***) the opponent's force by listening (***ting***) and understanding (***dong jin***) through the body's structure. Lead it to lower tan tien and the earth.	In solo practice, allow the chi to move the arms. Feel the tan tiens activate as you pull in the arms. In Push Hands or fighting, stick lightly to the opponent. Initiate the "two-man saw."	In Iron Shirt practice the adept eventually learns to abandon muscular force (Li power) and replace it with the openness and softness of chi or jin. In Tai Chi practice and the Six Healing Sounds meditation, experience the chi moving the body. In meditations like the Fusion practice, awareness and the senses are projected through the body and even beyond it.

STAGE	DESCRIPTION	PRINCIPLE	ASPECT OF UNIVERSAL HEALING TAO TRAINING/ GENERAL COMMENTS
2	The yin stage of Iron Shirt	The art of relaxing and using the incoming force to open the adept's structure. This stage includes the formation of the bow and string.	This practice is learned through sitting meditation and rooting in Iron Shirt. Learning to enjoy, relax, and be stretched by a push. This relaxation sees the tan tiens contract. There is emptying and consequent cessation of the breath with activation of the empty force.
3	Transformation: neutralizing the force	The yang energy of the opponent and any tension are sent into the earth. The yin energy of the earth and lower tan tien combine with this yang chi until there is a moment of stillness. The incoming force has thus been neutralized.	In Iron Shirt practice the opponent's push is neutralized by rooting force into the earth. In the Microcosmic Orbit, Fusion, and Kan and Li meditations, the beauty and power of the Wu Wei and stillness is appreciated. The moment of stillness is a connection to the mystery of the Tao.
4	Taking aim: rotation and reorientation	Use the Central Thrusting Channel (***Chong Mai***) and allow the body to rotate around this axis spontaneously.	In the moment of stillness, like the eye of a storm or the hub of the wheel, the body prepares to take aim. In the fundamental form of Tai Chi Chi Kung, the transitions between each of the thirteen forms eventually become effortless. Chi or jin moves the body as it rotates on its central axis.

STAGE	DESCRIPTION	PRINCIPLE	ASPECT OF UNIVERSAL HEALING TAO TRAINING/ GENERAL COMMENTS
5	Power appears to originate from the earth.	Chi passes without effort through the feet and legs to the waist/lower tan tien.	Correct Iron Shirt structure of the lower half of the body. Practice letting chi pass unheeded from the feet to the waist. Partner work can be used to push and test the lower half of the body. In the fundamental form of Tai Chi Chi Kung, multiple transitions, rooting, and adjustments are made between the lower tan tien and the earth.
6	Expansion of the lower tan tien, which then cascades to the other two tan tiens	Separation of the Governing Vessel from the Conception Vessel. The bow is being loaded.	Correct Iron Shirt structure for the entire body. Structure can be tested by a partner at T11, T5, C7, the base of the skull, and the shoulders.
7	Controlled expansion of structure while advancing or entering application	The adept prepares and moves into a position where "four ounces will repel a thousand pounds."	The adept finds the ideal setting for release of discharge power via one of the eight gates. With years of Tai Chi practice, the adept has mastered transitions, interchanges, and genuine understanding of the thirteen postures.
8	Sudden release of jin through the structure into the opponent	Spark arises in the kidney area. Sudden and massive release of jin. The body shakes and discharges via one of the eight gates to topple the opponent.	The adept's Iron Shirt structure is open, which allows the unimpeded flow of jin. Jin flows up the spine though the sacrum, Ming Men, T11, T5, C7, and Jade Pillow. Jin is released through arms, by "finding the curve in the straight"—the scapula round, elbows drop, and wrists rotate. "Shaking" is often experienced in sitting meditation when a burst of chi is sensed in the body. In Fusion and Kan and Li practices, the spontaneous ejaculation of the pearl has similarities to this release of jin.

THE EIGHT STAGES OF FA JIN

The following eight stages of Fa Jin describe the sequence of events that are required for the cultivation and release of discharge power. While the individual stages are steps in the sequence, they also describe successive levels of mastery.

Stage 1: Sticking to the Opponent or Following the Chi

In the first step of the Fa Jin sequence, the adept needs to develop a sensitivity and softness in solo practice, learning to let the body be moved by the chi (fig. 3.9). This lesson is emphasized by the Yang lineage and in the teachings of Chen Xiao-Wang discussed above. (See pages 32–35.) The first step is to feel the chi and the second step is to be moved by it. In the Universal Healing Tao system, the sensation of chi can occur during the Six Healing Sounds meditation and during the

Fig. 3.9. Stage 1: Chi moving arms, blocking, and sticking to opponent

practice of the fundamental form of Tai Chi Chi Kung. When you are connected to the chi, you can allow your hands and trunk and legs to move by themselves. To facilitate movement by chi, open the three tan tiens in either sitting or standing postures. With very slight movements of the finger joints, the movement by chi can be initiated. If there are any blockages in the body, then the body will not move.

In Push Hands and fighting, sensitivity is developed to stick to the opponent. The senses are acute and one gains insight into the opponent's intention and balance. In terms of Fa Jin, the force from the opponent is followed, then borrowed and used at a later stage.

Stage 2: Yin Formation of Iron Shirt Structure

Stage 2 correlates to the yin stage of Iron Shirt training, where an opponent's force is used to open and lengthen the adept's structure.* This yin stage can also be described as activating the empty force—the extra power that is generated at the end of exhalation with the sucking in of the Ren channel. This yin stage is separate from the yang stage, which involves inflation of the lower tan tien and packing of the structure. This division of Iron Shirt structure into yin and yang aspects is not described in the original Iron Shirt text but is a key element of discharge power (fig. 3.10).

The fundamental characteristic of this yin aspect of Iron Shirt is relaxation, called *fang sung* in pinyin. As the opponent's force enters into the body, relaxation and sinking must match this force exactly. Yang energy from the opponent is guided down to the earth with the sinking of the mind's awareness. This relaxation includes the elongation of muscles, rather than just becoming like a dead fish. It allows the arms, neck, and legs to lengthen.

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*The classics refer to the Universal Tao's Iron Shirt structure in many ways. In the *Yang Family Forty Chapters*, Iron Shirt is referred to as *zhong tu* (central equilibrium or central earth). It is also referred to as "standing on the posts (*zhan zhuang*)" and "In central equilibrium the feet develop root."[15]

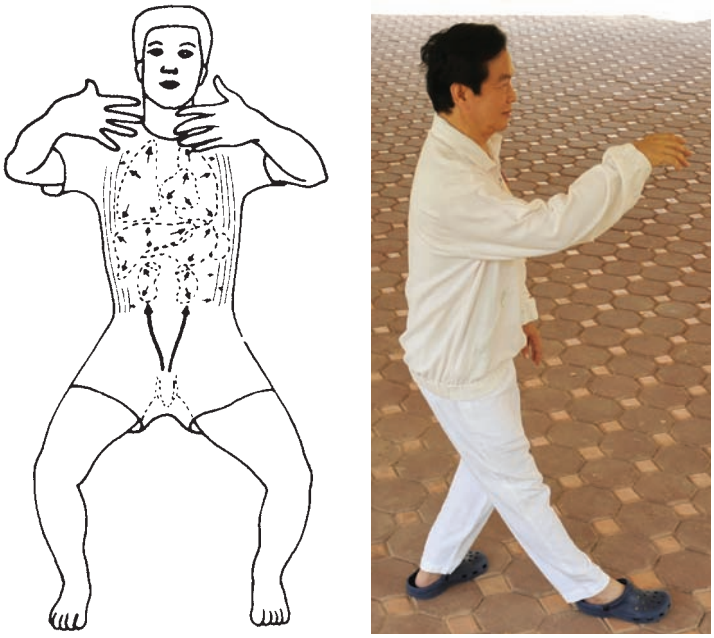

Fig. 3.10. Stage 2: Empty Force and Iron Shirt posture

In other words, the body relaxes within the specified structure. To sink does not mean to simply bend the knees, but means to sink by opening the kua and the Ming Men while tucking in the coccyx. Along with these changes, the shoulder blades round, the sternum sinks, the neck becomes long, and the Crown Point (Ba Hui) is lifted. Wu Yu-Hsiang tells us that "this is called the suspended head top."[16] Throughout the body, the muscles are elongated to their optimum length. There is a sense of fullness and openness that is obtained through relaxation by allowing the whole body to be filled with chi.

In many respects, this yin stage of Fa Jin is just an extension of Iron Shirt training and pushing. The incoming force is borrowed and utilized to lengthen the spine, open the channels, and connect with the empty force. Often but not always, the breath is also emptied and ceases for a moment.

Stage 3: Transformation

The transformation stage embodies the mystique of discharge power. At this level, forces are taken to a still point deep in the earth and lower tan tien, where they are magically transformed (fig. 3.11). This highlights the essence of the Tai Chi symbol and even the cosmological theory of the Tao. Yang from the opponent is courted by the yin of the adept into stillness.

Fig. 3.11. Stage 3: Transformation, a cosmic Big Bang

If Fa Jin is viewed from an alchemical and cosmological perspective, this process can be seen as the return to unity—to the Tao—via the coupling of yin and yang. It is a reversal of the Taoist creation theory, enabling a return to the One. From unity, the Big Bang occurs with an explosion that can be correlated to the discharge power of Fa Jin.

Stage 4: Rotations and Taking Aim

While jin power is in its undifferentiated or quiescent form, the adept can begin preparing to send it in the chosen direction. This is more easily achieved if the adept has opened the Central Thrusting Channel (*Chong Mai*). The body can rotate around it while maintaining Iron Shirt structure. Development of the Central Thrusting Channel in Push Hands means that even in the backward posture, there is strength. The central axis is used in the central and forward positions, and also enables power to be released left or right (fig. 3.12).

Fig. 3.12. Stage 4: Central axis in sink-back position

Stage 5: Jin Appears from the Earth

From the stillness an initial force appears. This initial force feels like silky Ching Chi or Earth Chi, but is theoretically Primordial Chi, because the yin and yang chi have been merged. This Primordial Chi

prepares root in the legs, sacrum, and waist, and is the foundation for the ultimate release of Fa Jin (fig. 3.13). This foundation loosens the structure and creates an environment for the spark or Big Bang to appear.

Fig. 3.13. Stage 5: Rooting to the earth force with Fa Jin

Stage 6: Expansion of the Lower Tan Tien

The rush of Primordial Chi comes from the earth and passes up through the legs to the lower tan tien, inflating it (fig. 3.14). The kidneys separate from the navel. For a moment the chi/jin is stored in the lower tan tien.

Stage 7: Passage of Chi/Jin Through the Structure while Preparing Application

In the fundamental form of Tai Chi Chi Kung, students learn to release the power from the earth or the opponent in an effortless and structured manner. This power is stored in the earth and the lower tan tien, then released through the body in a specific pattern. The first pattern we learn is a release through the spine in the classic Push,

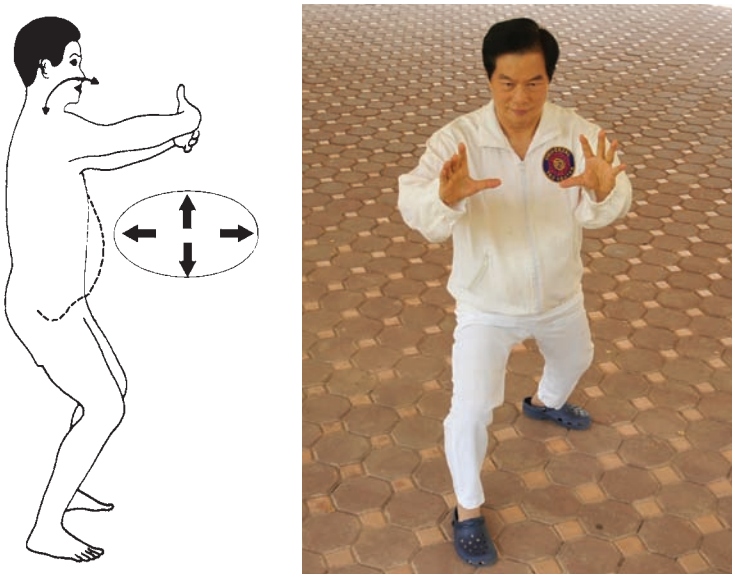

Fig. 3.14. Stage 6: Inflated tan tien

or in a Two-Hand Push (fig. 3.15). The jin or power ascends from the feet via the legs, which are kept in their rooted form. Chang San-Feng says, "The motion should be rooted to the feet, released through the

Fig. 3.15. Stage 7: Opponent being pushed in Iron Shirt posture as jin passes through structure

legs, controlled by the waist." This means that the legs are lengthened because the kua has been opened in a way that allows the coccyx to be tucked under and the front kua to open.* Power is released via the spine's sacral, lumbar, thoracic, and cervical vertebrae. The arms are connected to the power via C7 and the rounded scapulae. As Wu says, "In moving the chi, it sticks to the back and permeates the spine." If the adept has a broken structure, then the final jin force cannot be discharged freely. Chang San-Feng reminds us that ". . . All parts of the body must be light, nimble, and strung together."[17]

The whole structure is now prepared for the final climax. It is fully bathed in Primordial Chi and awaiting the final spark. The opponent is also now at the zenith of imbalance, and those proverbial "four ounces" are now all that is needed to throw him.

Stage 8: Discharge of Power into the Opponent

The spark or bang is now ignited. It makes itself known with a different sensation—a shiver or a spiral in the lower back. The whole structure is impregnated with this force; it is like a sneeze or an orgasm, shaking the back like a dog shakes water from its body. There is no friction or impedance to this force, because the pathway has been laid open by the prior stages of practice, and by the bathing and expansion of the body with Primordial Chi.

The arms find the "straight via the curve," as in the Tao Yin postures of Bow and Arrow and Dragon Tucks in its Tail and Stretches its Claws. The arm tendons rotate in a particular pattern that follows the jin as it travels through the spine. In the standard Two-Hand Push, C7 goes back, the scapulas rotate medially from their inferior portion as well as spreading out laterally, the elbows drop, and the hands rotate laterally.

Just as the adept's body is prepared for this final jin, so too is the opponent's. He has been trapped, his structure is broken, and he is on the point of imbalance. The force or jin connects, and he is thrown (fig. 3.16).

*The *kua* are the ligaments connecting the sacrum to the pelvis posteriorly and from the pelvic wings to the symphysis pubis anteriorly.

Fig. 3.16. Stage 8: Uprooting discharge

SUMMARY OF FA JIN FROM A UNIVERSAL HEALING TAO PERSPECTIVE

The eight stages of Fa Jin can be summarized as follows:

1. Following an opponent or the chi
2. Using the opponent's force to develop the yin aspect of Iron Shirt structure
3. Neutralization and transformation
4. Taking aim and rotating using the Central Thrusting channel
5. Preparing the legs and waist with Primordial Chi
6. Expanding the tan tien with Primordial Chi
7. Moving into position where the adept is vulnerable and expanding the rest of the body's structure
8. Release of discharge power—like a spark that initially shakes the back

THE EIGHT GATES OR EIGHT FORCES

Discharge power manifests itself via eight different pathways or gates. These are known as Peng, Lu, Ji, An, Tsai, Lieh, Chou, and Kou. Development of these inner forces requires skill developed from the Fusion practices and Kan and Li practice.

Certain texts and masters correlate the eight forces to various forms within the long Yang 108 Form. However, the forms can have varied gates or forces applied to their movements. Therefore, the primary focus should be on the discharge energy behind the move or the form, rather than on the external container for that force.

Many authors have attempted to correlate the eight gates with the eight trigrams of the pakua (Ba Gua), but these correlations have been inconsistent throughout the literature. The trigrams from the pakua are quoted by Chan San-Feng in the *Yang Family Forty Chapters.*[18] However, there seems to be little correlation with the energetic metaphors described by Tan Meng-Hsien. We choose to adopt the correspondences outlined in the table below:

EIGHT GATES FOR DISCHARGE OF POWER

TACTIC	OUTWARD MANIFESTATION	TRIGRAM	INNER MANIFESTATION
Peng	Ward Off	*Chien*	Spring
Lu	Rollback	*Kun*	Emptiness
Ji	Press	*Kan*	Bounce
An	Push	*Li*	Water
Lieh	Circular diversion	*Chen*	Spinning
Tsai	Lever	*Sun*	Lever
Chou	Elbow	*Tui*	Continuity of yin and yang
Kou	Shoulder	*Ken*	Pounding a Pestle

棚 Peng

Peng is the internal energy that results in relaxed resistance within the body. It is generated from the original source that inflates the body from the inside, and it is like a spring that is ready to be released. To cultivate Peng force, Tan Meng-Hsien recommends visualizing the tan tien as expansive and pushing out like a charged coiled spring through the fascial planes to the hands and fingers.[19] The closest element would be wood power.

In order to be properly expanded by this internal energy, the body needs to be a hollow vehicle. Practitioners often describe Peng as a feeling of vitality and resistance. In the *Songs of the Eight Postures*, Tan Meng-Hsien says, "The whole body has the power of a spring. Opening and closing should be clearly defined."[20]

To release the Peng force, either slip away from an opponent's force, or remove it like a quick-release valve. This will allow the Peng

Fig. 3.17. Single Push Hands releasing Peng force into the lower tan tien

force to drive home into the opponent (fig. 3.17). Peng is activated by the Push but never overreaches it. Hence the master of Peng will not be uprooted once the opponent's Push is withdrawn, as the force is generated from the original source and not from muscular strength, which would throw the body off center.

Peng is classically used in the Ward Off position but can theoretically be applied to many forms. The important principle is to use the body as a loaded spring.

璐 Lu

Lu cultivates extreme yin and requires a body memory of the Wu Wei or emptiness. For many students, this may start as visualization. With time, the body integrates the knowledge into the body and movement. Therefore, one moves from visualization to actualization.

The magical Lu is able to lead an opponent's force in a desired direction. It is magical because it typifies the transformative power

of softness in martial arts and because it is a gateway to all the other gates (fig. 3.18). Classically, it is a lead to the side as a Rollback in the Bird's Tail, but it can also be executed up or down. In its highest form, the opponent's force is led into a sensation of emptiness (fig. 3.19). The sensation of emptiness is cultivated by mystical practice, and in this situation, is integrated into a martial application.

During Push Hands, the practitioner feels the opponent's energies and senses departure from the true ideal state—the Iron Shirt posture. Any deviation—sensed as tension or aggression—is led back to the Wu Wei or nothingness. Tan Meng-Hsien says, "We follow the incoming force. . . . When his force is spent, he will naturally become empty."[21] In this way, Push Hands can be seen as a martial practice that helps cultivate the Tao. Lu is cultivated by the silk reeling exercises explored in chapter 4.

Fig. 3.18. Outward tactic of Lu diversion

Fig. 3.19. Outer space in the tan tien

挤 Ji

The Ji force is characteristically performed using the Press from the Bird's Tail form but can be used in any other movement (fig. 3.20). Inwardly, the discharge force is likened to a coin bouncing off a drum.[22] The tan tien expands and stretches the fasciae of the body like the skin of a drum or the strings of a tennis racquet. Therefore the body needs to be rooted, packed, and strong prior to the release of the force. The opponent is then bounced away with seemingly minimal effort. Releasing the power of the Ji force is more effective when the opponent is on the brink of toppling over.

During the Press, a connection is made to the opponent that gets him ready to topple. The practitioner roots to the earth, and at the moment that he places his second hand behind the first, the force is released. While the Press typifies this force, Ji can be used in many external strikes including those of the shoulder and elbow.

Fig. 3.20. Press posture

按 An

The external manifestation of the An force as used in the Bird's Tail is the Push. This force relies on the transmission of force from the earth via the Iron Shirt structure (fig. 3.21). While this has been said many times in this text, it is so important that it really cannot be said enough. The chi/jin begins from the earth like roots of a tree. The nine points of the feet softly connect with the ground. The legs are screwed gently into the earth.

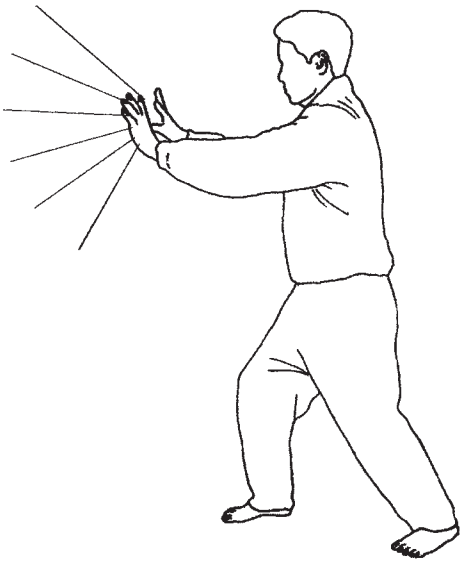

Fig. 3.21. Double-Handed Push transmitting chi

At the same time, the coccyx and sacrum tuck underneath, which then opens the kua. Consequently, the lumbar goes back, which reverses the usual lordosis. The jin or chi is then transmitted segment by segment through the lumbar, thoracic, and cervical vertebrae, and then moves into the arms. As it is transmitted through the arms, the scapula rotate, the elbows drop, and both arms rotate externally. This movement uses the principle of the curve to access the direct transmission of power from the trunk and is described as "In the curve seek the straight."[23] It allows an effortless passage of chi from the earth

Fig. 3.22. Outward form of An in a Push

through the Iron Shirt structure, which enables the Push (fig. 3.22).

Once this basic alignment of movement has been learned, then the essence of the force can be applied. According to Tan Meng-Hsien, the principle of the discharge is water.[24] Through careful listening by the practitioner, every small crevice or break in the opponent's structure is filled with water chi. Through the effortless power of water, the opponent is backed up until he has no reserve. His structure is broken and only a feather is now needed to move him. One small force will now push the opponent back.

冽 Lieh

The internal manifestation of this force is a spinning disc or whirlpool. This sensation is created in the tan tien and extends around the Central Thrusting Channel (*Chong Mai*) (fig. 3.23). Any external force that enters the body will be caught up in the centrifugal force and be cast out faster than it entered. Therefore, to cultivate this force the central axis must be internally defined through sitting practice and

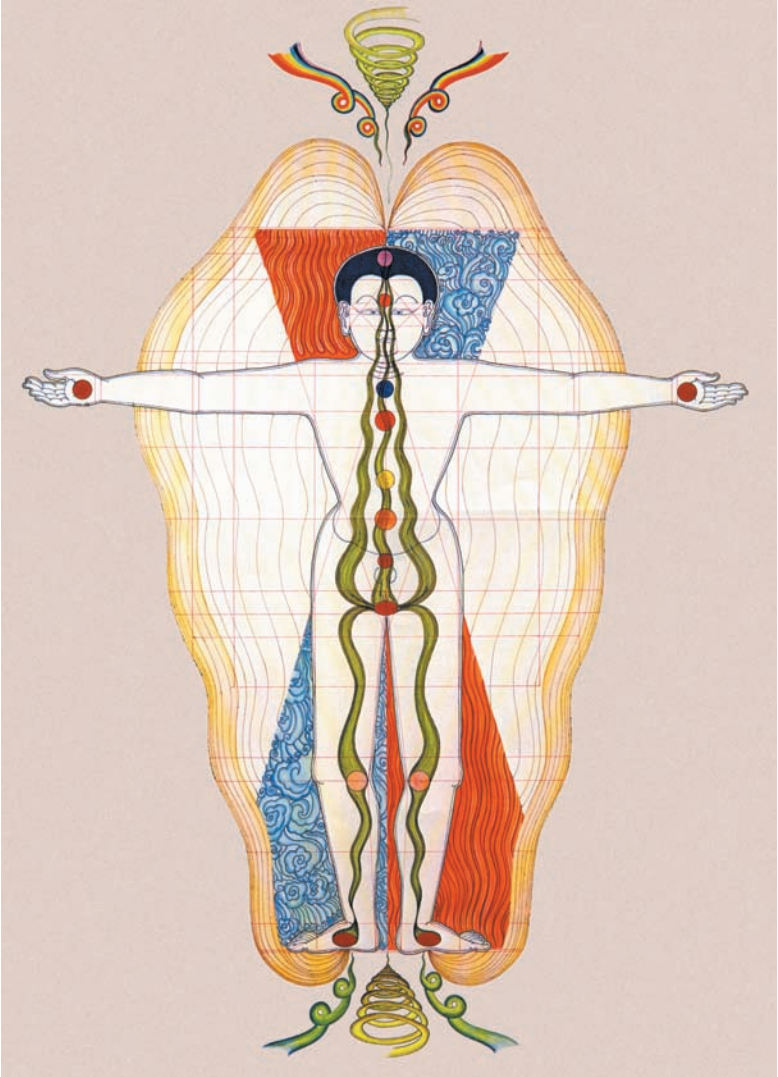

Fig. 3.23. Central Thrusting Channel

standing meditation. Opening the Central Thrusting Channel is a core practice in *Fusion of the Eight Psychic Channels*.*

This awareness of the Central Thrusting Channel must be

*Mantak Chia, *Fusion of the Eight Psychic Channels* (Rochester, Vt.: Destiny Books, 2008).

translated to both the Push Hands and boxing arenas. The Central Thrusting Channel is maintained with 80–90 percent of the weight on the back leg in the retreat position of Push Hands. Any force will then rotate around this central axis and accelerate with the internal energy produced by the practitioner.

The external manifestation of this movement usually originates from Lu and multiplies as the movement or force engages the spinning Central Thrusting Channel. The movement originates with both arms starting their journey close together, but vectors of force can fly from the center at varying angles, thus enabling the power of a double strike (fig. 3.24).

Fig. 3.24. Outward manifestation of Lieh as a splitting force

This means that one hand can control and strike the wrist while another can strike the elbow or shoulder. This double force is compared to an agricultural implement used in China to cut hay. In the West it would be more akin to flicking a towel to sting a friend, or cracking a whip. Again, this force is characterized by a slow entry into the spiral and then acceleration with a fast release. Momentum of the

Fig. 3.25. Application with Single Whip

Fig. 3.26. Application of Fair Lady Works the Shuttle

leading arm is balanced by the rear arm moving in the other direction. This force can be applied with such moves as the Single Whip and the Fair Lady Works the Shuttle (figs. 3.25 and 3.26).

钛 Tsai

This force is characterized by leverage—usually at the elbow, but it can easily be applied to the wrist, shoulder, or torso (figs. 3.27 and 3.28).

Fig. 3.27. Elbow lock position

Fig. 3.28. Shoulder lock position

Tsai takes over from the Lu force, which precedes it, lengthening the opponent's arm to break his Iron Shirt structure. The Tsai force then locks the elbow and uses it as leverage to either take the opponent to the ground or fling him off. In the discharge form this move is practiced with the Rollback after the Ward Off.

肘 Chou

The Chou force uses the elbow as an alternative striking implement to the hands (fig. 3.29). There are times when the hand is engaged and the opponent is within short striking distance; in this case, the elbow can be used. Often the Chou is applied when an opponent has executed a move with the Lu force. Turning disadvantage into advantage, the practitioner uses the opponent's force against him, altering its vector slightly via the elbow strike.

Fig. 3.29. Execution of the elbow strike as a counterattack

The inner manifestation of the Chou force is described by Tan Meng-Hsien as maintaining within the body the varied energies of yin and yang (full and empty) and the five elements (fig. 3.30). This

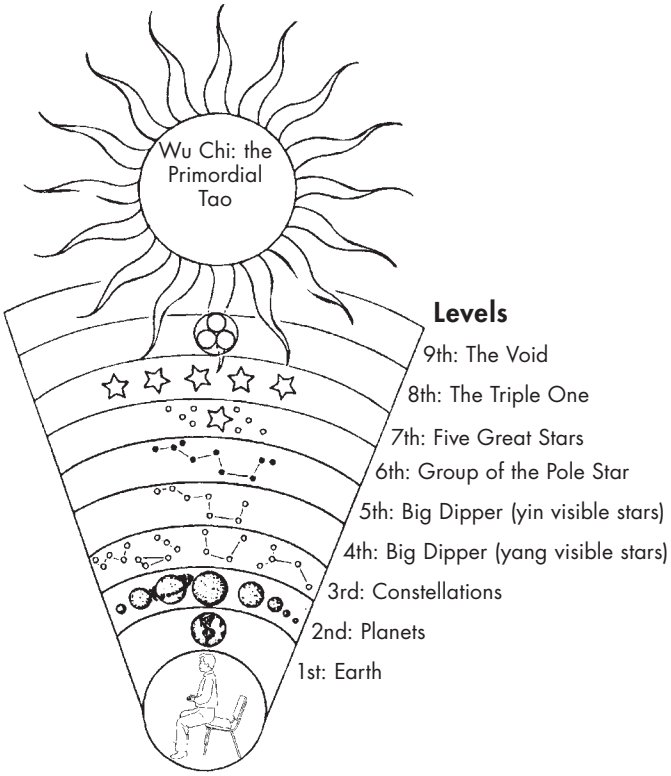

Fig. 3.30. Taoist cosmology and creation sequence

principle may be difficult to understand on first examination, but the skills have already been learned in the Fusion practices.

芤 Kou

Kou—the shoulder strike—can be used in various situations, from an unsuspecting neutral position to a last-resort counter attack similar to the one described above with the elbow strike. In the latter circumstance, the practitioner has used the Lu force and the shoulder takes a minor detour. Power is discharged through the shoulder to the opponent's torso. It can also be used front-on, especially if the opponent attempts to split or separate the practitioner's hands. In non-fixed-feet Push Hands, the shoulder strikes the opponent while the practitioner

is stepping through. Its application is best understood in the Tai Chi form Flying Oblique (fig. 3.31).

Fig. 3.31. Flying Oblique

The shoulder strike can be used as a technical exercise. In this case, both the front and back Kou strikes are practiced (fig. 3.32). Power is obtained by Iron Shirting the body during the moment of impact so that the force is evenly distributed. Care must be taken to place chi in the neck to prevent whiplash injury to the cervical spine.

The Kou force's internal energetic image is that it "crashes like a pounding pestle."[25] The explosion occurs after grinding; there is an initial contact and spiraling force, which release the energy like friction igniting a spark. This release of power relies on creating a strong Iron Shirt structure via the connection with the opponent during grinding. The spark is then lit from the tan tien and power is released.

We hope that this step-by-step analysis will give you new insights into Fa Jin practice. However, as with all complicated human achievements (especially those concerning the Tao), all of these stages—once mastered—will ultimately melt into one.

Fig. 3.32. Technical exercises for front and back Kous

4

Warm-ups and Technical Exercises

Warm-ups are basic to both Eastern and Western physical disciplines. In this chapter, both aspects will be offered, allowing the reader to compare and contrast them. The chapter will finish with specific warm-ups that we believe are beneficial to practicing Fa Jin and the Tai Chi Chi Kung Discharge Form.

THE WESTERN VIEW OF WARM-UPS

Most Westerners are familiar with warm-ups and recognize the physical and psychological benefits of them.[1] They are geared toward optimizing performance while minimizing physical injuries. Depending on the sport, warm-up goals may include aspects of agility, flexibility, balance, and strength. Injury avoidance during a warm-up includes surveillance of previously injured parts, awareness of vulnerable positions, and removal of stiffness.

From a Western point of view, warm-ups are needed to physically warm the tissues involved. A slightly higher body temperature encourages peak performance, bringing neuromuscular excitation and length-tension relationships to optimal levels. Increased body heat also reduces the viscosity of synovial fluid, resulting in better

lubrication of the joints. The increased suppleness that results from an adequate warm-up is an antidote to injury and is helpful in preventing post-exercise pain.

The mind also benefits from a warm-up, as lack of focus can lead to poor timing, and consequent incorrect delivery of a technique. This places excessive stress on particular joints, muscles, or tendons and can cause strain or injury. Psychologist David Kauss explains that the warm-up is a chance to reduce fear, minimize negative chatter, and quiet the mind by engaging the body in light exercise.[2] And while Western culture does not emphasize the unity of mind and body the way that Eastern practices do, many athletes and performers do recognize a "zone" of optimum performance that involves the mind and mental focus. Author Robert Kriegel calls this the "C Zone" and outlines six characteristics of it. According to Kriegel, this state of mind is: effortless, positive, spontaneous, focused, vital (characterized by high energy and joy), and transcendent (more effective than usual).[3]

In the West, warm-ups are classified into general and specific types.[4] General warm-ups involve certain body movements and general mind/body preparation that does not necessarily include the specific skills associated with the final performance. Specific warms-up verge on technical training and include a warm-up of the neuromuscular pathways that are required for the task at hand.

THE TAOIST VIEW OF WARM-UPS

From a Taoist perspective, the warm-up must provide a transition from our everyday mind and bodily state to one that is conducive to the successful release of discharge power. Chang San-Feng gives us an idea of what state we are seeking to achieve with a warm-up practice. He says:

> Whenever one moves, the entire body must be light and lively, and must all be connected throughout. The chi should be excited and the spirit should be gathered within. Let there be no hollows or

> projections; let there be no stops and starts. Its root is in the feet, its issuing from the legs, its control from the Yao and its shaping in the fingers. From the feet, to the legs, and then the Yao; there must be completely one chi.[5]

Here Chang San-Feng emphasizes that the body, the chi, and the spirit must be awakened. The hollows and projections he refers to are those parts of the body that can become stiff due to blockages in the acupuncture channels that prevent the formation of Iron Shirt posture. The Yao refers to the waist, including the lower tan tien and the Belt Channel (*Dai Mai*). "One chi" means that the various energies throughout the body are connected and able to work as a unit.

In this passage, Chang highlights the Taoist notion of where strength comes from: the body, mind, chi, and tan tien all work as one. This phenomenon of spiritual strength is outside the orthodox Western scientific paradigm, but it is integral to Eastern concepts of ability. Spiritual strength can be understood as drawing upon a consciousness beyond self. In other words, true power comes from tapping into a force outside of oneself—the power of the earth and the heavens.

From the Universal Healing Tao perspective, any warm-up should include the awakening and merging of the three tan tiens. When the upper tan tien (Crystal Palace), the middle (the heart) tan tien, and the lower tan tien are all awakened and connected, they operate as one unit—the integrated mind—and this is the mind that is a prerequisite for discharge power. In the everyday mind, the upper tan tien exists as a perversion of its higher self. This "monkey mind" lacks the capacity to execute Fa Jin, so any effective warm-up must subdue it. This is usually done through easy, repetitive, quieting exercises.

Optimum and balanced organ energy is another aspect of discharge power that should be achieved during warm-ups. Each organ should be balanced so it can offer its elemental energy to the tan tien. Although recognition of organ power is outside the scope of the Western clinical paradigm, it is not necessarily beyond the scope of Western culture. For example, warriors and sportsman who perform incredible feats are

often given names that describe their heart energy, like William "Brave Heart" Wallace (1272–1305) and King Richard the Lion Heart (1157–1199). Shakespeare believed that many varied states of being arose from the spleen, including the connection between heaven and earth.* He also described Lady Macbeth as wanting to replace her breast milk with bile, so that she would have the "gall" to kill Duncan.† In the wisdom of our own language, openness is equated with a vented spleen and excessive anger is equated with being liverish (livid).

In the Eastern paradigm, excessive arousal or overexcitement of any of the emotions will interfere with performance. Hence a warm-up is used to bring the organs and their associated emotions into a balanced, relaxed, and neutral state (fig. 4.1).

Fig. 4.1. Smiling to the organs

*"That, in a spleen, unfolds both heaven and earth; And ere a man hath power to say 'Behold!'"[6]

†"Come to my woman's breasts, and take my milk for gall . . ."[7]

STRETCHES

Stretching is an important component of all generic warm-ups. From a Western viewpoint, stretching improves the range of motion of the involved joints. It helps to prevent injuries and post-exercise soreness. From a physiological perspective, stretching facilitates neuromuscular pathways, and in particular the proprioceptors, which are nerve endings that provide the central nervous system with information on the location of joints and muscles within space and time.

From an Eastern perspective, stretching opens acupuncture channels and helps settle the monkey mind. Blocked channels are perceived as either a lack of chi flow to a particular body part or a feeling of stagnant or unhealthy chi. For example, sensations of prickliness, excessive heat, and even lethargy are features of blocked channels, while feelings of openness, pleasant body sensations, and muscle vigor are indicative of open channels.

In the Eastern way of thinking, gaining extra range of motion requires the mind to integrate with the body. For example, in a hamstring stretch, the burning sensations of these contracted muscles are explored and welcomed by the mind. By the act of a relaxed acceptance, the muscle fibers release. When muscles and channels are relaxed and open this allows the monkey mind to settle down (fig. 4.2).

The Taoist approach of the Universal Healing Tao system uses gentle stretches that highlight chi flow rather than extreme ranges of movement. (This is seemingly different from yoga practices, where an extreme range of motion is regarded as both the endpoint and the goal.) The Taoist approach is similar in many ways to orthodox Western stretching, but it also includes the perception of chi and the integration of the mind and body.

Variations on stretching occur in both the Western and Universal Healing Tao systems. Plyometrics is a Western type of exercise training designed to produce fast, powerful muscle movements. It includes activities such as skipping and repetitive on-the-spot jumping. Bounce or ballistic stretching is an attempt to gain increased range of move-

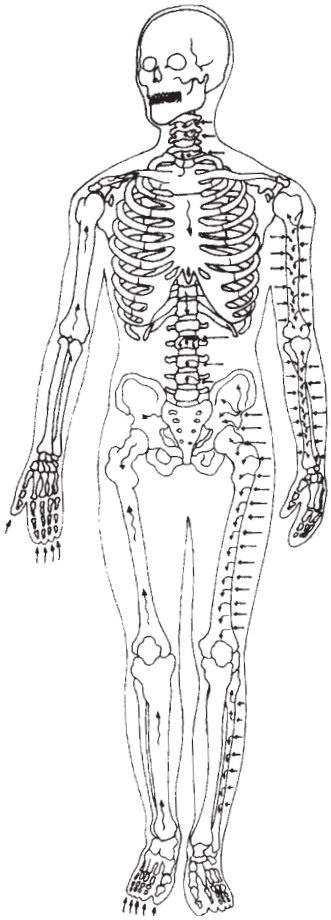

Fig. 4.2. Relaxing the muscles by breathing into the bones

ment by bouncing off muscle resistance. Recently, ballistic stretching has fallen out of favor in the West because it has been shown to increase muscle injury.[8] While it's true that muscle stretching against a contracted cold muscle may precipitate injury, bouncing is safe when used in the neutral (non-extreme) range of joint movement. This kind of bouncing is done in the Universal Healing Tao practices by shaking a leg or an arm while standing. Bouncing is also a part of the Tao Yin exercise of the Turtle, when the practitioner sits with the soles of the feet facing each other, and increases abduction of the thighs by bouncing them off the ground. It is also used in the Hummingbird posture (see fig. 4.3 on page 70). These kinds of warm-ups have

the benefits of warming the tissues and opening channels without increasing the risk of muscle injury.

Fig. 4.3. Bouncing in the Hummingbird posture

Stretches are focused on certain body areas that are notorious for being stiff and blocked. Chang refers to "hollows and projections," which is another way of saying areas of chi blockage. The classic problem areas are the mid-lumbar spine (Door of Life/Ming Men), the pelvic ligaments (kua), the peri-scapular region, and the cervical spine (fig. 4.4). These areas hold tension and need to be opened to obtain the Iron Shirt posture and execute Fa Jin.

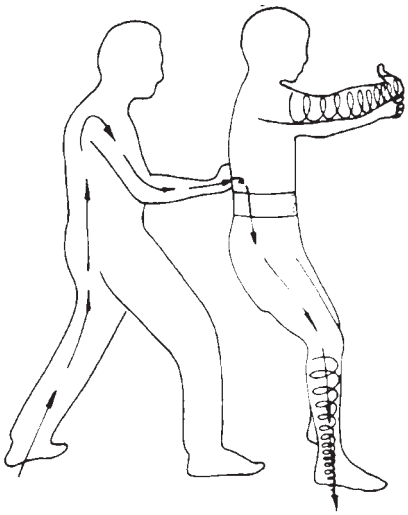

Fig. 4.4. Blocked chi in the lumbar area will interfere with the flow of jin from and into the earth. Bad posture can be corrected by proper adjustment to correct problem areas.

JOINT ROTATIONS

Joint rotations are used extensively in both Western and Eastern sports. From a Western perspective they warm the soft tissues around the joint, increase the temperature of synovial fluid (and thereby its lubricative characteristics), and activate proprioceptors. Certainly as the body ages—and the threshold for injury becomes lower—the warming up of joints prior to exercise becomes crucial.

From a Taoist perspective, joint rotations activate all the meridians that pass over the joint. In the Universal Healing Tao system we teach that by placing the mind in the joints when warming up, we increase regeneration of cartilage through the glucosamine/glycosaminoglycan pathway. There is no hard evidence for this, but there is little doubt that placing awareness in the joints assists with coordination, prevention of injury, and the achievement of higher mystical states.

PERCUSSION

Percussion is not a common warm-up technique in Western sporting exercise, though it is used as therapeutic technique in physical therapy and massage. In physiotherapy, drainage of pulmonary secretions is promoted through various postures and percussion of the chest and back. In massage, it is known as "tapotement" and is used to warm and stimulate soft tissues as well as bones. Percussion is used in Eastern massage techniques that include chopping, pummeling, and hitting with sticks or wires (see fig. 4.5 on page 72).* It is a useful way to warm up tissues, promote chi flow, and develop body awareness. It is likely that heavier percussion practices—such as hitting with heavy-gauged wire—cause minor tissue damage and even occasional cell death. This may, in fact, have powerful benefits. The theory is that the injury causes weak—and even potentially cancerous—cells to die. This cre-

*These techniques are discussed more extensively in *Bone Marrow Nei Kung* (Rochester, Vt.: Destiny Books, 2006).

ates cell turnover, so that the body can generate healthier new cells. In this scenario, keeping all cells alive, including sick ones, may actually be a retardant to ongoing health and longevity.

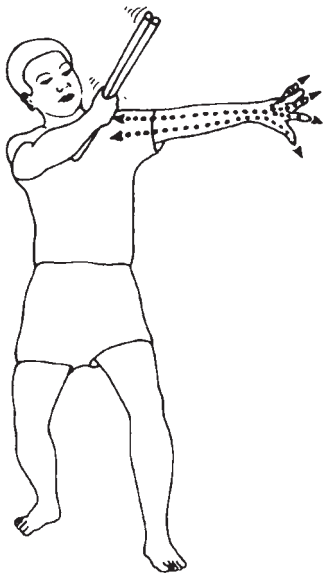

Fig. 4.5. Wire hitting technique

WARM-UPS AS TRANSITION

As discussed above, Chang San-Feng wanted the body to be lively with open channels rather than cold and blocked. Therefore, a warm-up is oriented to the transition from one state to the other. In the warm-up process, all the hollows and projections, i.e., blocked channels, are removed. The waist—which includes the tan tien, Central Thrusting Channel, and the Governing Channel—becomes open and loose. All parts of body and mind become connected rather than fragmented. All parts become one chi.

Warm-up exercises are usually classified according to the anatomical region they focus on. However, the theme for each exercise—regardless of the specific anatomy it addresses—is that the monkey mind is quieted. As the three minds integrate, they begin to aid the flow of chi, so that stagnant and sick chi are gently removed from the body (fig. 4.6). As the chi flows into stagnant areas, the body changes

its shape. The "hollows and projections" disappear and gradually the Iron Shirt posture is achieved. Opening the heart invites the spirit. Opening the upper mind or upper tan tien connects the practitioner to the heavenly chi. Opening the lower tan tien and particularly the sacrum connects the practitioner to the earth force.

Fig. 4.6. Three tan tiens connecting spirals to the heavenly force

THE BENEFITS OF WARMING UP

AREA OF BODY	EVERYDAY STATE	WARMED-UP STATE
MIND—upper tan tien	Rooted in thought, in the "monkey mind"	Rooted in the body and connected to the heavens
HEART—middle tan tien	Often closed	Open, spirit awakened. Warmth from the heart radiates through the body.
WAIST—lower tan tien	Closed and tight	Open: lumbar open, sacrum tucked in, connected to the earth. Tan tien awakened, with Belt Channel, Central Thrusting Channel, and Governing and Conception Channels open.

AREA OF BODY	EVERYDAY STATE	WARMED-UP STATE
BODY	Low blood flow to joints and muscles. Synovial fluid sticky. Fasciae are crinkled. Organ energies stagnant.	Lively with increased blood flow to joints and muscles, synovial fluid warmed and lubricating while fasciae are comfortably stretched open. Organ energies balanced.
CHI and acupuncture channels	Often stagnant with "hollows and projections."	Microcosmic Orbit, tan tien, and Belt Channel are all open.

As a general principle of the Taoist approach, that which is smooth, without force, and bordering on the spontaneous is closest to the correct technique. If an injured part is forced to become pain free, then any improvements are likely to be temporary, and pain and stiffness will recur after the training session. The wise, more experienced Taoist practitioner uses more yin techniques for warm-ups and practice. More yin means more relaxation, better focus, less effort, and yet paradoxically more discharge power.

Finally, it is important to remember that the older one gets, the lower the threshold for injury. Practitioners who are elderly, and those who have preexisting injuries need to tailor their warm-ups according to their injuries and vulnerabilities.

WARM-UP EXERCISES

Below are some general warm-up exercises that are important preparation for any Tai Chi practice, including Fa Jin.

Waist Loosening

This exercise involves waist rotations around the Central Thrusting Channel. It also helps loosen the lumbar vertebrae (the Governor Channel) by warming up the synovial fluid in the small facet joints that connect each vertebra and the soft tissues, including the discs.

1. Stand with the feet parallel, slightly wider than shoulder width

apart. Allow the arms to dangle loosely at your sides (fig. 4.7).

2. Begin to turn the hips from side to side. Let the arms swing naturally and easily with the momentum of the hips turning. Explore your natural and comfortable range of hip motion. Don't go to extremes; just stay within your free and easy comfort zone.
3. After turning just the hips ten or twelve times, allow the lumbar vertebrae to relax and loosen and to gently twist with the hips. You should still begin the movement from the hips, but now allow the lumbar vertebrae to respond as well.
4. Next allow the middle spine, upper back, and neck to twist gently with the movement.
5. Keep your shoulders loose and let your arms swing with the movement. Don't use effort to move the arms; let them be totally limp and just let the body swing them. At the same time, be aware of the gentle twisting of your knee and ankle joints as you twist the whole body. Do this at least 36 times to each side.

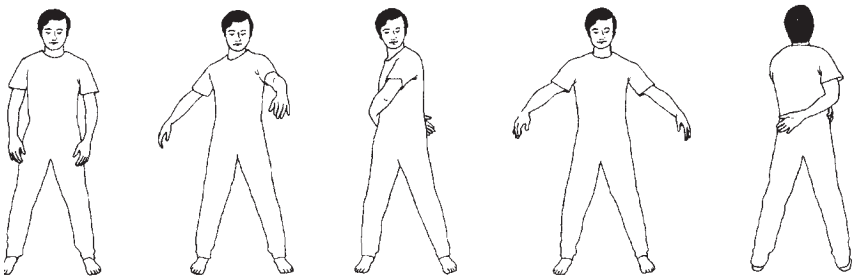

Fig. 4.7. Loosening the waist

Opening the Door of Life

This is a stretching exercise that works the pelvic floor muscles and the anterior abdominals to enable the opening of the Governor Channel.

1. Begin in the same stance as for Waist Loosening. This time twist to the left, again initiating the movement from the hips. Let your

right arm swing across the front of your torso, raising it up to head height with the palm facing away from you. At the same time, let your left arm swing around to the back, and place the back of your left hand over the Door of Life—the area on the spine opposite the navel (fig. 4.8).

2. When you reach your full extension, relax, and then extend again by loosening your low back. Feel the gentle stretch and increased extension coming all the way from the Door of Life, not from the shoulders. Relax and extend in this way 3 times.
3. Twist to the right and repeat the steps as above on the right side. Repeat for a total of 9 times on each side.

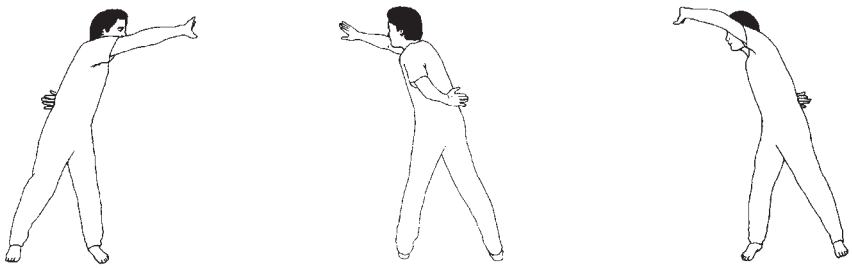

Fig. 4.8. Opening the Door of Life

Windmill Exercise: Opening the Spinal Joints

This exercise is a mixture of complex stretches and rotations. It stretches open the fasciae of the whole body, including the arms, torso, and legs.

Practice each phase of the exercise slowly and mindfully.

Outer Front Extension

1. Begin in the same stance as for Waist Loosening. Bring your hands to the midline of your body and hook the thumbs together (fig. 4.9).
2. Keeping your hands close to the torso, inhale and raise your arms

until they are extended straight up over your head, the fingers pointing up. Gently stretch upward in this position, extending your spine slightly backward. You can even say "Ah-h-h-h-h," as you would when you stretch first thing in the morning.

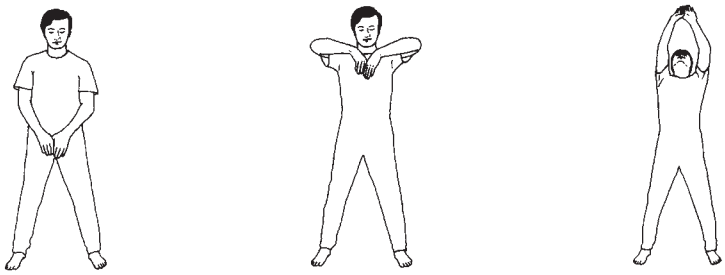

Fig. 4.9. Stretching the arms up

3. Begin to exhale slowly and bend forward, reaching as far out in front as you can, keeping your head between your arms (fig. 4.10). Try to feel the joints of the spine releasing one by one in a wave-like motion. Bend first from the lumbar vertebrae, then from the thoracic vertebrae, and finally from the cervical vertebrae. At this point your spine is released all the way toward the floor.
4. Slowly straighten back up, again feeling each joint of the spine, from the sacrum and lumbar area through the thorax, neck, and the base of the skull. Keep your arms hanging heavily and let your head be the last part of your body to come to vertical. Now you are back in the stretching position.
5. Repeat the above steps 3 to 5 times. Finish with your arms overhead, as at the end of step 2.

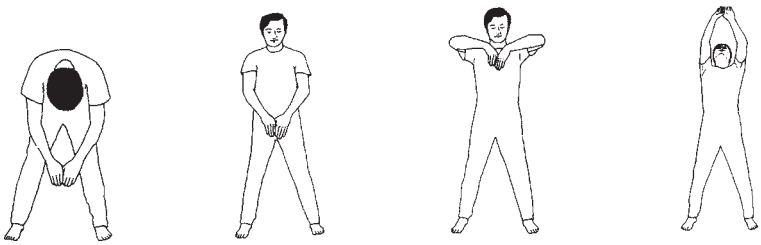

Fig. 4.10. Outer front extension of the Windmill exercise

Inner Front Extension

1. Now do the same movements in reverse. Point your fingertips down toward the floor and slowly lower your arms, keeping the hands close to the torso. When your arms are completely lowered, begin to bend forward; release the head, the cervical vertebrae, the thoracic vertebrae, and the lumbar vertebrae until you are bent all the way forward, as at the end of step 3 of the Outer Front Extension. Feel each joint opening.
2. Keeping your head between your arms, begin to straighten up. Feel each joint of the spine, from the sacrum and lumbar area through the thorax, neck, and the base of the skull. This time let your arms extend out in front as you slowly stand erect. When you come to vertical, your arms will be straight against your head.
3. Gently stretch upward in this position, extending your spine slightly back. Say "Ah-h-h-h-h," as you would when you stretch first thing in the morning.
4. Repeat the above steps 3 to 5 times.

Left Sidebend

1. Begin standing erect, with your feet shoulder width apart. With your head between your arms in the overhead position, lean to the left. You should feel a gentle stretch on the right side of your waist.
2. Continue stretching to the side until you've reached your limit, then gently rotate toward center as you stretch all the way down to the floor.
3. From the center, circle back up on the right side until you are again standing straight with your arms overhead.
4. Repeat 3 to 5 times, bending left to center and returning on the right.

Right Sidebend and Conclusion

1. Repeat the same movements as in the Left Sidebend, but this time begin bending to the right side and return on the left side (fig. 4.11).
2. Repeat 3 to 5 times.
3. To finish, unhook your thumbs and let your arms slowly float back down to the sides.

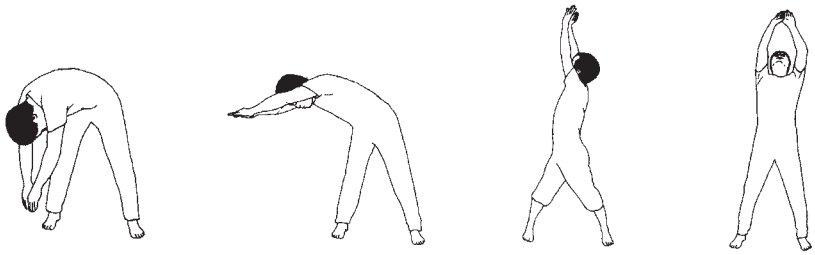

Fig. 4.11. Right side-bending movements

Tendon Twisting

This specific warm-up exercise might also be classified as a technical exercise. It is the foundation exercise for tendon wrapping, and exemplifies the principle of "in the curve seek the straight." It showcases many basic practices, including the passage of chi/jin up the spine.

The multiple stages of this exercise stretch and twist the tendons of the wrists, elbows, and shoulders to enhance flexibility and power. The movements should feel as though you are turning a screw into a wall.

Small Tendon Twist

1. Begin standing erect, feet shoulder width apart. Reach forward with both arms, palms up. Using a circular screwing motion, twist both thumbs so they face downward (see fig 4.12 on page 80). Then reverse directions and circle the hands forward, returning

to the starting position. While doing this, the wrists and elbows should be fully torqued to the point where, if you listen carefully, you can actually hear the stretching of the tendons that are being affected. The shoulders should be relaxed and rounded.

2. Repeat 3 to 9 times.
3. Repeat this movement with both arms above the head, with arms at the sides, and with both arms in front of the body but down at the groin.
4. Repeat 3 to 9 times in each position.
5. Now repeat in all positions, but reverse the direction of the tendon twist.

Fig. 4.12. Tendon twisting, front and sides

Large Tendon Twist

1. This exercise is comprised of the same movements as the Small Tendon Twist but it is performed in large circles. This movement should only be practiced with the arms in front of the body.
2. Do 3 to 9 rounds of the Large Tendon Twist.
3. Repeat the movements, reversing the direction of the tendon twist and joint opening. Practice 3 to 9 rounds in this direction.

Head Rotations and Neck-Joint Opening

This exercise, when done slowly and with focused concentration, warms up the soft tissues and also opens the channels. The secret to opening the channels is to move slowly, opening each vertebra one at a time. Allowing the chi to move your head further enhances this opening. Always remain soft and relaxed (*fang sung*). Smile and allow soft chi to dissolve blockages. These principles apply to all the rotation exercises.

1. Stand erect with your hands on your hips. Let your head relax forward. Feel the weight of your head providing a gentle stretch to the back of the neck. Allow the weight of your head to provide all the loosening and stretching force; this helps you relax and release and avoids the risk of injury from overstraining.
2. Gently roll your head to the right and feel the stretch on the left side of your neck (fig. 4.13).

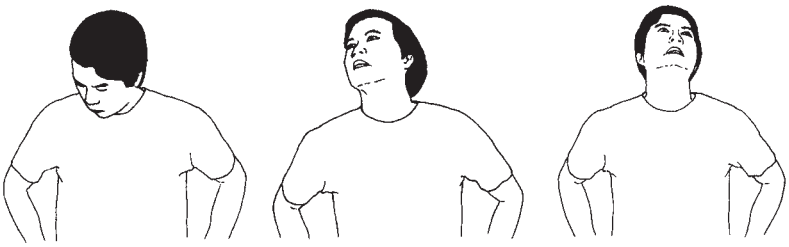

Fig. 4.13. Head rotations

3. Feeling the weight of your head, gently roll it to the back. Feel the stretch on the front of your neck.
4. Gently roll your head to the left, feeling the stretch on the right side of your neck.
5. Repeat the above steps 2 more times, then repeat the sequence 3 times in the opposite direction.

Shoulder Joint Rotations

This exercise increases your scapular power. Many people, especially if they have a good strong back, develop knots of tension in the shoulders. In this exercise, the scapulae are loosened and rounded to develop the type of scapular power used by tigers and other big cats.

1. Begin by standing with your feet parallel and slightly wider than shoulder width apart. Relax the entire body, paying special attention to relaxing your shoulders, scapulae, and back. Keep your palms loosely on the front of your thighs throughout this exercise.
2. Lift the shoulders straight up.
3. Extend the shoulders forward (fig. 4.14).
4. Lower the shoulders downward.
5. Draw the shoulders back.
6. Repeat the above steps steps 8 eight more times.

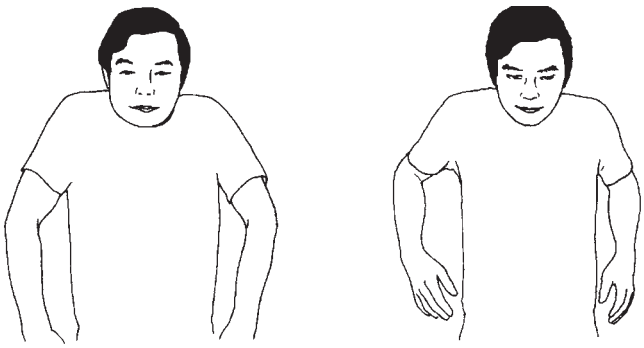

Fig. 4.14. Shoulder rotations

7. Now reverse direction: raise the shoulders, draw them back, lower them, and bring them forward.
8. Repeat 9 times.

Hip Rotations

As you perform the hip rotations, keep your head positioned over your feet—don't jut your jaw and head forward or let your head fall behind the centerline of the body. Move slowly and easily, breathing deeply and continuously.

1. Stand with your feet parallel and slightly wider than shoulder-width apart. Place your hands on your waist (fig. 4.15).
2. Bring your hips forward.
3. Move your hips in a big circle toward the right.
4. Now move your hips in a circle toward the back.
5. Circle your hips toward the left.
6. Repeat the above steps 8 more times.
7. Reverse direction and repeat 9 times.

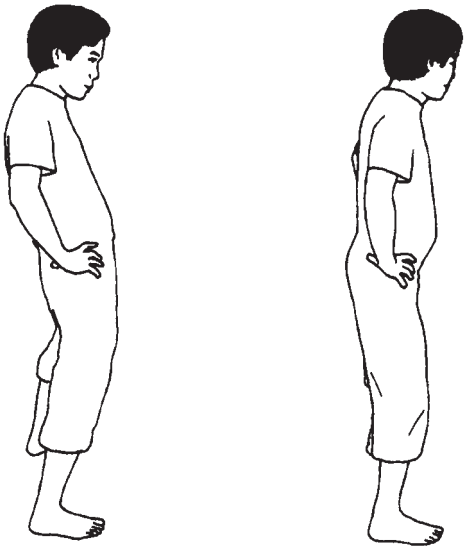

Fig. 4.15. Hip rotations

Knee Rotations

1. Stand erect with your feet together. Bend your knees and place your palms lightly on the kneecaps (fig. 4.16).
2. Slowly and gently rotate your knees to the left.
3. Rotate your knees to the back. The muscles behind the knee will lengthen.
4. Rotate your knees to the right.
5. Repeat the above steps 8 more times.
6. Now reverse direction and repeat 9 times.

Fig. 4.16. Knee rotations

Ankle/Knee/Hip Rotations and Joint Opening

Keeping the joints open is an important part of allowing the energy to be properly stored and available to flow into the bones. This exercise helps open the joints and flex the tendons so you do not overstress them during Tai Chi practice.

1. Stand erect with your hands on your hips, feet together. Raise your right leg and rotate the right ankle clockwise 9 to 36 times (fig. 4.17).
2. Now rotate the ankle counterclockwise the same number of times.
3. Keeping your leg raised, rotate the foreleg from the knee in a clockwise circular motion 9 to 36 times.
4. Now rotate the foreleg the same number of times counterclockwise.

5. Finally, rotate the entire leg from the hip joint in a clockwise circular motion 9 to 36 times.
6. Rotate the leg the same number of times counterclockwise.
7. Repeat the sequence with the left leg raised.

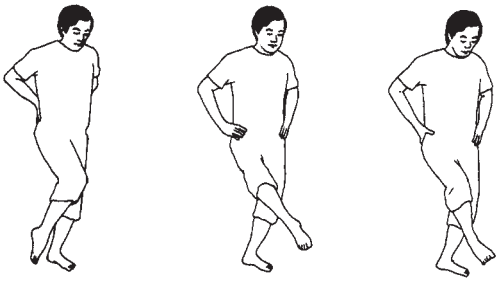

Fig. 4.17. Ankle rotations

Opening the Groin (Kua)

Opening the kua exercises the psoas muscles. As you do this exercise, pay close attention to deeply relaxing and lengthening the lower back and psoas muscles.

1. Stand with the feet parallel and slightly wider than shoulder-width apart. Place one hand on your sacrum and the other on your pubic bone (fig. 4.18).
2. Rock your sacrum forward and back, alternately tucking your tailbone and pushing it backward like a duck's tail, to open the groin area.
3. Repeat 9 to 36 times.

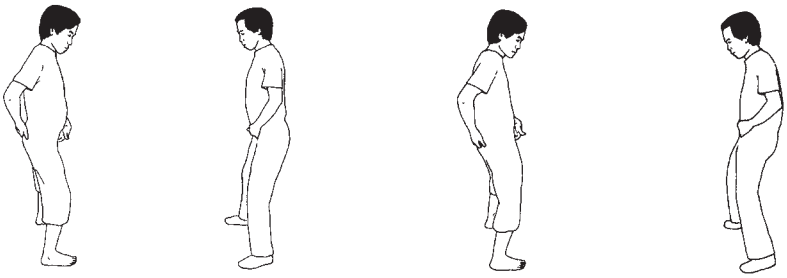

Fig. 4.18. Moving the sacrum to open the kua

Tan Tien Hitting

While this exercise includes waist rotation, it also employs the principles of percussion discussed earlier in this chapter. Percussion warms the tissues and removes stagnant chi from the channels. It helps awaken the tan tien.

Since the lower tan tien is the major storage center for the chi of the body, this area should be activated prior to Tai Chi practice.

1. Stand with your feet parallel and slightly wider than shoulder-width apart. Totally relax your arms and gracefully swing them in free-fall from left to right. As you swing to the left, your right hand comes in front of your body, with the palm hitting your navel area at the exact same time that the back of your left hand hits the Door of Life, opposite the navel (fig. 4.19).
2. As you swing to the right, your left hand comes in front of your body, the palm hitting your navel area at the exact same time that the back of your right hand hits the Door of Life.
3. Repeat 36 times to each side.

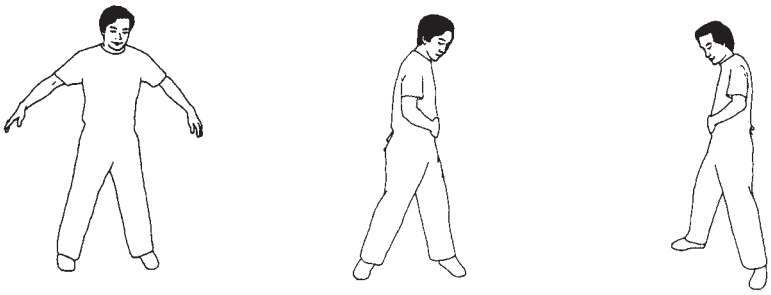

Fig. 4.19. Tan tien hitting

Bouncing and Shaking the Joints

Bouncing the body can be likened to a ride on the subway. For those of you who commute this way, this exercise can be practiced to and from work as well.

As mentioned above, bouncing and shaking can be seen as an alternative way to warm up the tissues. Remember, however, to bounce and shake only in neutral joint positions, as bouncing and shaking can damage tissues that are tight or contracted.

1. Stand with your feet parallel and slightly wider than shoulder width apart. Relax your body and concentrate on opening the joints.
2. Now bounce without any tension. Let the vibration in your heels work its way up through your entire skeletal system, from legs to spine to neck to skull (fig. 4.20). Let your shoulders and arms vibrate as they hang loosely by the sides of your body. To enhance the vibration you can hum a vowel, which will make the voice tremble as well.
3. Rest and feel chi entering the joints.

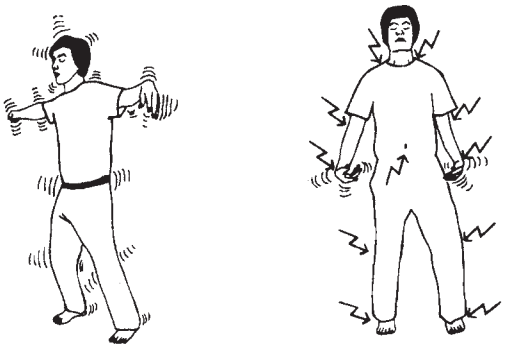

Fig. 4.20. Shaking the joints

Empty Force Breath

Empty Force Breath is basically the ability to suck in a chosen part of the body. This involves using the core muscles and imitating an inward breath but doing it with a closed glottis. This desire for breath is then transferred with focus of the mind to whatever part of the body the adept chooses. It is an important skill to obtain not only for Fa Jin, but also for high-level meditation.

In Fa Jin, the empty force is used during the yin stages of its execution. It helps load the bow and open the vertebral column (*Dai Mai*).

1. Stand in a comfortable Horse Stance position, with the legs just shoulder width apart. Exhale all the breath out forcefully and poke out your tongue.
2. Close the glottis, open the kua (coccyx tucked in and front part of pelvis widened), and transfer the desire to breathe to the abdominal musculature.
3. Focus the mind on a ball of chi in the pelvis and suck it up into your chest (fig. 4.21).
4. Next, roll the chi ball in the center of the abdomen, then relax and allow the abdominal wall to relax and protrude out.

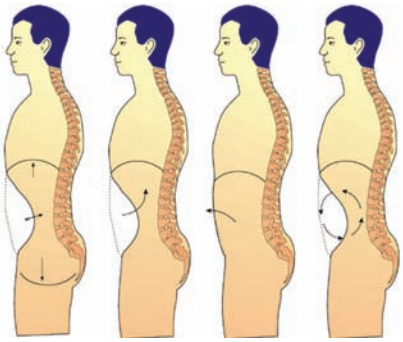

Fig. 4.21. Empty Force Breath

5. Repeat steps 1–4, but roll the chi ball at your solar plexus (fig. 4.22).
6. Repeat steps 1–4, this time rolling the chi ball at the lower tan tien.
7. Continue repeating steps 1–4, rolling the chi ball on the right side and the left side of your abdomen.
8. Relax after each cycle and allow the abdominal wall to protrude out.

This suction force can be called yin breathing; it is the opposite of the packing breath, which is called yang breathing. In the packing breath, air is sipped and packed into the body at the chosen point. It can be used to move the chi to areas that are stagnant. The empty force breath can likewise be used to move chi into blocked areas. It can also be used in sexual practices like the upward orgasmic draw, and may even happen spontaneously during high-level meditations like the Fusion practices and Kan and Li practice.

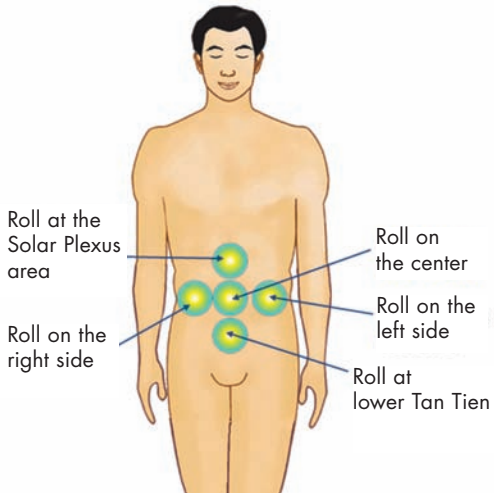

Fig. 4.22. Additional areas to work on with the Empty Force Breath

Energy-Connection Exercises

These exercises strengthen the realm of chi and spirit. They help to connect the mind and the tan tiens with the forces outside oneself. Remember that Fa Jin relies on the integration of the energies of heaven, spirit, the three tan tiens, the body, and the chi.

Washing the Body with Heaven and Earth Energies

1. Stand in the Embracing the Tree position: the feet are a little more than shoulder width apart, and the nine points of the feet are pressing firmly against the ground. The knees are bent and torqued slightly outward, with a corresponding torque in the

ankles and hips. This acts to screw the body into the ground and to initiate the earth connection. Straighten the spine by slightly tucking the sacrum under, which increases the connection to the earth, and by tucking in the chin to connect with heavenly energy. Round the scapulae, sink the chest, and hold your head erect. Position the arms as if they were encircling a tree, keeping the elbows sunk.

2. Reach down and forward, keeping the palms cupped, and slowly scoop the earth energy up through your body. Use your imagination at first, until you become sensitized to the feeling of the rising earth energy. Since you are washing your body with this energy, simultaneously feel a cool blue water-like healing sensation rising through your body at the level of your hands as you raise them up, lifting them until they are fully extended above your head.
3. Turn your palms up and connect with the heavenly energy.
4. Slowly arc your arms downward to the sides, palms out. Feel heavenly energy descend through your body at the level of your hands. The heavenly energy can feel like an expansive hot white fire that washes down through the body until it reaches the ground, at which point your hands will be reaching toward the ground.
5. Repeat this exercise 9 to 36 times, until you feel fully suffused with both earth energy and heavenly energy.

Cosmic Energy Mid-Eyebrow Connection

This exercise should only be performed at night, or at sunrise or sunset, when the light of the sun is softer and will not damage your eyes. Close and rest your eyes if ever the light from the sun or the moon feels too intense.

1. Begin in the Embracing the Tree position as described in step 1 above, but this time face the sun or the moon.
2. Bring your arms up to just above the level of the mid-eyebrow, and make a triangle between the index fingers and thumbs of

both hands, with either the sun or the moon centered within that triangle.

3. Hold this position and draw the sun (yang) or moon (yin) energy in through the mid-eyebrow.
4. Gather some saliva in your mouth and let the energy of the sun or moon that you've drawn in mix with saliva to collect a ball of chi energy in the mouth. This will increase saliva production and more will gather in the mouth.
5. Extend your neck slightly. Swallow the saliva with a strong gulp and mentally direct it to your navel. Feel your navel warm with the arrival of this new energy.
6. Repeat the above steps 9 to 36 times.
7. Close the exercise by slowly lowering your arms to the navel, placing the left hand over the right, and collecting energy by spiraling at the navel.

Navel/Palm Connection

1. Stand tall with your feet slightly wider than shoulder width apart. Position both palms approximately 2 inches out from the navel, palms facing inward.
2. Slowly inhale, allowing the abdomen to expand completely. As this is happening, lightly tug a "string" of energy away from the navel, using the centers of the palms.
3. Now slowly exhale and feed the energy string back in to the navel.
4. Repeat this sequence 9 times, and then collect energy at the navel.

Sink Back and Push Tree

1. Find a tree that beckons you with its positive energy. Selecting the proper tree is vital, since there are trees with negative energy.
2. Facing the tree with your right leg forward, sink into the Tai Chi sink-back position. Your fingers should be facing the tree.

3. As you proceed forward into the push, feel a connection as the energy from your fingertips shoots out and connects with the positive energy of the tree. Project out from your body any sick or negative emotions. Let those energies be taken in by the tree, to be healed and recycled through the earth.
4. Sink back and draw in the newly processed positive energy.
5. Repeat this yin and yang action 9, 18, or 36 times. This exercise is particularly effective for energy sensitization.

TECHNICAL EXERCISES

Technical exercises have the primary purpose of supporting a specific skill that is used in a given martial art. From a physiological perspective, technicals create specific neuromuscular patterns that form the groundwork for discharge power. Secondarily, technical exercises function like warm-ups, opening channels and meridians that are often closed in the everyday state.

This section explores four kinds of technical exercises. First are the silk-reeling exercises, which are yin exercises that refine the execution of Fa Jin—especially the first four stages. The second type are exercises that utilize the eight gates. The third type is a summary and focused appreciation of Tan Tien Chi Kung, and how it promotes discharge power. The fourth section explores yang technical exercises that focus on real-time speed release of jin.

Yin Technicals

Silk-reeling technicals are classified as a yin training exercise for the release of discharge power. They are yin because they are done in slow motion and because they cultivate softness, fullness, and absorption. However, being yin does not mean they are weak. We hope we have made it clear that by cultivating yin, the adept simultaneously empowers the release or yang phase. Silk reeling (*chan su jin*) is taught in the Chen tradition,[9] but it is certainly not unique to the Chen style.

In fact, technicals have been an important aspect of Tai Chi Chuan training in the Yang, Wu, Li, and Sun styles.[10] For example, Li I-Yu tells us to "move the chi like coiling silk."[11]

Yin technicals train all phases of the release of Fa Jin.[12] They cultivate the four yin stages described in chapter 3: sticking/following the chi, the yin phase of Iron Shirt, neutralizing, and rotation around the central axis. They also cultivate the yang aspect of release, which comprises stages five to eight as described in chapter 3. These stages include drawing power from earth, expansion of the tan tien, expansion of whole body, and final release. However, because they are yin exercises they are done in a soft and gentle way. Like general warm-ups, these yin technicals also serve the purpose of opening the acupuncture meridians and the three tan tiens.

Yin technicals are an alternative to prolonged sitting or standing in Iron Shirt postures. They help open the Microcosmic Orbit, the twelve main acupuncture channels, and the tan tiens. During yin stages of Fa Jin practice, the body and mind are in an absorptive state that collects chi from the heavens (including from the sun, moon, planets, and stars) and from the earth (the five elements of the earthly plane). The three tan tiens are activated to store jin/chi that is absorbed. Stagnation and blockages are cleared with the gentle movement of chi and jin through the aforementioned channels. In some respects, the yin technicals have significant overlap with soft Chi Kung exercises that are taught within the Universal Healing Tao system. They follow all the principles of the soft movements of Tai Chi Chuan.

To help understand the principles of yin technicals, we will analyze them in terms of the areas of the body they focus on.

Hands

During yin technicals, the hands—like the rest of the body—trace a circle. They do this with two purposes in mind: first of all they retain their martial purpose and therefore the ability to parry, and secondly they follow the natural connection and power with the wrist, elbow, and shoulder.

According to Li I-Yu: "Relax the fingertips and spread the fingertips. There is a slight feeling of swelling in the fingertips."[13] Because the fingers are constantly absorbing chi and also serve as a conduit for releasing prickly stagnant chi, they must be relaxed. Each finger retains a connection to one or more major acupuncture channels, and therefore must remain open. This openness brings a sensation of fullness or swelling, which is different than tension. Tension is synonymous with blockage and should be avoided. When each finger is open and spread, the chi has the power to move the entire limb.

Waist and Tan Tien

The waist (*yao*) is a center of much activity during the delivery of Fa Jin. Within the waist is the Central Thrusting Channel, which allows effortless rotation while maintaining rooting within the Iron Shirt structure. As Yang Pan-Hou says:

> The two arms are like a balance that swing left and right. The waist is the stem of the balance. . . . The plumb line suspending the head and the base of the balance located in the waist connects the Wei-Lu point in the coccyx and the Hsin-Men point at the crown of the head.[14]

The balance point in the waist allows effortless rotation while the arms and torso release jin. The Belt Channel (*Dai Mai*), which follows the outer circumference of the waist, is also active and full during Fa Jin.

The focus of mind and activity within the waist also varies throughout Fa Jin practice. In stages 1 to 3, the focus is on the back or the Ming Men. With rotation of the waist in stage 4 there is also some movement forward, and a momentary focus on the front aspect of the tan tien. The focus then moves back to the Ming Men again before the tan tien expands in stage 6.

During the yin phase, neutralization of yang chi/jin from the

opponent occurs via the Conception Channel (*Ren Mai*), which must pass through the waist into the earth. Similarly, the primary release of jin in the yang stage of Fa Jin is initiated by the back part of the tan tien and released via the Governor Channel (*Du Mai*/vertebral column) (fig. 4.23).

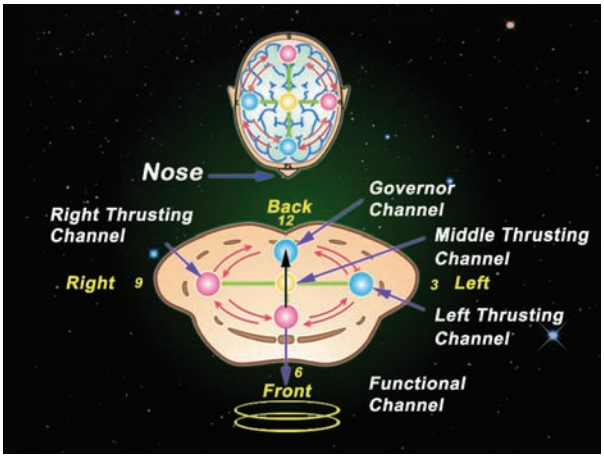

Fig. 4.23. Transverse section of waist and Thrusting Channels

Yang Pan-Hou describes it this way:

> With one wave of the signal flag
> The wheels of the two Ming Men begin to turn.
> When orders are issued by the mind,
> the chi goes into action like army banners.[15]

In other words, when the integrated mind says "Fire," the back tan tien shakes itself around the Central Thrusting Channel. Finally the jin is released via the Governor Channel. As Li I-Yu reminds us, "Energy issues from the spine."[16]

The whole body engages in the execution of discharge power. From the little toe to the little finger, all parts engage in letting go and opening to forces beyond the self. This concept is antithetical to the Western analysis of movement, which naively attributes movement

during complex actions to individual muscle groups. While Tai Chi Chuan practitioners would agree that certain muscle groups can carry a large percentage of the load, thoughtful complex motion is always understood to be a function of the whole body and mind.

Yi/Mind

The Yi (integrated mind) creates a template for the chi, which in turn moves the muscles and tendons. Yang Chen-Fu says, "If you do not use Li but use Yi, when the Yi arrives, the chi arrives immediately."[17] This implies that with successful coordination of complex moves, the monkey mind that believes pure muscular power is the way must let go and rescind authority to something larger. One successful technique, which Chinese martial artists have used for centuries, is to ascribe animals to some of the martial forms.

Many of these nominal allocations pertain to the celebration of earthly or heavenly existence. For example, we have the Bull exercise in Tan Tien Chi Kung, which is also known as Moving the Sampan Oars. Some names highlight the poetic beauty of the Taoist path, like the Jade Rabbit Pounding the Drug of Immortality. The integrated mind works better with simple pictures or impersonations. This is because the body/mind connection in its pure state works more like a child's mind. The adept playfully lets go and immerses the whole body and its movement into a template. This is not done by the adult intellectual mind (monkey mind), which would attempt to direct a complex form overtly, but through the indirect play of the integrated whole mind.

The Movement of Mind Focus During Yin Technicals

Prior authors have made many attempts to trace the body's center as it executes Fa Jin.[18] According to Universal Healing Tao teachings, the center begins forward and returns in a straight line back to a rear position. This comprises stages 1, 2 and 3. In stage 4 there is a sideways rotational movement and the center moves toward the front leg. The

waist then returns to the original position. This rotation and return is like the first part of the flicking of a towel or the cracking of a whip. Once returned, the body can then release the jin. In releasing jin the center moves from the back to the front, and the focus now moves up the body to the extremities and into the opponent.

The following diagram illustrates the stages of Fa Jin release as marked by movement of the center (fig. 4.24). Not all technicals trace this course, but most do. Those that don't tend to minimize stage 4.

The exercises that follow are basic technicals that highlight particular aspects of Fa Jin practice.

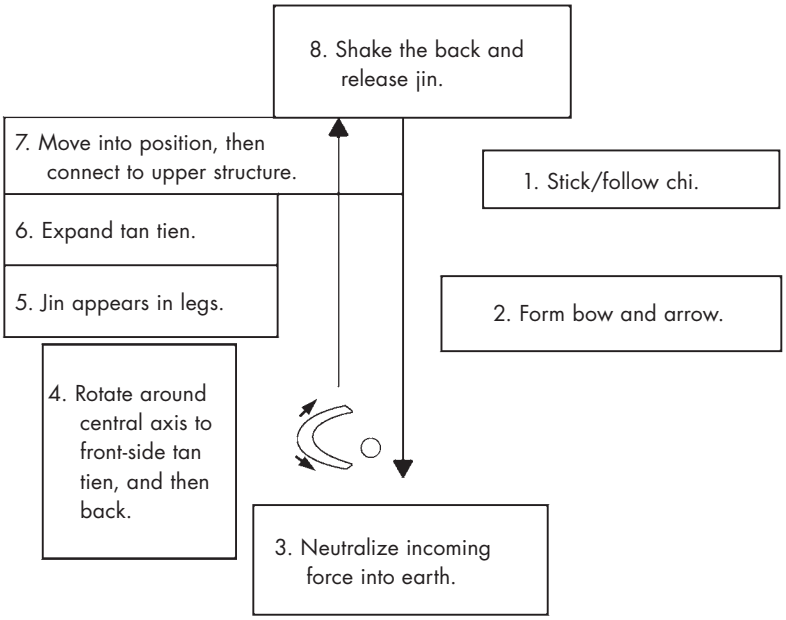

Fig. 4.24. Eight stages of Fa Jin

Silk Reeling

Turning the Wheel

This is a classic Universal Healing Tao practice whose emphasis is twofold. One is to open all the points of the Microcosmic Orbit. The second is to cultivate the appropriate coordination of the whole

body—from the feet to the fingertips—in simple circular movements. Jin is released via the vertebral column. The hands are moved by the chi. The novice begins by learning to turn from the waist and release power via the spine. Later, chi is allowed to move parts and then all of the entire structure. Any monkey mind intention is gradually removed. The following illustration shows the external moves and the movement of focus (or the chi ball) within the Microcosmic Orbit (fig. 4.25).

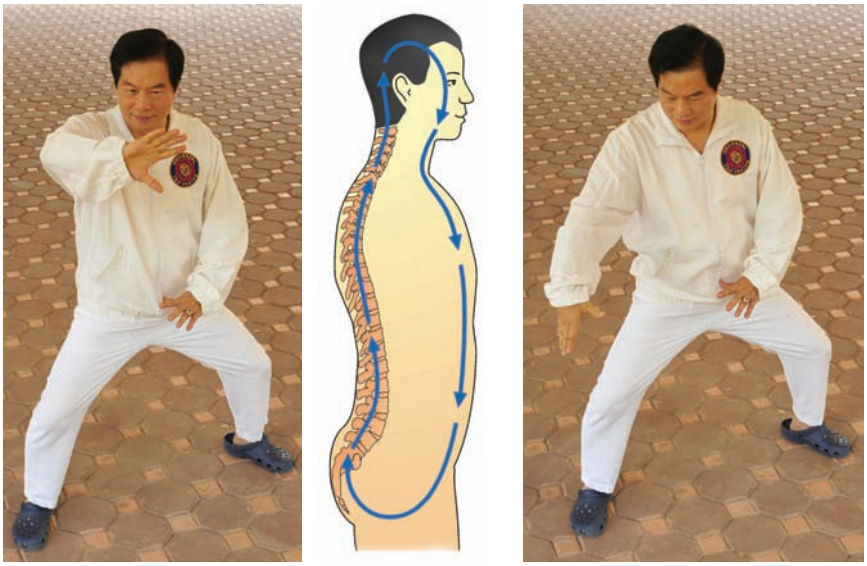

Fig. 4.25. Energy moving in Microcosmic Orbit and Turning the Wheel

Left and Right Parry Circles

This silk-reeling exercise is more frequently practiced by Chen practitioners and includes the left and right hands singly and together (fig. 4.26). The jin moves as follows: it retreats, follows the chi, opens the structure and the bow, rotates the waist with a slight forward movement of the tan tien to the front-side tan tien, then releases the spring via the whole structure—from the sacrum, to the lumbar, thoracic, and cervical vertebrae. From the cervical vertebrae, the arms find the "straight via the curve."[19]

Fig. 4.26. Left and Right Parry Circles

Rowing the Sampan Oars (Bull)

This yin technical includes arm splitting, which is akin to the moves of the breast and butterfly strokes in swimming (see fig. 4.27 on page 100). In this particular technical, the tan tien is already forward during the backward movement, so no rotation is required prior to the discharge of jin. In the butterfly action, however, the focus returns to the standard pattern.

Besides working to the sides, silk reeling can also be carried out in front of the body. From the Play the Pi Pa (front guard) position, the arms are rolled forward or backward. The legs can be interchanged when tired. Movement of chi and jin is the same as in Turning the Wheel.

Fig. 4.27. Focusing on chi ball of Sampan Oars

Jade Rabbit Pounds the Drug of Immortality

This technical is done in double-weighted Horse Stance only (fig. 4.28). It works to open the Central Thrusting Channel (*Chong Mai*). Like the above yin technicals, it can train all stages of Fa Jin, however, it is unlike the classic eight gates in that weight is not transferred from one leg to another. Again, follow the principle of allowing the chi to move the limbs.

Fig. 4.28. Jade Rabbit Pounds the Drug of Immortality

Technicals for Practicing the Eight Gates

Little is known about Tan Meng-Hsien, yet his writings have gained classic status. Tan offers explicit visualizations for the execution of the eight forces. In these technical exercises, the eight forces are practiced in sequence and with a specific jin in mind. This is starkly different from the practice or demonstration of the discharge form, during which there might not be the luxury of time to explore the complex internal work that is needed to release power from the tan tien. In the technical environment, however, adepts can practice according to their own inner timing rather than an imposed time constraint.

Multiple repetitions in a relaxed atmosphere allow the natural and spontaneous movement of chi and jin to occur. The eight stages of release are maintained, including four yin and four yang stages. However, in the following technicals taught by Tan Meng-Hsien, varied visualizations are used to create a template for the Yi to work with.[20]

The Eight Gates with Visualizations

Gate 1: Peng

Begin on the right side. Practice Peng with a movement like a floating boat supported by the water beneath. When the tan tien feels like it is naturally exploding, visualize it as a loaded spring releasing (fig. 4.29). The aim is to follow the release in a relaxed manner.

Gate 2: Lu

Roll back and sink deeper into your structure as per the Push Hands routine, keeping the kidneys full and the spine straight. Become empty and visualize yourself floating in deep outer space (fig. 4.30). In many respects, Lu represents the first half of the Fa Jin sequence. It can be used on its own to topple an opponent who expects resistance and consequently uproots himself when none is offered.

Fig. 4.29. Core spring in the tan tien

Fig. 4.30. Tan tien as empty outer space

Gate 3: Ji

In this exercise, imagine the tan tien or the body to be connected to two different forces, symbolized by the left and right arms. These two forces then create a reaction at the zenith of the movement that is like bouncing a coin off a drum (fig. 4.31).

Fig. 4.31. Tan tien as a drum

Gate 4: An

In the yang phase, visualize the energy like water in an outgoing tide—a steady force that fills every defect in the opponent's structure without effort (fig. 4.32). At the moment when the tide seems full—when there can be no more resistance and the opponent is on the verge of imbalance—then release your power.

Fig. 4.32. Tan tien as a wave in the sea

Gate 5: Tsai

Visualize yourself and your opponent in a lever position with a defined fulcrum (fig. 4.33). The wrist, elbow, and shoulder can be targets for pressure applied to engage a lock (*chin na*); finish with discharge power to dislocate a joint or fracture a bone. In this situation, the yin phase breaks the opponent's structure by elongation. In the yang phase (stages 5 to 7), the opponent is set up for the lever. Set up a lever like a balance scale so that only "four ounces" are required to break a thousand pounds.

Fig. 4.33. Tsai using the principle of the lever

Gate 6: Lieh

Next imagine the tan tien like a spiraling vortex or revolving flywheel.[21] The fastest moving point is distant from the central eye of the vortex (fig. 4.34). Any force that entangles itself on the outside of this vortex is cast off a thousand times faster than it entered.

Fig. 4.34. Vortex and spiraling in the lower tan tien

Gate 7: Chou

In this exercise, visualize the elbow's power as coming from the five elements and being absorbed from the six directions (fig. 4.35). This elemental energy reduces to a unity that ultimately explodes via the elbow joint.[22]

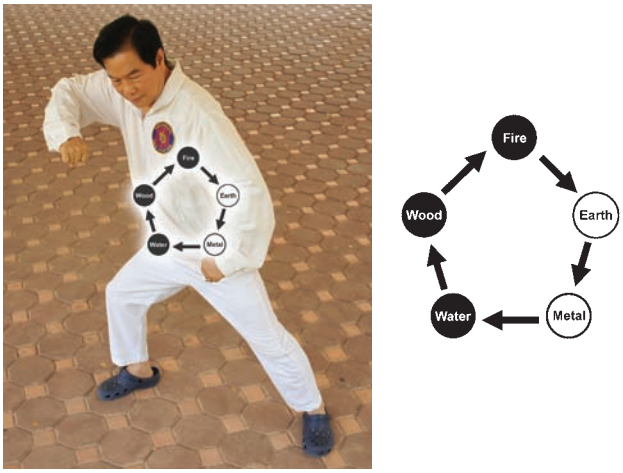

Fig. 4.35. Tan tien absorbing chi from the five elements

Gate 8: Kou

The back and shoulder set up a discharge of power using their weight against an imaginary force—much like Pounding a Pestle (fig. 4.36).[23]

Fig. 4.36. Shoulder Strike using the principle of the mortar and pestle

Tan Tien Chi Kung

This series of eleven exercises is useful for training the expansion of the tan tien, rotation of the waist, and movement of the center to the various parts of the lower tan tien. To find specific directions for the eleven animal exercises, see Mantak Chia's *Tan Tien Chi Kung*.*

TAN TIEN CHI KUNG EXERCISES

EXERCISE	ASPECT TRAINED
Rabbit	Front tan tien
Crane	Side tan tien
Bear	Back tan tien
Swallow	Sides of the tan tien
Dragon	Waist rotation
Eagle	Coupling
Monkey	Striking while relaxed
Elephant	Striking while relaxed
Rhinoceros	All phases of Fa Jin
Horse	All phases of Fa Jin
Bull	All phases of Fa Jin

Specific Discharge Power Yang Technicals

These technicals are carried out in full speed. While all stages of discharge power are required for practice, they focus now on real-time speed.

Civet Cat Catches the Rat

This cultivates the Peng force. It is the classic exercise for development of the one-inch punch, in which power is released from a

Tan Tien Chi Kung (Rochester, Vt.: Destiny Books, 2004), 112–50.

standing start (fig. 4.37). The opposition of the force comes from the other arm, and its sudden release can create a strong spring-like burst that is almost impossible to defend against. Visualize and imitate nature by moving your fist from an open palm to a closed fist, thus capturing a rat.

Fig. 4.37. Civet Cat Catches the Rat

Chopping Wood

This exercise cultivates Fa Jin in a downward direction (fig. 4.38). The force is released downward with 90 percent of the weight on one leg. There is a simultaneous sinking of the weight with each strike. The sinking of the weight implies that the weight of the practitioner is transferred with the strike. Combined with the power generated from the tan tien and arms, the body weight contributes to a power-

Fig. 4.38. Chopping Wood posture

ful destructive strike. This force is useful in executing the Tsai force. The name of the exercise reflects the principles of this technical: you become like an axe chopping wood. The weight must be more in the hand than in the elbow or shoulder. Maximal power comes from being loose and relaxed.

Striking to Side

In this technical, Fa Jin is released simultaneously with two arms to the back (fig. 4.39). There is the same sense of releasing power via the spine as in the fundamental form of Tai Chi Chi Kung.

Fig. 4.39. Arms swinging to the sides

Leading the Goat

Here power is released along the radial side of the forearm (fig. 4.40). Power is generated as per a roundhouse punch or strike—through rotation of the Central Thrusting Channel and the movement of focus from the side to the central tan tien. The use of the Yi power is encouraged via the image of "Leading the Goat."

Fig. 4.40. Leading the Goat: swinging arms inward

Flicking Fingers

This technical really encourages relaxation or *fang sung* while striking. Chi is generated from the tan tien, reaching the fingertips like a whip (fig. 4.41). The lightweight yet small fingers are themselves a dangerous weapon, as they can be used to strike the eyes or sensitive parts of the face.

Fig. 4.41. Flicking fingers

5

The Tai Chi Chi Kung Discharge Form

The following pages detail the practice of the Tai Chi Chi Kung Discharge Form (fig. 5.1). Beginners and older people generally practice the form with a higher stance. As a student progresses, he or she can practice with a middle-structure stance that is closer to the ground, to increase strength. For martial purposes, one generally uses an extremely low stance.

Fig. 5.1. Discharge form

Introductory Movements

Wu Chi Stance

The first movement of the Tai Chi Chi Kung Discharge Form is internal, not external. Outwardly, the practitioner stands still, facing north. This position is related to Wu Chi, the primordial unmanifest state (fig. 5.2).

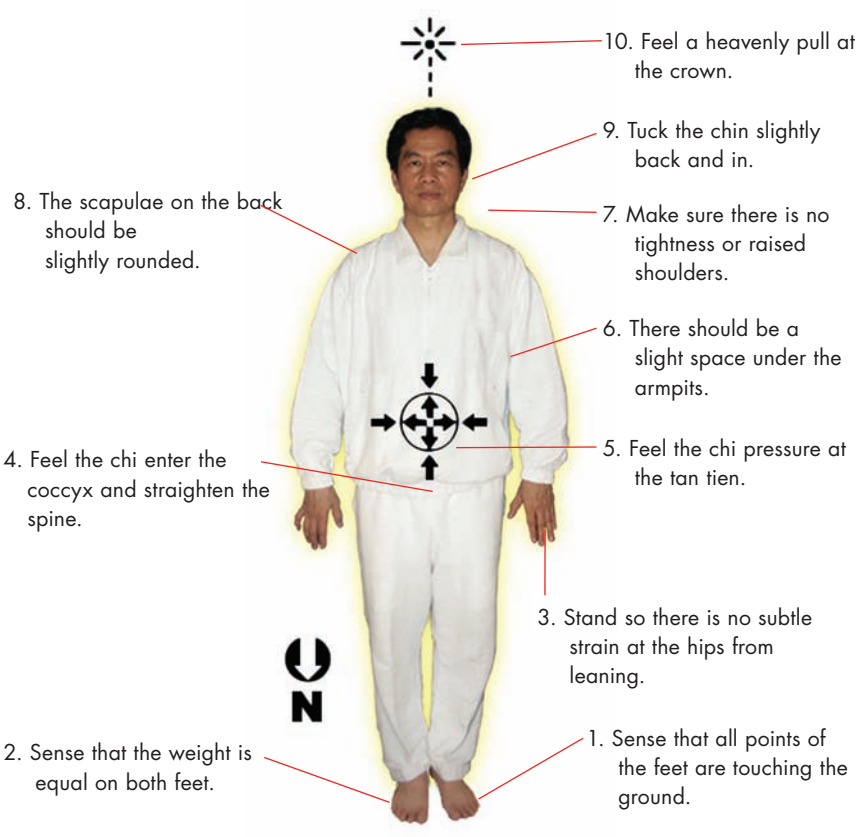

Fig. 5.2. Wu Chi Stance

1. Stand with your feet close together, but not touching at the ankles. The nine points of the feet should make contact with the ground. This is the root—the connecting point with the earth energy.

2. Keep your back straight and relaxed and the knees straight but not locked. No pressure, tension, or pain should be felt in the lumbar area.
3. Relax your shoulders and pull your head upward at the crown. This is the heavenly pull that draws the earth energy up through the feet.
4. Feel the heavenly pull, as if a chi ball above your head is pulling you up. The pull also stretches your spine, allowing the energy to circulate more freely. At the same time, feel the chi enter your coccyx and straighten your spine.
5. Keep your eyes open without strain. The focus is directly ahead, to the horizon.
6. Pull your chin slightly backward. This subtle movement opens the base of the skull so the energy can circulate freely up to the crown and down the front of the body.
7. Lightly place the tip of your tongue against the palate at a point that helps induce salivation (fig. 5.3). Your jaw should be relaxed with the teeth lightly touching. If the jaw is biting down hard, there will be tension on the sides of the head and the throat.
8. Relax your throat. Swallow a little saliva and exhale gently to relax the muscles of the neck.
9. The chest should be relaxed and slightly hollowed. This hollowing is produced by a subtle rounding of the scapulae on the back. If the chest is tight, relax it by inhaling gently without making noise and then exhaling just as quietly through parted lips.

Fig. 5.3. Tongue placed lightly on the roof of the mouth

10. Breathe deeply and evenly, expanding your abdomen.
11. Bring your attention to your navel or your tan tien. Let the breath penetrate to the tan tien, creating the sensation of a growing energy ball.
12. Relax your arms, leaving a hollow in the armpits as if holding a Ping-Pong ball there. The arms should not be touching the body.
13. Relax the palms of both hands, keeping the fingers loose yet straight. Raise your index fingers very slightly, so you can feel energy sparkling at the tips (fig. 5.4).

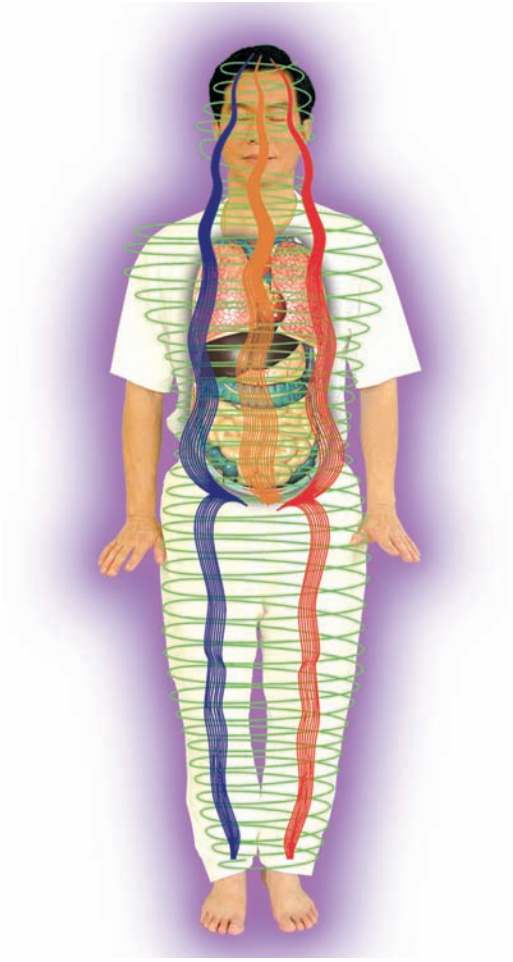

Fig. 5.4. Raise your index fingers to feel the energy sparkling.

14. Feel the palms and soles breathing. Feel the chi ball in the tan tien contracting and expanding with the breath (fig. 5.5).

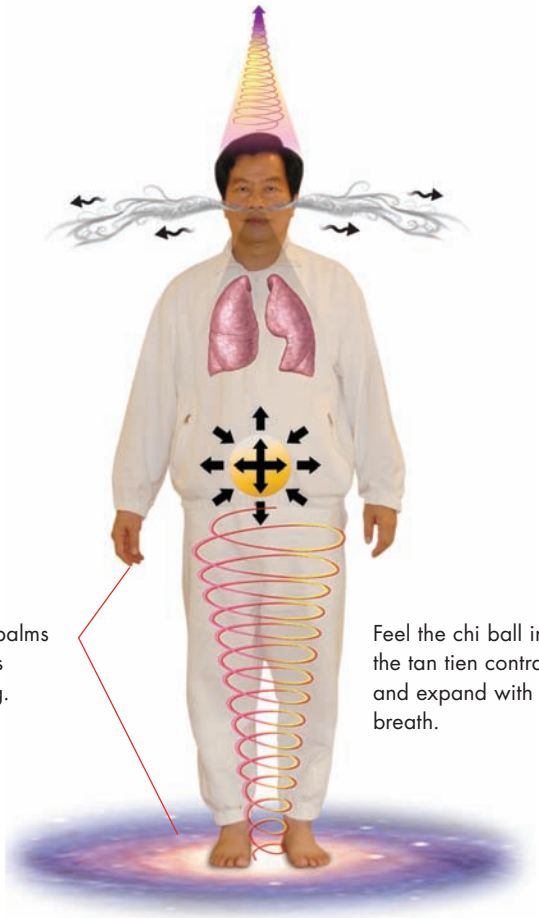

Fig. 5.5. Tan tien breathing

Smile

1. Smile down to the thymus gland below your neck. Allow the smile to spread to your heart and all other organs.
2. Smile down to your navel.
3. Listen to your heartbeat. Follow the pulse from your heart out through the chest, shoulders, upper arms, elbows, forearms,

wrists, hands, and fingers. Feel the pulse in the index and pinkie fingers.

Breathing

1. Become aware of the earth energy at your feet, the heavenly pull at your crown, and the cosmic energy in front of your body. Inhale gently without making noise and draw the cosmic energy into the mid-eyebrow point.
2. Let the cosmic energy penetrate deeply into the lungs, then spread to all of your organs. Let it fill the soles of your feet.
3. When your inhalation is complete, retain the breath for a moment without straining, then begin to exhale gently without making noise. Your breath should be so gentle that it would not move a piece of paper placed in front of your nostrils.

Opening the Tai Chi Chi Kung Discharge Form

Preparation: Step Out

1. As you exhale, begin to sink down, shifting your weight onto your right leg. The sinking should originate from the hips and sacrum, as sinking by simply bending the knees puts too much stress on them, resulting in swelling and injury. Sink and fold at the groin (*kua*) without much of a bend in the knees, and feel your weight transfer down the back of your knee to the heel (fig. 5.6).
2. Sink your chest and round the scapulae a little bit more, so that your arms come out slightly from your sides. As the chest sinks, the sternum moves inward, massaging the thymus gland.
3. Rotate your hands so that the palms face back. Feel the energy flowing through your arms down to the palms and fingertips.
4. Begin to shift your weight onto your right leg. Keep your crown aligned with the heavenly force, so there is no leaning to compensate for sinking down on the right leg.

5. When all the weight is on the right leg, inhale as you lift the left heel, keeping the big toe touching the ground.
6. Separate the left leg by brushing the ground lightly with the big toe, as if tracing a line. The separation between the two feet should be roughly the width of the shoulders. This is the base. If the space between the feet is less than shoulder width, the base will be narrower than the top, and the structure will be top-heavy. In this style, the base should not be wider than the shoulders' width.
7. Exhale as you place your left foot at a 45-degree open angle, firmly touching all 9 points on the ground. Shift your weight so that it is on both feet equally.

   At this point, your knees should remain slightly bent, but not going over the edge of the toes. Your pelvic area is open, and the energy ball is in the navel area. Your spine should be stretched by the heavenly pull while your sacrum is pulled down by the earth force (fig. 5.7).

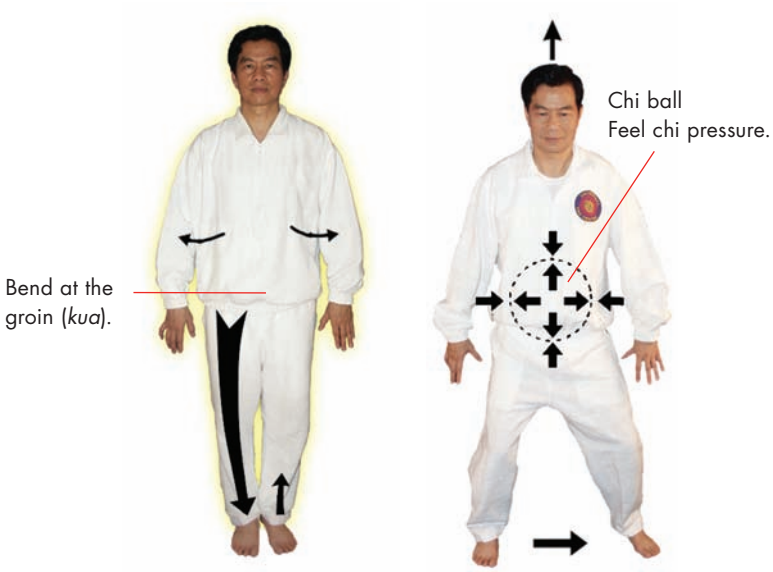

Fig. 5.6. Opening the kua (ligaments of the groin)

Fig. 5.7. Chi pressure

The next sequence is the core part of the Tai Chi Chi Kung Discharge Form. It starts with the Left-Hand Form and then transitions into the Right-Hand Form. At the end, there is a series of concluding movements.

Core Movements: Left-Hand Form

The first half of Tai Chi Chi Kung Discharge Form is called the Left-Hand Form. The moves are in a clockwise progression, and the strikes are performed with the left hand.

Step Forward (North)

1. Stand facing north with your feet together and knees straight (fig. 5.8). Relax, then regulate and slow your breath with whole-body breathing. Feel your head suspended by a string from heavenly force, and your feet drawn to earth by the earth force.
2. Smile down and inhale. Round the scapula and sink the chest. Open the armpits. Now exhale, sink down, and bend your knees, shifting your body weight and tailbone to the right foot. Allow the life force in your tan tien to lead the rotation to the left (west).
3. Inhale and pick up your left foot, placing it on the ground a shoulder width apart from the right foot, pointing toward the northwest.

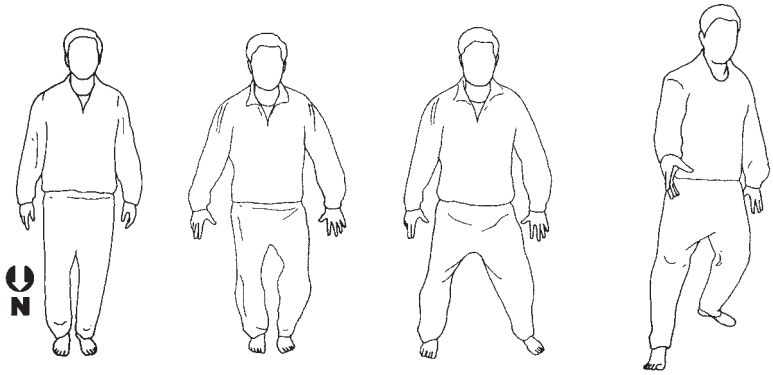

Fig. 5.8. First Ward Off: Opening Stance

4. Shift your body weight to the left foot. Draw the right hip forward. Step forward with the left foot. Reach with the right hand facing north.
5. Carry out silk reeling in an upward direction, one circle with the right hand then one with the left (fig. 5.9). Turn the waist to the left (south) with the momentum of the silk reeling exercise, rotating your tan tien around the imaginary Tai Chi Pole (Central Thrusting Channel).
6. The right hand, after completing its circle, prepares itself during the left silk reeling and the turn for the Ward Off position, which is palm facing upward and southward. After completing its circle, the left arm turns in the Ward Off position, with the exception that the palm faces downward.

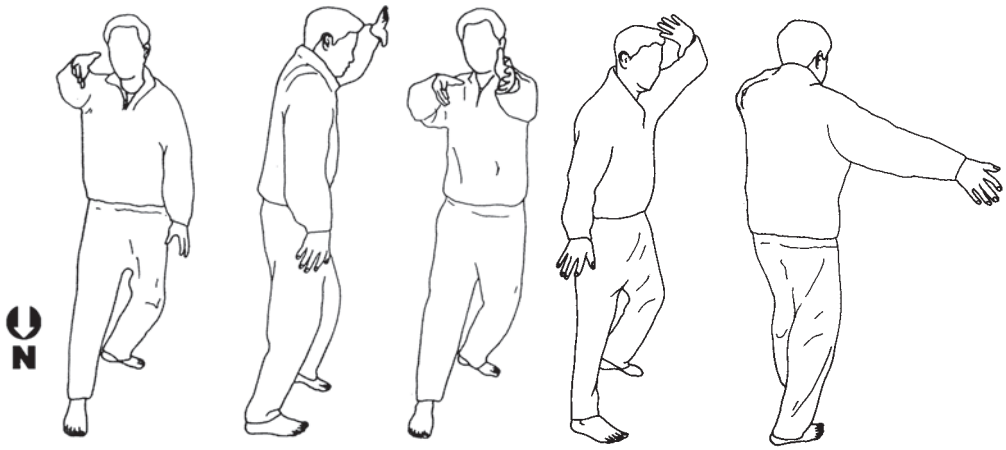

Fig. 5.9. Silk reeling

First Corner (South), Left-Hand Form

1. You now face south. The arms now have formed the Ward Off position and are holding a chi ball (see fig 5.10 on page 122). Your weight is largely on your right foot, with the left foot taking only 20 percent of it. Only the forefoot of your left foot is touching the ground, in a Cat Stance–like posture.

First Bird's Tail (South)

2. Ward Off Strike: Now sink back, letting your weight fall into the right leg.
3. Take your left foot off the ground while keeping the lumbar full, and step forward. This means hard work, using your quadriceps to keep the lumbar vertebrae full and held back. This ability can come only from Iron Shirt training. Use your tan tien, and feel it twist and hold power in the process of stepping forward with the left leg.
4. Now release the discharge power with your left hand while allowing the right (back) leg to drag and stay connected to the ground. Remember the Fusion meditations, where the eight forces are fused in the lower tan tien. If reversed, a desired force can be released. While the tan tien has the ability to release any of the eight forces, Fa Jin is primarily associated with Peng. It is like having a thousand troops ready to be released at the call of the general. This single move, described in steps 2–4, is the core feature of the form and repeated in principle throughout.

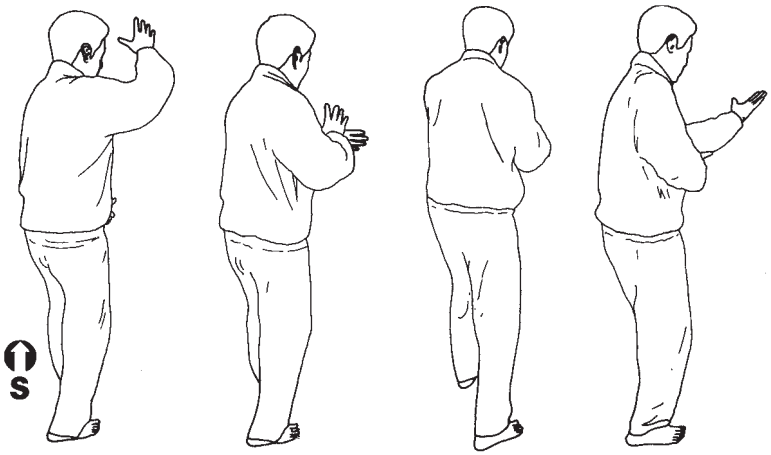

Fig. 5.10. First Bird's Tail (south)

5. Rollback: Return feet to the original position of the Ward Off Strike (step 2 above). This means stepping back with the right leg, as per the fundamental Tai Chi Chi Kung form. At the same time, rotate the left arm so the palm faces the face, and let the right arm float across, preparing for the Press Strike. Keep the right foot (the anchor leg) straight.
6. Press Strike: Connect the outer side (little finger side) of the right palm with the inner aspect of the left wrist. Repeat the same tan tien and footwork as in the Ward Off Strike, and release the discharge power. Remember to work the tan tien and keep the right foot (anchor leg) straight.
7. Push Strike: As per the fundamental Tai Chi Chi Kung form, sink back and separate the arms (fig. 5.11). As always, allow the arms to automatically follow the tan tien; they should not be moved directly by the mind. Then step forward with the left leg, prepare the tan tien, and discharge with a Double Palm Strike, dragging a stiff right foot straight. These three movements—the Ward Off, Rollback, and Push—are part of Grasping the Peacock's Tail, more conveniently shortened to "Bird's Tail."

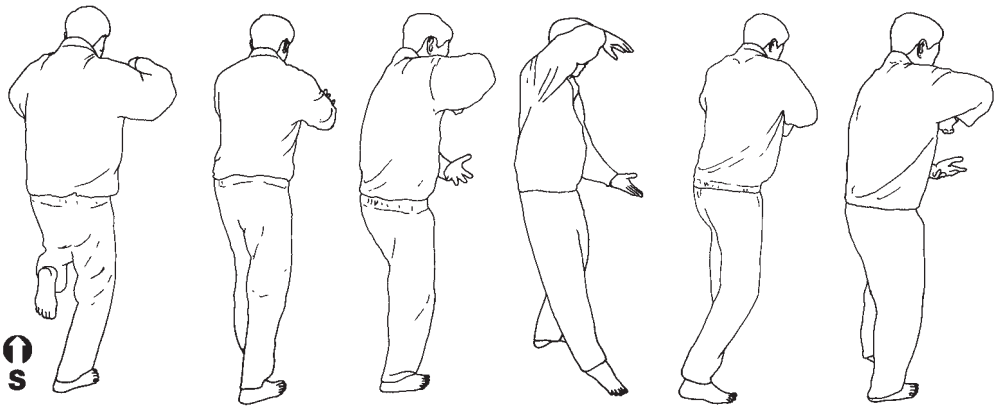

Fig. 5.11. Push to south, Left-Hand Form

Single Whip, Lady Shuttle, and Change of Direction

8. Single Whip: Sink back and put your weight over the right leg. Form a beak with the right hand and face the beak downward to the open palm of the left hand. Change the left foot from toes touching the ground to heel touching the ground. Turn the left foot so that the toes are now facing the west. The Single Whip is not completed as it is in the classic Yang form. Instead, only the initial preparatory half of the form is completed—through the Fair Lady Works the Shuttle.
9. Fair Lady Works the Shuttle (to north): Make a circle with the palms (fig. 5.12). The right palm circles to the lower position while the left palm moves to the top position. Hold the chi ball for a moment, and then step forward with the right leg to the north. Activate the tan tien and discharge the power via a Left Palm Strike and a Right Arm Upper Block.
10. Change directions: Step back with the left foot pointing west, and follow it with the right foot stepping back also pointing west. Now allow both hands to move to the Ward Off position. In order to activate the lower tan tien, however, the right hand carries out two small circles.

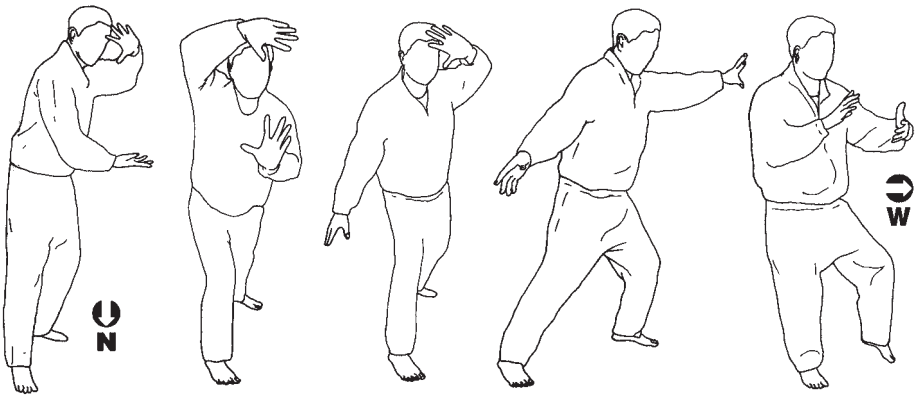

Fig. 5.12. Lady Shuttle to the north and change to west Ward Off

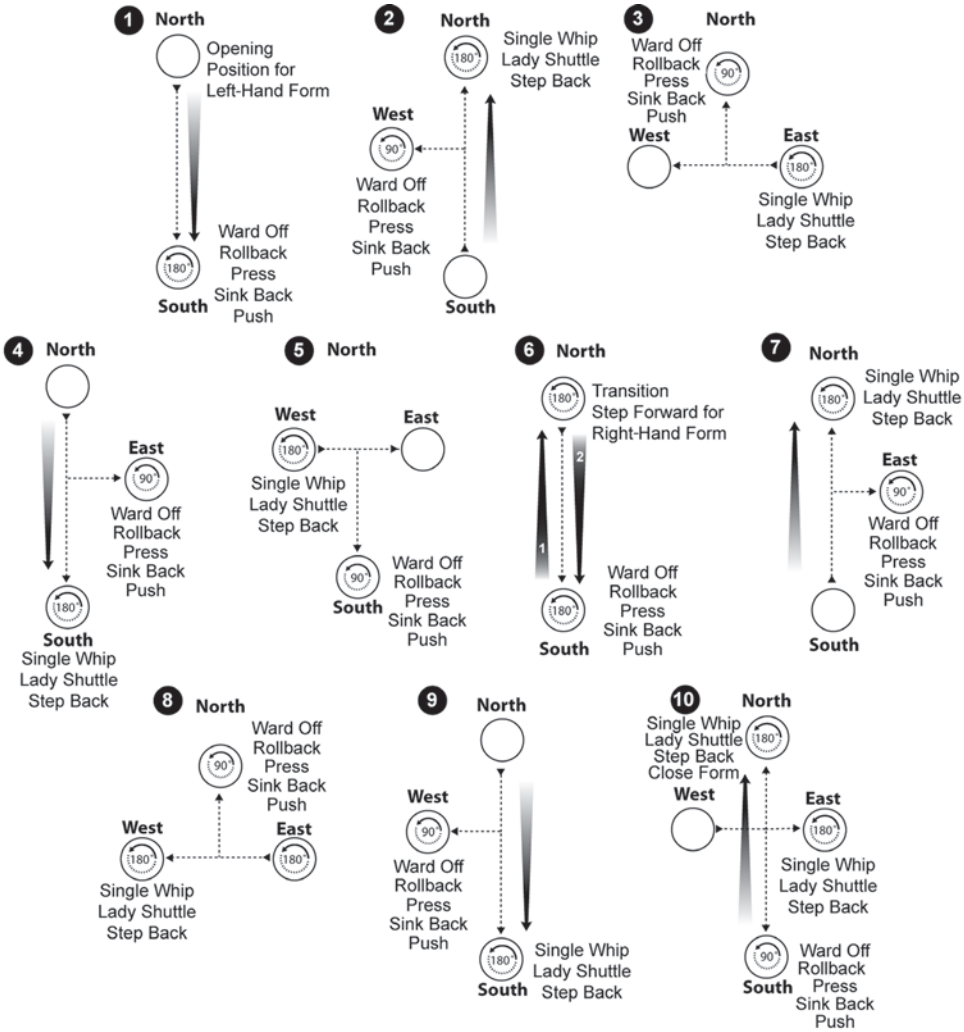

Fig. 5.13. North, South, West, East directions in the Discharge Form

Second Corner (West)

1. The arms now have formed the Ward Off position facing west and are holding a chi ball. Your weight is largely on your right foot, and only the forefoot of your left foot is touching the ground.

Second Bird's Tail (West)

2. Ward Off Strike: Now sink back, letting your weight fall into the right leg. Take your left foot off the ground while keeping the lumbar full, and step forward. Use your tan tien, and feel it twist and hold power in the process of stepping forward with the left leg (fig. 5.14).
3. Now release the discharge power while allowing the right (back) leg to drag and stay connected to the ground.
4. Rollback: Step back with the right leg, as per the fundamental Tai Chi Chi Kung form. At the same time, rotate the left arm so the palm faces the face, and let the right arm float across, preparing for the Press Strike. Keep the right foot (the anchor leg) straight.
5. Press Strike: Connect the outer side (little finger side) of the right palm with the inner aspect of the left wrist. Repeat the same tan tien and footwork as in the Ward Off Strike, and release the discharge power.
6. Push Strike: Sink back and separate the arms. As always, allow the arms to automatically follow the tan tien; they should not be moved directly by the mind. Then step forward with the left leg, prepare the tan tien, and discharge with a Double Palm Strike, dragging a stiff right foot straight.

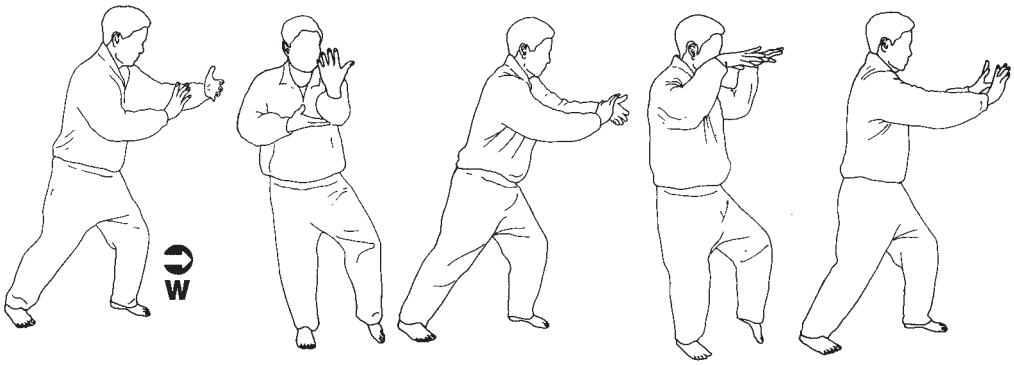

Fig. 5.14. Second Bird's Tail (to west)

Single Whip, Lady Shuttle, and Change of Direction

7. Single Whip: Sink back and put your weight over the right leg. Form a beak with the right hand and face the beak downward to the open palm of the left hand (fig. 5.15). Change the left foot from toes touching the ground to heel touching the ground. Turn the left foot so that the toes are now facing the north.
8. Fair Lady Works the Shuttle (to east): Make a circle with the palms. The right palm circles to the lower position while the left palm moves to the top position. Hold the chi ball for a moment, then step forward with the right leg to the east. Activate the tan tien and discharge the power via a Left Palm Strike and a Right Arm Upper Block.
9. Change directions: Step back with the left foot pointing north, and follow it with the right foot stepping back also pointing north. Now allow both hands to move to the Ward Off position. In order to activate the lower tan tien, the right hand carries out two small circles.

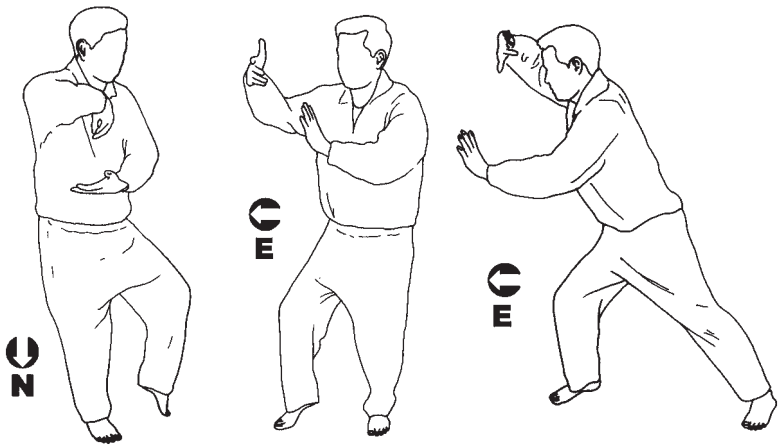

Fig. 5.15. Single Whip, then Lady Shuttle to the east

Third Corner (North)

1. You now face north. The arms now have formed the Ward Off position and are holding a chi ball. Your weight is largely on your right foot, and only the forefoot of your left foot is touching the ground (fig. 5.16).

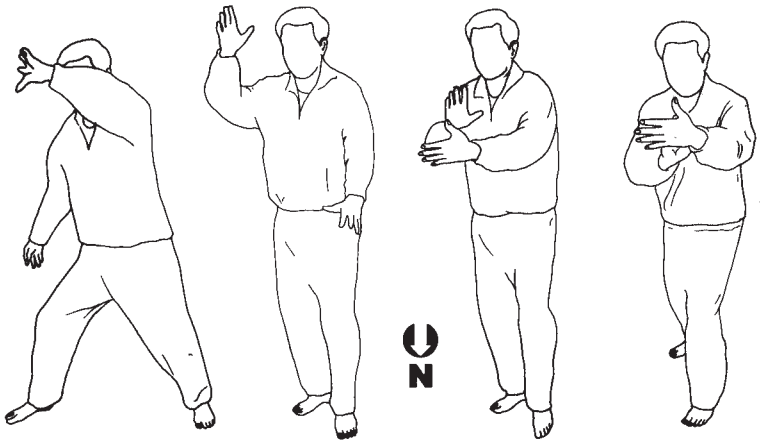

Fig. 5.16. Circle hands and Ward Off to north, Left-Hand Form

Third Bird's Tail (North)

2. Ward Off Strike: Sink back, letting your weight fall into the right leg. Take your left foot off the ground while keeping the lumbar full, and step forward. Use your tan tien, and feel it twist and hold power in the process of stepping forward with the left leg.
3. Now release the discharge power while allowing the right (back) leg to drag and stay connected to the ground.
4. Rollback: Step back with the right leg. At the same time, rotate the left arm so the palm faces the face, and let the right arm float across, preparing for the Press Strike. Keep the right foot (the anchor leg) straight (fig. 5.17).
5. Press Strike: Connect the outer side (little finger side) of the right palm with the inner aspect of the left wrist. Repeat the same tan

tien and footwork as in the Ward Off Strike, and release the discharge power.

6. Push Strike: Sink back and separate the arms. As always, allow the arms to automatically follow the tan tien; they should not be moved directly by the mind. Then step forward with the left leg, prepare the tan tien, and discharge with a Double Palm Strike, dragging a stiff right foot straight.

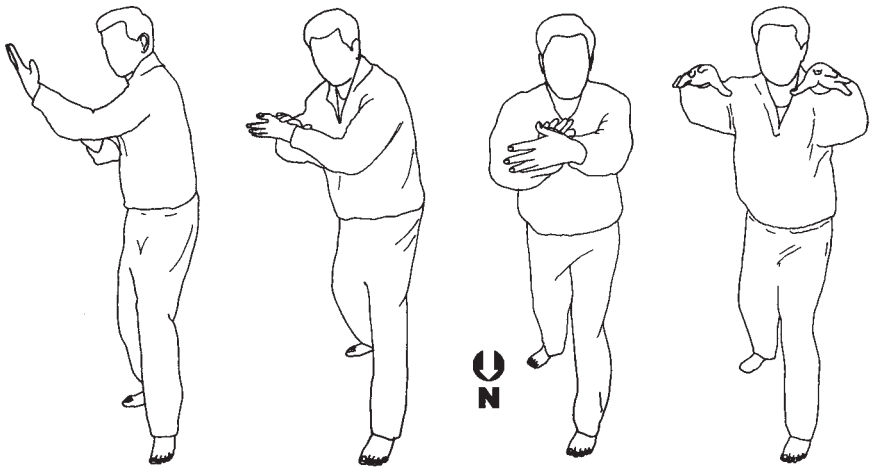

Fig. 5.17. Rollback, Press, and Push to north

Single Whip, Lady Shuttle, and Change of Direction

7. Single Whip: Sink back and put your weight over the right leg. Form a beak with the right hand and face the beak downward to the open palm of the left hand (see fig. 5.18 on page 130). Change the left foot from toes touching the ground to heel touching the ground. Turn the left foot so that the toes are now facing the east.
8. Fair Lady Works the Shuttle (south): Make a circle with the palms. The right palm circles to the lower position while the left palm moves to the top position. Hold the chi ball for a moment, then step forward with the right leg to the south (see fig. 5.19 on page 130). Activate the tan tien and discharge the power via a Left Palm Strike and a Right Arm Upper Block.

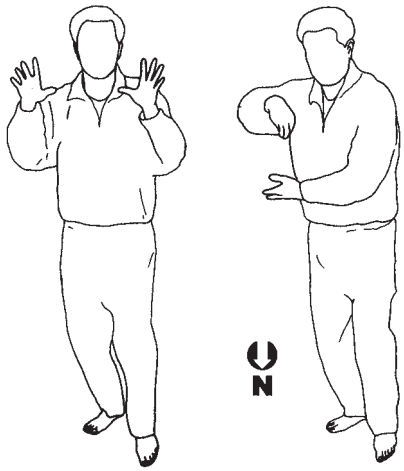

Fig. 5.18. Sink back and forming the beak in the Single Whip

9. Change directions: Step back with the left foot pointing east, and follow it with the right foot stepping back also pointing east. Now allow both hands to move to the Ward Off position. In order to activate the lower tan tien, the right hand carries out two small circles.

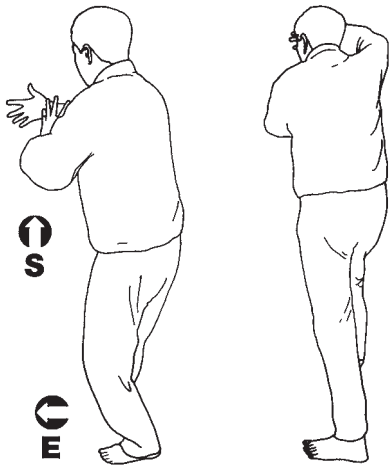

Fig. 5.19. Lady Shuttle Strike to south

Fourth Corner (East)

1. You are now facing east. The arms have formed the Ward Off position and are holding a chi ball. Your weight is largely on your right foot, and only the forefoot of your left foot is touching the ground.

Fourth Bird's Tail (East)

2. Ward Off Strike: Now sink back, letting your weight fall into the right leg. Take your left foot off the ground while keeping the lumbar full, and step forward. Use your tan tien, and feel it twist and hold power in the process of stepping forward with the left leg.
3. Now release the discharge power while allowing the right (back) leg to drag and stay connected to the ground.
4. Rollback: Step back with the right leg. At the same time, rotate the left arm so the palm faces the face, and let the right arm float across, preparing for the Press Strike. Keep the right foot (the anchor leg) straight.
5. Press Strike: Connect the outer side (little finger side) of the right palm with the inner aspect of the left wrist. Repeat the same tan tien and footwork as in the Ward Off Strike, and release the discharge power.
6. Push Strike: Sink back and separate the arms. As always, allow the arms to automatically follow the tan tien; they should not be moved directly by the mind. Then step forward with the left leg, prepare the tan tien, and discharge with a Double Palm Strike, dragging a stiff right foot straight.

Single Whip, Lady Shuttle, and Change of Direction

7. Single Whip: Sink back and put your weight over the right leg. Form a beak with the right hand and face the beak downward to the open palm of the left hand. Change the left foot from toes touching the ground to heel touching the ground. Turn the left foot so that the toes are now facing the south.

8. Fair Lady Works the Shuttle (to west): Make a circle with the palms. The right palm circles to the lower position while the left palm moves to the top position. Hold the chi ball for a moment, then step forward with the right leg to the west. Activate the tan tien and discharge the power via a Left Palm Strike and a Right Arm Upper Block.
9. Change directions: Step back with the left foot pointing south, and follow it with the right foot stepping back also pointing south. Now allow both hands to move to the Ward Off position. In order to activate the lower tan tien, however, the right hand carries out two small circles.

Fifth Corner (South)

1. You are now facing south again. The arms have formed the Ward Off position and are holding a chi ball. Your weight is largely on your right foot, and only the forefoot of your left foot is touching the ground.

Fifth Bird's Tail (South)

2. Ward Off Strike: Now sink back, letting your weight fall into the right leg. Take your left foot off the ground while keeping the lumbar full, and step forward. Use your tan tien, and feel it twist and hold power in the process of stepping forward with the left leg.
3. Now release the discharge power with your left hand while allowing the right (back) leg to drag and stay connected to the ground.
4. Rollback: Step back with the right leg. At the same time, rotate the left arm so the palm faces the face, and let the right arm float across, preparing for the Press Strike. Keep the right foot (the anchor leg) straight.
5. Press Strike: Connect the outer side (little finger side) of the right palm with the inner aspect of the left wrist. Repeat the same

tan tien and footwork as in the Ward Off Strike, and release the discharge power.

6. Push Strike: Sink back and separate the arms. As always, allow the arms to automatically follow the tan tien; they should not be moved directly by the mind. Then step forward with the left leg, prepare the tan tien, and discharge with a Double Palm Strike, dragging a stiff right foot straight.

Single Whip, Lady Shuttle, and Transition to Right-Hand Form

7. Single Whip: Sink back and put your weight over the right leg. Form a beak with the right hand and face the beak downward to the open palm of the left hand. Change the left foot from toes touching the ground to heel touching the ground. Turn the left foot so that the toes are now facing the west.
8. Fair Lady Works the Shuttle (to north): Make a circle with the palms. The right palm circles to the lower position while the left palm moves to the top position. Hold the chi ball for a moment, then step forward with the right leg to the north. Activate the tan tien and discharge the power via a Left Palm Strike and a Right Arm Upper Block (fig. 5.20).

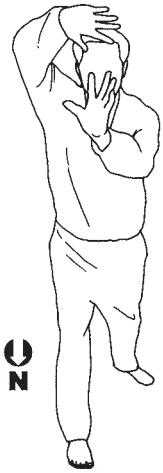

Fig. 5.20. Lady Shuttle Strike to the north

9. Step forward (west) with the left foot. Perform silk reeling and then sink back (fig. 5.21).
10. Turn to face south, sink your weight into the left foot, and hold a chi ball with your left hand above and right hand below to prepare the first Ward Off.

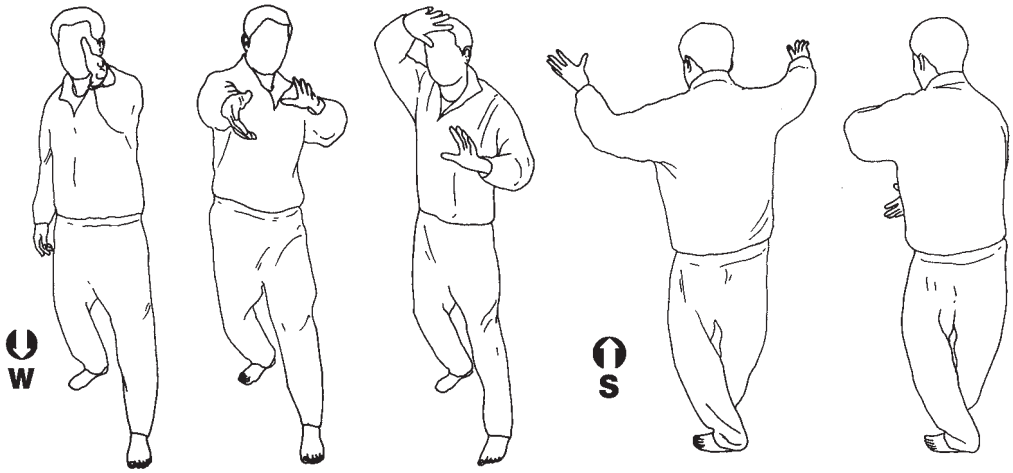

Fig. 5.21. Step forward to the west, changing directions to transition to the Right-Hand Form, facing south.

Right-Hand Form

Now, the right hand leads each Bird's Tail, and it is the right hand that strikes the chest of your imaginary opponent in the Fair Lady. In the Right-Hand Form, the body moves in a counterclockwise direction.

First Corner (South), Right-Hand Form

1. You are now facing south. Your arms have formed the Ward Off position and are holding a chi ball. Your weight is largely on your left foot, and only the forefoot of your right foot is touching the ground.

First Bird's Tail (South)

2. Ward Off Strike: Now sink back, letting your weight fall into the left leg. Take your right foot off the ground while keeping the lumbar full, and step forward. Use your tan tien, and feel it twist and hold power in the process of stepping forward with the right leg (fig 5.22).
3. Now release the discharge power with your right hand while allowing the left (back) leg to drag and stay connected to the ground.
4. Rollback: Step back with the left leg. At the same time, rotate the right arm so the palm faces the face, and let the left arm float across, preparing for the Press Strike. Keep the left foot (the anchor leg) straight.
5. Press Strike: Connect the outer side (little finger side) of the left palm with the inner aspect of the right wrist. Repeat the same tan tien and footwork as in the Ward Off Strike, and release the discharge power.
6. Push Strike: Sink back and separate the arms. As always, allow the arms to automatically follow the tan tien; they should not be moved directly by the mind. Then step forward with the right leg, prepare the tan tien, and discharge with a Double Palm Strike to the west, dragging a stiff left foot straight.

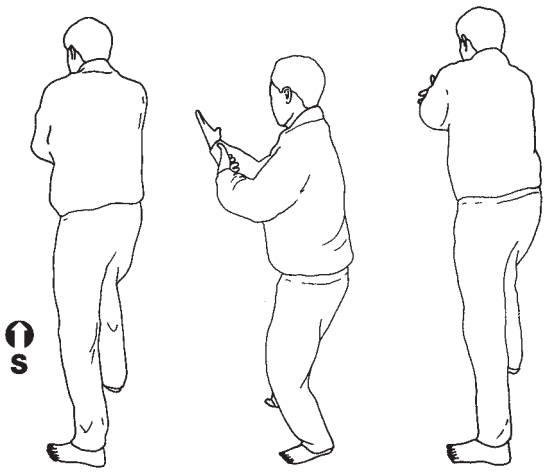

Fig. 5.22. Ward Off, Rollback, and Press to south

Single Whip, Lady Shuttle, and Change of Direction

7. Single Whip: Sink back, and put your weight onto your left leg. Turn the hips to the right, facing north (fig. 5.23). Form a beak with the left hand and face the beak downward to the open palm of the right hand. Change the right foot from toes touching the ground to heel touching the ground. Turn the right foot so that the toes are now facing the east.

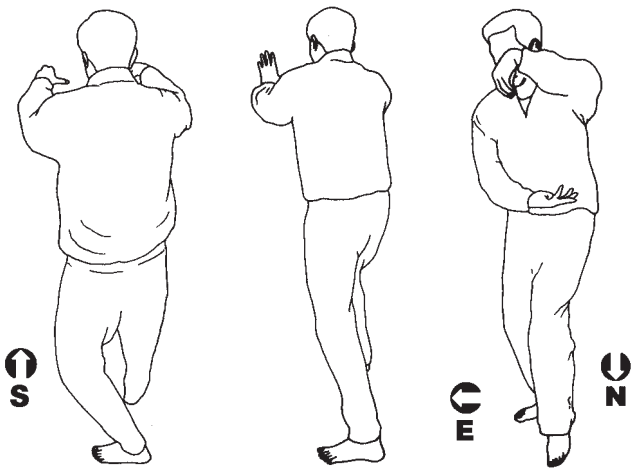

Fig. 5.23. Forming the Single Whip

8. Fair Lady Works the Shuttle (to north): Make a circle with the palms. The left palm circles to the lower position while the right palm moves to the top position. Hold the chi ball for a moment, then step forward with the left leg to the north. Activate the tan tien and discharge the power via a Right Palm Strike and a Left Arm Upper Block (fig. 5.24).
9. Change directions by stepping back with the right foot pointing east and follow it with left foot stepping back also pointing east. Allow both hands to move to the Ward Off position. Hold a chi ball in the preparatory Ward Off position facing east.

Fig. 5.24. Lady Shuttle to the north and preparing second Bird's Tail

Second Corner (East)

1. You are now facing east. Your arms have formed the preparatory Ward Off position and are holding a chi ball. Your weight is largely on your left foot, and only the forefoot of your right foot is touching the ground (fig. 5.25).

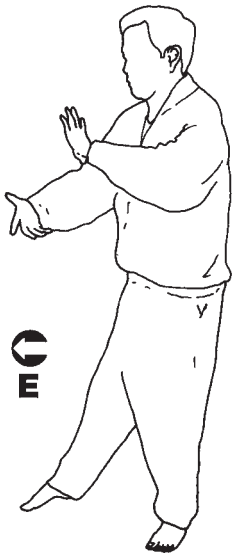

Fig. 5.25. Facing east for second Bird's Tail

Second Bird's Tail (East)

2. Ward Off Strike: Now sink back, letting your weight fall into the left leg. Take your right foot off the ground while keeping the lumbar full, and step forward. Use your tan tien, and feel it twist and hold power in the process of stepping forward with the right leg.
3. Now release the discharge power with your right hand while allowing the left (back) leg to drag and stay connected to the ground.
4. Rollback: Step back with the left leg. At the same time, rotate the right arm so the palm faces the face, and let the left arm float across, preparing for the Press Strike. Keep the left foot (the anchor leg) straight.
5. Press Strike: Connect the outer side (little finger side) of the left palm with the inner aspect of the right wrist. Repeat the same tan tien and footwork as in the Ward Off Strike, and release the discharge power (fig. 5.26).
6. Push Strike: Sink back and separate the arms. As always, allow the arms to automatically follow the tan tien; they should not be moved directly by the mind. Then step forward with the right leg, prepare the tan tien, and discharge with a Double Palm Strike to the east, dragging a stiff left foot straight.

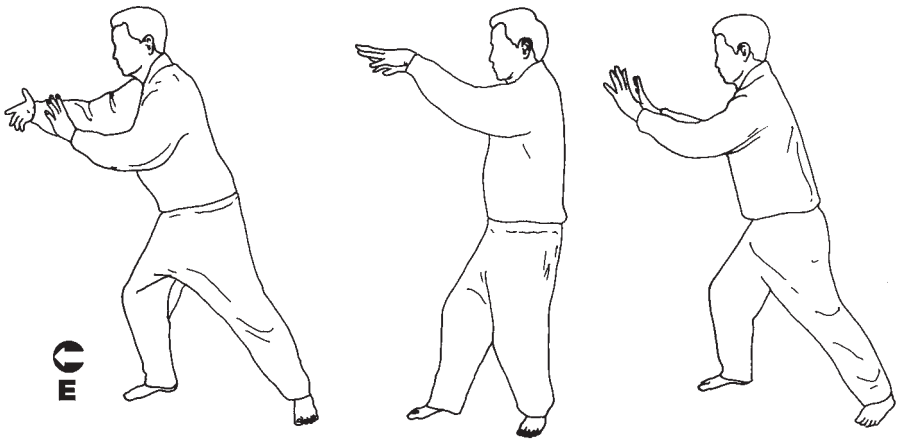

Fig. 5.26. Second Bird's Tail to east

Single Whip, Lady Shuttle, and Change of Direction

7. Single Whip: Sink back, and put your weight onto your left leg. Turn the hips to the right, facing north. Form a beak with the left hand and face the beak downward to the open palm of the right hand (fig. 5.27). Change the right foot from toes touching the ground to heel touching the ground. Turn the right foot so that the toes are now facing the north.
8. Fair Lady Works the Shuttle (to west): Make a circle with the palms. The left palm circles to the lower position while the right palm moves to the top position. Hold the chi ball for a moment, and then step forward with the left leg to the west. Activate the tan tien and discharge the power via a Right Palm Strike and a Left Arm Upper Block.
9. Change directions by stepping back with the right foot pointing north and follow it with left foot stepping back also pointing north. Allow both hands to move to the Ward Off position. Hold a chi ball in the preparatory Ward Off position facing north.

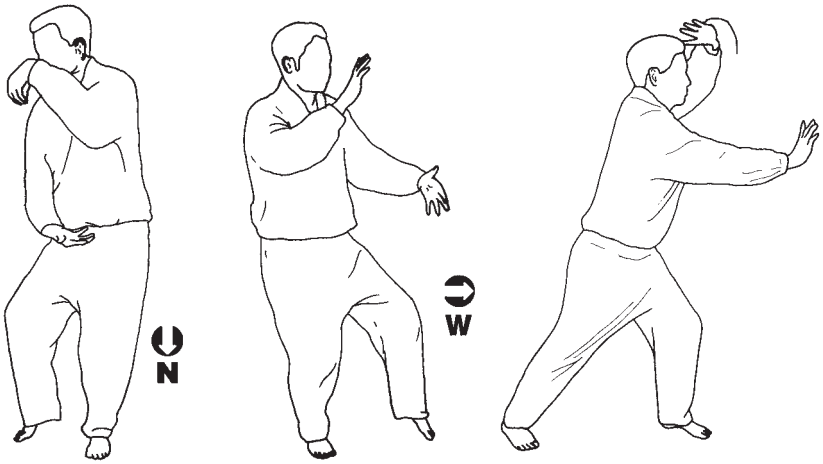

Fig. 5.27. Single Whip and Lady Shuttle to the west

Third Corner (North)

You are now facing north. Repeat the steps of the Right-Hand Form from the Ward Off through the Lady Shuttle in this direction. This means a Bird's Tail to the north (fig. 5.28) and a Lady Shuttle to the south.

1. Ward Off
2. Rollback
3. Press
4. Push
5. Single Whip
6. Lady Shuttle
7. Change directions by stepping back with the right foot pointing west and follow it with left foot stepping back also pointing west. Allow both hands to move to the Ward Off position. Hold a chi ball in the preparatory Ward Off position facing west.

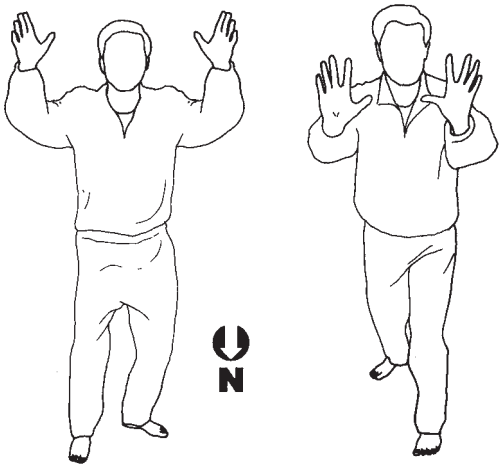

Fig. 5.28. Third Bird's Tail (to north)

Fourth Corner (West)

You are now facing west. Repeat the steps of the Right-Hand Form from the Ward Off through the Lady Shuttle in this direction. This means a Bird's Tail to the west and a Lady Shuttle to the east.

1. Ward Off
2. Rollback
3. Press
4. Push
5. Single Whip
6. Lady Shuttle
7. Change directions by stepping back with the right foot pointing south and follow it with left foot stepping back also pointing south. Allow both hands to move to the Ward Off position. Hold a chi ball in the preparatory Ward Off position facing south.

Fifth Corner (South) to Completion

You are now facing south. Repeat the steps of the Right-Hand Form from the Ward Off through the Single Whip in this direction. This means a Bird's Tail to the south and a Lady Shuttle to the north.

1. Ward Off
2. Rollback
3. Press
4. Push
5. Single Whip
6. Lady Shuttle: Sink back and push left hand forward with hip. Roll right hand up to protect head facing east.
7. Shift tailbone to right hip. Release Lady Shuttle to north (fig. 5.29).

Fig. 5.29. Final Lady Shuttle (to north)

Closing the Tai Chi Kung Discharge Form

1. Open both hands, moving them up and outward, then downward. At the same time, draw the left foot straight back, setting it down parallel to the right foot while shifting the tailbone to the left heel (fig. 5.30).
2. Lift up the right leg and place it parallel with left. Draw your feet together, keeping the toes even.
3. Cross your hands (right hand over left) 12 inches in front of your body, so that they form an X below your shoulders. Distribute your weight evenly between both feet, then simultaneously straighten your body and lower your hands to your sides, with palms facing backward.
4. End all movements at same time, then relax and center yourself. Feel the chi in your body.
5. Smile down. Collect energy at your navel.

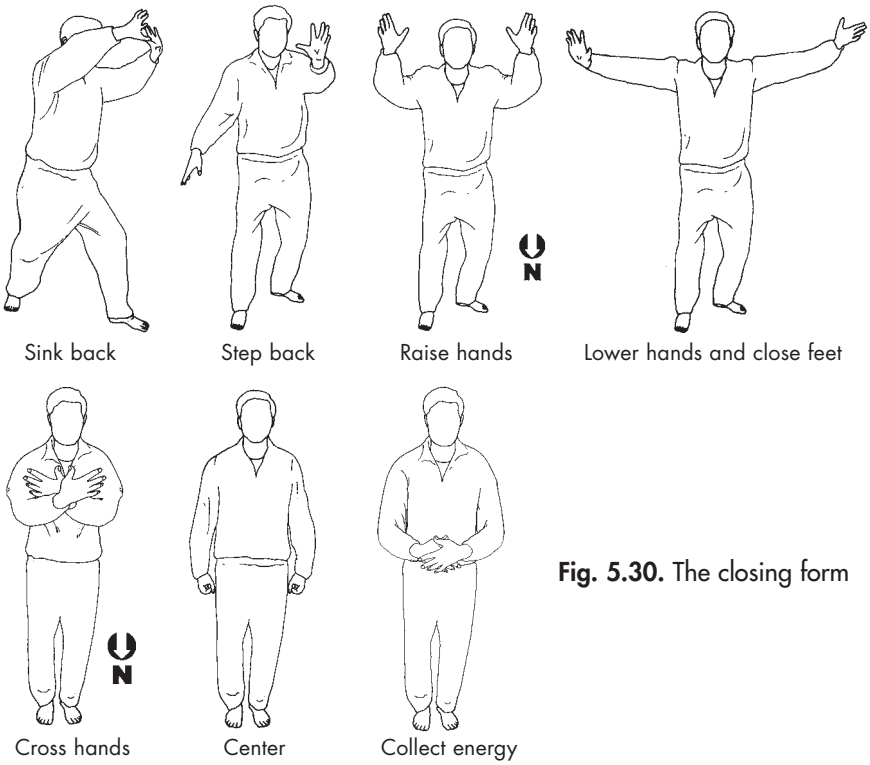

Fig. 5.30. The closing form

6

Summary of the Complete Discharge Form

The following images are an easy visual guide for your daily Fa Jin practice. The form will give you the full benefits of Tai Chi Chi Kung Discharge Form.

Opening the Form

1. Beginning Stance: Stand facing north, with your feet together and knees straight (fig. 6.1). Relax, then regulate and slow your breath with whole-body breathing. Feel your head suspended from a string connected to the heavenly force. Feel your feet connecting to the earth force. As in the preparation for any Tai Chi form, the practitioner needs to make a transition from the everyday mind to the Tai Chi mind. This involves a recall of meditation experience within the moment: the breath slows down to an experience of whole-body breathing; the mind—with the aid of the Inner Smile—sinks down via the middle tan tien to the lower tan tien; consciousness expands not only to the tan tiens but also beyond

the self to heaven and earth. A glimpse of the Wu Wei, or blissful nothingness, is remembered before the form is begun.

2. With the above as an initiation into the form, the practitioner sinks down, then opens the armpits and fingers a little.
3. Smile from the eyes down to the navel. Inhale while rounding the scapulae, sinking the chest, and opening the armpits. Then exhale while sinking down.
4. Shift your tailbone to the right heel and lift the left heel up.
5. Inhale while picking up your left foot, then exhale as you set the left foot down a shoulder width apart, at a 30-degree angle. Maintain basic Iron Shirt posture with the left foot open.
6. Shift your tailbone over the left heel. Draw your right hip forward, then step with the right foot and reach with the right hand facing north.
7. Draw your right hip and arm back while simultaneously moving the left hip and hand forward. Shift your tailbone to the left heel and sink back.
8. Turn left, and torque your left hip while bringing your left forearm up to protect your head. Let the movement of your hips turn your right foot 90 degrees, then shift your tailbone to the left heel.

Core Movements: Left-Hand Form

First Corner (South)

1. Turn hips to left (fig. 6.2). Shift tailbone to right heel. Step wide on left toes, facing south. Raise your right hand from the right hip, circling with the left hand twice, then forming a chi ball.
2. Ward Off Strike: Sink back–kick left foot back–discharge forward wide–drag stiff right leg (anchor leg), right foot straight–no upper movement–sink back.
3. Rollback: Turn hips to right, facing west–drop right hand to left elbow–eyes focus on left palm.
4. Press Strike: Outer right wrist connects to inner left wrist–kick

left foot back–discharge forward wide–drag right foot straight (anchor leg)–no upper movement.

5. Push Strike: Sink back–separate wrists–open palms–kick left foot back–discharge forward wide–drag stiff right foot straight (anchor leg)–no upper movement.
6. Single Whip: Sink back (fig. 6.3)–turn hips to right facing west–form right hand beak over left palm–weight on right.
7. Prepare Lady Shuttle: Sink back–step left heel to south–turn left foot 90 degrees west while dropping left hand to protect left knee. Shift tailbone to left heel–right foot step wide to right facing north–circle right hand with left hand twice to right, forming chi ball–weight on left foot.
8. Lady Shuttle Strike to north: Sink back–strike (fig. 6.4)–push left hand forward with hip–roll right hand up to protect head, facing north.
9. Change directions to west: Step back with left foot pointing west–open hip to west–draw right hand down (crossing left wrist) protecting right knee. Left hand protects head–shift tailbone to left heel–left hand down to left knee and right hand up to protect head. Shift tailbone to right heel–circle hands twice forming chi ball facing west.

Second Corner (West), Left-Hand Form

1. Form chi ball (fig. 6.5).
2. Ward Off: Sink back–kick left foot back–discharge forward wide–drag stiff right leg (anchor leg), right foot straight–no upper movement–sink back–strike west.
3. Rollback.
4. Press Strike: Same footwork as Ward Off Strike with connecting wrists.
5. Push Strike: Sink back–separate wrists–open palms–kick left foot back–discharge forward (west) wide–drag stiff right foot straight–no upper movement.
6. Single Whip: Sink back–turn hips to right facing north–form

right hand beak over left palm (fig. 6.6)–weight on right leg.

7. Lady Shuttle to the east: Step left heel to west–turn left foot 90 degrees north while dropping left hand to protect left knee–shift tailbone to left heel–right foot step wide to right (facing east)–circle right hand with left hand twice to right–form chi ball.
8. Sink back–strike–push left hand forward with hip–roll right hand up protecting head.
9. Change directions to north: Step back with left foot pointing north–open hip to north while drawing right hand down (crossing left wrist) to protecting right knee–left hand protecting head–shift tailbone to left heel–left hand down to left knee and right hand up protecting head.

Third Corner (North), Left-Hand Form

1. Shift tailbone to right heel–circle hands twice–form chi ball facing north (fig. 6.7).
2. Ward Off
3. Rollback
4. Press
5. Push
6. Single Whip (fig. 6.8)
7. Lady Shuttle to south
8. Change directions to east.

Fourth Corner (East), Left-Hand Form

(Fourth and fifth corners not shown.)

1. Ward Off
2. Rollback
3. Press
4. Push
5. Single Whip
6. Lady Shuttle to west
7. Change directions to south.

Fifth Corner (South), Left-Hand Form, and Transition to Right-Hand Form

1. Ward Off
2. Rollback
3. Press
4. Push
5. Single Whip
6. Lady Shuttle to north (fig. 6.9)
7. Transition: Left foot steps forward–shift tailbone to left heel–draw left hand forward and right hand back–shift tailbone to right heel–left hand to left hip and right hand forward–turn hips 90 degrees to right (face south)–right foot pointing east–right arm protects head–shift tailbone to left heel–weight on left foot.

Core Movements: Right-Hand Form

The movements now progress in a counter-clockwise direction, and strikes are performed with the right hand.

First Corner (South), Right-Hand Form

1. Right foot steps wide to right (facing south)–circle right hand around left hand twice to right–form chi ball (fig. 6.10).
2. Ward Off Strike: Sink back–kick right foot back–discharge forward wide–drag stiff left leg (anchor leg), left foot straight–no upper movement.
3. Rollback
4. Press
5. Push
6. Single Whip (fig. 6.11)
7. Lady Shuttle to north (fig. 6.12)
8. Change directions to east.

Second Corner (East), Right-Hand Form

1. Form chi ball (fig. 6.13).
2. Ward Off
3. Rollback
4. Press
5. Push
6. Single Whip (fig. 6.14)
7. Lady Shuttle to west (fig. 6.15)
8. Change directions to north.

Third Corner (North), Right-Hand Form

1. Form chi ball (fig. 6.16).
2. Ward Off
3. Rollback
4. Press
5. Push
6. Single Whip (fig. 6.17)
7. Lady Shuttle to south
8. Change directions to west.

Fourth Corner (West), Right-Hand Form

(The fourth and fifth corners are not pictured.)

1. Ward Off
2. Rollback
3. Press
4. Push
5. Single Whip
6. Lady Shuttle to east
7. Change directions to south.

Fifth Corner (South), Right-Hand Form, to Completion

1. Ward Off
2. Rollback
3. Press
4. Push
5. Single Whip
6. Lady Shuttle to north (fig. 6.18)

Core Movements: Closing Form

1. Completion: After releasing Lady Shuttle, open both hands (fig. 6.19). Move them up and outward then downward, drawing the left foot straight back, setting it down parallel to the right foot. Shift tailbone to left heel–lift up right leg placing, it parallel with left–draw feet together with toes even.
2. Raise hands 12 inches in front of body, then cross right wrist over left wrist and place them on your chest to form an *X* below the shoulders.
3. Distribute weight evenly between both feet. Simultaneously straighten body and lower hands to sides, with palms facing back. All movement ends at same time. Relax and center yourself, and feel the chi expand in your body.
4. Smile down, and collect energy at your navel.

Opening stance

Step out to left

Fig. 6.1. Opening the form

Opening Movements

Step forward
right foot and hand

Sink back

Turn left, draw back
right hip and arm

Shift tailbone
to left heel

Fig. 6.1. Opening the form, continued

Turn hips to left

Shift tailbone
to right heel

Circle Hands
form chi ball

Fig. 6.2. First Bird's Tail (to south)

Ward Off Strike

Rollback

Press Strike

Kick left foot back
for Push Strike

Push Strike

Fig. 6.2. First Bird's Tail (to south), continued

Sink back and form
beak for Single Whip

Sink back

Step out

Shift tailbone

Fig. 6.3. First Single Whip and preparing Lady Shuttle

Left-Hand Form

Lady Shuttle Strike

Roll right hand up to protect head

Changing directions: now left hand protects head

Change direction to west

Fig. 6.4. Lady Shuttle Strike (to north), and change of direction (to west)

Form chi ball

Ward Off Strike

Rollback

Press Strike

Fig. 6.5. Second Bird's Tail (to west)

Left-Hand Form

Sink back

Push Strike

Fig. 6.5. Second Bird's Tail (to west), continued

Form the beak for Single Whip

Lady Shuttle

Lady Shuttle Strike

Change direction to north

Fig. 6.6. Second Single Whip, Lady Shuttle (to east), and change of direction (to north)

Left-Hand Form

Form chi ball

Ward Off

Ward Off Strike

Rollback

Fig. 6.7. Third Bird's Tail (to north)

Fig. 6.7. Third Bird's Tail (to north), continued

Left-Hand Form

Form the beak

Lady Shuttle

Lady Shuttle Strike

Fig. 6.8. Third Single Whip and Lady Shuttle (to south)

Fifth Lady Shuttle Strike
(to north)

Sink back

Changing to
Right-Hand Form

Changing to
Right-Hand Form

Fig. 6.9. Last Lady Shuttle (to north) and transition to Right-Hand Form

Left-Hand Form transitioning to Right-Hand Form

This concludes the movements of the Left-Hand Form. The art on the following pages illustrates the Right-Hand Form. The movements of the Right-Hand Form progress in a counterclockwise direction and strikes are performed with the right hand.

Form chi ball

Ward Off

Ward Off Strike

Fig. 6.10. First Bird's Tail (to south)

Right-Hand Form

Fig. 6.10. First Bird's Tail (to south), continued

Form the beak

Single Whip

Circle hands

Fig. 6.11. First Single Whip and preparing Lady Shuttle (to north)

Right-Hand Form

Lady Shuttle Strike

Changing direction to east

Fig. 6.12. Lady Shuttle Strike (to north), and change of direction (to east)

Form chi ball

Ward Off Strike

Rollback

Fig. 6.13. Second Bird's Tail (to east)

Right-Hand Form

Press

Press Strike

Sink back

Push Strike

Fig. 6.13. Second Bird's Tail (to east), continued

Form beak

Circle hands

Lady Shuttle

Fig. 6.14. Second Single Whip and preparing Lady Shuttle (to west)

Lady Shuttle Strike

Changing direction to north

Fig. 6.15. Lady Shuttle Strike (to west), and change of direction (to north)

Form chi ball

Ward Off Strike

Sink back

Rollback

Fig. 6.16. Third Bird's Tail (to north)

Right-Hand Form

Press Strike

Sink back

Push

Push Strike

Fig. 6.16. Third Bird's Tail (to north), continued

Forming the beak for Single Whip

Lady Shuttle

Lady Shuttle Strike

Fig. 6.17. Third Single Whip and Lady Shuttle (to south)

Right-Hand Form

Fig. 6.18. Final Lady Shuttle Strike (to north) with a single-hand Push

Sink back

Cross hands

Draw hands down

Close feet

Collect energy

Fig. 6.19. Closing movements

Closing Form

7

Push Hands (Tui Shou)

Discharge power is never done in isolation. While it can be demonstrated in a form or on a punching bag, it ultimately requires interaction with another live being. Power needs to be borrowed from the opponent. For that reason, Push Hands is an ideal practice for the study of discharge power; it encompasses the principles of fighting but is practiced in a safe arena. Injuries are rare in Push Hands.

The reasons for studying Push Hands are the same as those for studying Fa Jin: it can be part of one's journey toward the Tao. Push Hands ultimately reveals to us any ways that we deviate from wholeness—any shortcomings in our ability to integrate mind with body, with movement, and with another human being. Our defects are brought to the surface through interaction with a colleague whose purpose is similar to our own. With patience and practice, these defects can then be slowly understood and healed. We progress toward a unity of vision and skill and get closer to realizing the Tao.

DEVELOPING A PUSH HANDS PRACTICE

The first step in developing a Push Hands practice is learning the routine. Single Push Hands is a good start for beginners, while Double Push Hands can be pursued next, according to the particular style of Tai Chi you have chosen. Being familiar with the routine is very important as uncertainty about form immediately creates tension in both the structure and movement. Excessive tension is one of the most common faults in Tui Shou.

Once you are familiar with the movements, then all the principles of Iron Shirt training can be integrated into this routine. In Iron Shirt training, the practitioner learns to rely more and more on energy and less and less on muscle tension to maintain structure. The adept turns on the central axis of the Tai Chi Pole (the Central Thrusting Channel) and can thus evade or attack on the left or right side. The Iron Shirt is developed enough to be executed on one leg, which means that even in the rear position, the kidneys stay back and the practitioner is strong.

Initially, the practitioner relies on the monkey mind, but the routine eventually becomes so familiar that the intellectual mind can forget it. Once this happens, the adept can really let go and use his integrated mind to interpret and understand his opponent. Now the body itself—via the tan tiens—interprets movements and acts reflexively. Eventually, of course, the great masters can interpret at even higher levels. They sense the intention of the opponent even earlier, and their whole body reacts as if directed by a spirit.

In Push Hands, the aim is "to stay connected and move coherently while external forces are applied to the body."[1] Ultimately, there can be no intellectual thought, just a merging with the opponent and the chi forces that surround him or her. The coherence relies on an integration of Iron Shirt structure, release of power as per the fundamental Tai Chi Chi Kung form, and effortless movement that is centered on the Tai Chi Pole/Central Thrusting Channel.

Initially, there is little connection to the opponent as the adept is

too stiff and preoccupied to listen. As the form becomes more familiar, however, the adept relaxes and begins to soften. Next, he uses just enough force that individual hairs will be bent but not squashed. He maintains a connection with his opponent when appropriate. The self is not separate in this merging but a new identity. There is neither forethought nor memory of past encounters, just a focus on the present contact. At some point, the opponent loses the foundation principle of Tui Shou and creates a disturbance that initiates an automatic response in the adept—the release of force via one of the eight gates. The tan tien is charged and releases.

The choice of which gate to use is based on a deep familiarity with each form, so that the correct gate is chosen in a given scenario. The choosing, however, is not an intellectual exercise but a decision that occurs in the integrated body-mind that lets go to the heavenly and earthly forces. Ultimately, this reaches a stage of "no method" with a release of maximal power. In some respects, the correct path requires learning to invest in loss. By losing and letting go of the monkey mind, and gradually assigning action to some greater though ill-defined force, progress is made. However, this progress is dependent on practice and discipline. Letting go would be useless to a novice who hasn't learned the eight forces or the routine of Push Hands itself.

Mastering Push Hands is an important accomplishment. However it is not an end in itself. Losing is equal to winning as it helps the adept in his journey toward the Tao. The adept should engage with others with a sense of humility, recognizing the opportunity for self-reflection.

ROUTINES

Single Push Hands

In the beginning position, the student starts facing forward with one leg in front of the other (see fig. 7.1 on pages 180–81). All the principles of Iron Shirt apply.

Fig. 7.1. Single Push Hands posture

Fig. 7.1. Single Push Hands posture, continued

1. Stand with the arms a little lower than in Embracing the Tree posture. Make sure the kidneys are back.
2. Rotate the hand so that the ulnar side of the palm contacts the wrist of the opponent.
3. Move forward maintaining structure and connection to the earth. Remember all the basics of Iron Shirt training, and keep the nine points of the feet in contact with the ground.
4. Move the tan tien forward so that there is a slight pressure difference on the front of the tan tien. Leave the upper body relaxed but not floppy. The primary force here is Push (*An*). The opponent initially receives the force with Peng. In other words, the force from the opponent is used to activate the lower tan tien.
5. When you cannot retreat any further without falling backward, use the oncoming force to rotate around the Central Thrusting Channel. The kidneys must be back in line with the rest of the back. Beginners, because they have not developed the tan tien, tend to sink back with the bottom and keep their normal lumbar curve (fig. 7.2).

Fig. 7.2. Moving backward losing the lumbar curve

6. Alternatively, the beginning practitioner will lean back with the shoulders instead of relying on the tan tien to maintain posture (fig. 7.3).

Fig. 7.3. Leaning back and crunching the lower vertebrae

The gate used here is the Rollback (*Lu*). Upon completion of the rotation around the Central Thrusting Channel, the force makes a circle and then returns to the opponent as Peng again.

Applications of Single Push Hands

During Single Push Hands, there are a number of common situations that can be addressed quickly and effectively with appropriate movements.

Opponent Pushes Excessively

Lead opponent's force to the rear side. Turn palm slightly such that there is an ounce of stickiness. Continue the direction of the force and uproot the opponent (fig. 7.4).

Fig. 7.4. Single Push Hands uprooting because of excessive force

Opponent Pulls Back Excessively

Sometimes an opponent may react with fear to an imminent uprooting and pull back excessively after a failed Rollback by the practitioner. At this point, the adept follows the withdrawal and initiates a Push (fig. 7.5).

Opponent Fails to Maintain His Iron Shirt

When an opponent does not maintain his Iron Shirt protection or Peng force, the practitioner seizes this moment with a Push at the apex of the circle, driving his elbow into the opponent to destroy his structure and topple him (fig. 7.6).

Fig. 7.5. Opponent withdrawing and the adept following with a Push

Fig. 7.6. Breaking an opponent's structure via elbow

Double Push Hands (Simple)

Here the practitioner and the opponent make contact with the wrist and elbow of one arm (fig. 7.7). The same circles are made as in the Single Push Hands form. Thus in the first position, the practitioner starts with the kidneys back and pushes on his opponent's forearm.

As with the Single-Hand Push above, the second position occurs when the opponent cannot retreat any more and therefore rotates on his Tai Chi Pole (Central Thrusting Channel) (fig. 7.8).

In the third position, the practitioner now returns the force as a Two-Hand Push to the opponent (fig. 7.9).

Fig. 7.7. Double Push Hands showing hand and elbow contact with feet position

Fig. 7.8. Two-handed rotation

Fig. 7.9. Ready for Push posture

Double Push Hands (Complex)

Inserted into the simple Double Push Hands described above is a complex hand interchange (fig. 7.10).

Fig. 7.10. Double Push Hands with a complex hand interchange

Fig. 7.10 (continued).

Fig. 7.10 (continued). Double Push Hands with a complex hand interchange

To improve your practice of Push Hands, it is helpful to remember the following rules.

Some Basic Push Hands Rules

- Always receive a Push with the top arm, which lies parallel to the chest.
- When you cannot retreat any more, turn on your Central Thrusting Channel toward the side of the top arm's hand (not elbow).
- Use your rear hand to lift your opponent's elbow, so he can make that forearm horizontal and parallel to the chest.
- Allow the hands to move so that both palms connect with your opponent's forearm.
- When changing sides, use your hand to lead the Push to the

opposite side and to return your opponent's connecting arm back to his side.

DEEPER PRINCIPLES OF PUSH HANDS

Once the routine of Push Hands has become familiar to the body and mind, the deeper principles can be entertained. First, the fundamental principle of maintaining Iron Shirt structure throughout the routine is paramount. This prevents the major faults of bending forward (*fu*) or bending backward (*yang*). Second, the practitioner begins to adopt the principles of connecting, sticking, adhering, and following the opponent. Third, the practitioner studies the principles of listening and understanding the movements in conjunction with the eight gates. Over time, the four faults of butting, deficiency, losing contact, and resisting disappear. Even if the practitioner does break from the opponent, this does not destabilize him and reconnection is easy.

Maintaining the Iron Shirt and Central Thrusting Channel in Movement

The ability to move well in Push Hands is developed by years of meditation and Iron Shirt training, which teach the practitioner to rely on chi to maintain the structure. These practices also teach how to keep the waist loose, allowing the tan tien to solidify and giving the practitioner the ability to rotate around the Central Thrusting Channel.

If the adept is comfortable with an Iron Shirt posture in a one-leg stance, then in defense he can transfer his weight to the back leg. If the kidneys remain back and full, then the Central Thrusting Channel remains open. This prevents the major fault of bending backward and allows the body to receive any force at a point external to the Central Thrusting Channel. The force will spin off at a tangent and consequently turn an opponent's attack into a loss.

As Yang Pan-Hou explains, "If we can entice the opponent into

our circle, then the technique of four ounces repelling a thousand pounds will succeed."[2] In this passage, enticing is a key concept. To entice means to draw the opponent into the mechanism of the Tai Chi Pole (Central Thrusting Channel). This means that the average practitioner will need to extend his reach in order to maintain contact. As he extends and overreaches, he will engage the spinning pole of the adept and get deflected (fig. 7.11). If he pulls back because of this loss, the adept can follow with a release of Fa Jin, and the opponent will be repelled in the direction opposite from which he pushed.

When moving forward, the tan tien and rooting power maintain effortless connection to the earth. Power can be transmitted via the structure as discussed in chapter 3. This prevents the fault of bending forward (*fu*) (fig. 7.12).

Fig. 7.11. Tai Chi Pole and deflection

Fig. 7.12. Incorrect bending forward and correct forward posture

When attacking an opponent, the aim is to send a force vector that he will not deflect. This means that the practitioner must break the Iron Shirt structure of his opponent prior to discharging a force. The vector is aimed to the center of the opponent's Tai Chi Pole so that deflection is made less likely (fig. 7.13).

Fig. 7.13. Adept aiming vector of force to the opponent's center

Connecting, Sticking, Adhering, and Following

Wang Tsung-Yueh described the core Push Hands principles of connecting, sticking, adhering, and following as *zhan*, *lian*, *nian*, and *sui:*

> *Zhan* is the energy that finds and connects with the partner's energy
> *Lian* is the energy that links and joins with the partner's energy
> *Nian* adheres and merges with the partner's energy
> *Sui* pursues and follows a partner's energy.[3]

Upon first analysis, Yang and Wang appear to be saying the same thing. According to Yang, these principles are actually stages between disconnection and a state of merging.[4] In the sparring situation, there is no contact; therefore, the first aim is to connect (*zhan*). From there, the adept makes an external link with the partner's movement (*lian*). Going deeper, the adept merges with the partner's internal energetic framework (*nian*) until finally the merging becomes a unity and it appears that the adept follows (*sui*) each and every move of the opponent. In actuality, they become one.

Now, in adhering to the opponent's energy, the practitioner merges his mind into the opponent's structure. He senses where the opponent's structure has deviated from the Iron Shirt position. This could happen at any point in the Push Hands sequence. At the moment the practitioner senses a deviation—or force outside the prescribed pattern—he neutralizes that force and returns it to the opponent. Therefore the practitioner must follow the opponent like a soft shadow, staying only one millimeter or one gram of force away from the opponent's inner structure.

The ability to do this comes in part from repeated Iron Shirt practice and meditation. There is a move away from reliance on the monkey mind and the ego, and a deep trust in the move toward the mind that has fused with the lower tan tien and the opponent. This mind relies on chi and the will of nature rather than on the ego's intention. This ideal state of connecting, sticking, adhering, and following is captured by Wu Yu-Hsiang's pithy observation: "If others don't move, I don't move. If others move slightly, I move first."[5]

Listening and Interpreting

The monkey mind cannot hear the chi directly, but requires the body and the senses to do this. Listening (*ting*) is the way we analyze chi filtered through the five senses.

Cultivation of the senses comes from awakening the body through basic and advanced practices. The first achievement is to turn the

mind inward via the five senses, until the whole of the body becomes alive with chi. As Yang Chen-Fu reminds us, "wherever the mind goes the chi will follow."[6] This practice is a fundamental aspect of Fusion of the Five Senses and is perfected in Sealing of the Five Senses. In these practices, the senses remain aware of the body's every move, perceiving whether it is grounded or not, fast or slow, light or heavy, connected or disconnected, pushed or pulled.

The deeper art of Push Hands cannot be appreciated if the mind is largely centered in the head and removed from the body. Full understanding and the ability to listen require integration of the senses from the upper mind into the body's center—the lower tan tien. Again, we return to the importance of that ideal state in which our three minds have become one. The senses of the upper mind and the spirit of the heart mind unite with the lower mind into one force known as the Yi power. Yang Pan-Hou called this level of accomplishment, "conscious movement."[7]

Interpreting (*dong*) is the next stage of progress. It describes the ability to accurately perceive an opponent's structure and intention. What is there to interpret? Firstly, one needs to interpret the opponent's faults and anticipate which gate he intends to use. Possible faults include deviations from ideal Iron Shirt posture as well as the faults of pushing too hard, pushing too soft, resisting, and breaking contact.

If the adept can read an opponent's faults, this knowledge can lead to a winning move. Again this has to be at an instinctive bodily level that requires no thought. The practitioner must immediately interpret the opponent for breaks in structure and adherence. For the practitioner to do this, his senses must invade the opponent and detect subtle realms of stiffness. He must notice when the opponent is using muscular force or overstepping structure. For example, if the elbow is stiff and close to the body, then it should immediately be pushed. If the arm is held too high, it should be lifted. If the opponent pushes too hard, the practitioner should follow that force and amplify it.

By following the opponent's energy, a body well versed and rehearsed in all of the eight gates is able to respond appropriately and immediately, rather than having to form an intention. By centering the body in the lower tan tien, with the only fixed point being the Central Thrusting Channel, the practitioner enables his body to respond as a passive yet conscious moveable vehicle. When it senses a gate being used, it will automatically use the appropriate counter. For example, if an opponent does a Rollback against me, then I will instinctively feel that force in my body, and before I know it my elbow or shoulder has struck. Wang Tsung-Yueh summarizes the attainment of interpreting with the following verse.

> What is true interpreting energy? If your vision and hearing have no basis, it is difficult to achieve accuracy. When your vision takes in far and near, left and right; when your hearing takes in rising and falling, slow and fast; when your understanding of movement encompasses evading, returning, provoking, and completing; and when your sense of action embraces turning, exchanging, advancing, and retreating, then this is true interpreting.[8]

Here he emphasizes the ability of consciousness to move outside oneself and understand the thirteen postures.

COMMON FAULTS DURING PUSH HANDS

The faults—butting (*ding*), deficiency (*bian*), losing contact (*diu*), and resisting (*kang*)—are those outward manifestations that prevent connecting, sticking, adhering, following, listening, and interpreting. In order for these faults to disappear, the practitioner must cultivate a steady growth in his use of chi, the integrated mind, and knowledge of past masters.

Butting

According to Yang Jwing-Ming, butting is when you use excessive force (fig. 7.14).[9] This can occur within the set routine of the Push Hands sequence or in the event of an application. Within the routine, it is a gross error and is characteristic of a novice first learning the routine. Novices are reminded to use only enough force to squash a hair to the skin. In applications, excessive force can be used by your opponent to topple you.

Of course, the grand masters not only topple their students but send them flying to the opposite side of the room; this could be regarded as excessive force. However, the nature of this force is a little different. The grand master senses that his opponent will topple with just one ounce. Up to this point he has used no excessive force and has applied the principle of following (*sui*). By a release of Fa Jin at this precise moment, however, like an explosion out of the most pure softness, the opponent is flung away.

Fig. 7.14. Pushing too hard, also known as butting

Butting also impedes listening. If a practitioner is pushing hard, then how can he read his opponent's structure? Listening and interpreting require the chi, which cannot coexist with tension. They are mutually exclusive. Often, the novice butts because he has a move in his monkey mind, but this opens him to incidental attack. He is already preoccupied and this manifests as stiffness.

Deficiency

Deficiency (*bian*) is the opposite state, when insufficient force is applied to exert an application or complete a routine. Deficiency means that the novice is trying too hard to relax. Instead of dilating and filling with chi, he sags and becomes like tofu. Consequently, his Iron Shirt is deficient and easily broken. A simple minor push on the elbow will collapse the structure and result in a fall (fig. 7.15).

Fig. 7.15. Loss of balance because of collapsed elbow

If insufficient force is used in an application via one of the eight gates, then the consequence will be that the opponent is not finished off. Instead, he is given a chance to retaliate and exert a counter move. It is likely in this case that the novice has not allowed the jin to pass unimpeded from the earth through the legs and waist to be emitted via the spinal column through the arms (finding the curve in the straight). Alternatively, fear or the monkey mind may have over-censored the application, resulting in ineffectual discharge power.

Losing Contact

Losing contact (*diu*) occurs when the practitioner disengages from the opponent during the usual routine of Push Hands (fig. 7.16). (For obvious reasons, it does not include the moment after an opponent has been toppled or has received a successful application of Fa Jin.) Losing contact is an obvious violation of the fundamental principles of adherence and following.

Fig. 7.16. Losing contact

For the novice, the root of losing contact may be lack of familiarity with the routine. In the intermediate student, it can be due to a lack of trust in one's ability to respond with a correct counter to an application initiated by an opponent. Losing contact also occurs when there are "hollows or projections"[10] in the adept's Iron Shirt posture. The flow of energy is broken when the chi meets the blockage; it disengages as it does not have the ability to continue.

The entire Push Hands sequence must embrace the principles of Iron Shirt structure and the fundamental form of Tai Chi Chi Kung, not only in the routine but also in defense and attack. Remember also that the ability to interpret your opponent is more difficult when you disconnect. However, in a sparring situation—unlike in Push Hands—contact is intermittent. In this situation it is possible to interpret and follow your opponent without touch, but it requires greater skill.

Resisting

Resisting (*kang*) often has the same root cause as losing contact. It manifests itself as tension within the routine of Push Hands. This tension can appear in a range of positions and anatomical regions, including the wrist, elbow, shoulder, hips, knees, ankles, neck, chest, or waist. From inner observation during Iron Shirt training or sitting meditation, tension tends to collect in segments of the vertebral column and then manifests along acupuncture meridians or nerve root segments (see fig. 7.17 on page 202). Relieving tension in the vertebral column opens up the corresponding acupuncture meridians and corresponding myotomes.

To open the elbows and wrists, the adept needs to open C5 to T1. To open the chest so that the scapulae round and the sternum sinks, T3 to T9 would need to open. Opening the thoracic and cervical vertebrae implies that the sacral and lumbar vertebrae would need to be pushed back first. Essentially, the Taoist practitioner becomes a master of each vertebra. This requires investment of time and consciousness during basic, intermediate, and advanced meditations ranging from Microcosmic Orbit and Fusion practices to Kan and Li practice.

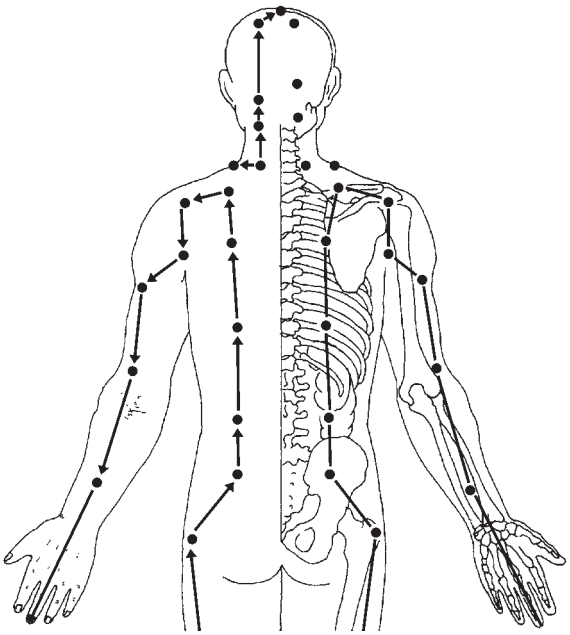

Fig. 7.17. Acupuncture channels may become blocked.

As shown in figure 7.18, each vertebra has a symbolic connection to phases of the moon and the various chakras. The sacrum governs the sexual chakra, the Ming Men governs the kidneys and the navel chakra, which in turn relates to the emotions of fear and gentleness. The vertebrae can also be related to the organs through the back Shu points. From this perspective, each of the main vertebrae governs one of the main organs. In order to open the vertebra, the organ itself must be balanced.*

Opening up the Governing Channel is a major step forward in reducing resistance, but ultimately the Central Thrusting Channel (*Chong Mai*) needs to open so that the Tai Chi Pole can function (see fig. 7.19 on page 204). The Tai Chi Pole reduces the need to resist as an opponent's force can be deflected without resisting.

*Balancing the organ energies belongs to the realm of basic practice and can be learned via the techniques of the Six Healing Sounds and the Inner Smile.

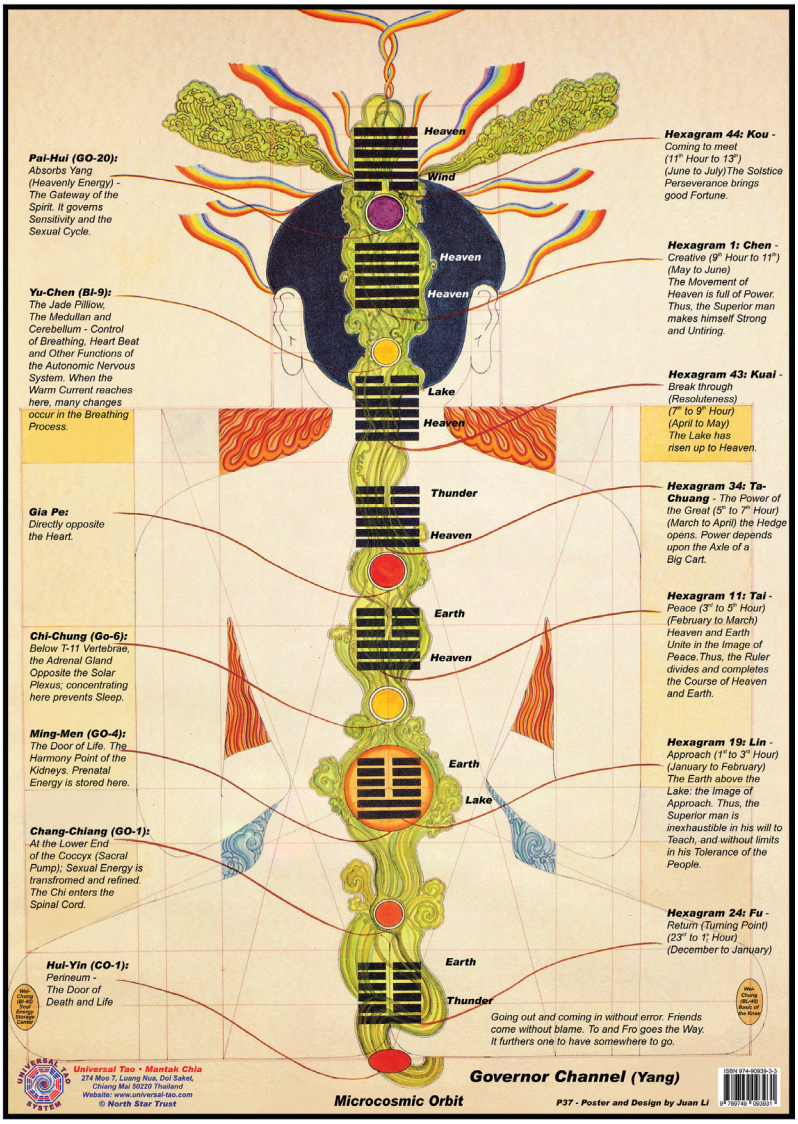

Fig. 7.18. Connections of the vertebrae

In addition to manifesting as blockages in the body, resisting can signify an insufficient ability to neutralize an opponent's force by sending it into the earth. This can be due to a lack of knowledge or a mistrust of one's own structure. Rather than trusting the chi, the novice uses Li power and muscular tension, which manifest as resistance.

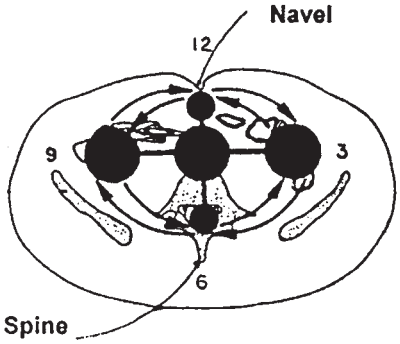

Fig. 7.19. Cross section of the waist with Central Thrusting Channel in the middle

STAGES OF AWARENESS

The practitioner goes through four stages of bodily awareness during Push Hands practice. The first is the novice stage, characterized by the absence of awareness of parts of the body or one's connection to the opponent. The second involves a partial opening of the channels, and following this stage is the recognition of yang and yin chi. Yang chi is unpleasant, vibratory, intense, and associated with the negative emotions. When tension begins to dissolve it usually passes through the yang state first. Yang chi is characteristic of the novice who is intense, pushy, and excited.

Yin is soft, pleasant, quiet, and associated with the positive emotions or virtues. Yin chi is associated with the master who is calm, soft, and peaceful. Therefore, when interacting with an opponent, allow tension to dissolve and the yin and yang to coexist and connect. This may be just another way of saying relax and be soft, but allow yang energetic states to connect with this softness.

The yin and yang chi can then divide into varied sensations that correspond with the five elements and the pakua. Each yin and yang has certain types of energies that are suited to varying circumstances, hence the concept of the eight gates or the eight forces. This sounds like the Taoist creation story and is repeated through all aspects of Chinese culture. However, Tan Meng-Hsien says that once this state is achieved, the opponent cannot resist your force and it enables explosive power.[11]

8

Martial Applications of the Discharge Form

The martial way relies on the fact that universal forces feed the adept's meditation, which in turn feeds Chi Kung practice, Tai Chi, Push Hands, and, finally, Tai Chi boxing. Tai Chi boxing is thus an outward manifestation of the connections first made to the universal forces in meditation. This is how progress in meditation ultimately leads to progress in martial practice.

The martial applications of the discharge form revolve around five of the eight gates of Push Hands. Those five gates can be used as follows:

1. Opening Form
2. Back Turn
3. Ward Off (Peng)
4. Rollback (Lu)
5. Press (Ji)
6. Push (An)
7. Fair Lady Works the Shuttle (Lieh)
8. Circle before Ward Off

Opening Form

This form, which is similar to the silk reeling forms, can be used for multiple blocks in the Tai Chi boxing combat scenario (fig. 8.1). It has already been discussed as a technical exercise in chapter 4. This move trains the rotation of the waist around the central axis, as well as the use of the Lu force to divert and suck in an opponent's energy. It is very useful for sucking in an opponent's punch, borrowing the opponent's energy, then charging the tan tien and returning with jin.

Fig. 8.1. Opening form application of Cross Hands technique

Back Turn

This twist is generated from the tan tien. It can be a response to a back attack. The coordination is similar to a ballet or dance turn, except that the spin prepares the Ward Off. The arms circle, and can be used to lock an arm, grab a kick, or simply prepare for a Ward Off (fig. 8.2).

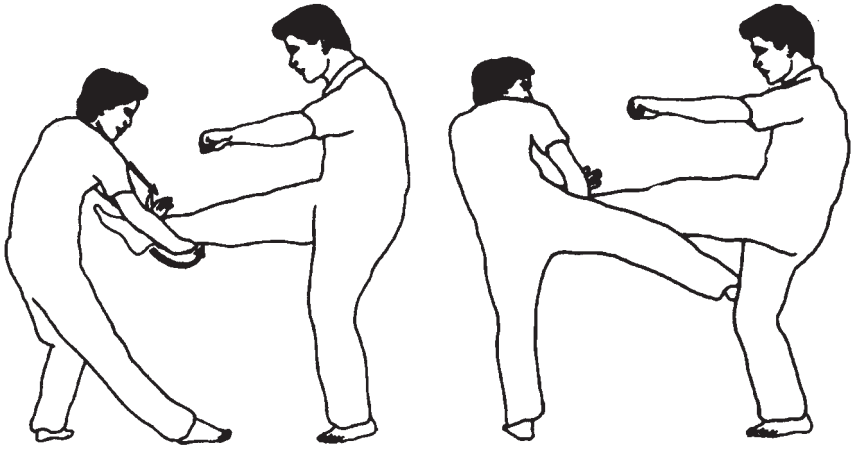

Fig. 8.2. Leg grab after back turn

Ward Off

The Ward Off has been extensively described in *The Inner Structure of Tai Chi*.* It relies primarily on the Peng force to redirect an opponent's force. It can be used as a neck breaker or converted to a Palm Strike (fig. 8.3).

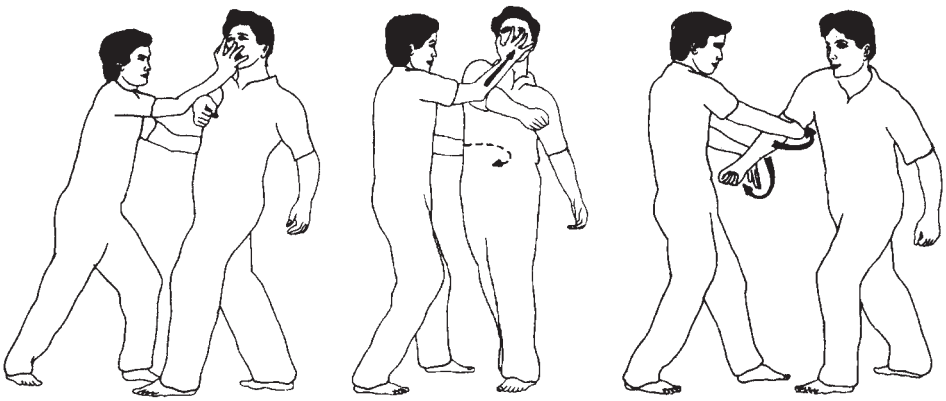

Fig. 8.3. Breaking the structure and alignment is a major goal in Tai Chi applications.

*Mantak Chia and Juan Li, *The Inner Structure of Tai Chi* (Rochester, Vt.: Destiny Books, 2005).

A leg cut can be added to the Ward Off to help break an opponent's balance (fig. 8.4). The leg push is used to break the opponent's structure at a lower level to facilitate less force above. This is obeying the fundamental principle of setting up "four ounces to deflect a thousand pounds."[1] Leg cutting and leg locks are a more dominant feature of Chen Push Hands.

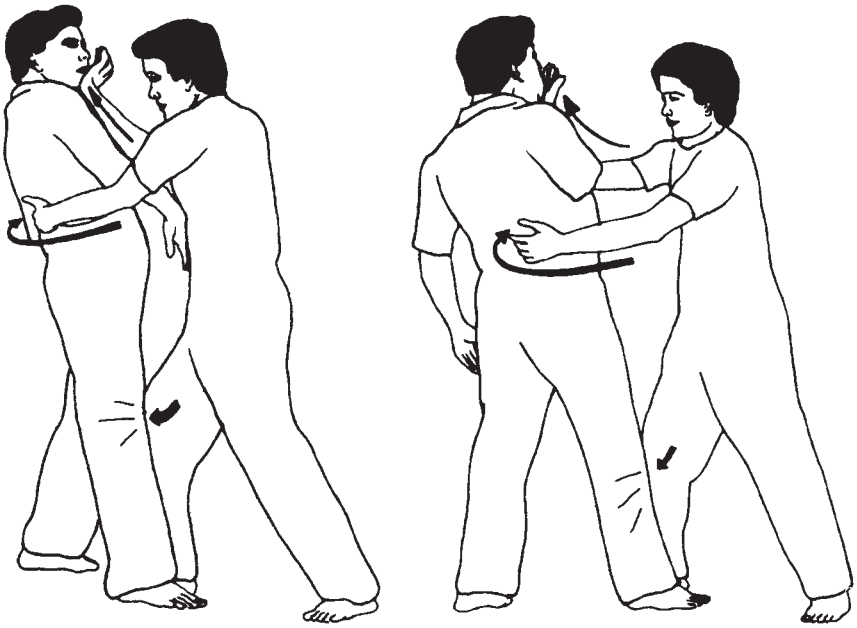

Fig. 8.4. Trap opponent's front leg with your front leg, causing his knee to lock and hyperextend.

For a further variation, the top hand can be taken higher and turned into a descending Palm Strike (fig. 8.5). The movement is more characteristic of the Wu Style offensive Palm Strike, and was apparently Yang Chen-Fu's favorite strike. This is because the palm has a descending vector, which, when combined with a dropping of the body, imparts maximum momentum transfer. If the leading hand engages the opponent, force can be borrowed and used to charge up the tan tien prior to the release of Fa Jin.

Fig. 8.5. Descending Palm Strike as a variation of the Ward Off

Rollback

The usual function of the Rollback is to absorb the opponent's strike so that Fa Jin can be released via one of the eight gates after that. However, the Rollback can be an attack in itself. In this context, it can uproot and topple an opponent on its own (see fig. 8.6 on page 210).

In the sparring situation, an inward parry serves the same function as Lu in Push Hands. Like the opening form, the Rollback can also be doubled up, combining two forceful sucking-in parries (see fig. 8.7 on page 210). Such a combination occurs in the Tai Chi boxing move called the Willow Tree, which is discussed in more detail on page 213.

Fig. 8.6. Uprooting an opponent with Lu

Fig. 8.7. Downward parry

Press

The Press is described as the Ji gate in chapter 3 and in the fundamental form of Tai Chi Chi Kung. The beauty of this move lies not so much in its final external form but in its ability to emerge from a disadvantaged position. For example, if your arm has been pulled across by an opponent, this position can easily be converted by turning your waist and pressing against the outstretched arm (fig. 8.8).

In an attack situation, the Press can be used against an opponent's upper arm.

Fig. 8.8. Lu performed by your opponent being countered with a Press

Combining Ward Off with Press

1. Gently deflect your opponent's right punch to your right (fig. 8.9a).
2. Once your opponent's force is neutralized, join your right palm to your left wrist (fig. 8.9b).
3. Guide your opponent's force downward. Absorb it into your rear leg, gathering energy for the Press (fig. 8.9c).
4. Release your stored energy from your rear leg and throw your opponent back using the Press. Your front leg can simultaneously attack and trap his leg (fig. 8.9d).

The Press is also useful after an upward deflection of an opponent's strike. Here, it is an ideal strike for attacking the face.

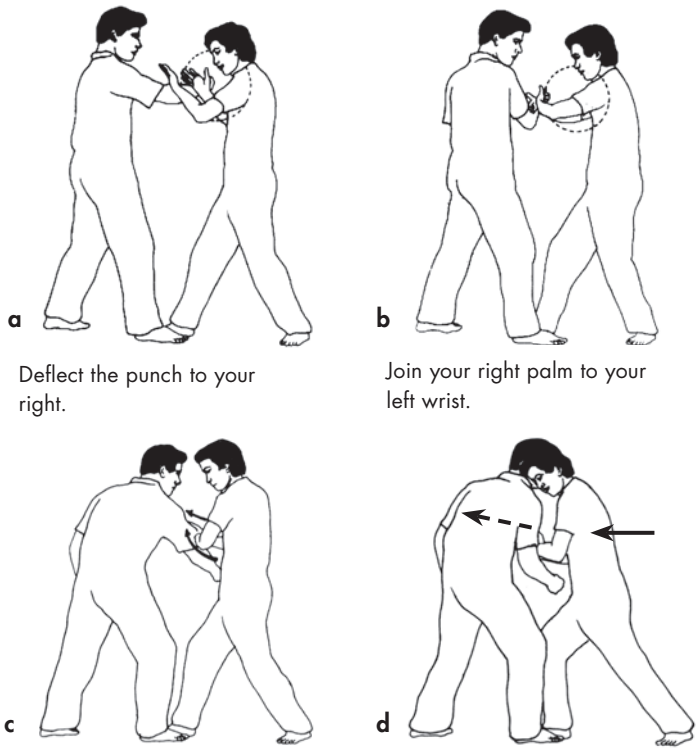

Fig. 8.9. Ward Off and Press

The Willow Tree

The Press/Ji can be modified for boxing situations, such that the two arms are delivered almost simultaneously as a back fist and a punch (fig. 8.10). This technique is called the Willow Tree because of its relaxed flowing movements akin to a gust of wind passing through the loosely hanging branches of a willow tree. Here the Rollback/Lu is delivered as two inward parries, and is followed by a back fist and strike. The movements are not separate, but are done in one continuous action. They are mere manifestations of the circle of energy that returns and is then emitted. Jin is included in that return, and it is a manifestation of true internal power.

Fig. 8.10. Press changed to a back fist and strike

Push

Many martial artists consider the Push to be too soft, because it merely moves the opponent away. Yet there are many self-defense

situations in which inflicting serious injury is not the goal. In these situations, the Push can be combined with skilled Fa Jin to throw an opponent several meters away. As discussed in the last chapter, the Push Hands has an inner trick: the practitioner can lock the opponent's elbow. As one side resists, the other hand can apply more force. The beauty of the Two-Hand Push is that with delicate listening, the move has more Jin behind it, and the practitioner can sense where the opponent's body is stiff and which way the force is moving.

OTHER PUSH HANDS MOVES ADAPTED FOR BOXING

Like the above applications, the Push Hands moves can be modified for boxing. The Double Push can be replaced by a Double Palm Strike, which can be executed upward, level, or downward (fig. 8.11).

Fig. 8.11. Double Palm Strike

Fair Lady Works the Shuttle

On the surface, this move consists of a fairly straightforward upward block and a Palm Strike to the chest or face. However, with more sophistication, the form can take on broader applications. For instance, the blocking arm can be used to defend against any strike originating from the opponent on the same side (meaning the right hand of the practitioner and the left hand of the opponent) (fig. 8.12). The striking palm can also block any strike originating on the opponent's same side (therefore the practitioner's left and the opponent's right side).* This is similar to the flexibility of the applications of the Single Whip in the fundamental form of Tai Chi Chi Kung. The

Fig. 8.12. Application of Fair Lady Works the Shuttle, blocking a same side strike from opponent

*In Tai Chi boxing, movements are generally described as basic forces rather than as contacts between specific parts of the practitioner's and opponent's bodies.

power of this form comes from the splitting of the gate or Lieh force, in which the two vectors explode in two different directions. Each force is generated by the rotation of the tan tien around the Central Thrusting Channel using discharge power.

A further variation on the Lieh gate is the Bird's Tail (fig. 8.13). In this form, the split also creates a simultaneous circular motion. The rear arm blocks a roundhouse punch while the forward arm prepares to block a lower punch using a Tiger Claw Palm. The power stolen from the opponent's roundhouse punch is returned in a Double Strike to the opponent's chest.

Circle before Ward Off

As in the Tan Tien Form described in *The Inner Structure of Tai Chi*, it is important in this form to activate the arm tendons and prepare the tan tien to release its power. By a small rotation, the arms activate the arm tendon/tan tien connection. Another way of describing this is activating the Iron Shirt structure to prepare for Fa Jin (fig. 8.14).

Fig. 8.13. Bird's Tail

Fig. 8.13 (continued).

Fig. 8.14. Arms in ready position following the small circle

This circling action can be used as an external lock on an opponent's arm (fig. 8.15). These locks are known as *jin na*. Using the Tsai Force in this lock position while simultaneously controlling the opponent's elbow, wrist, or shoulder with the other arm, the practitioner can lever the opponent down to the ground.

Fig. 8.15. Lock on wrist and elbow

SUMMARY

When the eight gates of Push Hands are applied to Tai Chi boxing techniques, the principles of discharge power and Push Hands apply. By being relaxed yet aware, the adept is able to borrow power from the opponent to activate the Iron Shirt (bow and arrow) in his own body. Even if there is no physical connection, the impression or sense of the opponent's power can be drawn into the adept's structure. It is neutralized in the earth, and then begins its return as a continuation of movement within a circle.

When the jin journeys through the body, it does so in a very sim-

ple and predictable way. Thus, whether one uses the shoulder, elbow, or hands, it does not matter. It also does not matter if the hand makes the shape of a fist, spear, or claw. Furthermore it does not matter whether the move is an attacking or a defending one. These variations are mere dressings on the base of discharge power. Obviously, each of these variations is better suited for some applications than for others, but the foundation of each variation is the same. After some time, the adept allows all techniques to become one technique. This, of course, mirrors the primary reversal of Taoist creation theory—the return of multiplicity to unity.

9

Home Practice

Your home is the playground for your self-cultivation and progress toward learning to discharge jin. Home practice encompasses two aspects of your training: the first is a training schedule that you develop at home for when you are not participating in a workshop or retreat. The second is the progress toward your particular and unique unfolding as you develop your jin or discharge power. In this second regard, "home practice" comes to signify the cultivation of your individual journey within the internal Taoist martial arts.

This chapter will discuss this second aspect first and end with practical suggestions for a routine at home.

HOME PRACTICE WITHIN

Home practice is the avenue for sustained improvement in your unique individual direction. Ultimately, each practitioner creates his or her own goals and destiny, but it is important to recognize that achieving goals at a superficial level may not be concordant with your ultimate destiny. As you become whole, foreknowledge of your destiny is likely to be more accurate.

In Taoist terms, becoming whole involves integration of all energies in order to experience the source, or Original Chi. These energies can be understood as the five elements or as the duality of yin and

yang. In either case, the individual energies correspond to particular portions or aspects of the psyche—what Jung referred to as *archetypes* or *psychophysical energies*.[1] The student's aim is to understand, balance, and coordinate these energies within herself. Thus she embarks on a particular journey, trusting that a higher force will lead her through the maze, arranging each experience and trial according to her needs.

Multiple teachers and masters are parts of this maze, hence the adage "when the student is ready the teacher will appear."[2] Therefore, it is important to take away any attachment or anxiety about having a single teacher for one's entire journey. There may be one teacher who is right for a long stretch of your journey, and others who serve in that role for just a short time. Some teachers may be there primarily to teach you a negative lesson. Unfortunately, there are no easy lessons; what is most important is to remain devoted to your inner development.

Therefore, it is important to relax and accept your progress, your current teacher and teachings, and to allow the mystery of Tao to reveal itself as it will in its own particular way. To rush is to cause yourself harm. Conversely, to not seize opportunities as they arise is also counterproductive. Making decisions about such alternatives is often a matter for the heart or intuitive gut feeling. Within the Universal Healing Tao framework, decision-making resides within the heart (middle tan tien) or the lower tan tien. It is important to remain cognizant of what excites the heart and what faults we project onto others. What we like to teach is often what we need to learn. Stay mobile and fluid and let the mystery of the "mother" draw you closer.*

In internal training, new positive experiences are initially transmitted by the teacher to the student. It is often in the master's presence that a student first experiences chi or other revelations.† For

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*"Tai Chi comes from Wu Chi and is the mother of yin and yang," says Wang Tsung-Yueh in *Tai Chi Chuan Lun*.[3]

†However, there are many notable masters who have reached enlightenment or achieved a practice spontaneously without transmission. For example, Master Leung Fong gained the name and title: Dondrup Dorje Dakpa Gyaltsen, which translates as "Spontaneously Accomplishing Thunderbolt, Famous Banner of Victory."

a while, this dependence is necessary, as the energetic blueprint is passed on from master to student. However, at some stage this dependence becomes counterproductive. The student remains subject to the teacher's presence rather than developing on his own. In this situation, practicing alone is the necessary correction. The student should seek to gain his own experiences by his own methods.

Many of my Universal Tao students are too dependant on my formulas and voice to achieve inner experiences; they forget that developing these experiences on their own is also important. I advise these students to let go, reminding them of the Doris Day song, "*Que sera sera* / whatever will be will be." Often progress requires simply that—letting go and just observing and following the energetic experiences inside. Each training session is different. The chi dances according to its own particular tune. Hear the tune and dance. Allow the Tao to unfold in its own particular way.

At times, it will seem to one of my students that a particular formula of mine or one handed down from my teacher needs to be questioned. The willingness to question or even reject the teachings of one's teacher can be thought of as a rite of passage. In order to embrace the Tao, one needs to seemingly reject it. In order to achieve an experience of a particular practice, one needs to not be too desperate for it. Paradoxically, the process of rejection and nonattachment allows the deeper meaning and experience to appear.

I am not saying to naively reject the practices. What I'm suggesting is that you find a healthy balance between the formulas and your own unwinding or progress. Question, argue, reflect, and attempt the formulas that are described in the Universal Healing Tao texts. Allow your deep intention to create the unfolding and revelation of the path required.

Remember that inner development goes hand in hand with this kind of "home practice." Bruce Kumar Frantzis, a reputable Western internal martial arts practitioner, describes the process this way:

> Critical to attaining real excellence in internal martial arts is the ability to practice for long periods of time on your own. It is most

often during these solitary practice sessions that you find the true sources of your inner strength and discover and correct your most dangerously vulnerable weak points.[4]

DEVELOPING A HOME PRACTICE

There are five features of progress in developing discharge power. These are:

- Merging of practices
- Becoming more yin
- Letting go of control to chi
- Yi (Integrated Mind)
- Shen (Spirit) power

Principles of Progress

There is no doubt that progress relates to the gradual reduction in chi blockages or areas of stiffness in the body. Sites of stiffness originate in the spine and manifest themselves within the limbs. Blockages of the sacrum and lumbar region make the hips and legs tight. Blockages in the cervical and upper thoracic vertebrae make the arms tight. Progress is the gradual unveiling of tension to provide the practitioner with an open spine/Governing Channel (see fig. 9.1 on page 224).

For many, the spine will open during retreat—when they are away from a tension-producing life. In the milieu of relaxation, spiritual contemplation, appropriate food, and lack of stimulants or sedatives, the body begins to open up. This opening is further accentuated in the presence of a master or teacher who transmits this state to his students. For more experienced students, the spine may open with some warm-ups and preliminary meditation. Finally, the spine stays open most of the time. With this open spine there are open kidneys (Ming Men), an open heart, a long neck, and a "suspended head top."[5]

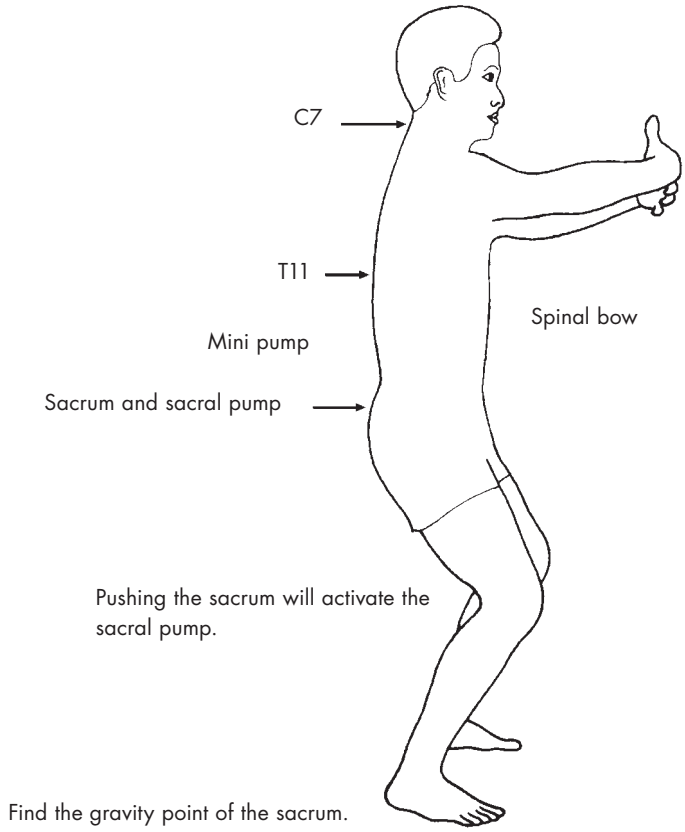

Fig. 9.1. Iron Shirt structure with key points along the spine

Coincident with this opening of the body—and particularly the channels of the Microcosmic Orbit—is an inflation of the body that originates in the lower tan tien and expands to the middle and upper tan tiens (fig. 9.2). The body inflates with chi from the inside out. Again, this experience is likely to happen on retreat first, and it can then be cultivated by individual students in their everyday lives. The gradual opening of the Microcosmic Orbit and the tan tiens in everyday life involves the same principles that are used to open them in meditation. However, opening them into everyday life means that the process needs to be integrated at a very deep level. The whole being becomes more and more soft, or in Taoist terms, more yin. At the same time, the more "substantial"[6] or yang energies are reduced. More

is achieved by being gentle, kind, open, and loving rather than being impatient, forceful, attached, or too determined. More is achieved by being soft and placid and by doing little, than by intervening and forcing an outcome. In essence, the adept learns that the true path to controlling one's energies lies in doing little and being soft and kind to oneself. In addition to creating an internal milieu that is saturated by these virtues, a new system of internal governance is created.

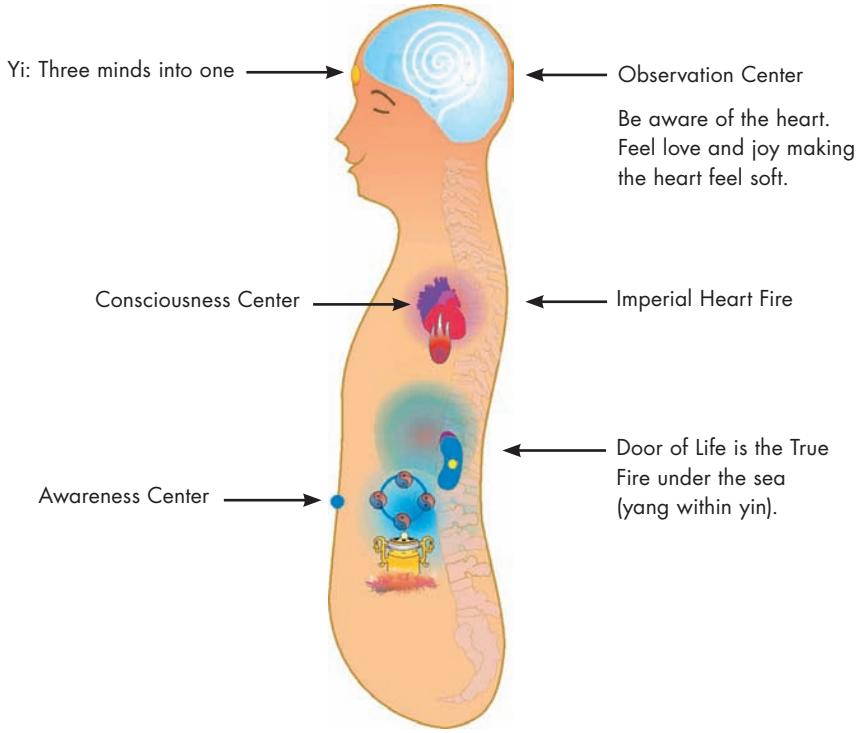

Fig. 9.2. Three tan tiens merging into Yi power

The new system of governance is the release of control of the monkey mind to Yi power—an integrated mind held by the heart (*xin*). The body holds the chi, which moves the limbs around during Tai Chi practice. However, the chi lacks knowledge, so the heart/mind must direct the martial moves. Ultimately, it is the spirit that controls the heart and is therefore the final commander. To some,

this may sound like traditional Chinese medicine fundamentalism. However, there is a tangible experiential reality for the adept searching for Fa Jin; the journey provides distinct physical sensations and experiences, some of which are described below.

The adept gradually relinquishes initial control of movement to the chi. The arms and legs have to feel like they are moved by a faint breeze of chi directing them "hither and thither." If the student gets impatient, then the chi will not move the limb—the monkey mind will. The trouble is that the monkey mind is poor at coordination and can never take the student to the point of learning Fa Jin.

In the next stage of experience, the tan tiens start to move the limbs, which have been mobilized by the chi. This is felt as both a pulling and pushing of the limbs by the three major tan tiens. One can even feel the tan tiens contracting and expanding as they direct the movements of the limbs.

Finally, it is the spirit that begins to orchestrate the body from above.* The spirit is worn like a cloak that embraces the flesh to carry out its will. It is often perceived as a light from the spiritual body or perhaps from a higher plane of existence. In Fa Jin, some practitioners experience a sudden expansion of the tan tien that is triggered by a light from above. In order to have this sensation, control of the body must be truly released from the usual intellectual mind. Maximal opening of the Microcosmic Orbit and the three tan tiens can occur only when the three minds are fully integrated.

GRADING THE STUDENT'S PROGRESS

The progress of a Tai Chi or Fa Jin practitioner is characterized by this process of letting go of the intellectual mind and embodying the integrated body/mind—a state open to direction by the spirit—with concomitant opening of the tan tiens and the Microcosmic Orbit.

*In this context spirit is experienced as light or consciousness that can exist beyond the bodily self.

These achievements provide a framework for understanding the various methods for grading progress that have been developed in the arts of Tai Chi and Fa Jin.

The Grading System of Chen Xiao-Wang

One grading system developed by Chen Xiao-Wang describes five stages. (Chen Xiao-Wang is an accomplished living Grand Master of the Chen style, and for his lineage he is named one of the "Four Tigers" of the art.)* This grading system is particularly relevant as the modern Chen style has more emphasis on Fa Jin than modern Yang style practices.

Chen Xiao-Wang's five levels are summarized below.[7] For the reader's benefit, his framework of required skill sets is explained by vocabulary from the Universal Healing Tao system.

In the first level, the student is learning the principles of Iron Shirt posture. Hence postures are often incorrect with excessive forward, backward, and even sideways bending. In both static and moving postures, the tan tien and body are relatively empty of chi. Tai Chi movements are either stiff or performed with excessive or deficient force. The passage of chi or power through the body as taught in Tai Chi Chi Kung is incorrect. Martial applications may be learned intellectually, but due to all the above reasons, they will be performed poorly. In terms of substantial and insubstantial energies, they are in essence 90 percent yang and 10 percent yin.

At the second level, the student begins to feel the passage of chi/jin through the spine and body as per the fundamental form of Tai Chi Chi Kung. The student begins to grasp the coordination between body and mind, which is demonstrated when the internal closing of the tan tiens matches the closing of the limbs. The student begins to feel that all the tan tiens can pulsate, open, and close in a rhythm.

*The other three tigers of the nineteenth generation of descendants of the Chen style are: Zhu Tian Cai, Chen Zheng-Lei, and Wang Xi-An.

The skill required for Push Hands remains inadequate, with constant butting, deficiency, stiffness, and loss of contact. The principle of following has not yet been learned, so attacking first is often the way that a second-level practitioner attempts a win. This level is characterized by 20 percent yin.

The third level is involves the transition from gross motor movements to energetic ones. Thus the big circle described by the waist or trunk can be replaced by an internal energetic circle of energy. A movement that involves returning, turning, and moving forward now appears on the outside as a one-inch punch. No returning or turning is seen by an observer. The student now begins to understand that in order to mobilize and coordinate the chi, he must let go and govern through the heart/mind connection via the spirit. Likewise, to control the breath means allowing the self to breathe naturally, although in Fa Jin training, some direct control of the breath is necessary at this stage. At this level, chi is beginning to appear in the tan tien. In Push Hands, a practitioner of this level is beginning to internally understand the use of the eight gates.

The fourth level is characterized by the ability to practice the Tai Chi form with correct spirit and intention. Like true shadow boxing, every move encounters an imaginary opponent in a process that engages the intention of the form. The student begins to understand the art of Push Hands. There is a lack of intellectual thought or preempting. The body/mind follows the principles of connection, linking, adhering, and following (*zhan*, *lian*, *nian*, *sui*). The student demonstrates smooth transitions between attack and defense, with appropriate suspension (*duan*) and reconnection (*jie*). The four faults of butting, deficiency, breaking, and stiffness begin to disappear. This level is described as 40 percent yin.

At the fifth level, the spiritual, cosmic, and earth connections are tangible and important in everyday practice. Fa Jin is accomplished by the appropriate coupling of the substantial and insubstantial (yang and yin) energies. Listening (*ting*) and interpreting (*dong*) are highly developed, to the point where an attack to any part of the body is

readily understood, and appropriate use of Fa Jin via the eight gates is initiated.

At this level, the body and tan tien are balanced with an internal energy that is 50 percent yin and 50 percent yang.

John Chang's Grading System

John Chang teaches a system for grading the progress of jin that is part of the Mo Pai tradition. This system includes seventy-two levels of attainment, which the immortal Chang San-Feng is considered to have achieved.

The first level is the appearance of ill-defined chi in the lower tan tien. In the second level, the chi becomes stronger. In the fourth level, the yin and yang can be coupled (fig. 9.3).

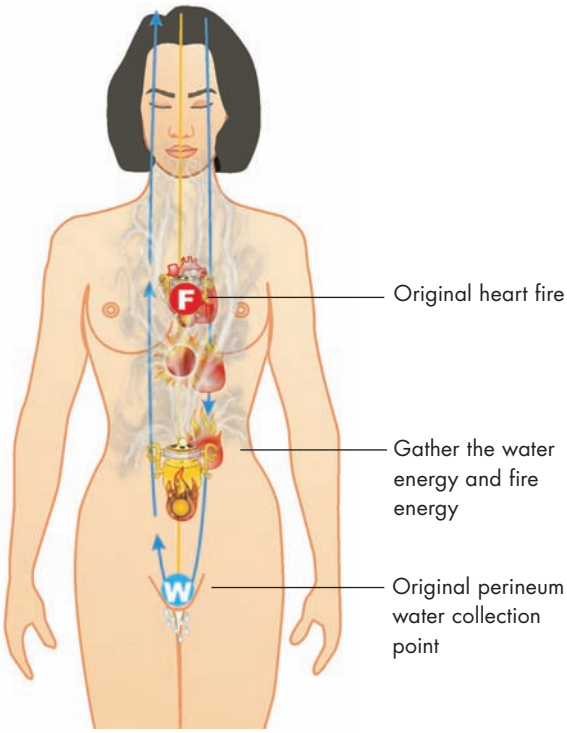

Fig. 9.3. Coupling of yin and yang (water and fire) in Kan and Li practice

The Grading System of Glenn Newth

A third system, which has some similarities to the one described by Chen Xiao-Wang, is outlined by Glenn Newth in his book *Hwa Yu Tai Chi Chuan*.[8] Newth describes level one as the stage in which students use muscle power alone. Because the monkey mind is controlling movement, the muscles are not well coordinated and work against each other.

The next level is called the "Bone Level." At this stage excessive muscle tension has dissolved, so that gravity can now connect to the skeleto-ligamentous structure (fig. 9.4). At this level, fear has left the body and the muscles work synergistically with, rather than against, each other. A sense of dance prevails, with graceful and lively movements. At the third level, chi, the tan tiens, and the Central Thrusting Channel are all engaged in movement. At the final level, the spirit governs the chi, which in turn coordinates the muscles and structure. This is the final letting go.

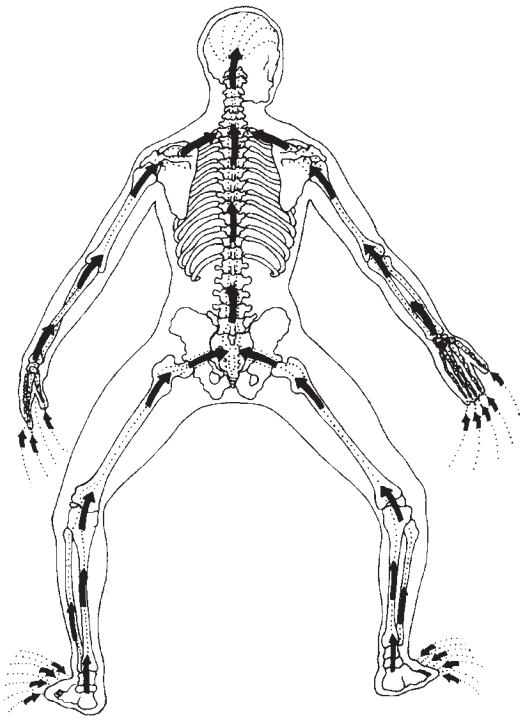

Fig. 9.4. Skeleton Bone Breathing

THE DEVELOPMENT OF A UNIVERSAL HEALING TAO GRADING SYSTEM

Below, we have created a system for evaluating the development of discharge power in terms of Universal Healing Tao practices. The system is comprised of four levels, each of which includes specific skill sets developed in Universal Healing Tao practices. It is important to recognize that students must train in other Universal Healing Tao practices to learn these skill sets before they appear in Fa Jin practice. The primary avenue for progress is meditation and the march toward the mystical experience of unity.

In this grading system, the four levels can be applied equally across four disciplines: Meditation, Iron Shirt, Tai Chi, and Push Hands practices. Each discipline will be subdivided into the four levels and will include aspects of internal and external appraisal (except meditation practice, which can be evaluated only on an internal level).

The four levels are the same for Meditation, Iron Shirt, Tai Chi, and Push Hands practice. In level one, the student uses intellect and muscle power (Li) alone. In level two, the student can perceive chi in the master's presence, within a group, or while on retreat. At home, the student may need audiotapes to assist his awareness of chi. In level three, the student can generate chi and achieve high levels of meditation using his own skills. Most skills are learned at this level, and the student is a competent teacher. However, the opening of the chi channels and the accomplishment of the integrated mind is still episodic at this level. Level four is the master level, wherein the adept is openly integrated most of the day and perhaps even during sleep. This level is characterized by a complete letting go, so that it is the spirit that governs thought, practice, and movement.

Unfortunately, a student really needs to get to level four to even begin to exercise discharge power. All the principles of Iron Shirt, Push Hands, Tai Chi, and Meditation have to be learned up to the letting go stage for the practice of even low-level Fa Jin. From there, Fa Jin practitioners can be can be divided into those that use jin, chi,

or shen. These levels correspond to the lower, middle, and upper tan tiens. Successful Fa Jin demands the competence of a master.

Meditation

Because meditation is an internal practice, there are not many external markers that can be used to asses a student's progress. As in the other disciplines, progress is marked by the ability to become more yin, to open the Microcosmic Orbit, to fill the tan tiens, and to make a connection to the spiritual body from above (fig. 9.5). In Kan and Li practice, for instance, the student learns to invert and couple the yin (insubstantial) and yang (substantial) energies. Within the various high level meditations, there are moments of sudden expansion of the tan tien, which releases a chill, shake, or even an orgasm throughout the body.

With progress, the student applies these meditational experiences from workshops or retreats to her everyday practice of Tai Chi Chi Kung, Push Hands, and the Yang Discharge Form. In level 4, the channels are open most of the day and even during sleep. The expansion of chi from the tan tien is harnessed for Fa Jin practice.

Fig. 9.5. The Microcosmic Orbit

MEDITATION LEVELS IN SUMMARY FORM

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
No perception of chi	Perception of chi in presence of master or on retreat	Ability to open channels with chi in home practice	Channels open most of the day in everyday life—even in sleep
However, student can visualize and imagine formulas	Learns Microcosmic Orbit, Fusion practices, and Kan and Li practice, and can practice them successfully on retreat	Student can practice Microcosmic Orbit, Fusion practices, and Kan and Li practice alone	Formulae are let go.
	Reliant on formulas	Formulas begin to blend into one practice	Practices become one and are spontaneous
		Generates skill for Fa Jin	Generates skill for Fa Jin

Iron Shirt

External Assessment. External assessment relies on the assessor's interpretation of the adept's adherence to fundamental principles. As the student progresses into level 2 of Iron Shirt practice, she can successfully remove the "hollows and projections"[9] that are symptoms of chi blockage. In other words, she has at this point overcome stiffness and removed chi blockages from the spine and the corresponding affected limbs. She thus requires fewer corrections to her form, such as dropping the elbows, sinking the chest, opening the lumbar spine, tucking in the chin, etc.

In level 3, the student can take pushes from all directions and in multiple postures (Embracing the Tree, Holding the Golden Urn, Golden Turtle, etc.). With progress, the student needs less and less time to warm up before being able to take a push. She has fewer bad days as her structure becomes consistently strong. Eventually, she can take pushes from different opponents of varying heights and strengths. In level 4, pushes can be taken from multiple persons at once (see fig. 9.6 on page 234).

The principles of Iron Shirt inform the Tai Chi and Push Hands

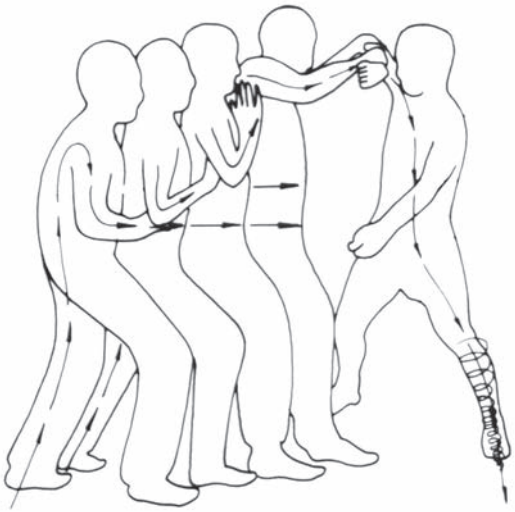

Fig. 9.6. Correct Iron Shirt posture withstands multiple-person pushes.

forms, so that every move begins to carry the foundation principles. Iron Shirt teaches students how to inflate the tan tien so that force can pass through the structure, thereby creating the foundation for release of Fa Jin via the eight gates. Furthermore, it is in Iron Shirt practice that the practitioner learns to borrow the opponent's energy and use it to charge the tan tien, thereby improving the quality of his/her structure.

Internal Assessment. The best judge of your development is of course yourself. Your senses can easily detect stiffness and stagnation of chi as well as smoothness and power. With progress into level 3, areas of stiffness disappear with minimal warming up. In time, you find a more yin approach to forming an Iron Shirt posture, and learn to respect the power of yin energies in accessing and sustaining the Iron Shirt. Yin energies appear in the body more often, like sensations of peace (*an jin*), unaroused sexual chi, love, openness, and so on (fig. 9.7). Tension or blockages disappear and you can accept yang energies—like fear, anger, and anxiety—alongside the yin energies in your body.

Fig. 9.7. Love and peace (*an jin*)

Integration of chi, the bodily senses, and the mind occurs with progress. In level 3, the body begins to think and respond by itself. As an opponent pushes, the practitioner's intellect remains dormant while the body itself decides how to react to a push. In level 4, the integration occurs beyond the body and manifests the interplay of heaven, earth, and spirit. Individual identity becomes lost in something greater.

IRON SHIRT LEVELS IN SUMMARY FORM

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
Uses muscular effort. Uses the monkey mind or intellect. No perception of chi.	Beginning to relax and learning to work with gravity. Can use chi in presence of master or on retreat.	Ability to open channels with chi in home practice. Three minds become one mind.	Channels open most of the day in everyday life—even in sleep. Three minds merge with spirit.
Multiple blockages in channels	"Hollows and projections" disappear on retreat or in presence of master	Good Iron Shirt can be experienced alone but still requires warm-up.	Iron Shirt with adept most of the day
	Reliant on teacher's presence to maintain structure. Tolerates pushing in a couple of postures.	Iron Shirt structure beginning to become second nature. Can tolerate pushes in all classic postures.	Iron Shirt appears naturally in all postures. Can tolerate very strong pushes from multiple opponents.
90% yang. Postures are tense throughout.	70% yang, 30% yin. Learning to find power of relaxation (***fang sung***). Tension still appears in postures.	60% yang , 40% yin. Tension disappearing. Utilizes yang (shaking, intense chi sensations) and yin energies.	50% yang, 50% yin. Balanced energies prevail and almost no tension remains in the body.
		Generates skill for Fa Jin	Generates skill for Fa Jin

Tai Chi Form

External Assessment. The Tai Chi student's form is assessed according to how completely the chi is allowed to move the limbs in an integrated manner. Initially, because the structure is fragmented, power can only be generated by isolated limbs and is very weak. With training, power from the earth learns its correct path, and the chi begins to move the limbs at a slow constant pace that is graceful and has no beginning or end. Yang Chen-Fu says:

> The root is in the feet, it is issued through the legs, controlled by the waist and expressed in the hands. From the feet to the legs to the waist there must be a continual flow of Chi. When the hands, waist and feet move, the spirit (*shen*) of the eyes move in unison. This then, can be called the "Unity of the Upper and Lower Body." If just one part is not synchronized, there will be confusion.[10]

This principle of integration is drummed into all Universal Healing Tao students right from the beginning: all parts of the body move in a coordinated manner when chi softly progresses through the legs, spine, and upper limbs. If there are no channel blockages, there is no need to force the chi anywhere. Forcing can result in jerky movements and in leaning too far forward or backward.

The breath mirrors stillness and the mastery of the foundation principles. In the beginning, the breath is all over the place. Next, the practitioner has enough control to inhale with closing movements and exhale with outward movements. Later, with further relaxation, the breath is even and mostly silent. It is coordinated with movement such that the phenomenon of whole-body breathing appears.* Finally, the spirit is engaged and the breath spontaneously mirrors the primordial energy of each form. In a Yang slow style

*For more information on whole-body breathing, see Mantak Chia's *Bone Marrow Nei Kung* (Rochester, Vt.: Destiny Books, 2006).

the breath may be quiet, while in a discharge form the adept may produce sudden loud exhalations.

With deeper understanding of the form, each posture can be seen to capture the essence of its application. Initially the adept is caught up in relaxing and focusing on the chi, and sometimes he needs to close his eyes to be able to do this. However, when the entire organism lets go to the spirit, the practitioner becomes able to incorporate all the aspects of breath, form, jin, and martial application. Often the spirit can be seen in his eyes.

Internal Assessment. To enable the complex coordination required for Tai Chi, the adept must let go. With progress, you bring less and less monkey-mind intention into the form. The mind relinquishes its stronghold to the wisdom of the heart and the intuition of the gut. This is transformed into actual physical movement when the tan tiens expand and contract in response to opening and closing movements. Gradually, movement is relinquished to the spiritual body. You will feel lighter and more coordinated, with the sense that a puppeteer is moving your body around. The strings are, of course, the chi. The puppeteer is the spiritual body, which has connections beyond the comprehension of the intellect, and which enables the magic of internal discharge power to emerge.

Jerky movements, rising and falling, and stooping forward and backward are all manifestations of poor Iron Shirt, using too much monkey mind, and not allowing the chi to direct the limbs. Continuity is based on a deep memorization of the form that is integrated to all levels of mind. Because the chi directs the movement, there are no stops and starts. Chi is ever flowing and never ceases! As Chang San-Feng puts it, "Tai Chi Chuan is like a great river rolling on unceasingly.[11]

There is a happy connection with the soft yang energies from the heavens and the pleasurable yin energies from the earth. These feed directly into the tan tien like the breath. When you are about

to exert a strike, the tan tien expands with yang chi. In the closing or withdrawal phase of a form, the tan tiens contract and pull the limbs in via the medium of yin chi. It inevitably becomes a dance of the Tao—the interplay of yin and yang, humming with the stillness of the Primordial or Original Chi. The dance becomes, as its meaning declares, the "Supreme Ultimate."

When complex movements are entertained in parts of the body that have blocked chi, the breath will be erratic. As the mind settles and the body relaxes, the breath can coordinate with movement. A good way to encourage this coordination is to inhale during closing movements and exhale during strikes, kicks, and outward movements. Eventually, the breath marries the body and we enable whole-body breathing, in which the breath supports and synergizes movement. During whole-body breathing, especially in the Yang, Wu, and Sun styles, the breath is very quiet. To an outside observer there is no breath, but internally one feels the whole body—and each form—breathe with movement. Ultimately, this is carried into the top level of Tai Chi Chuan practice, in which the breath is controlled by the forces beyond the individual.

The applications of the form are an essential component of Tai Chi Chuan. Without meaning, each posture becomes empty and too yin. The forms should each embody their name and spirit, which may relate to activities of daily living or aspects of nature—Grasp the Bird's Tail, Single Whip, Catch the Moon at the Bottom of the Sea, and the White Crane Spreads its Wings. Within these metaphors are also martial applications. If the spirit is involved, the adept will have a sense that he is channeling—letting his body be taken over by another. With practice, Tai Chi Chuan will lead you to finding discharge power.

TAI CHI LEVELS

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
MIND	Uses muscular effort and uses the monkey mind or intellect. Student has no perception of chi.	Beginning to relax and learning to work with gravity. Starting to use chi to move the body.	Integrated tan tiens with meaning and form episodic. Mind moves the chi, which moves the limbs.	Spirit engaged such that meaning and movements are generated throughout form without fatigue.
BODY, STRUCTURE, AND POWER	Body disconnected. Multiple blockages in forms and between postures. Forces not aligned.	"Hollows and projections" beginning to disappear from forms. On occasions, student may still be excessively forward, backward, or use too much or insufficient force. Power does not pass smoothly through the structure.	Most forms show good Iron Shirt structure. Power passes from the legs through the waist, spinal column, and then to the hands.	Ideal structure of all forms, with constant and steady center, and upright posture. Each move shows correct passage of jin through structure.
CONTINUITY BETWEEN FORMS	Multiple breaks in form. Disconnected from chi including the heavenly and earthly forces.	Segments of connection and continuity of forms. Muscles are more relaxed and movements naturally slow.	Grace and chi engaged in most forms with ongoing continuity. The chi is listened to and followed.	Entire form takes on a unique meaning foretold by the spirit grounded in stillness.
BREATH	Breath is labored and loud.	Breath is connected to form. Yin movements inhale, yang movements exhale.	Whole-body breathing, breath almost disappears to an observer.	Breath is spontaneous yet quiet and easy. The breath mirrors the spirit of each form.

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
MEANING AND MARTIAL APPLICATIONS/ FA JIN	Applications not understood or portrayed	Some understanding of meaning and applications	Meaning becomes apparent through placement of head, arms, waist, and legs.	Higher awareness of the intention of each form creates a sense of deep understanding of martial application.
			Beginning to generate skill for Fa Jin	Generates skill for Fa Jin

Push Hands

External Assessment. The student first learns single-handed Push Hands, then two-handed Push Hands. Within the routine, the student learns how to change directions, have strength in the five postures, and grasp the intentions of the eight gates. Once this is familiar, the practitioner forgets about the routine and concentrates on the subtleties of following and interpreting. Once the eight gates have been learned by the intellectual mind, the rest of the body must memorize them.

At first the student is awkward, as the monkey mind cannot master the art of Push Hands. The intellect cannot interpret or understand an opponent's movement; the integrated three minds are required for this. The novice's structure is poor and he has trouble sitting back. When the kua and kidneys are weak then the student will tend to bob up and down. He will stoop forward and lean too far back. Eventually, the student can apply principles of good structure to situational movements. In Push Hands, you win if you maintain your structure and you lose if you do not.

Initially, internal power is incomprehensible. However with time, practice, and understanding, the student learns how to correctly release power from the earth through the body. Likewise, learning to read an opponent's structure through touch (following, listening, and understanding jin) occurs with time and devotion. It is a giant leap forward when the adept realizes the power of relaxation and becomes able to attune himself to his opponent and the forces around him.

Internal Assessment. After spending a couple of years learning the routines—the skills of listening, understanding, and the use of the eight gates of discharge—Push Hands becomes like a meditation in itself (fig. 9.8). The multiple avenues of sensory input are reduced by the integrated three minds to a primordial perception. The opponent's internal structure is interpreted for its faults, and the body spontaneously reacts with an exaggeration of the defect to culminate in successful discharge.

PUSH HANDS LEVELS

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
Learning the routine	Relaxing into the routine	Using opponent's movements as guide	Using spirit to guide movements
Uses the monkey mind with predetermined ideas	More relaxed but still keeping a move in mind	Following, interpreting, and listening	Truly spontaneous, appears to read an opponent even before the opponent moves
Broken structure, with difficulty sitting back. Center moves up and down.	Four faults of butting, deficiency, breaking, and stiffness	Faults disappear, good structure in the five steps	Soft and alive in all positions
Uses muscles and Li power	Power still fragmented; breakages in link between earth, legs, waist, spine, and arms	Power is aligned.	Transmits power from the earth
Learning eight gates	Learning eight gates, becoming familiar with a few	Familiar with all eight gates	Eight gates include Fa Jin

Fa Jin

It is difficult to create a precise and uniform grading of Fa Jin skills, as Fa Jin is a continuum from muscle power to spirit power. We have discussed in chapter 3 that masters can discharge power from the jin level (lower tan tien), chi level (from the heart), or shen level (upper tan tien

Fig. 9.8. Listening, understanding, and following in Push Hands

and spirit). The ability to throw opponents several meters with minimal touch is a feature of a master with a life-long dedication to the art.

The Universal Healing Tao student who first gains mastery of meditation, Iron Shirt, Tai Chi, and Push Hands practices and will find that in time, he will be able to release his power with less effort. Ultimately, the whole process of discharge power becomes spontaneous with no effort.

HOME PRACTICE ROUTINE AND THE CHI CYCLE

Sleep at night, train first thing in the morning, eat, go to work, slow down in the afternoon, be with family and friends in the evening, and then prepare for sleep: home practice is based on tuning in to the chi cycle in order to enable enduring maximal performance.

Western society is so focused on top performance that it drains the nurturing aspects of the day. An easily understandable and practical interpretation of the chi cycle can be found in a book called *The Perfect Day Plan*,* by Australian traditional Chinese medicine practitioner Jost Sauer. In the book, Sauer explains that you can find your true power by tapping in to the cycle of life.

The Chi Cycle

The cycle of the day reflects the interplay and harmony of the five elements. It divides the day into twelve two-hour increments, each of which is governed by a certain organ and its corresponding element. By directing our activities so that they correspond to the appropriate organ at the appropriate time, we maximize our body's potential for growth, power, and regeneration.

Man is not separate from the universal forces and should not try to be. The more he divorces himself from the natural rhythm of these

*Jost Sauer, *The Perfect Day Plan: Unlock the Secrets of Your Body Clock* (Crows Nest, NSW: Allen and Unwin, 2009).

forces, the sooner he will age and sicken. There are no shortcuts but to live in harmony with the Tao. Relinquishing yourself to the forces outside of yourself enfolds you in the world of spirit and paradoxically allows you to find your true nature. Sauer maintains that this relinquishment gives each person a sense of not being alone—of being a part of something greater. This leads us, in turn, to doing things that are great.

In our Western lifestyle, we are determined to do more than we are capable of—by rushing, skipping meals, staying up late, and forcing things. Gradually, as separation occurs from the divine, we lose our power and lose our way.

However, all is not lost. Sauer recommends that the first step to redemption is to begin by tuning our body to the chi cycle first thing in the morning by arising at 5:00 a.m. This is the time that corresponds to the large intestine. There is an abundance of perceptible chi at this hour. Our spirits have been in the dream world and now we must awaken and get back into our bodies with all the information and chi that our dreams have so desperately been trying to procure. This is the ideal time to practice stretching, meditation, empty force breath, Chi Kung, and Tai Chi. Awareness, perception, and understanding of chi and jin are at their height between 5:00 and 7:00 a.m.

From 7:00 a.m. to 9:00 a.m. is the stomach time (fig. 9.9). We have embodied the chi from the dream world and it is time now to digest the chi from the material world. The taste buds are ready, the digestive juices are ready—the body is waiting for its material nourishment.

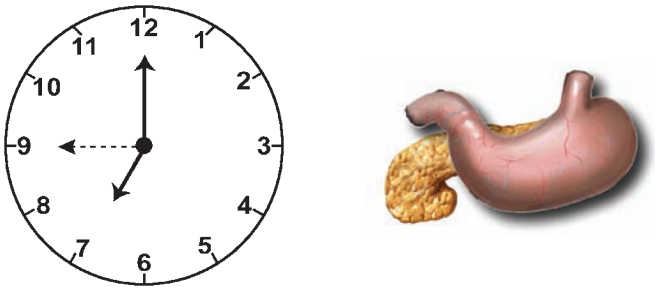

Fig. 9.9. Stomach time from 7:00–9:00 a.m.

A large cooked breakfast is ideal, with food prepared for digestion that includes dishes like porridge.*

From 9:00 a.m. to 11:00 a.m. is spleen time—the hour for embarking on earthly activities that help us to realize our dreams (fig. 9.10). Thinking is a function of the spleen so this is a great time for solving problems, studying, and performing seemingly difficult tasks.

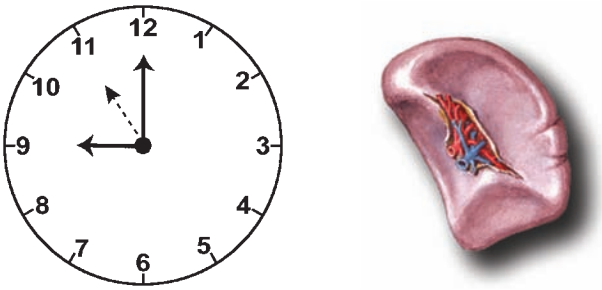

Fig. 9.10. Spleen time from 9:00–11:00 a.m.

From 11:00 a.m. to 1:00 p.m. is heart time (fig. 9.11). This is the middle of the day and a good time to explore and realize the creative insights of the heart.

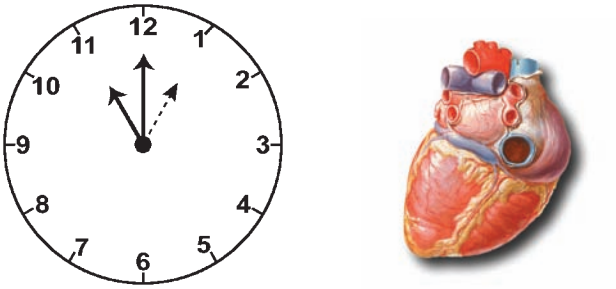

Fig. 9.11. Heart time from 11:00 a.m. to 1:00 p.m.

From 1:00 p.m. onward, the outward or yang energies of the body start to decline. This may be a good time to have some lunch,

*For more information on how to maximize your health through the foods you eat, see Mantak Chia and William U. Wei, *Cosmic Nutrition* (Rochester, Vt.: Destiny Books, 2012).

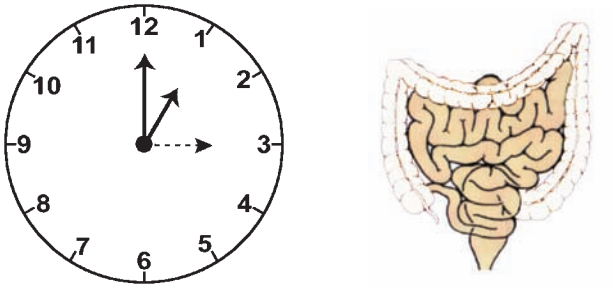

Fig. 9.12. Small intestine time from 1:00–3:00 p.m.

as 1:00 p.m. begins the time of the small intestine (fig. 9.12). Again, it is important to attune your meals to nourishment and food chi (*ku*). Fast foods, processed foods, and genetically modified foods lack food chi. On the other hand, fresh organic foods come with both flavor and energy. It is ideal to have a little rest after lunch, and this can vary from some quiet time alone to a brief meditation or even a power nap. The small intestine time continues till 3:00 p.m., so it is a good time to continue purification of the creative thoughts and ideas from the heart. However, effectiveness in the real world is abating.

From 3:00 to 5:00 p.m. is bladder time, while 5:00 to 7:00 p.m. is kidney time (fig. 9.13). Because the bladder is an organ that is paired with the kidneys,* the whole time period belonging to the bladder and kidneys (3:00 to 7:00 p.m.) can be used to support the vital energy of

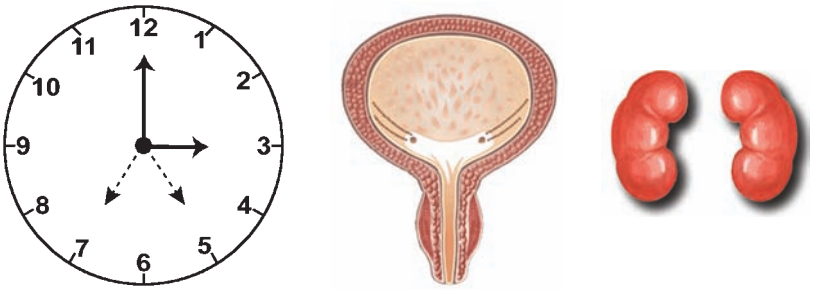

Fig. 9.13. Bladder time from 3:00–5:00 p.m., kidney time from 5:00–7:00 p.m.

*For more information on the relationship between the bladder and the kidneys, see Mantak Chia's *Healing Light of the Tao* (Rochester, Vt.: Destiny Books, 2008).

the kidneys. Kidney yin is closely related to sexual feelings and is paramount for the lubricating functions in the body. Kidney chi nourishes the mind, while kidney yang determines our willpower. Therefore, bladder and kidney time is a good time to connect again with our sexual urges. For many people, sexual energy becomes blocked by the negative emotions surrounding their work. The politics, human emotions, and various stresses at work interfere with connection to our primordial drives. This may be a good time to do some exercise to clean the body of negative emotions. A visit to the park, a swim, or even some time alone is very therapeutic. Thereafter, one can engage is some sexual practices with either dual or single cultivation.

From 7:00 to 9:00 p.m. is a time for being in an environment that protects the heart: it is pericardium time (fig. 9.14). For most people, this will mean relaxing at home with family. For others, it is time to spend with your friends or Taoist buddies. Friendship and the sharing of the day's experiences over a light evening meal is ideal.

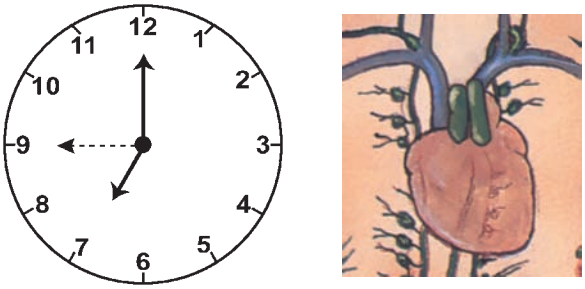

Fig. 9.14. Pericardium time from 7:00–9:00 p.m.

From 9:00 p.m. until 11:00 p.m. is preparation for sleep. During this time, the triple warmer has the function of dispersing chi to the three warmers and ensuring equal warmth (fig. 9.15). To enter sleep easily, the body should feel open and energized to a degree. If we are laden with negative emotions and blockages, then sleep will be hard to come by. Therefore, the Six Healing Sounds practice and soft stretching on the floor with Tao Yin exercises are ideal. Vigorous Chi Kung or meditation will be counterproductive at this hour, as they engage

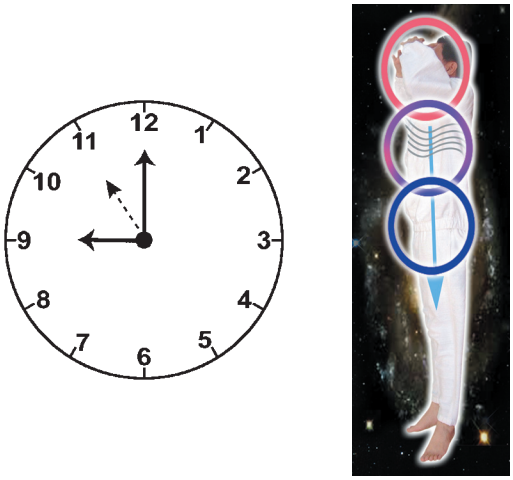

Fig. 9.15. Triple warmer time from 9:00–11:00 p.m.

too much yang chi and can awaken the body and mind too much.

It is a good idea to be well and truly asleep before the gallbladder and liver time (11:00 p.m.–3:00 a.m.). The ethereal soul leaves the body at this time and merges with the realm of spirit. There is potential here not only for healing but for advancement in one's practice. The ethereal soul can meet with other masters, solve problems, and even practice high-level alchemy. Lucid dreaming—a vehicle for further self-cultivation that is taught during our darkness retreats—can also be practiced during these hours.

From 3:00 to 5:00 a.m. is a continuation of the sleep cycle during which the realm of dreams and spirit dominates (fig. 9.16). The ethereal soul of the liver (*hun*) hands over its knowledge to the cor-

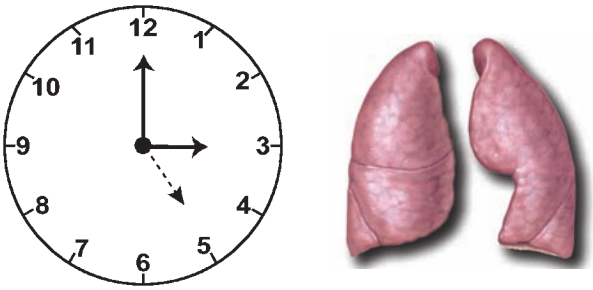

Fig. 9.16. Lung time from 3:00–5:00 a.m.

poreal soul of the lungs. This begins the process of descent from the unconscious back to consciousness, and the transfer of shen to bodily chi.

Harmonizing with the Cycles of Nature

The processes involved in self-cultivation, improving our daily life, and Fa Jin are similar. All are grounded in the harmony of the five elements and their corresponding organs as they express their interplay within the cycle of the daily spin of the earth. Yang Pan-Hou reinforces the importance of the relationship between our daily choices and Fa Jin. He says, "After reaching this level, how can one not be cautious in regards to daily activities, diet, and elimination?"[12]

Each element corresponds to an aspect of Push Hands, thereby returning us to the five steps of front, back, center, left, and right. In the context of the five elements, the five steps are advance (fire), retreat (water), gaze left (wood), look right (metal), and central equilibrium (earth).[13] Within each element there is a yin and a yang component, yin being soft, contractile, and withdrawing, while yang lets go, expands, and can initiate or attack. Appropriate use of these yin and yang aspects of the five elements leads to better use of the eight gates.

According to five element astrology, each element will express its yin and yang modalities according to the seasons, as determined by the axis of the earth making its yearly rotation around the sun. Beyond that, there are cycles dictated by the rotation of the other planets around the sun—especially the twelve-year cycle of Jupiter. Even further, there may be cycles that arise and repeat as our solar system moves within our galaxy. However beyond us all this may seem, we can each improve our connection to the greater universe—and thereby our discharge power—by striving to harmonize ourselves with the daily cycle of chi in our bodies.

THE CHI CYCLE IN DAILY LIFE

TIME	ORGAN	DAILY ACTIVITIES	CORRESPONDING FA JIN AND PUSH HANDS PRINCIPLES
5–7 a.m.	**LARGE INTESTINE**	Getting ready for the day. Heavenly and earthly chi is pouring into the body like a rapidly flowing river. Activities should assist the embodiment of dreams. This time is a bridge between the spirit world and earthly worlds. Begin with light meditation, chi weight lifting, Empty Force Breath, warm-ups, Tai Chi, and Chi Kung. Finish with meditation.	
7–9 a.m.	**STOMACH**	The time that the energetic dimension meets the material world of tastes, nourishment, warmth, and splendor. A warm cooked breakfast is ideal and can be the main meal of the day.	The earth element governs the digestion and absorption of chi. It also holds the center, providing peace, centeredness, and balance. It is about connecting and bonding with trust.
9–11 a.m.	**SPLEEN**	Action time: hard work, earthly problem solving, meetings with others, and healing of others. Absorption of chi continues with reading and writing—including study of the classics. Fulfillment of your grounded earthly mission.	
11 a.m.–1 p.m.	**HEART**	Creativity and hard work continue. Follow your heart and exercise the spirit that lives in your heart. Here you will find true internal power.	Creativity: heart yin begets insight while heart yang expresses it. Spirit resides in the heart during the day (and in the liver at night).
1–3 p.m.	**SMALL INTESTINE**	Time for lunch and the start of the yin phase. Take the opportunity to switch off with a power nap or brief meditation.	The small intestine purifies the creativity of the heart.

TIME	ORGAN	DAILY ACTIVITIES	CORRESPONDING FA JIN AND PUSH HANDS PRINCIPLES
3–5 p.m.	**BLADDER**	Time for activities that are more mundane and require little mind power. Exercise in the afternoon may be a waste of time.	
5–7 p.m.	**KIDNEY**	Time to detoxify from work and nurture the kidneys. This is good time to gather some rejuvenation, including sexual practices. Kidney yin lubricates the jin. Kidney chi helps to receive air chi (***zhong chi***) and combine it with stomach digestion chi (***ku chi***) and Original Chi (***yuan chi***).	The combination of kidney yang and kidney chi forms willpower.[14]
7–9 p.m.	**PERICARDIUM**	Home time: time to protect the heart. Be with family, friends, and Taoist buddies over a light evening meal. Best to go to bed slightly hungry. Do winding down exercises—ideally on the floor—including Tao Yin and the Six Healing Sounds.	Pericardium yin protects the spirit by closing the heart. The pericardium helps to find the right teacher and colleagues for safe creative expression.
9–11 p.m.	**TRIPLE WARMER**	Time to fall asleep. The triple warmer disperses the chi, moves you into new dimensions where you can discover your true identity.	The triple warmer distributes energy evenly between the three cavities of the body, creating balance and warmth. It prevents extremes of thoughts and behavior.
11 p.m.–1 a.m.	**GALLBLADDER**	Sleep time	

TIME	ORGAN	DAILY ACTIVITIES	CORRESPONDING FA JIN AND PUSH HANDS PRINCIPLES
1–3 a.m.	**LIVER**	Restoration time: you should be in a total yin state, fast asleep. This is when the ethereal soul (***hun***) ventures off to the spirit world to converse with Immortals and past masters. "This is the time when the unconscious is supreme."[15] The hun passes its information to the corporeal soul (***po***).	Movement energy: liver yang is action. Liver yin allows us to retreat and wait. The liver provides "the wisdom to know when to move and when to be still."[16] It governs the eyes, tendons, ligaments, and storage of blood.
3–5 a.m.	**LUNGS**	This is the grand time: the corporeal soul (po) brings the information and inspiration from the spirit world—and the magic of the world of dreams—back into the body.	Letting go (yang) and re-attachment (yin).

Glossary

An: one of the eight gates, the Push

back Shu points: Acupuncture points along the spine that correspond to and influence the solid and hollow organs

Ba Gua: Eight-sided symbol representing the eight forces of nature, also spelled *pakua*

Ba Gua Zhang: One of three internal Chinese martial arts featuring discharge power

Ba hui: The point at the crown of the head

bian: Deficiency, one of the four faults of Push Hands practice

chan su jin: Silk reeling

chi: the vibration of the life force felt by the senses

Chi Kung: To work the chi

Ching Chi: Fluid essence most commonly associated with sexual essence

Chong Mai: Central Thrusting Channel

Chou: One of the eight gates, the Elbow Strike

Dai Mai: Belt Channel

Du Mai: Governing Channel

ding: Butting, one of the four faults of Push Hands practice

diu: Losing contact, one of the four faults of Push Hands practice

dong jin: Understanding power

Fa Jin: Internal discharge power

fu: Bending forward

Hsing Yi Chuan: One of three internal Chinese martial arts featuring discharge power

hun: The soul of the liver; the ethereal soul

Ji: One of the eight gates, the Press

jin: Internal force

jin na: Locks

Kan, Li, Chen, Tui, Kun, Ken, Sun, Chien: Water, Fire, Thunder, Lake, Earth, Mountain, Wind, and Heaven

kang: Resisting

Kou: One of the eight gates, the Shoulder Strike

ku: Food chi

kua: The ligaments of the pelvis

Lieh: One of the eight gates, the Split

Lu: One of the eight gates, the Rollback

Ming Men: Door of Life (the acupuncture point between the second and third lumbar vertebrae)

Nei Kung: Internal strength work

pakua: see Ba Gua

Peng: One of the eight gates, the Ward Off

po: The soul of the lungs; the corporeal soul

Ren Mai: Conception Channel

shen: Spirit

Tai Chi Chuan: One of three internal Chinese martial arts featuring discharge power

tan tien: Energy center

Tsai: One of the eight gates, the Lever

Tui shou: Push Hands

Wu wei: Nothingness

yang: Bending backward

Yi: Integrated mind power

zhan, lian, nian, sui: connecting, sticking, adhering, and following

CAST OF TAOIST/TAI CHI CHARACTERS

See chapter 1 for more details.

Bruce Lee (1940–1973): Movie star

Chang San-Feng (1279–1368 CE): Legendary immortal who created Tai Chi and was an alchemist

Chen Man-Ching (1902–1975): Student of Yang Chen-Fu

Dong Hai-Chuan (1797–1882): Founder of Ba Gua Zhang

Li I-Yu (1832–1892): Taught by Wu Yu-Hsiang

Tan Meng-Hsien: Little is known, included in Yang family manuscripts

Wang Tsung-Yueh (actual dates unknown, either ca. 1368–1644 or eighteenth century): The first historical Tai Chi character after Chang San-Feng

Wu Yu-Hsiang (1812–1880): Founder of Hao style, taught by Yang Lu-Chan

Yang Chen-Fu (1883–1936): Son of Yang Jian

Yang Jian (1839–1917): Son of Yang Lu-Chan

Yang Lu-Chan (1799–1872): Founded the Yang style

Yang Pan-Hou (1837–1892): Son of Yang Lu-Chan

Notes

CHAPTER 1. HISTORY OF THE TAI CHI CHI KUNG DISCHARGE FORM

1. Chang San-Feng, quoted in *The Taijiquan Classics*, trans. Barbara Davis, (Berkeley, Calif.: North Atlantic Books, 2004), 75.
2. Douglas Wile, trans., *Lost T'ai-Ch'i Classics from the Late Ch'ing Dynasty* (Albany: State University of New York Press, 1996), 112.
3. Benjamin Lo and Martin Inn, trans., *The Essence of Tai Chi Chuan: The Literary Tradition* (Berkeley, Calif.: North Atlantic Books, 1979), 11; and Bing F. YeYoung, *The Origins of Tai Chi—the Chang San Feng Camp*, www.literati-tradition.com/zhang_sanfeng_camp.html.
4. Wile, trans., *Lost T'ai-Ch'i Classics*, 114.
5. Lo and Inn, trans., *The Essence of Tai Chi Chuan*, 13.
6. Douglas Wile, trans., *T'ai-chi Touchstones: Yang Family Secret Transmissions* (New York: Sweet Ch'i Press, 1983), iii, xvi.
7. Chang San-Feng, quoted in *The Essence of Tai Chi Chuan*, trans. Lo and Inn, 25.
8. Wang Tsung-Yueh, quoted in *The Essence of Tai Chi Chuan*, trans. Lo and Inn, 33.
9. Wile, trans., *T'ai-chi Touchstones*, 39.
10. Yang Chen-Fu, "Ten Important Keys to Taijiquan," in *Tai Chi Secrets of the Yang Styles*, trans. Yang Jwing-Ming (Boston: YMAA Publications, 2001), 35.
11. Ibid., 100.
12. Ibid., 162.
13. Li I-Yu, quoted in *The Essence of Tai Chi Chuan*, trans. Lo and Inn, 76.
14. Xing-Han Liu, *Hidden Knowledge in the Taoist Martial Art* (Berkeley, Calif.: North Atlantic Books, 1998), 33.
15. Dong Hai-Chuan, quoted by Frank Allen and Tina Chunna Zhang in *The Whirling Circles of Ba Gua Zhang: The Art and Legends of the Eight Trigram Palm* (Berkeley, Calif.: Blue Snake Books, 2007), 178.

16. Ibid., 192.
17. Ibid., 195.
18. Ibid.

CHAPTER 2. WHY PRACTICE THE TAI CHI CHI KUNG DISCHARGE FORM?

1. Eva Wong, *Taoism: A Complete Introduction to the History, Philosophy and Practice of an Ancient Spiritual Tradition* (Boston: Shambhala, 1997), vii–viii.
2. Chang [Zhang] San-Feng, "The Oral Transmission of Zhang San-Feng's Lecture," in *Tai Chi Secrets of the Yang Styles*, trans. Yang Jwing-Ming (Boston: YMAA Publications, 2001), 137–39.
3. Walter Pagel, "Jung's Views on Alchemy," *Isis* 39, no. 1 (May 1948): 47.
4. Chang [Zhang] San-Feng, "The Thesis of Comprehending the Dao from Martial Arts," in *Tai Chi Secrets of the Yang Styles*, trans. Yang Jwing-Ming (Boston: YMAA Publications, 2001), 147.
5. Chang [Zhang] San-Feng, quoted in *Lost T'ai-Ch'i Classics from the Late Ch'ing Dynasty*, trans. Douglas Wile (Albany: State University of New York Press, 1996), 87.
6. Ibid.
7. Ibid.
8. Chang [Zhang] San-Feng, "The Oral Transmission of Zhang San-Feng's Lecture," in *Tai Chi Secrets*, trans. Jwing-Ming, 137.
9. Chang [Zhang] San-Feng, "The Thesis of Comprehending the Dao," in *Tai Chi Secrets*, trans. Jwing-Ming, 145.
10. Ibid.
11. Michael Daniels, "The Development of the Concept of Self Actualization in the Writings of Abraham Maslow," *Current Psychological Reviews* 2 (1982): 66.
12. Chang [Zhang] San-Feng, "The Thesis of Comprehending the Tao," in *Tai Chi Secrets*, trans. Jwing-Ming, 145.
13. Bruce Lee, *The Tao of Gung Fu: A Study in the Way of Chinese Martial Art*, ed. John Little (Boston: C. E. Tuttle, 1997), 136.
14. Yang Pan-Hou, "The Interpretation of Taiji Three Achievements of Scholarship and Martial Arts," in *Tai Chi Secrets*, trans. Jwing-Ming, 87–88.
15. Ibid., 89.

CHAPTER 3. PRINCIPLES OF DISCHARGE POWER

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Benjamin Lo and Martin Inn (Berkeley, Calif.: North Atlantic, 1979), 53.

2. Kostas Danaos, *The Magus of Java: Teachings of an Authentic Taoist Immortal* (Rochester, Vt.: Inner Traditions, 2000), 104–10.
3. Douglas Wile, trans., *T'ai-chi Touchstones: Yang Family Secret Transmissions* (New York: Sweet Ch'i Press, 1983), 15–24.
4. Cheng Man-Ching, "Master Cheng's Thirteen Chapters on T'ai-chi ch'uan," in *T'ai-chi Touchstones*, trans. Wile, 19.
5. Ibid., 21.
6. Ibid., 19.
7. Davidine Siaw-Voon Sim and David Gaffney, *Chen Style Taijiquan: The Source of Taiji Boxing* (Berkeley, Calif.: North Atlantic Books, 2002), 138.
8. Ibid. 139–40.
9. Chen Xiao-Wang quoted by C. P. Ong in "Carrying the Burden of Taiji Legacy," *Kung Fu Tai Chi Magazine* online, December 2009. See: www.kungfu magazine.com.
10. Chen Xiao-Wang quoted by Howard Choy in "Chen Xiao-Wang: Keeper of Taiji Secrets," available online at: http://www.shou-yi.org/taijiquan/chen-xiaowang-keeper-of-taiji-secrets.
11. Yang Chen-Fu, quoted in *Tai Chi Secrets of the Yang Styles*, trans. Yang Jwing-Ming (Boston: YMAA Publications, 2001), 158; and Sim and Gaffney, *Chen Style Taijiquan*, 141.
12. Lama Dondrup Dorje quoted online at: http://www.pathgate.org/martial_arts_thtr_00.html#defFaJing.
13. Ibid.
14. Ibid.
15. Douglas Wile, trans., *Lost T'ai-Ch'i Classics from the Late Ch'ing Dynasty* (Albany: State University of New York Press, 1996), 67.
16. Wu Yu-Hsiang, "Expositions of Insights," in *The Essence of Tai Chi Chuan*, trans. Lo and Inn, 47.
17. Chang [Zhang] San-Feng, "Tai Chi Chuan Ching," in *The Essence of Tai Chi Chuan*, trans. Lo and Inn, 19.
18. Chang [Zhang] San-Feng lists the trigrams as follows: Kan (abysmal), Li (clinging), Chien (creative), Kun (receptive), Chen (arousing), Hsun (gentle), Tui (joyous), and Ken (keeping still) in *Lost T'ai-Ch'i Classics*, trans. Wile, 87.
19. Tan Meng-Hsien, "Songs of the Eight Ways," in *T'ai-chi Touchstones*, trans. Wile, 28–35.
20. Ibid., 28.

21. Ibid., 29.
22. Ibid., 30.
23. Wu Yu-Hsiang, quoted in *The Essence of Tai Chi Chuan*, trans. Lo and Inn, 53.
24. Tan Meng-Hsien, "Songs of the Eight Ways," in *T'ai-chi Touchstones*, trans. Wile, 31.
25. Ibid., 35.

CHAPTER 4. WARM-UPS AND TECHNICAL EXERCISES

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2. David Kauss, *Mastering Your Inner Game* (Champaign, Ill.: Human Kinetics, 2000), 246.
3. Robert and Marilyn Kriegel, *The C Zone: Peak Performance Under Pressure* (Garden City, N.Y.: Anchor Press/Doubleday, 1984), 2.
4. McArdle, Katch, and Katch, *Essentials of Exercise Physiology*, 549.
5. Chang [Zhang] San-Feng, "Tai Chi Chuan Jing," in *The Taijiquan Classics*, trans. Barbara Davis (Berkeley, Calif.: North Atlantic Books, 2004), 75.
6. William Shakespeare, *A Midsummer's Nights Dream*, act 1, scene 1.
7. William Shakespeare, *Macbeth*, act 1, scene 5.
8. Michael Alter, *Science of Flexibility* (Champaign, Ill.: Human Kinetics, 2004), 159–60.
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10. Kuo Lien-Ying, *The Tai Chi Boxing Chronicle*, trans. Gordon Guttman (Berkeley, Calif.: North Atlantic Books, 1994), 64–66.
11. Li I-Yu, quoted in *Lost T'ai-Ch'i Classics from the Late Ch'ing Dynasty*, trans. Douglas Wile (Albany: State University of New York Press, 1996), 50.
12. Sim and Gaffney, *Chen Style Taijiquan*, 50.
13. Li I-Yu, quoted in *Lost T'ai-Ch'i Classics*, trans. Wile, 50.
14. Yang Pan-Hou, "Nine Secret Transmissions on Tai Chi Chuan: Secret of the Free Circle" in *T'ai-chi Touchstones: Yang Family Secret Transmissions*, trans. Douglas Wile (New York: Sweet Ch'i Press, 1983), 77.
15. Ibid., 78.
16. Li I-Yu, quoted in *Lost T'ai-Ch'i Classics*, trans. Wile, 50.
17. Yang Chen-Fu, quoted in *Tai Chi Secrets of the Yang Styles*, trans. Yang Jwing-Ming (Boston: YMAA Publications, 2001), 158.

18. Kuo Lien-Ying, *The Tai Chi Boxing Chronicle*, 70.
19. Wu Yu-Hsiang, "Expositions of Insights into the Practice of the Thirteen Postures," in *The Essence of Tai Chi Chuan: The Literary Tradition*, trans. Benjamin Lo and Martin Inn (Berkeley, Calif.: North Atlantic, 1979), 53.
20. Tan Meng-Hsien, "Songs of the Eight Ways," in *T'ai-chi Touchstones*, trans. Wile, 28–35.
21. Ibid., 33.
22. Ibid., 34.
23. Ibid., 35.

CHAPTER 7.
PUSH HANDS (TUI SHOU)

1. Mark Chen, *Old Frame Chen Family Taijiquan* (Berkeley, Calif.: North Atlantic Books, 2004), 182.
2. Yang Pan-Hou, "Nine Secret Transmissions on Tai Chi Chuan: Secret of the Free Circle" in *T'ai-chi Touchstones: Yang Family Secret Transmissions*, trans. Douglas Wile (New York: Sweet Ch'i Press, 1983), 77.
3. Davidine Siaw-Voon Sim and David Gaffney, *Chen Style Taijiquan: The Source of Taiji Boxing* (Berkeley, Calif.: North Atlantic Books, 2002), 163.
4. Yang Pan-Hou, quoted in *Tai Chi Secrets of the Yang Styles*, trans. Yang Jwing-Ming (Boston: YMAA Publications, 2001), 45–46. Yang translates the four stages as attaching (*zhan*), adhere (*lian*), connect (*nian*), and follow (*sui*).
5. Wu Yu-Hsiang, "Expositions into the Insights of the Thirteen Postures," in *The Essence of Tai Chi Chuan: The Literary Tradition*, trans. Benjamin Lo and Martin Inn (Berkeley, Calif.: North Atlantic Books, 1979), 57.
6. Yang Chen-Fu, quoted in *T'ai-chi Touchstones*, trans. Wile, 12.
7. Yang Pan-Hou, quote from *Yang Family Forty Chapters*, in *Lost T'ai-Ch'i Classics from the Late Ch'ing Dynasty*, trans. Douglas Wile (Albany: State University of New York Press, 1996), 66.
8. Wang Tsung-Yueh, "Tai Chi Chuan Manual," in *Lost T'ai-Ch'i Classics*, trans. Wile, 83.
9. Yang Jwing-Ming, trans., *Tai Chi Secrets*, 47.
10. Chang [Zhang] San-Feng, "Tai Chi Chuan Jing," in *The Taijiquan Classics*, trans. Barbara Davis (Berkeley, Calif.: North Atlantic Books, 2004), 75.
11. Tan Meng-Hsien, "Songs of the Eight Ways," in *T'ai-chi Touchstones*, trans. Wile, 34.

CHAPTER 8. MARTIAL APPLICATIONS OF THE DISCHARGE FORM

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CHAPTER 9. HOME PRACTICE

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About the Authors

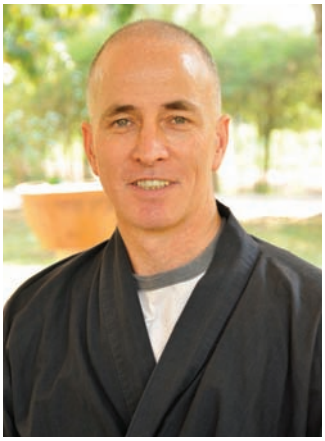
MANTAK CHIA

Mantak Chia has been studying the Taoist approach to life since childhood. His mastery of this ancient knowledge, enhanced by his study of other disciplines, has resulted in the development of the Universal Healing Tao system, which is now being taught throughout the world.

Mantak Chia was born in Thailand to Chinese parents in 1944. When he was six years old, he learned from Buddhist monks how to sit and "still the mind." While in grammar school he learned traditional Thai boxing, and he soon went on to acquire considerable skill in aikido, yoga, and Tai Chi. His studies of the Taoist way of life began in earnest when he was a student in Hong Kong, ultimately leading to his mastery of a wide variety of esoteric disciplines, with the guidance of several masters, including Master I Yun, Master Meugi, Master Cheng Yao Lun, and Master Pan Yu. To better understand the mechanisms behind healing energy, he also studied Western anatomy and medical sciences.

Master Chia has taught his system of healing and energizing practices to tens of thousands of students and trained more than two thousand instructors and practitioners throughout the world. He has established centers for Taoist study and training in many countries around the globe. In June of 1990 he was honored by the International

Congress of Chinese Medicine and Qi Gong (Chi Kung), which named him the Qi Gong Master of the Year.



ANDREW JAN

Dr. Andrew Jan is a senior instructor for the Universal Healing Tao system. He first became an instructor in 1992 and has been a senior instructor since 2001. He began studying martial arts as a young child and has been studying the internal arts of Wu Shu for 25 years. His teachers include Chen Lu, John Yuen (Blackburn Tai Chi Academy), Liu De Ming (Associate Professor Martial Arts, Fujien University), Huo Dong Li in Beijing (Senior Judge, Beijing Wu Shu Federation), Zhu Tian-Cai (one of the contemporary "tigers" of Chen Jia Guo), and of course Master Mantak Chia.

Andrew Jan has won multiple medals in Push Hands competitions in Victoria, New South Wales, and won a Full-contact All Styles, Lightweight Division title in 1984. In 2000, he became the National Tai Chi and Wu Shu Champion in the over-forty section and also won first place in Wu Style, Yang Style, and Weapon divisions.

Dr. Jan is currently an Emergency Medicine specialist and Director of Emergency Medical Services at a large private hospital in Perth, Western Australia. He is also a qualified acupuncturist with the Medical Acupuncture College. He was born in Australia to a Chinese father and an English mother. Dr. Jan has always found himself exploring and synthesizing Eastern and Western traditions, an ability he applies to healing as well as martial arts. He is married to his loving wife and fellow practitioner, Fiona, with one daughter, Nikita.

The Universal Tao System and Training Center

THE UNIVERSAL TAO SYSTEM

The ultimate goal of Taoist practice is to transcend physical boundaries through the development of the soul and the spirit within the human. That is also the guiding principle behind the Universal Tao, a practical system of self-development that enables individuals to complete the harmonious evolution of their physical, mental, and spiritual bodies. Through a series of ancient Chinese meditative and internal energy exercises, the practitioner learns to increase physical energy, release tension, improve health, practice self-defense, and gain the ability to heal him- or herself and others. In the process of creating a solid foundation of health and well-being in the physical body, the practitioner also creates the basis for developing his or her spiritual potential by learning to tap in to the natural energies of the sun, moon, earth, stars, and other environmental forces.

The Universal Tao practices are derived from ancient techniques rooted in the processes of nature. They have been gathered and integrated into a coherent, accessible system for well-being that works directly with the life force, or chi, that flows through the meridian system of the body.

Master Chia has spent years developing and perfecting techniques for teaching these traditional practices to students around the world

through ongoing classes, workshops, private instruction, and healing sessions, as well as books and video and audio products. Further information can be obtained at www.universal-tao.com.

THE UNIVERSAL TAO TRAINING CENTER

The Tao Garden Resort and Training Center in northern Thailand is the home of Master Chia and serves as the worldwide headquarters for Universal Tao activities. This integrated wellness, holistic health, and training center is situated on eighty acres surrounded by the beautiful Himalayan foothills near the historic walled city of Chiang Mai. The serene setting includes flower and herb gardens ideal for meditation, open-air pavilions for practicing Chi Kung, and a health and fitness spa.

The center offers classes year round, as well as summer and winter retreats. It can accommodate two hundred students, and group leasing can be arranged. For information worldwide on courses, books, products, and other resources, see below.

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Martial Arts/Tai Chi

Fa Jin, an advanced yang style of Tai Chi, complements the physical, mental, and spiritual conditioning available through solo Tai Chi practice and the internal martial arts of Taoism. Fa Jin enables adepts to harness the energy of yin, yang, and the earth in the lower tan tien and discharge it as an extremely close-range yet explosively powerful blow to be used in self-defense and partner practice as well as in healing techniques.

Integrating the teachings of many Taoist masters, including Chang San-Feng, the creator of Tai Chi; Wang Tsung-Yueh, the legendary 19th-century master; Bruce Lee, the actor and martial artist who made the "one-inch punch" technique famous; and the Magus of Java, a living master able to discharge energy in the form of electric shocks, this book explores the history, philosophy, internal exercises, and physical practices of Fa Jin. Drawing on Iron Shirt Chi Kung and Tan Tien Chi Kung techniques, Master Mantak Chia and Andrew Jan reveal the secrets to collecting yin and yang in the lower tan tien and discharging the energy with seemingly effortless yet explosive force. Illustrating several routines of the Tai Chi partner practice of "Push Hands" (Tui Shou), they explain how to apply Fa Jin techniques by "listening" to your opponent's intentions and countering the natural instinct to resist force with force through yielding softness and redirection. The authors also detail how to prepare for this advanced practice through stretching, meditation, breathing, relaxation, and energetic exercises.

Mantak Chia

MANTAK CHIA, world-famous Inner Alchemy and Chi Kung master, founded the Universal Healing Tao System in 1979. He has taught and certified tens of thousands of students and instructors from all over the world and is the author of 40 books, including *Iron Shirt Chi Kung* and *The Inner Structure of Tai Chi*. ANDREW JAN is a senior instructor for the Universal Tao and a former Australian National Tai Chi and Wu Shu Champion. He lives near Perth, Australia.

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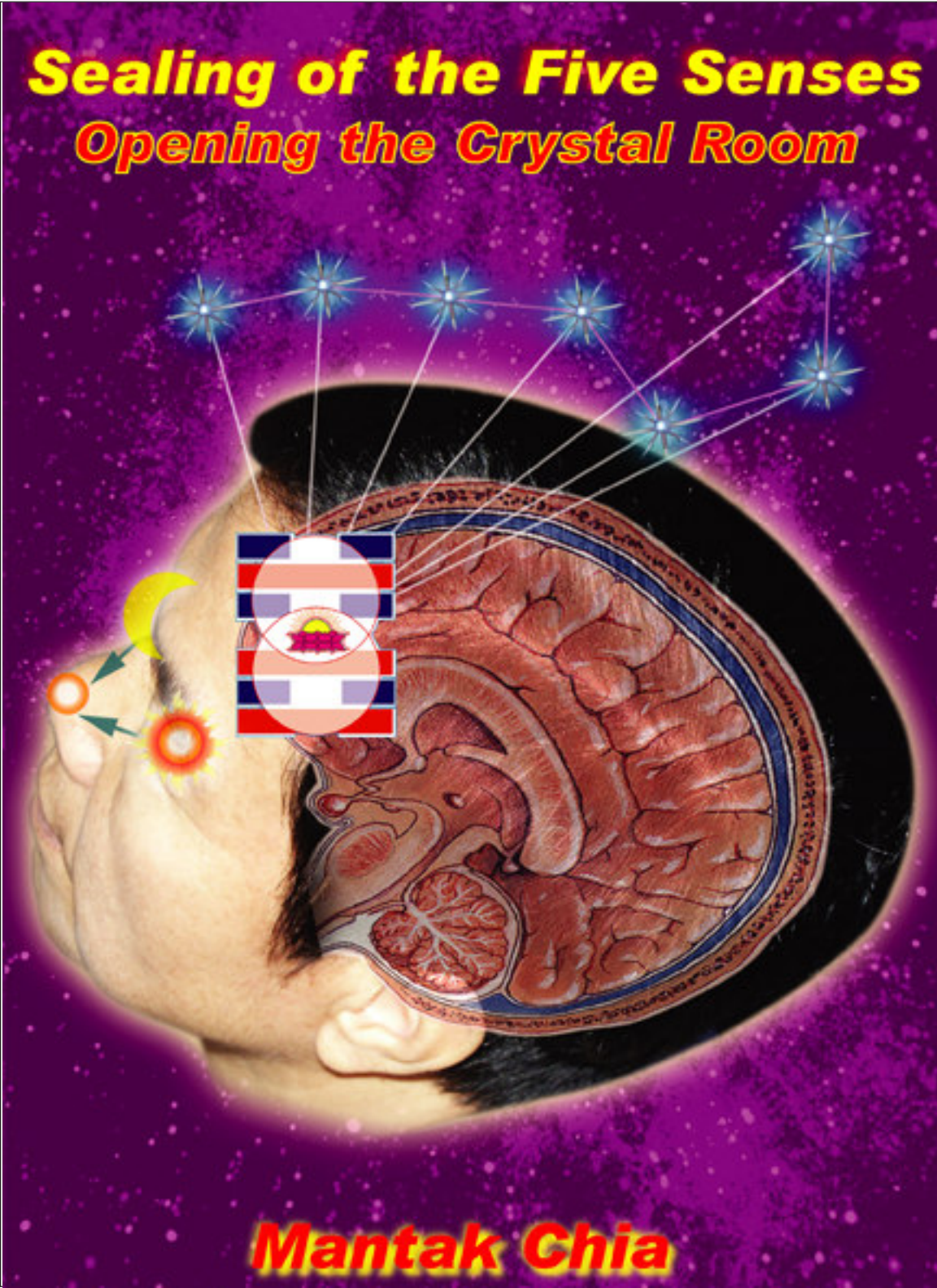

Mantak Chia

Sealing of the Five Senses

Opening the Crystal Room

Mantak Chia

Edited by:

Saumya Comer

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The meditations, practices and techniques described herein are ***not*** intended to be used as an alternative or substitute for professional medical treatment and care. If any readers are suffering from illnesses based on mental or emotional disorders, an appropriate professional health care practitioner or therapist should be consulted. Such problems should be corrected before you start training. This booklet does not attempt to give any medical diagnosis, treatment, prescription, or remedial recommendation in relation to any human disease, ailment, suffering or physical condition whatsoever.

Sealing of the Five Senses

Our senses are like antennas which receive waves of vibration, sound and light that come to us. If that wave makes sense, our brains will start to think. Thinking consumes more energy than any other bodily activity. As humans we can not stop thinking, looking and listing nor stop fantasizing. This sensory-linked brain function in reaction to the external world is known as the monkey mind.

Our mind connects with the heart. When the mind is disturbed, the heart too will become disturbed. The good-minded good heart is the compassionate heart (harmony), therefore its good intention connects to the earth and nourishes it. When the wood meets the earth, the wood will grow. When the water meets the earth, the water will gather. When the metal meets the earth, the metal will condense. When the fire meets the earth, the fire will tone down.

If we can make the senses stronger, and seal the senses with external and internal force, we can accumulate profound energy.

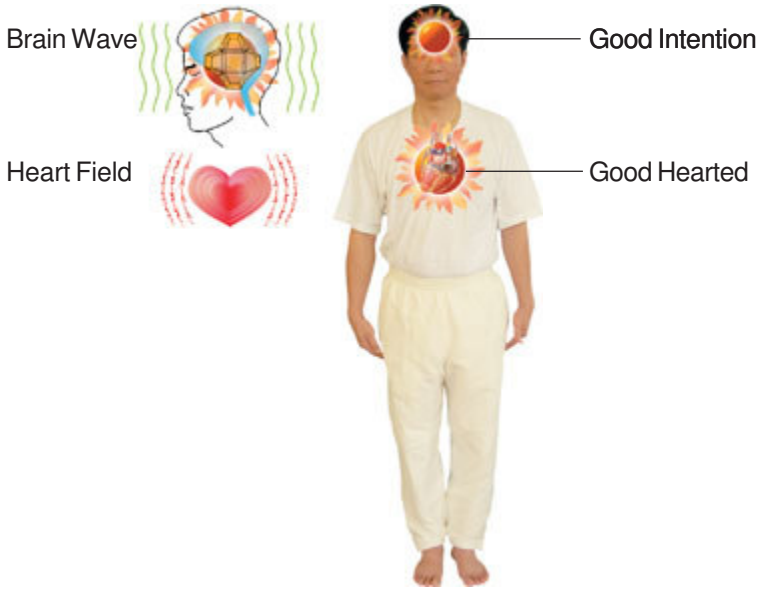

Fig. 1 *Waves of Vibration Coming into Senses*

1. First, we will strengthen the senses.
2. Second, we will make the connection.
3. Third, we will seal the senses.

The formula of Sealing the Five Senses effects a literal transmutation of the warm current or Chi into spiritual energy or energy of the soul. To do this, we must seal the five senses, for each one is an open gate of energy loss. The power flows out from each of the sense organs unless there is an esoteric sealing of these doors of energy. They must release energy only when specifically called upon to convey information.

Abuse of the senses leads to far more energy loss and degradation than people ordinarily realize. Examples of misuse of the senses are as follows: if you look too much, the seminal fluid is harmed; listen too much the mind is harmed; cry too much, and the blood is harmed; have sexual intercourse too much, and the marrow is harmed.

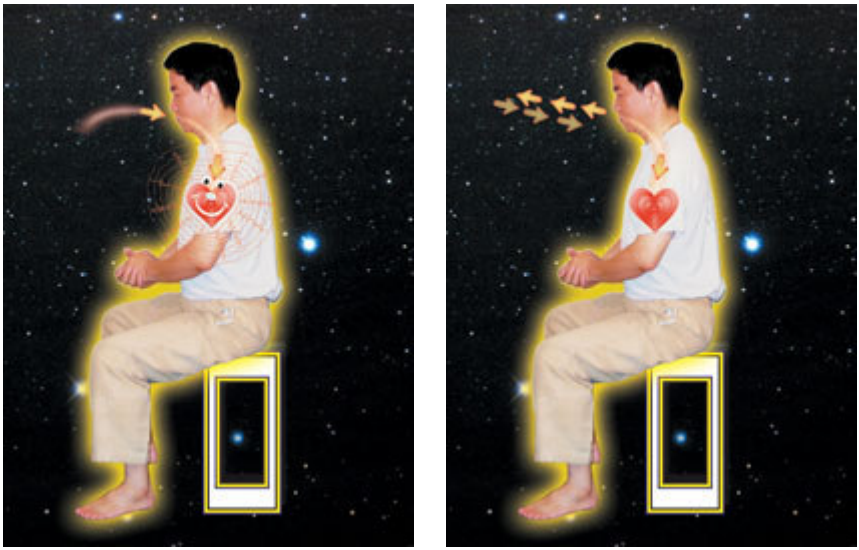

Fig. 2 *Sense Energy Turning inward. Content Person sitting in Meditation. Vibration turned Inward.*

A. First Formula Strengthening the Senses

The first step of strengthening our senses is very important. When the senses are strengthened we will be less affected by the stimuli coming from the outside world as criticism or praise. This strength leads to a connection with our center, where the mind becomes still, and the thoughts rest. A great deal of energy is spent thinking warring. Sealing the senses conserves this energy to be used for spiritual development.

Turning the senses inwardly to the center of the brain and down to the navel, and use the three cauldron coupling to help the suck in the natural and universal force.

1. The left ear corresponds to the metal element force.
2. The right ear corresponds to the wood element force.
3. The chin and the mouth correspond to the water element.
4. The nose corresponds to the earth star; this will tonify the earth.
5. The left eye corresponds to the sun.
6. The right eye corresponds to the moon.
   (Raise the water and lower the fire, and let it couple on the tip of nose.

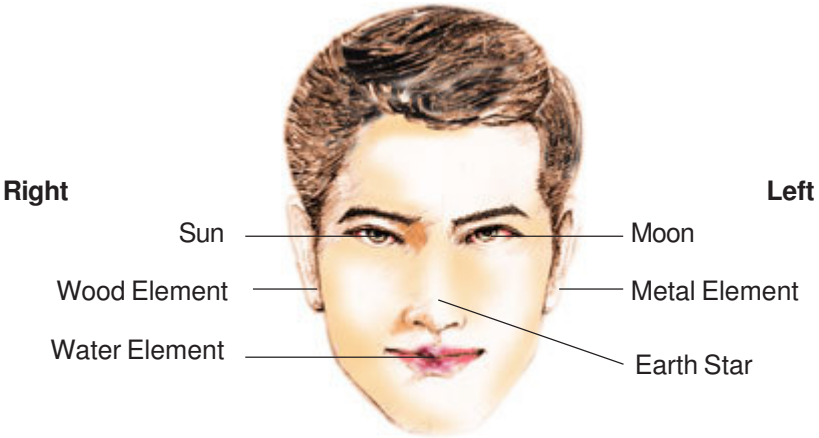

Fig. 3 *Elements Connected to Senses*

Practice Formula One

a. Be aware of the left ear and the metal force.
b. Be aware of the right ear and the wood force.
c. Draw these two forces together into the crystal room, combine them into the fire force.

Fig. 4 *Metal and Wood Transforming to Fire Crystal Room*

d. Be aware of the mouth and breath into the throat center and the lower abdominal suction and the tiger and the dragon breath to create the suction, and feel the Chi entering the mouth and gathering the water force into the Chi Ball.
e. Create the collection points to contain the water in the mouth.

Fig. 5 *Coupling of Five and Water*

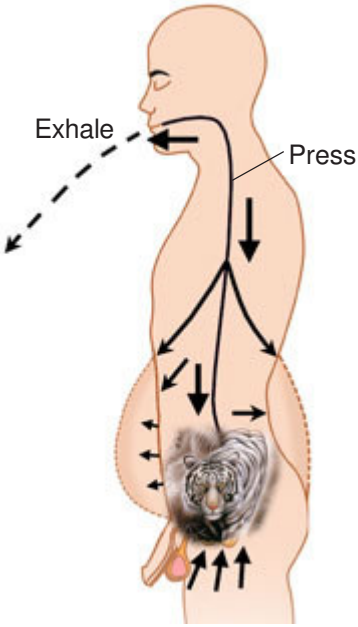

Fig. 6 *Dragon and Tiger breath. Exhale and compress the Chi down to lower abdomen.*

f. Let the water rise up, and lower the fire down and couple at the tip of the nose. Turn the awareness inward and feel the three-cauldron coupling at the same time.

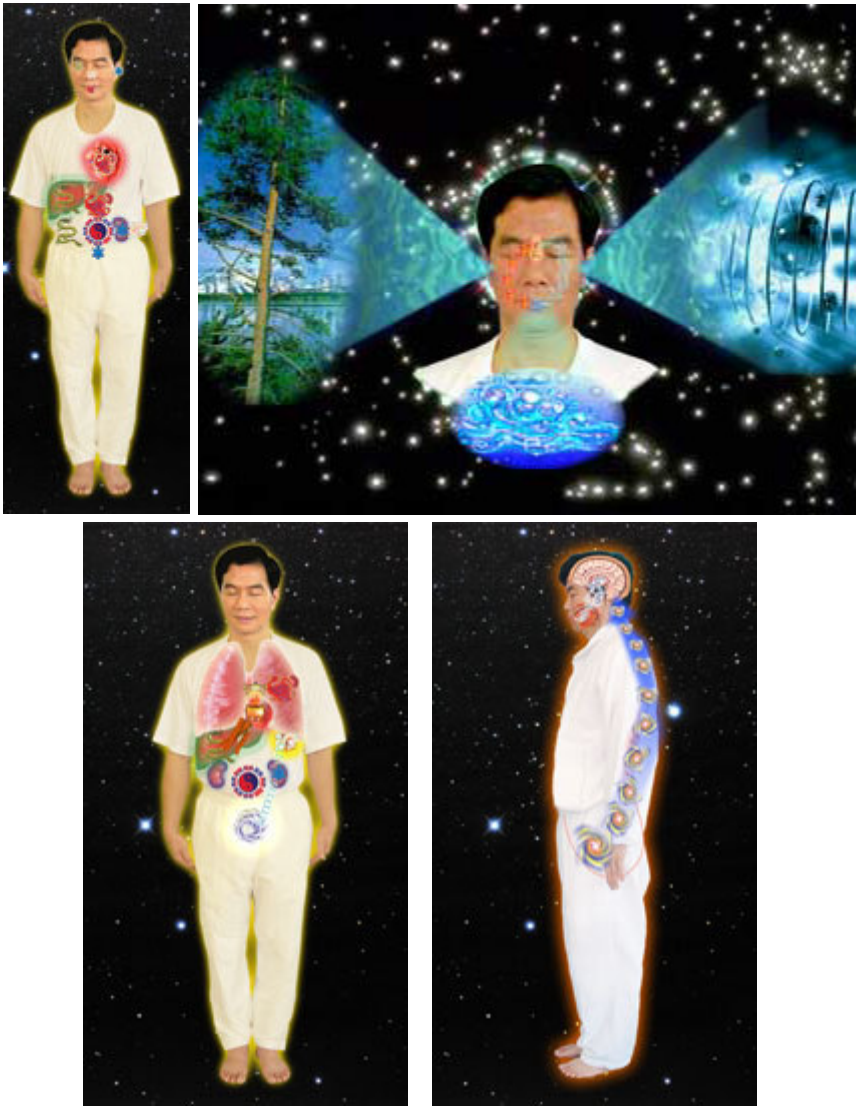

Fig. 7 *Coupling of Five and Water*

g. Let it steam to the crystal room. The lower cauldron steams to the organs and the glands.

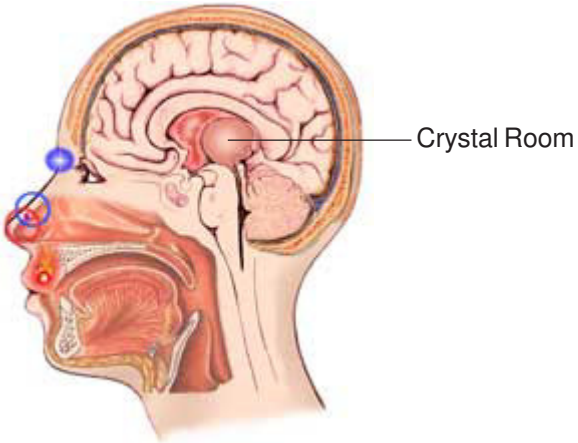

Fig. 8 *Steam to the Crystal Room*

h. Feel the four cauldrons couple at the same time, the normal breath stop and the true breath begin. Let the skin start to breath first, and the bones in the arms and the legs.

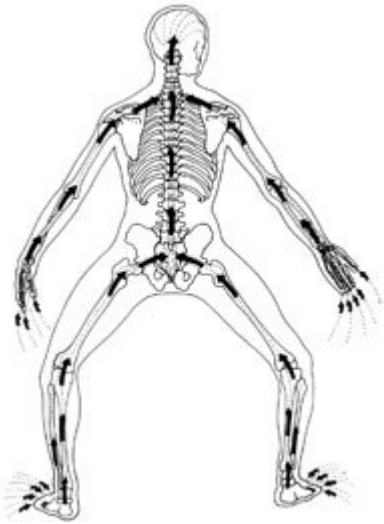

Fig. 9 *Skin, Bones Breathing*

i. Suck in the crown and expand to the nature and the universe. Suck in the mideyebrow, the third eye, the palms the soles of the feet, the perineum, the sacrum and the Door of Life. Eventually the whole body is breathing.

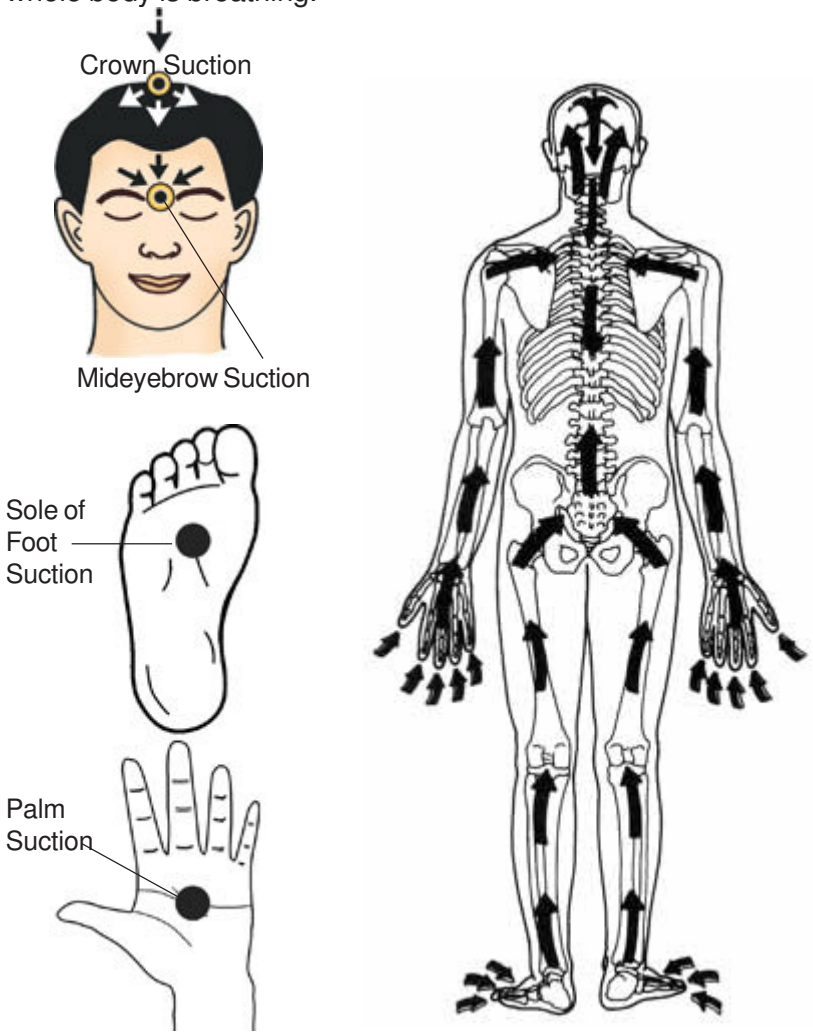

Fig. 10 *Whole Body Breathing*

B. Practice Formula Two

a. Be aware of the left eye as sun power.
b. Be aware of the right eye as moon power.
c. Combine these two forces into the bridge of the nose and let them become fire force.

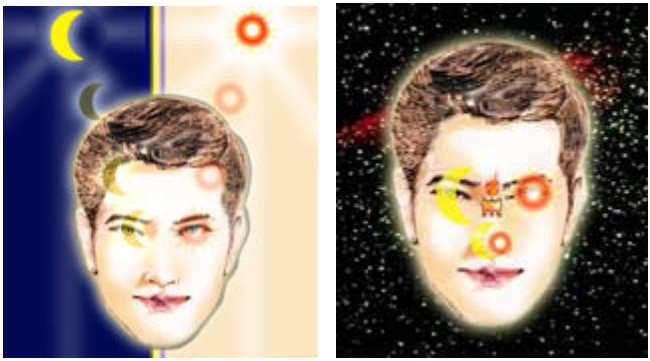

Fig. 11 *Combine to Nose*

d. Be aware of the Chi in the mouth, use the throat center and the lower abdominal and the Tiger and Dragon breath to create the suction to breathe in the external Chi to form a chi ball in the mouth.

e. Raise the water and lower the fire and let them couple at the tip of the nose.

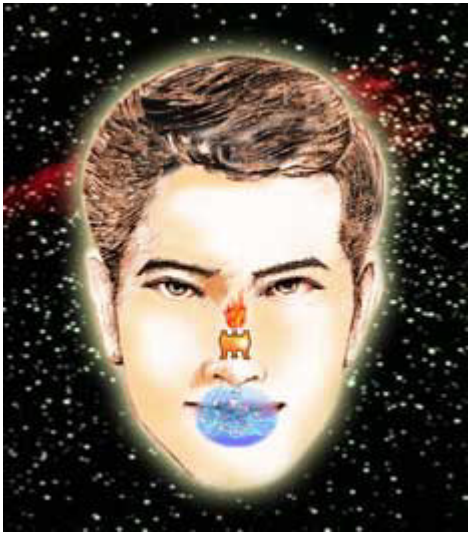

Fig. 12 *External Chi*

f. Feel the four cauldrons couple at the same time, the normal breath stop and the true breath begin. Let the skin start to breath first and the bones in the arms and the legs.

Fig. 13 *Skin and Bones start to breathe.*

g. Suck in the crown and expand to the nature and the universe. Suck in the mideyebrow, the third eye, the palms the soles of the feet, the perineum, the sacrum and the Door of Life. Eventually the whole body is breathing.

Fig. 14 *Eventually the whole body is breathing.*

C. Practice Formula Three: Sealing of the Five Senses

a. The left ear connects to the left kidney, known as the true kidney, the activator of the stored energy of the kidneys.

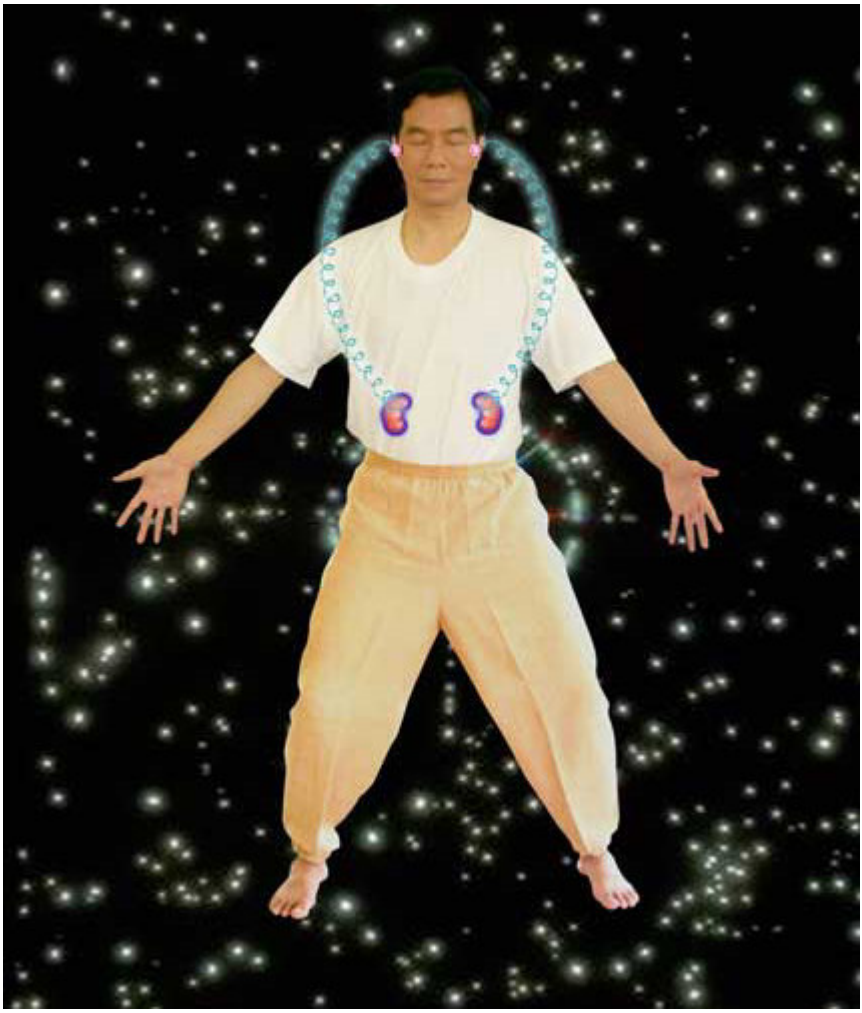

Fig. 15 *Stored Energy of the Kidneys*

b. The right car connects to the right kidney, which is yin, and is represented by a Weaving Maiden who stores the essence of the sexual energy (sperm and ovum), as well as the inner yang that attracts the active yang known as the Gate of Life.

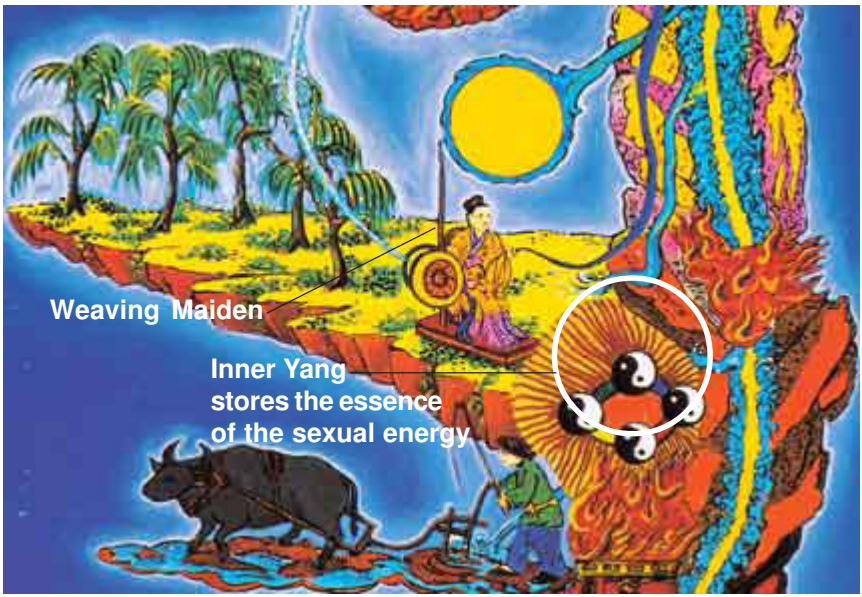

Fig. 16 *Weaving Maiden who stores the essence of the sexual energy.*

c. Be aware of the left kidney as fire force and let it gradually rise up to the left ear, creating a collection point to contain the fire force.

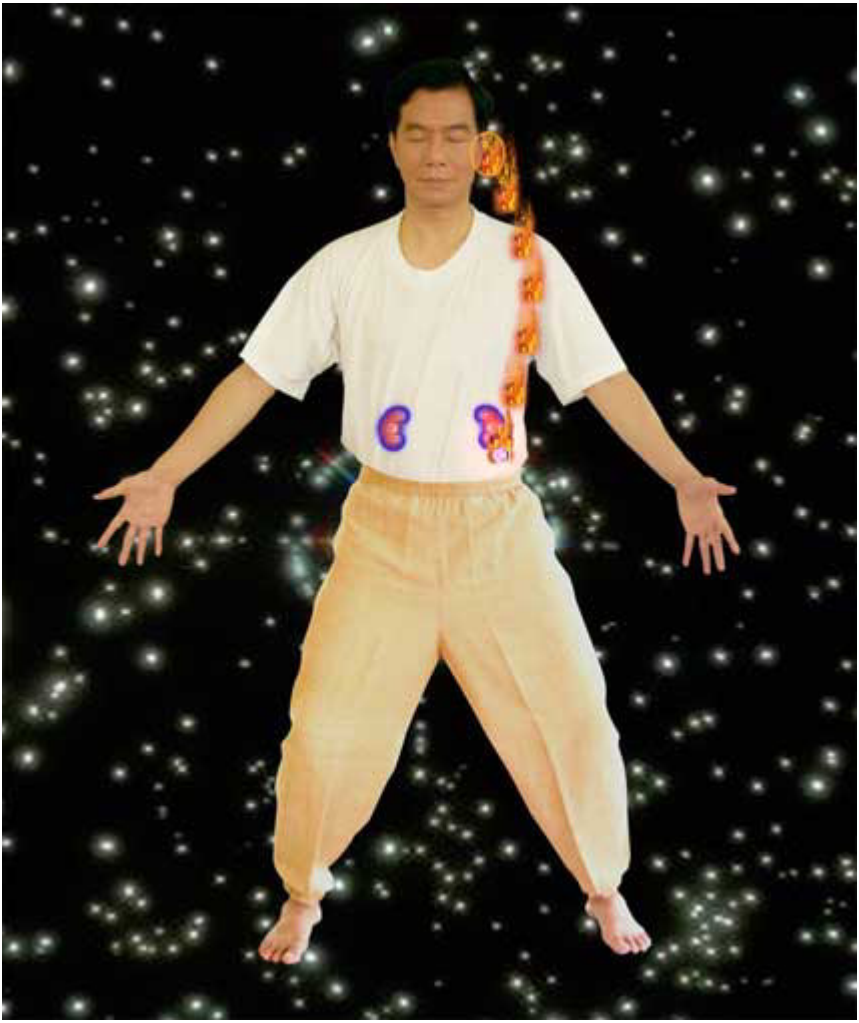

Fig. 17 *Left ear creating a collection point to contain the fire force.*

d. Be aware of the lower cauldron. Feel the fire start to warm the abdomen. The fire and steam power goes down to the sexual organs to transform the sexual energy into Chi or arousal sexual energy. Let this energy rise to the right kidney to activate the stored essence of sexual energy, the inner yin. Feel the connection of the right kidney to the right ear and let the essence yin energy rise up the ear. Create a collection point to contain the energy.

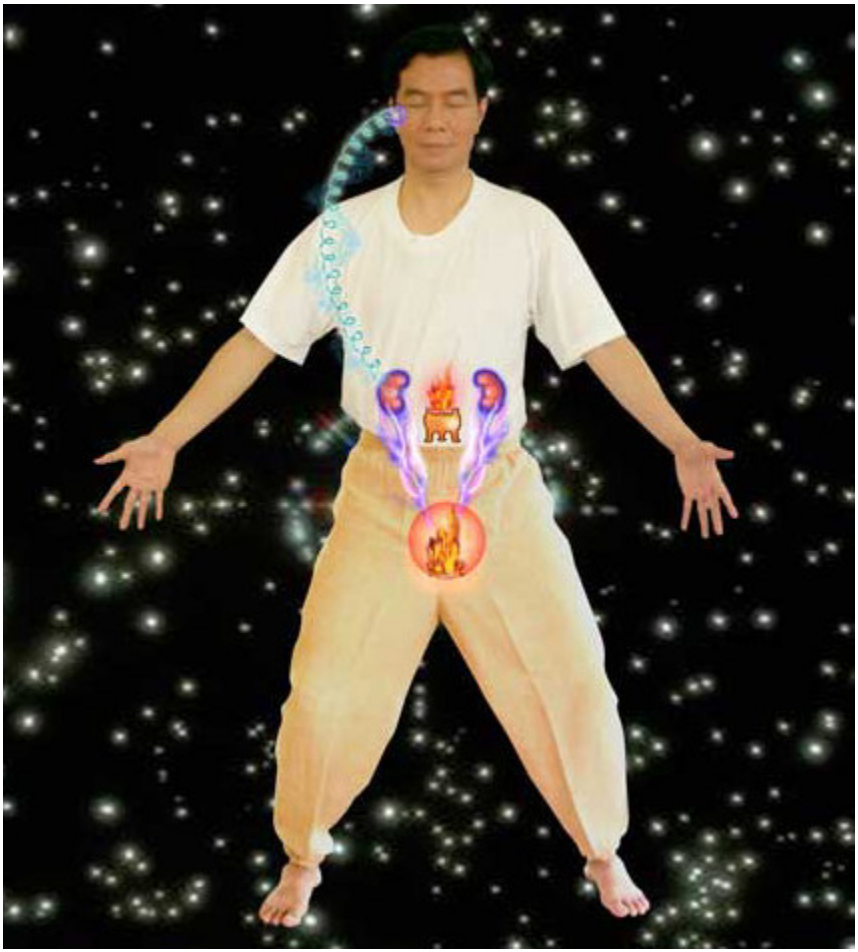

Fig. 18 *Create a collection point to contain the energy.*

e. Let the left and right ear, fire and water couple in the crystal room (middle of the ear).

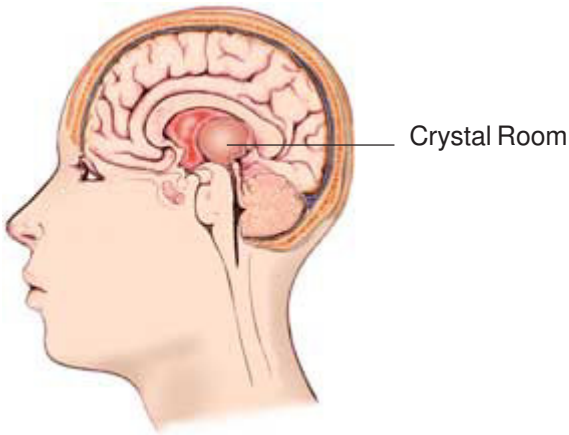

Fig. 19 *Fire and water couple in the crystal room*

f. Be aware of the mouth and gather the water force into a Chi Ball.

g. Let the water and fire couple at the nose, the earth.

Fig. 20 *Connecting to Earth*

D. Practice Formula Four: Sealing of the Five Senses

1. Clean out the Thrusting Channels. Be aware of the sole of the feet and feet, the universe force and earth force, rising up to the left side of the sexual organ and up the left thrusting channel and up to the left side of the crown.
2. Activate the Sexual Energy in the Lower Tan Tien.

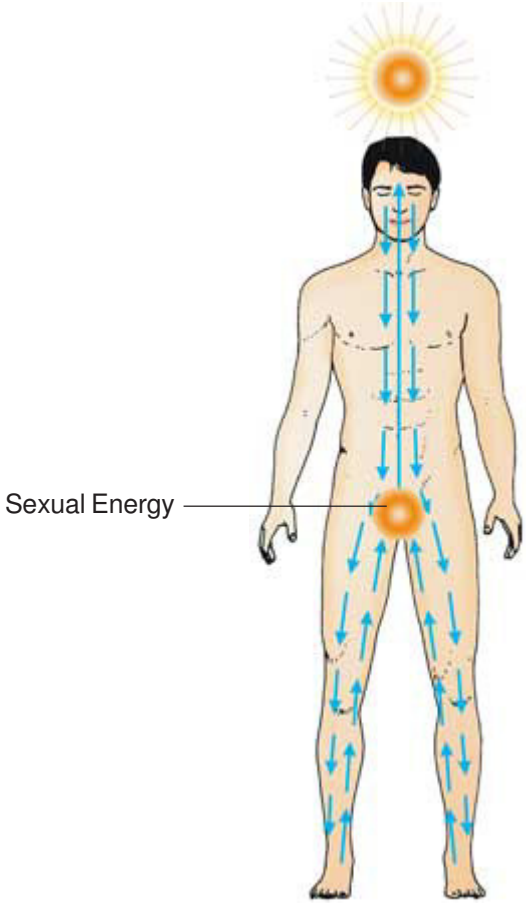

Fig. 21 *Activate Sexual Energy*

3. Turn the Wheel.
   a. Up the spine to the T-11 and then down to the Lower Tan Tien.
   b. Up the spine to the C-7 and then down to the solar plexus.
   c. Up the spine to the brain and then down to the heart.

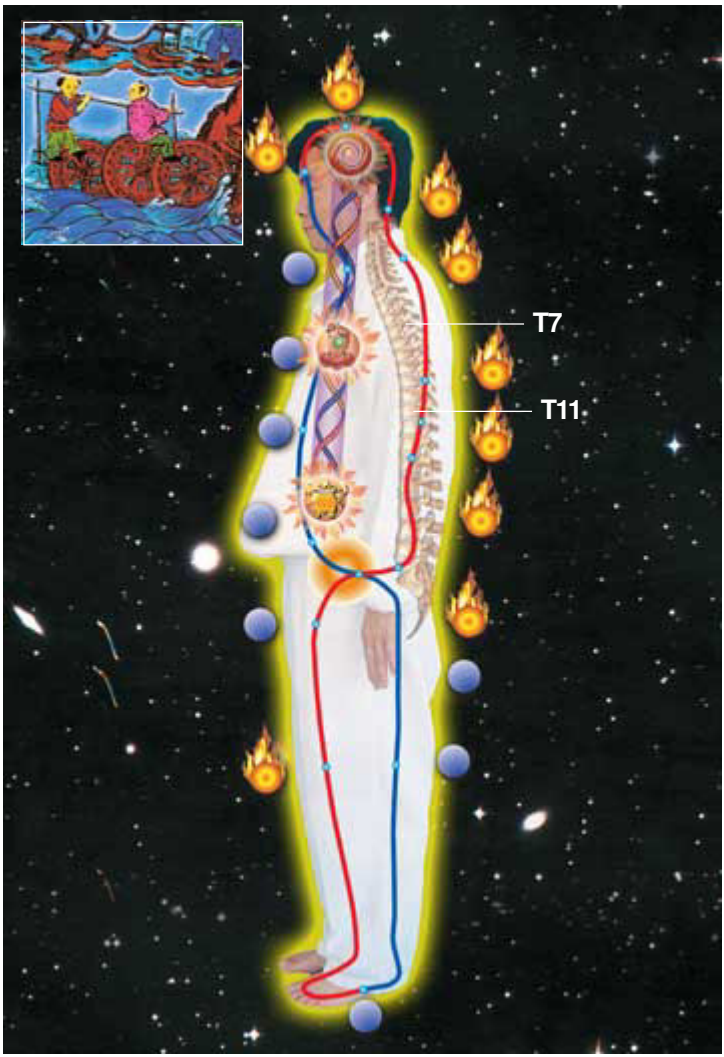

Fig. 22 *Turn the Wheel*

4. Build the Aura
   a. Breathe red mist into the heart.
      1. Breathe out any gray color.
      2. From the heart, send out the red mist to create an aura around the body.

Fig. 23 *Breathe into the heart.*

b. Breathe yellow mist into the spleen.

1. Breathe out any gray color.
2. From the spleen, send the yellow mist to all over the body and send radiance out around the body.
3. From the mouth, breathe out the yellow mist to create an aura.

Fig. 24 *Breathe into the Spleen.*

c. Breathe white mist into the lungs.

1. Breathe out any gray color.
2. From the lungs, send the mist to the nose and out the nose and the skin.
3. From the nose, breathe out the white mist to create an aura.

Fig. 25 *Breathe into the Lungs.*

d. Breathe blue mist into the kidneys.

1. Breathe out any gray color.
2. From the kidneys, send the mist to the ears and send radiance out for whole body radiance.
3. From the ears, breathe out the blue mist to create an aura.

Fig. 26 *Breathe into the Kidneys.*

e. Breathe green mist into the liver.

1. Breathe out any gray color.
2. From the liver, send the mist to the eyes.
3. From the eyes, breathe the green mist out to create an aura.

Fig. 27 *Breathe into the Liver.*

Fig. 28 *Finish building the Aura.*

4. Bring the sun down to the left eye to be the fire.
5. Bring the moon down to the right eye to be the water.

Right

Left

Fig. 29 *Sun and Moon down to the Eyes*

6. Bring the fire from the left eye to the bridge of the nose.
7. Bring the water from the right eye to the mideyebrow.

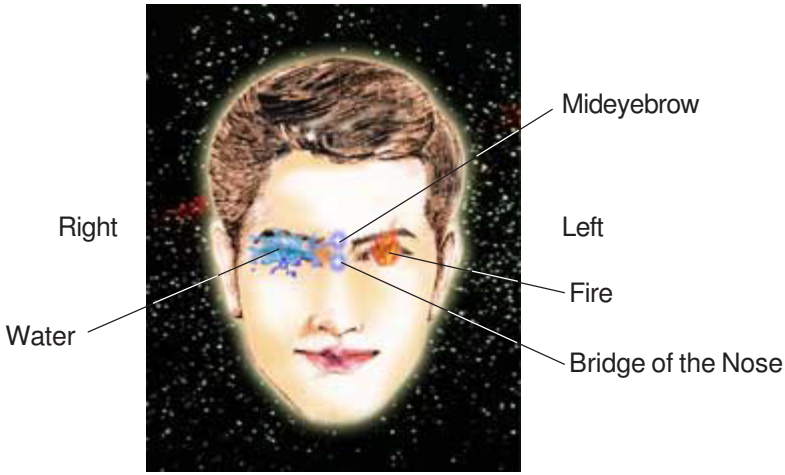

Fig. 30 *Sun and Moon down to the Eyes*

8. Start the coupling (this differs from practice formula#2 where we just combined the sun and moon to create one fire energy, now we couple two different energies).
9. The steam will come out the third eye.

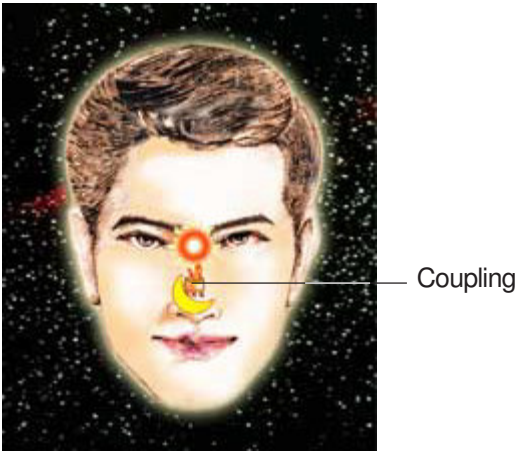

Fig. 31 *Combine the Sun and Moon*

10. Gather the sexual Energy from the sexual organs and bring it to the collection point in the mouth.

Fig. 32 *Gather the Sexual Energy.*

11. The steam produced from the sun and moon coupling will now become the fire for the coupling at the tip of the nose. Bring the fire energy down to the upper lip.

Fig. 33 *Energy down to Upper Lip.*

12. Bring the water energy from the mouth up to the bridge of the nose.

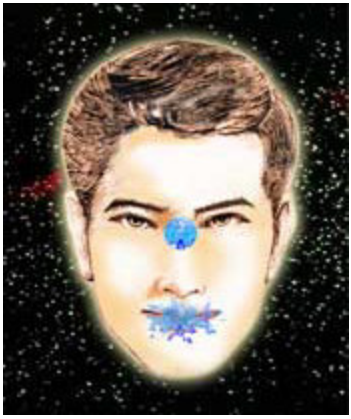

Fig. 34 *Energy up to the bridge of the nose*

13. Start the Coupling at the tip of the nose.

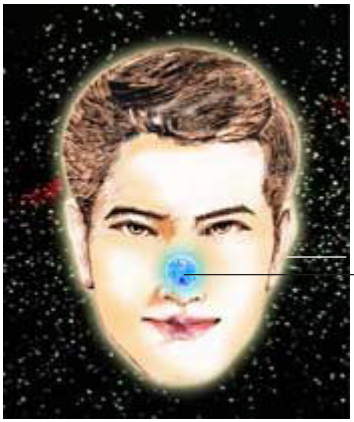

Fig. 35 *Coupling Tip of the Nose*

14. This coupling does not produce steam, yet you will clearly feel the suction.
15. Let the fire cool.
16. Bring the energy down to the Lower Tan Tien.

E. Practice Formula Five: Sealing of the Five Senses

The harmonizing of the four forces (stopping the draining of the essence)

1. When the eyes (green dragon, east, wood) are not seeing, the eternal soul will stay in the liver. Turn the eye power inward.

2. When the ears (Tortoise, north, water) are not hearing, the sexual essence stay in the kidneys. Turn the ears inward.

3. When the tongue (red pheasant, south, fire) is not speaking the spirit stays in the heart.

4. When the nose (white tiger, west, metal) is not smelling, the corporal soul (pui) stays in the lungs. Holding the tongue power inward regulates the breath.

5. When all four are not moving, these four essences will harmonise at the earth and will be nourished, strengthened, and sealed.

Fig. 36 *Five Sealing of the Five Senses*

When all the four essences are not draining out, sexual essence - water, spirit - fire, eternal soul - wood, and the corporal soul (pui) - metal all will gather at the earth, at the tip of the nose.

When there is no desire in the heart - fire is not activated, the green dragon in the liver will sound, the red pheasant will close its wings, and the sexual essence stays and gathers. Wood burns to become fire, and thus gives birth to the heart energy. The white tiger (Lung) gives energy to the water (kidney) which is the life essence (body). If we do not drain out the life essence (take care of our body) the white tiger will sound, the wind will start to move. The tortoise will stay dormant, the sexual essence will be conserved and stay in. When the sexual essence and the Chi stays in us, the metal, wood, water, fire forces will harmonize together and not leak to the earth. So the sexual essence, spirit, eternal soul will gather in the good intention.

1. Clean out the Thrusting Channels.
2. Activate the Sexual Energy in the Lower Tan Tien.
3. Turn the Wheel.
    a. Up the spine to the T-11 and then down to the Lower Tan Tien.
    b. Up the spine to the C-7 and then down to the solar plexus.
    c. Up the spine to the brain and then down to the heart.
4. Build the Aura
    a. Breathe red mist into the heart.
        1. Breathe out any gray color.
        2. From the heart send out the red mist to create an aura around the body.
    b. Breathe yellow mist into the spleen.
        1. Breathe out any gray color.
        2. From the spleen, send the yellow mist to the nose.
        3. From the nose, breathe out the yellow mist to create an aura.
    c. Breathe white mist into the lungs.
        1. Breathe out any gray color.
        2. From the lungs, send the mist to the nose.
        3. From the nose, breathe out the white mist to create an aura.

d. Breathe blue mist into the kidneys.
   1. Breathe out any gray color.
   2. From the kidneys, send the mist to the ears.
   3. From the ears, breathe out the blue mist to create an aura.

e. Breathe green mist into the liver.
   1. Breathe out any gray color.
   2. From the liver, send the mist to the eyes.
   3. From the eyes breathe the green mist out to create an aura.

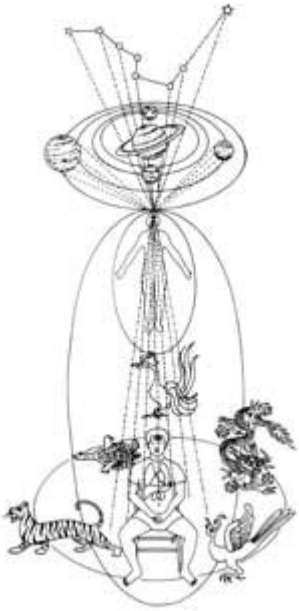

Fig. 37 *The Pill Connecting to the Dipper*

   4. Send out the pill to connect with the Big Dipper.
   5. Bring the Big Dipper down and connect it to the left and right temples, left and right mastoid, the chin, the base of the skull, and the crown.
   6. Bring the North Star into the crystal room.
   7. See the Big Dipper full of violet light; that light is now pouring into your crown.

8. Draw the Sun down to the left eye to collect the fire energy.
9. Draw the Moon down to the right eye to collect the water energy.
10. Bring the fire to the bridge of the nose.
11. Bring the water to the mideyebrow.
12. Draw the fire and water together and begin the coupling and simmer slowly and send the steam up to the third eye.
13. Draw the fire energy up from the left kidney to the left ear collection point.
14. Draw the Sexual Energy up from the sexual organs and the right kidney to the right ear collection point.

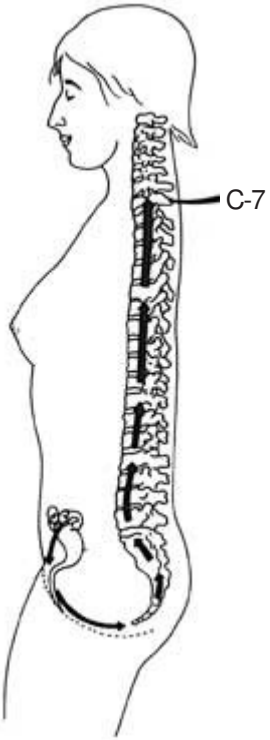

Fig. 38 *Sexual Energy Rising Up*

15. Draw the fire and water into the crystal room and begin the coupling. The steam produced here will become the fire for the next coupling.
16. Bring the Sexual Energy up to the Pineal Gland and allow it to drip down to the mouth. Mix it with the Saliva and fill the mouth with the sexual energy.
17. Draw the Fire Energy down from the Crystal Room to the upper lip.
18. Draw the Water Energy up from the mouth to the bridge of the nose.
19. Couple at the tip of the nose.
20. Be aware of the ears. Feel the blue energy turning into the tortoise in each ear to seal and protect the ears.
21. Be aware of the nose. Feel the white energy turning into the white tiger in the nose to seal and protect the nose.
22. Be aware of the eyes. Feel the green energy turning into the green dragon in the eyes to seal and protect the eyes.
23. Be aware of the tongue. Feel the red energy turning into the red pheasant at the tongue and in the mouth to seal and protect them.
24. Draw the green, wood energy of the eyes down to the tongue (fire) and combine the two to create one fire energy. Send the fire to the crystal room.
25. Draw the white, metal energy from the nose over to the ears (water) and combine the two to create one water energy. Send the water to the crystal room.
26. Start the coupling in the crystal room.
27. Slowly simmer for a long time.
28. Empty your mind into the Lower Tan Tien anytime thoughts arise. Feel the stillness of your senses. Feel how they are sealed.
29. Slowly let the fire cool down.
30. Gather the energy in the Lower Tan Tien.

F. Practice Formula Six: Sealing of the Five Senses

1. Clean out the Thrusting Channels.
2. Activate the Sexual Energy in the Lower Tan Tien.
3. Turn the Wheel.
   a. Up the spine to the T-11 and then down to the Lower Tan Tien.
   b. Up the spine to the C-7 and then down to the solar plexus.
   c. Up the spine to the brain and then down to the heart.
4. Build the Aura
   a. Breathe red mist into the heart.
      1. Breathe out any gray color.
      2. From the heart send out the red mist to create an aura around the body.
   b. Breathe yellow mist into the spleen.
      1. Breathe out any gray color.
      2. From the spleen, send the yellow mist to the nose.
      3. From the nose, breathe out the yellow mist to create an aura.
   c. Breathe white mist into the lungs.
      1. Breathe out any gray color.
      2. From the lungs, send the mist to the nose.
      3. From the nose, breathe out the white mist to create an aura.
   d. Breathe blue mist into the kidneys.
      1. Breathe out any gray color.
      2. From the kidneys, send the mist to the ears.
      3. From the ears, breathe out the blue mist to create an aura.
   e. Breathe green mist into the liver.
      1. Breathe out any gray color.
      2. From the liver, send the mist to the eyes.
      3. From the eyes, breathe the mist out to create an aura.
      5. Send out a pill to connect with the Big Dipper.

6. Connect the Big Dipper to the various points on the head (L&R mastoid, L&R temples, chin, base of skull, and crown), bring the North Star to the crystal room.
7. See the Big Dipper pouring violet light down into your crown.
8. Wash the whole body and especially the marrow with the violet light.
9. Bring the left kidney up to the left ear and make a collection point in the ear for the fire energy.
10. Bring sexual energy from the sexual organs and up from the right kidney to the right ear. Make a collection point in the right ear for the water energy.
11. Bring and fire and water energies into the crystal room.
12. Start the coupling in the crystal room.
13. Bring the Sun down to the left eye to collect the fire energy.
14. Bring the Moon down to the right eye to collect the water energy.
15. Bring the fire energy from the left eye to the bridge of the nose.
16. Bring the water energy from the right eye to the mideyebrow.
17. Bring the fire and the water together and start the coupling.
18. Draw the sexual energy up to the collection point in the mouth.
19. The steam from the crystal room coupling will now be used as the fire energy for the coupling at the tip of the nose. Bring the fire energy down to the upper lip.
20. Bring the water energy from the mouth to the bridge of the nose.
21. Bring the water and fire together at the tip of the nose and start the coupling.
22. Be aware of all three couplings simultaneously, the steam at the crystal room will form a pearl and open the third eye.

23. Send the liver energy out to draw in the green planet, Jupiter.
24. Bring Jupiter in to seal and protect the eyes.
25. Send the heart energy out to draw in the red planet, Mars.
26. Bring Mars in to seal and protect the tongue (mouth).
27. Bring the eyes down to the mouth and combine the eyes and tongue to create one fire energy.
28. Draw the fire energy up to the crystal room.
29. Send out the kidneys to draw in the planet Mercury.
30. Bring Mercury in to seal and protect the ears.
31. Send out the lungs to draw in the planet Venus.
32. Bring Venus in to seal and protect the nose.
33. Bring the ears to the nose and combine them to form one water energy.
34. Draw the water energy up to the crystal room.
35. Start the coupling of the fire and water at the crystal room.
36. Let go of all thoughts, send them down to the Lower Tan Tien.

Fig. 39 *The Planets connect to the Organs.*

37. Feel the stillness of all the essences as they are not being used to spend energy. Feel their energy staying with you. (eternal soul, spirit, corporal soul and the sexual essence)
38. Set the fire cool down.
39. Bring the energy down to the Lower Tan Tien.

G. Practice Formula Seven: Sealing of the Five Senses

1. Do the Bellows Breathing.
2. Connect with the Lower Tan Tien.
3. Build the Aura:
   a) Red mist from the heart.
   b) Yellow mist from the spleen.
   c) White mist from the lungs.
   d) Blue mist from the kidneys.
   e) Green mist from the liver.

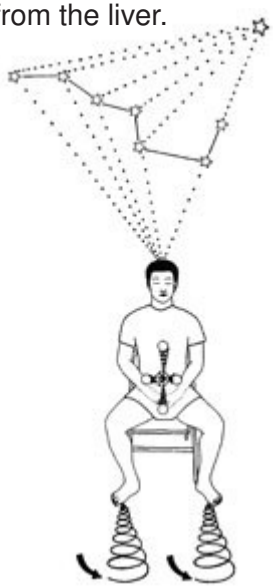

Fig. 40 *Big Dipper and North Star*

4. Send out the pearl to connect to your own personal star and to attract the Big Dipper.
5. Look for the light.
6. Draw the Big Dipper in and connect it to the head (L&R temples, L&R mastoid, chin, base of the skull, and the crown). Bring the North Star to the crystal room.
7. See the Big Dipper pouring out violet light down into your crown and through your whole body. Wash your body in the violet light and especially the marrow.
8. Feel your body so full of violet light it starts to overflow and create and aura around your whole body.
9. Be aware of the coupling at the mideyebrow, crystal room, and the tip of the nose.
   Give yourself plenty of time to feel the suction in each place.
10. Now expand your mind outward to the constellations.

Fig. 41 *Violet Light and Aura*

11. Feel the connection of the constellations to your organs to the elements.
    a) The east constellations connect to the liver (wood).
    b) The south constellations connect to the heart (fire).
    c) The west constellations connect to the lungs (metal).
    d) The north constellations connect to the kidneys (water).
    e) The crystal room is in the center.
12. Combine the South Constellation (fire) and the East. Constellation (wood) to create one fire energy.
13. Combine the North Constellation (water) and the West Constellation (metal) to create one water energy.
14. Couple the two at the crystal room.
15. Now, feel your aura as another layer of your skin. Feel it move in and out with each breath. Take in the refined energies from the constellations.
16. Let the fire cool.
17. Gather the energy at the Lower Tan Tien.

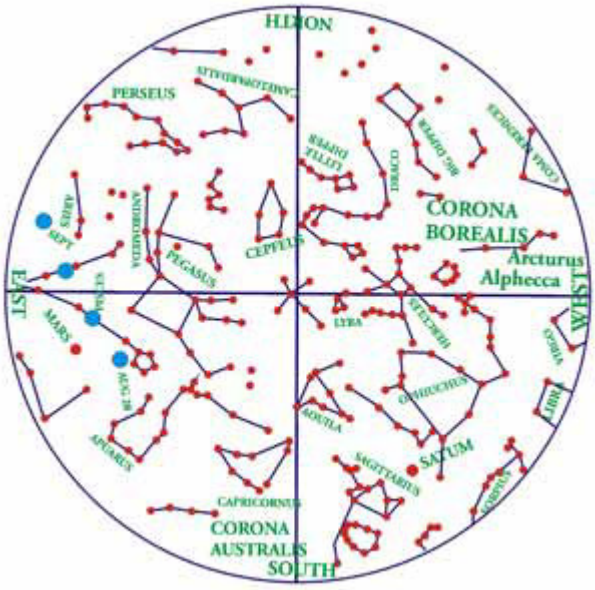

Fig. 42 *Star Constellations*

H. Practice Formula Eight: Sealing of the Five Senses

1. Clean the Thrusting Channels.
2. Turn the Wheel.
3. Create the Auras.
4. Send a pill out to connect with the Big Dipper.
5. Connect with the Big Dipper at the L&R Mastoids, L&R Temples, Base of the skull, Chin, and Crown. Feel the Dipper pouring violet light into your crown and washing your whole body.
6. Create the 3 cauldrons (Bridge of nose, Crystal Room, Tip of nose).
7. Feel your aura as an extra layer of skin. Feel it move in and out with each breathe. Feel your breathe drawing in chi through your skin to your whole body.
8. Be aware of the Planets and Animals protecting and sealing your senses.

Fig. 43 *Energy Body Going Out and Growing.*

9. Shoot your energy body out and make yourself very large.
10. Connect with the constellations: Liver, Wood, East
    - Heart, Fire, South
    - Lungs, Metal, West
    - Kidneys, Water, North
11. Combine the East and South Constellations (wood and fire) to create one fire energy.
12. Combine the West and North Constellations (metal and water) to create one water energy.
13. Start the coupling and feel the vast amounts of energy.
14. Beam the energy down to your crystal room, to your heart and see the rainbow beams coming out from your heart to the rest of the body wherever they is needed.
15. Bring your awareness to the Lower Tan Tien and start the coupling there.
16. Bring the energy from above, now into the Lower Tan Tien.
17. Use this energy to heal any part of the body or mind that is in need.
18. Slowly allow the fire to cool.
19. Gather the energy in the Lower Tan Tien.

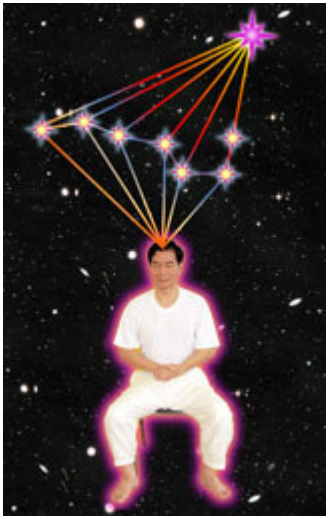

Fig. 44 *Rainbow Beams Healing Body*

Notes:

1) The laboratory, inside and outside. The microcosm and the macrocosm.
2) Clearing the trusting channel.
3) Turning the wheel.
4) Building the aura.
5) Breathing.
6) Connecting to the Big Dipper.
7) Sun and Moon.
8) Kidney energy, left is fire essence, right is water essence. Ear collection.
9) Mixing and collecting the water in the mouth.
10) Section on coupling.
11) Energy from the four constellations, violet light into the body, North Star.
12) Sealing the senses with animals or planets.
13) Beginning and ending the meditation.
14) Energies of the organs (hun, po, shen, yi,…).

Master Mantak Chia is the creator of Universal Tao System, Healing Tao, Tao Yoga and is the director of the Universal Tao Master School at Tao Garden Wellness Retreat in the beautiful northern countryside of Chiangmai, Thailand. Since childhood he has been studying the Taoist approach to life. His mastery of this ancient knowledge, enhanced by his study of other disciplines, has resulted in the development of the Universal Tao System which is now being taught throughout the world.

Sealing of the Five Senses

In this booklet for the first time ever Master Chia has revealed the final level of the Immortal Tao Practices of the Universal Tao System. You can divide your practice into several sections starting with the Three Levels of Kan & Li to set up the alignment of the body for the Opening of the Crystal Room in the Sealing of the Five Senses practices. Your training should be progressive; that is, once you have mastered one section, you can progress on to the next. Be sure to spend at least one or two weeks on each section as shown in this booklet, allowing enough time to thoroughly master each part before adding on the next section. Remember that you should always do the Chi Kung Warmups before going on into the meditation; it is very important to loosen the spine before meditation that helps your focus.

In this booklet we have divided the entire Microcosmic Orbit practice into Eight Formulas: Strengthening the Senses, Activating Sun & Moon, Connecting Senses to Organs, Activating Thrusting Channels, Opening the Virtuous Animals, Clearing the Conception Vessel with the Three Tan Tiens, Clearing the Planets, Building the Aura and Connecting with the Big Dipper and North Star. This booklet explains and reveals how to activate the Sealing of the Five Senses by spiraling, touching, coloring and small air sipping techniques.

This booklet is designed so you can use it to do your practice at your home or a cave anywhere in the world. We are happy to welcome you to the Advanced Level of the Universal Tao System and to join the Universal Tao family as a Advanced practitioner.

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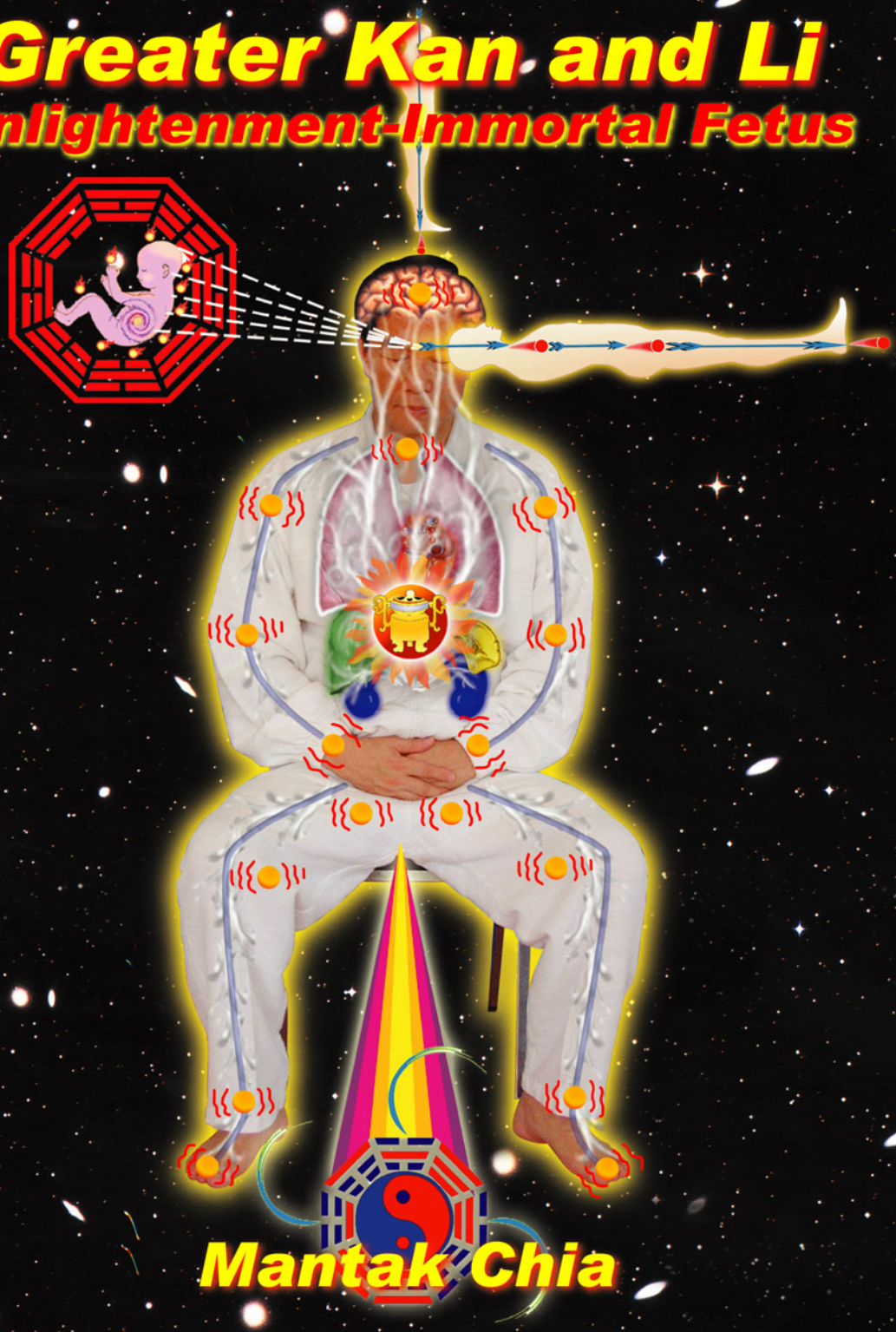
Greater Kan and Li

Enlightenment-Immortal Fetus



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Greater Kan and Li

Enlightenment-Growing the Immortal Fetus

Mantak Chia

Edited by:

Colin Campbell

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The meditations, practices and techniques described herein are ***not*** intended to be used as an alternative or substitute for professional medical treatment and care. If any readers are suffering from illnesses based on mental or emotional disorders, an appropriate professional health care practitioner or therapist should be consulted. Such problems should be corrected before you start training. This booklet does not attempt to give any medical diagnosis, treatment, prescription, or remedial recommendation in relation to any human disease, ailment, suffering or physical condition whatsoever.

Three Parts of the Greater Kan and Li Practice

A. Basic Formula

Preparations. This part includes Fusion of the Five Elements and Cosmic Fusion and, if time allows, Fusion of Eight Psychic Channels. It is important to cleanse and balance the negative emotions, develop the virtues, clear the thrusting channels and strengthen the belt routes as a preliminary procedure. At this stage, the pearl could be projected through the three planes (earth, human, heaven) also, although it is not obligatory because it could be done as an integral part of Greater Kan and Li proper.

B. Kan and Li Proper

The essence of the practice is the establishment of the cauldron in the solar plexus and the birth of the soul and spirit (if it has not been done earlier in Fusion of the Five Elements). From the navel (in Lesser Kan and Li), we reestablish a new cauldron at the solar plexus, where most of Greater Kan and Li practice transpires. Other related practices, which occur in one form or another in Fusion of the Five Elements and Lesser Kan and Li, are: Self-Intercourse, Forming the Soul and Spirit Bodies, Astral Flight, Domestic Animals, Virgin and the Twelve Channels, Gathering the Pill, Closing the Meditation (Turning the Wheel of the Law), and Transferring the Consciousness to the Energy Body and the Spiritual Body.

C. Corollary and supplementary practices

These practices are essentially supplementary techniques whose purpose is to draw energy from nature: Collection of Outside Energies (moon, sun, star, plants and trees).

Outline of Basic Practice – Simplified

A. Fusion

1. Smile down to the three lines or the entire body.
2. Form the four pakuas (front, back and sides) and feel them glow like diamonds with their bottoms meeting at the cauldron.
3. Collect negative emotions from the organs at the collection points and merge and balance at the pakuas.
4. Stream energies into the center and form a pearl.
5. Using the pearl to attract the virtues, do the creation cycle.
6. Using the pearl, clean out the thrusting routes and bring the pearl back to the perineum.
7. Collect saliva and swallow to cleanse the thrusting routes.
8. Move the pearl in the microcosmic and let it gather momentum.

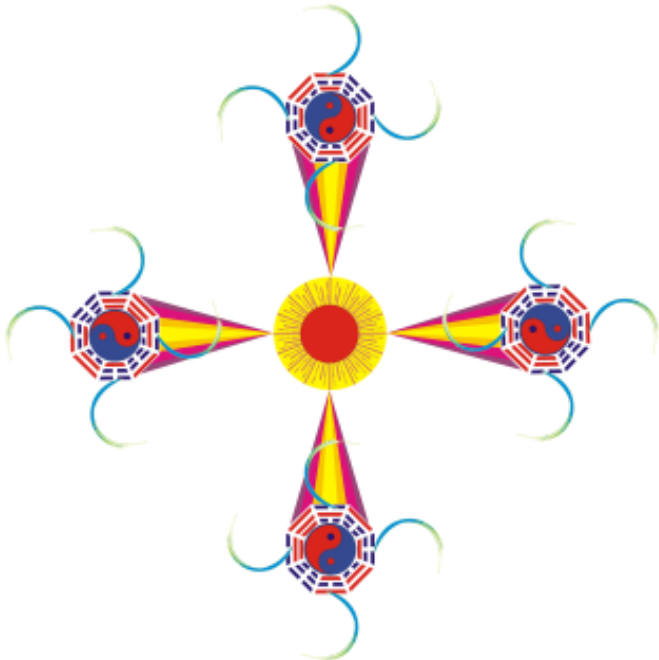

Fig. 1 *Collect negative emotions from the organs at the collection points.*

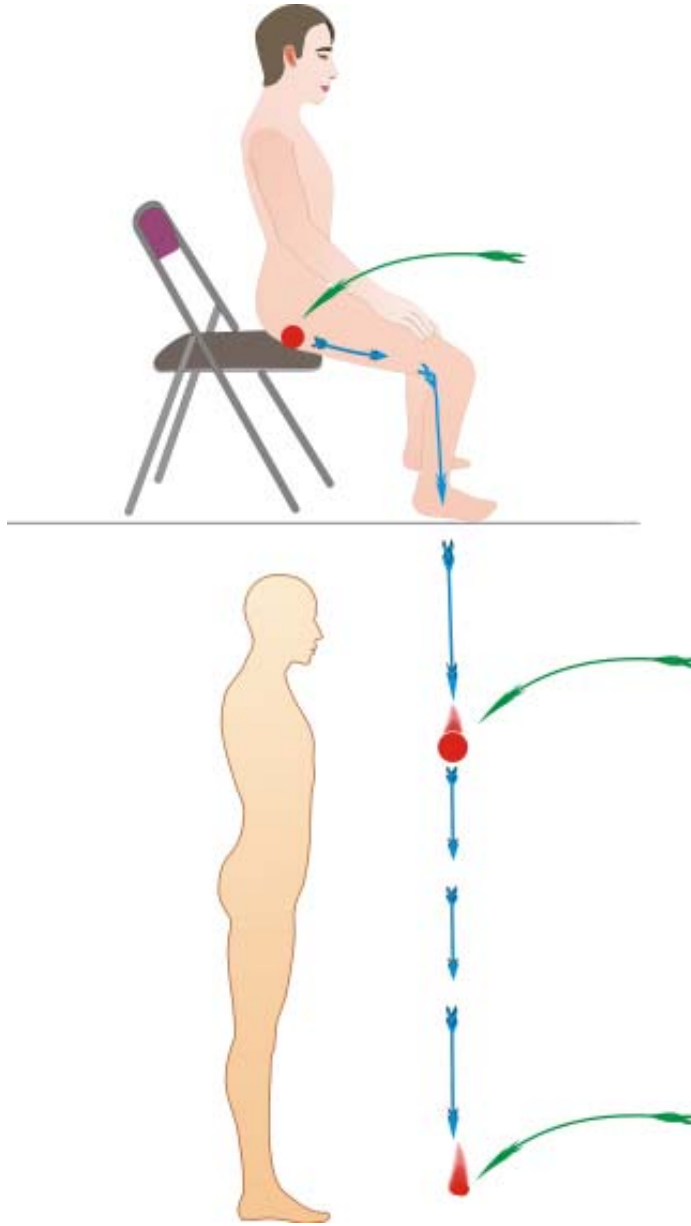

Fig. 2 *Move the pearl in the microcosmic and let it gather momentum.*

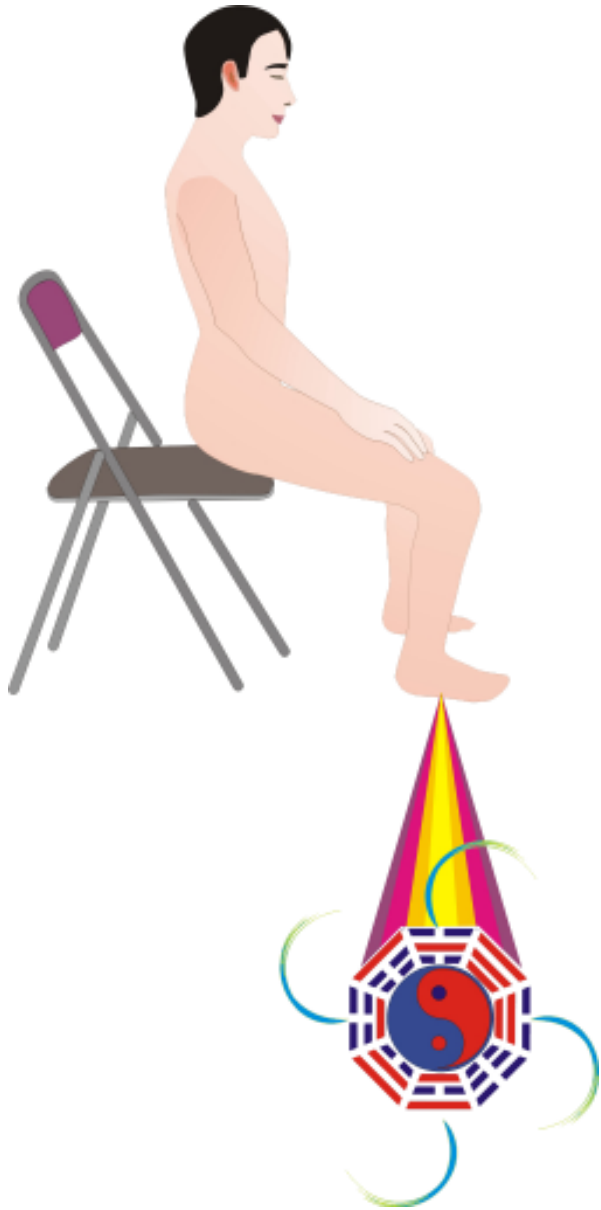

Fig. 3 *Stream energies into the center and form a pearl.*

B. Earth Plane

1. Shoot the pearl down the legs, one body length into the ground (as your practice improves, you can go down as many body lengths as your energy can reach).

2. Create a pakua around the pearl.

3. Extend the microcosmic, thrusting routes and belt routes to the body/bodies in the earth.

4. Gather water, fire, wood and metal energy through the pakua.

5. Gather in the middle of the toes and gather to the mideyebrow.

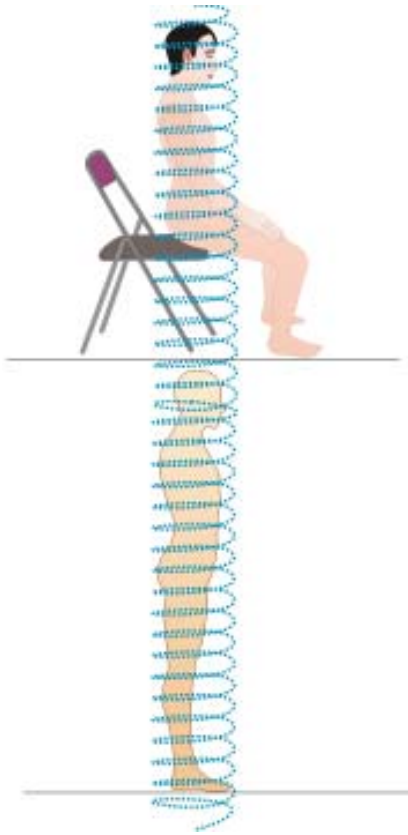

Fig. 4 *Extend the microcosmic, thrusting routes and belt routes to the body/bodies in the earth.*

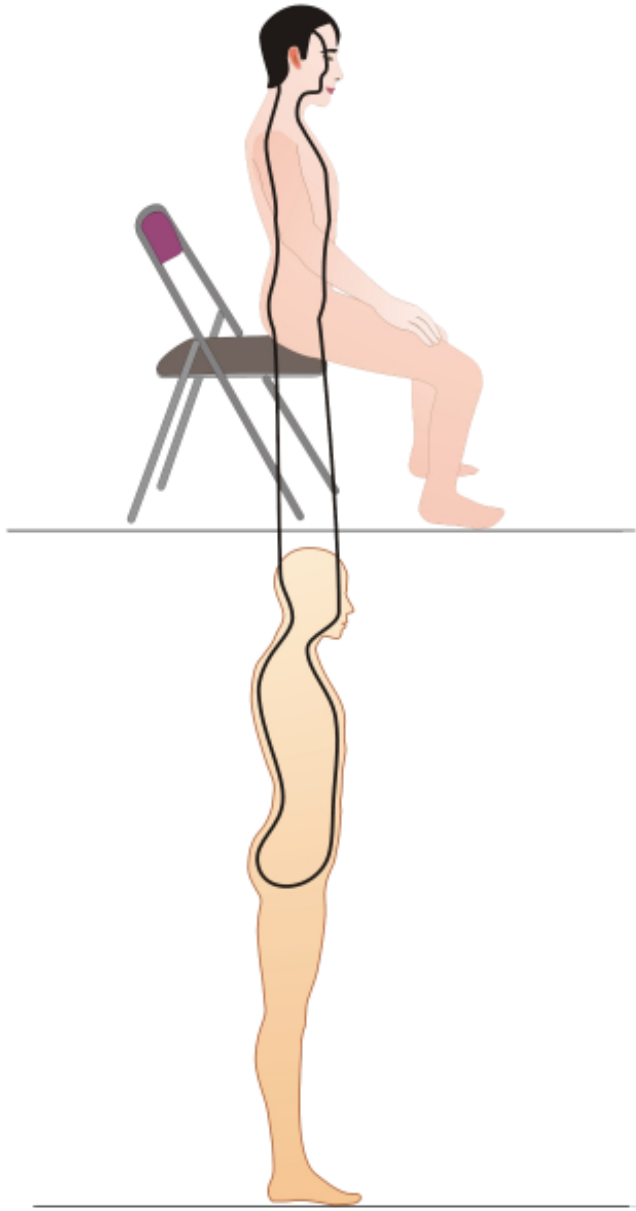

Fig. 5 *Shoot the pearl down the legs, one body length into the ground.*

C. Human Plane Cosmic Particle (Unicorn Practice)

1. Form another pearl in the cauldron and move it to the perineum.
2. Move the pearl in the microcosmic until it gathers momentum.
3. Let it stop at the crown and slowly let it go to the third eye.
4. To gather strength, you may use breathing.
5. Exhale and shoot the pearl one or more body lengths from the third eye parallel to the ground. (There is no need to visualize a body, although it provides a point of reference when one projects the microcosmic, thrusting channels and belt routes.)
6. Extend the microcosmic, thrusting channels and belt routes.
7. Gather energy with the pearl and let the energy stream into the crystal room.

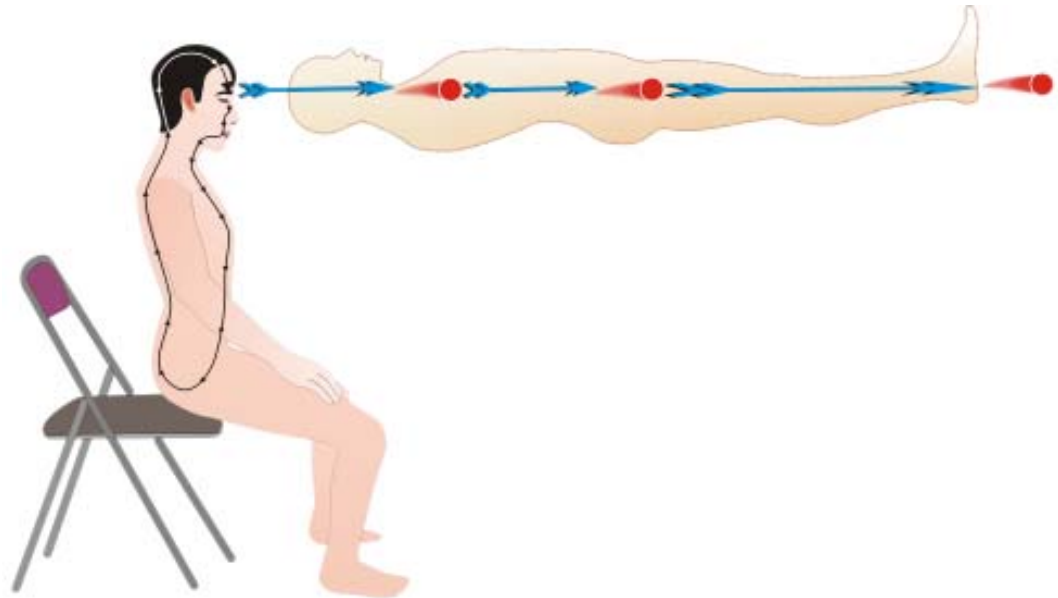

Fig. 6 *Human Plane Cosmic Particle*

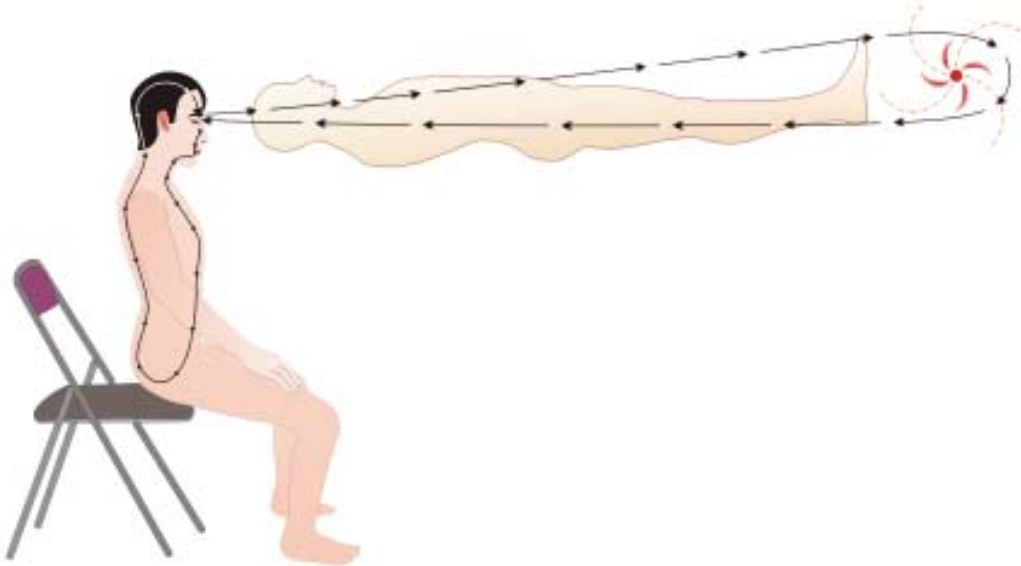

Fig. 7 *Gather Energy with the Pearl*

D. Heaven Plane (Beginning Vertical Flight)

1. Form another pearl and settle it in the perineum.
2. Move the pearl in the microcosmic and let it gather momentum.
3. Slow it down and let it rest in the crown.
4. Activate the cranial pump (look up, clench the teeth and jaw, sink chin and sternum, clench the fists, tighten the buttocks, pull up the sexual organ).
5. Exhale and shoot the pearl through the crown, extending the pearl one or more body lengths above you.
6. Extend the microcosmic, thrusting and belt routes.
7. Draw energy into the crystal room.

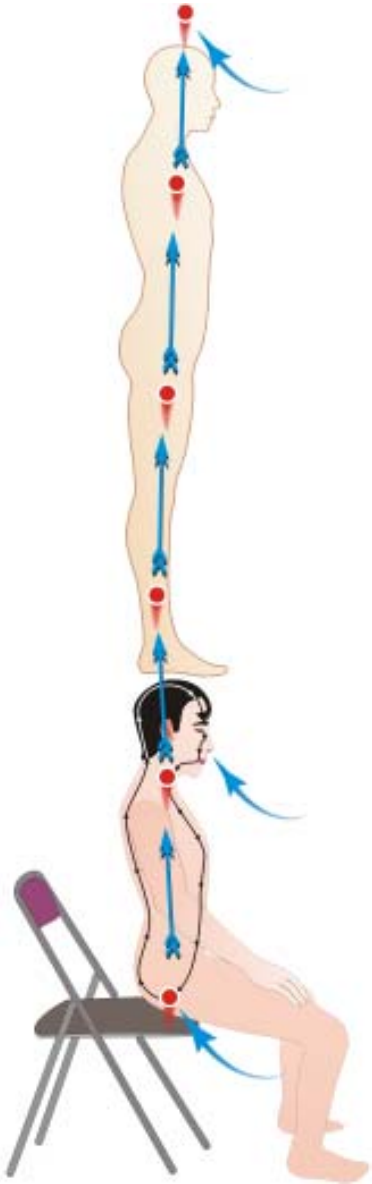

Fig. 8 *Heaven Plane (Beginning Vertical Flight)*

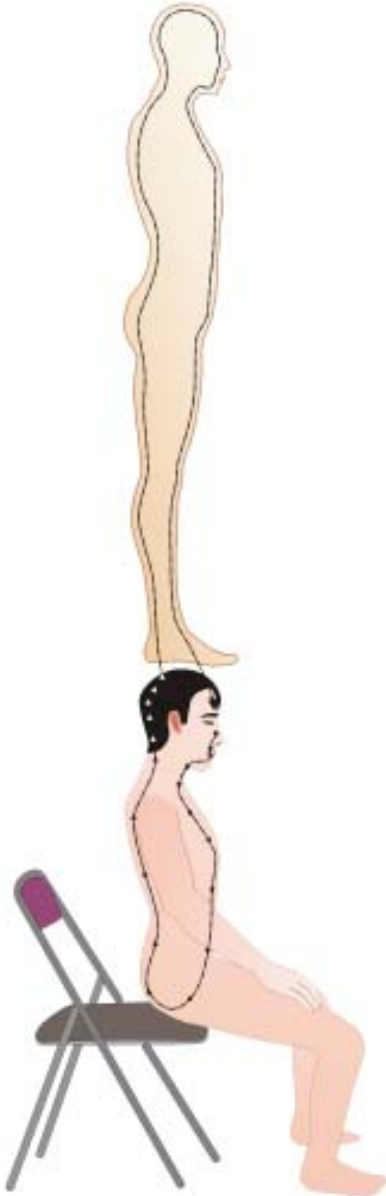

Fig. 9 *Slow it down and let it rest in the crown.*

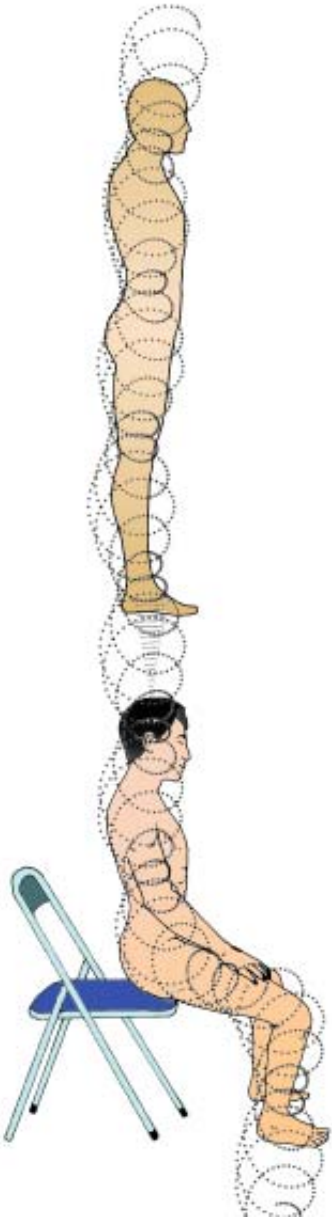

Fig. 10 *Extend the microcosmic, thrusting and belt routes.*

Greater Kan and Li Proper

A. Establishing the Cauldron at the Solar Plexus: Reversing Hot and Cold Energy (Coupling)

1. While the cauldron was established at the navel in Lesser Kan and Li, it is now established at the solar plexus.

2. Listen to the kidneys and feel their cold energy spiral at the kidney.

3. Distinguish the kidneys' cold energy from the hot energy of the adrenals.

4. Spiral and collect the cold energy of the kidneys and move it down to the collection point at the perineum.

5. Spiral and collect the hot energy from the adrenals and move it up to the crystal room behind the third eye.

6. Spiral and collect testicle and prostate energy (for men) and ovarian energy (for women) in the collection point at the perineum.

7. Divide the attention between the perineum and crystal room. Spiral at these two points.

8. Two things could be done either simultaneously or alternately:
   - Spiral and move the hot energy down the left or front thrusting route, gathering thyroid, parathyroid, thymus and heart energy on the way to the navel; and/or
   - Move the cold energy from the perineum up the right or back thrusting route to the heart.

9. Inhale and slowly exhale as you move the hot and cold energy into the middle thrusting channel to the solar plexus.

10. Couple the hot and cold energy at the solar plexus.

Reminder: Be sure to be careful in coupling the hot and cold energy that the cold energy does not spill.

Fig. 11 *Reversing Hot and Cold Energy*

B. Steaming

Consult Lesser Kan and Li for detailed description of this procedure.

1. To fan the fire of the cauldron, use bellows breathing until the energy begins to boil.
2. Establish a pulse at the cauldron and use this pulse to maintain the heat of the cauldron.
3. Turn the senses into the cauldron and stir with the eyes.
4. As the steam comes out of the cauldron, direct the steam to the following glands and organs (using the thrusting channels): kidneys, heart, thymus, thyroid, pituitary, pineal and crown.
5. Steam the thymus and lymphatic system.
6. Keeping the cauldron in place, steam the spine and regrow the nerves.
7. Steam the twelve channels.

Reminder: Amplify the pulse as the need arises since this takes the place of bellows breathing. To establish the pulse, listen to the heartbeat and synchronize other pulses to it. The result is a kind of rhythm that sets the pace not only of the practice but also of the pulsation.

Unlike in Lesser Kan and Li, it is not necessary to move the cauldron in spinal breathing and regrowing the nerves.

C. Adjusting the Seasoning in the Cauldron

This practice is intended to balance the energy in the cauldron. There may be an imbalance in the energies being used for steaming. It may not be cold or hot or there may be too much hot energy and too little cold energy; or the energy you may be drawing from its source may have changed temperature (from hot to cold, or vice versa). It is therefore necessary to determine that the energy you are using is hot or cold.

Procedure: Taste the qualities of the steam and the hot and cold energies that contribute to the process. To adjust the energy, use visualizations as follows:

- Tiger in the Sky: Greater Yang (Hot).
- Tiger in the Water: Lesser Yin (Cool).
- Dragon in the Sky: Lesser Yang (Warm).
- Dragon in the Water: Greater Yin (Cold).

Sky and tiger symbolize Yang energy; water and dragon symbolize Yin energy.

Fig. 12 *Adjusting the Seasoning in the Cauldron*

D. Domestic Animals and Virgin Boys and Girls (Pure Energy of the Organs)

1. Form the pearl, intensifying it with virtue energy.

2. Adjust the temperature in the cauldron, if necessary.

3. When the organ energy is pure enough, the energy can transform into the animals and virgin children, which will further purify the energy.

Move the pearl up to the top of the cauldron. Let it shine toward the liver. Let the crystal energy start to attract the dragon that lies dormant in the liver. The dragon's breath can change into two virgin boys, one wearing a green coat and the other wearing a yellow coat. The former can ride the dragon while the other can hold a jade scepter shaped like a paddle. Feel the virtue of kindness in the atmosphere of the liver. Get in touch with the virgin boys.

Go to the other organs, following the same procedure and using the animals and virgin children below:

a. Kidneys—Blue Deer. Two horns change into a virgin boy twelve inches tall. Virtue is gentleness.

b. Heart—Heart Pheasant. Produces virgin girl eight inches tall with a jade scepter like the heart. Virtue is respect, joy, honor and sincerity.

c. Spleen—Yellow Phoenix. Virgin girl six inches tall. Virtue is fairness, sympathy and openness.

d. Lungs—White Tiger. Virgin boy seven inches tall, carrying a shepherd's staff. Virtue is courage, strength and righteousness.

e. Gall Bladder—Green Tortoise and Snake. Virgin boy twelve inches throwing spear around liver.

4. It is the pure organ energy that is transformed into the animals and virgin boys and girls. The pearl and the fragrance attract the animals from their respective organs.

5. All the virtue energies merge into compassion energy embodied in the pearl. The animals and virgin boys and girls are attracted to it. Watch and enjoy this process.

6. At the end of the procedure, or toward the end of Greater Kan and Li proper, be sure to return the animals and virgin boys and girls to their proper organs.

7. The Inner Voice: Interacting with the animals and virgin boys and girls is one way of getting to know yourself. Be sensitive to their behavior and reactions. How they react is an indication of the state of your virtues. You can ask the virgin boys and girls questions and wait for their answers. You can name the virgin boys and girls if you wish.

Fig. 13 *Domestic Animals and Virgin Boys and Girls (Pure Energy of the Organs)*

E. Earth, Animal and Spirit Energy

Project the pearl into the earth and see what animals are there to interact with. See which ones are attracted to the pearl, which ones come to you.

Send out your love and kindness, touch the animals, absorb the essence of the animal, its positive qualities, into the pearl. Draw the energy into the feet, perineum and into your self.

Introduce the animal spirit to your domestic animals and your virgin boys and girls. Integrate their energies. Name the animals if you wish.

When the domestic animals return to their places, find the place for the new animal.

1. Do not contact cold-blooded, unstable animals, such as insects or reptiles. The animals that we attract from the earth reflect the quality of energy emerging from our cauldrons, so at different times we may attract different animals. In the process of finding an animal, we may attract a wounded animal. The state of inner change is reflected by the healing of the animal. The part of the animal that is wounded indicates the seriousness of the situation: e.g., leg means lack of support; missing head, mental problems.

2. You don't have to go down all the time to get your animals. Once you get one, use it and keep it. What attracts the animals is the quality of the pearl. The animals are good for checking what is right and wrong with one's personality. Sometimes, one goes through an energy change and the animals disappear; new ones will appear.

F. Plant, Flower, Tree, and Mid-Plane Voyages

This practice enables you to reach a higher level of awareness, not only of your organs and glands and their unique scents, but also of the essences of nature. Drawing in the energy and essences within and without enables us to tap to an alternative source of energy for higher practice and brings us closer to the Tao.

1. Steam the kidneys and heart and watch them bloom.
2. Distinguish the color and fragrance of the blossoms.
3. Proceed to steam the thymus gland and notice its color and fragrance. Do the same with the lymphatic system, pituitary, pineal, thyroid and parathyroid glands. Take time to enjoy the colors and fragrances.
4. Draw the fragrances of the flowers toward the cauldron and notice the special type of energy there.
5. Form the inner self. Be aware of the eye, ear, nose, legs, etc. of a being that looks like you or a being you would like to be. Move it out of the navel or crown. See to it that the body is linked to you by an umbilical cord. Let it travel into a springtime garden in full bloom. Choose a flower or tree that appeals to you the most. Feel its energy and absorb. Draw the flower or tree back into yourself and introduce it to your internal family. Watch how the energy reacts inside your body. Enjoy the energy.

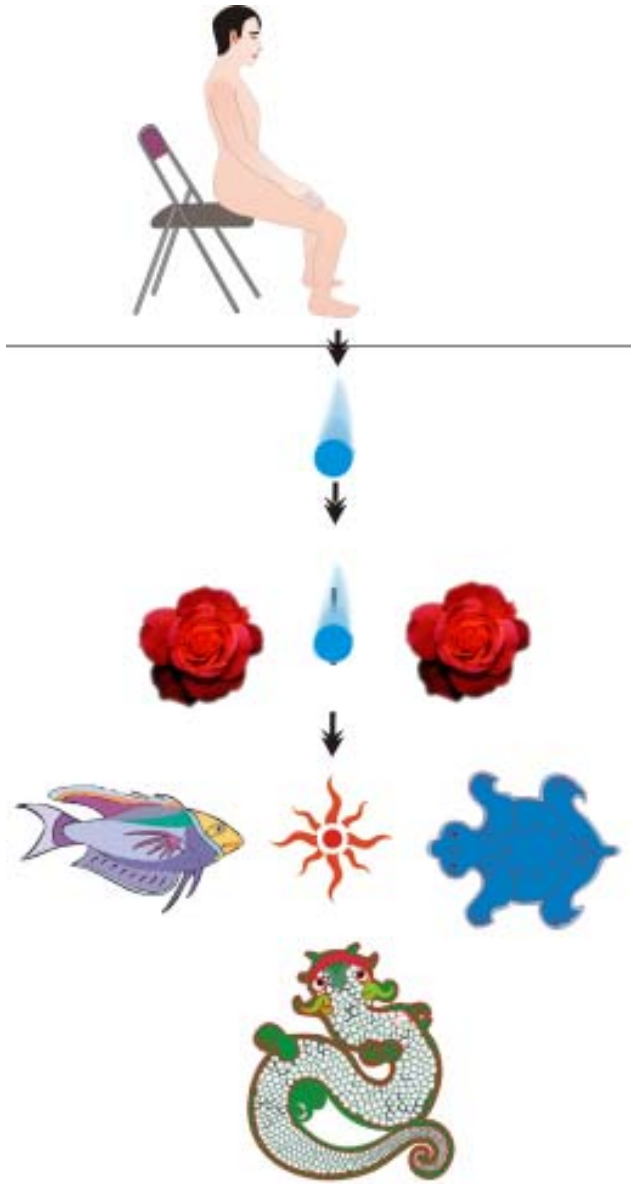

Fig. 14 *Plant, Flower, Tree, and Mid-Plane Voyages*

G. Self-Intercourse: Overcoming Death

It is important to remember that the essence of this practice is to give birth to the soul and spirit. The coupling of the Yin and Yang energies of the body in Kan and Li is aimed at overcoming death. Pregnancy may or may not result. Be aware of the symptoms of conception.

Self-intercourse, in the traditional literature, is called “first love.” It is characterized as an explosion of light from the pineal gland and a loss of physical boundaries. One learns to recognize the light. The pineal gland opens and the light comes through.

1. Focus your attention on the sexual organs and the pineal gland. Become aware of the universal (primitive) force.

2. Draw the universal energy of the earth (from the sexual organs and the pineal gland) into the cauldron until ecstasy results.

3. Allow the ecstasy to spread from the sexual organ to the organs and glands.

4. When ecstasy reaches the pineal, seed the cauldron with energy from the spleen (liver in Lesser Kan and Li).

5. If pregnancy results, run all channels and virtue energy inside the fetus (as in Fusion of the Five Elements). Be sure to practice the creation cycle often so that the fetus is nourished with virtue energy. Be patient. Growing the fetus takes a long time. It is an autonomous process. Suspend your steaming practice during the pregnancy.

a. Move the fetus in a circular pattern from the solar plexus to the spleen, to the lung, liver, perineum (pull up the sexual organs). Move the fetus to the heart and propel it to the crown to just above the head.

b. Let it stay for a minute and bring it down through the thrusting channel to the solar plexus.

c. With more practice (using the cranial pump mentioned earlier), you can propel the fetus higher.

6. If pregnancy does not result, form an imaginary fetus:

a. From the lower abdomen, make the cow sound “Mmm-mmmmoooooo.”

b. Move the imaginary fetus (as in a, b and c above) in a circular pattern from the solar plexus to the spleen, lung, liver and perineum (pull up the sexual organs); move the fetus to the heart and propel it up to the crown to just above the head.

c. With more practice (using the cranial pump mentioned earlier) you can propel the fetus higher.

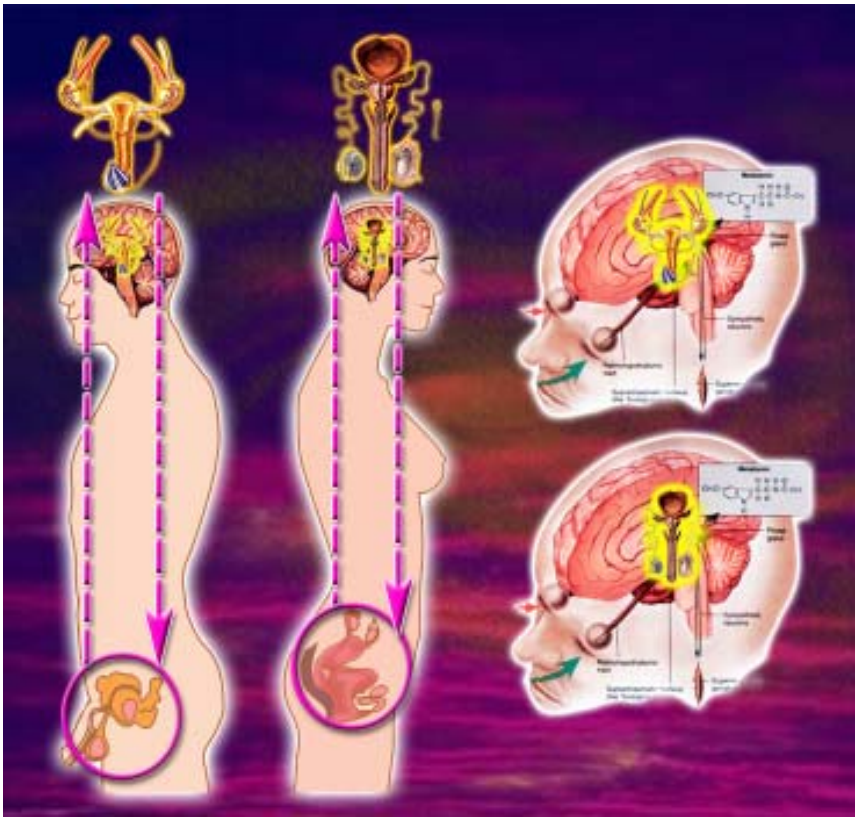

Fig. 15 *Self-Intercourse: Overcoming Death*

H. Opening and Emptying the Heart

1. Move the energy to the heart center, sink the sternum and relax the chest, steam the heart and watch it open and grow.

2. Amplify the pulse connection between the heart and the brain.

3. Inhale and squeeze the energy from the heart and as you exhale, send the energy to the brain.

4. Re-energize the heart with steam again and repeat the process.

This practice will help you open and empty the heart, energize the brain with heart energy, amplify the connection between the heart and brain and prepare you for the next level of practice.

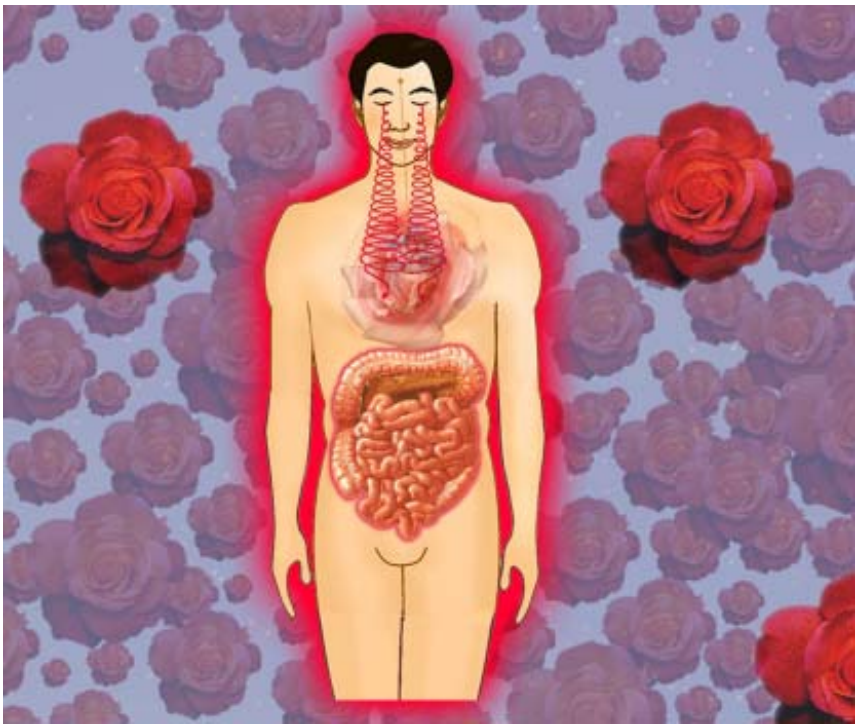

Fig. 16 *Opening and Emptying the Heart*

I. Forming the Energy and Spirit Body

Review Fusion of the Five Elements and Cosmic Fusion if you are not familiar with this procedure.

Fig. 17 *Forming the Energy and Spirit Body*

J. Astral/Vertical Flight

1. Continuing from the point where the spirit body is projected over the crown, move the spirit body around in a circle. Be aware of the distinction between the spirit body and the physical body.

2. Practice once a week for ten to fifteen minutes at the end of other work. If done at bedtime, the process will continue during sleep. The purpose of flight is to stay in the vertical and learn to digest mid-plane energies.

Fig. 18 *Astral/Vertical Flight*

Greater Kan and Li

The Sun:

Mankind has, since the beginning of time, observed the night sky and gradually gathered energy from the upper universe, the lower universe, the days and the hours. In Chinese reckoning, the lunar calendar is used and the start of these calculations was determined at the new moon 4681 years ago, in the first year of the Yellow Emperor.

This system is the accumulation of the many years of life experience of the many generations of people who followed the natural cycles. By observing the twenty-four climatic periods of solar energy, Chinese people have enriched their lives with regard to both agricultural and spiritual activities. This solar system of twenty-four periods is more closely related to the Western calendar. The Chinese system of solar energy variation defines the route the sun travels along the "Yellow Route" (ecliptic), beginning at the fixed point of the Spring Equinox and moving eastward until it reaches 360 degrees. Each 15 degree interval is a single seasonal period, thus setting twenty-four equal points. Each period has a special name which describes that climatic phase of the year.

Nature of the Sun and Moon:

The sun is the symbol of plenty, the essence of Greater Yang. The moon symbolizes Yin, or lack and the stars represent accomplishment. It is not within the emptiness of the sun's nature to experience eclipses. It is the essence of fire. It has a three-legged raven which is the essence of Yang. The moon is empty and is the essence of Yin and of water. 'It has a cinnamon tree with a rabbit that pounds the immortality drug'.

The moon is the daughter of cold and has a cold heart. The sun is related to heaven; the moon is related to earth. In the body, the sun is in the heart and the moon in the kidneys. The sun and moon are the eyes of heaven and correspond to the human eyes.

Yang within Yin and Yin within Yang in Sun and Moon:

The sun is red and its rays are purple. The moon is yellow and its rays white. The subtle breath of the sun on the stomach is red and yellow. The sun has a yellow essence and a red breath. The moon is the reverse, it has a red essence and a yellow breath.

The sun is represented by the trigram Li, (fire); the moon is represented by the trigram Kan (water). In Li the inner line is Yin. In Kan, the inner line is Yang. This is the Yin within Yang and the Yang within Yin. In the symbolism of the sun, the raven is the symbol of Yin within Yang. The rabbit in the moon is the Yang within Yin.

Solstices and Equinoxes:

In the Taoist view, the sun stops on its movement on the first day of each season. The moon stops on the days of the equinoxes and solstices. These stops are called “Doors”. In spring it is the Golden Door. This is the door of access to the sun. In autumn it is the “Eastern Well”. This is the door of access to the moon. The next stage is “Universal Yang” in the middle of summer when the sun culminates. “Great Cold” is the culmination of the moon in winter.

It is through the doors that the practitioner goes into thought to be the lord that grants the fruits of immortality.

There is a method to gather the sun essence at the “Golden Door”. This is done on the 3rd, 9th, 17th, 21st and 25th of the month in which the sun enters at the Golden Door.

The exact same practice is done for the moon when it reaches its door (the “Eastern Well”). The days for the moon are: 3rd,15th and 25th.

Cauldron and the Stars:

The cauldron has the sun on the left and the moon on the right. Above is the constellation of Ursa Major (the Great Bear). Surrounding the sun, moon and stars are all the energies.

Sun, Moon and Stars in the Body:

The sun is in the heart since it has the fire element; the moon is in the kidneys because they contain the water element. The Pole Star is in the spleen which represents the center of the body. The spleen receives the essence of the Pole Star and it is there that the Lord of the Pole Star resides. The Dipper surrounds the spleen since the spleen stands for the center of the body. The spleen receives the essence of the Dipper and that is where the Lord of the Dipper resides in the body.

Sun Essence:

The best time for practice with the sun is at sunrise and sunset when it is red. The sun spectrum from sunrise to 9 am is violet, for all the organs and especially for spiritual work. You can single out any color to be specific to the color you need. 9-11 am is for blue, and can be used to strengthen the kidneys. 11-1pm is for green, for the liver; 1-3pm is for orange, for sexual energy. 3-5pm is for red, for the heart.
Season Sun Practice: When you practice in a particular season, you can emphasise the practice of the sun spectrum inside the organ that corresponds to the season and its color.

1. Winter in the kidneys; blue.
2. Spring in the liver; green.
3. Summer in the heart; red.
4. Fall, in the lungs; white.
5. Indian summer in the spleen; yellow.

Absorbing the Breath of the Sun in the Four Seasons:

In spring absorb the orange breath (Combination of red=sun & yellow=moon) of the sun before it sets. In Fall, absorb the orange twilight of the sun after it has set. In winter absorb the white vapors of midnight. In summer, absorb the perfect clarity of the meridional sun of midday. These 4 types of breaths in addition to the blue breath of heaven and the yellow breath of the earth are called the six breaths.

Sun Practice:

1. After sunrise, when you practice with the sun, start with the Inner Smile and make the navel warm.

2. Be aware of the mideyebrow. Smile into your eyes, making them cool and soft.

3. Open your eyes and look at the sun. Keep on blinking your eyes for a while; then close your eyes. The eyes still face the sun, so you see a red and yellowish color. Single out the yellow color and breathe it in through the crown and mideyebrow into the nose, eyes and mouth. Keep the mouth closed and feel the color penetrate into these areas. Feel the bones in your skull, the brain and the brain marrow receive the yellow spectrum to wash and help grow the marrow. Let these rays penetrate deep down into the neck, like a wave penetrating deep into the bones, cell marrow and each cell in the body. Some people may experience a feeling of numbness.

4. Let the rays move to the sternum and the rib cage and feel them activate the thymus, sternum, and rib cage to help stimulate the immune system.

5. Let them flow down the spine and feel a numbness, tingling or warmth in the inner part of the bones. This feeling can spread out to the organs. Let it travel down to the hip, sacrum and feel the bones and the bone marrow activate, then let it move down to the legs and the bones of the feet. This can feel like a cosmic baptism; in this case a baptism of the sun. Feel the baptism of the sun's rays throughout your whole body.

6. Rest and let the body absorb all these cosmic nutrients. The sun becomes a prism – a rainbow of colors.

7. After your practice, look at the sun as described above and single out a color. Picture the organs and see each organ glow with its particular color.

a) Listen to the kidneys. Picture the kidneys; if you can look at an anatomy book, close your eyes and still see a picture of the kidneys, this will help tremendously with your visualization. Once you feel or see the kidneys, look at the sun and blink your eyes for a while. Then close your eyes and focus only on the color blue. In the

beginning this might be a little hard. You can use the kidneys' sound Chooooo, and the picture of the kidneys to help. Feel the kidneys glow with a bright blue light.

b) Look into the liver. Again, try to look at an anatomy book beforehand to get a clear picture of the liver to help you. Then close your eyes and retain that picture of the liver. Once you feel or see the liver, look at the sun and blink your eyes for a while. Then close your eyes and single out only the color green. In the beginning this might be a little hard. You can use the liver sound Shhhhhhhhh, and picture the liver to help you get the color. Feel the liver glow with bright green light.

c) Look, listen and move your tongue around, then feel the heart and picture it. Look at the sun and blink the eyes for a while, then close your eyes and single out only the color red. Use the heart sound Hawwww, and the qualities of the heart – love, joy and happiness. Feel the heart glow with bright red light.

d) Look, listen and taste into the spleen. Once you feel or see the spleen, look at the sun and blink your eyes for a while. Then close your eyes and single out only the color yellow. Use the spleen sound Whooooo, and the qualities of the spleen –openness and fairness. Feel the spleen glow with bright yellow light.

e) Look , listen and smell into the lungs, then picture the lungs. Once you feel or see the lungs, look at the sun and blink your eyes for a while. Then close your eyes and single out only the color white. Use the lung sound Sssssss, and the quality of the lungs–courage. Feel the lungs glow with bright white light.

8. When you are in a particular season, start your practice with that season. For example in the fall, picture the color white in the lungs. Once you feel or see the lungs, look at the sun, and blink the eyes. Then close the eyes and single out the color white and breathe it into the lungs. Then do as follows:

Winter into the kidneys; color blue.

Spring into the liver; color green.

Summer into the heart; color red.

The essence of the sun and moon is tasted on the tongue as nectar sweet as honey. This is the nourishment of the immortals.

To unite or balance the sun (left eye) and the moon (right eye) inside the crystal chamber as red light and white light, form a pearl as big as an egg and bring it down to the mouth.

9. When you can see the organs glowing with bright light, start to drink the nectar that gathers in the mouth.

a. Look at the sun and blink the eyes. When you feel and see the light, concentrate on the color violet.

b. Visualize the sun in the left eye and the moon in the right eye. This will help to balance the hot sun energy. Focus both on the third eye, Ming-tang, which is the location of the pituitary gland, and the pineal gland in the crystal room at the middle of the forehead.

c. Breathe into the crystal room and form a Chi ball or pearl.

d. After some time the Chi ball or pearl starts to drip from the glands into the crystal room. Let it drip down to the mouth, mixing with the sun essence. You can separate the sun essence from the breath in the mouth and let it mix with the original force. Feel a light ball grow in your mouth and throat. Close your eyes and focus on the light.

e. When you feel all the essence mix and glow like a Chi ball, swallow it down to the navel or cauldron.

10. Color method of the Sun

The divine breath or essence of the sun and moon appears in this method in the center of a cloud as five colors (colors of the five elements). The five colors are equivalent to everything created in the world.

a. After the Chi ball has been swallowed, look at the sun and blink the eyes for a while. Then picture the red light of the sun.

b. The red breath of the sun gathers and descends, covering the body of the practitioner. One imagines that one is in the light of the sun. The light travels through the body and rises, together with the practitioner, to the Palace of Universal Yang, the sun.

c. Gather the essence of the sun and descend.

d. Picture yourself sitting in the light of the five colors of the sun that form a halo which descends to the feet of the practitioner.

e. The five colors become concentrated and rise to the crown. The halo of five colors then penetrates through the mouth.

f. The cloud previously visualized remains outside, emanating the five colors. In the middle of the cloud appears a purple breath like the pupil of an eye.

g. This purple light has 10 layers blazing in the center of the cloud of 5 colors. The purple light together with the 5 colors penetrate through the mouth.

h. There is a counterpart moon exercise, which is identical except that the yellow breath of the moon replaces the purple breath of the sun in the center of the cloud.

Sun Essence Capture in Water:

The essence of the sun is captured in water by exposing it during the time from sunrise to 9 a.m. The color is violet, for all organs, especially for spiritual work. From 9-11 a.m. is for blue and can be used to strengthen the kidneys. 11 a.m.-1 p.m. is green for the liver; 1-3 p.m. is orange for sexual energy; 3-5 p.m. red for the heart.

A special water can be make on the days 1-15 of the month in which the sun comes to the Golden Door, which is the spring equinox. This water is called “Mineral Light; Mother of Waters”. To capture the essence, put purified rain or spring water in a sterilized bottle out in the sunlight during the corresponding phase of the spectrum for one or more days. You can drink the water, or make herb tea or mix it with food or medicine.

Eight Articulations of Sun and Moon:

The practices for the Sun and Moon are done according to the 8 articulations of sun and moon power. These are: the 2 solstices, the 2 equinoxes and the first day of the four seasons. These dates fix the time for doing the visualizations of the sun and the moon.

According to the ancient calendar the practice for each lasts 45 days in a continuous cycle of 360 days. (45 x 8 = 360).

45 days of sun practice are followed by 45 of moon practice.

Summary:

A. Moon Energy

Time of practice: 9 PM. to 1 AM.

Duration of practice: Ten to fifteen minutes.

Procedure: Feel the eyes yielding and cool. Do not blink. Absorb moon energy until tears form or the eyes heat up. Draw moon energy into the eyes, and into the mouth and mix it with saliva in the mouth. Draw in the senses, bring the chin down, straighten the spine and swallow (gulp down) into the thrusting channel for storage in the perineum.

Fig. 19 *Moon Energy*

1. Moon energy can be stored in all the organs.

2. Note that when the moon is full, there is more Yang energy in Yin. When there is no moon, there is pure Yin energy. After the new moon, there is less Yang in Yin.

3. The best time to absorb the moon energy is during the new moon, when the heart is calm. (First crescent after the dark phase.)

4. Collect moon energy in proportion to the sun energy collected to balance Yin and Yang energy.

5. The fluid of the eyes is magnetized by making it cold. The colder the fluid, the more magnetized it is. As it gets warmer, it loses its magnetism. Staring hard heats up the eyes; looking relaxed cools them. Instead of letting the eyes "go out" and reach the object, let the eyes attract the object.

B. Sun Energy

Time of Practice: At sunrise or sunset, when the sunlight is soft, not harsh. Be extremely cautious with this practice as the retina can burn quite easily.

Duration of Practice: Ten to fifteen minutes, depending on the time of the day.

Procedure: Look directly at the rising or setting sun for short periods. Close the eyes if the sun is high in the horizon. Absorb the sun energy through all three eyes into the Crystal Room (behind the Third Eye), to the Jade Pillow, down to the Door of Life (Ming-men) and store in the sacrum. It could also be stored at the Jade Pillow or Door of Life by some people, but the sacrum is the safest place.

1. At sunrise, when the sun becomes bright (yellow) is the best time to open the Third Eye; this is the energy of clear light.

2. Morning: Yin in Yang. High noon: Yang. Red Sun: more Yin.

3. At noon, absorb sun energy with the eyes closed until you see a rainbow.Then single out the colors. If one meditates, the body will become a crystal, extracting the type of light it needs. You can also place the palms toward the sun.

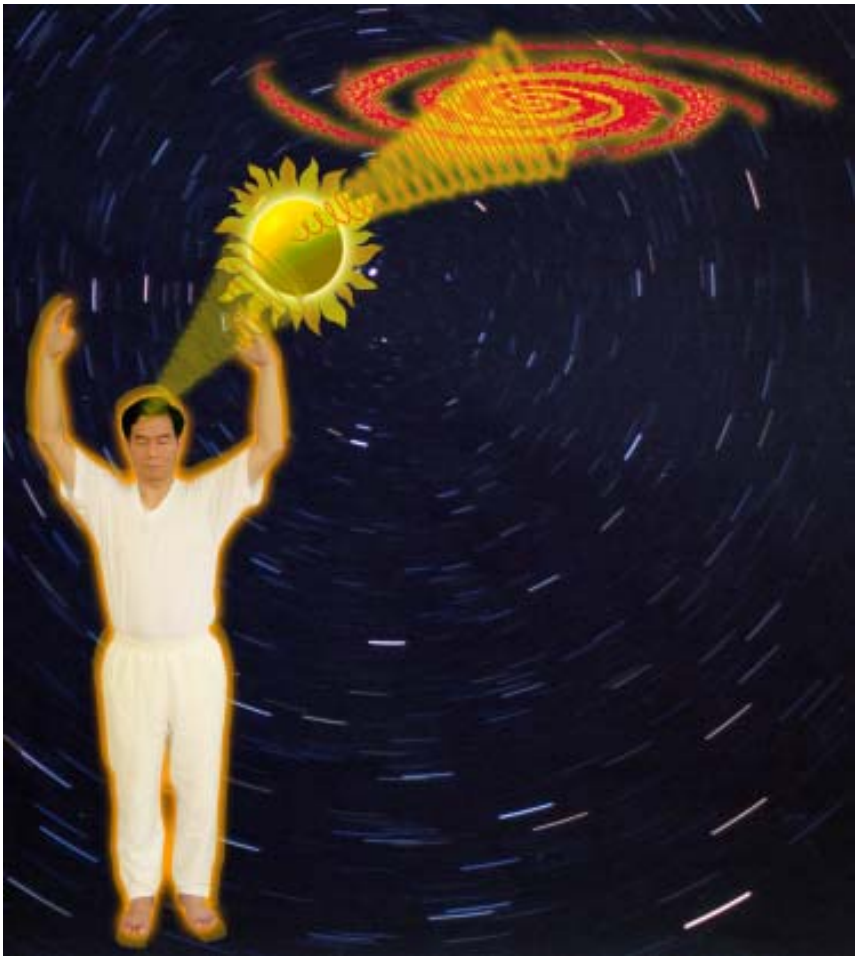

Fig. 20 *Sun Energy*

C. Star Energy (North Star and Big Dipper)

The Taoist aims at nourishing himself with light and essences not with substantial food. The Taoists eat the universe, but in its essential form which is more subtle.

It is by the absorption of essences that begins the cessation of cereals. Nourishment is replaced by subtle foods made of essences and lights. The absorption of cosmic energy becomes little by little the essential food of the practitioner. It is this subtle nourishment that allows the Taoist to become identified with the subtle and eventually become luminous and merge with the Universe to become part of the universe.

Heavenly Three in One:

The sun, moon and stars are the three luminous ones. They are the heavenly projection of the three Pure Ones. In the body that trinity is the Chi, Shen and Ching.

The three pure ones animate the universe through three breaths of three colors: Purple, Yellow and White. In the body they are incarnated by the three originals that reside in each of the 3 warmers.

Body as Light:

The body is conceived as a combination of lights. These lights are absorbed into the different elements of the body (blood, bones, muscles etc.).

The lights within are the counterparts of the lights outside in the starry heavens. The inner lights are Yin and the exterior ones Yang.

The Yin lights are the reflections of the Yang lights, yet neither can exist without the other.

Nature of Stars:

Stars are the dispersed emanation of the metal and their origin is in fire. The stars are yin and are the essence of the most subtle original breath.

There are three types of star practice.

1. They can be called to give protection.
2. The practitioner can make the stars energy comes down into the body.
3. The meditator can rise to the stars.

Protector:

Invoking the four animals:
Traditionally Taoists who practiced alone invoked the 4 animals at the beginning of the meditation. This was followed by the Sun, Moon and Dipper.

Ring of Protection:

The meditator, to protect himself during practice, can call the animals of the 4 directions. They form a protecting sacred belt that protects from evil, thus recreating a Microcosm in the middle of which the meditator sits.

1. The white tiger is to the right (west)
2. The green dragon is to the left (east)
3. The red bird is in front (or on the head)
4. The turtle, the black warrior is on the back, (or on the feet).

Inside Animals Protector:

Utilize the interior animals:

1. Picture first 4 spirits which are 4 children dressed in the same color as the organs they occupy.

2. Each exhales a breath of the same color as the organs to which they belong. The color breaths become the animals of the organs and go out to protect them.

Planets Protectors:

Like the ring of protection of the animals of the 4 directions, the planets can be called to form a protective ring around the practitioner.

Dippers:

The Dipper is also used as a protective cover over the practitioner. The method of internalizing and absorbing the essence of the Dipper stars is considered superior to covering the body with the stars, or praying to the stars. The highest practice is internalizing the stars.

Dipper Stars Protectors:

The star Governor of body spirits: The 7th star of the Dipper is considered the governor of the body spirits. The dipper stars are protectors of body points.

Dipper Stars Protect the Organs:

Visualize the 7 visible stars of the Dipper in succession. At the end visualize the two invisible ones together. Each star is visualized entering in the organs and illuminating the whole body.

The order of stars and organs: Heart 1#. At the cup, lungs 2#. Lower cup, liver 3#. At the lower cup, spleen 4# end of the handle, stomach 5#. At the handle, kidneys 6#., Pupils of the eyes 7#. At top of the handle. 8# Niwam on the crown (the 2 invisible ones together accompany the Pole Star).

Dipper Stars Protect Parts of the Body

1. The first 3 stars on the left side of the chest, elbow and the palms.
2. The 4th star on the heart.
3. The last 3 on the lower right side of the body. (abdomen, genitals and feet).

Dipper Symbolism:

This marks the four directions, fixes, determines and separates. It is the Dipper that fixes the seasons and Yin & Yang. The Dipper is the one that distinguishes good and bad, dispensing the results of good or bad deeds. So it is said to be the giver of happiness or adversity. Some texts say that the 7 stars become one and descend 3 feet above the head of newborns. If the child is going to be a good person it shines brightly, announcing the good news. If the stars remain dark this predicts a bad person.

The Dipper also governs the Superior Ones of the 9 heavens. In the middle plane it governs the flying immortals of the five mountains. Below it guides the true practitioners and the spirit of heaven and earth. Everyone depends on the Dipper.

Dippers of the Five Directions:

There are 5 Dippers: The eastern one rules the numbers of years each person is going to live. The western one inscribes the names of the living and dead in the registers of heaven. The northern one keeps tabs on the registers of death. The southern one gives life. The central one directs and governs all the spirits.

The most important of the 5 Dippers are the ones of the North and South. The Southern Dipper is believed to be in Sagittarius. Humans accumulate their merits in the southern Dipper. It saves the good from hell and intercedes with the king of hell anytime a demon bothers the practitioner. Parallel to that is the Dipper of the North. It keeps track of the evil deeds of humans and orders the king of hell to capture humans.

The northern Dipper is the place of hell and the southern one that of eternal life. Death comes from the emperor of the north and life through the door of the south. Prayers were made to both Dippers to prevent death and grant eternal life.

Dipper Stars and Seasons:

The first star of the Dipper, Yang Ming corresponds to the spring. Tan Yuan, the 5th, governs summer. Yin Tsing, the 2nd governs fall. Pei Ki, the 6th rules winter and Tien Kuan, the 7th, the center.

Dipper energy according to the days of the month is as follows:

The Dipper and the Three Pure Ones

1. Day 1, 2, 5 of the month. The energy is absorbed on the upper cinnabar field on the crown. The upper pure one, the upper warmer.
2. Days 7, 9, 12 on the middle field at the heart. The middle pure one, the middle warmer.
3. Days 15, 19, 23 on the lower field at the navel. The lower pure one, the lower warmer.

Dipper Energy Absorption Method:

Visualize the Ursa Major constellation, the stars are purple and net work that links them red. Feel a warmth produced by the purple color. The practitioner sees himself, together with the breath of the 7 stars, penetrate into a watery flower. In the center of the flower there is a pond of a 1000 miles, a jade mountain, a great terrace thousands of acres long and a red tree with purple flowers. He loses consciousness of himself inside of the flower.

This practice is called “abandoning the little for the great” or “metamorphosis without a trace”.

This method is considered the supreme experience of star meditations and was practiced by several of the great immortals.

Spring Practice:

On the equinox of spring after the Inner Smile late at night, turn toward the east, click the teeth 30 times and with, eyes closed, see the 3 palaces of the body with their 3 virtue children 4 ministers and oneself in the middle of them.

Exhale a purple breath and rise to the first star of the Dipper with a yang mind. This star is the spirit of the east and spring. One sees oneself at the star exhaling the purple breath 30 times . After some time one sees the palace of the 3 original high ones of the east at the #1 star yang mind. At the palace, the young child of the green mystery (spring) gives one the true light. This light is green like a silk piece. This is the celestial bridge.

Dipper and Fetus:

The Dipper is related with anything that has to do with sprouting. The stars open the 7 orifices of the fetus and give it life.

The 9 stars (including the invisible) are related with the transmutations that take place in the 3 warmers in the process of perfection. Nine is also the number of Greater Yang.

Creation of the Subtle Body with Astral Energy:

This method is to have different astral angel children descend into each of the organs and give them life. This way little by little a subtle body is created. The same is done through alchemical methods clarifying each of the 3 warmers little by little.

Out of Body Journey to Dipper:

The journey is made on the solstices, equinoxes and the beginning of each season to the Dipper. There the practitioners see the three great spirits and the appearance of newborns. He sits in front of each. The main purpose is the feeling of having abandoned the physical body.

Follow the same procedure and storage points as the moon energy. Draw only from the pole star (above the Big Dipper).

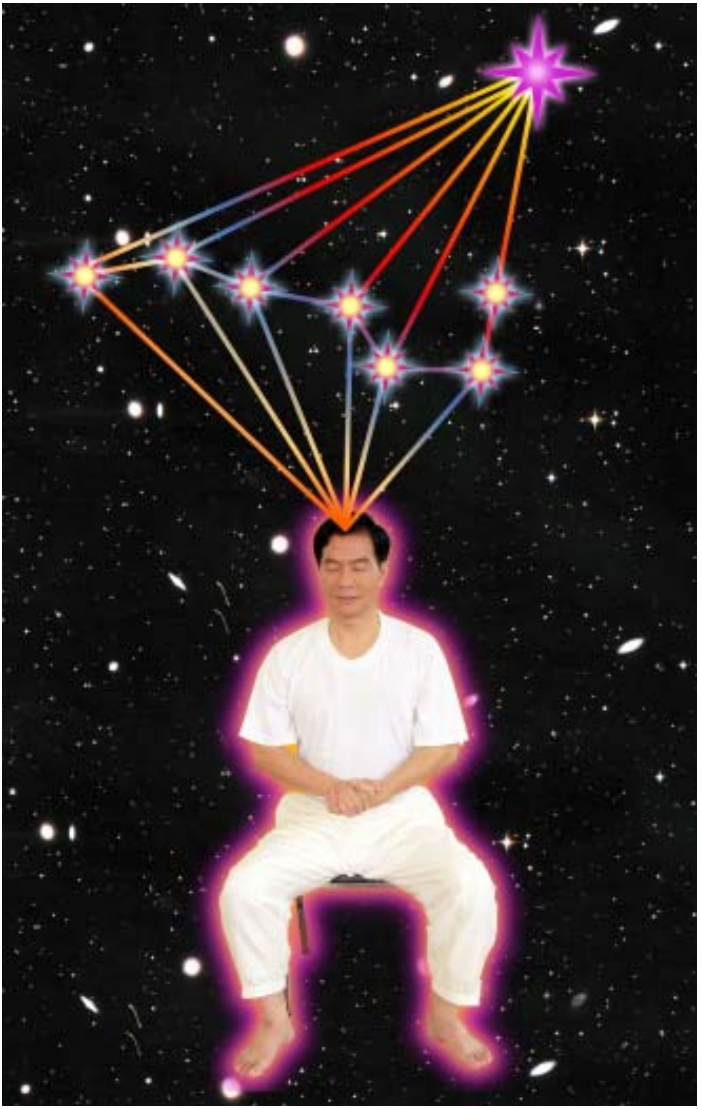

Fig. 21 *Star Energy (North Star and Big Dipper)*

D. Plant and Tree Energy

Time of Practice: Daylight hours. Avoid night time or early morning as plants are absorbing energy at this time. Choose plants and trees that are healthy.

Procedure: Sit quietly and feel the energy of the plant or tree. Absorb the energy through the palms, Third Eye, navel, solar plexus, projected pearl or the enveloping aura. Inhale and draw the energy through the points mentioned. Store in the perineum or back of the knees.

1. When drawing energy through the palms, circulate through the positive and negative arm routes. For smaller trees or plants, use the hands to absorb energy. For larger trees, extend your aura and envelop the tree, allowing the tree's aura to envelop you.

2. Animals belong to the lower plane (earth). Plants belong to the mid-plane or earth surface. Trees stand between heaven and earth; hence, they have earth and heaven energy. Taoists aim to become like trees, a union of heaven and earth, and symbols of longevity. The energy drawn from the trees and plants is absorbed by the pearl.

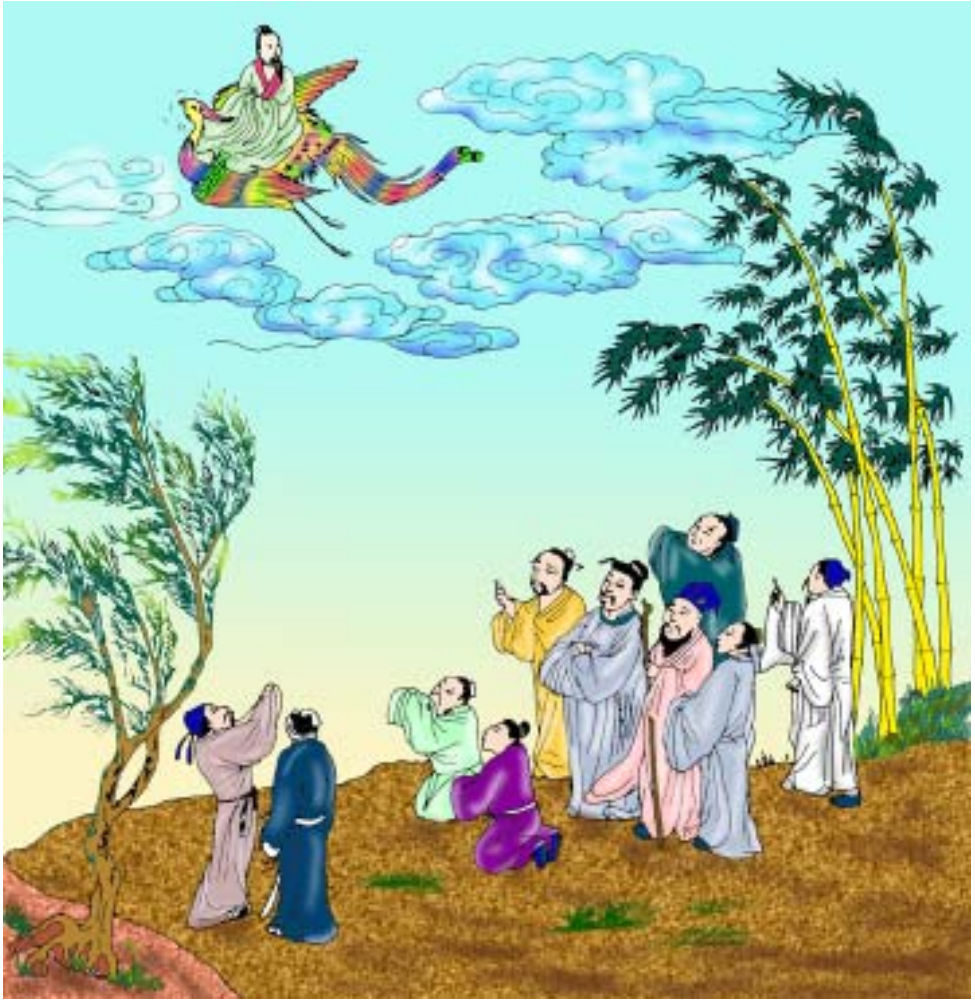

Fig. 22 *Plant and Tree Energy*

L. Ending the Meditation:Turning the Wheel of the Law

Each Kan and Li meditation should be ended with this formula which is a process of collecting “refined” energy in the navel cauldron to be used in future meditations, including the higher levels.

At this stage, the eyes are used to direct the energy produced by the meditation into the Microcosmic Orbit, guiding it into the cauldron behind the navel.

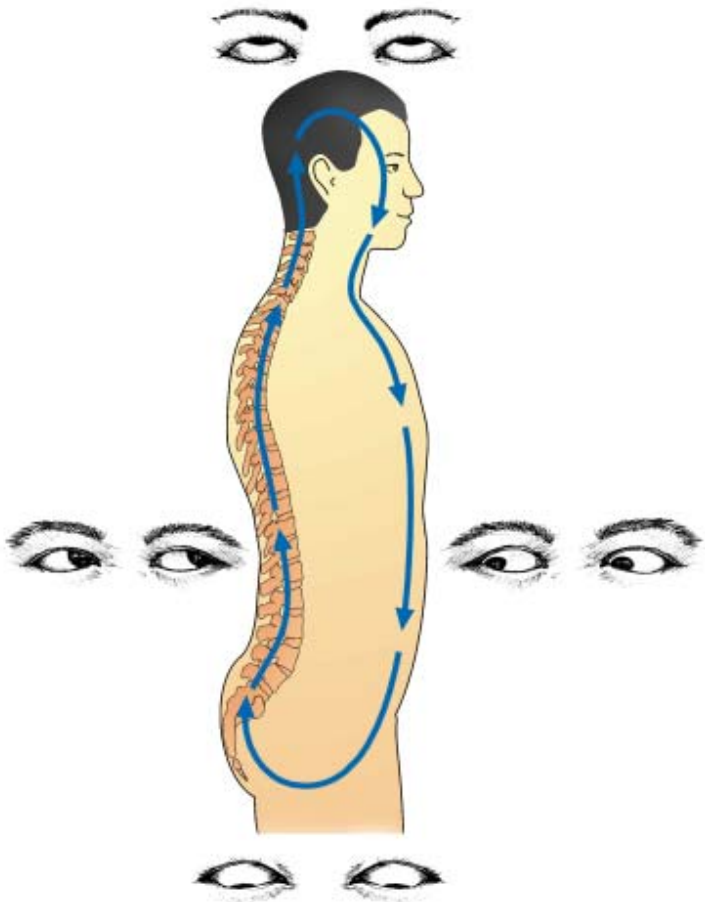

Fig. 23 *Ending the Meditation:Turning the Wheel of the Law*

1. Form a pool of sexual energy at the perineum. Looking straight ahead with your eyes closed, form a mental image of a clock with your eyes focused on its center.

2. Look down into the pool (6:00), and draw sexual energy up into the spine. The steam will travel up the spine drawing sexual energy with it.

3. Look from the perineum up to the right (3:00), drawing the energy up to T-11 as it is refined at that point.

4. Look from the right up to the crown (12:00), and draw the energy there to further refine it at the pineal gland.

5. Look from the crown down to the left (9:00), and draw the energy down either through the tongue or the thrusting routes into the cauldron at the navel. The energy is then stored in the cauldron. (These four directions constitute one round.)

6. Follow the procedures 1-5 above for at least 36 revolutions. You may do them in four rounds of six revolutions with three counts resting in between; or you may do two rounds of twelve revolutions with six counts of resting in between. In any sequence, the revolutions and resting counts must add up to 36. the rising steam will eventually flow independently of your counting, but maintain the mental revolutions to be sure it reaches the cauldron.

7. If you have time, do four rounds of 75 revolutions, resting for fifteen counts in between rounds; or do two rounds of 150 revolutions, resting for thirty counts between rounds; or do 360 revolutions straight through. (All of these methods add up to 360, which is the maximum number of revolutions used to end this practice.) If you have less time, do seven rounds, rest for three counts, then fifteen rounds, rest for three counts and finish with seven more rounds.

Master Mantak Chia is the creator of Universal Tao System, Healing Tao, Tao Yoga and is the director of the Universal Tao Master School at Tao Garden Wellness Retreat in the beautiful northern countryside of Chiangmai, Thailand. Since childhood he has been studying the Taoist approach to life. His mastery of this ancient knowledge, enhanced by his study of other disciplines, has resulted in the development of the Universal Tao System which is now being taught throughout the world.

Greater Kan and Li

In this booklet you will find all the information needed to continue your practice of the Kan and Li meditations. In the Lesser Kan and Li, you learned to establish a cauldron in the navel. In this, the Greater Kan and Li, a new cauldron is re-established at the solar plexus, where most of the Greater Kan and Li meditation transpires.

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The practices end with instructions for collecting refined energy in the navel cauldron for use in future meditations. You also learn how to collect other forms of outside energy, from the moon, sun, and stars.

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Tendon Nei Kung

Opening and Growing Tendon Power

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The meditations, practices and techniques described herein are ***not*** intended to be used as an alternative or substitute for professional medical treatment and care. If any readers are suffering from illnesses based on mental or emotional disorders, an appropriate professional health care practitioner or therapist should be consulted. Such problems should be corrected before you start training. This booklet does not attempt to give any medical diagnosis, treatment, prescription, or remedial recommendation in relation to any human disease, ailment, suffering or physical condition whatsoever.

Introduction to Tendon Nei Kung

Tendons Nei Kung and Tendons

Although there are a vast number of benefits that may be obtained from a regular practice of Tendon Nei Kung, the exercise is specifically designed to aid in the growing and strengthening of the tendons. The lastest research on the human body reveals that cultivating strength and physical well being. The tendons are a most vital ingredient. Generally speaking, people have a very limited knowledge on tendons and are far more interested in how to pump and tone their muscles in order to appear strong externally. In cultivating true strength, the tendons have to be included, and knowledge of how to strengthen them is required. Before we go into explaining the exercise itself though, it is helpful to have some basic knowledge about tendons and their nature.

Tendons and Ligaments

Tendons are the tissue that connect bones to muscle, while ligaments are the tissue that connects two bones together. Ligaments are mainly found in between the joints and are generally short in length. Tendons on the other hand are located through out the body. For example the tendon that connects our heel to our calf muscle (Achilles tendon) is of prominent length. In essence, tendons and ligaments are both connective tissue and made of exactly the same thing. Through out this book we will be referring mostly to tendons, however the Tendon Nei Kung practices are equally as vital and beneficial to the ligaments as they are to the tendons. Bare in mind that when we say tendons we are basically reffering to the body's connective tissue and are hence referring to the ligaments as well.

Tendon Nei Kung Practice

Theory

The three key instruments that are made use of to grow the tendons in Tendon Nei Kung (tendon changing) are mind, heart and eyes. Together the mind heart and eyes are know in Chinese language as Yi, which again can be translated into the English word “awareness”. The heart is at the very base of this practice. The ancient Taoists followed the theory that the tendons are directly connected to the heart. When the heart contracts, the tendons lightly contract. When the heart expands, the tendons expand. Therefore a vital step in Tendon Nei Kung practice is to be able to strongly sense the beating of the heart so that we can move to its rhythm when doing the forms. This is not such a simple task especially during movement and takes a little persaverance. Meditation (Inners Smile and Microcosmic Orbit) is key. By quieting the mind, we are able to sense the internal organs, and really listen to the rhythm of the heart. If you do not have a deep meditation practice and cannot yet feel the contracting and expanding of your heart, it helps to feel your wrist pulse for a moment to get a feel for the rhythm of your heart beat. This will be discussed later, in more detail, in chapter five.

Tendon Nei Kung Forms

Building the Structure

Rocking Forward

The basic movement for the Tendon Nei Kung forms proceeds out of the Iron Shirt I posture. Once in this posture, following the same guidelines and principles of relaxation and alignment, you are ready to start with the movement.

Power Moves from the Ground Up

Fig. 1 *Earth Force.*

Regardless of style, a universal principle of Tai Chi Chi Kung is that power is generated from below. In other words when generating force, it comes from the earth, to the feet, up through the legs, up the spine and back and travels through the arms where it will finally be expressed in the hands and fingers. Tendon Nei Kung is no different in this regard. In fact it is the very practice of learning to bring the earths enegy up through your body. The aim is to use the mind, assisted by the correct movements to bring the earth's energy from the ground, through the various tendons of the body and finally into the tendons of the hands.

Feet

Once you have adopted your Iron Shirt position, you are ready to initiate the movement from below, in other words the feet. First lift and press the toes back whilst gently leaning forward, so that your heals raise off the ground about an inch to an inch and a half. (on return keep the toes on the ground).

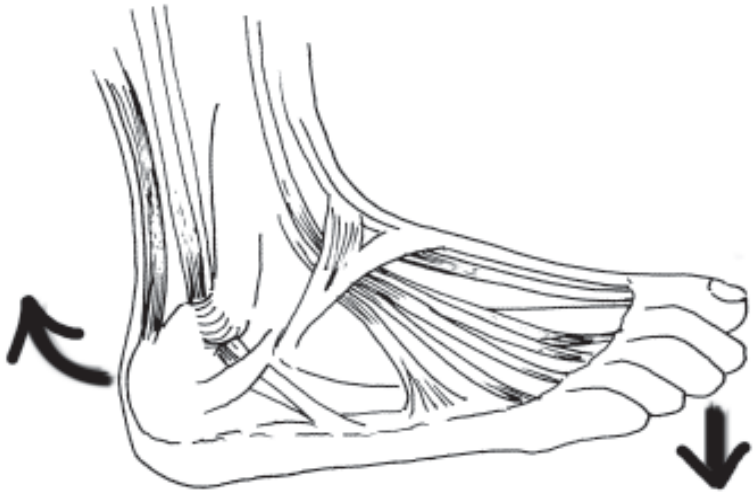


Fig. 2 *Lifting the Toes*

Legs

As your rock forward onto your toes, squeeze the legs slowly from the bottom up. The combination of these feet and leg movements should have you moving up and down about 4 to 6 inches. This movement is used to initiate the gentle whip motion that is used to assist the energy to flow up to the hand tendons in Tendon Nei Kung.

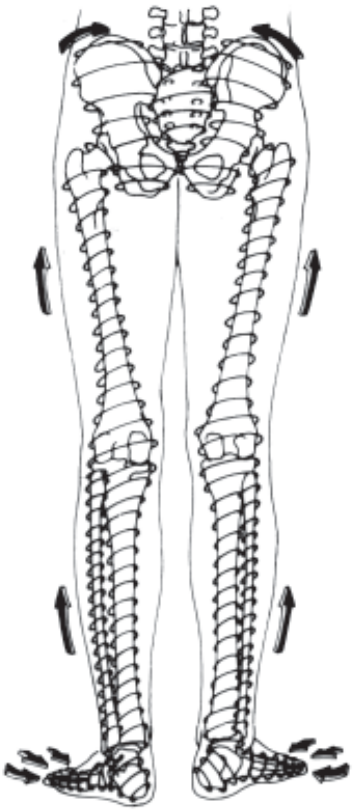


Fig. 3 *Squeezing the legs- from the bottom to the top*

Hips

Once the force has moved from the legs to the hips, press and squeeze the hip joints and feelt that the hips are folding on each other. Doing this should assist in the sending of the earths force upward towards the tendons in the fingers.

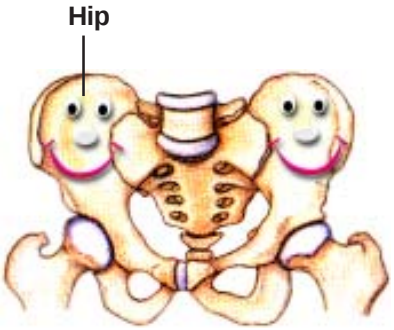


Fig. 4 *Squeezing the Hip Joints.*

The psoas muscle complex is a broad flat muscle in the lower back area. Like an octopus, it has branches extending out from both sides of the lower spinal vertebrae in many directions. It has two segments at its origin, psoas major and psoas minor, which connect with the twelfth thoracic vertebra (T12) and each of the five lumbar vertebrae (L1 to L5). The psoas major is by far the much larger of the two segments, and it gets most of the attention. The psoas major originates from the transverse processes of T12 and L1 to L5 and passes beneath the inguinal ligament in the groin area as it descends down the front surface of the ilium bones of the pelvis. It inserts into the lesser trochanter process on the inside front of the upper femur bone (the big bone in the upper leg). The smaller psoas minor segment shares the same origins as the psoas major, but inserts into the sacroischial ligament. This ligament connects to the ischium tuberosity (at the back of the sitting bones).

Press the psoas muscles form the hip up into the solar plexus and T11. This will help torque the psoas muscles, strongly connecting the hip girth to the leg bone. This connection between the upper and lower body makes the transferal of energy from the ground up, far more affective while also activating the sacral pump. When done correctly you will experience the feeling of being very well grounded.

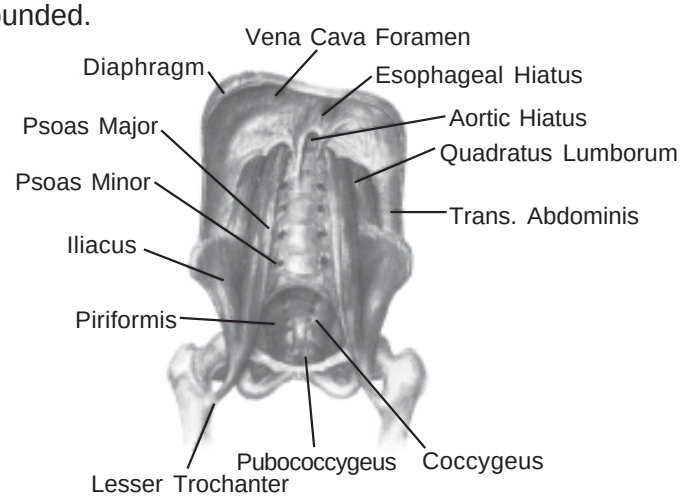


Fig. 5 *Psoas Muscles*

Spine

Feel the momentum of these movements carry into the spine pushing the energy further up. Stretch the spine upwards with a wave like motion moving from the bottom up, expanding from the 5 lumbers, the 12 Thoracics and to the 7 Cervicals.. Lengthen the spine as much as possible without being too forceful, as though someone was slowly pulling the imaginary string that is suspended from your crown up and slightly forward. Really stretch your spine and feel vital space between the vertebrae opening up and increasing in length allowing more Chi to flow and be stored.

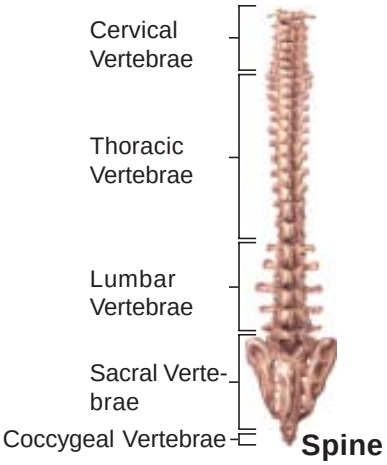


Fig. 6 *Lengthening the Spine*

Scapula

Open the scapula and push the T11 vertebrae simultaneously tilting the sacrum in by rolling the hips under the body. You should feel your feet press to the ground as more weight is given to the legs. The movement of the scapulas will give the illusion that the arms are moving forward and back. Take note however, that the arms are not moving of them selves but only as a consequence of being connected to the scapulae! This is what is referred to as movement without movement in the Taoist texts.

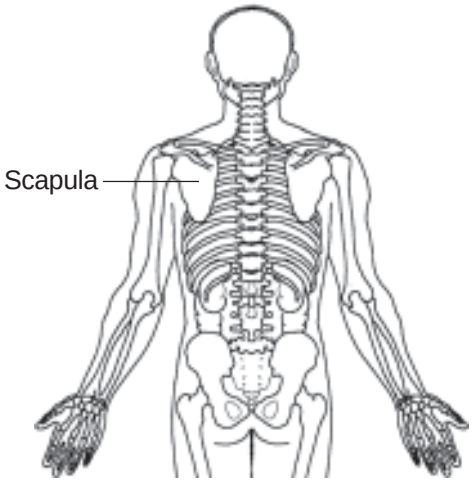


Fig. 7 *Pushing out the Scapulae*

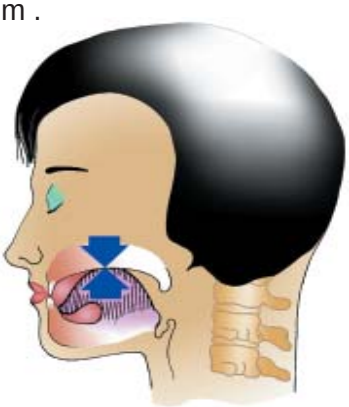
Hands

There is a direct connection between the middle of the hands and the heart. Because of this it is important to gently contract the hands as the heart contracts. By doing this you assist in furter synchronizing the beating of the heart with the movement of the tendons. This in turn greatly assists in pulsing more blood and chi through the tendons to the tips of the fingers. As you exhale and torque the variouse areas of the body and tendons, gently expand

your fingers slightly stretching the finger tendons. Take note this is a very sublte movement and is not an obviouse stretching out of the fingers. Instead try and sense the blood pulsing into your fingers and try and move them as a natural reaction to the momentum of the blood repeatedly pouring into them. You can slightly animate this movement but do not make the movement *unatural and* unrelated to the heart beat. Try and sense the blood pulsing in your hands enough to feel as though you actually have a heart in your hand and then make your hand movements to be a natural reaction to this pulsing.

Tongue

Press the Tongue to the palate connecting the governing vessel to the conception vessel to close microcosmic orbit and activate the Cranial Pump. Now round the shoulders, sink the chest and push the chin in to further open the scapulae and expand the back. This movement will also bring the C7 into alignment which will send the earth force though the tendons of the arms, the elbows and finally the fingers. As the earths force reaches the fingers, gently open your hands to very gently stretch the tendons in the fingers. It is vital that this opening of the hands be in accordance to the peristaltic pulse felt in the palm .



Press Tongue to Palate

Fig. 8 *Activating the Cranial Pump*

Breath (Chi Pressure)

As the heart contracts and you open the hands as explained above, exhale with force by squeezing the Tan Tien (??abdomen??) like clenching a fist, this will pull tendons inward towards the Tan Tien stretching them. Simultaneously pull up the genitals closing the anus and pinch the elbow joints tightly to help create more Chi pressure. Exhaling in this manner creates pressure and a slight tension which will torque all the tendons of the body.

On inhaling relax, and gently breath in releasing all the different pressure that has been created.

Fig. 9 *Tan Tien pulling the tendons inwards.*

Coordinating the Heart Beat, Breath and Movements

Once these movements have been mastered and are familiar to you, you are ready to coordinate the all important rhythm of the heartbeat and the exhalation of the breath to your physical movements. As mentioned, the Taoists believe that the heart controls the movement of the tendons. When the heart contacts, the tendons gently contract and when it expands they release this very subtle tension allowing the tendons to expand. Based on this knowledge of the relationship between heart and tendons the Taoists the vital importance of coordinating the contracting of the heart with the torquing of the tendons and pulling up of the sexual organs. Timing the movement with the heartbeat greatly assists in bringing the earth force through the tendons and is a vital aspect of Tendon Nei Kung.

Fig. 10 *Position when the Heart Contracts.*

Ultimately you need to be moving to the exact beat of your heart. Exhaling rock forward onto you toes, stretching you finger tendons, pulling up the sexual organs ect should be coordinated with the expanding of the heart (peristaltic beat), whilst rocking back onto you heals, inhaling releasing all the various tension should coordinated with the contracting of you heart. In order to do this though, one needs to be able to have a strong sense of heart's pulsing.

Sensing the heart's pulse is more challenging than expected for most people, especially when attempted during physical movement. Even with the necessary meditation experience, when the heart is relatively relaxed as should be when practicing Tendon Nei Kung, it's beat may at first be too subtle to register consciously.

However with a little practice this can easily be remedied to such and extent that you will be able to sense you heart in just about any situation.

Sensing the Heart Exercise

Sitting down, place yourself in a relaxed meditative position and go into you heart with your mind. Smile down to you heart and see to what extent you can sense its contracting and expanding. If you find that you cannot pick up its rhythm what so ever, place your middle and index finger across your palm to sense you pulse. Keep your mind in your heart and try as best you can to feel the rhythm in your palm, in your heart. Once you think you have a good sense of the rhythm try again to sense the heart's pulse with out the aid of you palm. If you find that you still able to do this, make use of your palm to sense the pulse until you think you are ready to do it with out using the palm's pulse. By continuing in this way you will soon be able to sense your hearts pulse with you mind.

Once feel that you have more or less mastered sensing the heart you may try to do the forms in accordance to your heartbeat. It may be easy to try this first from a sitting position, starting the movement from the base of the spine and ending in the fingers as there will be less movement to distract you.

Once you can do this it should be easy advance to standing. By practicing in coordination to your heartbeat in this way, you will be able to grow your tendons a lot more affectively.

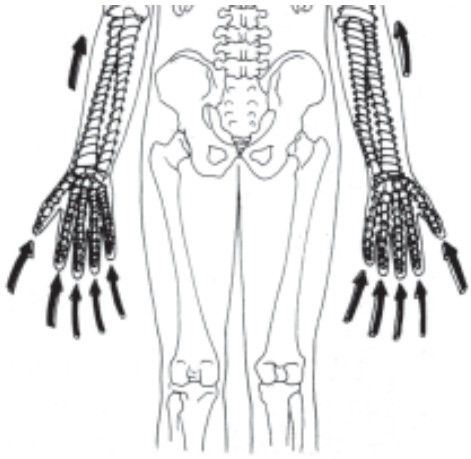


Fig. 11 *Feeling your pulse on your palm.*

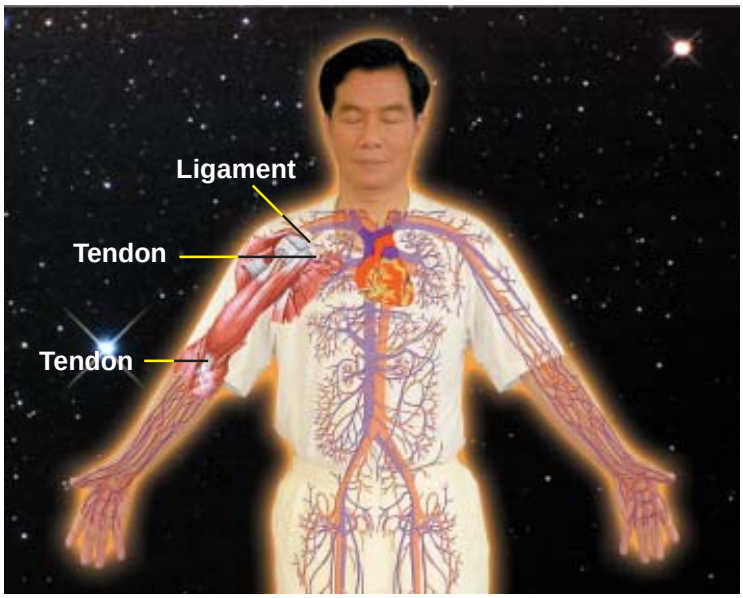


Fig. 12 *Relationship between Heart and Tendons*

Internalizing

Start with reasonably large, and animated external movements. Familiarize yourself with the internal force that is generated when executed correctly (what does the earths force feel like). Then once you have a deep practice and can execute all the internal and external movements as if second nature and generate the force, you can then attempt to internalize the movement. There should always be some visible external movement, but once you feel you are ready you should limit the movement as much as possible while still being able to feel the internal force. If you attempt limiting the movement but don't feel the same internal force generated by your previous larger movements, this is a clear indication to you that you are not yet ready to internalize the movement. In this case it will be necessary for you to spend another couple months, or however much time you feel necessary, before reattempting the internalization of the movements.

Importance of the Eyes

Being visually oriented, human beings rely heavily on their eye sight. Because of this fact we direct huge amounts of our Chi with our eyes, especially when we do it consciously. The Taoists were well aware of this and thought of the eyes as the windows of the soul. They knew that unless we greatly lack concentrated mental focus, our mind generally goes where our senses go, primarily our vision. Based on this knowledge they soon realized that the eyes could be of great aid in Chi Kung exercise as an aid to direct the Chi to the relevant areas. Specifically in Tendon Nei Kung the eyes are used to a large extent to direct the Chi. As the heart expands, we exhale from the Tan tien and we can greatly help direct the Chi to our fingers by expanding our eyes as much as possible and focusing in on our hands and fingers with a strong intent.

Fig. 13 *Directing Chi with the eyes by expanding.*

Concentrating on Individual Fingers

All the tendons connect up in the fingers and by emphasizing individual fingers in this manner one is able to greatly strengthen a specific line of tendons.

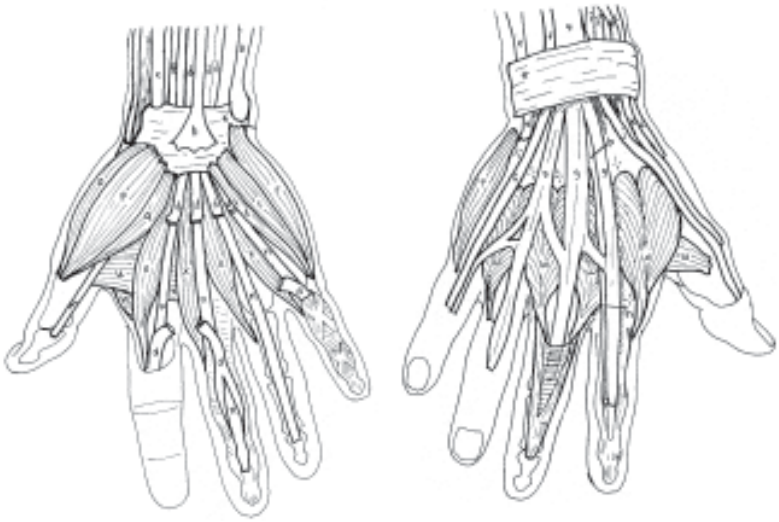


Fig. 14 *Tendon lines ending in the fingers.*

Eight Hand and Arm Positions

Once the basic structure of the Tendon Nei Kung forms has been successfully developed in the Iron Shirt I posture and you are confident with the movements and various details, you are ready to advance your practice by making use of the eight hand and arm positions.

By practicing the eight positions you strengthen and grow all of the various tendons in the body. Consistently practicing in this way will greatly strengthen your tendons as a unit, instead of having one line of tendons being more developed than another, leaving the others to become weak.

Fig. 15 *Developing the Tendons as a unit with tendons and muscles in good preportion.*

First Position

The hands are relaxed, held at nose level with the palms facing inwards in similar fashion to Iron Shirt I position. Following the movements described in basic structure, bring the earth's force up through your body. As your heart expands, you exhale to your Tan Tien, and torque the tendons from the ankles up, open of the scapulae and sink the chest, in this way moving your arm structure forward about a foot to a foot and a half. (Remember that the apparent movement of the arms in doing Tendon Nei Kung and Tai Chi forms, in reality, is only a result of the sinking of chest and the opening of the scapulae. Do not use the muscles in your arms!) As your heart expands, move your arms forward and torque the tendons in your hands. Very gently open and stretch the hand emphasizing the tensing of the tendons in your middle fingers. Expand your eyes and use your visual focus and mental awareness to direct and sense the earths force pulse into your finger tendons.

Fig. 16 *First Position*

Second Position

Hold the hands at eye level, with the palms and hands facing each other, creating an upside down 'V' or roof shape. Following the movements described in basic structure, bring the earth's force up through your body. As your heart expands, you exhale to your Tan tien and you torque the tendons from the ankles up, move your arm structure about a foot away from your body maintaining them at the same height as their original position. As you do this, direct your visual focus and mental awareness primarily towards your Pinky fingers. Gently stretch and tense all the finger tendons, charging them with the earths force, whilst emphasizing the pinky finger tendons.

Fig. 17 *Second Position*

Third Position

Hold your hands at abdomen level, palms and hands facing each other as though you were holding a soccer ball. Following the movements described in basic structure, bring the earth's force up through your body. As your heart expands, you exhale to you Tan tien and you torque the tendons from your ankles up. Simultaneously move the arm structure directly forwards about a foot to a foot and a half at the same height as their original position (abdomen) and gently open and stretch your four fingers forwards, away from your body. At the same time, direct your visual focus and mental awareness towards the thumbs and gently stretching them up towards the heavens. Feel the earths force spread into your fingers especially the thumbs.

Fig. 18 *Third Position*

Fourth Position

Hands are held at abdomen level with hands and palms facing the ground. Following the movements described in basic structure, bring the earths force up through your body. As your heart expands and you torque the tendons from the ankles up, move the arms up and out as the Chi travels through them. At the same time direct your visual focus and mental awareness to the top of your hands and feel the Chi rising up and moving out, through the top of your hands. Cultivate a feeling of resisting the downward force of someone leaning their weight on the tops of your hands. Your hands need move only about half a foot both up and out.

Fig. 19 *Fourth Position*

Fifth Position

Hands are held in front of the solar plexus in a 'roof' shape, similar to position two. Hold the hands about foot and a half to two feet in front of the solar plexus, keeping the elbows down and relaxed. The 'roof' angle is less acute than in the second position. An easy way to find the correct position is to take up the basic Iron shirt I position with the hands at solar plexus level about two feet in front. From this position simply turn your inward facing palms and hands to face at an angle to the ground. Then following the movements described in basic structure, bring the earths force up through your body. As your heart expands and you torque the tendons from the ankles up, move the arms away from your body about a foot keeping the arm structure at the original height (solar plexus). At the same time direct your visual focus and mental awareness to the pinky fingers while also tensing them slightly to charge them with Chi. Feel the earths force pulse into your finger tendons with emphasis on the pinky fingers.

Fig. 20 *Fifth Position*

Sixth Position

Hands are held at shoulder level with the palms and hands facing the chest. Hold you hands about a foot away from you shoulders, keeping the elbows down and relaxed. Following the movements as described in basic structure, bring the earths forces up and through your body. As your heart expands and you torque the tendons from the ankles up, move the arms forward, up and out about half a foot. Make your arm and hand movements larger and more animated than in the previous forms. As the arms move in this way, slightly raise the elbows but make sure you do not lift them over the height of the hands. Focus and expand your eyes to your hands and fingers and put your awareness on the movement of the spine emphasizing its whip like motion and feel it being charged with the earth's force.

Fig. 21 *Sixth Position*

Seventh Position

Hands are at waist level with palms and hands facing up and your fingers pointing towards each other expanding creating the shape of a basket. Following the movements as described in basic structure, bring the earths force up and through your body. As your heart expands and you torque the tendons from the ankles up, move the arms structure forward and slightly up about a foot to a foot and a half. Again focus on your spine and emphasize moving it like a whip. Focus and expand your eyes, looking at your hands and fingers and use your mental awareness to feel the spine being charged with the earth's force.

Fig. 22 *Seventh Position*

Eighth Position

For the final position hold your hands at knee level only a couple inches away with palms and hands facing upwards. To reach knee level with your hands you will need to bend your knees more than in any of the previous positions (bend over the toes!). Do not cheat yourself by bending and arching the spinal cord to reach your knees, as this will simply neutralize any of the desired affects of this form. By squatting, bending the knees whilst keeping the back straight, follow the movements as described in basic structure, bring the earths force up and through your body. As your heart expands,(!!!!you exhale to your Tan tien!!!!!), and torque your tendons from the ankles up, ??start?? straighten the knees until they are only bent a little. As you do this, move the arm structure forward and slightly up, swinging like a pendilum, expanding out creating a basket shape. Move the arms from the scapulae and shoulder as a unit without adjusting at any of the arm joints. As you do this, turn your hands outwards to torque the arm, hand and finger tendons. Focus and expand your eyes, looking at your hands and fingers directing the earths force to them. Emphasize the spine moving like a whip and use your mental awareness to feel the spine being charged with the earth's force.

Fig. 23 *Eighth Position*

Tai Chi Chi Kung Stance Application

Once you are familiar with the various movements and principles of the Tendon Nei Kung forms, you can start adapting the movement to your Tai Chi Chi Kung form. To start doing this you can use the push position. Stand with your hands out in front of your body about shoulder height, elbows down, with one leg forward and about 70 percent of you weight on your front foot, as in a bow and arrow stance. The first step is to initiate the movement from below out of this push position. To do this, you firstly shift your weight from your front leg to your back leg, then as soon as your weight has shifted to the back you project your weight back to the front. If done correctly this movement should encourage your spine to move like a whip as in the Tendon Nei Kung forms. You should practice this basic movement for a while, doing the movement at least a few thousand times concentrating only the on the leg movement. After practicing this for a while you will slowly begin to feel the power that can be generated by this movement move from your legs to your tailbone and up you spine. Do not expect however, to practice this just for one or two days and thinnk that you will be able to feel the power being generated. In ancient times people would spend 20 years doing only this movement, but when they pushed someone people would fly. This of course does not have to be equalled but is a could indicator that this movement is worth some time and attention.

Once you feel the force coming up, you can start concentrating on tuckng the sacrum in and pushing out the lumber. Again isolate this movement and practice it for a while concentrating on the sacrum and lumber movement until you can do it in your sleep. Once you can feel the power being generated by this movement, yo can advance the movement to pushing out the T 11. Again, do a promintent amount of repetitions concerning only the leg movement, the tucking of the sacrum and the pushing out of the llumber and the pushing out of the T 11. Once you feel that you have a level of mastery over this movement you can again advance, this time adding the pushing out of the area of the heart chakra, between the scapulae. As the power comes up through the sacrum, lumber

T 11 and reaches the area between the scapulae, push out this area of the spine and widen the scapulae, simultaneously hollowing your chest. The next area is the C 7 or the base of the neck. As the power comes up to this area you push out his area of the neck. The result of this movement is that your whole neck and head moves forward with the whip like motion that is being generated by the spine. The pushing out of the C 7 and the neck and the tucking in of the chin (as in the Tendon Nei King forms) should be timed together with the with the climax of the movement i.e. when the actual push manifests in your hands. Keep in mind also that the apparent hand and arm movement that is used to push is in reality, only really the result of the movement of pushing the scapulae out. If literally push with your arms, you will loose the structure and the internal force will be almost completely useless. Once you have a grasp this entire whip like movement of the spine in the Tai Chi Chi Gung stance, you can add the other facets of the Tendon Nei Kung movements, pulling up the sexual organs and flattening the stomach, pressing the tongue to the palate and exhaling to your Tantien to generate maximum internal force. The eight hand movements of the Tendon Nei Kung forms can also be practiced out of the Bow and Arrow Tai Chi Chi Kung stance.

Fig. 24 *Tendon Nei Kung Movement in a Tai Chi Stance*

General Information

When doing these movements, both the basic Tendon Nei Kung movements and the movements out of Tai Chi Chi Kung stance, it is necessary for you to really make use of your awareness to 'feel' your tendons. Torque each tendon and follow the gentle tension with highest awareness, if your mind is distracted and busy with other things the practice will not deliver high quality benefits. Feel the tendon torque against the bone structure stretching and strengthening it at each level up the body. Use your awareness to sense the powerful healing energy of the earth move through your body from the bottom up, toes, heels, ankles, legs, hips, spinal cord, jade pillow, arms and finally the fingers. Once you are completely familiar with this motion and can execute the entire movement witout having to consciously think about it, the movement should take no longer than half a second from the toes to the fingers when done at normal speed with a sense of confidence. Naturally, when familiarizing yourself with the external and internal movements you should start as slowly as necessary for you to do all the steps whilst still adhering to all the vital principles. Do not be in a rush to do the entire form in full speed. One may apparently be doing the form correctly from an external perspective. If, however, all the internal and mental faculties of the form are not carefully adhered to, one risks loosing a lot of the potential gain. that awaits the dedicated student. In studying the Tendon Nei Kung, proceed carefully and patiently making sure you include every last of the above mentioned details. Study, practice and feel. You wil know that you are doing it correctly when it feels correct.

Mung Bean Hitting

Taoist History of Mung Bean Hitting

As result of their intensive and intelligent studies of nature the ancient Taoists discovered many of the powerful natural medicines and their specific properties. Amongst their many discoveries made was the fantastic detoxifying properties of mung beans when applied externally to the body. The Taoists found that the mung beans could absorb the excess Yang energy which potentially causes overheating or manifestation of poisonous toxins in the body. They used the mung beans for a wide variety of ailments and injuries reaping many a health benefit from the simple techniques. When poisoned, any of the internal organs could be assisted in detoxifying by applying the simple mung bean techniques. The mung bean techniques were also used to bring relief for constipation and stomach cramps and were even made use of to heal headaches. However the ancient Taoists soon discovered that the mung beans were especially affective in the repairation of damaged tendons and joints and the further strengthening of healthy ones. Tendon strengthening soon became the mung bean techniques most recognized function and was most often combined with the practice of Tendon Nei Kung for martial arts training and maintaining general health.

Apparatus

The most convenient and affective way for applying the mung beans healing and strengthening techniques are by placing them in a cotton sock. The mung bean sock is then used in a club fashion to firmly hit along the lines of the tendons or any other relevant part of the body meridians. Nylon socks are not suitable for containing the beans as nylon soon stretches from the continual slinging and the beans inevitably spill out making a fantastic mess.

Fig. 25 *Mung Bean Sock*

Correct Weight

More or less a pound has been found to be the optimal amount of mung beans to place in the sock. Less or more than a pound of mung beans will prevent you from realizing the optimal intensity of the blow, limiting the sought after results.

Correct use of the Mung Bean Sock

A sure way to help realize the optimal intensity for mung bean hitting (one pound remember) is to let the bean filled sock simply fall onto your arm from a vertical height without any other added power. This should give a good indication of the optimal strength with which to hit yourself and it is advisable to spend a few moments before each session to familiarize your self with the appropriate (stronger) hitting power.

The mung bean hitting should be firm without becoming too extreme. When first making use of the mung beans it is appropriate to be a little cautious as not to injure yourself. Once your skin toughens up from consistent practice you can gradually increase the power of the hitting according to your own discretion.

Hitting with Mung Beans

Upper Limbs
Middle Finger Line

Extend your left arm above the level of your shoulders slightly twisting the arm so that the palm faces up. As you twist your arm into place swallow saliva down into your belly. Start off by hitting the inside of the left elbow three times. Continue hitting along the center of the arm to the inside wrist, through the palm, to the tip of your extended middle finger. Return using the same line, traversing the inner elbow and your shoulder to the top of your neck. Follow the same route back to your elbow giving the joint some final attention. Remember to always use your eyes to direct energy to the relevant areas. Shake the arm lightly and feel the beaten tendon line open and loose. Rest and smile to the tendon using your awareness to help absorb Chi into the tendon line.

Fig. 26 *Middle Finger Line*

Pinky Finger Line

Raise the arm above the shoulder and twist it so that the palm faces up and swallow saliva. Hit three times the point inside of the inner left elbow, slightly to the right of its center, where the ulna bone begins. Hit towards the hand, over the lower part of the inner left wrist, to the inside tip of the pinky finger. Return via the same route up to top of the neck before coming back down to the elbow to give the important joint some final attention. Shake the arm lightly and feel the beaten tendon line more open and loose than before. Rest and smile to the tendon line using your awareness to help absorb Chi into the tendon line.

Fig. 27 *Pinky Finger Line*

Thumb Line

With the arm extended above the shoulder, twisting so that the palm faces up, swallow saliva down into your belly. Hit three times the point located near the outside part of the inner elbow, slightly to the left of its center, where the radius bone begins. Hit towards the hand from this point, over the upper part of the inner wrist, to the inside tip of the thumb. Return via the same route up to the top of the neck before going back down for the elbow to give the joint some final attention. Shake the arm lightly and feel the beaten tendon line more open and loose than before. Rest and smile to the tendon line using your awareness to help absorb Chi into the tendon line.

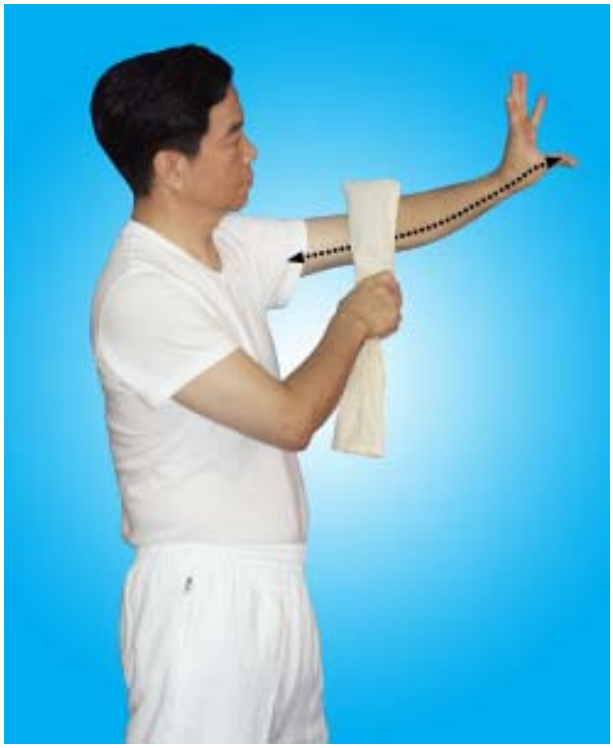


Fig. 28 *Thumb Line*

Back of the Hand

Raise the arm, extending it more or less shoulder height. Twist your arm so that the palm faces down with the pinky finger pointing towards the sky and thumb pointing towards the ground and swallow saliva. Hit the point at the top of your elbow as it is held. Follow this top line over the wrist and up to the end of you middle finger. Follow the same route back over the elbow, along the bicep tendon up to the top of the neck before returning to the elbow joint to give it some final attention. Shake the arm lightly and feel the beaten tendon line more open and loose than before. Rest and smile to the tendon line using your awareness to help absorb Chi into the tendon line, replenishing and strengthening it.

Fig. 29 *Back of the Hand Line*

Organs and Lower Limbs
Big Toe Line

Stand with the left leg a good distance forward, well bent and slightly to the side without straining yourself, hold the hitting device in the right hand. Men should use the right hand to cover the genitals, pulling them away from the left side. Swallow saliva and start the hitting from the left shoulder. Continue down the middle line of the body, hitting softly over the solar plexus, down the line in between your abdominal muscles until you reach your Tan Tien. Then continue down the leg, hitting the inside line of the thigh, down the inside of the knee, all along the inside of the shin bone, the ankle until finally reaching the big toe. Hit the ankle area three additional times since the spleen, liver, and kidney meridians meet near the ankle on this line. Follow the same route back all the way to the neck. Finally, rest and smile to the tendon line using your awareness to help absorb Chi into the tendon line, replenishing and strengthening it.

Fig. 30 *Big Toe Line*

Small Toe Line

Stand with the left leg a good distance forward, well bent and slightly to the side without straining yourself and hold the hitting device in the right hand. Raise your left arm in front of your body in a ward off position and clench your left hand into a fist as depicted in the caption and swallow saliva. Start the hitting under your raised arm in the armpit following a straight line down the left flank of your body. Continue down the leg, hitting the outside of the thigh muscle, passed the outside of the knee and all the way down the outside of the calf muscle, over the ankle and finally ending in the small toe. Follow the same route back all the way to the armpit. Rest and smile to the tendon line using your awareness to help absorb Chi into the tendon line, replenishing and strengthening it.

Fig. 31 *Small Toe Line*

Middle Toe Line

Stand with the left leg a good distance forward, well bent and slightly to the side without straining yourself and hold the hitting device in the right hand. Swallow saliva down to your belly and start hitting from the left shoulder. Hit down in a straight line over the left nipple, down over the internal organs on the left side of the body and over the Psoas muscle. Continue down the leg hitting over the top of the thigh muscle, straight over the knee cap(Hit beneath the kneecap, not directly on it.), down all along the outside of the shin bone over the ankle and the middle line of the foot ending in the middle toe. Gently hit the area at the top of the foot, in the middle, an additional three times. Follow the same route back all the way to the shoulder. Finally, rest and smile to the tendon line using your awareness to help absorb Chi into the tendon line, replenishing and strengthening it.

Fig. 32 *Middle Toe Line*

Back of the Leg Line

Stand with the left leg a good distance forward, well bent and slightly to the side without straining yourself and hold the hitting device in the left hand. Start the hitting from the back of the neck and follow the spine all the way down to your tailbone, hitting directly to the left of the spinal cord. Continue down the leg hitting the back of the thigh muscle, the back of the knee and the all the way down the back of you calf until you reach your heel. Follow the same route back all the way to the back of the neck. Finally, rest and smile to the tendon line using your awareness to help absorb Chi into the tendon line, replenishing and strengthening it.

Fig. 33 *Back of the Leg Line*

If consistently practiced, these simple techniques are guaranteed to strengthen the tendons greatly especially when combined with Tendon Nei Kung practice. Most people end up suffering tremendously from joint problems when they move into old age. This unnecessary suffering can so easily be prevented. Prevention is the best medicine and even though the same exercises can be used to heal tendons it is far more affective to start doing the practices before one starts experiencing problems.

Advised Practice for Today's Life Style

The Tendon Nei Kung forms themselves should constitute the bulk of your tendon changing (growing) practice and be given most attention. Initially it is especially important to set some time aside to make sure that you are doing the forms correctly without neglecting any of the details as people are some times inclined to do. Make sure you study the information on doing the forms thoroughly. Do not be in a hurry to be able to do the complete movement of the forms as soon as possible. These special exercises have many a subtle detail. You could probably perfect the outer movements within three days if you have a level of physical talent and a strong intent to learn and practice. However Chi Kung is not called an internal practice for nothing, and mastering all the internal and external aspects of the movements together takes a little perseverance and patience. Once you have the external movements down and can execute them with out thinking about it, start paying attention to internal movement and try and sense the internal force coming up from the ground all the way into your finger tips. If you practice in this way it will not take you long to be able to execute the movements correctly and as the Taoist love to say, "Once you got it, you got it". Mastering the Tendon Nei Kung forms are well worth spending some time and energy on as you will receive priceless benefits from practicing them correctly, cultivating great strength as a youth as well as saving yourself much of the suffering and indignity that people have come to accept as the normal deterioration of old age.

The best is to build up your Tendon Nei Kung form practice step by step, not advancing on to a next stage until the specific movement has become second nature to you and you can produce the movement without even having to think about it.

Once you have cultivated a level of mastery over the basic structure of the forms in this way, learning the eight different hand positions should not be too much of a challenge.

Fig. 34 *Tendon Nei Kung Practice*

Ten repetitions of each hand position is already a substantial tendon strengthening workout and is sufficient daily practice and should take you no longer than 10 minutes a day (once you are doing the movements properly). Especially if you are new to these tendon growing techniques it is important not to exceed the advised amount of repetitions as straining a tendon is both an unpleasant and long term hazard. In Taoist practices moderation is always the motto as the Taoists understood both the importance of practice itself as well as the resting period in which the body has a chance to nourish the area that has been giving attention. Even western sport scientists are now seeing that for optimal results in weight lifting it is essential for the practitioner to give a worked out muscle at least a 48 hour rest before exercising it again. If the practitioner does not allow the muscle group this recuperation period the muscle run a high risk of actually becoming weaker.

If you have a partner at hand and have the time another ten repetitions on all the hands positions may be spent on the partner practice of the forms which should take another 10 minutes. Of course partner practice should only be integrated into your practice once your solo practice is of a high level. The partner forms are also a very helpful in checking if you are doing the movements of the forms correctly.

A session of Mung Bean Hitting should also be done every day, preferably just before you do you Tendon Nei Kung forms, as this practice will aid the tendon growing process greatly. If you are highly motivated to improve the quality and strength of your tendons and have ample time, you can do a very thorough hitting session of 20 to 25 minutes. A general working with the Mung Bean Sock only has take to take about 8 to 10 minutes and is already sufficient. This practice is of great importance especially in the reparation of damaged tendons and joints and assists the Tendon Nei Kung forms in working its magic, greatly.

Fig. 35 *Bean Bag Practice*

The supplementary tendon exercises should be practiced a minimal of twice a week. If, however, you have available time, please indulge yourself in doing these every day. The precaution should be taken in doing too much in one day though. Combining these three practices will yield optimal results. Tendons strength is extremely long lasting as discussed. Because of this though they also take a longer time than muscles to strengthen. Patience is an essential ingredient in the makeup of someone wishing to pursue tendon growing practices. As a wise man once said to me, Tai Chi Chi Kung practices are not microwave pizzas. The rewards of your practices are inevitable, but it is important not to become fixated upon results. Concentrating on results is a cause of grief for many people in many areas of their lives. When you are concentrated on a result it is very difficult to fall into a state of calm and meditation, which is the ultimate state do be in for Chi Kung practice or whatever you are doing for that matter. A big part of being in meditative state is to be present from moment to moment, concentrating on results obviously prevents you from doing this. If you practice consistently though, after a six months period you will already start experiencing the fantastic benefits of this practice and will begin to feel a new kind of strength in your body, a genuine strength.

Fig. 36 *Meditative State*

For all of the above mentioned practices, remember to take time to shake out, rest and smile to the relevant tendons that have been given attention. This only takes 20 seconds or so each time and is a vital co practice for Tendons changing and most Chi Kung practices and increases results greatly.

Once again we remind you to stay mentally present during the practice of these exercises. Remember Chi follows Yi or energy follows mind. The more chi your tendons recieve, the more they will be able to effortlessly strenghten. If your mind is on other things the affect of the Tendon Nei Kung exercises will be greatly subdued.

Finally we would like to encourage you to adopt a superior Tendon changing attitude. It is important that you do not adopt the stereo typical 'body builder' mentality towards tendons changing as this will not provide superior results. When encountering pain in any of these exercices do not 'push yourself'. Build up all of the practices slowly and gently leaving any macho 'no pain no gain' attitude at the door and start to trust in the effortless path of the Tao.

Good luck and may the Chi be with you!

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Master Mantak Chia is the creator of Universal Tao System, Healing Tao, Tao Yoga and is the director of the Universal Tao Master School at Tao Garden Wellness Retreat in the beautiful northern countryside of Chiangmai, Thailand. Since childhood he has been studying the Taoist approach to life. His mastery of this ancient knowledge, enhanced by his study of other disciplines, has resulted in the development of the Universal Tao System which is now being taught throughout the world.

Changing the Tendons

Tendon Nei Kung Exercises are specifically designed to aid in the growing and strengthening of the tendons cultivating the true strength of the body. The practices of Tendon Nei Kung in this booklet will yield a substantial strength in the body which will be there to serve into the last years of our lives and greatly aids in preventing and curing arthritis as the poisonous acid is forced out of the body to make space for the healing energy, Chi.

Tendon Nei Kung practice makes the tendons supple and strong while also opening the joints up. The raw energy can then be stored in these open spaces in the joints and between the tendons allowing us to take in more energy. Once this is done we can start to transform this raw energy into higher creative and spiritual energy.

Eight Postures and Mung Bean Hitting

Practicing the Tendon Nei Kung Eight Forms opens up the spinal cord and benefits our organs. Chi pressure is also developed in these practices. By practicing the Eight Positions you strengthen and grow all of the various tendons in the body. Consistently practicing in this way will greatly strengthen your tendons as a unit. The Mung Beans Bag Hitting Practice revealed in this booklet which brings relief for constipation, detoxification, stomach cramps and used for healing headaches.

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Bone Marrow Nei Kung

Taoist Ways to Improve your Health by Rejuvenating your Bone Marrow and Blood

Mantak Chia

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I have come upon Master Chia's Taoist practice in my old age and find it the most satisfying and enriching practice of all those I have encountered in a long life of seeking and practicing.

Felix Morrow, Senior Publisher

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About the Author

Mantak Chia

Master Mantak Chia

Master Mantak Chia is the creator of the Universal Tao System and is the director of the Universal Tao Center and Tao Garden Health Resort and Training Center in the beautiful northern countryside of Thailand. Since childhood he has been studying the Taoist approach to life. His mastery of this ancient knowledge, enhanced by his study of other disciplines, has resulted in the development of the Universal Tao System which is now being taught throughout the world.

Mantak Chia was born in Thailand to Chinese parents in 1944. When he was six years old, Buddhist monks taught him how to sit and "still the mind." While still a grammar school student, he learned traditional Thai boxing. He was then taught Tai Chi Chuan by Master Lu, who soon introduced him to Aikido, Yoga and broader levels of Tai Chi.

Years later, when he was a student in Hong Kong excelling in track and field events, a senior classmate named Cheng Sue-Sue introduced him to his first esoteric teacher and Taoist Master, Master Yi Eng (I Yun). At this point, Master Chia began his studies of the Taoist way of life in earnest. He learned how to circulate energy through the Microcosmic Orbit and, through the practice of Fusion of the Five Elements, how to open the other Six Special Channels. As he studied Inner Alchemy further, he learned the Enlightenment of the Kan and Li, Sealing of the Five Senses, Congress of Heaven and Earth and Reunion of Heaven and Man. It was Master Yi Eng who authorized Master Chia to teach and heal.

When Mantak Chia was in his early twenties he studied with Master Meugi in Singapore, who taught him Kundalini, Taoist Yoga and the Buddha Palm. He was soon able to clear blockages to the flow of energy within his own body. He learned to pass the life force energy through his hands also, so that he could heal Master Meugi's patients. He then learned Chi Nei Tsang from Dr. Mui Yimwattana in Thailand.

A while later, he studied with Master Cheng Yao-Lun who taught him the Shao-Lin Method of Internal Power. He learned the closely guarded secret of the organs, glands and bone marrow exercise known as Bone Marrow Nei Kung and the exercise known as Strengthening and Renewal of the Tendons. Master Cheng Yao-Lun's system combined Thai boxing and Kung Fu. Master Chia also studied at this time with Master Pan Yu, whose system combined Taoist, Buddhist and Zen teachings. Master Pan Yu also taught him about the exchange of Yin and Yang power between men and women, and how to develop the Steel Body.

To understand the mechanisms behind healing energy better, Master Chia studied Western anatomy and medical science for two years. While pursuing his studies, he managed the Gestetner Company, a manufacturer of office equipment and became well acquainted with the technology of offset printing and copying machines.

Using his knowledge of Taoism, combined with the other disciplines, Master Chia began teaching the Universal Tao System. He eventually trained other Instructors to communicate this knowledge and he established the Natural Healing Center in Thailand. Five years later, he decided to move to New York, where in 1979, he opened the Universal Tao Center. During his years in America, Master Chia continued his studies in the Wu system of Tai Chi with Edward Yee in New York.

Since then, Master Chia has taught tens of thousands of students throughout the world. He has trained and certified over 1,200 instructors and practitioners from all over the world. Universal Tao Centers and Chi Nei Tsang Institutes have opened in many locations in North America, Europe, Asia, and Australia.

In 1994, Master Chia moved back to Thailand, where he had begun construction of Tao Garden, the Universal Tao Training Center in Chiang Mai.

Master Chia is a warm, friendly and helpful man who views himself primarily as a teacher. He presents the Universal Tao System in a straightforward and practical manner, while always expanding his knowledge and approach to teaching. He uses a laptop computer for writing and is totally at ease with the latest computer technology.

Master Chia estimates that it will take thirty five books to convey the full Universal Tao System. In June 1990, at a dinner in San Francisco, Master Chia was honored by the International Congress of Chinese Medicine and Qi Gong (Chi Kung), who named him the Qi gong Master of the Year. He is the first recipient of this annual award.

In December 2000, the Tao Garden Health Resort and Universal Tao Training Center was completed with two Meditation Halls, two open air Simple Chi Kung Pavilions, indoor Tai Chi, Tao Tao Yin and Chi Nei Tsang Hall, Tai Chi Natural Swimming Pool, Pakua Communications Center with a complete Taoist Library, Internal World Class Weight Lifting Hall and complete 8 Court Recreational Facilities.

In February 2002, the Immortal Tao practices will be held at Tao Garden for the first time using the Dark Room technology creating a complete environment for the higher level Taoist practices.

He has previously written and published these Universal Tao books:

Awaken Healing Energy of the Tao - 1983
Taoist Secrets of Love: Cultivating Male Sexual Energy co-authored with Michael Winn - 1984.
Taoist Ways to Transform Stress into Vitality -1985
Chi Self-Massage: the Tao of Rejuvenation - 1986
Iron Shirt Chi Kung I - 1986
Healing Love Through the Tao: Cultivating Female Sexual Energy - 1986
Bone Marrow Nei Kung - 1989
Fusion of the Five Elements I - 1990
Chi Nei Tsang: Internal Organ Chi Massage - 1990
Awaken Healing Light of the Tao - 1993
The Inner Structure of Tai Chi co-authored with Juan Li - 1996
Multi-Orgasmic Man co-authored with Douglas Abrams 1996 - published by Harper/Collins
Tao Yin - 1999
Chi Nei Tsang II - 2000
Multi-Orgasmic Couple co-authored with Douglas Abrams 2000 - published by Harper/Collins
Cosmic Healing I - 2001
Cosmic Healing II co-authored with Dirk Oellibrandt - 2001
Door of All Wonders co-authored with Tao Haung - 2001
Sexual Reflexology co-authored with W. U. Wei - 2002
Elixir Chi Kung - 2002

Many of the books above are available in the following foreign languages:
Bulgarian, Czech, Danish, Dutch, English, French, German, Greek, Hebrew, Hungarian, Indonesian, Italian, Japanese, Korean, Lithuanian, Malaysian, Polish, Portuguese, Russian, Serbo-Croatian, Slovenian, Spanish, & ***Turkish*** editions are available from the Foreign Publishers listed in the Universal Tao Center Overview in the back of this book.

Important Notice

The practices described in this book have been done successfully for thousands of years by Taoists under individual instruction. Readers who undertake Bone Marrow Nei Kung without personal training by the Universal Tao must realize that certain of these practices, if improperly done, may cause injury or result in health problems.

The use of common sense is necessary, and you must strictly follow the instructions and heed the notices and warnings that accompany each exercise and practice.

If you have not had previous experience with moving energy in the body through meditation, you must realize that this process is real and necessary for your safety. Adverse health effects can be caused by leaving excess energy in the organs or head; therefore, it is particularly important to move this energy through the Microcosmic Orbit and to store it in the Tan Tien as prescribed in the instructions.

The Chi Weight Lifting practice described in Chapter Five is restricted to persons who have been individually trained in a Universal Tao program. It is explained here so that information on this practice is available, and also to serve as a guide for those who have had Universal Tao instruction. Anyone who undertakes these practices on the basis of this book does so entirely at his or her own risk.

We urge every reader to study the exercises carefully before beginning any practice. Do exercises which must be done together and in proper sequence, and strictly follow the instructions, notes, and warnings.

The Universal Tao is not and cannot be responsible for the consequences of any practice or misuse of the information in this book. Where the reader undertakes any exercise without strictly following the instructions, notes, and warnings, the responsibility must lie solely with the reader.

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I wish to thank foremost those Taoist Masters who were kind enough to share their knowledge with me, never dreaming it would be so enthusiastically received by the Western world.

I thank the artist, Juan Li, for his illustrations and for the artwork on the cover of this book. I also thank the editors, Charles Soupios and Valerie Meszaros, for their suggestions and many long hours devoted to the completion of Bone Marrow Nei Kung.

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Without my mother and my son Max, the book would have been academic. For their gifts, I offer my eternal gratitude and love.

Finally, the Universal Tao will remember Felix Morrow, publisher of Universal Tao Books, who died in May 1988 before the completion of Bone Marrow Nei Kung. We are sorry that he could not see the results of his valuable advice and assistance.

Words of Caution

The practices described in this book have been used successfully for thousands of years by Taoists trained by personal instruction. Readers should not undertake the practice without receiving personal transmission and training from a certified instructor of the Universal Tao, since certain of these practices, if done improperly, may cause injury or result in health problems. This book is intended to supplement individual training by the Universal Tao and to serve as a reference guide for these practices. Anyone who undertakes these practices on the basis of this book alone, does so entirely at his or her own risk.

The meditations, practices and techniques described herein are ***not*** intended to be used as an alternative or substitute for professional medical treatment and care. If any readers are suffering from illnesses based on mental or emotional disorders, an appropriate professional health care practitioner or therapist should be consulted. Such problems should be corrected before you start training.

Neither the Universal Tao nor its staff and instructors can be responsible for the consequences of any practice or misuse of the information contained in this book. If the reader undertakes any exercise without strictly following the instructions, notes and warnings, the responsibility must lie solely with the reader.

This book does not attempt to give any medical diagnosis, treatment, prescription, or remedial recommendation in relation to any human disease, ailment, suffering or physical condition whatsoever.

The Universal Tao is not and cannot be responsible for the consequences of any practice or misuse of the information in this book. If the reader undertakes any exercise without strictly following the instructions, notes, and warnings, the responsibility must lie solely with the reader.

The book does not give any diagnoses or suggestions for medication. It does provide a means to improve your health in order to overcome imbalances in your system and to provide a richly rewarding sexual experience. People who have high blood pressure, heart disease, or a generally weak condition, should proceed slowly in the practice, particularly Ovarian Breathing. If there is a medical condition, a medical doctor should be consulted.

Introduction

Bone Marrow Nei Kung is a Taoist art of internal cultivation which employs mental and physical techniques to rejuvenate the bone marrow, thereby enhancing the blood and nourishing the life-force within. It is offered by the Universal Tao as a modern approach to health and longevity, but its heritage can be traced back thousands of years to ancient China. The barriers between cultures and the exclusivity of Taoism had hidden its benefits from the West until the recent introduction of acupuncture. Today, Taoist methods are gaining respect throughout the world. The reason for this is simple: they appeal to the body, the mind, and the spirit.

The Universal Tao system is a "living" philosophy in its own right, which means that to use it in life increases one's understanding of it. Indeed, with so many philosophies delineating the "best" way to live, perhaps it is appropriate that the Taoist practices can be applied in this way. A philosophy that cannot be practiced in daily life will rarely be retained, and is therefore not truly alive. If you consider your own mental, physical and spiritual aspirations in this light, perhaps the philosophy of the Tao is already understood.

A. Self-enhancement Through Taoist Practices

One objective of the Universal Tao System is to create an environment conducive to self-cultivation. The idea of changing a government, a belief system, or a society has little value to Taoism because more can be achieved by nurturing the growth of the individual. Those who seek knowledge often inspire others to do the same. This may seem strange to those whose philosophies advocate service to God, or "self surrender." The validity of this concept, however, is not diminished simply because its ideals seem contrary. In fact, one might find that self-cultivation and self-surrender are different expressions of the same ideal as both foster the individual's spiritual growth.

The practice of Taoism builds internal strength and creates peace of mind. It is pointless to worry about the world's problems while still vulnerable to your own. Do not concern yourself with the lack of peace and harmony in your family or among your friends until you have established peace within yourself. Your capacity to

help another human being depends upon the surplus of energy that you can channel towards that purpose. Such internal strength cannot be provided for the benefit of others unless you cultivate it within yourself first.

You can only share what you have in abundance. Otherwise, you will drain the energies of those around you as your needs become excessive. An emotion such as love exemplifies this truth. Taoism teaches that the body needs love from the inner self to survive and to nurture those energies that can be shared. Further, you cannot share the energy of love until it overflows beyond the needs of your body. In other words, you must love yourself to cultivate love for others.

In a spirit of altruism, people often demonstrate their desire to assist others beyond the point of necessity. This kind of "help" is detrimental to all concerned. Remember that the tradition of the Universal Tao does not tolerate self-righteousness and condescension among its students. These attitudes limit the freedom of others to choose their own paths in life The world must be accepted on its own terms, for we cannot change it. We have a responsibility, however, to change ourselves. If you can set an example for the rest of the world through your life's endeavors, then you have found the best way to create an impetus for change.

B. Decisions for Life

We assume that it is natural to age and to die, yet we often overlook the unnatural aspects of these processes by anticipating them. In truth, today's society simply lacks the education to understand how aging and death are choices we have made in our worldly endeavors. This is not to say that the human race is unknowingly immortal, but rather that we have far more control over these factors than we know. Death can be a choice in the sense that we can choose to live longer. Aging is a choice in that our bodies need not deteriorate as an effect of time. The effects of aging can be counteracted if we make the choice to do so. Certainly we all die, but we have forgotten that we all have options as to how and when.

Taoists choose to prolong life to create the best circumstances under which they can leave it. Since people know little about realities beyond physical existence, they often fear such knowledge, leaving it in the hands of God. This is how our race has learned survival

under the most rigorous conditions of faith. However, this fear has often negated the inner knowledge that God is not responsible for mankind's spiritual search; man is responsible. In Taoism, destiny lies solely in the hands of the participant and not in the hands of God, for we choose our actions in life.

The Taoist practice of temporarily leaving the body to explore the higher realms is as old as the most ancient of civilizations. This need not involve any confrontation with religion. It is part of a philosophy of life using physical and meditative means to cultivate spiritual energy. In the practice of the Universal Tao, this philosophy is not considered to be a religion because it lacks the rituals and worship of deities normally associated with religion. Consider, however, that religion is not necessarily synonymous with spirituality, since our true spiritual nature underlies the beliefs we grow into. Taoist philosophy simply offers a means of spiritual growth without the necessity of pondering religious questions. In the search for truth, one can leave the questions in order to experience the answers.

For some people, the idea of planning to journey beyond what can be physically touched or seen is totally inappropriate. This is perfectly reasonable in terms of spiritual growth because there is much to be learned in the world that we know. There is no reason for anyone to suffer in this reality, when good health can be achieved through these techniques. If one so chooses, one can develop the beginning of a spiritual afterlife before physical death would normally occur. For those who prefer to cultivate only the physical aspects of life, the copious health benefits of the Tao should be rewarding enough. The choice is simple in any case as the system is now available to everyone.

Remember that there is no place in Taoism for the glorification of masters. They are not saints, devils, or deities. These teachers consider it a wasteful expenditure of energy for students to pay them anything more than a casual, but genuine, respect. Taoist philosophy suggests that no "middle-man" is worth the expense when we can find our own answers. The enlightenment we seek demands that our efforts be channeled directly into the spiritual paths we choose. Those who would teach should only be considered helpful guides who offer assistance rather than salvation.

There are many more disciplines available than we need to attain enlightenment. Our spiritual inclinations, therefore, must eventually focus upon choosing wisely rather than searching endlessly. A Taoist cannot rely upon the good graces of a spiritual hierarchy because it is one's own responsibility to learn what spiritual needs are and how to fulfill them. The physical life we have chosen has many tools to offer. The Tao is simply a finger pointing the way.

Preface

Chinese Secrets of Bone Power

By Michael Winn

When I began doing Bone Marrow Nei Kung exercises seven years ago, I had absolutely no feeling for my bones. They seemed hard, rigid, and dense, the very opposite of the qualities I was seeking to cultivate in myself through Tai Chi Chuan movements and meditation. I didn't know my bones were alive and growing every minute, that my life depended on the quality of blood they produced or that I could have a major effect on my health by interacting with them.

I was amazed and surprised that with even the simplest exercises like "Bone Breathing," my bones quickly responded with a wonderful feeling of just having sprung to life. They tingled and began to rhythmically purr like a cat. When I did Tai Chi Chuan, my flesh and organs would disappear, and I could feel my skeleton dancing lightly through the air.

Over the years, doing the same simple practice of breathing and spiraling my Chi around my bones, I am still literally "thrilled to the bone." After I practice "Hitting" my bones gently, it feels like a deep massage that keeps vibrating all day long. The practices have greatly reduced latent fears I had of aging and finding my bones reduced to peanut brittle. Instead, I have the opposite problem, and I'm tickled when my wife complains that my bones have gotten too heavy as she tosses off my arm resting on her in the middle of the night.

Any lingering skepticism I had was erased when I discovered that hitting my jawbone with the wire device for three minutes daily was the most effective cure I had ever found for relieving tight jaw muscles. Jaws have some of the most powerful muscles in the body which is why TMJ (Temporal Mandibular Joint) Syndrome (a symptom of which is tight jaw muscles) is so difficult to cure. Apparently vibrating the jawbone loosens the hold of the tense muscles. This method offers promising relief for the many people suffering from tight jaw muscles in high stress urban areas.

My bones and I have become the best of friends now that I've learned how to play with them and meditate on them. Bone Marrow Nei Kung has given me a practical way to connect the densest part

of my physical body with the most subtle emanations of my spirit. The meaning of a Yang family classic Tai Chi Chuan training poem sudenly became clear once I understood the importance of moving from within our bones

> The mind moves the Chi
> So that it may sink deeply and penetrate the bones
> When the Chi flows freely,
> The body easily follows the mind

"Cleansing" my bone marrow was not always smooth sailing. In the beginning, the process of heavy detoxification was not always pleasant, and I occasionally felt ill for a day or two. There were psychological adjustments as well. Exercises like "Chi Weight Lifting" with the sexual organs and the Hitting practice seemed a bit far out at first. I cracked a lot of nervous jokes about religious fanatics flagellating themselves with whips, and I secretly wondered if I had fallen prey to same extreme teaching.

Having practiced these exercises for almost seven years now, I can assure the reader that the Bone Morrow Nei Kung practices are legitimate exercises for physical and spiritual health. The ancient Chinese were incredibly precise, even scientific in their methods of tapping bone power. Mantak Chia hay taken this one step further by integrating modern scientific knowledge of bone chemistry with the ancient knowledge of Chi functioning in the human bones and body.

The name "Bone Marrow Nei Kung" sounds pretty mysterious and esoteric. Master Chia originally taught it as an advanced level of "Iron Shirt Chi Kung." It may help to understand the cultural context of these Chinese terms. In China there are thousands of different "Chi Kung" practices taught by martial artists and meditation masters. Chi Kung literally means "practicing with the breath," which can include any exercise that uses breathing to energize the body. The physical breath activates the "Chi," also interpreted as "subtle breath," which generates increased physical and psychic strength.

Chi Kung is still so popular that on a recent trip to China I saw hundreds of Chinese flock to circus-like traveling road shows that gave Chi Kung top billing. These Chi Kung artists, with no apparent muscular buildup, perform feats like bending thick steel rods pushed into the soft spot on their necks. They break bricks on their heads, let trucks drive over them, and resist sharp knives with their bare skin.

These are high levels of physical accomplishment, but unfortunately they miss the real point of Chi Kung, which is to prepare the body for higher spiritual energies. Through Kung Fu movies and Chi Kung showmen, the practice of Chi Kung has been glorified as a path to superhuman physical power. This frightens off ordinary people from learning the true practices which are simple and give great benefits to health.

"Nei Kung" is a very close relative to Chi Kung. It means "practicing with your internal power" and implies building body-mind power without using physical breathing techniques. Mental concentration, internal imaging, and development of a deep inner sensing of psychophysical processes are the marks of Nei Kung techniques.

Most of the methods of internal alchemy taught at the Universal Tao Centers--the Inner Smile, Microcosmic Orbit, Fusion of the Five Elements, Kan and Li--are all "Nei Kung" techniques. Perhaps because they are more subtle than Chi Kung methods, the Nei Kung methods are fewer in number, and traditionally many have been kept very secret.

When Master Chia visited Taiwan in 1987, he discovered that the going price to learn Bone Marrow Nei Kung was about four thousand U.S. dollars for ten hours of instruction. Plus you had to take an oath of absolute secrecy not to teach anyone else. Master Chia had already learned the practice in Hong Kong more than a decade earlier from Master Cheng Yao-Lun.

When Master Chia learned the method of "Cleansing the Bone Marrow," the price was years of slavish devotion until your teacher, or "Sifu," entrusted you with the secrets. When he completed his training, it was Chia's very impatience with this slow process that inspired him to publish these closely guarded secrets to benefit the thousands of Westerners seeking accurate and practical instruction in Chinese internal arts.

The previously secret Bone Marrow Nei Kung methods of this book are the same ones associated with stories of masters achieving an "iron shirt" or building a "steel body." Contrary to movie legend, this is not a superman body of hardened flesh and muscle, but the inner strength of a body whose bones and organs are so packed with Chi energy that it resists aging and disease. The resilience to withstand the physical stress of hard blows or sudden falls comes from packing the fasciae with Chi that helps the body to "bounce off" outside forces.

Bone Marrow Nei Kung does generate tremendous amounts of Chi, and this makes it a dangerous practice for overzealous students who lack the self discipline lo refine this Chi through meditation. The body can overheat from excess energy, and meditation is the safety valve that transforms this raw energy back into its original spirit or "shen."

This is why in the Universal Tao System it is necessary to learn the Microcosmic Orbit Meditation before one even begins generating additional energy through Chi Kung. Without some way to refine and use the energy, what is the point of cultivating internal power?

I know one advanced student who eagerly did the Chi Weight Lifting exercises of Bone Marrow Nei Kung to generate more sexual energy. He then vibrated it into his bones with the device used in the Hitting practice. He was lifting very heavy weights from his genitals, far in excess of the ten pounds recommended in this book. He was so addicted to his practice that he would carry a suitcase full of weights with him wherever he traveled.

The student made the serious mistake of not meditating to assimilate all of the energy he was creating. He began having dreams that various creatures and people were feeding on him, and he started to become very paranoid. He finally quit the practice altogether after a psychic told him that many low level spirits were parasitically absorbing his excess sexual energy. He quit lifting excessive weights and his energy returned to normal. This is a bizarre and somewhat incredible story, but it should serve as a warning to people who tend to go overboard on a new thing.

Even masters are not exempt from the dangers of over-zealousness. The Taiwanese teacher who was selling the Chi Weight Lifting techniques for thousands of dollars claimed to be able to briefly lift 300 pounds from his genitals. It proved to be too much for him as he recently died at a very young age, allegedly from a blood clot in his testicles that may have travelled up to his brain. Had he chosen to be more practical, using light weights in a regimen balanced with meditation, he might still he alive today.

In ancient China the Taoists who practiced internal cultivation of Chi saw a deep "bone consciousness" as an essential step on their long journey to realizing their immortality. According to the classic Taoist texts, when the postnatal Chi--all the energy acquired by food, sex, thoughts, and emotions since birth--circulates in the Microcosmic Orbit, it stirs loose the prenatal Chi stored in the bone marrow and the brain.

It is this prenatal Chi, also called pre-heaven or primordial Chi, that is refined into spiritual consciousness and gives birth to the immortal embryo in the lower abdomen. This grows up to become the spiritual child and eventually crystallizes into the “light body’ or “immortal body” of the spiritually mature human.

For the Taoists, the bones were a secret key to stabilizing or “grounding” the life of the spirit within the human body. Before this could be done, the bones had to be cleansed, and their vibratory rate--bone consciousness--had to be raised to a more refined level. The movement of Chi in the bones was used to amplify the process of cleansing and purifying the Chi flowing through the meridian system, blood, internal organs, glands, and nervous system.

The bones create the vertical structure in man which allows special energy channels to function in the body such as the “Chung-mo,” which is the thrusting route in the center of the body, and the “belt routes” spiraling around the body. These channels allow man to act as an antenna and receive energy from the electromagnetic fields of the earth, moon, sun, and stars--the stepping stones to our sense of divinity.

In this light, an entire book on Bone Marrow Nei Kung does not seem like such an impossibly esoteric topic. A few years ago this topic would have drawn interest from only select circles of martial artists. Yet Bone Marrow Nei Kung practices can be done by ordinary people who simply wish to be more embodied, more grounded, and healthier in their physical being. These practices were once extremely secret in old China, but today the secrets of the Tao are opening like a flower, and the sweet fragrance is available to anyone drawn to it.

Modern popular literature on bone health is limited mostly to diet and mineral supplement advice on preventing osteoporosis. This disease, which makes bones brittle with age as they become depleted of calcium, is a major tragedy for the elderly, especially women after menopause. Recent studies show that calcium supplements are of dubious value in stopping osteoporosis.

According to scientific studies, what does reverse the process of osteoporosis are exercises that put gentle pressure on the bones and keep them fit, combined with the proper hormonal balance in the body. Bone Marrow Nei Kung gives the bones exercise, increases bone density, and the Sexual Energy Massage technique helps to stimulate hormonal production. Millions of women would benefit from to these exercises as a preventative measure against osteoporosis.

One exception to the gap in modern literature on bones is Gabriel Cousen's landmark book, *Spiritual Nutrition and the Rainbow Diet* (Cassandra Press, 1986). He points out that our bones are the only solid crystalline substance in our bodies and that scientists have actually been able to measure the electromagnetic fields that bones receive and send to our organs: meridians, blood cells, and nerves. The electrical generating ability of bones is called the "piezo-electric effect" and has been documented by a number of scientific studies. He states:

"The brain, nervous system, and heart also give off electromagnetic fields that resonate with our bones and other crystalline like structures. The crystalline bone structure then amplifies and radiates this energy and information to the rest of the system down to the cellular and subcellular crystalline structures."

This suggests the bones are nothing less than the tuning fork for our whole body. It is the solidity of the bones that makes them such stable transmitters of the deep, rhythmic pulsating energy that biologically connects our smallest atoms to the primordial rhythms of the stars. Bone Marrow Nei Kung gives us a way to systematically increase the purity and range of our body's tuning fork so it hums with a crystal clear vibration.

Bone consciousness has manifested in a variety of other interesting ways outside of the martial arts. In the mainstream Chinese culture a deep reverence for bones is revealed in the great importance placed on burial and ancestor worship. If the bones of your parents or grandparents are buried near a disturbing environment with noise and traffic, or in a site with the wrong elemental balance of water, wind, mountain, etc., then your own life will be disturbed.

According to Chinese theory, this "bone magic" works because the vibrational frequency of your body is very close to the vibrational frequencies of your parents' bodies. If their bones are disturbed, your bones will also be disturbed as we always remain in subtle communication with those closest to ourselves. Our bones never die. They continue acting as transmitters for the departed spirit.

Our bones are like invisible wands concealed within the shrouds of our flesh. We wave them about in life like an orchestra conductor invoking the magic of the higher harmonies. It is when we get old that our bones feel empty and brittle, without the sparkle and dash needed to play life's symphony. And small wonder since we pound

them, run and joggle them, use and abuse them in a thousand ways without even giving a thought to making them stronger. Gravity adds its stress by pulling down on them without allowing any relief.

Bone Marrow Nei Kung offers an opportunity to explore the core of our physical body and to learn how to root our spiritual being within that solid physical anchor. The benefits are universal, teaching us to use the unconscious power deep within our bones and make it available for mundane everyday use, as well as for spiritual goals.

The next step is up to us. We must experiment with the Bone Marrow Nei Kung exercises until we feel this ancient knowledge of Chi as a living presence in our bones. As Mantak Chia is fond of saying, "You do it, you get it."

New York City, July 4, 1988

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Chapter I
Understanding Bone Marrow Nei Kung

A. Internal Discipline vs External Exercise

The Western world generally believes that daily physical exercise helps to slow the aging process. In our society physical fitness is gauged according to the external manifestations of arduous training. An example of this is the trend towards muscular development through weight lifting. Athletic competition has also influenced many of our concepts of health and well-being. If one considers, however, that body builders and athletes enjoy the same life span as the average human, one might reconsider the assumption that they are the most "physically fit."

The professional athletes we admire expend enormous amounts of energy to attain top positions in their sports. As they overdraw on their resources for long periods of time, their internal organs often lose the capability to feed such exhaustive energy requirements. The inexorable effects of aging then impede them until they can no longer compete. Some may delay the exhaustion of their energy sources through vitamins and nutrition, but their digestive capabilities usually decrease with age, making a dependency upon food and vitamins even less promising. Nutrition and physical exercise are not comprehensive approaches to health, even when they are combined.

In your own fitness training, you may be indirectly exercising the internal organs and glands; however, if you do not emphasize their cultivation above and beyond that of the muscular system, you can ultimately do more damage than good. The organs and glands nourish every function of the body just as the bone marrow nourishes them through the production of blood. Still, we unknowingly tax the internal system beyond its limits because we believe that muscular development should take precedence. Without the energy supplied by the internal organs and glands,

there can be no lasting muscular development. In short, muscular strength and stamina may not be the best medium by which to judge overall physical health.

The Taoist approach to health is very different from Western concepts of exercise because the Taoist disciplines are always internally focused. These exercises, therefore, emphasize the cultivation of the organs and glands. After the organs and glands have been enhanced, the needs of the tendons, bones, and muscles are fulfilled accordingly. Bone Marrow Nei Kung replenishes the blood supply and strengthens the internal system, thereby improving every aspect of the body.

Energizing the bone marrow is crucial to the development of that internal power which has a lasting quality unknown to external systems of health. We have all heard that inner beauty lasts when outer beauty begins to fade. The Taoist practices cultivate inner strength and lasting beauty, as they enhance the external aspects of the body.

B. Bone Marrow Nei Kung and the Practice of the Universal Tao

1. Internal Energy Known as Chi

Taoists describe the world as an interaction of positively and negatively charged electromagnetic energies. “Chi” is an overall term used for these energies, which comprise the ultimate nourishment derived from food, air, moon, sun, and stars. Chi is also generated within our bodies by the organs and glands, and it extends around us as part of our emanation. This is why the cultivation of our organ, and glands is so important to the enhancement of our life-force energies.

Just as the positive and negative terminals of a battery must both be engaged to generate power in an electrical circuit, the “Yin” and “Yang” qualities of Chi must both be engaged for the proper functioning of the body. Yin is analogous to the negative charge, and represents a cool, gentle energy often associated with femininity. Yang is the positive charge, and represents a hot, volatile energy that is characteristic of masculinity. Both qualities can be found within us, although there is often a lack of harmony between

them. The knowledge of Yin and Yang and their proper balance is critical to our daily lives because an imbalance can create a negative effect.

Chi-also known as “Qi” is a constant factor in every part of our lives. Unfortunately, we often lose it at a faster rate than we can amass it. As our internal sources of energy are not inexhaustible, we can unknowingly drain them beyond repair, creating the possibility of painful aging and an early demise. If the organs and glands could regenerate themselves, however, such possibilities would become remote. Fortunately, what we have sacrificed of our bodies in our worldly pursuits can often be replaced through the absorption and recycling of Chi. In other words, this energy can be used to replenish its sources within our bodies so that we can regenerate our internal systems and better maintain them.

Chi cultivation is the underlying purpose of the Universal Tao. This is the essence of all that a practitioner of this system aspires to. If one wishes to be a healer, success depends upon the ability to channel energy through the hands. If one wishes to be an athlete, success depends upon the ability, to convert energy into strength and endurance. If one wishes to he free of negative influences, success depends upon the ability to transform negative energy into positive energy. One who seeks enlightenment is searching for the highest source of all energy.

2. Bone Marrow Nei Kung in Theory

The purpose of Bone Marrow Nei Kung is to regenerate the blood-producing red marrow of the bones to enhance the blood and the sources of Chi within the body. The system consists of five practices related to the following functions:

a. Breathing in energy from external sources
b. Drawing in and circulating sexual energy throughout the body
c. Vibrating the bones to open their pores for energy absorption
d. Compressing the combined energies into the bones to eliminate fat
e. Enhancing the nervous and lymphatic systems while detoxifying the skin

The techniques of Bone Marrow Nei Kung reverse the effects of aging by regenerating the bone marrow with sexual energy while

eliminating the accumulated fat which restricts the production of blood. Exercises are also used to detoxify the body and improve the functions of the nervous and lymphatic systems. Finally, a sixth practice is used by advanced practitioners to further strengthen the internal organs and glands by exercising the fascial layers which surround them. A higher concentration of sexual energy--referred to as Ching Chi--is released into the body through this technique.

Men have reported increased strength, endurance, and sexual powers upon mastering Bone Marrow Nei Kung. Women have reported that the Hitting techniques, used in conjunction with other exercises, are a perfect weapon against cellulite. Bone Marrow Nei Kung is also an excellent medium for weight control as it generates intense heat within the body to burn up large quantities of fat. This system can he used to enhance one's capabilities in all activities, including martial arts, running, weight lifting, football, aerobics, dance, and so on.

The exercises of Bone Marrow Nei Kung should not be considered a strict regimen. Progress is not contingent upon arduous practice except in a martial arts context where the goals are different. Those who cannot devote much time to esoteric disciplines should still be able to progress slowly but steadily to better health. Upon developing a reasonable proficiency with these techniques, practice can be curtailed to every other day, if necessary, to maintain that level of proficiency. These exercises and their prerequisites should only take from 35 minutes to one hour to complete.

C. Overview of Bone Marrow Nei Kung and Related Disciplines

1. Practices of Bone Marrow Nei Kung

Bone Marrow Nei Kung--sometimes referred to as Iron Shirt Chi Kung III--consists of the five interrelated practices. Chi Weight Lifting is a sixth technique described in Chapter Five for advanced practitioners. With the exception of Chi Weight Lifting, all of the following exercises, including the supplemental practices, should be used in your training schedule to some extent. If you wish to

receive instruction in these disciplines, it is advised that you contact the Universal Tao for information on the seminars in which Bone Marrow Nei Kung is taught.

a. The Bone Breathing Process: Bone Breathing uses the power of the mind with deep, relaxed inhalations to establish an inward flow of external energy through the fingertips and toes. This energy is used to complement previously stored sexual energy which is released into the body through the Sexual Energy Massage or Chi Weight Lifting and then compressed into the bones. The external energy helps to eliminate the fat accumulated in the bone marrow, thereby assisting in the marrow's regeneration. Bone Breathing may be used with or without Bone Compression, but they are presented as a combined practice in this book.

b. Bone Compression: After external energy has been breathed into a particular area, the muscle contractions of this process force the combined energies into the hones to burn the fat not of the marrow. While Bone Breathing is a mental process used in conjunction with long, soft breath cycles, Bone Compression is a physical process of contracting the muscles, thereby squeezing Chi into the bones. Combining the mental with the physical in this way enhances the results of Bone Marrow Nei Kung.

c. The purpose of the Sexual Energy Massage is to release Ching Chi from the genitals so that it can be disseminated throughout the body and absorbed into the bones. (The term "Ching Chi" actually refers to sexual energy and sexual hormones combined.) The fingers massage the genitals while meditative breathing is used to draw the sexual energy and hormones upward from the genitals into the body. The genitals are later replenished by the rejuvenated organs and the return flow of the microcosmic Orbit Meditation, described in Chapter Six.

Although the combined energies from sexual and external sources are used to burn fat out of the bones, only Ching Chi can regenerate bone marrow. The massage techniques release tremendous amounts of Ching Chi into the body for this purpose. The release of sexual hormones into the bloodstream also stimulates the pineal and pituitary glands. Western science believes that the pituitary gland produces an aging hormone in the absence of this stimulation, contributing to an early death.

d. The first Hitting technique has two applications: one uses a form of compression to force Chi into the bones, the other works

without any muscle tension, “Hitting with Packing” amplifies the Bone Compression practice using a special device to strike each successive area of the body or limbs that is being compressed. The device creates vibrations throughout the body which open the pores of the bones to receive condensed energy. Specific lines correlating with known acupuncture meridians are hit along their respective lengths to open their channels for the energy flow.

In the second application, “Hitting to Detoxify,” the striking device is applied without any form of Bone Compression, and the muscles stay relaxed. This detoxifies the body, helping it to absorb Chi. Hitting to Detoxify is recommended for beginning students because it has a less overwhelming effect on the body than the packing method. In both applications, Hitting is one of the most efficient techniques available for detoxifying the body.

e. The last technique, “Hitting with Rattan Sticks,” employs a similar striking sequence to stimulate the nervous and lymphatic systems. The sticks do not emphasize vibrations as the wire device does, but the shock of their contact strengthens skin, muscles, tendons, and bones. They should not be applied to the bones directly.) This method also detoxifies the skin, thereby improving the complexion. Hitting with Rattan Sticks completes the basic procedures of Bone Marrow Nei Kung.

f. Chi Weight Lifting is the last practice described in this text because of its advanced nature and its dependence on the other disciplines. It is similar to the Sexual Energy Massage, but weights are used to increase the pressure on the genitals. The procedure should not be attempted until all of the massage techniques in Chapter Three have been thoroughly mastered. Chi Weight Lifting differs from the Sexual Energy Massage in that it develops strength in the layers of fasciae surrounding the organs and glands. These tissues are engaged to counteract the downward pull of the weight against the genitals, thereby creating an upward flow of energy from the sexual center.

Note**:** Chi Weight Lifting is included herein to document its practice for instructors and trained students. It is not recommended for beginners or casual readers without a full understanding of its applications as taught at Universal Tao seminars.

g. Using the Bone Marrow Nei Kung Practices

(1) Practitioners usually begin with Bone Breathing and Bone Compression to draw external energies into the body. (In advanced

practice, you may prefer to use these steps only during the Hitting with Packing process.)

(2) Either the Sexual Energy Massage or Chi Weight Lifting techniques are then used to release Ching Chi, which is combined with the external energies.

(3) Finally, the Hitting practices must follow the release of sexual energy. First the vibrations are created to help the body assimilate the combined energies into the bones. Then the rattan sticks are used to strengthen the skin and nerves.

2. Required Supplemental Practices for Bone Marrow Nei Kung

The Universal Tao employs many other disciplines integral to Bone Marrow Nei Kung. Most of these practices can be used alone; however, a working knowledge of them all, including certain meditations, is necessary for Bone Marrow Nei Kung. It is the working knowledge of these other disciplines that creates a safer practice. After learning the required supplements, you may emphasize particular aspects of your training according to the needs of your body.

Tremendous energy is released during practice, which can cause an imbalance if one does not know how or where to channel and store an overflow of Chi. This could create problems that would require an acupuncturist to correct in order to avoid dangerous side effects. As a rule, hot energy is never allowed to remain in the organs and glands because it can overheat them. The supplemental practices used with Bone Marrow Nei Kung remove such an overflow of energy to the proper storage areas.

a. Microcosmic Orbit and the Inner Smile

A common denominator of all the physical disciplines, as well as the mental and spiritual work, is the Microcosmic Orbit Meditation, which is initiated by the “Inner Smile.” (See Chapter Six.) In relation to Bone Marrow Nei Kung, the flow of the Microcosmic Orbit is necessary for channeling sexual energy. (Fig. 1.1) Ching Chi is drawn up from the lower centers into this flow and distributed throughout the body. In this way, meditation assists in creating blood cells by circulating Chi to enhance bone marrow.

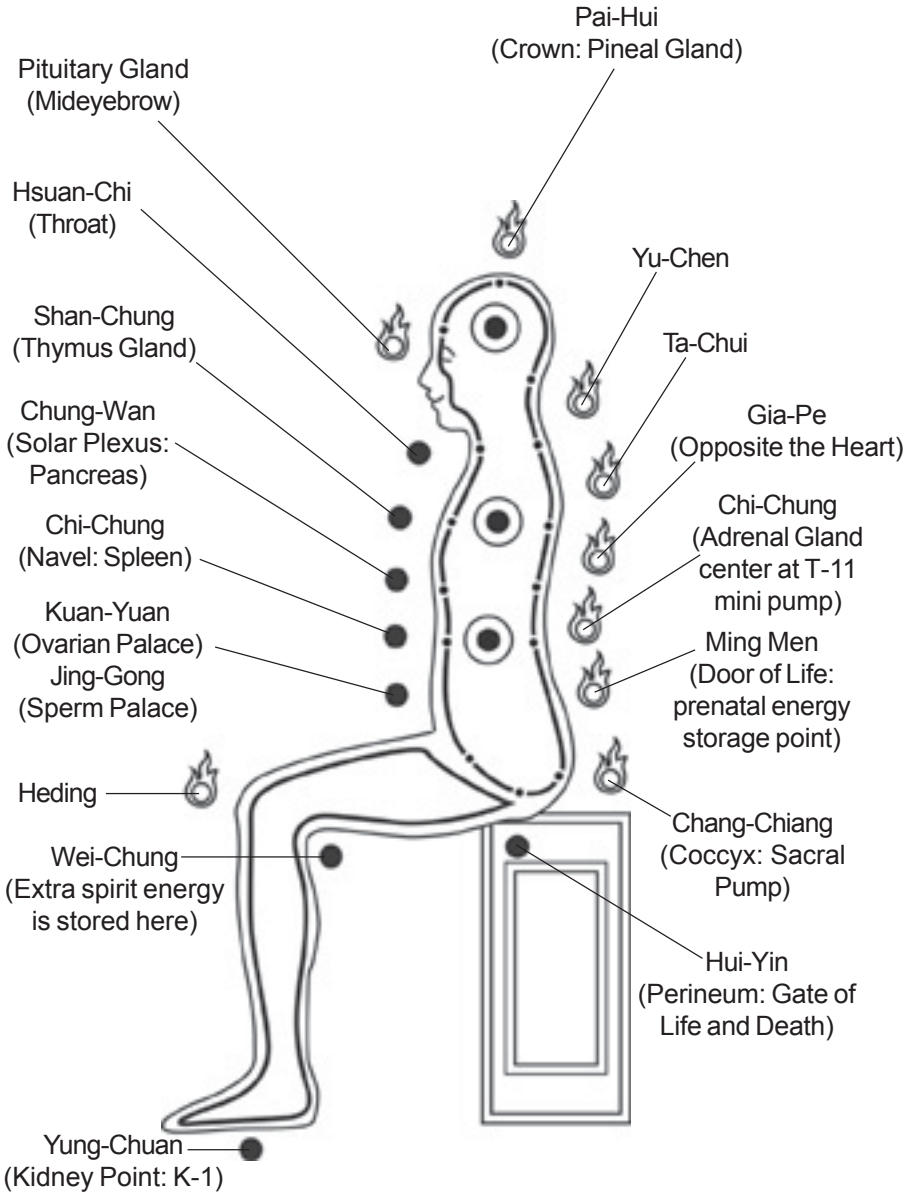


Fig. 1.1 *Stations of the Microcosmic Orbit*

Warning: To practice without the Microcosmic Orbit Meditation can cause irregular heartbeat, chest congestion, headaches, pain in the chest or back, and other problems. This meditation is a prerequisite for Bone Marrow Nei Kung. Ignore it at your own peril.

b. Healing Love

Another important exercise for Bone Morrow Nei Kung is the Healing Love practice used in all sexual activities. The loss of sexual energy, or "Ching Chi," depletes the bone marrow and the vital organs which must replace what was lost. Unless one learns how to retain this energy and build up a healthy reserve, the organs and glands must sacrifice one third of their energy to replenish the genitals which produce Ching Chi.

The Healing Love methods for both men and women involve drawing in orgasmic energy and channeling it upward to higher centers, thereby reversing the outward flow of Ching Chi that is normally released during sex. When used in conjunction with the Sexual Energy Massage, these techniques combine to release tremendous amounts of Ching Chi upward into the body, making this practice very useful to Bone Marrow Nei Kung. When used alone, Healing Love methods release abundant sexual energy which can then be stored and cultivated for mental, physical, and spiritual use.

Sexual energy can be transformed into life-force energy, compounded regularly by the Healing Love practice. The use of these methods not only improves the internal organs and glands but also enhances one's sexual satisfaction. The libido lasts for many more hours during sex, and for many more years in one's life. Furthermore, sexual stimulation reaches far beyond the conventional idea of a "climax."

c. Iron Shirt Chi Kung I

The postures of Iron Shirt I can be an excellent medium for the practice of Bone Marrow Nei Kung. In the Iron Shirt techniques, one learns to compress energy into the fasciae surrounding the organs and glands. These protective sheaths of tissue are most conducive to the Chi flow that nourishes the internal system.

Compression of Chi creates its storage space within the fasciae as the fat lodged within the muscles, tendons, and bones is purged

and then transformed into more energy. A brief synopsis of the related postures is included in Appendix 1. Iron Shirt Chi Kung I is detailed in the Universal Tao book of the same name.

d. Six Healing Sounds

The Six Healing Sounds are produced sub-vocally and correspond to specific organs: the lungs, kidneys, liver, heart, and spleen. The sixth sound is the "Triple Warmer" which evenly distributes energy throughout the body. When used independently of Bone Marrow Nei Kung, each sound creates its own energy to enhance and detoxify the internal system. All six sounds and their related postures decelerate the body after practice and remove excess heat accumulated in vital areas. These exercises are fully explained in Appendix 1 and also in the Universal Tao book, *Taoist Ways to Transform Stress into Vitality.*

D. Importance of Internal Exercises

Master of Internal Strength

There once was a master who was very powerful. Many people wanted to learn from him, but he was difficult to have an audience with. This master felt that, unless one had patience, no one was worthy of his lessons. There was a very determined man, however, who waited three years, day after day, to see him. But the master would only appear to discourage those who waited. He would send them away, and they would all leave, except for this one man. Finally, the master became curious about this man who remained each day only to receive such disappointment.

One day the master asked the man, "If I tell you to do something, will you do it?" "I will try my best," the man answered. So the master told him to go over to a tree that grew nearby and pull it out of the ground for him. The man looked at the tree and decided to try it, since this was better than waiting for the treatment that the other people would get. He went over to the tree, grabbed it, and pulled at it. He did this day after day, year after year.

With each passing year, the tree grew bigger, but with each passing year, the man developed more internal strength. Finally one day, after ten years of daily effort, he became very determined

to pull that tree out. He felt his body fill with Chi as he approached the tree and grabbed it. His feet were firmly planted on the ground, and he was wrapped around the tree in such a way that his internal strength could best be applied. With great force, he finally pulled the tree out.

The man went to the master and excitedly reported his great triumph. The master said that was fine, and then told him to leave. The man was very surprised and disturbed by the master's response. It appeared that he had been shunned without ever learning from this master after all. The master looked at him and said, "If you can pull that tree out of the ground, whoever in the world would want to fight you?" The man smiled upon realizing that he had indeed been taught what he most needed to know: patience, self-discipline, and internal power. (Fig. 1.2)

Fig. 1.2 *Embracing the Tree*

1. Chi flow assists the Heart.

This system regards the heart as both a muscle and a vital organ. Taoists would agree that even a strong heart should never be overworked. The heart never truly rests from the time it begins to

beat. As blood carries oxygen and nutrients throughout the body, its circulation can be a burden to the heart if physical stress remains constant. (Fig. 1.3) When energized with Chi, however, the blood becomes lighter and easier to move, allowing the heart to work less and maintain a higher energy level. The practice of Bone Marrow Nei Kung helps to develop the Chi flow while improving the heart's capabilities.

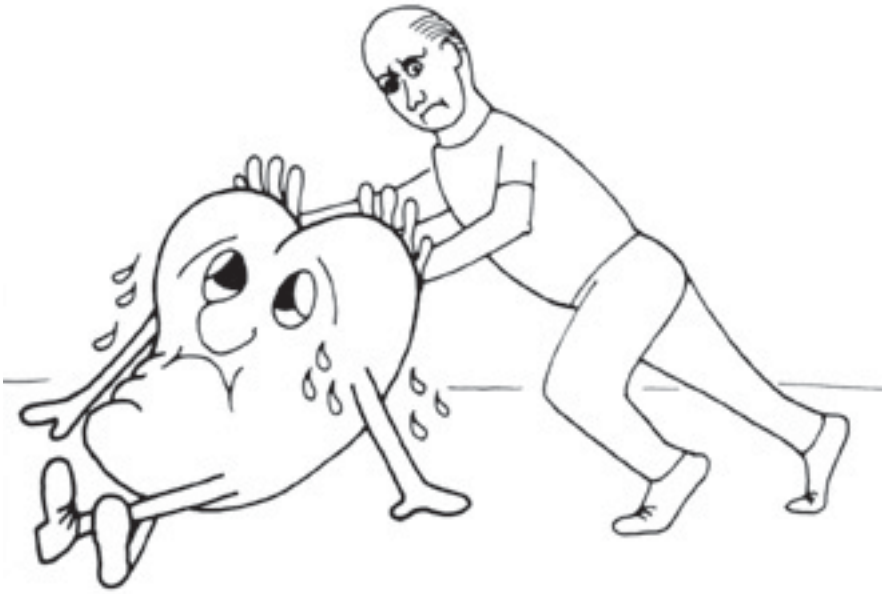


Fig. 1.3 *The more we push the heart, the more we exhaust its energy.*

2. Mind moves Energy

The flow of Chi can be controlled by the mind to greatly reduce the work of the heart. If, for example, your hands and legs are cold, you may concentrate and direct the Chi to flow with the blood to warm those areas. "Pulsing" is a meditation technique used to make the blood flow with less dependence on the pumping of the heart. Pulsing can direct the Chi to help circulate blood throughout the body. The method amplifies the pulse at the crown and at the perineum so that blood can be directed from all three points rather than from the heart alone. This practice is used to assist the heart in Bone Marrow Nei Kung, and it exemplifies some of the physical manifestations of meditation.

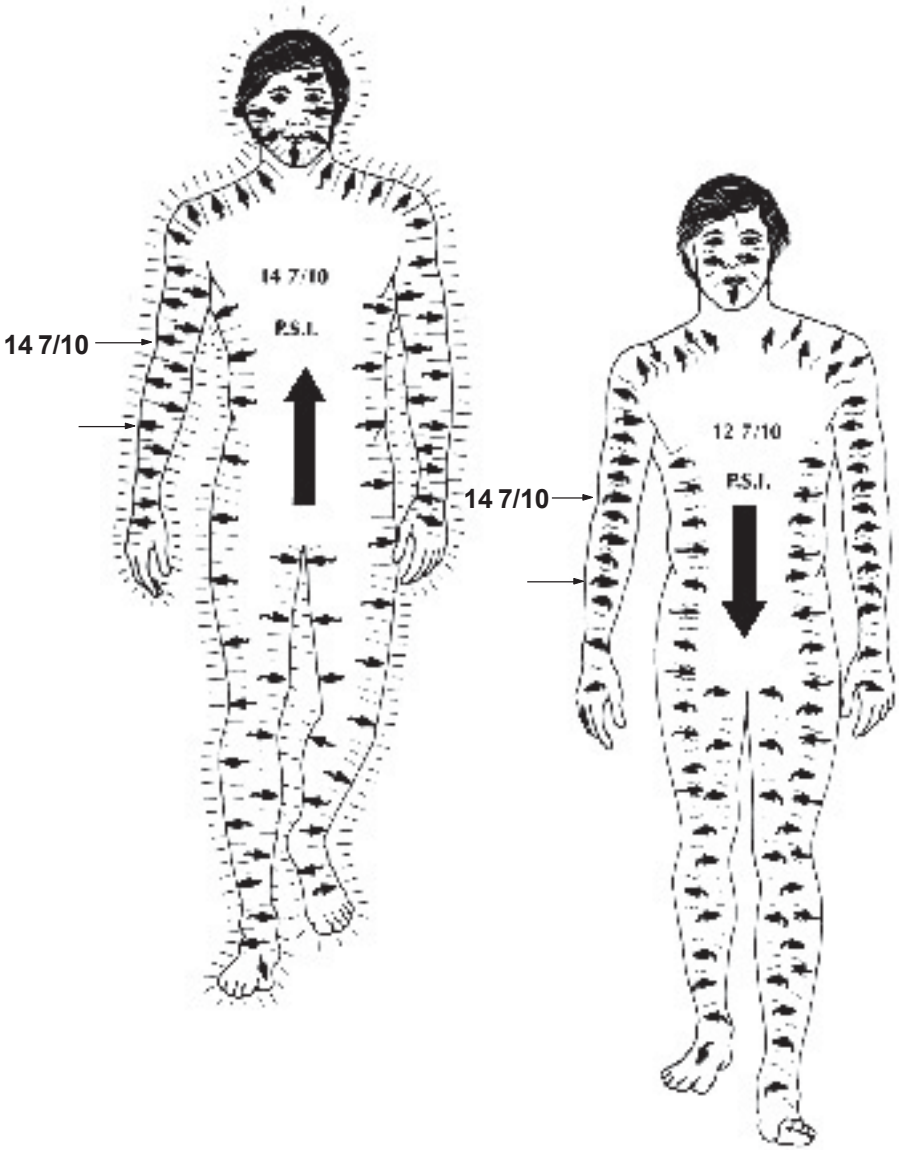


Fig. 1.4 *A healthy body has an internal pressure of fourteen and seven-tenths pounds of pressure per square inch (P.S.I.) Any reduction of this pressure increases the chances of illness and overall weakness.*

3. Developing Chi Pressure

Chi pressure is important in Bone Marrow Nei Kung as energy is compressed into the cavities of the body to provide for the vital functions of the internal system. A healthy body has a Chi pressure level of about fourteen and seven-tenths pounds per square inch. When we are sick, or become old, this pressure decreases, and the body reacts like a car tire losing air. (Fig. 1.4) Bone Marrow Nei Kung employs special breathing techniques, first introduced in Iron Shirt I, to double the Chi pressure in and around the organs and glands. This is like creating an additional, powerful heart to improve one's internal capabilities. The Chi pressure also protects the body from internal injury resulting from external forces.

4. Circulating and Storing Chi through Acupuncture Meridians

During the development of acupuncture, the Taoist masters discovered a network of pathways through which energy could be distributed to all areas of the body. Modern science describes these pathways as conductors of electric current with storage compartments of electromagnetic energy. The Taoists simply referred to them as routes, meridians, or channels. As Chi flows through each channel, it energizes the particular organs associated with that channel. In the practice of Bone Marrow Nei Kung, energy is conducted through these acupuncture meridians to enhance the organs, glands, fasciae, muscles, and bones, rejuvenating the entire body.

5. Chi and the Crystalline Properties of Bones in Western Research

Dr. Gabriel Cousens has compiled many documented studies pertaining to the crystalline properties of the human bone structure. In his book, *Spiritual Nutrition and the Rainbow Diet*, he reports that bones can receive and emanate electromagnetic fields in the same manner as other crystalline structures. These fields can affect cell nutrition, cell functions, enzyme activity, energy transfer, and many other internal activities. Bone-generated electromagnetic fields relate directly to the assimilation of nutrient energy, which means that they affect our intake of energy from external sources such as food.

The fact that externally created electromagnetic fields can affect the crystalline properties of bones might explain how a small electrical current can be used to help the bones heal themselves. Calcium lost in osteoporosis has been replaced through this technique. It is unknown how this process works, but Taoists suggested its use long before electrical impulses could be generated by anything other than the body.

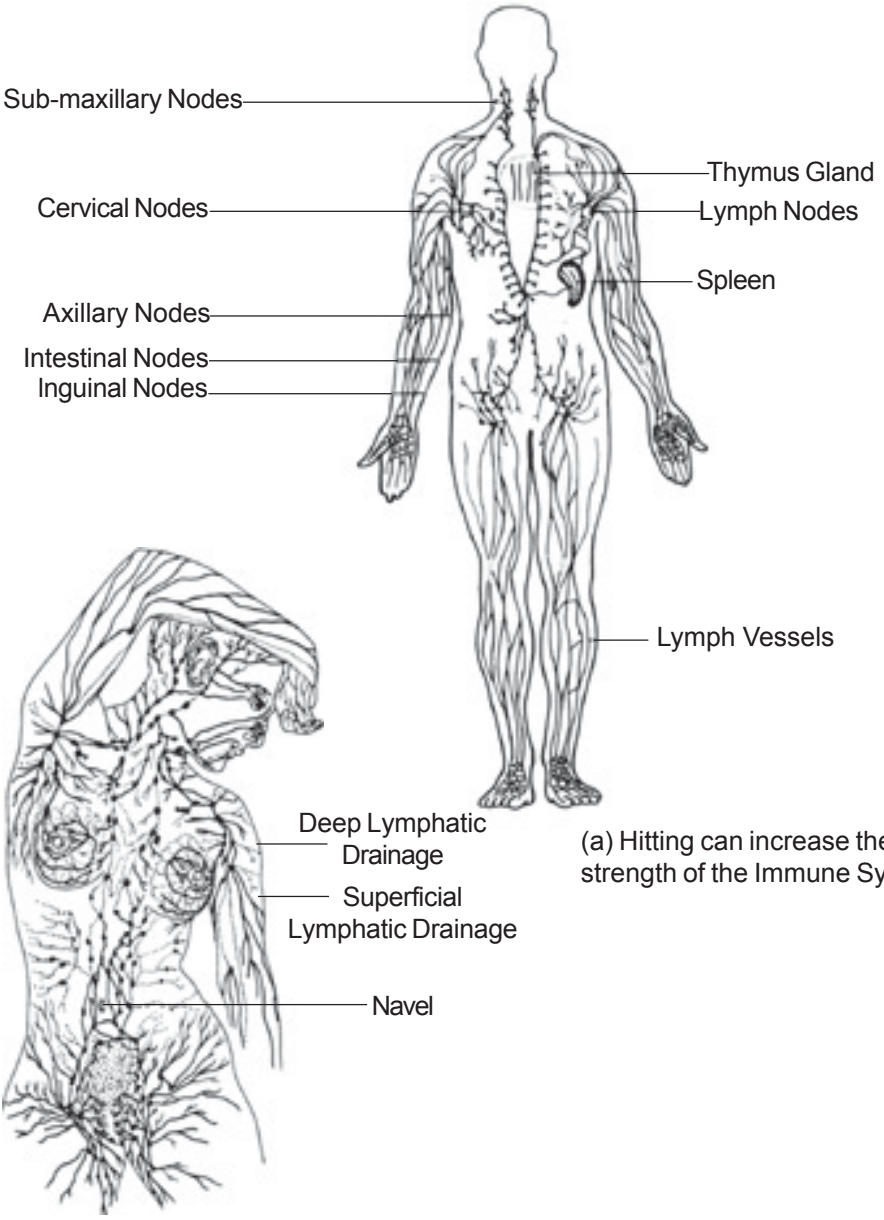
These findings may someday help the West to accept Taoist ideas about the use of energy as a healing tool. Research has already confirmed the effects of electromagnetic energy on bone functions, and Taoist concepts seem to intrigue Western medicine as electrical current is now being used to heal bones. (Bone Breathing and Bone Compression exemplify how this process was originally employed.) It would appear that Taoist practices offer an approach to healing similar to electro medicine, but in fact these practices actually prevent bone problems and other disorders from ever occurring.

6. Taoist Practices strengthen the Immune System.

Western science is conducting studies to ascertain the effects of Taoist methods--and those of various other disciplines--on the immune system. Research is being conducted in the fields of psycho-neuroimmunology, behavioral medicine, and movement therapy. So far there is no evidence that would establish any single discipline as a comprehensive approach to strengthening the immune system. One may conclude, however, that self-induced healing, as advocated by Taoists, is creating a foundation for such a program. This ancient approach has illuminated the link between the immune system and the power of the mind. The “Inner Smile” meditation clearly exemplifies the benefits of this connection. (Fig. 1.5 (a) and (b))

7. Cultivation of Sexual Energy leads to Personal Power.

Nurturing Ching Chi through Bone Marrow Nei Kung and Healing Love practices eventually brings great personal power as sexual energy begins to radiate from the body. This energy has a magnetic quality that attracts people. It nourishes those who do not have the knowledge to store Chi for themselves, but it can also attract those who have other energies to share. In other words, you may attract the yin counterpart lo your yang energy or vice versa. When such



(a) Hitting can increase the strength of the Immune System.

(b) The superficial and deep lymphatic drainage of the head, arms, and torso is increased by Hitting with Rattan Sticks.

Fig. 1.5 *Immune System*

Fig. 1.6 *Spirit Body*

a meeting occurs the abundance of sexual energy becomes even more important as it can be shared to create the foundation for a spiritual bonding. Two can share in this joy when the energies overflow from both participants.

8. Developing the Spirit Body with Internal Energy

During its journey through the Microcosmic Orbit, sexual energy transforms into life force energy, which ultimately transforms into spiritual energy. This final transformation yields the raw material for the creation of a "spirit body," which is used as a vehicle for the ethereal being within each of us. (Fig. 1.6) This metaphysical part of ourselves is vulnerable unless we use our energies to fortify it. By creating the spirit body, the spirit is strengthened and given a safe means of transportation to and from other realms. The cultivation of this vehicle leads to the ultimate experience of the Tao.

E. Summary

1. Bone Marrow Nei Kung was created to fulfill several functions leading to the rejuvenation of the bone marrow and the enhancement of the blood:

a. Breathing in energy from external sources.
b. Drawing in and circulating sexual energy throughout the body.
c. Vibrating the bones to open their pores for energy absorption.
d.Compressing the combined energies into the bones to eliminate fat.
e.Enhancing the nervous and lymphatic systems while detoxifying the skin.

2. These functions are served by the following practices:

a. Bone Breathing draws in external energy through the fingertips and the toes and circulates it throughout the body.
b. Bone Compression combines external and sexual energies while compressing them into the bones.
c. The Sexual Energy Massage releases Ching Chi upward into the body so that it can be used to regrow the bone marrow.
d. The first Hitting form creates vibrations which open the pores of the bones to absorb external and sexual energies as the body detoxifies.
e. The second Hitting form improves the nervous system and the external aspects of the body as the skin detoxifies.
f. Chi Weight Lifting releases the highest concentration of sexual

energy and hormones as it strengthens the fasciae surrounding the organs.

3. Four practices must be used with Bone Marrow Nei Kung:

a. The Inner Smile and Microcosmic Orbit meditations energize the body and open channels for the circulation of energy to the organs and glands.

b. The Healing Love practice retains sexual energy for healing the internal organs and glands as the brain is stimulated.

c. The Iron Shirt I practice packs Chi into the layers of fasciae surrounding the organs and glands, thereby storing energy for their use.

d. The Six Healing Sounds decelerate the body after practice and release excessive heat from the internal system.

4. Energy known as “Chi” is important because:

a. Chi can regrow the bone marrow and energize the blood.

b. The mind can move Chi to assist the heart and heal the body.

c. Chi pressure creates strength and resilience within the body.

d. Chi can strengthen the immune system, increase one’s sexual and personal power, and enhance one’s spiritual perspectives.

Chapter II
Healthy Bones: Bone Breathing and Bone Compression

There are many health benefits to bone Breathing and Bone Compression. These techniques can be used independently of the other Bone Marrow Nei Kung exercises. They can be practiced anywhere, even while riding on a bus or waiting on line, as long as there are no serious distractions. They help to remove fat from the bone marrow and create space for the marrow to grow, thereby increasing one's ability to produce blood cells. They also relieve tension in the muscles, permitting Chi and blood to circulate freely.

The spinal cord benefits from the energy Bone Breathing draws into it. People with back problems can concentrate on Bone Breathing in and around the spinal cord to relieve discomfort in the area while strengthening the back. Back tension and pain are released from the body as the vertebrae are gently separated and cushioned by the Chi.

The overall results will be a healthier body with increased internal power.

Cosmic energy constantly comes to the earth in the form of extremely fine particles produced as stars evolve through their life cycles. All forms of life on earth, including humans, depend on this energy which is absorbed through breathing and assimilating food.

The use of external energy to fortify the bones is a meditative process which uses long, deep breathing cycles. Bone Breathing draws Chi in through the fingertips, the toes, and all of the protruding bones, spreading it throughout the skeletal structure. (Fig. 2.1) This energy is then compressed into the bones through muscular contractions, forcing Chi into the cavities of the body. Bone Compression thus completes the Bone Breathing process by retaining the accumulated energy.

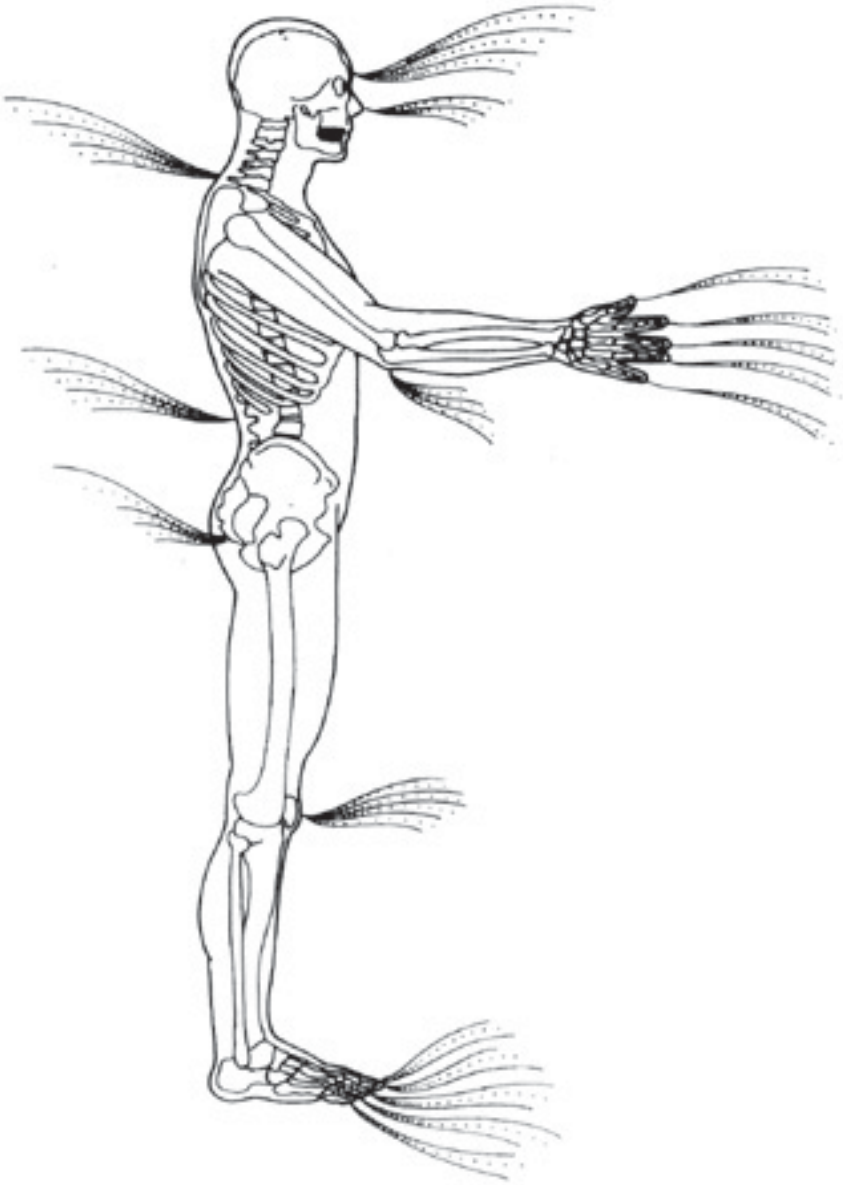


Fig. 2.1 *Energy is most effectively absorbed by the protruding bones of the body.*

A. Benefits of Bone Breathing and Bone Compression

1. Healthy Bones and the Production of Blood

Red blood cells are produced by the long bones of the body such as those found in the shins, thighs and arms. They circulate oxygen and eliminate carbon dioxide. White blood cells are produced by the flat bones such as the pelvis, sternum, scapulae and skull. They are vital to the body's defense system. Both red and white blood cells are produced in the marrow of the bones; which type of cells are produced depends on the type of marrow that predominates.

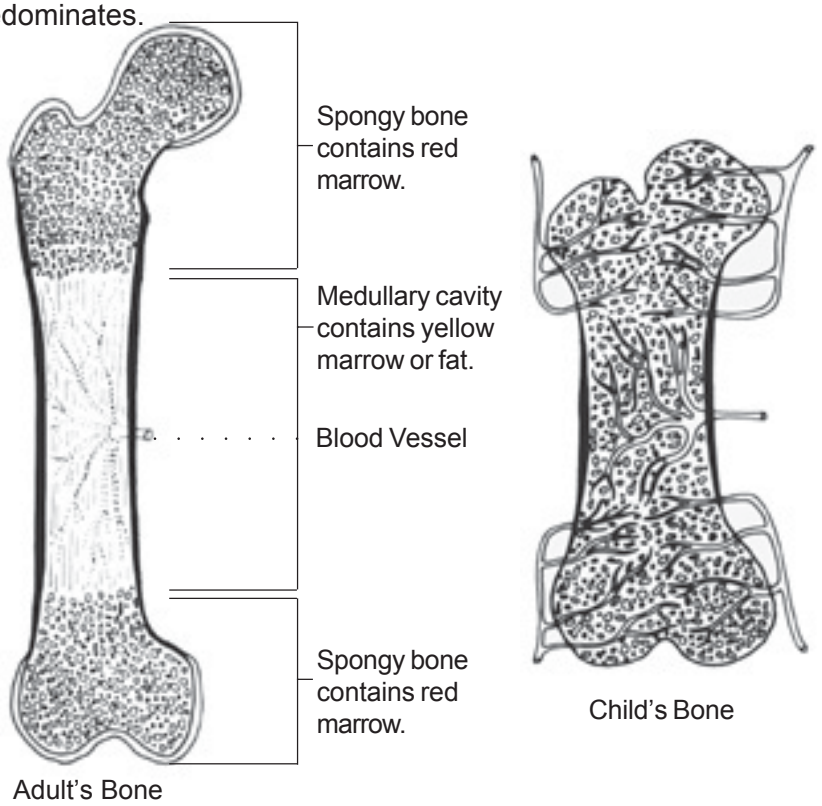


Fig. 2.2 *Bones of child are made up exclusively of red marrow with abundant blood vessels, while adult bones have red marrow at the extremities and a central area containing fat (yellow marrow).*

Healthy bones contain more red marrow, which produces blood cells. Yellow bone marrow also exists, producing fat which accumulates as the body ages. When neglected through lack of exercise, this accumulation can decrease the proportion of red marrow crucial to the production of blood. Although yellow marrow can also produce blood cells, healthy blood production is contingent upon a higher proportion of red marrow in the bones and less fat. For this reason, Bone Marrow Nei Kung practitioners always seek to increase the growth of red marrow while eliminating fat. (Fig. 2.2)

2. Improving the Heart Function

In the advanced practice of Bone Breathing, the process of "Pulsing" can relieve the heart of excessive work while increasing circulation in other parts of the body. Pulsing uses the mind to amplify the pulse in the crown and perineum points. The pulse from these outer regions can then be used to move the Chi, and thereby move the blood. Through this process, the heart uses less force in its pumping action, and there is less need to tap its energy reserves.

You can also feel the pulse from the outer regions and mentally slow it down at the source. Hold either wrist between the thumb and forefinger of the opposite hand to determine the pulse. Then, by mentally decreasing the number of beats per second in the crown and perineum points, you can decrease the rate of the heart's pumping action. Both methods of reducing the heart's work can be applied simultaneously. Simply increase the strength of each beat from the crown and perineum as you slow down the heart rate.

B. Overview of Bone Breathing and Bone Compression

Bones are extremely porous, and they are always "breathing." (Fig. 2.3) The pores allow the passage of oxygen, blood, and nutrition through the bones in the same way a sponge absorbs and releases water. Bone Breathing draws external Chi in through the skin, muscles, and tendons to be combined with sexual energy and compressed into the marrow of the bones through the Bone

Compression practice. This process uses the combined energies to create the heat necessary to bum the fat out of the marrow. (Fig. 2.4)

Fig. 2.3 *Bones are extremely porous and are always "breathing".*

Fig. 2.4 *Prolonged Bone Marrow Nei Kung practice helps to clear the fat from the bones, nurturing the regrowth of the red marrow.*

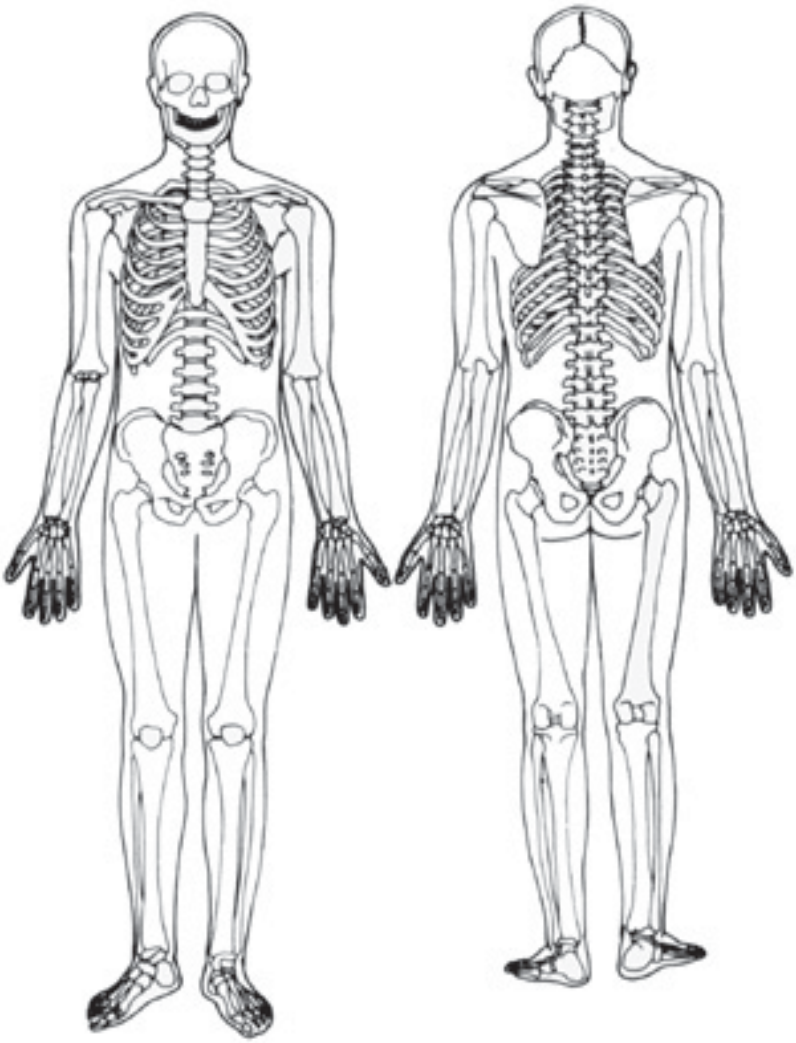


Fig. 2.5 *Skeletal Structure*

1. Bone Breathing

Look closely at the skeletal structure illustrated in Fig. 2.5. Prepare to draw in external Chi through the tips of your fingers and toes as you breathe in and out through them. (Fig. 2.6) Energy can be drawn

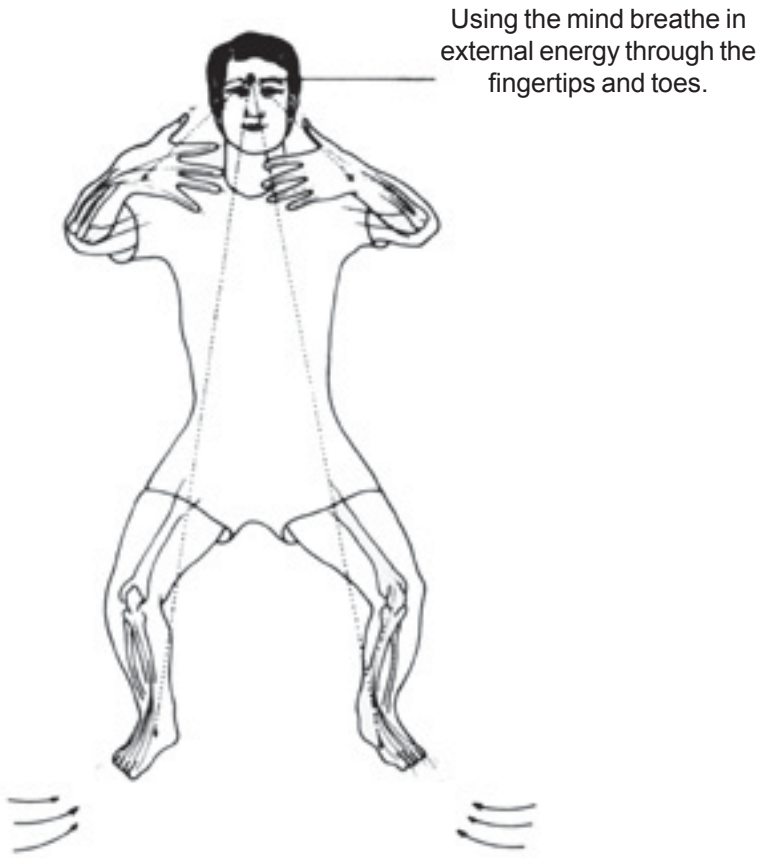


Fig. 2.6 *Bone Breathing*

in through the hands and feet by fostering a sense of coolness in them. This imagined cold will actually attract warm external energies. When you inhale through the fingers, the feeling is usually cool. When you exhale, the feeling is warm. Once you have established the feeling of the energy in your fingers, use your mind to guide the Chi upward into the limbs and the body as you inhale.

Each time you exhale and release the Chi, you can draw it back further into each limb with more force like a battering ram. This opens the channels of the arms and legs so that more energy can be drawn into the body. By the time the energy passes beyond your elbows and knees, however, you may not feel that you can expel the energy as your limbs may seem longer than your breath cycles. A physical feeling will indicate that the energy is being retained.

Note: These techniques should initially be practiced from a seated position until you are able to draw the energy while standing in the "Embracing the Tree" posture. (See Appendix 1.) If possible, try to keep your feet bare since shoes and socks impede the drawing of energy through the lower limbs.

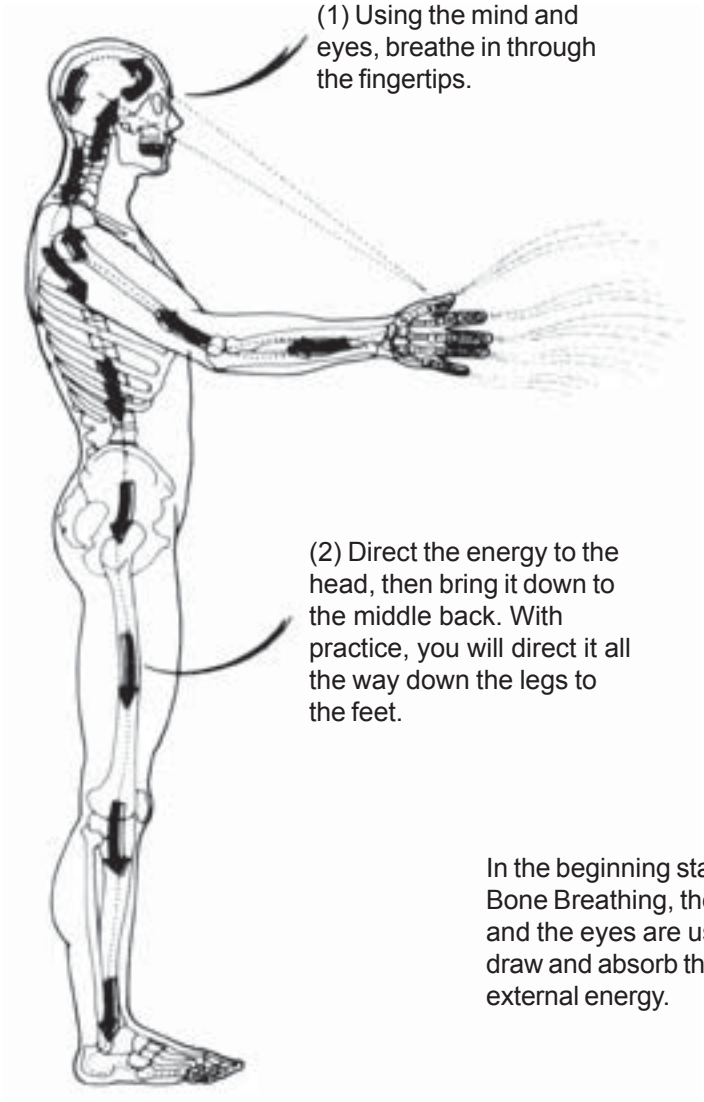


Fig. 2.7 *Stage One: Respiration through the Fingers*

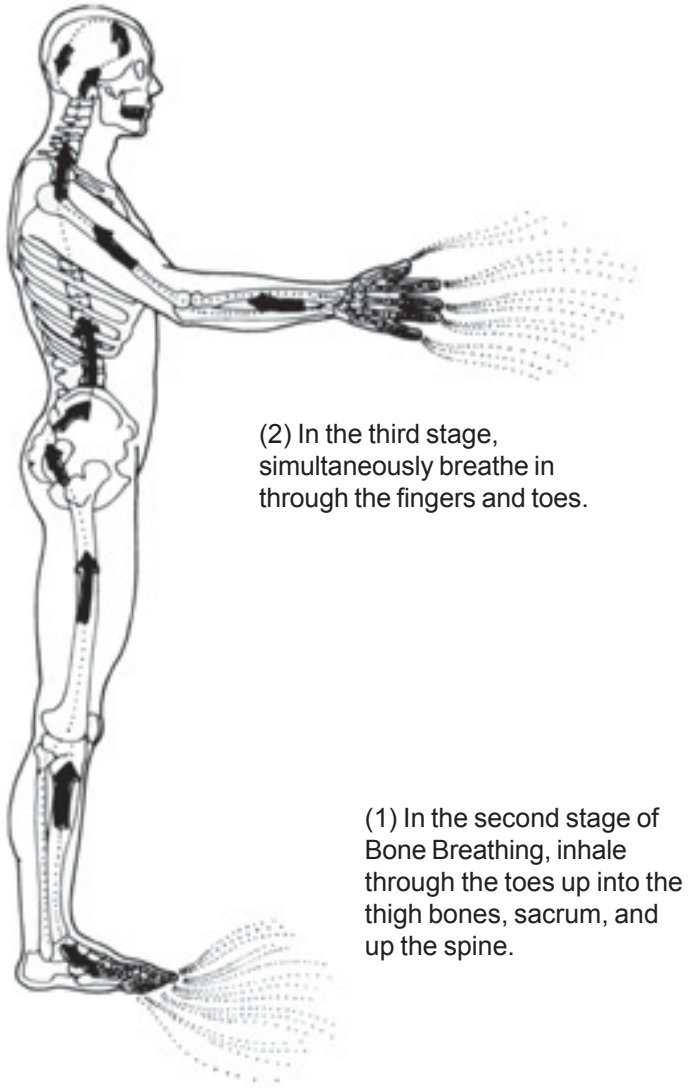


Fig. 2.8 *Stage Two and Three: Respiration through the Toes and simultaneous practices.*

a. Respiration through the Fingers: In the first stage of Bone Breathing, use lower abdominal breathing to draw energy in through the fingertips. Then gradually move the Chi up through the hands, arms, shoulders and scapulae, up to the skull, and then back down the spinal column to the middle back. (Fig. 2.7) Mentally create a cool feeling in the hands to attract the warm external Chi. Briefly

hold each breath before releasing the Chi as you exhale. Draw the energy in further with each new breath as you continue to open the pathways for its travel.

b. Respiration through the Toes: When your feet feel cool, inhale through the toes, and then by degrees into the thigh bones, hips, and sacrum. Most people feel the breathing sensation very powerfully in their legs. Each time you inhale, hold your breath--but not so long that you experience discomfort. Then, exhale down and out through the legs and toes. You may feel the energy surge from the sacrum up the back and circulate throughout the nervous system as you breathe up the spine. (Fig. 2.8)

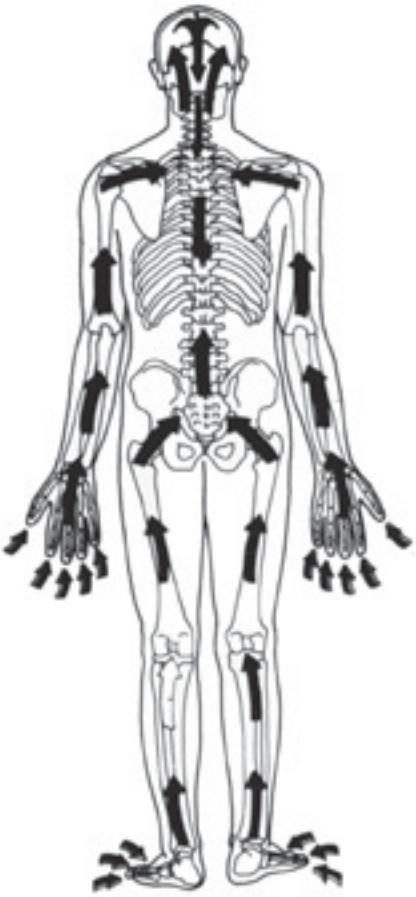


Fig. 2.9 *In the Third Stage of Bone Breathing: Energy is breathed in through the fingertips and toes, gradually moving up and connecting at the spine.*

c. Simultaneous practice: Eventually, practice both of the previous stages together. With experience, there will be no need to work the arms and the legs separately. Breathe up through the toes, the legs, and up the spine in one direction as you simultaneously breathe in through the fingers, into the arms, the shoulders and scapulae, up to the head, and return down the spine from the opposite direction. (Fig. 2.9)

d. The energy connects the upper and lower halves of the body near the middle of the spine. The combined energies then travel back up the spine to your skull. The Chi spirals through the facial bones and returns down the spine to the point at which the two sources connect.

e. After the Chi from both sources has returned to the upper spine, the energy will spread out through the rib cage and recombine at the sternum. The Chi travels from the back of the rib cage to the front. The sternum is filled with the spiraling Chi from all twelve ribs simultaneously.

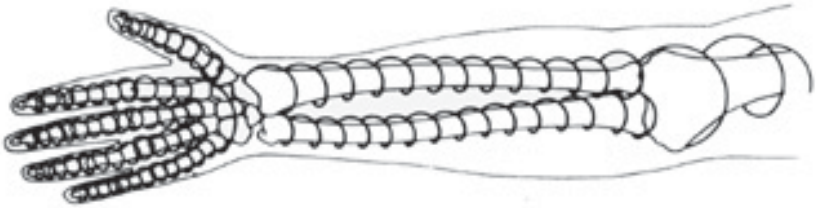
2. Bone Compression

There are three steps to Bone Compression: The first is to inhale the Chi in a spiraling motion, drawing it in through the fingers and toes to surround the bones of the arms, legs, and body. The second step is to pack the Chi in between the muscles and bones. The third step squeezes the muscles, thereby compressing the Chi into the marrow through the pores of the bones. The sequence of steps is: inhale, spiral, pack, and squeeze Chi into each part of the limbs and body successively. (Fig. 2.10) (The first two steps are actually a single process.)

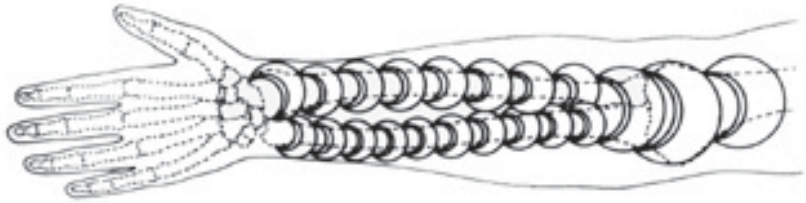
***Note*:** Unlike the early stages of Bone Breathing, Chi is not expelled upon exhalation during Bone Compression. As you spiral the energy inward, concentrate on those parts of the body that have received the inhaled Chi. It will remain at those points until you are ready to compress it into the skeletal structure.

a. In the first stage of Bone Compression, inhale Chi into each part of the skeletal system in a manner similar to Bone Breathing, but spiral the energy as you draw it in. Do not release it. As you use your mind to draw in the external Chi through your arms and legs, envision it travelling through each limb in a spiraling motion, circling

clockwise through your right arm and leg, and counterclockwise through your left arm and leg. Spiraling helps to combine the external and sexual energies, while allowing the Chi to cover more internal space.



(1) Spiraling the energy.



(2) Packing around the bones.

(3) Squeezing the energy into the bones.

Fig. 2.10 *Spiral, Pack, Squeeze*

b. While spiraling helps to bring Chi into more internal areas, packing condenses it into less space. This step creates more room for the energy in every part of the limbs and body before it is compressed into the bones. Once the heart rate is audible to your "inner ear," you may amplify the pulse at the crown, the perineum, the hands, and the feet, maintaining it throughout each compression in order to decrease the work of the heart.

c. Squeeze the muscles of each hand and forearm individually after you have inhaled, spiralled, and packed Chi into them. (Fig. 2.11) When you are familiar with the way it feels, work both hands

at the same time. Hold your breath for a comfortable period of time as you maintain each squeeze. This helps to compress Chi into the pores of the bones. Relax your muscles as you exhale.

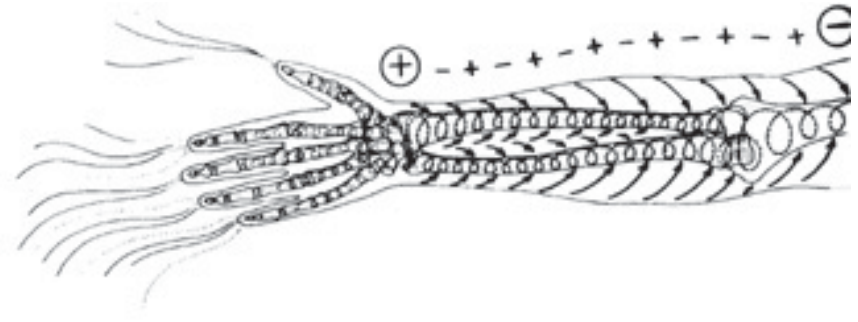


Fig. 2.11 *By inhaling through the fingertips, packing, spiraling, and squeezing energy into the bones, an electrical impulse is created.*

The resting period is extremely important. You will feel the most profound sensation of Chi at this time. Absorption during rest periods is a continuation of the compression process, using mind control instead of muscular contraction. When you release your hold, use the mind to relax the muscles and to absorb more energy into the bone marrow. The muscles and tendons should feel like cotton wrapped around your bones.

Note**:** Eventually, Bone Compression can be practiced upon all of the body simultaneously.

C. Bone Breathing Process Step By Step

Note**:** The following is a detailed analysis intended for reference. Upon becoming familiar with Bone Marrow Nei Kung, students may use the summary at the end of each chapter as a practice guide.

1. Preparations

You should be certain that the Microcosmic Orbit is clear of any blockages before starting. Regulate your breathing, then circulate your energy through the Microcosmic Orbit for several cycles. (You

may wish to do this from the Iron Shirt posture so that your body will feel like an integrated unit.)

Look at the illustration of the human skeleton. (Fig. 2.12) Notice the size, shape, and placement of the bones. Then, one arm at a time, trace your way up from the fingertips, through the bones of the hand and wrist, the radius and ulna of the forearm, the humerus of the upper arm, the collar bone (clavicle) in front, and the shoulder blade in back. Trace the legs in the same manner. This illustration should help as a guide for the energy flow in your practice.

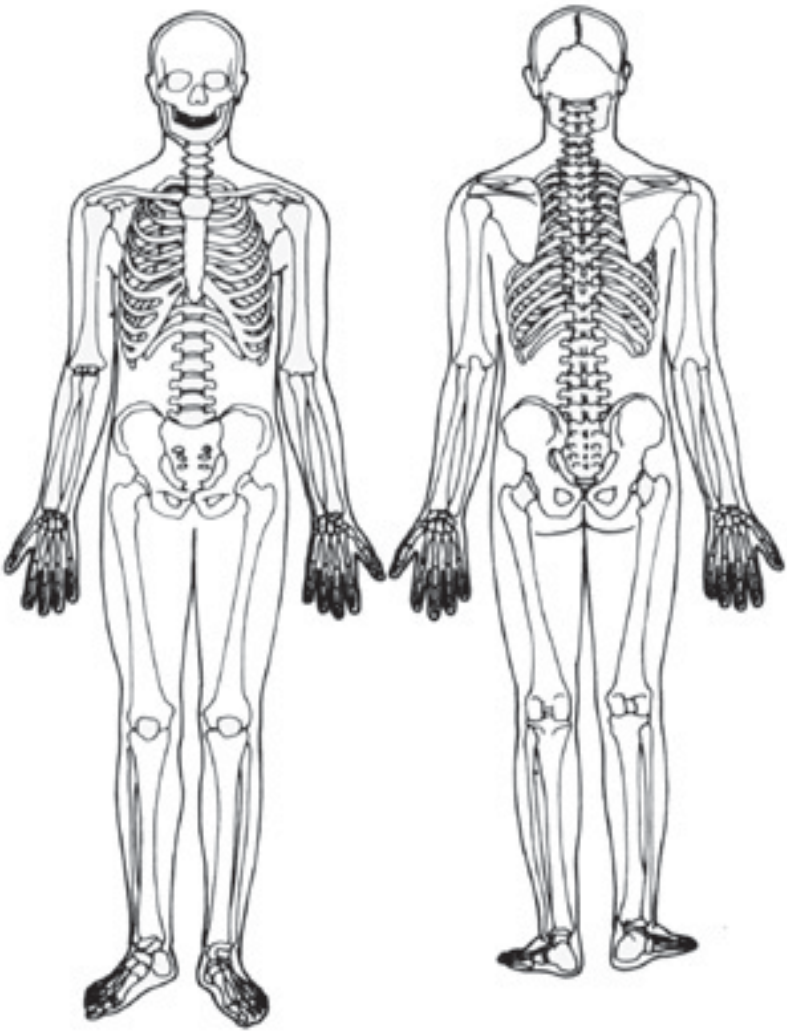


Fig. 2.12 *Observe the skeletal structure.*

Initiate Bone Breathing with the fingers of one hand until you feel energy, moving in and out of that hand. Continue breathing up into each section of the arm. Begin your practice with the fingers of the right hand if you are right handed, or with the left hand if you are left handed. Practice using the fingers of the opposite hand, and then both hands together, moving up both arms, and so on. Similarly, practice on the right (or left) toes, and then the toes of the opposite foot, and then continue up the legs.

Fig. 2.13 *Sink the elbows, face the palms down, and relax the fingers. Gently pull up the sexual organ and the anus.*

Some people find it useful to extend the hand they intend to breathe into, palm down, pointing outward horizontally, at chest level. (Fig. 2.13) This aids in concentrating on the fingers of that hand. Between each step, rest for as long as you feel the need to do so. Place your hands on your legs, palms up, and close your eyes during each testing period.

2. Initiating Bone Breathing: Breathing through the Fingers

With your hand raised gently pull up the sexual organs and anus with each breath. Draw the energy in as you inhale; push the energy out as you exhale. As you inhale, sink the elbow down, and draw the energy in. Then exhale, extend your hand out slightly from the rising elbow and release the energy. As you watch with your mind's eye, see the fingers beginning to breathe. Breathe through your nose in long, deep, but gentle cycles.

a. Start with the Index Finger

The bones in the tips of the fingers are pointed and can draw in energy. Begin the Bone Breathing process from the index finger, which offers the most sensation of the energy entering and leaving. (Fig. 2.14) Bend and sink the elbow while holding the, lower arm up. Relax the wrist, hands, and fingers.

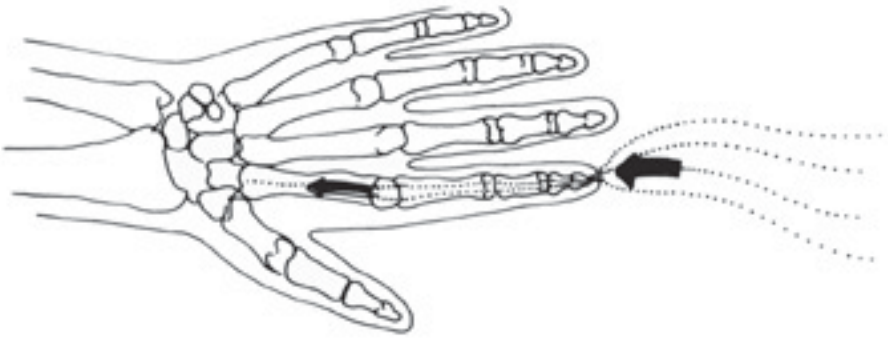


Fig. 2.14 *Begin Bone Breathing through the index finger.*

Note: If it helps you to become more aware of your index finger, press its tip with a fingernail from the other hand until you feel a sharp pain indicating the bone.

b. Draw warm energy into the cool fingertip.

Sense a cold feeling in the tip of your index finger. Sink your elbow, and slowly pull in the entire hand--finger extended--with a long, gentle breath. Be aware of the energy as it enters into the tip of that finger only.

c. Release the energy with the breath.

Exhale, permitting the elbow to rise slightly as you slowly extend the hand. Feel the sensation of the energy leaving the extended finger.

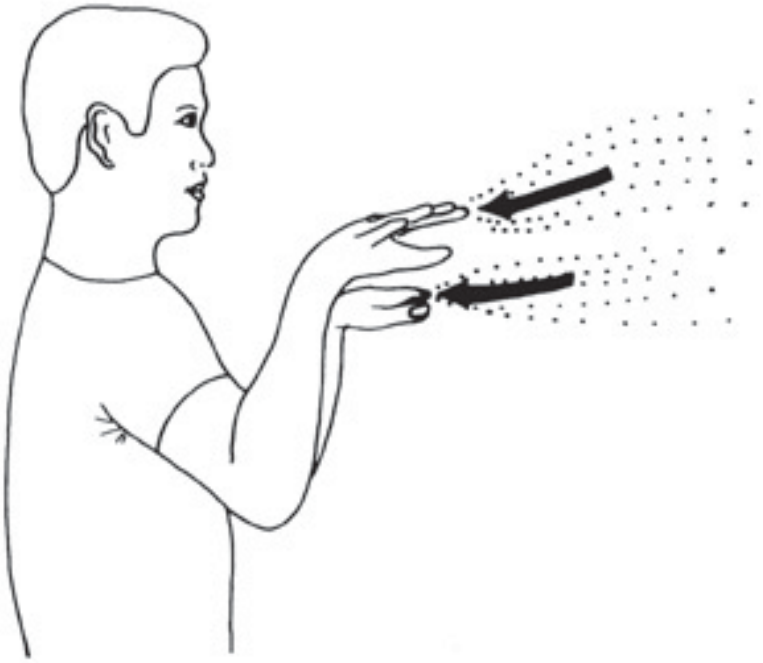


Fig. 2.15 *Draw the energy simultaneously into all the fingers of both hands.*

d. Breathe into the Fingers individually.

Next, breathe into the second, third, and fourth fingers, and finally the thumb. These need not be done individually every time you practice. This is intended only to help you to isolate the feeling of energy by concentrating on one small area at a time.

Eventually all fingers will be used to draw energy simultaneously into both hands. (Fig. 2.15) The finger bones do not have much fat; hence, there is little resistance to the energy. Once you bring the energy past the finger bones into the ulna and radius bones of the arm, you will encounter more fat; therefore, breathing into them may require more practice. Now compare the fingers of the hand that have experienced Bone Breathing with the fingers of the hand that you have not yet worked on. You should notice a difference.

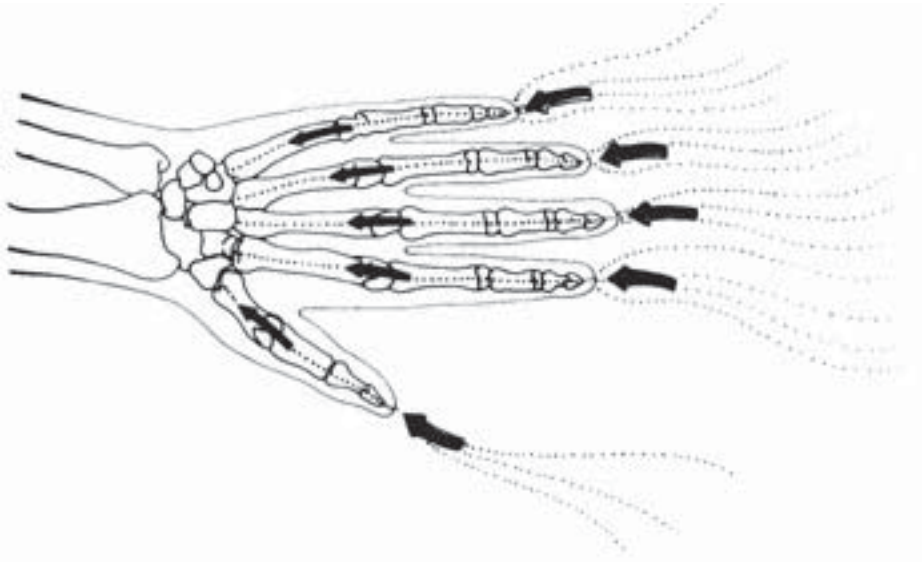


Fig. 2.16 *Breathe into the entire hand at once, and visualize all the bones.*

3. Breathing into the Entire Hand

At this point you should be able to inhale through all of your fingertips, filling the knuckles with Chi. Pull up slightly on the sexual organs as you draw energy in through your fingers. Then inhale,

and hold for a while, feeling the energy as an increasing fullness, or swelling, in all fingers. Exhale, and rest. Now breathe into your entire hand, visualizing all the bones you observed in the illustration of the skeleton. (Fig. 2.16) Then exhale, releasing the energy. From this point on you will always breathe into the whole hand when you begin the exercise.

Note**:** Use the Bone Breathing illustrations as reference guides Although your objective is to learn how to feel the shape and size of each bone, the beginning stages often require more visualization.

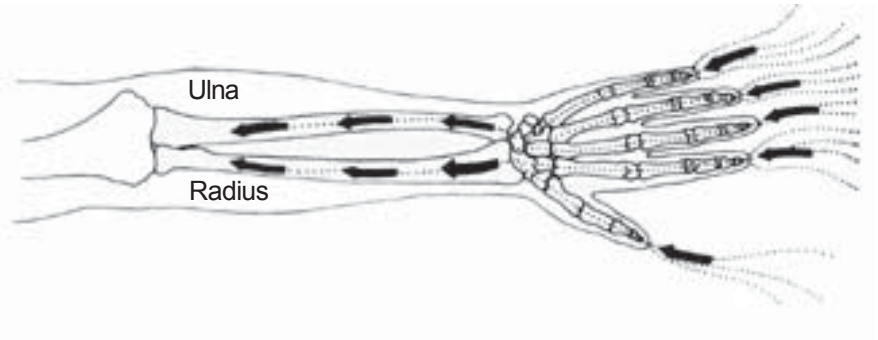


Fig. 2.17 *Breathe into the ulna and radius bones of the forearm.*

4. Forearm and the Ulna and Radius Bones

This time send the Chi up through your hand to the wrist, and into the many small bones there. Inhale as you pull the energy up from the fingertips through the hand all the way to the ulna and radius bones of the forearm. (Fig. 2.17) Hold each breath and feel the ulna and radius start to expand. Allow your eyes to close. Exhale, releasing the energy. Continue to breathe in and out of these bones several times in the same way. Exhale, and rest. Now practice breathing into the fingertips of the opposite hand, then the hand itself, and finally, into the forearm.

5. Breathing into the Upper Arm and the Humerus Bone

By now you have a good idea of the Bone Breathing process, and you should be able to expand it to the upper arm. Now you can

breathe into the humerus bones of both arms simultaneously. Inhale, relax the fingers, draw energy into the bones, sink the shoulders and the humeri. Breathe through the fingers, hands and forearms into the humeri. (Fig. 2.18) Exhale and continue breathing into and out of the bones. Drop the elbows and shoulders and breathe in through the arms to the humeri again. Exhale, regulate the breath, and rest.

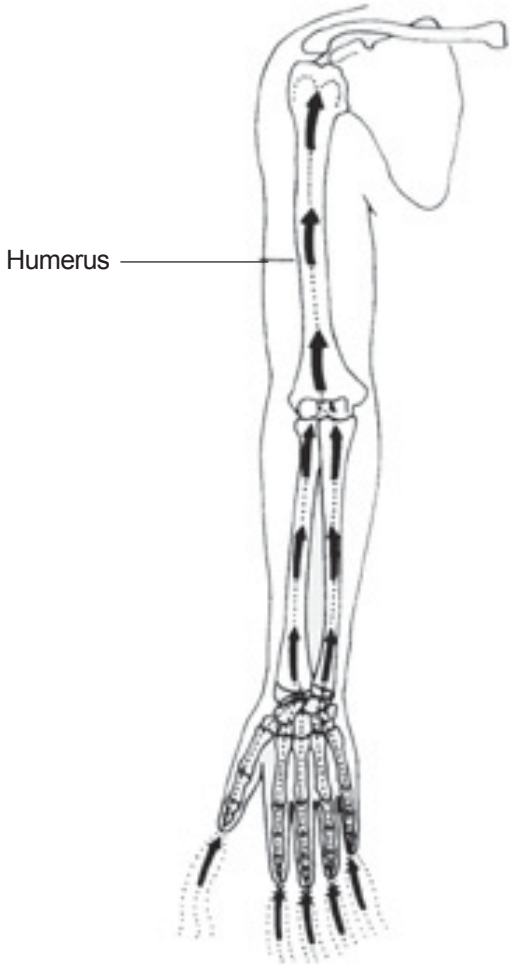


Fig. 2.18 *Breathe into humerus bone of the upper arm.*

6. Scapulae, C-7 Point of the Neck and the Head

Begin the exercise again. With eyes closed, breathe energy into the bones through the hands, arms, and humeri. Be certain to maintain dropped elbows and shoulders. Exhale, and then inhale again to draw energy up to both scapulae (shoulder blades) and to the C-7 point on the neck. Hold the energy there, continue breathing in and out, and then rest. Again draw the energy through the fingertips, hands, arms, humeri, scapulae, C-7, and continue to bring it all the way up into the head. Hold it there at the base of the skull. (Fig. 2.19) Exhale, regulate your breathing, and rest.

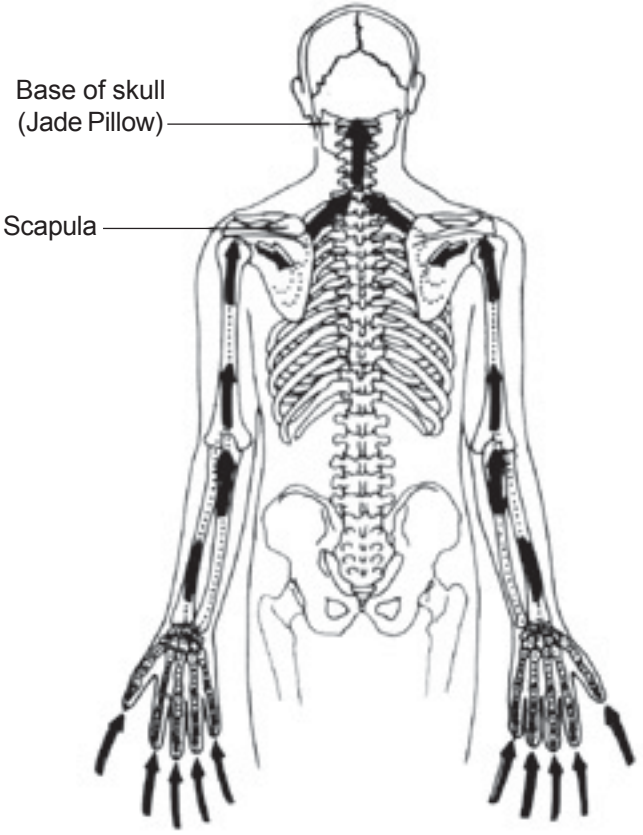


Fig. 2.19 *Breathe into the scapulae and the base of the skull.*

Note**:** If for some reason you should stop at this point, do not leave the energy in the head. Press the tongue up to the roof of the mouth, and bring the energy down to the navel. When you are ready to combine the procedures for the arms and legs, you will not draw the Chi directly to the skull from the arms. You will first combine the energy from the two sources at the center of the spine, and then move it upwards into the skull.

7. Breathing into the Toes

Breathe into the toes one at a time. Start with the big toe of either foot, then move to the second, third, fourth and fifth toes. Finally inhale as you draw energy into all five toes simultaneously, then exhale, allowing it to be released. (Fig. 2.20) Breathe in this manner for a minute or two, then inhale strongly, drawing the energy in more forcefully--like a battering ram--to open the channels of the foot.

Fig. 2.20 *Inhale, and draw the energy through all the toes.*

Note: Do not pull your feet up with the breath. Let them remain fiat on the floor. Remember that keeping your feet bare is the best way to absorb energy into your legs. Wearing synthetic materials on your feet will impede this process.

8. Breathing into the Feet

Inhale, and draw energy through all of the toes into the entire foot. (Fig. 2.21) Exhale, and release the energy Continue breathing energy in and out. Then begin breathing through the toes of the opposite foot, in the same manner described above, until you can breathe into that entire foot.

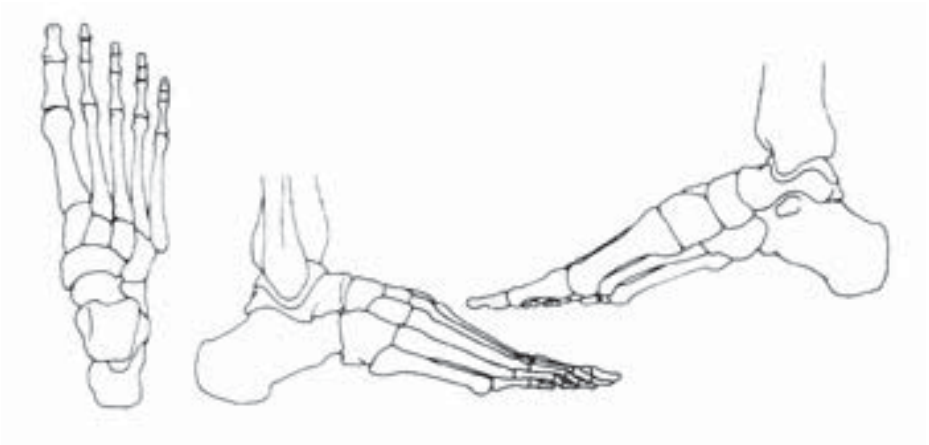


Fig. 2.21 *Bones of the feet and ankles.*

Concentrating on both feet, inhale, and bring the energy up into both feet simultaneously. Feel breath enter through all of the bones, hold it for a while, and then let the energy flow out. Inhale the energy again, close your eyes, and feel all of the bones of both feet, up to and including the small ankle bones, as they become more alive with each breath. Return to regulated breathing, ending with an exhalation, and then rest.

9. Tibia and Fibula Bones of the Lower Legs

With your eyes closed, draw energy into the tibia and fibula bones

of both lower legs. (Fig. 2.22) Hold it for a while, then release your breath and the energy. Inhale, and pull the energy up through the lower legs with more force. Exhale, and release it. Continue to breathe in and out of these bones, drawing in more energy with each breath while preparing to travel further into the upper legs.

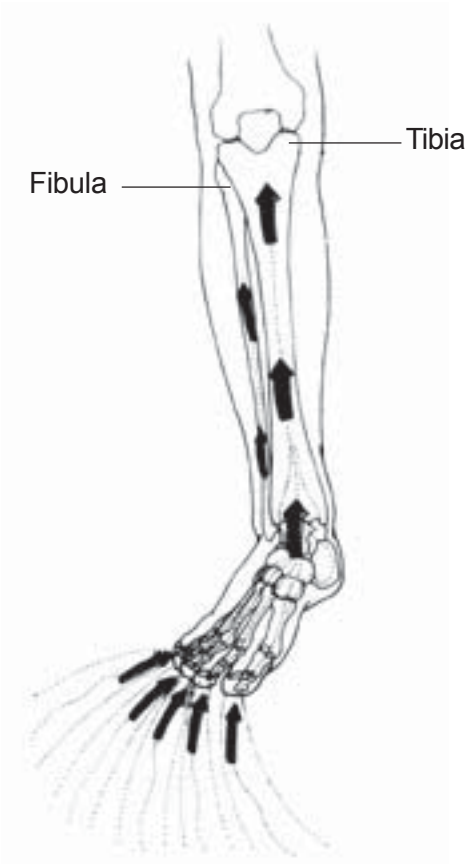


Fig. 2.22 *Bones of the feet and ankles.*

10. Thigh Bones, Hips, and Sacrum

Inhale from the tips of the toes all the way through the feet, ankles, tibia, and fibula bones of both legs, and draw energy up to each leg's femur or thigh bone. Hold your breath and the energy there, and then exhale. If you cannot feel the connection between the thigh bones and the hips, look at the illustration to avoid any

confusion. Also note how the hip bones connect to the sacrum. Breathe up the entire length of both legs into the hip bones and into the sacrum. (Fig. 2.23) Exhale, and rest.

Fig. 2.23 *Inhale, and draw the energy all the way into the sacrum.*

11. Breathing into the Hands and Feet Together

In the next step of Bone Breathing, breathe into both hands and feet simultaneously. Inhale all the way up to the shoulders and scapulae through the arms, and up to the thigh and hip bones through the legs, Hold your breath, then exhale. With practice you will learn to divide your concentration between the absorption points of the feet and hands. Combine the energy at the middle of the spine. (Fig. 2.24)

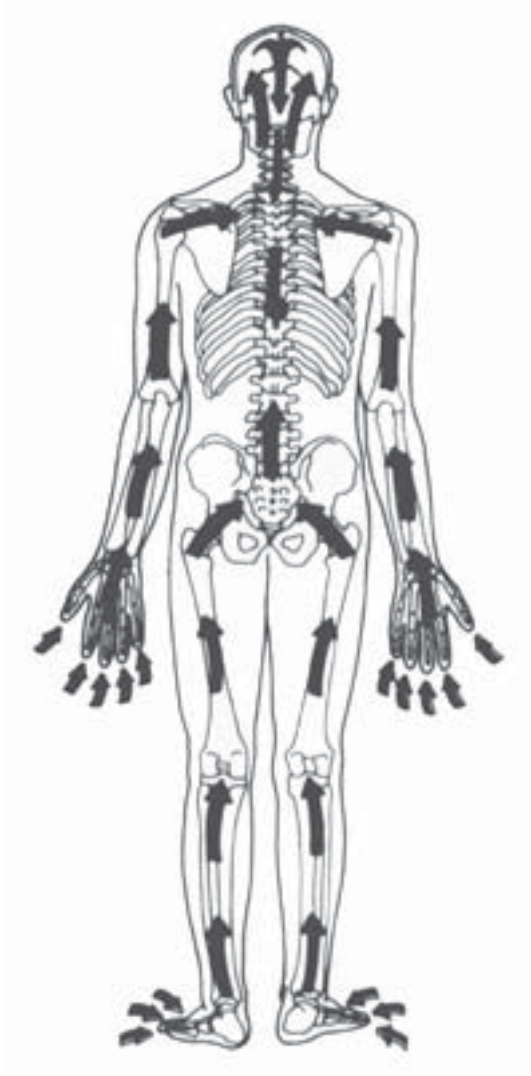


Fig. 2.24 *Breathe in through the hands and feet simultaneously, and combine the energy at the middle of the spine.*

12. Breathing into the Sacrum and Spine

You may wish to stand during this step of the exercise. This will help energy travel up the spine. The “Embracing the Tree” posture of Iron Shirt I is useful here. The next point to breathe into from the legs is the plate-like structure at the base of the spine referred to as the sacrum. Feel the sacrum with your fingertips. As you breathe

in again up through the legs and hip bones, draw the energy from the legs together at the sacrum point.

When energy reaches this point it may take off on its own, travelling the length of the spine. If the energy does not travel up the spine spontaneously, continue to breathe up the back until the spine receives energy from the sacrum. Then include the breathed-in Chi from the length of the arms. The two energies of the arms and legs should meet beneath the shoulder blades on the spine at T-11. Combine the two energies, sending them to the shoulders, to C-7, and into the head. (Fig. 2.25)

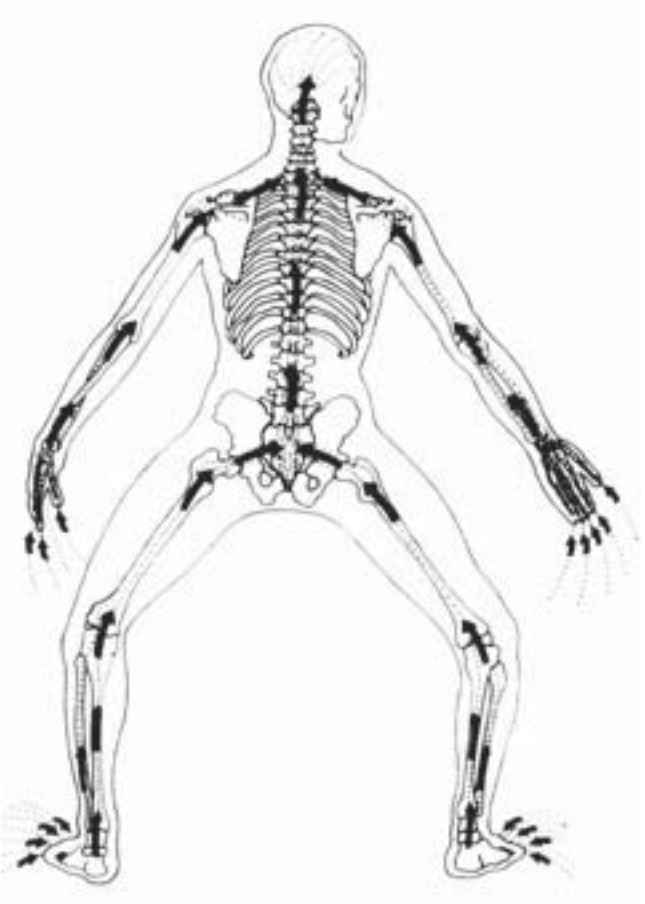
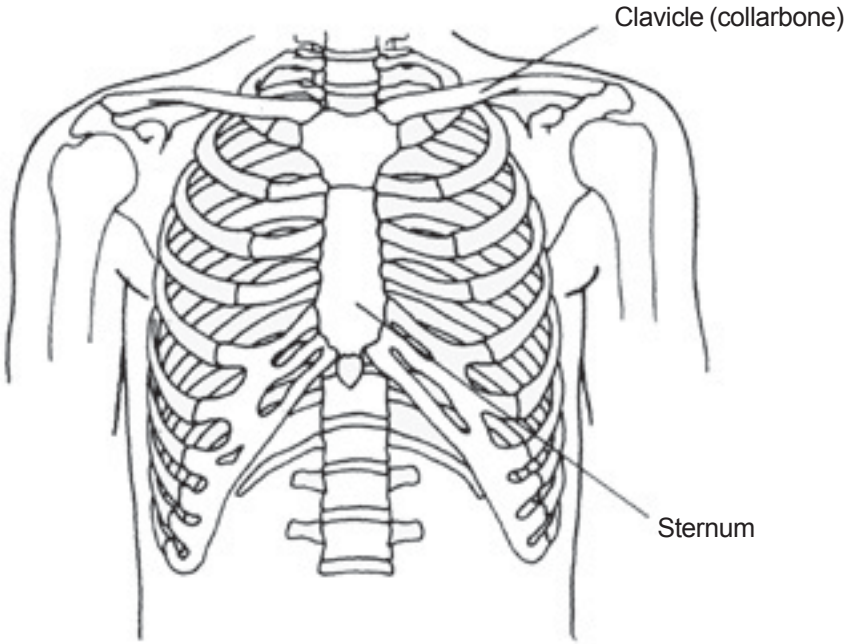
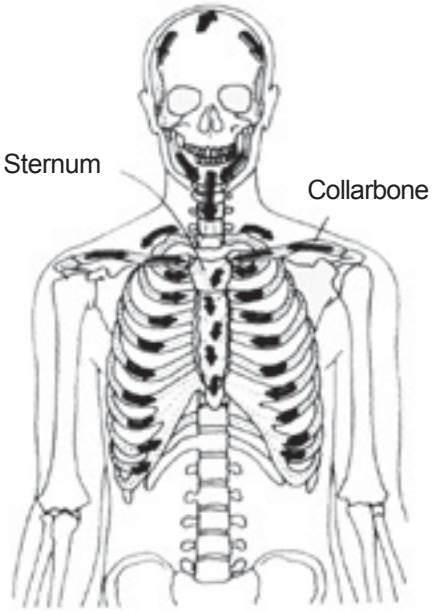


Fig. 2.25 *Breathing into the sacrum and spine.*



(a) *Clavicle, Sternum, and Rib Cage.*



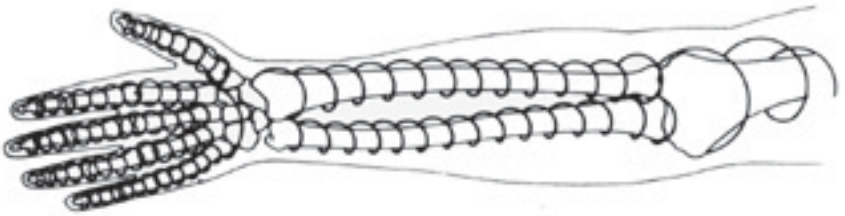
(b) *Breathing into the Collarbone, Sternum, and Ribs*

Fig. 2.26 *Bone Breathing in the Chest*

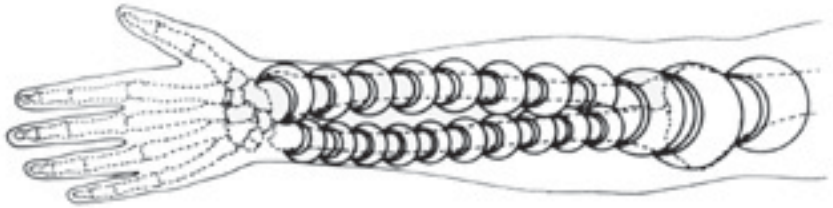
13. Breathing into the Collarbone, Sternum and Ribs

Locate the collarbone at the front of the body and the sternum, or breastbone, at the middle of the chest where the ribs are attached. (Fig. 2-26(a)) Feel the way the ribs arch away from the sternum in the front and connect to the spine in the back. These are difficult structures to breathe Chi into requiring your utmost concentration.

The combined Chi from the legs and the arms is first breathed into the cranial area before it is sent back down the spinal cord to the point at which the ribs extend. Spiral Chi throughout the head and facial bones. From there, bring it into the spine and collarbone, spreading energy throughout the ribs, finally reaching the sternum. (Fig. 2.26(b))



(1) Spiraling the energy.



(2) Packing around the bones.

(3) Squeezing the energy into the bones.

Fig. 2.27 *Bone Breathing in the Arm*

D. Bone Compression Process Step By Step

The sequence used in Bone Breathing is also used in Bone Compression. The circulation of the energy differs, however, in that it spirals around the bones while rising into each limb. Then, as it accumulates, the energy is packed tightly and compressed into the bones. Refer to Fig. 2.27(b) for an illustration of what spiraling might look like to your inner eye. Fig. 2.27(b) and (c) demonstrate the difference between packing and squeezing: One process pulls Chi between the muscles and bones: the other compresses it into the bones. As stated earlier, packing is a mental process, while squeezing is a physical process.

1. One Hand and Forearm

Practice with either hand alone first, inhaling into your fingers, wrist, and then the ulna and radius hones, holding the intake from each breath. Use your inner eye to spiral energy around these bones as Chi rises into each successive limb. Visualize a clockwise spiraling motion rising in the right arm, or a counterclockwise spiraling motion if you are using the left arm.

After spiraling, inhale again, and pack the energy, mentally condensing it as it accumulates. Pull up the sexual organs and the anus as you pack energy in between the muscles and bones. Continue this process until the hand and forearm begin to feel swollen. Then, using hard muscular contractions, squeeze Chi into the bones, feeling its heat in the marrow. Apply a little more tension to reach the deeper areas of your bone structure. Hold it, exhale, and release. It is not necessary to hold each breath to the point of discomfort.

2. Right and Left Hands together

When you become familiar with the way this compression feels, work with both hands at the same time. After packing, hold each muscular contraction along with your breath in a long squeeze, and then release it. When you release your hold, use your mind to absorb energy into the bones. The bones, muscles and tendons

should begin to feel as though they are wrapped in cotton. Always concentrate on feeling energy penetrate into the bone.

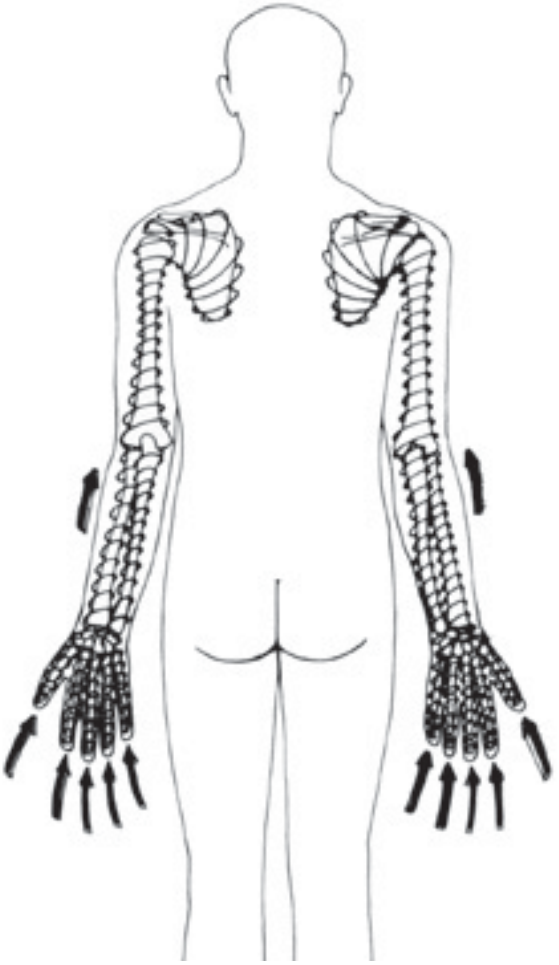


Fig. 2.28 *Spiral both hands and forearms together, and squeeze the muscles.*

3. Both Arms Together

Now practice spiraling both hands and forearms together. Pull up the sexual organs and anus. Inhale, spiral, pack and squeeze the muscles of the lower arms repeatedly with each breath. (Fig. 2.28)

Exhale, and release. As you release the muscles, the Chi will not dissipate because its density is increased by packing until it can no longer escape through the skin. Next, inhale, spiral, pack and squeeze Chi into both humeri, continuing the process into the shoulders and scapulae. Exhale, and release.

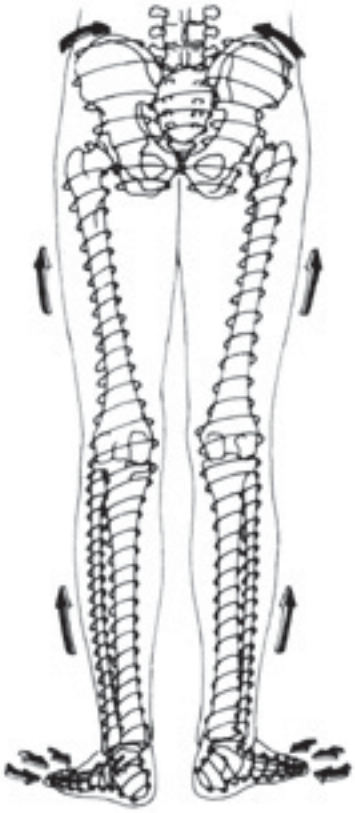


Fig. 2.29 *Bring the energy up both legs, spiraling into the sacrum.*

4. Legs

Next inhale into both legs all the way up to the sacrum. (Fig. 2.29) Hold the energy in the bones. Continue to inhale, spiral, and pack. Then inhale again, squeeze, hold the tension, and release. It is important to be aware of your mind controlling your muscles. Inhale energy and squeeze your muscles to the bones again, proceeding

from the lower to the upper parts of the legs. Exhale, and rest. Use your mind to relax the muscles. Finish by shaking your legs.

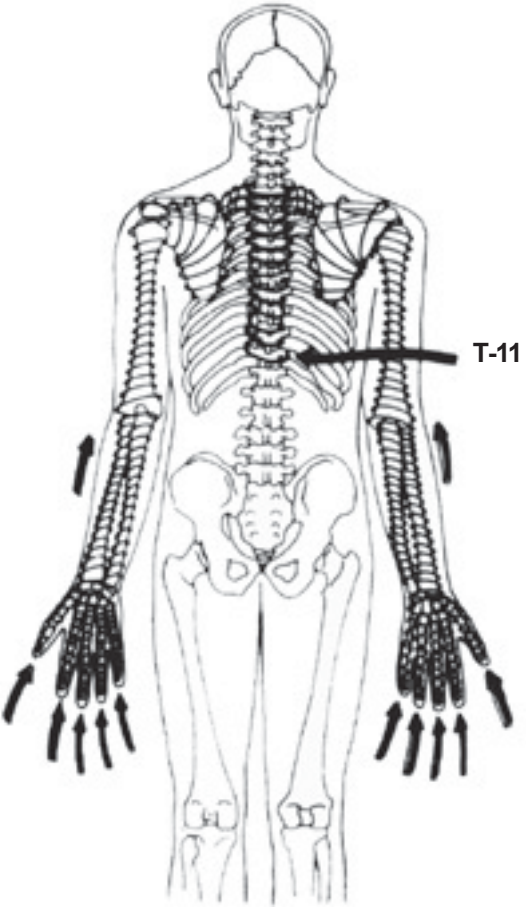


Fig. 2.30 *Bring the energy through the arms to the shoulder blades, and down the spine to T-11.*

5. Lumbar Region of the Spine

You may wish to use the "Embracing the Tree" posture to assist in drawing energy up into the sacrum, although it can also be done while seated erect. Again, inhale, spiral, pack and squeeze the energy successively from the legs to the lower region of the spine. As you pack and squeeze Chi into the sacrum, the Sacral Pump is

activated, which helps the upward flow of energy to the higher centers.

Inhale, and spiral energy from the legs, through the sacrum, and up the spine to the first lumbar. Hold the energy. Inhale again, and pack from the lower part of the leg and up so that the entire lower region feels the compression. Pack into the sacrum and the spine, then squeeze the Chi into the bones by contracting the muscles of the legs, hips, buttocks and lower back. Hold the contraction with your breath, then release it as you exhale.

6. Spine through the Collarbone and Scapulae

Inhale, spiraling energy upward from your fingertips successively through the hands, ulnae, radii, humeri, shoulders, and into the scapulae and collarbone. Continue to pack from the scapulae into the spine down to T-11. (Fig. 2.30) Squeeze the muscles surrounding the hands, arms, scapulae and spine, thereby compressing Chi into the bones of the upper region. Exhale, and rest. It is approximately at T-11 on the spine that the energy from the upper region combines with that of the lower region.

7. Cranial Bones and the Cranial Pump

From the T-11 point inhale and spiral the combined energies further up the spine, through the cervical hones in the neck, and up into the head. (Fig. 2.31) When you reach the head, spiral throughout the entire cranial area, pressing your tongue to your palate. (Fig. 2.32(a)) Clench your teeth and squeeze Chi into the cranial bones. This increases the activity of the Cranial Pump, which is similar to the Sacral Pump. (Fig. 2.32(b)) Both of these pumps move tremendous amounts of energy into the spine.

8. Rib Cage and Sternum

Energizing the rib cage and sternum can be problematic since the rib cage is not directly in the path of energy drawn in from either hands or feet. Success here depends on how well you have thus far managed to spiral Chi throughout the spine. When you return the combined flow of Chi from the cranium down through the spine

to where the lower ribs expand outward, spiral the Chi through all twelve ribs simultaneously from their connection at the spine to the sternum in front. (Fig. 2.33)

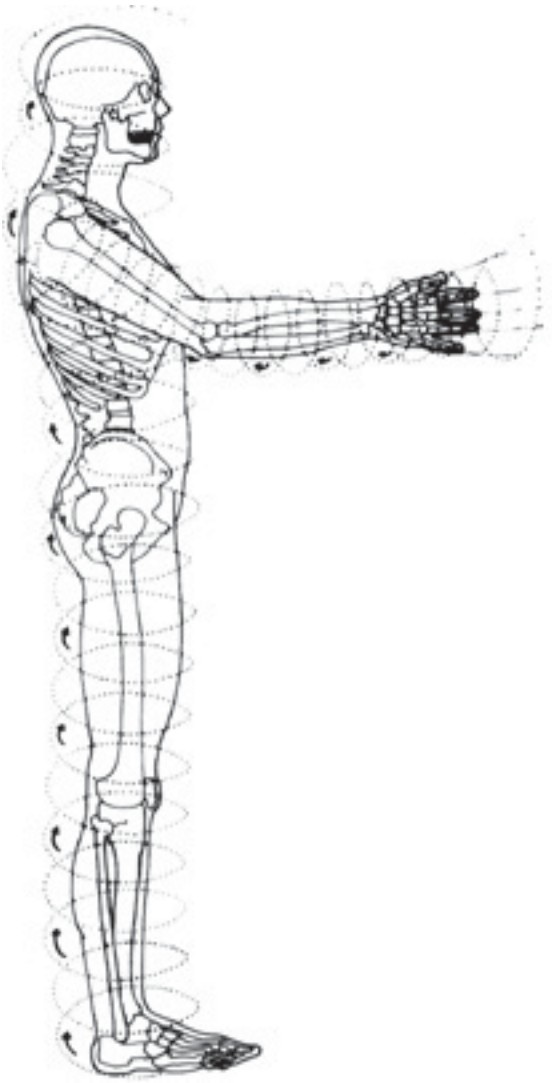
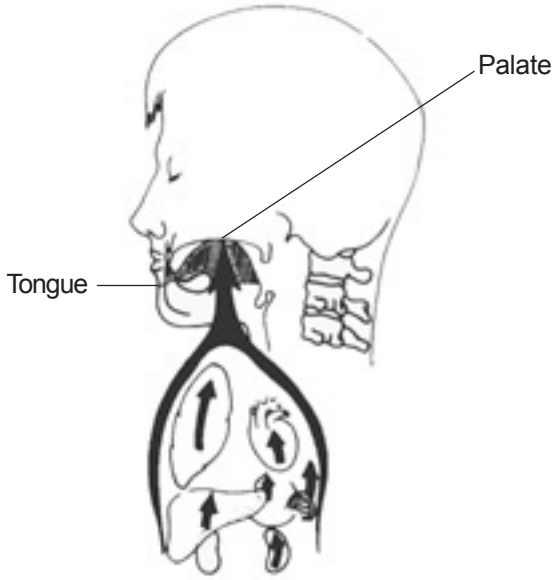
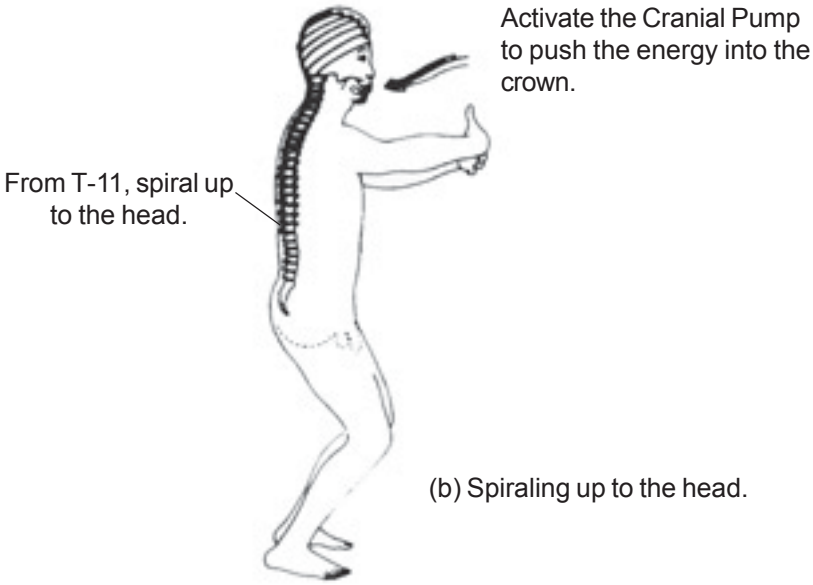


Fig. 2.31 *Spiral the energy from the legs up the spine. At the same time, spiral from the hands to the upper spine and into the head.*



(a) Press the tongue to the roof of the mouth with the combined power of all the einternal organs.



(b) Spiraling up to the head.

Fig. 2.32 *Bone Breathing in the Spine*

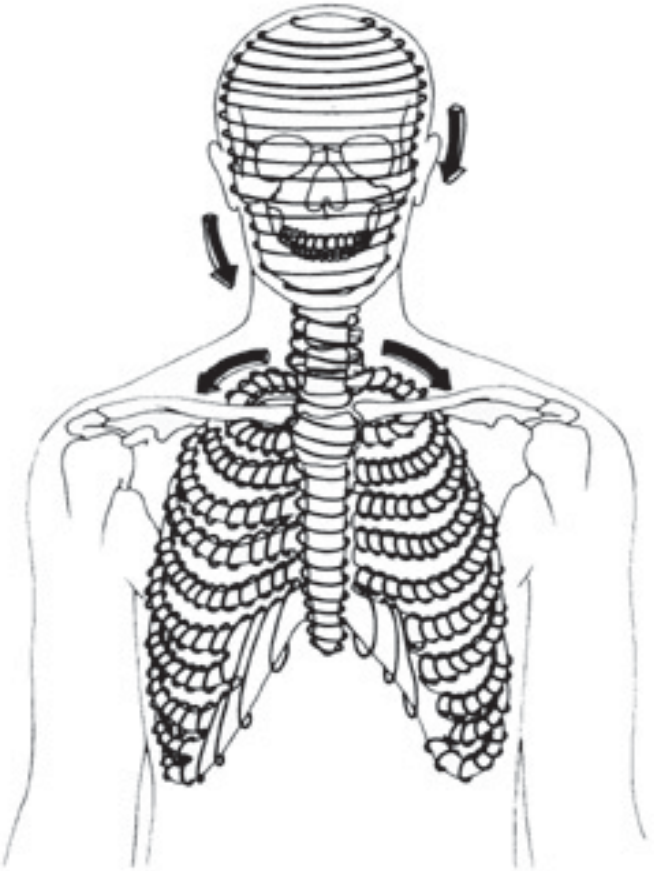


Fig. 2.33 *Spiraling from the head down to the ribs and sternum.*

The spiraling will not feel as it did in the limbs; however, the same results are achieved by mentally creating a circular motion with the energy as it travels through each rib. Packing will feel the same, although there may be less muscle available to squeeze Chi into the ribs and sternum. Compress energy into the sternum by sinking your chest slightly, and squeeze into it from the surrounding muscles of the chest.

Finally, exhale. Sit or stand quietly and feel how the energy moves within the structure of your bones. Use your mind to relax the muscles in your spine and ribs, and feel the heat as energy moves into your bones. Shake your hands, fingers, and legs, and flex your spine. Be sure that your chest is relaxed so the energy does not congest there.

E. Summary of Bone Breathing and Bone Compression

Although Bone Breathing and Bone Compression are most easily practiced from a seated position, advanced practitioners usually graduate to the Embracing the Tree posture as used in the practice of Iron Shirt I. This posture also suits the Hitting practices because Bone Breathing, Compression, and Hitting are later combined.

1. Bone Breathing in Practice

a. Create a sensation of coolness in the fingers of either hand. Inhale, and draw warm external energies into that hand through the fingers. Apply this to the opposite hand. Exhale, and release the energy.

b. Pull up your genitals slightly as you breathe Chi further up into the ulna and radius bones of the lower arm. Practice first on each arm, then on both together. Exhale, and release.

c. Apply the same procedure to the upper arms, drawing Chi to the humerus bones. Exhale, and release the energy. Remember to draw energy in with more force with each new inhalation, thereby accessing further points within each limb.

d. Draw Chi up through the scapulae and collarbone to reach the C-7 point and the cranium but do not leave it there. Either combine it with the energy drawn from the legs or store it in the navel.

e. Create a sensation of coolness in the toes of either foot. Inhale and draw the warm external energies into that foot through the toes. Apply this to the opposite foot. Exhale, and release the energy.

f. Pull up the genitals slightly as you breathe Chi further up into the tibia and fibula bones of the lower legs. If necessary, practice on each leg individually, and then draw Chi into both legs together. Exhale, and release.

g. Draw the Chi further up with each breath into the femur bones of the upper legs, into the hips, and then to the sacrum. Exhale, but retain the energy you have breathed into these areas.

h. If you choose to combine the procedures for the arms and legs, do not draw the energy to the skull from the arms directly, but instead recombine it at the center of the spine. First breathe into

both hands and feet simultaneously. Inhale Chi all the way up to the shoulders and scapulae through the arms, and up to the thigh and hip bones through the legs. Recombine this energy at the middle of the spine after it has reached the sacrum and the scapulae from their respective sources. From the center of the spine, move the energy up to the head, and then back down the spine to where the ribs begin. Exhale as needed.

i. Breathe the energy outward through the twelve ribs, encompassing the rib cage from the front to the back, and recombine the Chi at the sternum. Breathe into the sternum. Exhale.

2. Bone Compression in Practice

a. Inhale, pulling up the undertrunk, then spiral the energy up from the fingers and toes throughout the arms and legs to meet at the center of the spine. Use the same steps as in Bone Breathing, but retain the Chi by spiraling it throughout the limbs.

b. Having recombined the external energy drawn from both sources at the center of the spine, expand the Chi outward through the twelve ribs, spiraling it into the sternum.

c. The body's capacity has been reached when you can no longer spiral new Chi into the arms. Begin to pack the Chi, condensing it into the same space as the energy which has been accumulated.

d. Squeeze the muscles of the hands and arms with each breath. Hold the breath with each contraction.

e. Exhale as you release the contraction. When you release your hold, use your mind to absorb the energy into the bones through the pores of the skin. During resting periods, the sensation of drawing in energy through the skin should be felt throughout the body. Bones, muscles and tendons should begin to feel as though they are wrapped in cotton.

f. As you maintain your stance, feel the pulsing of the heart, and bring that pulse to all of the major points--particularly the crown, perineum, hands and feet. As you decrease the force of the heart's pumping, you may also reduce the heart rate. If necessary, check either wrist to feel the pulse. After you have practiced for a while, feel the sensation inside your bones. If you have a lot of fat, the feeling will be very hot. This is the fat beginning to melt. It is a good idea to practice with the tongue on the palate because the energy will begin to move through the Microcosmic Orbit.

Chapter III
Sexual Energy Massage

Taoists regard sexual energy as having creative and rejuvenative powers. They acknowledge its role in the conception of human life, but when procreation is not intended, they advocate other applications for Ching Chi. In the Healing Love practice, this energy is used to heal the internal organs and glands, increase the brain's capacity and further open the channels of the Microcosmic Orbit. In the more advanced practice of the Sexual Energy Massage, it is also used to replenish and cultivate the blood-producing red marrow of the bones. Ching Chi is the term for sexual energy.

The Sexual Energy Massage is one of the most important practices in Bone Marrow Nei Kung. It is a beginner's equivalent to Chi Weight Lifting, which requires much more experience. The massage draws sexual energy and hormones into the body and promotes a healthy flow of blood and Chi within the sexual center. It also brings more internal energy into the genitals, and increases the production of Ching Chi. Using these techniques, men find that prostate problems can be greatly reduced, and women often alleviate the problems associated with menstruation.

The accumulation of external energy through Bone Breathing was discussed earlier as a meditative approach to harvesting Chi. For the most effective application of Bone Compression, however, sexual energy should also be harvested and subsequently compressed into the marrow along with the external Chi. This chapter explains how to disseminate sexual energy throughout the body so that it can be combined with external energy, for the "cleansing of the marrow," one of the main functions of Bone Marrow Nei Kung.

A. Three Taoist approaches to Sexual Energy.

This section is a brief explanation of the three methods used to draw sexual energy and hormones into the body. These methods

provide men and women with the means of achieving great personal power through increased sexual energy. Although some of the techniques in this chapter may be similar to those found in other Universal Tao books, their application in Bone Marrow Nei Kung produces a different quality of Ching Chi. The massage techniques and exercises, such as the Power Lock, release unaroused Ching Chi into the body. This differentiates them from the Healing Love practices that require sexual stimulation.

Warning for Men and Women**:** Do not practice if you have any, venereal infections or skin rashes in the genital area. Methods used to draw sexual energy into the body can spread existing venereal diseases to the organs.

1. Healing Love

Healing Love is a cultivation practice that does not fulfill the requirements of Bone Marrow Nei Kung by itself; however, its practice is necessary to prevent the loss of Ching Chi during all sexual activities. Healing Love also helps to open the Microcosmic Orbit to its maximum capacity while rejuvenating the internal organs and glands with sexual energy. The techniques reverse the usual outward flow of sexual energy during the orgasmic phase of sex, and draw the Ching Chi upward into the body, thereby enhancing one's internal healing capabilities. Through this practice concentrated sexual energy, extracted through the advanced disciplines, is also drawn into the Microcosmic Orbit.

NOTE: The actual release of Ching Chi into the body through the Sexual Energy Massage or Chi Weight Lifting methods presupposes that it is already abundant within the sexual center. If one suffers from chronic impotence, weakened kidneys, or any internal dysfunctions, the Healing Love methods should be mastered to accumulate Ching Chi before Bone Marrow Chi Kung is attempted.

2. Sexual Energy Massage

For the purposes of Bone Marrow Nei Kung, the Sexual Energy Massage is the primary practice. It not only releases Ching Chi into the body, but also extracts a higher concentration of sexual

hormones from the genitals to stimulate the hypothalamus, the pituitary and the pineal glands. Stimulation of the pituitary gland is believed to prevent the production of an aging hormone that ultimately brings death.

Healing Love prevents the loss of Ching Chi and rejuvenates the internal system. The Sexual Energy Massage releases higher concentrations of Ching Chi into the body for cultivating the bone marrow and stimulating the endocrine glands. When used together, the two practices constitute a safer method of disseminating sexual energy than Chi Weight Lifting.

3. Chi Weight Lifting

Chi Weight Lifting releases sexual energy and hormones to a much greater degree than the other practices. In addition, the technique exercises the fascial connections between the genitals and the internal system, thereby strengthening the organs and glands. Its practice provides the greatest abundance of Ching Chi for rejuvenating the bone marrow. It also releases maximum quantities of sexual hormones for the stimulation of the pituitary gland to prevent aging. Chi Weight lifting is the highest level of physical practice in Bone Marrow Nei Kung.

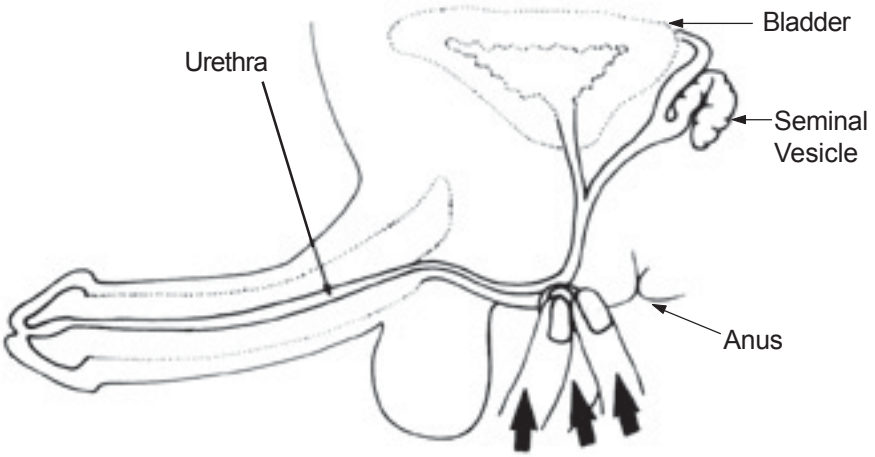
Chi Weight Lifting should not be attempted without the proper Training. After having received instruction, a student may proceed with caution to lift light weights using the genitals. At this level, the Sexual Energy Massage is used before and after Chi Weight Lifting: first to prepare the genitals, and afterwards to replenish the circulation in the sexual center, which helps to avoid blood clots. The Healing Love practices that require sexual arousal are no longer necessary because Chi Weight Lifting supplies the body with abundant Ching Chi. Healing Love must still be practiced during sex, however, unless the time is right for procreation.

4. Three Practices in Relation to Bone Marrow Nei Kung

The Sexual Energy Massage techniques offer a greater release of Ching Chi than the Healing Love methods alone, and they can be practiced with much more safety than Chi Weight Lifting. The

(a) Combine the three middle fingers.

(b) Where to apply pressure.



(c) Press the urethra just in front of the anus.

Fig. 3.1 *The external blocking procedure involves pressing the urethra from a point at the back of the perineum, near the anus.*

"Power Lock" and "Genital Compression" exercises are derived from the Healing Love practice and used as non-sexual techniques in Bone Marrow Nei Kung to channel unaroused sexual energy into the Microcosmic Orbit. The sexual application of the Power Lock is described in Appendix 1 because it is essential for maintaining Ching Chi in both men and women. Students should understand both versions before attempting Bone Marrow Nei Kung.

B. Power Lock Exercise for Men and Women

The detailed descriptions of these exercises which follow are for learning the practice and for reference. Study them carefully. Then use the chapter summary as a quick practice guide.

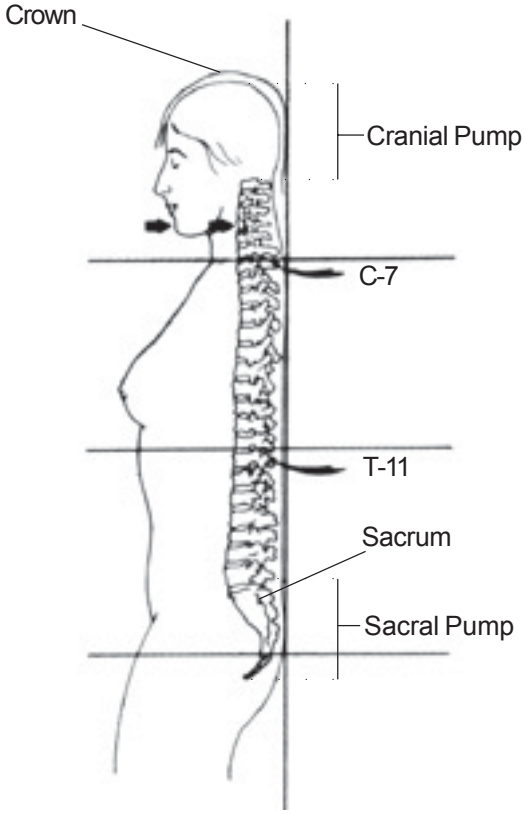


Fig. 3.2 *Sacral Pump and Cranial Pump*

1. Synopsis

The Power Lock exercise is used before and after the Sexual Energy Massage. Air is sipped in through the nose as the genitals, perineum and anus are contracted to draw Ching Chi up from the perineum into the higher centers. The three middle fingers of either hand are applied to a point located at the back of the perineum--in front of the anus--to lock the energy into the upward flow after each contraction. (Fig. 3.1) Clenching the teeth and the buttocks activates the Cranial Pump and the Sacral Pump, thereby helping the energy to reach its destination at the crown point. (Fig. 3.2)

Warning: Before you begin drawing Ching Chi up to the higher centers, remember that you should never leave hot sexual energy in the head for long periods of time. Always draw it down to the navel through the Functional Channel of the Microcosmic Orbit at the end of your practice. (See Chapter Six for details regarding the Microcosmic Orbit.) There is an old Chinese saying: “Don’t cook your brain.” When in doubt about the hot or cold status of your energy, store it in the navel.

a. Five Stations

There are five points used as stations for Ching Chi in the Power Lock exercise: the sacrum, T-11, C-7, the base of the skull, and the crown. Activate the respective pumps for these stations, starting with the Sacral Pump, until the Ching Chi rises to the crown. This is done in sets using nine muscular contractions of the undertrunk simultaneously with nine sips of air to draw the energy up to each point from the perineum. The exercise then starts again at the genitals after each station has been completed, although the energy is actually held at the previous station. (Fig. 3.2)

b. Where to apply external pressure?

Locate the Gate of Death and Life (the perineum, or Hui-Yin) between the sex organ and the anus. (Fig. 3.3) Use your fingers to find the slight depression directly in front of the anus, at the back of the perineum, and focus your attention there. Fingernails should be cut short and filed.

Fig. 3.3 *Perineum and the depression in front of the anus.*

c. How to apply external pressure with the fingers.

Using either hand, combine the three middle fingers into a triangle. Immediately after each inhalation, press the three fingertips on the point in front of the anus to lock the Ching Chi into its upward journey, preventing its return to the perineum. (Women may forego using the fingers if it causes discomfort.) Release the fingertips as you sip in more air and then re-apply them as each breath is held. Press the point only for as long as you hold each breath and muscular contraction, then release. Do not apply the fingers as you inhale because you will block the energy from rising. Remember that the fingers help to push the energy upward.

d. Contractions activate the Sacral and Cranial Pumps.

Each of the five stations has a “pump” to move energy, but the Sacral and Cranial Pumps require the most concentration to become activated. The muscles of the undertrunk help to draw the energy, into the sacral area. Tilt the sacrum slightly and clench the buttocks as you contract the anus and perineum to direct the energy

up the spine. (Fig. 3.4(a)) As the Sacral Pump is activated, it creates a vacuum in the urogenital diaphragm which draws the Ching Chi from the sexual center.

The Cranial Pump is activated by first pressing the flat part of the tongue up to the roof of the mouth as the tip of the tongue presses the lower jaw behind the teeth. (Fig. 3.4 (b)) Slightly clench the teeth as you pull in the chin towards the back of the head. Take in ten percent of your lung capacity with each sip of air through your nose as you pull up the genitalia, apply pressure with the three fingers, and contract the individual sections of the undertrunk. Simultaneously, push up your tongue, pull in your eyes, and look up to your crown.

Note**:** Remember never to contract the chest muscles. This can cause energy to congest around the area of the heart.

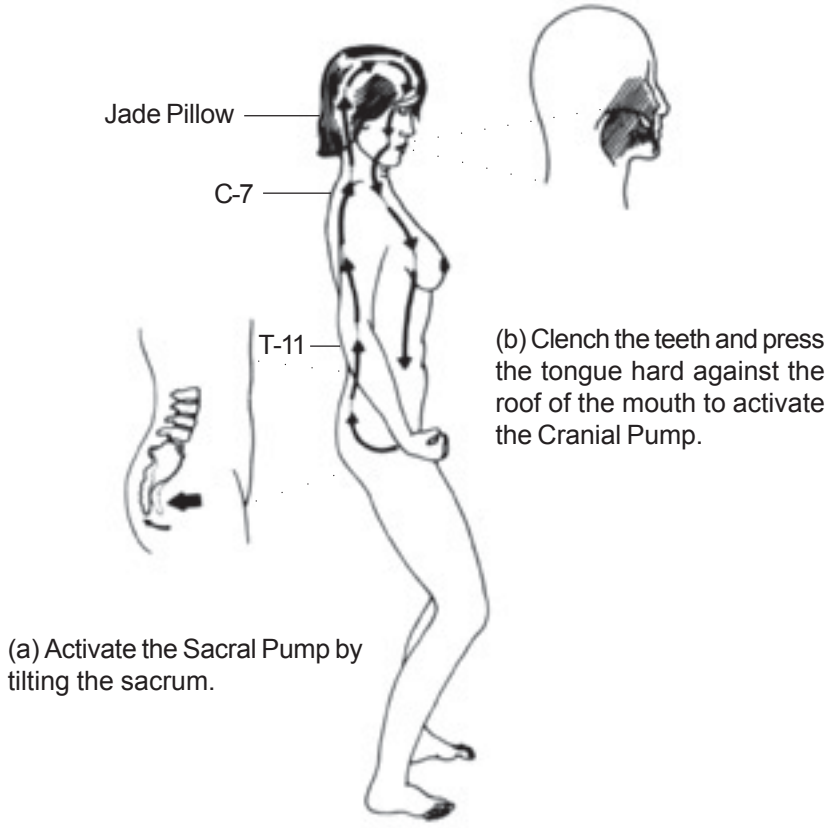


Fig. 3.4 *Activating the Cranial Pump*

e. Sequence

Men draw sexual energy from the genitals into the perineum through Testicle Breathing. Women use Ovarian Breathing, slightly contracting the vagina to accumulate Ching Chi in the Ovarian Palace. (Refer to Chapter Six for information about these techniques.) Use a short inhalation to draw the energy through each successive point leading up to the first station. Remember to apply the fingers as you hold each sip of air. First inhale, and contract the perineum. Then inhale again as you contract the anus. With the next sip of air, pull up the back part of the anus as you draw the energy up to the sacrum. After covering these points, use several sets of nine contractions to push the energy into the sacrum. This entire sequence is repeated for each subsequent station, starting at the sexual center.

As Ching Chi expands in the sexual center, use one sip of air with each contraction to draw it up through the aforementioned points. At least one set of nine contractions should be used for each station that was previously opened. Then emphasize each new station with several sets of nine contractions. Although a week or two may be required to open each station completely, you can practice using all of the stations, concentrating more on the difficult points. Exhale after the ninth sip of air, and release the tension as you repeat the process.

f. Power Lock Practice Step By Step For Men and Women

(1) Station One--the Sacrum

(a) Be aware of the sexual organ.

(b) When you feel the Ching Chi expanding, inhale and contract the perineum, drawing sexual energy into the perineum. Use your fingers to press on the point each time you contract, releasing them briefly before each subsequent contraction.

(c) Inhale, contract the anus, and draw the energy up to the anus.

(d) Inhale, contract, and draw the energy up to the back part of the anus.

(e) Inhale, and tilt the sacrum as you clench the buttocks to activate the Sacral Pump. Draw the energy up to the sacrum.

(f) Use nine contractions with nine sips of air to draw Ching Chi from the sexual center to the sacrum. (Fig. 3.5)

(g) Hold the energy at the sacrum as you exhale and return your attention to the sexual organ.

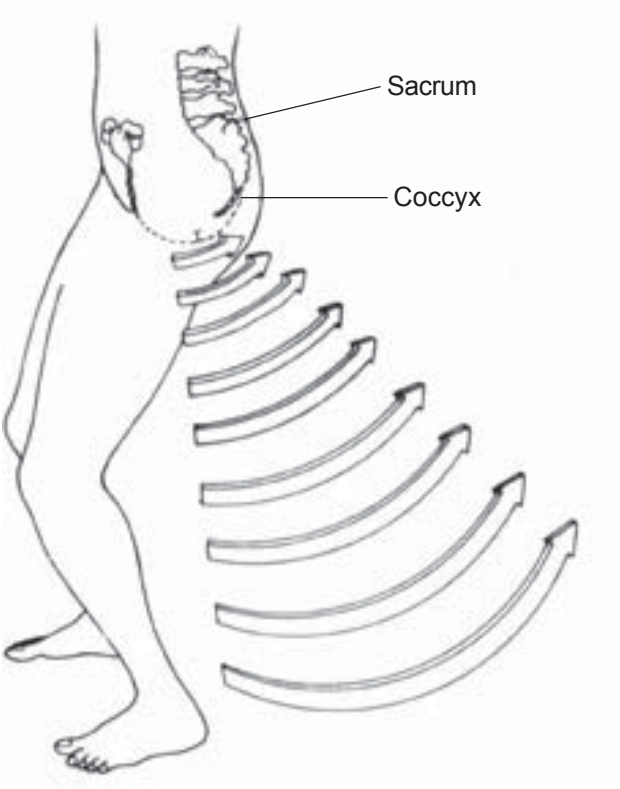


Fig. 3.5 *Collect the energy at the sexual center, then do nine contractions to draw the energy to the sacrum*

(2) Station Two--the T-11 Point

(a) Repeat the previous steps, drawing the energy up through the sacrum until you reach the T-11 point.

(b) Use nine contractions with nine sips of air to draw the Ching Chi from the sexual center to T-11 on the spine. (Activate the T-11 pump by pushing the spine outward at that point.)

(c) Hold the energy there as you exhale and return your attention to the sexual organ.

(3) Station Three--the C-7 Point

(a) Repeat the previous steps, drawing the energy up through T-11 until you reach the C-7 point.

(b) Use nine contractions with nine sips of air to draw Ching Chi from the sexual center to the C-7 point. (Push the C-7 out, and pull back the chin slightly to help activate the C-7 pump.)

(c) Hold the energy there as you exhale and return your attention to the sexual organ.

(4) Station Four--the Base of the Skull

(a) Repeat the previous steps, drawing the energy up through C-7 until you reach the base of the skull.

(b) Use nine contractions with nine sips of air to draw Ching Chi from the sexual center to the base of the skull as you activate the cranial pump. (Pull the chin back once again.)

(c) Hold the energy there as you exhale and return your attention to the sexual organ.

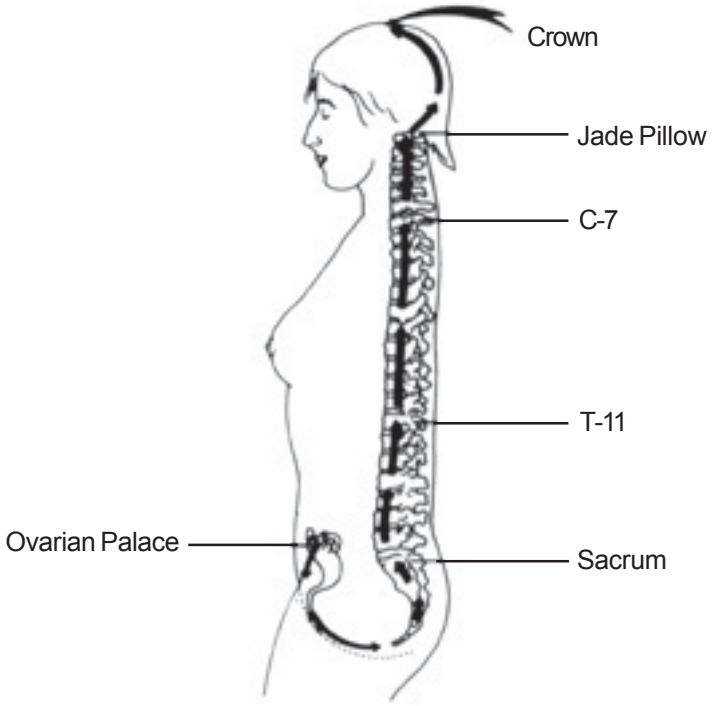


Fig. 3.6 *Power Lock guiding the energy up to the crown.*

(5) Station Five--the Crown

(a) Repeat the previous steps, drawing the energy up through the base of the skull until you reach the crown point. (Fig. 3. 6)

(b) Use nine contractions with nine sips of air to draw Ching Chi from the sexual center to the crown. (Fig. 3.7)

(c) Exhale and rest as you spiral this energy nine times outward from the crown, and then nine times inward.

(d) Finally, bring the energy down and store it in the navel.

Fig. 3.7 *Power Lock drawing the energy from thesexual center to the crown.*

g. Completion of the Power Lock

Men**:** Cover your navel with both palms, left hand over right. Collect and mentally spiral the energy outwardly at the navel 36 times clockwise, and then inwardly 24 times counterclockwise. (Fig. 3.8(a))

Women: Cover your navel with both palms, right hand over left. Collect and mentally spiral the energy outwardly from the navel 36 times counterclockwise, and then inwardly 24 times clockwise. (Fig. 3.8(b))

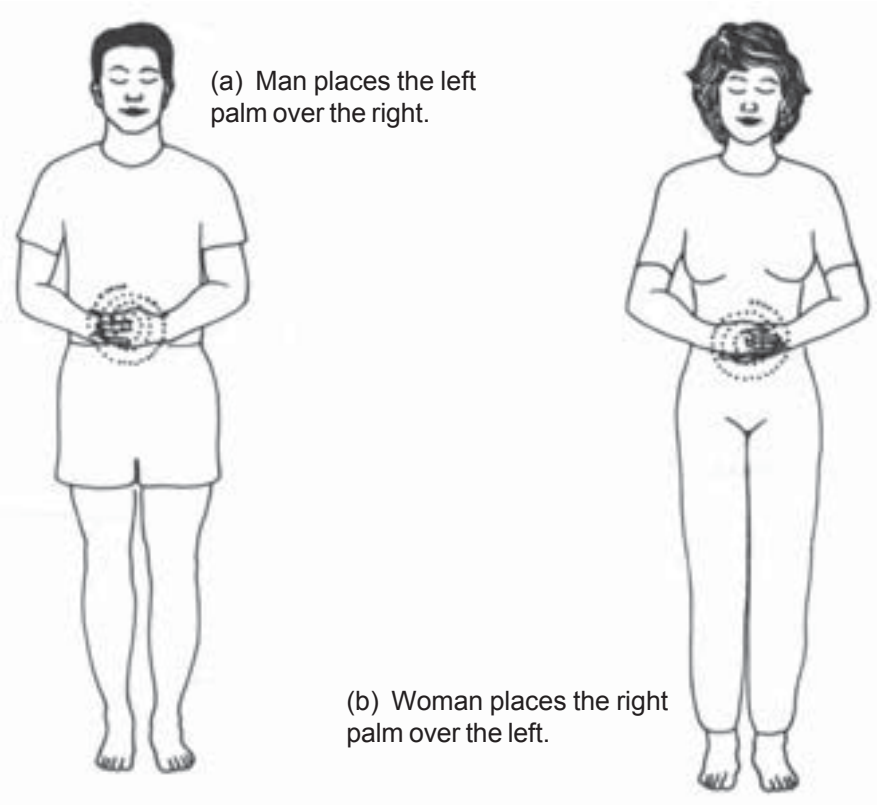


Fig. 3.8 *Collect the Energy.*

h. Massage after the Power Lock

The final step helps to increase the blood and Chi flow in the sexual center. Apply a silk cloth in a circular motion to the perineum, coccyx, and sacrum. Starting at the perineum use the cloth to massage the area in a clockwise motion nine to eighteen times, then counterclockwise nine to eighteen times. (Fig. 3.9) Apply the cloth to the coccyx for the same number of repetitions, and finish at the sacrum.

Fig. 3.9 *Massage the Perineum.*

C. Genital Compression for Men and Women Step By Step

The Genital Compression Exercise dynamically builds sexual power by packing electromagnetically charged energy into the testicles or the ovaries. As an expanding sensation fills the genitals, sexual energy increases, eventually reaching into higher centers of the body through the Microcosmic Orbit, as it is needed. This practice is particularly important to use after the Sexual Energy Massage or Chi Weight Lifting to replenish the energy extracted from the genitals.

(1) Loosen your pants or take them off. Sit on the edge of a chair. Men should allow the testicles to hang loose over the edge.

(2) Inhale slowly but deeply through your nostrils into the lungs, expanding the solar plexus. Simultaneously contract the anus, and pull Chi into the upper abdomen.

(3) Feel the energy of each breath culminate at a point behind the solar plexus. Use your mind and some abdominal muscles to compress the energy into a sphere at the solar plexus point. Imagine this as a ball of Chi which you will roll down the front of your body by contracting the upper abdominal muscles.

(4) Let the “Chi Ball” fortify itself with each breath, and then roll it

downward from the solar plexus, through the lower abdomen, to the sexual center near the pelvis. Keep your chest relaxed to prevent any congestion of energy there. Use your mind to guide the Chi flow to the sexual center and genitals. (Fig. 3.10)

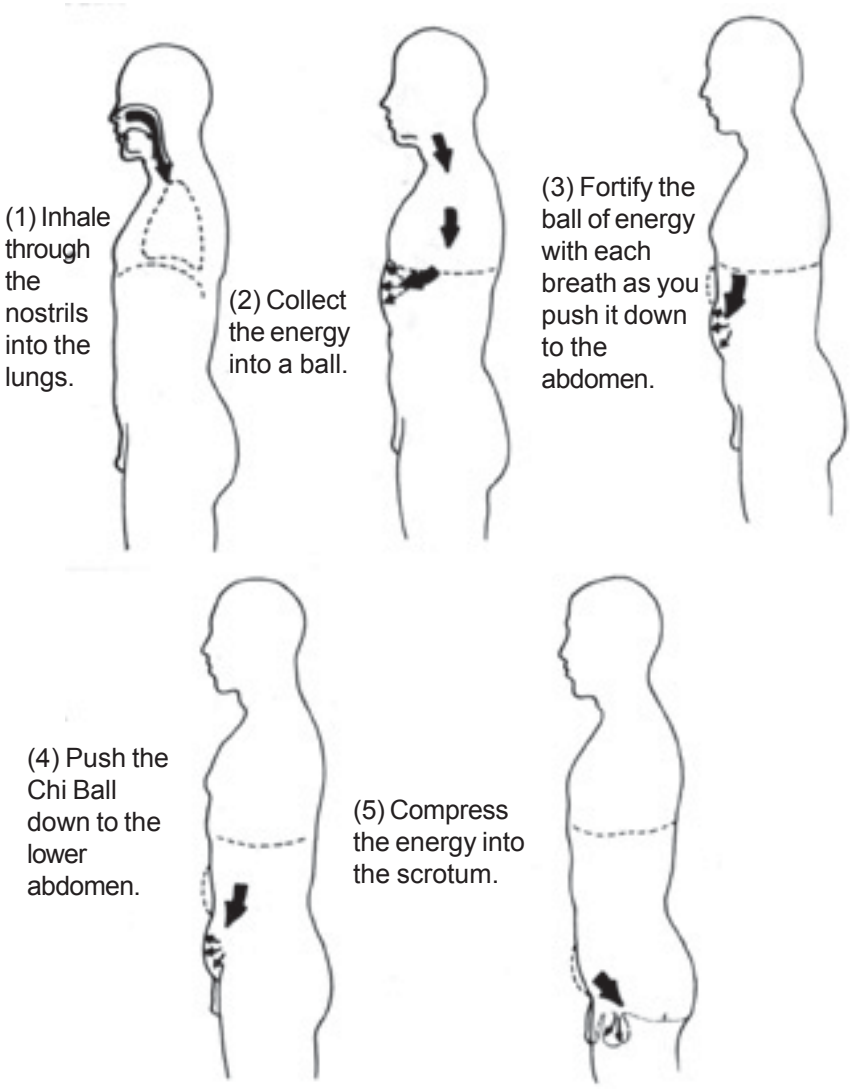


Fig. 3.10 *Genital Compression*

(5) Men: Compress Chi into the scrotum for as long as you can. Squeeze the anus, and gently tighten the perineum to prevent energy loss. Eventually only the power of the mind will be necessary to contract these areas. The muscles of the lower abdomen should also be used as you force the scrotum to expand with energy.

(6) Women: Compress the energy into the lower abdomen and the pelvic region while contracting the perineum, the anus, and the vagina. Locate the ovaries as they are shown in Fig. 3.11. Direct the energy into both ovaries, and feel them expand with warmth.

Fig. 3.11 *Locating the Ovaries and the Ovarian Palace*

Note for Women: In the beginning it is helpful to locate the ovaries by placing both thumbs, tip facing tip, on the navel with the fingers extending downward, outlining a triangle over the lower abdomen. Where the index fingertips meet is the Ovarian Palace. Next, spread all of the fingers out from that point while maintaining the position of the index fingers. Where the tips of the pinky fingers fall on the abdomen is the approximate location of the ovaries.

(7) While still in the compression process, keep your tongue pressed against the roof of your mouth to maintain the flow of energy through the Microcosmic Orbit. Move it around to stimulate the saliva flow. Swallow deeply into the sexual center to enhance the compression. With practice, you should be able to hold the compression for as long as 30 seconds.

(8) Exhale. Take a few, quick, short breaths by pulling your lower abdomen in and pushing it out (Energizer Breathing) until you are able to breathe normally. Relax completely.

(9) Repeat the exercise from three to nine times until you feel the testicles or ovaries become warm.

Remember to keep the tongue against the palate, and breathe only through the nose. When you perform Genital Compressions, especially after having practiced Bone Marrow Nei Kung for about a month, you will feel more Chi being guided to the sexual organs. It is important to practice these compressions in the morning or afternoon, but not before you go to sleep.

D. Preliminary Cloth Massage for Men And Women

The preliminary Cloth Massage of the sexual center is an extremely important preparation for the Sexual Energy Massage techniques. It stimulates the energy and prepares the sexual organs for the role at hand. The perineum and sacrum are also massaged since they are powerful stimulators of life-force energy. First, the silk cloth is applied to activate Ching Chi. The Sexual Energy Massage then releases the Ching Chi to be assimilated into the body. While massaging with the cloth, men should feel their testicles fill with energy as they become firm. Women should feel the breasts enlarge slightly as the vagina becomes moist with secretions. Using the cloth should help you feel the Chi routes open as they are stimulated.

Note: After the Sexual Energy Massage or Chi Weight Lifting, the Cloth Massage of the sexual center, perineum, and sacrum should be repeated to replenish the circulation of blood and Chi in the sexual center.

1. Hold the cloth using the three middle fingers of either hand. Apply it to the sexual center in clockwise and counterclockwise motions for 36 rotations in each direction. (Fig. 3.12) Men should apply the cloth directly to the genitals. Women should cover the entire mons and labial area. Massage the vaginal muscles, pressing in on the sides of the groin.

2. Locate the perineum, and use the cloth to massage it clockwise 36 times, and then counterclockwise 36 times.

Fig. 3.12 *Massage the perineum with the cloth 36 times clockwise, and 36 times counterclockwise.*

3. Apply the cloth to the coccyx and massage its tip, gradually applying more pressure to activate the Sacral Pump. Massage clockwise and then counterclockwise 36 times. Move up to the sacrum and massage it clockwise, then counterclockwise 36 times. (Fig. 3.13)

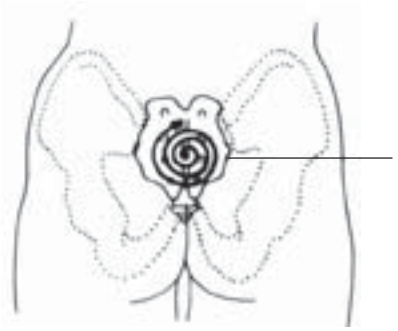


Fig. 3.13 *Sacrum Massage*

E. Sexual Energy Massage

At this point, although the practices for men and women differ greatly, the purposes and results are the same. To avoid confusion, the remainder of this chapter is divided into separate sections for

men and women. The Sexual Energy Massage helps both men and women clear blockages in the Chi flow while directing energy and blood into the sexual center and enhancing the production of Ching Chi. These techniques are the main focus of this book in preparation for the higher level practices, such as Chi Weight Lifting.

The Sexual Energy Massage often causes enough stimulation to require the Healing Love techniques to avoid sexual arousal. If arousal occurs, draw the activated sexual energy into the Microcosmic Orbit. Both men and women must use the Power Lock-without arousal before the Sexual Energy Massage to prepare for the procedures, and afterwards to draw Ching Chi up through the stations of the Microcosmic Orbit. At least two to three sets are recommended at both times.

***Note for Women*:** The second part of this section explains the techniques which are special to your needs. Study the Breast Massage described in "Procedures for Women." Section F details the "Internal Egg Exercise" as a preparation for women's Chi Weight Lifting

1. Sexual Energy Massage for Men Step by Step

Warning: If you know that you have a blood clot in the area of the scrotum, consult a physician before applying the Sexual Energy Massage or Chi Weight Lifting techniques. Although the massage techniques in this chapter help to prevent blood clots from forming, medical advice is necessary to determine their safety with existing blood clots. Refer to Precaution 15 in Chapter Five for further information.

Note: In all of the following exercises, you may wrap the testicles with the cloth as you massage them.

a. Finger Massage of the Testicles

(1) Inhale Chi into the testicles as in the Genital Compression exercise. Rub your hands to warm them, and use them to warm the testicles.

(2) Hold the right testicle with the right hand. Place the pinky, fourth, third, and second fingertips on the bottom of the testicle. Place the right thumb on the top of the testicle. Hold the left testicle with the left hand in the same manner. (Fig. 3.14)

Fig. 3.14 *Finger Massage of the Testicles*

(3) Use your thumbs to gently press on each testicle, with the other four fingers holding the bottom of each. Then use your thumbs to massage around the testicles 36 times clockwise, and then 36 times counterclockwise. (Fig. 3.15)

Fig. 3.15 *Rub the testicles in each direction up to 36 times.*

(4) Use your thumbs to hold the testicles in place while the other four fingers of each hand roll them to the left and right or back and Forth 36 times in both directions. Draw the energy upward. (Fig.

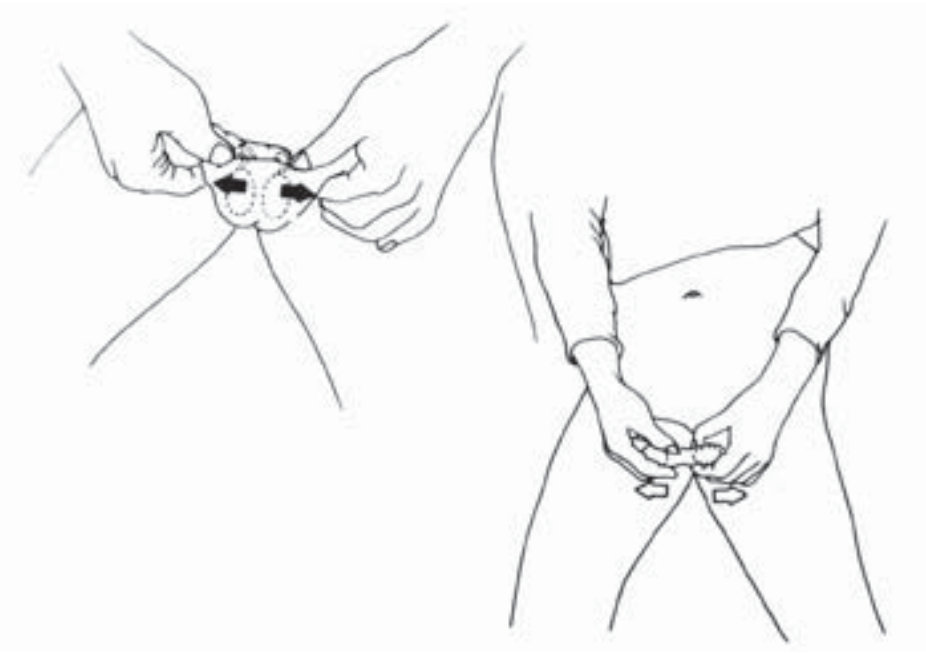


Fig. 3.16 *Roll the testicles in each direction up to 36 times.*

b. Palm Massage of the Testicles

(1) Inhale Chi into the testicles. Rub your hands together until they are hot, and warm the testicles with them.

(2) Move the penis toward the right with the right thumb and fore finger, covering the top of the testicles with the lower edge of the right hand.

(3) Place the left palm on the bottom cupping the testicles.

(4) Keeping the penis to the right, begin to lightly press the testicles with both hands, and then gently rub the testicles with the left palm 36 times, both clockwise and counterclockwise. (Fig. 3.17)

(5) Warm the hands again, and reverse the hand positions. Then gently rub the testicles with your right palm 36 times in both directions. Draw the energy upward.

Fig. 3.17 *Massage the Testicles.*

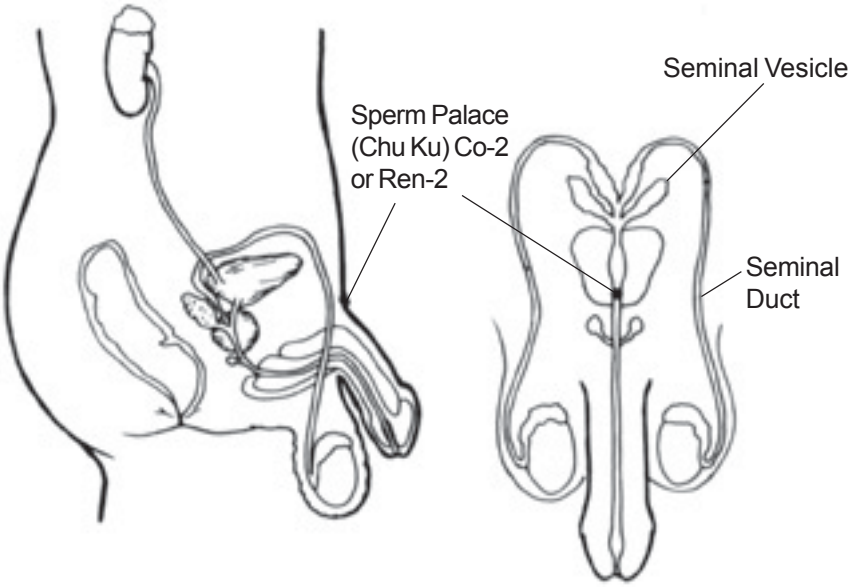


Fig. 3.18 *Trace the ducts of the testicles.*

c. Ducts Elongation Rubbing

(1) Rub your hands together to warm them, cup the testicles with them, and then trace the ducts extending upward from the rear of the testicles. (Fig. 3.18)

(2) Gently use your thumbs and index fingers to massage the ducts near the point at which they connect to the testicles. Rub towards the back of each duct with your index finger and use your thumb to rub towards the front. Gradually move along the ducts up toward the body. (Fig. 3.19) Be careful.

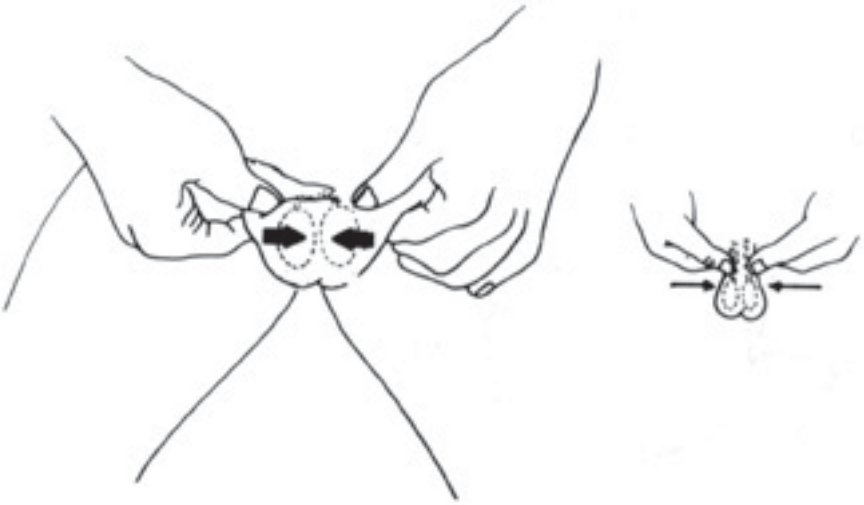


Fig. 3.19 *Ducts Elongation Rubbing*

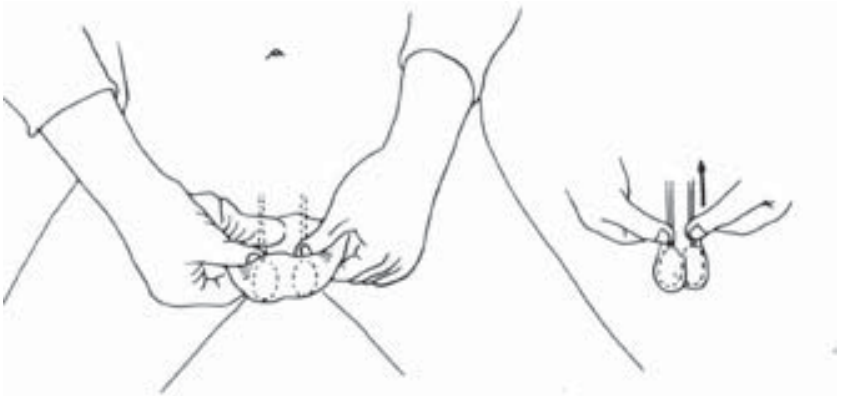
(3) Reverse finger positions and return downward toward the testicles, now using the thumb to rub the back, and the index fingers to rub the front. Continue running 36 times. Each up and down movement counts as one time.) Draw the energy into the Microcosmic Orbit.

d. Stretching the Ducts Gently with Massage

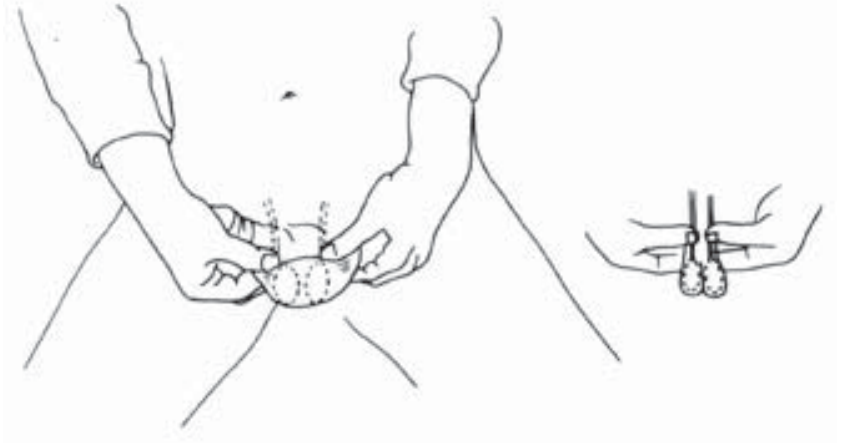
(1) Use the thumbs and index fingers to hold the ducts, thumbs in front.

(2) Use the right thumb to rub toward the left, and use the right index finger to rub and gently pull the right testicle out, stretching the duct.

(3) Next use the left thumb to rub towards the right, and the left index finger to rub and gently, pull the Left testicle out, stretching the duct. (Fig. 3.20)



Rub the ducts between thumbs and index fingers,
gently squeezing them upward.



Gently stretch the ducts downward.

Fig. 3.20 *Stretching the ducts gently with massage.*

(4) Gently palm massage both testicles, and repeat the stretching.

(5) Now you may simultaneously rub the testicles using the thumbs and index fingers of both hands up to 36 times. Draw the energy upward.

e. Stretching the Scrotum and Penis Tendons

(1) Pre-stretching Exercise

(a) Warm both hands by rubbing them together.

(b) Encircle the base of the penis with the thumb and forefinger as all of the fingers encircle the scrotum, surrounding the testicles.

(c) Gradually pull the entire groin down towards the tip of the penis as you pull the internal organs up, opposing the outward force with your hand. (Fig. 3.21) First, pull straight down with the hand, and then pull down to the left and right in equal counts. (Fig. 3.22) Simultaneously pull up the internal organs from the perineum. hold for a while, and then release.

(d) Pull downward in a circular motion nine to 36 times clockwise and then counterclockwise. Draw the energy upward.

Fig. 3.21 *Gently pull down on the penis and testicles as you pull up from the internal organs.*

(2) Massage the penis

(a) Rub the hands together until they are hot. Use the thumbs and index lingers of both hands to hold the base of the penis from the sides.

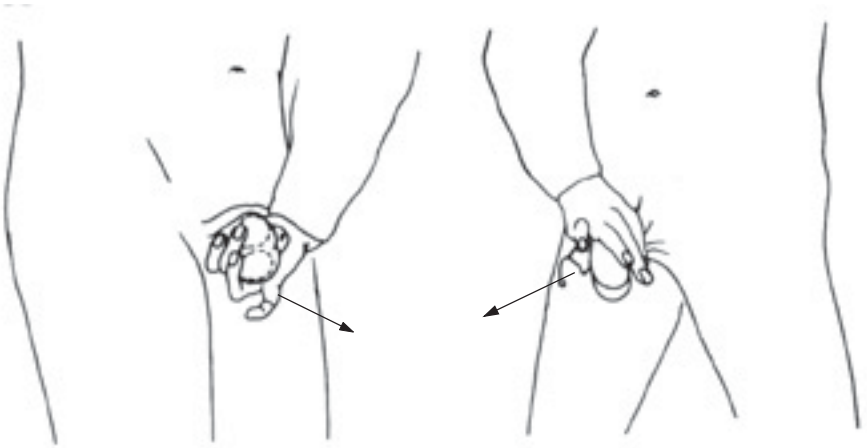


Fig. 3.22 *Stretching the scrotum and penis tendons.*

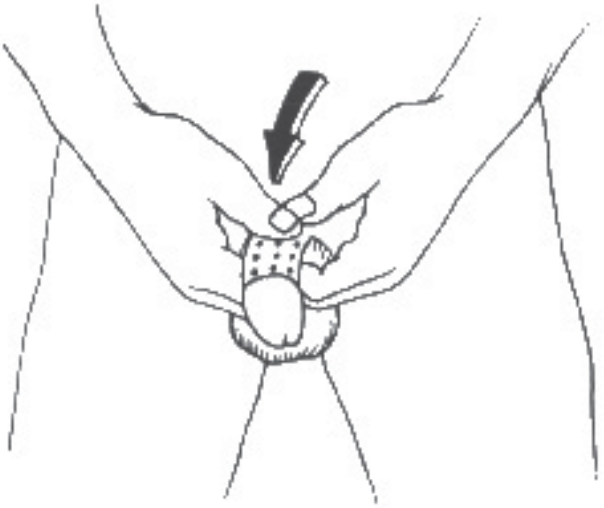


Fig. 3.23 *Massage the penis along three lines from the base to the head.*

(b) Massage the penis along three lines. Begin with the left line, using the left thumb and index finger to massage from the base of the penis to the tip and back. (Fig. 3.23) When use the right thumb and index finger to massage the right line in the same manner.

(c) Next place both thumbs and index fingers on the middle line at the base, and massage down to the glans and back. Massage all three lines, counting up and down as one time, up to 36 times.

f. Tapping the Testicles.

(1) Stand in a Horse Stance with the pants off.

(2) Inhale Chi directly, into the testicles, slightly pulling them up, and hold your breath. Clench the teeth, contract the perineum and anus, but only contract the testicles very slightly.

(3) Use the fingertips to lightly tap the right testicle. Tap in sets of six, seven, or nine. Exhale, rest, and draw the energy up the spine. Use the same procedures with the left testicle. (Fig. 3.24)

Fig. 3.24 *Tap the testicles lightly.*

g. Resting

Resting after massaging is very important. Use your mind to channel your breathing into long, smooth, soft breaths. Then draw the energy of these breaths to the point on which you are working.

h. Suggested Timetable

Practice the Sexual Energy Massage lightly for the first ten days. If you do not have time for all the techniques, try at least one of them daily. You can divide the exercises so that different sets are practiced on alternate days. Practice in sets of up to 36 repetitions, as long as you are comfortable with this regimen. Forego practice, or at least decrease it, whenever you do not feel comfortable. Once you are skilled, these exercises can be completed very quickly.

After ten days you may increase the force of each exercise as you decrease the number of repetitions per set. You may also use fewer sets per exercise. After 50 days, further increase the force as you decrease the repetitions and sets, spending more time on the palm and finger massages. After this, men who have taken instruction in Bone Marrow Nei Kung may feel ready to attach the weight hanging bar to the cloth, first by itself, and then with very light weights. (See Chapter 5)

2. Sexual Energy Massage for Women Step by Step

Note**:** Remember to apply the preliminary Cloth Massage of the sexual center, perineum, and sacrum as prescribed earlier in this chapter.

The Sexual Energy Massage for Women is followed by the Internal Egg Exercise, which is useful in all sexual activities and is a prerequisite for Chi Weight Lifting.

a. Breast Massage

Massaging the breasts activates the sexual energy of the ovaries, which subsequently activates the energy of the glands and the organs. It is also possible to prevent lumps from forming within the breasts, or to dissolve them, by using this practice. You should find that this practice greatly enhances your health and sexuality.

(1) Begin in a seated position, either naked or wearing loose pants. You should feel a firm pressure against the vagina. To achieve this, sit up against a hard object, or place a rolled up towel between your legs. If you are naked, use a sanitary cover for protection.

(2) Pull up the middle and back parts of the anus, drawing the Chi up through the spinal cold. (Fig. 3.25(a) and (b)) Then pull up the left and right sides of the anus, and bring Chi directly up to the left and right nipples.

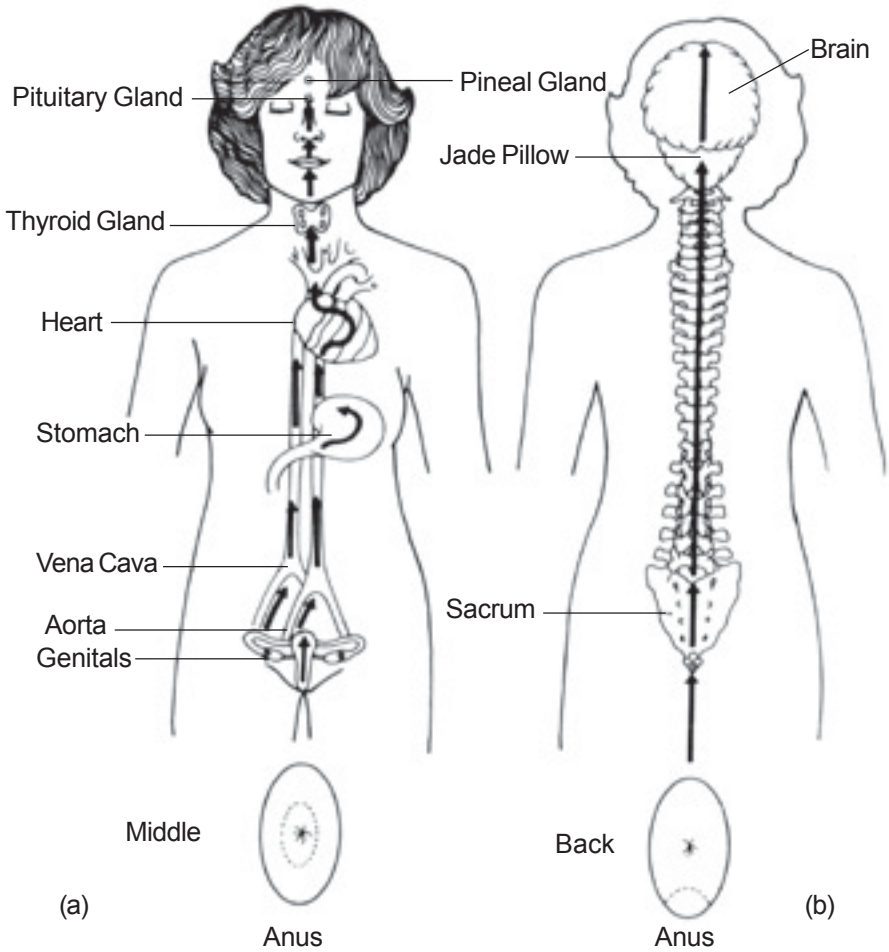
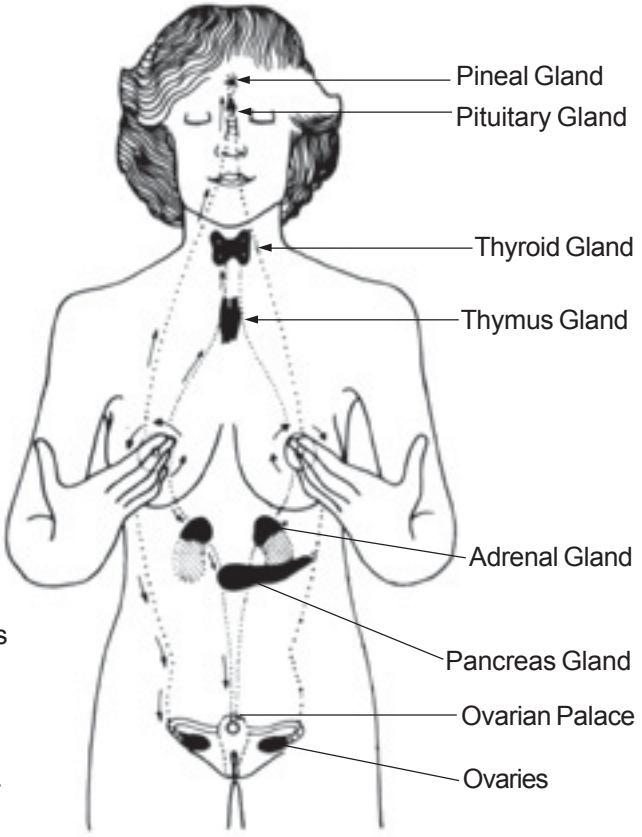


Fig. 3.25 *Pull up the middle and back parts of the anus.*

(3) Warm the hands by rubbing them together as you inhale, and press the tongue against the roof of the mouth. Place the second joint of the middle finger of each hand directly on the nipple of its respective breast. Cup the outside of the breasts with your palms.

b. Massaging the glands with accumulated Chi.

Note**:** As you do the following exercise, combine the Chi stimulated in the breasts with the additional energy of each successive gland or organ, drawing it back up to the breasts as the energy of each is activated. Return to the breasts after each of the following steps. Think of the breasts as melting pots for the combined ingredients of Chi from the organs and glands.



Activate the endocrine glands by massaging the area around the nipples, using the three middle fingers of each hand.

Fig. 3.26 *Activating the Endocrine Glands.*

(1) Use the three middle fingers on each breast to circle outward from the nipples, and then inward again. Move your right hand clockwise, and your left hand counterclockwise, then reverse. Direct the Chi accumulated in the breasts to the glands. (Fig. 3.26)

(2) When the clitoris is energized, the sexual energy surges to the head and activates the pineal gland at the crown. Return your attention to the breasts.

(3) Continue massaging as you move your attention to the pituitary gland, behind the “third eye “ You may feel pressure in the head as the energy descends to the pituitary gland. Return your attention to the breasts.

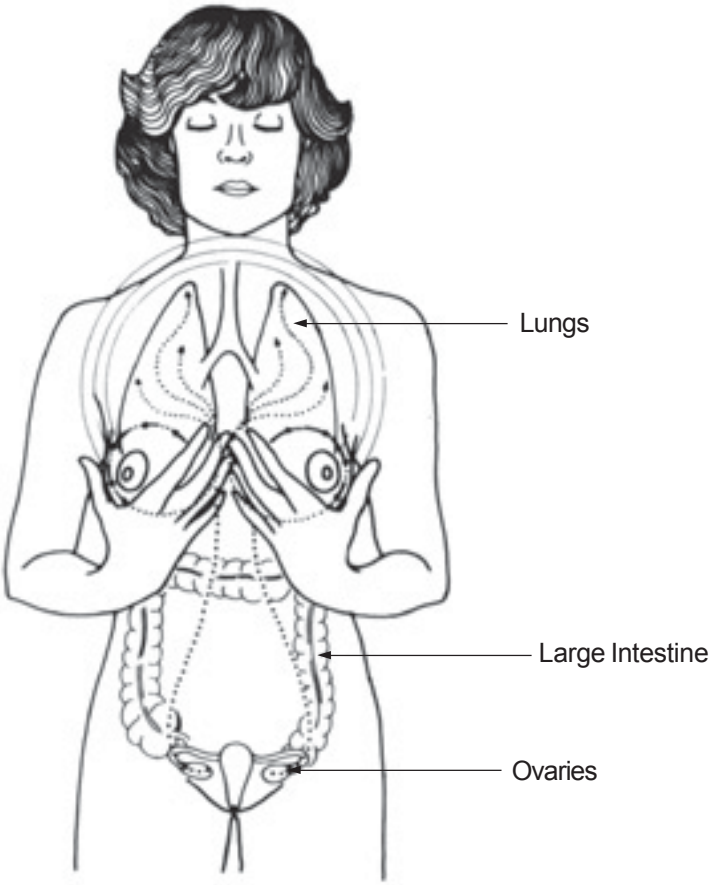


Fig. 3.27 *Chi of the Lungs and Large Intestines*

(4) Draw the activated energy down to the thyroid and parathyroid glands, Feel the expansion of these two glands as they become activated. Return both your attention and the Chi to the breasts.

(5) Continue to gently massage the breasts, and settle your attention on the thymus gland in order to activate its energy. Return your attention to the breasts with the combined Chi.

(6) Let the Chi flow down to the pancreas to activate it. Return the combined Chi to the breasts.

(7) Activate the adrenal glands with the energy, and bring it up to the breasts to blend with all the energies of the other glands. This accumulation will help to activate the organs' Chi.

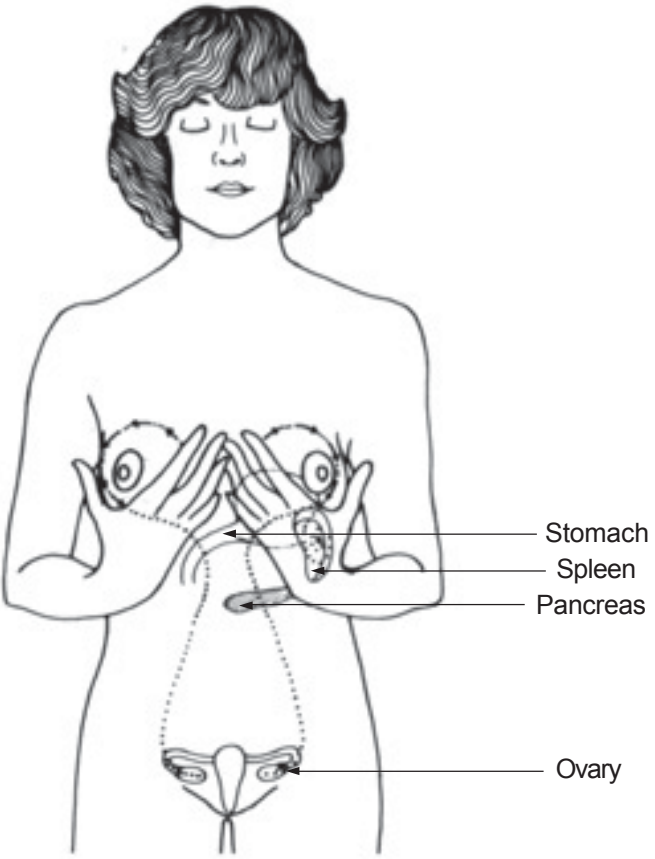


Fig. 3.28 *Spleen, Stomach and Pancreas Chi*

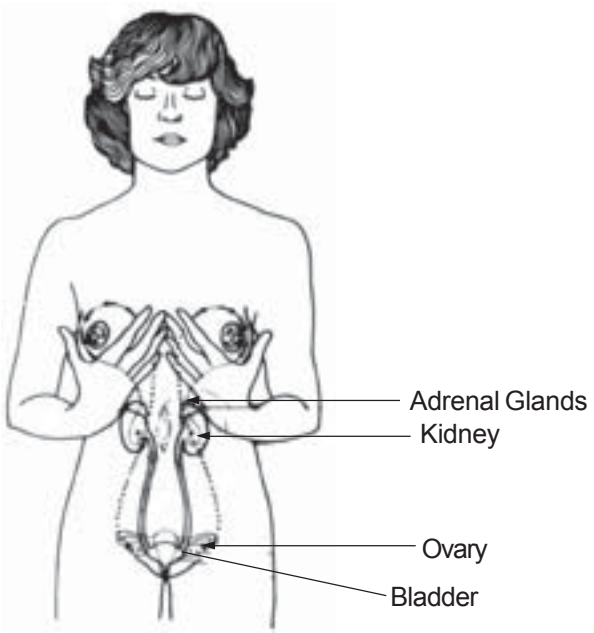


Fig. 3.29 *Kidneys, Adrenal Glands and Bladder Chi*

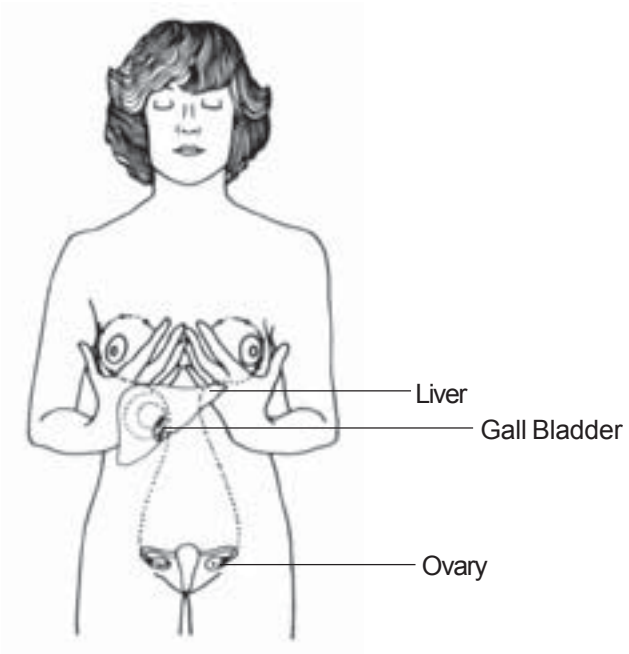


Fig. 3.30 *Liver and Gall Bladder Chi*

c. Massaging the Organs with Accumulated Chi

(1) Again, rub your palms together until they are hot, and cover your breasts with your hands. Feel the Chi from the thymus and the breasts activate the energy of the lungs. (Fig. 3.27) Direct this Chi back to the breasts.

(2) Activate the heart's energy with the accumulated Chi, and direct this energy to the breasts.

(3) Direct your attention to your spleen, and allow the accumulated Chi to activate the spleen's energy. (Fig. 3.28) Feel the Chi of the spleen, and direct it to the breasts.

(4) Now direct the Chi to the kidneys. (Fig. 3.29) Activate the energy of the kidneys, and direct it to the breasts.

(5) Direct the Chi to the liver, and activate the livers energy. (Fig. 3.30) Draw the liver's energy into the breasts.

(6) Place your palms on your knees as you focus your attention upon your breasts. Experience the energy that has accumulated in them. Let the energy expand into the nipples as you feel a tingling warmth. Wait a few moments as the breast energy accumulates in the nipples, and then let the energy flow directly down into the ovaries. Pause, and feel the accumulated energy in the ovaries.

(7) Become aware of your breath and concentrate on the ovaries, breathing directly into them. Use your mind and a slight muscular contraction to move the lips of the vagina. Feel an increase in the pulsation of the vagina, and feel it open and close like the petals of a flower: When this energy becomes strong, let the vagina close in, and then draw the energy from both ovaries to merge in the Ovarian Palace three inches directly below the navel. Slightly squeeze in, tensing the cervix and concentrate the sexual energy at this point.

D. Massaging the Ovaries

After completing the breast massage, place each hand over its respective ovary at a hand's breadth below the navel on each side of the abdomen (Fig. 3.31), and massage the ovaries 36 times in both directions as you did with the breasts. Once you have sufficiently stimulated the breasts and the clitoris, the warm, moist vaginal secretions indicate that the body is ready for the egg to be inserted. The Chi that is now available for your practice is comprised of energy from the organs, the glands, and the sexual center.

Fig. 3.31 *Massage the ovaries circling 36 times counterclockwise.*

F. Internal Egg Exercise for Women

1. Overview

In ancient China the egg exercise was a closely guarded secret of the queen and concubines who aimed to please the king. Taoist women used it to strengthen the sexual region, thereby increasing both the Ching Chi and life-force energy that was available to them. This practice also develops internal strength and control over one's sexuality. As the egg is inserted into the vagina, the subsequent exertion used to move it within the vaginal canal increases the strength of the lower abdomen. This internal "work out" helps you develop a mastery over the Chi Muscle (refer to Chapter Five) and its functions. It also aids in gaining control over many of the involuntary muscles in the same area.

The Sexual Energy Massage is used to prepare the vagina for the insertion of the egg by training the muscles surrounding the vaginal canal, especially the Chi Muscle. The egg's use, however, is unnecessary if you prefer to initiate the internal contractions without it. (In that case the egg is only needed for Chi Weight Lifting.) The following steps also serve as a preparation for Chi Weight Lifting.

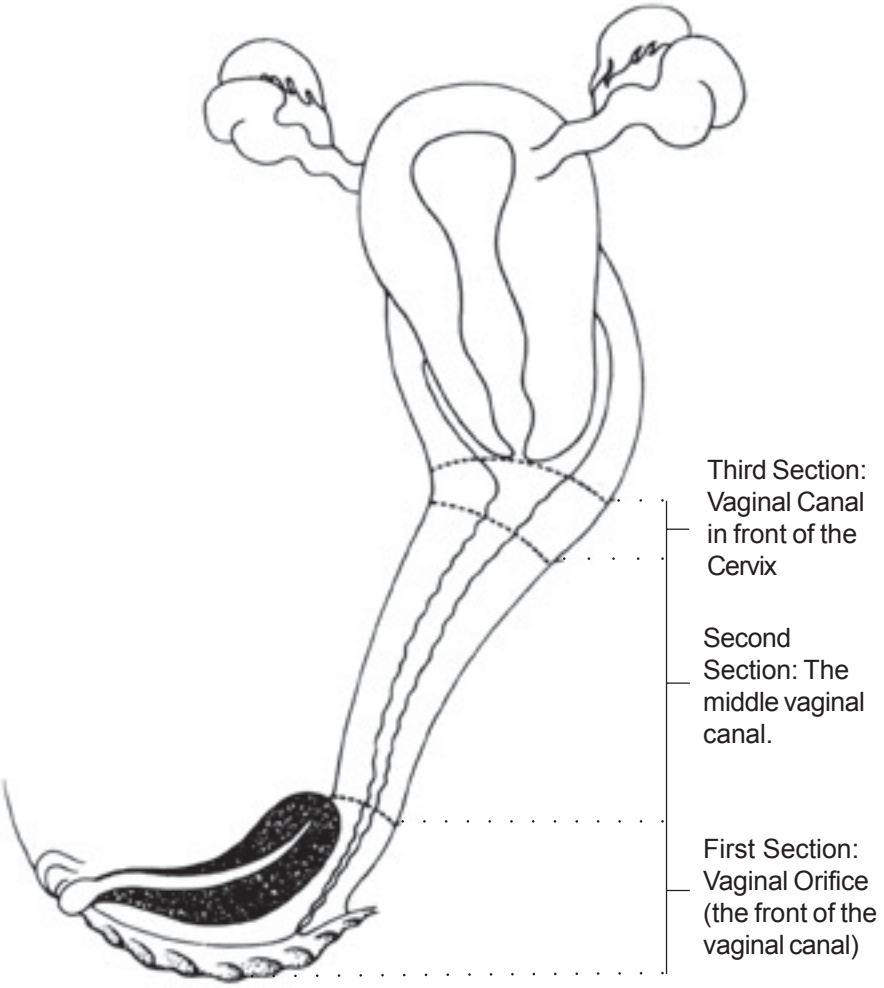


Fig. 3.32 *Three Sections of the Vagina*

Examine Fig.3.32. The egg is used as a guideline for contractions in three specific locations:

a. The first is the front of the vaginal canal, within the external orifice.

b. The second is the middle of the canal between the first and third sections.

c. The third is directly beneath the cervix, near the end of the canal.

In contraction exercises without an egg, one simply uses the Chi Muscle to contract the three sections of the vaginal canal. Each section is contracted individually, beginning with the external orifice, then the middle canal, and then the anterior of the cervix, which is contracted before beginning once more at the orifice. The egg exercise, used in conjunction with the massage, creates more resistance within the canal. Chi Weight Lifting is the final stage of the practice in which maximum resistance can be attained.

2. Equipment

The recommended eggs to use are made of jade. Jade and obsidian eggs can be drilled to accommodate a string passed through their centers for the advanced weight lifting practice. The obsidian eggs may require a diamond drill bit. It is recommended that any egg should be drilled, even if weights are not used. The string may help in removing the egg. Jade eggs are preferable because they are sturdy. smooth and non-porous. You may also find that jade eggs are far less expensive. These eggs are available through theUniversal Tao. Additional information on their use can be found in Chapter Five.

Warning**:** Wooden eggs, or any eggs with painted or chemical finishes, should be avoided.

3. Suggestions for the Internal Egg Exercise

a. As a useful addition to this technique, it is recommended that Ovarian Breathing be practiced concurrently with the egg exercise. (Refer to *Healing Love Through the Tao: Cultivating Female Sexual Energy*.)

b. Do not practice lying down.

c. If you have a tight vagina, or if you are a beginner, use the egg with a string to eliminate any fears of the egg becoming stuck. Ultimately, you will learn how to expel the egg without the help of the string. If an egg without a string attached gets stuck, do not panic. Relax and allow the muscles to rest until you can gradually expel the egg. When the perineum grows stronger you may wish to advance to a double egg system.

d. Remember that this exercise should not be attempted if you have a vaginal infection or if you are menstruating. Wait at least two days until after your period is over before starting practice.

4. Preparation for Inserting the Egg

a. Personal Hygiene

Proper feminine hygiene is an absolute necessity for Bone Marrow Nei Kung. Remember that morning, preferably after bathing is the best time to practice the Sexual Energy Massage and the Internal Egg Exercise.

b. Cleanliness of the Egg

Cleanliness of the egg is extremely important. All eggs should be boiled prior to their first use, and washed after every training session. Because some women may be unknowingly allergic to isopropyl or rubbing alcohol, avoid using them to clean the egg.

c. Lubrication

If the preliminary massage does not provide enough natural lubrication, lubricate the egg with a non-toxic oil or gel prior to its insertion. Be sure that the lubricant is not petroleum-based.

5. Internal Egg Exercise Step by Step

a. Inserting the Egg

(I) Insert the egg into the vagina, larger end first. After some practice, you should begin to increase the force of the suction used to draw it in.

(2) Once inserted, assume the “Embracing the Tree” posture described in Appendix 1, or stand with your feet parallel, at shoulder width, and the knees slightly bent. Elevate your arms in front of you to a 45 degree angle, palms facing upward, and clench your fists. Use this standing posture to practice the egg technique and to lift weights.

b. Positioning the Egg (Fig. 3.33)

(1) Isolate and contract the muscles that close the external vaginal orifice.

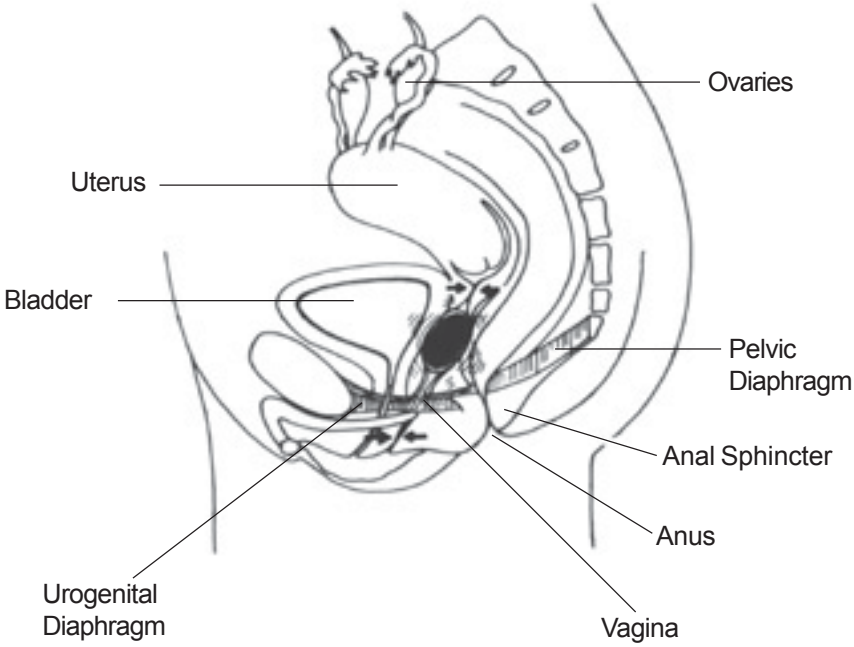


Fig. 3.33 *Woman's Sexual Glands*

(2) Inhale slowly and deeply down into the ovaries as you gather your sexual energy. Bring it down through the uterus, to the clitoris, and then hold it there.

(3) Contract and hold the lower, middle, and upper vaginal muscles so that the egg pushes into the vaginal canal.

c. Contracting the Three Sections

As the egg is pushed into the vaginal canal, an internal sucking action is begun by contracting the three sections of the canal to move the egg in and out of each section. The sequence of contractions is as follows:

(1) First the orifice is contracted to draw the egg into the canal.

(2) Next, the Chi Muscle at the anterior of the cervix--third section--is contracted to force the egg back into the middle canal. At this point, the two sections are being contracted simultaneously below and above the egg.

(3) The middle canal is then gradually squeezed to establish a grip on the egg as pressure is increased to move it up and down in the canal at will. (Fig. 3.34)

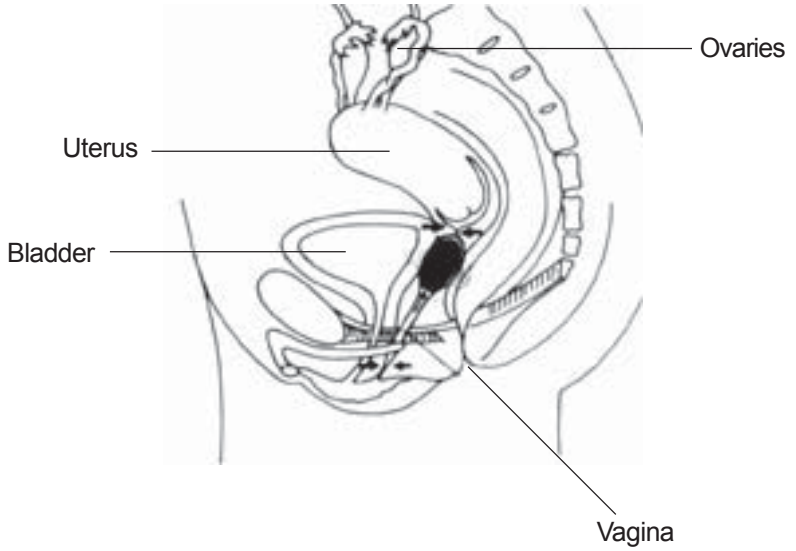


Fig. 3.34 *Moving the Egg up.*

(4) The speed of the motion should eventually be increased and maintained until you feel the need to rest. The rest period is important as Chi will start to accumulate in the area.

(5) At this point take a deep breath and draw the accumulated energy into the Microcosmic Orbit as described earlier in this chapter. This is done after every Bone Marrow Nei Kung exercise.

d. Removing the Egg

You should remove the egg by contracting the vaginal muscles to expel it. At first, a squatting position mad be necessary. Try elevating one leg on a short chair to facilitate the egg's removal. If you are using an egg with a string attached, removal should be very simple, although your internal capabilities should be allowed to develop without too much external help.

e. Massage

Massage the breasts and vaginal areas with a silk cloth after practicing the egg exercise. (Fig. 3.35) Next, massage the perineum in a circular motion counterclockwise for nine, eighteen, or 36 times, and then clockwise for nine, eighteen, or 36 times. Massage the

coccyx and sacrum in the same manner using a counterclockwise motion, and then reverse for the same number of repetitions. This will enhance the action of the Sacral Pump and increase the upward flow of Chi, transforming raw sexual energy into life-force energy.

Fig. 3.35 *Massage the breasts with the cloth.*

f. Rest

Rest, then practice two or three of the Six Healing Sounds, particularly the Lung and Heart Sounds. Also practice the Microcosmic Orbit Meditation to circulate the tremendous energy you have generated throughout your body. Sit comfortably concentrate on the navel, and use the mind to move the energy. (See Appendix 1 for the Six Healing Sounds.)

g. Clean the Egg

The mucous secretions on the egg are an ideal medium for bacterial growth, so be sure to clean the egg thoroughly after each use.

Jade eggs can be boiled daily, although washing may suffice. Boil the egg at least once a week for complete safety, and never let anyone else use your egg.

Warning To All Practltioners**:** The Sexual Energy Massage and Chi Weight Lifting practices both require that the Hitting techniques described in Chapter Four be applied immediately, after the dissemination of Ching Chi and hormones into the body. This is to help assimilate the energy before too much of it accumulates in the head.

G. Summary

1. At this stage of Taoist practice, there are three approaches to sexual energy: Healing Love, Sexual Energy, Massage, and Chi Weight Lifting.

a. Healing Love retains sexual energy, stimulates the brain, and rejuvenates the organs and glands to increase the production of Ching Chi.

b. The Sexual Energy Massage uses more of this energy as well as sexual hormones to fortify the bones, regrow marrow, and replenish the blood while strengthening the genitals and internal system. These techniques comprise one of the most important practices of Bone Marrow Nei Kung.

c. Chi Weight Lifting is the ultimate practice for releasing sexual energy into the body. It extracts the highest concentration of Ching Chi from the genitals while strengthening the fasciae genitals, and internal system. The release of sexual hormones stimulates the pituitary gland.

2. The Power Lock: This is practiced before and after the Sexual Energy Massage to assist in the upward draw of released energy and sexual hormones. The Power Lock employs nine short sips of breath with nine contractions of the genital, anal, and perineal areas. The tongue is pushed against the palate, and the buttocks and teeth are clenched to activate the cranial and sacral pumps. In conjunction with these contractions, the three middle fingers of cither hand press a point at the back of the perineum, near the anus, to help guide the rising energy up to the five stations of the sacrum, T-11, C-7, base of the skull, and the crown. The goal is to draw sexual energy from the perineum to the crown.

3. Genital Compression: This exercise replenishes the energy drawn from the genitals during the other practices. This is not a Bone Marrow Nei Kung technique in itself, but rather a separate practice for use afterwards. The method compresses energy into the genitals to enhance their production of Ching Chi.

4. Preliminary Cloth Massage: A silk cloth is used to massage the genital area, the perineum, the coccyx, and the sacrum. This is done before and after the Sexual Energy Massage to first prepare the genitals for the exercise, and later to replenish the flow of blood and Chi to the sexual center. This is particularly useful in preventing blood coagulation and subsequent blood clots from occurring in the genitals of male practitioners.

5. Sexual Energy Massage For Men:
   a. Finger Massage of the Testicles
   b. Palm Massage of the Testicles
   c. Ducts Elongation Rubbing
   d. Stretching the Ducts Gently with Massage
   e. Stretching the Scrotum and Penis Tendons
   f. Tapping the Testicles

6. Sexual Energy Massage for Women:
   a. Breast Massage
   b. Massage of the Glands with Accumulated Chi
   c. Massage of the Organs with Accumulated Chi
   d. Massage the Ovaries

7. Internal Egg Exercise: This exercise uses the jade egg as a guideline for contracting the three sections of the vaginal canal to strengthen them. The first section is the front of the vaginal canal, within the external orifice. The second section is the middle of the canal between the first and third sections. The third section is directly beneath the cervix, near the end of the canal.

Chapter IV
Hitting

An interdependence exists among the Bone Marrow Nei Kung disciplines. Although some benefits are derived from these exercises individually, only their combined practice can produce the coveted “Steel Body” that transcends human frailties and disease. For example, Bone Breathing and Bone Compression work best when combined with the Hitting practice. Hitting is also used after Chi Weight Lifting to enhance the body’s assimilation of Ching Chi, The practice does not depend upon the other disciplines, but it dramatically increases their effectiveness by promoting a much deeper penetration of energy into the body.

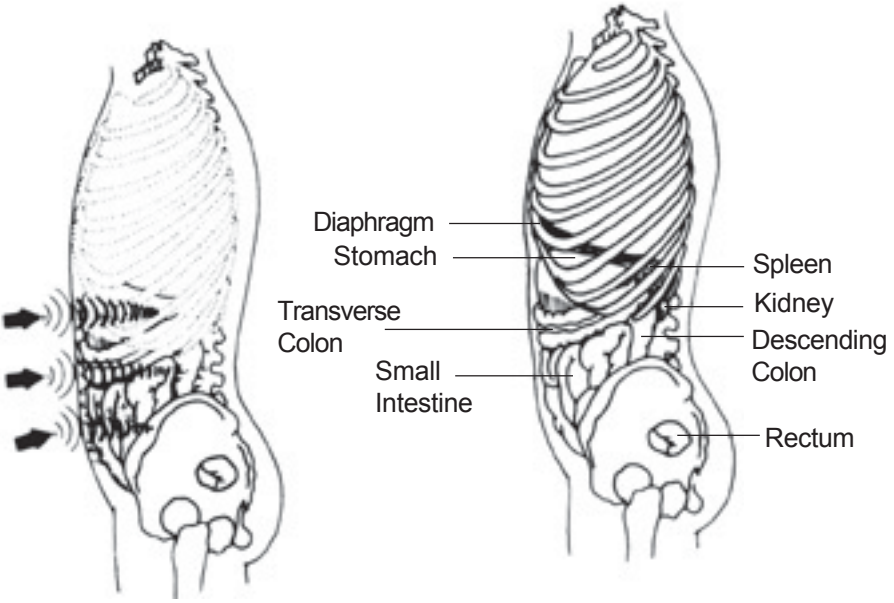


Fig. 4.1 *Vibrations from Hitting breaks up toxic substances deep within the body.*

A. Overview of Hitting

In the primary form of Hitting, a bundle of wire rods is used to strike specific lines along the body and limbs. (A long bean bag filled with mung and black beans may be used instead.) The wire rods create vibrations which serve to open the pores of the bones for the accumulated energies to access the bone marrow. These vibrations also shake any toxins out of the fasciae, muscles and internal organs, while breaking up deposits of uric acid and releasing tension from the body. (Fig. 4.1) A second form of Hitting uses rattan sticks along the same lines to improve the exterior of the body and increase the strength of the nervous system.

The specific lines used for Hitting correspond to known acupuncture meridians that accommodate the Chi flow throughout the body. As you hit along each line, vibrations penetrate into its respective organs through the associated meridians. The Hitting device also vibrates the fascial layers, separating them while the accumulated energy inflates them like cushions to protect the internal system. The resulting increase in Chi pressure creates a resilience within the organs, enabling them to bounce back from each strike. This rebound creates shock waves in the Chi flow from which the organs, glands, and bones can absorb more energy. (Fig. 4.2)

B. Methods of Hitting

Note: Of the two forms of Hitting, the first focuses primarily on internal health. whereas the second is geared towards external improvements.

1. There are three methods at the first form of Hitting:

(a) “Hitting with Packing” is the most comprehensive approach to Hitting. It is the only method explained in detail here, since it encompasses the other methods. The technique works in conjunction with a Bone Breathing and Bone Compression process referred to as “Packing.” This process requires that you inhale, spiral, pack and squeeze energy into the bones of a specific limb or part of the body, and then maintain the compression as you hit along the lines of that area. The process continues for each section of the arms, legs and body in succession as described below.

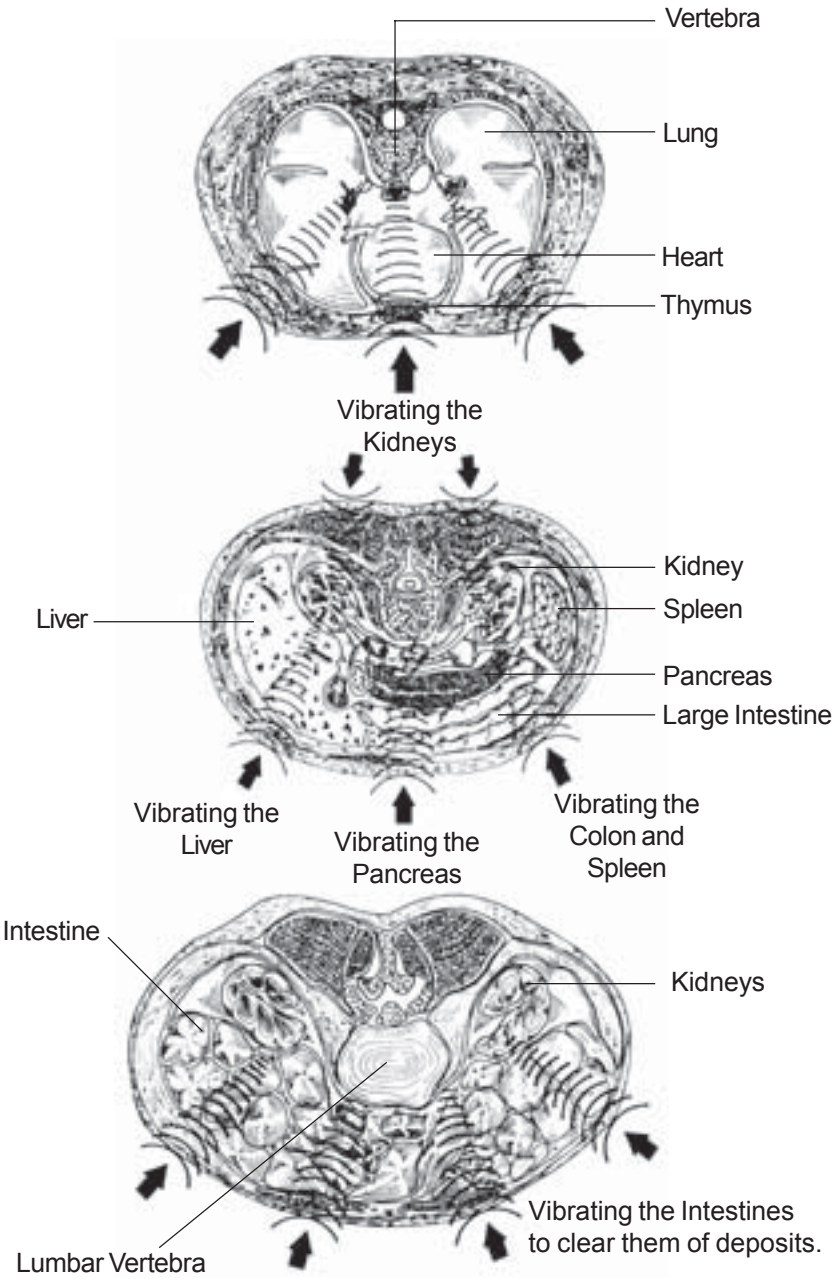


Fig. 4.2 *Cross sections of the torso showing how the vibrations reach the organs.*

(b) “Hitting with a Long Bean Bag” uses a sack of mung and black beans eighteen inches long instead of the wire device. The sack has a cooling effect which alleviates the problem of too much heat that arises from the other Hitting practices. The long bean bag absorbs heat and toxins while helping the hones to absorb Ching Chi and external energy. This method is useful for beginners and those who are physically weak.

(c) “Hitting to Detoxify” also uses the same Hitting lines as the other methods, but it does not include any Bone Breathing or Bone Compression since there is no Packing involved. This method relies solely on the vibrations of the wire device or the use of the bean bag to cleanse the internal system. This detoxification process can he used as a preparation for the other methods, or as a practice by itself.

2. The second form of this practice “Hitting with Rattan Sticks,” is used to improve the nervous and lymphatic systems while strengthening the skin and external features of the body. Most of the same lines are used, hut no bones are hit, and Packing is unnecessary. Hitting with rattan sticks can be done immediately after any of the other Hitting methods. It is usually the final Bone Marrow Nei Kung procedure before the closing meditation and the Six Healing Sounds.

C. Hitting Equipment

Vibrations in the Hitting practice are created by a special striking instrument made of bundled wires. From 100 to 110 pieces of twelve gauge wire, cut to eighteen inch lengths, are bound together at one end with duct tape covering approximately six inches of the bundle. The bound end should be covered with enough tape to feel comfortable in your hand. The free end should be about twelve inches long. The wires at the free end should be separated slightly to help distribute the impact and create vibrations during the Hitting process. (Fig. 4.3)

Note**:** Women may prefer to use a lighter wire device with 50 to 75 pieces of wire in the bundle.

The wire device can be replaced by a long bean bag, eighteen inches long by three inches wide, of strong material filled with mung and black beans. This device is not intended to create vibrations,

but it helps to absorb any excess heat that the body cannot assimilate. The bag can be used after the wire device to eliminate the problem of overheating.

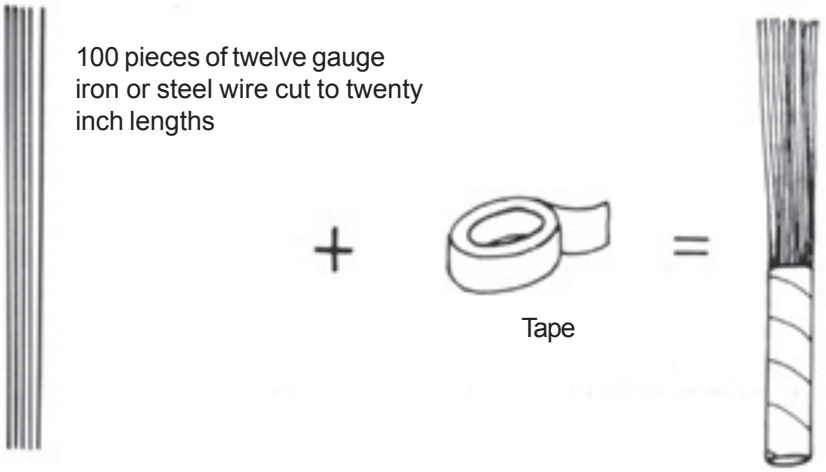


Fig. 4.3 *Wire Hitter*

The rattan sticks are cut from a very, light hardwood to a length of about two feet. Two sticks are wrapped together with duct tape at approximately two inches from each end as they are held together. (Fig. 4.4) The rattan sticks are used for external stimulation, which strengthens the nervous and lymphatic systems through the shock of contact with the skin.

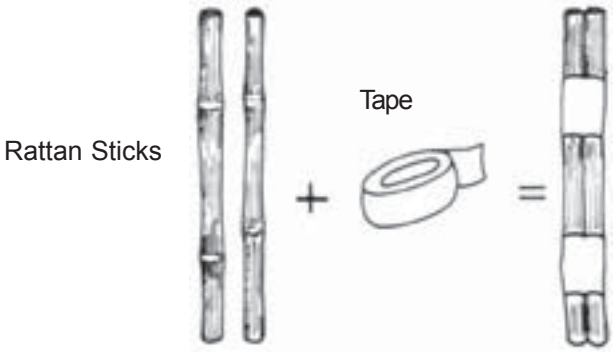


Fig. 4.4 Rattan *Hitter*

D. Choosing the Right Approach

The format that will hest serve you depends upon your goals and your physical condition, since your needs may not require a full regimen of Hitting on a daily basis. Those involved in martial arts can benefit from a complete training program, but a less comprehensive schedule is adequate for those who are interested only in detoxifying the body or improving the skin. In any case, it is recommended that the abdominal lines be hit daily as part of the detoxifying process. Include the insides of the elbows, the backs of the knees, and the Ming Men point an the back opposite the navel.

In the beginning you should only use the Hitting to Detoxify method without any Packing. Gently hit along each line without tensing your muscles, and use only three strikes to emphasize each point. The spares between these points should also he randomly brushed in a steady rhythm. Because the vibrations of the wire device penetrate up to six inches beneath the skin, there should be little concern that some meridians and corresponding organs will miss the shock waves if any points are merely brushed over. These waves spread out as the device makes contact. Follow this with a light application of the rattan sticks.

Note**:** Hitting with Packing can also be used to detoxify but it should not be practiced until the detoxification process works without overheating or exhausting your body.

When you advance enough to use Packing, remember to pull up the sexual organs and the urogenital and pelvic diaphragms as you compress Chi into each area. First become aware of the limb or part of the body you intend to hit. Then inhale, spiral, pack, and squeeze Chi into it, maintaining the compression as you strike the lines of that area with either Hitting device. All tension is released by exhaling after each series of hits. As you strike the body, the free hand can either be clenched in a fist or used to cover the kidney on the opposite side from that which you are Hitting. Continue this process with each successive area.

Eventually you can increase the number of times that you hit each point from three to nine as your practice evolves into a continuous, rhythmic motion. You may also increase the force with which you hit, provided that you maintain a sensible approach, since the effects of overzealous practice can be detrimental. None of the exercises in this book is intended to be difficult or strenuous in any

way. After a line is hit it is important to rest and feel the heat that is generated so that you can direct it into the upward flow of the Microcosmic Orbit.

Important**:** Even if you do not intend to use Packing it is Recommended that you first read Section E to learn the sequence, and then practice from the summary, which does not include the Packing process. Read the precautions in Section G carefully before you begin the practice.

E. Hitting with Packing in Detail

Hit gently, especially in the beginning. If you use the wire device, your goal is to create a spring-like action which will initiate gentle shock waves in the body's energy flow. (The free ends of the wires should be slightly spread to accommodate this action.) Vibrations resulting from this exercise activate the Chi and create the space its absorption.

1. Awaken the Energy and Detoxify

The following steps constitute a warm-up exercise to prepare for Hitting. These steps are designed to stimulate the energies stored in the navel and to detoxify the places where toxins accumulate most heavily. Always hit gently, using light to medium force. Rest and practice Bone Breathing in between rounds. (Fig. 4.5) After finishing the Hitting sequence, hit these four areas again to complete the practice.

a. Tan Tien--Lower Abdomen: Hit three times the lower abdomen point located three inches directly below the navel. As you hit the navel and the Tan Tien, feel the warmth spread throughout your body. (Fig. 4.6) Hit again three times with packing if you like, and then rest briefly.

b. Ming Men: Hit the Ming Men point--also known as the "Door of Life"--on the spine opposite the navel three times. (Fig. 4.7) When Packing this area, inhale, and draw the energy up from the perineum, through the sacrum, and into the Ming Men, Also pack the two kidneys while pulling up the left and right sides of the anus. Hit the Ming Men three times again, and then rest. Be aware of the point,

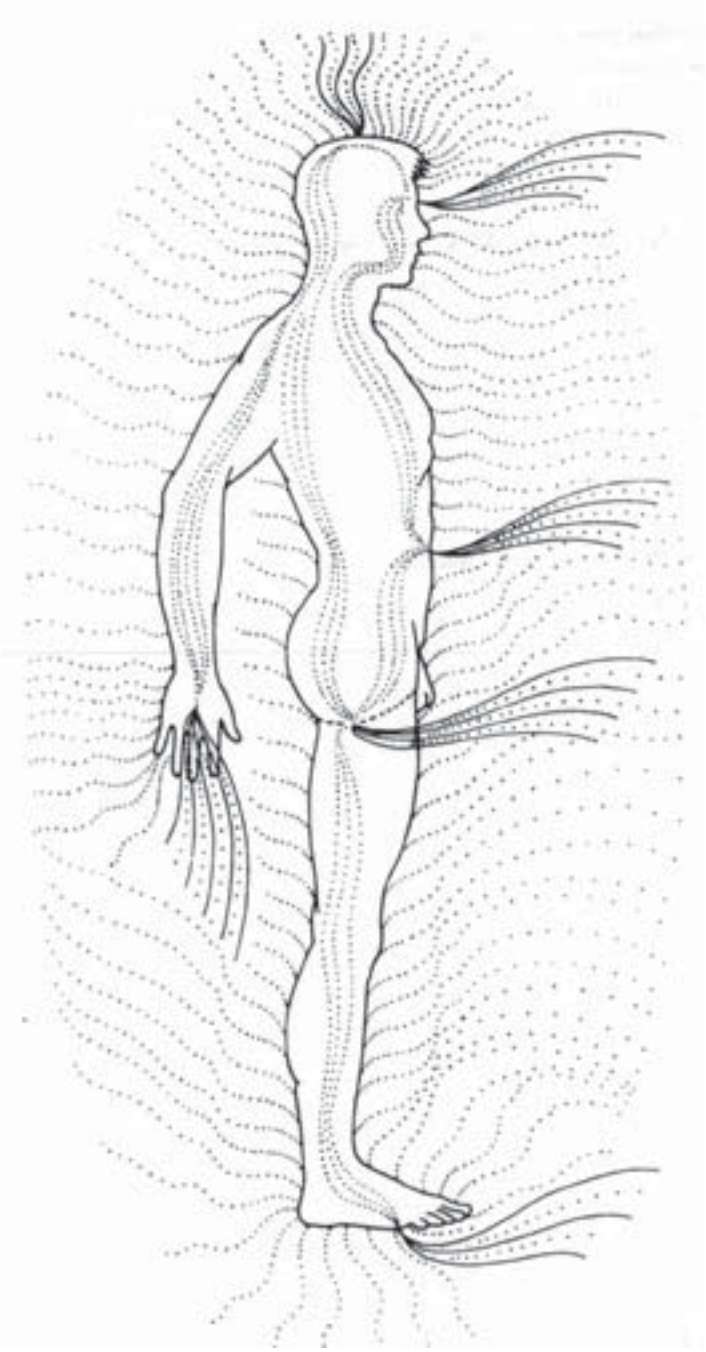


Fig. 4.5 *Rest and practice Bone Breathing, using the mind to absorb energy into the bones and through the whole body.*

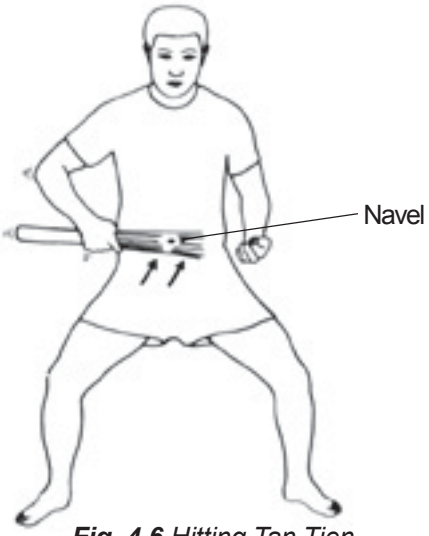


Fig. 4.6 *Hitting Tan Tien.*

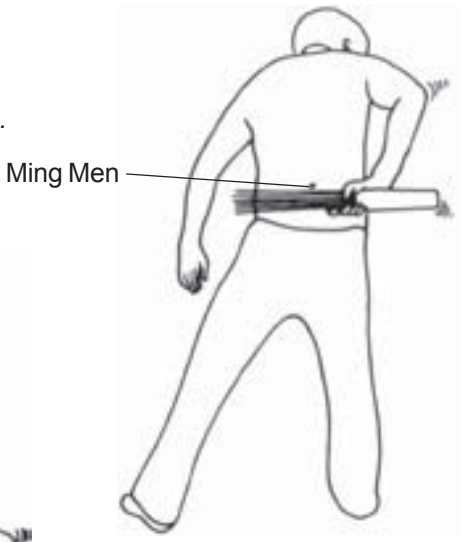


Fig. 4.7 *Hitting back.*

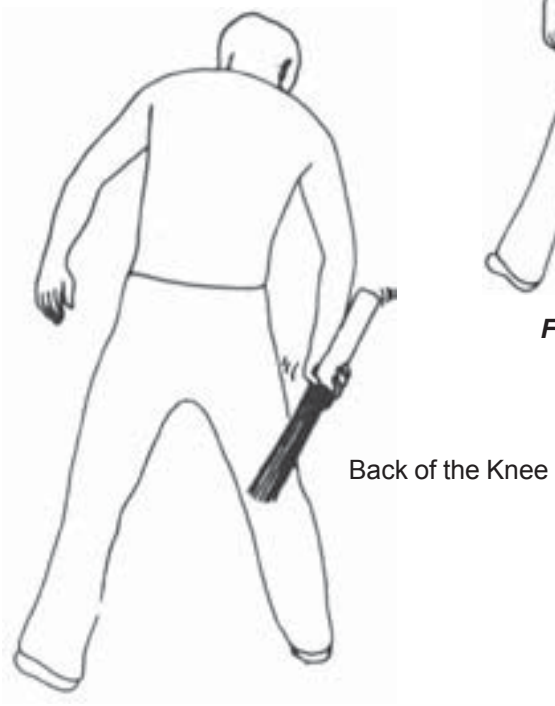


Fig. 4.8 *Hitting leg.*

and use your mind to absorb the energy into the spine through the Ming Men.

c. The Back of the Knee: Hitting this point will release an enormous amount of toxins which accumulate there. (Fig. 4.8) Hit three times, and then rest as you breathe energy into the bones, (Fig. 4.5) Repeat the procedure.

d. Inside of the Elbow: Hitting this point initiates powerful detoxifying vibrations throughout the arms. (Fig. 4.9) Hit three times. Rest as you feel the energy flow. Repeat once more.

Fig. 4.9 *Inside of the Elbow*

2. Hitting the Abdominal Area

Practice should start with the five vertical lines of the abdomen between the rib cage and the pubic bone. (Fig. 4.10) As you breathe in Chi, directing it to the navel, do not over-compress the air into your lungs. Sip in small amounts of air--less than ten percent of your lung capacity--as you concentrate on raising the Chi pressure in the navel area. Make sure you feel the pressure at the navel and not in the chest. (Fig. 4.11)

a. Center Line: Standing in a Horse Stance position, inhale, pulling up the genitals and the pelvic and urogenital diaphragms. After you have drawn Chi into the navel with your breath, spiral,

Fig. 4.10 *Five Lines of the Abdomen*

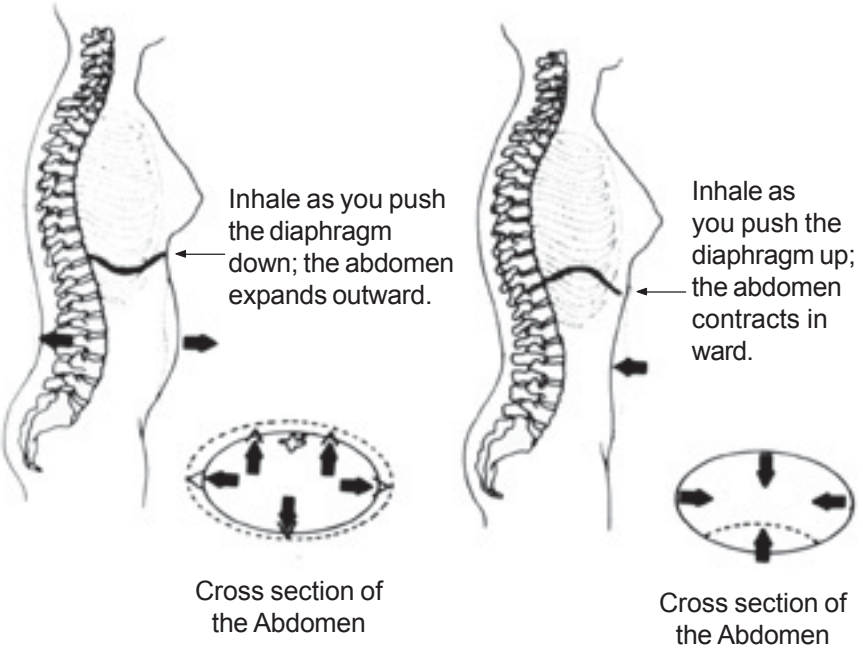


Fig. 4.11 *Breathing in Chi*

pack, and squeeze it as you strike the compressed area three times. Apply the same procedures to the Lower Tan Tien, continuing down to the pubic bone, and then back up this line to the solar plexus. (Fig. 4.12) Exhale, relax, and absorb the Chi.

Fig. 4.12 *Pack and hit from the navel down to the pubic bone and back up to the solar plexus.*

b. Interior Left Abdomen: Inhale pull up, spiral, pack, and squeeze energy into the interior left abdominal line. This channel runs parallel to the center line vertically between the ribs and the pubic bone, one and a half inches to the left of the navel. While maintaining the pressure, hit down to the pubic bone and then back up the same line to a point just below the rib cage. (Fig. 4.13) Exhale, relax, and absorb the Chi.

c. Exterior Left Abdomen: Inhale again, pull up, and pack into the exterior left abdominal line that runs parallel to lines (a) and (b) at about three inches to the left of the navel. With the left hand raised to avoid obstructing the process, use the right hand to hit down to a point near the hip, then hit back up the same line to a point just below the rib cage. (Fig. 4.14) Exhale, relax, and absorb the Chi.

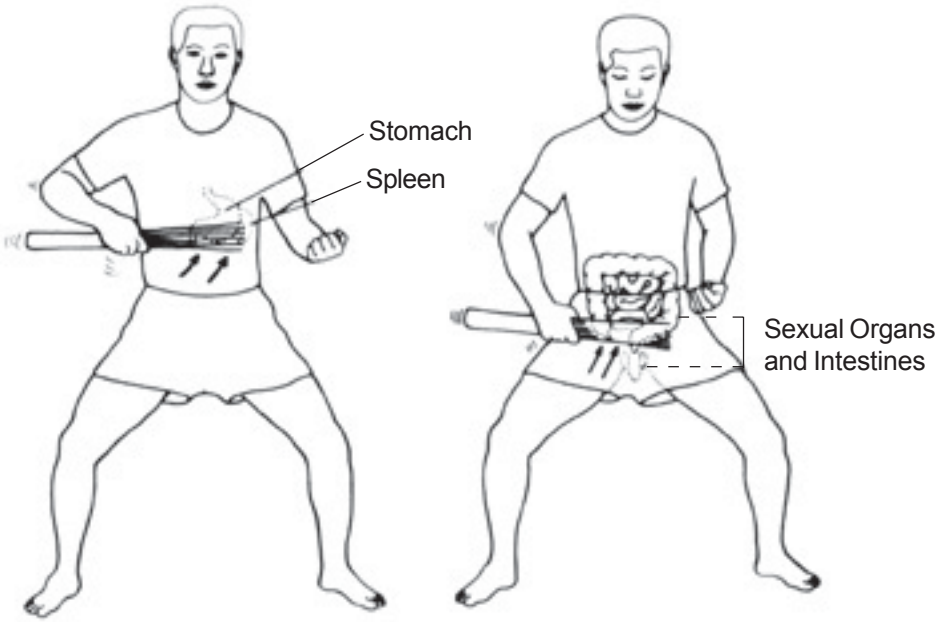


Fig. 4.13 *Hitting the abdomen.*

Fig. 4.14 *Hitting the exterior left abdomen.*

d. Hitting the interior and exterior lines on the right side of the abdomen uses the same steps as above. Use the left hand to hit as the right hand covers the right kidney, or remains in a fist. (Fig. 4.15) These are lines (d) and (e) of the abdomen.

Fig. 4.15 *Hitting a vertical line paralled to the line at the navel*

3. Hitting the Sides of the Body

The next line is located on the far left side of the body, extending downward vertically from the armpit. Raise the left arm overhead to access the left side line with the right hand. Start hitting from the floating rib--at the level of the navel--down the left side to the hip, then back up to the rib cage, continuing up to the armpit, and back down the left side again to the floating rib. Exhale, rest, and absorb the Chi. The right side line is exactly the same as the left, but this time the device is held in the left hand as the right arm is raised to facilitate Hitting. (Fig. 4.16)

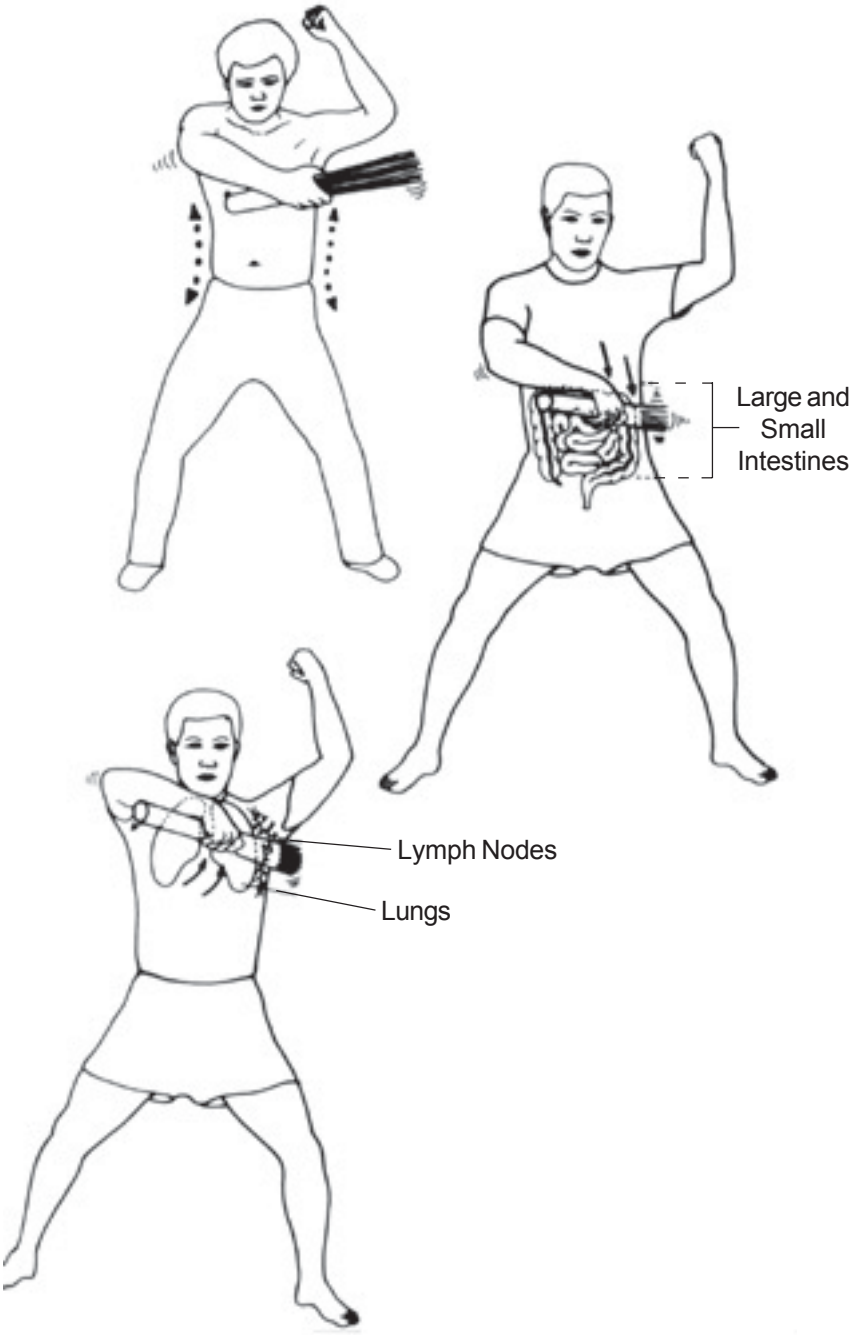


Fig. 4.16 *Hitting the sides of the body from the floating ribs to the hip*

Fig. 4.17 *Hitting the ribs from the sternum outward horizontally.*

Fig. 4.18 *Hitting the sternum and the collarbone (the vibrations stimulate the thymus gland).*

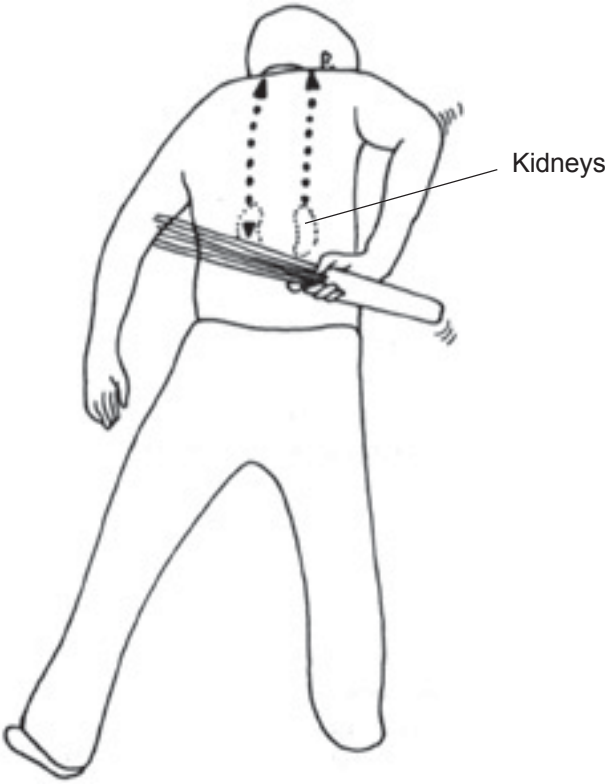


Fig. 4.19 *Hitting the lines extending from the kidneys to the base of the skull.*

4. Hitting the Rib Cage

(a) The rib cage is gently hit across the chest in horizontal lines, starting from the sternum and proceeding in either direction. (Fig. 4.17) Reposition the wire device at the sternum after each rib is hit, working from the bottom ribs to the top. Follow the curvature of the ribs as they guide you towards the spine.

Begin at the base of the left chest, near the sternum, with the lowest rib. (The false ribs, which are not attached to the sternum, can be hit either as part of the back. or along with the side lines which extend from beneath the armpits.) Pull up the left side of the anus as you breathe into the left side and pack Chi into it. Hit the left rib cage, moving up about one and a half inches for each rib,

starting each from the sternum. Then, using the left hand, hit the right rib cage in the same manner while pulling up the right anus.

(b) The last sections to hit are the sternum and the collarbone on both sides. Hit this area from the base of the sternum, along the collarbone, and finally out to the shoulder. (Fig. 4.18) Use caution while Hitting the sternum. Exhale, relax, and absorb the energy.

5. Hitting the Back

Note: It is always preferable to have a partner hit the lines of the back for you. This allows you to concentrate more on the absorption process and less on trying to access hard to reach areas.

a. The Lines of the Back: Hit a point three inches directly to the left of the Ming Men three times, using the right hand. (Fig. 4-19) Then, round the scapulae by extending your left arm and shoulder as you sink in the chest. Pack and hit the left kidney gently and then hit vertically all the way up to the neck. Pull your chin towards the back of the head, clench your teeth, and press your tongue to the palate as you reach the base of the skull. Return down this line to a point to the left of the sacrum, and then go back up to the starting point. Rest, and absorb the Chi. Hit the line three inches to the right of the Ming Men in the same manner.

6. Hitting around the Head and Jaw

Gently hit around the head, tapping at the level of the hairline, but never on top or near the crown. Then lightly tap around the outside edges of your lower jaw. (Fig. 4.20) Always pull back the chin, clench your teeth, and press your tongue to the palate when Hitting the head.

7. Left and Right Inside Elbows

Note: The insides of the elbows should be hit separately before Hitting the lines of the arms, and then again afterwards to conclude the exercise. First inhale, pack, and pull up the undertrunk while contracting the muscles around the left inner elbow. Concentrate on this area, and hit the inside of the joint three times. (Fig. 4.21) Exhale, relax, and absorb the Chi. Hit the inside joint of the right

Fig. 4.20 *Gently tapping the head and jaw.*

Fig. 4.21 *Hitting the left and right inside elbows.*

arm in the same manner. The back of each knee joint should also be hit this way before starting the leg sequences.

There are six meridians on the arms: the three inside lines of the middle finger, the thumb, and the pinky, and the outside lines of the index finger, the fourth finger, and the pinky. If you find that you have little time to hit all six lines, then only hit the two inside lines of the middle finger and the thumb, and the two outside lines of the pinky and the back of the hand. (These four lines are used in the chapter Summary.) Always lower the arm to reach the outside meridian associated with the small finger. See Fig. 4.22 for the six meridians of the arms.

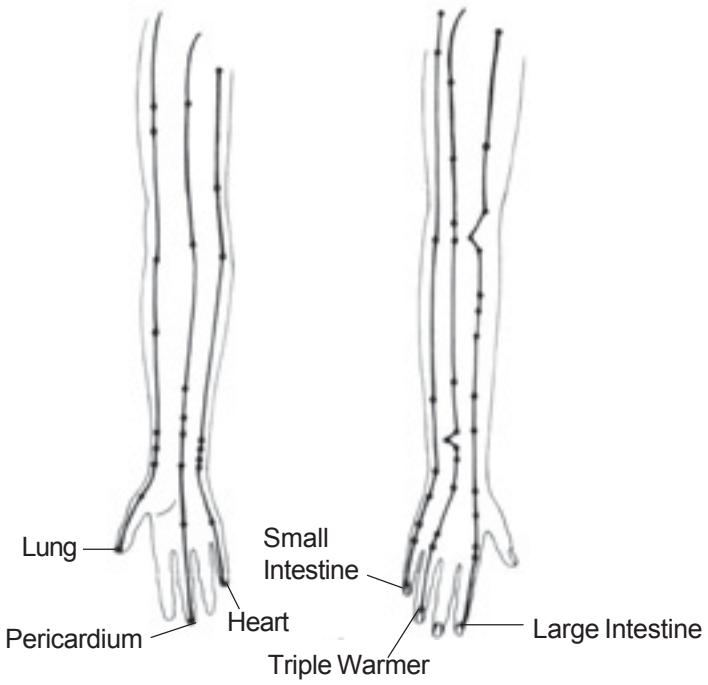


Fig. 4.22 *Six Meridians of the Arms*

8. Inside Elbow--Middle Finger Line

Extend your left arm above the level of your shoulders with the palm facing up. Hit the inside of the left elbow three more times, then continue Hitting along the center of the arm to the inside wrist,

through the palm, to the tip of the middle finger. (Fig. 4.23) Return using the same route, traversing the inner elbow, to reach the shoulder at the front of the collarbone. Rest, absorb the energy, then move to the next line.

Fig. 4.23 *Hitting the Middle Finger Line*

9. Inside Elbow--Thumb Line

With the arm extended above the shoulder, and the palm facing up, hit three times the point located near the outside part of the inner elbow, slightly to the left of its center, where the radius bone begins. Hit towards the hand from this point, over the upper part of the inner wrist, to the inside tip of the thumb, and then return by the same line to the shoulder at the top of the collarbone, over the clavicle. (Fig. 4.24) Rest, absorb the energy then move to the next line.

10. Inside Elbow--Pinky Finger Line

With the arm raised above the shoulder and the palm facing up, hit three times the point inside of the inner left elbow, slightly to the right of its center, where the ulna bone begins. Hit towards the hand, over the lower part of the inner left wrist, to the inside tip of

Fig. 4.24 *Hitting the Thumb Line from the shoulder to the thumb.*

Fig. 4.25 *Inside Pinky Finger Line*

the pinky finger. (Fig. 4.25) Return by this same line to the shoulder near the chest Rest, absorb the energy, then move on lo the next line.

11. Outside Elbow--Index Finger Line

With the arm raised above the shoulders, palm face down, and thumb slightly lower than the pinky, hit a point to the right of the outside left elbow three times. From this position the point should appear almost directly between the centers of the inside and the outside of the elbow, on top of the radius bone. Hit towards the back of the hand from this point until you reach the outside tip of the index finger, then return along the same line to the left shoulder. (Fig. 4.26) Rest, absorb the energy, then move on to the next line.

Fig. 4.26 *Outside Index Finger Line*

12. Outside Elbow--Fourth Finger Line

Lower the arm, extending it beneath the shoulder level with the palm facing down. Turn the wrist so that the thumb is lower than

the pinky finger. Bend the left elbow and feel the depression located slightly inward from the tip of the outer elbow, between the tip and the first visible protrusion of the elbow joint. Straighten the left arm and hit this point three times. Continue to hit along this line toward the back of the hand, traversing the outside wrist, over the knuckles, to the tip of the fourth finger. (Fig. 4.27) Return the Hitting process all the way back up this same line to the top part of the shoulder. Rest, absorb the energy, then move on to the next line.

Fig. 4.27 *Fourth Finger Line*

13. Outside Elbow--Pinky Finger Line

Lower the left arm with the palm directly facing outward, turning the wrist vertically so that the pinky finger is the highest point directly over the thumb, which should point to the floor. Begin Hitting three times the point near the tip of the outside left elbow, continuing the process all the way along the ulna bone, over the outside wrist, to the tip of the pinky finger. (Fig. 4.28) Return along the same line to the back of the shoulder by the scapula, near the armpit.

Finish the left arm by again Hitting the center point of the inside elbow three times. The right arm should be hit in the same manner as the left in order to cover the other aspects of the same meridians. Rest, absorb the energy, and then move on to the lines of the right arm. You may hit the left arm and leg together before practicing on the right arm and right leg.

Back side of
the pinky finger

Fig. 4.28 *Hitting the Qutside Pinky Line from the shoulder to the fingertip.*

14. Left and Right Posterior Knee Joints

The six leg meridians are accessed through four Hitting lines--one in back, two on the sides, and one that passes down the middle in front. Start awakening the energy of the legs by Hitting the sacrum three times, since energy tends to concentrate there. Then pack and hit the inside of each knee joint the same way you did the insides of the elbows. (Fig. 4.29)

15. Back Side of the Left Leg--Heel Line

Begin by moving your right leg forward and bending it slightly, while the left leg remains straight at a comfortable angle. With the device held in your left hand, hit the back of the left knee three more times,

Fig. 4.29 *Heel Line*

Fig. 4.30 *Heel Line - Back Side of the Leg*

then pack and hit from the left buttocks down to the heel of the left foot. (Fig. 4.30) Return the process hack up along the same line, covering the starting position, lo a point on the back three inches directly to the left of the Ming Men. Rest, absorb the energy, then move on to the next line,

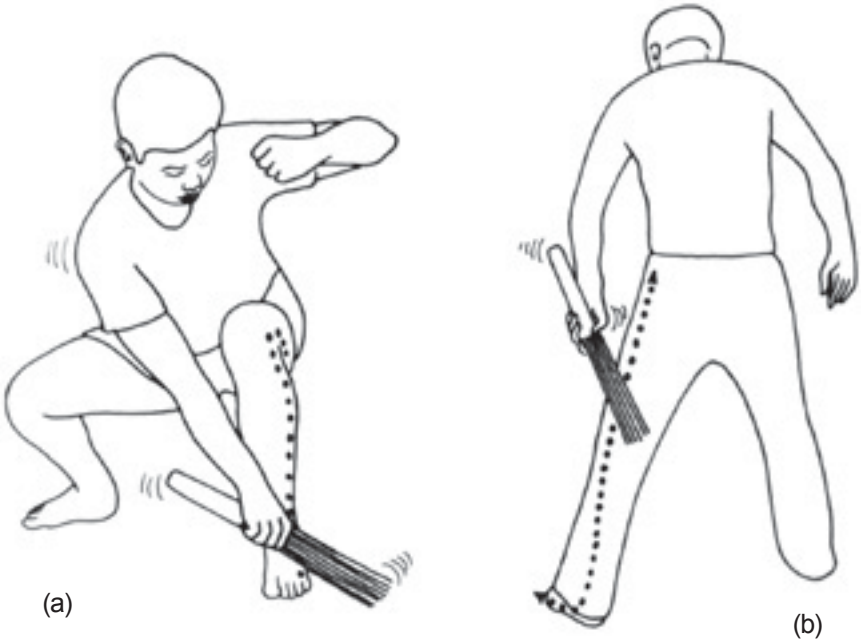


Fig. 4.31 *Heel Line - Back Side of the Leg*

16. Outside Left Leg--Small Toe Line

Maintain the stance above, and hit the point left of center on the outside of the left knee three times. Pack and hit the outside of the leg from the hip down to the outer edge of the ankle, ending at the tip of the small toe. (Fig. 4.31 (a)) Return back up this same route to finish where you began, (Fig. 4.31(b)) Rest, absorb the energy, and then move to the next line.

17. Inside Left Leg--Big Toe Line

With your feet parallel, move your left leg one half-step to the side. Men should use the right hand to cover the genitals, pulling them

away from the left side. Pack and hit three times the point located on the inner side of the joint, to the right of the knee, between the kneecap and the back of the leg.

From a point near your genitals, which are protected, continue Packing and Hitting down along the inside of the leg, covering the inside of the ankle completely, to the tip of the big toe. Hit the ankle area three additional times since the spleen, liver, and kidney meridians meet near the ankle on this line. (Avoid Hitting the protrusion of the ankle bone directly.) Return back up this same line to the starting point near the genitals. (Fig. 4.32) Rest, absorb the energy, and then move on to the next line.

Fig. 4.32 *Hitting the big Toe Line of the Leg.*

18. Front of the Leg--Middle Toe Line

Stand with the left leg forward slightly, and hold the device in the right hand. Hit a point below the center of the left kneecap three times gently. (Hit beneath the kneecap, not directly on it.) Reposition the Hitting device to the point at which the leg meets the body in the middle of the leg, directly between the hip and the sexual center.

Hit down the front of the leg, covering the knee, over the tarsus of the foot, to the tip of the middle toe. (Fig. 4.33) Gently hit the area at the top of the foot, in the middle, an additional three times. Return back up this line to end where you started the process. Hit the point at the back of the knee three times to finish the process. Rest, absorb the energy, and then move on to the lines of the right leg.

Fig. 4.33 *Hitting the Middle Line of the Leg.*

19. Sole of the Foot or "Bubbling Spring"

Hitting the bottom of each foot helps to increase the Chi flow and the circulation, returning blood to the heart faster through the veins. It also helps to open a channel for earth energy to be drawn into the body. You may sit on a chair and strike the point illustrated in Fig. 4.34 from nine to 36 times. Rest, and absorb the energy.

F. Hitting with Rattan Sticks

Warning**:** The neck, ribs, kneecaps, sacrum, spine, and all joints must be carefully avoided when using the rattan sticks. With this in mind, you may apply this procedure to the lines described in the summary after carefully reading the precautions in Section G.

Fig. 4.34 *Hitting the Sole of the Foot ("Bubbling Spring").*

Hitting with Rattan Sticks does not create vibrations within the body as does Hitting with the wire device, but it increases your tolerance for pain and releases tension in the muscles, detoxifies the skin, and enhances lymphocyte production. It also helps the nerves to conduct impulses more effectively while increasing the production of hormones. The Hitting lines for rattan sticks are identical to those used for the other methods, but several areas must be avoided.

This practice is usually done immediately after the other Hitting methods. It is important to remember not to use any Packing, and to avoid Hitting the bones. Never hit the sacrum or the spinal cord with the rattans. Unlike the other methods, the rattan sticks are used sparsely on the two side lines extending over the kidneys. During this procedure, the scapulae must be rounded and separated by extending the arms as you hit their respective lines. For this reason it is best to have a partner apply the device for you.

Fig. 4.35 *Hitting the bones of the lower arms with the rattan sticks will toughen them.*

Fig. 4.36 *Carefully Hitting the shins with the Rattan Sticks.*

Fig. 4.37 *Hitting below the navel with the Rattan Sticks.*

Certain areas, such as the shin hones and the ulna and radius bones of the lower arm, can be toughened to improve one's abilities in martial arts or in contact sports. (Fig. 4.35) The shins tend to be very sensitive, so the rattan sticks should be applied very lightly from the top of the shins down, and then back up again. (Fig. 4.35) As a rule, however, it is best to hit where there are not too many bones. (Fig. 4.37) You should also be especially careful to avoid the face, neck, spine, and kneecaps. The point here is to absorb the shock of wood upon skin, thereby detoxifying the skin and strengthening the nerves while the pain is transformed into energy.

G. Precautions

Warning**:** Never apply any hitting device to an area that has been bruised or recently scarred in any way. this will only increase the pain and inhibit the healing process. Also avoid hitting any sores or open wounds that can become infected or bleed as a result of this practice.

1. If you have psychological or physical illnesses, or any sexually related problems, consult a doctor or psychologist before attempting this practice.

2. If the Microcosmic Orbit has not been opened, you cannot experience Hitting safely. To avoid severe discomfort and possible damage to your system, be certain that you have a clear flow of internal energy. When Packing is used with Hitting, Chi pressure is increased to the point where energy flows up to the head in quantities greater than the brain can safely handle. A channel must therefore be opened for this energy to travel down from the head to the navel. Be sure that the Microcosmic Orbit is open in order to avoid serious consequences.

3. When Hitting remove all watches, pens, and jewelry that will obstruct your practice, and put them in a safe place.

4. If you are weak or in poor health, you should not use Hitting with Packing because the rush of energy that is produced can be overwhelming to your internal system. Practice Hitting to Detoxify--without Packing--until your health improves.

Note: People with high blood pressure, heart disease, or blood clots should refrain from Packing altogether. A physician must be consulted before attempting any form of the Hitting practice in this case.

5. Always use a Hitting technique with the wire device or the long bean bag immediately after the Sexual Energy Massage or Chi Weight Lifting. This is required to help the body assimilate the energy before too much of it rushes to the head with potentially dangerous results.

6. Always try to relax the upper part of the body while practicing. If there is tension in the muscles of the chest, the heart and lungs may become congested with Chi and overheat. If any difficulties occur such as chest pain, reduce or stop your practice until you are comfortable.

7. Although the sacrum is lightly tapped in detoxifying, do not in any way hit the spinal cord.

8. When Hitting around the neck or the head, clench your teeth, and place your tongue up against the roof of your mouth to avoid damaging your teeth or biting your tongue.

9. Do not practice Hitting on a full stomach, and do not eat immediately after Hitting, Wait at least two hours after a moderate meal before practicing. Also, it is best to empty the bladder and

bowels before a practice session; otherwise large amounts of Chi may be passed out of the body.

10. It is important to remember not to take a shower or bath for at least an hour after you have practiced Hitting, especially if you sweat. Water can wash away external energy, thereby reducing some of the energy you are trying to store. Shower before practicing.

11. Even if you are in good health, if you feel just a little out of sorts or weak, do not practice Hitting or any exercise that requires Hitting. If you decide to practice at such times, hit only your arms, legs, and back very lightly. Wait at least a day or two, or until you again feel alert and vigorous, before striking areas where the impact might reach vital organs.

12. Make sure that you get sufficient rest after Hitting; the detoxification may exhaust you. Drink plenty of pure water to help the cleansing process.

13. Burp freely during practice: your body will feel the need to eliminate the trapped toxins and gases that are released from within.

H. Summary of Hitting

The following summary can he used with or without Packing for all applications. The areas to avoid with the rattan sticks are indicated.

1. Abdomen

a. Preliminary Hitting: To stimulate energies and detoxify, hit three times the Lower Tan Tien (below the navel), the Ming Men (opposite the navel on the spine), the inside of both elbows, and the backs of both knees. Remember to hit the inside elbows three times before and after practicing on the lines of the arms. Also hit the backs of the knees before and after Hitting the legs.

b. Hit from the navel down to the pubic bone, and then back up lo the sternum.

c. Hit down a parallel line from a point one and a half inches to the left of the navel, and then back up to beneath the ribs.

d. Hit down a parallel line from a point three inches to the left of the navel and then hack up to the ribs.

e. Apply the same procedures to lines running parallel on the right side of the abdomen at one and a half inches and three inches respectively.

2. Rib Cage

Do not use rattan sticks to hit the rib cage.

a. Apply the wire device to the ribs from the sternum extending outward horizontally, starting at the base of the rib cage, Hitting towards the left side, then repositioning the device higher at the sternum for each rib. Apply the same procedures to the right side of the chest. (Always hold the device at an angle, pointing out to the side.)

b. Gently tap the sternum to stimulate the thymus, then extend the Hitting lines upward and out to both sides of the collarbone.

3. Lines of the Back

Avoid the sacrum and spine when Hitting with the rattan sticks. Sink in the chest as you round out both scapulae by extending your arms. Using the wire device, lightly hit from the left kidney up to the left side of the neck at the base of the skull, and then back down. Change the hand holding the device if necessary. Always clench the teeth. Apply the same procedures to the right side.

4. Left and Right Sides of the Body

Raise your left arm and hit downward from the floating ribs to the left hip. Then hit back up to the armpit, returning finally to the floating ribs. Repeat the same procedure on the right side.

5. Head and Jaw

Do not apply the rattan sticks to the head and jaw.

Gently tap with the wire device from the forehead around the skull, avoiding the crown. Use the device cautiously around the lower jaw. Remember to clench the teeth whenever you hit the neck, head, or jaw.

6. Lines of the Arms

Avoid Hitting wrists, knuckles, and elbows with the rattan sticks. Although there are six meridians in each arm and leg, there are four Hitting lines commonly used to access them from the surface of each limb. Use these four lines when you do not have time to hit all six.

Note**:** Three of the following Hitting lines require that either arm be held up higher than its shoulder as it is hit. Only the Pinky Line requires that the arm be held down.

a. Middle Finger Line

Raise the left arm, palm up, fingers extended. Hit the inside of the elbow three times, then continue Hitting as you move the striker toward the middle finger on the palm side. Use the same process as you return toward the shoulder, up to the base of the neck. End by Hitting the inner elbow three more times.

b. Thumb Line

Raise the left arm, thumb side up, and hit from the top of the inner elbow--close to the outside of the arm--to the end of the thumb, and then back towards the shoulder until you reach the neck line.

c. Back of the Hand

Raise the left arm, palm down, and hit from the side of the elbow down to the tip of the middle finger and then back to the shoulder once again.

d. Pinky Line

Lower your left arm in front of you, thumb pointing down, palm facing out vertically so that the small finger is on top. Hit from the base of the elbow to the tip of' the pinky finger, and then back up to the posterior of the collarbone.

You may apply the device to the other arm now, or you may hit the lines of the left leg before using these procedures on the right arm and leg.

7. Lines of the Legs

Avoid kneecaps, toes, and ankle bones when Hitting with the rattan sticks.

a. Middle Line

Hit from the top of the left leg--where it joins the body in front--down to the tips of the toes, and then back up to the starting point.

b. Big Toe Line

Men should cover the genital area. Hit the inner leg from the inner thigh down to the inside of the big toe, and then back up to the starting point.

c. Small Toe Line

Hit the outer left leg from the hip joint down to the small toe, and then back up to the starting point.

d. Back of the Leg

Hit from the buttocks to the heel of the left foot, emphasizing the back of the knee, then return up this route to the starting point. Hit the back of the knee three more times to finish the left leg. You may now reposition the Hitting device and begin the process on the same four lines of the right leg, or on the right arm and leg together.

8. Soles of the Feet (“Bubbling Spring”)

You may sit in a chair to hit the soles of the feet. Hit each from nine to 36 times, rest, and absorb the energy.

Chapter V
Chi Weight Lifting

Warning: Chi Weight Lifting is included in this text solely for the documentation of its procedure to serve as a guide for instructors and trained students of the Universal Tao. It is not intended for beginning students. Universal Tao cannot and will not be held responsible for any reader of this book who attemps Chi Weight Lifting without first receiving qualified instruction from the Universal Tao. Even trained students must thoroughly master the exercises in Chapter Three before practicing Chi Weight Lifting.

The ancient Taoist masters discovered that the genitals were connected to the organs and glands in an area of the perineum called the "Chi Muscle," which encompasses the anal, perineal, and pubic coccygeal muscles. (Fig. 5.1) With this knowledge they developed the Healing Love techniques, using the Chi Muscle to create an upward flow of sexual energy into the higher centers of the body. They eventually learned to increase this Chi flow by developing the "fasciae," which are connective tissues engaged by the organs and glands to lift weights externally anchored to the genitals in the Chi Weight Lifting practice. (Fig. 5.2) The beneficial aspects of strengthening the internal system through the fasciae became an integral part of Bone Marrow Nei Kung.

Originally men accomplished Chi Weight Lifting by placing stones in a basket and hanging the basket from their groins. Today, male and female Taoists use light weights to draw a special formula of sexual energy from the genitals upward into the body. This sexual energy, or Ching Chi, is combined with external energy and compressed into the skeletal structure through the methods described in this book. As sexual energy transforms into life-force energy, Chi Weight Lifting enhances the life-force of the men and women who practice it. The genitals are replenished by the rejuvenated organs and glands as the transformed energy returns through the Microcosmic Orbit.

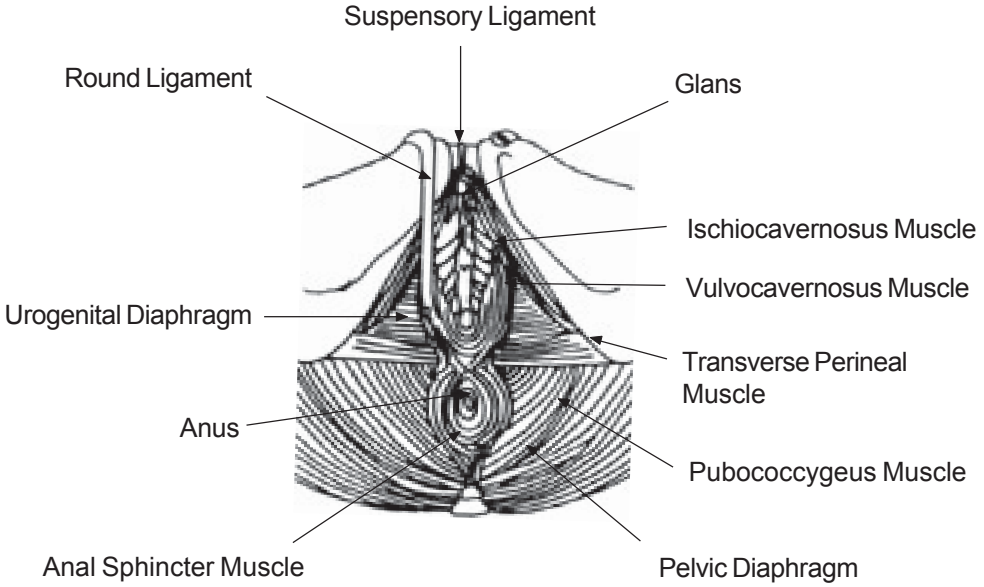


Fig. 5.1 *Chi Muscle includes the urogenital diaphragm, the pelvic diaphragm, the anal spincter muscle, and the pubococcygeus (PC) muscle.*

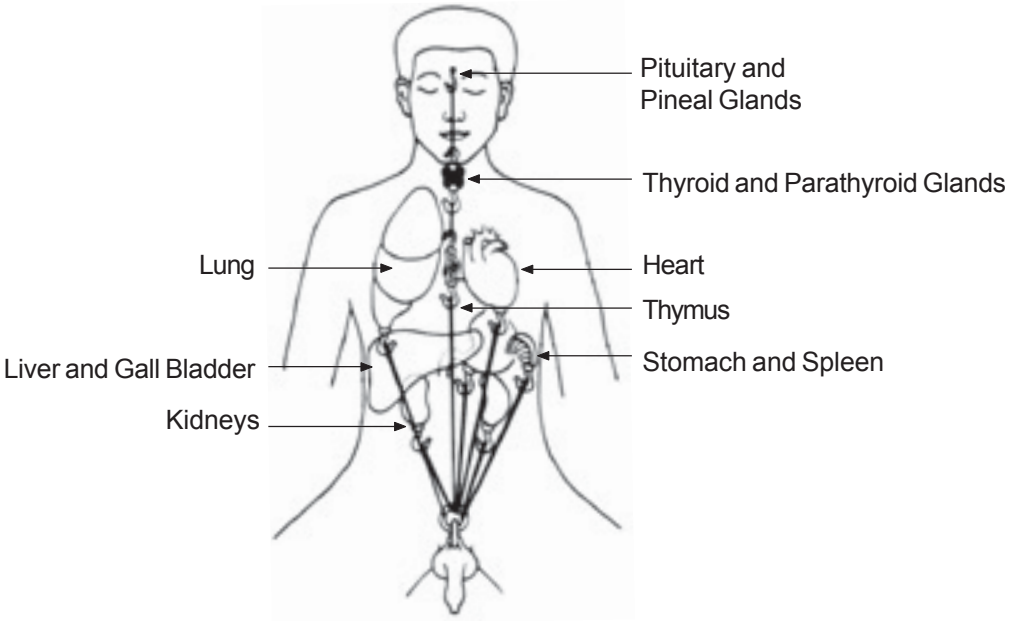


Fig. 5.2 *Sexual organs are joined to all of the organs, glands, tendons, and muscles.*

A. Applications for Chi Weight Lifting

1. Strengthening the Fasciae Network

An upward counterforce is created by the internal organs and glands to resist the weight placed upon the genitals. This force is strengthened by the Chi released from the sexual center as the internal system engages the fasciae to pull up against the weight. The fasciae, therefore, contribute greatly to the distribution of energy. They also serve as the connection between the genitalia and the pelvic and urogenital diaphragms. When this connection is loose, the Chi Muscle and the diaphragms allow the organs to drop their weight onto the perineum, thereby reducing the Chi pressure. When the connection is kept strong, the organs and glands are held in place and the Chi pressure is maintained.

2. Chi Weight Lifting for Powerful Urogenital and Pelvic Diaphragms

The human body has many diaphragms holding the internal organs and glands in place, such as the thoracic, pelvic, and urogenital diaphragms. During Chi Weight Lifting these contribute greatly to the upward counterforce deployed against the downward pull of the weights anchored to the genitals. (Fig. 5.3) The pelvic and urogenital diaphragms, considered the floor of the organs, and the Chi Muscle, are all strengthened by this practice which helps to prevent any loss of energy through them. Their increased strength also helps to alleviate the protruding abdomen caused by organs stacking up on the pelvic area. (Fig. 5.4)

Chi Weight Lifting is credited with many other benefits related to the improved functioning of the diaphragms, such as the lifting of dropped kidneys. Furthermore, the practice helps to seal the openings of the anus and sex organ to prevent the leakage of Chi. Taoists believe that this helps to redirect the spirit away from these openings as one prepares to finally leave the body. The upward flow of energy that is developed through Taoist practices will point toward the crown as the proper exit for the spirit to use at the end of life.

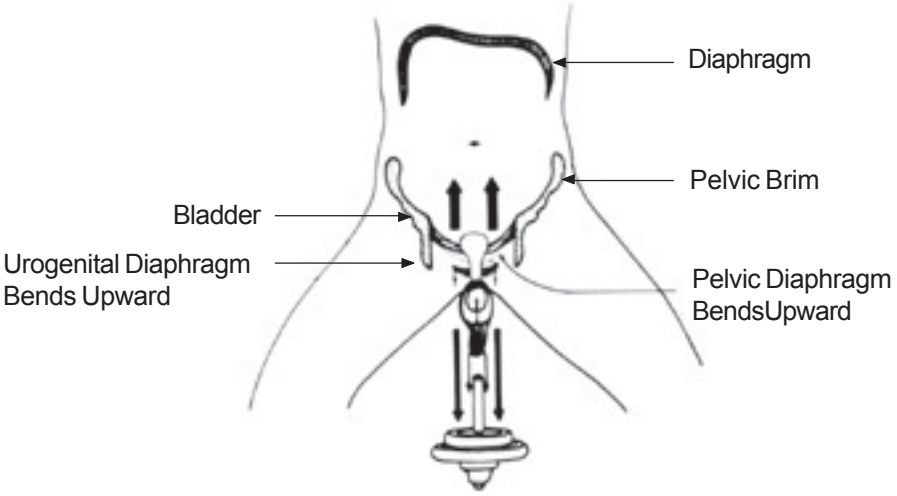


Fig. 5.3 *Pelvic and urogenital diaphragms provide counterforce to the weights.*

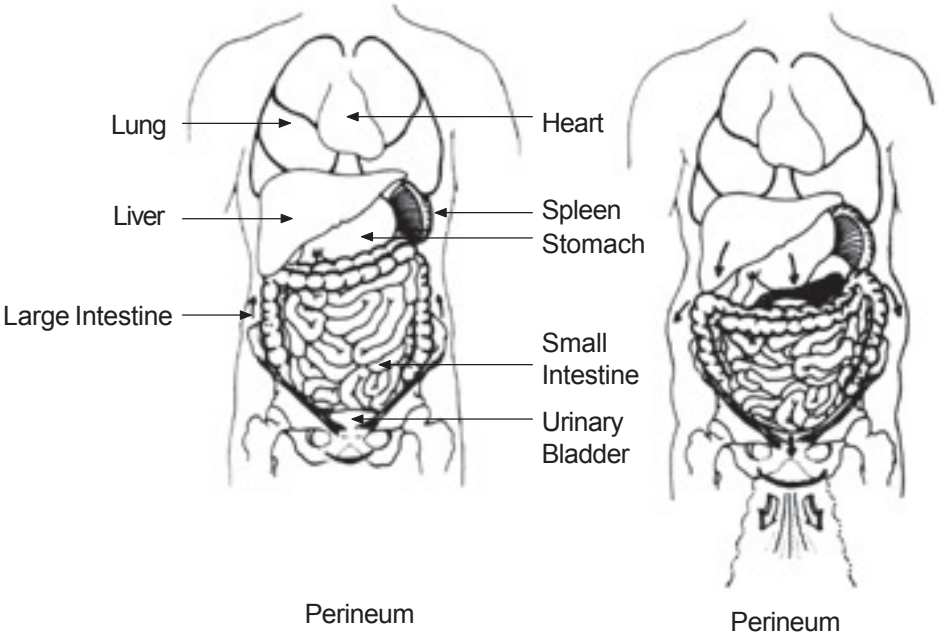


Fig. 5.4 *Organs*

3. Sexual Hormones Delay the Aging Process

The release of sexual hormones stimulates the pituitary gland to prevent the production of an aging hormone. It has been proposed that one function of this gland may be to measure the growth of mutated reproductive cells. Scientific studies have found some evidence that the aging hormone is released when these mutations are allowed to increase beyond a certain level. Theoretically their growth should he impeded by a healthy reserve of sexual hormones. Otherwise, upon sensing the reduced presence of Ching Chi within the body, the pituitary gland can cause a premature death by producing the aging hormone. It is therefore wise to maintain sexual energy and hormones through the Taoist practices.

4. Sexual Hormone Stimulation of the Brain

The right side of the brain is also influenced by the sexual hormones to promote the healing and rejuvenation of the body. Since Ching Chi revitalizes the internal system and regrows the bone marrow, hormonal stimulation of the brain greatly enhances these processes. This effect also serves Taoist spiritual work because practitioners find it to he an invigorating experience on all levels. The health of the body and the mind directly affects the spirit.

B. Equipment and External Preparations

1. Cloth for the Massage and Lifting the Weight

Men and women use a silk cloth for the Sexual Energy Massage techniques to increase the flow of Chi and blood in their sexual centers. Silk works well because it develops considerable static energy when rubbed. This is important for the stimulation of Chi in the sexual organs, perineum and sacrum. Women also use the cloth to massage their breasts. Men use the cloth after the massage techniques to lift the weight from a special holding apparatus.

Men: Two sizes of cloth can be used to lift the weight, depending on the method chosen for practice. The smaller cloth, which is used for lifting the weight from a table or chair, should measure approximately three and one-half by eight inches. If you choose to

lift the weight from the floor, the length of the cloth can very according to the length of your legs. When the cloth has been cut to size, you can sew the edges to prevent unraveling and to avoid abrasions of the skin.

2. Equipment for Men and Women

a. Equipment For Men

Men require a special device by which the weight can be held to the cloth. (Fig. 5.5) Cut a ten inch length of galvanized pipe for an apparatus to be used from the floor. Cut an eight inch length for an apparatus to be used from a chair. (Either size is adaptable to either method if necessary.) Drill a one-quarter inch hole through the pipe one-half inch from either end.

Secure a piece of chain two links long to the pipe with a one quarter inch bolt inserted through the hole and fastened by a nut and washer at its end. At the end of the chain, a heavy ring one and a half inches in diameter is attached. Several types of clamps may be used on the opposite end of the pipe to hold the weights. After the silk cloth has been tied gently, but firmly, around the groin, it can then be attached to the ring in order to lift the entire weight-holding apparatus.

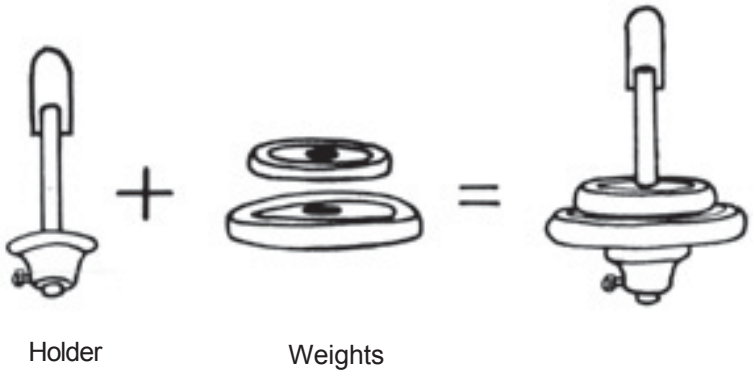


Fig. 5.5 *Weight lifting device for men.*

Some men can begin Chi Weight Lifting with a two and one-half pound weight; however it is safer to start with the apparatus alone, or with one or two weight clamps attached to it. (These are used in standard barbell sets.) If you use two weight clamps, their weight should equal one pound, plus the weight of the apparatus itself. Some stores that carry sporting equipment sell one and a half pound weights. Add on more weight gradually, but only as much as you feel comfortable with. Do not advance to higher weights unless you can lift the current weight easily for one minute.

b. Equipment for Women

Women require a special egg drilled lengthwise for the insertion of a string which holds the weight. (See Chapter Three.) The egg is inserted into the vagina, large end first, with the string tied to the weight. Squatting may make it easier to insert the egg as the weight rests on the floor. The weight is then lifted and swung like a pendulum. Jade eggs are recommended. Obsidian eggs can also be drilled to accommodate the string, but they may require a diamond drill bit.

It is recommended that all eggs be drilled, even if weights are not used, because the string can help in removing the egg. Jade eggs are preferable because they are sturdy, smooth, and non-porous. You may also find that jade eggs are far less expensive. Wooden eggs, or any eggs with painted or chemical finishes should be avoided. Prior to Chi Weight Lifting, training with the egg should begin with the techniques explained in Chapter Three. The egg exercise must first be mastered without any weight.

Women can begin Chi Weight Lifting with a one-half pound weight, gradually adding one-half pound at a time. A string can be tied to the men's weight lifting apparatus, first using the bar alone as a trial weight. (Fig. 5.6) (Light weights are also available that can be tied directly onto the string without the bar.) Later, try using the men's apparatus with one or two weight clamps. which are used in standard barbell sets. Finally, when you are ready, try lifting the apparatus with a weight held on by one of the clamps. It is better to lift lighter weights for longer periods than heavier weights for shorter periods. Never exceed one minute.

Fig. 5.6 *Women can begin lifting by using the lifting apparatus alone.*

3. Preparations for Men and Women

After learning one of the tying methods, or how to use the egg, test yourself with the weight-holding apparatus before you add any weights to it. If it feels light to you, begin adding the weight clamps. Later, you may start adding standard weights. When you are ready, you can increase the w·eight until a maximum of two and a half pounds Is reached. ***Do not attempt to exceed this level on the first day.*** Instead, try to sustain the weight for longer periods, but less than a minute, to release more energy.

Swinging the weight will gently increase the pressure. This is preferable to increasing the weights too fast, or to lifting them too long. Each swing back and forth can be counted as one second.

Practice at each level until you can easily lift the weight for up to 60 seconds. Men must be careful not to cut off the circulation to the testicles. Lifting for more than a minute can impede circulation.

The room in which you practice should be quiet and well ventilated, hut not cold. Keep a hard chair available for your meditation and as a place to rest the weight, unless you lift from the floor. As suggested earlier, the best time for these exercises is the morning after you shower and relieve your bladder and bowels. If you can, face the sun as you practice in the early morning hours, but never look directly into it at any time.

C. Starting the Practice

1. When to Start

Men: In determining when it is safe to begin Chi Weight Lifting, consider the condition of your testicles and scrotum. If the scrotum is very loose and hanging weakly and the testicles feel weak, practice only the massage techniques. Do not practice Chi Weight Lifting. If the testicles are too tight and close to the body, none of the tying methods will work. Massage the testicles until they loosen.

The optimum condition for weight lifting is when the testicles are slightly loose, but firm. The strength of the testicles can be felt internally rather than with the fingers. In other words, when they are massaged their resilience and ability to withstand the massage without pain will indicate their condition. A slight pain from the first massage may be the result of a beginner's apprehensions. Do not begin to practice weight lifting until you are comfortable emotionally as well as physically.

Women: There is less danger for women in the Chi Weight Lifting practice. You are ready when, after massaging the breasts and genitals, the vagina is moist with secretions. If not enough moisture is present, prepare the vagina with a natural lubricating cream. Women can feel reasonably safe with these practices--provided that the egg and string are kept sanitary--because the weight can be easily released if it proves too heavy to lift.

2. Weight Lifting Goals

The Universal Tao does not recommend anyone try to lift over ten pounds without supervision. On the basis of this book; ten pounds should be considered the absolute maximum goal. Women may find that their lifting capabilities are slightly different because they have no way to anchor the weight and are therefore more dependent upon internal power. It is certainly no shame for men and women to lift less than the one or two pounds recommended for beginners. If you choose to lift beyond five pounds, exercise more than the usual caution.

Warning: Lifting heaver weights without supervision is both foolish and contrary to the recommendations of this book. In systems where excessive weights are used for practice, broken veins or blood clots have occurred in some overzealous men, resulting in serious injury. (There are no statistics available concerning possible deaths that may have occurred). Further instruction in Bone Marrow Nei Kung is necessary for Chi Weight Lifting with heavier weight. Contact the Universal Tao Center for information on advanced instruction.

D. Genital Massage and Preparatory Exercises for Men and Women

1. Massage Techniques

Review Chapter Three for the Cloth Massage and Sexual Energy Massage practices. These stimulate internal energies and prepare the genitals for the role at hand. (Fig. 5.7) First, the silk cloth is applied to the sexual center, perineum, and sacrum to activate the Chi. Men should feel the testicles fill with energy as they become firm. Women should feel the breasts enlarge slightly as the vagina becomes moist with secretions. The Sexual Energy Massage techniques should then be used to condition the genitals for Chi Weight Lifting. After the weights are removed, the massage techniques must be repeated to restore the circulation of blood and Chi to the sexual center.

Men: Although not all six techniques are required the Sexual Energy Massage must be emphasized by men after the weights have been removed to ensure that the genital area will be clear of any blood coagulation which can lead to blood clots.

Fig. 5.7 *Cloth Massage*

2. Outline of Pre-Chi Weight Lifting Exercises

Review Chapter Three for the practices listed here. Both men and women should specifically review the Power Lock which is used before the Sexual Energy Massage and again immediately after the weights have been removed. The Kidney and Chi Pressure exercises are included herein.

Men:
(a) Increasing Chi Pressure Exercise
(b) Increasing Kidney Pressure
(c) Power Lock-two or three times up to the Crown
(d) Cloth Massage
(e) Finger Massage of the Testicles
(f) Palm Massage of the Testicles
(g) Ducts Elongation Rubbing
(h) Stretching the Ducts Gently with Massage
(i) Stretching the Scrotum and Penis Tendons
(j) Tapping the Testicles

Women: (a) Increasing Chi Pressure exercise
(b) Increasing Kidney Pressure
(c) Power Lock-two or three times up to the crown
(d) Cloth Massage
(e) Breast Massage
(f) Massage the Glands with Accumulated Chi
(g) Massage the Organs with Accumulated Chi
(h) Massage the Ovaries
(i) Egg Exercise (optional)

a. Increasing Chi Pressure

Before you initiate the Power Lock exercise, you should be certain that the abdomen is full of Chi. Place the middle finger of each hand about one and one-half inches below the navel. Concentrate on the Lower Tan Tien as you inhale Chi into it, expanding the point with the resulting pressure. Your mental power increases the energy flow to this area. Exhale, and release the pressure. (Fig. 5.8) Repeat this exercise up to 81 times.

Fig. 5.8 *Inhale and Exhale up to 81 times to the lower abdomen to increase Chi pressure. Use the fingers to press in.*

b. Increasing Kidney Pressure

Stand in a Horse Stance with your feet slightly wider than shoulder width. Rub your hands together until they are warm, and then apply their warmth to the kidneys by placing your energized palms on them from the back. (Fig. 5.9 (a) and (b)) Bend your upper body forward slightly as you inhale, and pull up the left and right sides of the anus as you draw Chi up to the kidneys. (Fig. 5.9(c)) Exhale, and deflate the kidneys. Follow this sequence up to 36 times, and finish by warming the hands and again placing them on the kidneys.

Fig. 5.9 *Increasing Kidney Pressure*

E. Chi Weight Lifting

Warning: Do not attempt Chi Weight Lifting without studying the precautions in Section F.

Students are expected to receive instruction before attempting Chi Weight Lifting; however, the following detailed synopsis will clarify this practice for novices. Students are not expected to remember every detail. In advanced practice, the steps which follow are combined into a very brief exercise. Although the summary is concise enough to be used as a practice guide for trained practitioners, all practitioners are advised to first read the details.

1. Attaching the Weight--Men

a. Position of the Weights

Chi Weight Lifting can be initiated from either a kneeling or standing position. (Fig. 5.10) If you cannot kneel, set the weight on a chair in front of you. It may be necessary to relieve the pressure of the weights quickly at times, particularly if they are too heavy and the knot beneath the testicles is tight. For this reason, keep the weight close to a place where it can be quickly removed. Consider tying one end of the cloth to the ring while leaving the other end in a loop--folded beneath the knot--so that the knot will undo itself if that end is pulled.

b. Standard Method of Tying the Cloth

Warning: Do not tie the cloth around the testicles alone.

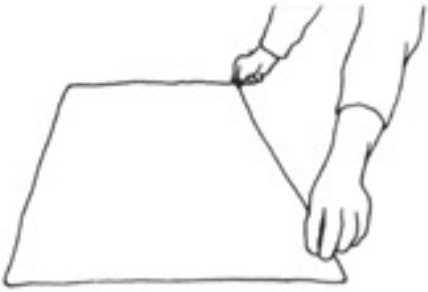
(1) Fold the cloth lengthwise several times to a width of about one inch. (Fig. 5.11) This creates a thick padding.

(2) Hold the cloth beneath the perineum, and bring it up behind the testicles. Be sure that the edge of the cloth is folded away from the skin so that if does not cut into the groin.

(3) Wrap both ends of the cloth upward around the penis and testicles, and secure the cloth at the surface of the penis base by tying a knot.

Note: If you prefer, you can place the cloth on top of the penis and tie the knot beneath the testicles. In either case, the knot must eventually be positioned at the perineum. (Fig. 5.12(a), (b) and (c))

Fig. 5.10 *Chi Weight Lifting can be initated from either a kneeling or a standing position.*



(a) Lay the cloth flat.

(b) Fold it in half with the edges matched.

(c) Fold it in half again.

(d) Fold it again into a thick strip of padding.

Fig. 5.11 *Folding the Cloth*

(4) Move the knot behind the testicles and beneath the perineum. The ends of cloth should hang to the floor. Before tightening the knot, you can use one end to create a loop between the knot and the groin so that the cloth and apparatus can be quickly removed.

(5) Contract the muscles of the undertrunk and tighten the knot. The penis and testicles should bulge slightly from the pressure to insure against slippage. Do not cut off the circulation to the testicles.

(6) Tie one end of the cloth to the weight that you have placed on the floor, or on a chair. (Fig. 5.12 (d), (e) and (f)) If the weight is on the floor, tie the cloth to it from a kneeling position.

(7) To remove the weight at the end of practice, kneel in front of the chair--or near the floor--and untie the cloth attached to the holding apparatus, then remove the cloth from the groin.

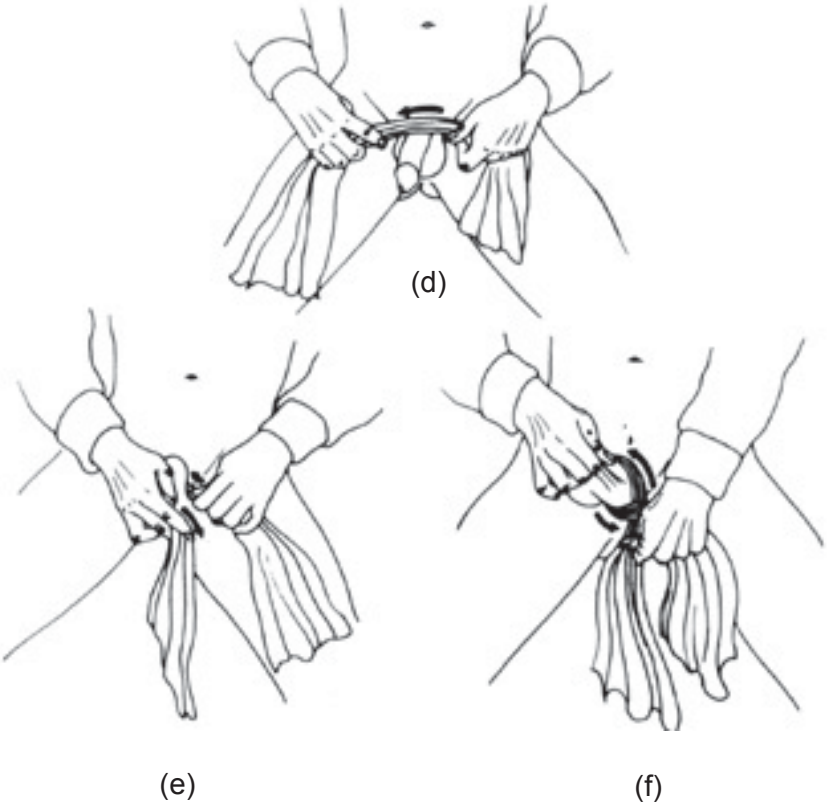


Fig. 5.12 *Tying the Silk Cloth around the genitals.*

2. Attaching the Weight--Women

Note: The Internal Egg Exercise described in Chapter Three can be used as a preparation for Chi Weight Lifting. During the actual lifting of weights, however, the egg is held deep inside the vaginal canal. Do not move it up and down, and do not release it.

a. Tying the String to the Weight

After the string has been passed through the egg and secured with a knot at the egg's large end, tie the weight to the string. The weight can also be placed inside a bag or container attached to the string. The weight holder prescribed for men can also be used, first without any weight, and then with the gradual addition of the holding clamp and the weight. Either place a chair in front of you and rest the weight on it, or place the weight on the floor and squat down to facilitate the egg's insertion. (Remember to hold the weight with your fingers as you stand up.)

b. Inserting the Egg

After you have massaged your breasts and vaginal areas in the prescribed manner, kneel down near where the weight is resting, and insert the egg into the vagina, large end first. (Use a lubricant if necessary.) Close the vagina, contracting the muscles around the egg to hold it. (Fig. 5.13)

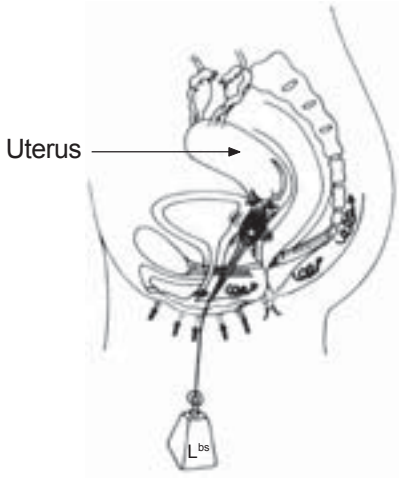


Fig. 5.13 *Vaginal Weight Lifting*

3. Testing and Lifting the Weight--Men and Women

(1) Slowly stand up, holding the cloth or the weight in your hand, and assume a weight lifting stance. (Keep the feet parallel at about shoulder width, and bend the knees slightly.) By using your index and middle fingers to test the weight, you can sense whether or not it is too heavy.

(2) Inhale a sip of air and pull up the anus, perineum, and genitals. Inhale again, and pull up both sides of the anus as you draw Chi into the left and right kidneys respectively.

(3) Press the tongue firmly up to the roof of your mouth to increase your internal power. Increasing pressure on this connection will accelerate the upward force of the Chi.

(4) Then, slowly release the cloth or the string from your fingers. You are now sustaining the weight from the sexual organ, and you should begin to pull against it using internal strength, particularly from the kidneys.

(5) With the fingers of one hand nearby, feel the pull of the weight, and determine whether or not your genitals can sustain it. Men in particular should be certain that they are reasonably comfortable.

(6) Inhale, pull up the right, left, front and back sides of the anus and wrap the energy around the kidneys. (Fig. 5.14)

(7) Gently swing the weight drawing the energy up to the coccyx, and then to the sacrum. You can practice up to the sacrum for the first few weeks. When you feel more energy you can gradually move it up the spine to T-11, C-7, the Jade Pillow, and all the way to the crown. When you are ready to store the energy press your tongue to the palate, and bring the energy down to the navel, completing the Microcosmic Orbit.

Note: Remember that in advanced practice, a separate round is used to lift the same weight from the internal organs and glands. Rather than remove the weight you may hold it as you rest between rounds.

(8) To finish the practice kneel as you place the weight on the chair again, or the floor, and remove the egg and weight holding apparatus. Men should untie the cloth after the apparatus has been removed. The Power Lock should be practiced immediately afterward.

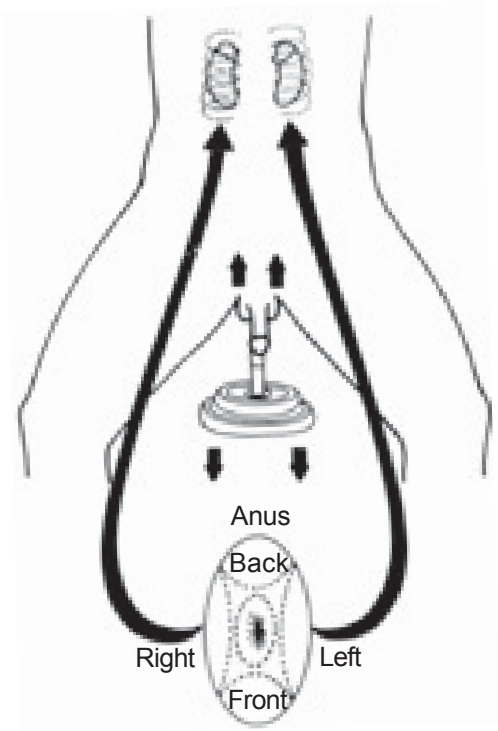


Fig. 5.14 *When you feel the pull of the weight, inhale and pull up the right, left, front, and back parts of the anus. Wrap the Chi around the Kidneys.*

a. Swinging the Weight

Swinging the weight gives the practitioner control over the amount of pressure on the groin, which is why lighter weights are recommended The Chi from the Fascial connection between the perineum and the kidneys is used to pull the weight. In the beginning swing the weights gently as you determine the amount of pressure that is comfortable for you.

Inhale as you contract the anus and perineum. Swing the attached weight from 36 to 49 times. Synchronize your breathing with each swing. Inhale as the weight swings forward, and exhale as it swings backward. (Fig. 5.15) Pull up against the weight internally with each forward swing, and draw the energy up to the coccyx, the sacrum, and, eventually all the way through the Microcosmic Orbit. (Fig. 5.16) Each completed swing back and forth should approximate one second.

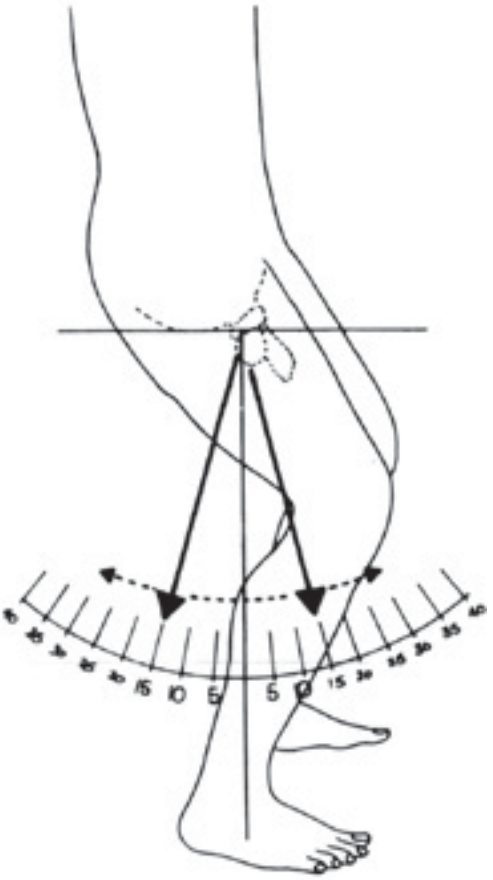


Fig. 5.15 *Swing the Weight at an angle between 15 and 30 degrees.*

After a week, try to swing the weight for 60 counts. More pressure results from the counter-force exerted by the Chi Muscle when heavier weights are swung, but it is wiser to increase this pressure with lighter weights by adding more power to each swing. The lighter weights should be used to their maximum potential, thereby strengthening the Chi Muscle and producing more hormones.

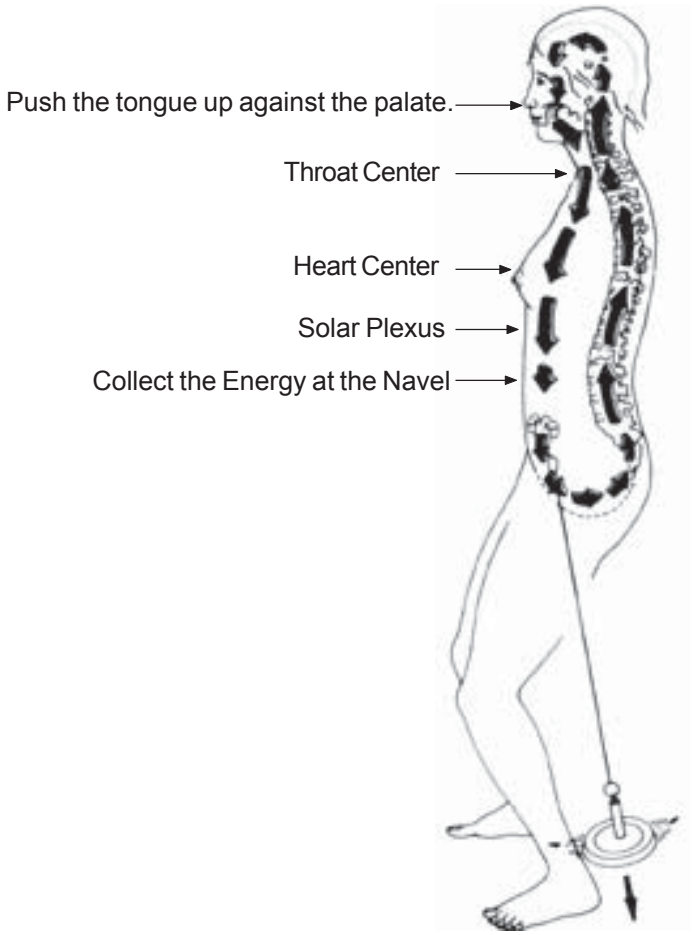


Fig. 5.16 *Circulate the Chi all the way around the Microcosmic Orbit and collect the energy at the navel.*

b. ***Finish with the Power Lock and Massage Techniques***

Practice the Power Lock for at least two or three rounds after releasing the weight. Then apply the Cloth Massage and the Sexual Energy, Massage techniques. Rest, and practice the Microcosmic Orbit Meditation to circulate the tremendous energy you have generated, finally collecting it in the navel.

4. Lifting Weights from the Microcosmic Orbit: Men and Women

After you have practiced for two to four weeks, and feel comfortable with Chi Weight Lifting, begin to lift the weight from the stations of the Microcosmic Orbit. As you bring the Chi up into the sacrum and higher centers, use this energy to pull the weight from each station, Take your time, and don't rush. Each point can take one or two weeks before you feel the flow of the Microcosmic Orbit working as part of the counterforce.

a. Step by Step Procedures

(1) Sacrum: When you lift the weights from the sexual organs, pull up the front, back, right and left of the anus to bring the energy up to the sacrum. (Fig. 5.17) Hold it there. Breathe normally, and gently swing the weights. Feel a line of energy from the sexual center up to the sacrum.

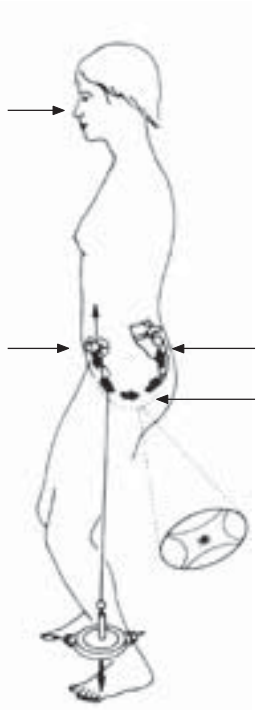


Fig. 5.17 *Swing the weight, pull the anus at the front, back, and left sides, and feel a line of energy between the sex organ and the sacrum.*

(2) Door of Life: Once you feel the Chi in the sacrum, bring it to the Door of Life on the spine, opposite the navel. (Fig. 5.18) Hold the Chi there, and continue to swing the weights. Every time you swing, pull up more.

(3) T-11 Point: From the Door of Life, bring the energy up to T 11 on the spine, opposite the solar plexus. (Fig. 5.19) Feel the line of energy as it moves up to T-11.

(4) C-7 Point: Pull the energy from the sexual center, passing it through the sacrum, Door of Life, T-11, and up to C-7 at the base of the neck. (Fig. 5.20) Feel the line of energy from the sexual organs up to C-7.

(5) Base of the Skull: Next draw the Chi through the sacrum, Door of Life, T 11, and C-7, and up to the base of the skull. (Fig. 5.21) Feel the line of Chi flow from the sexual organs up to the base of the skull.

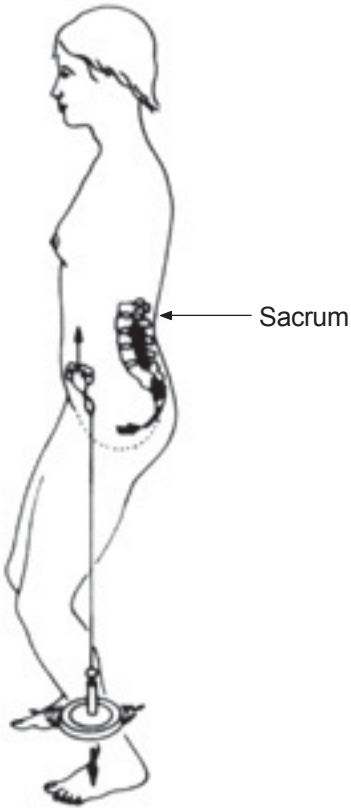


Fig. 5.18 *From the sacrum bring the Chi to the Door of Life (Ming Men).*

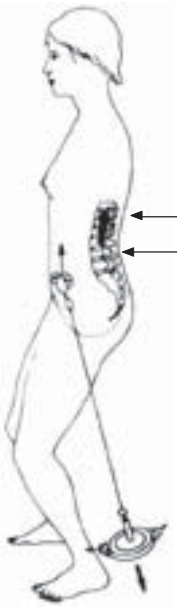


Fig. 5.19 *From the Door of Life bring the energy up to T-11 .*

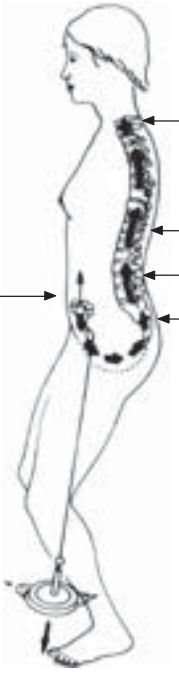


Fig. 5.20 *Pull the energy from the sexual center all the way up to C-7.*

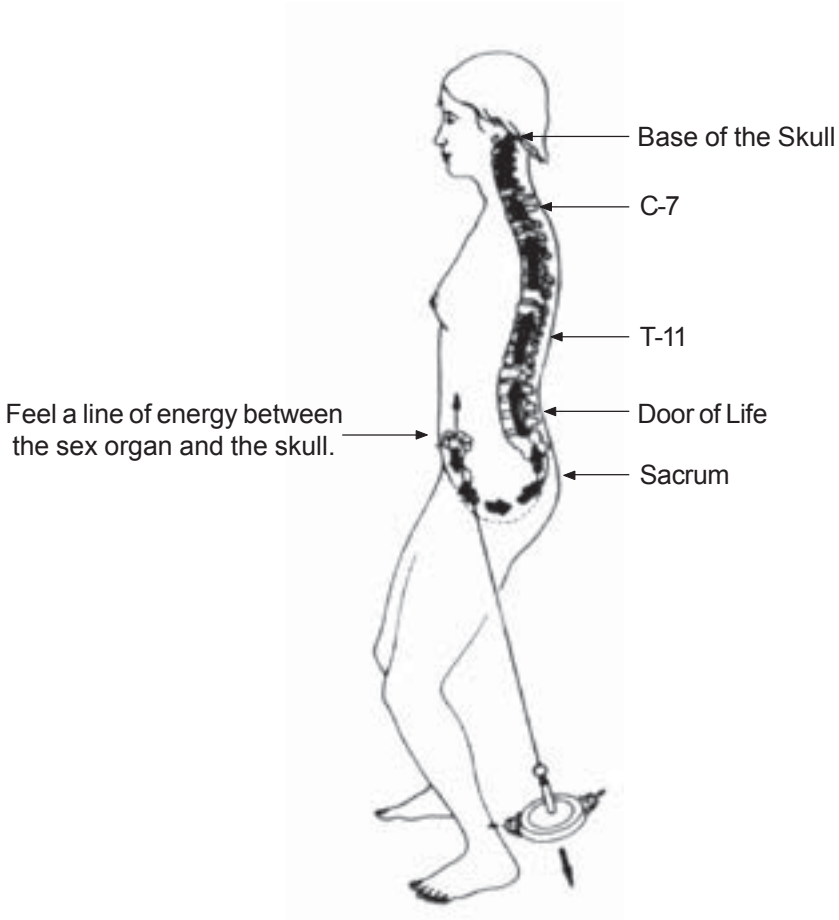


Fig. 5.21 *Pull the energy from the sex organ all the way up to the base of the skull.*

(6) Crown Point and the Pineal Gland: Draw the Chi up to the crown point where the pineal gland is located. (Fig. 5.22) Remember that the sexual glands are closely related to the pineal and pituitary glands. You may feel this connection as these glands are stimulated.

(7) The Third Eye: Bring the Chi to the "Third Eye" (mideyebrow), also called the "Crystal Room," where the pituitary gland is located. (Fig. 5.23)

(8) With the tongue on the palate, bring the Chi down to the throat center, the heart center, the solar plexus, and finally down to the navel. (Fig. 5.24) The overflow will spill back down to the sexual center.

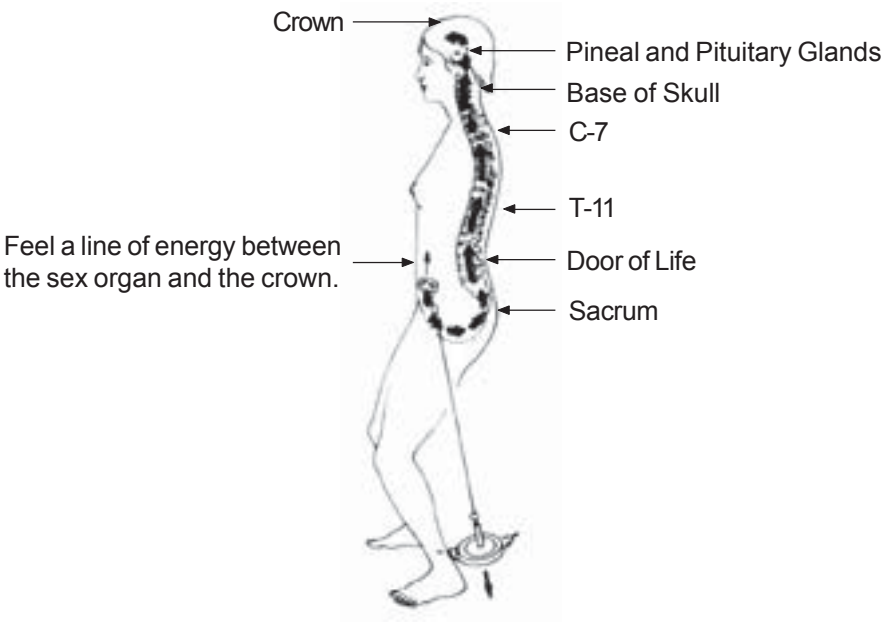


Fig. 5.22 *Pull the energy from the sex organ all the way to the crown.*

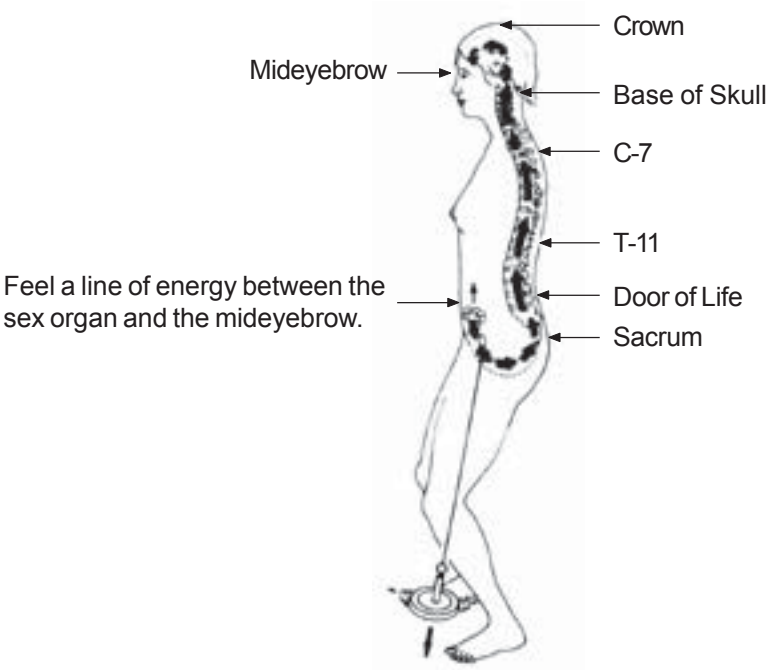


Fig. 5.23 *Pull the energy from the sex organ all the way to the mideyebrow.*

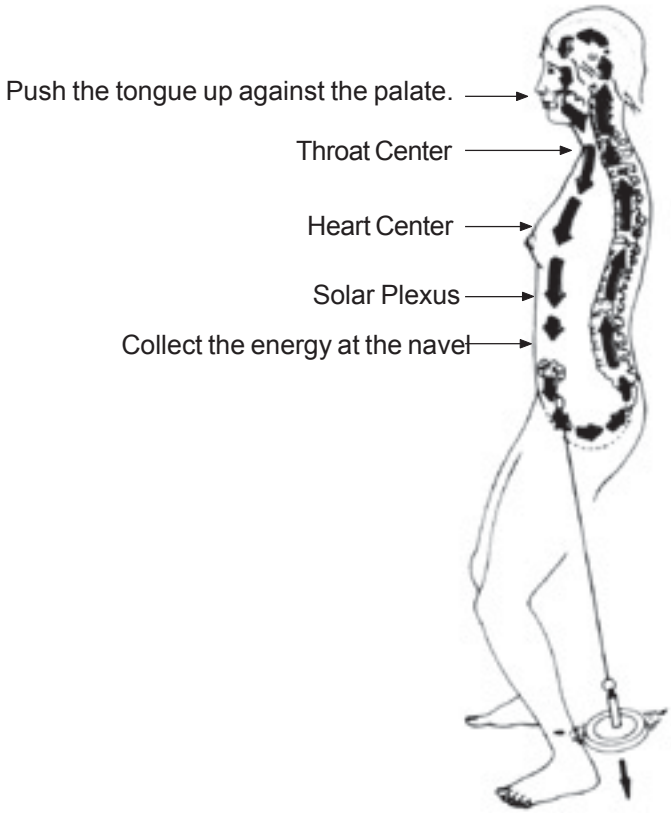


Fig. 5.24 *Circulate the Chi all the way around the Microcosmic Orbit and collect the energy at the navel.*

(9) At this point you have successfully brought the energy from the sexual organs up through the spine, over the top of the hand, down the front to the navel, and back again to the sexual organs, circulating it through the Microcosmic Orbit. This process refines and enhances Chi as it moves through the energy centers.

(10) Once the Microcosmic Orbit is open to the flowing sexual energy, all you need do is pull the energy up to the head, and then down to the navel through the tongue. Concentrate on drawing the energy, circulating it in the Microcosmic Orbit, and storing it in the navel. The Chi will flow very quickly through all the centers. You will no longer need to bring it up through the points of the spine one by one.

5. Advanced Chi Weight Lifting Using the Internal Organs: Men And Women

a. Kidneys Help Pull the Weight

In the beginning stages of Chi Weight Lifting, it is the power of the kidneys that provides real internal counterforce. (Fig. 5.25) Once you can feel that power, it becomes easier to tap the force of the other organs to help lift heavier weights. As you begin to increase the weight, start to use the strength of the other organs and glands to increase the upward counterforce. The main secret of internal power is to press the tongue against the roof of the mouth as you direct the force of the organ's energy toward it.

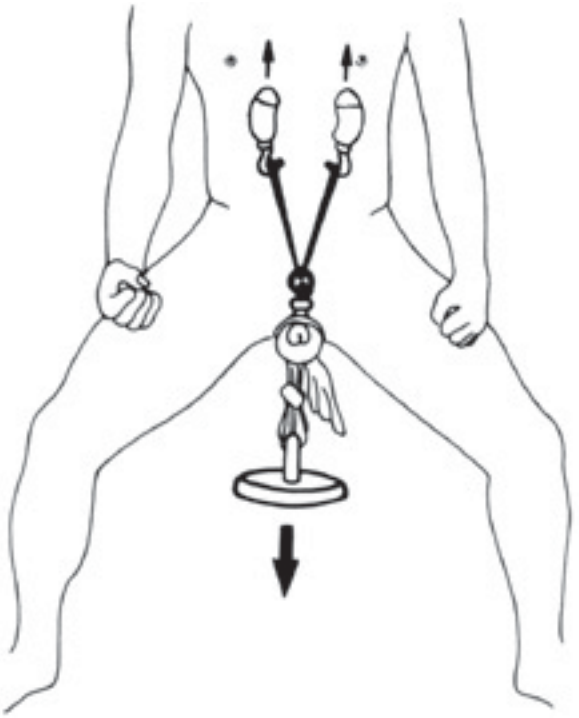


Fig. 5.25 *In the beginning stages of Chi Weight Lifting it is the kidneys that provide the internal counterforce.*

(1) Always begin by pulling the energy up to the head several rimes to make sure of its flow within the Microcosmic Orbit.

(2) Inhale with small sips, pull up the left side of the anus, and spiral the energy to the left kidney. Inhale again, pull up the right side of the anus, and spiral the energy into the right kidney. (Fig. 5.26) Hold the energy there, and feel the Chi in the kidneys pull up towards the tongue, resisting the weight. Some people report that they can immediately feel the kidneys as they help lift the weight.

(3) Exhale, maintaining the pulling action of the perineum and kidneys, and then breathe normally. With each swing, pull up more on the sexual organs and kidneys. Practice from 36 to 49 swings. Untie the weight, massage the sexual organs, and start Hitting.

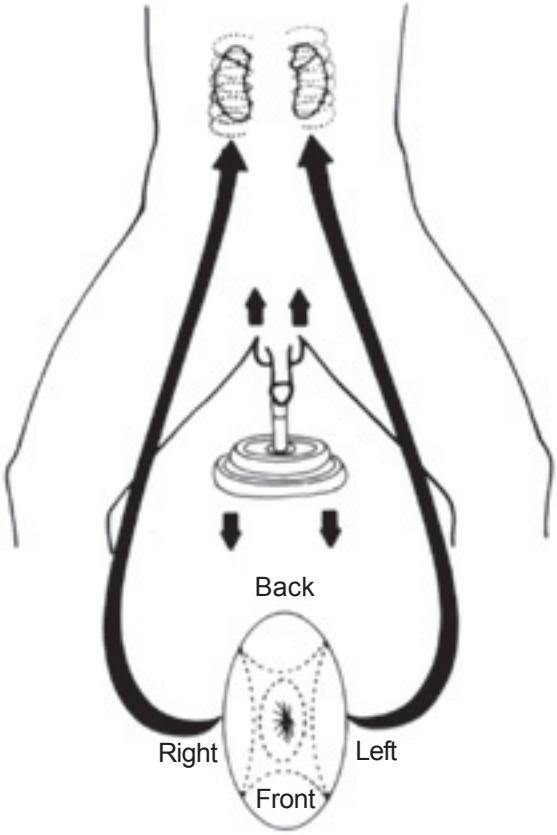


Fig. 5.26 *When you feel the weight, Inhale and pull up the right and left side of the anus. Wrap the Energy around the kidneys.*

b. Spleen and Liver Pull the Weight

Note: Always keep the chest relaxed during these procedures. You can practice lifting from the spleen and liver as a separate exercise, or together as one exercise.

(1) Spleen: Start again on the left side by pulling up the left side of the anus and perineum. Become aware of the spleen situated beneath the left side of the rib cage. Contract the left anus, and pull the Chi up to the spleen and left kidney with one more sip. Wrap the Chi around and into the spleen. (The spleen is located toward the back, slightly above the left kidney and adrenal gland.) Keep the tongue pressed to the roof of your mouth. Then, as you feel its connection to the genitals, pull the spleen energy up towards the tongue, Lift the genitals thereby lifting the weight.

(2) Liver: Practice the same procedure on the liver, which lies under the right side of the rib cage. Pull up the right side of the anus and perineum. First draw the Chi up to the right kidney. Then become aware of your liver, and pull the Chi up to it twice. Pack and wrap the liver with Chi. Pull the energy toward the hack, near the right kidney and adrenal gland. Push the tongue against the roof of your mouth. Then, as you feel its connection to the genitals, draw the liver energy up to the tongue. Pull up the genitals, thereby lifting the weight.

(3) Combine the procedures of the spleen from the left side and the liver from the right side in order to help lift the weight. (Fig. 5.27) Pull their combined energies up towards the tongue.

C. Lifting with the Lungs

Lifting a weight with the lungs is an advanced procedure and is more difficult than lifting with other organs and glands. Before you try to apply Chi Weight lifting using the lungs, practice pulling energy up to each of the lower organs in succession, drawing the organ energy up toward the tongue. Pull up the Chi of the lower organs until you actually feel each lung contracting. Each step should first be practiced separately. Later, all of the steps can be combined into one practice. The procedure is as follows.

(1) First draw the Chi up from the sexual center through each of the organs and glands in succession, Lift with the kidneys, the spleen, and then with the left lung as the Chi reaches it. Inhale, and expand the upper left stomach near the left rib cage. Inhale again, and pull the stomach in toward the spine, up to the left rib cage,

and then to the left lung. Push your left shoulder and side slightly towards the front.

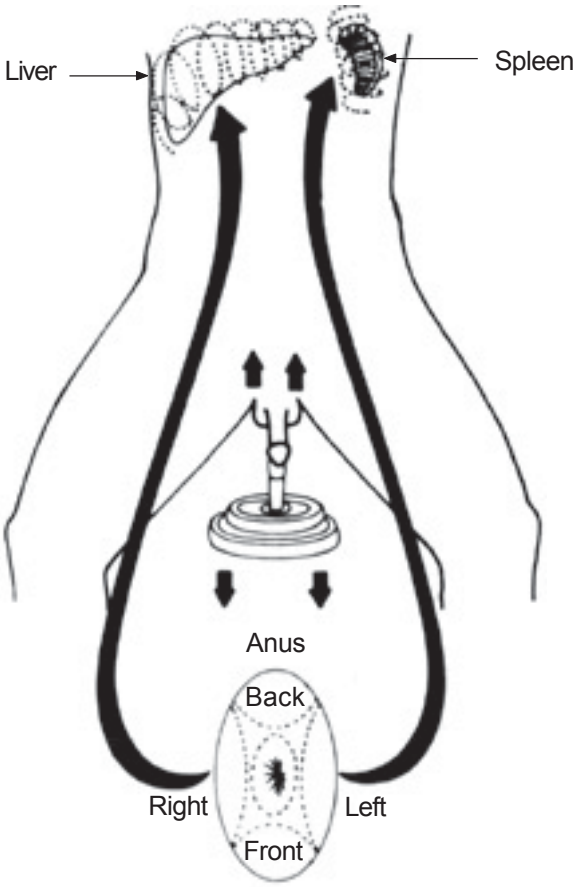


Fig. 5.27 *Inhale and pull up the right side of the anus, directing the energy to the liver. Inhale and pull up the left side of the anus, directing the energy to the spleen, Wrap the energy around these organs.*

(2) Inhale a sip of air pull up the left anus toward the left lung as you pull up the sexual organs. Pull up the left kidney, and then pull up the spleen. Feel the left kidney and the spleen assisting the left lung. Contract the muscles around the left lung, and draw the Chi up to and around that lung through the lower organs.

(3) Pull the Chi up from the left side of the anus to the bladder, left kidney, adrenal gland and spleen until you feel the lung contracting. Feel all of these organs in a line between the lung and

the genitals. Use the organs to pull up towards the tongue. Push your tongue hard against the roof of your mouth as you draw the Chi up through the organs to the left lung.

Use the same procedure with the right side until the same line can be felt passing through the associated organs, such as the liver, to your right lung. When you feel the fascial connection to the genitals, use all of the lower organs to pull the genitals up toward the lungs, helping them lift the weights. Once you can exert this power from the lungs, you may eliminate the procedure of expanding the stomach area. (Fig. 5.28)

Note: Don't use force. Use your Chi to lift the weight in conjunction with light muscular action and strong mental power.

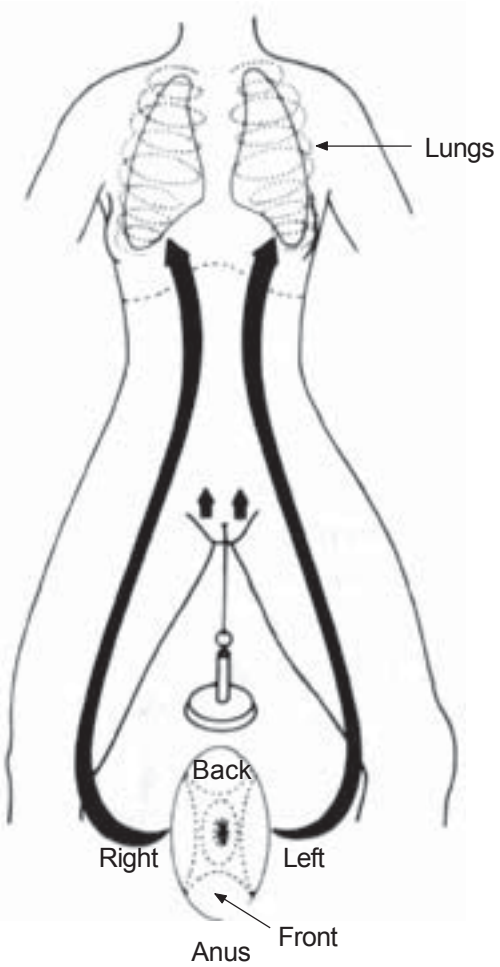


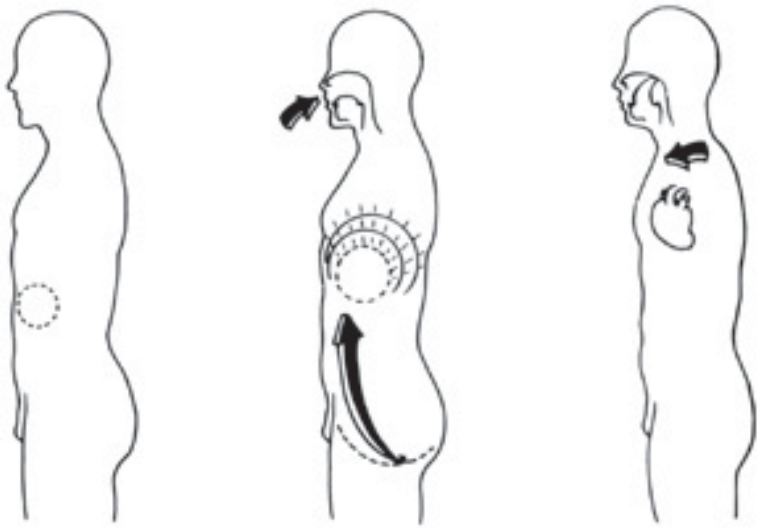
Fig. 5.28 *Inhale and pull up the right side of the anus, directing the energy to the lungs. Wrap the energy around the lungs.*

d. Lifting with the Heart--Cautiously

As you progress to the heart, be sure that you are in control of the other organs first. The heart and lungs can easily become congested with energy causing chest pain and difficult breathing. If you have this problem, tap the area around the heart and practice the Healing Sound associated with that organ. (The Six Healing Sounds are described in Appendix I and in the book, *Taoist Ways to Transform Stress into Vitality*.)

Before lifting the weight, practice drawing up the Chi and wrapping it into and around the heart. Proceed as follows with caution:

(1) Create a ball of energy in the center of the stomach, above the navel. Inhale a sip of air, pull up the front part of the anus, and expand the "Chi Ball" upward towards the rib cage. Inhale another sip, draw the Chi Ball inward, and then pull it up under the sternum. Expand it under the sternum towards the back and to the left side. Push your tongue up against the roof of your mouth, push the left shoulder towards the front, and feel your heart. (Fig. 5.29) Slowly exhale, and regulate your breath.



1. Create a ball of energy above the navel.

2. Inhale and pull up the front part of the anus, and expand the "Chi Ball" beneath the sacrum.

3. Press the tongue against the roof of the mouth and push the left shooulder forward. Feel the heart.

Fig. 5.29 *Chi Ball*

(2) When you are well practiced, eliminate the step of expanding the stomach area. Simply inhale in sips, pull up the front part of the anus as you pull up the sexual organs. Pull up the stomach to the rib cage, and pull the Chi to the heart, using the power of the heart. Wrap the Chi into and around the heart.

(3) Pull up the genitals, bladder, kidneys, liver and spleen towards the tongue. Contract the muscles around the heart and lungs, and successively pull the Chi up through each of the lower organs. Start lifting with the lower organs, and draw the Chi upward through each of them to reach the heart.

(4) When you are ready to practice Chi Weight Lifting from the heart, simply pull up the front part of the anus, the genitals, bladder, kidneys, liver, and spleen to the heart. (Fig. 5.30) Employ the power of the heart and lungs to help the other organs and glands pull against the genitals, thereby lifting the weight.

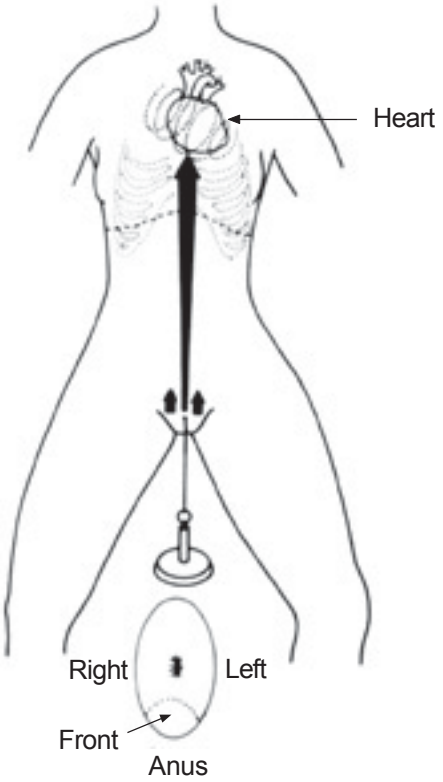


Fig. 5.30 *Pull up the front part of the anus and directing the energy to the heart.Wrap the energy around the heart.*

e. Thymus Gland adds Power to the Heart and Lungs.

Sink the sternum to the back as you exhale, and push the lungs towards the thymus under the sternum. Then connect the Chi of the heart to the thymus, which is in close proximity to the heart. Contracting the muscles around the thymus, heart and lungs will greatly increase their combined force, enabling them to draw Chi up through the lower organs, pull up the genitals, and lift the weight. (Fig. 5.31)

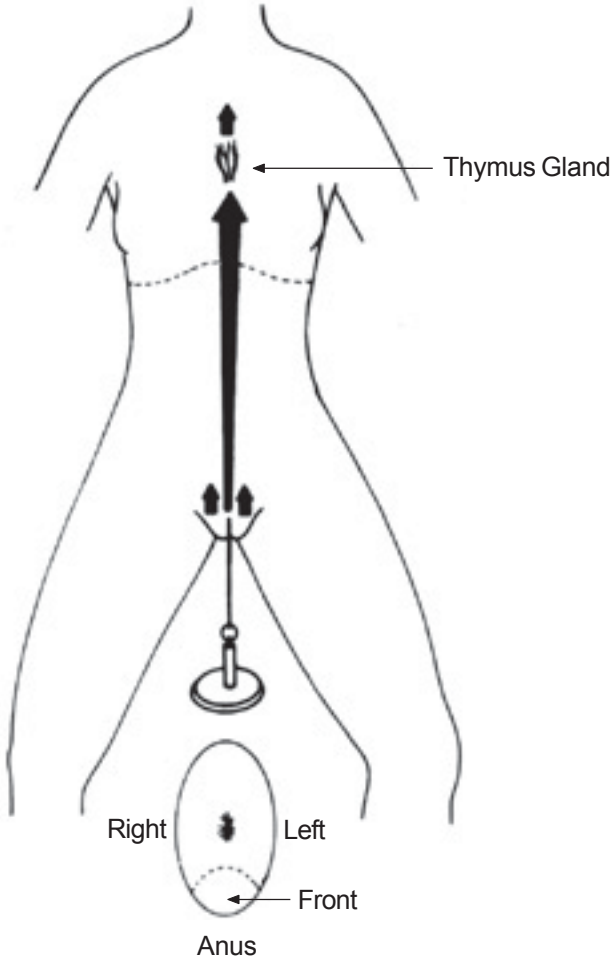


Fig. 5.31 *Pull up the weight by contracting the thymus.*

f. Pulling from the Pituitary and Pineal Glands

The tongue and eyes act as major tools in exerting control over the pituitary and pineal glands.

(1) Practice first by pressing the tongue to the palate, and turn the eyes upward.

(2) Contract the eye muscles towards the middle of the brain to the pituitary gland.

(3) Contract the cranium from all sides: Squeeze in from the crown, the base of the lower jaw near the throat, the front, back, and left and right sides of the skull, gently compressing the center of the brain. Concentrating on the center point behind the "third eye," prepare to draw the energy up to the pituitary gland. (Fig. 5.32) You are using the muscles of the skull to increase the pressure on this area.

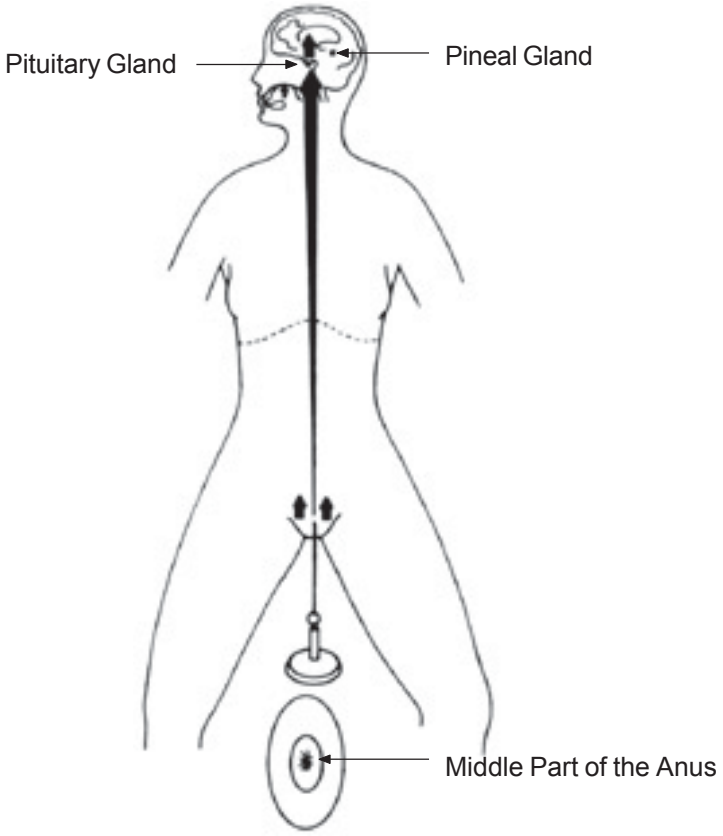


Fig. 5.32 *Contract the middle part of the anus, and pull up all the way to the brain. Lift the weight by contracting the pituitary gland.*

(4) Contract the middle part of the anus, and pull the Chi all the way up into the brain.

(5) Contract the lungs, heart and thymus gland, and push their energy up towards the center of the brain. The pituitary gland pulls energy from the thymus gland, heart, lungs, spleen, liver, adrenal glands, kidneys, bladder, and sexual organs. All of these parts will then work together to pull up the weight.

(6) Repeat the practice, now focusing on the pineal gland at the crown of the head.

g. Circulate the Microcosmic Orbit

Since all the steps of this exercise are extremely powerful, use caution. The Microcosmic Orbit meditation is a very important safety measure. When finished with all of these steps, circulate the energy in the Microcosmic Orbit several times, collecting it in the navel. Finally, remove the weight.

6. Finish Chi Weight Lifting

After you have released the weights, practice the Power Lock two or three times up to the crown, and massage the sexual organs again. First massage the genitals, sacrum, and perineum with the cloth, then practice the Sexual Energy Massage techniques. As stated earlier, the Universal Tao is not responsible for your use or misuse of this practice. The massage techniques are your best protection. Do not neglect them at any time.

F. Precautions and Suggestions for Practice

Note: The best precaution is common sense. Read this section carefully!

Although most of these suggestions are directed at men because they are at a greater risk, women can also be affected in adverse ways by this practice if they are not careful. Read all of the following precautions to fully understand this practice

1. Be sure that the Microcosmic Orbit is clear of any blockages.

2. Men and Women: Be well versed in all of the prerequisites before attempting this practice. Without a degree of mastery of Iron Shirt Chi Kung I, a student may not be grounded enough to safely accumulate external energies. Without the Six Healing

Sounds, the organs may overheat. Without the Microcosmic Orbit Meditation, there is no point in doing any practice taught in this system. Trouble would be the only result.

3. ***Men:*** If you have not mastered the Sexual Power Lock, and therefore cannot prevent an ejaculation, you should not practice Chi Weight Lifting. Practice Healing Love instead. If you have mastered these techniques, but you lose your seminal fluid accidentally, abstain from Chi Weight Lifting for at least two to three days after the accident. Be prepared to drastically reduce the weight you would normally lift, since Chi diminishes with the loss of seminal fluid, making the practice unsafe. (See Appendix 1.) Further information is available in the book, *Taoist Secrets of Love; Cultivating Male Sexual Energy.*

Note: It is safe to practice Chi Weight Lifting after sex, provided that the seminal fluid is retained. You should still be prepared to reduce the weight, however, if the act of sex drains you in any way.

4. Women: If you have not mastered the Orgasmic Draw, do so before you practice Chi Weight Lifting. Although Chi Weight Lifting is actually safer for women than it is for men, less Chi will be available for the internal organs to pull the weight if too much sexual energy is expended. The remedy is not celibacy, but rather the practice of the Orgasmic Draw. (See Appendix 9.) Further information can be found in the book, *Healing Love Through the Tao: Cultivating Female Sexual Energy.*

5. Women should Never continue Chi Weight Lifting during a menstrual period, vaginal infection, or at any stage of pregnancy. When these times have passed, practice may be resumed. Wait at least two or three days until after menstruation has finished.

6. Men and Women: The ancient Taoist masters advised that one abstain from sex for the first one hundred days of this practice. For the best results in the modern world, abstain at least until you have comfortably mastered the lightest weights. Do not try to speed up your progress for this purpose. This is recommended because men and women must fully retain their sexual energy before they can safely practice Chi Weight Lifting.

7. Men and Women: Take extra care not to allow the accumulation of too much sexual energy in the head. Headaches, numbness, or discomfort can be alleviated by pressing the tongue to the roof of the mouth and drawing the pressure out of the head, down through the tongue, and into the navel. Spiral the energy,

following the same procedures used at the end of the Microcosmic Orbit Meditation.

8. Remember that the Genital Compression exercises found in Chapter three are the best ways to replenish the sexual energy you are extracting from the ovaries or testicles. Use this after the Chi Weight Lifting practice.

9. Men may find, upon mastering Chi Weight Lifting, their Power Draw is so powerful that the testicles are drawn into the body after the weights are removed. Do not be alarmed. No harm will come of this, provided that you relax and don't cause yourself any harm through fear or rash action. You may employ the Genital Compression technique, but it is not absolutely necessary. The testicles descend by themselves within a few minutes or at the most, a few hours.

In ancient times it was considered a priceless asset for a male martial artist to be able to retract his testicles into the body to avoid having them crushed or damaged by an opponent. In spiritual circles, this was a valued practice because the maintenance of Ching Chi could no longer tax the organs and glands if no sperm were produced. (The testicles cannot produce sperm in a retracted state.) Taoist adepts who practice to this end will eventually acquire full access to their internal energy.

Note for Men and Women: Sexual energy transforms into life-force energy, which transforms into spiritual energy. The ability to stop the actual production of sperm or eggs means there is one less transformation for energy to go through, since life-force e energy becomes directly available. This should not be taken to mean that such a practice is being advocated, but to inform you of its ramifications. The ancient masters saw this as a short-cut to the cultivation of spiritual energy, leaving one with fewer steps to cover on the spiritual path.

10. Men: Never try to lift weights without using the entire groin. The cloth must be tied around the penis and the testicles together. Using the testicles alone defies common sense; however, there are those who can be tempted to try new things without first reading the instructions.

11. Men: Never lift weights with an erection. This can lead to a great deal of pain as the pressure of the weight expands into the already engorged head of the penis. Further, lifting with an erection may create conditions which can lead to blood clots.

12. Men: To help prevent painful slippage of the cloth, tighten the knot at the base of the testicles so that it almost touches the perineum. Try to avoid too much slack around the groin while lifting, but do not cut off circulation.

13. In the beginning stages of practice, a man might feel a little pain in the groin or in the abdomen caused by the lifting of the weight. Massage very carefully before and after Chi Weight Lifting, and follow the procedures with caution. The massage should reduce any pain you may experience.

Note: Once your sexual organs become stronger, the pain gradually goes away. This is not unlike the muscle pain that occurs in normal weight lifting. Some may experience fever; however, there have been no reports of infections of the testes resulting from this practice. You may wish to use only the massage techniques until the pain stops, and then resume lifting.

14. Men and Women: If you feel pain in your internal organs after training, practice the Microcosmic Orbit Meditation and the Six Healing Sounds until the pain is gone. The pain may be a sign of overheating which means that Chi Weight Lifting should be discontinued until the pain subsides. This may also be an indication that your internal organs are not in a healthy condition. If so, resume practicing the less advanced techniques instead of Chi Weight Lifting until you can comfortably lift weights.

15. Warning for Men: If you know that you already have a blood clot from circumstances which pre-date this practice, consult a physician about the severity of the problem before attempting Chi Weight Lifting.

A blood clot should be fully dissipated for complete safety in these practices. Otherwise, it can dislodge and relocate in a vital area bringing serious or lethal consequences. A medical consultation should reveal whether or not the Sexual Energy Massage or Chi Weight Lifting techniques can be safely used with an existing blood clot. If not, ask your doctor about options to help circumvent or alleviate the problem. There are medical methods of eliminating blood clots. The Universal Tao is not responsible for your choice, however. Your physician's advice and your internal sensitivities must be your guidelines in such matters.

16. Men and Women: If you scratch the skin of the sexual organs, clean the area, and allow it to heal before you do this practice. You can practice Hitting with the massage techniques, but it is best to

avoid lifting weights if the groin is hurt. You may apply medications that you have used before, providing that the sexual organs are kept dry. (Hydrogen peroxide is useful for keeping a wound clean and dry.) Men should avoid using most medications on or around the sensitive tip of the penis.

17. Women: See a physician or gynecologist for wounds within the vaginal wall that require medication. Do not use any medications internally without a doctor's advice.

18. Although it is better to lift less weight for longer periods of time than to lift heavier weights for shorter periods, avoid lifting any weight for more than 60 seconds. Men in particular must avoid cutting off the circulation of blood to the testicles.

19. Do not try to outdo yourself or anyone else because you then stand a good chance of getting hurt. If you feel any strain at all, remove the weight immediately.

20. If you haven't practiced for more than a week, do not return to the same weight you were able to lift before the layoff. Build up again slowly to avoid injuring yourself.

Note: When energy is low, and you still choose to practice, spend more time massaging the genitals, and less time hanging the weight. (Women should massage the breasts as well.) When you have finished Chi Weight Lifting, hit your hands, legs and back only. For al least two or three days refrain from striking areas where the impact might reach vital organs, or wait until you again feel alert and vigorous.

21. When some people detoxify, diarrhea, nausea, or pain in some of the organs may result as they are cleansed by the process. These are all temporary; however, Chi Weight Lifting and Hitting can also initiate some long term effects which are ultimately good:

a. During the first 100 days of practice, a reduced sex drive may result from the sexual energy transferring up to the higher centers to heal the organs and glands. Once the body has had a chance to repair itself, the sexual energy will increase greatly, thereby restoring the sex drive.
b. A need to drink more water may result from changes in one's metabolism.
c. Practice may cause either an increase or loss of appetite, accompanied by exhaustion. This may be part of the re-balancing process that the body goes through as energy is being assimilated. Some overweight people begin to lose

weight; some underweight people find that they are eating more.

d. When you practice Chi Weight Lifting you may feel heat, muscle spasms, shakiness, coldness, breezes, or simply an overall "funny" feeling. The body may not yet be adjusted to the increase in Chi, or the energy may be fighting diseases in the body, thereby causing such symptoms. Use your own judgment as to whether you should continue the process, but if serious physical problems persist, consult your doctor.

e. As certain levels of practice are attained, some people dream profusely. This may be because they are practicing Chi Weight Lifting and Hitting in excess, or they may be Hitting too hard. This causes the organs to overheat. Also, if the physical body is too hard and tight, emotions may be locked in the muscles and organs. The Hitting process may release them. Pain felt in the tendons and muscles can cause a great deal of dreaming. The increase in Chi, and its fight against diseases of the body, can cause great internal changes which may also be the source of excessive dreaming.

22. Be especially careful if you suffer from high blood pressure. The Power Draw and Orgasmic Draw can raise the blood pressure considerably if you do not have your Microcosmic Orbit opened sufficiently. If the Microcosmic Orbit is open and flowing, the blood pressure can be reduced and eventually controlled.

23. Do not practice Chi Weight Lifting and Hitting on a full stomach. Wait at least one hour after a meal before practicing. Also, to keep from losing Chi when you have finished exercising, do not eat for one-half hour to an hour.

24. Do not shower right away after practice, especially if you sweat. Allow your body to cool down for a while. You are still absorbing Chi at this point; therefore, it is better to avoid washing away external energy.

25. Men: If you have washed before practicing, be sure to dry yourself thoroughly. Otherwise, you may abrade yourself if your skin is still moist when you apply the weight.

26. Men: You may wish to cut your pubic hair short. If it is left long, pain may result since it is pulled during Chi Weight Lifting.

27. Urinate or have a bowel movement before practice. If this is not possible, try to wait one or two hours after practice before fulfilling these functions in order to prevent any loss of accumulated Chi.

This will give the body time to absorb the Chi into the bones, organs, and glands. Collect the energy in the navel.

28. In hot weather, do not drink too much cold water because the body must expend a great deal of internal energy to warm it. This may result in too much cold energy in the heart, which can be harmful.

29. Many people have reported a loss of desire for alcohol, drugs, tobacco, coffee and tea as a result of the detoxification initiated by Chi Weight Lifting and Hitting. It is best to avoid these toxic substances in any case, but keep in mind that they will satisfy you less if you detoxify faster than these substances are taken in. The stimulation they offer may not occur if they arc forced out of the body before they can affect you.

30. Do not stand on a cold floor during practice. If there is no rug, stand on a towel. A cold floor will draw away your energy.

31. In the early stages, avoid practicing at night, because you may not be able to sleep. When you become proficient, you should be able to practice at any time.

32. Remember that the purpose of your training is to raise your energy levels and to rid your body of toxins. It is NOT to promote violence or foolishness. Do not walk into your local bar and make claims to being the sexual weight lifting champion of the Universal Tao. You may find that this particular subject is not well received in certain social atmospheres.

33. Be aware that practices that draw sexual energy into the body can spread any existing venereal infection. Be sure that you are free of such problems before attempting the Sexual Energy Massage or Chi Weight Lifting.

34. Warning for Men and Women: Be aware of your body's reactions to Chi Weight Lifting. Although this system is known for its many safeguards to avoid side effects, it is difficult to account for the internal differences in people. ANY problems that do not appear to be covered in this book must be directed to the Universal Tao. In such cases, Chi Weight Lifting should be discontinued until you are fully aware of your status.

G. Summary of Chi Weight Lifting

1. Pre-Chi Weight Lifting Exercises:

   a. Increasing Chi Pressure: Practice from nine to 81 times.
   b. Increasing Kidney Pressure: Practice from six to 36 times.
   c. Power Lock Exercise Practice two to three times up to the crown.
   d. Cloth Massage of Sexual Center, Perineum, and Sacrum
   e. Sexual Energy Massage:

Men: (1) Finger Massage of the Testicles
(2) Palm Massage of the Testicles
(3) Ducts Elongation Rubbing
(4) Stretching the Ducts Gently with Massage I
(5) Stretching the Scrotum and Penis Tendons
(6) Tapping the Testicles

Women: (1) Breast Massage
(2) Massage the Glands with Accumulated Chi
(3) Massage the Organs with Accumulated Chi
(4) Massage the Ovaries
(5) Internal Egg Exercise (optional)

2. Chi Weight Lifting

a. Prepare the weight on the floor or a chair. (Women: After inserting the string through the egg, tie it to the weight or the weight apparatus.)

b. Men: Fold the cloth, and tie it around the penis and testicles. Then tie one end of the cloth to the weight holding apparatus.

c. Women: Insert the egg into the vagina, larger end first.

Note for Men and Women: Always hold the weight or the cloth with your hands while standing up to assume a weight lifting posture. Test the weight with the index and middle fingers before releasing it.

d. While testing the weight with your fingers, pull up the left and right sides of the anus to the left and right kidneys respectively, and contract the perineum.

e. If it does not feel too heavy, gently release the string or cloth from the fingers, and hold the weight with the genitals.

f. Swing the weight from 30 to 60 times, inhaling as you pull up with each forward swing. Exhale as the weight moves backward.

g. First lift the weight from each station of the Microcosmic Orbit (You will actually be lifting the weight using the power of your mind.)

h. Rest as you hold the weight manually, or place it on a high surface, such as a table top. (You may prefer to remove it while resting, and then attach it again to resume lifting.) Collect the energy in the navel during the rest period.

i. Gently release the weight between your legs once again to lift it with the power of the organs and glands, starting with the kidneys.

j. Men: Lower the weight to the chair or the floor, and untie the cloth from the holding apparatus. Then remove the cloth from the groin.

k. Women: Lower the weight to the chair or the floor, and then remove the egg.

3. Men and Women: Practice the Power Lock exercise two or three times up to the crown.

4. Cloth Massage of the Sexual Center Perineum, and Sacrum

5. Sexual Energy Massage

Note: Men in particular should repeat at least two or three of the aforementioned massage techniques to replenish the circulation of blood in the sexual center, and to help dissipate any coagulation which can lead to blood clots. Women repeat the same procedures at their own pace.

6. Hitting (See Chapter Four.)

7. Use at least two or three of the Six Healing Sounds, especially the Heart and Lung Sounds. All of them are useful if you have the time to do them.

8. Practice the Microcosmic Orbit meditation for several minutes. In conjunction with this meditation, you can also practice Bone Breathing. Use your mind to absorb the released Ching Chi into the bones.

Chapter VI
Summary

This chapter is both a summary of Bone Marrow Nei Kung and a sample of its use with other Taoist physical disciplines. You may tailor your own training schedule from this information provided that you have thoroughly studied each exercise, and you know the precautions associated with each. Do not start training until you have fully understood the previous chapters.

When practiced together, these exercises can be completed within 45 minutes in an abbreviated format. There are nine distinct disciplines in this particular schedule. The Inner Smile, Microcosmic Orbit, Healing Love, Iron Shirt Chi Kung I, and the Six Healing Sounds are included as part of the regimen. When some degree of proficiency has been reached, practice according to your needs; however do not neglect any of these disciplines entirely.

A. Beginner's Approach to Bone Marrow Nei Kung

In the beginning, people are apprehensive about the time and effort required to achieve goals within this system. Indeed, the regimen may appear overwhelming to a novice. Similar questions arise among experienced practitioners, but for a different reason. The concern of the novice is how to create the time for such an esoteric discipline. The concern of the adept is that nothing interfere with the time allotted for practice.

Obviously, the most difficult task is getting started. People spend twelve to eighteen years obtaining the education they need to create the best possible foundation for a career, family, and social life. In the process they must often temporarily neglect their physical and spiritual health in favor of earning a living. The need for entertainment and social interaction often compounds the situation. Eventually, you must consider just how "temporary" the situation really is concerning your health and well-being.

Once Bone Marrow Nei Kung is established as a daily regimen,

people often find more time, energy, and pleasure in their lives. Internal health provides a wider range of capabilities and increased efficiency in your daily functions. The cultivation of internal power leads first to self-healing, then to radiant health, and ultimately to a better overall perspective. In this system, you will learn how to improve your capabilities to create more time for the pleasures of life.

B. General Features of Training

1. The Inner Smile is the most important aspect of early Taoist training because it draws positive energy to the internal organs and glands. It is taught as part of the Microcosmic Orbit meditation, but it is also distinct in that the Inner Smile makes new energy accessible through the mid eyebrow and the eyes. The Microcosmic Orbit is actually the pathway through which the associated meditation circulates internally stored energy while distributing new energy absorbed from the Inner Smile.

2. The Microcosmic Orbit Meditation should be used as part of the Bone Marrow Nei Kung regimen as well as being practiced regularly by itself. In this meditation energy is circulated through twelve stations located along two major pathways of the body. The first extends from the palate to the perineum, and the second extends from the perineum to the crown, returning to the palate through the mideyebrow. With the Inner Smile, this meditation should be practiced in the morning before your day begins and, along with the Six Healing Sounds, in the evening to decelerate the body.

3. The Healing Love is crucial to Bone Marrow Nei Kung in order to prevent the loss of sexual energy. The practice includes a sexual version of the Power Lock, the Genital Compression exercise, and Testicle/Ovarian Breathing. (The Sexual Power Lock is explained in Appendix 1.) In Bone Marrow Nei Kung, the Power Lock is used without any sexual arousal to draw Ching Chi into the Microcosmic Orbit. The Sexual Power Lock prevents the loss of Ching Chi during sex by drawing this energy into the body rather than expelling it. This also reduces the energy loss suffered by women during menstruation.

4. Iron Shirt I can be simplified to accommodate some of the Bone Marrow Nei Kung exercises, such as Bone Breathing and Bone Compression, which can be initiated from the “Embracing

the Tree" posture. Unless you wish to emphasize Iron Shirt Chi Kung I in your regimen, the other five postures can be done later in the day, or when ever you feel more ambitious about your training. It is useful for rooting the body and drawing energy from the earth. Refer to the book, *Iron Shirt Chi Kung I* for the complete practice.

5. Bone Breathing and Bone Compression can he practiced anywhere as separate exercises or to initiate Bone Marrow Nei Kung. Simply inhale, pack, spiral and squeeze Chi successively into the limbs and the body from a seated position or from the "Embracing the Tree" posture of Iron Shirt Chi Kung I. You may also use Bone Breathing and Bone Compression as part of the Hitting practice, combining them for the ultimate compression of sexual and external energy into the body.

6.The Sexual Energy Massage releases Ching Chi from the sexual center into the Microcosmic Orbit to be disseminated throughout the body and compressed into the bones. It is the primary practice because it is extremely powerful when combined with Healing Love techniques, and it is much safer that Chi Weight Lifting. The exercises related to the Sexual Energy Massage techniques are the Power Lock (non-sexual). Genital Compression and the Preliminary Cloth Massage Theses prepare the genitals by stimulating the Ching Chi for its ascension into the body. They also replenish the circulation of blood and Chi in the sexual center after practice.

7. As stated throughout this text, Chi Weight Lifting is documented for those students who have received the necessary training. The Sexual Energy Massage techniques will suffice for the purposes of Bone Marrow Nei Kung, and they must certainly be mastered prior to attempting this practice. Chi Weight Lifting differs from the massage techniques in that it further strengthens the fasciae which connect the genitals to the internal organs and glands. This is achieved by lifting light weights, and gradually increasing the length of time they are held, but never exceeding sixty seconds.

Note: Do not neglect the Power Lock, Cloth Massage, and Sexual Energy Massage techniques before and after Chi Weight Lifting.

8. The Hitting practice has two forms: one uses a wire device, the other uses rattan sticks. (Either can be used with packing.) The first form initiates strong vibrations, opening the pores of the bones to absorb new energies while detoxifying the system. The second form strengthens the nervous system by increasing the

skin's tolerance for external contact while stimulating lymphocyte production used in the creation of antibodies.

9. The Six Healing Sounds should complete the training in order to release trapped tension and excess heat from the body. These sounds are practiced from a seated posture after the Hitting techniques and the Microcosmic Orbit meditation. They serve to decelerate the body since its metabolic rate will be extremely high by the end of a Bone Marrow Nei Kung training session.

Note: The Microcosmic Orbit meditation still takes precedence over all other facets of this regimen. If you have little time for meditation, spend less time on each discipline; otherwise, do not practice until you can make the time for both the practice and the meditation.

C. Sample Training Schedule

At this point you have enough information on each practice to combine them into a Bone Marrow Nei Kung regimen. This summary is intended to help you assimilate what you have learned into your practice. Keep the book nearby and open to this page when you are ready to begin.

1. Inner Smile

a. Sit on the edge of a chair with your hands held together and eyes closed.

b. Re-create a happy emotional state, and express it with your best smile. Also smile by lifting the outer corners of your eyelids to enhance the process.

c. Picture a radiant smile of energy on the face of a glowing sun directly in front of you.

d. Sense a coolness in your eyes to attract and absorb the warm energy.

e. Mentally enhance the radiance and any color, or perceptions of warmth, until your eyes are filled with it.

f. Let the smiling energy spread down to the organs as you smile to your heart, lungs, liver, spleen, and kidneys. It is your smile that will give the energy its positive charge.

g. Draw in more energy through the mideyebrow and the eyes to stimulate the entire system. The process can take up to fifteen

minutes before you are ready to circulate the energy in the Microcosmic Orbit.

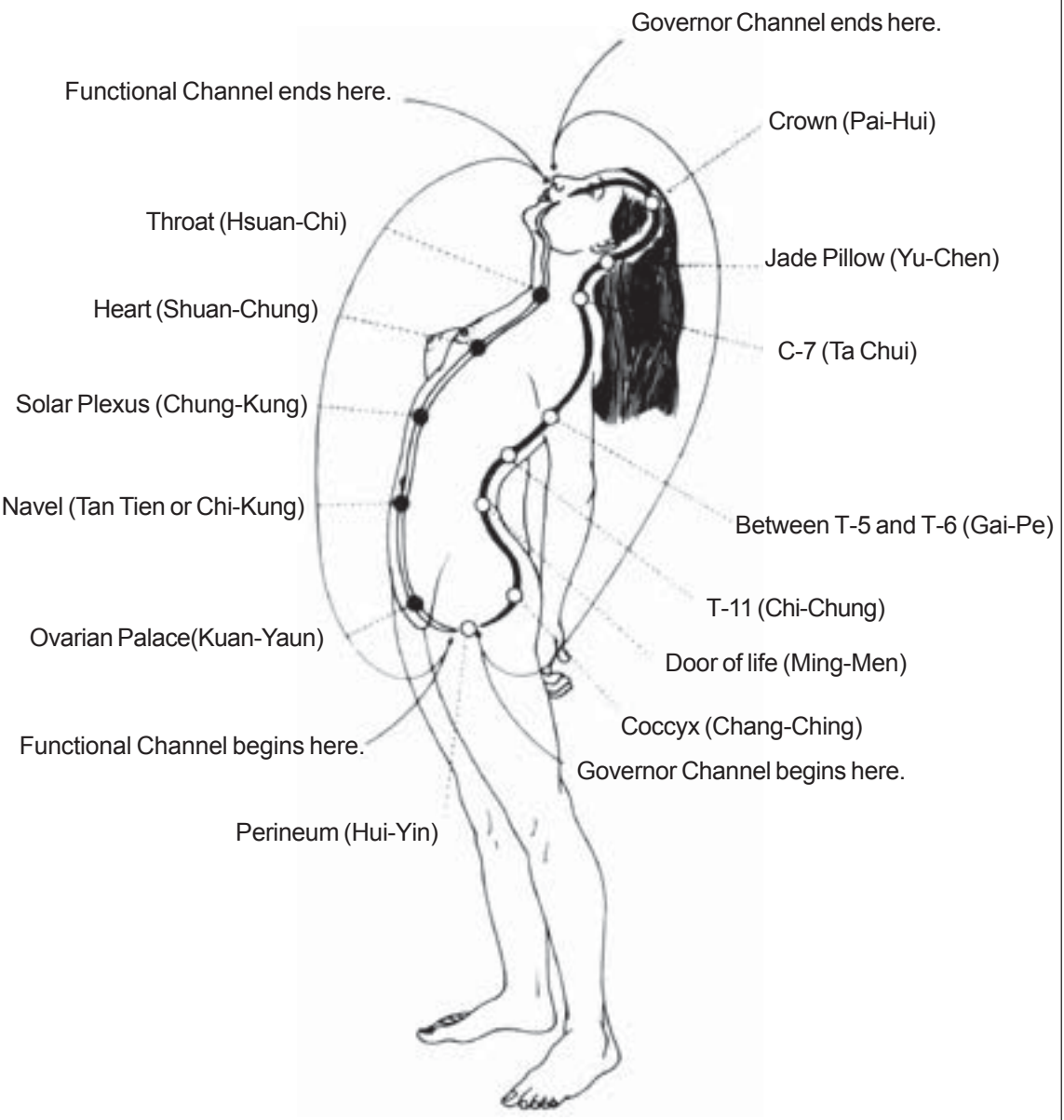
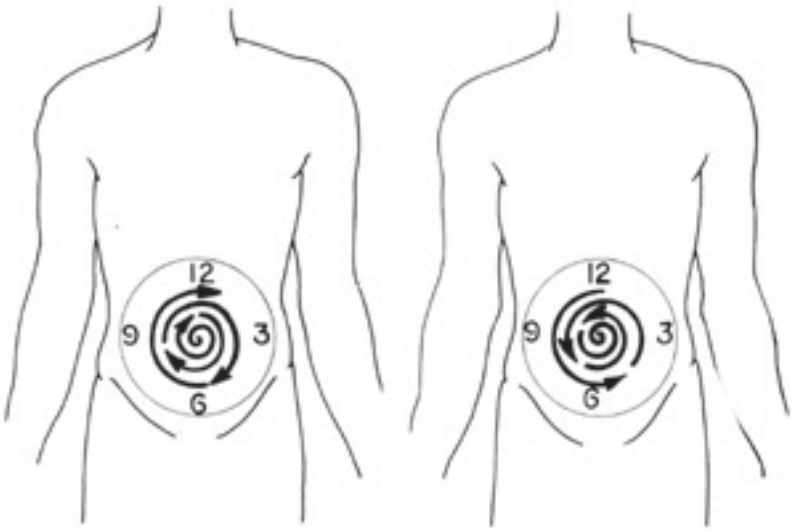


Fig. 6.1 *Functional and Governor Channels of the Microcosmic Orbit*

2. Microcosmic Orbit

a. After smiling down, collect the energy at the navel.
b. Let the energy flow down to the sexual center.
c. Move the energy from the sexual center to the perineum.
d. Draw the energy up from the perineum to the sacrum.
e. Draw the energy up to the Ming Men, opposite the navel.
f. Draw the energy up to the T-11 vertebrae.
g. Draw the energy up to the base of the skull.
h. Draw the energy up to the crown and circulate it.
i. Move the energy crown from the crown to the mideyebrow.
j. Pass the energy down through the tongue to the throat center.
k. Bring the energy down from the throat to the heart center.
l. Bring the energy down to the solar plexus.
m. Bring the energy back to the navel.
n. Circulate the energy through this entire sequence at least nine or ten tunes.
o. Collect the energy at the navel.

Men: Cover your navel with both palms, left hand over right. Collect and mentally spiral the energy outward at the navel 36 times clockwise, and then inward 24 times counterclockwise. (Fig. 6.2)

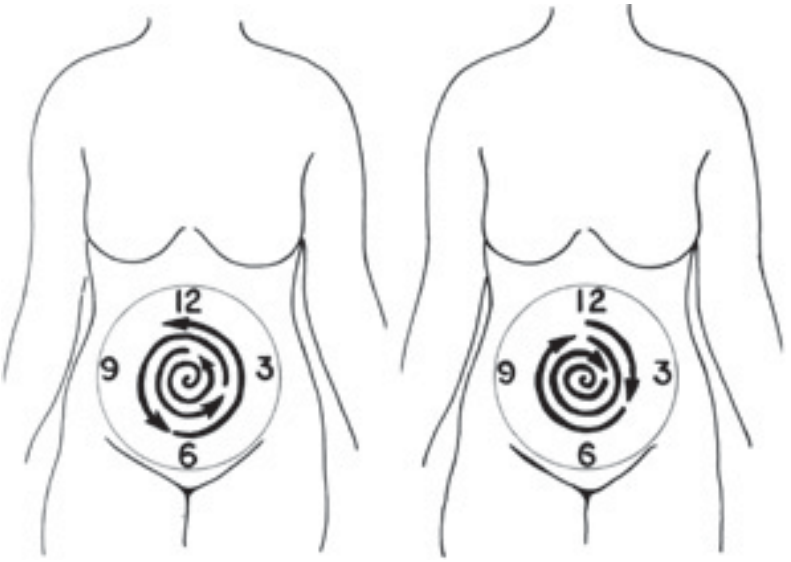


1. Collect the energy by spiraling outwardly from the navel 36 times clockwise.

2. Then spiral inwardly 24 times clockwise, finishing at the navel.

Fig. 6.2 *Men's collection of the Energy*

Women: Cover your navel with both palms, right hand over left. Collect and mentally spiral the energy outward from the navel 36 times counterclockwise, and then inward 24 times clockwise. (Fig. 6.3)



1. Collect the energy by spiraling outwardly from the navel 36 times counterclockwise.

2. Then spiral inwardly 24 times clockwise, finishing at the navel.

Fig. 6.3 *Women's collection of the Energy*

3. Testicle and Ovarian Breathing

a. Inhale and use mental power and a slight muscular contraction to draw the testicles upward. Hold the energy, as you exhale, and slowly lower the testicles. Women inhale, and squeeze the vagina, drawing the energy of the ovaries to the Ovarian Palace.

b. Guide the unaroused sexual energy up through the perineum by inhaling and pulling up the testes or contracting the vagina slightly.

c. Guide the Ching Chi up the back as if sipping on a straw. Slightly arch the lower back outward as if flattening the back against a wall. This will activate the Sacral and Cranial Pumps. Hold the attention at the sacrum and exhale slowly.

d. Relax the sacrum and neck back to their normal positions.

e. Inhale and guide the energy up to T-11 repeating steps 4, 5 and 6.

f. The next stopping place is the Jade Pillow at the base of the skull.

g. Guide the energy up to the head and spiral the energy nine times clockwise and nine times counterclockwise.

h. Men can leave the cold energy in the head for a while. Women should bring the resultant hot energy down the Microcosmic Route immediately.

4. Iron Shirt Chi Kung I: Embracing the Tree Posture

Use this posture for practicing Bone Breathing and Bone Compression, Iron Shirt I techniques, weight lifting, and so on.

a. Stand with the feet parallel at a foot-to-knee distance from each other.

b. Dig firmly into the ground by slightly turning out the balls of the feet.

c. Rotate your pelvis back until the thigh tendons can relax.

d. Feel that the sacrum is pulling the spine down.

e. Relax the chest and ribs.

f. Keep the back as straight as possible. The neck is gently, but firmly pushed back at the C-7 point.

g. Pull back the lower jaw towards the Jade Pillow of the skull.

h. Hold the hands vertically at shoulder level with the fingers spread and the elbows dropped beneath them. Point the fingers towards those of the opposite hand.

i. Position the arms as if they were encircling a tree. Hold the thumbs outward slightly, with the pinkies directed inward, and relax the other fingers.

j. Drop the shoulders, round the scapulae, and sink the chest.

k. Relax the neck, and feel the Chi connecting the hip joints with the knee and ankle joint, and feel their energy connecting with the ground.

5. Bone Breathing and Bone Compression

Note: These may be done in conjunction with Hitting rather than as separate practices.

a. From either a seated position or the posture outlined above, draw in external energy through the fingers as you inhale; release it as you exhale.

b. Inhale and exhale through the lower and upper arms successively. Begin to spiral the energy as you draw it in.

c. Breathe into the toes in the same manner.

d. Continue to breathe into the legs, the pelvis, and spiral the energy.

e. Combine the draw of external energy from both sources and allow them to meet at the spine.

f. Draw the combined energy, up to the head, and spiral it.

g. Breathe the energy into the ribs and sternum from the spine, and continue to spiral it.

h. Inhale, spiral, pack, and squeeze into all sections simultaneously; hold your breath as you compress the energy into your bones; then exhale.

6. Sexual Energy Massage

a. Power Lock

The Power Lock is practiced before and after the Sexual Energy Massage to assist in the upward draw of the released energy and sexual hormones. It employs nine short sips of breath with nine contractions of the genital, anal and perineal areas. The tongue is pushed against the palate, and the buttocks and teeth are clenched to activate the Cranial and Sacral Pumps. Together with these contractions, the three middle fingers of either hand are used to press a point at the back of the perineum, near the anus, to help guide the rising energy, up to the five stations of the sacrum,T-11 point C-7 point, base of the skull, and the crown point. The goal is to draw sexual energy from the perineum to the crown.

b. Genital Compression

This exercise replenishes the energy drawn from the genitals during the other practices. This is not a Bone Marrow Nei Kung technique in itself, but rather a separate practice for use afterwards. The method compresses energy into the genitals of men or women to increase their production of Ching Chi.

c. Preliminary Cloth Massage

A silk cloth is used to massage in circular motions the genital area, perineum, coccyx, and sacrum. This is used before and after the Sexual Energy Massage to first prepare the genitals for the and then later to replenish the flow of blood and Chi to the sexual center. This is particularly useful in preventing blood coagulation and subsequent blood clots from occurring in the genitals of male practitioners.

d. Sexual Energy Massage for Men

(1) Finger Massage of the Testicles
(2) Palm Massage of the Testicles
(3) Ducts Elongation Rubbing
(4) Stretching the Ducts Gently with Massage
(5) Stretching the Scrotum and Penis Tendons
(6) Tapping the Testicles

e. Sexual Energy Massage for Women

(1) Breast Massage
(2) Massage of the Glands with Accumulated Chi
(3) Massage of the Organs with Accumulated Chi
(4) Massage the Ovaries

f. Internal Egg Exercise

This exercise uses a jade egg to resist internal contractions of the vaginal canal, thereby strengthening its three sections. The first section is the front of the vaginal canal, within the external orifice. The second section is the middle of the canal between the first and third sections. The third section is directly beneath the cervix, near the end of the canal.

7. Chi Weight Lifting for Men and Women

As you swing the weights, first pull them from the Microcosmic Orbit as the energy flow resisting the pressure of the weights passes through the perineum, sacrum, T-11 and C-7 vertebrae. Jade Pillow, and crown. Later, as you continue to lift from the perineum, both sides of the anus should be pulled up as you pack Chi around both kidneys. Starting at the kidneys, lift from the lower organs successively upwards, eventually employing the higher organs, and finally lift from the pineal and pituitary glands. Circulate the released energy through the Microcosmic Orbit upon removing the weights.

a. Start with the Power Lock, Cloth Massage, and Sexual Energy Massage. The weight should be placed on a chair or the floor.

b. Men: Tie the cloth around the entire groin (not the testicles alone). Attach a light weight to the cloth. Women: Attach a light weight to the string held by the egg, then insert the egg into the vagina.

c. Lift the weight from its resting place, and swing it, using the strength of the Microcosmic Orbit to create the upward force. Begin by pulling up the front, middle, and back anus to bring the Chi to the sacrum from where it will be pulled up the spine to the head. Use every station of the Microcosmic Orbit to assist in pulling the weight.

d. Concentrate on the kidneys. Pull up the right and left anus as you wrap Chi around the kidneys, and then lift the weight from the kidneys.

e. Pull up the right and left anus. Wrap Chi around the spleen and the liver. Pull the weight from the spleen and the liver.

f. Use the same procedure lo lift from the lungs. Pull the weights from a straight line though the organs beneath each lung.

g. Pull up as you contract the heart, lungs, spleen livers adrenals, kidneys and thereby the weights. Feel the fascial connection between all of these organs and the genitals.

h. Add the strength of the thymus gland to the upward draw of the organs.

i. Finally, press the tongue to the palate, pull up both sides of the anus, contract the muscles of the skull, and lift from the pituitary and pineal glands through all of the previous organs.

j. After you release the weights repeat the Power Lock exercise Cloth Massage and Sexual Energy Massage.

8. Hitting with Packing

Inhale, spiral, pack, and squeeze external and sexual energy into each area as you prepare to apply the Hitting device; hold the breath and muscle tension as you hit; then exhale and release the tension. When Hitting with the rattans avoid contact with the spine.

a. Preliminary Hitting: To stimulate energies and detoxify, hit three times the lower Tan Tien (below the navel), the Ming Men (opposite the navel on the spine), the inside of both elbows, and the back of both knees. This is optional when using the rattans.

b. Hit the five abdominal lines.

c. Hit the rib cage and the sternum very lightly at an angle.

d. Hit the three, lines of the back (two lines with the rattans).

e. Hit the left and right sides, of the body.

f. Gently tap the head and jaw.

g. Hit the four lines of each arm: the Middle Finger Line, the Thumb Line, the Back of the Hand Line, and the Pinky Line.

h. Hit the four lines of the legs: The Middle Line (down the front), the Big Toe Line, the Small Toe Line, and the Back of the Leg Line.

9. Six Healing Sounds

Do the Lung Sound and the Heart Sound as described in Appendix 1. The other four sounds and related postures are optional, but they are useful in helping the body to decelerate at the end of this regimen. You may wish to begin any of the higher level meditations, or else practice the Inner Smile and Microcosmic Orbit again.

10. Combining the Practices

When you are well acquainted with the supplemental disciplines, you can combine them into one practice from the Embracing the Tree posture.

a. Assume the Embracing the Tree posture.

b. Smile down to the organs, glands, and navel.

c. Practice “Energizer Breathing” by pushing and pulling the lower abdomen out and in to emphasize each inhalation and exhalation for nine, eighteen, or 36 breaths.

d. Do the three stages of packing for Iron Shirt Chi Kung I as described in Appendix 1.

e. Practice Bone Breathing.

f. Practice Testicle/Ovarian Breathing.
g. Do the Genital Compression exercise two or three times.
h. Do from three to six sets of the Power Lock exercise.
i. Practice the Microcosmic Orbit for three to six rounds.
j. Collect the energy in the navel.

D. Planning your Practice

1. Bone Marrow Nei Kung Regimen

a. Ideally, you should begin by spending from fifteen to 30 minutes on the Microcosmic Orbit with the Inner Smile, and ten minutes practicing Iron Shirt Chi Kung I.

b. Begin the Cloth Massage and practice the Power Lock exercise to start the flow of sexual enerygv to the higher energy centers.

c. Begin the Sexual Energy Massage. Then, providing that you have received training, you may follow the massage techniques with Chi Weight Lifting.

d. Repeat the Power Lock exercise for at least two or three rounds, then repeat the Cloth Massage.

e. Repeat two or three of the Sexual Energy Massage techniques after Chi Weight Lifting to replenish the circulation of blood and Chi in the sexual center, thereby avoiding blood clots in the male genitals.

f. Begin the Hitting practice. Use the bundled wires to create the vibrations that will force the sexual energy into the bones, organs, and glands as you pack and spiral the energy. Rest after you hit each line.

g. Use the rattan sticks to strengthen the skin, muscles, nervous and lymphatic systems. Rest after you hit each line.

h. Finish the entire process with the Microcosmic Orbit Meditation and the Six Healing Sounds.

2. Time for Practice

The best time to practice as previously, mentioned, is in the morning after you have eliminated body wastes and bathed but you can also practice in the afternoon. You are advised not to practice in the evening because you are creating a great deal of energy and

you may have difficulty sleeping. Try to maintain a specific schedule until you are proficient.

3. Frequency of Practice

In the very beginning practice two to three times a week. Once you are proficient, you may begin to practice on a daily basis. As in all the other Universal Tao disciplines, Chi Weight Lifting and Hitting take time to learn. Eventually, all the steps will begin to blend together into an easily practiced sequence which will increase your energy as your body becomes stronger and healthier.

4. Practice during Travel

The Sexual Energy Massage, Healing Love Bone Breathing and Bone Compression can be practiced easily while traveling. You can also practice Chi Weight Lifting and Hitting, though it may be hard to carry the weights and devices. The Universal Tao suggests the following to help you maintain these disciplines.

a. The bean hag and rattan sticks are light and should present no problems for travel. If necessary, you may use your hands to hit the Door of Life point on the back, and the lower Tan Tien point below the navel. Then use the palms to hit the limbs and the body.

b. For Chi Weight Lifting, carry the cloth—or the egg—and a small, strong bag in which you can place an object to serve as a weight. Always weigh this object on a scale to determine whether or not it is within your capacity to lift.

Appendix I
Supplemental Exercises

Once the Microcosmic Orbit has been opened, a novice can practice Bone Marrow Nei Kung. However, the most benefit is derived from combining this discipline with other aspects of the system. The following is an abridged review only. Each supplemental exercise requires time to master, and each is further described in other Universal Tao books.

***Note*:** These disciplines ate not presented as part of a regimen or in any specific order for practice.

A. Healing Love

The effects of Bone Marrow Nei Kung are dependent upon the practice of Healing Love, which rechannels sexual energy to heal the internal system. For the purposes of this book, the sexual version of the Power Lock is given because it encompasses the "Power Draw" technique used by men and the "Orgasmic Draw" technique used by women in the Healing Love practice. These exercises are combined with the three finger technique and the internal contractions of the Power Lock to draw Ching Chi into the Microcosmic Orbit.

1. Power Draw

For men, the practice of orgasmic redirection employs a form of non-ejaculatory sex which results in the highest internal stimulation that can be achieved. The energy that is normally lost during an ejaculation is instead channelled into the body. When it reaches the organs and glands, this energy causes body orgasms that last longer, feel superior, and lack the exhaustion normally felt after sex. The loss of sexual energy through ejaculation deprives the bone marrow of nourishment and depletes the internal organs and glands of one third of their energy. Ejaculation drains energy from the internal system to replace Ching Chi lost with the seminal fluid.

2. Orgasmic Draw

Women who practice the Orgasmic Draw also experience superior orgasms, shorter menstrual periods, and an increase in life-force energy as Ching Chi is retained for use by the body. The problem women face is the loss of enormous quantities of sexual energy through their menstrual periods. This loss can be limited or completely prevented through the Healing Love practice. Further, the exchange of energies during sex becomes far more valuable to a woman when the Yang Chi imparted by her lover is absorbed into her Microcosmic Orbit. Otherwise, the energy received, as well as her own, will be expelled at the end of her cycle and wasted.

3. Health and Sexual Benefits

Not only do the organs retain their full capacity when Ching Chi is saved, but internal energy compounds itself when it is allowed to accumulate on a regular basis. In other words, men and women who consciously save the internal power normally lost during sex will receive a one-third increase in their life-force energy, which accrues regularly with practice. Consider this to be the interest you collect on your savings which is paid off in strength, health, and superior orgasms. The body improves itself regularly through intelligent sex, and the excess energy can be used to fortify every aspect of your life.

4. Sexual Power Lock Practice

Review the Power Lock exercise of Chapter Three for the proper sequence of contractions. Healing Love is practiced in an amused state with or without a partner. In solo practice, use several sets of nine short inhalations--”sips”--with nine simultaneous contractions to each station. Continue to repeat this process, drawing the energy up towards the crown. Remember to push the flat part of the tongue against the roof of the mouth as you force the tip of the tongue against the lower jaw behind the teeth. This opens the crown and increases the force of the energy travelling up the spine.

***Men*:** During the act of sex, reach behind the buttocks to use the three fingertips on the point in front of the anus. (Fig. App. 1.1)

Apply pressure after each sip of air. In solo practice, use sets of nine contractions until your erection subsides through your drawing power. Repeat this procedure several times. In both cases, maintain the finger pressure if you are near an ejaculation. Do not release it until the urge to expel the semen is gone. Timing is important. If you feel near ejaculation, do not wait to start a set of nine contractions, and be prepared to hold the finger pressure if necessary.

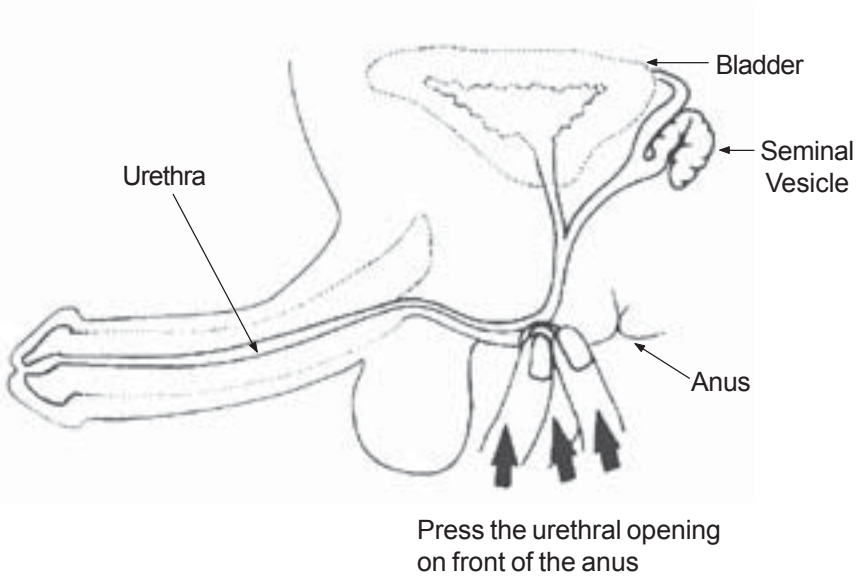


Fig. App.1.1 *Sexual Power Lock for men includes pressing against the urethra from a point at the back of the perineum, in front of the anus.*

Women: The three fingertips need not be applied by women during the sexual practices. Their main concern is to draw the energy of each orgasm up through the five stations to the crown point, and then to circulate it. (If your Microcosmic Orbit is open, you can draw the energy directly up to the crown.) Finish by storing the energy in the navel. In solo practice, always begin by drawing Ching Chi from the ovaries and sexual center into the perineum. Do not allow it to remain in the sexual center.

Men and Women

a. As you initiate the Sexual Power Lock, draw in towards the sacrum with every sip of air. (Men apply the fingers as you hold each contraction.) Pull up the genitals, anus, and perineum, simultaneously clenching the teeth and buttocks. (Fig. App. 1.2)

Fig. App.1.2 *Initiate the Sexual Power Lock.*

b. Inhale, and pull up the anus to the sacrum. Tilt the sacrum, pull up further to T-11 at the center of the back, opposite the solar plexus, and then up to C-7 at the base of the neck. Inhale again, and pull up higher to the 6ase of the skull and then all the way up to the crown point. (Fig. App. 1.3) Spiral the energy, then bring it down to the third eye between the eyebrows: and hold it there for a while.

***Note*:** If the Governor channel is completely open, you can draw Ching Chi all the way up to the crown. Always avoid leaving Ching Chi at the Ming Men point opposite the navel because it causes an allergic type of reaction in both kidneys.

c. Exhale, place the tongue on the palate, and let the energy flow down through the tongue to the throat center. Then bring the energy down to the heart. Rest, and concentrate on the navel, Bring the energy down to the solar plexus, and finally down to the navel. Cover the navel, and spiral the Chi.

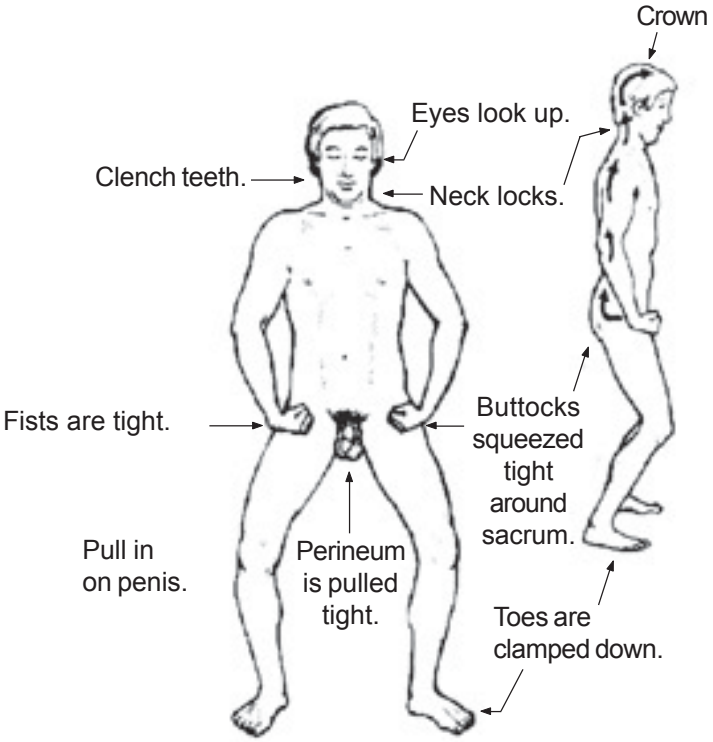


Fig. App.1.3 *Inhale and pull all the way up to the crown.*

d. Cloth Massage after the Sexual Power Lock: Apply the cloth using circular motions to the perineum, the coccyx, and the sacrum. Starting at the perineum, use the cloth folded lengthwise to massage in a clockwise motion nine to eighteen times, then in a counterclockwise motion nine to eighteen times. Apply the cloth in the same manner to the coccyx, and finally to the sacrum.

Note: More information un the Healing Love techniques can be found in the books, *Taoist Secrets of Love: Cultivating Male Sexual Energy and Healing Love Through the Tao: Cultivating Female Sexual Energy.*

B. Iron Shirt Chi Kung I

1. Energizer Breathing

Begin with Abdominal Breathing (also known as Energizer Breathing) by expanding the lower abdomen on all sides like a ball as you inhale. Breathe into both kidneys and lower the diaphragm as you inhale, making sure to keep the chest relaxed and sunk down. As you exhale, flatten the abdomen completely. Regulate this breathing using quick, short sips to inhale and exhale.

Reverse Abdominal Breathing is practiced in the opposite manner by extending the abdomen as you exhale and retracting it as you inhale. Keep the chest relaxed throughout. Contract the pelvic and urogenital diaphragms, and slightly pull up the Chi Muscle during these exercises.

***Note*:** In Iron Shirt I, packing is initiated by contracting the muscles of a given area as you mentally condense the Chi there. Always breathe through the nose in all Universal Tao exercises.

2. Embracing the Tree

This basic rooting posture is similar to the Horse Stance, which is often used in the practice of Chi Weight Lifting. The Embracing the Tree stance is created as follows: Stand with the feet parallel at a heel-to-knee distance from each other. Dig firmly into the ground by slightly turning out the balls of the feet in a gripping motion. Maintain this force throughout the duration of the posture, and do not curl the toes up. The pelvis is rotated back until the thigh tendons can relax. Feel the sacrum pulling the spine down.

Keep the chest relaxed and the back as straight as possible. The neck is gently, but firmly, pushed back at the C-7 point. This is accomplished by pushing back the lower jaw slightly until you feel the C-7 point and the base of the skull aligned with the spine. The head should feel as though it is being lifted from the crown.

The hands are held vertically at shoulder level with the fingers spread and elbows dropped beneath them. Point the fingers towards those of the opposite hand, and position the arms as if they were encircling a tree. Hold the thumbs slightly outward with

the pinkies directed inward. Drop the shoulders, joining the scapulae with the spine by rounding the scapulae and sinking, the chest. Relax the neck. Feel the connection from the hip joints down to the knee and ankle joints, and feel their connection with the ground. (Fig. App. 1.4)

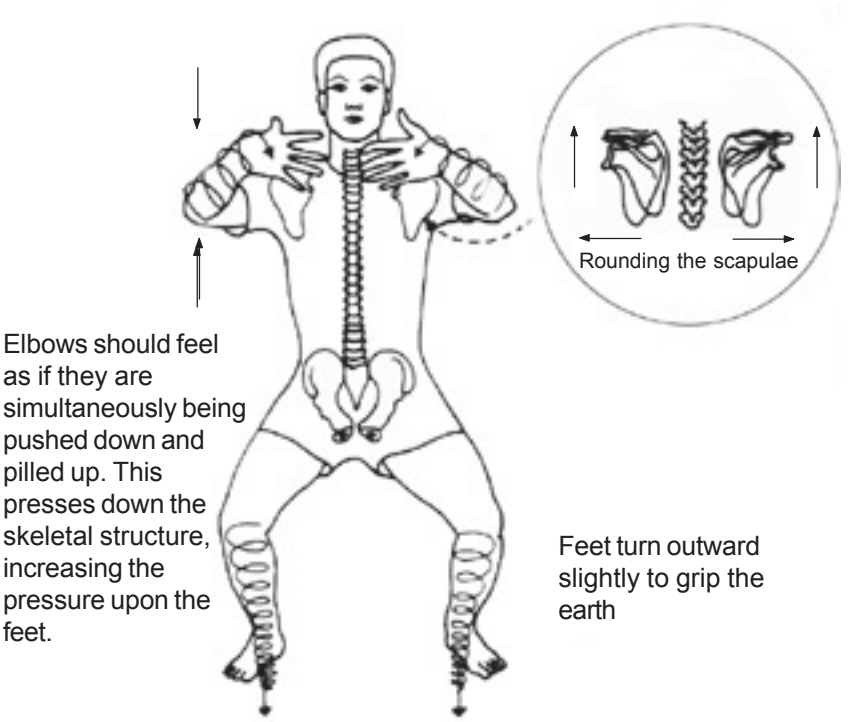


Fig. App.1.4 *Full Embracing the Tree Posture - Front View*

The exercise usually associated with this posture is presented in three stages. If you cannot complete these stages for any reason, it is important that you collect the Chi in the navel. If time does not allow for much work in this area, just use this posture for Bone Breathing and Bone Compression. The actual Iron Shirt I techniques can be done later in a separate practice if necessary.

***Note*:** The same precautions for Hitting with Packing apply to this practice. Check with a physician if you have high blood pressure. Women should not use any packing or compression during a menstrual period, or if they are pregnant.

a. Stage One

(1) Assume the posture described above. Press the sacrum down, round the scapulae, relax the chest, and hold the head erect.

(2) Begin Energizer Breathing by pushing and pulling the abdomen out and in to emphasize each inhalation and exhalation. Practice nine to eighteen breaths in this manner.

(3) Exhale, flatten the stomach, and lower the diaphragm. Exhale again, and pull up the pelvic and urogenital diaphragms and the sexual organs.

(4) Inhale in short sips holding about ten percent of your lung capacity, and tighten the perineum. Sip in twice, and pull up the left and right sides of the anus to the kidneys with each sip. Pack Chi into the kidneys. Do not release the breath until your lungs are comfortably full.

(5) Pull up the sexual organs, sip in air, and pack Chi into the navel. Keep the chest relaxed, and spiral the energy nine times clockwise then nine times counterclockwise as you hold the compression around the kidneys and the navel. Do not move your hands.

(6) Breathe into the middle abdomen (one and a half inches below the navel) without spiraling, and pack.

(7) Breathe into the lower abdomen (three inches below the navel) without spiraling, and pack.

(8) Breathe into the perineum, and feel it bulge.

(9) Exhale down through the legs and the feet into the ground approximately six inches. Initiate breathing energy through your palms and soles. Use Energizer Breathing from the lower abdomen for up to eighteen breaths. Feel the energy flowing in the Microcosmic Orbit. (A form of Bone Breathing can also be done at this time.)

b. Stage Two

(10) Exhale, flatten the stomach, and pull up the left and right anus. Inhale, lighten the perineum, and squeeze the soles of the feet into the ground. Inhale ten percent of your lung capacity as you pull up the left anus. Hold, and then sip in more air as you pull up the right anus. Pack the kidneys. Claw the toes as though you are gripping the earth, and spiral at the Kidney Points (K-1) on the soles of both feet simultaneously, nine times clockwise and nine times

counter-clockwise. Use the mind, coordinated with eye movements, to help circulate the energy.

(11) Inhale, bringing the energy from the earth up to the knees. Lock the knees with no spiraling,

(12) Inhale the Chi up to the perineum, and spiral nine times clockwise and nine times counterclockwise. Feel the perineum bulge.

(13) Exhale. Regulate the breath with Energizer Breathing, practice Bone Breathing, and be aware of the soles and palms absorbing and releasing energy. Relax, practice the Inner Smile, and send smiling energy to all of the organs. Feel the energy flow in your Microcosmic Orbit.

c. Stage Three

(14) Now exhale again twice and flatten the stomach. Inhale ten percent of your lung capacity, and pull up the front, middle and finally the back part of the anus so that you can direct the Chi into the sacrum. Tilt the sacrum, pack Chi into it, and spiral the energy nine times clockwise and nine times counterclockwise. This will strengthen and activate the Sacral Pump.

(15) Inhale Chi up to T-11, inflating the kidney area, and press out on the lower back to straighten the curve there, spiraling nine times clockwise and nine times counterclockwise.

(16) Inhale up to C-7, straighten the curve at the neck, and lock the neck. Spiral the energy at C-7 nine times clockwise and nine times counterclockwise.

(17) Inhale to the base of the skull, Push the tongue against the palate, clench the teeth tightly, push the chin back, and squeeze the skull and temple hones to activate the Cranial Pump. Spiral nine times clockwise and nine times counterclockwise.

(18) Inhale to the crown (pineal gland) and spiral the energy nine times clockwise and nine times counterclockwise. (Fig. App. 1.5)

(19) Concentrate on the space between the eyebrows until you feel Chi build up there. Regulate the breath with Energizer Breathing. Exhale, holding the tongue up to the palate to connect the Governor and Functional channels.

(20) Bring the Chi down through the throat, heart center, and solar plexus. Bring the Chi down to the navel. Collect the energy,

there by covering the navel with the palms and spiraling in the prescribed manner.

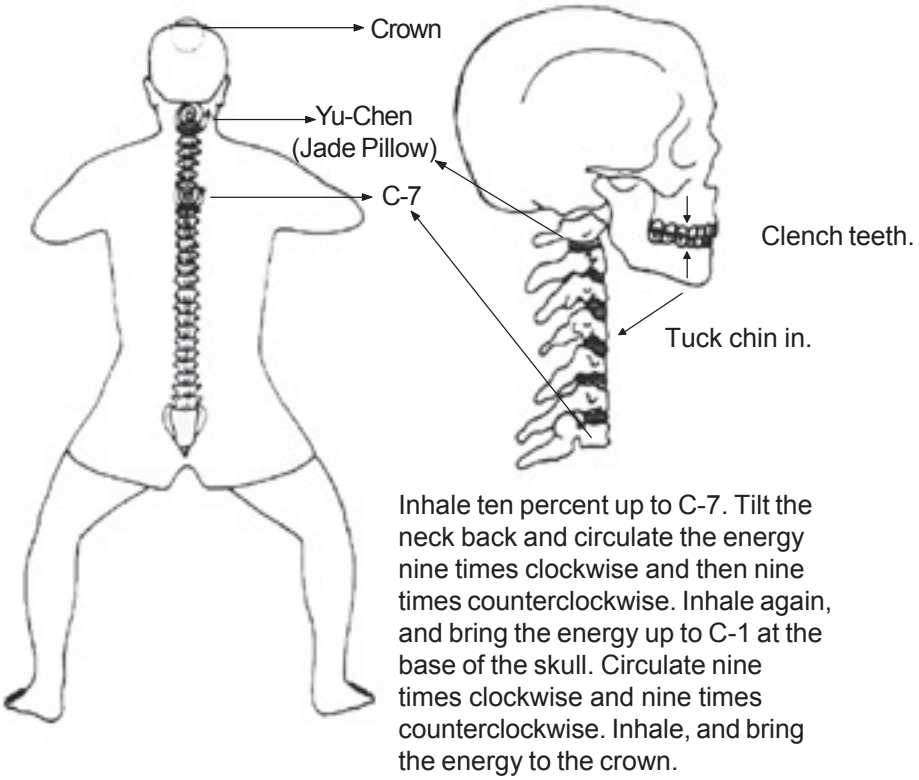


Fig. App.1.5 *Stage Three of Embracing the Tree*

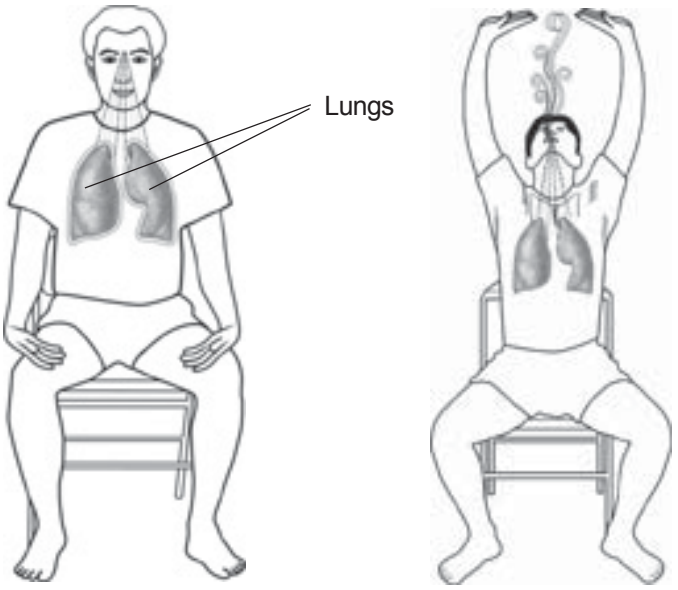
C. Six Healing Sounds

Emotional problems, pollution, poor food, injuries, and sudden or overly strenuous exercise can overheat the internal organs and glands. The Six Healing Sounds and their associated postures serve to cool and cleanse the vital organs, stimulating the flow of Chi energy to them. There are specific positions that you can assume to liberate any heat that may be trapped within the cooling sacs that surround each vital organ.

Note: Typical side effects of these practices are yawning, burping, or passing wind, all of which are beneficial.

1. Lungs: First Healing Sound

Associated Organ: Large Intestine
Element: Metal
Season: Autumn
Color: White
Emotions: Grief and Sadness, Courage and Righteousness
Parts of the body: Chest, Inner Arms, Thumbs
Senses: Smell (Nose) and Touch (Skin)
Taste: Pungent
Sound: ***Sssssssssss*** (tongue behind teeth)



(a) Become aware of the lungs

(b) Picture and feel the sac covering the lungs compress.

Fig. App.1.6 *Lungs Sound*

a. Position: Sit up straight on the edge of a chair with the backs of your hands resting on your thighs. (Fig. App.1.6 (a)) While looking at your palms, take a deep breath, and raise your arms out in front of you. When the hands are at eye level, begin to rotate the palms and bring them up above your head until the fingers of each hand point toward each other, and the palms face upward and outward.

Keep the elbows rounded out to either side. Do not straighten your arms.

b. Sound: Close the jaw·s so that the teeth meet gently, and part the lips slightly. As you look up, push up through your palms, draw the corners of the mouth back, and exhale the sound "***Sssssssssss***" sub-vocally, slowly and evenly in one breath. Picture and feel the sac covering the lungs compress and expel the excess heat, sick energy, sadness, sorrow, and grief. (Fig. App. 1.6 (b))

c. Rest and Concentrate: When you have exhaled completely, rotate the palms down, gently lowering the shoulders, and slowly lower your hands to your lap, resting them on your thighs, palms up. Close your eyes, and be aware of your lungs, imagining that you are still making the sound. Breathe into the lungs normally to strengthen them. Visualize the color white and smile into the lungs. Try to feel the exchange of cool, fresh energy replacing the hot, wasted energy. Feel righteousness and courage grow within you.

d. Repeat the Lung Sound three to six times. For colds, flu, toothaches, asthma, emphysema, or depression, repeat the exercise six, nine, twelve, or 24 times.

2. Kidneys: Second Healing Sound

Associated Organ: Bladder
Element:: Water
Season: Winter
Color: Black or Dark Blue
Emotions: Fear, Gentleness
Parts of the body: Side of Foot, Inner Legs, Chest
Senses: Hearing (Ears), Bones
Taste: Salty
Sound: ***Chooooooooo*** (as when blowing out a candle, the lips forming an "O")

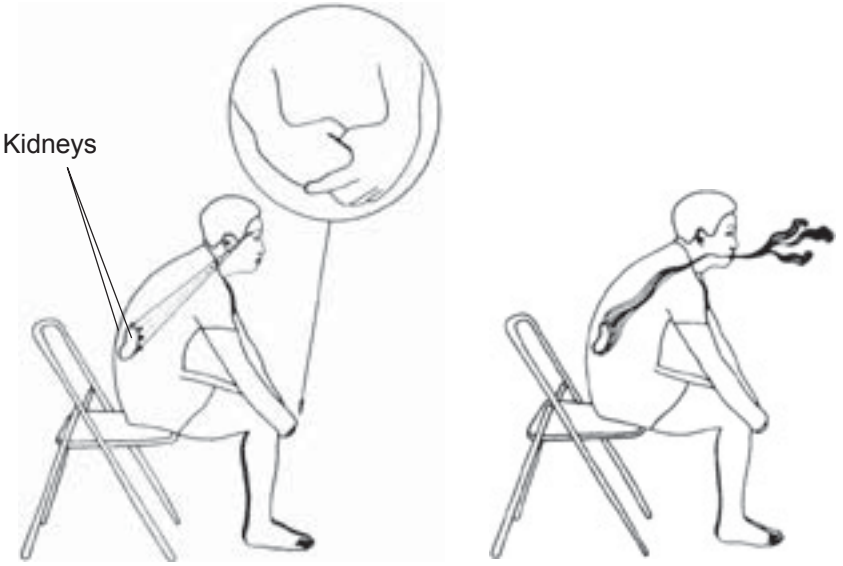
a. Position: Bring your legs together, ankles and knees touching, then take a deep breath and lean forward. Clasp the fingers of your tight hand around your left, and embrace your knees with the joined hands. (Fig. App. 1.7(a)) Pull back on the arms, straightening them. Allow your back to sag so that it protrudes in the area of your kidneys. Then tilt your head back slightly, and feel the pull on the spine.

b. Sound: Round the lips, and exhale the sound "***Chooooooooo***" as if you are blowing out a candle (Fig. App. 1.7 (b)) At the same

time, contract your abdomen in toward your kidneys. Keep the lips rounded. Imagine the excess heat, the sick energy, and the fear being squeezed out from the membranes surrounding the kidneys.

c. Rest and Concentrate: When you have fully exhaled, sit erect, separate the legs, and place your hands on your thighs with palms up. Close your eyes, breathe into the kidneys, and be aware of them. Visualize the color blue in the kidneys. Smile to them, imagining that you are still making the sound, and feel gentleness there. Be aware of the flowing energy.

d. Repeat the Kidney Sound three to six times. Practice more to alleviate problems of fatigue, dizziness, ringing in the ears, or back pain.



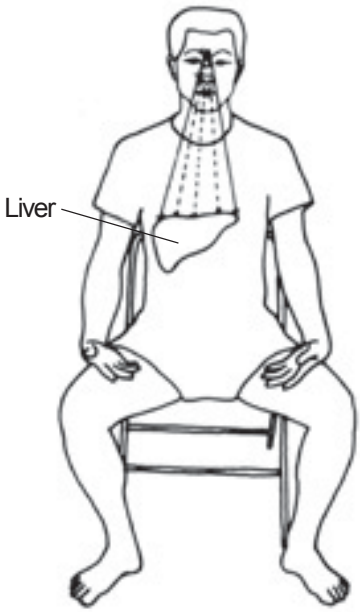
(a) Hook the hands around the knees. Become aware of the kidneys.

(b) Round the lips, making the sound one makes when blowing out a candle.

Fig. App.1.7 *Kidneys Sounds*

3. Liver: Third Healing Sound

Associated Organ: Gall Bladder
Element: Wood
Season: Spring



(a) Become aware of the liver.

(b) Feel that a sac encloses the liver, compresing it.

(c) Close your eyes and smile down to the liver.

Fig. App.1.8 *Liver Sound*

Color: Green
Emotions: Anger, Kindness
Parts of the body: Inner Legs, Groin, Diaphragm, Ribs
Senses: Sight (Eyes), Tears
Taste: Sour
Sound: ***Shhhhhh*** (tongue near palate)

a. Position: Sit on the edge of your chain and extend your arms out to the sides, palms up. (Fig. App. 1-8 (a)) Take a deep breath as you slowly swing your arms up and over your head following this action with your eyes. Interlace the fingers and turn your joined hands over to face the ceiling, palms up. Push out at the heel of the palms and feel the stretch through the arms into the shoulders, Bend slightly to the left, exerting a gentle pull on the liver.

b. Sound: Open your eyes wide as they are the openings of the liver. Slowly exhale, and sub-vocally emit the sound "***Shhhhhh***." Envision the excess heat and anger being expelled from the liver as the sac enveloping the liver is gently compressed. (Fig. App. 1.8 (b))

c. Rest and Concentrate: When you have fully exhaled, turn the hands over, separate them, and slowly bring the arms down to your sides. Bring the hands to rest on your thighs, palms up. Smile down to the liver. Close your eves, breathe into the liver, and be aware of it beneath the right rib cage. (Fig. App. 1.8 (c)) Imagine that you are still making the Liver Sound. Feel kindness grow there and visualize the color green.

d. Repeat the Liver Sound three to six times. Practice more times to expel anger, clear the eyes of any irritations, remove a sour or bitter taste, or to detoxify the liver.

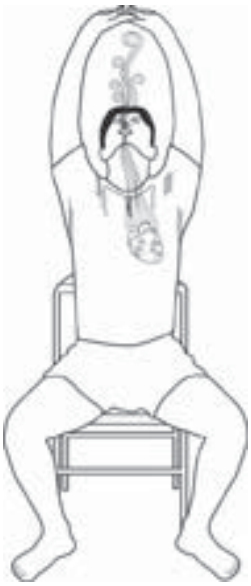
4. Heart: Fourth Healing Sound

Associated Organ: Small Intestine
Element: Fire
Season: Summer
Color: Red
Emotions: Hastiness, Arrogance, Cruelty, Joy, Honor, Sincerity
Parts of the body: Armpits, Inner arms
Senses: Tongue, Speech
Taste: Bitter
Sound: ***Hawwwwwwww*** (mouth wide open)

a. Position: Take a deep breath and assume the same position as for the Liver Sound (Fig. App. 1.9(a)), but lean slightly to the right since the heart is located slightly to the left of center in your chest. Focus on the heart and feel the tongue's connection to it.

b. Sound: Open the mouth, round the lips, and exhale the sound "***Hawwwwwwww*** " sub-vocally. Picture the sac which surrounds the heart expelling heat, impatience hastiness, arrogance, and cruelty. (Fig. App. 1.9 (b))

(a) Assume the same position as for the Liver Sound. Become aware of the heart.



(b) Open your mouth round your lips, and exhale the sound.

Fig. App.1.9 *Heart Sound*

c. Rest and Concentrate: After exhaling, smile down to the heart, and visualize a bright red color. Feel joy, honor, and sincerity grow in the heart.

d. Repeat the Heart Sound three to six times. Practice more to alleviate problems such as a sore throat, cold sores, swollen gums or tongue, jumpiness, moodiness and heart disease.

5. Spleen: Fifth Healing Sound

Associated Organs: Pancreas, Stomach
Element: Earth
Season: Indian Summer
Color: Yellow
Emotions: Worry, Fairness
Parts of the body: Lips, Mouth
Senses:Taste
Taste: Sweet, Neutral
Sound: ***Whooooo*** (from the throat, guttural)

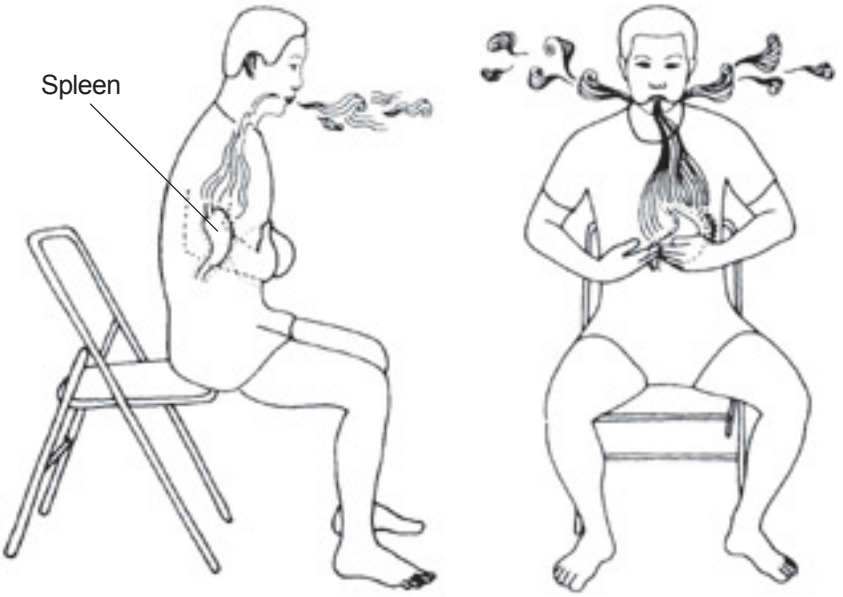


Fig. App.1.10 *Spleen Sound*
Place your hands with the three middle fingers resting at the bottom of the sternum, slightly to the left. Press in with the fingers

a. Position: Take a deep breath as you place your hands beneath the sternum with the index fingers resting at the bottom rib, slightly to the left and above the navel. Press in with the fingers as you push out the middle back. (Fig. App. 1.10)

b. Sound: Look up, and gently push your fingertips into the solar plexus area. Exhale the sound "***Whooooo*** " sub-vocally. Feel the sound vibrate the vocal cords. Feel pour worries being expelled.

c. Rest and Concentrate: Once you have fully exhaled, close your eyes. Place your hands on your thighs, palms up, and concentrate your smiling energy on the spleen, pancreas, and stomach. Breathe into these organs. Imagine a bright yellow light shining, and feel the emotions associated with fairness growing.

d. Repeat the Spleen Sound three to six times. Practice more times to eliminate indigestion, nausea, and diarrhea.

6. Triple Warmer: Sixth Healing Sound

The Triple Warmer refers to the three energy centers of the body: the upper section (brain, heart and lungs) is hot; the middle section (liver, kidneys stomach, pancreas and spleen) is warm; and the lower section (large and small intestines, bladder, and sexual organs) is cool. The Triple Warmer Sound, "***Heeeeeee***." serves to balance the temperature between the three centers.

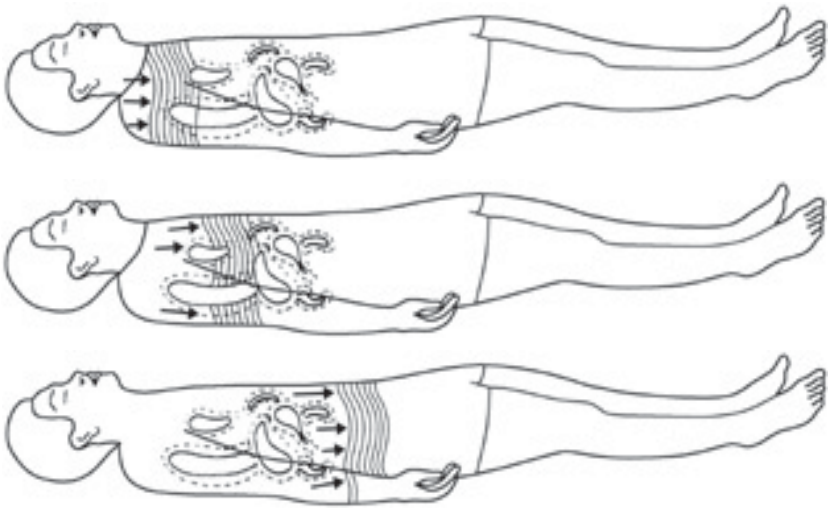


Fig. App.1.11 *Triple Warmer*

a. Position: Lie on your back with your arms resting at your sides, palms up, and your eyes closed. Inhale fully into all three cavities: chest, solar plexus, and lower abdomen.

b. Sound: Exhale the sound "***Heeeeeee***" sub-vocally, first flattening your chest, then your solar plexus, and finally your lower abdomen. (Fig. App. 1.11) Imagine a large roller pressing out your breath from your forehead to the pubic area.

c. Rest and Concentrate: When you have fully exhaled, concentrate on the entire digestive tract; that is, most of the torso.

d. Repeat the Triple Warmer Sound three to six times. Practice more to relieve insomnia (until you fall asleep) and stress.

Appendix 2
Meridian Points

The following illustrations define each meridian by certain well-known acupuncture points. Most points are indicated by an abbreviation of the specific meridian and a number. (i.e., P-3 is point number 3 on the Pericardium Meridian.) There are two good books of reference outlining, these points: *Acupuncture: A Comprehensive Text*—The Shanghai College of Traditional Medicine, translated and edited by John O'Conner and Dan Bensky, and *Anatomical Atlas of Chinese Acupuncture Points*, published by the Shandong Science and Technology Press.

The numbers are not always exactly the same for each point in both texts: therefore, the second label for a given point in this text is shown in parentheses. (This number represents the point indicated by the *Anatomical Atlas of Chinese Acupuncture Points*.) In addition you will find Chinese names labeling the more important points of this text in parentheses. You do not need to learn the points of each meridian. You only need to know the lines associated with each meridian. The points are illustrated as guidelines and for informational purposes.

1. Hit to awaken, detoxify, and strengthen the lower Abdomen (Lower Tan Tien, or Chi Hai) (Fig. App. 2.1)
2. Hit the Ming Men, or Door of Life, GV-4 (Fig. App. 2.2)
3. Hit the Insides of the Elbows, P-3 (Quze.) (Fig. App. 2.3)
4. Hit the Backs of the Knees, B1-54 (BL40) (Wei Chung.) (Fig. App.2.4)
5. Six Channels of the Left Arm and Hand:

a. Inside Elbow—Middle Finger Line—the Pericardium Meridian (Fig. App.2.5): Hit Point P-3 (Quze) three times. The specific points along the length of the meridian are hit as follows: P-2, P-3, P-4, P-5, P-6, P-7, wrist, P-8, palm, and middle finger.

b. Inside Elbow—Thumb Line—the Lung Meridian (Fig. App. 2.6): Hit Point LU-5 (Chize) three times. The route runs through the following points: LU-1, LU-2, LU-3, LU-4, LU-5, LU-6, LU-7, LU-8, LU-9, and LU-10.

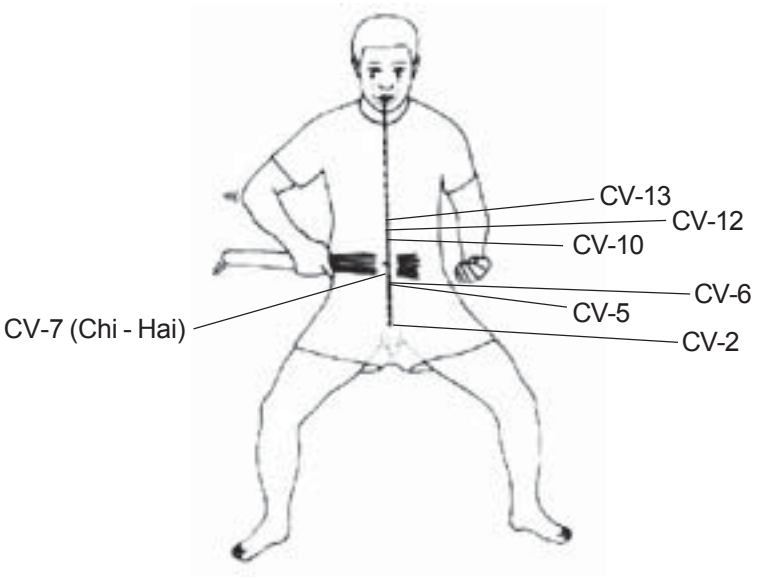


Fig. App.2.1 *Functional Meridian*

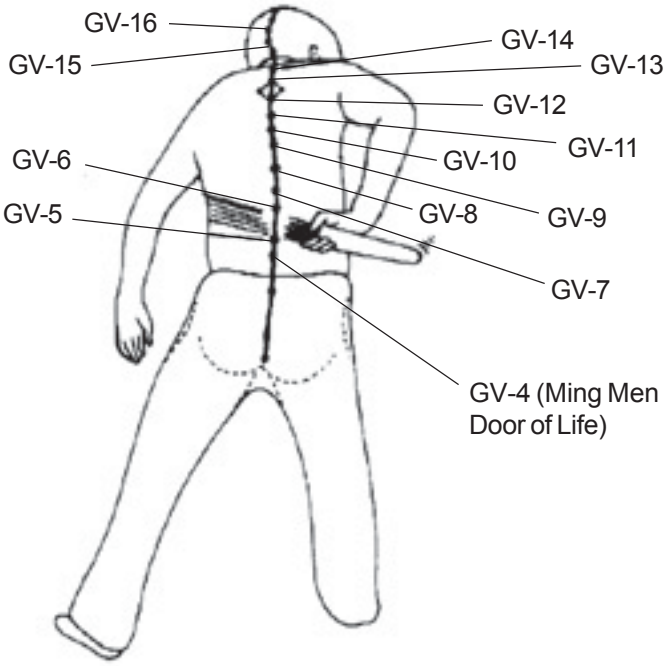


Fig. App.2.2 *Governor Channel*

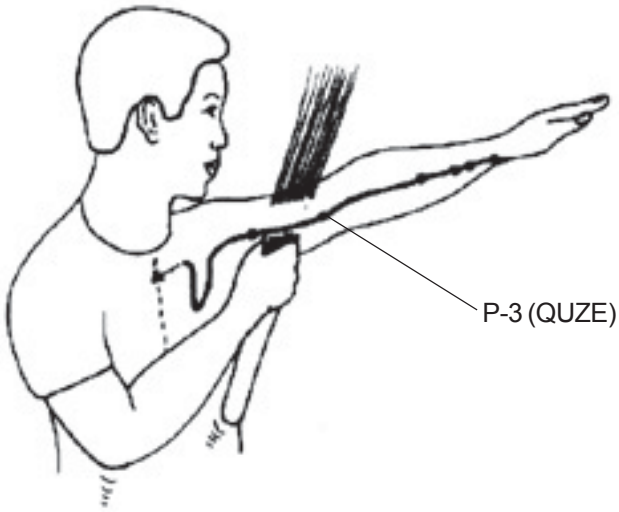


Fig. App.2.3 *Section of the Pericardium Meridian*

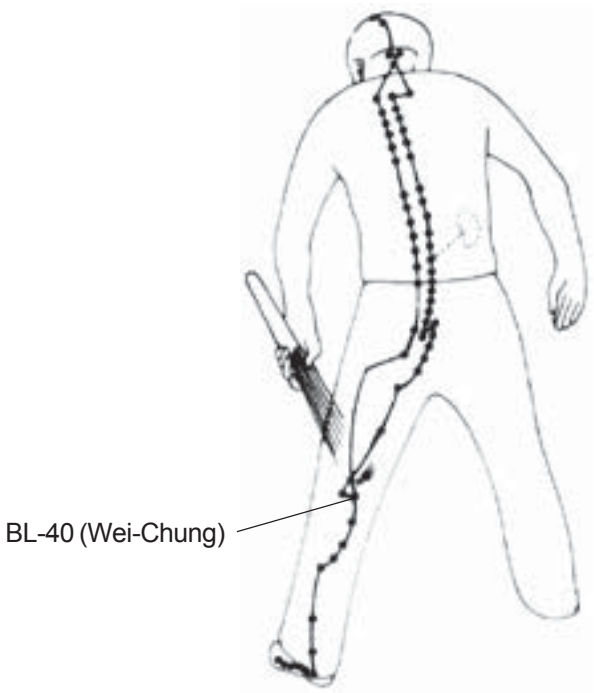


Fig. App.2.4 *Urinary Bladder Meridian*

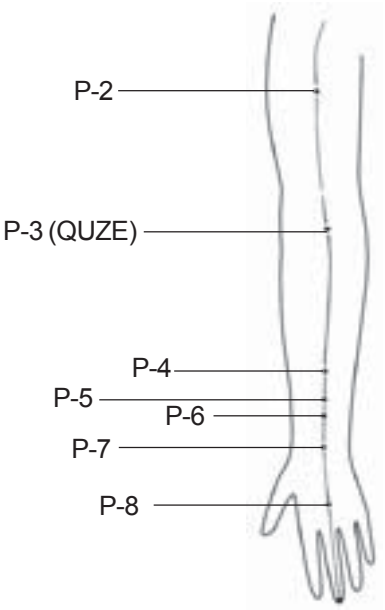


Fig. App.2.5 *Pericardium Meridian*

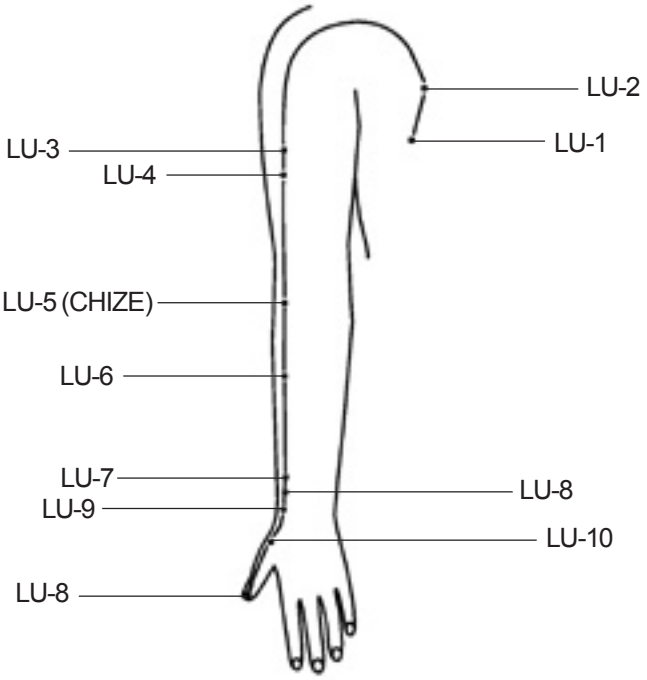


Fig. App.2.6 *Lung Meridian*

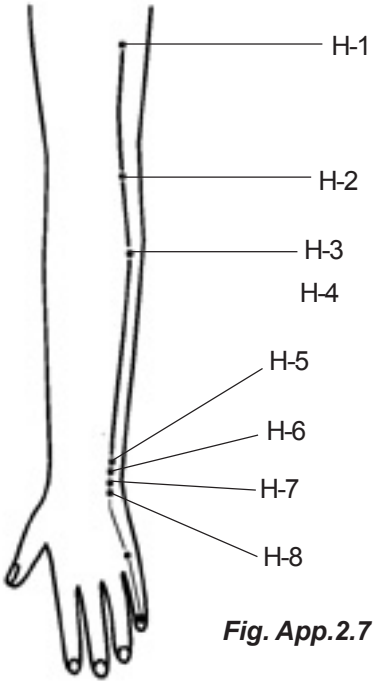


Fig. App.2.7 *Heart Meridian*

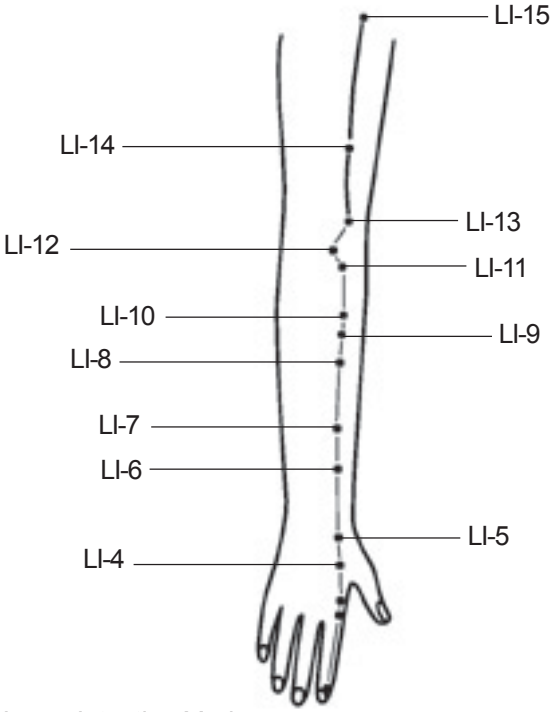


Fig. App.2.8 *Large Intestine Meridian*

c. Inside Elbow—Pinky Finger Line—the Heart Meridian (Fig. App. 2.7): Hit Point H-3 (Shaohai) three times. The route runs as follows: H-1, H-2, H-3, H-4, H-5, H-6, H-7, and H-8.

d. Outside Elbow-Index Finger Line-the Large Intestine Meridian (Fig. App. 2.8): Hit Point LI-5 (Quchi) three times. The points of the route are as follows: LI-15, LI-14, LI-13, LI-12, L1-11, LI-10, LI-9, LI-8, LI-7, LI-6, LI-5, and LI-4.

e. Outside Elbow—Four Finger Line—the Triple Warmer Meridian (Fig. App 2.9): Hit Point TB-10 (Tian Jing) three times. The route runs as follows: TB-14, TB-13, TB-12, TB-11, TB-10, TB-9, TB-8, TB-7, TB-6, TB-5, TB-4, and TB-3.

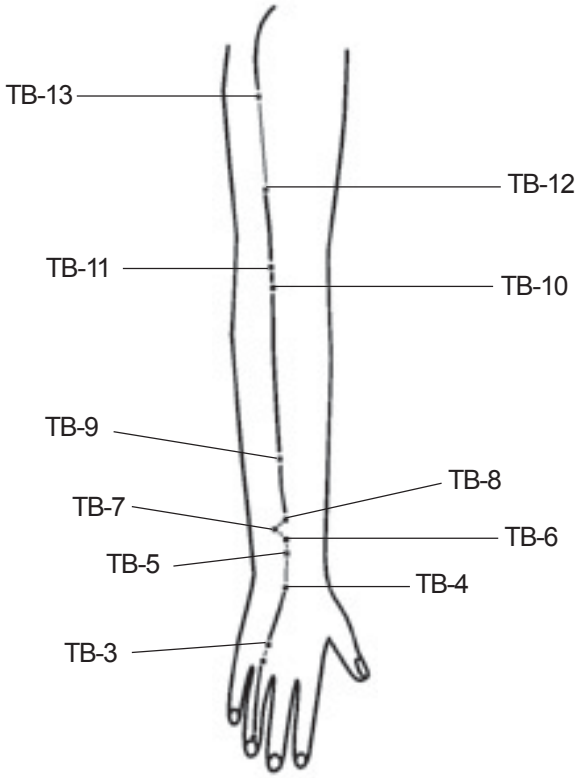


Fig. App.2.9 *Triple Warmer Meridian*

f. Outside Elbow-Pinky Finger Line-the Small Intestine Meridian (Fig. App. 2-10): Hit Point SI-8 (Xiao Hai) three times. The route runs as follows: SI-9, SI-8: SI-7, SI-6, SI-5, and SI-4.

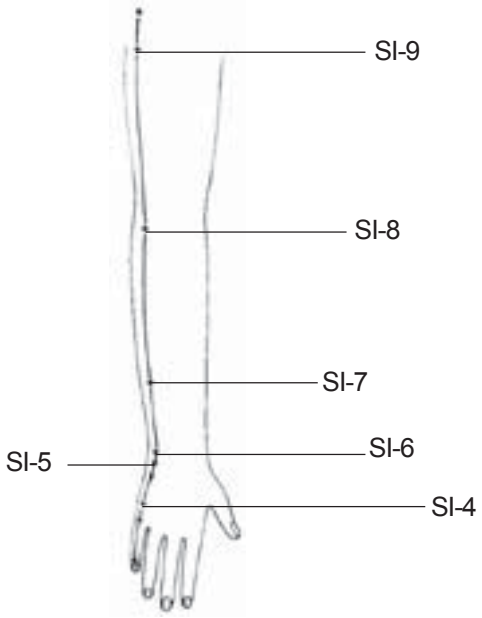


Fig. App.2.10 *Small Intestine Meridian*

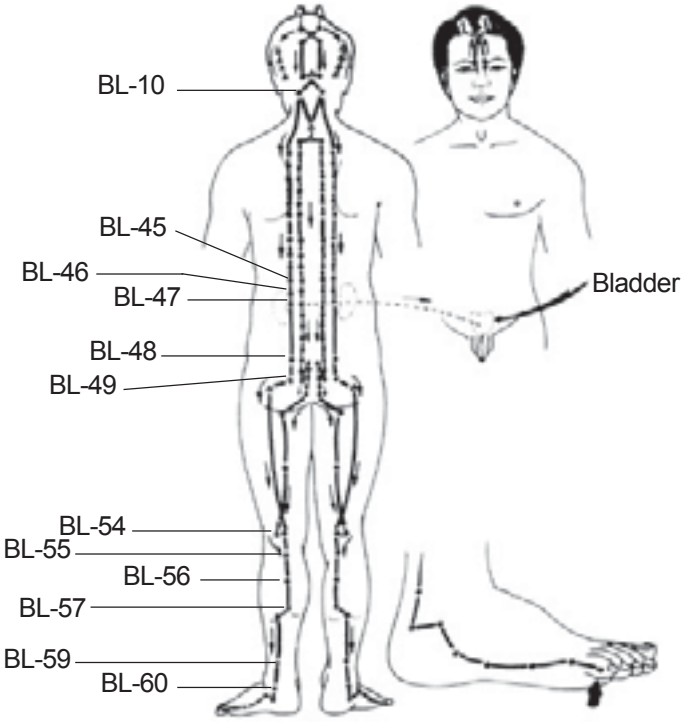


Fig. App.2.11 *Urinary Bladder Meridian*

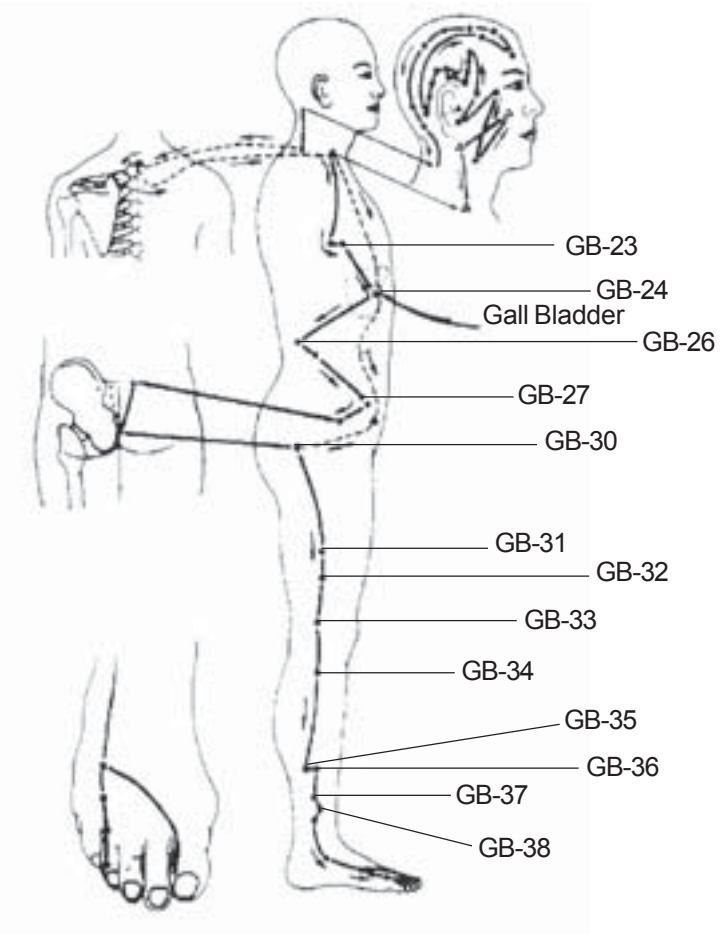


Fig. App.2.12 *Gall Bladder Meridian*

6. Six Meridians of the Leg

a. Back Side of Left Leg-Heel Line-the Bladder Meridian (Fig. App. 2.11): The Bladder Meridian points are as follows: BL-54 (BL-40) (Wei Chung) (at the back of the knee), up to BL-49, BL-48, BL-47 (BL-52) (three inches to the left of the Door of Life). Hit back down the same line, returning to the back of' the knee, and continue down to BL-55, BL-56, BL-57, BL-59, and BL-60.

b. Outside of the Left Leg—Fourth Toe Line—the Gall Bladder Meridian (Fig. App. 2.12): The Gall Bladder Meridian points are as follows: GB-33 (Yang Kuan) (on the outside of the left kneel, up to GB-32, GB-31, and GB-30 (Huan Tiao) (at the hip), and then back down to the knee GB-34, GB-35, GB-36, GB-37, and GB-38.

c. Inside of Left Leg—Big Toe Line—the Spleen, Liver, Kidney Meridians (Fig. App. 2.13): The Spleen Meridian points are as follows: SP-9 (Yin Ling Chuan), up to SP-10. SP-11, and then downward past SP-9 again, to SP-8, SP-7, and SP-6 (San Yin Chiao) (Where the Spleen, Liver and Kidney Meridians meet). Hit SP-6 three extra limes, then hit to the upper part of SP-5, and to the big toe.

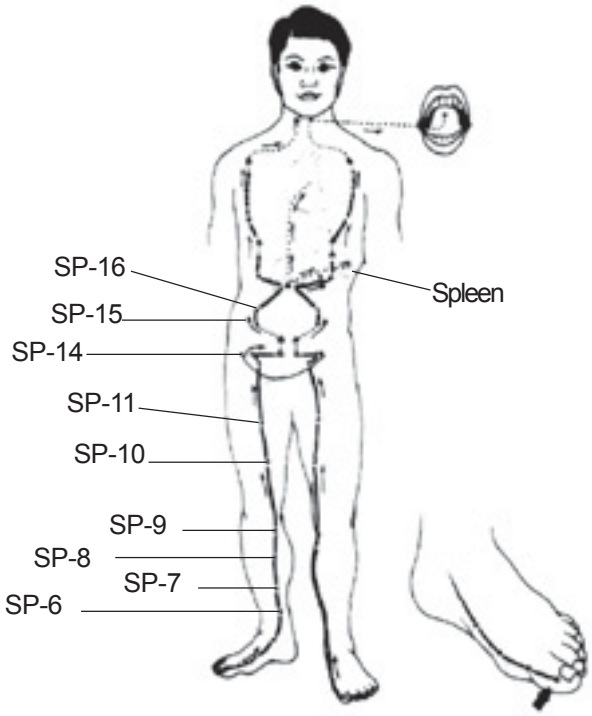


Fig. App.2.13 *Spleen Meridian*

d. Front Side of Left Leg—Middle Toe Line—the Stomach Meridian (Fig. App. 2.14): The Stomach Meridian points are as follows: ST-35 (Tu Pi) (under the kneecap), up to ST-34, ST-33, ST-32, ST-31, and back down the same route past the kneecap to ST-36, ST-37, ST-38, ST-39, ST-40, and ST-41. Hit ST-41 three extra times. End the Hitting of this leg by Hitting Point BL-54 I (BL-40) (Wei Chung) at the center of the inside of the knee.

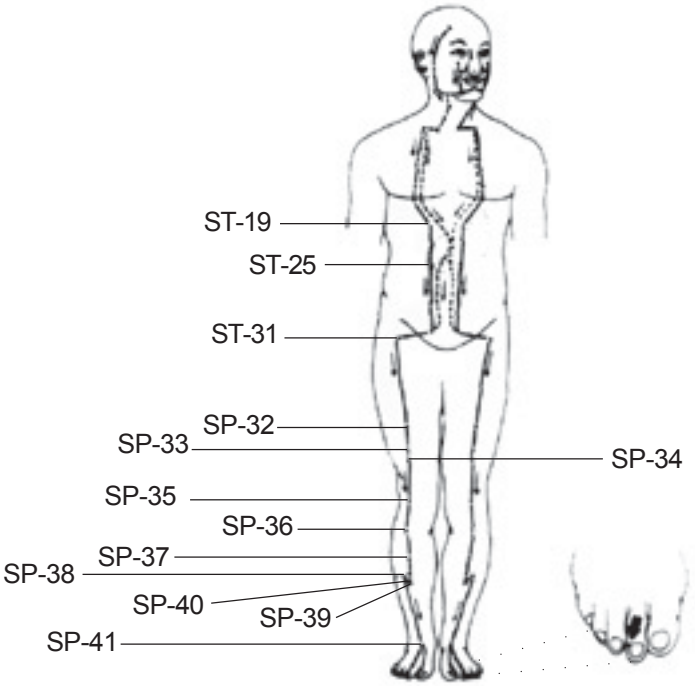


Fig. App.2.14 *Stomach Meridian*

7. The Meridians of the Back:

a. The Middle Line of the Back—the Govemor Meridian (Fig. App. 2.15): Hit GV-4 (the Ming Men Point, or Door of Life) three times. The points of the route are as follows: GV-6, GV-7, GV-8 GV-9, GV-10, GV-11, GV-12, GV-13, GV-14. GV-15 (Yamen), and GV-16 (Feng Fu). Gently hit this area an extra three times, then hit down to GV-2 (the sacrum).

b. The Left and Right Lines of the Back-the Bladder Meridian (Fig. App. 2-16): Hit BL-47 (BL-52) (Zhishi) three times. The points of this route are as follows: BL-47 (BL-52), BL-46 (BL-51), BL-45 (BL-50), up to BL-10 and BL-9. Hit these points an extra three times, and down again past BL-47 (BL-52), down to BL-49 (BL-54) (at the side of the sacrum). Hit this point an extra three times. Then hit back up again to BL-47 (BL-52) (the Door of Life), hitting it an extra three times.

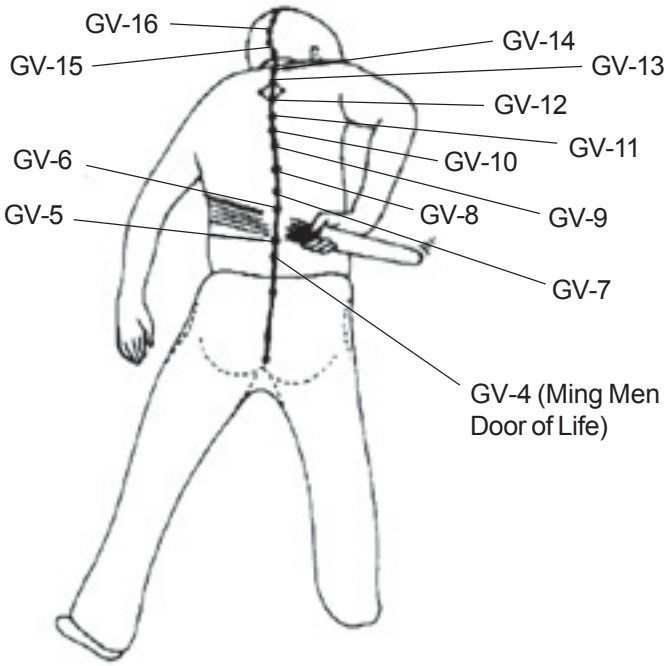


Fig. App.2.15 *Governor Channel*

8.The Front Part of the Body:

a. The Conception Vessel Meridian (Fig. App. 2.17):

(1) Hit the Lower Tan Tien one and a half inches below the navel in men; three inches below the navel in women.

(2) The Conception Vessel Meridian-Above the Navel: Begin by Hitting Point CV-13, just below the xiphoid process. Hit downward to CV-12, midpoint between the xiphoid process and navel, and hit in a rolling fashion to CV-10, about an inch and a half above the navel.

(3) Navel, Sexual Organs, Prostate/Ovaries of the Conception Vessel Meridian—the Middle Tan Tien: The Conception Vessel Meridian points below the navel are as follows: CV-8 (Chi Cgung) (the middle of the navel), down to CV-7, CV-6 (Chi Hai; one and a half inches below the navel—the Lower Tan Tien of men), down to CV-5, CV-4 (Kuan Yuan) (about three inches below the navel—the Lower Tan Tien of women), CV-3, CV-2, and back up to the navel.

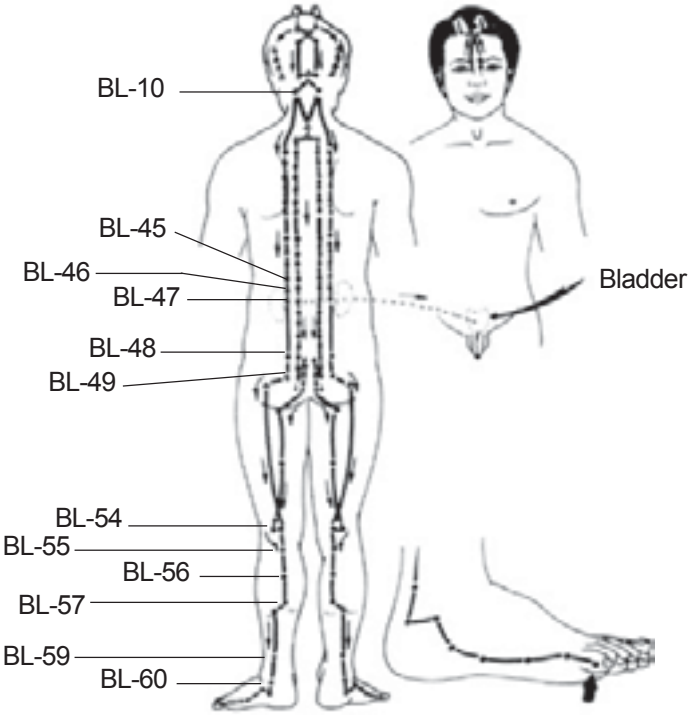


Fig. App.2.16 *Urinary Bladder Meridian*

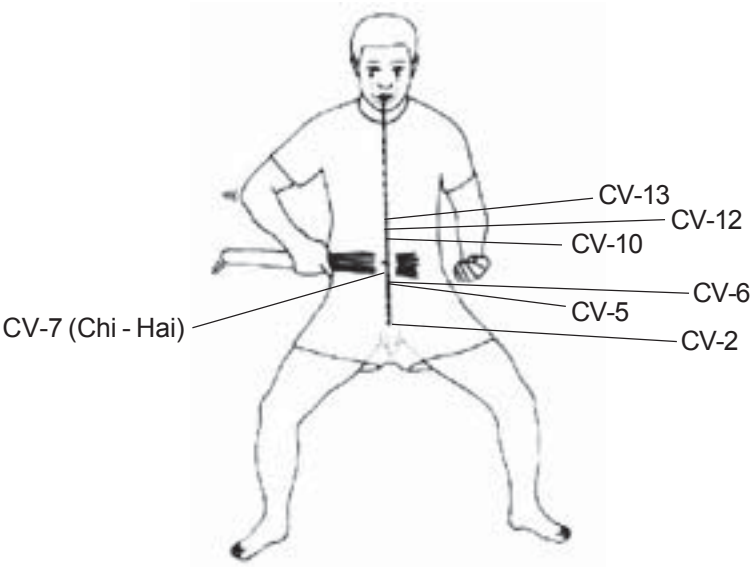
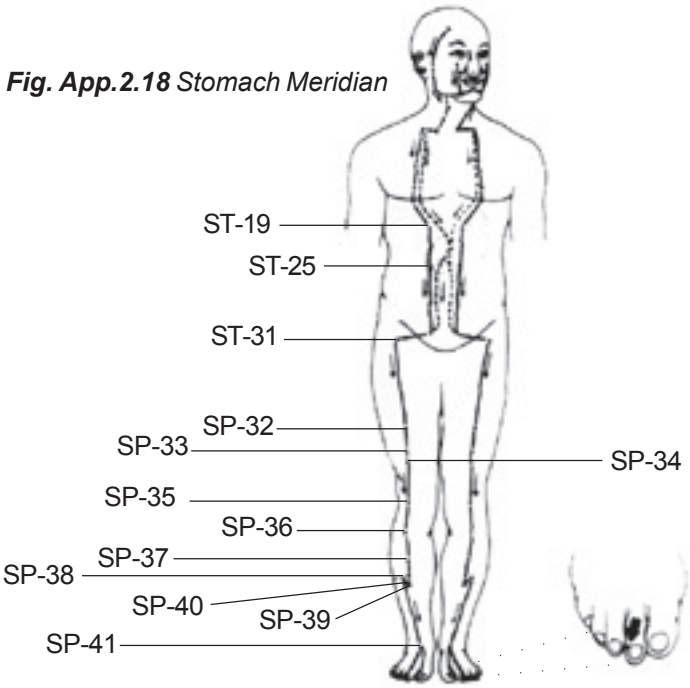


Fig. App.2.17 *Conception Vessel Meridian*

Fig. App.2.18 *Stomach Meridian*



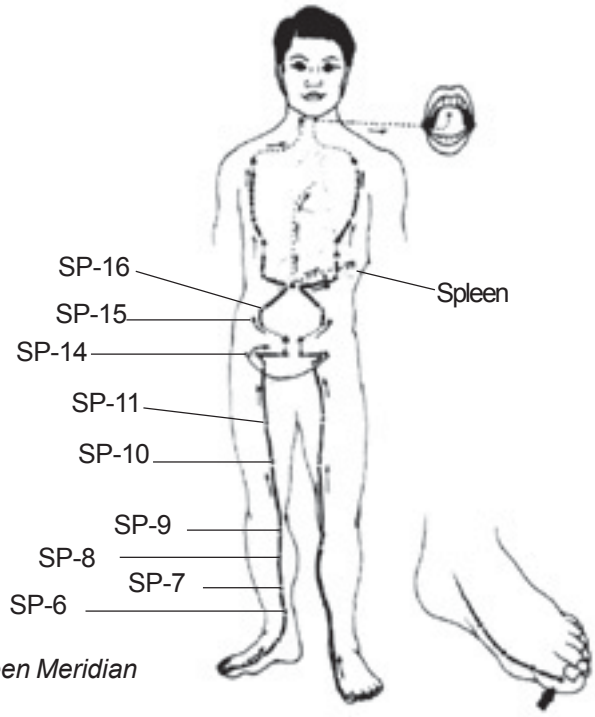


Fig. App.2.19 *Spleen Meridian*

b. Left Abdomen—the Stomach Meridian, one and a half inches to the left of the navel (Fig. App. 2-18): The Stomach Meridian points are as follows: ST-25 (Tien Shu; one and a half inches to the left of the navel, down to ST-24, ST-23, ST-22, ST-21, ST-20, ST-19, up to just below the rib cage, and down to the left of the navel.

c. Left Abdomen—the Spleen Meridian, three inches to the left of the navel (Fig. App. 2-19): The Spleen Meridian points are as follows: SP-15 (Ta Heng) (three inches to the left of the navel), downward to SP-14, SP-13, up the same line to SP-16 (below the rib cage), and back down to SP-15.

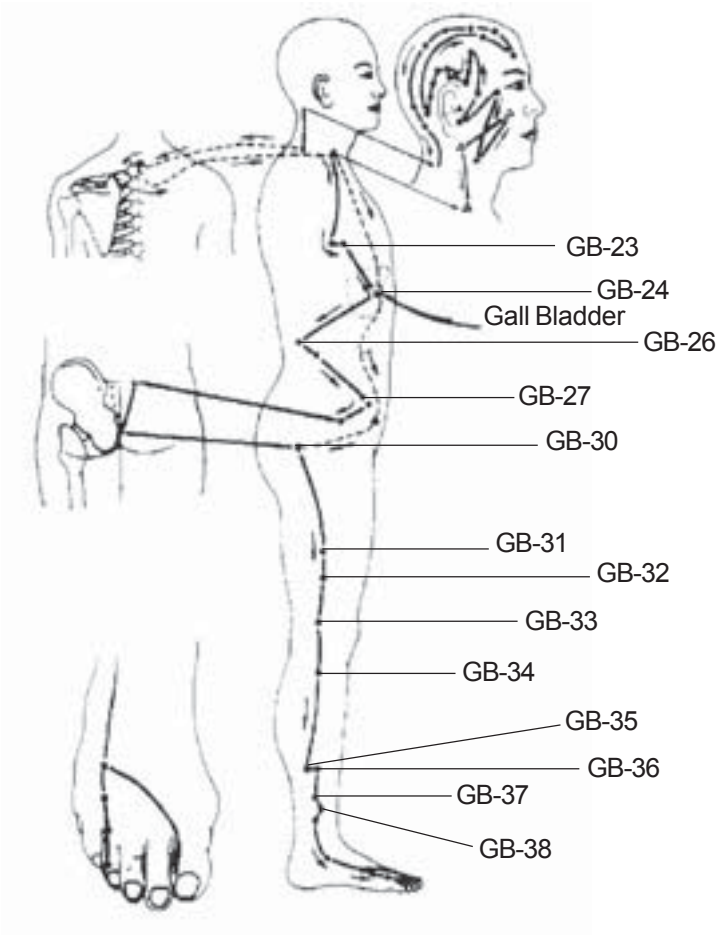


Fig. App.2.20 *Gall Bladder Meridian*

d. Side of the Left Abdomen—the Gall Bladder Meridian far left side of the body (Fig. App. 2.20): The Gall Bladder Meridian points are as follows: the GB-26 (Tai Mo), also know as the Belt Channel point, is very important in the development of the Belt Channel. Hit down to the left hip GB-27, and up GB-25, GB-24, GB-23, GB-22, and to the armpit.

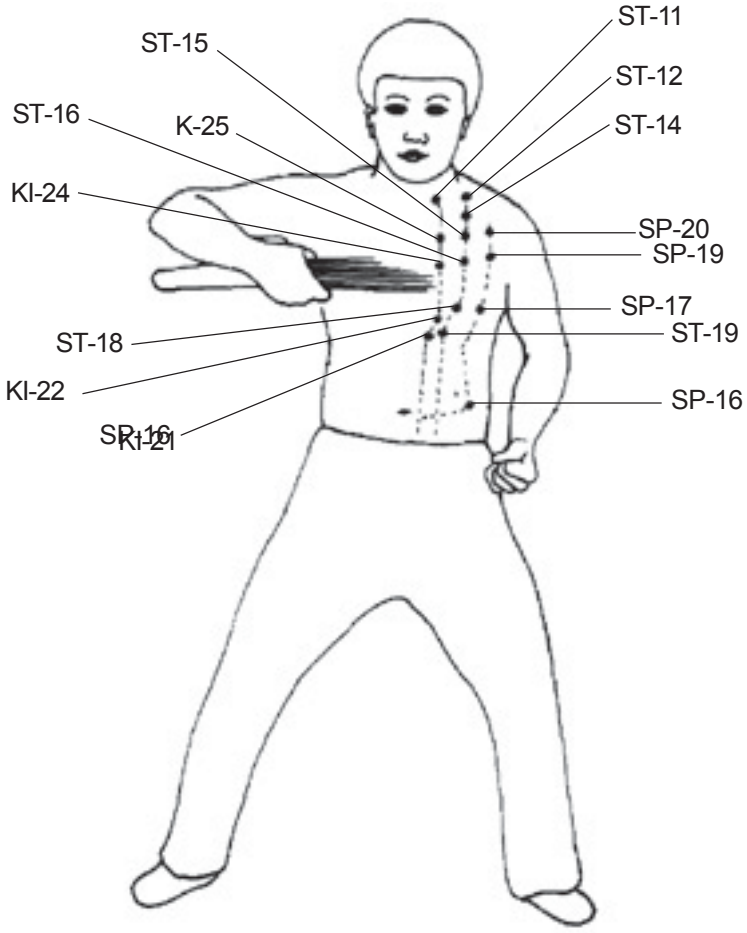


Fig. App.2.21 *Point on the Left Rib Cage*

e. Hitting the Left Rib Gage (Fig. App. 2.21):

(1) Start at the bottom, right side of the left rib cage, directly at the center of the chest where the sternum is located. Hit following the downward angle of the rib the meridian points: KI-21, ST-19, and SP-16.

(2) Hit down the meridian line just below the nipple along the next rib beginning near the sternum the meridian points: KI-22, ST-18, and SP-17.

(3) Hit down the meridian line just above the nipple, along the next higher rib, from the sternum down through the meridian points: KI-24, ST-16, and SP-19.

(4) Hit along the next higher rib, hitting from near the sternum downward, the meridian points: KI-25, ST-15, and SP-20.

(5) Hit downward along the next higher rib, just below the collarbone, beginning near the sternum the meridian points: KI-26 and ST-14.

(6) Hit along the collarbone, starting from the top of the sternum and out toward the shoulder to the meridian points ST-11 and ST-12.

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Iron Shirt Chi Kung III
Bone Marrow Nei Kung

Taoist Ways to Improve your Health by Rejuvenating your Bone Marrow and Blood

Mantak Chia

Illustrated By Juan Li

Bone Marrow Nei Kung is a system of health developed by the ancient Taoist Masters for the cultivation of internal power. They discovered that, through the process of absorbing energy into the bones, bone marrow can be revitalized to replenish the blood and nourish the life-force within. Many healers have sought these methods, which are known to make the body impervious to illness and disease. In ancient times, the "Steel Body" attained through this practice was a coveted asset in the fields of Chinese medicine and martial arts.

Today the copious health benefits of this art are sought after by health enthusiasts from all walks of life. The Taoist methods of "regrowing" the bone marrow are crucial to the rejuvenation of the body, which in turn rejuvenates the mind and the spirit. These secrets have never before been revealed, but now their disclosure is necessay to instill the sensibilities of the masters into an energy-deficient society. In this book, Master Mantak Chia divulges the step-by-step practices of his predecessors in a useful and informative work, written for the health and spiritual well-being of today's world.

Master Mantak Chia, born in Thailand, comes from the ancient lineage of Taoist Masters, extirpated in communist China and now existing in dwindling numbers among the Overseas Chinese. He also has a Western education in anatomy and physiology. Now in Thailand, he has developed a clear and practical way of teaching this ancient wisdom, much of it hitherto kept secret. He is also the author of Awakening Healing Energy, Taoist Secrets of Love, Taoist Ways to Transform Stress into Vitality, and Chi Self-Massage.

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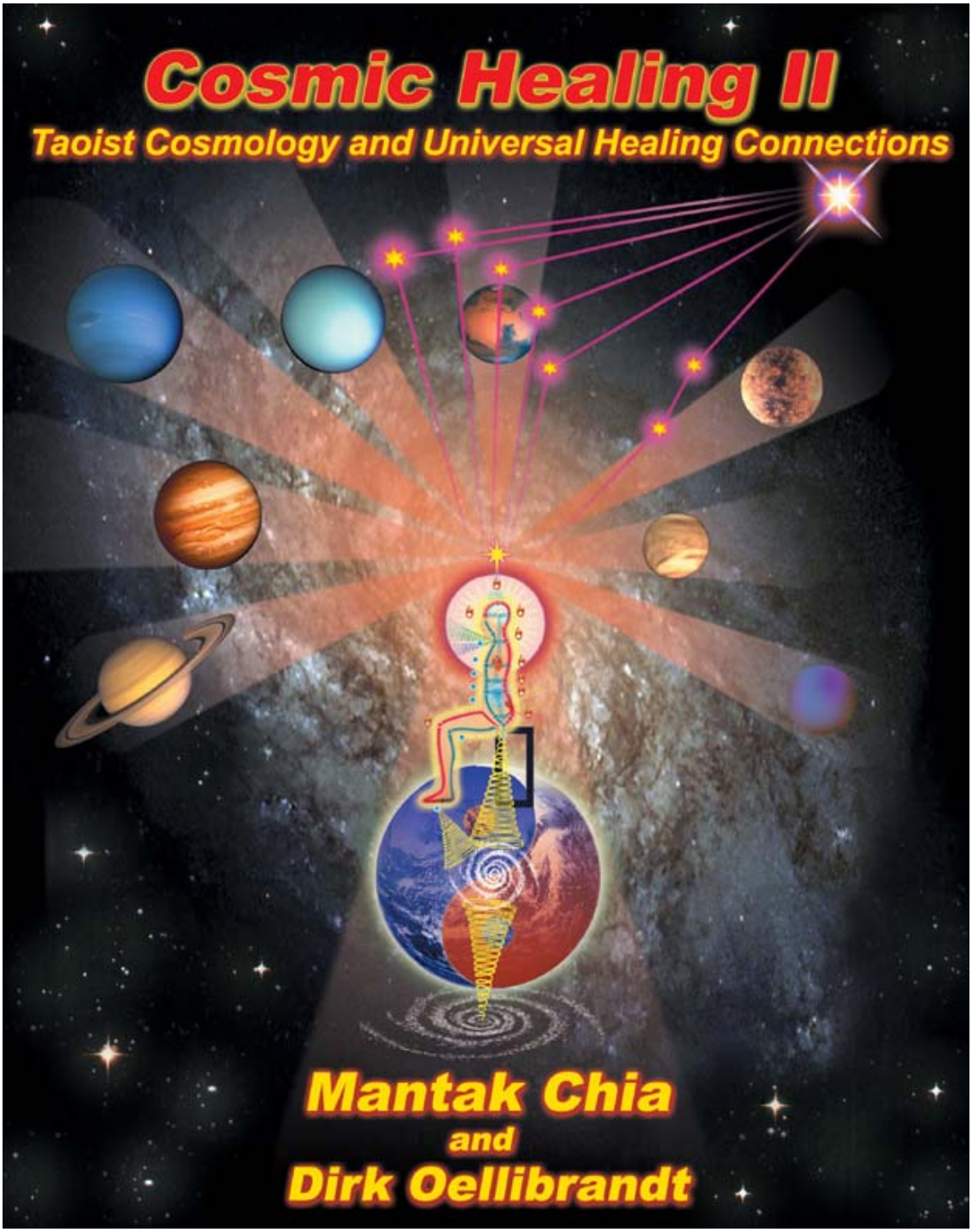
Cosmic Healing II

Taoist Cosmology and Universal Healing Connections



Mantak Chia
and
Dirk Oellibrandt

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About the Authors

Mantak Chia

Master Mantak Chia

Master Mantak Chia is the creator of the Universal Tao System and is the director of the Universal Tao Center and Tao Garden Health Resort and Training Center in the beautiful northern countryside of Thailand. Since childhood he has been studying the Taoist approach to life. His mastery of this ancient knowledge, enhanced by his study of other disciplines, has resulted in the development of the Universal Tao System which is now being taught throughout the world.

Mantak Chia was born in Thailand to Chinese parents in 1944. When he was six years old, Buddhist monks taught him how to sit and "still the mind." While still a grammar school student, he learned traditional Thai boxing. He was then taught Tai Chi Chuan by Master Lu, who soon introduced him to Aikido, Yoga and broader levels of Tai Chi.

Years later, when he was a student in Hong Kong excelling in track and field events, a senior classmate named Cheng Sue-Sue introduced him to his first esoteric teacher and Taoist Master, Master Yi Eng (I Yun). At this point, Master Chia began his studies of the Taoist way of life in earnest. He learned how to circulate energy through the Microcosmic Orbit and, through the practice of Fusion of the Five Elements, how to open the other Six Special Channels. As he studied Inner Alchemy further, he learned the Enlightenment of the Kan and Li, Sealing of the Five Senses, Congress of Heaven and Earth and Reunion of Heaven and Man. It was Master Yi Eng who authorized Master Chia to teach and heal.

When Mantak Chia was in his early twenties he studied with Master Meugi in Singapore, who taught him Kundalini, Taoist Yoga and the Buddha Palm. He was soon able to clear blockages to the flow of energy within his own body. He learned to pass the life force energy through his hands also, so that he could heal Master Meugi's patients. He then learned Chi Nei Tsang from Dr. Mui Yimwattana in Thailand.

A while later, he studied with Master Cheng Yao-Lun who taught him the Shao-Lin Method of Internal Power. He learned the closely guarded secret of the organs, glands and bone marrow exercise known as Bone Marrow Nei Kung and the exercise known as Strengthening and Renewal of the Tendons. Master Cheng Yao-Lun's system combined Thai boxing and Kung Fu. Master Chia also studied at this time with Master Pan Yu, whose system combined Taoist, Buddhist and Zen teachings. Master Pan Yu also taught him about the exchange of Yin and Yang power between men and women and how to develop the Steel Body.

To understand the mechanisms behind healing energy better, Master Chia studied Western anatomy and medical science for two years. While pursuing his studies, he managed the Gestetner Company, a manufacturer of office equipment and became well acquainted with the technology of offset printing and copying machines.

Using his knowledge of Taoism, combined with the other disciplines, Master Chia began teaching the Universal Tao System. He eventually trained other Instructors to communicate this knowledge and he established the Natural Healing Center in Thailand. Five years later, he decided to move to New York, where in 1979, he opened the Universal Tao Center. During his years in America, Master Chia continued his studies in the Wu system of Tai Chi with Edward Yee in New York.

Since then, Master Chia has taught tens of thousands of students throughout the world. He has trained and certified over 1,200 instructors and practitioners from all over the world. Universal Tao Centers and Chi Nei Tsang Institutes have opened in many locations in North America, Europe, Asia and Australia.

In 1994, Master Chia moved back to Thailand, where he had begun construction of Tao Garden, the Universal Tao Training Center in Chiang Mai.

Master Chia is a warm, friendly and helpful man who views himself primarily as a teacher. He presents the Universal Tao System in a straightforward and practical manner, while always expanding his knowledge and approach to teaching. He uses a word processor for writing and is totally at ease with the latest computer technology.

Master Chia estimates that it will take thirty five books to convey the full Universal Tao System. In June 1990, at a dinner in San Francisco, Master Chia was honored by the International Congress of Chinese Medicine and Qi Gong (Chi Kung), who named him the Qi Gong Master of the Year. He is the first recipient of this annual award.

He has previously written and published these Universal Tao books:

Awaken Healing Energy of the Tao - 1983
Taoist Secrets of Love: Cultivating Male Sexual Energy
co-authored with Michael Winn - 1984.
Taoist Ways to Transform Stress into Vitality -1985
Chi Self-Massage: the Tao of Rejuvenation - 1986
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Bone Marrow Nei Kung - 1989
Fusion of the Five Elements I - 1990
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The Inner Structure of Tai Chi co-authored with Juan Li - 1996
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Multi-Orgasmic Couple co-authored with Douglas Abrams 2000 - published by Harper/Collins
Cosmic Healing I - 2001
Cosmic Healing II co-authored with Dirk Oellibrandt - 2001
Door of All Wonders co-authored with Tao Haung - 2001
Sexual Reflexology co-authored with W. U. Wei - 2001
Elixir Chi Kung - 2001

Also many of the books above are available in the following foreign languages:

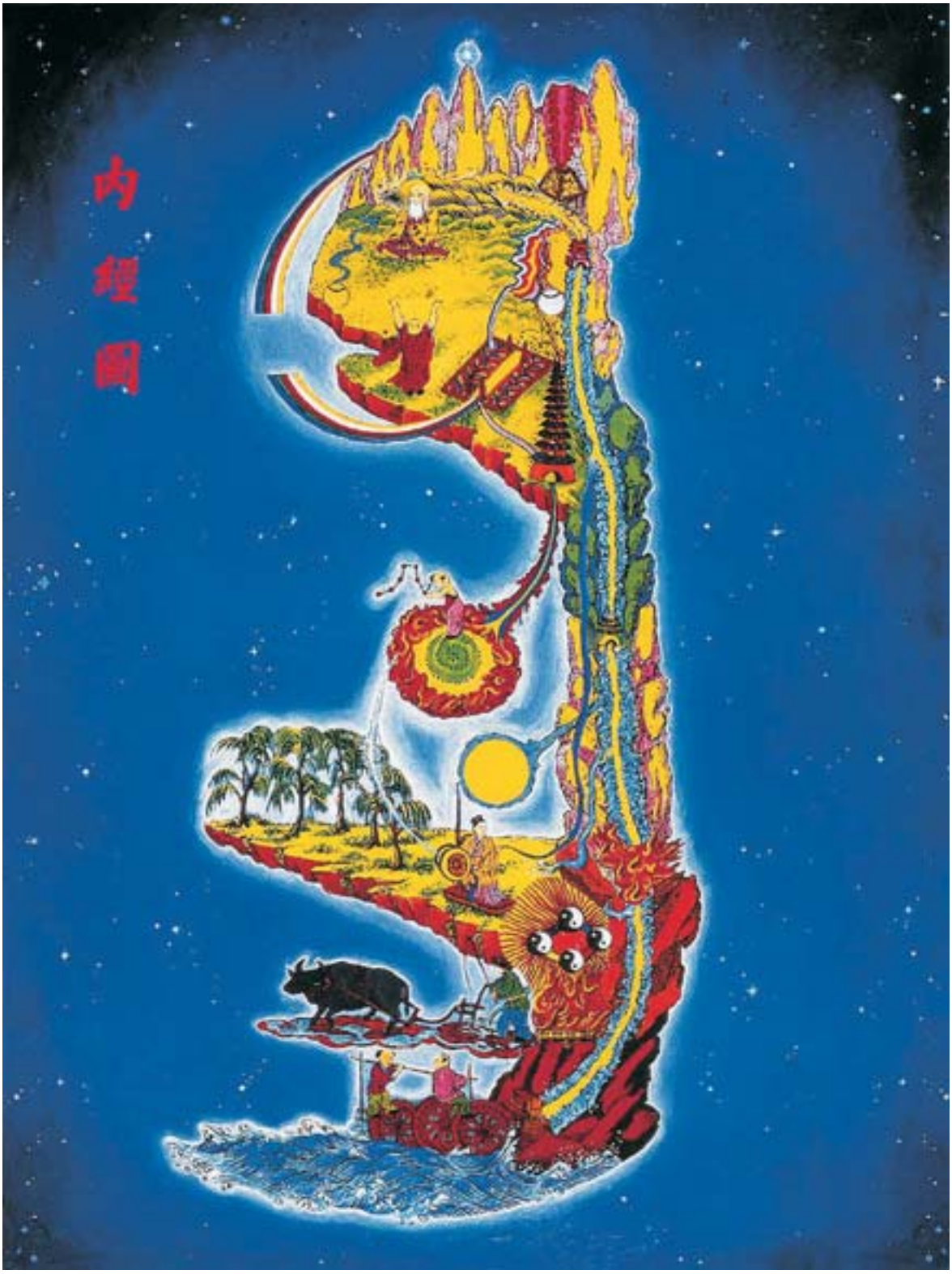
Bulgarian, Czech, Danish, Dutch, English, French, German, Greek, Hebrew, Hungarian, Indonesian, Italian, Japanese, Korean, Lithuanian, Malaysian, Polish, Portuguese, Russian, Serbo-Croatian, Slovenian, Spanish and Turkish. There is a Foreign Publishers listed in the Universal Tao Center Overview in the back of this book.

Dirk Oellibrandt

Dirk has been practicing the principles of oriental martial arts since the age of 13. His training combined with a great passion for nature helped him to develop a solid base with a high sensitivity for energies. In his evolution as a martial artist he became fluent with theTaoist specialties and Shiatsu. At 25 he began withdrawing from the external martial arts and studied different forms of Chi Kung, Aikido, Tai Chi and Pakua. He also learned to apply his energy in the form of healings; he studied different shiatsu systems, oriental medicine, and osteopathic techniques. His most important sources of inspiration are Master Mantak Chia, Saul Goodman and Michio Kushi.

His gathered knowledge and experience from his studies, treatments and teachings combined with his inherent sense of the universal laws helped him to give life to a new approach to the field of bodywork and healing. He named it “4 DIMENSIONAL BODYWORK”.

Dirk and wife Katrien direct an international organisation centered in Belgium called “DU MAI” to further this work. The unique philosophy underlying the Du Mai program combined with Dirk’s vigorous and awakening teaching and treatment style has been a source of support and inspiration for many. Together with a team of colleagues including teachers and therapists he is exploring the dynamics between the universal laws and the constant re-creation of our human body. This approach suggests exciting possibilities and higher dimensions in the art of healing and bodywork.


内經圖

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We offer our eternal gratitude to our parents and teachers for their many gifts to us. Remembering them brings joy and satisfaction to our continued efforts in presenting the Universal Tao System. For their gifts, we offer our eternal gratitude and love. As always, their contribution has been crucial in presenting the concepts and techniques of the Universal Tao.

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We wish to thank Colin Campbell for his editorial work and writing contributions on the first printing of this book, as well as his ideas for the cover. We appreciate his research and great labor. We wish to thank Matt Gluck for his editorial contributions on the revised edition of this book, as well as thanking our instructors, Dennis Huntington and Annette Derksen, for their insightful contributions to the revised version. We thank Dirk Gerd Al for his technical editing and clear writing throughout the book.

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Words of Caution

The practices described in this book have been used successfully for thousands of years by Taoists trained by personal instruction. Readers should not undertake the practice without receiving personal transmission and training from a certified instructor of the Universal Tao, since certain of these practices, if done improperly, may cause injury or result in health problems. This book is intended to supplement individual training by the Universal Tao and to serve as a reference guide for these practices. Anyone who undertakes these practices on the basis of this book alone, does so entirely at his or her own risk.

The meditations, practices and techniques described herein are ***not*** intended to be used as an alternative or substitute for professional medical treatment and care. If any readers are suffering from illnesses based on mental or emotional disorders, an appropriate professional health care practitioner or therapist should be consulted. Such problems should be corrected before you start training.

Neither the Universal Tao nor its staff and instructors can be responsible for the consequences of any practice or misuse of the information contained in this book. If the reader undertakes any exercise without strictly following the instructions, notes and warnings, the responsibility must lie solely with the reader.

This book does not attempt to give any medical diagnosis, treatment, prescription, or remedial recommendation in relation to any human disease, ailment, suffering or physical condition whatsoever.

Chinese medicine emphasizes balancing and strengthening the body so that it can heal itself. The meditations, internal exercises and martial arts of the Universal Tao are basic approaches to this end. Follow the instructions for each exercise carefully and do not neglect the foundations, i.e, the Microcosmic Orbit and any other supplemental exercises. Also pay special attention to the warnings and suggestions in each chapter. People who have high blood pressure, heart disease or a generally weak condition should proceed cautiously, having prior consent from a qualified medical practitioner. Pregnant women should not practice Cosmic Healing. People with venereal disease should not attempt any practices involving sexual energy until they are free of the condition.

The Universal Tao is not and cannot be responsible for the consequences of any practice or misuse of the information in this book. If the reader undertakes any exercise without strictly following the instructions, notes and warnings, the responsibility must lie solely with the reader.

The correct way to work with Cosmic Healing II is to read and practice the techniques in Cosmic Healing I by Mantak Chia, to fully obtain the benefits of this new work.

Preface
Taoist Cosmology
Stellar and Planetary Connections

Dirk Oellibrandt

We are moving towards unprecedented changes, at the turn of the millenium. The accelerating speed of global change shows us that society is moving towards a climax of tension and contraction, the center of the evolutionary spiral where things are turning towards their opposites. The ability to adapt to this breathtaking process is essential to survive. These changes are not always caused by natural disasters or climatic alterations, but by the effect of centuries of the human drive for power, temporarily forming an unstable social atmosphere on the planet. This tension field is magnified by universal astrological conditions.

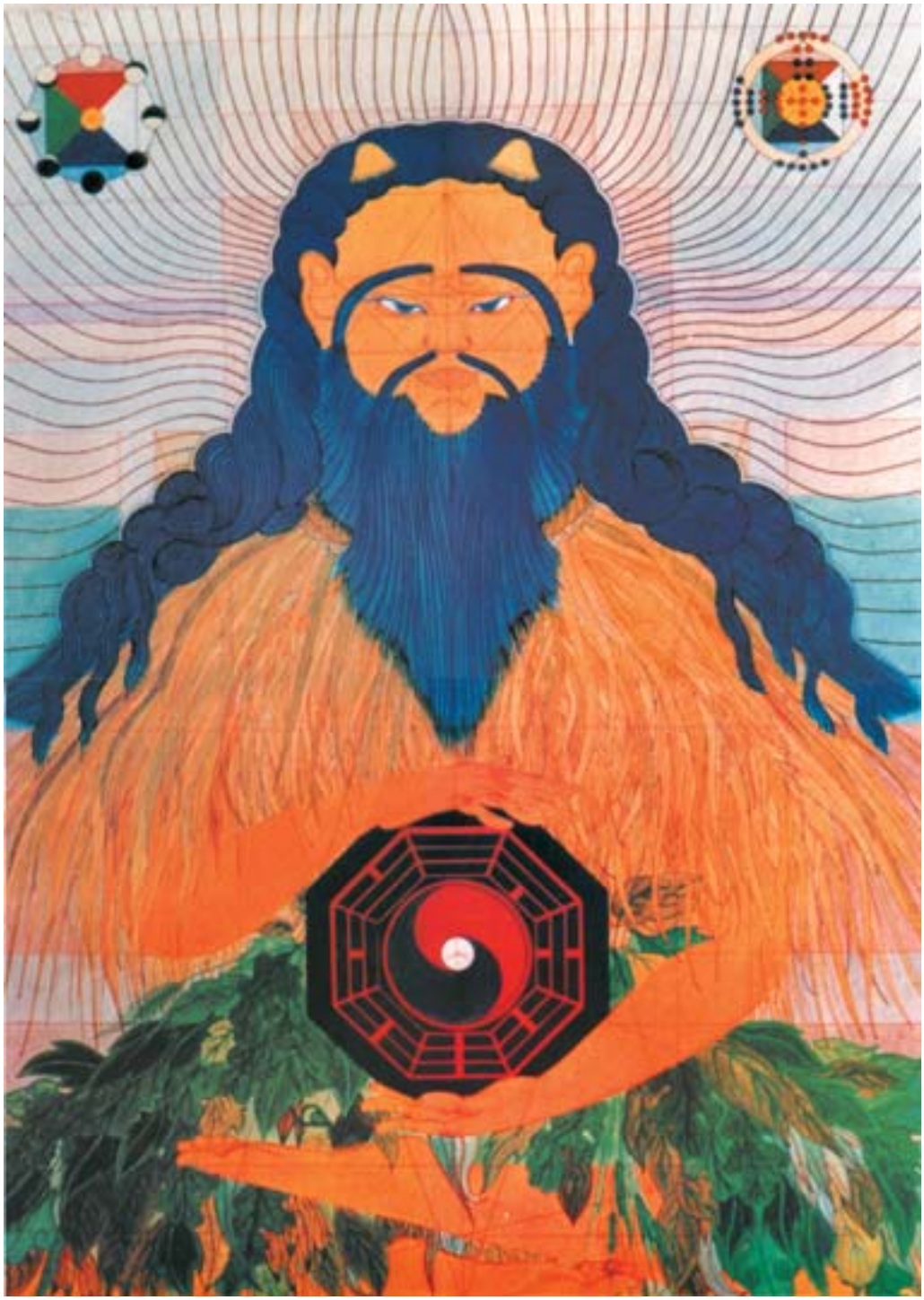
In the modern world, many people have barely enough energy to follow the speed and direction of these changes much less have enough creative energy remaining to consider and set down their true tasks. A major part of the world population spends too much of its precious energy trying to survive. Some do this by imitating and using political and social structures that are controlled by the commerical industrial groups. In this way they are destroying the roots of their own culture. Natural rhythms are changed by obsessive striving for material goods. Superficial pleasure takes over, disconnecting people from their spiritual roots and a natural way of life.

A new orientation in life and guidance by leaders who understand the order of the universe and can see truth in the midst of the realm of phenomenon and events, is one of the most urgent needs we all experience today.

This book does not pretend to and does not claim to solve these needs for you. We do, however, trust that these practices can help you to reconnect with who you really are and that it may help you in finding the way back to your origin. Once we reconnect to this source of intelligence, everything around us acquires a new and a deeper meaning.

This book offers parts of the Taoist cosmology about the planetary and stellar world, some personal insights and an introduction into Taoist planetary and stellar practice. Once you have integrated these into your life, they will help you to cultivate inner light and clarity.

We hope this book will inspire you and help you, so that you will feel more liberated and at peace with yourself. May it enhance your sense of ‘coming home’ as well. Although most information comes out of the ancient oriental tradition, we want to point out that the true information source is the ***Tao*** itself, the essential you ,including all countries, traditions, races and so much more.



Fu Hsi - Creator of the I Ching (Drawing by Juan Li)

Chapter I
Taoist Cosmology and Universal Healing Connections

Introduction

Taoism is a practice of studying and living the laws of the universe. It has its roots in a body of knowledge that many masters have gathered over thousands of years. According to ancient Taoist records, this practice has been the fruit of deep meditative practice by highly advanced practitioners who lived an intimate relationship with the universe and nature, often in remote and isolated places.

A major role in the discovery of a practical way to work with the energy of the universe was played by Fu Hsi, who has been credited in Chinese history with the discovery of the pakua and who has been seen as the creator of the I Ching, the most ancient Taoist book of wisdom. There is agreement among historians of Chinese culture that it was the Yellow Emperor, who played a major role more than 5000 years ago, in synthesizing Taoist practices in the domains of health and healing as well as in the healing love practice. He integrated a wealth of insights and practices from a wide variety of Taoist masters. This process of synthesis and accumulation of theory and practice continued to grow in subsequent millennia, until today. It is still evolving.

Taoist practice as we understand it is not religious in conventional terms, nor is it based on a creed or on transcendental principles.

It is a practice of self-awareness and self-transformation through which we gradually become one with the cosmos. In this process we realize and actualize ourselves, as within the physical body, the energy body grows (in Taoism known as the soul body) and within the latter the spirit body (the light, diamond or rainbow body - see illustration on page 12) evolves. It is in this process of subsequent energy transformations, that we return to our origins and realize our original intrinsic nature of which peace and freedom are the natural fruits.

There is a firm insistence in the Taoist wisdom tradition that any advance in energy transformation or what in western culture is called spiritual advancement, needs to be well rooted in the earth: thus the initiation into the higher practices bears fruit, in the Taoist view, only to the extent that the practitioner is rooted and grounded. Taoist practice may help a person to lead a fascinating life and at the same time grow spiritually by realizing one's natural potential.

Essential to spiritual growth is that the Taoist practitioner cultivates a sense of purity, joyfulness in life and a sense of wonder, thereby regaining and enhancing the openness and excitement of a small child. Not surprisingly the virgin child stands in the Taoist tradition for purity and immortality. In this way the practitioner develops one's own sense of inner truth as a reflection of one's innate spiritual origin.

In the chapter which follows, we offer an approach which integrates ancient Taoist insights with knowledge and information from several more recent sources, exposing a wide range of possibilities. We hope that the information offered in the following chapters may help the reader to enhance his or her awareness, health and quality of relationships and may also serve to raise thereby, the quality of society in general. Knowledge of this material can also be used in personal healing and by those who engage themselves to help others to heal themselves. Promising effective results of this approach in thousands of treatments have encouraged us to share this information. In the near future a book may appear which will be specifically focused on the therapeutic possibilities of this work.

Three Ways

We propose that the reason for the generally poor quality of our lives and that of society is due to the perception we have of who we are, where we originated and what we are doing here on earth. The quality of our life as we live it does not reflect our full potential. In what follows, we describe three different kinds of people, typical of the most common visions and life styles. Also we will see how we as human beings gradually entered into a process of degeneration and how we lost our divine nature. Many centuries of conditioning by institutional religion as well as by modern science have lowered our energy frequencies and have locked up humankind into a horizontal, materialistic culture in which sensitivity to our true origin has become obscured and we live cut off from the energies of heaven.

Thus we have become trapped into a rational, materialistic way of life. At the same time, as a result of our repression and disconnection we tend to be lost in guilt, we project negative emotions on others and look for truth outside rather than within ourselves. This book is designed to help us to reactivate the deep memory of who we are beneath the crust and overgrowth of the various forms of domestication and slavery that we have been subject to in the history of our civilization.

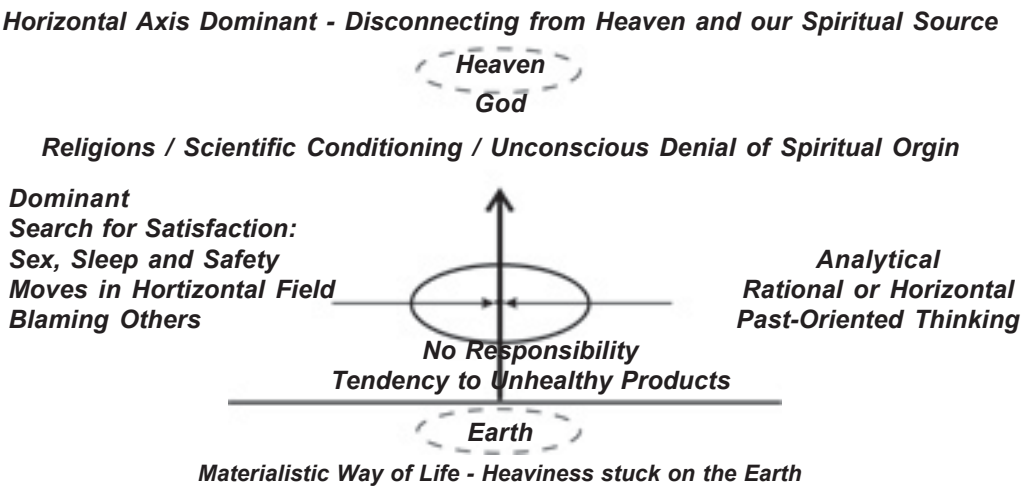


Fig. 1.1 *Horizontal Axis*

This state of spiritual disconnection has been further aggravated by unnatural ways of living, moving and eating. Spiritual disconnection and materialist obsession are at the very core of modern society. Since we turned away from the higher intelligence of the universe, which is our only source of true knowing, we became like a space shuttle without external information, depending and hoping for good luck.

Thus most of us in the world of today live in an unawakened, half numb state, unconscious that we are caught in the past, afraid to look at ourselves and where we are here and now.

As this is the dominant state of social energy, it is not easy to avoid being trapped in it. Most people are resigned to this state and if you would ask them how they feel and how they are doing, they would tell you: “We are doing okay”. Their lives basically revolve around eating, sleeping, mating, security and power. If they would look deeply inside and were honest to themselves, they would see that they are rather unhappy and feel empty inside. The deep fear of looking at this pain and emptiness prevent them noticing that they have gravely suppressed their godly nature.

As children of the universe we are not only created by the same intelligence and the same subtle substance, but if we allow it, we spontaneously will co-create its evolutionary process. We are not only children of the universe and its love which gave us life, we are also its fathers and mothers, whose love is co-responsible for the way it evolves. As an ancient expression says:“Embrace the universe as a mother embraces her first born child”.

Once we truly take responsibility for ourselves, our health, our spiritual origin and our life task, we can start to wake up from this numb state. Then we become aware of the fear and mechanisms we have cultivated to prevent ourselves from getting in touch with our true selves. Only when we have the courage to look beneath the surface of our ordinary consciousness, will we be able to open up and walk the path to freedom and spiritual independence.

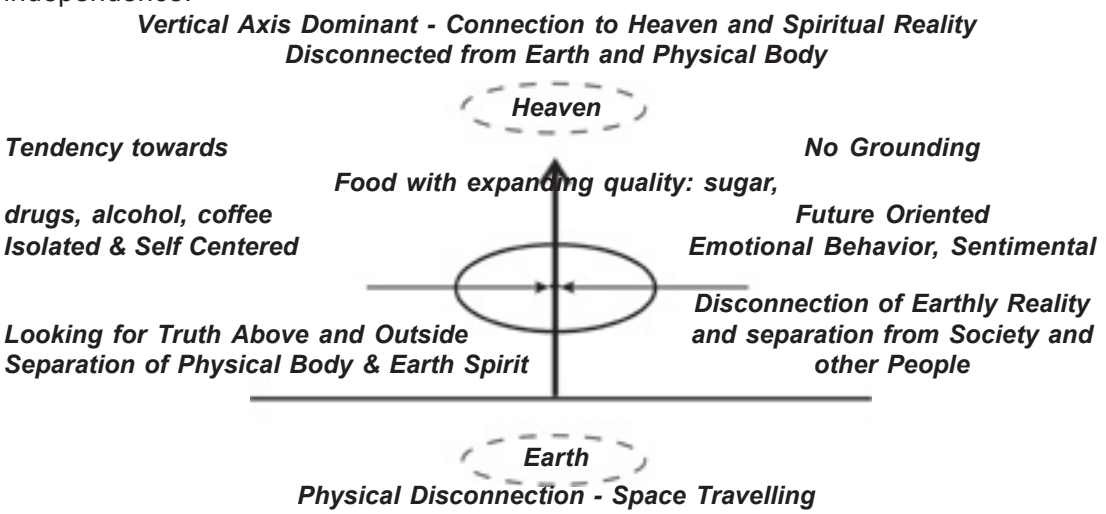


Fig. 1.2 *Vertical Axis*

The Flower Power period and the New Age movement may be seen as a reaction to the materialistic upsurge. However many followers of these movements, in their relative disdain of mundane and earthly material pursuits, have moved to the other extreme: a spiritualism without grounding 'roots' in the earth. Or they have the same fear pattern but now use a new emergency exit, which contains the same duality between heaven and earth and which has characterized most dominating religious and philosophical traditions.

People with poor groundings and a negative relationship with their body frequently face a host of problems in their daily lives regarding sex, money, health, self esteem and relationships. They often suffer from insecurity and have a weak relationship with the realities of life. They tend to seek ways to elude these realities, including their own physical existence, so that they experience a growing disconnection between body, mind and spirit. They do understand that they need to look for truth within themselves, as they carry the divine within. But they find this difficult because of the split which they have created within themselves between what is "above" and what is "below", between heaven and earth within themselves.

The pursuit in realizing freedom often causes such spiritual aspirants to imprison themselves in their search. As a result they are bound to end up as imbalanced as their materialist opposites. It is the deep pain they experience which pushes them to a spiritual path, free from all obstructions. Now the same ego is hidden behind a spiritual mask. When we turn our attention away from our body we cut the intelligence away from the 'matter'. In this way the body is ignorant, dependent and selfish. We dishonor the female nature, the holiest temple on earth. The higher frequencies are not balanced and integrated in the physical body, so the vital essence will gradually leave the body or will transform into high energy frequencies that can only be partly assimilated in the physical body. The balance of the energy will leave the body and find a new 'attraction'. Physically this person will start to weaken slowly and all kinds of symptoms will appear, ultimately leading to premature aging. Their heart-energy may be compared with to a flower which is not connected with the roots. Their spiritual condition is only momentary. They only live in the upper body, as they tend to ignore or are afraid of their sexuality; they lack a connection with the belly, their energy center. As love and sex are not connected, their relationships tend to be emotionally unstable and superficial. Let us be true to ourselves; we were not given our bodies to deny them. We can all contribute to the quality of life on this planet by dissolving the denseness and separation in our mind and our social mentality. The problem is not only in the body, but also in the absence and denial of an understanding of the infinite and unfathomable true spirit and universal mind. Taoist masters realize that truth lies in a spiritual life which includes the physical body. By consciously fusing the spirit with the core of physical existence a new quality of life arises.

Taoist self-healing practices can significantly help such people: by teaching them how to get in touch with the spiritual nature of their body, to care for it and make it healthy and strong. This is essential for the growth of a healthy energy body.

The initial focus of Taoist practice is on creating a healthy and strong physical body, well rooted in the source of life, the energy of our 'mother' earth. At the same time Taoist practice acknowledges that the origin of our spirit is in heaven. Our soul has chosen to incarnate on earth and seeks opportunities to grow and evolve, by learning from the universe. Since everything finds its nature in Tao or the great spirit, the human body, soul and spirit can be seen as different densities of the same substance.

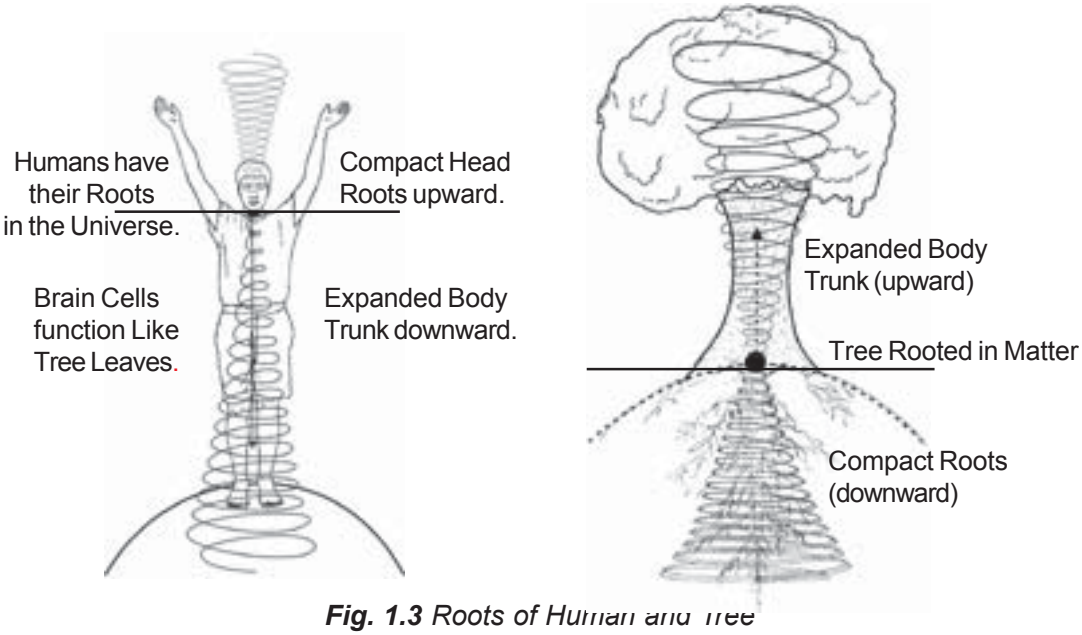


Fig. 1.3 *Roots of Human and Tree*

In view of our unawakened unconscious state, most of us tend to get trapped in one of the two poles: either by focusing on an earthly life at the expense of heaven or the other way around. This imbalanced polarity is well illustrated by the struggle between men and women.

Over the ages, Taoist masters have frequently obtained great insights in the art of cultivating their health and physical strength. Longevity was one of the fruits. In such a way they enjoyed much time and space to cultivate their spirit and to transform their physical and energy body into a light body. In the Taoist tradition this state of being has also been called "the crystal" or "the immortal body".

With the deepening of the grounding practice, the higher body can grow step by step and the emotions of daily life, with its ups and downs, gradually lose their uprooting effect. When one practices daily, a point may be reached where one feels the desire to withdraw from society, live away from the hustle and bustle of modern life, to facilitate a truly intimate relationship with the universe and nature for a certain period of time. This may speed up the transformation process, as has been demonstrated for centuries by monks of different spiritual traditions. Taoist masters have also advised their students to give up

their withdrawn lives and return to "the world" to maintain their roots in the realities of daily life. This advice was given by a master, if he observed that his students needed to mature and that they needed to get a taste of social life and experience desire, so that they could compare these two 'directions' and appreciate the experience of true peace in their meditation practice.

Thus, before achieving a higher level of awareness and mastery over their energy, they were sent for a few years into a busy town to work as a dishwasher or do other menial jobs. If the student had reached the stage where he could maintain his inner peace, even under difficult circumstances, then he was seen as becoming a master himself.

For most people, withdrawal from society and from social relations and earthly life may only be advisable after having learned and integrated different stages and levels of energy transformation within society. If we withdraw from society without the necessary maturity and insight, the mind is often bound to remain restless, as it continues to look unceasingly for physical, emotional and mental satisfaction.

When a Taoist student has achieved a strong navel center and enjoys a firm connection of heaven and earth within, then he can freely move "upward" and "downward" without getting lost. The relationship between heaven and earth may be represented by a vertical axis which goes up (heaven) and moves down (earth). Along this axis we can visualize the different centers and levels of energy and their transformations (body/soul/spirit). Because of the firm rooting, the Taoist way of energy transformation is a safe one. It has been tested for many centuries. The Universal Tao practice is actually a self-cultivation program we can make use of effectively and apply in our daily lives. The practices lead us step by step from an initial level to the highest or "immortal" practices. The Taoist way of life teaches you to reconnect and become aware of your true spiritual origin and bring this experience down into the lowest center of the physical body: the Lower Tan Tien. It brings spirit into matter or light on earth. After achieving this strong rooting process between heaven and earth (vertical axis), the practitioner can move freely into the materialistic world (horizontal axis) without losing his connection with the spiritual.

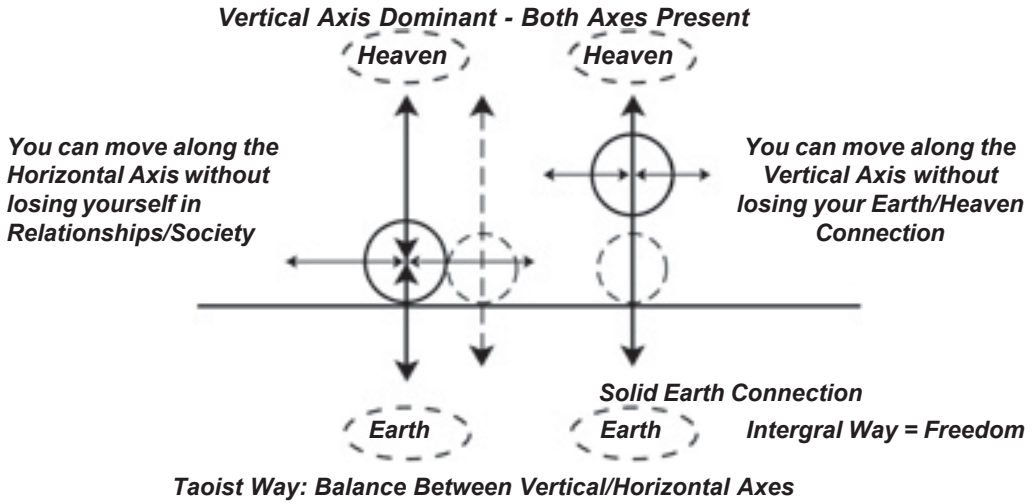


Fig. 1.4 *Both Axes*

Three Sources of External Chi

According to the Taoist view, the energy of the universe is comprised of three different realms.

The subtle origin of the universe or the Tao is the source of all life, all beings, all things, all energy and their various manifestations.

In the Tai Chi (See fig. 1.5) the circle represents the oneness and the yin and yang energies represent the intrinsic polarity of all forms of energy. Yin and yang represent a unity of opposites, always balancing, completing, embracing and containing each other. The interaction between yin and yang created the Three Pure Ones or the three energy sources in the universe: the cosmic force, the universal force and the earth force. Knowing that these energies contain the pure light of the Tao, we recognize the Three Pure Ones in the Tai Chi Tsu. The circle represents the cosmic light energy while yang and yin represent the universal and the earth energy.

Fig. 1.5 *Tao of Triple Unity*

Cosmic Chi is born out of the original Chi of the Tao and literally carries the intelligence and essence of life. Guided by this intelligence it spreads out into the universe and manifests in different densities and forms defined by the cosmic laws. This is how stars, planets, human cells, subatomic particles and all other forms of life take form and are nourished.

In particular, cosmic energy descends and materializes into the human baby, as it is attracted into the world by the magnetic field between the earth and the moon. Since most people have lost the ability to consciously and directly absorb the cosmic light, we can only do this in a materialized form: either by eating living substances that have absorbed cosmic light (plants) or by eating living creatures (animals) that have eaten the plants. This means that we only consume light in the more or less materialized form: cosmic dust, which in turn becomes plants and animals. Evolution is leading us to return to consume from the source: cosmic light. In this way yin and yang have become one another, as the circle leads us back into light.

Taoist practice focuses on restoring this direct connection with the cosmic source (light particles) so that we regain the ability to directly live from light energy. In this way we become less and less dependent on eating plants and animals. There is abundant evidence that throughout the ages many Taoist masters have been able to live for months or

even years without taking any food and without losing weight, while maintaining and even enhancing their vitality. Today, more and more people in different places all over the world and with different backgrounds are living only on water, tea or fruit juice. This practice is possible because such advanced practitioners tap into the original source of human life and all other forms of being: cosmic light.

Both universal and earth energy have their genesis in the original energy of the Tao. The universal force of heavenly Chi is the radiating force of all galaxies, stars and planets of the whole universe. It is this all pervasive force which nourishes the cosmic force in nature and all life forms. The earth force is the third force of nature which includes all the energies of mother earth. This force is activated by the electromagnetic field originating in the rotation of the earth. It is also integrated into all aspects of nature on our planet.

The earth energy is accessed through the soles of the feet, the perineum and the sexual organs. Earth energy nourishes the physical body. It supplies our daily life force and is one of the principal forces used to heal ourselves.

Human Energy in the Universe

In early times Taoist masters had an understanding of what a human being 'is', an understanding which is quite different from some present day theories. Human energy was understood to be the highest manifestation of the cosmic light. The primary responsibility of humankind as the highest manifestation of cosmic light, was seen as keeping the balance between heaven and earth.

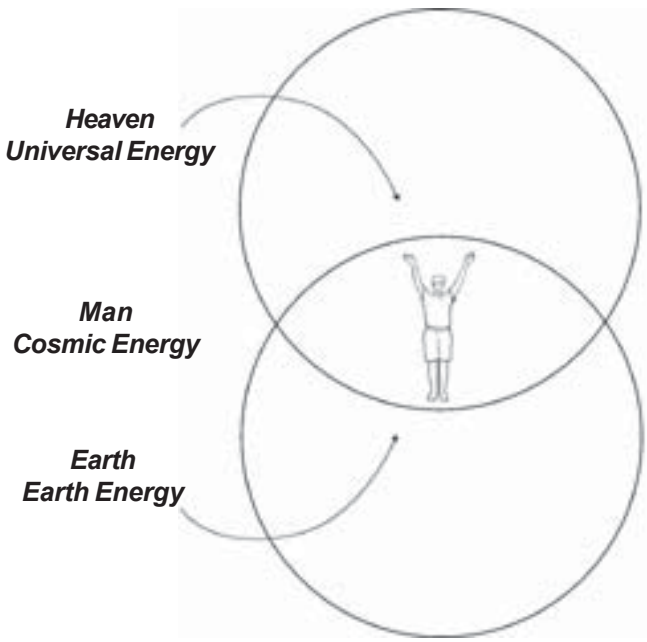


Fig. 1.6 *Balance between Heaven and Earth*

Today, responsibility is frequently experienced as a burden and not as an opportunity to grow. Supernatural powers of the 'Immortals' are not really extraordinary, as they are inherent to our natural position in the universe. Each of us holds the memory of the true potential of life and of human responsibility within our genetic code.

Three Levels of Existence

The threefold nature of the universe manifests itself in many different ways. In the Taoist vision, everything we see and experience around us has gone through three different realms or spheres of existence.

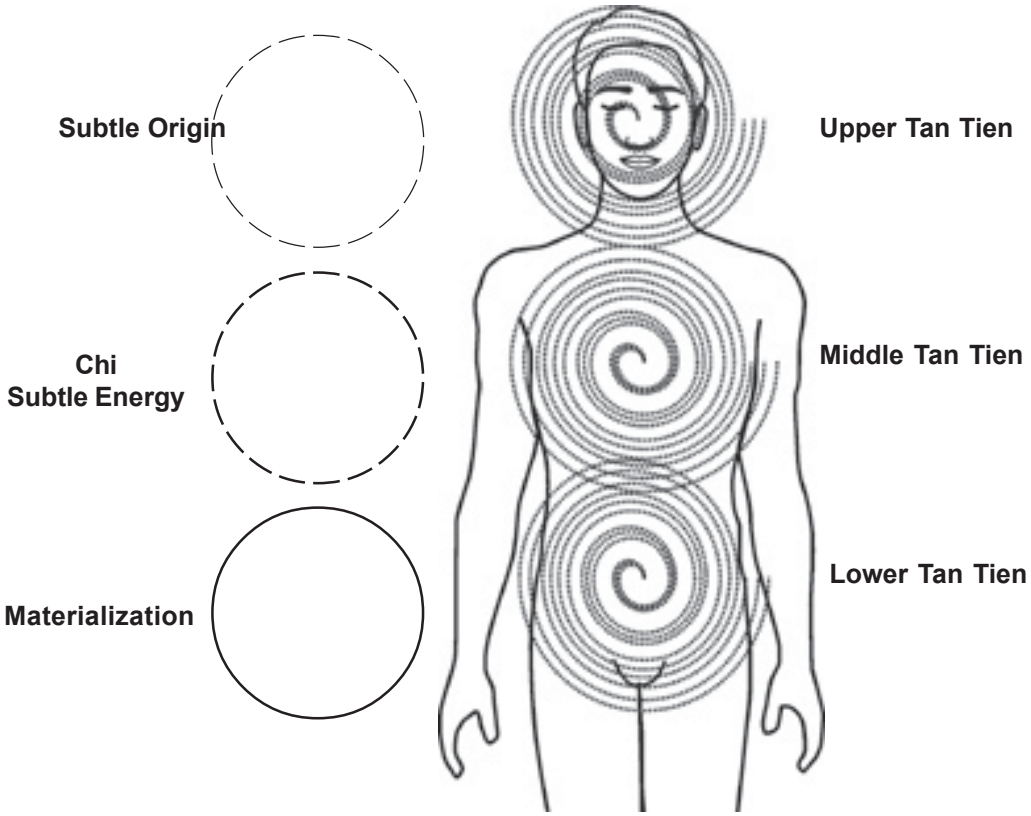


Fig. 1.7 *Three Tan Tiens in the Human Body*

The subtle origin is the source of everything: heaven and earth. It contains the realm of Chi and all phenomena.

1. The subtle origin or pure law of existence (Tao).
2. Chi, the subtle energy.
3. All phenomena, interactions, transformations of Chi.

The three realms are inseparable. Once we understand this threefold nature and experience its manifestation in our bodies, we have made a major step on our spiritual journey.

We have pointed to the necessity to open up the vertical axis and establish a deep rooting in both heaven and earth. The three principal energy centers in our body on this axis are called Tan Tiens. They are in reality the containers of the physical, soul and spirit energy. The way we become human is through a process of materialization (the body is the material densification of energy) in which the subtle energy of the Tao, connected to your spirit, has incarnated through your soul into your body. So heaven had descended into the earth and what is above and below have united.

The Tan Tiens (fig 1.7) each have specific energetic functions. The three main stages in Taoist spiritual cultivation are directly related to the Three Tan Tiens.

Three Tan Tiens and the Three Step Cultivation Process

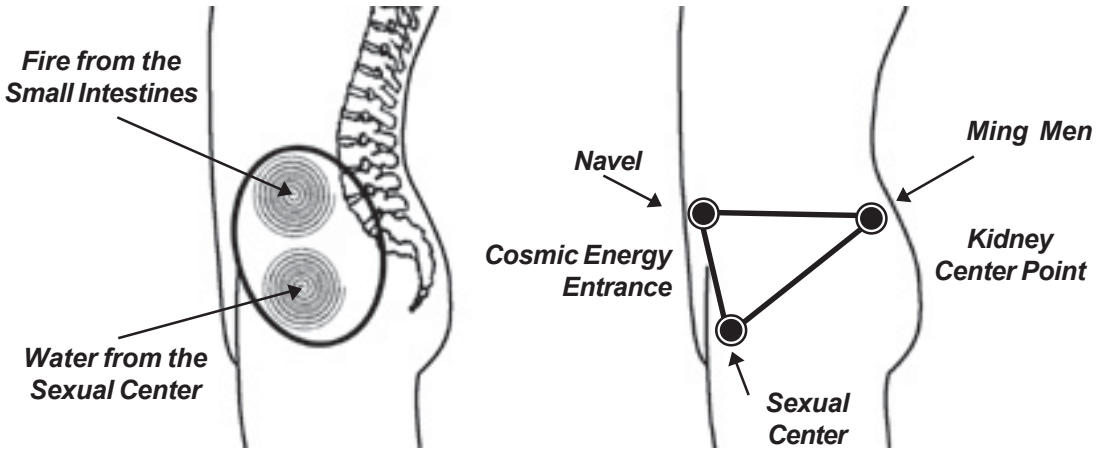


Fig. 1.8 *The Lower Tan Tien is found within the triangle.*

The lower energy center or Tan Tien is located behind and below the navel. It is located in the small intestine and is also called the lower fire. This center has a strong polarity because it governs the fire (small intestine) and the sexual water (kidneys) energy at the same time.

It is the center of the physical body and of physical strength. It contains a frequency of gross energy (compared to the two other two Tan Tiens). In the center point (see fig.1.8), the prenatal force is preserved by the power generated from the kidneys. When the Lower Tan Tien is strong, digestion is easy, emotions and experiences are easily transformed and there is much sexual energy.

The center point contains the basic spark which was created when your father's sperm penetrated your mother's egg. If this spark continues to be active and strong, it provides life force to the billions of cells throughout your body. The Lower Tan Tien is located in the triangle between the navel, the opposite point to the navel (in the spine between the second and third lumbar called the 'Gate of Life') and the sexual center. For men this is the prostate gland and for women it lies in the top of the cervix between the ovaries.

Control of sexual energy and its transformation into life force is essential if we wish to raise our energy level in the Lower Tan Tien. For men this implies that they need to preserve the life essence of the sperm during intercourse or self stimulation. Through controlling ejaculation they can transform the essence of the sperm into Chi. For women it means that they learn to regulate and control menstruation, thereby transforming blood into Chi. For healers, it is very important to learn how to transform sexual energy into spiritual energy. Because this original balance between love and sex, or water and fire contains in itself the essence of healing and creation. Self-transformation is a condition for being able to help others on the path of transforming sexual energy into spiritual energy. Once the energy in the Lower Tan Tien has become pure and strong, it will naturally ascend to the heart center, Middle Tan Tien.

When the Lower Tan Tien transforms negative emotions, a purer higher frequency energy arises and radiates from the heart. The state of compassion and of love as a high energy state is the fruit of the virtues of all organs. This should not be mistaken for the dualistic sentimental love that all of us have experienced temporarily and taken for a peak love experience at some time in our life.

The true godly nature of our being and our love starts radiating through our higher self connection in and from our heart center. In this state there is an abundance of energy, as the heart center is directly nourished by the cosmic light. In this state a deep oneness with people around us can be experienced.

This higher energy and awareness level allows us to help others while not losing energy ourselves. This **light of compassion** which is born from universal love can be cultivated and will gradually attract more pure divine light and spiritual essence.

This spiritual essence is attracted by the crystals (the glands) in our head at the core of the nervous system. This compact, spiral-formed spiritual center is also called the Upper Tan Tien.

In this process, the nature of our life changes and adopts a divine quality. The actions and directions you choose come from the laws of the universe and are no longer determined by animalistic behavior, emotional satisfaction or a drive for wealth and power.

The spiritual essence is gathered in the crystal body, a body that does not dissolve at the moment of death, a body that carries us to immortality.

The three step cultivation is a life long process of self cultivation that gradually takes us from the suffering of addiction and dependence, extreme emotions and ups and downs, into a life of freedom, spiritual independence and enlightenment.

The three step cultivation leads to:

- ☆ A healthy body and an abundance of life force.
- ☆ Control and balance on the emotional level and the growth of the **Compassionate Heart Center**. This compassion is raised by cultivating virtues and by good deeds and is stored in the soul body.
- ☆ When the soul body matures, it acts as a baby sitter to help nurture the spirit body.
- ☆ Body, soul and spirit are united deep into the Tan Tien, enlightening the person.
- ☆ The ability to share this light and wisdom with everybody around them.

Since the soul carries the seed of the immortal or spirit body within, the development of the spirit body is the condition for breaking through the law and the wheel of incarnation. When the three bodies are established and spiritual energy is dictating the quality of life, the practitioner can transform energy from the physical into the soul body and from the soul into the spirit body.

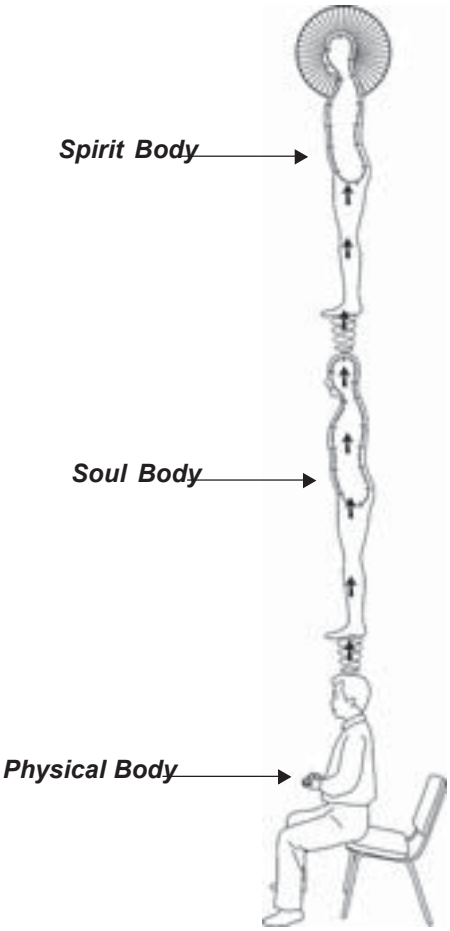


Fig. 1.9 *Three Bodies*

At the moment of death, the energy of the physical body will be partly or completely absorbed into the spirit body. This means that the physical body eventually dissolves. There are many records of Taoist masters who successfully dissolved their physical body rapidly into the spirit body, leaving only teeth, hair and nails.

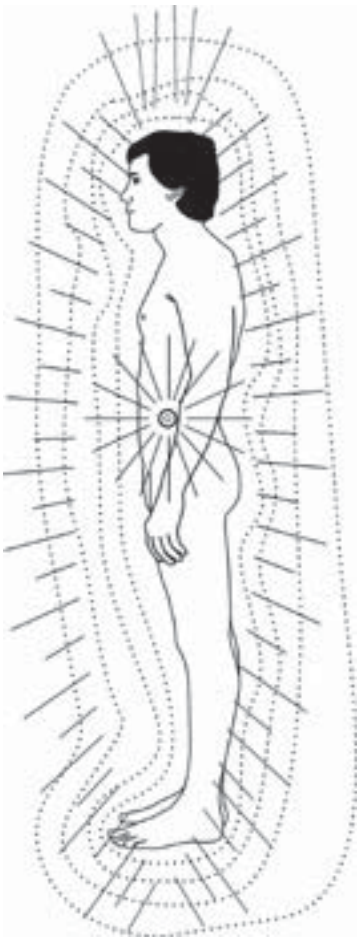


Fig. 1.10 *Pearl of Consciousness*

In the condensed state the soul body is kept as a pearl of consciousness with the spiritual essence deep inside. This consciousness center creates a bright protective awareness field.

Chapter II
Universal Tao Basic Practices and Preparation Exercises

Introduction

In the Universal Tao, we teach Cosmic Healing within a system of exercise and meditation. As a part of this system, Cosmic Healing comprises the art of healing oneself and others and focuses on energy work for projecting Chi. One can easily learn the simple movements of Cosmic Healing without doing any other Universal Tao practices, but if one truly wishes to master the art of Cosmic Healing, it is important to have a firm foundation in the basic Universal Tao practices. Therefore in this chapter we will introduce you to the basic Universal Tao practices that are used in conjunction with Cosmic Chi Kung.

The preparatory practice consists of a few parts. Work through each part at your own pace and eventually join them together as a whole.

Always start with **warming the stove** at the abdomen and direct the fire down to the Sexual Center to transform the sexual energy. Next practice the Cosmic Inner Smile. The Cosmic Inner Smile is a powerful relaxation and self-healing technique that uses the energy of love, courage, fairness, kindness and gentleness as a language to communicate with the internal organs of the body. Each organ is connected to a specific element and corresponds to a specific color, so that the kidneys are, for instance, connected to the water element and correspond to the blue color, whereas the heart is connected to fire and red, etc. This makes it very easy to guide the healing power into each organ by using the appropriate color. The practice also aids the transformation of negative emotions into positive energy. This transformation is a very powerful Chi Kung practice. A **genuine smile** transforms negative energy into loving energy that has the power to relax, balance and heal. By learning to smile inwardly to the organs and glands your whole body will feel loved and appreciated and enjoy more Chi. After the Inner Smile, practice Bone Breathing, Marrow Washing, Cosmic Healing and the Microcosmic Orbit.

Warm Up the Stove

1. Sit at the edge of a chair with your hands clasped together and your eyes closed.
2. Start with ‘bellows breathing’, moving your abdomen in and out quickly. Emphasize the exhalation by breathing out forcefully for 18 to 36 times. Rest, cover your navel and feel warm and nice.
3. Next do the “inner laughing” exercise, where you feel the abdomen vibrate inside you. Practice for a few minutes, allowing the movement of your inner laughter to grow

stronger. Then rest and use the mind and eye power to gather the Chi, now felt as a warm feeling behind the navel, into the Tan Tien. Picture a stove with fire burning behind your navel. Feel nice and warm.

Transform the Sexual Energy

Once you feel the Tan Tien warm enough, smile down and bring the warm Chi down to the sexual organs; women, down to the uterus; men, down to the testicles. It may feel like the sun shining on the water. The rays of the sun purify the water until it becomes steam and rises up high. Keep on smiling down to the sexual organs and feel the warm or fiery feeling from the navel area continue to flow down to the sexual organs, transforming the sexual energy into Chi. Raise the Chi up the spine into the brain; this will help activate the crown and mideyebrow.

Focus your awareness in the sacrum. At the very tip of the sacrum, the coccyx, there is a hole. Breathe into this hole until you feel some activity there. This may be felt as tingling, numbness or pulsing. If you can really activate this point it will have 'suction'. Be aware of the sacrum opening. Feel the hole in the tailbone (the sacral hiatus) having a suction-force; breathe into it until you feel it become activated. Once the sacrum is activated, you will very easily feel the suction and breathing in the cranium and mideyebrow also. Keep on gently smiling and softly breathing into the Tan Tien and feel the suction in the abdomen. Focus 95% in the Tan Tien and 5% in the sacrum, the crown and the mideyebrow. Be aware of the Tan Tien breathing and internally observe the pulsing and breathing in the sacrum, the mideyebrow and the crown. Do this 36 times.

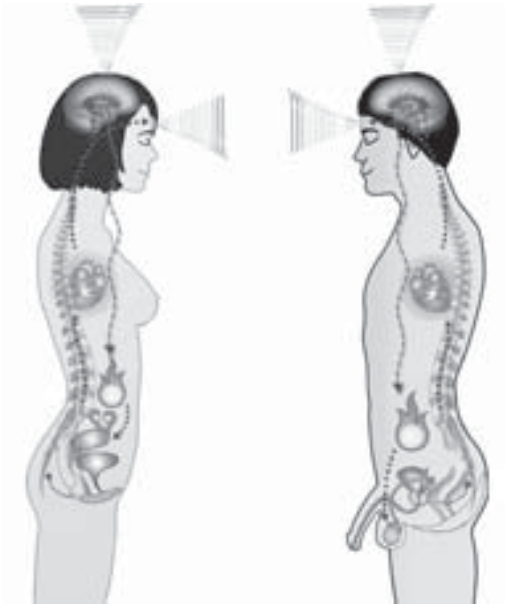


Fig. 2.1 *Breathing and pulsing in the sacrum, mideyebrow and crown.*

Cosmic Inner Smile

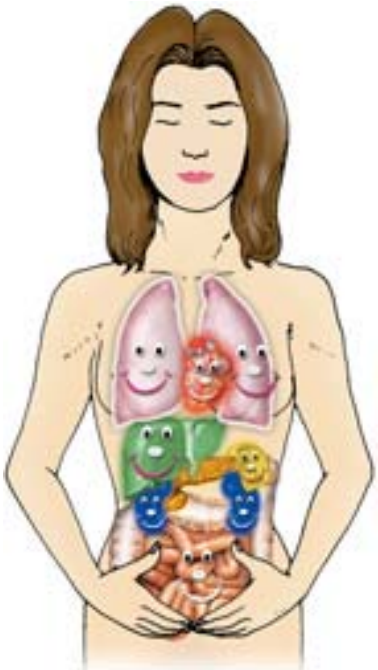


Fig. 2.2 *Smile down into the Organs.*

The Inner Smile begins at the eyes and the mideyebrow point and moves down to the heart. As you activate the heart, the loving energy will flow out and you will feel the energy of your Inner Smile flow down the entire length of your body like a waterfall. This is a very powerful and effective tool to counteract stress and tension.

1. Be aware of the **mideyebrow**, imagining that you are in one of your favorite places in the world, a place where you feel safe, relaxed and happy. Recall the sights you might have seen there, the sounds you might have heard, the scents, sensations and flavors that you associate with this place.
2. Imagine that one of your favorite people is standing in front of you, smiling to you with loving, happy, radiant shining eyes. **Smile** and slightly lift up the corners of your mouth.
3. Feel yourself responding to that special person's smile with a smile of your own. Feel your **eyes smiling** and relaxing.
4. Smile down to the thymus gland and picture a white flower blossoming. Gently inhale into the **thymus gland**, connecting your breath to the olfactory organ. Smell the good fragrance.
5. Aim your inner attention at your heart, picturing the image of the heart before your inner eye and smile to it. Smile until you feel the **heart smile** back to you. Picture your heart like a red tulip, gradually opening. This will activate the love and fire of compassion in the heart. Once you feel the red light and loving awareness it will activate the

cosmic **red healing light** or mist from above and around you.

6. Smile at the light or mist and very slowly, with a soft, long, deep breath draw the red mist, **love and compassion** into the mideyebrow, down through the mouth and throat, into the heart and gradually overflowing to the small intestine. Exhale, but retain the red light and the love and compassion in the heart and small intestine. At the same time exhale the cloudy, black or negative energy which holds hate, arrogance, heart-breaking traumas and irritation. Keep on doing this way of breathing for 18 to 36 times. Breathe until the heart becomes bright red before your inner vision and starts to radiate out to the tongue, mouth, nose, ears and eyes. Allow the red light to whirl around you and form a **red aura**. Feel your skin glowing with red energy.
7. Let the heart's loving energy radiate out to the lungs. Aim your attention at the lungs, picture the image of the lungs before your inner eye and smile to it. Smile until you feel the **lungs smile** back to you. Picture your lungs like a white flower, gradually opening and smell the good fragrance. This will activate the courage in the lungs. As soon as you invoke the white light and the courage into the lungs, you will also activate the cosmic **white healing light** or mist from above and around you.
8. Smile at the light or mist and very slowly, softly take a long deep breath and draw the white mist into the mideyebrow, the mouth and down to the lungs, gradually overflowing into the large intestine. Exhale but retain the white light and the feeling of courage in the lungs. At the same time exhale the cloudy, black or negative energy. Keep on doing this kind of breathing for 18 to 36 times. Until the lungs become bright white and start to radiate out to the nose, ears, eyes, tongue and mouth. Invite the white light to whirl around you and form a white aura covering your skin like autumn dew.
9. The **liver** and gall bladder connect to the green color of the wood element. Kindness replaces anger, which is expelled on breathing out. Do the same as above and create a green aura around you. Exhale the dark, cloudy heat. Inhale the **nourishing green** of the forests. Do 18 to 36 cycles, until the green light has completely filled the liver and starts to radiate out to your eyes, tongue, mouth, nose and ears. Invite the green light to form a **green aura** around you.
10. The **spleen**, pancreas and stomach correspond to the yellow color of the earth element. Connect to these organs and smile down into them from the mideyebrow. First connect to the heart, then attract the clear yellow light from above and around you. You might see the golden yellow aura of a wheat field ready for harvest. Expel feelings of worry; exhale the cloudy, sticky energy. Breathe in the golden yellow aura, filling your Spleen Center with **golden yellow light**. Repeat to complete 18 to 36 cycles, then allow the light to radiate out to your mouth, nose, ears, eyes and tongue. Wrap the **golden aura** around you, leaving a golden shine on your skin.
11. The **kidneys** and bladder correspond to the blue color of the water element. Gentleness is contained within the **blue healing light**. Inhale the blue aura into the kidneys. Expel feelings of fear or stress on breathing out. Allow your energy field to expand, breathing in and out the blue energy for 18-36 times, until it starts to radiate out from your kidneys to your ears, eyes, tongue, mouth and nose. Gather the blue mist on your skin, enveloping you with a **blue aura**.

12. Smile down to the **sexual organs** and reproductive system. Feel **love and the energy of sexual arousal**, the heart and sexual organs coming to union. Observe how this process transforms the sexual energy into Chi. Channel down pink and red light to the sexual organs. Thank them for their work in keeping you healthy and for giving you life force and creativity.

Cosmic Star and Earth Star

At the moment of conception, the two forces yin and yang connect with such a force, that only fractions of a moment later, the two forces explode into nine different energy centers. Seven of them we find in the body and two of them outside the body, forming our Personal Stars.

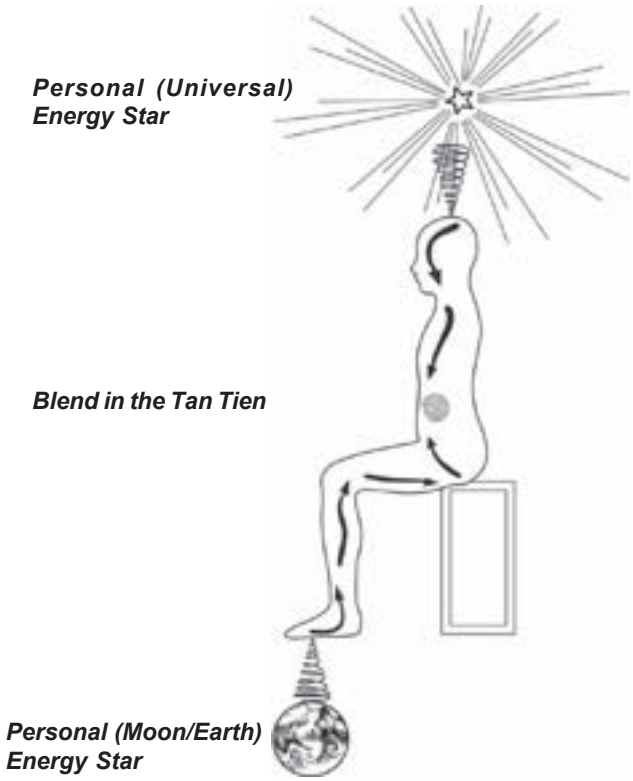


Fig. 2.3 *Personal Stars*

The two Personal Stars are in fact energy centers connecting the auric field of each individual with the universal forces and the earth forces. In a way one can see the aim of the Taoist Inner Alchemy in bringing these nine forces together, merging them in one force and thus, enabling them to return to the original force, the Wu Chi.

There is a star about 6 inches above your crown and 1 to 3 feet below the soles of your feet, also known as the higher self, guidance, protector, advisor. These stars are our connection to the cosmic force, the universal force and the earth deep below us.

Always make sure your Tan Tien is warm and the sacrum, cranium and mideyebrow are breathing. Be aware of the crown breathing and see a star or a small sun above you. Feel a light beam extend out of the crown and make a connection to the star above you. Keep on breathing until you feel a strong connection. Feel how the star above you is exercising a strong pulling force on your crown. Once you feel the pull on your crown you will also feel a strong pull down from the ground. Be aware of the star above and the earth and universal force below you. Feel that both of them have a strong 'pull' on you.

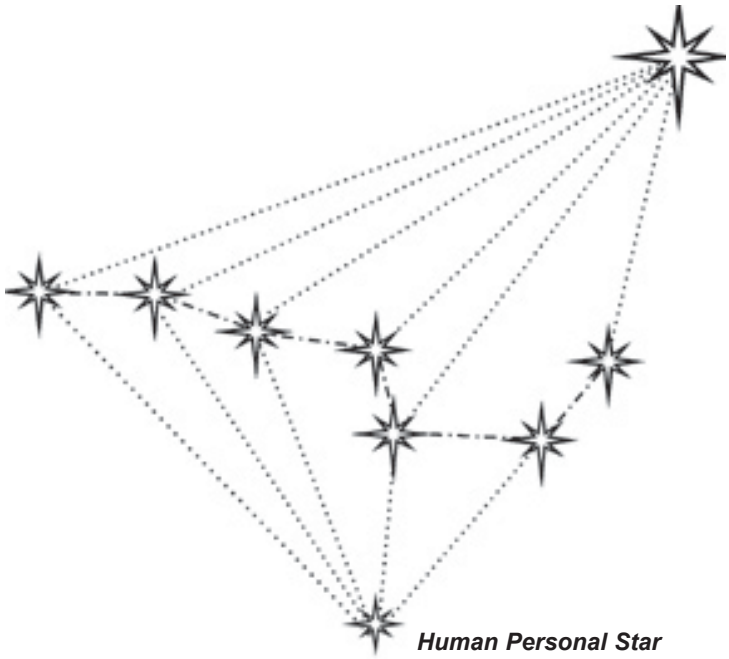


Fig. 2.4 *North Star, the Big Dipper and Human Personal Star*

In Taoism we consider the North Star as emitting a violet light (which is regarded as the highest healing light) and the Big Dipper as emitting a red light.

You can do these meditations sitting, or standing in the Chi Kung postures. The standing position will provide a stronger structure and allow for a better connection with the earth through the feet.

1. Reconfirm the star above you and the earth directly below you.
2. Fix the image of the North Star and the Big Dipper six to nine feet above your crown. See the cup of the Big Dipper filling with the violet light, which gathers Chi from the North Star and the universe.

3. Reach up with your right hand, and hold on to the handle of the Big Dipper. Pour the violet light down to your Personal Star 4 to 6 inches above your head, in order to predigest the energy of the violet light. Then let it flow down to your crown, into the Upper Tan Tien, to be processed and flow down to the Heart Center (Middle Tan Tien) or to the back of the head down to C-7 (Cervical 7) and T-2 (Thoracic 2) and down to the palms.

Fig. 2.5 *North Star and Big Dipper connecting with the Crown.*

4. Always remember to breathe in slowly so you can process the awareness of the Lower Tan Tien. Feel a suction, warmth (Chi) and continue to breathe in and be aware of the suction of the Crown, North Star and Big Dipper above you.

Fill the Joints with Chi

The bones have the ability to process cosmic Chi (Chi above and around you) to be used by your body. The joints are also able to store Chi which serves as a cushion between the bones.

1. Be aware of your index fingers and thumbs. Feel Chi enter the fingers and the joints; this will make them tense and stiff. The stiffness and tension come from the Chi filling in the joints and pushing the fingers to become longer. Keep all fingers tense with Chi and slightly raise the index fingers and open the thumbs to the sides. Feel the thumbs tense. Breathe into the fingertips, until you feel the sensation of Chi entering the fingers. Continue to breathe in the Chi and the stiff feeling will go from the fingers to the wrist, elbow and shoulder joints, making the whole area tense and stiff, so the fingers and the arms become one piece. Chi will gradually fill every joint of the body and make the whole body become one piece.

2. Be aware of the big toes, breathe into the toes and feel the toes grow longer. When the Chi fills the joints, the big toes become tense and stiff. Gradually it will fill the other toes and the feet and come up to the ankles, knees, femur bones and hips, until it reaches the sacrum and the spine. A sensation of numbness or an electric charge will start to flow up your legs. The legs and the spine become one piece.

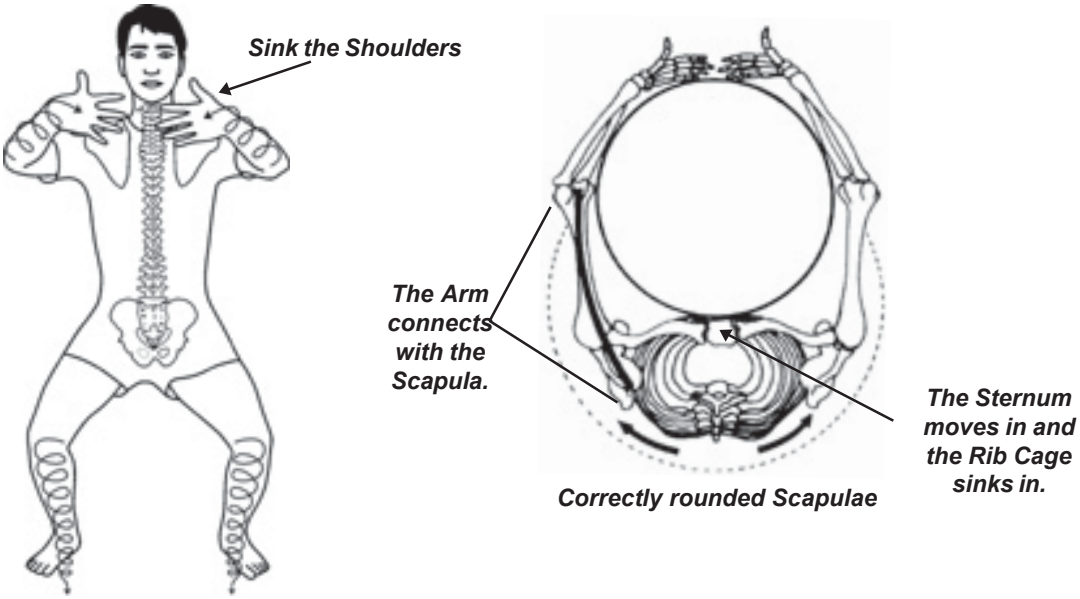


Fig. 2.6 *Bone Structure*

Bone Breathing and Marrow Washing

Bone Breathing is one of the main practices of the Cosmic Healing Chi Kung practice. This is a method of drawing external Chi through the skin into the bones to help regrow and replenish the bone marrow, thusly assisting in the production of white blood cells. Sending Chi into the bones will therefore enhance the immune system. This process also helps to clean out fat in the bone marrow ("Washing the Marrow"), one of the main causes of osteoporosis (brittleness of the bones). Tension in the muscles close to the bones is decreased so Chi and blood can flow into them easily, and the bones themselves become strong.

The Bone Breathing process uses the mind and the eyes to absorb Chi into the bones. The better your Bone Breathing is, the better your Cosmic Healing Chi Kung practice will be. Mind and eyes are also used immediately after the exercise to gather the energy at the navel. Once you have it, when you move your hand, the energy will follow easily. You will be able to absorb external Chi effortlessly, so you will not need to use your own energy in your healing work.

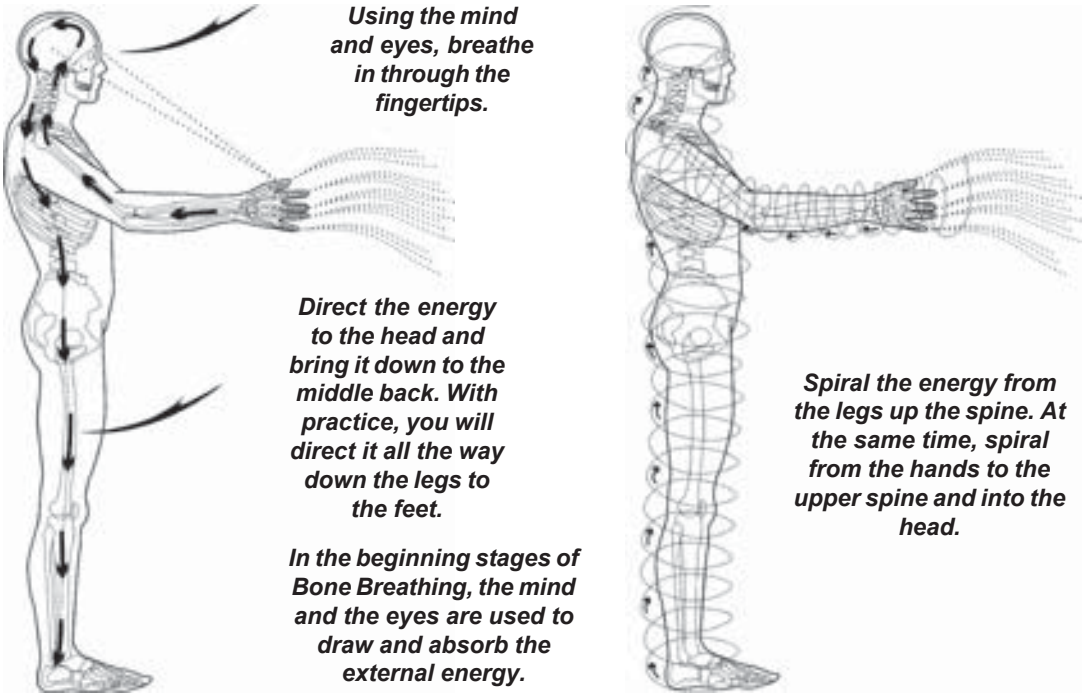


Fig. 2.7 *Bone Breathing through the Fingers*

Bone Breathing

There are several variations in the Bone Breathing and Marrow Washing process. Here we will introduce you to the first type of Bone Breathing, inhaling and exhaling Chi through the skin and packing it into the bones. In this method, you imagine that your bones are like hollow bamboo tubes and that you are breathing and drawing the Chi into them.

Bone Breathing is practiced in a three-stage process. Let your breathing follow a normal pace. Do not strain or hold your breath too long.

1. You can do this practice in the sitting position or in the Embracing the Tree posture (or any other Iron Shirt Chi Kung posture). You will use your mind and eye power to breathe in a short breath and at the same time feel suction. Suck the Chi of the atmosphere into your hands, eventually expand to the universe, breathe in a few times more. Use a combination of mind/eye/heart power (Yi) to suck the Chi from the atmosphere into your hands, while taking small sips of breath. **Smile.** Once you can clearly feel the increase of Chi-pressure in your hands, you extend the feeling throughout your arms, having the whole skin surface of the arms breathing in the Chi. Feel the skin hold Chi pressure.
2. Inhale one more deep breath and lightly contract the arm muscles to squeeze the Chi into the bones, hold for a while, condensing the Chi into the marrow of your bones. Exhale and at the same time, feel a distinct heaviness in the bone, meaning that the

Chi has been condensed and packed into the bones. Eventually you will use more mind power (mind/eyes/heart power) and less muscle and use soft breathing, to draw the force into the bones. Do this 6 to 9 times; rest and feel the Chi having been condensed into the bones.

3. Proceed in the same way, breathing in progressively through the bones of the forearms, upper arms, scapula, collarbone, sternum and ribs. You may feel a different sensation as you breathe in each area (in some areas the feeling is cool, in others warm or tingling depending on the bone structure and the quality of the marrow).
4. Inhale and exhale in the same way through the legs and then, in a step-by-step progression, inhale up through the calf bones, thigh bones, pelvis, coccyx and sacrum and up the spinal column to the C-7 vertebra.
5. Finally breathe in through the arms and legs simultaneously. Combine their energy as it flows up past C-7 and up through the neck and into the skull. Breathe in this way for at least nine breaths. Conclude by collecting energy at the navel.

Marrow Washing

You can wash your bone marrow with earth force, heavenly force or with cosmic force. This energy helps to cleanse and rejuvenate the bone marrow.

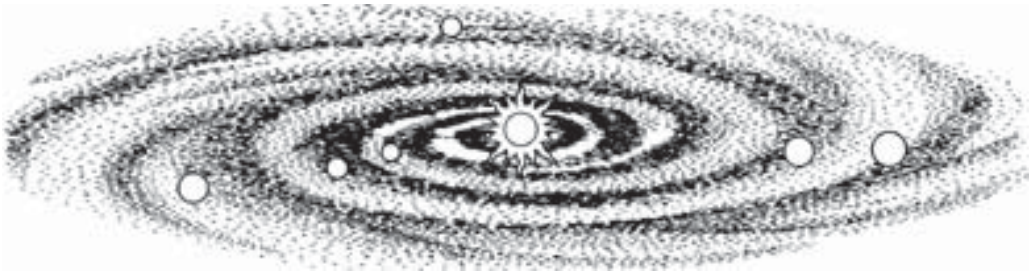


Fig. 2.8 *Star and the Direction of Spiral*

Heavenly Force Marrow Washing with Violet Light

1. Men place the left palm on the top of the head and cover with the right palm. Be aware of your Personal Star above. Slightly press the palms and spiral in a clockwise direction, meaning to spiral from the front to the right ear, to the back and the left ear for 9 times; rest and feel the increased Chi pressure in the crown. Do 3 sets.
2. Women place the right palm on the top of the head and cover with the left palm. Be aware of your Personal Star above you. Press the palms lightly and spiral in a counter clockwise direction, meaning to spiral from the front to the left ear, to the back and the right ear for 9 times. Rest and feel the increased Chi pressure in the crown. Do 3 sets.
3. **Smile**. Raise the arms, palms facing toward heaven and scoop the galactic Chi into a ball above your head. This Chi ball contains the North Star and the Big Dipper. See the Dipper cup fill with violet energy. Imagine you reach out your arms to hold the Dipper handle and pour the violet liquid over your crown. It will feel as if there is a numbness

descending down. Your palms face down now to empty Chi and the whole galaxy down into your crown. You may perceive this energy as a violet amethyst and red light frequency.

Fig. 2.9 *Your Hands scoop up the whole Universe through the North Star and the Big Dipper.*

4. Guide this sensation down to your skull, deep into your brain, sternum, cervical vertebrae, thoracic vertebrae, lumbar vertebrae and down through your legs. Feel it penetrating and enlivening your bones, deep into the bone marrow, washing, cleansing, energizing.

   This liquid like Chi spills all the way down to your feet. Feel it connecting with the earth through the soles of your feet; be aware of the bubbling springs (the K1 point of the kidney meridian) breathing and pulsating.

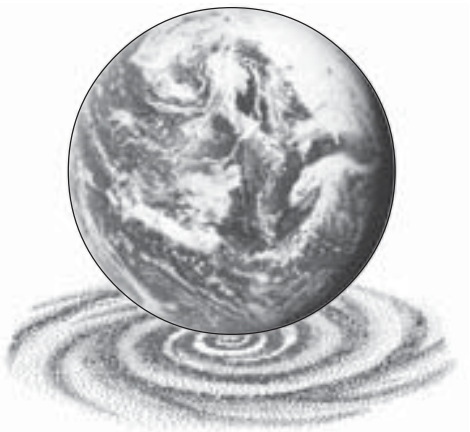


Fig 2.10 *Earth Force Marrow Washing Yellow Light*

1. Touch your navel with the fingers of your hand. Focus on the door of life and let the fire activate in the Tan Tien and kidneys. Chi will rise up to the brain.
2. Move your hands down touching your femur bones, feel your hands penetrate into the bones and into the bone marrow. It will feel like an electric shock, or tingling is moving all the way down through the bones of the legs and down to the soles of your feet.
3. Slowly move your fingers down touching the bones and the bone marrow until you are squatting with the heels touching the earth. Move your intention down through the earth to touch the universe on the other side. Raise your sacrum up and picture yellow light coming up from the earth and the other side of the universe, focus on the Lower Tan Tien and feel it fill with Chi. Do this three times.

Fig. 2.11 *The Hands circle to Gather Earth Chi in Squatting Position.*

4. Palms face down to the earth. **Smile**. Be aware of the galaxy and the yellow light, make three to six circles to gather the Chi below. Gather the yellow Chi to touch your heels and feel the yellow Chi rise up the leg bones. Feel it bubbling, like electric currents running up through the bones of your feet, tibia and fibula, femur, pelvis and spine. While touching your bones and bone marrow with your fingers, slide your hands along the whole route on the back of the legs, slowly coming all the way up to touch the coccyx and the sacrum. Concentrate on your Sexual Center so the energy will flow and spread out to the sexual organs. Go back to the navel and gather the Chi into your Tan Tien.

Source of Chi and Color

There are different sources of Chi in the universe. Cosmic (air), nature, earth and human to name a few. In humans, each part of the body has a different kind of energy and these energies correlate directly with the universe and nature. Each part of our body, organs and glands can produce, receive, transform and emit different types of Chi.

Earth Chi

While Cosmic Chi (the atmosphere over us and the universal force) is ethereal in nature, what is called earth chi is not. This Chi appears as the line visible above the horizon when the sun is low in the sky, and seems to hover just above the ground. It actually also sinks into the ground.

Earth Chi contains yellow and some white Chi. Earth and cosmic Chi, when combined, have a very powerful healing reaction in the body. It is very balancing and mild. When treating a problem, white Chi, in the proportion 7:3 (7 white to 3 of the selected color) acts as a brake on colors which are hot or too active. This enables the body to take in Chi more easily.

Simple Practice:
During and after sunrise (and before sunset) look at the edge of the sky and the earth. Stand still and extend your palms toward the sun, **smile** and absorb the colors in to you.

Human and Nature Chi

This Chi is derived from all the things we can see on the earth. In Cosmic Healing, we use energy from the mountains, lakes, oceans, forests, caves, valleys, rocks and precious stones. The Taoists classify the elements into five forces: earth, metal, water, wood and fire. There are five elements in our body, in nature, in the cosmos and in the universe.

According to Taoist tradition, once we make the connection to ourselves and control our internal bodily elements, we will quickly make connections to nature and the universal forces and employ them easily.

Solar Chi

Before sunrise or sunset there is more white Chi in the air which we can use abundantly for health and healing. White Chi affects the lungs and the large intestine, so we direct this Chi to these organs. This will generate further Chi to maintain our daily activities. White contains all the colors of the rainbow or spectrum.

Special Note: Many of the color references came from the following books: *"Let There be Light"* by Darius Dinshah and *"Advanced Pranic Healing"* by Master Choa Kok Sui.

Sun Essence

The best time for practice with the sun is at sunrise and sunset, when its glare is not too strong for the eyes. The sun spectrum from sunrise to 9 a.m. is violet, and can be used for all organs, especially for spiritual work. You can select any color that you need.

9-11 a.m. is blue and can be used to strengthen the kidneys.
11 a.m.-1 p.m. is green for the liver.
1-3 p.m. is orange for sexual energy.
3-5 p.m. is red for the heart.

Seasonal Sun Practice

You can **emphasize** practice of the sun 'spectrum' inside the organ that corresponds to the season and its color;

Winter in the kidneys, blue.
Spring in the liver, green.
Summer in the heart, red.
Fall in the lungs, white.
Indian summer in the spleen, yellow.

Absorbing the Breath of the Sun in the Four Seasons

In Spring, absorb the orange Chi of the sun *before* it sets. In fall, absorb the orange twilight Chi of the sun *after* it has set. In Winter, absorb the white vapors of midnight (sun shining on the moon). In Summer, absorb the perfect clarity of the meridional sun of midday (protect the eyes during midday sun absorption). Breathe each in deeply.

These four types of breath, in addition to the blue breath of heaven and the yellow breath of the earth, are called the **six breaths.**

Sun Practice

1. Practice with the sun during and after sunrise.
2. Start with the Inner Smile, 'Warm the Stove' and make the navel warm.
3. Be aware of the mideyebrow. **Smile** into your eyes. Make your eyes cool and soft.
4. Open your eyes, look at the sun and keep on blinking the eyes. Close your eyes for a while. The eyes should be facing the sun. (You might see a purple reddish and yellowish color). Select the yellow and breathe it in through the crown and mideyebrow and into the nose, eyes and mouth (mouth closed, but feel the color penetrate into it). Feel the bones in your skull, the brain and the bone marrow. Absorb the yellow spectrum to wash and help grow healthy marrow. Let this ray penetrate down to the neck. Some might feel numbness, like a wave penetrating deep into the bone marrow and each cell of the body.
5. Let this ray go down to the sternum and the rib cage and feel it activate the thymus gland. This will help to strengthen the immune system.

6. Let the color flow down to the spine and feel numbness, tingling or warmth in the interior of the bones. This feeling may spread out to the organs. Let it go down to the hips and sacrum. Feel that the bones and the bone marrow have been activated and let the Chi descend to the bones of the legs and feet. The sun practice can produce the effect of a cosmic baptism. Feel the sun's ray baptize your whole body.
7. Rest and let the body absorb all these cosmic nutrients.
8. After you practice, look at the sun; single out the colors and picture the organs and see the organs glow with their relevant color.

Follow with the Seasonal Sun Practice (previous page) for the relevant time of year. During fall, picture the white color in the lungs. Look at the sun, blink the eyes, then close the eyes; select the white color and breathe into the lungs.

Winter into the kidneys, blue rays.
Spring into the liver, green rays.
Summer into the heart, red rays.
Indian Summer into the spleen, yellow rays.

Sun Essence Captured in Water

The essence of the sun is captured in water by exposing the water to sun from sunrise to 9 a.m. This is for absorption of violet, which can be used for all organs and especially for spiritual work. The time from 9-11 a.m. is for the absorption of blue and can be used to strengthen the kidneys; 11 a.m. - 1 p.m. green for liver; 1 - 3 p.m. is orange for sexual energy; 3 - 5 p.m. is red for the heart.

A special water can be made on the first fifteen days of the month in which the sun comes to the Golden Door. This water is called "Mineral Light Mother of Waters".

To capture this sun essence, put purified rain or spring water in a sterilized bottle out in sunlight during the corresponding phase of the spectrum for one or more days.

You can drink the water, make herb tea or mix with food or medicine.

Solstice and Equinox

Taoists believe that the sun stops in its movement on the first day of each season. The moon stops on the days of the equinoxes and solstices. These stops are called "Doors". It is the "Golden Door" in the spring. This is the door of access to the sun. In Autumn it is the "Eastern Well", this is the door of access to the moon. The next stage is "Universal Yang" in the middle of summer when the sun culminates. "Great Cold" is the culmination of the moon in winter.

Symbolically, it is thought that the practitioner goes to be received by the Lord that grants the fruits of immortality. Gathering the sun essence at the "Golden Door" is done on the 3rd, 9th, 17th, 21st and 25th of the month in which the sun enters at the Golden Door. The exact same practice is done for the moon when it reaches her door. The days for gathering the moon essence are the 3rd, 15th and 25th.

Healing Colors

Blue Chi

The effect of blue chi is one of cooling, and hindering similar to yin or water energy. The opposite effect can be obtained with the use of red Chi. When we draw energy down, some people's bodies can't adjust to it immediately, so using blue Chi is always good. 'Water blue' is the one element that always brings harmony and does not cause any harm.

Pain and swelling can be treated with cool blue Chi, and an abnormal temperature can be reduced. Sleep and relaxation can also follow a treatment with blue Chi. Blue assists the blood in the clotting process, and, because of its association with the watery yin element, can remove Chi which is dark and negative, by flushing it out of the body.

Green Chi

Green Chi is mild and safe. To free up and flush out diseased material in the body, use green Chi. It has a 'loosening' effect on the ailment. Once loose, you can use the orange Chi to expel the disease. Negative energy can then be removed by localized sweeping, either through the arms or through the legs.

If you need to energize the organs, first energize with light green Chi. Cancerous growths can be treated with both tangerine and green Chi which is dark in color.

One should use green Chi before using orange. Pale tangerine and green chi should be used at the same time to increase their effectiveness in dealing with hard to remove deposits in the body.

Always use green Chi before colors of tangerine, purple or red.

"sick" energy which is difficult to remove can be dispersed using pale green Chi, then driven out of the body with pale tangerine.

To remove infection and toxins and disperse dead cells, green Chi can be employed. It is also helpful in getting rid of fevers and colds and in dispersing clots in the blood.

White Chi

The color of the chi from the air, earth and sun is always white and acts as a calming agent for the surplus chi produced by the other colors. It also redirects this Chi to areas of the body which need it. For this reason, use white in combination with another color in the proportion 7:3.

Experiment with blending white Chi with other forces:

Shining white Chi should be concentrated at the center, while colored Chi goes to the edge. This can also be reversed. It is also possible to blend the white and colored Chi together.

It is safe to use white Chi when you are not sure which color to use, especially when treating babies and toddlers or the elderly and the weak. People with minor problems can be treated with blue, green or mauve, while gold colored Chi or mauve/white Chi is better when the problem is serious.

White red has a stimulating and strengthening effect.

We have a soft violet and a very strong violet in the North Star. You can dilute these colors with white.

When it becomes necessary to switch from one color to another, an abrupt shaking movement of the hand should ensure a smooth transition to a new color.

Red Chi

Cerise Chi makes the area to which it is applied stronger, while crimson Chi has the opposite effect. When using color for healing, project luminous white in the center and cerise at the edges for a strengthening effect.

Cerise/white: Is useful for those with heart or breathing problems such as asthma as it opens the blood vessels and airways.

Cerise/white Chi, because of its ability to open blood vessels and air tubes, is particularly good for people with heart or breathing problems such as asthma. It also helps improve the flow of blood around the body and has a strengthening effect on the internal organs and weaker areas of the patient's body. If the patient has too much cold energy, this color can help to reduce it and also to drive out toxic and unwanted substances along with 'sick' energy. Allergy suffers can benefit from this color, and those who are unconscious can be revived, while the dying may live a little longer after its application.

Avoid the use of dark colors, which may cause an adverse reaction. Treating of sexually transmitted diseases with crimson chi is not advised, because this chi can result in swelling or tightening. It also encourages the proliferation of disease causing microbes.

Tangerine Chi

If you need to use the Tangerine Chi, you should first use the blue Chi to cool and calm the treated area. Because tangerine Chi has a lot of power it is better to use it in a diluted form by mixing it with white, and also not to use it on areas such as the spleen and spleen center, heart, eyes, head area or the throat. The large intestine benefits from the use of tangerine Chi, but this color should be used sparingly on areas like the solar plexus and navel. Appendix problems should not be treated with this color as it could exacerbate the problem. Tangerine chi has an effect on the bowel, and can also aid in returning an unconscious person to consciousness or in stimulating someone who is dying. To treat cancers of certain types, dark green and dark tangerine are suitable because of their ability to destroy.

Tangerine Chi:

- Forcible removal of waste products, toxic substances, 'sick' energy, viruses and bacteria
- Menstrual difficulties
- Waste elimination problems
- Freeing up 'sick' energy
- Breakdown of clots in the blood
- Problems of the urinary and respiratory systems
- Diseases of joints and connective tissue
- Common cold
- Problems caused by allergens
- Cysts

Yellow Chi

Yellow Chi has a close connection to the nerves, bones and the bone marrow. Yellow is also the color of the spleen. The spleen is involved in the assimilation of food and the appetite. So, when the spleen is balanced, the appetite will be controlled.

The effects of yellow chi are those of repairing – bones, skin, cells, nerves (by causing re-growth) and a general beneficial effect on the organs, bones and tissues.

Ordinary and Luminous Violet Chi

Comes from surrounding Chi: air, earth, solar energy and from the higher self, soul, crown point, North Star and Big Dipper, Divine or soul energy.

Bright purple chi has a much greater force than purple chi because it contains all the characteristics of the other colors and can help fast re-growth when organs or nerves are affected.

For cancers and other tumors, luminous dark purple Chi is suitable.

It develops the crown center, spiritual essence and core.
Good for psychological ailments.
There is more information about this light in Cosmic Healing I.

Internal Organs Chi

This Chi is manufactured by the body daily and is readily available. It is good to mix it with universal or cosmic Chi for healing.

A brief word about detoxifying organs' Chi. Before we can effectively use organs' Chi, we must be sure that it is healthy. Many of the organs hold excess negative emotional Chi. We call this an emotional link. Many diseases are caused by emotional links. People use psychology to deal with such problems and it can work to a certain level, but the energy tends to jam up in the organs if it is not released.

Commitment is of course necessary for successful practice. If you are teaching, tell your students that the **Inner Smile** should be done every day; also to contract the pelvic floor muscles 9-18 times, until they feel the energy radiating upwards. This will help strengthen the major organs. It is alright to insist that if they don't do the Inner Smile and toning up the body every day, they will not heal. If they do commit to doing some daily practice and they come to you for work on their energy field, you will be able to help. Using Chi, color and mind power helps to improve the organs.

Cosmic Healing works very well with Chi Nei Tsang (Chinese Internal Organs Massage). Cosmic Healing will do what it can. Chi Nei Tsang and the Universal Tao practices will do what they can. You have to allow the practices to take care of themselves, as the **Tao begins to flow through you.** Allow yourself to heal. When you combine the above practices you will open yourself to the forces of nature and the Divine.

The person you are treating should be under the supervision of a medical doctor. Such supervision is especially necessary with serious physical, emotional and mental disorders. The patient should have a balance between the prescribed medicine and the work with the Universal Tao. The doctor should be advised of what we intend to do with the patient.

When working with improving organ health, the major point is to draw in white Chi, breaking down red, orange, yellow, green, blue, and violet; then distribute it to all of the organs.

Ming Men Chi

Yellow, pelvic organs.
Kidney power: Regulates blood pressure and is good for increasing low vitality and aiding back problems, internal root of the meridian system and healing for prenatal traumas.

Solar Plexus and Liver Chi

It is very important to use the Inner Smile when using this Chi. The solar plexus is very strongly connected to the liver which is also a very strong emotional center. A lot of emotions (cloudy grey in appearance) get stuck in the solar plexus.

Navel Center Chi

Yellow, some violet - increasing original Chi - helps to circulate Chi in the meridians. Good for small and large intestines, constipation, loose bowels, inability to assimilate food and nutrients and aids in raising overall vitality.

Heart Center Chi

Golden and red Chi. The thymus gland and defense system. Energize the Heart and Lungs Center through the back of the Heart Center. The heart is the seat of compassion.

Throat Center Chi

Green for thyroid, parathyroid, lymphatic system, sex center, asthma.

Mideyebrow

Yellow and violet for pituitary, endocrine system, eye problems, cancer.

Forehead

Light violet for pineal, nervous system, cosmic consciousness.

Crown Center

Violet and golden for entry point of Divine energy.

Spleen Chi

Yellow: The spleen connects to the solar plexus and the navel. It is the major center that connects to all the organs. Holding solar energy or a white ball at the solar plexus will help distribute Chi to all the organs.

If the solar plexus gets clogged, the liver and spleen will be blocked as well. The spleen is linked with the 'Door of Life' (point opposite navel on the back) and the navel.

The spleen (located at the left side under the rib cage) can take in the white Chi and absorb it directly through the front or back, the spleen center or the navel area. The Chi will be broken down into color and distributed to other centers and to the organs.

If the spleen area is not clean, the immune system suffers and diseases of the joints and connective tissue promoted, along with blood full of impurities and bone problems.

Basic technique to improve health, reduce tension and reduce aging.

Green or blue light mixed with white. Localized sweeping of the front of the solar plexus 30 times counterclockwise, guiding dirty Chi to leave the organs. In other words; counterclockwise sweeping motions to move energy.

Brush locally in the areas of the solar plexus, liver, stomach and pancreas, using blue Chi.

Use white to bring energy to the brain, crown point, forehead and the back of the head.

Use white to brush the lungs and the heart, both front and back.

Brush the kidneys, lower abdomen, spine, and the front and back of the spleen with white.

Brush the sexual center using white Chi and use it for the sacral area too.

Brush the arms, hands and the legs and feet with white Chi.

After a session, patients who are particularly weak should not bathe for one full day. The energy which has been put into their bodies can thus be kept there by application of pale blue/white Chi at the end of the session.

Eye Problems

Use green and yellow.

Constipation

Use yellow and orange for the large intestines, diaphragm, liver, pancreas, stomach, heart lungs and energize the pancreas through the back of the solar plexus. When the intestines are exhausted, they can be revitalized at the solar plexus center.

Use Compassion, Love, Kindness

Microcosmic Orbit

The Microcosmic Orbit Meditation awakens, circulates and directs Chi through the Governing Channel, which ascends from the base of the spine up to the head and the Functional or Conception Channel, which runs from the tip of the tongue down the middle of the torso to the perineum. Dedicated practice of this ancient esoteric method eliminates stress and nervous tension, energizes the internal organs, restores health to damaged tissue, and builds a strong sense of personal well-being.

The Microcosmic Orbit is the foundation of Cosmic Healing practice. Each new practice is dependent upon the quality of your meditations and your ability to perfect the Microcosmic Orbit. In order to master Cosmic Healing, one must practice meditation daily.

The meditations in the Microcosmic Orbit 'system' also strengthen the Original Chi and teach you the basics of circulating energy. This enables the palms, the soles of the feet, the mideyebrow point and the crown to open. These specific locations are the major points where energy can be absorbed, condensed and transformed into fresh new life force.

Focus on the Lower Tan Tien (the area where the Original Chi is stored, between the navel, kidneys and sexual organs). Feel the pulsing in this area, observe whether this area feels tense or relaxed, cool or warm, expansive or contracting. Notice any sensations of Chi: tingling, heat, expansiveness, pulsing, electricity or magnetism. Allow these to grow and expand. Then let this energy flow out to the Navel Center.

Use your intention (mind/heart/eye power) to spiral in the point and guide and move the Chi. Let the energy flow down to the Sexual Center (the Ovarian or Sperm Palace).

Move the energy from the Sexual Center to the perineum and down to the soles of the feet.

Draw the energy up from the soles to the perineum and to the sacrum.

Draw the energy up from the sacrum to the Door of Life (the point in the spine opposite the navel).

Draw the energy up to the mid-spine point (T11 vertebra).

Draw the energy up to the base of the skull (Jade Pillow).

Draw the energy up to the crown.

Move the energy down from the crown to the mideyebrow point.

Touch the tip of your tongue to your upper palate; press and release a few times; then rest and lightly touch the tongue to the palate, sensing the electricity or tingling feeling of the energy flowing into the tongue. Move the energy down from the mideyebrow to where the tip of your tongue and palate meet.

Move the energy down from the palate through your tongue to the Throat Center.

Move the energy down from the throat to the Heart Center.

Bring the energy down from the heart to the solar plexus. Feel a small sun shining out.

Bring the energy back down to the navel.

Continue to circulate your energy through this entire sequence of points at least nine times. Once the pathways are open, you can let your energy flow continuously like a stream or river, without stopping at each point.

Conclude when you wish, by collecting energy at the navel.

Men: Cover your navel with both palms, left hand over right. Collect and mentally spiral the energy outward from the navel 36 times clockwise and then inward 24 times counter-clockwise.

Women: Cover your navel with both palms, right hand over left. Collect and mentally spiral the energy outward from the navel 36 times counterclockwise and then inward 24 times clockwise.

For more details of this practice please see the book, *'Awaken Healing Light' by Mantak Chia.*

Cosmic Inner Smile and the Six Healing Sounds

These are very important practices to make the connection between the organs, colors and the good virtue energy in each organ. The colors will help you to make the connection to the cosmic and universal healing power.

Red from heart
White from lungs
Yellow from the spleen
Blue from the kidneys
Green from the liver

Each organ has its own vital color and will radiate this color in abundance, as an aura for vitality, protection and healing. These colors are connected to the universe. Over a period of time, the power of each healing sound will help enhance the universal connection. Each sound will provide different healing power. The practices also help balance, refine and transform negative sick energy back to positive vital energy.

Iron Shirt Chi Kung and Bone Breathing

Iron Shirt Chi Kung and Bone Breathing are standing meditations. These exercises help you to become grounded and build good structure. They help you to take in greater force and connect to the earth force. In turn, this will help draw in the heavenly energy. The practices strengthen the body and enable it to contain a greater energetic charge. These abilities are essential prerequisites for handling increasing amounts of energy.

Iron Shirt Chi Kung also includes the art of Changing the Sinews and Washing the Marrow. Through these subsystems, you learn to absorb, store and discharge large amounts of energy through the tendons and bones. *These practices are outlined in detail in the books, 'Iron Shirt Chi Kung I and Bone Marrow Nei Kung' by Mantak Chia.*

To attain skill in Cosmic Healing, it will help if you practice the meditation above as a minimum requirement. If you already have other Chi Kung or meditation practices they will also be beneficial. Beyond this basic level, the Universal Tao System includes many other intermediate and advanced Chi Kung practices and meditations. The further one advances, the greater one's mastery of Chi.

Your increasing level of skill in the Universal Tao System will reflect immediately in your Cosmic Healing practice. Furthermore, you will discover that you can incorporate many of your Universal Tao practices directly into your practice of Cosmic Healing.

Activating the Six Directions and the Three Fires

This powerful energetic technique allows one to extend the mind, to touch the force, and to draw that energy back into the body.

The Six Directions teaches you how to expand your mind and chi for receiving healing power. By practicing the Six Directions daily this will help you increase your healing and cosmic power. Turn your mind and Chi into the cosmos, multiply them and draw them back.

Direction Below

When you achieve the three minds into one mind and expand into the six directions, press your hands down and start with the low direction. Picture yourself standing on the earth and expand yourself very far away – deep down into the earth. Very, very deep down into the earth. Your hands become very long; your feet become very long — they go all the way down into the earth and out past the galaxy below on the other side.

Push. When you push, connect with the galaxy below — pull and think about your Tan Tien filling with Chi. Push and pull. Push and pull. Fill your Tan Tien with Chi.

A. ***B.*** ***C.***

Fig. 2.12. A. *Hands expand through the Galaxy.* ***B.*** *Hands push forward and pull back.* ***C.*** *Smile to the Primordial Chi from Universe back to the Lower Tan Tien.*

1. Stand, feet together. Put your hands down, parallel to the ground. Expand your hands very far away and your mind very far away, touching the ground. Continue expanding your hands, feet and your mind very far away beyond the earth below. Go down through the galaxy, way beyond to the primordial force. It's just like you are extending all the way to the primordial force as it was about 30 billion years ago.
2. Push, moving the hands forward six inches only.
3. Pull, moving the hands back by the sides. Think about your Tan Tien and feel Chi coming to the primordial force in your Tan Tien. Smile to your Tan Tien, dark, deep and vast.
4. Push: touch the primordial force in the universe.

A. ***B.*** ***C.***

Fig. 2.13: A. *Primordial Forces enter the Lower Tan Tien.* ***B.*** *Activate the Tan Tien Fire.* ***C.*** *Fire burning Under the Sea.*

5. Pull back the dark primordial forces with your hands to your Tan Tien.

Push and pull: It's just like you go to an empty space – vast. Then you come back to your Tan Tien – also empty, just like the primordial condition before anything existed.That is where all the forces come from. Push and pull 3 – 9 times.

Front Direction and Tan Tien Fire

Next, be aware of the front direction; a huge fireball appears in front of you. Open your palms: scoop up the Chi, scoop up the fire. Bring the fire into your Tan Tien. Activate the Tan Tien Fire.

1. Start with a small dot of light inside you. Expand your awareness to the universe in front of you.
2. Become aware of a big fireball in front of you. Feel your hands become bigger and longer. Scoop up the fireball. You may close your eyes to help your inner sensing.
3. Use the fireball to light the fire in your Tan Tien. Feel the fire burning in the darkness, the 'fire burning under the sea.'

Fig. 2.14 *Smile to the Burning Fire.*

Back Direction and Kidney Fire

Be aware of the back of the Tan Tien, the Door of Life and the back or rear direction. Extend your mind very far away to the 'back'. Scoop up the fire and light up your 'Kidney Fire'.

Fig. 2.15 *Be aware of the back direction, move the arms toward the universe, Scoop up the Universal Fire.*

1. Expand your awareness all the way to the back. Move the arms toward the universe behind you.
2. Touch the universe; scoop up the fire. Activate the Kidney Fire. Maintain your awareness in the Tan Tien and expand out to the universe. The energetic spiral glows in the Tan Tien. Spiral in the heart, spiral in your crown and spiral in the universe.

Heart Fire

Raise your hands up under your armpits and feel yourself holding the two fireballs. Touch the heart by extending the fingers energetically in from the sides; feel your hands extending into your heart and very far away. Activate the Heart Fire.

Fig. 2.16 *Activate the Heart Fire.*

1. Move your hands up under your armpits and extend your fingers deep into your heart and very far away.
2. Tan Tien and the universe: you are connecting to the 'charger,' charging more fire into yourself.
3. Feel your heart soft in the center. Feel the warmth of the fire energy of love, joy and happiness in the heart.
4. Feel the connection with the unconditional love in the universe as you keep your heart consciousness in your Tan Tien and extend your awareness out to the universe.

Sacred Fire *(Chi Fire)*

Connect the Three Fires to combine into one Fire: *Heart to Kidneys to Navel to Heart*.

Fig. 2.17 *Connect the Three Fires and Sacred Fire.*

1. Move your hands together in front of your heart. Hold your hands together in front near the heart and feel the fire burning in there. Connect the Heart Fire to the Kidney Fire and from the kidneys to the Tan Tien Fire near the navel and back up to your heart — connecting them as one triangular Sacred Fire, doubling or tripling their collective power.

Open the Third Eye

Now, extend your hands out to the front, very far away – pushing, pushing, pushing. Turn your palms inward, and extend your middle fingers inward toward your third eye. Picture a crack in the middle of your forehead and pull the crack open. Feel the light from the heavens opening it and feel them shining into your brain.

1. Open your palms. Open your eyes, very dim eyes. Look to the universe. Extend your hands to the front, palms vertical. Extend the arms from the scapulas. Touch the universe.
2. Turn your palms inward and extend your middle fingers inward toward your third eye.

3. Picture a crack in the middle of your forehead and let the heavenly light shine into the brain; pull the crack open and let the light reflect into the organs.
4. Close the third eye. Again, open. Pull: open-open-open. Then, close. With the third eye open, the light from the heavens shines into your brain and reflects down to all your organs. Open and close the third eye 3 - 9 times.

Fig. 2.18 *Look as you touch the Universe in front of you.*

A. **B.**

Fig. 2.19 A. *Close the Third Eye.*

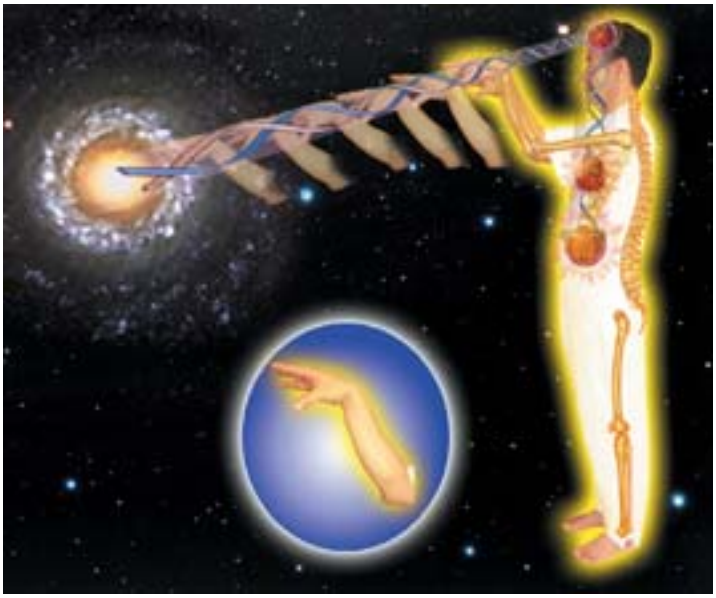
B. *Pull open the Third Eye and let Heaven's light shine into the Brain.*

Front Direction: Push/Pull Master Practice

Now, turn your palms, pushing out. Push. Pull. This is the master practice that is imperative for successful completion. When you first start practicing you should do it at least one hundred times and increase up to 200 times. Push and pull. When you push, you feel your hands extended very far away – very long – reach the sky. Touch the universe.

1. Push: Extend your arms and hands to the front, palms vertical. Extend the arms from the scapulas.
   Expand: smiling, smiling, touching the universe – touching the force, touch the cosmic Chi.

Fig. 2.20 *Master Practice - Touch the Universe.*



2. Pull: Draw the Chi back to you from the universe. Moving the arms from the scapulas, draw the hands toward your body in a horizontal position.

Fig. 2.21 *'Draw' Universal Chi and Think about your Tan Tien.*

Pull: Think and smile to your Tan Tien. Push, very far away to the universe.
Pull: Push: smile, relax and let go, touching the sky, touching the universe.

Fig. 2.22 *Let go - Push and touch the Universe. Repeat 6, 9 or 18 times.*

Left and Right Directions

Now, move your hands to the left and right directions. Pull the Universal energy in. Push; touch the universe. Pull; think about your Tan Tien. Push – all the way, touching-touching-touching the universe.

1. Move your extended hands from the front horizon to the left and right sides.

Fig. 2.23 *Touch Left and Right Universe.*

2. Pull. Tan Tien: Smile to your Tan Tien. Keep smiling to your Tan Tien.
3. Push to both sides. Expand all the way, touching the universe.

   Push/Pull: touching, touching the universe drawing the Chi into you from both sides.

   Repeat 3—6 times.

Fig. 2.24 *Pull, just think about your Tan Tien.*

Direction Above

Turn your palms up to the universe. Scoop up the Chi. Pour the Chi over your crown and touch your crown. Project the Chi all the way down to the perineum and down through the earth to the universe below. Tan Tien and universe; always feel your Tan Tien spiraling, heart spiraling, crown spiraling and the universe around you spiraling.

Fig. 2.25 A: *Raise the hands above the crown and feel it extend up to heaven.*
B: *Feel that the hands are big and long and that the bones are hollow. Fill and pack the bones with Chi.*

Raise your hands up to the universe and expand your hands as big as the universe - feel the Chi charge into your bones.

Fig. 2.26 *Scoop up the Universal Chi and pour it over the head.*

Open the Spine

1. Touch the back crown point. Pour the Chi all over your crown. Feel your soles and imagine that you feel like there is a waterfall of Chi flowing from your crown all the way down to your soles. Feel your fingers grow long and the Chi penetrate down through your spine to the coccyx. Leave the fingers touching the back of the crown, to maintain the energetic connection with the coccyx.

Fig. 2.27 *Chi 'Waterfall' Cleansing the Spine.*

Turn 'Three Minds into One Mind' at the Lower Tan Tien and expand the awareness to the universe. Let yourself be charged by the universe.

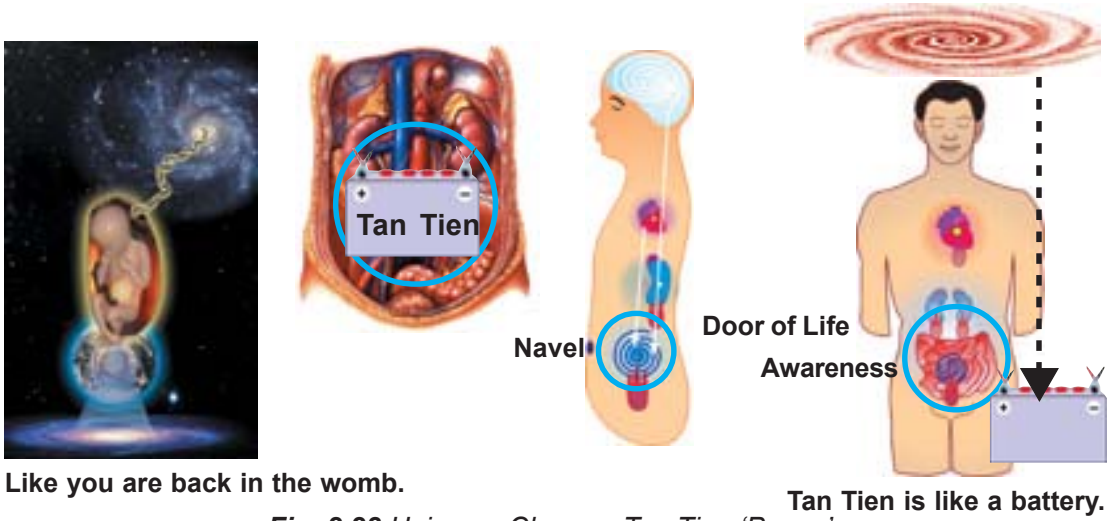


Fig. 2.28 *Universe Charges Tan Tien 'Power'.*

Be aware of the Tan Tien and spiral it like Universal energy in motion. Feel the heart center spiraling and the crown spiraling. Be aware of the universe spiraling above, below, front, back, left and right. Let all of the sick energy and the negative forces leave the body and go down into the ground, for Mother Earth to recycle. Extend the Chi from above, all the way down through the earth and the universe below.

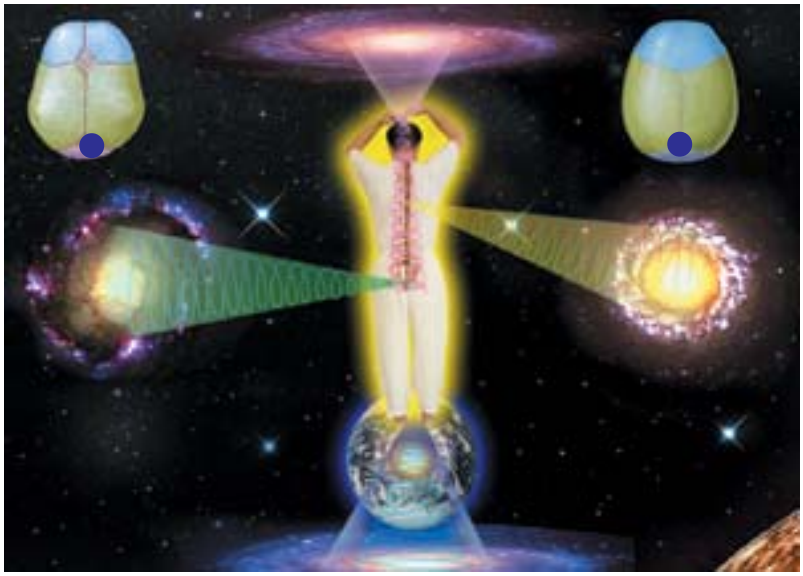


Fig. 2.29 *Feel the Lower Tan Tien, heart center and the crown spiraling and feel the Universe around is spiraling and charging the three Tan Tiens.*

Open the Middle Channel and Perineum

1. Move to the mid-crown point. Touch the point and project your fingers inwards; deeper, deeper through the middle of your body down to the perineum. Focus on the perineum. Feel the Chi from the universe flow right into your perineum. Look for one dot of light. Look into the darkness, the vast darkness, the immense darkness: this is the primordial force, a cloudy moving force. Look for a dot of light at the perineum and extend your awareness all the way down through the ground and the universe below.

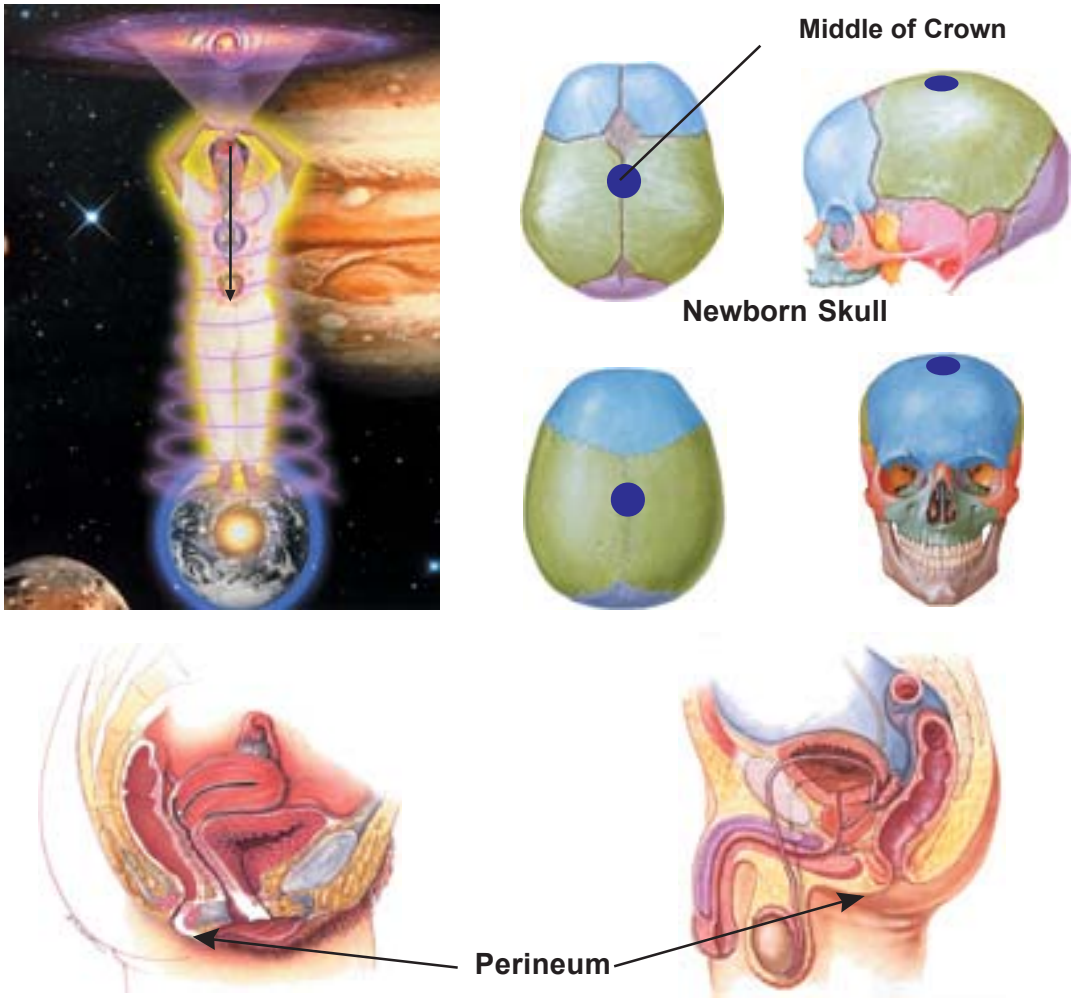


Fig. 2.30 *Universal Light shines from Crown to Perineum.*

When finished opening to the six directions and igniting the three fires, gather the Chi in the center and bring this expanded awareness into the healing session.

Tan Tien and the Universe

The expression, 'Tan Tien and the Universe', is a reminder to feel your Tan Tien, heart, mideyebrow and crown spiraling and that you are connected to the universe spiraling in the six directions around you.

1. Establish a Complete Location

You will use your Yi (the three-mind power), to recharge your Chi repeatedly for various purposes. You recharge by connecting to the Universal Chi in the six directions of the universe simultaneously. When you charge a particular area or direct Chi into the body to a particular point, you first establish a connection point for the Chi by placing the hand or fingers at an appropriate location on the surface. This is like giving a location for the Chi to go to. Once the location is established and the Chi starts to go there, leave your hands there.

Then you move your attention to where you want the Chi to go in the body. Feel the Chi connected to and charging the intended location.

2. Charge Tan Tien from Universe

When the address connection is established, be aware of your Tan Tien, heart center, mid-eyebrow and crown spiraling. Be sure that the conscious mind of the heart is lowered to the Tan Tien and the awareness mind of the abdomen is connected to the mideyebrow crown and out to the universe. Feel them connected to the spiraling energy in the six directions of the universe. Let the universe charge your Tan Tien.

3. Don't Stop at the Location

With your focus in the Tan Tien, the Chi will go from there to the 'location' indicated by your hands and then to the intended location in the body. Don't let Chi stop there, however.

4. Direct Chi out the Opposite Side to Universe

Direct your attention to the Chi and guide it through the body and out the opposite side. The idea is to clear out any blockages and prevent any others from accumulating and also to release sick energy and negative forces down into the earth. Let the Universal Chi flow out through the universe and beyond.

Open the Three Tan Tiens

Move your hands down to the mideyebrow. Touch the mideyebrow. We are going to open the three Tan Tiens, starting with the Upper Tan Tien.

Upper Tan Tien - Mideyebrow

1. Recharge. Remember: Tan Tien – heart consciousness in, awareness out. Spiral – Tan Tien, heart, third eye and crown. Universe – six directions spiraling.

Fig. 2.31 *Raise hands and charge the Universe Chi.*

2. Move your hands down and touch the mideyebrow. Feel your fingers grow very long (energetically) and penetrate all the way back to the base of the skull. Focus on the back. Remember: Tan Tien and the universe spiraling. With the spiraling, the Chi in the fingers will become hot. It will expand and penetrate out through the back of the head all the way to the universe behind.

Fig 2.32 *Fingers touch Mideyebrow and penetrate to the Universe.*

Fig 2.33 *Tan Tien and the Universe*

3. Picture your fingers like laser beams of Chi. 'Tan Tien and Universe': Feel your Tan Tien and the universe spiral and charge your fingers. Move your fingers out from the mid-eyebrow around the side of the head to the top of the ears. Your fingers are like lasers -cut-cut-cutting open your skull right in the middle, around to the top of the ear, cutting open your Upper Tan Tien. Cut and project your fingers long into the middle of your brain. Spiral your Tan Tien and the universe. Leave your fingers there. Concentrate on your Tan Tien spiraling your heart, crown, the universe above, below, front, back left and right all spiraling. Your Tan Tien is a big empty space: primordial force; darkness. You can put so much Chi inside there! The Chi penetrates into your brain.

Fig. 2.34 *Move the Fingers to the Top of the Ears and feel them Grow Longer. Cut Open the Center of the Skull.*

4. Move your hands all the way to the back, cutting to the back of the skull. Touch and feel the Upper Tan Tien open.
5. Touch the base of your skull. Focus on the mideyebrow. Feel the Chi flow like a laser beam from back to front and out to the universe in front. Complete the opening process by moving the hands back around to the mideyebrow, cutting as you go.

Fig. 2.35 *Chi moves like a Laser from Front to Back of Skull.*

6. Recharge in the universe. Feel your bones and your arms are hollow. Fill and compact them with Chi.
7. Scoop the Universal Chi and pour it down over your crown and all the way down, down to the Middle Tan Tien.

Fig. 2.36 *Recharge in the Universe:*
Scoop and Pour the Chi down to the Middle Tan Tien (Heart Center).

Middle Tan Tien - Heart Center - Conscious Mind

1. Move your hands all the way down to your heart center at the mid-sternum. Touch. Focus on the point opposite the heart, T5/T6 on the spine. Fingers 'long' as Chi penetrates into your thymus gland. Light – golden light – penetrates into your thymus. Feel the Chi penetrate through your heart all the way through T5/T6 to the universe behind. 'Tan Tien & the Universe' also feel your Chi Fingers penetrate into the bone and bone marrow and spread out into your rib cage.

Fig. 2.37 *Golden Light Enters the Heart, Thymus, Bones, Marrow and Penetrates to the Back and all the Way to the Universe.*

Recharge and cut around to the Armpits

1. Recharge in the universe: pour Chi over the crown down through the body and lower your hands down to the heart center. Touch with the fingertips. Move your hands around under your armpits, extending the Chi like laser beams cutting open this Middle Tan Tien. Pause under the armpits as you send the Chi into the center.

Fig. 2.38 *Cut Open the Middle Tan Tien by cutting around the Armpits.*

2. Continue to move your hands around to your back at T5/T6, touch and send the Chi from back to front. Let the beam of Chi penetrate out through the heart center to the universe in front of you. Then, move the hands back around the sides to the front, cutting as you go.

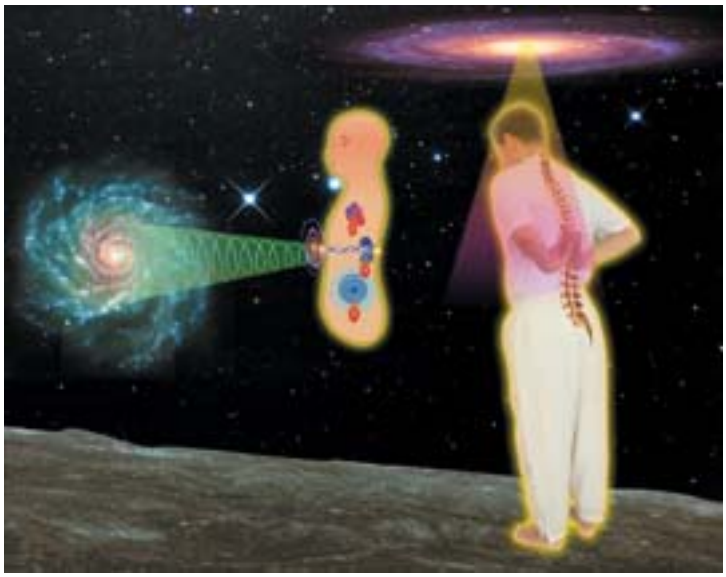


Fig. 2.39 *Chi Beam from the Door of Life penetrates the Heart Center in the front.*

Lower Tan Tien - Navel - Awareness Mind

1. Recharge with Universal Chi, Tan Tien and Universe: Again, raise your hands and charge with the Chi in the universe. Your hands are very big, very long. The bones are hollow and compacted with compressed Universal Chi. Scoop the Chi from above and guide it down. Pour all the way down, down, down, down to the navel. Touch the navel and focus on the Door of Life opposite, on the spine between L2/L3. Touch and feel the Chi penetrate to the Door of Life. Tan Tien and Universe: Feel the Chi penetrate through to the back and out to the universe behind.

A. ***B.***

Fig. 2.40 A. *Recharge the Lower Tan Tien and penetrate through to the Door of Life.* ***B.*** *Raise the hands up to the Universe & charge with Chi. Bring the Power down to the Lower Tan Tien.*

2. Open this Lower Tan Tien the same way as for the Upper and Middle Tan Tiens. Tan Tien and universe – charge more Chi into your hands and let them be like lasers cutting it open. Cut around to the sides. Pause. The fingers of the left and right hand are very long, extended energetically inside. Cut and feel the energy penetrate into the navel and Tan Tien .

Fig. 2.41 *'Cut' Open the Lower Tan Tien with Laser Fingers.*

3. Continue cutting to the Door of Life. Touch and send the Chi from the Door of Life back to the navel and out to the universe in front.
4. Move the hands back around the sides to the navel, extending the fingers and "cutting"the Tan Tien open as you go. Touch the navel: Tan Tien and the universe spiraling. Feel more Chi and feel the Tan Tien open.

Fig. 2.42 *'Cut' open the Door of Life and Send Chi to the Universe in Front.*

Activate Chi in the Bones of Hips, Legs and Sacrum

1. Now touch your pelvic bones by energetically extending your fingers from the front area near the hips to the back. Feel Chi penetrate into your pelvic bones: funny, laughing, happy bones.
2. Touch the femur bones. Tan Tien and Universe: Charge the fingers. Also, feel the funny, happy, laughing vibration inside the bones and in the bone marrow. Be aware of the Three Tan Tiens. Spiraling from the universe. Spiraling charging your Tan Tien. Charge your hands and your bones.

Fig. 2.43 *Touch the Femurs - Happy Laughing Legs!*

3. Now we are going to slowly lower the sensation of Chi down through the bones to the earth. Move the hands down the legs as you bend down.
4. Lower yourself all the way down to the ground and sit on your feet. Move the Chi with your hands down to your toes, down through the earth and the universe below.

A. ***Fig. 2.44*** ***B.***

A. *Sink the Chi into the Earth.* ***B.*** *Lower and Sink the mind and Chi down to the Universe.*

5. Raise your sacrum up, keeping your hands at the toes. Smile to your Tan Tien and feel the Chi from the universe rising to fill the Three Tan Tien.

Fig. 2.45 *Raise the Sacrum and smile to the Tan Tien.*

6. Lower down again. Lower the Chi down to the earth and the galaxy below.
7. Once more, raise your sacrum up, maintaining hand contact with your feet. Smile to your Tan Tien.
8. For the third time, lower down. Open your palms, gathering the Chi from the earth below. Gather and scoop the Chi.

Fig. 2.46 *Gather the Earth Chi.*

9. Touch your heels and feel your bones as you slowly rise up. Fill your bones with Chi as you guide it up with your hands.
10. Fill the bones in the upper legs as you move your hands up.

A. ***Fig. 2.47*** ***B.***

A. *Fill the Bones with Chi.* ***B.*** *Feel your fingers penetrate into the Bones as you rise.*

11. Feel your bones and fill them with Chi, all the way up to your coccyx. Touch your coccyx. Leave your fingers there and be aware of the Chi gradually feel the Chi rising up to the Tan Tien and the universe. Feel it charge the fingers and the spine.
12. Come up to the sacrum, Tan Tien and the universe.

A. ***Fig. 2.48*** ***B.***

A. *Bring the Chi to the Coccyx.*
B. *Move your hands up to the Sacrum and feel the Chi Rise up to the Crown.*

13. Come up to the 'Door of Life', and then back to the navel. You may sit down to continue the next step in the Cosmic Healing Practice. Practice daily until you feel the Chi. You will then be able to apply this Chi to the Healing Sessions.

Fig. 2.49 *Bring the Chi to the Door of Life and let it penetrate to the Navel.*

Sacred Water Practice

Invoke the power of the Sacred Water practice to cleanse and heal the body's sick, toxic or negative energy. **If you are working with a group of people, direct your energy through the energy body overhead and into each person's star, as you guide them through the procedure**.

Outline of Practice

I. Hold a glass one quarter full of water in your left hand, folding the middle and the ring fingers into the center of the palm.

II. Hold the glass in front of your body as you point the 'Sword Fingers' of your right hand up to Heaven.

III. Make a request to receive healing energy and feel yourself touch a heavenly pool of sacred water energy. Feel the pool pouring down heavenly water to fill your arm.

IV. Place your fingers on the cup and ask:
Command 1: ***"Yin power and good fortune come from the east. Yin power please dissolve all negative energy, all sickness and bad fortune".*** Make a cross over the top of the cup.

V. Bring your arm down and point the sword fingers around the inner rim of the glass. Smile as you circle the fingers around the rim.
Command 2: ***"By my request. Please carry out the order now."*** Repeat this three times, charging the water with Yin Power. Project your thoughts into the water.

VI. Use the thumb and index finger to remove the sick energy from the cup, without touching the water. Do this three times. Talk to the sick cells. Tell them to listen to your command:
Command 3: ***"All sick cells please listen: Clear, clean and bright, this Sacred Water will take all the sickness away."***

VII. Repeat the order and visualize yourself removing the sick energy from the cells and returning it to Mother Earth for recycling.

VIII. Hold the cup with both hands near your heart.
Command 4: ***"This Sacred Water will give me/you health, wealth and longevity."***
Project love, joy, thankfulness, gratefulness, appreciation and the energy of compassion into the cup.

IX. The Sacred Water will carry the message of the practice to all the cells, where it will remain. If you are practicing in a group, drink the water in unison. If you are working with a student, pass the glass using both hands.

Step I: Prepare the Hands and Arms to receive the Universal Chi.

Left Hand Position: Prepare to hold a cup or glass with the left hand by folding the ring and middle finger into the center of the palm. Hold the glass in front of the body.

A. ***B.***

Fig. 2.50 A. *Fold Ring and Middle Fingers.* ***B.*** *Hold Glass in front of Body.*

Step II: Prepare the Sword Hands to receive the Universal Chi.

Right Hand Position: Form the right hand into a 'sword hand' by folding the pinkie, ring fingers and thumb into the palm. Straighten and hold the index and middle fingers together and extend them upward.

Fig. 2.51 *Prepare to receive the Universal Chi.*

Step III: Fill your Arm with the Power of the Heavenly Pool.

Sense the sword fingers and the arm as being 'long' and 'big' as you raise them towards Heaven. Sense that the middle is hollow and the bottom is sealed at the shoulder. When the mind's attention is focused on merging with the primordial Chi of the Universe, the energy of your thoughts will be multiplied.

As you make your request to the Universe, feel that you are touching a heavenly pool of Sacred Water Energy. Feel that the pool is pouring down like a waterfall to fill the arm. When it is full compact and compress the Sacred Energy into it as much as you can.

Fig. 2.52 *Touch the Heavenly Pool.*

Step IV: Make the Cross on the top of the Cup.

Put Sword Fingers on top of the Cup. Ask for the Yin Power: **Command 1:** ***"Yin Power and good fortune, come from the east. Yin has the power to dissolve all negative energy, all sickness and bad fortune."***

Command 2: Make the cross on the top of the cup and say ***"By my request"***.

Fig. 2.53 *Fortune come from the East - Yin has the power to dissolve all Negative Energy, all Sickness and Bad Fortune."*

Step V: Charge the Water to transform it into Sacred Water.

Bring your arm down and point the sword fingers into the glass of water. Smile and circle the sword fingers around the inner rim of the glass.

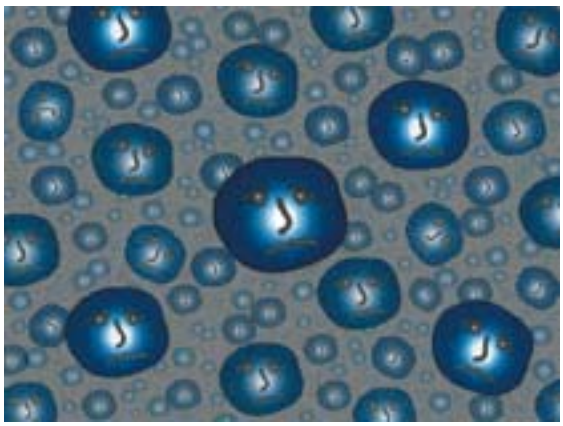
Continue to order: ***"Please carry out the order now."*** Repeat 3 times to charge the water with the Yin Power. As you do this, project a good thought into the water.

Fig. 2.54 *"Please carry out the order now." Repeat three times, charging the water with the yin power.*

Step VI: Command 3: *"All sick cells please listen : Clear, Clean and Bright, this Sacred Water will take all the Sickness Away."*

Give the above command. Use the thumb and index finger to pick up sick energy from the cup, without touching the water. Do this three times.

Fig. 2.55 *"All sick cells please listen: Clear, Clean and Bright, this Sacred Water will take my/your Sickness Away."*



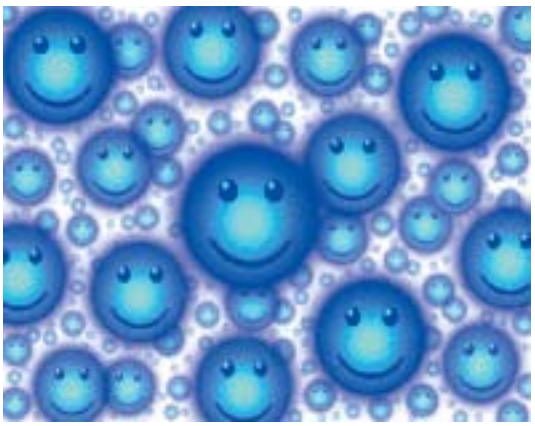


Fig. 2.56

A. *Ask for the power to see the cells - If they are toxic and dark, ask for them to be cleaned out.*

B. *"Clear, Clean and Bright".*

Step VII: Let go of the Sick Energy to be transformed by the Earth.

As you **repeat** the order, picture yourself removing the sick energy from the cells and discarding it down into the Earth to be transformed and recycled.

Step VIII: Fill the Water with Compassion.

Hold the cup with both hands near the heart and project goodness into the water.

Command 4: ***"This sacred water will give me/you health, wealth and longevity."***

Project love, joy, thankfulness, gratefulness, appreciation and the energy of compassion into the cup.

Fig. 2.57 *Sick Energy return to the Earth.*

Fig. 2.58 *"This Sacred Water will give you Health, Wealth and Longevity."*

Step IX: Drink the Sacred Water.

The Sacred Water will carry the message to all the cells. It will keep the message of the Sacred Water practice in all of the cells. Use both hands to pass the Sacred Water to the student you are working with, or drink it yourself and/or in unison with your group. **Feel the water go into all the cells of your body. Feel it removing the sick cells and purifying your body.**

You can also sprinkle it onto any area that requires healing.

Fig. 2.59 *Drink the Sacred Water.*

Chapter III
Taoist Astrology and the Structure of the Universe

Origin of Astrological Information

Thousands of years ago, people experienced the shimmering stars as their natural connection with heaven. Society was organized in accordance with the laws of the universe and people viewed their relations as a reflection of the configurations of the stars. Human arrogance, the drive for power and a growing disdain for nature led to the vision that the earth was the center of the universe. Instead the earth is our temporary home and is our central point from which we observe the universe.

At the same time, leaders began to rule their countries without being in touch with the heavens. A mixture of power, ambition, desire for wealth and religious conditioning led to an increasing disconnection from the natural receptivity to the energy from the universe.

Since then this self-created isolation has been growing and is dominant in present day society. Although there is a longing to reconnect, many healers, therapists and practitioners of meditation or astrology understand the ancient practices with their rational mind but miss the subtle connection.

We should remember that the knowledge with which astrologists work now comes originally from a direct experiential connection with the universe and the understanding that many masters cultivated throughout several thousand years. Many present day astrologists are guided solely by this ancient information.

The question may be raised as to how the early astrologists, who wrote down their experiences and transmitted them, gathered and collected their information? They had no sophisticated equipment like telescopes. Through a combination of observing the universe and relating it to changes in the energy on earth, in nature and human beings and through meditation or spiritual practices, they were able to assimilate their knowledge.

During the Tang dynasty many Taoist masters and students spent their whole lives in kuans or watch places (observatories). The masters had selected these unique locations in nature, based on the presence of strong cosmic energy. Most of the kuans were located high in the mountains, sometimes in very inaccessible places. The interaction of the strong natural forces with natural crystal antennas (mountains) and the planetary/star observations (meditations) formed a perfect platform for the Taoist astral travel and spiritual practices.

These masters clearly saw the cranium as our own bony planetarium. A key realization was to break through the illusion of the separate realities of ‘inner’ and ‘outer’. Their supernatural astrology helped them to realize the universe within the cranium and from there, into the Tan Tien.

Fig. 3.1 *Astrologer casting a horoscope.*

In the Taoist view, their highly advanced insights could only come about through the growth of the higher centers and glands which allowed them to perceive and understand the reality of the universe beyond the normal material and visible manifestations.

Of course, astronomy provides us with a great deal of interesting information. It has recently become clearer that astronomy parallels all universal law. We should realize that these laws can be further enhanced with the aid of high powered telescopes. Taoists say "without leaving the room, you can know heaven and earth".

The Newtonian view of the universe which uses a mechanical approach to reality by way of an exclusively rational concept at the expense of our body, our ability to sense and use our intuition and feelings, has gradually and increasingly disconnected us from the realm of the spirit and the living cosmos.

Strangely enough, the more we attempted to know the universe through observation with a telescope, the more we became separated from its subtle origin.

This is so, as the rational mind tends to move horizontally and may find it difficult to enter into the realm of the spiritual laws. Unless of course it is the rational mind of a spiritually evolved person. Each time an astronomer reaches further into the universe, finding new information, some scientists try to use it in a concept of how the history of nature formed and the universe must be. But these fundamental questions cannot be solved within the realm of time and space. It is good news to see that a growing number of modern scientists are becoming more open to the paradigm that the universe has a timeless and spaceless origin.

"As above, so below", we look at ourselves the same way that we look at the universe, even if we are not concerned about the direct connection between the two. If we try to understand the body, by way of observation with a microscope and chemical analysis, it may help us to see how the laws of energy and Chi manifest in the realm of matter. It may increase our ability to enhance the fundamental questions of life which lead to greater freedom and happiness.

Many scientists who previously subscribed to the Newtonian view now agree to the following: that the essence of the material world are frozen energy waves that *appear* as matter to the external senses.

Many scientists believe that by the year 2030, the computer will be able to take over the complete human brain function. This idea is well accepted in modern science but shows at the same time, the very limited understanding of the true quality of our intelligence and the human mind.

Centuries of religious repression have discouraged people's sense of responsibility for their lives as well as the search for freedom and spiritual independence. Hence, science, astronomy, religion and many other fields of experience can be useful in our search for spiritual achievements. All of these schools of thought merge into one, as they reconnect to our true origin.

Working with planetary and star energies gives us an access to the ground layers of our emotional, social and mental tendencies. The rational mind and emotions, higher mind and spirit are related to the planets and star/world. Star energy and higher mental energy have a higher frequency than planet and rational mind/emotional energy. The

separative, rational, more horizontal mind is related to the emotions; the higher mind or universal mind is related to the collective intellgence and our spirit.

More than likely you have observed that it is your emotions and thoughts which hold you back from reaching a balance in your life or progress in your meditation practice, or to focus and connect when you work as a healer.

The planets are far closer to us than the stars and their energy field has a much slower vibration. To give you an idea, the earth is 150 million kilometers away from the sun. Pluto, the planet farthest away from the sun has an orbit of about 6 billion kilometers. The closest star (except for the sun) in our universe is Proxima Centauri at a distance of 4.3 light-years or 270,000 times farther away from the sun (a light year is the distance that the light travels in one year at a speed of 300,000 kilometers per second).

How to use Astrological Information

Ancient peoples believed that under the influence of very specific conditions of stars and planets at the moment of birth, the basic quality of a human being is formed and the personality and tendencies in a person's life are basically patterned. It is important to see this constitutional quality as a strong tendency and not as a fatalistic prediction or inevitable course. This unique quality will indeed influence you for the rest of your life. But it is important to see that this condition works on our body and soul, not on our spirit. The reason for this is because the spirit is eternal. It has and always will exist. It is free from the laws of karma and reincarnation. It is therefore free from the laws governing individual incarnations. For that reason Taoist astrologists say that astrological conditions should not be seen as limitations but rather as directions based on universal influences. It just gives you clear information as to where you come from and how your tendencies may evolve. Since our spirit is timeless and spaceless, we can still move in any direction. An intelligent person moves with the flow or the intelligence of the universe, in order to keep the life force inside. It is good to remember that you can actually move in the direction you truly wish to move to, always following the truth within your heart. If you decide to join a football game, you are immediately fixed by the rules of the game. If you see all these rules as limitations, you would do better to play another game. The art of playing the game of life is to see, understand and accept the limits in the material world and learn how to move freely within them, whilst maintaining awareness of your connection with your unlimited spirit.

Two basic questions to ask when moving to a certain place are: "Where am I now?" When you know the answer; "What is the best way to achieve my goal?" Through the connection with our spiritual origin and planetary/galactic forces, we can strengthen the weaker points in our energy system and our personality. In this way we can use astrological information as a source of personal growth and not as an excuse for unconscious emotional behavior.

Brief History of Astrology

Chinese astrology is a very broad subject which contains much information and is highly complicated for the untrained mind. There are many ways of interpreting the universal conditions, which are brought together in different systems with their own specific diagrams and calculation methods.

In the ancient Taoist literature much attention is given to the subject of "astrology". The 18th century Imperial encyclopedia has 2500 chapters on astrology! What we wish to do in this book is to make you aware of the nature and origin of this wisdom and how it relates to spiritual practices and the laws of the universe.

In most Chinese astrological systems it is mentioned that between 4000 and 5000 years ago, the stars and planets were perfectly situated. At the moment it looks like no one can really describe what that means from a pragmatic point of view. What is clear is that this period may have seen a unique universal condition. From that point on, Chinese astrologists have counted the years, months and days and calculated movements by observing the sky. Noio, the Great Minister of the Yellow Emperor Hwang Ti set the beginning of the first 60 year cycle at 2637 B.C. (according to stems and branches) which means we are in the 78th sexagenary cycle now.

Most sources claim that Chinese astrology developed wholly independently from other cultures and traditions, but this is probably not the case. If we compare Chinese, Mayan and old European calendars and zodiacs and also the language and architecture we find parallels that simply cannot be accidental. It is clear that all these cultures were shaped by the same information source. The advanced spiritual development of these different cultures allowed them to translate information from the same source in the form of an astrological system reflecting the order of the universe. This translation happened in coordination with their specific location on the planet.

As you will see in the following overview, people all over the world were already observing the stars long before the start of the Chinese calendar 2637 B.C.

Although there is still discussion on the subject, the famous Egyptologist, Schwaller de Lubicz states that the Egyptian calendar has its starting point about 4240 B.C. This calendar was based on astronomical observations made during a period more than 6000 years ago.

Also in Egyptian civilization astronomy/astrology was used to crystallize the universal laws into human life. The great pyramid was built at approximately 2170 B.C. One of its functions was to serve as an astronomical observatory. The entire geometry of the pyramid was based upon astronomical positions and movements. Notes of astronomical observations from the Sumerian culture (3000 B.C.) have also been found. Different cultures describe the destruction of civilization about 12,000 years ago, under influence of the star Vega in the constellation of Lyra. An earth axis shift occurred and big floods destroyed civilizations.

Chinese astrology probably has its own roots but was later greatly influenced by Indian (Hindu) and old Babylonian astrology. The year 10,000 B.C. appears to have been a critical point in astrological history. Archeological findings in Europe, South America,

Africa and Asia prove the existence of a highly developed civilization that was strongly influenced by astronomical and astrological knowledge.

In a museum in Peru, a rock shows the engraving of a human figure looking through a telescope to the sky. This piece of art is estimated to be more than 30,000 years old. This is just one of the many archeological treasures that shows that there must have been other cultures before our culture was born less than 1,000 years ago.

The Greek historian Solon claimed that astronomical observations and calculations were made nine thousand years B.C. (or 11,000 years ago).

Oracle bones from the Shang dynasty (17th to 11th century B.C.) mention astronomical observations of stars more than 4000 years ago, which were then interpreted as being lucky or unlucky. In many parts of the 9 Chinese Classics and certainly in the 5 canons or "Ching books" astronomical/astrological observations are described as coming from this same period.

Differences between Chinese and Western Astrology

The main differences between Chinese and western astrology are their reference points. In western astrology, stellar positions are found and calculated in the ecliptic. The ecliptic is the trajectory the sun apparently makes around the earth, through the Milky Way. The plane of the ecliptic is inclined at an angle of 23 ½ degrees to the plane of the equator. The ecliptic is also known by Chinese astrologists as the yellow route, but they also work with the North Star as the central reference point in the sky and the celestial equator or red route as the base line. In this context the lunar zodiac is used where the moon cycle around the earth (28 days) is divided into parts of 1 day (thus, 28 segments). This is also related with the 28 years it takes Saturn to turn around the sun. The Chinese zodiac or 12 animal cycle also refers to the 12 years it takes planet Jupiter to move around the sun.

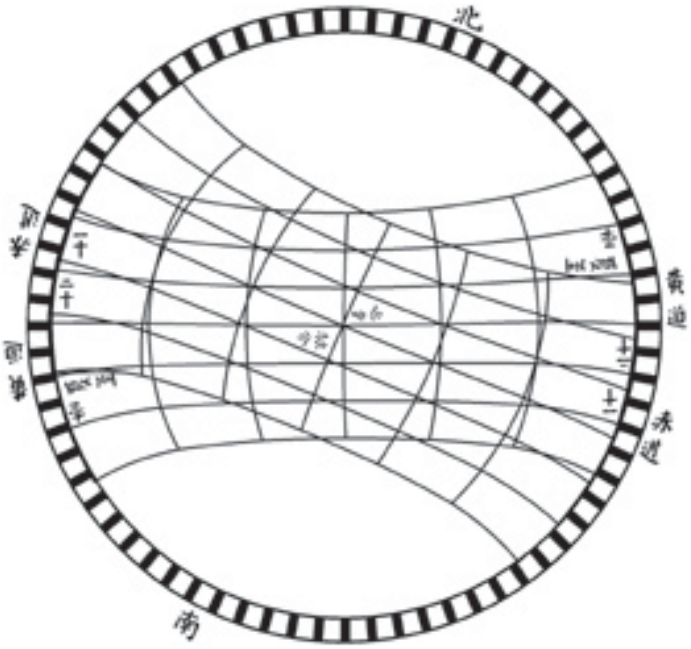


Fig. 3.2 *Diagram shows the Red Path and Yellow Path (the celestial equator and the ecliptic).*

The animal names used in Chinese astrology came to China from India. They were based on the legend of the Buddha. He was visited by 12 animals that came to say goodbye to him before he left the earth.

Before this, the earthly branches, in combination with the older decimal system of the 10 heavenly stems, was used. The combination of stems (10 or two times five) and branches (12) (gives a series of 60 based on the twelve animals and the five elements) was used to count the years and days and was also called 10 mothers and 12 children. Research shows the strongest difference between modern western and traditional Chinese astrology is the focus on the North Star as the 'Heavenly Gate'. This shows the direct relationship with the Taoist spiritual practices. Chinese astrology and direct astronomical observations have always been closely related. They made observations constantly and based many of their calculations directly upon them. The appearance and movement of a planet or star as well as its brightness, aura and shades were closely studied. Some Chinese Emperors had a 24 hour a day observation crew. In this way all signs from the universe were picked up and used to make personal and political decisions. Many stars and planets were connected to gods, emperors or sages. Changes in the expressions of heavenly bodies were seen as direct signs from the divine world.

Although they had no astronomical tools in their own terms, Taoist astronomers knew about supernovae (exploding stars), black holes (imploding stars), pulsars and quasars.

Chinese astrology is based on direct observation of the sky and it is used in this book as the information bridge to universal energy.

Many astrologists all over the world, focus on their tables and books, only looking down, instead of connecting with the universe. Even in China, the traditional art of astrology is hard to find these days. It has been taken over by western astrology or other methods of prediction. As Taoist Ming Shu stated, "very few are still combining their astrological calculations with spiritual practice and with observing the sky." This, of course, gives less depth to their work.

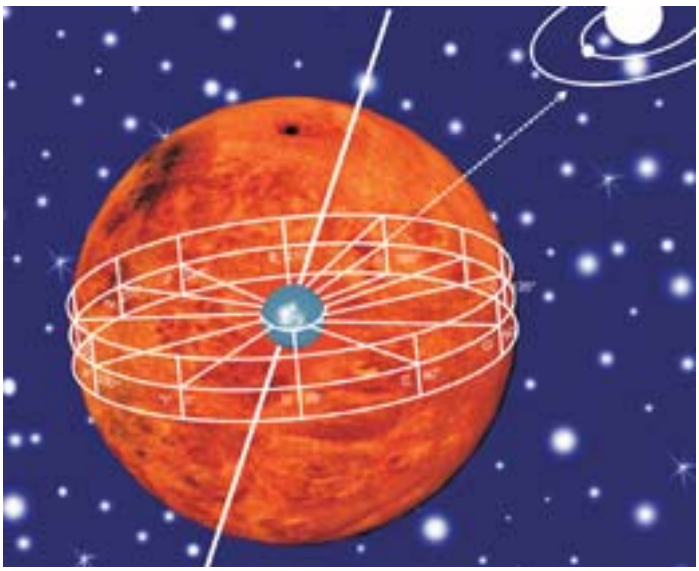


Fig. 3.3 *Western Zodiac, Zodiac Band and Plane of Ecliptic*

The Zodiac band extends above and below the plane of the ecliptic.The Zodiac with its 12 signs is known in many different cultures.

Fig. 3.4 *Lunar Zodiac*

Seven Days of the Week	Related Planets	Constellations East	North	West	South
Sunday	Sun	Fang Room	Hsu Void	Mao Pleiades	Niao Bird
Monday	Moon	Hsin Heart	Wei Danger	Pi Net	Chang Drawn Bow
Tuesday	Mars	Wei Tall	Shih House	Tsui Beak	Yi Wings
Wednesday	Mercury	Chi Basket	Pi Wall	Shen Orion	Chen Board
Thursday	Jupiter	Chio Horn	Tou Ladle	K'uei Astride	Tung Well
Friday	Venus	K'ang Neck	Niu Ox Boy	Lou Mound	Kuzi Ghosts
Saturday	Saturn	Ti Base	Nu Maiden	Wei Stomach	Liu

Willow

The 28 days of the Lunar Zodiac in relation to the 5 Palaces around the North Star, are the 28 segments. The Moon will rotate in each palace during seven days. This period is connected with the seven days of the week. This brings a cycle of the seven planets during the days of the week in the 28 constellations. Specific influence of the sun (moon + 5 planets) and the 28 constellations (4 x 7) each of the 7 days of the week.

Although much more information is recorded and transmitted in China compared to most other civilizations, the real meaning of many methods is very rare to find. The system of stems and branches is a good example of this. Today this system is used on computers and in the form of diagrams, by many practitioners of Chinese medicine all over the world, but very few of them know what the system really means and where it comes from.

Fig. 3.5 *Hindu Zodiac*

Fig. 3.6 *Star Palaces and Constellations*

Chinese Astrology and the Laws of the Universe

As human beings we are the highest manifestation of the Cosmic light which has its origin directly in the Tao, the oneness. The life we lead now originated from this source. From this one unlimited intelligence a process of densifying/materialization or multiplication has led to your individual incarnation or manifestation in the physical realm. Taoist philosophy describes this process as 'the one giving birth to the two'. The interaction between the two, further differentiates into the world of phenomena. To connect to the spiritualizing spiral of true intelligence that we are, will strengthen the connection to the Tao. This process will deepen through astronomical information (observation) and meditation (explained further, later in this book).

In Chinese cosmology and philosophy the world of duality yin/yang, gives birth to the triple unity. This triple unity we find in the three basic energies in the universe (universal, cosmic and earth) and the interaction between heaven, man and earth. In the body, the interaction of heaven and earth forces (two) gives birth to the three Tan Tiens.

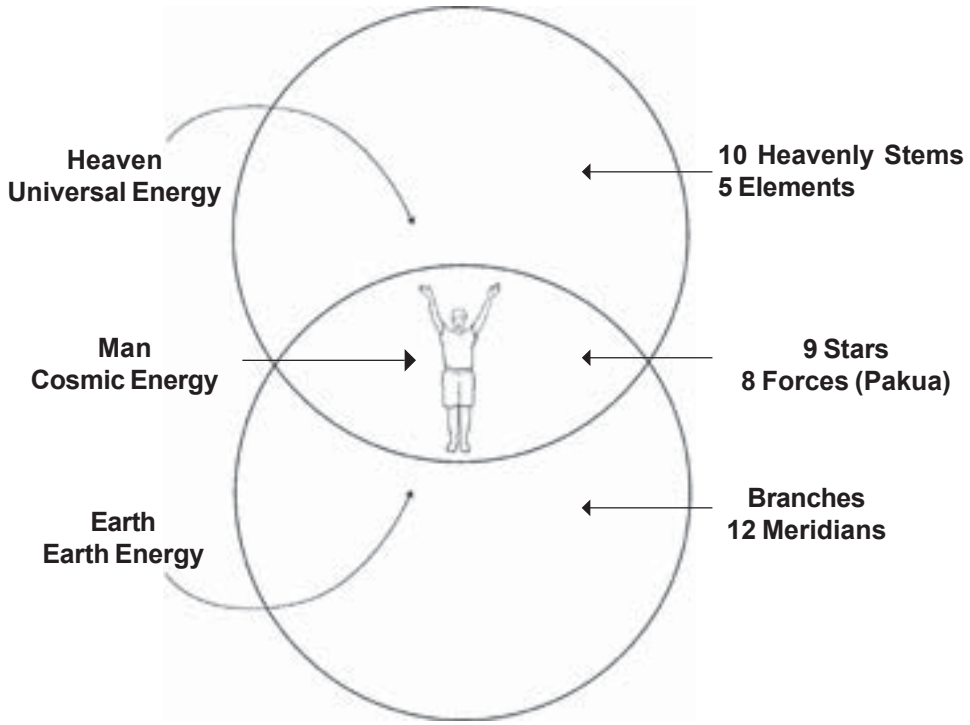


Fig. 3.7
Interaction of Man with the Realms of Heaven and Earth, the Pakua and the Stems and Branches

These three realms contain the main principles applied in Chinese philosophy and astrology. The ten heavenly stems are based on the yin and yang aspect of the five elements (related to yin/yang senses/organs/systems). The I Ching and its internal principle of the pakua or eight forces relates to the eight extraordinary meridians in the body. This more prenatal meridian system is nurtured by the eight planets (the sun and moon form the central aspect) and the eight related star essences. The principles of the pakua are also found in the Taoist 9 Star Astrology (8 forces + the central Tai Chi = 9). The North Star and Big Dipper energy are essential to the whole Taoist practice. Taoist masters observed that in the central star palace, 9 major energy points clearly reflect the changing energy quality of the universe and our planet. These 9 points are the 7 stars of the Big Dipper, the light of the yang star, Polaris and the light of the yin star, Vega.

The 12 earthly branches are in relationship with the earthly forces and also the 12 main acupuncture channels.

The heavenly stems have a high frequency energy - related to realm of cosmic law and Universal energy. The earthly branches have a lower frequency, related to the earth energy and the surroundings of the earth in the 12 different directions.

The principles of the five elements, the pakua and, to a lesser degree, the related stems and branches are fundamental for the planetary and stellar meditations. We will go deeper into these topics as we progress.

Five Elements

Every part of Chinese philosophy is connected with the five elements. The law of Yin and Yang, Five Elements and Pakua (eight forces) come from the unmanifested world and control the whole world of phenomena, including the world of stars and planets and life on earth. Written evidence of the use of the five elements has been found around 300 B.C. although they were certainly known and used before that time. Much confusion arises between the Greek four elements and the Chinese five elements. Both of them have a clear underlying philosophy. **The five basic planets are the physical manifestation of the five elements.**

Ancient Chinese astrology divides the sky into five palaces, also called the five cardinal points. The earth, or Central Palace, is the part of the sky which is visible throughout the whole year. The other four Palaces can be located as the earth moves through the four seasons during its annual rotation around the sun. Each of the outer 4 palaces covers an area of about 90 degrees in the sky.

The one (circle) gives birth to the two (Tai Chi), from there we find the three (e.g, heaven, earth and man), a further differentiation leads us to the pakua. Inside these eight trigrams we find the five elements (see figs 3.10 and 3.11). The combination of the eight trigrams gives us the 64 trigrams. This concept of the order of the universe and an understanding of these laws was traditionally necessary to be able to work with Chinese astrology.

The pakua can be looked at in different ways. In a common form the five elements are located as follows: earth as the center, south on top, north below, east left, west right. If the observers look to the south, following the main trajectory of the sun they see the chart as shown below.

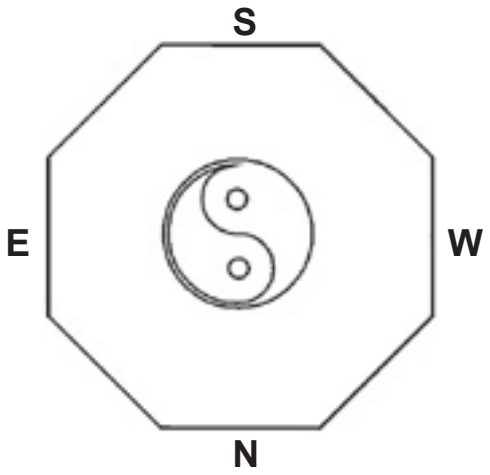


Fig. 3.8 *Five Directions - Pakua looking from the south.*

But if we move southward with the direction of the sun and look from that position to heaven then north would be on top, south bottom, east left, west right. The way the pakua is presented shows the point of view of the observer.

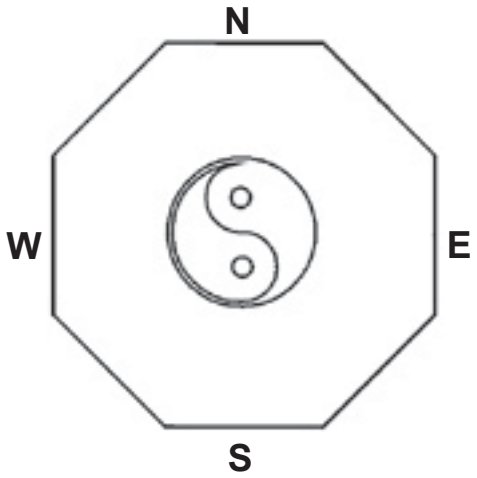


Fig. 3.9 *Five Directions - Pakua looking from the north.*

The most commonly applied system of using the five elements according to the seasons is with the earth element (Indian Summer) coming after the fire element (summer) (See fig. 3.10). Another less popular method uses the earth in its central aspect and places a short earth period in between every season (See fig. 3.11).

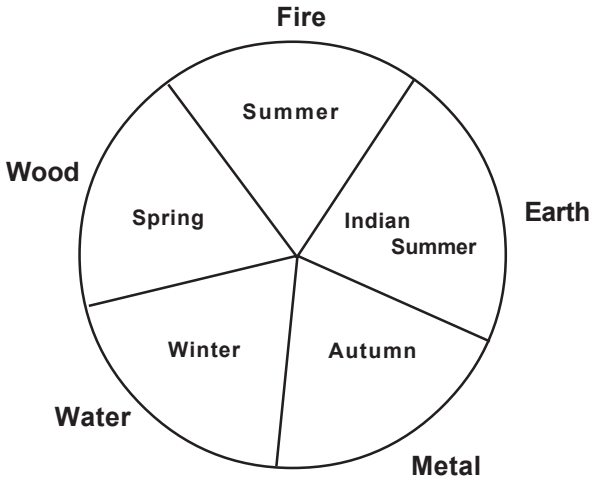


Fig. 3.10

Most common way of using the 5 elements in the year's cycle:
5 periods of 72 days each (the Astrological Year counted 360 days).

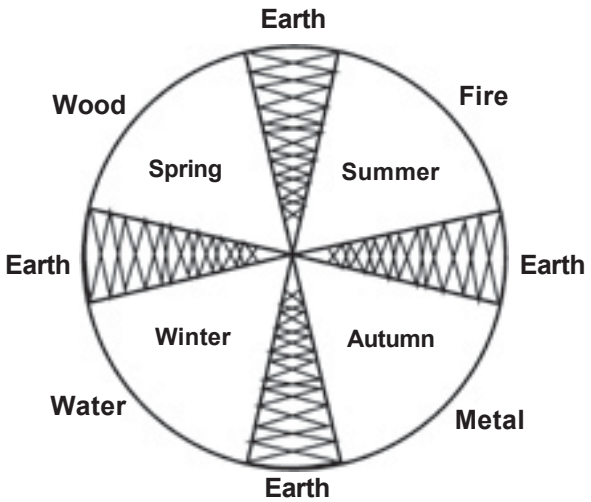


Fig. 3.11

Earth element seen as the changing and balancing point between the seasons.

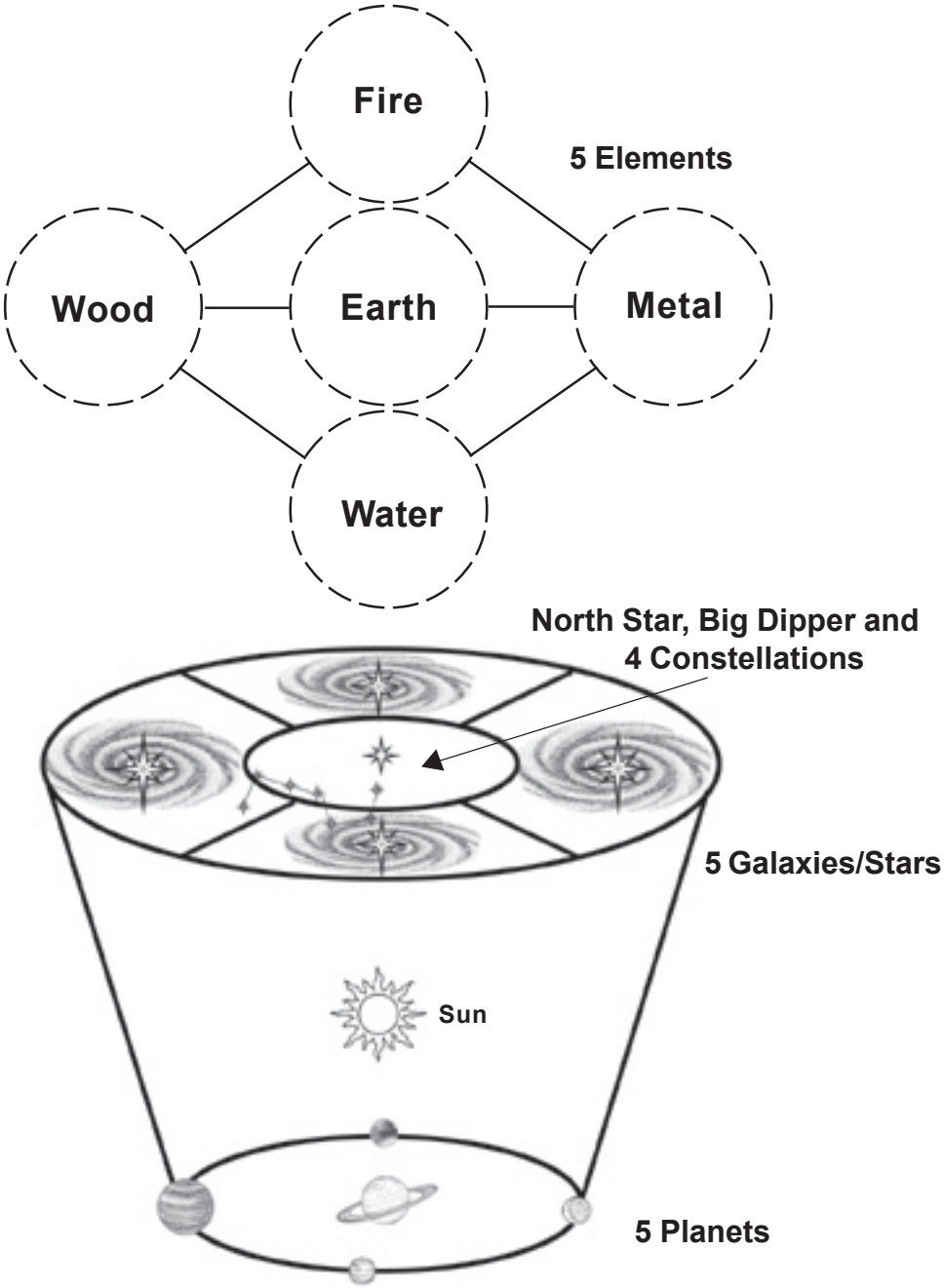


Fig. 3.12 *Five Elements through the Universe*

The dominance of one of the five elements in a person's basic energy will give a charge to the person's quality and way of living. Of course, all of us have some of all five elements but according to the year/month/day and in some systems also the hour/minute at the moment of birth, one of the five elements will be stronger than the other four. As mentioned before there are many different systems, all using different methods to make calculations. Most of them work well if we understand their point of view and if we use them as a 'whole'. Mixing different astrological systems tends to create much confusion.

The most typical positive or creative qualities of the different elements are:
Wood: Practical, creative, casual.
Fire: Lively, talkative, quick.
Earth: Stable, reliable, conservative, primitive.
Metal: Vigorous, progressive, determined, calculated.
Water: Contemplative, attentive, communicative, adjustable.

(For a better understanding of this topic, read: "Fusion of the Five Elements I", by Mantak Chia)

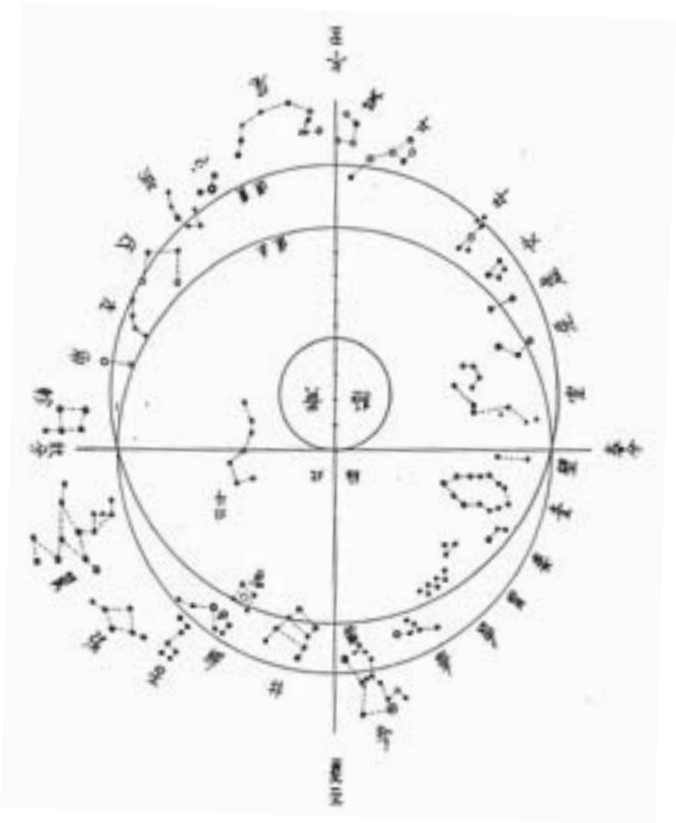


Fig. 3.13 *North Star - Big Dipper - 28 Constellations*

Pakua - Eight Forces

The pakua (or eight forces) were first described by Fu Hsi as a sign from heaven brought in the form of stripes on the back of a turtle. The I Ching or book of changes is based on the pakua. The combination of the eight directions gives birth to the 64 hexagrams also used in **I Ching** astrology. The eight directions and the center form the nine palaces used in the Chiu Kung Ming Li or Nine Star Astrology and also in the Lo-Pan, the basic tool of Chinese geomancy and in Feng Shui. The Lo Shu or Magic Square found its origin in the Lo Map and is used for prediction.

The eight different signs come from the combinations between the yin and the yang .

First there was Tai Ji (extremity) ; this produced the two poles yin and yang; the two poles yielded four phases, the four strengths: Greater Yang (Tai Yang), Lesser Yang (Shao Yang), Greater Yin (Tai Yin), and Lesser Yin (Shao Yin). The four phases yield the eight trigrams.

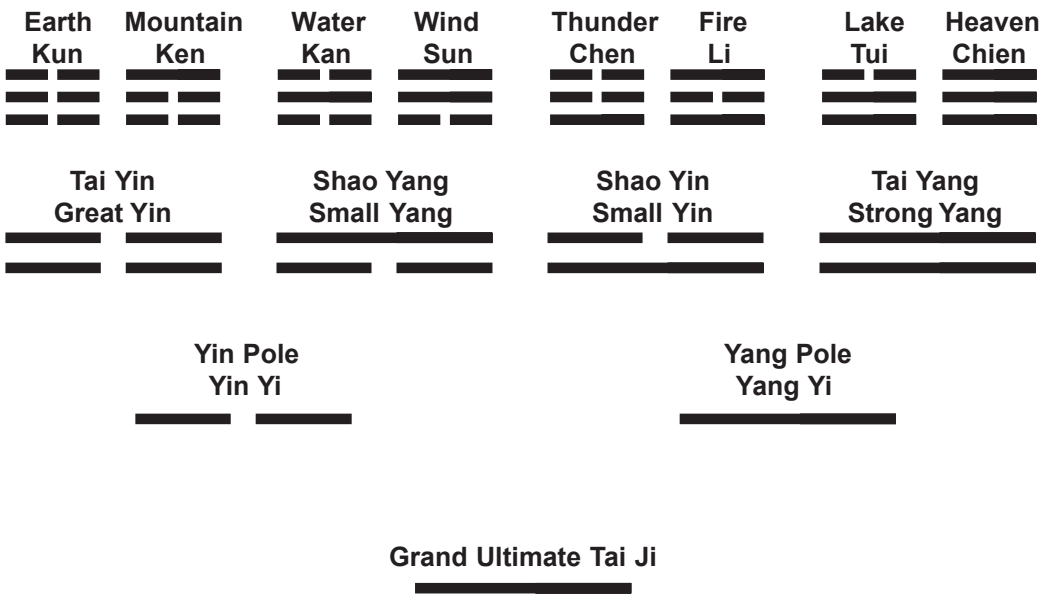


Fig. 3.14 *The eight trigrams are divided from Tai Ji.*

Fig. 3.15 *Lo-Pan or Net Tablet.*

The eight trigrams are used in different forms of Chinese and Japanese astrology and also in the Lo Shu, or Magic Square (See fig. 3.17), related to the nine main stars in the Central Palace. The eight directions and the center (9 palaces) each have their typical quality. Since the Central Palace is above the earth axis, it has the strongest effect on human energy and consciousness.

Taoist masters gave a name and a number to each of the nine stars describing the unique quality of each of them.

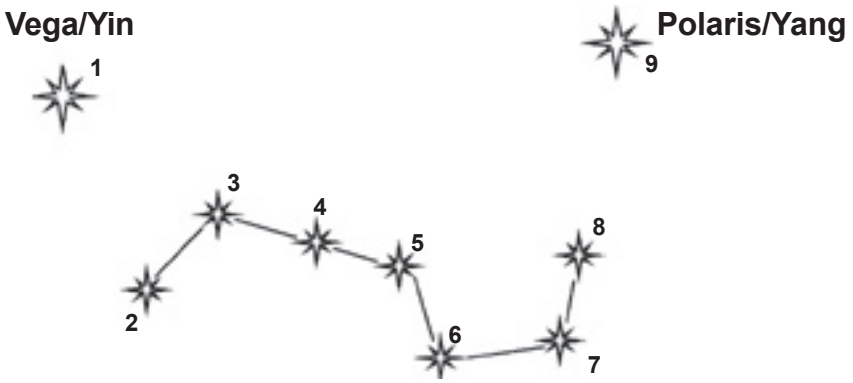


Fig. 3.16 *Nine Stars*

According to the time of birth, each of us is more or less influenced by one of the nine stars with its unique quality based on the five elements and the trigrams. During our lives we keep this basic quality but with time we will move with our numbers to other positions in the magic square (called the houses) each with its unique influence on us. While being influenced we are initiated into life's other possibilities.

4	9	2
3	5	7
8	1	6

Fig. 3.17 *Magic Square always adds up to fifteen.*

Your numbers are situated in the different palaces and will show you the Universal quality that is influencing you the most at that specific moment.
The typical qualities of the Nine Palaces are:

Chen 3	Thunder: the arousing, the new impulse, exciting.
Sun 4	Wind: the penetrating, gentleness.
Li 9	Fire: clarity, conscious, independent.
Kun 2	Earth: the receptive, trust, confidence, openness.
Tui 7	Lake: joyfulness, fullness, satisfaction.
Chien 6	Heaven: the creative, energetic, strong, light.
Kan 1	Water: prudence, dangerous, unreliable.
Ken 8	Mountain: keeping still, stability, rest.
Chung 5	Female Trigram: Kun-black earth, the receptive.
	Male Trigram: Ken-mountain, keeping still.

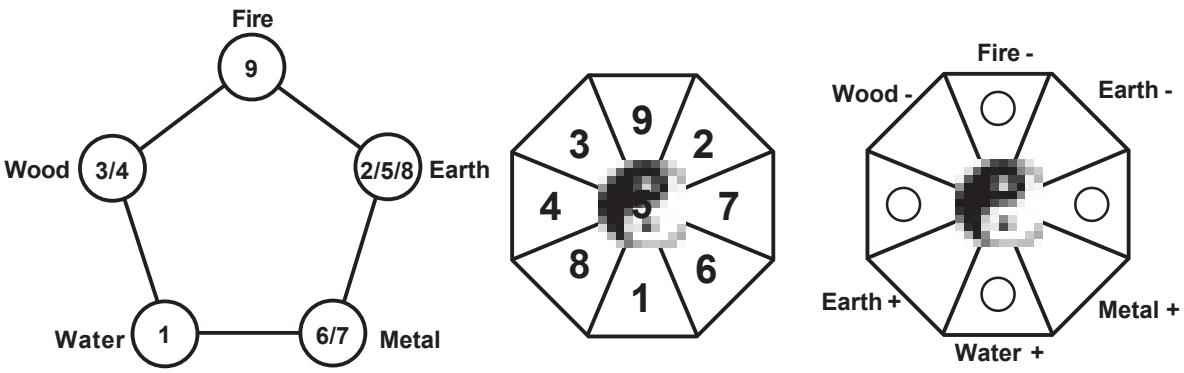


Fig. 3.18 *Numerology in the Pakua and the Five elements.*

The five elements and eight trigrams are deeply interwoven into Chinese philosophy and astrology. The eight trigrams can be seen as a further derivation of the five elements or from the four directions to the eight directions.

The symbolism in the eight trigrams is used in two different ways. One of them is called "the preheavenly pakua" according to the legendary Fu Hsi, named during the age of the five rulers (2852 B.C.). The other is the "postheavenly pakua" originally coming from King Wen of the Chou Dynasty (1122 B.C.) in his book called Yixici (YI 's related metrical composition) or Yi Da Zhnan (great biography of Yi). This is the first written explanation of the relationship between the preheavenly and postheavenly pakua. The preheavenly state is related to the time before the earth was formed, when everything was chaotic, like a cloud or mist. Nothing could be differentiated (state of Wu Chi).

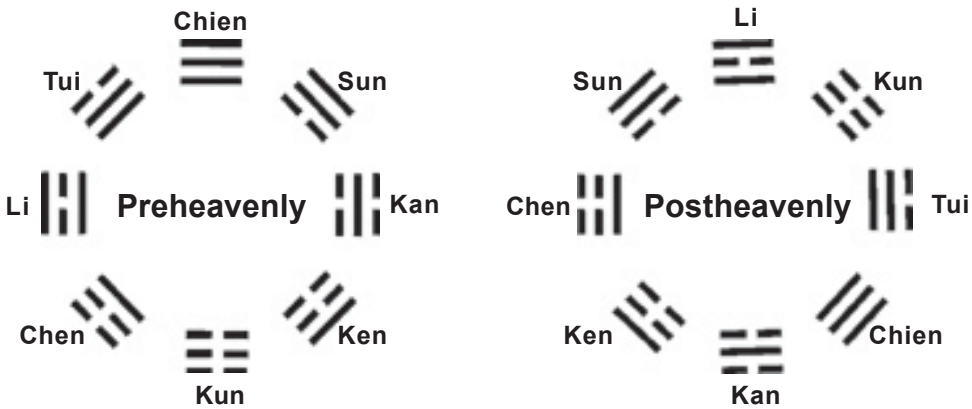


Fig. 3.19 *Preheavenly and Postheavenly Pakuas*

The preheavenly state can also be seen as the period before the time that the earth started to materialize and heaven and earth began to separate (Tai Chi or grand ultimate state). The postheavenly state begins at the time when heaven and earth were clearly distinguishable and the yin and yang pole were generated.

In human life the preheavenly and postheavenly states are separated by birth or the moment the baby can see the light or the sky.

The goal of the Universal Tao practice is to unify the pre and post heavenly states of being. The quality of the preheavenly state is the basic energy of the newborn baby, totally soft, natural and filled with its mother's essence, Chi and blood.

As well as this, intuition, flexibility, softness, tenderness and creativity are components of this preheavenly or virgin child state. In the Taoist Fusion and Kan and Li practice five virgin children are pictured to store and crystallize the pure virtue energy from the five elements.

Through the Universal Tao practices, the vital essences remain in the body until old age. The practitioner remains flexible, strong, and full of virtue. The unification of 'pre' and 'postheaven' is reached by first "training the postheaven to remedy the preheaven" and

then “training the postheaven to return to preheaven”. In the unified state the body and mind become one, in accordance with the heavenly principles.

Fig. 3.20 *Unify Postheaven into Preheaven.*

In the art of Pakua Palm (an internal martial art) the practitioner walks a circular path, stepping one by one through the different Kuas (directions) and then spiraling from one to another. In this way the embryonic formation is repeated and the deep cellular memory inside the DNA is activated. The Microcosmic Orbit has the same life spiral and intelligence inside as the DNA. Walking and spiraling in the Pakua Palm way is recreating your life process on a deep level.

Through meditation and exercises, the preheavenly mind will start to guide the postheavenly body so that the body will gradually turn into its preheavenly state.

Ten Stems and Twelve Branches

As described before the ten heavenly stems are the yin/yang poles of each of the five elements, while the twelve earthly branches are related to the twelve sections of the earth’s rotation field projected in the star world.

The 60 years of the stems and branches ‘cycle’ happens in correlation with the Jupiter/Saturn conjunction.

The whole system describes geometrical coordinates in time and space, with Polaris as the center point and other celestial bodies as references. The ten heavenly stems are often related with the planets and the five palaces in the star world.

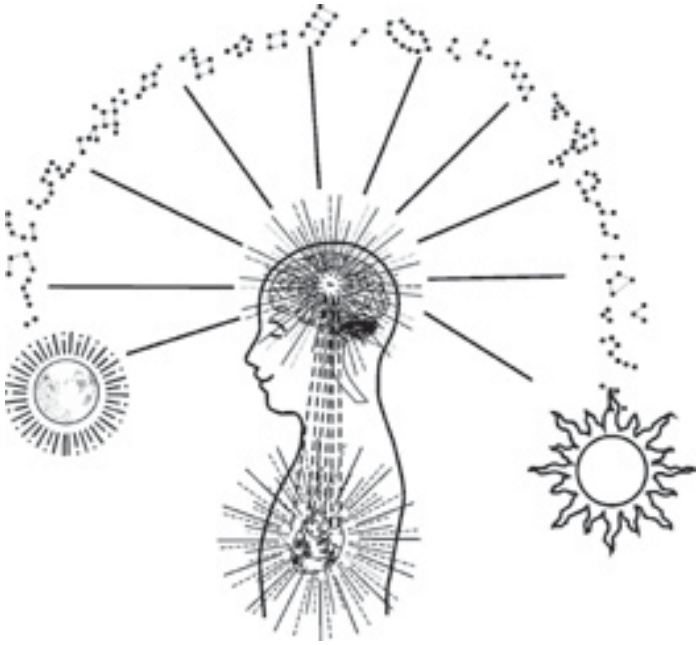


Fig. 3.21 *Ten Stems in the Sky*

Ten Stems

No.	Name	Transcription	Significance Related		
1	甲	**Chia**	Yang moving in the East; sprouting.	Fir Tree	**Wood**
2	乙	**Yi**	Plant growing in a crooked way; tendril; twig.	Bamboo	
3	丙	**Ping**	Growth in southern heart; bloom.	Torch-Flame	**Fire**
4	丁	**Ting**	Vegetation in warm season; summer.	Lamp-Light	
5	戊	**Wu**	Exuberance; substance of life.	Mountains	**Earth**
6	己	**Ki**	Winter; sleep, hibernation.	Level Ground	
7	庚	**Keng**	Fullness of crops; the West; autumn harvest.	Weapon	**Metal**
8	辛	**Sin**	Ripened fruit and its flavor; supposed to be metallic.	Cauldron	
9	壬	**Jen**	Yin at the height of its function; pregnancy.	Willow	**Water**
10	癸	**Kwei**	Water absorbed by earth; Yang preparing for spring.	Unruffled Stream	

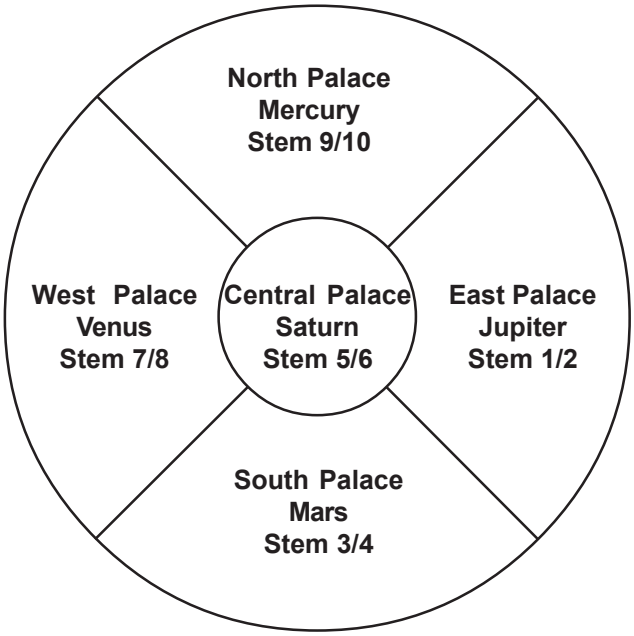


Fig. 3.22 *Branches*

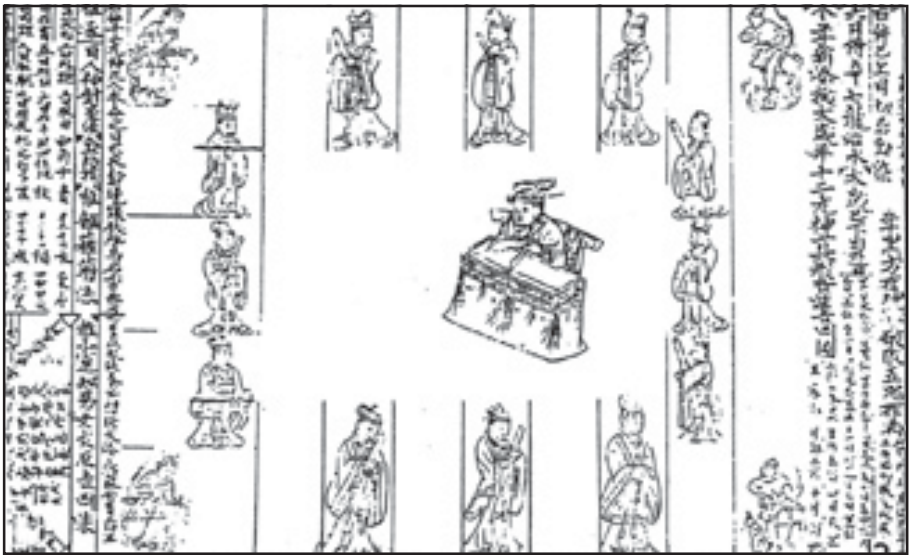


Fig. 3.23
The Deities of the Twelve Branches From a Tun Huang Manuscript Dated AD 978.

Twelve Earthly Branches or Duodenary Cycle / Twelve Animals

Twelve Branches							Twelve Animals	
No.	**Name**	**Tran-scrip-tion**	**Usual Meaning**	**Significance in the Duodenary Cycle**	**Symbol**	**Element to Which Related**	**Name**	**Meaning**
1	子	**Tze**	Child	Regeneration of vegetation	Yang stirring underground	**Water**	鼠	Rat
2	丑	**Chu**	Cord	Relaxation; untying a knot	Hand half-opened		牛	Ox
3	寅	**Yin**	To revere	Awakening of life; plants	Wriggling earthworm	**Wood**	虎	Tiger
4	卯	**Mao**	A period of time	Breaking through the soil	Opening a gate		兎	Hare
5	辰	**Chen**	Vibration	First vegetation; seed-time	Thunderstorm		龍	Dragon
6	巳	**Ssu**	End	Supremacy of Yang	Snake	**Fire**	蛇	Serpent
7	午	**Wu**	To oppose	Yin reasserting itself	Female principle in hidden growth		馬	Horse
8	未	**Wei**	Not yet	Taste of fruit	Tree in full bloom		羊	Goat
9	申	**Shen**	To expand	Yin growing strong	Clasped hands	**Metal**	猴	Monkey
10	酉	**Yu**	Ripe	Completion	Cider or wine-press		雞	Cock
11	戌	**Shu**	Guard	Exhaustion	Yang withdraw-ing underground		犬	Dog
12	亥	**Hai**	Kernel	Kernel or root	Yang in touch with Yin	**Earth**	猪	Boar

Structure of the Universe and the Process of Spiritualization

Evolving through the process of spiritualization, our spirit will enter different layers of Universal consciousness. As described in the previous chapter, the universe can be seen as three different realms: one of the pure law, one of Chi and one of the manifestations of law and Chi.

We have all arrived on this planet through a materialization process: a contracting spiral that led us through these three realms into the physical condensed form we have now. From the moment of birth and more so after the physical development has reached its biological peak. The spiritual process, an expanding spiral that projects our spirit into the universe, begins to grow.

When the level of consciousness grows, the intelligence and information network that connects each of us with the source will start to light up more and more; and we will, step by step, experience all the different dimensions of the universe, from our sexual energy to our spiritual origin. In the course of this process, you will find yourself projected into the whole universe.

Of course it is easier to take seven steps one by one, rather than trying to jump to the 7th at once. The same is true for the spiritual process. We will gradually grow through the 3 realms step by step. The seven meditations in this book will guide you all the way through the manifested world of earth, planets and stars to the world of pure Universal laws.

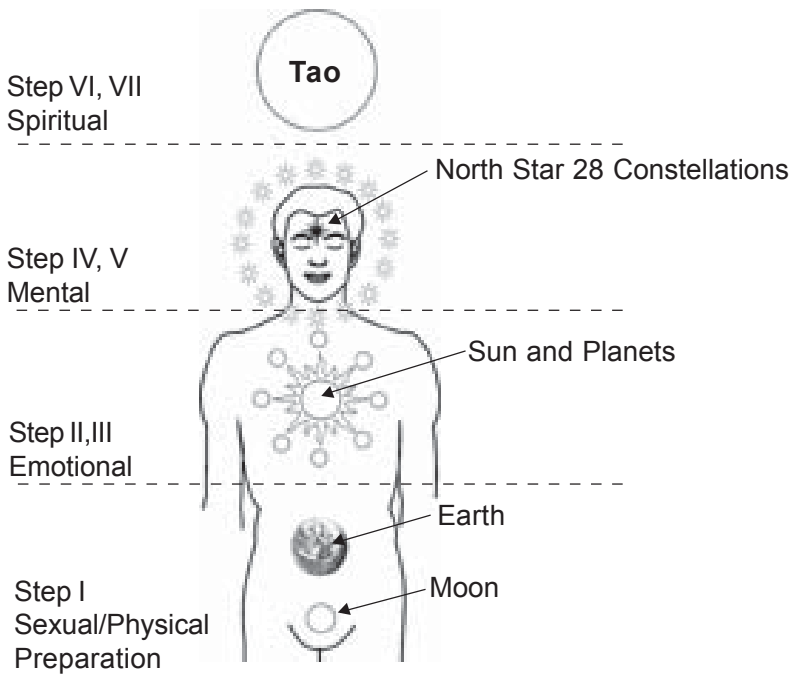


Fig. 3.24 *Seven Steps of the Spiritual Process*

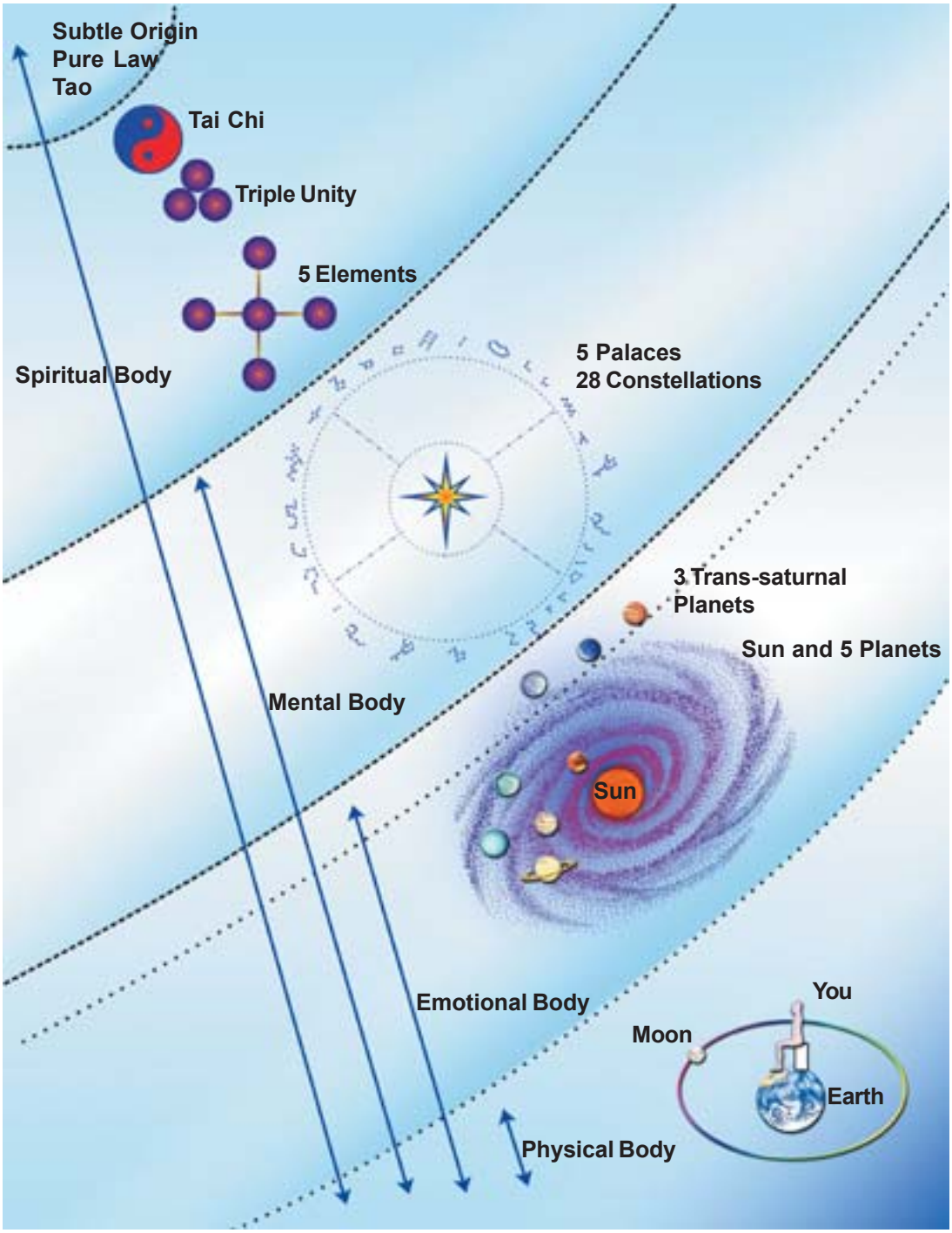


Fig. 3.25 *Human Energy in the Universe*

Step One: Earth/Sun/Moon Triangle

Before you go on this journey, it is wise to take care of your vehicle. You will need a healthy and strong body and put on your safety belt. This is the rooting or the connection with the earth.

Fig. 3.26 *Rooting to the Earth.*

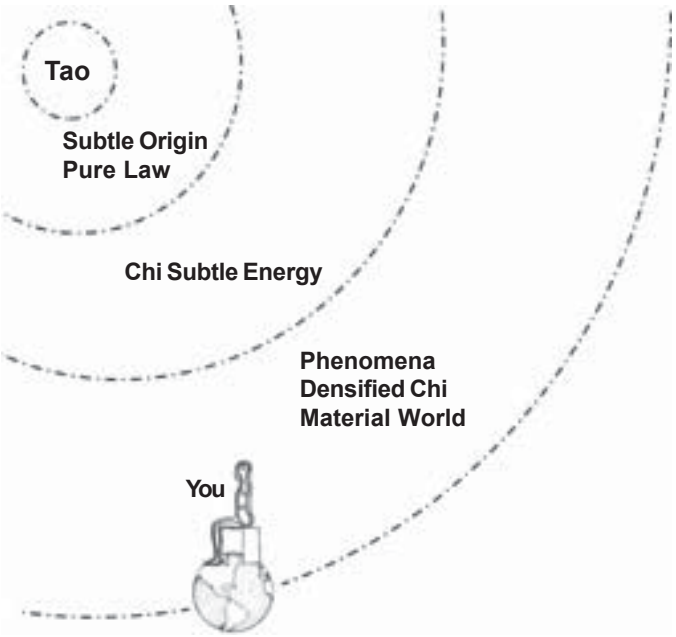


Fig. 3.27 *Three Realms in the Universe*

Now you need to learn to control, transform and use your sexual energy. Sexual energy is connected to the moon. The sun and the moon energies are easily experienced because we can see and feel them with our earthly senses. Most people do not consciously experience the effects of the moon. We cannot touch it like the earth or feel its radiant energy as easily as the heat from the sun.

The goal of our meditative practices is to tune into the energy frequencies and awareness field of the planets and stars and integrate these into our physical body. The moon is an important step in the development of our universal awareness because the moon meditation triggers deeply hidden layers of the unconscious mind connected with our sexual potential.

Our connection with the moon will help us to become profoundly aware of our sexual essence to which we cannot relate with our ordinary mind.

Through moon and sun meditations, the sexual essence which is stored deep inside the sexual organs and kidneys, becomes available and transforms from Jing into Shen, shifting unconsciousness into consciousness .

When we suppress or have no control over our sexual energy, the earth energy will be insufficient for us to keep balance and be stable enough to advance in the spiritual process. Unconsciously or consciously a part of us may be blocked by sexual frustration and its associated emotions.

All people in the modern world have a layer of heaviness and negativity on the level of their sexuality. This is based on the social/collective conditioning during many centuries of religious and scientific control.

Fig. 3.28 *Sun and Moon Balance*

Once you have built up a strong center in the Lower Tan Tien and are enjoying a good connection with the earth and have achieved control over your sexual energy, you can begin expanding your awareness field.

The Universal Tao practices lead you step by step through these levels. Without these preparations, the effects of your planetary and stellar meditations will be limited as you lack the power to attract, absorb and integrate the energy in your physical body.

Note

If you have not done any Universal Tao practices, you can also do the planetary/stellar meditations. In this case however, you have to build up your physical body/Lower Tan Tien and the star/planet connection simultaneously. Keep this balance. Build up regularly, but slowly.

The centering, rooting and cultivation process of the physical body and the sexual energy should be continuously developed because we also expand into and grow further with the universe. In this way you become like a big tree with long and deep roots and you grow the ability to lead information from the universe down into the earthly realm and into your physical body.

The picture (see Fig. 3.25) “Human Energy in the Universe” reflects how we can find ourselves back in the universal picture.

The cool moon energy in the lower body is balanced by the contact with the warm sun energy in the upper body. The sun will help us to open the heart center and feel connected to nature, the universe and other people. The sun is the central point of the solar system and governs a higher awareness than the other planets. The sun is a star in the planet world and a gate out of the planetary emotional and rational mind layer into the realm of the higher mind and the spirit. (See Fig. 3.28)

The sun and the moon need to be balanced inside to create peace between the love and sex energy, the conscious and unconscious.

Steps Two and Three

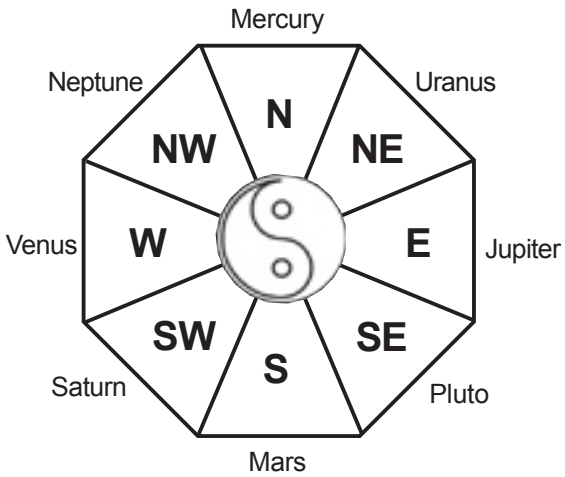
Step two in our universal awareness journey leads us deeper into our solar system. To the sun and the five basic planets. The five basic planets are a materialized form of the energy of the five elements. In the planetary world we find the sources of our collective emotional and lower mental tendencies.

First we connect with the sun and the five basic planets (Mars, Saturn, Venus, Mercury, Jupiter). We integrate their specific frequencies and their qualities/virtues and connect to these energies. The practice described in this book deals with the first five steps.

In step three we expand further out to the border of our solar system into the three planets beyond Saturn (Uranus, Neptune and Pluto). These three planets represent the part of the emotional social consciousness that has recently (the last centuries) formed along with the development of society and social awareness.

According to the Taoist tradition, the five planets can be placed in the cycle of the five elements. If we add the three trans-saturnal planets, we can link them up with these five and use them in the eight directions of the pakua (the eight-sided form). Since Chinese astrologists did not originally know about the three trans-saturnal planets, the use of the eight planets must have been introduced in this century.

Although some Chinese astrologists claim that the trans-saturnal planets were known long before their discovery in the west, we could not find any reference of astronomical/ astrological use of these planets in the old Chinese literature. Some additional planets that are used in China and known as 'counter planets' are instead energetic formations (not materialized). These same principles are also found in the Hindu and Aboriginal tradition.



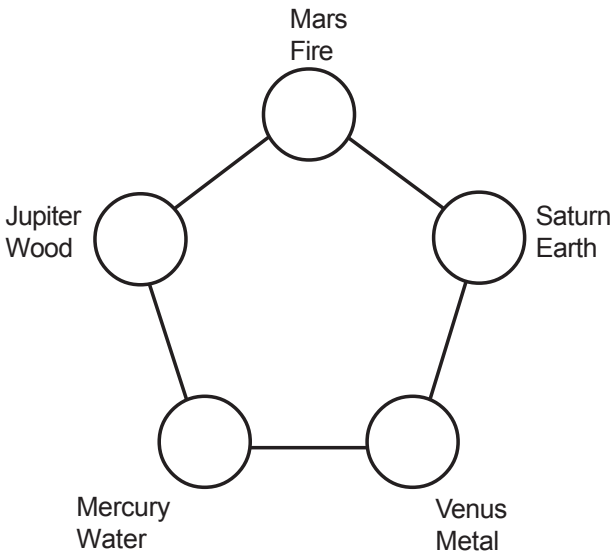


Fig. 3.29 *Five Elements*

Step Four

This step leads us to the world of the stars, star clouds and milky ways. This represents a finer quality of energy that is related to the higher world of the mind and the spirit. Taoist masters observed several thousand of years ago that the North Star always keeps its position while the 28 constellations turn around it.

For this reason Taoists have always seen the North Star as the center of the star world and also as the gate to the spiritual realm and the Tao. In the planetary and stellar meditation, we first connect with the North Star. In this way we deeply penetrate into the star world. Then connections with galaxies are established that are related to the Five Palaces/Elements.

Astrological studies of the 12 or 28 constellations combined with intensive meditation on the individual qualities of these signs can deepen our connection with the star world and can greatly accelerate our spiritual advancement. This is, however, a quite advanced and complex practice.

Step Five

We will combine the two most extreme poles in the star world: the ultra yang force of a quasar, with the ultra yin force of a black hole. We will use an uplifting spiral of these two to project an awareness in the pure yang unmanifested world.

Step Six

Here we go beyond the realm of phenomena and the realm of Chi into the realm of the spiritual laws, five elements, the triple unity, polarity and the pure law.

Step Seven

Figure 3.25 on the structure of the universe shows different layers in the universe and how to find them in the body.

The energy core of these different layers are all lined up on the Central Thrusting Channel that is located in the center between the perineum and the crown point. Step seven is what we call ‘being and living the source continuously in a state of absolute freedom’. We could also call this level zero because all separation will end in this state.

The connection and integration of the essence of these core points into our body will automatically raise our energy and awareness level and in this way trigger the connection with more subtle universal frequencies. In this way your body and the universe are becoming one. All your actions and your presence become an effortless reflection of the Tao itself.

Each of the seven steps described above is accompanied by major changes in all aspects of the practitioner’s life.

Chapter IV
Astronomical Overview

How to use the Astronomical Information in this Book

Astronomy is a valuable tool to understand and cultivate our relationship with the material universe. The accumulation of astronomical knowledge does, of course, not guarantee a higher energy and awareness level. The information presented may help you create a direct experiential link between where you are living now on the earth and the heavenly energies of planets and stars. Only when this direct, experiential contact is made, can the study of and meditation on the universe improve your quality of life.

In this chapter, we will summarize some basic astronomical facts. They are meant to increase your understanding of the world of stars and planets. If we study some basic astronomy and use it to expand our awareness, our intellectual mind will be more satisfied and will be able to function as a vehicle that can travel beyond time and space. Together with the accompanying pictures it is presented to give you some specific connection points during the meditations. After you have studied the information, simply put the picture in front of you and take it in deeply. Empty the mind of all other activity.

Then close your eyes, expand your awareness and travel with your intention in space. Be aware that the physical objects you are connecting to are just the materialized centers of an energy field or belt. It is the frequency and the energy in the belt that you are tuning into. So, relax.

Keep your hands on the Tan Tien and keep the energy deep inside. Repeat this process 4 to 5 times until you start to feel the connection. Use the meditation techniques as described in chapter XI.

Formation of the Solar System

Planet earth is a small planet that has an annual cycle around a middle-sized star, the sun. There are nine planets in our solar system. Together with the planetoids, satellites, comets, meteors and some gas and dust formations, they form our solar system.

The sun is 10 times as big as the biggest planet in our solar system, which is Jupiter and more than 100 times larger than the earth. Since the mass of the sun is 330,000 times greater than the earth, its gravitational force holds the earth in a fixed yearly cycle. Many believe the birth of the solar system was introduced by the implosion of a cloud of gas and dust. The reason for this implosion is still a mystery, but meteor analyses shows that an exploding star or supernova might have caused this.

Our solar system started its materialization process about 4.5 to 5 billion years ago. Around that time, a cloud charged with cosmic dust gathered at the edge of the Milky Way. The centripetal force in the cloud caused the formation of a more dense center. This created heat, which speeded up the rotational force and flattened the form. After millions of years the immense gathering of energy in the center caused a nuclear reaction and self-inflammation. At other places in this cloud smaller concentrations of gas and cosmic dust gathered as a result of the lower density. They did not inflame but materialized.

The specific place and orbit of each planet in our solar system is located at the balance point between the rotation force/centrifugal force and the gravitational force /centripetal force both in relation to the sun.

The planets closer to the sun were baked and became very hard because the gases were dispersed by the heat and the ion/electron wind sent into the universe by the sun. Further out from the sun, the temperature is much lower. The planets there materialized into big balls of fluid gas with a vast center, often with a crust of frozen substance.

Expansion and Contraction of the Solar System

Astronomical studies tell us that there are billions of milky ways in the universe and that there are also billions of stars in most of these milky ways. Our solar system travels through the universe at a speed of about 300 km/sec. Even at this speed it takes about 230 million years for our solar system to make a complete cycle through the Milky Way. During such a cycle or what is called a galactic year, the solar system is not always at the same distance from the center of the Milky Way.

When the solar system is closer to the center this is called the galactic summer. Our solar system responds to the stronger contractive force at this point in the galactic year. The planets come closer to the sun in this period, the atmosphere heats up and greatly enhances the size of the flora and fauna. When the solar system is further away from the center of the milky way, the solar system expands, so a greater distance arises between the earth and the sun. This creates lower temperatures and plants and animal species will be smaller (more arctic).

It is generally believed that the first life forms on earth appeared some 3.2 billion years ago. This means that the earth moved about 13 cycles in the milky way.

Fig. 4.1 *Formation of our Solar System*

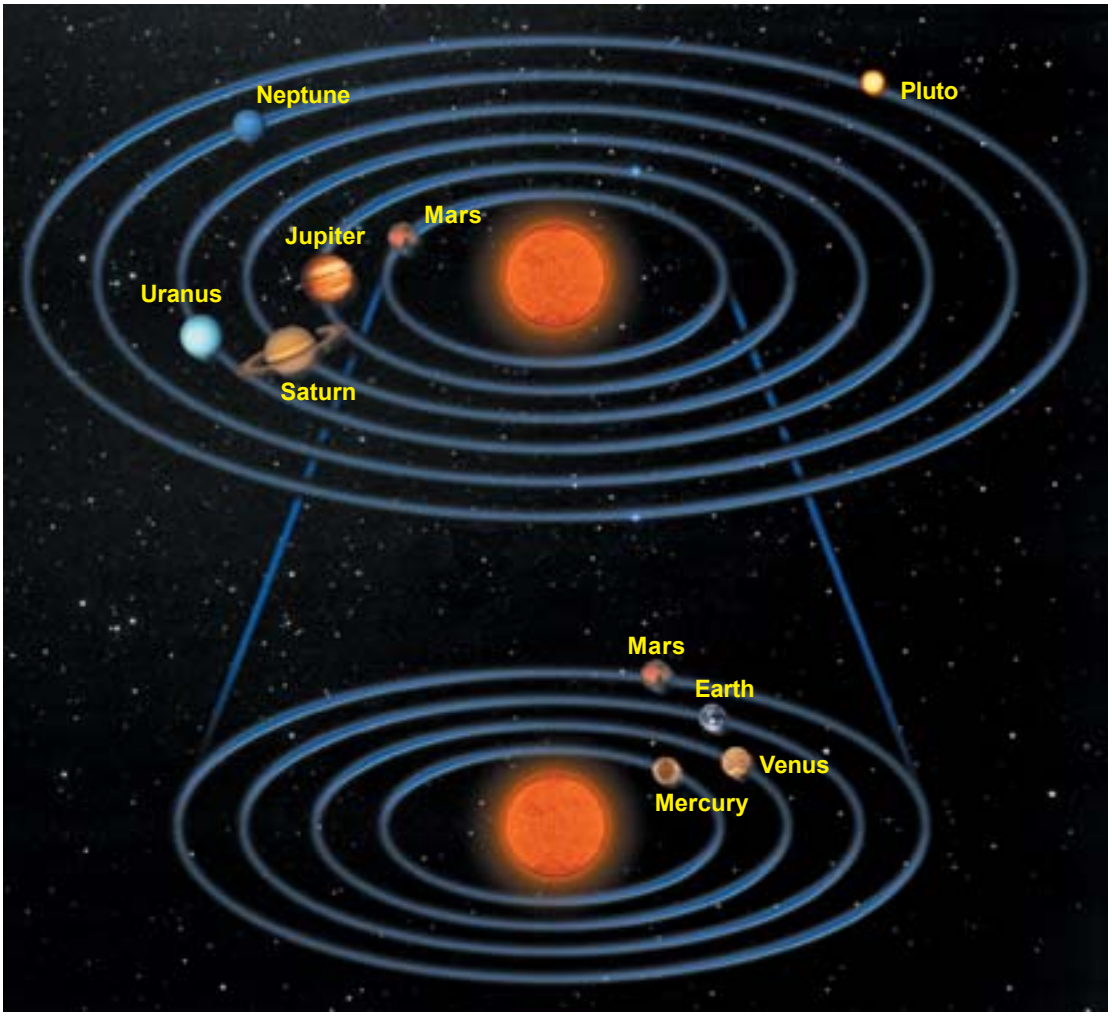


Fig. 4.2 *Overview of the Solar System*

Overview of the Planets in Our Solar System

Earth

Fig. 4.3 *Earth Field*

Planet earth is a blue planet with a moderately humid climate and a lightly unstable surface, 70% of which is covered by water. Its atmosphere consists mainly of nitrogen and oxygen. Under the 32km (approximately) thick earth crust we find a 3000 km thick inner mantle. The core of the earth is a moving sea of liquid nickel and iron, which creates a strong electromagnetic field. It rotates around its axis in one day and around the sun in one year.

Moon

Fig. 4.4 *Moon Field*

The moon is, in fact, not a planet but a satellite of the earth.

Since the moon has no protective atmosphere it has been bombarded out in space for the last 800 million years. The craters that we can see from the earth are 'scars' of this activity, their presence enabled by the absence of erosion. Stones have been found that are more than 4 billion years old, the same age as the solar system. The origin of the moon in relation to the earth is still a mystery. Its rotational speeds around its axis and around the earth are about equal; 28 days. For this reason we always see the same side of the moon. Temperature extremes vary between + 127 °C and - 173 °C.

Sun

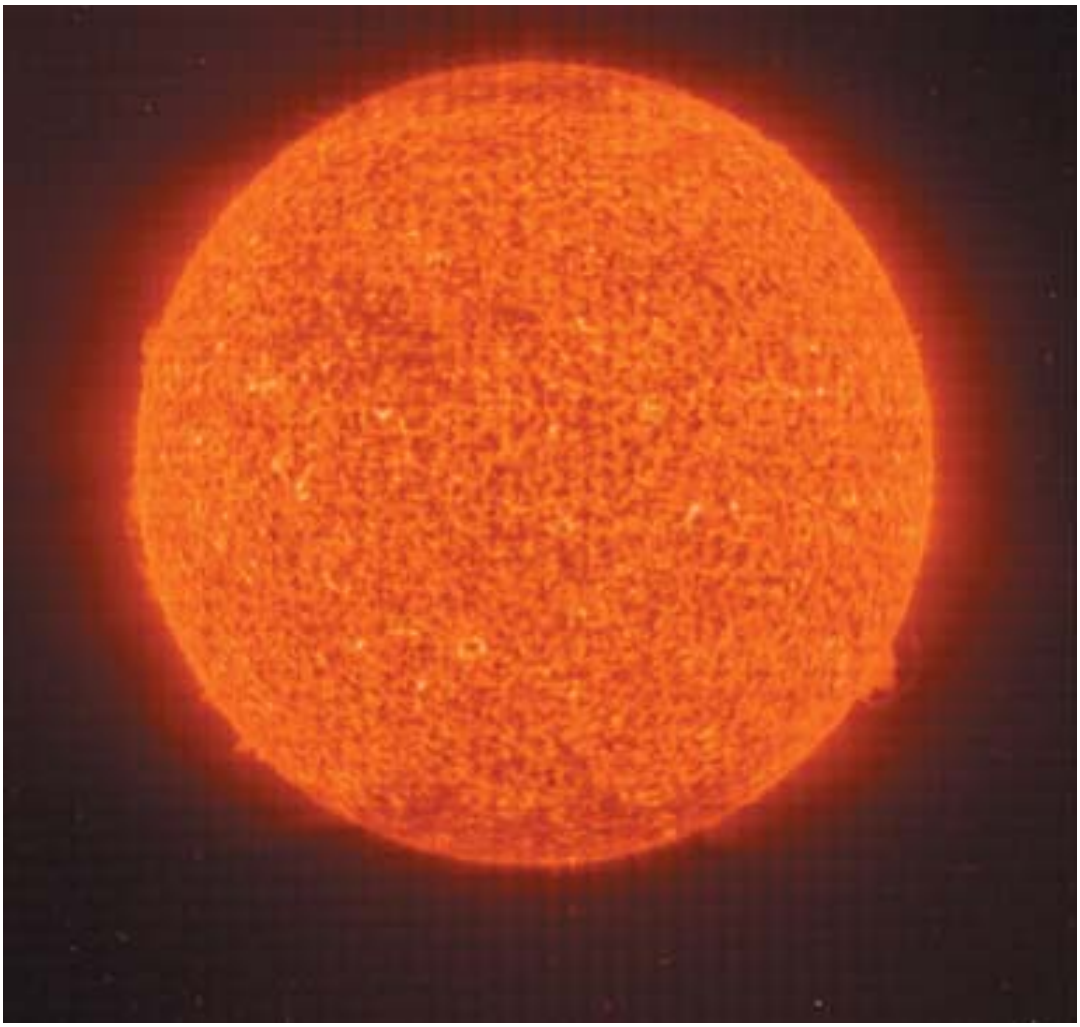


Fig. 4.5 *Sun Field*

The sun is the giant of our solar system, with a bigger mass than all planets put together. Compared to other stars it is small to medium sized. It is the main light source in our solar system and in this way generates life on our planet. Its main components are hydrogen and helium. The sun radiates enormous amounts of light particles and radioactivity. It turns around its axis in 246 days. The temperature in the center of the sun is about 15 million °C.

Each second the sun radiates more energy than man has used since the beginning of civilization.

Mercury

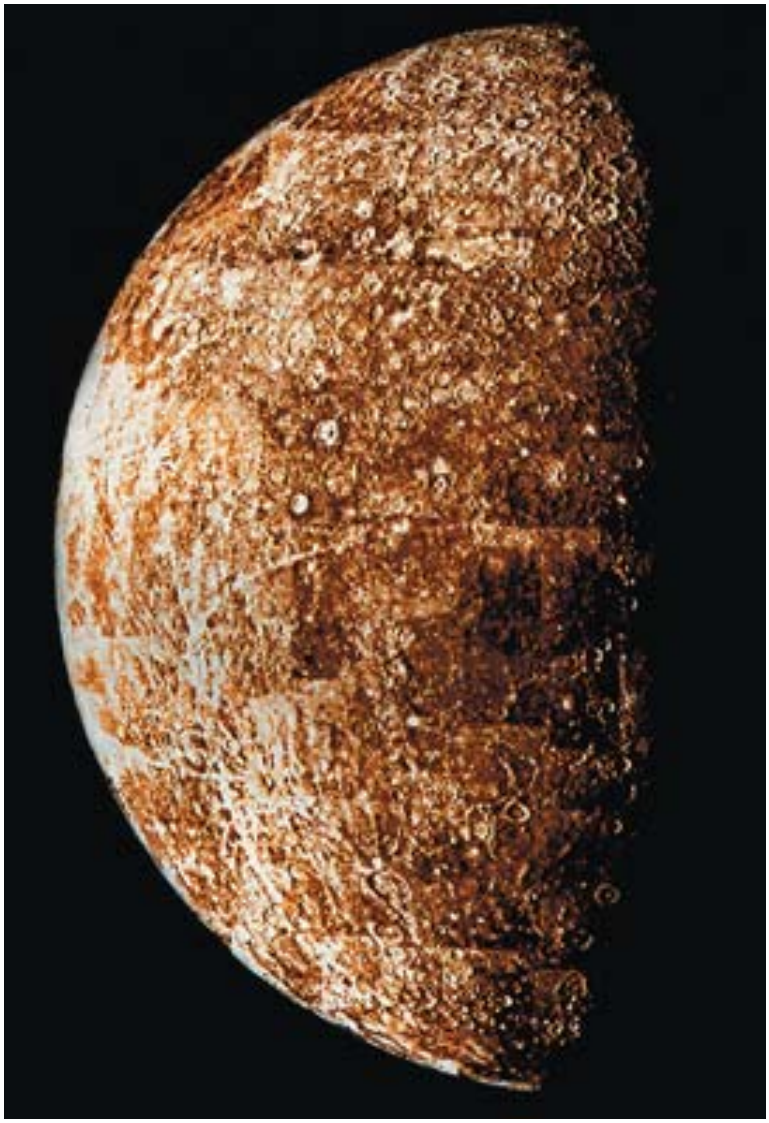


Fig. 4.6 *Mercury Field*

Mercury is like a giant cinder with a strong pockmarked surface.

Its proximity to the sun has caused its atmosphere to be burned away completely. On the sunny side the temperature rises to 430 °C, on the dark side it drops to - 170 °C. It turns around the sun in 88 days and has a rotational speed around its axis of 58.6 days. The marked surface may also be the effect of shrinkage.

Venus

Fig. 4.7 *Venus Field*

In the past, Venus was called the ‘clear morning star’ or by others the ‘clear evening star’. The reason for this is that when viewed from the earth it swings across our ‘planetary view’ over a period of about sixteen months. For about eight months it is clear in the morning and the other eight months it is clear in the evening. Its surface is covered under a thick atmosphere where temperature rises to 500 °C. The atmosphere allows sunlight in but not out, which causes a greenhouse effect. A constant acid rain (carbon dioxide and sulfuric acid) falls form the clouds. It turns around the sun in 225 days and around its axis in 243 days. The pressure of its atmosphere is about 90 times greater than that of earth.

Mars

Fig. 4.8 *Mars Field*

The red planet is a giant sand desert where huge storms occur regularly. It also has ice caps on the poles just like the earth and several giant volcanoes. The highest one is 2 ½ times as high as the Mount Everest.

It has a thin, pink atmosphere and a deep red surface. Temperatures are between + 20 and - 140°C. It rotates around the sun in 687 days. A Martian day also takes about 24 hours. It may have had water on its surface in the past and a denser atmosphere.

Jupiter

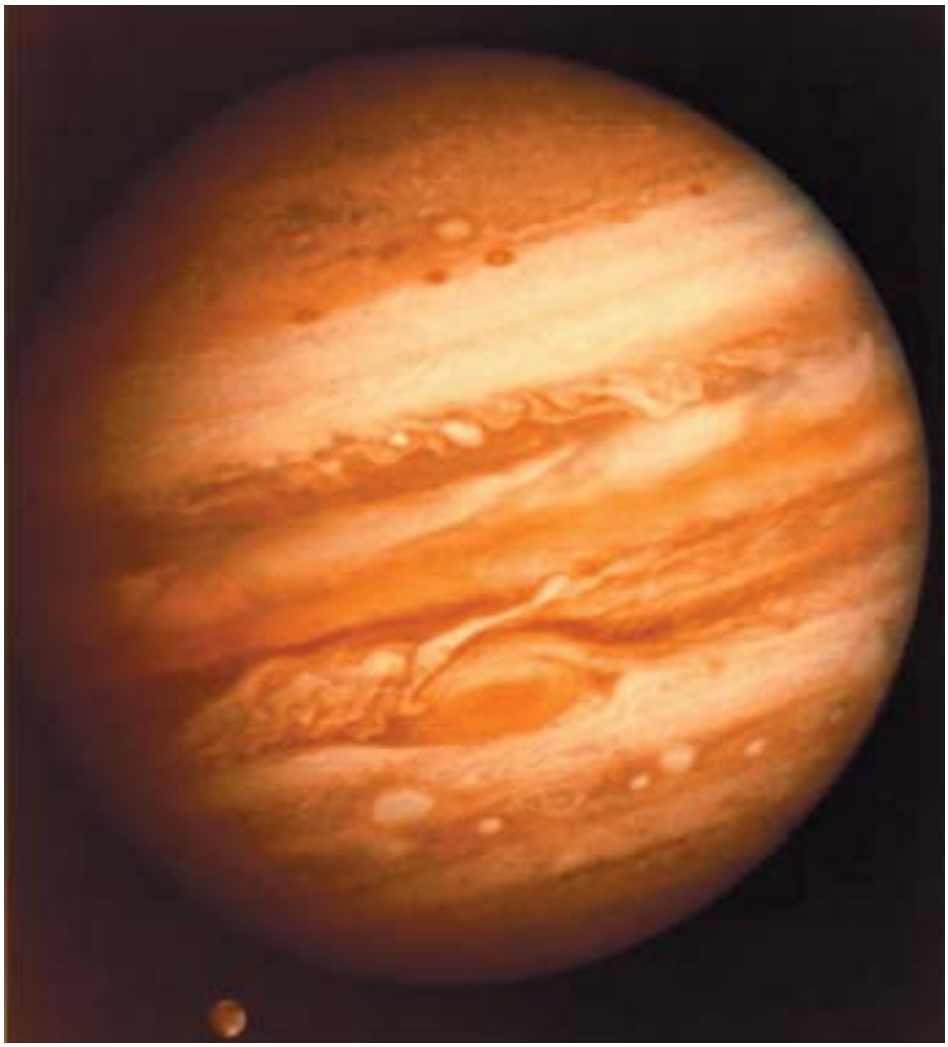


Fig. 4.9 *Jupiter Field*

The largest planet in the solar system with a diameter nine times greater than the earth. Because of its constant light during the night, the Greeks called the planet the supreme god. Giant storms with speeds of 350 km/h, lash the dust from the surface up to 25k.m. high. The atmosphere mainly contains hydrogen. Just like the sun, its composition is 9 parts hydrogen, 1 part helium. Because of its smaller mass, it never self-ignited, keeping its temperatures much lower (between + 25 and – 150°C). The center is about 20,000°C. If its mass was 50 times bigger, we would have had two stars in our solar system creating a completely different environment. Jupiter has 16 satellites.

Saturn

Fig. 4.10 *Saturn Field*

This pale yellow giant looks a little like Jupiter. It has the same 3-layer atmosphere and huge storms (speeds of more than 1500 km/h have been measured). It is surrounded by thousands of rings (containing ice and rocks), making it look like an old gramophone record. The temperatures on its surface are around -150°C. It is the lightest planet in our solar system. If we could drop it in water it would float. Seventeen satellites have been discovered around Saturn.

The Three Trans–Saturnal Planets

Uranus

Fig. 4.11 *Uranus Field*

Uranus is the only planet which lies on its side as it revolves around the sun. It is invisible to the naked eye and was unknown until 1781. The astronomer William Henschel discovered it with the use of a telescope. According to scientific models, the outer layer would consist of hydrogen and helium covering a mantle of fluid frozen methane, ammonia and water. Inside would consist of a stony center of metals and silicate. The temperature would be around – 215 °C. It has a diffuse belt of rings and 15 satellites.

Neptune

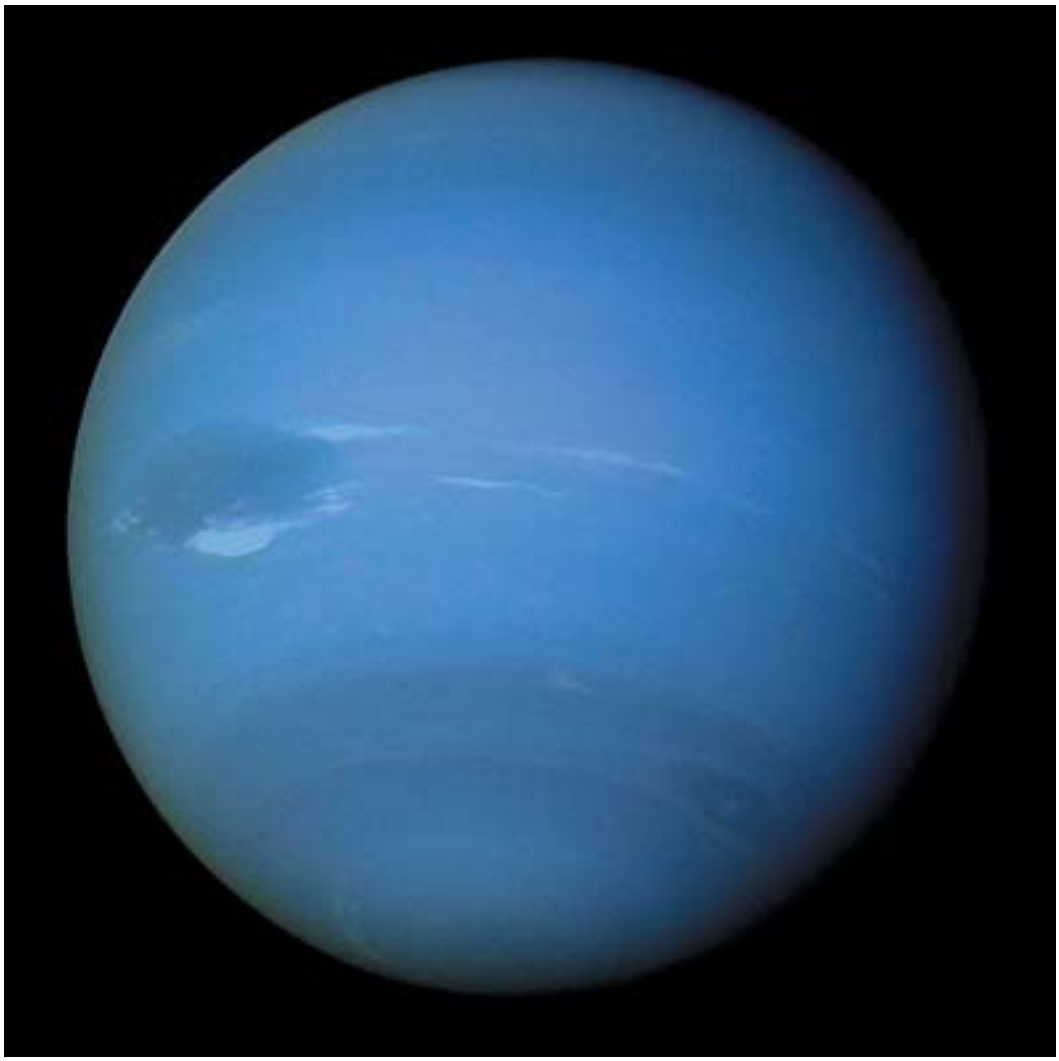


Fig. 4.12 *Neptune Field*

Neptune was first discovered through mathematical calculation before it was ever seen according to the changes in the orbit of Uranus. In 1846, J. Galle discovered Neptune where the mathematicians predicted it to be.

The scientific model developed for Neptune shows a very similar structure and composition to the earth.

Pluto

Fig. 4.13 *Pluto Field*

Clyde Tembough discovered Pluto in 1930. It has an orbit about 6 billion km away from the sun. It has a diameter of about 2300 km (the earth's moon is 3476km) and a mass more than 1/400 of the earth. This frozen stone clump has a thin atmosphere of methane and surface temperatures of – 210 °C. It has an orbital angle of 17°, which is unique in the planetary world. It also has a strong elliptical orbit causing a crossing of the Neptune orbit.

The inner part of the solar system contains four similar, more rocky planets: Mercury, Venus, Earth and Mars. This is followed by an asteroid belt containing millions of irregularly shaped stones. Further out are the four gas/ice giants, Jupiter, Saturn, Uranus and Neptune. Pluto is the farthest planet out in our solar system. It is a very 'small' frozen rock which might previously have been a satellite of Neptune. Many astrologists and astronomers talk about a 10th planet being further out in the solar system. This planet would have a mass twice to five times greater than the earth. This would explain the changes in the orbits of the outer planets. Since Pluto's mass is very small, another planet is probably causing this effect. The angle of the 10th planet's orbit would probably be about 75°.

The planetary field is the central area in our solar system. It is a very little part of the solar system. The cometary field is estimated to be 3850 times bigger than the planetary field. The outer edge our solar system almost touches other solar systems. The nearest solar system is Alpha Centauri. All together these solar systems move around the center of the Milky Way at a speed of 300 km/sec. It takes more than 200 million years to finish a complete cycle around the center of our Milky Way.

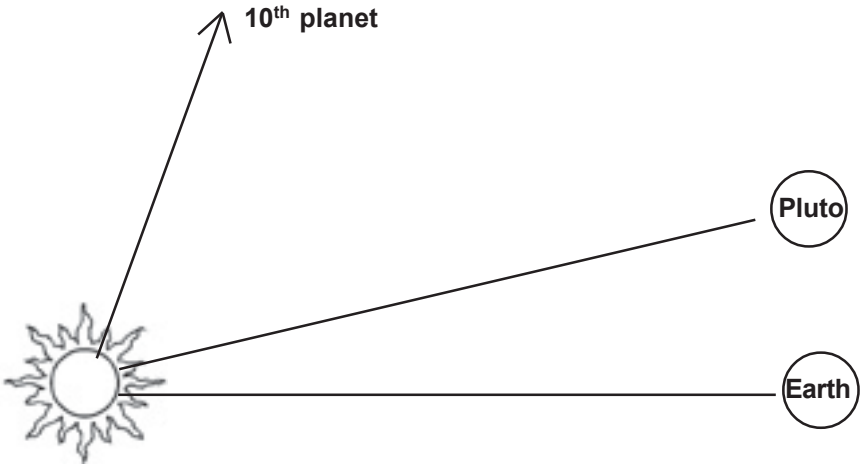


***Fig. 4.14 10th** 'Unnamed' Planet (Chiron), Pluto, Earth and Sun*

It is not accidental that the three outer planets (Uranus, Neptune and Pluto) were only discovered during the last 150 years. As human evolution moves towards the center of the spiral we experience an increasing speed of events (reaching a peak around 2100). This whirlpool of events strongly activates the collective consciousness field. If the body's energy system and the soul connection are not developed, this spiral and the trans-saturnal planets can create a great deal of confusion, exhaustion and mental and emotional imbalance.

But, if we can integrate these forces they will trigger unique human abilities at the level of mind and spirit and the collective social consciousness.

In 1977 a large asteroid like planet was discovered. It has its orbit at its closest point (to the sun) between Saturn and Uranus and at its farthest point far beyond the orbit of Pluto. In this way this planet connects the personal planets with the trans-saturnal planets which are related to the collective consciousness. Astronomers named it Chiron, which is the name of a Greek mythological figure being half-human/half-horse. It is a symbol for healing. Also, since 1977 healing arts have rapidly developed and spread on our planet.

As time goes by, more universal knowledge will be gained, always being connected to related changes in the personal and collective consciousness.

Stars and Galaxies

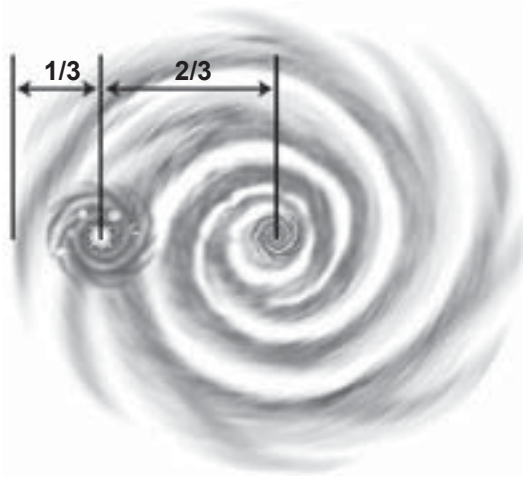


Fig. 4.15 Our Solar System in the Milky Way

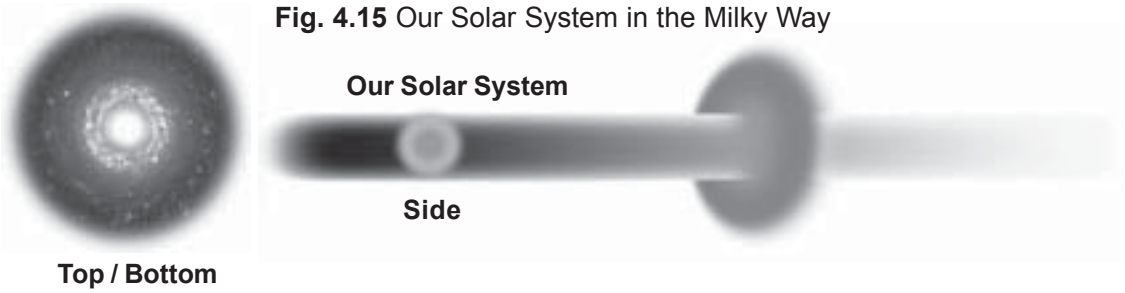


Fig. 4.16 *Shape of the Milky Way*

Images taken recently through the Hubble space telescope show the different stages in the birth process of stars. These pictures show that powerful energy, ultraviolet radiation and high speed gas clouds unleashed by adult stars are triggering the birth of new stars in the surroundings. Ultraviolet light emitted by the neighbor stars energizes the clouds. Inside these huge interstellar gas columns, the density can become so high that gravity takes over and causes the gas cloud to collapse and split into smaller clumps or gas eggs. When compression continues a nuclear fusion will ignite their cores so that they become fledgling stars.

The pressure and temperature in the cloud will rise to a point where nuclear reactions arise. After this point is reached, the star will shine for millions of years. A star like the sun, can live for over 10 billion years. Bigger stars are often burned out after 20 billion years. Generally speaking, we can say that the younger stars have violet/blue colors, the middle aged ones are yellowish, the older ones are red-brown and the oldest are black. As the star ages it might turn into a white dwarf through a lack of fuel, or into a supernova through explosion, or into a black hole through implosion. According to the estimated age of many stars, it is clear that our Milky Way must be over 12 billion years old.

Earth is about 1/3 of the way from the outside border in our galaxy. The galaxy has a diameter of about 100,000 light years and contains about 100 billion stars. The biggest concentration of stars is found in the central area. There are billions of other galaxies in the universe. These galaxies are grouped into clusters and in turn these clusters belong to super clusters. Our galaxy belongs to a group of about 30 other galaxies called “the local group”. The closest other big galaxy is the Andromeda nebula. We find this star nebula at a distance of 2,200,000 light years, which means that the pictures we see now were sent out 2.2 million years ago. On a dark clear night, we can see the Andromeda nebula without any binocular or telescope. Some of the stars we are seeing are in fact galaxies composed of billions of stars.

In Taoist astrology the sky is divided in 28 or 64 constellations. Astronomers often use the different distances of the stars in one constellation as proof that there is a connection between the stars in these constellations and in this way they affect the human condition. However, in the unique quality of each constellation, the real distance of the stars is just an aspect that co-creates the magnitude of the star as seen from the earth. The collective angle or direction of influence is what forms the specific group energy and connection between the stars in all constellations.

In the case of Polaris for instance, which is located in the center of the galaxy, it is certainly not the brightest star in the sky.

For the Big Dipper, the five most central stars belong to one star cluster which is at a distance between 59 and 75 light-years (the closest star cluster for us). The outer two stars are at a different distance and move in a different direction.

Different Galactic Forms

There are many different types of galaxies, but they are mostly divided into three main groups.

Fig. 4.17 *Spiral Galaxies*

Spiral galaxies, like the Milky Way, have a central elliptical region filled with many old stars. Around this center there is a sphere of old stars connected with the outer spiral arms, composed of younger stars and regions of gas and dust where stars are still born.

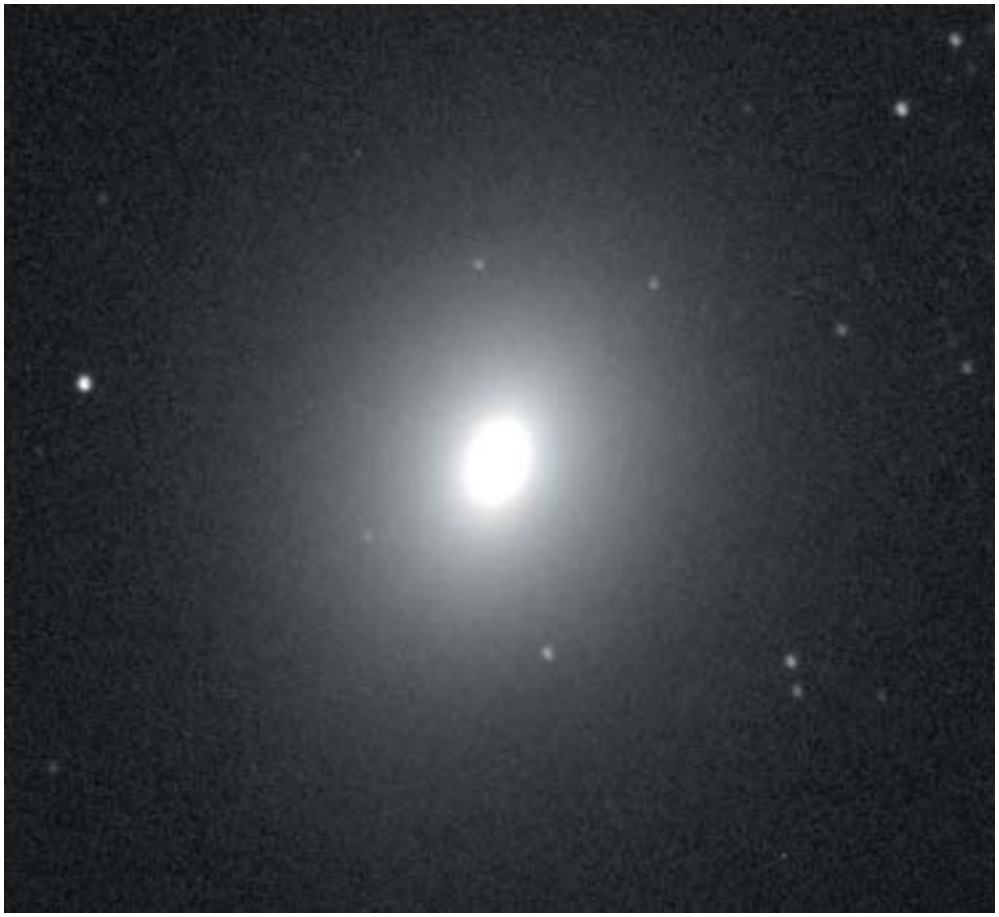


Fig. 4.18 *Elliptical Galaxies*

Elliptical galaxies contain very few young stars or gas and dust. They are mainly composed of older groupings of stars. Few stars are born here.

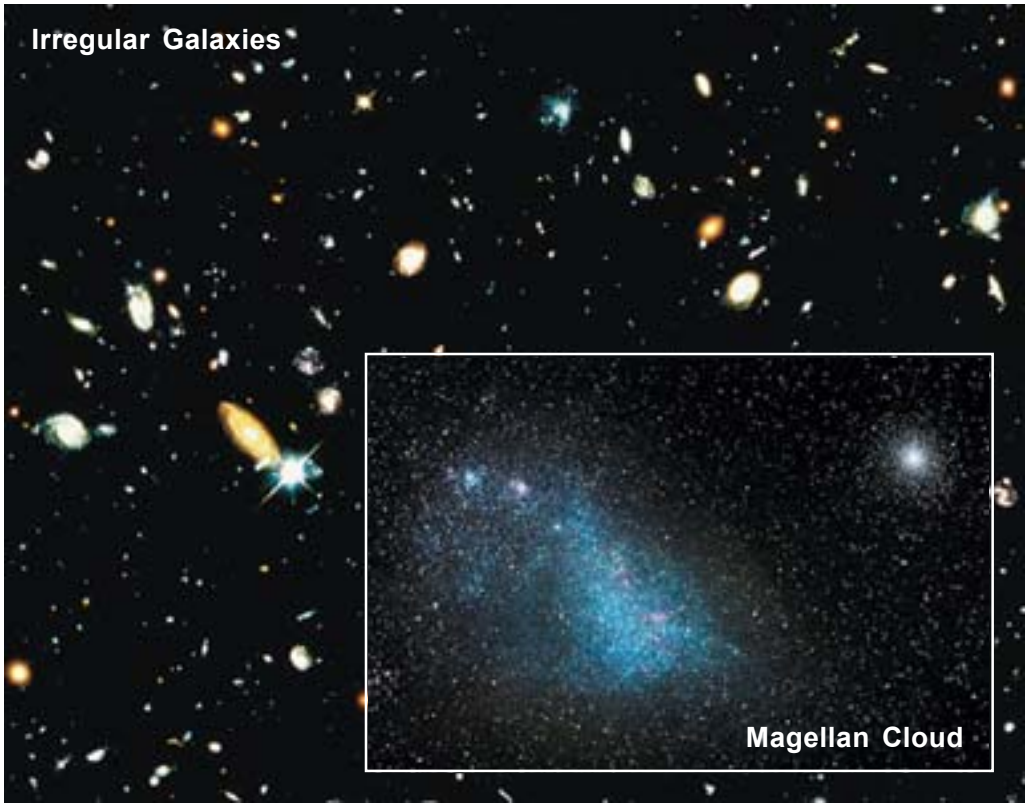


Fig. 4.19 *Irregular Galaxies*

Irregular galaxies without a particular form. One of these is the large Magellan Cloud, the companion of our solar system.

White Dwarfs, Supernovae, Black Holes, Pulsars and Quasars

As a star gets older it might turn into a white dwarf through a lack of fuel. It also can explode and in this way become a supernova, a star that is a bright as about 10 billion suns. The third possibility is implosion into a black hole, a concentration of extreme density and gravity so that according to most scientists no matter, radiation or light can escape from it. Astronomers believe that pulsars are fast rotating neutron stars that radiate light (or sound waves or radioactive waves) through a small beam, so that we can see it every time it is directed towards the earth.

Quasars are the brightest sky objects in the visible universe. They often shine with a brightness of 200 billion suns and are often visible with the bare eye even though they are at a distance of billions of light years.

Fig. 4.20 *Supernova*

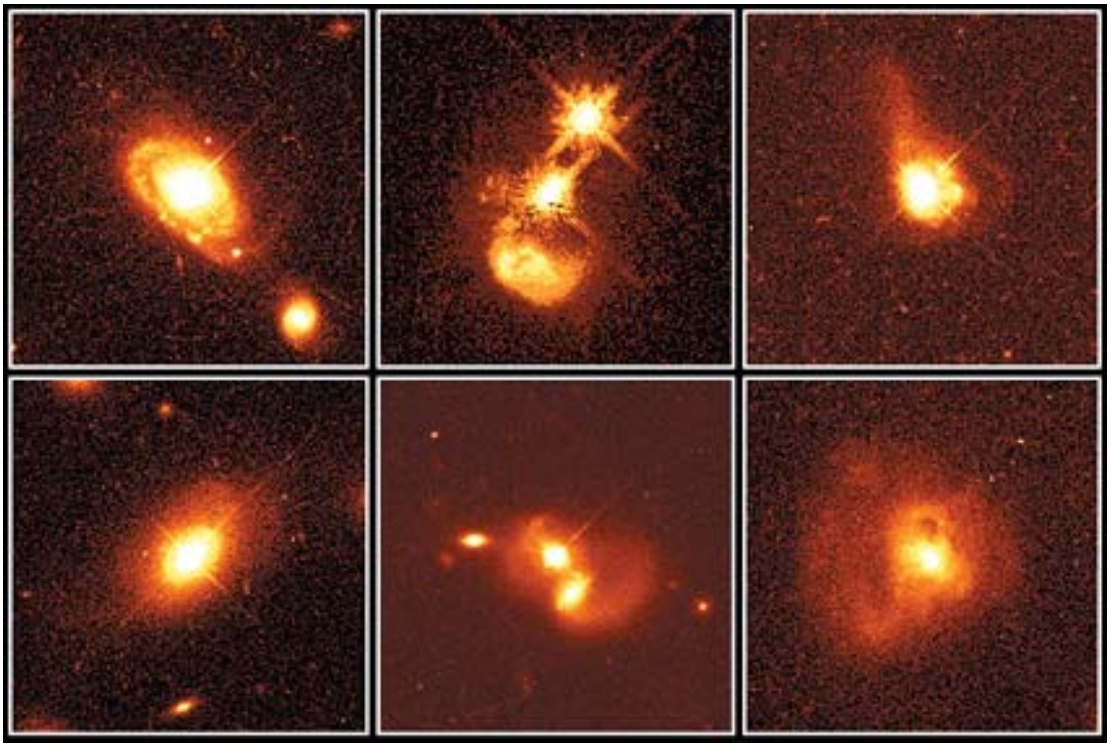


Fig. 4.21 *Quasars*

Chapter V
Taoist Star Practices and their Effect on Human Awareness

North Star and Big Dipper in the Taoist Practices

Ancient practices viewed the stars as having a material manifestation. The manifestation of the stars in brilliance, pulsation and color shows the constant interaction of these two forces. Stars were seen as the embryonic essence but also as a great source of Chi. In the stars we find high concentrations of the vital primal essence. The sun was seen as the fullest form of pure yang energy which then was divided out towards the different stars. Because of their inherent relation to the embryonic essence (like sexual essence in our body), stars were seen as forms of water energy. The expression of bright white light shows the inherent metal energy.

For the Taoists, stars are the places where immortal beings reside. Mostly in the central star palace but also in other locations. Newly born stars demonstrate that a high master has made the transition to heaven. One Han master, Ching Fong, predicted that after his death a new star would show up in Hercules and indeed, a supernova suddenly appeared just after he died.

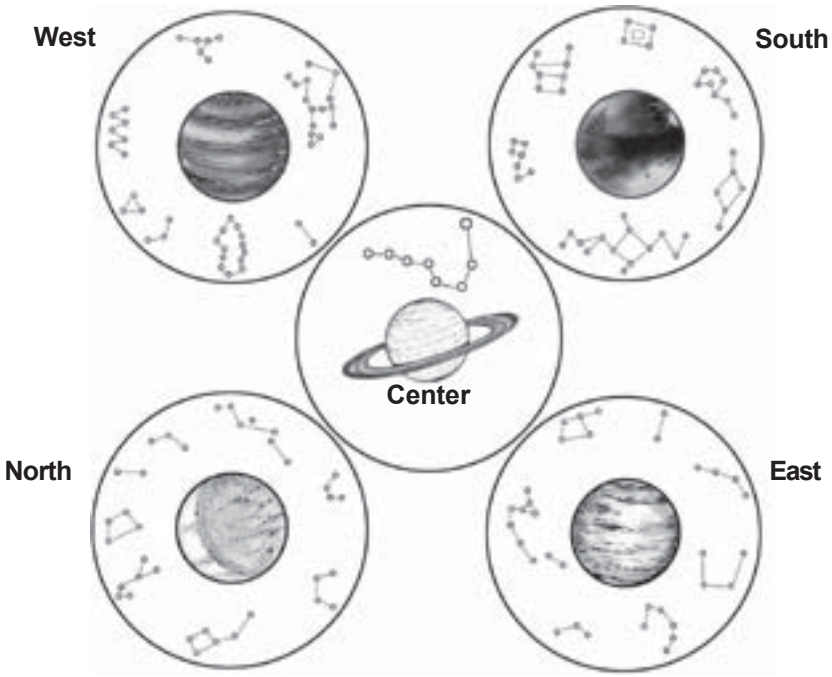


Fig. 5.1 *Five Planets, Directions and Constellations*

The Taoist masters viewed the North Star and Big Dipper as the greatest celestial sources of power. Their supernatural energy was shown by the name “yang luminosity”. The North Star has been used by many enlightened Taoist masters as a gate to the Tao. This North Star gate was used during the meditation practices and finally at the moment of dying. Other spiritual systems use other connection points or gates into the sky.

The Chinese Emperor was seen as a heavenly child. Many stars around the North Star have the name of an Emperor or one of his family members. The great one (Emperor) was often depicted with the Big Dipper in one hand and the North Star in his other hand.

Because of the wobbling of the earth axis in a cycle of 25,800 years, different stars will get aligned over the earth axis. This means that different stars will take the position of the North Star.

In some years ahead there will be a new “North Star”; it will be Vega again. From 1000 to 500 B.C. it was the star Kochab; during the time the Egyptian pyramids were being built it was Dra Thuban; about 13,000 years ago it was Vega (in Lyra). During the Ming Dynasty it was Tian Shu in the Big Dipper. Tian Shu is also the name for ‘ST 25’ the acupuncture point to either side of the umbilicus.

A name that is generally used for Pole stars is Zhong Ji - ‘Center of Heaven’, which means, “The best place in heaven” or Tai Yi “The great one”. Zhong Ji also relates to the acupuncture point ‘CV 3’ and Tai Chi with ‘ST 23’ showing the connection between the body’s meridian system in the Tan Tien area and the Taoist gate to the Universal light. Also the name ‘Pivot of Heaven’ was used. This same name was also used for Dubne, in the Big Dipper. The function of the North Star is to emit the essence, the embryonic energy flow.

The North Star has a close connection to the seven stars of the Big Dipper. The North Star is found at about 5 times the distance of the line projected from 6th and 7th Big Dipper stars. Traditionally the Big Dipper/North Star axis was used to determine the season. The North Star/Big Dipper axis is moving through the four palaces or regulating the four countrysides during the four seasons or one year.

The Dipper is the carriage of the North Star. When the spiritual essence of the Tai Yi spills over, the Dipper lets its essence fall through its seven bright gates of celestial power.

Fig. 5.2 *North Star and Big Dipper connecting with the human body.*

In the Taoist advanced practices the North Star and Big Dipper energies are connected with the differe

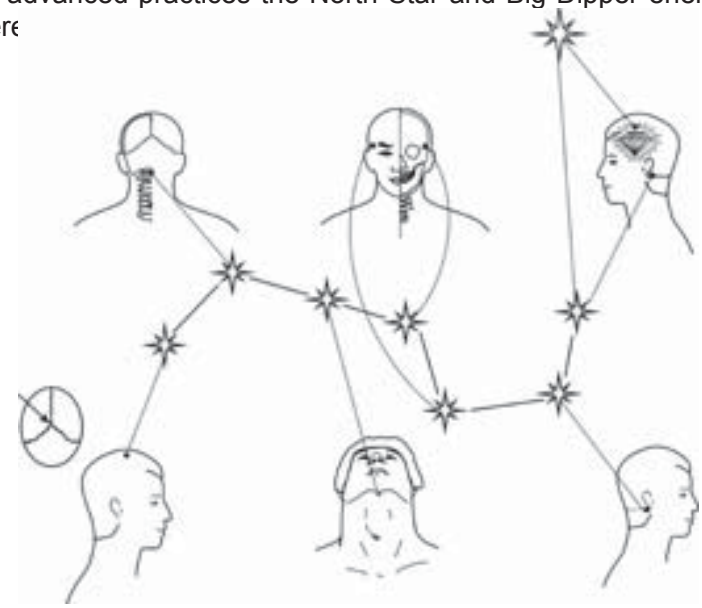


Fig. 5.3 *North Star and Big Dipper connecting with points of the skull.*

In this way the connection with the Universal Light is deeply integrated in the brain and the glands within the skull (Crystal Room/Palace, see Fig 5.5). Each of the stars has a connection with the lower planetary world (five planets, sun and moon) and with the higher vibrational world of the five elements and the pakua. According to the oracle texts of the Han Dynasty, each of the Big Dipper stars has a unique earthly manifestation in the animal and plant kingdom. The seven star principle is not unique to the Big Dipper. It can also be found back in the Pleiades, the Vermilion Bird and other constellations.

In one type of Taoist astrology the numbers 1 to 9 and the 9 energies of the pakua (8 directions and the center) were used as a form of numerology connected to the seven stars of the Big Dipper, Polaris and Vega. Since the star Vega, related to number 1 was known as a star related to destruction, it was not connected to the Crystal Room.

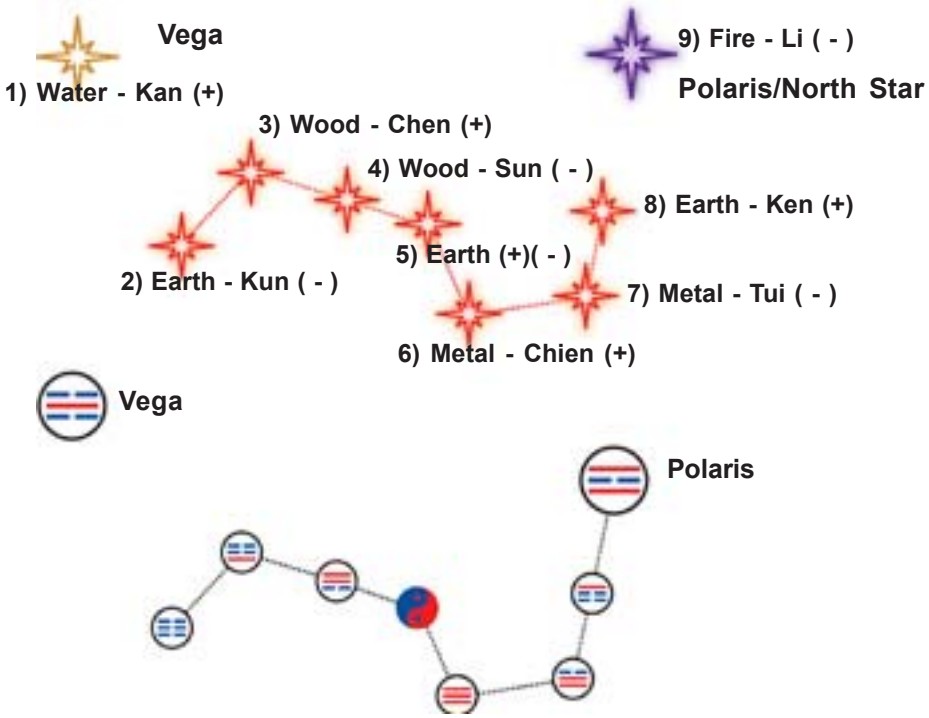


Fig. 5.4 *North Star, Vega, Big Dipper and Five Elements*

In Taoism, the nine stars of the true Dipper are used. There are the seven familiar ones and two hidden or invisible ones. According to one source these stars hold the embryonic essence (Ching) and actualizing spirit (Shen). One T'ang practice which is still used these days in China is the practice through the nine stars of the Dipper while visualizing the star Alcor and holding the breath. Just as the principle of counter planets in Chinese astrology and the modern astronomical theory that quasars and black holes might be functioning together, some Taoists believed that there are nine black stars underlying the nine Big Dipper stars.

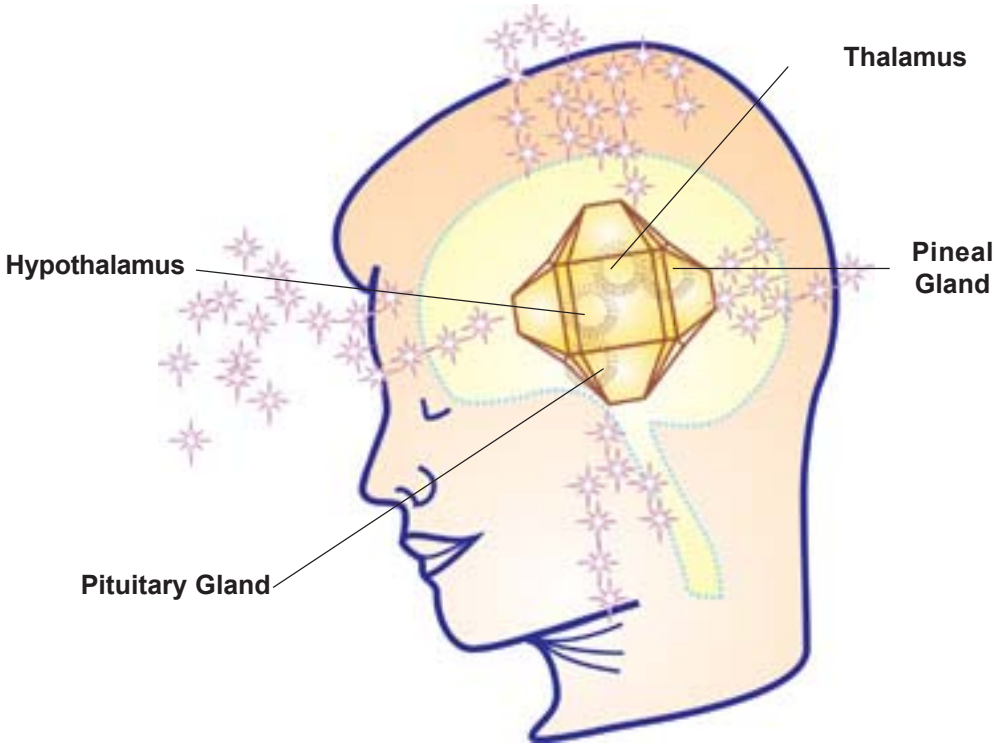


Fig. 5.5 *Crystal Palace*

In the Universal Tao meditation practices, we use the combined energy of the North Star and the Big Dipper to connect with the Universal Light.

The Big Dipper light (red) is absorbed by the thalamus and hypothalamus glands while the North Star (violet) relates to the pineal gland. The pineal gland is our internal compass, while the North Star is our external compass. Taoist masters believed that if the North Star was able to keep all the constellations in orbit, its size and mass would be enormous.

In Taoist cosmology, 28 constellations are ordered around the North Star and the Big Dipper. In each of the 28 days of the moon cycle one of the constellations reaches its maximum influence. The special magnetic field of moon and earth energies combined together, attracts these fine star energies creating a special spiritual condition on our planet.

Besides the 28 constellations around the North Star there are billions of milky ways each with billions of stars in their universe. All these stars have a direct connection with the billions of cells in our body, where at the moment of fertilization and birth a specific position gives you a unique charge and direction in life.

Through meditation practices and by way of integrating new insights and this higher awareness into your daily life, the information from these stars and your personal cells becomes synchronized. This brings you back to your true task in this life, but it also gives you access to the Universal information field. The direct connection with this intelligence will naturally provide you with all the information and life force required for you to fulfill the true life task.

The earth's rotation around its axis creates a strong electromagnetic field. The wobbling of the earth's axis creates different stellar influences with enormous effects on the conditions of our planet.

Fig. 5.6 *Earth's Rotation*

Earth Axis Wobbling and Poleshifts

The earth has three movements: it rotates around the sun (one year); it rotates around its own axis (one day); and the axis wobbles. The projection of the earth's axis to the north creates a circular form between Vega and Polaris. There is a strong electromagnetic belt around the earth because of the rotational force. This belt is strongest around the equator and weakest at the poles. The South Pole is directed towards the center of the Milky Way while the North Pole is directed towards the outside of the Milky Way.

For this reason the energy that comes through the North Pole is clearer and more subtle than the one which comes in from the South Pole. The northern sky is governed by the energy of the North Star and its 28 constellations and is considered richer in terms of star and galactic energies.

The wobbling movement of the axis of the earth has a strong effect on human civilization and the quality of life on earth. It takes 25,800 years for the earth to make a full 360° movement around its axis. The strongest activation of energy occurs when the axis is directed straight towards Polaris (the North Star at the turn of the millennium).

Around the year 2,102 the North Star will be in perfect line with the earth axis. This will highly increase the influence of spiritual energy on our planet.

The galactic year: Movement of our solar system around the center of the Milky Way. Speed 300 km/sec, 230 million years to make a complete cycle.

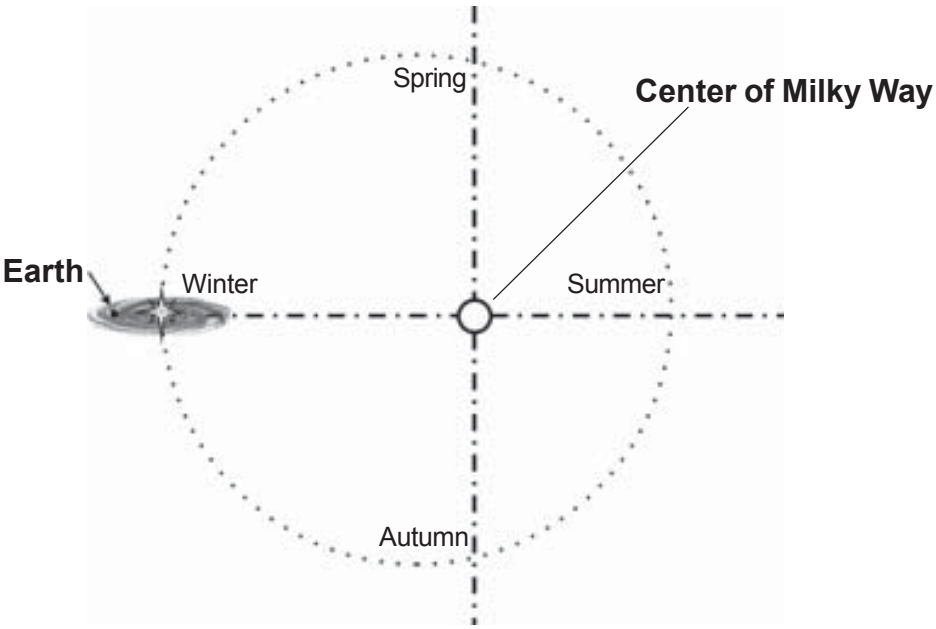


Fig. 5.7 *Galactic Year (230 Million Years)*

During the 230 million years (a galactic year) it takes our solar system to orbit the center of the Milky Way, it will be located at different distances from this center, which will create varying gravitational conditions in the solar system and on our planet.

The energy of Polaris is the yang energy from heaven related to the Governing Vessel. The energy of Vega is the yin energy from heaven related to the Conception Vessel.

During a 25,800 year cycle, the period of Polaris was traditionally seen as the light period. There was a flourishing spiritual life on earth and a period of happiness and good luck. The period of Vega (12,900 years later) is seen as the arrival of the dark period with destruction of society and a low spiritual level on our planet.

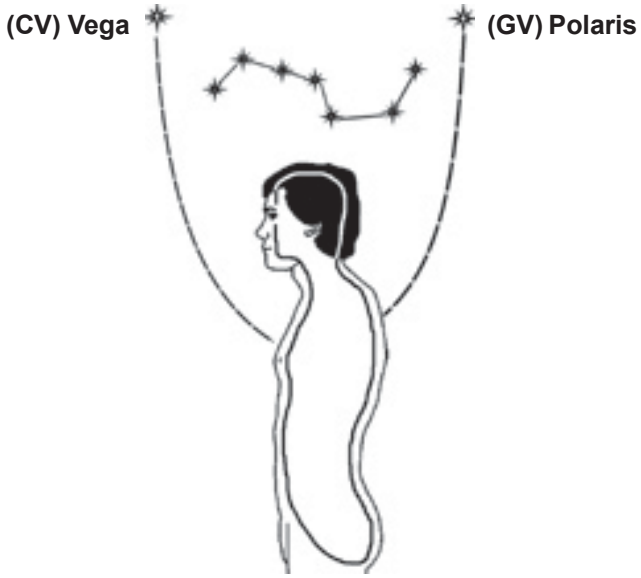


Fig. 5.8 *Nine Stars and Governing and Conception Vessels*

When Polaris is above the earth axis the Crystal Room Governing Vessel receives information and transfers it to the Conception Vessel where it is integrated. When Vega is above our earth axis, the energy is directly absorbed into the lower centers without the spiritual/universal connection. The result is isolation, arrogance and destruction.

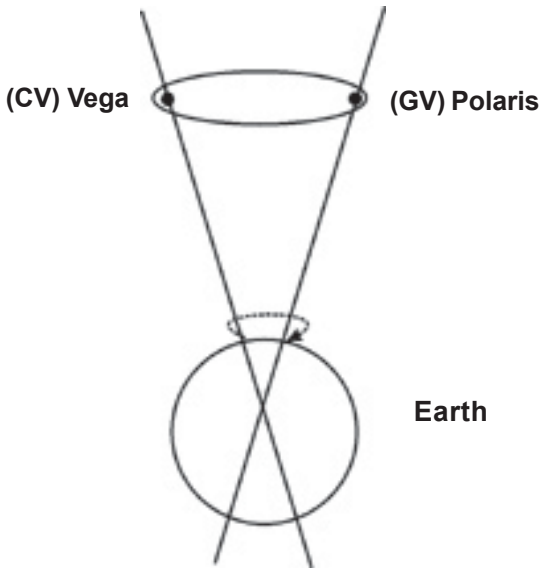


Fig. 5.9 *Pole Shifts*

Pole Shifts: The rotational force of the earth creates a centrifugal force. When this expanding force reaches a peak, an axis shift occurs. If we roll an egg away from us, at a certain point it starts wobbling and than suddenly flips over, creating another axis and new poles. According to some sources many of these pole shifts have occurred on earth. These shifts happen in a few days, creating giant shifts of the water and land and the death of millions of humans and animals. In different civilizations these shifts and floods have been known and described.

Although scientists do not agree, some believe that the famous sphinx from Giza in Egypt must have been built long before Pharaoh Chefren 2,700 B.C. The sphinx is the biggest one piece statue on earth. The famous Egyptologist, Schwaller de Lubicz, thinks that the erosion on the head of the sphinx could only have been caused by water. Around 15,000 BC the last ice age must have been at its peak. The big floods caused by the melting ice caps all happened between 10,000 and 12,000 B.C. As we explained before, these floods were caused by earth axis shifts under influence of the North Star of that time: Vega.

This data suggests that the sphinx might have come from a civilization of more than 12,000 years ago. This would also explain the mystery of Egyptian culture in many areas. Although the pyramids were built with an unknown skill and technology, the Egyptologist Borchardt states that at that time the Egyptian culture was certainly not yet highly advanced. Structures were probably built on the fragments of a lost civilization. Study of sediment in paleo-climatological research has shown that severe flooding must have occurred around 12,000 years ago. Many books from around the world speak of the lost civilization of Atlantis. It is believed to have been swallowed by the sea because of a great deluge about 12,000 years ago. Atlanteans knew of the impending destruction and sent out groups to other continents. Perhaps these emissaries from “lost Atlantis” were responsible for the spiritually advanced cultures that followed. There are other theories relating to the link between these ancient civilizations and extraterrestrial life; most notably between the Egyptian pyramids, spinning disk technology and life on Mars. Taoist masters were not alone in recognizing the 25,800 year earth axis wobble and polar shifts.

Fig. 5.10 *Sphinx and Great Pyramid in Giza, Egypt.*

As previously discussed there are many different influences affecting us at the same time. All of these influences have a unique rhythm. It is the concentration of all these rhythms, influences and positions that create a unique Universal condition at every moment of our lives. Another strong influence on human awareness is the Photon Belt. A field that our planet is slowly arriving into now. Satellites discovered the Photon Belt in 1961. Photons are very small light particles of electromagnetic energy, without mass and electrical charge and of an undefinable life span. These photons are in our atmosphere all the time but their number is gradually increasing because our planet is traveling through the Photon Belt for greater periods of time every year. From the year 2013, we will be constantly surrounded and immersed by these photons for a period of about 2000 years. The activity of the North Star and of the Photon Belt represents a unique spiritual possibility to all of us. The North American Indians, the Mayans, Tibetans and the Egyptians were amongst the ancient cultures that were quite aware of the age of light which would begin at the start of the 21st century.

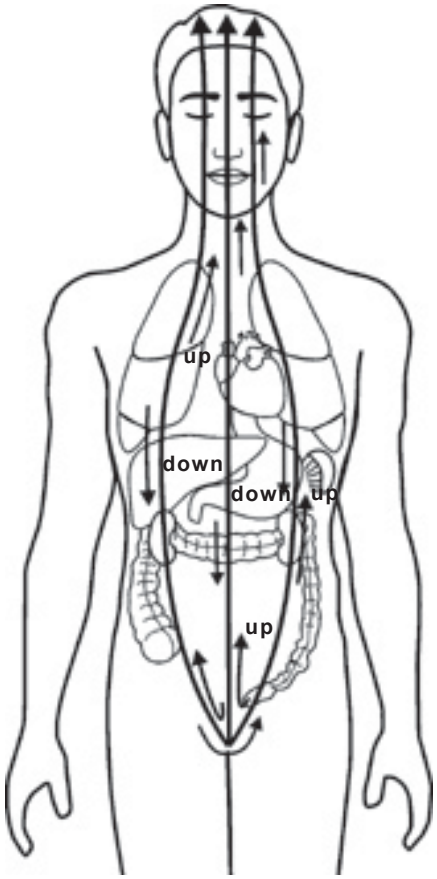
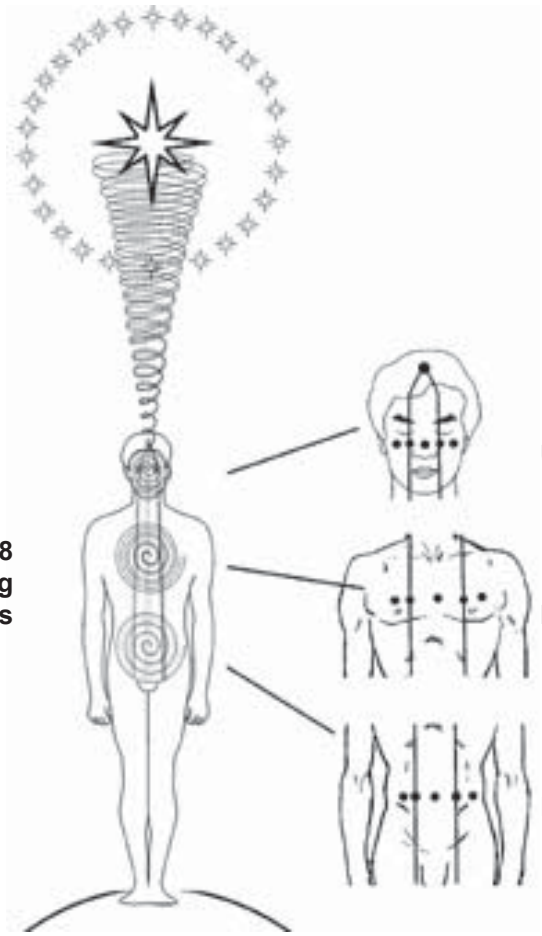


Fig. 5.11 *Three Thrusting Channels: Chi Energy can flow up or down.*

Universal Tao Practices that connect you with the unique Universal Conditions

The strong Polaris energy, which carries the information of all the stars of the northern sky, will shine straight down into the crown. It has a direct connection with the thrusting channels. These channels run through the central part of the body between the crown and the perineum.



The North Star and the 28 Constellations activating the Thrusting Channels and the 3 Tan Tiens.

Fig. 5.12 *Polaris Energy connecting with Three Tan Tiens and Thrusting Channels*

There are Three Thrusting Channels: one central, one left and one right. They create left/right balance and a direct vertical connection between all the important organs. The influence of this spiritual activation is already quite apparent in present human behavior and interest. More and more people are attracted to meditation, spirituality and self-development. In the next century, their number and the depth of their spiritual growth will certainly increase.

Another clear sign that humanity is quickly moving towards a new phase in its evolution and into a new direction is the fact that many things in society are changing at a dazzling speed. More than any time before in human history, the pace of life has quickened; many people feel highly pressured and confused, as they desperately try to keep up with the changes in all dimensions of social life and social realities, with encompassing changes occurring in such domains as science and technology, family ties, communications and security. Many people experience this whirlpool of change as a direct challenge to their currently weak condition and as a major reason for loss of energy.

The arrival of the light period in connection with the North Star activation must be seen as a possibility we have to fill in ourselves and not as a gift that will be automatically delivered to our home.

Although the transformation of energy is in principle available to everybody, our overall condition and the direction of our focus will greatly determine the level of integrating the newly arising condition of energy in the universe.

It is important to remember that health and freedom greatly depend on our ability to follow and integrate these universal changes. In the same way as an amoebae opens and closes and the heart expands and contracts, human evolution goes through phases (every 25,800 years) in which it flourishes and enters into decline. These phases are dictated by the earth's axis in the northern sky.

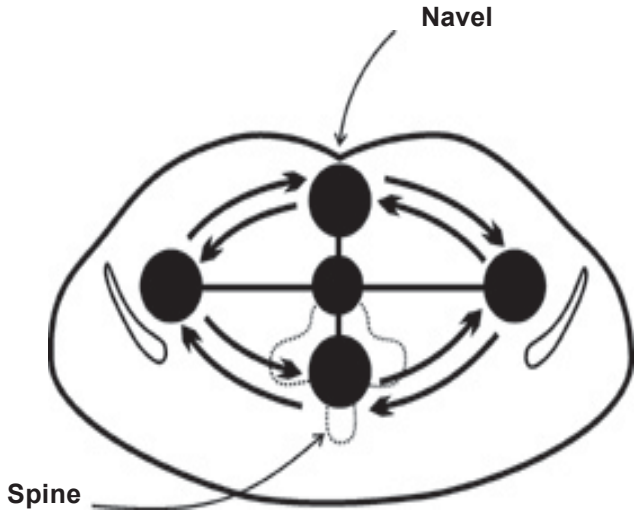


Fig. 5.13
Belt and Thrusting Channels at the Level of the Navel (Lower Tan Tien):
These Energy Channels run throughout the Body
and are Interconnected by Circular Horizontal Energy Bridges.

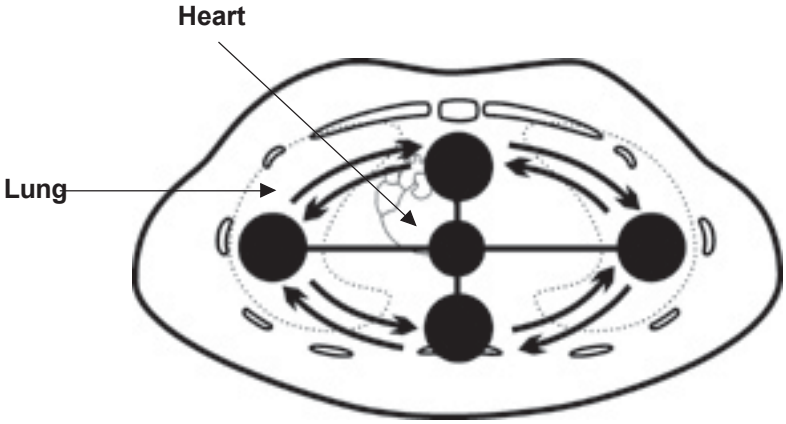


Fig. 5.14 *Belt and Thrusting Channels at the Level of the Heart (Middle Tan Tien)*

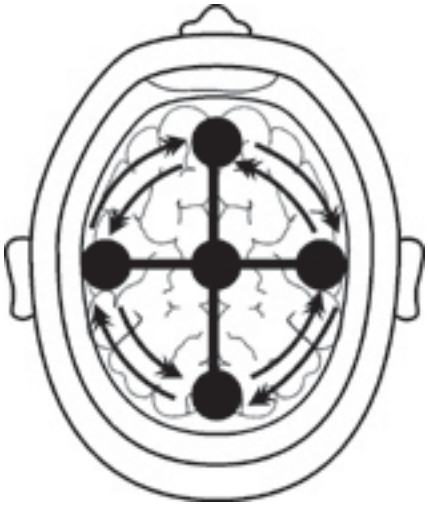


Fig. 5.15 *Belt and Thrusting Channels at the Level of the Crown (Upper Tan Tien)*

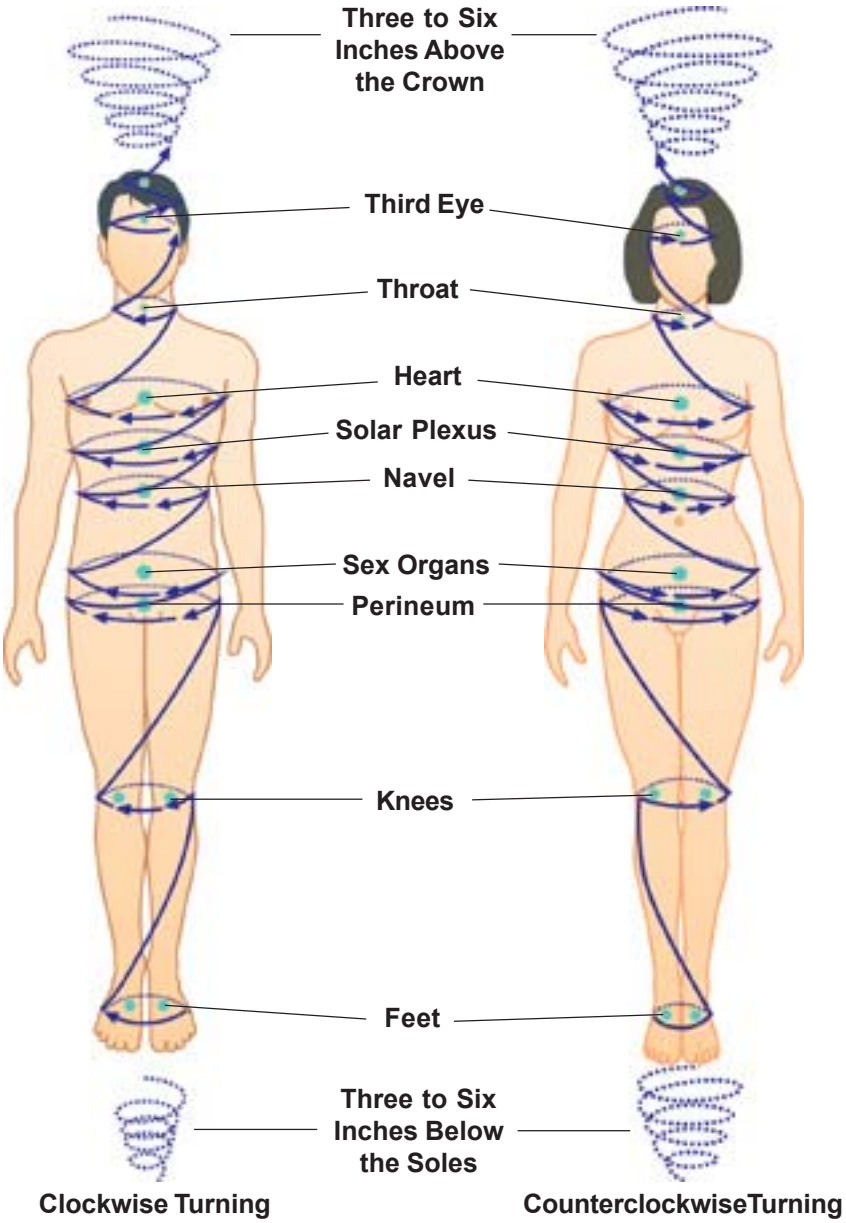


Fig. 5.16 *Belt Channels*

Practicing the Universal Tao techniques which will align you with this unique situation in the universe will open several spiritual channels.The first step in this process is the open-

ing of the Microcosmic Orbit (MCO). This is a channel directly connected to all the orbits in the universe reaching to the source. If this channel is open the information from the universe can be easily picked up and integrated. As you can see in Fig. 5.18, there are many different points on the MCO which need to be opened and connected.

These points are directly connected with the Tan Tiens (front and back) and with the points where the Tan Tiens are connected with each other and with the environment. As Fig. 5.18 shows, the MCO points, the Tan Tiens and the chakras (as they are known in the Hindu tradition) actually have the same location.

When the MCO opens and connects with the Tan Tiens, the Thrusting Channels will also start to open up. This enhances the heaven/earth connection, and energizes and detoxifies the body. Then all the five channels (the front and back channels and the three thrusting channels) connect with the Belt Channels. These are horizontal circular channels, which conserve and protect your life force. When these channels are open and connected, your energy level and your healing capacity will greatly increase. The Belt Channels connect Conception/Governing Vessels and Left/Right Thrusting Channels.

By activating the Tan Tiens and fusing the energy into one 'pearl' in the Tan Tien, the dualistic experience of time in a manifested past and a vibrational future diminishes and finally dissolves into one infinite experience of now.

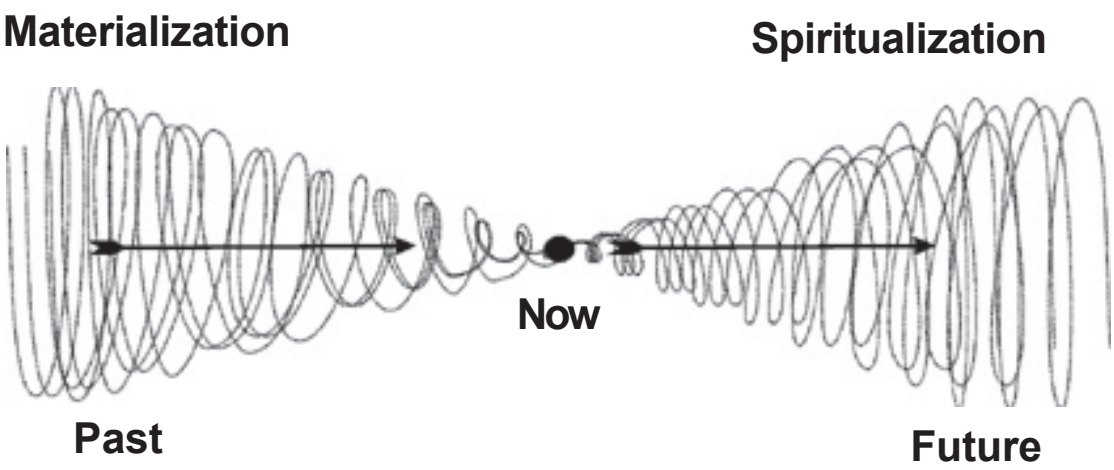


Fig. 5.17 *Human Evolution*

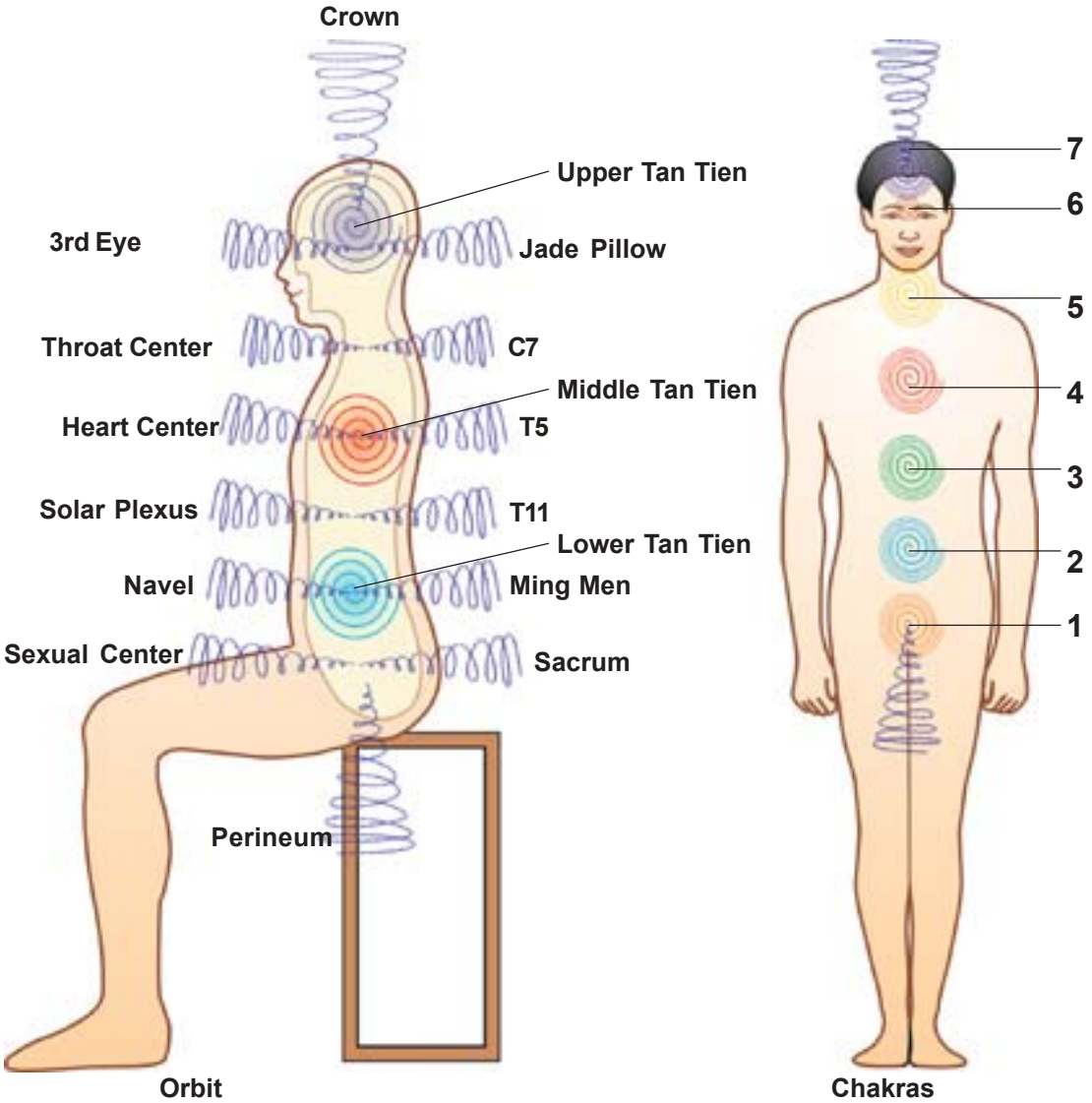


Fig. 5.18 *Microcosmic Orbit - Tan Tiens - Chakra Comparison*

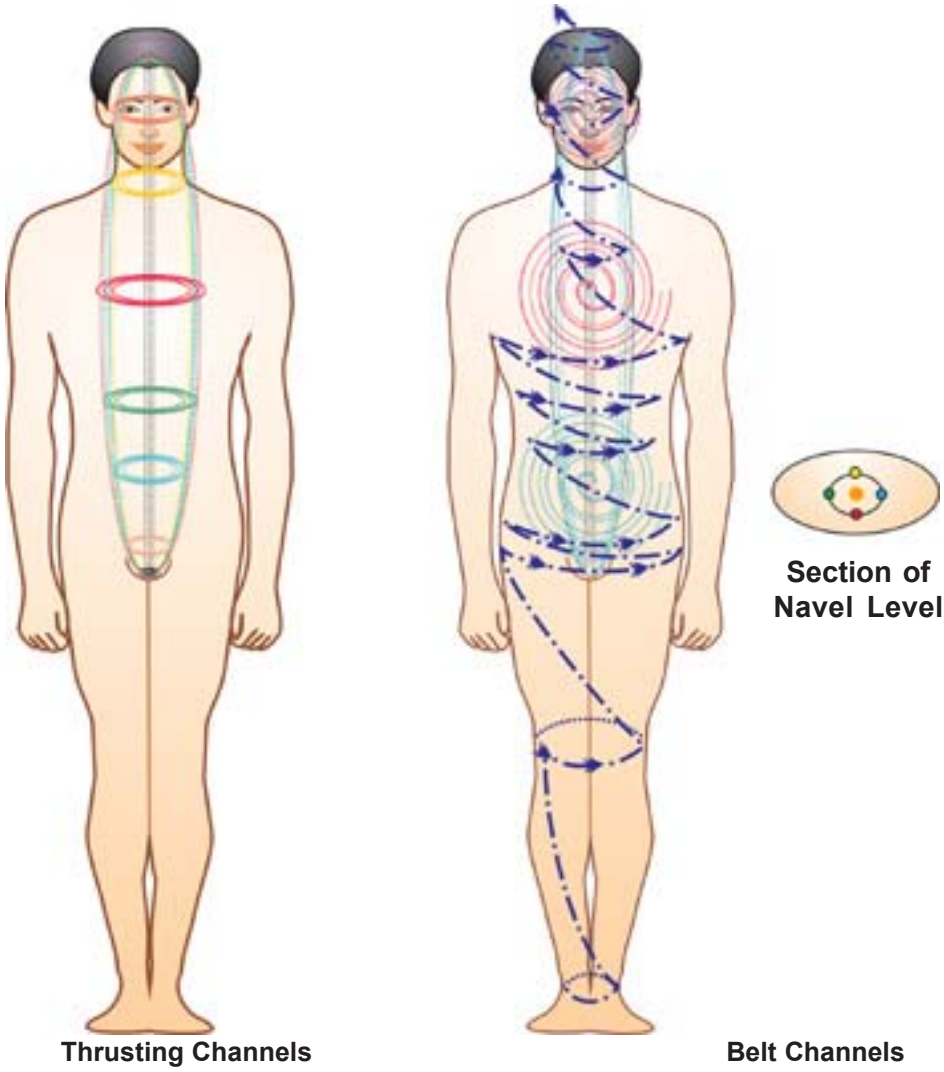


Fig. 5.19 *Microcosmic Orbit, Three Tan Tiens, Thrusting Channels, Belt Channels, Tan Tien Comparison.*

Chapter VI
Development of Humanity

Simultaneous Development of Humanity and the Universe

Our planet started its materialization process about 4.5 to 5 billion years ago. After the formation of a dense core and a protective atmosphere, the whole planet was covered with water. In this ancient sea, life emerged about 3.2 billion years ago, in its most primitive forms; viruses and bacteria. This, of course, is not when life began in the universe. We, in our true immortal state, are pure life and intelligence in human form. But around that time we began to manifest in physical existence.

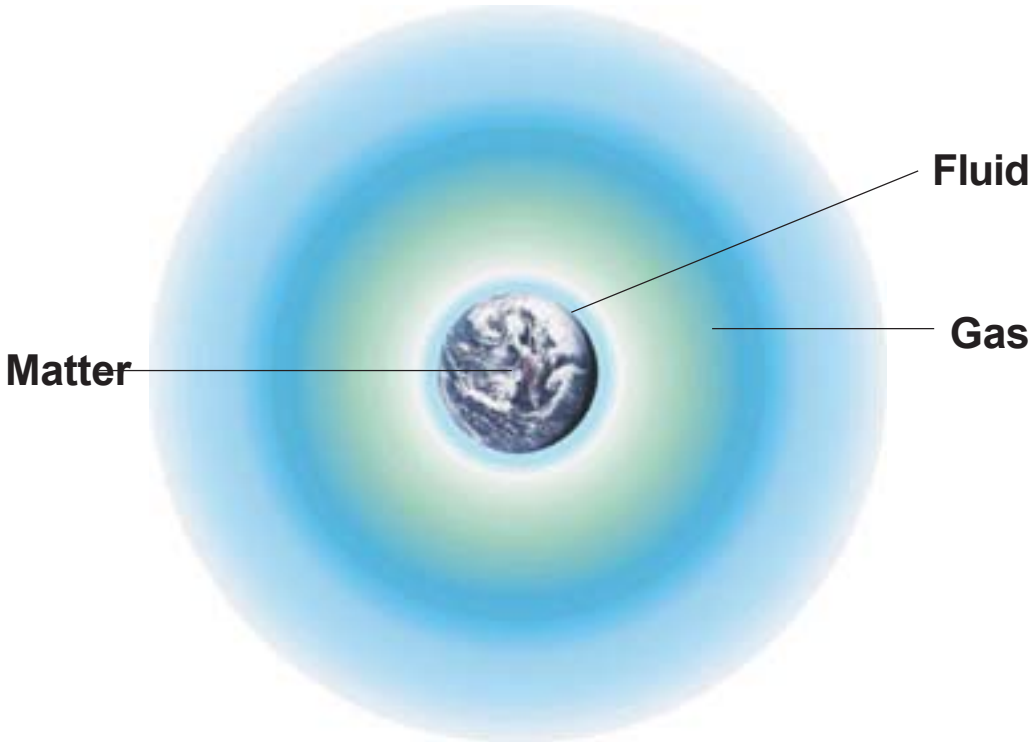
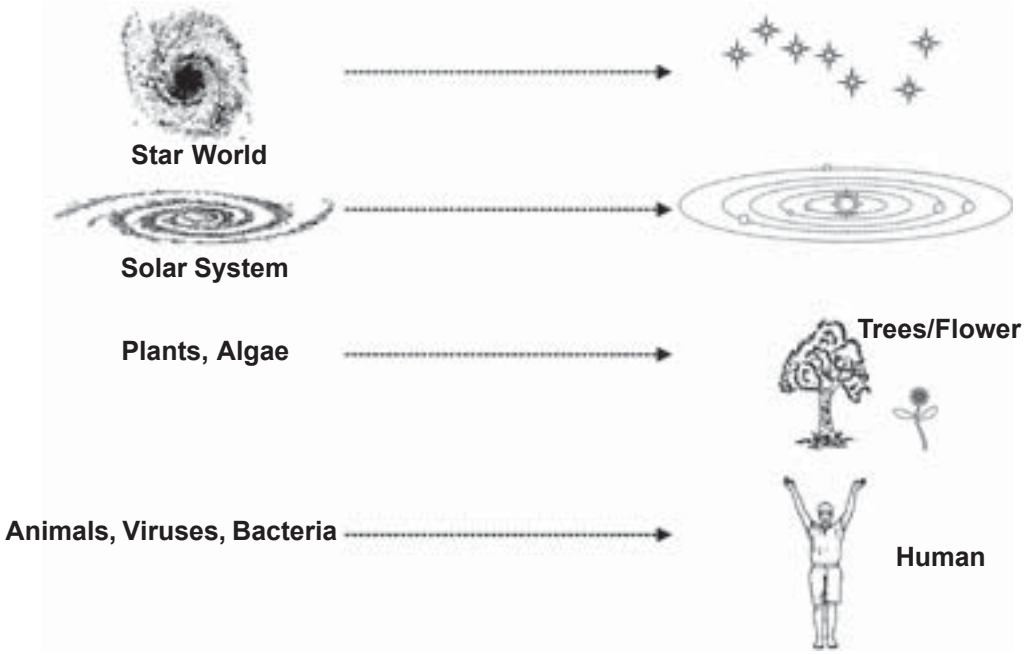


Fig. 6.1 *Materialization of Planet Earth*

The intelligence that materializes/manifests in the visible world and dematerializes/disappears in other dimensions is one and the same (omnipresent). When the solar system and the Milky Way developed further and became more structured, life on earth developed simultaneously. When the solar system started to form, the Milky Way had already been in existence for billions of years.



The formation of the solar system and humanity is due to a contracting/materializing force or spiral. This spiral crystallizes energetic laws and Chi causing the formation of our solar system and the earth. The unique earthly atmosphere has attracted life with humanity as its highest manifestation. Cosmic dust and particles gather and form elements around the already energetic (present in the world of law and Chi) human structure.

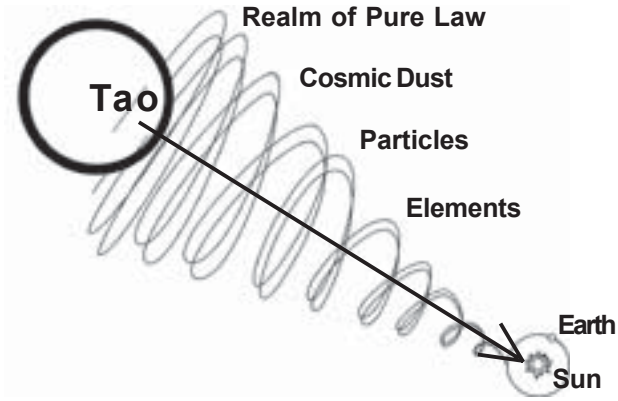
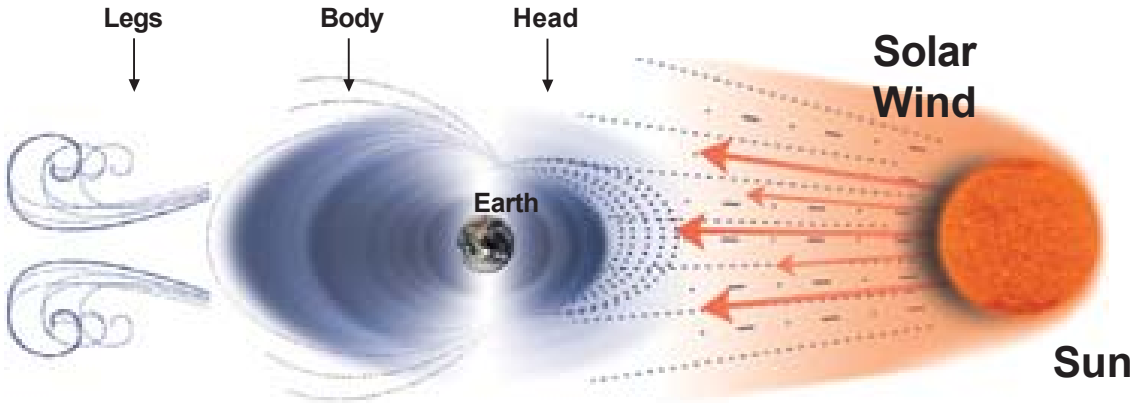


Fig. 6.3 *Humanity's Materializing Process*

Humankind in the Solar System

The human form can be seen in the solar system if we look at the deforming electromagnetic field of the earth, caused by the solar wind. This causes a flattening on the sunny side and an enlarging on the dark side of the field. An electromagnetic field is caused by the rotation around the earth's axis. In Figure 6.4, the earth would be at the place of the throat center. This center is seen as a center of expression but also of growth and the place where our two bodies (trunk and head) are fused. In an upright position on the earth, the body grows downwards and the head upwards from the throat.



Force from the Outer Planets

Fig. 6.4 *Solar Wind - Earth - Human Body*

The earth and heaven forces are in a balance of about 1:7. The earth is creating the rising force or the formation of the head. The heaven is the descending force or the formation of the body. This is according to growth and development. If we look at the energetic functions of the head and the body, the head would be the heaven force center, the lower body would be the earth force center.

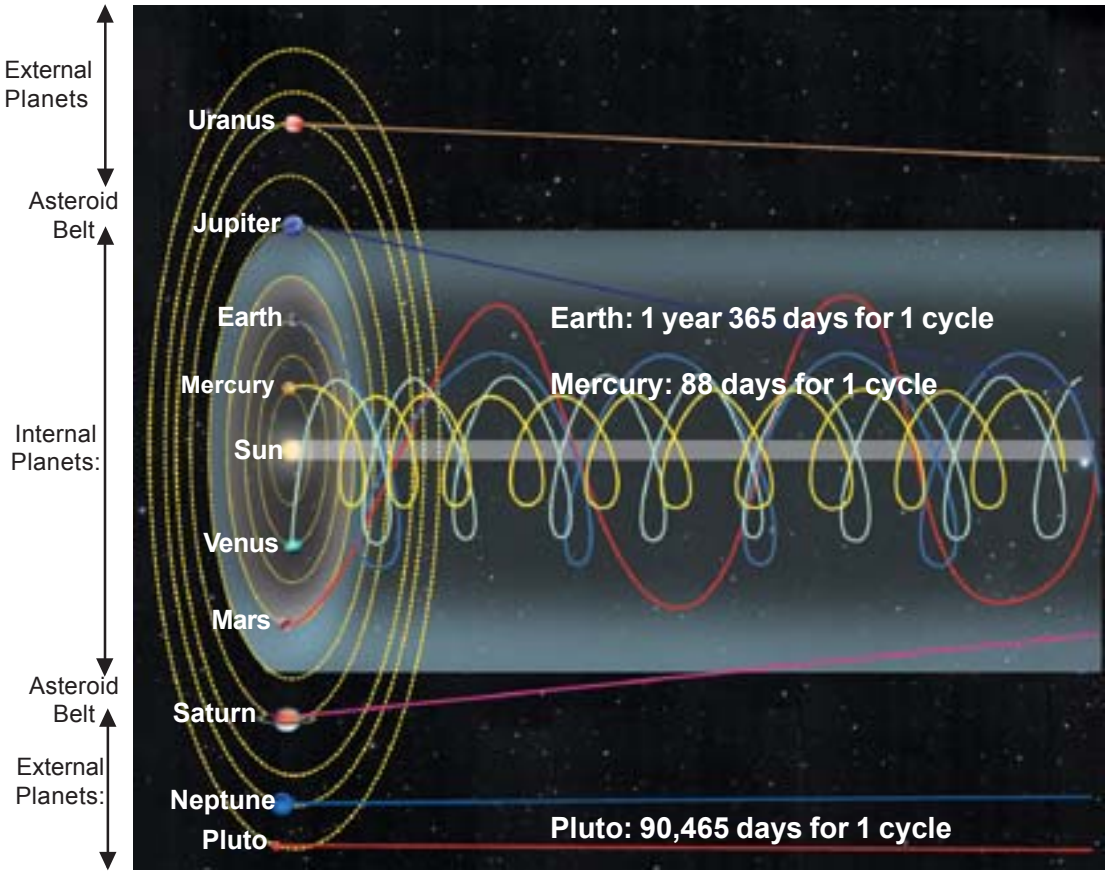


Fig. 6.5 *Movement of the Solar System through Space.*

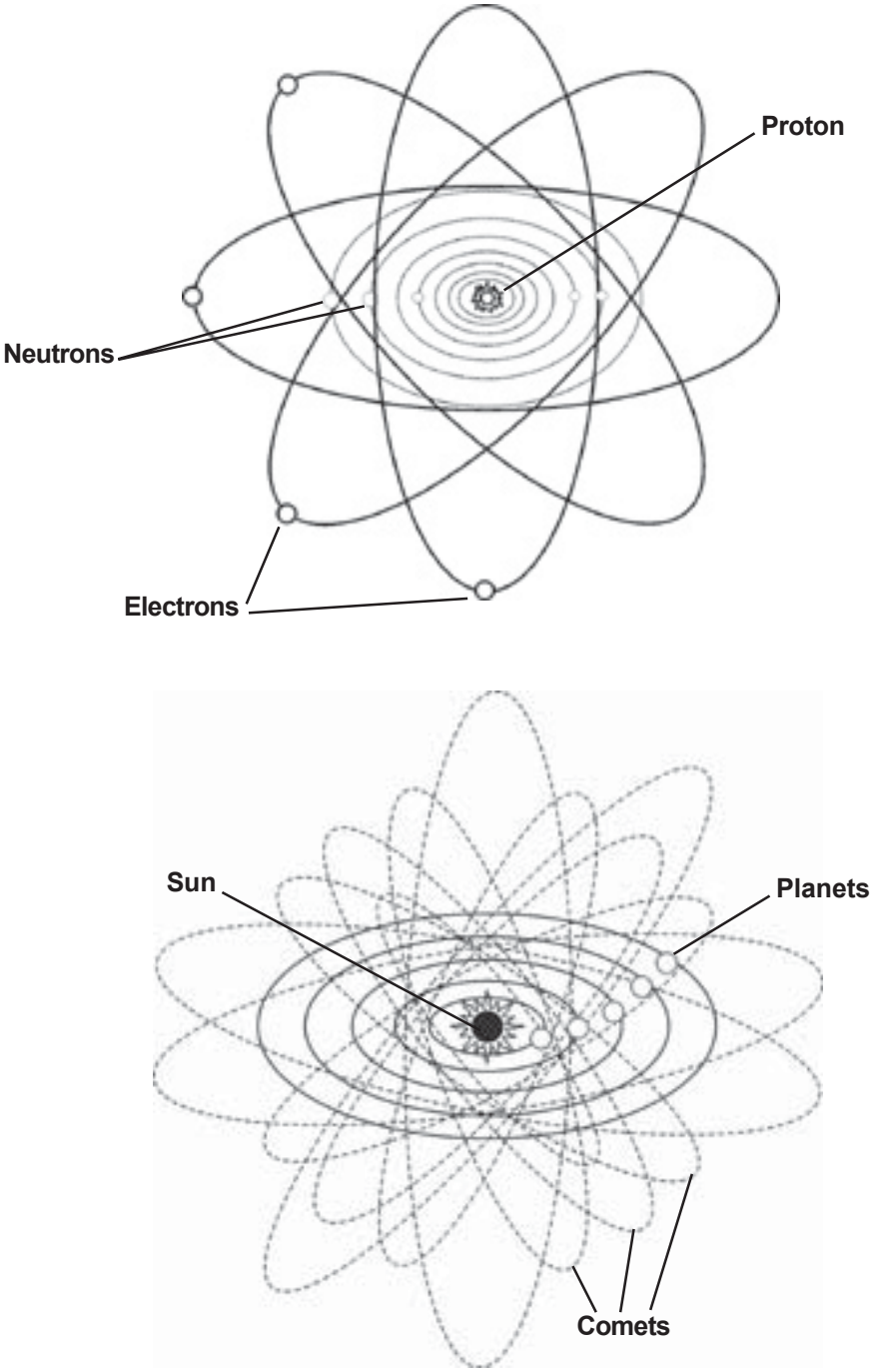


Fig 6.6 *Atomic Structure and Solar System Structure*

Comparison between Milky Way/Solar System and Human Cells/DNA Structure

If we look at the paths the sun and the planets are making, as they move around the center of the Milky Way, we observe a very interesting spiral structure. Because of the increasing rotation of the planets as we move outward through the solar system, the spiral structure becomes larger from Mercury to Pluto (rotation time for Mercury: 88 days, Pluto: 90,465 days).

The long stretched spiral shows a similarity to a DNA structure. These structures belong to the most fundamental building blocks of the body cells and also contain a complicated transmitter and receiver system that pick up the continuous changes in the solar system, the Milky Way and the vibrational world.

If we compare the form of the spiraling Milky Way and DNA seen below, the shape becomes even more similar.

Fig. 6.7 *DNA Double Helix*

The structure of the solar system is found to be very similar to the structure of an atom (See fig. 6.6). The sun and the planets represent the nucleus of the atom, the sun with a positive charge and the planets a balancing charge. The sun would be the proton and the planets the neutrons. The comets of the solar system are comparable with the electrons of an atom, carrying a negative charge. There's a striking relationship between the I Ching and the genetic structure, with the number 64 as the central aspect, illustrating the relationship between spiritual laws and genetic structure.

Energetic Embryology

The original unity of man and woman is symbolically seen in the Tai Chi Symbol. The yin and yang in perfect balance together. One stage before this they were still one indistinguishable entity; the Wu Chi state. The energy of man and woman also originates from this oneness. This state is still deeply inherent in all our body cells. So, before the egg and sperm physically fused, man and woman united on a vibrational level. The original oneness literally draws the egg and sperm together.

A recent research project found that in at least 85% of the cases, women were unconsciously acting on a deep drive to fertilize an egg. Something inside of them decides that now is the time. This strong desire then intuitively triggers the attention of the man. This shows the interaction of the karmic charge in the soul and the individual awareness field of human beings.

Fig. 6.8 *Egg and Sperm, the Universal Big Bang and the Little Bang*

At the moment of fertilization, or when the sperm penetrates through the egg's membrane wall, a mini light explosion happens. This series of events contains the complete evolutionary process of universe and humanity. Connected to the information of the egg and sperm and the Universal consciousness, the cell knows how to produce a human being.

This process is very much like the birth process of a star. Energy and then gas build up potential between different stars. The potential rises to a peak where a cloud implodes and falls into different eggs or cocoons. Through the increasing density and pressure a nuclear reaction follows automatically and a new star comes into existence.

The creative ability of the intelligence present in this one cell can only be called miraculous. Everyone could be enlightened from the abilities of the young embryo. Although modern science can demonstrate interesting observations and pictures of how a fully grown human being manifests from this one cell, it cannot understand the theological perspective as to why?

More open-minded scientists agree that the mystery of life cannot be explained by chemistry, genes and chromosomes. Many of them now realize that cells should not be thought of as a rigid unit, but rather as a momentary aspect of spatially ordered (submicroscopic), metabolic movement (same for tissues and organs). All normal cells in the

human ovum have the same chromosomes, yet they differ in various ways, so the way genes react must be dictated by external information that enters through the membrane into the cytoplasm and the nucleus.

The vibrational potential between the parents resonates with the soul, which is externally present and interactive long before conception. It enters the embryo around the 49th day after fertilization. The fertilized egg shows (during the first 3 days) a process of splitting, comparable to the earth axis shift that we described before in chapter V (see fig. 5.9). Three or four new axes are created during that time, bringing the number of cells to about 16. This process is also described in the I Ching.

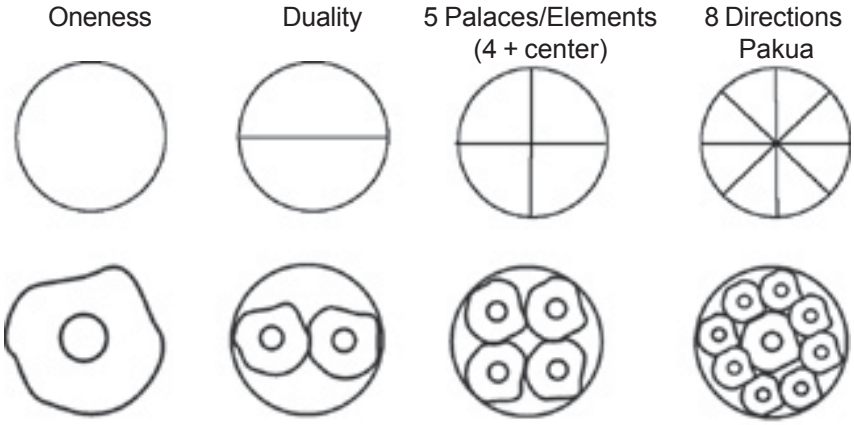


Fig. 6.9 *In Embryology this stage is called the Morula.*
One gives rise to two, two gives rise to four, four to eight.

The fertilized egg stores much of its information in the space and charge between the inside and the outside. The inside is related to the woman's energy and the Conception Vessel. The outside holds the fathers' energy and the Governing Vessel energy. The Governing Vessel functions as a receiving station that picks up all external vibrations. The Conception Vessel internalizes the information and acts as an internal transmission system. In later development the male energy stays more in the vibrational field and gathers around the nervous system and Governing Vessel.

The female energy gathers through the blood production system in the belly, organs, and the Conception Vessel. The Governing Vessel is seen as the source of yang vessels, the Conception Vessel as the source of yin vessels. Until day 16, the embryo consists of 2 layers: the ectoderm and endoderm. Around that time a third layer called the mesoderm will materialize along the central axis of the embryo. The Chong Mo (invisible axis of the cell) has been there all the time, but not in a manifested form. The Chong Mo creates the connection between the Jing (sex potential) and the Shen (spiritual potential).

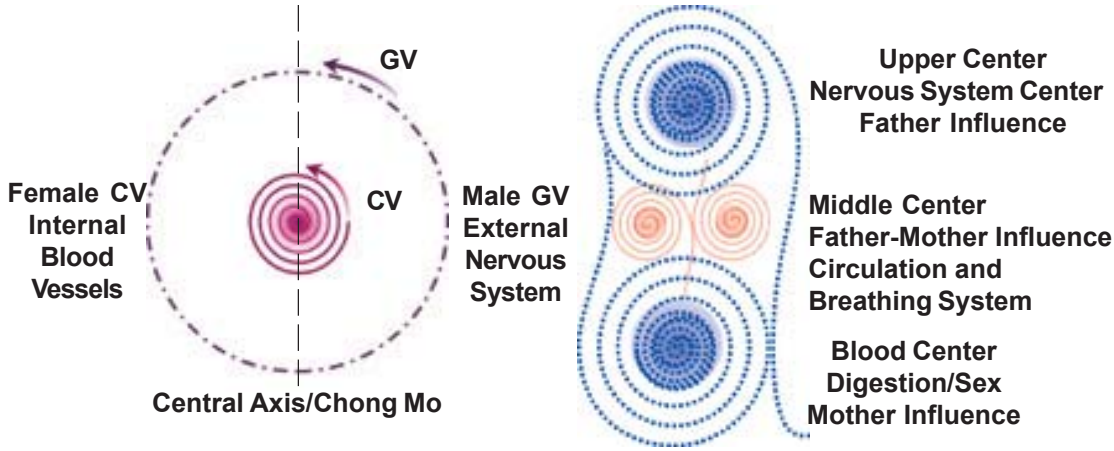


Fig. 6.10 *Parental influences on embryonic development.*

Energetic Human Model in the Universe

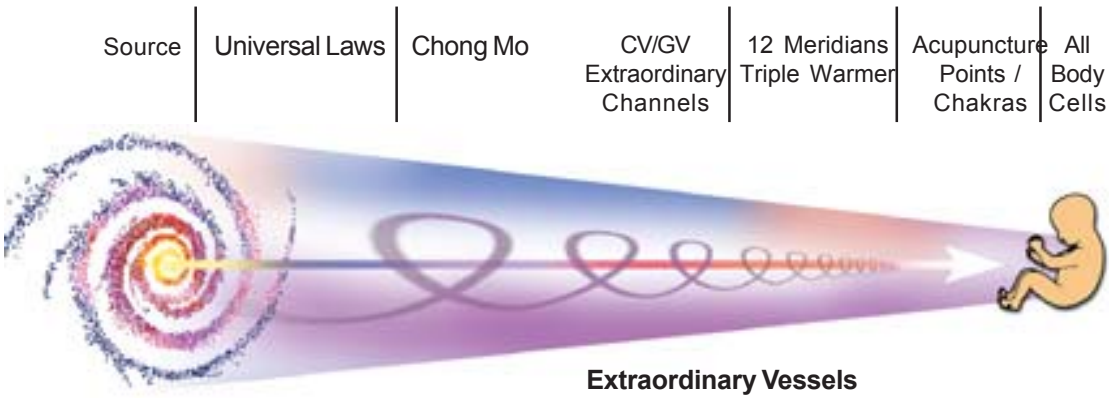


Fig. 6.11 *Embryo-Source*

In Chinese medicine, the triple warmer is directly related to the source. It is directly related to the fascia system as a mechanism to form or shape the fascia, according to the energetic spiral network. From the 3-layer embryo, the five different elements divide.

The fire element is divided into two parts: primary and secondary fire expressing the high complexity of the human heart/fire quality. So, six meridian couples are formed. This meridian network spreads out in the body with over a thousand vital points, where the electromagnetic force gathers.

➢ Ectoderm	- Secondary Fire	Triple Warmer
		Pericardium
	- Metal	Large Intestine
		Lungs
➢ Mesoderm	- Earth	Spleen
		Stomach
	- Wood	Liver
		Gallbladder
➢ Endoderm	- Primary Fire	Heart
		Small Intestine
	- Water	Kidneys
		Bladder

Fig. 6.12 *Human Cells- Six Meridians Couples - Twelve Meridians*

Waves of Endless Motion

As we have pointed out, humanity developed following one simultaneous materialization process that manifested the entire solar system, the earth and human society. We can say the universe is evolving as a whole. This can happen only with a wavelike motion of life and death or materialization and dematerialization. Just as stars and solar systems are born and come into existence all of it will one day be subject to destruction, decline and dematerialization. The model that is currently used on human development is mainly based on written history, although many facts show that there must have been highly developed civilizations over five thousand years ago. Egyptian, Mayan, Tibetan and Hindu cultures speak of previous civilizations dated long before the times that are generally accepted.

Fig. 6.13 *Waves of Endless Creation*

The old Newtonian material, rational identification with our external senses, prevents us seeing the authenticity of our true origin. It would be narrow minded to limit ourselves to written material as our only proof. The use of wisdom, life experience and intelligence is the way to penetrate deep behind the limits of the senses. Otherwise we block ourselves and only experience life in our physical boundaries, denying the endless, nature of life. As we see in fig. 6.14, all life comes out of this timeless and formless void, the source. The play, the interaction of polarity creates waves that differentiate in time and space, through the physical universe, the Milky Way, the solar system, the earth, in the body with all its cells, particles and waves. The deeper we go into our physical existence the lower the vibration. Freedom lies in the experience of all these different vibrations while relating to the same timeless and spaceless reality.

Expanding Human Consciousness through the Ages

The work of Rudolf Steiner, the founder of anthroposophy shows many interesting references to planetary energies and human development. This work is more connected to Greek mythology than to Chinese literature. It gives an interesting picture of the link between the universe and human development. Greek mythology places its own qualities on the planets, as do the Taoist or Chinese astrologers.

The planets are the purest symbols of the personality and emotional/social human behaviors. The planetary world is the world of the soul, with the sun as the middle point or the core of the field of consciousness. This chapter is inspired by philosophy of anthroposophy.

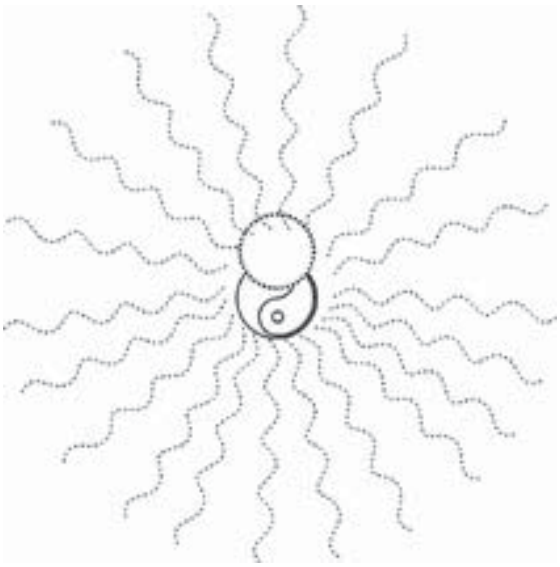


Fig. 6.14 *Sun expressing Cosmic Law and Chi*

For a long time in the West, astronomy was based on the Ptolemaic view of the solar system (second century Greek astronomer). In this view, the earth was the unmoving center of the universe and all planets circled around it (which is true of course looking from the standpoint of the observer). In anthroposophy, this Ptolemaic point of view is still used as a map to describe the evolution of the soul.

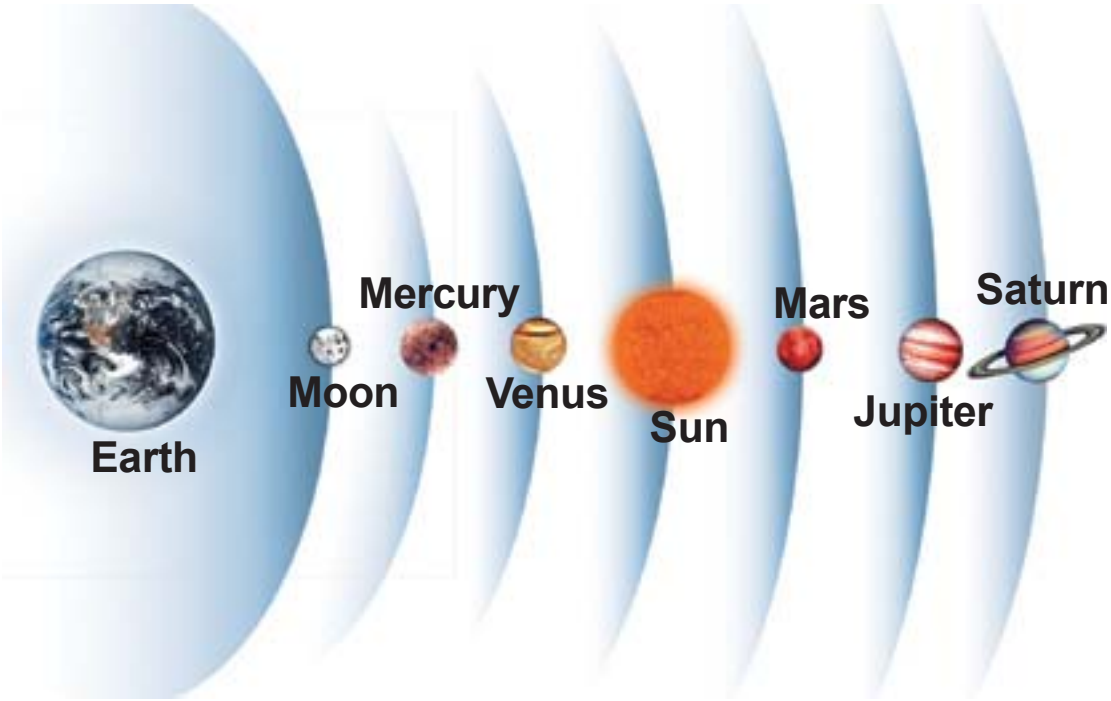


Fig. 6.15 *Solar System according to Ptolemy*

The earth is the physical place where the human soul connects with the body. Earth, sun and moon form the basic energies for the development of humanity. The deep contents of these energies rise when they meet each other. The meeting of sun and moon represents the interaction between the consciousness and unconsciousness. But on another level it can also be seen as consciousness of mind (sun) and consciousness of the body (moon).

Fig. 6.17 *Sun and Moon*

Mercury represents the ability to connect on a neutral, non-emotional basis. It connects the energy of sun and moon. Among primitive tribes, the group functions as a unit and is more important than the individual. Connection - the quality of Mercury - gives birth to the Venus quality, which has safety and security as its key attributes. They are the unconscious goal of forming a group. People gradually learned to increase their survival rate and enhanced their security through control of the environment (agriculture, hunting).

Mars is the desire to be independent. It stands for the formation of the conscious ego. This is a reaction to the contractive energy of the group. To create balance between this expanding and contractive force another energy was needed. This energy was found in the gods by rituals and prayers (religion). This quality is related to Jupiter. The deeper and higher unity within the group and growing consciousness. The experience of pleasure and pain related to the internal/external struggle in a search for balance and growing consciousness is related to Saturn. It highlights the process of decision making based on your experiences of pleasure and pain.

The discovery of the three trans-saturnal planets created an extra dimension or a higher octave in our solar system's awareness.

Chapter VII
Soul in the Planetary World

The solar system is an energy structure composed of a central area largely consisting of mass and light and nine awareness belts encircling its center. The planets are the materialized forms of these belts. Each of these belts has unique frequencies and qualities. Since the soul remains strongly connected to the sun, throughout life an evolution through the solar awareness belts takes place.

The Taoist masters clearly distinguish two forms of souls. The sun related cloud soul (hun) and the moon related white soul (p'o). The p'o (one of the stages of the soul) constituent of this dual soul comes into being immediately upon birth, preceding the emergence of the hun which is the yang element of the spiritual nature.

In the following pages we will not use the dualistic principle of the soul, but rather see the soul as one.

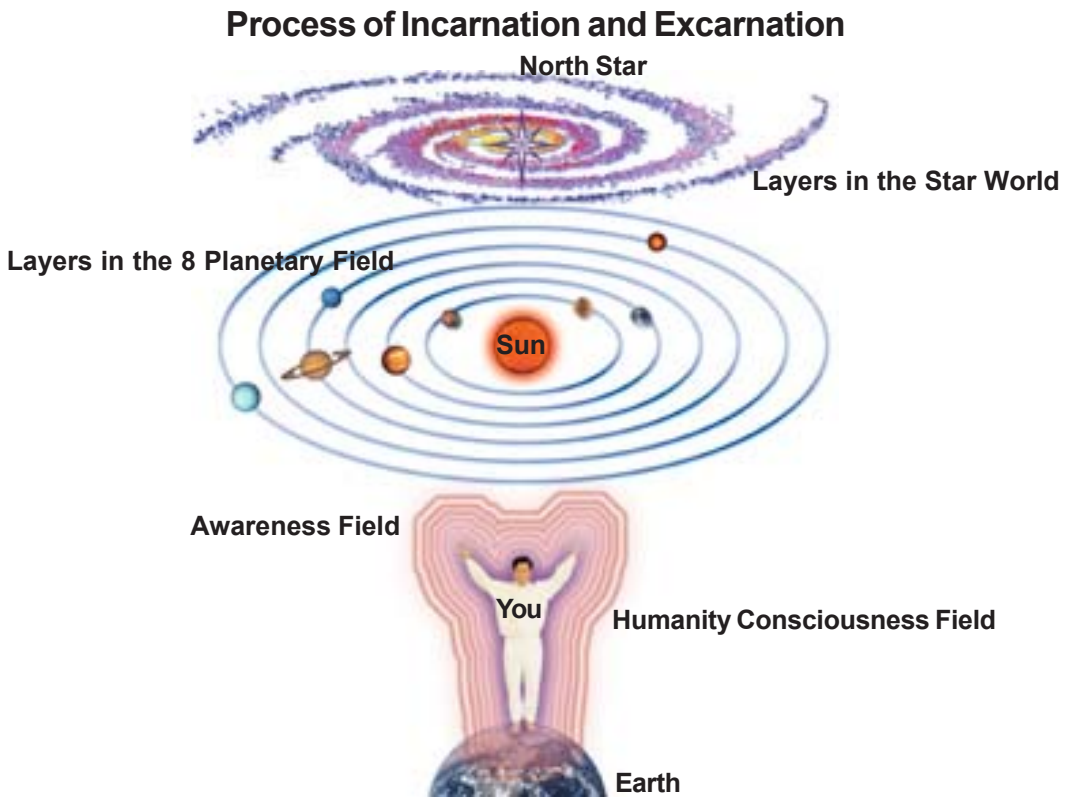


Fig. 7.1 *Star World - Planetary World - Human Awareness Field*

When the soul starts its incarnation process it moves through the world of stars and is attracted by the unity of our solar system with the sun as its medium. The sun (a star in the solar system) functions as a giant satellite station between the worlds of stars and planets.

According to the karmic information carried by the soul, it will remain a shorter or longer period in the frequencies of some planets. During these stays it receives the necessary information that will create or awaken our specific learning possibilities.

Each soul remains longer in one sphere than another, creating a very distinctive quality in the character of that person. We have greater connections to some of these planets and weaker ones to others. During this incarnation process the soul will move from the unmanifested world through the star world, the external planets, the internal planets and the moon-earth sphere; it will be constantly attracted by the force of the sun and later the earth. The electro-plasmic force of humanity around the earth functions as an awareness belt that connects the soul with life on earth.

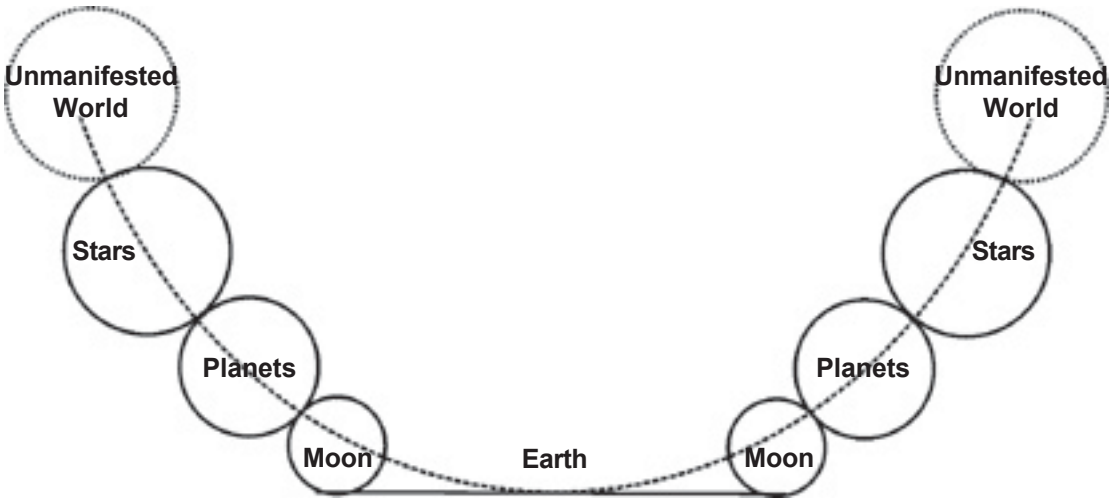


Fig. 7.2 *Birth - Life - Death*

When a baby is born, the incarnation process is not yet complete, as we can clearly see in the personality of the child. In the first two life cycles (7 year cycle) the full incarnation of the soul still has to be completed. Often around puberty, at the beginning of the third stage, the true personality reveals itself, sometimes even as a shock to the parents. The same happens in the last cycles of life. The person increasingly loses interest and connection with earth and life on the planet, as the soul withdraws towards the higher worlds. Although they are on the other side of the spiral of life, children and old people often dwell with their soul still or already in a higher realm.

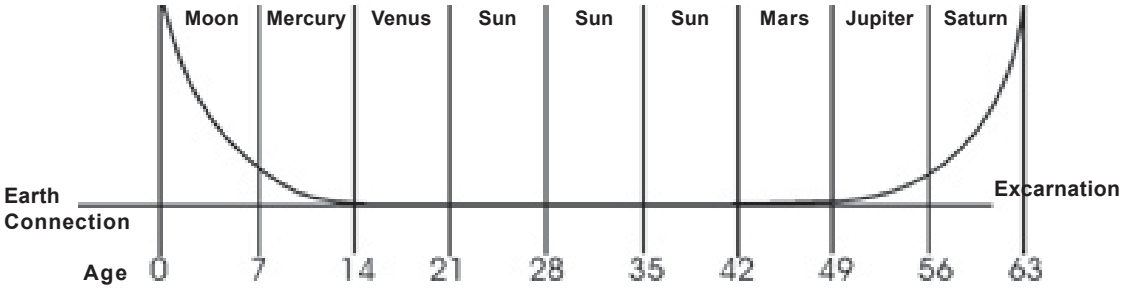


Fig. 7.3 *Development of the Soul through the Planetary World Based on Anthroposophical Theory.*

In the above picture based on the anthroposophical view of the growth of the soul, the earth is seen as the physical middle point and the sun as the center of soul development. The sun reflects the law of triple unity in the universe. Three planets are placed on each side, the sun is placed in threefold, in the central region.

The stages of incomplete incarnation would be in the stage of the moon and Mercury for the child and of beginning excarnation in the stage of Jupiter and Saturn for elder people.

The discovery of the three trans-saturnal planets has also occurred together with growing human life expectations. This creates a different schedule. In modern society the period of withdrawal from active life and into retirement has clearly become longer than in past centuries. This increased period extends in the trans-saturnal sphere of Uranus, Neptune and Pluto. Because of the low energy and awareness level of many people, this 21 extra years is simply an extension, which results in an increased life span but of a lower quality of life.

Most people have wasted most of their life force before they enter into the trans-saturnal period. This often creates an inability to integrate these planetary influences, with the result that the awareness level drastically diminishes during the last stages of life.

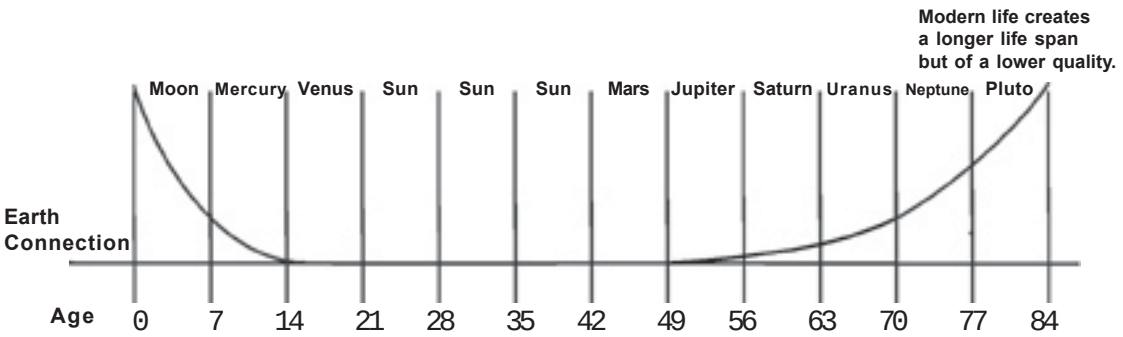


Fig. 7.4

Application in the Universal Tao Practice

In the Universal Tao practice the period of the sun (ages 21 to 42 years) is used to build up a strong connection with the sun and then the North Star consciousness (See fig. 7.5). The North Star is the Taoist spiritual gate. Once the connection with the source is established through the North Star and the Universal light, the effect of the planets on the practitioners' emotional and mental state will be reduced. To establish this sun/North Star connection, the five elemental forces must be balanced and the frequencies of the awareness belts around the sun (related to the planets) must be integrated. During the sun period, the collective consciousness inherent in each cell of our body will be nurtured by the high quality of the sun's frequency. This energy is mostly used to manifest oneself in the world; relationships, work, house, children, etc.

In Taoist practice the awakening light of the sun period is a perfect time to establish the North Star/spiritual connection. Once the connection with the spiritual realm is established we can distinguish two different realities. The planetary influences will still affect us but the rooting to earth and heaven will make it much easier to stay in connection with the spiritual laws, the life in our body and their interaction. This way we stop nurturing the ego and begin to live a life beyond the personality and the related planetary spheres.

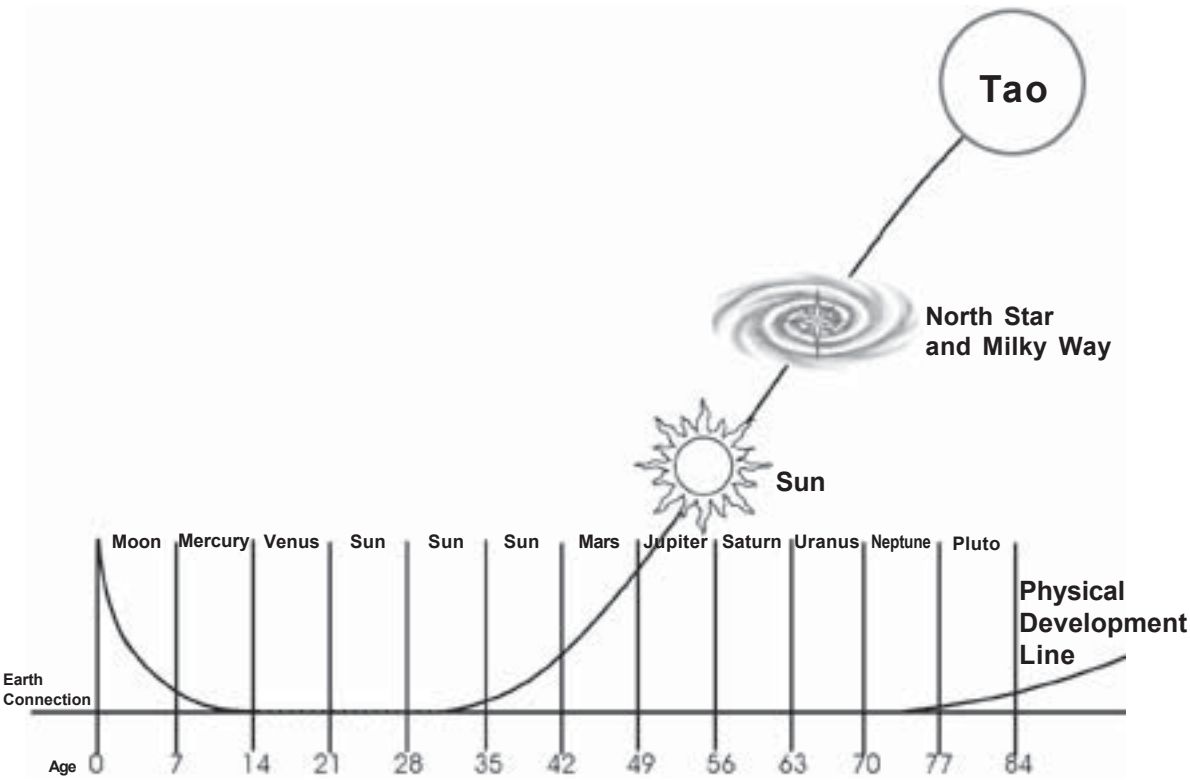


Fig. 7.5 *Taoist Development Line*

Through the Universal Tao practice the sun period can be used to cultivate the soul and spirit body. The soul is the medium between the physical plane and the spiritual world. The soul naturally follows the evolution through the planetary world but the spirit does not have this limitation. The determining factor is the point of identification and realization. The sun period is also the time when the level of Chi in the physical body is at its peak. The physical and biological development is at its peak at around 28 years of age in men and 24 years of age in women. At that time the body becomes a temple in which the soul and spirit can be cultivated. Taoist practitioners cultivate quantity (life span) combined with quality (spiritual realization).

Through the Universal Tao practices this peak state can be kept and even improved upon during the following decades. Just like many Taoist masters and some isolated tribes found that getting older does not have to mean getting weaker. They became fitter as they grew older, which was confirmed by western doctors. These people were wise and had clear connections to the gods. Is this not a better idea about getting older: “I get wiser, more experienced and intelligent, I integrate this in my body, so I will be fit and strong in my old age”. Since most people waste this energy upon superficial satisfaction, it leaks away and when they reach old age, when they have lost most of their energy, they feel weak, scattered and disconnected from their spiritual task. When the sun/North Star connection is open, your whole life will be inspired and guided by the unlimited wisdom of the universe. The connection with the light will enable you to lead an active but peaceful life. You will still experience the growth of the soul through the more emotional planetary world, but the spiritual connection will allow you to observe this process, see reality through the emotions and integrate it within the physical body.

In this way the energy of the experience is integrated to nurture the consciousness. Rudolf Steiner said that the goal in life is to balance the planetary qualities to reach the highest state in the solar system which he called “the sun awareness”. During the excarnation, the soul will move again through the planetary world and will be purified from all earthly, materialistic and emotional experiences. The fruits of the past life are harvested and condensed to form the seeds for the next life. This process is continued outside the planetary world in the world of stars and the immaterialized realm or the world of vibrations.

In the Universal Tao, the Fusion of the Five Elements practice is used to balance the qualities of the five elements in the body. This practice is also called internal alchemy. After strengthening and purifying the body during the basic practices and fusion practice, the energy and virtues of the five vital organs will be cultivated (kidney, heart, spleen, lungs, liver). These energies will be gathered in specific areas (pakuas) around the navel into the collection points. From the collection points, the energy will be drawn to other pakuas that is formed around the navel. From these pakuas the energy is blended, purified and stored in the center (Lower Tan Tien).

Fig. 7.6 *Immortal Meditating*

The energy will be condensed until it becomes a radiating pearl. This pearl will be held at the original meeting point, or the point where the information of the first cell or basic spark in your body is kept. Taoists use the metaphor of the pearl or crystal, to refer to the highly concentrated purified energy.

This pearl will be cultivated and slowly transformed into spiritual energy. It will become the house of the soul and spirit body, one's balance, control and Universal connection point.

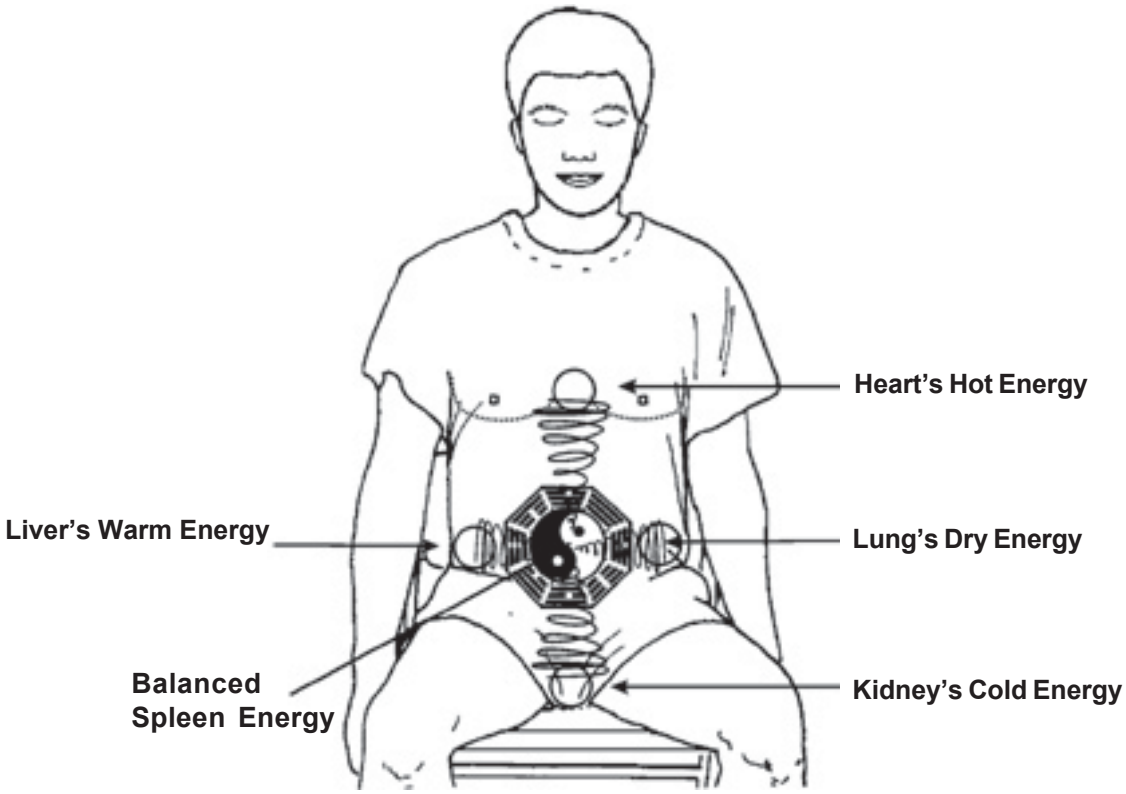


Fig. 7.7 *Pakua Collection Points*

The pearl will then serve to open different energy channels in the body and to travel outside the physical body through the world of planets/stars and vibrations. The pearl has the same function as the sun in our solar system: centering, collecting, controlling and connecting to higher realms. When the center is weak (no pearl), there is no central point of consciousness or control. This implies weakness and inability to decide where to go or what to do. When we use the mind to gather the energy at one point, the spark that is still glowing inside of you will create ignition and start to shine again. Just as our solar system formed some 5 billion years ago.

Comparing Solar System and Organ System

Fig. 7.8 *Contracting Spiral - Energy gathering in the Center - Spontaneous Inflammation*

When the pearl is shining and stable in the Lower Tan Tien, it will be the source of energy for all the organs. The place where the pearl is kept is the area of the small intestine. In Chinese medicine this is the yang meridian of primary fire, the center of transformation.

When the pearl is stronger and more refined, it can be moved towards the heart center. While the small intestine fire is more a physical fire, the fire of the heart carries a higher vibration. This fire is related to the quality of the sun, the soul and the state of compassion. It is the practitioner's task to create the right internal condition for this by self-cultivation and good deeds to the benefit of all beings. In the Kan and Li or Immortal Practices, the pearl moves up to the center of the head. It moves up by itself as the fruit of self-transformation. At this point the pearl changes and acquires a very high frequency, related to the world of spirit. During meditation practice it is good to expand one's energy field and connect with all forces of the universe. Subsequently contracting and storing in the Lower Tan Tien will make these energies available in your daily life. During meditation we can use the moon and earth force in the Lower Tan Tien, the sun energy in the Middle Tan Tien and the North Star energy in the Upper Tan Tien.

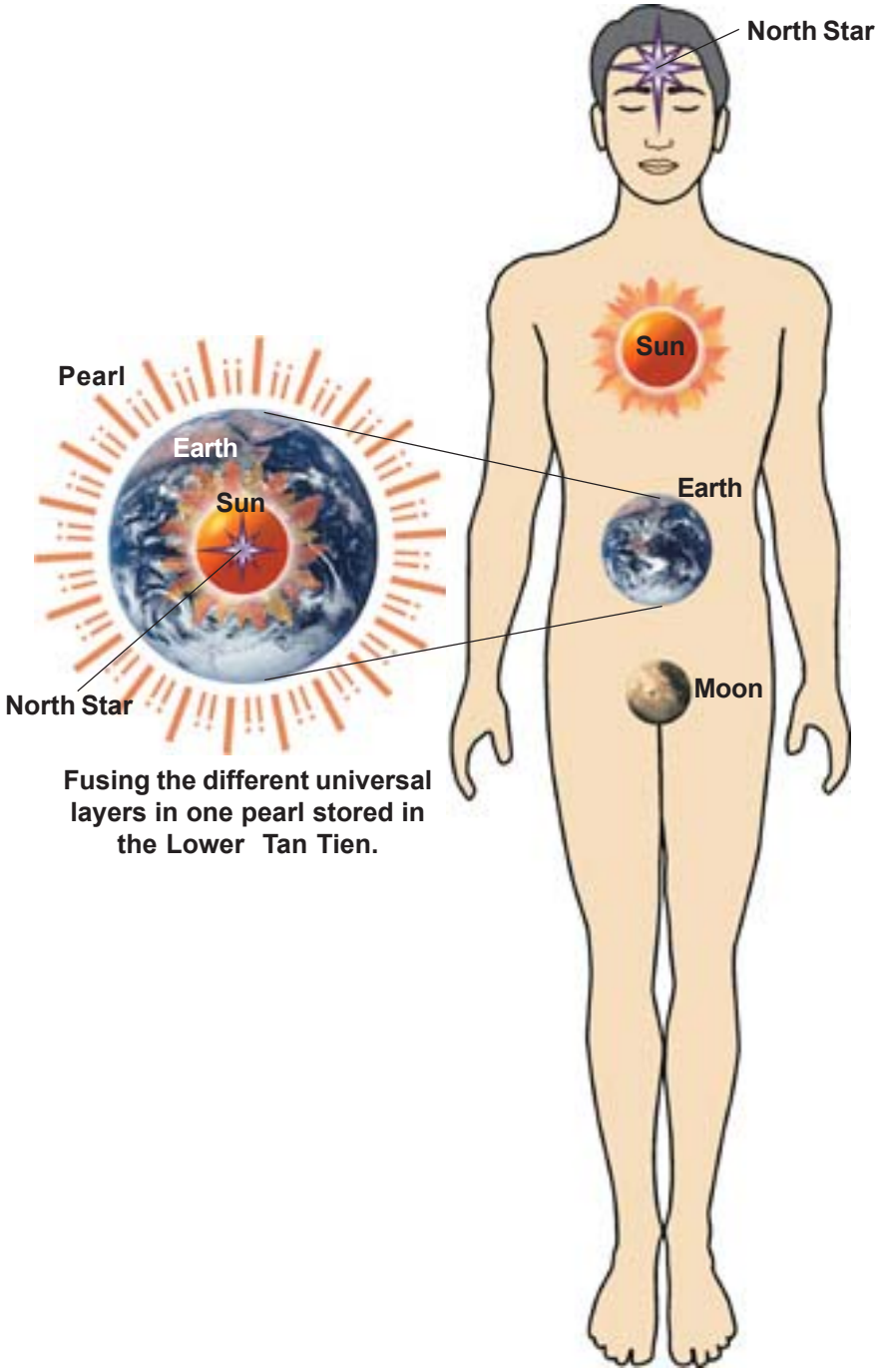


Fig. 7.9 *Fusing the Pearl*

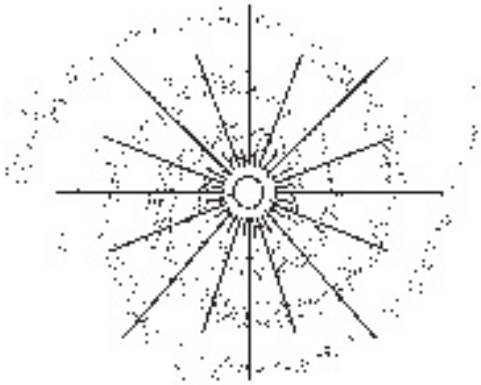


Fig. 7.10 *The Pearl in the Tan Tien has a function similar to that of the Sun in our Solar System.*

At the end of the meditation the North Star will be brought into the sun in the Middle Tan Tien. After that both will be put in the earth or the Lower Tan Tien ("Three in one principle"). This connective and gathering process symbolizes unification, or the spiritual world becoming the core of your life.

Use of Planetary Energies in East and West

Translation	Chinese English Spelling	Western Name	Element
Chronographic Star	Ch'en Hsing	Mercury	Water
Grand White	T'ai Po	Venus	Metal
Sparkling Diluter	Ying Huo	Mars	Fire
Year Star	Sui Hsing	Jupiter	Wood
Quelling Star	Chen Hsing	Saturn	Earth

In China the planets have been used in connection with the Five Elements and the Five Heavenly Palaces in their relationship with the 28 Lunar Mansions for thousands of years. The planets were called the "naked eye five" or the "five stars" or sometimes the "five pacers". The precise movements of the planets as seen from the earth was not a focus point for the ancient Taoist, although the trajectories were approximately known by about the fifth century. The translation of the Chinese name of the planets gives us an idea of the nature of their energy.

Outside China there is a long history of the astrological use of planets, recorded since the third millennium B.C. in the Babylonian civilization. The Babylonians also connected the planets with different gods and goddesses, a link found in many cultures.

Planet	Babylonian	Hindu	Egyptian	Greek	Roman
Sun	Shamash	Surya	Ra	Helios	Apollo
Moon	Sin	Chandra	Chamse	Artemis	Diana
Mercury	Nabu	Hanuman	Toth	Hermis	Mercurius
Venus	Ishtar	Lalita	Hathoor	Aphrodite	Venus
Mars	Nergal	Mangala	Horus	Ares	Mars
Jupiter	Marduk	Indra	Amoun	Zeus	Jupiter
Saturn	Ninurta	Brahma	Sebek	Kronos	Saturn

Western astrological signs are different, but comparable with Taoist astrology - the base of our stellar and planetary initiation. It uses signs for the planets that have slightly different connections with the world of soul and spirit, where the sun is the image of concentrated spirit.

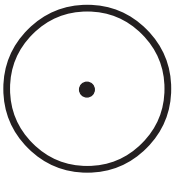


Fig. 7.11 *The circle is a sign of wholeness and the dot represents the center of the solar system.*

Fig. 7.12 *The vertical division of the circle, or the half circle is the symbol for the moon and also for the soul (divided consciousness).*

Fig. 7.13 *When we integrate matter or the cross in the circle of spirit we get the sign for the earth: matter in spirit.*

Fig. 7.14 *Venus is the Sign of Spirit over Matter.*

Fig. 7.15 *Mars shows the Cross of Matter over spirit.*

Fig. 7.16 *Mercury as the Planet of Connection mediates between the different Forces or is the Spirit as a Bridge between Soul and Body.*

Fig. 7.17 *Jupiter shows the Soul Elevated over the Cross of Matter.*

Fig. 7.18 *Saturn is the Cross of Matter above the Crescent of the Soul.*

In Greek mythology and related anthroposophical studies, soul types are described based on the expression of the planets. The observations of the expression of these heavenly bodies was the vehicle to get in contact with the higher psychic world.

In the Taoist practices the planets are seen from the Tao and its manifestation in the five elements and so the internal energy of the planets have a relation with the colors of the five elements and the seasonal cycle. Because of this different point of view (their interpretation of male/female planets), the connection they make with the body organs and systems and also the personality connected to a particular planet, is different between Chinese and Western astrology.

For instance in the West the planet Venus is a female planet connected with the Greek goddess of love and beauty, Aphrodite. While Jupiter is known as a male planet with a dominating, controlling energy and the god Zeus.

In the East, wood is the quality for spring. Spring gives birth to new life (so it is female). Since wood is the planet of Jupiter it is considered to be a female planet. Metal is the quality for autumn. In autumn life withdraws and contracts (male). Venus is in the West, so it is seen as a male planet. The planets Mercury and Venus seem to be used in opposite ways in the two systems. So, it is important to use the planets according to one system only and not to mix them together.

Modality	- Lungs +		- Kidneys +		- Liver +		- Heart +		- Spleen +	
Emotion	Sadness, Grief	Righteousness, Courage	Fear, Stress, Fright	Gentleness	Anger	Kindness	Impatience, Cruelty, Hate	Love, Honor, Respect	Worry	Fairness, Openness
Shape	Collapsed, Flattened Ball	Tall, Straight	Awkward, Tiny, Compressed	Round, Full, Expansive	Spear-like, Sharp	Round, Smooth	Moving, Spiny	Straight, Open	Irregular	Open, Wide, Big
Color	Grey	Bright White	Dark Grey, Cloudy	Bright Sky Blue	Red, Cloudy	Soft Green	Orange, Muddy	Bright Red	Cloudy	Mellow Yellow
Smell	Musty	Pure, Fresh	Foul, Urine	Fresh	Pungent	Sweet, Fragrant	Sharp Burnt	Aromatic Incense	Sour	Clean, Dry
Temperature	Cold	Comfortable, Warm	Cold, Chilly	Cool, Comfortable	Hot, Explosive	Warm, Pleasant	Unsteady	Warm, Full	Humid	Warm, Mid-range
Sound	Low, No Force	Strong Firm, Resonant	High-pitched Shrill	Whisper, Pleasant to the Ear	Flashing, Loud	Melodious	Noisy, Irregular	Deep, Stable, Steady, Solid	Shaky	Clear, Soft, in Tune
Feeling	No Energy, Exhausted	Uplifted	Tight, Closed in	Relaxed, High, Centered	Pain, Tough, Rough	Nurtured	Irregular	Stable, Protected	Uncertain	Balanced, Even
Texture	Crumpled	Firm but Comfortable	Slippery	Velvet	Rough	Soft	Cactus-like	Comfort-able, Secure	Sticky	Smooth, Firm
Size	Deflated, Low	Expanding Upward	Small	Limitless	Expanding, Exploding	Expanding, Gently	Small, Pointed	Expanding	Out of Proportion	Big, Deep
Taste	Salty	Satisfying	Salty	Mild, Honey	Bitter	Sweet	Acidic	Satisfying	Sour	Smooth, Clean
Direction	Downward	Upward	Scattered	Circular	Attacking	Enfolding	Scattered	Open, Steady	Con-stricted	Horizontal

Fig. 7.19 *Typical Qualities of the Five Vital Organs*

Chapter VIII

Cranium: Projection of the Five Elements, Five Star Palaces & Five Planetary Forces

Development of Craniosacral Rhythm

Taoist theory on the structure of the universe and the invisible world can be partly recognized on a more physical and chemical level in more recent discoveries in science and bodywork. An interesting link was discovered between the five elements - the five planets, the cranium and the five vital organs. These more recent discoveries make the Taoist esoteric knowledge pragmatic in meditations and treatments. Taoist masters always mentioned that the power of the Governing Vessel is controlled by the power in its two poles: the **sacrum** and the **cranium**.

Since the Governing Vessel is a reflection of the Universal orbits, coming all the way from the Tao, a free flow of energy between the two poles is essential to provide the body with the right information to function in accordance to the Universal law. The treatment of the physical manifestation of this system is developed in a specialized art of bodywork, deriving from osteopathy, called craniosacral therapy. Touching the crown to connect another person to the light is well known in several cultures and thousands of years old.

The Governing Vessel has been used as a spiritual channel for more than 5,000 years, but the art of working with craniosacral rhythm is about 100 years old and focuses on other energy levels of the human skull. The discovery of this bodily intelligence would appear to be directly connected with Universal and human evolution. It is a further development of awareness and sensitivity of the bioplasmic (personal aura) and electroplasmic field (shared with all other humans). Long ago humans were only aware of their rhythm of breathing. The primitive human being recognized the breath as a sign of life. They were strongly physically dependent and oriented. The breath provided them with vital energy (Cosmic light) and oxygen to nourish the exchange process between their and outer world and the transformation process in the belly.

The heart center was undeveloped and the cardiovascular system situated more deeply inside of the body. They were not aware of their heartbeat. The development of the heart center gave birth to a more conscious soul connection. As the breathing developed and grew into the heart center, the sociability of the lung energy came forward.

System	Level	Connection
* Meridian Rhythm (Cycle)	- Spiritual	- Unmanifested World
* Cranial Rhythm	- Higher Mental/Spiritual	- Star Connection
* Heart Rhythm	- Lower Mental/Social/Emotional	- Sun Connection
* Breathing Rhythm	- Physical	- Earth/Moon Connection

In the heart center, the connection with other beings, the emotions and virtues arise. When the heart center developed into a higher state, compassion evolved as a bridge to the higher mental and spiritual level. Chi and awareness in the nervous system or spiritual center is known in every spiritual tradition but the rhythm of the craniosacral system is a relatively new discovery.

Craniosacral System

The craniosacral rhythm develops through the subtle cranial shifts that occur during the unfolding of the embryonic nervous system and is a translation of the information in the Governing Vessel. The brain and its ventricles produce a liquid called cerebrospinal fluid. This fluid is rhythmically pumped into the sub-arachnoidal space around the spinal cord between the surrounding fascia layers (the meninges). The Governing Vessel is located at the back of the spinal cord - in the same space between the arachnoid and pia mater, all the way from the perineum to the upper lip (and internally back down to the perineum). In this way the Governing Vessel is constantly charging the cerebrospinal fluid and the spine.

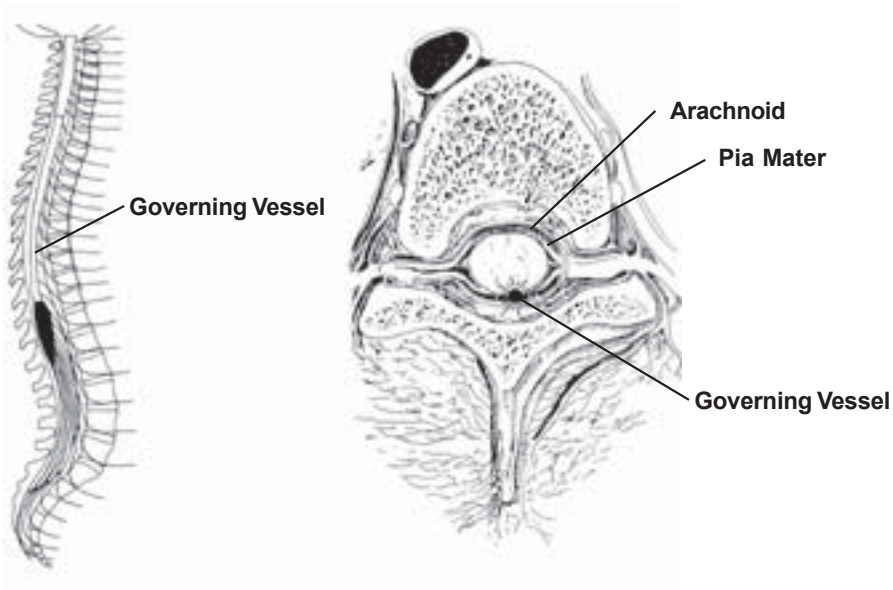


Fig. 8.1 *The Meningal System contains the Energy of the Governing Vessel.*

The cerebrospinal fluid is produced in the ventricles of the brain and is completely renewed every 5 to 6 hours. There is about 135 cm^3 of this fluid present in the body and the ventricles secrete more than half a litre daily. It must circulate continuously; take this information as encouragement to do **spinal cord breathing** frequently during the day. (refer to Cosmic Healing I). Besides the spiritual information in the Governing Vessel the cerebrospinal fluid contains the deep memory of biological evolution from the oldest planetary oceans. A period of more than three billions years of evolution from bacteria and viruses to human beings is stored there. The high and low "water marks" in the system have a rate of about 8 to 12 times per minute. During the phases the membrane system in the head contracts and expands causing the movement of cerebrospinal fluid in the spine. The cranial movements, created through these waves, are 0.04 to 1.5 millimeters, but with some training they can be felt throughout the whole body. It is important to remember that the craniosacral rhythm is fully independent of the breathing process.

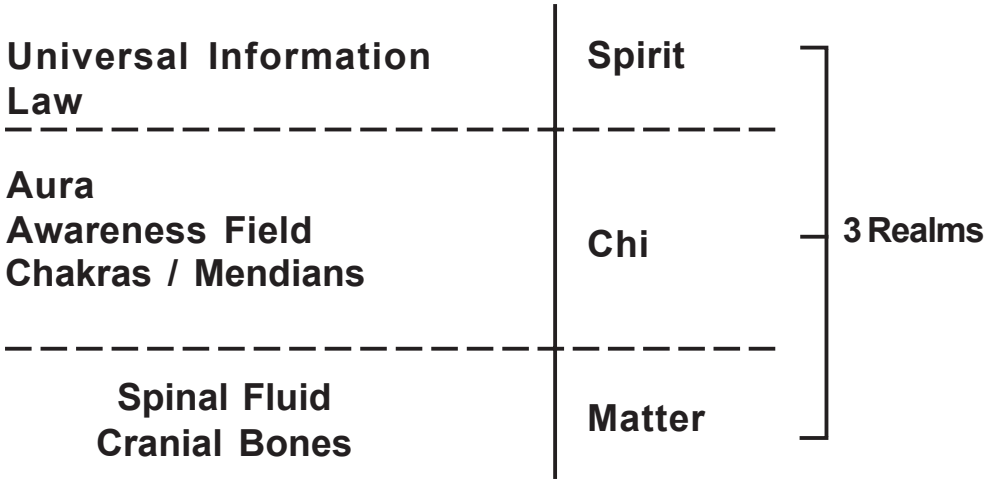


Fig. 8.2 *Three Realms in the Universe and in the Human Body*

In a meditative state confusion may occur between these two rhythms. Touching the skull very lightly and stopping the breathing for about 10 seconds in the outbreath can help you out of this confusion.

Even though the energy in the cranial system is more spiritually oriented, four different dimensions can be recognized (spiritual, mental, emotional, physical).

Any kind of impact on one of these four layers changes the quality and energy in the other three: treatment, meditation, thoughts, physical stress or strong emotions.

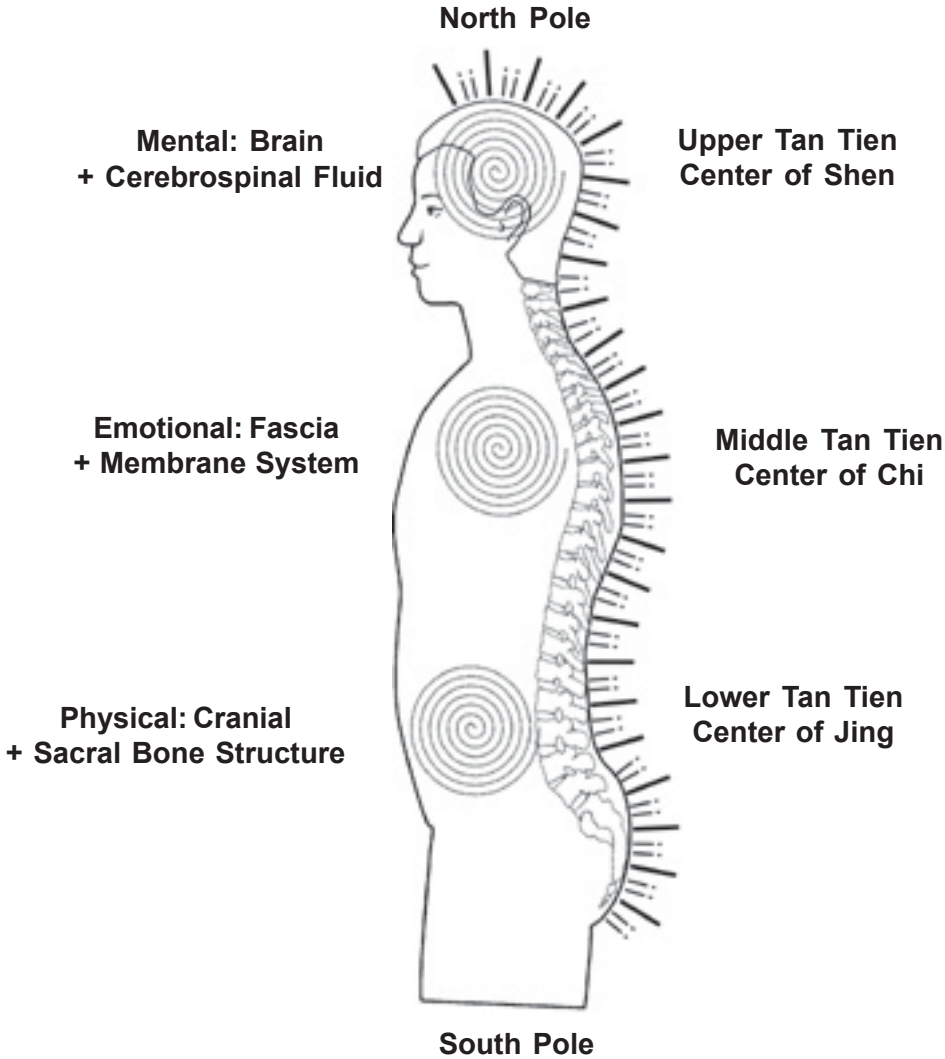


Fig. 8.3 *Spiritual Governing Vessel and its Aware Expression (Craniosacral System)*

The whole cranial system is a big antenna and transmitter of information to all the different energy levels in the body. To work with it in our treatments or just for our own meditations, it is necessary to practice, to feel and study the different layers of the system.

The physical layer (cranial bones) and the spiritual layer (Governing Vessel) are the most easy and most practical ones to register in your body. This mental/spinal fluid and emotional fascia needs more study and practice. The craniosacral system has a north pole, the cranium and a south pole, the sacrum. Under normal conditions they work together in perfect rhythm. The cranium is the pneumatic/mechanical driving force; the sacrum follows the cranium impulses. In cases of stress or blockages there can be small timing differences between the two.

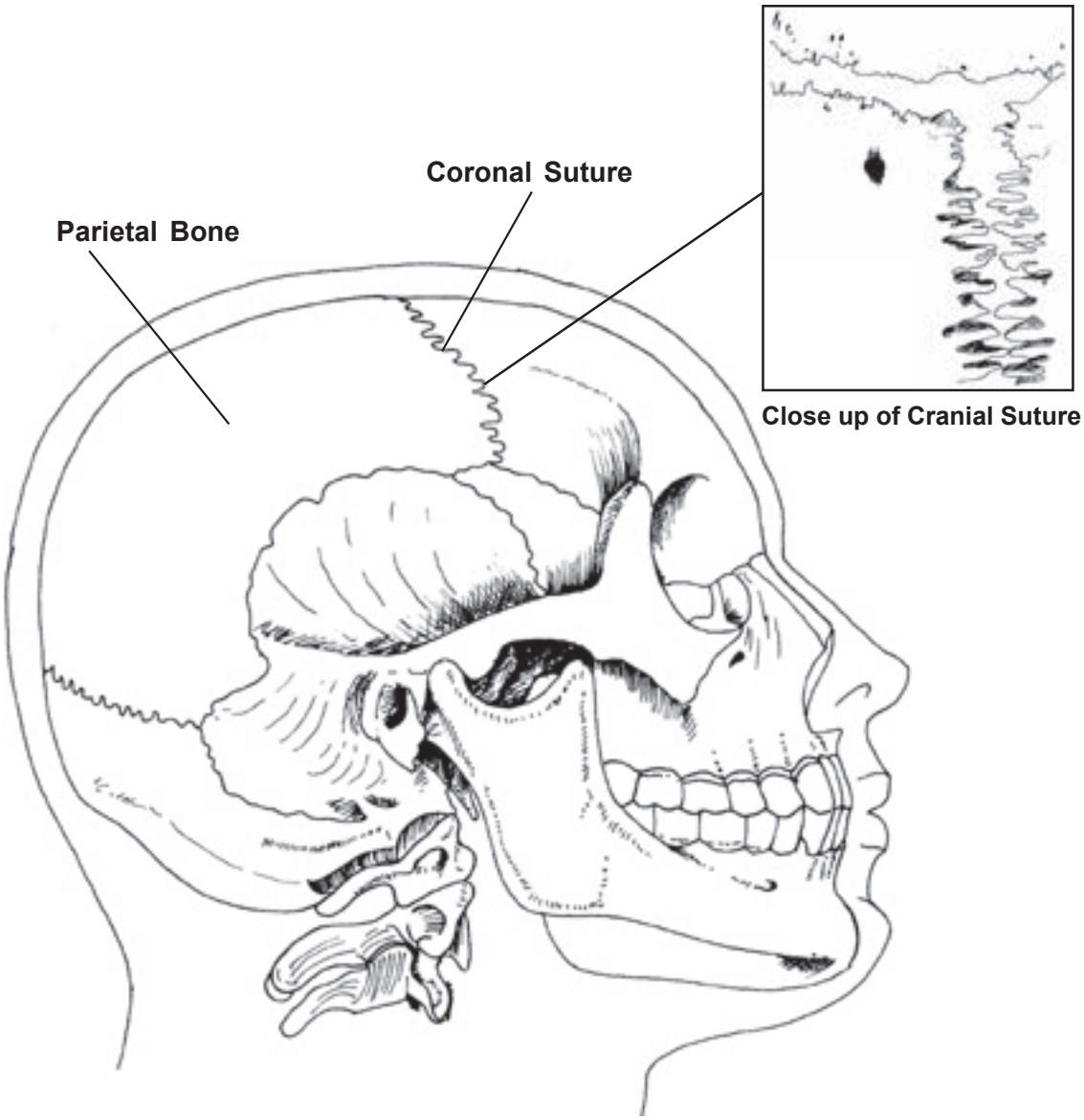


Fig.8.4 *Cranial Bone*

The suture lines in the cranial system form zigzag pointed protrusions that have a function in receiving stellar vibrations. From these structures subtle energy information channels spread out through the whole body.

Craniosacral Anatomy Sensitivity Exercises to become Aware of the Craniosacral Rhythm

To be able to understand the craniosacral system we have to look at some simple anatomical charts. The cranial bowl contains 10 major external bones, five of which will be used during our meditations: you can see them in the drawings below.

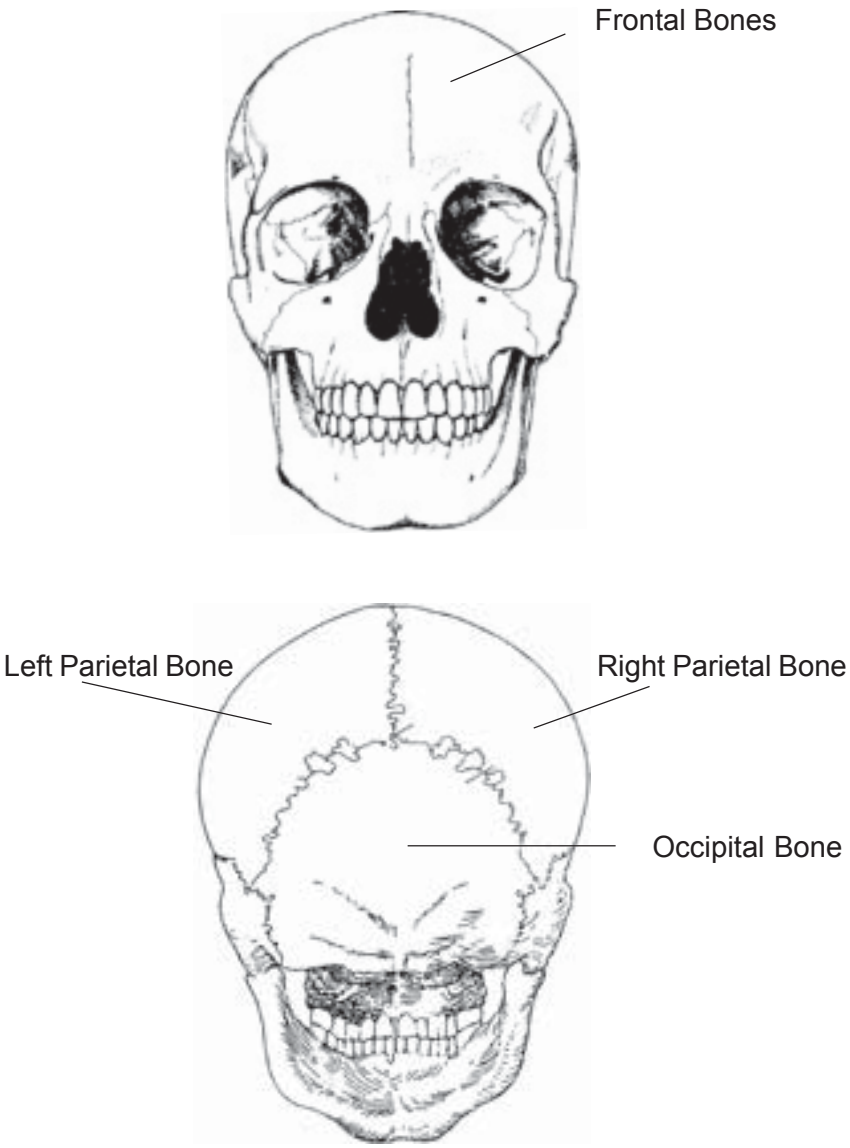


Fig.8.5 *Skull Front and Rear View*

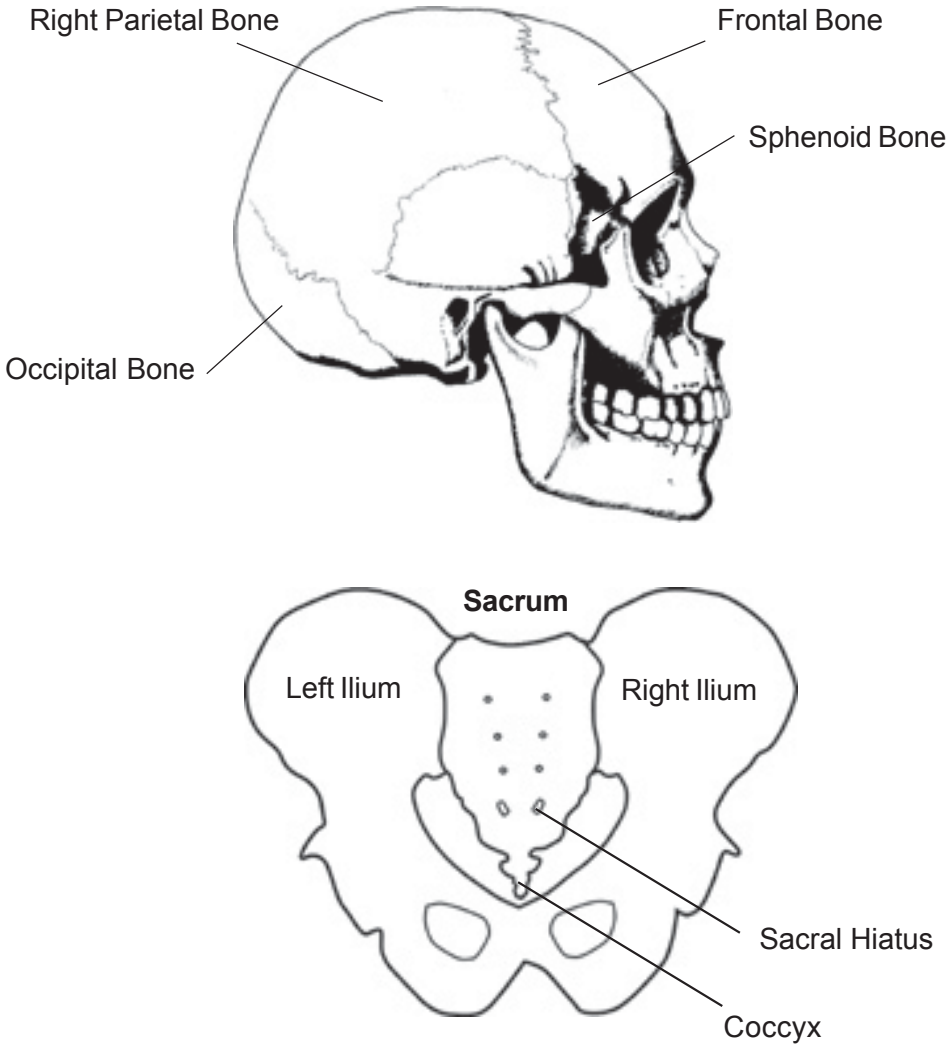


Fig. 8.6 *Craniosacral System*

As described before, the craniosacral system has a high and low tide according to the movement of the cranial bones and membranes in the cranium. Each individual bone has a very specific movement plus a bending factor of the bone itself. This means that the bones can actually bend like a piece of hard rubber. We can also see a general movement of the cranium (seen as one piece). In the flexion stage the cranium becomes wider and shorter. In the extension stage the skull becomes smaller and longer. You can compare it with a balloon you hold on both sides. If you softly press and release every 6 to 7 seconds, you get an effect similar to the cranium during flexion/extension.

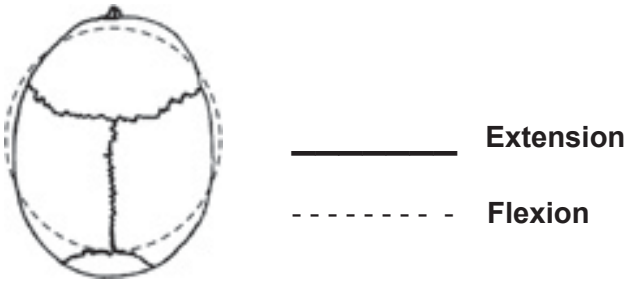


Fig. 8.7 *Flexion and Extension Stage*

Simultaneously, the sacrum will be in a more vertical position (if you lay down) in the flexion stage and a more horizontal position in the extension stage.

In the flexion stage, the arms/hands and legs/feet have a slight outward rotation. On the extension stage they make an inward rotation.

Spend some time feeling this rhythm in your head, arms, hips, sacrum, legs and expand the movements into the aural field. You will feel a deep relaxation and at the same time a great improvement in your sensitivity and body awareness.

Five Elements - Five Star Palaces - Five Planets - Five Cranial Bones

The five planets are the physical representation of the different awareness layers in the solar system and at the same time a materialized form of the law of the five elements. This five elements law is an important foundation in ancient and modern Chinese society. In medicine, astrology, politics as well as in a variety of other fields this principle of five elements is used.

There are Taoist meditation practices where the planets are linked with the cranial bones. But in some methods connections are made among the stars and the sutures between the crainal bones. One comparable Taoist meditation of unknown origin places the planet Saturn in the heart, Mars above the head, Mercury under the feet, Venus in the right palm and Jupiter in the left palm. The cranial system is our own compact mini-representation of the five planets or the more central part of the solar system and on a larger scale the five star palaces. It is in direct connection with this planetary/galactic/five element world and reacts directly on all information coming through this channel. From the cranial bowl, the energy moves down into the organs and different body systems.

Awareness of the cranial system and its connections to the planetary/galactic and five elemental forces helps us to:

* Create a direct contact with the universe. It is an enormous energy source.
* Get insight in our karmic charge, how the soul is basically influenced by some and less by other planets/stars.
* Develop the ability to understand our present lives, our reactions, our physical, emotional, mental condition.
* Acquire an ability to stabilize these imbalances.

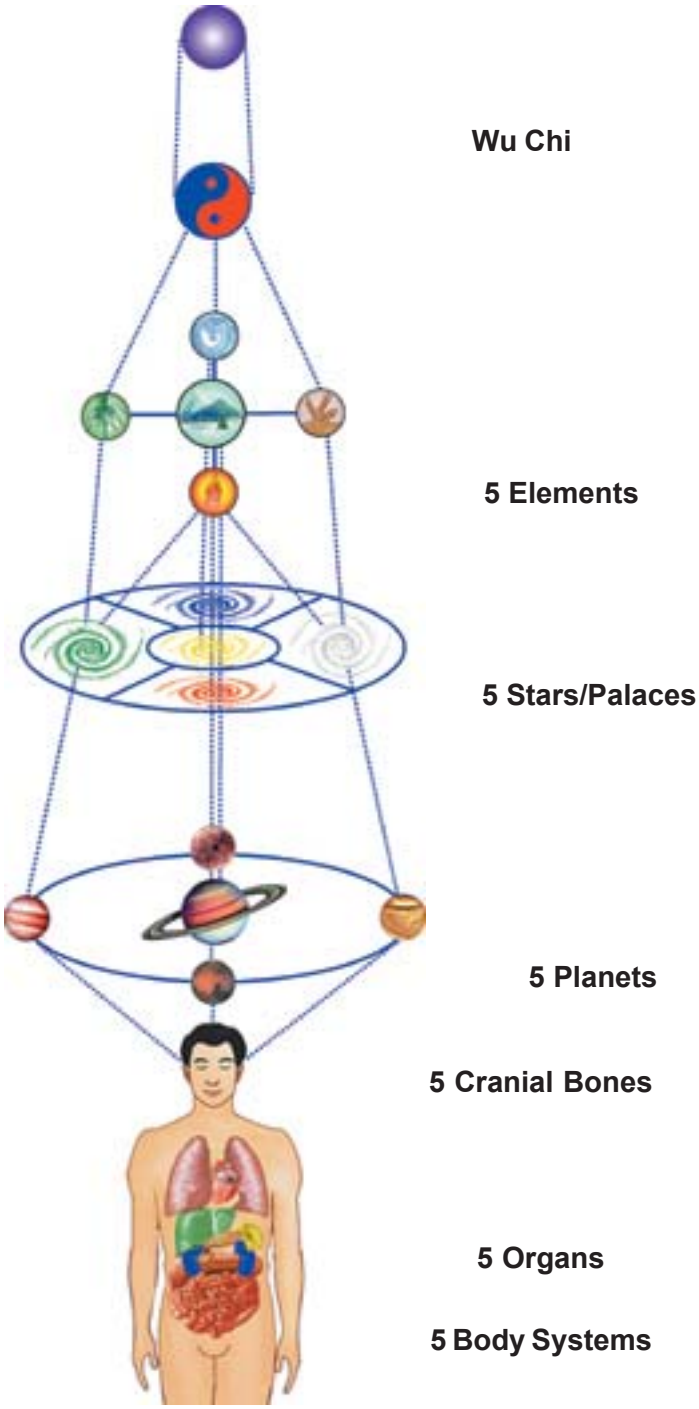


Fig. 8.8 *Five Elements, Palaces, Planets, Cranial Bones*

Once a clear connection with the planets is established, the galaxy energies from the five palaces can be integrated. See chapter 11, Meditation 4. On a high level, a direct contact with the law of five elements in the vibrational world can be achieved.

The bone structure is our most dense body system. The crystalline and mineral structure of the bones has (besides its supportive function) a primary function in attracting high frequencies. Also, the hormonal activities in the glands in the head have an important role. Both the hormones and mineral structures are very condensed substances that have the ability to attract extremely high vibrations: spiritual energies and star frequencies.

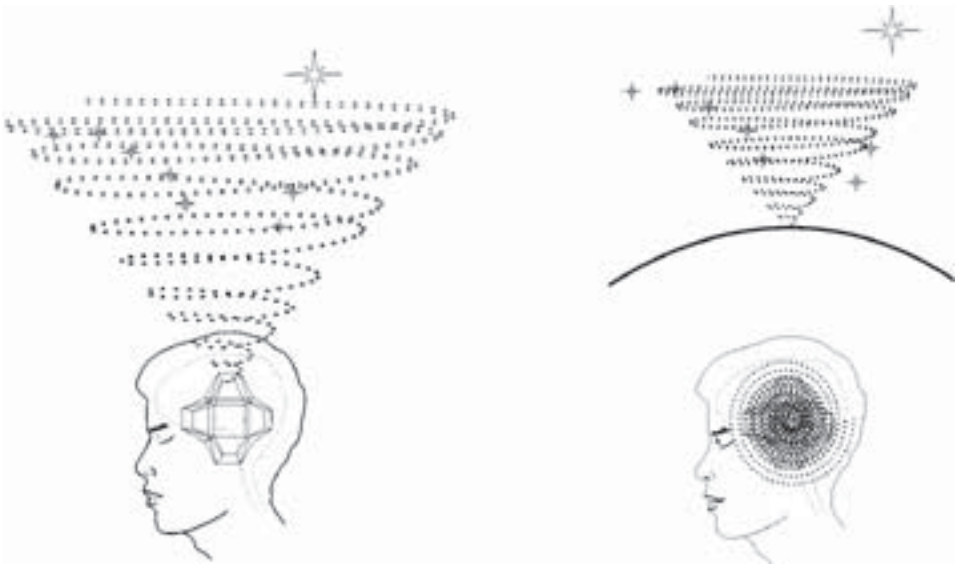


Fig. 8.9 *When the Crystal Room is open, there is a Universal Connection; when the Crystal Room is closed there is no Universal Connection caused by too much Mental Activity, Stress, Low Energy and Negative Emotion.*

The glands serve as transmitters and transformers of the subtle (high) energy frequencies, which can then enter into the organs and the layers of the body with a lower vibration. These vertical connecting channels can only be experienced in the silence of the empty spaces between the turbulent horizontal activity caused by the emotions and thoughts. The planetary and stellar connection generally depends on two different factors: prenatal and postnatal.

Prenatal

The karmic information, based on the tasks and messages the soul has received during the incarnation process (according to the sum of past life information).

Postnatal

The physical, emotional and mental condition determines the ability to receive information from the universe. If we get very busy, and mentally overactive, stress gathers in our body and the feeling of separation will increase in and outside of ourselves. In this way the left brain becomes very active and a state of separation from the environment and an inability to connect with ourselves arises. This condition makes it impossible to take in information from the universe.

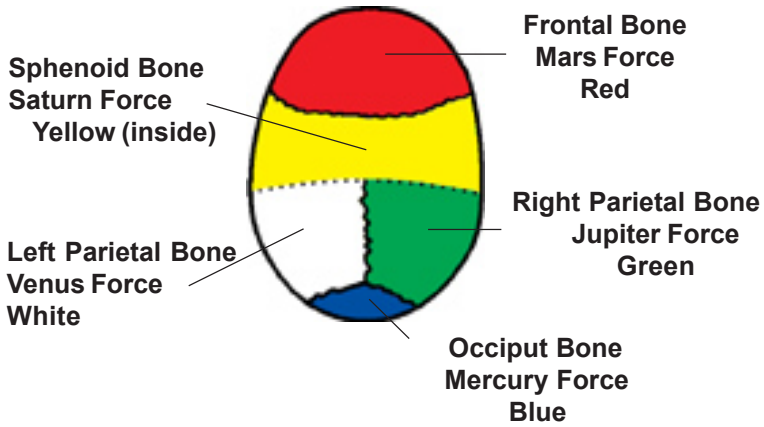


Fig. 8.10 *Top View of the Cranium*

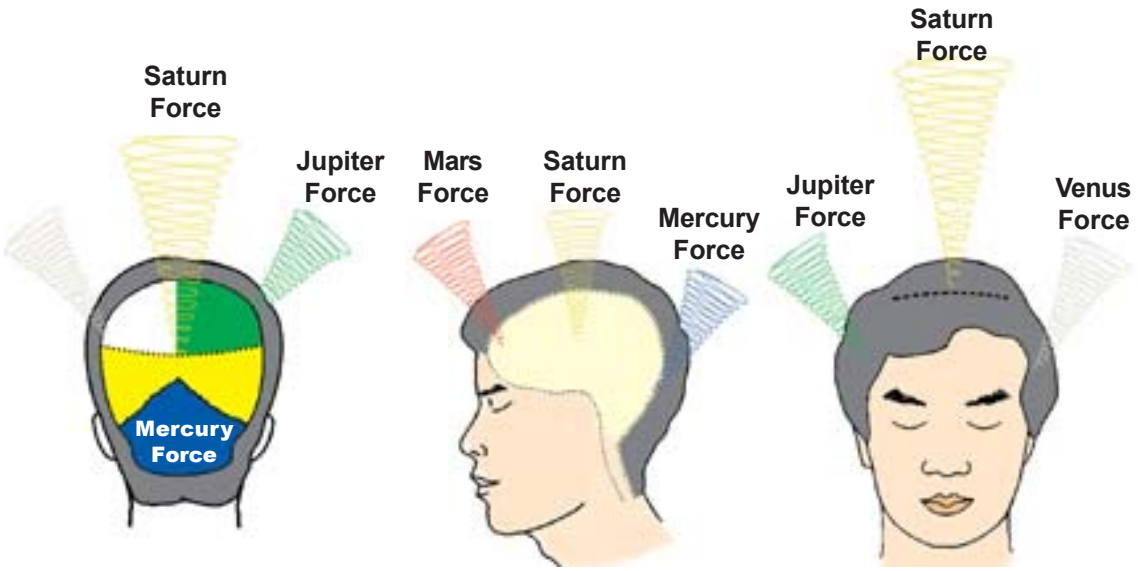


Fig. 8.11 *Back View, Left Side, Front Side of the Cranium and the Planet Forces*

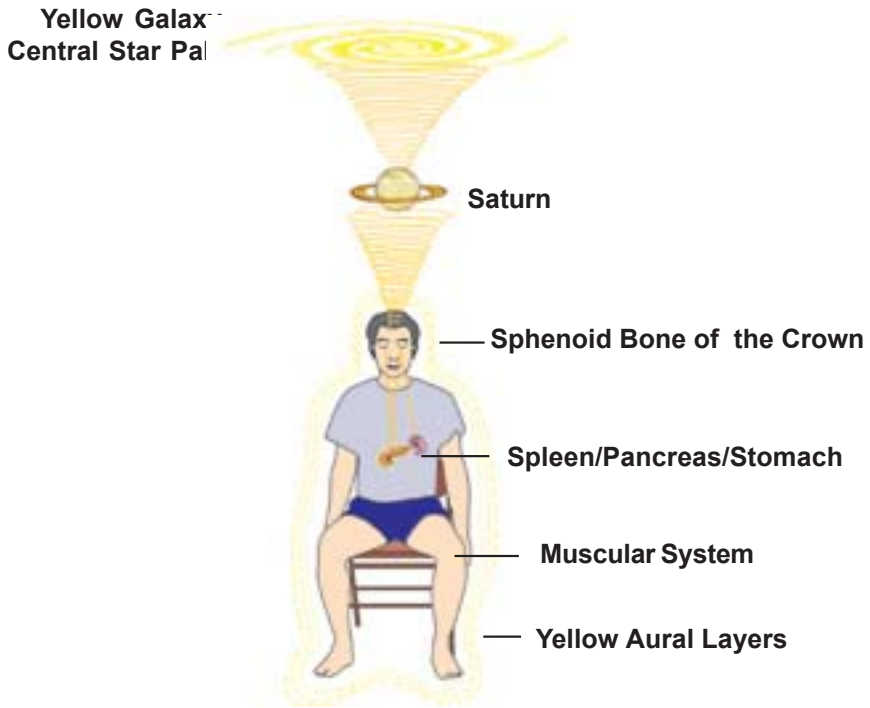


Fig. 8.12 *Earth Element*

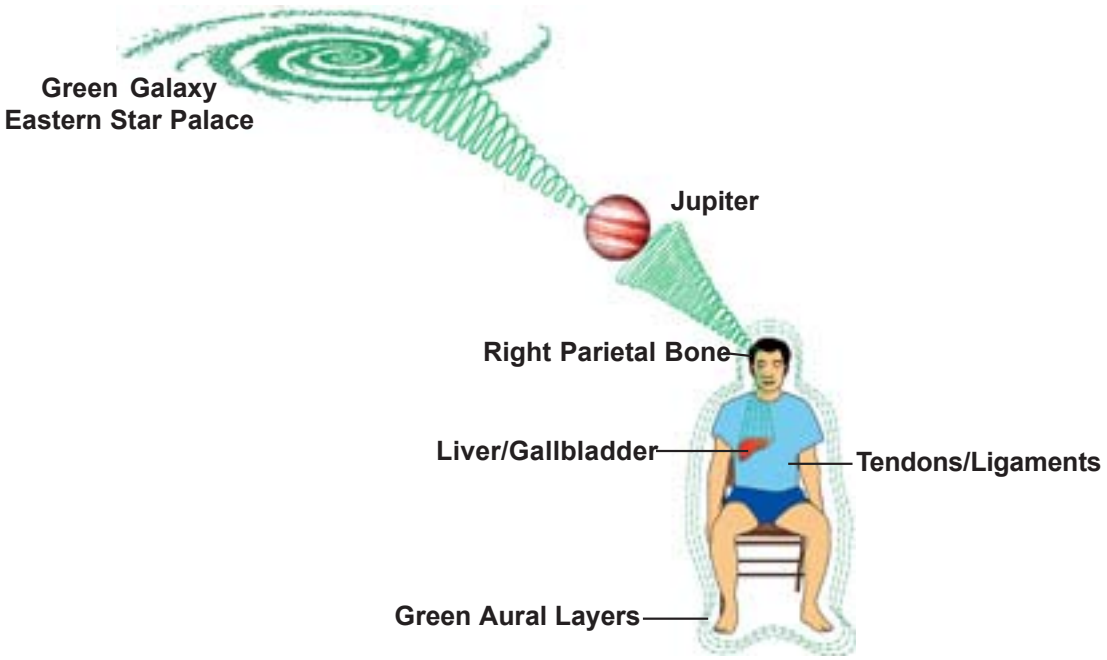


Fig. 8.13 *Wood Element*

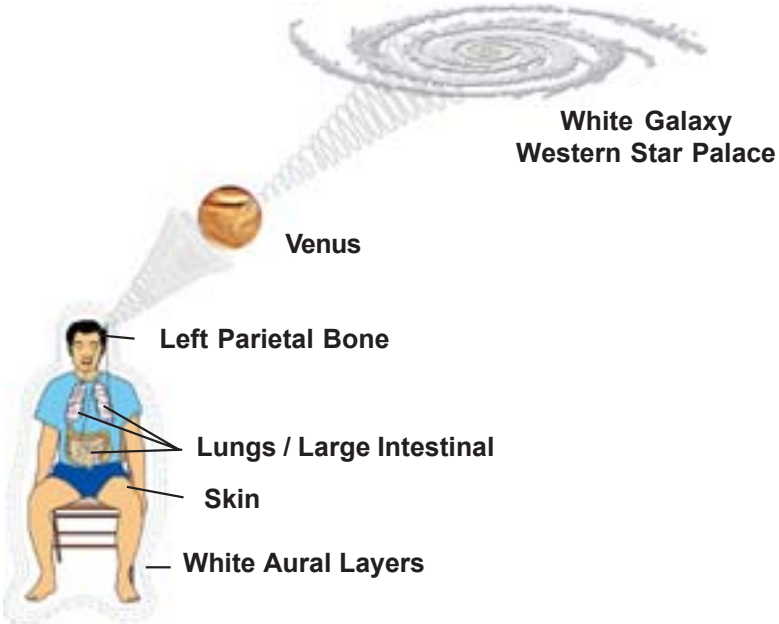


Fig. 8.14 *Metal Element*

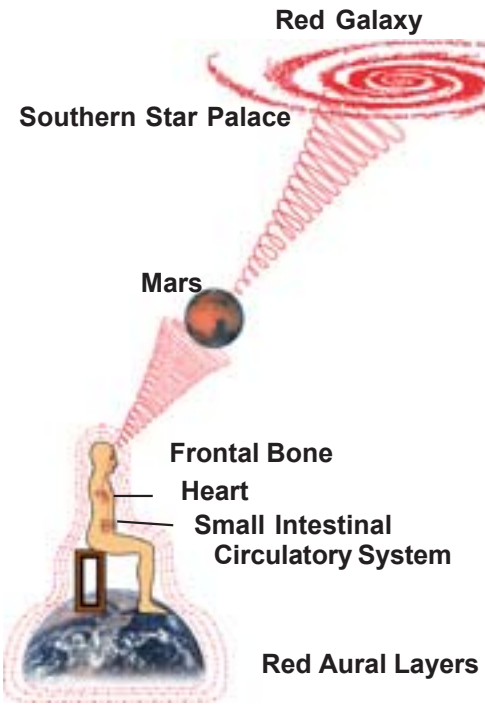


Fig. 8.15 *Fire Element*

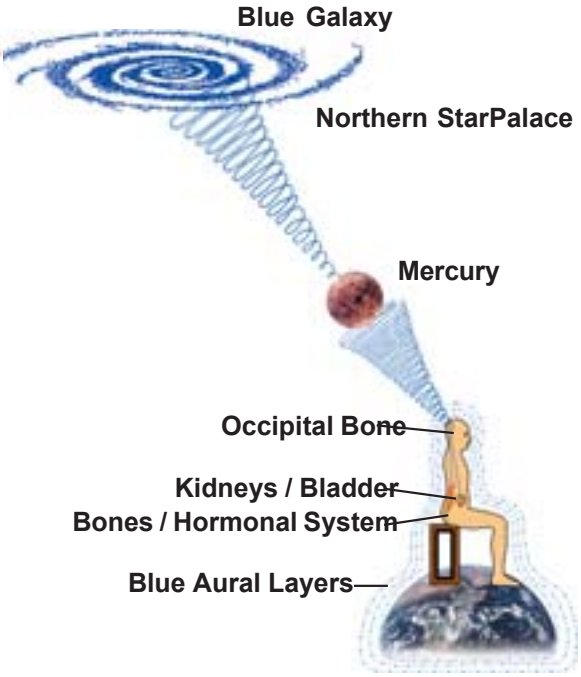


Fig. 8.16 *Water Element*

Balancing the Planetary Energy with Nature's Energy and the Earth Force creating a more Harmonious Energy Quality

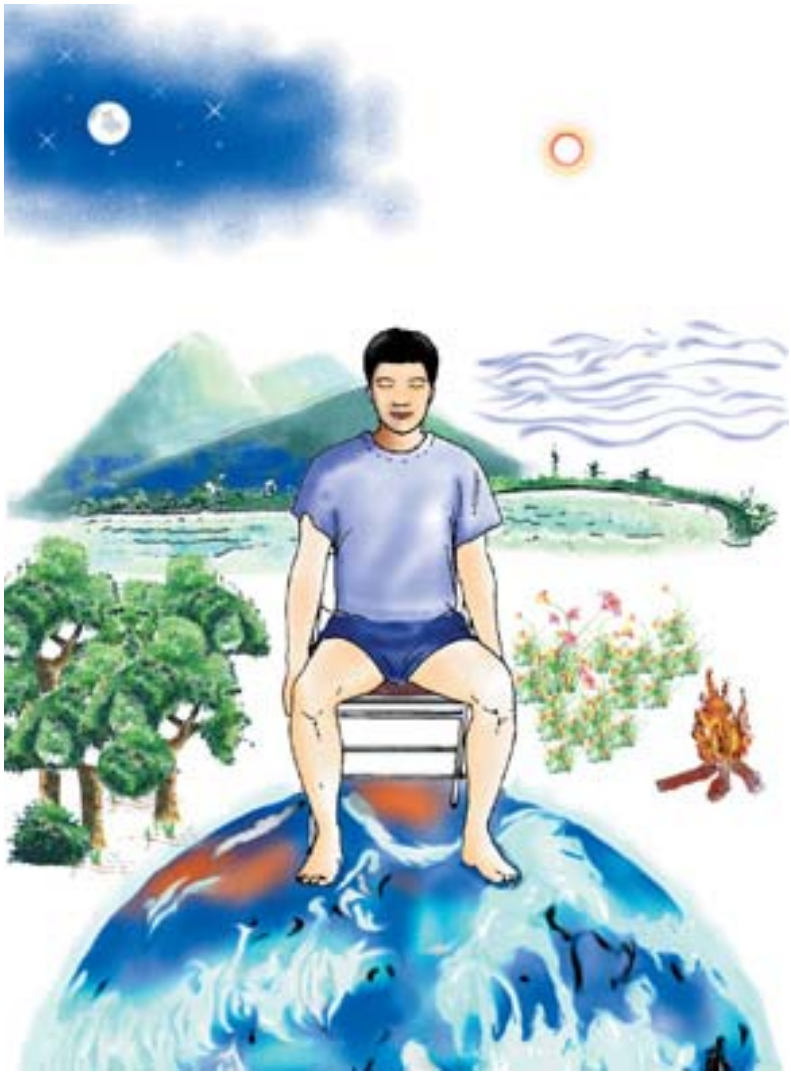


Fig. 8.17 *Inner Balance*

To prevent overheating it is necessary to mix the planetary or heavenly energy with the five nature forces and the cooling energy of the planet earth itself. The combination of planetary and five earthly elements gives a more balanced and stable energy. We can breathe in these energies through the third eye or the skin to the related organ or directly through the navel area in the center.

Five earthly connections for the planetary energies are:

Jupiter	-	Liver	-	Wood/Tree Energy	-	Green
Mars	-	Heart	-	Fire/Flame Energy	-	Red
Saturn	-	Spleen	-	Earth/Soil Energy	-	Yellow
Venus	-	Lungs	-	Metal/Mountain Energy	-	White
Mercury	-	Kidneys	-	Water/River Energy	-	Blue

The energies of the wind, sky, thunder, lightning, lakes and flowers are also very useful. All natural energies are a direct source of cosmic energy for us.

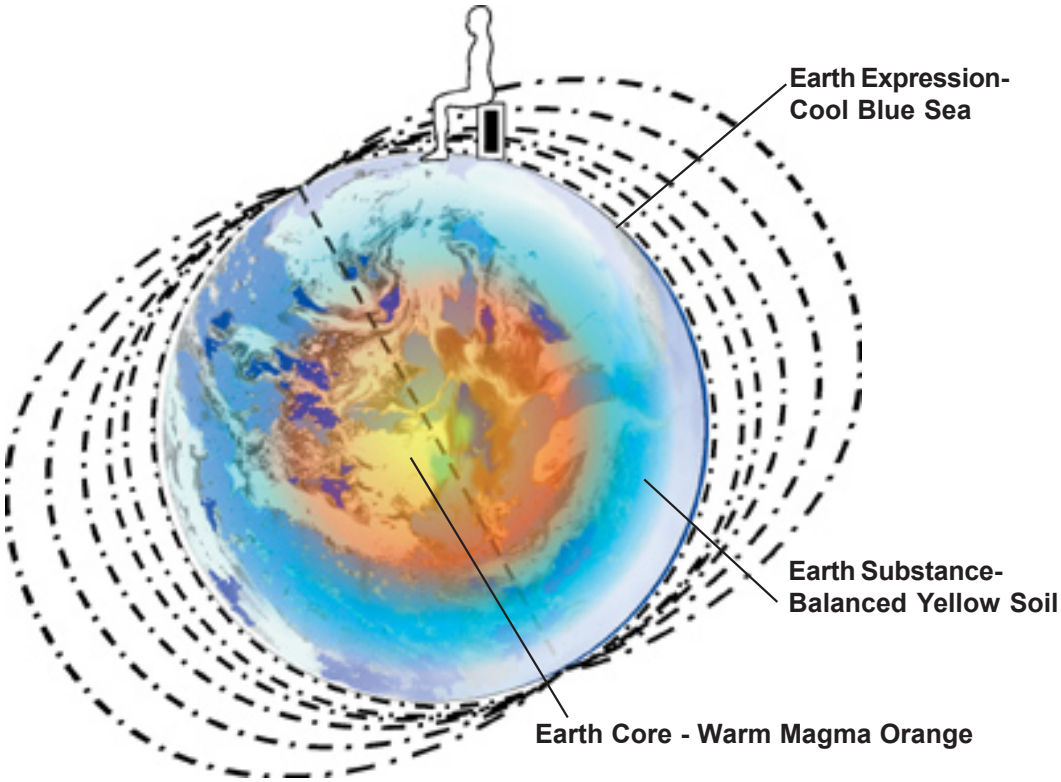


Fig. 8.18 *Three Aspects of the Earth Force*

Three Aspects of the Earth Force

The planet earth has three different energies. Many discussions about the energetic quality and color of the earth and other planets is based on the fact that different people tune in on different planetary layers or use another method of looking at things. Always give yourself enough space to perceive energies in your own way, but know at the same time that if you perceive the energy and color differently from someone else you are probably tuning in to a different energetic layer. If we tune into the earth, we connect to the earth/soil quality which is yellow. If we tune into the energy radiated by the earth created by the centrifugal force, we receive blue, cool energy.

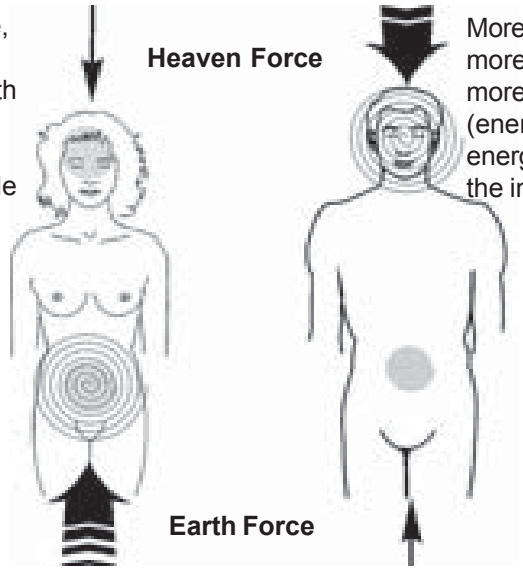
If we go deeper into the earth with our mind and bring this energy into our body we can perceive orange/red, related to the more central part of the earth (fire, magma).

The inner earth has a very different quality. Not only is the temperature very different, but also the movement and speed of the central part varies with that of the outside layer.

The inner earth relates more to the deep female qualities while the expession of the earth is the male quality. Exactly the same discussions occur about male/female energy qualities as with planets and again it is just a matter of where you are tuning into.

According to the Taoist masters, women are more yin, in their overall energetic constitution. In the same way that the earth's (the female source) center has a different energy. Women are warmer inside than men. This warmth is also found in the quality of the eggs in the ovaries. Taoists knew long ago that the eggs and the earth/moon energy are directly related. Understanding this relationship, they knew that the fertilized ovum had a similar turning motion similar to the planet earth. Western science has discovered this turning motion only this century. Men on the other hand have a more warm energy on the outside, but deep inside their basic quality in accordance with the sperm is cool.

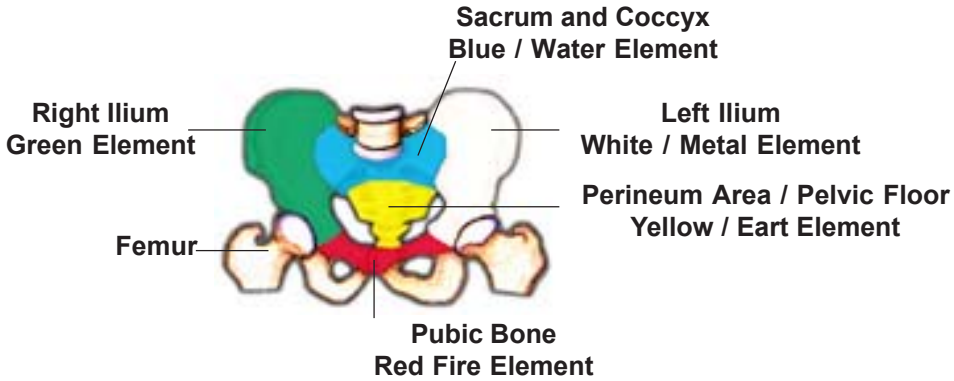
More earth force influence, more energy in the lower body; more density/warmth in the Lower Tan Tien (stability of the egg) and softer/cooler on the outside of the body.



More heaven force influence, more energy in upper body; more dense/warm outer layer (energy related to the sperm energy) and softer/cooler on the inside of the body.

Fig. 8.19 *Heaven and Earth Forces*

The core of Taoist practices is to balance the Yin and Yang – Male/Female Forces. To be able to integrate the high frequency forces of the universe, we have to create counterforce in our own body and inside the earth. This, we can do most easily by activating the inner frequencies in the pelvic bones. They are very directly connected to the five inner colors from the earth that is originating in the Earth star. Especially for women, it is essential to have the pelvic region and the earthly five elements in their body consciousness. The greater depths of the unmanifested world cannot come into our awareness as long as the secrets of the earth and the physical/energetic body remain unknown to us.



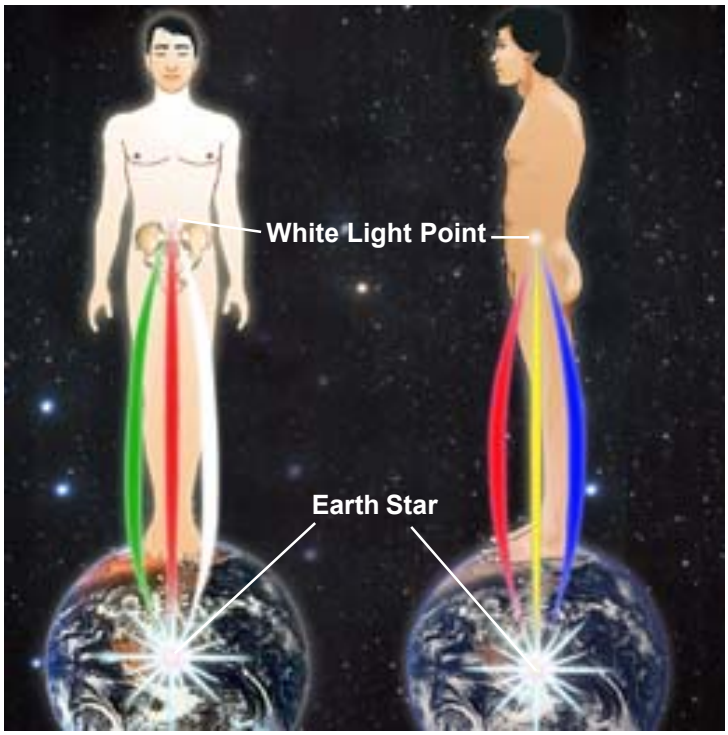


Fig. 8.20 *Pelvic Bones connecting with the Earth Star.*

Relationship between the Five Planets and the Star World

As in the planetary world, the star world is divided into five parts called the five palaces (four directions and one central part)

To concentrate the energy from the galaxies, all energy can be visualized in one central star in the middle of the galaxy.

The five palaces in relationship with the 28 lunar mansions are fundamental in Chinese astrology. The 28 constellations are divided into four groups of seven around the central palace of the North Star, the Big Dipper and related stars. There is a total of one hundred and eighty two stars collected around the central palace. In the past the four groups of constellations were seen as four giant constellations related to the following animals.

Green Dragon	- East	(32 Stars)
Blue or Black Turtle	- North	(35 Stars)
White Tiger	- West	(51 Stars)
Red Bird	- South	(64 Stars)

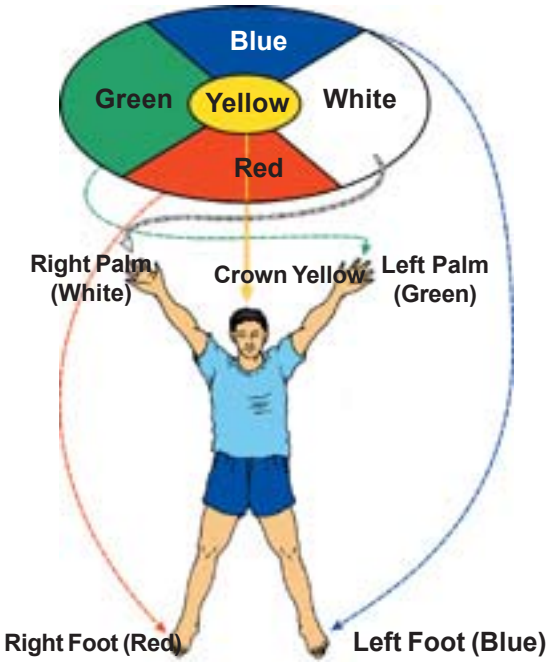


Fig. 8.21 *Colors*

These mythical animals were called the guardians of the four directional palaces.

In the Taoist immortality practices of Kan and Li, the palaces are connected with the hands and feet. Through the connection of the extremities and the crown with the five palaces we can integrate the galactic energy more easily.

Long ago the planets were seen as special stars related to the five elements :

Fire Star - Mars
Earth Star - Saturn
Metal Star - Venus
Water Star - Mercury
Wood Star - Jupiter

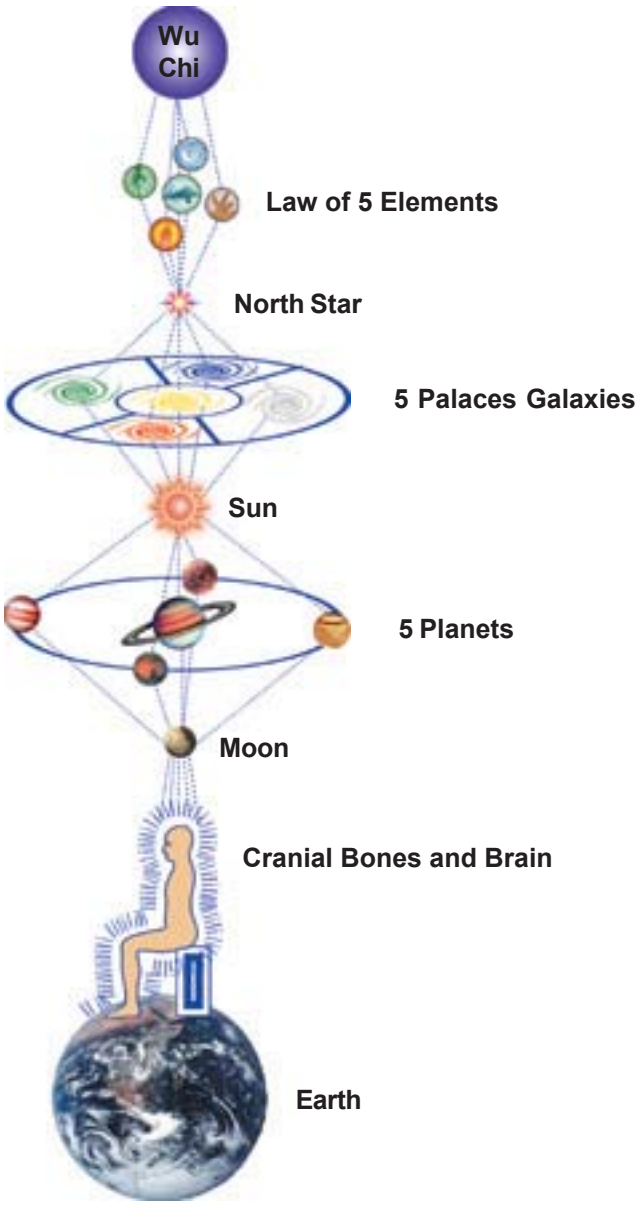


Fig. 8.22 *Universal Forces*

The North Star is the balancing point above the galaxies and the sun is the balancing point above the planets. The sun and the North Star are gates to a higher dimension and frequency in the universe. In order to pass through these gates a balance and integration of the underlying energies is required.

Earth and also the moon will be used to keep the grounding and to integrate the high frequency energy in the physical body.

The galaxy meditation of the five palaces brings the energies of all stars and galaxies placed in that direction of the sky together in one galaxy.

Balancing the Cranial System

Many therapists work with techniques on the craniosacral system these days. In the last 20 years craniosacral therapy has evolved to a great art of bodywork to create balance, release blockages and energize the body. Most of these therapists work with the bones, the membranes, the fascia and the cerebrospinal fluid. Planetary and stellar energies can create an extra dimension to this art because it helps to get closer to the origin of the system and how it relates to Universal principles. In many cases the craniosacral system is treated as a separate unit of the body or, by some therapists, as the only important system in the body. Miracle therapies have been brought forward many times throughout the ages but after a while it always becomes clear that they are just another part of the puzzle. The Universal laws organize all the parts of the puzzle. Stellar and planetary initiations can be a valuable method to create an extra dimension in the consciousness and deeper understanding of healers and bodyworkers.

The meditations described in this book demand only a basic theoretical and practical knowledge. Essential, however, is sensitivity and energy cultivation. Of course, people with a deeper understanding of the craniosacral system can integrate the meditation and awareness practices into their regular treatment method. More detailed descriptions of how to use the meditations during treatment will be published in a book on the therapeutic applications.

Since the origin of this method is located in the world of the soul and spirit, balancing the planet and star energies will result in deep, long lasting changes in the life of the practitioner and the patient. When the energies get balanced, Universal information naturally reaches you in a more harmonious way. Many of the blockages on a physical, emotional and mental level will get connected and receive the information that was missing before. As a result of the balancing they will gradually dissolve.

It is necessary to realize that the bodyworker/healer of the future will have an important teaching task. The qualities required to practice as a therapist in this new age are a fusion of awareness with knowledge and sensitivity with skill.

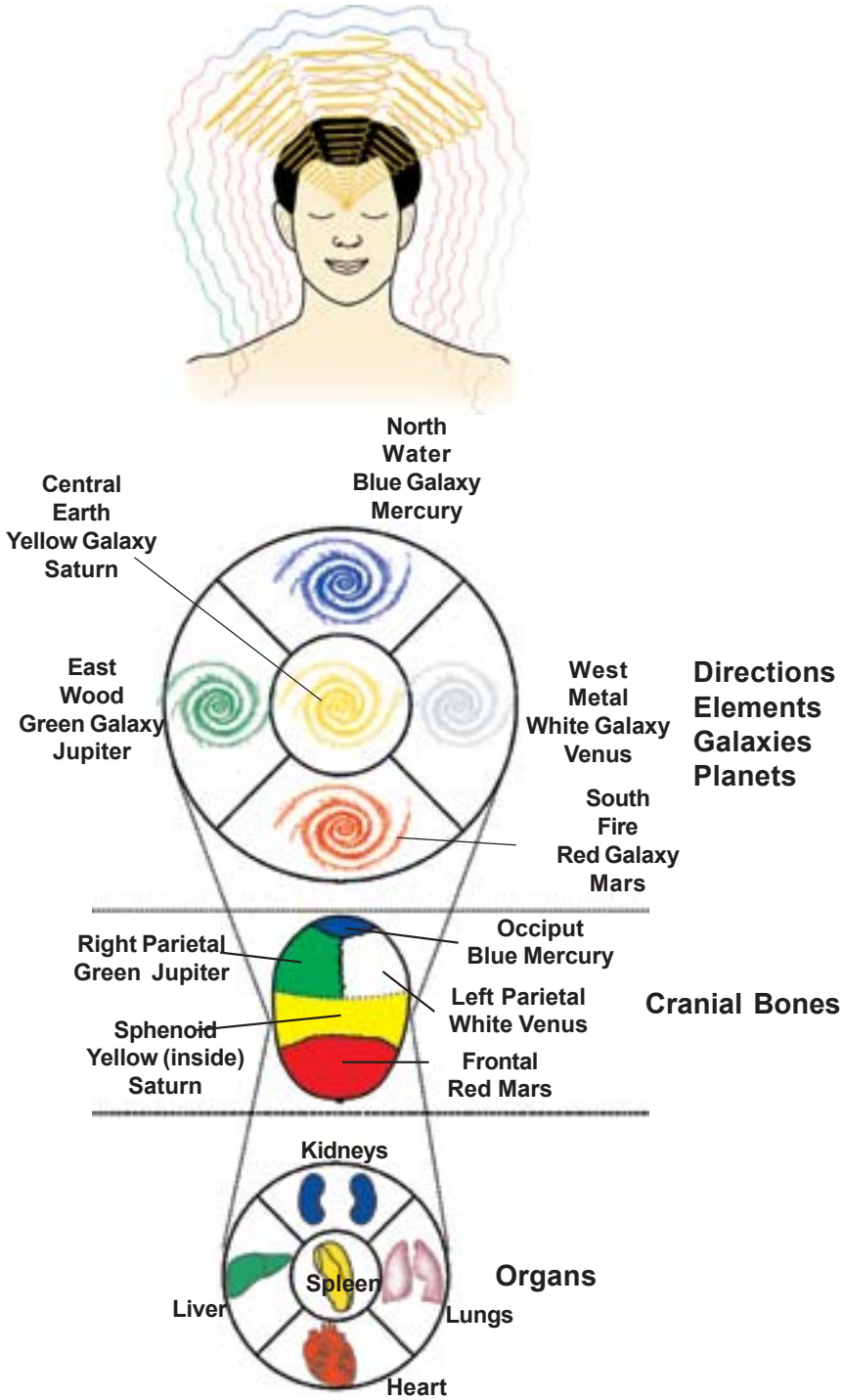


Fig. 8.23 *Integrating the Different Frequencies into the Cranium.*

Chapter IX
How to use Planetary Forces in your Life

In cranial osteopathy the sphenoid bone is considered to be the central, mechanical, driving bone. It connects the temple bones and forms the central axis of the cranium where all major cranial bones are attached. In the planetary world of our solar system, according to the five elements, the earth element and saturn are the central aspects. The central yellow galaxy with the yellow star in its core is the earth element of the star world. The four other planetary/galaxy connections of the cranium are functioning as two complementary couples paired up around the central point. The five planets are ruled by the sun.

Sun - Moon

The sun/moon balance is an important preparatory practice, (see also Meditation 1 in chapter 11). The sun and moon energies form a major influence in the development of human consciousness derived from the more primitive life forms (mammals and reptiles).

	Biological evolution
Neocortex: Self-Consciousness, Human	200 million years ago
Limbic System: Feelings, Emotions, Mammal State	300 million years ago
Brain Stem: Basic Life Features, Reptile State	500 million years ago

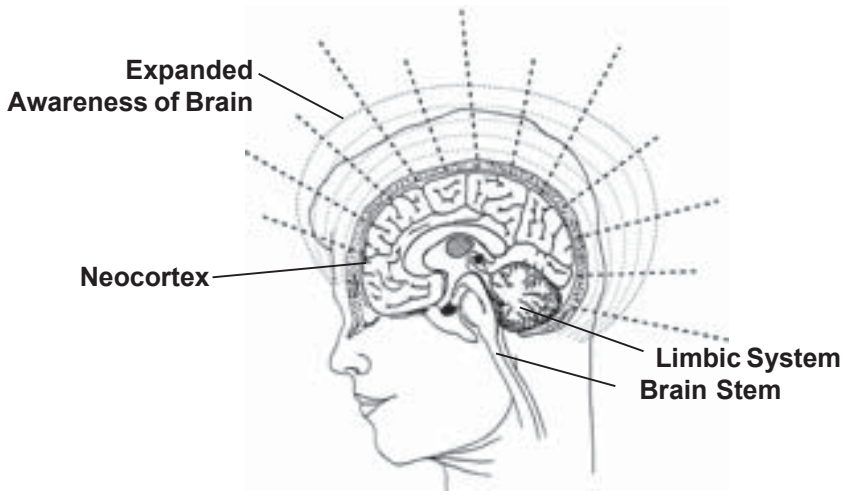


Fig. 9.1 *Limbic System - Brain Stem - Neocortex*

The development of the neocortex as well as the etheric brain is the end product of a 500 million year process. About 100 million years ago, the multiple layer structure of the neocortex was formed. This process is still in evolution. Only at the highest level of awareness can the neocortex expand energetically beyond the physical boundaries of the skull. This expanded aural brain shows connections to the godly level, clairvoyance, vision and enlightenment. This is similar to the golden crowns or halos that are seen in paintings of Christian saints.

The hot essence of accumulated yang energy generates fire and gives birth to the sun. The cold essence of accumulated yin makes water and gives birth to the moon. Sun's cloud soul and moon's white soul are the yin and yang manifestations of the energy around our planet.

As heaven is one, the yang is realized in three: heaven, sun and constellations. The associated animal with sun energy is the three legged crow. This sun crow stands for the lively consciousness. Names that were used for the sun are "Radiant Numen" (Yao Ling), "Vermilion Luminosity" (Chu Ming).

As in most cultures the Taoists saw the sun as the supreme life giving force on earth. The crow in the sun belongs to the west (metal energy), it is of the yin class and in this way clarifies and balances the light of the sun.

The moon is the grand yin aspect and complementary to the sun. The moon animal is the toad; its nature is cold and watery. The toad on the moon belongs to the east (wood energy); it is of the yang class, which strengthens and illuminates the moon.

The moon plays a vital role in planetary existence and its value is frequently underestimated. This point is based on the social status of women in the east but also the imbalanced view of male/female energy around the world. The moon is the 'potential' around the world - the receptive form of spirit. Its true brightness is latent and dependent on the light of the sun. But its cool yin energy is constant and independent. Men have lost the ability to see light and feel energy in the dark, due to a lack of inner peace and silence.

The moon is the magic mirror, reflecting consciousness in the sunrays and bringing them to the core of the body, to our sexual potential. The water energy is closely related to the sexual energy and all body fluids. The phase of the moon strongly influences all fluids in the body and from there, human behavior. The moon's journey around the earth represents the yin principle in the cosmos and in our world.

The sun has a connection with the third eye and the pituitary gland. It is the star connected with consciousness and future vision. It functions as a source of consciousness and compassion and a gate to the higher universe. The moon finds its most important entrance point in the sacrum (the sacred part) and represents the unconscious relation to the past, sexuality and basic instinctive reactions. The place where their essence is stored is located more centrally in the body.

The sun/moon energies contribute in keeping a balance between the Lower and Middle Tan Tien (belly/heart). Imbalances can also relate to the influences of the other five planets. When the five other planets are not in balance it will be hard to receive the deep frequencies of the sun and the sexual energy will get distorted. A strong connection to the sun will have a balancing function throughout the whole body.

Once the sun energy is collected in the heart and moon energy in the sexual center, these two energies can be moved towards the Lower Tan Tien. The most vital blood channels in the body, the aorta and the vena cava, can be used for this: The artery system, which the aorta belongs to, distributes the blood outward. It works with clear, red, oxygenated blood and is more yang/future oriented, so it has more sun qualities.

The vein structure like the vena cava withdraws the blood from the outside. More bluish or dark blood is transported here, which will first go through the kidneys to be purified. So it is a more yin/past oriented system and has moon-like qualities. Harmonizing the aorta/vena cava and the rest of the cardiovascular system will magnify the sun/moon meditations.

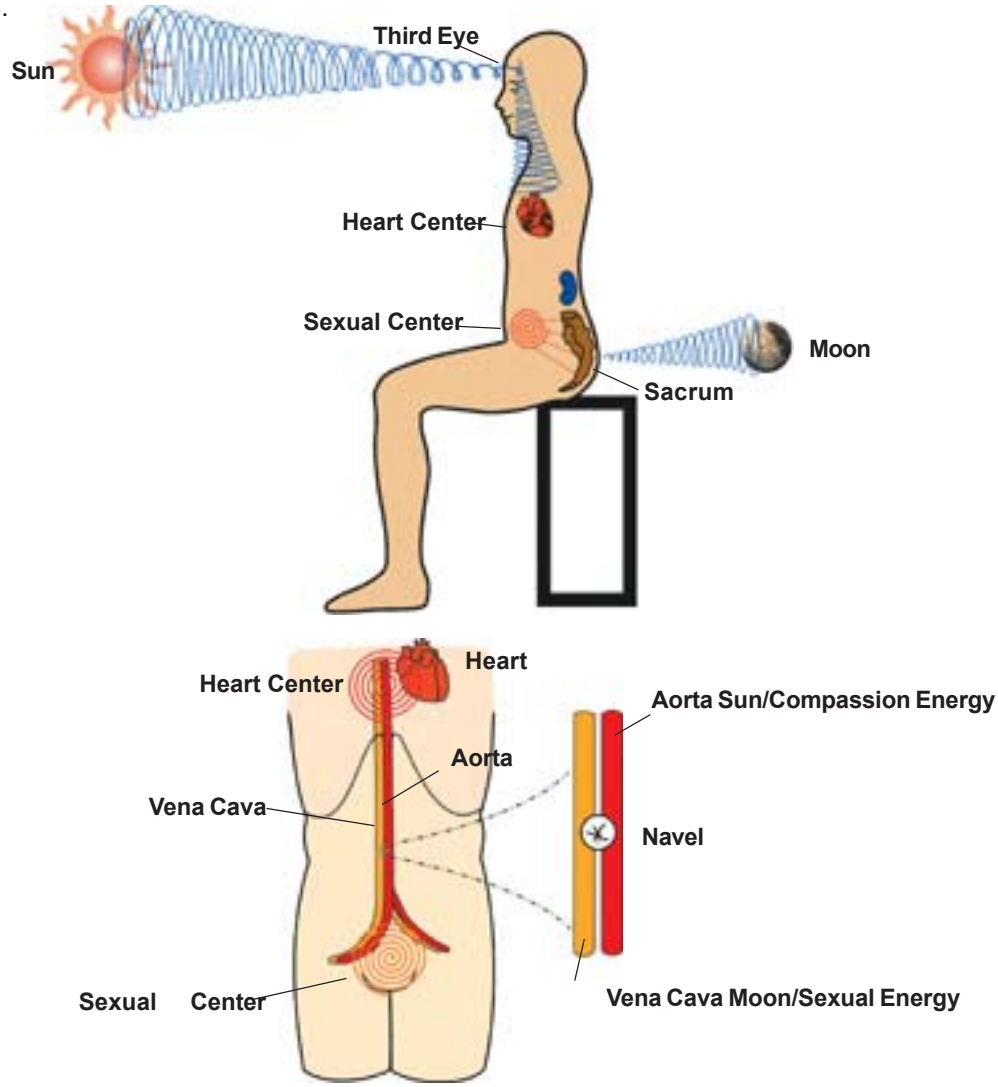


Fig. 9.2 *Internal Organs*

A strong moon connection can give access to deeper unconscious behavior and gives us the ability to shine a light in the dark or transform unconsciousness into consciousness. The sexual essence governed by the moon energy will stimulate all energies in the body, both positive and negative. A strong stimulus of the moon energy without an open sun connection can cause emotional problems and distorted sexual behavior.

In the Taoist way of energy cultivation the sun controls the hours between midnight and noon (yang energy). The moon controls the energy between noon and midnight (yin energy). Sometimes it is said: All hours of sleep before midnight count double, because of the strong yin energy which charges us at that time.

Taoist masters also saw the sun and moon as the eyes of heaven, corresponding to the human eyes. The left eye rational or intellectual brain relates to the sun, while the right eye more intuitive part of the brain relates to the moon.

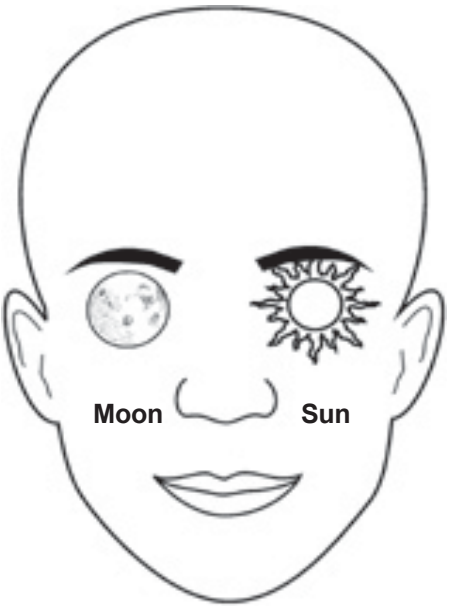


Fig. 9.3 *Moon and Sun*

We can use the sun/moon energies to create balance between the two hemispheres. If used during meditation, always integrate the sun/moon energies in the heart center, third eye and the sexual center/sacrum first. This is to prevent overheating the heart. Practice and integrate Meditation 1 in chapter 11 before you try this meditation.

It is important to utilize the moon/sun frequencies to get a balance between water and fire energy in the body and then to increase the amount of energy of both.

The moon's color is yellow, its essence is red and its rays are silver white. The Taoist practices for the moon are done according to the eight articulations of the moon power which occur during the two solstices, the two equinoxes and the first day of the four seasons.

In the second century manual “Can Dong Chi” the interaction of sun/moon is used in relation to the Daiwa, the twelve directions and the five elements. These pictures contain the deep secrets of the Taoist immortality practice.

Fig. 9.4 *Method of the Elixir*

Mars - Mercury

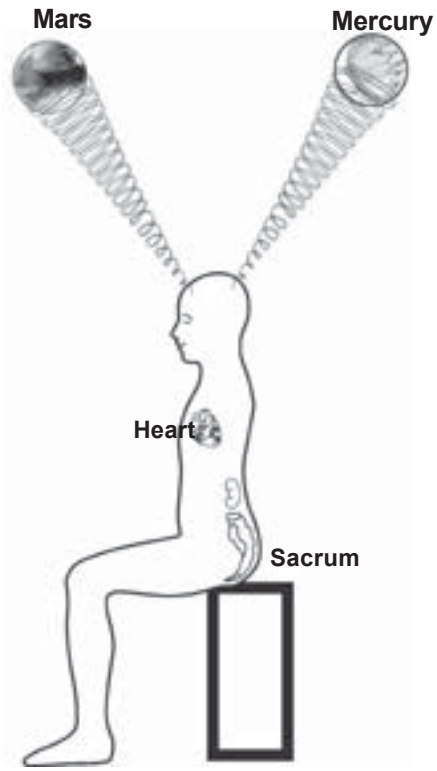


Fig. 9.5 *Mars and Mercury*

Mars and Mercury are the planets of fire and water respectively. They are on a lower vibration level compared to the sun.

The sun is the father of fire and Mars is the planet of fire. Mars relates to the tongue, speech and the physical heart. The heart is placed to the left of center in the chest; the sun is connected to the heart center, behind the sternum and is related to the heart governor. (pericardium). We can say that the sun has a controlling/regulating effect on the heart energy. Medical research on yogis has proved that their physical heart operates more efficiently after many years of meditation and that the tip of the tongue often makes a curve in the palate in the direction of the center of the crystal room.

Mars energy is more male and future oriented. If the Mars energy is too strong in comparison to the other energies, one may get aggressive and too talkative. This is often caused by weakness of the kidneys. Most heart problems are caused by depletion of the kidneys and the sexual energy. If Mars is too weak, the heart function/fire is withdrawn and the person feels weak.

Since the kidneys are the seat of the sexual essence and store the ancestral energy, they have a governing function on the sexual center. If the kidneys are depleted, sexual energy will also be weak. Fire is inactive in isolation and needs the presence of the other elements to stay balanced. Keep the fire in your stove and you won't burn your house down (see chapter II).

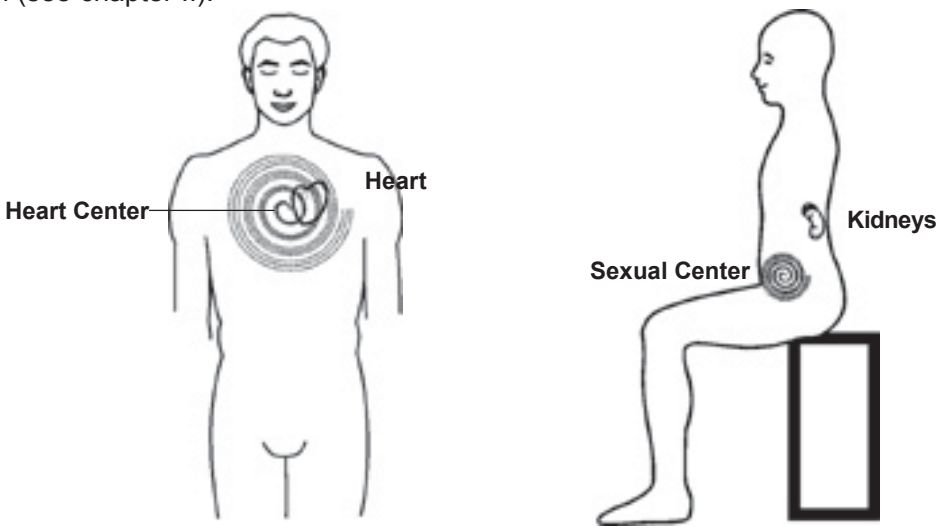


Fig. 9.6 *Heart and Kidneys*

The play between water and fire is found in the controlling cycle of the five elements. Mars and the sun can be seen as fire qualities - Mercury and the moon as water qualities; this demonstrates the double nature in the fire element (primary and secondary fires) and the double formation of the water element (urogenital system).

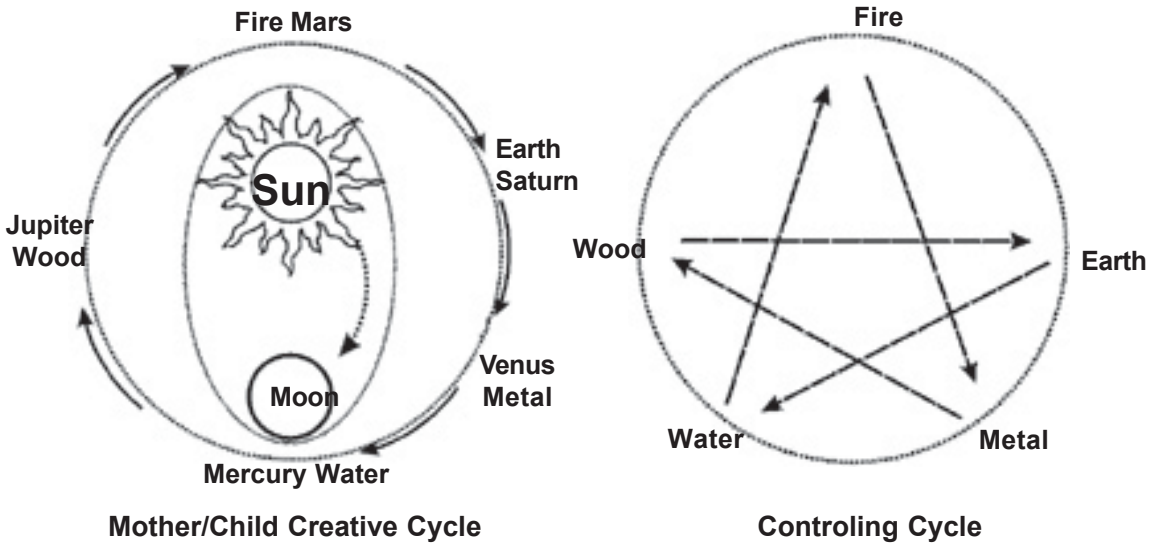


Fig. 9.6 *Creative and Controling Cycles*

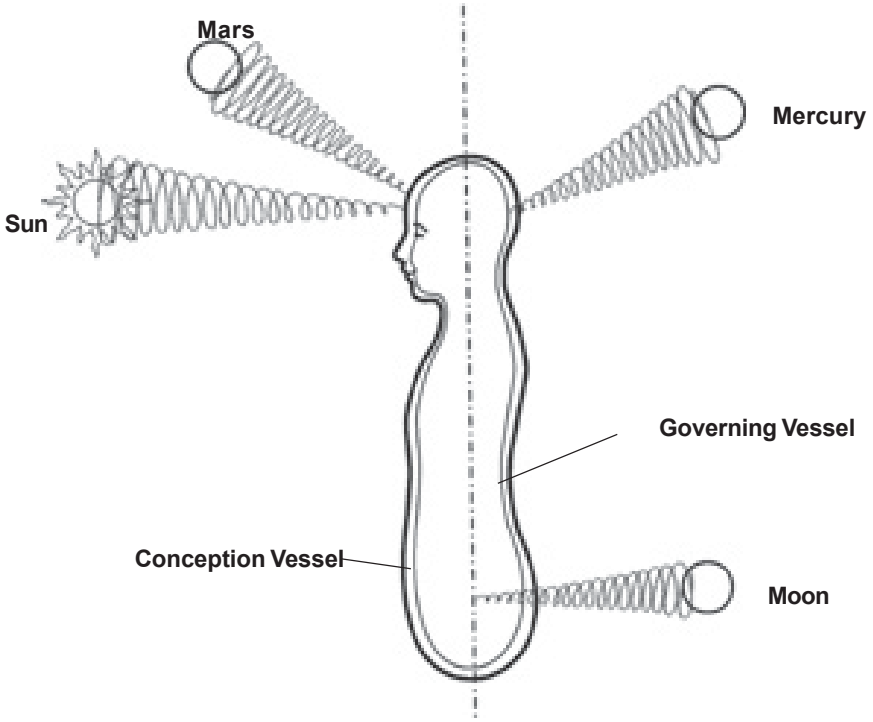
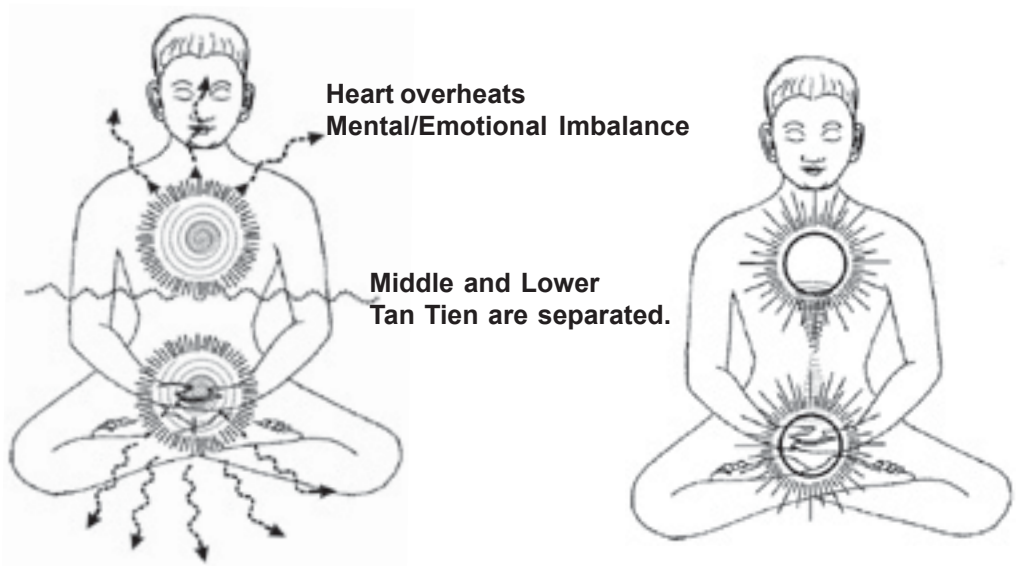


Fig. 9.8 *Conception Vessel Sun-Mars and Governing Vessel Moon-Mercury.*



Kidney and Sexual Energy leak out.

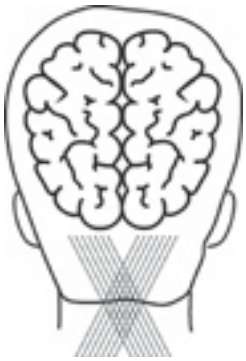
Balanced Water and Fire Energy, Love and Sex lead to Strength and Inner Peace

Fig. 9.9 *Balancing Water and Fire*

The sun and moon can be placed internally. In the five element creative cycle water will give birth to wood, wood to fire, fire to earth, earth to metal. It is a cycle of expansion and contraction in five stages (see Fusion 1 book). In the Taoist spiritual practice this interaction is compared with cooking. Water controls fire. If the sexual energy potential dries up, the fire has no more control. At the same time there is a controlling cycle which balances the five elements. Water controls fire. So kidney/sex energy has a cooling balancing effect on heart and heart governor. On the other hand, if the fire is too weak, the body often gets very cold and the spine and hip area can become very stiff.

The water-fire balance is related to the Chi/Jing/Shen interaction and is a fundamental step in the Taoist Immortal Practice, Kan and Li.

The sun/moon meditation and to a lesser degree Mars/Mercury meditation can help people who have problems balancing their life according to the future and past. Today many people are stuck in past experiences. These experiences have an emotional charge and are connected with pain which may be constantly denied or at the most intellectually controlled. For these people, the sun connection will bring relief, more vision of the future and another view of their past. Some are only striving for future experiences, running away from themselves constantly. The moon/mercury meditations will bring them closer to where they come from and to the forces and influences which have shaped their emotional body.



Nerves Crossing in the Neck

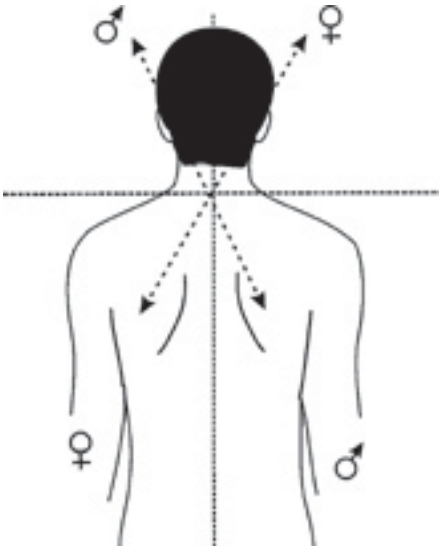


Fig. 9.10 *Body on a Mental/Emotional Level*

Venus - Jupiter

The left/right brain activity has been a popular topic for many decades. As stated before, the focus point in heaven and in the body determines how you will perceive this reality.

There is a strong influence of the five element forces with wood on the right, metal on the left and earth in the middle as the balance point. This is a direct influence from the realm of spiritual law straight down to the physical body (see Fig. 9.11). The Tan Tien energy shows the same structure, according to the energy collection points, just like the initial connection of the spirit with the deep body energy or the Shen with the Jing. This process happens without directly interfering with the lower mental/emotional field. The central stabilizing earth aspect is also found in the energy of the spleen and pancreas.

If we look from the perspective of stars and planets, the core of the activity will be on the emotional and mental level and related to the activity of the brain.

The white stars and Venus are activating the left, more rational and social part of the brain, more male energy. The green stars and Jupiter are activating the right, more emotional part of the brain, more female quality.

From this point of view the nerves are crossing in the neck. So the left brain is associated with the function of the nervous system, regulating the right side of the body with the liver as the center point. The right brain regulates the left side of the body, with the spleen and the pancreas as the center point. (see Fig. 9.10) These energies will enter more directly into the organs and body system.

The right brain is related to individual/body emotional awareness, downward energy related to the spleen. The left brain deals mostly with social, external, controlling, rational activities; more rising energy related to the liver and gall bladder. The elemental influence is weaker in this new point.

We have to remember that the cortex and the human brain consciousness developed from the limbic system, which is evolved from the mammal state. In these primitive states the mental, intellectual and social abilities are very limited. The limbic system has a basic center in both hemispheres of the brain. These centers called the amigdala, deal with deep emotional experiences (affection, safety and other primal needs). A human being is directly related with the neocortex and the ability to connect with other people and the universe. But we must not forget to be in touch with our feelings and our body. Just as the Taoist masters say: “Help and heal yourself and then help others”.

If the right brain is overactive and the left brain energy is blocked, the person will tend to feel isolated, overemotional and stuck in the past (no spirit connection).

If the left brain is overactive and the right brain energy is blocked, the person has a hard time getting in touch with the emotions and body awareness. They tend to rationalize things and they have a hard time feeling involved with others or even with themselves.

Left/right brain balance is crucial for a state of well-being. The planetary and star initiations can be a tremendous help in keeping or creating this balance.

In western astrology and Greek mythology these two planets are exactly in opposition (Venus/female-Jupiter/male) to the Taoist view.

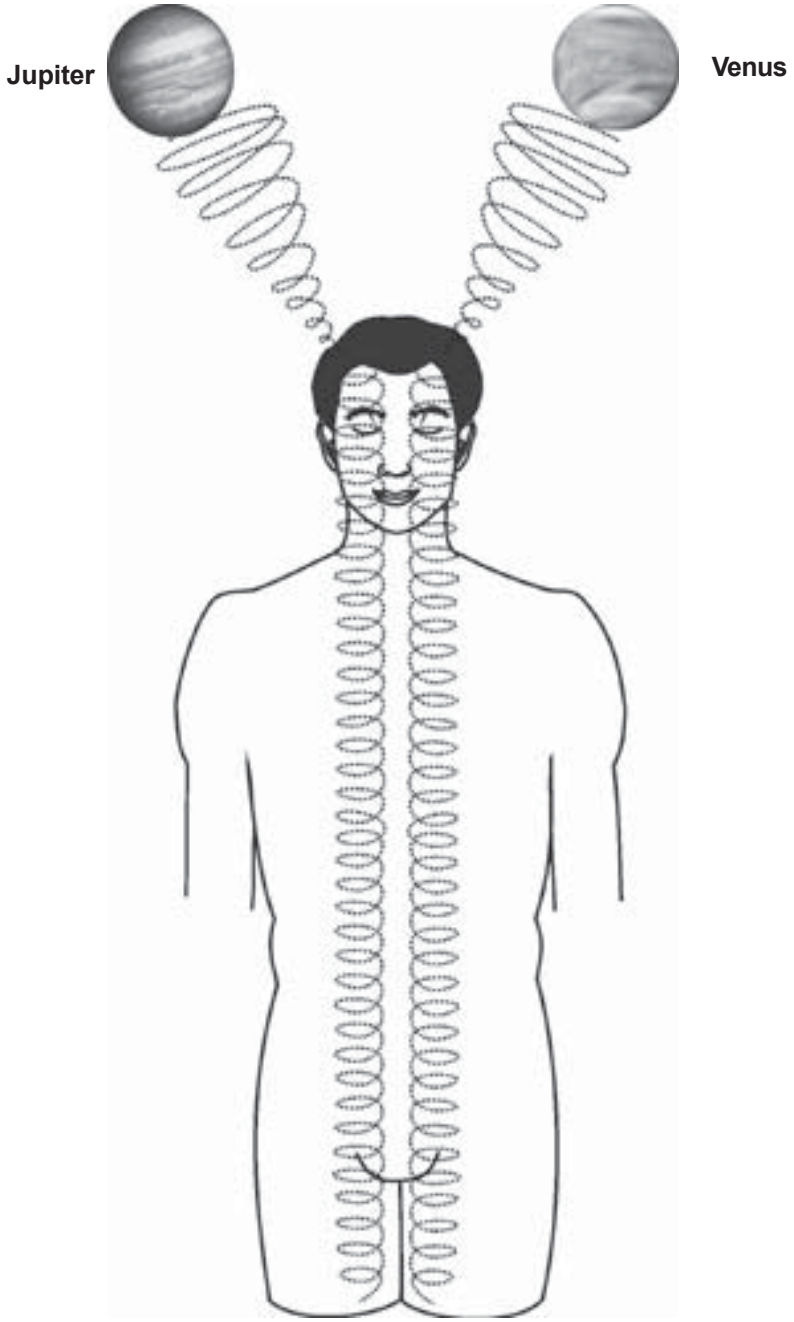


Fig. 9.11 *Jupiter and Venus*

Saturn Energy

The universal earth element is the center point in the planetary and star system. It balances the energies of Mars-Mercury and Jupiter-Venus. It is also related with the central thrusting channel. It connects the crown with the perineum. The universal earth quality of Saturn meets the earthly earth quality in the solar plexus and the Tan Tien. The Saturn and earth quality is of major importance to balance the energy in the solar plexus between liver/gall bladder and on the other side spleen/stomach. Bodily stress is created by an imbalance between the internal and external world, primarily stored in the solar plexus. These days most people have great trouble with their digestive system. Men tend to get a blocked and overheated liver/gall bladder, caused by irritation and anger. Women often suffer from spleen weakness; caused by worry/doubt, from which fear/kidney imbalances originate. Saturn energy has a strong balancing effect that is often experienced physically in the skull during meditations, in the form of movements, pain or pressure.

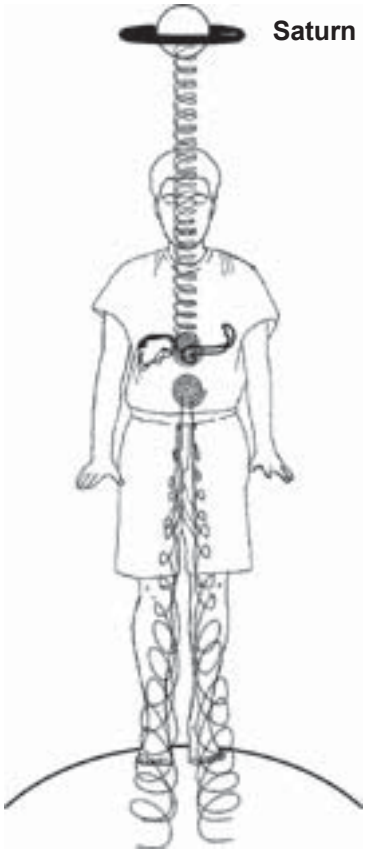


Fig. 9.12 *Let the Saturn Force go down through the Perineum.*

How to find your Strongest and Weakest Planet of Influence

The easiest way to do this is to observe how you connect with the qualities, colors and pictures that are used with each planet (reactions in your body, ability to feel the energy). If you take some time with each of them you will soon find which quality/element feels natural and easy. On the other hand you will also feel what is missing. If you study the typical qualities of this element you will recognize much in your daily life (also, use the meditations in chapter 11). Regular evaluation will soon make it clear that one of them is always there and another may be deficient. It is interesting to meet people who have an abundance of the qualities that you are missing. To some extent they are your masters, but often you will not like them because you feel that they confront you too much. Observe and feel where and how they get this energy. Remember that the first goal is the sun state. The sun state or the state of compassion will grow out of the virtues of all the other organs/planets.

Breaking through the Circle of Attractions and Addictions

Balancing the planetary/galactic/elemental forces brings us to the underlying cause of many problems in life, such as emotional patterns, addictions, irresponsible behavior and low self-esteem. At an emotional level they can only be temporarily released; at a mental level they are often ignored or rigidly controlled. When we get to the higher meaning and origin of these problems and balance the information and energy imbalances that are causing them, they lose their reason for existing and gradually dissolve.

Three Trans-Saturnal Planets

The trans-saturnal planets are not commonly used in the eastern astrological systems because they were undiscovered until the last century. They can be seen as the higher octaves or frequencies of the internal planets reflecting the co-evolution of human consciousness with universal changes.

Water	- Mercury	- Uranus	- Thyroid Gland
Metal	- Venus	- Neptune	- Thymus Gland
Fire	- Mars	- Pluto	- Adrenal Gland

It is not necessary to work with these planets in your meditations, but they can be used to provide an extra dimension. Sometimes they come up spontaneously during meditation. Because of their influence on the social field, they often occur in group meditations.

In the Universal Tao eight planets are used in the pakua as seen in fig. 9.13.

More study and meditation will bring clearer information on these three planets and their cranial connection. According to our and other practitioners' experiences during group meditations, the following entrance points can be used for the trans-saturnal planets.

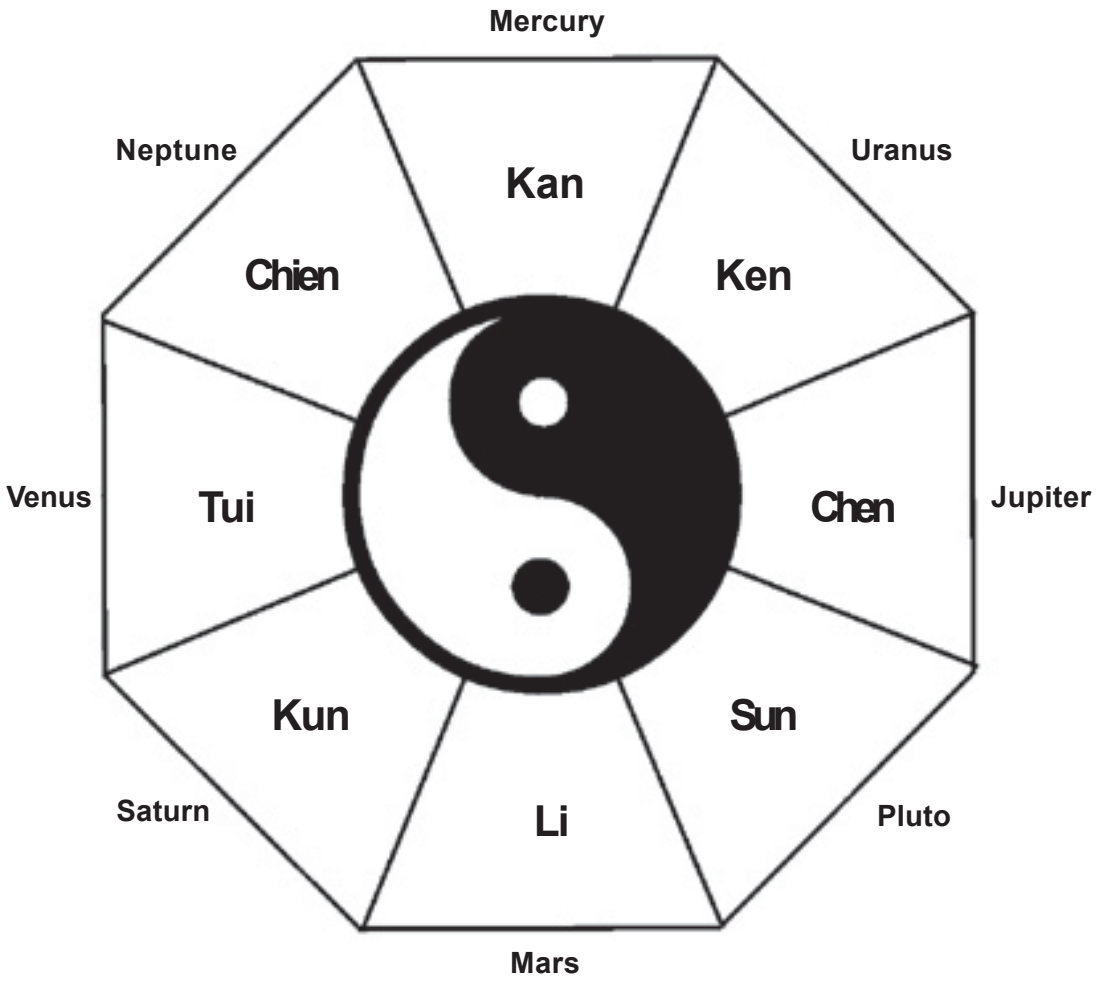


Fig. 9.13 *Pakua*

The trans-saturnal planets are the field between the basic planets (organs) and the stars (glands). They work on the lower frequency and the more physical, hormonal function of the glands.

Pluto enters above the Mars area.
Neptune around the hair spiral area above the Mercury area.
Uranus at an angle of about 45° (just a few cm above the ears).

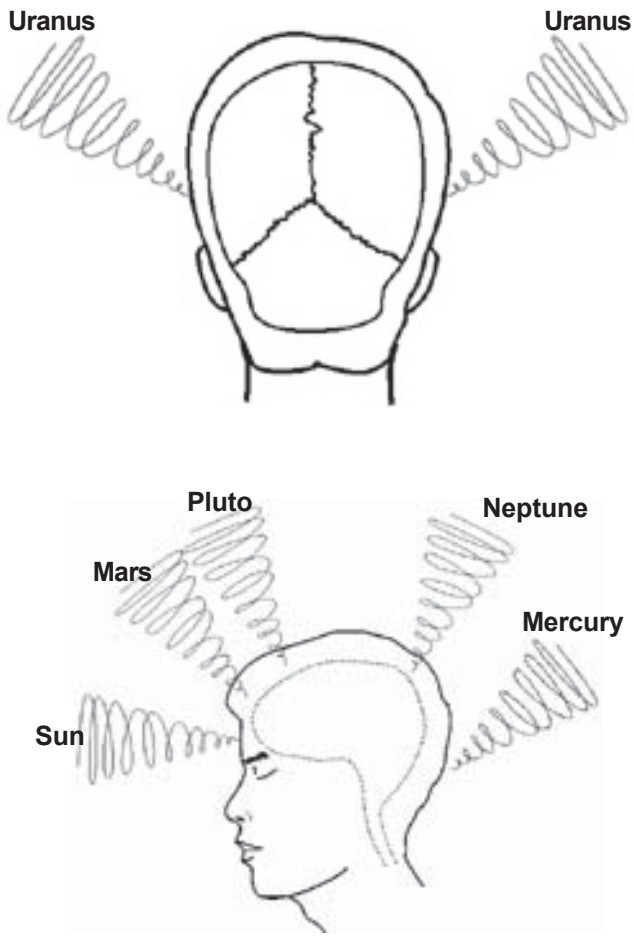


Fig. 9.14 *Planet Energies*

Chapter X
Universal Healing Connection

Create a Chi Field for Cosmic Healing

Visualization into Actualization!

Think of a Chi Field as being a containment area for all the Chi you might want for your Chi practice. The area can be as large or as small as you want. It could cover a city, a farm, your neighborhood or home, your room, a group of people, or just yourself. You can create Chi Fields within Chi Fields — as many as you like.

Use your power of visualization to project a dome-shaped protective covering around yourself, a group of people or whatever suits your situation. Think of the dome as being like a semipermeable membrane that will allow Chi in and that will not allow it to leak out. It will also prevent unwanted forces or emanations from coming into your space, somewhat like the ozone layer that protects Earth. The dome may be as large or small as you want it to be. This Chi Field will contain the Universal, Cosmic Particle and environmental Chi that you draw into it when you set it up.

You can create a Chi field to protect your house. In rural areas, Chi Fields have been used to protect and fortify farmlands, resulting in greatly enriched produce and increased yields of agricultural products. We should also cover ourselves with a Chi Field when we do our Chi cultivation practices. Teachers should create a Chi Field to work in, in order to impart more powerful experiences when guiding students in meditative processes for awareness and experience. A Cosmic Healing Practitioner should create a Chi Field for a powerful healing environment.

Organizing the Chi Field for Healing

1. Connect with the forces of the six directions and create a Chi Field. Creating a Chi Field is very important. It is like you are painting a beautiful picture inside yourself in the Chi Field. Sense thunder and lightning coming down. Create a domed Chi Field to cover the room you are doing a healing session in. Sense that the room has become electrified, that thunder and lightning has come in. Draw in the power of the lakes, forests, oceans, sun, stars, and high mountains. When you are ready, inhale; draw the energy from the Galaxy and Universe.
2. Be aware of your Lower Tan Tien and pour the energy over the crown. Feel the energy come to your crown and let the energy flow. Feel numbness and tingling. Focus on the soles of the feet.

3. Gradually feel that the room has become charged with Universal Chi. Close your eyes and feel the personal stars of the participants. Start to link them together from the left corner of the room.
4. Spiral out clockwise to link them together with your own personal star, you can project an individual vertical connection from the energy body to each participant. Link all the stars, including your own star, to an energy body.
5. Project an Energy Body above you in the dome. The size and shape of the Energy Body is not important; just have the idea and the sense that it is there for you to use. This tool provides you with an immediate resource to draw from when you distribute energy to the participants. When you are guiding and teaching a meditative process, keep your awareness of your Lower Tan Tien and the Universe and guide the students via the Energy Body for enhanced power and effectiveness. For yourself; first empty the mind down and fill the Lower Tan Tien with 'Smiling Sunshine' Chi. Be aware of your heart; empty love, joy and happiness into the Lower Tan Tien. Extend your Lower Tan Tien up to the Universe, multiply, draw down to the energy body and distribute it to those present.

Opening the Three Tan Tiens to the Six Directions

Introduction

Opening the Three Tan Tiens is a Chi Kung meditation that strengthens our connection to the Universe, opening us up to the primordial force of the Cosmos and the energy within Nature. We are dynamically connected to the infinite. "As above, so below" is an echo of wisdom heard from sages and mystics throughout the ages. When we can connect to and absorb the energy that surrounds us, we are able to tap into the many splendors of the Universe.

We exist because of the unique combination of the forces that are around and within us. The two main forces are electricity and magnetism. 'Bio-electro magnetism' is the Western term for life force and what the Tao refers to as Chi. For the last 5000 years, the Taoists have utilized this bio-electro-magnetic energy to enhance their way of life and establish a relationship with the Universe. Bio signifies life, electro refers to the universal energies (Yang) of the stars and planets and the magnetic force refers to the Earth force (Yin) or gravitational force present on all planets and stars. As we align ourselves with these forces, we become a conduit through which we can absorb and digest these energies through the body, mind and spirit establishing a direct connection with the Universe. The Taoists recognized this connection and created the Chi Kung form of 'Opening the Three Tan Tiens to the Six Directions' to enhance our relationship to and our understanding of this connection.

Humans normally access bio-electro-magnetic energy through their food and air. Plants take the universal energies of the sun and the magnetic energies of the earth and digest and transform them, thereby making these energies available to all living beings.

Taoists believe that the food sources with the purest form of energy are the green leafy vegetables. These have taken sunlight directly into their cells. Rather than waiting until the energy in the Universe is processed through plants, the Taoist goes directly to the source of this primordial energy. Through Chi Kung and meditation, the Taoists direct the energy of the Universe precisely. Opening the Three Tan Tiens is a meditational Chi Kung exercise that focuses on how to directly tap into the source of energy all around us.

Activating the Three Fires

The Three Fires refers to the fire energy contained within the lower abdomen, the Door of
Life (the adrenal fire) and the heart center. Opening these centers fills the body with energy and life force.

1. Stand with the feet together. Feel the connection to the Earth through the soles of the feet. Project your mind and extend your Chi into the Earth. Continue extending your mind power and Chi until you feel the connection to the infinite space beyond the Earth.
2. Hold the palms down, parallel to the ground, lifting up the fingers. Connect to the Earth energy through the center of the palms .
3. Move the arms and palms out slightly to the front of the body (palms still facing down). As the arms move, expand your mind and feel the connection to the Earth and the infinite space below you.
4. Gently, pull the hands and arms back toward the body. As the arms move, feel the Chi flow through your body and condensing into the Lower Tan Tien. Continue to push and pull 6-9 times, expanding your mind and gathering Chi from the infinite space into the Lower Tan Tien.
5. Lift your arms and face the palms toward the Lower Tan Tien. Feel as if you are holding a huge Chi ball on the Lower Tan Tien. Feel the connection between the fire in the Lower Tan Tien and the fire energy in the Universe. Feel the warmth spread through the entire body.
6. Expand your awareness to the infinite space behind you. Move your hands to the back and hold a huge Chi fire ball on the Door of Life (Ming Men).
7. Feel the Chi ball pulsing and breathing, drawing energy into the body from the infinite space behind you.
8. Lift the hands, palms facing up, to the sides of the body under the arm pits. Feel the Chi from the fingers extend into your chest igniting the fire in the Heart Center.
9. Allow the Heart Center to open, pulsing and breathing with Chi.
10. Feel all three fires activated and resonating together; the Lower Tan Tien, the Door of Life and the Heart Center.

Healing with the Chi Field and Energy Body

1. Ask the students to start to empty the mind down.
2. Connect with the energy body. Move your hands down. Touch your navel. Concentrate on the Lower Tan Tien. Ask your students to follow you. Your fingers touch the navel; focus on the Door of Life. Feel a numbness, a tingling sensation of energy flow. When you feel it, transfer it up to the crown. Expand to the Universe and multiply the feeling. Guide the Universal energy down to the Energy Body. Always spiral the energy in the Lower Tan Tien. Transfer, guide the energy, the feeling, down from the Universe to the Energy Body.
3. Take time to work with the Lower Tan Tien. Transfer your Chi (feeling) to the other people. When your Lower Tan Tien is very full, you actually feel the energy charge up the whole brain. So, your brain has a lot of Chi to extend up to the Universe.
4. At this level, there is no particular color for the energy body — it depends on what you are doing. Just transfer the feeling up, the feeling of the Chi. The Chi feeling gives you a pattern. And that pattern can multiply in the Universe. When it multiplies, it can be abundant when it comes back down.

You cannot teach somebody something that you do not first have yourself. When you are teaching, you are controlling the energy. You are guiding the students' energy. If you are happy, they feel happy. You feel joy and they feel joy. When you have the feeling of the bone marrow, you transfer the feeling of the bone marrow up. Therefore, the students can only be as good as you are at that moment. You may feel pain in your body at times; just pick out the good feeling and transfer that up. Otherwise, the student might feel pain and it is not his or her pain.

You have to multiply what you are feeling first before transferring your energy to the students. When you have that feeling (very nice, very good, happy, laughing bones, funny bones — tingling, numbness, etc.), transfer it up to the mind and out to the Universe. From there, you spiral a few times — just spiral the energy and multiply— and then bring the increased Chi down to the energy body and it will spread out to the participants by itself. (see the illustration on page 223)

World Link Meditation

Explanation

The Three Minds are the Upper, Middle and Lower or the Three Tan Tiens. The Upper Mind is good for planning and figuring out numbers, but any negative emotions that are present will stir up the brain with excess thinking and worrying. It spends and drains out too much energy. We should train this brain while resting to just observe. The key is to lower your Upper Mind and use it in the Lower Mind to do your thinking; “seek the released mind”.

At first, I did not understand this. When my Master taught me to lower and sink my mind down to the Lower Tan Tien, I started to understand. I understood this further, when I found that Western technology had discovered that the nerve endings in the stomach and intestines, especially related to emotional responses, are the same as those in the Upper Mind. So by just smiling to the lower Tan Tien you can activate the Lower Mind. By using the awareness, consciousness, and observing minds together in the abdomen you can do all your thinking.

The Upper Mind works practically all the time, stirring up the emotions and using up to 80% of your body energy. Western science has discovered that the Lower Mind can do a lot of things that the Upper Mind does without using the senses. The difference is it does it with pure awareness without questioning, as the Upper Mind does. If you can use the Lower Brain more, the Upper Mind can rest and listen (observe) from the abdomen. The Upper Mind, or as the Taoists refer to it, the monkey mind, when activated will suppress consciousness or awareness. Once the Upper Mind rests you can be conscious and aware of things you were never conscious or aware of before. You then can rest, be more aware and save energy using the Lower (second) Brain. So your Upper Brain can rest and build up strength for any daily tasks.

Three Minds

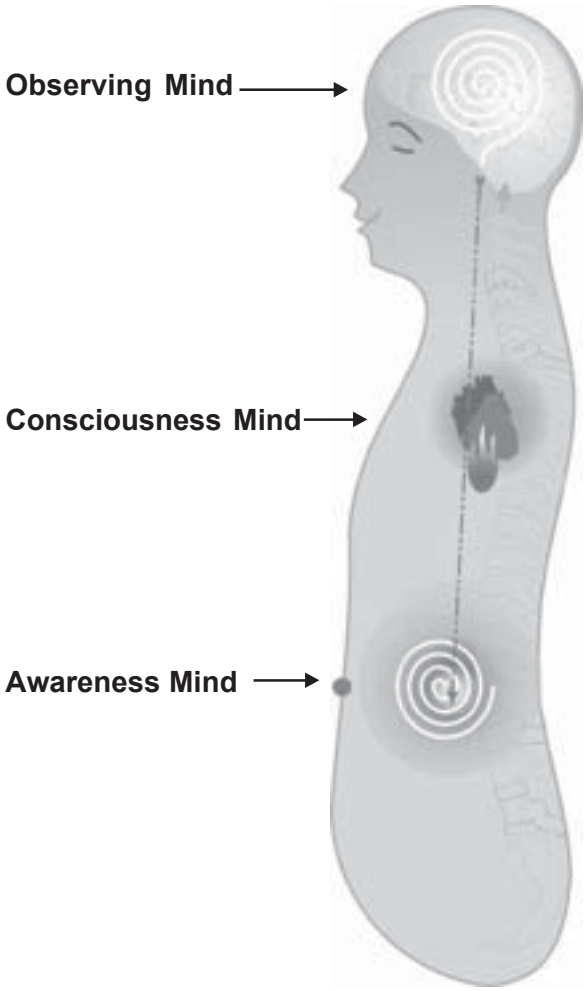


Fig. 10.1 *Empty your Mind Down to the Lower Tan Tien.*
Let the Awareness and Consciousness combine together.

Preparation

Stand or sit alone or with others in a group meditation. Relax and empty your mind down to the Tan Tien by smiling down to your lower abdomen. Bring your awareness to your abdomen and fill your abdominal brain with Chi.

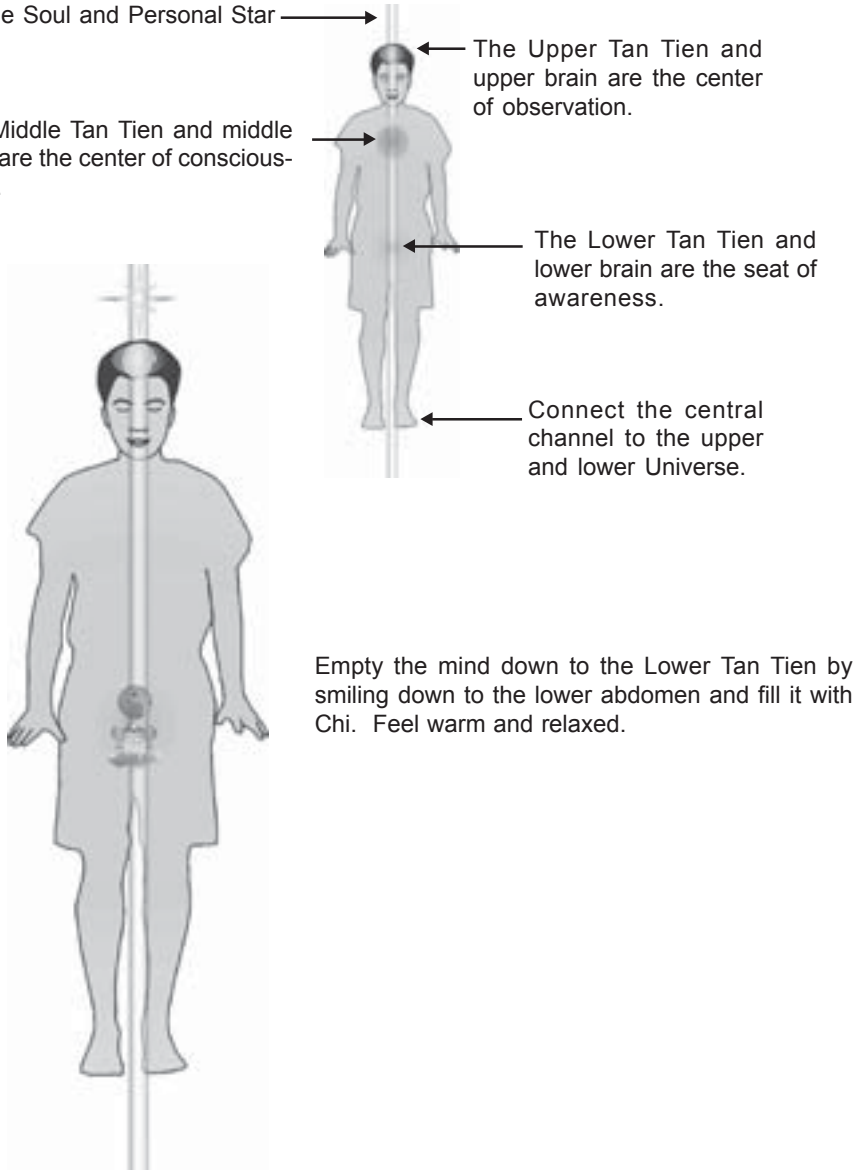


Fig. 10.2 *Three Tan Tiens*

Activate the Consciousness of the Three Fires

Tan Tien, Kidney and Heart Fires

1. **Tan Tien Fire (Abdomen):** Feel the energy behind the navel become warm as you direct a golden sunshine smile down from your face. Imagine that the energy in your abdomen is like a fireball behind the navel and below, a stove burning with fire. The stove is situated below the navel and close to the sacrum and lumbar vertebrae. Create the fireball above the stove behind the navel. The Taoists describe it as a burning stove that energizes the other fires in the body.

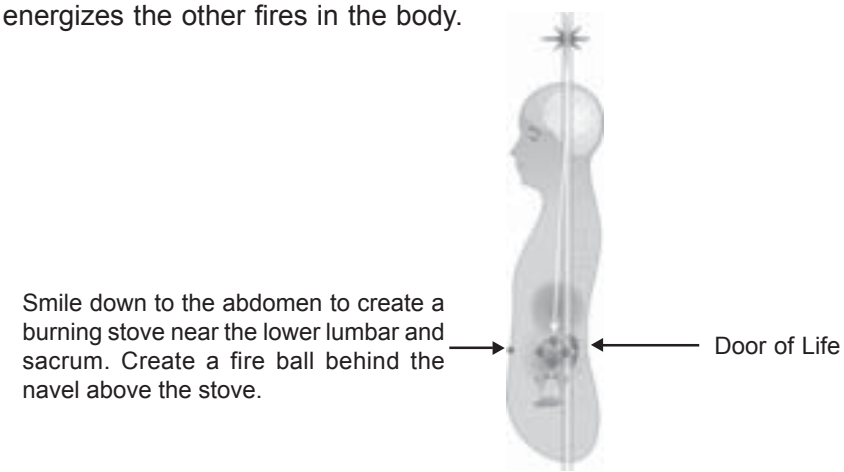


Fig. 10.3 *Tan Tien Fire*

2. **Fire under the Sea (Kidney):** Be aware of the Yang energy of the adrenals on top of the kidneys. Move that Yang energy down into the center of each kidney at the Door of Life (Yang within the Yin), thus lighting the Fire under the Sea. Expand the activated kidneys' energy to the Door of Life point on the spine opposite the navel just below the kidneys.

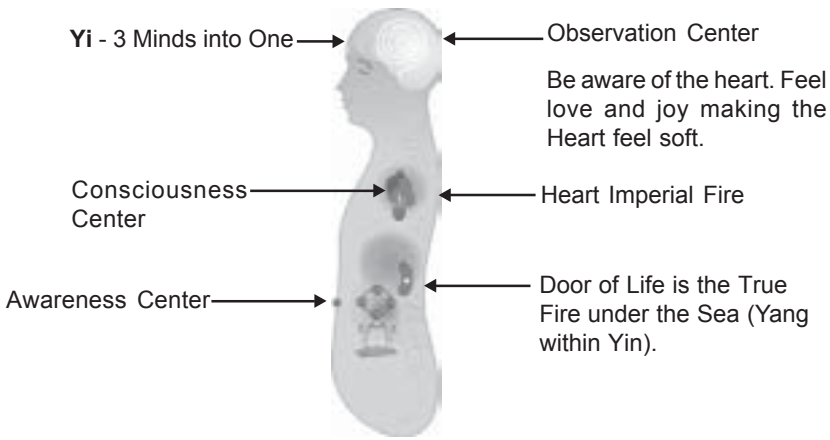


Fig. 10.4 *Kidney Fire*

3. **Imperial Fire (Heart):** Activate the consciousness by smiling down to the Heart making it feel soft. Be aware of the 'Fire in the Heart'. Feel the fire of love, joy, happiness and compassion creating softness in the Heart (Yin within the Yang). This will activate the consciousness of the Heart. Make a triangle, connecting the heart down to the kidneys and then down to the fireball behind the navel (Tan Tien). Connect the fireball to the kidneys and back to the Heart. This triangulation doubles or triples the Chi Fire Power.

Fuse the three minds into one mind *(Yi - pronounced "ee")*: When the abdomen is filled with Chi and feels nice and warm, it will rise and fill the upper brain with Chi. Lower the Upper Mind and the Middle Mind to the Lower Tan Tien, combining the three minds into one mind, ***Yi.*** The three mind powers will move to the mideyebrow. You can use this ***Yi*** to make correct decisions and to take the correct action or non-action.

Expand to the 6 Directions: Combine the power of the three minds with the power of the one mind, ***Yi***. Bring the ***Yi*** power into the third eye and expand it to the Six Directions of the Universe.

Link Personal Stars, Energy Body and Universe: With the ***Yi*** power connect to your ***Personal Star*** six inches above your head. Expand your awareness and consciousness to your Personal Star and out to the whole Universe. If in a group, spiral out and link with their Personal Stars. Create an Energy Body, linking everyone together with

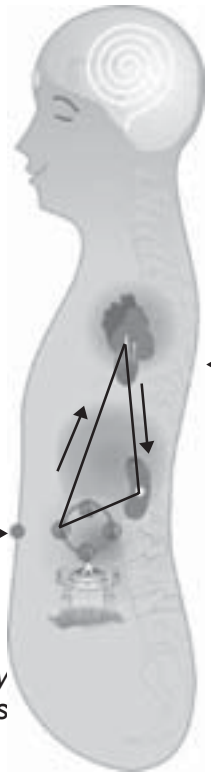


Fig. 10.5 *The Triple Force is the Holy Fire. Make a triangle: Heart to Kidneys to Navel (Tan Tien).*

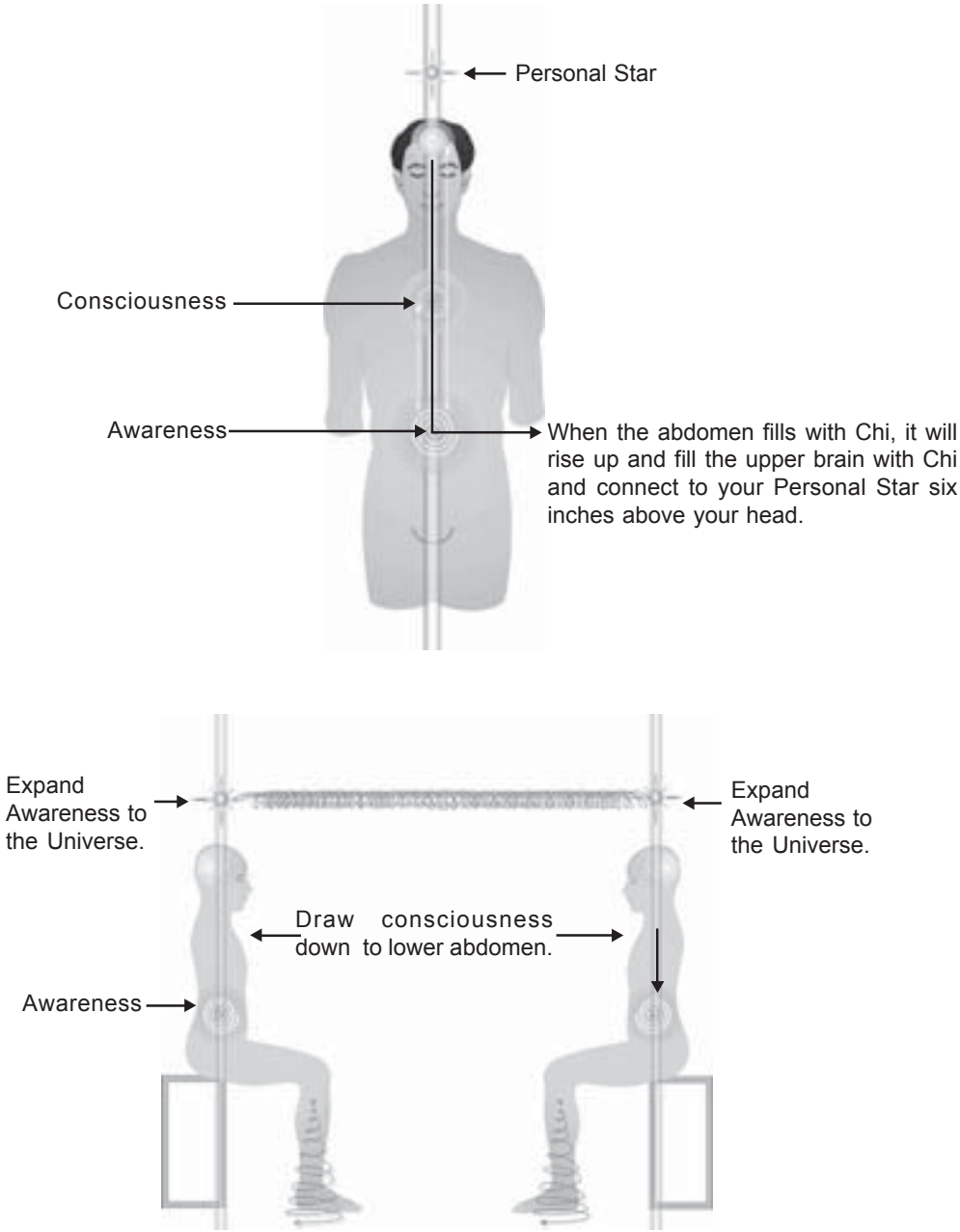


Fig. 10.6 *Link with other Personal Stars and expand the awareness from the abdomen.*

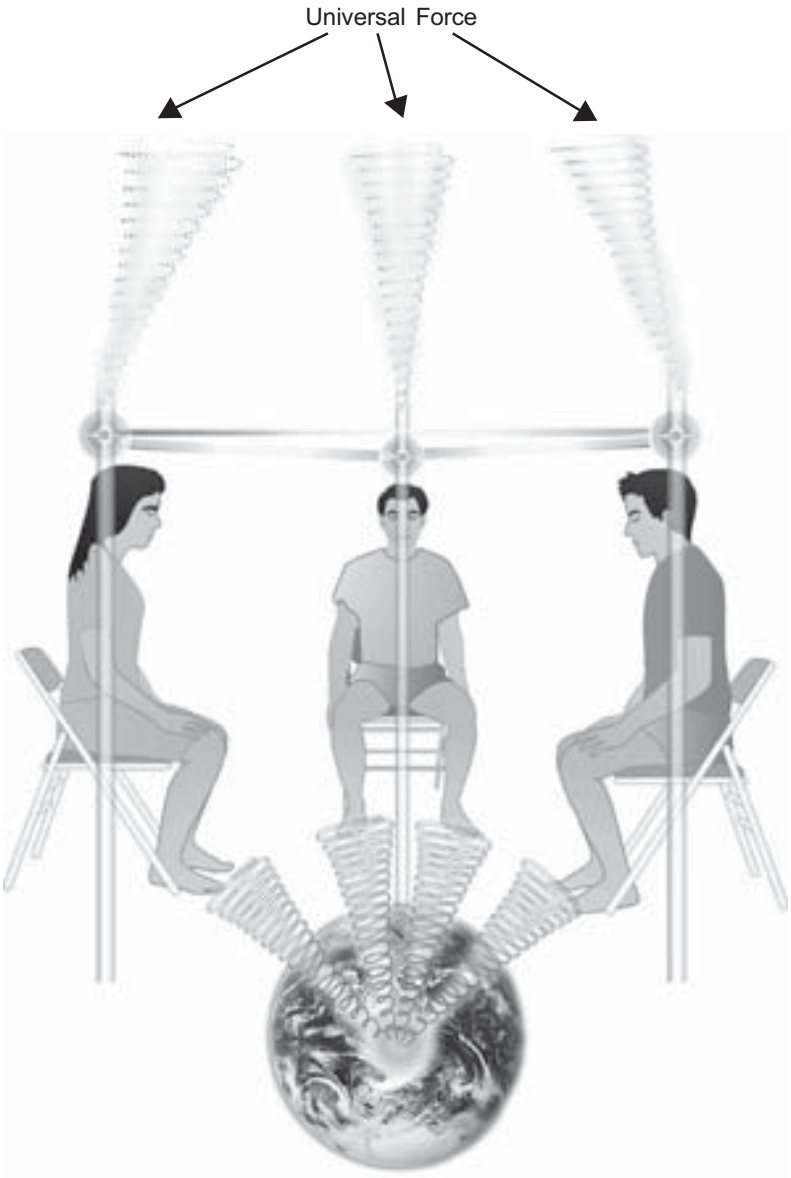


Fig. 10.7 *Link with other Personal Stars.*

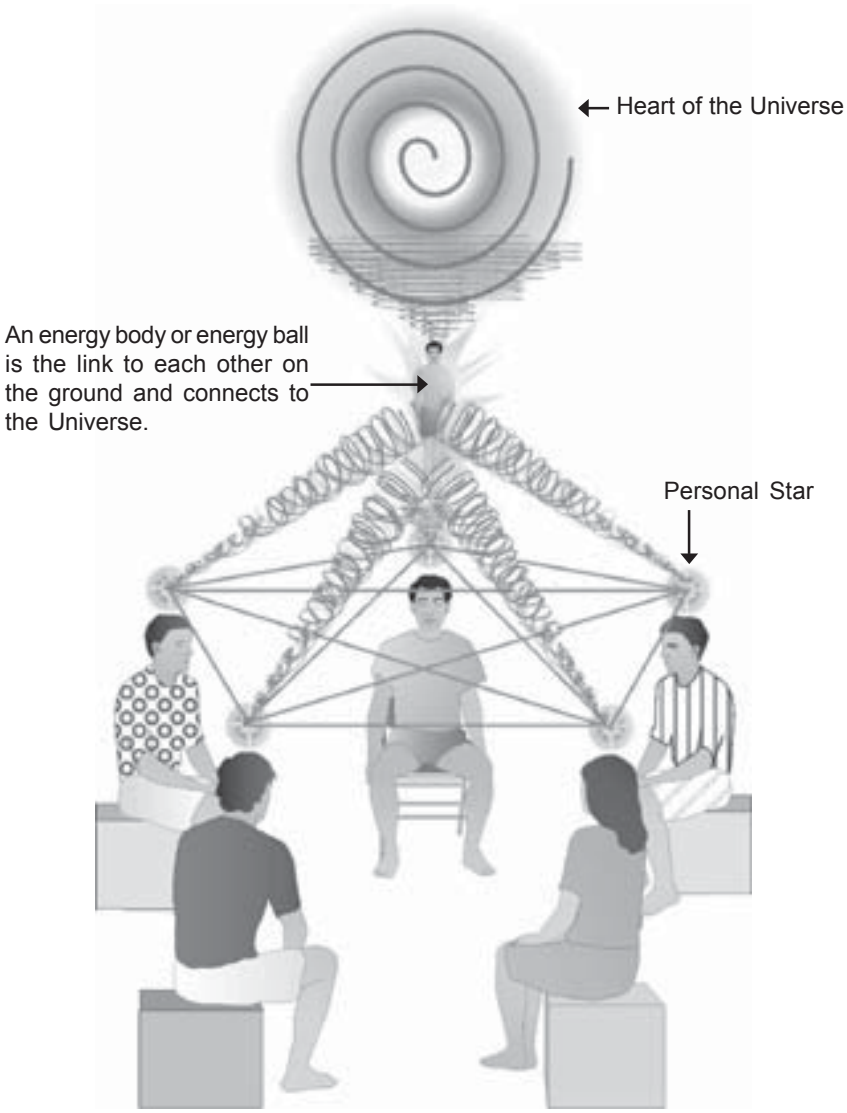


Fig. 10.8 *A Group can Link their Personal Stars Together.*

Link to friends, instructors, or others in the Universal Tao or to others who are doing similar work.

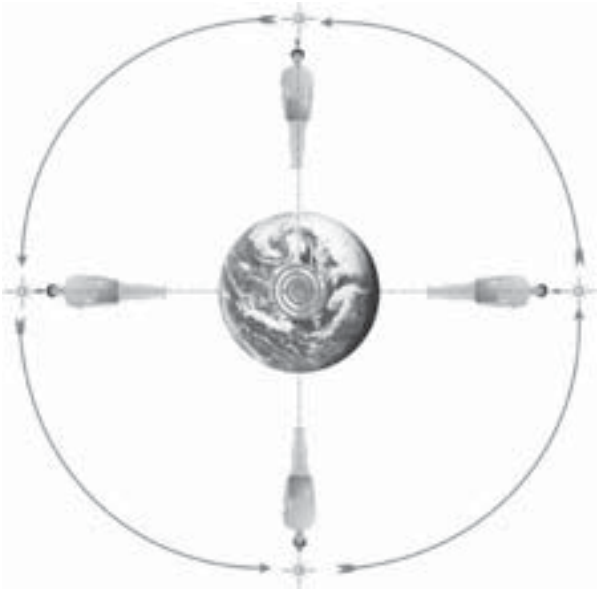


Fig. 10.9 *Like a Satellite, the World Link Meditators become a Communication Link between the Earth and the Universe.*

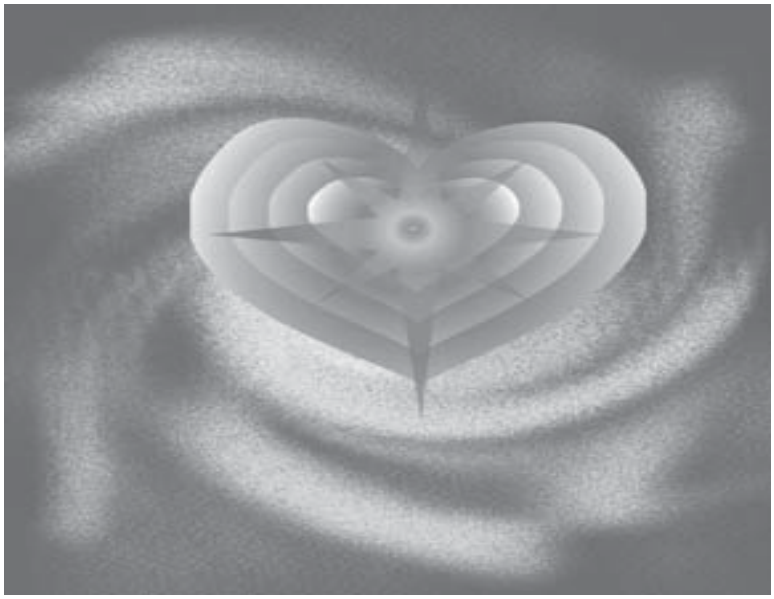


Fig. 10.10 *Linking to the Heart of the Universe (God) is a way of 'being in' Unconditional Love.*

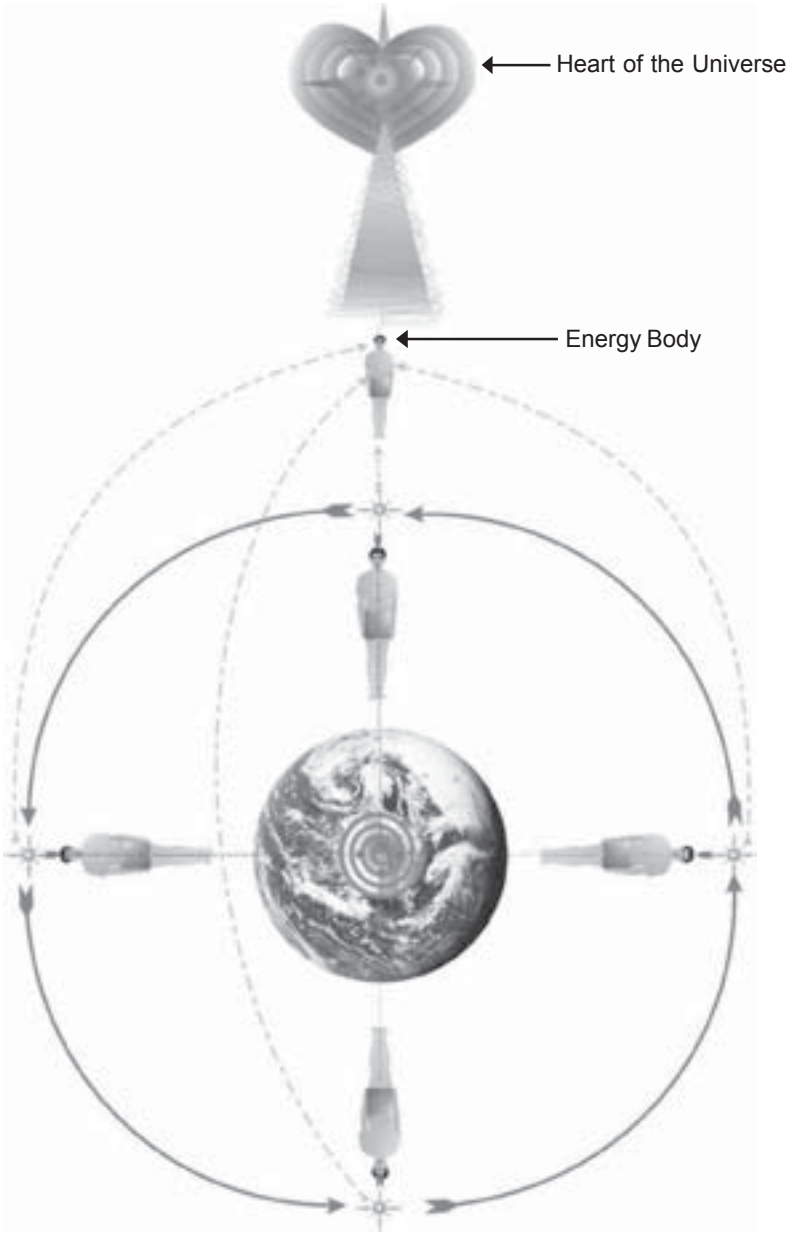


Fig. 10.11 *The Energy Command Communication Center for each person and group can connect to their 'own' Heart of the Universe.*

Protective Sacred Circle of Fire

The **Sacred Circle of Fire** has the power to protect us from all evil, whether it be sickness, misfortune or negative thinking from those around us. It allows us to connect with the power of the Universe. It helps us remove doubts of our own worthiness, so that we may reclaim the best that life has to offer; our birthright. Additionally, the **Protective Ring** connects us with the elemental essences of Forces in the Universe which both strengthen and protect us.

Sacred Fire Circle and Golden Chi Field

This method is an inner visualization using the power of the three minds (the observation, consciousness, and awareness) fused into one mind, the **Yi**. Its purpose is to get in touch with the **Guardian Essence (Guardian Angel)** or the forces of the **Six Protective Guardian Animals** of the **Six Directions**.

Fig. 10.12 *The Sacred Fire Circle and Golden Chi Field have the Power to protect us from Evil and Negative Thinking from around us.*

Visualization into Actualization

When we use awareness and consciousness, we turn our visualization into actualization; using our trust and belief, we can manifest and let it happen in consciousness and awareness, with good intentions.

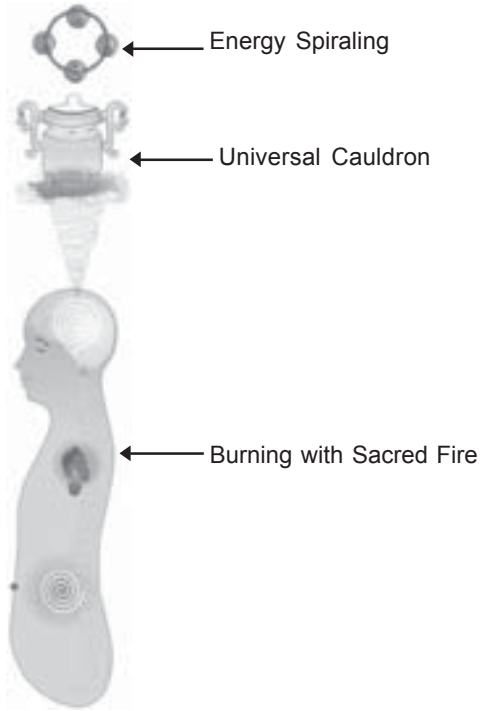


Fig. 10.13 *Project a Cauldron of Fire Burning in the Cosmos.*

1. Use visualization and imagine a big cauldron burning with fire in the cosmos. Feel the awareness and let it happen.

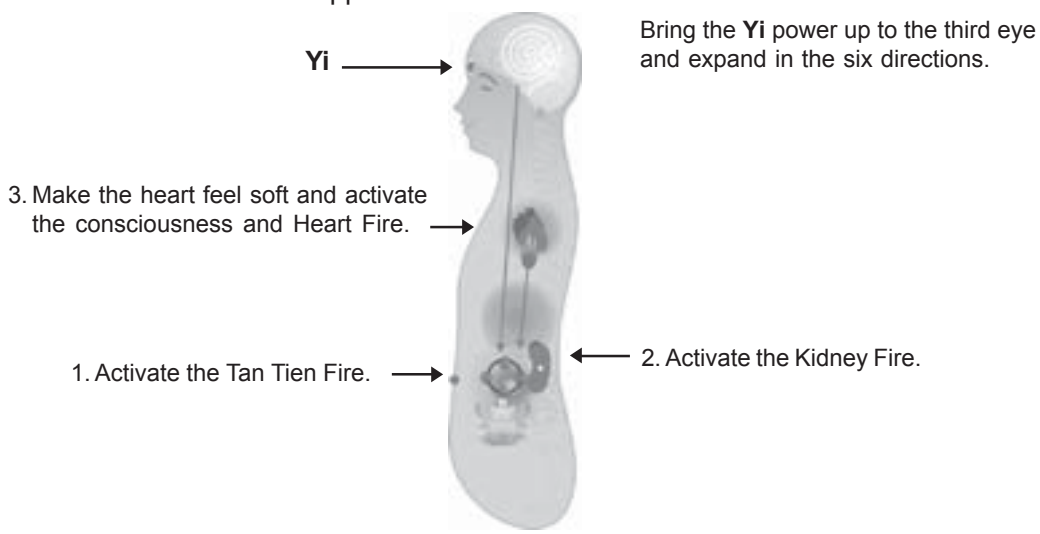


Fig. 10.14 *Three Fires and **Yi***

2. Be aware of yourself holding a long wand. Reach out to the cauldron and ignite the wand with fire.

Fig. 10.15 *Long Wand and Cauldron*

3. Use the Yi power to draw on the ground with the burning wand a Circle of Fire, 7 feet (2 meters) in diameter.

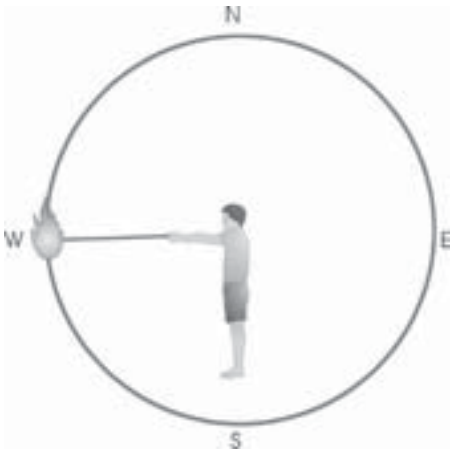


Fig.10.16 *Circle of Fire*

4. Stand in the center. Face the North. Imagine the burning wand and light up the Northern section outside the circle with fire. Pass the wand in an arc towards the South edge of the circle and ignite the Southern section with fire. Then swing it to the Eastern edge and ignite that section with fire.

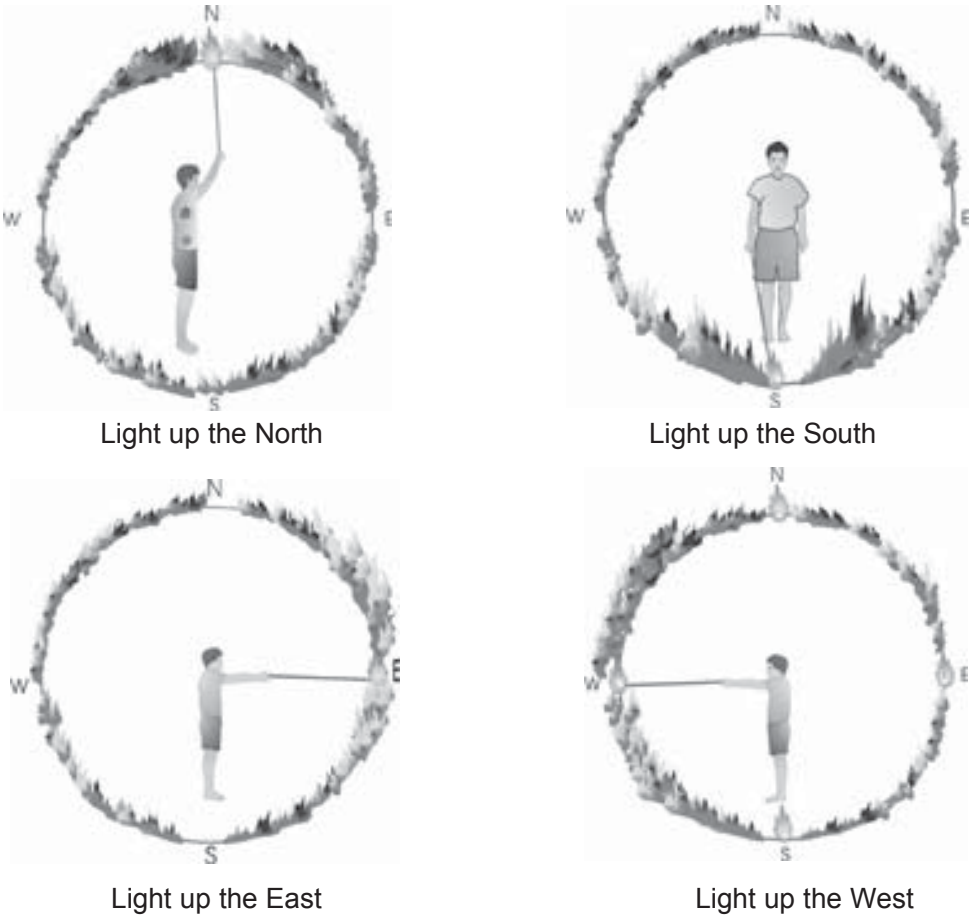


Fig. 10.17 *Four Directions*

5. Position the wand directly overhead. Turn left to face West and ignite it with fire.
6. Expand the fire to the whole circle, protecting you from all evil, whether it be in the form off sickness, misfortune or negative thinking from those around you. Place the wand at the edge of the circle.
7. Squat down facing North. In each direction place a Protective Animal (Guardian Essence or Angel): In front (North) place a Blue Tortoise, in back (South) a Red Pheasant, Right (East) a Green Dragon, Left (West) a White Tiger, Above (Center) a Yellow Phoenix, and Below (Earth) a Black Tortoise.
8. Create a protective Golden Dome Chi Field over you. Let go of all concerns and empty yourself. Ask each animal for protection. These Protective Animals of the 6 Directions are the same protective animals that are associated with the vital organs. Therefore, for energetic protection, ask the Blue Tortoise for Gentleness; Red Pheasant for Joy; Green Dragon for Kindness; White Tiger for Courage; Yellow Phoenix for

Fairness; and Black Tortoise for Stillness (Beneath). Connect with Universal Love, saying “I am worthy of Divine Love and Protection”.

9. Remain in this position for several minutes. Be aware of the Sacred Fire burning all around the circle and the Golden Dome Chi Field surrounding you. This forms a permanent magnetic Sacred Circle that is literally indestructible.

Fig. 10.18 *Golden Dome Chi Field*

Practice

Affirmations Peace within your own Heart

Calm the mind, emptying down to the abdomen and expand the awareness out to the Universe, repeating the following affirmations from the center of your awareness and consciousness.

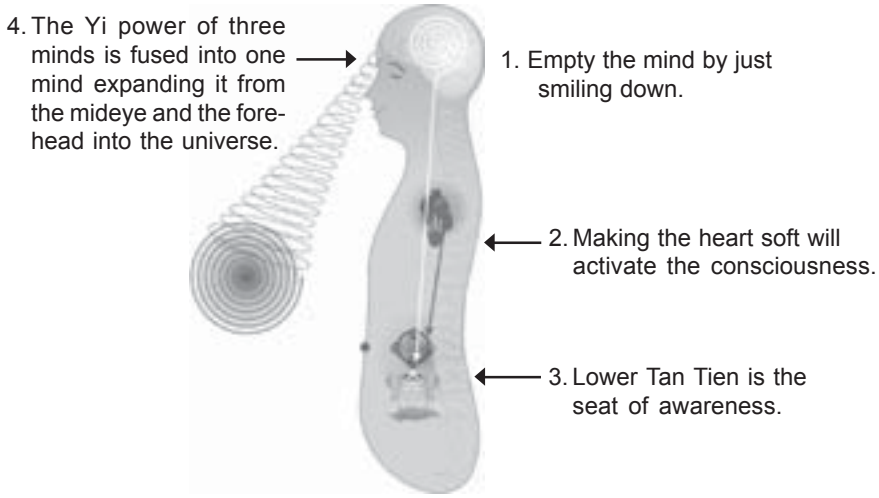


Fig. 10.19 *Activate three minds into one mind.*

Empty the mind by smiling to the Lower Tan Tien and direct the conscious mind of the Heart down to the awareness of the Lower Tan Tien, combining the three minds to fuse into the one mind (Yi). The Yi mind is the most powerful mind to connect with the universe.

I am at peace, feeling love and compassion in Myself (Touch Heart).
I am calm, warm, and still in my Center (Touch Lower Abdomen).
I am at peace with my Family and people close to me (Picture Them).
I am at peace with my Neighbors (Picture Them).
I am at peace with my Friends and Co-workers (Picture Them).
I am at peace with my Community (Picture Them).
I am at peace with myself and all sentient beings (Feel them).

Healing Yourself and Others

Personal Connection

1) Empty the Mind by starting a **smile** in your face. Let the Smiling Energy flow down to the neck and into the Heart area (the seat of consciousness). Make the Heart feel soft and full of love, joy and happiness activating the conscious mind.
2) Continue smiling and relaxing down to the abdomen (the center of awareness). Smile, emptying the mind and senses (eyes, ears, nose and mouth) down until the navel area feels warm, activating the awareness.
3) Feel the observing mind of the head and the conscious mind of the heart going down to combine with the awareness mind of the Lower Tan Tien. Combine and fuse these three minds into one mind: “Yi” at the mideye. Expand the awareness out from the abdomen beyond your physical limits to the cosmos and universe, connecting with the Universal Energy (God).

Take the Yi and spiral it upwards through the crown into the vast pool of energy in the universe. Continue spiraling in the universe and let it multiply. Then, spiral it down to your Personal Star and into your whole body.

Forest Green Energy

Picture an ancient forest with bright green leaves up in the universe. Picture a beautiful emerald green light coming from heaven and spiral it down to you. Spiral the green light down through your community, Tao Garden, your house and then into your crown. Let it clean your whole body, binding and absorbing any negativity, burdens, worries and sick energy and draining it all out of your body. Let it flow down deep into the ground. Dig a hole and bury the sick, negative energy in the ground. Let your heart be happy (3-6 times), for serious illness (36-81 times).

Forest Green Energy Keep the Tan Tien warm and expand the Yi mind to the universe, picturing a beautiful emerald green light in the universe.

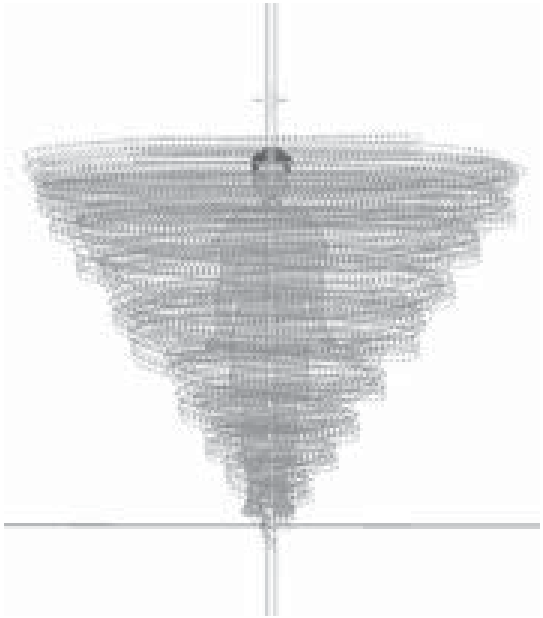
Fig. 10.20

Spiral it down through your community, your home and then into your crown.

Fig. 10.21 *Forest Green Energy*

Let the energy cleanse all that it comes in contact with.
Then spiral it down into the ground.

Fig. 10.22



Dig a hole and bury the sick, negative energy deep into the ground, never to return. It will be transformed by the Earth into positive energy.

Fig. 10.23 *Bury the sick energy.*

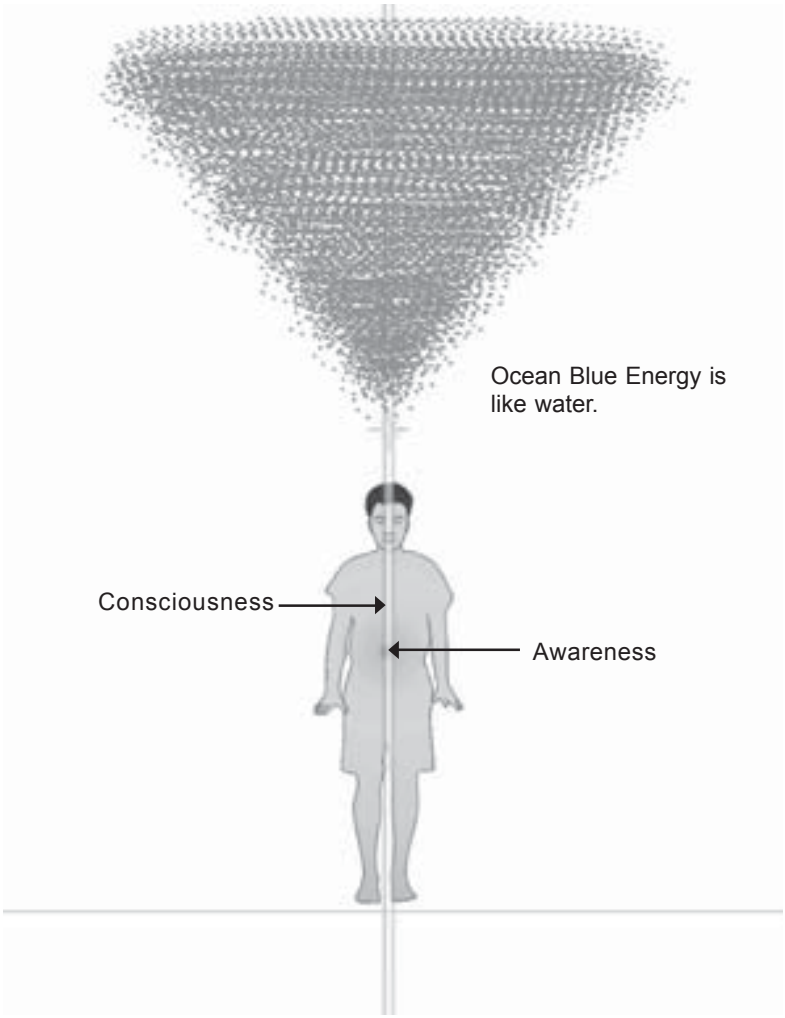


Fig. 10.24 *Keep the Tan Tien Warm.*
Stay Connected to the Awareness and Consciousness of the Yi as you Flush the Blue Light through your Body.

Electric/Universal Violet Energy

Picture violet light, the most abundant energy in the universe. Picture it coming from the North Star and the Big Dipper. Gather the energy in the cup of the Big Dipper. Hold the handle and pour the violet down over the Crown. Spiral the energy down and fill all the cells of your body, together with the Energy Body (6 times).

Fig. 10.25 *The North Star is a major source of violet light.*
The Big Dipper is a major source of red and infra-red light.

Healing and Strengthening the Whole Body

1. Fill the brain with violet light, saying "Let all sickness go away and let the brain be at its best."
2. Follow this method for your organs. Using the same affirmation for every organ. You can also group the organs;
   Eyes, ears, nose, mouth, tongue, teeth.
   Thyroid, parathyroid, thymus, pancreas, prostate, uterus.
   Lungs, heart, stomach, small intestines, large intestines.
   Liver, spleen, kidneys, ovaries, testicles.

   Doing this with your mind, stay conscious of the Lower Tan Tien. Expand your awareness to the universe and the universe will fill you with healing energy.

Activate the Immune System and Defense System

1. Touch the sacrum and feel your fingers grow 'long' with Chi and penetrate into the sacrum and bone marrow, activating the bone marrow. Put your mind into the Tan Tien and the universe. Hold until the universe fills the sacrum and Chi rises up the spine to the forehead. Feel the pulsating in the temple bones. This increases the production of healthy white blood cells for the immune system. Keep the Lower Tan Tien warm and feel the Chi flow up the spinal cord, then let it spiral up into the universe. The universe will fill you with healing energy.

Fig. 10.26 *Feel your whole body radiate, clean and shining with light.*

Fig. 10.27 *Hold until the universe fills the sacrum and Chi rises up the spine to the forehead.*

Activate the Immune System. Empty the mind down. Keep the Tan Tien warm. Touch above the pubic bone and feel your fingers grow 'long' with Chi. Let them penetrate into the sacrum and bone marrow to activate the immune system's production of red and white blood cells. Leave your fingers there and lower your mind into the Lower Tan Tien and the Universe'. Feel the funny, happy, laughing and tingling electrifying sensations in the bones.

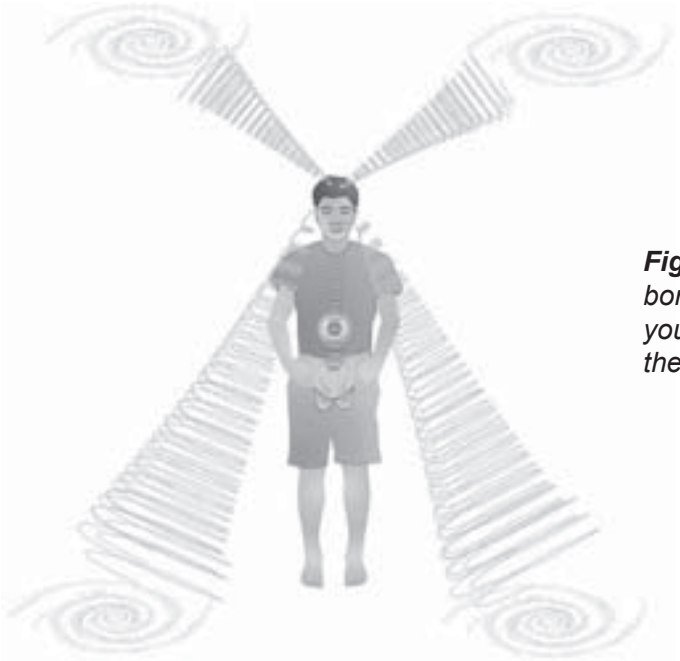


Fig. 10.28 *Touch and feel the pubic bone. Leave your fingers there. Lower your mind into the Lower Tan Tien and the Universe.*

Fig. 10.29 *Touch the sternum and let the Chi spread throughout the sternum, through the whole rib cage, in the Lower Tan Tien and the Universe, activating production of white blood cells.*

Touch the femur bone's middle point (upper legs) and feel your fingers grow 'long', penetrating the bone marrow of your legs. This should give a tingling sensation through the whole leg. It also increases the production of red blood cells.

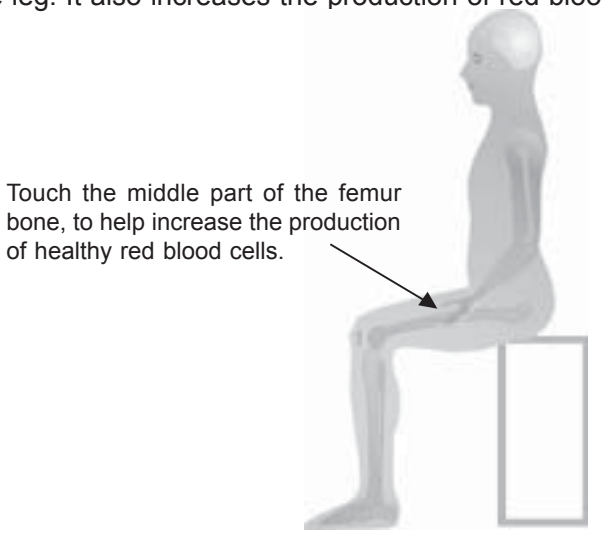


Fig. 10.30 *Touch the Middle Point of Femur Bones.*

1. Touch the middle point of the humerus (upper arm) and feel your fingers grow 'long' penetrating the bone marrow of the arm, activating production of healthy red blood cells.
2. Touch the sternum, feeling your fingers grow 'long' and project the Chi into the chest cavity activating the thymus gland. Feel the connection to the thyroid and parathyroid glands. This activates the immune system and increases the production of the T-cells (the anti-virus 'commando' cells of the body).

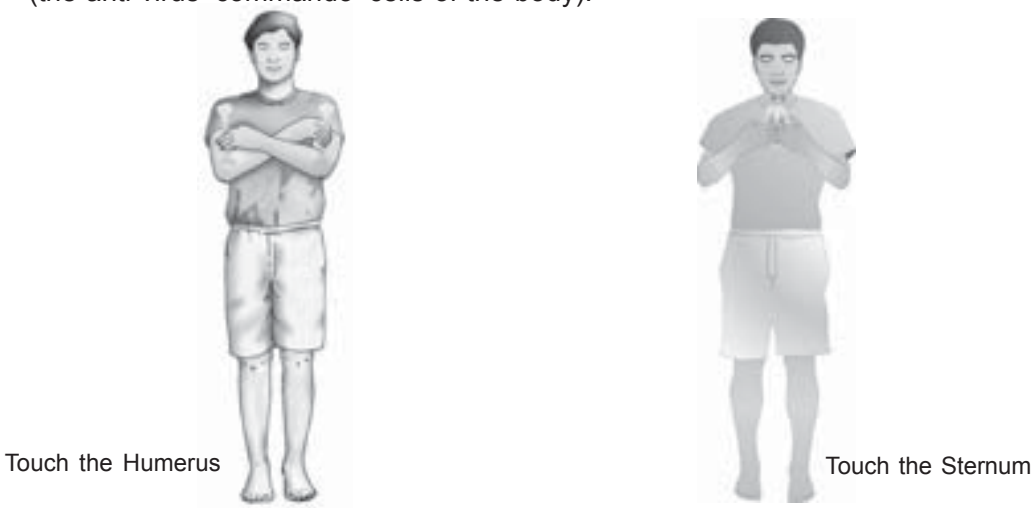


Fig. 10.31 *Humerus and Sternum*

Manifestations

Virtue Mind Power: our Subconscious Guilt

In order to increase the Virtue Mind Power, you need to get rid of subconscious guilt. Our subconscious guilt complexes are major obstacles to our health and progress. They are the major causes of illness and frustrations. It is as if we have an inner program that says we do not deserve to have health, wealth and happiness. This guilt makes us feel like powerless victims.

Other guilt complexes assume that we are sinners requiring punishment in the form of ill health or misfortune. We can never bring ourselves to ask the Universe for anything that we do not feel worthy to receive. God made the human in his own image. Humankind is naturally entitled to everything that the Earth and the Universe can provide for our happiness and well being. As children of God we deserve the best. We can command the Cosmos, providing that we make our command in the right way and with good intent.

Being Unwanted

Being unwanted is one of the worst situations for many people. This is true for all those who feel alone, especially children and old people, who might feel left all alone to die. Subconsciously, they will send out messages to the Cosmos to make themselves sick. The more attention that is given to sickness and ill health, the more energy is received from the Cosmos to make that happen. We get exactly what is projected by the subconscious mind.

Negative Self-Talk and Negative Thinking

Every thought whether positive or negative, is a command to the Universe. If our lives are not how we would like them to be, it is because we have unwittingly given negative commands to the Cosmos, we will receive negative results. Humans have a deep need for love and attention. Sometimes we become needy and try to get sympathy and attention through being sick, or by becoming a victim. If in our subconscious mind we believe that our motives are unrighteous or impure, then the Cosmos will keep us poor, sick, or both.

Your command to the Cosmos always brings results. We get exactly what we command, whether good or bad. Therefore, we must be careful of what we think, feel and say, if we want our lives to change for the better. We can remove all the unworthy, guilty, sinful thoughts and ideas, replacing them with the realization that we are the Children of God (the Cosmos). We can accept the best the Universe and Earth have to offer. Be glad to see other people have gained wealth honestly and that they are healthy and happy. If we develop jealous or negative feelings towards them, then we immediately return to the state of being self-righteously poor.

We need not accept the results of our negative thinking. We can initiate a positive course of action. To fully use this power you must replace negative thought patterns with

a new command of the cosmic force. You must take action when you receive the energy and information. The way to get extra energy is by breathing the red light into the heart 3 to 6 times letting it radiate into the whole body into the heart. You will feel a lot of energy helping you to take the actions necessary to complete your tasks.

Direct Command

To make a positive statement is to make a direct command. A command given in the present tense – in the now – is the most powerful command that we can give to the Cosmos. A command to the Cosmos should be phrased clearly, as an individual statement and always said aloud.

For example, if we make the command to ourselves, "I am well, I am healthy, I am happy, I am wealthy," it doesn't matter how sick or poor we are. The fact is, we have already begun to take on that quality because of the command that we have given. The change will begin very rapidly. The Cosmic force will begin work on our inner functions immediately, according to what qualities we have claimed. Success in using Cosmic power depends upon our working with and our exercise of the command, in the right way, to take action and responsibility. Practicing Positive Mind Power, fusing the three minds into one, the Inner Smile or Chi Kung will help.

Once you have set the cosmic force in motion with a direct command, you must take action. You must be willing to take responsibility for yourself. The Universe cannot accomplish everything on its own. The key is to use the Cosmic force to aid your actions. There is no limit to what the individual can accomplish when combining the Cosmic force with individual intent.

Manifestations: 'Yi' Mind Power

Start by smiling and empty the mind to fuse the three minds as one (Yi), in the lower abdomen. Move the Chi up to open the frontal lobe of the brain at the Third Eye. Create a triangle from the third eye to the temple bones filling it with Chi. Expand the awareness to the Universe.

Fig. 10.32 *Third Eye and Temple Bones are in a Triangle.*

Fig. 10.33 *Manifest the Mind Power, using the frontal lobe. Activate it by touching the sacrum. When the sacrum is filled with Chi, the Chi will rise up to fill up the frontal lobe.*

We manifest our affirmations in the physical, emotional, mental and spiritual body by starting to manifest from the center of awareness, by placing the attention in the abdomen. Next bring the thought that you want to manifest up to the heart connection, then to the upper mind, the frontal lobe and the mideyebrow. Broadcast it out to the entire Universe. This affirmation is multiplied many times by the abundant Universal energy. It will return to you to be manifested, but you must wait with your awareness anchored in the second brain - the lower abdomen.

Physical Image

Picture yourself at an age you would like to be, and hold that image very clearly. Hold it in the center of your second brain (lower abdomen) and move it up to the center of your consciousness in the heart area. Continue to hold this image very clearly and move it up to the forehead and then send it out to the Universe in all six directions, saying, “I am well and perfectly healthy.”

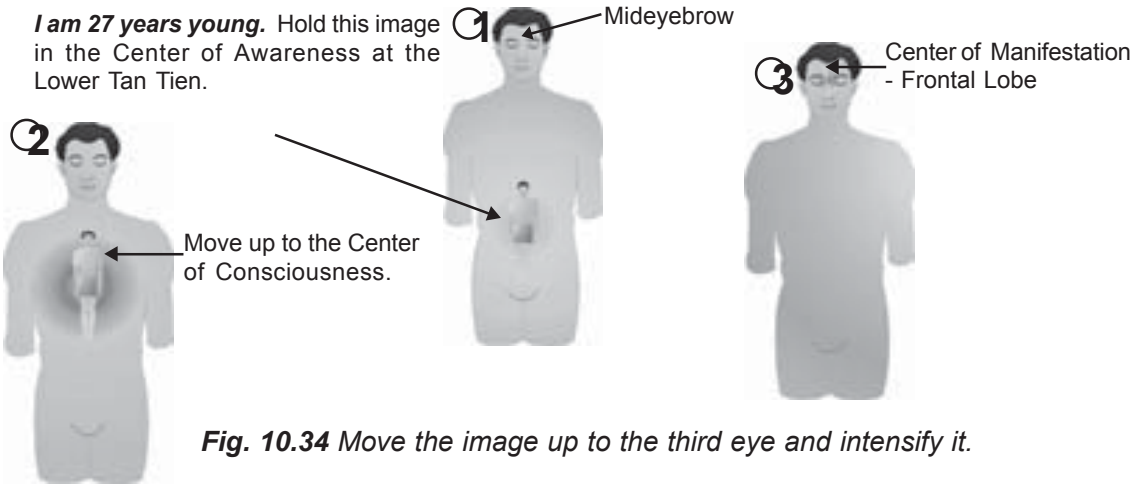


Fig. 10.34 *Move the image up to the third eye and intensify it.*

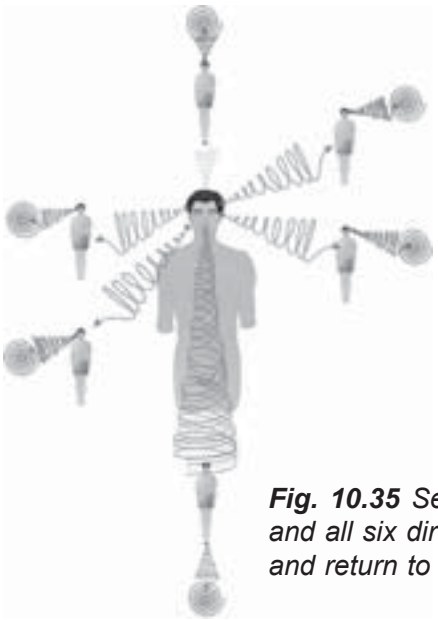


Fig. 10.35 *Send the image out into the Universe and all six directions. The affirmation will multiply and return to you to be manifested.*

Emotional Image

Picture your emotional body: See a body-shaped image close around your physical body, composed of all kinds of moving colors, saying: "I let go of old emotional experiences, seeing them for what they are and fill myself with radiant joy, love and compassion." Bring the image up the heart center and then to the frontal lobe. Send it out to the Universe and the Universe will multiply it many times and it will be sent back to you. Just wait for it to return with your awareness in the lower brain.

Affirm: "I let go of old emotional experiences, seeing them for what they are and fill myself with radiant joy, love and compassion."

Emotional Image.
See yourself as a happy, joyful person.

Fig. 10.36 *Emotional Image*

Mental Image

Picture your mental body, saying: "I make an agreement with myself to enjoy the best of life and to live the full wealth of my potential in harmony with Nature and the Universe." Follow the same sequence of moving the image up to the heart, the frontal lobe and out to the Universe. Wait for the return with your awareness in the lower brain.

Affirm: "I make an agreement with myself to enjoy the best of life and to live the full wealth of my potential."

Fig. 10.37 *Mental Image*

Spiritual Image

Picture your spiritual body and higher self, saying: "I am at one with my God (Source) within and manifest its Glory." Follow the same procedure as before.

Problem Solving

Answers and Solutions

A. Take the questions and problems that you have into your center of ***Awareness*** (Abdominal Brain) then to your ***Consciousness*** (Heart Brain) and send them out into the Universe through the third eye from your ***Observation Center*** (Mind Brain) broadcasting out to the entire Universe.
B. Wait for the best answers and solutions to return to you clearly and distinctly. Allow them to ripen into full understanding.
C. At any point in the future, if you have any questions or you need to take action or have a problem that needs to be solved, all you need to do is to inhale deeply and allow your awareness in the abdomen to expand far beyond your physical limits.
D. Exhale your problem into the Universe, open yourself, wait for a moment and let go of the problem. You will become conscious of the solutions to your questions or problems you presented. The more you practice this, the quicker and easier the results will come. You must take action when you receive the energy and information. The way to get extra energy is by breathing red light into the heart 3 to 6 times, letting it radiate into the whole body through the heart. You will feel a lot of energy enabling you to take action and complete the task.
E. You can use the same technique to project the goals and the time frame during which you wish to accomplish them. Sometimes it helps to ask for more wisdom from the Universe or Cosmos in order to understand our Life's purpose.

Finish the meditation by resting for a few moments and collecting the energy in your Lower Tan Tien.

Chapter XI
Planetary and Stellar Meditations to increase Awareness and Sensitivity

Feeling the direct connection with the planetary energies is a unique experience which carries multiple benefits for yourself and for the healing practices you carry out. Here follow some of the benefits we noted among practitioners of these meditations:

An increase in emotional stability and in understanding the origin of emotional patterns.
Ability to connect with information and energy from the universe.
Strong healing processes in the organs and the whole body.
A major increase in healing power.
A greater balance between the weak and strong points of character.
A rise in the ability to be deeply in touch with the different organs/systems in the body both of the practitioner and that of the person being treated.

We advise you to practice the opening of the Three Tan Tiens to the Six Directions first. (see Chapter II). Once the organs and energy centers are connected to the galaxies, the planetary forces can be integrated easily. The planetary meditations are divided into seven parts ; following each one represents a growing level of awareness/sensitivity.

Before you start with the first one, take some time to create a good contact and to integrate these energies into your body. Then proceed with the next one. A good sequence for building up the meditation practices from this book is the following:

Step 1: Iron Shirt Chi Kung, Inner Smile, Six Healing Sounds, Microcosmic Orbit. For those of you who have studied Cosmic Chi Kung (One Finger Art, see the book Cosmic Healing I) this practice is also a perfect preparation.

Step 2: Opening the Three Tan Tiens to the Six Directions.

Step 3: Planetary and Stellar Initiations 1 to 5.

To get a direct connection with the frequency of the planetary belts and galaxies, use the information and pictures in Chapter III; Taoist Astrology and the Structure of the Universe. As is the case with all new practices and meditations, it takes some time to build up the connection, but with practice it soon will become easier and once you really get it, you can connect to the energy at any moment during the day when you decide to tune into it.

As with anything in life, you will only get good at it if you master the basic principles and practice daily. If you want to go quickly in the beginning, you may have to return to the basics at a later stage.

It is important to realize that in these meditations you are interacting with enormous forces. It is not the effort, but the awareness and resonance that determine the results.

The openness to achieve the connection with these energies will give you just enough of what you need and what you are able to manage. This can cause strong emotional, mental and physical shifts in energy, but it is always available in amounts that you can handle. If you try to manipulate the universe you may well suddenly receive a lot more energy, just as you have asked. But you will discover soon that the ego led you in this direction. You will not be able to handle it and will 'burn' yourself. Thus your energy level will decline instead of rise, with disappointment being the result.

A good way to get in contact with the awareness belts in the solar system (planetary frequencies) is to study some basic astronomy and use the pictures of planets/stars in this book as a starting point. Once you have a better understanding of how the solar system really appears, the pictures can be used to tune into the planetary frequencies. Simply look at the pictures then close your eyes, look out through the cranium and expand your awareness. It is important to respect the correct sequence of building up this meditation practice. Start with what you can clearly register sensorially. Start with the sun (warmth/seeing it), then move to the earth (seeing, feeling gravity and energy), then shift to the moon (seeing, feeling). You need to contact with these three forces first before you will be able to connect to the other planets. Remember that you do not have to see these planets in order to feel them. What we are getting in contact with is the energy/awareness belts of the planets. The planets in their materialized form are only the center of this belt.

Practice with great respect. Do not try to pull these forces with your willpower. This will not work! Try to attract them. You can use the eastern or western astrological signs for the planets during the meditations by projecting them into the picture of the planets. But it's better to start with only the color and quality of the element.

Meditation 1
Earth - Sun - Moon Triangle

1. Warming up exercises (Inner Smile, Chi Kung, Tai Chi, Tao Yin and others)
2. Opening the Three Tan Tiens to the Six Directions, integrate the Inner Smile and the MCO.
3. Connect to Mother Earth. Breath deeply into the earth with every exhalation. Thank the earth for her love and nourishment. Breathe in the cool blue energy through the soles, the palms and the perineum. Store this energy in your center. This will be your safety belt and rooting during your planetary and galactic journey.
4. Bring your attention to the sacrum.
5. Picture a bright full moon behind you, shining on your sacrum. The color of the moon can be seen/felt as silver/white.

The moonlight will be mixed inside the sexual center with the blue sexual energy. Breathe it into the sacrum drawing the moonlight inside and further into the sexual center. At the same time draw the sexual energy inward. Men pull up the sexual organ, perineum and anus and gently squeeze the muscles around the prostate gland. Women softly close and contract the vagina, perineum and anus and gently squeeze the muscles around the ovaries and the uterus. On the exhalation (men and women) release the muscles about 90% but keep the Chi inside.

The squeezing should be very gentle and the other muscles in the body remain very relaxed. Gather the energy at the sexual center. Take about 5 to 10 minutes until you feel the moonlight directly entering into the sexual center.

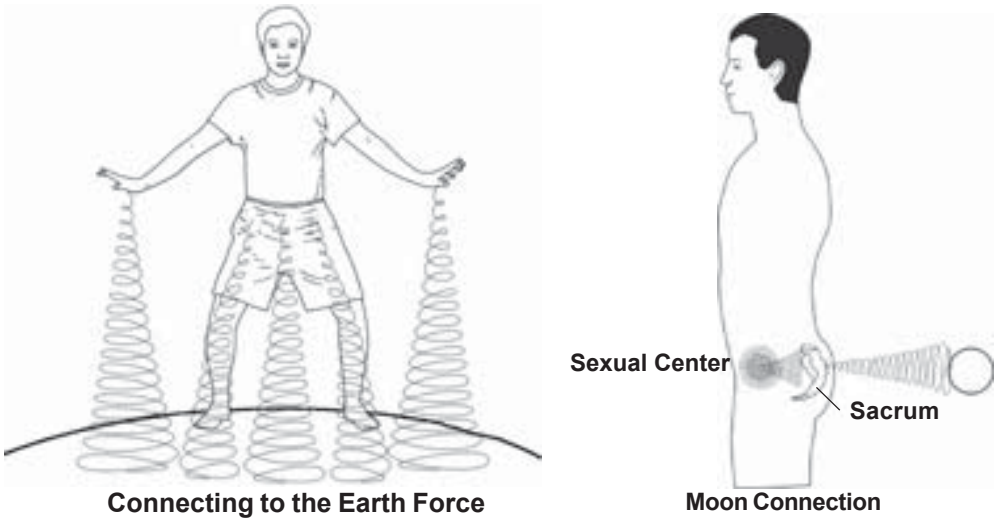


Fig. 11.1 *Sexual Energy*

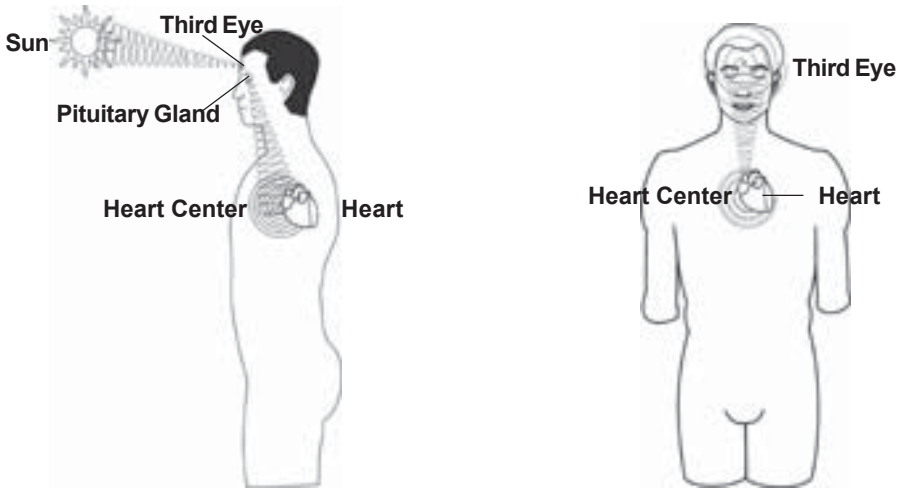


Fig. 11.2 *Connecting the Sun with the Third Eye and Pituitary Gland.*

6. Bring your attention to the third eye/mideyebrow point.
7. Picture a bright gold/yellow sun in front of you. Feel the light particles, the cosmic Chi tingling on your face. Absorb this light in the third eye and the pituitary gland.
8. Breathe in the light and guide it from the third eye and the pituitary gland down into the heart.
9. Make the heart sound to clean it and balance the heart energy. Feel love, peace, patience and respect, while you feel the sun directly shining in your heart. Shift your focus towards the heart center, right in the middle between the nipples, behind the sternum.

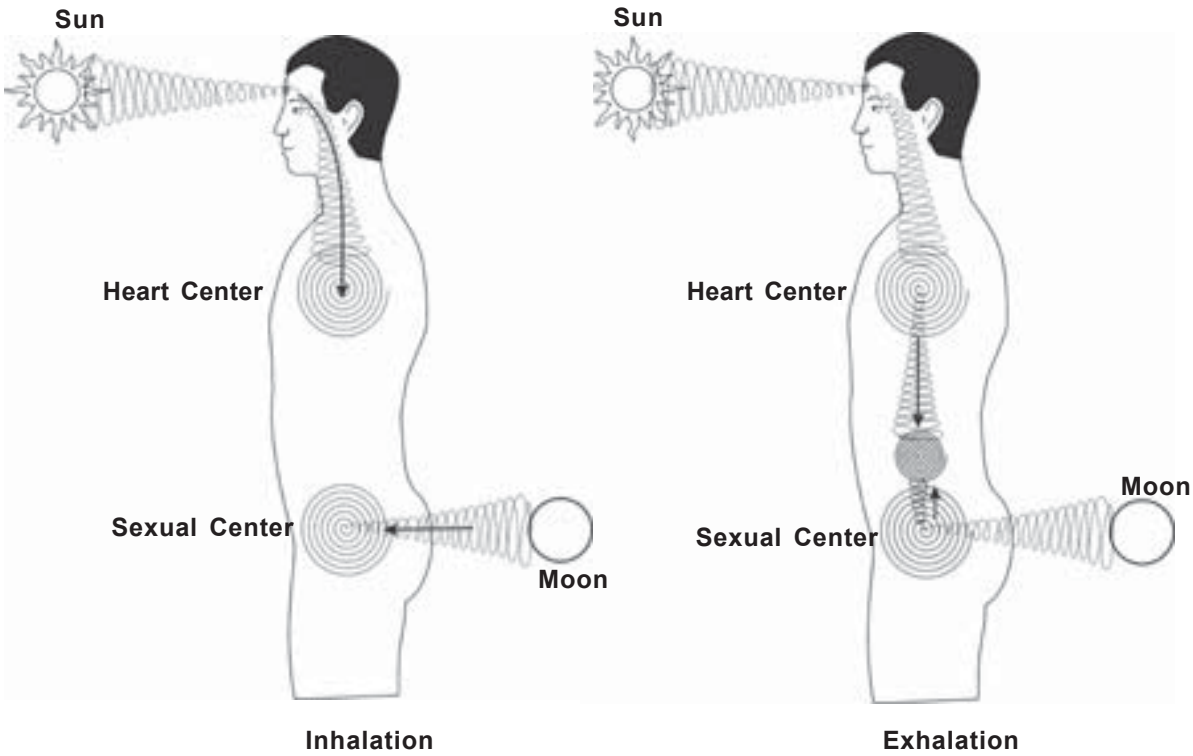


Fig. 11.3 *Connect the Sun and the Moon.*

10. Blend the golden/yellow sunlight with the bright red color of love and compassion in the heart center.
11. Gather more sunlight in the heart center. At a certain point the heart center will open up further and connect with the universal love. A deep yet unsentimental love can be experienced. This has been described as the 'blooming of compassion'.

12. On the inbreath draw the silver/white moonlight into the sacrum/sexual center (blue) and at the same time the golden/yellow sunlight into the third eye/heart center (red). On the outbreath condense these two energies in the central point behind the navel. Push the blue/silver/white energy up and the red/golden/yellow energy down. Keep drawing these energies in until you feel a clear connection (10-15 minutes).

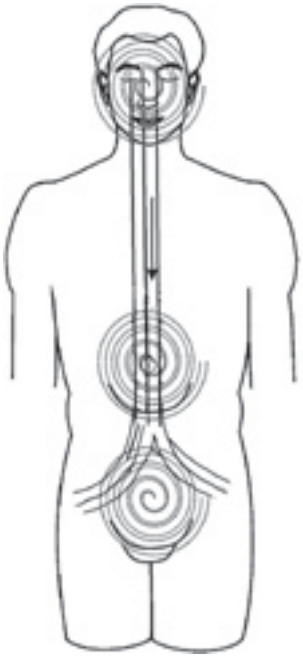


Fig. 11.4 *Sun and Moon Energy in the Body*

13. Bring the kidney and sexual energy up through the vena cava and the heart energy down through the aorta.
14. Mix both energies in the Tan Tien. If you have difficulties to connect with the aorta/ vena cava, just relax and let the two energies come together in the Lower Tan Tien.
15. When the love and sexual energy are combined in the center, a soft orgasmic feeling will start vibrating in the Lower Tan Tien and from there on through the whole body.
16. Combined with the sun and the moon force this energy can be multiplied. Start slowly; do not take in too much sun and moonlight or you will begin to overheat. Give your body the time to adjust to the new energy level. If you feel that you are getting too hot, or have any adverse reactions (unpleasant sensations), practice the Six Healing Sounds to cool down and regain equilibrium.

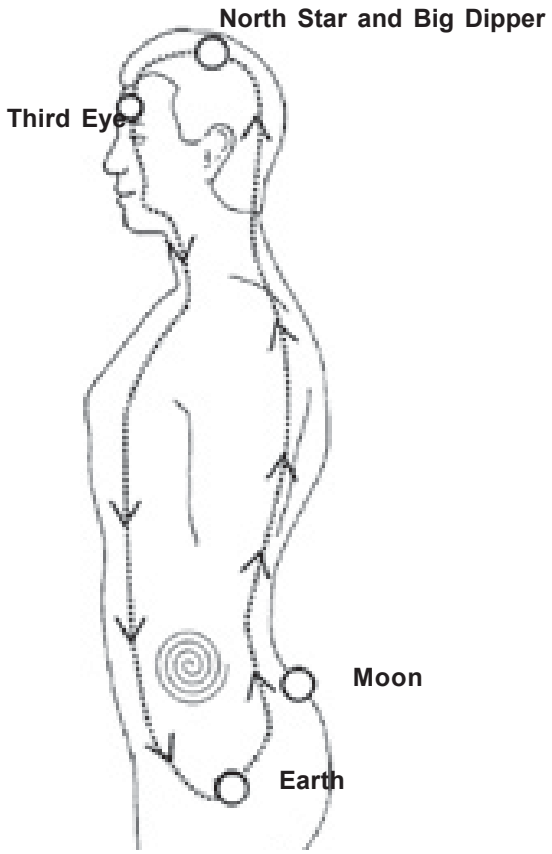


Fig. 11.5 *Microcosmic Orbit (MCO)*

17. Move the energy from the center down into the perineum and up the MCO.
18. Put the emphasis on the following points and connections:

    Perineum - Earth
    Sacrum - Moon
    Crown - North Star/Big Dipper
    Third Eye - Sun

19. Stop at each of these points and feel the external connection.
20. Circle the energy around 9 to 18 times in the MCO. Gather the energy in the center and rest. Observe your body and energy in the yin stage. Just notice where the energy is moving in your body. Remain in this state for 5 to 15 minutes.
21. End this meditation with Chi Self Massage.

Meditation 2
Strengthening the Organs and Balancing the Emotions

1. Warm up exercises (Inner Smile, Cosmic Chi Kung, Tai Chi, Tao Yin and others).
2. Opening the Three Tan Tiens to the Six Directions.
3. Integrate the Inner Smile and the MCO.
4. Make a firm condensed Chi ball in the center.
5. Connect to the Mother Earth force.
6. Bring your attention to the cranium and softly touch the cranial bones with a minimum of pressure. This touch is often called the butterfly touch, as it is compared with the pressure you feel when a butterfly is landing on your hand; connect to the craniosacral rhythm. Once you feel this rhythm, try to remain with it. Try it without hand contact. Touch without touching, holding your hand 1 to 2 centimeters from the skull.
7. Expand this cranial awareness to a distance of 5 to 50 centimeters away from the physical body. This will greatly increase the sensitivity in your skull and the craniosacral structure.
8. Make the connection between the organs, the cranium and the related planet.
9. Put one hand on the spleen/pancreas area, fill them with the bright yellow light of openness, fairness and trust. Put the second hand (in the form of a beak) softly on the crown point to make the internal connection with the sphenoid bone (See fig. 11.6).
10. Hold the position and let the Chi move between the hands or between the sphenoid and the pancreas/spleen. Once you feel the connection, put the hands together in front of the Tan Tien. Then expand your cranial structure and look up with your eyes through your crown.
11. Visualize a bright yellow planet above you, the planet Saturn. Let the light of the planet Saturn shine down into the crown and the sphenoid bone and than directly down into the spleen and the pancreas. Feel the direct connection and feel how the spleen and pancreas are activated through this direct contact.
12. Feeling this connection may take some time, but once it has been established, the planets become like powerful batteries, charging your organs.
    Use this same procedure for the planets and organs, following the Five Element Cycle:
    Spleen - Lungs - Kidneys - Liver - Heart
    Earth - Metal - Water - Wood - Fire
13. Use an open hand for the other bones in the cranial system and not a beak hand as on the sphenoid bone.
14. Use your giving hand (usually the predominant one) on the cranium and your receiving one on the organs.
15. Picture all five planets above the crown and let the light shine into the five cranial entrances and further down into the organs. Bring all these energies together in the center.
16. Move the energy in the MCO, making 9 -18 cycles.
17. Gather the energy back into the center, observe the yin stage.
18. End with Chi Self Massage

Fig. 11.6 *Spleen/Pancreas, Sphenoid Bone and Saturn*

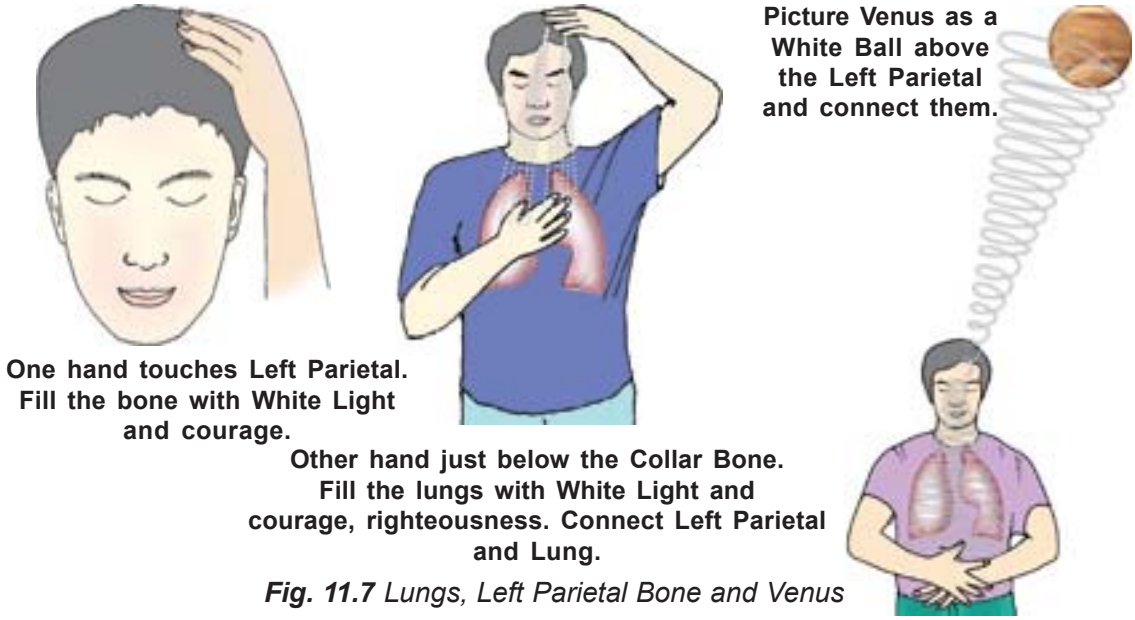


Fig. 11.7 *Lungs, Left Parietal Bone and Venus*

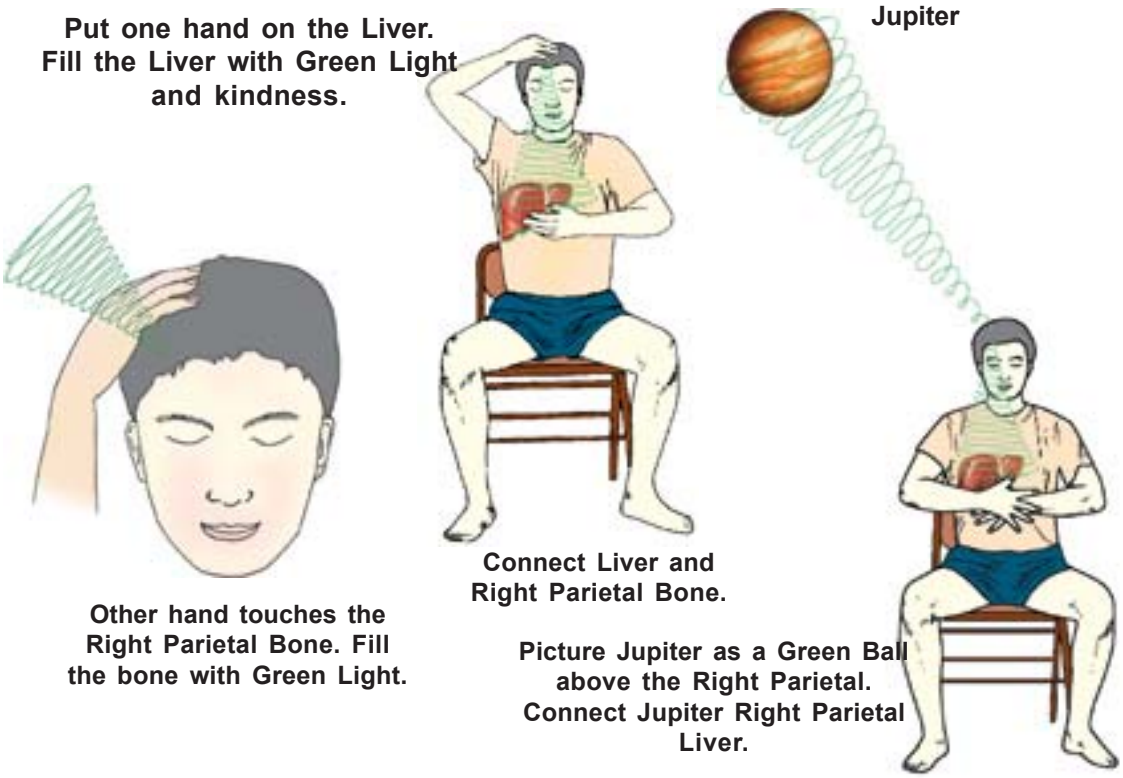


Fig. 11.8 *Liver, Right Parietal Bone and Jupiter*

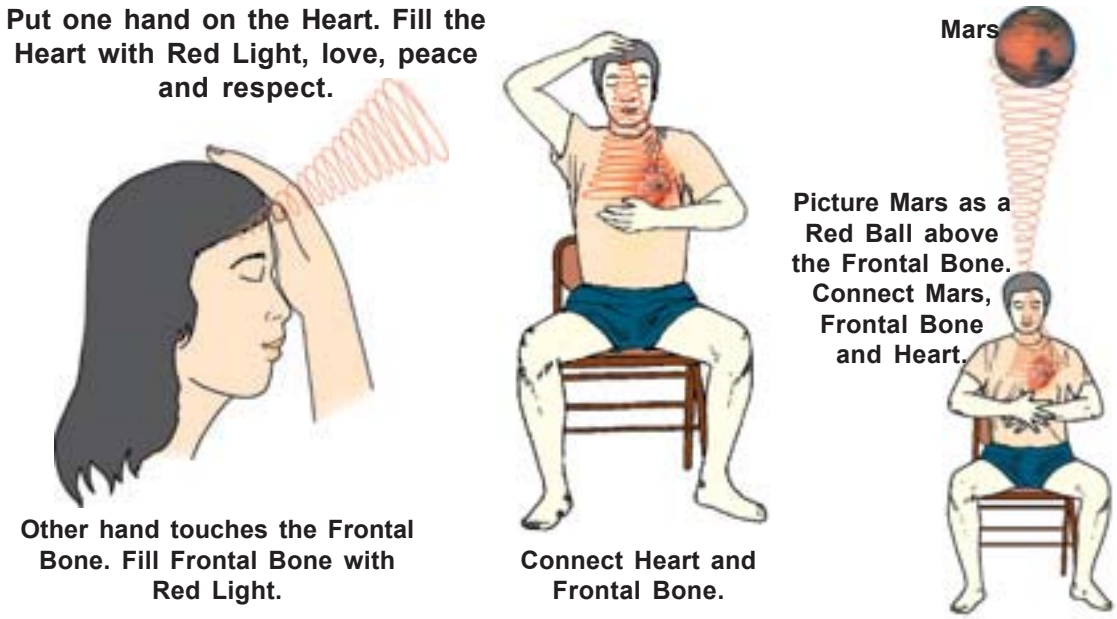


Fig. 11.9 *Heart, Frontal Bone and Mars*

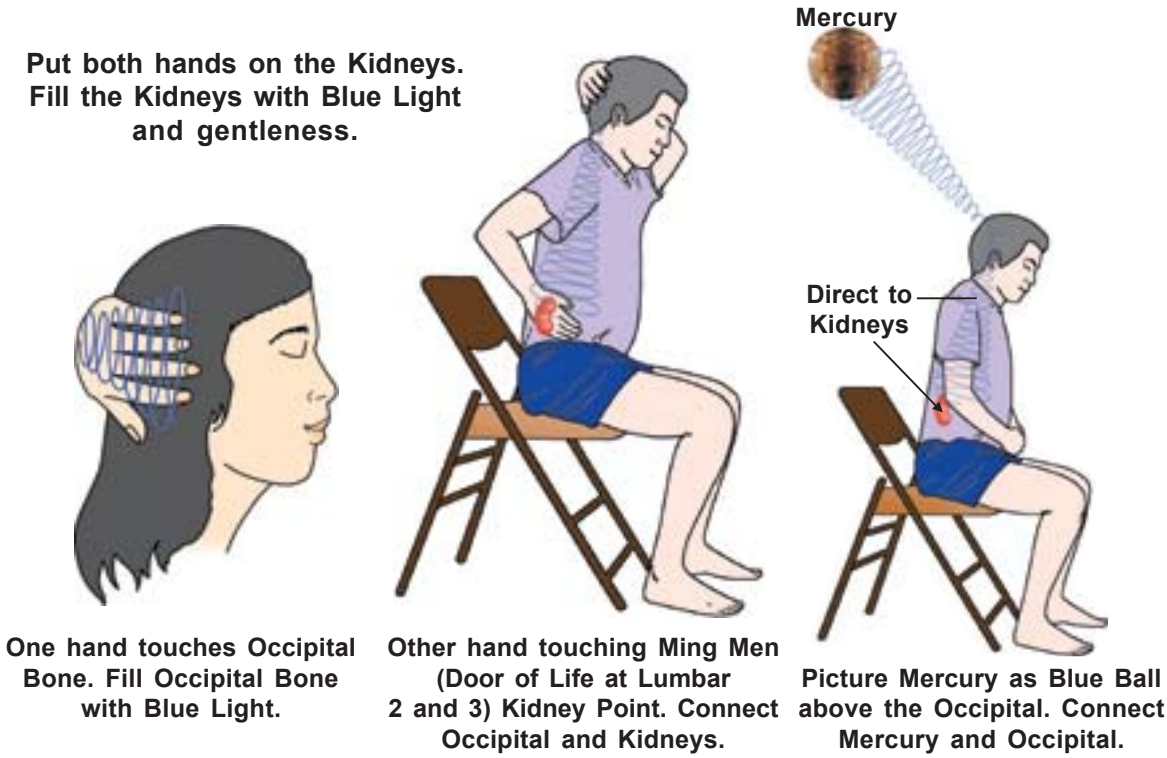


Fig. 11.9 *Kidneys, Occipital and Mercury*

Note: During the meditation you may meet different negative or undesirable emotions. Keep smiling down into the organs to enhance the virtue energy. If negative emotions keep bothering you, exhale them deeply into the earth and make the related healing sound. Fill the space with positive or virtue energy.

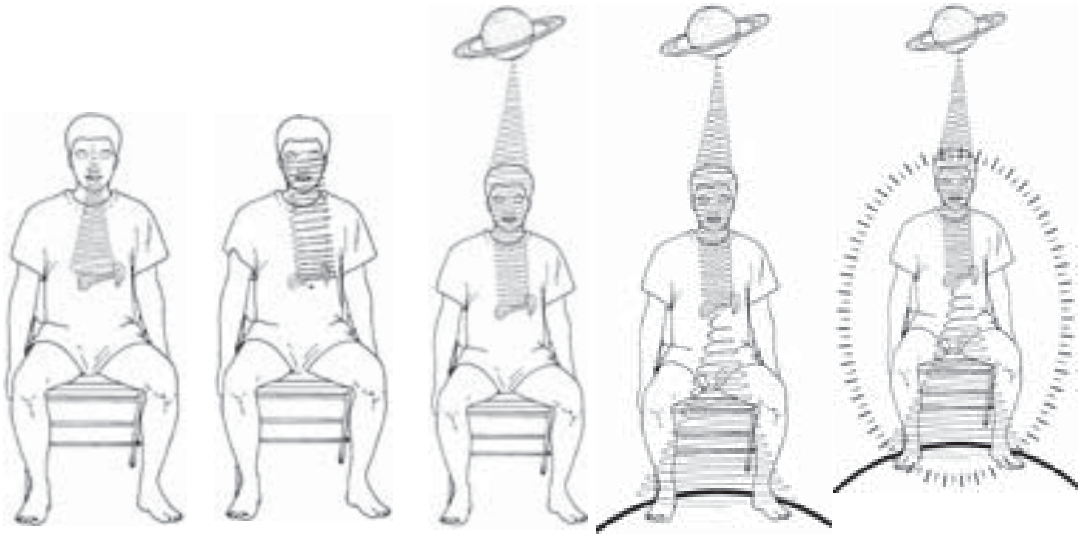
Meditation 3
Strengthening the Body Systems
Increasing the Energy Field

After you have practiced the second meditation for a while it will become easier to feel the connection with the planetary forces. This third meditation uses the technique of the second meditation but adds two factors:

Five Earthly Elemental Forces
Expansion of the Planet/Organ Energy into the Body Structures

This practice will strengthen the different organs and body systems. It will also create balance in your energy structures. Sickness and negative energy will be discharged. Your energy field will greatly improve.

1. Warm up exercises
2. Open the Three Tan Tiens to the Six Directions.
3. Make a firm, condensed Chi ball in the center.
4. Connect to the Mother Earth Force.
5. Go through the same five planets/organ cycle, as in meditation 2, but now add the earthly nature force related to that organ. Spend some time to build up a connection with the different nature forces.
6. Mix the earthly and planetary energy in the organ.
7. Let the energy/color/virtue expand in the muscular system until the whole body is filled with it and the energy radiates out into the aural field.
8. Earth Element: Spleen - Sphenoid Bone - Saturn - Earth/Soil Energy - Muscular System. Earth energy can also be used in the lymphatic system. Use the same strategy for the four other elements.
9. Metal Element: Lungs - Left - Parietal Bone - Venus - Lake/Metal Energy - Breathing System.
10. Water Element: Kidneys - Occipital Bone - Mercury - Water Energy - Bone Structure/ Hormonal System.
11. Wood Element: Liver - Right - Parietal Bone - Jupiter - Tree Energy - Tendon/Ligament System.
12. Fire Element: Heart - Frontal Bone - Mars - Fire Energy - Arterial/Veinous System.



Smile deep into the Spleen and Pancreas.

Connect the Spleen/ Pancreas and the Sphenoid Bone.

Let the Yellow Light of Saturn down into the Sphenoid Bone Spleen/ Pancreas.

Take in the Earth/Soil Energy, mix it in the Spleen/ Pancreas with the light of Saturn.

Let the light and energy expand; fill up the whole body, until it shines out into the aural field.

Fig. 11.10 *Earth Element: Spleen, Sphenoid Bone, Saturn, Earth/Soil, Muscular System*

Fig. 11.11 *The Planets' Forces beam down to the Crystal Room.*

At the end you will feel a strong multicolored energy filling your whole body and surrounding you.

You can complete the meditation by adding the sun and moon energy. The sun is connected to the fire energy, the pericardium, third eye and lymph/immune system. The moon is connected to the water energy, the sexual organs, sacrum, hormonal system. Use the same order as in Meditation 1. This will increase the energy field.

13. At the end envision all of the planets above and around you. Just relax and let the energy move freely throughout your body.
14. Gather the energy in the Lower Tan Tein until you feel a Chi ball. Condense it firmly.
15. Circle the Chi ball in the Microcosmic Orbit.
16. Then gather in the center and observe the yin stage.
17. End with Chi Self Massage.

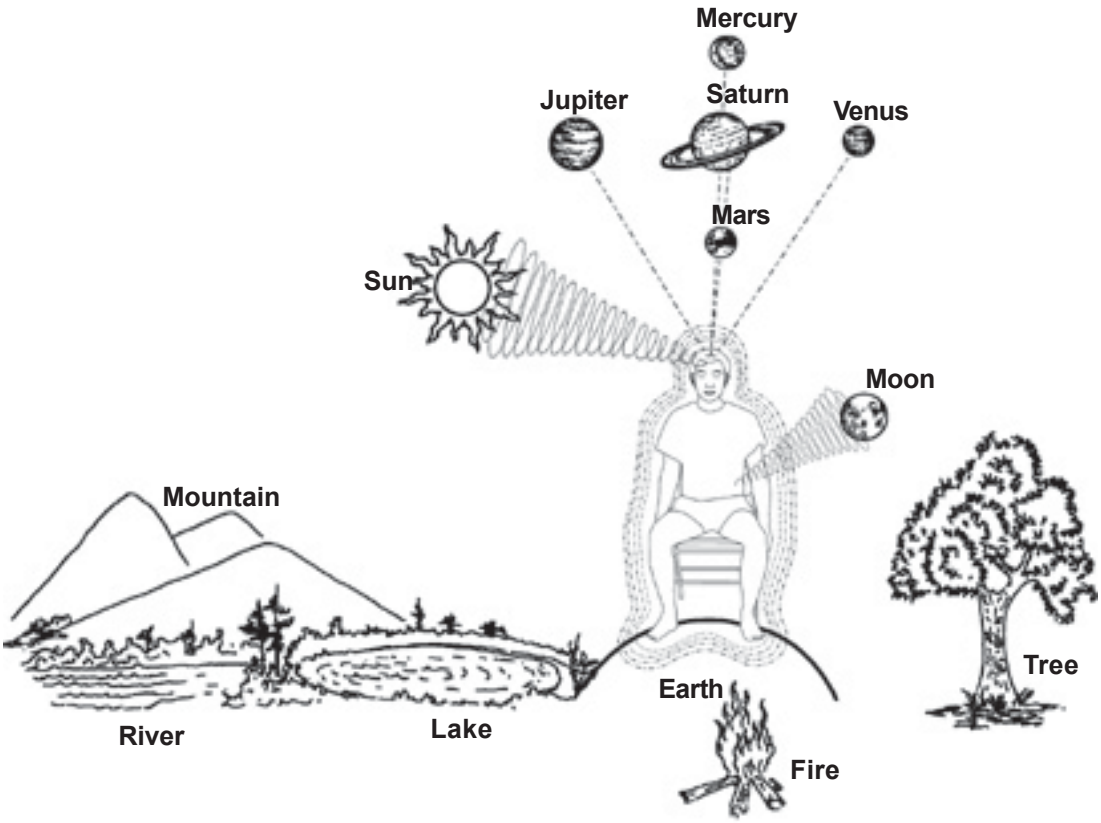


Fig. 11.12 *Natural Forces*

Meditation 4
Connecting to the Galactic Forces

To connect with the galaxies is a very strong meditation form. It brings enormous amounts of energy in your body. To work with them first use the preparation exercises from Chapter II.

The galactic energies can be used in two different ways:

1 Connect with Six Galaxies in the Six Directions.

2 Connect with the North Star and the Five Palaces.

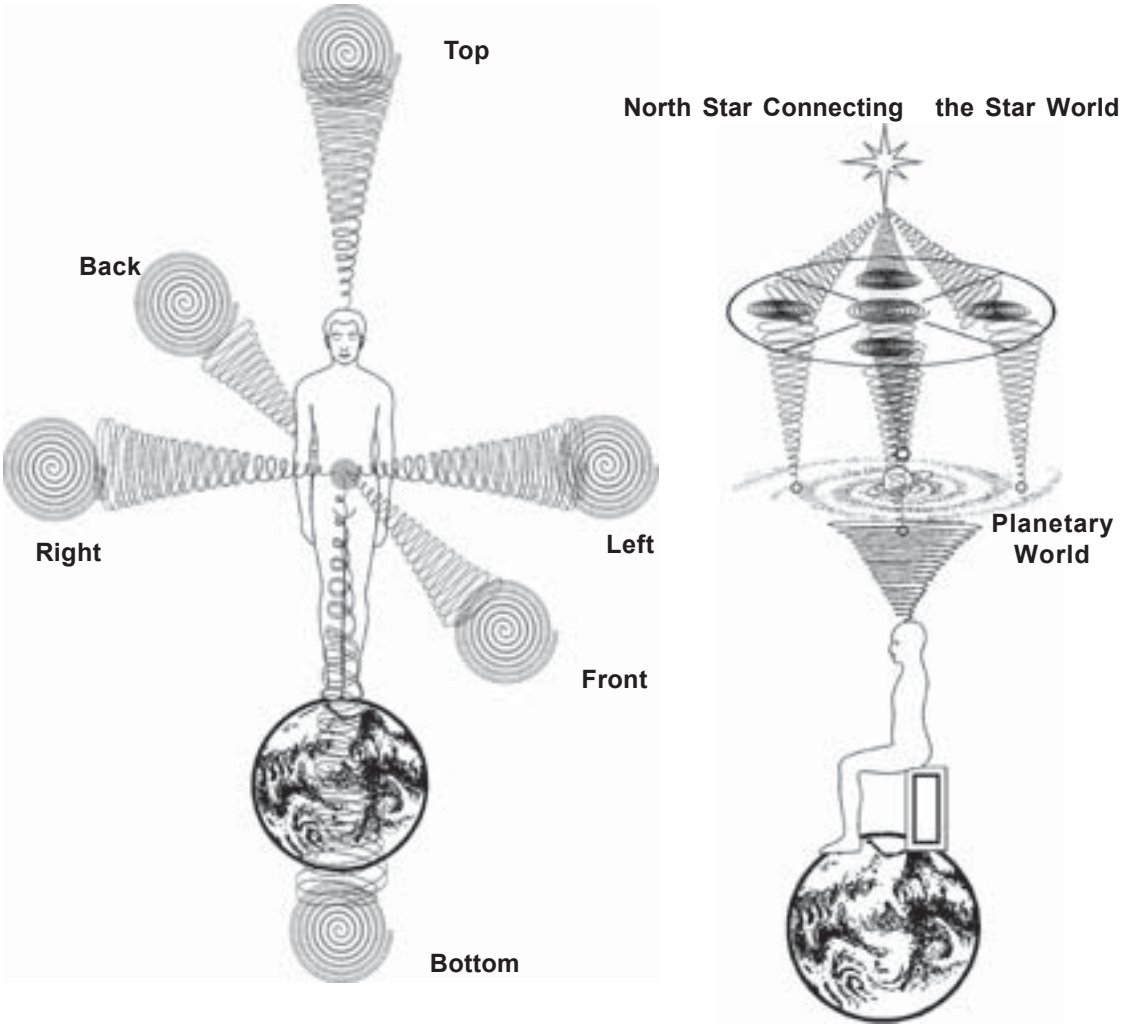


Fig. 11.13

Galaxy Connection in the Six Directions and Galaxy Connection with the Five Palaces

Six Direction Method

Golden yellow is the color used most frequently but any other colors can be incorporated as they manifest.

The entrance points are the crown, the third eye, the navel, the Door of Life (point in the lower back) and the feet. This meditation will balance the energy throughout the body since the connection points are in the head, body and legs. The bottom galaxy is reached through the earth, which means that good grounding is easy. This takes away the risk of overheating. Always remember that galactic energy is enormously powerful; maintain a respectful attitude as you work with these energies. The best way to build up is to work first with the six directions and then with the five palaces.

Five Palace Method

In this method, the energy is brought into the body through the cranium so there needs to be a good rooting and connection with the earth to balance this hot Universal energy in the head. Meditation 1, 'Balancing (Earth) Sun and Moon' or the preparation exercises in Chapter II, can be used first. It is advisable to begin with planetary connections and meditations. Their frequency and the subsequent amount of heat that is produced is lower than that of the galaxies. Once the planetary energies are balanced in the head. expand the awareness further beyond the Milky Way into the galactic world. Connect with the North Star and build up the connection with the five galaxies placed around the North Star.

Use the same colors and qualities as used in the five elements and bring the energy all the way down to the five organs.

Note: Once you have mastered this meditation you can increase the energy level, specifically by connecting the seven stars of the Big Dipper with the bones of the skull. (Details, see chapter V, page134)

Fig. 11.14 *Immortal*

Pictures of the channels between galaxies and organs can be used during or as a preparation for meditation.

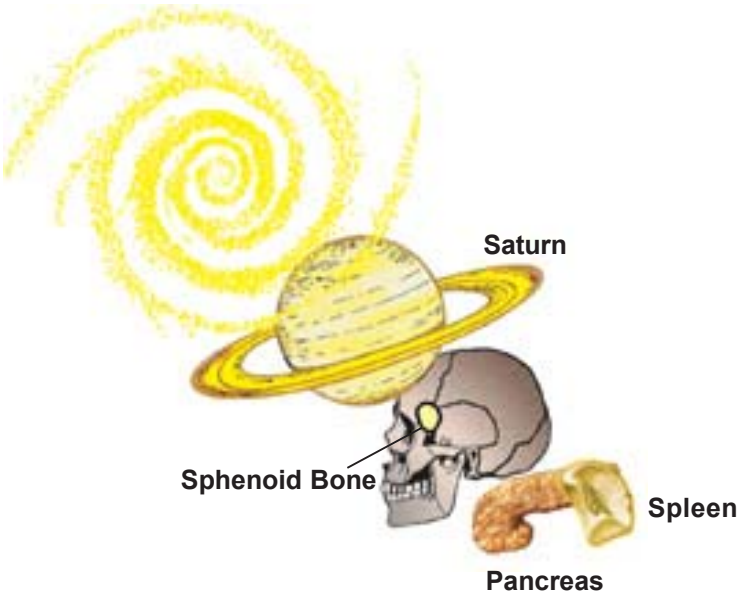


Fig. 11.15 Central Palace -Yellow Galaxy

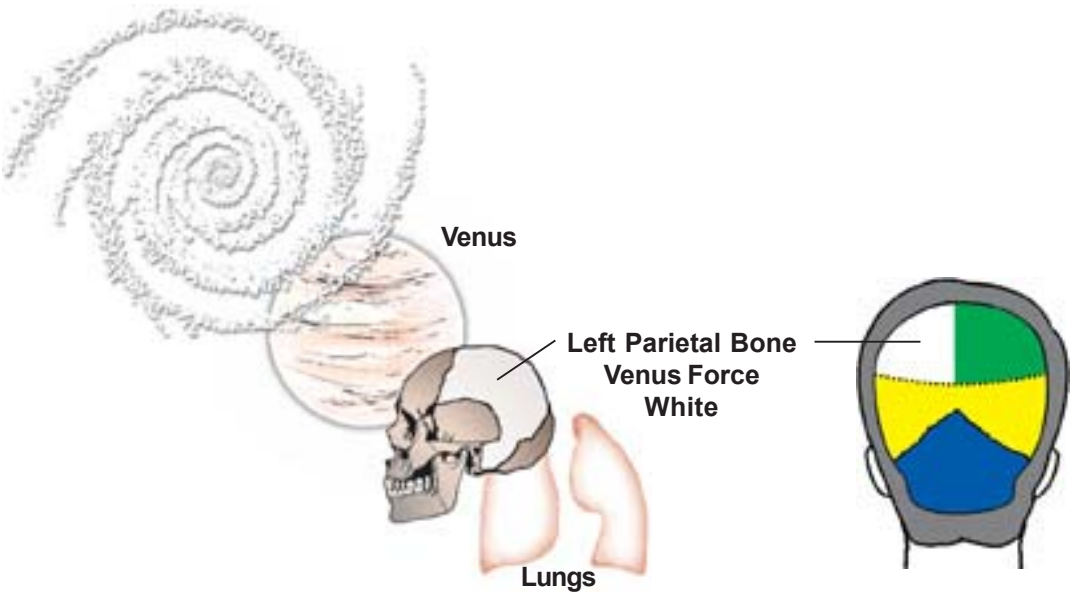


Fig. 11.16 West Palace - White Galaxy

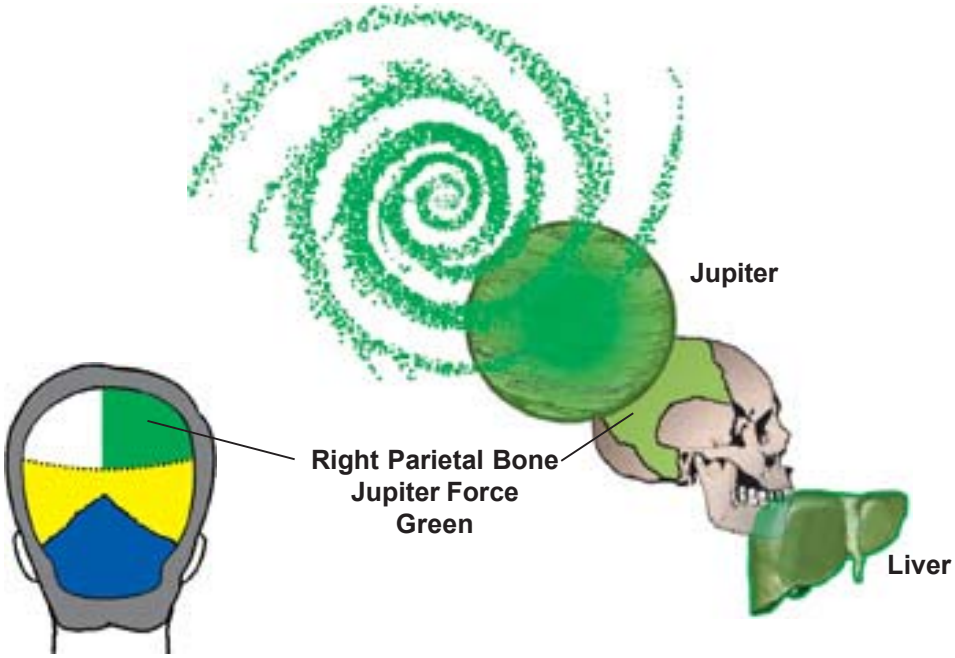


Fig. 11.17 East Palace - Green Galaxy

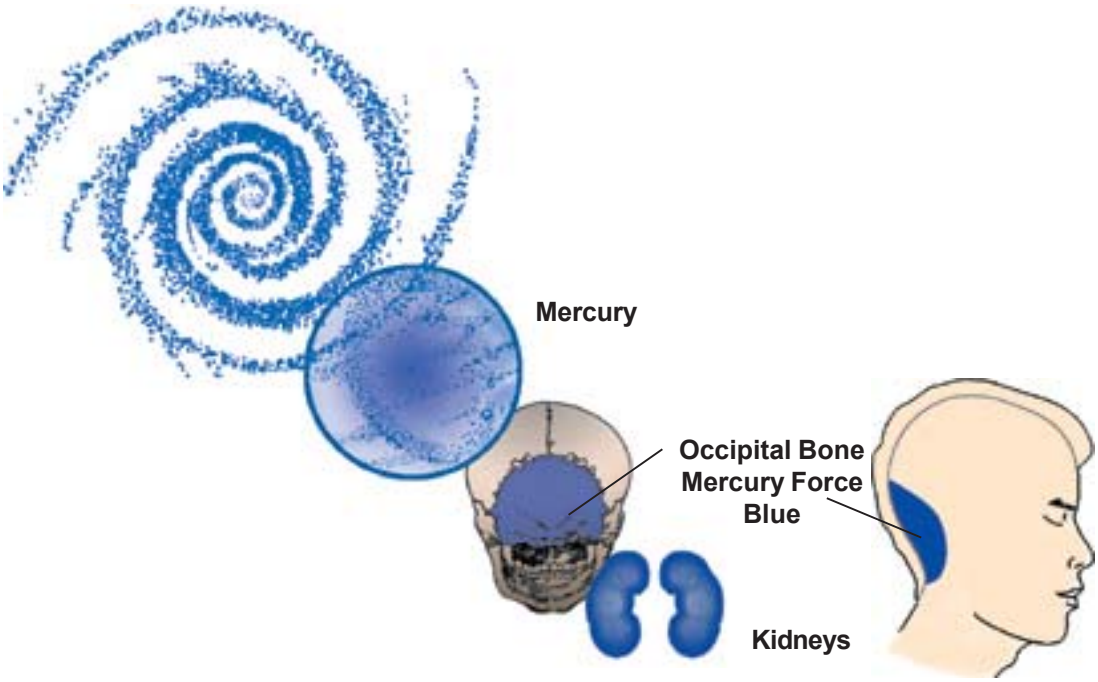


Fig. 11.18 North Palace - Blue Galaxy

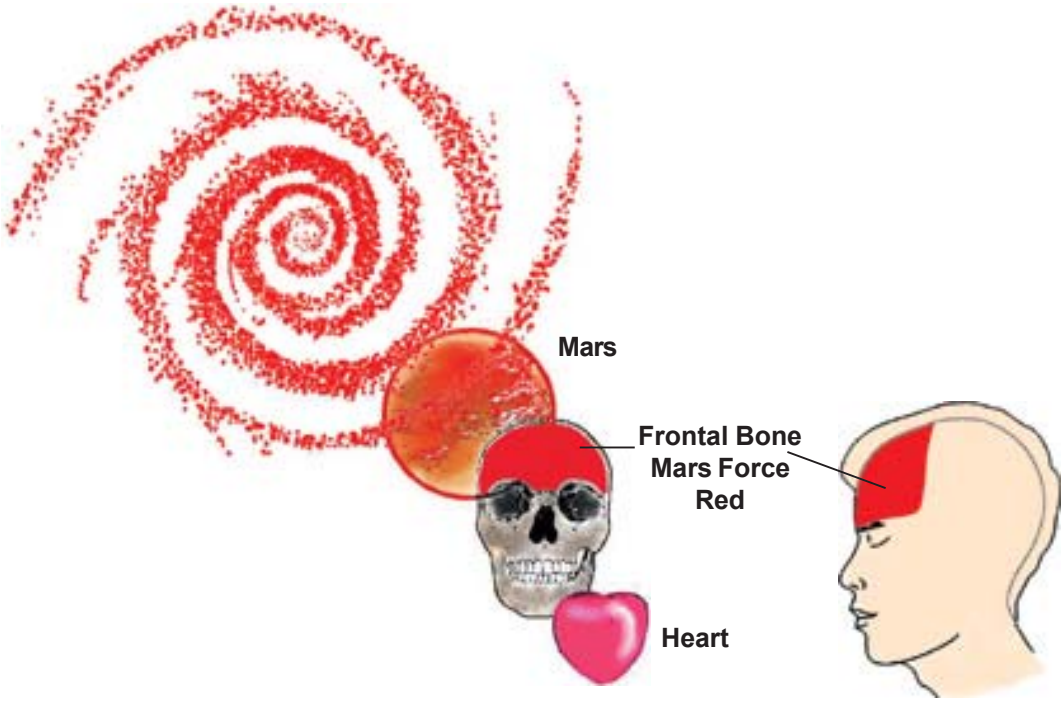


Fig. 11.19 Southern Palace - Red Galaxy

Meditation 5

Balancing the Planetary and Stellar Influences and increasing Emotional and Mental Stability

Regular practice of the first four meditations will give you a clear picture which of the five elements is your strong or weak point. It might show up in different ways - emotions, pain, and tension during the meditation. You might notice the weak element through an inability to feel its color, organ or planetary influence.
What you probably have accomplished by now is:

1. The ability to feel the connection with the related planetary and/or stellar frequency.
2. The ability to feel the connection between the cranial bone and the organ.
3. The ability to expand the energy into the related body system.

One of the five planets (sun/moon) - Star Palaces - cranium - organ - body systems will probably be very easy to feel, while another may seem to be absent. This difference originates in all kinds of physical, emotional, mental imbalances which are locked up in between the unconscious minds. It is also possible that you may feel the planetary connection and not the stars of the same direction or the other way around. Try to get the picture as clear as possible, it will give you a lot of information about your personality and also about your soul.

Once you have discovered how this imbalance is anchored in your system, you can use this during meditation as a tool to improve the weakness in your personality and in your physical body.

In this meditation we use the five galaxies and not the six directions method.

The principle of full and empty functions in the body is one of the most fundamental in oriental medicine. The cause of the problem lies basically in a lack of energy and information in one part of the energy system which is internally balanced by overactivity in other parts. Many people are hooked in a fanatical way on a certain more developed part of their personality and abilities. If they wish to balance themselves they must face their fear-based fanaticism which creates the empty or missing opposite.

The imbalance might already be found in the karmic information and can be related to the life task or it might come through in the way this person leads their life. Use the same principle as in the third meditation but work only with the strongest and weakest connection. As an example, let us say that you connect with the liver easily - right parietal bone - Jupiter- green galaxy and have difficulty with the lungs - left parietal bone - Venus - white galaxy. This might also show up in liver overactivity and lung weakness. You might notice a tendency to irritation, anger and on the other side depression, sadness, discouragement; good overviews on situations but tendency to over control.

The principle of this meditation is that you use the excess energy from the overactive organ to create a connection and nurture the deficient organ. If we put more vitality into the weak organ - the information of how to open this closed door often arises spontaneously.

1. Start with the same preparation as in Meditation 3.
2. When you have reached the part with the planetary connection, first make the connection with the strongest organ - cranium - planet/star connection, in this case the liver - right parietal bone - Jupiter - green galaxy and fill the body and aura with the related color (green).
3. Then change the color in the body and aural field with the one of the weakest function, in this case the lung/white. Draw this color inside of the lungs. Put both hands on the lungs, until you feel the energy tingling inside the organs.
4. Put one hand on the left parietal and feel the lung - left parietal connection.
5. Once you feel this connection, put your hands together in front of the navel and turn your eyes left and upward looking in and through the left parietal outside in the direction of Venus and the white galaxy.

6. Visualize a clear white ball above you. At a certain point the energy of Venus will shine down directly into the body; keep your attention and expand your awareness through Venus towards the white galaxy.

Do this transition of color from the strongest to the weakest function several times until the energy feels more balanced.

If the transition does not work, let the green light expand and project through the left parietal/Venus/white galaxy until you feel the white light clearly. Let the light shine on your skull and fill up the whole body and aura with this color.

Feel both liver/Jupiter/green galaxy and lung/Venus/white galaxy and balance them further into the body and the aural field.

7. To increase the effect, expand the energy in the respiratory system. Breathe through the skin of your whole body.
8. Gather the energy in the Lower Tan Tein, making a condensed Chi ball.
9. Circulate it through the MCO.
10. Then gather it again in the center and rest in the yin stage.
11. End with Chi Self Massage.

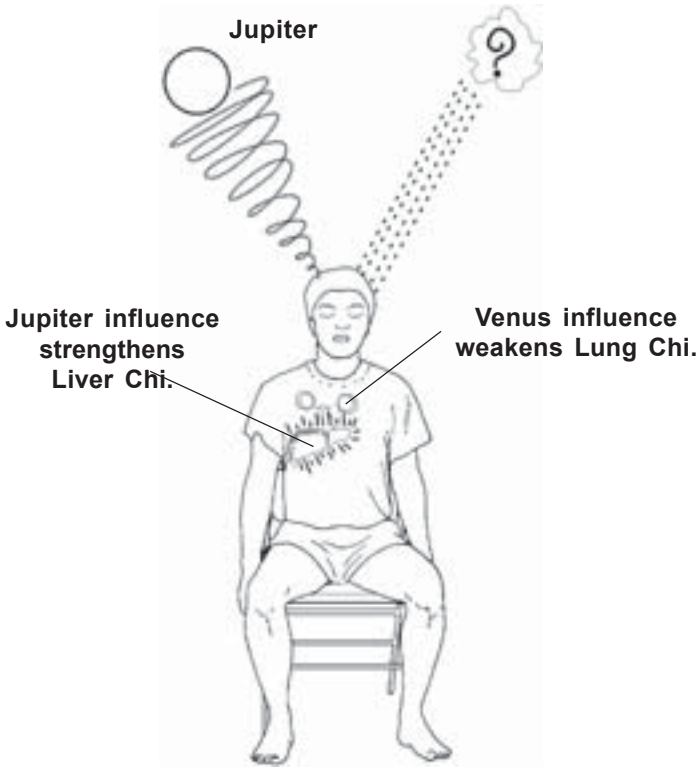


Fig. 11.20 *Balancing the energy.*

Fill the whole body and the aural field with the green light.

Maintain the energy field and bring it into the lungs. Change the color to white, let it radiate into the whole body and the aural field.

Balance the energies of Jupiter and Venus in the organs and aural field (green/white energy).

Look out through the left parietal and picture the planet Venus. At a certain point the light will come down from Venus (white galaxy) and start nurturing the energy field and the lungs.

Fig. 11.21 *Jupiter and Venus Energies*

Meditation 6
Balancing the Yin/Yang Extremes in the Star World

The immensity of the star world is difficult for the undeveloped human mind to grasp, yet is a part of the materialized world and in this way part of the world of polarity and yin and yang.

Although many scientists believe that black holes are built around a point of singularity (infinite density) it is clear that infinite density cannot exist. Infinity cannot be found within our limited thinking of the material world. Black holes are indeed points of extreme density but only to the point that extreme yin turns into its opposite. Extreme darkness starts to produce light again. So, although not yet measurable, light particles are still escaping from black holes.

Also the quasars, the brightest objects in the sky are not infinite light but extreme light, until the point turns to its opposite. Dark holes and quasars are the yin/yang extremes of the star world. In this meditation we will use these two poles to project our awareness beyond the world of phenomena.

It is important that you have taken sufficient time to master the first five meditations; only then can this advanced meditation be of great help in your spiritual development. If you are not prepared, it can be harmful. **We advise that you contact an experienced Cosmic Healing Teacher to introduce you into this level. If you suffer regular headaches, heart problems or mental/emotional problems don't do this Sixth Meditation. Use Meditation 1 and Meditation 7.**

These are the principles of this meditation:

1. Start with good centering/grounding.
2. Expand your awareness in the star world.
3. Connect high above you with the North Star and Big Dipper.
4. Let the light fill your Upper Tan Tien.
5. Connect with two points, placed around the North Star.
6. One extreme light point, quasar (extreme yang).
7. One extreme dark point, dark hole (extreme yin).
8. Let these two points circle around the North Star.
9. Let the process speed up and continue automatically while your attention goes in and through the North Star.
10. At a certain point the process can speed up so much that you start to feel a lifting and the edge between yin and yang start to fade away.
11. Let this process continue naturally, until yin and yang are melting together and the pure yang or ultimate yang energy arises.

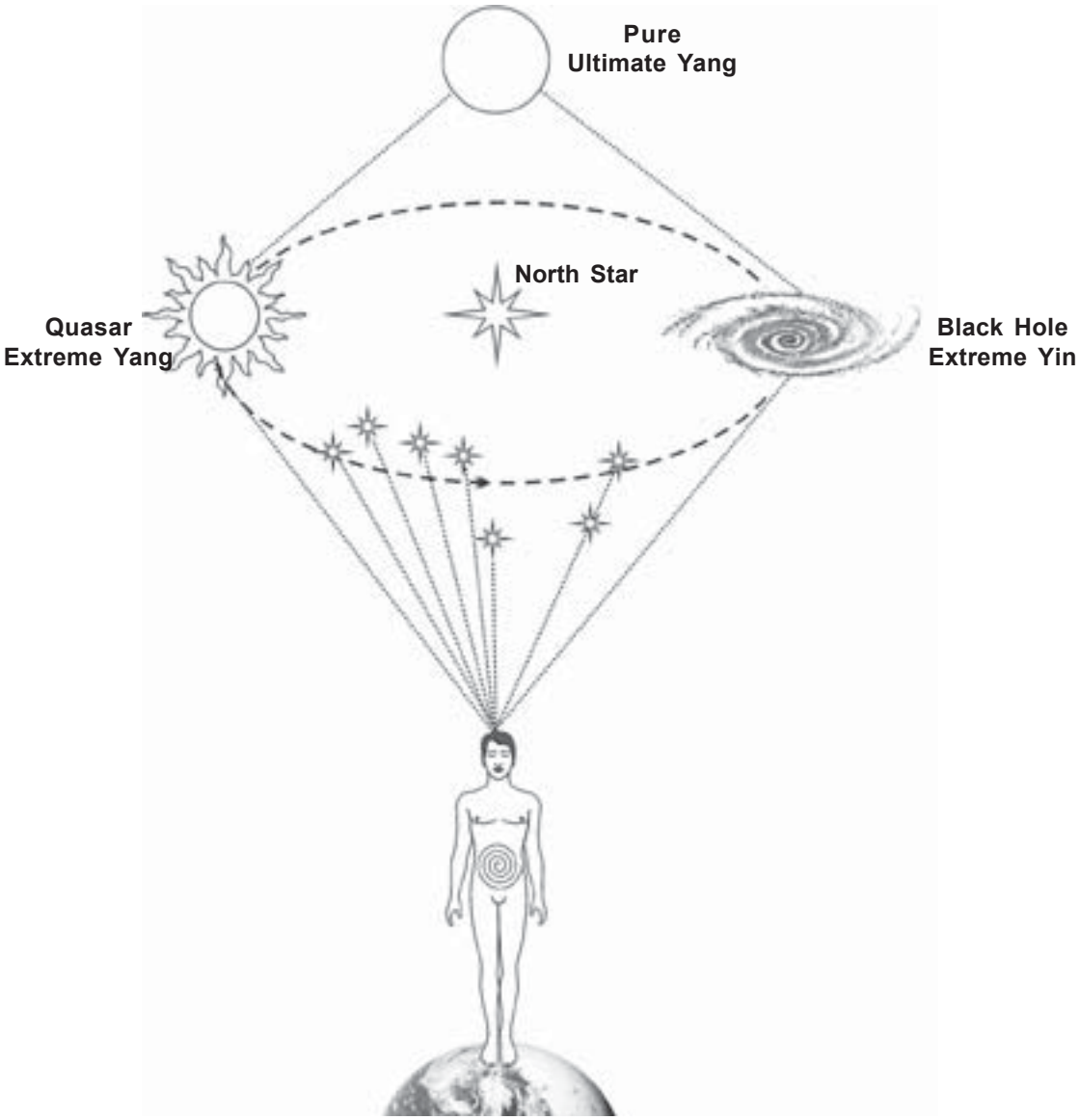


Fig. 11.22 *Connecting with Quasar and Black Hole*

Meditation 7
Yin Stage
Awareness Practice

In this meditation the intention is to let the planetary/galactic forces enter spontaneously. It is important not to use willpower or intention to attract any particular planet, just be open to the planetary/galactic forces, which is an unspecified intention. If you have read the previous parts of this book it will be clear that planetary/galactic forces are influencing us every second of our lives. The only choice we have is to be aware of it or not - the influence is there anyway. For each individual the dominant planetary/galactic influence changes many times in a day. When we sit still and empty the mind we can observe this subtle process of planetary/galaxy energies and shifts in our cranium, our organs and energy field.

During a yin (passive) stage meditation, you can pick up energy from different layers (or combinations) of the universe.

1. Nature Energies: Trees, lakes, Mountains, Thunder, Wind, Lightning, etc.
2. Planets
3. Individual Stars
4. Galaxies, Quasars, Pulsars, Black Holes
5. Connect with elemental qualities in common as Green Galaxy-Star-Jupiter-Tree Energy.

When you learn to observe this process you will be able to feel the direct influence of these planets/stars in that particular moment. It will give you the freedom to understand the specific Universal influence and how it determines your physical/energetic condition and your emotions/thinking process free from any astrological prediction. It also will clarify tensions or growing processes in relationships or with friends. If you and your partner or your friend are both practicing these meditations you can meditate together and see how the energy is naturally working on the two of you. It will definitely give you much insight and information.

This yin stage awareness meditation works very well in groups. Many different processes will be occurring at the same time. The planetary/star energies will:

1. Work on each individual.
2. Work on processes among several individuals.
3. Work on the whole group energy as a unit.

Experience shows us that even in big group meditations 50% to 80% of the people experience the same planets/galaxy entering their energetic fields.

The way to build up this meditation (alone or with more people) consists of:

1. Warming up exercises.
2. Opening the Three Tan Tiens to the Six Directions, integrate the Inner Smile and MCO.
3. Make a firm, condensed Chi ball in the center.
4. Connect to the Mother Earth Force.
5. Bring your attention to the cranium, feel the rhythm, expand the cranial rhythm into the aural field.
6. Connect to the energy field of the people you are meditating with.
7. Just relax and see what happens; if you want, you can softly say to the others what you feel happening in your body or cranium.

Individual and Triangle Awareness Meditation with Saturn Influence

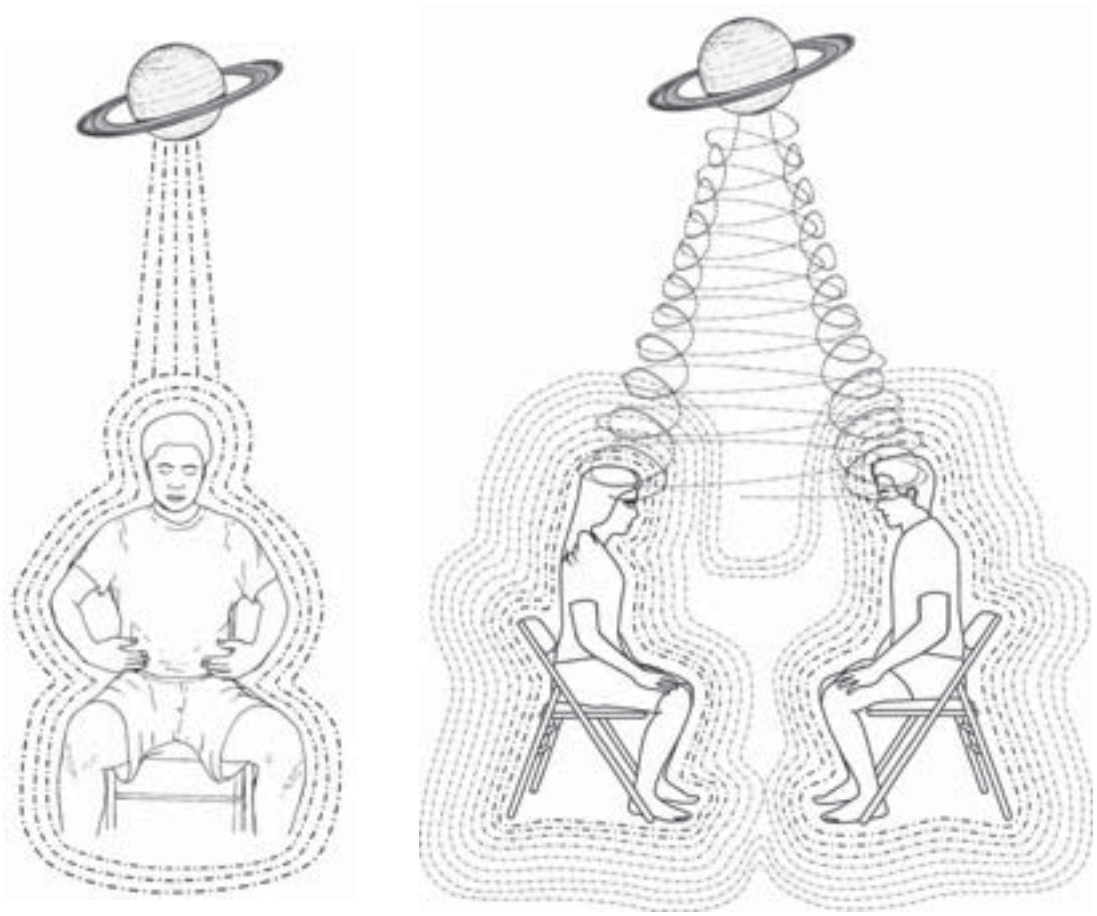


Fig. 11.23 Yin Stage Awareness Meditation - Saturn Influence

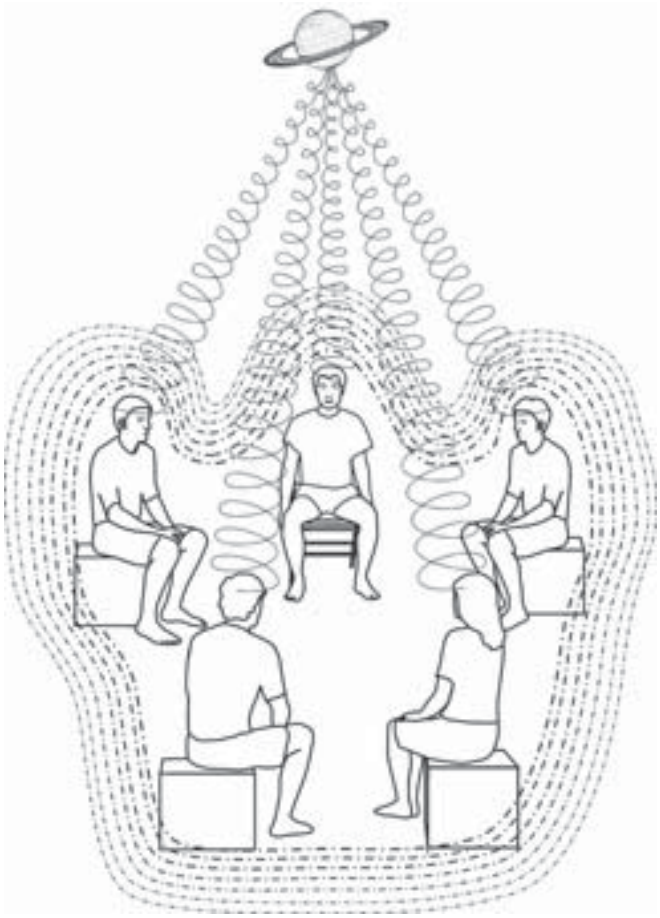


Fig. 11.24 Group Meditation: Yin Stage Meditation - Saturn Influence

8. At the end draw the energy back into your own individual field.
9. Gather into the Lower Tan Tein and make a condensed Chi ball.
10. Circulate throughout the MCO.
11. Then gather it again in the center and rest in the yin stage.
12. End with Chi Self Massage.

First, practice individually or, if you practice in a group, stay with your individual experience. After a while you will be able to distinguish your personal energy field and the shared or group energy field.

If you have difficulty feeling these energies, meditate with someone who has a better connection with the planets, but stay with your own experience.

Be patient, relax. You can be sure that your information/energy source will not run away.

Chapter XII
Use to Help Others

Treatment Expression of your Personal Practice

The therapeutic potential of the previously described practices is unlimited. It can be applied as an individual or self-healing method with great success, but it is also very easy to integrate it into healing and bodywork practices you are using already. This chapter explains some basic techniques on applying Cosmic Healing during a treatment (on one or more students). The complete theoretical and practical procedure on how to help and heal others will be published in the next book of the Cosmic Healing series.

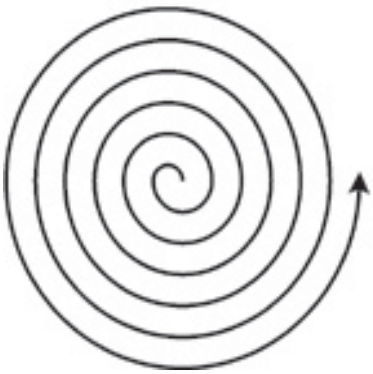
The combination of the Universal Tao practices with Chi Nei Tsang (Internal Organ Chi Massage) is very powerful. Both methods have the same goal in the treatment: to balance the energies in the body and to activate the life force. Chi Nei Tsang uses the Lower Tan Tien as the main area of diagnosis and treatment. Imbalances in energy and tension in the Tan Tien will be treated with a firm physical pressure and with the three forces of the universe (earth, cosmic, universal) as the nurturing source.

In Cosmic Healing the emphasis is on connecting the body with the five elemental forces of nature, the planets and stars, often without touching the body.

We could say that Chi Nei Tsang works mainly from the Lower Tan Tien towards the universe while Cosmic Healing works from the universe towards the Lower Tan Tien.

The combination of these two systems will give you the ability to integrate internal/ external energy in the Lower Tan Tien.

Cosmic Healing: Starting form the universal laws and integrating it into the physical body.



Chi Nei Tsang: Starting from the Lower Tan Tien and connecting with the Universal laws.From matter into subtle energy.

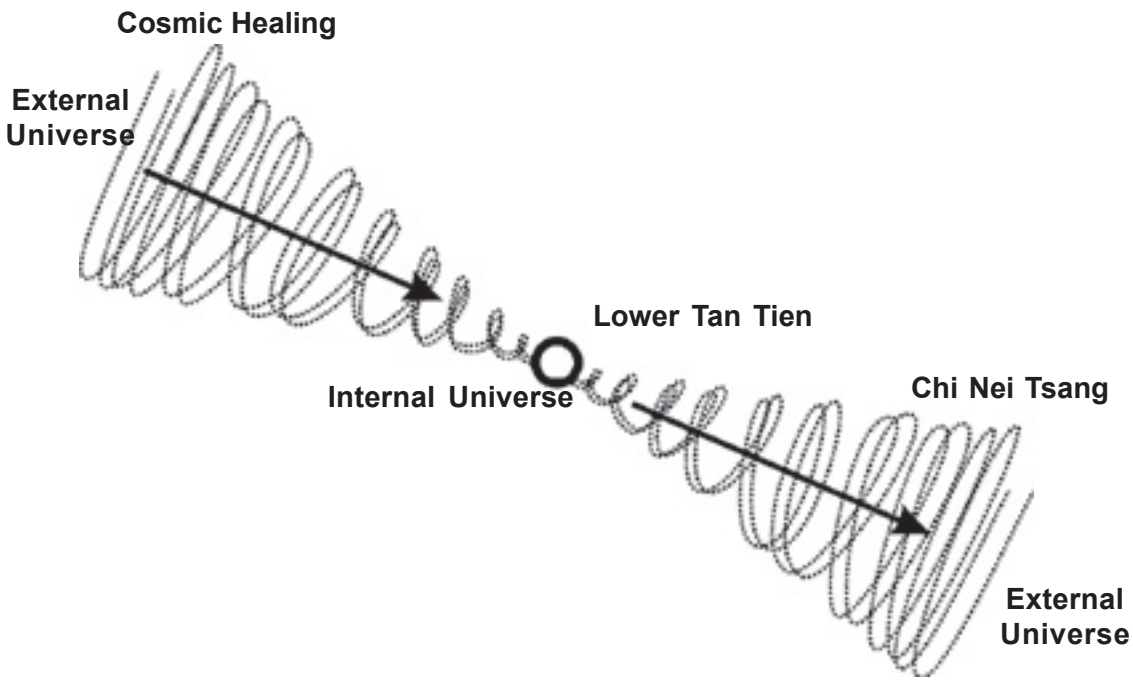


Fig. 12.1 *External and Internal Universes*

These days many healers are working consciously with the Universal connection from subtle energy into matter. Different systems are now in use. Some of them work with initiations to connect the student with the same universal source as the teacher or master.

This is the story of a student who was desperately looking for a teacher who could show him how to reach the state of enlightenment. He visited or followed many teachers, but he did not make much progress. None of them gave him satisfying answers to his main questions and most of them were still in search of enlightenment themselves.

One day he traveled to a master who was known to be fully enlightened. When he asked the master if he could show him how to attain enlightenment, the master said, “Sure,” and smiled at him. After a long silence the student said, “Well, why don’t you tell me?” The master said, “Why confuse you more by telling you something that you surely cannot understand anyway”.

This story shows us how useless it is to give initiations to people who are not ready to integrate and understand. It only creates confusion and illusion. Many students are trying to buy their ‘ticket’ to heaven by paying thousands of dollars for initiations with a master or guru.

Let us stay clear and grounded. There are no shortcuts on the spiritual path. Although spectacular healings occur through this practice it must be clear that the goal of the treatment is mainly one of guidance and teaching.

The purpose of planetary and galactic healing is to reconnect students with the energy of nature, planets, stars and the higher universal frequencies.

This connection:
- Activates the life force in the body which triggers the ability for self-healing.
- Releases and transforms sick/negative energy.
- Creates a strong spiritual connection and higher awareness level.

Although this healing practice is easy to learn for anyone with enough interest and perseverance, the effectiveness of a treatment mainly depends on the level of energy (quantity/quality), the clarity of the connection of the healer with nature and Universal forces and the ability to see what the student really needs at that moment.

This strength and sensitivity can only be cultivated by doing the previously described meditations on a regular basis and fully integrating them into your daily life.

General Healing Session

For reasons of clarity this text only mentions one person or student; this session may however be performed with a group also. Before starting this session do some meditation practice and warm ups with your student(s).
There are two ways of doing this type of healing session:

One way is to focus on the specific location in your own body, using your hands and asking the other person to do the same. Together you go through the complete healing procedure. Another way is to focus on your energy body and do the same step by step meditation. For details refer to the appropriate chapter.

1) Be aware of the Lower Tan Tien and connect to the universe. Let the student sit back on the chair. Sit across from the student. Be aware of your sacrum area and feel the Chi; transfer this feeling up to the crown and to the universe. Spiral the Chi down to the energy body and it will go down to the student's physical body.
2) Draw the green light in with your palm and push it right through the sacrum to spread the sickness through to the other side of the universe. Pull the green light from the universe and push the sick Chi out to the universe. Do this 6 to 9 times until you feel the sacrum is clean. When you pull back, stop the green Chi right at the student's sacrum; there is no need to pull it back to you.

   Yellow light from the ground will help strengthen the sacrum bone. Visualize the sacrum and vitalize the complete bone structure with yellow light.
3) Be aware of the energy body above the crown; extend yourself up from above your crown and channel down the white light from the center of the galaxy and the violet light

from the Polar star. Using your mind power, invite the inside of the bone to open, allowing the white and violet light to flow into the marrow. Focus on the energy body; you can picture the energy body's sacrum and bone structure to guide the energy inside and see the whole body light up from deep inside.

Next, focus on the Door of Life and the navel. First flush them through with green light, to clean them out. Draw the yellow light from the Door of Life through to the navel and then push back through. To cool down the Door of Life (if necessary), draw the blue light and push it through from the navel to the Ming Men connecting with the universe. Then bring the white or violet light down and activate the Lower Tan Tien. Teach people about their Lower Tan Tien. It is like an ocean and the body is like a hollow bamboo. The bamboo can bring the water up. This way energy will never dry up.

4) Concentrate on the solar plexus and T-11. Again, draw the green light in, spiral it, flush with the green light, then energize with white and violet light. As before, always allow the energy to stream through both points fully. When working on the solar plexus, which holds all the emotions, the most important thing to remember is to connect the backside of the solar plexus to the universe. There is literally no end to this connection. Just allow the Chi to come all the way down and pull a little. Simply clean out the path. Allow the information to condense, allow any images to form and be released. Then stabilize the energy. Picture the Chi field encompassing the person as a big protective bubble. Cool down with blue.
5) Proceed to the heart and the Shen Dao (T5/ T6). Draw the green light in and push it through; repeat several times; now scan the heart with your palm, judging its strength; next select the strength of the red color, (never too dark); send the red light through the heart, strengthening it.
6) Cool down any excess heat in the heart, flushing down and out, using blue. Draw in the white Chi; push it through to the Wing Point (T5/T6). Energize the center at the back of the heart using violet and golden Chi. Picture the heart surrounded by a golden aura.
7) Move up to the throat center, flushing through to C-7, using green light first. The throat center responds very well to the blue light; it opens and clears it.
8) Next activate the mideyebrow. Focus on the mideyebrow in your own body. Attract the golden yellow color and use it to flush and stabilize. Flush it all the way through to the back of the head. Energize with violet and golden light.
9) Proceed up to the third eye in the middle of the forehead. Connect to the 'Kun Lun' at the back of the crown. Flush through both points using the light violet light. Energize with electric white golden light.
10) Concentrate on the crown. Invite the violet golden light to enter and flush all the way down through the center channel, leaving the body at the perineum. Cool down the system by showering blue light over the whole body.

Du Mai Information

The co-author of this book Dirk Oellibrandt, together with his wife Katrien Laurens, leads an organization called Du Mai.

This organization is active in Belgium and has side branches in Holland, Sweden and France. The Du Mai philosophy promotes the practice of 4 Dimensional Life and Taoism and uses the Taoist principles in a complete approach of healing and the art of bodywork, called 4 Dimensional Bodywork.

The Du Mai organization offers possibilities in four different fields for deepening and improving the quality of your life and for reaching a higher level of health, happiness and awareness.

In the Du Mai therapeutic clinic many western bodywork techniques are combined with food prescriptions, herbs and other forms of therapy. All this is based on the unique Taoist view of the universe and is structured upon a treatment approach called 4 Dimensional Bodywork.

The Du Mai program is organized into three categories:

1. Personal development
2. Three to five years in therapeutic education
3. Courses of up to three years of training for professional therapists

An Overview of the Du Mai Course and Training Activities

Universal Tao Belgium

Evening, weekend and weekly courses that will teach you to heal yourself, understand your true nature and your task in life discovering vitality, happiness and freedom in daily life.

Basics: Inner Smile
Six Healing Sounds
Iron Shirt Chi Kung I
Chi Self Massage
Microcosmic Orbit
Tao Yin
Taoist Secrets of Love
Advanced Bone Marrow Nei Kung
Fusion I - II - III Inner Alchemy
Tai Chi Chi Kung I - II - III
Pushing Hands
Pakua Palm

Chi Nei Tsang
- Level I, II, III

Cosmic Healing
- Level I, II

4 Dimensional Life Training

1 year/12 weekends training in the art of 4-Dimensional awareness and understanding man, in the world, the universe and the intelligence that connects and governs all these processes called life.

Goals in this training are :

- Spiritual : awakening
- Mental : clearness and presence
- Emotional : understanding, using and transforming emotions
- Physical : building the fundament for a strong/vital/healthy body

Much time is invested in becoming aware through touch and bodywork of the different layers systems and frequencies in your body, so that the deep information and energy potential is awakened.

4 Dimensional Bodywork

A 3 year (500 hours) or 5 year (850 hours) training to became an all round healer/ bodyworker with a strong ground of 4 Dimensional self realization. The Du Mai school offers you a unique training according to quality and variety. Truly understanding life and its play in our manifestation as a human being is the fundament of the school. Within this unique view, a complete circle of all possible bodywork and healing techniques is offered. These techniques come from traditional and modern, eastern and western origin; or from shamanistic traditions, or Taoist cosmology or simply from our own body intelligence. The main guidance into this network of information is the students message and information system, showing us a constant flow in priorities in the treatment approach.

For already professional therapists and bodyworkers (prerequisites are 400 hours of training as a bodyworker/healer/natural therapist). We offer a 3 year training in 4 Dimensional Bodywork that will push your already achieved therapeutic level to a wider and stronger platform. Individual therapeutic limitations are removed and the circle of therapeutic possibilities is enlarged.

Some of the topics are (a specific personal development program for each year) :

- 4 Dimensional life/bodywork
- Natural healing - diagnostics
- Universal Tao: Basics, Iron Shirt I, Healing Love, Tai Chi I, Fusion I
- Chi Nei Tsang I
- Cosmic Healing I
- Chakra + Aura Healing
- Reflexology
- Shiatsu - Thai massage
- Craniosacral Therapy
- Osteopatic Techniques
- Fascia and Visceral Therapy
- Structural Corrections
- Sjamanistic Healing
- Food Prescriptions
- Frequency Healing
- Spiritual Healing
- 4 Dimensional Integration

In the near future, books on 4 Dimensional Life and 4 Dimensional Bodywork will be published. Please contact us for book availability.

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Cosmic Healing II

Taoist Cosmology and Universal Healing Connections

Mantak Chia

and Dirk Oellibrandt

Cosmic Healing II

Cosmic Healing II deepens the knowledge & experience of Cosmic Healing I. In Cosmic Healing II the emphasis is on connecting the body with the five elemental forces of nature, the moon and sun, the planets, the stars, galaxies and other celestial phenomena. This is a continuation of Mantak Chia's Universal Tao System and co-author Dirk Oellibrandt's Du Mai System for personal improvement.

Taoist Astrology and Astronomy

The authors reveal not only the esoteric information, but more significantly they unveil the step-by-step practices both physical and meditative for healing oneself and others. Cosmic Healing II incorporates ancient Taoist knowledge and practices based on Taoist astronomy observations and cosmological research. Modern Taoists Master Mantak Chia and Dirk Oellibrandt expand on this millennia-tested material with their practical experience and expertise. Whether you are interested in building on your base of Chi Kung and meditation or whether you are bodyworker desiring to make giant strides in your treatments you'll find within Cosmic Healing II the substance for growth.

Techniques for Planetary and Galaxy Stellar Meditations

The inner universe & outer universe become even more connected through planetary/galaxy stellar meditations. You'll learn how to integrate Taoist Astrology and Astronomy with your healing practices so as to support others in a deeply rooted cleansing revitalization. Cosmic Healing II teaches people how to take full charge of their health and well-being.

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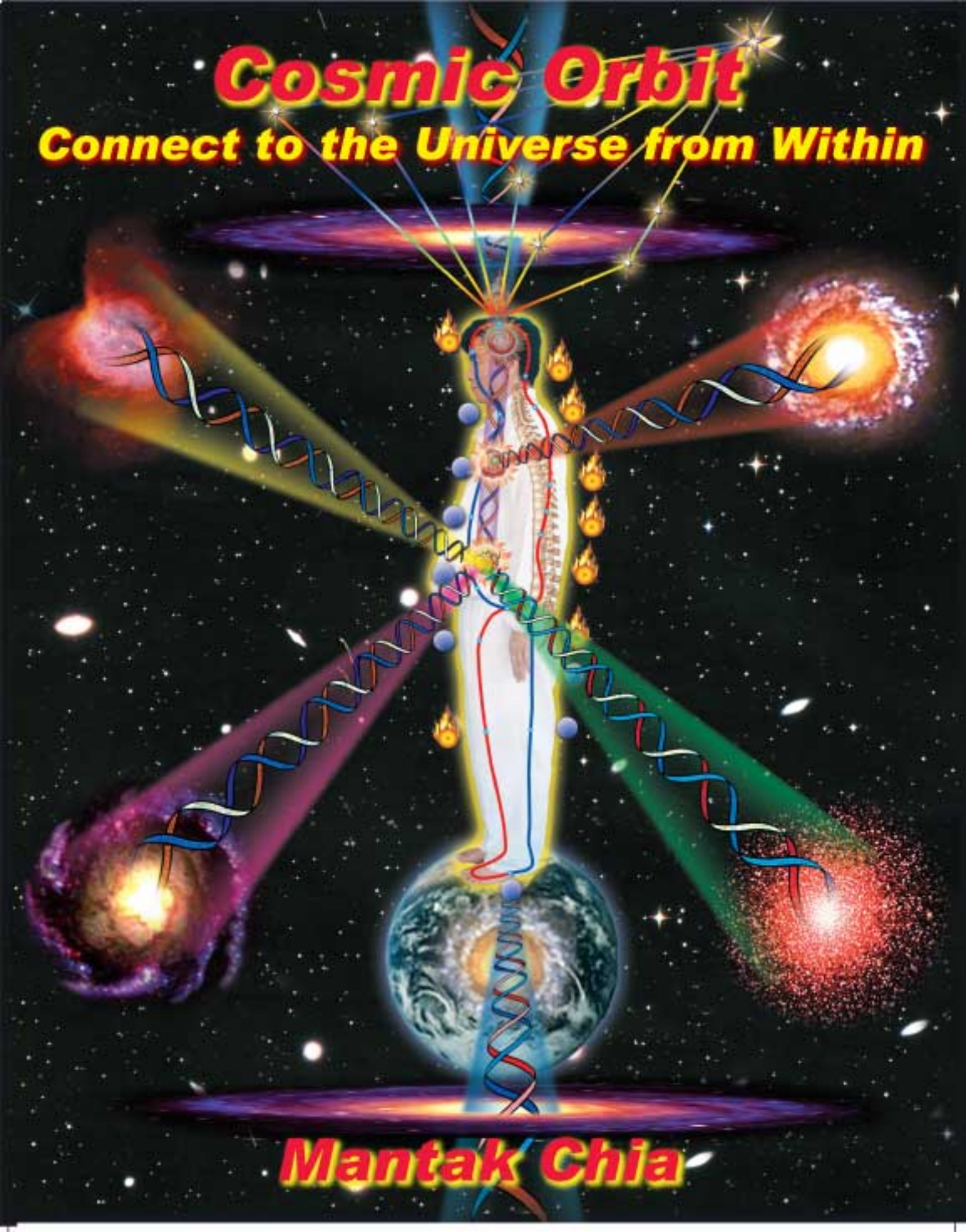
Cosmic Orbit

Connect to the Universe from Within



Mantak Chia

Cosmic Orbit

Connect to the Universe from Within

Mantak Chia

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About the Author

Master Mantak Chia

Master Mantak Chia is the creator of the Universal Tao System and is the director of the Universal Tao Center and Tao Garden Health Resort and Training Center in the beautiful northern countryside of Thailand. Since childhood he has been studying the Taoist approach to life. His mastery of this ancient knowledge, enhanced by his study of other disciplines, has resulted in the development of the Universal Tao System which is now being taught throughout the world.

Mantak Chia was born in Thailand to Chinese parents in 1944. When he was six years old, Buddhist monks taught him how to sit and “still the mind.” While still a grammar school student, he learned traditional Thai boxing. He was then taught Tai Chi Chuan by Master Lu, who soon introduced him to Aikido, Yoga and broader levels of Tai Chi.

Years later, when he was a student in Hong Kong excelling in track and field events, a senior classmate named Cheng Sue-Sue introduced him to his first esoteric teacher and Taoist Master, Master Yi Eng (I Yun). At this point, Master Chia began his studies of the Taoist way of life in earnest. He learned how to circulate energy through the Microcosmic Orbit and, through the practice of Fusion of the Five Elements, how to open the other Six Special Channels. As he studied Inner Alchemy further, he learned the Enlightenment of the Kan and Li, Sealing of the Five Senses, Congress of Heaven and Earth and Reunion of Heaven and Man. It was Master Yi Eng who authorized Master Chia to teach and heal.

When Mantak Chia was in his early twenties he studied with Master Meugi in Singapore, who taught him Kundalini, Taoist Yoga and the Buddha Palm. He was soon able to clear blockages to the flow of energy within his own body. He learned to pass the life force energy through his hands also, so that he could heal Master Meugi's patients. He then learned Chi Nei Tsang from Dr. Mui Yimwattana in Thailand.

A while later, he studied with Master Cheng Yao-Lun who taught him the Shao-Lin Method of Internal Power. He learned the closely guarded secret of the organs, glands and bone marrow exercise known as Bone Marrow Nei Kung and the exercise known as Strengthening and Renewal of the Tendons. Master Cheng Yao-Lun's system combined Thai boxing and Kung Fu. Master Chia also studied at this time with Master Pan Yu, whose system combined Taoist, Buddhist and Zen teachings. Master Pan Yu also taught him about the exchange of Yin and Yang power between men and women, and how to develop the Steel Body.

To understand the mechanisms behind healing energy better, Master Chia studied Western anatomy and medical science for two years. While pursuing his studies, he managed the Gestetner Company, a manufacturer of office equipment and became well acquainted with the technology of offset printing and copying machines.

Using his knowledge of Taoism, combined with the other disciplines, Master Chia began teaching the Universal Tao System. He eventually trained other Instructors to communicate this knowledge and he established the Natural Healing Center in Thailand. Five years later, he decided to move to New York, where in 1979, he opened the Universal Tao Center. During his years in America, Master Chia continued his studies in the Wu system of Tai Chi with Edward Yee in New York.

Since then, Master Chia has taught tens of thousands of students throughout the world. He has trained and certified over 2,000 instructors and practitioners from all over the world. Living Tao Centers, Chi Nei Tsang Institutes, Cosmic Healing Forums & Immortal Tao Mountain Sancutaries have opened in many locations in North America, South America, Europe, Asia, Africa and Australia.

In 1994, Master Chia moved back to Thailand, where he had begun construction of Tao Garden and the Universal Tao Training Center fifteen miles outside of Chiang Mai.

Master Chia is a warm, friendly and helpful man who views himself primarily as a teacher. He presents the Universal Tao System in a straightforward and practical manner, while always expanding his knowledge and approach to teaching. He uses a word processor for writing and is totally at ease with the latest computer technology.

Master Chia estimates that it will take thirty-five books to convey the full Universal Tao System. In June, 1990, at a dinner in San Francisco, Master Chia was honored by the International Congress of Chinese Medicine and Qi Gong (Chi Kung), who named him the Qi gong Master of the Year. He is the first recipient of this annual award.

In December, 2000, the Tao Garden Health Resort and Universal Tao Training Center was completed with two Meditation Halls, two open air Simple Chi Kung Pavilions, indoor Tai Chi, Tao Tao Yin and Chi Nei Tsang Hall, Tai Chi Natural Swimming Pool, Pakua Communications Center with a complete Taoist Library, Internal World Class Weight Lifting Hall and complete eight Court Recreational Facilities.

In February, 2002, the Immortal Tao practices were held at Tao Garden for the first time using Darkness Technology, creating a complete environment for the higher level Taoist practices.

Master Mantak Chia has previously written and published these twenty-five Universal Tao books:

Awaken Healing Energy of the Tao - 1983
Taoist Secrets of Love: Cultivating Male Sexual Energy
co-authored with Michael Winn - 1984.
Taoist Ways to Transform Stress into Vitality -1985
Chi Self-Massage: the Tao of Rejuvenation - 1986
Iron Shirt Chi Kung I - 1986
Healing Love through the Tao: Cultivating Female Sexual Energy - 1986
Bone Marrow Nei Kung - 1989
Fusion of the Five Elements I - 1990
Chi Nei Tsang: Internal Organ Chi Massage - 1990
Awaken Healing Light of the Tao - 1993
The Inner Structure of Tai Chi with Juan Li - 1996
Multi-Orgasmic Man co-authored with Douglas Abrams 1996 - published by Harper Collins
Tao Yin - 1999
Chi Nei Tsang II - 2000
Multi-Orgasmic Couple co-authored with Douglas Abrams 2000 - published by Harper Collins
Cosmic Healing I - 2001
Cosmic Healing II co-authored with Dirk Oellibrandt - 2001
Door of All Wonders co-authored with Tao Haung - 2001
Sexual Reflexology co-authored with W. U. Wei - 2002
Elixir Chi Kung - 2002
Tan Tien Chi Kung - 2002
Cosmic Fusion - 2002
Karsai Nei Tsang - 2003
Cosmic Orbit - 2005
Lesser Kan & Li - 2005

Many of the books above are available in the following foreign languages: ***Arabic, Bulgarian, Czech, Danish, Dutch, English, French, German, Greek, Hebrew, Hungarian, Indonesian, Italian, Japanese, Korean, Lithuanian, Malaysian, Polish, Portuguese, Romanian, Russian, Serbo-Croatian, Slovenian, Spanish,*** & ***Turkish*** editions are available from the Foreign Publishers listed in the Universal Tao Center Overview in the back of this book.

Lee Holden has been a Universal Tao Certified Instructor and Chi Nei Tsang Teacher since 1992 and recently has been certified as a Senior Instructor in the Universal Tao. Lee has been the chief editor for Master Mantak Chia for numerous projects such as Tao Yin: Exercises for Health, Revitalization, Longevity, Sexual Reflexology and Cosmic Fusion. Lee has taught workshops throughout the United States, Europe, and South East Asia. Lee has been on staff with Mantak Chia and Deepak Chopra, teaching, writing and facilitating seminars and workshops. Currently, Lee teaches at Five Branches Institute for Chinese Medicine, Twin Lakes College of Massage and is the founder of Pacific Healing Tao in Northern California. Lee's video Tai Chi for Fitness has been featured on two separate television shows and has been the subject of numerous magazine articles. Lee Holden Jr. is a graduate of U.C., Berkeley, with a BA in Psychology and is a Licensed Acupuncturist.

Lee Holden,
Copy Editor

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Thanks to Juan Li for the use of his beautiful and visionary paintings, illustrating Taoist esoteric practices.

We offer our eternal gratitude to our parents and teachers for their many gifts to us. Remembering them brings joy and satisfaction to our continued efforts in presenting the Universal Tao System. For their gifts, we offer our eternal gratitude and love. As always, their contribution has been crucial in presenting the concepts and techniques of the Universal Tao.

We wish to thank the thousands of unknown men and women of the Chinese healing arts who developed many of the methods and ideas presented in this book.

We wish to thank Fiona Jan for her editorial work and writing contributions, as well as her ideas for the cover. We appreciate her research and great labor. We offer thanks for her editorial contributions on the revised edition of this book, as well as thanking our Senior Instructors Dr. Andrew Jan and Wilbert Wils, for their insightful contributions to the revised version. We thank Matt Gluck and Saida Desilets for their technical editing and clear writing throughout the book. We wish to thank Daniel Dubie for his continuing support and valuable contributions towards Master Chia's publications and the Tao Garden.

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Words of Caution

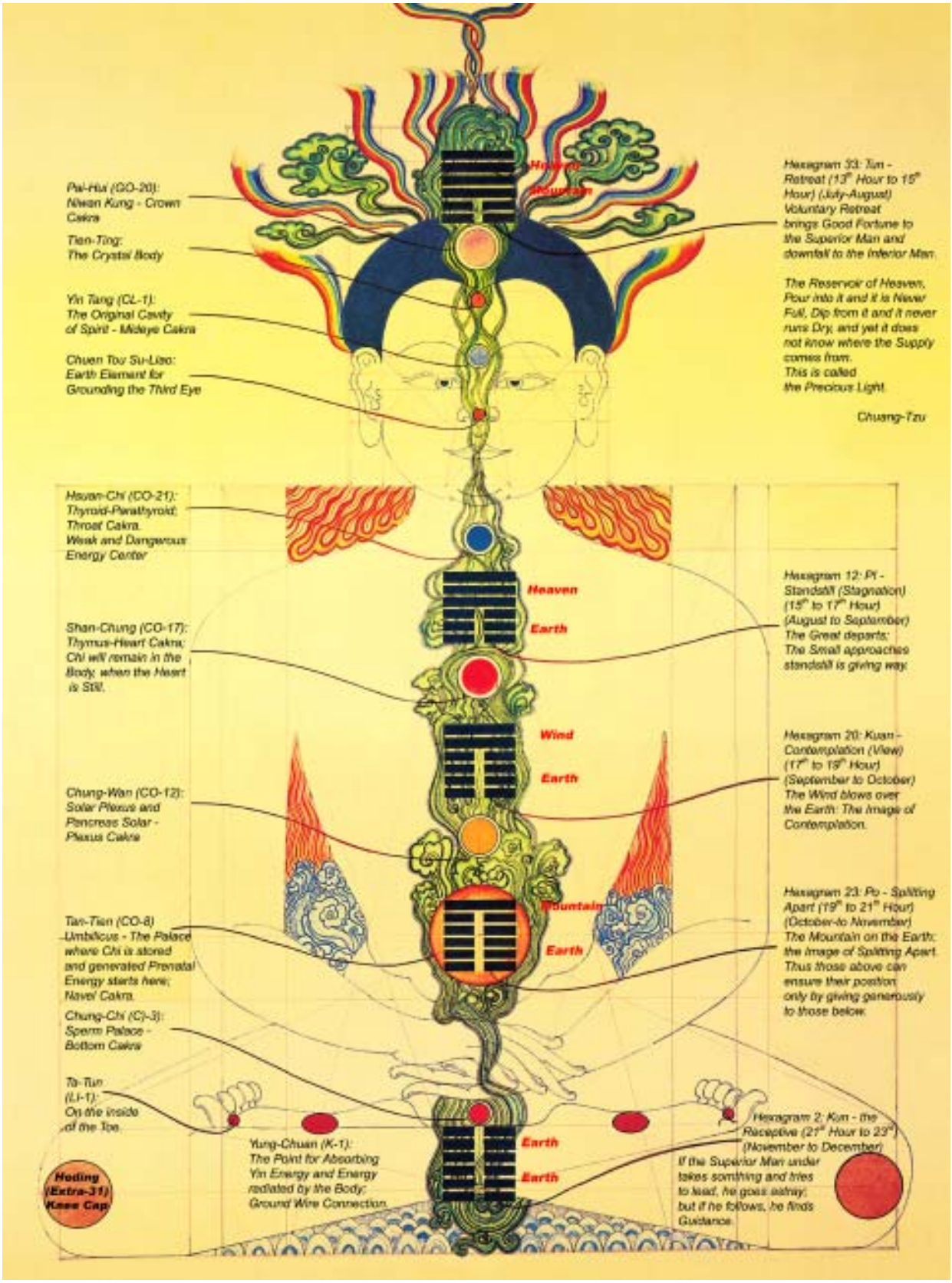
The practices described in this book have been used successfully for thousands of years by Taoists trained by personal instruction. Readers should not undertake the practice without receiving personal transmission and training from a certified instructor of the Universal Tao, since certain of these practices, if done improperly, may cause injury or result in health problems. This book is intended to supplement individual training by the Universal Tao and to serve as a reference guide for these practices. Anyone who undertakes these practices on the basis of this book alone, does so entirely at his or her own risk.

The meditations, practices and techniques described herein are ***not*** intended to be used as an alternative or substitute for professional medical treatment and care. If any readers are suffering from illnesses based on mental or emotional disorders, an appropriate professional health care practitioner or therapist should be consulted. Such problems should be corrected before you start training.

Neither the Universal Tao nor its staff and instructors can be responsible for the consequences of any practice or misuse of the information contained in this book. If the reader undertakes any exercise without strictly following the instructions, notes and warnings, the responsibility must lie solely with the reader.

This book does not attempt to give any medical diagnosis, treatment, prescription, or remedial recommendation in relation to any human disease, ailment, suffering or physical condition whatsoever.

The Universal Tao is not and cannot be responsible for the consequences of any practice or misuse of the information in this book. If the reader undertakes any exercise without strictly following the instructions, notes, and warnings, the responsibility must lie solely with the reader.

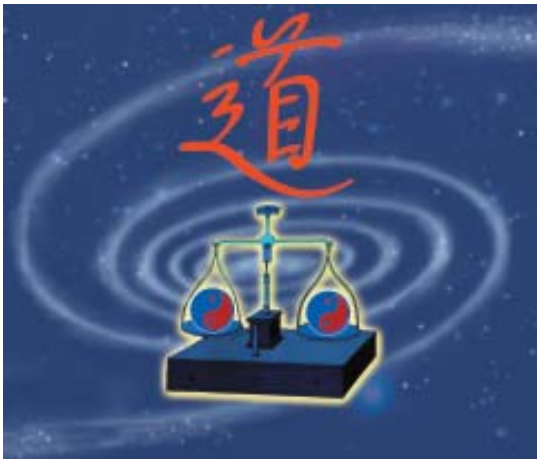

Pai-Hui (GO-20):
Niwan Kung - Crown Cakra
Tien-Ting:
The Crystal Body
Yin Tang (CL-1):
The Original Cavity of Spirit - Midaye Cakra
Chuen Tou Su-Liao:
Earth Element for Grounding the Third Eye
Hexagram 33: Tun - Retreat (13th Hour to 15th Hour) (July-August)
Voluntary Retreat brings Good Fortune to the Superior Man and downfall to the Inferior Man.
The Reservoir of Heaven, Pour into it and it is Never Full. Dip from it and it never runs Dry, and yet it does not know where the Supply comes from.
This is called the Precious Light.
Chuang-Tzu
Hsuan-Chi (CO-21):
Thyroid-Parathyroid; Throat Cakra.
Weak and Dangerous Energy Center
Heaven
Earth
Shan-Chung (CO-17):
Thymus-Heart Cakra; Chi will remain in the Body, when the Heart is Still.
Hexagram 12: Pi - Standstill (Stagnation) (15th to 17th Hour) (August to September)
The Great departs; The Small approaches
standstill is giving way.
Wind
Earth
Chung-Wan (CO-12):
Solar Plexus and Pancreas Solar - Plexus Cakra
Hexagram 20: Kuan - Contemplation (View) (17th to 19th Hour) (September to October)
The Wind blows over the Earth: The Image of Contemplation.
Mountain
Earth
Tan-Tien (CO-8)
Umbilicus - The Palace where Chi is stored and generated Prenatal Energy starts here; Navel Cakra.
Hexagram 23: Po - Splitting Apart (19th to 21th Hour) (October-to November)
The Mountain on the Earth; the Image of Splitting Apart.
Thus those above can ensure their position only by giving generously to those below.
Chung-Chi (C)-3):
Sperm Palace - Bottom Cakra
Ta-Tun (LI-1):
On the inside of the Toe.
Yung-Chuan (K-1):
The Point for Absorbing Yin Energy and Energy radiated by the Body; Ground Wire Connection.
Earth
Earth
Hexagram 2: Kun - the Receptive (21st Hour to 23rd) (November to December)
If the Superior Man undertakes something and tries to lead, he goes astray; but if he follows, he finds Guidance.
Hoding (Extra-31) Knee Cap

Introduction

Tao teaches how to cultivate inner energy and connect this energy with universe.

This is the third book involved with the teachings of the Microcosmic Orbit. In this book there are more details with the most up to date instructions. This book is designed to expand upon the other two and allow practitioners to open their own internal energy and create harmony between themselves and the universe.

The picture below is a 2000-year-old carving in a Tao temple. This carving is a symbolic representation of the Cosmic Orbit. Water is being pumped by the boy and girl through the spine to the top of the head. In the Tao Classics, this is called, “Kidney water reverses its course.” The water passes through the fire at the Lower Tan Tien and the kidney/adrenals transforming it into vapor (Chi or Qi). When the vapor reaches the crown it condenses and drips down like misty water to the heart. This cools the heart fire, so the heart will not dry out and the vapor will nurture all the organs and irrigate the land. This is symbolic for the energy circulation called transforming water into steam. By pumping the watery sexual energy up the spine past the fire from the sexual palace and the kidneys to the top of the head, one is able to understand the symbolic energy circulation called transforming water into steam. Next, it flows down past the fire of the heart and is transformed into Chi, the bio-electromagnetic power of the life force.



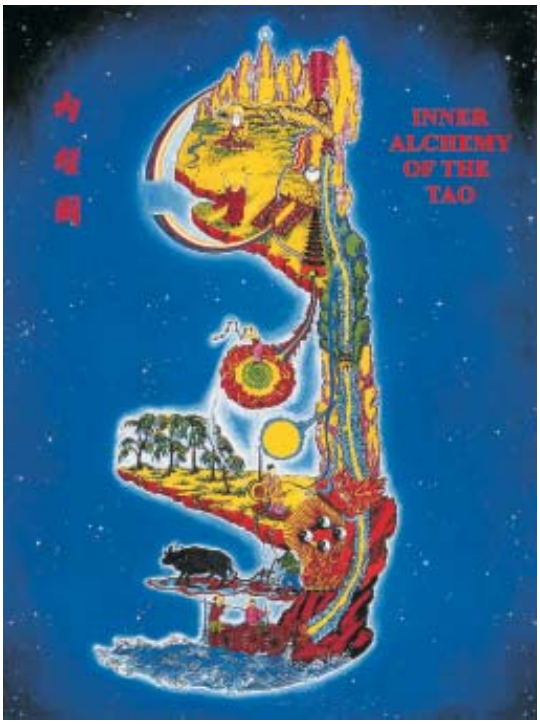


Fig. 1 *2000-year-old Carving in a Tao Temple*

We are directly involved with our solar system: the energies from our body, mind and spirit are constantly affected by the moon, planets, sun, galaxy and the entire universe. The Taoist practices expand our awareness and keep many more elements of the universe in our consciousness.

Fig. 2 *Consciousness of Humanity Field, Awareness Field*

White Magic Practice

丹鼎

The Taoist practices are also called White Magic Practices or Inner Alchemy. With the Inner Smile and the Six Healing Sounds we transform negative emotions into positive energies. Negative emotions are normal. Feelings such as impatience, anger and worry happen everyday. We call them negative because when they stay in us too long they become stagnant and detrimental to our health. This is contrary to what happens with positive emotions such as love, joy, generosity, happiness and trust, which nurture us. What the Taoists discovered is that we can utilize this negative energy to cultivate positive energy through such practices as the Inner Smile and Six Healing Sounds.

Sexual energy or jing chi in the Taoist thinking is the source of all life and creativity. It is the basic resource transformed first into chi and then into shen (spiritual energy). Sexual energy can be cultivated by men learning how to control ejaculation and by women easing the blood flow in the monthly period. Sexual energy can be used for the ultimate creative act of creating a new body. In the Taoist Healing Love practices, learning to circulate the sexual energy, transforming it up along the spine through the cosmic orbit and down the front of the body, recycles and regenerates the body's internal energy.

Inner Alchemy Changes

Transform negative into positive energy. Changing lead into gold.

Alchemical changes happen every day of our life. When our loved ones are sad, angry or depressed, we can send love and gentleness to them and make them feel better. Changing the anger into happiness, is changing the negative into positive, also known in Taoism and alchemy as "Changing Lead into Gold." Western doctors now realize that a lot of sickness is caused by negative emotions. Anger increases blood pressure and puts stress on the heart. We need to learn how to change the negative into positive energy to improve our health and spiritual energy. The basic practices for this are the Inner Smile and Six Healing Sounds.

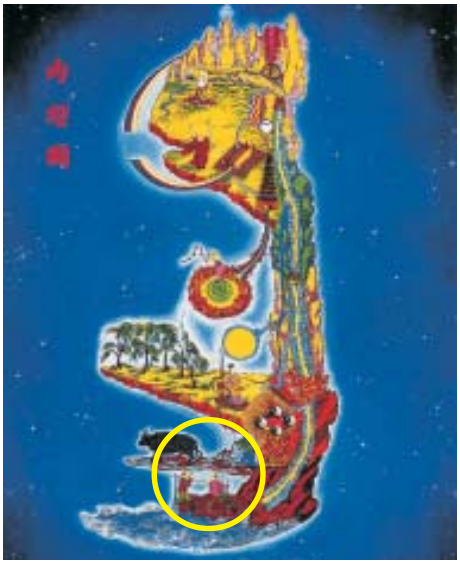
Recycle the emotions and sexual energy.

When we feel sexual arousal and desire, the sexual hormones are activated. This is the beginning of the inner alchemy of sexual energy. Recycling this energy is the fundamental practice of the Cosmic Orbit. Sexual energy is the creative force that is used to regenerate the body's internal energy as it travels through the orbit.

Returning to the Primordial Force and Born Again Process 重生

Taoists regard the opening of the cosmic orbit as “The Born Again Process”. In the womb we receive nutrients from our mother through the umbilical cord. When we practice the cosmic orbit and touch the tongue to the roof of the mouth, we receive nutrient Chi from the universe and store it in the Tan Tien.

Fig. 3 *Born Again Process and Returning to Primordial Forces*



The cosmic orbit practice is sometimes called “Returning to the Primordial Force” or the “Born Again Process.” Turning the water wheel of the cosmic orbit is also referred to as “Spinning the Wheel.”

Fig. 4 *Turning the Water Wheel*

Taoist Universe, Elements and Awareness

The Five Elements play a major role in the way the Taoists see the universe and in the Taoist practices. From the Wu Chi, (in other traditions referred to as the Void or God), or the Ultimate Stillness, creation brings forth yin and yang. These are transformed into each other in an eternal cyclic movement, Tai Chi, which generates the five elements: the stages in the transformation of yin into yang and yang into yin. They are also symbolized as water, wood, fire, earth and metal or air. Of course, Earth, Man and all living things are composed of these elements.

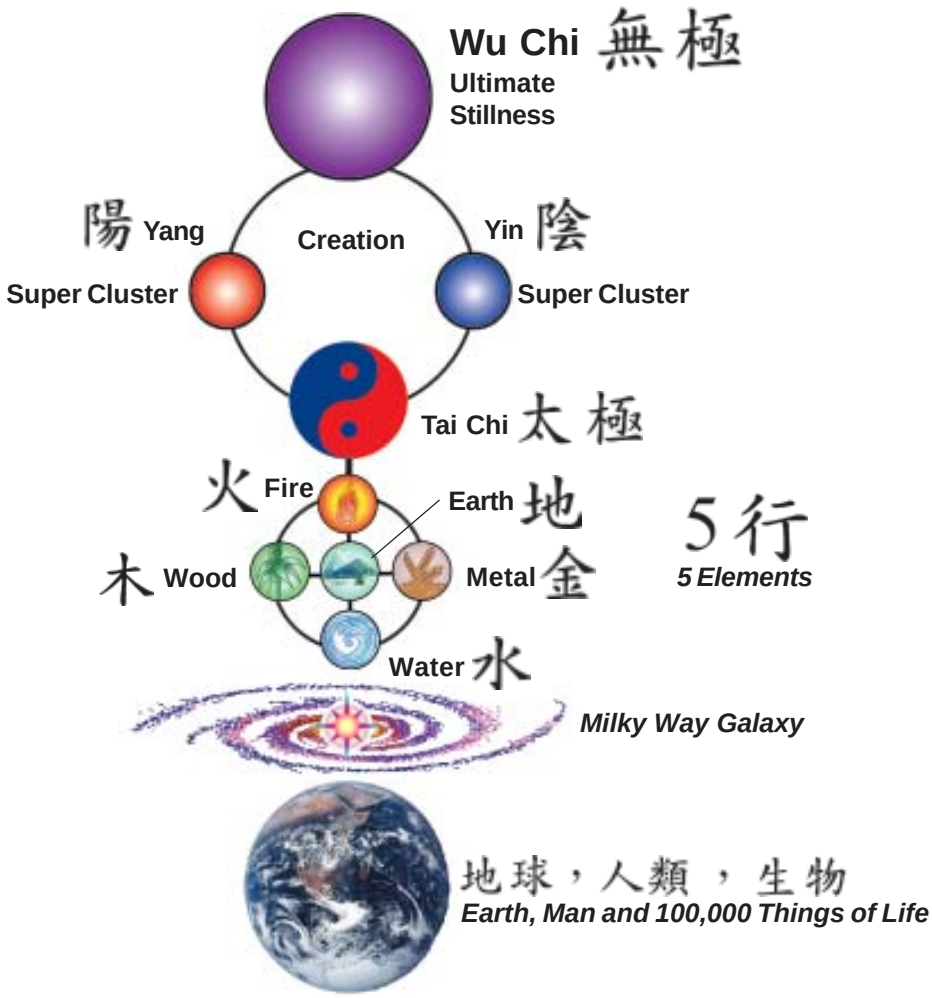


Fig. 5 *Levels of the Cosmic Taoist Universe*

By calming our minds, we can become aware of the many elements in the universe and the major forces that are active around us. When we make contact with these forces and learn to integrate them within our own energy field, we become part of the entire universe. The diversity of the universe is enormous. For example, it has been estimated that there are more than 200 billion galaxies, each containing more than 200 billion stars. So, the Taoists say that the limited energy of the human body can become part of the unlimited energy of the universe.

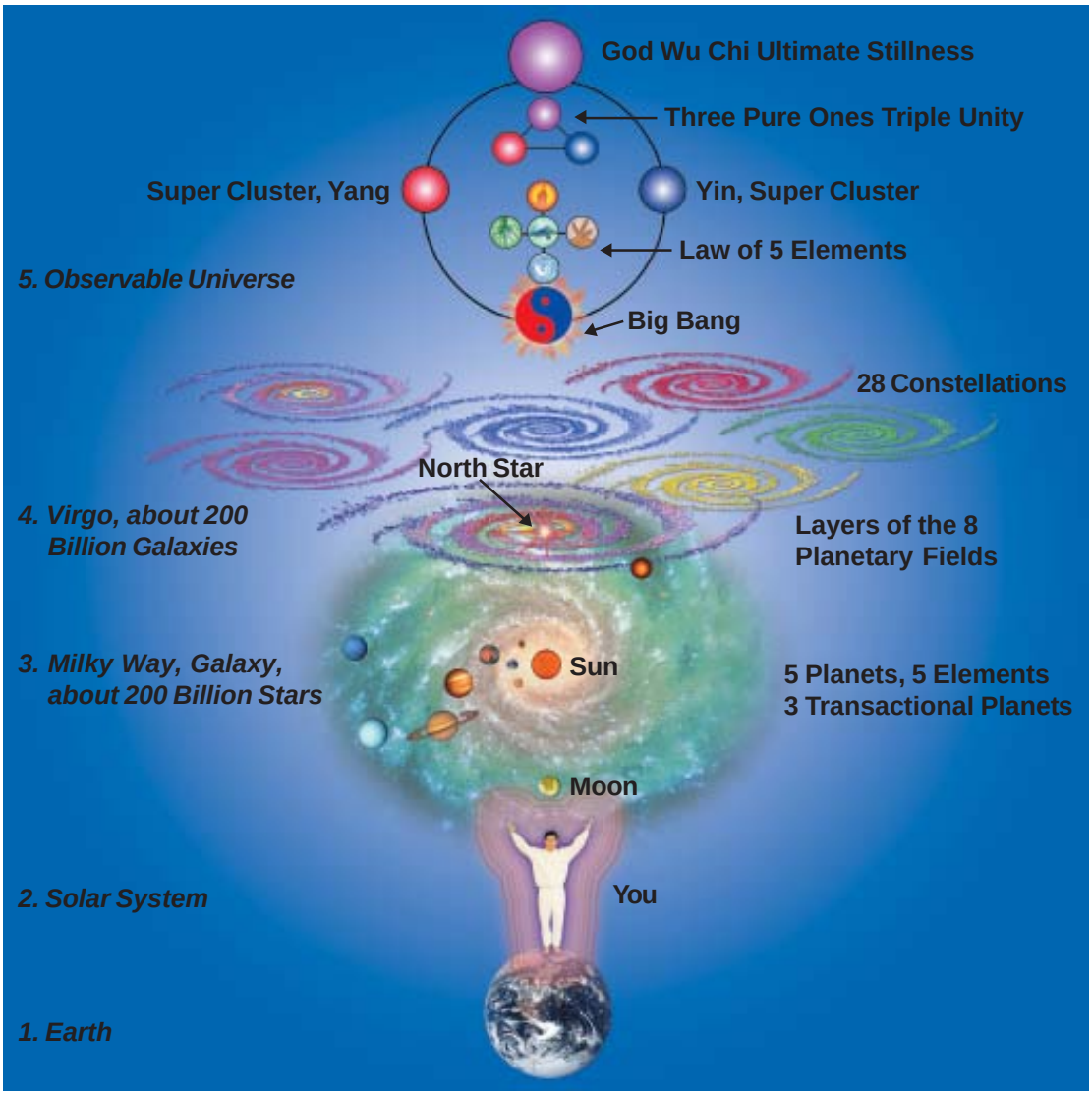


Fig. 6 *Levels of the Cosmic Universe, Field of Human Consciousness, Awareness Field*

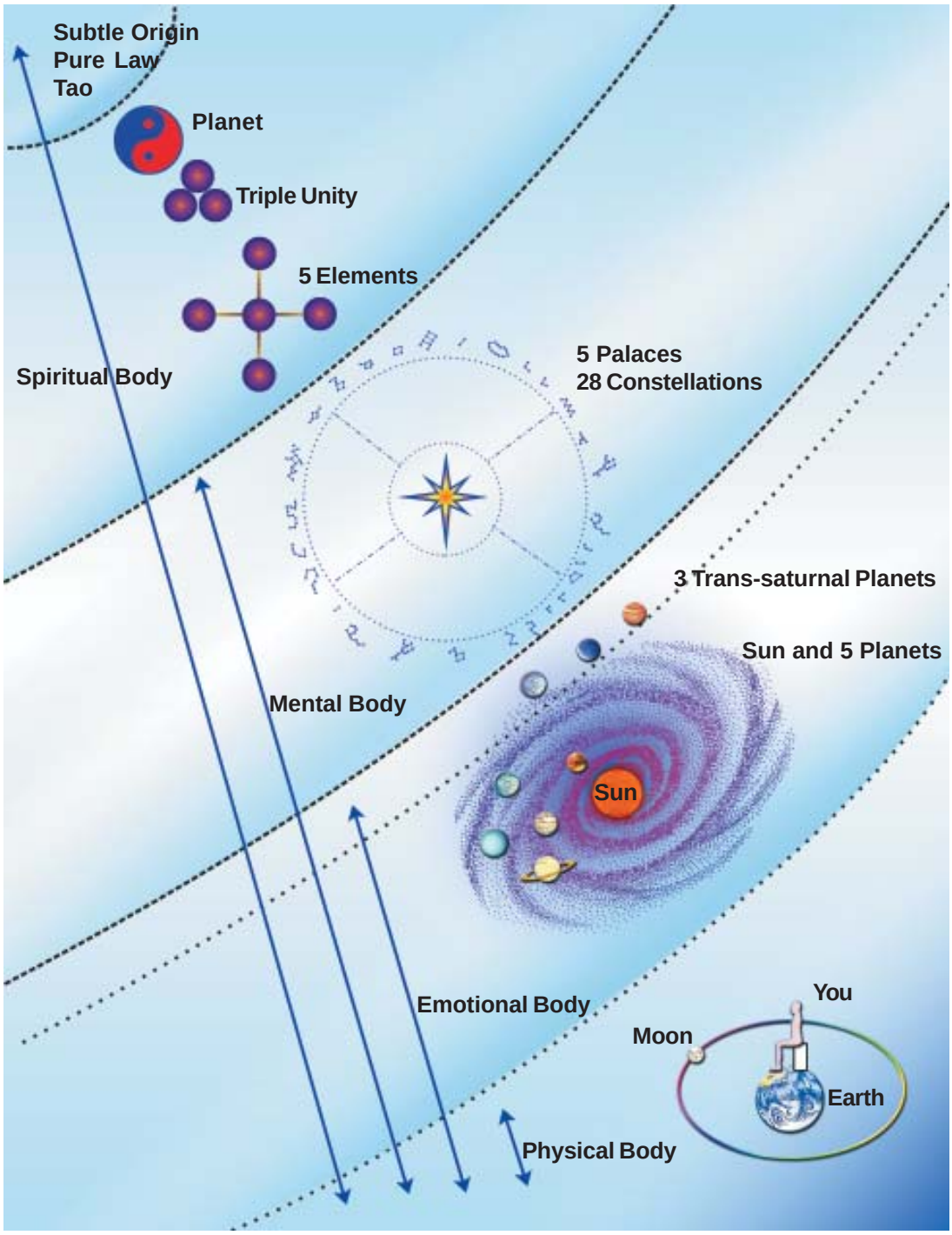


Fig. 7 *A schematic depiction of the various spheres so we can expand our awareness.*

Three Treasures of the Tao 丹 田

Taoist teachings often refer to the Three Treasures.

1. **Treasures of Heaven: Stars, Sun, Moon**

2. **Treasures of Man: Spirit or "Shen" Energy or Chi and Sex/Body or Jing Chi**

3. **Treasures of Earth: Land, Water, Wind**

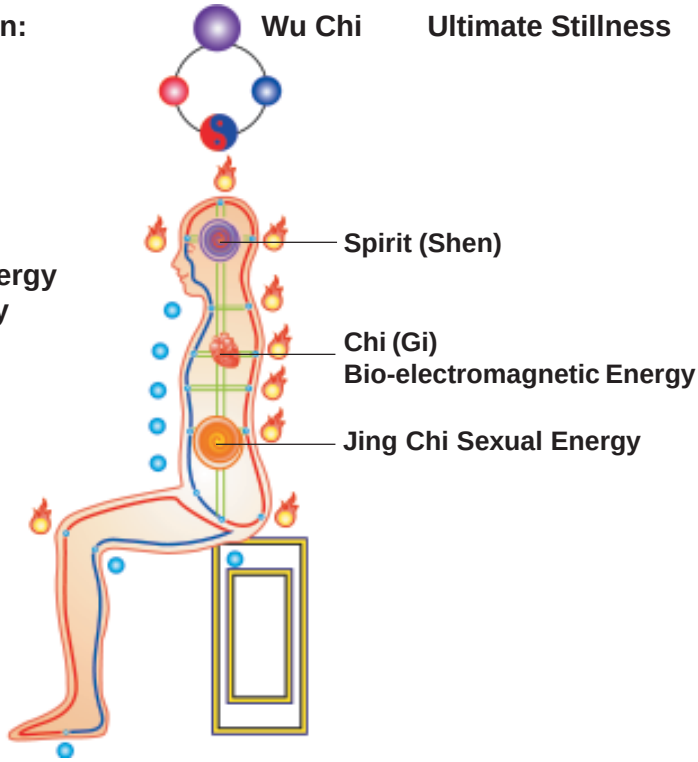


Fig. 8 *Wu Chi*

The Taoist Classics state, "Transform Jing (Sexual Energy) into Qi (Life Force Energy) and Qi into Shen (Spirit Energy)." This is truly the internal alchemical process of returning to the origin, the doorway into the Tao, the primordial void of clear light and inner sound. The Three Treasures practice cultivates self-awareness and develops your personal soul pattern. It is a process of self-transformation, of creating higher forms of vibration, and resonating with the source of life. It is process of self-regeneration using the DNA to divide matter into new cells creating bliss and divine qualities of love and truth.

Chapter 1
Foundation of the Universal Tao System is the Cosmic Orbit Meditation

The Cosmic Orbit Meditation is a refined practice which connects with the earth, cosmic (nature), and universal forces. The first step is to make a connection with the North Star and the Big Dipper's violet/red light ultra violet which is one of the most powerful heavenly lights. Through this practice, learning to feel Chi and using the mind/eye/heart power **(Yi 意)** to guide the Chi flow through the primary energy routes in your body is the foundation of Taoist meditation. This practice is later extended to include the arm and leg routes too; it is then the full Cosmic Orbit flow.

There are hundreds of different Chi Kung forms in China, and many involve different hand movements and gestures. We could spend lifetimes just learning the hand movements. The practice of the Cosmic Orbit meditation will help you feel Chi more easily inside, outside and around the body. It is the core practice of all the Chi Kung forms.

When I was a child I liked to practice Chi Kung so much I had to save my lunch money to learn. After many years of practice, I started to forget the first form, so I learned a new form. One day I tried to practice and review all the forms that I had learned and I realized that I could hardly remember the majority of them. I sat down and thought, "I only have two hands, two legs and one head. Why are there so many forms? And why are there are so many religions and beliefs?" I said to myself that there must be one main thing that they have in common. I started to search and I found out that the most important thing is feeling the Chi within us (God within us). Being able to increase, transform, take in and stay in touch with the universal, the cosmic, nature and the earth forces and letting them all combine within us (oneness with God, oneness with the universe) is what is important. Likewise in religion there is God (a Force in Taoism we call Wu Chi, the nothingness, the supreme power controlling the universe) and, with a good heart and virtuous energy we can connect with this force.

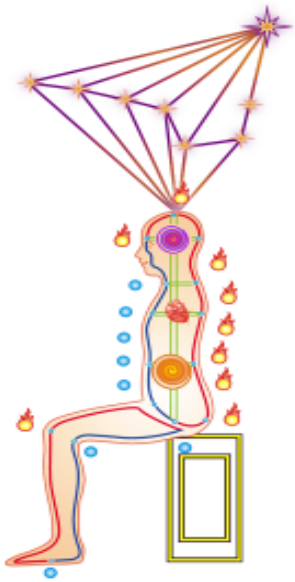


Fig. 1.1 *Cosmic Orbit Meditation*

Cosmic Inner Smile and the Six Healing Sounds

Cosmic Inner Smile and the Six Healing Sounds are very important practices to make the connections between the organs, the colors and the good virtuous energies associated with each organ.

Cosmic Inner Smile
Smile down to the abdomen and warm it up, smile to the heart and feel love with this practice. Energy levels increase, the heart beat remains calm, the body relaxes and, energy charges up the brain.

Fig. 1.2 *Red for the Heart, White for the Lungs, Yellow for the Spleen, Blue for the Kidneys, and Green for the Liver*

Each organ has its own vital color and when this is abundant it will radiate out as an aura for healing and protection. These organ colors and their associated universal connections have great healing power. The power of the 'Six Healing Sounds' will help enhance the connection to the cosmic source. Each sound will bring a different healing energy. The practices also help balance, refine and transform the negative energy into positive energy.

Six Healing Sounds is a Powerful Healing Exercise.

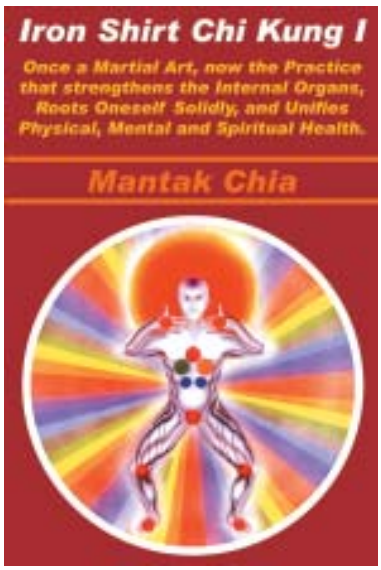
- Six Healing Sounds is a simple, easy and powerful exercise to transform and release negative energies from our body.
- Six Healing Sounds can change our inner energy quality, balance our organ energy and have a calming and healing effect on our body.
- The order of the organs healing sound is: lungs, kidneys, liver, heart, spleen and Triple Warmer.
- It is best practiced before our nightly rest.

Please see more details in the book *Transform Stress into Vitality.* ***Fig. 1.3*** *Six Healing Sounds*

Iron Shirt Chi Kung and Bone Breathing

Iron Shirt Chi Kung and Bone Breathing are systems of standing meditations. These exercises help ground and to root your connection into the earth force, building good structure and absorbing greater force. In turn, this will help draw in the heavenly force, which will combine with the potent healing power of the earth's yellow light. The practice also strengthens the body so you can hold a higher energetic charge. These abilities are essential prerequisites for handling greater amounts of energy.

Iron Shirt Chi Kung also includes the art of "Changing the Sinews and Washing the Marrow." Through these aspects of Iron Shirt, you learn to absorb, store and discharge large amounts of energy through the tendons and bones. *These practices are outlined in detail in the books "Iron Shirt Chi Kung" and "Bone Marrow Nei Kung" by Mantak Chia.*



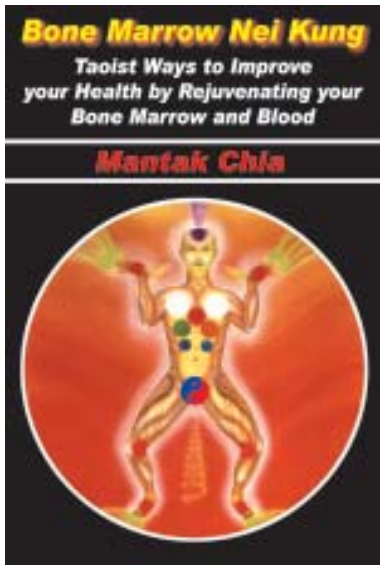


Fig. 1.4 *Iron Shirt Chi Kung and Bone Marrow Nei Kung Books*

To attain skill in Cosmic Chi Kung, it is helpful to practice Iron Shirt, Bone Marrow and meditation as a minimum requirement. Beyond the basic level, the Universal Tao System includes many other intermediate and advanced level Chi Kung practices and meditations. The further one advances, the greater one's mastery of Chi.

Your increasing level of skill in the Universal Tao system will reflect immediately in your Cosmic Healing Chi Kung practice. Furthermore, you will discover that you can incorporate many of your Universal Tao practices directly into your practice of Cosmic Chi Kung. We will give you a simple combined practice of the Cosmic Healing Chi Kung, the Inner Smile, Microcosmic Orbit, Iron Shirt and the Sexual practices.

Stages of Mastering Chi

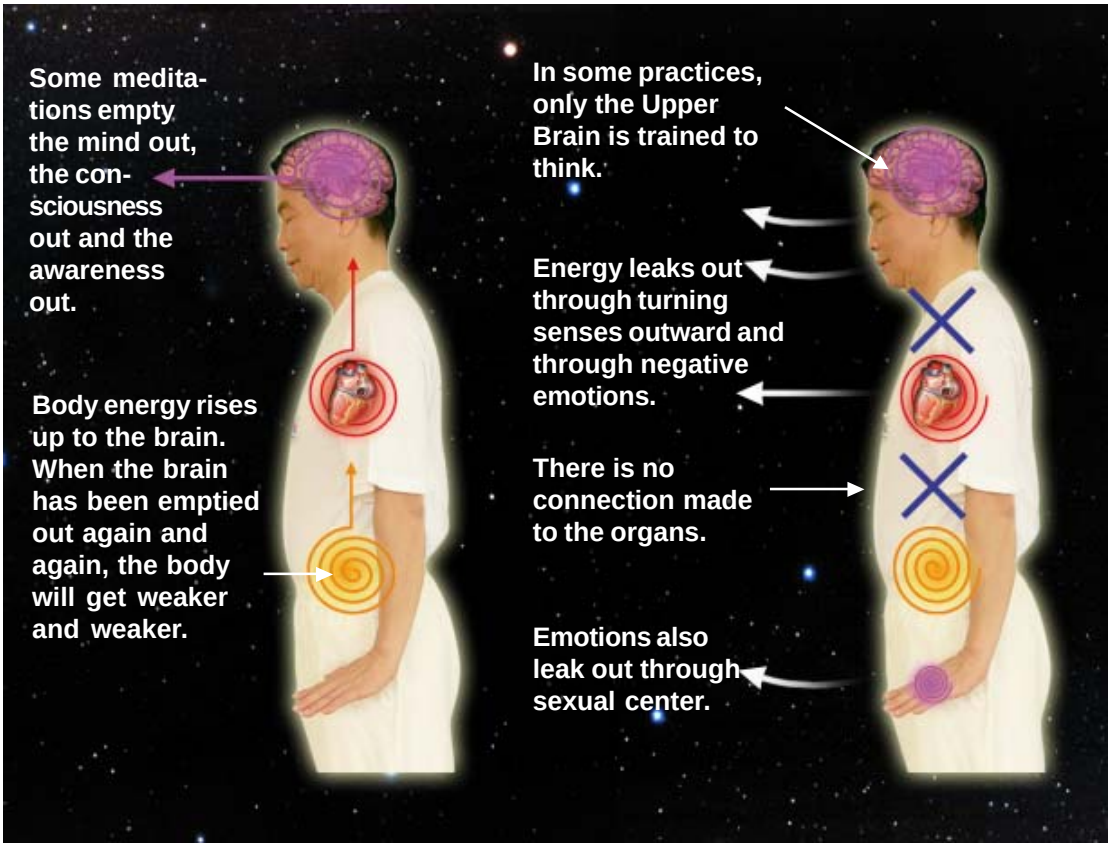


Fig. 1.5 *Some practices attempt to reach enlightenment at the expense of the body. When we lose all energy we lose control of our own mind and spirit.*

1. Conserving Chi. In the Universal Tao System, our *first* goal is to learn to conserve our Chi; when a battery is totally drained, it is harder to charge. Conservation of Chi will help gain more Chi. To have more Chi we first need to maintain control of the gates through which energy normally leaks out and constantly drains our life force. We leak energy:
   - through our reproductive system
   - through negative emotion
   - through constantly turning our senses outward
   - poor diet, eating habits
   - improper or shallow breathing

   Without knowing how to conserve the Chi that we already have, what is the point of acquiring more?

2. Balancing Chi. Learning to balance Chi is the second step to keeping a smooth and harmonious flow of energy moving throughout the whole body. If our energy is imbalanced, we may have too much energy in some places and not enough in others; we may also be too yang or too yin. We may have an excess or deficiency of heat, cold, damp or dryness. This imbalanced energy tends to make us go to extremes.
3. Transforming Qi. Transforming Qi is the third phase and allows practitioners access to more beneficial energies. For example, through the Taoist Sexual Chi Kung practices taught in the Universal Tao (the course known as Healing Love through the Tao), we can transform sexual energy back into basic life force Chi. Through other practices (such as the Inner Smile, the Six Healing Sounds, and Fusion of the Five Elements) we learn to transform negative emotional Chi into positive virtuous Chi. Thus Chi is not only the foundation of our health; it is also the basis of spiritual development in the Tao.
4. Increase Qi. Once we have accomplished the three previous phases of mastering Chi, we then learn to increase it. Chi pervades all of heaven, earth and nature. In Cosmic Healing Chi Kung we learn time-tested ways to tap into these unlimited and transpersonal reservoirs of Chi and greatly expand the amount of energy available to us. It is very important to master first the stages of conservation, balance and transformation before we emphasize increasing our Chi. Otherwise we may waste the energy we bring in, or we may inadvertently amplify the imbalanced or negative energies that we have not yet learned to bring under control.
5. Expanding Qi. Finally, we learn to extend our mind to tap into the vast Chi of nature, the cosmos and the universe to heal our body, mind and spirit and to heal other people. Cosmic Healing Chi Kung practice sensitizes your hands to the feeling and movement of Chi; it uses the mind-eye power to absorb cosmic Chi into the palm and crown and to send it out through the hands and beyond, so that you can help restore balance in others without touching them or draining yourself.

Essence of Tao Practices

"When a man smiles only with his eyes, not with his belly; do not trust him."

Laughing Chi Kung

My wish is for everyone to be spiritually independent and connected personally to the Source, Cosmos, or Primordial Force in our common quest to return to Wu Chi (God). Through this process we can gain inner peace, happiness and compassion for ourselves and others. We can also develop the ability to heal ourselves and to serve as positive energy sources. Naturally, the first step is to be at peace with ourselves. Therefore, I now present this meditation, Laughing Chi Kung as a tool for strengthening the connection we have to ourselves and for opening to the abundant Chi available from the cosmos and for developing the skills of self-healing.

I remember one day practicing the many forms of breathing exercises I had learned. After practicing the whole day I had not finished and I thought to myself, why so many different breathing exercises, after all we have only one nose and two holes? At this point I started to laugh and laugh, and after a few minutes of laughing I felt more relaxed, more open and full of Chi than after a day of complicated breathing exercises. I realized that laughing is a natural and powerful method for calming the nervous system, stimulating circulation and digestion, activating the immune system and generating more energy. This is what this meditation practice and breathing technique is: laughing for our health. Laughing Chi Kung teaches us how to laugh from all the way down in our lower bellies, strengthening the deepest abdominal muscles, the diaphragm and the muscles of the pelvic floor, the urogenital muscles. When our lower abdomen is enlivened through deep belly laughing, we create a good solid home for our awareness and energy.

Fig. 1.6 *Why are there so many breathing exercises when we only have only one nose with two holes?*

Explanation of Benefits

When we laugh from the abdominal area, there is a vibration that moves though the body. This vibration will activates the heart brain and the thymus gland Laughing from our Lower Tan Tien, our second brain, stimulates all the functions of this area and activates the heart brain and the thymus gland. Allowing the laughter to reverberate through the diaphragm, sternum, spine and all the organs feels like a real workout in the beginning. All the tensions we hold on that keep us in a state of contraction are vibrated from the inside and then start to release. You will feel an enormous relaxation in your abdomen and all the related tensions in the rest of your body start to release as well.

1. Increases the minds attention, improves circulation.
2. Activates the diaphragm and the diaphragm activates the abdominal area.
3. Activates the Lymphatic System and improves the Immune System.

Fig. 1.7 *Laughing Chi Kung*

Three Minds into One Mind 意 Yi

In the Tao practice it is important to understand the principle of the three minds. The upper mind, also known as the upper Tan Tien, resides in the brain. The upper mind is good for planning and detailed figuring but it is easily drained by thinking too much. The middle mind, or the middle Tan Tien, is centered in the heart. The heart is the seat of our consciousness. The lower mind, or the lower Tan Tien is in the lower abdomen and this is where our awareness resides. It is also the place to generate Chi. The three minds; the observing brain mind, also known as monkey mind, the conscious heart mind and the aware abdominal mind, can be fused together to form one mind which in Tao we call ***"I"*** . From this one mind we can do all of our thinking and sensing and connect to the cosmos and use a fraction of the energy needed when the upper mind works alone.

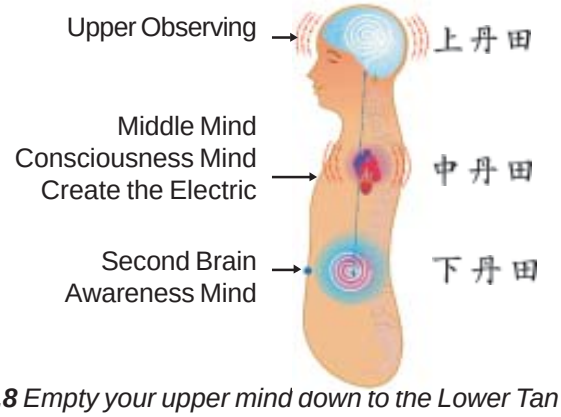


Fig. 1.8 *Empty your upper mind down to the Lower Tan Tien. Let awareness and consciousness combine together.*

Upper Mind, Monkey Mind

The Taoists refer to an over-used upper mind as the monkey mind. The monkey mind is never at rest and consumes an amazing amount of the body's energy, so it is important to train the upper mind to rest in the lower Tan Tien and work together with it. When the upper mind is over-active it will suppress consciousness and awareness, but when we fuse our minds in the lower Tan Tien we become conscious and aware of things we were never conscious or aware of before. When we let our upper mind rest, we conserve energy and improve our health and emotion and spiritual practice. With practice we can learn to charge the lower Tan Tien with more energy and in turn the lower Tan Tien will charge the upper brain. Cultivating Chi in the lower Tan Tien is the key to the whole Tao practice.

Fig. 1.9 *Monkey Mind is known as the Upper Mind*

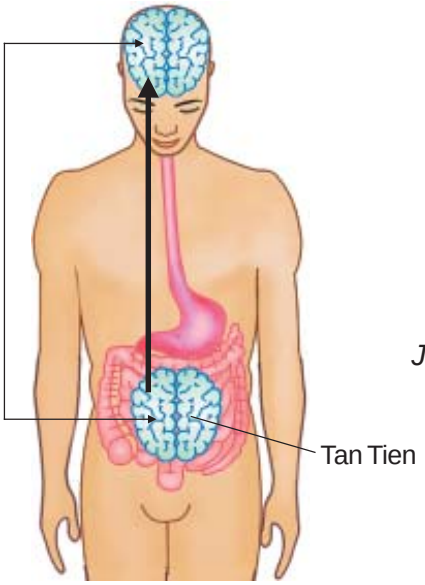
Second Brain is a Key Concept in Tao Practice.

In the beginning of my practice with my master, I did not understand the Second Brain concept. My master taught me to lower and sink my mind down to the lower Tan Tien. Much later, I understood this when I read that western technology had discovered that the nerve endings in the stomach and intestines, especially those that are related to emotional responses, are the same as those in the upper mind. By just dropping your energy down and smiling to the Lower Tan Tien you can activate your observing mind, conscious mind and awareness mind.

The west has been aware of the second brain for the last one hundred years. It still does not realize exactly how to use it as a conscious element of the human organism. The second brain is located in the regions of the small and large intestines. These carry the same kind of neurons and tissue as the first brain in the head except that they are larger in size and consume less energy. The second brain can perform many of the tasks of the upper brain.

The Taoists call this lower brain, situated in the abdomen, the Lower Tan Tien. This second brain has all the properties of the normal higher brain. In the west we refer to it as our guts. The west has now recognized the existence and importance of this second lower brain and how the higher and lower brain interact.

- The lower brain can be trained to think.
- The lower brain uses much less energy than the upper brain, and it can help us to take care of our daily work.
- Through practice, the lower brain can charge the upper brain with energy.



"Complex and Hidden Brain in the Gut"
Makes Stomach Aches and Butterflies

The New York Times
Tuesday, January 23, 1996

The gut has a mind of its own.
Just like the larger brain, this system sends and receives impulses, records experience and responds to emotions.

The gut can upset the brain and the brain can upset the gut.

Fig. 1.10 *Brain Power of the Tan Tien - The Seat of the Awareness Mind*

Studies are also taking place in the West on the Tan Tien Mind.

In his book The Second Brain, Gershon describes how this second brain has been known in the west since for over 100 years, but that people really did not know how to work with it. The Taoists have worked with this brain for 5000 years. The major practice is to "lower" the higher brain into the lower brain. This allows the higher brain to rest and recover. The higher brain uses a relatively larger amount of energy and resting it also saves energy. The lower brain can attract energy from the universe and charge the higher brain or other parts of the body.

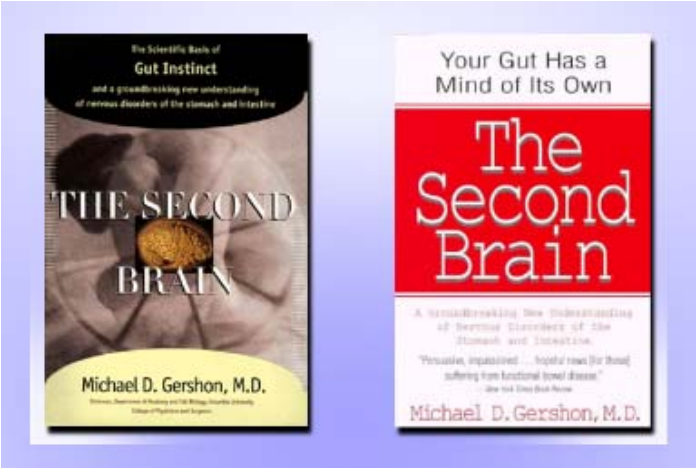
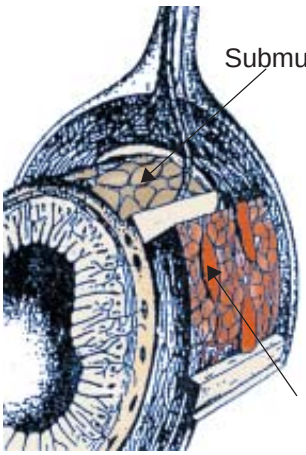


Fig. 1.11 *Books about the Second Brain by Michael D. Gershon, M.D.*



The intestine is loaded with neurons that can learn.

The Taoist practice teaches organs to learn and remember.

Fig. 1.12 *Existence of neurons enables the Second Brain to learn.*

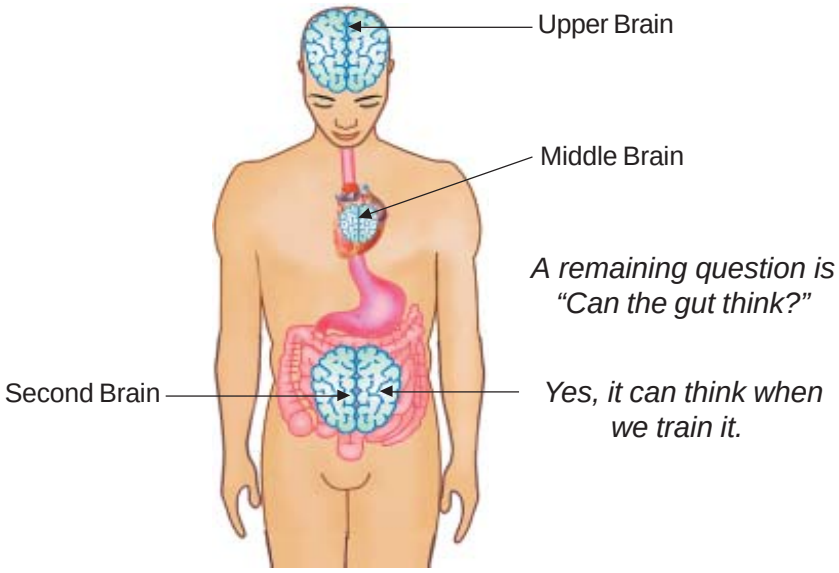


Fig. 1.13 *Taoism believes in the thinking capability of the Second Brain.*

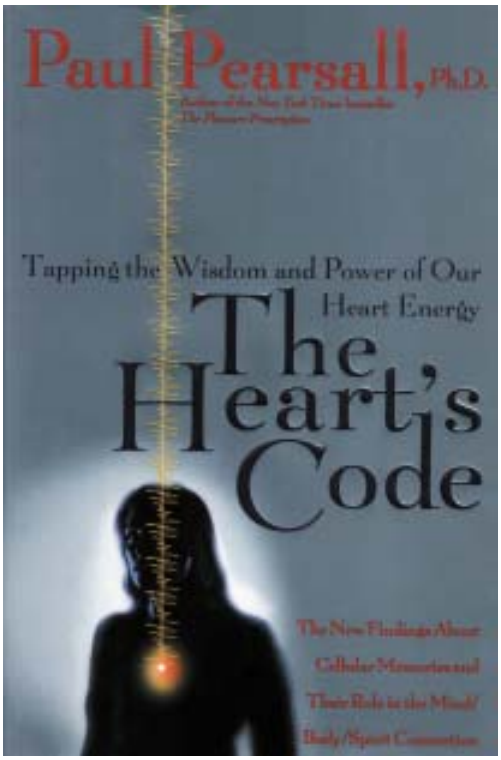


Fig. 1.14 *The heart has its own brain, the conscious mind.*

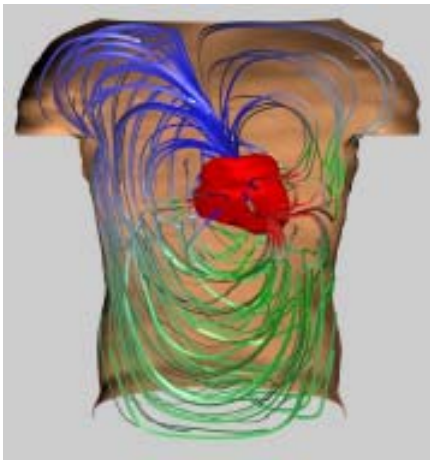
The Middle Brain, the Conscious Mind

The heart has its own brain, the conscious mind.

The Heart's Code by Paul Pearsall, Ph.D.

Taoism believes that the heart (Middle Tan Tien) is a "Mind", the seat of the conscious mind. The heart refines the spirit and then manifests in radiance of the spirit. The heart is known as radiant and shining heart. The nature of the heart governs and exerts authority on the other organs.

The Heart That Found Its Body Killer
Page 7
Cellular Memories and a Thinking Heart
An eight-year-old little girl received the heart of a murdered ten-year-old girl. This girl started screaming at night about her dreams of the man who murder her donor. Her mother said her daughter knew who it was. Her mother and the psychiatrist finally decided to call the police and, using the descriptions from the little girl, they found the murderer. Everything the little heart transplant recipient reported was accurate e.g. the time, the weapon, the cloth.

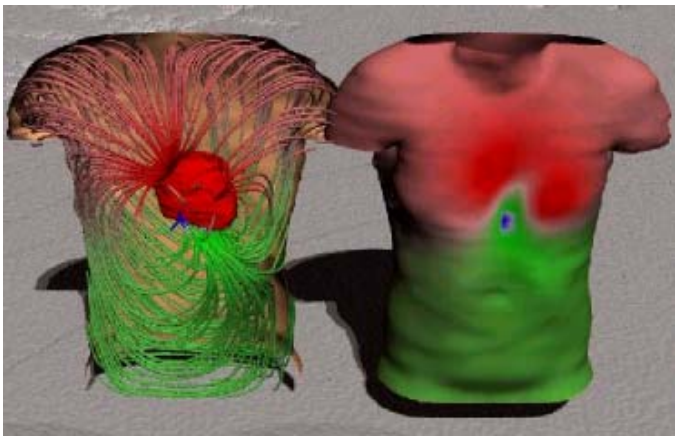


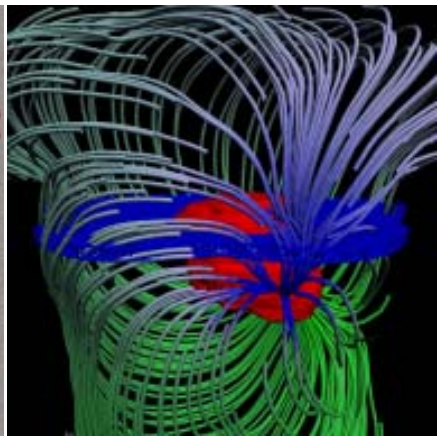
"These images show the use of ribbons to model the current paths inside the thorax. The colors along the ribbons indicate potential (red indicates positive, blue indicates negative)".

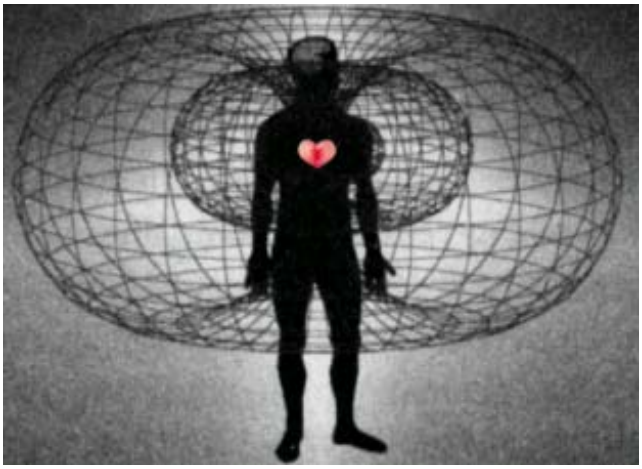
picture from:
www.sci.utah.edu/sci_images/pages/track266.html
www.ncsa.uiuc.edu/pubs/access/95.1/mapping.

The electricity manifests as an electrical field within and around the body, subtle but detectable.

Electric Current near the Heart







Recent research has revealed that the heart generates a strong electromagnetic field within and around the body. The electrical field is shaped like a donut, or torus, similar to the biomagnetic field of the human aura, and the geomagnetic field of the Earth. When we feel love and compassion, the heart will radiate and shine to all the cells of the body and radiate out to people around us.

Fig. 1.15 *Schematic of the Heart's Magnetic Field, the Radiant Heart*

The axis of the heart's electromagetic field is tilted at an angle to the body axis, similar to the tilt of the Earth's magnetic field. In the Tao, we believe that the heart tilts 45 degrees towards the North Star and that the North Star exerts a strong pull on the heart.

Fig. 1.16 *Axis of the heart's electromagnetic field*

In the Tao, we believe that the heart fibers are bundled into seven layers which generate seven electromagnetic fields and seven states of compassion energy.

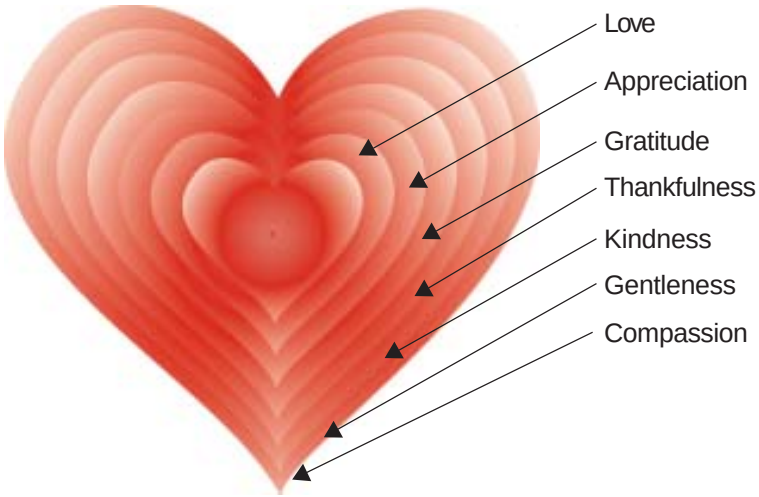


Fig. 1.17 *Generation of seven electromagnetic fields*

Laughing Chi Kung

Six Step of Laughing Chi Kung

1. Generate Chi with laughing
2. Increase the Chi by spiraling
3. Chi rises to the crown and the nostrils open
4. Gather the Chi in the lower Tan Tien
5. Collect the Chi
6. Store the Chi

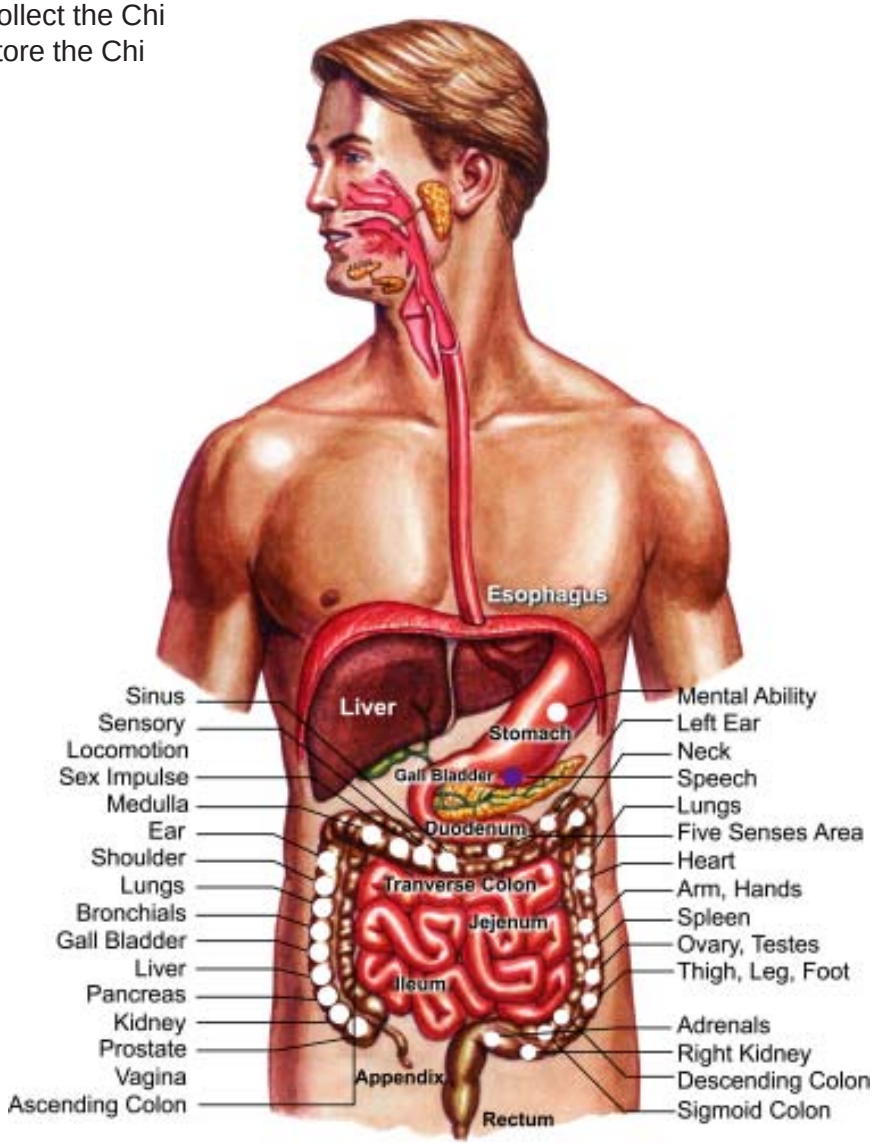
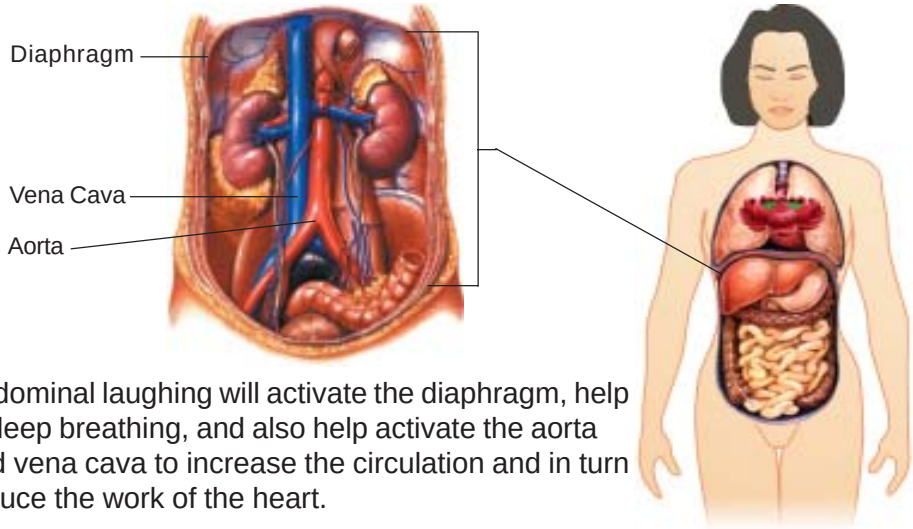


Fig. 1.18 *Reflex Points of the Colon*

Step 1: Generate Chi with Laughing



Abdominal laughing will activate the diaphragm, help in deep breathing, and also help activate the aorta and vena cava to increase the circulation and in turn reduce the work of the heart.

Fig. 1.19 *Activate Diaphragm.*

Many reflex points in the large intestine become stimulated with laughter. When the reflex points are stimulated, this has a beneficial effect on the corresponding organ.

Abdominal laughing exercises your diaphragm. When your diaphragm moves more easily this assists the lungs to breathe deeper and more fully. When the muscles in your belly tighten, the pressure in your abdomen increases. This squeezes the arteries and veins and moves the blood. When the muscles release and your belly expands it creates a vaccum for the major veins and arteries, the vena cava and the aorta, which attracts blood. This mechanism acts like a second heart, and lightens the workload for your primary heart.

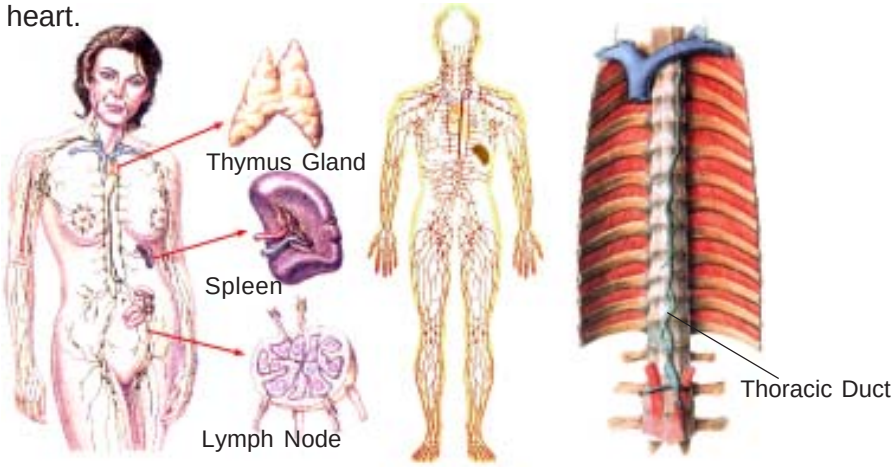
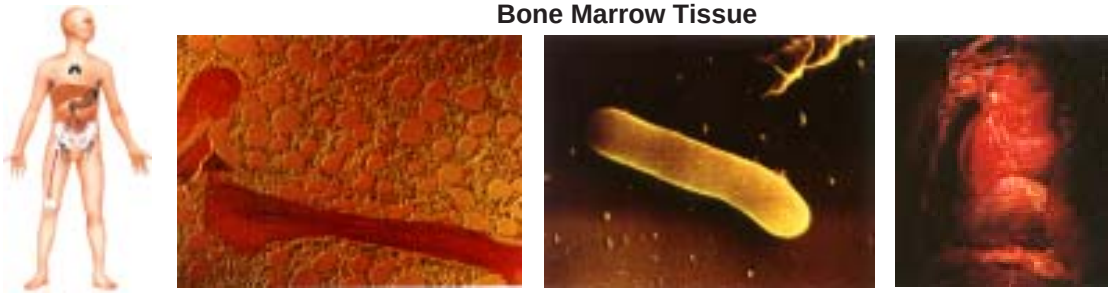


Fig. 1.20 *Activate the Lymphatic System and improve the Immune System.*

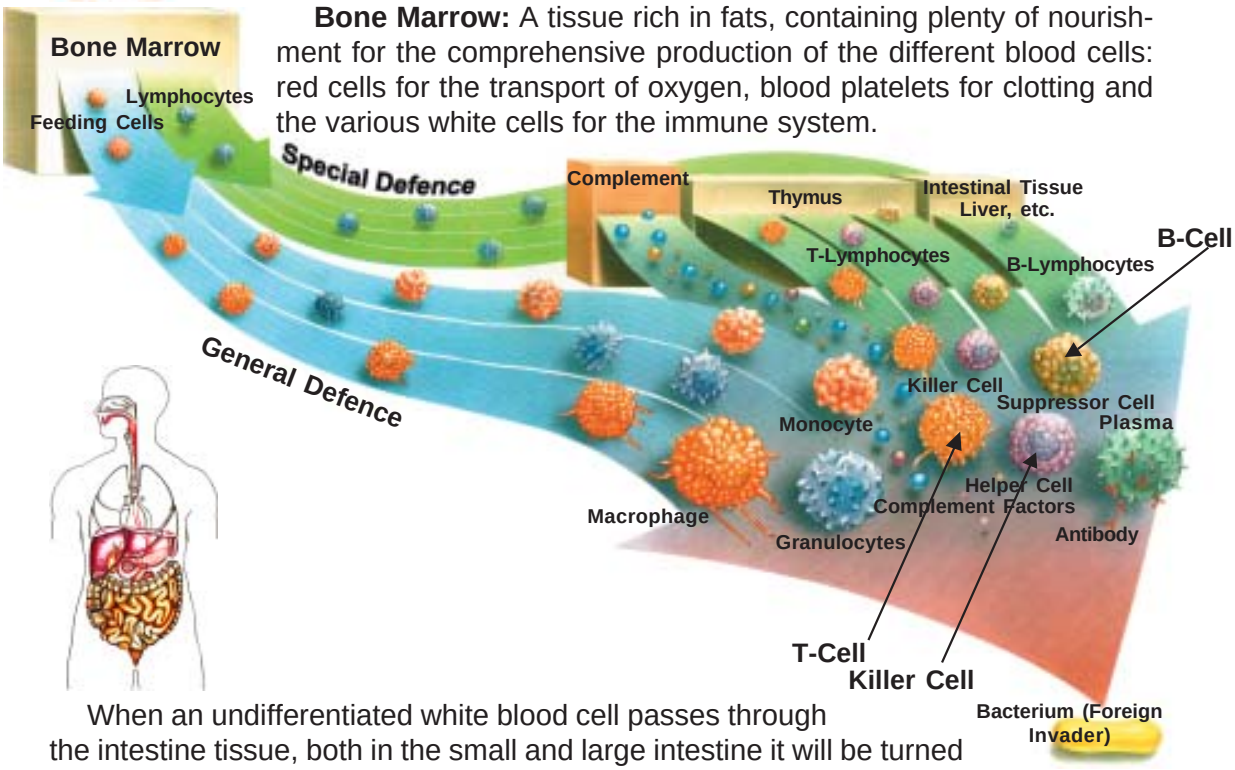
Laughing out loud also activates the blood stream, which will affect the thymus.
Thymus: The thymus gland is perhaps the most important organ of the immune system. In it the vital training of the different T-lymphocytes takes place to activate the immune system.

Laughing will activate the blood stream and vibrate the thymus gland let blood flow though the thymus gland, when white blood pass through the gland it will insert the program and white blood cell become T-cells.

Bone Marrow Tissue



Bone Marrow: A tissue rich in fats, containing plenty of nourishment for the comprehensive production of the different blood cells: red cells for the transport of oxygen, blood platelets for clotting and the various white cells for the immune system.



When an undifferentiated white blood cell passes through the intestine tissue, both in the small and large intestine it will be turned into the B-lymphocytes. Every individual B-lymphocyte can make antibodies only against a specific foreign organism. The picture shows a B-lymphocyte, the large round body, with the ability to form antibodies against bacteria. Laughing will help increase more blood flow through the intestinal tissue.

Fig. 1.21 *Bone Marrow, Bacterium and Thymus*

Step 2: Increase the Chi by Spiraling

Spinning the Energy

After each session of laughing we spend time spinning the newly generated energy in the lower Tan Tien. Spinning or spiraling the energy attracts more energy from the cosmos around us. At first we actively spin and spiral ourselves. Later, when we become more aware of the spinning and spiraling deep inside us and in the larger cosmos around us, the spinning and spiraling will happen spontaneously. Just being aware of this enables us to tap into enormous sources of energy.

Even greater speeds are attained through the spiraling of the Milky Way galaxy moving at enormous speeds through the universe. These speeds affect us in some way. Internally at the atomic level, everything spins in similar patterns. These movements influence each other and energy is transferred. The Taoists believe that becoming aware of all these internal and external spins and spirals allows us to constantly attract energy from the universe.

Fig. 1.22 *Spinning Energy*

How fast are you moving?

Spinning is an important concept in Taoist practice. Everything around us spins and often emits strong electromagnetic charged fields. We live in a spinning universe. All energy spins. In Taoist practice we must establish ourselves in the spinning universe, have our own spin to create our own identity and to be able to make contact with it.

For example, every point at the Equator moves at about 1000 miles per hour as the earth turns on its axis in 24 hours. Moreover, the earth moves around the sun in huge annual orbit. As the earth hurtles around the sun it has a speed of 67,000 miles per hour. This creats a spinning force and a force to draw more power from the Cosmos.

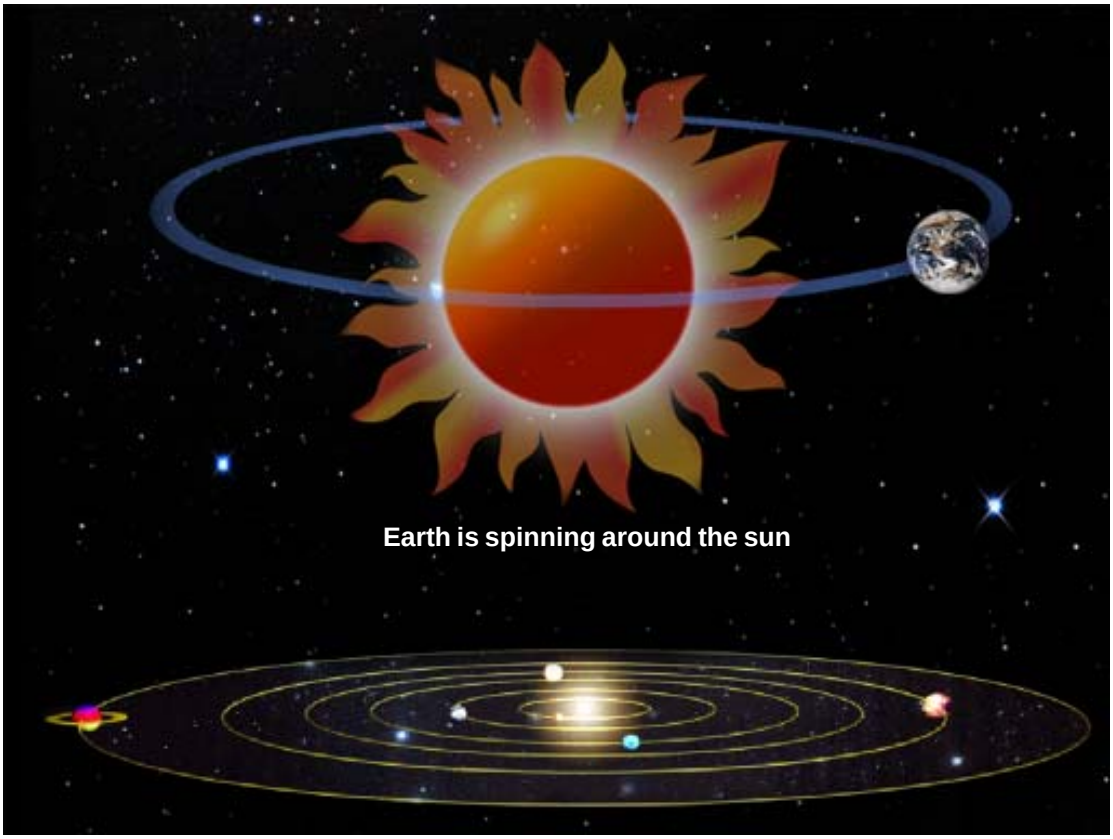


Fig. 1.23 *The Earth and Planets are moving around the Sun at 67,000 miles per hour.*

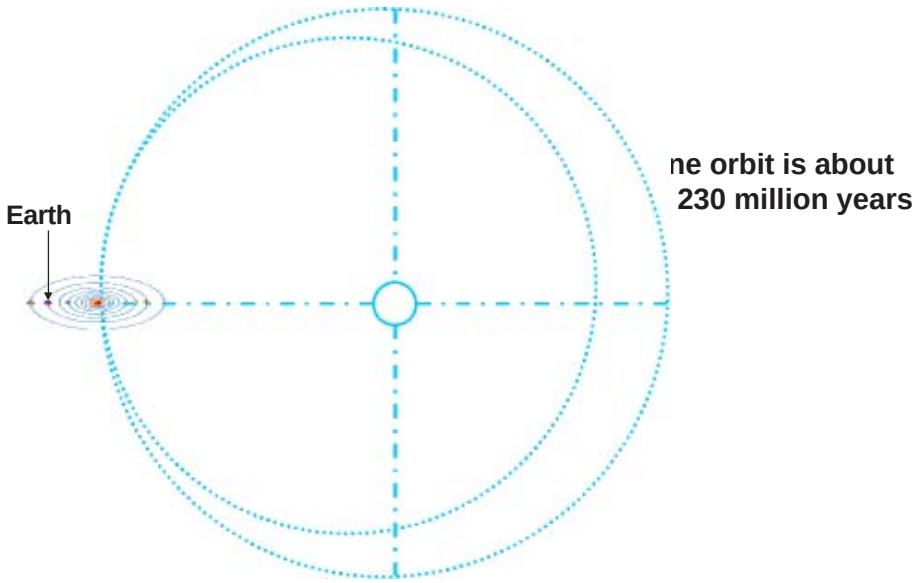
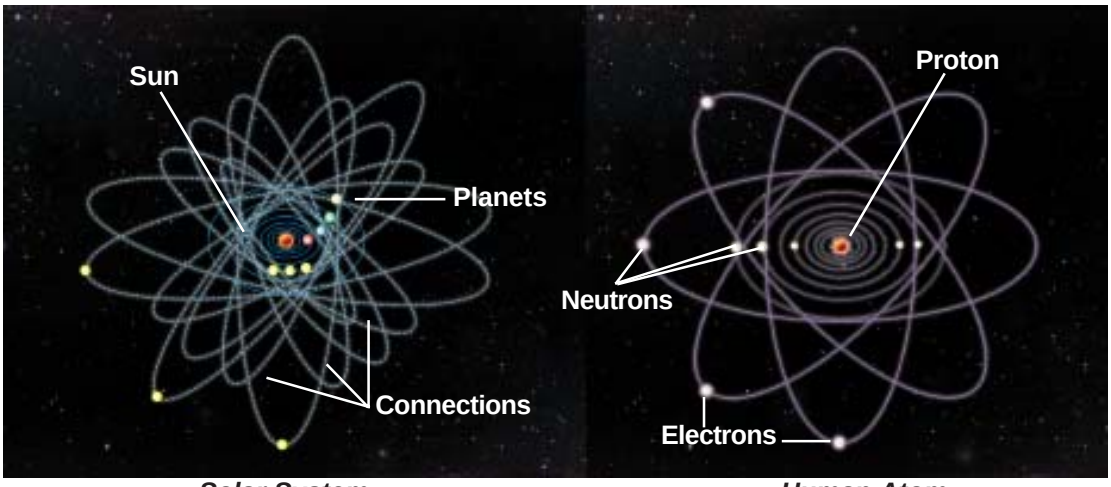


Fig. 1.24 *In addition the sun moves around our galaxy in space taking the whole solar system with it.*

Within the solar system there are many planets all circling around at great speed and influencing each other. It is amazing the planets do not bang into each other.



Solar System ***Human Atom***

Fig. 1.25 *Atomic Structure and Solar System Structure look similar.*

There are similarities between the solar system and our atom, with our atom spinning around a central point in an elliptical orbit. We have 6.5 trillion cells and each cell atom is spinning. The combined force of the spinning can generate tremendous power.

When we put these two together they look very similar. This shows how our atoms are continually moving and spinning and are influenced by the solar system.

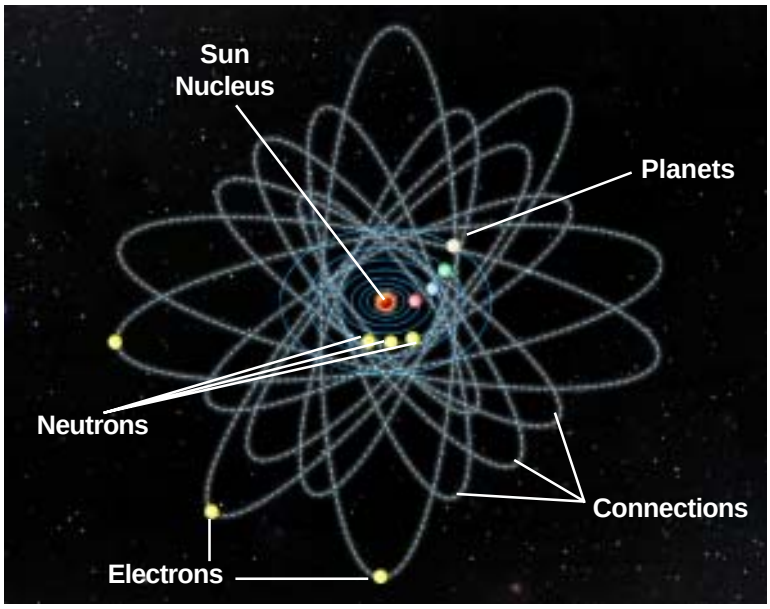


Fig. 1.26 *Human Atom and Planets*

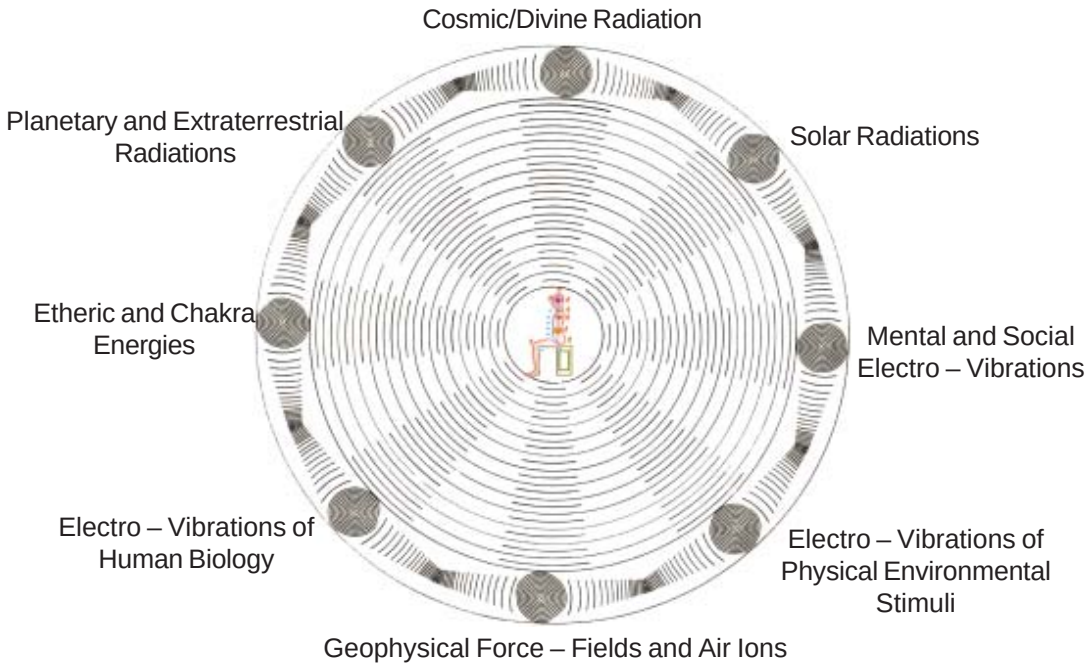


Fig. 1.27 *With the Cosmic/Divine Radiation Fields we are contacting and receiving cosmic energy all around us.*

The earth and many objects in the stars, planets and space emit an electromagnetic field. We are exposed to many such fields. The individual spin and fields enable us to communicate with the rest of the universe and exchange energy with it. We call this the Cosmic Orbit. The cosmic force and our cells are made of the same material which can help enhance the spinnning.

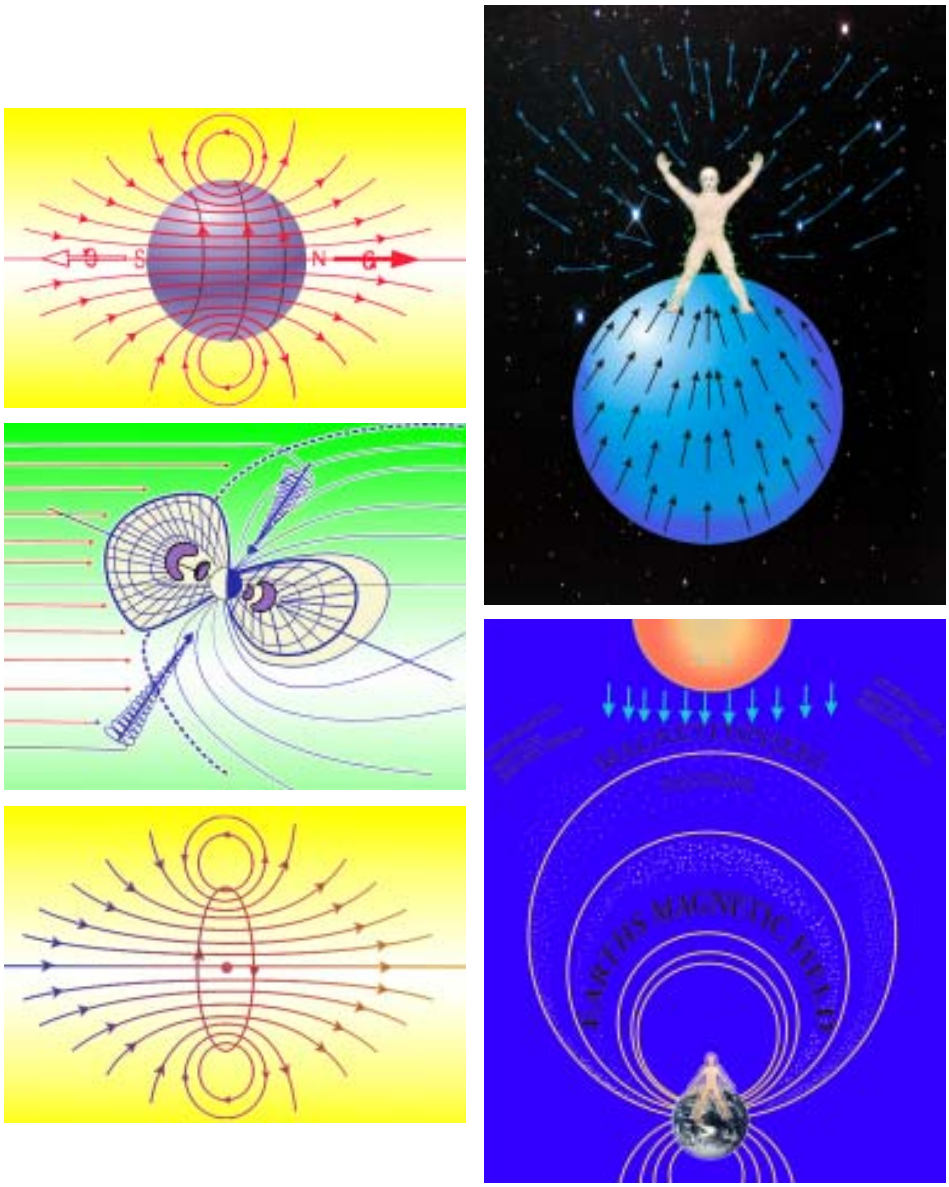


Fig. 1.28 *Cosmic forces flow to us and the world.*

Cosmic Orbit

Turning the Wheel

Moving the Microcosmic Orbit is another spin of energy also known as turning the wheel.

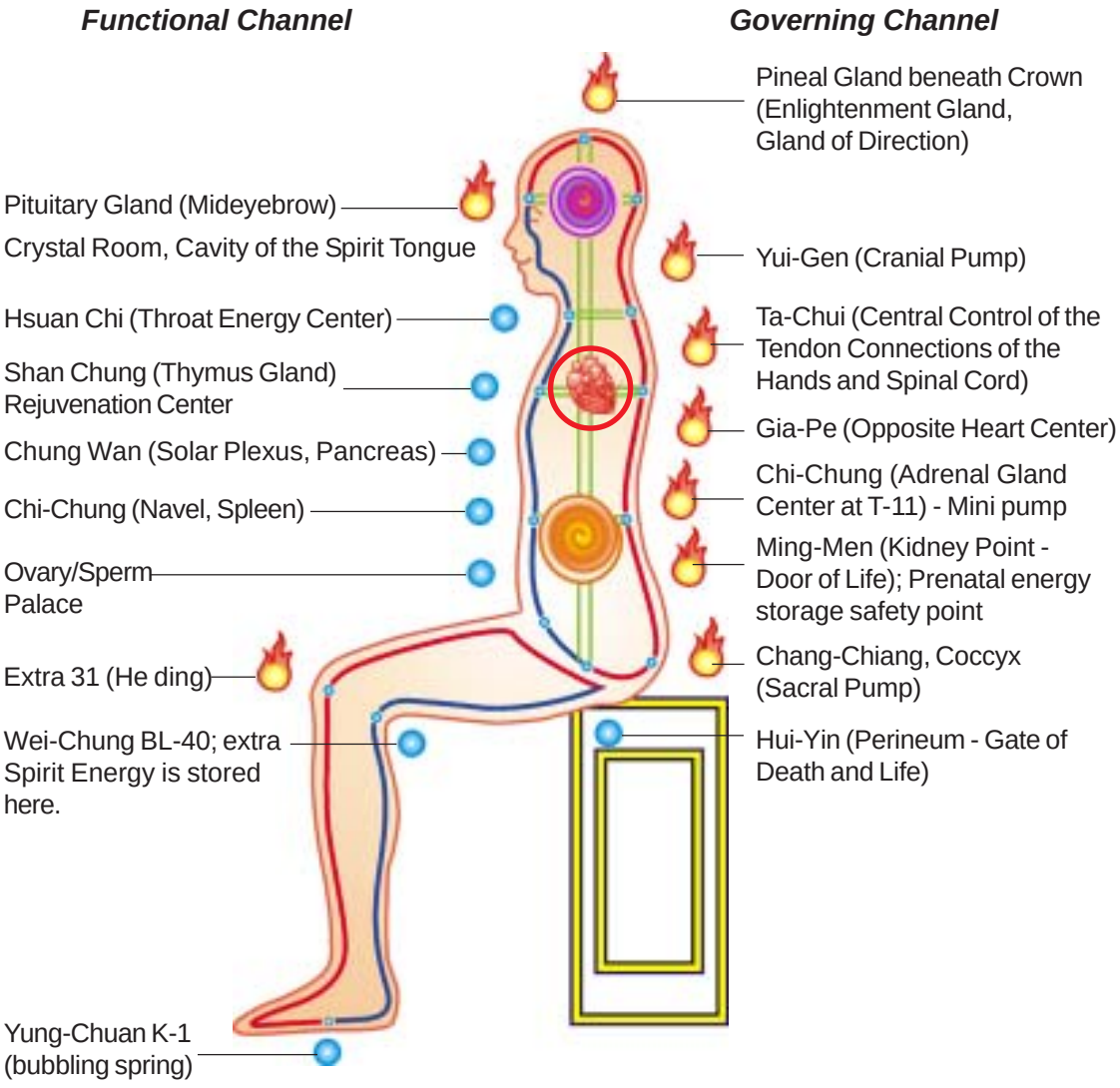


Fig. 1.29 *The Orbit turn in our body. Turning the Wheel*

Step 3: Chi rises to the Crown and the Nostrils Open

Our body with its 6.5 trillion cells is like the universe with its stars, so it is easy to see how the moving of the Cosmic Orbit or Turning the Wheel, is very important to synchronize our body with the movement of the universe. Once we can feel the spin in the lower abdomen the middle mind will spin also. This is similar to three solar system spinning. When this spinning falls in the tan tien it will raise up to the crown and push down to open the nostrils.

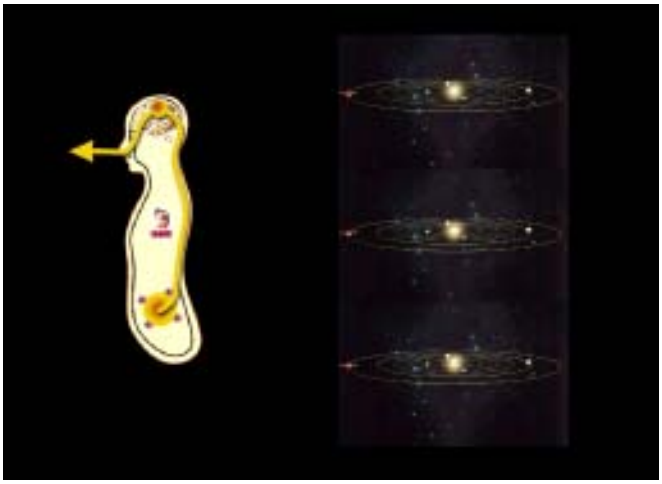


Fig. 1.30 *The Three Tan Tiens are just like the solar system or galaxy turning and spinning inside us.*

Born Again Process

Fig. 1.31 *In many Taoist practices we return to the baby stage and make the connection to the Universe from the umbilical cord.*

Place Tongue to the Root of the Mouth

Before a baby is born, it gets food and oxygen from its mother via the placenta. The baby's blood flows through the umbilical cord to the placenta, where it receives food and oxygen from the mother's blood. This circulation is the same as the microcosmic orbit.

After the baby is born, it breathes in oxygen through its lungs and starts to eat and digest its own food. Its blood circulation changes so that more blood flows to the lungs and gut. The baby no longer needs the placenta, so this is removed by cutting through the umbilical cord. The body starts to move the orbit by itself. When get older, the microcosmic orbit will gradually stop.

Fig. 1.32 *Before the Baby is Born*

Fig. 1.33 *After the Baby is Born*

See how this a one month old child already holds its tongue against the roof of the mouth and so makes it possible for the cosmic orbit to move. It is believed that children do this in the womb.

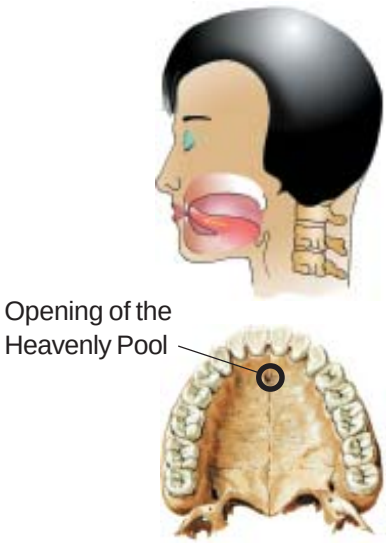


Fig. 1.34 *Babies automatically place their tongues up to the palate, just as they do in the womb. This is the connection of the cosmic orbit, the Chi Bridge.*

Steps 4, 5, 6: Gathering, Collecting and Storing the Energy

Collecting and storing the newly generated energy is an important part of the Laughing Chi Kung practice. After each session of laughing we collect and store the excess energy in the Lower Tan Tien. With continued practice, the Lower Tan Tien becomes very alive, and we feel more centered within ourselves. The Lower Tan Tien conserves and store our energy and when another part of the body needs an energy boost it can draw on this storehouse of energy. Scientists have discovered that the villi in the large and small intestines have properties that are similar to a storage battery. Through hundreds of years of practice the Taoists have discovered that bones and cells can also store energy.

Electrical Polarity is in our Intestines. Villi serve as the Storage Battery of our Energy in the Lower Tan Tien.

The body can store an instant form of energy like “Chi” or “Ki” in the Lower Tan Tien. The only other way we can store energy is in the form of fat. We can activate the energy in fat by fasting. However, often then the body panics and, as soon as we eat again, it tries to store even more energy in the form of fat. There are also other ways to store energy Chi, for example in the bones. But we always have to begin with storing energy in the Tan Tien.

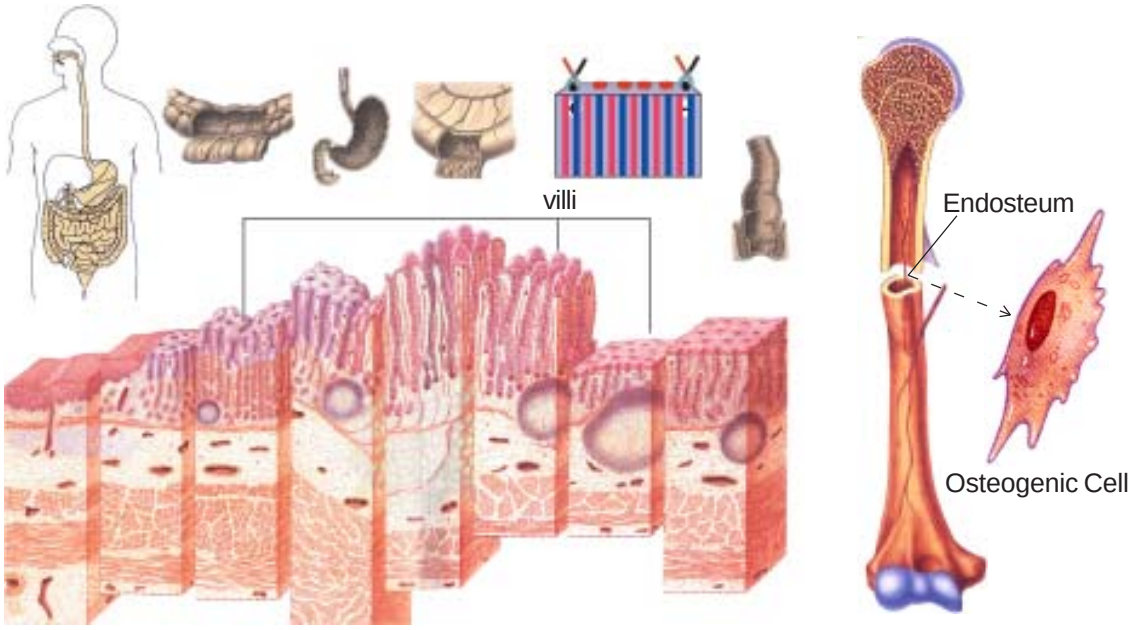
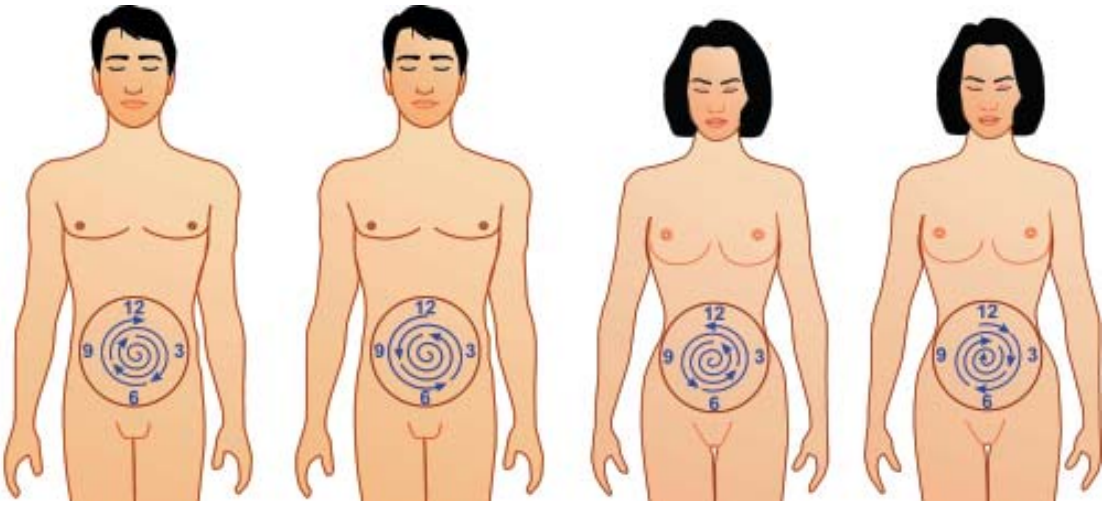


Fig. 1.35 *Energy in Lower Tan Tien and Bone Cells*

Note: The villi in the intestines act like cells in a car battery. Bones and cells also can store energy.

Gather, Collect and Store the Energy

At the end of a laughing meditation or practice, we want to collect the energy in the Lower Tan Tien so we follow a specific procedure. Men follow the energy outward as it spirals clockwise 36 times and next bring in the energy, spiraling counterclockwise 24 times. Women first spiral outward counterclockwise 36 times and then collect the energy, spiraling clockwise 24 times. In Tao practice, the gathering and storing of energy is very important. Energy can be stored for everyday use, for emergencies or used to protect the body from sickness.



a
Gathering

b
Collecting and Storing

c
Gathering

d
Collecting and Storing

Fig. 1.36 *a. Men collect the energy by spiraling outwardly from the navel 36 times clockwise.*
b. Then they spiral inwardly 24 times counterclockwise, ending at the navel.
c. Women collect the energy by spiraling outwardly from the navel 36 times counterclockwise.
d. Then they spiral inwardly 24 times clockwise, ending at the navel.

Boisterous Laughing

1. Place your hands over your lower Tan Tien and laugh loudly from your belly. Feel your laughter shake the sternum and the lower abdomen and reverberate deep inside your body. Continue laughing for five minutes.
2. Rest and place the tip of your tongue on your upper palate. This allows the energy in your head to drop down to your Tan Tien.
3. Guide any excess Chi in your body to the area behind your navel and in front of the kidneys.
4. Turn the eyes down to the lower abdomnen. Spiral counterclockwise like the earth spiral around the sun. Keep on spiraling until the area becomes warm and fill with Chi, and the Chi starts to move by itself up to the crown, then pushes down to the nose. Feel the nose open and breathe deep as the Chi starts to flow down to the tongue. This will help open the orbit.

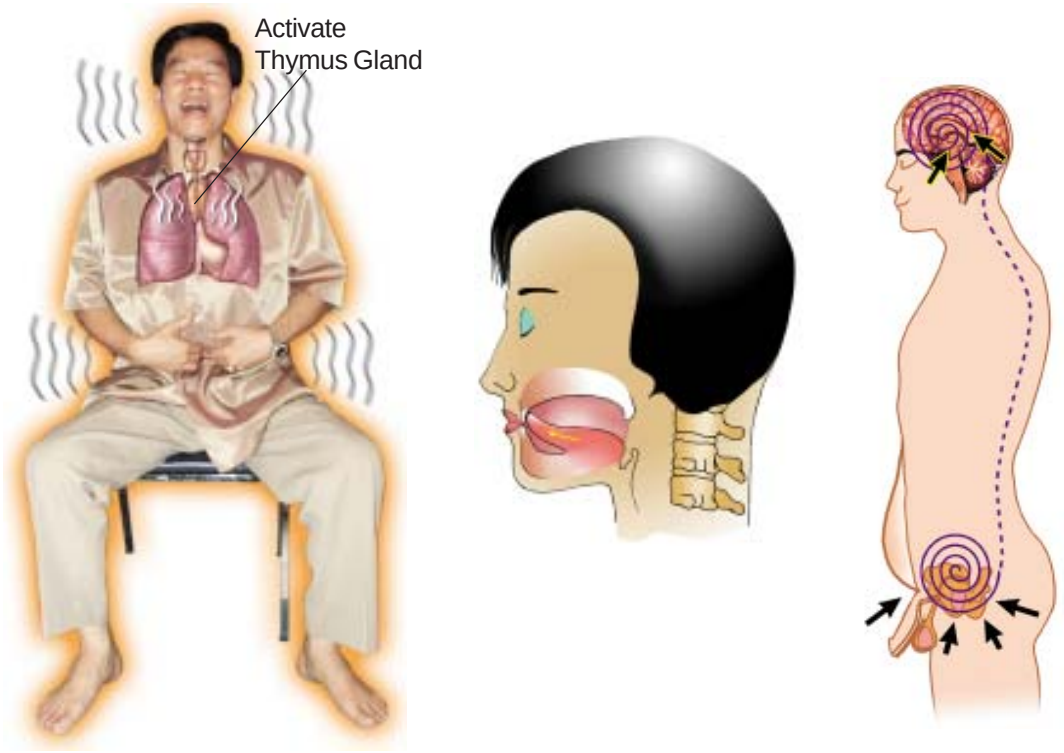


Fig. 1.37 *Laughter Shake*

5. Rest and enjoy the sensations of lightness and peacefulness. Feel the spaciousness inside your body and mind.

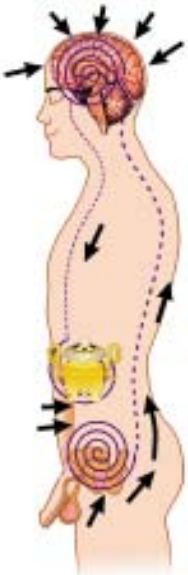


Fig. 1.38 *Turn mind and eyes down to lower abdomen.*

Giggling

Rest at the lower abdomen and start to laugh again.

1. Place your hands over your lower Tan Tien and giggle from your belly. Feel your laughter shake and reverberate throughout your body. Continue laughing for five minutes.
2. Rest and place the tip of your tongue on the upper palate. This allows the energy in your head to drop down to your Tan Tien.
3. Guide any excess Chi in your body to the area behind your navel and in front of the kidneys.
4. Turn the upper mind down.
5. Rest and enjoy the sensations of lightness and peacefulness. Feel the spaciousness inside your body and mind.

Fig. 1.39 *Giggle from your Belly.*

Silent Giggling

Hit the belly drum, feel it vibration inside.

1. Place your hands over your lower Tan Tien and giggle silently from your belly. Feel your laughter shake and reverberate throughout your body. Continue laughing for five minutes. Rest feel energy rises up to the crown.
2. Rest and place the tip of your tongue on the upper palate. This allows the energy in your head to drop down to your Tan Tien.
3. Guide any excess Chi in your body to the area behind your navel and in front of the kidneys.
4. Gather the excess energy in your body by spiraling the energy around the navel 36 times outward and 24 times inward. Men spiral clockwise outward and counterclockwise inward; women spiral counterclockwise outward and clockwise inward. You may use your hands to help you spiral. Feel as though your intestines are physically spiraling.
5. Rest and enjoy the sensations of lightness and peacefulness. Feel the spaciousness inside your body and mind.
6. Hold both hand near your heart and smile to the heart, breathe into the heart, and feel the heart calm. Feel peace, and feel that all three Tan Tien are alight together.

Fig. 1.40 *Silent Giggling*

After the Laughing

Sit comfortably near the edge of your chair with your feet flat on the floor. Relax your body while maintaining the alignment of your spine. Be aware of your star above your crown. Breathe from your lower abdomen. Smile to your heart and feel your heart grow soft. Move the energy from your heart down to your Lower Tan Tien. Feel your three minds rest in your Lower Tan Tien. Be aware of your Tan Tien filling with Chi.

1. Smile and breathe to connect with your personal star. Be aware of your mideyebrow in front of you and be aware of a good feeling (smiling face, a nice place, your favorite thing). Smile at this and breath into the mideyebrow and into the brain for 36 breaths.

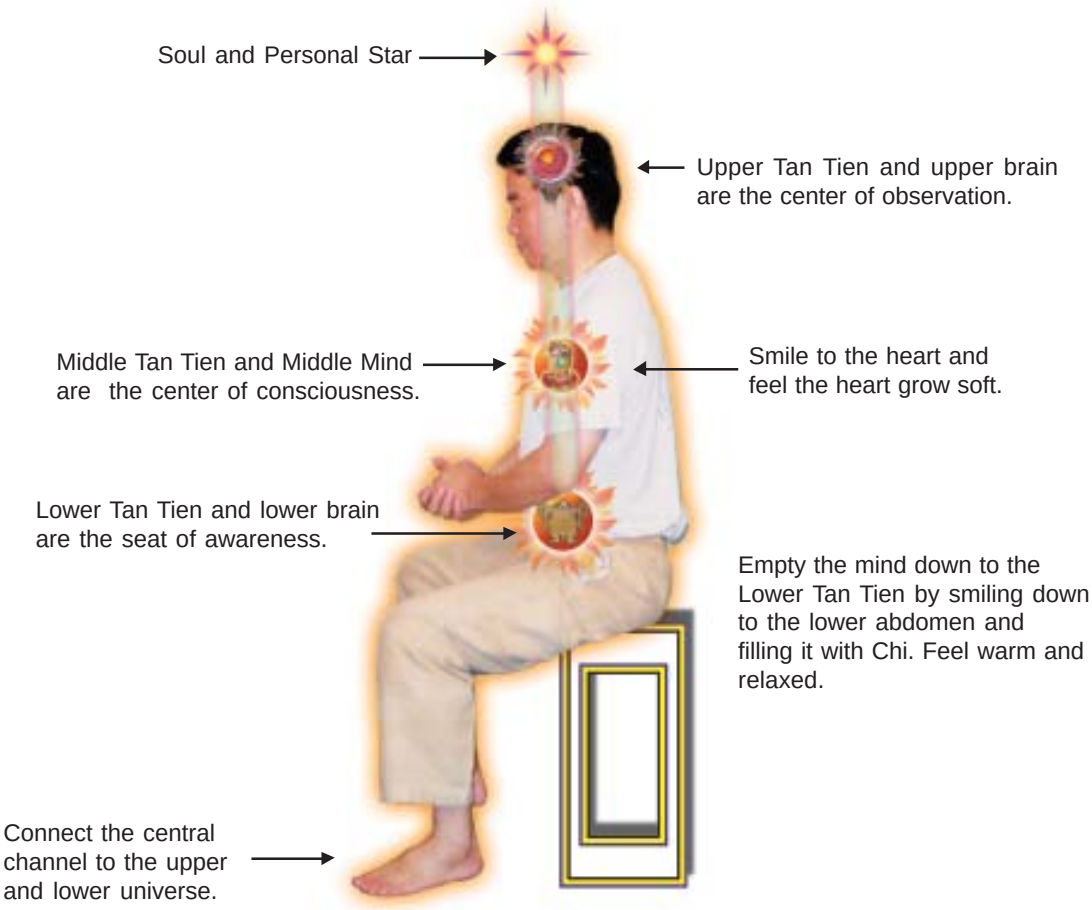


Fig. 1.41 *Empty your mind down to the Lower Tan Tien.*

Fig. 1.42 *Smile and breathe in the good feeling to connect with your personal star.*

2. Be aware of your heart, smile into the heart and make your heart feel soft. Breathe this good feeling into the mideyebrow and down into the heart. Smile and feel good, keep breathing for up to 36 breaths.

Fig. 1.43 *Breath down the good feeling into the brain and smile down to the heart and make your heart feel soft.*

3. Be aware of the Lower Tan Tien, breathe into this good feeling from the mideyebrow and down to the heart and to the Lower Tan Tien. Feel warm and good and again breathe into this feeling 36 times.

Fig. 1.44 *Breathe the good feeling down to Heart and to the Lower Tan Tien.*

Soles of the Feet, Sacrum and Bone Breathing

The sacrum controls all the bones and bone marrow in the body, so, by working on your sacrum, you work on all your bones.

Be aware of the soles of the feet and feel the soles breathing. Keep breathing and feel the center of the earth also pulsing and breathing.

1. Be aware of the soles of the feet breathing.Touch your sacrum and feel your sacral holes breathing and pulsating together with the soles of the feet.
2. Become aware of the bone marrow inside your sacrum.
3. Feel the Chi rise up from the earth to the soles, then up to the sacrum and activate all the vertebrae in your spine and up to the crown, pulsing and breathing.
4. Feel the Chi activate your temporal bones. Feel them pulsing and breathing; the temple bones connect to the third eye when activated.
5. Become aware of your third eye (between your eyes) and feel your third eye open. The third eye is a major opening for receiving cosmic energy.
6. Rest and enjoy the feeling of being both quiet in your body yet energized at the same time.

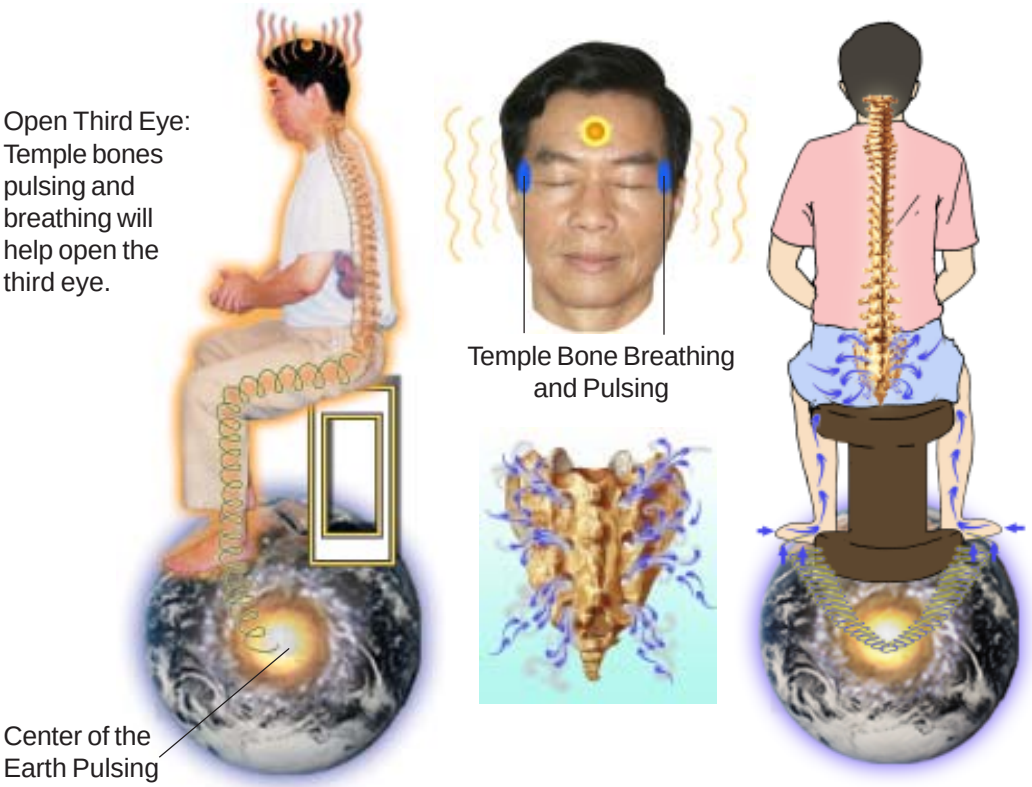


Fig. 1.45 *Soles of the Feet and Sacral Holes Breathing and Pulsating*

Practices of Taoism have three main goals:

1. Learning to heal, love and be kind to ourselves as we develop compassionate hearts and a wholeness of being.
2. Learning to help, heal and love others using the abundance of healing and loving energies we receive from the forces of nature, heaven and earth.
3. Learning about our Original Source and helping it to unfold within us.

Summary

1. Start with 3 ways laughing each 5 minutes. Rest and spin all the Chi. Move it up to the crown and open the nostrils.
2. Tongue up to palate and let Chi down to heart center and down to mind center.
3. Smile to the heart make it soft and calm breathe to the heart and feel the Three Tan Tien spiral.
4. Breathe into the mideyebrow and down to the heart, and finally down to the Lower Tan Tien.
5. Do sole and sacrum breathing, feel the sacrum activated and the energy raising up the spine to temple bones activating the temple bones and opening the third eye.

Chapter 2
Powers of Ten - Universe and the Human

We have included an extract from this wonderful publication due to its relevance to the Cosmic Orbit and the intrinsic and boundless relationship with the Tao. We have made a few adjustments to the annotations, in our attempt to clarify and enhance understanding from a slightly less scientific point of view.

'Powers of Ten' is a true masterpiece, an enlightened work of divine comprehension. It demonstrates natural progressions, transitions and the cyclic nature of things, leading us through the realms of infinity.

The 'outward' explosion merges with the 'inward' implosion, creating the inner eye of a non-vacuous nothingness.

"There is no need to go anywhere or do anything to know the ways of the world".

The macrocosm and the microcosm merge in Heavenly intercourse. ***Our cells and atoms have a very close relationship with that of the cosmos.***

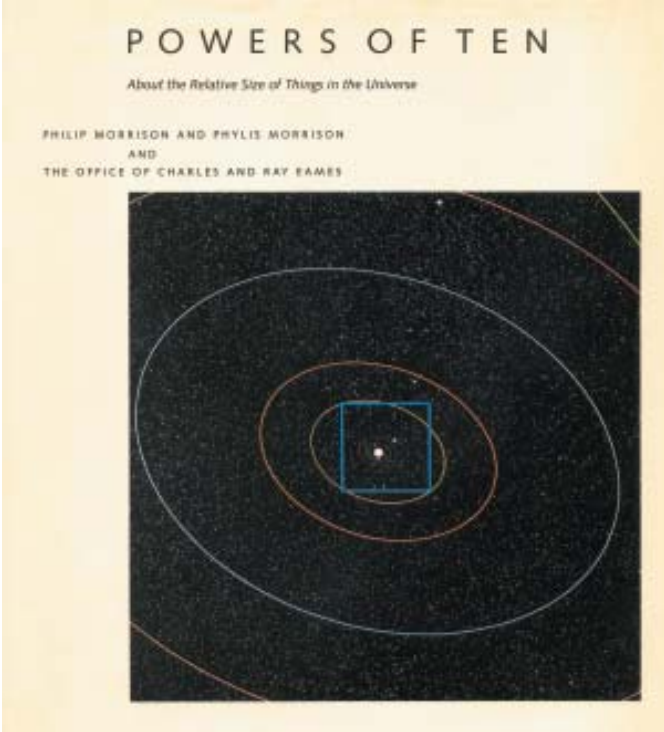


Fig. 2.1 *Book Cover of Powers of Ten*

These next pages are a series of pictures taken from the book called Powers of Ten. By Philip Morrison and Phylis Morrison. First it shows a picture of space very far away, 1 billion light years away and in each consecutive picture the distance is lowered by a factor of 10. Gradually we get to our galaxy, the Milky Way, and to the solar system in it. From there to Earth, to a specific location on Earth (Lake Michigan) and to two people lying on the shore of the beach of this lake. The pictures zoom in on the couple, a hand, the skin and as the zoom is increased, to a cell, the gene chromosomes, etc. We seem to get a remarkably similar picture as we zoom in on the microcosm and as we expand our vision to the macrocosm. At both extremes there is much emptiness or void. This is the ultimate source of things as the book firmly describes, “As above so below.” Our cells connect to the cosmos.

Fig. 2.2 *1 Billion Light-Years 10^{25} Meters*

Most of ‘space’ is empty. At this scale, the distribution of matter is roughly uniform; there is virtually no pattern or structure.

Most of ‘space’ looks as empty as this, the glow of distant Galaxies like clotted dust. This emptiness is normal. A tenfold larger view would show no new structure, no new void; the universe is roughly uniform at such dimensions. This view will dim slowly, for a few billion years at least, as the faint clusters drift farther apart.

Fig. 2.3 *100 Million Light-Years 10^{24} Meters*

We look toward our distant home in the Milky Way. But we see mostly one large intervening cluster of Galaxies, called the Virgo Cluster. Galaxies as a rule associate into orbiting clusters and groups. There is reason to believe that our Milky Way is itself an outpost of the big Virgo Cluster, responsive to its steady gravitational pull: part of a super cluster. Out there beyond the Milky Way is an enormous space volume nearly devoid of noticeable Galaxies.

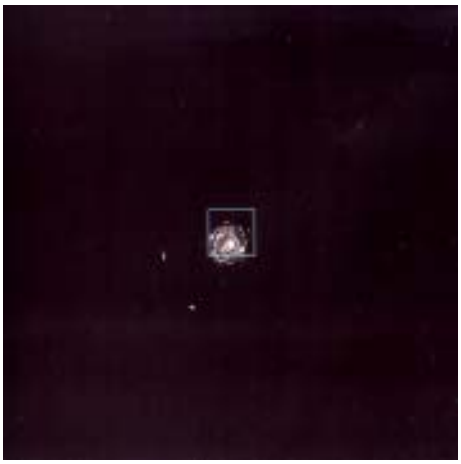


Fig. 2.4 *1 Million Light-Years 10^{22} Meters*

This flat circular disk is our own Galaxy (approximately 200 billion stars) the Milky Way, which adopts the form of a spiral. It travels in space with two satellite Galaxies, the irregular little Clouds of Magellan. We have only observed a few Galaxies that are larger than our own and smaller than Magellan Clouds.

Fig. 2.5 *1 Trillion Kilometers 10^{15} Meters*

Only the Sun is to be seen, against a background of fainter stars beyond. Once that was all we knew of the frontier of the Sun's system. We know now that a great cloud of icy comets orbits here slowly, though invisible in the weak sunlight. We see comets only as each year a few fall into the brighter regions near earth. There we catch sight of them, moving in the sky like temporary planets, the Sun's fires boiling out their long faint tails.

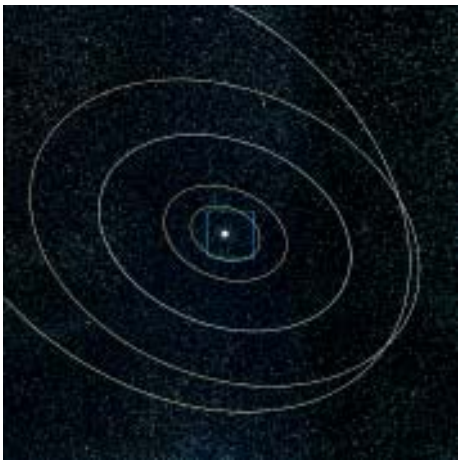


Fig. 2.6 *10 Billion Kilometers 10^{13} Meters*

The paths of the outer planets fill this picture. The strongly tilted orbit belongs to awry little Pluto. The four others are those of Neptune, Uranus, Saturn and Jupiter - with their many satellites. Between Jupiter's path and the Sun run the inner planets in their smaller orbits. The planets circulate counterclockwise here, (which we view at an angle) all nearly on the same plane. The planetary system, apart from Pluto, is as flat as a pancake.

Fig. 2.7 *100 Million Kilometers 10^{11} Meters*

Now we see the inner solar system. The green arc is traversed by planet Earth during some six weeks each September and October.

Fig. 2.8 *100 Thousand Kilometers 10^{8} Meters*

The whole earth appears, isolated, elegant, and fragile. We recognize our globe in open space, a spacecraft in orbit with no Atlas to support it. Its smooth, swift motion around the Sun carries it across such a square at this very hour.

Fig. 2.9 *100 Kilometers 10^5 Meters*

The metropolitan area of Chicago nestles at the south end of the lake. On a day like this, someone walking along the street might have looked up to a blue sky and never known that a camera plane was flying high above them, beyond their eyesight. The lattice visible among so many blurred streets is the mile-square grid of wide Chicago boulevards.

Fig. 2.10 *10 Meters 10^1 Meters*

Along the Chicago riverside, a man and a woman are at a picnic in the park. This picnic is the center of every picture viewed outward among the Galaxies.

Fig. 2.11 *1 Meter 1 Yard 10^0 Meters*

“Of all things, man is the measure,” Protagoras the Sophist proclaimed. His measurements were correct, as this image portrays a life scale of a man and his daily pleasures, including food for the mind, body and soul. The man rests from these activities, as life inside and all around him continues.

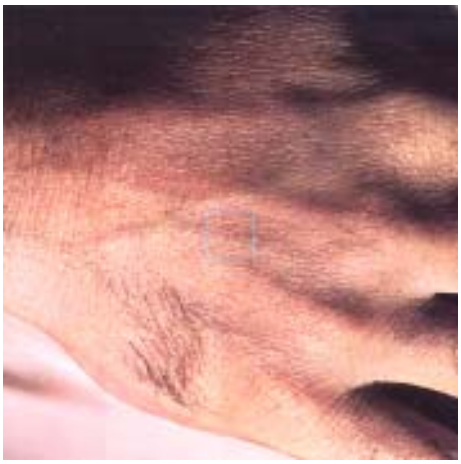


Fig. 2.12 *0.1 Meter 10 Centimeters 10^{-1}Meters*

The scale is now intimate: As you can see, this is an up close look at the back of the mans' hand, a little enlarged. This animate structure, is the creative force of all man's manifestation, making it possible to put thoughts into actions. It is the connecting pull between the mind and body communication. Every cell in this living object continually corresponds with all other cells in the entire being.

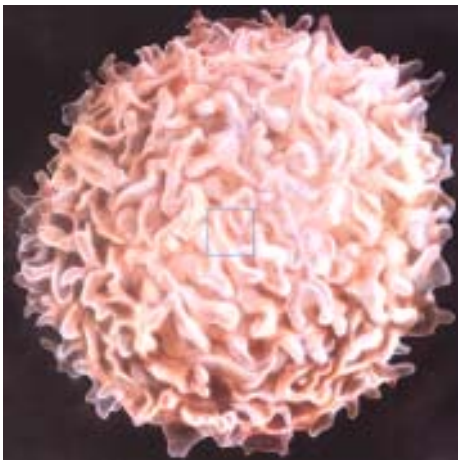


Fig. 2.13 *10 Microns 10^{-5} Meters*

We pass through the living skin to enter a capillary vessel, where blood oozes by. Most blood cells are the small, incomplete, short -lived disks that give red blood its color; this white cell, a lymphocyte, is a long-lived participant in the complex cellular and chemical strategy called the immune system, the body's defense against infection.

Fig. 2.14 *0.1 Micron 1 Thousand Angstroms 10^{-7} Meters*

Held safely inside the cell nucleus are enormously long molecules, the coils of DNA, cunningly spooled and folded within this tiny space. These vital instructions are carefully duplicated at every cell division. One such thread of DNA is stored in each of the forty-six chromosomes within the nucleus of every human cell.

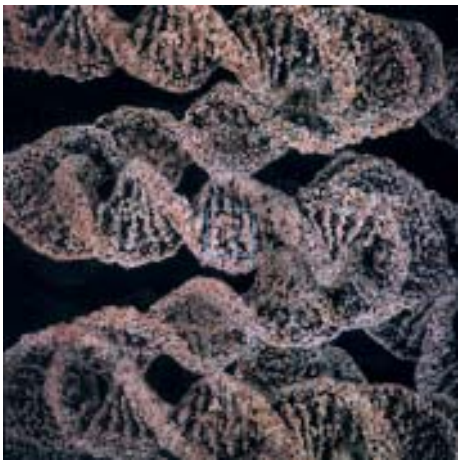


Fig. 2.15 *100 Angstroms 10^{-8} Meters*

In this close-up, the DNA is seen as a long twisted molecular ladder, the double helix. The individuality of the organism is held in the running sequence of the differing rungs. That chemical message is spelled out at great length in a molecular alphabet of four letters. One alphabet serves all life, but the tale retold in every cell of the body differs from individual to individual. The two rails of the ladder come apart during cell duplication, each to act as a template for one complete new copy of the ladder of rungs.

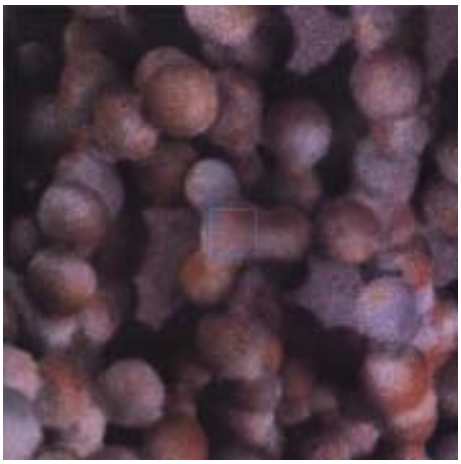


Fig. 2.16 *10 Angstroms 1 Nanometer 10^{-9} Meters*

These building blocks are molecular typography, the letters of the genetic message. It is their particular order that spells out the long text. The forms are chemical patterns, the ordinary stable structures of bound atoms, themselves indifferent to life. The central carbon atom is bonded to three visible hydrogen atoms (and to another atom that lies behind). A similar linkage might well be found abundantly among carbon and hydrogen atoms drifting in the cold thin clouds of our interstellar space.

Fig. 2.17 *1 Angstrom 10^{-10} Meters*

The quantum laws of atomic scale require a description of electron motion that is more subtle and less sequential than for the moving particles of ordinary experience. Accordingly, the dot texture shown does not map individual electrons; instead, it suggests the cloud of electrical charge the electrons paint out during their symmetrical but untraceable quantum pattern of motion. In that cloud the surface electrons are shared by the bonded atoms.

Fig. 2.18 *100 Fermis 10^{-14} Meters*

A transient view of the eternally dancing structure of stable carbon-12. Those neutrons and protons that join to form it are universal nuclear modules. Protons are found free as natural hydrogen; neutrons can be set free by energetic nuclear reaction as in the fission of uranium. Study of these particles as independent objects has revealed one more analogue to chemistry: They too react upon collisions at high enough energy to produce a host of new particles, mostly transient ones.

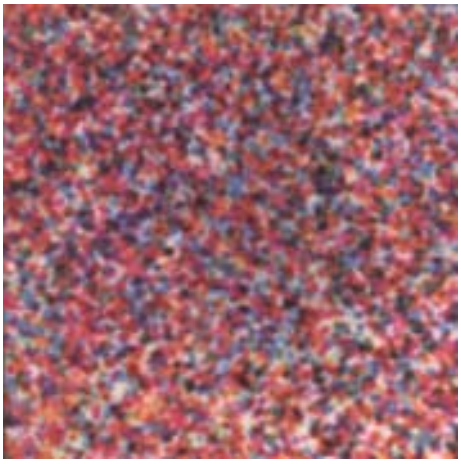


Fig. 2.19 *0.1 Fermi 10^{-16} Meters*

What will we see and what will we come to understand, when we enter into the next levels? When we expand the atom to be very big, we will be closer to understanding the intimate connection to the Universe.

As described in this book, the infinite worlds of the universe are so intimately connected with the finite worlds of the human being. Each universe spirals indefinitely into itself and then out again, creating space and energy. This energy is innumerable, and yet with the ability of man, we are able to measure this mystery with the powers of the mind and technology. With these powers multiplied, we have proven that we can begin to make the connections of our outside world, its properties of nature, to that of our own natural physical body. When it's altered, externally or internally, we affect our perceptions of these worlds and their relationship. It is imperative to understand the relationship of these intertwining universes; for we are the creators of harmony, balance and freedom or agony, destruction and war within these worlds.

It is only because of our continuous research into the unlimited possibilities of the internal and external universe, that we have discovered some of the unknown, intrinsic mystery of this life. We still have so much to unravel, and because of our natural ability to be just and balanced with these pulling forces, we are drawn to discover the ways in which the world turns.

One achieves Expansion of Awareness and Calmness through Observation of Consciousness in and Awareness out to the Universe

Through training, we can become aware of and activate the three minds: The upper brain mind is called the observer mind; the middle heart mind is called the conscious mind and the Lower Tan Tien mind is called the awareness mind. Awareness covers all that influences us, all information that reaches us. That information is filtered and only a tiny part becomes conscious. With the upper brain mind we can direct our consciousness and focus it.

We can expand our awareness very far into the universe. Accomplished Taoist masters were able to just sit in a room and expand their awareness like radar so that they could perceive what happened elsewhere in the universe. Awareness is non-selective. We use consciousness to tune into specific parts, like tuning to a specific radio or TV station. Working with this information happens in the middle brain. All in all, we expand our awareness outward and turn our consciousness inward.

Bring your three minds into one mind, expand your awareness like a radar, and let your conscious mind watch the monitor in your Tan Tien. Greater awareness, consciousness and calmness are achieved. A developed Tan Tien has its own set of senses. These are recognized as the sixth sense.

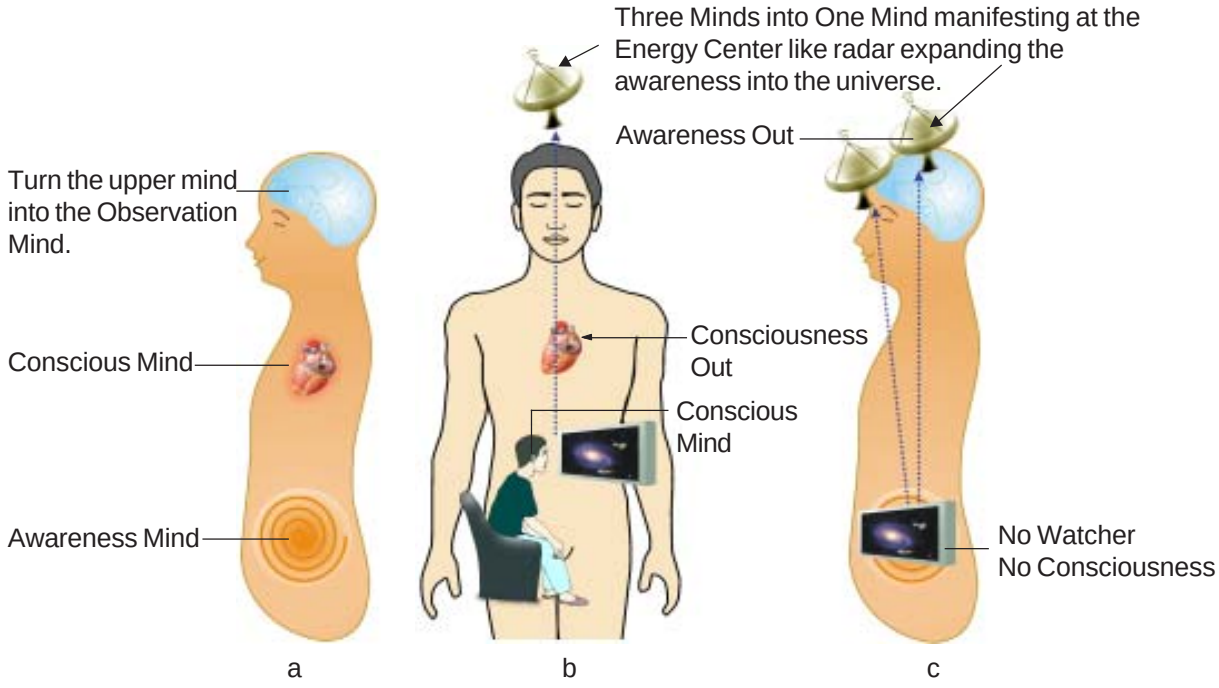


Fig. 2.20 *Consciousness is like a watcher, watching what the awareness picks up.*

When consciousness and awareness are both out, it is like having good radar and a good monitor but no one to watch them. It is better to turn your consciousness in and expand your awareness outwards. If you turn your mind out, and your awareness out, you become a spiritual slave. People can tell such people to do anything and they will do it. They have no inner observation or self-consciousness.

We need to be conscious of what we 'pick up'. We turn our consciousness in and expand our awareness out. If you turn your heart, senses, mind and awareness out, there is nothing left on the inside and you have left yourself unrooted. You will be more inclined to, and influenced by the thoughts and energies of others because you have allowed yourself to be tainted by mass emotion. Roots and anchors exist to keep us from straying too far from home; the self is the center of the heart and center of the body is the Lower Tan Tien. Some believe enlightenment can be purchased from the supermarket, others that it can be hitched onto like a tour bus. Some wait for reincarnations and second comings, divine intervention and alien interception. Whatever your beliefs, the most important thing is to check and know that they are really yours. Imbalance on a small or grand scale may lie ahead if one is not careful. The Tao believes that we can all become immortal, but that we have to work towards this end by way of natural and constant progression. The time it takes to prepare is usually about the same time it takes to live this mortal existence.

Human Energy has the same Quality as the Universal Energy.

We are really children of the universe. We are composed of the same elements as one finds in space and our internal structures can be found externally as well.

The universe has all the components to create life. We have the same structure as the cosmic particles. The universe is filled with nitrogen, protons and electro-magnetic power, which are the same as our energy, bio-electro-magnetic power.

Fig. 2.21 *We are the Universal Children.*

God is Too Big to Fit in One Religion

We have the power to create positive energy patterns in the universe.

The early Taoist masters discovered that they could send specific patterns of energy, for example good or bad emotions, into the universe. These patterns would multiply there and gain in strength before they returned to the sender or to wherever the sender wanted them to go. This process involved first “lowering” the upper and the middle mind into the lower mind; next they would use the lower mind to send the chosen pattern out into the universe. They would spin the Tan Tien and be aware of the spin far in the universe. That is enough to establish the contact and get the process going.

When more people send the same patterns into the universe that pattern will attain some independent existence. An example of this is how religions are formed. Some people think that all of reality comes about this way.

The founders of the Tao system found that when they lowered the upper mind, they awakened the mind of consciousness and awareness. When they calmed down and turned their consciousness in and their awareness out to the universe, they discovered the center of the universe and the spiral force. They also discovered that when energy and the mind’s thinking pattern were sent up to the universe, they would multiply. When more people do the same thing, and have the same thoughts as that of the universe, the energy pattern will multiply.

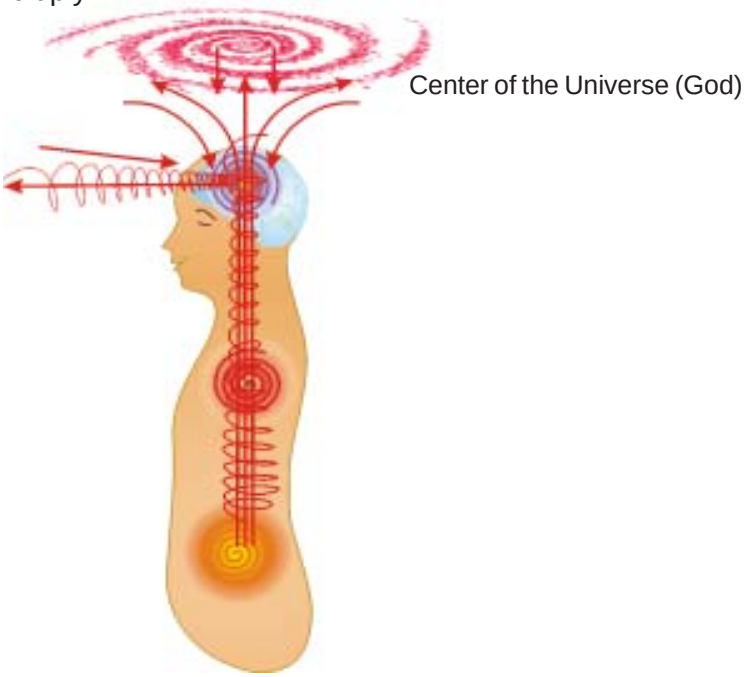


Fig. 2.22 *Spreading positively through the universe by generating a pattern within oneself. God is too big to fit in one religion.*

Primordial Force

Bring your mind down to the Tan Tien and connect to the cosmos.

Like “the Power of Ten” we can bring our attention to the Lower Tan Tien. This can give us another vast universe. So our inner universe can connect with the outside universe. When we are back in the primordial force, similar to being back in the womb, we are fed by the universe.

Bring the senses down to the Tan Tien, sense the dark, deep and vast inner Universe within us. Smile and drop down, let go and sense our inner universe as being very vast, very deep and very dark. Feel the vastness of the outer Universe within us, we are back to our primordial force. Just keep on smiling deeper and deeper down into the body.

Fig.2.23 *Be immersed in the Dark Empty Space of your inner Universe.*

1. Smile into you own vast empty space of the cosmos, the void, fill the space with good feeling.

Fig. 2.24 *1 Billion Light-Years 10^{25} Meters. Most of 'space' is empty. At this scale, the distribution of matter is roughly uniform; there is virtually no pattern or structure, the same as our own universe.*

2. Inhale the void (filled with goodness) into the mideyebrow and down to the heart and the lower Tan Tien. Continue breathing for 36 times.

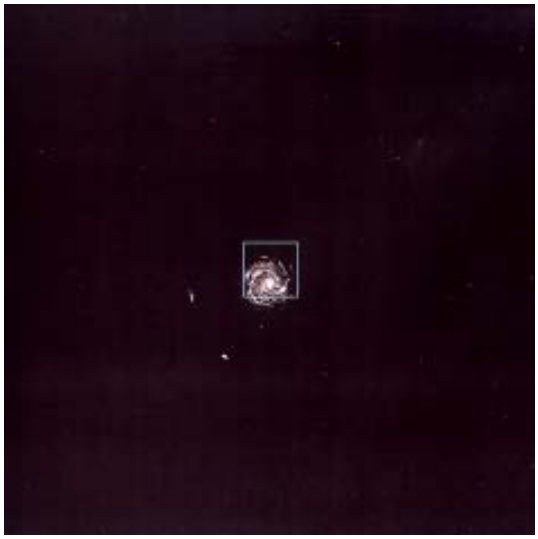


Fig. 2.25 *Sink deep in the your own empty space and look for a dot of light.*

3. Turn the three minds into one mind and down to the lower Tan Tien and sense the dark, deep and vast inner Universe within us.
4. Smile and drop down, let go and sense our inner Universe as being very vast, very deep and very dark. Feel the vastness of the outer Universe within us, we are back to our primordial force. Just keep on smiling deeper and deeper down in the body.
5. Once you sink deep enough to the dark, empty vastness, you can begin to see the dot of light, as you enter into the 'Mystery Gate.' You are actually entering into your own cell and into the outer genes and DNA. The spaces between each cell are very big and when we enlarge DNA to imitate the star, the space between mirrors that of the cosmos.

0.1 Micron 1 Thousand Angstroms 10^{-7} Meters 1 Angstrom 10^{-10} Meters

(In our atom we are entering into our DNA code)

a b

Fig. 2.26 *a. Held safely inside the cell nucleus are enormously long molecules, the coils of DNA. b. Human atom electron motion dot texture shown does not map individual electrons; the cloud of electrical charges the electrons paint out during their symmetrical but untraceable quantum pattern of motion.*

6. Once you get in touch with your own cosmos (Universe), you will then have the ability to connect with the outer cosmos.
7. Keep smiling and sinking down, turning the consciousness inward and expand the awareness outward to connect with the vast cosmos.
8. There are cosmic forces, cosmic wisdom that we have the ability to tune into and connect with. The cosmic force will turn into Chi, and heal and strengthen the body, turning this force into spiritual food.
9. The Pakua has a very similar structure to that of our DNA.

100 Fermis 10^{-14} Meters

Fig. 2.27 *A transient view of the eternally dancing structure of stable carbon-12. Those neutrons and protons that join to form it are universal nuclear modules.*

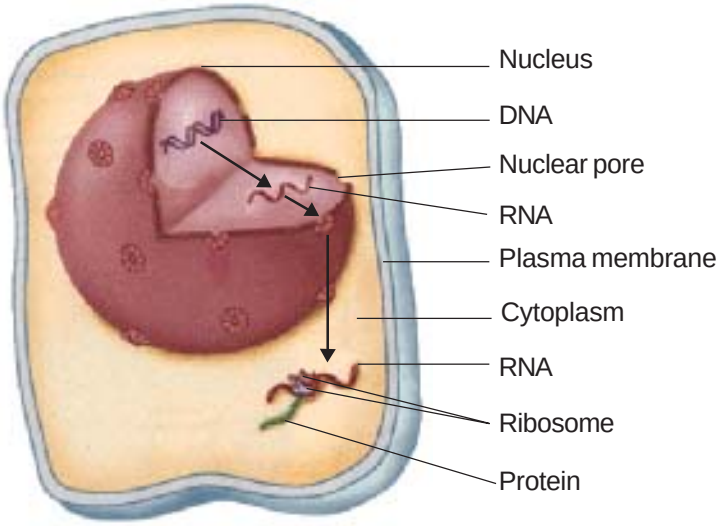


Fig. 2.28 *When the frequency is 8Hz, transcription occurs in the nucleus, which the translation takes place in the cytoplasm.*

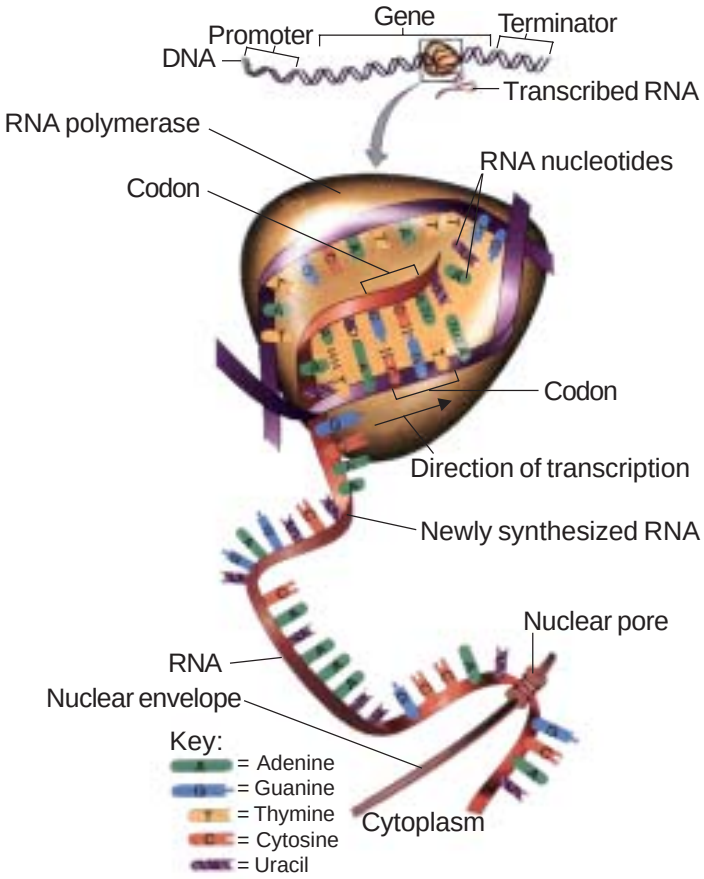


Fig. 2.29 *During transcription, the genetic information in DNA is copied to RNA which in the Tao is known as cupping or self-intercourse.*

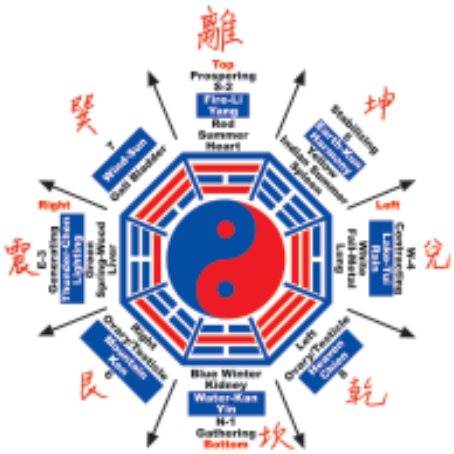


Fig. 2.30 *Pa Kua 64 Hexagrams and Eight Connecting Lines are close connection to the DNA & RNA.*

Chapter 3
Preliminary Practices for Cosmic Orbit

Spinal Cord Breathing

Spinal Cord Breathing enlivens the spine, promoting range of motion and flexibility. It activates the cranial sacral pump, enhancing the flow of cerebral spinal fluid. It also helps relax the back muscles so that meditation is comfortable for long periods of time. Spinal Cord Breathing can be practiced sitting or standing. Find a suitable chair and relax, keeping the spine comfortably straight without allowing it to touch the back of the chair.

1. Begin by exhaling and feeling yourself relax.
2. Inhale, and gently tilt the sacrum back and press the chin toward the neck. Open the chest and expand the rib cage to activate the adrenal and thymus glands. Simultaneously pull back the shoulders and fists (which are held near the shoulders), and pull the scapulae together as you press the neck back and lightly clench the teeth. This activates the cranial pump. Do this spinal cord breathing 36 times.

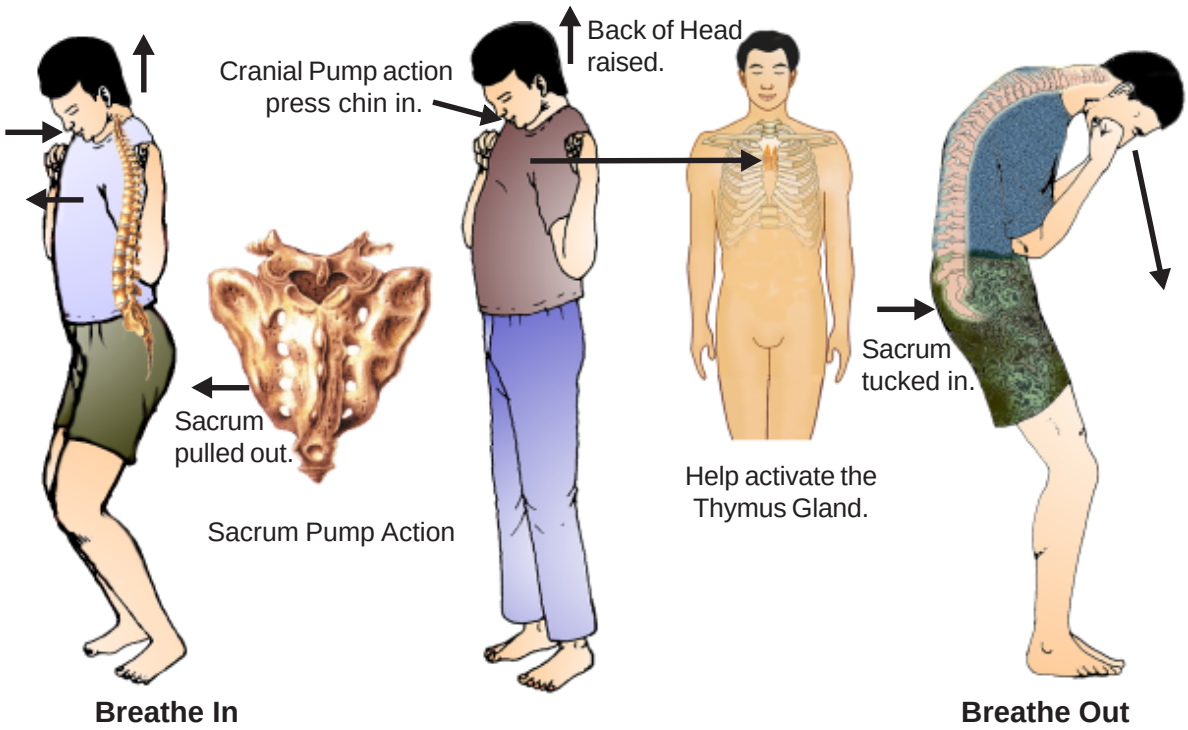


Fig. 3.1 *Movements of Spinal Cord Breathing*

Step 1: Wagging the Tail, Spinal Rock

1. Sit down and smile to the spine. Gently start rocking the spine left and right, like a dog wagging the tail. Feel each vertebra from the lumbar working up through the thoracic and then to the cervical vertebrae. This opens the spine in a lateral direction.

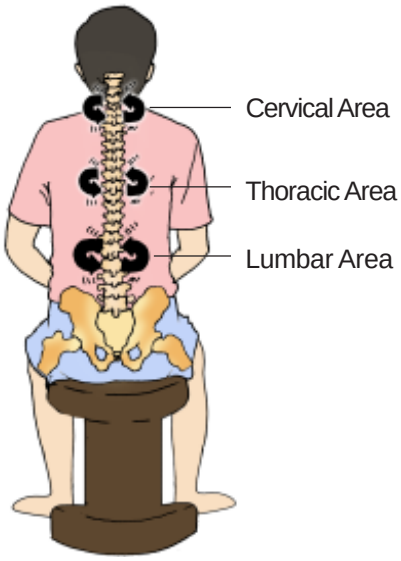


Fig. 3.2 *Begin to rock the spine and smile into organs (lumbar to cervical).*

2. When rocking this way, the whole spine has a vibration and the energy can move throughout the entire back, especially in conjunction with the spinal cord breathing exercise. The spinal cord breathing activates the three pumps: sacrum, Door of Life and the cranial pump. When the lumbar and the Door of Life are open, the fluid can flow and there are sufficient nutrients to feed back to the brain.

Fig. 3.3 *'Riding the Horse' rock lumbar to sacrum, activate pump.*

Step 2: Riding the Horse

3. Rocking the sacrum and the lumbar back and forth on the sitting bones will activate the sacral pump. This will help create good movement of the bones, and openness through the spine. It is an internal movement to enhance the flow of Chi. So when you rock like this throughout the meditation, it creates a vibration rising up the spine from the base of the coccyx through the lower lumbar area and up the cranial base.

Fig. 3.4 *Rock the whole spine and feel energy vibration activate 3 pumps.*

Step 3: Rolling the abdomen helps to eliminate trapped gas.

Hold the breath, roll till the abdomen until it is totally empty. Roll until you feel empty. This creates suction, a vacuum like sensation to energize the internal organs. Start slow until making sure you feel comfortable.

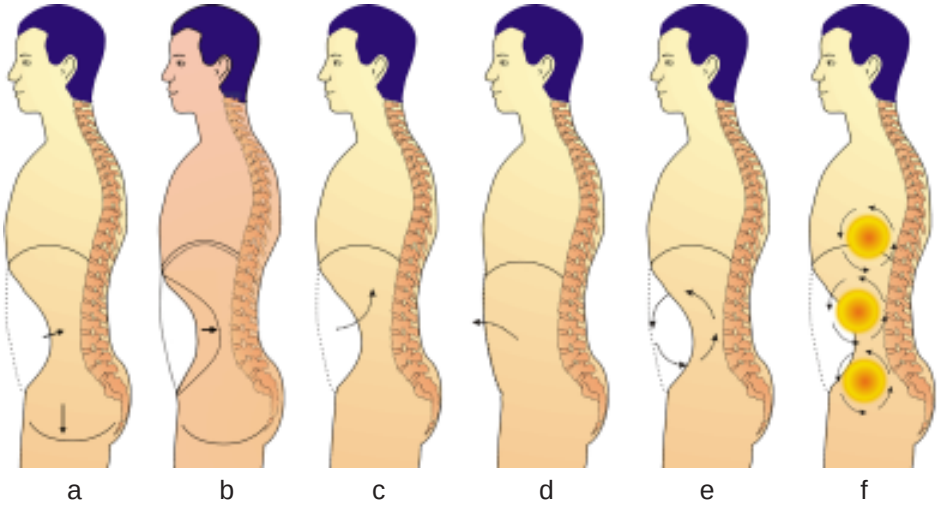


Fig. 3.5 *a. Hold the breath. b. Suck in the abdomen and pull it in more and more. c.d. Pull up the abdominal muscles and roll to the top of the abdomen and push out. e. Push out the abdominal muscles and pull down again. f. Roll the muscles back again.*

Step 4: Use the vacuum within to gasp air into the intestines.

When one is totally out of breath he/she gasps in air. This has a strong cleansing effect on the whole abdominal area. Next, breathe out with the lung sound, while the hands move down in front of the body with the palms facing down.

When out of breath, let the suction from the throat and abdomen within suck the air in, all the way down to the large intestine. This adds Chi into the whole digestive tract. Raise the hands up with palms face down and exhale with the Lungs Sound - SSSSSSSSS. The fresh air will push out the trapped gas and one may even belch.

In the beginning, if you have blockages in the small or large intestine, try to clean the intestine and take more natural fiber. The air will help the composting in the digestive tract and help to eliminate toxins. Do this for 3 to 6 times and the saliva will begin to be produced, then proceed to the next step.

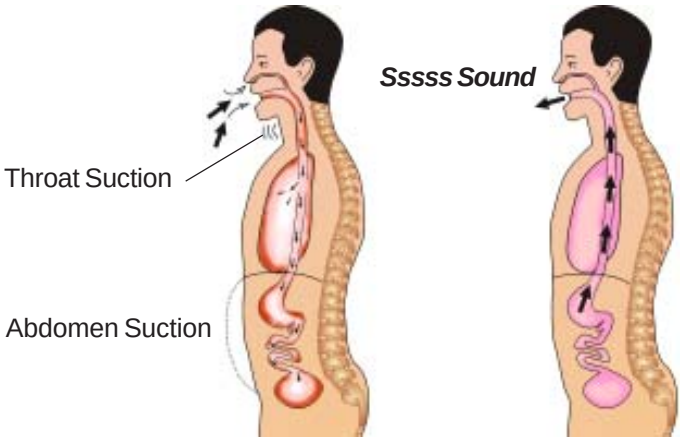


Fig. 3.6 *Gasp air into the intestines.*

Empty Force Practice

Navel Touch the Spine

In Empty Force Breathing one flattens the stomach against the spine and then with the fingers in the stomach one massages in five areas with the abdomen pulled in. The Empty Force helps exercise the organs and is a major rejuvenation practice. The Empty Force breathing will help to increase blood circulation and Chi flow move to the abdominal area.

Create an Abdominal Cavity and Vacuum in the Stomach.

Inhale and exhale. Exhale and flatten the abdomen until you feel as if the navel is touching the spine. Inhale again, and flatten down the abdomen again.

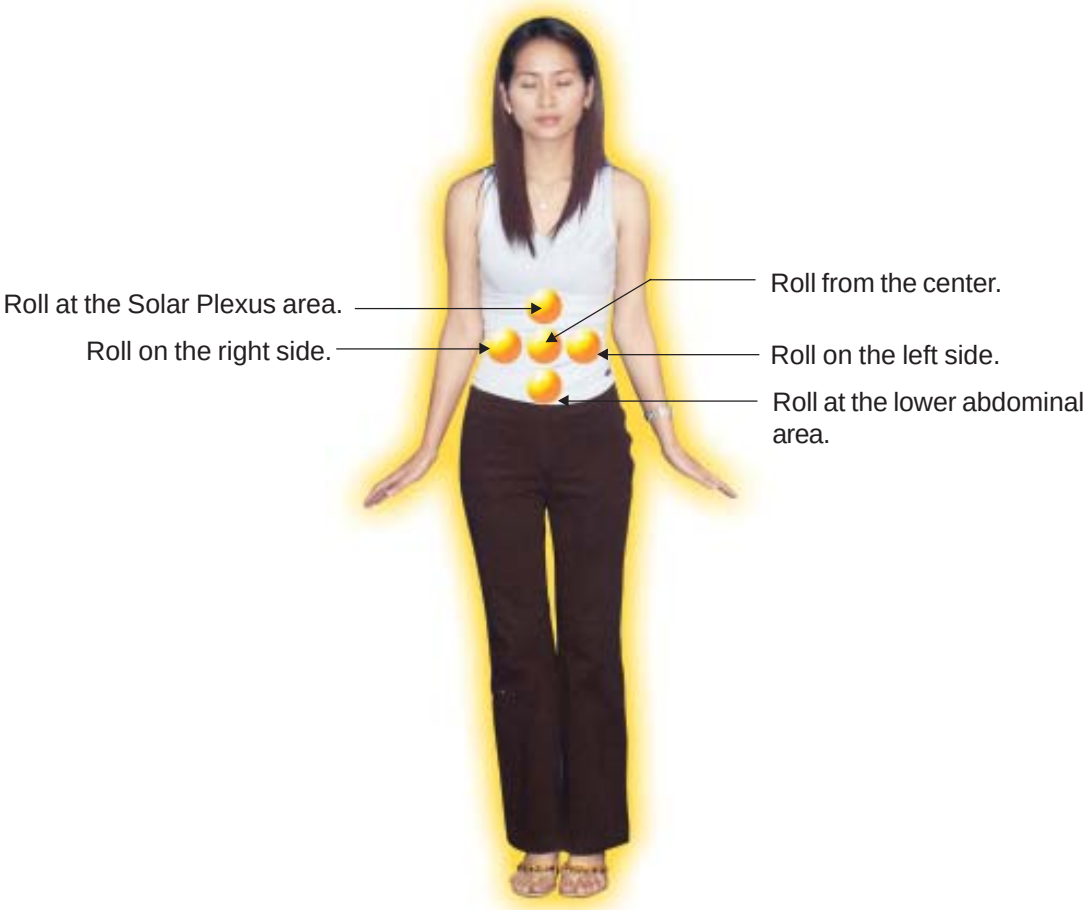


Fig. 3.7 *Empty Force*

Saliva and Chi Mixing

To the Taoists, saliva is the fluid of life. It is the essential fluid for the body, moistening the organs and lubricating all the joints in the body. Saliva will also secrete a major longevity hormone and proper daily chewing will help mix the air with saliva and food. Taoist say, “Eat your liquid and drink your food.” This is because food chewed to liquid will mix well with a lot of saliva and activate enzymes for optimal digestion.

Utilizing the Saliva and Chi

- Mix Saliva with Cosmic Chi
- Mix Chi with Jing (Sexual Chi) as taught in Healing Love

Step 1: Mix saliva and air and with the cosmic chi.

1. Chew the saliva and mix the air and oxygen into it by circling the tongue in the mouth.
   a. Suck the saliva in the mouth to increase the saliva back and forth.
   b. Move the tongue to massage the gums. Knock the teeth to strengthen the bones and activate the saliva gland. Right side 9 times, middle 9 times, left side 9 times.

a. Suck the saliva back and forth

b. Move the tongue to massage the gums.

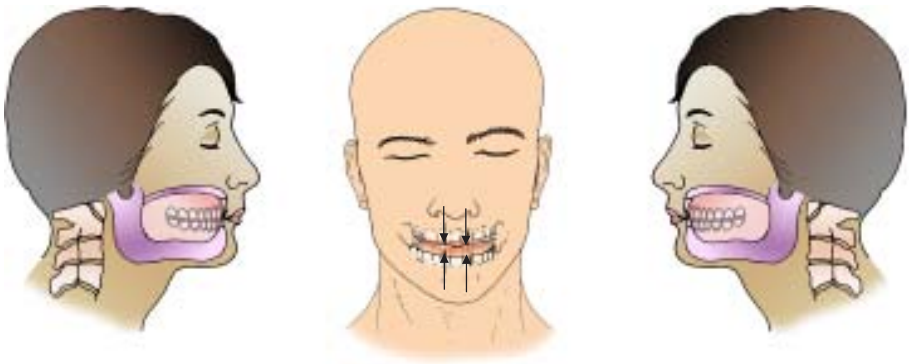


Fig. 3.8 *Knock Right Side 9 times, Middle 9 times and Left Side 9 times.*

2. Open your palms to gather the cosmic Chi and smile to the Cosmos.
3. Activate the throat with your mouth closed and let the abdomen serve as a sucking machine. Draw the Cosmic Chi through the mid-eyebrow to the nose, into the mouth, and mix with the saliva. The saliva is a powerful force mixed with the cosmic energy.

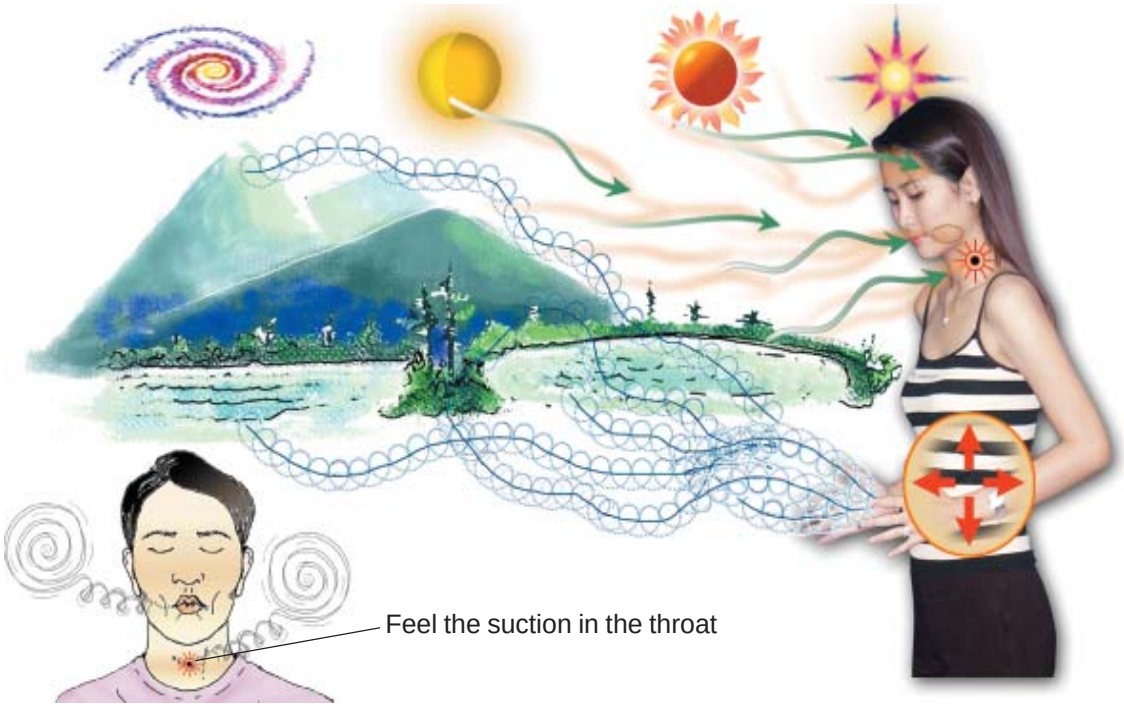
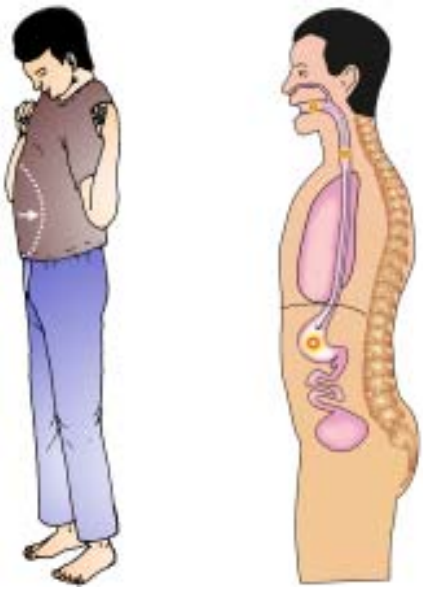


Fig. 3.9 *Close mouth and feel the suction in the throat and abdomen draw the cosmic Chi in.*

Step 2: Swallow with force to push the combined energy to the navel.

Swallow the saliva mixed with Chi forcefully down the throat. The saliva is really sucked into the stomach by moving the flattened stomach out, creating a vacuum and pulling down the saliva.

Exhale and flatten the stomach, lower and tighten the neck and hold the breath as long as you can.



Tighten the neck, swallow the saliva with force 3 times, pushing it down to the navel.

Fig. 3.10 *Saliva Mixed*

Step 3: Let the combined energy help heal your body.

Cover the navel and feel the saliva turn into Chi. Feel the saliva turn into fuel glowing inside your navel. Breathe in, breathe out. Feel the lower abdomen warm.

Use both palms to roll your Chi ball and feel the Chi balls in the Tan Tien rolling and turn the saliva into instance Chi.

Healing Effects of the Practice:

1) Assists in elimination of germs
2) Helps moisturize the internal organs and joints.
3) Increase oxygen available to the body
4) May enhance hormonal balance
5) Helps prevent tooth decay

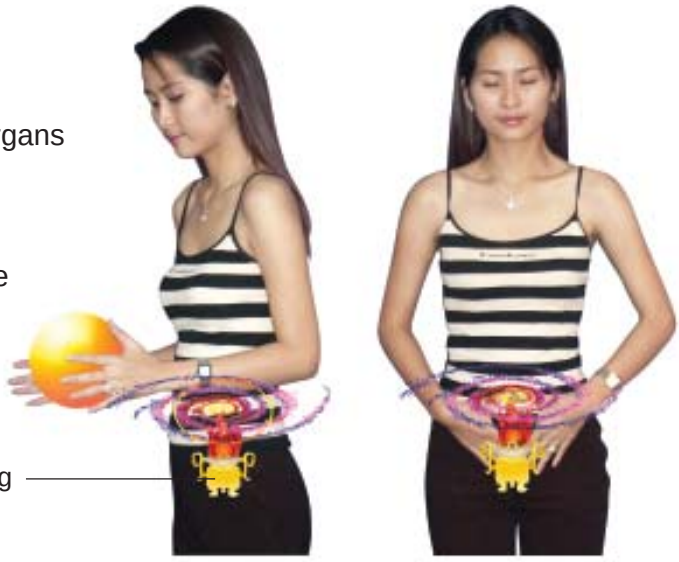


Fig. 3.11 *With the stove burning, saliva turns into Chi.*

Strengthen and Lengthen the Tendons by working with the Tongue and the Sexual Organs.

The tongue is connected to all the tendons and especially to the heart, arteries and veins. Exercising the tongue improves the flexibility of the tendons in the body.

The sexual organs are connected to all the tendons in the back. When the sexual organ becomes shorter, it will cause the tendons in the back to be shorter, and will cause the back to be tight and tense.

Stretching the Tongue

a. Exhale and flatten down the abdomen until it feels like the navel touches the spine. Hold the breath out as long as you can.
b. Exhaling more and spitting the tongue out with the rest of the air.
c. Hold your breath and stretch out your tongue as much as you can to the left, top, right, and bottom for 6 rounds. Reverse the direction. Feel the perineum is moving in connection with the tongue. The eyes also move with the tongue.
When you are out of breath, gasp the air in. The extra oxygen you gasp into the digestive tract will be rushed to the tongue and will strengthen the tongue and the tendons.

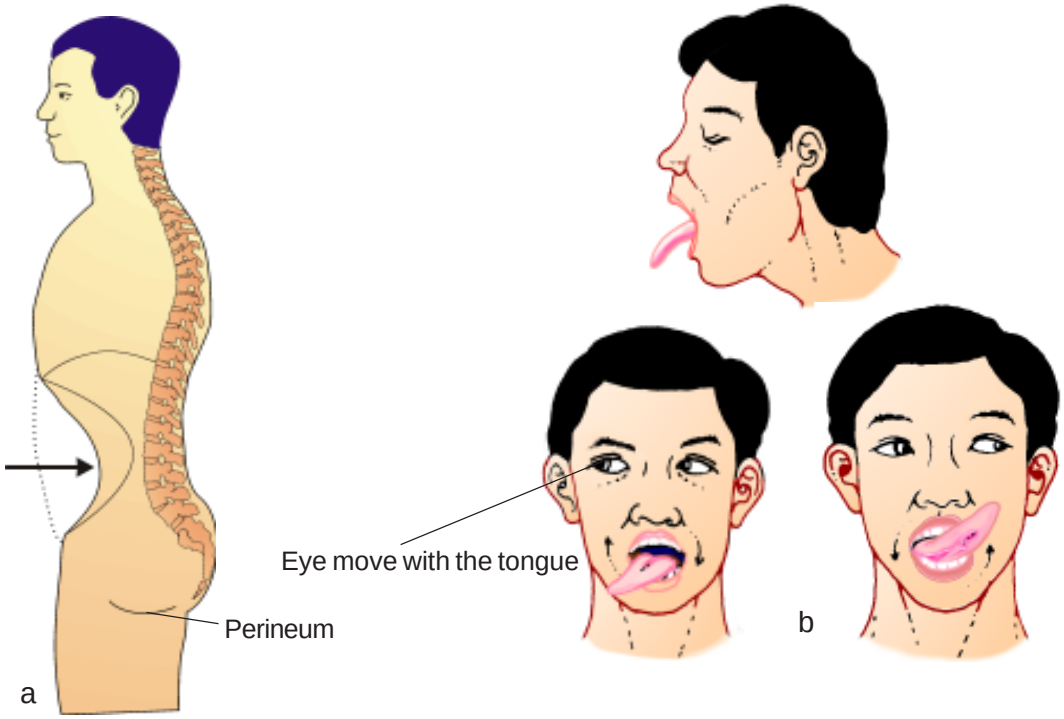


Fig. 3.12 *a. Navel touches the spine. b. Stretching the tongue.*

Stretch the Sexual Organs - Male

Inhale, exhale and flatten down the abdomen. Bring the navel toward the spine.

Flatten the abdomen and stick the tongue out. Men use the thumb and index finger to grip the head of the penis. Pull the penis and thrust the tongue out more at the same time pull to right, left, front, back and middle. With each pull, suck the flattened abdomen up towards the spine and rib cage. Release and repeat. Keep on pulling until you are out of breath. Then gasp air into the intestines. When you exhale again, do the S-s-s sound until you are out of breath. The Chi will rush to strengthen the sexual organ. Do this with 3 to 6 breaths. Use the thumb and index fingers to grip the scrotum and do the same exercise 3 to 6 times.

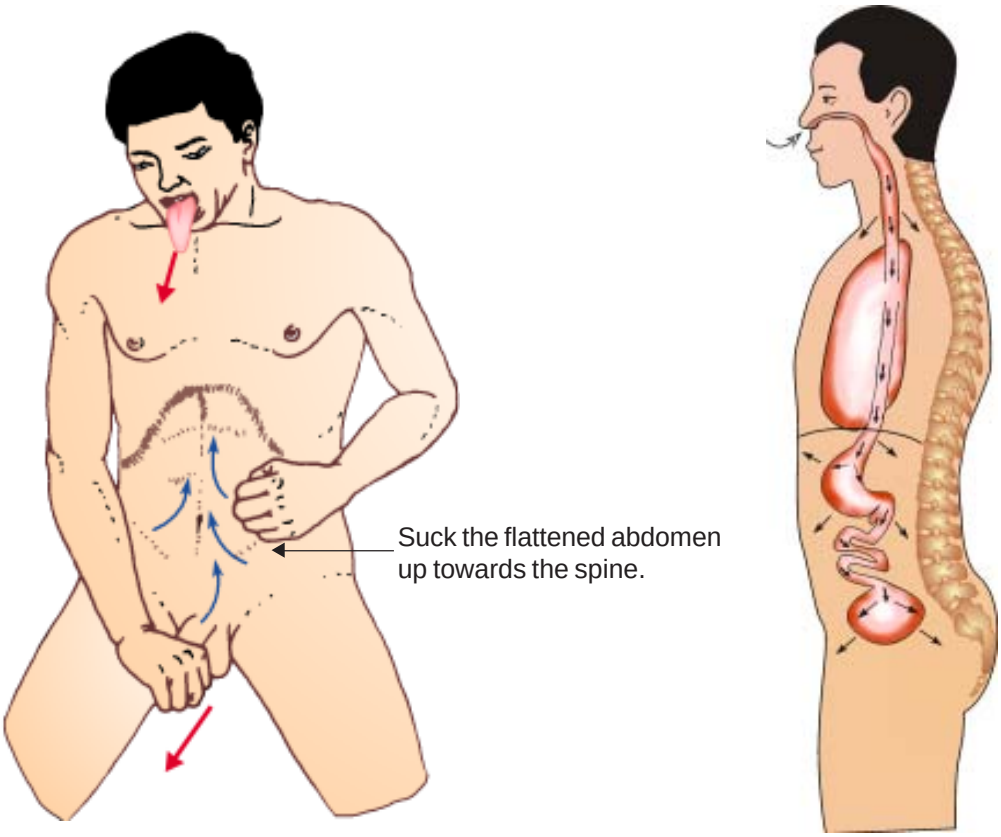


Fig. 3.13 *Stretch the Sexual Organs; Suck in and flatten the abdomen up towards the spine.*

Stretch the Sexual Organs - Female

Exhale and flatten the abdomen. Inhale again.

When you flatten the abdomen, stick the tongue out. Women use the thumb and index finger to grip the thread that is connected to the egg inside while doing the Jade Egg Exercise from the *Bone Marrow Nei Kung* and *Sexual Reflexology* book by Master Chia. Pull the thread and thrust the tongue out more at the same time. With each pull, suck the flattened abdomen up towards the rib cage. Release and repeat.

Keep on pulling until you are out of breath. Then gasp air into the intestines.

When you exhale again, do the S-s-s sound until you are out of breath. The Chi will rush to strengthen the sexual organ.

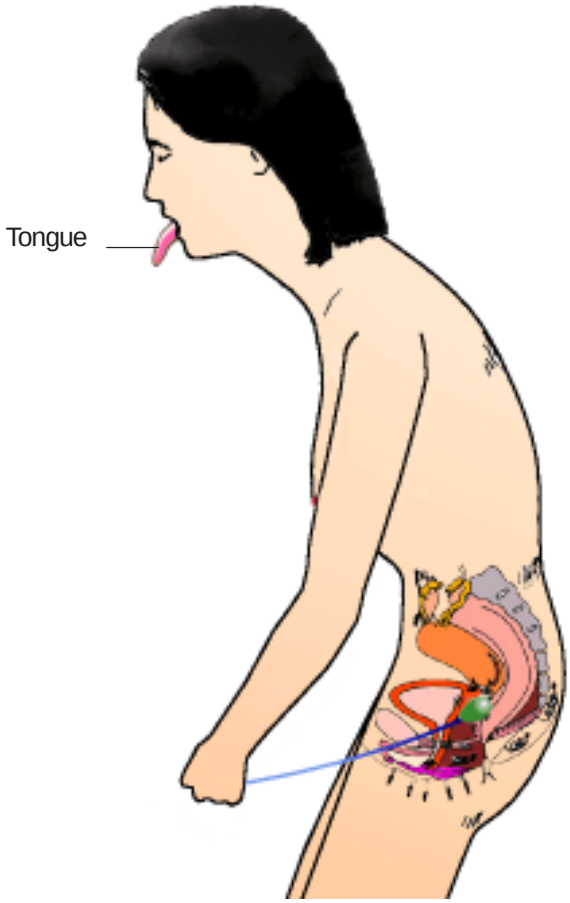


Fig. 3.14 *Contract to the egg inside sexual organs, suck in the abdomen and feel it pull up the sexual organ.*

Chapter 4
Cosmic Healing Chi Kung

Opening the Three Tan Tiens to the Six Directions

Introduction

Opening the Three Tan Tiens is a Chi Kung meditation that strengthens our connection to the universe, opening us up to the primordial force of the Cosmos and the energy within Nature. We are dynamically connected to the infinite. "As above, so below" is an echo of wisdom heard from sages and mystics throughout the ages. When we can connect to and absorb the energy that surrounds us, we are able to tap into the many splendors of the universe.

We exist because of the unique combination of the forces that are around and within us. The two main forces are electricity and magnetism. 'Bio-electro magnetism' is the western term for life force, and what the Tao refers to as Chi. For the last 5000 years, the Taoists have utilized this bio-electromagnetic energy to enhance their way of life and establish a relationship with the universe. Bio signifies life, electro refers to the universal energies (yang) of the stars and planets and the magnetic force refers to the earth force (yin) or gravitational force present on all planets and stars. As we align ourselves with these forces, we become a conduit through which we can absorb and digest these energies through the body, mind and spirit, establishing a direct connection with the universe. The Taoists recognized this connection and created the Chi Kung form of 'Opening the Three Tan Tiens to the Six Directions' to enhance our relationship to and our understanding of this connection.

Humans normally access bio-electromagnetic energy through food and air. Plants take the universal energies of the sun and the magnetic energies of the earth and digest and transform them, thereby making these energies available to all living beings. Taoists believe that the food sources with the purest form of energy are the green leafy vegetables. These have taken sunlight directly into their cells. Rather than waiting until the energy in the universe is processed through plants, the Taoist goes directly to the source of this primordial energy. Through Chi Kung and meditation, the Taoists direct the energy of the universe precisely. Opening the Three Tan Tiens is a meditation Chi Kung exercise that directly taps into the source of energy all around us.

The Tao views human beings as lamps filled with fuel. Many people burn this fuel at very high intensity, without ever taking the time to replenish the oil in the lamp. Alcohol, drugs, tobacco and promiscuity all quicken the depletion of this fuel. The Taoist exercises

strive to continually refuel the energy within. The Taoist recognizes that we are limited in our nature as human beings unless we connect the sources of energy within the universe, thereby becoming infinite. So, within the limitations of our human nature, we constantly fill ourselves with the unlimited abundance of energy around us.

Through their internal quest, the Taoists discovered a doorway to the universe. The more we open our internal energy, the more we are capable of connecting to the forces of energy around us.

Human beings have amazing potential and capabilities. We are unique creatures in the way we use our minds and hands. Look at the world around you, the skyscrapers, the architecture, computers, technology and the myriad creations of man. All have come about through the combination of the mind with the hands. In the Tao practice, we use the mind and the hands, in both Chi Kung and meditation, to connect to the forces of the universe. We use the mind to project a pattern of energy into the universe, to connect to the force, and to bring this energy back into the body.

The mind can travel millions of light years in a few moments. Taoists discovered the unlimited potential of the human mind. If you picture something in your mind; an ocean, a sunset or a mountain, you automatically connect with that image. The mind can take you anywhere you imagine. With the proper training you can connect to the energy of nature and the universe and project your Chi to combine with it, drawing these forces into the body. The hands are called the “touching force,” and like antennae they can transmit the frequencies and vibrations from space. With the mind and the hands, each of us can journey into the boundless energy of the universe.

Relaxation, Letting Go, Surrender and Ego

In some religions and spiritual paths, there is a great emphasis on surrender and letting go. This is actually a form of relaxation. Taoist practices emphasize relaxation, letting go, and emptiness. When a person is relaxed, the muscles are open, the breathing is soft, and the energy can flow through the channels of the body. There is no resistance and no fighting. This allows the creative and higher forces to flow into us.

Most religions have a similar process. To contact the higher self and the higher forces, letting go and surrendering are imperative. Through the surrender of control, touching the forces of nature are more accessible. However, if one continues to surrender and let go, vital energy will be lost. In the long term, this will gradually drain a person. The force will suck the energy out, rather than help to bring the energy into oneself. To avoid this, at the moment that one is in touch with the higher forces, become aware of yourself and your own energy. Then, projecting thoughts, intentions and energy patterns into the creative force will fill rather then deplete the life force energy. This way, energy is grounded and contained within.

Remaining open and empty, using intention, mind and Chi to draw the energy in, rather than focused externally is a vital principle of Taoist practice. What might initially

appear to be a paradox is reformed as one does the practice and learns how to be empty and open and to simultaneously retain enough consciousness to draw the force into oneself.

Mind, Organs and Sexual Organs

When people are disconnected from themselves and from their sexual organs, the mind and organs energy are separate. Taoism believes that the mind, body and spirit must work together. The results depend on a person's practice.

Brain

The brain can access and generate the higher forces, but storing this energy in the brain itself is not easy. We need to train the brain to increase its ability and capacity to store energy. The brain energy, when increased to a certain level, can enable more synapses to grow, and can help turn protein into brain cells. The Tao believes that with training and practice, one can learn to grow more brain and nerve cells, as well as increase the number of synapses in the central nervous system.

Organs of the Body

The organs can also generate energy, but much less than the sexual organs and the brain. They also have a much greater capacity to store and transform energy.

Sexual Organs

The Tao discovered that the sexual organs are the only organs that can generate a significant amount of vital energy (life force). However, the sexual organs cannot store the energy efficiently. When too much energy is generated, considerable amounts have to be dumped out. This is the most refined energy, the 'creative' energy that should be cultivated for self-healing.

Three Tan Tiens

The Three Tan Tiens can also store energy, transform it and supply it to the brain, spinal cord, sexual organs and other organs.

The aim of Taoist basic training is to integrate the brain, sexual organs and other organs into one system. If the brain generates too much energy, it can store the energy in the organs. The excess sexual energy can also be stored in the organs and the three Tan Tiens. If the brain generates too much of the higher forces and we are unable to

store this energy, we have to throw it away. It is like preparing food for one hundred people, when only one person is eating. The rest gets thrown away. In the same way, when too much sexual energy is produced and there is no place for it to be stored, it is wasted. We do not have enough of this energy to be able to waste it. We have a limited amount of energy and time.

Some practices just deal with the spirit and ignore the body and the sexual energy. These practices can generate a lot of energy, but when there is no connection to the organs, it cannot be stored. This is how energy is depleted. Some people practice sitting quietly, emptying the mind, with the whole body relaxed and calm, but very little energy is actually generated. When one gets deep into the practice, some people find it hard to come back to society, because they have no energy and their mind power does not work well. These people have to depend on others to support them.

In the Universal Tao, we are learning to create a sacred and holy temple within ourselves. With the simple practice of smiling to all the organs, we can integrate our bodies, minds and spirits. They are no longer separate. The sexual practice connects the mind with the sexual organs and the brain. The separation between these parts of ourselves is bridged and a synergy is created.

The Taoist practice provides us with the resources to extend beyond the realm of our senses. By tapping into our internal resources and channeling the energy around us, we can perceive much more than the senses normally report to the mind. We want to extend our perception from the limited perspective of the sociologically conditioned senses to the unlimited awareness of the universe. For example, our senses tell us that the earth is flat, that we are stationary, and that heaven is above us. In reality, the earth is a sphere hurtling through space at thousands of miles per hour and the heavens are above, below and beyond the earth in every direction. The goal of the Three Tan Tiens is to connect with the forces from the six directions - above, below, left, right, front and back - and draw all these forces into the body. Eventually, with practice one can draw upon many different energies and use them as needed, thereby giving form to the formless energy that is abundant in nature.

Opening the Three Tan Tiens

Opening the Three Tan Tiens to the Six Directions is just another one of the many resources the Taoist practitioner uses to connect with the universe. The practice combines the power of the mind with the extension of Chi. This combination allows our personal consciousness to directly connect to the patterns and matrices of energy in the universe. When we put our thoughts into the web of the universe, we transform the electromagnetic energy into a force that is accessible to us. The combination of mind power and energy is what allows us to establish a relationship to these creative forces and the high sources of energy.

Three Tan Tiens

Once we make the connection with the forces of energy in the universe, we then want to be able to store this energy in the body. Energy is like money, if you are making a million dollars a year and spend a million dollars, you have nothing left to use in the future. That is the way we live and use our energy in our society. We are spending more energy than we are saving and we are living on borrowed energy, paying very high interest. Our credit will run out very soon.

In the Tao practice, we store energy in the Three Tan Tiens. The Three Tan Tiens are the reservoirs of energy within us; our internal chi savings accounts.

Good Mind

Fig. 4.1 *The* ***Upper Tan Tien*** *is in the brain (the* ***Crystal Room****, third ventricle), and when it is full of energy, the capacity of the brain increases. We store our spiritual intelligence, the mind, here. All the Tan Tiens have both yin and yang within them. In nature, the yin and yang are present in all things. Day (yang) turns into the sunset, which turns to night (yin). It is very important to feel the qualities of yin within yang and yang with yin (sunrise/sunset). One quality does not exist without the other. They are inseparable qualities of the same force.*

Good Heart

Fig. 4.2 *The* ***Heart Center Tan Tien****, between the two nipples, is the* ***Middle Tan Tien****. It is associated with the fire element. Yet, within fire there is always water. The original spirit (Shen) is stored here.*

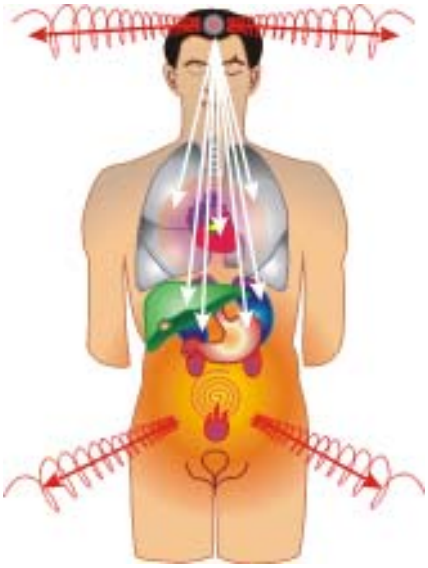
Good Chi

Fig. 4.3 *The lower abdomen at the* ***Navel*** *is like an empty universe, or ocean. We want to feel a universe of energy in the* ***Lower Tan Tien****. Within this universe or ocean, there is a fire, like a volcano under the ocean; 'fire under water'.*

These reservoirs are places where we can store, transform and collect energy. The reservoirs are the source of energy that flows through the body. The meridians are rivers of energy fed by these reservoirs. The goal of Opening the Three Tan Tiens is to continually fill and replenish the energy of the Three Tan Tiens. When we are connected to the Tao, life ceases to be a struggle. Through the observation of nature, the Taoists learned to flow with the stream of energy and connect to forces in the universe.

In these practices, we use a variety of hand movements and body postures to open to the energy around us. We draw the energy from the six directions into the body, activate the three fires, open the Three Tan Tiens and circulate this energy in the Microcosmic Orbit.

Our Upper Mind consumes a Great Deal of Energy



The Upper Mind activates all the senses, organs and emotions, which consume much energy.

When people are very emotional, the Upper Brain can spend up to 80% of the whole body energy.

Fig. 4.4 *Our Upper Mind consumes a Great Deal of Energy*

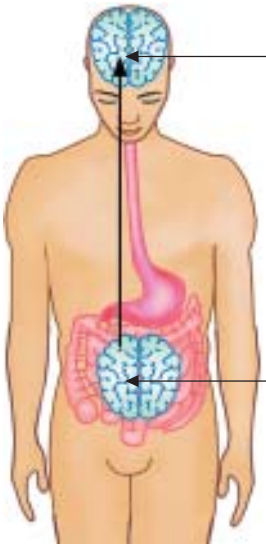
In Contrast, the Lower Brain uses much Less Energy.

The Lower Brain consumes less energy and can do much daily work, such as send and receive impulses, record experience and respond to emotions.

When you lower down the Upper Mind, it will also lower the blood pressure and anxiety levels.

Fig. 4.5 *In Contrast, the Lower Brain uses much Less Energy.*

Universal Tao Practices utilizes Lower Brain and charges Upper Brain.



Rest the Upper Brain when you do not use it or are doing routine things.

Empty the Upper Brain down to the Lower Brain, so there will be energy left over. This can charge the Upper Brain during the day. Normally we can only charge our Brain when we have a good, deep sleep.

Fig. 4.6 *Universal Tao practices utilizes the Lower Brain and charges the Upper Brain.*

Our Three Energy Centers have different Generating and Storing Capabilities

Upper mind can generate and receive energy, but it is not good at storing energy.

Organs can store energy very well, but they are not good at generating energy.

Sexual organs can generate energy very quickly and can multiply it, but as soon as it is generated it will go out and not be contained.

Fig. 4.7 *Our Three Energy Centers have different generating and storing capabilities.*

Some Practices attempt to reach Enlightenment at the Expense of the Body.

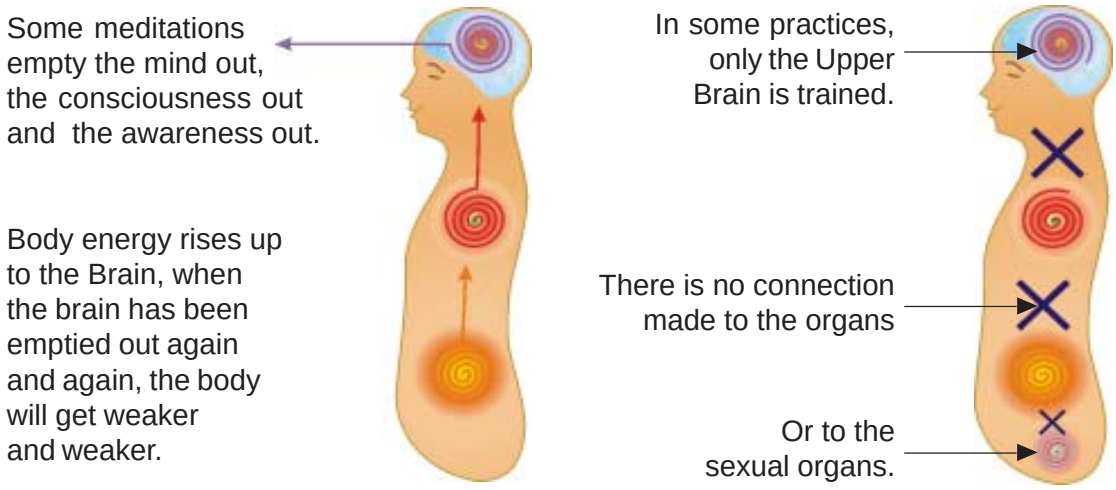


Fig. 4.8 *Some Practices attempt to reach Enlightenment at the expense of the Body.*

Universal Tao Practice Conserves Energy by Connecting to the Lower Tan Tien.

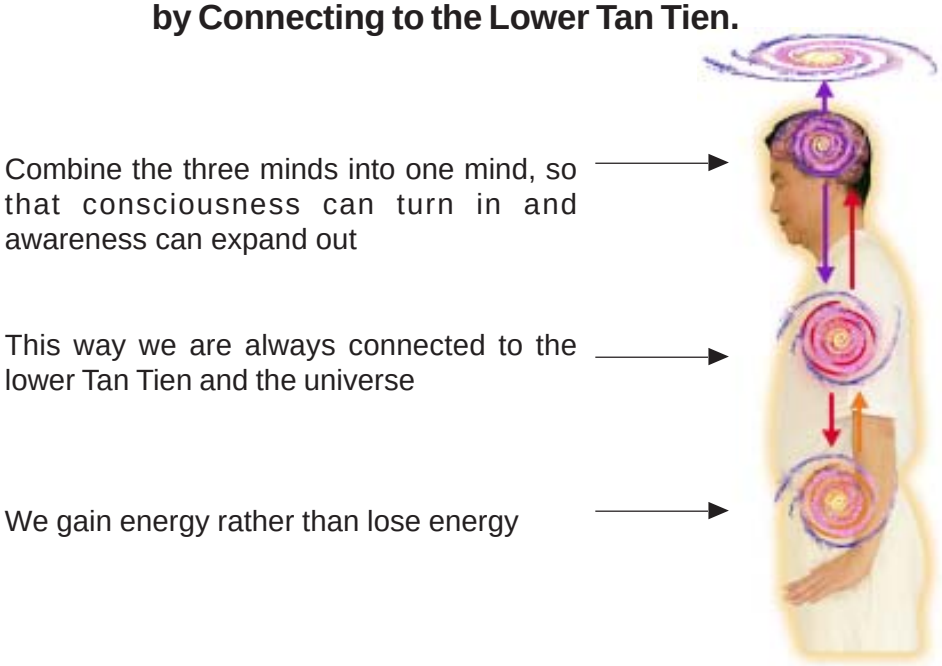


Fig. 4.9 *Universal Tao practice conserves energy by connecting to the Lower Tan Tien.*

Universal Tao Practice balances the Three Energy Centers.

The results of testing showed when we smile down and empty the mind to the navel, the organs can be charged with Chi and store Chi. Gradually, the organs will release Chi to the brain. This effect can last for 10 to 12 hours.

This practice gives a calm release of energy, unlike coffee which studies have shown to create nervous side-effects.

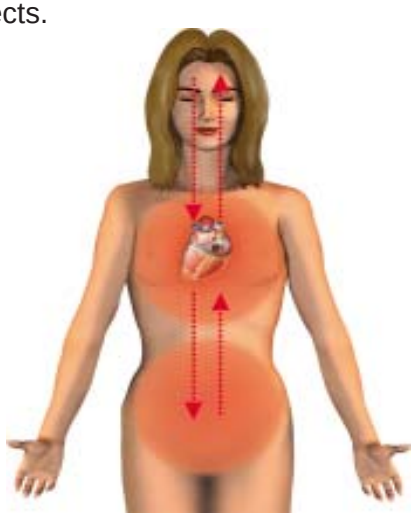


Fig. 4.10 *Universal Tao Practice balances the Three Energy Centers.*

In a Good State of Sleep, the Two Brains interact with Each Other

During sleep, the brain produces 90-minute cycles of slow wave (healing wave) sleep.

During sleep when the stomach has no food to digest, the abdominal brain will also produce 90 minute cycles of slow wave muscle contractions punctuated by short bursts of rapid muscle movement.

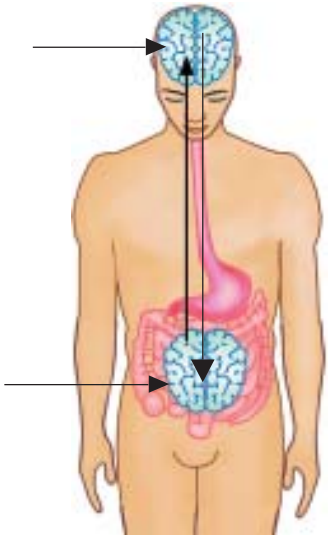


Fig. 4.11 *In a Good State of Sleep, the Two Brains interact with Each Other.*

Good Sleep will charge the Brain, Increase Sexual Hormones and Repair our Body.

1. Sleep early after dark, 9 p.m.—2 a.m., this is the time when Melatonin is produced.
2. Do not have food in the stomach.
3. The room must have no light; it should be completely dark (Neon light will awaken Pineal gland).
4. Couples should use separate beds or have enough space to recharge vital energy.
5. No noise
6. Cool room

Emptying the Mind

There are Five Major Steps in Emptying the Mind.

1. Relax the body and the nervous system.
2. Turn the Upper Mind into an observation mind, and observe inwardly.
3. Spiral at the heart and start to turn the conscious mind down to the Lower Tan Tien. Combine three minds into one mind at the Lower Tan Tien and keep it spiraling.
4. Spiral at the Crown and the mideyebrow.
5. Connect to the Tao.

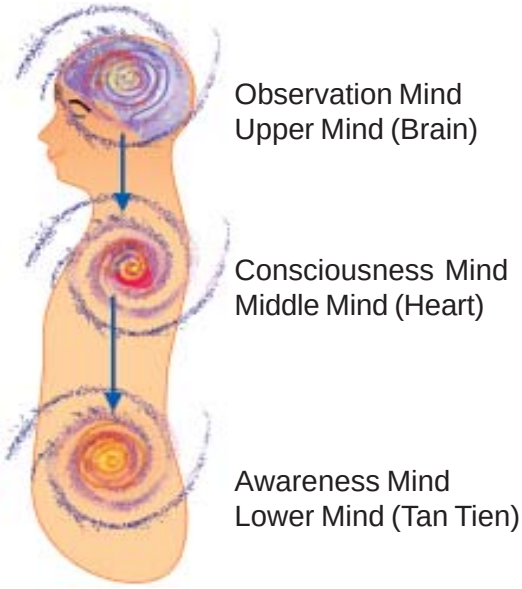


Fig. 4.12 *Combine Three Minds into One Mind at the Lower Tan Tien.*

Daily Practice: Opening, Connecting and Activating Chi Within and Cosmic Charging

Paradoxically, in order to project ourselves out into the immensity of the galaxies and the universe to gather limitless resources of Cosmic Chi for healing, we must take the first steps of the journey within ourselves. In order to 'go out', we must first 'go in'. The vehicle for this magical journey is powered by our ability to relax in mind and body. As we physically relax and let go of muscular and emotional tensions and joint and bone structures we gain access to the inner realms by turning on our very special subtle smile. It opens the pathways of the parasympathetic nervous system. This helps us to reduce the out flowing habits of our senses so that we can be more alert in sensing our inner universe.

This simple process of 'going in' enables us to develop our internal skills so as to safely 'go out' to the universe.

Fig. 4.13 *Focus your attention inside and connect with the outside universe.*

Practice
Relax and Let go

Step 1: Relax and Let go - Smile to Connect with the Universe Within

Smile to mideyebrow, eyebrows, eyes, mouth, jaw, tongue, lips, cheeks, ears, shoulders, ribcage and brain. Let the relaxed sensations and the 'Observer Mind' (Upper Brain) sink down into the Lower Tan Tien.

1. Smile to the mideyebrow. Relax and let go. Smile to the eyebrows and let them grow long to the sides. Lower these relaxed sensations down to the Tan Tien.

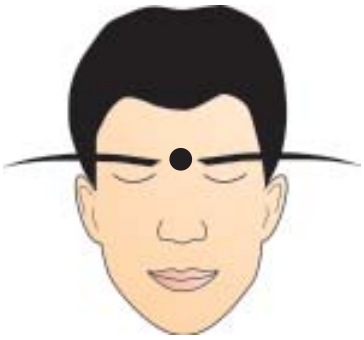


Fig. 4.14 *Smile and relax to the mideyebrow and think of the eyebrows growing very long.*

2. Smile to the eyes: relax the eyes and feel how nice and cool they are. Let the eyes gently draw back in their sockets and start to sink down to the chest and gradually down to the abdomen, the home of your 'feeling and awareness mind'.

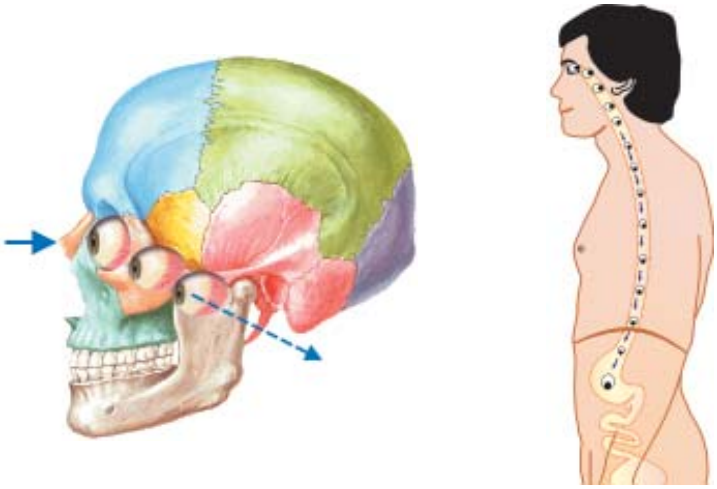


Fig. 4.15 *Smile and relax the eyes, sink into the eye sockets and gradually feel the eyes dropping down into the abdomen.*

3. Relax the two broad muscles extending from the outer portions of the upper lips across the cheekbones, and lightly smile feeling their connection to the upper front of the ears. Gradually feel the ears growing 'long', up and down. Feel the ears grow all the way down and connect to the kidneys.

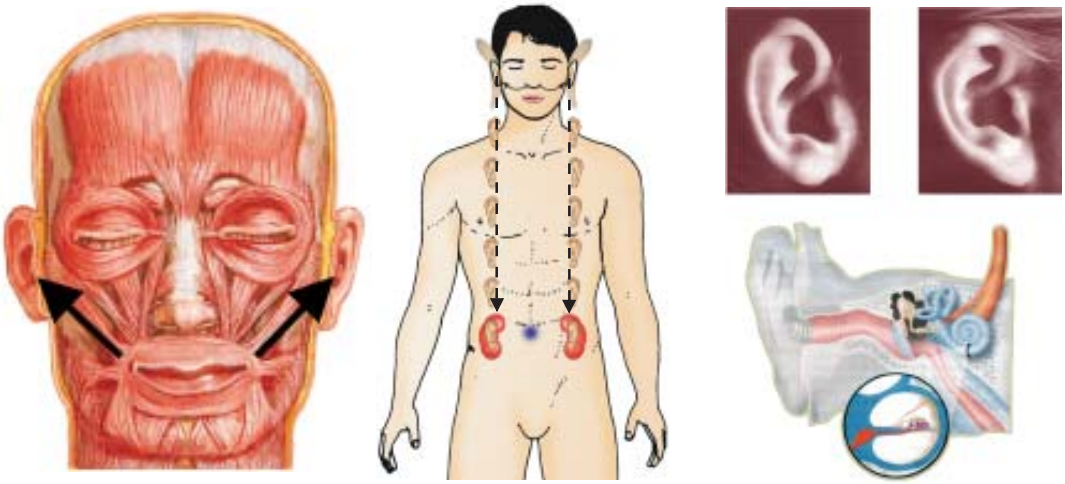


Fig. 4.16 *Smile to the ears and listen to the kidneys.*

4. Open your mouth and relax your jaw, separating the upper and lower teeth. Feel the jaw relax. Once the jaw relaxes the shoulders will relax and drop down. Continue to feel the jaw relax until you feel the saliva start to come out. Relax down to the rib cage. Feel the rib cage drop down, softening all the joints, relaxing down to the Lower Tan Tien. Let the tongue relax back in the mouth. Feel the tongue start to drop down into the throat to the chest and all the way down to the navel sinking the 'floating' sensation down to the Lower Tan Tien.
5. Smile to the shoulders and relax until you feel the shoulders drop and the rib cage relax.

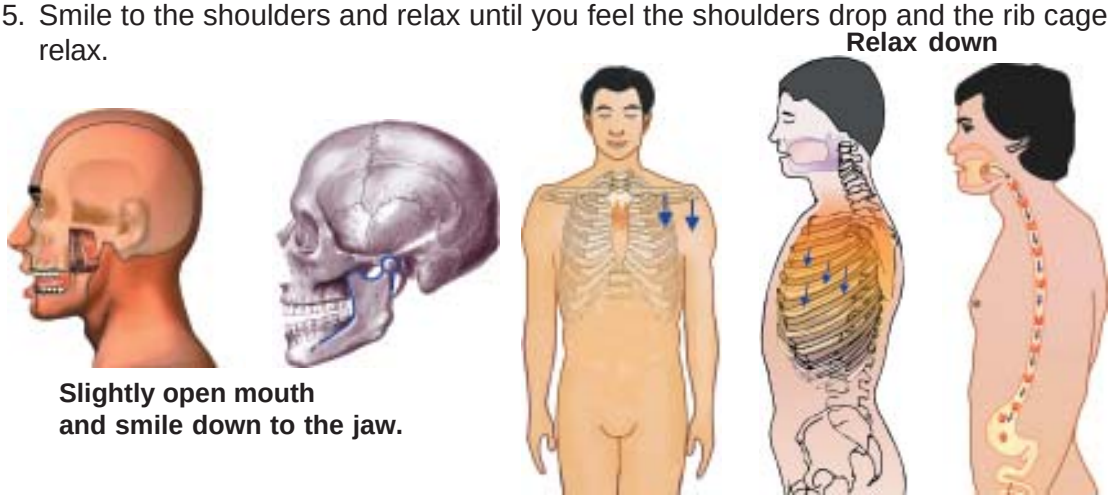


Fig. 4.17 *Relax the jaw, shoulders and tongue. Move the awareness down to the Lower Tan Tien.*

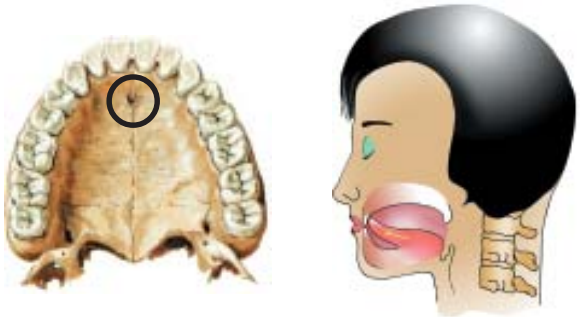


Fig. 4.18 *Place your Tongue to the Roof of the Mouth to make the Connection.*

Step 2: Empty the Mind down to the Tan Tien and Spiral or Turn the Wheel.

Sink deep into the empty space within. Smile down and empty the mind down to the Tan Tien, the Abdominal Brain. Look for a dot of light – the galaxy within. Start to spiral at the Tan Tien. When the abdomen is warm, the Chi is full. It can then charge up to the brain. This will indicate that the Chi is moving.

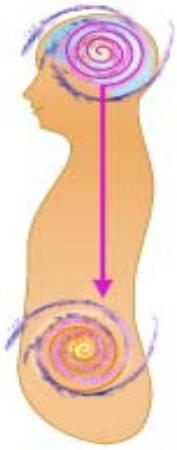


Fig. 4.19 *Empty the mind down to the Tan Tien and spiral or turn the wheel.*

Step 3: Turn Three Minds into One Mind at the Lower Tan Tien, keep on Spiraling, and expand your Awareness to the Universe.

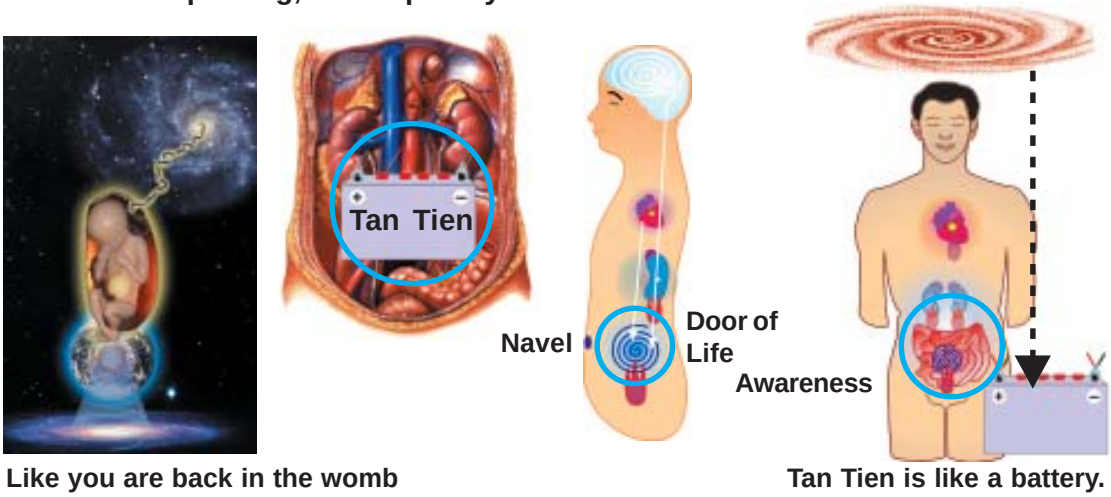


Fig. 4.20 *Universe charges Tan Tien power.*

Tan Tien and the Universe Consciousness In and Awareness Out

The expression, “Tan Tien and the Universe,” is a reminder to feel your Lower Tan Tien, your heart, your mideyebrow/third eye and your crown spiraling while the universe spirals in the six directions around you.

Use your Yi, the three-mind power, repeatedly to recharge your Chi for various purposes. You recharge by connecting to the Chi in the six directions of the universe simultaneously. When you charge a particular area or direct Chi into the body at a particular point, this establishes a connection point for the Chi by placing the hand or fingers on the surface at that location. This is like giving an address for the Chi to go to. Once the address is established and the Chi starts to go there, then move your attention to where you want the Chi to go.

Fig. 4.21 *Tan Tien and the Universe Consciousness, in and awareness out.*

Summary: Turn Consciousness In, Awareness Out

1. Empty the mind by just smiling down.
2. Making the heart soft will activate the Consciousness.
3. Three minds are fused into One Mind at the Lower Tan Tien (the Yi Power).
4. Expand the Yi Power to the mideyebrow, crown and forehead into the universe.
5. Feel yourself being charged by the Universe

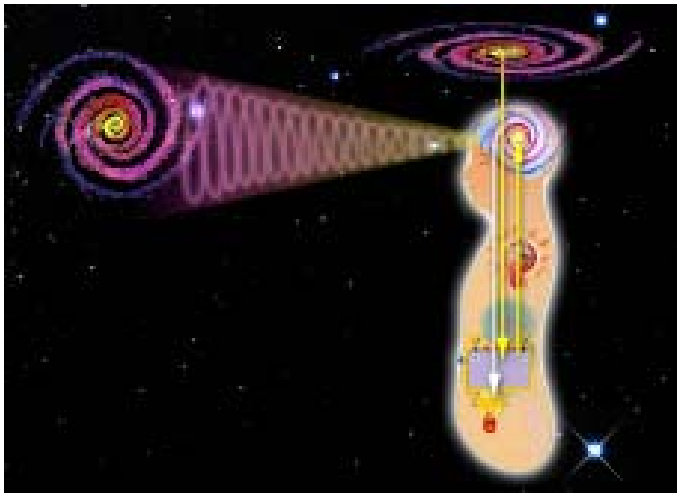


Fig. 4.22 *Lower Tan Tien is the seat of awareness.*

Spiral in the mideyebrow and the crown.
Turn the consciousness in and expand the awareness out to connect to the Universe and the six directions at the mideyebrow and the crown.

Fig. 4.23 *Connect with the Universe and the Six Directions.*

Activating the Six Directions and the Three Fires

This powerful energetic technique allows one to extend the mind, to touch the force in the cosmos, and to draw that energy back into the body.

The Six Directions teaches you how to expand your mind and Chi to receive healing energy. By practicing the Six Directions daily you will increase your healing and cosmic power. Turn your mind and Chi into the cosmos, multiply them and draw them back as energy.

Trust and Believe: Direction Below will turn Visualization into Actualization

When you achieve the three minds into one mind, begin expanding into the six directions. Press your hands down and start with the low direction. Picture yourself standing on the earth and expand yourself far away – deep down into the earth, very, very deep down into the earth, turn the trust and turn the visualization into actualization. Your hands become long; your feet become long, they go all the way down into the earth and out past it into the galaxy below on the other side.

Push. When you push, connect with the galaxy below, pull and think about your Tan Tien filling with Chi. Push and pull. Push and pull. Fill your Tan Tien with Chi.

Practice:

1. Stand, feet together. Put your hands down parallel to the ground. Expand your hands very far away and your mind very far away, smiling into the ground. Continue expanding your hands, feet and your mind far away beyond the earth below. Go down through the galaxy, way beyond to the primordial force. It's just like you are extending all the way to the primordial force 30 million years ago or before.
2. Push, moving the hands forward six inches only.
3. Pull, moving the hands back by the sides. Think about your Tan Tien – Chi coming to the primordial force in your Tan Tien. Smile to your Tan Tien, dark, deep and vast.
4. Push: touch the primordial force in the universe.
5. Pull back the dark primordial forces with your hands to your Tan Tien.
   Push and pull: project your awareness into the vast empty space. Then come back to your Tan Tien – also empty, just like the primordial condition before anything existed. That is where all the forces come from. Push and pull 3 – 9 times.

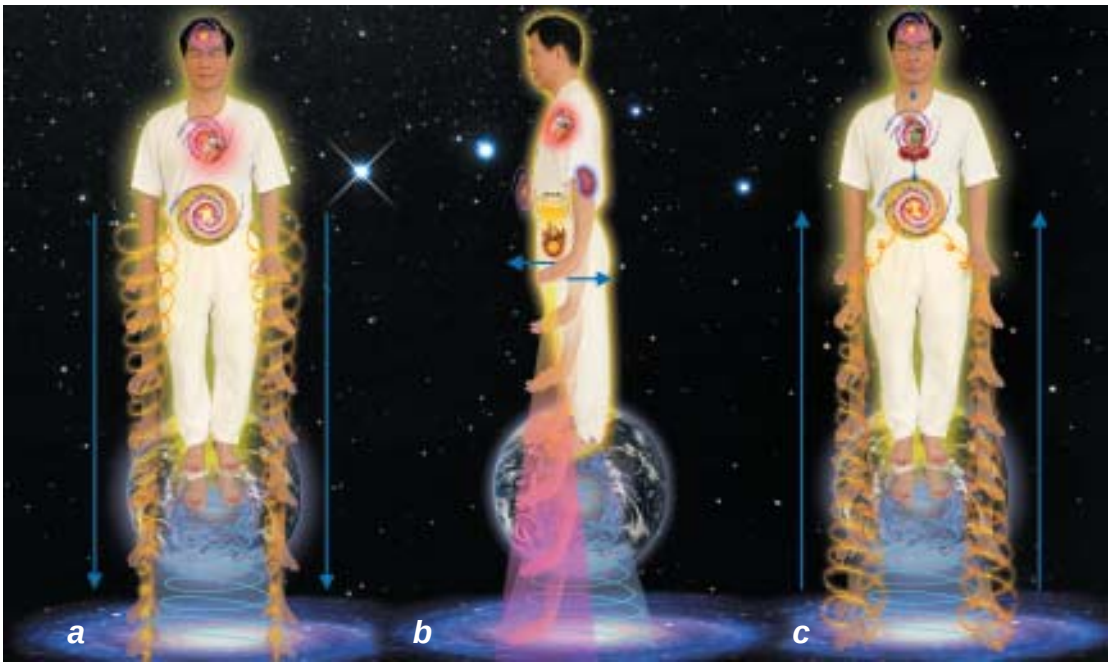


Fig. 4.24 *a. Hands expand through the earth and to the galaxy below. b. Hands push forward and pull back. c. Smile to the primordial Chi from the universe back to the Lower Tan Tien and fill the Tan Tien with Chi.*

Front Direction and Tan Tien Fire

Next, be aware of the front direction; a huge fireball appears in front of you. Open your palms: scoop up the Chi, scoop up the fire. Bring the fire into your Tan Tien. Activate the Tan Tien Fire.

1. Start with a small dot of light inside you. Expand your awareness, smiling to the universe in front of you.
2. Become aware of a big fireball in front of you. Feel your hands becoming bigger and longer. Scoop up the fireball. You may close your eyes to help your inner senses.
3. Use the fireball to light the fire in your Tan Tien. Feel the fire burning in the darkness, the 'fire burning under the sea.'

Fig. 4.25 *a. Be aware of the universe in front. b. Expand your hands very big and long to the universe in front. c. Hold the fireball to activate the Tan Tien Fire.*

Back Direction and Kidney Fire

Be aware of the back of the Tan Tien, the Door of Life and the back or rear direction. Extend your mind very far away to the 'back'. Scoop up the fire and light up your 'Kidney Fire'.

Fig. 4.26 *Be aware of the back direction, move the arms toward the back of the universe and scoop up the universal fire.*

1. Expand your awareness all the way to the back. Move the arms toward the universe behind you.
2. Touch the universe; scoop up the fire. Activate the Kidney Fire. Maintain your awareness in the Tan Tien and expand, smiling out to the universe. The energetic spiral glows in the Tan Tien. Spiral in the heart, spiral in your crown and spiral in the universe.

Heart Fire

Raise your hands up under your armpits, and feel yourself holding two fireballs. Touch the heart by extending the fingers energetically in from the sides; feel your hands extending into your heart and very far away. Activate the Heart Fire.

Fig. 4.27 *Activate the Heart Fire.*

1. Move your hands up under your armpits and extend your fingers deep into your heart. Keep your awareness on the infinite space to the sides.
2. Tan Tien and the Universe: you are connecting to the 'charger,' increasing more fire into yourself.
3. Feel your heart soft in the center of the chest as you smile down. Feel the warmth of the fire, the energy of love, joy and happiness in the heart.
4. Feel the connection with the unconditional love in the universe as you keep your heart consciousness in your Tan Tien and extend your awareness out to the universe.

Sacred Fire *(Chi Fire, Holy Fire)*

Connect the Three Fires to combine into one Fire: *Heart to Kidneys to Navel to Heart*.

Fig. 4.28 *Connect the Three Fires and Sacred Fire.*

1. Move your hands together in front of your heart. Connect the Heart Fire to the Kidney Fire, the Kidney Fire to the Tan Tien Fire and back up to your heart. Connect them all as one triangular Sacred Fire, circulating the Chi between the three centers, first slowly, then getting faster and faster.

Open the Third Eye

Now, extend your hands out to the front, very far away – pushing, pushing, pushing. Turn your palms inward, and extend your middle fingers inward toward your third eye. Picture a crack in the middle of your forehead, and pull the crack open. Feel the light from the heavens opening it and feel the light from the heavens shining into your brain.

1. Open your palms. Open your eyes. Look to the universe. Extend your hands to the front, palms vertical. Extend the arms from the scapulas. Smile and touch the universe.
2. Turn your palms inward and extend your middle fingers inward toward your third eye.

3. Picture a crack in the middle of your forehead and let the heavenly light shine into the brain; pull the crack open and let the light reflect into the organs.
4. Close the third eye. Pull: open-close-open. And, close. With the third eye open, the light from the heavens shines into your brain and reflects down to all your organs. Open and close the third eye 3 - 9 times.

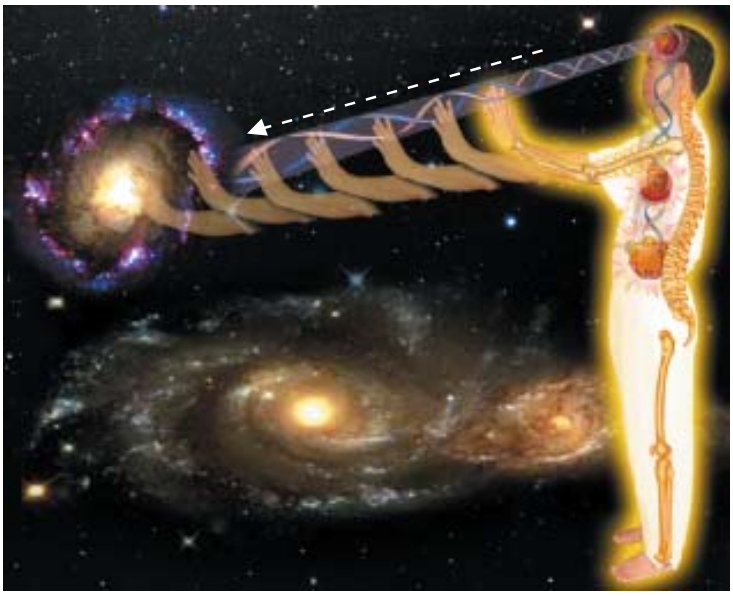
Fig. 4.29 *Look as you smile into the universe in front of you.*

a *b*

Fig. 4.30 *a. The middle finger hooks into the third eye and light reflects down into the organs. b. Pull open the third eye; let heaven open and shine its light into the brain.*

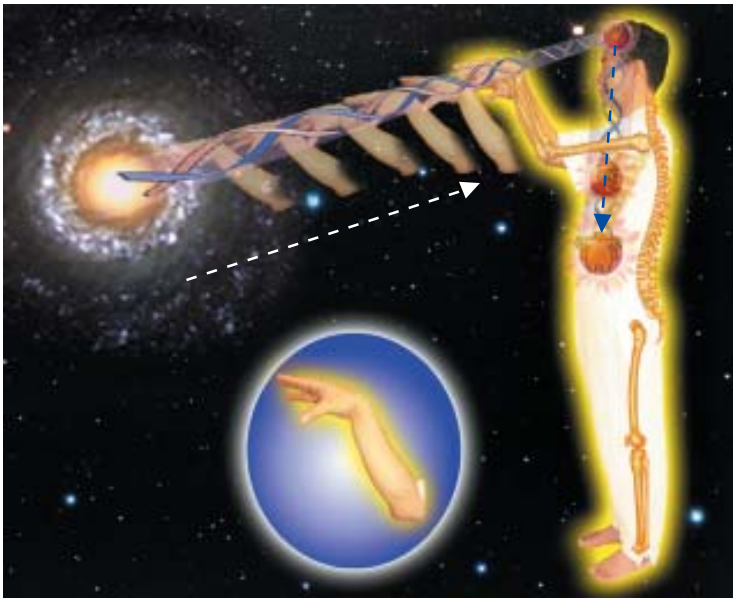
Front Direction: Push/Pull Master Practice

Now, turn your palms, pushing out. Push. Pull. This is the master practice that is imperative for successful completion. When you first start practicing you should do it at least one hundred times and increase up to 200 times. Push and pull. When you push, you feel your hands extended far away – very long – reaching into the sky. Touch the universe. Turn the visualization into the actualization.



1. Push: Extend your arms and hands to the front, palms vertical. Extend the arms from the scapulas.
   Expand: smiling, smiling, touching the universe – touching the force, touching the Cosmic Chi.

Fig. 4.31
Master practice:
Touch the Universe.



2. Pull: Draw the Chi back to you from the universe. Moving the arms from the scapulas, draw the hands toward your body in a horizontal position, drawing the Chi into the Lower Tan Tien.

Fig. 4.32 *'Drawing' universal Chi - feel your Tan Tien and fill it with Chi.*

Pull. Think and smile to your Tan Tien. Push, very far away to the universe.
Pull. Push: Smile, relax, and let go, touching the sky, touching the universe.

Fig. 4.33
Let go - push and touch the universe 6, 9 or 18 times.

Left and Right Directions

Now, move your hands to the left and right directions. Pull the Universal energy in. Push; touch the universe. Pull; think about your Tan Tien. Push – all the way, touching-touching-touching the universe.

1. Move your extended hands from the front horizon to the left and right sides.

Fig. 4.34 *Touch the universe - left and right.*

2. Pull into the Tan Tien: Smile to your Tan Tien. Keep smiling to your Tan Tien.
3. Push to both sides. Expand all the way, smiling and touching the universe.

Fig. 4.35 *Pull: Just feel your Tan Tien.*

4. Push and Pull: Touching, reaching into the universe drawing in the Chi. Smile energy into you from both sides.
   Do 3—6 times.

Fig. 4.36 *Draw the Chi in from both sides.*

Direction Above

Turn your palms up to the universe. Scoop up the Chi. Pour the Chi over your crown, and then touch the crown. Project the Chi all the way down to the perineum and down through the earth to the universe below. Always feel your Tan Tien spiraling, heart spiraling, crown spiraling and the universe around you spiraling.

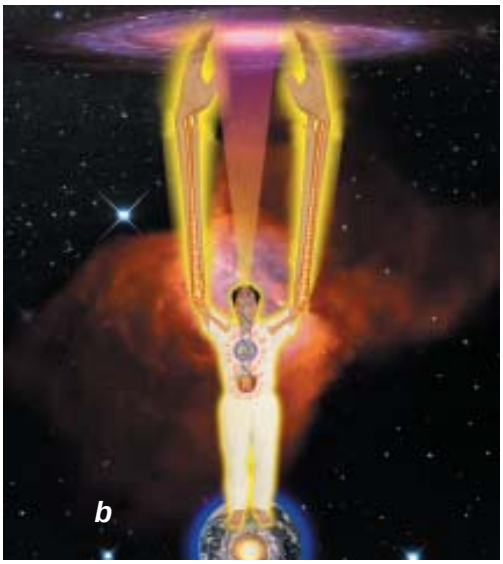


Fig. 4.37 *a. Raise your hands up to the universe. b. Feel that the hands are big and long and that the bones are hollow. Fill and pack the bones with Chi.*

Turn your palms up to the universe. Scoop up the Chi. Pour the Chi over your crown, and touch your crown. Project the Chi all the way down to the perineum and down through the earth to the universe below.

Connecting your Tan Tien and the universe, always feel your Tan Tien, heart and crown spiraling, and the universe around you spiraling.

Fig. 4.38 *Scoop up the universal Chi and pour it over the head.*

Gather the energy and bring it all the way back down to the Tan Tien. Remember, use the mind. Extend it down to the Earth and gather the energy. Go back up and extend up to the universe and gather more energy from the universe. Come back down to the mid-eyebrow and bring in more energy.

Fig. 4.39 *Gather the energy.*

Keep moving the energy. When we move it to a certain level, it gets faster and faster (spiral speed).

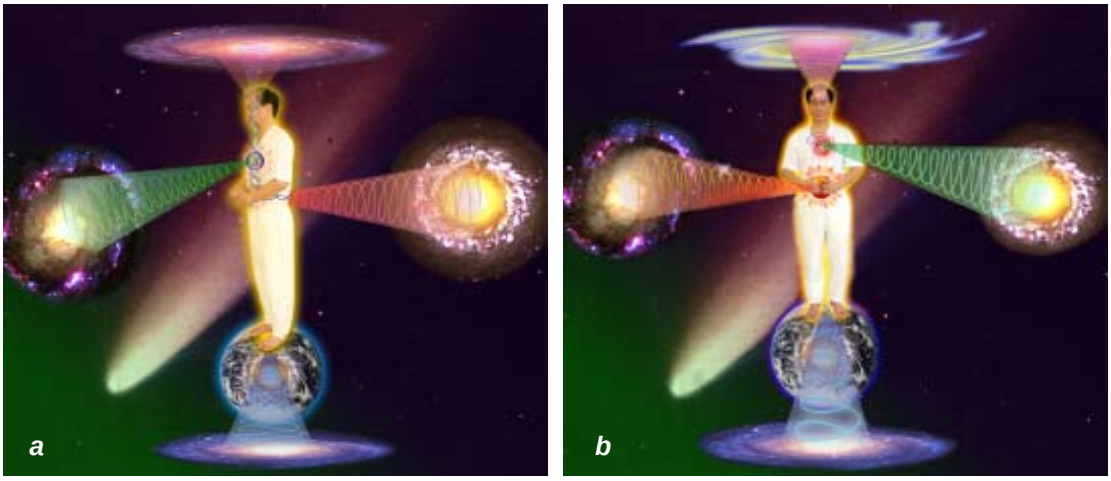


Fig. 4.40 *a: Touch the navel and feel the Chi all sink down to the Lower Tan Tien, start to spiral, faster and faster.*
b: Feel the Tan Tien and the universe all spiraling at a fast speed.

Chapter 5
Protective Circle and Chi Field

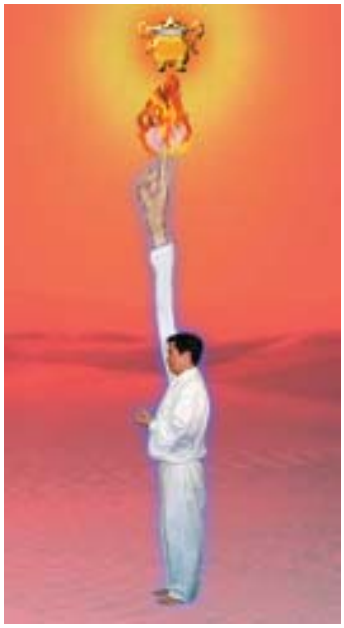
It is very importance to create the Chi field as a protection area. Only allow the good intentions enter the space and expel the negative Chi out. Raise your hands up and become aware of the 'Sacred Fire' in the universe. Feel your fingers extend way out into the universe and touch the fire in the sky. Bring the fire down. Make a circle around your community, your house, the meditation hall or where you are and around your body. This creates an energetic field of Chi around the whole room.

Sacred or Chi Fire
Connect and Receive Fire from the Universal Cauldron

1. Activate the Sacred Fire in the Universe

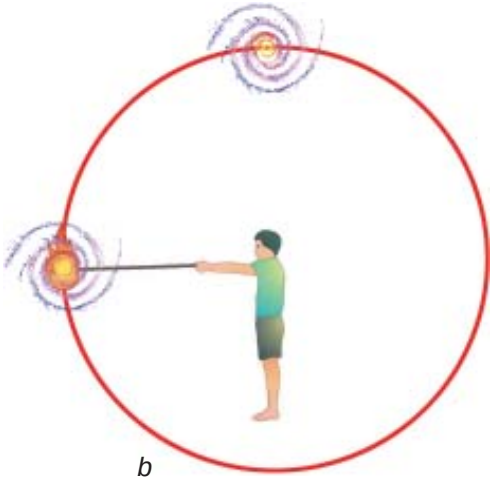
Be aware of yourself. Feel the bones in the arms and fingers grow and expand. Reach into the universe and the Sacred Fire. Let the Sacred Fire fill and condense in your arms and bones.

2. Use Yi Power to Create Sacred Fire Protective Circle



a

Use the Yi Power to draw the Sacred Fire Circle on the ground around your house, office and the room you work in.



b

Fig. 5.1 *a. Arm bones long; touch the sacred fire.* *b. Make the circle of Chi field.*

3. Create a Chi Field of Sacred Animals Practice

Set up the 'guardian animals', Blue Tortoise in the north, Red Pheasant in the south, Green Dragon in the east, White Tiger in the west, Yellow Phoenix above and Black Tortoise below.

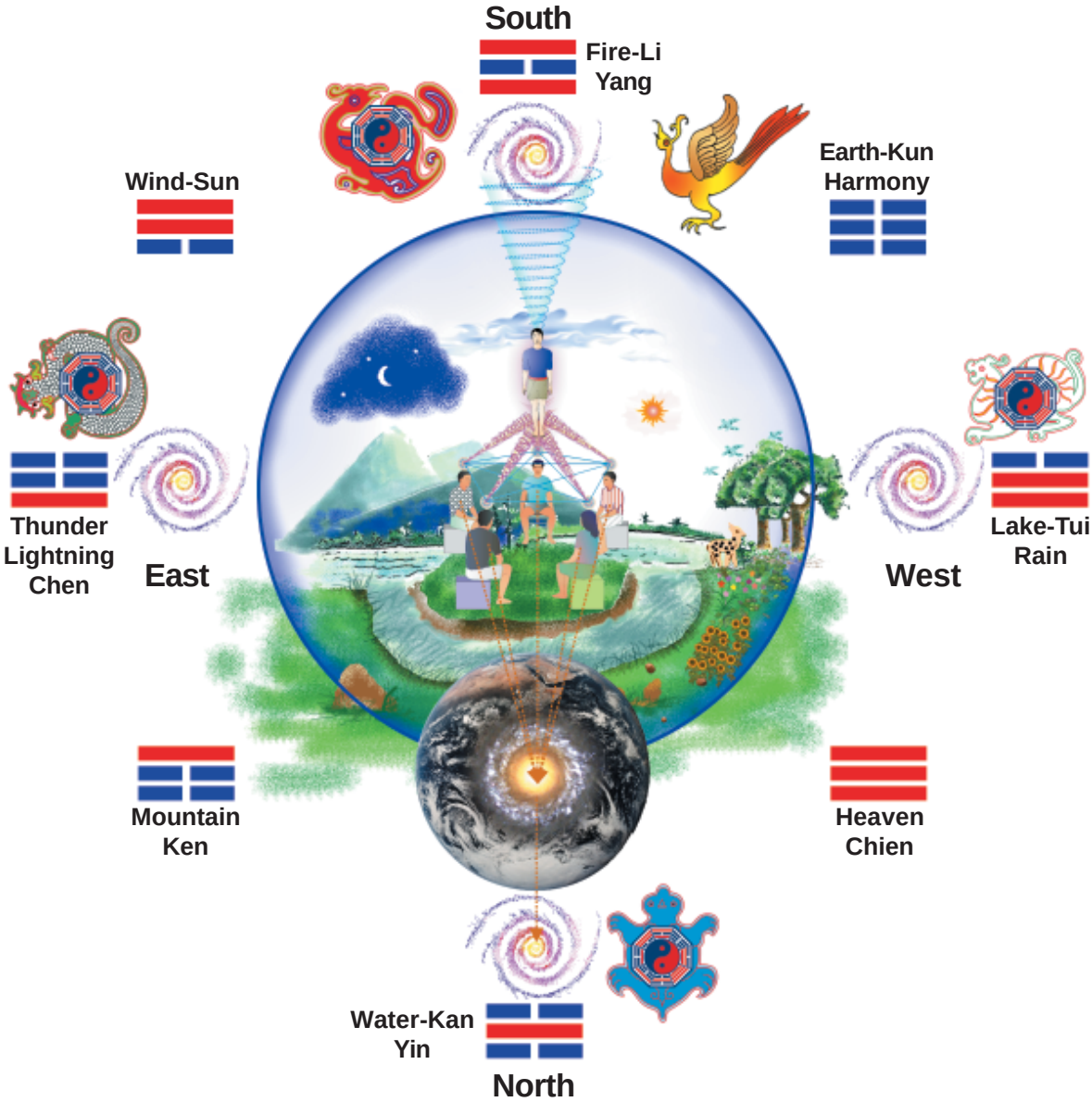


Fig. 5.2 *Create and surround yourself with a Chi Dome and the Guardian Animals.*

4. Activate the Eight Elemental Forces of Nature and the Universe

Activate all eight forces; wind, mountain, fire and thunder on the east. Earth, lake, water and heavenly power on the west. Call the Eight Forces; fire, water (ocean), thunder (lightning), lake (rain), earth, mountain, wind, and heaven.

It is always good to create the Chi field and call upon the eight tri-gram-Pakua power, the eight force, when you want to do the meditation.

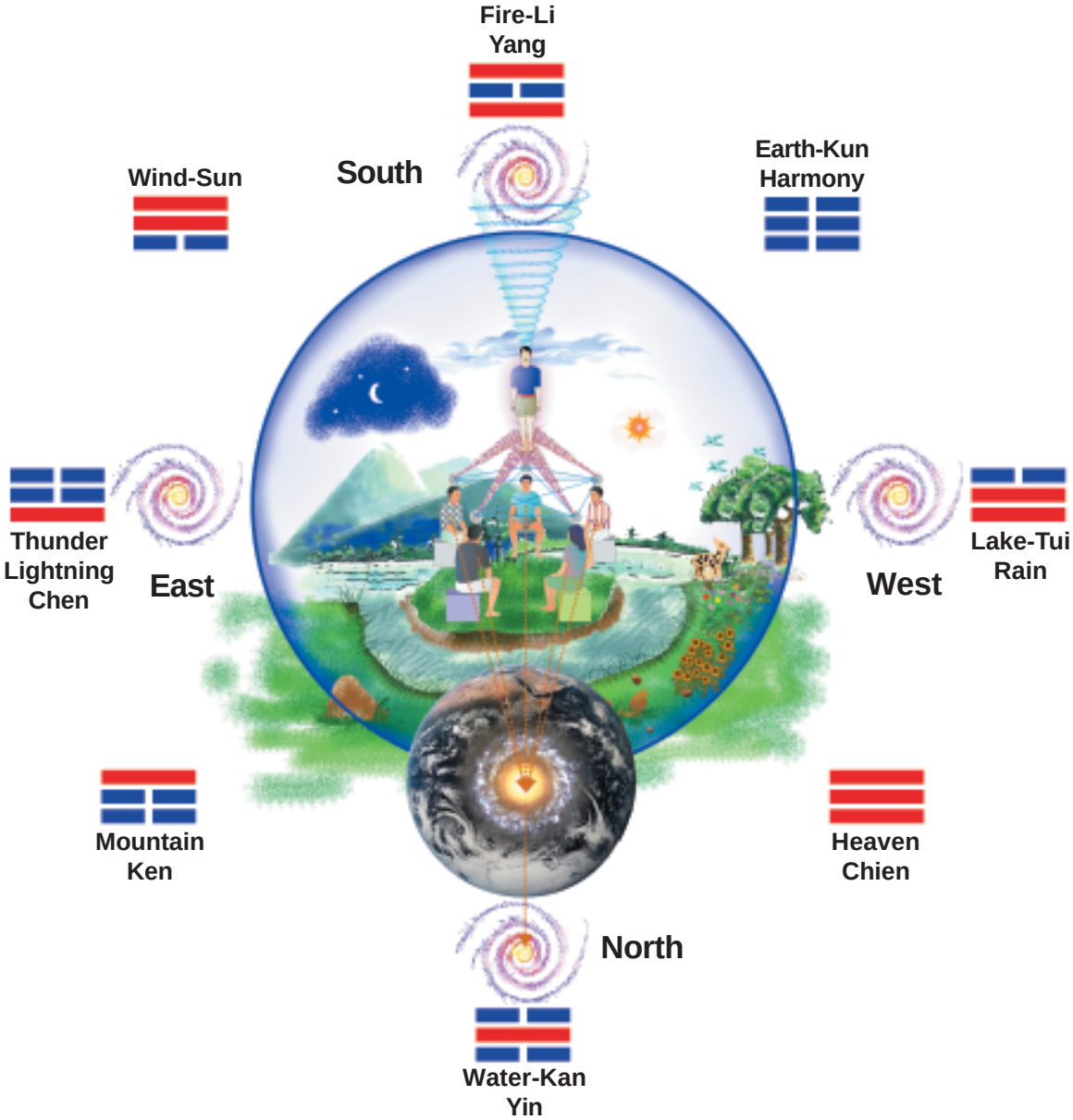


Fig. 5.3 *Activate the Eight Forces.*

We have the Power to create Sacred Water.

The Sacred Water practice is exercising the right of being the children of the cosmos, children of god and asking for the power to give bio-electromagnetic power to the water. The water's power can cleanse the body's cells of sick, toxic or negative energies.

Fig. 5.4 *Sacred Water from the Cosmos*

In the next sections the practices are used for cleaning the cells.
The more you clean the cells the more the Cosmic Healing can take place.
For more detail please read Cosmic Healing I

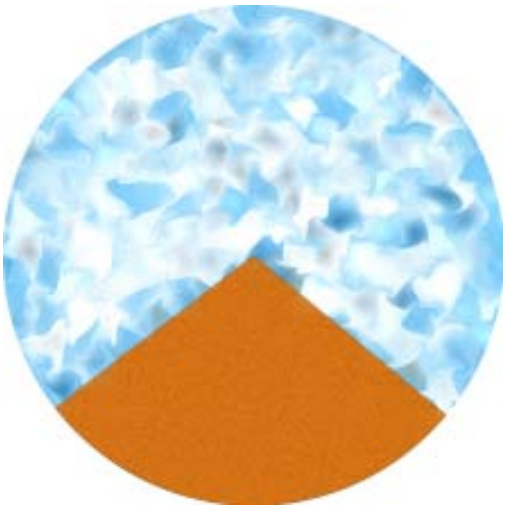
Chi (Sacred) Water Practice

The Sacred Water practice (also known in the West as Holy Water) is to exercise the right of being the creator of the Cosmos. With strict, regular daily water intake to prevent the stresses and associated damages of dehydration, the chief conductor and supervisor of the body's well being – tryptophan and its neurotransmitter derivatives, serotonin, tryptamine and melatonin will be well positioned to regulate all functions. Regular daily walks will keep muscles well coordinated and correct any physiological processes that are established in the body as a result of anxiety or emotional stress.

Well hydrated and healthy skin needs water to constantly replace that which it loses to the outside environment. This then allows blood vessels in the face and the body to open up and provide necessary nourishment for exposed skin cells.

Science has discovered that even if we clean water through filtration processes, although it may look and taste alright, closer analysis using high powered microscopic technology, indicates that its cell structure is 'unclean'. Water, like humans, maintains the memory of its old 'self'. We store our 'memory' within our DNA; water stores its memory within its cells.

The world is about 70% water



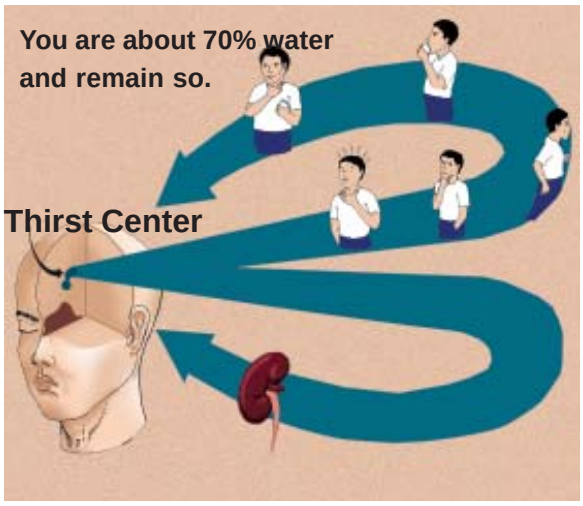


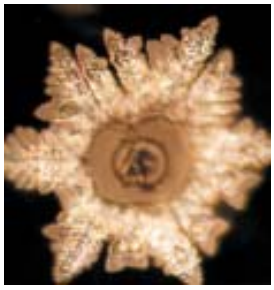
Fig. 5.5 *Water is Life.*

The following three pages contain extracts from the book 'The Message from Water' by Masaru Emoto. He advises us that 'water is telling us to take a closer look at ourselves - water is a mirror reflecting our mind.'

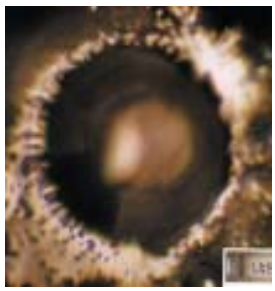
After offering a prayer to the Fujiwara dam the message is reflected in the water.

Chi and Love

Love-Appreciation



"Let's do it"



"Do it!"

Fig. 5.6 *The emotions change the water structure.*

When we project Chi and love into water and then freeze it; it will turn into a 'regular' and well structured crystal. If we project negative energy into water, the opposite will apply. Our projections will access the cellular level, clean out the polluted cells and reprogram those remaining with the essence of our affirmation.

When we project a nice, loving instruction or thought into water, like 'let's do it' the water will pick up this vibration and restructure itself. If we project negativity into the water, like a command, 'do it!', the water will acknowledge this accordingly. When we look into a pond we see our image. If we drink a glass of negative image water its destructive energy will enter our system and attempt to multiply.

Outline of Sacred Water Practice

Invoke the power of the Sacred Water practice to cleanse and heal the body's sick, toxic or negative energy.

Step 1: Hold the cup with both hands near your heart. Be aware of your Lower Tan Tien and spiral to feel it warm and feel the Chi radiate to the palms and to the cup of water, filling the water with Chi as done in *Cosmic Healing I* book by Mantak Chia.

Step 2: Command *"This Sacred Water will give me/you health, wealth and longevity."* Project love, joy, thankfulness, gratefulness, appreciation and the energy of compassion into the cup.

Step 3: The Sacred Water will carry the message of the practice to all the cells, where it will remain. If you are practicing in a group, drink the water in unison. If you are working with a student, pass him/her the cup to drink using both hands.

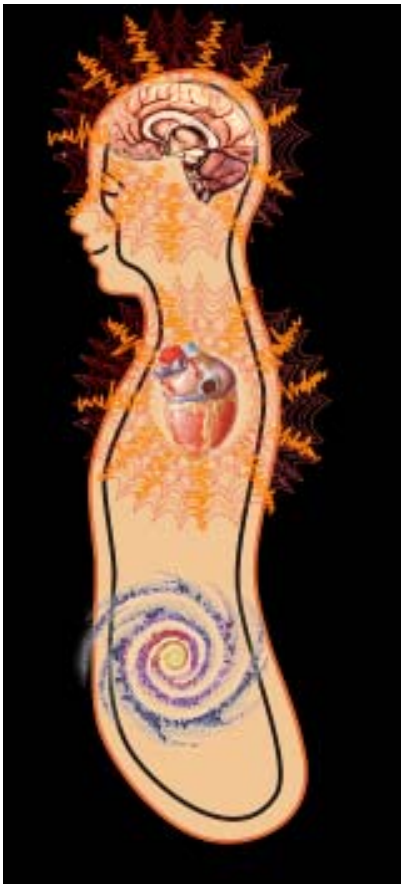


Fig. 5.7 *Feel good, feel love, compassion, joy and happiness.*

The Three Tan Tiens can generate out different waves which can which can change the crystals of the water.

Feel love, compassion, joy and happiness. This will change our body's structure so that it can receive and radiate out good and healing energy.

Before the practice of the Cosmic Orbit it is good to create the Chi field and do the Sacred Water Practice with the green and blue color and filling the body with violet light.

Step 1: Fill the Water with Chi

Hold the cup with both hands near the heart. Be aware the Lower Tan Tien and spiral till is warm in the lower abdominal area.

Fig. 5.8 *Fill the water with Chi.*

Step 2: Fill the Water with Compassion

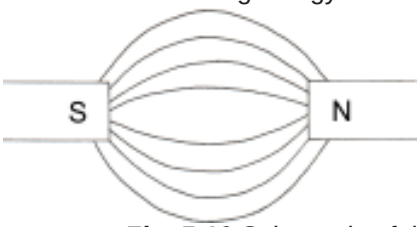
Hold the cup with both hands near the heart and project goodness into the water. Feel the Chi radiate to the palms and the radiate Chi into the water.

Project love, joy, thankfulness, gratefulness, appreciation and the energy of compassion into the cup.

Fig. 5.9 *Fill the water with Compassion.*

Recent research has revealed that the heart generates a strong electromagnetic field within and around the body. The electrical field is shaped like a donut, or torus, similar to the biomagnetic field of the human aura, and the geomagnetic field of the Earth. The heart can radiate out very powerful healing power.

Each person's palm can generate Chi or healing energy.



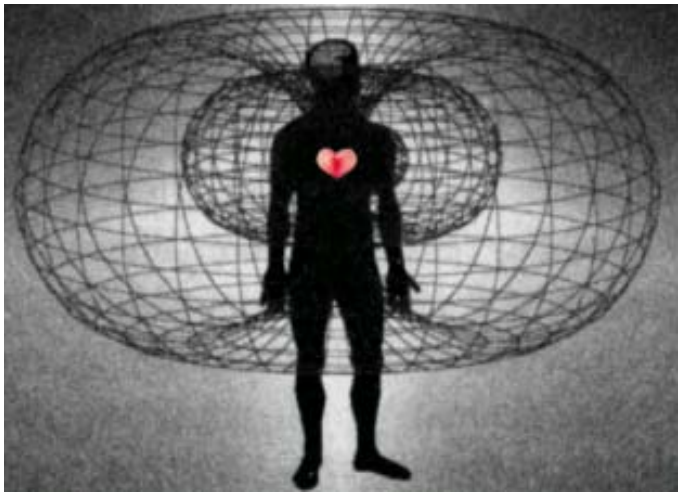


Fig. 5.10 *Schematic of the Heart's Magnetic Field for the Sacred Water Practice*

Step 3: Fill the Water with Good Intention

Hold the cup with both hands near the heart and project goodness through water.

Command: "***This sacred water will give me/ you health, wealth and longevity.***"

Project good intentions and the energy of compassion into the cup.

Fig. 5.11 *Fill the water with good intention.*

Step 4: Drink the Sacred Water

The Sacred Water will carry the message to all the cells. It will keep the message of the Sacred Water practice in all the cells. Use both hands to pass the Sacred Water to the student you are working with, or drink it yourself and/or in unison with your group. **Feel the water go into all the cells of your body. Feel it removing the sick cells and purifying your body.**

You can also sprinkle it on to any area that requires healing.

Clean with Green and Blue Chi

Draw the Green Light from the Universe

The green light and blue light has the power to clean out space, clean out the body and take out toxins, sickness and bad fortune. It is good to clean the space and the body before doing the Cosmic Orbit.

Be aware of the liver, gall bladder, forest while breathing through the throat.

Be aware of the green light in the universe. Let the light come in and blend it in the Tan Tien, up to the heart to blend with the compassionate heart and up to the crown.

Project the light up to the universe. See it spiral and let it multiply.

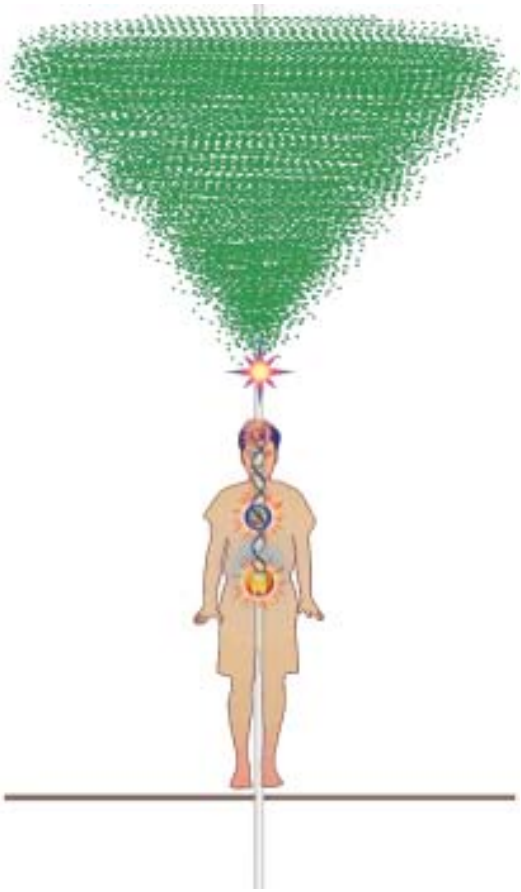


Fig. 5.12 *Draw down the Green Light from the Universe.*

Cleanse Us from Sickness

Extend your arms up, with palms facing the heaven. Use one hand to spiral the green force down. The other hand holds the position and connects to the universe. Let this big pool of green light in the universe spiral down through your community, your home, and then into your crown.

Let the Green light blend into the cells and bond with sickness and toxins. Let the green light bring the sickness out of the cells and flow down to the center of the earth.

Bury the sick energy in an energetic hole. Give the command: “Don’t come back. You will be happy there. You will be transformed into good Chi.”

Repeat it for 6, 9, 18, times. For people who are very sick with cancer or tumors, you can do up to 36, 72, 108 times.

Fig. 5.13 *Green Light bonds with the Sickness and Toxins before returning them to the Earth.*

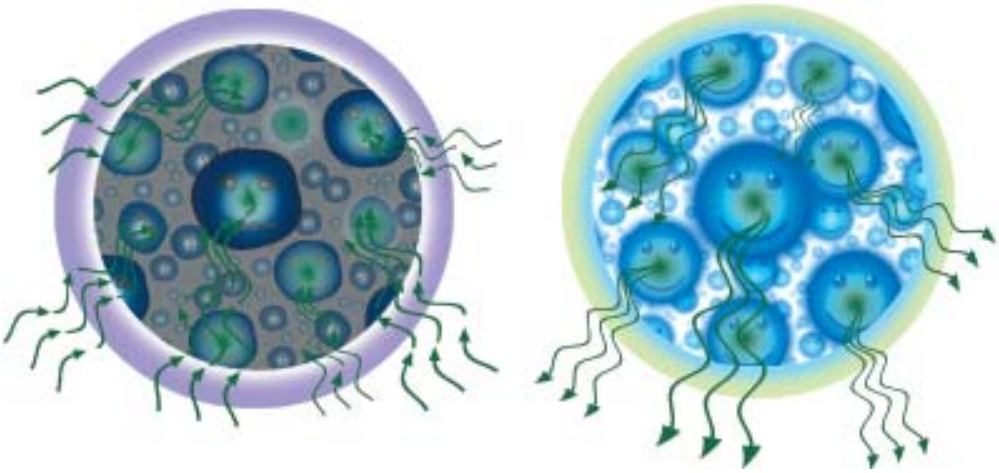


Fig. 5.14 *Green Chi blends in the sick cells and takes out the toxins it flows out and down to the ground. Dig a hole and bury them deep.*

Draw the Blue Light from the Universe

Be aware of the kidneys, the bladder, the oceans and the water energy.

Be aware of the blue light in the universe. Let the light come in and blend in the Tan Tien, up to the heart to blend with the compassion and up to the crown.

Project the light up to the universe. See it spiral and let it multiply.

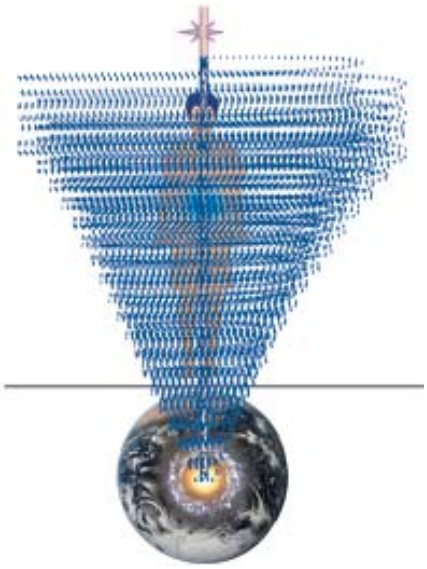


Fig. 5.15 *Draw the Blue Light from the Universe - rinse clean and remove sickness.*

Rinse and Flush

Extend your arms in the air, with palms facing heaven. Use one hand to spiral the green force down. The other hand holds the position and connects to the universe. Let a big pool of green light in the universe spiral down – through your community, your home, and then into your crown.

Then, let the blue light flush into the cells and flush out sickness and toxins towards the center of the earth.

Dig a hole and bury them. Give the command: “Don’t come back. You will be happy down there. You will be transformed into good Chi.”

Repeat it six, nine or eighteen times. For people who are very sick, who have cancer or who may be terminally ill you can do this up to thirty six, seventy two or one hundred and eight times.

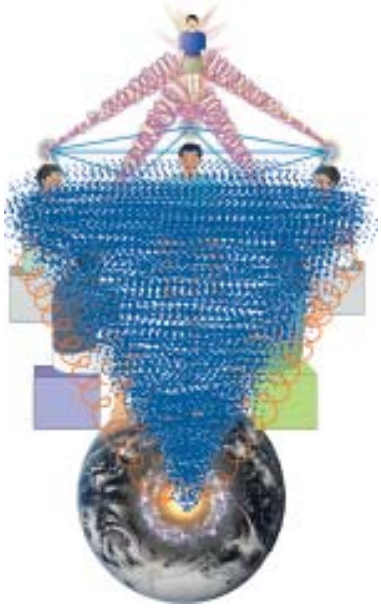


Fig. 5.16 *Blue Light flushes out the sickness and toxins before returning them to the earth.*

Chapter 6
Cosmic Orbit

Preparatory Practices

In the Universal Tao, we teach Cosmic Healing Chi Kung within an entire system of exercise and meditation. As a part of this system, Cosmic Healing Chi Kung comprises the art of healing oneself and others. It focuses on energy work for projecting chi to affect these healings. One can easily learn the simple movements of Cosmic Healing Chi Kung without doing any other Universal Tao practices, but if one truly wishes to master the art of Cosmic Healing Chi Kung, it is important to have a firm foundation in the basic Universal Tao practices. Therefore in this chapter we will introduce you to the basic Universal Tao practices that are used in conjunction with Cosmic Chi Kung.

The preparatory practice consists of a few parts; work through each part at your own pace and eventually join them together as a whole.

Always start with:

1. Warming up the stove.
2. Follow with Laughing Chi Kung at the abdomen.
3. Three Minds into One Mind, direct the fire down to the sexual center to transform the sexual energy.
4. Practice the Cosmic Inner Smile. The Cosmic Inner Smile is a powerful relaxation and self-healing technique that uses the energy of love, happiness, kindness and gentleness as a language to communicate with the internal organs of the body. Each organ corresponds to a specific element and color. For example, the kidneys will consist of the element of water and the color blue. The heart will consist of the element of fire and the color red. This makes it very easy to guide the healing power into each organ by using the appropriate color. The practice also aids the transformation of negative emotions into positive virtuous energy. This transformation is a very powerful Chi Kung practice. A genuine smile transforms negative energy into loving energy that has the power to relax, balance and heal. By learning to smile inwardly to the organs and glands, your whole body will feel loved and appreciated and enjoy more Chi.
5. Activate the Six Directions and the Three Fires.
6. Do the Cosmic Orbit in the standing or sitting position.

Core of the Earth

The earth rotates around itself 1,000 miles per hour caused by its core liquid and movement around sun at 67,000 miles per hour, so this affects every cell in our bodies. The paradox is that the earth appears to be still. The appearance of stillness is created because the earth is moving so fast. This is like the stillness we feel in an airplane because it is so fast it creates this stillness. These incredible speeds greatly influence the liquid in the body. Being are 70 percent water keeps us connected to the forces all around us. This connection is strongest in the Tan Tien, which is linked to the core of the earth.

The earth's spin also create the gravitational and the magnetic forces. This is the yin and yang polarity and the life force within our cells. The North Star is another force that pulls us toward it. This force connects with the axis of the earth tilting toward the North Star (*see pages 26-29).*

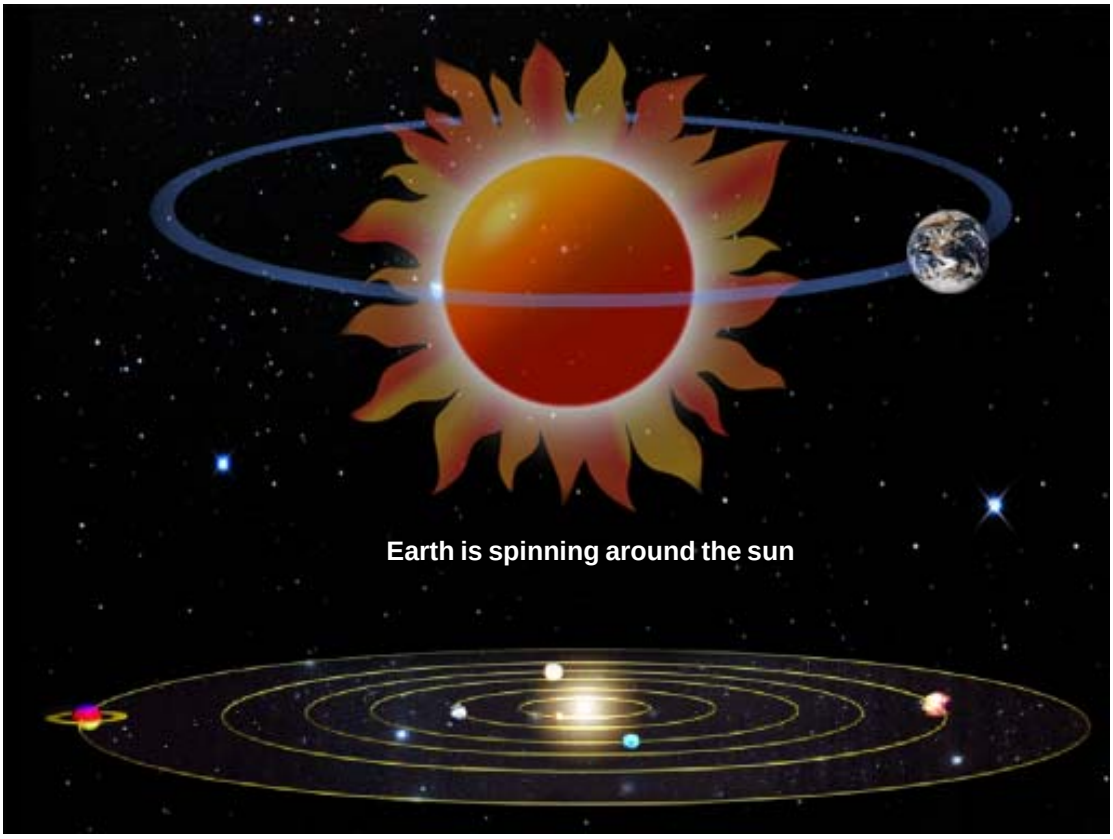


Fig. 6.1 *The Earth and Planets are moving around the Sun at 67,000 miles per hour.*

The North Star, we now know, is actually 100,000 times bigger than our Sun. The Earth's axis 5,000 years ago was aligned with Thuban. Now we are aligned with Polaris – tilted towards the North Star. Perhaps in another 2,000 years it will change again. We are actually influenced by the Sun and the North Star. The space between each star in the Big Dipper is actually very far and no one knows why they stay together as a group. We are aligned to the North Star (North Pole) and the Southern Cross (South Pole).

Taoists regard the North Star as the northern gate to heaven. The North Star is the one object in the sky that does not move and it is easily recognized.

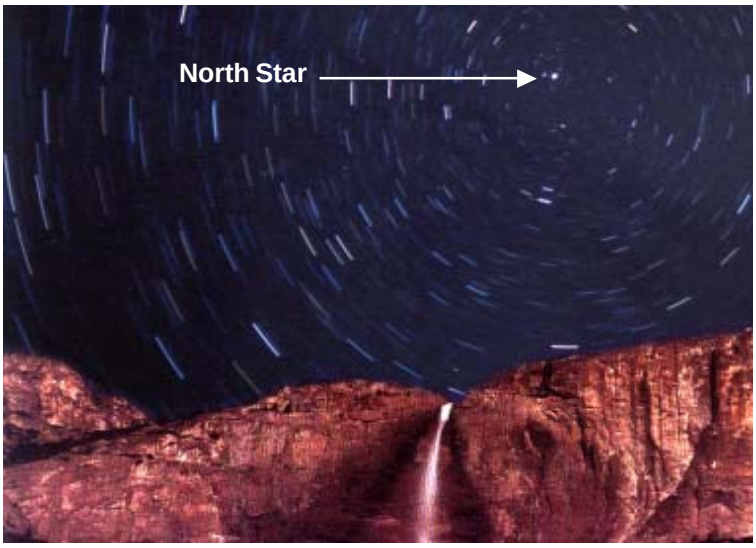


Fig. 6.2 *Gateway to Heaven North Star and Big Dipper*

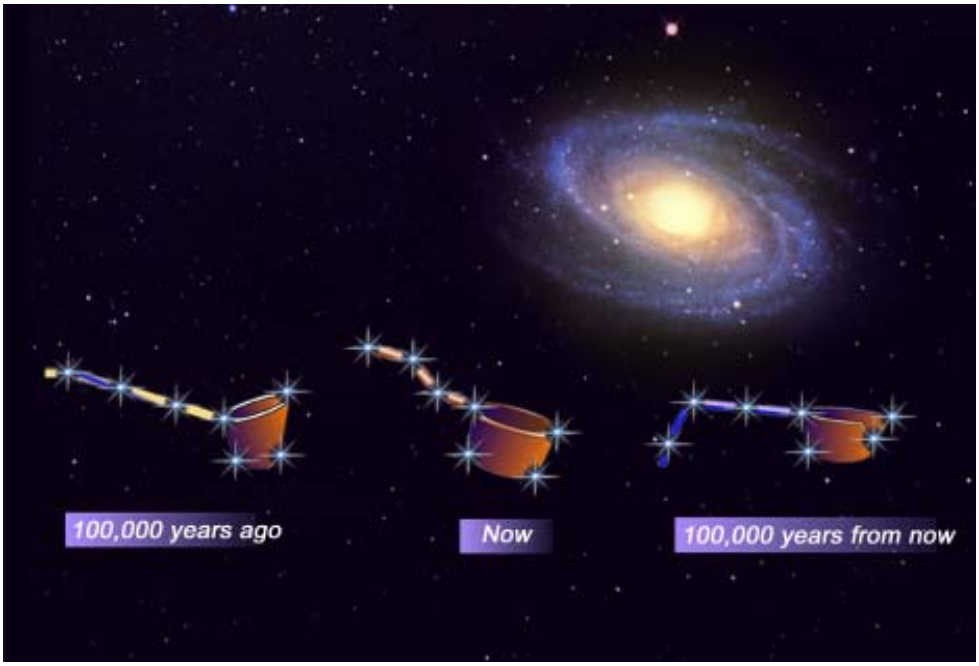


Fig. 6.3 *Big Dipper Movement*

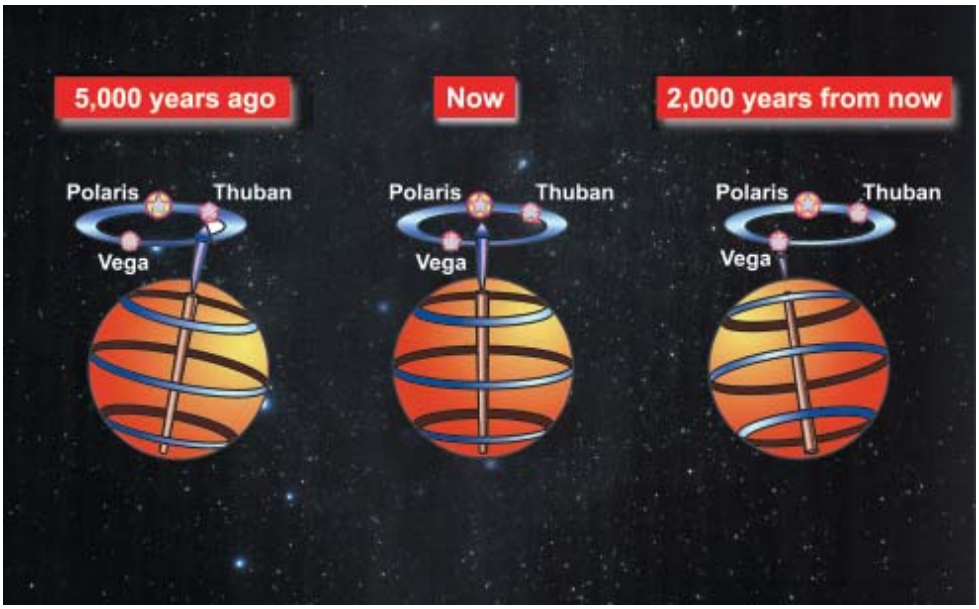


Fig. 6.4 *The Earth axis tilts towards the North Star so all the living things on the earth will connect with the North Star.*

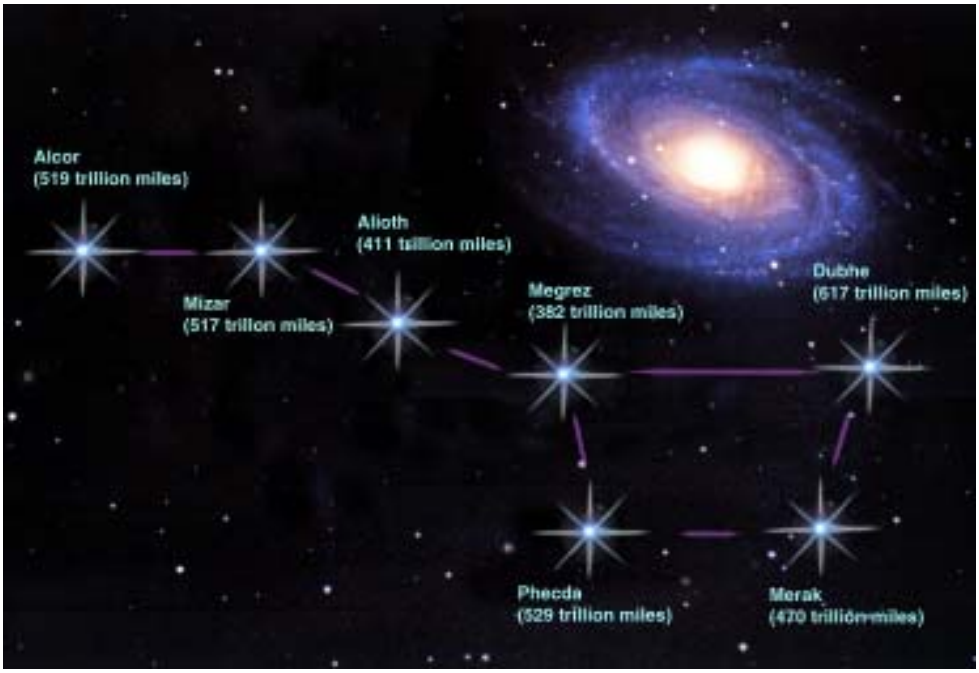


Fig. 6.5 *Space between each star in the Big Dipper*

Fig. 6.6 *North Star (North Pole) and the Southern Cross (South Pole)*

Luminous violet has a unique vibration and can be programmed. The universe is filled with violet light, especially the North Star and the Big Dipper. The color of the star, the higher self, or higher soul, from the crown is also violet light, the Divine or Soul energy.

1. Violet light has all the properties of all of the other colors. It has a rapid regenerating effect on damaged organs and nerves.
2. It develops the crown center, spiritual core center, and it is good for psychological ailments.

Fig. 6.7 *Feel Luminous Violet and the pull of the North Star.*

The North Star is a major source of violet light. The Big Dipper is a major source of red and infra-red light. Taoists believe that the cup of the Big Dipper gathers all the violet light from the universe. Use the left hand to hold the handle of the Big Dipper and pour it down to the crown and let it flow through the whole body.

Fig. 6.8 *Connect with the North Star to receive the violet light.*

The feeling of the Three Forces:

1. Earth force and the sole breathing.
2. North Star pulling you toward it, making you feel you are lighter.
3. Tan Tien Spiral.

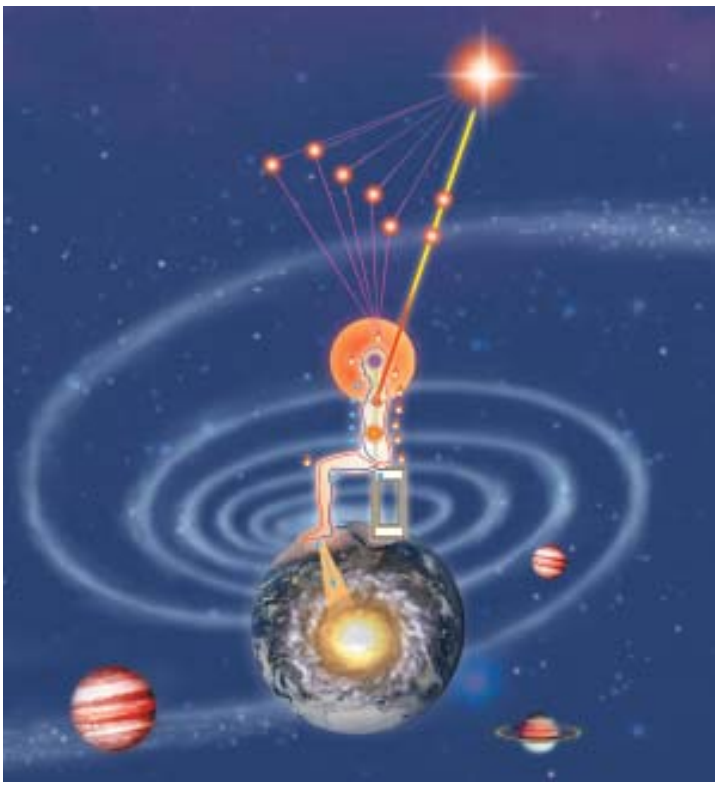


Fig. 6.9 *Connect with Big Dipper and Universe.*

Preparation Practice

Let's start to put the preparation practices together. As you progress, you can be creative with how you prepare. With continued practice, the preparation takes less and less time. Remember, these are just guidelines, you must make the practices and meditations work for you.

1. Start with Warming the Stove, do the Bellows Breathing 36 times. Rest and feel the warmth grow in the abdominal area.
2. Do Laughing Chi Kung, laughing loud for 5 minutes. Spiral the Chi in the lower abdomen. Feel the warm Chi build up and start to rise up to the crown and open the nostrils. Take some deep breaths.
3. Do the Giggling Laughing (not loud) for 3 to 5 minutes. Rest and spiral, allowing the Chi flow up to the crown.
4. Do Inner Laughing and feel the vibration inside for 3 to 5 minutes and rest. Let the energy flow.
5. Three Minds into One Mind.
6. Let the energy flow down to the mideyebrow and breathe through the eyebrow. Breathe this energy into the center of the brain. Do the breathing 9 to 36 times.
7. Breathe the good feeling into the mideyebrow and down to the heart. Hold it in the heart for a moment, allowing it to radiate through the body. Keep on breathing 9 to 36 times.
8. Breathe the good feeling through the mideyebrow, down to the heart and exhale down to the lower Tan Tien. Hold the Chi there, feel centered and balanced. Do this breathing 9 to 36 times. Feel all three minds (Upper Mind, Heart Mind and the Lower Abdominal Mind) merge in the Lower Mind. Feel calm and relaxed.
9. Do the Cosmic Inner Smile.
10. Sit on the edge of the chair and rock from the sacrum up to lumbar then up to the neck. Rest and smile to the spine. Feel the spine warm and open.
11. Smile to the heart and feel joy, happiness and love. Let this good feeling flow down to the spleen, stomach and the pancreas. Breathe in the yellow color of openness and fairness. Do 3 to 6 breaths.
12. Breathe the good feeling into the heart with the red or violet light and let it radiate down to the lungs. Breathe in the good feeling of the white light, courage, and righteous feeling into the lungs. Keep on breathing in 3 to 6 times.
13. Breathe the good feeling into the heart with red or violet light, and let it radiate down to the kidneys. Breathe in the good feeling of the blue light, gentleness and calmness feeling into the kidneys. Keep on breathing in 3 to 6 times.
14. Breathe into the heart the good feeling with red or violet light, and let it radiate down to the liver. Breathe in the good feeling of the green light, kindness and generosity into the liver. Keep on breathing in 3 to 6 times.

15. Feel all the organs surrounded by light. Heart is bright red, spleen is bright yellow, lungs are bright white, kidneys are bright blue, and the liver is bright green.
16. Move your tongue around to activate the saliva, and swallow down to the stomach and down to the small and large intestine. Keep on smiling down and follow the warm feeling of the saliva.
17. Stand up away from the chair, and do the opening of the Six Directions and Three Fires.
18. Follow this with the with the Cosmic Chi Kung practice to help open all the energy centers.
19. Then sit down and do the Cosmic Orbit meditation.

If you start fresh, after doing the Inner Smile, raise the hands to the universe, feel that the hands are big and long and that the bones are hollow. Fill and pack the bones with Chi.

Fig. 6.10 *Raise your hands up to the Universe. Feel that the hands are big and long and that the bones are hollow. Fill and pack the bones with Chi.*

Connect with the North Star to receive the Violet Light

The North Star is a major source of violet light. The Big Dipper is a major source of red and infra-red light. Taoists believe that the cup of the Big Dipper gathers all the violet light from the Universe.

Be aware the North Star and Big Dipper and let them descend down to your hands. Use the left hand to hold the handle of the Big Dipper and pour its light down to your crown and let it flow to all the body.

Fig. 6.11 *Practitioner connects with Universal Violet Light.*

Guide this sensation down into your skull, deep into your brain, cervical vertebrae, sternum, thoracic vertebrae, lumbar vertebrae and down through your legs. Feel it penetrating and enlivening your bones, deep into the bone marrow, washing, cleansing, energizing. This 'liquid-like' Chi spills all the way down to your feet. Feel it connecting with the earth through the soles of your feet; be aware of the bubbling springs in the feet (the K1 point of the kidney meridian) breathing and pulsating.

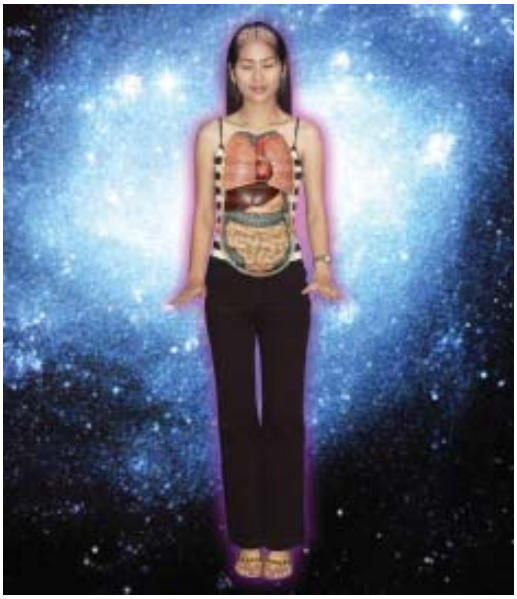


Fig. 6.12 *Let your whole body feel radiant, clean and shining with the healing light.*

Open the Cosmic Orbit

Touch the back-crown point. Pour the Chi all over your crown. Think of your soles so that you feel like there is a waterfall of Chi flowing from your crown all the way down to your soles. Feel your fingers grow long and the Chi penetrate down through your spine to the coccyx. Leave the fingers touching the back of the crown, to maintain the energetic connection with the coccyx.

Fig. 6.13 *Feel your fingers growing long, all the way down to the coccyx.*

Be aware of the Tan Tien and spiral it like universal energy in motion. Feel the heart center spiraling and the crown spiraling. Be aware of the universe spiraling above, below, front, back, left and right. Let all of the sick energy and the negative forces leave the body and go down into the ground for Mother Earth to recycle. Extend the Chi from above, all the way down through the earth and the universe below.

Fig. 6.14 *Be aware of the Lower Tan Tien, Heart Center and Crown spiraling. Feel the universe spiraling and charging the Three Tan Tiens.*

Open the Cosmic Orbit Points

Move to the mid-crown point. Touch the point and project your fingers deep through the middle of your body down to the perineum. Focus on the perineum. Feel the Chi from the universe flow right to your perineum. Look for one dot of light. Look into the darkness, the immense, vast darkness. This is the primordial force.

Fig. 6.15 *Open the Crown Point.*

Be aware of the Tan Tien and spiral it like the galaxy. Feel the heart center spiraling and the crown spiraling.

Be aware of the universe spiraling above, below, front, back, left and right. Let all of the sick energy and the negative forces go out of the body and down into the ground for Mother Earth to recycle. Extend the Chi from above all the way down through the earth and the universe below.

Fig. 6.16 *Tan Tien and the Universe*

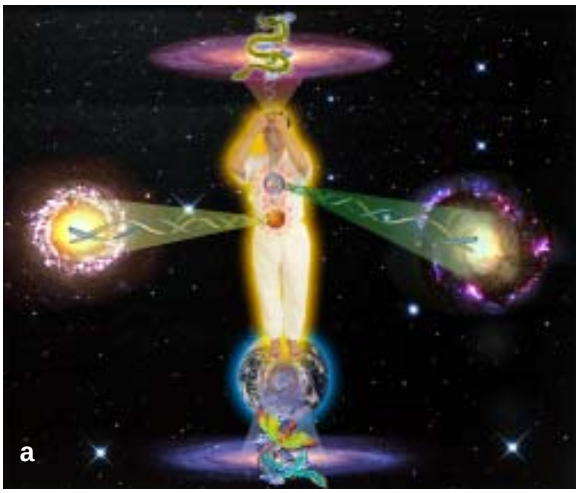
Charging the energy - feel your hands and legs very warm when you scoop up the energy. In this part we always want the three Tan Tiens to merge yin and yang energy together. In the Taoist formulas, we involve the Phoenix and Dragon. When Chinese people get married they always have a Phoenix and Dragon, symbolizing the female and male coming together to become one energy. In the three Tan Tiens you can constantly feel this male and female uniting.

Recharge. Be aware of the Tan Tien, heart consciousness in and awareness out. Spiral the Tan Tien, heart, third eye and crown. The Universe and six directions are all spiraling.

Feel the yin and yang, male or female Dragon and Phoenix reunite and make love, spiral into one love and orgasm force in the heart center, and spread out to all the cells in the body.

Fig. 6.17 *Mideyebrow Point*

Scoop the energy and then come down and touch the mideyebrow, focusing on the base of the skull and feel the fingers penetrate straight through to the base of the skull.



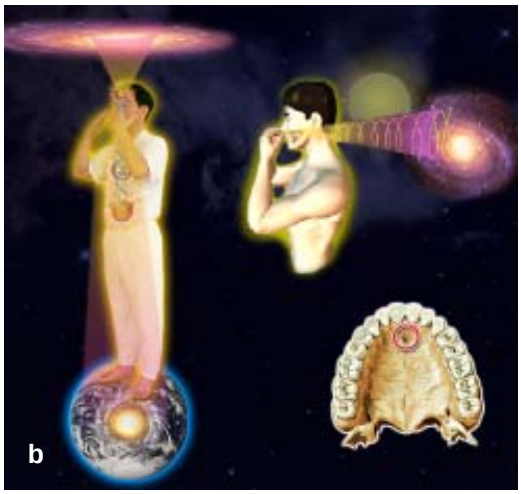


Fig. 6.18 *a. Be aware of Tan Tien and the universe spiraling. With the spiraling, the Chi will become hot in the fingers. It will expand and penetrate out through the back of the head all the way to the universe behind.*
b. Move the fingers down to touch the upper lips. Feel the Chi charge the upper palate.

Come down to the middle or upper lip. This point revives consciousness.

Fig. 6.19 *Feel the universe and galaxies spiral and charge the palate. The circuits are flowing down through the tongue and down to the throat.*

Feel the primordial love and orgasmic energy within; this is the most important energy that we need every day. If you want more energy, just become aware of the universe. The six directions of the universe are below, above, left and right, front and back. Everything is spiraling and moving around us. When you are aware of the universe spiraling, you are charging energy into yourself.

Fig. 6.20 *Feel the Six Directions.*

Touch the left and right ear and feel the fingers grow very long. Make a cross into the brain and open the Upper Tan Tien and the back of the head and the third eye. This opens the whole brain. Chi will go right into it much easier.

Picture your fingers like laser beams of Chi. Feel your Tan Tien and the universe spiral and charge your fingers. Move your fingers out from the mideyebrow around the side of the head to the top of the ears. Your fingers are like lasers, cut-cut-cut-cutting open your skull right in the middle around to the top of the ear. Cut your Upper Tan Tien open, cut and project your fingers long into the middle. Spiral your Tan Tien and the universe. Leave your fingers there. Concentrate on your Tan Tien spiraling your heart, crown, the universe above, below, in front, behind, left and right all spiraling. Your Tan Tien is a big empty space: primordial force, darkness. You can put so much Chi inside there! Chi penetrates into your brain.

Fig. 6.21 *Opening the Jade Pillow*

When you touch the back the energy flows through to the front.

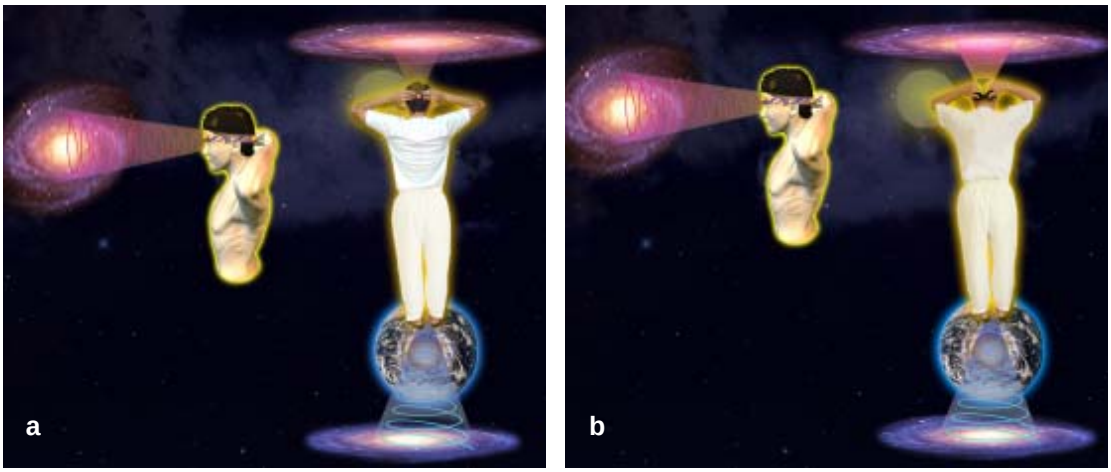


Fig. 6.22 *a. Move your hands all the way to the back, cutting to the back of the skull. Touch, and feel the upper Tan Tien open.*
b. Touch the base of your skull. Focus on the mideyebrow. Feel the Chi flow like a laser beam from back to front and out to the universe in front. Complete the opening process by moving the hands back around to the mideyebrow, cutting as you go.

Anytime you want to recharge the energy (when you feel the hands getting low in energy and to help you open the body), reach into the universe and bring down the energy.

Fig. 6.23 *Recharge from the universe. Feel that your bones and your arms and legs are hollow. Fill and compact them with Chi.*

Feel the constant love and orgasm energy all around us – the creative energy of the universe.

Fig. 6.24 *Scoop the universal Chi and pour it down over your crown and all the way down, down, down to the middle Tan Tien. Feel the Dragon and the Phoenix making love in the heart center. Feel the yin and yang, male or female, Dragon and Phoenix reunite, make love, spiral into one love and orgasm force in the heart center, Lower Tan Tien, the crown, and spread out to all the cells in the body.*

When you are aware of the universe spiraling, you are charging energy into yourself.

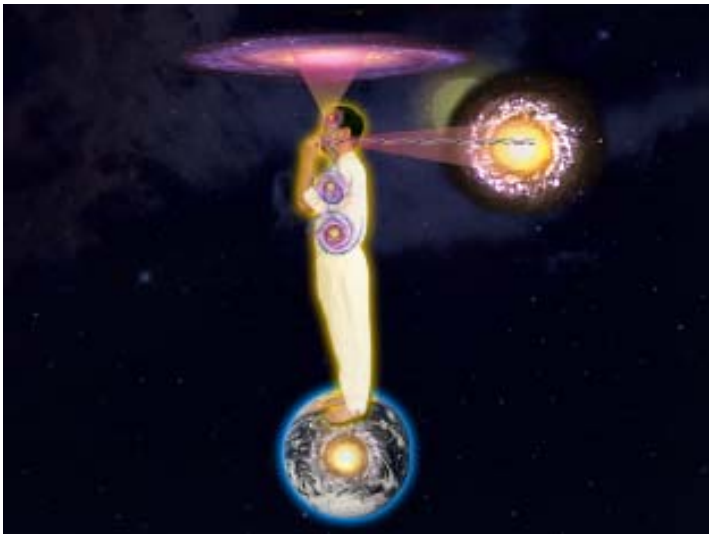


Fig. 6.25 *Touch the upper lips and feel the connection with the tongue and the front palate.*

Move down to the throat center and touch and focus on C-7, on the back of the neck. Focusing on the back of the neck and the throat center will activate the thyroid and parathyroid and thymus glands.

Fig. 6.26 *Move the fingers down to the throat center and feel them penetrate through the C-7 and to the universe behind.*

Every time you need more energy, recharge by reaching into the universe and bring the energy all the way down to the heart center.

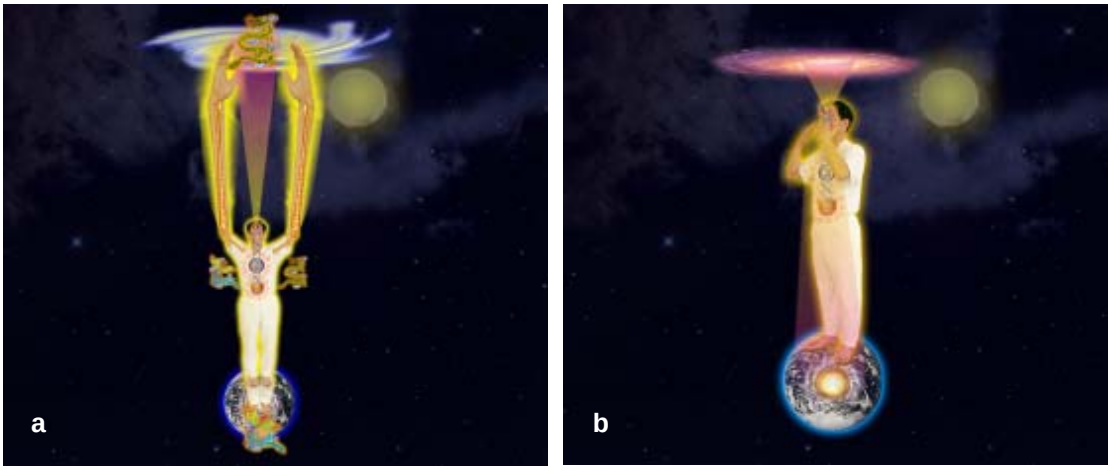


Fig. 6.27 *a. Recharge from the universe. Feel your bones and your arms and legs are hollow. Fill and compact them with Chi.*
b. Recharge and cut around to heart and to the armpits.
Recharge from the universe, pour Chi over the crown down through the body and lower your hands down to the heart center. Touch with the fingertips.

Middle Tan Tien and Heart Point

Touch the heart and focus on the back of the heart to T-5 and T-6. Feel the energy go all the way through to the universe and connect with the galaxy.

Move your hands all the way down to your heart center at the mid-sternum. Touch and focus on the point opposite the heart, T5/T6 on the spine. Imagine the fingers long; the Chi penetrates into your thymus gland. Light golden light penetrates into your thymus. Feel the Chi penetrate through your heart all the way through T5/T6 to the galaxy behind. In the Tan Tien and the universe also feel your fingers penetrate into the bones and bone marrow and spread out into your rib cage.

Fig. 6.28 *Opening Heart Point*

Move to the left and right, opening the heart center (like opening a book) which also activates the thymus gland and all of the lymphatic system, the immune system, the T-cells, B-cells, and the Killer cells. This will immensely help the immune system when you open the heart center.

Fig. 6.29 *The Heart Center is also connected to the thymus gland, which is the most important organ in immune system.*

We open the left and right sides of the heart.

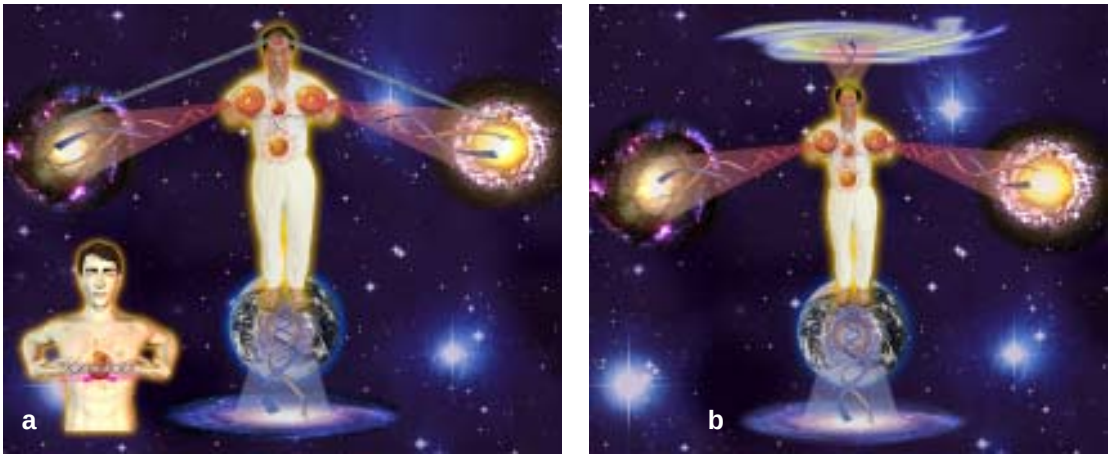


Fig. 6.30
a. Move your hands around under your armpits, extending the Chi like laser beams cutting open the middle Tan Tien. Pause under the armpits as you send the Chi into the center.
b. Be aware of the Tan Tien and the universe spiraling. With the spiraling, the Chi will become hot in the fingers. It will expand and penetrate out through the back of the head all the way to the universe behind.

Open the back, touch the back at T-5/T-6 and feel the energy come to the front.

Fig. 6.31
Continue to move your hands around to your back at T5/T6, touch, and send the Chi from back to front. Let the beam of Chi penetrate out through the heart center to the universe in front of you. Then move the hands back to the front, cutting as you go.

Open Solar Plexus Point

Move down now to the solar plexus, found between the sternum and navel. Touch the solar plexus and focus on the T-11 in the back. Feel your fingers penetrate all the way through. Just hold the Solar Sun here - think that a Sun is shining in your solar plexus and radiating all the light throughout the whole body. Just keep on holding and feel the Sun in the body. The more you can feel and see the Sun shining in the body, the more you can clear the sickness from the body. Sickness doesn't like light/sun energy, it likes darkness, wetness, and dampness.

Fig. 6.32 *a. Move your hands down to your solar plexus center between the sternum and the navel. Touch and focus on the point opposite T-11 on the spine. Make your fingers long; Chi penetrates into your solar plexus.*
b. Tan Tien and the universe: also feel your Chi fingers penetrate into the bone and bone marrow and spread out into your rib cage.

Open Navel Point

Come down now to the navel. Touch the navel and focus on the Door of Life (Ming Men) between L-3 and L-4.

Recharge with universal Chi, Tan Tien and universe. Again, raise your hands and charge with the Chi in the universe. Your hands are very big, very long. The bones are hollow and compacted with compressed universal Chi. Scoop the Chi from above and guide it down. Pour all the way down, down, down, down to the navel. Touch the navel, and focus on the Door of Life opposite, on the spine between L2/L3. Touch and feel the Chi penetrate to the Door of Life. Feel the Chi penetrate through to the back and out to the universe behind.

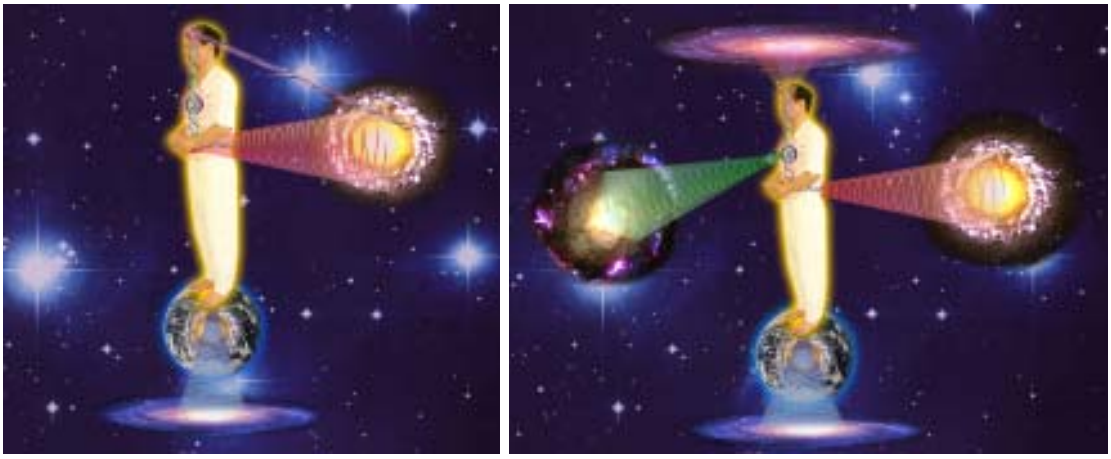


Fig. 6.33 *Tan Tien and Universe*

Feel like there is a laser beam cutting open the left and right sides. Begin at the navel and slowly circle all the way back to the Door of Life; all the while the energy is cutting like a laser and opening this area.

Open this Lower Tan Tien the same way as the Upper and Middle Tan Tiens. Tan Tien and universe - charge more Chi into your hands, and let them be like lasers cutting it open. Cut around to the sides, pause. The fingers of the left and right hand are very long, extended energetically inside. Cut and feel the energy penetrate into the center.

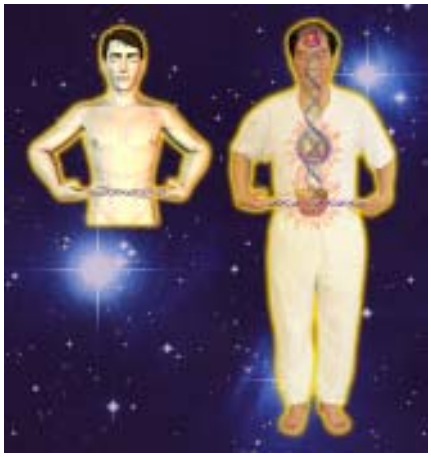


Fig. 6.34 *Open the Lower Tan Tien.*

Wherever you touch, focus on the opposite point and feel the energy flow. As you touch the Door of Life you will feel the energy go right through to the navel and into the universe.

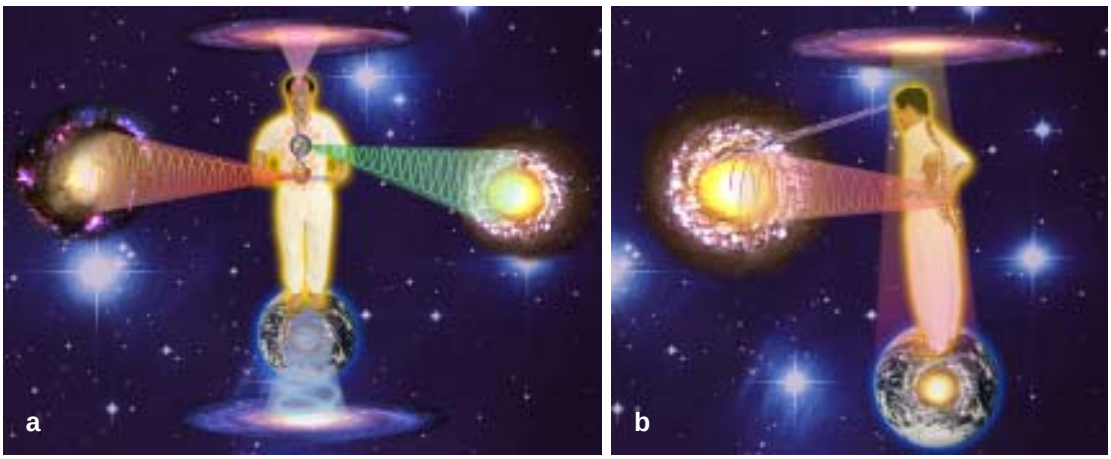


Fig. 6.35 *a.Tan Tien and Universe Feel more Chi.*
b. Continue cutting to the Door of Life. Touch and send the Chi from the Door of Life back to the navel and out to the universe in front.

When you open the orbit and the energy starts to move through it, the body gets penetrated with more and more energy. This process opens the body so that the energy can go through it. The body gets less dense.

When the body is too dense the Chi cannot go through it, light cannot go through it and that's when sickness can start to get into the body. Light and Chi must penetrate through our body. Doing this meditation you will get a lot of energy right through the body.

Fig. 6.36 *Open the Cosmic Orbit and your body gets less dense.*

Open Sexual Palace

Finally, come back down to the navel and go down to the pubic bone and focus on the back. Penetrate right through the sexual organs (ovaries/prostate and bladder area).

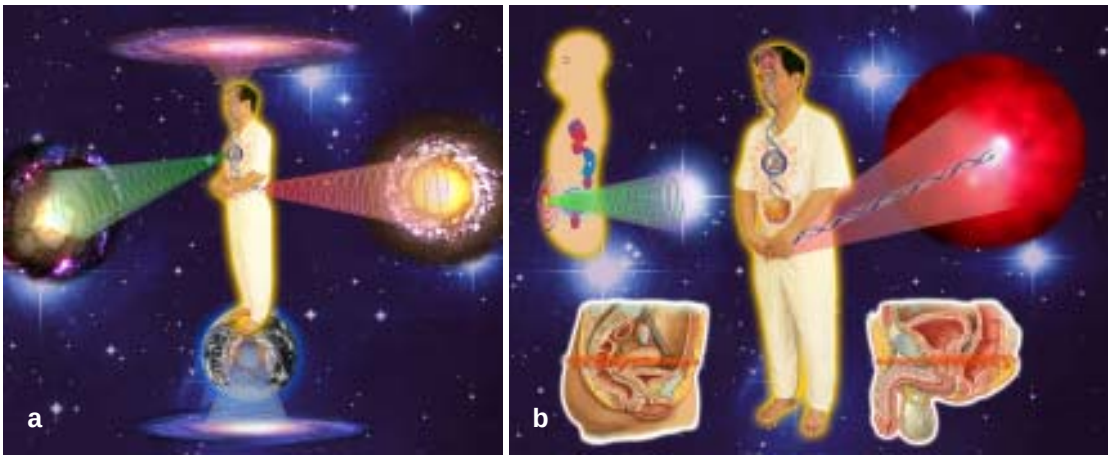


Fig. 6.37 *a. Move the hands back to the navel, extending the fingers and "cutting" the Tan Tien open as you go. Touch the navel, Tan Tien and the universe are spiraling. Feel more Chi, and feel the Tan Tien open.*
b. Touch the sexual center and let the Chi penetrate through to the sacrum. Touch the sacrum and let the Chi penetrate through to the sexual center.

Then we go into our bones. Begin by touching the hipbones and laugh inside the bones. Laugh inwardly and feel the laughing vibration in the bones. Feel your fingers are very long and penetrating right into your bones and bone marrow.

Fig. 6.38 *Receive Chi from the Tan Tien and the universe to the Sexual Center.*

Opening Sacrum

When we are young, this bone produces so many blood cells. The older we get, the more hollow the bones become and they slow diminish their production of blood cells. We lose a very big factory. In the Taoist practice we work to revive this factory. Funny, laughing, happy bones; smile to your bones, feel Chi going into the bones and activating the bone marrow.

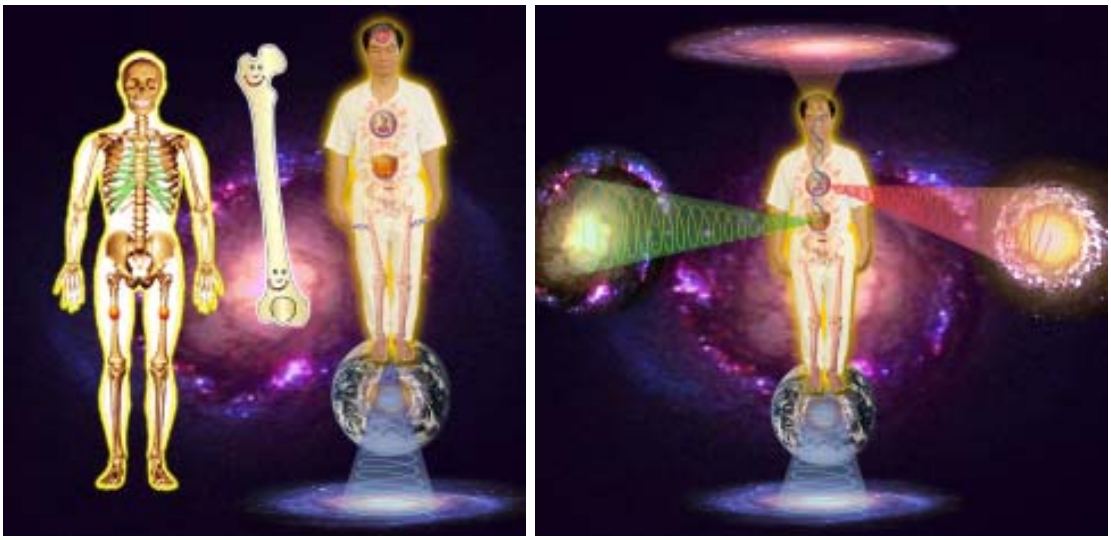


Fig. 6.39
Touch both side of the hipbones. Feel your fingers grow long.
Smile to the bones and feel funny and happy bones.
Touch the femur bones, Tan Tien and universe. Charge the fingers.
Feel the funny, happy, laughing vibration inside the bones and in the bone marrow.

When you have nothing to do, just touch your bones and smile and feel funny, happy, laughing bones.

Touch the sternum and laugh internally sending the vibration into the bones. Funny, happy, laughing bones. The marrow and thymus will activate - this is very important. In inner laughing the Taoists describe it as the sensation of hitting a drum and feeling the inner vibration- BOOMMMM! Inner vibration is the echo of the energy vibrating in the bones.

Squat down and feel the entire body sink down into the ground and gather the Earth energy. Touch your heels and feel the energy go up into the heel and raise your sacrum (straighten your legs). Feel this whole area open, smile to the Tan Tien and wiggle the tailbone side to side. This will open a lot of energy in this area.

Squat down again, collecting more earth Chi and pull it up into your bones, pulling it all the way up to your sacrum.

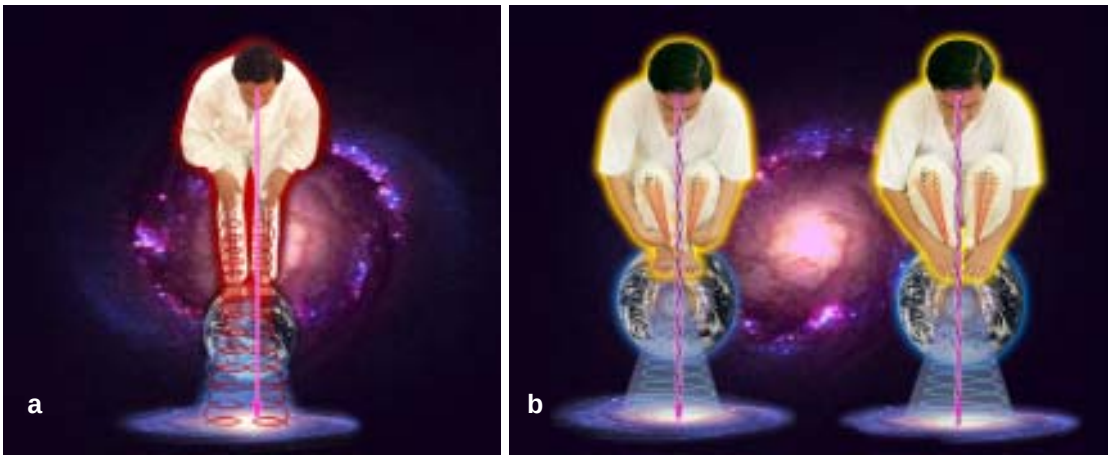


Fig. 6.40 *a. Now we are going to slowly lower the Chi down through the bones to the Earth. Move the hands down the legs as you bend down.*
b. Lower yourself all the way down to the ground and sit on your feet. Move the Chi with your hands down to your toes, down through the Earth and to the universe below.

Fig. 6.41 *Raise your sacrum up, keeping your hands at the toes. Smile to your Tan Tien.*

1. Lower down again. Lower the Chi down to the earth and the galaxy below.

2. Once more, raise your sacrum up, maintaining hand contact with your feet. Smile to your Tan Tien.

3. For the third time, lower down. Open your palms, gathering the Chi from the earth below. Gather and scoop up the Chi.

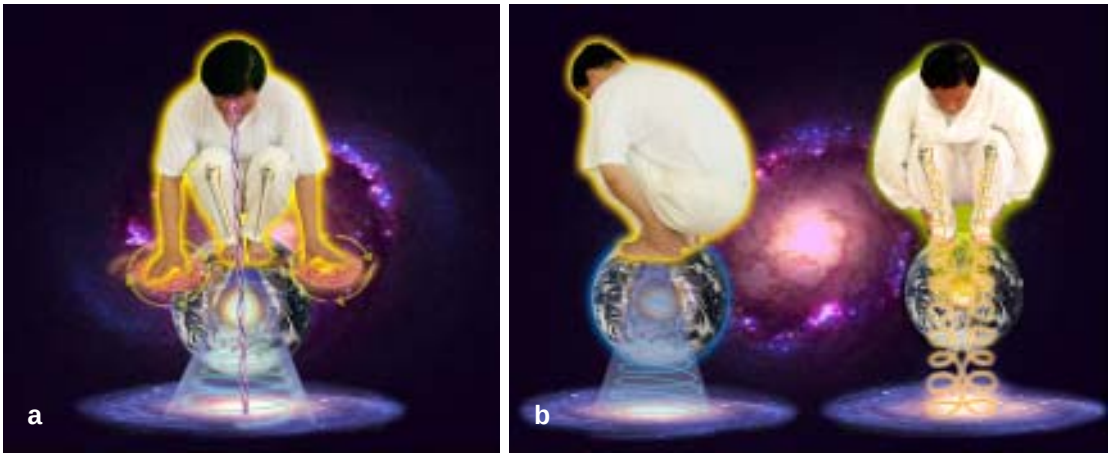


Fig. 6.42
a. Send Chi down to the earth and the galaxy below.
b. Touch your heels and feel your bones as you slowly rise up.
Fill your bones with Chi as you guide it up with your hands.

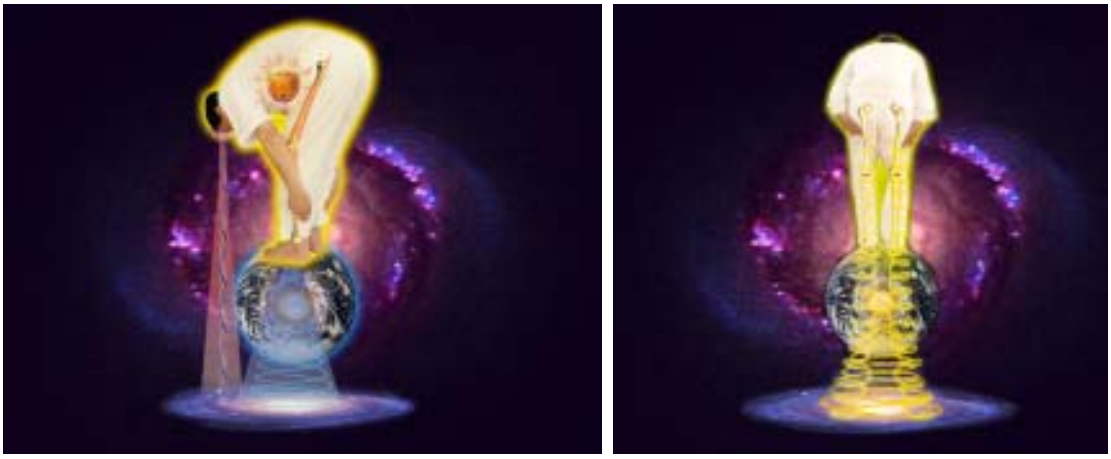


Fig. 6.43 *Fill the bones with Chi as you move your hands up.*

Now reverse. When you touch your coccyx, think about the ground. The energy will go into the bone and spinal cord and reach up to the crown.

Fig. 6.44 *Feel your bones, and fill them with Chi all the way up to your coccyx. Touch your coccyx, Tan Tien and the universe.*

Opening Governing Channel

Touch the sacrum and picture the sacrum grow. Make it bigger and bigger, extending it down to the universe.

Feel the eight holes breathing. The sacrum breathes the energy up into the spine.

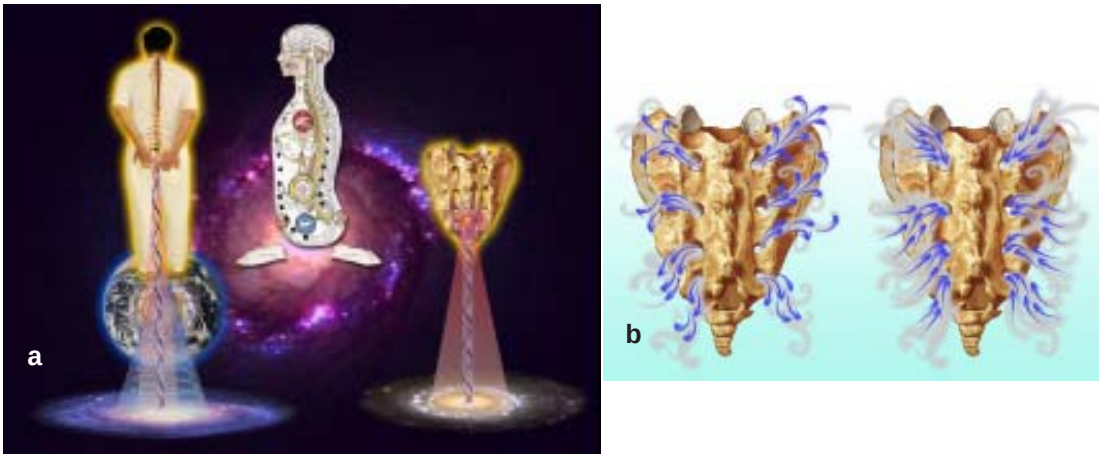
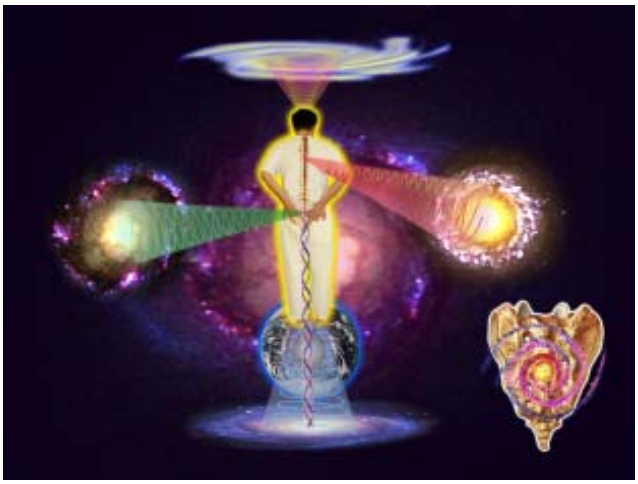


Fig. 6.45
a. Touch your Sacrum. *b. Eight Holes Breathing*

The sacrum bone controls all the bones and bone marrow production. Sometimes when I need to enhance my immune system I touch my sacrum and the sternum. Both of these bones are very important and help to activate the immune system and increase the white and red blood cells.

Feel the sacrum big and breathing. As always, when you need energy, become aware of the universe and Tan Tien.



Sacrum Breathing

Fig. 6.46 *Come up to the sacrum, Tan Tien and the universe. Feel the Chi rise up through the spine and spread out to the glands and organs and fill them with Chi.*

Now bring your hands up to the Door of Life (Ming Men) which is opposite the navel.

Fig. 6.47 *a. Come up to the Door of Life and through to the navel. Now you may sit down. b. Connect to the Tan Tien and the universe.*

Move up to C-7, opposite the throat center. Up to the base of the skull (Jade Pillow) which is opposite the mideyebrow.

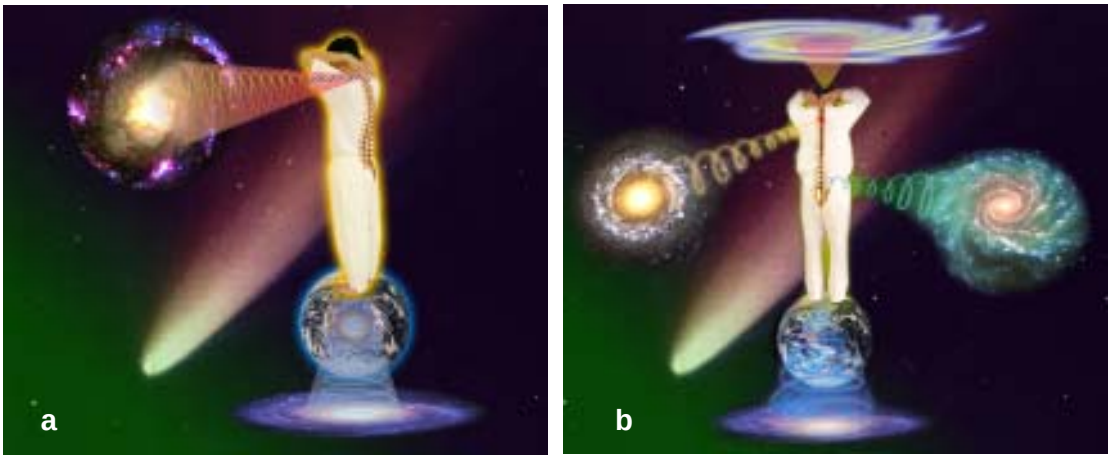


Fig. 6.48 *a. Touch the C-7 and feel the fingers penetrate through to the throat center.*
b. Fingers continue to touch the C-7 point, feel the three Tan Tiens and the universe spiraling.

Finally, go up to the crown. Feel the energy penetrate from the crown all the way down to the perineum. This can take a while.

All you have to do is think that your fingers are ***Long***. It's simple. You practice it, you have it! It's your aura that is extending and penetrating deep within your body all the way to the middle of the perineum.

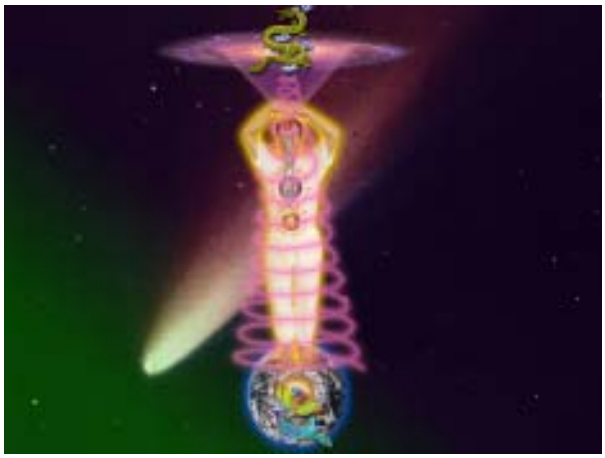


Fig. 6.49 *Move the fingers to touch the crown and feel them penetrate through the body down to the perineum.*

Gather the energy and bring it back down to the Tan Tien. Just use the mind. Extend it down to the Earth and gather the energy. Go back up and extend up to the universe and gather more energy from the universe. Come back down to the mideyebrow and bring more energy into the mideyebrow.

Fig. 6.50 *Gather the Energy.*

Keep on moving the energy. When we move it to a certain level, it gets faster and faster (spiral speed).

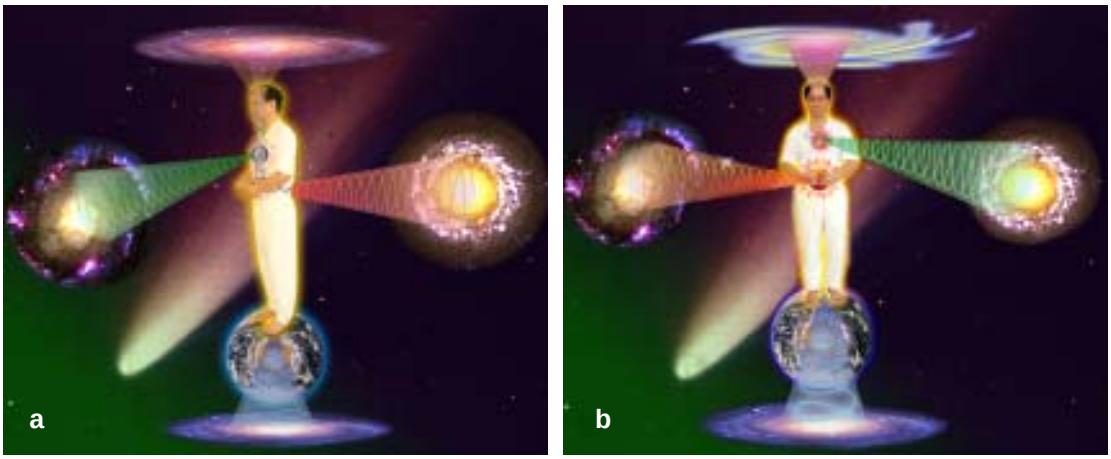


Fig. 6.51 *a. Touch the navel and feel the Chi all sink down to the Lower Tan Tien, start to spiral, faster and faster.*
b. Feel the Tan Tien and the universe all spiraling at a fast speed.

The spiraling is at a rate of 30,000 – 60,000 miles per hour. When you move so fast, you become very still. Just as the Earth is spiraling and spinning so fast, yet it feels still.

Fig. 6.52 *Sit down and start to move the orbit at fast speed, from 1,000 rotations per minute, to 10,000 per minute and up to 30,000 per minute.*

When you move the energy slowly, you will become aware of the spinal cord and all of the nervous system connected to the internal organs.

In the beginning, when we activate the energy, it will spin in this way.

Fig. 6.53 *Become aware of the spinal cord and all of the nervous system connected to the internal organs.*

Microcosmic Orbit

The Microcosmic Orbit Meditation awakens, circulates and directs Chi through the 'Governing Channel', which ascends from the base of the spine up to the head and the 'Functional' or 'Conception Channel', which runs from the tip of the tongue down the middle of the torso to the perineum. Dedicated practice of this ancient esoteric method eliminates stress and nervous tension, energizes the internal organs, restores health to damaged tissue and builds a strong sense of personal well being.

The Microcosmic Orbit is the foundation of Cosmic Healing Chi Kung practice. Each new practice is dependent upon the high quality of your meditations and your ability to perfect the Microcosmic Orbit. In order to master Cosmic Chi Kung, one must practice meditation daily. The meditations in the Microcosmic Orbit also strengthen the 'Original Chi' and teach you the basics of circulating Chi. They allow the palms, the soles of the feet, the mideyebrow point and the crown to open. These specific locations are the major points where energy can be absorbed, condensed and transformed into fresh new life force.

The following steps are a summary of the Basic Microcosmic Orbit Meditation to be utilized in conjunction while doing the Cosmic Orbit Meditation:

1. Be aware of the crown and the North Star; feel the crown and heart being pulled toward North Star.
2. Be aware the soles of the feet and the bones growing down into the ground; feel the soles of the feet breathing. The Chi from earth and galaxy below enter into the soles at the bubbling springs points and travel up into your bones.
3. Be aware the spin in the earth, which affects every cell in the body, spiraling at 1,000 mile rotations per hour and 37,000 mile rotations per hour around the sun, and feel this spiral inside you.
4. Focus on the Lower Tan Tien (the area where the Original Chi is stored, between the navel, kidneys and sexual organs). Feel the pulsing in this area, observe whether this area feels tense or relaxed, cool or warm, expansive or contracting. Notice any sensations of Chi: tingling, heat, expansiveness, pulsing, electric or magnetic sensations. Allow these to grow and expand. Then let this energy flow out to the Navel Center.
5. Use your intention (mind-eye-heart power) to spiral in the navel point, guiding and moving the Chi. Let the energy flow down to the sexual center (Ovarian or Sperm Palace).
6. Move the energy from the sexual center to the perineum and down to the soles of the feet.
7. Draw the energy up from the soles to the perineum and to the sacrum.
8. Draw the energy up from the sacrum to the Door of Life (the point in the spine opposite the navel).
9. Draw the energy up to the mid-spine point (the T-11 vertebrae).
10. Draw the energy up to the base of the skull (Jade Pillow).
11. Draw the energy up to the crown.
12. Move the energy down from the crown to the mideyebrow point.
13. Touch the tip of your tongue to your upper palate, press and release a few times; then lightly touch the palate, sensing the electric or tingling feeling in the tip of the tongue. Move the energy down from the mideyebrow to where the tip of your tongue and palate meet.
14. Move the energy down from the palate through your tongue to the throat center.
15. Move the energy down from the throat to the heart center.
16. Bring the energy down from the heart to the solar plexus and feel a small sun shining out.
17. Bring the energy back down to the navel.
18. Continue to circulate your energy through this entire sequence of points, at least nine times. Once the pathways are open, you can let your energy flow continuously like a river of energy without needing to stop at each point.
19. Conclude when you wish by collecting energy at the navel.

Men: Cover your navel with both palms, left hand over right. Collect and mentally spiral the energy outward from the navel 36 times clockwise, and then inward 24 times counterclockwise.

Women: Cover your navel with both palms, right hand over left. Collect and mentally spiral the energy outward from the navel 36 times counterclockwise, and then inward 24 times clockwise. *For details of this practice see the book, "Awaken Healing Light", by Mantak Chia.*

Heal by using Positive Images and Affirmations.
We can create Positive Images of Ourselves.

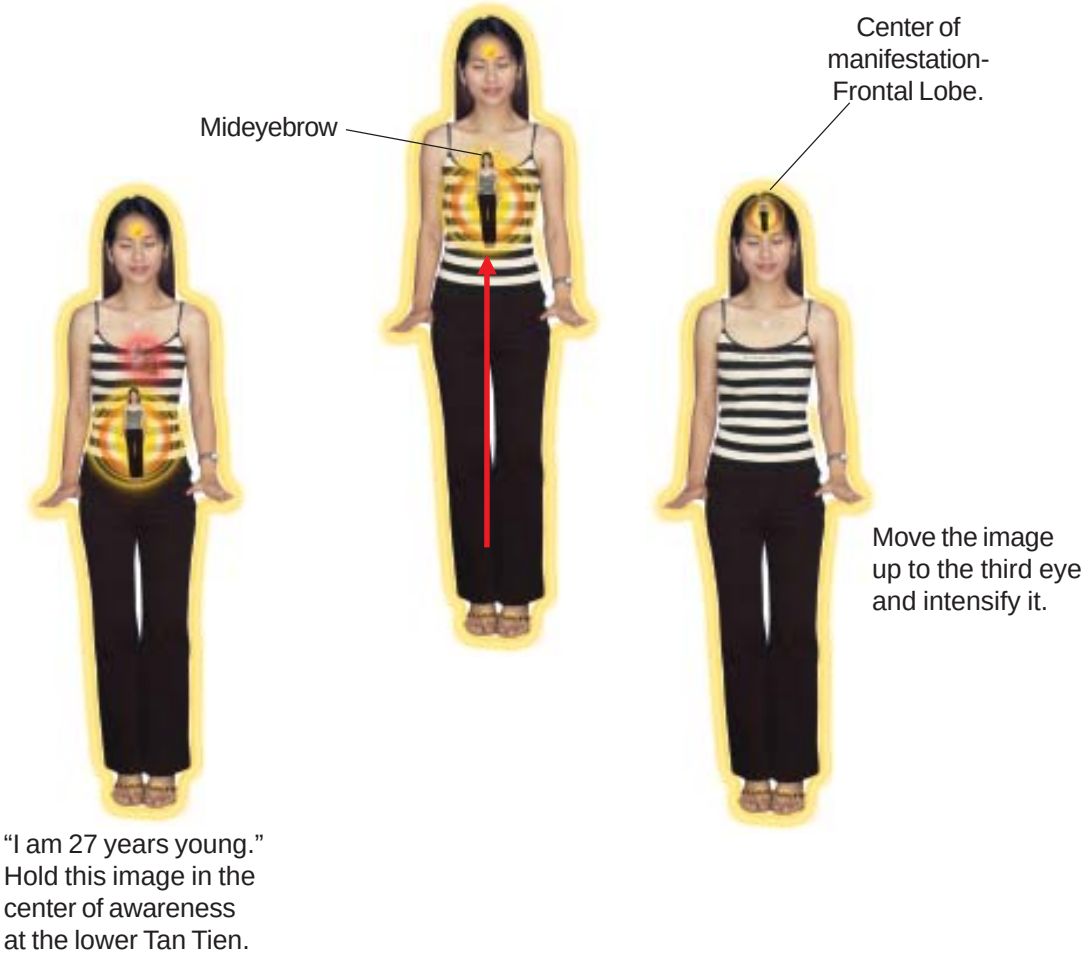


Fig. 6.54 *Positive Images*

Affirm Positive Emotions within us and make Positive Decisions about Ourselves.

Affirm: "I let go of old emotional experiences, seeing them for what they are, and fill myself with radiant joy, love, and compassion."
Affirm: " I make an agreement with myself to enjoy the best of life and to live to my fullest abundant potential."

Fig. 6.55 *Positive Emotions*

I send these Thoughts Out to the Universe to be manifested Here on Earth.

Send the image and question out into the universe and all six directions. The affirmation and answer will multiply and return to be manifested for you.

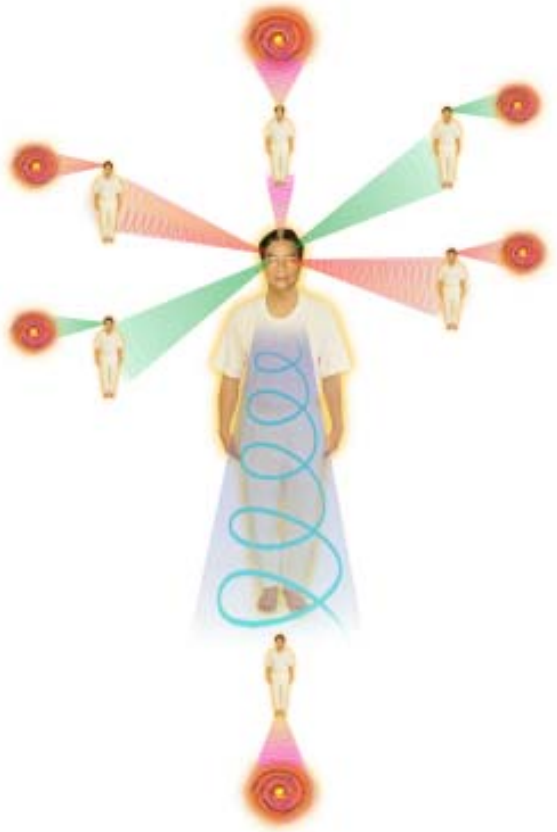


Fig. 6.56 *Sending out manifestations to the Universe.*

Meditation Preparation for Cosmic Inner Smile

Involves Emptying the Mind and Three Minds into One Mind

Cosmic Inner Smile
Heart • Spleen • Lungs • Kidneys • Sexual Organs • Liver • Heart Again

We first need to empty the mind to the Tan Tien, the Second Brain.

During any meditation, we keep emptying the mind down to the Tan Tien and the organs. By emptying the mind, we transfer energy from the mind to the organs.

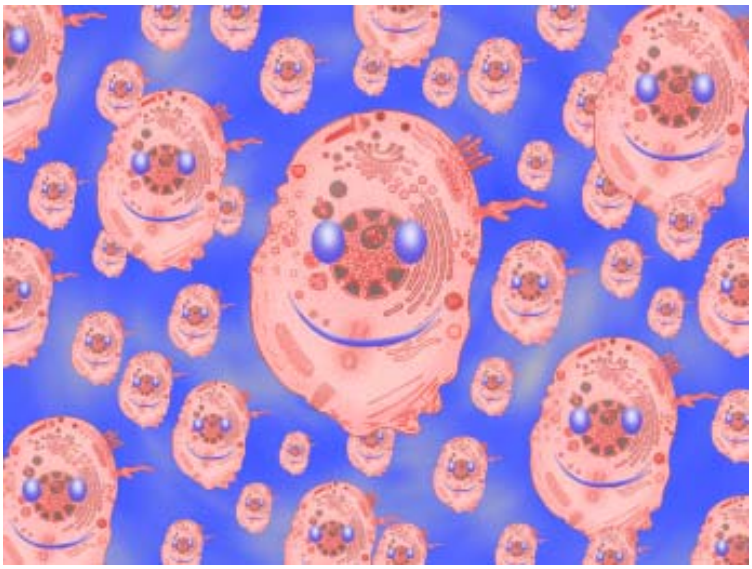


Fig. 6.57 *Charge the organs with Chi through smiling to the organs and the cells.*

Connect with the Heart and the Small Intestine

The heart refines the spirit. It is a natural governor and exerts authority on other organs.

1. Smile, relax, and empty the mind to the heart and the small intestine.
   Put the hands over the heart and smile. Feel the heart filled with love and joyous energy. Feel the radiant heart.

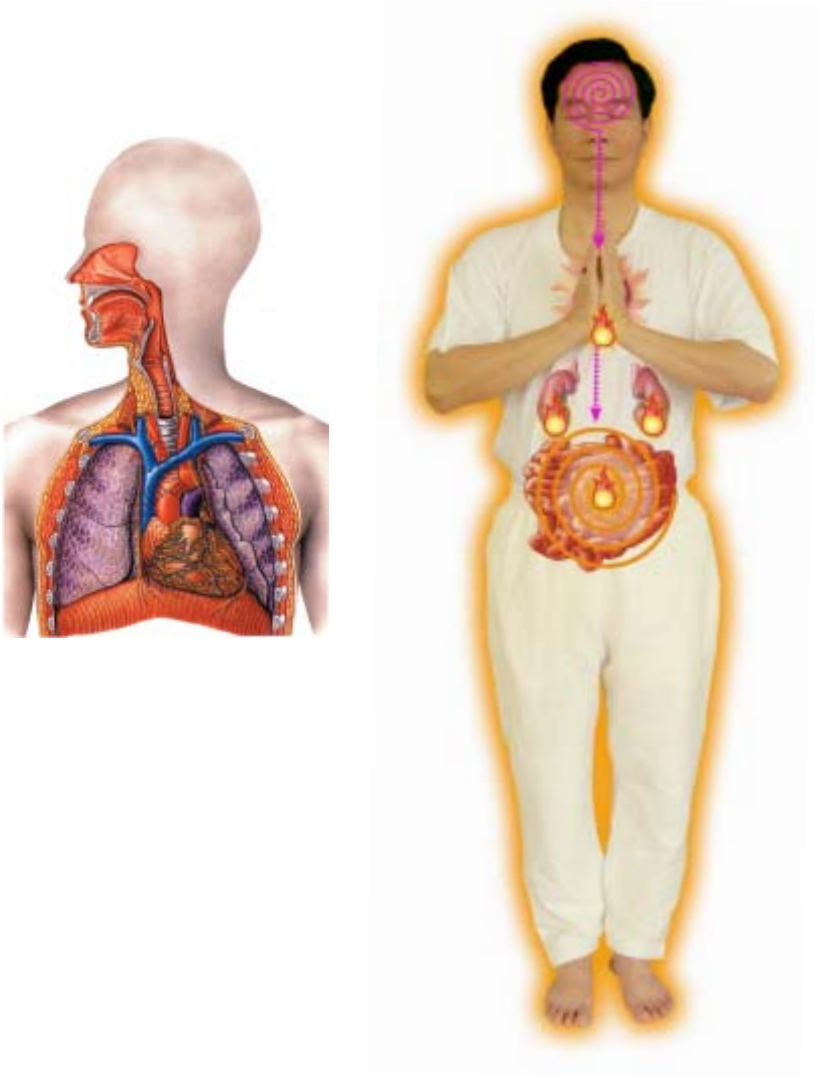
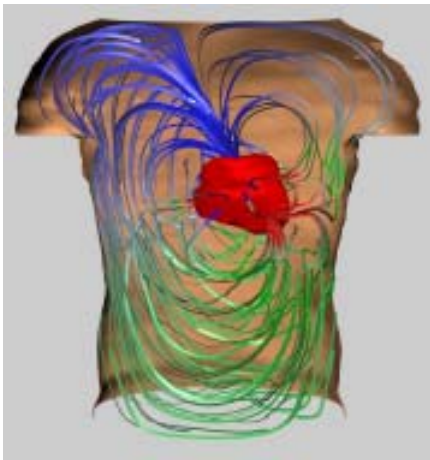


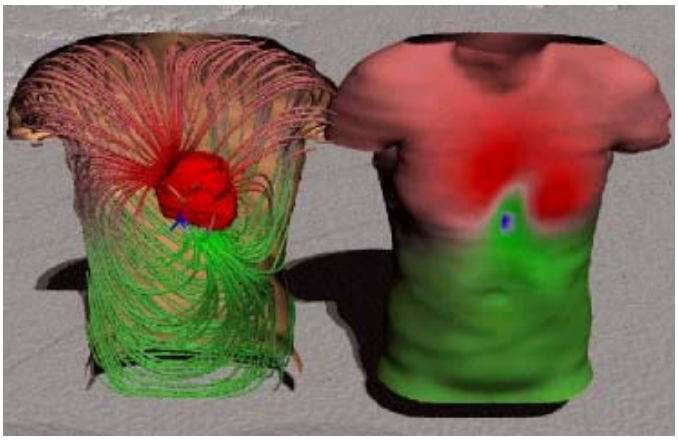
Fig. 6.58 *The heart and the small intestine can store and transform Chi. Keep the Tan Tien spiraling.*

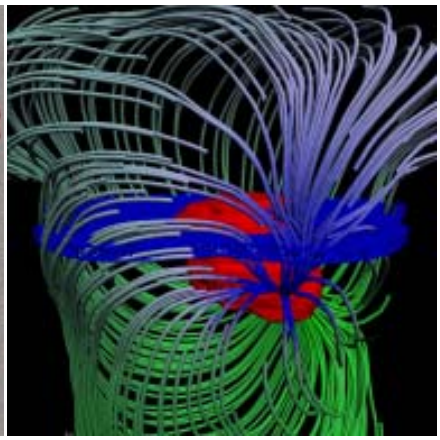


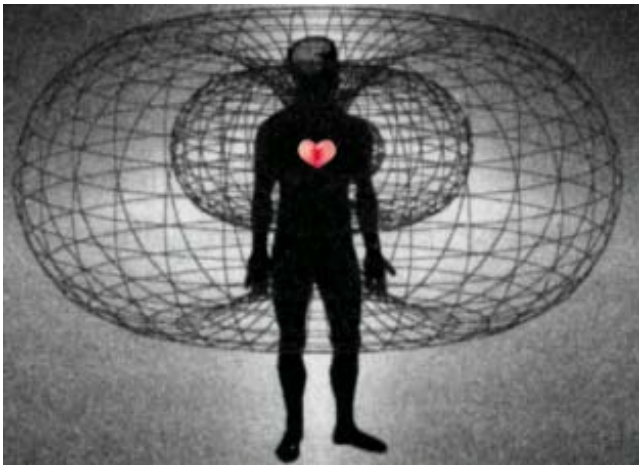
"These images show the use of ribbons to model the current paths inside the thorax. The colors along the ribbons indicate potential (red indicates positive, blue indicates negative)" and are from the web site www.sci.utah.edu/sci_images.

The electricity manifests as an electrical field within and around the body, subtle but detectable.

Electric Current near the Heart







Recent research has revealed that the heart generates a strong electromagnetic field within and around the body. The electrical field is shaped like a donut, or torus, similar to the biomagnetic field of the human aura, and the geomagnetic field of the Earth.

Fig. 6.59 *Schematic of the Heart's Magnetic Field, the Radiant Heart*

2. Smile to the Red and White Blood Cells.

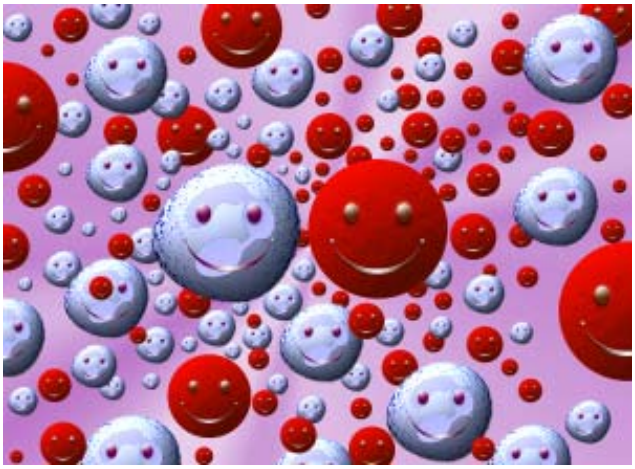


Fig. 6.60 *Red and White Cells*

3. Chi transformed in the heart and the small intestine. Let the Chi raises up to the universe and multiply.

Fig. 6.61 *Charge the Brain with Transformed Chi from the Heart.*

Cosmic Inner Smile Practice

Second Brain - Essence of the Inner Smile

1. Activate the Consciousness (Heart Mind)

Smile to the heart and make it feel soft.
Feel love, joy, happiness and compassion.
Feel the heart spiral and radiate.

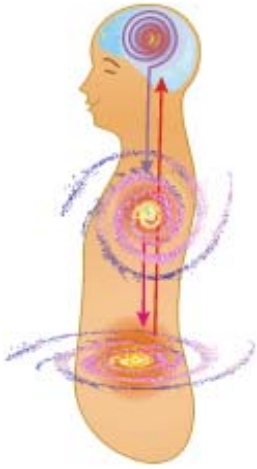


Fig. 6.62 *Feel the heart spiral.*

2. Primordial Force Lowers the Senses to the Tan Tien

Bring the senses down to the Tan Tien, sense the dark, deep and vast inner universe within us. Smile and drop down, let go and sense your inner universe as being vast, deep and dark. Feel the vastness of the outer universe and the primordial force all around us.

Fig. 6.63 *Be Immersed in Dark Empty Space of the Universe.*

3. Inner Smile Originates from Self-love Towards Our Own Body.

The secret of true love is to be lovable.

To be lovable is: To possess a smile that says “I love you with a heart filled with joy and gratitude”.

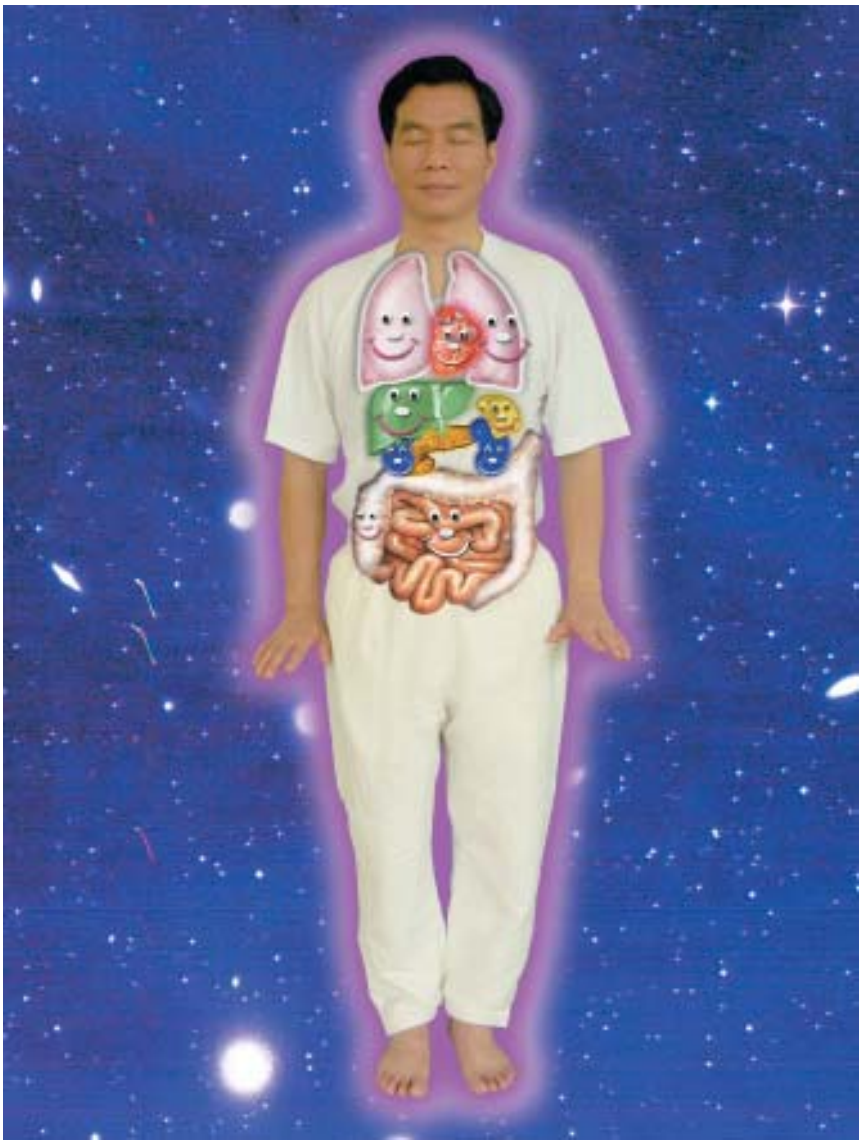


Fig. 6.64 *Self-Love towards our own Body*

Prepare to connect with the Universe

4. Leave the hands over the heart and start to spiral as before. Direct your mind to the Tan Tien and the universe. Start to spiral in the Tan Tien, the heart, the brain and the crown.

Fig. 6.65 *Heart can generate 37 layers of magnetic field.*

Connect with the Universe and charged with the Universal Energy

5. Be aware of the universe above you, below you, in front of and behind you, all of them spiraling. Feel the universe charge your Tan Tien, and the Tan Tien charges your heart and small intestine.

Fig. 6.66 *Connect with the Universe and Become Charged with the Universal Energy.*

Connect with the Spleen, the Stomach and the Pancreas

1. Smile, relax, empty the mind down to the stomach, the spleen and the pancreas. The spleen and stomach are responsible for the storehouses and granaries of the body. The five tastes stem from these organs.

Fig. 6.67 *Connect with the Spleen, the Stomach and the Pancreas.*

Smile Down and charge the Spleen with Loving Energy

2. Cover the spleen with your hands. Smile to the spleen, pancreas and stomach. Feel openness and fairness there, and breathe bright yellow openness and fairness energy into them.

Fig. 6.68 *Smile Down and Charge the Spleen with a Loving Energy.*

Spiraling at the Three Tan Tiens

3. Leave the hands over the spleen and start to spiral as before. Direct your mind to the Tan Tien and the universe. Start to spiral in the Tan Tien until the heart, the brain and the crown all start to spiral.

Fig. 6.69 *Spiraling at the Three Tan Tiens*

Charge with Universal Energy

4. Be aware of the universe above you, below you, in front of and behind you, all of them spiraling and blending with the chi that you sent up.
   Feel the universe charge your Tan Tien, and the Tan Tien charge your spleen, pancreas and stomach.

Fig. 6.70 *Charge with Universal Energy*

Connect with the Lungs and the Large Intestine

The lungs hold the office of minister and chancellor, the regulation of the life-extending network to other organs.

1. Relax, smile, empty the mind down to the lungs and the large intestine.

Fig. 6.71 *Connect with the Lungs and the Large Intestine.*

Transform the Chi in the Lungs with Smile. Let the Chi rise to charge the Brain.

2. With the Mind empty, smile to the lungs allowing the Chi to transform in the lungs and the large intestine transforming the Chi from the lungs and large intestine.

Fig. 6.72 *Transform the Chi in the Lungs with Smiling energy and let the Chi rise to charge the Brain.*

Prepare to connect with the Universe

3. Maintain the hands and lungs connection, and direct your mind to the Tan Tien and the Universe. Start to spiral in the Tan Tien until the heart, brain and the crown start to spiral.

Fig. 6.73 *Prepare to Connect with the Universe.*

Let the Universal Energy charge the Lungs and the Large Intestine

Be aware of the universes above you, below you, in front of and behind you; all of them are spiraling. Feel the universe charge your Tan Tien, and the Tan Tien charge your lungs and large intestine.

Fig. 6.74 *Let the Universal Energy charge the Lungs and the Large Intestine.*

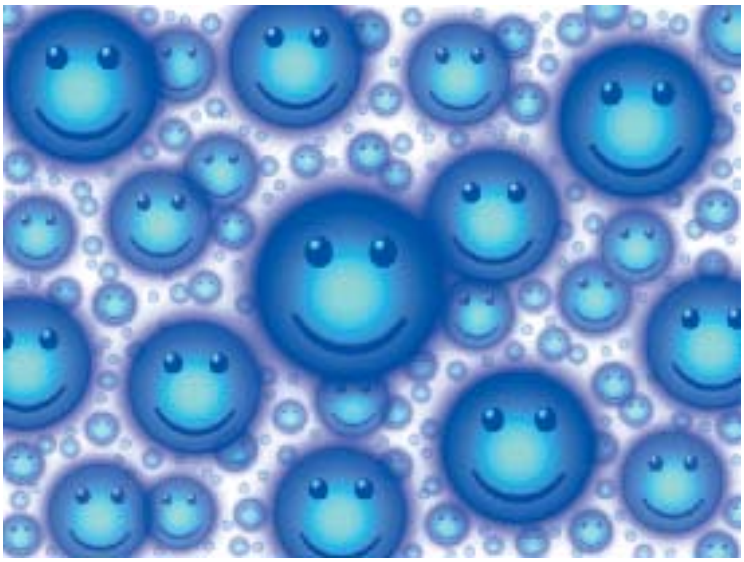


Fig. 6.75 *Let Kidney Cells feel the Loving Smile.*

Maintain Mind Connection with the Tan Tien

The Kidneys represent strong will, strong purpose, clear ideas and good feeling.

1. Smile, relax, and empty the mind down to the kidneys.
2. Put the hands over the kidneys. Fill the organs with love and compassion.
3. Maintain the connection between the hands and the kidneys, and direct your mind to the Tan Tien and the universe. Start to spiral in the Tan Tien until the heart, brain and the crown start to spiral.

Fig. 6.76 *Maintain Mind connection with the Tan Tien.*

Connect with Universal Energy to Charge the Kidneys

4. Be aware of the universe above you, below you, in front of and behind you, all of them are spiraling.
5. Feel the universe charge your Tan Tien, and the Tan Tien charges your kidneys and bladder.

Fig. 6.77 *Connect with Universal Energy to charge the Kidneys.*

Connect with your Sexual Organs

1. Smile, relax, and empty the mind down to the sexual organs.
2. Put hands over the sexual organs. Fill the organs with love and compassion.

Fig. 6.78 *Connect with your Sexual Organs.*

Smile to the Sexual Cells

Let the Sexual Organs be engulfed in the Light Pink. Let the Brain be charged with chi from the Sexual Organs.

Fig. 6.79 *Smile to the Sexual Cells.*

Breathe Gently to the Sexual Organs

3. Maintain the hands cover over the pelvic area the sexual center. Be aware of the Tan Tien. Start to spiral in the Tan Tien till the heart, the brain and the crown start to spiral together.

Fig. 6.80 *Breathe gently to the Sexual Organs.*

Charge the Sexual Organs with the Universal Energy

4. Be aware of the universe above you, below you, in front of and behind you; all of them are spiraling.
5. Feel the universe charging your Tan Tien, and the Tan Tien charging your sexual organs.

Fig. 6.81 *Charge the Sexual Organs with the Universal Energy.*

Connect with the Liver and the Gall Bladder

1. Empty the mind to the liver and the gall bladder.
2. Cover the liver with your hands. Smile to the liver. Feel kindness and generosity, and breathe bright green kindness and generosity energy into the liver and the gall bladder. Let the liver be filled with the green, warm energy of the forest.

Fig. 6.82 *Smile to the Liver Cells.*

Spiraling the Three Tan Tiens

3. Keep the hands over the liver. Be aware of the Tan Tien. Start to spiral in the Tan Tien until the heart, brain and the crown start to spiral together.
   The liver holds the office of general of the armed forces; the liver assess circumstances and draws conception of plans.

Fig. 6.83 *Spiraling the Three Tan Tiens*

Charge the Liver and the Brain with the Universal Energy

4. Send the Chi up to be multiplied. Be aware of the universe above you, below you, in front of and behind you; all of them are spiraling and multiplying with your Chi.
5. Start to feel the universe charge your Tan Tien, and the Tan Tien charging your liver and gall bladder.

Fig. 6.84 *Charge the Liver and the Brain with the Universal Energy.*

Chapter 7
Freedom, Harmony & Balance in the Tao

Goal of the Tao is to achieve Freedom.

Nobody can control our spirit and mind if we do not allow them to. The teachings of the Tao help us to attain inner freedom and mental resiliency.

No one outside ourselves can rule us inwardly and control our soul and spirit. When we know this, we become free.

Certain religious systems try to rule over us inwardly, attempting to control our soul and spirit. Understanding spiritual, emotional and physical independence gives inner freedom and the ability to choose how to direct our own energy.

Freedom is achieved through Internal Harmony.

Freedom is achieved through internal harmony or balance. When we have inner motivation, we have power. But upon losing the motivation, our power is gone as well. If we have internal harmony and balance we have internal power. People will want to listen to us just because they are drawn to us.

Balance is very important in the Tao. Virtue is power. If you are filled with love and kindness, people will respect you. Harmony and balance within will create durable virtuous energy.

Harmony is a power. Harmony is a force. The force is not directly produced by external competitions. Harmony comes from clarity and spiritual achievement. Harmony is generated from the spiritual growth that comes from understanding and balancing our own energy within.

Fig. 7.1 *Internal harmony comes from understanding and balancing our energy within.*

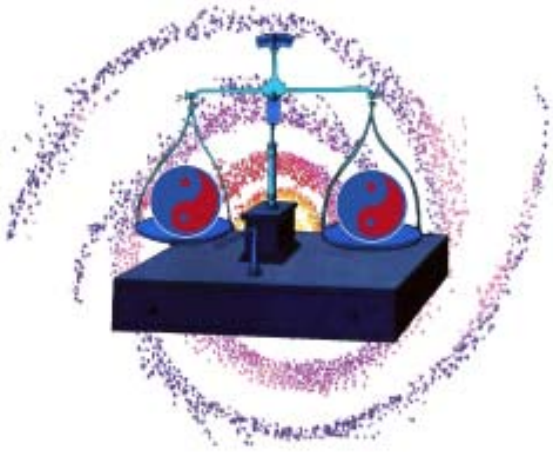


Fig. 7.2 *Harmony is at the core of the universe.*

Harmony is the key element of life for each individual, society and humankind. Harmony in nature is the most nutritious and supportive condition for human life.

Those who are in harmony with themselves will not disturb the harmony existing in nature.

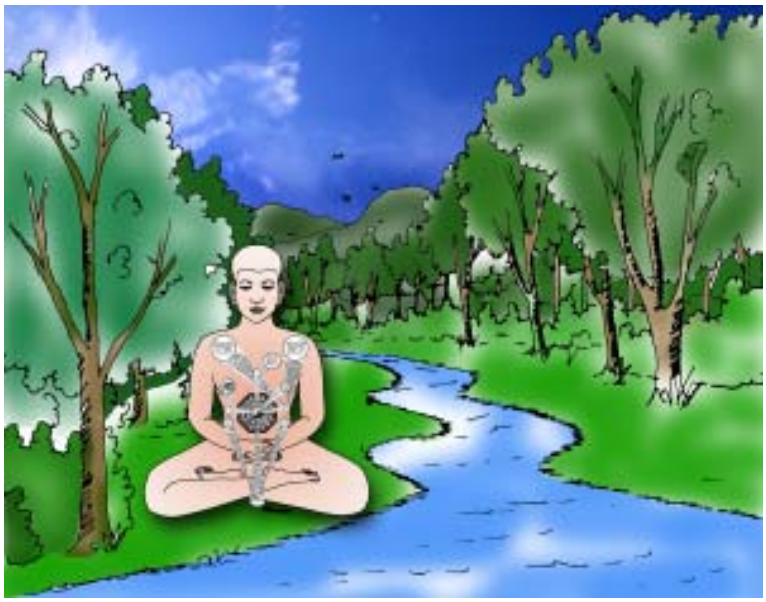


Fig. 7.3 *Harmony in nature nourishes our internal harmony.*

However, when people are not in harmony, they will destroy the harmony in nature as well. If you do not find internal harmony, you not only make trouble for yourself, but anything you create could harm other people.

Fig. 7.4 *Internal disharmony disrupts our environment.*

The people who seek power and build it for themselves take advantage of others by violence or force.

Life itself is a set of conflicts. To diminish conflicts, there is a middle point that can be acceptable to both sides. This is called harmony. Harmony is supportive and helpful.

A Win-Win Attitude

Another important practice to achieve freedom, harmony and balance is to work towards Win - Win situations. In that case there is a balance in yin and yang. Both parties gain (yang) and most likely both parties give in a little (yin). They balance each other. In win - win situations both parties are happy. If one is the winner and the other the loser, the winner is happy, the loser unhappy. That does not create freedom.

Yin pushes yang and yang pushes yin, no one loses and no one wins; this will continue for a billion years. We can practice the win-win attitude everyday of our lives; nobody wins and nobody loses.

Fig. 7.5 *Yin and Yang*

Internal harmony is also based on understanding one's own energy pattern and how to move it. Harmony is based on our understanding the nature of things as they are and not always as we would like them to be. If you want to know the truth, it is essential to forget about right and wrong. The conflict of right and wrong is the sickness of the human mind. Harmony comes from understanding oneself, one's own mind, body and energy within. Words from a Tao Master: "If you want to know the truth, forget about right and wrong. For the conflict between right and wrong is the sickness of the human mind." In other words, find your center in your Lower Tan Tien and the answer will come. Do not rely too heavily on the intellectual mind which always tries to see things as right and wrong.

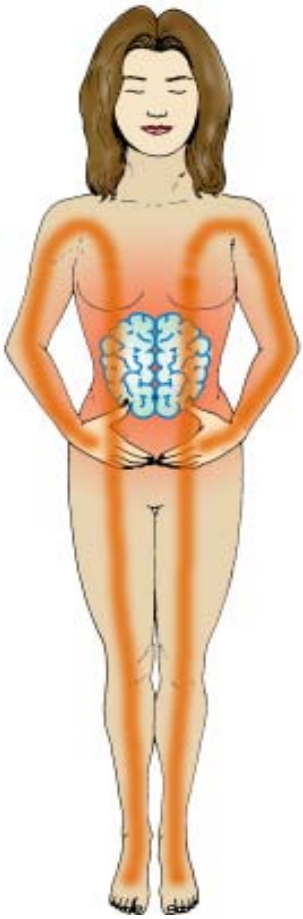


Fig. 7.6 *Harmony is based on our internal understanding.*

We can progress towards harmony within ourselves and in our surroundings through the cosmic inner smile, cosmic healing sounds and cosmic orbit practice.

Fig. 7.7 *Universal Tao practice helps us to achieve inner harmony.*

Tao Teachings

- He who practices the Tao does less and less everyday until the reaches the point where he does nothing. He does nothing, yet there is nothing that is not done!
  —Chuang Tzu

- One who knows when he has enough, is rich.
- Only one who empties himself finds fulfillment and completion.
- What you desire and what you fear are within yourself.

Relationship Is about achieving Harmony between Yin and Yang.

A relationship is just like the Tai Chi diagram, which has two equal sides. Each takes the specific expression of yin or yang according to its nature.

Fig. 7.8 *Yin within Yang and Yang within Yin*

When the energies are in balance with each other, a positive condition will result.

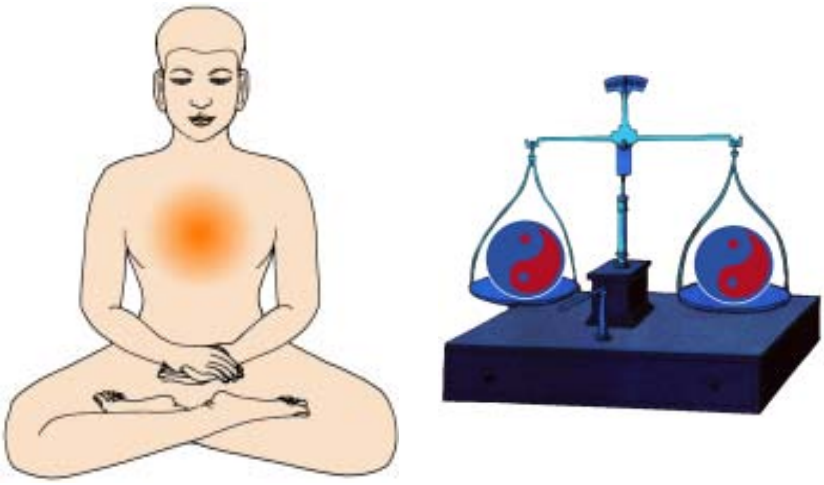


Fig. 7.9 *Balance is the way for a harmonious relationship.*

When there is imbalance in the amount of either yin or yang, usually a negative condition will result.

Fig. 7.10 *Imbalance creates disharmony and discomfort.*

Harmony in groups or in relationships involves creating a healthy point of energy linkage.

When the point of linkage is healthy and helpful, it brings balance and harmony.

The two different forces do not fight against each other. The two different forces, being interdependent, can work together for mutual help.

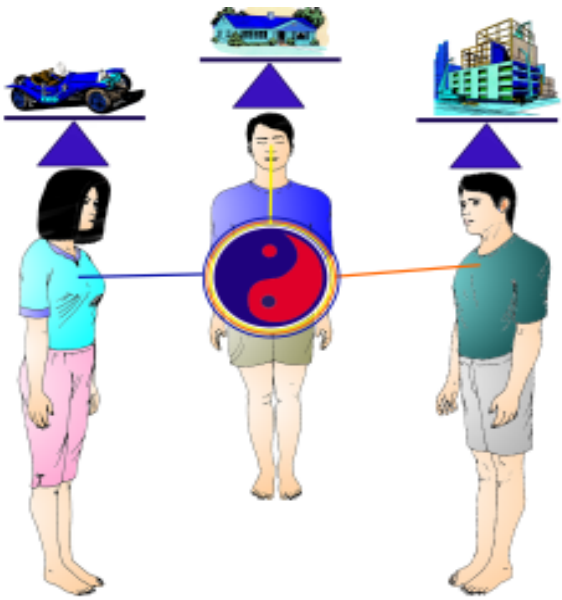


Fig. 7.11 *Balance of healthy energy creates a nurturing linkage in human relationships.*

Scientific Research on Universal Tao Practices

Dr.Jessum's Study focuses on how Universal Tao Practices impact the Brain's Abilities.

EEG, Meditation and Healing Tao by Rhonda Jessum, Ph.D.
Case Study of Master Mantak Chia May 1997

Fig. 7.12 *Dr. Rhonda Jessum presenting her findings.*

Study was done through Measuring the Brainwaves

Beta (15-18 Hertz)

Alpha (8-10 Hertz)

Theta (4-7 Hertz)

There are three levels of Brainwave Frequencies.

Beta (15-18 Hertz)

Beta is the highest activity level of frequency

Associated with external, narrow, focused attention, positive and uplifting emotions, increased physical arousal. When we sustain these too much and for too long, this state will increase stress and high blood pressure.

Fig. 7.13 *Beta (15-18 Hertz)*

Alpha (8-10 Hertz)

Alpha is present in the meditative higher consciousness state of mind. It is associated with meditative states in general and the experience of deep calmness and surrender. Also present when a person is absorbed in imagery, watching TV, a happy comedy, at home relaxing or drinking beer.

Fig. 7.14 *Alpha (8-10 Hertz)*

Theta State (4-7 Hertz)

Theta is a Trance-like State.

State just before falling asleep or waking up. Related to the state of shaman journeying and the trance-like state.

Fig. 7.15 *Theta State (4-7 Hertz)*

Study measures brainwave frequencies during four practices.

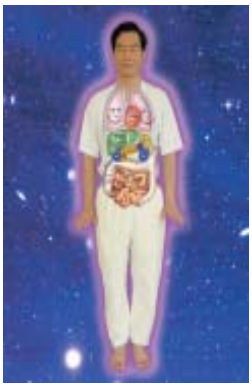


Fig. 7.16
Cosmic Inner Smile

Fig. 7.17
Six Healing Sounds

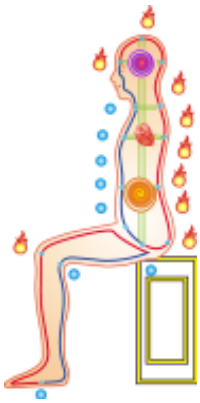


Fig. 7.18
Cosmic Orbit

Fig. 7.19
Orgasmic Upward Draw

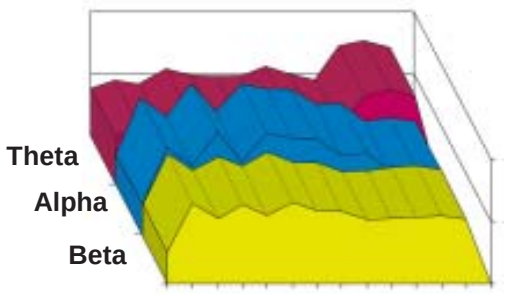


Fig. 7.20 *High Level of Alpha Waves Present during the Cosmic Inner Smile Meditation*

Fig. 7.21 *Ultraslow Brain potentials measurement while in Vienna.*

Master Chia smiles down to his abdomen and warms it up, smiles to his heart and feels love. Energy levels increase, the heartbeat remains calm, the body relaxes, energy charges up the brain.

Fig. 7.22 *First Test: Cosmic Inner Smile*

Through testing done in at the Institute for Applied Biocybernetics Feedback, Vienna, Austria, we found out that when we do the Microcosmic Orbit our body goes through many different kinds of brain waves. When I lower down my mind to the TanTien I get a lot of Theta waves. When I start to move the energy, I get Alpha and Beta waves.

Institute for Applied Biocybernetics Feedback Vienna, Austria October 25th 1996

Research: Measurement of the Ultraslow Brain Potentials

Fig. 7.23 *Mr. Gerhard Eggetsberger, Director of the Institute*

When I move the energy up I get a lot of Beta and Alpha again. Moving back down to the Tan Tien, I get a lot of Theta again. So the Alpha, Beta, and Theta waves are continuously cycling in this manner.

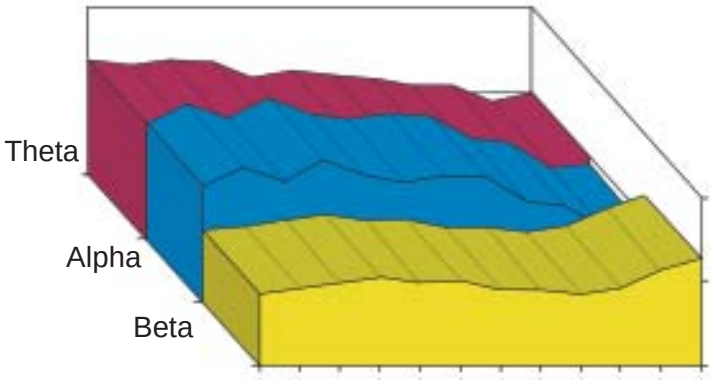


Fig. 7.24 *Altering Dominance of Alpha and Theta Wave during the Cosmic Orbit Meditation.*

This helps a person's body to be strong, healthy and live longer and be happier.

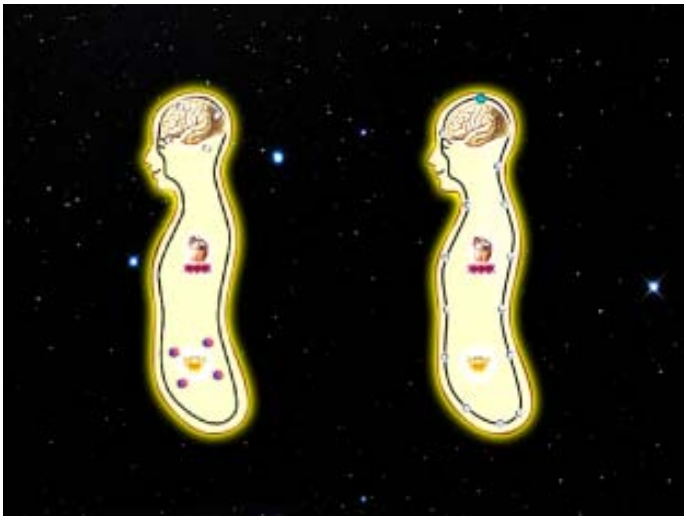


Fig. 7.25 *Movement of the Microcosmic Orbit*

Fig. 7.26 *Doing the Cosmic Orbit*

You will see that if you test the brain waves, it is very easy to get Theta waves when you lower down your mind and feel your navel warm. Your mind will very quickly calm down and there are a lot of Theta waves. When you circulate the energy, there are a lot of Alpha and Beta waves that happen and this is when healing takes place. As long as I keep on holding my attention on my Tan Tien a lot of Theta happens. The whole problem is that the machine only measures the waves of the brain, but it does not measure the Tan Tien waves.

The result of the testing showed that during the Cosmic Orbit Master Chia's brain did not only produce Beta waves, but also produced Alpha and Theta waves. This practice teaches us to use the Lower Brain and rest the Upper Brain. This helps conserve our energy and not drain it out with our emotions.

Fig. 7.27 *Test confirmed the reality of using the lower brain and resting the upper brain.*

I always keep awareness in my Tan Tien and spiral. In the graphs, a lot of Theta waves (on the top) are shown. The brain is not 'working'; it is resting while I use the lower brain (abdominal). So there is not much activity in the top, but there is activity inside. Understand that the upper brain consumes too much energy, the senses activate and this uses up too much energy. When we lower down the upper brain, it will help conserve our energy and not drain it out. Different brain waves are associated with different meditations. When you practice the Universal Tao meditations you see that the brain increases its ability to do many more functions and is flexible between the states of consciousness. When we are in high arousal while maintaining a deep state of consciousness, this also activates the brain. When you feel arousal inside and you move the orgasm into the body you feel a very high and deep state of consciousness.

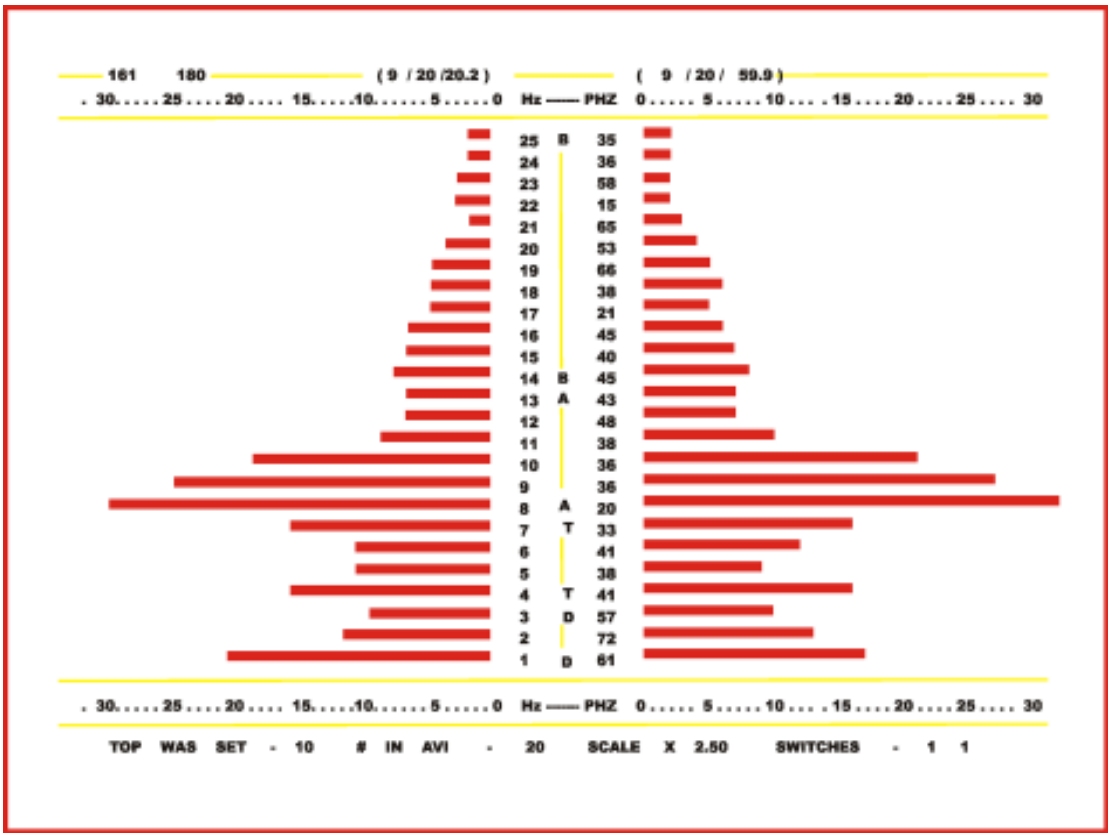


Fig. 7.28 *Summary of Research*

This is the testing done in Vienna. To see the summing up of all the practices, look at the graph starting from the Inner Smile. The left and right brain start to be synchronized from the Inner Smile to the Six Healing Sounds and up to the Microcosmic Orbit then finally to Orgasmic Upper Draw. The left and right brain start to synchronize on all levels and how it applies to the living light Kirlian Technology.

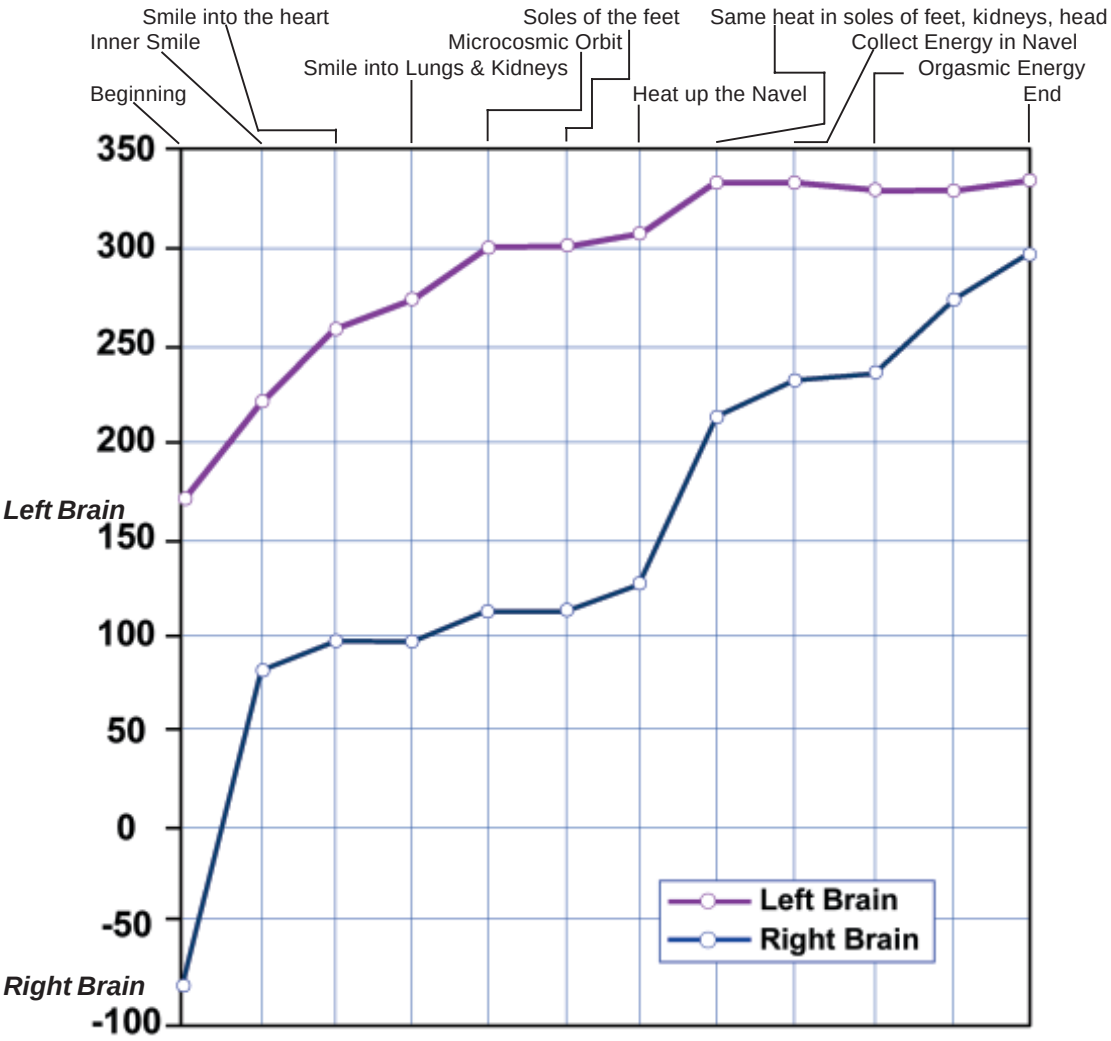


Fig. 7.29 *Left and Right Brain Charts*

Living Light Kirlian Technology

Students doing the Inner Smile practice using Kirlian technology.

Mr.Antonio's aura photographed the night before the practice from front, left and right.

Mr. Antonio's aura after practicing the Inner Smile Meditation.

Mr.Javier's aura the night before doing the practices from front, left and right.

Fig. 7.30 *Mr. Javier's aura after doing the Inner Smile practice from front, left and right.*

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Connect to the Universe from Within

Mantak Chia

Illustrations by Udon Jandee

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After forty-five years of practice and teaching Master Chia gives you here the essentials for running the Microcosmic Orbit. You will learn the preparations correctly: Chi Kung Warm-Ups; Sitting properly and keeping the spine supple and loose; Inner Smiling; Warming the Stove; Activating Sexual Energy; Gathering Tan Tien Chi; Connecting with the Cosmos and Drawing the Cosmic Energy into your Microcosmic Orbit creating the Cosmic Orbit with the Universe.

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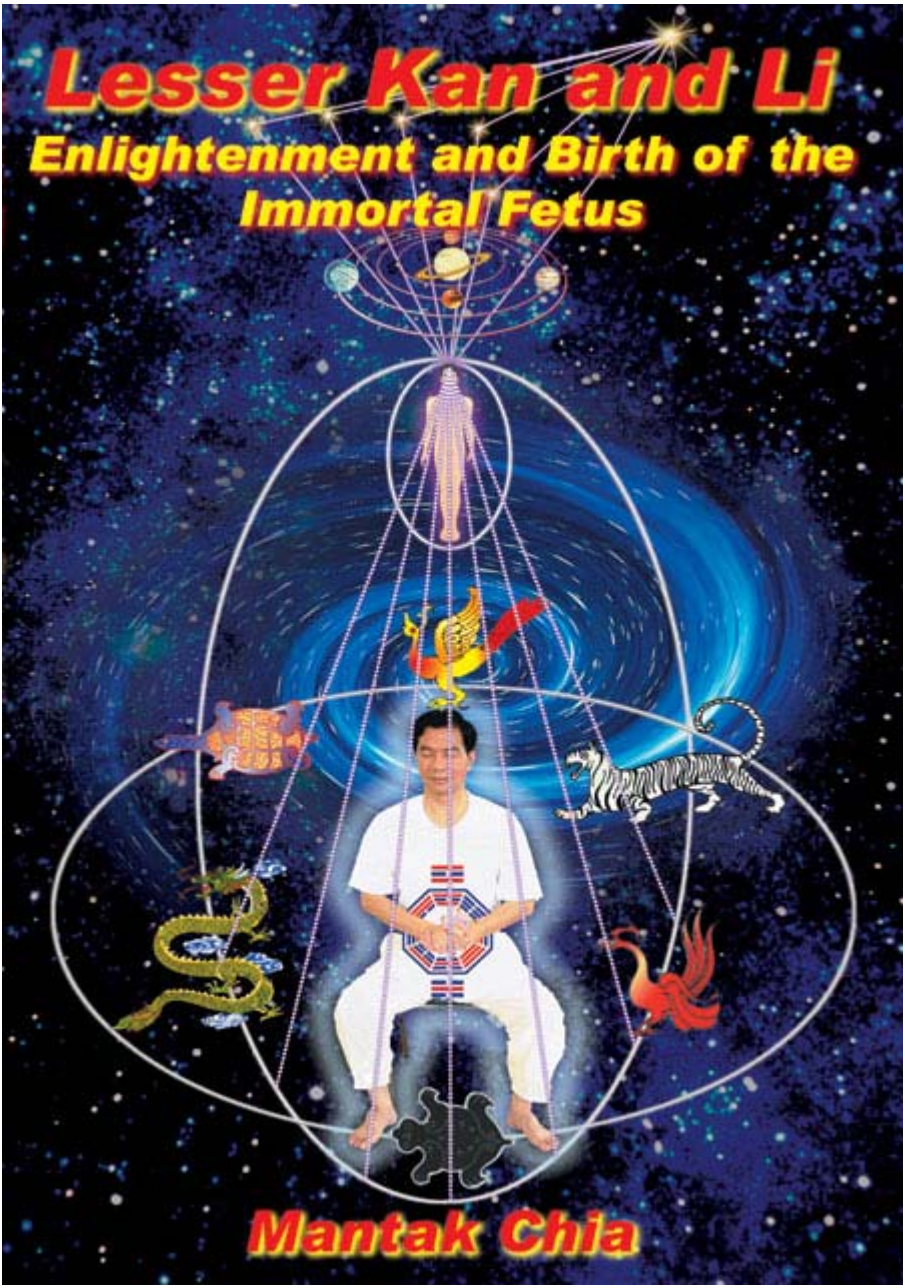
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Enlightenment and Birth of the Immortal Fetus
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The meditations, practices and techniques described herein are ***not*** intended to be used as an alternative or substitute for professional medical treatment and care. If any readers are suffering from illnesses based on mental or emotional disorders, an appropriate professional health care practitioner or therapist should be consulted. Such problems should be corrected before you start training. This booklet does not attempt to give any medical diagnosis, treatment, prescription, or remedial recommendation in relation to any human disease, ailment, suffering or physical condition whatsoever.

Taoist Cosmology

North Star and Big Dipper

Taoists regard the three largest known stars – Polaris (the North Star), Thuban, and Vega – as the collective center of our galaxy (Fig. 1). The earth's axis shifts toward a different one of these stars every 2,150 years as a result of the gravitational pull from the sun and moon. The axis currently tilts toward the North Star, which is therefore referred to as the Pole Star. In other words, if one were to observe the sky from the North Pole, the entire galaxy would appear to be moving around the North Star. As the earth's axis is influenced by its mass, the North Star controls the earth's energy fields, thereby affecting our health and emotional states.

The three stars are known as the Violet Stars because they emanate violet rays throughout the galaxy, which affect every living cell of nature on our planet. Taoists believe that a human's heart tilts 45 degrees toward the North Star, just as the earth tilts 23.5 degrees toward it to receive its energy. They also believe that every planet in the galaxy tilts toward these Violet Stars in the same way, and that the North Star is presently controlling them as well (Fig. 2).

Fig. 1. *Violet Stars*

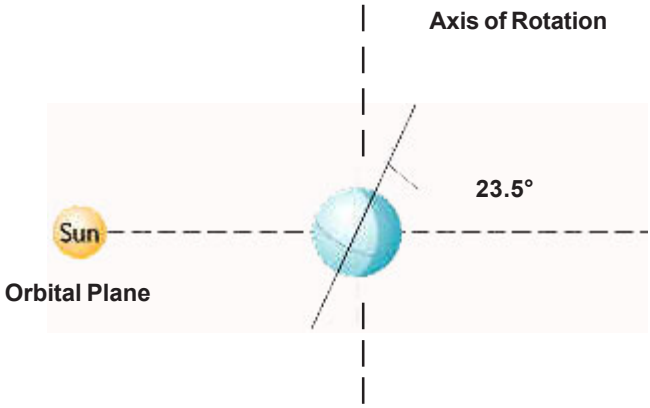


Fig. 2. *Earth tilts 23.5 degrees towards the North Star.*

Fig. 3. *Infra-red emanations of the Big Dipper*

The Big Dipper revolves around the North Star, as do other constellations, reflecting the earth's seasonal changes. The Big Dipper is a major source of red and infra-red light, or radiant energy (Fig. 3). Taoists believe that the cup of the Big Dipper gathers all the violet light from the universe. The emanation of infra-red light of the Big Dipper, combined with the violet rays of the Violet Stars (especially Polaris), has a positive, nurturing effect upon the bodies and minds of those who know how to access it. Taoists believe that the Violet Stars, the Southern Cross constellation, and other constellations form the "Gates of Heaven." All living things must pass through these gates to return to their source of origin, the Wu Chi, which is the state of oneness with the Tao.

Taoists believe that the soul and spirit come from the stars and ultimately must return to them to find their origins. To do this, one must first gather and refine the energies of soul and spirit until they are as pure as the stars, and eventually as pure as the Original Force. This is the way to achieve oneness with the Tao. The first step is to refine the force internally while practicing detachment from worldly things. This helps to break the bonds that hold us to this world. The second step is to draw in the forces of the planets to enhance our own internal force. This gives us spiritual power in the form of energy to use as fuel for travel to the planets, the constellations (especially the Big Dipper), and finally to the North Star, which points to Heaven. Taoists refer to this process of absorbing, transforming, and combining our soul and spiritual energies as "marrying the force," which means that we purify our energies to merge with the stellar forces.

Nine Sacred Mountains

In the Taoist tradition, the human body is a microcosm of the natural world. Our physical anatomy is an inner landscape with its own rivers, forests, mountains, and lakes that reflect their harmony with the outer landscape of the planet Earth. Fig. 4 is an ancient render-

ing of the inner alchemy practice of the Tao, probably originally drawn by a highly achieved Taoist from China's Tang Dynasty period (7th century C.E.). These mountain peaks function as funnels guiding Universal Energy downward. This energy is then concentrated in the mountain caves. Taoist adepts go to these caves for initiation. In the human head there are nine different energy centers (peaks or points), which are able to extend to Heaven to connect to the Cosmos. The brain marrow cavities, as well as the various energy centers of the body, are like caves in a mountain in which you can concentrate, store, and transform energy.

(16) Top of the Great Peak is located at the back of the head. When we tilt our head and push our chin back, our head reaches its highest point. This peak connects the North Star to the Pineal Gland; it is where we receive the descending Universal Energy.

(17) High Place of Many Veils lies between the Muddy Pool and the Great Peak. It is where the spirit and soul bodies can leave and enter in horizontal flight.

(18) Muddy Pool is located in the center of the crown (Bai Hui or the hundredth meeting point). When it is open it feels like soft mud. This crown point connects the Big Dipper to the Hypothalamus Gland. It is through this center, which functions as a two-way street, that you can project your energy (soul or spirit) upward or receive the energy flowing downward.

(19) House of Rising Yang is the third eye. Located slightly above the middle of the forehead, this center is able to receive the energies of the sun and moon, which it uses to project the soul and spirit bodies into space.

(20) Nine Sacred Realms are directly connected to the mid-eyebrow and have a close connection to the Pituitary Gland. This center is used to receive the Cosmic Force and to launch the soul and spirit bodies into the earthly or human plane for traveling.

(21) Immortal Realm is located in the center just in front of the crown point. It is here that our energy is able to make a connection with the heavens to draw down even more powerful Universal Energies.

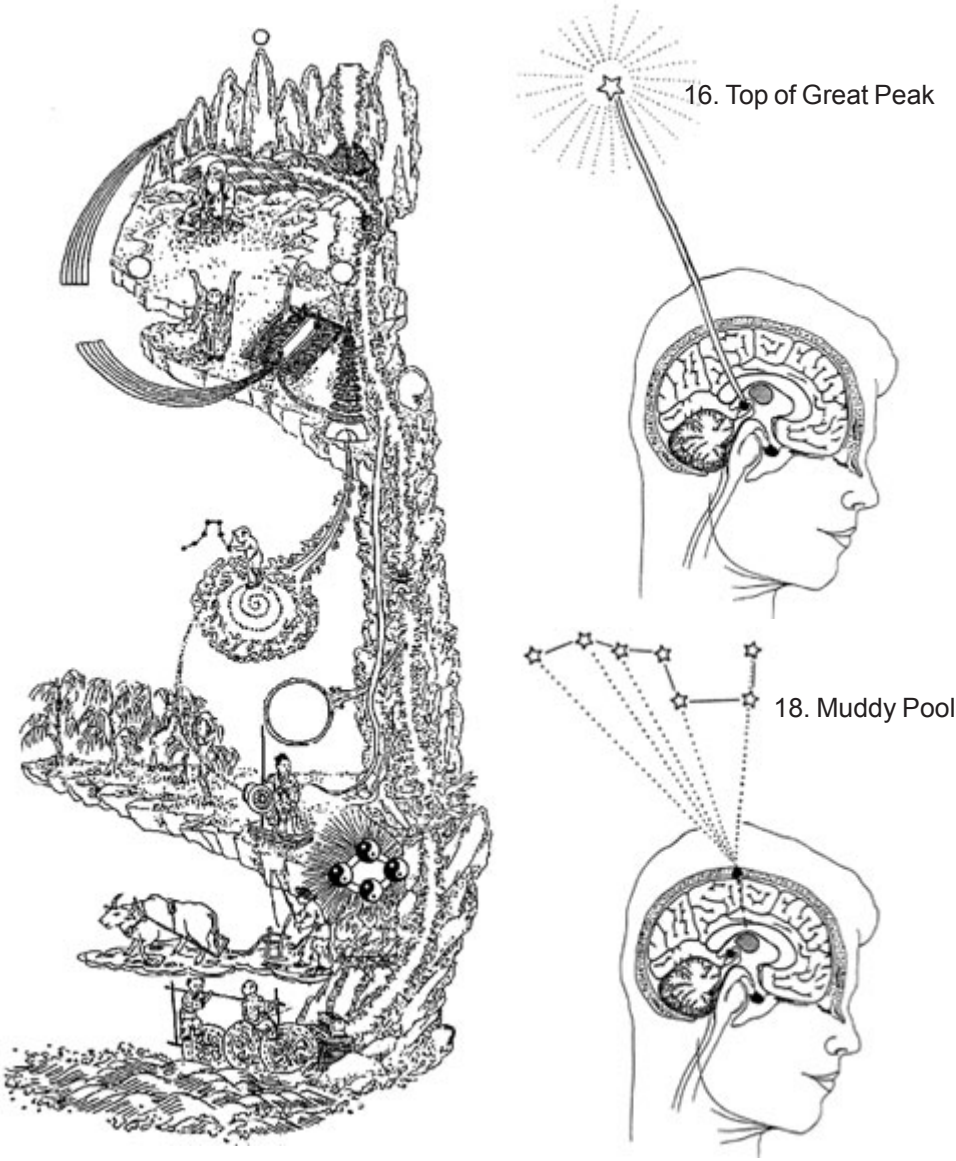


Fig. 4. *On the left, an ancient rendering of the inner alchemy practice of the Tao. On the right, two of the nine mountains (16 and 18) correspond to Nine Palace points in the brain.*

Nine Palaces

Nine is one of the most commonly used numbers in Taoism being the highest cardinal order in numerical calculation. Lao Tzu once referred to a nine-story-building rising from a clod of earth. A nine-story-building has both architectural significance and spiritual implication. The architectural significance is based upon the order of nine, which implies the highest structure of mental calculation and manipulation. In Chinese architecture, the steps and stories of a building are designed within the function of nine. The nine-story-building refers spiritually to the nine mountain-like palaces crowning the brain (Fig. 5). The cortex will gather all the elixir-making fluid needed for crystallizing into mystic elixir. Lao Tzu's statement also refers to the nine-story tower of vocal cords.

In Chinese, nine means literally the change of yang, which depicts the crawling position and extreme end. This nine-yang is the highest order in heaven and on earth, and it is the power representation of all. Beginning from nothing (zero), at nine we reach the peak stage of performance and begin to return to the original state of inactivity, for either a new beginning or a complete change. As life evolves and changes, there will be nine significant crises to be conquered. These can be referred to as the crises of merging within the structural and dynamic trinity. The nine crises determine nine deaths of old conditioning and established habits that one must walk through. Nine deaths bring about the final new birth, or the returning of pure spirit. When a person consciously dies nine times, the last death must be the spiritual birth of self into cosmic void.

In the beginning of life, we have nine holes that open and close to life in the body: the life of breath, love, and harmony. Seven of these are charged by seven powers of light. The eighth and ninth discharge the water and concrete wastes externally, or internalize the thrusting power of spirit and its mating partner, the sexual fluid, or the holy water in its earthly matured form. Among these nine holes, two form visual receptors and process the maximum on the information highway. As the receptors collaborate with the visual center in the rear of the brain, the neutralized energy activates the single most powerful interior organ: the pineal gland (Fig. 6).

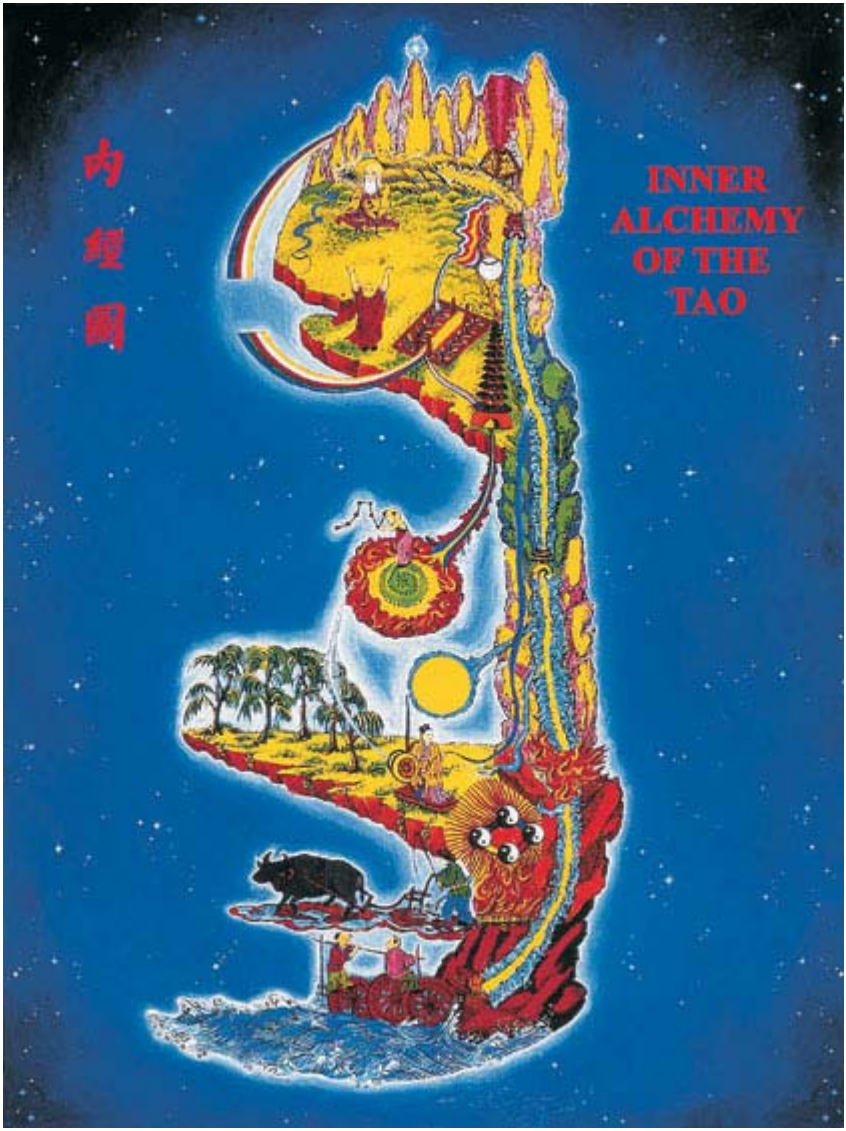


Fig. 5. *In Taoist Inner Alchemy, nine mountain-like palaces crown the brain.*

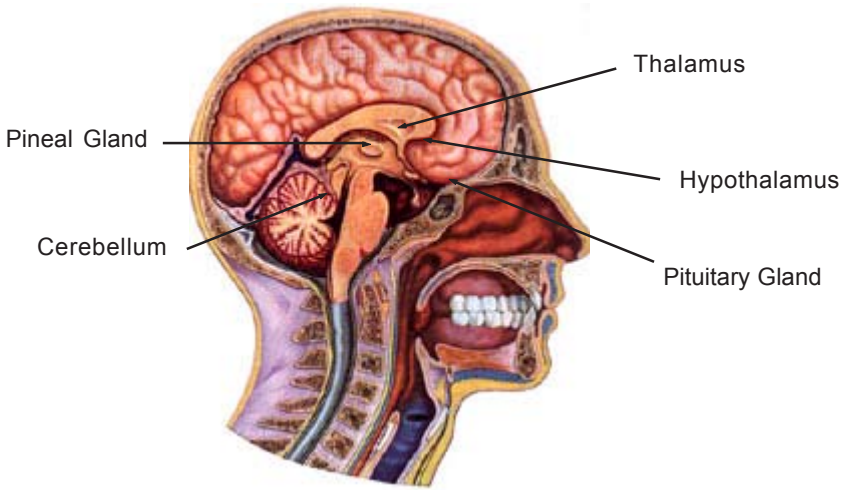


Fig. 6 *Brain includes the organs: cerebellum, thalamus, hypothalamus, pineal gland, pituitary gland.*

The pineal gland stands side by side with the limbic system and helps the cerebral-spinal-abdominal fluid to form the whitish matter by releasing melatonin and other chemicals. Melatonin is the essential substance required to maintain the hibernation state where spiritual consciousness sustains a peaceful, healthy, loving, and long life. The spiritual vitality producing the biological Jing will be preserved. The person then retains a child-like biological condition where no matured melatonin is wasted in biological continuation. When this substance works together with the yellow marrow in the bone, the reddish firing reaction of the biological process will be converted into a gentle cooking interaction between the holy water and light.

The sacred water refers to the inner fluid that is responsible for producing bone marrow and other bodily fluids. When the light activates this sacred water, one experiences a born-again mentality. When sacred water and light merge, the faithful mustard seed is planted, and the true teaching and living begin.

The sacred water runs not only in the center of the bones, but also in the midst of the body connecting the Crown and Perineum Points (Fig. 7). The Crown Point emits the fire as the Perineum Point secretes the glacial water. The glacial water is the primordial yang Chi that carries the gender-producing substances. The conscious fire in the brain utilizes the unconscious water in the abdomen as elixir or white horse: a completed product.

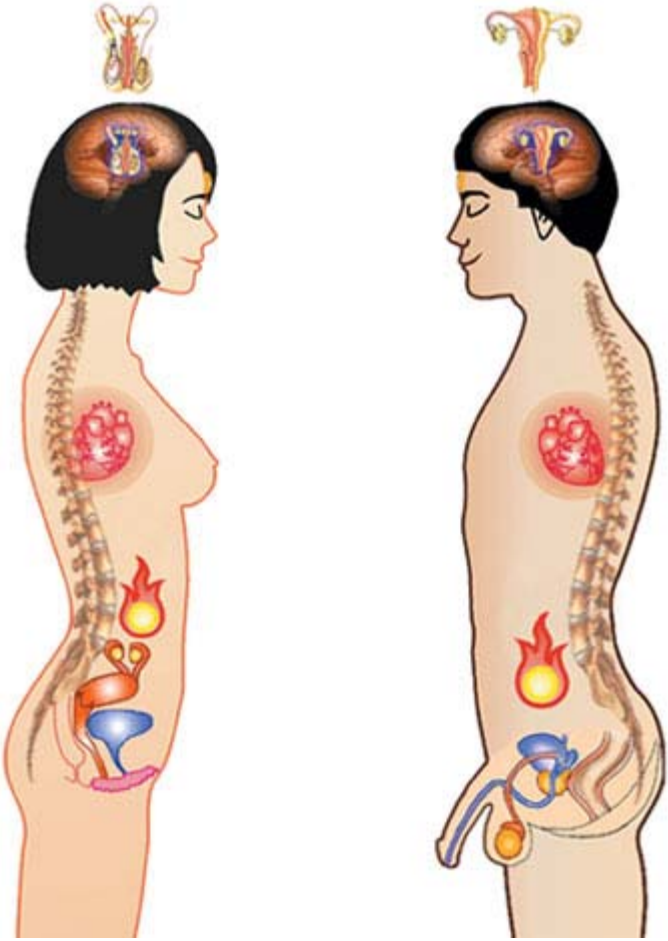


Fig. 7 *Crown Point is connected to the Perineum.*

Under this condition, the nine structural ligaments that form the vocal cords speak with the power of nine kings being guided by the master king, the tenth king of Miphkad. The nine bodily parts and holes are integrated into nine palaces echoing the power of nine teachings. The sacred water and light unify the seven firmaments. The vocal cords no longer resound with the activation of mouth and teeth, but vibrate directly through the pineal gland and the Crown Point. When the nine vibrations activate the pineal gland, the Crown Point will resonate in the universal and cosmic behavior. The visible biological nine holes in the body will harmonize with the invisible nine holes in the brain. The active nine bodily parts will speak through the inactive nine vocal ligaments. The cerebral cortex becomes the cosmic mud upon which the spiritual elixir can be produced through the activation of the mighty cerebellum. (Fig. 8).

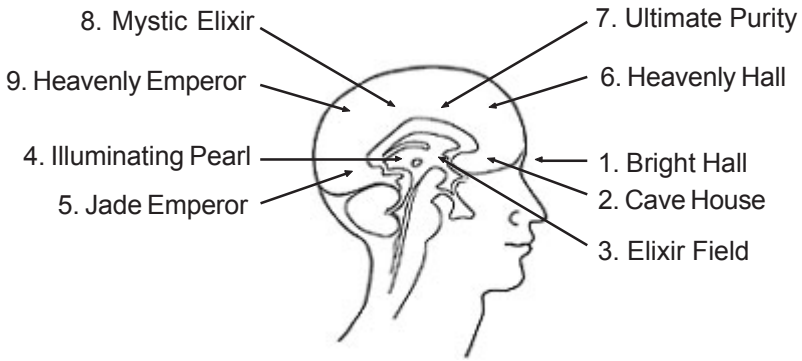


Fig. 8 *Nine Palaces*

When the cerebellum is totally awakened, the instinctive mind behaves through the supervision of eternal peace. Daily activity will unify with nightly rest; the thinking mind will collaborate with the dreaming mind; biological water will balance with sacred water; lustful drive will merge into blissful flow. The inner drumming practice is about to begin. When the glacial thalamus and hypothalamus glands are activated by the holy well of brain fluid under the cave of the corpus collasum, elixir is produced through the interaction of the pituitary and pineal glands. The elixir then travels through the cal-

carine and parieto-occipital sulcus to nourish the entire cortex and cerebrum (Fig. 9). When the time is right, the spirit-elixir will shoot through the central sulcus, the “Crown Point”, its heavenly home. Souls are shocked by this drumming power, and spirit is aroused by the drumming frequency of vibration balancing the entire universe. The body is scorched, the souls are sold, and spirit returns to its original home.

As the vocal cords produce sound, the nine special areas in the body/mind are opened. Among these nine areas, three represent the Tan Tiens, three the “guans” or passes of fire, and three for “qiao”. The three Tan Tiens are located in the third eye area, the Yellow Court area, and the cauldron area respectively (Fig. 10). They charge the frontal body by managing the water-Qi circulation. The lower Tan Tien awakens the Kundalini power for the frozen Jing-Qi to become internalized into sweet dew. The middle Tan Tien expresses love through the falling of sweet dew, while upper Tan Tien reviews the cosmic wisdom with its fresh single eye. In Biblical tradition, the lower Tan Tien constructs the Old Gate. The upper Tan Tien forms the Sheep Gate. The middle Tan Tien manifests the Christ Love. These three Tan Tiens belong to the wood element. They possess the power of restoration and charge the power of growth.

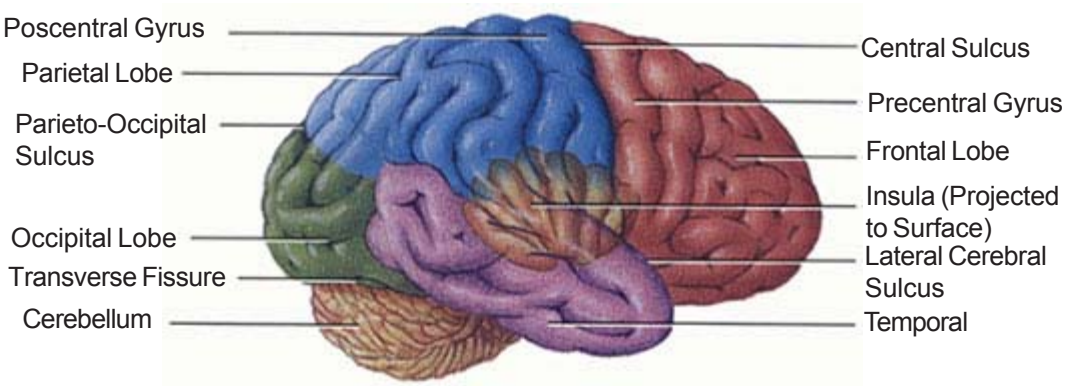


Fig. 9 *Brain Sulci: Parieto-Occipital and Central Sulci of the Skull*

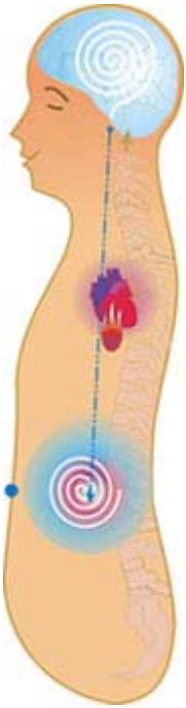


Fig. 10 *Three Tan Tiens*

Corresponding to these Tan Tiens are the three “Guans,” the passes of fire. These passes circulate in the back, facing the three Tan Tiens directly. The Lower Guan opens the life-gate pressure or the Water Gate. The Middle Guan empowers the spirit-platform or the Horse Gate that fires the hands. The Upper Guan, called the Jade Pillow, is located in the center of visual cortex. It is the power of the Master Gate, or the Gate of Miphkad. These three Guans belong to the golden element. They possess the power of openness and initiate the circulation of change.

Circulating between these six special areas are the powers of the three “Qiao” or three Knacks. Each knack constitutes a “gong” or palace. The Yin Gong is the perineum point, and the Yang Gong is the Crown Point. The Central Gong utilizes the cortex as the cosmic earth. The yin qiao/gong belongs to the water element and pos-

sesses the quality of peace. The yang qiao/gong belongs to the fire element and has the quality of action. The Central Qiao/Gong belongs to the earth element and pertains to the quality of harmony.

When these nine special areas are unified in the brain the Nine Palaces are flung open, emitting elixir into the cosmos through nine mountain-like openings. Among them, seven connect with star lights of the Big Dipper. The Moon shadows the eighth through the North Star. The ninth is charged by the Sun, which is controlled by the Southern Star. Allowing the Jade Moon and Golden Flower lights to become the basic nutrients, rather than consuming food and water, the meditative mind and fasting body create their own wonder. At a higher level, the eighth is milked by the cosmic holy water and the ninth is clothed by the cosmic white light. The seven teachings are produced through seven sacred body parts, called churches.

Darkness Practice

The Big Dipper and Nine Palaces are practiced interchangeably: meaning the Big Dipper exercises are done actively as “Wuhuo” or “Military Fire” and the Nine Palaces are exercised passively as “Wenhuo” or “Intellectual Fire.” During the active meditation in the early morning and before midnight while in complete darkness using Darkness Technology (UTS - Booklet), all participants must exercise Big Dipper. During relaxed or sleeping meditation practice, Nine Palaces will be used. Also, practice the Big Dipper first and then the Nine Palaces.

Big Dipper Practice

The names of the seven stars are as followings. 1) Supreme Star-Jing, Mystic axis, or Bright Yang; 2) Prime-star, North Platform, Yin Essence; 3) Truth-Star, Nine extremity, Pure Person; 4) Network-Star, Orbiting Root, Mystic Subtlety; 5) Principal-Star, Supreme Peace, Prime Elixir; 6)Disciple-star, Mechanical Spirit, North Pole; 7) Guard-Star, Mystic Yang, Heavenly Guard (Fig. 11). The names from western Astronomy are in Fig. 12.

The first two stars belong to Hun-Soul, the third and fourth stars are controlled by Po-Soul, and fifth and sixth stars generate Spirit-elixir, the seventh star illuminates for all (Fig. 13). The others names are 1) Hungry Wolf, 2) Huge Gate, 3) Prosperity Storage, 4) Intellectual Art, 5)Honest Chastity, 6) Martial Art, 7) Destructive Army.

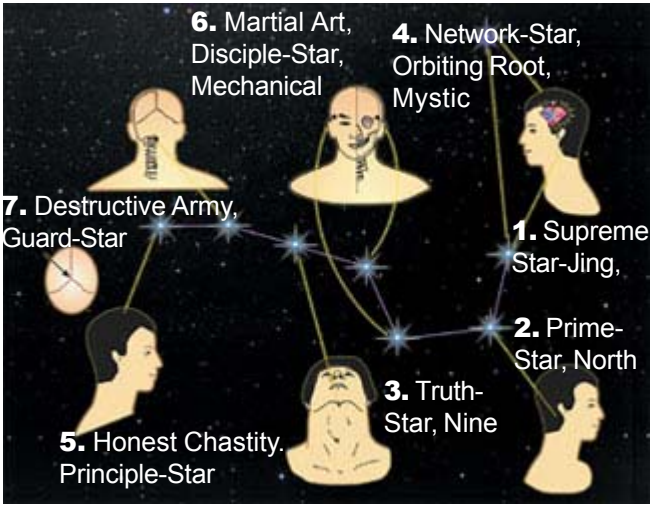


Fig. 11 *Taoist names of the seven stars.*

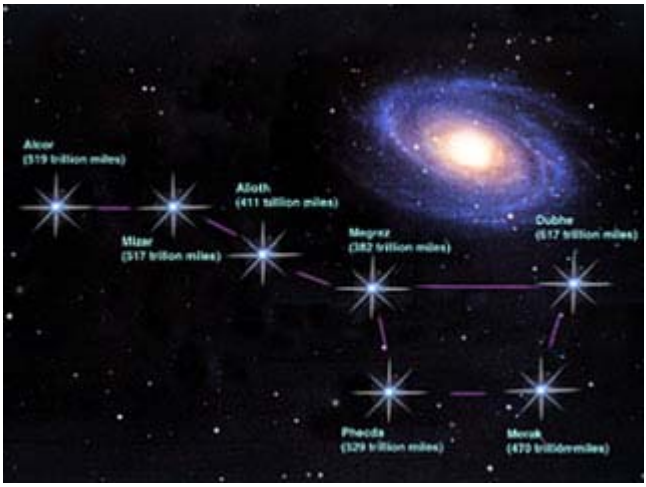


Fig. 12 *Stars and their distances from earth.*

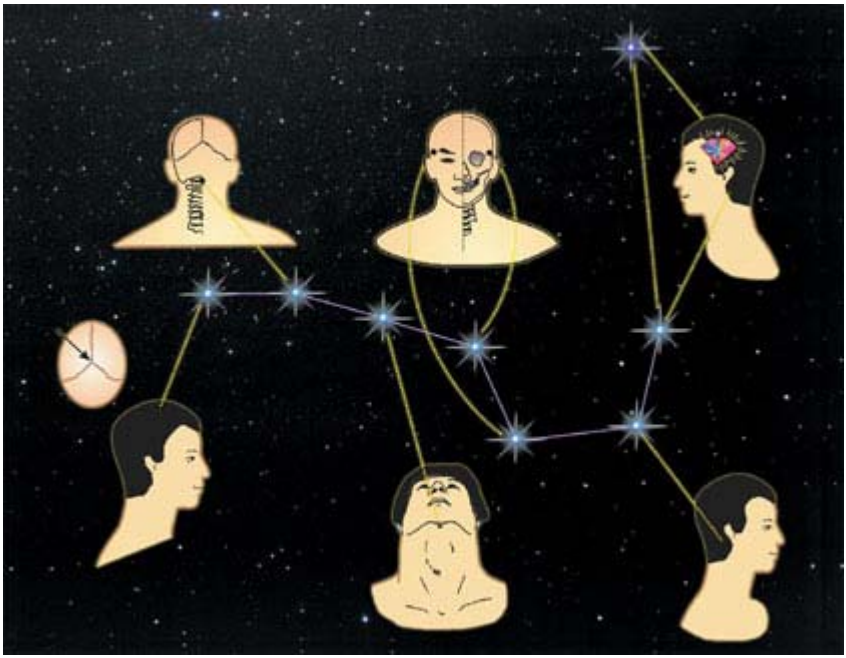


Fig. 13 *Soul names of the stars.*

According to the Chinese Calendar, each two hours is one time period (Fig. 13). Each person has a birth star, depending on the specific time period: first star 11:00 pm-1:00 am; second star 1:00-3:00 am/pm; third star 3:00-5:00am/pm; fourth star 5:00-7:00 am/pm; fifth star 7:00-9:00 am/pm; sixth star 9:00-11:00 am/pm; and seventh star 11:00 am-1:00 pm. Before any person goes to the dark-room, he or she must know his or her star. Without connecting to the birth star, Big Dipper practice cannot be practiced successfully. The names are given orally. The normal names that are used are Bright Yang/Hungry Wolf; Yin Essence/Huge Gate; Pure Person/Prosperity Storage; Mystic Subtlety/Intellectual Art; Prime Elixir/Honest Chastity; North Pole/Martial Art; and Heavenly Guard/Destructive Army.

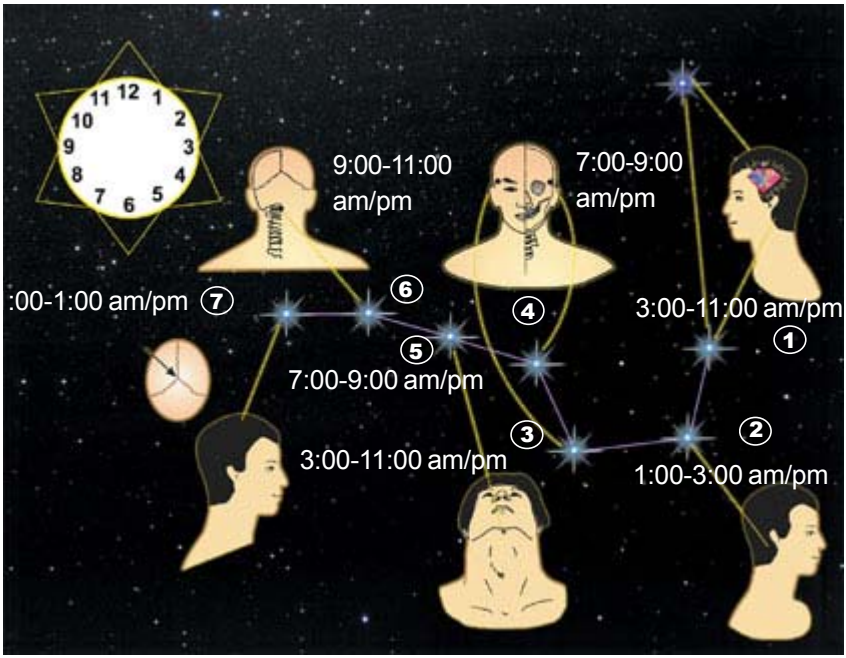


Fig. 14 *Times for each Star*

Exercises

1. The first exercise, the Big Dipper, should be practiced only during nighttime and sleep. Practice the Big Dipper only in the brain. Each star three times with each breath (Fig. 15).

a. The first star is located in the Jade Palace, the power of cerebellum. Visualize it as the purple light, inhale gather the purple light into the cerebellum. Hold the breath, condense the light inside the cerebrum, and exhale, relax and observe the energy circulation in the cerebrum.

b. Then concentrate on the memory center in the brain by inviting the second star. Visualizing it with dark-blue light during inhalation. Hold the breath, let the light circulate around the memory center. Exhale, observe the Chi circulation.

c. Then concentrate on the pineal gland by inviting the third star with the light-blue light.

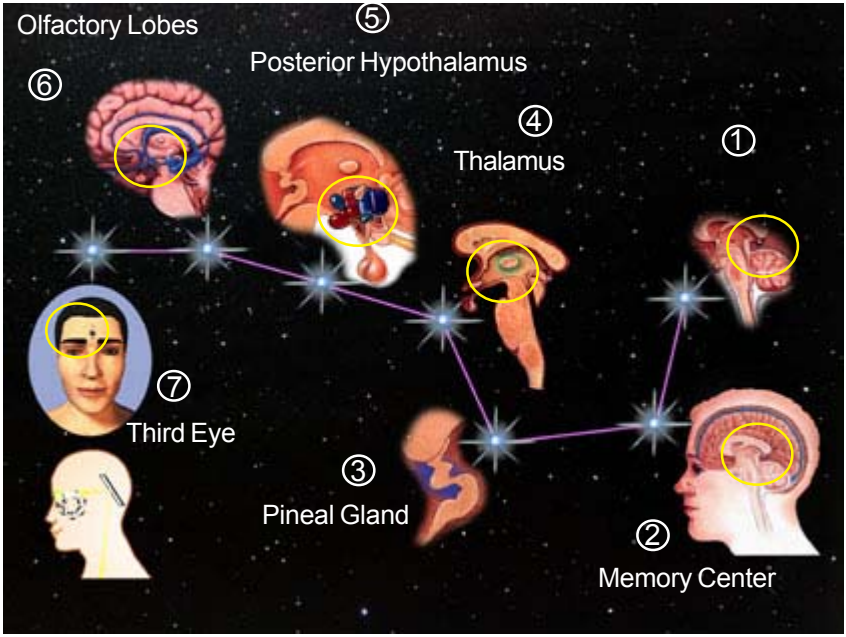


Fig. 15 *Big Dipper Stars and the Brain*

d. Fourthly, concentrate on the thalamus glands by inviting the fourth star and green light. This star is the division between the left-brain and right-brain, or animal brain and human cortex.
e. Then concentrate on the hypothalamus and pituitary glands by inviting the firth star and yellow light. This star connects to human smell and balance.
f. The sixth star connects to the olfactory gland and orange light and temples above the and in front of ears. Hearing-palace and Ear Gate pressure points are located here connecting the Small Intestine and Triple warmer.
g. The seventh star gives ultimately the birth of red fire, the solar light, and passion of sixth sense to mystic awareness. It is located on the yang third eye, or Spirit-hall pressure point.

h. After meditating on each star three times, then visualize all the rainbow colors/lights showing into the brain. Above the rainbow colors the mystic black light, and below is the white (Fig. 16).
i. This star exercise connects to the Spleen and planet Saturn, in the sense that the brain becomes the cosmic soil.

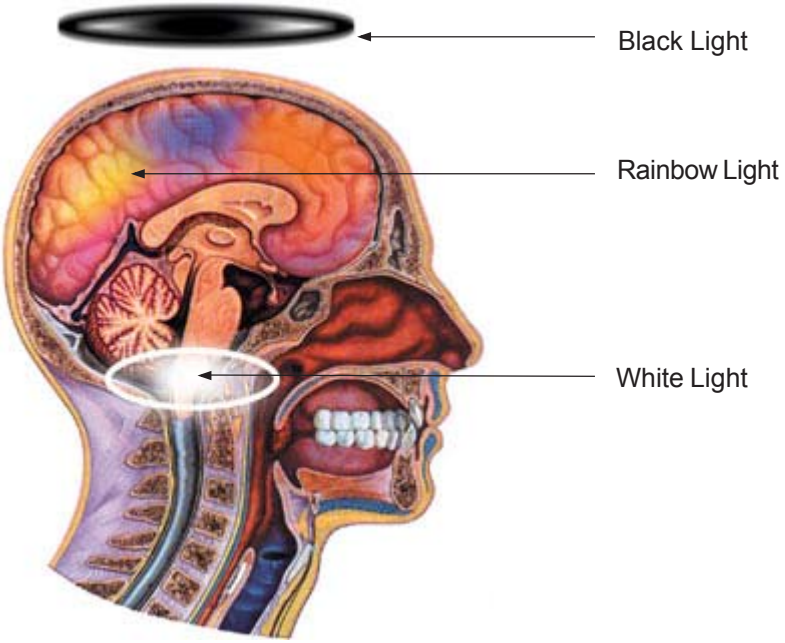


Fig. 16 *Rainbow color lights in the brain.*

2. The second exercise connects to the south and planet Mars (Fig. 17). During the night time the practitioner must focus on the brain to gather the star power and solar light. The exercise is: 1) The first star connects to the yang-third-eye; 2) second star/Jade palace;3) third star/C-7; 4) fourth star/thymus gland; 5) Fifth star/ Yellow Court;) Sixth Star/umbilical cord; and 7) seventh star; Lower Tan Tien. Use the same colors and same format as the first exercise.

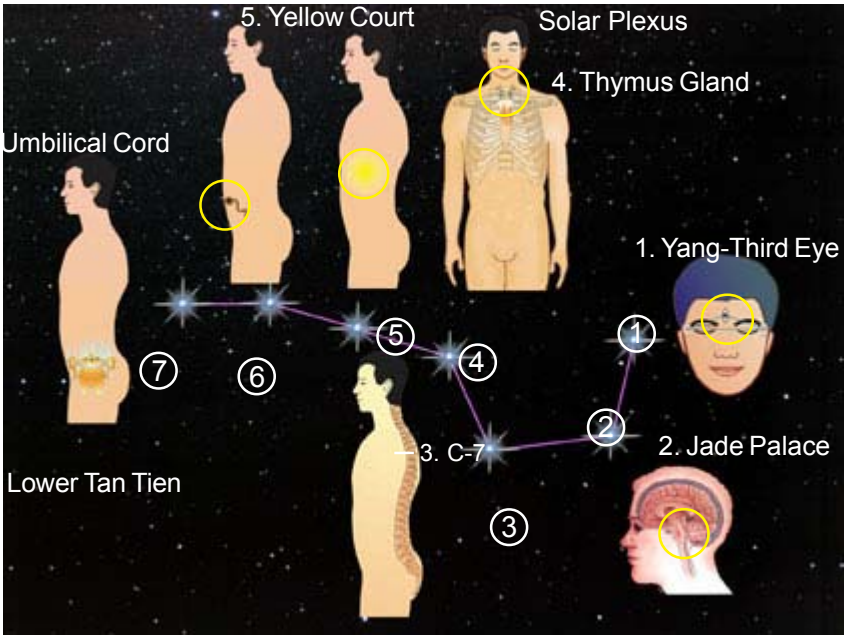


Fig. 17 *Gathering star power and solar light.*

3. During the daytime, focus on the Lower Tan Tien and moon practice (Fig. 17). The exercise is: 1) first star/tailbone; 2) second star/pubic bone; 3) third star/umbilical cord; 4) fourth star/life-gate point; 5) fifth star/Yellow Court; 6) sixth star/thymus gland; 7) and seven star/vocal cords. The third exercise relates to the north and planet Mercury.

4. The fourth exercise is about the sleeping practice. Lie down on the right side to avoid the pressure exerting on the heart. The thumb and index fingers of the right hand cover the right ear; with the elbow serving as the pillow. The left big toe touches the right inner ankle, to connect the yinqiao/wei points. The left hand is placed either on the left hip or in between the legs. The seven star arrangements are the same as the fourth exercise.

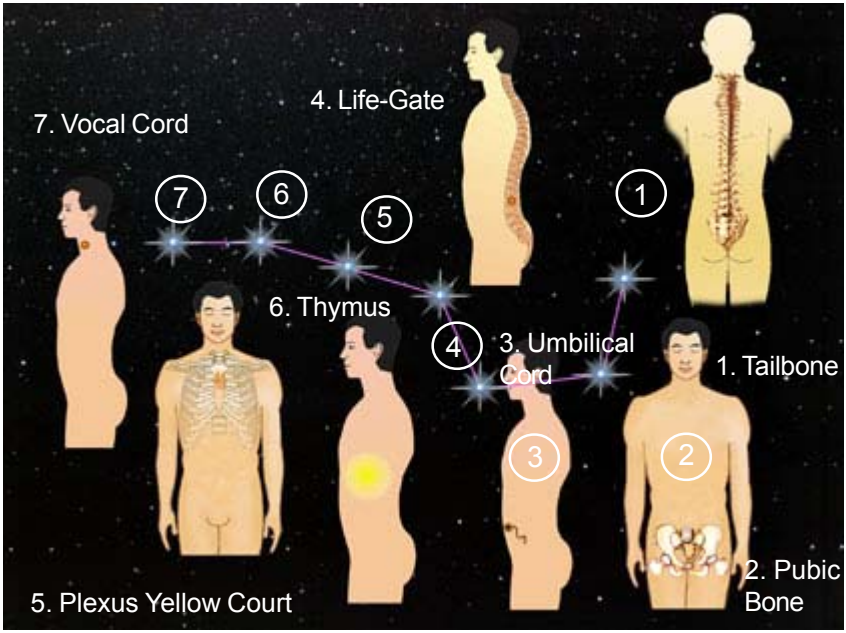


Fig. 18 *Bigger Dipper Stars and Related Body Parts*

Exercise four alternates between the first star and seventh one, meaning the practitioner can either begin with the brain for descending practice, and gathering the cosmic power; or start with the ascending practice, gathering water-earth-Chi. The standing exercise represents east direction or sunrise, and planet Jupiter. The sleeping exercise represents west direction or sunset, and planet Venus.

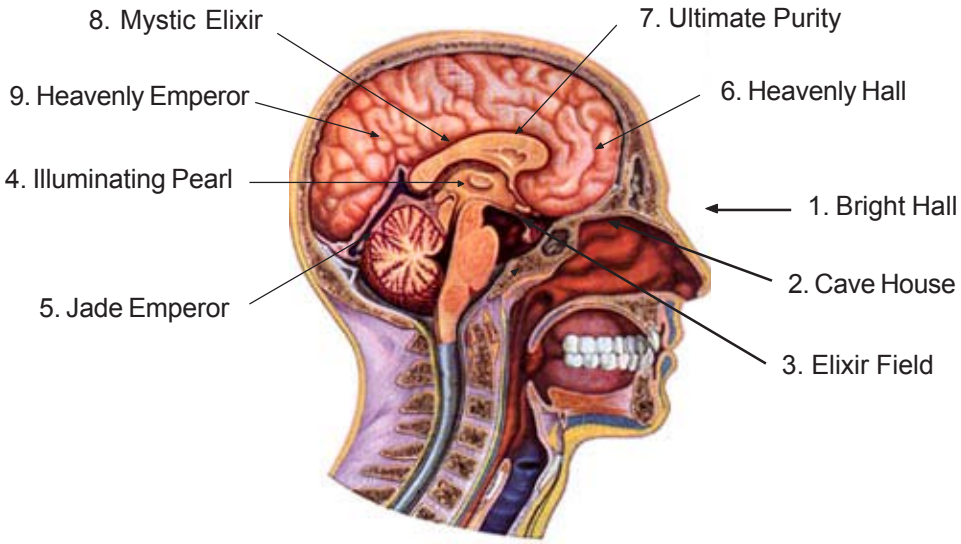
After each of these exercises, the practitioner can start with the Nine Palace practice, beginning with the kidney Qi-sound, and observing the vibration in four tones and upper four palaces.

Begin from the standing exercise, then the sun, moon, sleeping and ending up with the brain exercise, to finally gather and condense the five Chi between the body/mind and universe.

After the seven-star and nine-palace practices are completed, the seven stars will connect to the North Star via Vega, the Girl Weaver, the eighth power. The seven-star practice is completed as Cowherd, the Cowboy, the seventh power.

Nine Palaces Practice

In Taoist tradition, the Nine Palaces of the brain (Fig. 19) connect with nine sacred caves and nine sacred mountains, intersecting the nine sacred power lines of Mother Earth. Each Palace serves as a cosmic antenna, and each mountain transmits the vibration circulating in that region. In order to receive these nine power lines, one must travel across the nine sacred mountains and sit finally on the middle one, the crowning mountain, to practice enlightenment. The caves are the Mother's energy lines. Like the hollowing bones, caves contain the earliest information of life stored inside the Earth. The caves contain the vital essence of the Earth Power. When nine special bodily areas are unified in the brain, the Nine Palaces are flung open, emitting elixir into the cosmos.



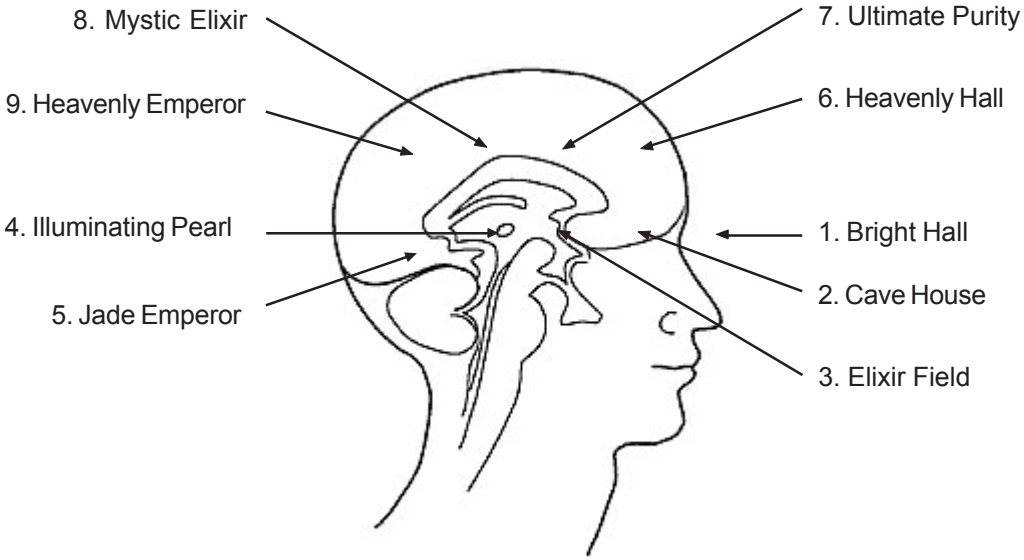


Fig. 19 *Nine Palaces of the brain connect with the nine sacred mountains.*

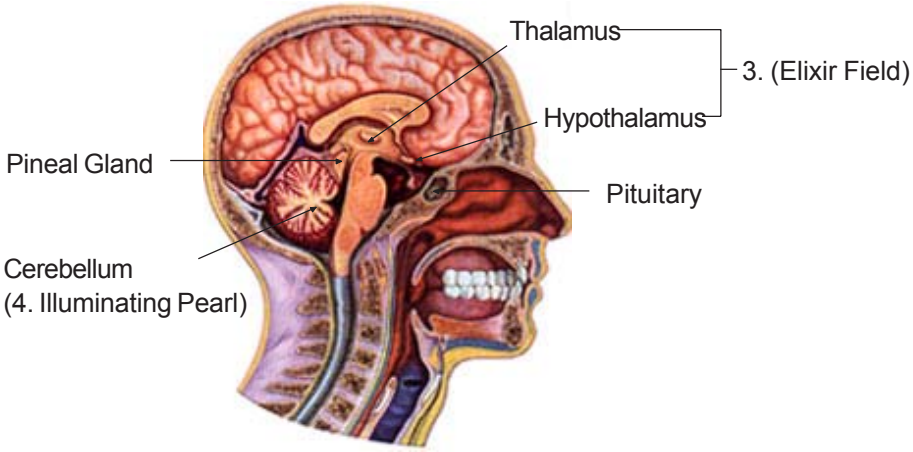


Fig. 20 *Brain areas. Functional areas of the brain and the corresponding nine palace points.*

1. The first palace is called the Bright Hall and corresponds to the Third Eye (Fig. 19). The Bright Hall connects with the power of speech (Fig. 20). The Bright Hall vocalizes God's power of the Word. [Corresponds with Peak 19, House of Rising Yang, Fig. 4.]
2. The Cave House, the second palace, is about one inch behind the Bright Hall (Fig. 21). It is centered in the optic, auditory and olfactory bulbs, occupied with seeing, hearing, and smelling. The Cave House is the primary sensory power, whether in the cave under the ocean (the fetus stage) or in the cave of darkness (night and advanced spiritual work).
3. The Elixir Field, the third palace, is about one inch behind the Cave House. The Elixir Field generates the crystallized fluid in the brain, making biological and spiritual functioning available. It is the principal field of all bodily glandular functioning as well. This field works directly with the eighth palace of the Mystic Elixir (below). Beneath the cave, the thalamus and hypothalamus glands (Fig. 21) can then generate the bluish crystal glacier to form the basic brain fluid. [Corresponds with Peak 18, Muddy Pool, Fig. 4.]

4. The Illuminating Pearl, the fourth palace, is about one inch behind the Elixir Field. The Illuminating Pearl connects with the cerebellum (Fig. 21), connecting with ultimate arousal, uplifting bliss, and the precious momentary joy.

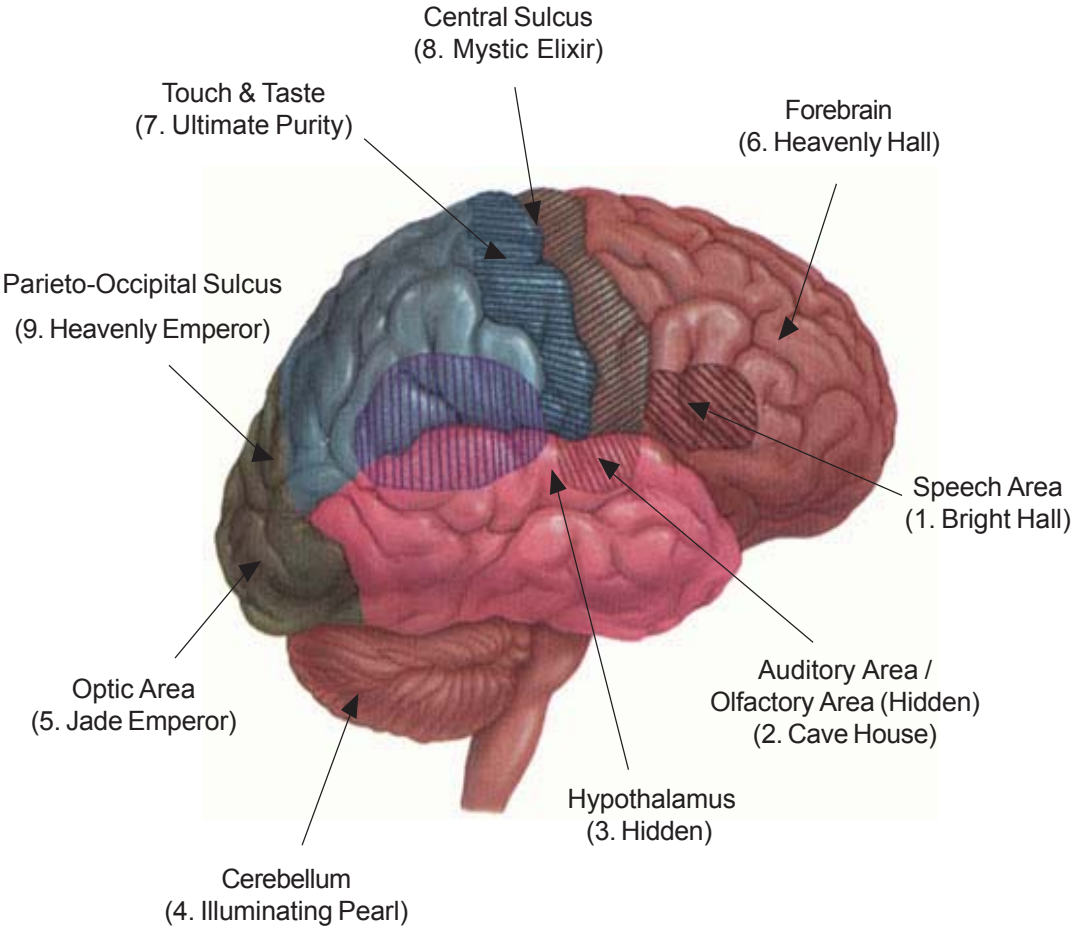


Fig. 21 *Brain areas and associated Palaces*

5. The Jade Emperor, the fifth palace, is about one inch behind the Illuminating Pearl. The Jade Emperor sees and directs all activities. (Fig. 20)
6. The Heavenly Hall, the sixth palace, is about one inch above the Cave House. The Heavenly Hall circulates within the dipole of the forehead.
7. The Ultimate Purity, the seventh palace, is about one inch above the Elixir Field. The Ultimate Purity controls the frontal operculum. Its power connection is the frontal fontanels. It controls the bodily and cosmic movements of touching and tasting (lightning and rain) (Fig. 20). The energetic power of touching and tasting also come from the Mystic Elixir, the ground base (below).
8. The Mystic Elixir, the eighth palace, is about one inch above the Illuminating Pearl. The Mystic Elixir gathers the elixir-making fluid from the central sulcus. This is the most refined spiritual fluid in the body, ready to evaporate the spirit into the sky. Which corresponds with Peak 16, Top of the Great Peak, Fig. 4.]
9. The Heavenly Emperor, the ninth palace, is about one inch above the Jade Emperor. The Heavenly Emperor occupies the parietal operculum, behind which, heavenly light shoots into the conscious mind through the parieto-occipital sulcus (Fig. 11).

All together, the Jade Emperor supervises all, the Bright Hall sees all, the Cave House hears and smells all, the Elixir Field waters all, the Illuminating Pearl experiences all, the Heavenly Hall idealizes all, the Ultimate Purity balances all, the Mystic Elixir glorifies all, the Heavenly Emperor seals all. Through the cerebral cortex and cerebellum, the Eternal Life and Mystic Elixir give birth to the final end product, Spirit, which is the tenth of all. The cerebral cortex and the cerebellum are the cosmic land in the body / mind.

Exercises

The detailed meditation practice of these nine palaces has to do with the five sonic vibrations purified from the five organs and the four tones within each.

1. To begin with, the yin third eye watches downward to connect the true and false vocal cords as well as the thyroid and parathyroid glands. The distance is about seven inches in between.
2. As the meditator inhales, the true vocal cord generates the green color, while the false vocal cord produces the purple color.
3. While sustaining the breath, the mind gathers the condensed vibration to the corresponding five palaces: the fifth palace connects to the kidney sound, the fourth the liver sound, the third to the heart sound, the second to the spleen and the first to the lungs.
4. Exhale, mentally connecting the sonic vibration from the organs below and the two colors generated by the vocal cords to the four tones of the four upper palaces, then letting the tones vibrate through the left and right brain. The left-brain connects to the blue color, while the right brain to the purple color. Doing so connects the power of the Moon and Sun correspondingly.

Each sound is produced five times. Starting with the kidney sound, the two emotional powers ”will and fear” will be balanced and will resonate at the same time. Next is the liver sound, the power of passion and rage; then heart sound, the power of love and hate; then the spleen sound, the power of worry and giving; and finally the lung sound, the power of happiness and sadness.

It is through these sonic vibrations that the person engaging in fasting practice will sustain the power of breath, and the power of mental wakefulness. Even going through the dying process, the spirit mind must be alert all the time. Otherwise, the souls will die into ghost world.

Normally, this set of exercises must be practiced together with the Big Dipper exercise. As the seven emotions are purified through the Big Dipper exercise, the five sonic vibrations will reach to their purest state. The nine palaces will then be fully open.

Preparations for Lesser Kan and Li: Fusion of Five Elements/Creation Cycle

It is important to cleanse the emotions each day so the energies will be pure for the Kan and Li practice. Connect the senses to the organs as you form a pearl and circulate it through the Microcosmic Orbit. Then send the pearl through the organs in the Creation Cycle for at least three rounds. You may use the same pearl or form a new one to send through the thrusting and belt channels (Cosmic Fusion). Finally, if time allows, send the energy through the Bridge and Regulator Channels (Fusion of Eight Psychic Channels).

As you create the pearl, distinguish any negative emotions that may be present within each organ. Look for fear in the kidneys, impatience in the heart, anger in the liver, sadness in the lungs, and worry in the spleen. Transform those negative energies by recycling them in the Creation Cycle, nurturing the virtue energies associated with each organ. Enhance the virtues of gentleness in the kidneys, kindness in the liver, respect in the heart, fairness in the spleen, and righteousness in the lungs.

Foundations of Spiritual Practice

Lesser Enlightenment Kan and Li; Opening of the Twelve Channels; Raising the Soul and Developing the Energy

Lesser Enlightenment of Kan and Li (Yin and Yang Mixed): This formula is called Siaow Kan Li in Chinese and involves a literal steaming of the sexual energy (Ching or creative) into life-force energy (Chi) in order to feed the soul or energy body. One might say that the transfer of the sexual energy power throughout the whole body and brain begins with the practice of Kan and Li. The crucial secret of this formula is to reverse the usual sites of Yin and Yang power, thereby provoking liberation of the sexual energy.

This formula includes the cultivation of the root (the Hui-Yin) and the heart center and the transformation of sexual energy into pure Chi at the navel. This inversion places the heat of the bodily fire beneath the coolness of the bodily water. Unless this inversion takes place, the fire simply moves up and bums the body out. The water (the sexual fluid) has the tendency to flow downward and out. When it dries out, it is the end. This formula reverses normal wasting of energy by the highly advanced method of placing the water in a closed vessel (cauldron) in the body and then cooking the sperm (sexual energy) with the fire beneath. If the water (sexual energy) is not sealed, it will flow directly into the fire and extinguish it or itself be consumed.

This formula preserves the integrity of both elements, thus allowing the steaming to go on for great periods of time. The essential formula is to never let the fire rise without having water to heat above it and to never allow the water to spill into the fire. Thus, a warm, moist steam is produced containing tremendous energy and health benefits, to regrow all the glands, the nervous system and the lymphatic system and to increase pulsation.

Kan and Li Characteristics

Kan (Water): Broken Lines are Yin, Darkness. Solid Line is Yang-Light. The Trigram is Light within Darkness or Fire within Water (Yang within Yin).

Li (Fire): Broken Line is Yin, Darkness. Solid lines are Yang, Light. The Trigram is Darkness within Light or Water within Yin (Yin within Yang).

Kan

Lead, Life Essence,
Sexual Energy, Real Knowledge
True Sense, Real Wisdom
Tama the Tiger

1. The Yang within Yin
2. True Lead, True Sense
3. The Lad of the Kan in the Moon
4. North, Moon
5. Water
6. White Tiger
7. Female
8. Kidney
9. Saliva
10. Semen, Sperm
11. Black
12. Self
13. True Sense mixed with arbitrary Feeling.

Li

Mercury, Spiritual Essence
Temper, Ground the Dragon,
Heart of Compassion

1. The Yin within Yang
2. True Mercury, Spiritual Essence and Virtual
3. The Maiden of the Li in the Sun
4. South, Sun
5. Fire
6. Green Dragon
7. Male
8. Heart
9. Chi
10. Blood, Menstruation
11. Red
12. Other
13. Spiritual Essences become adulterated with Temper.

Kan: Lead, True Sense, Life Essence, Orgasm Energy

1. Lead is dense and heavy

2. True sense of real knowledge; when sexual energy cannot be moved senses will be restored.

3. True sense is outwardly dark but inwardly bright Strong and unbending, able to ward off external afflictions. The Black Tiger's strength and vigor are within.

4. The White Tiger's energy is associated with metal.

5. Iron Man is not constrained by anything.

6. Golden Flower- pivot of creation.

7. North Star-it conceals brightness within darkness and metal within water.

8. Rabbit in the Moon-masculinity within femininity.

9. When sexual energy rises (does not leak out) it gets transformed into bliss.

10. Total Body Orgasm: First: Brain; Second: the Senses; Third: the Kidneys; Fourth: the Liver; Fifth: the Spleen; Sixth: the Lungs; Seventh: the Heart; Eighth: the Soul; Ninth: the Spirit.

11. The Orgasm comes from the material

   a. The material- the sexual organs, the senses, the glands, the organs

   b. When sexually aroused it transforms the aroused sexual energy into immaterial.

   c. When it is aroused to the higher level of force, the orgasm has the power to connect with Universal Force (God) and bring the Earth Energy up to human body.

Li: True Mercury, Spiritual Essence, the Heart of Compassion

1. Mercury: Lively and active, bright and buoyant, soft and yielding. It easily runs oft like the spiritual essence of conscious knowledge in the human body.

2. Spiritual essence is outwardly firm yet inwardly flexible. Call and it responds; touch and it moves. True Mercury goes in and out unpredictably.

3. Green Dragon- when passing through or tempering by fire it changes to the Black Tiger.

4. The Woman: Yang on the outside and Yin on the inside.

5. The Man: Yin on the outside and Yang on the inside.

6. Wood Mother- Soft and Loving.

7. Raven in the Sun- Femininity within Masculinity.

8. Mercury Within Cinnabar- Its reality is hidden within fire.

9. Flowing Pearl- Its light is penetrating.

10 The Firs of heart compassion come from the material into the immaterial.

a. The material- the Organs: Heart, Kidneys, Liver, Spleen, Lungs.
b. Their pure energy transforms into virtue, the immaterial such as love, joy happy, gentleness, kindness, fairness, cour age. Which we can not see, cannot touch, but we can feel its reality.
c. When all these virtues combine at the heart they become the heart of compassion.
d. When it rises up to the mideyebrow it becomes the spiritual essence.

Afternoon or Evening Meditation

Kan and Li Formulas:

Do each formula for two weeks, then combine them if time permits.

A. Reversing the Hot and Cold Energy

These procedures should be done at the beginning of each meditation.

1. Smile down.
2. Listen to the kidneys - feel gentleness and coolness.
3. Distinguish their cold energy from the hot energy of the adrenals, which are located on top of the kidneys.
4. Form a sphere at the perineum in which to collect the cold energy of the kidneys. Collect the hot energy of the adrenal at T-11 on the spine, and send it up the spinal cord to the crown. From there bring it down the middle Thrusting Channel to the heart center, and combine it with the energies of the heart and the thymus.
5. Pull the hot energies from the adrenals, heart, and thymus into the heart collection point and mentally establish the pulse there.
6. Divide your attention between the hot and cold energies at the two collection points. Bring the hot energy down either the front or the left Thrusting Channel to the lower abdomen. Simultaneously bring the cold energy up the back or the right Thrusting Channel to the solar plexus. Do not allow the energies to shift or move as you slowly reposition them. Think of the hot and cold energies as fire and water contained in two separate cups, both of which must not be spilled.
7. Move the hot and cold energies into the middle Thrusting Channel and carefully couple them at the navel. The fire is the stove, and the water is the cauldron. Be careful not to spill the cold energy into the stove.

8. Establish the heartbeat in the cauldron, and allow the kidneys to pulse with the heart as you pull up the sex organs.

9. Seal the senses down into the cauldron as this will help you establish the automatic pulsing there.

10. Stir the cauldron with your inner eye, and feel the steam arise from the cauldron.

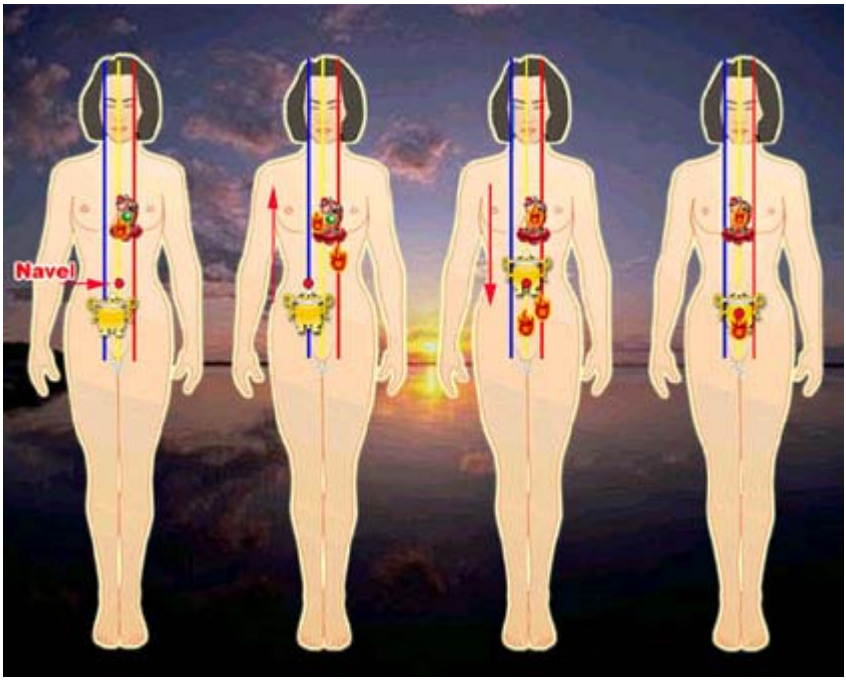


Fig. 22 *Reversing the Hot and Cold Energy*

B. Steaming the Glands and Organs

As the steam comes out of the cauldron, direct the colored steam or vapor to the following glands and organs for a few minutes each. You may feel each organ soften, expand like a flower blossom, and become cool as the steam surrounds it.

1. Kidneys - Bladder - Blue Steam
2. Liver - Gall Bladder - Green Steam
3. Spleen - Pancreas - Yellow Steam
4. Heart - Small Intestine - Red Steam
5. Lungs - Large Intestine - White Steam

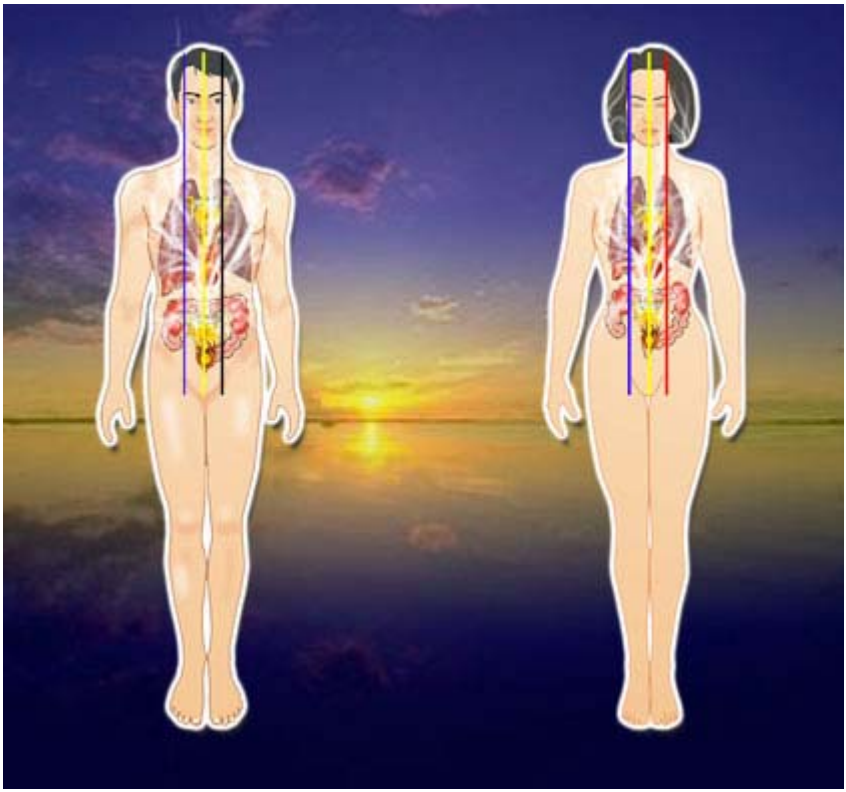


Fig. 23 *Steaming the Glands and Organs*

C. Spinal Cord Steaming

- If starting fresh, complete the steps in A (one to ten).
- If continuing from B, reestablish the automatic beating at the cauldron.

1. As you stir the cauldron with the eyes and pull up the sex organs, move the cauldron and stove back toward the spine.
2. Direct the energy of the steam into the spine. The abdomen may pull in, and the breathing may stop momentarily.
3. As you feel the steam in your back, breathe the energy up and down the spine.

Fig. 24 *Spinal Cord Steaming*

D. Lymphatic System

- If starting fresh, complete the steps in A.
- If continuing, reestablish the pulse in the cauldron.

This exercise requires knowledge of the lymphatic system's locations in the body.

1. Direct the steam into the lymph nodes in the navel area.
2. In time, each node will begin to flower or open one by one.
3. Allow each to open, moving your concentration from the navel area into the chest, neck, armpits, etc., following the pathways of the lymphatic system.

Fig. 25 *Lymphatic System*

E. Nervous System/Spine

- If starting fresh, follow the procedures in A.
- If continuing, reestablish the pulse at the cauldron.

1. Move the stove and cauldron down to the perineum.
2. Move it carefully to the sacrum and steam up the spinal cord.
3. Eventually the steam will flow out of the spinal cord into the nerves throughout the body.

Note: Focus on dry areas and moisten them.

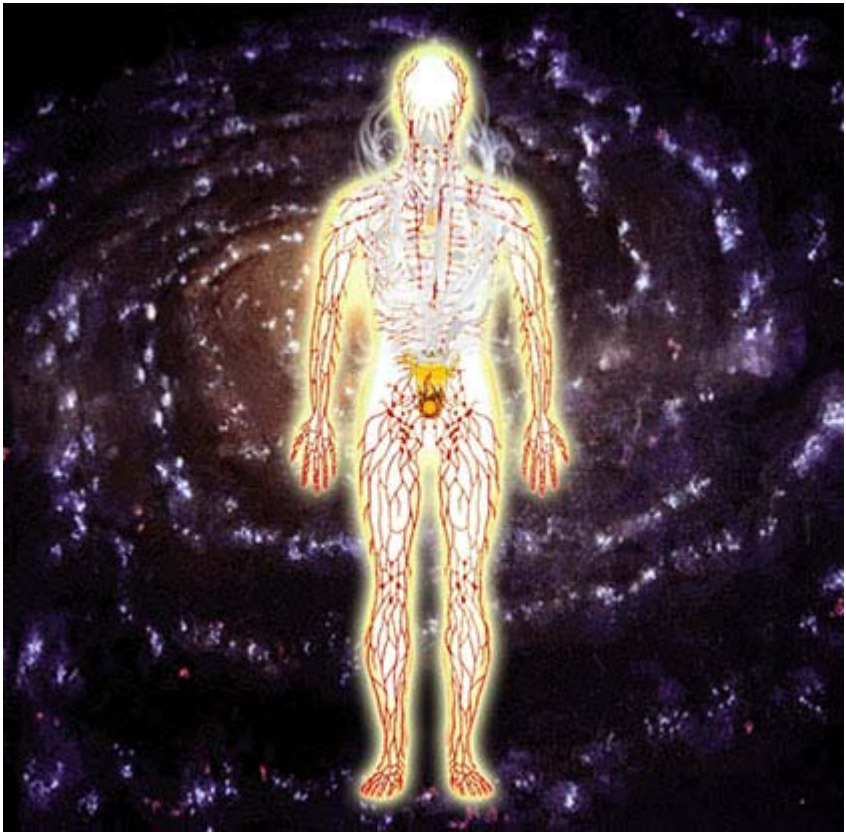


Fig. 26 *Nervous System/Spine*

F. Thymus/Pituitary/Pineal

- If beginning fresh, follow the procedures in A.
- If continuing, reestablish the pulse at the cauldron.

1. Steam the thymus gland located behind the sternum.

Note: Spend less time on the thymus. Calculate before you steam this and the pituitary gland so that the thymus only receives two-thirds as much steam. In other words, if you plan to steam the pituitary for three minutes, steam the thymus for only two.

2. Turn the eyes up to the point between the eyebrows, and direct the steam into the pituitary gland.

3. Turn the eyes up to the top of the head, and steam directly into the pineal gland.

Note: After the pineal gland has been steamed, the energy may spread into any one of a number of routes: eight psychic channels, twelve channels in arms or legs, or any of the routes in *Fusions of the Five Elements, Cosmic Fusion* and *Fusion of Eight Psychic Channels.*

Fig. 27 *Thymus/Pituitary/Pineal*

G. Opening the Twelve Channels

- If starting fresh, follow the procedures in A.
- If continuing, reestablish the pulse at the cauldron.

Note: Be sure to steam each organ before passing the steam through the associated channels. Each channel connects to the next in sequence. After opening each channel the steam will automatically be at the starting point for the next. You may feel a numbness as it passes through each.

1. Lungs: Steam the lungs and their channel as you hold the lung points on the inside edges of your thumbs.

The Lung Channel originates at the middle of the abdomen and travels through the arms to connect with the Large Intestine Channel. From near the cauldron, it runs along the upper orifice of the stomach, passes through the diaphragm, and enters the lungs. At the portion of the lungs nearest the throat, it separates and descends along the inner aspects of the upper arms, through the forearms, and ends at the inside edges of the thumbs. A branch runs directly to the inside tip of each index finger where it links with the Large Intestine Channel.

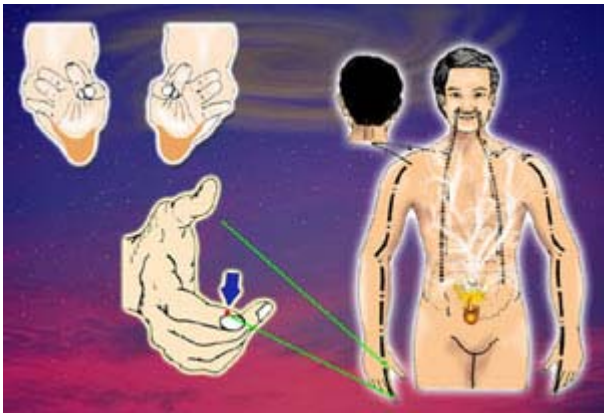


Fig. 28 *Steaming the Lungs Meridian with Holding Point*

Holding Point: Use the index finger of each hand to reach over its respective thumb and press a point on the inside edge facing the centerline of your body where the thumbnail begins.

2. Large Intestine: Steam the large intestine and its channel as you hold the related points on your index fingers.

The Large Intestine Channel starts at the inside tips of the index fingers, running up between the first and second metacarpal bones of each hand. Following the outer length of the forearms, it reaches the outside of the elbows, ascending along the upper arms to the highest point of the shoulders. It travels along the outer border of the acromion and culminates briefly at the C-7 point. From there it descends over the shoulders as it again separates. Each half splits: one part of each route descends to connect with the lungs and diaphragm, entering the large intestine; the other part branches upward through the neck and cheek. The ascending portions travel up the sides of the mouth, partially connecting at the upper lip as they extend upward through both sides of the nose to link with the Stomach Channel.

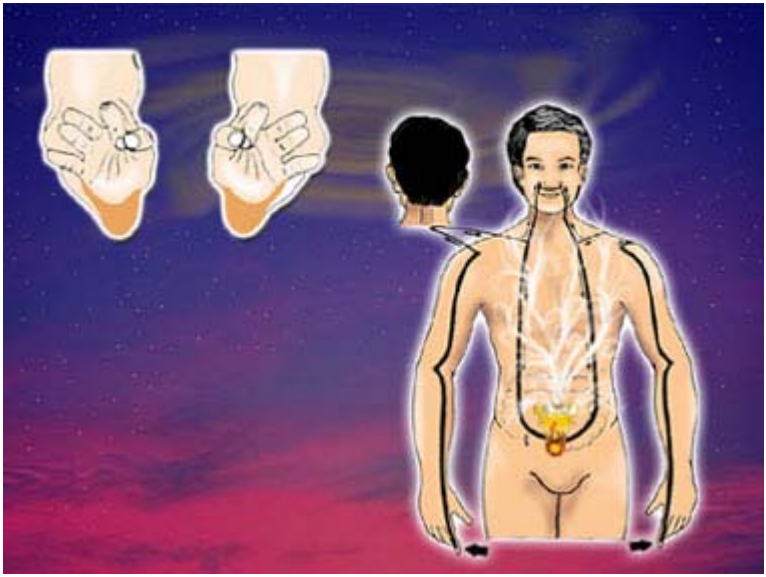


Fig. 29 *Steaming the Large Intestine Channel with Holding Point*

Holding point: Use the tip of each thumb to press a point on inside edge of each index finger facing the thumb where the fingernail begins.

3. Stomach: Steam the stomach and its channel as you mentally hold the related points on the second toes of the feet. (These are the longest toes.)

The Stomach Channel starts on both sides of the nose, extending almost to the inside corner of each eye. From the sides of the nose it descends over the mouth, connecting at the chin. It again separates as two branches run across the lower portion of the jaw on both sides of the head, ascending by the front of each ear along the hairline to the forehead.

Parts of these branches descend along the sides of the throat and split again near the collar bone. Two extensions pass through the diaphragm and the stomach as they travel to the groin. (The left side connects with the spleen.) The other extensions run outside, descending through the nipples and near the umbilicus on the inner sides of the lower abdomen. Four branches connect at the middle of the groin, and then divide into two branches which travel down the front of the legs to the dorsal areas of the feet. These branches again split within each foot. One part extends to the outer tip of the second toe (the holding point), and the other to the inside edge of the big toe as it connects with the Spleen Channel.

Fig. 30 *Steaming the Stomach Channel with Holding Point*

Holding Point: As you hold the lung points with your fingers, focus your attention on points at the outside edges of the second toes facing the middle toes where the toenails begin.

4. Spleen: Steam the spleen and its channel as you mentally hold points located on the inside edges of the big toes facing the centerline where the toenails begin.

The Spleen Channel starts from the tips of the big toes, running along the insides of the feet and ascending up the legs through the inner knees and thighs. The two branches curve around the lower abdomen, combining at the navel before they split into four. One extension connects with the spleen; another flows through the stomach and into the heart to link with the Heart Channel. Two remaining branches ascend through the diaphragm and along the sides of the esophagus until they reach the root of the tongue where they culminate.

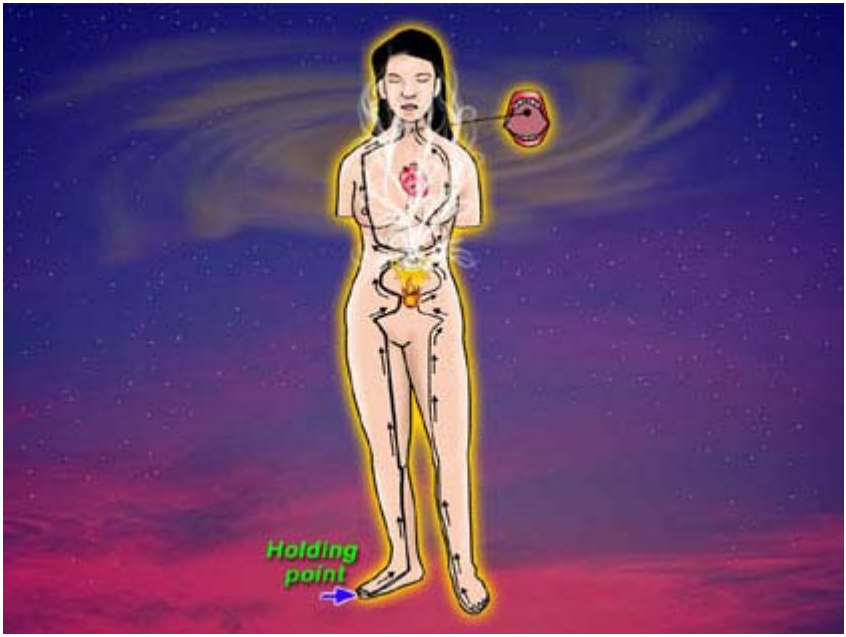


Fig. 31 *Steaming the Spleen Channel with Holding Point*

Holding Point: As you hold the lung points with your fingers, concentrate on the inside edges of the big toes behind the toenails.

5. Heart: Steam the Heart and its channel as you use your thumbs to hold the heart points on the inside edges of the pinky fingers facing the fourth fingers where the fingernails begin.

The Heart Channel originates at the heart and spreads over the surrounding area, flowing down through the diaphragm to connect with the small intestine. One ascending portion of the channel runs along the center of the esophagus to connect with the eye system. Another two branches flow upward to the lungs, curving around to the insides of the forearms and flowing down through the inside edges of the pinky fingers. Here the branches link with the Small Intestine Channel.

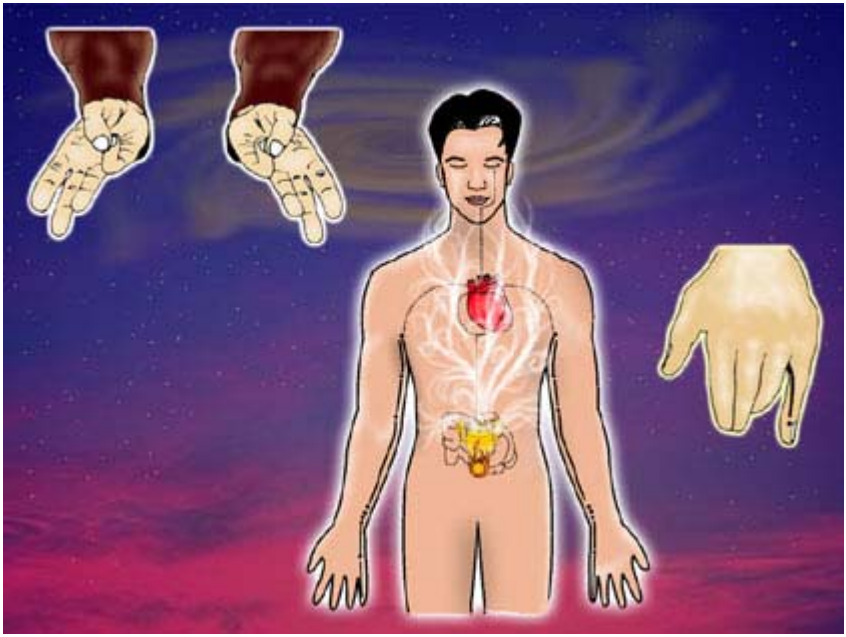


Fig. 32 *Steaming the Heart Channel with Holding Point*

Holding Point: Hold the heart points at the inside edges of the pinky fingers using the tips of the thumbs.

6. Small Intestine: Steam the small intestines and their channel as you use your thumbs to hold the points on the outsides of the pinky fingers where the finger nails begin. (Curl the pinky fingers to access the points.)

The Small Intestine Channel starts at the outer side of the tips of the pinky fingers. Following the edges of the hands, its branches ascend up the outer sides of arms to the shoulder joints. Then they curve through the scapulae and traverse the sides of the lower neck to the front of the body where the two branches split. Their lower extensions connect at the heart and descend as one channel, passing through the diaphragm, the stomach, and finally the small intestines. The ascending branches extend from the collar bone up the sides of the neck to the cheeks where they also split. Two extensions end at the sides of the nose near the inside corners of the eyes where they connect with the Urinary Bladder Channel. The other two extensions split further at the outside corners of the eyes and cross the cheeks to end at the ears.

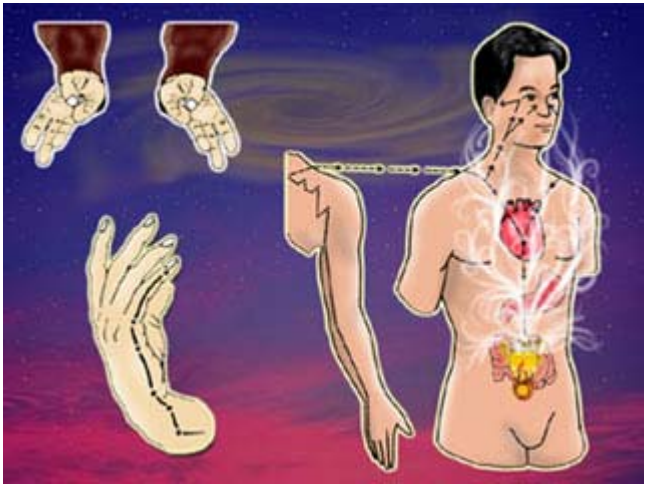


Fig. 33 *Steaming the Small Intestine Meridian with Holding Point*

Holding Points: Use the tips of the thumbs to depress the small intestine points located on the outside edges of the pinky fingers behind the fingernails.

7. Urinary Bladder: Steam the bladder and its channel as you mentally hold points at the outer edges of the pinky toes where the toe nails begin. The Urinary Bladder Channel starts at the nose near the inside corners of the eyes. The two branches ascend to the forehead, joining at its apex, then split and run across the top of the cranium. On the back of the head the branches split again: routes descend behind the ears and converge at the back of the skull, enter the brain, reemerge, and bifurcate into two extensions of each branch. Near the base of the skull, the channel appears as four separate lines. Two of these run vertically down the insides of the scapulae, descending into the lumbar region as they enter the body cavity and connect with the kidneys and the urinary bladder. They swing back to the sacrum and descend down the inner thighs to join two other branches of the Urinary Bladder Channel at the knees. The other two branches descend vertically from the back of the neck along the edges of the scapulae parallel to the inside channels. Passing downward through the buttocks, they cut outward and descend along the backs of the legs. From where these meet with the inside branches at the knees, the recombined lines descend along the lower legs to the outer edges of the feet, ending at the outside edges of the pinky toes. Here the branches link with the Kidney Channel.

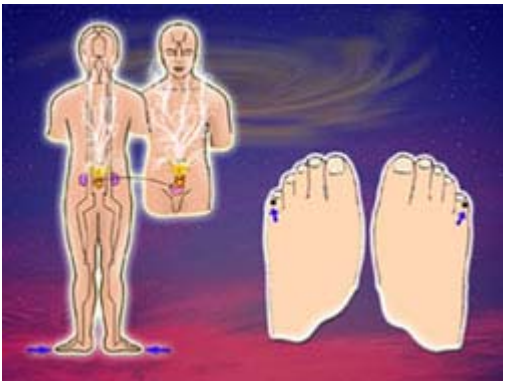


Fig. 34 *Steaming the Urinary BladderChannel with Holding Point*

Holding Point: As you hold the lung points with your fingers, mentally hold the urinary bladder points on the outer edges of the smallest toes.

8. Kidneys: Steam the kidneys and their channel as you mentally hold points located on the undersides of the pinky toes.

The Kidney Channel starts at the underside of the little toes and runs across the soles of the feet. From the soles, the branches emerge and circulate around the protruding inner ankle bones and ascend along the inner legs and thighs toward the coccyx. From the coccyx, the channel follows the spine up to enter the kidneys. From the kidneys, two branches run down to the bladder and up through the liver and diaphragm to enter the lungs. The branches terminate at the root of the tongue. A small branch also joins the heart and links with the Pericardium Channel.

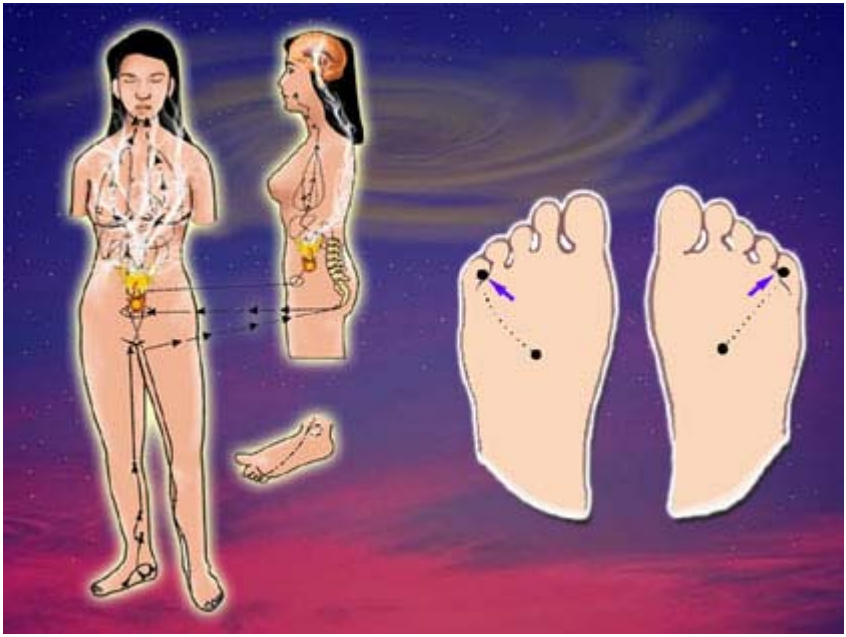


Fig. 35 *Steaming the Kidneys Meridian with Holding Point*

Holding Points: As you hold the lung points with your fingers, concentrate on the bottom of each pinky toe.

9. Pericardium: Steam the area around the heart and its related channel as you hold points on the tips of the middle fingers using the tips of the thumbs. (Curl the middle fingers to access the points with the thumbs.)

The Pericardium Channel originates in the chest around the heart. It enters the pericardium, then it descends through the diaphragm to the abdomen. Other branches run inside the chest toward the nipples, curving up, and then running down the insides of the arms to the palms. The channel ends at the tips of the middle fingers where branches arise from the palms to connect with the Triple Warmer Channel, which begins at the fourth fingers.

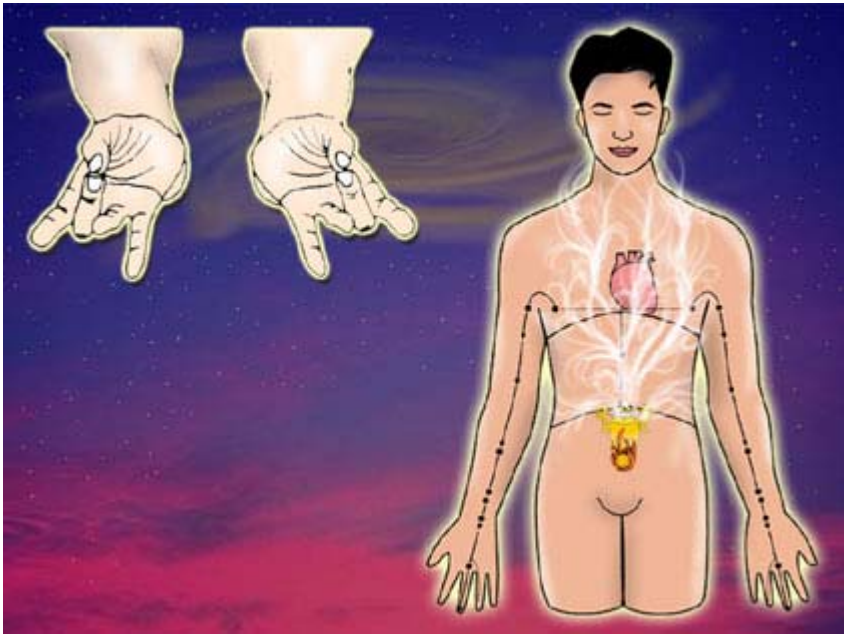


Fig. 36 *Steaming the Pericardium Meridian with Holding Point*

Holding Point: Hold the pericardium points on the middle finger-tips using the tips of your thumbs.

10. Triple Warmer: Steam up the torso upper, middle, and lower abdomen and its channel as you hold points on the tips of your ring fingers with your thumbtips. (Curl the fourth fingers.)

The Triple Warmer Channel originates at the tip of the ring fingers, flowing across the back of each hand and ascending up the outer sides of the arms to the backs of the shoulders. Its branches wind over the shoulders to the supraclavicular fossa where they recombine and split again, spreading in the chest to connect with the pericardium before they descend through the diaphragm to the upper, middle, and lower abdomen.

A branch ascends to the supraclavicular fossa from the chest and continues over the shoulders and up the sides of the neck toward the ears. This channel splits on both sides of the neck. One branch extends around the back of the ear, up to the temple, and down to the cheek, ending at the inside corner of the eye. The other enters the ear, emerges in front of the ear, and crosses to the outer edge of the eyebrow to link with the Gall Bladder Channel.

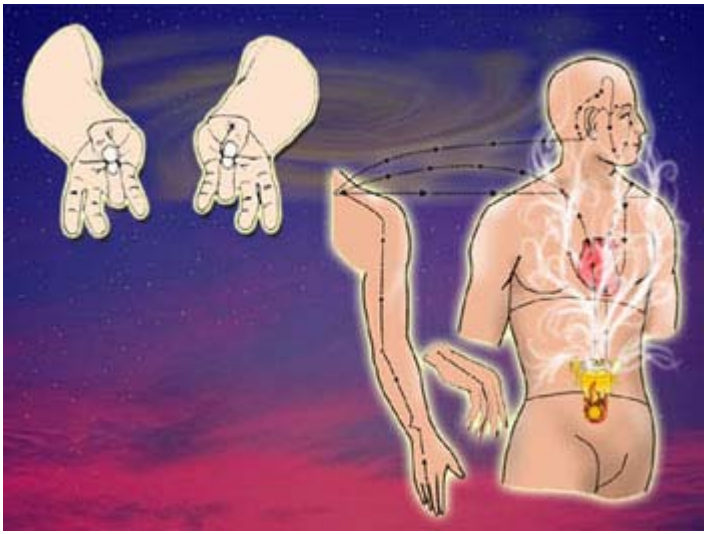


Fig. 37 *Steaming the Triple Warmer Meridian with Holding Point*

Holding Point: Depress the triple warmer points on the tips of the ring fingers of each hand using the tips of the thumbs.

11. Gall Bladder: Steam the gall bladder and its channel as you mentally hold a point on the outside edge of the fourth toe of each foot facing the pinky toe where the toenail begins.

The Gall Bladder Channel originates in the outer canthus, flowing toward the ears, up to the corners of the forehead, and back down to the tips of the ears. Then its branches curve back around the ears, up over the cranium to the forehead, and back down the neck. They traverse the shoulders and join the other branches descending from the infraorbital regions and the cheeks at the supraclavicular fossa region.

From the supraclavicular fossa region, one branch descends into the chest and passes through the diaphragm to connect with the liver and the gall bladder. From there it runs down the abdomen, superficially along the margin of the pubic hair, and then into the hip region. The other branch runs downward along the lateral aspect of the chest and the free ends of the floating ribs to the hip where it joins the other branch. The channel splits again and descends along the lateral aspects of the thighs, knees, and lower legs to the outside tips of the fourth toes. Branches also run to the big toes where they link with the Liver Channel.

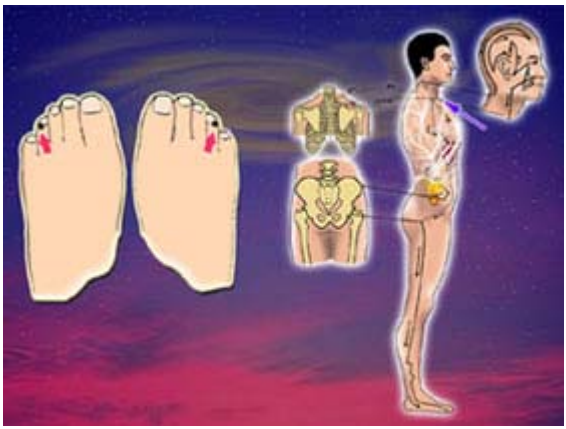


Fig. 38 *Steaming the Gall Bladder Meridian with Holding Point*

Holding Point: As you hold the lung points with fingers, focus your attention on point at the inside edges of the big toes.

12. Liver: Steam the liver and its channel as you mentally hold a point on the outside of the large toe of each foot facing the second toe where the toenails begin.

The Liver Channel starts at the dorsal region of the big toes and ascends up the inner sides of the knees and thighs to the pubic region. It curves around the genitalia and up through the diaphragm to curve around the chest. Then its branches ascend along the posterior aspects of the throat, crossing the cheeks to connect with the eye system. They continue upward, emerging from the forehead above the eyebrow, and pass over the head. A branch comes down from the eye system to curve around the inner surface of the upper and lower lips. Another branch arising from the liver passes through the diaphragm and lungs to link with the Lung Channel.

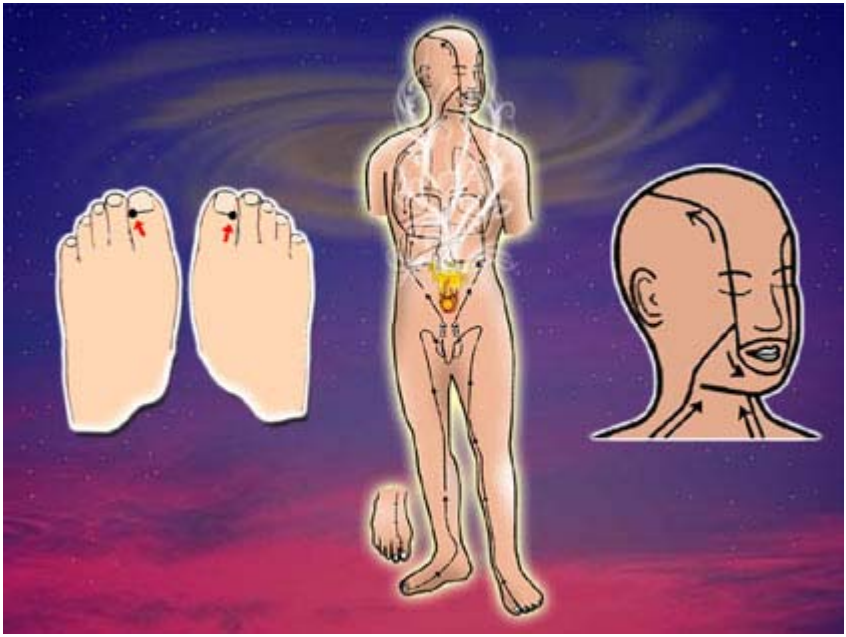


Fig. 39 *Steaming the Liver Meridian with Holding Point*

Holding Point: As you hold the lung points with fingers, focus your attention on point at the inside edges of the big toes.

H. Increasing the Pulses

- If starting fresh, follow the procedures in A.
- If continuing, reestablish the automatic pulsing as you move the stove and cauldron back to the coupling point behind the navel.

1. Mentally allow the heart rate to decrease.
2. Amplify the strength of the pulse at the crown and perineum points. This will assist the heart by moving the blood with Chi energy.
3. Amplify the pulse at the navel, groin, inner ankles, and feet.
4. Amplify the pulse at the neck, temple, back of skull, arm pits, inside elbows, and wrists.
5. As you become familiar with this exercise, begin to synchronize all pulses. By recreating the pulse in other areas, you will eventually be able to transfer the heartbeat up to the energy body.

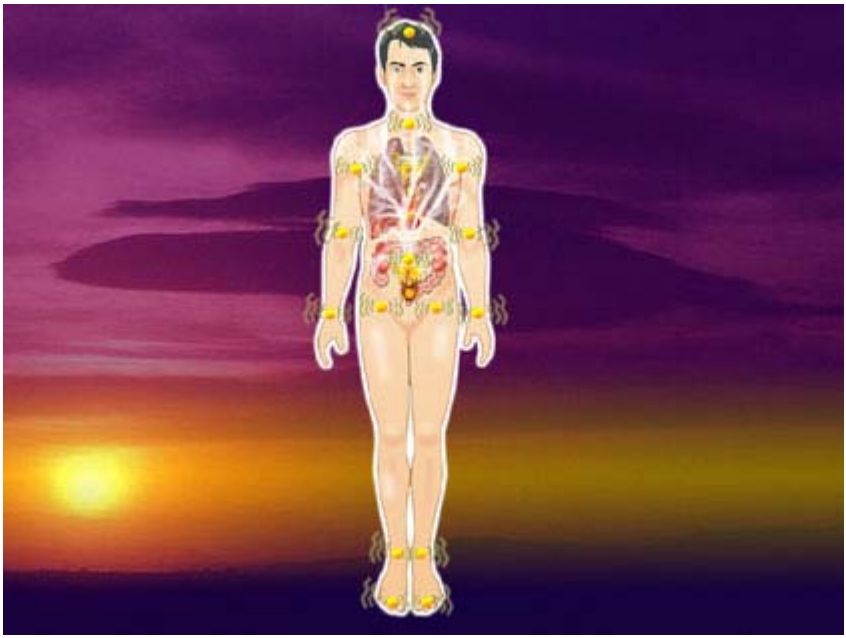


Fig. 40 *Increasing the Pulses*

I. Inner Eye

- If beginning fresh, follow A (one to ten).
- If continuing, return to the stove and cauldron.

1. In the junction point between the stove and cauldron, make the eye. You may begin with it as a point of light.
2. Allow it to grow and strengthen and begin to move it out of the stove/cauldron.
3. Eventually begin to direct the inner eye on exploratory missions throughout the various routes: microcosmic, thrusting, belt, etc.

Fig. 41 *Inner Eye*

J. Self Intercourse

- If starting fresh, follow the procedures in A.
- If continuing, reestablish the pulse at the cauldron.

1. Concentrate on the sexual organs and the pineal gland.
2. Practice the Power Lock for several rounds to draw sexual energy up to the pineal gland.
3. In a separate step, draw sexual energy into the perineum.
4. Using the middle thrusting channel, feel the connection between the genitals through the perineum and the pineal gland.
5. Draw sexual energy up from the perineum as you bring down energy from the pineal gland, compressing them both into the cauldron at the navel. As you establish their connection at the cauldron, an orgasm may occur in the navel area extending out to the organs.
6. When the orgasm reaches what feels to be its peak, seed the cauldron with energy from the liver or the liver collection point.

Note: The cauldron may be seeded either from the top or directly into the coupling point.

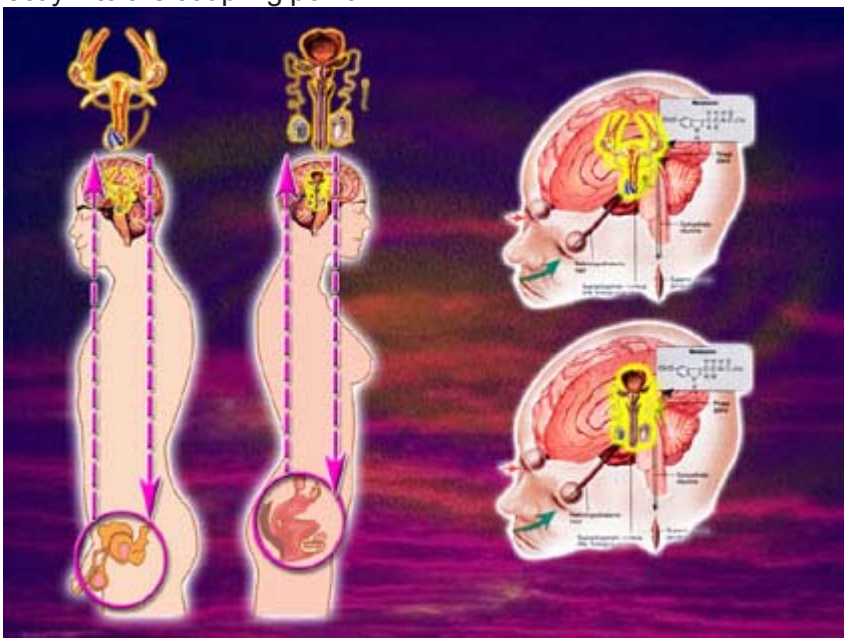


Fig. 42 *Self Intercourse*

K. Virtuous Animal Pure Inner Child and Planet Protection

Spiral Kidney Essence to Kidney Collection Pt.-Feel Blue Light form Virgin Child & Antlered Deer (Earth Force)-Breathe out Blue Light of Gentleness forming Blue Turtle behind(N) connecting above with Mercury. Spiral Heart Essence to Heart Collection Pt.-Feel Red Light form Virgin Child & Pheasant (Earth Force)-Breathe out Red Light of Joy forming Red Pheasant in Front (S) of Body connecting above with Mars. Spiral Liver Essence to Liver Collection Pt.-Feel Green Light form Virgin Child & Dragon (Earth Force) Breathe out Green Light of Kindness forming a Green Dragon Right (E) connecting above with Jupiter. Spiral Lung Essence to Lung Collection Pt. -Feel White Light form Virgin Child & Tiger (Earth Force) Breathe out White Light of Courage forming a White Tiger Left (W) of Body connecting above with Venus. Spiral Spleen Essence to Spleen Collection Pt.-Feel Yellow Light form Virgin Child & Phoenix(Earth Force) Breathe out Yellow Light of Fairness forming a Yellow Phoenix Above (C) of Body connecting with Saturn. Form protective Outer Ring around Organs with Virgin Children & Power Animals then form Protective Ring & Fiery Dome around Physical Body with Earth Force Animals North-South-East-West-Center interconnecting with Planets & Stars (RS).

Fig. 43 *Animal Protection*

L. Gather the Pill

Breathe in through the mideyebrow connecting with an outer light by blinking the eye. Draw and gather the light into a pill and move it down to the Solar Plexus. The pill is the essence and nutriment for the Immortal Fetus. Feel the growth of the Immortal Fetus as you draw in the light.

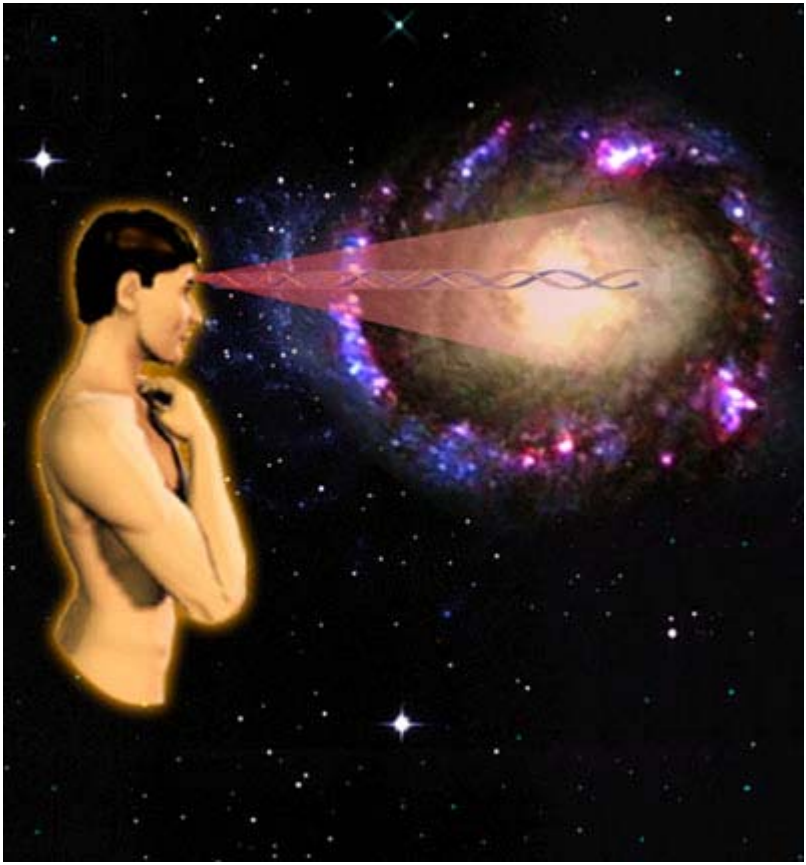


Fig. 44 *Gather the Pill*

M. Transfer of the Organ's Essence

Feel the organ energy and essence and transfer into the organs of the Energy Body with each of the vital organs: Heart Essence into Energy Body's, Lungs Essence into Energy Body's, Spleens Essence into Energy Body's, Liver Essence into Energy Body's, Kidneys Essence into Energy Body's.

Fig. 45 *Transfer of the Organ's Essence*

N. Ending the Meditation: Turning the Wheel

Each Kan and Li meditation should be ended with this formula which is a process of collecting refined energy in the navel cauldron to be used in future meditations, including the higher levels.

- If beginning fresh, follow the procedures in A.
- If continuing from I above, reestablish the cauldron and stove, moving them back to the sacrum.

At this stage, the eyes are used to direct the energy produced by the meditation into the Microcosmic Orbit, guiding it into the cauldron behind the navel.

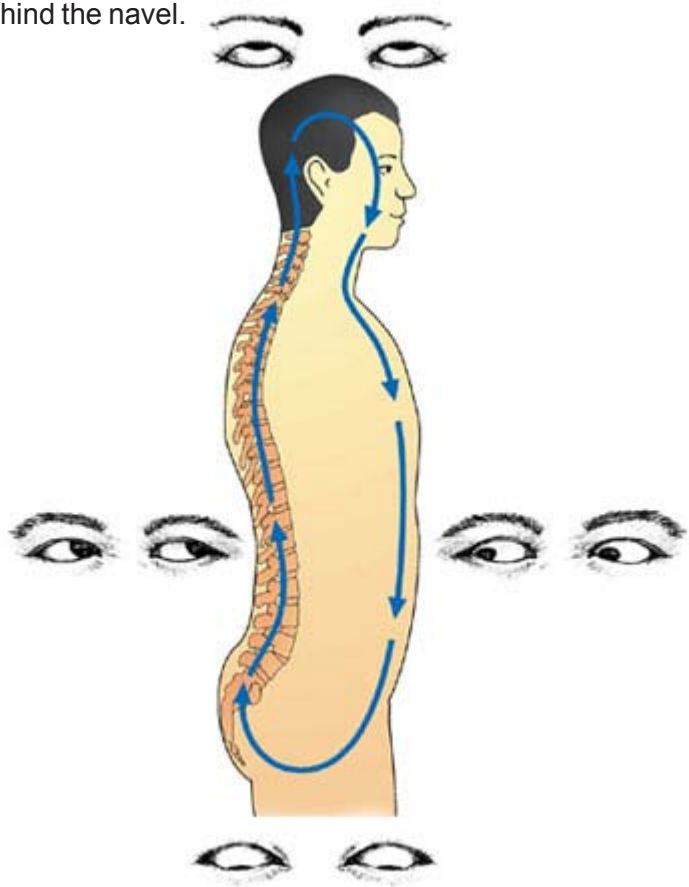


Fig. 46 *Ending the Meditation: Turning the Wheel*

1. Form a pool of sexual energy at the perineum. Looking straight ahead with your eyes closed, form a mental image of a clock with your eyes focused on its center.

2. Look down into the pool (6:00), and draw sexual energy up into the spine. The steam will travel up the spine drawing sexual energy with it.

3. Look from the perineum up to the right (3:00), drawing the energy up to T-11 as it is refined at that point.

4. Look from the right up to the crown (12:00), and draw the energy there to further refine it at the pineal gland.

5. Look from the crown down to the left (9:00), and draw the energy down either through the tongue or the thrusting routes into the cauldron at the navel. The energy is then stored in the cauldron. (These four directions constitute one round.)

6. Follow the above procedures J (two to five) for at least 36 revolutions. You may do them in four rounds of six revolutions with three counts resting in between; or you may do two rounds of twelve revolutions with six counts resting in between. In any sequence, the revolutions and resting counts must add up to 36. The rising steam will eventually flow independently of your counting, but maintain the mental revolutions to be sure it reaches the cauldron.

7. If you have time, do four rounds of 75 revolutions, resting for fifteen counts in between rounds; or do two rounds of 150 revolutions, resting for 30 counts in between rounds; or do 360 revolutions straight through. (All of these methods add up to 360, which is the maximum number of revolutions used to end this practice.)

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Lesser Kan and Li

Enlightenment and Birth of the Immortal Fetus

Mantak Chia

Illustrations by Udon Jandee

Lesser Kan and Li

Kan and Li literally means water and fire. The Chinese formula Siaow Kan Li (Yin and Yang Mixed) literally steams the sexual energy (Jing) into life force energy (Chi) in order to feed the soul or energy body.

The Birth of the Soul

The formulas in the lesser Enlightenment help to give birth to the soul body, an awakening of that part of yourself, which is free from environmental and karmic conditioning. The birth of the soul is not metaphor. It is an actual process of converting energy into a subtle body.

Overcoming Reincarnation

The newborn soul matures in relation to your energy skills. If you were to die, the energy gathered in the soul body will not simply dissipate. The Lesser Enlightenment of Kan and Li leads to the first steps of overcoming reincarnation.

Preparing for the Spirit Body

Developing the soul body is the preparation for the growth of the Spirit Body in the Greater Enlightenment of Kan and Li. Come! Experience the mystery. "Begin it now." As Goethe said: "Boldness has genius and magic in it."

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Wisdom Chi Kung

Opening the Brain to Wisdom

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Wisdom Chi Kung

Opening the Brain to Wisdom

Mantak Chia

Edited by:

Lee Holden

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Wisdom Chi Kung Theory

Western science has discovered that when people are heavy thinkers, when they worry a lot, are full of anger, jealousy, hatred or other negative emotions, their brain activity can consume 80 percent of all their total body energy. The brain is a heavy user of energy and when it begins to use it's energy, it doesn't stop if it is not told to. The rest of the body has only 20 percent of it's energy to use for all other intricate functions needed for daily activity. You can imagine why at the end of the day, most people go home and 'vege out' in front of the television. There is no energy in the body left to do anything.

One of the things that many religions have tried to do through meditation is to discover how to stop people from thinking. How do you stop the monkey mind from spinning constantly? All this activity does not stop at the end of the day but continues on during dreaming. In this chapter, we will introduce you to the monkey mind concept, how to recognize it when it begins, and how to respond correctly to it's perpetual activity.

Basis of Theory

So, the whole secret of the practice is; just smile down, relax, picture the eyes like a 'sun shining on the water,' suddenly you will start to feel something like a steam starting to rise up from your sacrum. You will feel this energy move up and begin to charge the brain. Now, if you expand the mind out and connect with the Universe, bring the energy back and store it in the organs, when that energy is transformed and charged back up to the brain, that will bring the brain functioning to a new level. This energy has been transformed and digested so that the brain can use it effectivley. This is very different then storing Universal energy it in the brain itself. The process of storing undigested universal energy in the

brain can actually have something like an allergic reaction which can cause an ‘ energy indigestion’. The brain can have a very strong reaction to this unprocessed energy.

In the Taoist practices we are always concerned about the lower Tan Tien. The energy there is the basis of all the higher practices. Wherever your mind goes, the Chi will go, that is where the fire will be burning. So you must always keep your mind on the lower Tan Tien, or else this fire will burn out. When the fire burns out, the body will loose an emense amount of life force. The mind then needs to be turned in, and then it can expand out. We will further expand on this topic in later chapters.

Fig. 1 *Smile down and Fill the Tan Tien with Chi.*

Introduction of Monkey Mind

In the West they believe that the brain, the vital organs, the sexual organs and energy are all separate. The sexual function is seen by religions as sinful, but it is obvious that it is not possible to suppress the natural instinct to have sex. The problem is that sex has become a very basic drain on everyone because it is approached in the wrong way. So how does one manage this energy and maintain it? The sexual energy and the brain energy are the same energy and their communication with each other is vital for their healthy functioning. The problem is that our mind is patterned to function continuosly with out recieving messages of impulses from the rest of the body. Our mind will voulentarily spin with no direction, for the purpose of maintaining itself. With no structure, or discipline, this monkey mind will run loose and rampid. In the upcoming chapters, we will describe in detail, how to begin to manage this monkey mind, and connect it down to our sexual organs, turning this generated energy into fuel for the body.

Fig. 2 *Connect the mind*

Inner Smile

The most essential point is to connect all the organs and the brain. So you say, how am I going to make this connection? And I say it is nothing more than a “Smile”. Nothing more. It took me thirty years to understand this. Even then, afterl we did all the testing was when it all became clear.

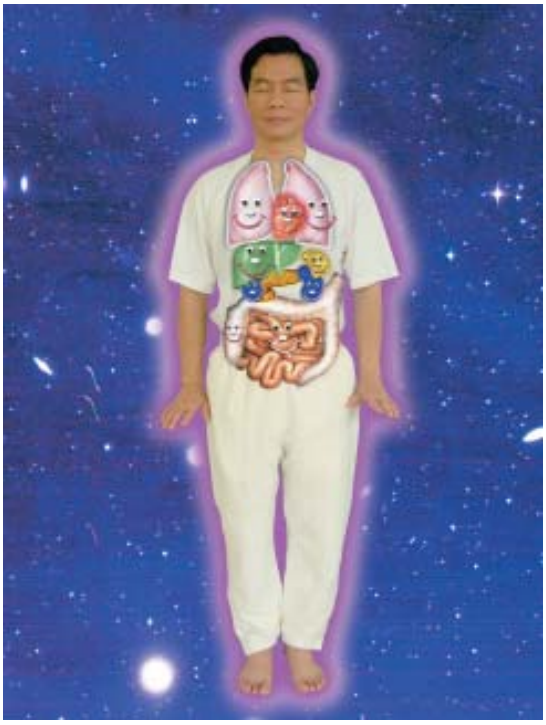


Fig. 3 *Inner Smile into Organs*

The whole goal is to increase the capacity of the brain to hold energy because the brain is really not very capable of ‘holding energy’ The brain can easily overheat actually “cooking” the brain. When the brain gets too cooked, there can be detrimental experiences, like psychological damage. Many people have experienced too much heat in the brain and end up in the hospital beacuse their heightened

experiences have brought too much undigested brain food, turning it into sickness rather than nutrition.Smiling into the organs will allow us to filter energy, giving just enough to charge the brain and revitalize the organs.

Fig. 4 *Connect the brain and the organs.*

Second Brain

In 1996 New York Times published the article, “Complex and Hidden Brain in the Gut makes Stomachaches and Butterflies” the entire article is dedicated to explaining to the public on how “the gut has a mind of it’s own, known as the enteric nervous systemlocated in sheaths of tissue lining the esophagus, stomach, small intestine and colon.” Because of it’s direct relevance to the information in this book, much of this section will be quoted from this article. The

authors explain that the gut brain," is a network of neurons, neurotransmitters and proteins that zap messages between neurons, support cells like those found in the brain and a complex circuitry enables it to act independently send and receive impulses." record experiences and respond to emotions. Nearly every substance that helps run and control the brain has turned up in the gut.

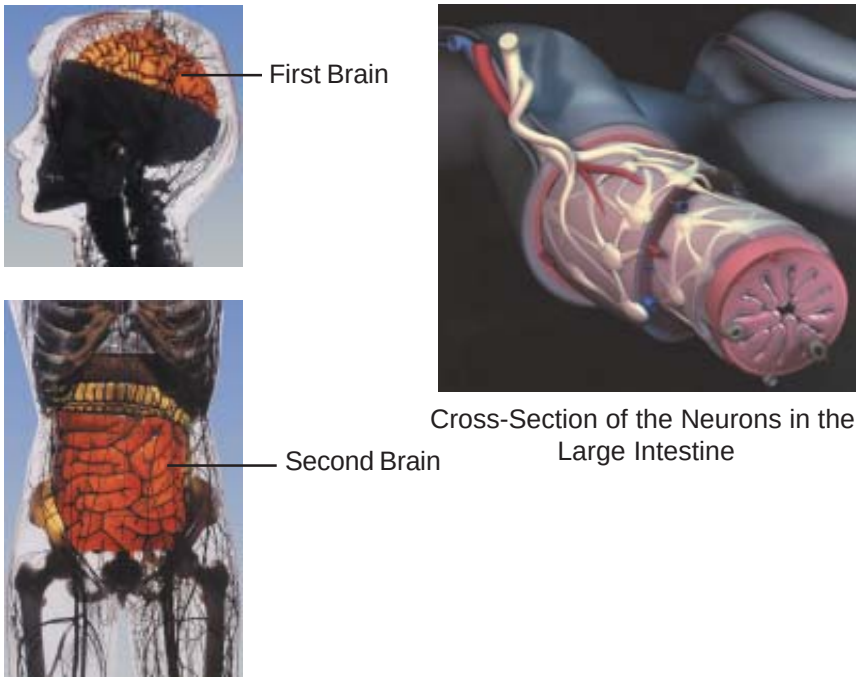


Fig. 5 *Energic nervous system feeds the second brain*

"Since offspring need to eat and digest food at birth, nature seems to have preserved the enteric nervous system as an independent circuit only loosely connected to the central nervous system. A clump of tissue called the neural crest forms early in embryogenesis; one section turns into the central nervous system, another piece migrates to become the enteric nervous system. Only later are the two nervous systems connected via a cable called the vagus nerve."

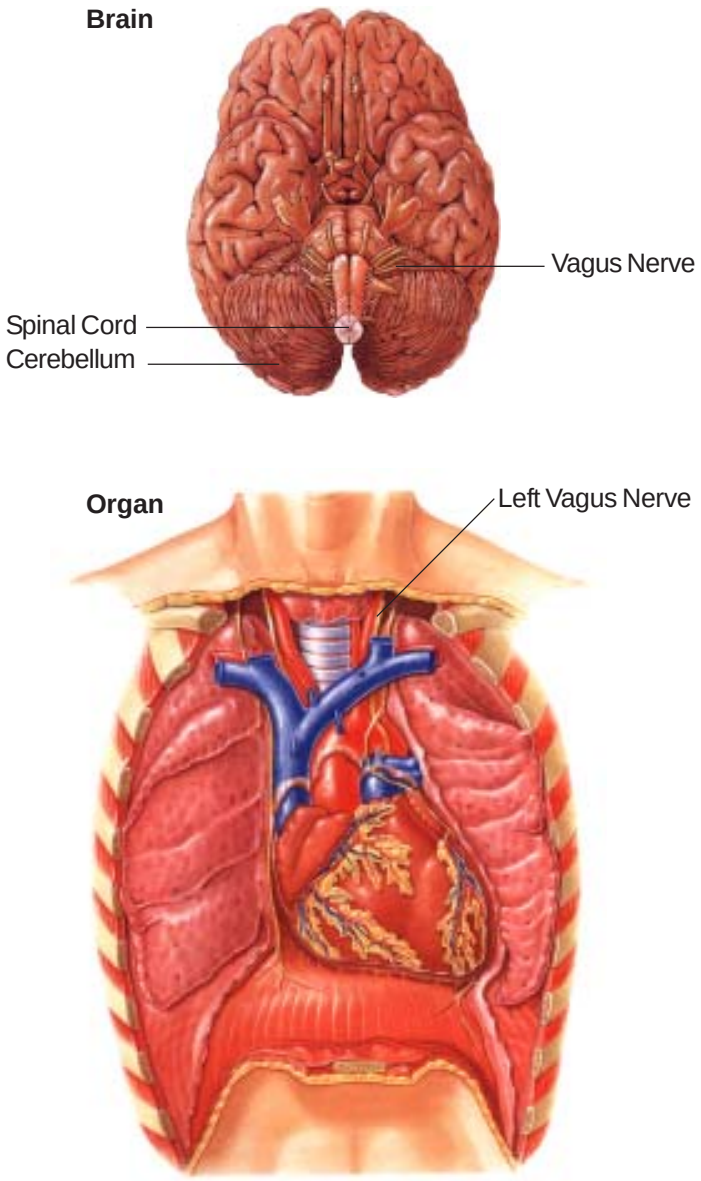


Fig. 6 *Energic and Central Nervous System connected by Vagus Nerve*

"The gut contains 100 million neurons – more than the spinal cord has. Yet the vagus nerve only sends a couple of thousand nerve fibers to the gut. The brain sends signals to the gut by talking to a small number of "command neurons," which in turn send signals to gut interneurons that carry messages up and down the pipe. Both kinds of neurons are spread throughout two layers of gut tissue called the myenteric plexus and the submuscosal plexus."

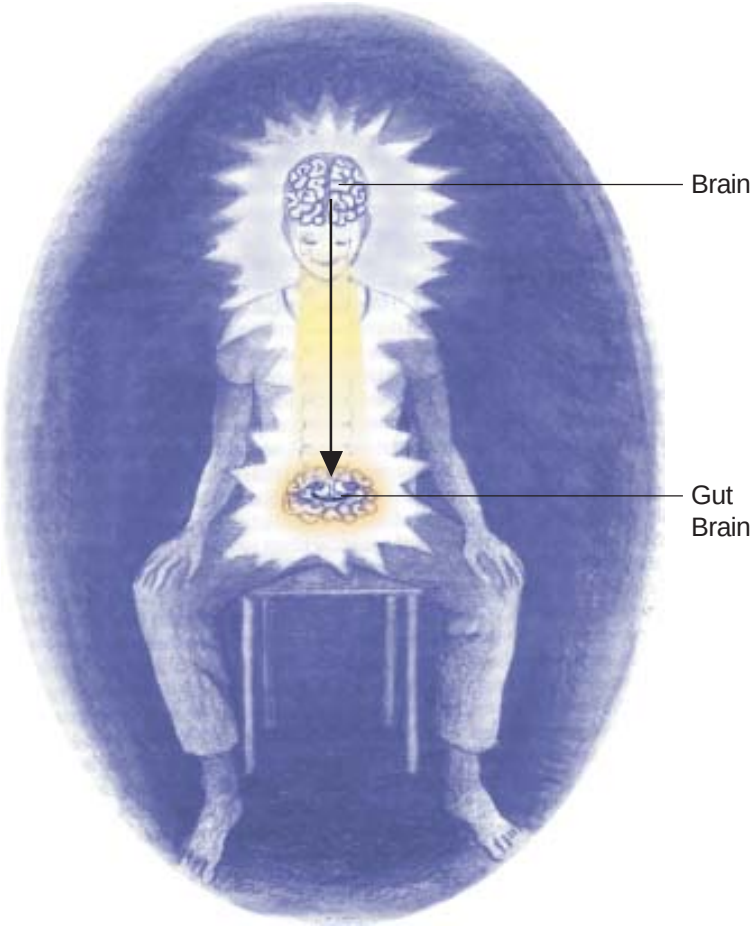


Fig. 7 *Vagus Nerve send corresponding messages to gut brain.*

"The gut's brain and the head's brain act the same way when they are deprived of input from the outside world. During sleep, the head's brain produces 90- minute cycles of slow wave sleep punctuated by periods of rapid eye movement sleep in which dreams occur. During the night, when it has no food, the gut's brain produces 90-minute cycles of slow wave muscle contractions punctuated by short bursts of rapid muscle movements. Such cross talk also explains many drug interactions; psychic drugs that affect the brain are very likely to have an effect on the gut as well." The gut can think.

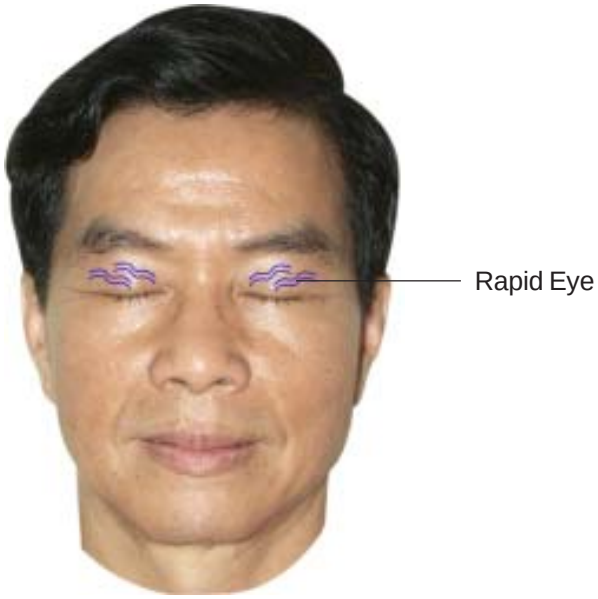


Fig. 8 *Rapid Eye Movement during Sleep*

For centuries, Taoists have been working with this complex and hidden brain in the gut. They have realized and worked with the specific alchemy of the body and used it's simplicity for healing purposes.

For example, water and it's properties can be reflected to the cycles of human life. The human body is about 90% water. Starting

with ice, ice changes to water, and then water changes to steam or gas. This transformation is going on every day. The sun shining on the water. Without the sun shining on the water, very quickly everything that we know of on the world would vanish. Without the steam, there would be no rain. We've had the same water going around in this recycled manner for 100 million years. The ancient Taoists said that the secret of immortality is to transform all liquids into life force.

Ice *Water* *Steam*

Fig. 9 *Transformation Cycle: Ice, Water and Steam*

Reconnect to yourself

Taoism believes that the mind, body and spirit must work together.

1. Sexual organs: The Taoists discovered that although the sexual organs are responsible for *generating* life force energy, they cannot store the energy efficiently. Once a certain amount of energy has been generated, some energy has to be dumped out.
2. The brain can access and generate the higher forces, but it is not easy to store this energy in the brain. We need to train the brain to increase its ability and its capacity to store energy. The brain energy, when increased to a certain level can enable more synapses to grow, and can help convert protein into material the brain cells can use. Taoists believe that with training and practice, one can learn to grow more brain and nerve cells, as well as increase the number of synapses or connections between the nerve cells in the central nervous system.

3. The organs of the body can also generate energy, but much less than the sexual organs and the brain. They do however have a much greater capacity to store and transform energy.
4. The three Tan Tien also can store energy as well as transform and supply it to the brain, spinal cord, sexual organs, and other organs.

The aim of Taoist basic training is to integrate the brain, sexual organs and internal organs into one system. If the brain generates an excess of energy, this energy can be stored in the organs. Excess sexual energy can also be stored in the organs and three Tan Tiens. If the brain generates a surplus of the higher force energy and we are unable to store this energy, we end up having to throw it away. It is like preparing food for one hundred people, and only one person eating. The rest is wasted. When too much sexual energy is produced and there is no practice in how to store it, it will be wasted.

Wisdom Chi Kung Practice

Preliminary Practices Breath Activation

Here we have the bulk of the practice, with an introductory breathing activation, the Wisdom Chi Kung and finally a practice which will tie the two together. The first part of the practice is standing up, “spinal cord breathing.” Spinal cord breathing is about activating the “three pumps.” The first pump is the sacral or sacrum pump. Separating the sacrum movement from the hip movement is important because they are very different movements.

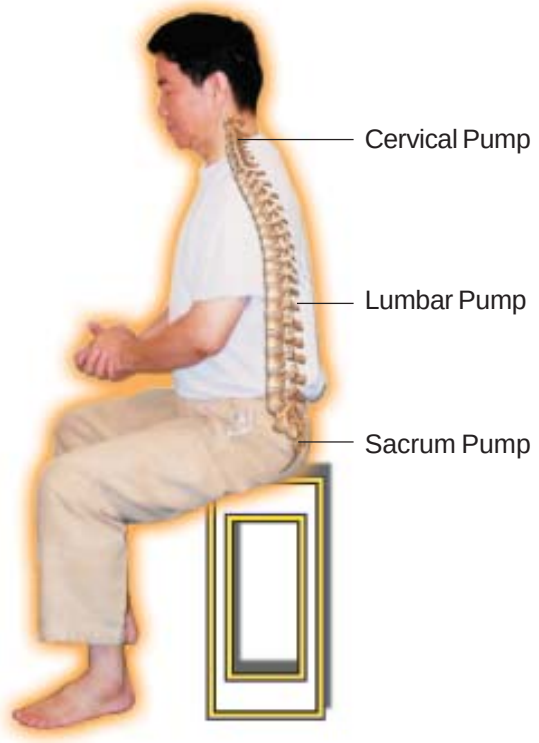


Fig. 10 *Activatng three pumps in the body.*

The sacrum needs to pump the fluid to flow up the spinal cord and to the brain. When you are sitting all the time, you are sitting on the sacrum, on your pump, the fluid does not flow. To activate this pump begins the perenial and sacral flow of energy, sustaining this flow throughout the body, regulating the distribution of energy to all the different points along the meridians.

In order to activate this you must inahle and expand the chest, arms bent at the elbows and extended to the sides of the body. Exhale, tuck the tailbone under you and round the back, bringing the elbows toward one another in the front of the chest. Smile, Inhale, expand the chest, tuck the chin in toward the throat, push the chin back and raise the crown, bring the arms out toward the sides.

Repeat this movment 36 times. This movement activates the crainial and sacral pumps, and loosens all the joints in the spine. When you get old, the brain is no longer fed by this fluid and large parts of its capacity are lost. That's why many older people begin to shrink, their bones actually start to shrival, and condense. There is no fluid for elasticity of the muscles or bones, creating a loss of mass of these parts.The brain "dries out" and often this is the reason for decreased mental capacity.

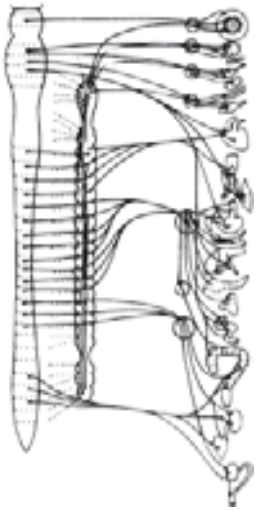


Fig. 11 *Activate sacral pump with spinal cord breathing.*

Because the human being stands erect, it takes a powerful pump to pump the fluid all the way up to the brain. The pump has to work against the force of gravity to push the fluid all the way up to the brain. So the sitting position, especially sitting on the sacrum makes this very difficult.

Study the diagram carefully and make sure you understand the exact movement. Look into a mirror to see that you are doing the movement correctly

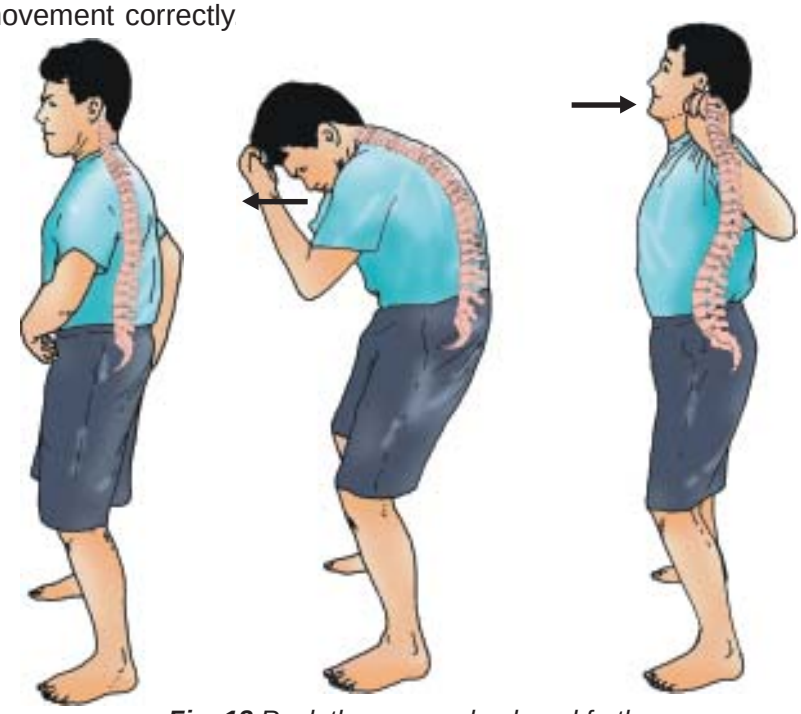


Fig. 12 *Rock the sacrum back and forth*

We really only see this movement in the pop stars in our society. That is how they make millions of dollars. When people see the rock singers moving like this, they feel sexually aroused, they feel so excited and free in the body that they begin to circulate this sexual energy. The sacrum bone is considered the secret bone or sacred bone.

Centuries ago, this movement for 'ordinary' people was forbidden to see. The young virgin girls were taught by priests to dance for God, calling it a sacred dance, in which only the priests themselves could watch. Not surprised are you?

In these ceremonies, when the sound of a drum is made, the heart activates, the sexual energy rises up but often jams in the brain. When the energy does not move people go crazy or become obsessed because this energy is constantly creating pressure on the brain. Much sexual frustration happens with this jamming also because of the fantasy and dreaming created in the brain, and this energy not being expelled through the body.

So we need to move the sacrum back and forth like this.

When you move like this you activate the sacrum pump and pump the fluid up the spinal cord.

Fig. 13 *Fluid pumping up the Spine by rocking the sacrum.*

The next pump is the Door of Life, above the sacrum, including the lumbar spine. When you start to rock the sacrum and the Door of Life Center, both move and the fluid starts to circulate. When the fluid circulates to these areas, the posture becomes more erect, your stance will improve and height will increase. By rocking and walking, these pumps will activate, and the oxygen from your breath will induce appropriate movement of the blood in this area.

Fig. 14 *Activate the Door of Life*

The next pump we call the cranial pump. The first opening part of the movement is to lower the chin down and pull the chin back so the sacrum pump also moves as well. This opens up the neck, crainal sutures, muscles, parathyroid and thyroid glands and opens up the lungs for increased oxygen. Rock the neck back and forth 36 times, including the breath, inhale and exhale each time.

Fig. 15 *Activate the Cranial Pump*

Because the neck and cranium are so intrinsically connected, by activating one, you automatically activate the other. The cranial-sacral movement has been studied for a long time now, and there are even specific forms of bodywork and healing methods that focus only on this flow between the two pumps. This flow is actually fluid called dural matter, encased in a sac, that lubricates the cranium, the entire spine and vertebre, and around the sacrum and pelvis.

It's like having a pully at the head and sacrum, with a rope connecting the two. When one side of the rope is pulled, the other is activated, but pulled in the opposite direction. By feeling the pulls of this movement, one can increase the healthy flow of the dural matter and improve the alignment of the corresponding bones and muscles. Many times as children, we fall on the tailbone, this impact creates movement of the sacrum, often inhibiting the connection to the crainal. This then affects the way the cranium and sacrum connect with each other, and it takes much awareness and attention to appropriatly make this connection again.

When this connection happens and all three pumps are activated, there is a natural flow of the energy through these pumps to activate Chi and enliven the body.

Fig. 16 *Combination of all three pumps Activated.*

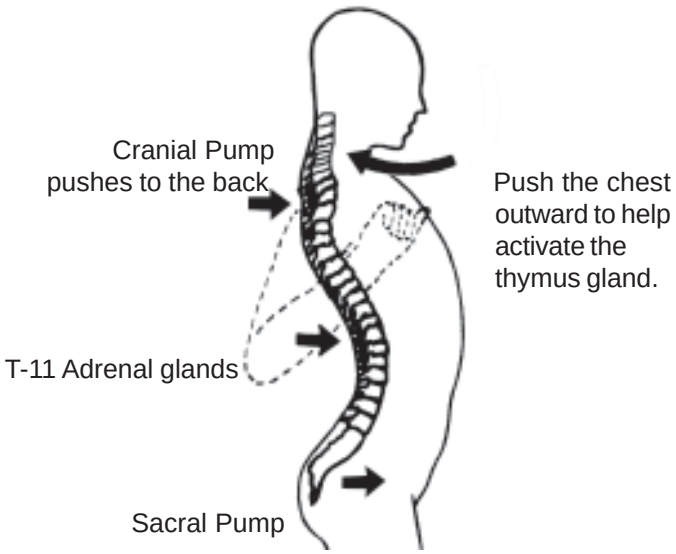


Fig. 17 *The sacrum tucks, the door of life pushes to the front, the sternum also pushes to the front, and the cranial pushes to the back.*

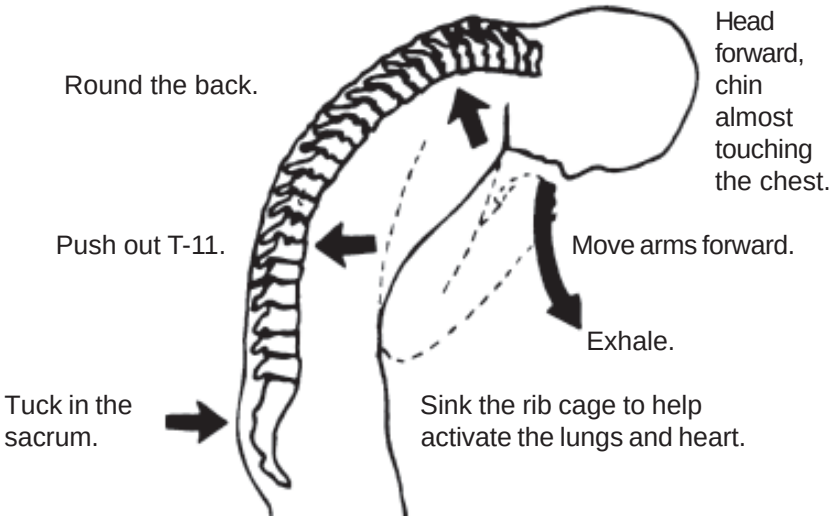


Fig. 18 *The sacral tilts, the door of life pushes to the back, the sternum tucks in and the chin tucks as the cranial opens.*

Breath and Laughter

During the course of my study, in sitting with different masters, every one has given me at least one breathing technique. Then after many years, practicing all these different techniques I came to realize something. The Tao texts always talks about a 'drum' beating in the Tan Tien, like a vibration there. I realized we naturally have a very effective and powerful breathing technique. This comes from when we laugh. When this is a real, deep, honest laugh, that is the abdominal laugh.

You will see that when you learn how to laugh, the diaphram activates up and down and this causes a pumping. Taoism refers to this as the second heart. It has the same kind of pumping action as the heart. When people are sitting, and sitting for a long time, thinking and thinking, nearly two thirds of the blood is stagnant in the organs. It does not move at all. This is a major cause of all sickness. The other being when the heart is pumping but the blood is stagnant and it does not move. So when you learn how to laugh, and the vibration in the Tan Tien is very strong, just like a heartbeat, this pump helps to move the blood, moving the Chi. With this, the heart can pump so much more easily. So if you can activate the vibration in the Tan Tien, Taoism says it is like a second heart. Many good things are associated with this second heart.

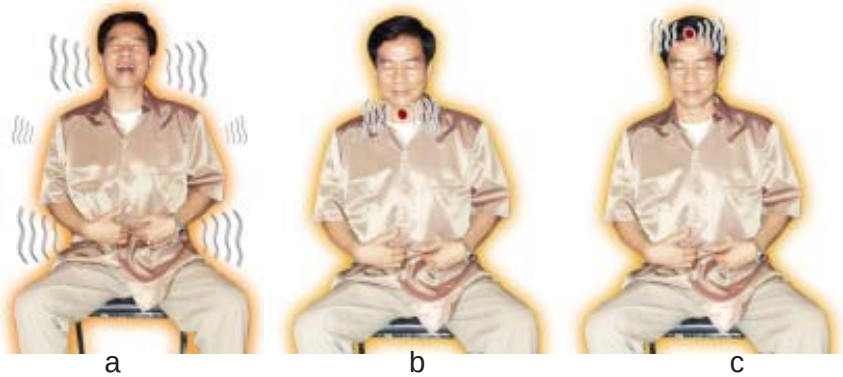
Fig. 19 *Activate the Second Heart by abdominal laughing*

So we are going to learn this laughing three different ways.

One way laughing loud, so when you laugh loud, you feel the vibrations.

The second way like you are in church and suddenly something is very funny but you cannot laugh loudly and you feel a higher vibration in the throat.

The third way you laugh is with the cranial, something right in front of you is so funny you have a feeling very big in side of you.



a b c

Fig. 20 *a. Laugh out loud b. Laugh a little c. Laugh with the cranium*

Feel it like a drum beating and vibrating deep inside you.

When you learn to laugh deep inside, feel that the laughter is vibrating tremendously inside you. When you do this, the blood, the Chi, the energy is all moving. So the stagnant Chi is gone, and the most important part, the heart, can work less.

Fig. 21 *First Fire activated: the Tan Tien Fire.*

Fig. 22 *Feel the Vibration of love filling your spine.*

Introduction to Three Fires

With the natural connection of the laughter activating the second heart, and establishing the vibration in the Tan Tien, we start smiling down to introduce the activation of the three fires: Inhale the smiling energy and exhale it down to the Tan Tien.

1) Feel the smiling energy in front of you.
2) Lift up the corners of the mouth, and empty your mind.
3) Keep on smiling, empty your mind down to the Tan Tien.
4) Fix a point in the abdominal area, and just keep smiling down.
5) When you get to a certain level the Tan Tien starts to get warm. Once you get it warm, the fire the first fire has started, the fire burning under the sea.

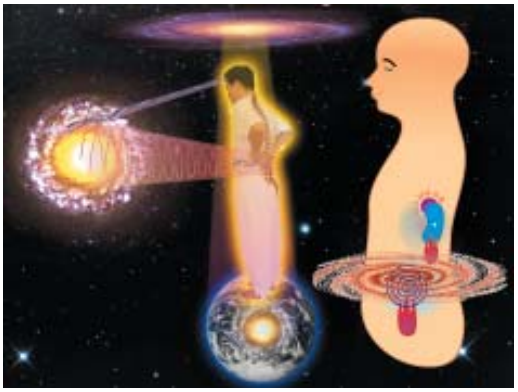


Fig. 23 *Second Fire activated: Kidney Fire (Door of Life)*

You can touch the naval, focus on this area, the door of life, and feel the door of life warm, there is a fire burning here.

This is the kidney fire activating, the kidney fire is so important because it is the original force. We are born with this force and are continuously using it throughout our lifetime. The Taoists believe that when this force is drained out, your life force is finished. This force is actually involved with the sexual energy. Everyday this fire is burning, and when it goes out, you die.

After that you move the hands, and keep smiling down, feel the heart fire activate, the loving energy, the compassion energy, and when you feel the heart fire burning, make it soft, very very soft.

Fig. 24 *Third Fire activated: Heart Fire*

Keep emptying the mind down, emptying the mind down, the energy activates

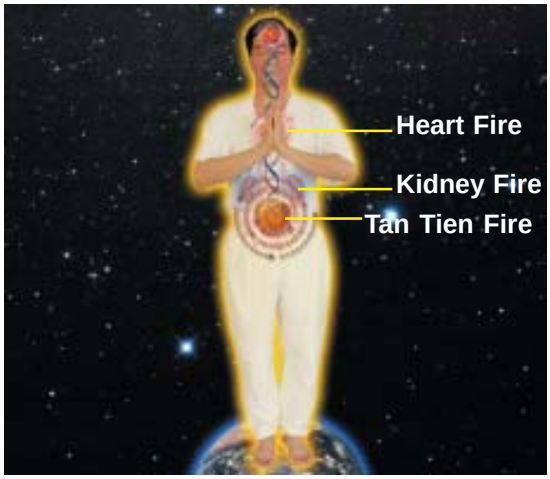


Fig. 25 *Activation of Three Fires: Tan Tien, Kidney, Heart*

You will begin to feel that something actually begins to charge up to the brain. In the beginning you might feel something like a numbness in the brain. And then the energy begins to rebuild, begins to repair, starts to develop new brain power.

Fig. 26 *Brain Activation as a result of the Fire Activation.*

Fig. 27 *Taoist Practices Charge the Entire Being with Energy.*

In all the medatative practices in the world, the first step is to get the energy flowing. Wether it's chanting, praying, singing, mantras, focus on a statue or whatever, there is always instruction like this. They all have a starting pattern to focus and move the energy.

But the goal is energy. So in Taoism, we do not have all these other patterns in front, we go directly into the real practices and techniques to induce the spiritual flow. There has to be an understanding and explanation of how to get this moving, so this next section is dedicated to doing just this.

Now that you are aware of your breath and the essential focuses of the practice, we can now begin the heart of the Wisdom Chi Kung Practice.

Wisdom Chi Kung Practice

Continue to bring your focus and Awareness to the Tan Tien and the acivated fires in the body. This will allow you to increase your energy more and more. The continued focus is the key to this practice.

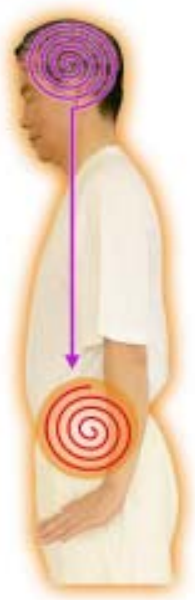


Fig. 28 *Smile down & empty the mind to the Tan Tein, Abdominal brain*

Fig. 29 *Wisdom arises from the awareness and senses of appropriateness created when the head brain and the abdominal brain connect. Fill the Tan tien with Chi.*

Fig. 30 *Tan Tien Fire: Activate the Tan Tien Fire to transform the Chi.*

Fig. 31 *True Fire: a. Fire under the Sea*
b. Activate the Kidney Fire c. Always retain awareness at the Tan Tien

Fig. 32 *Imperial Fire: Activate the Heart Fire*
Keep the Heart Soft. Feel Love, Joy and Happiness.

Energy transfomed into the organs can charge back up to the brain when the mind is empty.

Fig. 33 *Smile to the Kidneys. Continue to empty the mind to the Tan Tien and the Kidneys.*

Fig. 34 *When the Kidneys are filled, transformed Chi will arise up and fill the back part of the brain. Keep 95% of the attention at the Tan Tien.*

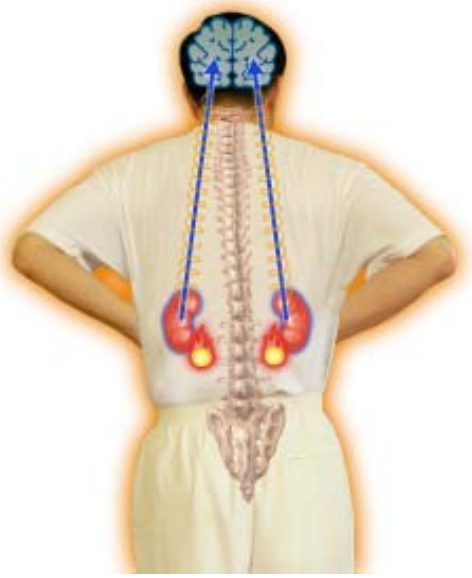


Fig. 35 *Left & Right sides of the back of brain both fillwith Kidney Chi.*

Fig. 36 *Smile, relax, empty the mind down to bladder & sexual organs.*

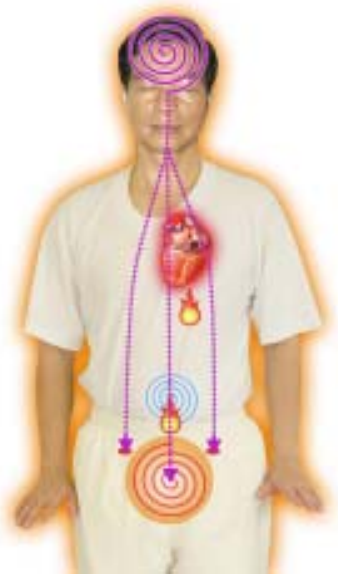


Fig. 37 *The bladder and sexual organs can store and transform Chi.*

Fig. 38 *The transformed Chi will rise up to fill the center of the brain.*

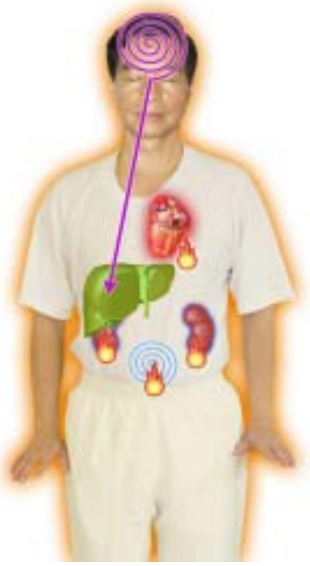


Fig. 39 *Smile. relaxand empty the mind down to the liver and gall bladder. Let them transform with Chi.*

Fig. 40 *Chi transformed in liver will rise up to fill center of right brain.*

When we empty our mind into our organs, we will have extra energy to repair and heal the body.

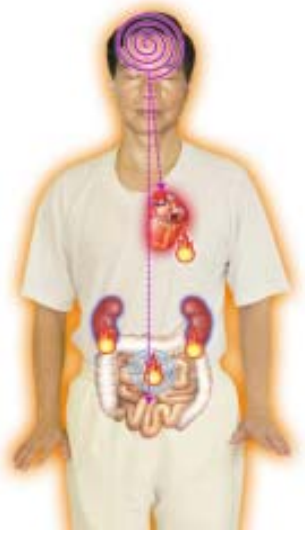


Fig. 41 *Smile, relax, empty the mind into the heart and small intestine.*

Fig. 42 *The heart and small intestine can store and transform Chi.*

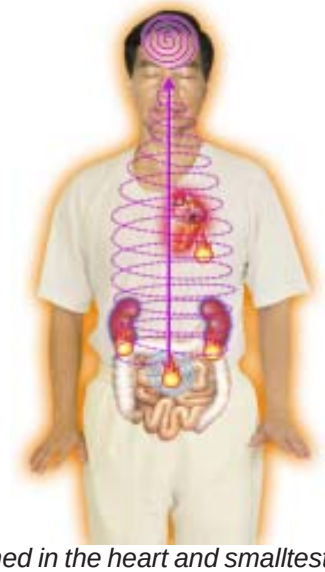


Fig. 43 *Chi transformed in the heart and smalltestine will charge up and fill the front part of the center of the brain.*

Fig. 44 *Smile, relax, empty the mind down to the Stomach, Spleen and Pancrease. 95% of the attention on the Tan Tien.*

Use the Inner Smile to charge the energy back up to the brain to repair, increase memory and to expand the capacity of the brain.

Fig. 45 *Chi transformed in the Stomach, Spleen and Pancrease will charge the left Brain with Energy.*

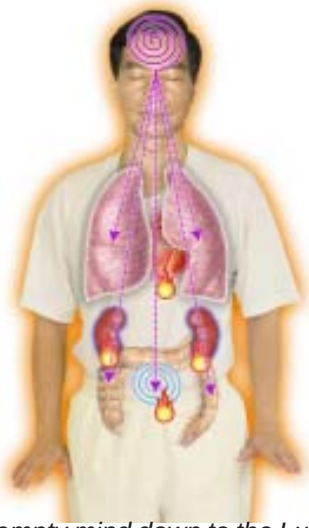


Fig. 46 *Relax, smile, empty mind down to the Lungs & Large Intestine.*

Fig. 47 *Transformed Chi from the Lungs and Large Intestine rises up to fill the front part of the left and right Brain.*

Fig. 48 *Continue to empty the mind down to the Tan Tien and Organs.*

Fig. 49 *When the mind is empty. transformed energy from the Organs can charge the Brain with Chi.*

Fig. 50 *Once the mind has become empty, then it can be filled with transformed Energy.*

Combine Chi and intention with the universal energy and it will be returned to you, multiplied many times, to fill you with enhanced Life Force.

Fig. 51 *With the brain filled with Chi, be aware of a star or light above you. Always maintain awareness of the Tan Tien.*

Fig. 52 *Be aware of the universe, the stars, and the galaxies in it. Smile and empty the mind to the universe. Relax and let go and be compleatly empty.*

Fig. 53 *Touch and be aware of the universe, the stars and galaxies in it. Continue to be aware of the Tan Tien so you do not lose yourself.*

Fig. 54 *Open yourself to contain the universe. Combine the universal energy with the transformed Chi at the Tan Tien. This is the secret of all the great masters.*

Fig. 55 *Combine your Chi and good intention with the high universal energy and let this multiply while retaining a majority of your awareness at the Tan Tien.*

Fig. 56 *The energy will be returned to you multiplied many times to fill the brain and the whole body.*

Fig. 57 *Hold the enhanced Chi in the brain for as long as it is comfortable. As your practice deepens, you will be able to hold it longer.*

Fig. 58 *Empty the mind down to the Tan Tien once again. Feel this enhanced energy fill the Tan Tien with a higher frequency of Chi which will be refined and enhanced and available to fill the brain again.*

Fig. 59 *Once the brain has been filled again, empty the mind again to the universe. Once it is empty, the mind can be filled with a higher force which will open the capacity for increased understanding and wisdom.*

Integration

Allow yourself a moment to feel the practice. Notice any differences in your, body, mind, heart, from when you began the practice, and now. It may be subtle to begin with, but just notice and bring your attention to what has altared. As you consistantly expand the pratice the sublties will increase and your awareness of the Chi that is flowing through your body will enhance dramatliclly.

As you 'check in' with yourself at this moment, reflect on any other thought processes that occured during your practice. Notice the activity of the "Monkey mind" and quietly thank and tell that part of your consiouness that it is no longer needed during this time of meditation. Be gentle with yourself, and allow yourself ample time to familiarize and grasp the Wisdom Chi Kung practice as "every Oak starts as a seed."

Combination of Practices

Now that you have been introduced to the system, it is important to make a connection with the different aspects of these practices, to combine and integrate, for a more compleate understanding.

In practice a, we felt the breath increase by internally activating the three pumps, the three fires and finally feeling the sensations and affects of laughter in the body.

So again, put your hands on the naval. Everyone knows laughing lightens the spirit, but do we always have to have a reason to laugh? You still can laugh without a reason, it is actually very important. Hearing yourself laugh will also make you laugh more. Especially when your by yourself! Sometimes I think how hilarious it is that I am alone and laughing at nothing. But I am actually laughing at myself laughing at nothing, and that's quite funny. So I end up laughing even more!

So let's try laughing with no reason. If you are feeling too serious or too emotional, loud laughing on tape actually makes you laugh.

Fig. 60 *Feel the laughing, giggling, smiling energy deep inside.*

Again, experience the sensations of laughter in your entire being. Laugh loud, then softer, and finally give yourself a little giggle as if you just remebered one fo the most embarassing times of your life.

Put your hands down over the naval,

Now very subtley, feel the smiling energy around you.

Keep a slight smile on your face

Inhale, exhale, feel the breath sinking down.

Smiling, relaxing, breathing and sinking down to the Tan Tien

Keep reminding yourself, empty the mind down, fill the Tan Tien with Chi.

If the mind is wondering around, fix the mind on the lower Tan Tien, breathing the mind down, continuing to smile.

Fig. 61 *Bring the wondering mind back with the breath & into the Tan Tien.*

One hand touch the naval invite your awareness to feel the all three fires activated Door of Life, Imperial fire and Tan Tien.

Keep smiling down to the Tan Tien, the eyes like the sun shining on the water.

Now move the hands down and cover the pelvic area and smile down to the sexual organ picture the sexual organ, exhale, relax, empty the mind down down to the lower abdominal, feel the sun shining on the water.

Fig. 62 *Sun shining on water: onto Three Fires and Sexual organs*

Now move the hands to the naval, and just start spiraling don't worry about the direction down and begin to feel the energy being stored in the naval area. Feel the naval begin to grow warmed energy when you feel the energy begin to charge up to the brain.

Fig. 63 *Feel the relaxed, charged energy fill the brain with Chi.*

The next thing you are going to get is a lot of saliva, very sweet saliva or nectar coming down. We can swallow this nectar down to the Tan Tien. This is a special form of nourishment from the brain.

Fig. 64 *Swallow nectar from the brain (sweet saliva) into Tan Tien*

Rest and feel the naval and lower Tan Tien increase the warmth. Feel the nourishment of the smile and lughter, the relaxing breath, and the rejuvination of Chi vibrate your being.

Fig. 65 *Rest and be rejuvinated.*

Integrating Wisdom Chi Kung; Ending the Meditations

This very basic practice is the most important thing you can do in your life. Even when you learn the Universal Tao practice to the highest level, this is the most important foundation. Every time you must do this same practice; Empty the mind, stop the brain, fill the Tan Tien With Chi. Simple and effective, this practice is the most crucial.

Ending the meditations is perhaps the most important time of the meditations. This is the time when the body has to compleatly relax and assimilate everything that has occured before and during the practice. This is the time when the body, mind and spirit begin to intergrate, fuse together, and unify the external with the internal. This is the goal of the practice. This is why we do the practice, to be finished with it. When we are finished, we live our life and the practice becomes a part of who we are. What we live for, what we learn and teach, how we talk and breathe. How we relate to others and how we interrelate with ourself.

Take time at this time to feel yourself, notice any changes, or anything that has not changed. Just to notice, and be gentle with yourself at this crucial stage of integration. When at this stage, our inner being begins to strengthen, and the spirt becomes stronger with awareness.

Awareness of our being allows our counsiouness to expand, we become wiser. This is Wisdom Chi Kung. Empty the mind, raising the Chi. The more we can do this, the more our wisdom increases to higher capacities. Generate energy, and at the same time be empty, this is Wisdom Chi Kung.

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The Universal Tao is not and cannot be responsible for the consequences of any practice or misuse of the information in this booklet. If the reader undertakes any exercise without strictly following the instructions, notes, and warnings, the responsibility must lie solely with the reader.

Master Mantak Chia is the creator of Universal Tao System, Healing Tao, Tao Yoga and is the director of the Universal Tao Master School at Tao Garden Wellness Retreat in the beautiful northern countryside of Chiangmai, Thailand. Since childhood he has been studying the Taoist approach to life. His mastery of this ancient knowledge, enhanced by his study of other disciplines, has resulted in the development of the Universal Tao System which is now being taught throughout the world.

Wisdom Chi Kung

Lower the mind, fill the Tan Tien with Chi. This practice teaches the art of meditation and physical rejuvenation. Opening the brain to be filled with the knowledge of the Universe, by increasing our own mental capacity. Wisdom Chi Kung is a simple and highly effective method which prepares the mind for higher levels of Universal Tao knowledge.

A New Approach to Healing

In combination with Universal Tao healing systems such as the Inner Smile, Laughing Chi Kung and Chi Nei Tsang, Wisdom Chi Kung prepares the practitioner for increased understanding of how to heal the body with an empty mind. Techniques taught in this booklet are for increasing Mental Alertness, Memory, Clarity and to have the ability the maintain this for a lifetime

Meditation that will connect with the Universe

Unlike other meditations Wisdom Chi Kung in this booklet teaches to connect with the universal energies, expand our awareness out, but charge the body with this energy, not to loose sight of the physical realm. It is essential to maintain a healthy connection with our bodies, and Wisom Chi Kung is one way of doing this.

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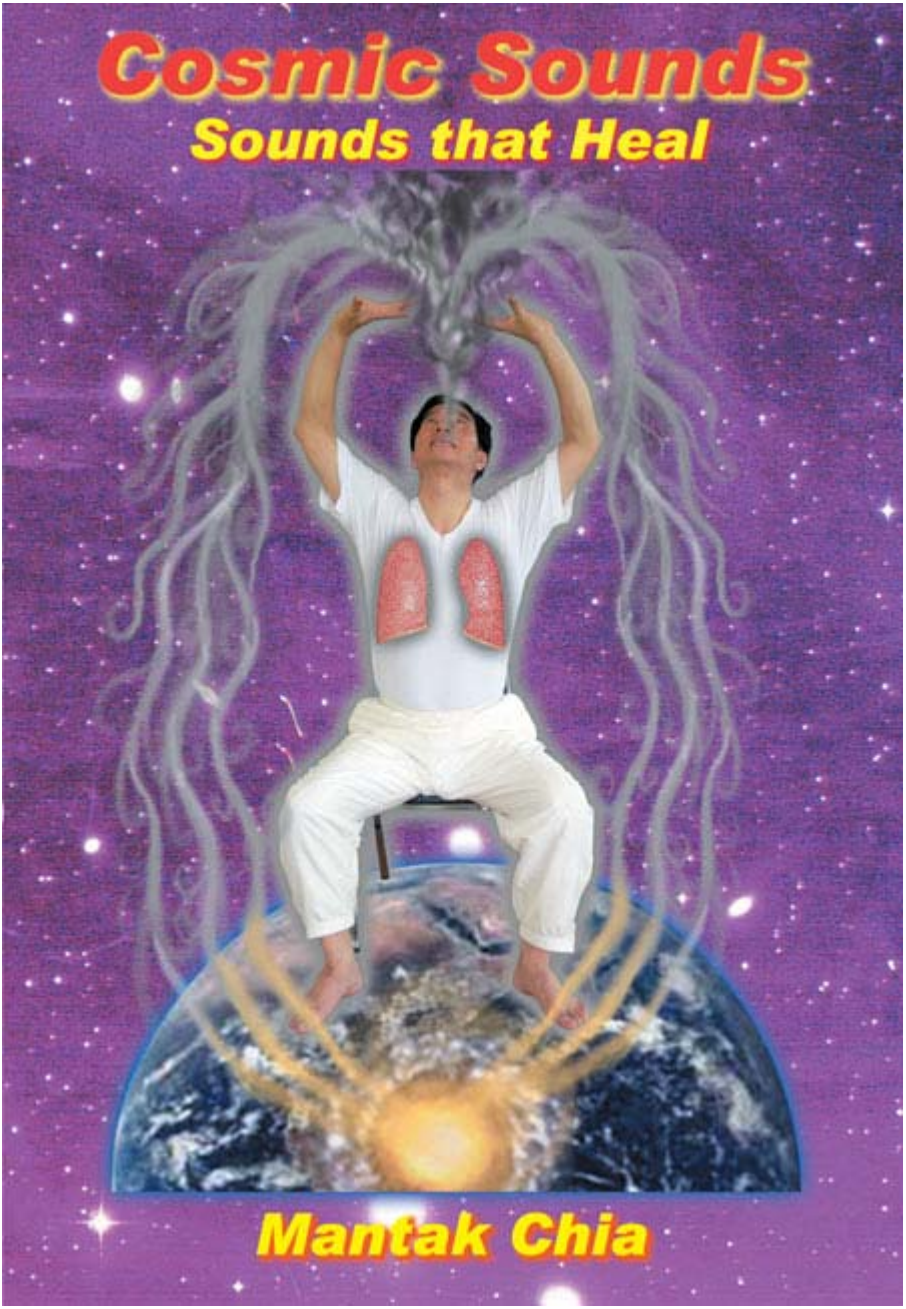
Cosmic Sounds
Sounds that Heal
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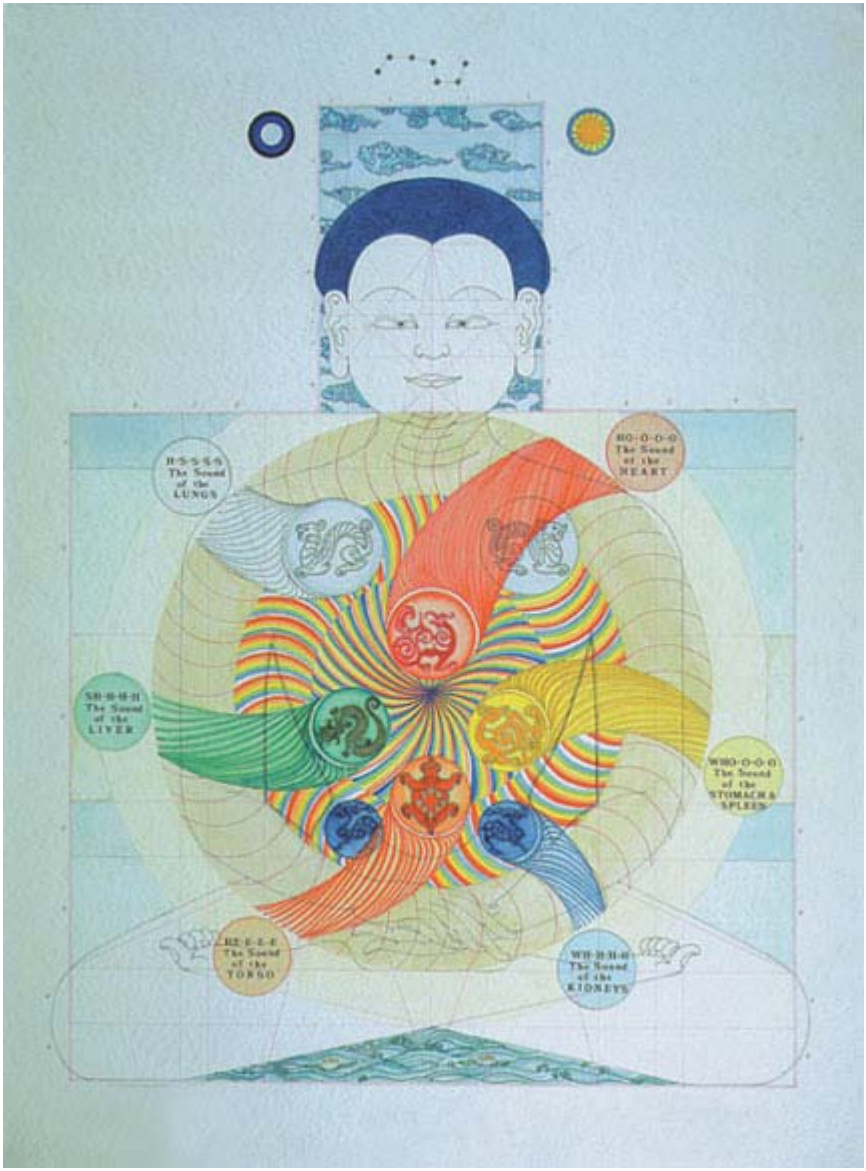
The meditations, practices and techniques described herein are ***not*** intended to be used as an alternative or substitute for professional medical treatment and care. If any readers are suffering from illnesses based on mental or emotional disorders, an appropriate professional health care practitioner or therapist should be consulted. Such problems should be corrected before you start training. This booklet does not attempt to give any medical diagnosis, treatment, prescription, or remedial recommendation in relation to any human disease, ailment, suffering or physical condition whatsoever.



Cosmic Healing Sounds as taught by Mantak Chia
Artist: Juan Li

Cosmic Six Healing Sounds

Theory

Having accessed the knowledge of the universe through internal practices, the Taoist masters discovered that each healthy organ is associated with a particular sound, color, and quality of energy. Emotional problems, pollution, poor food, injuries, and overly strenuous exercise can overheat the internal organs. causing them to weaken. This changes the state of each organ's sound frequency, color, and energetic quality. The Six Healing Sounds practice help to restore, balance, and cleanse the vital organs by correcting these factors. They also stimulate the Chi flow throughout the body to enhance one's overall health and vitality.

The Cosmic Six Healing Sounds help to release any excess heat that may be trapped in the cooling sacs which surround each organ. As you assume the postures and produce the sounds sub-vocally, their vibrations redistribute any excess heat into cooler regions of the body where this can safely be stored or used. Once the organ energies are balanced, you have a good foundation for establishing and nurturing the virtue energies. This will help to maintain the Chi balance throughout the system.

What causes an organ to malfunction? There are many causes. Urban society creates a life full of physical and emotional stresses such as overcrowding, pollution, radiation, junk food, chemical additives, anxiety, loneliness, bad posture, and sudden or overly vigorous exercise. Separately and together, these stresses produce tension and start to block the free passage of enegy flow in the body, thus the organs overheat. In addition, the concrete jungle that we live in lacks the safety valves provided by nature: trees, open spaces, and running water, which give forth a cooling, purifying energy. Continued overheating causes an organ to contract and harden. This impairs its ability to function and results in illness. One of the surgeons working with the Universal Tao Center in New York reports that the hearts of patients who have died of heart attacks look as if they've been cooked! And the ancient Taoists have a saying: "Stress cooks your brain".

Chinese medicine teaches that each organ is surrounded by a sac or membrane, called fascia, which regulates its temperature. Ideally, the membrane releases excess heat out through the skin, where it is exchanged for cool life force enegy from nature. An overload of physical or emotional tension causes the membrane, or fascia, to stick to the organ so that it cannot properly release heat to the skin nor absorb cool energy from the skin.

The skin becomes clogged with toxins and the organ overheats. The Sounds speed up the heat exchange through the digestive system and the mouth. The digestive system is more than 20 feet long and runs from the mouth to the anus as one pipe in the middle of the body in between all the organs. It helps release excess heat from the fascia, cooling and cleansing the organs and skin. When all the sounds and postures and done in the proper order, body heat is evenly distributed by the intestinal tract throughout the whole body, and each of the organs is at its correct temperature.

Daily practice of the Six Healing Sounds wil restore and maintain calmness and good health. Greater sexual pleasure and improved digestion will occur. Minor ailments, such as cold, flu, and sore throats, can be prevented or thrown off easily. Many students of The Universal Tao have overcome their long-standing dependence on sleeping pills, tranquilizers, aspirin, and antacids. Heart attack victims have prevented further attacks. Several psychologists have taught some of their patients to use the Six Healing Sounds to relieve depression, anxiety or anger; and body work oriented healers have used the Six Healing Sounds to help speed up healing, and the healer spends less of his own life force energy.

Each of the six organs in the practice has an associate organ which responds together with it and in the same manner. When an organ is weak or overheated, its paired organ is similarly affected. Likewise, practicing the appropriate healing sound and posture improves the organ and its associate.

***Note**:* Typical side effects of these practices are yawning. burping, or passing wind, all of which are beneficial as indicators of moving energy.

Practice

First Cosmic Healing Sound: Lung Sound

The Lung Sound is a metal sound. It sounds like the vibration of a bell and activates the lung Chi.

Associated Organ: Large Intestine
Element: Metal
Season: Autumn
Color: White
Emotions: Grief and Sadness
Virtues: Courage and Righteousness
Related Senses: Smell (Nose) and Touch (Skin)
Taste: Pungent
Related Parts of the Body: Chest, Inner Arms, Thumbs
Sound: ***Sssssssss*** (Tongue behind Teeth)

Exercise:

1. Sit with your back straight, your hands resting on your lungs, and your eyes closed. Smile down to your lungs. Be aware of the quality of the energy in the lungs. Picture a white light, fresh and pure like the energy of the mountains and hear the metal sound.

2. Take a deep breath, open the eyes and raise your arms out in front of you with the palms facing the lungs. When the hands are at eye level, begin to rotate the palms, bringing them above your head until they face up and are pushing outwards. Point the fingers toward those of the opposite hand. Keep the elbows rounded out to the sides, and do not straighten your arms.

Close the jaws so that the teeth gently meet and part the lips slightly as you slowly exhale through your teeth the sound "***Sssssssss***". In the beginning, you can produce the Lung Sound out loud, but eventually you should practice it sub-vocally.

Fig. 1 *Become aware of the Lungs.*

Feel that the sound starts to move the Chi in the lungs, and that any excess heat and toxins are expelled from the lungs as the sacs surrounding the lungs are compressed.

Fig. 2 *Gather the energy into the Lungs.*

Note: “Sub-vocally” means that you are vocalizing so softly that only you can hear the sound and feel the vibration inside the lungs. You must exhale slowly and fully. Also, the word “sacs” refers to the layers of tissue called fasciae, that surround every organ.

Fig. 3 *Do the Lung Sound.*

3. When you have exhaled completely, rotate the palms and scoop up the white light. Pour this light from the crown down into the lungs. Lower the arms and hold your hands before the lungs and radiate the bright white light, and courage into the lungs.

Fig. 4 *Bring the energy down to the Lungs.*

4. Rest, close your eyes and be aware of your lungs. Smile into them, and imagine that you are still making the Lung Sound. Feel the vibration of the sound moving and cleaning the energy in the lungs. Breathe normally, and see your lungs glowing with a bright white light. This will strengthen your lungs and activate courage in the lungs. With each breath, try to feel that fresh white metal energy is replacing the excess hot, toxic, and depressed energy.

Fig.5 *Cover the Lungs.*

5. Nurture good emotions. This is the most important part of this practice. Take as much time as you need to get in touch with the organs. When you get rid of the excess heat and let the white metal energy expand in the lungs, good emotional qualities will have room to grow. Concentrate on the feelings of righteousness and courage as you transform any sadness or grief. Sit up straight and tall so you can feel courage, and try to maintain the feeling of the Lung Sound for increasingly longer periods after each practice, and in your daily life.

6. Repeat the Lung Sound three to six times. For sadness, depression, colds, flu, toothaches, asthma, emphysema, or depression, you may repeat this exercise 6, 9, 12, or 24 times.

Fig. 6 *Mouth Position for Lung Sound. Close the jaws so that teeth meet. Draw the corners of the mouth back.*

Second Cosmic Healing Sound:Kidney Sound

The Kidney Sound is a water sound and it activates the kidney Chi.

Associated Organ: Bladder
Element: Water
Season: Winter
Color: Dark Blue
Emotion: Fear
Virtue: Gentleness, Calmness and Stillness, Alertness
Parts of the Body: Sides of the Feet, Inner Legs, Chest
Senses: Hearing (Ears), Bones
Taste: Salty
Sound: ***Chooooooooo*** (As when blowing out a candle: lips forming an "0")

Exercise:

1. Sit with your back straight, your hands resting on your kidneys, and your eyes closed. Smile down to your kidneys. Be aware of the quality of the energy in the kidneys. Picture a blue light, the sun shining on the ocean.

2. Take a deep breath, open the eyes and put your legs together, ankles and knees touching. Lean forward and clasp the fingers of both hands together around your knees. Pull your arms straight from the lower back while bending the torso forward (This allows your back to protrude in the area of the kidneys). Simultaneously tilt your head up as you look straight ahead, maintaining the pull on your arms from the lower back. Feel the pull on your spine. Round the lips, and slightly exhale with the sound "***Chooooooo***" as if you were blowing out a candle.

Simultaneously contract your abdomen pulling it in toward your kidneys. At first you can produce the Kidney Sound out loud, but eventually you should practice it sub-vocally. Feel that the sound starts to move the Chi in the kidneys; any excess heat and toxins are expelled from the kidneys as the sacs surrounding the kidneys are compressed.

Fig. 7 *Smile to the Kidneys.*

3. After you have fully exhaled, sit erect, separate the legs and move your arms up to the crown and scoop up the blue light. Pour this light over the body and into the kidneys. Lower your arms and hold the palms on the kidneys. Radiate the blue light, the gentleness, and stillness into the kidneys.

Fig. 8 *Do the Kidney Sound.*

4. Return your hands to your kidneys. Rest, close your eyes, and be aware of your kidneys. Listen to your kidneys. Smile to them, and imagine that you are still making the Kidney Sound. Feel the vibration of the sound is moving and cleaning the energy in the kidneys.

Fig. 9 *Bring the energy down to the Kidneys.*

Breathe normally, and see your kidneys glowing with a cool blue light. This will strengthen your kidneys and activate the gentleness and stillness in the kidneys. With each breath, try to feel that bright blue water energy is replacing the excess hot, toxic, and fear energy.

Fig. 10 *Gather the energy into the Kidneys.*

5. Nurture good emotions. This is the most important part of this practice. Take as much time as you need to get in touch with the kidneys. When you get rid of the excess heat and let the cool blue water energy expand in the kidneys, good emotional qualities will have room to grow.

Concentrate on the feelings of gentleness, stillness, and alertness as you transform any fear. Feel the gentleness relaxing also the lower back. Try to maintain the sensation of this energy for increasingly longer periods after each practice, and in your daily life.

Repeat the steps from three to six times. You may repeat this exercise more times to alleviate fear, fatigue, dizziness, ringing in the ears, or back pain.

Fig. 11 *Round the lips, making the sound one makes when blowing out a candle.*

Third Cosmic Healing Sound: Liver Sound

The Liver Sound is a wood sound and it activates the liver Chi.
Associated Organ: Gall Bladder
Element: Wood
Season: Spring
Color: Green
Emotion: Anger
Virtue: Kindness
Parts of the Body: Inner Legs, Groin, Diaphragm, Ribs
Senses: Sight (Eyes), Tears
Taste: Sour
Sound: ***Shhhhhhh*** (Tongue near Palate)

Exercise:

1. Sit comfortably with your back straight, your hands resting on your liver and your eyes closed. Smile down to your liver until you feel you are in touch with your liver. Be aware of the quality of the energy in the liver. Picture a forest, a big green forest. See the sun shining on the forest creating life force and green light.

2. Take a deep breath, open the eyes and extend your arms out to your sides, palms up. Slowly raise the arms from the sides to the crown, following this action with your eyes. Intertwine the fingers, and rotate your joined hands over to face the ceiling, palms up. Push up and out with the heels of the hands and stretch the arms out from the shoulders; the elbows should be pushing to the back.

Bend slightly to the left, exerting a gentle pull on the liver. Open your eyes wider because they are the openings of the liver. Slowly exhale out the sound "***Shhhhhhh***" loud and eventually sub-vocally. Feel the sound start to move the energy in the liver and that all excess heat and toxins are expelled from the liver as the sac around it is compressed.

Fig. 12 *Smile to the Liver.*

3. After you have fully exhaled, sit erect, separate the hands and scoop up the green light. Pour this light over the body and into the liver. Slowly bring your arms down, palms facing out, and scoop up more green light and hold both hands before your liver. Radiate the green light, the forest energy, and kindness in the liver.

Fig. 13 *Do the Liver Sound.*

4. Return your hands to your liver. Rest. Close your eyes and be aware of your liver. Smile and look in your liver and imagine that you are still making the Liver Sound. Feel the vibration of the sound is moving and cleaning the energy in the liver.

Fig. 14 *Scoop green light as the hands return to the Liver.*

Breathe normally, and see your liver glowing with the green rejuvenating light. This will strengthen your liver and activate kindness in the liver. With each breath, try to feel that bright green wood energy is replacing the excess hot, toxic, anger, aggression and frustration energy.

Fig. 15 *Gather energy into the Liver.*

5. Nurture good emotions. This is the most important part of this practice. Take as much time as you need to get in touch with the liver. When you get rid of the excess heat and let the warm, moist, green wood energy expand in the liver, kindness will have room to grow.

Concentrate on the virtue of kindness and forgiveness as you transform any anger and aggression. Feel warm and energetic, and maintain this feeling for as long as you can after practice.

6. Repeat the steps from three to six times. Practice more to expel anger, to clear red or watery eyes, to remove a sour or bitter taste, and to detoxify the liver.

Fig. 16 *Exhale on the sound "**Shhhhhhh**"*

Fourth Cosmic Healing Sound: Heart Sound

The Heart Sound is the fire sound and activates the heart energy.

Associated Organ: Small Intestine
Element: Fire
Season: Summer
Color: Red
Emotions: Hastiness, Arrogance, Cruelty
Virtues: Joy, Honor, Sincerity
Parts of the Body: Armpits, Inner Arms
Senses: Tongue, Speech
Taste: Bitter
Sound: ***Hawwwwww*** (Mouth wide Open)

Exercise:

1. Sit comfortably with your back straight, your hands resting on your heart, and your eyes closed. Smile down to your heart until you feel you are in touch with your heart. Be aware of the quality of the energy in the heart. Picture a sunset on the ocean, a red light.

2. Take a deep breath, open the eyes and take the same position as for the Liver Sound. Unlike the former exercise, however, you will lean slightly to the right to pull gently against the heart, which is located just left of the center of your chest.

Focus on your heart, and feel the tongue's connection to the open mouth, round the lips, and slowly exhale the sound "***Hawwwwww***" out loud and eventually sub-vocally. Feel the sound start to move the energy in the heart and that excess heat and toxins are expelled from the heart as the sac around it is compressed.

Fig. 17 *Do the Heart Sound.*

3. After you have fully exhaled, sit erect, separate the hands and scoop up the red light. Pour this light over the body and into the heart. Slowly bring your arms down, palms facing out. Scoop up more red light and hold both hands before your heart. Radiate the red light, the love, and inner joy into your heart.

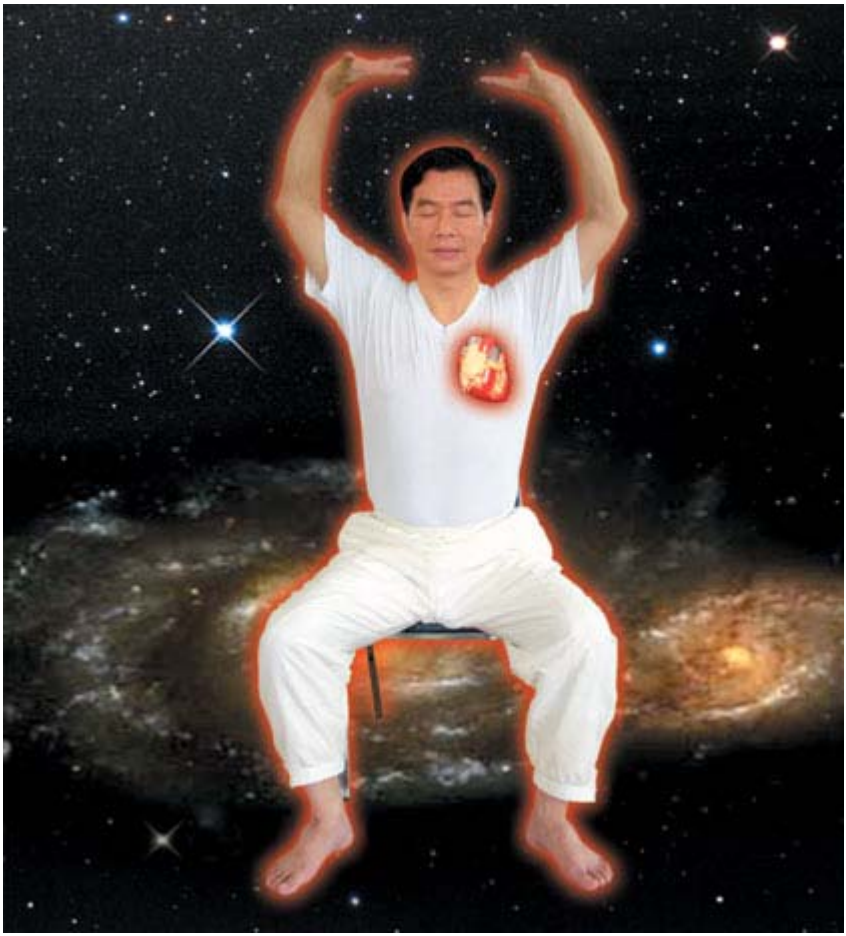


Fig. 18 *Gather energy into the Heart.*

4. Return your hands to your heart. Rest, close your eyes and be aware of your heart. Smile to your heart and imagine that you are still making the Heart Sound. Feel the vibration of the sound is moving and cleaning the energy in the heart. Breathe normally, and see your heart glowing with a red fire light.

Fig. 19 *Smile into the Heart.*

This will strengthen your heart and activate love, inner joy, and sincerity in your heart. With each breath, try to feel that the warm red light is replacing the excess hot, toxic energy and any hastiness, arrogance, and hate in the heart.

Fig. 20 *Turn the senses into the Heart.*

5. Nurture good emotions. This is the most important part of this practice. Take as much time as you need to get in touch with the heart.

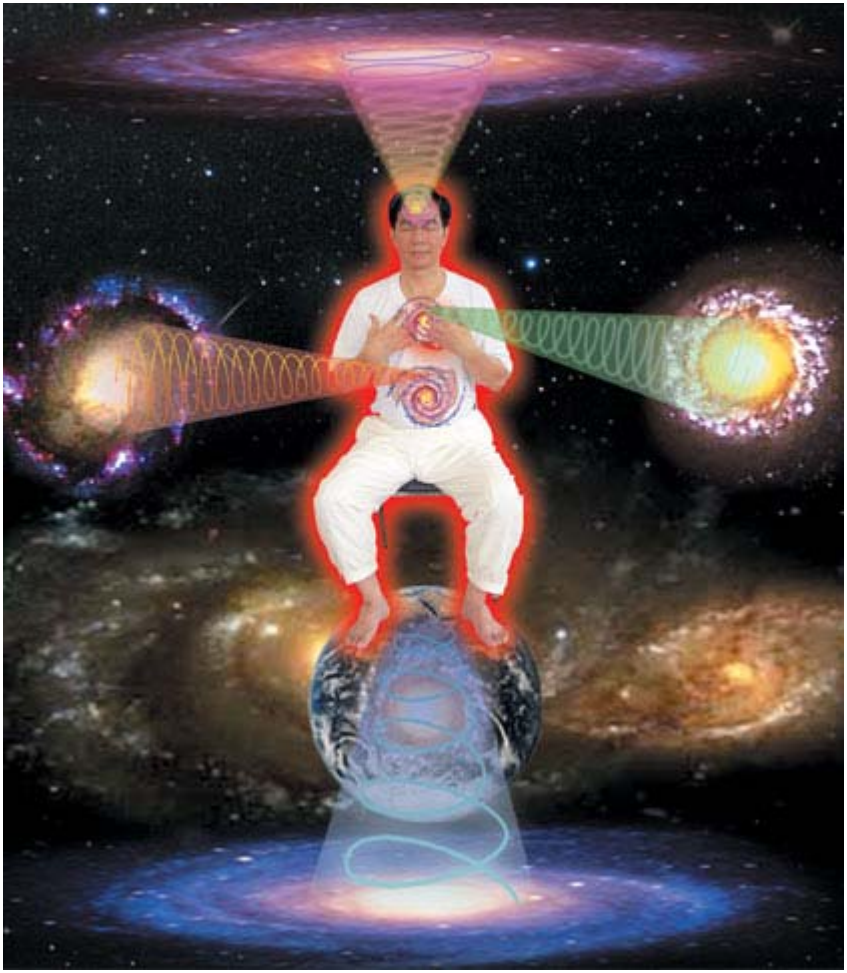


Fig. 21 *Loving energy grows in the Heart.*

Fig. 22 *When the heart is relieved of its daily load and stress, all the organs smile!*

When you gel rid of the excess heat and let the red fire energy expand in the heart, good emotional qualities will have room to grow. Feel love, joy, honor, and respect radiate outwards.

Feel any hatred, arrogance, or impatience transform into loving energy as sincerity, honor, and respect grow in your heart. Try to maintain the feeling of the Heart Sound as long as you can after practice.

6. Repeat the steps from three to six times. Practice more to relieve sore throats, cold sores, swollen gums or tongue, jumpiness, moodiness, and heart disease.

***Fig. 23** "**Hawwwwww**" Sound*

Fifth Cosmic Healing Sound: Spleen Sound

The Spleen Sound is the earth sound, activating the energy of the stomach, the pancreas, and the spleen.

Associated Organs: Pancreas, Stomach
Element: Earth
Season: Indian Summer
Color: Yellow
Emotion: Worry
Virtues: Fairness, Openness
Parts of the Body: Lips, Mouth
Senses: Taste
Taste; Sweet, Neutral
Sound: ***Whoooooo*** (From the Throat, Guttural)

Exercise:

1. Sit comfortably with your back straight, your hands resting on your spleen, and your eyes closed. Smile down to your stomach and spleen until you feel you are in touch with them. Be aware of the quality of the energy in the stomach and the spleen. Picture a yellow light, the golden satiated light of the Indian Summer, a stable light.

2. Take a deep breath, open the eyes, move the arms to the front and place the three middle fingers of both hands just beneath the sternum on the left side of the rib cage.

Look up and gently press your fingers under the rib cage, pushing your stomach or spleen to the back and your middle back out wards you exhale out loud, eventually sub-vocally, the sound "***Whoooooo***" This is more guttural, or "throaty" than the kidney Sound. Unlike blowing out a candle, this sound originates from with in the chest, rather than from the mouth.

Fig. 24 *Smile to the Spleen.*

Feel the Spleen Sound vibrate the vocal cords. Feel the sound start to move the energy in the stomach and the spleen and that all excess heat and toxins are expelled from the stomach and the spleen as the sac around them is compressed.

Fig. 25 *Fingers under the left Rib Cage Preparing to press on Spleen, Pancreas and Stomach.*

3. After you have fully exhaled, move the arms outwards, embracing the earth and scoop up the yellow light. Pour this light into the stomach and spleen. Bring the arms and the hands to the stomach and/or the spleen. Radiate the yellow light, the fairness, openness, and stability into the stomach and the spleen.

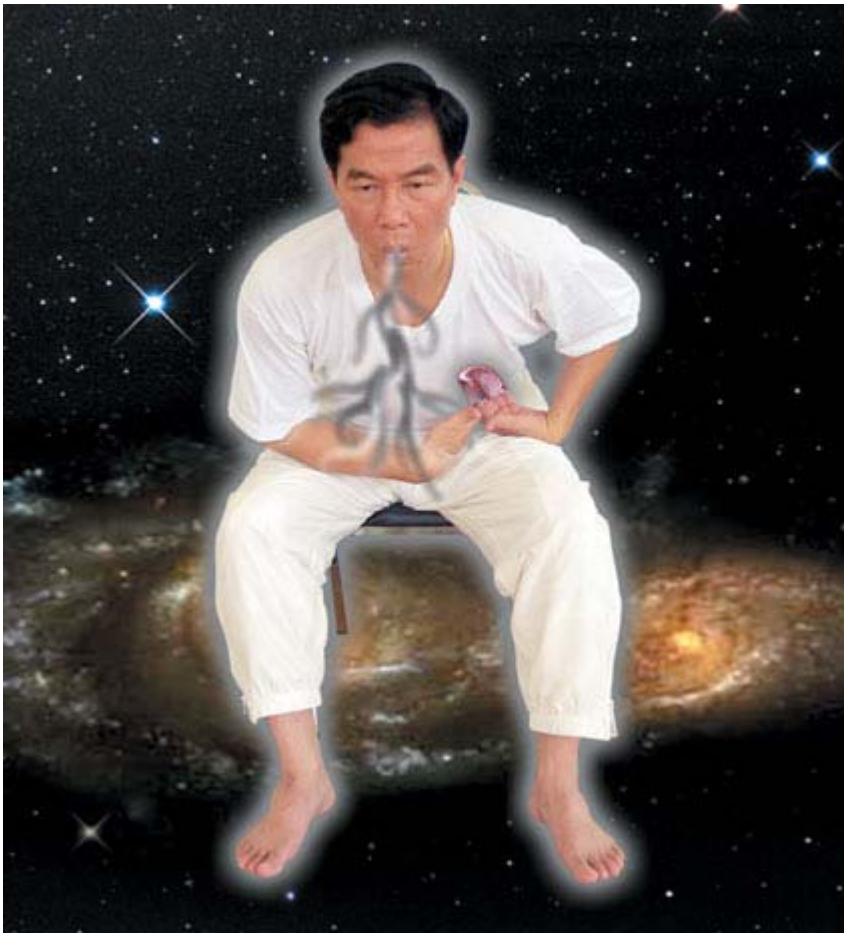


Fig. 26 *Feel the Spleen Sound Vibrate.*

4. Rest, close your eyes and be aware of your stomach and spleen. Smile to them and imagine that you are still making the Spleen Sound. Feel the vibration of the sound is moving and cleaning the energy in the stomach and the spleen.

Fig. 27 *Openesss and Fairness Grow in the Spleen.*

Breathe normally, and see your stomach and spleen glow with a yellow light. This will strengthen these organs and activate openness, fairness, and stability in your stomach and spleen. With each breath, try to feel that the warm yellow light is replacing the excess hot, toxic energy and any worries in these organs.

5. Nurture good emotions. This is the most important part of this practice. Take as much time as you need to get in touch with the stomach and the spleen.

When you get rid of the excess heat and let the yellow earth energy expand in the stomach and the spleen, good emotional qualities will have room to grow. Feel the fairness, openness, balance, and harmony grow in these organs, transforming any worry in them. Try to maintain the feeling of the Spleen Sound as long as you can after practice.

6. Repeat the steps from three to six times. Practice more to eliminate indigestion, nausea, and diarrhea.

Fig. 28 *Exhale on the sound "**Whoooooo**"*

Sixth Cosmic Healing Sound: Triple Warmer

The Triple Warmer refers to the three energy centers of the body: The upper section (brain, heart, and lungs) is hot; the middle section (liver, kidneys, stomach, pancreas, and spleen) is warm; and the lower section (large and small intestines, bladder, and sexual organs) is cool.

The sound "***Heeeeeee***" serves to balance the temperature of the three levels by bringing hot energy down to the lower center and cold energy up to the higher center. Specifically, hot energy from the area of the heart is moved to the colder sexual region, and cold energy from the lower abdomen is moved up to the heart's region.

Exercise:

1.Lie on your back or lean back in the chair. Smile, move your arms up and gather the Chi, and bring your arms and hands to your face. As you make the *"**Heeeeeee**"* sound on exhalation, let the arms slowly move down the body bringing the energy down from the crown to the feet.

2. Inhale fully into all three cavities: chest, solar plexus, and lower abdomen, and then exhale completely. Exhale with the sound "***Heeeeeee***" sub-vocally, first flattening your chest, then your solar plexus, and finally your lower abdomen. Imagine a large, roller pressing out your breath and move the hot energy down as the arms move from your head down to your lower Tan Tien.

3. Rest, and concentrate. When you have fully exhaled, focus on the entire digestive tract.

4. Repeat the steps from three to six times. Practice more to relieve insomnia and stress.

***Note*:** The Triple Warmer can be done lying down to facilitate falling asleep.

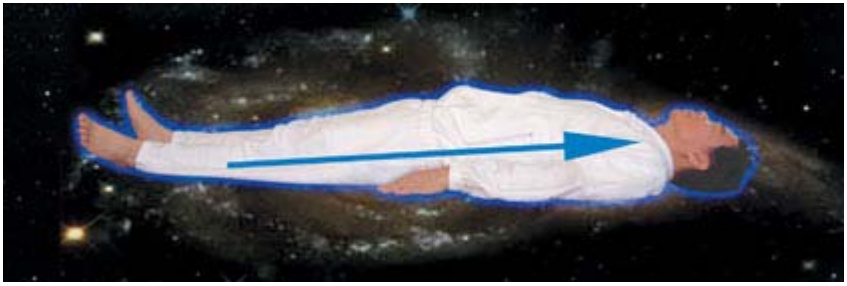


Fig. 29 *Rest by breathing normally and focus on the Triple Warmer Sound.*

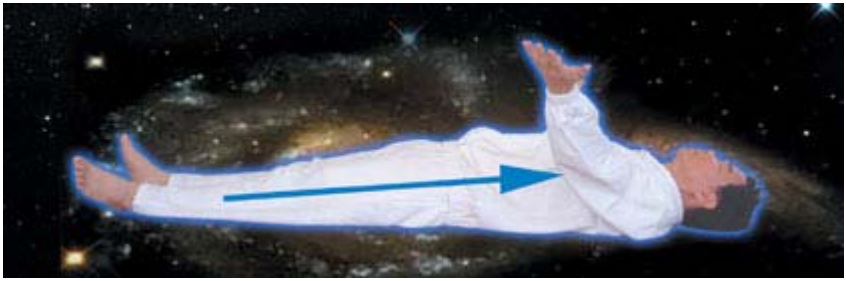


Fig. 30 *Gather the energy from all three Levels.*

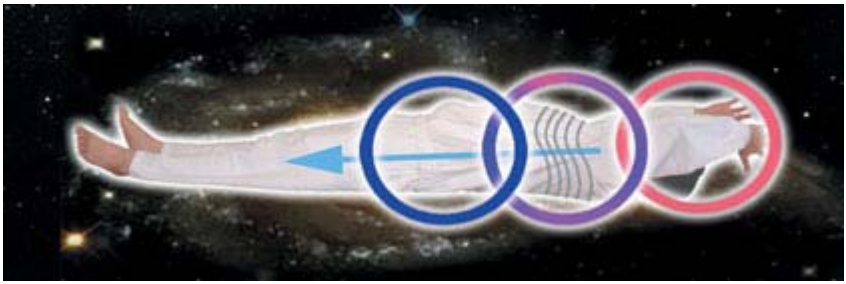


Fig. 31 *Send the energy down the body.*

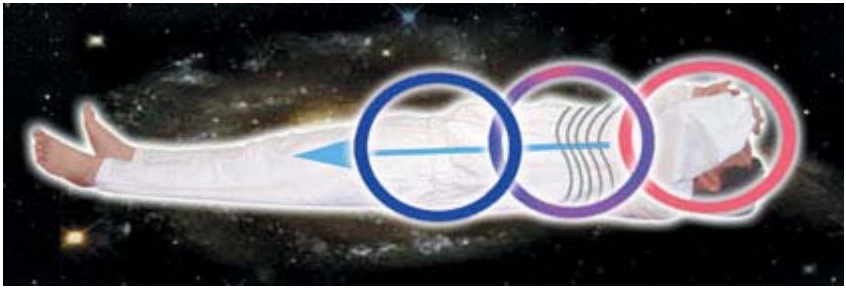


Fig. 32 *Upper Level*

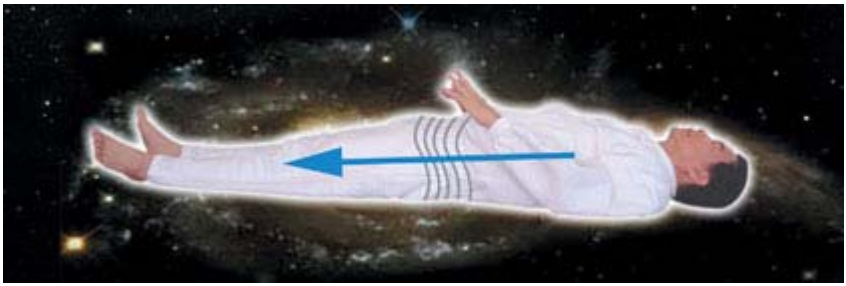


Fig. 33 *Middle Level*

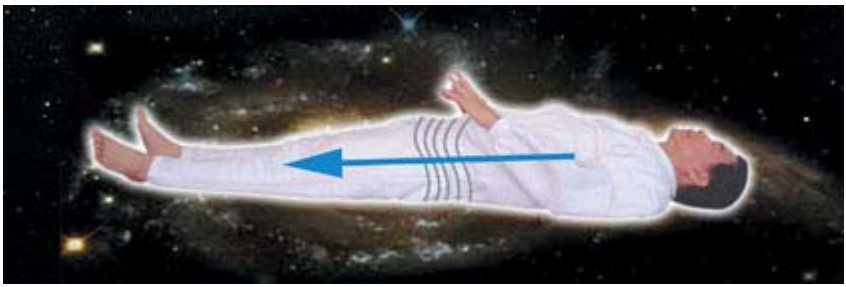


Fig. 34 *Lower Level.*

Fig. 35 *Excess heat flows out of the fingertips and toes into the Earth.*

Fig. 36 *Do the Triple Warner Sound.*

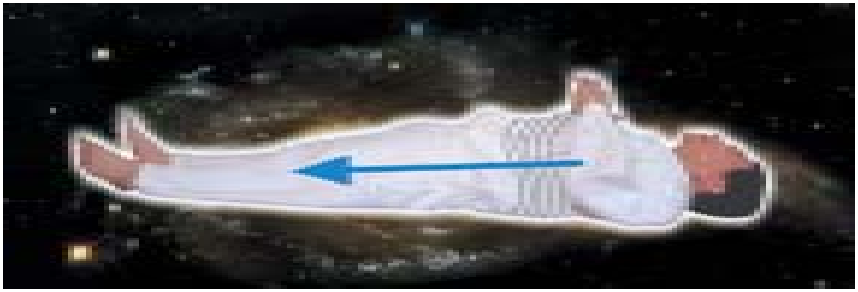


Fig. 37 *All the way down the body with the* ***"Heeeeeee"*** *Sound.*

Fig. 38 *"**Heeeeeee**" Sound*

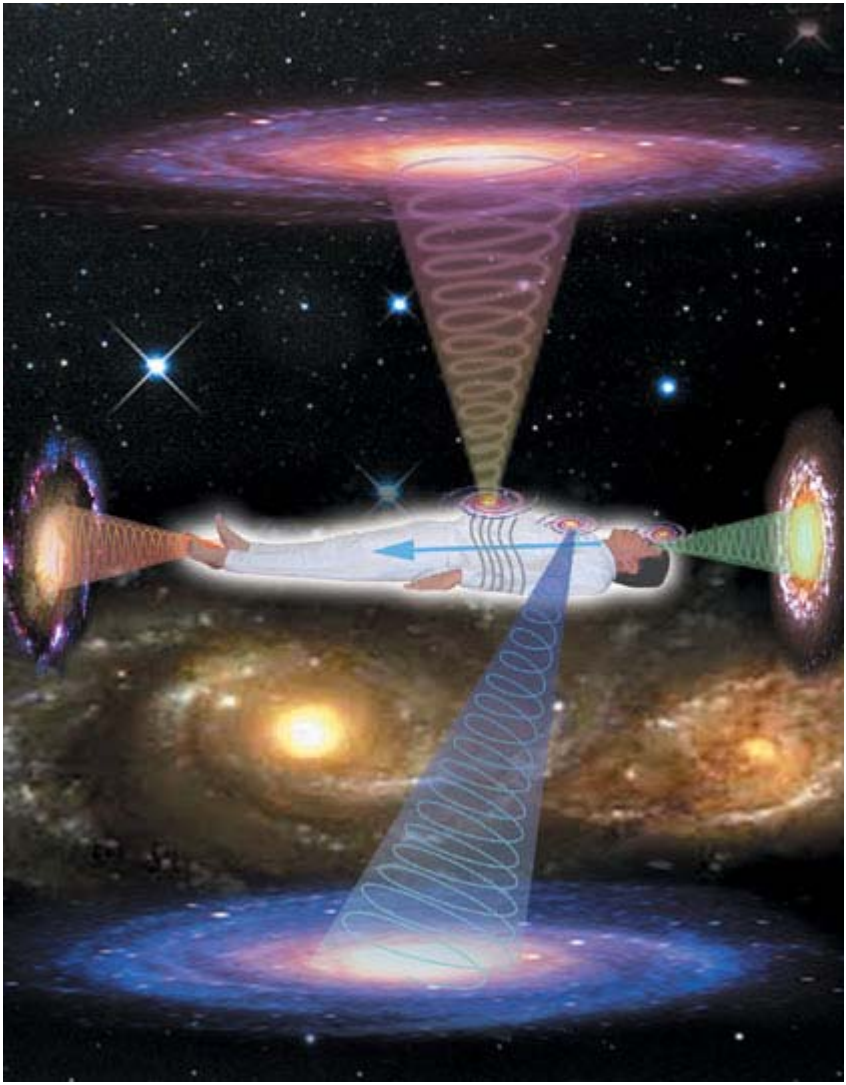


Fig. 39 *Rest and absorb the Cosmic Forces.*

Daily Practice

1. We recommend that you practice the Six Healing Sounds before going to bed at night to relax the body, promote good sleep, and cool down any organs that are overheated. You may also do these sounds to enhance any of the other Taoist exercises whenever you feel like practicing. Do three rounds of each sound to prevent illness and maintain good health. Once learned, the procedures take only ten to fifteen minutes to complete.

2. Clear out any negative emotions, and let positive emotions grow before you go to sleep. You may feel a sense of emptiness as you disengage from your own mental activity to connect with the Universal Consciousness. This will also help you to avoid bad dreams while sleeping, as your body recharges through its connection with the Universal Force. If you have any problems, stress, or illnesses this is the best time to allow the Universal Consciousness to help you find the solution or cure. When you awaken after sleep, smile inwardly, and look for answers within.

3. You can devote extra time to an organ when you feel troubled by it or its associated emotions. You may also emphasize extra practice for an organ during its particular season. For example, in spring you would spend more time on the Liver Sound.

4. The order of the Six Healing Sounds follows the progression of the seasons.

Starting with autumn, practice the Lung Sound, followed by the sounds of the kidneys, liver, heart, and spleen. Finish with the Triple Warmer Sound.

5. When you are feeling tired or depressed at work, practice the Six Healing Sounds. If you do not have time to do them all, just practice the Lung Sound and the Kidney Sound.

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$6.95

Cosmic Sounds

Sounds that Heal

Mantak Chia

Illustrations by Udon Jandee

Cosmic Six Healing Sounds

The Sounds that Heal are the Six Healing Sounds and related postures helping to restore, balance, and cleanse the vital organs. They also stimulate the Chi flow throughout the body to enhance one's overall health and vitality. The Cosmic Six Healing Sounds and their postures help to release any excess heat that may be trapped in the cooling sacs which surround each organ. This booklet will show you how to assume the postures and produce the sounds sub-vocally; their vibrations redistribute any excess heat into cooler regions of the body where it can safely be stored or used. Once the organ energies are balanced, you have a good foundation for establishing and nurturing the virtue energies. This will help to maintain the Chi balance throughout the system.

Practice of the Cosmic Six Healing Sounds will restore and maintain your calmness and good health. Greater sexual pleasure and improved digestion will occur. Minor ailments, such as colds, flu, and sore throats, can be prevented or thrown off easily. Several psychologists have taught some of their patients to use the Cosmic Six Healing Sounds to relieve depression, anxiety or anger; and body work oriented healers have used the Six Healing Sounds to help speed up healing, and the healer spends less life force energy.

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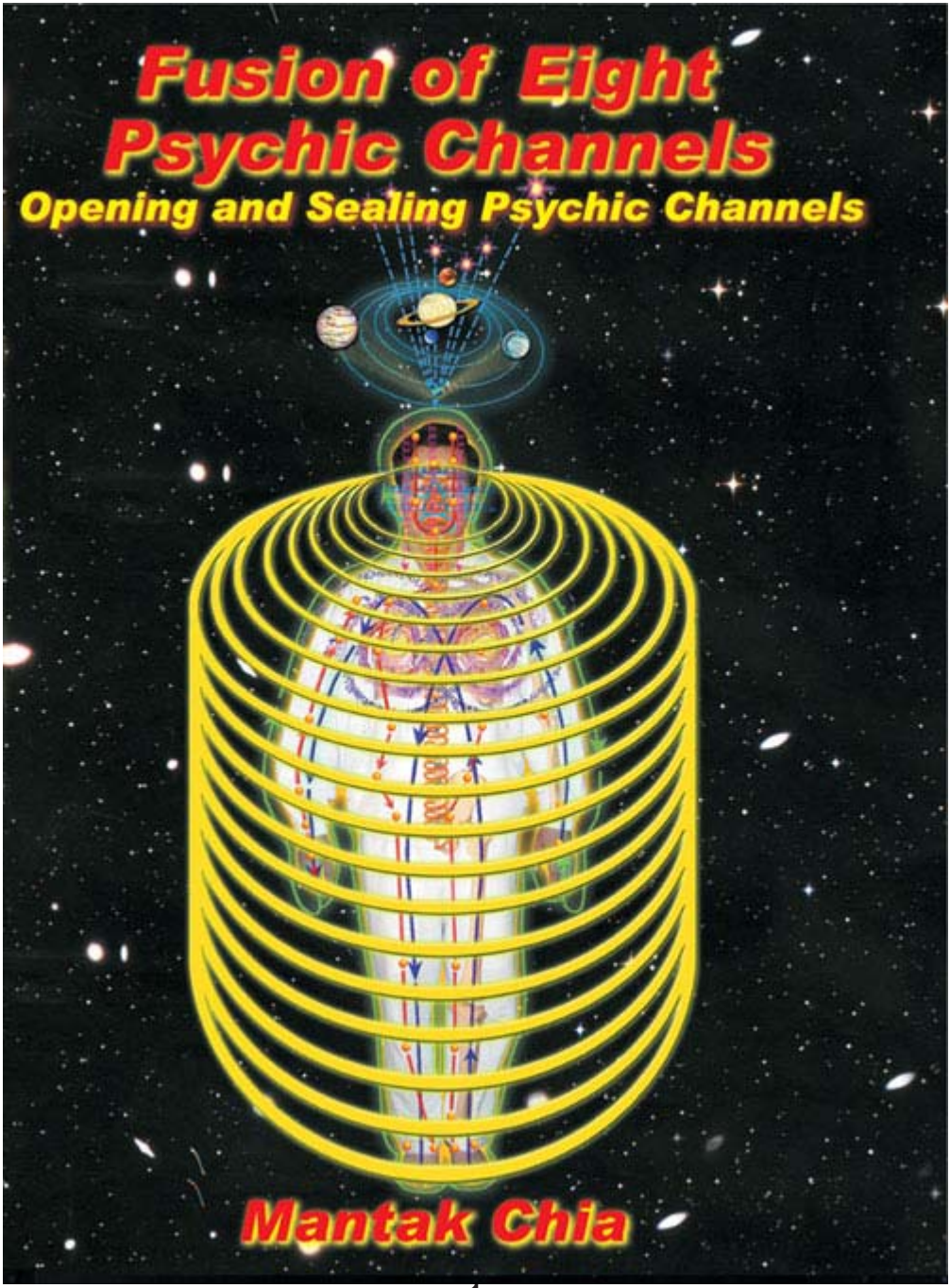
Fusion of Eight Psychic Channels

Opening and Sealing Psychic Channels



Mantak Chia

Fusion of Eight Psychic Channels

Opening and Sealing Psychic Channels

Mantak Chia

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The meditations, practices and techniques described herein are ***not*** intended to be used as an alternative or substitute for professional medical treatment and care. If any readers are suffering from illnesses based on mental or emotional disorders, an appropriate professional health care practitioner or therapist should be consulted. Such problems should be corrected before you start training. This booklet does not attempt to give any medical diagnosis, treatment, prescription, or remedial recommendation in relation to any human disease, ailment, suffering or physical condition whatsoever.

Introduction to Fusion of Eight Psychic Channels

In Fusion of Eight Psychic Channels

1. You will open and clean the Great Bridge and the Great Regular Channel. Both consist of a Yin and a Yang Channel. All together they form four channels (Yin and Yang Wei and the Yin and Yang Chiao Channels). They are the last Extraordinary acupuncture (psychic) Channels to open. The others are; the Governor (Du Mai) and Functional (Ren Mai) Channel of the Microcosmic Orbit and the Thrusting Channels (count as one Channel, related to the Chong Mai) and the Belt Channel (related to the Dai Mai).

2. You will learn to protect the spine and your energy field, to seal the aura and the senses and to drill your head.

3. You will learn to transform the Microcosmic Orbit, the Thrusting Channels and the Belt Channel in the Energy Body.

Fusion of the Eight Psychic Channels is the last part of the Fusions. It teaches the last techniques and meditation to prepare you for the higher practices. After you master all the Fusion Practices you are ready and prepared to start the Practice of the Immortal Tao.

Practice of Fusion of Eight Psychic Channels

Great Bridge Channel and the Great Regular Channel

1. Theory

The Great Regulator and Great Bridge Channels have no points of their own, but run across specific points of the twelve organ meridians. They connect in this way all these meridians together which enables the energy to flow from one meridian to another, balancing and regulating the energy flow in the meridians. The *Great Bridge*

Channel (Yin and Yang Chiao Mai) serves to connect all the meridians. The *Great Regulator Channel* (Yin and Yang Wei Mai) serves to regulate, coordinate and balance the energy flow between these meridians, also called the body's channels. The routes they follow lie close together.

Although they are separate channels we practice them in Fusion of Eight Psychic Channels as one channel with a Yin and a Yang part. The Yin part connects all the Yin organ-meridians and regulates the flow of energy in these meridians, the Yang part connects all the Yang organ-meridians and regulates the flow of energy in these meridians. The Yin channels run along the inside of the legs and arms and the front of the body. They also regulate the blood. The Yang channels run on the outside of the legs and arms and the back of the body. They control the defensive energy and regulate resistance to external infections. In other words, the Yin Channels protect the body from "attacks" from within and the Yang Channels protect the body from external "attacks".

The most important reason to open the Bridge and Regulator Channel is to promote the unimpeded flow of energy in the body, to heal the body and to prepare the body to receive and to circulate the higher energy forces of the Immortal Practice in your body. All the Eight Psychic Channels act as receivers and distributors to the organs and glands of the *Universal Force*. For this reason, working with the Eight Psychic Channels is considered spiritual work in the Taoist system.

Forming the control base of the Eight Psychic Channels is the *Gate of Death and Life* (also known as the *Gate of Mortality*) at the perineum point. The perineum point serves many purposes. It is considered the sexual energy base. It is also the point to which is joined the Bubbling Spring, the collection point of the Earth energy at the soles of the feet. The Belt Channel passes through the perineum point as it interconnects the other seven channels. The interconnection of the Belt Channel makes it possible to move the energy from one channel to any other channel, while it serves to protect all the body's centers. The crown point at the pineal gland is the other common point of the Eight Psychic Channels.

2. Location of the Points of the Great Bridge and Great Regulator Channels

In this part we give you all the points of these channels with their locations and their meaning as acupuncture point.

A. Locate GB-17 and ST- 4

Part of the Yang Route of the Channel

1. **GB-17 (Gall Bladder Meridian)**
Traditional Name: Cheng Yin = Correct Management
Location: Slightly behind the center of the top of the head, and to the right and left sides.
Uses: To help relieve headaches and toothaches.

2. **GB-16 (Gall Bladder Meridian)**
Traditional Name: Mu Chuang = Eye Window
Location: On top of the head at the central point, and to the right and left sides.
Uses: To help relieve eye problems and facial edema (swelling through water retention).

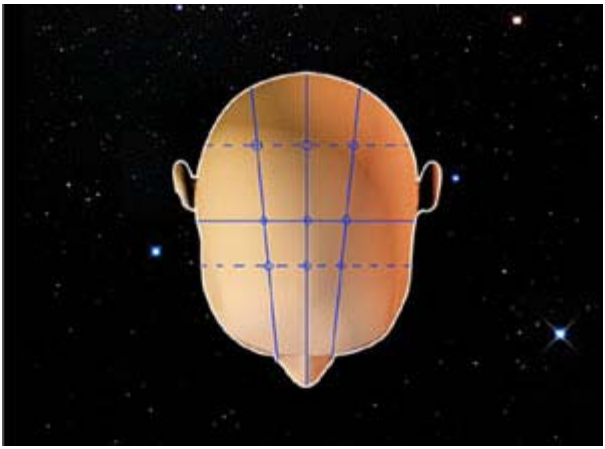


Fig. 1 *Yang Route of the Channel*

3. **GB-15 (Gall Bladder Meridian)**

Traditional Name: Lin Chi = Temporarily Weeping

Location: On top of the head in front of the central point, and to the right and left sides.

Uses: To help relieve stuffed nose, eye problems and strokes.

4. **GB-14 (Gall Bladder Meridian)**

Traditional Name: Yang Pai = White Yang or Pure Yang.

Location: One finger's width above the eyebrow in direct line with the pupil of the eye.

Uses: To help relieve eye problems such as glaucoma, night blindness, forehead pain, facial nerve paralysis, stuffed nose and strokes.

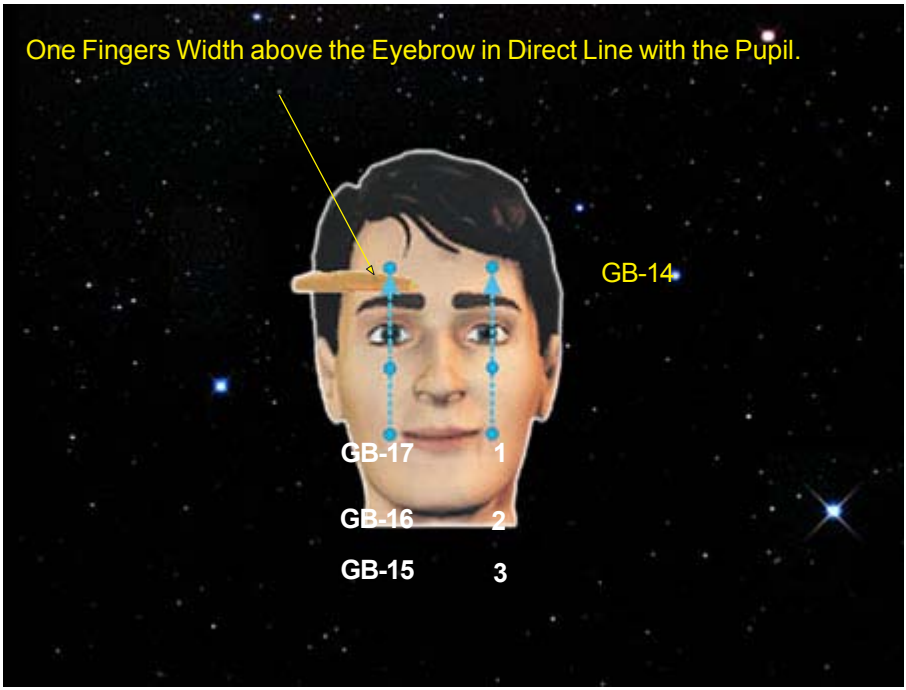


Fig. 2 *GB-14 (Gall Bladder Meridian)*

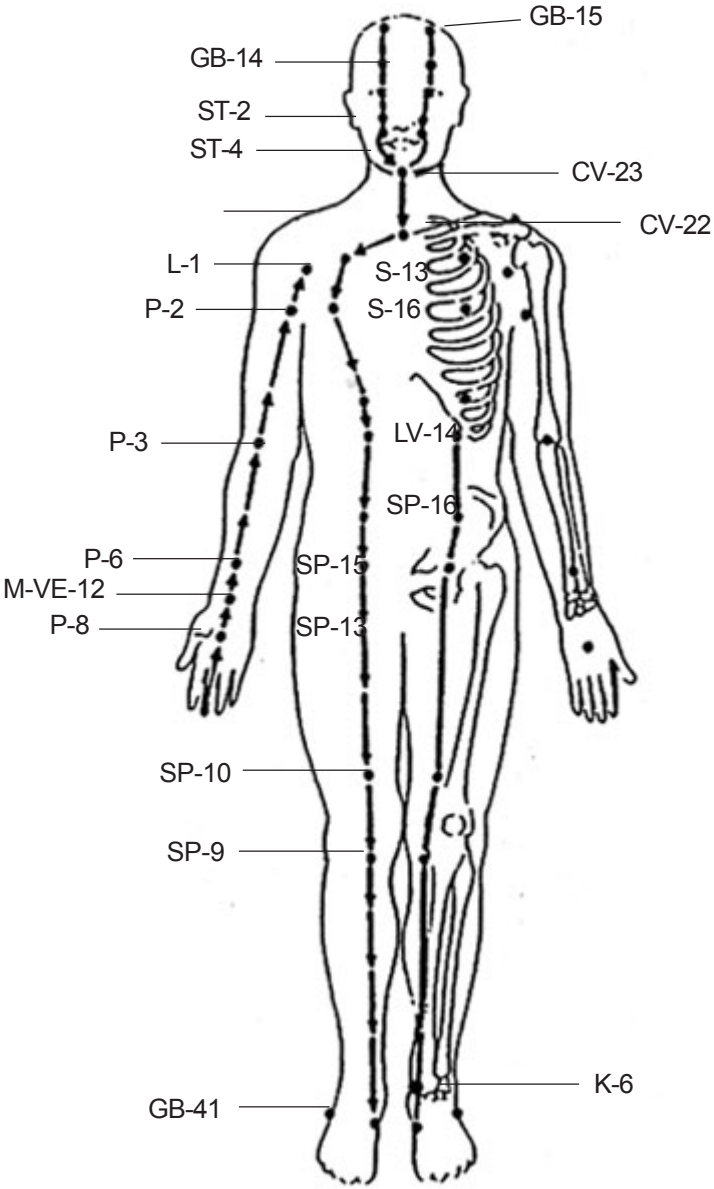


Fig. 3 *Yin Side*

5. **ST-2 (Stomach Meridian)**
Traditional Name: Szu Pai = Four White
Location: Below the eye in direct line with the pupil.
Uses: To help relieve eye disease, toothaches, facial nerve paralysis, nose bleeding, and colds.

6. **ST-4 (Stomach Meridian)**
Traditional Name: Ti Tsang = Ground Storehouse
Location: At the intersection point of a line straight down from the pupil to the base of the cheekbone, and another line along the curve of the cheekbone.
Uses: To help clear nasal passages, colds, toothaches, eye problems, facial paralysis, nose bleeding, and dribbling.

Fig. 4 *ST-4 (Stomach Meridian)*

B. Locate CV-23 and K-1

The Entire Front (Yin) Route of the Channel

1. **CV-23 (Conception Vessel or Functional Channel)**
Traditional Name: Lien Chuan = Corner Spring
Location: Behind the midpoint of the lower edge of the chin bone. Hook the thumb behind the bone, CV-25 and press upward and forward.
Uses: Can help to relieve laryngitis, clears the throat.

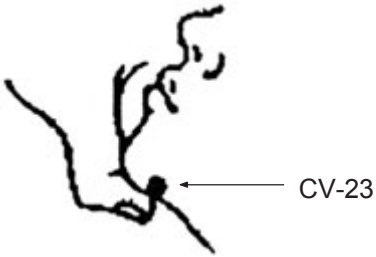


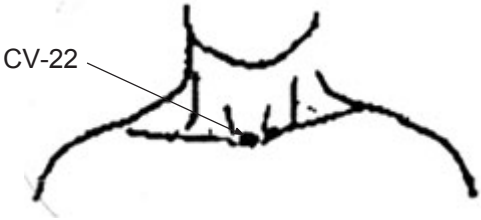
Fig. 5 *CV-23 (Conception Vessel or Functional Channel)*

2. **CV-22 (Conception Vessel or Functional Channel)**

Traditional Name: Tien Tu = Celestial Protrusion

Location: At the top of the breastbone (sternum) in the V-shaped indentation; press downward in a 45-degree angle.

Uses: Can relieve asthma, bronchitis, coughing, sore throat, larynx spasms. Pressing and releasing CV-22 can cause energy to flow more easily through the chest, thereby helping to restore the proper freer breathing.



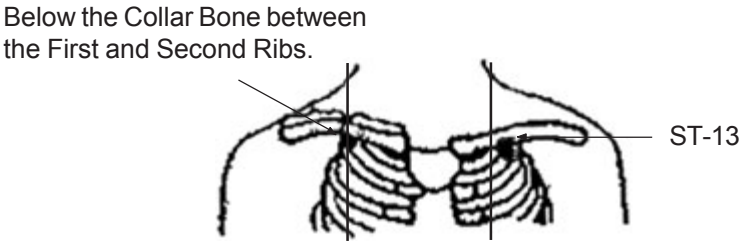


Fig. 6 *CV-22 (Conception Vessel) and ST-13*

3. **ST-13 (Stomach Meridian)**

Traditional Name: Chi-Hu = Door of Chi

Location: Below the midpoint of the collarbone between the first and second ribs. Press straight into the body. The point feels sore or like an electric shock.

Uses: Can relieve asthma, bronchitis, chest and back pain, hiccups. Unrestricted flow through ST-13 allows good energy to flow through the chest.

4. **ST-16 (Stomach Meridian)**

Traditional Name: Yin Chuang = Breast window

Location: Between the third and fourth ribs, one rib directly above the nipples in males, slightly higher in females. When pressed the point feels somewhat sore, especially on females.

Uses: Can relieve coughing, asthma, swelling of the breast, chest and stomach pain, heartburn, short breath, melancholy. Good energy flow clears the whole breast region and promotes optimism.

5. **LV-14 (Liver Meridian)**

Traditional Name: Chi Men = Gate of Hope

Location: At the junction of the ninth rib cartilage to the eighth rib. Follow the bottom edge of the rib cage from the sternum until the first major indentation, then trace a line down from the nipples. The intersection is the LV-14 area. Press slightly up and into the abdomen. The point will feel quite sore when pressed.

Uses: Can relieve difficulty in breathing, chest pain, diarrhea, cholera, menopausal disorders, childbirth pains, abdominal tension. Pressing LV-14 affects the liver, gall bladder, and diaphragm. Used traditionally to relieve side aches from too much running, and to relieve hiccups, belching, and snoring.

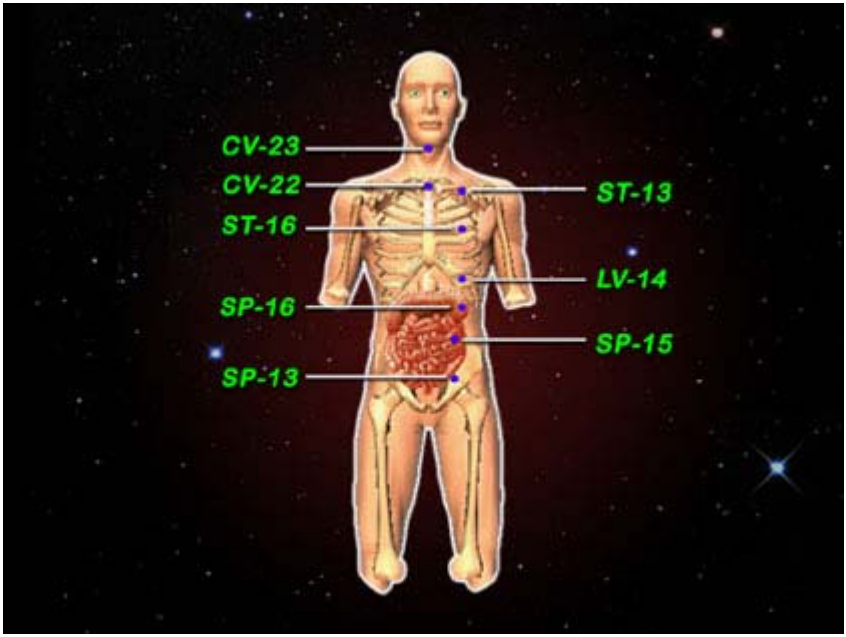


Fig. 7 *LV-14 (Liver Meridian)*

6. **SP-16 (Spleen Meridian)**

Traditional Name: Fu Ai = Abdominal Sorrow

Location: Below the bottom edge of the rib cage in direct line with the nipple. For women, it is in line with ST-13 under the collarbone, and just beneath the rib cage from LV-14 at the edge of the bottom rib. For men, it is in line with ST-13 and ST-16, just beneath the rib cage.

Uses: Can relieve abdominal pain, constipation, dysentery.

7. **SP-15 (Spleen Meridian)**

Traditional Name: Da Heng = Big Horizontal

Location: To the sides of the navel in direct line with the nipple.

Uses: Can relieve nervousness, dysentery, constipation, excessive sweating, diarrhea, abdominal pain, intestinal paralysis.

8. **SP-13 (Spleen Meridian)**

Traditional Name: Fu She = Palace Dwelling

Location: Two fingers' width above the middle of the groin. Hold this point firmly without excessive pressure; it may feel ticklish.

Uses: Can relieve abdominal pain and tension, colic pain, appendicitis, constipation. Good energy flow through SP-13 relaxes the abdominal region, groin, thigh and sexual organs; it relieves menstrual cramps, indigestion, and intestinal weakness.

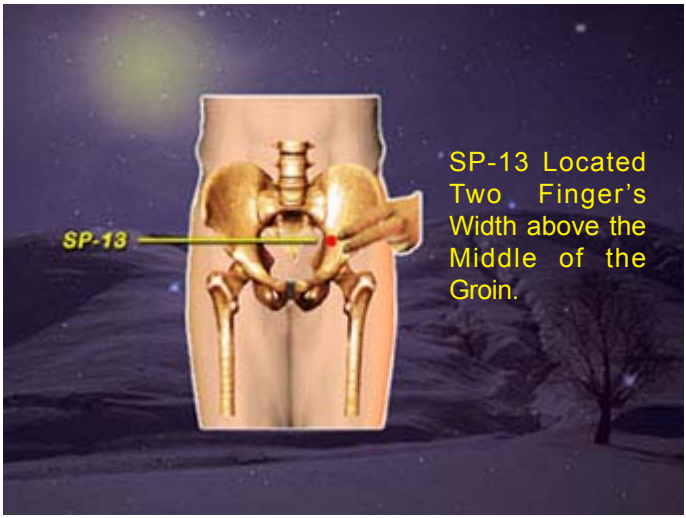


Fig. 8 *SP-13 (Spleen Meridian)*

9. **SP-10 (Spleen Meridian)**

Traditional Name: Hseuh Hai = Sea of Blood

Location: Three fingers' width above the knee on the inside of the thigh. Place the left palm on the kneecap, fingers pointing to the inside of the knee. Press down on the inside with the thumb. The point is sensitive to pressure.

Uses: Can relieve abnormal menstrual flow and cramps, uterine bleeding, rashes, indigestion. Good energy flow through SP-10 promotes smooth functioning of the female organs. This point also releases the flow of energy through the thighs and knees.

10. **SP-9 (Spleen Meridian)**

Traditional Name: Yin Lin Chuan = Dark Tomb Spring

Location: On the inside of the leg below the top of the tibia bone (the large bone of the leg.) The point is very tender.

Uses: Can relieve abdominal pain and distension, excessive menstrual flow, menstrual pain, lower back pain, swelling. Unrestricted energy flow through SP-9 increases the flow of energy through the knees and legs.

Fig. 9 *SP-9 (Spleen Meridian)*

11. **K-6 (Kidney Meridian)**

Traditional Name: Chao Hai = Shining Sea

Location: One finger's width below the inner ankle. The point is sensitive to pressure.

Uses: Can relieve mental disorders, insomnia, tonsillitis, menstrual disorders, epilepsy, sadness. This point helps balance the Yin aspect of the Great Bridge Channel. When good energy flows through K-6, problems in the female sexual organs and the kidneys will be reduced. Also, a deep refreshing sleep is encouraged by pressing this point.

12. **SP-4 (Spleen Meridian)**

Traditional Name: Kung Sun = Grandson

Location: On the bottom of the foot, in a hollow behind the joint of the big toe. The point is sensitive to pressure.

Uses: Can relieve heart pain, stomach pain, epilepsy, vomiting, diarrhea, paralysis of the big toe and foot, cold feet, foot cramps, abdominal tension. This point helps balance the Yin aspect of the Great Regulator Channel. When energy flows well through SP-4, the body energy is balanced.

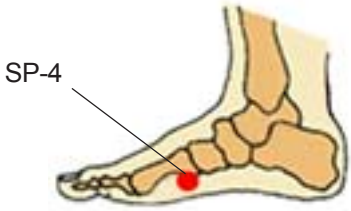


Fig. 10 *SP-4 (Spleen Meridian)*

13. **K-1 (Kidney Meridian)**

Traditional Name: Yong Quan = Bubbling Spring

Location: At the center of the ball of the foot when curling the toes in at the hollow; a sensitive spot.

Uses: Can help to calm the spirit; It opens the senses. Connects the earth energy to the perineum

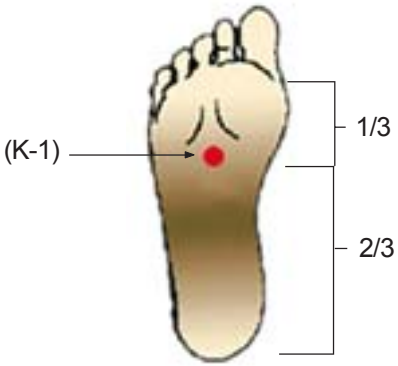


Fig. 11 *K-1 (Kidney Meridian)*

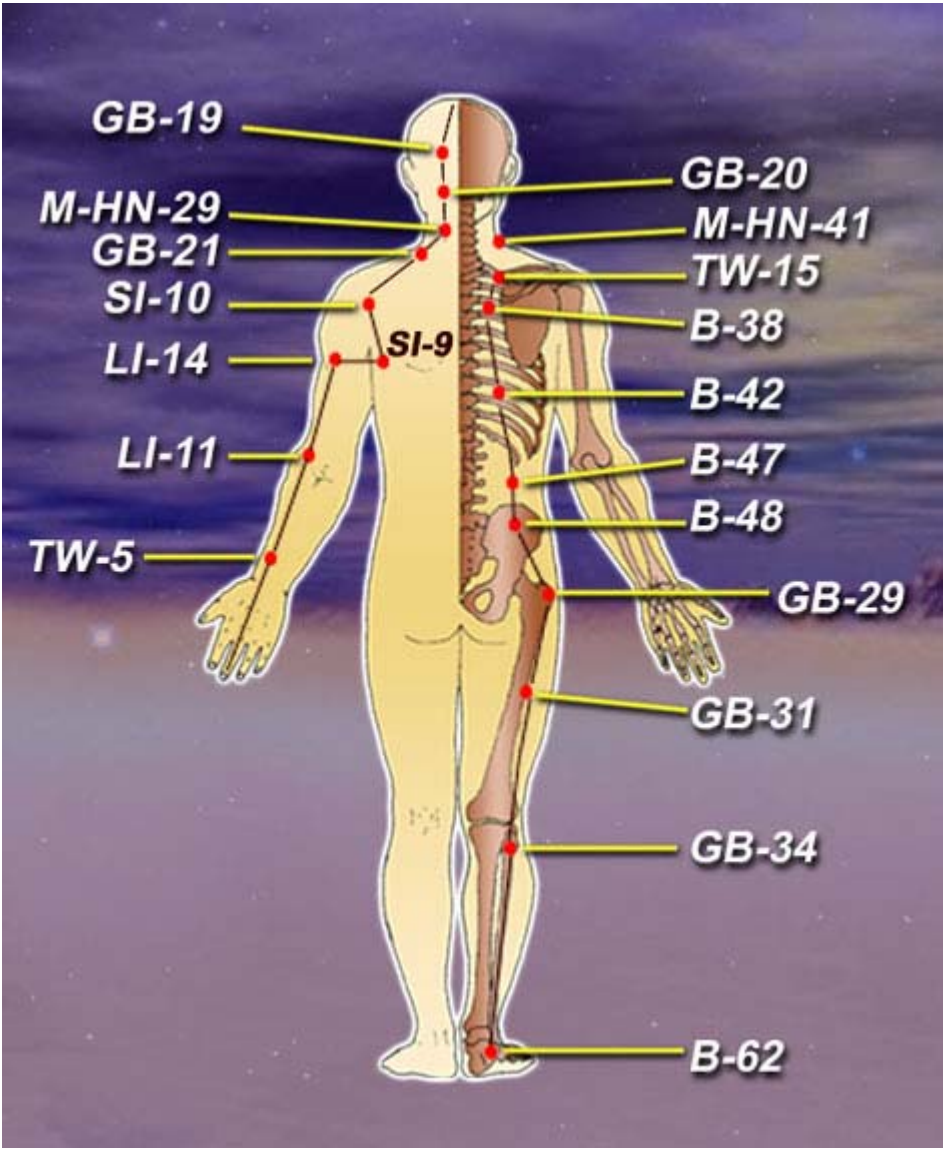


Fig. 12 *Yang Side*

C. Locate GB-41 and SI-9

The Entire Back (Yang) Route of the Channel.

1. **GB-41 (Gall Bladder Meridian)**

Traditional Name: Lin Chi = Attending the Crying Child

Location: Facing the outside of the foot at the joint, in the upper space between the fourth and little toe.

Uses: Can help to relieve arthritis, inflammation of the breast, hearing problems, ringing in the ears, irregular menstruation, insufficient breast milk, headaches, rheumatism, perspiration problems, excessive water retention. This point helps balance the Yang aspects of the Great Regulator Channel and the Belt Channels.

Fig. 13 *GB-41 (Gall Bladder Meridian)*

2. **B-62 (Bladder Meridian)**

Traditional Name: Shenmai

Location: On the outside of the ankle, in the small depression just under and slightly behind the ankle bone. Press straight into the side of the foot.

Uses: Can relieve headache, mental confusion, epilepsy, dizziness, insomnia, backache, aching of the lower extremities.

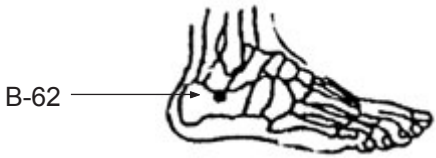


Fig. 14 *B-62 (Bladder Meridian)*

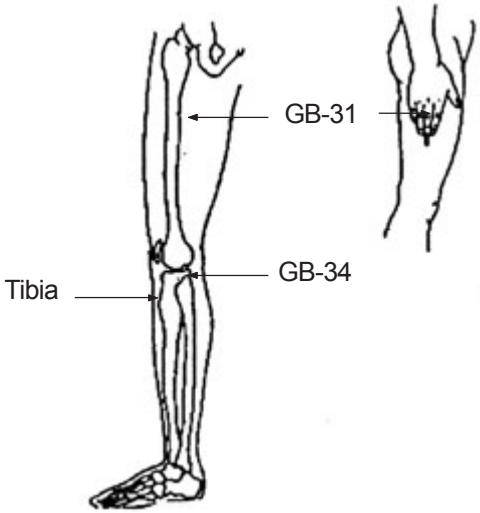


Fig. 15 *GB-31 (Gall Bladder Meridian)*

3. **GB-34 (Gall Bladder Meridian)**

Traditional Name: Yang Ling Chuan = Life Tomb Spring

Location: On the outside of the leg, in a hollow below the top of the fibula (slender, lower leg bone.)

Uses: Can relieve rheumatism in the knees, weakness of the legs, pain or paralysis of the leg, soreness after exercise, headaches, abdominal problems, constipation, lower back tension, and extreme fright.

4. **GB-31 (Gall Bladder Meridian)**

Traditional Name: Feng Shih = Windy City

Location: Standing upright with the hands at the sides, the point is located behind the femur (thigh bone) where the middle finger touches the leg. The point is very sensitive to pressure.

Uses: Can relieve paralysis of the legs, knee joint pain. Energy flowing through GB-31 encourages good energy flow to the knees, legs, hips and back points.

5. GB-29 (Gall Bladder Meridian)

Traditional Name: Chu Liao = Dwelling Bone

Location: At the joint of the top of the femur bone and the hip.

Uses: Can relieve diseases of the hip joint and surroundings, lower leg pain.

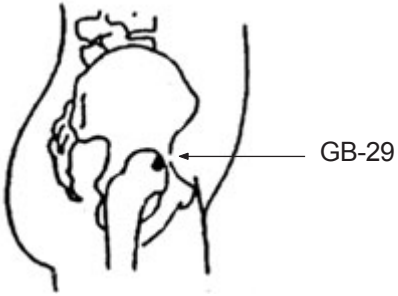


Fig. 16 *GB-29 (Gall Bladder Meridian)*

6. **B-48 (Bladder Meridian)**

Traditional Name: Pai Huang = Round Tissue below the Diaphragm, Uterus, or Placenta

Location: Two fingers' width from the top of the sacrum. The point feels sore.

Uses: Can relieve the pelvic area, abdominal problems, constipation, hemorrhoids, prostate gland and urinary problems.

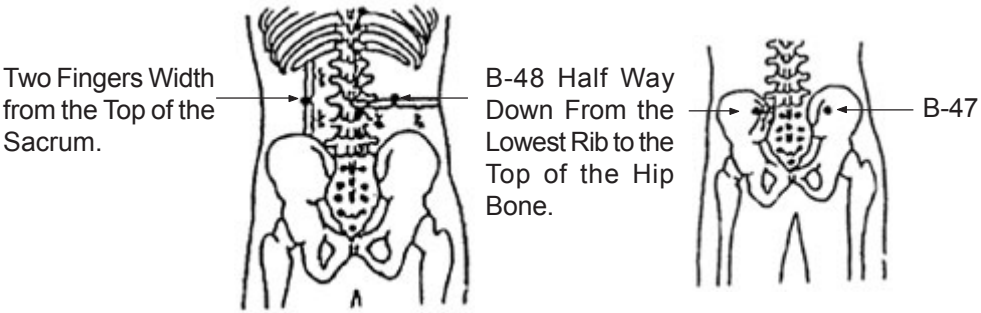


Fig. 17 *B-48 (Bladder Meridian)*

7. **B-47 (Bladder Meridian)**

Traditional Name: Chi Shih = Room of Resolution

Location: On the back, halfway down from the lowest rib to the top of the hip bone, and halfway between the spine and the side of the body.

Uses: Can relieve abdominal problems, appetite balance, genital problems, prostate, urinary, and kidney problems. Good energy flow through B-47 strengthens the lower abdomen and releases energy flow to the lower back.

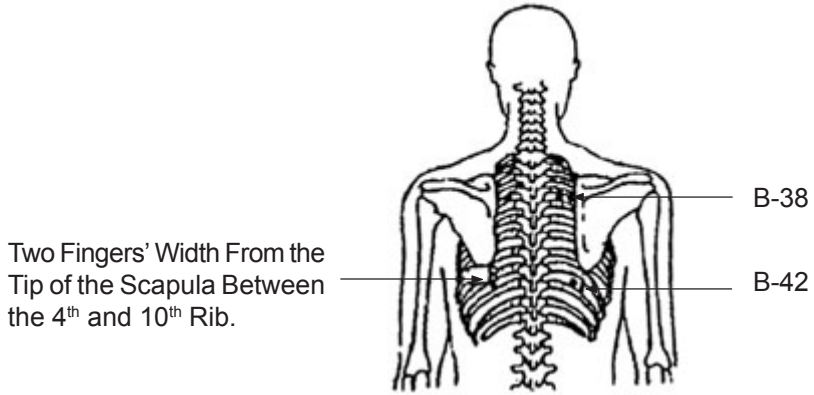


Fig. 18 *B-47 (Bladder Meridian)*

8. **B-42 (Bladder Meridian)**

Traditional Name: Hun Men = Gate of the Soul

Location: On the back, between the ninth and tenth rib, and about two fingers' width below the bottom tip of the scapula.

Uses: Can relieve stomach pain, liver problems, fullness in the chest, poor digestion, fainting. Pressing this point releases the back and affects the diaphragm.

9. **B-38 (Bladder Meridian)**

Traditional Name: Kao Huang = Fat Tissue between Heart and Diaphragm

Location: On the back, between the fourth and fifth rib, between the spine and the left scapula. The point feels like a knot of muscular tension and is sensitive to pressure.

Uses: Can relieve circulation and lung problems, releases the neck, upper back and arms, respiratory difficulties, coughing, hyperactivity, fatigue. Pressing this point strengthens the entire body. This is a very important point and can be used to treat many diseases.

10. **TW-15 (NTB-15) (Triple Warmer (Burner) Meridian)**

Traditional Name: Tian Liao = Heaven's Seam

Location: Above the shoulder blade, toward the side of the neck.

Uses: Can relieve pain in the scapula, back, neck, and the pain of fever.

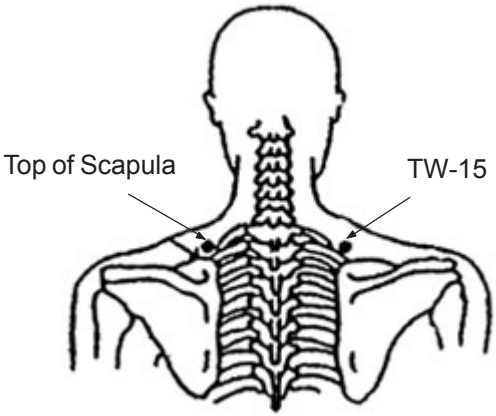


Fig. 19 *TW-15 (NTB-15) (Triple Warmer (Burner) Meridian)*

11. **SI-10 (Small Intestine Meridian)**

Traditional Name: Scapulae's Hollows

Location: On the back, on the scapula directly above the armpit and joint.

Uses: Can relieve chills, fevers, inability to move the arm, soreness of the arm, hypertension, shoulder pain.

12. **SI-9 (Small Intestine Meridian)**

Traditional Name: Jian Zhen = Shoulder Chastity

Location: On the back, just above the armpit.

Uses: Can relieve shoulder problems, paralysis of the upper limbs, excessive perspiration in the armpits, pain in the shoulder blades, toothaches, deafness, swelling of the joints.

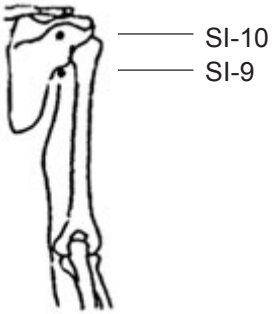


Fig. 20 *SI-9 (Small Intestine Meridian)*

D. Locate LI-14 and TW-5

The Yang Arm Route of the Channel.

1. **LI-14 (Large Intestine Meridian)**

Traditional Name: Binao = Arm and Scapula

Location: On the upper arm, above the midpoint between the shoulder and elbow.

Uses: Can help clear vision, and relieve arm and shoulder, eye problems.

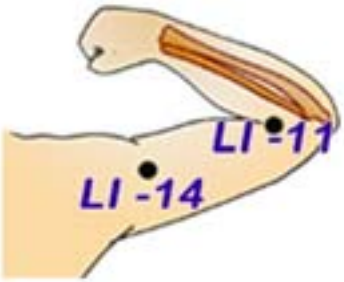


Fig. 21 *LI-14 (Large Intestine Meridian)*

2. **LI-11 (Large Intestine Meridian)**

Traditional Name: Quchi = Crooked Pool

Location: At the front of the arm in the inner crease where the forearm joins the upper arm.

Uses: Can cool heat; can relieve arthritic pain in the arms, paralysis, hypertension, high fever, anemia, allergies, skin problems.

3. **TW-5 (Triple Warmer Meridian)**

Traditional Name: Waijuan = Outer Gate

Location: Two fingers' width above the wrist on the outside of the arm.

Uses: Helps to circulate stagnant Chi; can relieve common colds, high fevers, pneumonia, deafness, insomnia, headache, stiff neck, paralysis.

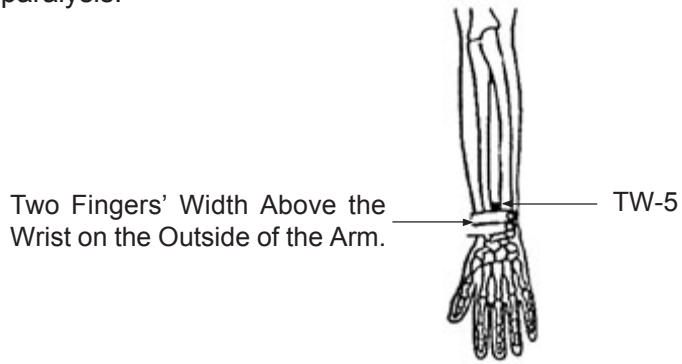


Fig. 22 *TW-5 (Triple Warmer Meridian)*

E. Locate P-8 and L-1

The Yin Arm Route of the Channel.

1. **P-8 (Pericardium Meridian)**

Traditional Name: Laogons = Gakor's Palace

Location: At the center of the palm.

Uses: Can cool the heart and drain heat, relieving heat exhaustion and chest pains.

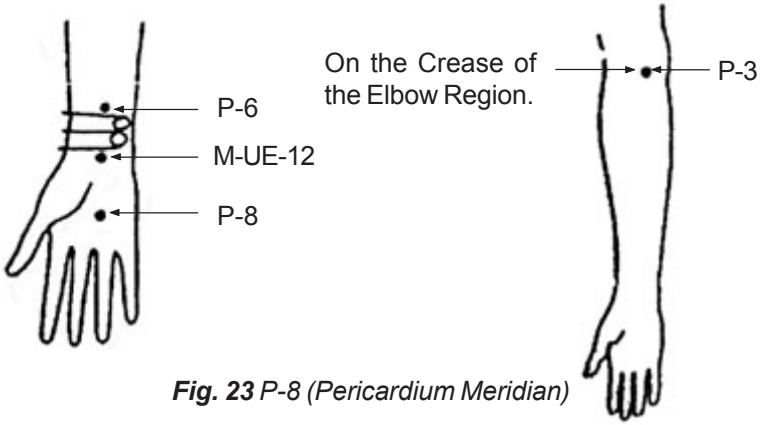


Fig. 23 *P-8 (Pericardium Meridian)*

2. **M-UE-12 (Miscellaneous Point)**
Traditional Name: Nei Yangchi = Inner Yang's Pool
Location: At the center of the inner crease of the wrist.
Uses: Can relieve paralysis, infantile convulsions.

3. **P-6 (Pericardium Meridian)**
Traditional Name: Nei Guan = Inner Gate.
Location: Two fingers' width above the inner wrist.
Uses: Can calm the heart and spirit and regulate Chi; can relieve rheumatic heart disease, vomiting, chest pain, stomach ache.

4. **P-3 (Pericardium Meridian)**
Traditional Name: Quze = Crooked Marsu
Location: On the middle of the crease of the inner elbow.
Uses: Can open heart Chi, and disperse heat; can regulate the intestines, gastrointestinal problems, bronchitis, heat exhaustion.

5. **P-2 (Pericardium Meridian)**
Traditional Name: Tianjuan = Heaven's Spring
Location: Next to the armpit in the front of the arm, within the biceps muscles.
Uses: Can relieve cough, palpitations, chest pain.

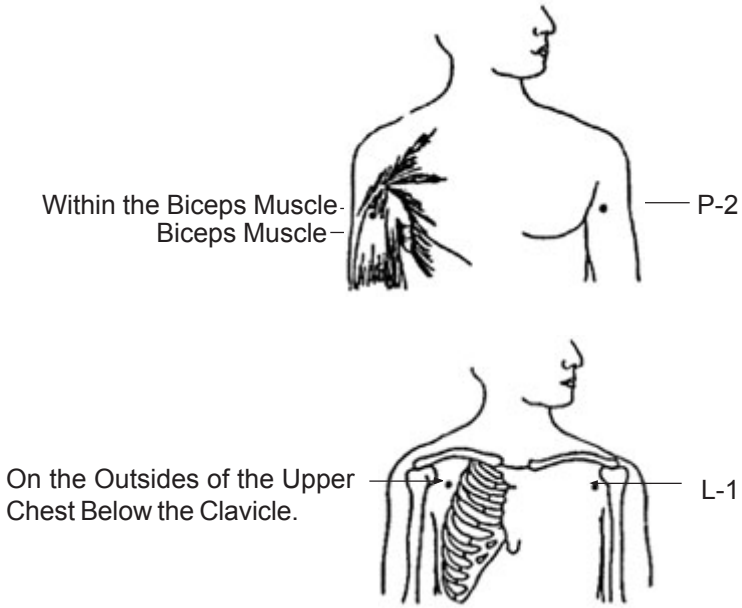


Fig. 24 *P-2 (Pericardium Meridian)*

6. **L-1 (Lung Meridian)**

Traditional Name: Zhong Fu = Central Radiance

Location: On the outside of the upper chest, below the clavicle.

Uses: Can relieve bronchitis, pneumonia, asthma, tuberculosis, coughing, blocked throat, congested nose.

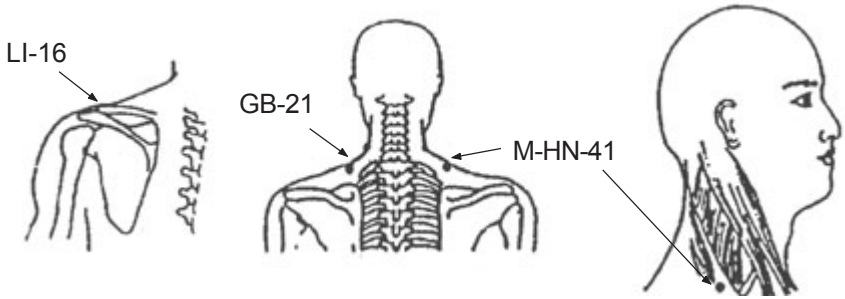


Fig. 25 *L-1 (Lung Meridian)*

F. Locate LI-16 and GB-20

The Last Part of the Yang Back Channel.

1. **LI-16 (Large Intestine Meridian)**
Traditional Name: Fusu = Crest Bare
Location: In a hollow of the shoulder at the end of the clavicle.
Uses: Can relieve shoulder problems, disperse blood congestion, convulsions, neck problems.

2. **GB-21 (Gall Bladder Meridian)**
Traditional Name: Tian Jing = Shoulder Well
Location: On the shoulder, in a hollow of the collarbone near the neck.
Uses: Can relieve uterine bleeding, back pain and shoulder pain.

3. **M-HN-41 (Miscellaneous Point)**
Traditional Name: Jingbi = Neck and Arm
Location: On the side of the neck, above the clavicle.
Uses: Can relieve numbness in the arm; paralysis of upper limbs.

4. **M-HN-29 (Muscle Point)**
Traditional Name: Xinshi = New Recognition
Location: On the back of the neck between the third and fourth cervical vertebrae.
Uses: Can relieve stiff neck, headaches, sore throat.

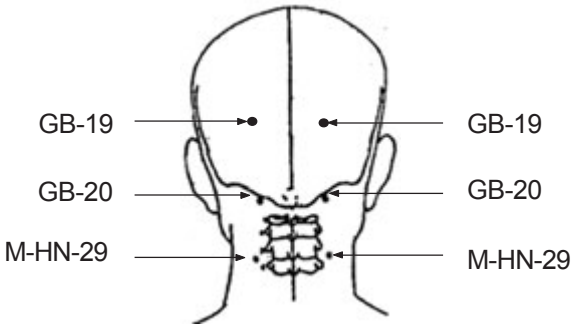


Fig. 26 *M-HN-29 (Muscle Point)*

5. **GB-20 (Gall Bladder Meridian)**

Traditional Name: Fenschi = Pool of Wind

Location: On the back of the neck in the hollow at the base of the

Uses: Can help a hot wind condition; can improve hearing and vision; can relieve the common cold, headache, stiff neck, hypertension, sinusitis, red eyes, deafness, insomnia.

Locate and become familiar with the points and proceed then with the next procedure.

3. Practice of Opening of the Great Bridge and Great Regulator Channels

We will open the channels in two ways:

A. Concentrate on the Flow of (Energy in) the Channel(s)

The most important thing is that you will feel the flow of (energy in) the channels. Therefore just go along the Channels with your hands and mind and be aware of the Channels and the flow of energy.

Start at the top (GB-17) and go over the face and down in a straight line, along the front of the body and the inside of the legs to the K-1 (Bubbling Spring). Then go up, on the outside of the legs, hips and spine to the shoulder and down to the armpits (SI-9). Next go with the right hand over the outside of the left arm and back on the inside of the left arm to LI-16 on the shoulder. We continue with the left hand from SI-9 over the outside of the right arm and back on the inside of the right arm to LI-14 on the shoulder From there we continue with both hand along the neck to GB-20 back to CB-17. Touch lightly each point and use your mind/eyes, when you go down and up along the Channel in this way. You can repeat a few times until you really are aware of the Channel and feel the flow of energy.

B. Open the Channel(s) More Specific by Individually Opening and Connecting each Point along the Channel

a. Open and connect the points GB-17 to ST-4 on both sides of this part of the Channel.

Preparation:

1. Sit or stand up, and smile down.

2. Practice quickly Fusion of the Five Elements, reactivate the pakuas, the facial and universal pakua as well. Spiral the pakuas and draw all the energies also of the organs, the senses and the mind to the big space, the cauldron in your Tan Tien. Balance the emotional energies in the organs as taught in Formula III and let the Compassion Energy grow with the creation cycle of Cosmic Fusion.

Spiral and condense the energies in the cauldron to form a shining pearl.

3. Move the pearl down to the perineum and circulate the energy a few rounds in the Microcosmic. Let the pearl absorb forces of the Earth, the Cosmic Particles and the Universe. Move the pearl down to the perineum again.

4. At the perineum use the pearl to clear the Left, Middle, and Right Thrusting Channel. Move the pearl up and down through all three Thrusting Channels to the crown, in the following way.

- Hold your left arm, with your fingers pointing down to the earth, along your side. Inhale, close your right nostril and pull up your left anus and suck the energy up through the left Thrusting Channel. Exhale and let all the toxic and sick energy flow through the channel down into the earth.

- Close both nostrils, pull up the middle part of the anus and suck the energy up through the middle Thrusting Channel. Exhale, bring your right hand along your side, keep the left nostril closed, and let all the toxic and sick energy flow through the middle Thrusting channel into the earth.

- Keep the left nostril closed, and the right arm hanging down. Inhale, pull up the right side of the anus and suck the energy up

through the right Thrusting Channel. Exhale and let all the toxic and sick energy flow down through this right channel into the earth.

- Repeat the procedure for the middle thrusting channel (when you exhale down, keep your right nostril closed and your left arm hanging down), the left Thrusting Channel, the middle Thrusting Channel (exhale down on the right side), the right Thrusting Channel, the Middle Thrusting Channel (exhale down in the left side) and the left thrusting Channel.

- Rest and feel the three Thrusting Channels and all the organs, they penetrate, open and clean. With your mind/eyes you can still let the energy flow up and down in the three channels. All the routes and clean the Thrusting Channels.

Practice:

1. Then move the pearl through the Left and Right Thrusting Channel to point GB-16 on both side of the Pai Hui, at the top of the head. Use your right and left's hand middle finger to press on the center of the crown through which the Middle Thrusting Channel runs. Now move this fingers to a point about one and a half inches to the left and right of the crown, and press on this point, GB-16. The points GB-16 will feel painful when pressed. Release; press again, then rest. Concentrate on and feel this point.

Note: It is not necessary to find the exact location of each point. The points are quite large. When you use three fingers to cover the point(s), you will find it/them by feeling the spot(s) where the energy is most condensed, recognizable by the strongest pulsation.

2. With the middle fingers of each hand remain on GB-16, place the index fingers about one inch away from the middle fingers on GB-17, and the fourth fingers to a point about one inch away from the middle fingers on GB-15. Press and release all three points a few times simultaneously. All three points will feel painful when pressed. Then continue to use all three fingers to press them lightly until you feel a pulsation at the fingertips.

3. Continue to press the fingers on these points. Then, using the index, middle, and fourth fingers together, gently press on point GB-

14 on both sides, in the middle of the forehead over the left and right eye. When you feel the points, mentally move the energy down from the crown to the forehead. Feel the energy flowing. The energy will flow quite easily through this point, perhaps it will be a little bit painful. Continue to press here until you feel again a pulsation at the fingertips. If you feel tense and worried, GB-14 is usually blocked. Wrinkle the brow as you do when you are tense, and hold GB-14 on both sides to stimulate the energy flow. Stiffness in the neck and face, which is the product of overall tension, can be relieved by restoring proper flow to the area of GB-14. In addition, since this point is strongly related to consciousness, good energy flow through GB-14 will calm the spirit and brighten vision.

4. Move the three fingers of both hands down to press on ST-2 on both sides of the cheekbone in line with the pupil and GB-14. Feel the energy flow in a line from the top of the head down the forehead, through the eyes to the cheekbone points, ST-2. You may feel a pain in the cheekbone area.

5. Move the same fingers to the point at the corners of the mouth, ST-4. Press ST-4 in and slightly upward. This point is also tender upon pressure. You may feel pain from pressing this point manifesting in the teeth. Run the energy again from the crown through the points to the corners of the mouth.

6. Now release both hands from the points they have been pressing. Clasp them together in the holding position of meditation, and mentally run the left route from the top of the head points, GB-17, GB-16, and GB-15, down to ST-4.

7. Rest. Let the energy flow by itself.

b. Open and connect the points ST-4 to SP-4 along the entire front route on both sides.

1. If you start fresh, repeat the steps of A. Otherwise you just proceed to the next points of this route.

2. Keep your fingers on ST-4 in the corners of your mouth and move the energy down to CV-23. Use the left or right thumb to press

CV-23, under the chin. Press upward toward the tongue, and feel the energy flow down to this point. As the energy flows, you may feel a pulse or electricity in the hand.

3. Use the left or right thumb to press down on the top of the sternum toward the chest. Rest, and then use the left index, middle, and fourth fingers to press lightly on the CV-22 point above the sternum. Move the energy to this point, and relax for a while.

As you relax, use the mind to connect these points (CV-23 and CC-22) with the previous points.

4. Move the index, middle, and fourth fingers of each hand from the three points at the top of the head to point ST-13 under the collarbone. Then, move the left and right index, middle, and fourth fingers to just above the nipple at ST-16. Trace the energy flow from the crown down to the forehead, cheekbone, comer of the mouth, CV-23, CV-22 above the sternum, to ST-13 under the collarbone (ST-13), and to ST-16 just above the nipple.

5. Continue to keep the right and left fingers on ST-13. Move the left and right hand down straight in line with the nipple and middle of the collarbone to LV-14 between ribs eight and nine. Feel the energy flow inside your body. Massage, release, and press again until you feel a pulse at this point indicating that the energy has traveled this far. Move the left and right fingers to just beneath the rib cage in line with the nipple to SP-16. Move the energy to the point.

6. Move the left and right fingers to SP-15 at both sides of the navel and to SP-13 at the groin area above the leg bone and in line with the above points. Feel the energy connection and movement.

7. Move the left and right fingers to SP-10 on the inside and just above the knee, Feel the connection. Then, move with the fingers to SP-9 just below the knee, and connect it with the flow of the energy from the above points.

8. Move the left and right fingers to K-6 one finger's width below the inner ankle. Feel the connection. Then, move the left and right hand to SP-4 on the inside of the feet in a hollow just behind the ball of the feet. The energy may pulsate at this point as it connects to the above points.

9. Then move the left and right hand to K-1 (Bubbling Spring) at the center of the ball of the feet.

10. Now, clasp your hands, and put them on your lap in the meditation position. Mentally trace the energy flow from the top of the head to soles of your feet.

11. Slowly open your eyes. You should feel peaceful as the energy connects.

c. Open and connect all the points K-1 to SI-9 along the entire Yang (back) route of the channel.

1. When you start fresh, continue the above procedure all the way down to K-1. If not, just continue.

2. As above, put first the right and left hand on GB-17, GB-16, and GB-15.

Begin to run the route again down to ST-13.

3. Place the three fingers on ST-13 under the collarbone on both sides as before, and continue to hold this point with those fingers as you proceed with the three fingers to press and connect each succeeding point. Run the route in this manner down through ST-16, down the front, left side .of the body to K-1 and GB-41.

4. Continue to follow the route upward in one straight line at the outside of the ankles and legs along B-62, GB-34, GB-31 over the hip GB-29 to B-48 on the back, a little above the top of the sacrum.

5. Then, move the right and left three fingers to the back to the points B-47, B-42, and B-38, all the way up to TW-15 at the top corner of the scapula.

6. Now, move the right and left three fingers to the points SI-10 and SI-9, above and just above the armpits.

7. Now, clasp your hands, and put them on your lap in the medication position. Mentally trace the energy flow from the top of the head to soles of your feet and up to SI-9 just above the armpits.

8. Slowly open your eyes. You should feel peaceful as the energy connects.

d. Open and link together the points LI-14 and TW-5 of the Yang armroute of the left arm.

1. Use the three fingers of your right hand to move down to points LI-14 and LI-11 on the arm, and TW-5, above the outer wrist.
2. Rest, close your eyes and feel the flow of energy.

e. Open and connect the points P-8 - L-1 of the Yin armroute of the left arm.

1. Then move the right three fingers down and over the middle finger to point P-8 on the palm.
2. Next, move the right three fingers up along the inside (Yin) side of the left arm to join the points which are running down the Yang (outer side) of the left arm to the points M-UE-12, P-6, P-3, P-2 and L-1.
3. Rest, close your eyes and feel the flow of energy along the points the Yang and Yin route of your left arm.

f. Repeat step d and e on your right arm to open the points of the Yin and Yang part of the Channels on this arm.

g. Open and connect the points LI-16 to GB-20 on both sides of the last part of the Yang route of the Channel.

a. Move with the fingers of both hands from L-2 to LI-16 on top of the shoulders.

b. Move from there to GB-21, M-HN-41, M-HN-29 to GB-20 at the base of the skull.

c. Put the hands together in the meditation position, mentally move energy through the whole left and right sides of the Great Bridge and Great Regulator Channels. Run both sides of the Channel together by simply using the mind to direct the energy from point to point.

d. Collect the energy at the cauldron, and finish with Chi Massage.

Daily Practice

Quick Morning Checkup of the Eight Psychic Channels

1. Smile down, quickly form the pearl, and bring it down to the perineum. Practice six rounds of the Microcosmic Orbit.

2. Return to the perineum and clear the three Thrusting Channels, including the leg routes with the procedure described in Cosmic Fusion and on page 24 of this handbook.

3. Women, guide the energy into the earth, absorb the energy and spiral it clockwise and then counterclockwise. Start the Belt Channel up to and above the crown. Absorb the heavenly force. Continue spiraling counterclockwise and then reverse the direction and spiral the Belt Channel down to the earth again and back to the feet. Men, guide the energy above the crown. Spiral counterclockwise and absorb the Heavenly force. Spiral then clockwise and circle the Belt Channel down into the earth. Spiral clockwise and absorb the earth force. Reverse the direction and spiral counterclockwise the Belt Channel up to the Crown and then down to the earth again in a clockwise direction, back to the feet.

4. Men and Women split the energy (pearl) at the feet and start the flow of the energy through the Great Bridge and Regulator Channels from the inside of the left and right the foot (SP-4) and run the Channel along the inside of the legs, the groins, the front side of the body up to GB-14. Continue up, over the head, passing GB-15, GB-16, GB-17 down to LI-16. When you go up on the inside of the legs and the front side of the body, you will feel feel the energy flow along the outside of the legs (Most of the Yin and Yang points are located just opposite each other) and the back of the body at the same time. From LI-16 you go to L-1 and then, along the inside of the arms, P8 and from there you go over TW-5 up on the outside of the arms to join again at LI-16. From there you go up to the crown (GB-16) again.

5. Rest. Guide the energy with your mind/eyes through all the eight Channels.

6. Rest and bring the energy and your attention back to the cauldron in your Tan Tien. Gather and blend all the energy. Turn your senses and mind inward. Empty the mind in the Tan Tien and do nothing.

7. Collect the energy and end with a soft Chi Self Massage.

Protection of the Spinal Cord

1. Spinal Cord Microcosmic Orbit: Supplemental Belt Channel

This practice serves to strengthen the spine and protect it, and it is also important in the higher practice to wrap the spine with energy for its maintenance during trips to the midplane.

A. Practice Fusion, and then run the Microcosmic. Bring the pearl into the sacrum, and run it up the inner side of the back of the spinal cord to the brain. Wrap the energy around the frontal lobe and inside the skull. Return it down the inner side of the front of the spinal cord, and wrap it around the whole length of the spine.

B. Bring the pearl down to the coccyx and through it, and then up the outer side of the back of the spinal cord to the outside of the head. Wrap it around the frontal lobe and bring the pearl down along the outer side of the front of the spinal cord and return it to the coccyx.

C. Wrap the pearl around the coccyx. Wrap it around the outside of the spinal cord all the way up to the brain and the frontal lobe of the brain. Wrap the pearl around the skull, and then wrap it down the inside of the spinal cord to the coccyx.

D. Rest and do, with the mind/eye, the Spinal Cord Microcosmic Orbit for a few times.

2. Spinal Cord Cutting from the Throat Center

A. If you start fresh, always start with Fusion of the Five Elements to form the pearl, and circulate it in the Microcosmic Orbit for a few rounds.

B. Stop the pearl at the throat center at the top of the sternum. Inhale, exhale, and project the pearl out from the throat, and around the outside of the head toward the back to cut through C-7. Cut through and cut down through each of the cervical, thoracic, and lumbar vertebrae, down to the sacrum and coccyx.

C. Finish by bringing the pearl back into the throat.

Fig. 27 *Spinal Cord Cutting and from the Throat Center*

3. Protection of the Spine, Organs and Glands Cutting from the Third Eyes

A. Begin at the mideyebrow, and use the pearl to cut either clockwise or counterclockwise through the neck, the thoracic, and lumbar vertebrae. Cut until the whole body has been cut, including all the organs and glands. Return the pearl to the mideyebrow. The spine is now completely wrapped with energy.

B. When finished, bring the energy back down from the mideyebrow to the navel to collect it there.

Butterfly Protection of your Body

Cutting with Energy.

1. Start at ST-16 just above the nipples. (This point is slightly higher on women than on men.)

Fig. 28 *Spiral Energy From ST-16 Just Above the Nipple, Increase the Spirals on the they Encompass the Body.*

2. The pearl spirals in line with the body from ST-16. As it spirals, it cuts through both sides of the body through the rib cage in outward and downward ares (like the wings of a butterfly), and then cuts back in.

3. The spirals grow larger each time to include the whole body and legs. Eventually the spirals come forward out of the body into the aura.

4. Collect the energy at ST-16.

This exercise is often used in the Martial Arts. Because you are spiraling your energy all around you, your opponent can not find where the center of your energy is and can therefore not “attack” you. We use the Butterfly for the same reason in the higher practices to hide our center of energy so “nobody” can attack us. It is a very good psychic protection.

Cutting the Senses

This is a good way to protect and seal our senses.

A. Begin about half an inch in front of the eyes, spiral the pearl in three figure eight motions from the mideyebrow in the following manner.

Fig. 29 *Cutting the Senses*

1. Spiral the pearl down to the bottom of the left eye, circling it up to the top of the left ear. Then, circle it down the back to the bottom of the left ear, and circle up to the left eyebrow.

2. Circle across the mideyebrow, down to the bottom of the right eye, up to the top of the right ear. Circle around the back of the right ear, up to the right eyebrow, and join the first spiral at the mideyebrow.

3. From the mideyebrow spiral down to the left side of the nose, and down to the right corner of the mouth in a half circle. Spiral under the mouth to the left corner of the mouth, and then cut across to the right side of the nose. Return to the mideyebrow.

B. Collect the energy at the mideyebrow when finished.

Drilling the Head with Energy

This exercise is used to drill our head more open in order to receive the higher frequencies. Drilling the head with energy helps also to clear the brain.

1. Drill with the energy by spiraling the pearl into the head horizontally from points on the forehead to the back of the head, starting from the mideyebrow.

2. Later you can drill with energy all over the face, horizontally and vertically, including from the top of the skull to the neck and chin, until you feel your head clear.

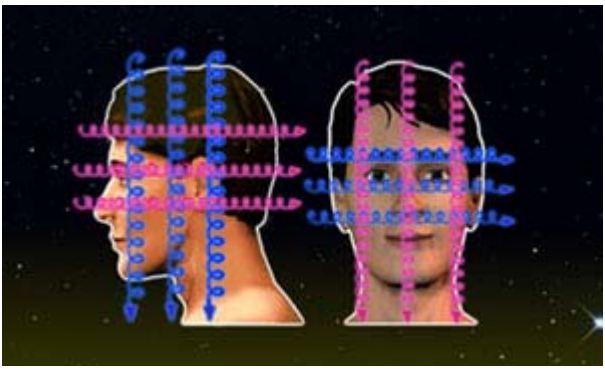


Fig. 30 *Drilling the Head with Energy*

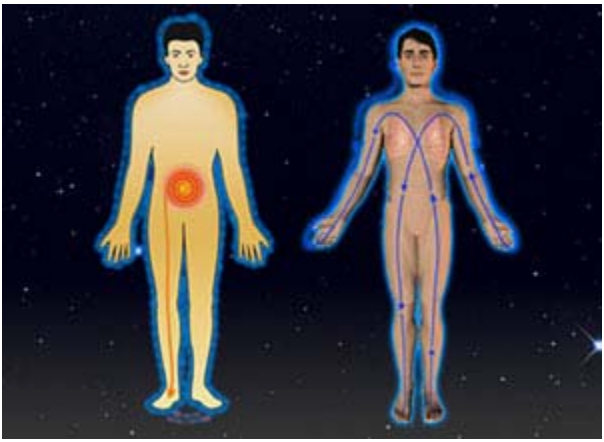
Sealing the Aura

1. This Taoist practice concentrates on containing the aura to preserve energy, and creating a thicker aura to protect the body.

2. Begin at the navel and send a pearl of energy down the front of the leg to the big toe of the right foot. Jump the energy from the big toe of the right foot to the big toe of the left foot.

3. Run a sheet of energy that traces the toes of the left foot and the outside of the left leg. Trace the outer left side of the body to the armpit. Trace the inside of the left arm, thumb and fingers. Trace the outside of the left arm, over the left shoulder, and over the crown.

4. Now trace the outside of the right arm, fingers, and inside of the arm. Trace the right side of the body, down the outside of the leg to the toes. Trace each toe and bring the sheet of energy up the inside of the right leg, around the perineum, to the inner left leg, to the toes, and jump the energy to the right toes again to finish the procedure. Bring the energy up, and collect it. If you wish to continue with this exercise, do not jump the energy back to the right toes.



Sealing the Aura: First Part Sealing the Aura: Second Part

Fig. 31 *Sealing the Aura*

5. Trace the front side of the left leg up to the left pelvis. Cross the energy over the solar plexus to the right collarbone, and bring it down the inside of the right arm. Trace the fingers and trace up the outside of the right arm. Wrap the energy over the crown and down the outside of the left arm to the fingers. Trace the inside of the left arm to the left collarbone. Bring the energy down the front side of the body, crossing over the solar plexus again, to the right hip, and then down the front side of the right leg.

6. Bring the energy up the backside of the left leg, and cross over to the T-11 and the right scapula. Trace the inside of the right arm, around the fingers, up the outside of the right arm, over the crown, down the outside of the left arm, up inside of the left arm to the left scapula and across to T-11. Cross over to the right, to the back of the right leg, to end at the toes.

Bring the energy up to the navel, and collect the energy at the cauldron.

7. Rest. Turn your senses and mind inwardly. Empty your mind in the cauldron in your Tan Tien. Feel nice, calm and protected.

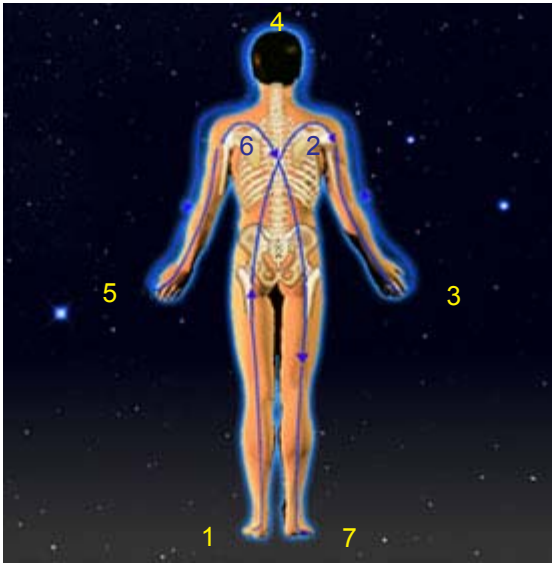


Fig. 32 *Third Part Sealing the Aura.*

Energy Body

Transfer the energy of Microcosmic, Thrusting and Belt Channel from the Physical Body into the Energy Body above. Once you have practiced to this level, you are ready to form the pearl into an energy body.

1. Always do Fusion of the Five Elements to clean out the negative emotions.

2. Condense the pearl and practice the Creation Cycle, Thrusting Channels and Belt Channels.

3. Run the pearl in the Microcosmic, and control its movement with the senses.

4. Move the pearl to the perineum. Inhale in short sips, drawing in ten percent of lungs capacity and pull up the anus. Inhale up to the navel, and inhale up to the heart.

5. Inhale up to the crown. Swallow your saliva (imagine swallowing upward) and exhale forcefully to open the crown and shoot the pearl out.

6. Feel the Universal Force, the forces of the North Star and Big Dipper above your head, and the Cosmic Particle Force in front of you as they shine down to your pearl. Feel your pearl start to absorb this energy, and then feel it expand.

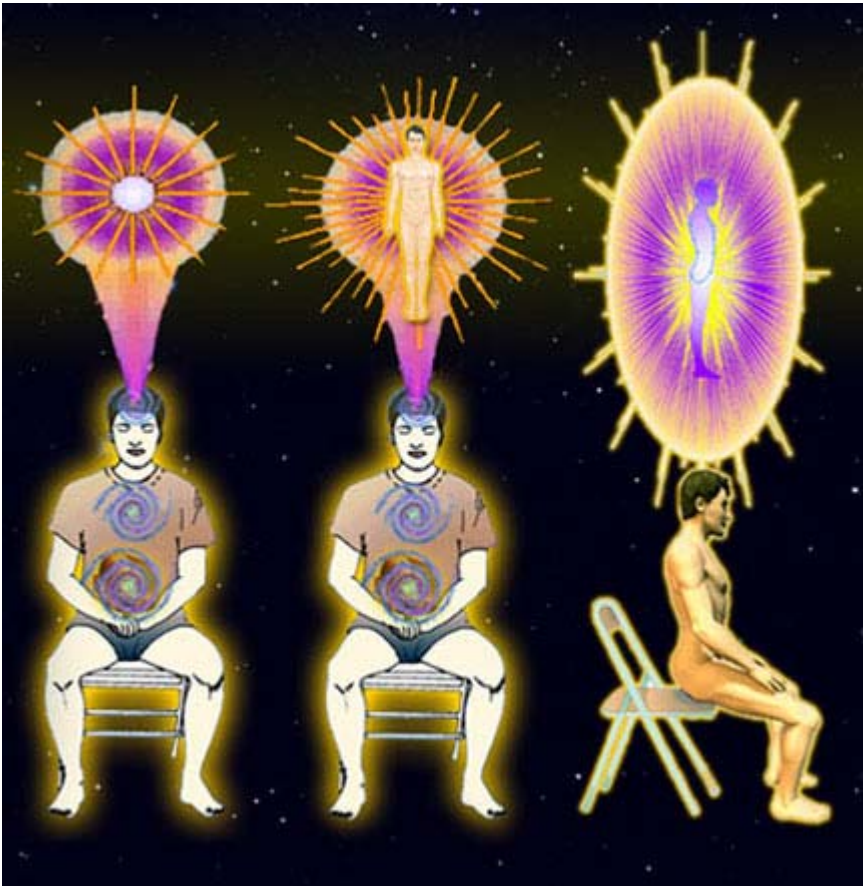
7. Bring your awareness to your feet. Feel the earth energy flow up through your feet, supplying this energy to your body. The pearl continues to expand with all the energy coming to it from outside the physical body.

8. Relax the senses, and form the energy body. Count the years of your age and with each year your energy body is growing. Form the energy body in the way you like.

9. Run the Microcosmic in the physical body. Open the crown, transfer the Microcosmic pathway into the energy body.

10. Form another pearl in the cauldron, and shoot the pearl into the energy body. Circulate the pearl through both Microcosmic Orbits.

11. Move the Thrusting Channels into the energy body.



Extend the Microcosmic Orbit.

Extend the Thrusting Channel.

Extend the Belt Routes into the Body Above.

Fig. 33 *Energy Body*

12. Practice all the Belt Channels up through the crown to and around the energy body. Feel the Belt Channel spiral around the physical and the energy body, connecting all the Channels in both bodies and protecting them.

13. Continue to practice until you are in full control of the energy body. Bring your awareness in this body. Just let it very carefully, travel a little bit, still close connected with your physical body (especially with the cauldron in the Tan Tien) and the Earth. Let it collect and absorb the energies of the North Star and Big Dipper, of the planets and the stars.

14. When you are ready, shrink the body to a pearl again. Activate the Cranial Pump. Press your tongue up, clench your teeth, pull back your chin, pull up your anus, and look up to the crown. Feel the beating in your heart and the pulse at your crown.

15. Activate the lead light, and let it shine up from your crown. It may feel like a frequency going out of the crown. Draw the pearl down to the lead light, and land the pearl. Inhale and draw the pearl back into the crown.

16. Move the pearl in the Microcosmic Orbit and nourish the physical body with all the energies the pearl has absorbed. Then bring it down to the navel and to the cauldron at the body's center. Collect, spiral and condense the energy in the cauldron.

17. Sit back. Turn yourself inwardly toward your center. Rest and stay in this energy.

Note: The energy which the pearl/energy body is absorbing, is nourishment for your physical body and especially for your energy and spirit body, which are formed in the practice of the Immortal Tao.

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Fusion of Eight Psychic Channels

Opening and Sealing Psychic Channels

Mantak Chia

Illustrations by Udon Jandee

Fusion of Eight Psychic Channels

Fusion of the Eight Psychic Channels is the last of the three Fusion practices. It teaches you the last techniques and meditation to make you ready and prepared to start the Practice of the Immortal Tao.

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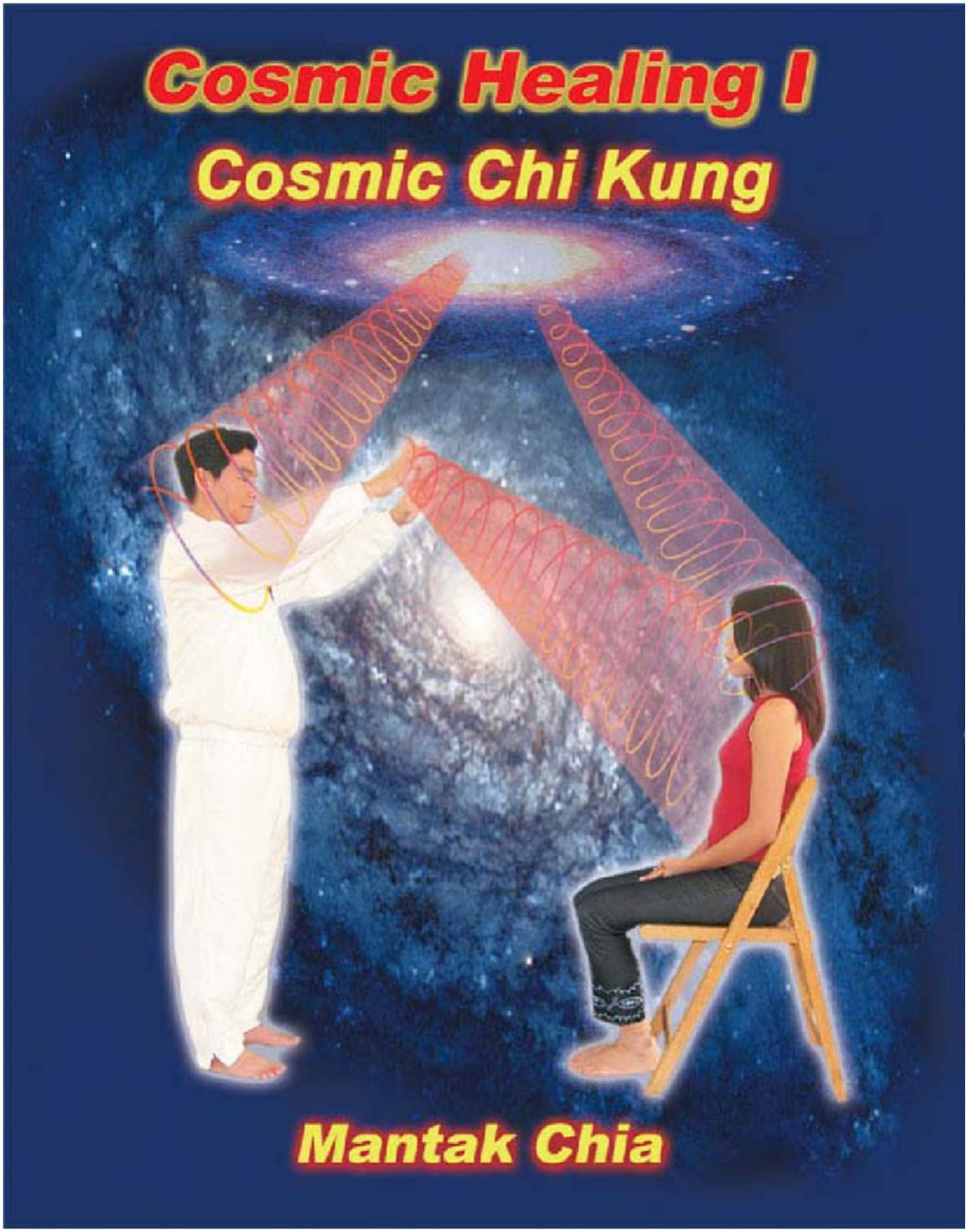
Cosmic Healing I

Cosmic Chi Kung



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About the Author

Mantak Chia

Master Mantak Chia is the creator of the Universal Tao System and is the director of the Universal Tao Center and Tao Garden Health Resort and Training Center in the beautiful northern countryside of Thailand. Since childhood he has been studying the Taoist approach to life. His mastery of this ancient knowledge, enhanced by his study of other disciplines, has resulted in the development of the Universal Tao System which is now being taught throughout the world.

Mantak Chia was born in Thailand to Chinese parents in 1944. When he was six years old, Buddhist monks taught him how to sit and "still the mind." While still a grammar school student, he learned traditional Thai boxing. He was then taught Tai Chi Chuan by Master Lu, who soon introduced him to Aikido, Yoga and broader levels of Tai Chi.

Years later, when he was a student in Hong Kong excelling in track and field events, a senior classmate named Cheng Sue-Sue introduced him to his first esoteric teacher and Taoist Master, Master Yi Eng (I Yun). At this point, Master Chia began his studies of the Taoist way of life in earnest. He learned how to circulate energy through the Microcosmic Orbit and, through the practice of Fusion of the Five Elements, how to open the other Six Special Channels. As he studied Inner Alchemy further, he learned the Enlightenment of the Kan and Li, Sealing of the Five Senses, Congress of Heaven and Earth and Reunion of Heaven and Man. It was Master Yi Eng who authorized Master Chia to teach and heal.

When Mantak Chia was in his early twenties he studied with Master Meugi in Singapore, who taught him Kundalini, Taoist Yoga and the Buddha Palm. He was soon able to clear blockages to the flow of energy within his own body. He learned to pass the life force energy through his hands also, so that he could heal Master Meugi's patients. He then learned Chi Nei Tsang from Dr. Mui Yimwattana in Thailand.

A while later, he studied with Master Cheng Yao-Lun who taught him the Shao-Lin Method of Internal Power. He learned the closely guarded secret of the organs, glands and bone marrow exercise known as Bone Marrow Nei Kung and the exercise known as Strengthening and Renewal of the Tendons. Master Cheng Yao-Lun's system combined Thai boxing and Kung Fu. Master Chia also studied at this time with Master Pan Yu, whose system combined Taoist, Buddhist and Zen teachings. Master Pan Yu also taught him about the exchange of Yin and Yang power between men and women, and how to develop the Steel Body.

To understand the mechanisms behind healing energy better, Master Chia studied Western anatomy and medical science for two years. While pursuing his studies, he managed the Gestetner Company, a manufacturer of office equipment and became well acquainted with the technology of offset printing and copying machines.

Using his knowledge of Taoism, combined with the other disciplines, Master Chia began teaching the Universal Tao System. He eventually trained other Instructors to communicate this knowledge and he established the Natural Healing Center in Thailand. Five years later, he decided to move to New York, where in 1979, he opened the Universal Tao Center. During his years in America, Master Chia continued his studies in the Wu system of Tai Chi with Edward Yee in New York.

Since then, Master Chia has taught tens of thousands of students throughout the world. He has trained and certified over 1,200 instructors and practitioners from all over the world. Universal Tao Centers and Chi Nei Tsang Institutes have opened in many locations in North America, Europe, Asia, and Australia.

In 1994, Master Chia moved back to Thailand, where he had begun construction of Tao Garden, the Universal Tao Training Center in Chiang Mai.

Master Chia is a warm, friendly and helpful man who views himself primarily as a teacher. He presents the Universal Tao System in a straightforward and practical manner, while always expanding his knowledge and approach to teaching. He uses a laptop

computer for writing and is totally at ease with the latest computer technology.

Master Chia estimates that it will take thirty five books to convey the full Universal Tao System. In June 1990, at a dinner in San Francisco, Master Chia was honored by the International Congress of Chinese Medicine and Qi Gong (Chi Kung), who named him the Qi gong Master of the Year. He is the first recipient of this annual award.

In December 2000, the Tao Garden Health Resort and Universal Tao Training Center was completed with two Meditation Halls, two open air Simple Chi Kung Pavilions, indoor Tai Chi, Tao Yin and Chi Nei Tsang Hall, Tai Chi Natural Swimming Pool, Pakua Communications Center with a complete Taoist Library, Internal World Class Weight Lifting Hall and complete 8 Court Recreational Facilities.

In February 2002, the Immortal Tao practices will be held at Tao Garden for the first time using Dark Room technology, creating a complete environment for the higher level Taoist practices.

He has previously written and published these Universal Tao books:

Awaken Healing Energy of the Tao - 1983
Taoist Secrets of Love: Cultivating Male Sexual Energy
co-authored with Michael Winn - 1984.
Taoist Ways to Transform Stress into Vitality -1985
Chi Self-Massage: the Tao of Rejuvenation - 1986
Iron Shirt Chi Kung I - 1986
Healing Love Through the Tao: Cultivating Female Sexual Energy - 1986
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Fusion of the Five Elements I - 1990
Chi Nei Tsang: Internal Organ Chi Massage - 1990
Awaken Healing Light of the Tao - 1993
The Inner Structure of Tai Chi co-authored with Juan Li - 1996
Multi-Orgasmic Man co-authored with Douglas Abrams 1996 - published by Harper/Collins
Tao Yin - 1999
Chi Nei Tsang II - 2000
Multi-Orgasmic Couple co-authored with Douglas Abrams 2000 - published by Harper/Collins
Cosmic Healing I - 2001
Cosmic Healing II co-authored with Dirk Oellibrandt - 2001

Also many of the books above are available in the following foreign languages: ***Bulgarian, Czech, Danish, Dutch, English, French, German, Greek, Hebrew, Hungarian, Indonesian, Italian, Japanese, Korean, Lithuanian, Malaysian, Polish, Portuguese, Russian, Serbo-Croatian, Slovenian, Spanish,*** & ***Turkish*** editions are available from the Foreign Publishers listed in the Universal Tao Center Overview in the back of this book.

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Thanks to Juan Li for the use of his beautiful and visionary paintings, illustrating Taoist esoteric practices.

We offer our eternal gratitude to our parents and teachers for their many gifts to us. Remembering them brings joy and satisfaction to our continued efforts in presenting the Universal Tao System. For their gifts, we offer our eternal gratitude and love. As always, their contribution has been crucial in presenting the concepts and techniques of the Universal Tao.

We wish to thank the thousands of unknown men and women of the Chinese healing arts who developed many of the methods and ideas presented in this book. We offer our graditute to Master Lao Kang Wen for sharing his healing techniques.

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Words of Caution

The practices described in this book have been used successfully for thousands of years by Taoists trained by personal instruction. Readers should not undertake the practice without receiving personal transmission and training from a certified instructor of the Universal Tao, since certain of these practices, if done improperly, may cause injury or result in health problems. This book is intended to supplement individual training by the Universal Tao and to serve as a reference guide for these practices. Anyone who undertakes these practices on the basis of this book alone, does so entirely at his or her own risk.

The meditations, practices and techniques described herein are ***not*** intended to be used as an alternative or substitute for professional medical treatment and care. If any readers are suffering from illnesses based on mental or emotional disorders, an appropriate professional health care practitioner or therapist should be consulted. Such problems should be corrected before you start training.

Neither the Universal Tao nor its staff and instructors can be responsible for the consequences of any practice or misuse of the information contained in this book. If the reader undertakes any exercise without strictly following the instructions, notes and warnings, the responsibility must lie solely with the reader.

This book does not attempt to give any medical diagnosis, treatment, prescription, or remedial recommendation in relation to any human disease, ailment, suffering or physical condition whatsoever.

Chinese Medicine and Chi Kung emphasizes balancing and strengthening the body so that it can heal itself. The meditations, internal exercises and martial arts of the Universal Tao are basic approaches to this end. Follow the instructions for each exercise carefully and do not neglect the foundations, i.e, the Microcosmic Orbit and any other supplemental exercises. Also pay special attention to the warnings and suggestions. People who have high blood pressure, heart disease or a generally weak condition should proceed cautiously, having prior consent from a qualified medical practitioner. People with venereal disease should not attempt any practices involving sexual energy until they are free of the condition.

The Universal Tao is not and cannot be responsible for the consequences of any practice or misuse of the information in this book. If the reader undertakes any exercise without strictly following the instructions, notes, and warnings, the responsibility must lie solely with the reader.

Chapter I
Cosmic Healing

Cosmic Healing Chi Kung in the Universal Tao System

Cosmic Healing Chi Kung is an important branch of the Universal Tao, an entire system of Taoist practices for cultivating the body, the Chi and the spirit. Your level of skill in Cosmic Healing Chi Kung will be based upon your mastery of the Universal Tao System as a whole. One of the most important parts of the Taoist practices is working with the energy moving within the body.

Foundation of the Universal Tao System is the Microcosmic Orbit Meditation

This is the major practice to connect with the earth, cosmic and universal forces. This is the way to make a connection with the North Star and the Big Dipper's violet/red light which is one of the very powerful universal healing lights. Through this practice you learn to feel Chi and to use your mind/eye/heart power to guide the Chi flow through the primary energy routes in your body. This practice is later extended to include the arm and leg routes too; it is then called the Macrocosmic Orbit.

Many people, including Chi Kung Masters, come to me and say that they have been practicing Chi Kung for years and nothing is happening. They don't feel any energy and they think that they must be performing their Chi Kung incorrectly. I tell them that they also need to do meditation. Hand movements are nothing by themselves. There are hundreds of different Chi Kung forms in China. You could spend seventy lifetimes just learning the hand movements. The practice of the Microcosmic Orbit meditation will help you to feel the Chi more easily inside, outside or around the body and in the extremities of the hands and feet.

When I was a child I liked to practice Chi Kung so much I had to save my lunch money to learn. After many years of practice of many Chi Kung forms, I started to forget the first form, so I learned it again. One day when I tried to practice and review all the forms that I had learned, I couldn't remember many of them. I sat down and thought, "I only have two hands, two legs and one head. Why are there so many forms? And why are there are so many religions and beliefs." I said to myself that there must be one main thing that they have in common. I started to search and I found out that the most important thing is feeling the Chi within us. Being able to increase, transform, take in and stay in touch with the universal, the cosmic, nature and the earth force. Letting

them all combine within us is what is important. Likewise in religion there is God (a Force in Taoism we call Wu Chi, the nothingness, the supreme power controlling the universe); with a good heart and virtue energy we can connect with this force.

The complete practice of the Microcosmic Orbit Meditation is fully described in the book "Awaken Healing Light of the Tao" by Mantak Chia.

Cosmic Inner Smile and the Six Healing Sounds

These are very important practices to make the connection among the organs, the colors and the good virtue energy; each organ color will enhance your connection to the cosmic and the Universal Healing power.

Fig. 1.1 *Red for the Heart*
White for the Lungs
Yellow for the Spleen
Blue for the Kidneys
Green for the Liver.

Each organ has its own vital color and when abundant it will radiate out as an aura for healing and protection. These organ colors and their associated universal connections have great healing power. The power of the 'Six Healing Sounds' will help enhance the connection to the cosmic source. Each sound will foster different healing energy. The practices also help balance, refine and transform the negative energy back to positive energy.

Iron Shirt Chi Kung and Bone Breathing

Iron Shirt Chi Kung and Bone Breathing are a system of standing meditations. These exercises help you to become grounded and to root your connection into the earth force, in order to build a good structure and absorb greater force. In turn, this will help draw in the heavenly force, which will combine with the very potent healing power of the earth's yellow light. The practice also strengthens the body so you can hold a higher energetic charge. These abilities are essential prerequisites for handling greater amounts of energy.

Iron Shirt Chi Kung also includes the art of 'Changing the Sinews and Washing the Marrow'. Through these aspects of Iron Shirt, you learn to absorb, store and discharge large amounts of energy through the tendons and bones. *These practices are outlined in detail in the books "Iron Shirt Chi Kung" by Mantak Chia and "Bone Marrow Nei Kung" by Mantak Chia*.

To attain skill in Cosmic Chi Kung, it will help if you practice Iron Shirt, Bone Marrow and meditation as a minimum requirement. Beyond the basic level, the Universal Tao System includes many other intermediate and advanced level Chi Kung practices and meditations. The further one advances, the greater one's mastery of Chi.

Your increasing level of skill in the Universal Tao system will reflect immediately in your Cosmic Healing Chi Kung practice. Furthermore, you will discover that you can incorporate many of your Universal Tao practices directly into your practice of Cosmic Chi Kung. We will give you a simple combined practice of the Cosmic Healing Chi Kung, the Inner Smile, Microcosmic Orbit, Iron Shirt and the Sexual practices.

Stages of Mastering Chi

1. In the Universal Tao system, our *first* goal is to learn to conserve our Chi; when a battery is totally drained it is harder to charge; money makes money, Chi makes Chi. Conservation of Chi will help gain more Chi. To have more Chi we first need to maintain control of the gates through which energy normally leaks out and unwittingly drains our life force.

   We leak energy: - through our reproductive system
   - through negative emotions
   - through constantly turning our senses outward

   Without knowing how to conserve the Chi that we already have, what is the point of acquiring more?
2. We learn to balance our Chi; that is, we seek to keep a smooth and balanced flow of energy moving throughout the whole body. If our energy is imbalanced, we may have too much energy in some places and not enough in others; we may also be too yang or too yin. We may have excess or deficient heat, cold, damp or dryness. This imbalanced energy tends to make us go to extremes.
3. We learn to transform our Chi into more beneficial energies. For example, through the Taoist Sexual Chi Kung practices taught in the Universal Tao (the course known as Healing Love through the Tao), we can transform sexual energy back into basic life force Chi. Through other practices (such as the Inner Smile, the Six Healing Sounds, and Fusion of the Five Elements) we learn to transform negative emotional Chi into positive virtuous Chi. Thus Chi is not only the foundation of our health; it is also the basis of spiritual development in the Tao.
4. Once we have accomplished the three previous phases of mastering Chi, we then learn to increase it. Chi pervades all of heaven, earth and nature. In Cosmic Healing

Chi Kung we learn time tested ways to tap into these unlimited and transpersonal reservoirs of Chi and greatly expand the amount of energy available to us. It is very important to master first the stages of conservation, balance and transformation before we emphasize increasing our Chi. Otherwise we may waste the energy we bring in, or we may inadvertently amplify the imbalanced or negative energies that we have not yet learned to bring under control.

5. Finally, we learn to extend our mind to tap into the vast Chi of nature, cosmic and the universe, to heal our body, mind and spirit and to heal other people. Cosmic Healing Chi Kung practice sensitizes your hands to the feeling and movement of Chi; it uses the mind-eye power to absorb cosmic Chi into the palm and crown and to send it out through the hands and beyond, so that you can help restore balance in others without touching them or draining yourself.

   This may sound fantastic at first, yet recent researchers in Chinese Chi Kung hospitals have not only measured the energies emitted by Chi Kung masters; they have also discovered that different varieties and frequencies of healing Chi can be emitted. This research has been corroborated by experiments in the United States at such places as the Menninger Institute.

Four Sections of Cosmic Healing

The next step is to learn the four sections of the Cosmic Healing Chi Kung, the 'Empty Force' sequence. Each of the four sections of Cosmic Healing Chi Kung develops a different type of energy mastery. Each section begins and ends in the same way, yet has different movements in the middle.

Connecting to Heaven and Earth

The first section of Cosmic Healing Chi Kung emphasizes connecting to the external Chi emanating from heaven and earth. This ability is very beneficial for self-healing and is essential for healing others. If you do not connect to some source of external energy when healing others, you will draw upon your own personal reservoirs. Our personal Chi is limited by nature, and can easily become depleted if we give it away too freely.

Over the past decade external Chi healing has become very popular in China. There are now hundreds of Chi Kung hospitals and clinics throughout the country. Yet many of the Chi Kung therapists can only administer two or three treatments a day; they spend the rest of their day practicing Chi Kung to replenish their own Chi. Those who practice the more traditional Chi Kung know how to connect to the Chi of heaven, earth and nature.

In this first section, you will learn to sense the energies outside your body. You will then learn to draw and absorb these energies into your body and process them in order to use them for self-healing and healing others.

Opening the Bridge and Regulator Channels and Extending your Chi Outwards

The second section opens and strengthens four of the Eight Extraordinary Channels: the Yin and Yang Bridge and Regulator Channels. This section also teaches the student to extend and take in the cosmic Chi and emit Chi out of the body for healing others. This ability is the heart of Cosmic Healing Chi Kung practice.

Opening and Energizing the Governor and Functional Channels

The third section enhances the energy in the points along the two channels used in the Microcosmic Orbit. Opening the Microcosmic Orbit strengthens and balances one's own energy, and prepares one to heal others. Practicing this section will be of great help with the Microcosmic Orbit Meditation.

Activating One Finger Art and the Chi Belt

The fourth section of Cosmic Healing Chi Kung activates the hands and you will practice emitting Chi from each of your fingers and opening the "Chi Belt." This channel is also known as the Belt Route or Girdle Vessel.

Chapter II
Preparing for Cosmic Chi Kung

Preparatory Practices

In the Universal Tao, we teach Cosmic Healing Chi Kung within an entire system of exercise and meditation. As a part of this system, Cosmic Healing Chi Kung comprises the art of healing oneself and others. It focuses on energy work for projecting Chi to effect these healings. One can easily learn the simple movements of Cosmic Healing Chi Kung without doing any other Universal Tao practices, but if one truly wishes to master the art of Cosmic Healing Chi Kung, it is important to have a firm foundation in the basic Universal Tao practices. Therefore in this chapter we will introduce you to the basic Universal Tao practices that are used in conjunction with Cosmic Chi Kung.

The preparatory practice consists of a few parts; work through each part at your own pace and eventually join them together as a whole.

Always start with "warming the stove" at the abdomen and direct the fire down to the sexual center to transform the sexual energy. Next practice the Cosmic Inner Smile. The Cosmic Inner Smile is a powerful relaxation and self-healing technique that uses the energy of love, happiness, kindness and gentleness as a language to communicate with the internal organs of the body. Each organ corresponds to a specific element and color. For example, the kidneys will consist of the element of water and the color blue. The heart will consist of the element of fire and the color red. This makes it very easy to guide the healing power into each organ by using the appropriate color. The practice also aids the transformation of negative emotions into positive virtuous energy. This transformation is a very powerful Chi Kung practice. A genuine smile transforms negative energy into loving energy that has the power to relax, balance and heal. By learning to smile inwardly to the organs and glands, your whole body will feel loved and appreciated and enjoy more Chi. After the Inner Smile, practice Bone Breathing, Marrow Washing, Cosmic Healing and the Microcosmic Orbit.

Warm Up the Stove

1. Sit on the edge of a chair with your hands clasped together and your eyes closed.
2. Start by doing the "bellows breathing", moving your abdomen in and out quickly. Emphasize the exhalation by breathing out forcefully 18 to 36 times. Rest, cover your navel and feel nice and warm.
3. Next, do the "inner laughing" exercise; you feel the abdomen vibrate inside you. Practice

this for a few minutes, allowing the movement of your inner laughter to grow stronger. Then rest and use the mind and eye power to gather the Chi (now felt as a warmth behind the navel) into the Tan Tien. Picture a stove with burning fire behind your navel. Feel nice and warm.

Transform the Sexual Energy

Once you feel the Tan Tien is warm enough, smile down and bring the warm Chi down to the sexual organs; women bring the Chi down to the uterus, men bring the Chi down to the testicles. It may feel like the 'sun shining on the water'. The rays of the sun purify the water until it becomes rising steam. Keep smiling down to the sexual organs and feel the warm or fiery feeling from the navel area continue to flow down to the sexual organs; this transforms the sexual energy into Chi, and this Chi rises up the spine into the brain helping to activate the 'crown' and 'mideyebrow' energy centers.

Focus your awareness in the sacrum. At the very tip of the sacrum there is a hole in the coccyx. Breathe into this hole until you feel some activity there. This may be felt as tingling, numbness or pulsing. If you can really activate this point it will generate 'suction'. Be aware of the sacrum opening. Feel the suction force pulling through the hole in the tailbone (sacral hiatus); breathe into it until you feel it becomes activated. When the sacrum is activated you will feel the suction easily, as well as breathing in the cranium and mideyebrow. Keep on gently smiling and softly breathing into the Tan Tien and feel the suction in the abdomen. Focus 95 % of your awareness in the Tan Tien and 5 % in the sacrum, the crown and the mideyebrow. Be aware of the Tan Tien breathing and observe internally the pulsing and breathing in the sacrum, the mideyebrow and the crown. Do this 36 times.

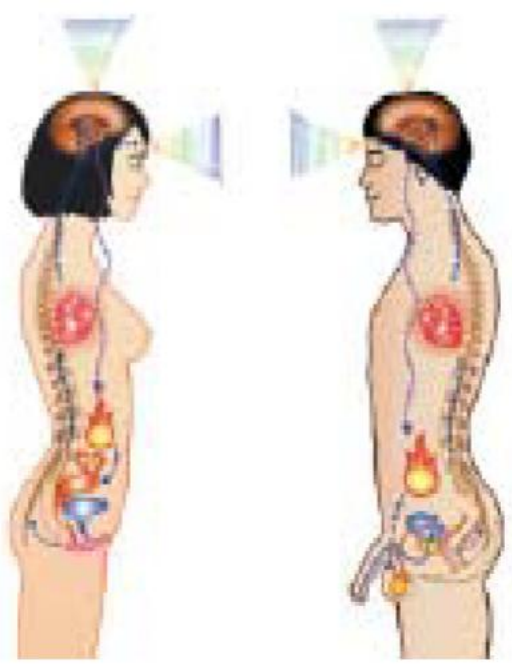


Fig. 2.1 *Smile down to the Lower Tan Tien.*

Filling the Joints with Chi

The bones have the ability to process Cosmic Chi (Chi above and around us) to be used by the body. The joints are also able to store Chi and they also serve as the cushion between the bones.

Be aware of your index fingers and thumbs; lightly raise the index fingers, feel a slight tension and open the thumbs to the sides and feel it magnify. Breathe into the finger tips, until you feel the sensation of Chi entering the fingers. The fingers will feel stiff as they stretch, to make way for the Chi entering the joints. Continue to breath in the Chi - the stiffness will spread to the other fingers, wrists, elbows and shoulder joints making the whole arm tense and stiff. The fingers and the arms become one piece. Eventually the Chi will fill every joint of the body making it into a complete unit.

Be aware of the big toes; breathe into the toes and feel the toes grow longer. When the Chi fills the joints the big toes become tense and stiff. Gradually it will fill the other toes rising to the ankles, knees, hips, sacrum and spine; the feeling may be one of tension and stiffness, numbness or like an electrical charge. The legs and the spine become one piece. You will certainly feel good.

Bone Breathing and Marrow Washing

Bone Breathing is one of the main practices of Cosmic Healing Chi Kung. This is a method of drawing external Chi through the skin into the bones to help replenish the bone marrow, thereby reactivating the production of white blood cells. Sending Chi into the bones will enhance functioning of the immune system. This process also helps to clean out fat in the bone marrow ("Washing the Marrow"), one of the main causes of osteoporosis (brittleness of the bones). Tension in the muscles close to the bones is decreased so Chi and blood can flow into the bones easily, enabling them to become stronger.

The Bone Breathing process uses the mind and the eyes to absorb Chi into the bones. The better your Bone Breathing is the better your Cosmic Healing Chi Kung practice will be. Mind and eyes are also used immediately after the exercise to gather the energy at the navel. Once you have it, when you move your hand, the energy will follow easily. You will be able to absorb external Chi effortlessly, so you will not need to use your own energy in your healing work.

Bone Breathing

There are several variations in the Bone Breathing and Marrow Washing process. Here we will introduce you to the first type of Bone Breathing, inhaling and exhaling Chi

through the skin and packing it into the bones. In this method, you imagine that your bones are like hollow tubes, and that you breathe and suck the Chi into the bones.

Bone Breathing is practiced in a three-stage process. **Let your breathing follow a normal pace. Do not strain or hold your breath too long**.

Fig. 2.2 *Bone Breathing through the Fingers*

1. You can do this practice in the sitting position or in the Embracing the Tree posture (or any other Iron Shirt Chi Kung posture). You will use your mind and eye power to breathe in a short breath and at the same time feel suction. Suck the Chi of the atmosphere into your hands, eventually expand to the universe and breathe in a few more times. Use a combination of 'mind/eyes/heart' power (Yi), to suck the Chi from the atmosphere into your hands, while taking small sips of breath. Once you can clearly feel the increase of Chi 'pressure' in your hands, you extend the feeling throughout your arms. The whole skin surface of the arms breathes in the Chi, feeling the skin holding this pressure.
2. Inhale one more deep breath and lightly contract the arm muscles to squeeze the Chi into the bones. Hold for a while to condense the Chi into the marrow of your bones. Exhale and at the same time feel a distinct heaviness in the bones, meaning that the Chi has been condensed and packed into the bones successfully. Eventually you will use more mental power (mind/eyes/heart power) and less muscle, using soft breathing, to draw the force into the bones. Do 6 to 9 times; rest and feel the Chi that has been condensed into the bones.

3. Proceed in the same way, breathing in progressively through the bones of the forearms, upper arms, scapulae, collarbone, sternum and ribs. You may feel a different sensation as you breathe in each area; in some areas the feeling is cool, in others warm or tingling, depending on the bone structure and the quality of the marrow.
4. Inhale and exhale in the same way through the toes, feet and legs; then, in a step-by-step progression, inhale up through the calf bones, thighbones, pelvis, coccyx and sacrum, and up the spinal column to the C-7 vertebrae.
5. Finally breathe in through the arms and legs simultaneously. Combine their energy as it flows up past C-7 and up through the neck and skull. Breathe in this way for at least nine breaths. Conclude by collecting energy at the navel.

Marrow Washing

You can wash your bone marrow with earth force, heavenly force or with cosmic force. This energy helps to cleanse and rejuvenate the bone marrow.

Heavenly Force Marrow Washing with Violet Light

1. Men place the left palm on the top of the head, and cover it with the right palm. Be aware of your 'Personal Star' (star that appears in your mind's eye and is located above your crown), above. Slightly press the palms and spiral in the clockwise direction, spiralling from the front to the right ear, to the back and the left ear 9 times; rest and feel the increased Chi pressure in the crown. Do 3 sets.
2. Women place the right palm on the top of the head and cover it with the left palm. Be aware of your Personal Star above you. Press the palms lightly and spiral in a counterclockwise direction, spiralling from the front to the left ear, to the back and the right ear 9 times; rest and feel the increased Chi pressure in crown. Do 3 sets.
3. Face your palms towards Heaven and feel that you are scooping a galactic Chi ball from above. This Chi ball contains the North Star (Violet) and the Big Dipper (Red). See the dipper fill with violet/red energy. Imagine you reach out your arms to hold the dipper handle and pour the violet/red liquid over your crown. It will feel like there is a numbness descending. Your palms face down to your crown and pour the whole galaxy onto your crown. You may perceive this energy as violet amethyst and red light frequencies. Smile.

4. Guide this sensation down into your skull, deep into your brain, cervical vertebrae, sternum, thoracic vertebrae, lumbar vertebrae and down through your legs. Feel it penetrating and enlivening your bones, deep into the bone marrow, washing, cleansing, energizing. This 'liquid-like' Chi spills all the way down to your feet. Feel it connecting with the earth through the soles of your feet; be aware of the bubbling springs in the feet (the K1 points of the kidney meridian) breathing and pulsating.
5. Touch your navel with the fingers of both hands. Focus on the door of life, and let the fire activate in the Tan Tien and kidneys. Chi will rise up to the brain.

6. Move your hands down touching your femur bones; feel your hands penetrate into the bone and into the bone marrow. Feel like an electric shock or a tingling moving all the way down through the bones of the leg and down to the soles of your feet.
7. Slowly move your fingers down touching the bone and into bone marrow and extend yourself down past the earth to touch the galaxy on the other side. Raise your sacrum and picture yellow light coming up from the earth and the other side of the galaxy; focus on the Lower Tan Tien and feel it fill with Chi. Do this three times. Go back down to the squatting position.

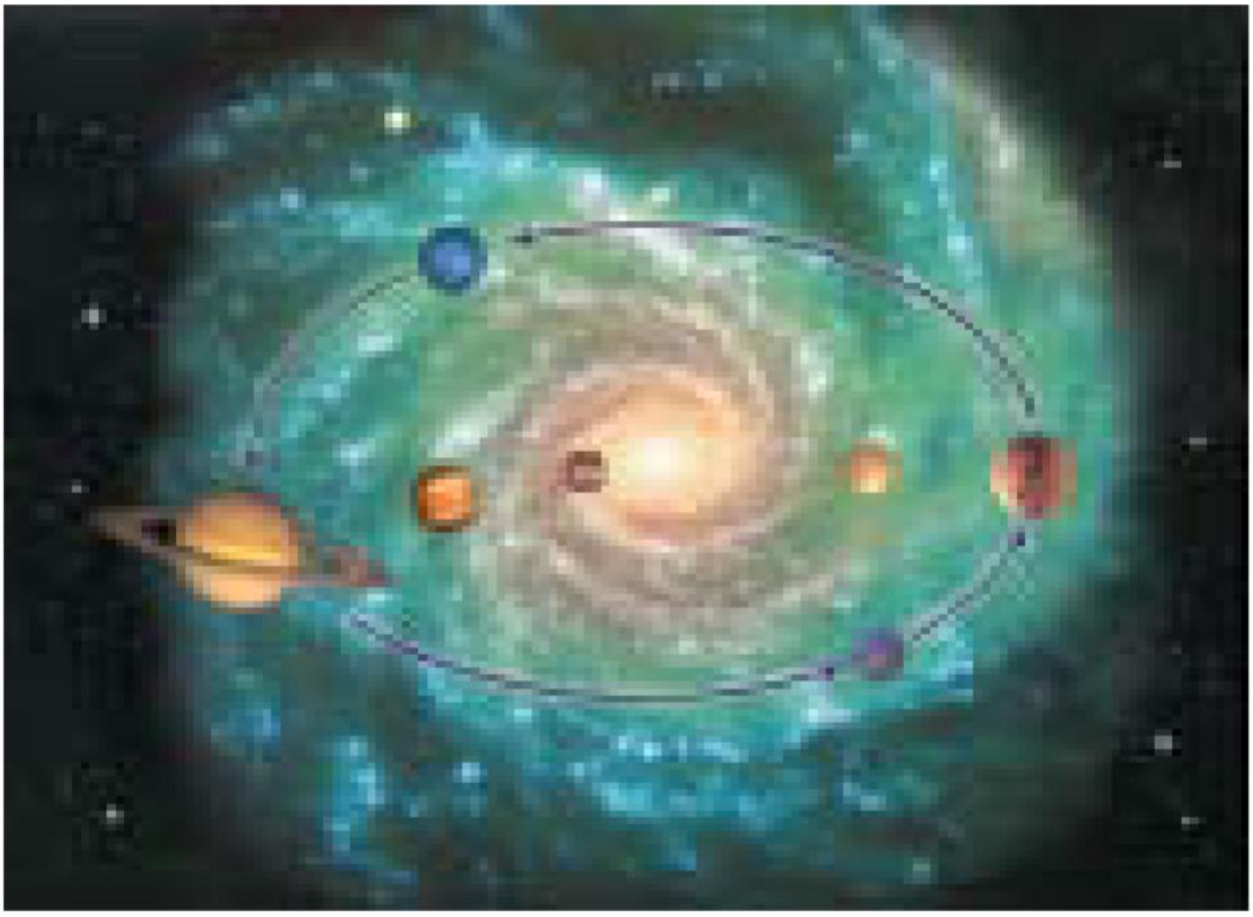


Fig. 2.4 *Galaxies Spiral Star and the Direction of Spiral*

8. Place the palms face down to the earth and be aware of the galaxy and the yellow light; make three to six circles to gather the Chi below. Gather the yellow Chi; touch your heels and feel the yellow Chi flowing up the leg bones. Feel the bubbling of your bones like an electric current running up through the feet, tibia and fibula, femur, pelvis, and spine. While touching your bone and bone marrow with your fingers, slide your hands up along the back of your legs; slowly come all the way up to touch the coccyx and the sacrum. Concentrate on your sexual center so the energy will flow and spread out to the sexual organs. Go back to the navel and gather the Chi into your Tan Tien.

Fig. 2.5 *Hands circle to gather Earth Chi.*

Microcosmic Orbit

The Microcosmic Orbit Meditation awakens, circulates and directs Chi through the 'Governing Channel', which ascends from the base of the spine up to the head and the 'Functional' or 'Conception Channel', which runs from the tip of the tongue down the middle of the torso to the perineum. Dedicated practice of this ancient esoteric method eliminates stress and nervous tension, energizes the internal organs, restores health to damaged tissue and builds a strong sense of personal well being.

The Microcosmic Orbit is the foundation of Cosmic Healing Chi Kung practice. Each new practice is dependent upon the high quality of your meditations and your ability to perfect the Microcosmic Orbit. In order to master Cosmic Chi Kung, one must practice meditation daily. The meditations in the Microcosmic Orbit also strengthen the 'Original Chi' and teach you the basics of circulating Chi. They allow the palms, the soles of the feet, the mideyebrow point and the crown to open. These specific locations are the major points where energy can be absorbed, condensed and transformed into fresh new life force.

- **1.** Focus on the Lower Tan Tien (the area where the Original Chi is stored, between the navel, kidneys and sexual organs). Feel the pulsing in this area, observe whether this area feels tense or relaxed, cool or warm, expansive or contracting. Notice any sensations of Chi: tingling, heat, expansiveness, pulsing, electric or magnetic sensations. Allow these to grow and expand. Then let this energy flow out to the Navel Center.

- **2.** Use your intention (mind-eye-heart power) to spiral in the navel point guiding and moving the Chi. Let the energy flow down to the sexual center (Ovarian or Sperm Palace).
- **3.** Move the energy from the sexual center to the perineum and down to the soles of the feet.
- **4.** Draw the energy up from the soles to the perineum and to the sacrum.
- **5.** Draw the energy up from the sacrum to the Door of Life (the point in the spine opposite the navel).
- **6.** Draw the energy up to the mid-spine point (the T-11 vertebrae).
- **7.** Draw the energy up to the base of the skull (Jade Pillow).
- **8.** Draw the energy up to the crown.
- **9.** Move the energy down from the crown to the mideyebrow point.
- **10.** Touch the tip of your tongue to your upper palate, press and release a few times; then lightly touch the palate, sensing the electric or tingling feeling in the tip of the tongue. Move the energy down from the mideyebrow to where the tip of your tongue and palate meet.
- **11.** Move the energy down from the palate through your tongue to the throat center.
- **12.** Move the energy down from the throat to the heart center.
- **13.** Bring the energy down from the heart to the solar plexus and feel a small sun shining out.
- **14.** Bring the energy back down to the navel.
- **15.** Continue to circulate your energy through this entire sequence of points, at least nine times. Once the pathways are open, you can let your energy flow continuously like a river of energy without needing to stop at each point.
- **16.** Conclude when you wish by collecting energy at the navel.

Men: Cover your navel with both palms, left hand over right. Collect and mentally spiral the energy outward from the navel 36 times clockwise, and then inward 24 times counterclockwise.

Women: Cover your navel with both palms, right hand over left. Collect and mentally spiral the energy outward from the navel 36 times counterclockwise, and then inward 24 times clockwise. *For details of this practice see the book, "Awaken Healing Light", by Mantak Chia.*

Chapter III
Cosmic Chi Kung

Opening the Three Tan Tiens to the Six Directions

Introduction

Opening the Three Tan Tiens is a Chi Kung meditation that strengthens our connection to the universe, opening us up to the primordial force of the Cosmos and the energy within Nature. We are dynamically connected to the infinite. "As above, so below" is an echo of wisdom heard from sages and mystics throughout the ages. When we can connect to and absorb the energy that surrounds us, we are able to tap into the many splendors of the universe.

We exist because of the unique combination of the forces that are around and within us. The two main forces are electricity and magnetism. 'Bio-electro magnetism' is the western term for life force, and what the Tao refers to as Chi. For the last 5000 years, the Taoists have utilized this bio-electro-magnetic energy to enhance their way of life and establish a relationship with the universe. Bio signifies life, electro refers to the universal energies (yang) of the stars and planets and the magnetic force refers to the earth force (yin) or gravitational force present on all planets and stars. As we align ourselves with these forces, we become a conduit through which we can absorb and digest these energies through the body, mind and spirit establishing a direct connection with the universe. The Taoists recognized this connection and created the Chi Kung form of 'Opening the Three Tan Tiens to the Six Directions' to enhance our relationship to and our understanding of this connection.

Humans normally access bio-electro-magnetic energy through food and air. Plants take the universal energies of the sun and the magnetic energies of the earth and digest and transform them, thereby making these energies available to all living beings. Taoists believe that the food sources with the purest form of energy are the green leafy vegetables. These have taken sunlight directly into their cells. Rather than waiting until the energy in the universe is processed through plants, the Taoist goes directly to the source of this primordial energy. Through Chi Kung and meditation, the Taoists direct the energy of the universe precisely. Opening the Three Tan Tiens is a meditational Chi Kung exercise that focuses on how to directly tap into the source of energy all around us.

The Tao views human beings as lamps filled with fuel. Many people burn this fuel at very high intensity, without ever taking the time to replenish the oil in the lamp. Alcohol,

drugs, tobacco and promiscuity all quicken the depletion of this fuel. The Taoist exercises strive to continually refuel the energy within. The Taoist recognizes that we are limited in our nature as human beings, unless we connect the sources of energy within the universe, thereby becoming infinite. So, within the limitations of our human nature, we constantly fill ourselves with the unlimited abundance of energy around us.

Through their internal quest, the Taoists discovered a doorway to the universe. The more we open our internal energy, the more we are capable of connecting to the forces of energy around us.

Human beings have amazing potential and capabilities. We are unique creatures in the way we use our minds and hands. Look at the world around you, the skyscrapers, the architecture, computers, technology and the myriad creations of man. All have come about through the combination of the mind with the hands. In the Tao practice, we use the mind and the hands, in both Chi Kung and meditation, to connect to the forces of the universe. We use the mind to project a pattern of energy into the universe, to connect to the force, and to bring this energy back into the body.

The mind can travel millions of light years in a few moments. Taoists discovered the unlimited potential of the human mind. If you picture something in your mind; an ocean, a sunset or a mountain, you automatically connect with that image. The mind can take you anywhere you imagine. With the proper training you can connect to the energy of nature and the universe and project your Chi to combine with it, drawing these forces into the body. The hands are called the touching force, and like antennae they can transmit the frequencies and vibrations from space. With the mind and the hands, each of us can journey into the boundless energy of the universe.

Relaxation, Letting Go, Surrender and Ego

In some religions and spiritual paths, there is a great emphasis on surrender and letting go. This is actually a form of relaxation. Taoist practices emphasize relaxation, letting go, and emptiness. When a person is relaxed, the muscles are open, the breathing is soft, and the energy can flow through the channels of the body. There is no resistance and no fighting. This allows the creative and higher forces to flow into us.

Most religions have a similar process. To contact the higher self and the higher forces, one needs to let go and surrender in order to reach the level where one can be in contact and become one with the higher forces. Through the surrender of control, one opens up and touches the forces of nature. However, if you continue to surrender and let go, you will lose the energy you have sent out. In the long term, this will gradually drain you. The force will suck the energy out of you, rather than help you to bring the energy into yourself. To avoid this, at the moment that one is in touch with the higher forces, one again becomes aware of oneself and his or her own energy. One is then able to project his or her own thoughts, intentions and patterns into the force, integrating the outer with the doubling or tripling inner energies. You can bring this force back to your place, your house and into yourself.

One must remain open and empty while using one's intentions, mind and Chi to draw the energy into oneself. What might initially appear to be a paradox is reformed as one does the practice and learns how to be empty and open and to simultaneously retain enough consciousness to draw the force into oneself.

Mind, Organs and Sexual Organs

It seems that some people are disconnected from themselves and from their sexual organs. The mind and organs are therefore separate. Taoism believes that the mind, body and spirit must work together. The results depend on a person's practice.

Brain

The brain can access and generate the higher forces, but storing this energy in the brain itself is not easy. We need to train the brain to increase its ability and capacity to store energy. The brain energy, when increased to a certain level, can enable more synapses to grow, and can help turn protein into brain cells. The Tao believes that with training and practice, one can learn to grow more brain and nerve cells, as well as increase the number of synapses in the central nervous system.

Organs of the Body

The organs can also generate energy, but much less than the sexual organs and the brain. They also have a much greater capacity to store and transform energy.

Sexual Organs

The Tao discovered that the sexual organs are the only organs that can generate a significant amount of sexual energy (life force). However, the sexual organs cannot store the energy efficiently. When too much energy is generated, considerable amounts have to be dumped out. And this is the best energy that one has. It is the 'creative' energy.

Three Tan Tiens

The Three Tan Tiens can also store energy, transform it and supply it to the brain, spinal cord, sexual organs and other organs.

The aim of Taoist basic training is to integrate the brain, sexual organs and other organs into one system. If the brain generates too much energy, it can store the energy in the organs. The excess sexual energy can also be stored in the organs and the three Tan Tiens. If the brain generates too much of the higher forces and we are unable to store this energy, we have to throw it away. It is like preparing food for one hundred people, when only one person is eating. The rest gets thrown away. In the same way,

when too much sexual energy is produced and there is no place to store it, it is wasted. We do not have enough of this energy to be able to waste it. We have a limited amount of energy and of time.

Some practices just deal with the spirit and ignore the body and the sexual energy. These practices can generate a lot of energy, but when one is not connected to the organs, it cannot be stored anywhere. One will end up draining oneself. Some people practice sitting quietly, emptying the mind, with the whole body relaxed and calm, but very little energy is actually generated. When one gets deep into the practice, some people find it hard to come back to society, because they have no energy and their mind power does not work well. These people have to depend on others to support them.

In the Universal Tao, we are learning to create a sacred and holy temple within ourselves. With the simple practice of smiling to all the organs, we can integrate our bodies, minds and spirits. They are no longer separate. The sexual practice connects the mind with the sexual organs and the brain. The separation between these parts of ourselves is bridged and a synergy is created.

The Taoist practice provides us with the resources to extend beyond the realm of our senses. By tapping into our internal resources and channeling the energy around us, we can perceive much more than the senses normally report to the mind. We want to extend our perception from the limited perspective of the sociologically conditioned senses to the unlimited awareness of the universe. For example, our senses tell us that the earth is flat, that we are stationary, and that heaven is above us. In reality, the earth is a sphere hurtling through space at thousands of miles per hour and the heavens are above, below and beyond the earth in every direction. The goal of the Three Tan Tiens is to connect with the forces from the six directions - above, below, left, right, front and back - and draw all these forces into the body. Eventually, with practice one can draw upon many different energies and use them as needed, thereby giving form to the formless energy that is abundant in nature.

Opening the Three Tan Tiens

Opening the Three Tan Tiens to the Six Directions is just another one of the many resources the Taoist practitioner uses to connect with the universe. The practice combines the power of the mind with the extension of Chi. This combination allows our personal consciousness to directly connect to the patterns and matrices of energy in the universe. When we put our thoughts into the web of the universe, we transform the electromagnetic energy into a force that is accessible to us. The combination of mind power and energy is what allows us to establish a relationship to these creative forces and the high sources of energy.

Three Tan Tiens

Once we make the connection with the forces of energy in the universe, we then want to be able to store this energy in the body. Energy is like money, if you are making a million dollars a year and spend a million dollars, you have nothing left to use in the future. That is the way we live and use our energy in our society. We are spending more energy than we are saving and we are living on borrowed energy, paying very high interest. Our credit will run out very soon.

In the Tao practice, we store energy in the Three Tan Tiens. The Three Tan Tiens are the reservoirs of energy within us.

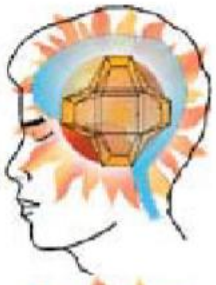


Fig. 3.1 *The* ***Upper Tan Tien*** *is in the brain (the* ***Crystal Room****, third ventricle), and when it is full of energy, the capacity of the brain increases. We store our spiritual intelligence, the mind here. All the Tan Tiens have both yin and yang within them. In nature, the yin and yang are present in all things. Day (yang) turns into the sunset, which turns to night (yin). It is very important to feel the qualities of yin within yang and yang with yin (sunrise/sunset). One quality does not exist without the other. They are inseparable qualities of the same force.*

Fig. 3.2 *The* ***Heart*** *Center Tan Tien, between the two nipples, is the* ***Middle Tan Tien****. It is associated with the fire element. Yet, within fire there is always water. The original spirit (Shen) is stored here.*

Fig. 3.3 *The lower abdomen at the* ***Navel*** *is like an empty universe, or ocean. We want to feel a universe of energy in the* ***Lower Tan Tien****. Within this universe or ocean, there is a fire, like a volcano under the ocean; 'fire under water'.*

The Three Tan Tiens refer to the three reservoirs of energy within the body. These reservoirs are places where we can store, transform and collect energy. The reservoirs are the source of energy that flows through the body. The meridians are rivers of energy fed by these reservoirs. The goal of Opening the Three Tan Tiens is to continually fill and replenish the energy of the Three Tan Tiens. When we are connected to the Tao, life ceases to be a struggle. Through the observation of nature, the Taoists learned to flow with the stream of energy and connect to forces in the universe.

In these practices, we use a variety of hand movements and body postures to open to the energy around us. We draw the energy from the six directions into the body, activate the three fires, open the Three Tan Tiens and circulate this energy in the Microcosmic Orbit.

Combined Practice

Warm - Up Exercises

Rotating the Sacrum

Rotating the sacrum is an excellent exercise to open the lower back and activate the spinal cord. Place one hand over the sacrum and the other over the pubic bone. Rotate the sacrum in a circle, 36 times in each direction. This movement activates the sacral pump.

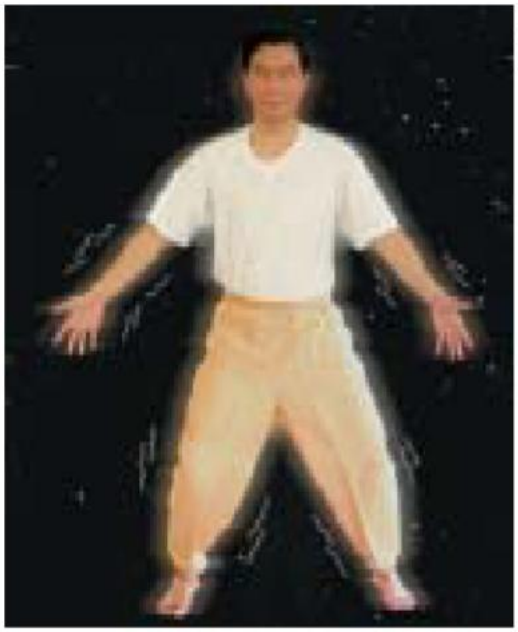
Spinal Cord Breathing

Inhale and expand the chest, arms bent at the elbows and extended to the sides of the body. Exhale, tuck the tailbone under you and round the back, bringing the elbows toward one another in front of the chest. Smile. Inhale, expand the chest, tuck the chin in toward the throat, push the chin back and raise the crown and bring the arms out to the sides. Repeat this back and forth movement 36 times. This movement activates the cranial and sacral pumps, and loosens all the joints in the spine.

Shaking

Shake the whole body loose, especially the joints, by bouncing up and down on the heels. Let all the joints open and relax. Also, shake the testicles and the breasts loose. This will open the sexual energy (the yin electric) and you do this on back as well.

The yin and yang are the negative and positive electric forces in the universe. The heart produces impulses (the yang electric) and the adrenal glands produce the adrenal hormone to stimulate the heart to beat. Of all the hormones inside us, this is the one that gives the vital force to our life.



When we concentrate on the sexual organs, the heart and the mind, we can make the yin and the yang electricity combine.

Fig. 3.4 *Whole Body shaking and Lymphatic System*

True Breath - Skin Breathing

We exist because of the physical food and the unique combination of forces that surround us. The daily requirement of calories is about 6,000 units, while we only get 2,000 calories from food. The other 4,000 calories come from the forces around, above and below us. These forces that surround us are electricity, magnetism, cosmic particle energy, light, sound and heat. If we don't know how to absorb and transform this cosmic food, we need to depend on others to supply us. We then need to ask a priest, monk or holy person to give us our daily spiritual food.

The Taoists discovered that we can learn to absorb these surrounding and universal energies through the skin and the major energy centers. Absorbing energy through the skin is called the True Breath. This powerful energetic technique requires the Inner Smile and relaxation. The more one can relax, the more the body and the skin can open to the energy around us. The practice allows one to extend the mind, to touch the force and to draw that energy back into the body.

Daily Practice: Opening, Connecting and Activating Chi Within and Cosmic Charging

Paradoxically, in order to project ourselves out into the immensity of the galaxies and the universe to gather limitless resources of Cosmic Chi for healing, we must take the first steps of the journey within ourselves. In order to 'go out', we must first 'go in'. The vehicle for this magical journey is powered by our ability to relax in mind and body. As we physically relax and let go of muscular and emotional tensions and joint and bone structures we gain access to the inner realms by turning on our very special subtle smile. It opens the pathways of the parasympathetic nervous system. This helps us to reduce the out flowing habits of our senses so that we can be more alert in sensing our inner universe.

This simple process of 'going in' enables us to develop our internal skills so as to safely 'go out' to the universe.

Practice

Relax and Let go - Smile to Connect with the Universe Within

Smile to mideyebrow, eyebrows, eyes, mouth, jaw, tongue, lips, cheeks, ears, shoulders, ribcage and brain. Let the relaxed sensations and the 'Observer Mind' (Upper Brain) sink down into the Lower Tan Tien.

1. Smile to the mideyebrow. Relax and let go. Smile to the eyebrows and let them grow long to the sides. Lower these relaxed sensations down to the Tan Tien.

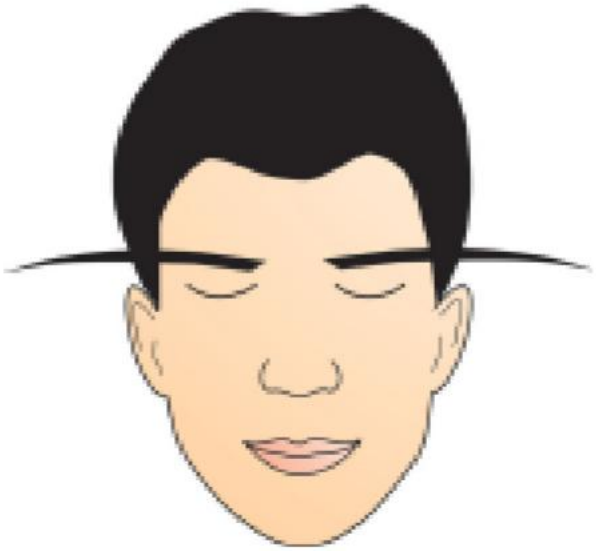


Fig. 3.5 *Smile and Relax to the Mideyebrow and think of the eyebrows growing long.*

2. Smile to the eyes: relax the eyes and feel how nice and cool they are. Let the eyes draw back in their sockets and start to sink down to the chest and gradually down to the abdomen, the home of your 'feeling and awareness mind'.

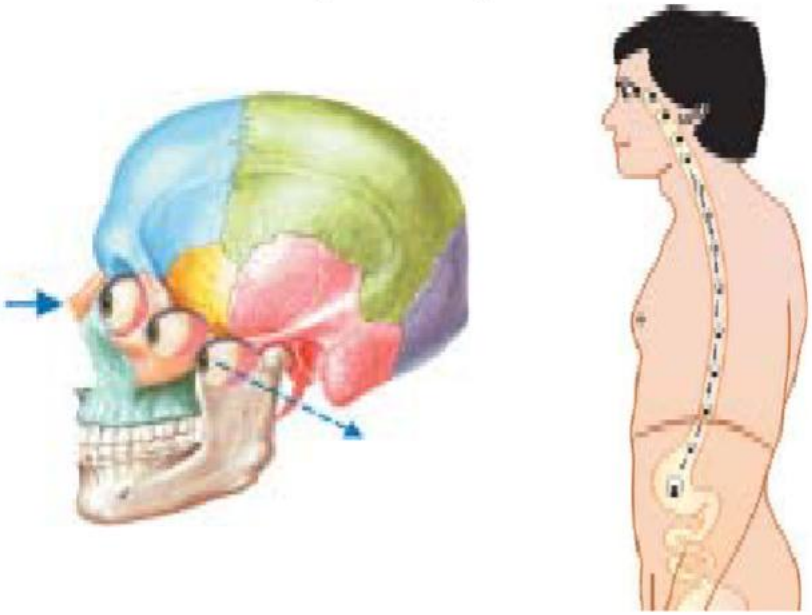
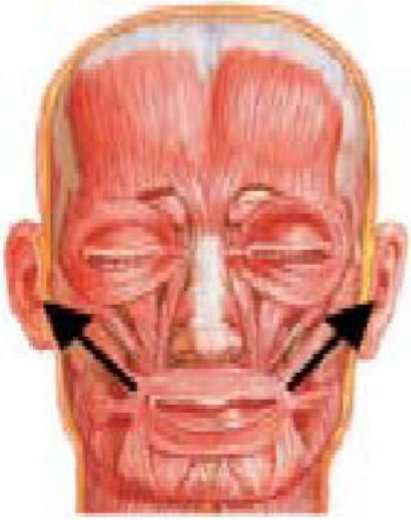


Fig. 3.6 *Smile and relax the eyes, sink into the eye sockets and gradually feel the eyes dropping down into the Abdomen.*

3. Relax the two broad muscles extending from the outer portions of the upper lips across the cheekbones, and lightly smile feeling their connection to the upper front of the ears. Gradually feel the ears growing 'long', up and down. Feel the ears grow all the way down and connect to the kidneys.



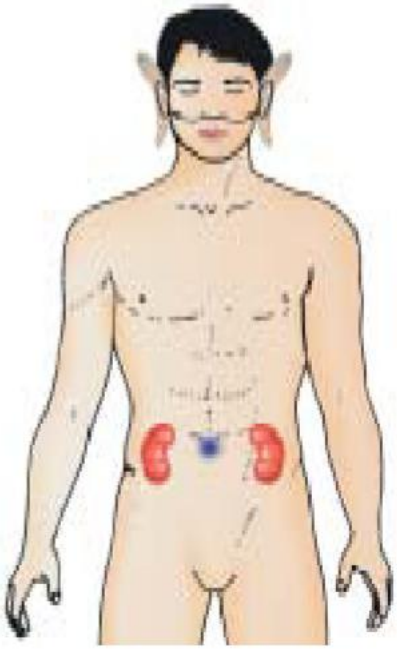


Fig. 3.7 *Smile to the Ears and listen to the Kidneys.*

4. Open your mouth and relax your jaw, separating the upper and lower teeth. Feel the jaw relax. Once the jaw relaxes the shoulders will relax and drop down. Continue to feel the jaw relax until you feel the saliva start to come out. Relax down to the rib cage. Feel the rib cage drop down, softening all the joints, relaxing down to the Lower Tan Tien. Let the tongue relax back in the mouth. Feel the tongue start to drop down into the throat to the chest and all the way down to the navel sinking the 'floating' sensation down to the Lower Tan Tien.
5. Smile to the shoulders and relax until you feel the shoulders drop and the rib cage relax.

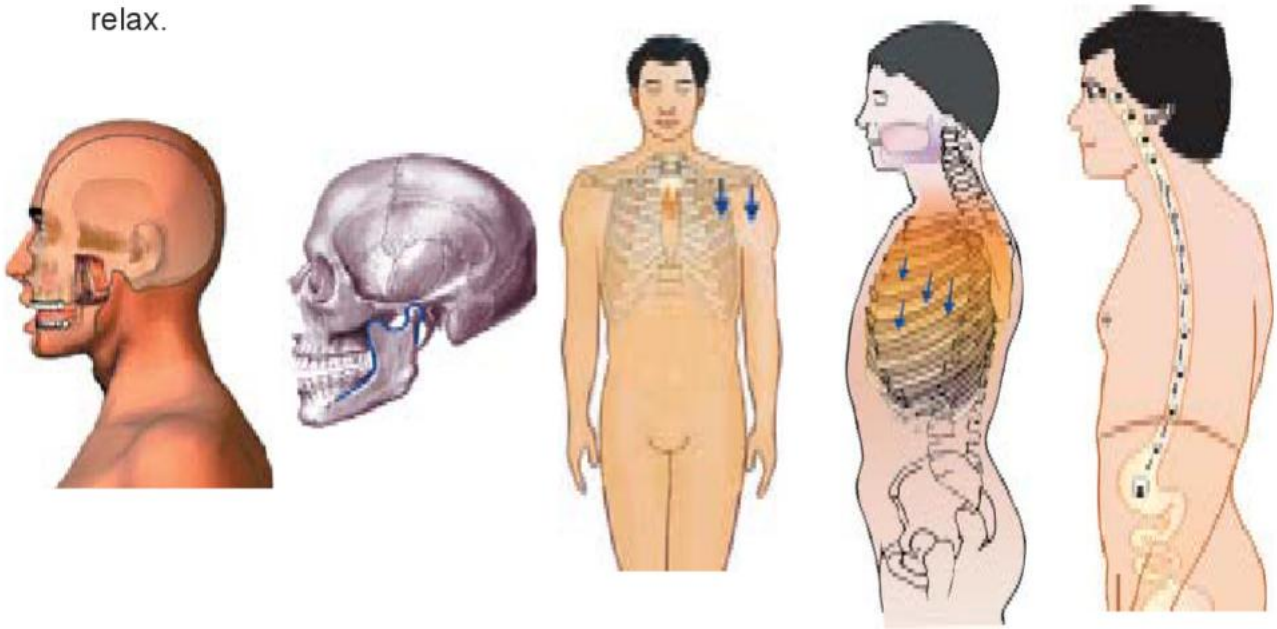


Fig. 3.8 *Relax the Jaw; and the Shoulders and Tongue will relax down to Lower Tan Tien.*

6. Lightly close the lips, but keep the teeth slightly separated. Physically begin a child-like smile with the corners of the mouth gently uplifted and the outer edges of the eyes softly crinkled up. Breathe through your nose.
7. Smile into the brain and empty the upper (observing) mind down to the Tan Tien.
8. Become aware of your inner universe as a big empty space. Keep on sinking – sinking down, into the darkness of your empty space. Keep sinking and experience the vastness until you get closer and closer to the center, the 'original force.' Stay relaxed and alert so as to be able to see one dot of light. It becomes a galaxy spiraling inside you.

   Do the above practice several times until you become familiar and comfortable with it.

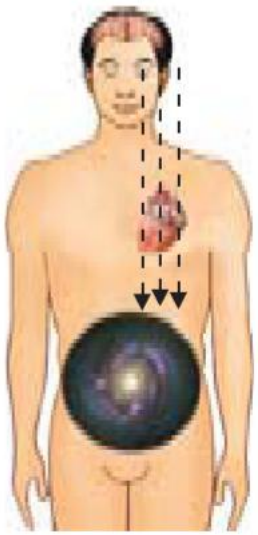


Fig. 3.9 *Bring the Senses down to the Tan Tien.*

Tan Tien Consciousness: Second Brain

Already terms have been used like 'upper mind', 'feeling and awareness mind' in the abdomen and lower 'Tan Tien'. In the next phase of practice, the 'conscious mind of the heart' is introduced. For those readers who have not been updated on the scientific and medical revelations of the recent era about a 'second' and 'third' brain, we offer the following information.

Along with this, there is the long-standing Taoist practice of cultivating and training consciousness in the Three Tan Tiens, especially the Lower Tan Tien. There is my own experience in participating in brain wave measurements and 'brain energy potential' research in recent years. The combination of all these areas of knowledge and experience in our time, makes Cosmic Healing practices accessible for our minds while also being very 'down to earth.' Now let's talk about the Lower Tan Tien.

In addition to its importance as the control center for the mechanics of the physical structure of the body, the Lower Tan Tien also houses a treasure of even more far-reaching significance. It has been a well-kept secret in the western world, as well as in most of the rest of the world: our Second Brain. Most of us who have had Taoist training in Chi Kung, Tai Chi, various Chi meditations or healing practices have often heard the reminder, 'Be aware of your Tan Tien.' But, do most people really 'get' the meaning of the injunction to always be conscious of the Tan Tien? Probably not. Further, do we use our Second Brain as much as we can? Definitely not.

In western terms, do we actually understand "Be aware of your Tan Tien" as being a way to train consciousness and awareness, like educating a brain in the abdominal area, in our Tan Tien? Probably not. Throughout the world, there are institutions to train the brain in the head. That is good. But, what about training the 'second brain' in the abdominal area? I didn't think of it exactly like that in western terms, either, even though that is exactly what I have been doing all of my life in my Taoist training and teaching.

Personal Revelation

Suddenly I came to understand a few things which are so simple and so important, and that's what I am going to share with you. It started in 1994 in Los Angeles when a clinical psychologist there, Dr. Rhonda Jessum, wanted to start testing me. I agreed to do the testing, but the machines at that time didn't tell me much. However, it was discovered that when I did the Inner Smile meditation, my brain waves went down dramatically – but at the same time, my 'beta' waves increased to a very high level. That means the waves showed that I could be driving a car, but that my brain should have been resting and sleeping. So the researchers said, "Hey, how did you do that?" I didn't understand either – because it was not clear to me either.

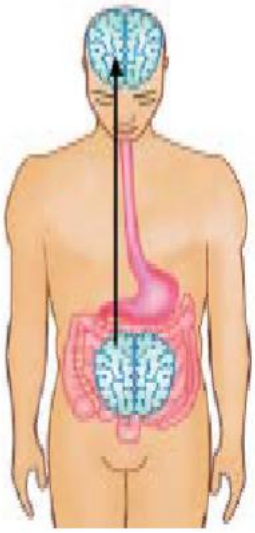


Fig. 3.10 *First and Second Brains are linked.*

Fig. 3.11 *Second Brain*

After that, I was invited to start testing in Europe by the Institute for Applied Biocybernetics and Feedback Research. My name is becoming known there because I teach in Europe a lot. One of the biggest institutes for training top athletes in Europe is in Vienna. They developed an instrument that can measure the brain's potential energy, which represents all the energy in the body. The doctors also said that this proves to the west that Chi exists, there is energy and a life force running in the body. That instrument picks it up in the brain and indicates how much potential brain energy you have. It also determines how much energy you have for the whole day and how much of that energy is for mental clarity and body power. They use these instruments to measure the athletes.

The study measures brainwave frequencies during four practices.

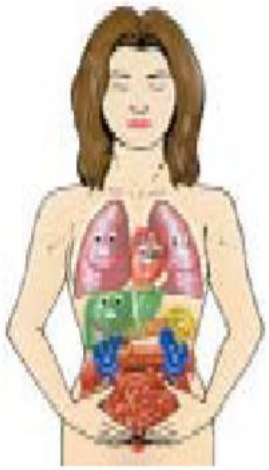


Fig. 3.12
Cosmic Inner Smile

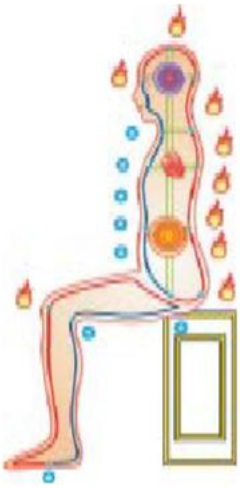


Fig. 3.13
Cosmic Orbit

Fig. 3.14
Six Healing Sounds

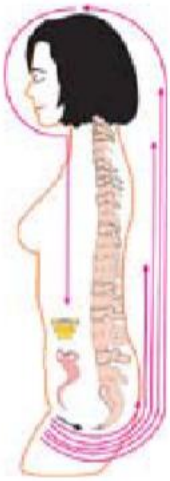


Fig 3.15
Orgasmic Upward Draw

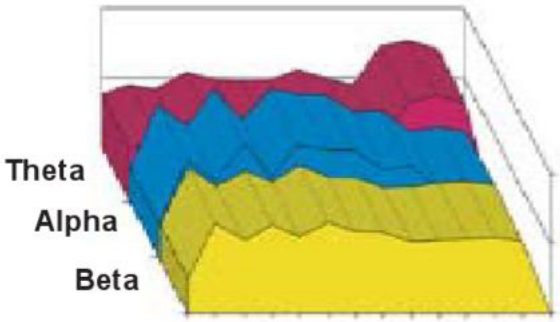


Fig. 3.16 *Alpha and Theta Waves increasing during the Cosmic Inner Smile Meditation.*

Fig. 3.17 *Ultraslow Brain potentials measurement while in Vienna.*

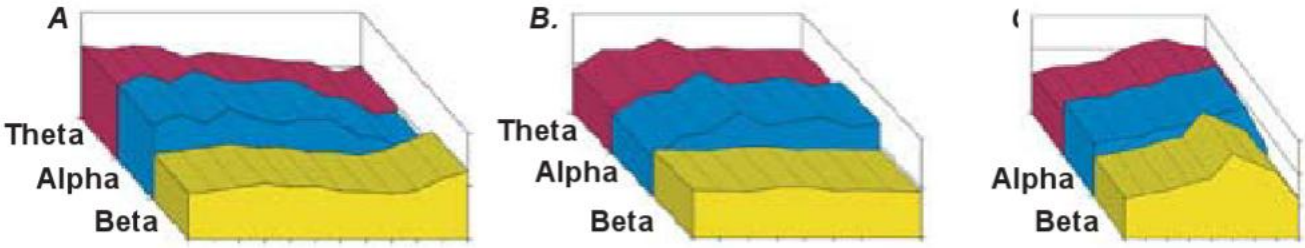


Fig. 3.18 A. *Altering dominance of alpha and theta waves during the Cosmic Orbit Meditation.* ***B.*** *Cosmic Healing Sounds Meditation, results in increases in alpha and theta frequencies. There are minimal beta brainwaves; the brain reaches a state of stillness and internal focus.* ***C.*** *Orgasmic Upward Draw Meditation increases the levels of alpha and theta.*

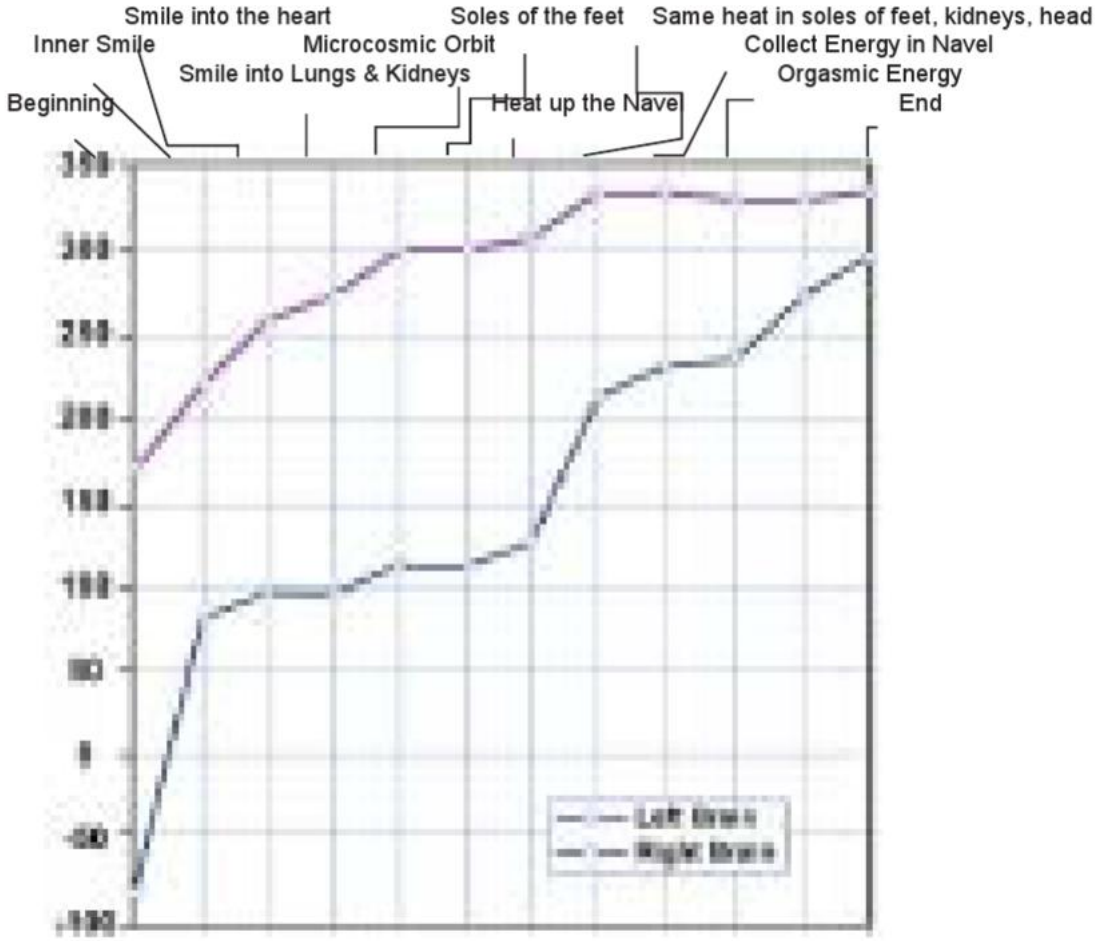


Fig. 3.19 *Left and Right Brain Charts*

It's interesting because the energy I have been describing in my teaching is exactly what they were measuring during their testing. So I went there and did the measurements with them. I just did the Inner Smile, smiling into my abdomen. They picked up these readings very quickly and said, "Your brain waves are going lower, lower and resting – and you are nearly in the sleeping state." At the same time, the muscle tension

was very low, the heartbeat was very low and the skin resistance was very low. After that, I surged the energy up to the brain and they started to see that the energy actually charged up there. When we are thinking, worrying or feeling anger, shame or guilt – the energy level in the brain actually decreases, and the brain doesn't get charged up. They were quite amazed, and said, "Hey, this is what we're looking for!"

They asked me what I was doing. I said, "I'm smiling to my abdomen." They kept on talking to me and asking me questions. They discovered that this brain (in the head) was not very active at all, meaning that there was not much activity in the brain. It was still in a very light resting state. But, how could I answer their questions? They said, "Hey, look! Master Chia is talking to us in his sleep. How can he talk to us in his sleep?"

After that, I said, "Oh, I understand now." Because, throughout the whole practice of the Tao is the injunction, 'train the second brain in order to use the second brain.' It took the westerners a long time to understand that. So, when the article about the 'Hidden Brain in the Gut' came out in The New York Times,[1] I started to understand that. You can be miserable; you can be happy; you can feel all kinds of feelings. But according to this article, they had also discovered that this brain in the gut, the enteric nervous system, can do a lot of functions. It says that this gut brain can send and receive impulses; it can record experience and respond to emotions. So, it is like a brain. In this article, they had only discovered that the large intestine and the small intestines have the same neurons as the brain cells. After that article, a new book, *The Second Brain,* was published.[2]

Now in medical science, I might add, they have begun to discover consciousness in the heart. They found that the heart can record a whole event, and it has its own brain. Dr. Paul Pearsall has written a new book, called *The Heart's Code*.[3] They have found that people who have a heart transplant actually get the emotions of the donor. They actually experience whatever the donor experienced. One of the cases is that of a girl who was brutally killed, and they didn't know who killed her. But, the heart was OK; so, it was transplanted into another girl. After that, the girl started to get nightmares and described somebody killing her. Then she described how the killer looked. Finally, the mother took the girl to a psychiatrist, and he in turn contacted the police. The girl gave the police an exact description and a police artist drew a likeness of the killer. With the information provided by the girl, the police were able to go and arrest the man. Afterwards, when confronted with clear details of the crime, the man confessed that he was indeed guilty of this crime. So, from that experience, medical scientists and others came to realize that the heart can record all of an event and remember it.

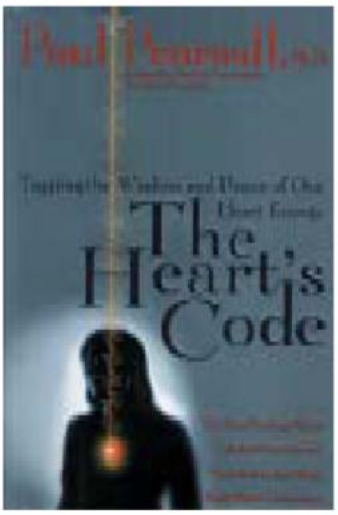


Fig. 3.20 *Heart's Code*

1 "Complex and Hidden Brain in the Gut Makes Stomachaches and Butterflies," The New York Times, section C1, Tuesday, January 23, 1996

2 Gershon, Michael. *The Second Brain* (New York: Harper Collins Publishers Inc., 1998).

3 Pearsall, Paul, Ph.D. *The Heart's Code* (New York: Broadway Books, 1998)

The Lower Brain consumes less energy and can do a lot of daily work, like send and receive impulse records and experience and respond to emotions. When you lower down the Upper Mind, it will also lower the blood pressure and anxiety.

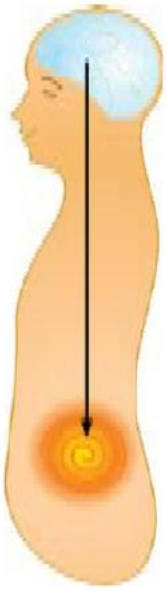


Fig. 3.21 *Abdomen has it own Brain: the Awareness Mind.*

On the second page of the Times' article, it says that even the large intestine is loaded with neurons. The question was posed, 'Can it learn?' But I say, "Hey, this goes back to 4,700 years of the Tao practice, which says: Train all the organs; train them how to do different things." You can rest the head brain when you're not using it – and use the brain in the gut. Why is it so important? Because the head brain is a 'monkey mind' riddled with doubt, shame, guilt and a suspicious mind. It is always thinking. Worrying, figuring things out things, head trips – it just keeps on, all the time. To be a God, you must let go of the past and empty the mind. Now we are in the information age; anything flits in – we think. Just one word flits in and we start an entire string of thought. When somebody says one bad word to you, you can think and figure it out for three days and three nights. 'How am I going to get revenge? How am I going to get revenge?'

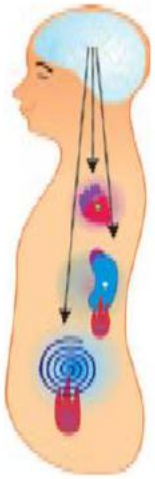
Scientists have discovered that when people worry too much, thinking, planning, etc., this brain actually uses up a lot of energy. Depending on the type of person– some people are very physical types who use very little brain energy, but their physical body consumes a lot of energy. However, most people think and think and think. So the scientists give an approximation, by way of a percentage. This is just a number for comparison, not an exact number. They say that this brain in the head can use up to 80% of the body's energy. So, what happens is you have only 20% left for the organs.

Fig. 3.22 *Cross-section of the neurons in the Large Intestine.*

According to the information about the brain in the gut, they have discovered that the brain in the head and the brain in the gut can do some similar jobs. For example, this brain in the gut is the emotional and the feeling brain. In the west you have the expres-

sions, 'I feel you from my gut' and 'I have a gut feeling about something.' Why do people mention a gut feeling? Obviously people have some feeling in their gut. It's very interesting that the whole Tao practice is feeling, awareness and consciousness – using this gut to feel, to be aware, and to be conscious.

You can rest, relax the brain in the head by using the 'brain in the gut.' This is the first step. The first thing we learn in the Tao is to forgive and let go. When we keep on remembering past negative emotions, we will stop seeing the truth. To let go of the past is to empty the mind and use the abdominal mind, the awareness and consciousness. Here's an interesting point in the way of the Tao: This gut brain can do a lot of simple functions that are similar to the functions of the brain in the head. This is a feeling and awareness type of functioning similar to many of our 'right brain' functions. However, we need to use the brain in the head in order to perform complex functions such as reasoning, making plans and making complex calculations. For rational functions, we need to use the brain in the head for the 'left brain' functions.



For our daily life of consciousness, awareness and feeling, we can use either the brain in the gut or the brain in the head. When we use the upper brain less, it will become charged with more energy and its power will be increased – and more power will be available to the body. That is why we say in Taoism, that we have to train the brain in the gut, so that we can use it when the brain in the head is resting. When the head brain is resting, it can be recharged: brain repair and maintenance occurs. Also, it can grow new brain cells. With more charging we have more power for creativity or whatever we want to use it for. If we like, we can use it to develop our higher spiritual nature.

Fig. 3.23 *When you are not using the Upper Brain allow it to rest by sending it down to the Lower Tan Tien.*

The simple thing is, that for the same job that the head brain or the gut brain can do, the head brain charges you eighty dollars. The gut brain only charges you twenty dollars. So, which one do you want to use? No, of course we are not that silly to use this overpriced person for the same work. But when we come to our own actual life, we don't know how to do it. We always use this mind, this high-priced brain. To add to this, we continue using it and using it, until the brain energy is completely consumed – no more energy. When you get to a certain level the brain is empty. These brain energy measurements are not only for indicating mental energy levels, they also represent energy conditions for the whole body and spiritual energy.

Whenever I smile down, the brain waves go lower and lower very quickly – and the transformed energy from the Tan Tien and organs charges up the brain in the head! Just by flexing the facial muscles into the mode we use with a genuine smile, we can produce the effects on the nervous system that normally goes with the natural sponta-

neous feeling. We can actually make ourselves relaxed and happy by taking advantage of this built-in human mechanism. It's natural. Just do it! Learning to smile down to the abdominal area and maintain the awareness of the relaxed, smiling sensation in the Tan Tien is the first step in training the *Second Brain!* Think about it: Pure awareness and consciousness can change attitudes and emotions carried in the DNA.

Remember: Number 1: "Empty your mind down to the Tan Tien, and fill the Tan Tien with Chi." An axiom in the Tao is, where the mind goes the Chi follows. And, Number 2: "When your mind is empty, it will be filled!" This means that when the organs have extra energy, the extra organ energy will rise up and fill the brain with Chi.

Fig. 3.24 *When the mind is empty, transformed energy from all the organs can charge the brain with Chi.*

Practice

Three Minds into One: 'Yi' Power

Smile into your heart. Lower the Observation Mind, then the Heart Mind down to the Tan Tien. With the Feeling/Awareness Mind, Spiral the three minds into one.

1. Smile into your heart. Make it feel soft. Feel love. Feel joy. Feel happy and feel compassion in your heart. Feel the heart spiral.
2. Spiral in the upper mind. Lower your upper mind, the observation mind, down to the Tan Tien in your navel area.
3. Turn the consciousness in your heart, activated by your love and softness, down to your Tan Tien.
4. Combine the upper and middle minds with the energy of the feeling/awareness mind of the entire nervous system – the Second Brain in the abdomen. Merge the three minds into one mind by spiraling their energy, blending them together as one in the Tan Tien.

When the three minds merge into one they become the 'Yi' power, the three-mind power – activate the spiraling at the mideyebrow, crown and the soles of your feet – expand to the universe in six directions: up, down, front, back, left and right. Once you get it, the Yi, we will start to activate the six directions and the three fires.

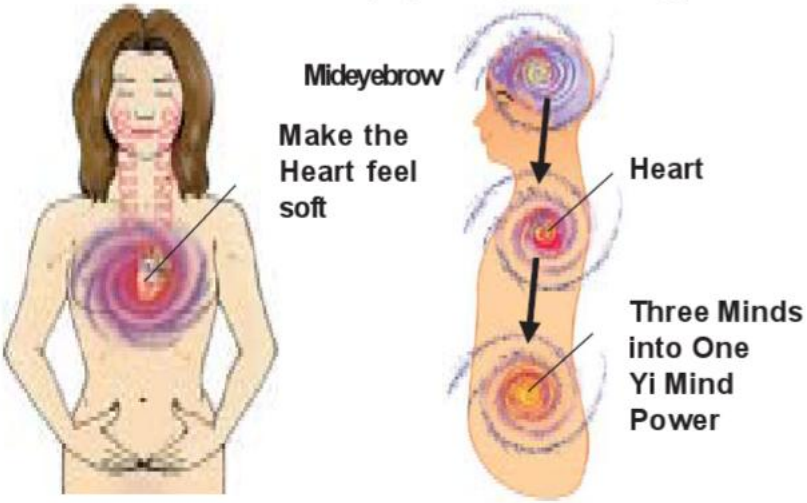


Fig. 3.25 ***A.*** *The Heart softens like a rose blossoming.* ***B.*** *Spiral the Upper Tan Tien to the Lowest Tan Tien and Three Mind 'Yi' Power.*

Activating the Six Directions and the Three Fires

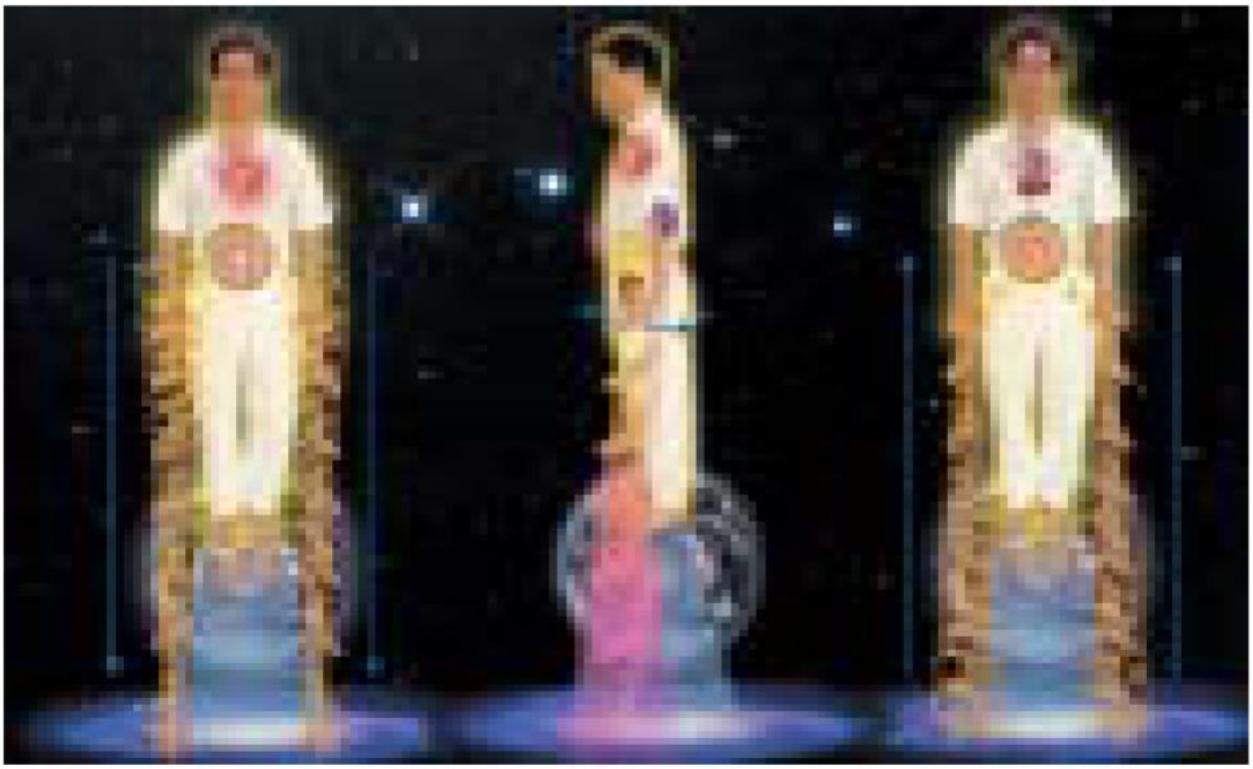
This powerful energetic technique allows one to extend the mind, to touch the force, and to draw that energy back into the body.

The Six Directions teaches you how to expand your mind and Chi for receiving healing power. By practicing the Six Directions daily you will increase your healing and cosmic power. Turn your mind and Chi into the cosmos, multiply them and draw them back.

Direction Below

When you achieve the three minds into one mind begin expanding into the Six Directions; press your hands down and start with the low direction. Picture yourself standing on the earth and you expand yourself very far away – deep down into the earth, very, very deep down into the earth. Your hands become very long; your feet become very long — they go all the way down into the earth and out past it into the galaxy below on the other side.

Push. When you push, connect with the galaxy below — pull and think about your Tan Tien filling with Chi. Push and pull. Push and pull. Fill your Tan Tien with Chi.



A. **B.** **C.**

Fig. 3.26 A. *Hands expand through the earth and to the galaxy below.*
B. *Hands push forward and pull back.* ***C.*** *Smile to the primordial Chi from the universe back to the Lower Tan Tien and fill the Tan Tien with Chi.*

1. Stand, feet together. Put you hands down, parallel to the ground. Expand your hands very far away and your mind very far away smiling into the ground. Continue expanding your hands, feet and your mind very far away beyond the earth below. Go down through the galaxy, way beyond to the primordial force. It's just like you are extending all the way to the primordial force before 30 million years ago.
2. Push, moving the hands forward six inches only.
3. Pull, moving the hands back by the sides. Think about your Tan Tien – Chi coming to the primordial force in your Tan Tien. Smile to your Tan Tien, dark, deep and vast.
4. Push: touch the primordial force in the universe.

A. **B.** **C.**

Fig. 3.27 A. *Be aware of the universe in front.*
B. *Expand your hands very big and long to the universe in front.*
C. *Hold the fire ball to activate the Tan Tien Fire.*

5. Pull back to your Tan Tien the dark primordial forces with your hands.

Push and pull: It's just like you go to an empty space – vast. Then you come back to your Tan Tien – also empty, just like the primordial condition before anything existed.That is where all the forces come from. Push and pull 3 – 9 times.

Front Direction and Tan Tien Fire

Next, be aware of the front direction; a huge fireball appears in front of you.

Open your palms: scoop up the Chi, scoop up the fire. Bring the fire into your Tan Tien. Activate the Tan Tien Fire.

1. You start with a small dot of light inside you. Expand your awareness smiling to the universe in front of you.
2. Become aware of a big fireball in front of you. Fell your hand become bigger and longer. Scoop up the fireball. You may close your eyes to help your inner sensing.
3. Use the fireball to light the fire in your Tan Tien. Feel the fire burning in the darkness, the 'fire burning under the sea.'

Fig. 3.28 *Smile to the Burning Fire.*

Back Direction and Kidney Fire

Be aware of the back of the Tan Tien, the Door of Life and the back or rear direction. Extend your mind very far away to the 'back'. Scoop up the fire and light up your 'Kidney Fire'.

Fig. 3.29 *Be aware of the back direction, move the arms toward the back of the universe and scoop up the universal fire.*

1. Expand your awareness all the way to the back. Move the arms toward the universe behind you.
2. Touch the universe; scoop up the fire. Activate the Kidney Fire. Maintain your awareness in the Tan Tien and expand smiling out to the universe. The energetic spiral glows in the Tan Tien. Spiral in the heart, spiral in your crown and spiral in the universe.

Heart Fire

Raise your hands up under your armpits, and feel yourself holding the two fireballs. Touch the heart by extending the fingers energetically in from the sides; feel your hands extending into your heart and very far away. Activate the Heart Fire.

Fig. 3.30 *Activate the Heart Fire.*

1. Move your hands up under your armpits and extend your fingers deep into your heart and very far away.
2. Tan Tien and the Universe: you are connecting to the 'charger,' charging more fire into yourself.
3. Feel your heart soft in the center as you smile down. Feel the warmth of the fire energy of love, joy and happiness in the heart.
4. You feel the connection with the unconditional love in the universe as you keep your heart consciousness in your Tan Tien and extend your awareness out to the universe.

Sacred Fire *(Chi Fire)*

Connect the Three Fires to combine into one Fire: *Heart to Kidneys to Navel to Heart.*

Fig. 3.31 *Connect the Three Fires and Sacred Fire.*

1. Move your hands together in front of your heart. Hold your hands together in front near the heart and feel the fire burning in there. Connect the Heart Fire to the Kidney Fire, the Kidney Fire to the Tan Tien Fire and back up to your heart; connecting them as one triangular Sacred Fire, circulating the Chi at 1,000 revolutions per minute, 10,000 R.P.M, 30,000 R.P.M and 60,000 R.P.M, doubling or tripling their collective power.

Open the Third Eye

Now, extend your hands out to the front, very far away – pushing, pushing, pushing. Push. Turn your palms inward, and extend your middle fingers inward toward your third eye. Picture a crack in the middle of your forehead, and pull the crack open. Feel the light from the heavens opening it and feel the light from the heavens shining into your brain.

1. Open your palms. Open your eyes, dimming the eyes. Look to the universe. Extend your hands to the front, palms vertical. Extend the arms from the scapulas. Smile and touch the universe.
2. Turn your palms inward and extend your middle fingers inward toward your third eye.

3. Picture a crack in the middle of your forehead and let the heavenly light shine into the brain; pull the crack open and let the light reflect into the organs.
4. Close the third eye. Again, open. Pull: open-close-open. And, close. With the third eye open, the light from the heavens shines into your brain and reflects down to all your organs. Open and close the third eye 3 - 9 times.

Fig. 3.32 *Look as you smile into the Universe in front of you.*

A. ***B.***

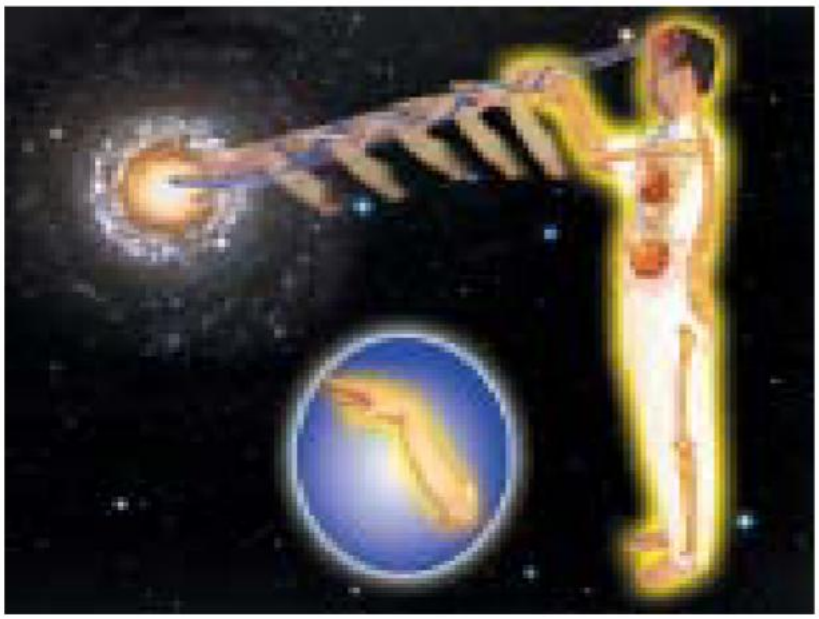
Fig. 3.33 A. *The Middle of the Finger hooks into the third eye and reflects down into the Organs.*
B. *Pull open the Third Eye; let heaven open and shine its light into the Brain.*

Front Direction: Push/Pull Master Practice

Now, turn your palms, pushing out. Push. Pull. This is the master practice that is imperative for successful completion. When you first start practicing you should do it at least one hundred times and increase up to 200 times. Push and pull. When you push, you feel your hands extended very far away – very long – reach the sky. Touch the universe.

1. Push: Extend your arms and hands to the front, palms vertical. Extend the arms from the scapulas.
   Expand: smiling, smiling, touching the universe – touching the force, touch -ing the Cosmic Chi.

Fig. 3.34
Master practice: Touch the Universe.



2. Pull: Draw the Chi back to you from the universe. Moving the arms from the scapulas, draw the hands toward your body in a horizontal position, drawing the Chi into the body.

Fig. 3.35 *'Drawing' Universal Chi - feel your Tan Tien and fill it with Chi.*

Pull. Think and smile to your Tan Tien. Push, very far away to the universe.
Pull. Push: Smile, relax, and let go, touching the sky, touching the universe.

Fig. 3.36
Let go - Push and Touch the Universe, do it 6, 9 or 18 times.

Left and Right Directions

Now, move your hands to the left and right directions. Pull the Universal energy in. Push; touch the universe. Pull; think about your Tan Tien. Push – all the way, touching-touching-touching the universe.

1. Move your extended hands from the front horizon to the left and right sides.

Fig. 3.37 *Touch the Universe Left and Right.*

2. Pull Tan Tien: Smile to your Tan Tien. Keep smiling to your Tan Tien.
3. Push to both sides. Expand all the way, smiling and touching the universe.

   Push/Pull: touching, touching the universe drawing the Chi smile energy into you from both sides.

   Do 3-6 times.

Fig. 3.38 *Pull: Just feel about your Tan Tien.*

Direction Above

Turn your palms up to the universe. Scoop up the Chi. Pour the Chi over your crown, and touch your crown. Project the Chi all the way down to the perineum and down through the earth to the universe below. Tan Tien and universe; always feel your Tan Tien spiraling, heart spiraling, crown spiraling and the universe around you spiraling.

Fig. 3.39 A. *Raise the hands above the crown and feel it extend up to heaven.*
B. *Feel that the hands are big and long and that the bones are hollow. Fill and pack the bones with Chi.*

Raise your hands up to the universe and expand your hands as big as the universe - feel the Chi charge into your bones.

Scoop and gather the energy turning the body three times to the left and three times the right drawing the smiling energy.

Fig.3.40 *Scoop up the Universal Chi and pour it over the head.*

Open the Spine

1. Touch the back-crown point. Pour the Chi all over your crown. Think of your soles so that you feel like there is a waterfall of Chi flowing from your crown all the way down to your soles. Feel your finger grow long and the Chi penetrate down through your spine to the coccyx. Leave the fingers touchng the back of the crown, to maintain the energetic connection with the coccyx.

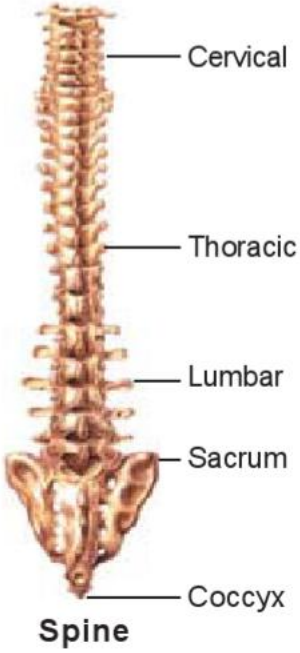
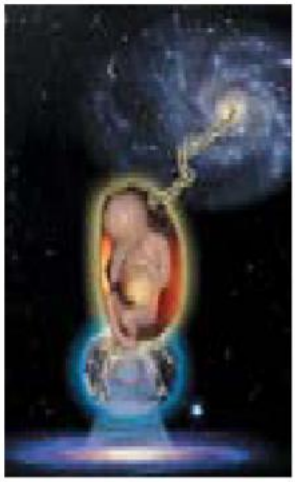
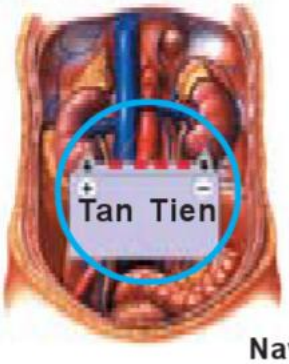


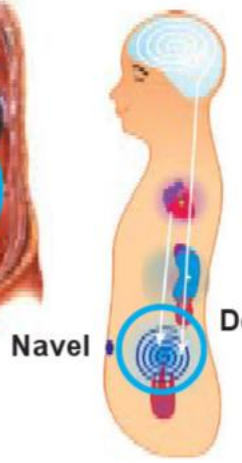
Fig. 3.41 *Feel your fingers growing long, all the way down to the coccyx.*

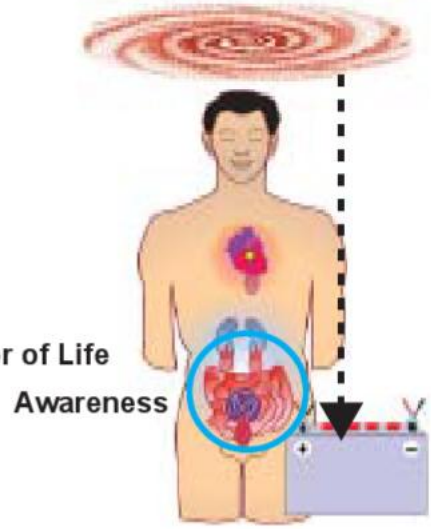
Turn 'Three Minds into One Mind' at the Lower Tan Tien, and expand the awareness to the universe. Let yourself be charged by the universe.



Like you are back in the womb.







Tan Tien is like a battery.

Fig. 3.42 *Universe charges Tan Tien power.*

Beware of the Tan Tien and spiral it like universal energy in motion. Feel the heart center spiraling and the crown spiraling. Be aware of the universe spiraling above, below, front, back, left and right. Let all of the sick energy and the negative forces leave the body and go down into the ground for Mother Earth to recycle. Extend the Chi from above, all the way down through the earth and the universe below.

Fig. 3.43 *Be aware of the Lower Tan Tien, Heart Center and Crown spiraling. Feel the Universe is spiraling and charging the Three Tan Tiens.*

Open the Middle Channel and Perineum

1. Move to the mid-crown point. Touch the point and project your fingers inwards; go deeper, deeper through the middle of your body down to the perineum. Focus on the perineum. Feel the Chi from the universe flow into your perineum. Look for one dot of light. Look into the darkness, the vast darkness, the immense darkness; this is the primordial force, a cloudy moving force. Look for a dot of light at the perineum and extend your awareness all the way down through the ground and the universe below.

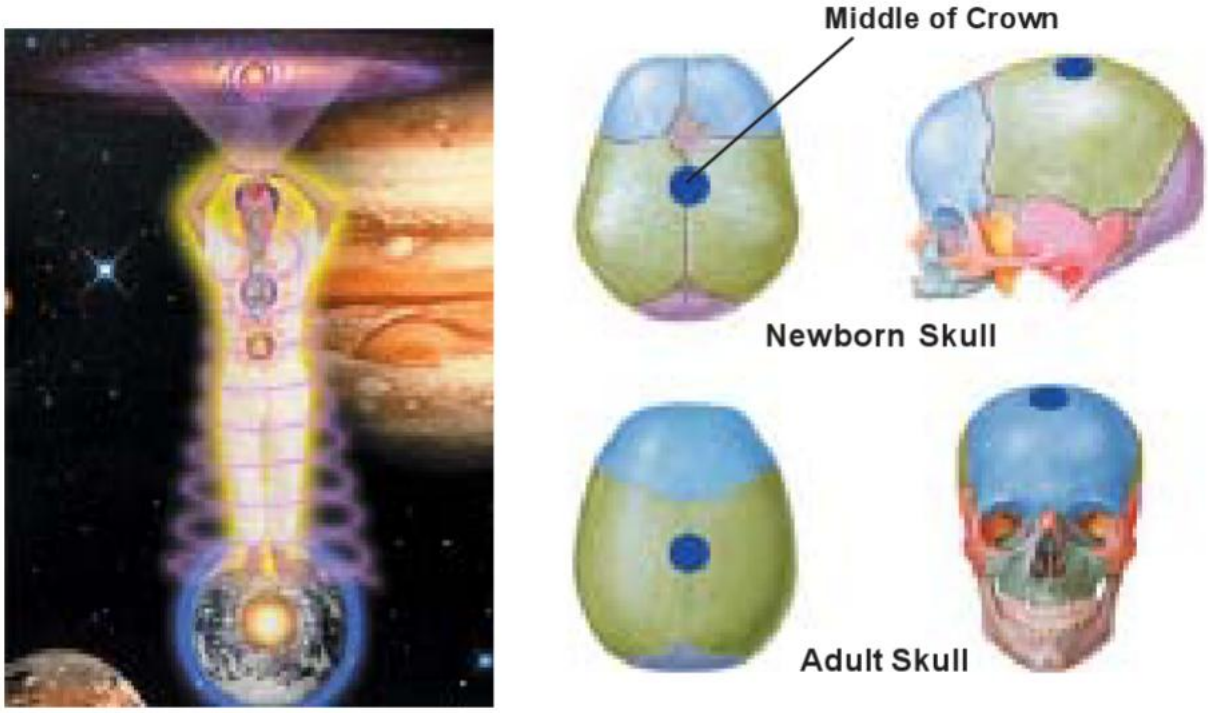
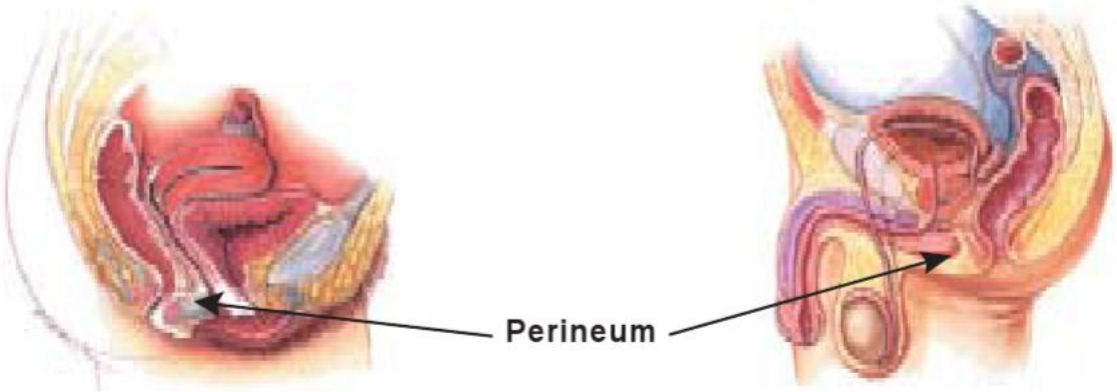


Fig. 3.44 *Move the Hands to the Middle of the Crown and feel the Fingers Penetrate to the Perineum.*



When finished opening to the Six Directions and igniting the Three Fires, gather the Chi in the center and bring this expanded awareness into the healing session.

Tan Tien and the Universe

The expression, 'Tan Tien and the Universe', is a reminder to feel your Tan Tien, heart, mideyebrow and crown spiraling and that you are connected to the universe spiraling in the six directions around you.

1. Establish a Complete Location

You will use your Yi, the three-mind power, repeatedly to recharge your Chi for various purposes. You recharge by connecting to the Universal Chi in the six directions of the universe simultaneously. When you charge a particular area or direct Chi into the body to a particular point, you first establish a connection point for the Chi by placing the hand or fingers at an appropriate location on the surface. This is like giving a location for the Chi to go to. Once the location is established and the Chi starts to go there, leave your hands there.

Then you move your attention to where you want the Chi to go in the body. Feel the Chi connected to and charging the intended location.

2. Charge Tan Tien from Universe

When the location connection is established, be aware of your Tan Tien, heart center, mideyebrow and crown spiraling. Be sure that the conscious mind of the heart is lowered to the Tan Tien and the awareness mind of the abdomen is connected to the mideyebrow crown and out to the universe. Feel them connected to the spiraling energy in the six directions of the universe. Let the universe charge your Tan Tien.

3. Don't Stop at the Location

With your focus in the Tan Tien, the Chi will go from there to the 'location' indicated by your hands and then to the intended location in the body. Don't let Chi stop there, however.

4. Direct Chi out the Opposite Side to Universe

Direct your attention to guide the Chi flow through the body and out the opposite side. You want to clear out any blockages and prevent any others from accumulating. You also want to release sick energy and negative forces down into the earth. Let the Universal Chi flow out through the universe and beyond.

Open the Three Tan Tiens

Move your hands down to the mideyebrow. Touch the mideyebrow.
We are going to open the three Tan Tiens, starting with the Upper Tan Tien.

Upper Tan Tien - Mideyebrow

1. Recharge. Remember: Tan Tien – heart consciousness in, awareness out. Spiral – Tan Tien, heart, third eye and crown. Universe – six directions spiraling.

Fig. 3.45 *Raise hands and charge with Universal Chi.*

2. Move your hands down and touch the mideyebrow. Feel your fingers grow very long (energetically) and penetrate all the way back to the base of the skull. Focus on the back. Remember: Tan Tien and the universe spiraling. With the spiraling, the Chi in the fingers will become hot. It will expand and penetrate out through the back of the head all the way to the universe behind.

Fig 3.46 *Fingers touch mideyebrow and penetrate to the back of the skull and the universe at the rear.*

Fig 3.47
Tan Tien and the Universe.

3. Picture your fingers like laser beams of Chi, 'Tan Tien and Universe': Feel your Tan Tien and the universe spiral and charge your fingers. Move your fingers out from the mideyebrow around the side of the head to the top of the ears. Your fingers are like lasers -cut-cut-cutting open your skull right in the middle, around to the top of the ear, cutting open your Upper Tan Tien. Cut and project your fingers long into the middle of your brain. Spiral your Tan Tien and the universe. Leave your fingers there. Concentrate on your Tan Tien spiraling – your heart, crown, the universe above, below, front, back left and right all spiraling. Your Tan Tien is a big empty space: primordial force; darkness. You can put so much Chi inside there! The Chi penetrates into your brain.

Fig. 3.48 *Move the fingers to the top of the ears. Feel them growing longer and cutting the skull open, penetrating into the brain.*

4. Move your hands all the way to the back, cutting to the back of the skull. Touch, and feel the Upper Tan Tien open.
5. Touch the base of your skull. Focus on the mid-eyebrow. Feel the Chi flow like a laser beam from back to front and out to the universe in front. Complete the opening process by moving the hands back around to the mideyebrow, cutting as you go.

Fig. 3.49 *Chi moves like a laser, penetrating from the mideyebrow at the front, to the back of skull.*

6. Recharge in the universe. Feel your bones and your arms are hollow. Fill and compact them with Chi.
7. Scoop the Universal Chi and pour it down over your crown and all the way down, down to the Middle Tan Tien.

Fig. 3.50
Recharge in the Universe, scoop and pour the Chi down to the Middle Tan Tien (Heart Center).

Middle Tan Tien - Heart Center - Conscious Mind

1. Move your hands all the way down to your heart center at the mid-sternum. Touch. Focus on the point opposite the heart, T5/T6, on the spine. Fingers 'long', Chi penetrates into your thymus gland. Light – golden light – penetrates into your thymus. Feel the Chi penetrate through your heart all the way through T5/T6 to the universe behind. 'Tan Tien and the Universe' also feel your Chi Fingers penetrate into the bone and bone marrow and spread out into your rib cage.

Fig 3.51 *Golden light enters the heart, thymus, bones and marrow; feel it penetrate to the universe at the rear.*

Recharge and cut around to the Armpits

1. Recharge In the universe, pour Chi over the crown down through the body and lower your hands down to the heart center. Touch with the fingertips. Move your hands around under your armpits, extending the Chi like laser beams cutting open this Middle Tan Tien. Pause under the armpits as you send the Chi into the center.

Fig. 3.52 *Cut open the Middle Tan Tien by cutting around the armpits.*

2. Continue to move your hands around to your back at T5/T6, touch and send the Chi from back to front. Let the beam of Chi penetrate out through the heart center to the universe in front of you. Then, move the hands back around the sides to the front, cutting as you go.

Fig. 3.53 *Chi beam from T5/T6 penetrates to the Heart Center in front.*

Lower Tan Tien - Navel - Awareness Mind

1. Recharge with Universal Chi. Tan Tien and Universe: Again, raise your hands and charge with the Chi into the universe. Your hands are very big, very long. The bones are hollow and compacted with compressed Universal Chi. Scoop the Chi from above and guide it down. Pour all the way down, down, down to the navel. Touch the navel, and focus on the Door of Life opposite on the spine between L2/L3. Touch and feel the Chi penetrate to the Door of Life Tan Tien and Universe. Feel the Chi penetrate through to the back and out to the universe behind.

A. **B.**

Fig. 3.54 A. *Recharge the Lower Tan Tien and penetrate through to the Door of Life.*
B. *Raise the hands up to the universe and charge with Chi. Bring the power down to Tan Tien.*

2. Open this Lower Tan Tien the same way as for the Upper and Middle Tan Tiens. Charge more Chi into your hands, and let them be like lasers cutting it open. Cut around to the sides. Pause. The fingers of the left and right hands are very long, extended energetically inside. Cut and feel the energy penetrate into the center. Focus at Tan Tien and universe and feel more Chi.

Fig. 3.55 *'Cut' open the Lower Tan Tien with Laser Fingers.*

3. Continue cutting to the Door of Life. Touch, and send the Chi from the Door of Life back to the navel and out to the universe in front.

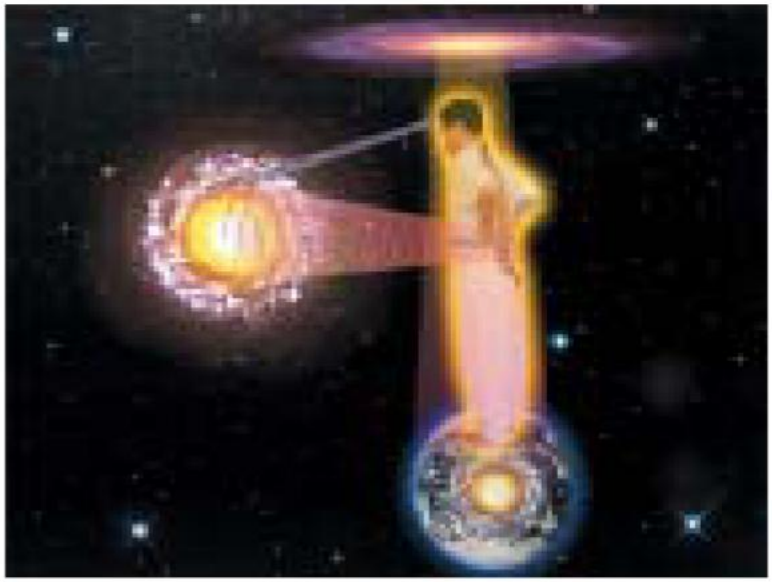


Fig. 3.56 *'Cut' open the Door of Life and send Chi to the navel and universe in front.*

4. Move the hands back around the sides to the navel, extending the fingers and "cutting" the Tan Tien open as you go. Touch the navel: Tan Tien and the universe spiraling. Feel more Chi, and feel the Tan Tien open.

Activate Chi in the Bones of Hips, Legs and Sacrum

1. Now touch your pelvic bone by energetically extending your fingers from the front area near the hips to the back. Feel Chi penetrate into your pelvic bones: funny, laughing, happy bones.
2. Touch the femur bones. Tan Tien and universe. Charge the fingers. Also, feel the funny, happy, laughing vibration inside the bones and in the bone marrow. Be aware of the Three Tan Tiens. Spiral from the universe. Spiraling charging your Tan Tien. Charge your hands and your bones.

Fig. 3.57 *Touch the femurs - happy laughing bones!*

3. Now we are going to slowly lower the sensation of Chi down through the bones to the earth. Opening up the sacrum. Move the hands down the legs as you bend down.
4. Lower yourself all the way down to the ground and sit on your feet. Move the Chi with your hands down to your toes, down through the earth and the universe below.

A. **B.**

Fig. 3.58 A. *Sink the Chi into the earth.* ***B.*** *Lower and sink the mind and Chi down to the universe.*

5. Raise your sacrum up, keeping your hands at the toes. Smile to your Tan Tien and feel the Chi from the universe coming to fill the Three Tan Tiens. Opening up the sacrum.

Fig. 3.59
Raise the sacrum and smile to the Tan Tien.

6. Lower down again. Lower the Chi down to the earth and the galaxy below.
7. Once more, raise your sacrum up, maintaining hand contact with your feet. Smile to your Tan Tien.
8. For the third time, lower down. Open your palms, gathering the Chi from the earth below. Gather and scoop the Chi.

Fig. 3.60 *Gather the Earth Chi.*

9. Touch your heels and feel your bones as you slowly rise up. Fill your bones with Chi as you guide it up with your hands.
10. Fill the bones in the upper legs as you move your hands up.

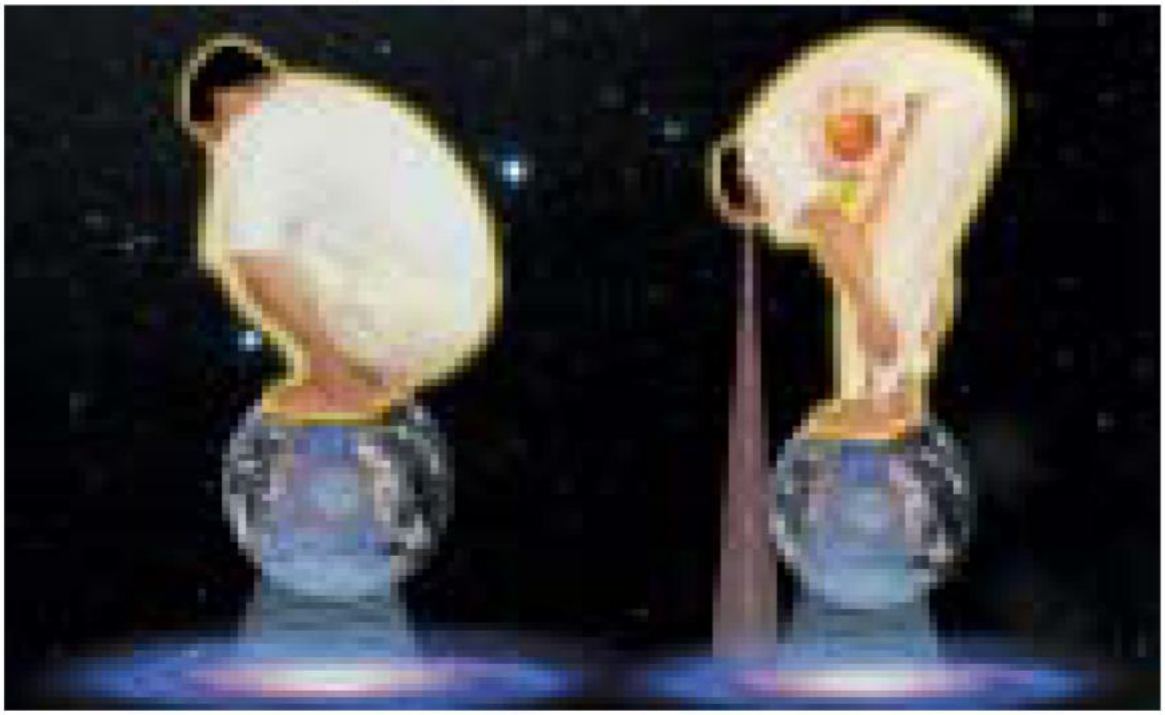
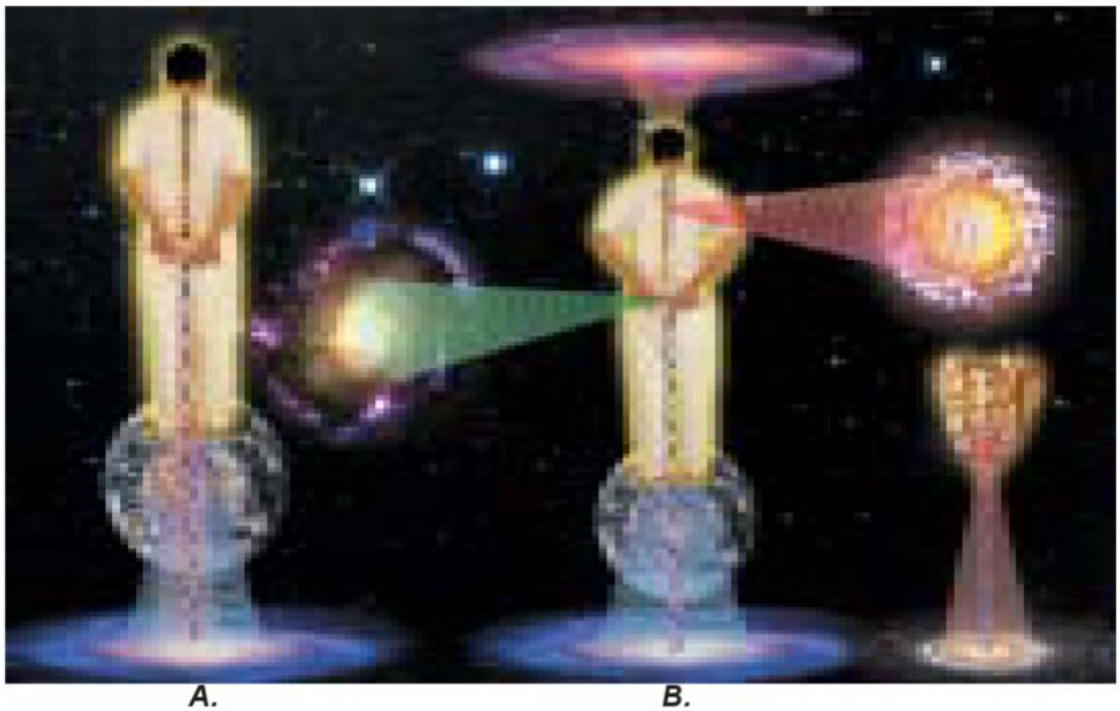


Fig. 3.61 A. *Fill the bones with Chi.* ***B.*** *Feel your fingers penetrate into the bones as you rise.*

11. Feel your bones, and fill them with Chi all the way up to your coccyx. Touch your coccyx. Leave your fingers there, then be aware of the Chi and feel the Chi raising up to the Tan Tien and the universe. Feel it charge the fingers and the spine.
12. Come up to the sacrum. Feel the sacrum open. Focus at the Tan Tien and the universe.



A. B.

Fig. 3.62 A. *Bring the Chi to the Coccyx.*
B. *Move your hands up to the Sacrum and feel the Chi rise up to the Crown.*

13. Come up to the door of life, and then back to the navel. You may sit down to continue the next step in the Cosmic Healing Practice.

Fig. 3.63 *Bring the Chi to the Door of Life and let it penetrate to the Navel.*

Practice daily till you feel the Chi. Then you can apply this Chi to the Healing Sessions.

Chapter IV
General Healing Session

The General Healing session practices are to be done with every student regardless of their age or health condition. These are for cleaning and strengthening the cells. Cells must be clean and strong to heal. The General Healing practices listed steps A-K are the most important part you must always do in every session. You can do this with one person or with many people at the same time. The following is a detailed decription of each of these steps. Become familar with them and they will flow easily one into the other.

A. Three Minds into One Mind

Smile down to the inner universe. Activate the heart consciousness and empty the mind and heart down to the LowerTan Tien, the Abdominal Brain. Gather the 'Yi' (mind-eye-heart power), combining three minds into one. Fill the Tan Tien with this Chi. Start to spiral. You are then ready to connect to the higher forces of Universal and Heavenly Chi. The Three Minds are the Upper, Middle and Lower, or three Tan Tiens. The Upper Mind is the one we have been closely related to most of our lives. It is the logical thinking, planning, calculating and worrying mind; it consumes 80% of our body's energy.
The key is to learn 'to releas the mind' by learning to sink the Chi to the Lower Tan Tien, whereby it can be used in synergy with the other two.

B. Activate the Six Directions

Activating the six directions is for opening the whole body, mind and soul to all of the Universal and Cosmic forces in all directions. We literally learn to draw in the Universal and Cosmic forces from all directions at the same time. This is important for healers so they are not using their own energy for healing but drawing on the limitless Universal forces.

Expand your awareness to connect to the universe and the Six Directions at the mideyebrow and crown; left, right, front, behind, above and below. Connect to the universe, collect and spiral the energy into your Lower Tan Tien.

C. Activate the Three Fires

Activate the Tan Tien, Kidney and Heart Fires to create a Sacred Fire Triangle. Move from the Tan Tien to the Heart, the Heart to the Kidneys and the Kidneys back to the Tan Tien.

D. Linking Personal Stars, Energy Bodies and the Universe

World Link is a way for intelligent life force to return to the source; inwards and upwards. Become aware of the 'personal stars' above the crown and below the earth.We link with our own personal stars and then with the stars of each person in a group. This links the energy bodies of everyone in a group together. Start to spiral your energy and connect to other peoples' stars and energy bodies. Make a left spiraling pattern, progressing around the circle in a clockwise rotation. Link all of these stars together and form ***one large energy body.*** Each meditator will become an individual unit in an integrated communication link. A link between the earth and the universe.

E. Protective Circle and Chi Field

We create Chi Fields, Protective Animals and call the Eight Forces to protect the group from disturbances and psychic attacks. Raise your right (or leading) hand in the air and access the **'Sacred Fire'** of the universal cauldron. "Feel your fingers becoming big, long and hollow", as they reach into the Sacred Fire. The Chi will fill and pack your arm as you bring it down into your body. Use Yi-Power to create the **Sacred Fire Protective Circle.** The fire will purify and protect the circle. You can cast a circle around your community, house, room and body. This will create an energetic field of Chi around the whole room.

Then Create a **Chi Dome**. Invoke the 'guardian animals'; Blue Tortoise from the north, Red Pheasant from the south, Green Dragon from the east, White Tiger from the west, Yellow Phoenix from above and Black Tortoise from below.

Finally, activate the **Eight Elemental Forces of Nature and the Universe**. Call the forces of fire, water (ocean), thunder (lightning), lake (rain), earth, mountain, wind and heaven. Activate fire in the north, water in the south, lightning in the east, and rain in the west.

F. Chi (Sacred) Water Practice

Invoke the power of the Sacred, Chi or Holy Water practice to cleanse and heal the body's sick, toxic or negative energy. Make a request to receive healing energy and feel yourself touch a heavenly pool of sacred water energy. Feel the pool pouring down heavenly water to fill your arm.

Use the thumb and index finger to remove the sick energy from the cup, without touching the water. Talk to the sick cells. Let the sick energy return to the earth for recycling. Fill the water with your heart's compassion. Give the command: "This Sacred Water will give health, wealth and longevity". Cosmic Healing works on a cellular level. It is the water's 'job' to carry the message of the practice to all the cells, where it will remain. Drink the water in unison with the rest of the group.

G. Empty and Fill

The Empty and Fill technique is emptying the sick energy into the earth and filling with healing Cosmic Force Energy. Project your 'sword' hand (middle and index fingers) down to the ground. Project the hand 'very big and very long' and your feet 'very big and very long' - extended down to the ground. Now very slowly inhale, bring up the earth energy. Bring the energy up to your feet and into your bones. Let it enter all the bones, organs and cells. Feel it blending with all the sick energy. Turn your palm up, turn it back down again and exhale; let go of all the sick energy, the negative energy, the worries and burdens, all the way down into the earth. Repeat this three to nine times. Dig a hole and bury all the sick energy; tell it, "Do not come back; you will be happy down there." Smile.

H. Clean with Green Light

The Green light is for cleaning the cells. This is vitally important because the cells must be clean for healing. Green can help detoxify the toxic cells. Green Chi is mild and safe. Green Chi is used for cleansing, and as a decongestant for diseased parts. It 'loosens' the area. The light green Chi is used to break down dirty or diseased energy, like a detergent is used for washing clothes or dishes.

Afterwards, the cells will be rinsed with blue light, like clean water is used to rinse the detergent and residue from clothes or dishes.

When you carry out healing try to 'see' the cells enlarged and this green energy go in and blend with the dirty, black and cloudy energy. See it come out and let it go down to the earth. Dig a hole and bury it there. Tell it, "Don't come back. You will be happy down there". Become aware of the green light and spiral counter clockwise. Spiral down. Cleaning out the stress. Repeat as many times as you like, three times minimum.

I. Clean with Blue Light

Blue is like cold water; it has the yin power to dissolve all kinds of negative energy and sickness. It has an inhibiting effect. Blue yin energy is the opposite of red yang, which has a strengthening and stimulating effect.

Blue has a cooling effect; it can reduce pain and inflammation, and it can help blood clot. It stops bleeding and reduces fever. It can help to induce rest and sleep.

J. Charge with Violet Light

Charging with Violet light holds the highest healing energy. When the cells are clean they will absorb and hold the Violet light and the healing will take place. Luminous Violet has intelligence and can be programmed. The universe is full of violet light, especially the North Star and the Big Dipper. The color of the star of the higher self or soul, above the crown, is also violet. It is the color of Divine or Soul energy.

It has properties of other Chi colors. It has a rapid regenerating effect on damaged organs and nerves. Always use green and blue light before using violet. Violet light develops the crown center, the spiritual core. It is good for psychological ailments as well as for physical deficiencies.

K. Activate the Immune and Defense System

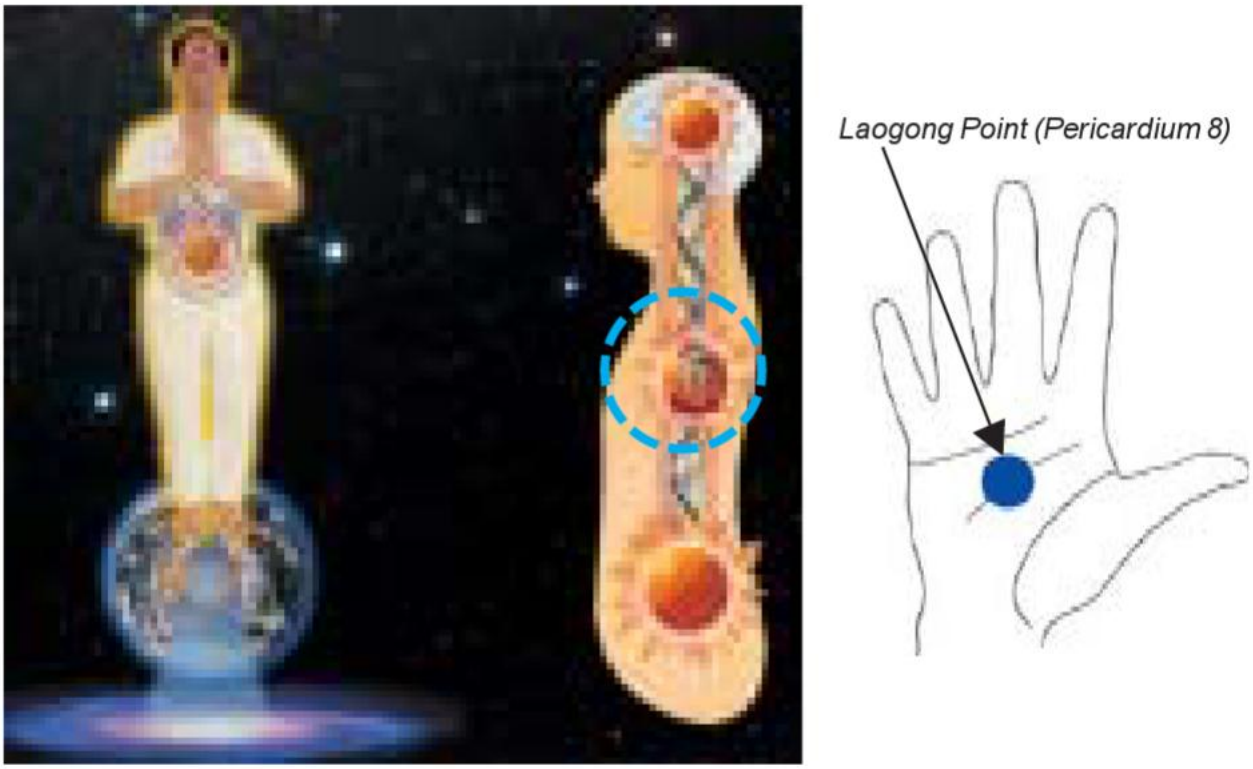
The body has various mechanisms which combine to provide protection and defense against illness and disease. These mechanisms enable the body to produce various cells and bodies which act against invading or unwanted substances. As soon as a foreign body is recognized, the immune system will be triggered and will act to provide the most efficient means of eliminating the danger and return the body to a balanced state of health. A strong and healthy body will have good resources to protect itself from negative or sick energy. The aim of these practices is to help you to realize the potential of true harmony within yourself. To activate the immune and defense system is to increase the production of red and white blood cells. To do this we activate the bone marrow and lymphatic system. Guide the student or whole group together in all of these steps. You will not lose energy by doing this. You will gain more energy because you are all connected together in the group power. The crucial part is to multiply your good intentions, Chi and virtue energy into the cosmos, making yourself and each person a direct line from the Universe. After you finish the General Healing session you can tailor the healing techniques in the next chapters to the individual's needs.

Practice

A. Three Minds into One Mind

1. Smile to the Inner Universe

Place your palms together in salutation, in front of your heart. Feel the Laogong points in your hands connect, creating an energy loop running from your heart through your arms and hands and back again.



A. **B.**

Fig. 4.1 A. *Empty the mind down to the lower abdomen.*
B. *Activate the heart's compassion.*

2. Activate the Heart Compassion Energy

Smile to the heart and feel it softening. Feel love, joy, compassion and happiness. Smile down and empty the mind to the Tan Tien, the Abdominal Brain. Fill the Tan Tien with Chi and start to spiral. When the abdomen is warm, it is full of Chi. The Chi can then charge up to the brain.

3. Combine the Three Minds into One

1. Turn Upper Mind to observation mind.
2. Turn consciousness (Middle Mind) down to Lower Tan Tien.
3. Combine three minds into one mind at the Lower Tan Tien (the Yi).
4. Manifest out at the mideyebrow.

Fig. 4.2 *'Three Minds into One'.*

B. Activate the Six Directions

Expand the awareness to connect to the universe and the Six Directions at the crown, mideyebrow, heart and Tan Tien.

Fig. 4.3 *Trust and believe - turn visualization into actualization.*

C. Activate the Three Fires

1. Tan Tien Fire - Activate the Tan Tien Fire:

Smile down to the abdomen to create a burning stove near the lower lumbar and sacrum. Create a fire ball behind the navel, above the stove.

2. Kidney Fire - Activate the Kidney Fire:

Always retain awareness at the Tan Tien and keep it spiraling.

3. Heart Fire - Activate the Heart Fire:

Keep the heart soft and fill the heart with joy, love and happiness.

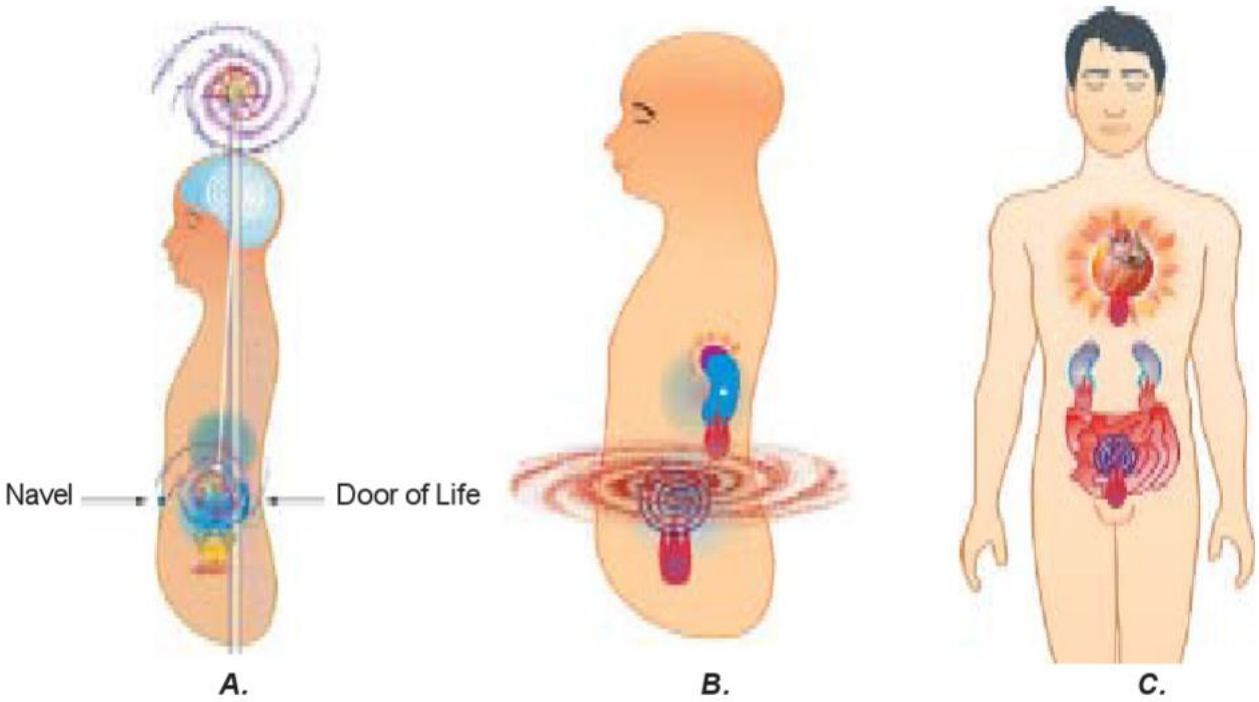


Fig. 4.4 A. *Activate the Lower Tan Tien Fire.* ***B.*** *Activate the Kidney and Adrenal Fires.* ***C.*** *Activate the Heart Fire.*

4. Sacred Fire Triangle

The Sacred Fire Triangle has triple force. Make a triangle from kidneys to navel (Tan Tien). From the heart make the connection to the kidneys. Move from the Tan Tien up to the heart.

5. Cosmic Star and the Earth Star

At the moment of conception, the two forces yin and yang connect with such a force, then only fractions of a moment later, the two forces explode into nine different Energy Centers. Seven of them we find in the body and two of them outside the body, forming our personal stars.

Fig. 4.5 *Three Fires into One*

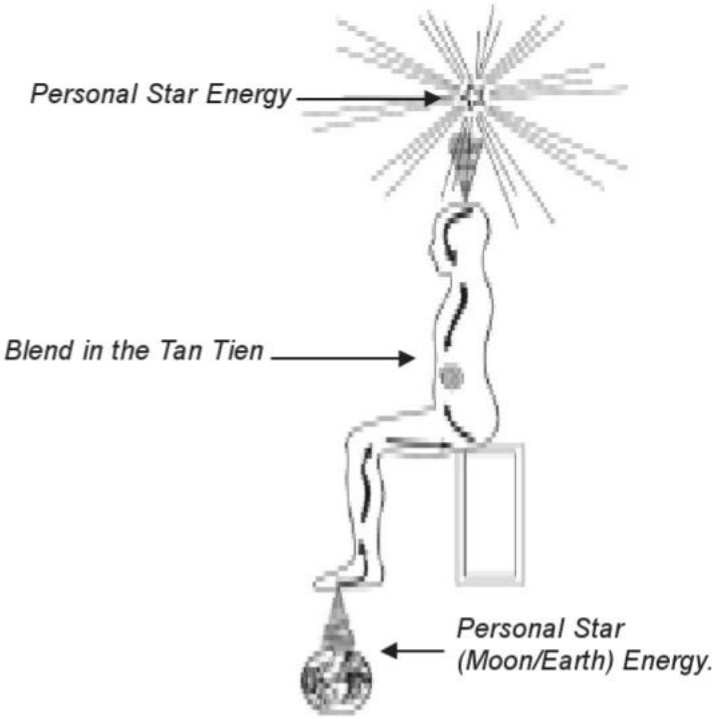


Fig. 4.6 *'Personal Star' Energy*

The two personal stars are in fact energy centers connecting the aural field of each individual with the universal forces and the earth forces. In a way one can see the aim of Taoist Inner Alchemy in bringing these nine forces together, merging them into one force and thus enabling the return to the original force, the Wu Chi.

There is a star about six inches above your crown and another one about one to three feet below the soles of your feet. They are also known as the higher self, guidance, protector, adviser. These stars are our connection to the cosmic force, the universal force and the earth deep below us.

Always make sure your Tan Tien is warm and the sacrum and mideyebrow are breathing. Be aware of the crown breathing and see a star or a small sun above you. Be aware of the crown and feel a light beam extend out of the crown and make a connection to the star above you. Keep on breathing until you feel a strong connection. Feel how the star above you is exercising a strong pulling force on your crown. Once you feel this pull on your crown you will also feel a strong pull down from the earth. Be aware of the star above and the earth and universal force below you. Feel that both of them have a strong pull on you.

1. Reconfirm the star above you and the earth directly below you.
2. Fix the image of the North Star and the Big Dipper six to nine feet above your crown. See the cup of the Big Dipper filling with the violet light, which gathers Chi from the North Star and the universe.

3. **Reach up with your left hand, and hold on to the handle of the Big Dipper. Pour the violet light down to your personal star 4 to 6 inches above your head, in order to predigest the energy of the violet light. Then let it flow down to your crown, into the Upper Tan Tien, to be processed and flow down to the heart center (Middle Tan Tien) or to the back of the head down to C-7 (Cervical 7) and T-2 (Thoracic 2) and down to the palms.**

   In Taoism we consider that the North Star emits a violet light, which is regarded as the highest healing light and the Big Dipper as emitting a red light.

   You can do these meditations sitting, or standing in the Chi Kung posture. The standing position will support a stronger structure and provide a better connection with the earth.

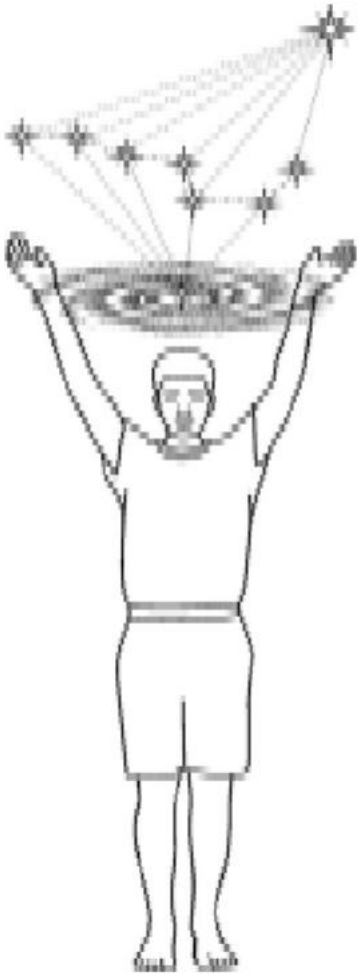


Fig. 4.7 *The North Star, Big Dipper and Galaxy spiral above.*

4. Always remember to breathe in slowly so you can process the awareness of the Lower Tan Tien. Feel a suction, warmth (Chi) and continue to breathe in and be aware of the suction of the crown, North Star and Big Dipper above you.

D. Linking Personal Stars, Energy Bodies and the Universe

Be aware of your 'personal stars' above and below and connect to other peoples' stars and energy bodies.

Three minds unite, one mind aware of the stars above you and a star below you. Connect these stars to the people around you. Think about the bright light above the crowns of other people. Start to spiral your energy to connect to each of them. Group all the stars into one energy body and connect all the way to the center of the universe.

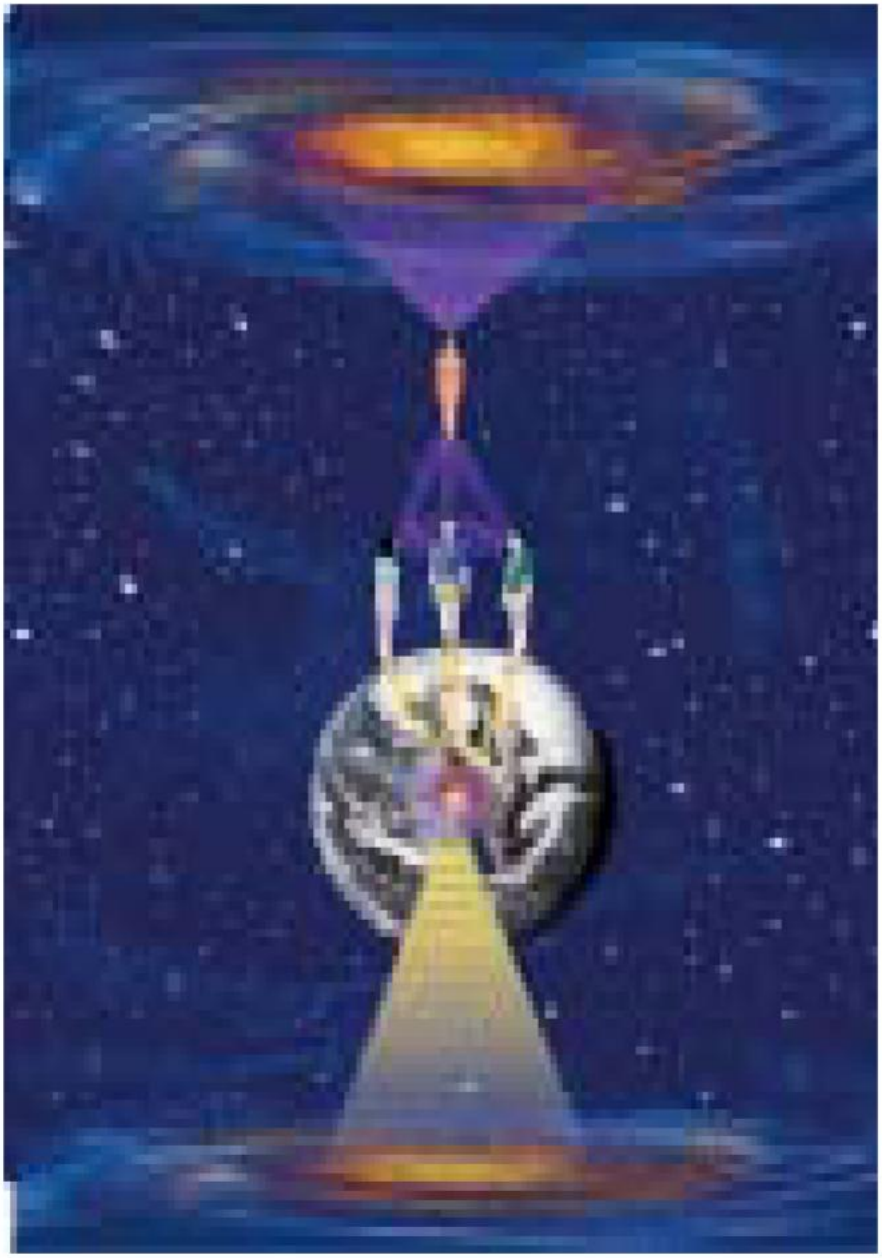


Fig. 4.8 *World Link Meditation*

1. Center Channel and Personal Star above

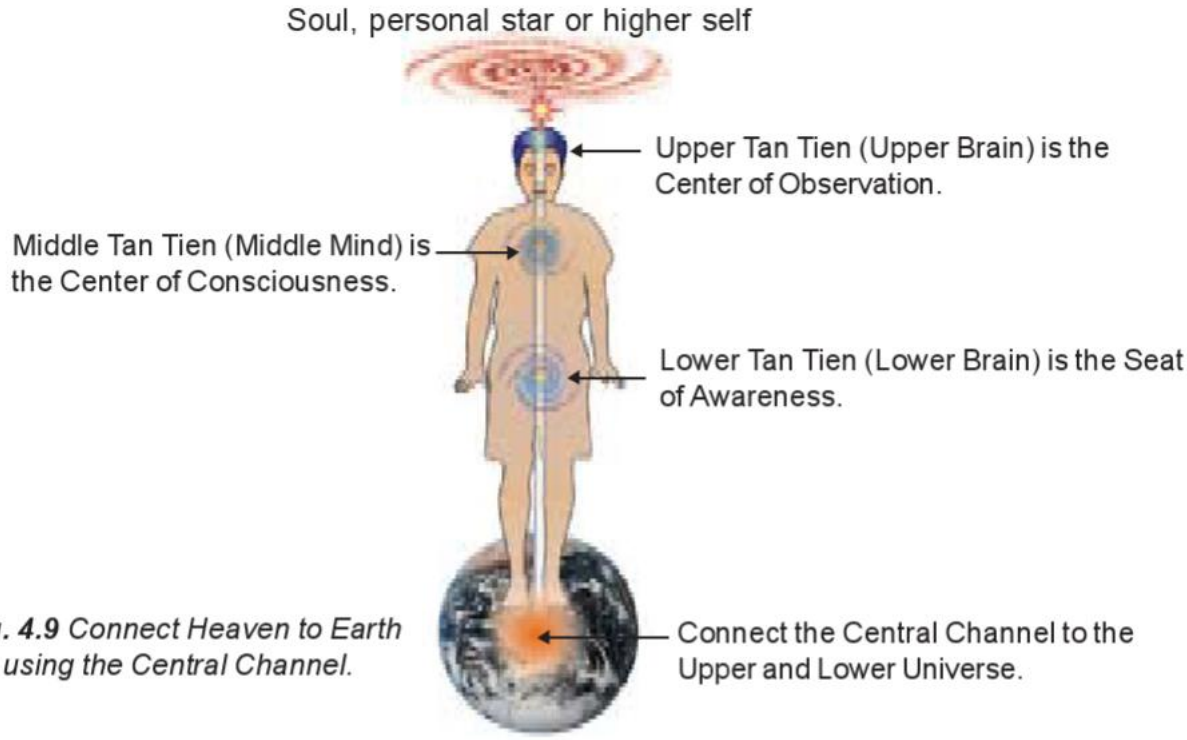


Fig. 4.9 *Connect Heaven to Earth using the Central Channel.*

2. Use Yi power to connect to your Personal Star above

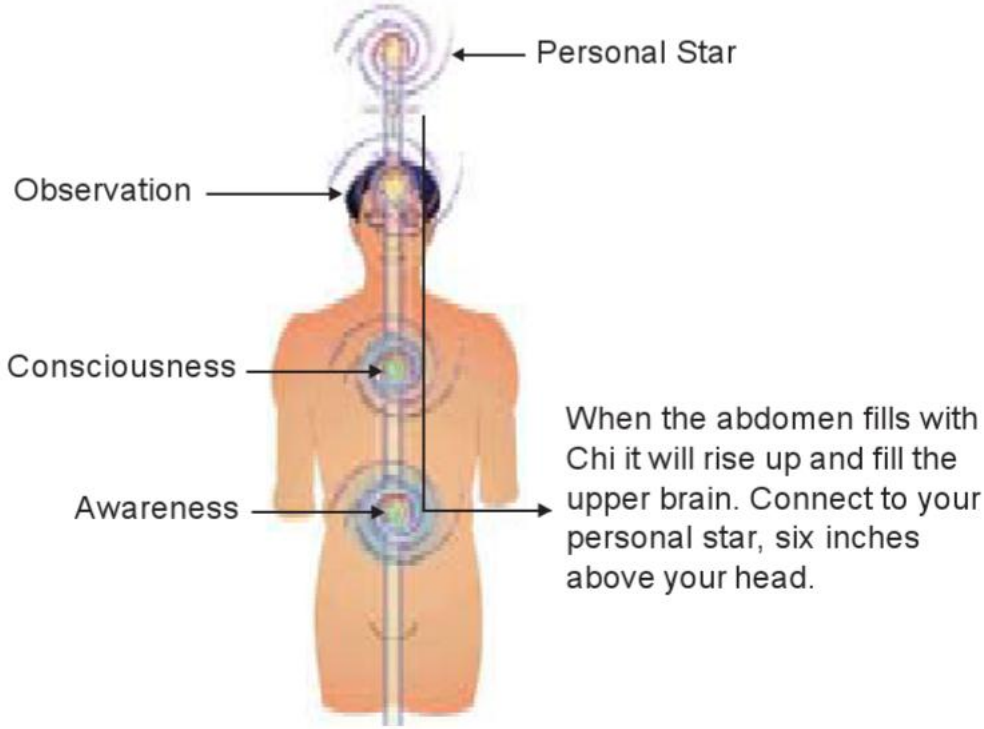


Fig. 4.10 *Connect to your Personal Star Energy using 'Yi' Power.*

3. Connect your Personal Star to the Personal Star of each person

Connect your personal star to each person and then to the universe.

4. Create a Chi Body becoming the major connecting point. Counterclockwise spiral to connect each person's star into a larger group star.

Fig. 4.11 Link with Each others Personal Stars.

Fig. 4.12 Connect into Group Star.

5. Meditators become satellite links and create a group energy body.

The World Link meditations become an integrated communication link. They are linked to the earth and the universe. Spiral and connect each person's star together and group the energy into one energy body. This energy body becomes an integrated communication center for each person in the group. We can be connected, wherever we are. Each person can connect and become their own 'Center of the Universe'.

Fig. 4.13 Form a Satellite Link and create a Group Energy Body.

E. Protective Circle and Chi Field

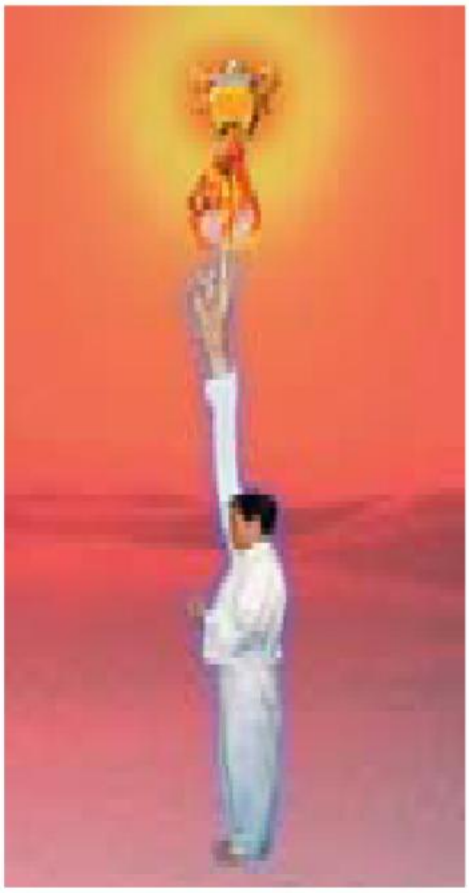
Raise your hand up and become aware of the 'Sacred Fire' in the universe. Feel that your fingers are very 'big', very 'long' and touch the fire. Bring the fire down. Make a circle around your community, your house, Tao Garden, the meditation hall and around your bodies. Create an energetic field of Chi around the whole room.

Sacred or Chi Fire
Connect and Receive Fire from the Universal Cauldron

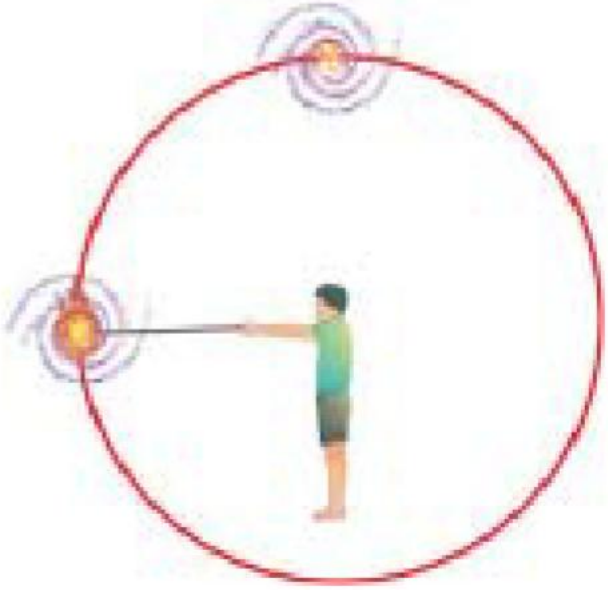
1. Activate the Sacred Fire in the Universe

Be aware of yourself. Feel your arm and fingers 'big', 'long' and 'hollow'. Reach to the universe to the Sacred Fire. Let the Sacred Fire fill and pack your arm.

2. Use Yi-Power to Create Sacred Fire Protective Circle



Use the Yi Power to draw the Sacred Fire Circle on the ground around your house, office and the room you work in.



A. **B.**

Fig. 4.14 A. *Create a Group Energy Body.* ***B.*** *Sacred Fire 'Protection'*

3. Create a Chi Dome

Set up the 'guardian animals', Blue Tortoise in the north, Red Pheasant in the south, Green Dragon in the east, White Tiger in the west, Yellow Phoenix above and Black Tortoise below.

Fig. 4.15 *Create and surround yourself with a Chi Dome and the Guardian Animals.*

4. Activate the Eight Elemental Forces of Nature and the Universe

Activate all eight forces; wind, mountain, fire and thunder on the east. Earth, lake, water and heavenly power on the west.

Call the Eight Forces; fire, water (ocean), thunder (lightning), lake (rain), earth, mountain, wind, and heaven.

Fig. 4.16 *Activate the Eight Forces.*

In the next sections F,G,H,I are practices that are for cleaning the cells. The more you clean the cells the more the Cosmic Healing can take place.

F. Chi (Sacred) Water Practice

The Sacred Water practice (also known in the West as Holy Water) is to exercise the right of being the creators of the Cosmos. With strict and absolutely regular daily water intake to prevent the stresses and associated damages of dehydration, the chief conductor and supervisor of the body's well being – tryptophan and its neurotransmitter derivatives, serotonin, tryptamine and melatonin will be well positioned to regulate all functions. Regular daily walks will keep muscles well coordinated and correct any physiological processes that are established in the body as a result of anxiety or emotional stress.

A well hydrated and healthy skin needs water to constantly replace that which it loses to the outside environment. This then allows blood vessels to the face and the body to open up and provide necessary nourishment for exposed skin cells.

Science has discovered that even if we clean water through filtration processes, although it may look and taste alright, closer analysis using high powered microscopic technology, indicates that its cell structure is 'unclean'. Water, like humans, maintains the memory of its old 'self'. We store our 'memory' within our DNA; water stores its memory within its cells.

The world is about 70% water

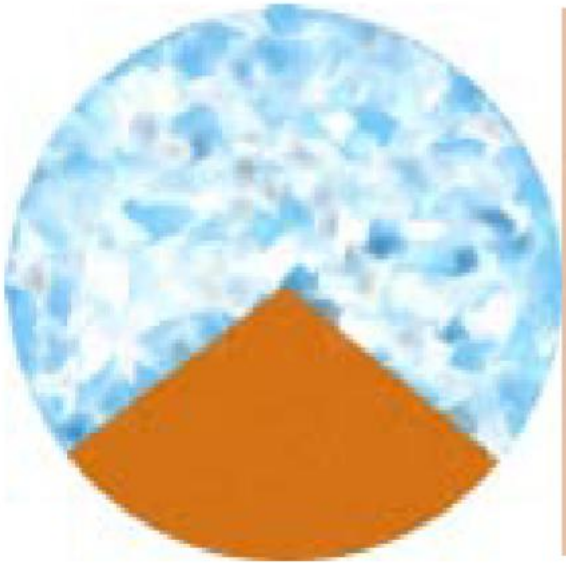
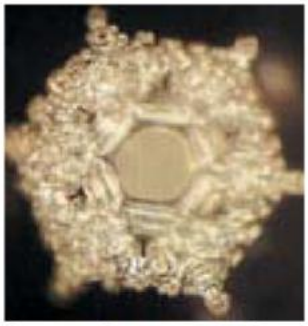


Fig. 4.17 *Water is Life.*

The following three pages contain extracts from the book 'The Message from Water' by Masaru Emoto. It advises us that 'water is telling us to take a closer look at ourselves - water is a mirror reflecting our mind.'

After offering a prayer to the Fujiwara dam the message is reflected in the water.

Chi and Love



Love-Appreciation

Let's do it

Do it!

Fig. 4.18 *The Human Body consists of 70% Water.*

When we project Chi and love into water and then freeze it; it will turn into a 'regular' and well structured crystal. If we project negative energy into water, the opposite will apply. Our projections will access the cellular level, clean out the polluted cells and reprogram those remaining with the essence of our affirmation.

When we project a nice, loving instruction or thought into water, like 'let's do it' the water will pick up this vibration and restructure itself. If we project negativity into the water, like a command, 'do it!', the water will acknowledge this accordingly. When we look into a pond we see our image. If we drink a glass of negative image water its destructive energy will enter our system and attempt to multiply.

Research has demonstrated that if we completely filter polluted water, using every process available, it will still maintain its old vibration and unstable structure. It will maintain memory in the same way that a computer does. We must therefore reprogram the cells with our intent.

If the water we drink contains too many pollutants and antioxidants it will eventually poison us.

As we can see from these pictures, there is an enormous difference between natural spring water and regular city water. It is now quite clear that if we program water so that it becomes, sacred, holy or Chi water, then it will have the power to remove all antioxidants and pollutants – all sickness. It will have the power to reprogram the water within our bodies, to carry the same pure structure.

Tokyo Tap Water

London Tap Water

Paris Tap Water

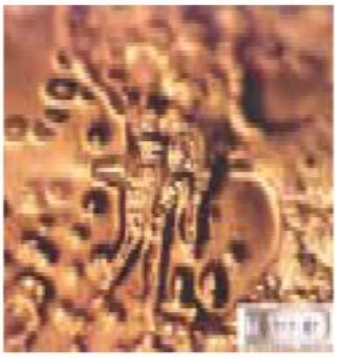
Under Ground Water in Northern Island, New Zealand

Buenos Aires, Argentina

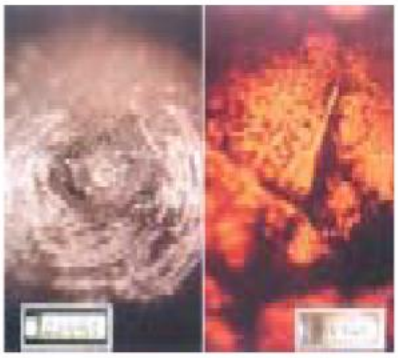
Spring Water of Saijo, Hiroshima Prefecture

Fig. 4.19 *Healing or hurting?*

We can also use music to program a vibration into water. Classical music will create a vibration that synchronizes with our own health, whereas heavy metal music will have a tendency to 'shatter'!

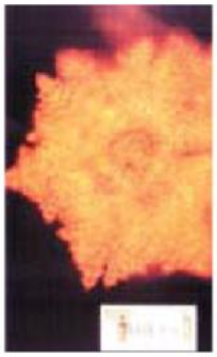


"You make me sick", or "I will kill you".



You Fool

Heavy Metal Music



Thank you

Folk song of Celtic Region in UK

Healing Music

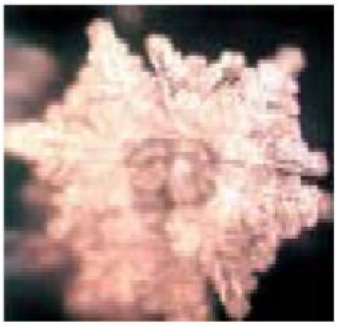
Fig. 4.20 *Power to heal or harm?*

Similarly, when we program our emotions regarding other people into water, the effects are the same. If we think negatively of someone, then the response will produce a bad vibration. If we think kind, loving thoughts then the structure will be like a beautiful crystal. If we love Mother Theresa and send this energy into the water, a wonderful crystalline structure will be created. Sick water can be transformed into healthy water. Healthy water can be transformed into sick water. The human body consists of 70% water. The key is your intent and your ability to believe that healing comes from the nature of your vibration. Always be open to receive.

Adolph Hitler

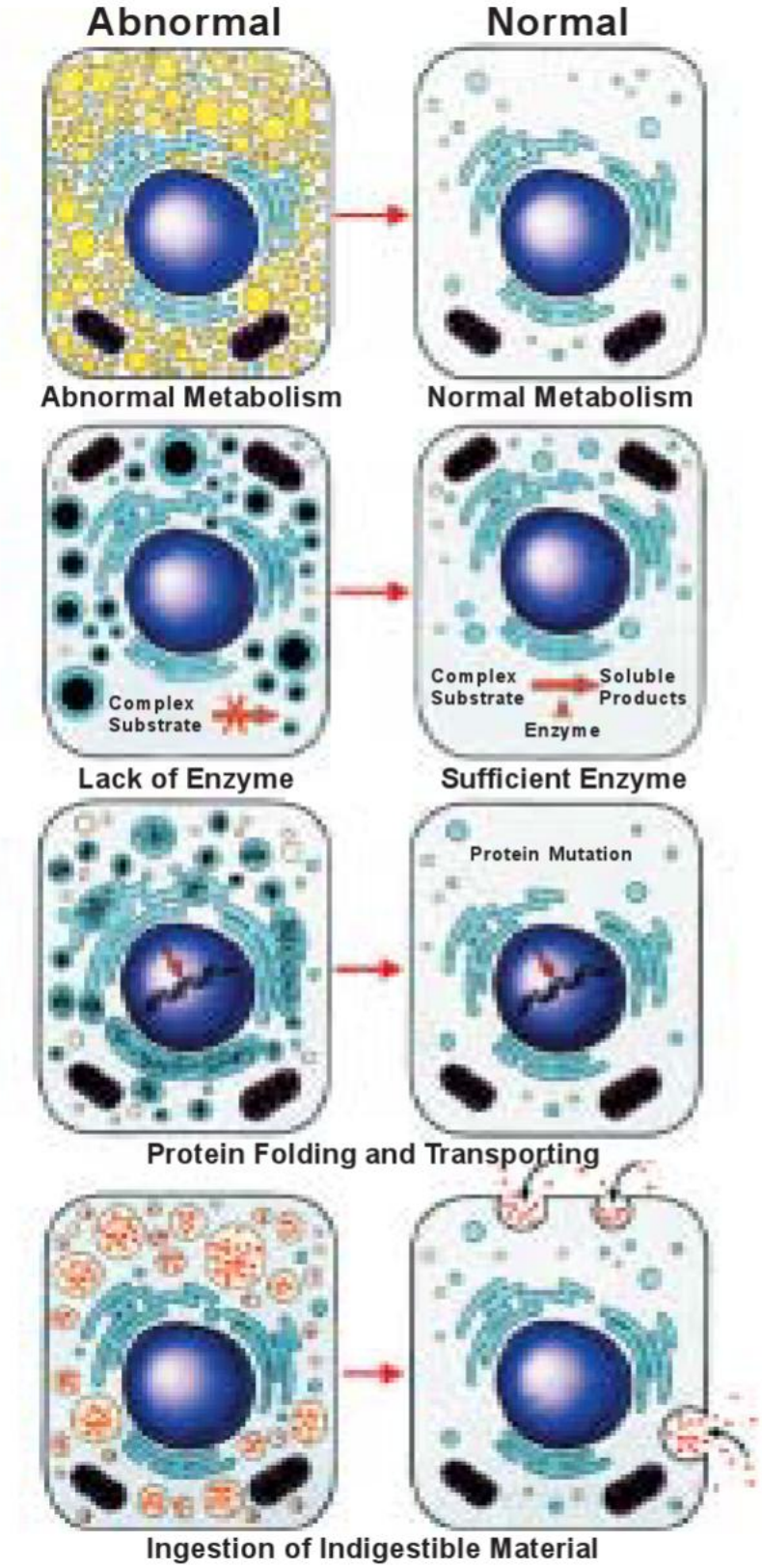
Mother Teresa

Dirty



Beautiful

Fig. 4.21 *Sick or saintly?*



A positive mental attitude will be transmitted into the cells of the water contained within our own body. We must consciously practice inner work until it becomes reflexive.

Fig. 4.22 *With the Power of the Sacred Water Abnormal Cells can be cured.*

Outline of Sacred Water Practice

Invoke the power of the Sacred Water practice to cleanse and heal the body's sick, toxic or negative energy. **If you are working with a group of people, direct your energy through the energy body overhead and into each person's star, as you guide them through the procedure**.

I. Hold a glass one quarter full of water in your left hand, folding the middle and the ring fingers into the center of the palm.
II. Hold the glass in front of your body as you point the 'Sword Fingers' of your right hand up to Heaven.
III. Make a request to receive healing energy and feel yourself touch a heavenly pool of sacred water energy. Feel the pool pouring down heavenly water to fill your arm.
IV. Place your fingers on the cup and ask:
Command 1: ***"Yin power and good fortune come from the east. Yin power please dissolve all negative energy, all sickness and bad fortune".*** Make a cross over the top of the cup.
V. Bring your arm down and point the sword fingers around the inner rim of the glass. Smile as you circle the fingers around the rim.
Command 2: ***"By my request. Please carry out the order now."*** Repeat this three times, charging the water with Yin Power. Project your thoughts into the water.
VI. Use the thumb and index finger to remove the sick energy from the cup, without touching the water. Do this three times. Talk to the sick cells. Tell them to listen to your command:
Command 3: ***"All sick cells please listen: Clear, clean and bright, this Sacred Water will take all the sickness away."***
VII. Repeat the order and visualize yourself removing the sick energy from the cells and giving it to Mother Earth for recycling.
VIII. Hold the cup with both hands near your heart.
Command 4: ***"This Sacred Water will give me/you health, wealth and longevity."***
Project love, joy, thankfulness, gratefulness, appreciation and the energy of compassion into the cup.
IX. The Sacred Water will carry the message of the practice to all the cells, where it will remain. If you are practicing in a group, drink the water in unison. If you are working with a student, pass them the glass to drink using both hands.

Step I: Prepare the Hands and Arms to Receive the Universal Chi

Left Hand Position: Prepare to hold a cup or glass with the left hand by folding the ring and middle finger into the center of the palm. Hold the glass in front of the body.

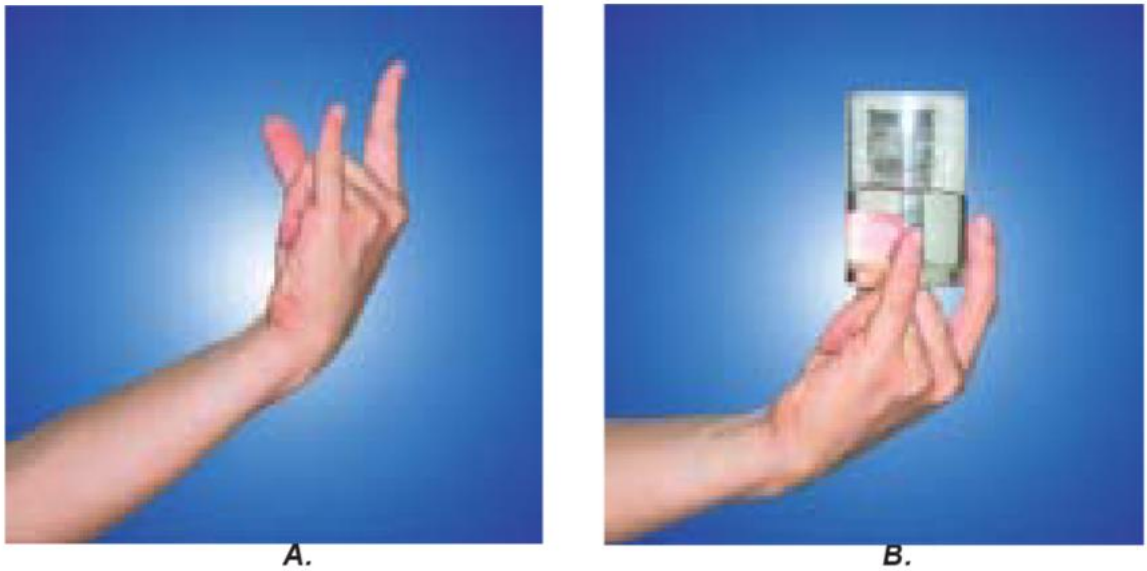


Fig. 4.23 A. *Fold Ring and Middle Fingers.* ***B.*** *Hold Glass in Front of Body.*

Step II: Prepare the Sword Hands to Receive the Universal Chi

Right Hand Position: Form the right hand into a 'sword hand' by folding the pinkie, ring fingers and thumb into the palm. Straighten and hold the index and middle fingers together and extend them upward.

Fig. 4.24 *Prepare to receive the Universal Chi.*

Step III: Fill your Arm with the Power of the Heavenly Pool

Sense the sword fingers and the arm as being 'long' and 'big' as you raise them towards Heaven. Sense that the middle of the arm is hollow and bottom is sealed at the shoulder. The mind's attention is focused on merging with the primordial Chi of the Universe, the energy of your thoughts will be multiplied.

As you make your request to the Universe, feel that you are touching a heavenly pool of Sacred Water Energy. Feel that the pool is pouring down like a waterfall to fill the arm. When it is full compact, compress the Sacred Energy into it as much as you can.

Fig. 4.25 *Touch the Heavenly Pool.*

A.

B.

Fig. 4.26 A. *Blessing Sacred Water in Russia.* ***B.*** *Opening the Third Eye in Russia.*

Step IV: Make the Cross on the Top of the Cup

Put Sword Fingers on top of the Cup. Ask for the Yin Power: **Command 1:** ***"Yin Power and good fortune, come from the east. Yin has the power to dissolve all negative energy, all sickness and bad fortune."***

Command 2: Make the cross on the top of the cup and say ***"By my request....."***.

Fig. 4.27 *Give the command: "Fortune comes from the East - Yin has the power to dissolve all negative energy, all sickness and bad fortune. By my request....".*

Step V: Charge the Water to Transform it into Sacred Water

Bring your arm down and point the sword fingers into the glass of water. Smile and circle the sword fingers around the inner rim of the glass.

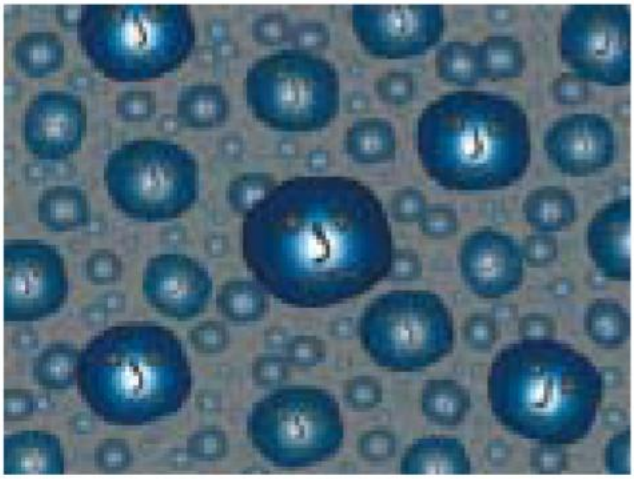
Continue to order: ***"Please carry out the order now."*** Repeat 3 times to charge the water with the Yin Power. As you do this, project a good thought into the water.

Fig. 4.28 *"Please carry out the order now" Repeat three times, charging the water with the yin power.*

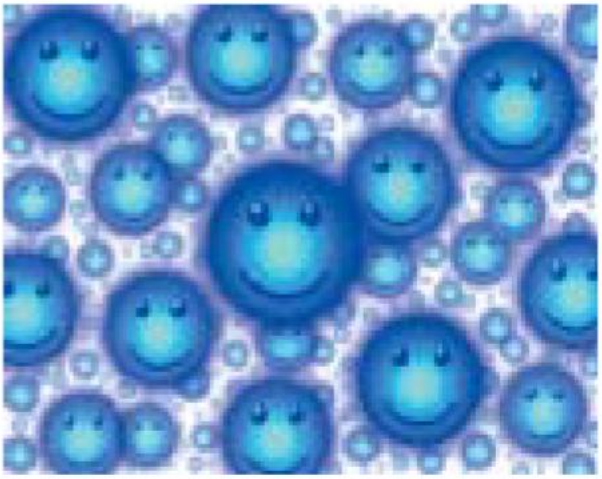
Step VI: Command 3: *"All sick cells please listen : Clear, Clean and Bright, this Sacred Water will take all the Sickness away."*

Give the above command. Use the thumb and index finger to pick up sick energy from the cup, without touching the water. Do this three times.

Fig. 4.29 *"All sick cells please listen: clear, clean and bright, this sacred water will take my/your sickness away".*



A.



B.

Fig. 4.30

A. *Ask for the power to see the cells - if they are toxic and dark, ask for them to be cleaned out.*
B. *"Clear, clean and bright".*

Step VII: Let go of the Sick Energy to be transformed by the Earth

As you **repeat** the order, picture yourself removing the sick energy from the cells and discarding it down into the Earth to be transformed and recycled.

Fig. 4.31 *Sick Energy return to the Earth.*

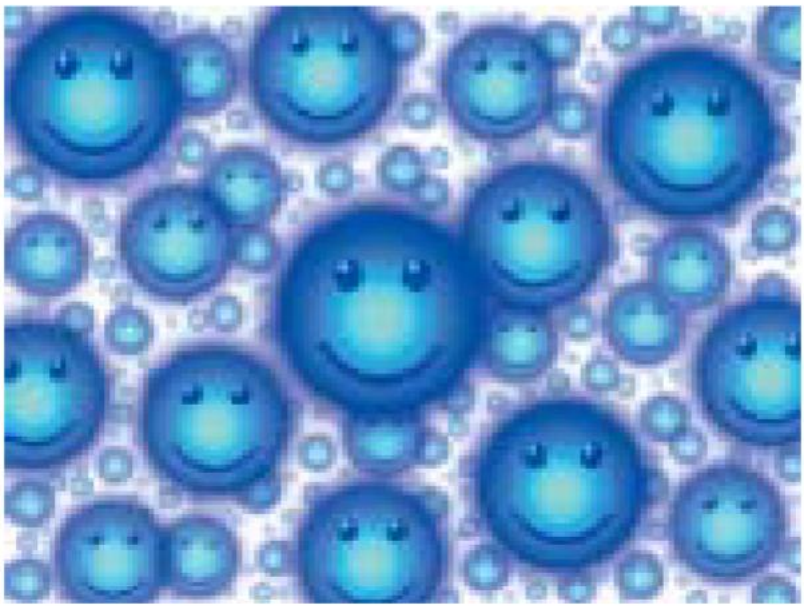


Fig. 4.32 *See the Cells become Clean, Bright and Smiling.*

Step VIII: Fill the Water with Compassion

Hold the cup with both hands near the heart and project goodness into the water.
Command 4: ***"This sacred water will give me/you health, wealth and longevity."***

Project love, joy, thankfulness, gratefulness, appreciation and the energy of compassion into the cup.

Fig. 4.33 *"This Sacred Water will give you health, wealth and longevity."*

Step IX: Drink the Sacred Water

The Sacred Water will carry the message to all the cells. It will keep the message of the Sacred Water practice in all the cells. Use both hands to pass the Sacred Water to the student you are working with, or drink it yourself and/or in unison with your group. **Feel the water go into all the cells of your body. Feel it removing the sick cells and purifying your body.**

You can also sprinkle it on to any area that requires healing.

Fig. 4.34 *Drink the Sacred Water.*

G. Empty and Fill

Ask for permission to work on the student by communicating with their personal star. Point your sword hand down to the ground. Project your hand 'very big and very long' and your feet 'very big and very long' - extended down to the ground. Now very slowly inhale, bring up the earth energy. An important part of the practice is to extend a 'line' down from universe into yourself and one into the student. The line sinks through the Tan Tien into the universe below. You can send your energy up to your energy body and it will be brought down to the energy body of the other person.

Fig. 4.35 *Feel your hands are long as down into the earth they extend.*

Fig. 4.36 *Project the other person's legs deep into the earth.*

Fig. 4.37 *Blend the universal energy and Earth Chi - bring it into all of the bones and cells.*

Bring the energy up to your feet, into your bones. Let it enter all the bones, organs and cells. Feel it blending with all the sick energy. Turn your palm up, turn it back down again and exhale; let go of all the sick energy, the negative energy, the worries and the burdens all the way down to the earth. Down, down, down to the earth. Again from the earth up. Do it at least three, six or nine times. When people are very sick, you need to clean them thoroughly. Bring the earth energy up into your bones again. Feel numb, tinkling electricity flowing in all your cells. Return the energy down, down, down to the earth. Relax, let go; worries, burdens, let everything go. It is very important to say to yourself or group: **"You must let go of all your sick energy. Let go of all your burdens. Let go of all your worries, down to the earth".** Repeat it once again. Inhale from the universe and into the earth. From the earth let it enter into your bones. From the bones all the way to your inner self. Feel the energy blend with the sick energy. Exhale and let go of all your sick energy, any negative emotions burdens, worries, anxieties; release them all the way down into the earth.

Fig. 4.38 *Bring the Universal Chi down and let it blend with the sick and negative energy. Bring it down into the earth and bury it there.*

Empty negative, sick energy, burdens, worries, go deep down into the earth. Dig a hole and bury them there - tell them "Do not come back; you will be happy there."

Feel that the feet are long and extended into the earth. The hollow bones have been compacted with compressed Chi.

Once again guide the good Chi from earth up to the fill the person again. See the cells as big as the stars and fill them with Chi to blend with the dirty and sick energy. Then empty them again down to the earth.

Fig. 4.39 *You can also use a Tree to guide the Chi down into the Earth.*

H. Clean with Green Light

Become aware of your liver and breathe into your throat center. Feel that you are breathing the green light into your throat center and let it blend in the Tan Tien. The Chi comes up to blend in the heart, up to the crown, spirals and goes up to the universe. Raise your hand in a spiraling motion up to the universe. Use your 'one hand' to spiral in the universe. Spiral clockwise first. Spiral green light from the universe. Now reverse, counterclockwise - multiply and spiral counterclockwise, bringing the Chi down to clean out your communities, your house, the Tao Garden, the meditation hall, your bodies and all of the people that are 'here' - fill yourselves with Chi. You will use this power to see the cells.

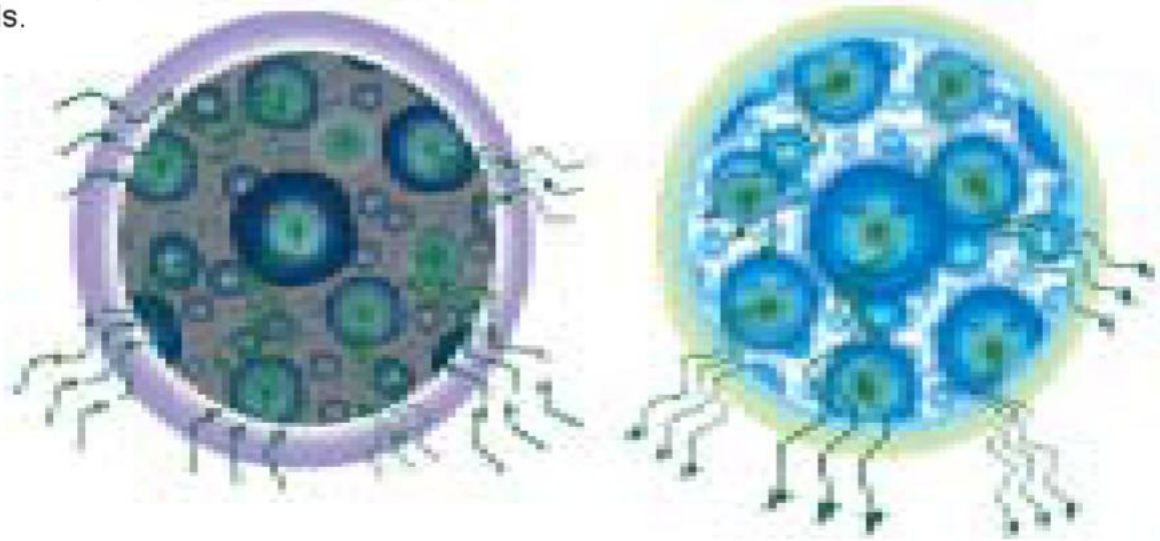


Fig. 4.40 *Spiral Sick Energy Counterclockwise down to the Earth. Smile to the Cells and let the Green Light clean out the sickness, flushing it down into the Earth below.*

See the cells enlarged and this green energy go in and blend with the dirty, black and cloudy energy. See it come out and let it go down into the earth. Dig a hole and bury it there. Tell it, "Don't come back. You will be happy down there". Become aware of the green light and spiral counterclockwise. Spiral down, cleaning out the stress. Clean out your house. Send everything down into the earth. Repeat three, six, nine, thirty six or one hundred and eight times. This depends on how much sick energy you are dealing with in your body.

Green:

Fig. 4.41 *Clean with green.*

Green cleans and detoxifies all of the body's cells. Green Chi is mild and safe. Green Chi is used for cleansing, and as a decongestant for diseased parts. It 'loosens' the area. The light green Chi is used to break down dirty or diseased energy, like a detergent is used for washing clothes or dishes. Afterwards, the cells will be rinsed with blue light, like clean water is used to rinse the detergent and residue from clothes or dishes.

Throat Center Green

Be aware of the liver's green color, the throat and the forest. Breathe into the throat, feel yourself breathing in the green light. Guide it down to the Tan Tien, blend and move it up to the heart and the crown.

Project it to the universe; spiral and let it multiply.

Channel one direct line down to the student, one to your crown and one to your palm.

Fig. 4.42 *Blend Green Chi into the Three Tan Tiens - project to the Universe, multiply and bring the Energy back down to the Student.*

Be aware of the liver, the gall bladder, the forest and the throat breathing.

Be aware of the green light in the universe. Let the light come in and blend in the Tan Tien, up to the heart to blend with the compassion in the heart, and up to the crown.

Project the light up to the universe. See it spiral and let it multiply.

Always keep your Lower Tan Tien Fire warm. **Spiral in your Tan Tien and spiral the energy down to the student.** Spiral 1,000 revolutions per minute, 10,000, 30,000 and 60,000.

Fig. 4.43 *Draw down the Green Light from the Universe.*

Cleanse and Remove Sickness

Extend your arms up, with palms facing the heavens. Use one hand to spiral the green force down. The other hand holds the position and connects to the universe. Let this big pool of green light in the universe spiral down – through your community, your home and then into your crown.

Let the Green light blend into the cells and bond with sickness and toxins. Let the green light bring the sickness out of the cells and flow down to the center of the earth.

Dig a hole and bury it. Give the command: "Don't come back. You will be happy down there. You will be transformed into good Chi." Smile. Always smile.

Repeat it six, nine or eighteen times. For people who are very sick, who have cancer or may be terminally ill, you can do this two or three hundred times.

Fig. 4.44 *Green Light bonds with the Sickness and Toxins before returning them to the Earth.*

I. Clean with Blue Light

Be aware the blue light, kidney blue. Breathe the blue light into the throat center. Now slowly blend the blue light in the Tan Tien. Blend the blue light in the heart, in the crown and project it up to the universe, spiraling clockwise. Then feel the universe pouring the blue light back down; counterclockwise. Spiral down. Look at the cells and see the blue light, like water, go in to the cells to rinse and clean all the dirty things, down, down, down to the earth. All the way down. Repeat three, six or nine times. Smile.

Blue:

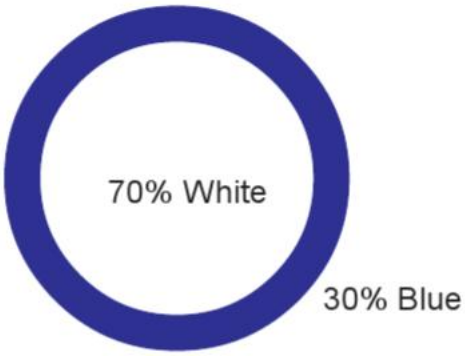


Fig. 4.45 *Rinse with Blue.*

Blue is like cold water; it has the yin power to dissolve all kinds of negative energy and sickness. It has an inhibiting effect. Blue yin energy is the opposite of red yang, which has a strengthening and stimulating effect. Blue has a cooling effect; it can reduce pain, inflammation and can help blood to clot. It stops bleeding and reduces fever. It can help to induce rest and sleep.

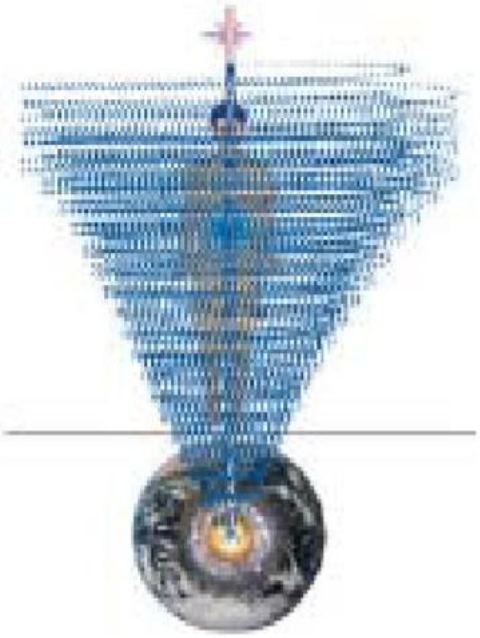
Throat Center Blue

Be aware of the kidneys' blue color and breathe the blue light into your throat. Guide it down to the Tan Tien, blend and move back up to the 'heart of compassion' and then the crown.

Project up to the universe, spiral and let it multiply.

Channel one direct line down to the student, one to your crown and one to your palm.

Fig. 4.46 *Multiply the Universal Blue Light - guide the Energy from the Throat, Heart and Crown into the Universe and back down.*



Be aware of the kidneys, the bladder, the oceans and the throat breathing.

Be aware of the blue light in the universe. Let the light come in and blend in the Tan Tien, up to the heart to blend with the compassion and up to the crown.

Project the light up to the universe. See it spiral and let it multiply.

Fig. 4.47 *Draw the Blue Light from the Universe - rinse clean and remove sickness.*

Rinse and Flush

Extend your arms in the air, with palms facing heaven. Use one hand to spiral the green force down. The other hand holds the position and connects to the universe. Let a big pool of green light in the universe spiral down – through your community, your home, and then into your crown.

Let the blue light flush into the cells and flush out sickness and toxins towards the center of the earth.

Dig a hole and bury them. Give the command: "Don't come back. You will be happy down there. You will be transformed into good Chi."

Repeat it six, nine or eighteen times. For people who are very sick, who have cancer or who may be terminally ill you can do this up to thirty six, seventy two or one hundred and eight times.

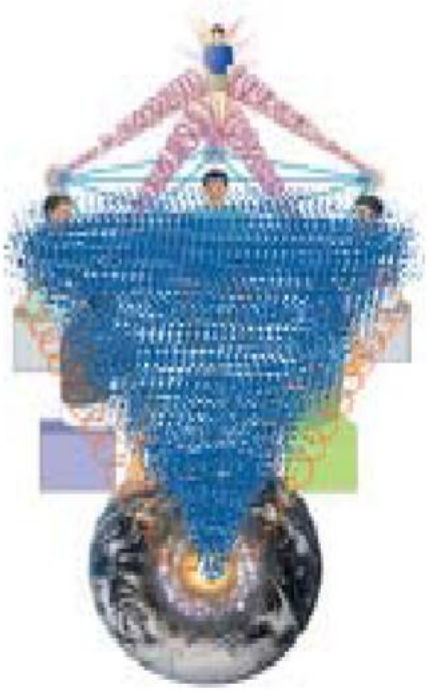


Fig. 4.48 *Blue Light flushes out the sickness and toxins before returning them to the earth.*

J. Charge with Violet Light

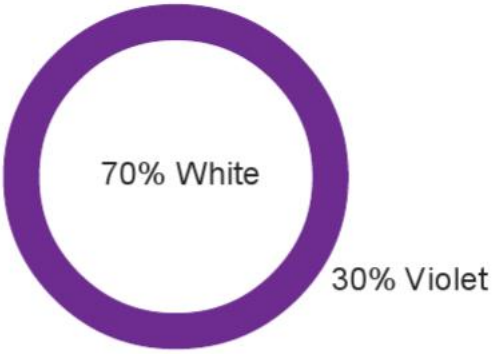


Fig.4.49 *Intelligent Luminous Violet*

Luminous Violet has intelligence and can be programmed. The universe is full of violet light, especially the North Star and the Big Dipper. The color of the star of the higher self or soul, above the crown, is also violet light, the Divine or Soul energy.

It has properties of other Chi colors. It has a rapid regenerating effect on damaged organs and nerves. Always use green and blue light before using violet. Violet light develops the crown center, the spiritual core. It is good for psychological ailments as well as for physical deficiencies.

Primordial Force

Turning the three minds into one mind, go deep into the empty space of the cell and deep into the chromosomes, magnify the space as you enter into the DNA and return to the original cells. The empty space is the Wu Chi. When you enter this stage you turn the subconsciousness into consciousness and you can talk to your body and cells. You can change the programming of DNA and RNA.

Ask for the power to see the cells and look at the brain cells spread out into the space. "Brain cells please listen. Clear, Clean, and Bright: fill with violet light and return to normal function".

Violet Light into the Cells

See violet light. Be aware of your crown. The Tan Tien Chi and the negative Chi all combine in the crown. Extend a violet light up to the universe. See the North Star in the Big Dipper. Tell the student to hold their arms in the air, so that they can funnel the Chi into their personal star. Bring the North Star and the Big Dipper down; hold the handle of the Big Dipper and pour the violet light over the student's personal star. The higher cells will be programmed. Let the Chi enter the brain and ask for the power to see the brain cells. "Brain cells listen to the command". If there is sickness in the brain, give the command. "Sickness go away".

The North Star is a major source of violet light.

The Big Dipper is a major source of red and infrared light. Taoists understand that the cup of the Big Dipper gathers all the violet light from the universe. The left hand holds the handle of the big dipper - pour it down to your crown. It then flows down throughout the body.

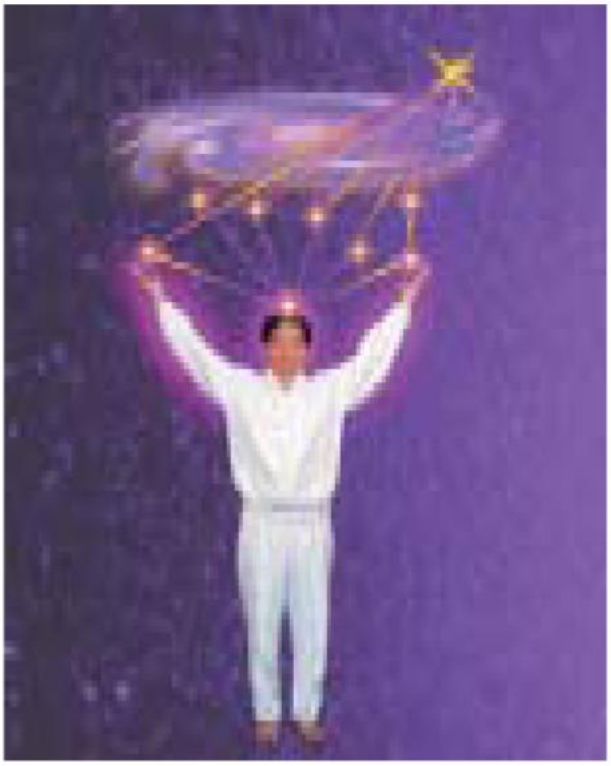


Fig. 4.50 *Connect with the North Star to receive the Violet Light.*

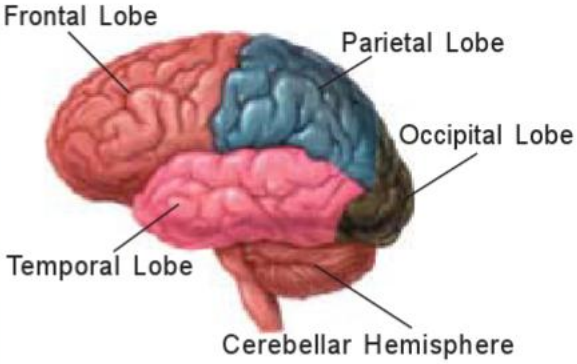
Fig. 4.51 *Practitioner connects with Universal Violet Light.*

Bring the violet light down to the student's personal star above their crown. Pause to let the higher cells of the brain reprogram the violet light at the personal star. Continue to spiral the violet light down through the cells of the brain and down through the cells of the whole body.

Fig. 4.52 *Pause to reprogram the Violet Light at the other Person's Personal Star.*

Fig 4.53 *Lead the person and guide them to follow you.*
Tell them to focus on the part of their body that you are working on.

1. Ask for the power to see into the cells of the brain. Ask the student to move their hands to cover their brain. "Brain cells listen to the command: Sickness go away. Clear, clean and bright; fill with violet light and return to normal function".



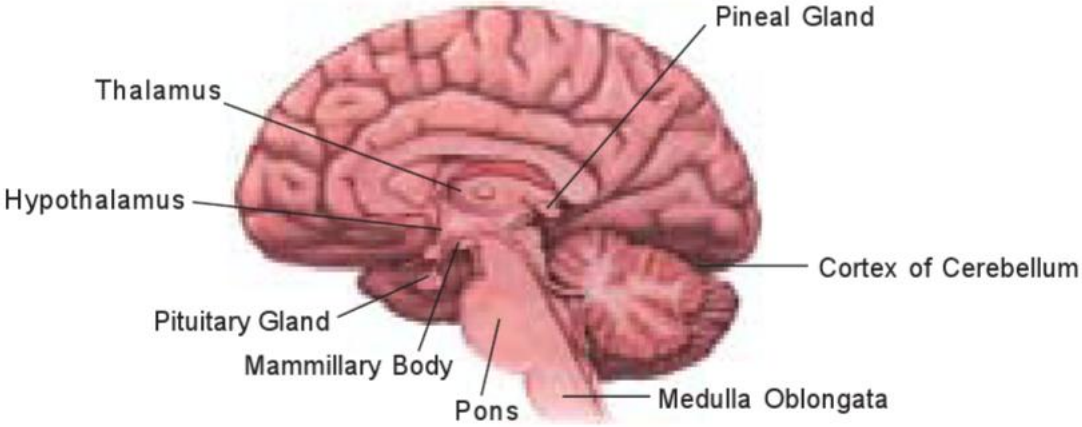
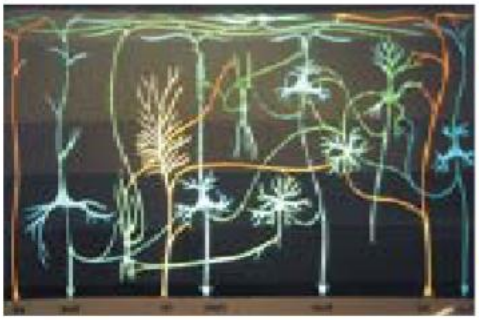
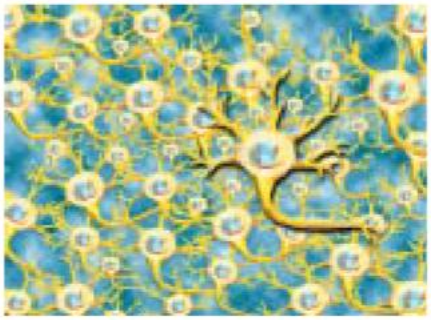


Fig. 4.54 *"Clear, clean and bright; fill with violet light and return to normal functions".*



Brain Cells



Healthy Happy Cells

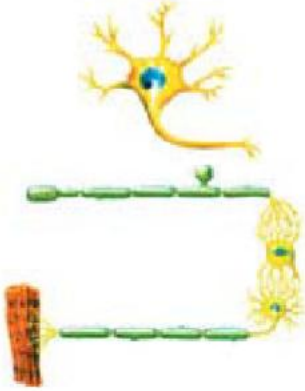


Fig. 4.55 *'Intent' to Heal.*

2. Ask for the power to see the cells of the sense organs. Ask the student to move their hand to cover their senses. Give the command: "Eyes, ears, nose, tongue and mouth cells listen to the command. Sickness go away. Clear, clean and bright; fill with violet light and return to normal function".

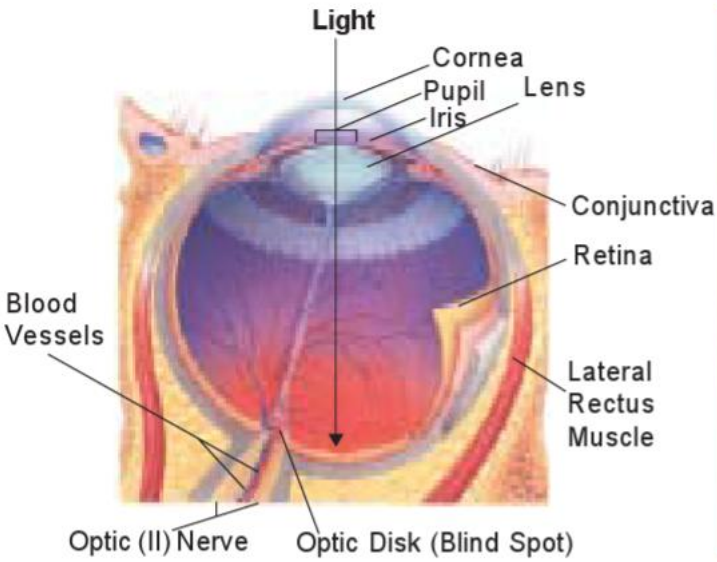


Fig. 4.56 *"Eyes, listen; clear, clean and bright; fill with Violet Light and return to normal function".*

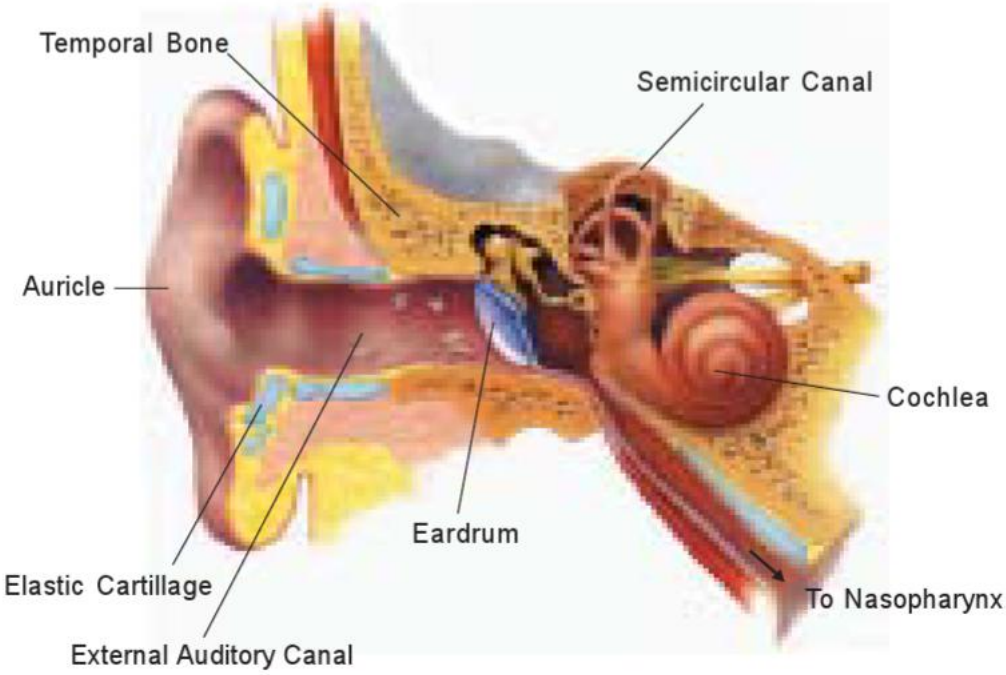


Fig. 4.57 *"Ears, listen; clear, clean and bright; fill with Violet Light and return to normal function".*

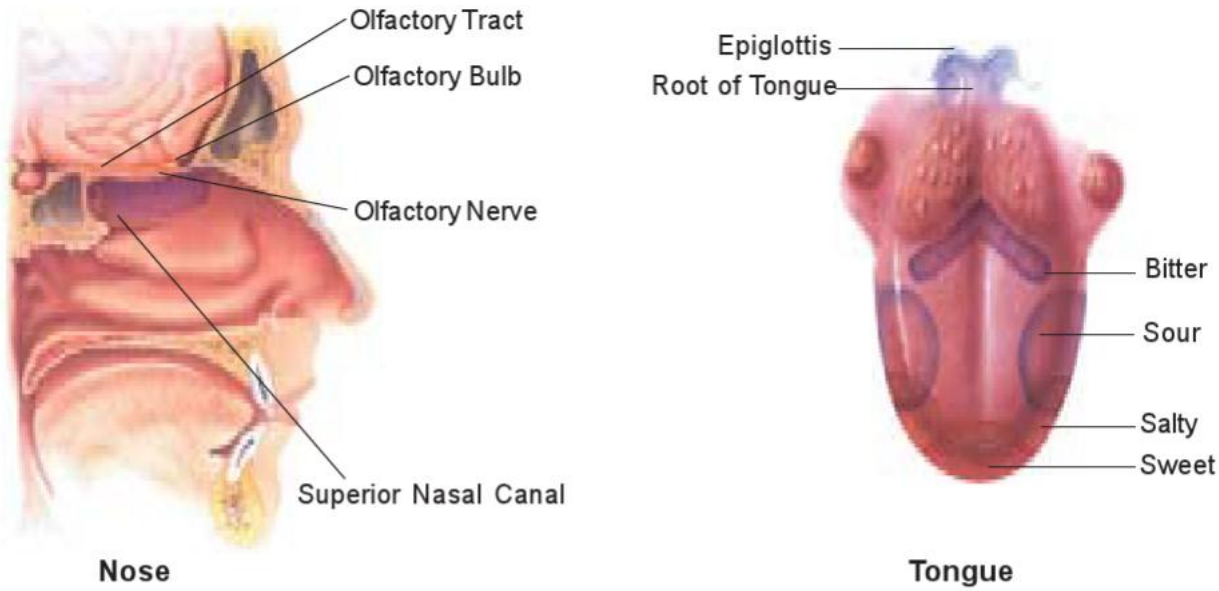


Fig. 4.58

"Nose, tongue, listen; clear, clean and bright; fill with violet light and return to normal function"

3. Move your hands down to your throat center and give the command: "Thyroid, parathyroid and Thymus glands, listen to the command; Clear, clean and bright; fill with violet light and return to normal function".

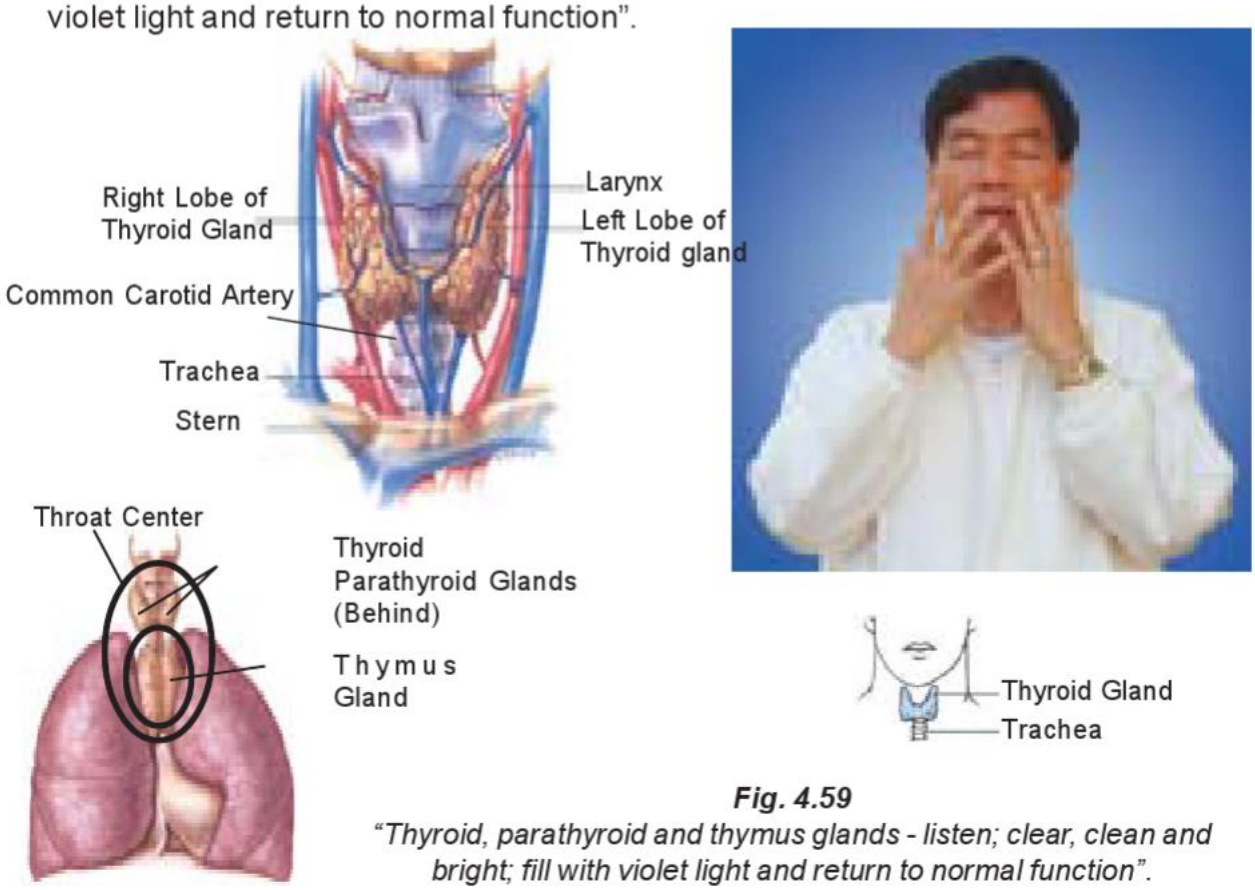


Fig. 4.59

"Thyroid, parathyroid and thymus glands - listen; clear, clean and bright; fill with violet light and return to normal function".

4. Move your hands to the heart and the lungs. Ask for the power to see the cells of the heart and lungs. Give them the command: "Lungs and heart cells, listen to the command". If there is no sickness, just clean them out. See the cells and clean them out with violet light. If there is sickness, tell the sickness to "go away - be clear, clean and bright; fill with violet light and return to normal function". Make sure that you say this part aloud. Give the command in a very firm tone of voice.

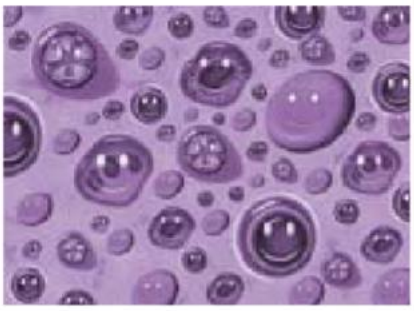


Fig. 4.60

"Heart and lung cells please listen; clear, clean & bright; fill with violet light and return to normal function".

5. Move your hands to cover the left and right sides of the ribcage. Ask for the power to see the cells of the liver, gallbladder, spleen, pancreas and stomach. Give them the command: "Liver, gallbladder, spleen, pancreas and stomach cells, listen to the command". If there is no sickness, just clean them out. If there is sickness, tell the sickness to, "go away - be clear, clean and bright; fill with violet light and return to normal function". Make sure that you say this part aloud. Give the command in a very firm tone of voice.

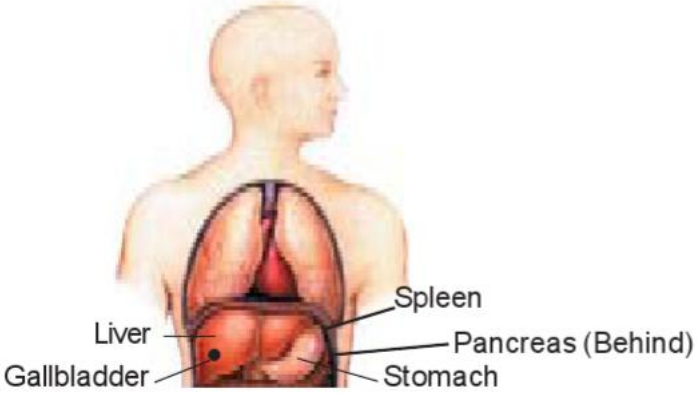
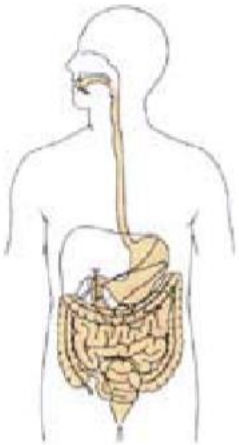


Fig. 4.61

"Liver, gallbladder, pancreas and spleen cells please listen; clear, clean and bright: fill with violet light and return to normal function".

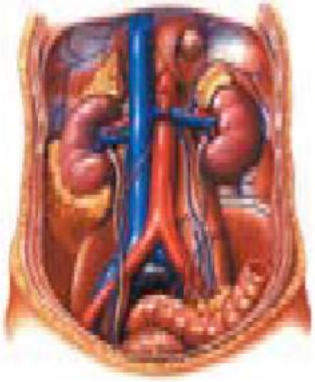
6. Move your hands to the large and small intestine on the front of the abdomen. Ask for the power to see the cells of the intestines. Give them the command: "Large and small intestine, listen to the command". If there is no sickness, just clean them out. See the cells and clean them out with violet light. If there is sickness, tell the sickness to, "go away - be clear, clean and bright; fill with violet light and return to normal function". Make sure that you say this part aloud. Give the command in a very firm tone of voice.

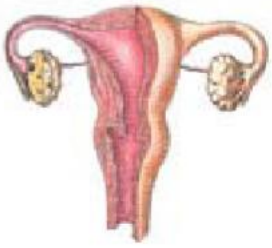


Intestines **Healthy cells**

Fig. 4.62 *"Small and large intestine cells listen to the command: clear, clean and bright; fill with violet light and return to normal function".*

7. Move your hands to the kidney and sexual organs and ask for the power to see their cells. Give the command: "Kidney and sexual organ cells listen to the command: Clear, clean and bright; fill with violet light and return to normal function". Gather the violet light again and let it pour down and fill all the cells. See the violet light again and feel and see that all the cells are, "clear, clean and bright". Smile.





Kidney **Testes** **Ovaries**

Fig. 4.63 *"Kidneys and Sexual Organs listen".*

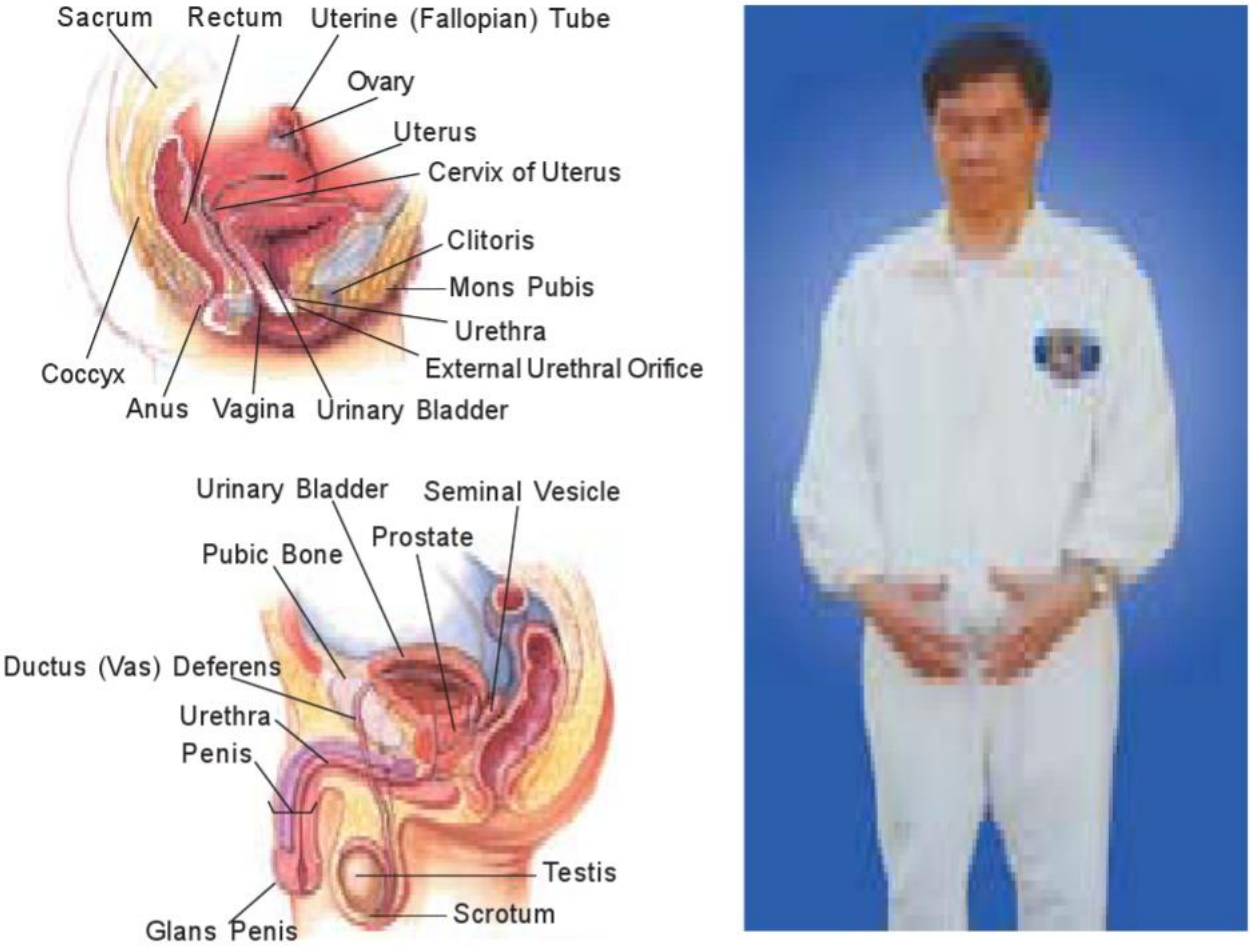


Fig. 4.64 *Male and Female Sexual Organs*

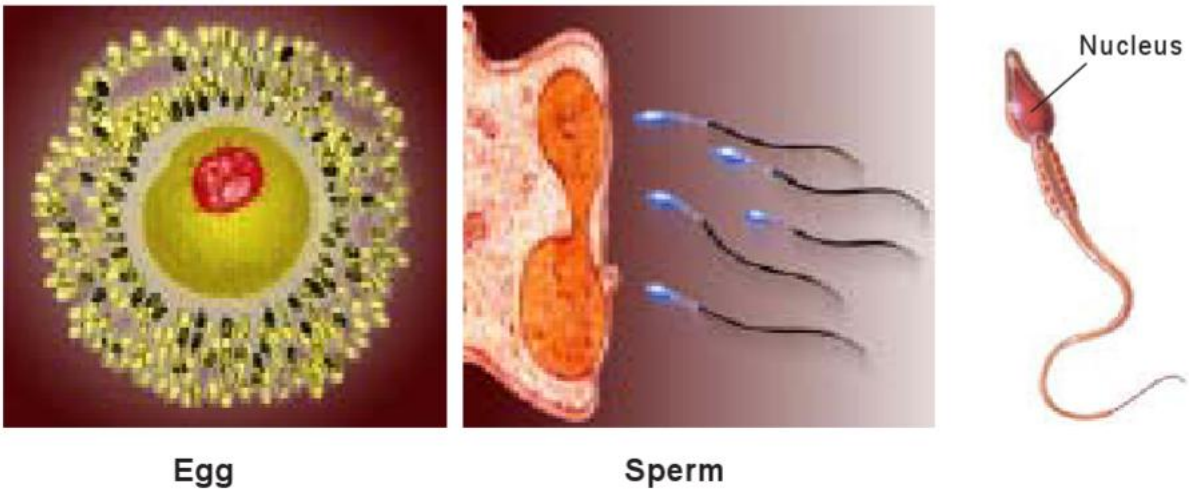


Fig. 4.65 *"Clear, clean and bright: fill with Violet Light and return to normal function".*

K. Activate the Defense and Immune System

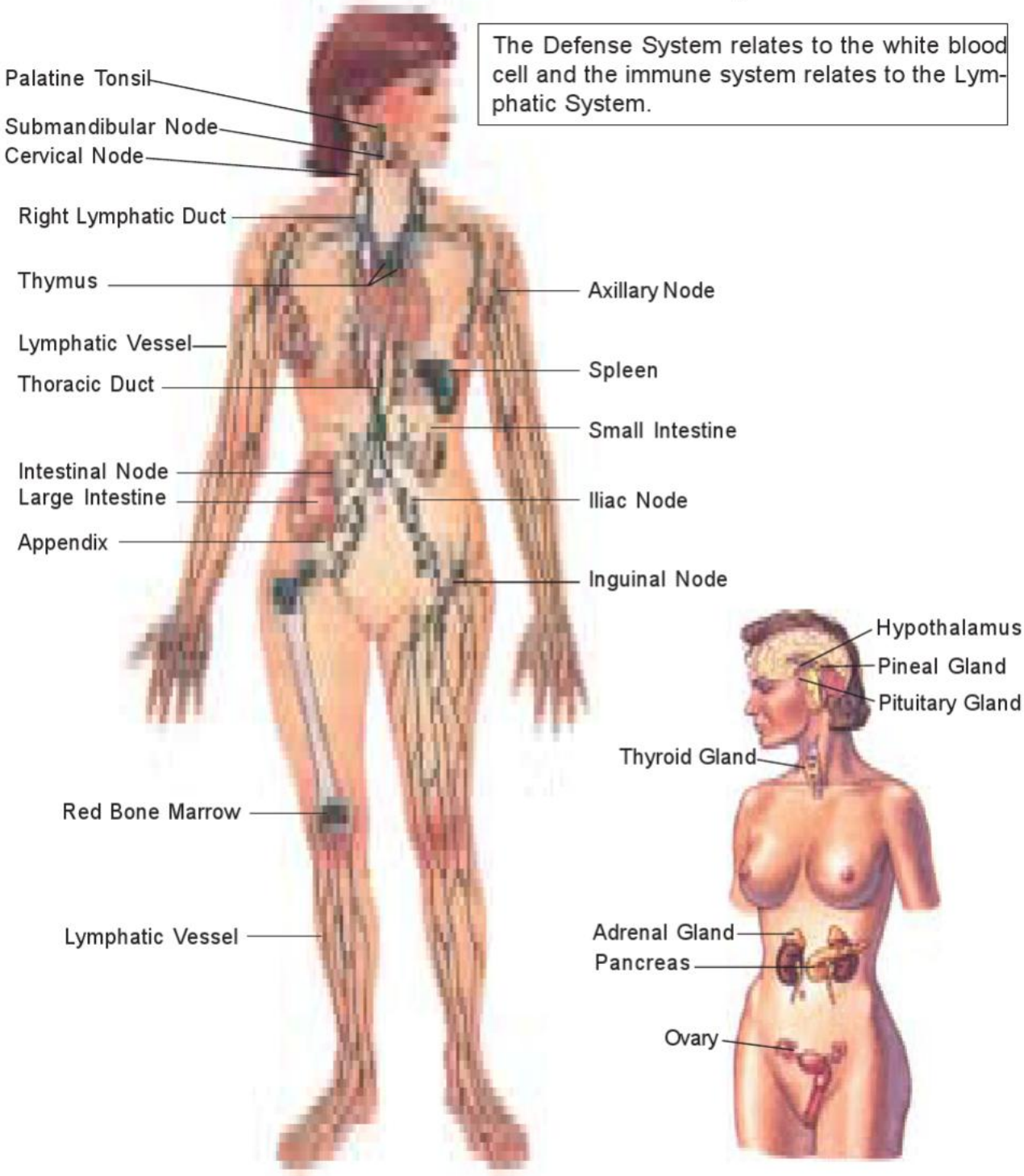


Fig. 4.66 *Ask the cells to listen to the command.*
The bone marrow produces red and white blood cells. The lymphatic system cleans the toxic and polluted material and bacteria from the cells.

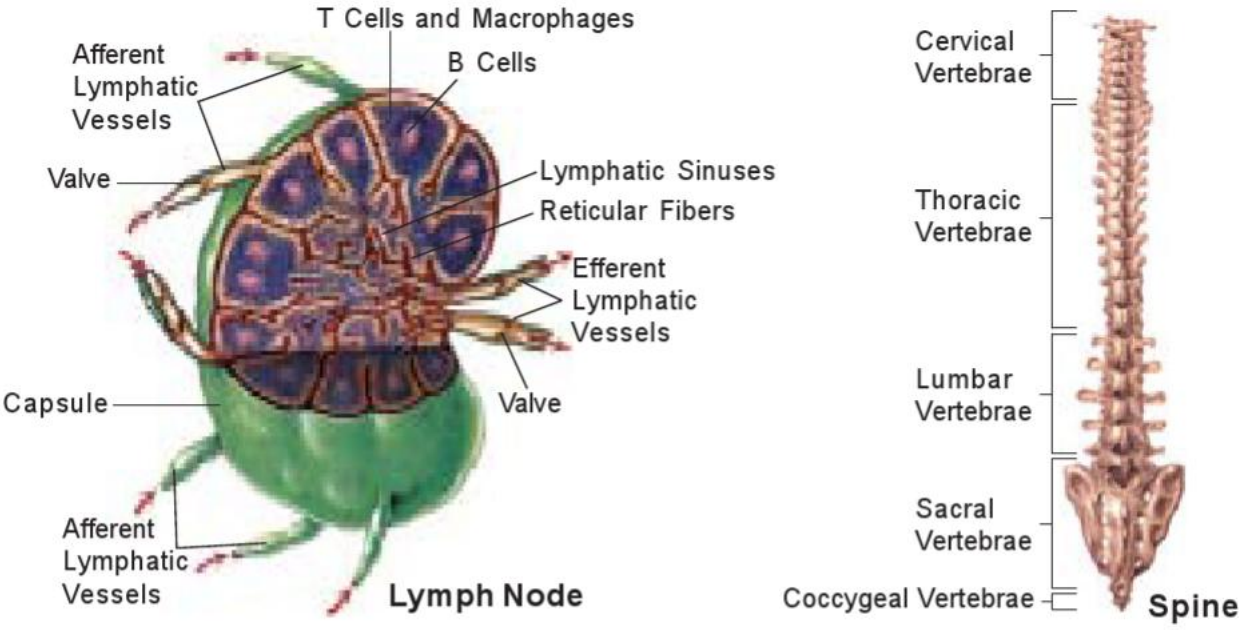
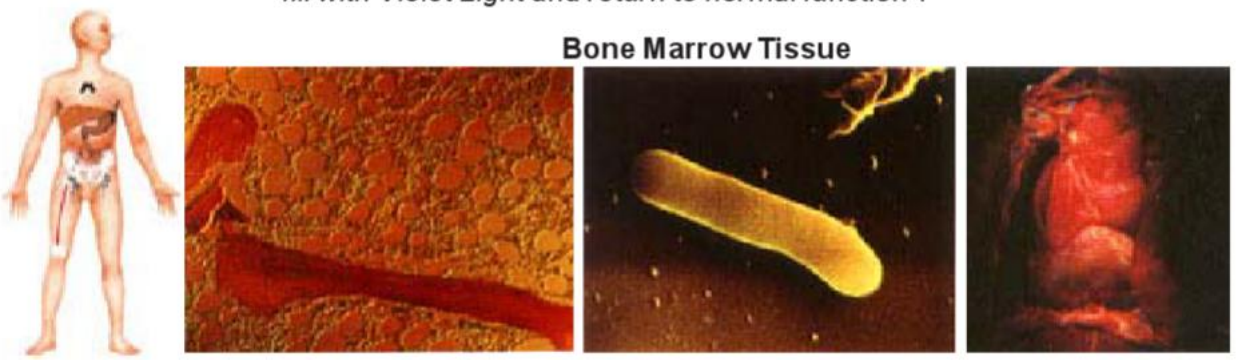


Fig. 4.67 *"Immune Cells and Vertebrae please listen: clear, clean and bright; fill with Violet Light and return to normal function".*



Sacrum: The sacrum controls all the bones and marrow. It effects the production of red and white blood cells. The bone marrow produces the lymphatic cells (white blood cells). When the blood is full of Chi it becomes lighter. Negative emotions make the blood thick and acidic. The blood cells in a healthy body can live up to ten times longer than in a weak or diseased one.

Bone Marrow: A tissue rich in fats, containing plenty of nourishment for the comprehensive production of the different blood cells: red cells for the transport of oxygen, blood platelets for clotting and the various white cells for the immune system.

Bacterium: Represents the foreign invader, but it is only one of many invaders. Parasites, fungi, viruses, chemicals, mineral fragments, metal particles—these and a great deal besides, set the immune system to work.

Thymus Gland: Perhaps the most important organ of the immune system. The vital training of the different T-lymphocytes takes place inside. When they pass through the thymus they receive a program to convert them into 'T' lymph cells. When they pass through the liver and large intestine they become 'B' cells and helper cells.

We have obtained Fig. 4.68 and the following text from the publication 'The Body Victorious' by Lennart Nilsson and Jan Lindberg.

We hope that you find this short selection of material as informative as we did.

"The illustration below is a highly schematic and simplified picture of our immune system. *Top left*, the pale yellow 'house' symbolizes the bone marrow, where all blood cells are born. *Bottom Right*, a solitary bacterium (yellow) represents the foreign invader that the immune system needs to combat. The light blue path represents the older defenses, with various feeding cells that tackle all foreign substances and also function as a kind of cleaning system. They deal with all the old, dead and used-up material in the body. The newer, special defense force, which develops later, follows the green path. Its cells are more specialized; they obtain their special training and reach maturity in organs such as the thymus gland and in the lymphoid tissue around the intestines and in the liver. In the lymphoid tissue, the yellow 'half-way house' (far right), the 'B-lymphocytes are trained. These are the precursors of the large plasma cells - the pale green cells (far right) in the illustration, which produce the body's sniper ammunition, the antibodies (Red and Y-Shaped).

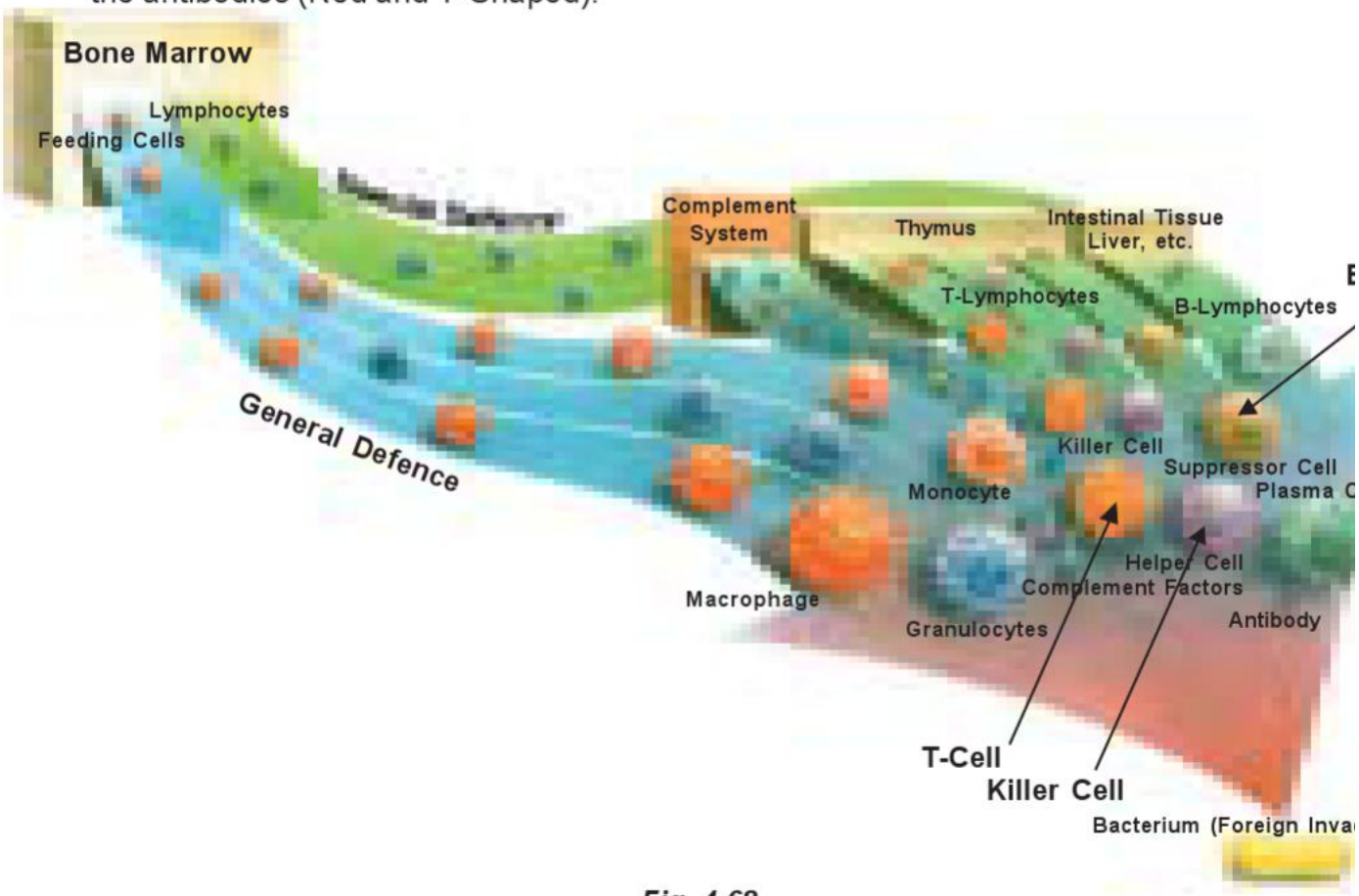


Fig. 4.68

Bone marrow, bacterium and thymus please listen: clear, clean and bright; fill with violet light and return to normal function".

The three paths from the thymus are intended to show that there are different types of T- lymphocytes - among others, aggressive killer cells, helper cells and suppressive cells. All of them have specialized tasks to perform when the immune system launches a counterattack. The three blue paths of the older defenses have three different kinds of feeding cells. First, the large and powerful macrophages (orange) advance on the enemy; then come the granulocytes (blue), smaller and faster moving, followed by the (pink) monocytes. The nuclei in the shimmering cell bodies are faintly discernable. In addition, there is an important complement system (middle), symbolized here by a multicolored range of small spheres flocking toward the foreign bacterium. These molecules play a large part in increasing the efficiency of both antibodies and feeding cells. In addition, they have the capacity to destroy bacteria by shooting holes in them. The complement factors are produced in many different cells in the body.

Chi Kung has a very strong effect against viruses. Altough medical science is struggling to discover a medicine that will kill them, Chi Kung practice is able to prevent them from occuring in the first place. Whether we are sick or healthy, we all need our defense system to be in good shape.

Defense System - Outline of Practice

1. Work on yourself first to activate your sacrum. Project the sacrum as big as the universe. See the eight holes in the bone and visualize them breathing. Breathe and compress the Universal Chi into the bones. Feel the Chi begin to rise up the spine and into your mideyebrow and temple bones. When you feel that there is enough Chi, project it out to the universe, multiply it and spiral it back down. Project it towards the student and ask them to touch their sacrum. Rub your hands until warm and touch the sacrum. Picture the sacrum getting bigger and bigger, breathing into the eight holes. Tell the person to smile at the sacrum and start to work on your Tan Tien and universe. Multiply more energy and picture the Chi from the universe coming down to the sacrum of the other person (and your own) and then charge up the spine, to the rib cage, to the temple bone and to the mideyebrow.

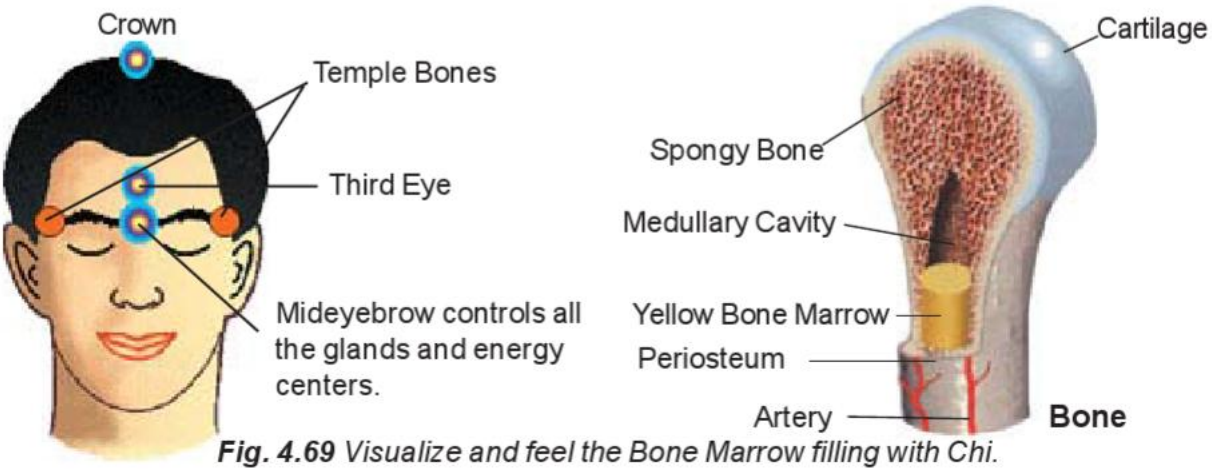
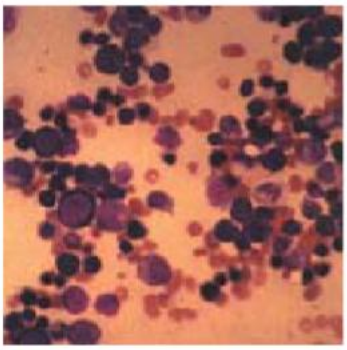


Fig. 4.69 *Visualize and feel the Bone Marrow filling with Chi.*

2. Tell the student to move their hands to the hip bones. Tell them to smile to these bones. Feel them as 'funny, laughing, happy bones'. Tell them to feel the electricity in the sacrum and bone marrow.
3. Touch the femur bones. Feel the electricity running up the legs.
4. Touch the humerus bones. Feel the electricity running up the arms.
5. Touch the lower part of the sternum and feel the Chi penetrate into the bones and spread out to the rib cage. Feel the electricity run throughout the rib cage.

Practice

1. Touch the sacrum, feel your fingers grown 'long' and penetrate into the marrow. Feel that the sacrum is as big as the universe and that the Chi has been compacted. Fill the sacrum with Chi. The eight holes are breathing. Let the fingers touch the sacrum and become aware of the Tan Tien spiraling, until you feel the crown and the mideyebrow spiral and connect to the universe. Hold until the universe fills the sacrum once again and rises up the spine to the mideyebrow.



Bone Marrow Cells

Fig. 4.70 *Touch the Sacrum - see the Eight Holes breathing - fill the Sacrum, Mideyebrow and Crown with Chi - empty to the universe and 'fill' again.*

Sacrum Breathing to get Chi

Breathe through the sacrum; feel red and yellow light enter. Guide it into Tan Tien. Blend the Chi in the Tan Tien. Move up to the Heart Center. Move up to the Crown and project up to the universe; let it blend and multiply. Multiply in the universe

Open a direct channel down to the other person, and one to your palm.

Sacrum Chi

Project the student's feet down to the earth and connect to the earth's core.

Third Eye and Temple Bones are aligned in a triangle.

Activate the Sacrum until you feel the Chi rising up the spine and feel it pulsing; be aware of the Temple Bones.

Fig. 4.71 *Activate the Sacrum - Be aware of the Temples.*

2. Tell the student to move their hands to the hip bones. Tell them to smile to these bones. Feel them as 'funny, laughing, happy bones'. Tell them to feel the electricity in the sacrum and bone marrow. Tell the student to pack and compress the Chi into the bones in order to revitalize and revive bone marrow. Give the command. "Produce healthy white and red blood cells".

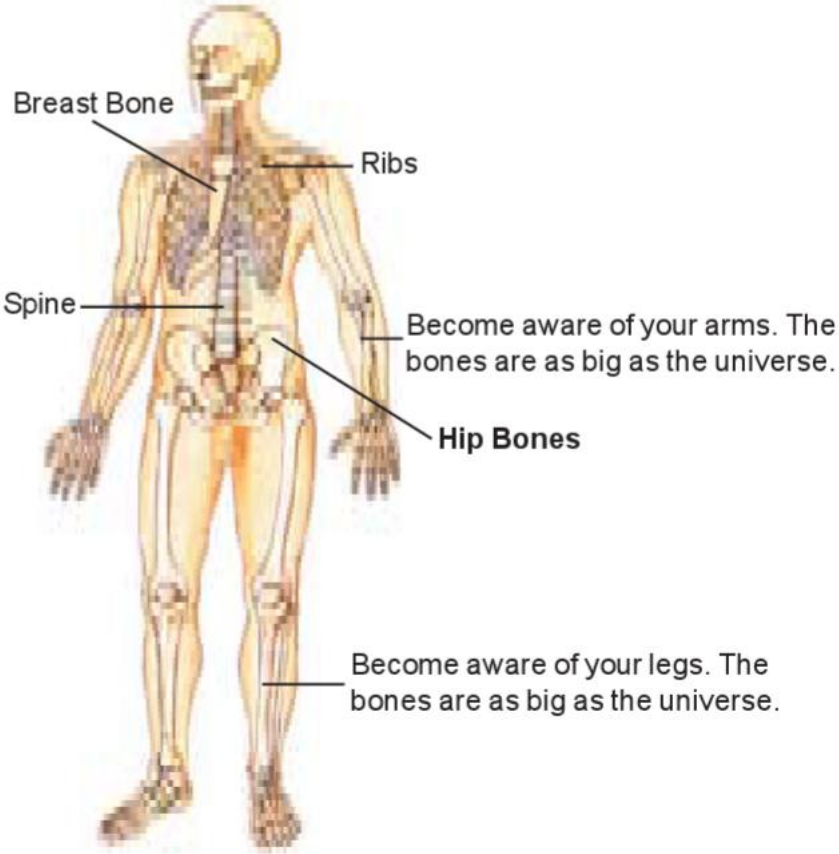
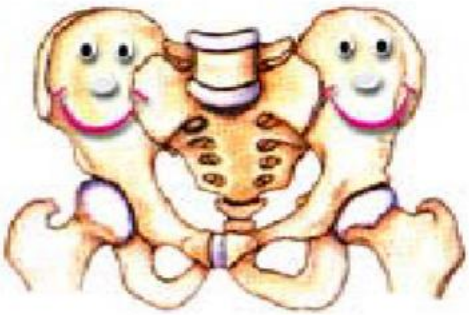


Fig. 4.72 *"Hip Bones produce healthy White and Red Blood Cells".*



White Blood Cell
(Neutrophil)

Leave the fingers touching the hip bones and start to spiral in the Tan Tien until you feel the crown and the mideyebrow also spiral. Expand your awareness to the Universe and the Universe will charge into the hip bones.

Fig. 4.73 *Touch and feel the bones. Leave your fingers there - lower your mind into the Tan Tien and the universe.*

3. Touch the middle part of the femur bone to help increase the production of healthy red blood cells. Feel the electricity running up the legs. Give the same command for the femur bones: "Funny, laughing, happy bones produce healthy white and red cells." After that put your mind into the Tan Tien and universe so that the Chi can charge into the bones. Feel electricity run throughout the whole skeleton.

Fig. 4.74 *"Funny, laughing, happy femur bones produce healthy white and red blood cells".*

4. Touch the humerus bones. Feel the electricity running up the arms.Give the same command: "Funny, laughing, happy bones produce healthy white and red cells." After that, put your mind into the Tan Tien and universe so that the Chi can charge into the bones. Give the same command for the lower part of the sternum. Chi penetrates into the bone and spreads out into the rib cage 'Tan Tien and Universe'. Put your mind into the Tan Tien and the universe so that the Chi can charge into the bones.

5. Touch the lower part of the sternum and feel it and the rib cage as funny, happy, laughing bones. Feel the Chi and electricity penetrate into the bones and spread out to the rib cage. Touch the lower part of the sternum. Give the same command again. "Produce healthy white and red cells". After that you put your mind into the Tan Tien and universe so that the Chi can charge into the bones.

   You have finished activating the defense system.

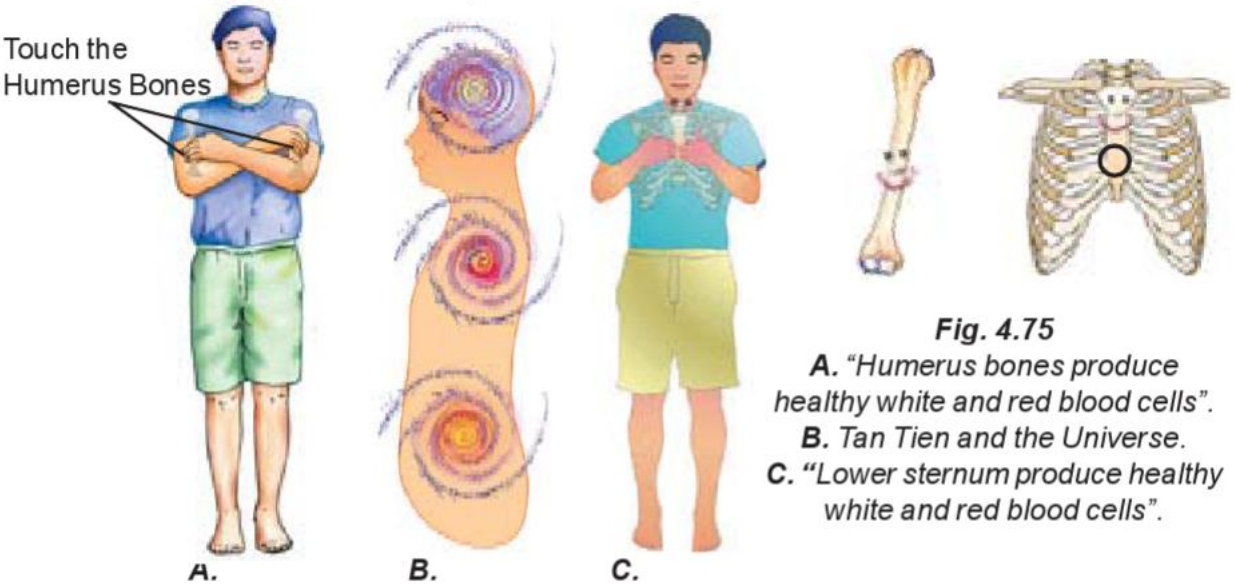


Fig. 4.75
A. *"Humerus bones produce healthy white and red blood cells".*
B. *Tan Tien and the Universe.*
C. *"Lower sternum produce healthy white and red blood cells".*

Immune System

1. The Immune System starts with the top part of the sternum. Touch the top part of the sternum. Project your fingers 'very long' into the bone and feel them penetrate right into the thymus. Activate the thymus gland. Gradually, feel the fingers rising up to the thyroid and parathyroid. Activate the thyroid and parathyroid and throat center. Give the command, "Clear ,clean and bright fill with violet light and return to normal function".

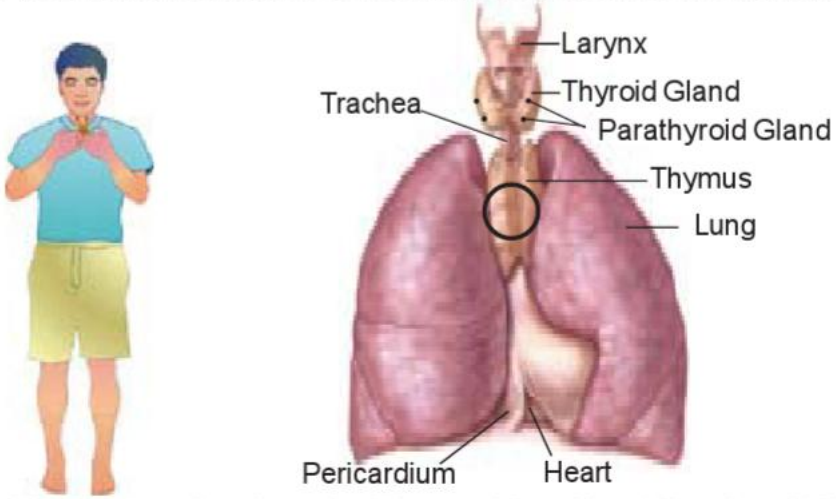


Fig. 4.76 *Touch the Top of the Sternum & activate the Thymus, Thyroid and Parathyroid Glands.*

2. Move the fingers to touch both sides of the jaw bones to help activate the tonsils, the body's first line of defense. The jaw bone affects the lymph nodes beneath, which include the tonsils. Fill them with Chi. Give the command, "Clear, clean and bright; fill with violet light and return to normal function".

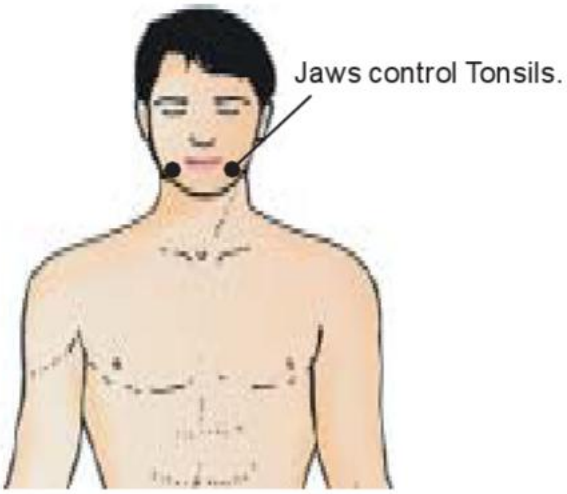


Fig. 4.77 *Activate the Tonsils and Jaw Bones.*

3. Touch the mideyebrow and crown, which control the pituitary and pineal glands respectively. Touch the third eye, feeling it open and feel the light from heaven entering into your brain and into your body. Touch the crown. Feel your fingers reaching deep inside and feel the Chi penetrating all the way down to your perineum. Give the command, "Clear, clean and bright fill with violet light and return to normal function".

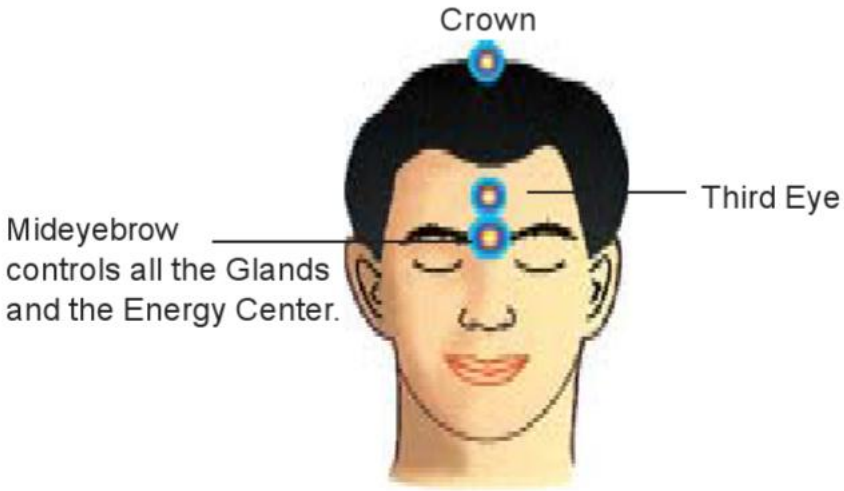


Fig. 4.78 *Third Eye, Mideyebrow and the Crown affects the Immunity and Defense Systems.*

4. Rub both of your hands until they are warm and cross the hands on the neck and feel the lymphatic system has been activated. Cross your arms and hold your hands

under your armpits. Picture the lymphatic system of the armpits as you activate the lymph nodes. Give the command; "Clear, clean and bright fill with violet light and return to normal function". The lymphatic system of the upper body is clear, clean and bright and the lymphatic fluid flows! Smile.

Fig. 4.79 *Lymphatic System of the Neck and Armpits are clear, clean and bright.*

5. Move the hands to the cover the groin area. Give the command to the lymph nodes there. Next, cover the lymph nodes of the navel area, and give the command; "Clear, clean and bright fill with violet light and return to normal function". The groin and the navel area lymph nodes become clear, clean and bright.

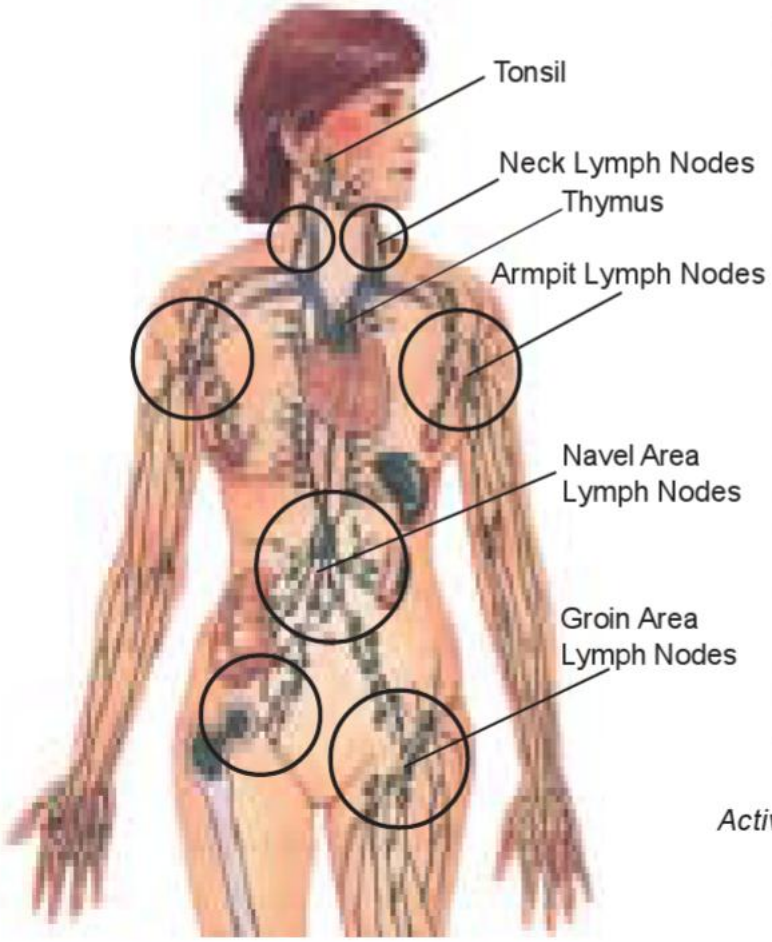


Fig. 4.80
Activate the Lymph Nodes in the Groin.

6. Place your palms over your navel and activate the lymph nodes. Give the command; "Clear, clean and bright fill with violet light and return to normal function". See them become clear, clean and bright. You have now activated the immune system.

Fig. 4.81
Touch and activate the Lymph Nodes in the Navel.

Summary - General Healing Session

This General Healing Session will help everybody.

A. Three Minds into One
B. Activate the Six Directions
C. Activate the Three Fires
D. Linking Personal Stars, Energy Bodies and the Universe
E. Protective Circle and Chi Field
F. Chi Water (Sacred Water) Practice
G. Empty and Fill
H. Clean with Green Light
I. Clean with Blue Light
J. Charge with Violet Light
K. Defense and Immune System

A. Three Minds into One

Smile to the inner universe, activate the heart compassion energy; feel the love and joy within. Smile and empty the mind and heart down into the Tan Tien. Fill the Tan Tien with Chi and spiral the energy. When the Tan Tien is full, the energy will rise up to fill the brain. Manifestation will occur at the mideyebrow.

B. Activate the Six Directions

Expand the awareness to connect to the Six Directions at the crown, mideyebrow, heart and Tan Tien.

C. Activate the Three Fires

Activate the Tan Tien, Kidney and Heart Fires.

Activate the Sacred Fire Triangle circulating the energy between the Tan Tien, kidneys and the heart. Feel the energy's force multiply.

Activate the personal stars; the cosmic star above the head and the earth star below the soles of the feet.

Keep the Tan Tien warm, and spiral at the sacrum and mideyebrow. Turn your eyes to look upwards and see the crown spiraling, connecting to the cosmic star about six inches above the crown point. Feel the cosmic and earth stars pull the body simultaneously towards heaven and earth. See the cup of the Big Dipper fill with Violet Light, gathering Chi from the North Star and the universe. When the cup is full, pour the light down into the cosmic star above your head. Feel the violet light spreading throughout your entire system, filling the Upper, Middle and Lower Tan Tiens.

D. Linking Personal Stars, Energy Bodies and the Universe

Feel the central channel running from your cosmic star, through your three Tan Tiens and connecting to the earth energy below. Use you 'Yi' power to connect to the personal or cosmic star above the head. Connect the personal star to the stars of each other person in the meditation. Create a Chi body and become the major connecting point. Create a left spiral pattern to connect all the stars into a larger group. All the meditators then become a satellite, creating a group energy body.

E. Protective Circle and Chi Field

Raise the hands and touch the Universal Fire. Use your Yi to bring the energy down and manifest a Sacred or Chi Fire around the room, creating a protective circle. Create a Chi Dome and set up the guardian animals and/or angels. Activate the eight elemental forces of nature and the universe.

F. Chi Water (Sacred Water) Practice

Invoke the power of the Sacred Water practice to cleanse the body of all sickness, negative energy and bad fortune. Energize and renew the self at a cellular level with health, wealth and longevity.

G. Empty and Fill

Empty any remaining negative energy, sickness, burdens and worries, down in the depths of the molecular mother, the earth. Bury the energy there so that the earth can recycle it. Bring recycled energy up from the center of the earth into the body. Fill and compact the Chi into the 'hollow bones'. See all of the cells on the horizon of your mind's eye; spread them across the panorama and see the cells as big as the stars in the night sky. Fill them with Chi, blending it with any sick or grey energy. Then empty again, as you guide the all of the Chi back into the earth for recycling. If you wish, you can fill with earth Chi once again before you begin to 'clean with green'.

H. Clean with Green Light

Green cleans and detoxifies all of the body's cells. Green Chi is mild and safe. Green Chi is used for cleansing, and as a decongestant for diseased parts. Be aware of the liver's green color, the throat and the emerald forest. Breathe into the throat, feel yourself breathing in the green light. Guide it down to the Tan Tien, blend and move it up to the heart and the crown.

Project it to the universe; spiral and let it multiply. Channel one direct line down to the student, one to your crown and one to your palm. Bring the energy back down and blend it with any sickness in the liver, gallbladder or anywhere else in the body. Spiral the energy counter clockwise and down into the earth. Continue cleaning with green until you see that all the cells have been charged with the emerald light of the forest.

I. Clean with Blue Light

Be aware of the kidneys' blue sapphire color and breathe the blue light into your throat. Guide it down to the Tan Tien, blend and move back up to the 'heart of compassion' and then to the crown.

Project up to the universe, spiral and let it multiply. Channel one direct line down to the student, one to your crown and one to your palm. Then feel the universe pouring the blue light back down; clockwise. Spiral down. Look at the cells and see the blue light, like water, go into the cells to rinse, clean and remove any sickness. Spiral the energy counter clockwise and down into the earth. Continue rinsing with blue light until you see that all the cells have been charged with the sapphire blue.

J. Charge with Violet Light

Luminous Violet has intelligence and can be programmed.

Turn three minds into one mind, go deep into the empty space of the cell and deep into the chromosomes, magnify the space as you enter into the DNA and return to the original cells. Ask for the power to see the cells and look at the brain cells spread out into the space. "Brain cells please listen. Clear, Clean, and Bright: fill with violet light, back to normal function". See violet light. Be aware your crown. The Tan Tien Chi and the negative Chi all combine in the crown. Extend a violet light up to the universe. See the North Star and the Big Dipper. Tell the students to hold their arms in the air, so that they can funnel the Chi into their personal star. Bring the North Star and the Big Dipper down; hold the handle of the Big Dipper and pour the violet light over the student's personal star. The higher cells will be programmed. Let the Chi enter the brain and ask for the power to see the brain cells. "Brain cells listen to the command". If there is sickness in the brain, give the command. "Sickness go away". Continue to spiral the violet light down through the cells of the whole body.

1. Ask for the power to see into the cells of the **Brain.** Ask the student to move their hands to cover their brain. "**Brain Cells** listen to the command;"Sickness go away. Clear, clean and bright fill with violet light and return to normal functions".

2. Ask for the power to see the cells of the sense organs. Ask the student to move their hand to cover their senses. Give the command; **"Eyes, Ears, Nose, Tongue and Mouth** cells listen to the command. Sickness go away. Clear, clean and bright fill with violet light and return to normal function".
3. Move your hands down to your Throat Center and give the command; **"Thyroid, Parathyroid and Thymus Glands** listen to the command; Clear, clean and bright fill with violet light and return to normal function".
4. Move your hands to the heart and the lungs. Ask for the power to see the cells of the heart and lungs. Give them the command; **"Lungs and Heart Cells** listen to the command; Clear, clean and bright; Fill with violet light and return to normal function".
5. Move your hands to cover the left and right sides of the ribcage. Ask for the power to see the cells of the liver, gallbladder, spleen, pancreas and stomach. Give them the command; **"Liver, Gallbladder, Spleen, Pancreas and Stomach Cells** listen to the command; Clear, clean and bright fill with violet light and return to normal function".
6. Move your hands to the large and small intestine on the front of the abdomen. Ask for the power to see the cells of the intestines. Give them the command; **"Large and Small Intestine**, listen to the comm and Clear, clean and bright fill with violet light and return to normal function".
7. Move your hands to the kidney and sexual organs and ask for the power to see their cells. Give the command; **"Kidney and Sexual Organ Cells** listen to the command; Clear, clean and bright fill with violet light and return to normal function". Gather the violet light again and let it pour down and fill all the cells. See the violet light again and feel and see that all the cells are "clear, clean and bright". Smile.

K. Defense and Immune System

Defense System

1. Work on yourself first to activate your **Sacrum**. Project the sacrum as big as the universe. Breathe and compress the universal Chi into the sacrum until it rises up to fill your brain. Project out into the universe, multiply the energy and spiral it back down. Project it to the students and tell them to touch the sacrum.
2. Tell the students to move their hands to the **Hip Bones**. Tell them to smile to these bones. Feel them as 'funny, laughing, happy bones'. Tell them to feel the electricity in the sacrum and bone marrow.
3. Touch the **Femur Bones.** Feel the electricity running up the legs.
4. Touch the **Humerus Bones.** Feel the electricity running up the arms.
5. Touch the lower part of the **Sternum** and feel the Chi penetrate into the bones and spread out to the **Rib Cage**. Feel the electricity run throughout the rib cage.

Immune System

1. The Immune system starts with the top part of the **Sternum**. Touch the top part of the sternum. Project your fingers 'very long' into the bone and feel them penetrate right into the **Thymus**. Activate the thymus gland. Gradually, feel the fingers rising up to the thyroid and parathyroid. Activate the **Thyroid** and **Parathyroid** and **Throat Center**. Give the command; "Clear, clean and bright fill with violet light and return to normal function".
2. Move the fingers to touch both sides of the **Jaw Bones** to help activate the **Tonsils,** the body's first line of defense. The jaw bone affects the **Lymph Nodes** beneath, which includes the tonsils. Fill them with Chi. Give the command; "Clear clean and bright fill with violet light and return to normal function".
3. Touch the **Mideyebrow** and **Crown**, which control the **Pituitary** and **Pineal Glands** respectively. Touch the third eye, feeling it open and feel the light from heaven entering into your brain and into your body. Touch the crown. Feel your fingers reaching deep inside and feel the Chi penetrating all the way down to your perineum. Fill the glands with Chi. Give the command; "Clear, clean and bright fill with violet light and return to normal function".
4. Rub both of your hands until they are warm. Cross your arms and hold your hands under your **Armpits**. Picture the **Lymphatic System** of the armpits as you activate the lymph nodes. Give the command; "Clear, clean and bright fill with violet light and return to normal function". The lymphatic system of the upper body is clear, clean and bright then the lymphatic fluid flows! Smile.
5. Move the hands to the cover the **Groin** area. Give the command to the **Lymph Nodes** there. Give the command; "Clear, clean and bright fill with violet light and return to normal function".
6. Place your palms over your **Navel** and activate the **Lymph Nodes**. Give the command to the lymph nodes there. Give the command; "Clear, clean and bright fill with violet light and return to normal function". **You have now activated the immune system.**

Chapter V
Cosmic Healing I - Basic

Source of Chi and Color

There are different sources of Chi in the universe: cosmic (air), earth, nature and human. Different parts of the human body have different energies and are correlated with the universe and nature. Each part of our body, especially the organs and glands can produce, receive, transform and emit different Chi and color.

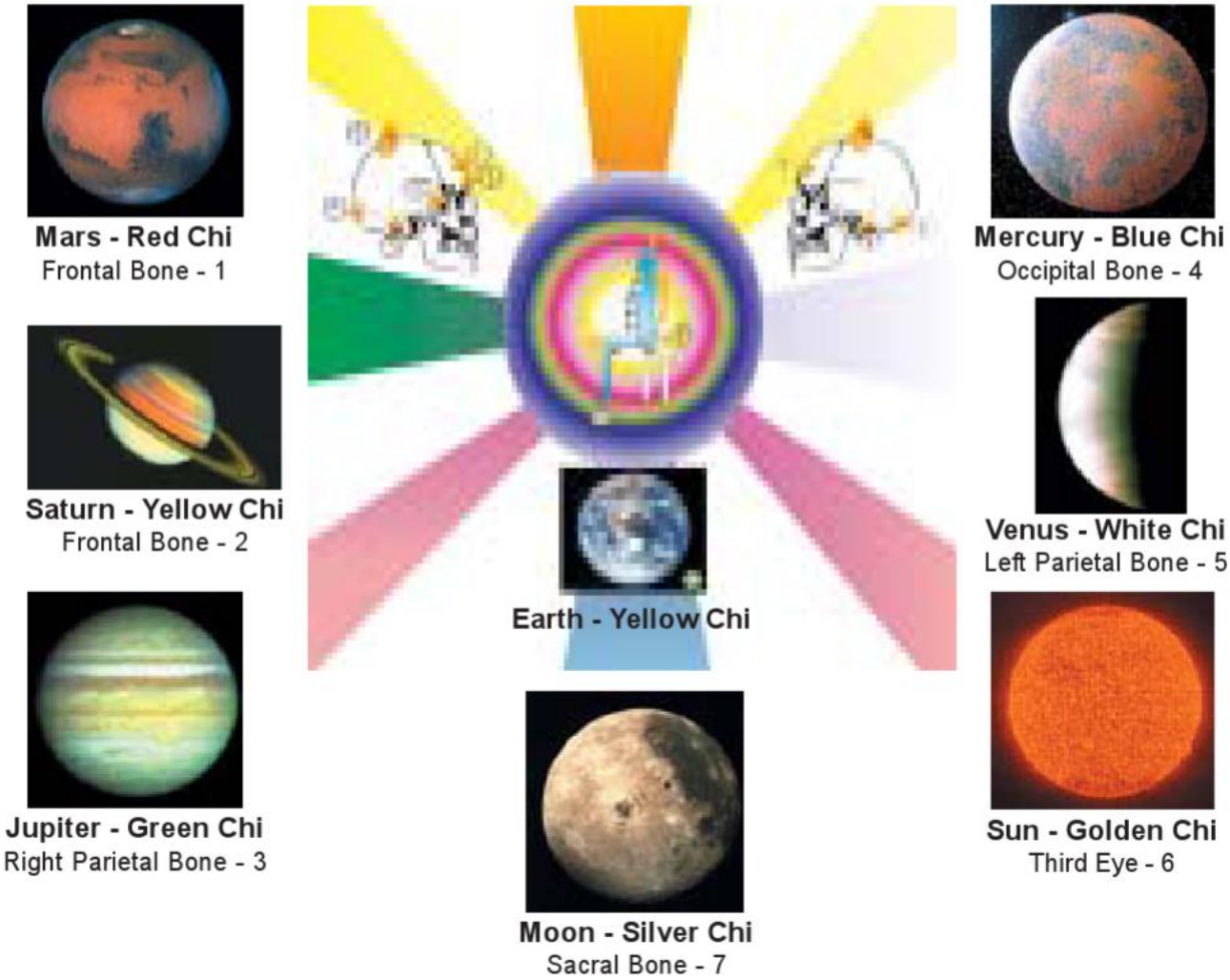


Fig. 5.1 *Planet, Bone and Cosmic Colors*

Earth Chi

While Cosmic Chi (the atmosphere over us and the universal force) is ethereal in nature, what is called earth Chi is not. This Chi appears as the line visible above the horizon when the sun is low in the sky, and seems to hover just above the ground. It actually also sinks into the ground.

Earth Chi contains yellow and some white Chi. When the ground and the cosmic (air) combine they will become white Chi. This Chi has a very powerful healing energy, not too overheated, but balanced and mild.

When treating a problem, white Chi, in the proportion 7:3 (7 white to 3 of the selected color) acts as a brake on colors which are hot or too active. This enables the body to take in chi more easily.

Fig. 5.2 *Use White Chi to blend all the other Colors.*

Special Note: Many of the color references came from the following books: *"Let There be Light"* by Darius Dinshah and *"Advanced Pranic Healing"* by Master Choa Kok Sui.

Human and Nature Chi

These include the things we can see on the earth: the mountains, lakes, seas, forests, streams, caves, valleys, rocks and precious stones. Taoism classifies five elemental forces: earth, metal, water, wood and fire.

So there are five elements in our body and five elements in nature; there are five elements in the cosmic and five elements in the universe.

According to the Taoists, when we can make the connection and control our body's elements, we will quickly make connections to nature and the universal forces and employ them very easily.

Solar Chi

Before sunrise or sunset there is more white Chi in the air, which we can use abundantly for health and healing. White Chi affects the lungs and the large intestine, so we direct this Chi to these organs. This will generate further Chi to maintain our daily activities. All colors of the spectrum are present in white.

Simple Practice

Look at the horizon at sunrise and sunset. Stand still and extend your palms toward the sun, smile and absorb the rising or setting sun's energy into yourself.

General Information

Energy can be introduced to the affected area of the body by moving the hand clockwise in a spiral.

Move the hand **anticlockwise** with a spiraling motion to clean, flush and remove energy from the treatment area. After this, brush down the whole body, to direct the sick energy into the earth.

Use an anticlockwise spiraling movement in order to clean, then expel the energy.

Use a clockwise movement to bring energy in and an anticlockwise one to take it out.

As a general rule and especially when you are beginning to practice the techniques, keep the color combinations simple. **Always use blue (to cool, calm and stabilize), green to clean, white to harmonize and violet (which carries the properties of all the other colors) to program.**

Although it is important to learn all of the applications, it is more important to begin practice, maintaining a serene state of mind throughout. You will immediately realize that Cosmic Healing provides the practitioner with as much benefit as the student. The more you practice the more you heal.

Healing Colors

White Chi

The color of the chi from the air, earth and sun is always white and acts as a calming agent for the surplus chi produced by the other colors. It also redirects this chi to areas of the body which need it. For this reason, use white in combination with another color in the proportion 7:3.

Shining white chi should be concentrated at the center, while colored Chi goes to the edge. This can also be reversed. It is also possible to blend the white and colored Chi together.

It is safe to use white chi when you are not sure which color might be suitable for a patient, especially when treating babies, toddlers, the elderly and the weak. People with minor problems can be treated with blue, green or mauve, while gold colored Chi or mauve/white Chi is better when the problem is serious.
For a stimulating and strengthening effect use white-red.

When it becomes necessary to switch from one color to another, an abrupt shaking movement of the hand should ensure a smooth transition to a new color.

There is a very strong violet light in the North Star. You can dilute the color with white. White Chi is composed of red, orange, yellow, violet and blue.

Blue Chi

The effect of blue Chi is one of cooling, and hindering similar to yin or water energy. The opposite effect can be obtained with the use of red Chi.
When we draw the energy down, some peoples' bodies can't adjust to the energy immediately, so using blue Chi is always good. "Water blue' is the one element that always brings harmony and does not cause any harm.

a. Blue Chi, like yin, water energy, has a cooling effect. It also can act as a restraining agent.
b. Because of blue Chi's ability to cool, soothe and numb, it is particularly appropriate for promoting relaxation and sleep, reducing abnormally high body temperature, minimizing pain and swelling. It can also hinder the proliferation of viruses and bacteria and assist in the rapid clotting of blood.

Blue (and green) can detoxify and also energize.

Green Chi

While tangerine Chi can be quite dangerous, the action on green chi is gentle and harmless. Freeing up a damaged area so that cleaning can then take place may be done with green Chi. Once it's loose you can then use blue or organ's color Chi to expel the disease completely. It can therefore remove the disease and bad energy by locally sweeping either to and then out of the arms for the upper body or out of the legs for the lower body.

If there is a need to energize with the organ's color Chi, first energize with pale green Chi. Always use green chi before using the colors purple, tangerine and red.

Use the throat to activate and draw the green Chi up to the crown, rising to the universe to be multiplied and brought back down for use. Always add blue Chi when there is pain. The motion of pushing and pulling through the affected part is very powerful. You also can also use the 'sword finger' in a small area and for infection.

Green can also be used for energizing together with violet; first use green and follow with violet.

Pale green and pale tangerine chi can be employed in sequence, as the first acts on the 'sick' energy, reducing it to a form which can easily be driven out by the second.

Simultaneous use of pale green pale tangerine and white chi in the ratio 2:1:7 is recommended to treat stubborn areas because the effects are intensified when these proportions are used together.

In the treatment of cancer, dark green and tangerine Chi may be employed, preceded by blue. This can assist in toxin removal, and in the cleaning and freeing up of disease affected areas so that necrotic cellular tissue is released. These colors can relieve congestion and free up 'sick' energy which is 'stuck' when used with brushing movements over the affected areas. They also help with treatment of colds and elevated body temperatures, and in the dispersal of blood clots.

Red Chi

Cerise chi makes the area to which is applied stronger, while crimson chi has the opposite effect. When using color for healing, project luminous white in the center and cerise at the edges for a strengthening effect. Always combine red with blue and green; never use it on its own.

Cerise mixed with white, because of its expansion abilities, can help widen blood vessels and breathing tubes. It also helps those with heart and asthma problems.

Red chi with its qualities of warmth and expansion, has a number of benefits. It is good for the circulatory and respiratory systems and the blood, as it expands blood vessels and other tubes, thus improving circulation and breathing, particularly for heart patients and asthma sufferers. It also brings increased energy into the blood and helps allay feelings of fatigue or weakness, driving out 'sick' energy along with toxic substances and other waste materials. It can also help those who are sensitive to allergens. It may help those whose lives are near the end have a longer period on earth, and promote revival of consciousness.

Avoid the use of dark colors, which may cause an adverse reaction. If a person is suffering from a sexually transmitted disease, it is not advisable to treat him or her with chi which is crimson. Chi of this color makes the microbes that cause such diseases multiply at a fast rate and can also produce an inflammatory or constrictive reaction.

Tangerine Chi

When using orange Chi, always use blue Chi first; to tone and calm down the ailing body area, before applying the vitality of orange.

Pale tangerine chi with added white can be used; however certain areas are inappropriate for treatment by this color because of its power. Do not use with the eyes (including retinal problems), heart, head, throat, brain (for example bleeding in the brain) or the spleen.

The large intestine benefits from the use of tangerine chi, but this color should be used sparingly on areas like the solar plexus and navel. Appendix problems should not be treated with this color as it could exacerbate the problem. Tangerine chi has an effect on the bowel, and can also aid in returning an unconscious person to consciousness or in stimulating someone who is dying.

To treat cancers of certain types, dark green and dark tangerine are suitable because of their ability to destroy. Always avoid the head and the heart when using orange.

Forcible removal of waste products, toxic substances, 'sick' energy, viruses and bacteria
Menstrual difficulties
Waste elimination problems
Freeing up 'sick' energy
Breakdown of clots in the blood
Problems of the urinary and respiratory systems
Diseases of joints and connective tissue
Common cold
Problems caused by allergens
Cysts

Yellow Chi

Yellow Chi has a close connection to the nerves, the bones and the bone marrow. It is the color of the spleen; in Taoism we feel the spleen is involved in the assimilation and processing of food and the appetite. This doesn't mean eat a lot, but when the spleen is balanced the appetite will be controlled.

Chi which is yellow in color is beneficial in the treatment of nerves as it promotes re-growth. It also helps in the repair of fractures and cells. It is good for the health of bones, tissues and organs. It has the power to increase bone marrow production.

Violet Chi

Violet Chi has the properties of all the other colors. It's used for severe types of sickness.

The qualities found in all colors are contained in purple chi, therefore it is particularly effective for serious illnesses. Mauve (light purple) chi which contains elements of blue and green, helps to restore organs and nerves affected by disease or trauma. Although mauve chi can be employed on certain kinds of severe infections, chi which is dark purple should be avoided when diseases of the respiratory system are present, as it could cause the proliferation of disease causing microbes.

Violet Chi is use chi that is pale white/green or pale white/tangerine and, selecting each in turn, with a brushing movement apply to the whole spinal area and especially to the area where the trauma is located.

If purple chi is used in combination with other colors, it will intensify their qualities and if used together with red, tangerine or yellow chi can be dangerous; it may cause the undesirable proliferation of some cells.

Dark electric violet can be used for tumors or cancers. Always use the blue or green first.

In order to make an area which has become weak stronger, mauve mixed with white can be used, but for really fast strengthening use cerise mixed with white.

Both white and violet have the properties of all the Chi colors. The difference is that violet Chi has a greater penetrating effect and is easier to assimilate than white.

Because bright purple chi has been acted upon by the soul, it has the capacity for independent thought and action.

Energy or chi which comes from the air, the earth and the sun is called purple chi. There is a second type of chi with this color, but having more brightness – this has been called bright purple chi and is derived from the soul through the crown of the head, the point connected to the North Star or Big Dipper.

Bright purple chi can only be brought down from the universe via the crown point if the practitioner has highly developed senses, The effects of chi from air, earth and the sun depends on the development of the practitioner's soul.

In contrast to purple chi, the chi which is bright purple in color has a much greater potency because it can help in the restoration of nerves and organs which have been affected either by disease or trauma. This bright purple chi can be used to remove infection and to promote fast healing, even in the case of serious illness. In addition, this chi has been said to possess its own consciousness (Master Choa Kok Sui. Advanced pranic healing:49)

When cancer and other growths are being treated, use bright purple chi because it has the ability to destroy. However, beforehand, the affected area should be energized with pale blue chi.

Do not use bright purple chi at the same time as chi which is yellow, green, tangerine or red because it will intensify and increase the effects of these colors. In addition, the use of any dark colors with bright purple chi (either preceding or following its use) should be avoided, as this will produce a very damaging result. As a general guideline, use blue before electric violet.

Golden Chi

Gold colored chi, which has almost the same qualities as bright purple chi, is formed when bright purple chi meets the spirit body. The color changes to cerise (pale red) when this gold colored chi enters the physical body. However, this chi is does not have as much influence as the bright purple chi, being gentler and therefore less effective as a cleansing agent. Gold colored chi should be used to treat a very local area, while bright purple chi can be employed over a wider area.

Spleen

The spleen is connected to the solar plexus and the navel, the major center that connects to all the organs. Holding solar energy or a white ball at the solar plexus will help distribute Chi to all the organs.

If the solar plexus gets clogged up the liver and spleen will also become blocked. The spleen, the Door of Life and the navel are all linked together; the navel and the Door of Life sit opposite each other. We call this an emotional link. Many diseases are caused by emotional links; people use psychology to deal with it which can work to a certain level, but all the energy would eventually get stuck at this main juncture or plexus. White chi is taken in mainly at the spleen, and before being sent to the various parts of the body, is split into its colored forms of red, green, purple, blue and tangerine.

If the spleen is not clean, the immune system will be affected, together with the production of bone marrow. The blood will be dirty and diseases of the joints and connective tissue encouraged.

Cosmic Healing Chi Kung works very well with Chi Nei Tsang. The Cosmic Healing Chi Kung, Chi Nei Tsang and all the other Universal Tao practices all play a unique role in working to heal the physical and subtle bodies. When you combine these three in synergy, it allows you to perform many healing tasks. The spleen (located under the left side of the rib cage), spleen center or navel can absorb white Chi directly into the front or back. The Chi will be broken down into color and distributed to other centers and their associated organs.

There is one thing that I always advise: the recipient or student should be under a doctor's supervision and that they should alternate between the medicine from the doctor and the work with us at the Universal Tao. The doctor should be advised of what we intend to do with the student.

Cosmic Healing Planetary Colors

In Taoism we give each planet a color which enhances the healing power. Have the 'Planets' chart (located at the beginning of this chapter) in front of you, look at the relevant planet and close your eyes. Hold the planet in your mind.

Fig. 5.3 *Channel the Cosmic Planetary Energy into the body.*

Mars: Focus your awareness on the star above you, turn your eyes up and look up to the crown. Hold the image of Mars and extend your sight beyond the crown, looking up into infinity. See the **Red Light** and gradually bring it down to your head about 6 feet above you. Form it into a red ball, a holographic image of the planet Mars shining its red light above you. Invite it to flow down to your 'star' (located above your crown) and continue to flow into your Upper Tan Tien for processing. Let it flow down to the heart (or T-2) and down to the palms. Red and orange light also can be breathed in through the sacrum. Feel the sacrum pulsing and breathing in the red and orange light. Practice 9 to 18 times, rest and shake your hands.

Venus: Become aware of the star above you, turn your eyes up and look up to the crown and into infinity, seeing the expanse of **White Light.** Gradually bring the light down to your head, about 6 feet above you. Form it into a white ball, a holographic image of the planet Venus shining its white light above you. Invite it to flow down to the star above your crown and continue to flow into your Upper Tan Tien, for processing. Now it may flow down to your lungs freely.

Saturn: The **Yellow Light** from Saturn can also be absorbed via the earth through the soles of your feet and perineum. This is for your spleen. Follow as above.

Mercury: The **Blue Light** from Mercury may be absorbed through the throat center. This is for your kidneys.

Jupiter: The **Green Light** from Jupiter can also be absorbed through the throat center. This is for your liver. Follow as above.

Summary - Working with Color

(Practitioner to Student)

There are two ways of doing this type of healing session:

One way is to focus on the specific location in your own body, using your hands and ask the other person to do the same. Together you complete the entire route.

Another way is to focus on your own energy body and ask the student to do the same. Bring a channel or line down from your energy body into your physical body and do the same for the student. Once again, complete the routes together.

For reasons of clarity this text only mentions one student and uses the male gender; this session may however be performed with a group also. Before starting the session do some group meditation practice and warm ups.

1. Be aware of the Tan Tien and connect to the universe. Let the student sit with his back to you. You are behind him. Be aware of your **Sacrum** area and feel the Chi; **wait for the Chi to rise up to the crown** and to the universe. Spiral the Chi down to the student's and your own energy body and it will flow into the physical realm.
2. Draw in the green light with your palm, push it right through the sacrum and disperse the sickness throughout the other side of the universe. Pull the green light from the universe through the sacrum and push the sick Chi out to the universe. Do this 6 to 9 times until you feel the **sacrum has been cleaned**. When you pull back stop the green Chi at the student's sacrum; there is no need to pull it back to you.

   Yellow light from the earth will help strengthen the sacral bone. Visualize the sacrum and vitalize the complete bone structure with yellow light passing throughout.
3. Be aware of the energy body above the **Crown**; extend yourself up from above your crown and **channel down the white light from the center of the universe and the violet light from the North Star.** Using your 'mind-power' ask the inside of the bone structure to open, allowing the white and violet light to **flow into the marrow.** Focus on the energy body; you can picture the energy body's sacrum and bone

structure to help guide the energy inside and see the whole body light up from deep within.

4. Then focus on the **Door of Life and the Navel.** First flush them through with **green** light, cleaning them out. Draw the green light from the Door of Life through to the navel, and then push back through. To cool down the Door of Life (if necessary), draw the **blue** light and push it through from the navel to the Ming Men, connecting with the universe. Then bring the **white or violet light down and activate the Lower Tan Tien.** Always teach people about their Tan Tien. It is like an ocean and the body is like a hollow bamboo. The bamboo can bring the water up. This way energy will never dry up.
5. Concentrate on the **Solar Plexus and the Chi Chung (T-11)**. Once again, draw the **green** light, spiral it, use it to flush, then **energize with white and violet light**. As before, always allow the energy to stream through both the points completely. The solar plexus holds all the emotions. When working on the solar plexus, the **most important thing to remember is to connect the 'backside' to the universe.** There is literally no end to this connection. Just allow the Chi to come all the way down and then pull it towards the rear slightly. Simply clean out the path. Allow the information to condense; allow any images to manifest and then release. Then stabilize the energy. Picture the Chi-Field enveloping the person as a big protective bubble. **Cool down with blue.**
6. Proceed to the **Heart and the Shen Dao (T5/ T6).** Draw in the **green** light, push it through and repeat several times. Now scan the heart with your palm, sensing its strength; then select an appropriate hue, i.e., not too dark. Send the **red** light through the heart to strengthen it.

   Cool down any excess heat in the heart, flushing down and out, using **blue** color. Draw in the **white** Chi; push it through to the **Wing Point (T5/T6)**. **Energize the center at the back of the heart using violet and golden Chi.** Picture the heart surrounded by a golden aura.
7. Move up to the **Throat Center, flushing through to C-7**, using **blue** light first to open and clear it and then **green** light to clean.
8. Next activate the **mideyebrow.** Focus on the mideyebrow in your own body. Use **golden yellow** Chi; use it to **flush and stabilize** the mideyebrow. Flush it all the way through to the backside of the head. **Energize with violet golden light.**
9. Proceed up to the **third eye** in the middle of the forehead. **Connect to the Kun Lun** at the back of the crown. **Flush** through both points using the pale **violet light. Energize** with **electric white or golden light.**
10. Concentrate on the **crown**. Use **violet** or **golden** light to enter and **flush** all the way down through the **central channel**, leaving the body at the **perineum**. **Cool down the system by showering blue light over the whole body.**

    When people have a serious infection, they should consult a doctor. It is common for infections to take a long time to clear up nowadays, even when using antibiotics.

There are two ways to deal with this; allopathically or naturally. The Taoist practices are in great conflict with 'contemporary (i.e., not alternative/natural) western concepts'. The western concepts recommend a full course of antibiotics. Using the theories of Chi Kung, a baby for example, would absorb natural antibiotics via the bones. Western Allopathic Practice consider antibiotics as wonder drugs. The only 'wonder' is when will they realize the many harmful effects that it has on the body? Babies that have been 'fed' with antibiotics frequently suffer many organ related problems by the time they reach 20 to 30 years of age. The worst thing is that they are given to children nearly every time that they become ill. If you scan (cosmically) the solar plexus, thymus or spleen of such a person, the area feels like a hollow void. This means that the immune system is totally non-functional. The same thing applies to ***Aids***: the immune system no longer functions. Any virus can enter the body - medicine cannot kill it. There is nothing left to 'fight with'.

In my experience and following my own experiments, in circumstances like the above my own practices are as follows: I clean my colon; there are a few ways to do that. I eat fiber, vegetables, especially green leafy ones. I eat a big bowl of vegetable soup. I also add things like onion, pumpkin, carrots and cabbage, which will give it a sweet taste. I don't eat any meat and drink a lot of water. The colon is cleansed within two days. I also brush the skin, which is a very good detoxifier. The vegetables will provide natural carbohydrates which are digested and absorbed very quickly. A healthy diet consists of many whole natural foods. It is 'alkaline' as opposed to 'acid' based. I also use the 'colema' which I feel is the best cleanser.

Chapter VI
Individual Healing Session

The Individual Healing session embodies all of the techniques that you have used previously and consolidates them for use on a one-to-one basis. The session comprises the following three parts:

A. Almighty Knife (Chi Knife)

The almighty knife can be used for any health problems. We can charge the knife with Yin or Yang energy. We charge the almighty knife most often with Yin Power. Yin is the cold energy and is used for any inflammation, pain or heat. Yin is used to break up illness. Charge the almighty knife with Yang for strengthening, melting or expelling. Only use the Yang when there is no pain.

B. Energizing and Activating the Immune System

C. Cleansing the Internal Organs

A. Almighty Knife

Fig. 6.1 *Almighty Chi Knife*

Since the dawn of ages and our descent into the material realm, we have constructed, manufactured and used tools to facilitate the progress of events. They are an extension of ourselves that enable us to enhance, mould and magnify our intrinsic nature as inquisitive playful beings.

We have used implements to help nourish, protect and amuse ourselves and further our progress in attempting to understand the 'how' and 'why' of existential reality. The knife has served as a means to carve our way into the present. It is a simple, yet powerful 'friend' and derives as much power as we wish to lend it.

Its design may consist of any combination of the five elements (Earth) which when combined with Universal (Heaven) and Cosmic (Man) forces, provide a unit of energetic substance which receives and transmits magnification, purpose and power in accordance with the human will that governs it. 'Chi Knife' and "Powers of Ten' adopt the precepts of a truly magical existence. When we arrive at our destination we will realize that we have indeed turned "the Wheel of Law'. In achieving this end we will have completed the cycle and returned to the beginning of the journey. We will understand that the simple things in life, like the knife, contain the same amount of power as state of the art technology.

We are all returning to the Garden of Eden. Complex telescopic and microscopic equipment now enables us to see the truth:

"Inside has no outside; outside has no inside".

They are one in the same thing. When they merge together we will indeed enter the Kingdom of God.

Outline of Practice

1. Hold the knife in the right hand (left, if you are left handed). Hold the other hand near your body, with the thumb and index finger touching. Project the Chi Knife as big as the universe, 'long and big - reaching to Heaven'. The bones in your arm are hollow and the 'bottom' is sealed at the shoulder. Feel them 'fill and pack' with the power coming from above.
2. Then give the command: **"Power comes from the east. This Chi Knife has the power to dissolve all the negative energy, sickness and bad fortune. By my request, please carry out the order now."** Wait until you feel that your arm and the knife are heavy and full of Chi.

Eye Problems

Use the thumb and the index finger to hold the eye wide open.

You hold the knife like holding a pen, 3 to 6 cm away from the eye. Use the little finger for leverage and support.

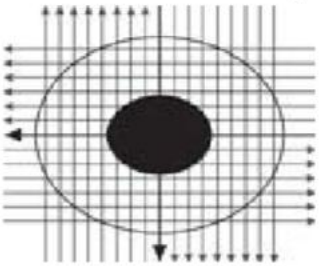
WARNING!

DO NOT USE A KNIFE. THE **MASTERS** OF GREAT EXPERIENCE USE RITUAL SCALPEL TYPE KNIVES. THE STUDENT SHOULD USE THE "SWORD HAND" FINGERS (P.76, FIG. 4.24).

DO **NOT** USE SHARP OBJECTS NEAR THE EYES.

Fig. 6.2 *Hold the knife three to six cm. from the eye.*

Chi knife - "Almighty Knife" helps all eye problems". Cut up and down and sideways in the cross pattern 'through' the eye thoroughly. Tell the student to move the eye left and slowly move to the right as you cut with the Chi Knife. When they move their eye to the right, move the Chi Knife to the left. **Remember that the knife is used for 'energetic surgery' and should never make contact with the eye itself.**



"Slice" the eye toward the right side for 50 to 100 knife movements and do the same to the left side.

Fig. 6.3 *"Almighty Chi Knife helps eye all problems".*

"Almighty Knife, please destroy all kinds of wounds, warts and tumors". Cut up, down and sideways in the cross pattern through the part that has the 'condition'.

Fig. 6.4 *"Almighty Knife, please destroy all kinds of wounds, warts and tumors".*

The almighty knife can be used for any problem in the body. Follow the same procedure to carry out 'energetic surgery' on all parts of the anatomy. It is especially good for soft tissue repair, including the brain.

When you feel that the Chi Knife is full of sick Chi, spiral counter clockwise and discard it down to the ground. When you feel that the knife is 'empty' charge it with Chi from the universe.

B. Energizing and Activating the Immune System

In cases of severe illness, you will want to do this technique many many times, because it is essential to stimulate the body's defence-systems. This technique is also beneficial for debilitation and infection. You may also want do this in a preventative manner.

Activating the immune system always involves the bone structure, especially the round bones in the arms and legs and the flat bones in the skull, jaw, rib cage, hips and spine. All of these are involved with the production of white blood cells. The **thymus gland** and the **spleen** are of special importance to the immune system, because they are involved with programming and training the white blood cells (called T-Cells) to do the right job. **The lymphatic system is involved in removing toxic waste from the body; it is therefore beneficial to stimulate the lymph flow as well.** This is best done in combination with Chi Nei Tsang. *For details refer to the Chi Nei Tsang Books.*

Fig. 6.6
Touch the top of Sternum to activate the Thymus.

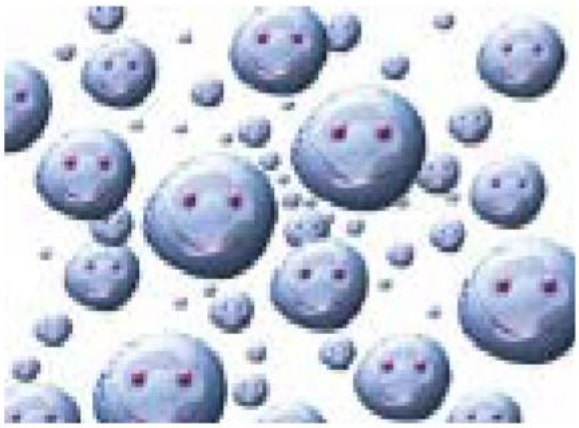


Fig. 6.7 *Happy Cells.*

If you work on a one-to-one basis, first perform the general cleansing session, where you 'pour energy' over the other person. After that use your hands, drawing Chi and pushing it through. Remember to push the energy all the way through and connect it with the universe beyond. Ask your student to concentrate on the areas that you are treating, preferably by guiding them, touching each point as you go.

Outline of Practice

Fig. 6.9 *Touch the Sacrum.*

Guide the student as you practice together. Work with your own energy body and tell the student to work with theirs. Presuming that you have already done the previous set of general healing, you can start with the **coccyx**.

1. Be aware of your Tan Tien and connect to the universe. Direct the Chi down to the fingers. Touch your coccyx with the fingers concentrating a beam of white light on to it. Picture the sacrum opening and the white light streaming inside, flowing up the spine and streaming out over the whole bone-structure. Transfer the feeling of Chi in the coccyx up to the universe, multiply it and guide it down to your energy body.
2. Always be aware of the Tan Tien and the universe first. Attract the yellow light; spiral and condense the healing light into the tip of your fingers; move the fingers up to touch the sacrum. Send out a beam of yellow Chi into the sacrum, directing it up the spine. This will stimulate the production of red blood cells. If you are not sure whether you are able to send it right into the marrow, picture the marrow or emit the Chi from your fingers, while at the same time concentrating on the bone marrow of the energy body. Transfer the feeling of 'Bone Chi' up to the universe and down to the energy body.

3. Proceed to the crown, showering it with violet light. Then spread from the crown throughout the bones of the body. Repeat several times. Instruct the student to feel the bone structure breathing. Ask him/her to extend up from the crown to the Big

Dipper and North Star, channelling down the red and violet light into the thymus gland.

4. Continue to the throat, stroking down with your palms, using green color to move the lymph down towards the backside of the heart. **(Never stroke up towards the head. Only guide the lymph down).**

A. **B.**

Fig. 6.10 A. *Channel the Violet Light of the North.*
B. *Use your Palms to bring the Lymph flow back to the Heart.*

5. Proceed to the lymph nodes under the armpits and across the sternum. Next activate the lymph nodes in the groin. From the groin you guide the lymph up to the navel center (Not down where it will get stuck in the legs).
6. Return to the navel center. Send the energy deep inside, energizing the lymph nodes at the back. Pull back, drawing green energy, flushing out any waste products that are stuck in them.

A. B.

Fig. 6.11 A. *Activate the Lymph Nodes in the Armpits and Groin.*
B. *Energize and flush the Lymph Nodes in the Navel.*

C. Cleansing the Internal Organs Technique

Healing Some Common Illnesses

This session can be used for any kind of ailment and carried out with any number of students. It can take place on a singular, paired, small group or large group basis. Numbers can range from one person, one hundred, one thousand, ten thousand, ad infinitum. It is more likely that a greater energetic current will be created in much larger groups. In the case of 'mass' healings, there will always be a 'guide' or 'conductor', to open the channel for the students to follow. In the case of solo practices you will of course be the guide. **The following instructions have been set out on a one-to-one basis**.

By connecting to heaven, earth and your student, you will maximise the wholistic healing potential to your physical and subtle bodies. We recommend you spend about twenty minutes on the general healing before moving on to the more localized practices of emptying and cleansing the body's centers, systems and organs, contained within this chapter. We recommend that you spend between five to fifteen minutes on all of these. **Always perform the Sacred or Chi Water practice before.**

It is important to remember that if there is no energy in your Tan Tien, then there will be no energy to work with. 'Connecting the Tan Tien and the Universe' means connect your center to the infinite source of the universe, the Tao. When you make the connection you access this power. Always hold on to your center; it is the only thing that is truly yours. Keep the fire warm and spiraling. When you are aware of your Chi, you can direct heavenly light straight into your energy body and then into the student's.

General Principles

1. Push and pull the energy through the student's body. Push and disperse the sick energy into the universe and out to the planets, where it will be transformed and recycled.
2. Pull the energy back and stop it between yourself and the student.
3. Spiral the energy counterclockwise until you see the **green** light mix and clean the sick energy. Spiral and flush the energy down into the earth.
4. Spiral with **blue** light; see it mix and flush the energy within the student's body. Spiral this energy down to the ground.
5. Energize the student with **white** or **violet** light.
6. You can also use both hands to channel Chi when you 'push and pull' through the body.
7. Energy can be introduced to the affected area of the body by moving the hand clockwise in a spiral.
8. Move the hand anticlockwise with a spiraling motion to clean, flush and remove energy from the treatment area. After this, brush down the whole body, to direct the sick energy into the earth.
   Use an anticlockwise spiraling movement in order to clean, then expel the energy.
   Use a clockwise movement to bring energy in and an anticlockwise one to take it out.
9. When you begin pushing, pulling and sweeping, you may feel resistance in the body. As you progress and the energy centers open, this feeling will diminish.
10. There are many color combinations that can be applied to the various parts of the body. When you start practice, stick to the basic 'blue, green, white, violet and blue' formula. When you are working on a specific area, you can keep this book near by, or write a short 'color recipe' before you begin. In this way, you will be able to relax your mind.
11. 'Pushing and pulling' is like fanning and venting the body; when you fan your hands in front of your face, it will have a cooling effect. Ventilation enables the stagnant, sick energy to leave the body.
    Below is a list of the body's organs in relation to their tendency to 'store heat'. They are listed in descending order, i.e, the head is the hottest:

Head, heart, liver, lung, stomach and spleen, large intestine and small intestine, kidneys and sexual organs (which become hot when aroused).

Outline of Practice

Occupying a position amongst most of the internal organs, the solar plexus acts as a kind of clearing center for energy generated by the emotions. It also lies in between the lower and higher energy centers.

1. Scan; ask for the power to look at the cells.
2. Push, pull and give the command, "Disperse". Push until you feel the solar plexus clear and open.
3. Spiral green Chi counterclockwise. Talk to the sick energy; tell it to "leave", you will take it to "a better place, where it will be happy". Give the command, "Out".
4. Spiral Blue Chi counterclockwise, flushing out any remaining sickness. Guide the sick energy into the earth.
5. Spiral and sweep Blue-Green and Red Chi into the solar plexus, sweeping the organs. If the patient is expecting a baby, has an infection or bleeding in the intestinal area; do not use this method.

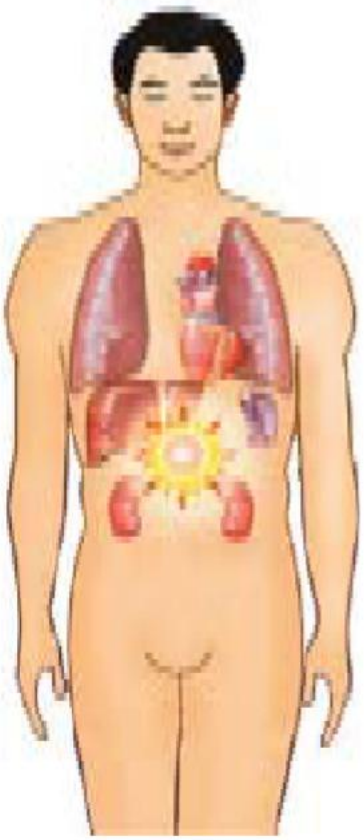


Fig. 6.12
Spiral Green Chi counterclockwise in the Navel.

Fig. 6.13 *Charge your Hands with Chi - project the Hand Bones into the Universe and feel them fill and pack with Chi.*

Work on cleaning out the **organs**. Scan the person and see which parts are hot. A lot of people will have an overheated solar plexus, which means that this area will require a lot of attention. You will feel the heat when you scan.

You can **clean the organs by 'pushing and pulling'**. Picture the organ and push; feel your hands are very 'long', extending through the organs and reaching out to the universe. Project all the sick energy down into the earth and out to the universe. Use your intent to guide it into the earth and out to the other planets in the solar system, where it will be processed and recycled. Pull the universal energy back towards yourself; push and disperse all the negative energy out to universe. Pull; when you pull the Chi back past the student, stop in between the two of you. Push, pull, push and pull, until you feel the energy or power. **Ask; "Give me the power to see". Feel your Chi entering into the organs with ease.**

A. ***B.***

Fig. 6.14

A. *Extend through the solar plexus and reach out to the universe.*

B. *'Clean and energize with Green' - push and pull to help loosen the solar plexus. Spiral counterclockwise with a Green Light. Blend with the sick energy and guide it down to the ground.*

Clean with Green Light. Spiral counterclockwise. Feel the green light mixing with the sick energy. Push and pull until you feel the energy in the solar plexus begin to disperse. Spiral the energy counterclockwise and guide it down to the ground.

A. **B.**

Fig. 6.15 A. *'Push and Pull' to help disperse the energy in the Solar Plexus.*
B.*'Flush and stabilize with Blue'-Picture Ocean Blue and flush sick energy down into the Earth.*

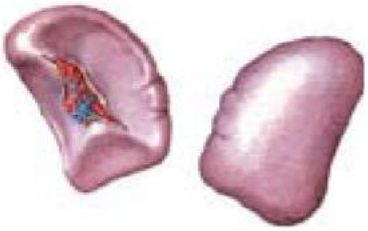
Rinse and flush with blue light. Picture ocean blue and flush down to the earth. See and feel the solar plexus becoming cleaner. Flush the sick energy down to the earth.

Now clean out the whole body again. With all the organs: from the lungs, heart, liver, gall bladder, pancreas, spleen, stomach, small intestines, large intestine, kidneys and sexual organs. Clean all the way down to the earth. **When you clean the solar plexus and all the other organs you remove all the negative emotional energy.**

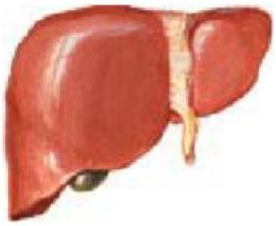
Energize the **spleen**, **liver** and **kidneys** with blue or white light. Then project green, followed by orange light to the cores of the liver and kidneys. Clean with the green and orange light and stabilize with blue light.

Work on the **back** of the **spleen** and **kidneys**. Energize them with blue-white light. The spleen is on the student's left and kidneys on the right and left. They all help to clean the blood. Spiral the energy clockwise into the spleen. See it in your mideyebrow. See the cells and spiral the light into them. Give the command, "**Stay**". This is very important; it makes sure that none of the cells hide from the dazzling light that you are sending. Give the command again. Then stabilize them with blue light. Picture the kidneys and see their cells and feel the blue light go into the cells.

Work on the **Liver** on the student's right hand side. Smile and laugh to the liver and see all of its cells. Give the command, "**Stay**"; then send in the healing light. Send in blue or white (energize), followed by green (energize and clean), blue (rinse and stabilize), violet (recharge and reprogram) and then blue to stabilize again.



Spleen - Front and Rear



Liver

Fig. 6.16 *'Push and Pull' to help disperse the energy in the Liver and Spleen. Clean with Green and flush and stabilize with blue. Flush the sick energy down into the Earth.*

It is essential that you feel and talk to any sick energy. **If the student is healthy then you will feel their 'light'.** Ask their energy body to tell you where it **may** need some healing. Send in 'light radar'. Transmit green light and flush down to the earth. **When you feel that energy is accumulating, start to spiral more.** Push and pull and give the command for the sick energy to leave.

The more you clean, the more you heal. Tell your student to practice at home after the session, at an agreed time. You can then carry out 'absent or distance' healing, linking everyone's personal star, energy body and the universe. **With time, you will master the techniques, imprinting them with your own manner.** Eventually symptoms disappear, as the blockages are cleared and the flow returned.

Cleansing the Spinal Cord

Spine

Always cleanse the spinal cord, which protects the entire body from diseased and negative energy, both physical and psychic. When you open the spinal cord and solar plexus you can release many energy blockages. Sweep the hand in a clockwise motion to energize the spine with either/or a combination of; **blue, green, white and ultra-violet**. Then spiral counterclockwise and **brush** the spine down to the ground. Continue sweeping until you feel that the spinal cord has cooled down. Remember not to use orange or red.

Cleansing the Blood (Lungs)

Pale green/white and tangerine/white chi work as cleaning agents for the blood. Diseases of the blood and arteries can be treated. The chi first energises the lungs and as the blood passes through them, it takes in the chi, thus becoming purified. The benefit is then carried to the rest of the body as the blood circulates. Serious infections can also be treated in this way; however, the technique should not be used on women who are pregnant.

A. ***B.***

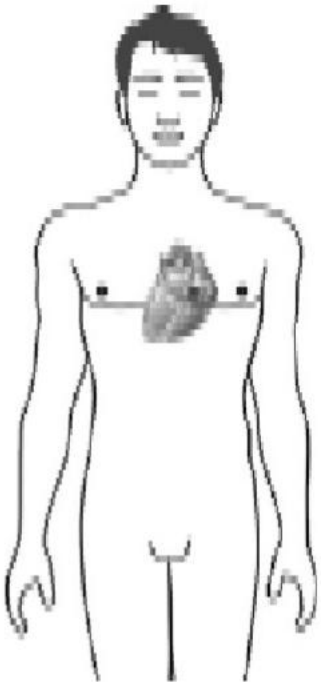
Fig. 6.17 A. *Cleansing the Blood and emptying the Lungs.*
B. *Become aware your Three Tan Tiens. Connect to the Universe and ask for 'the Power to See'.*

Outline for Cleansing the Blood/Lungs

Lungs

1. Scan the student.
2. Push through and open the lungs from the back to the front.
3. When the lungs need to be given energy, use pale green/white followed by pale tangerine/white chi beginning at the front and moving top the rear.
4. To make weak patients stronger, cerise/white chi can be employed as this will bring energy into the lungs.
5. Purification of the blood is carried out by the liver, kidneys and spleen. Use white chi to bring energy to these areas, after first pushing and pulling through them.
6. The blood requires a lot of cleaning on a regular basis.
7. Energize with white Chi. **Germs can only grow in the dark. 'Fill yourself with the light'.**

Circulatory/Heart System General



One of the basic problems pertaining to the circulatory system and heart is hypertension and hypotension. Once again, the sacrum and solar plexus are involved. The sacrum controls the bones; indirectly, it stimulates the marrow and enhances the quality of the blood. Good blood is like running the highest quality motor oil through the engine of a motor vehicle.

(Within the Universal Tao System we also have the view that the sacrum controls the Chi-pulse. If there is enough Chi, the heart does not have to work so hard, because the Chi pushes the blood).

The solar plexus relates to the emotions, affecting the heart through two mechanisms:

- It may affect the heart directly, causing rhythmic disturbance or pressure around the heart muscle
- Malfunction in the liver or digestive tract, leading to high cholesterol levels or gas which pushes up towards the heart from the intestines and causes unwanted heat and pressure.

Cleaning out the Solar Plexus will greatly improve these conditions. If you have been trained in Chi Nei Tsang you can use it in combination with the Cosmic Healing techniques.

Specific

Working on the Heart Muscle:
Clean out the Solar Plexus as outlined above. Push and pull with green and blue.
Detoxify the liver, flush with green.
Enhance with white and violet light.
Use the finger to work on the lower left and upper right part of the heart.
Remember that the heart muscle is very delicate.
You draw the force, you spiral and you push.
Stabilize with white.
For enlarged heart use blue.
Carefully use the red light to balance the blood and open the blood vessels.
Sweep the sacrum with green, red and blue.
Sweep the solar plexus with green, blue, red, white and violet.
Energize and cool down the throat center, using blue.
Working on Hypertension (High Blood Pressure):

Overactive adrenals/ kidneys often cause hypertension. Clean out the solar plexus first, because the adrenals (T11) are connected to it. The adrenal glands produce adrenaline, the hormone that stimulates the heart to pump. Overactive adrenal glands will eventually affect the heart.
Tune-up the Door of Life with blue, calming it.
Take the pressure from the heart, use green.
Energize the heart, use violet.
Flush down from head to feet with blue;
The basic problem with hypertension is that the Chi goes up and cannot come down. Work on the sacrum, using orange and yellow.

Working on Hypotension (Low Blood Pressure):
In hypotension the Door of Life and T11 are underactive.
First clean out the Solar Plexus, this time focus on removing blocks or stuck energy.
Energize the Door of Life, using green and red.
Energize the Sacrum (same colors).
Energize the Base of Skull with green and violet.

Stomach Pains

Pass your hands over the patient and brush the whole abdomen, especially the solar plexus, navel and lower abdomen. The navel should be treated with a combination of green and blue, and blue should be used at the end to firm up the energy.

If problems persist: A) Treat with Chi Nei Tsang B) Seek the advice of a qualified medical practitioner.

Relieving Pain: *Blue Chi*

Chi that is associated with the colors blue and green can be utilized in different ways. While green chi acts to free up energy that has become 'sick' and 'stuck', blue chi can act as a painkiller because of its ability to reduce the severity of pain.

1. Push and pull the through the affected part out to the universe or ground the sick energy until partial relief is attained.
2. A large amount of pale blue/white chi together with pale green/white chi should be used to transmit energy to the problem area.
3. For the alleviation of pain, use pale green/white chi and pale tangerine/white chi in turn.

Energize means draw the Chi into the part that you want to receive healing. Cleansing means push energy through the affected part and send it out to the universe. Pull the new Chi back into the same area. Light green Chi is used in loosening and cleansing delicate organs like the eyes and the brain.

Headache: *Light Whitish Green and Light Whitish Blue Chi*

1. To check for areas that are congested or lacking in energy, the eyes, temples, spine and solar plexus area should be scanned. Also, the crown, mideyebrow, forehead and back of the head and neck.
2. The eye and temple areas should be brushed down when the headache is because of eyestrain and then flushed into the ground.
3. The whole head, particularly the painful section should be brushed and then pale green/white, blue/white and pale purple/white Chi used to bring energy into the area.

Migraine Headache: *Light Whitish Green Blue and Violet Chi*

1. Persons who suffer from prolonged or chronic headaches including those types termed 'migraine' headaches have an abnormal accumulation of energy in various parts of their bodies. Starting with the solar plexus, this energy follows a route up the vertebral column and thence into the neck and head. As a result the various blood vessels in the head expand, causing pain in the head area. Mental strain and emotional disturbances usually cause this type of headache.
2. Use a pushing movement to clean and open the solar plexus and liver areas. First use pale green/white, then pale blue/white and finally mauve/white chi to bring energy to the solar plexus area.
3. In order to send the 'sick' red chi into the ground, brush down the spinal column.
4. The back of the heart can be opened by pushing through in order to remove the dirty Chi. Then bring energy to the heart by using pale green/white and purple. Use your mind to see the heart center expanding and opening.
5. Brush down the dirty chi from the head area and send it into the earth.
6. Use a combination of pale green/white, blue and purple to bring energy to the back of the head, the crown point and the forehead.

Toothache: *Light Whitish Green and Blue Chi*

1. Brush down the area with pale green/white Chi.
2. Energy should be brought into the area with pale green/white, mauve/white and blue Chi.

Broken Bone: *Orange-Yellow Chi*

For anything relating to the bones always activate the sacrum. Light orange-yellow Chi is used to encourage broken bones to knit quickly, Chi which is pale yellowish tangerine may be employed. The sacrum attracts the orange-yellow Chi; feel the eight holes in the bone breathing. The orange-yellow Chi enters, transfers up to the crown and is sent up to the universe to multiply.

1. The fracture area should be brushed using a combination of pale green/white and pale tangerine/white chi.
2. To promote fast knitting of fractures, a daily treatment with pale tangerine yellow Chi mixed with white can be employed, in the ratio of 7:1.5:1.5 of white (for the center), yellow and tangerine respectively. Push through and brush the sacral and navel areas, using a cerise (light red) Chi mixed with white.

Back Injury: *Light Whitish Blue and Green Violet Chi*

1. Scan the student to see which parts are congested.
2. Use chi that is pale white/green or pale white/tangerine and, selecting each in turn, with a brushing movement apply to the whole spinal area and especially to the area where the trauma is located.
3. To bring energy to the damaged area, use a combination of pale blue/white, green and purple.
4. White chi should be used with a brushing movement on both the back and front of the solar plexus area.

Infection and Inflammation: *Light Green Chi*

Treat the damaged area with green and tangerine/white chi, using a brushing movement. For the heart and spleen, these colors should be replaced with green and purple.

Bring energy to the area by the use of mauve, white, tangerine, green and blue and strengthen the natural immune of the body.

Cysts: *Light Green and Blue Chi*

During the course of the session, repeatedly pass your hands over the patient's body. Treat the solar plexus area with a combination of green and blue chi. The cyst can be removed using a chi knife, spiraling clockwise with green and tangerine chi; moving the 'stuck' red chi out of the body and grounding it in the earth. After, blue chi should be used for a calming effect, while green and tangerine can also provide energy. For maximum benefit, sessions should be thrice weekly.

As foods containing a lot of highly spiced ingredients have a lot of red chi, these should be kept to a minimum. The patient should use the Inner Smile to calm and balance his/her emotional state.

It is sometimes necessary to sweep 100-200 times, to cool the affected area. Scanning will enable you to take a temperature reading. If the area is still hot then continue sweeping until it reaches a satisfactory temperature.

Fever

1. Brushing can be done with blue or green Chi.
2. Push and pull through the affected part, sweeping the spleen with green and blue. Clean and rinse thoroughly.
3. The solar plexus area can be treated with tangerine and blue Chi but tangerine should not be used on a patient with diarrhea.
4. The thymus gland can be stimulated by the application of green, tangerine and purple Chi. First, brush the heart area with green and blue. This helps the body to ward off infection.
5. Both lungs should be brushed and energy brought into the back of the lung area by the use of tangerine and green.
6. Sweep the spleen with green.

If the student has a fever then they must lie down to receive the healing. This applies in all cases where the student is unable to sit up comfortably.

Insomnia: *Green and Blue*

Inability to sleep may be the result of too much activity in the solar plexus and the sacral area. The solar plexus may also be congested. Similar problems can also occur in the throat, mideyebrow and forehead, as well as at the crown point.

Repeatedly pass your hands over the patient's body as the treatment progresses and use a combination of blue and green chi to clean the sacral and solar plexus areas.

Sleep can be brought on by use of blue, as it soothes the solar plexus area. Use blue and green to brush the mideyebrow, forehead and crown point and white and tangerine on the navel. Finish with blue.

Do not eat food late in the evening.

Sleep in a separate bed from your partner. You can place two beds next to each other.

Tinnitus

Relates to weakened kidneys. Work on the kidneys, mideyebrow and forehead.

Blood Clotting: *Blue Chi* - Fresh Burns: *Green and Blue Chi*

Because of the cooling and calming properties of blue chi, it can be used to remove the heat from burns. Green has a similar effect.

The area needing treatment should be scanned, then brushed with a combination of pale green/white and blue Chi until relief is felt and the heat in the cells released.

Old Minor Burns: *Green and Red Chi*

Pass your hands over the damaged areas and repeat this during the treatment period. Use pale green/white and tangerine, but do not use on the head, eyes or brain, or other sensitive organs.

To reduce discomfort in the damaged area and promote fast healing, firstly pale blue Chi mixed with white should be employed, followed by cerise mixed with white, and green in equal proportions as this mixture optimizes the breaking down of necrotic cellular material. However, cerise should not be used in the head area but be replaced by mauve mixed with white.

Use cerise/white chi to brush the sacral and navel areas and follow with blue which assists in the release of the stagnant Chi. This session should be repeated for 2 or 3 days.

Old Severe Burns: *Green and Red Chi*

1. Scan at the beginning and end of the treatment (Note:I do not think scan can be seen as plagiarism and I don't know what other word to use in this context as I do not have the full text)
2. The local area should be brushed first with pale green/white and then with pale tangerine white. Keep repeating but make sure to omit sensitive organs and the head area.
3. To speed up healing and reduce pain and infection, the damaged area should be filled with energy from pale blue white, pale green white and mauve with white Chi.
4. To help speed up the healing process, wait a few days until there is much less pain, then use pale green white and cerise mixed with white Chi. If the head area is affected, use mauve mixed with white in place of the cerise.
5. Brush in the sacral and navel areas and to speed up healing use white Chi.
6. After making your healing intent stable, release it.

Old Wounds: *Green and Red Chi*

Green chi, in equal proportion of pale green/white and pale red/white should be employed on injuries which are not new as, when used in large quantities, it attacks and disperses damaged cellular matter, promoting fast healing. On recent injuries, it will have an adverse effect because it is likely to cause the trauma area to become moist, and it also will not be able to work quickly.

Scan at the beginning and end of the treatment, and brush the damaged area with pale green/white and pale tangerine/white Chi. Some pale blue/white can be employed locally to energise the area. Use of pale green/white followed by cerise mixed with white can speed up the healing process and assist in the breakdown of cellular material.

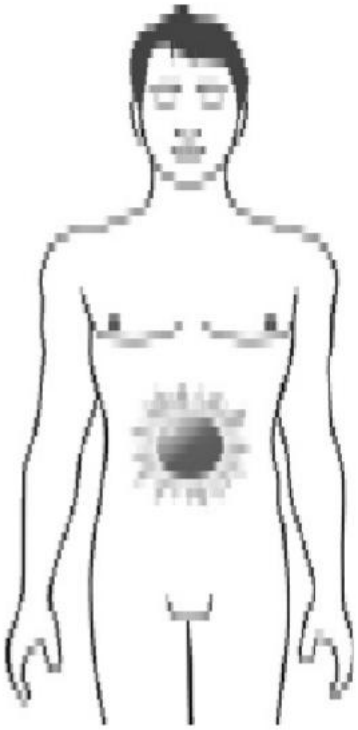
The navel and sacral areas should be brushed using pale cerise/white Chi. This will fill the area with energy and make the wounds heal faster. Before the Chi is let go, it should be stabilized.

Some Specific Points and Ailments

The following descriptions are mere guidelines. Each case is different and much depends on your own abilities. One needs practice to detect diseases. Best results with Cosmic Healing will be obtained when practiced in combination with Chi Nei Tsang.

Remember that these techniques are not meant to replace the doctor, but merely to assist him. The student must always work with the practitioner. ***The practitioner is a channel, the student the healer.***

Solar Plexus: *Blue Chi*



The Solar Plexus is the connection point for practically all the nerves inside the body. That is why it becomes laden with emotions so easily. When the Solar Plexus jams up and overheats, the liver will overheat; when this happens, the heart will also overheat; this will in turn affect the thyroid and parathyroid; finally the brain will be affected. Cleaning out this center is therefore extremely important. This type of cleaning may be done from the top down (as in the general cleansing session) or aimed at the Solar Plexus directly. Draw the green light, spiral it, flush with the green light, then energize with white and violet light. As before, always allow the energy to stream through both the points fully. The Solar Plexus holds all the emotions. When working on the Solar Plexus, the most important thing to remember is to connect the backside to the universe. There is literally no end to the 'other' end of this connection. Just allow the Chi to come all the way down and slightly pull inwards a little. Simply clean out the path. Allow the information to condense, allow any images to come out. Then stabilize the energy. Picture the Chi-field enveloping the person as a big protective bubble. Cool down with blue.

Skin Infection: *Blue Chi*

The skin is related to the lungs and the kidneys. Whenever there is an infection, the immune system is involved.

1. Enhance immunity as outlined in pages 101-108.
2. Focus on strengthening the lungs. Always start with green to flush out. Then send orange light into the lungs. Make sure you are not sending it up to the brain. Energize the lungs with blue and white.
3. Detoxify the kidneys, purify the blood (green) and energize with blue. Ask the person to visualize a fresh mountain-stream to stimulate the kidneys.
4. Treat the area locally, using your hands. If the area is big, use your palm, if small use the fingers. Do not focus on your palms - refer to the section 'Forget About Your Palms'. on page 152. Draw green Chi from the forest, and then energize with violet.
5. To diminish pain or itch, use blue to cool down. Also use the Chi knife to work on the infection.

In case the skin problem is allergy-based, you should also treat the mideyebrow; there might be some irritation here. First clean with green, then either energize with

violet (if resistance is low) or soothe with a light shade of yellow. If the skin problem is related to asthma, open the lungs with bright red clean the throat center with green and energize it with (deep) blue.

If the problem is due to toxicity, also clean out the liver flushing with a combination of green and orange. Energize with green. Enhance the immune system by working on the sacrum.

Eyes: *Green Chi*

The right and left eye are governed by the forehead and mideyebrow respectively. The eyes are also linked to the temples. Ask the person to touch their temple bone and guide them to take in the (white or light violet) Chi. Send Chi through the mideyebrow and forehead (all the way through). Ask the person to visualize the light coming in. Use soft shades of green with golden yellow to stimulate the optic nerve. Use blue to calm the eye muscles and light violet to stimulate the inner eyesight.

The eyes are connected to the liver. Scan the liver and energize with green. Scan the jawbone to see if there is any unreleased anger. Cool down with blue. Channel bright green into the liver.

Ears: *Violet Chi*

The right and left ears are governed by the forehead and mideyebrow respectively. Push and pull green Chi to clean. The ears are connected to the kidneys, so you can work on them also. The ears are also connected to the sinuses and upper respiratory tract. This means that infections need to cool down before you can use any cleaning technique. Use blue to cool and clean with violet. As long as fever and severe infection persist, use blue to cool them down. When clean, energize with violet.

Have Better Health, Less Stress and Remain Young

Brush specifically on the areas of the solar plexus, liver, stomach and pancreas.

White chi brings energy to the crown point, head (at the back) and both sides of the brain.

Both the front and rear of the heart and lungs can receive energy from white/purple Chi.

Both the front and rear of the spleen, the navel and lower abdominal area, the spinal cord, the kidneys, using white Chi.

On the sexual center use white chi but if the problem is difficult to shift, use green. You can also use white Chi on the sacral area, and green or purple on other organs.

White Chi can be employed for the arms and hands, while the legs and feet should be treated with white and purple Chi.
Eye problems with green/yellow energy.

After a session, patients who are particularly weak should not bathe for one full day. The energy which has been put into their bodies can thus be kept there by application of pale blue/white Chi at the end of the session.

Fig. 6.18 *Use Compassion, Love and Kindness.*

Summary of Individual Healing Session

A. Chi Knife
B. Energizing and Activating the Immune System
C. Cleansing with the Internal Organ Techniques

General Outline of Practices

1. Gain experience by working with one person. **Stand in front of them with your feet shoulder width apart.** Hold your hands at your heart in salutation. Transmit your love and compassion and ask for their permission to help them to help themselves heal.

2. Connect to the student's and your own cosmic star above your head and ask for universal permission. **Radiate your love and transfer three minds into one mind**. Lower your Upper Tan Tien. Activate your consciousness: Three minds become one mind. Expand your awareness in the mideyebrow and the crown. Feel the Tan Tien, heart, mideyebrow and crown spiraling. Expand to the universe.
3. Visualize the person's legs as being 'very long', extending down to the earth. **Activate the Sacred Fire** and bring it down. Clean out the room and make a big Chi field around you and the student.
4. **Call the Elemental Forces:** water, fire, thunder, lightning, rain, lake, earth, mountain, wind and Heavenly Chi. Call the guardian animals; Blue Tortoise from the north, Red Pheasant from the south, Green Dragon from the east, White Tiger from the west, Yellow Phoenix from above and Black Tortoise from below. Feel that you are protected by the Chi; gather the power of all the mountains, rivers, streams, stones and rocks into the room. Activate them with lightning, thunder and wind - filling the whole room with electrified Chi.

A. Chi Knife

1. Hold the knife in right hand (left, if you are left handed). Hold the other hand near your body with the thumb and index finger touching. Project the Chi Knife as big as the universe, 'long and big - reaching to Heaven'. The bones in your arm are hollow and the 'bottom' is sealed at the shoulder. Feel them 'fill and pack' with the power coming from above.
2. Then give the command: **"Power comes from the east. This Chi Knife has the power to dissolve all the negative energy, sickness and bad fortune. By my request, please carry out the order now."** Wait until you feel that your arm and the knife are heavy and full of Chi.

   Carry out energetic surgery, **cutting and slicing the affected area with cool yin energy**. When you feel that the Chi Knife is full of sick Chi, spiral counterclockwise and discard it down into the ground. When you feel that the knife is 'empty', charge it with Chi from the universe. Continue until you feel that the area has been cleansed.

B. Energizing and Activating the Immune System

In cases of severe illness, debilitation and infection, it is essential to stimulate the body's defence systems. You may also want do this in a preventative manner. Guide the student as you practice together. Presuming that you have already done the previous set of general healing, you can start with the coccyx.

1. Be aware of your Tan Tien and connect to the universe. Touch your **coccyx** with the fingers concentrating a beam of white or yellow light on to it. Picture the sacrum opening and the light streaming inside, flowing **up the spine** and streaming out over

the whole bone structure. Feel the Chi rising up to the universe, multiply it and guide it down to your energy body.

2. Be aware of the Tan Tien and the universe. Attract the yellow light; spiral and condense the healing light into the tips of your fingers; move the fingers up to touch the **sacrum**. Send out a beam of yellow Chi into the sacrum, directing it up the spine. This will stimulate the production of red blood cells. Transfer the feeling of 'Bone-Chi' up to universe and down to your energy body.
3. Proceed to the **crown**, showering it with violet light. Then spread from the crown throughout the bones of the body. Repeat several times. Instruct the student to feel the bone structure breathing. Ask him/her to extend up from their crown to the Big Dipper and North Star, channelling down the red and violet light into the thymus gland.
4. Continue to the **throat**, stroking down with your palms, using green color to move the lymph down towards the backside of the heart. (Never stroke up towards the head! Only guide the lymph down).
5. Proceed to the **lymph nodes under the armpits and across the sternum**. Next activate the lymph nodes in the **groin**. From the groin you guide the lymph up to the navel center (Not down where it will get stuck in the legs).
6. Return to the **navel center**. Send the energy deep inside, energizing the lymph nodes at the back. Pull back, drawing green energy, flushing out any waste products that are stuck in them.

Activate the points at the inside of the **elbows** and the **knees**.
Shower the whole body with healing light and energize the **perineum** with blue Chi.
Always remember to ground any sick energy by sending it deep into the ground. Ask the student to do the same and it will be more effective. You should do this while giving the session as well as when closing it.

C. Cleansing the Internal Organs (Repeated from pages 132-133 and pages 136-137)

This session can be used for any kind of ailment and carried out with any number of students. **It is important to remember that if there is no energy in your Tan Tien, then there will be no energy to work with.** When you are aware of your Chi, you can direct heavenly light straight into your energy body and then into the student's.

General Cleansing Procedure

1. Push and pull the energy through the student's body. Push and disperse the sick energy into the universe and out to the planets, where it will be transformed and recycled.
2. Pull the energy back and stop it between yourself and the student.
3. Spiral the energy counterclockwise until you see the **green** light mix and clean the sick energy. Spiral and flush the energy down into the earth.

4. Spiral with blue light; see it mix and flush the energy within the student's body. Spiral this energy down to the ground.
5. Energize the student with **white** or **violet** light.
6. You can also use both hands to channel Chi when you 'push and pull' through the body.
7. **Spiral in** - spiral clockwise to bring energy into the body and energize it.
8. **Spiral out** - spiral counterclockwise to cleanse, flush and remove energy.
9. When you begin pushing, pulling and sweeping, you may feel resistance in the body. As you progress and the energy centers open, this feeling will diminish.
10. There are many color combinations that can be applied to the various parts of the body. When you start practice, stick to the basic 'blue, green, white, violet and blue' formula. When you are working on a specific area, you can keep this book near by, or write a short 'color recipe' before you begin. In this way, you will be able to relax your mind.
11. 'Pushing and pulling' is like fanning and venting the body; when you fan your hands in front of your face, it will have a cooling effect. Ventilation enables the stagnant, sick energy to leave the body.

    Below is a list of the body's organs in relation to their tendency to 'store heat'. They are listed in descending order, i.e, the head is the hottest.

    Head, heart, liver, lung, stomach and spleen, large intestine and small intestine, kidneys and sexual organs (which become hot when aroused).

Outline of Practice

The **solar plexus** is the clearing house for emotional energy and is situated in between the lower and higher energy centers and in the center of most of the internal organs. All the organs dump their negative emotions here. The internal organs can be cleansed by sweeping the solar plexus, energizing, cleaning and flushing it of sick energy. When you feel sick energy in the body, give the command: "Stay". This is very important; it makes sure that none of the cells hide from the dazzling light that you are sending in.

1. Scan; ask for the power to look at the cells.
2. Push, pull and give the command "Disperse". Push until you feel the solar plexus clear and open.
3. Spiral green Chi counterclockwise. Talk to the sick energy; tell it to "Leave", you will take it to "a better place, where it will be happy". Give the command "Out".
4. Spiral Blue Chi counterclockwise, flushing out any remaining sickness. Guide the sick energy into the earth.
5. Spiral and sweep Blue - Green and Red Chi into the solar plexus, sweep the organs. Do not use in cases where there is intestinal infection and internal bleeding (which can be worsened) or in the presence of pregnant women.

Cleansing the Spinal Cord

Always cleanse the spinal cord, which protects the entire body from diseased and negative energy, both physical and psychic. When you open the spinal cord and solar plexus you can release many energy blockages. Sweep the hand in a clockwise motion to energize the spine with either/or a combination of: blue, green, white and ultra-violet. Then spiral counterclockwise and brush the spine down to the ground. Continue sweeping until you feel that the spinal cord has cooled down. Remember not to use orange or red

Cleansing the Blood (Lungs)

The blood can be cleansed by energizing the lungs with whitish green, then with light whitish orange. The blood passing through the lungs will absorb the green and orange Chi, thereby cleansing the blood plasma and vessels and the rest of the body. This technique is very useful for treating ailments of the blood and of the arteries and for severe infections. Do not use it on pregnant women.

Outline of Practice

1. Scan the student.
2. Push through and open the lungs from the back to the front.
3. Energize the lungs from front to back with light whitish green, then with light whitish orange. Push through.
4. If the student is weak, energize the lungs with light whitish red, which will provide a strengthening effect.
5. The **spleen**, **liver and kidneys** purify the blood. Push and pull through the organs and energize with white Chi.
6. The blood requires a lot of cleaning on a regular basis.
7. Energize with white Chi. **Germs can only grow in the dark. 'Fill yourself with the light'.**

General Principles

Energy can be introduced to the affected area of the body by moving the hand clockwise in a spiral. **Flush** means to return the sick energy to the earth for recycling.

Stabilize means to return the area to normal functioning.

Spiral in a **clockwise** motion when you are '**stabilizing**'.

Use **blue or white** light to energize the area that you are working on.

Use **green** light to **energize** and **clean** the area that you are working on.

Use **blue** light to **flush** and **stabilize** the area that you are working on.

Use **violet** light to **balance** the sick energy and **reprogram** the cells of the body.

For **general infections** always **use green** (energize and clean) and **blue** (stabilize) light. Use violet light to balance the sick energy and reprogram all the cells. Use the 'Chi Knife' for infections as well. Never use orange on the head, heart and spleen.

Give the command **"Stay"** to make sure **all the cells receive the light** you are sending in. Remember that germs and bacteria cannot hide in the light.

Energize means to draw the Cosmic Chi into the part that requires healing.
Cleanse means to clean all the cells being treated.

You can also work on yourself. You may need some help when working on the back. If you obtain optimum health and practice the Cosmic Orbit regularly then you will never 'need' to apply any of these techniques to yourself.
Like all Chinese medicine, Cosmic Healing works on the system as a whole, balancing the entire organism, treating the cause to cure the symptoms.

The techniques really are simple.

When in doubt use; blue, green, white, violet, blue.
You can always use white and violet.
Upper organs - use violet.

You can practice group healings and then link your students' personal stars together, at an agreed time later in the day. **You can then perform the World Link Cosmic Healing**.

Work on any other ailments that the student may have.
The simplest way to learn is to begin practicing today.
The simplest way to heal is to allow yourself to be healed.

Chapter VII
Different Hand Techniques

Forget about your Palms

An extremely important theory of Cosmic Healing Hand Techniques is to 'forget about your palm'. This means that you should only use the palm (which is incredibly sensitive), for 'guiding' the universal energy into the right spot, sending out a minute beam of light, like a laser, that marks the place where the energy should be sent. Your palm is connected to your brain, which has been sunk into your Tan Tien. The light marker will serve as a beacon for the force that is directed down by your mind. Draw down the Universal Chi, guide it to the right spot and give the command; "Stay". This is very important, otherwise the Chi will disappear once you move your hand.

When you practice Cosmic Healing it makes no difference how many people you treat, because you are not transferring your own energy.

Don't Focus your Mind on the Sick Part

If you direct your attention towards something, your energy will go there. If you focus on some ailment, you are already sending out your energy. Instead you should try to connect with a greater source, Universal Chi, extending your mind very far away. This way you won't lose your power. The only thing you do as a practitioner is to form the connection between nature, the student and the sick energy or between the universe, the Chi field and the sick part.

Cosmic Healing is Teaching

One of the best methods of protection for a practitioner is the Fusion practice (*Refer to 'Fusion of the Five Elements I by Mantak Chia*). Perhaps even better is for the practitioner not to perceive him/herself as a healer, but as a person that comes to guide people in something they have to do themselves. When you say; "I am a healer", the sickness or bad energy, has already found a new home. When you check it out, first it will try to hide, and then it will try to attach itself to you. But if you don't interfere, the energy will go straight to the ground. So it is very important to clarify that you are not a healer, but a practitioner that can help, and that the student or sick person has to do most of the job.

Fig. 7.1 *The Stronger your Awareness of your Inner Body, the Easier it will be for others present to pick up this Sense.*

If you guide those present, this will greatly enhance your healing session. Sit or stand facing your student. Any time you want him or her to focus on a particular point of the body, ask them to touch it with their hands. For example, "Now place your hands on your navel", while you do the same thing yourself. As soon as you feel the Chi there, you instruct them to focus on the navel themselves. This way you are actually helping them to deepen their bodily awareness. The stronger your own awareness of your inner body, the easier it will be for the others present to pick it up. This means that if you are treating some part of another person's body, or if you see that the person is not aware of any energy in some part of the body, you can help by focusing your awareness on this particular part of your own body.

Chi Kung Diagnosis: Hand Scanning

Hand scanning is a simple and effective diagnostic tool of External Chi Healing. It involves passing your palm over the body of your student from one inch to one foot above the surface of the skin and being aware of the energetic state of the various bodily areas. What one senses is described as the electromagnetic field, the aura or the energy body.

General Variations in the Energy Field

The variations you may sense with scanning that have diagnostic significance are:

Temperature

Heat generally indicates excess, while cold indicates deficiency. However, some areas of the body are naturally warmer or colder than others. This is described below under "Hand Scanning the Internal Organs."

Thickness

A feeling of thickness over the area would indicate excess, while thinness may indicate deficiency.

Wind

You may feel sensations of wind leaving the body at various places. This may indicate internal wind at a given location, or it may point to an area of the body that is "leaking energy" and needs to be 'patched' or 'sealed'. It may also be a positive sign that you are driving wind out of the body.

Peaks and Valleys

Peaks in the energy field will feel like mountains or hills in the aural landscape. They may actually push your hand away. Valleys feel like depressions or energy vortexes drawing you in. They may also feel empty, like a hole or pit. Peaks indicate excess or stagnation, while valleys indicate deficiency.

Tingling

Accumulations of sick Chi may cause your hand to tingle, feel prickly, throb, or even hurt. These are excesses of energy and upon inquiry, the student may complain of pain in this area.

Hand Scanning the Internal Organs

Each Organ Emits a Different Aura

Each organ emits a different kind of force or aura through the skin. By passing a hand one or two inches above the skin, you can feel different sensations that reflect the condition or state of the internal organs. You need to develop the sensitivity to receive and identify the vibration or frequency of each organ. Practicing the Cosmic Chi Kung Meditations will help develop such sensitivity.

Liver and Gall Bladder Scanning

Healthy liver and gall bladder energy feels warm.

Negative Emotions: When you pass your hand over the liver, under the right side of the rib cage, you will feel a charged energy come up to your hand. This is a sign of anger in the liver.

Overactivity: When you pass your hand over the liver and feel a rush of hot energy, this indicates that the liver is overheating because of toxins or emotional stress.

Underactivity: When you pass your hand over the liver and you feel a dense and hot energy, the liver is weak, congested and sick.

Lungs Scanning

Healthy lung energy feels cool and dry.

Negative Emotions: Pass your hand over the lungs. Do the Lungs' Sound and listen to the echo of the sound as it rebounds from the lungs. Sadness will feel like a deflating ball pressed between your hands.

Overactivity: Energy that feels dry and hot indicates an overworked organ.

Underactivity: Energy that feels damp and cool under the scanning hand indicates underactive or congested lungs that can lead to respiratory problems.

Heart Scanning

Healthy heart energy feels warm and energetic.

Negative Emotions: Hot and charged energy indicates impatience, hastiness and arrogance in the heart.

Overactivity: If your hand detects hot, charged and overly expansive energy, this indicates that the heart and blood may be overheating.

Underactivity: Energy that feels cool and less expansive indicates an underactive or congested heart.

Spleen Scanning

Healthy spleen energy feels lukewarm.

Negative emotions: Energy that feel damp and sinking indicates excessive worry.

Overactivity: The energy feels hot and damp when the spleen is overactive.

Underactivity: The energy feels cool and damp.

Kidneys Scanning

Healthy kidney energy feels cold, but not too cold.

Negative emotions: Energy that feels cold and chilly indicates fear.

Overactivity: When the kidneys are overworked or overstimulated by excessive exercise or improper diet and liquid intake, the energy can feel damp, stick and hot.

Underactivity: When toxins are blocking the organs, the energy can feel damp and cold.

Hand scanning is an art, and may take a while for you to feel confident using it. Practicing Cosmic Chi Kung is one of the best ways to develop greater sensitivity in hand scanning.

Chapter VIII
Cosmic Chi Kung
Palm and Finger Training

Why We Practice the Cosmic Chi Kung

The Cosmic Chi Kung is also known as Buddha Palm. The reason we train with the Empty Force practice in connection with the Cosmic Healing is to learn how to project Chi through the space in the cosmos, the space between your hands and to project Chi through the space to your students. Usually when we touch the student we pick up sick energy. This practice will teach you how to ground the sick energy to the earth and to disperse it into the Universe to be decomposed and recycled by the planets.

Practice until you can project Chi out from your palms and fingers and when you feel the Chi coming into your body through your hands. The most important part is to always remain connected with the Universal Force coming from all six directions. If you focus on healing from your hands or your Tan Tien you will use up your own energy. You must be connected to the Cosmic Universal Force.

Expand your awareness to nature, the oceans, the lakes, the forests and mountains. Smile to nature and feel it smile back to you; inhale and draw the Chi into your palms. Expand your awareness to connect to the light, the Milky Way and the cosmos.

Be aware of the heart and the red light in the heart; expand your awareness to infinity. The light will come close to you; picture the red planet Mars above you. See it shine down to your crown, feeling the light in your palms. Be aware of the six directions, feel your body growing bigger; until you touch the sky, your feet still planted in the earth.

Opening Heaven and Earth Force in the Palms with Heaven and Earth Spirals

The purpose of this technique is to draw in the forces of heaven and earth through the palm. Activate the spirals, the symbol for the heaven and earth force in the center of the palm.

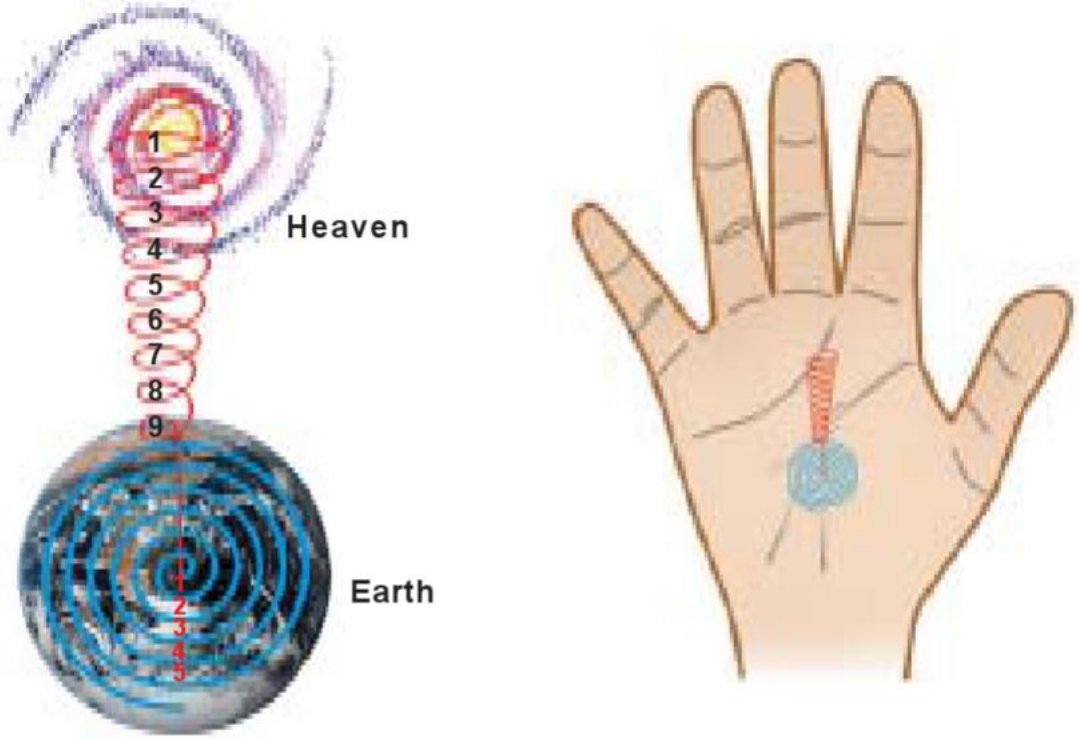


Fig. 8.1 *Enhances the symbol of Heaven and Earth Force, in the Laogong - Pericardium 8.*

This is accomplished by drawing these spirals with the palm itself. As you draw the spirals, you should actually feel the palm breathing, inhaling these forces in. In the beginning, however, you may only be able to use your own mental imagery and imagine that you are absorbing these forces. In time the feelings will replace your imagination.

You breathe in Heavenly Chi when you draw the heaven spirals, and breathe in Earthly Chi when drawing the earth spirals. You may draw in both in one session; you may also choose just to draw in either Heaven or Earth Chi if you feel you need more of one or the other. It is important to balance these energies whenever you do this exercise.

1. Begin by raising the right hand to about shoulder height with the elbow sunk and the palm facing forward. Slightly pull back (open) the index finger, and slightly stretch the thumb forward and down. This will activate the Laogong point on the palm.

   At the same time, touch the tips of your left thumb and index fingers together. This will allow the right hand to draw in the Heaven and Earth Chi. The left hand will then be held palm up to draw in the heavenly force, or held palm down to draw in the earthly force.

2. Begin **drawing the heaven spiral** by moving the **palm in a clockwise motion**, with the circles getting smaller and smaller, spiraling inward. At the same time, your left hand is held at your side, palm up with thumb and index tips touching each other. Draw seven or nine (planets of our solar system) small spirals with your right hand in this way, drawing in the violet heavenly energy.
3. Next, lower your right hand slightly and turn your left palm down to face the earth. Then begin **drawing the earth spiral** by moving the right palm in a **counterclockwise motion** with the circles getting larger and larger. Draw five spirals (five elements), drawing in the blue earth energy as you move. Inhale into the palm, feeling the energies.
4. You may now bring both hands down to the beginning position of Cosmic Chi Kung, or you may open the Cosmic Channel to the planets for healing. This is discussed in the next section, Part I, 'Opening to Heaven, Earth and Cosmic Chi'.

Cell Breathing

By understanding the operations of our cells, we establish a foundation for our experience of Cosmic Chi Kung. Each cell is a living, breathing entity, absorbing energy with each inhalation and releasing toxins with each exhalation. Thus with every breath, we are creating more Chi.

We are made up of over one hundred trillion cells (one trillion is one thousand billion). Each one of these cells is constantly breathing. In order for our cells to function optimally, we must follow nature's teachings.

Fig. 8.2 *Each Cell is a Living, Breathing Entity.*

The first thing is to keep your cells free of toxins. Eat nutritional foods. This helps the Chi to flow smoothly through your energy channels and aids greater assimilation of vitamins and minerals. Learn and apply Five Element nutrition principles, eating according to the seasons and to your own constitution.

The second thing is to keep your cells free of excess emotions. Develop the skill of acting positively to situations, rather than reacting, especially negatively. Don't allow anyone to make you sad and unhealthy. Some people like to say, "You make me angry," or "You made me worry." We cannot allow other people to make us so emotional. We do not need to accept the negative emotions that other people try to dump on us. Cellular and psychic boundaries are related. Negative emotions disturb the cells' ability to absorb Chi and to generate the energy necessary for healing. We need all the Chi that we can get. Learn and apply the Six Healing Sounds, the Cosmic Inner Smile and the Fusion of the Five Elements meditation to transform negative emotions into personal power.

Third, create more energy by cultivating a happy attitude, so that your cells can regenerate more easily. **Smiling and loving** are the two quickest ways to make more Chi. In order to have an ample supply of Chi, develop an attitude of **joy and love** in yourself and towards others.

Mind, Eyes, Heart and Intention (YI)

The opening of the mind, eyes, heart and use of intention is vital for further activating and increasing your Chi. In the Tao we achieve this by cultivating our "Yi" (pronounced "yee"). "Yi" means mind power, intention, awareness and concentration. The Yi leads and guides the Chi. With our mind we control thought patterns. With our eyes we control the senses of sight, hearing, smell and taste. With our heart we control all our organs and their related emotions: the kindness/anger of the liver, the joy/impatience of the heart, the openness/worry of the spleen, the courage/sadness of the lungs and the gentleness/fear of the kidneys.

Fig. 8.3 *'Yi' leads and guides the Chi.*

Every excellent achievement in our lives depends upon the quality and efficient operation of our Yi. Combining the awareness of the mind, eyes, heart and intention into one, causes the creation of a rich and rare alchemical mixture. The power of the Yi is the magical catalyst that assures energetic results.

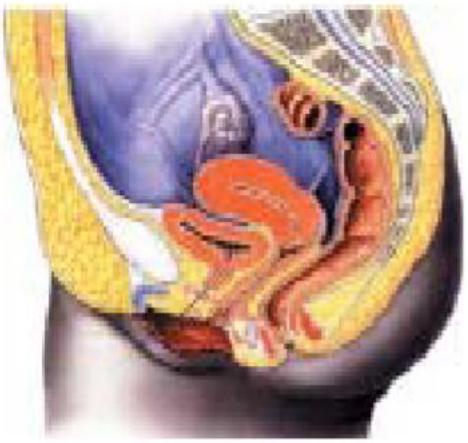
The basic teachings are all in the Microcosmic Orbit, the Cosmic Inner Smile and the Six Healing Sounds. As long as you are alive and healthy, you are able to draw in energy from the universe and nature. The stronger the battery, the better it is able to store this energy. If you're weak and sick, you have no way to draw any energy from nature or the universe. When the cells stop drawing in energy, life ends. If you have perfected these practices, you have all the personal physical, mental and spiritual power that you need. Everything comes together. Your mind is aware of the original force. From the knowledge of Oneness, you are inwardly aware of your mind, senses and heart; you are outwardly aware of the universal energy. Now you are capable of receiving the abundantly available healing power of the universe; you can tune into everything, inwardly and outwardly in all directions. This is what we are here for: to heal and become whole again. We have higher goals to reach. The foundation for reaching our goals is a strong and healthy body.

Cosmic Healing Chi Kung is merely an extension of the universe within yourself. You draw the universe in through your palms, skin, heart and crown. With your Yi you breathe in the cosmos through these various open cavities of receptivity in your body, absorb its power, condense it, transform it and use it for the benefit of all.

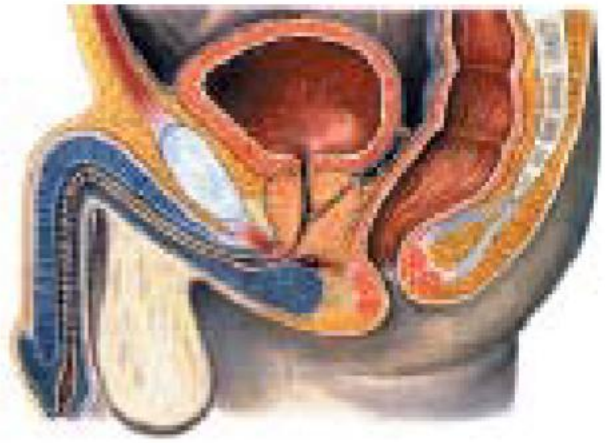
Connecting the Bridge

Contracting the muscles of the perineum, sexual organs and anus activates our connection with the earth energy. By pulling up these areas and drawing in energy through the soles of the feet, we immediately become grounded and bring the earth (yin) energy into the Microcosmic Orbit. Pulling up should be done gently and directed by the Yi.

When we speak of "Connecting the Bridge," we are referring to the above exercise, except that we do not pull up on the perineum. Pull up gently and lightly on the sex organs and anus while leaving the perineum totally relaxed. After performing the first contractions, when you then relax the perineum, the earth energy will continue to flow into the body using the principles of a siphon. We thus connect the "Bridge" across the perineum from the sexual organs to the anus using the Yi to direct the energy. This actively combines the earth energy and your sexual energy and directs it into the Microcosmic Orbit. This energy is circulated during Cosmic Chi Kung. Holding a very gentle contraction will keep you grounded during the exercise. It can be done sitting or standing.



Women lightly contract the Vagina



Men lightly contract the Perineum and Anus

Fig. 8.4 *Connect the Bridge - combine Earth and Heavenly Energy.*

Cosmic Chi Kung Preparation

Cosmic Chi Kung can be practiced either in a sitting or a standing position.
Sitting, relax as much as possible and invoke the **Cosmic Inner Smile**.

1. Be aware of your **heart** and listen to your **kidneys** with your inner senses. Smile to your heart and kidneys and feel them pulsing; feel them communicating and interacting with each other. The **Kan** and **Li**; the water of the kidneys and the fire of the heart, balance and **begin to mix**.
2. Open the arm pits as if you were holding a ping pong ball there and slightly move the fingers to activate the Chi flow. Relax. **Feel** the sensations of the **Chi flow**: tingling, warmth, pulsing, electric and magnetic feelings.
3. Be aware of your palms. Draw in Chi by **activating the bone breathing** process. Become aware of the perineum; slightly pull up the perineum, sexual organs and anus and "**connect the bridge**." (Remember to relax the perineum).
4. Breathe into the palms of the hands and soles of the feet, further enhancing your connection to the earth force. Smile to the blue earth energy as it flows up your arms and legs and suffuses your body with pleasant Yin energy.
5. Breathe into the **mideyebrow** point and activate your connection with the **Cosmic Force**. Smile to the golden light of the cosmic energy as it swirls into your mideyebrow point and flows throughout your body, healing and balancing your energy.
6. Breathe into your **crown** point and activate your connection with the **Heavenly Force.** Smile to the red and violet light of the heavenly force as it flows into your brain and washes your body with subtle pure Yang energy.

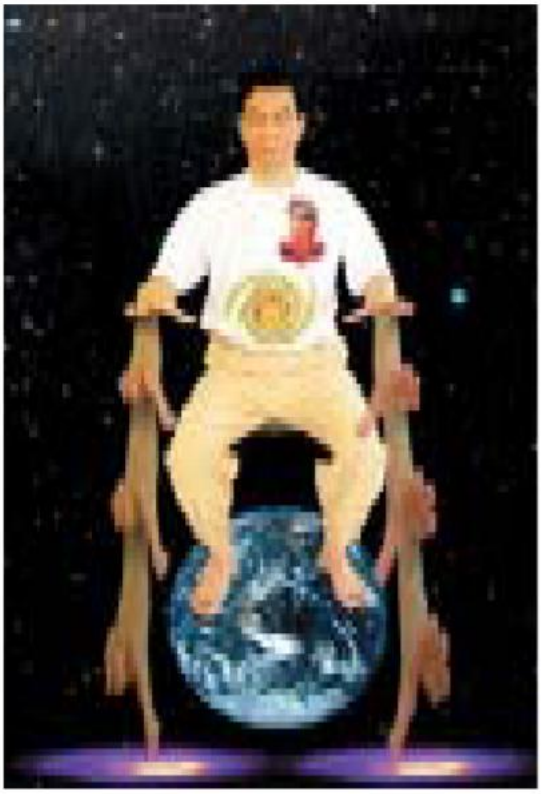


Fig. 8.6 *Invoke the Cosmic Inner Smile.*

Fig. 8.5
Place the Tip of the Tongue on the Upper Palate.

7. Place the tip of your tongue on the upper palate behind the teeth in a comfortable position.

8. As you begin to move through the postures of Cosmic Chi Kung, always be aware of the Chi flow and its attending sensations.

Cosmic Chi Kung Preparation Standing

1. Stand with your **feet parallel** and shoulder width apart.
   Tilt your **sacrum** and **pelvis** slightly forward until you feel your feet press more firmly into the ground. As you tilt the pelvis, feel your lumbar vertebrae pressing outward; this is called "**Opening the Door of Life**."
2. Relax your **chest** and sink your **sternum**. Draw your chin in slightly, and hold your **head, neck** and **spine** erect as if your head and spine were suspended from above by a string.
3. Follow the same instructions for the preparations of Cosmic Chi Kung.

Opening to Heaven, Earth and Nature

The natural world is the source of our power. Cosmic Chi Kung teaches us about nature and its energies. In the Tao, nature and the universe are equivalent to God. You are a part of nature and can easily learn to open to the forces in the macrocosm and let them flow through you. This is very simple. Just tune into the frequencies around you. Your fingers are antennae, which transmit and receive.

1. To begin your practice of Cosmic Chi Kung, simply **stand** up and **feel the energy around you**. When you stand or sit, be aware of your soles (Bubbling Spring points) making a good connection with the earth. Your perineum (Hui Yin point) is relaxed and open. You are connecting to the earth force and can expand further down on to the other side of the universe. This is one type of energy.
2. When you draw your **chin in**, slightly **relax your chest** and tilt your head slightly forward; you begin to be aware of the heavenly force. This is another type of energy.
3. The qualities of the **Five Elements** reveal themselves as woody trees (growing force), fiery deserts (expanding force), earth mountains (stabilizing force), metal air (contracting force) and watery oceans and lakes (gathering force). We call the combination of these elements the '**Cosmic Force**'.

Thus, your mind and body learn to gather, absorb, direct and transform the heaven, earth and cosmic energy for your own use. This is the essence of Chi Kung. Today there is a lot of emphasis on learning movements and forms of Chi Kung. However, if the inner feeling is not there, the movements are of little value.

Heavenly force is Yang. Earth force is Yin. By learning to connect to the energies of heaven and earth, you have a powerful tool for restoring and maintaining your inner balance of Yin and Yang.

Outline of Practice

Before practicing each of the Cosmic Chi Kung sets in this chapter and in the following chapters begin with the heaven and earth spirals as outlined on page 157.

First **Create the Chi Field**.

Hold each of the Cosmic Chi Kung postures for at least 5 - 30 seconds, gradually lengthening the time to 60 - 120 seconds per posture.

Note: While holding the postures count the breath from 5 to 15 seconds, being aware of the **Tan Tien** and feeling the Chi in the Tan Tien which then moves up to the **crown** and expands up to the universe; fuse your Chi with the Universal Chi and let it multiply down to your palms. **Just concentrate on the 'Tan Tien and the Universe'**; do not concentrate on the palms at all.

Throughout parts I, II, III and IV 'Tan Tien and Universe' means to spiral into the Tan Tien and spiral out into the universe connecting 'Tan Tien and Universe'.

Part I
Opening to Heaven, Earth and Cosmic Chi

Opening Movements

Three Minds into One Mind

Empty the mind and heart down to the Tan Tien.
Hold the hands together at the heart center.
Smile and make the heart feel soft; feel love, joy and happiness.
Turn your consciousness inward and your awareness out.

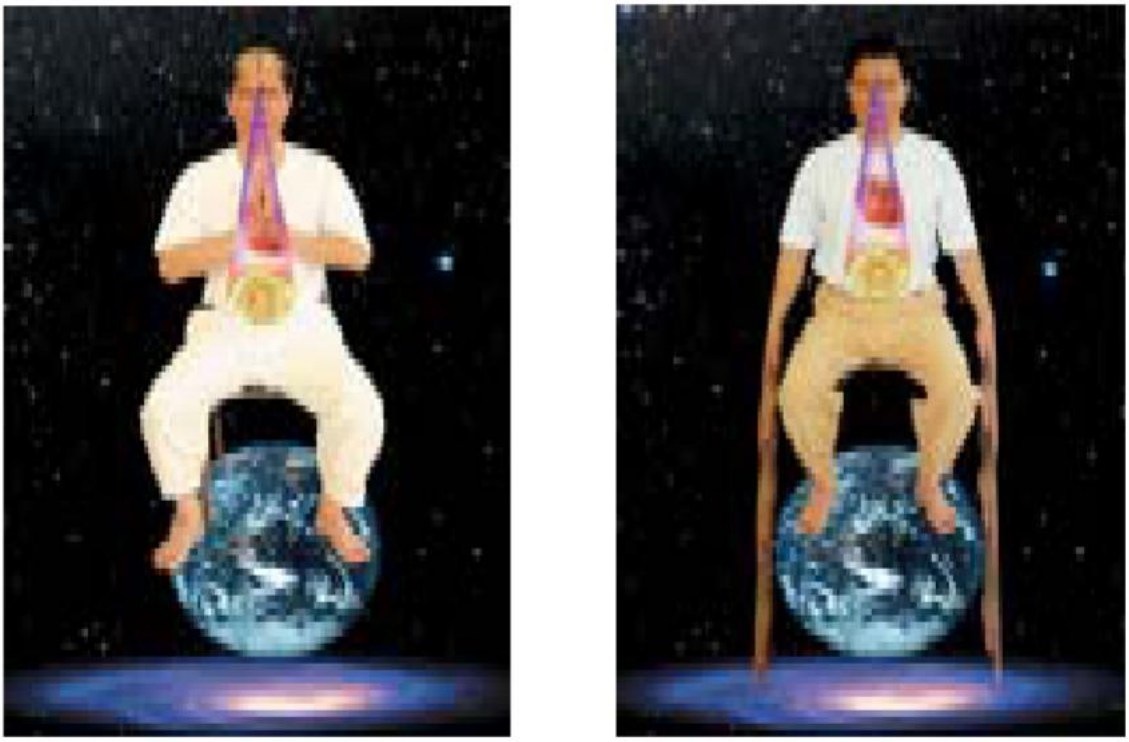


Fig. 8.7 *Empty your Mind and Heart down to your Lower Tan Tien.*

Feel your legs lengthen extending down to the center of the earth.
Feel your hands lengthen extending to the universe below.
Let the mind expand and be aware all the way down to the universe.
Feel the 'long' bones of the arms and legs and begin bone breathing.
Feel universal Chi filling, packing and compressing into the bones.
Draw this Chi down to the back of your crown and feel a heavy pressure press on the crown; feel slightly numb or a light electric downward flow, like oil dripping down. 'Focus at Tan Tien and Universe'. Count to five.

Channeling the Earth Force - Washing the Bone Marrow

Smile into the **perineum, palms** and **crown**. Then slowly raise the arms, palms facing each other, to chest height keeping the elbows relaxed and sunk. Rotate the arms slowly until the palms are facing down. Be aware of the mideyebrow and feel your breath and lightly contract your eyes and round muscles around the eyes. Connect the perineum bridge by slightly squeezing the sex organs and the anus; do this a few times.

Rest and **smile to soles of the feet**, feel the Chi bubbling and feel like you are standing on a hot spring starting to bubble up.

Be aware of your Tan Tien and expand your mind down past the earth to connect with the galaxy below you. Multiply and bring your mind back to the Tan Tien. Gradually feel the Chi being absorbed through the whole body and absorb it into the bones and body like a **rising steam or mist**. Feel the earth force move through the center of the bones and enter the bone marrow move up the calves and thighs (femur bones) through the hip bones, spine, **scapula**, **arms**, **neck** and **skull**. Finally **swirl the energy around your brain. 'Focus at Tan Tien and Universe'**.

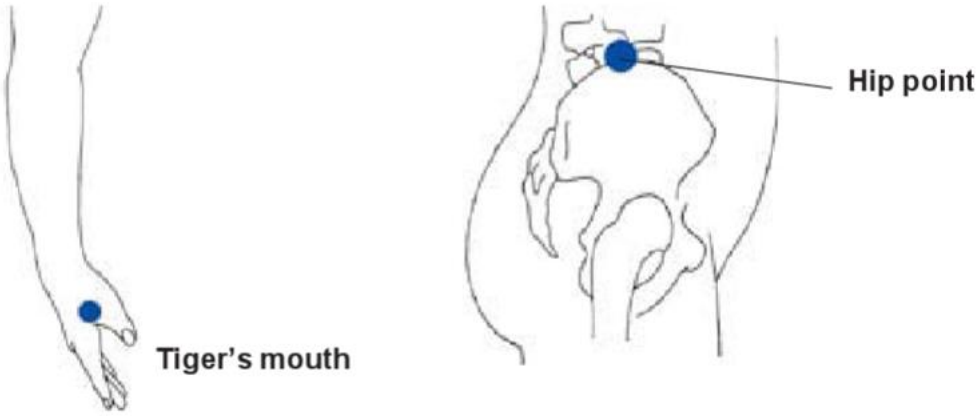


Fig 8.8 *Activate the Hip: Large Intestine 4, Pericardium 8 and Small Intestine 3.*

Raise your index finger slightly upward to activate the Hegu Point (Large Intestine).

Fig. 8.9 *Open the 'Tiger's Mouth'.*

Then **stretch your thumbs out to the sides and down**, so that they end up pointing downwards toward the earth. This activates Large Intestine 4 (Hegu). Large Intestine 4 is found in the webbing between the thumb and index finger. It is called the "eye of the hand"; this area is also known as the "Tiger's Mouth."

Slowly draw the elbows back and lower the hands until your palms are facing down beside the "eye of the hip" (the iliac crest) with the "eye of the hand" (Large Intestine 4) aligned with the "eye of the hip. "Be aware of the Tan Tien (Yi, the abdominal brain) and expand your mind out into space, the Cosmos and the universe. Remember: The fingers and the energy point act just like a laser to help guide the universal force flow; as soon as you focus on the fingers or the palms you are starting to use your own energy. Feel your Tan Tien and the crown full with Chi. Just use your second mind intention, lightly aware of the area between the hips and LI-4 points. Focus at Tan Tien and the universe. This will activate the lungs and large intestines. **Hold for a 30 second count** and gradually you will feel the ascending colon and the sigmoid colon have been activated; you may feel some movement around this area.

Fig. 8.10 *Activate the Organ Energy.*

Use your Yi to rotate your hands so that the fingers first point out, then back, turn the palms up and finally point the middle finger in toward the eye of the hip. Tan Tien and the universe - **95 % aware of the 'Tan Tien and the Universe' and 5 % aware of energy flowing back and forth between the tips of the middle fingers** (Pericardium 9); feel the Chi passing through the hips. This will activate the pericardium.

Rotate the hands again until the fingers are pointing forward with the **palms facing up**. Align the knife edges (Small Intestine 3) with the eyes of the hip. 'Focus at Tan Tien and the Universe'. Be lightly aware of the energy passing back and forth between the two hands. This will activate the heart and small intestine.

Fig. 8.11 *Activate the Heart and Small Intestine.*

Absorb the Heavenly Force Washing the Bone Marrow - Crown to Soles

Extend the arms forward to chest height with the palms facing upward.

Fig. 8.12 *Draw Heavenly Energy into the Palms.*

Become aware of the **Tan Tien, the Crown and the Star above you**. Expand your mind (YI) out to the universe and connect to the galaxy. Be aware of the palms and the crown which are connected to the galaxy. Activate the Laogong point (Pericardium 8).

Feel the heavenly energy come directly to your palms, and be aware of the violet light of the North Star and the red light of the Big Dipper both shining radiantly.

Fig. 8.13 Hold the Big Dipper.

Picture yourself holding the handle of the Big Dipper and turn the 'cup' pouring the light over your head. Draw this light in through the palms and the crown point and feel it washing your bone marrow. Always remember your Tan Tien. **Direct the sensations down through the skull, cervical vertebrae, clavicle, scapulas and sternum. Activate your thymus gland and continue drawing the healing heavenly light down through the rib cage, arms, spine, hips, femurs and calf bones, feet and toe bones. Be aware of the soles bubbling up to the perineum and up to the crown**.

Lightly rock yourself like riding a horse; this will help keep your spine open and Chi can flow easily throughout the practice.

Absorb the Earth Force and the Other Side of the Galaxy

Rotate the arms until the **hands are palms down**.

Raise the index fingers slightly and extend the thumbs first towards each other and then toward the ground. Be 95% aware of the Tan Tien and the Universe, and 5 % aware of the index fingers and the big toes. Wait until you feel the Chi enter. Fill the joints of the fingers and up to the wrists; feel 'tense but not tense' and let the **Chi continue to fill the joints** up to the elbows, up to the shoulders and gradually up to the neck and the head. Go from the toes up the legs to the hips and on into the spine and the rib cage **completing all the joints of the body**.

Be aware of the Tan Tien and the universe and only slightly aware of the palms (Laogong), the soles of the feet (Kidney 1-Bubbling Spring), and the perineum (Conception Vessel 1-Hui Yin) bubbling. Activate these points, feel the earth energy and continue smiling through the earth to connect with the galaxy, Milky Way, and the universe. Draw this light in through the palms and soles and let it wash up through the center of your bones from the feet up. Let it **steam and cleanse your marrow**. Picture any impurities or illness dripping out of your bones and draining down into the earth, where they will be recycled and purified.

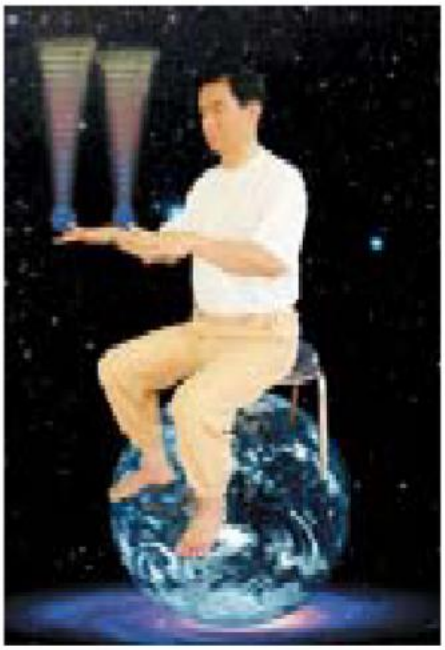


Fig. 8.14 Open the index fingers.

Core Movements of Part I

Grasping the Moon

Connecting the Heaven and Earth Forces - Right Side over Left

Open Position: Heaven Force - Slightly raise the index fingers to open the palms. Bring the arms up , bending the elbows so that the left hand is under the right elbow with the left index finger pointing up to Heart 3.

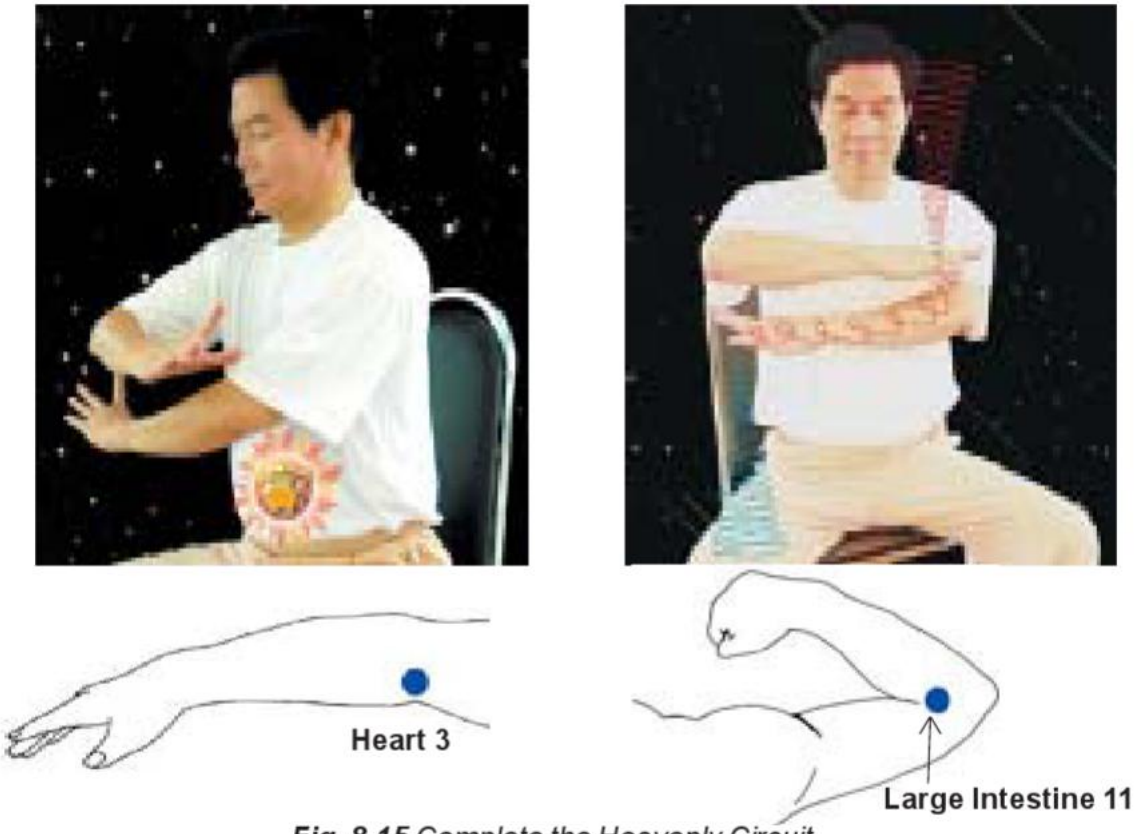


Fig. 8.15 *Complete the Heavenly Circuit.*

The right index finger is pointing up toward heaven and connecting to the galaxy. The right forearm is over the left forearm, with the tip of the right index finger held above the Large Intestine 11 point of the left arm.

The **right index finger draws in the heavenly force** like antennae. The force flows up the bones of the right arm, across the shoulders to the left arm and through the bones of the left arm to the left index fingertip. It **then flows through the index finger of the left hand** into the Heart 3 point of the right arm, **completing the heavenly circuit**. Continue cycling in this way. Hold the position and count to five.

The practice uses the 'Empty Force'; this means that there is no contact. The fingers must be 'tense without tensing'. When you tense and raise the index finger, you will feel the Laogong point opening.

Close Position: Tan Tien, earth and the universal force - keeping the arms in the same position, move both index fingers to point down. The **right index finger will now point toward the Large Intestine 11 point of the left arm and the left index finger will point downward toward the earth** and continue down to connect to the universe. Draw in the earth force through the left index finger, bringing it through the bones of the left arm, across the shoulders through the right arm to the right index finger and out into the Large Intestine 11 point of the left arm. Continue cycling in this way, **completing the earth circuit**.

Open and close three times altogether ending in the open position. Hold each count for five seconds.

Holding and Activating the Chi Ball
Tan Tien and the Original Force - Right Side over Left

Turn the **left palm upward** and lower it to the Tan Tien with the pinky pointing inwards.

Lower the right palm to the navel, palm down, as though you were holding a small Chi ball. Lower the right thumb to point toward the left Laogong point. This opens the eye of the right hand (LI-4), then point it toward the navel. Be aware of Tan Tien and universe.

Fig. 8.16 *Right Side over Left - 'Holding the Ball'.*

Yin/Yang Palms

Separate the hands and extend them out in front of the body at navel level. The **left palm** is still pointing up, and is **Yang** drawing in the heavenly force through Laogong. The **right palm** is still facing down, and is **Yin** drawing in the earth and the galactic force from below.

Conclude by turning the left palm over to face downward. **Draw in the earth force through both palms.**

Fig. 8.17 *'Yin and Yang Palms' - Right Hand connecting to Earth and Left to Heaven.*

Left Side: **Repeat on the left hand side with the left arm over the right**. Holding the Chi ball the left hand is on top. Hold for a count of five seconds.

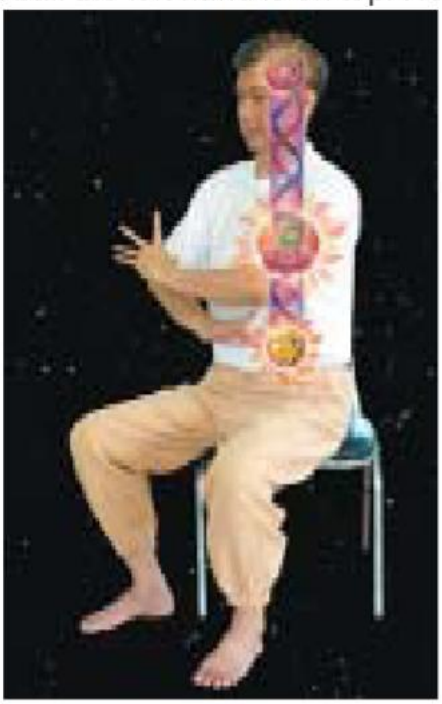


Fig. 8.18 *Open the Heavenly Circuit. Then the bottom hand slides and turns 'Palm-Up' and the Top Arm slides to 'hold the Chi Ball'*

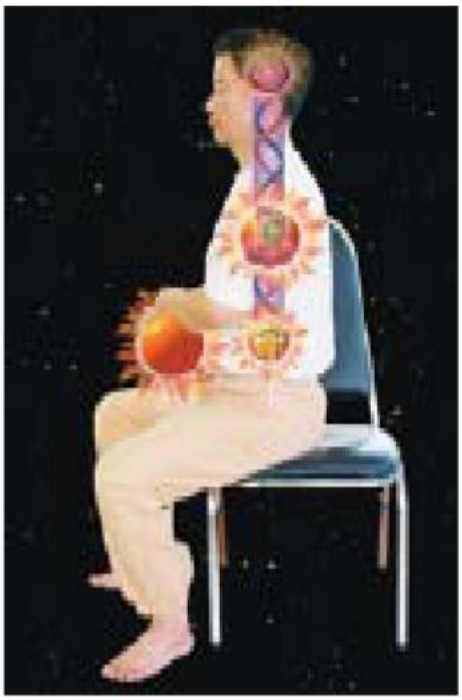


Fig. 8.19 *Holding the Chi Ball - Left Side over Right.*

Closing Movements

Activate the Chi Channels - Balance the Organs

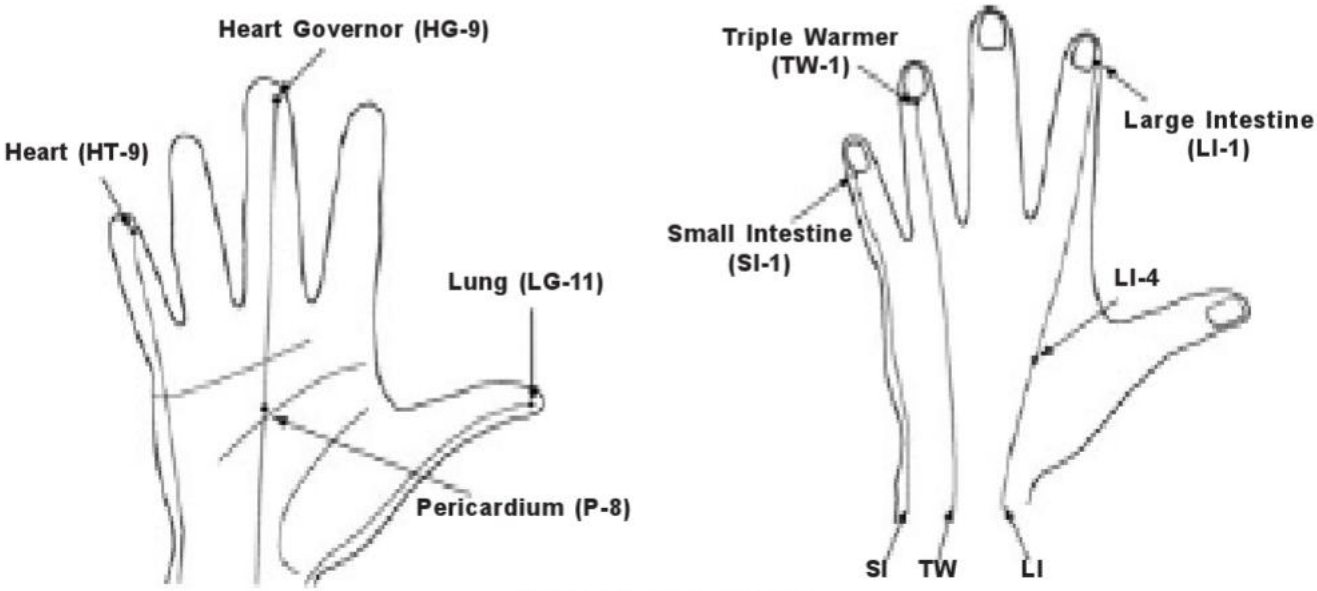


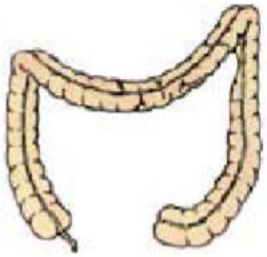
Fig. 8.20 *Finger Points*

The closing movements balance organ energy while activating the Chi Channels.

Hold the arms extended forward with the palms down at solar plexus level. Hold each stage for a count of five seconds.

Index Fingers:

Tense all the fingers and feel the Chi filling all the joints; open the index fingers, raising them up, while keeping the rest of the fingers level.

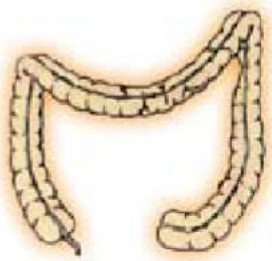


Large Intestine

Fig. 8.21 *Activate the Index Fingers - Up.*

The tension should be like the string of a tuned musical instrument. When lightly tense the Heavenly Chi will be drawn in through the index fingers.

Relax the hands and bring the index fingers back to the neutral position, level with the other fingers.



Energy to Large Intestine

Fig. 8.22 *Draw Earth Energy through the Index Fingers - Down.*

Stretch out and tense all the fingers and **press the index fingers to point down** toward the earth and continue down to the universe. Keep the other fingers level. **Draw in earth energy through the index fingers and circulate it through the body.**

Bring the index fingers back to neutral and relax your hands.

Once again **open the index fingers by raising the index fingers up**, while keeping the rest of the fingers level. **Draw in the Heavenly Chi through the index fingers**.

Bring the index fingers back to neutral again and relax your hands.

Ring Fingers:

Stretch the ring fingers down toward the earth, keeping the rest of the fingers level. Draw in earth energy through the ring fingers and circulate it through the body.

Fig. 8.23 *Draw Earth Energy through the Ring Fingers.*

Bring the ring fingers back to neutral and relax your hands.

Once again open the index fingers by raising the index fingers up, while keeping the rest of the fingers level, and draw in the Heavenly Chi through the index fingers.

Bring the index fingers back to neutral again and relax your hands.

Thumbs:

Stretch the thumbs out and down toward the earth, keeping the rest of the fingers level. Draw in earth energy through the thumbs and circulate it through the body.

Bring the thumbs back to neutral and relax your hands.

Fig. 8.24 *Draw Earth Energy through the Thumbs.*

Once again open the index fingers by raising the index fingers up, while keeping the rest of the fingers level, and draw in the Heavenly Chi through the index fingers.

Bring the index fingers back to neutral again and relax your hands.

Pinky Fingers:

Stretch the pinky fingers out and down toward the earth, keeping the rest of the fingers level. Draw in earth energy through the pinky fingers and circulate it through the body.

Small Intestine

Fig. 8.25 *Draw Earth Energy through the Pinky Fingers.*

Bring the pinky fingers back to neutral and relax your hands.

Once again open the index fingers by raising the index fingers up, while keeping the rest of the fingers level. Draw in the Heavenly Chi through the index fingers. Bring the index fingers back to neutral again and relax your hands.

Middle Fingers:

Stretch the middle fingers out and down toward the earth, keeping the rest of the fingers level. Draw in earth energy through the middle fingers and circulate it through the body.

Bring the middle fingers back to neutral and relax your hands.

Once again open the index fingers by raising the index fingers up, while keeping the rest of the fingers level. Draw in the Heavenly Chi through the index fingers.

Bring the index fingers back to neutral again and relax your hands.

Heart

Fig. 8.26 *Draw Earth Energy through the Middle Fingers.*

Crane's Beak and Swallow the Saliva:

Form the "Crane's Beak" with both hands by bringing all the fingertips together with the thumbs inside. **Inhale** and **contract the sexual organs**.

Move your tongue and suck the mouth to **activate the saliva**. Divide it into three parts, tighten the neck and gulp down the **first part** to the center of the **navel**; force the **second** mouthful of nectar down to the **left side of the navel** and the **third** to the **right side of the navel**. Raise the forearms up to shoulder height with the fingers pointing down. Slowly open the palms and begin to lower the arms to the sides, until the palms are facing each other before the starting position.

Fig. 8.27 *Form the 'Crane's Beak'.*

Fig. 8.28 *Raise Forearms to Shoulders.*

Fig. 8.29 *Lower Arms to the Sides.*

Fig. 8.30
Palms facing each other to cover the Navel.

Conclusion:

Bring awareness to the navel. Notice the quality and intensity of the energy generated and **collect your energy at the navel**. Men place hands over the navel with the right hand on top; women vice versa. Rest.

Summary:

Practice Part I daily for one or two weeks until you can do it well. Then you can proceed to learning Part II.

Part II
Opening the Bridge and Regulator Channels

Theory

Chi flows through your body along numerous channels or meridians. The channels are divided into two major groups: the **extraordinary** or special channels and the **ordinary** channels. After your mother's egg and your father's sperm joined together to form a single cell, that cell began to divide. The extraordinary channels were the first energy channels formed as a result of that early cell division.

There are **Eight Extraordinary Channels:**

Governor Channel
Functional or Conception Channel
Thrusting Channel
Belt Channel
Yang Regulator Channel
Yin Regulator Channel
Yang Bridge Channel
Yin Bridge Channel

Later, as your fetus developed, your Original Chi flowed through the eight extraordinary channels to help create your internal organs and their energy channels. These twelve "ordinary channels" are divided into yin and yang. The yin Channels are connected to the solid organs, and the yang channels are connected to the hollow organs.

The **Twelve Ordinary Channels:**

Lung (Yin) Channel
Large Intestine (Yang) Channel
Stomach (Yang) Channel
Spleen (Yin) Channel
Heart (Yin) Channel
Small Intestine (Yang) Channel
Bladder (Yang) Channel
Kidneys (Yin) Channel
Pericardium (Yin) Channel
Triple Warmer (Yang) Channel
Gall Bladder (Yang) Channel
Liver (Yin) Channel

These twelve organs serve to extract energy from the food and water we ingest and the air that we breathe to create energy through the metabolic processes of respiration, circulation, digestion, elimination and reproduction. This energy is called PostNatal Chi, as it comes in after we are born. Thus the extraordinary channels serve as the link between our Original or Prenatal Chi which came from our mother and father, and our Postnatal Chi which comes from our food and air as a result of metabolism.

General Functions of the Eight Extraordinary Channels

They serve as reservoirs of Chi.

About two thousand years ago, one of the great texts of Chinese medicine, the Nan Ching was written. This classical text describes the twelve ordinary channels as rivers and the eight extraordinary channels as reservoirs of Chi. When the ordinary channels become low in energy, they can draw from the reservoirs of energy in the extraordinary channels. On the other hand, if the ordinary channels become too full, the excess can be taken up by the extraordinary channels. In this way the extraordinary channels help us to maintain a balance in our energy body.

They store and circulate Ching Chi.

The extraordinary channels all draw their energy from the kidneys, which are the storehouse of Ching Chi (essence or sexual energy) in the body. Thus the extraordinary channels circulate the Ching Chi around the body, particularly to the skin and hair, and to the five ancestral organs: the brain and spinal cord, the bone marrow, the blood, the uterus and the liver and gall bladder.

They circulate Defensive Chi to protect the body.

The Chi that protects the body against invasion by external pathogens is called Defensive Chi or Wei Chi. The extraordinary channels circulate Defensive Chi over the back, abdomen and thorax. These functions are performed by the Governor Channel, the Functional Channel and the Thrusting Channels, respectively.

They regulate our life cycles.

In the first chapter of the Yellow Emperor's Classic of Internal Medicine (Huang Di Nei Ching Su Wen), another of the classical texts of Chinese medicine, the life changes of women and men are described in 7 and 8 year cycles respectively. The Functional Channel and the Thrusting Channel govern these cycles.

Eight Extraordinary Channels and Chi Kung

There are few texts available today that describe the purpose and function of the eight extraordinary channels and their place in Chi Kung practice. To make matters more confusing, the extraordinary channels and points used in Chi Kung are often quite different from those used in acupuncture, even though they may bear the same names.

Most acupuncturists pay little attention to the eight extraordinary channels in diagnosis and treatment with the exception of some modern Japanese researchers. By contrast, the extraordinary channels have been of special importance to Taoists and Chi Kung practitioners for thousands of years. Taoists see the extraordinary channels as the foundation of our bodily energy, as the bridge between our Original or Prenatal Chi and our Postnatal Chi; these channels affect us on the deepest level of our basic constitutional energy.

Therefore, Taoists focus on opening up the flow of energy through the eight extraordinary channels as a prerequisite for opening the energy flow in the twelve ordinary channels. In the Universal Tao system, you first open up the Governor Channel and the Functional Channel in the Microcosmic Orbit Meditation. The second pair: the Thrusting Channels and the Belt Channels are opened in the Fusion of the Five Elements II Meditation. The last four channels, the Yin and Yang Bridge Channels and the Yin and Yang Regulator Channels are opened in the third level of Fusion of the Five Elements Meditation. After opening all eight channels, in the next level of Taoist inner alchemical meditation called the Lesser Enlightenment of Kan and Li, the twelve ordinary channels are then opened.

Special Functions of the Bridge and Regulator Channels

The Bridge and Regulator Channels have no points of their own. They borrow points from the other 'ordinary' channels linking together and controlling the flow through all the separate channels of the body. The Bridge and Regulator Channels travel along the same paths. There is no 'real' difference between them. Both of them connect or 'bridge' and 'regulate' the flow of Chi in the body's meridians.

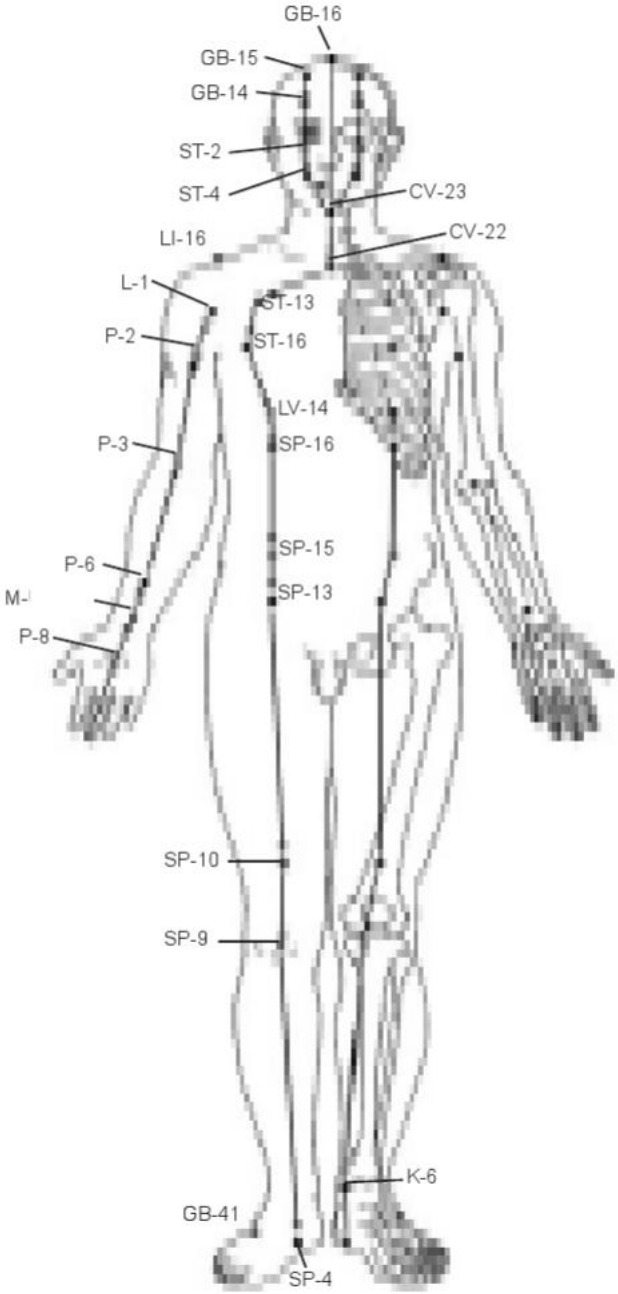


Fig. 8.31 *Yin Bridge and Regulator Channels*

Bridge Channels Yin and Yang Chiao Mo Function

The Bridge Channels, also called the Heel Vessels as they originate at the heels, regulate the amount of energy being used by all the other meridians in the body. They act like a bridge linking together the stored Chi in the body and the areas in need of Chi. Usually if any meridian uses more energy than it needs to flow properly, then other meridians become deficient as a result. Thus the Bridge Channels seek to assure that your energy is distributed in a balanced way. The Yin Bridge Channel runs along the front or yin side of the body, while the Yang Bridge Channel runs along the back of the body.

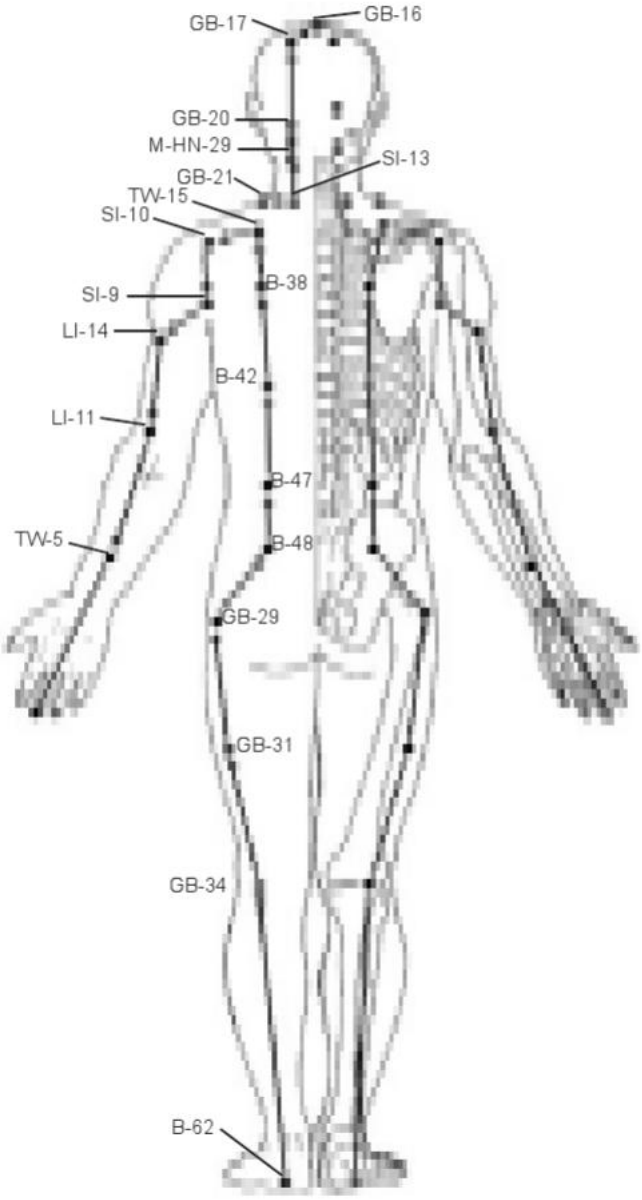


Fig. 8.32 *Yang Bridge and Regulator Channels*

Disorders of the Bridge Channels

Excess Yang Energy

When yin energy is slowed down in the Bridge Channels, yang energy flows more rapidly. The excess yang can cause the following problems: insomnia, difficulty in closing the eyes, hypertension, stiff back and waist, inability to bend down, thigh tumors, bad colds, spontaneous sweating, headaches, painful eyes, paralysis of the arms and legs, vomiting of milk in infants, deafness, epilepsy, nose bleeding, swelling of the body, pain in the joints and head sweating.

Excess Yin Energy

When yang energy is slowed down in the Bridge Channels, yin energy moves more rapidly. The excess yin causes the following problems: sleepiness, difficulty in keeping the eyes open, hypotension, choking, painful urination, stomach rumbling, vomiting, diarrhea, difficult bowel movements, difficult labor and unconsciousness.

Regulator Channels

Yin and Yang Wei Mo Function

The Regulator Channels, also called the Linking Vessels, bind together all the meridians in the body. The Regulator Channels are also divided into yin and yang. The yin aspect, which runs along the front of the body, moves the yin energy and regulates the blood and inner parts of the body. It connects with all the yin channels: the Liver, Spleen, Kidney, Heart, Pericardium and Lung channels. If the yin aspect becomes imbalanced, the person may suffer from heart pains.

The yang aspect, which runs along the back side of the body, moves the yang energy, controls Defensive Chi, regulates resistance to external infections, and regulates the external parts of the body. It connects with all the yang channels: the Stomach, Bladder, Gall Bladder, Large Intestine, Triple Warmer & Small Intestine channels. If the yang aspect becomes out of balance, the person may catch colds and fevers easily.

By joining together the various channels, the Regulator Channels help to maintain a harmonious and cooperative interaction between the different channels.

The Regulator Channels in Taoist Yoga and Chi Kung are slightly different from those presented in acupuncture texts. The Chi Kung Regulator Channels include the yin and yang arm routes as well; some Taoist Yoga texts also refer to the arm routes as the Yin Yu and the Yang Yu. Acupuncture texts, by contrast, include only the leg, trunk and head routes. Many recent Chi Kung texts, unaware of these differences, depict illustrations from acupuncture texts alone, further adding to the confusion.

Disorders of the Regulator Channels

Excess Yang Energy

When yin energy is slowed down in the Regulator Channels, yang energy moves more rapidly. The excess yang can cause the following problems: swelling and pain in the joints, cold knees, paralysis of the arms and legs, painful back and sides, aching muscles, pain in the head, neck and edge of the eyebrows, fever, rashes, night sweating, tetanus, painful red eyes, colds and superficial fevers.

Excess Yin Energy

Similarly, when yang energy is slowed down in the Regulator Channels, yin energy moves more rapidly. The excess yin can cause the following problems: heart pain, diarrhea with stomach rumbling, difficulty swallowing, pain on both sides of the chest, diseases associated with cold and convulsions.

Summary

The Bridge and Regulator Channels link all of the yin and yang channels in the body together and regulate the flow of energy in these channels to maintain a state of energetic balance in the body. The channels used for meditation are somewhat different from the ones seen in Chinese medical text and acupuncture charts. This is because their purposes are different.

Chinese medicine aims to restore sick people to health. The points being treated must be superficial so that they can be activated by acupuncture needles.

Chi Kung and Taoist meditation aim to maintain health and to take one beyond mere physical health to spiritual immortality. The channels and points can be deep within the body, since the energy is guided by the mind or by postures and movements rather than by needles.

The movements used in Cosmic Chi Kung Part II to activate the Bridge and Regulator Channels are relatively simple. To completely master the Bridge and Regulator Channels, you must learn and practice the third level of Fusion of the Five Elements Meditation. Once you have done so, this part of Cosmic Chi Kung practice will be particularly powerful and balancing for you.

Practice

Opening Movements

The Opening Movements for this second part of Cosmic Chi Kung are the same as for the first part. By now you should be familiar with these movements, so they will be described briefly. For a more detailed description, refer to Part I, Opening Movements.

Hands down at sides, palms facing each other. Commence Bone breathing. Be aware of the Tan Tien and absorb Cosmic Chi. Be aware of the Tan Tien and channeling the earth and galactic forces.

Washing the Bone Marrow

Raise arms to chest height - palms facing each other. Rotate arms until palms face down. Open the 'Tiger's Mouth' - Index finger up, thumb down.

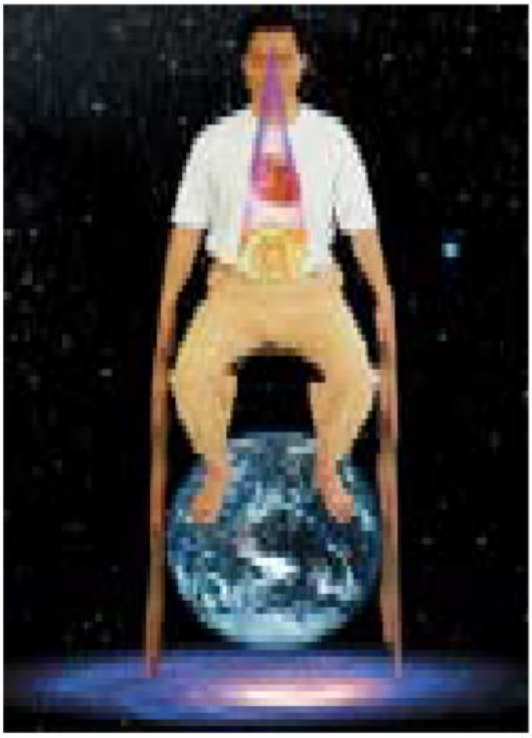


Fig. 8.33 *Hands lower to the Sides. Lower the Mind to the Tan Tien.*

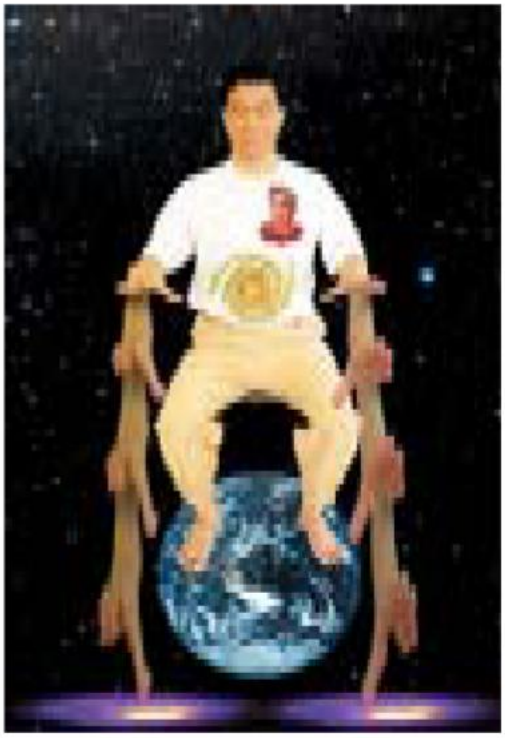
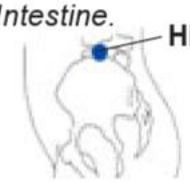


Fig. 8.34 *Open the 'Tiger's Mouth'.*

Activate and Beam to the Eye of the Hip

A. Large Intestine 4 - Eye of the Hand
B. Pericardium 9 - Tip of the Middle Finger
C. Small Intestine 3 - Knife Edge of the Hand

Fig. 8.35 *Activate the Large Intestine, Pericardium and Small Intestine.*



Be aware of the Tan Tien and absorb the Heavenly Force Washing the Bone Marrow Crown to Soles.

Extend the arms forward - palms upward. Be aware of the Tan Tien and absorb the heavenly force. Rotate the arms until the palms face down. Raise the index fingers slightly. Absorb the Earth Chi.

A. ***B.***

Fig. 8.36
A. *Be aware of the Tan Tien and absorb the Heavenly Force.*

B. *Index Fingers up - be aware of the Tan Tien and absorb the Earth and Universal Force.*

Core Movements of Part II
Opening the Bridge and Regulator Channels

Activate the Throat Center - Right Side

Keeping the elbows sunk, raise the left palm first so that it is about 1 inch in front of the throat center (Conception Vessel 22), palm facing in. Then bring the right hand up so that it is about 1 inches in front of the left hand, palm facing in. Align the Lung 10 point in the middle of the eminence of the left hand with the **throat center. Feel the Chi go through the neck to C-7**. Continue smiling to the universe and connect to the back side of the universe. Hold for a 5 to 30 count and feel the throat center activated.

Fig. 8.37 *Connect to the Throat Center.*

Fig. 8.38
Feel the connection to the Universe at the Back.

Move both hands out slowly like you're pulling silk; when the feeling is diminished or the silk starts to break stop there. Be still and feel the beam connect the throat center to C-7 and the universe. Maintain the energy beam as you move in and out three times altogether ending with the hands as above.

Activate Mideyebrow Point - Right Side

Be aware of the Tan Tien and the universe. Keeping the Lung 10 points aligned, raise the hands up to the level of the mideyebrow point about one inch in front of the face. **Keep the points aligned and beam the energy passing through both hands into the mideyebrow point and through to the base of the skull.** Continue smiling and extending to make a connection to the back universe for a 5 to 30 count.

Use only 5% of the awareness to move both hands very slowly out, like you are **pulling silk**; continue to move out as long as your can feel the connection to the mideyebrow, C-7 points and the universe, maintaining the energy beam as you move.

Move in and out three times altogether, ending with the hands as above.

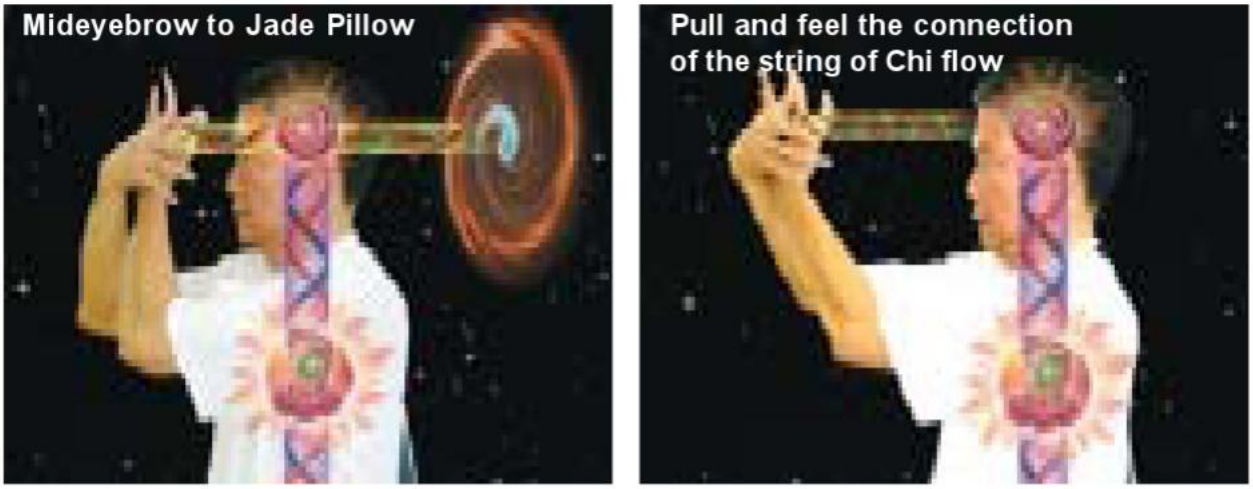


Fig. 8.39 *Connect to the Mideyebrow, Jade Pillow and the Universe at the Back.*

Keeping the palms and thenars (Lung 10) aligned, move the hands back down to the position in front of the throat center. Keeping the forearms horizontal at shoulder height, separate the hands so that the Laogong point is aligned in front of Stomach 13, just **below the clavicle** on a vertical line above the nipple or mammillary line. The middle fingertips should almost be touching. **Beam energy from the Laogong points into ST-13 through the back on the side of the spine and connect to the universe**. You will be following this vertical line, which passes through the nipples, down the torso to the level of the navel, **stopping to focus and beam energy into key points along the way.** On each of these, focus your Yi on beaming energy into the organs inside each position. Stomach 13 is the location that activates the Heart and Lungs. Feel the change in your breathing as you activate the lungs.

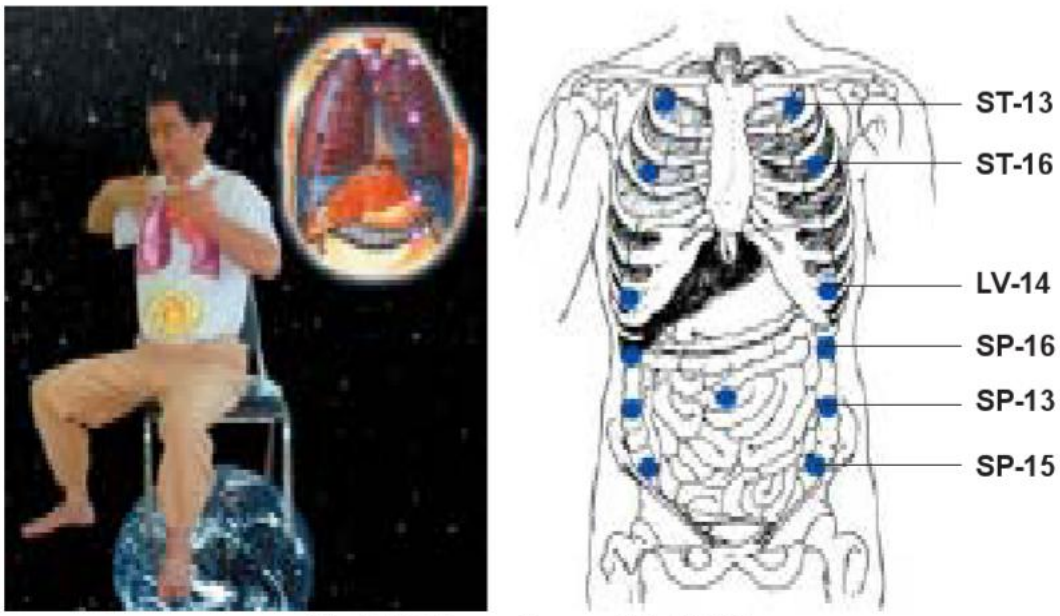
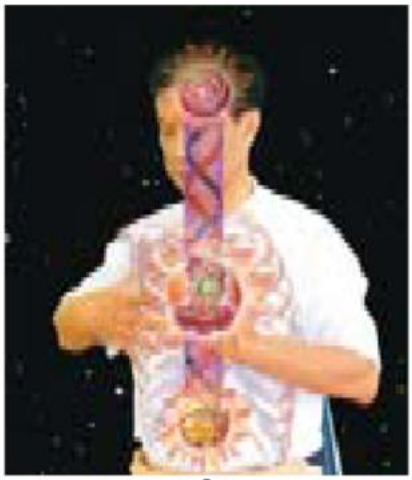
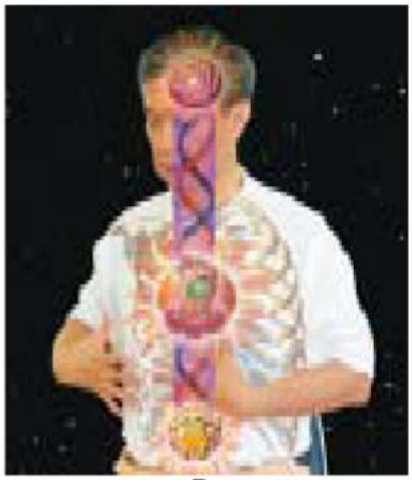


Fig. 8.40 *Beam Energy into ST13.*

Move the hands down the mammillary line to Stomach 16, about one inch above the nipple (in the space between the third and fourth ribs). Chi connects to the back and to the universe. Again, beam energy to energize and balance the **heart and middle of the lungs**. Move the hands down to Liver 14 (about 2 - 3 inches below the nipple in the space between the 6th and 7th ribs). Beam healing energy into the **liver and gall bladder.** Feel the Chi or the vibration of the palms activate the liver and feel the energy moving inside there.



A.

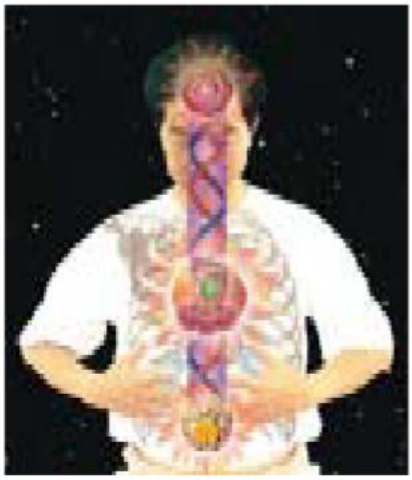


B.

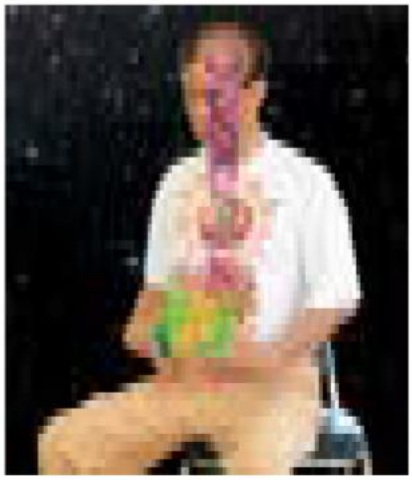
Fig. 8.41 A. *Energize and balance the Lungs at ST16.*
B. *Energize and balance the Liver and Gallbladder at LV14.*

Move the hands down to **Spleen** 16 (just below the rib cage on the mammillary line). Beam healing energy into the **stomach, pancreas and spleen and the liver.** Picture the organs receiving the Chi from the cosmic and the universe.

Move the hands down to Spleen 15 (on the mammillary line to the level of the navel). Beam healing energy from your palms into the **small intestine and the Tan Tien.**



A.



B.

Fig. 8.42 A. *Energize the Stomach, Pancreas, Spleen and Liver at SP 16.*
B. *Energize the Tan Tien and Small Intestine at SP15.*

Hold the Chi Ball - Right Hand on Top

Turn the **left palm up** and align the Chi Ball with the Tan Tien. Turn the **right palm down** and align the eye of the hand (LI-4) with the navel. Feel your palms holding a Chi ball and feel a **Chi ball inside the Tan Tien**. Feel the Chi ball connect to the Cosmic Chi outside. Feel the north (usually left) and south (usually right) poles in the hands. Lower the right thumb to point toward the left Laogong point.

Fig. 8.43
Hold the 'Chi Ball' - One in the Tan Tien and the other in the hands - Right Hand over Left.

Yin/Yang Palms

Separate the hands and extend them out in front of the body at solar plexus level. The **left palm** is still pointing up and is yang drawing in the **Heavenly Force** through Laogong. The **right palm** is still facing down and is yin drawing in the **Earth Force** energy. **'Be Aware Tan Tien and Universe'**.

Fig. 8.44 *Connect to Heaven and Earth.*

Conclude by turning the left palm over to face downward. **Draw in the 'Earth Force' through both palms.**

Fig. 8.45 *Draw the Earth Force through the Palms.*

Repeat the sequence with the left palm over the right.

Start by moving the right palm to the throat and then the left palm. Scan the body, as in the previous sequence, using both palms to connect to the points running down the front of the body. Remember to maintain a sense of the Chi flowing between the points in the front and their corresponding points in the back of the body.

Fig. 8.46 *Repeat the Practice on the Left Side. Push and Pull the silk at the Throat.*

Fig. 8.47 *Project to the Mideyebrow and Base of the Skull - connect to the Universe at the back. Then hold the Ball and repeat Finger Movements, as below.*

Continue with the left side, now pulling the silk at throat (C-7).

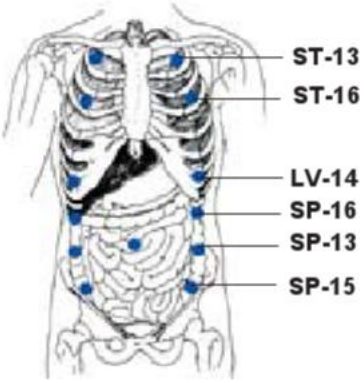


Fig. 8.48 *Beam Energy into each of the Organs like the last time.*

Closing Movements

The closing movements, crane's beak and finish are the same as before.
Activate the Chi channels - balancing the organs.

Index Fingers

Fig. 8.49 *Open (up)*

Fig. 8.50 *Neutral*

Fig. 8.51 *Close (down)*

Fig. 8.52
Ring Finger *- down, neutral.*
Index Finger *- open, neutral.*

Fig. 8.53
Thumb *- in and down, neutral.*
Index Finger *- open, neutral.*

Fig. 8.54
Pinky Finger *- down, neutral.*
Index Finger *- open, neutral.*

Fig. 8.55
Middle Finger *- down, neutral.*
Index Finger *- open, neutral.*

Crane's Beak

Form the crane's beak with both hands by bringing the fingertips together with the thumbs inside. Activate the saliva and swallow down three times to the Tan Tien. Raise the forearms to shoulder height with the fingers pointed down, inhaling gently as you raise. Open the palms slowly and begin to lower the arms to the sides as you exhale, until the palms are facing each other in the starting position.

Finish

Bring the awareness to the navel and notice the quality and intensity of the energy generated. **Collect energy at the navel**. Men, place the hands over the navel with the right hand on top; vice versa for women.

Part III
Opening the Functional and Governor Channels

Theory: Functional and Governor Channels

The Functional and Governor Channels are the first two of the eight extraordinary channels described earlier in this chapter (beginning p.178). They serve as the reservoirs of yin and yang energy in the body. The Functional or Conception Channel is yin and all of the ordinary yin channels connect to it. Similarly, the Governor Channel is yang and all of the ordinary yang channels connect to it.

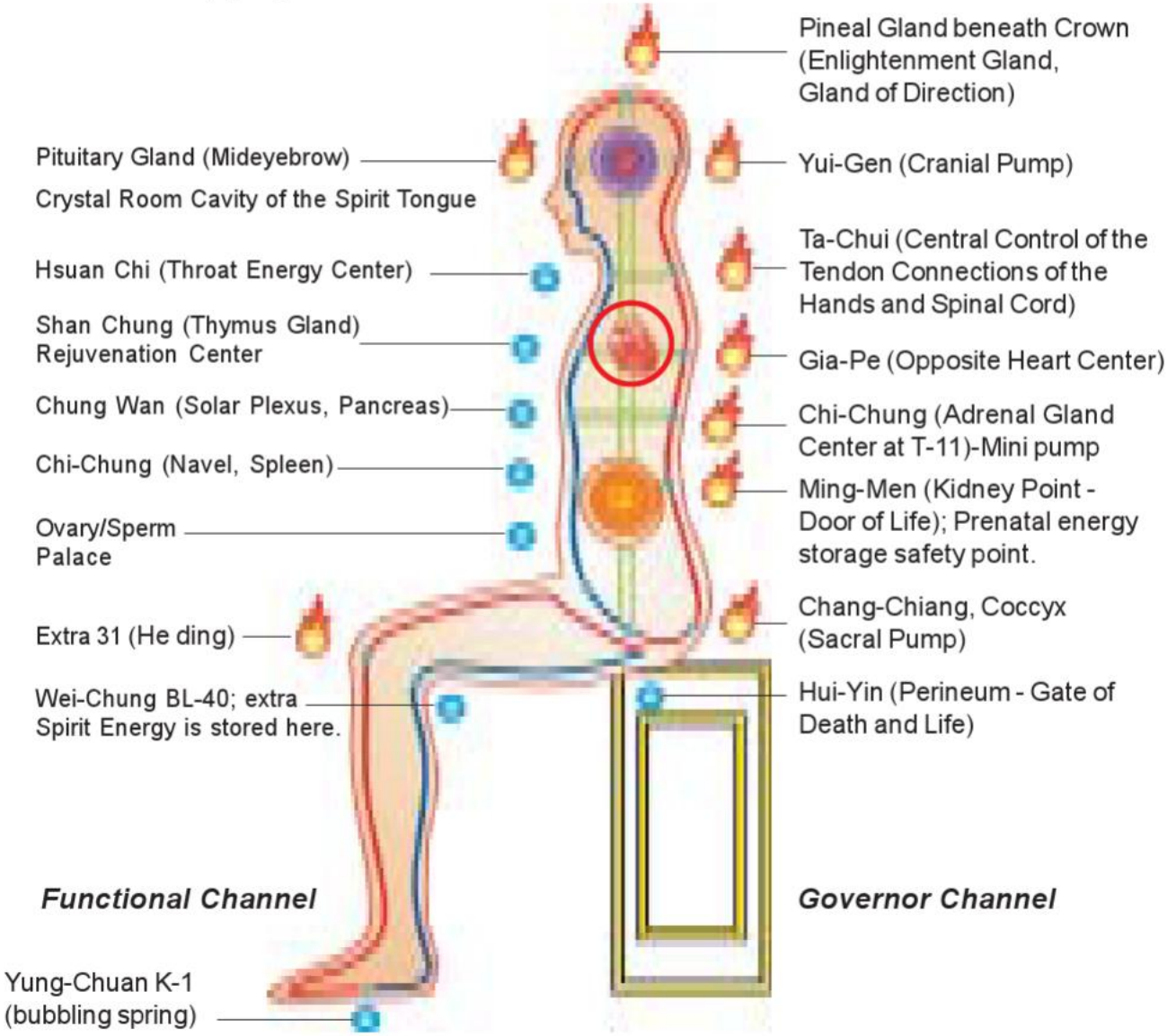


Fig. 8.56 *Cosmic Orbit*

Chi Ball

In Part III we also begin to focus more on the sensation of Chi being emitted from our palms. This energy is emitted from the **Laogong** points primarily, but you can also feel it throughout the palms and fingers. It will feel like a balloon between your hands that is expanding and contracting or like two magnetic fields repelling and attracting each other.

Once you have practiced Cosmic Chi Kung for awhile and have become skillful at it, you may find that Grasping the Chi ball is all you need to do to activate your flow of healing energy before doing a session. As you become sensitive to the sensation of your own Chi, it becomes an easy step to feel the Chi of others.

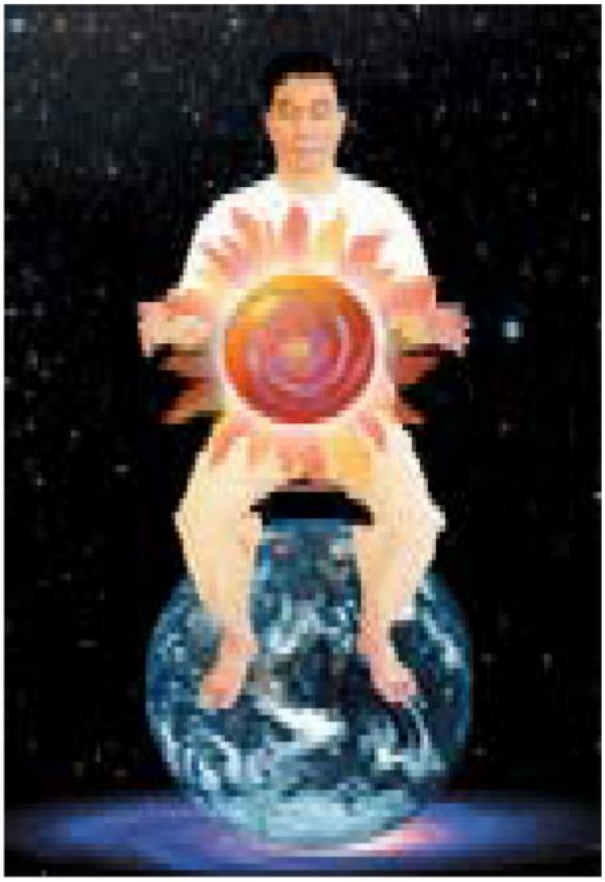


Fig. 8.57 *Grasping the Chi Ball.*

Opening Movements, Hands Down at Sides, Palms Facing Each Other Bone Breathing - Absorbing Cosmic Chi

The Opening Movements are the same as in the sequence in Part I, 'Opening to Heaven, Earth and Cosmic Chi', on page 164.

A. **Channeling the Earth Force - Washing the Bone Marrow** Raise arms to chest height - Palms facing each other. Rotate arms until **palms face down.** Open the Tiger's Mouth - Index finger up, thumb down.
B. **Activate and Beam to the Eye of the Hip**
C. **Absorb the Heavenly Force Washing the Bone Marrow - Crown to Soles**

Core Movements of Part III

Grasping the Chi Ball

Slowly rotate the hands so that your palms face each other in front of your navel.

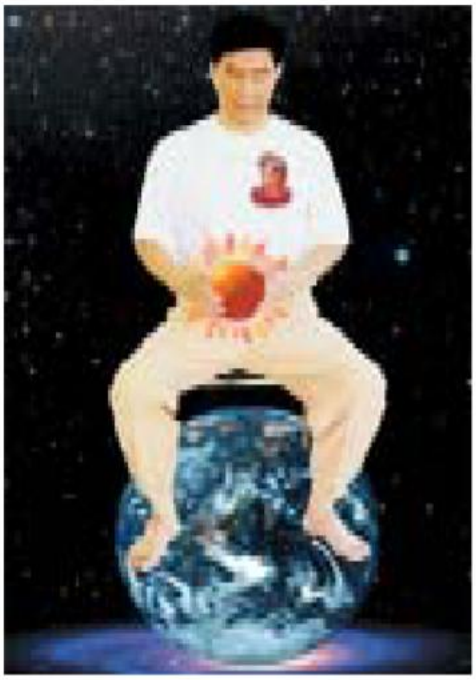


Fig. 8.58 *Hold the Chi Ball.*

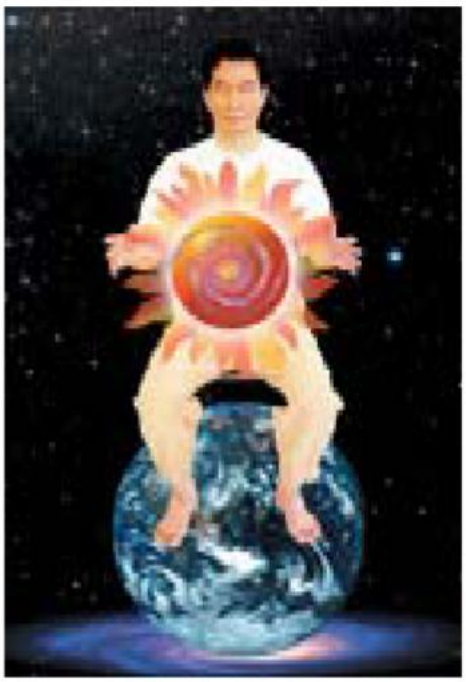
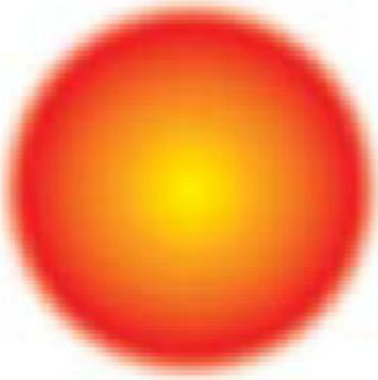


Fig. 8.59 *Stretch and squeeze it.*

Feel the invisible ball of energy between your hands. Allow the energy to push your hands apart keeping the feeling of connection between your palms. When you have less feeling stop the palms and hold it there and reestablish the feeling of the Chi ball.

Let the energy draw your hands back toward each other, like a magnet, until you feel as if you were squeezing and compressing the ball.

Stretch and squeeze the Chi ball three times by opening and closing your palms in this way.



Activate the Outer and Inner Arm Gates

Activate Waiguan Triple Warmer 5 and Neiguan Pericardium 6 - **Right** arm on top. Slowly rotate the arms so that both **palms face down.**

Cross the right wrist over the left wrist with 1 inch of space between the hands. Align PC-6 of the right wrist with TW-5 of the left wrist. Feel the two gates activate each other like metal and magnet drawn to each other. Hold for a 5 to 30 second count.

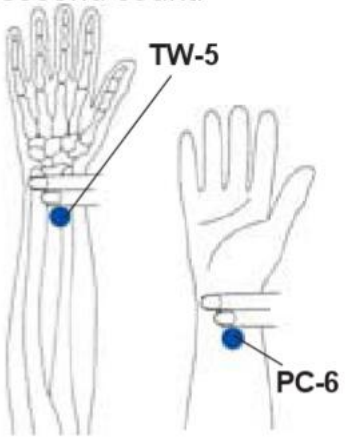


Fig. 8.60 *Align and activate PC-6 (Right) with TW-5 (Left).*

Keeping the wrists crossed, slowly rotate hands **turning the palms upward**. Now TW-5 of the right wrist will be aligned with PC-6 of the left wrist. Hold and count and feel the points activated. 'Be aware of Tan Tien and Universe'.

Fig. 8.61
Align and activate TW-5 (Right) with PC-6 (Left).

Fig. 8.62 *Feel the Chi Ball and beam energy from LI-4 into the Navel Point.*

Open the Functional Channel with LI-4

Bring the left hand down to the level of the Tan Tien with the Chi Knife facing in. Lower the right hand, palm down and align the eye of the hand, the LI-4 point with your navel. **Feel the Chi ball between your two hands**, and at the same time beam energy from LI-4 into the **navel** point.

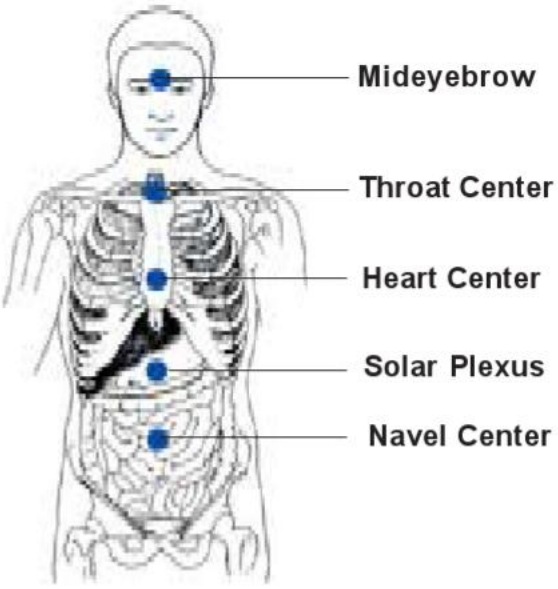


Fig. 8.63
Magnify the Power of the Beam to the Solar Plexus.

Fig. 8.64 *Activate all the Points.*

Raise the right hand up the Functional Channel, stopping and aligning LI-4 with the **solar plexus**, hold for a 5 to 30 second count and feel the points open and starting to activate each other.

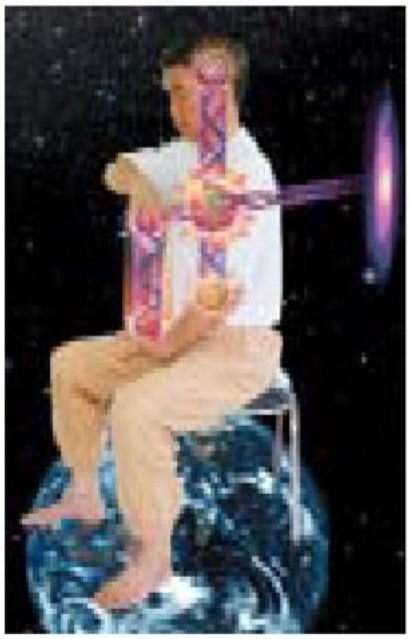


Fig. 8.65
Beam to the Heart Center.

Fig. 8.66
Beam to theThroat

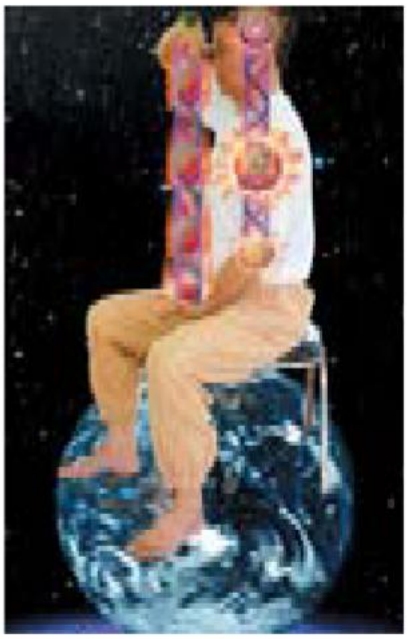


Fig. 8.67
Beam to the Mideyebrow

Continue to move up to the **heart**, **throat** (CV-22) and **mideyebrow** points. Beam energy from the eye of the hand into each of these points and at the same time, continue to feel the Chi ball connection between the two hands.

Return down the Functional Channel in the same manner, starting from the mideyebrow and stopping to beam energy into each point.

Next beam into the **throat center, heart center, solar plexus** and finally the **navel**. Hold the Chi ball at the navel with the right hand over the left.

Yin/Yang Palms

Separate the hands and extend them out in front of the body at solar plexus level. The left palm is still pointing up and is yang drawing in the heavenly force through the Laogong point. The right palm is still facing down and is yin drawing in the earth force energy.

Fig. 8.68 *Separate the Hands, one palm facing up and one down - draw in the Forces of Heaven and Earth.*

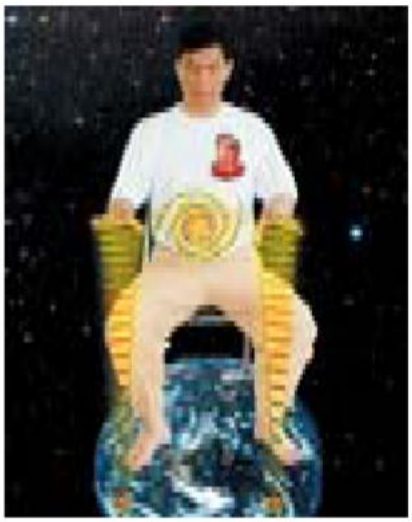


Fig. 8.69 *Draw in Earth Force.*

Conclude by turning the left palm over to face downward. Draw in the earth force through both palms.

Activate the Chi Ball, Tan Tien and the Original Force

Turn the right palm upward and lower it to the Tan Tien with the Chi knife pointing inwards.

Lower the left palm to the navel, palm down. Lower the left thumb to point toward the right Laogong point. This opens the eye of the left hand (LI-4), pointing it toward the navel.

Fig. 8.70 *Activate the Chi Ball, Tan Tien and the Original Force - Right Hand over left, the 'Large Intestine 4' pointing at the Navel.*

Open the Functional Channel with the Left Hand

A. **B.** **C.**

Fig. 8.71 ***A.*** *Bring LI4 point up to the Solar Plexus and Heart Center.*
B. *Then up to the Throat Center.*
C. *Then up to the Mideyebrow. Descending down the channel in reverse, finishing at the Navel.*

After going up the functional channel come down the channel with the left hand.

Holding a Chi Ball: Open the hands with the palms facing each other holding a Chi ball. Stretch and squeeze the Chi ball a few times in order to feel the Chi as a substance; open and then relax the palms as you squeeze.

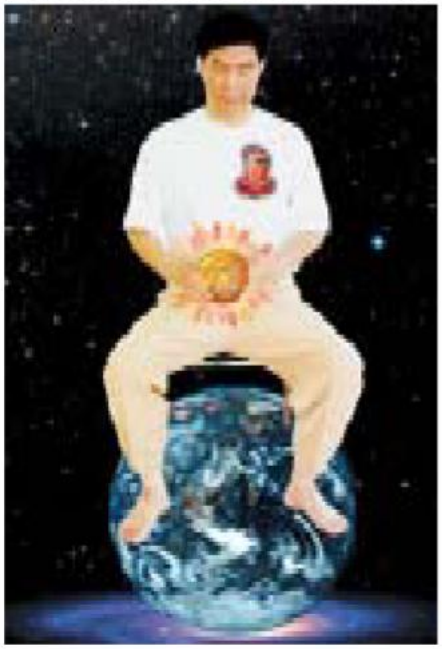


Fig. 8.72 *Hold and squeeze the Chi Ball.*

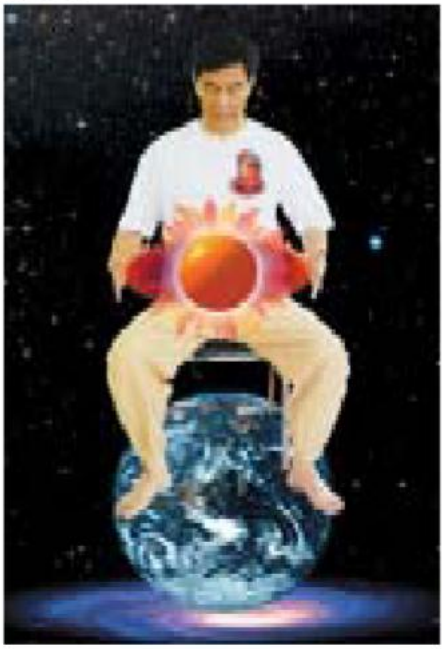


Fig. 8.73
Feel the Chi Ball expanding, growing Bigger.

Double Palm and Double Beam - Palm to Palm
Activate the Functional and Governor Channels - Right Palm on Left

Bring the left palm in first to face the navel, about 1 inch away, aligning the Laogong point with the navel. Follow by bringing the right hand in front of the left hand, **aligning the Laogong of the right palm with the Laogong of the left hand and the navel**. Both palms are now facing in. Beam energy through both Laogong points to the **navel and through the body to the Door of Life**, between L-2 and L-3 (Lumbar Vertebrae). Hold for a 5 to 30 second count and feel the vibration of the palms and Chi beam penetrate through the two points; feel them link together.

Fig. 8.74
Left Palm to Navel.

Fig. 8.75
Right on Top.

Fig. 8.76
Beam from Navel to Door of Life.

Next raise the left palm up to the solar plexus, aligning the Laogong point with the solar plexus.

Follow with the right palm aligning the Laogong to the left palm. Beam energy into the **solar plexus point and through the body to the T-11 point (thoracic vertebrae)**.

Fig. 8.77
Raise Left Palm to Solar Plexus.

Fig. 8.78 *Follow with the Right Hand to form the Double Beam.*

Continue in the same way with the left hand leading to the **heart point and wing point,** the **throat point and C-7 (cervical vertebrae)**, the **mideyebrow point and Jade Pillow**, and the **crown point and perineum**. **Always remember 'Tan Tien and the universe'.**

Fig. 8.79 *Beam into the Heart Center and to the back of the Heart.*

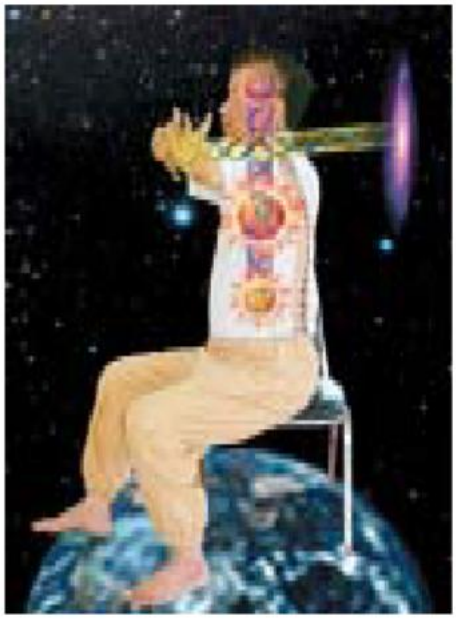


Fig. 8.80 *Beam into the Throat Center and to C7.*

When you reach the crown lightly spiral the palms and feel the Chi slowly penetrate deep into the body reaching the perineum; this will also open the **Thrusting Channels.** This might take a longer time, try a 30 to 60 second count.

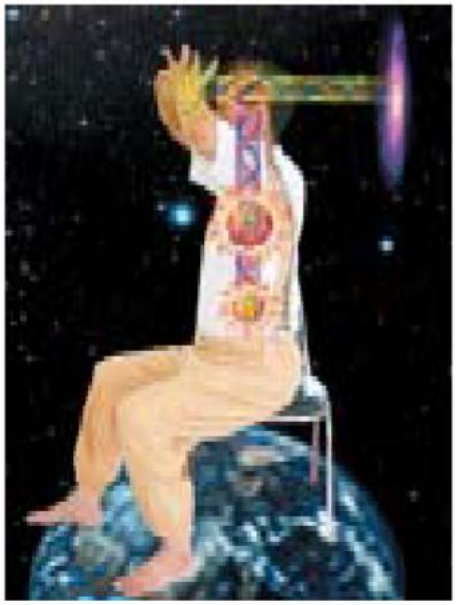


Fig. 8.81 *Beam into the Mideyebrow to the base of the Stall.*

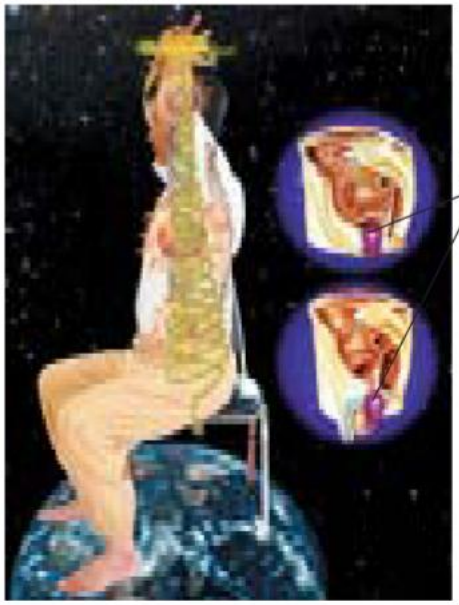


Fig. 8.82 *Beam from the Crown down to the Perineum.*

Return down the front, point by point in the same way, leading with the left hand.

Go up and down this way three times. The double palm and beam activate both the Functional and Governor Channels. The energy beam passes all the way through the body at each point.

Grasping the Chi Ball

Separate the hands and slowly extend the arms in front of you at navel level, palms facing each other, holding the Chi ball.

Fig. 8.83 *Squeeze the Chi Ball.*

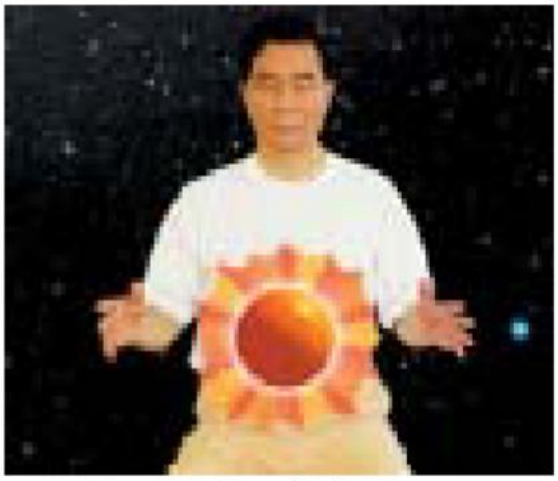
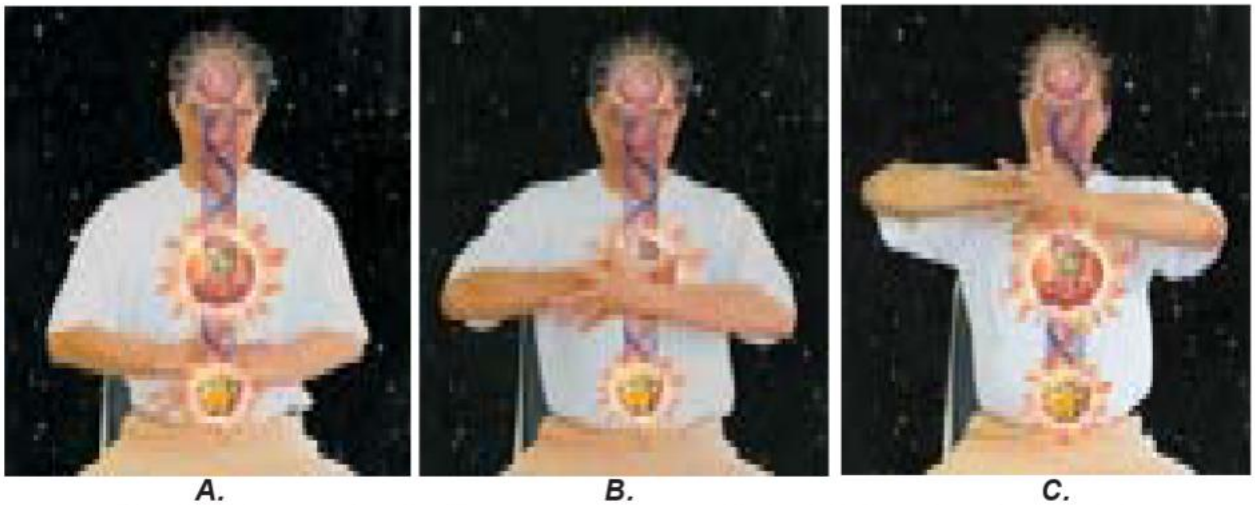


Fig. 8.84 *Magnify its Energy.*

Stretch and squeeze the Chi ball three times as before by opening and closing the palms. 'Be Aware of Tan Tien and Universe'.



A. ***B.*** ***C.***

Fig. 8.85 *Repeat the double palm and beam with the* ***left hand on the outside and the right palm leading,*** *beaming from;* ***A.*** *Navel to Door of Life.* ***B.*** *Solar Plexus to T11 and Heart Center to the Wing Point* ***C.*** *Throat Center to C7.*

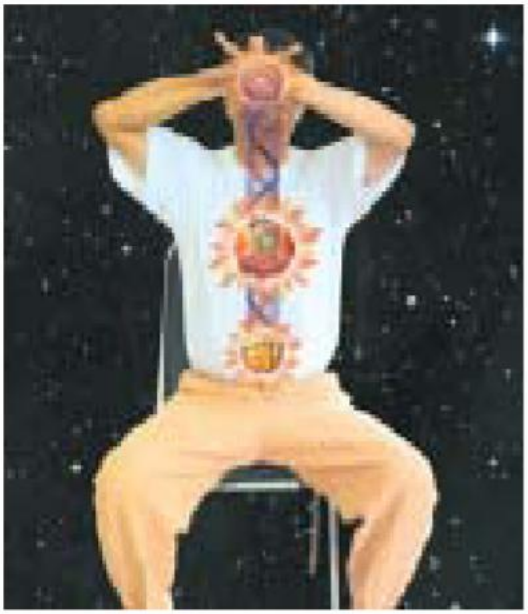


Fig. 8.86 *Activate the Mideyebrow to the Base of the Skull.*

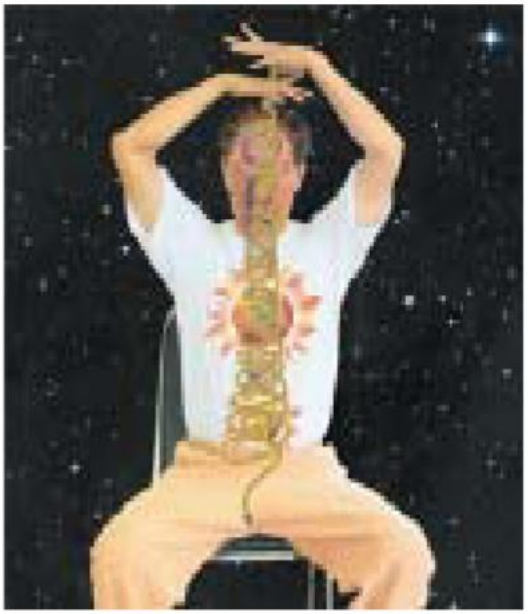


Fig. 8.87 *Activate the Crown and feel the Energy penetrate to the Perineum.*

A. Lower the right hand to the mideyebrow and penetrate to the skull.
B. Lower the right hand down to the throat center, following with the left.
C. Lower down to the solar plexus and penetrate to T11.
D. Lower down to the navel and penetrate to the Door of Life.

Fig. 8.88 *Channel the Earth Force.*

Rotate the **hands to face downward** and draw in the earth force through the palms, soles and perineum.

Closing Movements

Activate the Chi Channels - Balancing the Organs

The closing movements, crane's beak and finish are the same as before.
Index Finger *open (up), close (down), neutral (even with the other fingers)*
Ring Finger *- down, neutral.*
Index Finger *- open, neutral.*
Thumb *- in and down, neutral.*
Index Finger *- open, neutral.*
Pinky Finger *- down, neutral.*
Index Finger *- open, neutral.*
Middle Finger *- down, neutral.*
Index Finger *- open, neutral.*

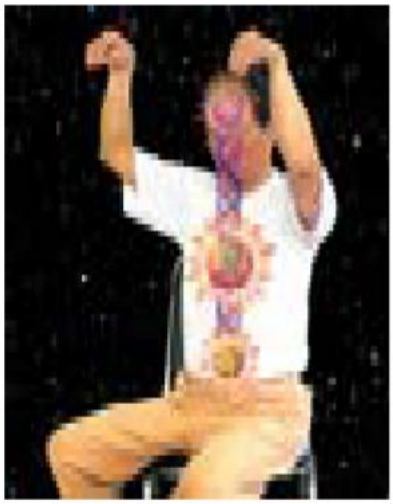


Fig. 8.89 *Form the Crane's Beak.*

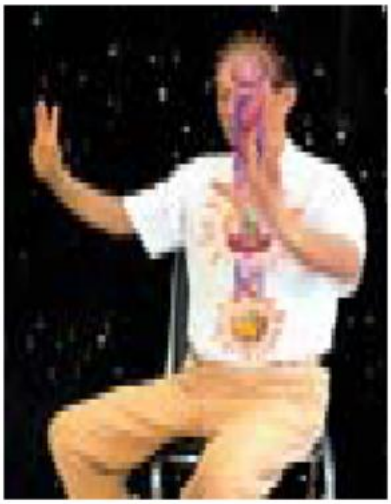


Fig. 8.90 *Palms to Front.*

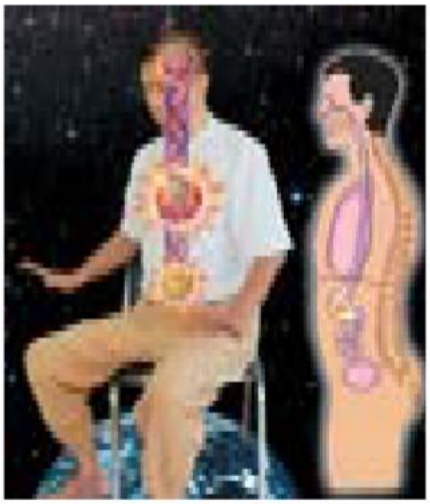


Fig. 8.91 *Lower to Sides.*

Crane's Beak

Form the crane's beak with both hands by bringing the fingertips together with the thumbs inside. Activate the saliva and swallow this elixir down three times to the Tan Tien. Raise the forearms to shoulder height with the fingers pointed down, inhaling gently as you raise.

Open the palms slowly and begin to lower the arms to the sides as you exhale, until the palms are facing each other in the starting position.

Finish

Bring awareness to the navel and notice the quality and intensity of the energy generated. Collect energy at the navel. Men, place the hands over the navel with the right hand on top; vice versa for women.

Part IV
Activating the Yin and Yang Channels and the Chi Belt

Theory

In this final part of Cosmic Chi Kung, you will focus on opening the yin and yang channels of the arms and on activating the Chi Belt around the waist. Mastery of Part IV of Cosmic Chi Kung will enhance your ability to project Chi through your fingers for healing.

Yin and Yang Channels of the Arms

There are six important energy channels flowing through the arms. These channels are paired together with each pair comprised of a yin channel and a yang channel. The yin channel of each pair flows down the inside of the arm from torso to fingertip, while its yang counterpart flows up the outside of the arm from fingertip to head.
The pairs are as follows:

Metal Element - Yin - Lung Channel - Thumb
Yang - Large Intestine Channel - Index Finger
Fire Element - Yin - Pericardium Channel - Middle Finger
Yang - Triple Warmer Channel - Ring Finger
Fire Element - Yin - Heart Channel - Pinky Finger
Yang - Small Intestine - Pinky Finger

Projecting Healing Energy through the Fingers

Emitting Chi from the fingers for healing is known in China as the **"One Finger Art."** Because the various energy channels of the arms either end or begin at the fingertips, the fingers are very effective instruments for projecting healing energy. Your fingers can focus energy like a laser beam toward a concentrated area such as a specific acupuncture point. You can also emit energy from all the fingers at once creating a combined effect to target an area. Part IV of Cosmic Chi Kung will stimulate all of the arm channels and will give you an opportunity to activate all of the fingers for beaming energy.

Fig. 8.92 *"One Finger Art"*

Activating the Chi Belt - Dai Mo

The Chi Belt or Belt Channel (also called the Girdle Vessel) is the only channel in the body that runs horizontally. It encircles the body at the waist level, connecting together all the vertical channels running through the torso. Thus, the Belt Channel plays an important role in maintaining a good energetic communication between the upper and lower body. In women it strongly affects the uterus and the menstrual cycle in particular.

In Taoist Chi Kung, the Belt Channel is not limited to the waist region. It encircles the entire body, almost like weaving an energetic cocoon around you from head to foot. Activating the Belt Channel strengthens the aura and helps to defend and protect you from outside negative energies.

Fig. 8.93 *Belt Channel*

Practice

Opening Movements

These opening movements have been described in Parts I, II, III. Refer to Part I to refresh your practice.

Hands Down at Sides - Palms Facing Each Other - Bone Breathing - Absorbing Cosmic Chi.

Channeling the Earth Force - Washing the Bone Marrow.
Raise arms to chest height - Palms facing each other.
Rotate arms until palms face down.
Open the Tiger's Mouth - Index Finger up, thumb down.

Activate and Beam to the Eye of the Hip.
Large Intestine 4 - Eye of the Hand.
Pericardium 9 - Tip of the Middle Finger.
Small Intestine 3 - Knife Edge of the Hand.

Absorb the Heavenly Force - Washing the Bone Marrow - Crown to Soles.
Extend the arms forward to chest height - palms upward.

Absorb the Earth Force.
Rotate the arms until the palms face down.
Raise the Index Fingers slightly.

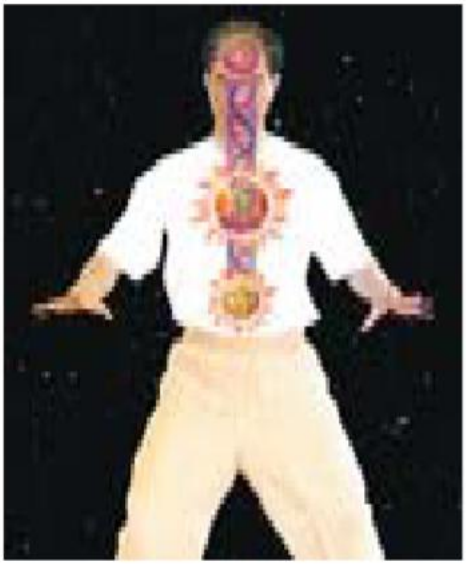
Fig. 8.94 *Mother Earth's Healing Power*

Core Movements of Part IV Yin and Yang Channels - Chi Belt

Activating the Yin Channels - Left Side

Turn the palms down and slightly open the index fingers. Smile to your palms and soles and channel the earth force.

Turn your right palm up and pass it just one inch below the left arm yin channels from the left palm to the armpit, **without physically touching the arm**. Feel the Chi moving. Turn your right palm to face your left rib cage and pass your right hand down the left side of your abdomen along the descending colon, and a cross the pelvis to the right side to activate the **yin** energy.



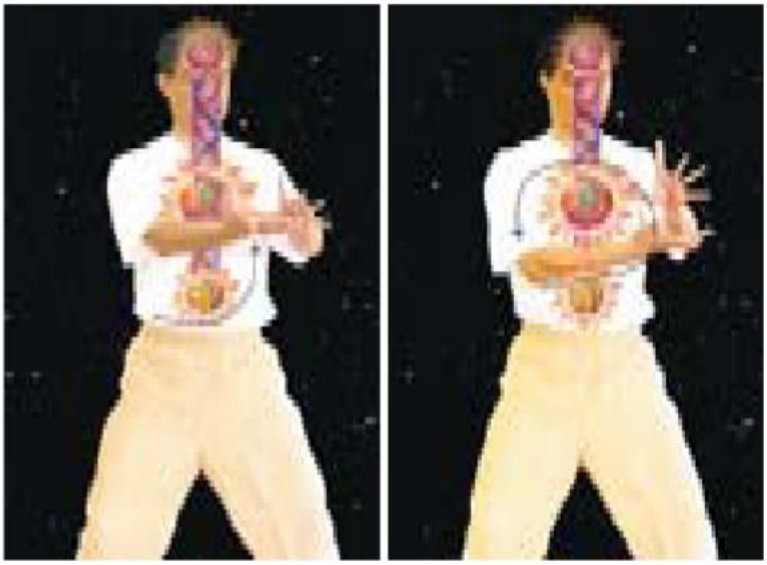


Fig. 8.95 *Channel the Earth Force.* ***Fig. 8.96*** *Activate the Yin Energy from the Palm to the Pelvis.*

Fig. 8.97 *Raise Chi in the Right Palm.*

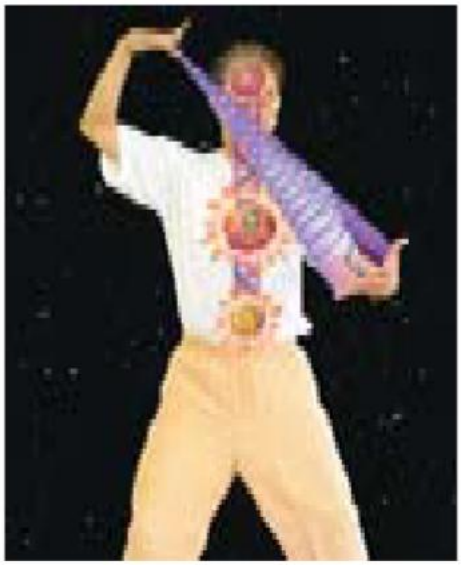


Fig. 8.98 *Pass it to the Left.*

Pass your right hand up the right side of the abdomen to the level of your forehead with the palm facing diagonally toward the left palm (which simultaneously turns palm up at the level of the navel). Project the Chi from palm to palm for 30 to 60 seconds, vibrating the palm and feeling Chi from the right palm sent to the left picking up by the left palm. Keep the palms open and relaxed.

Next point the right ring finger toward the left palm and project Chi making very small circles from the right ring finger (Triple Warmer channel); emit the Chi to the left palm for 30 to 60 seconds.

Then return the right index finger to neutral position. Point the left ring finger up toward the right palm, project into the right palm for 30 to 60 seconds, and then return to neutral.

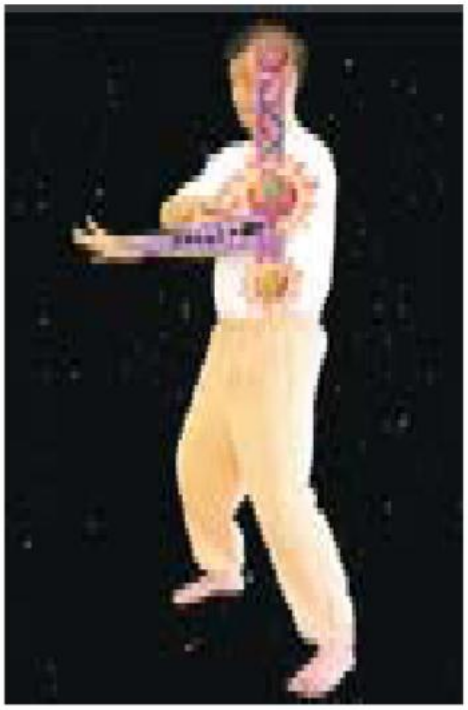
Next both ring fingers project toward the opposite palms at the same time for 30 to 60 seconds and then return to neutral. Notice that the energy may meet in the middle.

Fig. 8.99 *Project Energy and balance Left and Right.*

Activate the Yang Channels - Left Side

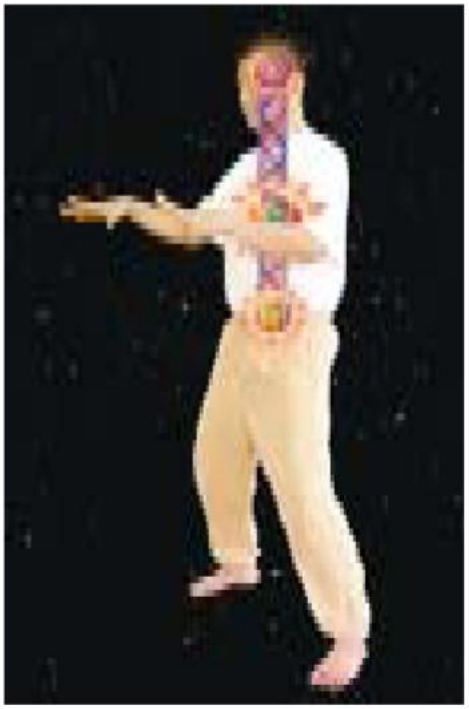
Turn the left palm down and lower the right palm to cover the back of the left hand, palm down. Pass the right palm over the left arm's **yang** channels from the back of the left hand to the left shoulder. Then pass the right palm across the upper chest and across the right breast. Scoop the right palm under the right armpit, fingers first. Then bring the right palm forward, palm down and press forward with the left palm at the same time. Relax and channel the earth force.

A. *Left Palm down, lower Right Palm to cover the back of Left Hand.*



B. *Pass the Right Palm over the Left Arm's Yang Channels.*

C. *Pass the Right palm across the chest and scoop under the Right Armpit, Fingers first.*



D. *Press both Palms forward, relax and channel the Earth Force.*

Fig. 8.100 *Balance Left Side Yin and Yang and Channel Earth Energy.*

Repeat, Activating the Yin and Yang Channels to the Right Side

Fig. 8.101 *Balance right side yin and yang and channel earth energy*

Then repeat **Activating the Yin and Yang Channels** with the other fingers and channels in the following order:

Index Finger - Large Intestine
Thumb - Lung
Pinky Finger - Heart and Small Intestine
Middle Finger - Pericardium

Fig. 8.102 *One Finger Art - activating the Laogong.*

Activate the Chi Belt - Right Foot Forward

Step forward with the right foot. The right palm covers the navel and the left palm covers the Door of Life. Feel the Chi beam penetrate from palm to palm.

Turn your hips to the right and shift weight to your right leg. At the same time move your right palm to the Door of Life in a brushing manner, while your left palm moves to the right hip in a sweeping manner. Note that the palms face the Chi belt.

Repeat the above three times altogether.

Fig. 8.103 *Activate the Chi Belt - Right Side.*

Activate the Chi Belt - Left Foot Forward

Repeat the above with the left foot forward and reversing the right and left hands.

Fig. 8.104 *Activate the Chi Belt - Left Side.*

Channel the Earth Force

Bring the hands forward and rotate the palms to face downwards. **Smile** and channel the earth force as before.

For these Closing Movements see the pictures beginning on page 171.

Closing Movements
Activate the Chi Channels - Balancing the Organs

Index Finger - open (up), close (down), neutral (even with the other fingers).
Ring Finger - down, neutral.
Index Finger - open, neutral.
Thumb - in and down, neutral.
Index Finger - open, neutral.
Pinky Finger - down, neutral.
Index Finger - open, neutral.
Middle Finger - down, neutral.
Index Finger - open, neutral.

Crane's Beak

Form the crane's beak with both hands by bringing the fingertips together with the thumbs inside. Swallow the saliva. Raise the forearms to shoulder height with the fingers pointed down, inhaling gently as you raise.

Open the palms slowly and begin to lower the arms to the sides as you exhale, until the palms have returned to the starting position.

Finish

Bring the awareness to the navel and notice the quality and intensity of the energy generated.

Collect energy at the navel. Men, place the hands over the navel with the right hand on top; vice versa for women.

Healing Others

Summary and Combined Practice

After learning the four sets of Cosmic Chi Kung, you may want to combine them all into a short and simple daily practice. This combined set, previously called Buddha Palm I, synthesizes the movements from the first three sets into one basic sequence. The movements are done on the right side only, so the entire set can be completed in **ten to twenty minutes**.

Cosmic Chi Kung: Simple Combined Sequence

Opening Movements

Bone Breathing - Absorbing Cosmic Chi

1. Stand with your hands down by your sides. Feel your Chi moving and activate the **bone breathing**.
2. Activate the cosmic force by using your mental intention (Yi) to spiral at the **mideyebrow** point and draw in the golden light energy. Breathe through the mideyebrow point in the same manner as in bone breathing, allowing the energy to **flow through the Microcosmic Orbit**. Alternatively you can breathe the golden light down into your navel to charge up your Original Chi at the Tan Tien. You can also simply circulate the golden light throughout your body. Relax, smile and enjoy the sensation of your entire body breathing in the cosmic energy.

Channeling the Earth Force - Washing the Bone Marrow

1. Connect with the earth force by activating the **perineum** and the **soles of the feet, Kidney 1, Bubbling Spring**. Connect the bridge by slightly squeezing the sex organs and the anus. Wash the bone marrow from the soles to the crown.
2. **Smile** into the perineum, palms, mideyebrow and crown. Then slowly raise the arms, palms facing each other to chest height keeping the elbows relaxed and sunk. Then slowly rotate the arms until the **palms are facing down**. Absorb the Earth Chi through the soles, perineum and palms; feel it being absorbed into the bones and body like a **steam or mist rising from the earth**. Feel the earth force move through the **center of the bones**, up the calves, thighs (femur bones), through the hip bones, spine, scapulas, arms, neck and skull. Finally swirl the energy around your brain.

Activate the Hip - Large Intestine 4, Pericardium 9 and Small Intestine 3

1. Raise your index finger slightly upward to activate the Laogong point (Pericardium 8). Then stretch your thumbs out to the sides and down, so that they end up pointing downwards toward the earth to activate Large Intestine 4 (Hegu). **Large Intestine 4 is found in the webbing between the thumb and index finger. It is called the "eye of the hand"; this area is also known as the "Tiger's Mouth."**
2. Slowly draw the elbows back and lower the hands until your palms are facing down beside the "eye of the hip" (the iliac crest) with the "eye of the hand" (Large Intestine 4) aligned with the "eye of the hip". **Use your mind intention to beam the energy back and forth between your two LI-4 points. This will activate the large and small intestines.**
3. Rotate your hands so that the fingers first point out, then back and finally point the fingers in toward the eye of the hip. **Beam energy back and forth between the tips of the middle fingers** (Pericardium 9) passing through the hips.
   Rotate the hands again until the fingers are pointing forward with the palms facing up. Align the knife edge (Small Intestine 3) with the eyes of the hip, and **beam the energy back and forth between the two hands.**

Absorb the Heavenly Force - Washing the Bone Marrow - Crown to Soles

Extend the arms forward to chest height with the **palms still facing upward**.

Become aware of the palms and the crown. Activate the Laogong point (Pericardium 8). Feel the heavenly energy, and be aware of the violet light of the North Star and the red light of the Big Dipper shining down. Draw this light in through the palms and the crown point and feel it washing your bone marrow. Direct the sensations down through the skull, cervical vertebrae, clavicle, scapulas and sternum. Activate your thymus gland and continue drawing the healing heavenly light down through the rib cage, arms, spine, hips, femurs, calf bones, feet and toe bones. **Feel your bones activated with a positive electrical force (the positive force comes from heaven, negative from the earth).**

Absorb the Earth Force

1. Rotate the arms until the **palms face down**.
   Raise the index fingers slightly, extend the thumbs first towards each other, and then towards the ground.
2. Become aware of the palms (Laogong), the soles of the feet (Kidney 1, Bubbling Spring) and the perineum (Conception Vessel 1, Hui Yin). Activate these points, feel the earth energy, and **be aware of a gentle blue light or white light rising up from the earth like a pure steamy mist.** Draw this light in through the palms and soles and let it wash up through the center of your bones as it steam cleans your

marrow. Picture any impurities or illness dripping out of your bones and draining down into the earth, where they are recycled and purified.

Core Movements

Grasping the Moon - Connecting the Heaven and Earth Forces

1. **Open Position:** Heaven Force - Bring the arms up to shoulder height, bending the elbows so that the **left hand is under the right elbow** with the left index finger pointing up to Heart 3.
2. The right forearm is over the left forearm with the tip of the right index finger held above the Large Intestine 11 point of the left arm. The right index finger is pointing up toward heaven.
3. The right index finger draws in the heavenly force like an antenna. The force flows up the bones of the right arm across the shoulders to the left arm, and through the bones of the left arm to the left index fingertip. It then flows through the index finger of the left hand into the Heart 3 point of the right arm **completing the heavenly circuit**. Continue cycling in this way.
4. **Close Position:** Earth Force - Keeping the arms in the same position, move both index fingers to point down. The right index finger will now point toward the Large Intestine 11, point of the left arm and the left index finger will point downward toward the earth. Draw in the earth force through the left index finger bringing it through the bones of the left arm, across the shoulders through the right arm to the right index finger and out into the Large Intestine 11 point of the left arm. Continue cycling in this way **completing the earth circuit.**

   Open and close three times altogether ending in the open position.

Activate the Throat Center

1. Draw the elbows out to the side and rotate the palms to face in so that the left palm is about 3 - 6 inches in front of the Throat Center (Conception Vessel 22), palm facing in, and the right hand is about 1 - 3 inches in front of the left hand, palm facing in. Align the Lung 10 point of the right hand with the Lung 10 of the left hand, and align the Lung 10 points in the middle of the thenar eminence of the left hand with the Throat Center. **Keep the points aligned and beam the energy passing through both hands into the Throat Center.**
2. Move both hands about 12-18 inches out from the Throat Center maintaining the energy beam as you move.
3. Move in and out three times altogether in this way ending with the hands in as in preivous point above.

Activate the Third Eye

1. Keeping the Lung 10 points aligned, raise the hands up to the level of the mideyebrow point. Keep the points aligned and **beam the energy passing through both hands into the mideyebrow point.**
2. Move both hands about 12-18 inches out from the mideyebrow point maintaining the energy beam as you move. **Move in and out three times** altogether in this way, ending with the hands as previously.
3. Keeping the palms and thenars (Lung 10) aligned, move the hands back down to the position in front of the **Throat Center.**

Open the Bridge and Regulator Channels

1. Keeping the forearms horizontal at shoulder height, separate the hands so that the Laogong points are aligned in front of Stomach 13 just below the clavicle on a vertical line above the nipple or **mammillary** line. The fingertips should almost be touching. Beam energy from the Laogong points into ST-13. You will be following this vertical line, which passes through the nipples, down the torso to the level of the navel stopping to focus and **beam energy into key points along the way**. On each of these, focus your Yi on beaming energy into the organs inside each position. Stomach 13 is the location that activates the Heart and Lungs. Feel the change in your breathing as you activate the **lungs**.
2. Move the hands down the mammillary line to Stomach 16, about one inch above the nipple (in the space between the third and fourth ribs). Again, beam energy to energize and balance the **heart and lungs**.
3. Move the hands down to Liver 14 (about 2 - 3 inches below the nipple in the space between the 6th and 7th ribs). Beam healing energy into the **liver and gall bladder**.
4. Move the hands down to Spleen 16 (just below the rib cage on the mammillary line). Beam healing energy into the **stomach, pancreas and spleen**.
5. Move the hands down to Spleen 15 (on the mammillary line to the level of the navel). Beam healing energy from your palms into the **small intestine and the Tan Tien**.

Grasping the Chi Ball

1. Slowly rotate the hands so that your palms face each other in front of your navel. Feel the invisible ball of energy between your hands. Allow the energy to push your hands apart keeping the feeling of connection between your palms.
2. Let the energy draw your hands back toward each other, like a magnet, until you feel as if you are squeezing a ball.
3. Stretch and squeeze the Chi ball three times by opening and closing your palms in this way.

Activate the Outer and Inner Arm Gates
Waiguan - Triple Warmer 5 and Neiguan - Pericardium 6 - Right Arm on Top

1. Slowly rotate the arms so that both palms face down.
2. Cross the right wrist over the left wrist with 1-3 inches of space between the hands. Align PC-6 of the right wrist with TW-5 of the left wrist.
3. Keeping the wrists crossed, slowly rotate hands turning the palms upward. Now TW-5 of the right wrist will be aligned with PC-6 of the left wrist.

Open the Functional Channel with LI-4

1. Bring the left hand down to the level of the Tan Tien with the Chi Knife facing in. Lower the right hand, palm down, and align the eye of the hand, the LI-4 point with your navel. Feel the Chi ball between your two hands, and at the same time beam energy from LI-4 into the navel point.
2. Raise the right hand up the Functional Channel stopping and aligning LI-4 with the **solar plexus, heart, throat** (CV-22) and **mideyebrow** points. **Beam energy from the eye of the hand into each of these points**, and at the same time continue to feel the Chi ball connection between the two hands.
3. Return down the Functional Channel in the same manner stopping to beam energy into each point. **Go up and down the Functional Channel** in this way three times.

Yin/Yang Palms

1. Separate the hands and extend them out in front of the body at solar plexus level. The left palm is still pointing up and is yang drawing in the heavenly force through Laogong. The right palm is still facing down and is yin drawing in the earth force energy.
2. Conclude by turning the left palm over to face downward. Draw in the earth force through both palms.

Double Palm and Beam to Activate the Functional and Governor Channels

1. Bring the left palm in first to face the navel, about 3 - 5 inches away, aligning the Laogong point with the navel. Follow by bringing the right hand in front of the left hand, aligning the Laogong of the right palm with the Laogong of the left hand and the navel. Both palms are now facing in. **Beam energy through both Laogong points to the navel and through the body to the Door of Life**.
2. Next raise the left palm up to the **solar plexus** aligning the Laogong point with the solar plexus. Beam energy into the solar plexus point and through the body to the T-11 point. Your right hand remains at the navel level beaming energy to the navel and the Door of Life.
3. Raise your right hand up to the outside of the left hand at the solar plexus level, and beam energy through both hands into the **solar plexus point and the T-11 point**. Continue in the same way with the left hand leading to the **heart point and wing**

point, the **throat point and C-7**, the **mideyebrow point and jade pillow** and the **crown point and perineum**.

4. Return down the front, point by point in the same way, leading with the left hand. Go up and down in this way three times. **The double palm and beam activate both the Functional and Governor Channels. The energy beam passes all the way through the body at each point**.

Grasping the Chi Ball

1. Separate the hands and slowly extend the arms in front of you at navel level, palms facing each other holding the Chi ball.
2. Stretch and squeeze the Chi ball three times as before by opening and closing the palms.

Channel the Earth Force

Rotate the hands to face downward, and draw in the earth force through the palms, soles and perineum.

Closing Movements

Activate the Chi Channels - Balancing the Organs

Index Finger - open (up), close (down), neutral (even with the other fingers).
Ring Finger - down, neutral.
Index Finger - open, neutral.
Thumb - in and down, neutral.
Index Finger - open, neutral.
Pinky Finger - down, neutral.
Index Finger - open, neutral.
Middle Finger - down, neutral.
Index Finger - open, neutral.

Crane's Beak

1. Form the crane's beak with both hands by bringing the fingertips together with the thumbs inside. Raise the forearms to shoulder height with the fingers pointed down, inhaling gently as you raise.
2. Open the palms slowly and begin to lower the arms to the sides as you exhale, until the palms are facing each other in the starting position.

Finish

1. Bring the awareness to the navel and notice the quality and intensity of the energy generated.
2. Collect energy at the navel. Men, place the hands over the navel with the right hand on top; vice versa for women.

Chapter IX
Universal Tao Practices

Cosmic Inner Smile

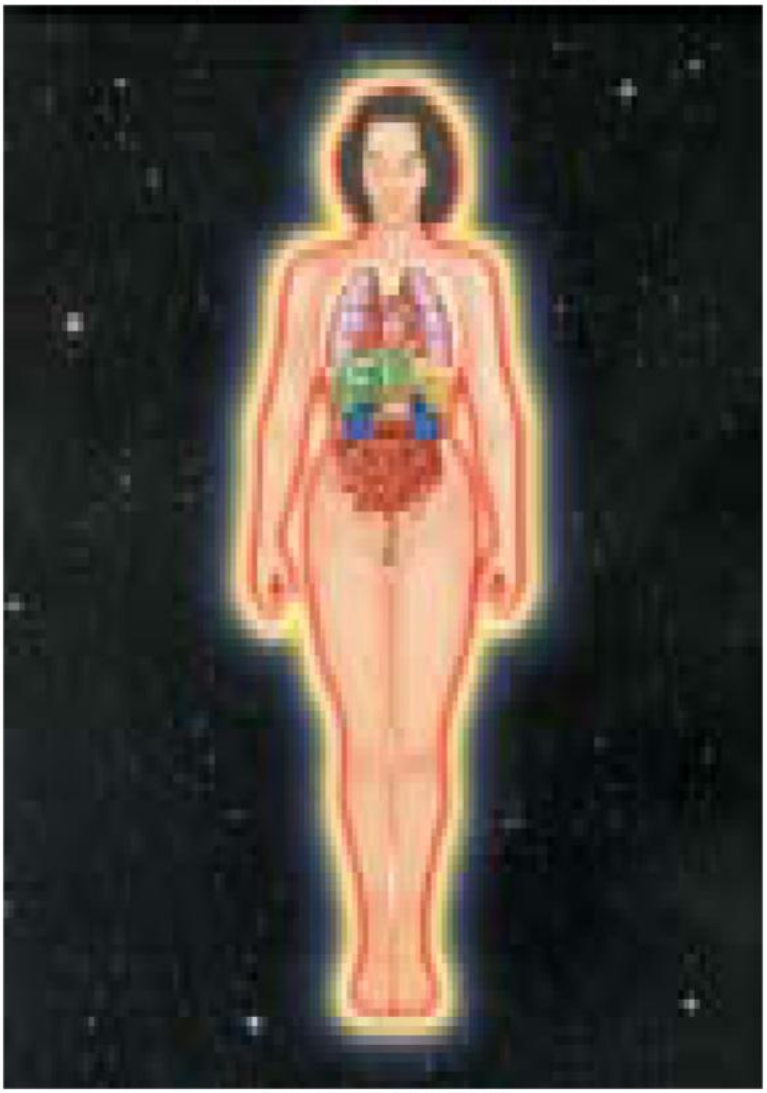


Fig. 9.1 *Inner Smile*

The Inner Smile begins at the eyes and the mideyebrow point and moves down to the heart. As you activate the heart, the loving energy will flow out and you will feel the energy of your Inner Smile flow down the entire length of your body like a waterfall. This is a very powerful and effective tool to counteract stress, tension and negative Chi.

1. Be aware of the **mideyebrow,** imagining that your are in one of your favorite places in the world, a place where you feel safe, relaxed and happy. Recall the sights you might have seen there, the sounds you might have heard, the scents, sensations and flavors that you associate with that place.
2. Imagine that one of your favorite people is standing in front of you, smiling to you with loving, happy, radiant shining eyes. **Smile** to your face and slightly lift up the corners of your mouth.
3. Feel yourself responding to that special person's smile with a smile of your own. Feel your eyes smiling and relaxing.
4. Smile down to the **thymus gland** and picture a white flower blossoming. Gently inhale into the thymus gland, connecting your breath to the olfactory organ. Smell the good fragrance.
5. Aim your inner attention at your **heart**, picturing the heart before your inner eye and smile to it. **Smile** until you feel the heart smile back to you. Picture your heart like a red rose, gradually opening. This will activate the **love** and fire of **compassion** in the heart. Once you feel the red light and loving awareness it will activate the **cosmic red healing light** or mist from above and around you.
6. Smile at the light or mist and very slowly with a soft, long, deep breath draw the red mist, love and compassion into the mideyebrow, down through the mouth and throat, into the heart and gradually overflowing to the **small intestine**. Exhale, but retain the red light and the love and compassion in the **heart and small intestine**. At the same time exhale the cloudy, black or negative energy. Keep on doing this breathing 18 to 36 times waiting until the heart becomes bright red before your inner vision and starts to radiate out to the tongue, mouth, nose, ears and eyes. Allow the red light to whirl around you and form a **red aura**. Feel your skin glowing with red energy.
7. Let the heart's loving energy radiate out to the **lungs**. Aim your attention at the lungs; picture them before your inner eye and smile to them. **Smile** until you feel the lungs smile back to you. Picture your lungs like a white rose, gradually opening; smell the good fragrance. This will activate the courage in the lungs. Once you invoke the white light and courage into the lungs, you will also activate the **cosmic white healing light** or mist from above and around you.
8. Smile at the light or mist and very slowly, softly take a long deep breath and draw the white mist into the mideyebrow, the mouth and down to the lungs, gradually overflowing into the **large intestine**. Exhale but retain the white light and the feeling of courage in the lungs. At the same time exhale the cloudy, black or negative energy. Keep on doing this kind of breathing 18 to 36 times, waiting until the lungs become bright white and start to radiate out to the nose, ears, eyes, tongue and mouth. Invite the white light to whirl around you and form a **white aura** covering your skin like autumn dew.
9. The **spleen, pancreas and stomach** correspond to the yellow color of the earth element. Connect to these organs and smile down into them from the mideyebrow.

First connect to the heart, then attract the clear yellow light from above and around you. You might see the **golden yellow aura** of a wheat field ready for harvest. Expel feelings of worry; exhale the cloudy, sticky energy. Breathe in the golden yellow aura, filling your spleen center with golden yellow light. Repeat to complete 18 to 36 cycles, then allow the light to radiate out to your mouth, nose, ears, eyes and tongue. Wrap the golden aura around you, leaving a golden shine on your skin.

10. The **kidneys and bladder** correspond to the blue color of the water element. Gentleness is contained within the blue healing light. Inhale the blue aura into the kidneys. Expel feelings of fear or stress on breathing out. Allow your energy field to expand, breathing in and out the blue energy 18-36 times, until it starts to radiate out from your kidneys to your ears, eyes, tongue, mouth and nose. Gather the blue mist on your skin enveloping you with a **blue aura**.
11. The **liver and gall bladder** connect to the green color of the element wood; kindness replaces anger, which is expelled on breathing out. Do the same as above and create a **green aura** around you. Exhale the dark red, cloudy heat. Inhale the nourishing green of the forests. Do 18 to 36 cycles, until the green light has completely filled the liver and starts to radiate out to your eyes, tongue, mouth, nose and ears. Invite the green light to form a green aura around you.
12. **Smile** down to the **sexual organs** and reproductive system. Feel love and sexual arousal and the heart and sexual organs uniting. Observe how this process transforms the sexual energy into Chi. Channel down orange and red light to the sexual organs. Thank them for their work in keeping you alive and healthy. Rest. Do nothing. Gather and store the energy by smiling and spiraling in the Tan Tien.

Six Healing Sounds

The Six Healing Sounds enhance Therapeutic Work

Everyone has heard stories about gifted beings who possess great healing powers. People seek out gifted healers. Yet even in the best of circumstances, how much time can a great healer spend with you? One hour a day? An hour a week? What about the rest of the time? Thus you must learn how to take care of yourself; you must learn how to clear out your negative energy and transform it into positive healthy energy. If you maintain yourself in this way it will surely enhance any other therapy you are receiving.

The Six Healing Sounds are a simple yet powerful tool to promote physical, energetic and emotional healing and balance. If you are healing others, you can teach your students one or two of the Six Healing sounds each session, to enhance the effects of your therapeutic work. During the practice of the sound the resting period is very important. Growing the good virtue of the organs is essential so the negative or sick energy has less room to grow.

The sounds are also used to generate certain frequencies for specific healing. Each sound can generate different energy for the healing of the different organs.

Once the movements, sounds and information have been integrated into your practice you can simplify and make the Six Healing Sounds more powerful. For example, when you are settled into the lung sound and you are breathing white healing light and feel the mideyebrow wide open, you put the awareness in the 'Tan Tien and Universe'.

Chi will flow from the universe into the Tan Tien and just the right amount and quality will flow from the Tan Tien into the lungs and large intestine. Just set up the location (the organ) and connect to the universe and the Chi will flow to the correct location!

When doing these, the eyes are open only while making the sound.

Six Healing Sounds - Practice

Lung Sound

Element: Metal
Associated Organ: Large Intestine
Sound: SSSSSSS (Tongue behind Teeth)
Emotions: Negative - Grief, Sadness, Depression
Positive - Courage, Righteousness, High Self Esteem
Color: White, Clear, Metallic
Season: Fall
Direction: West

Position: Sit in a chair with your back straight and your hands resting palms up on your thighs. Have your feet flat on the floor about a hip's width apart . **Smile** down to your lungs and be aware of any sadness, grief or excess heat in your lungs. Slowly inhale and raise your hands up your center line with your fingers pointing toward each other. When your hands pass your shoulder level, begin to rotate the palms out as you continue raising your hands up in front of you and above your head with the palms up. Point your fingers towards the fingers of the opposite hand and keep your elbows slightly bent.

Sound: Part your lips slightly, keeping your jaw gently closed. Look up through the space between your two hands and push your palms slightly upward as you slowly exhale and make the sound, "SSSSSSS". Picture and feel any excess heat, sadness, grief, depression, sickness and dingy white color expelled and released as you exhale slowly and fully.

Resting Posture: When you have completely exhaled, rotate the palms to face downward with the fingers still pointing toward each other. Slowly lower the palms and bring them just in front of the chest feeling the lung's aura.

Close your eyes and be aware of your lungs. **Smile** into your lungs, and as you inhale, imagine that you are breathing in a **bright white mist of light**. Breathe this light into your lungs and feel it cooling, cleansing, invigorating, healing and refreshing your lungs. Feel it flowing down to the large intestine to balance the energy of the yin lungs and yang large intestine, allowing the **courage** quality of your lungs to emerge. Grow more courage, so sadness and depression have less room to grow. With each inbreath, feel yourself drawing in cool fresh energy. With each outbreath, mentally make the Lung Sound and release any remaining sadness or hot energy.

Repeat at least three times. For the first two repetitions, you can make the sound aloud. On the third or last repetition, make the sound sub-vocally (vocalizing the sound so softly that only you can hear it) Repeat six, nine, twelve or twenty four times to alleviate extreme sadness, depression, colds, flu, toothaches, asthma and emphysema.

Kidney Sound

Element: Water
Associated Organ: Bladder
Sound: CHOOOOOO (with your lips forming an "O" as if blowing out a candle.)
Emotions: Negative - Fear, Shock
Positive - Gentleness, Wisdom
Color: Dark Blue or Black
Season: Winter
Direction: North

Position: Now move the hands to cover the kidneys. **Smile** to your kidneys, and be aware of any excess cold or heat in the kidney region. Then bring your legs together, ankles and knees touching. Lean forward and clasp the fingers of both hands together around your knees. Inhale and pull your arms straight from the lower back while bending the torso forward (this allows your back to protrude in the area of the kidneys). Tilt your head upward as you look straight ahead, still pulling on your arms from the lower back. Feel your spine pulling against your knees.

Sound: Round the lips slightly and slowly exhale while making the sound "CHOOOOOO." Simultaneously contract your abdomen, pulling it in toward your kid-

neys. Imagine any fear, sickness, imbalances, excess cold or heat energy being released and squeezed out of the fascia surrounding the kidneys.

Resting Posture: After you have fully exhaled, slowly sit erect and return the hands to touch the aura of the kidneys. Close your eyes and again be aware of your kidneys. **Smile** to your kidneys and, on the inbreath, imagine you are breathing a brilliant **luminous blue light mist** into them; feel this mist healing, balancing and refreshing your kidneys and bladder and picture them glowing a bright blue color. On the outbreath, imagine you are still making the Kidney Sound.

Repeat at least 3 times, as with the previous sound. Repeat six, nine, twelve, or twenty four times to alleviate extreme fear, fatigue, low-pitched ringing in the ears, dizziness, back pain, bladder and urinary infections or other problems of the reproductive system.

Liver Sound

Element: Wood
Associated Organ: Gall Bladder
Sound: SHHHHHHH
Emotions: Negative - Anger, Frustration, Resentment
Positive - Loving Kindness, Benevolence, Forgiveness
Color: Green
Season: Spring
Direction: East

Position: Place the hands on the liver. **Smile** to your liver and be aware of any anger, frustration, resentment or excess heat. Slowly begin to inhale a deep breath as you extend your arms up from the sides with your palms up. Continue to raise them over your head. Interlace your fingers together and turn your joined hands over to face the sky, palms up. Push out through the heels of the palms and extend the arms up, keeping the shoulders relaxed. Bend a little to the left and stretch your right arm slightly to gently open the area of your liver.

Sound: Open your eyes wide (the eyes are the sensory opening of the liver). Slowly exhale, making the sound, "SHHHHHHH" sub-vocally. Feel that you are releasing any trapped excess heat, anger, illness and negativity from your liver and that these are riding out of your body on your breath.

Resting Posture: Once you have fully exhaled, separate your hands, turn the palms

down and slowly lower your arms to the sides, leading with the heels of the hands. **Smile** and inhale a **shiny spring green mist**, illuminating the liver and gall bladder. Bring your hands back to rest on the liver's aura. Close your eyes and smile into your liver. With each inbreath, breathe fresh Chi into your liver and gall bladder and mentally make the Liver Sound with each outbreath.

Repeat at least three times, as with the previous sound. Repeat six, nine, twelve or twenty four times to alleviate extreme anger, to relieve red or watery eyes, to remove a sour or bitter taste in the mouth or to detoxify the liver.

Heart Sound

Element: Fire
Associated Organ: Small Intestine
Sound: HAAAAAAAW
Emotions: Negative - Arrogance, Harshness, Cruelty, Hatred
Positive - Joy, Honor, Respect, Love, Happiness
Color: Red
Season: Summer
Direction: South

Position: Let both hands rest on the heart. **Smile** to your heart and be aware of any arrogance, haughtiness, hatred, giddiness, cruelty or hastiness. Slowly begin to inhale a deep breath as you extend your arms up from the sides with your palms up, as you did with the Liver Sound. Continue to raise them over your head. Interlace your fingers together and turn your clasped hands over to face the sky, palms up. Push out through the heels of the palms and extend the arms up, keeping the shoulders relaxed. Bend a little to the right and stretch your left arm slightly to gently open the area of your heart.

Sound: Keep your eyes soft and relaxed, looking up through your hands. Slowly exhale, making the sound, "HAAAAAAAW" sub-vocally. Feel that you are releasing any trapped heat, negative emotions, illness and imbalances from your heart and that these are riding out of the body on your breath.

Resting Posture: Once you have fully exhaled, close your eyes, separate your hands, turn the palms down and slowly lower your arms to the sides, leading with the heels of the hands. As you move inhale a **bright red mist** into the heart and small intestines. Bring your hands back to rest on your heart's aura . Smile into your heart. With each inbreath, breathe fresh Chi into your heart with each outbreath mentally repeat the heart sound.

Repeat at least three times, as with the previous sound. Repeat six, nine, twelve or twenty four times for the heart and small intestines; feel them balanced. This will alleviate extreme impatience, hastiness, arrogance, nervousness, moodiness, jumpiness, irritability, tongue ulcers, palpitations, sore throat, heart disease, insomnia and detoxify the heart.

Spleen Sound

Element: Earth
Associated Organ: Pancreas, Stomach
Sound: WHOOOOOOO (gutturally from the throat)
Emotions: Negative - Worry, Excess Sympathy, Overthinking
Positive - Fairness, Balance, Equanimity, Justice, Openness
Color: Yellow
Season: Indian Summer
Direction: Center (where you stand, looking out to the Six Directions)

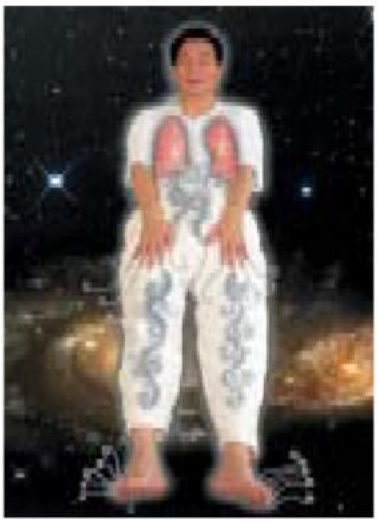
Position: Place your hands on the body covering the spleen, pancreas, and stomach area. Be aware of your spleen and **smile** sincerely into it. Inhale deeply as you move the arms outward in an embrace and aim the fingers up under the left rib cage. Place your fingers of both hands just beneath the sternum and rib cage on the left side.

Sound: Look out, lean into your fingers and gently push your fingertips in. Exhale slowly and make the sound, "WHOOOOOOO," from the depths of your throat. Feel yourself releasing any trapped heat, worry, mental fixations or excess sympathy.

Resting Posture: Once you have fully exhaled, close your eyes, slowly release the hands and extend the arms out embracing the earth; return your hands to the resting position on the spleen's aura. Smile to your spleen, pancreas and stomach. Inhale fresh Chi to your spleen, pancreas and stomach as a brilliant **luminous yellow healing mist** that cleanses and refreshes your organs. Mentally do the Spleen Sound with each outbreath.

Repeat at least three times, as with the previous sound. Repeat six, nine, twelve or twenty four times to alleviate extreme indigestion, heat or cold in the stomach or spleen, worry, nausea, hemorrhoids, fatigue, organ prolapse or loose stools.

Triple Warmer Sound



The Triple Warmer refers to the upper, middle and lower body, and to the distinct metabolic transformations that occur within each area. The Upper Warmer is the area above the diaphragm, where the heart and lungs are located. This area tends to become hot and is responsible for respiration and cardiovascular circulation. The Middle Warmer, the area between the diaphragm and the navel, becomes warm and is where the digestive organs are located. The Lower Warmer, the area below the navel, is responsible for reproduction and elimination and is cool in temperature. The sound "HEEEEEEE" balances the temperatures of the three levels by bringing hot energy down to the lower center and cold energy up to the higher centers.

Position: Lie on your back with your arms resting palms up at your sides. Keep your eyes closed. **Smile**. First breathe into the upper part of your lungs to expand the Upper Warmer; then breathe into the middle of the lungs to expand the Middle Warmer; finally, with the last part of your inhalation, expand your lower lungs and fill the Lower Warmer. Breathing in this way creates more space inside for each organ, helping to release and circulate any internal heat or cold.

Sound: Exhale with the sound "HEEEEEEE" sub-vocally, first flattening your chest, then your solar plexus, and finally your lower abdomen. Feel the dark and cloudy color, cold and chill energy exit from the tips of the fingers.

Resting Posture: Once you have fully exhaled, do not to focus on any emotions or purification process at all. Just let go and relax your body and mind completely.

Repeat at least three times, as with the previous sound. Repeat six, nine, twelve or twenty four times to alleviate insomnia and stress.

When you have completed the Six Healing Sounds just rest, **smile** and do nothing.

Regular daily practice of the Six Healing Sounds will help you to keep in touch with the energetic and emotional state of your internal organs. Most importantly do the sounds in the evening before going to sleep. This will help clear out the negative emotions before sleeping, so you can feel that the night's rest recharges your energy positively. This practice will greatly benefit your personal Cosmic Healing Chi Kung practice. It will help sensitize you to the varieties and differing qualities of Chi. This knowledge will also help you in diagnosing and treating others.

For more details of this practice please see the book "Taoist Ways to Transform Stress Into Vitality", by Mantak Chia.

Appendix

Guide to the Acupuncture Points used in Cosmic Chi Kung

The following is a detailed description of the acupuncture energy points used in the Cosmic Chi Kung practice. It is necessary to know the exact location of the points to do the practice well. However, you do not have to know the traditional Chinese medical functions and energetics of the points to do the practice. These are included in this appendix as an item of interest.

The names of the points are given first by the channel and number, second by the English translation of the traditional Chinese name for the point and finally by the name in Chinese.

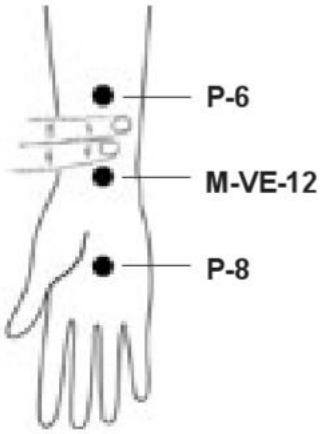
We are emphasizing the traditional Chinese medical therapeutic properties of the points given herein. Many of these points also have very different purposes in Taoist Yoga. *For a description of the Taoist Yoga energetics, refer to "Awaken Healing Light of the Tao" by Mantak Chia.*

Pericardium 8

"Lakor's Palace" - Laogong

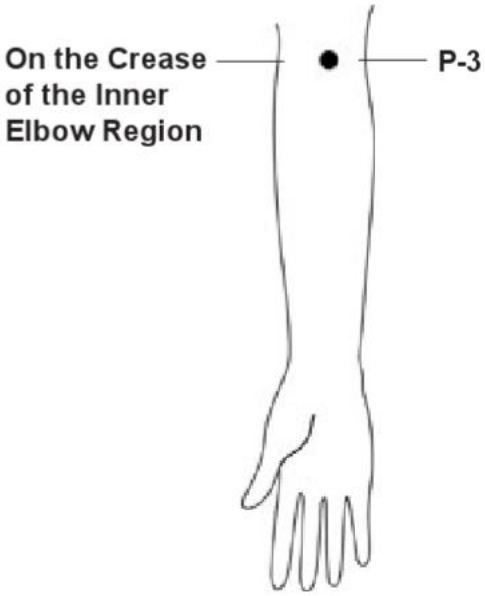
Ying Spring, Fire Point

Location: On the center of the palm, where the tip of the middle finger touches when making a loose fist.

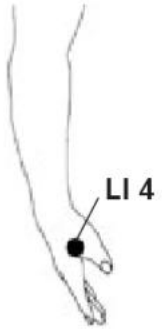


Functions: Cools the heart, drains heat from the heart, cools the blood, calms the spirit, regulates the heart Chi and yang, Ghost Point for treating spirit possession.

Indications: Coma from stroke, heat exhaustion, angina pectoris, mania, hysteria, mental illness, excessive sweating of the palms, mouth problems.

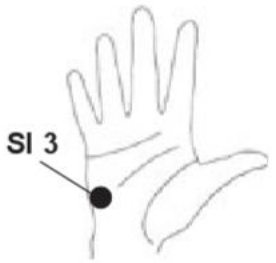


Large Intestine 4
"Adjoining Valleys" - Hegu



Yuan Source Point
Location: On the back side of the hand between the thumb and index finger, in the web approximately at the middle of the metacarpal bone of the index finger.
Functions: Disperses wind, relieves exterior conditions, suppresses pain and clears the channels, clears lung heat, calms the spirit.
Very powerful point for moving the Chi and blood of the whole body; main point for pain; main point for headache; main point for ailments of the head, face and sensory organs; main point for immunity.
Indications: Headaches, common cold, redness with pain and swelling of the eyes, toothache, facial swelling, sore throat, finger cramps, arm pain, fever, abdominal pain, constipation.
Caution: Contra-indicated in pregnancy.

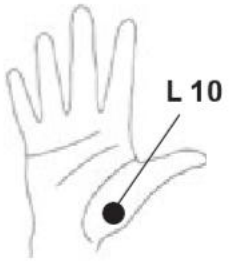
Small Intestine 3
"Back Creek" - Houxi



Shu Stream, Wood Point
Master Point of the Governor Channel
Coupled Point of the Yang Bridge Channel
Location: When a loose fist is made, the point is near the head of the fifth metacarpal bone on the knife edge of the hand at the junction of the red and white skin.
Functions: Relaxes the tendon-muscular channels, opens the Governor Channel, clears the Spirit, drains evil Chi from the heart.
Indications: Seizures, psychosis, hysteria, intercostal neuralgia, headache, stiff neck, red, painful and congested eyes, deafness, spasms of the arm, elbow and fingers; fever, night sweating, whiplash, occipital headaches.

Used for structural/musculo-skeletal problems; opens the Governor Channel for problems with back, neck and head, main point for stiff neck, antispasmodic for muscle spasms; anti-inflammatory for spinal arthritis, intestinal inflammation.

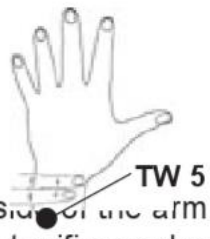
Lung 10
"Fish Border" - Yuji



Ying Spring, Fire Point
Location: In the middle of the ulna eminence below the thumbs at the junction of the red and white skin.
Functions: Cools heat in the lungs, benefits the throat.
Indications: Sore throat, cough, laryngitis, tonsillitis, fever with common cold.

Triple Warmer 5

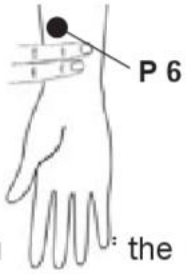
"Outer Gate" - Wai Guan



Luo Connecting Point
Master Point of the Yang Regulator Channel
Coupled Point of the Belt Channel
Location: About two fingers width above the wrist crease on the outside of the arm.
Functions: Regulates the Yang Regulator Channel and Belt Channel, tonifies and consolidates Protective (Wei) Chi, releases exterior hot and cold conditions, helps circulate stagnant Chi in the channels.
Indications: Common cold with alternating chills and fever, high fevers, pneumonia, deafness, migraine headaches, paralysis, stiff neck.

Pericardium 6

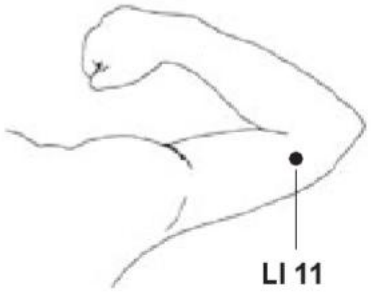
"Inner Gate" - Nei Guan



Luo Connecting Point
Master Point of the Yin Regulator Channel
Location: About two fingers width above the wrist crease on the inside of the arm, between the two prominent tendons.
Functions: Calms the heart and spirit, regulates the Chi, opens and relaxes the chest, regulates and harmonizes the stomach, regulates the liver, relieves pain.
Indications: Rheumatic heart disease, shock, angina pectoris, palpitations, chest pain, asthma, shortness of breath, tightness or fullness in the chest, spasm of the diaphragm, vomiting, stomach ache, abdominal pain, morning sickness, motion sickness, migraine headaches, hysteria, anxiety, irritability, insomnia, seizures, swollen and painful throat, painful menses or nausea with period.

Large Intestine 11

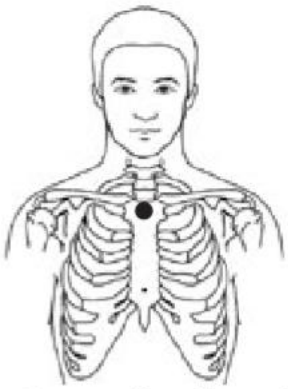
"Crooked Pond" - Qu Chi



He Sea, Earth Point
Ghost Point
Location: When the elbow is flexed, in the depression at the outer and upper end of the elbow crease.
Functions: Cools heat, clears fire, drains dampness, eliminates wind and exterior conditions, regulates and moistens large intestine.
Indications: Arthritic pain in the arms, paralysis, hypertension, high fever, anemia, allergies, skin problems, Parkinson's Disease. Main point for skin diseases; main point for high fever.

Conception Vessel 22

"Heaven's Chimney" - Tian Tu



Intersecting Point of the Yin Regulator Channel on the Conception Vessel, Window of the Sky Point

Location: At the top of the breastbone (sternum) in the V-shaped indentation (suprasternal notch). Press in and downward at a forty-five degree angle.

Functions: Cools the throat and clears the voice, facilitates and regulates movement of lung Chi, frees the breath and helps restore the proper functioning of the lungs and bronchi, helps open Conception Vessel (Functional Channel).

Indications: Asthma, bronchial asthma, bronchitis, coughing, pharyngitis, goiter, hiccups, nervous vomiting, hoarse voice, spasms of the esophagus, diseases of the vocal cords, sore throat.

Conception Vessel 17

"Central Altar" - Tan Zhong

Front Mu-Alarm Point of the pericardium, Influential Point of Chi of the body
Sea of Chi Point, Master Point of the Middle Tan Tien

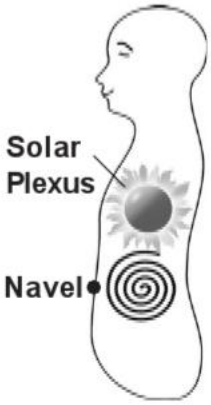
Location: On the frontal midline at the level of the fourth intercostal space, between the nipples.

Functions: Regulates the lungs and the Upper Warmer, tonifies Ancestral Chi, opens and relaxes the chest, diffuses lung Chi, regulates and tonifies Chi, transforms phlegm.

Indications: Pulmonary tuberculosis with shortness of breath, bronchitis, asthma, bronchial asthma, chest pain; all breast problems such as mastitis, insufficient lactation, breast abscesses, wheezing, chest pain, labored breathing, palpitations, difficulty swallowing food, anxiety.

Conception Vessel 12

"Middle Cavity" - Zhongwan (Solar Plexus)



Front Mu-Alarm Point of the stomach, Influential point of all yang organs

Location: Approximately midway between the navel and the top joint of the xiphoid process.

Functions: Regulates the stomach Chi and yin, regulates, strengthens and tonifies the spleen Chi and yang, regulates the Middle Warmer, reduces digestive stagnation, tonifies nutritive Chi, regulates Chi and blood, redirects rebellious Chi downwards, clears stomach fire and heat, calms the fetus, controls the aura.

Indications: Acute or chronic gastritis, stomach and duodenal ulcers, prolapsed stomach, acute intestinal obstruction, stomach ache, vomiting, abdominal distention, diarrhea, constipation, acid regurgitation, indigestion, hypertension, mental diseases.

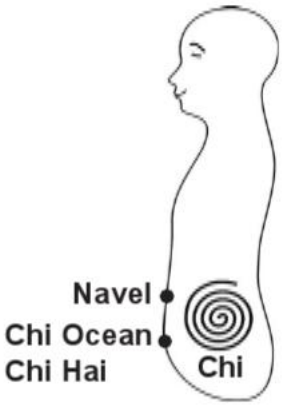
Mideyebrow Point

"Seal Hall" - Yin Tang

Master Point of the Upper Tan Tien
Location: At the midpoint between the two eyebrows.
Functions: Calms the spirit, activates the Crystal Room, opens the Governor Channel, draws in Cosmic Chi, eliminates wind heat.
Indications: Headache, vertigo, rhinitis, sinusitis, common cold, hypertension, infantile convulsions, sore eyes.

Conception Vessel 6

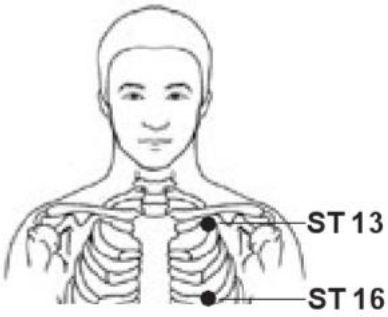
"Chi Ocean" - Chi Hai



Master Point of the Lower Tan Tien
Location: Approximately three fingers width below the navel.
Functions: Regulates Chi, tonifies Original Chi, strengthens weak kidneys, harmonizes the blood, regulates the Thrusting Route Conception Vessel, reinforces Ching Chi, enriches yin.
Indications: Neurasthenia, abdominal distention, abdominal pain, irregular menstruation, impotence, spermatorrhea, urinary retention, frequent urination, intestinal paralysis, incontinence, constipation, infertility, uterine bleeding, hernia.

Stomach 13

"Chi's Household" - Chi Hu



Location: Below the midpoint of the collarbone along the mammilary line (directly above the nipple).
Functions: Clears heat, loosens the chest, relaxes the diaphragm, regulates lung Chi.
Indications: Asthma, bronchitis, chest and back pain, hiccups.

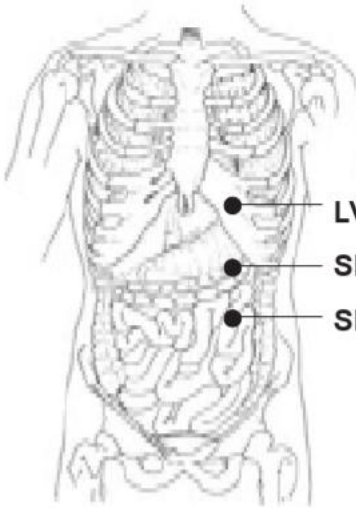
Stomach 16

"Breast's Window" - Ying Chuang

Location: In the space between the third and fourth ribs, one rib directly above the nipple in men, slightly higher in women.
Functions: Stops pain, reduces swelling, clears heat, resolves depression, opens lungs, stops cough, relaxes chest, moves Chi.
Indications: Coughing, asthma, swelling of the breasts, chest and stomach pain, heart-burn, shortness of breath, melancholy, diarrhea

Liver 14

"Gate of Hope" - Chi Men



Front Mu-Alarm Point of the liver
Intersecting point of the Yin
Regulator and spleen channels on the liver channel
Location: In the sixth intercostal space, directly below the nipple.
Functions: Spreads liver Chi, transforms and removes congealed blood, strengthens spleen and stomach, expands and relaxes the chest.
Indications: Difficulty in breathing, chest pain, hepatitis, enlarged liver, gall stones, pleurisy, nervous stomach, menopausal disorders, cholera, failure to discharge the placenta after childbirth.

Spleen 16

"Abdomen's Sorrow" - Fu Ai

Location: Just below the bottom edge of the rib cage on the mamillary line.
Functions: Frees bowel Chi, dispels damp and heat, opens the organs and clears Chi stagnation.
Indications: Pain in the navel region, indigestion, dysentary, constipation.

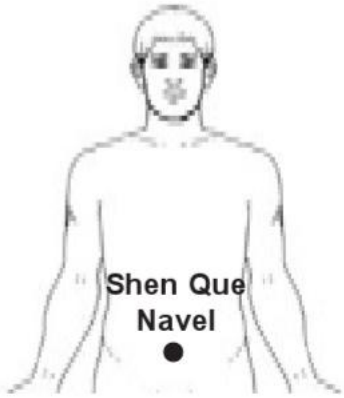
Spleen 15

"Great Horizontal" - Da Heng

Intersecting point of the Yin Regulator Channel on the spleen channel
Location: At the level with the navel along the mamillary line.
Functions: Regulates the spleen, regulates and moistens the intestines, reduces digestive stagnation and transforms damp-heat.
Indications: Abdominal distension, diarrhea, constipation, intestinal paralysis, parasitic worms in the intestines, chronic sadness.

Conception Vessel 8

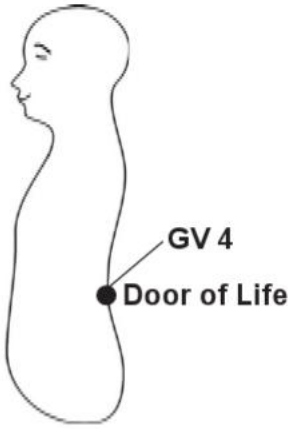
"Spirit Palace Gate" - Shen Que



Doorway to the Original Chi,
Location: In the center of the navel
Functions: Tonifies, strengthens and regulates the spleen (Chi and yang), and stomach Chi, regulates the intestines, warms the interior and reduces digestive stagnation, tonifies the kidneys, warms the yang, dries dampness and dispels cold.
Indications: Chronic diarrhea, intestinal tuberculosis, all urinary disorders, shock resulting from intestinal adhesions, heatstroke, rectal or anal prolapse, restless fetus.

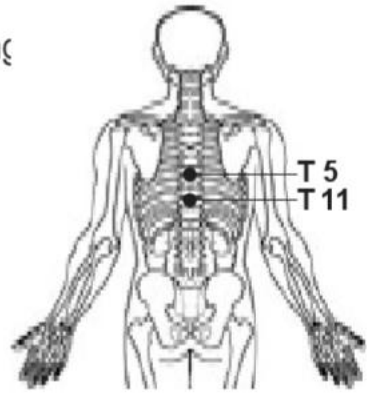
Governor Vessel 4
"Door of Life" - Ming Men

Back Doorway to the Lower Tan Tien
Location: Below the spinous process of the second lumbar vertebrae. Approximately at the level of the navel.
Functions: Nourishes the Original Chi, strengthens and harmonizes the kidneys, tonifies ching and yang, clears channels and invigorates collateral vessels, benefits the lower back and bones, regulates water pathways.
Main point to build life fire; main point for sexual/genital problems.
Indications: Bone disorders, chronic nephritis, enuresis, low sex drive, fatigue, spermatorrhea, impotence, irregular menses, painful menses, no menses, scanty menses, abnormal uterine bleeding, lower back stiffness and pain, kidney pain radiating to the abdomen, hemorrhoids, urinary incontinence, painful urination, diarrhea, sciatica, spinal myelitis.



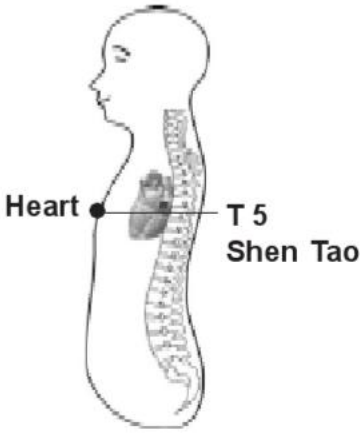
Governor Vessel 6
"Middle of Spine" - Jizhong

Location: Below the spinous process of the 11th thoracic vertebrae (T-11).
Functions: Stimulates Ching Chi, benefits spleen, stomach and kidneys and liver.
Indications: Hepatitis, seizures, low back pain, paralysis of lower limbs, blood in stools, diabetes, diarrhea.



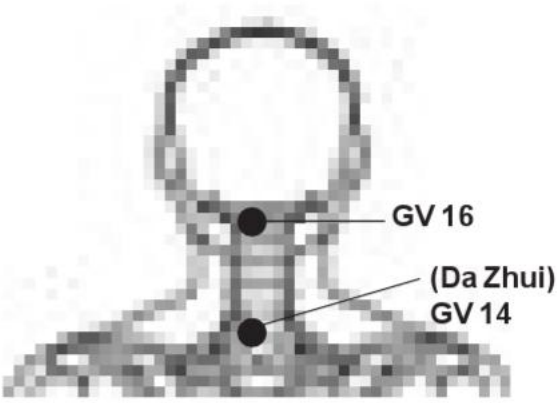
Governor Vessel 11
"Spirit's Path" - Shen Tao

Location: Below the spinous process of T-5 (opposite CV-17, the Heart Point).
Functions: Calms heart and mind, regulates heart Chi and yang, expands and relaxes the chest, benefits heart and lungs, sedates pain, sedates fright and dispels wind.
Indications: Anxiety and palpitations due to fear or fright, neurasthenia, asthma, cough, shortness of breath, chest and hypochondriac pain, insomnia, aphasia due to winds, stroke, forgetfulness, fever.



Governor Vessel 14

" Big Vertebra" - Da Zhui



Influential point of yang
Sea of Chi point
Intersection point of all yang channels.
Location: Below the spinous process of the seventh cervical vertebra (C-7), approximately at the level of the shoulders.
Functions: Opens the yang, clears the brain, calms the spirit, tonifies Protective (Wei) Chi, reduces fever, relieves exterior conditions, clears heat.
Indications: Fever, sunstroke, malaria, psychosis, seizures, bronchitis, asthma, pulmonary tuberculosis, emphysema, hepatitis, blood diseases, eczema, hemiplegia, pain in the back of the shoulders, cold-induced diseases, cough, fever and chills.

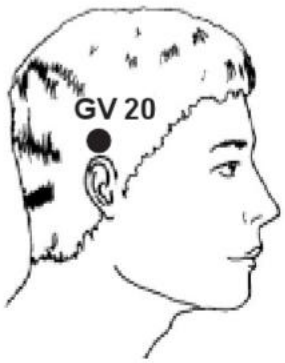
Governor Vessel 16

"Jade Pillow" or "Wind Palace" - Feng Fu

Sea of Marrow Point, Window of Sky Point, Ghost Point
Intersection point of the Yang Regulator Channel on the Governor Vessel
Location: At the base of the skull, about one inch above the posterior hairline.
Functions: Benefits and clears the brain, calms spirit, opens the sensory orifices, dispels wind, wind-cold and wind-heat, smoothes joint functions.
Indications: Seizures, mania, hemiplegia, loss of speech due to stroke, delirium, suicidal behavior, fear and fright, anxiety, common cold, sensation of heaviness in the head, headache, dizziness, numbness of the limbs, deaf-mutism, blurred vision, sinusitis, stiff neck.

Governor Vessel 20

"One Hundred Meetings" - Bai Hui



Sea of Marrow Point
Location: At the crown of the head, approximately on the midpoint of the line connecting the top apex of the two ears.
Function: Clears the senses, calms the spirit, extinguishes liver wind, stabilizes ascending yang.
Indications: Headache, dizziness, shock, depression, hypertension, insomnia, seizures, prolapsed anus, prolapsed uterus, mental dullness, hemorrhoids.

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Mantak Chia

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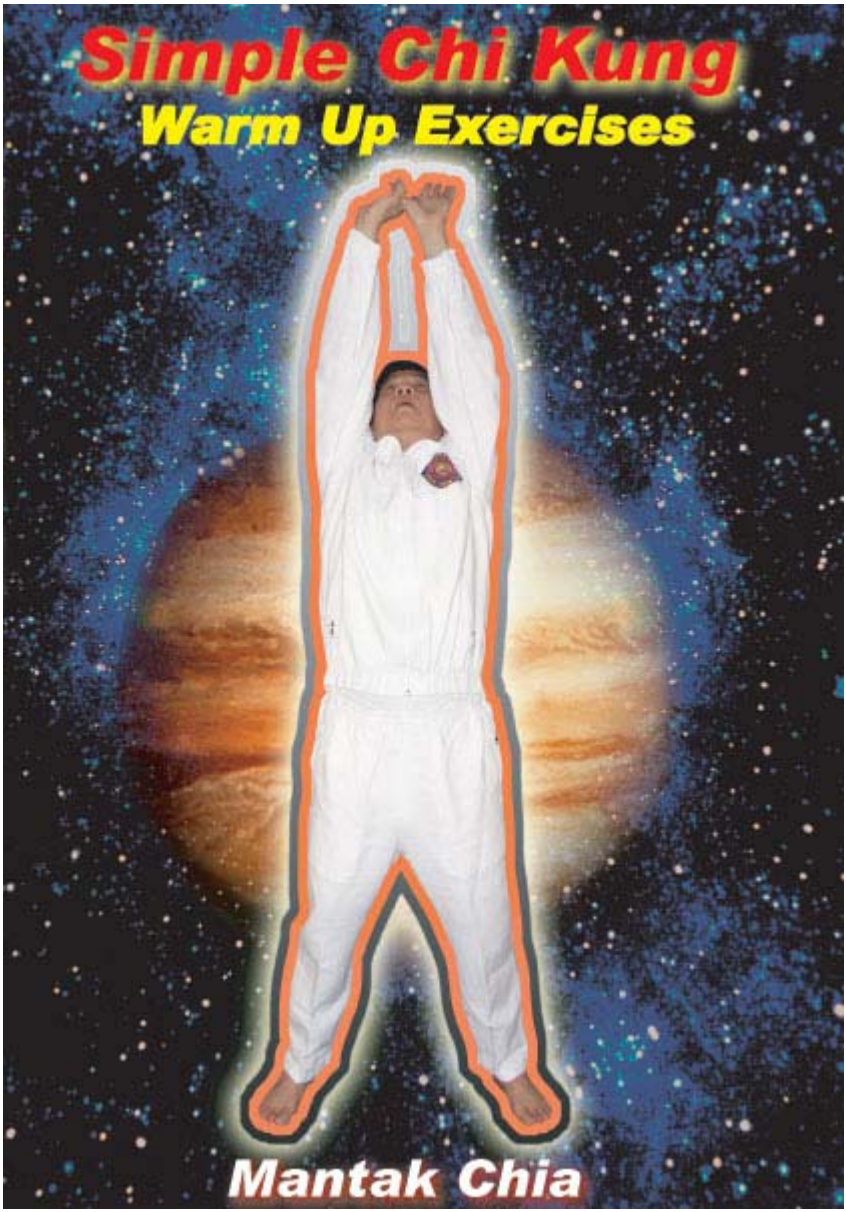
Simple Chi Kung
Warm Up Exercises
Mantak Chia

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The meditations, practices and techniques described herein are ***not*** intended to be used as an alternative or substitute for professional medical treatment and care. If any readers are suffering from illnesses based on mental or emotional disorders, an appropriate professional health care practitioner or therapist should be consulted. Such problems should be corrected before you start training. This booklet does not attempt to give any medical diagnosis, treatment, prescription, or remedial recommendation in relation to any human disease, ailment, suffering or physical condition whatsoever.

Simple Chi Kung

Whether one is student or an expert, practice is essential. A practice session can be fruitless, however, if the body is not properly prepared to handle the energy it is about to absorb. This is the main reason for these additional Iron Shirt training exercises. The term "warm-up" means to begin the Chi and blood flow and invigorate their circulation throughout the body. Warm-up exercises are particularly important for areas of the body that are rarely stretched, such as the spine and the sacrum. Even a person who does weight training and aerobics is still not properly prepared for the conduction of large amounts of energy. Without an adequate warm-up before exercise, the muscles may also be stiff and tight and lack sufficient blood supply to meet the sudden demands placed on them by strenuous activity. This is one major cause of athletic injury.

They are also easy to perform. Listen to the messages from your body as you do the various exercises. Pain is the body's warning signal that you may be overdoing it. The goal is not to overstretch or to develop large muscles, but to loosen the joints and relax the muscles so that the Chi and blood can flow without obstruction. Don't force yourself beyond your limits: less is better, especially at the beginning. If you feel any joint pain or discomfort while doing any of the exercises, back off until you feel comfortable. If you still feel strain or pain, discontinue the exercise all together.

Be especially respectful of any injuries, chronic problems, or physical limitations you may have. If you are kind and gentle to your body, it will start to trust you and relax by itself. You will find yourself starting to loosen on a deeper level without having to force the issue. In this way, you will develop naturally, gradually, and safely. In Iron Shirt Chi Kung, you learn to reorganize the structure of your body in the way you are standing, sitting or moving. In particular, you discover how to use the power of the Lower Tan Tien, the perineum and the spine to stand in a strong, stable, integrated way.You will see that many warm-up movements focus on training the waist for this reason.

Bouncing

Bouncing the body can be compared to a brief ride on the subway. For those of you who commute, this can be practiced on the way to work as well.

1. Just relax the body while concentrating on opening the joints, and bounce on the floor without any tension.

2. Let the vibration in the heels work its way up through the entire skeletal system: from the legs to the spine to the neck to the skull. Shoulders and arms should vibrate as they hang loosely by the sides of the body. To enhance this, you can hum a vowel to hear the vibration make the voice tremble as well.

3. Rest and feel the Chi entering the joints.

Fig. 1 *Shake all the joints loose and feel them open.*

Foot and Hand Kicking

Draw out your leg and opposite arm and kick out letting go of any tension, pain and stress (30 to 60 times); then do the opposite leg and arm.

Fig. 2 *Foot and Hand Kicking*

Knee Rotations

Standing with feet together, hands on your knees, knees flexed, rotate both knees together, exercising your ankles and knees with clockwise/counterclockwise rotations.

1. Place the feet together. Bend the knees and place the palms lightly on the kneecaps.
2. Slowly and gently rotate the knees to the left.
3. Rotate the knees to the back.
4. Rotate the knees to the right.
5. Repeat steps 2 and 4 eight more times.
6. Now reverse direction and repeat nine times.

Fig. 3 *Knee Rotations*

Hip Rotations

1. Stand with the feet parallel and slightly wider than shoulder width apart. Place the hands on the sides of the waist. As you perform the hip rotations, keep the head above the feet. Move slowly and easily, breathing deeply and continuously.
2. Bring the hip and forward.
3. Move the hips in a large clockwise circle..
4. Now move the hips in a circle to the back.
5. Move the hips counterclockwise.
6. Repeat steps 2-5 eight more times.
7. Reverse the direction and repeal steps 2-5 nine times.

Fig. 4 *Hip Rotations*

Sacrum Rotates Back and Forth

Rotating the sacrum is an excellent exercise to open the lower back and activate the spinal cord. Place one hand over the sacrum and the other over the pubic bone. Rotate the sacrum in a circle, 36 times in each direction. This movement activates the sacral pump.

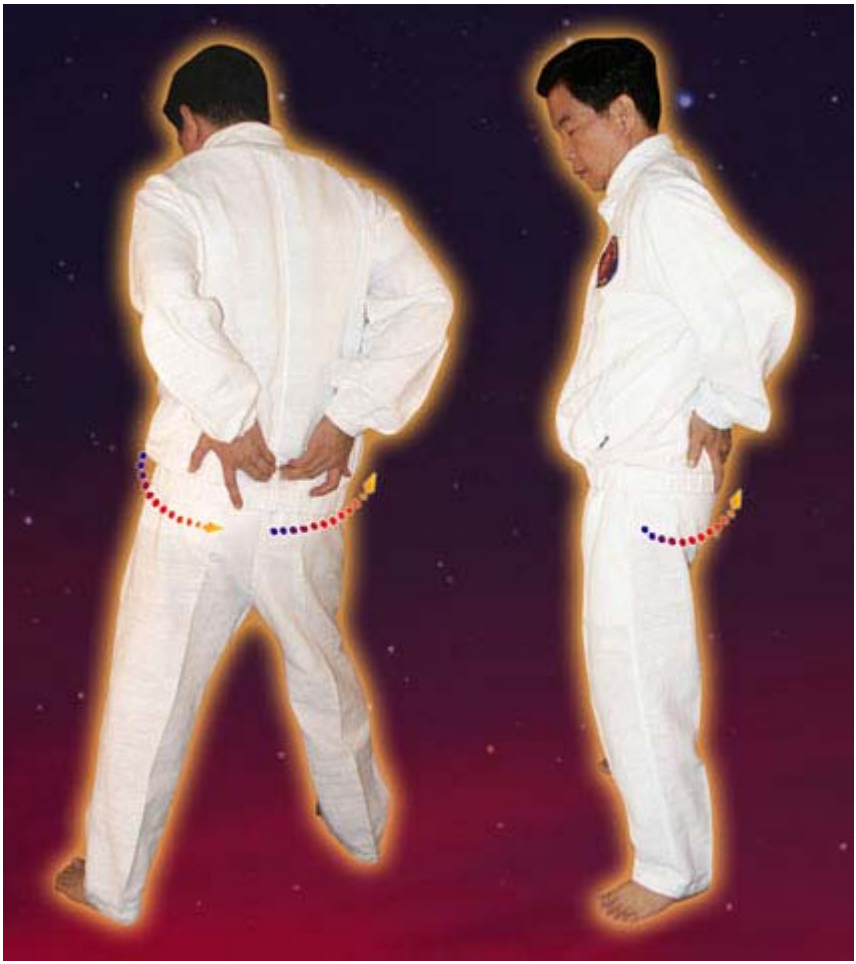

Fig. 5 *Sacrum Rotates Back and Forth*

Standing Crane and Turtle

Stand with feet apart and draw your head out in front of you with your chin extended out and your palms on your knees.

Draw your chin into your body moving your spine. Do Crane Exercise nine to eighteen times and reverse curving your lower back nine to eighteen times with the Turtle Exercise.

Fig. 6 *Standing Crane and Turtle*

Standing Crane

Fig. 7 *Standing Crane*

Spinal Cord Breathing

Inhale and expand the chest, arms bent at the elbows and extended to the sides of the body. Exhale, tuck the tailbone under and round the back forward, bringing the elbows toward one another in front of the chest. Inhale, expand the chest, tuck the chin in toward the throat, push the chin back, raise the crown and bring the arms out to the sides. Repeat this back and forth movement 36 times. This movement activates the cranial and sacral pumps, and loosens all the joints in the spine.

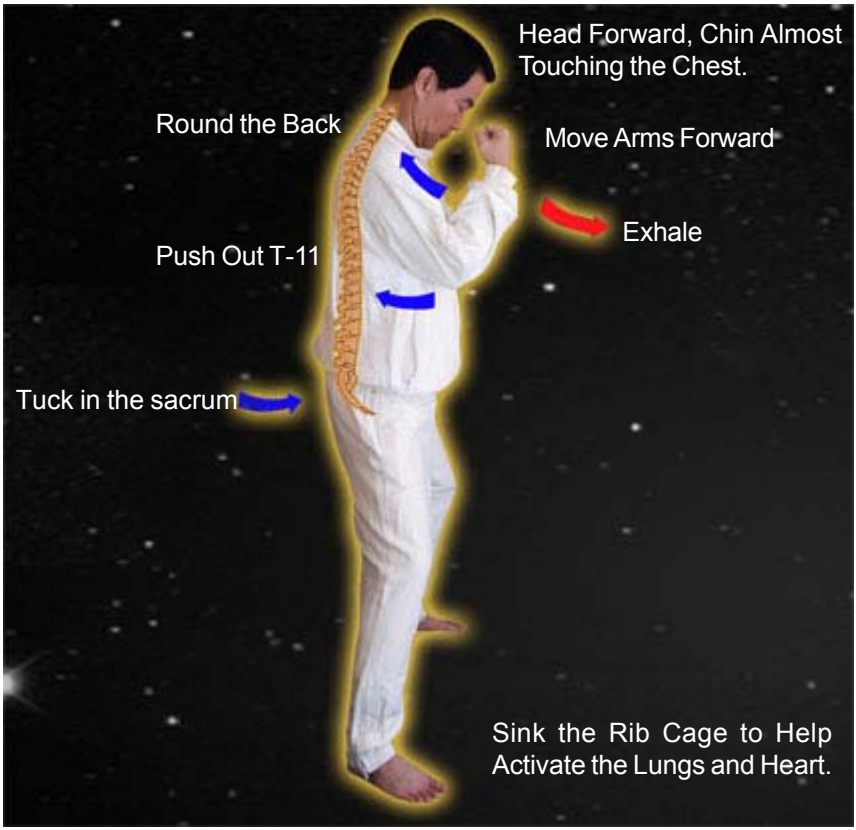

Fig. 8 *Spinal Cord Breathing*

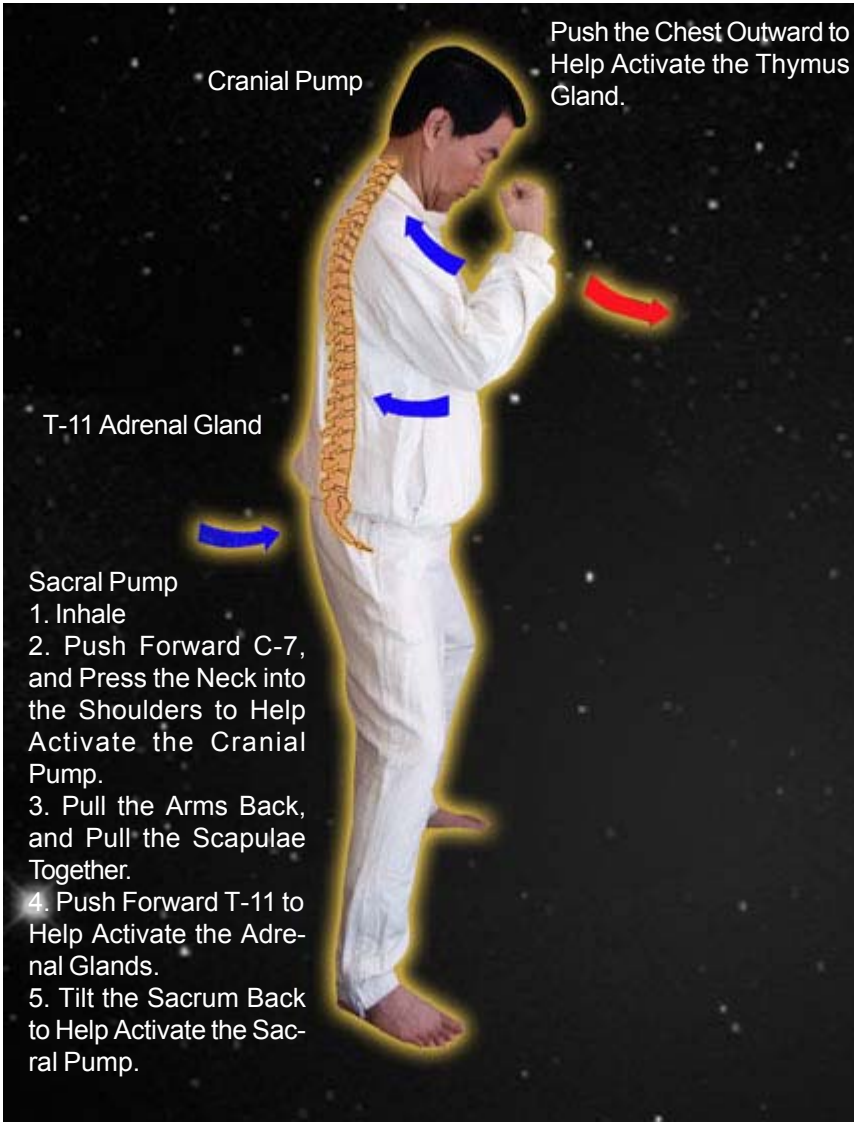

Fig. 9 *Spinal Cord Breathing*

Empty Force in Lower, Middle, Upper Parts of the Body

Breathe in the three abdominal areas (Lower, Middle and Upper) and exhale deeply out with mouth open. Breathe in deeply and exhale, sticking the tongue out and curling it under with the movement of the lower abdominal area emptying any further air out of the body. (Optional: Men: Pull your genitals down at the same time as you breathe and Women: Use a string and jade egg).

Do the same procedure for the Middle and Upper abdominal areas, then move the tongue and abdomen in a circular motion and reverse continually emptying the body out of any air.

Fig. 10 *Empty Force in Lower, Middle, Upper Parts of the Body*

Empty Force Practice

Fig. 11 *Empty Force Practice pulling the Genitals down*

Upper Stretching and Twisting to Four Sides

Raise hands above head and stretch as far as you can reach, moving up on your toes. Grab your elbows, moving down on your feet and lean to each side several times. Then turn your spine to the right and then to the left.

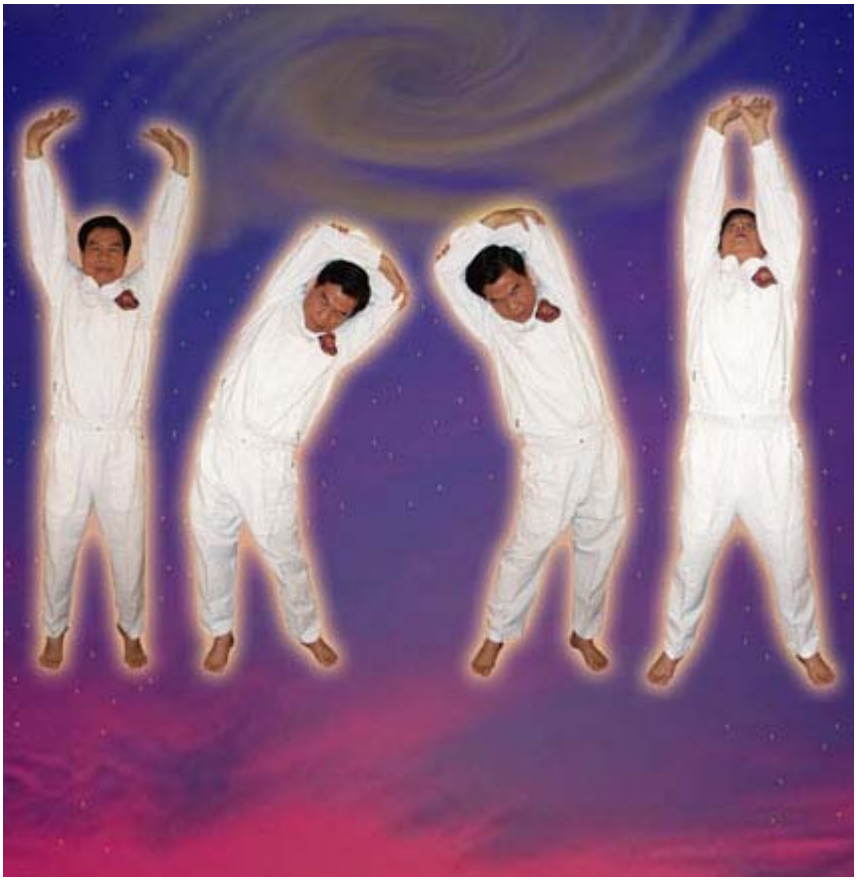

Fig. 12 *Upper Stretching and Twisting to Four Sides*

Windmill Exercise: Opening the Spinal Joints

Do each phase of this practice very slowly and mindfully.

A. Outer Front Extension

1-3. Begin in the same stance as for Waist Loosening. Bring both hands together and hook the two thumbs together. Keeping the hands close to the torso, inhale and raise the arms until they are extended straight above the head, with the fingers pointing upward. Gently stretch up in this position, extending the spine slightly backwards. You can even say ***"Ahhhhhh"*** as you would when you stretch first thing in the morning.

4-5. Begin to exhale slowly and bend forward, reaching as far out in front as you can, keeping the head between the arms. Try to feel each joint of the spine releasing one by one in a wavelike motion. Bend first from the lumbar vertebrae, then from the thoracic vertebrae, and finally from the cervical vertebrae. At this point you should be completely bent over.

6-9. Slowly straighten your back, once again feel each joint of the spine become open, from the sacrum, lumbar, thoracic and cervical vertebrae. Allow arms and head to hang heavily until you are back in the starting position. Repeat three to five times. Finish with the arms over the head as at the end of Step one.

B. *Inner Front Extension*

1-3. Now do the same movements, but in reverse. Point the fingertips downward and slowly lower the arms, keeping the hands close to the torso. When the arms are completely lowered, begin to bend forward. Release the head, cervical vertebrae, thoracic vertebrae, and lumbar vertebrae, until you are bent all the way forward as at the end of Step two of the Outer Front Extension. Feel each joint become open.

4-5. Keeping the head between the arms, start to straighten back up. The arms should extend in front as you slowly move back to an erect position. When you finish straightening up, the arms should be straight up above the head. Repeat three to five times.

C. *Left Outer Extension (Left Side Bending)*

1. Keep your head between your arms in the overhead position, and lean to the left. You should feel a gentle stretch on the left side of the waist. Continue stretching down and to the side until you are bend all the way down to the side.
2. Then circle back up on the right side until you are once again standing straight with the arms overhead. Repeat three to five times.

D. Right Outer Extension (Right Side Bending)

Repeat the side-bending movements as in the left Outer Extension, but to the right. Do three to five times.

E. Conclusion

To finish, unhook the thumbs and let the arms slowly float back down to the sides.

Fig. 13 *Windmill Exercise*

Fig. 14 *Windmill Exercise*

Look from Side to Side from the Neck

1. Neck tilt: Let the head drop gently on one side, then the other back and forth. Let gravity do the work. Try to feel how much it weighs. Keep both shoulders dropped, relaxed and motionless.

2. Side to side rotation: Look over the shoulders one after the other, looking further and further back as you warm up.

Let your eyes direct the movement and let your neck follow so it is always in extension, never in contraction.

3. Up and down: Look up right over the head, then down in between your feet alternately.

4. Rotations: Follow a circle around your face clockwise several time, then counterclockwise. Again keep your eyes open and directing the movement. The neck is only following.

For all the exercises make sure you keep the rest of the body joints loose and breathe calmly from your abdomen.

Fig. 15 *Look from Side to Side from the Neck*

Shoulder Rotation with Eyes

1. Lateral movement: Spot an object in each extreme angle of your peripheral vision and move from one to the other alternately without turning your neck.

2. Up and down: Spot an object over your head, another one by your feet and go from one to the other without tilting your head.

3. Upper right corner of the right eye to the left corner of the left eye.

4. Upper left corner of the left eye to the right corner of the right eye.

5. Rotations: Follow a circle around the eyes very slowly and catch yourself when your eye balls want to skip an angle and go back and forth there until you have a smooth movement.

N.B.: Make sure you are breathing steadily from your abdomen and your neck is unlocked.

Fig. 16 *Shoulder Rotation with Eyes*

Shoulders

1. Shoulder Rotations: Stand with feet a shoulder or hip width apart in a relaxed manner.
   a. Bring the shoulders all the way up to the ears
   b. Then as far back as possible (Trying to touch the shoulder blades together)
   c. Then let them drop.

Repeat several times.

2. Shoulder rotations + Front Arms Stretch
   Stand with feet a shoulder or hip width apart in a relaxed manner, arms extended forward.
   a. Bring the shoulders all the way up to the ears
   b. Then as far back as possible (Trying to touch the shoulder blades together)
   c. Then let them drop
   d. Stretch all the way from the tip of the fingers to the spine as if you were pulled forward by the fingers.

Repeat several times.

3. Shoulder Rotations + Arms Stretch over the Head: Stand with feet a shoulder or hip width apart in a relaxed manner, arms extended over the head.
   a. Bring the shoulders all the way up to the ears
   b. Then as far back as possible (Trying to touch the shoulder blades together)
   c. Then let them drop
   d. Stretch all the way from the tip of the fingers to the spine as if you were pulled by the fingers from the ceiling.

Repeat several times.

4. Shoulder Rotations + Lateral Aarms Stretch
   Stand with the feet a shoulder or hip width apart in a relaxed manner, arms stretched out laterally.
   a. Bring the shoulders all the way up to the ears
   b. Then as far back as possible (Trying to touch the shoulder blades together)
   c. Then let them drop
   d. Stretch all the way from the tip of the fingers to the spine as if you wanted to touch the walls in both directions at the same time.

Repeat several times.

The stretch happens from the tip of the fingers and involves all tendons, ligaments and faciae from the tip of the fingers to the spine. This is excellent for prevention and correction of carpal tunnel syndrome and tennis elbow.

Fig. 17 *Shoulders*

Forearm and Palms Slapping the Organs

Twist the spine left to right, letting go of the arms with palms slapping the organs (Lungs, Heart, Kidneys, Spleen, Pancreas, Lower Bladder) as you turn the spine several times.

Fig. 18 *Forearm and Palms Slapping the Organs*

Hand and Wrist

Wrists:

One arm and hand active, the other arm and hand passive. The passive side receives the treatment/exercise, the other side (active side) gives the stretch. Stretch is given upon exhalation.

1. Simple flexion:
   a. The active hand lifts up the passive wrist at sternum level and flexes the wrist by pushing the hand toward the inside of the arm.
   b. Repeat several times.
   c. Switch sides.
2. Internal rotation with flexion and abduction of the wrist:
   a. Passive hand facing your face; the active hand wraps around the back of the passive hand, thumb between the little finger and the ring finger, with middle finger and ring finger wrapping around the wrist of the passive hand.
   b. Rotation of the passive wrist is given by pushing the thumb of the active hand between the little finger and the ring finger of the passive hand while the middle and ring fingers of the active hand pull the passive wrist in the opposite direction.
   c. Repeat several times.
   d. Switch sides.
3. External rotation with flexion and adduction of the wrist:
   a. Arms outstretched palms facing each other.
   b. Passive hands turns outwardly, active hands spoons the passive hand, slightly clenches the fingers together holding the weight of the passive hand and arm.
   c. Passive side decontracts and lets drop the whole weight of the elbow and shoulder.
   d. Active hand flexes and stretches the passive wrist by bring ing it closer to the sternum.
   e. Repeat several times.
   f. Switch sides.

4. External rotation with abduction and extension of the wrist:
   a. Passive hand extended, with arm outstretched, palm facing forward, thumb down.
   b. Active hand takes all the fingers of the passive hand in a palm to palm position giving an upward rotation, hyper extending the wrist while you let drop the whole weight of your arm and shoulder.
   c. Then lift up all the weight of your wrist, elbow and shoulder in a stretching movement toward the ceiling. Stretch should be felt all the way from the fingers to the neck.
   d. Repeat several times.
   e. Switch sides.
5. Hyper extension of the wrist:
   a. Passive hand palm up.
   b. Active hand takes the fingers of the passive hand and hyper extends the fingers, hand, wrist and arm in one motion down toward the leg.
   c. Repeat several times.
   d. Switch sides.

Fig. 19 *Hand and Wrist*

Fig. 20 *Elbow Twist*

Opening the Door of Life

1. Begin in the same stance as the Waist Loosening. Twist to the left as in the Waist loosening exercise, initiating the movement from the hips. Let the right arm swing across the front of the torso, raising it up to head height with the palm facing away from you. At the same time, let the left arm swing around the back and place the back of the left hand over the Door of Life point (the point on the spine opposite the navel).

2. When you reach your full extension, relax, and then extend again by loosening the lower back. Feel the gentle stretch and increased extension coming all the way from the Door of Life area, not from the shoulders. Extend in this way two or three times.

3. Twist to the right and repeat the steps as above on the right side. Repeat nine times to each side.

Fig. 21 *Door of Life*

Fig. 22 *Opening the Door of Life*

Elephant Swings his Trunk

Let go of your arms and move your hips back and forth throwing your arms out and loosening your shoulders and neck.

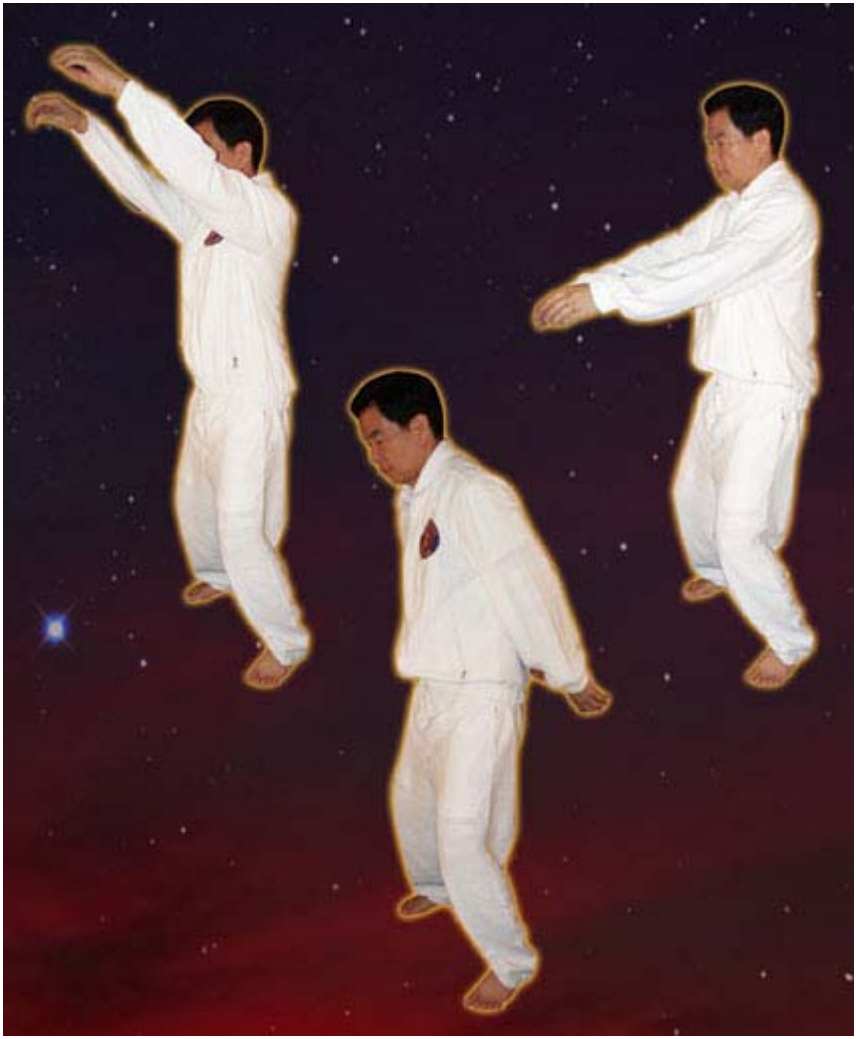

Fig. 23 *Elephant Swings his Trunk*

Squatting to Open Sacrum

A good exercise for developing the squatting position is to stand with your feet shoulder width (when you improve your squatting ability, place both feet together) close to a wall, facing the wall and then to squat straight down from the kua (like you are sitting down, not bending the knees too much). The wall will prevent you from leaning forward when you squat. Some people tend to bend the head forward first, and also to bend the back and lean forward. Using a wall will make you see whether you are bending too much. Breathe in the Lower Tan Tien. Keep the chest relaxed and feel a force pulling you down and a force pulling you up, when you squat down to the Earth.

To squat down you can also use the help of a partner or the edge of a table. Be sure that you go straight down and bend from the kua. When you work with a partner, stand shoulder width facing each other, arms stretched, and firmly grasp each other's wrists. From this position, squat straight down together from the kua while supporting one another. Sink as deep as you both can without leaning forward.

Start by standing in front of the wall 18 cm or more away. Eventually you can move closer to the wall. Place both hands on the sides, the tips of the fingers touch the thigh bones.

Slowly drop down from the groin, like you are sitting down; drop till you can't go any further, and lightly bend the knees. If you bend too much your knees will hit the wall.

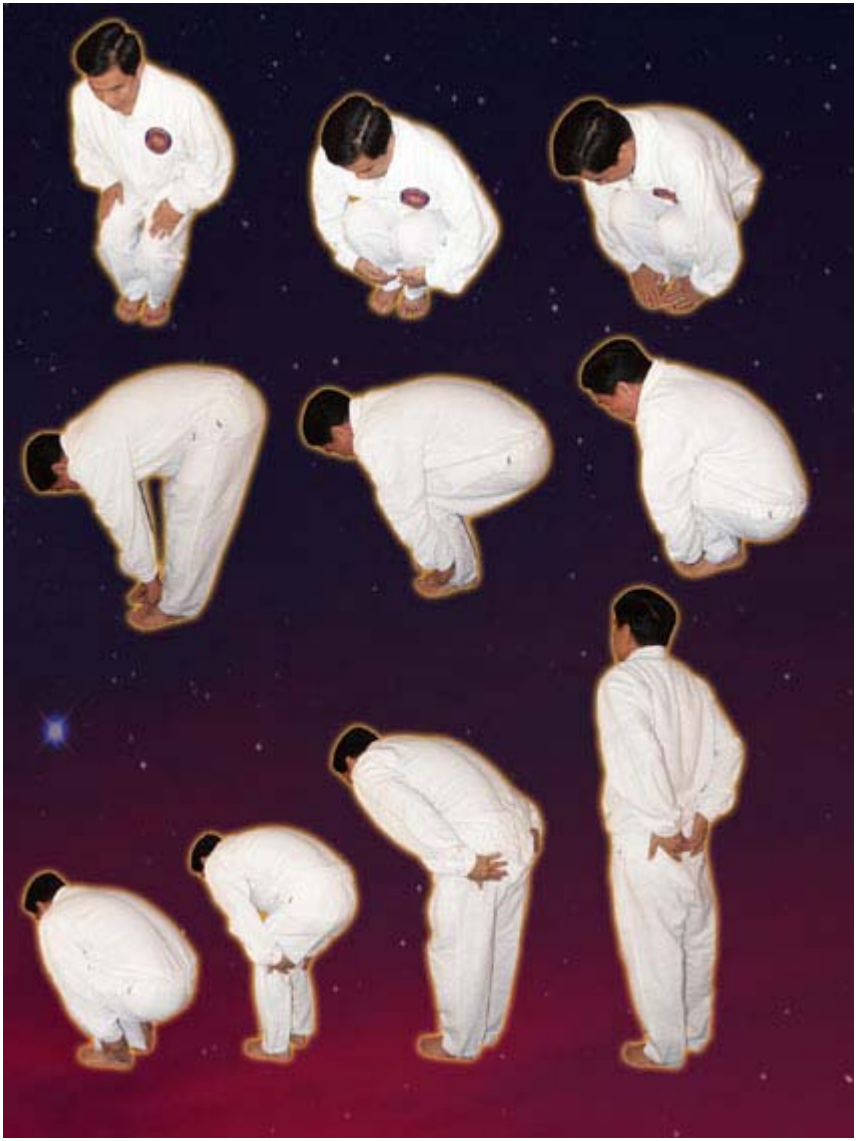

Fig. 24 *Squatting to Open Sacrum*

Clench and Tap Teeth

Clench and tap your teeth several times from the front, right and left sides.

Fig. 25 *Clench and Tap Teeth*

Bone Breathing

1. Bone Breathing Process

The Bone Breathing Process uses the mind and the eyes to absorb the Cosmic Force into the bones. The mind and the eyes are also used immediately after each exercise (in any posture) to bring the energy down to the navel.

Bone Breathing is the method of drawing external energy through the skin into the bones to clean out fat in the bone marrow(“Cleansing the Marrow”). This process helps to regenerate the bone marrow, thereby rejuvenating the production of blood and Chi. It is vital to the practice of Iron Shirt Chi Kung III, but is also used in Iron Shirt I to increase blood and energy circulation. Chi can then flow freely into the bones and blood, carrying nutrients and oxygen to areas in need. Tension in the muscles surrounding the bones is lessened and the bones become strong.

Bone Breathing is a three-stage process of inhaling and exhaling as through the fingers and toes:

a. Use the powers of the mind and eyes to breathe in outside energy through the fingertips, gradually up to the hands and arms to the skull, and then down the spinal column. A sensation is felt as you breathe into each area.

b. Inhale and exhale the same way through the toes and then, by degrees, inhale up to and into the thigh bones, legs, and hips (also in a step-by-step progression). Then inhale up your legs to the sacrum where the energy will enter your spinal column, surging up throughout the nervous system.

c. Finally, breathe into both the arms and legs simultaneously, through C-7, and up into the head. Remember that you absorb and eject energy more effectively at specific points, many of which protrude from the body; toes, fingertips, elbows, knees, sacrum. Door of Life. C-7, shoulders, and nose.

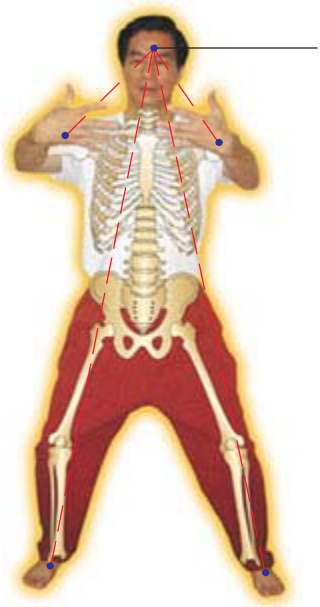

Fig. 25 *Bone Breathing*

2. *Bone Compression*

This exercise is another mean of increasing the flow of Chi to the muscles and the bones, squeezing out toxins, sediment, waste material, and negative emotions that have become stored in the muscles. Once these negative qualities are cleaned out, positive ones have room to grow. Positive emotions relax the muscles and the entire body.

We also know the Bone Compression as the “Power Exercise” or the “Dynamic Tension” which serves to greatly tone up the muscles and strengthening the bone and bone marrow. It is accomplished by tightening and squeezing the muscles to the bones as you inhale, then releasing and totally relaxing chose muscles as you exhale strongly.

Practice in the following progression: (a) hands, forearms, upper arms; (b) legs, lower legs, thighs; (c) neck and head, (d) back (spinal cord) and chest (rib cage). Peel the muscles and bones separate from each other as you relax.

Complete the exercise by standing up straight with the palms on the navel. (Men, left palm over right; women, right palm over left). Stand for a while, and feel the Chi flow in your Microcosmic Orbit. Then concentrate on collecting the energy in the navel. Men should spiral the energy outwards in a clockwise direction 36 times, being careful not to go above the diaphragm or below the pubic bone, then inwards 24 times, and collect the energy at the navel. Women should spiral in a counterclockwise direction 36 times, reversing when spiraling inwards for 24 times. When you are finished, relax, and use the palms to gently brush any remaining energy down from the chest.

Tips of the fingers have a lot of Chi.

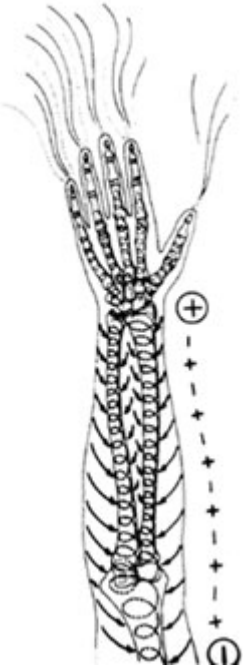

Fig. 26 *Touching Navel and Sexual Center.*

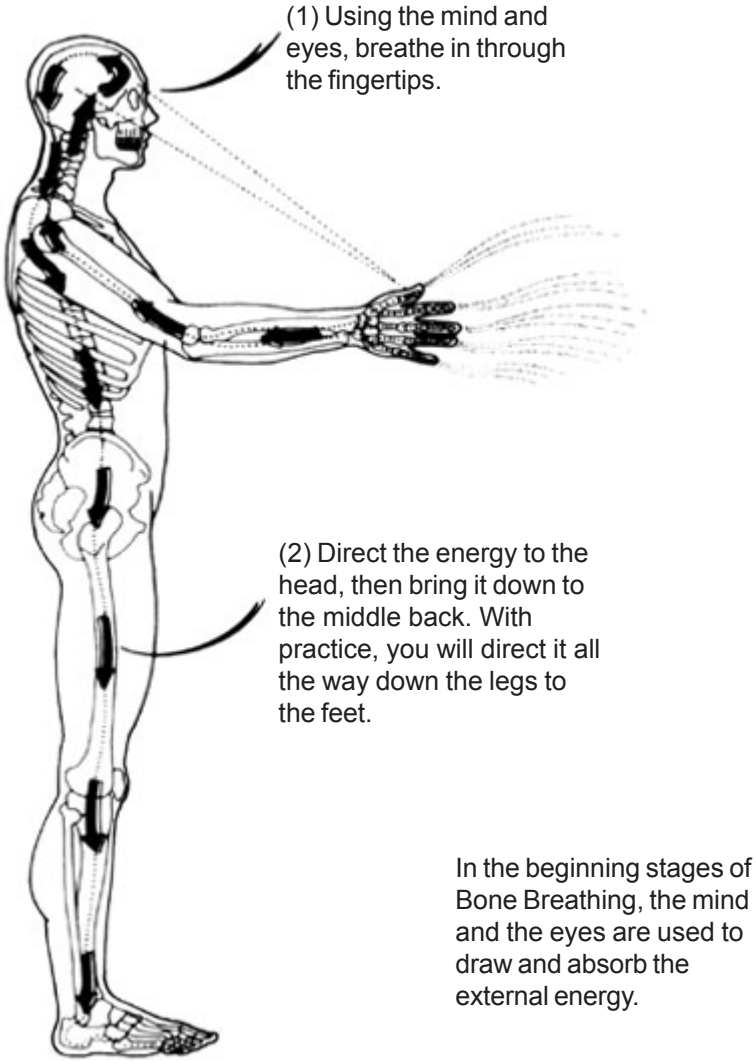

Fig. 27 *Stage One: Respiration through the Fingers*

Precautions

The following is a warning to all practitioners, especially those with high blood pressure, emotional instability, heart or chest pain, or any acute illness.

1. If you have high blood pressure, check with a doctor before attempting to practice Iron Shirt. Do not do the exercises and breathing techniques strenuously.

2. Women should not do Iron Shirt breathing during menstruation, but may practice the structure, standing meditations, and Bone Breathing. If pregnant, do not practice Iron Shirt Packing Breathing; use only Energizer Breathing and standing meditation.

3. Be sure that the diaphragm is lowered while practicing these exercises to avoid accumulating energy in the heart and to facilitate the flow of the Microcosmic Orbit. Do not pack the chest as this can cause energy to congest there, which can affect the heart. Again, you should always relax the chest.

4. Always breathe into the lower abdomen and perineum to avoid trapping negative energies in other parts of the body. especially in the brain, the heart, or the liver.

5. After practicing the postures, be sure to place the tongue on the roof of the mouth to connect the Microcosmic channels so that all energy from the head can be drawn down through the Functional Channel to the navel for storage. Do not leave energy in the head or upper body.

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Warm Up Exercises

Mantak Chia

Simple Chi Kung

In this booklet you will learn a series of simple exercises which can be used as warm ups for higher Chi Kung practices. When the practitioner does these exercises, the body is prepared to handle the energy it is about to absorb and the circulation of Chi and blood throughout the body is facilitated.

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The joints of the knees, hips and spine are worked, and these exercises are followed by breathing routines, then stretching, twisting and rotation exercises working on the tendons and ligaments in different parts of the body.

Specific techniques for opening the Door of Life point and the Sacrum are illustrated in a clear step-by-step manner, and the booklet ends with an explanation of Bone Breathing and Bone compression.

Practice of these warm up exercises will result in a deeper level of loosening in the body and an increased awareness of the body's structure. The practitioner can then progress to practice of Iron Shirt Chi Kung with confidence.

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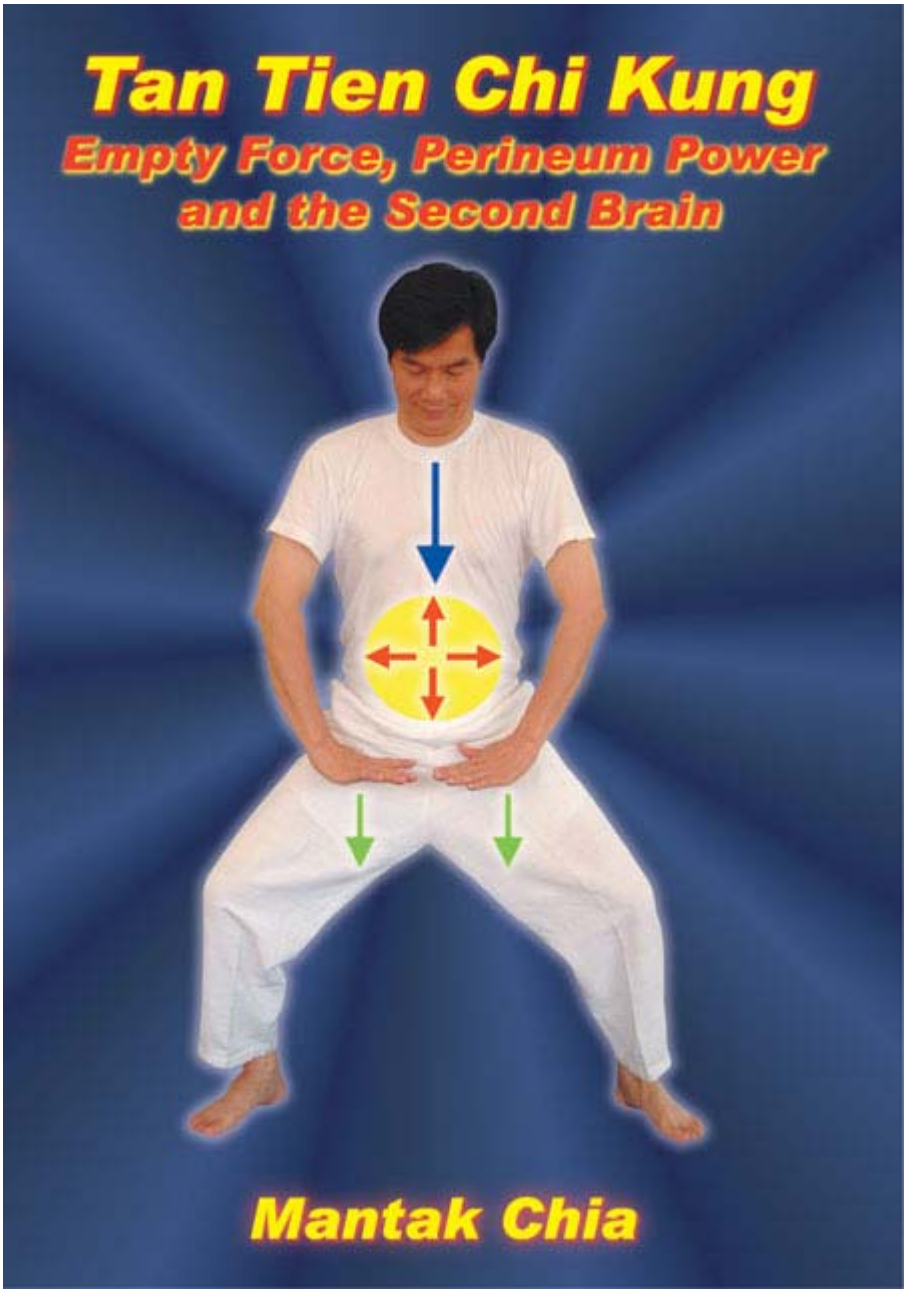
Tan Tien Chi Kung

Empty Force, Perineum Power and the Second Brain



Mantak Chia

Tan Tien Chi Kung

Empty Force, Perineum Power and the Second Brain

Mantak Chia

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The meditations, practices and techniques described herein are ***not*** intended to be used as an alternative or substitute for professional medical treatment and care. If any readers are suffering from illnesses based on mental or emotional disorders, an appropriate professional health care practitioner or therapist should be consulted. Such problems should be corrected before you start training. This booklet does not attempt to give any medical diagnosis, treatment, prescription, or remedial recommendation in relation to any human disease, ailment, suffering or physical condition whatsoever.

Introduction

Tan Tien Chi Kung is one of the Taoist Chi Kung practices used to develop Tan Tien and Perineum power.

We need Chi and Chi pressure in the Tan Tien as a foundation for most of our Universal Tao practices, especially for Iron Shirt and Tai Chi Chi Kung, and meditation.

The Lower Tan Tien is the main energy reservoir in the body. It is the place where we store the energy we generate, gather and absorb in Chi Kung and meditation. If the energy is stored in the Tan Tien it can be accessed later, if not the Chi dissipates and cannot be used. The Tan Tien is therefore also called the Ocean of Chi. According to the Chinese medical theory, once the ocean is full it overflows into the eight extraordinary meridians. Once these are full the Chi flows into the twelve ordinary meridians, each of which is associated with a particular organ. The Tan Tien is therefore the foundation of the entire energetic system of the body.

Fig. 1 *Expanding the Chi Ball.*

We usually refer to the lower abdominal area as the Tan Tien, but we actually have three Tan Tiens: the Lower Tan Tien, the Middle Tan Tien (heart) and Upper Tan Tien (behind the mideyebrow point; the brain). You can read more about the Tan Tien in the booklet, “Opening the three Tan Tiens to the Six Directions”. All three Tan Tiens are used in Taoist inner alchemy. Because of their capacity to deal with a large amount of Chi, the Tan Tiens are used as a “laboratory” for Inner Alchemical work. Translated from the Chinese, the word Tan means elixir (literally cinnabar, a mineral used in the Outer Alchemy as a basis for the elixir of immortality, since it was considered to have the perfect balance of Yin and Yang). Tien means field or place. It is the place where all the energies of our body, the earth, the Universe and nature come together to form the pearl, the elixir of immortality, the nourishment for our soul and spirit.

The Lower Tan Tien (hereafter referred to as “the Tan Tien”) is located in the abdomen approximately three finger-widths below the navel near the center of the body. The precise location varies from person to person and depends on the body type. In the Tan Tien we store our Original Chi. Original Chi is the Chi derived from the egg and sperm of our parents, from which our entire organism arises.

In Iron Shirt Chi Kung practice we learn to stand effortlessly and relaxed in the “Embrace the Tree” position through our internal body structure and alignment, our rooting, a powerful pelvic floor and the centering in the Tan Tien. In Tai Chi Chi Kung we learn to move this “tree”, circulate the energy and strengthen our internal power. All movements in Tai Chi originate from the Tan Tien. This important region is responsible for control and balance, two key ingredients in proper Tai Chi execution. Additionally, the Chi generated through the Iron Shirt and Tai Chi practice is stored in the Tan Tien.

For the development of the internal and rooting power and the centering of the body and the mind, it is necessary that enough energy is stored in the Tan Tien (so that the Tan Tien is filled with Chi pressure) and that our mind is strong and focused in the Tan Tien. This will also makes us more focused, stable and balanced in daily life. It enhances our personal power.

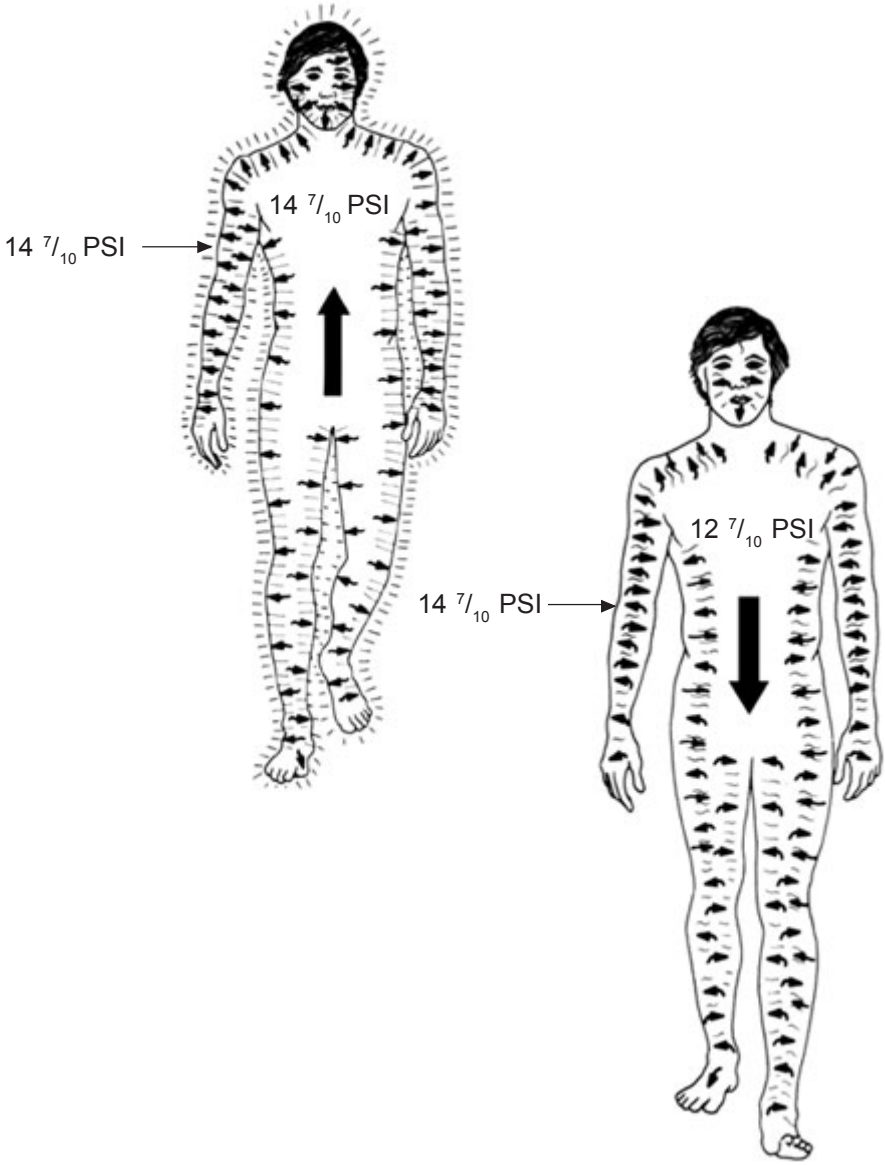

Fig. 2 *A healthy body has an internal pressure of fourteen and seven tenths pounds of pressure per square inch (PSI) Any reduction of this pressure increases the chances of illness and overall weakness.*

While the Tan Tien is both the source and container of Chi power, the mind acts like a general that issues orders to the Tan Tien for directing power. Through this we can draw energy quickly and effectively from this area and direct it to another area. This is especially important in Tai Chi and Healing Love practices.

We have a constant air pressure in our body. We call this Chi pressure. In Tan Tien Chi Kung we learn to develop this Chi pressure in the Tan Tien and to strengthen our organs and fasciae. Our system relies entirely upon Chi pressure to move the body fluid. We can actually increase our vital energy, strengthen our organs, and promote self-healing by increasing the Chi pressure in our organs and body cavity. The circulatory system, the lymphatic system, the nervous system, and the endocrine glands will all be activated, and blood, spinal fluid and hormones will flow more easily so that the heart will not have to work as hard. Increasing pressure in the abdominal cavity will help increase the Chi pressure used to move the Chi, blood and lymph fluid.

One of our goals is to increase Chi pressure in order to increase organ and abdominal pressures so that the Chi presses outward on the fasciae layers from the inside. We pack the Chi in the Tan Tien and, after it is released, the fasciae expand as do the organs.

When people are sick, the Chi pressure inside decreases and falls below the Chi pressure from outside, which is about 14.7 PSI. So these people cannot tolerate the exterior pressure so well. They will become irritated very quickly, tired from people around them, etc. Life becomes a burden. A lack of Chi pressure also slows down all circulation (Chi, blood, lymph and spinal fluid). It is a downward spiraling movement of the whole life force.

Developing Chi pressure is one of the best practices we can use to reverse the downward spiraling movement into an upward spiraling movement in the quantity and quality of our life force. In other words, the increase of the Chi pressure in our Tan Tien through the Tan Tien Chi Kung will enhance our healing, martial arts (Iron Shirt and Tai Chi), meditation abilities, and the art of daily living and will also nourish our Original Force. It is the Chi pressure in the Tan Tien that roots our body and mind.

It is our electric wire in the earth, our ground wire. When the Chi pressure is low, we will have no rooting. The energy and the mind will be fuzzy, drifting and will quickly rise upward and dissipate, and cause overheating, headache, pain in the heart and a distracted mind.

If you want to become a big strong tree, you need deep roots, which also means a high Chi pressure in the Tan Tien. This is one of the reasons why the Tan Tien Chi Kung is the foundation for Iron Shirt and Tai Chi Chi Kung and it is also important for our meditation practice.

In the long run we will regain our inner peace and stillness through this inner power in the Tan Tien. This will restore our connection with our Origin, the mind of the Tao.

Fig. 3 *All forms of energy work require that we remain solidly connected to the ground.*

Practice

The practice is divided into two parts. In part one, we will learn to increase the Chi pressure in the Tan Tien, in the organs, especially the kidneys, in the fasciae, in the lumbar area and the Door of Life. This is accomplished through a combination of breathing, contraction (pulling upward) of certain parts of the perineum (anus) toward specific areas of the abdomen and pressing down the abdominal diaphragm. The exercises also nourish our Original Force.

The warm-ups open the kua/sacrum and the hip joints and strengthen the anus (perineum)

In part two, we will learn eleven animal postures. In fact, they have the same results as the exercises from part one. They are, however more powerful and will significantly enhance the Chi pressure/inner power in the Tan Tien, the strength of the perineum and the rooting power. They are actually a very good preparation for Tai Chi.

Warm-up Exercises

We start the practice of Tan Tien Chi Kung with some warm-up exercises: the opening of the sacrum/kua and the strengthening of the anus (in fact the whole perineum, including the sexual organs).

An open sacrum and a strong anus are the necessary conditions for the development of Chi pressure in the Tan Tien (Tan Tien power). These are the requirements for the correct execution of the exercises of Tan Tien Chi Kung.

1. Opening the Sacrum

The sacrum, the groin area, the hip joints and the iliopsoas all form the kua. When the kua is closed, the flow of Chi, blood, lymph fluid down and up the legs is blocked as are the nerves to the legs. In order to enable the sacrum to move freely, the sacrum should be separate from the hip bones. When the sacrum and the pelvis are open, there is space for the energy and we can push this energy far down in the Lower Tan Tien.

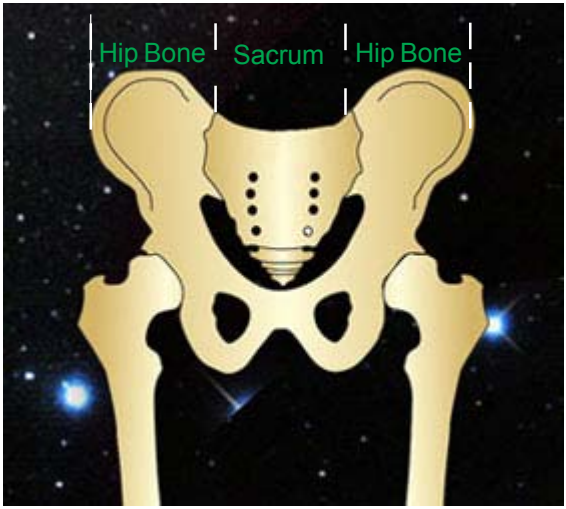

Fig. 4 *Sacrum*

1. Rub the sacrum warm. Stand shoulder width, feet parallel, ankles and knees slightly spiraled outward and locked together like one piece. The arms are round and the palms are facing the earth. Picture your Lower Tan Tien as an ocean. The waves are moving you back and forth. Sink down in the groin/kua. Inhale, turn the palms and raise them upward, pull the perineum slightly up, the sacrum is closed. Exhale, turn the palms, with the thumbs inward, down and push them firmly toward the earth. This will create a tension in the tendons. At the same time contract the anus and push the heels which are firmly rooted, outward and turn the upper thigh inward. This will help to open the sacrum. Keep the knees and ankles aligned and connected with the earth. When you open the sacrum this way, it feels like you are pushing the hips to the side. Actually, you are also pushing the sacrum to the back, tucking the coccyx in and opening the pelvis.

Activating the hips and the sacrum pump activates the cranial pump, stimulating the flow of cerebrospinal fluid through the spine to the brain. This will nourish the brain and enhance the clarity of our thinking and the activities of the central nervous system.

Fig. 5 *Sink down in the kua, round the arms and push down into the earth.*

2. Squatting will also help to open the kua, especially the sacrum and the hip joints. Squatting is a powerful and effective way to open the kua and the sacrum. For many people in the world it is still common to sit, talk, eat, empty the bowels, meditate and relax and restore the energy flow in the squatting position.

The squatting position also provides a deep massage and enhances the Chi and blood flow to all organs in the Lower Tan Tien, including the small and large intestines and the fasciae. It releases gases and is very helpful in relieving constipation.

A good exercise for developing the squatting position is to stand with your feet shoulder width (when you improve your squatting ability, place both feet together) close to and facing the wall and then to squat straight down from the kua. The wall will prevent you from leaning forward when you squat. Breathe in the Lower Tan Tien, keep the chest relaxed and feel a force pulling you down and a force pulling you up, as you squat down to the Earth.

To squat you can also use the help of a partner or the edge of a table. Be sure that you go straight down and bend from the kua.

When you work with a partner, stand shoulder width facing each other, arms outstretched, and place the hands on each other's shoulders. From this position, squat straight down together from the kua while supporting one another. Sink as deep as you both can without leaning forward.

3. Other exercises for loosening the sacrum:

- Put your hands on your sacrum and pubic bone and rotate the sacrum in both directions.

- Hold your hands again on the sacrum and move the sacrum back and forth, back and forth.

Fig. 6 *Squat*

2. Anus/Perineum

The Taoists divide the anus into five parts: the front which is connected to the Hui Yin (the perineum point and the sexual organs); the back of the anus, which is connected to the coccyx and the sacrum; the middle; the left, which is connected to the left side of the body, especially the left kidney; and the right side, which is connected with the right side of the body, especially the right kidney. In Tan Tien Chi Kung we strengthen all these parts (perineum power) by contracting them (pulling up). When your pelvic area is strong, no energy will leak out of these gates, and you can enhance the Chi pressure in your Tan Tien. With a weak perineum and anus, this is not possible.

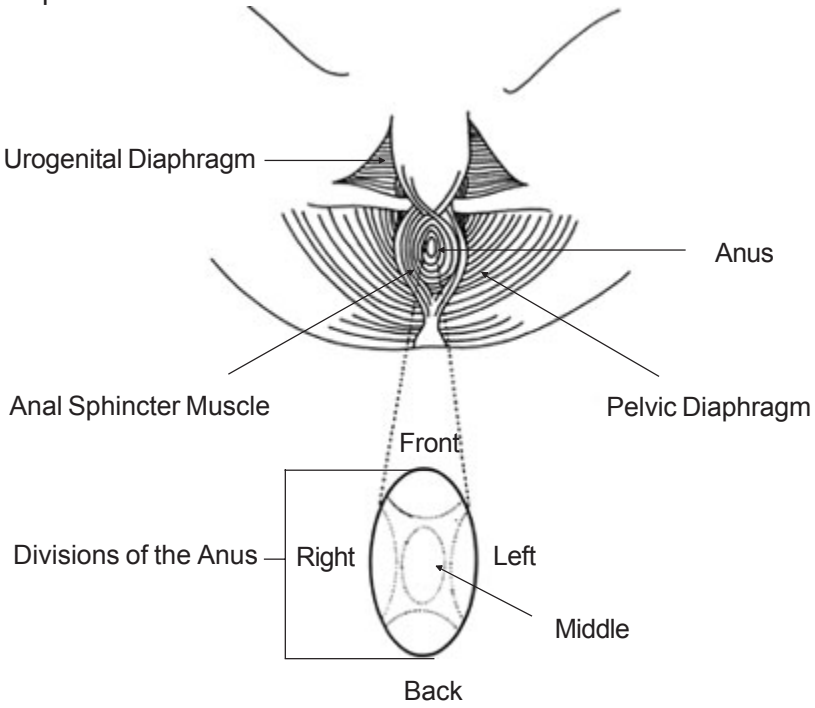

Fig. 7 *Anus is divided into five regions.*

There are good Taoist exercises to strengthen the anus and the different parts of the anus (perineum/pelvic floor) and to learn to contract them (by pulling up) without tightening the muscles too much. To make them really strong, which means giving the muscles a strong tone, you must do these exercises many times a day. The pleasant thing about them is that you can do these exercises everywhere: good times and places to practice are while waiting at the post office, the bus station, the shop, or when you watch a movie or TV, or work on the computer. When you are creative, you will find many occasions during the day to practice these exercises.

The best way to do these exercises is in the standing position. However, you also can practice them sitting or laying on the ground, in bed or even in the bathtub.

We give you the exercises in the standing position;

1. Stand shoulder width with the feet parallel and all the nine points firmly rooted in the earth. Just be aware of the front part of the anus and the sexual organs, especially the testicles, the vagina and the uterus. Inhale half the breath, flatten down the stomach, hold the breath, inhale without inhaling, inhale more and contract the **front** part of the anus and the sexual organs. Keep your tongue against the palate. Exhale very slowly and pull up even stronger. This will be easier and more effective when you exhale with the kidney sound. When you do this well the coccyx will turn in and the sacrum will push out, rounding the lower back, because the sacrum and the sexual organs are connected.

2. Stand in the same position, be aware of the middle part of the anus, and for men also the prostate gland. Inhale half the breath, flatten down the stomach, hold the breath, inhale without inhaling, inhale more and contract the **middle** part of the anus. Hold the breath and exhale very slowly, pulling up the middle part of the anus even more. You can also exhale with the kidney sound now, if you wish.

3. Stand in the same position; be aware of the **left and right** sides of the anus. Inhale, flatten down the stomach, hold the breath, inhale without inhaling, inhale more and contract the left and the

right sides of the anus toward the kidneys. Hold the breath and exhale slowly, if you wish, with the kidney sound, pulling up the left and right side of the anus even more. Feel the kidneys and the whole part of the back expand, including the Door of Life.

4. Stand in the same position; be aware of the **back** of the anus. Inhale half the breath, flatten down the stomach, hold the breath, inhale without inhaling, inhale more and contract the back part of the anus. Hold the breath and exhale very slowly, with the kidney sound if you wish, contracting the back part of the anus even more. You will feel that the lower back is pushed further outward and has more power.

When you inhale and contract the different parts of the anus, at the same time you can always contract your eyes, suck in your mouth, widen your nostrils like a rabbit and push the tongue against the palate. All the round muscles around the orifices of the body and the diaphragm are working together.

3. Releasing Tension in the Diaphragm

Many people have a stiff diaphragm which sticks to the rib cage. In order to be able to develop the Chi pressure, we should have a diaphragm that is loose and that can easily move up and down. To release the tension in the diaphragm, you can massage the diaphragm:

a. You can massage under, and along the rib cage from top to bottom and, or

b. You put the left hand's middle fingers with the palm facing upward, under the rib cage. Place your right hand on the lower part of the right rib cage and push the rib cage downward with your right hand. Repeat for the left side.

This massage will loosen and stretch the diaphragm and will facilitate and deepen the breath. You will be able to keep and push the diaphragm down on the exhalation, which is necessary for the development of the Chi pressure in the Tan Tien.

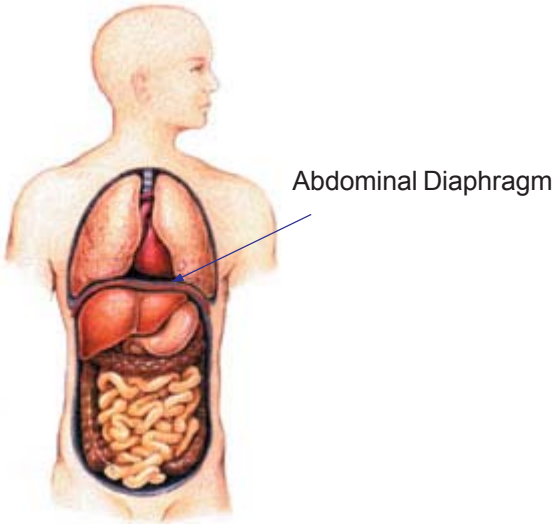

Fig. 8 *Release Tension in the Diaphragm*

Development of Chi Pressure in the Tan Tien Through Tan Tien Breathing

To feel Chi within you is not easy. When people laugh in the Lower Tan Tien, the Tan Tien Chi starts to develop. You can picture the Tan Tien as a balloon that you can fill with air, creating air pressure in the balloon. The main thing you have to do to fill this balloon is to blow air in it little by little. Blow and hold, blow and hold. With the Tan Tien it is the same. You inhale, blow in the air, hold the breath (air) and exhale very slowly. In this way you can maintain the pressure.

You can verify this with a partner exercise. Take a partner and gently put your fist on his or her Tan Tien (belly) just below the navel.

a. Let him inhale in the abdomen and feel the pressure of the breath (Chi) pushing his abdomen against your fist. Let him then exhale quickly and you will feel that the air (Chi) pressure is gone and that you are pushing into an empty Tan Tien.

b. Let him inhale in the same way and exhale this time very slowly through the mouth. You will feel that the pressure is still there. Just as with the balloon, when you pull up the perineum and push down the diaphragm, the air (Chi) pressure in the Tan Tan will be more condensed and stronger.

As you continue to push, you will feel that the energy remains there and is moving. Let your partner now laugh in the Tan Tien while you are still pushing, and you will feel the Chi pressure becoming stronger and the Chi moving and vibrating. You can change places and let your partner work on you.

1. Breathing exercises to develop Chi Pressure in all Seven Areas and in the Whole Tan Tien

We distinguish seven important areas in the Lower Tan Tien where we would like to develop the Chi pressure:

1. Area below the navel (Chi Hai)
2. Both sides of the front part of the Tan Tien
3. Bladder Area
4. Area near the Solar Plexus
5. Both Sides of the body
6. Both Kidneys
7. Door of Life.

Areas 1 - 4 belong to the front part of the Tan Tien, and 6 and 7 to the back part of the Tan Tien.

Just as with the balloon, you can press some areas of the balloon/Tan Tien to increase the pressure in other parts of the balloon/Tan Tien. The two main areas you always press are the perineum and the diaphragm. This will reduce the space in the Tan Tien and condense the Chi (ball) in the Tan Tien. When you pull to the right, the left, the back or the front, the Chi ball (pressure) will move from one side to the other.

A. Lower Tan Tien: Ocean of Chi or Chi Hai

Put your hands on the Chi Hai in the lower abdomen very gently and very softly. Smile and do a few abdominal breaths. Inhale half the breath, hold the breath, inhale more and pull up the front part of the anus (and the sexual organs) and push at the same time into your lower abdomen; the breath pushes your hands out. Feel a suction. Slowly exhale (hold the Chi pressure in the Chi Hai) and push the Chi down to the lower abdomen part of the Tan Tien. Regulate the breath and maintain equal force between the downward pressure of the Chi and the upward force from the anus (perineum). Always keep the diaphragm down and the chest relaxed. You can make a high pitched sound when you inhale (dragon sound), suck up with the sound and a low pitched (tiger sound) sound when you exhale and push the energy down. Laugh softly inside and feel the vibration in the Chi Hai.

Fig. 9 *Put your hands on the Chi Hai in the lower abdomen.*

Repeat several times. Feel the pressure becoming stronger with every breath. Especially when you exhale consciously, you hold the Chi. When you inhale and exhale with an absent mind, you lose the Chi. Then it will be true what the Taoists say, that with every breath taken, life is one breath shorter.

B. Both Sides of the Front Part of the Tan Tien

Put your hands gently on both sides of the front part of the Tan Tien. Smile and inhale half the breath. Hold the breath, inhale more and pull up the anus and the left and right sides of the anus and push these points of the Tan Tien outward against your hands. Exhale slowly and press the Chi down to the right and left parts of the front Tan Tien maintaining equal force. Do this several times until you feel a strong Chi pressure. Laugh softly inside and feel a vibration in both sides of the Tan Tien.

Fig. 10 *Smile and inhale half the breath.*

C. Bladder

Put your hands gently on your bladder. Smile and inhale half the breath. Hold the breath, inhale more and pull up the anus and the front part of the anus and push the bladder outward against both hands. Exhale slowly and consciously and push the Chi down in the bladder. Maintain equal force. Repeat several times until you feel a strong pressure in the bladder region. Laugh softly inside and feel a vibration in the bladder. You can do this exercise when you are urinating to greatly reduce the loss of energy during urination.

Fig. 11 *Put your hands gently on your bladder.*

D. Upper Abdomen near the Solar Plexus

Put your hands gently on the upper part of your abdomen. Smile and inhale half the breath. Hold the breath, inhale more and pull up the anus and the front part of the anus. Press the upper part of your abdomen out against your hand (with the high pitched dragon sound). Exhale slowly and consciously (with the low pitched tiger sound) and push the Chi in your upper abdomen. Maintain equal force. Repeat several times until you feel a strong Chi pressure in this area. Laugh inside and feel a vibration in the Upper Tan Tien.

Fig. 12 *Laugh and Smile in Solar Plexus.*

E. Both Sides of the Body

Place your hands gently on both sides of your body. Smile and inhale half the breath. Hold the breath, inhale more and pull up the anus and left and right sides of the anus and push both sides out against your hands. Feel both sides expanding. Exhale slowly and consciously and push the Chi down to the left and right sides. Maintain equal force. Feel both sides of the Tan Tien expanding. Repeat several times until you feel a strong Chi pressure in both sides. Laugh inside and feel both sides of the Tan Tien vibrating.

Fig. 13 *Feel both sides of the Tan Tien expanding.*

F. Kidneys

Place your hands gently on your kidneys. Smile in the kidneys and inhale half the breath. Hold the breath, inhale more and pull up the anus and the left and right sides of the anus and push the kidneys out against your hands. Feel the kidneys expanding, and the whole lumbar area opening. Inhale more, expand, hold the breath once more and exhale slowly down in the kidneys. Feel the whole kidney area expanding when you exhale and push the energy down. Repeat several times until you feel a strong Chi pressure in both kidneys and a Chi belt around your waist. This exercise will also strengthen the kidneys and increase your Original Force. Smile in the kidneys and feel them vibrating.

Fig. 14 *Feel the kidneys expanding, and the whole lumbar area opening.*

G. Door of Life

Place both hands gently, one over the other, on the Door of Life (about L2/L3 level). Cover the Door of Life. Smile and inhale half the breath. Hold the breath and pull up the anus and the back part of the anus and push the Door of Life out against your hands. Feel the Door of Life expanding and becoming more open. Inhale more, hold the breath, pull up more and expand, inhale more, hold and expand. Exhale slowly and consciously and press the Chi down to the Door of Life. Maintain equal force. Repeat several times until you feel a strong pressure in the Door of Life and you feel it open and breathing. Be aware of the soles of your feet, the coccyx and the sacrum. Inhale and pull up the anus and the back part of the anus, feel the pulsation in the Door of Life sucking up the energy of the Earth and moving it upward through the spine to the brain. Exhale, put both feet together, scoop up the energy and bring it down. Touch the navel and focus on the Door of Life. Repeat several times.

Rest, cover the navel, smile and feel your whole abdomen full of Chi, open and breathing/pulsating.

Fig. 15 *Focus on the Door of Life.*

H. Tan Tien Breathing

Breathe slowly and smoothly in the Tan Tien until you feel nice and calm. Then combine all the seven breathing exercises together. Smile and gently place both hands on the Lower Tan Tien. Inhale part of the breath. Hold the breath, inhale more and pull up the anus and the front part of the anus and push against the fingers. Exhale slowly and push the energy down, expanding the lower abdomen. Hold the pressure.

Place your hands on both sides of the front Tan Tien. Inhale again part of the breath. Hold the breath, inhale more and pull up the anus and the left and right side of the anus. Push against the fingers. Exhale slowly and push the energy to the left and right side of the front Tan Tien. Feel these parts expanding and hold this pressure. Place your hands on the bladder. Inhale part of the breath. Hold the breath. Inhale more and pull up the anus and the front part of the anus, pushing out the bladder. Exhale slowly and push the energy down in the bladder.

Feel the bladder expanding and hold the pressure. Place your hands on both sides of the body. Inhale part of the breath. Hold the breath and pull up the anus and the left and right sides of the anus. Push both sides of the body out against the hands. Exhale slowly and push the energy down to both sides of the Tan Tien. Feel the sides expanding and hold this pressure.

Place your hands on the kidneys. Inhale part of the breath. Hold the breath, inhale more and pull up the anus and the left and right sides of the anus toward the kidneys. Push the kidneys outward. Exhale slowly and push the Chi down into the kidneys. Feel the kidneys expanding. Hold the pressure.

Place both hands on the Door of Life. Inhale part of the breath. Hold the breath, inhale more and pull up the anus and the back part of the anus. Exhale slowly and push the energy down into the Door of Life. Feel the Door of Life expanding, pushing the lumbar area slightly to the back. Feel the energy rising up the spine to the brain. Your whole Tan Tien is now like a balloon with a very high Chi pressure inside, expanding to all sides.

Hold both hands on the Tan Tien and laugh gently inside it. Feel the vibration and pulsation of the Chi. Turn your senses inward to the Tan Tien. Empty the mind in the Tan Tien. Just rest for a while. Feel nice, calm, relaxed and energetic.

Fig. 16 *Laugh gently in the Tan Tien.*

2. Exercises to Bring More Chi Pressure and Energy Vibration in the Tan Tien

1. You can just repeat the exercises. The only difference is that this time you use your fingers to give counter pressure against the pressure of the Chi from inside.

For example: Put your fingers on the Chi Hai in the lower abdomen. Smile and do a few abdominal breaths. Inhale half of the breath, hold the breath, inhale more and pull up the front part of the anus and push at the same time against the lower part of the Tan Tien, against the pressure from your fingers. Feel a suction. Slowly exhale (hold the Chi pressure in), increase the pressure of your fingers and push the Chi down in the lower abdomen against your fingers. You will notice that with the counteracting force of the fingers the Chi pressure becomes stronger. Do this a few times. The last time you hold the breath after the exhalation and tap both fists on the Chi Hai until you feel a vibration in this area.

Do this for all the other six areas of the Tan Tien (tapping on the bladder is especially good for women). You then combine them, enhancing in this way the Chi pressure and vibration in the whole Tan Tien. Repeal this until you feel a very deep vibration of the Chi inside the Tan Tien and in your original force.

Have a partner gently push you with his fist in your Tan Tien, so that you have to hold and apply counter pressure. This will help you to develop a stronger Chi pressure and vibration in the Tan Tien.

2. Repeat each exercise again and continue to use the fingers as a counteracting force. At the end of each exercise, inhale and expand for instance the lower abdomen and exhale quickly with the deep tiger sound “haaa”, pushing the energy down and out against your fingers. The sound is made through a quick expansion, for instance from the lower abdomen. The exhalation, the expansion and the sound should be completely synchronized.

Repeat with the whole Tan Tien.

Rest with the palms facing downward. Feel the Tan Tien Chi breathing and pulsating. Inhale and pull up the front, back, left and right parts of the anus together with a light contraction of the eyes and mouth and feel the suction in the Tan Tien, the palms, the soles of the feet, the perineum, the sacrum, the mideyebrow point, the crown. Exhale and condense the energy in the Tan Tien.

Repeat several times.

Fig. 17 *Use counter pressures of hands and breath to increase Chi pressure.*

Animal Exercises

After each animal exercise: Inhale, put the feet together, scoop up the energy from the universe, palms facing up. Turn the palms downward and pour the energy down over the body, back into the navel, back into the Tan Tien. Focus on the Door of Life. Gently, move the hands from the navel (Lower Tan Tien) to the thighs. Feel the fingers and Chi penetrate the thighbones as Chi is absorbed into the bone marrow. Move the hands down the thighbones. Feel the fingers penetrate the bones, glide past the knees, and across the shinbones. As you glide the hands down, sink the hips and bring the tailbone down to the heels in a squatting position.

Fig. 18 *Scoop up energy and pour it onto and into the crown.*

Feel yourself sinking down through the Earth and into the infinite space beyond the Earth. Picture the galaxy and feel the spiraling of the force.

Fig. 19 *Lift the Tailbone first.*

With your hands resting on your feet, lift the tailbone until the legs are straight. Feel the Chi drawn from outer space and the earth spiraling into your body.

Squat down again and gather more Earth energy and more Universal energy. Do this 3 to 9 times.

With your hands resting on your feet, lift the tailbone until the legs are straight. Feel the Chi drawn from outer space and the earth. spiraling into your body.

Stand up slowly, gliding the hands over the back of the legs. Feel the fingers touch the bones and the bone marrow and glide up to the coccyx; hold them there for a while. Feel the Chi rising to the spine and the brain. Move the fingers to the sacrum. Feel the Chi pour into the sacrum and the sexual center.

Bring the hands up to the Door of Life and concentrate on the navel.

Feel the Chi energize the kidneys and the Door of Life. Slowly bring the hands to the navel. Smile and collect the energy in the Tan Tien.

Notes: In all the animal exercises the diaphragm is down, the chest relaxed and the anus pulled up. Repeat all the animal exercises several times.

Start the exercises with some Tan Tien breathing, expanding the front, back and sides of the Tan Tien with every breath. Stay relaxed and keep your mind focused.

When doing the animals breathe in with the high pitched, wheezing dragon sound and breathe out with the low pitched, growling tiger sound.

1. Rabbit (Front Tan Tien)

This exercise develops the Chi pressure in the front part of the Tan Tien, navel and pelvic area.

Stand shoulder width, with the feet parallel. Inhale, pull up the anus and the front part of the anus, expand the lower abdomen (with the high pitched dragon sound) and feel the suction in the abdomen, while raising the arms slightly above the head. The wrists should be bent down and the fingers facing the earth.

Exhale quickly and pull up the anus and the front part of the anus even more and, like a rabbit, widen your nostrils. At the same time, sink down a little in the kua, press the palms down and push the energy in the front part of the Tan Tien and the pelvic area. It is very important that you synchronize these three movements. When you do this you will feel the Chi pressure increasing in this part of the Tan Tien and in the palms of your hands. Because there will be a lot of Chi generated in the lower abdomen, the kua and the hip joints will open more.

Fig. 20 *Rabbit sinks into the kua.*

2. Crane (Both Sides of the Tan Tien)

This exercise develops the Chi pressure in both sides of the Tan Tien.

Stand shoulder width, with the feet parallel. Inhale, pull up the anus and the left and right sides of the anus, expand the left and right sides of the Tan Tien and feel the suction in this part of the Tan Tien. Raise the arms. The fingers should form beaks. Move the arms to the sides of the body at shoulder level. Exhale quickly and pull up the anus (the left and right sides of the anus even more). At the same time, press your palms down to hip level and press the Chi to the left and right sides of the Tan Tien. Feel them expanding and feel the Chi pressure growing in this part and in the palms of your hands. Repeat several times.

Fig. 21 *Crane makes beaks.*

Fig. 22 *Crane expands left and right sides of Tan Tien.*

3. Bear (Back Part of the Tan Tien and the Whole Back/Spine)

This animal position corresponds to the back part of the Tan Tien, especially to the sacrum and the whole back: a bear back! We already did part of these exercises in the beginning to open the sacrum and the kua.

Stand shoulder width, feet parallel with the palms facing up. Inhale. Pull up the anus and the back part of the anus, expand the sacrum and the lower back and feel a suction. Feel this suction raises the palms. Now, on exhaling, you must quickly do several things at once. Just as in all the animal exercises, you have to exhale quickly and pull up the anus and the back part of the anus even more. At the same time, you must turn the palms downward and push them down together with the energy and open the sacrum as described in the warm-up exercises, while rounding the shoulders and sinking the chest. You will feel the whole back expanding.

Fig. 23 *Bear expands the sacrum.*

4. Swallow (Left and Right Tan Tien)

Stand in the Embrace the Tree position. Inhale, pull up the anus and the left and right sides of the anus and let the Lower Tan Tien Chi move you to the left. Your left foot turns 90° and your right foot 45° to the left. Exhale, pull up the anus and the left side of the anus more and press the Chi down in the left Tan Tien, in the left leg, pushing you down into the earth. Feel a force coming up from the earth and a force pushing you down. Inhale again; pull up the anus and the right side of the anus and let the Lower Tan Tien Chi move you to the right. The right foot turns to the front and then 90° to the right, the left foot also turns to the front and then 45° to the right. Exhale quickly, pull up the anus and the right side of the anus more and press the Chi down in the right Tan Tien, in the right leg, pushing you into the earth. Feel again a force coming up from the earth and a force pushing you down.

This exercise is very important for your Tai Chi, especially for the Tan Tien form.

Fig. 24 *Swallow moves the tree.*

5. Dragon (Left, Right and Middle Tan Tien)

Stand shoulder width, with the feet parallel and the fists at hip level. Inhale, pull up the anus and the left side of the anus and expand the left side of the Tan Tien. Feel a suction. Exhale quickly, pull up the left side of the anus more and, at the same time, press the energy in the left Tan Tien and the right fist to the left leg. Feel the left side of the Tan Tien expanding. Repeat this for the right and the Middle Tan Tien. For the Middle Tan Tien, you push both fists down and pull up the middle part of the anus. This exercise is also very good for your Tai Chi.

Fig. 25 *Dragon makes suction.*

6. Eagle (Lower Tan Tien)

Stand shoulder width, feet parallel and hold the arms with the elbows bent. Pull up the anus and feel the force in the Tan Tien activated by the force of the fingers and a slight contraction of the eyes. At the same you will feel that the force in the fingers is activated through the force in the Tan Tien. Just stand for a while and feel the forces moving you, enhancing the power in the Tan Tien and in your fingers.

Fig. 26 *Eagle activates Lower Tan Tien Chi.*

7. Monkey (Lower and Upper Tan Tien)

Stand shoulder width, with your feet parallel and your fists in front of the kua. Inhale, pull up the anus and the middle part of the anus and expand the lower Tan Tien, fists pushing down. Then with a swing coming from the force in the Tan Tien and a contraction of the anus, move your arms up quickly, palms facing downward and let the Chi rise to the Upper Tan Tien. Exhale, pull up the anus more and push the energy down in the Lower Tan Tien. At the same time press the hands down to the earth in a squatting position and then scoop up the earth energy.

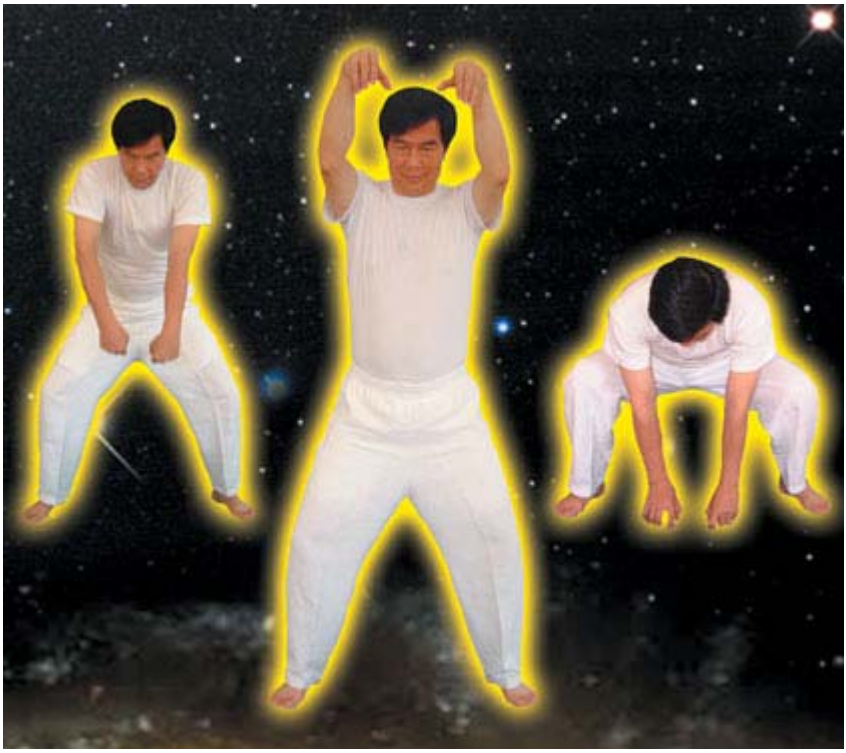

Fig. 27 *Monkey pushes down to Earth.*

Come back to the starting position. Inhale again, pull up the anus and the middle part of the anus, and swing the arms high up in front of you.

When you exhale quickly, pull up the anus more and push down the Chi ball in your Lower Tan Tien with some force and then let your whole weight freely come down with the kua until you are in the squatting position. Let your hands swing backward like open cups beneath the perineum. Inhale, gradually raise up from the knees to the hips and, with your palms, scoop up the earth energy. Gather the energy at the navel. In this exercise, the upper part of your body is loose while the lower part is heavy.

Fig. 28 *Monkey scoops up Earth energy.*

8. Elephant (Left and Right Kua and Lower Tan Tien)

Stand with your feet parallel and shoulder width. Inhale, pull up the anus and the left side of the anus and swing your arms, like the trunk of an elephant, upward to the front and to the left as you turn your waist to the left. Hold the breath, expand the left Tan Tien and swing the trunk and the waist to the middle again. Exhale, pull up the middle side of the anus and at the same time press the energy and swing the trunk down until you are in a squatting position. End the swing of the trunk between your legs. Inhale, pull up the anus and the right side of the anus, swing the trunk upward to the front and to the right as you swing your waist to the right. Hold the breath, expand the right part of the Tan Tien and swing the trunk and the waist to the front again. Exhale, pull up the middle side of the anus and at the same time press the energy and the trunk down until you are in a squatting position. End the swing of the trunk between the legs. The swing of the trunk should be light and smooth.

Fig. 29 *Elephant swings his Trunk.*

Fig. 30 *Elephant gathers Chi.*

9. Rhinoceros (Left and Right Tan Tien)

Stand shoulder width, with your left foot in front and your right foot at a 45° angle behind you. Stretch your left arm straight in front of you, the palm facing downward. Hold the back of your right hand in front of your forehead. Inhale, pull up the anus and the left side of the anus, sink a little bit in the kua and move the waist with the Tan Tien to the left. Your hips and navel should stay pointed straight in front of you. The arms and the upper body move with the Tan Tien to the left. Exhale, pull up the left side of the anus more and, at the same time, press the Chi down in the left Tan Tien, pressing the left leg into the ground.

Repeat to the right side, the right leg in front and the left foot at 45° turned outward behind you. Stretch the right arm straight in front of you and hold the back of the left hand in front of your forehead. Inhale, pull up the anus and the right side of the anus. Sink a little bit in the kua and turn the waist with the Tan Tien to the right. The navel and hips should not move. Exhale, pull up the right side of the anus more and, at the same time, press the Chi down in the right Tan Tien, pressing your right leg in the ground.

Fig. 31 *Rhinoceros presses and condenses Chi into Left and Right Tan Tiens.*

10. Horse (Upper Tan Tien and Solar Plexus)

Use an expanding sound from the upper Tan Tien/solar plexus. Stand shoulder width, with the feet parallel and the fingertips on the Tan Tien. Inhale, pull up the anus and the front side the anus and expand the upper Tan Tien against your fingertips. The fingertips will provide some counter pressure. Exhale quickly, pull up the front side of the anus more, swing the arms and press them down with the Chi. Sink a little in the kua and at the same time feel the upper part of the Tan Tien expand with the horse sound ("ho"), it is an echoing sound coming from the solar plexus.

Fig. 32 *Horse makes "Ho" Chi in Solar Plexus.*

11. Bull (Back Tan Tien)

Stand shoulder width, with the feet parallel. Put your left leg to the front and turn your right foot 45° outward. Your arms are in front of you, palms facing outward. Inhale, pull up the anus and the back side of the anus; sink to the back and at the same time turn the palms and scoop up the Chi on the left and right side when you sink to the back. The Tan Tien Chi is pushing you to the back and down into the right leg. Spiral the hands with the spiral of the tendon under the armpits until the palms are facing you. Then exhale, pull up the front side of the anus, spiral the hands more until the palms are facing outward and, at the same time, let the Tan Tien Chi push you to the front and down into the left leg. Feel the energy rising from the earth. Pull up the front and back side of the anus, round the sacrum/ lower back (with your chest in, scapulae round and chin pushed back and up). Feel the energy rising in the spine and push the energy out to the fingertips. Repeat with the right leg in front and the left leg back.

Fig. 33 *Bull strengthens the Back Tan Tien.*

This is a very important exercise for Tai Chi. From this exercise you will learn to sink back in the kua, move from the Tan Tien with the Tan Tien force and direct the force through the spine to the fingertips and from the fingertips back into the earth.

Finishing Tan Tien Chi Kung

After you have finished Tan Tien Chi Kung, sit and relax. Put both palms on your Tan Tien. Smile and feel the Chi vibrating in the Tan Tien and in all the organs, glands and fasciae. Then inhale, move your arms above your head, exhale with the Heart or Triple Warmer Sound and with the palms move all the excess heat (and sick energy) down out of the body, into the earth. Repeat a few times. Let go and empty yourself. Inhale again, raise your arms slowly upwards and scoop up the Universal energy, the violet and ultra red light, into a huge Chi ball. Turn your palms toward your crown and pour the energy over you. Be aware of the soles of your feet and slowly move the energy with the palms down into your body, energizing the body, including your brain, organs, glands, spine. Repeat a few times. Rest. Turn your mind and senses inwards. Empty your mind in the Tan Tien. Feel nice, calm and energetic.

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$6.95

Tan Tien Chi Kung

Empty Force, Perineum Power and the Second Brain

Mantak Chia

Illustrations by Udon Jandee

Tan Tien Chi Kung

Tan Tien Chi Kung is one of the best Taoist Chi Kung practices used to develop the Tan Tien and Perineum power. We need Chi and Chi pressure in the Tan Tien as a foundation for most of the Universal Tao practices, especially for Iron Shirt Chi Kung, Tai Chi Chi Kung and meditation. The Tan Tien is the energy reservoir in the body; it is the place where we store the energy we generate, gather and absorb in Chi Kung, Tai Chi and meditation.

The Tan Tien is also called the ocean of Chi. According to Chinese medical theory, once the ocean is full it overflows into the eight extraordinary meridians. Once these are full the Chi flows into the twelve ordinary meridians, each of which is associated with a particular organ. The Tan Tien is therefore the foundation of the entire energetic system of the body.

Tan Tien Chi Kung will help you develop Chi pressure which is one of the best practices to reverse the downward spiraling movements into the upward spiraling movement of the quantity and quality of our life force. In other words, the increase of the Chi pressure in our Tan Tien through the Tan Tien Chi Kung will enhance our healing, martial arts (Iron Shirt and Tai Chi), meditation abilities, and the art of daily living and will also nourish our original force. It is the Chi pressure in the Tan Tien that roots our body and mind.

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About the Author

Mantak Chia

Master Mantak Chia

Master Mantak Chia is the creator of the Universal Tao System and is the director of the Universal Tao Center and Tao Garden Health Resort and Training Center in the beautiful northern countryside of Thailand. Since childhood he has been studying the Taoist approach to life. His mastery of this ancient knowledge, enhanced by his study of other disciplines, has resulted in the development of the Universal Tao System which is now being taught throughout the world.

Mantak Chia was born in Thailand to Chinese parents in 1944. When he was six years old, Buddhist monks taught him how to sit and "still the mind." While still a grammar school student, he learned traditional Thai boxing. He was then taught Tai Chi Chuan by Master Lu, who soon introduced him to Aikido, Yoga and broader levels of Tai Chi.

Years later, when he was a student in Hong Kong excelling in track and field events, a senior classmate named Cheng Sue-Sue introduced him to his first esoteric teacher and Taoist Master, Master Yi Eng (I Yun). At this point, Master Chia began his studies of the Taoist way of life in earnest. He learned how to circulate energy through the Microcosmic Orbit and, through the practice of Fusion of the Five Elements, how to open the other Six Special Channels. As he studied Inner Alchemy further, he learned the Enlightenment of the Kan and Li, Sealing of the Five Senses, Congress of Heaven and Earth and Reunion of Heaven and Man. It was Master Yi Eng who authorized Master Chia to teach and heal.

When Mantak Chia was in his early twenties he studied with Master Meugi in Singapore, who taught him Kundalini, Taoist Yoga and the Buddha Palm. He was soon able to clear blockages to the flow of energy within his own body. He learned to pass the life force energy through his hands also, so that he could heal Master Meugi's patients. He then learned Chi Nei Tsang from Dr. Mui Yimwattana in Thailand.

A while later, he studied with Master Cheng Yao-Lun who taught him the Shao-Lin Method of Internal Power. He learned the closely guarded secret of the organs, glands and bone marrow exercise known as Bone Marrow Nei Kung and the exercise known as Strengthening and Renewal of the Tendons. Master Cheng Yao-Lun's system combined Thai boxing and Kung Fu. Master Chia also studied at this time with Master Pan Yu, whose system combined Taoist, Buddhist and Zen teachings. Master Pan Yu also taught him about the exchange of Yin and Yang power between men and women, and how to develop the Steel Body.

To understand the mechanisms behind healing energy better, Master Chia studied Western anatomy and medical science for two years. While pursuing his studies, he managed the Gestetner Company, a manufacturer of office equipment and became well acquainted with the technology of offset printing and copying machines.

Using his knowledge of Taoism, combined with the other disciplines, Master Chia began teaching the Universal Tao System. He eventually trained other Instructors to communicate this knowledge and he established the Natural Healing Center in Thailand. Five years later, he decided to move to New York, where in 1979, he opened the Universal Tao Center. During his years in America, Master Chia continued his studies in the Wu system of Tai Chi with Edward Yee in New York.

Since then, Master Chia has taught tens of thousands of students throughout the world. He has trained and certified over 1,500 instructors and practitioners from all over the world. Living Tao Centers, Chi Nei Tsang Institutes, Cosmic Healing Forums and Immortal Tao Mountain Sanctuaries have opened in many locations in North America, South America, Europe, Asia, Africa and Australia.

In 1994, Master Chia moved back to Thailand, where he had begun construction of Tao Garden and the Universal Tao Training Center fifteen miles outside of Chiang Mai.

Master Chia is a warm, friendly and helpful man who views himself primarily as a teacher. He presents the Universal Tao System in a straightforward and practical manner, while always expanding his knowledge and approach to teaching. He uses a word processor for writing and is totally at ease with the latest computer technology.

Master Chia estimates that it will take thirty-five books to convey the full Universal Tao System. In June, 1990, at a dinner in San Francisco, Master Chia was honored by the International Congress of Chinese Medicine and Qi Gong (Chi Kung), who named him the Qi gong Master of the Year. He is the first recipient of this annual award.

In December, 2000, the Tao Garden Health Resort and Universal Tao Training Center was completed with two Meditation Halls, two open air Simple Chi Kung Pavilions, indoor Tai Chi, Tao Tao Yin and Chi Nei Tsang Hall, Tai Chi Natural Swimming Pool, Pakua Communications Center with a complete Taoist Library, Internal World Class Weight Lifting Hall and complete 8 Court Recreational Facilities.

In February, 2002, the Immortal Tao practices were held at Tao Garden for the first time using the Dark Room technology creating a complete environment for the higher level Taoist practices.

He has previously written and published these twenty-one Universal Tao books:

Awaken Healing Energy of the Tao - 1983
Taoist Secrets of Love: Cultivating Male Sexual Energy co-authored with Michael Winn - 1984.
Taoist Ways to Transform Stress into Vitality -1985
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Many of the books above are available in the following foreign languages:

Arabic, Bulgarian, Czech, Danish, Dutch, English, French, German, Greek, Hebrew, Hungarian, Indonesian, Italian, Japanese, Korean, Lithuanian, Malaysian, Polish, Portuguese, Romanian, Russian, Serbo-Croatian, Slovenian, Spanish, & ***Turkish*** editions are available from the Foreign Publishers listed in the Universal Tao Center Overview in the back of this book.

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We offer our eternal gratitude to our parents and teachers for their many gifts to us. Remembering them brings joy and satisfaction to our continued efforts in presenting the Universal Tao System. For their gifts, we offer our eternal gratitude and love. As always, their contribution has been crucial in presenting the concepts and techniques of the Universal Tao.

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Words of Caution

The practices described in this book have been used successfully for thousands of years by Taoists trained by personal instruction. Readers should not undertake these practices without receiving personal transmission and training from a certified instructor of the Universal Tao, since some of these practices, if done improperly, may cause injury or result in health problems. This book is intended to supplement individual training by the Universal Tao and to serve as a reference guide for these practices. Anyone who undertakes these practices on the basis of this book alone, does so entirely at his or her own risk.

The meditations, practices and techniques described herein are ***not*** intended to be used as an alternative or substitute for professional medical treatment and care. If any readers are suffering from illnesses based on mental or emotional disorders, an appropriate professional health care practitioner or therapist should be consulted. Such problems should be corrected before training begins.

Neither the Universal Tao nor its staff and instructors can be responsible for the consequences of any practice or misuse of the information contained in this book. If the reader undertakes any exercise without strictly following the instructions, notes and warnings, the responsibility must lie solely with the reader.

This book does not attempt to give any medical diagnosis, treatment, prescription, or remedial recommendation in relation to any human disease, ailment, suffering or physical condition whatsoever.

Introduction

In the Universal Tao Practice, Second Brain Chi Kung (also called Tan Tien Chi Kung) is the art of cultivating and condensing Chi in the Lower Tan Tien and thereby raising the pressure in this area.

The Lower Tan Tien is, in the Taoist energy paradigm, the center of the body. It is both the major generator and storage place for Chi energy in the body and the center of awareness. Taoists train this lower abdominal area as the second brain. In all Taoist practices the student is required first to lower the upper brain down to the lower brain. The student trains to consciously become aware of the second brain, so the upper brain which consumes a lot more energy than the lower brain can rest when it is not really in use.

The Lower Tan Tien is also called the “Medicine Field” as well as “the Elixir Field”, as it gathers and contains the healing power of the Original Chi or Prenatal Energy. Other names for it are the Ocean of Chi, the Sea of Energy, the cauldron and the navel center. The use of the expressions “Ocean” and “Sea” refer to the wavelike quality of Chi. The cauldron and the navel belong to the lower Tan Tien. The expression “cauldron” refers to the function of the lower Tan Tien as the chief laboratory and center of internal alchemy which transforms energy frequencies.

The Lower Tan Tien serves as the source of the life force or vital force which then as Chi becomes the source of Shen Chi or spirit power/energy.

Thus, throughout all Universal Tao practices including the highest ones, the Lower Tan Tien remains the key to opening the body and the mind for a free uninterrupted energy flow.

To keep the practitioners in this process firmly on the ground and rooted so that they do not lose the connection with the earth, Tan Tien Chi Kung provides a safe and effective method of bringing us “down to earth” and receiving the energy of the earth. To the extent that we ground ourselves, Tan Tien Chi Kung is the basis of our stability, physical and mental/spiritual balance. It helps us to live from our own center and be proactive instead of reactive, giving space to others as we are in touch with ourselves and value our own space. Tan Tien Chi Kung proposes that the source of true happiness and joy lies within our very selves and not anywhere else. The negative energies within and around us, which we

may experience as obstacles to our happiness, are the “raw material” for energy transformation. Through them we may learn to accept and appreciate ourselves, others and the world around us. It helps us to see our own negative energies as garbage we can recycle into compost which can then serve to compound our positive energies.

In the recycling process, our inner power will grow and the pressures from outside and within ourselves will come into balance. As a result, we will feel at ease and our Lower Tan Tien will be relaxed, which is the most essential technical requirement for keeping up the Chi pressure.

Tan Tien Chi Kung is above all a practice by which the unity of what is above and below is acknowledged and honored. Through its service as reservoir and focus of condensation of Chi, the Lower Tan Tien confirms the unity between earth and heaven in the body.

Tan Tien Chi Kung is a Chi Kung form that Master Mantak Chia has developed to build up the Tan Tien Chi. It is an important basic form for all the basic training, especially Iron Shirt Chi Kung, Tai Chi Chi Kung and Microcosmic Orbit.

The Lower Tan Tien is the place where our original force is stored; it is in the center of the belly just under the navel. This is at the same time the storage place for all the energy which we are absorbing and collecting during the Chi Kung exercises and Taoist Inner Alchemy meditation practice. In Tan Tien Chi Kung we make use of Tan Tien breathing, by which we will train the Tan Tien Chi in eight directions. You also learn to control and move the Chi through the power of the mind and to increase the Chi pressure in the Tan Tien with the Tiger and Dragon breaths. In this way you can send and circulate the Chi in Tai Chi Chi Kung, Iron Shirt Chi Kung and Microcosmic Orbit; you are also able to strengthen your connective tissue. The old Taoists first learned Tan Tien Chi Kung so that subsequently they could move the Chi into Tai Chi Chi Kung and Iron Shirt Chi Kung forms.

Chapter I
Power of the Inner Smile

Second Brain Chi Kung (Tan Tien Chi Kung) and the Power of the Inner Smile

The process of internal transformation in the Universal Tao practice starts with the Inner Smile down to the lower brain located in the lower abdominal area. It is the key practice for keeping Chi pressure in the Lower Tan Tien and the whole body, and it is the most effective practice for keeping all energy path routes in the body open.

Although the Inner Smile at first sight would appear to be an easy practice, it actually represents a great challenge. It holds in all its apparent simplicity a highly concentrated way to change our whole attitude towards life and towards ourselves. Yet, at the same time, it is the key to shifting and transforming our inner disposition and attitude so that we open ourselves to the ability of flowing with the stream of life. Also, it helps us not to "push against the river" and use force on ourselves and others. It trains us to accept ourselves and thereby others so that transformation can come from within and not from above or outside, as we raise our awareness and mindfulness.

The practice of the Inner Smile is not a shrewd trick or an easy device to forget our pain and to repress and do away with it. We need to recognize that pain will always be there, as existential pain, which is there as we live and exist. We will invariably accumulate pain in the ups and downs of life. It is the very practice of the Inner Smile which trains us to look deeply into ourselves and transform the pain into a source of self-transformation and empowerment. We become truly invulnerable, not by ignoring the pain, but by becoming more vulnerable and getting in touch with ourselves. By so doing we can be more sensitive to others and to the world. It is good to shed tears as we detoxify ourselves. In a patriarchal culture like ours, men are not supposed to show their tears, because it shows their weakness. If we learn the Inner Smile, we open ourselves to our deeper self and we learn to process our pain. In this

way we restore the energy flow so that we can laugh again and then smile, as we learn to embrace ourselves, others and the world.

Yet, when we cry we lose energy. However the Inner Smile is a training to sense, feel, see and hear deeply, and learn to accept and embrace what is there so that life is opened up again.

By smiling into the heart of our own being and into our whole body, we affirm the basic intrinsic goodness of existence and our gratitude for being alive. By smiling inwardly we create the ground for self-esteem which in turn is the root of our own sense of dignity, and is essential for self-empowerment.

This may be called the first process of alchemical transformation on which all the others depend; it is the beginning of a new way of being, free from self-destruction.

It is not based on self-confrontation and fighting ourselves, but on learning to accept ourselves as we are, with a unique blend and combination of good and negative energies. We need both of them in order to grow. Without the negative energies there would be no impulse for the transformation process and we could not even raise our energy supply. The energy potential hidden in the negative energies would remain repressed and untapped.

Fig. 1.1 *Smile down to the Lower Brain.*

Smiling and lowering the upper mind down to the lower mind, the LowerTan Tien, is of particular importance as a way to tune in to our life source and raise our life force. By so doing, we make it possible for the diaphragm to relax and freely move up and down. This also makes the lungs and heart happy.

Laughing and smiling are perhaps the best ways to connect with the Lower Tan Tien, generate Chi pressure and inner power, restore the free flow of energy and increases immunity.

It is good to experiment with and experience different forms of smiling and find out for yourself the results of moving from outward laughing towards inner laughing. It is a process like hitting a drum on its ouside and causing vibrations inside; we go from outer laughing towards inner smiling. The more subtle will be the vibrations in the Lower Tan Tien and the more powerful the Chi pressure generated.

Fig. 1.2 *Outward Laughing*

Fig. 1.3 *Inner Laughing*

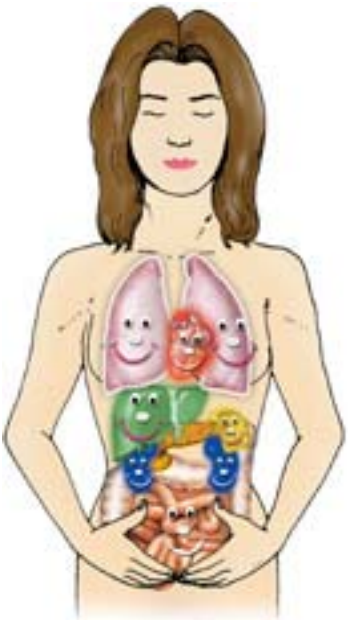


Fig. 1.4 *Inner Smile*

The more inward the smile is, the less the lungs are used and the more energy is economized and natural (embryonic) breathing is approached.

Smiling and laughing Chi Kung are such a natural form of relaxation that we hardly think of them as a Chi Kung practice. Yet they are one of the most effective ways to restore the Water/Fire balance in the body. By making the sound “Ha”, heat is released and excess fire energy is expelled,and the body is cooled and thereby rebalanced.

The Inner Smile is not only essential to get in touch with ourselves. It is also the key which makes it possible for us to get in touch with, receive and absorb all energies from the Universe, the Earth and the Cosmic particle energy around us, and to open ourselves to the Universe.

Fig. 1.5 *Group Laughing*

Tan Tien Chi Kung and the Alchemical Process

The sound “Ha” together with the sounds “Ho” and “Hum” constitute a triad of sounds which serve as seed mantras in the hundred syllable mantra in Tibetan Buddhist practice, by which the highest wisdom energies are invoked. Specific sounds raise particular energy frequencies in each organ. Obviously the sound “ha” is the sound which makes the whole body feel good, as it generates Chi and make energies move, so that a state of well being is experienced. Laughing and smiling are natural ways the body uses to rebalance itself and release stress and tension and restore the Chi flow.

The very low sounds which Tibetan monks make, when chanting their mantras, are very similar to those we heard on the sound track of the Nasa recording of the sound of the Earth, Saturn and other planets. Normal people cannot hear, but the adept can hear them. These sounds originate from deep in the belly and thereby create powerful vibrations in the Lower Tan Tien. Such a practice may well be called Tiger and Dragon sounds in the Tan Tien Chi Kung practice, as it raises internal pressure and power to move Chi.

In the Healing Sounds practice, we have learned that the Inner Smile heightens the activity of the thymus gland, the gland of the heart and the seat of loving and love Chi. The heart is capable of producing 37 layers of magnetic fields. The thymus gland produces the T-cells and killer cells which ward off and destroy cancer and other dangerous cells.

Fig. 1.6 *Inner Smile spiraling out to the Universe as the heart radiates out power to the Universal magnetic fields.*

Smiling down into the body has multiple beneficial effects releasing toxins and restoring the energy flow and the capacity of the body to heal itself.

Simple Practice

1. Sit, stand or lay down in a comfortable position.
2. Use the fingers of both hands especially the middle, index and ring fingers. Touch the navel with the palm.
3. Smile into the mideyebrow and feel it relax. Smile and relax the upper mind down to the neck, down to the chest and gradually down to the Lower Tan Tien.
4. Feel the navel area starting to get warm. Start to spiral the energy in the navel area like the Tai Chi spiral. Feel the Chi getting warmer and warmer starting to raise through the spine to the brain.
5. Keep your mind on the lower abdominal spiral, and lightly feel the brain spiral and the Chi pressure on the crown and the mideyebrow. Gradually feel the Chi pressure push

down into the nose and open the sinuses and feel the nose open and your breathing improved.

6. Moving Chi down into the sinuses will help prevent colds and flu.
7. Slowly let the Chi go down by itself to the navel. Smile down into the navel a while and feel the energy stored.

Second Brain, the Lower Tan Tien Consciousness

Taoist practice is entirely based on the art of sensing and feeling as the primary form of cognition which precedes all other forms. It is the nervous system which enables us to feel and sense our body.

It is our mind which directs and guides the Chi but if we cannot feel and sense our body, the mind cannot give direction and guidance. To be able to feel and sense, our nervous system needs to be in a relaxed state. The moment we are stressed and tense, our ability to feel and sense the processes in our body declines.

When we are pressured or feel ready for action, we are not prepared to turn inwardly, smile to our mind, our nerves and our Chi. We reinforce the disconnective process, and as a result, are confused and upset. We feel the internal fracturing and fragmentation taking place but do not understand (or wish to understand) what is going on.

These are valuable starting points: letting our mind come down and sink in our body to our Lower Tan Tien; giving attention to our breathing and posture becoming aware. They create a way out of disconnection and back into getting in touch with our body. This means that we have to entirely relearn to value and listen to our body and become sensitive to what it wants to tell us. The choice is ours.

In this process of relearning to be open to ourselves and to connect with our own body, Tan Tien Chi Kung is basic. Especially because it brings us back to what in our culture is as a rule treated as the least honourable part of ourselves and thereby elevates us as human beings.

As a result of the orientation of hegemonic culture, human potential, which is intrinsically multidimensional, is increasingly steered

in one direction. Dominant forms of disembodied abstract cognition have ascendance over all other embodied forms of knowledge.

Widespread 'dis-ease' is a result of this sharp decline of a basic sense of cause and effect and a generalized lowering of Chi pressure and feeling of being threatened. This feeling of 'dis-ease' generates negative emotions which are then projected onto people who do not share our views of the world. Such tendencies towards racism and fundamentalism can only be overcome if we are all the same human being, sharing the same body and spirit and learning to truly value ourselves in our whole being.

Precisely because of the desperate conditions this situation engenders and the resistance it creates, there is an awakening to the need for a new, more embodied way of understanding the universe and ourselves.

Lower Tan Tien as the Second Brain

Recent advanced research confirms the ancient Taoist insight, gained over a long period of inner observation, that the lower Tan Tien is a key source of intelligence. It actually supplies the brain with the basic orientations, data and information which it can then process. It turns out to be full of neurotransmitters. This is why I like to compare the brain to the hardware of the computer and the organs to the software. The organs feed the brain with information and it depends on the quality of the organs and what is transmitted to the brain what is processed. So the quality of the organs and the way they are activated by the brain affects the outcome.

For this reason, the Lower Tan Tien is also called the second brain by Taoists. It may well be called the first brain, by the way it processes and balances the emotions which in turn determine the nature and quality of the intellectual process. Growing imbalance and disconnection between body and mind, thinking and feeling and the various forms of cognition and intelligence, appear to be a central feature of the prevailing global culture. It is not surprising that, violence and conflict in all domains of life have become chronic and widespread.

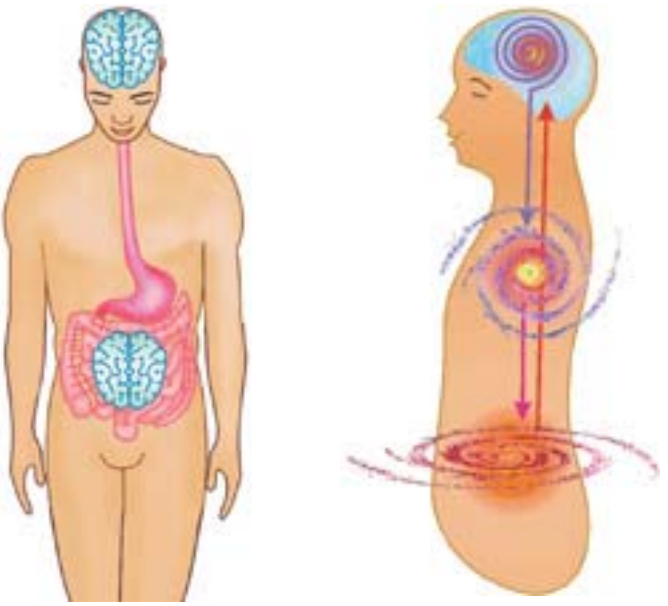


Fig. 1.7 *A. Lower Tan Tien and Second Brain*
B. Upper, Middle and Lower Tan Tien Connections

Tan Tien Chi Kung and Natural Breathing

The natural form of breathing is Iron Shirt abdominal breathing. This is the principal measure by which to evaluate the body's state of health and capacity for self-healing. To the extent that we practice abdominal breathing, we have retained the ways we used to breathe as a baby and child.

When in the course of life, natural low, deep, long and quiet abdominal breathing is replaced by high short and shallow breathing in the chest, we lose our inner stability. We have lost a major source of vitality and self-healing, as our breathing requires more energy than it generates. Through the loss of internal pressure, we also lose our inner power, as the balance between our inward pressure outwardly and the outward pressure inwardly has been lost.

We can only regain our vitality by recreating this internal power so that the two powers are once again in a dynamic and reciprocal state of interplay. This is the inner meaning of Chi Kung: to restore the inner power by learning to breath naturally again.

The cultivation of this natural form of breathing, which reproduces the process of prenatal embryonic breathing, is essential to Tan Tien Chi Kung. It is through this form of breathing that we recover our original Chi and thereby our internal pressure.

Through this form of breathing, the amount of energy needed for external breathing and the intake of oxygen are reduced. Precisely because of this, the lungs can then take in more oxygen. At the same time, the capacity of the whole body and all its cells as well as the capacity of the lungs to store oxygen is enhanced. Thus with less energy, breathing has improved both qualitatively and quantitatively.

Tan Tien Chi Kung breathing relies less on breathing in Chi from outside, as it basically draws on Original Chi. As a result of this, the abdomen starts to breath by itself and the process of breathing becomes economical, effortless and unintentional. Inner original breath and outer breath have a relationship as the external breath can move the inner breath and vice versa, as Chi pressure from the Lower Tan Tien helps the lungs to breathe. The way the lungs are used also affects the original internal breath in its unfolding. Yet the two forms of breathing are to be clearly distinguished. Genuine inner breathing can only evolve if external breathing gives it space.

At the same time, Chi pressure is kept up and remains high. The more unintentional and natural this process is, the more it enhances the free and full flow of Original Chi throughout the whole body, its reservoirs, pathways, organs, glands, fasciae and all cells.

This kind of breathing may be compared to that in a deep and calm sleep. It is not without reason that when we see children asleep, we are at once struck by the beauty and serenity of their expression and the peaceful energy they radiate. We feel at once the fine and good energies as if the inner quality of the Chi in the child's body becomes transparent. We like to caress and embrace it, not realizing that it mirrors our own potential Chi Kung state which we long for.

In prenatal breathing, a great change takes place in the manner of breathing. It is no more through the nose. The whole body starts to breathe. This is at times called skin breathing, although the whole body is involved. In this natural state of breathing, on the out breath we send the Chi to the tendons, muscles and the skin, while when we breathe in, the Chi flows to the bone marrow and the internal organs.

Skin breathing may be called a high energy form of breathing. It does by itself what we most need to generate and rejuvenate ourselves.

On the in breath, it dislodges the fat accumulated in the bone marrow and it creates and renews in the bone marrow the red and white blood cells; these cells are needed to transport the supply of nutrition, to remove waste and to neutralize germs. Then it replenishes the organs with fresh energy.

On the out breath, it presses out the fat from the fasciae in between the tendons, muscles and the skin and pushes out the waste through the pores of the skin and hair and opens it for fresh Chi to enter.

Thus skin breathing regulates the continuous exchange process between inner and outer energies. Crucial for regulating this exchange is the coordination of the perineum and the anus. It is not surprising, therefore, that this training is at the core of Tan Tien Chi Kung.

In the state of skin breathing, the borders between the inside and outside of the body tend to dissolve and a sense of unity with the universe may arise by itself. One feels at the same time at home within the body and in the universe, which is then experienced as one's own extended body. Skin brushing enhances this natural exchange process.

Natural breathing becomes possible when emotional fixations and entanglements are overcome so that you feel at peace with yourself, relaxed, calm and happy. To induce this process, the practice of the Inner Smile, the Healing Sounds and Fusion are of crucial significance. They help to clear the energy reservoirs and pathways and also enhance the state of receptivity of the organs, glands and cells as well as of the bones, so that the flow of Chi can enter and do its work.

In terms of energy use, Chi Kung as a practice is superior to the external practice of sports and athletics. In a Chi Kung state the body can largely rely on the natural flow of original Chi. This is also more healthy, not only because energy is saved, but also because the body is often tortured or exposed to different forms of rude treatment in sports and athletics and in activities like aerobics and jogging. In a Chi Kung state, the body can do with little oxygen.

This explains why advanced Chi Kung practitioners who have learned to rely on embryonic breathing have acquired a high re-

generative and rejuvenating capacity. They are known for their longevity, as they chemically and spiritually reproduce the exchange mechanisms which make the child grow.

Iron Shirt Chi Kung and Tai Chi Chi Kung

Tan Tien Chi Kung has a particularly close connection with the three basic Iron Shirt Practices which focus on the strengthening of the internal organs and firm rooting, the change and strengthening of the tendons and the cleansing and renewal of the bone marrow. As to the Iron Shirt practices, compression as mentioned above, creates space for new Chi in the muscles, tendons and the bones, as the fat which has been accumulated there is expelled. With the process of aging, fat tends to accumulate, and as a result the bones lose their regenerative function, as fat takes the place of blood cells.

Through bone breathing, the regenerative capacity of the bone marrow is restored, as new red and white blood cells start to regrow after the fat has been expelled.

Maintaining a firm but gentle Chi pressure in the Lower Tan Tien is also at the heart of creating Chi pressure, needed in Tai Chi Chi Kung.

Chapter II
Squatting Chi Kung

One of the most wonderful Tan Tien Chi Kung exercises undoubtedly is squatting. It is so common and well understood in certain regions of the world relatively less affected by modernization. It is hardly noticed; yet now it is considered worthy of elevation to human “exercise”. This position of squatting has been the position for humans to move the bowels throughout the evolution of human beings.

Fig. 2.1 *Squatting Position*

Since the beginnings of civilization, people have known the highly beneficial effects of squatting. Their bodies told them to do so and in this way they recreated a deep state of relaxation, in which the sacrum and spine open and the warm life current in the body regained its optimal free flow.

It is not incidental that this yoga position (in the original meaning of this Sanskrit word which means unity, connection, relation) is, of all postures, the one that comes closest to that of the child in its embryonic high energy state. Its capacity for energy storage and consumption is optimal while the metabolic rate is low and energy consumption most economical.

It is not by chance that the common people, to rest from their labors in the service of the powerful, squatted and the chairs and stools were reserved for the rulers and aristocrats who then could, at least while sitting, keep their feet on the ground.

Fig. 2.2 *Squatting to connect with Mother Earth and Galaxy below.*

More than any other posture, squatting opens the lower lumbars and thereby prevents hernia. Also it activates the latent motor force of the pelvis, opens the kua, flexes the hip joints, induces downward pressure and release of waste, gases and toxins for recycling in the ground and reactivates the colon. By the gravity pull it provokes, it stirs the earth Chi current to move and bounce upward to the perineum, to awaken the spinal fluids in the sacrum, open and elongate the spine, rebalance vertebrae and ease the Chi current upward to the crown and the crystal room.

Also the lungs and the heart get a massage, as external breathing changes into internal breathing while the Tan Tien helps the heart by taking over its pumping function for the Lower Tan Tien, facilitating and activating the Chi and blood flow.

It also significantly contributes to lengthening the psoas which shortens with age, through anxiety and as a result of too much susceptibility to cold temperatures. It is the shortening of the psoas which pulls the body over and out of alignment with gravity so that the up and downward pull is lost and hence the flow of energy upward and downward is slowed.

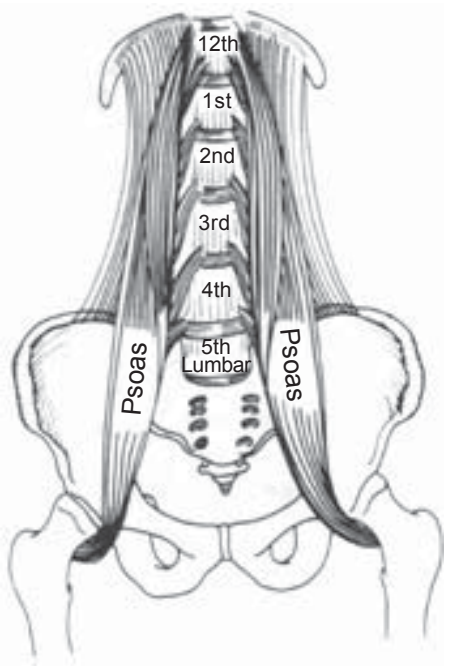


Fig. 2.3 *Psoas is a supporting shelf below.*

Hence the Tao Yin practice which focuses on restoring the original suppleness of the psoas muscle which is also called the “soul muscle” in Chinese is of vital importance. Obviously the soul, to grow, needs a well aligned body so that when the time for the transference of the soul, upward through the crown comes, it can count on a straight body, in line with the earth and with heaven.

By relaxing the psoas, unity between lower and the upper part of the body is promoted. A relaxed psoas makes it possible for the Chi to freely flow upward, connecting the lower lumbar with the lower part of the kua (groin). When the psoas muscles are relaxed, the earth Chi can freely flow from the legs into the upper body, in particular the spine (via the perineum and sacrum).

When the psoas muscles are relaxed, Chi can freely flow between the kidneys via the veins to the heart and vice versa. The free exchange between fire Chi from the heart to the kidneys (by which the kidneys are warmed up and the heart is cooled) and from the kidneys to the heart (by which the kidneys are warmed and the heart is cooled) is the basis of the balance between Water and Fire energy in the whole body and thereby the balance between Yin and Yang.

Squatting is also closely connected with togetherness. When people in communities not yet affected by modernization relax, they often squat together in a circle. It is also the ideal position in the field when at work, and work is alternated with moments of rest. It is also part of the realm of play and playfulness among children.

There are advantages in turning for a while into a frog or into other animals such as a tiger, lion, crane, turtle, rabbit, swallow, elephant, cobra, locust and so on.Through observation of how animals use their energy, the great masters, in their wisdom, invented these postures.

As the squatting position generates a state of relaxation and stillness, it is also a natural posture for meditative practice. One sees that in many indigenous cultures people assume the squatting position precisely for that reason.

Also, the sleeping posture which curves the body, while lying on the side and pulls the legs in, is close to this position. Obviously the subconscious counsels this position for its regenerating quality.

In many cultures, when people die they are laid in the squatting position as it resembles most closely that of the child before it was

born and thereby is an unconscious expression of reconnecting the body with its original immortal state of being.

Squatting may perhaps be called Tan Tien Chi Kung exercise number one but let's guard against elevating it to the highest rank of exercise in any system. Let's protect its entirely natural character for those who are spontaneous Chi Kung practitioners without knowing it. Their body knows and the wisdom of their bodies, as they inherited it from the ancestral culture, understands the secret. Yet as the deep sense of Taoist practice is to facilitate and accommodate nature, it would still be just to see it as an exercise.

Practice Squatting

A good exercise for developing the squatting position is to stand with your feet shoulder width (when you improve your squatting ability, place both feet together) close to a wall, facing the wall and then to squat straight down from the kua (like you are sitting down, not bending the knees too much). The wall will prevent you from leaning forward when you squat. Some people tend to bend the head forward first, and also to bend the back and lean forward. Using a wall will make you see whether you are bending too much. Breathe in the Lower Tan Tien. Keep the chest relaxed and feel a force pulling you down and a force pulling you up, when you squat down to the Earth.

To squat down you can also use the help of a partner or the edge of a table. Be sure that you go straight down and bend from the kua. When you work with a partner, stand shoulder width facing each other, arms stretched, and firmly grasp each other's wrists. From this position, squat straight down together from the kua while supporting one another. Sink as deep as you both can without leaning forward (See Fig. 2.4).

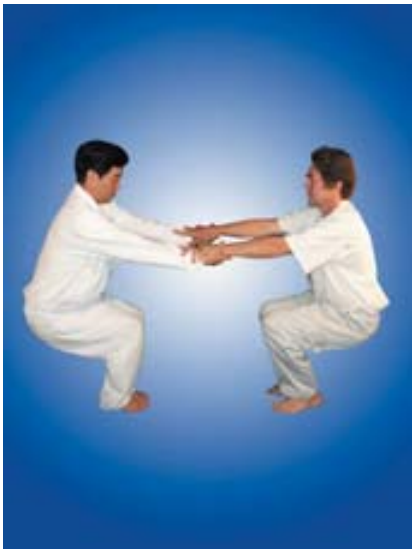


Fig. 2.4 *Squatting with a Partner.*

2. Start standing in front of the wall 18 cm or more away. Eventually you can move closer to the wall. Place both hands on the sides, the tips of the fingers touch the thigh bones.

Fig. 2.5 *Squatting using a wall.*

3. Slowly drop down from the groin, like you are sitting down; drop till you can‘t go any further, and lightly bend the knees. If you bend too much your knees will hit the wall.

Fig. 2.6 *Squatting using the wall in front of you.*

Chapter III
Tan Tien Chi Kung

Our Body and the Body of the Universe

In Chi Kung there may be called a “Yin” state or a state in which receptivity is a principal virtue. In a later period the character representing Chi is composed of two parts those for “rice” and “air”, implying that energy was seen as the combined product of the intake of oxygen and food. Is this shift indicative of a change in perception which coincides with the rise of patriarchy and a shift from inner to outer?

Chi

As the inner movements of body and mind become more natural, also the Chi flow, generated by the Chi pressure in the Lower Tan Tien, becomes more natural and will ultimately move by itself. The more the Chi Kung state is approached, the easier will be the transition from an external to an internal movement so that ultimately the body moves by itself, carried forward by the invisible powers of the universe. In the state of Wu Wei, it would seem as if nothing is done while in actual fact everything happens. It means that emptiness has generated fullness and nothing has produced everything.

The Lower Tan Tien is also the place where the Chi which we indirectly receive through the intake of air, water and food as well as the energies which we directly receive from the Three Forces (the Universe, the Earth and the Cosmic Particle) can best be stored and where the Original energy can be replenished. Yet for the inner practice, the major focus is relying on the original or prenatal Chi.

The vision and theory which inspires Tan Tien Chi Kung lies at the very root of Chinese medicine, in which health is seen as the natural outcome of self-reliance; the assumption of responsibility for one’s own life, attitudes and conduct.

As an inner energy practice, Tan Tien Chi Kung provides a focal point which underlies and serves the whole range of practices of the Universal Tao: to help structure and sustain processes of transformation at different levels and stages.

Chi Kung may be viewed as the practice by which separation and fragmentation, to which we are subject in our daily life, as we become stressed and alienated from our true being, is overcome. We become inwardly united by the Chi flow, as we are structurally properly aligned. In and through the practice, we learn to heal ourselves and become *whole/undivided/holy* again, regaining our original state of being. All three words convey processes towards reconnection and unity and have the same etymological root.

In the Taoist perspective, the recreation of unity within ourselves and the process of overcoming inner dispersion and fragmentation are crucial. This process is dependent on reestablishing within ourselves, through the practice, a sense of inner unity in which polarities are harmonized and one begins to feel at peace with oneself and the universe.

It is essential to this process that stagnations in the free flow of energy are overcome and the natural spontaneity of the movement of energy within the body and the mind are restored. The practice serves to facilitate, enhance and accommodate natural processes. The use of force ("pushing the river") has a contrary effect, as it tends to block the energy flow by creating tension in the body.

Tan Tien Chi Kung has a key role in setting in motion and sustaining these processes, not only in terms of physical health and self-healing, but also for the purpose of mental balance and spiritual growth.

In the Taoist vision, there are three kinds of bodies, the physical body, the energy body and the spiritual or light body. The immaterial spiritual (high) body has its genesis in the transformation of the material physical (low) body. These two bodies are mutually dependent on each other and are connected with each other through the energy (soul) body.

In Taoist tradition and in Chinese medicine, the physical body and its activities are viewed as Yang while the energy body or Chi body is considered Yin, and the spiritual body is the unity and marriage of the two. This also explains the unique emphasis in Chi Kung on Chi and the subtle inner structure of the energetic process in human development.

It is the Chi which provides the link and serves as the bridge between the physical and the spiritual bodies and activates and moves them in their processes of mutual support and transformation.

For this reason, Chi has been likened to the fuel which feeds the engines of a boat. If there is little fuel and it is of poor quality, the ship is not likely to carry the passengers very far and the journey will end before they reach the other shore.

The process of transformation of the physical body into an energy body is generated by the mind, which guides and leads the Chi. The Chi will go where the mind leads it. As a consequence, the process of transformation is decisively dependent on the quality of mindfulness and awareness.

The process of awakening the body and its potential for self-transformation depends on the commitment to self-transformation. This takes form in the discipline one develops and the resulting focus and attention to the process. This discipline is not primarily an outer discipline and does not depend on any outer authority; it is an inner discipline, nourished by the effectiveness and truthfulness of experience from within as the basis of practice. These then serve to awaken and remind one of one's inner commitment.

The physical body cannot be seen as independent from the body of the universe, as if one could breathe and live without it or in spite of it. Intrinsic in the Taoist vision is the perception of one's own individual body as an expression of the loving body of the universe by which it was given birth, as is stated in the Tao Te Ching. By transcending the separation between oneself and the universe and honoring one's intrinsic unity with it, the universe becomes one's own body.

With the growth of the awareness of this relationship, a sense of responsibility for it and qualities such as love and compassion with the universe and the world can grow. The universe and the earth will then no more be experienced as objects to be conquered and manipulated but as one's own father (heaven) and mother (earth).

This experience of an inclusive and compassionate sense of life, rooted in the cultivation of love and compassion, is summarized in the ancient saying, "Embrace the universe as a mother her newborn child". It is in the very practice of Chi Kung and Tan Tien Chi Kung, as we become grounded and connected and begin to feel at ease and relaxed in our body, that this sense of unity is cultivated and reinforced.

It is in the practice of Cosmic Chi Kung and its integration in all Chi Kung practices that we enhance our receptivity and sensitivity to our intrinsic relational nature of being. Our body is nourished and replenished by the Chi from the Universe (Heaven), Earth and by the Cosmic particles of which nature (including ourselves) is composed.

Getting in touch with the Universe

The Chi of the Universe can only be absorbed to the extent that we open our heart to the Universe and extend our consciousness and Chi to it as a token of our love. Only then will it respond. To be effective, mind and Chi need each other, as in the rise of internal pressure. We will only receive the love energy of the Universe to the extent that we acknowledge and honour our love relationship to the Universe.

This first of all implies that we acknowledge that the Universe is alive and that we are its children. Unless we awaken to this and bring it into our lives, it will be difficult to realize that we are part of it and we will tend to feel superior to it and see ourselves the center of the world which we will wish to use as a tool for our own interest. The Universe may then become a profitable fetish which we use, because we believe we can get something out of it like a bank account.

This attitude of seeing ourselves as a small cosmos which is only there because it is nourished in every breath by the great cosmos, so typical of the Taoist tradition, is shared by many ancient cultures. It was thus, part of a common human pattern beneath all the diversity and multiple originalities, before the process of homogenization was enforced with the advent of modern times.

When we relate to the Universe, it will respond and we will begin to feel it in the changes in energy in our body. This is the law of reciprocity underlying our relationship with the Universe. It requires an attitude which is radically different from the one in which the Universe has been reduced to a useful object which needs proper management.

In the course of Chi Kung of which Tan Tien Chi Kung is a particular form, a sudden sense of wonder may arise in a flash of awareness: although one is responsible for one's own life and for

one's own breath and Chi, one realizes that one's breathing is only there, because one breathes. This awareness then grows with the realization that one is part of the great whole and its rhythms; our awareness processes the life giving energy.

Such a sense of wonder may arise in between the out and in breath and the in and out breath in that moment of emptiness when life is for a fraction in suspense. Then one is filled again with new life force and the Lower Tan Tien, enjoying the bio-electromagnetic current, in which the essence of food and air is converted, enters into waves of fine vibrations which ripple in all directions. It is like a drum whose skin has the right tension and internal pressure to produce a powerful sound. The same is true with string instruments. If the strings are too tight, they snap. If they are too loose, you cannot play. Only when they have the right tension does music become possible.

The Universe cannot resonate with us, if our musical instrument is out of order and we cannot tune it.

Yet, in order to truly get in touch with the Universe and with the world, there is a clear insistence in the Taoist view, that we need to be first in touch and connected with ourselves. It is difficult to be in touch with the Universe, if we are not first in touch with and love ourselves. As the Chi Kung Master Jesus, the son of a Palestinian carpenter, said, "Love your neighbor as you love yourself." In order to receive love, we need to give it so that a balance of reciprocity is maintained and enhanced on the basis of mutual exchange. To be able to give, one must first gather abundant good energies to share.

Sensitivity and a loving attitude towards oneself is thus a condition for getting in touch with others and of the energies of the Universe. As I have more than once suggested, the relationship with the Universe may be compared with that between two lovers. In order to attract the attention of the person whom one has fallen in love with, one needs to first share one's good intentions and qualities, to stir openness and love on the other side. A true relationship is only possible, if there is dialogue and partnership and a process of mutual exchange in an interplay of give and take.

At the heart of Taoist practice stands the process of the alchemical conversion of energy: matter turns into energy and energy into matter of another kind and in another form. I have often observed that what is material immaterializes and what has immaterialized once again materializes into another form and state. Thus, the potential of the physical body to become a spiritual body is actualized.

As a rule, because of the materialist perspective in present day dominant culture and the immediate utility of Chi Kung for enhancing health, some may tend to use it as another outer fitness practice. Those who make use of it its original intention, develop inner power.

There is a growing group of people who long for a new perspective on health and self-healing which has its roots not in any dictates and truths from outside, imposed by any institutions, but in one which can be verified through one's own life experience.

Chi Kung: Unconsciousness-Wonderment

The view which limits Chi Kung practice to strictly personal affairs tends to ignore the role of Chi Kung as a way of life and a state of being, nourished by an inner practice to cultivate virtues and attitudes towards the Universe and the community at large. The cultivation of these attitudes brings about in oneself a particular quality of being which may be called a Chi Kung state of being.

It is this Chi Kung state of being which nourishes and sustains harmonious forms of conduct in relations with the universe, nature, oneself, partners, family, neighbors and people at large. In a higher Chi Kung state, the healing process goes by itself, as the emission and transmission of vibration frequencies naturally takes place, just as a baby generates tenderness and openness in those who see it.

It is not surprising that great Chi Kung Masters like Jesus of Nazareth and Taoist and Buddhist Masters love to have children around. They remind them of the playful, joyous, spontaneous loving nature of the Universe and of their own true nature. They realize also that children help them to activate their own native energies, especially their heart energy. What actually happens is that children awaken the higher energy centers.

As a functional practice, the focus in Chi Kung is on its immediate effects like in the Healing Love practice in which life energy is saved, health is enhanced and the organs are regenerated. Chi Kung is at the same time, however, a practice by which Chi is transformed into spirit and low energy substance is transformed into high energy substance. At every stage the energies take on a more refined and subtle form, as the process towards unity with the Tao comes closer.

It is not true that in Healing Love practice a sacred body is created out of a profane body. The body was always sacred. Through the practice, awareness is cultivated through which experience undergoes a revolution: the indivisibility of the material and the material as one and the same indivisible energy is realized and thereby experienced in a new way.

Then energy may reach forms which are wholly beyond the imagination of the conventional mind, as it is moulded in cultural conditioning which severely restricts the human potential, both in terms of the transformation of the body and of the mind. Reading the stories of the Immortals gives us an inkling of these processes of self-transformation and the powers they generate.

In the *Tao Te Ching* Lao Tzu speaks of the wonders the higher cultivation of spirit energy may generate: from subtle wonders to mysterious wonders to incredible wonders. These are not to be understood as romantic metaphors but actual processes of Chi transformation by Chi Kung Masters. In the real world they are moved by and move high energy frequencies, inexplicable in the canons of orthodox materialist science.

One can still sense this potential (for such a state) in and around oneself as, underneath conventional awareness, there is another wholly different form of awareness. In this state what is conceived as impossible is precisely that which inspires us in our Chi Kung practice.

It is this state of generating wonder which throughout history has been the key characteristic of all Taoist Immortals as well as of great Buddhist, Indian and other Masters. They defied the rules as well as the perceptions of the society in which they lived (by their inner sense of freedom). This state was sometimes called one of “crazy fellowship” as it was so uncommon and often broke with the standards of submission and docility to authority. It was often characterized by a high degree of spontaneity, humour and joyfulness.

We may see our "old state of being" as the outcome of a process of self-domestication which we often use to excuse ourselves for not daring to perceive our own virtues as potentialities. It's as if these were only the privilege of highly endowed people unlike ourselves or merely belong to the past of "Once upon a time....."

Yet at the same time, it is these virtual states of being which move our innermost being, the "unconscious" state deep down within ourselves. These states may well, like our ancestral Chi, be nourished by our prenatal memory. We get in touch with the hidden liberative potential within ourselves, beneath the crust of our active functional consciousness and come to sense the energy of the invisible and virtual creative energy which awaits our invitation to be actualized.

In modern Western culture, as a result of a long historical process of disconnection, the unconscious or subconscious was seen interfering with the need for rationality, control and management of and over life. This expressed itself in a progressive disconnection between body and mind and the inferiorization, subordination and repression of body, feeling, emotions, instinct and nature.

Women were seen as the carriers of all these negative properties. Consciousness was reduced to what was in accordance with the demands for rationality, self control, outer discipline and other requirements of modern industrial society.

The unconscious and subconsciousness were relegated to the position of states which interfered with these values. Chi Nei Tsang, the practice of Internal Organ Massage, plays an important role in helping people to rebalance their emotions; CNT helps to connect with the subconsciousness in the belly as a source of self-esteem, power and peace.

In Taoist practice, relaxation, inner peace or stillness is seen as a condition through which form of consciousness is suspended. We can then get in touch and feel what deep down in our "unconscious" or subconscious state our body tells us; what signals it expresses and wants to transmit. We may call this sensitivity to the consciousness in our organs, glands, energy path routes and flows, blood, lymph, bones, joints, heart and all the other organs and parts of our body, the Chi Kung state. We cannot always live in it but once we have access to it and know how it feels to be connected with the source of our primordial life experience, we can easily return to it.

It is this state in which we get in touch with the reservoirs in ourselves of latent inner power and energies which can help us to

transform our Ching Chi into Chi and life force Chi into Shen (Spirit) Chi. New states cannot arrive without old states departing; the new grows out of the old. The old one is a condition for the transition to the new one. Relaxation in this context does not necessarily require outer forms of peace and tranquillity. Surely with the high levels of interference in present day society, the body also needs outer stillness to get in touch with its original consciousness and high energy frequencies.

Historically, withdrawal has always been associated with meditative practice, as a mean of getting in touch. Yet meditation can also serve to make one better able to live in the world, in a state of Chi Kung. One is in touch with one's true self, from one's Lower Tan Tien and center and grounded, so that one is not too much affected by the storms of life; one is able to move into one's center where stillness reigns. Tan Tien Chi Kung is a precious practice to create a state of energetic self-reliance and to get in touch with one's hidden reservoir of high frequencies and energies.

In this context Dr. Van Xin, a present high Taoist Master, points out that Lao Tzu speaks of the Chi Kung state as a state which is neither conscious nor "unconscious" but a state which one experiences as "fuzzy and distant or distant and fuzzy". It is in such a state that genuine Chi runs in the body which then improves its physiological functions by itself as a variety of spontaneous adjustments take place.

Such a state is essentially one of relaxation which Dr. Xin says that should even be in our bones and joints. We know that our joints become flexible again, once they have learned to relax, after we have brought Chi into the them.

Dancing and Bone Chi Kung

The Chi acts as a softening cushion in between the bones so that they can smoothly turn and do not grind against each other, as happens when they have dried out and lost their softness. As they regenerate with the bone marrow practice, Chi fluids are brought into them and between them. Chi may be viewed as oil which greases a lock or a motor to make it work smoothly again.

It should be remembered that the sockets of the hipbones carry the whole body and its weight and that it is often due to overweight (too much fat accumulated in the Lower Tan Tien and in and be-

tween the fasciae of the whole body) that problems start. Another cause of the absence of Chi fluids between the bones is emotional imbalance and the predominance of negative emotions like depression and anger. These play a critical role. The smooth rotation of the hips as a process over time is directly connected to our emotional state, especially as we grow older.

The smooth functioning of the hip joints is crucial in the whole Chi transmission process. The Chi which comes from below has to travel upward. Breathing into the hip joints and the sockets and sending love into the bones and bringing the inward smile into them helps this process. The hip joints play a critical role as conveyors of the upward Chi flow from the earth, and if our body is well aligned, it can then further travel upwards.

That is why dancing and shaking, (apart from being a blessing for the lymph system), like in many ancient forms of dance, is so good for our joints. As we experience joy and firmly touch the earth she then responds by sending her Chi upward into our bodies. We let the bones dance. The more “inward” we dance, as a form of energy meditation, the deeper will be the effect. There is evidence that Chi Kung in its earliest stages was a slow dance which was done as its healing qualities were realized.

Therefore, dancing is a way to rebalance ourselves and regenerate our joyfulness and good humor as filling the joints and the spaces in between with Chi is an excellent Chi Kung practice. The Taoist dance form, as it evolves with its slow rhythmic gentle and graceful movements, would seem to integrate these advantages. The dance becomes the expression of the inner movement of the life force, like Tai Chi Chi Kung. Such a form of dancing has great healing powers.

The highest form of dancing would be one in which we inwardly balance out the dynamic relations between the elements and phases in our body with our surroundings and fire, water, metal, earth and wood. We then enter into a state of equilibrium and so merge with the Tao.

The joints can again produce abundant saliva, the elixir of life, which is replete with hormones and which contains a variety of precious substances essential for our vitality. Afflictions like arthritis and rheumatism may be overcome by the loving use of consciousness and Chi breathing instead of by any medicine or worse, surgical operations to replace the brittle joints with steel ones.

It is not without reason that in many indigenous cultures, bones are especially sacred and are, even long after a person has died, preserved with great care as they contain the spirits of the ancestors and the person. It would seem as if people intuitively knew that the bones are the generators of the substance of life and need therefore a special attitude of reverence.

Bone Marrow Nei Kung ("Nei Kung" means awareness or meditative practice), until quite recently a highly guarded secret practice, has always been seen as a vital key to grounding and embodying the life of the spirit in the body. To create and enhance the body's receptivity for the electromagnetic forces of the sun, moon, planets, stars and the earth, the bones are first washed and cleansed. After this, pressure is brought on them so that the fat inside, which accumulates through stress, a degenerative life style and age, is burnt. The Chi in and around the bones can be significantly raised or even doubled. To do this the presence of the original Chi pressure is needed first in the Lower Tan Tien. Without prior Chi, no Chi can be moved.

It has been discovered that the bones in the body which form its central axis have a crystal structure which facilitates the body's receptivity to the electromagnetic power entering from the electromagnetic fields of the Universe. The body generates and enhances itself as an electromagnetic field. In the body, the brain, the heart and the nervous system are such electromagnetic fields which resonate with the crystalline bone structures that draw the powers of the Universe and the Earth pulling us in opposite directions.

The more our bones and joints are alive and filled with the bioelectromagnetic Chi flow and the more its vibrations increase, the more we feel alive and naturally bounce between heaven and earth. Like our organs and glands, our bones are centers of consciousness, connecting us with Earth and Heaven.

This is at once visible in the way Tai Chi Masters move like tigers. This may have an "electrifying" effect on the surroundings and those who see and feel with them, as Chi is emitted and the Chi in the empathetic onlooker starts to resonate. Although the tiger is fully grounded at each step and movement, they move very lightly. They are totally relaxed and calm, yet highly awake and alert. One feels highly concentrated power, which can be mobilized at any moment into every direction. One feels stillness in the movement and movement in the stillness. One senses and sees the power of the mind and Chi combine in the power of the movement.

That is also the reason why dance, as a practice to "unite heaven and earth within yourself" has a transformational effect on the dancer as well as on those who see them and join in the dance.

True dancing only arises if and when the movement starts from the center, the Lower Tan Tien. For this reason Tan Tien Chi Kung is an essential practice for all dancers or all those who wish to experience and practice life as a dance.

The Nei Kung practice of the Bone Marrow Nei Kung, by gentle Chi pressure and infusing the bones with Chi, serves to regenerate them by renewing the blood. It requires a form of deep sensing meditation which can only be realized in a state of deep relaxation. Then even the hardest elements in our body yield to the force of the gentle, and what was dying comes to life again, as the stone yields to the water.

To move the bones from within and from without is very good. The reason why Taoist meditation always seeks a balance between stillness and motion in which the movement is the Yang element and the stillness Yin, with awareness, like in Tai Chi Chi Kung is because they are a unity of opposites. Yang can only come about because of Yin, and Yin can only arise thanks to Yang. Actually Yin is contained in Yang and Yang in Yin.

Is this not the secret of the power and elegance of natural movement in animals and in that part within ourselves where we have retained natural inner connection? The more bones dance from within and in unison with the Universe, the more it becomes a healing practice. Chi from all directions flows in and out and harmonizes, each time creating the inner power and pressure needed to infuse Chi power and gentleness in the next movement.

In many indigenous cultures the emphasis lies on the community as a whole and its relation with the Universe. This is why the dance is the most sacred form of expression. It opens a space to experience the divine directly within the vibrations it generates and in the unity of Yin and Yang it enhances. In such a form of dance, people are not only involved as individuals separate from each other, but they also experience their unity and connections with others as a community and with the Universe. In this way a regenerative process is set in motion and the unity of the community with the Universe is reaffirmed.

It is the dance which can generate that state of dynamic balance in which we feel connected with ourselves and with the whole.

In the dance we bring the center of gravity down in the Lower Tan Tien so that we enhance the ability to move from the center and let the pressure which builds up there move the body, filled with Chi moving in natural waves.

Dances have an intrinsic erotic and ecstatic quality, as they serve to transform the Ching Chi or sexual energy/life force energy into Chi, and stimulate the hormone flow. They may therefore be considered a particular form of Healing Love practice.

It is not by coincidence that dances of many ancient cultures continue until today. Dancing is connected with marriage celebrations, and is also common to great mystical traditions, in which it becomes the ecstatic expression of unity with the divine, like in the Sufi tradition. Also in the Christian tradition, there have been mystics (like the great Spanish woman mystic Santa Teresa in the 17th century) who danced to express their longing to experience unity with the divine.

A particular form of Healing Love practice (single cultivation) is belly dancing, of ancient origin in cultures of the Middle East. This dance had been closely connected with rituals of fertility and invoking the powers of the Universe and the Goddess. Belly dancing enhanced life giving powers before it was incorporated into patriarchal cultures in which women were subordinated and it came to serve as a means for men to raise their desire and passion.

By pressing the ground and swinging the hips, the kua opens and as the Chi from the earth runs up, the sexual organ and the whole pelvic floor are stimulated and the life force starts to fill the belly. It then begins to tremble and vibrate and the Chi moves to the sacrum, up the spine and around and through the whole body, filling the reservoirs, path routes, organs and glands.

This form of sacred dance was originally done by women among themselves, as men were not allowed into the life giving circle. Such a dance regenerates the life current and thereby grants a heightened sense of inner power, joyful vitality and self-esteem. It is therefore not surprising that this dance has come back in circles of women who seek to raise their autonomy and self-esteem as well as their joyfulness in life.

Thus, dancing in which the mind, Chi and the body are properly aligned with heaven and earth may be seen as a particular form of Chi Kung. People do Chi Kung as it helps them to generate, regain and balance out their life force and thereby enter into a “Chi Kung

state". They get more in touch with the energies of the Universe and their own energy and inner power.

If we lead the flow of the Chi with our Yi, the dance may turn into a kind of single cultivation practice, as we unite Yin and Yang within ourselves. Or, as men and women dance together they let mind, body and breath mutually adjust in the dance. For these reasons more recently these dances have been called "sacred dances". The transformational process regarding the life force is little understood, but quite well intuited.

As we have emphasized, the growth of pornographic culture in our time is closely related to the continued repression of the life force in present day hegemonic culture. There is intense pressure disrespecting the needs of the body and what is associated with it. Universal Tao practices in which the Lower Tan Tien is radically reappraised, as in the practices of the Microcosmic Orbit and that of Healing Love can play a major role in creating a new, more balanced culture.

These Chi Kung states are, in Taoism, intimately related to the birth and growth of the immortal child; the process by which we reconnect with our origins and in which our true being is born. The birth of the immortal child is intimately connected to this ability to access, see, feel, hear, taste and sense subtle wonders. Our higher energies open up and we can sense what we did not sense before in our body and around us.

In a Chi Kung state, there is a high quality of natural energy pressure both in the body and in the mind, through the practice of love, compassion and other qualities of being, and alignment with the forces of the Universe. A whole new range of physical and spiritual transformations in our mind and body become possible.

Chapter IV
Empty Force

Tan Tien Chi Kung is one of the Taoist Chi Kung practices used to develop the Tan Tien (Second Brain) and Perineum Power. We need Chi and Chi pressure in the Tan Tien as a foundation for most of the Universal Tao practices, especially for Iron Shirt Chi Kung and Tai Chi Chi Kung and meditation. The Tan Tien is the energy reservoir in the body. It is the place where we store the energy we generate, gather and absorb in Chi Kung and meditation. If the energy is stored in the Tan Tien it can be accessed later, if not, the Chi dissipates and cannot be used. The Tan Tien is therefore also called the Ocean of Chi. According to the Chinese medical theory, once the ocean is full, it will overflow into the eight extraordinary meridians. Once these are full, the Chi flows into the twelve ordinary meridians, each of which is associated with a particular organ. The Tan Tien is therefore the foundation of the entire energetic system of the body.

We usually refer to the lower abdominal area as the Tan Tien, but we actually have three Tan Tiens: the Lower Tan Tien (Second Brain), the Middle Tan Tien (Heart, seat of the consciousness) and Upper Tan Tien (behind the mideyebrow point, the seat of the Shen, the spirit). You can read more about the Tan Tien in the booklet on the Chi Kung meditation called *"Opening the Three Tan Tiens in Six Directions"*. All three Tan Tiens are used in Taoist inner alchemy. Because of their capacity to deal with a large amount of Chi, the Tan Tiens are used as a "laboratory" for Inner Alchemical work. Translated from the Chinese, the word "Tan" means elixir (literally cinnabar, a mineral used in the Outer Alchemy as a basis for the elixir of immortality, since it was considered to have the perfect balance of Yin and Yang). Tien means field or place. It is the place where all the energies of our body, the earth, the Universe and nature come together to form the pearl, the elixir of immortality, the nourishment for our soul and spirit. The Lower Tan Tien (from now on called "the Tan Tien") is located in the abdomen approximately three finger-widths below the navel near the center of the body. The precise location varies from person to person and depends on the body type. In the Tan Tien we store our Original Chi. Original

Chi is the Chi derived from the egg and sperm of our parents, from which our entire organism arises.

In Iron Shirt Chi Kung practice we learn to stand effortlessly and relaxed in the “Embrace the Tree” position using our internal body structure and alignment or rooting. We develop a powerful pelvic floor and the centering in the Tan Tien. In Tai Chi Chi Kung we learn to move this “tree”, circulate the energy and strengthen our internal power. All movements in Tai Chi originate from the Tan Tien. This important region is responsible for control and balance, two key ingredients in proper Tai Chi execution. Additionally, the Chi generated through the Iron Shirt and Tai Chi practice is stored in the Tan Tien. Practicing Tan Tien Chi Kung is for the development of the internal and rooting power and the centering of the body and the mind. It is necessary that enough energy is stored in the Tan Tien so that the Tan Tien is filled with Chi pressure and that our mind is strong and focused in the Tan Tien. This will also make us more focused, stable and balanced in daily life. It enhances our personal power. While the Tan Tien is both the source and container of Chi power, the mind acts like a general that issues orders to the Tan Tien for directing power. Through this we can draw energy quickly and effectively from this area and direct it to another area. This is especially important in Tai Chi and Healing Love practices.

We have a constant air pressure in our body. We call this Chi pressure. In Tan Tien Chi Kung we learn to develop this Chi pressure in the Tan Tien and to strengthen our organs and fasciae. Our system relies entirely upon Chi pressure to move the body fluid. We can actually increase our vital energy, strengthen our organs, and promote self-healing by increasing the Chi pressure in our organs and body cavity. The circulatory system, the lymphatic system, the nervous system and the endocrine glands will all be activated and blood, spinal fluid and hormones will flow more easily so that the heart will not have to work as hard. Increasing pressure in the abdominal cavity will help increase the Chi pressure used to move the Chi, blood and lymph fluid.

One of our goals is to increase the Chi pressure in order to increase the organ and the abdominal pressure so that the Chi presses outward on the fasciae layers from the inside. We pack the Chi in the Tan Tien and after it is released, the fasciae expand as do the organs. When people are sick, the Chi pressure inside decreases and falls below the Chi pressure from outside, which is

about 14.7 PSI (pounds per square inch). Sick people cannot take so much pressure from outside any more; they will become irritated very quickly and tired by people around them, etc. Life becomes a burden. A lack of Chi pressure also slows down all circulation (Chi, blood, lymph and spinal fluid). It is a downward spiraling movement of the whole life force.

Developing the Chi pressure is one of the best practices we can use to reverse the downward spiraling movements into an upward spiraling movement in the quantity and quality of our life force. In other words, the increase of the Chi pressure in our Tan Tien through Tan Tien Chi Kung will enhance our healing, martial arts (Iron Shirt and Tai Chi), meditation abilities and the art of daily living. It will also nourish our original force.

It is the Chi pressure in the Tan Tien that roots our body and mind. It is our electric wire in the earth. When the Chi pressure is low, we will have no rooting. The energy and the mind will be unfocused and will quickly rise upward and dissipate, and cause overheating, headache, pain in the heart and a distracted mind.

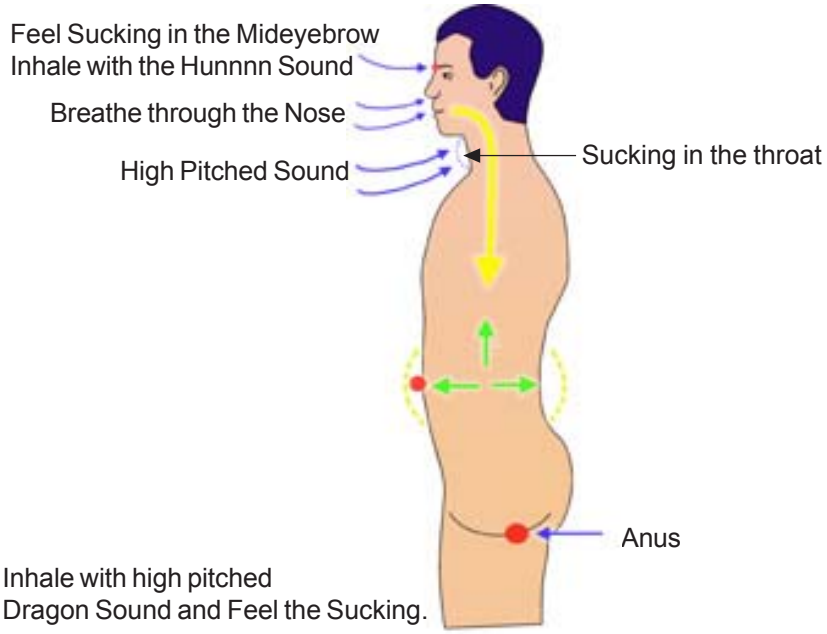
When you want to become a big tree, you need deep roots, which also means a high Chi pressure in the Tan Tien. This is one of the reasons why Tan Tien Chi Kung is the foundation for Iron Shirt and Tai Chi Chi Kung and it is also important for our meditation practice.

In the long run we will regain our inner peace and stillness through this inner power in the Tan Tien. This will restore our connection with our Origin, the mind of the Tao.

Dragon and Tiger Breath

1. Dragon Breath

a. Inhale with a high pitched (***Hunnnn***) sound and feel the suction in the Upper Tan Tien. Raise the arms up above the head and feel the throat center like a vacuum. Feel the Chi pressure in the Lower Tan Tien and the throat.



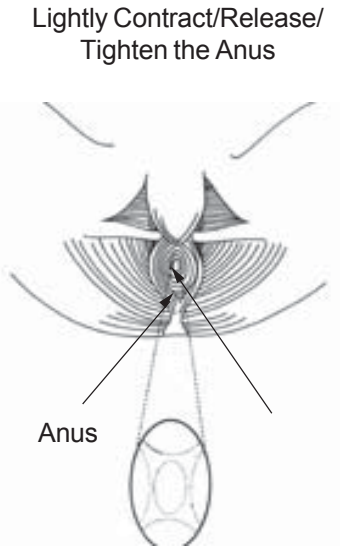


Fig.4.1 *Dragon Breath*

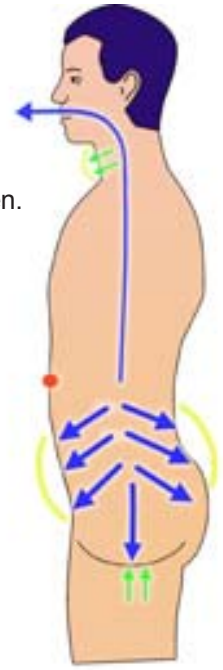
2. Tiger Breath

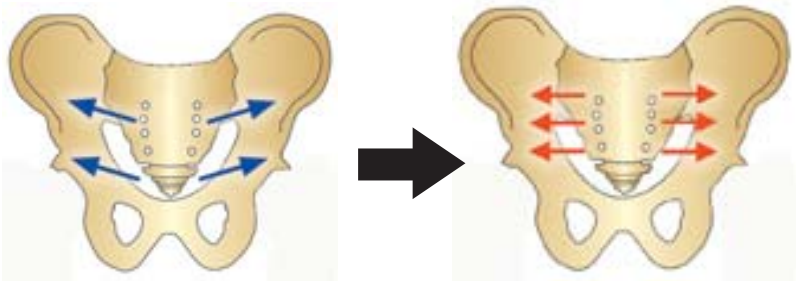
b. Exhale with the Tiger Sound (***Hummmm***) like a tiger growling. Press the arms down and feel the Chi pressure down to the lower abdominal area. Lightly pull up the anus.

c. Do this 6 to 9 times. Then do 3 more sets.

d. These breathing practices will be used in all the exercises.

Exhale with *Hummmmmm* Tiger Sound and press the pressure down to the Lower Tan Tien.





Feel pressure push the sacrum and separate the hips with a twist of the leg bones.

Fig. 4.2 *Tiger Breath*

Perineum Power

A critical role in Tan Tien Chi Kung breathing and the creation of the right pressure in the Lower Tan Tien lies in the tightening and sealing of the sexual organ, the perineum and the anus. The ability to contract the pelvic floor and the coordination of holding up and tightening the sexual organ, perineum and the anus is essential. This ability prevents leakage of essence energy and preserves it so that it may be transformed into vital life force energy and spirit energy.

This practice is called the closing of the Three Gates. The perineum, not without reason, is called the Gate of Life and Death, as it plays such a crucial role both in preventing degeneration and in activating all the organs and glands and other body functions.

Massaging the perineum is an excellent practice to vitalize the sexual organs and strengthen the pelvic floor. It also contributes to activating the pineal gland to which it has a direct connection through the Thrusting Channel. This is one of the finest meditations to do, as it helps one to become aware of the unity of high and low in one's body. It acknowledges the most honourable function of what are often called "the lower organs".

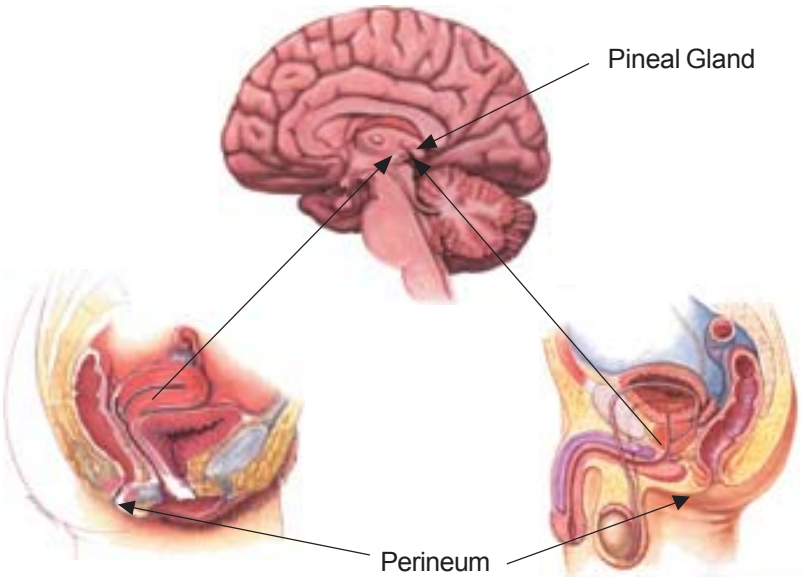


Fig. 4.3 *Perineum and pineal gland are connected.*

Tightening the perineum and the anus strengthens the pelvic and urogenital diaphragm and holds up and reactivates the organs in the Lower Tan Tien, thereby revitalizing them. If coordinated with the downward pressure of the diaphragm, it helps to provide the space in which the process of Chi compression can be realized.

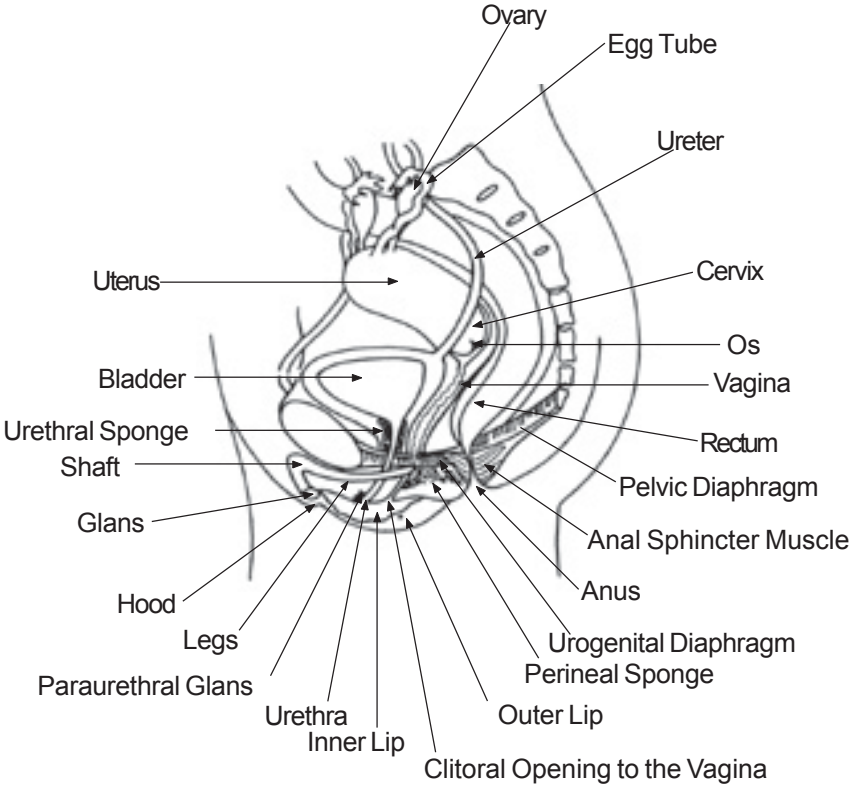


Fig. 4.4 *Urogenital Area in Women*

The exercises to activate the front, back and sides of the abdomen are one of the keys of Tan Tien Chi Kung. This is achieved by the anus exercises.The walls of the abdomen are strengthened, tightened and sealed to prevent leakage of energy. Smiling into the anus is a very important practice as, through the contraction of the anus, all organs in the body are vitalized. So the spiritual energy hidden in the smile helps the organs and glands to raise the quality of their energy and our consciousness which is condensed in them.

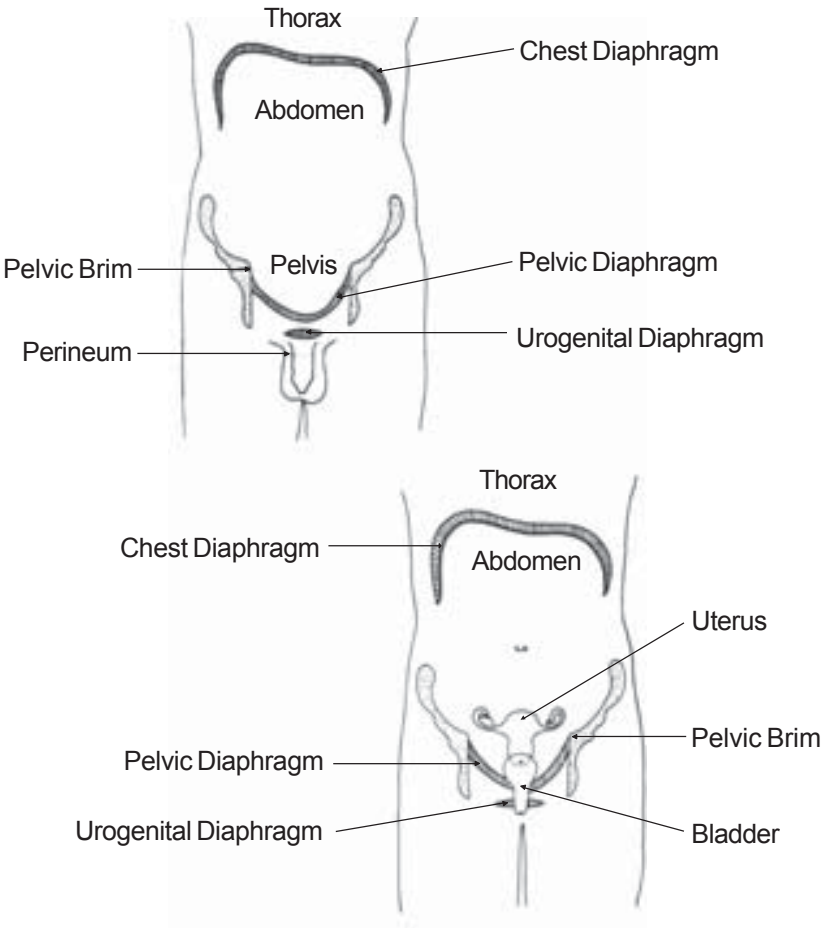


Fig. 4.5 *Pelvic and urogenital diaphragms are the major lower seals which prevent vital energy from leaking out the lower openings.*

As the Chi is pressed inward from all sides, Chi pressure in the Lower Tan Tien rises. The more the Chi is concentrated, the higher its expansive potential becomes. This practice has been called the creation of a “Chi Ball”. The creation of the Chi Ball is a wonderful metaphor which at once evokes the playful and relaxed attitude needed to create it as well as the nature of the compression and condensation process needed. Scattered Chi is concentrated and the Lower Tan Tien raises the inner power needed to activate the whole body and all its flows and networks.

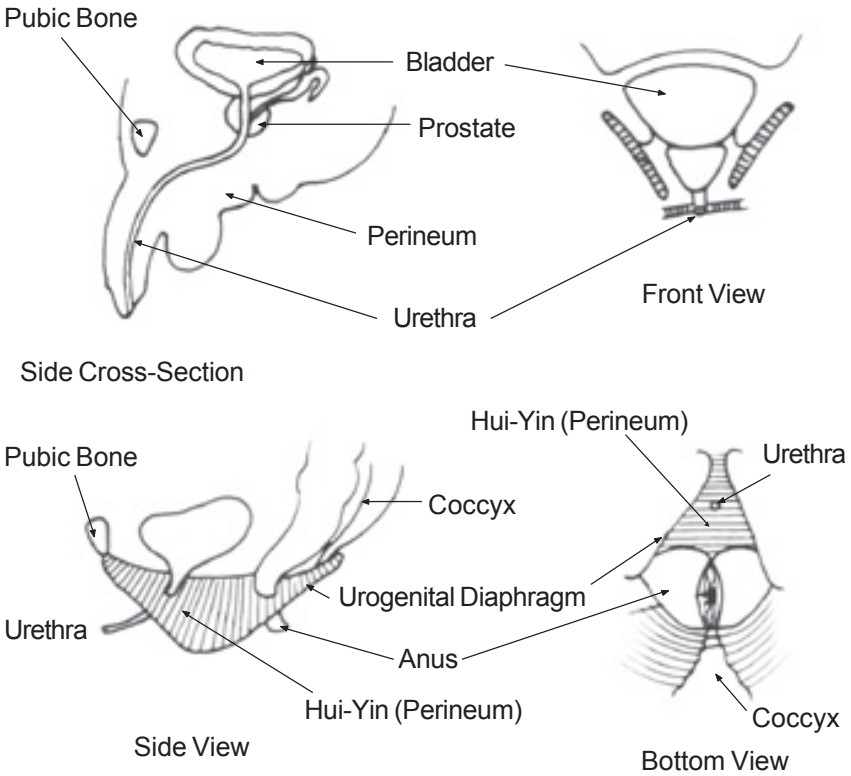


Fig. 4.6 *A closer view of the urogenital diaphragm in the male.*

The ability to do so depends on what is called Perineum Power, the ability to achieve control over the three gates.

This ability of closing the gates and leading the energy backward and upward, rather than allowing it to go outward and downward, is the basis for the practice of the Microcosmic Orbit and Healing Love. The dense form of Chi (Ching Chi) produced in the sexual organ is brought into the loop of the Governor and the Conception Channels and thence upward into the brain.

On its upward journey, the Chi has undergone several transformations (at the Sacrum, the Ming Men Point and the Jade Pillow Pumps) and has nourished and activated all the organs through the spine, the mother channel of all energies, before it finally brings fresh energy and hormones to the brain.

The quality of the brain cells and their functioning is critically dependent on the supply of hormones and the pressure which can be exerted to bring circulation of the blood and the Chi upward.

Development of Chi Pressure in the Tan Tien through Laughing Chi Kung

To feel Chi within you is not easy and training it is difficult. When people laugh in the Lower Tan Tien, the Tan Tien Chi Kung starts to develop.

a. First Laughter: Start either standing or sitting with both palms covering the navel. Start to laugh loud and feel the abdominal vibration. Laugh for 5 minutes. Rest, cover the navel with the palms and feel it become warm. Spiral in both directions (Clockwise and counterclockwise).

b. Second Laughter: Start with inner laughing like tickling in the throat, feel navel and spiral to keep the Chi in this area.

c. Third Laughter: Silent inner vibration, like hitting a drum and feeling a vibration inside. Keep the vibration inside for 5 minutes. Rest and cover the navel then spiral to keep the energy there.

Laughing helps create the second heart and second lungs, activating and improving the lymphatic system.

Fig. 4.7 *Laughing Chi Kung*

Anus and Perineum

Practice for the Chi Pressure to the Tan Tien

The Taoists divide the anus into five parts: 1. Middle 2. Front 3. Back 4. Left 5. Right

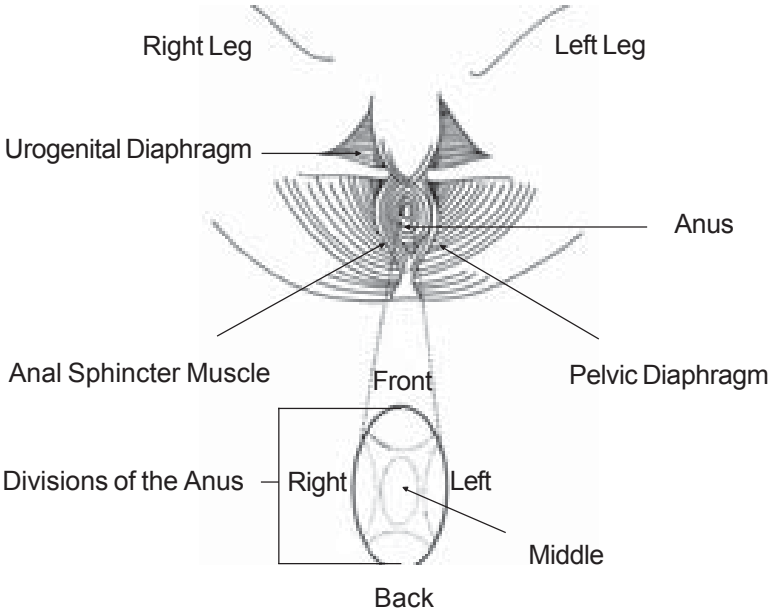


Fig. 4.8 *Anus is divided into five regions.*

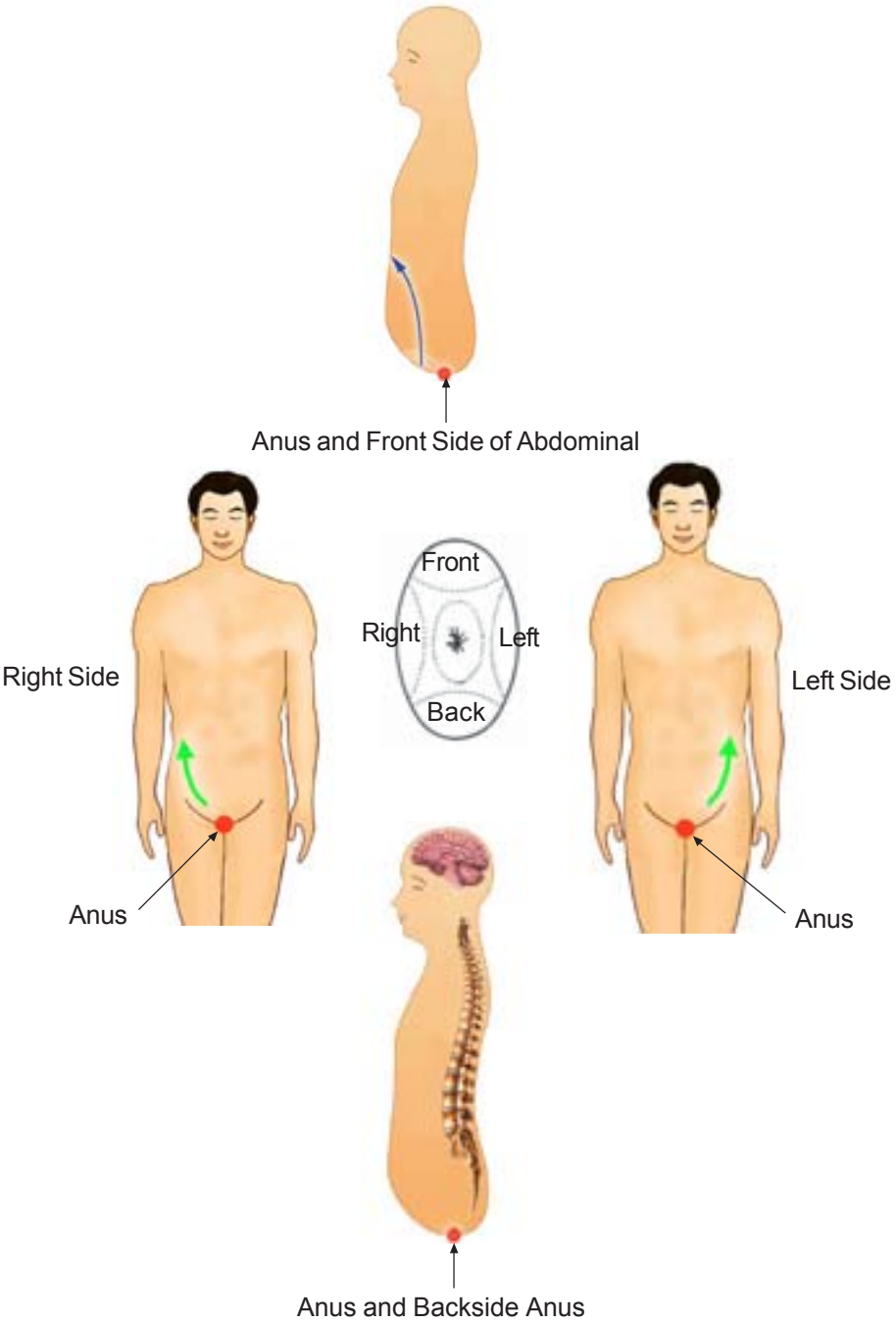
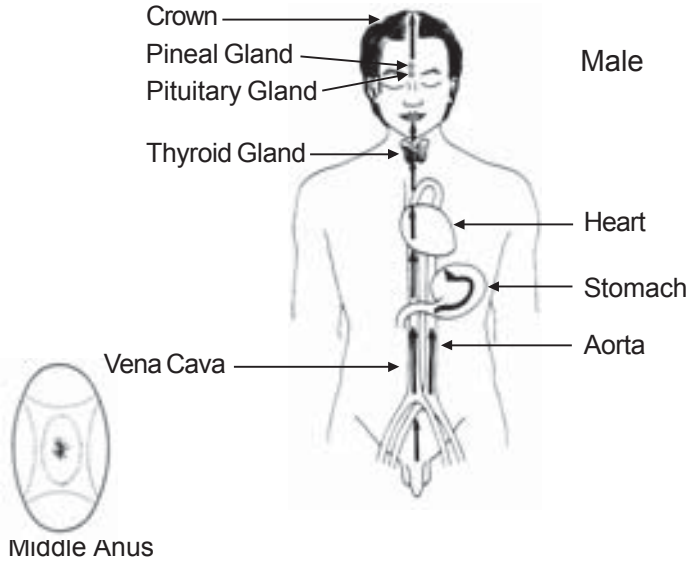


Fig. 4.9 *Anus and Perineum*

a. The middle part connects to the organs in front part of the abdominal area. For women the vagina-uterus, for men the prostate gland. It also connects to the aorta and vena cava, stomach, heart, thyroid and parathyroid, pituitary gland, pineal gland and the top of the head, the center channel.



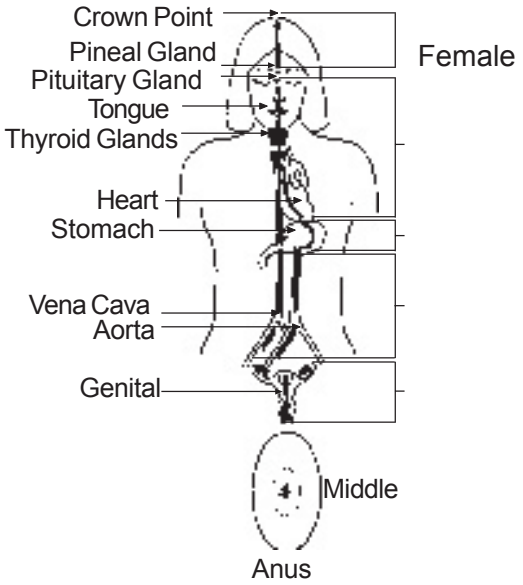


Fig. 4.10 *Connections of the Middle Anus*

b. The front of the anus, which is connected to the Hui Yin in women, the lower part of the vagina (the perineum point and the sexual organs) and the front part of the abdomen, front Tan Tien.

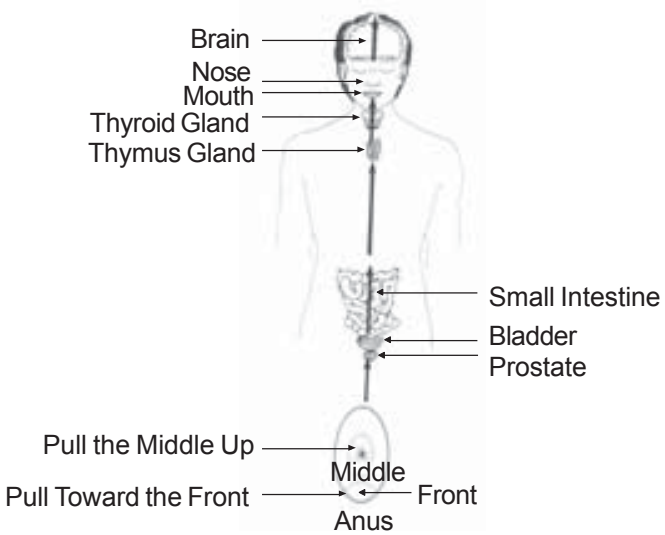


Fig. 4.11 *Connections of the Front Anus*

c. The back of the anus, which is connected to the back of the lower lumbars, the coccyx, the sacrum, the spine and the small brain (cerebellum).

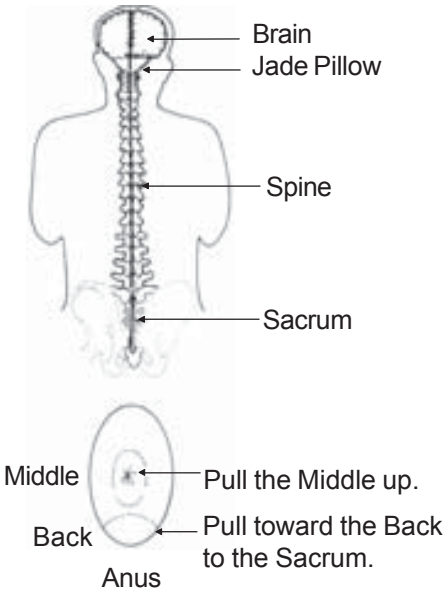


Fig. 4.12 *Connections of the Back Anus*

d. The right side, which is connected with the right side of the abdomen. The right ovary or right testicle, ascending colon, right kidney, adrenal gland, liver, gall bladder, right lung and right hemisphere of the brain.

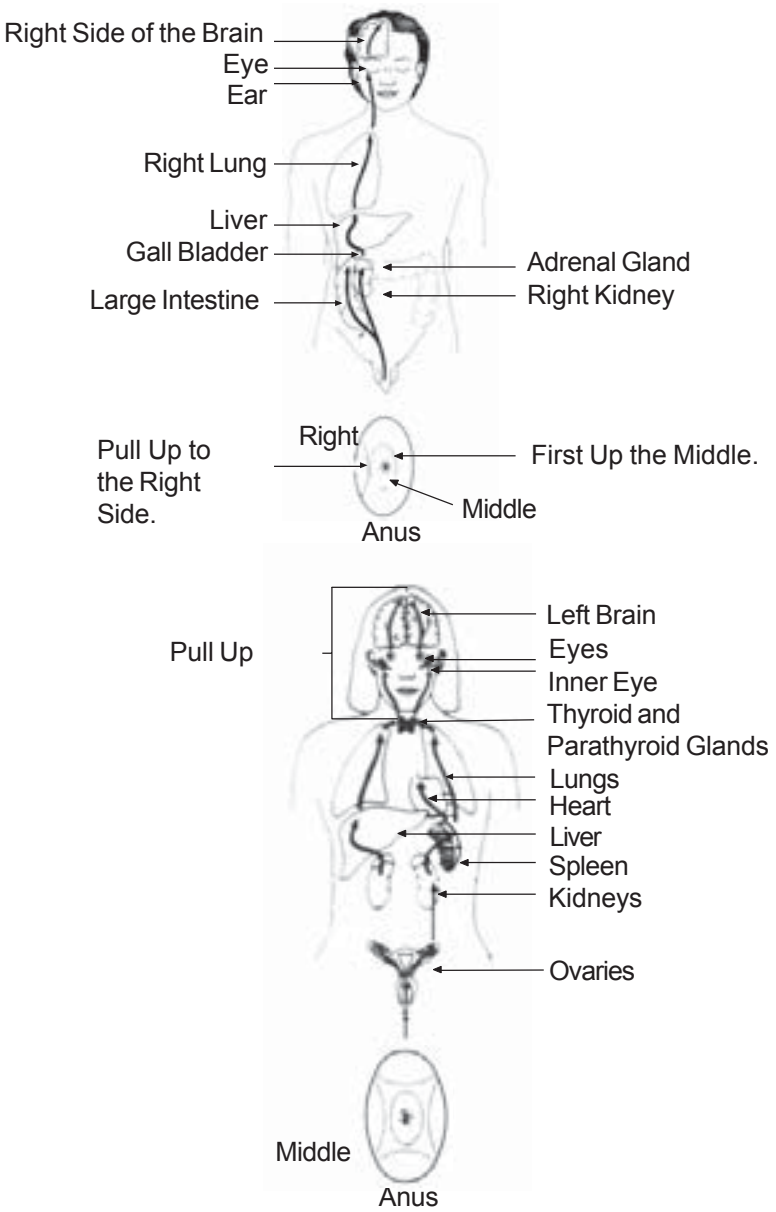


Fig. 4.13 *Connections of the Right and Left Anus*

e. The left side of the anus, which is connected with the left side of the abdominal (Left Tan Tien). The left ovary or left testicle, descending colon, left kidney, adrenal gland, spleen, stomach, left lung and left hemisphere of the brain.

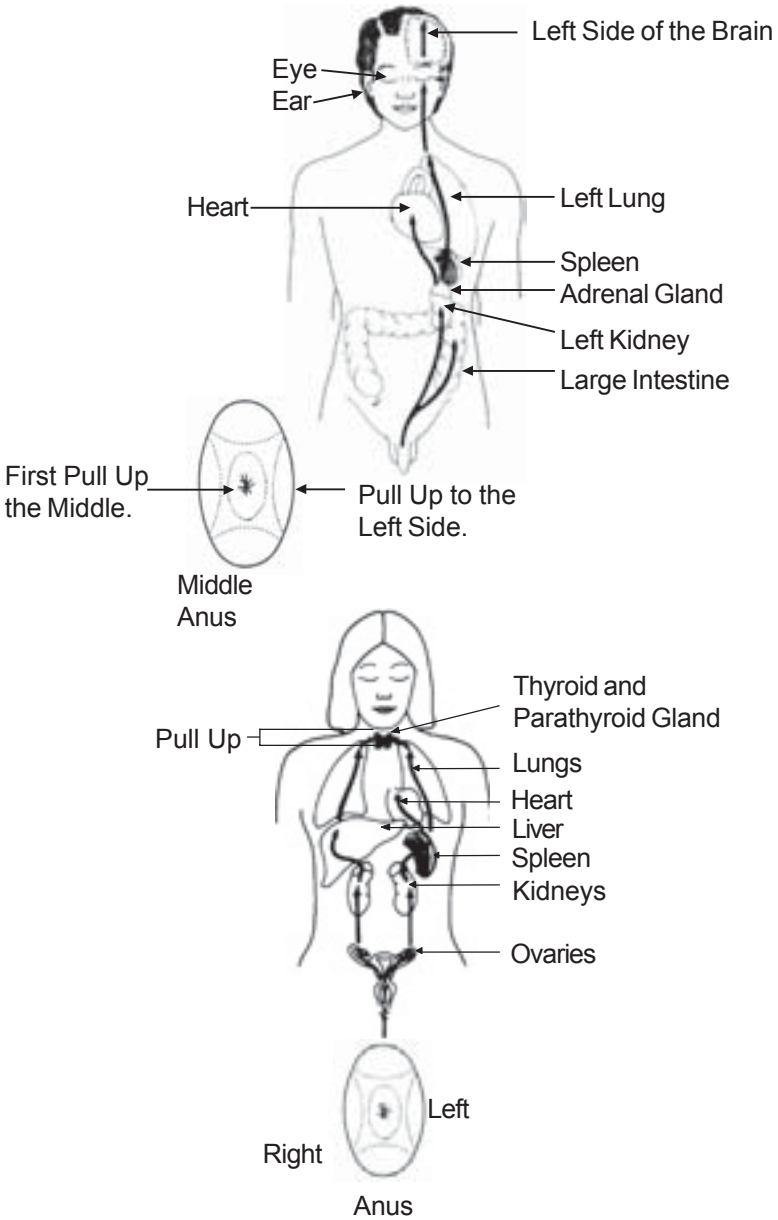


Fig. 4.14 *Connections of the Left and Right Anus*

In Tan Tien Chi Kung we strengthen all these parts (perineum power) by contracting them (by pulling up). When your pelvic area is strong, no energy will leak out of this gate, and you can enhance the Chi pressure in your Tan Tien. With a weak perineum and anus, this is not possible.

There are good Taoist exercises to strengthen the anus and the different parts of the anus (perineum/pelvic floor) and to learn to contract them (by pulling up) without tightening the muscles too much. To make them really very strong, which means giving the muscles a strong tonicity, you must do these exercises many times a day. The pleasant thing about them is that you can do these exercises everywhere; good times and places to practice are while waiting at the post office, the bus station, the shop, or when you watch a movie or TV, or work on the computer. When you are creative, you will find many occasions during the day to practice these exercises.

The best way to do these exercises is in the Standing position. However, you also can practice them sitting or laying on the ground, in bed or even in the bathtub.

We give you the exercises in the standing position.

Practice of Anus and Perineum Power

Breathing exercises to develop the Chi pressure in all the following seven areas and in the whole Tan Tien.

We distinguish seven important areas in the Lower Tan Tien where we would like to develop the Chi pressure:

A. Below the navel: Chi Hai (Ocean of Chi).
B. Lowest Abdominal: Bladder area.
C. Above the navel: Area of the Solar Plexus.
D. Both left and right sides of the front part of the Tan Tien.
E. Both left and right sides of the body.
F. Both kidneys.
G. Door of Life.

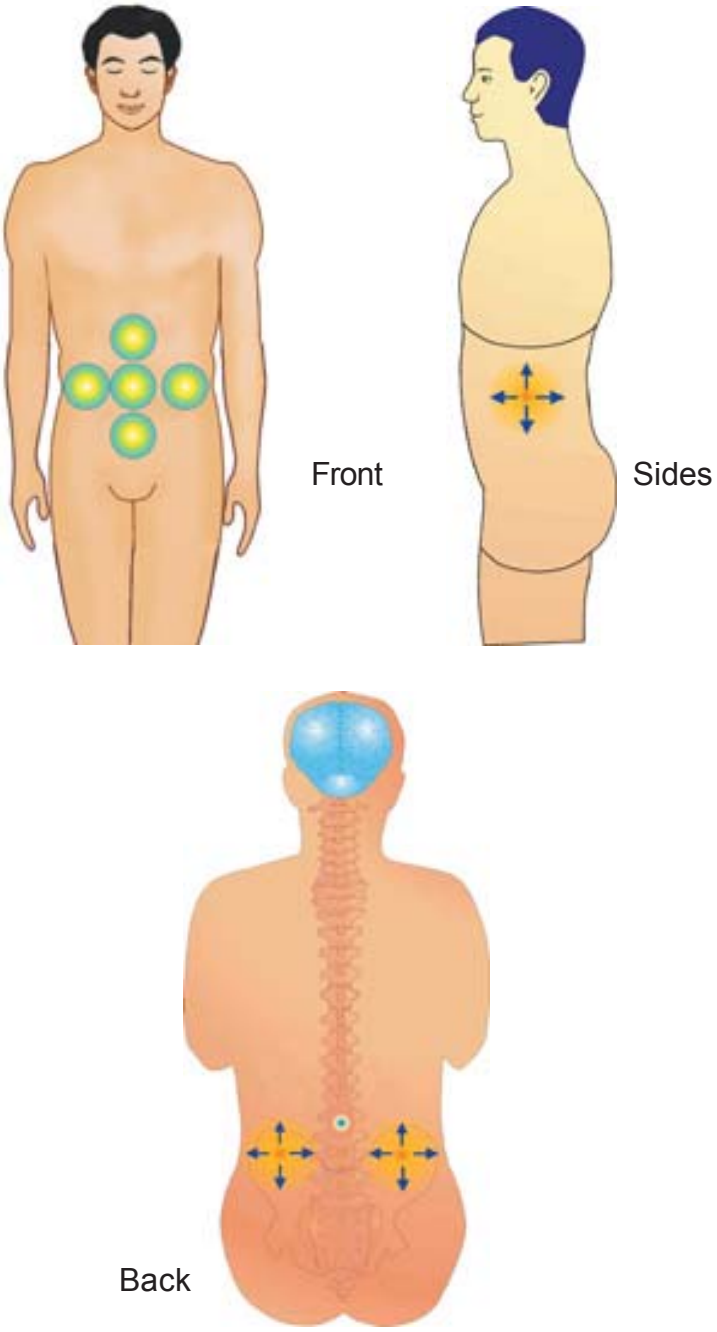
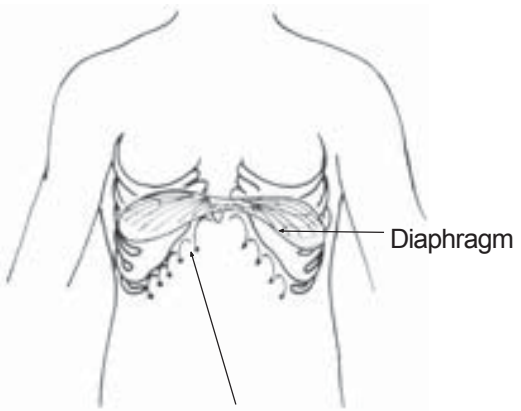


Fig. 4.15 *Areas for the development of Chi Pressure*



Press in and down all along the edge of the rib cage.

Fig.4.16 *Releasing Tension in the Diaphragm*

Diaphragm, abdominal wall and perineum press into the abdomen.

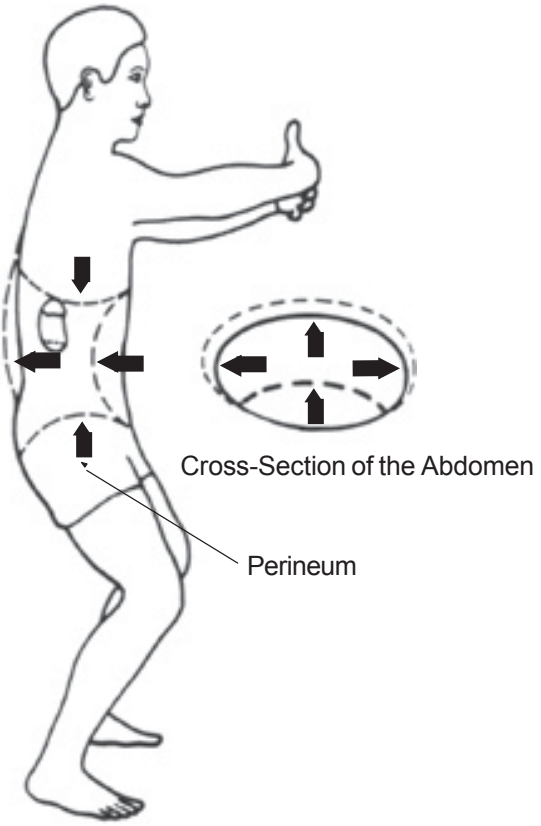


Fig. 4.17 *Perineum Power*

Areas A -D belong to the front part of the Tan Tien, and E and F to the back part of the Tan Tien. Just as with a balloon you can press some areas, to increase the pressure in other parts of the balloon,so you can increase pressure in the Tan Tien.

There are two main areas you always use. Pull up the perineum and press down the diaphragm. This will reduce the space in the Tan Tien and condense the Chi in the Tan Tien. When you pull to the right, the left, the back or the front, the Chi ball (pressure) will move from one side to the other.

There are two major breaths, one is the short breath to expand the abdominal, and the second is: exhale, hold the breath and do the inhale with out inhaling, meaning hold the breath and expand.

A. Lower Tan Tien: Ocean of Chi or Chi Hai

The Anus and the Front part of the Anus, and below the Navel Area. In this part we inhale and expand, dividing the breath into two small breaths.

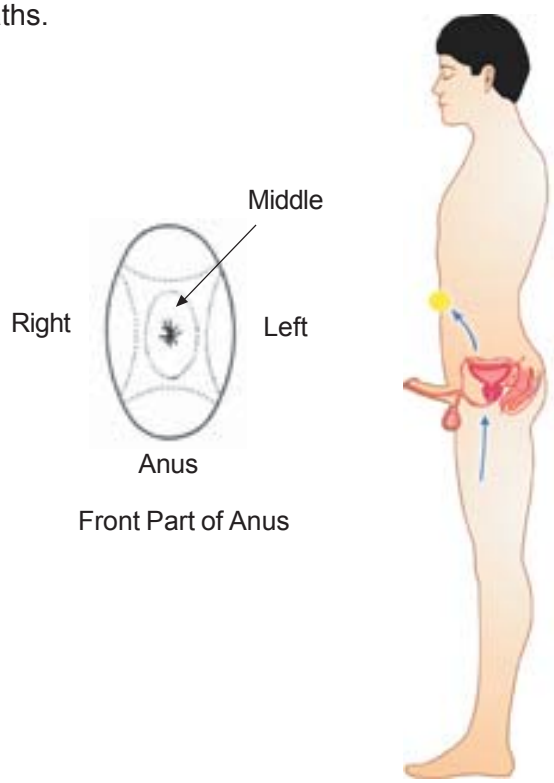


Fig. 4.18 *Front of Anus*

a. Stand with the feet parallel and shoulder width apart. All the nine points should be firmly rooted in the earth.

b. Just be aware of the anus, the front part of the anus and the sexual organs; especially the testicles, vagina and uterus.

c. Put your hands on the Chi Hai below the navel on the lower abdomen very gently and very softly. Smile and do a few abdominal breaths.

d. Exhale and flatten down the abdominal area. Use the fingers of both hands.

e. Inhale with a half breath, using the dragon sound. ***The dragon sound is a high pitched Hunnnnnn.*** Feel the abdominal area and the throat like a vacuum cleaner sucking in Chi pressure. Lightly pull up the anus, the front part of the anus and the sexual organs. At the same time, push against your lower abdomen and, pushing your fingers out, hold the breath and Chi pressure in the Chi Hai. Always keep the diaphragm down and the chest relaxed.

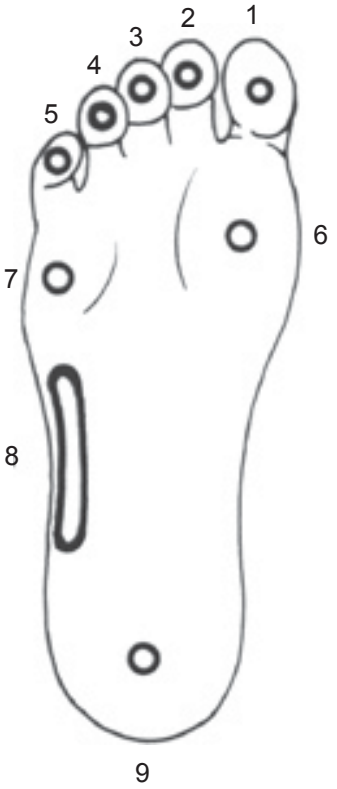


Fig. 4.19 *Nine Points of the Foot rooted in the ground.*

Fig. 4.20 *Hands placed on the lower abdomen below the navel.*

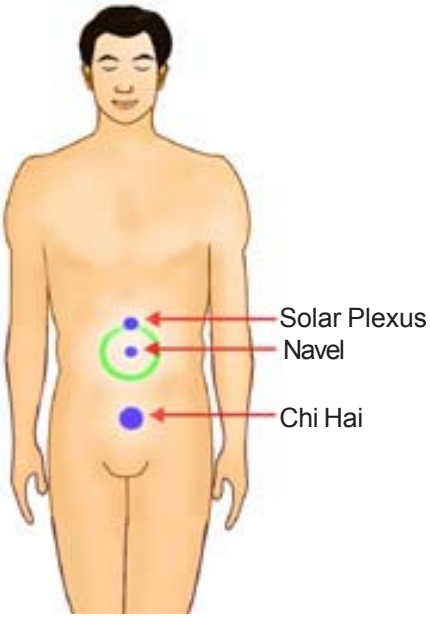


Fig. 4.21 *Solar Plexus, Navel and Chi Hai Areas*

Fig. 4.22 *Position of Chi Hai in Men and Women*

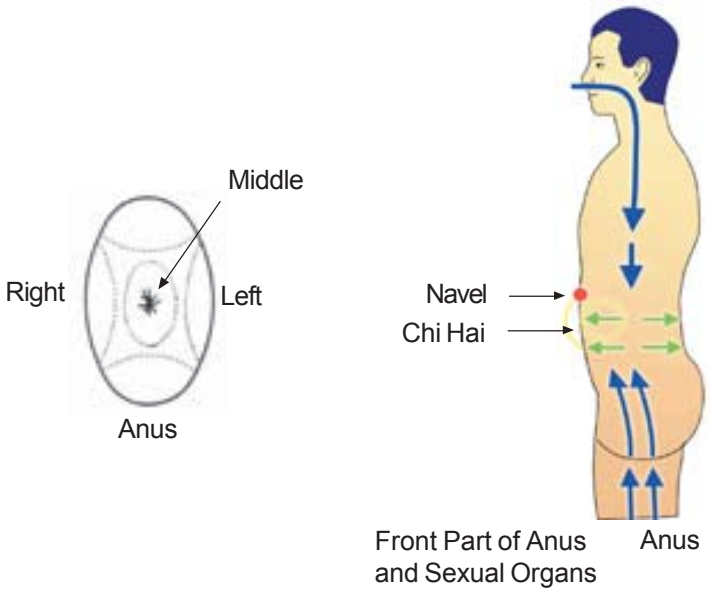


Fig. 4.23 *Inhale, pull up and hold the pressure in the Chi Hai.*

f. Exhale with the tiger sound ***Hummmmm*** and push the energy pressure down to the lower abdominal area. ***The tiger sound is a low pitched, growling Hummmmm sound.*** Hold the breath and laugh softly inside. Feel the vibration in the Chi Hai. Hold until you feel comfortable then inhale and slowly regulate the breath.

Fig. 4.24 *Exhale with Tiger Sound.*

g. Repeat 3 to 6 times. Feel the pressure becoming stronger with every breath. When you exhale consciously, you hold the Chi. When you inhale and exhale unconsciously, you lose the Chi.

B. Pelvic Area — Bladder - Uterus Area

Anus: Front and Back part of the Anus, and the lower part of the Navel, the Bladder and the Uterus.

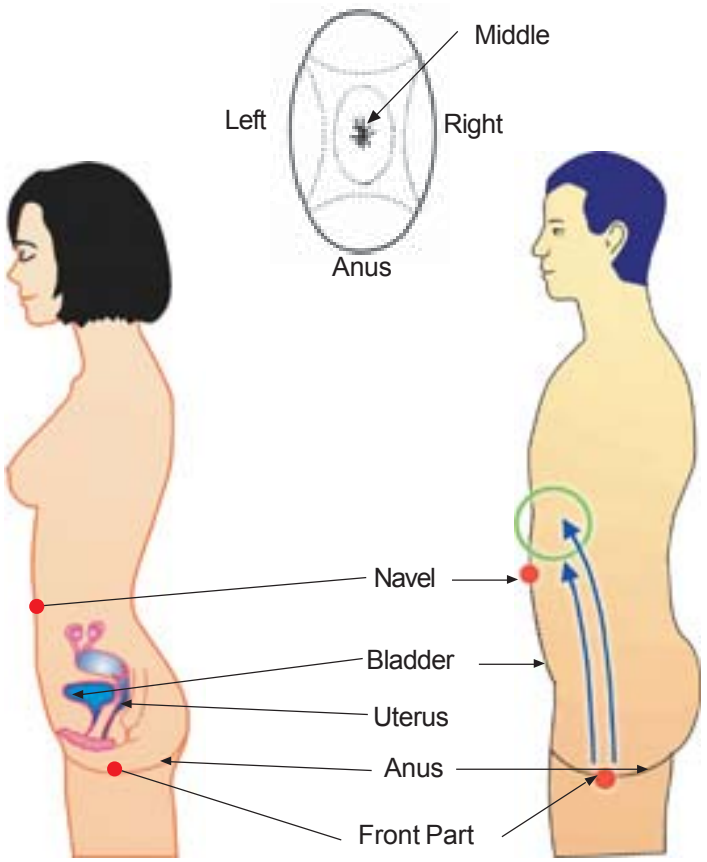


Fig. 4.25 *Anus, Bladder, Uterus*

In this part we inhale and expand and divide the breath into three small breaths.

a. Stand in the same position, be aware of the middle part of the anus, the front part, back part and for men the prostate gland; women the uterus.

b. Use the fingers to press in on the lower abdomen near the pelvic bones. Exhale, flatten down the stomach, and hold the breath for a short while. Lightly suck up the abdomen and feel the suction inside.

c. Inhale one third of the breath with the high pitched sound, the dragon sound. Feel the abdomen and the throat like a vacuum, sucking in Chi pressure. At the same time contract and pull up the anus.

d. Inhale the second third of the breath, contract, pulling up the front part of the anus and the sexual organs toward the bladder/ uterus, lowest part of the abdomen and expand.

Fig. 4.26 *Anus and Perineum Power*

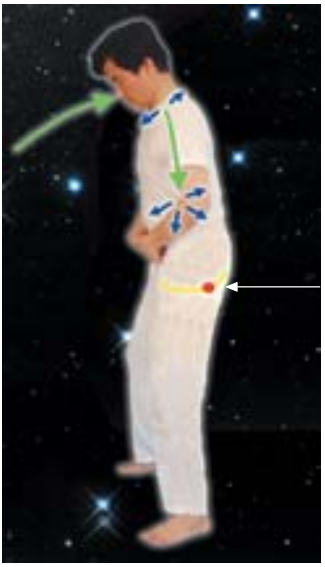


Fig. 4.27 *Front Anus and Perineum Power*

e. Inhale the last third of the breath; at the same time contract and pull up more of the front part of the anus toward the bladder and uterus. At the same time push the lowest abdominal area out against the fingers.

f. Keep your tongue against the palate. Hold as long as you feel comfortable.

Tongue against the Palate

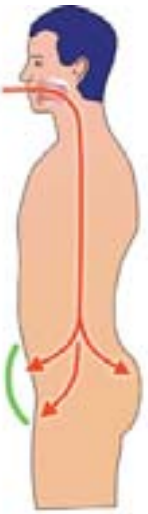
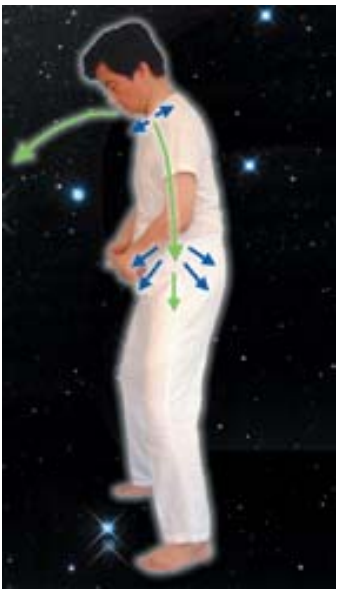


Fig. 4.28 *Tongue to Palate and Perineum Power*

Tiger Sound



Expand and push
out with Chi Pressure.

Fig. 4.29 *Tiger Sound*

g. Exhale with the kidney sound ***Chooooo***. When you do this well the coccyx will lightly turn in and the sacrum will push out, rounding the lower back, because the sacrum and the sexual organs are connected. Do 3 to 6 times. Relax and let go and smile to this area; feel Chi and blood flow into the area.

C. Solar Plexus — Above the Navel

Anus and Front Part of the Anus, and above the Navel (Solar Plexus)

In this part we inhale and expand and divide the breath into three small breaths.

1. Stand in the same position, be aware of the middle part of the anus, and the front part and for men also the bladder and prostate gland; women the uterus.

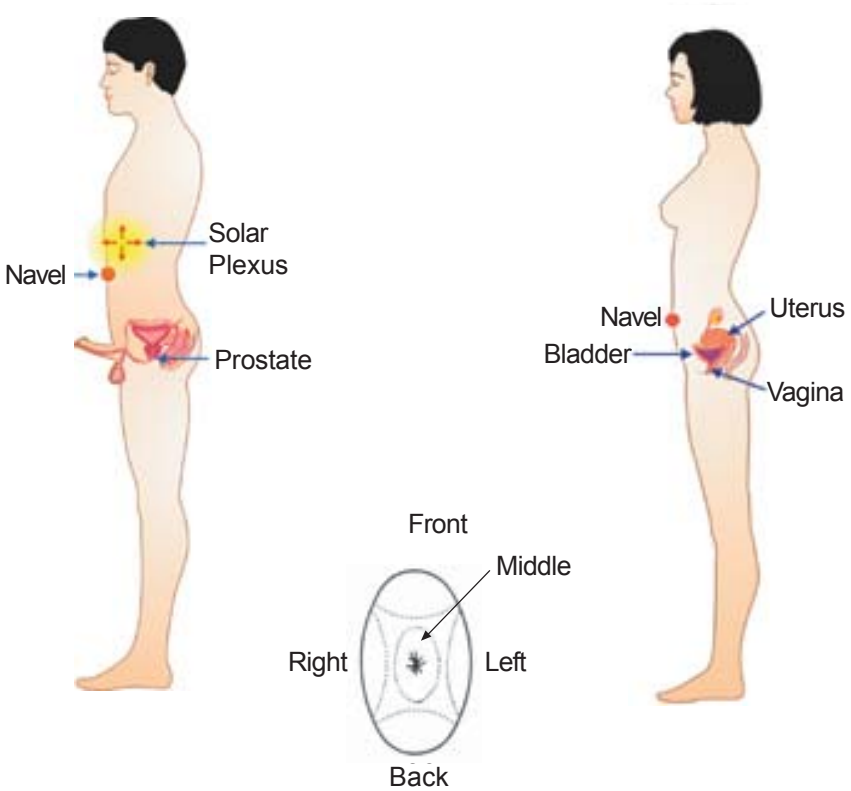


Fig. 4.30 *Solar Plexus Perineum Power*

2. Use the fingers to press in on the solar plexus above the navel. Exhale, flatten down the stomach, and hold the breath for a short while. Lightly suck up the abdomen and feel the suction inside.

Fig. 4.31 *Push out Chi for Anus and Perineum Power.*

h. Inhale with one third of the breath, contract and pull up of the anus (the middle).

i. Inhale with small sip another one third of the breath, contract, pull up the front part of the anus and the sexual organs toward the navel. At the same time push the lower part of the navel area out.

j. Inhale the last third of the breath and at the same time contract and pull up more of the front part of the anus toward the solar plexus. At the same time push the solar plexus area out to press against the fingers.

k. Keep your tongue against the palate. Hold as long as you feel comfortable.

l. Exhale, with the kidney sound ***Chooooo***. When you do this well the coccyx will lightly turn in and the sacrum will push out, rounding the lower back, because the sacrum and the sexual organs are connected.

m. Do 3 to 6 times. Relax, let go and smile to these areas. Feel Chi and blood flow into the area.

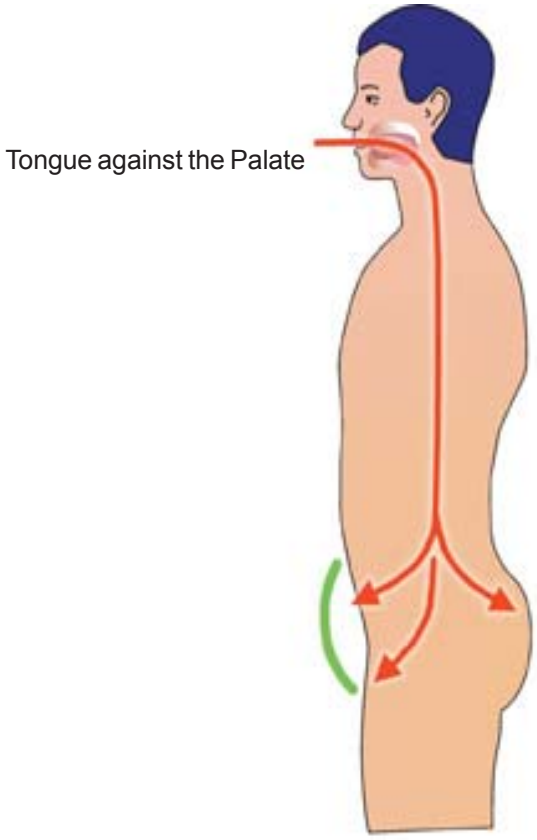


Fig. 4.32 *Anus and Perineum Power with the Breath*

Fig. 4.33 *Exhale with Anus and Perineum Power*

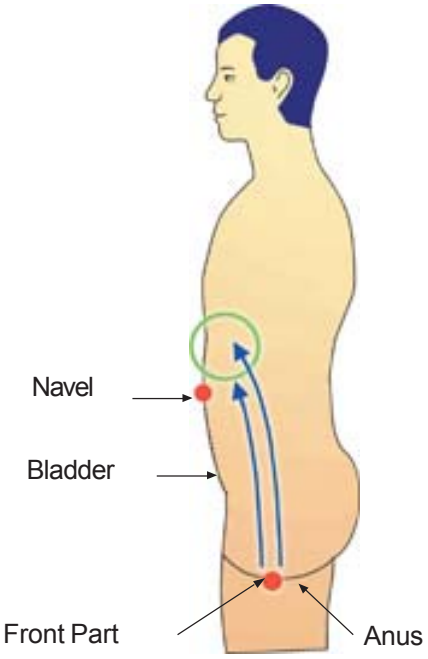


Fig. 4.34 *Front Part of Anus and Perineum Power*

In this part we inhale and expand doing all the above practice in one breath.

Anus, Front and Back Part of the Anus, Below the Navel (Chi Hai), Below the Navel (Bladder, Uterus), and Above the Navel (Solar Plexus)

1. Stand in the same position, be aware of the anus, the front part , back part; and for men the prostate gland; women the uterus.
2. Use the fingers to press in below the navel (Chi Hai). Exhale, flatten down the stomach, and hold the breath for a short while. Lightly suck up the abdomen and feel the suction inside.
3. Inhale with one slow breath at the same time contract the anus, front part of the anus and expand below the navel and pelvic area (bladder-uterus area) above the navel. Hold the breath for a while, exhale and rest.
4. Do 3 to 6 breaths.

Fig. 4.35 *Push out the Middle Tan Tien with Chi Pressure.*

D. Both Sides of the Front Part of the Tan Tien

a. Put your fingers on both left and right sides of the front part of the Tan Tien. Smile and do a few abdominal breaths.

b. Exhale flattening the abdomen. Press your fingers in on both sides of the front abdominal.

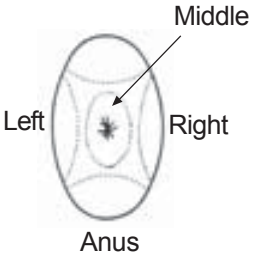


Fig. 4.36 *Exhale and use the Fingers to press in.*

c. Inhale with the high pitched sound, the Dragon Sound. Feel the abdomen and the throat like a vacuum sucking in Chi pressure with half the breath. Lightly pull up the anus.

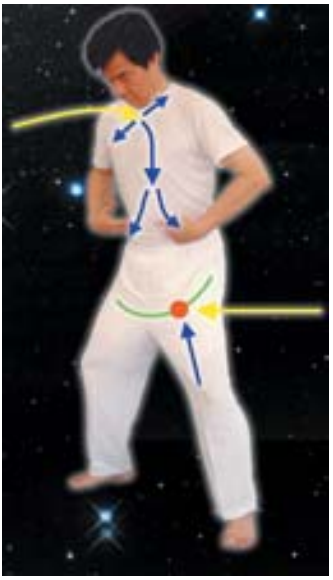


Fig. 4.37 *Make Dragon Sound and pull up right and left sides of anus.*

Fig. 4.38 *Push Chi to both sides of Tan Tien while laughing softly.*

d. Inhale the other half, suck in more and contract the left and right sides of the anus and push the points of the left and right Tan Tien outward against your fingers; hold the breath and Chi pressure. Always keep the diaphragm down and the chest relaxed.

e. Exhale with the Tiger Sound ***Hummmmm*** and push the energy pressure to both sides. Laugh softly inside and feel a vibration in the Chi Hai. Hold as long as you feel comfortable.

f. Inhale slowly and regulate the breath. Do this several times until you feel a strong Chi pressure. Laugh softly inside and feel a vibration in both sides of the Tan Tien.

g. Do 3 to 6 sets of the practice.

Fig. 4.39 *Make the Tiger Sound and make pressure on both sides of the Tan Tien.*

E. Left and Right Sides of the Body

Repeat the same precedure as above.

a. Place your hands gently on both left and right sides of your body.

b. Smile and inhale half the breath with the dragon breath, contract and pull up the anus; hold the breath for a while.

Fig. 4.40 *Do the Dragon Breath and pull up anus.*

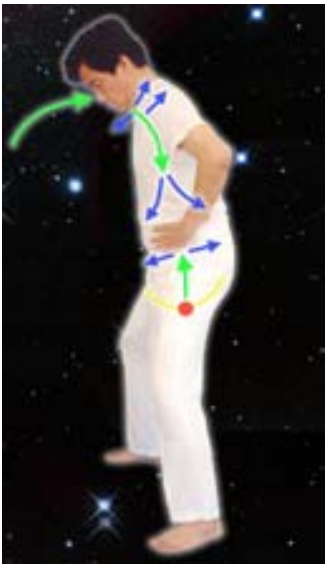


Fig. 4.41 *Do the Dragon Sound while inhaling with half of the Breath.*

b. Inhale the other half breath and contract; pull the left and right sides of the anus toward both left and right sides of the body out against your hands. Feel both sides expanding.

c. Exhale with the Tiger Sound, slowly and consciously and push the Chi down to the left and right side. Maintain equal force. Feel both sides of the Tan Tien expanding.

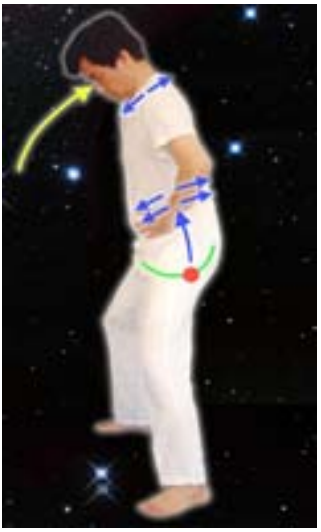


Fig. 4.42 *Complete the Dragon Breath by inhaling and exhaling out both sides of the body.*

Fig. 4.43 *Exhale with the Tiger Sound and continue expanding to the right and left.*

d. Repeat several times until you feel a strong Chi pressure in both sides. Hold the breath and laugh inside and feel both sides of the Tan Tien vibrating.

F. Left and Right Sides of Kidneys

a. Place your hands gently on your left and right kidneys. Your spine lightly arches back.

b. Smile in the kidneys and inhale with the Dragon Breath with half of the breath and pull up the anus; hold the breath for a while.

c. Inhale the other half of the breath and contract and pull up the left and right sides of the anus to the kidneys and lightly round the back and press out against your hands.

d. Feel the kidneys expanding, and the whole lumbar area opening. Inhale more, expand, hold the breath for a while.

Exhale and feel it flatten down and lighty bend the back.

Fig. 4.44 *Use the Hands to cover the Kidneys.*

e. Exhale with Tiger Sound and slowly presss Chi pressure down to both sides of the kidneys and the lower abdomen. Feel the whole kidney area expanding when you exhale and push the energy down.

Fig. 4.45 *Inhale-Exhale the Chi to the Back.*

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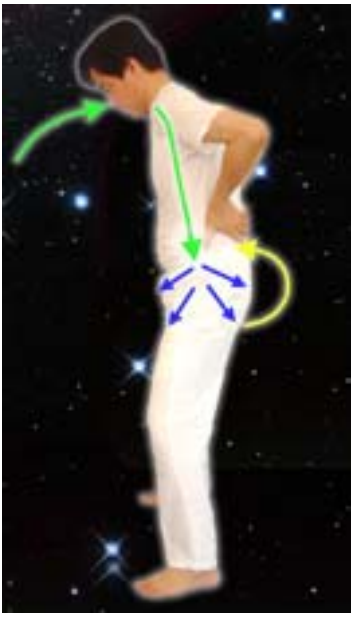


Fig. 4.46 *Use Dragon Breath to inhale with Chi expanding the Kidney area growing Chi Belt.*

f. Repeat 3 to 6 times until you feel a strong Chi pressure in both kidneys and a Chi belt around your waist. This exercise will also strengthen the kidneys and increase your Original Force. Smile in the kidneys and feel them vibrating.

G. Door of Life

a. Place both hands gently with the fingers touching the Door of Life (between lumbars 3, and 4), palms cover the kidneys; the back is lightly arched to the front.

b. Smile and inhale half the breath. Hold the breath and pull up the back part of the anus and push the Door of Life and the lumbar region out against your hands.

c. Feel the Door of Life expanding and becoming more open. Inhale more, hold the breath, pull up more and expand, inhale more, hold and expand.

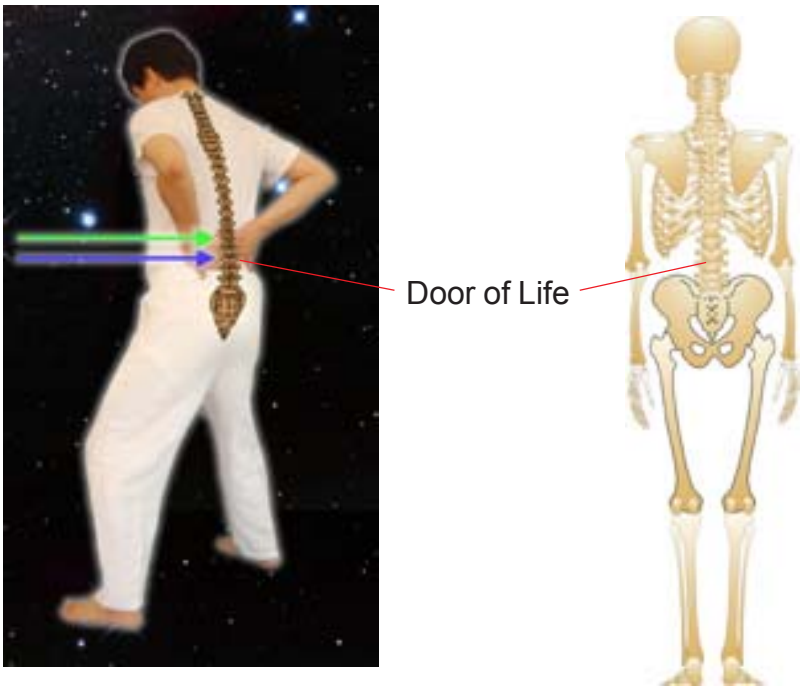


Fig. 4.47 *Opening the Door of Life*

d. Exhale slowly and consciously press the Chi down to the Door of Life. Maintain equal force. Repeat several times until you feel a strong pressure in the Door of Life and you feel it open and breathing.

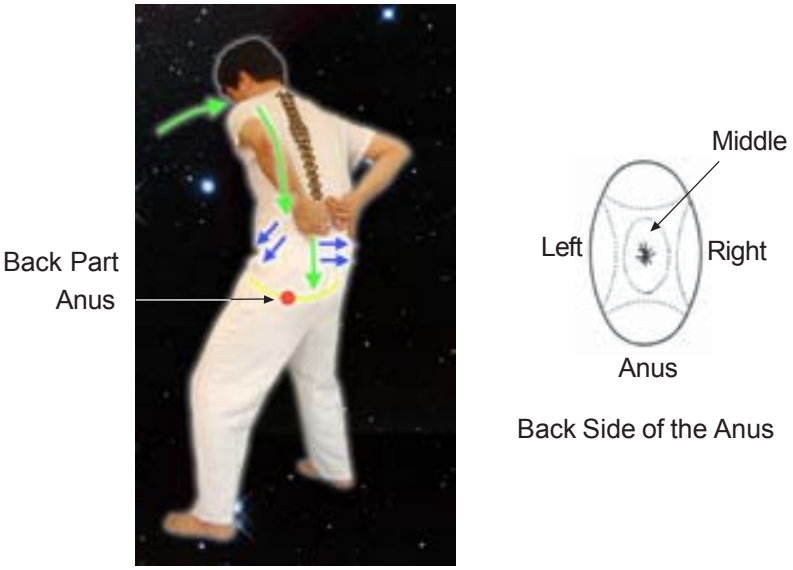


Fig. 4.48 *Dragon Sound Breath expanding the Door of Life.*

Fig. 4.49 *Tiger Sound Breath expanding the Door of Life.*

e. Be aware of the soles of your feet, the coccyx and the sacrum. Inhale and pull up the back part of the anus, feel the pulsation in the Door of Life sucking up the energy of the Earth and moving it upward through the spine to the brain.

f. Exhale, put both feet together, scoop up the energy and bring it down. Touch the navel and focus on the Door of Life. Repeat several times. Rest, cover the navel, smile and feel your whole abdomen full of Chi, open and breathing and feel it pulsating.

H. Chest

a**.** Place both hands gently on both side of the chest under the armpit.

b. Exhale flattening the chest down.

c. Smile, inhale with the Dragon Sound and with half the breath. At the same time pull up the front part of the anus and expand the whole Front Tan Tien.

d. Inhale the other half of the breath and contract and pull up the left and right sides of the anus toward the left and right rib cage; let the Chi expand and round the upper back.

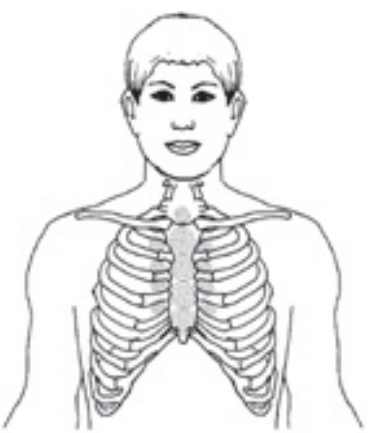


Fig. 4.50 *Exhale and flatten the chest.*

e. Exhale with the Tiger Sound; slowly press Chi pressure down to the lower abdomen and let the pressure from the lower abdomen expand up to the upper chest. Feel the whole kidney area expanding when you exhale and push the energy down.

f. Repeat 3 to 6 times; rest, regulating the breath.

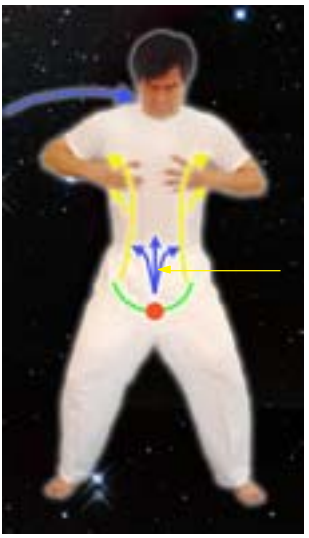


Fig. 4.51 *Inhale with the Dragon Sound, pull up the anus and expand the Tan Tien.*

Fig. 4.52 *Exhale with Tiger Sound, expand Chi down to abdomen.*

I. Total Tan Tien Breathing with Inhale

a. Breathe slowly and smoothly in the Tan Tien until you feel nice and calm. Then combine all the seven breathing exercises together.

b. Smile and gently place both hands on the Lower Tan Tien.

c. Inhale part of the breath and at the same time pull up the anus, the front part, left and right side of the anus toward the front and left and right side of the abdomen. Expand and push out the lower part of the navel and the upper left and right sides of the abdomen. You can move your fingers along the part that you expand.

d. Inhale another part of the breath and at the same time pull up the left and right sides and the back part of the anus toward the left and right sides of the kidneys, and the Door of Life.

e. Exhale, relax ,and regulate the breath.

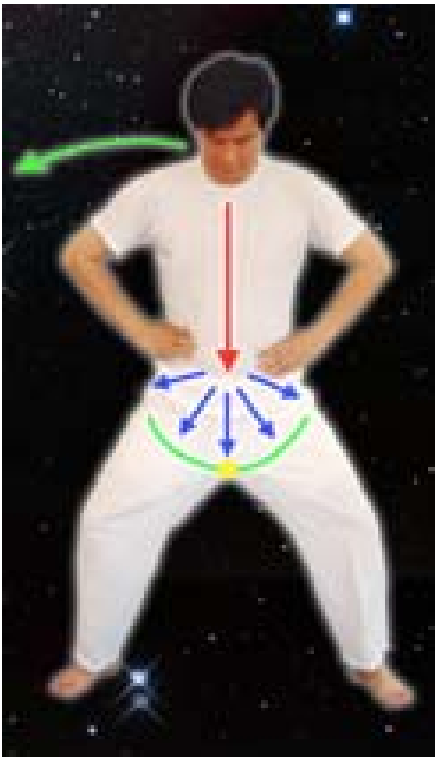
Fig. 4.53 *Expand the Tan Tien with smooth inhalation.*

J. Total Tan Tien Breathing with Exhale

a. Inhale fully and exhale; press the Chi pressure down and hold the breath.

b. Inhale without inhaling. Hold the breath and suck in; feel the suction and at the same time contract the anus, front, left, right and back.

c. Continue holding the breath and inhale without inhaling and expand the front, left and right, and the whole back. Continue to expand to the chest.



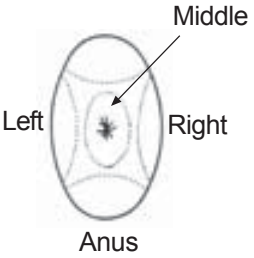


Fig. 4.54 *Expand the Tan Tien with an exhale.*

Exercises to Bring More Chi Pressure and Energy Vibration in the Tan Tien

1. You can just repeat the exercises. The only difference is that this time you use your fingers to give counter pressure against the pressure of the Chi from inside.

a. Put your fingers on the Chi Hai in the lower abdomen. Smile and do a few abdominal breaths.

b. Inhale half of the breath, hold the breath, inhale more and pull up the front part of the anus and push at the same time against the lower part of the Tan Tien, against the pressure from your fingers and feel a suction. Slowly exhale (hold the Chi pressure in this point), increase the pressure of your fingers and push the Chi down in the lower abdomen against your fingers.

c. You will notice that with the counteracting force of the fingers the Chi pressure becomes stronger. Do this a few times. The last time you hold the breath after the exhalation and tap both fists on the Chi Hai until you feel a vibration in this area.

Fig. 4.55 *Tap with Fists.*

Fig. 4.56 *Tap with edge of hands.*

d. Do this for all the other six areas of the Tan Tien (tapping on the uterus and bladder is especially good for women). You then combine them as part of enhancing the Chi pressure and vibration in the whole Tan Tien.

e. Repeat this until you feel a very deep vibration of the Chi inside the Tan Tien and in your original force. Have a partner gently push you with his fist in your Tan Tien, so that you have to hold and apply counter pressure. This will help you to develop a stronger Chi pressure and vibration in the Tan Tien (See Fig. 4.60).

f. Repeat each exercise again and continue to use the fingers as a counteracting force. At the end of each exercise, inhale and expand the lower abdomen and exhale quickly with the deep Tiger Sound "Hummmm", pushing the energy down and out against your fingers. The sound is made through a quick expansion from the lower abdomen. The exhalation, the expansion and the sound should be completely synchronized. Repeat with the whole Tan Tien .

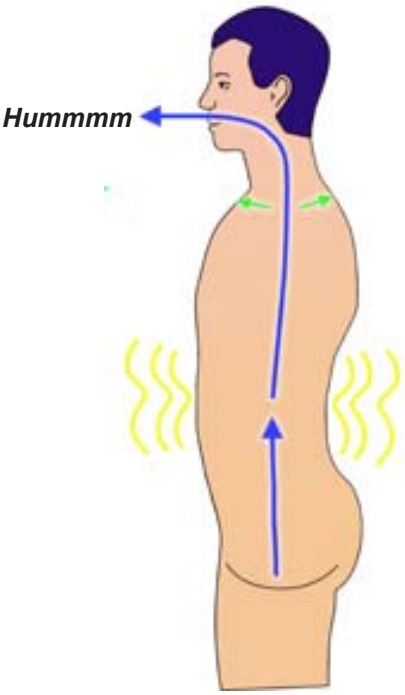


Fig. 4.57 *Exhale quickly with "Hummmmmm" Sound.*

g. Rest with the palms facing downward. Feel the Tan Tien Chi breathing and pulsating. Inhale and pull up the front, back, left and right parts of the anus together with a light contraction of the eyes and mouth and feel the suction in the Tan Tien, the palms, the soles of the feet, the perineum, the sacrum, the mideyebrow point, and the crown. Exhale and condense the energy in the Tan Tien. Repeat several times.

Releasing the Tension in the Diaphragm

Many people have a stiff diaphragm which sticks to the rib cage. In order to be able to develop the Chi pressure, we should have a diaphragm that is loose and that can easily move up and down. To release the tension in the diaphragm, you can massage the diaphragm.

a. You can massage under and along the rib cage from top to bottom.

b. You put the middle fingers from the left hand with the palm facing upward, under the rib cage. Place your right hand on the lower part of the right rib cage and push the rib cage downward with the mouth of your right hand. Repeat for the left side.

c. This massage will loosen and stretch the diaphragm and will facilitate and deepen the breath. You will be able to keep and push the diaphragm down on the exhalation, which is necessary for the development of the Chi pressure in the Tan Tien.

You can picture the Tan Tien as a balloon that you can fill with air creating pressure in the balloon. The main thing you have to do is to fill this balloon and blow air in it little by little. Blow and hold, blow and hold. With the Tan Tien it is the same. You inhale, blow in the air, hold the breath (air) and exhale very slowly. In this way you can maintain the pressure.

Fig. 4.58 *Another way of releasing tension in the diaphragm.*

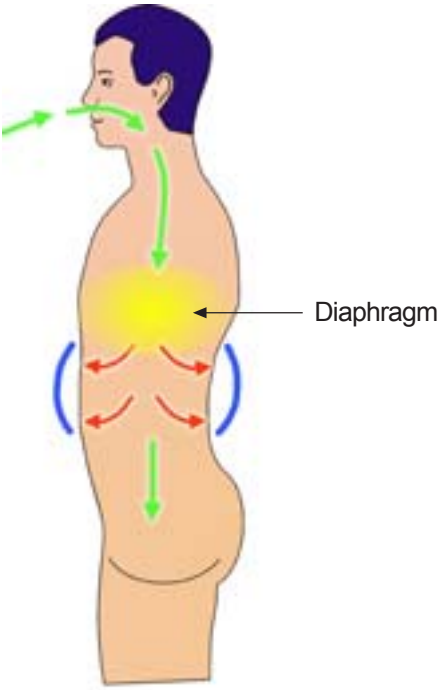


Fig. 4.59 *Increase Chi pressure with every breath.*

a. Take a partner and gently put your fist on their Tan Tien (belly).

b. Let him inhale in the abdomen and feel the pressure of the breath (Chi) pushing his abdomen against your fist. Let him then exhale quickly and you will feel that the air (Chi) pressure is gone and that you are pushing in an empty Tan Tien.

c. Let him inhale in the same way and exhale through the mouth but still push the pressure down and out. You will feel that the pressure is still there. Just as with the balloon, when you pull up the perineum and push down the diaphragm, the Chi pressure in the Tan Tan will be more condensed and stronger.

d. As you continue to push, you will feel that the energy remains in the Lower Tan Tien and can be moved around.

e. Let your partner now laugh in the Tan Tien while you are still pushing, and you will feel the Chi pressure becoming stronger and the Chi moving and vibrating.

You can change places and let your partner work on you.

Fig. 4.60 *Using your partner's fist to build more Chi pressure.*

Chapter V
Tan Tien Chi Kung Postures

Practice

The practice is divided into two parts. In part one, we will learn to increase the Chi pressure in the Tan Tien, in the organs, especially the kidneys, in the fasciae, in the lumbar area and the Door of Life through a combination of breathing, contraction (pulling upward) of certain parts of the perineum (anus) toward specific areas of the abdomen and pressing down the diaphragm. The exercises also nourish our original force.

The introductory exercises open the sacrum/kua and the hip joints and strengthen the anus and perineum.

In part two, we will learn eleven animal postures. In fact, they have the same results as the exercises from part one. They are, however more powerful and will significantly enhance the Chi pressure/inner power of the Tan Tien, the strength of the perineum and the rooting power. They are actually a very good preparation for Tai Chi.

Opening of Sacrum/Kua

We start the practice of the Tan Tien Chi Kung with some introductory exercises: the opening of the sacrum/kua and the strengthening of the anus (in fact the whole perineum, including the sexual organs).

An open sacrum and a strong anus are the necessary conditions for the development of the Chi pressure in the Tan Tien (Tan Tien power). These are the requirements for the correct execution of the exercises of the Tan Tien Chi Kung.

Tan Tien Chi Kung Warm Up

The sacrum, the groin area, the hip joints and the iliopsoas all form the kua. When the kua is closed, the flow of Chi, blood, lymph fluid down and up the legs is blocked as are the nerves to the legs. In order to enable the sacrum to move freely, the sacrum should be separate from the hip bones.

When the sacrum and the pelvis are open there is space for the energy and we can push this energy far down in the Lower Tan Tien.

Opening the Sacrum

1. Rub the sacrum warm. Stand with the legs shoulder width apart, feet parallel, both big toes lightly turned inward. Place the nine points of the feet firmly on the ground.

2. Start with lightly twisting and spiraling the ankles and knees counterclockwise. This will make the feet, the leg and the thigh bones become one piece. Press the feet with force and twist the heel inward, and the big toes outward. The feet are still firmly placed on the ground creating a balance and find the feeling of “in but not in- out but not out”. In this position the sacrum is closed.

3. Exhale, press the heels firm and turn the heels outward, with the big toes inward, press the whole legs down and press them firmly to the earth.

4. This will create a tension in the tendons and so the feet and legs become one piece which attach to the hip bones. This will help pull open the hips lightly separate from the sacrum. When you open the sacrum in this way, it feels like you are pulling the hips to the sides. Actually, you are also pushing the sacrum to the back, tucking the coccyx in and opening the pelvis. This will make the base bigger. Some people might feel pain in the sacrum.

5. Keep the knees and ankles aligned all the time and connected with the earth.

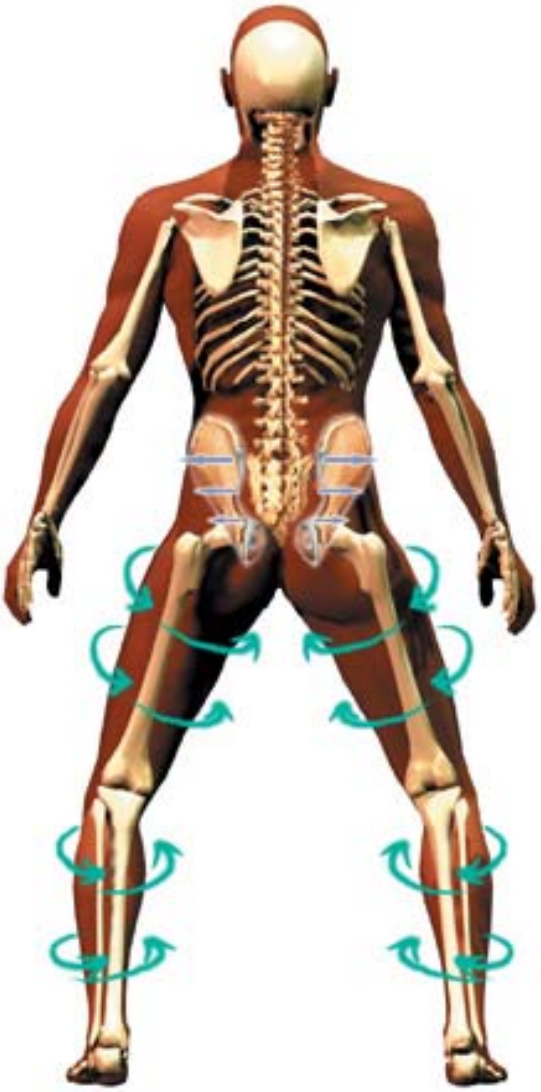


Fig. 5.1 *Opening the Sacrum*

6. Activate the Pumps to connect the Hips to the Spine
    a. Activating the hips and the sacrum (pump) by pushing back and align with the spine.
    b. Activate the T-11 pump by pressing the point lightly back and align with the spine.
    c. Activate the cranial pump by pushing the chin back and raising the back of the crown high. This will help stimulate the flow of the spinal cerebral fluid through the spine to the brain. This will nourish the brain and enhance the clarity of our thinking and the activities of the central nervous system.

7. Squatting will also help to open the kua especially the sacrum and the hip joints. Squatting is a powerful and effective way to open the kua and the sacrum. For many people in the world it is still common to sit, talk, eat, empty their bowels, giving birth, meditate relax and restore the energy flow in this squatting position.

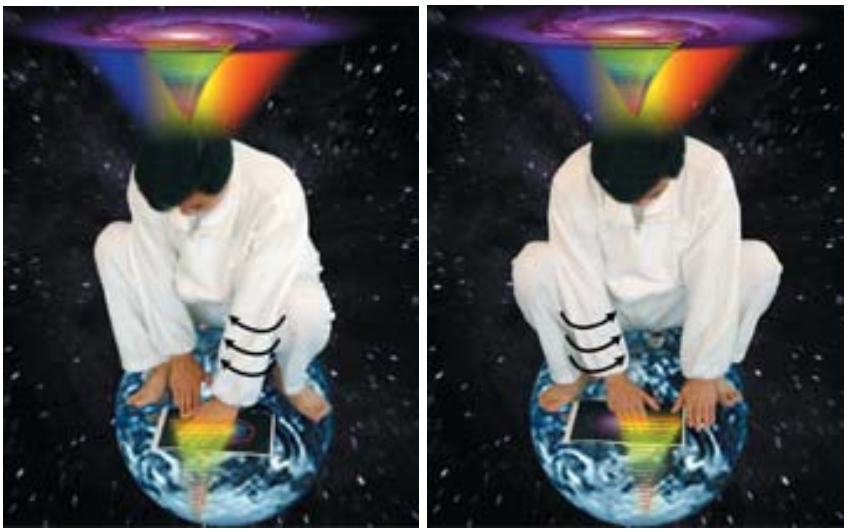


Fig. 5.2 *Squatting while gathering the Earth Force.*

8. The squatting position also provides a deep massage and enhances the Chi and blood flow to all organs in the Lower Tan Tien, including the small and large intestines and the fasciae. It releases gases and is very helpful in relieving constipation. (See the book, *Elixir Chi Kung* by Mantak Chia).

9. Other exercises for loosening the sacrum like we do in the Chi Kung warm ups;

- Put your hands on your sacrum and pubic bone and rotate the sacrum in both directions not moving the hips.

- Hold your hands again on the sacrum and move the sacrum back and forth.

Fig. 5.3 *Spiral the Sacrum.*

Ending Exercise for All Eleven Animal Postures

After each animal exercise:

a. Inhale, put the feet together, scoop up the energy from the universe, palms facing up.

b. Turn the palms downward and pour the energy down over the body, back into the navel, back into the Tan Tien.

Fig. 5.4 *Palms Opened Upwards*

Fig. 5.5 *Pour the Chi Down*

c. Focus on the Door of Life. Gently, move the hands from the navel (Lower Tan Tien) to the thighs. Feel the fingers and Chi penetrate the thighbones as Chi is absorbed into the bone marrow.

Fig. 5.6 *Touch the Thighbones.*

d. Move the hands down the thighbones. Feel the fingers penetrate the bones, glide past the knees, and across the shinbones. As you glide the hands down, sink the hips and bring the tailbone down to the heels in a squatting position.

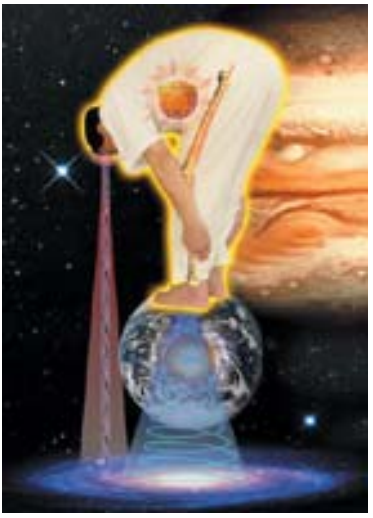


Fig. 5.7 *Feel the fingers move down the legs.*

Fig. 5.8 *Squat Down.*

e. Feel yourself sinking down through the Earth and into the infinite space beyond the Earth. Picture the galaxy and feel the spiraling of the force.

f. With your hands touching your feet, lift the tailbone until the legs are straight. Feel the Chi drawn from outer space and the earth spiraling into your body.

Fig. 5.9 *Lift the Tailbone.*

g. Squat down again and gather more Earth energy and more Universal energy. Do this 3 to 9 times.

h. Move your fingers to the back of the legs. Feel the fingers touch the heel bones and the bone marrow and glide the fingers up the leg bones to the coccyx and hold them there for a while. Feel the Chi rising to the spine and the brain.

i. Move the fingers to the sacrum. Feel the Chi pour into the sacrum and the sexual center.

Fig. 5.10 *Squat down again.*

Fig. 5.11 *Move fingers to hips.*

j. Bring the hands up to the Door of Life and concentrate on the navel. Feel the Chi energizes the kidneys and the Door of Life. Slowly bring the hands to the navel. Smile and collect the energy in the Tan Tien.

Fig. 5.12 *Move up and touch the Coccyx and Sacrum.*

Fig. 5.14 *Pour the Chi down the Spine to the Sacrum.*

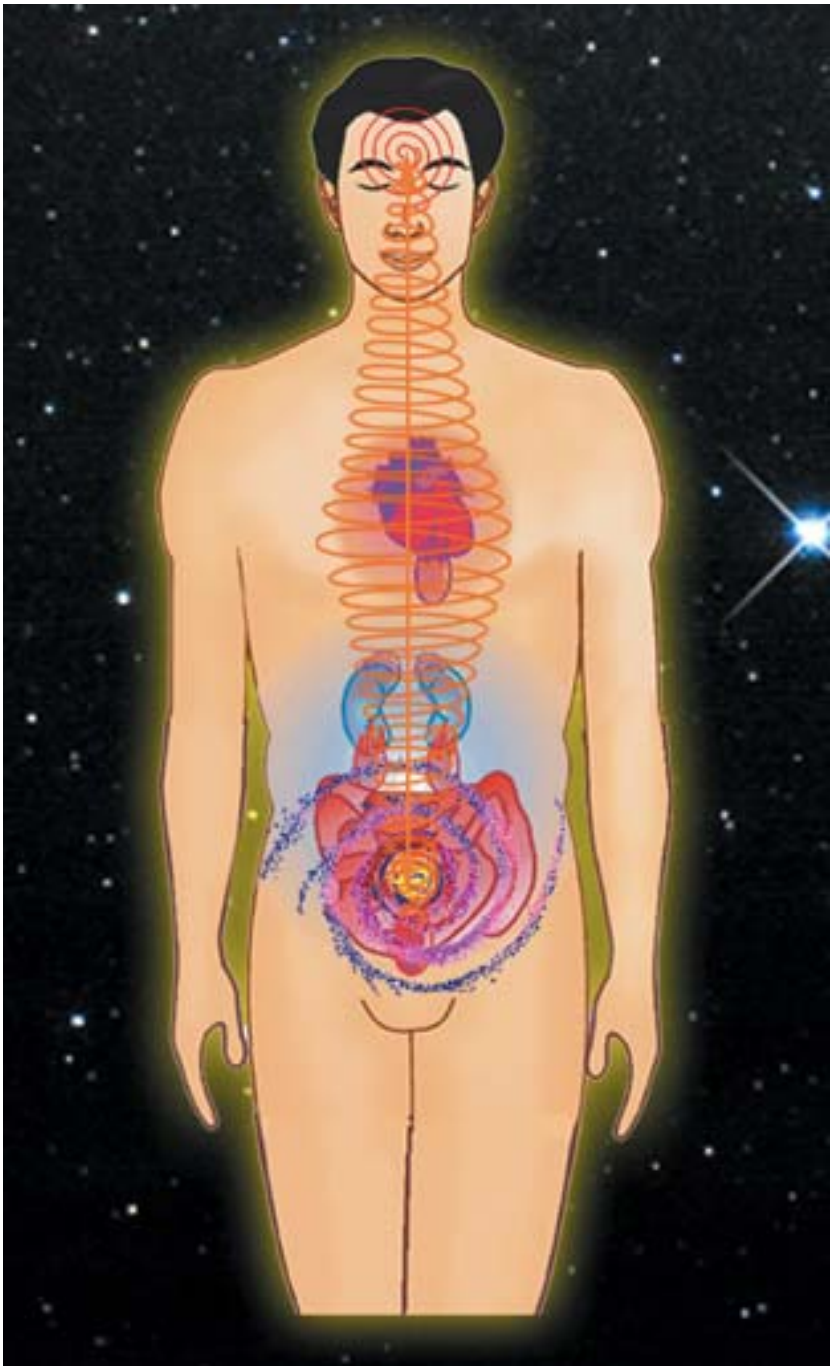


Fig. 5.15 *Spiral and collect the Chi in the navel.*

Tan Tien Chi Kung Postures

All eleven postures start from the normal standing posture.

Fig. 5.16 *Standing Normal.*

Note*:* In all the exercises keep the diaphragm down, the chest relaxed and the anus pulled up. Repeat all the animal exercises several times.

Rabbit (Front Tan Tien)

This exercise develops the Chi pressure in the front part of the Tan Tien, navel and pelvic area.

a. Stand shoulder width, with the feet parallel.

b. Inhale; pull up the anus and the front part of the anus, and simutaneously make the Dragon Sound (with a high pitched sound Hunnnnn). At the same time feel the lower abdomen and the throat like a vacuum sucking Chi to expand the lower abdomen and the throat, while raising the arms slightly above the head.

Fig. 5.17 *Begin the Rabbit Posture with the Dragon Sound.*

c. Exhale with the Tiger Sound (hummmm sound) quickly and pull up the anus and front part of the anus even more and widen your nostrils. At the same time, sink down a little in the kua, press the palms down and push the Chi pressure down in the front part of the Tan Tien and the pelvic area with the sound.

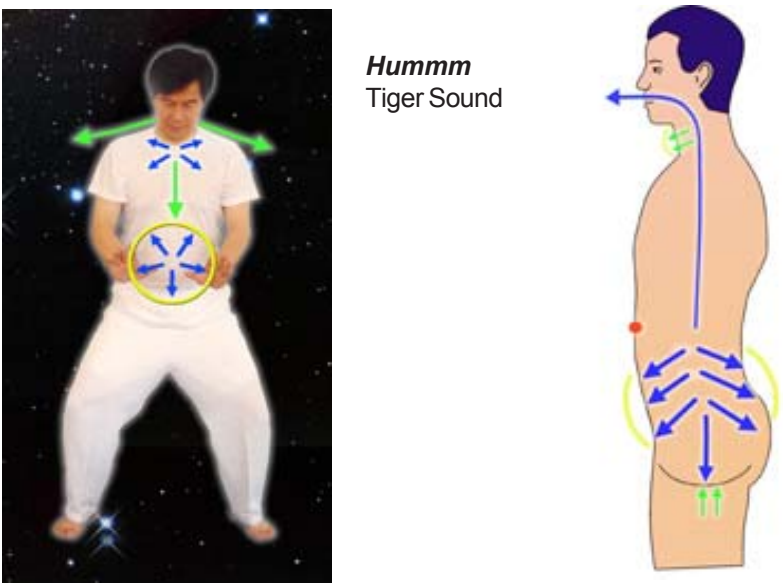


Fig. 5.18 *Rabbit exhaling with Tiger Sound.*

d. It is very important that you synchronize these three movements. When you do this you will feel the Chi pressure increasing and generated in the lower abdomen, in this part of the Tan Tien and in the palms of your hands. The kua and the hip joints will open more due to this Chi pressure.

e. Do the ending practice (See page 93).

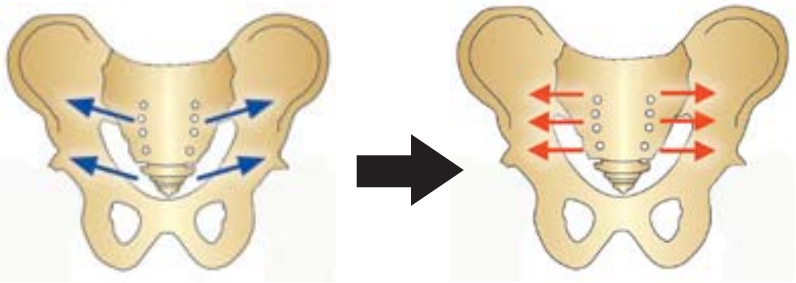


Fig. 5.19 *Rabbit Posture opens the kua and hip joints.*

Crane (Both Sides of the Tan Tien)

This exercise develops the Chi pressure in both sides of the Tan Tien.

a. Stand shoulder width, with the feet parallel. Inhale with the Dragon Sound; pull up the anus and the left and right sides of the anus.

b. While raising the arms slightly above the head the fingers form the breaks.

Fig. 5.20 *Crane raises its Breaks.*

c. Exhale with the Tiger Sound (hummmm sound) and at the same time, press your palms down to hip level and press the Chi to the left and right sides; pull up the anus and the left and right side of the anus and expand the left and right side of the Tan Tien. Feel them expanding and feel the Chi pressure growing in these parts and in the palms of your hands.

d. Sink down a little in the kua, press the palms down and push the Chi pressure down to both sides of the Tan Tien and the pelvic area.

e. It is very important that you synchronize these three movements. The kua and the hip joints will open more due to this Chi pressure.

Fig. 5.21 *Crane expanding Chi to both sides.*

f. Repeat 3 to 6 times.
g. Do the ending practice (See page 93).

Fig. 5.22 *Cranesinking into the Kua.*

Bear (Back Part of the Tan Tien and whole Back/Spine)

This animal position corresponds to the back part of the Tan Tien, especially to the sacrum and the whole back: a bear back! We already did part of these exercises in the beginning to open the sacrum and the kua.

a. Stand shoulder width, feet parallel with the palms facing up.

b. Inhale, with the Dragon Sound and raise up your palms to face the heavens and scoop up the Chi and pour it down.

c. “In but not in; out but not out”. Now exhale with the Tiger Sound and push down to the Lower Tan Tien. Lower the hands near the hips. Lock the wrists by screwing and twisting. Screw and twist ulna and radius but lock the elbows. Feel the two bones are crossing each other. Feel the whole arm and the scapula become one piece. The whole arm turns so the fingers point together; this will pull the scapulae out and make the upper back round.

Fig. 5.23 *Bear Posuture begins.*

Bear inhales with Dragon Sound. Bear exhales with Tiger Sound.

Fig. 5.24 *Bear Posture: Inhale and Exhale.*

Strengthen the Arms

Fig. 5.25 *Bear presses the hands down.*

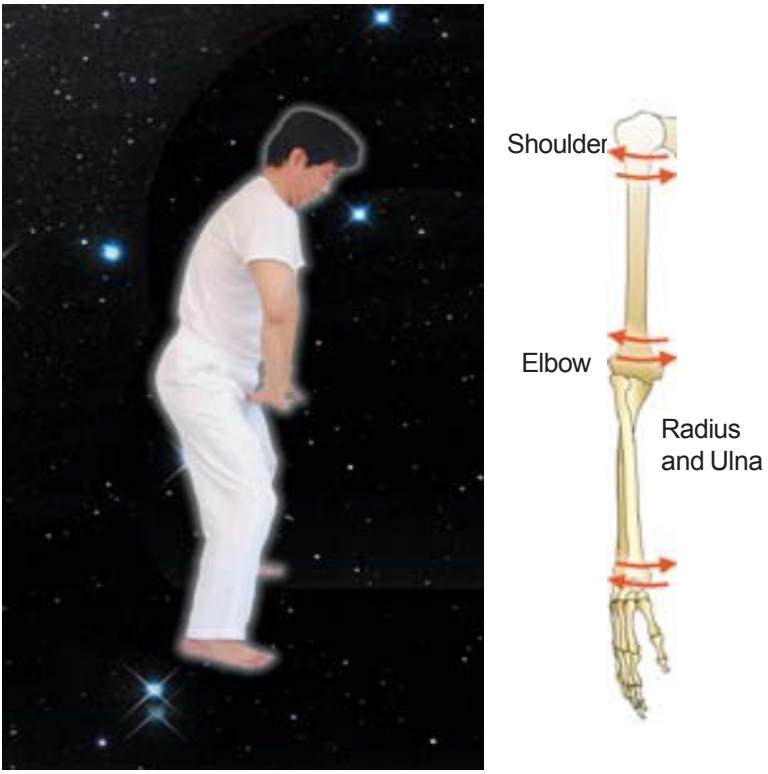


Fig. 5.26 *Bear turns arms so fingers point at each other.*

d. At the same time twist the ankles and the knees so the two bones cross each other. This will the make whole leg to be one piece.

e. Twist the heels lightly out and the toes lightly in. (The formula of “In but not in; out but not out” will create a force of balance; no force will overcome this.) Feel the hips and sacrum open and the chest sink and the scapulae round and the Chi will fill the whole back. While rounding the shoulders you will feel the whole back expanding like a bear.

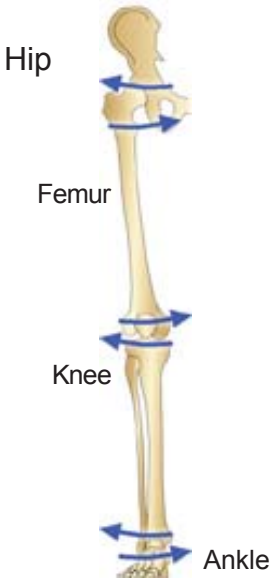


Fig. 5.27 *Bear screws and twists.*

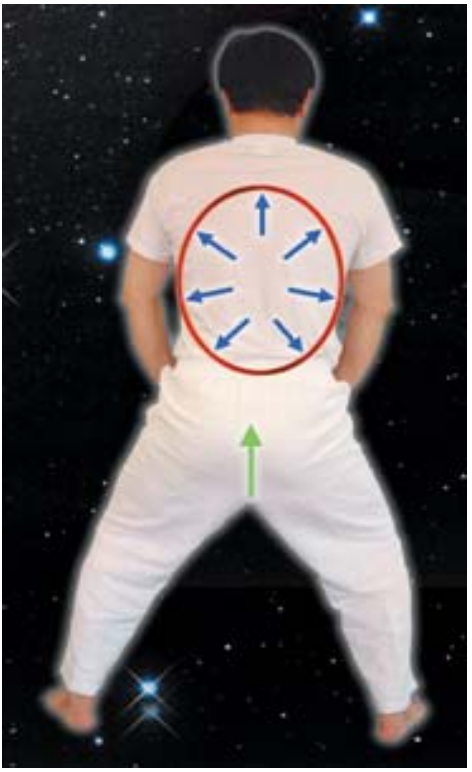


Fig.5.28 *Bear rounds and expands the back.*

f. Inhale without inhaling. Inhale and exhale with the Dragon and Tiger Breath till the Chi fills up. Inhale once more with the dragon breath and hold the breath. Lock the neck and the anus so it feels like a vacuum pack without leaking. Suck in and suck out without breathing the air in and feel the pressure increase in the whole torso. This will increase blood circulation, the Chi, the lymphatic system and massage all the organs. Exhale and relax for a while.

g. Inhale; turn the palms out and up and raise up your palms facing the heavens and scoop up the Chi and pour it down. Lower the hands down to the navel, cover the navel for a while, feel warm and nice.

h. Do the ending practice (See page 93).

Fig.5.29 *Bear Posture: Legs screwed in; kua open; arms one piece with scapulae and spine; back expanded.*

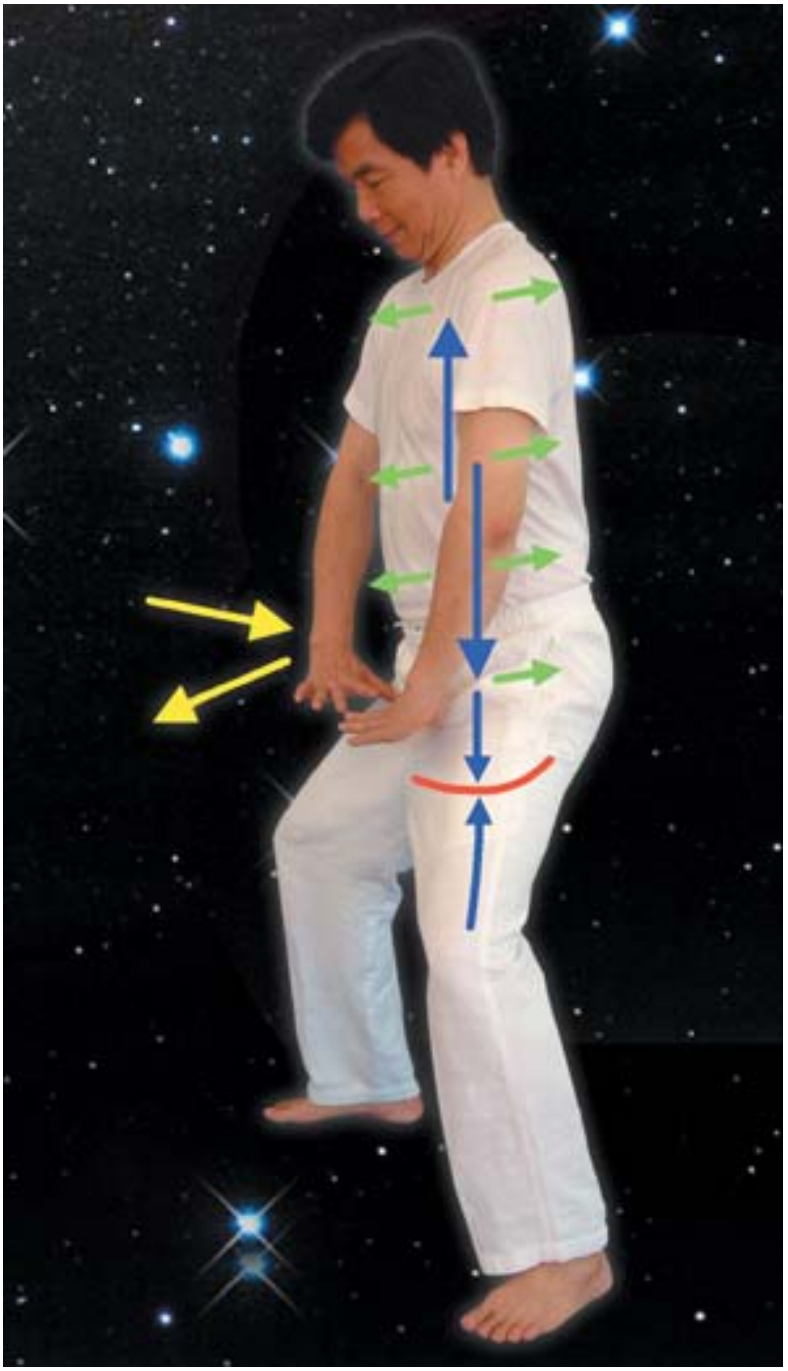


Fig. 5.30 *Bear Posture expanding the back.*

Swallow (Left and Right Tan Tien)

a. Stand in the Embrace the Tree position; arms rounded; chest sunk.

b. Inhale, with the Dragon Sound; lightly pull up the anus and the left and right sides of the anus; feel the suction in the Tan Tien.

c. Left side: Let the Lower Tan Tien Chi move you to the left from the lower lumbar. Do the inhale without inhaling; feel the Chi pressure; hold this position for a while.

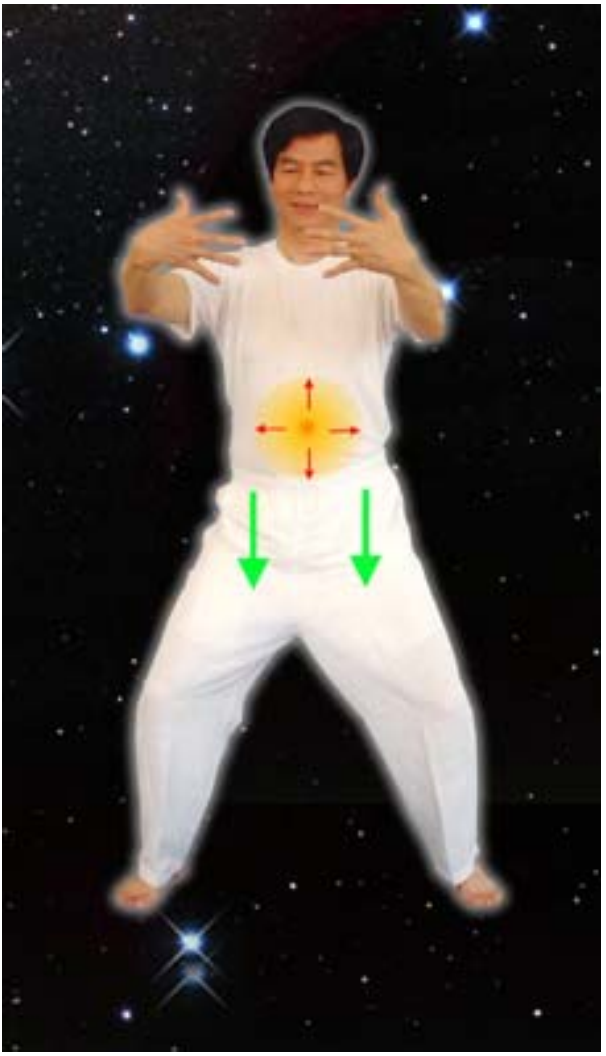


Fig. 5.31 *Swallow Embraces the Tree.*

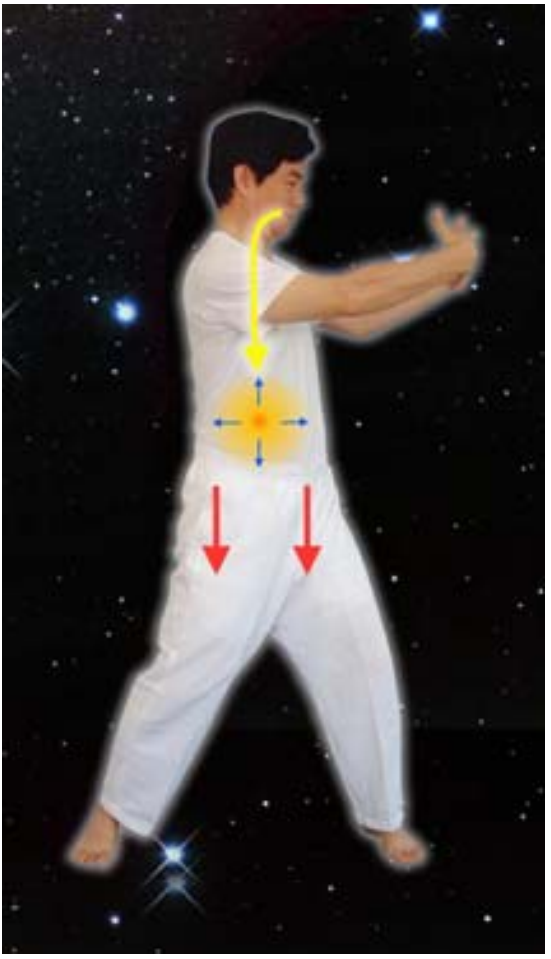


Fig. 5.32 *Swallow moves to left side.*

Exhale with the Tiger Sound, push the Chi down to the left side and keep the anus lightly contracted. Sink from the groin and feel your left leg pushing down into the earth. Feel a force coming up from the earth and a force pushing you down. Keep on doing the Dragon and Tiger Sounds and expand the pressure in the Tan Tien. Do the inhale without inhaling, feel the Chi pressure; hold this position for a while.

d. Middle: Turn the Embracing the Tree arms to the middle. Do the same as the left side. Inhale and lightly pull up the middle part of anus with the Dragon Sound and feel suction in the throat and the lower abdomen.

e. Exhale with the Tiger Sound, push the Chi down the middle and keep the anus lightly contracted. Sink from the groin and feel your legs pushing you down into the earth. Feel a force coming up from the earth and a force pushing you down. Keep on doing the Dragon and Tiger Sound 6 to 9 times and feel the pressure in the Tan Tien expand and contract. Do the inhale without inhaling, feel the Chi pressure; hold this position for a while.

f. Right Side: Turn the Embracing the Tree with the arms to the right. Your right foot turns 90 degrees and your left foot 45 degrees to the right.

Fig. 5.33 *Swallow expands the Chi pressure in the Middle Tan Tien.*

Fig. 5.34 *Swallow pushes Right Leg into earth and Tan Tien expands.*

g. Inhale, with the Dragon Sound, lightly pull up the anus and the right side of the anus; feel the suction in the Tan Tien.

h. Exhale quickly, pull up the anus and the right side of the anus and press the Chi down in the right Tan Tien; the right leg pushing in the earth. Feel again a force coming up from the earth and a force pushing you down.

Keep on doing the Dragon and Tiger Sounds 6 to 9 times and feel the pressure in the Tan Tien expand and contract. Do the inhale without inhaling, feel the Chi pressure; hold this position for a while.

This exercise is very important for your Tai Chi. especially for the Tan Tien form.

i. Do the ending practice (See page 93).

Dragon (Left and Right and Middle Tan Tien)

a. Stand shoulder width, with the feet parallel and the fists at hip level.

Fig. 5.35 *Dragon inhales.*

b. Left Side: Inhale with the Dragon Sound and feel suction in the lower abdominal and the throat. Move yourself to the left side from the lower lumbar. Hold this position for a while.

Fig. 5.36 *Dragon moves to the left.*

c. Exhale with the Tiger Sound quickly, lightly pulling up the left side of the anus. At the same time thrust the right fist down along the left leg toward the ground.

d. Feel the left side of the Tan Tien expanding.

e. Repeat this for the right side and the Middle Tan Tien.

Fig. 5.37 *Dragon exhales with the Tiger Sound and thrusting the fist down to the earth.*

f. For the Middle Tan Tien, you push both fists down and pull up the middle part of the anus.

g. Do the ending practice (See page 93).

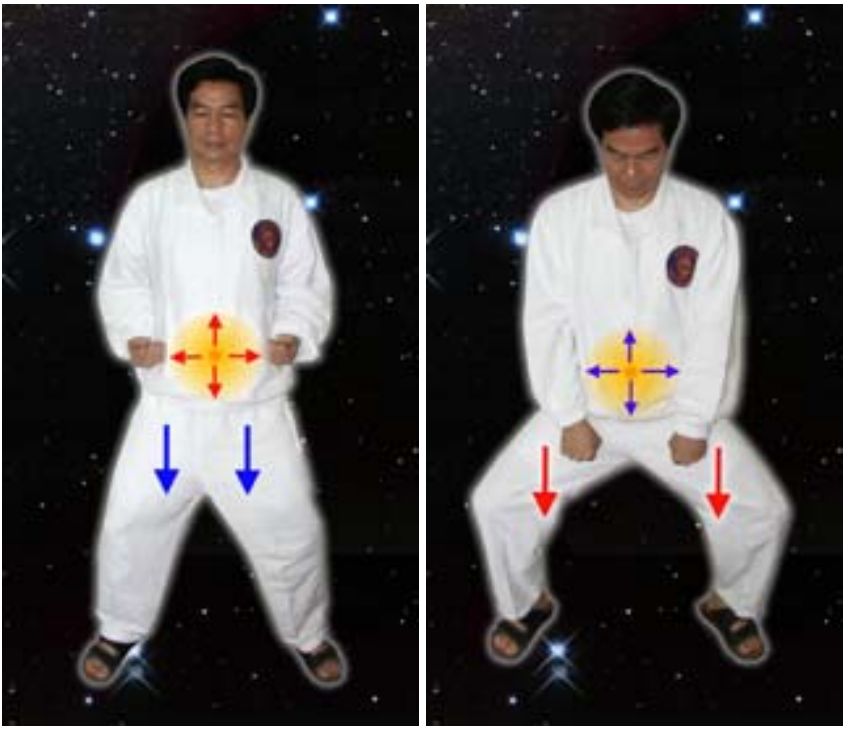


Fig. 5.38 *Dragon expands the Chi pressure in the Middle Tan Tien.*

Eagle (Lower Tan Tien)

a. Stand shoulder width, feet parallel, lightly pull up the anus with the elbows bent and the fingers spread out above the head.

Fig. 5.39 *Eagle flies.*

b. Inhale with the Dragon Sound and lightly pull up the anus and feel the suction. Roll your eyes up and fix them on the crown.

c. Exhale with the Tiger Sound and press down to the Lower Tan Tien.

d. Just stand in this position and do the Dragon and Tiger Sounds and feel the forces moving you, Do 3 to 6 times. This exercise will enhance the power in the Tan Tien and in your fingers.

e. Do the ending practice (See page 93).

Fig. 5.40 *Eagle rolls the eyes to the crown.*

Monkey (Lower and Upper Tan Tien)

a. Stand shoulder width, with your feet parallel and your palms in front of the kua.

b. Inhale with the Dragon Sound and lightly pull up the anus and the middle part of the anus and expand the Lower Tan Tien. Raise the arms up above the head palms open.

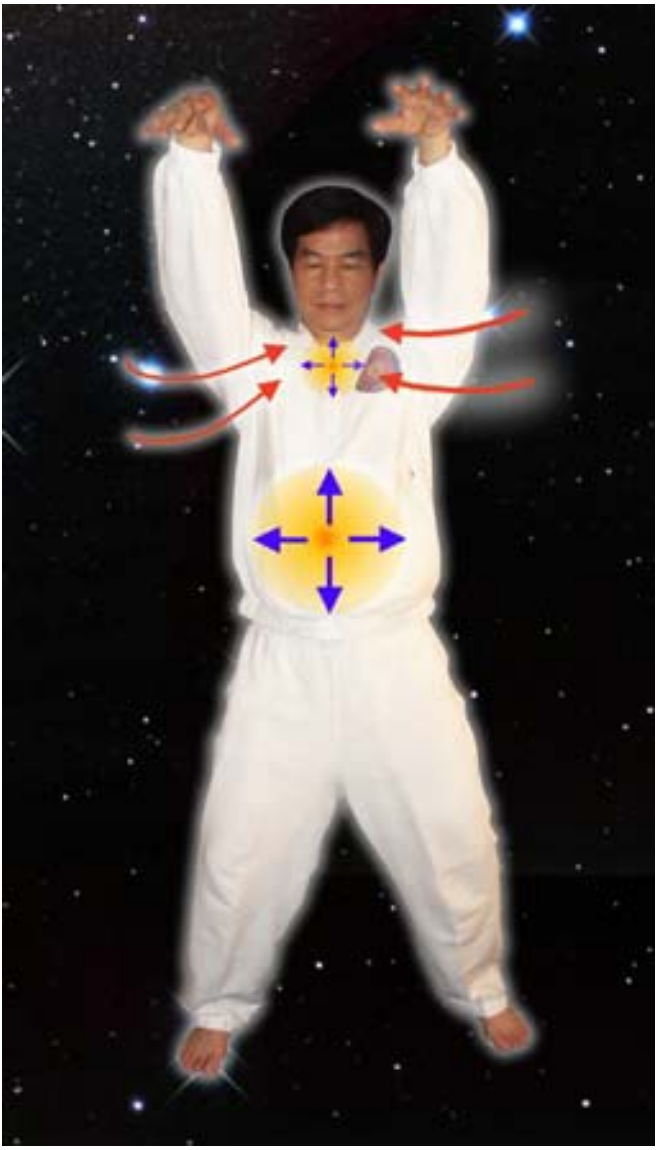


Fig. 5.41 *Monkey makes the Dragon Sound.*

c. Squat down from the kua and exhale with the Tiger Sound, press the Chi pressure down in to the Lower Tan Tien and swing both arms down to the ground.

d. Continue swinging both arms back and forth while in the squatting position like a Monkey and feel the kua (groin) open more. While swinging gather the earth Chi into the palms and the bones.

Fig. 5.42 *Monkey squats.*

Fig. 5.43 *Monkey gathers the Earth Energy.*

Fig. 5.44 *Monkey swinging the arms.*

e. Inhale with the Tiger Sound, gradually rise up from the hips to the knees and the palms scoop up the earth energy. Come back up to the starting position.

Fig. 5.45 *Monkey rises up bringing Earth Energy to the Lower and Upper Tan Tiens.*

f. Open your palms to absorb the heavenly force.
g. Repeat the same exercise 3 to 6 times.
h. Do the ending exercise (See page 93).

In this exercise, the upper part of your body is light while the lower part is heavy.

Fig. 5.46 *Monkey absorbs Heavenly Chi.*

Elephant (Left and Right Kua and the Lower Tan Tien)

a. Stand with your feet parallel and shoulder width.

b. Inhale with the Tiger Sound and feel the suction. Hook the thumbs together and raise them up above the crown. Turn the hip to the left side

Fig. 5.47 *Elephant raises his trunk above the crown.*

c. Exhale with the Tiger Sound and press the Chi down to the Tan Tien. Pull up the anus and the left tide of the anus. Turn your hips to center and swing your arms, like the trunk of an elephant down to the ground. Swing the arms like a trunk back and forth to gather the earth Chi.

Fig. 5.48 *Elephant swings his trunk, gathering Earth Energy.*

d. Inhale with Dragon Sound as you gradually raise up from the knees to the hips and with palms. The palms scoop up the earth energy. Come back up to the starting position: Arms raised above the crown. Turn the hips to the right side.

Fig. 5.49 *Elephant raises his trunk up from the Earth to the Heavens.*

e. Exhale with the Tiger Sound and press the Chi down to the Tan Tien. Pull up the anus and the left side of the anus. Turn your hips to the center and swing your arms, like the trunk of an elephant down to the ground. Swing the arms like the trunk back and forth to gather the earth Chi. Do three sets.

f. Rest and do the ending exercise (See page 93).

Rhinoceros (Left and Right Tan Tien)

a. Stand shoulder width, with your left foot in front and your right foot at a 45 degree angle behind you.

b. Stretch your left arm straight in front of you, the palm facing downward. Hold the back of your right hand in front of your forehead.

Fig. 5.50 *Rhinoceros begins.*

Fig. 5.51 *Rhinoceros moves to the left side.*

c. Inhale with the Dragon Sound. Pull up the anus and the left side of the anus, sink a little bit in the kua and move the waist with the Tan Tien to the left. Your hips and navel should stay pointed straight in front of you. The arms and the upper body move with the Tan Tien to the left.

d. Exhale with the Tiger Sound, pull up the left side of the anus more and, at the same time, press the Chi down in the Left Tan Tien, pressing the left leg into the ground.

e. Hold this position and do the Tiger and the Dragon Sounds with the “inhale without inhaling” to build up the inner abdominal pressure. When out of breath, exhale and inhale. Regulate the breath; rest.

f. Repeat to the right side, the right leg in front and the left leg at a 45 degree angle aimed outward behind you. Stretch the right arm straight in front of you and hold the back of the left hand in front of your forehead.

Fig. 5.52 *Rhinoceros moves to the right.*

g. Inhale with the Dragon Sound. Pull up the anus and the right side of the anus. Sink a little bit in the kua and turn the waist with the Tan Tien to the right. The navel and hips should not move.

h. Exhale with the Dragon Sound. Pull up the right side of the anus more and, at the same time, press the Chi down in the Right Tan Tien, pressing your right leg in the ground.

i. Hold this position and do the Tiger and the Dragon Sounds with the “inhale without inhaling”. Build up the inner abdominal pressure. When out of breath, exhale and inhale. Regulate the breath; rest.

j. Do the ending exercise (See page 93).

Horse (Upper Tan Tien and the Solar Plexus)

An expanding sound from the Upper Tan Tien/Solar Plexus.

a. Stand shoulder width, with the feet parallel. Raise the arms above the head.

b. Inhale with the Dragon Sound and suck in the upper abdomen toward the back (Upper Tan Tien). Flatten the navel area so that the navel touches the spine.

Fig. 5.53 *Horse Posture begins.*

c. Sink a little in the kua and at the same time exhale quickly with force and press the arms down with force especially the wrists. Push the abdomen out with the horse sound (Hoooooo) from the Lower Tan Tien. It is an echo sound coming from the Upper Tan Tien and solar plexus.

d. Do the horse sound three to six times. Rest.

e. Do the ending exercise (See page 93).

Fig. 5.54 *Horse exhales 'Hoooooo" sound pressing down with the arms and wrists.*

Bull (Back Tan Tien)

a. Stand shoulder width, with the feet parallel. Put your right leg to the front and turn your left foot 45 degrees outward.

b. Your arms are in front of you, palms facing outward.

c. Inhale with the Dragon Sound and feel the suction expand the upper abdomen. Pull up the anus and both sides of the anus; sink to the back and at the same time turn the palms and scoop up the Chi on the left and right sides. The Tan Tien Chi is pushing you to the back and down into the right leg.

Fig. 5.55 *Bull Posture begins.*

d. Spiral the hands with the tendons under the armpits until the palms are facing you. “In the curve find the straight” means that when you twist the wrist and the elbow, hold the twist and try to straighten the arms and creating a force in the arms.

Fig. 5.56 *Bull scoops up the Chi.*

Fig. 5.57 *Bull finding the Curve in the Straight.*

e. Then exhale with the Tiger Sound and press the Chi down to the lower abdomen. At the same time very lightly pull up the front side of the anus; spiral the hands more until the palms are facing outward and, at the same time, let the Tan Tien Chi push you to the front and down into the right leg.

f. Feel the energy rising from the earth. Pull up the front and back side of the anus, round the sacrum/lower back (with your chest in, scapulae round and chin pushed back). Feel the energy rising in the spine and push the energy out to the fingertips.

g. Do this exercise 3 to 6 times, rest.

h. Repeat with the left leg in front and the right leg back.

This is a very important introduction exercise for the Tai Chi. From this exercise you will learn to sink back in the kua, move from the Tan Tien with the Tan Tien force and direct the force through the spine to the fingertips and from the fingertips back into the earth.

i. Do the ending exercise (See page 93).

Fig. 5.58 *Bull makes the Tiger Sound pushing out to the front.*

Finishing Tan Tien Chi Kung

After you have finished the Tan Tien Chi Kung, sit down and relax. Put both palms on your Tan Tien. Smile and feel the Chi vibrating in the Tan Tien and in all the organs, glands and fasciae.

Chapter VI
Chi and the Tao

Tan Tien Chi Kung and the Universal Tao Practices

It is in the Lower Tan Tien that the condensation process started from which our life began. This is where all the energies of heaven and earth in the lovemaking of our parents and ancestors and their essences came together and created the embryo and our Original Chi.

In the Cosmic Healing Sounds practice, sound combined with movement serves to soften and cool down overheated organs which have tended to contract and harden as a result of stress. The body temperature is rebalanced and the free energy flow is regenerated.

Fig. 6.1 *Cosmic Healing Sounds*

It is here that the birth of the very Universe from Nothingness towards Fullness is reflected in the unity of Yin and Yang at the beginning of our life Journey. By smiling and relaxing into the belly, we ease the metabolism in the whole body, facilitating the digestion of food and creating favorable conditions for the greater digestive happening: the processing and blending of Universal, Earth and Cosmic Particle energies to support the growth of the embryo.

It is by focusing our loving attention on the Lower Tan Tien that we create the primary conditions for regeneration and rejuvenation. When we grow older, we also can grow younger, as we remember our original prenatal state, cultivate our inner power and keep Chi pressure.

It is in the Cosmic Inner Smile that the heart of Tan Tien Chi Kung as an active energy meditation practice lies. It prepares the ground for all other Universal Tao exercises. The presence of inner peace determines to what extent exercises will be effective.

Fig. 6.2 *Cosmic Inner Smile*

Also, it is relaxation which determines to what extent the body will be able to absorb the high energy substances. These substances are the focus of Chi Kung and determine its effectiveness in the process of transformation.

In the Fusion Practices we learn to balance our negative energies with our positive energies and condense our positive energies into a jewel of compassion. And then it is circulated through the Microcosmic Orbit to heal and transform our whole body and all its organs, glands, networks and channels. The pakuas are energy webs into which the emotional energies are brought together, blended and purified; they are located just behind the navel.

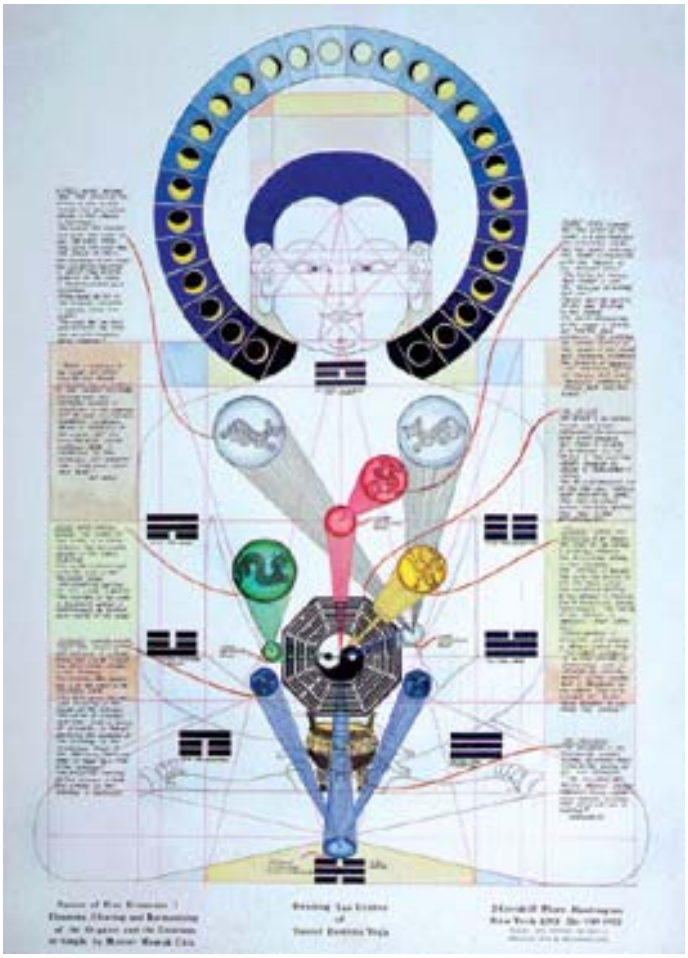


Fig. 6.3 *Cosmic Fusion*

The Belt Channel also starts at the navel. It is the psychic channel for self-defense of the body against negative energies from outside. It moves in a circle in and around the body from the center to the crown and down to the ankles and up again, to protect all the vital energy centers. The Chi which moves it comes from the power generator of the body.

Fig. 6.4 *Belt Channels*

The Lower Tan Tien processes and balances the emotional energies which have their seat in the organs and then returns the virtuous energy to them. Subsequently it nourishes the whole body with the blended and refined energies; it is concentrated in the pearl which is then circulated through the Microcosmic Orbit and from there into all the other energy pathways.

While the Cosmic Inner Smile, the Healing Sounds and the Fusion practices generate new fresh energy, they also need to be nurtured by fresh energy which can only come from good Chi pressure.

In the higher alchemical Kan and Li practices, it is once again the Lower Tan Tien which serves as the first station for alchemical transformation. Here the Water energy is steamed by the Fire energy so that the whole body is cleansed and detoxified and the transformation processes at the higher centers of the heart and the brain are prepared.

For all these alchemical transformations, a high accumulation of concentrated Chi is needed. To supply this Chi, Tan Tien Chi Kung plays a key role. This explains why Taoist Masters and practitioners in their meditations always center on the Lower Tan Tien. It is here that the whole bio-electromagnetic process is set in motion which nourishes and sustaines successive waves of electromagnetic activation.

Fig. 6.5 *Lesser Kan and Li*

Self Healing and Wholeness

In the Taoist tradition, the lower body and its organs and functions are associated with earth, the higher body and its organs with heaven. Yet the spiritual body cannot be born and grow without being nourished by an unceasing supply of fresh Chi, generated in the lower body by the practice of Tan Tien Chi Kung.

Tan Tien Chi Kung, as one of the basic practices of the Taoist approach to health and self-healing, has its roots in a particular world view at the very heart and root of Chinese civilizations and science. In this view, human beings, like all other creatures, are seen as part of nature.

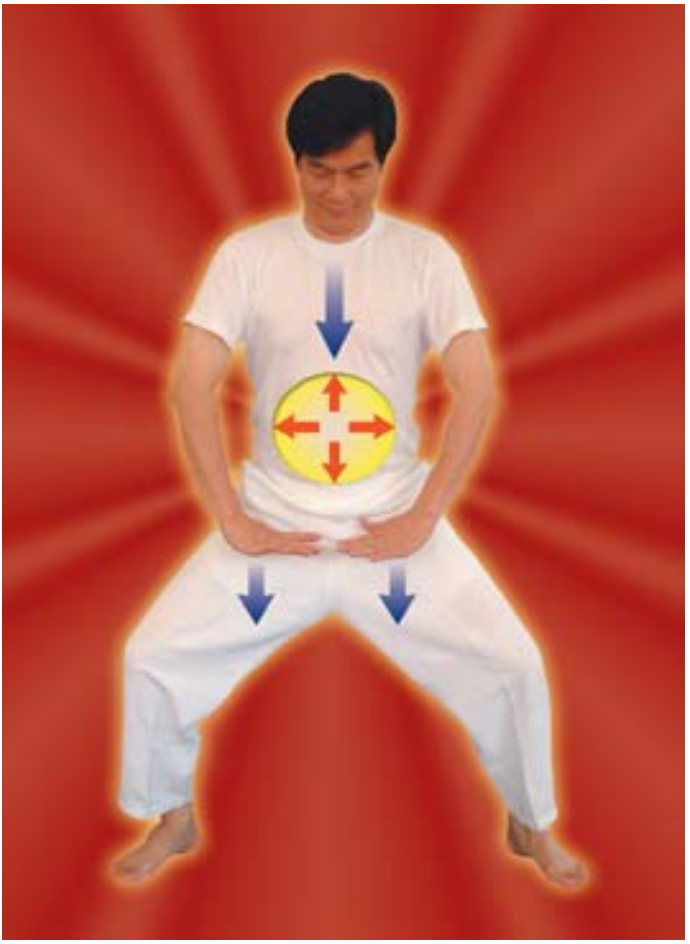


Fig. 6.6 *Tan Tien Chi Kung*

They are not above and on top of nature but need to serve and honor it. Nature is not to be conquered and subjected but to be treated with reverence and respect. People have to live in harmony with the universe and with nature as its manifestation. If not, the universe will turn against them and destroy the very foundations of their life.

In this ancient Taoist vision, at the heart of Chi Kung and Tan Tien Chi Kung, the universe and the earth are seen and experienced as sacred. Also, the human body is seen as a sacred vessel and a microcosmos in which the macrocosmos is mirrored and reproduced.

In the same vein, all that exists is holy and life is seen as a process of return to the original state of holiness/wholeness in which the primordial unity with the universe is regained. Healing, wholeness and holiness have the same etymological root.

Heaven and Earth, dark and light, the sacred and the profane, the material and the spiritual, body and mind, the physical and the metaphysical, thinking and feeling, what is above and what is below, are not seen as irreconcilable or inimical opposites but as natural polarities and partners between Yin and Yang. This manifests the relations between Heaven/Fire and Earth/Water, at the root of the energetic processes of imbalance and balance within the body.

The Tan Tien is not a physical phenomenon but an energy field of the subtle body. It has therefore not a precise physical location but varies with each person, depending on sex, age and life history. It functions in the area just between the navel, the Door of Life and the sexual center, just above the pelvic area.

In view of the above, Tan Tien Chi Kung may be defined as an energy meditation or inner fitness practice, designed to enhance a Chi Kung state of being in ourselves by awakening, activating and sustaining processes, rhythms, flows and transformations of energy in the body.

The Tan Tien is the center of activation and balancing of the primal life force energies (Chi) of the body by which the practices (Kung) of Chi Kung are generated. Tan Tien Chi Kung may also be called a strategy for self-empowerment and self-healing.

Tan Tien Chi Kung, like other forms of Chi Kung, is not only a source of self-healing but may also serve as a source of healing others. However, its effectiveness depends on the energy of the

healer. To practice healing others by way of Chi Kung, the healer needs first to raise their own energy, so that they can share their abundance.

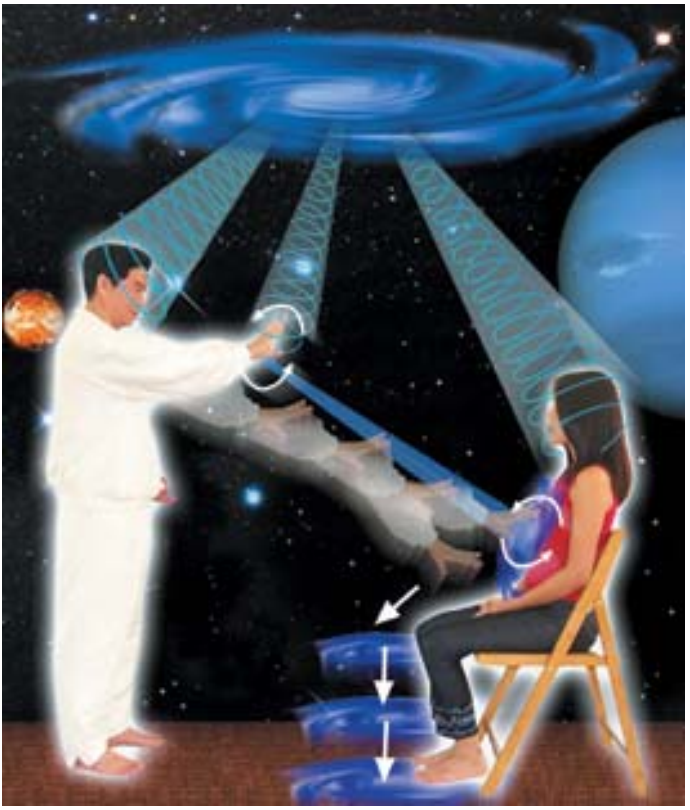


Fig. 6.7 *Cosmic Healing*

A high energy field is created which may then serve to activate enrgy fields of those who seek to be healed. If the person who seeks healing were to have a higher energy field, it may well be that the healer would drain that person. Thus for any healer the first responsibility lies in healing themselves so that their work will be a blessing.

For this reason, energy meditations are the first responsibility of the Taoist practitioner who intends to be a healer. To raise energies, Chi pressure is indispensable. While an abundant Chi supply is essential for health, inversely, good health is also a condition for an abundant Chi supply.

Thus, to ensure both physical health and spiritual growth, an abundant supply of Chi (bio-electromagnetic energy) is needed. This accumulation of Chi is indispensable for creating the right kind of pressure to sustain and enhance the free and optimal flow of energy throughout the whole body. Chi is needed to activate the blood and lymph flows, the flow of the cerebrospinal fluids, the nerves, the endocrine glands and hormones, the fasciae and the tendons, bones, muscles and all the cells of the body.

As an electromagnetic force, Chi is the source of all movement and power in the Universe. It is also the source of life and empowerment of the whole body and all its functions. It can only be properly used and serve body and spirit if it is activated, guided and directed by the mind.

Chi Kung and the Balance of Water and Fire

Tan Tien Chi Kung involves the simultaneous training of body and mind by way of activating mind power. The combined and integrated activity of the mind, the heart and the eye power are the major sources of activation of the subtle energy and the transformations it requires and enhances.

The more the mind is awakened, the more the heart is opened and the more the eye is trained to look inward, the easier it becomes for the mind to lead and guide the movement of Chi through the body.

Thus the process of transformation is determined by the progressive refinement and combination of mind, heart and eye into one undivided subtle power. The emphasis in Taoist practice on the inner structure of this transformational power is suggested by the expression used for it. It is called " ***Yi"*** which means Water or Wisdom Mind.

This Yin mind is receptive, inward oriented, serene, steady and cool and represents the moon energy. It is the opposite of the Yang or Fire mind. The Fire Mind is so called as it represents the heat of the Sun, the emotional, active, outward going and volatile mind. These two minds, representing the unity of opposite Yin and Yang energies in the Universe, need to always return to balance, so as to create harmony and the right temperature in body and mind.

While the Lower Tan Tien serves as the source and the vessel

or container of Chi, it is the Wisdom mind which leads its movement, distribution and circulation. The more the mind is cultivated and transformed into a Wisdom mind, the more skilful it will be in sensing where Chi is needed and guide it.

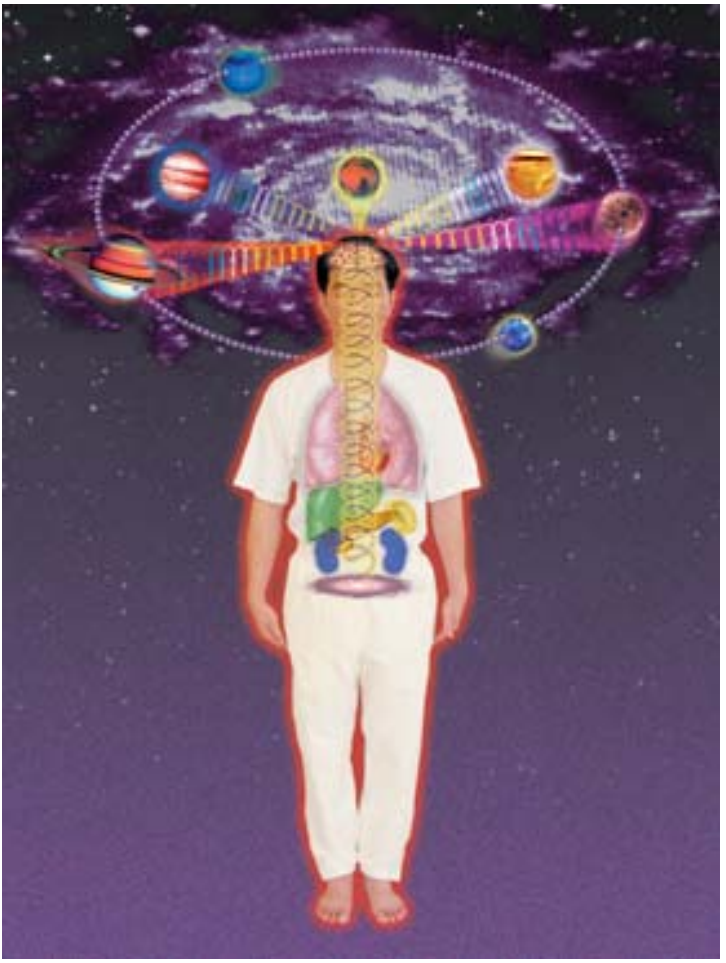


Fig. 6.8 *Wisdom Chi Kung*

In traditional Chinese terms Chi is considered the soldiers and Yi the Commander in chief. These martial terms make clear that Chi was of vital importance in the martial arts and in warfare, as it represented the major source of internal power before gun powder was introduced.

In Iron Shirt Chi Kung there was always, at least at the surface, a strong emphasis on its Yang dimension, although the real power was hidden in the Yin energy.

It is not surprising that the ways of access to these powers were kept secret to guard the monopoly and also to avoid abuse. The emphasis on energy as a meditative practice, so characteristic of the Taoist approach, becomes understandable if we know that monks played a crucial role in its creation.

With the decline of Chi Kung and especially of Iron Shirt Chi Kung as a principal weapon in warfare, its Yin dimension, not directly discernible to an uninitiated outsider, could be more fully appreciated. Chi Kung and Iron Shirt Chi Kung came to play a vital role in using Chi for health, self-healing and spiritual growth. The meaning of Yi as Wisdom or Water mind suggests that Taoist practice relied on the enhancement of the power of intuition and the art of sensing; these powers were considered as belonging to the essence of feminine power. Throughout history and the evolution of culture women have been closer to the earth and to their hearts than men. It is not surprising that the Taoist tradition has been called the female undercurrent of Chinese (patriarchal) culture.

With its emphasis on the integration of action with contemplation Taoist practice has had a pervasive influence on the flowering of Chinese civilization in all fields, in particular in those of science, medicine and the arts.

With the growth of subtle energy through Taoist meditative practice, there is less need to rely on the conduction through Chi on external practice and power. The movements increasingly originate from within as both the mind and the body become more sensitive to each other; the body becomes the seat of finer and more powerful subtle energies.

The overall energy balance in the body always remains the direct outcome of the level of Chi pressure. When Chi pressure declines, all fluids in the body are deactivated and health is in decline. When the natural energy balance between Fire and Water in the body is lost both body and mind suffer, but especially the brain and the heart.

As the Water element in the body weakens with the decline of the Earth connection, the Fire energy is more out of balance and runs wild.

Given the prevailing trends, there is an implicit contempt for wis-

dom at the expense of knowledge; wisdom relies on listening to and feeling into the consciousness of the mind and the whole body and its organs. Knowledge is seen as a mere instrument of utility and as a product of the brain. The body and its emotions are seen as a source of disturbance rather than the “Temple of the Spirit”. This situation may be inverted when there is more space for Water energy and a better connection with the Earth energy. It is the Lower Tan Tien which is the seat of both Water and Earth elements.

Tan Tien Chi Kung, Iron Shirt Chi Kung and Tai Chi Chi Kung, as well as all other Universal Tao practices are helping practitioners around the world to become rooted and centered.

Fig. 6.9 *Iron Shirt Chi Kung*

Fig. 6.10 *Tai Chi Chi Kung*

Consciousness and Relaxation

In recent fundamental brain research, it has been found that the average person uses only four to five percent of their brain cells. This small portion of active brain cells lies at the surface of the cerebrum. It means that the vast numbers of brain cells in the deeper layers of the cerebrum are asleep.

There is evidence that it is difficult for these cells to be activated if one is too active and over conscious. Our target-oriented, linear-rationalist culture makes stress and tension an essential condition for “keeping up”. Such stress makes it difficult to nourish and keep up Chi pressure.

Chi Kung serves to create a state of relaxation which enables the practitioner to return to their “natural state”. Then the deeper layers of the brain can be opened up and the creative powers of the unconsciousness mind, where all originality and creativity lie hidden, become available.

Relaxation is not static. Rather, it is an expression of the dynamic balance which comes about when one is aligned with the force of gravity. We experience the pulls of the opposite forces within oneself: the force which pulls up and the force which pulls down and the forces from the different directions of the Universe that are electrical and magnetic fields. Chi Kung is the art of being and entering in balance though the process of mutual adjustment of body, mind and breathing. Our posture is an expression of this balance and so internal pressure and power are generated.

Chi Kung practice can serve to significantly activate dormant electromagnetic currents in the deep brain and thereby bring about a major change in the nature of awareness. There is likely to be a close relationship between the high under-utilization of the brain’s potential and the prevailing economic patterns of production, distribution and consumption. They impose the patterns of socialization and education that seem to be aggravated by the new forms of mass information and communication.

Another important finding is that adult and old people’s encephalograms dramatically changed after they had practiced Chi Kung and showed characteristics of childrens’ encephalograms.

As a result of the high pressures of modern life and the build up of tension and stress, the heart is overheated and “cooked”. Its pumping function is severely jeopardized and the blood stream is deactivated.

The balance between Water and Fire energies is seriously disturbed and heart weakness becomes epidemic. Pressure on the heart can significantly be lowered by the Iron Shirt practice of activating the Lower Tan Tien. Such exercises as the Tree, the Turtle, the Golden Urn and the Phoenix Washing Its Feathers make the work of the heart lighter. The Lower Tan Tien requires two thirds of the body’s total blood supply for its four magor organs: liver, kidneys, spleen and stomach. This is why Taoists have also called the Lower Tan Tien “the second heart”.

The heart is also assisted by the Cosmic Healing Sounds for the heart and triple warmer. The Tao Yin practice of leading excess

heat from the heart to the kidneys and the meditation technique of pulsing, through which the pulse can be amplified at the crown and the perineum help relieve the heart.

The ability of the Lower Tan Tien to activate Chi significantly depends on the degree to which the diaphragm regains its flexibility and becomes relaxed so that it can freely move up and down. The diaphragm has a pumping function that can exert pressure on the Lower Tan Tien by way of the Iron Shirt breathing practice of packing and releasing. Chi pressure is raised and is condensed through the packing process.

Through the practice of packing and releasing, the whole Lower Tan Tien receives a massage. This activates the four organs and expels toxins and sediments from the organs in the abdomen, so that blood and Chi flow are restored.

Also the small and large intestines share in the benefits of this packing process, as they are massaged and the natural peristaltic movement is reactivated. It is well known that many chronic diseases originate in the bowels. The Tan Tien Chi Kung exercises designed to open the kua work on pressing the bowel into movement.

Chi Kung as Self-Actualization

The ordinary, functioning mind and consciousness cannot maintain a high concentration of Chi. It behooves us to learn and practice so as to align our true nature with energies of the Universe (Te).

Fig. 6.11 *Chinese Character "Te"*

This is the original meaning of the Chinese character "Te": human alignment with the Whole, the Universe. Thus it may also be translated as "actualization of the Universe or Cosmos within oneself" or self-realization.

It has also been translated as “integrity” (in its original sense of being whole/undivided) which is expressed in “power”, “quality” and “strength”. The more one grows towards realizing within oneself this unity with the Universe, the higher is one’s quality of selfhood, as a microcosmic manifestation of the Macrocosmos.

In its original meaning “Te” is defined as a process of alignment “from within” and it presupposes independence and self-reliance; one’s own mind and body is a field of energy and consciousness and the source of entering into alignment with the Tao. This explains the great sense of independence by Taoist practitioners and communities over the centuries and their reliance on inner rather than outer authority, knowledge and power. This is obvious from the striking tales and legends about the lives of the Immortals.

Fig. 6.12 *Chaun Chung-Li, One of the Eight Immortals*

Reactivation and Regeneration

The activation of the abdomen plays a major role in the creation of a state of ease to prevent “dis-ease”. If the abdomen is at ease, the whole body comes to rest. If not, the whole body suffers, as the basic metabolism is affected. In the process of aging and as a result of an agitated externalized life style the abdominal organs tend to sag and thereby lose their vitality. These organs, thanks to the rise in Chi pressure in the Lower Tan Tien, are uplifted and brought back in their original position, so that once again the Chi flows.

After giving birth, the uterus may sag and cause the prolapsus of the transverse colon, and constipation. If undue pressure is exercised on the fallopian tubes and the ovaries, it may become a cause of sterility, as proper blood and Chi flow is prevented and toxins cannot be moved out. This in turn may lead to serious diseases. Thus, women can receive particular benefit from Tan Tien Chi Kung.

The diaphragm can move down if the Lower Tan Tien is freed from mental and emotional stress and tension. This is a principal cause of constipation and degeneration of the digestive and eliminative system. Constipation can also be relieved by the Tao Yin practice of lengthening the psoas muscle, combined with the conversion of fear into gentleness by the Cosmic Healing Sounds and the Fusion practices.

By “bringing peace” and generating Chi in the Lower Tan Tien, the Wisdon mind, Yi, dissolves tensions in the body, as it brings down the Fire energy, which always rises up and tends to overheat the brain, the heart and the lungs. This cools the body, reestablishing the natural balance between Fire and Water energies.

By concentrating attention on the Lower Tan Tien, Yi also brings down the point of gravity in the body so that stability increases and the earth connection is enhanced. As we become more rooted, a sense of coming home may arise. This has a further cooling and refreshing effect on the body.

With the downward movement of the diaphragm, the lungs also get new space. They have suffered from the stress and tension which has caused breathing to become short and shallow. When the Lower Tan Tien enters a state of rest and the diaphragm is able to relax and returns to its natural rhythmic up and down movement, the lungs can ease into their natural function.

Then one can start again to breath deeply and slowly and gently. This regenerates the whole body, as its cells, organs, glands and bones become tonified and energized as a consequence of the fresh Chi pressure. Nose breathing becomes less necessary and can gradually give way to breathing from within.

As a result of this process towards inner relaxation and balance, the body can start to function in a qualitatively new way; it needs to rely less on external air intake and more on the Chi from within, the original or prenatal Chi. Breathing becomes again a natural rhythmic process which goes by itself and which creates the right pressure needed for the body to function optimally.

New consciousness does not come about by itself; it requires continuous exercise and practice that is light and playful, as if it were a child’s game.

Iron Shirt Chi Kung plays a critical role in this training process by which the Tan Tien releases tensions and relaxes mind and body, so that Chi can be generated from and towards the Tan Tien. One learns to let mind and body, and the glands and organs have a dialogue with each other with the Tan Tien leading the way.

The Microcosmic Orbit meditation is the best way to maintain the original Chi, as it fills our energy reservoirs and keeps our meridians open. We also enhance our ability to take in, process and store the Chi we receive from the Three Forces: the Universal, Earth and Cosmic Particle energies. Our Chi reservoir is raised

and enriched. The preservation and enhancement of Original Chi is essential for the acquisition of external energies; in the Universal Tao System called, “acquired Chi”.

The Cosmic Orbit meditation is also essential for Sexual Kung Fu which is the practice of transforming sexual energy into life force energy and life force energy into spiritual energy. The higher the spiritual energy or Wisdom energy we create, the easier will be the process of successive transformations.

The ability to move Chi and hormones upward and renew our central body functions is ultimately determined by the quantity and quality of Chi in the Lower Tan Tien. The availability of Chi depends in turn on the quality of the breathing.

Iron Shirt Chi Kung and Tai Chi Chi Kung

Tan Tien Chi Kung has a particularly close connection with the three basic Iron Shirt Practices which focus on the strengthening of the internal organs and firm rooting, the changing and strengthening of the tendons and the cleansing and renewal of the bone marrow. In the Iron Shirt practices, compression creates space for new Chi in the muscles, tendons and the bones, as the fat which has been accumulated there is expelled. With the process of aging, fat tends to accumulate, so that the bones in particular lose their regenerative function, as fat takes the place of the blood cells.

Through bone breathing the regenerative capacity of the bone marrow is restored. New red and white blood cells start to regrow after the fat has been expelled.

Maintaining a firm but gentle Chi pressure in the Lower Tan Tien is also at the heart of creating Chi pressure needed in Tai Chi Chi Kung.

In no other Taoist practice are consciousness, posture and energy circulation so intimately interwoven as in Tai Chi Chi Kung. This is beautifully illustrated by the book on the *Inner Structure of Tai Chi* by Mantak Chia and Juan Li.

It is not accidental that Tai Chi has become widely popular as a way to preserve and enhance health and self-healing, although most practitioners may not be very aware of its inner structure. They may see it as a pleasant form of higher gymnastics and not have an inkling of its inner energy structure. Somehow, in the initial stage,

it may be the intuition of their body which leads them to Tai Chi. Tai Chi Chi Kung provides a synthesis of all learning processes on the use of Chi from other Universal Tao practices.

In Tai Chi Chi Kung, the Lower Tan Tien, as the locus of the center of gravity in the body, plays a key role. The whole training in Tai Chi Chi Kung is directed towards bringing and keeping the center of gravity downward in the Lower Tan Tien. One may call it the practice of learning to come “down to earth”.

Tai Chi’s movement is exactly counter to that of today’s global culture with its upward movement which disconnects people from the earth, so they lose their structural alignment with gravity and their Chi pressure. As a result they lose their inner power, physically, mentally and spiritually. When the center of gravity comes down, also the sense of weight of the body goes down. One starts to feel lighter; it is as if one is less affected by the law of gravity and feels more free and spacious as well as more grounded. This opens the way for the transfer of consciousness into higher bodies which are free of gravity. This is only safe and wise, in the Taoist view, if and when the body remains grounded and centered. The higher you want to go, the more you have to ground. Precisely for this grounding, Chi pressure in the Lower Tan Tien needs to grow. One can exercise Chi pressure downward into the ground, so that the Earth force will resonate and bounce up. If one is not grounded and centered and there is no good Chi pressure in the Lower Tan Tien, it is unavoidable that fear accumulates, and it is even more difficult to center and touch ground; it blocks Chi by creating tension in the body especially in the kidneys.

The connection with the earth declines and a sense of being at ease and at home in one’s own body is weakened. Life is increasingly experienced in terms of outside pressure. This leads to an inner state in which the body feels compelled to experience life as a threat coming from outside against which the body has to defend itself and organize itself.

In this process the body’s energies, rather than serving the growth of inner balance, are turned against “the others” and the world as the actual or potential enemy. The very basis of existence becomes one which is marked by and legitimizes aggression. Competition and the creation of a win/lose situation becomes a compulsion.

In this situation, Tan Tien Chi Kung, Tai Chi Chi Kung and other

Taoist practices are a blessing, as they help the student to rediscover and regain the inner way of reconnecting with their own center and ground. They also create awareness of the inner structure of the body and of the glorious unity between high and low, heaven and earth and the mutual relationships between the sexual organs, the perineum, the anus , the belly, the mind and the spirit.

When grounded and rooted, one can come to feel at home and at ease and peace with oneself. Then one becomes less vulnerable and swayed by the external circumstances, no matter what happens around one.

The Tan Tien Chi Kung training of smiling to one's pelvic floor and embracing one's body in all its functions enables one, both physically and psychologically to remain centered and rooted. The more you are centered and rooted, the less others can push you.

Training in centering, grounding and rooting and moving from your center, coordinating the contraction of anus and perineum so as to gather internal pressure, has major implications for one's relationship to the world. If one feels safe and at ease with oneself, there is no need to project one's own negative energies on others. As a result, others are less likely to see you as their opponent or enemy. Also, as one exudes inner power, there is reason for others to be respectful.

If they still want to attack you, they cannot push you over, as you have learned to lead the energy of the opponent into the ground. So in actual fact they do not push you but the air with which you are connected, in view of your alignment. Who can push over the Earth and the Universe?

The more intimate you become with the energies of the universe in your inner structure, the less vulnerable you become until you have become invulnerable. That means that you are one with the Tao and all imbalances in the pressure from inside and outside have been dissolved.

Tai Chi Chi Kung is also a powerful antidote against aging, which is greatly accelerated by a movement upward of the center of gravity, with the consequent loss of power and stability. This movement can be reversed by bringing the focus of attention down to the Lower Tan Tien which is the purpose of Tan Tien Chi Kung.

For this, the mind has to undo itself from that which prevents it from inner relaxation, as true attention and mindfulness can only

grow if the mind is freed from negative emotions and mental states and learns to practice emptiness. Then it can create the conditions for new fullness and one can see that life consists of cycles: fullness and emptiness, living and dying, beginnings and ends, old and new, seasons and phases, days and nights, mornings and evenings, and dark and light.

This is precisely what Tai Chi Chi Kung practice focuses on: the continuous flow between Yin and Yang positions whereby each move towards fullness becomes a condition for emptiness, and fullness can only arise out of emptiness.

With the center in the Lower Tan Tien, the body can move in perfect alignment with gravity. It can only do so if the breath is kept low and the diaphragm finds itself in a relaxed state, as it responds to the relaxation in the Lower Tan Tien.

Such a process towards relaxation is the very aim and art as a play of movements; to become a child again, finding joy and delight in the practice for its own sake.

In the process of rhythmic movement, breathing may gradually become rhythmic, deep, smooth and slow. The Wind Force can then quiet the Fire Force, as the Chi of the overheated heart is led to the lungs so that heartburn can be prevented.

Thus deep breathing has a cooling and calming effect and balances the Fire when it gets too excited. The Water element is activated when excess heat of the heart is brought down through the spine to warm up the kidneys. The Water energy of the kidneys can be guided upward to cool the heart.

It is the process of rhythmic movement and relaxation from the Lower Tan Tien and in line with gravity, which makes the Earth energy bounce up. Water and Fire can gradually enter into balance. In this connection, it is interesting to know that the original Chinese character for Chi was written as “no fire” and the Chi Kung practitioner in those times was aiming at achieving a state of “no fire”.

Fig. 6.13 *Chinese Character “No Fire”*

Chapter VII
Awakening to Subtle Wonders

Essential to the creation and preservation of internal pressure and inner power in the Lower Tan Tien is that we turn inward and begin to listen to our body and natural wisdom and what it wishes to tell us. We need to learn to understand and interpret its signs and processes.

As a rule, these have accumulated in our bodies and their organs and glands as the sediment of early traumas which we have not been able or willing to give up. We may even have cherished them, as they give us reason to continue living in a state of separation and depression, so that we can justify our state of "dis-ease" and negative emotions.

Subtle wonders may arise at any time under any circumstance as moments of awakening to our virtual powers and potentials. Disease may be a more forceful sign calling upon us to awaken. Dis- ease can be an invitation to turn inward.

Subtle wonders lie in the small spaces of awareness every new day. In these we may be awakened to our virtual Chi Kung state. What makes us truly feel at ease and what are the situations, places, postures and patterns in ourselves? Which make us sensitive to subtle wonders in ourselves and others? Subtle wonders arise from the deep down longing for infinity from which a sense of curiosity arises. This then cultivates awareness and mindfulness from which open-mindedness arises in which we suddenly begin to see reality from a new angle. Our energy is changing and we begin to feel and see ourselves and the world in a new way.

Chi Kung and especially Tan Tien Chi Kung can help in reconnecting with ourselves and reconnect us with the earth and the Universe through all the exercises of grounding and centering. From these, a sense of belonging arises in our body.

The great Chi Kung Master the Buddha said: "You are me and me is you". This goes back to the ancient Hindu view on the identity of "this" and "that", to the root of the epistemology of the unity and interconnectedness of all phenomena which we also find in the

Taoist view of the Universe. Recent insights in quantum physics and relativity theory also support this view.

Humility is a state of being truthful and sensitive to this insight and is a condition for healers to set in motion a process of self-healing and to transmit healing Chi. The person who seeks healing is willing to entrust themself to the healer who acknowledges a common humanity.

To the extent that we will be able to forgive and accept ourselves, others and the world, we create an ability in ourselves to return to our pre-natal breathing pattern and not only create peace within ourselves but also around us.

Such an attitude will also help us to view problems around us, not as obstacles outside ourselves, but as opportunities for learning and solving them “from within”. It is significant in this context that the Chinese word for “crisis” has at the same time a negative as well as a positive connotation. What is “a problem”, a “negative” occurrence, is at the same time an “opportunity” to learn.

This is precisely the deep sense of the Yin and Yang symbol in which there is a light spot in the dark and a dark spot in the light. How truthful and wise is this insight which honors the inherent reality of a unity of opposites in everything in the universe, including ourselves. How liberating is this Taoist view of the unity of positive and negative energies, used in the first Fusion practice.

Prenatal breathing and the natural pressure which goes with it are indispensable for the growth and recuperation of inner power. They can only be regained and sustained by an abundant supply of Chi. For the higher body we need a solid foundation and Chi supply in the body in which we now live.Therein lies the relevance of Tan Tien Chi Kung.

Fig. 7.1 *Yin and Yang Symbol*

Originality of Chi Kung as Active Energy Meditation

It is precisely for this reason that, at a very early stage, Chinese Taoist practice took distance from the "spiritualist" path. Meditation by the mind at the expense of the body and in disconnection from the body is seen as the only legitimate form of meditation in some schools.

The Taoist position emerged, as it was observed that this kind of "passive meditation" was inspired by and led to a serious contempt for the body, thereby undermining balance, ease and well being.

It is this focus on the integration of mind with Chi and of the cultivation and transformation of Chi as an internal active meditation practice which constitutes the originality of the Chi Kung practice. In this it is different from all other approaches to meditation in all religious traditions. Undoubtedly this Chinese originality is deeply connected with a pragmatic sense of life which is so characteristic of Chinese culture.

At the same time the originality of the Chinese Taoist active meditation tradition has its roots in a positive approach to the entire body and in particular to sexuality. Sexuality is, in most religious traditions and "high" cultures (in contradistinction to indigenous and folk cultures), treated with contempt and fear as it is associated with the "lower" part of the body. It is seen as the locus of (animal) instincts and therefore an obstacle to "higher" pursuits and the spiritual path.

The Universal Tao practices of Healing Love instead acknowledge and respect the creative force. Healing Love truly emphasizes health, love and sex as the essential ingredients for spiritual growth.

Unlike in the Western approach to health and medicine, Chi Kung does not focus on particular parts of the body when sickness or pain is experienced. It looks at the totality of the processes taking place in the relations between the Five Elements and Phases, so that imbalances are treated and mutual adjustment enhanced.

Chi Kung is based on premises which are qualitatively different from those inspiring modern Western conceptions of medicine. It is a process and method of practicing breathing to increase Chi pressure to enhance health, self-healing and energy transformation.

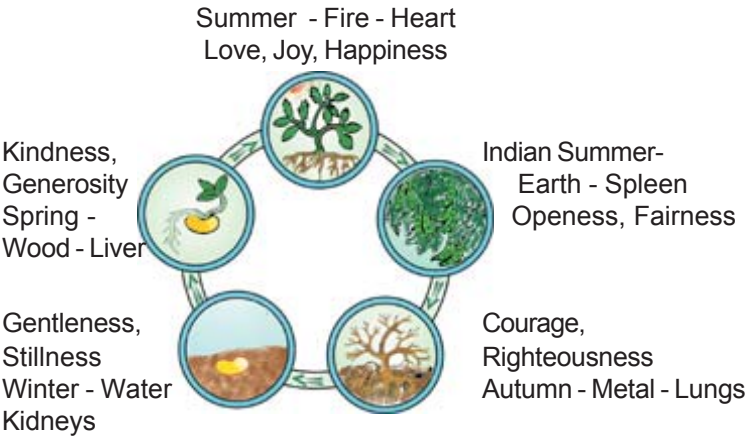


Fig. 7.2 *Creation Cycle in Nature*

Chi Kung and the Rise of a New Perspective

The rise in interest in Chi Kung as a practice which enables people to take care of themselves and make use of their own innate potential to cultivate their health and heal themselves is not surprising. In the process of Chi Kung practice, new forms of consciousness/spirit may arise which are able to direct, steer and guide the Chi in new directions.

All genuine transformations have invariably started as small awakenings, subtle wonders that were hardly perceptible.

One of the subtle wonders which may happen is that you decide to start with the practice of Tan Tien Chi Kung and train in learning to differentiate the activation of different points of the anus. You coordinate the contraction of the anus and the perineum so as to seal the pelvic floor. This creates the internal pressure through the creation of the Chi ball needed for our health to open the way for self-reliance, self-healing and self-realization.

Another subtle wonder could be that we decide to do some squatting every day to open our kua and enjoy numerous benefits from it, as it heightens the quality of our practice of the Microcosmic Orbit, Healing Love and makes us more grounded and lighter at the same time.

Another subtle wonder might be that we discover that when we have opened our kua, we can walk again in a new way and see the world with new eyes. We walk straight and tall, and one day realize that there is so much to learn and to appreciate in this world full of mysteries and beauty.

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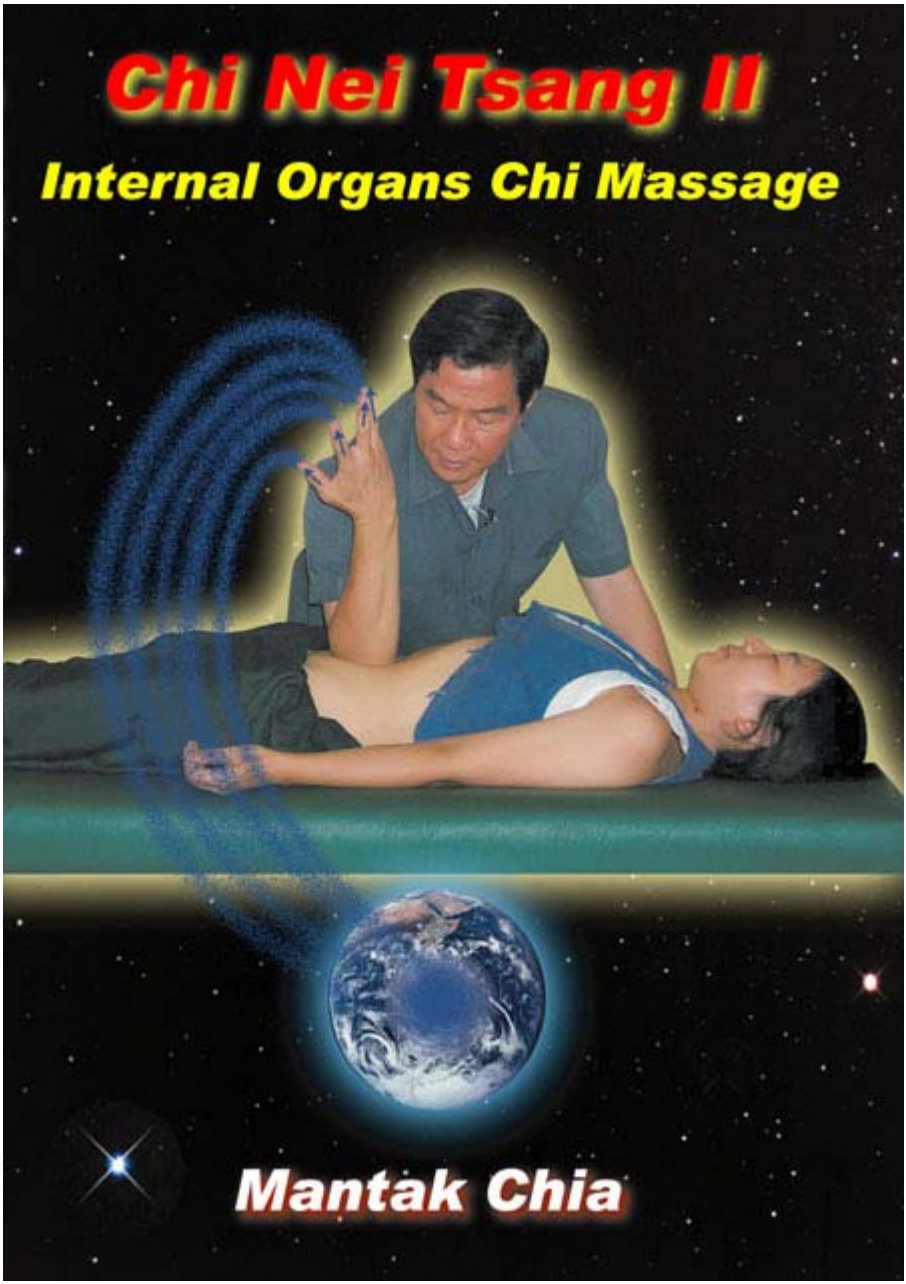

Mantak Chia

Chi Nei Tsang II

Internal Organs Chi Massage

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The meditations, practices and techniques described herein are ***not*** intended to be used as an alternative or substitute for professional medical treatment and care. If any readers are suffering from illnesses based on mental or emotional disorders, an appropriate professional health care practitioner or therapist should be consulted. Such problems should be corrected before you start training. This booklet does not attempt to give any medical diagnosis, treatment, prescription, or remedial recommendation in relation to any human disease, ailment, suffering or physical condition whatsoever.

Hands on CNT II: Working Procedures

The following are the procedures to follow in a session with a student.

A. CNT I

In order to work with the winds in your student's body, you must first integrate the procedures of Basic Chi Nei Tsang. This involves carefully sensing and touching the abdomen, clearing the large and small intestines, toning, detoxifying and pumping the organs and clearing the lymphatic system. If the person's abdomen is full of knots and tangles, the winds will not be able to circulate and leave the body. Releasing the abdomen may take a few sessions. Once you have released the main blockages, you can then begin with the work on the winds.

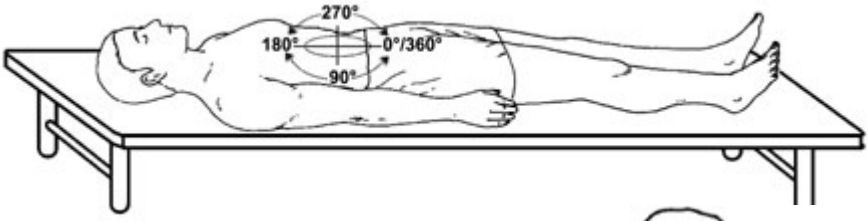
B. Opening the Wind Gates

In this practice we'll make "traps" for the winds. One trap is created by using the "elbow in the navel". A second trap comes from "opening the navel with the thumbs". A third and quite powerful way is "making space in the Pakua". These traps present an open space for the winds to move to and from there they can be easily flushed and vented down the legs and out of the feet.

a. Elbow in the Navel

In this level of Chi Nei Tsang one way of opening the wind gates is through the use of the elbow placed directly on the student's navel. In order to explain this procedure, we will divide the navel area into a 360 degree circle divided into four sections. It is equivalent to a com-

pass lying on the person's belly. When we talk about left or right sides, we refer to the left or right side on your student's body. The top of the navel, is South/180°. The left side is West/270°. Below the navel is North/0°/360°. The right side of the navel is East/90°. Every degree of the navel circle connects to different parts of the body. 180° - 270° describes the upper left quadrant of the abdomen. 270° - 360° describes the lower left quadrant. 0° - 90° describes the lower right quadrant. 90° to 180° describes the upper right quadrant.



Push Down and Toward the Side

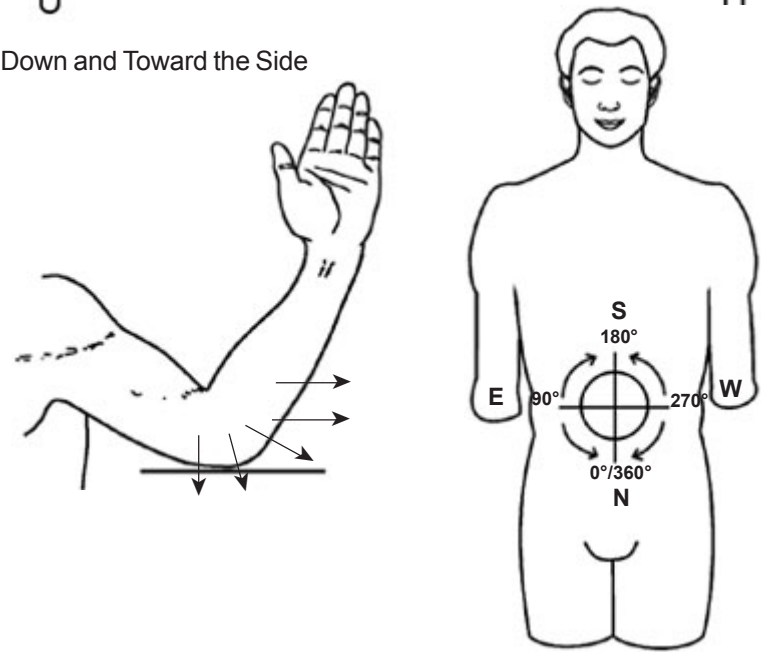


Fig. 1 *Opening the Wind Gates with the Elbow.*

Fig. 2 *Sick winds spiral out of fingers into the earth.*

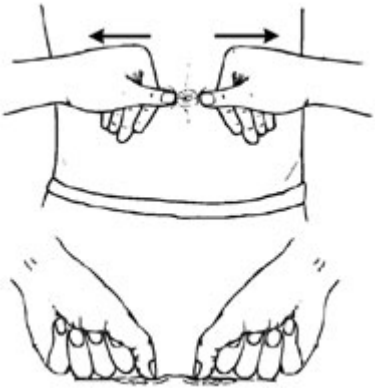
The procedure to open the wind gates with the elbow is the following:

1. Place your elbow on the navel and press down.
2. Holding the pressure, move your elbow out towards the left side of your student's body at 270° toward 180° and from 180° back to 270°. Rest, twist the wrist and fingers and let the sick winds out of your finger tips down into the earth. Release the pressure, go back to the center of the navel and press down and out from the center to 280°, then from the center to 290° and continue until you have worked your way to 360°and from 360° toward 270°. When you are finished with this lower left quadrant, ask your student to breathe deeply into the navel to push your elbow out.
3. Flush the winds down the legs and out through the toes.
4. Repeat this procedure on the lower right quadrant from 90° towards 0° and from 0° toward 90°, and from 90° work toward

180° This will open the whole navel which will create a place for the wind to gather and the tightness of the abdomen will be released. For people who have back pain this work will greatly release the back pain. Flush and vent 15-20 times until you feel the navel is warm.

b. Opening the Navel

Taoists believe that there are trapped winds in the intestines and abdomen and also all the tendons from the body that join around the navel. Release the navel by pressing your thumbs on the ring muscle of the navel and pushing down and in opposite directions, for an approximate count of 15.



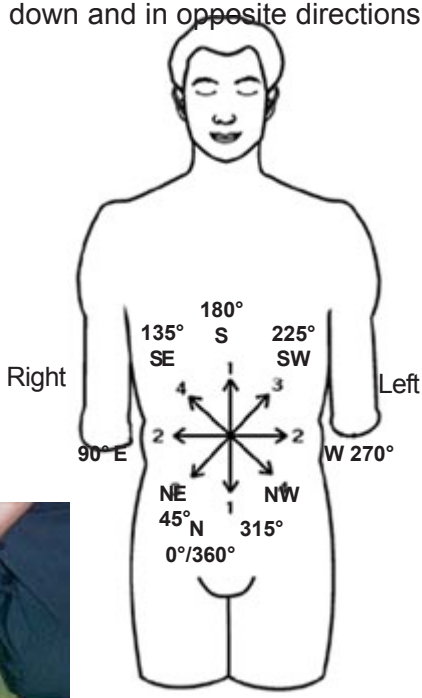


Fig. 3 *Push Down and in Opposite Directions.*

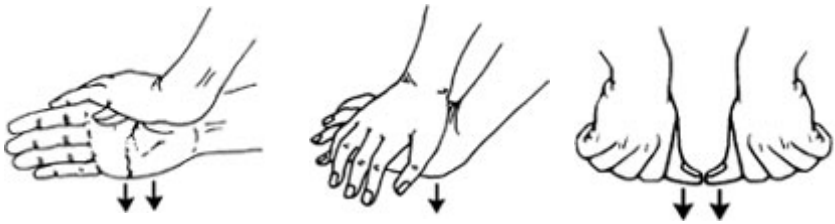
1. 0°-180° / N-S
2. 90°-270° / E-W
3. 45°-225° / SE-NW
4. 135°-315° / SE-NW

Your aim is to stretch the muscle below the skin, so you will need to place your fingers on the sides of the navel and not inside. Be careful not to hurt the skin as you push in opposite directions. Flush and vent 15-20 times.

c. Making Space in the Pakua

Opening the area around the navel following the shape of a Pakua discharges tensions from the body, releases pinched or tight nerves and reestablishes the proper flow in blood vessels and lymph channels. This follows the later heaven Pakua energy flow. To know more about the Pakua see the *Fusion* book. In Fusion I, organs are related to the different "Kuas" (forces). For example, the kidneys are related to Kan (water) in the North and the liver to Chen (thunder and lightning) in the East. In CNT II we relate the organs not to the kuas but to the reflexology points of the organs themselves. For example, the left kidney is at the Western Gate (4) and the right kidney at the Eastern Gate (3).

With the side of your hand, the heel of your palm, or thumbs press into the abdomen with both hands, one pushing on the other. If you feel too much wind when pressing down, stop, flush and vent down and out. This will make a big space and force the winds that are stuck in the organs and body to come and gather in the Pakua area.



Use the side of the hand, bottom of the palm (wrist), or use the thumbs.

Fig. 4 *Pressing the Side of the Pakua.*

Press the eight sides of the pakua in the following order:

1. The Northern Gate (related to the bladder and the sexual organs, on the bottom of the pakua, at 0°/360°),
2. The Southern Gate (related to the heart, on the top of the pakua, at 180°),
3. The Eastern Gate (related to the right kidney, on your student's right side, at 90°),
4. The Western Gate (related to the left kidney, on your student's left side, at 270°),
5. The Southwestern Gate (related to the stomach and spleen, on your student's upper left, at 225°),
6. The Northeastern Gate (related to the intestines, on your student's lower right, at 45°),
7. The Southeastern Gate (related to the liver and gall bladder,on your student's upper right, at 135°).
8. Finally, the Northwestern Gate (related to the intestines, on your student's lower left, at 315°). Flush and vent 15-20 times.

This work includes releasing the navel area and then chasing and flushing out the winds as described in the previous section. The next chapter of this book provides a detailed explanation of the procedure to follow for specific winds and their manifestation. Most of the work is done with the elbow on the student's navel and by working on related points in the back, head and limbs.

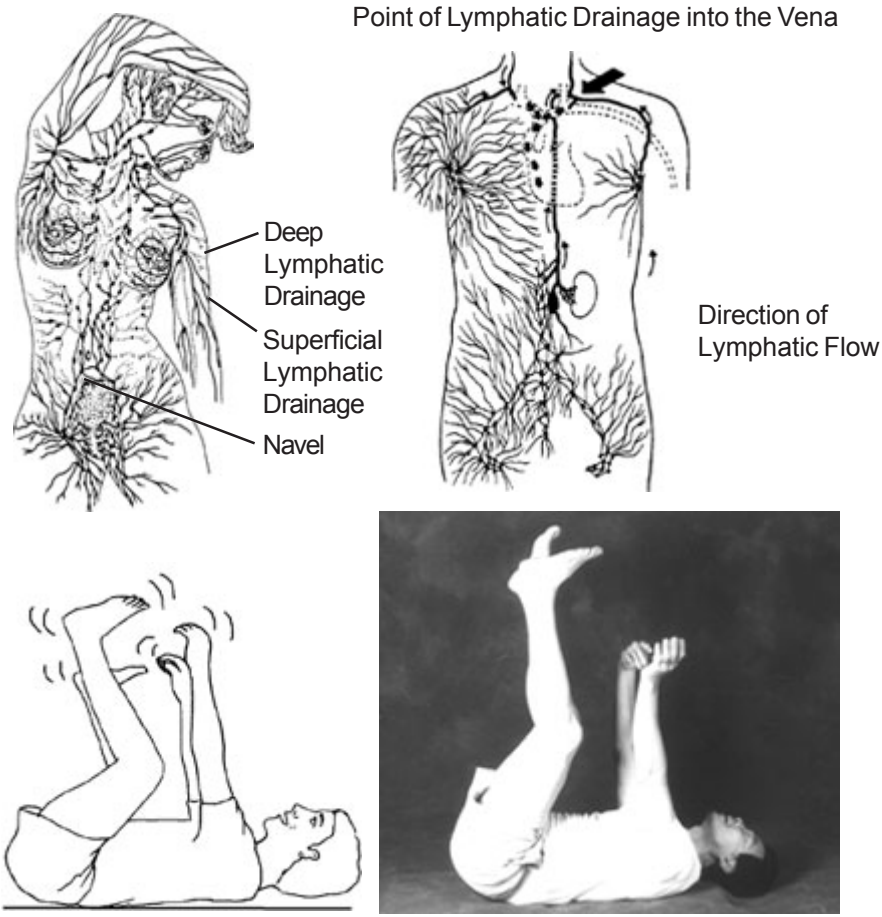


Fig. 5 *Monkey Dancing*

D. Closing the Session

When you perform Chi Nei Tsang, the blood and energy concentrate in the abdomen. Before your student gets up when you have finished the session, guide her to do “monkey dancing”. Ask her to lie on her back and to raise her arms and legs toward the ceiling and to shake them enthusiastically and loosely and to laugh while breathing deeply in the abdomen. This will help activate the lymph and blood circulation. (Fig. 5)

E. Encouraging Students to Work on Themselves

It is important to teach your students to do Chi Nei Tsang II on themselves between sessions. At the end of the session point out to them the areas that were particularly tight or congested; it is important that they continue to work on releasing them at home. Show them how to work on themselves using their fingers with their hands relaxed and elbows extended to their sides. Their shoulders, neck and arms should be relaxed and connected to the spine.

Tell your students that it is important for them to be responsible for their health and take the time to work on themselves. If they are confident of their own abilities to care for themselves they will feel more positive, stronger and free. Refer them to any additional practices that could help them to deal with their situation. In the Taoist way, suggest that they simplify their lives by allowing one unnecessary thing to fall away each day. This will settle their organs and calm their minds.

A daily routine of moderate exercise (for instance walking briskly) activates blood circulation and movement of the lymphatic system and keeps the body in good shape. It is also good for them to massage their belly every day stimulating the four corners of the intestines: the ileocecal valve (in the lower right abdomen approximately at the midpoint between the navel and the right pelvic bone); the hepatic flexure in the right upper abdomen, (under the bottom

right corner of the rib cage and under the liver); the splenic flexure (in the upper left quadrant of the abdomen under the bottom of the left rib cage); and the sigmoid colon (from the lower left corner of the abdomen between the midline of the abdomen and the left pelvic bone). Following a healthy diet is also very important.

In the way of the Tao, each individual in the world is responsible for his own enlightenment and well being. As Universal Tao Chi Nei Tsang practitioners and teachers, we are responsible for encouraging our students to be themselves and grow. As they do their work and feel the results they will want to do more for themselves.

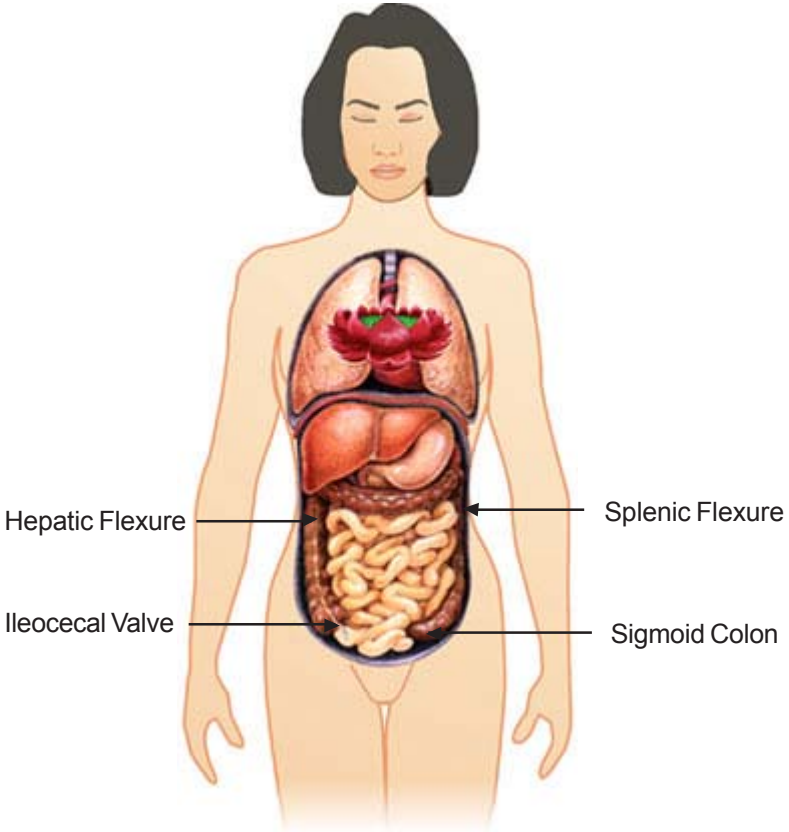


Fig. 6 *Four Corners of the Intestines*

First Wind
Wind that attacks the Liver and the Pericardium and the Heart

This wind rises from the small intestines and spleen and attacks the liver, pericardium and heart making them weak and tired. Symptoms usually manifest as a burning itching feeling and restless sleep, sometimes accompanied by a burning rash. The liver and heart tend to hold the heavy duty emotions of anger, envy, hatred, etc. Working on the First Wind can be a strong emotional release.

A. Navel Points for the First Wind

Use your elbow to press the following points:

Fig. 7 *Navel Points for the First Wind*

Follow the arrows; this will help spiral all winds out from the organs.

1. Point 35 located just above the navel, on the left side.
2. Point 35 on the right side.
3. Point 32 located below the navel towards the outside of the body, on the left side.
4. Point 32 on the right side.
5. Point 37 located on a line right above the navel, on the right side.
6. Point 37 on the left side.
7. Point 30 located below the lower end of the sternum. Be careful not to press on the tip of the sternum as it is very delicate.

B. Liver

To release the wind from the liver, observe the shape of your student's rib cage. If there is a problem, the ribs may be raised on one side.

1. Loosen the area under the ribs and massage the liver the liver, "***Shhhhh***", sound.
2. Press your knuckles on and between the rib bones all around the bottom of the ribcage on your student's right side. This might be particularly painful since the emotional energy stuck on the liver tends to rise and get stuck in the rib bones.

Fig. 8 *Massage the Liver with Both Thumbs.*

C. Heart and Pericardium

The heart is the seat of emotions, and a lot of the blocked emotional energy is stored around that area. Assist your student in learning how to release the energy of emotions trapped in the chest by breathing deeply and smiling into the area. Making the heart sound as he or she exhales can help ease the pain.

1. Begin by pressing your knuckle into points 22 and 23 on the left side. Point 22 is located right above the left nipple. For women you can find the point above the left breast approximately between the 4th and 5th ribs, 1 1/2 to 2" down from the collarbone. Point 23 is about an inch from Point 22 towards the arm. These points are usually very sensitive. Use soft stimulation instead of a heavy pressure. Spiral the knuckle in small area - a depression where the knuckle fits. Spiral counter clockwise to loosen.
2. Flush the wind from the heart area by spiraling your hand above it counterclockwise and then moving your hand above the heart meridian down the left arm. You will normally feel the dense, hot or itchy energy leaving the heart and you should direct it into the ground. The wind will flow out through the fingertips, especially the middle and pinky fingers. Your student can also focus on these fingers, exhaling out any excess heat from the pericardium also directing it towards the earth. The pericardium is like a cooling system for the heart.
3. Check the right side of the chest. Although wind trapped on this side does not affect the heart as much, if you do not release it this wind can later move into the left side. Work on Points 22 and 23 on this side and then flush the wind out through the right hand.
4. With your knuckle, release the area of the sternum, massaging between the ribs and directly on the rib bones, especially on the area around the heart .

   For women, work around the breast, moving it to the side to work on the ribs under it. When you work on the sternum be

aware of how soft it is and do not press too hard. Usually, you will find the problem area close to the heart, and you may feel a kind of swelling like the surface of a balloon.

5. Flush the wind down from the left part of the chest through the left arm.

D. Legs

1. To find the related knee Point 53, lay the palm of your hand on the midline above your student's knee. Your extended index finger should just about touch the gap above the kneecap. You will find the point as you extend your thumb to the inside of the leg and grab the inner thigh muscle.
2. Flush the wind down.
3. Repeat on the other leg.

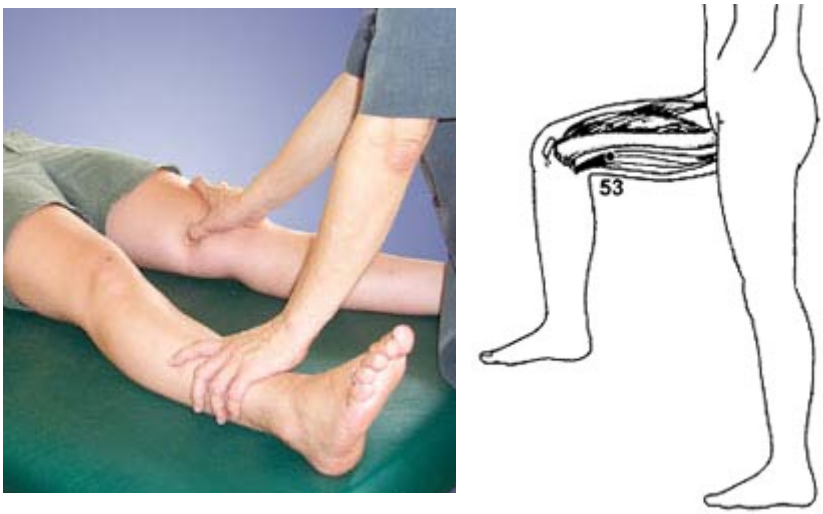


Fig. 9 *Point on the Legs*

Second Wind
Wind that attacks the Tongue, Jaw, Eyes and Head

Fig. 10 *Navel Points for the Second Wind are the same as for the First Wind.*

The treatment for this wind is the continuation of the work for the first wind. The wind that attacks the liver and the heart is hot, so it tends to rise to the throat, paralyzing the root of the tongue and then affecting the jaw, the eyes and the head. This wind can also impact the central nervous system. This is what often happens during heart attacks when people cannot speak. This wind often comes up when people are very angry, tense or under a lot of stress. The treatment is also useful when the student is very emotional or has low self-esteem.

A. Chin

1. Release the root of the tongue by massaging the soft area under the chin.
2. Press Point 15 under the chin, and then slowly slide the pads of your thumbs along the jawbone towards the back of the jaw and then to the front again. Dig your thumbs in behind and against the bone. This place can accumulate a lot of emotions and it can be very painful. Repeat this nine to eighteen times. This procedure can release the tongue after a heart attack when there are speech problems.
3. Flush the winds down your student's arms.

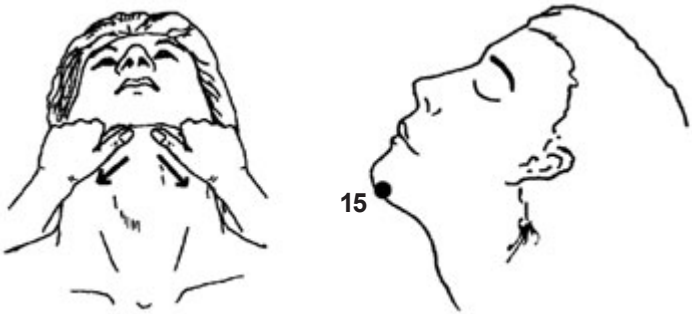


Fig. 11 *Releasing the Chin Area.*

B. Jaw

When this wind is present, the jaw becomes tense and tight and there is often a history of nightmares. The people affected by it normally clench the jaw or grind the teeth, especially during the night. Over a series of sessions, the jaw can be released and TMJ syndrome (lockjaw) may be relieved.

Liver excess is often the cause of this condition. It is important to release the toxins and wind in the liver as explained for the first wind before working directly on the jaw. Otherwise, the wind will rise from the liver and the problems will manifest once again.

1. Ask your student to gently tighten and loosen the jaw by clenching the teeth. This allows you to find the muscle between the upper and lower jaw.

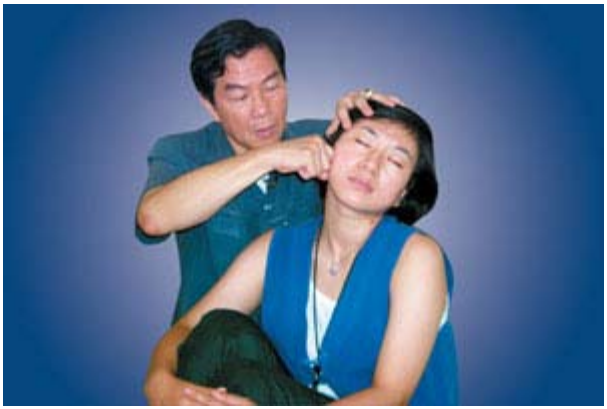


Fig. 12 *Massaging the Muscle between the Lower and Upper Jaw.*

2. Supporting the face with your other hand, massage the muscle as your student repeatedly opens the jaw. This point can be very painful. Work on both sides of the jaw until you feel the tense muscles easing. You can work on each side separately or on both sides simultaneously.
3. Use your knuckle to press Point 13 located right below the earlobe on the edge of the jaw. Work on both sides.
4. As you work, ask your student to do the Liver Sound subvocally to facilitate the release of the wind.

Fig. 13 *Pressing Point 13 with the Finger*

C. Head and Eyes

Use your knuckle to massage the following points on the face, spiraling in a tiny circle. These points are particularly powerful antidotes to migraine headaches and sore eyes or eye aches. Use the point of the knuckle at a 90° angle to the face or head.

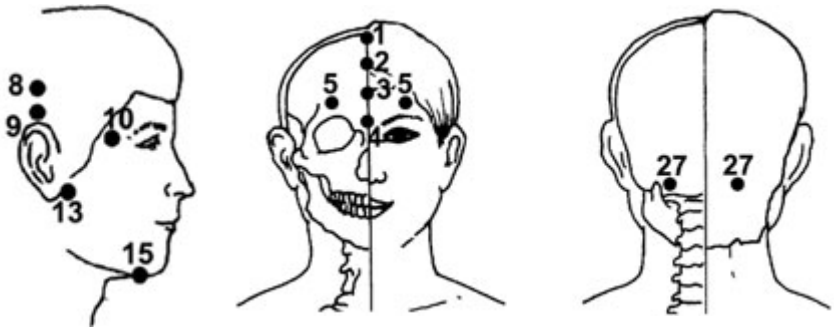


Fig. 14 *Massaging Point 3*

1. Point 2 in the front of the skull on the center line above the hairline.
2. Point 3 on the area in the middle of the forehead.
3. Point 4 on the mid brow.
4. Point 5 above the middle of each eyebrow where you find a small notch.
5. With your thumb, release the area all around the upper eye socket following the bone. Work slowly and softly from the inside to the outer edge. This can also relieve the heat, redness, pain and dryness in the eyes caused by liver wind. This massage is very effective with swollen eyes that often come with migraine headaches.
6. Guide the student to turn the head to the opposite side where you will work and support the head with your other hand. Find point 10 on the temple just beyond the orbital bone on the outer edge of the eye. It will feel like a hole, valley or indentation. Begin by releasing it gently with your fingers, and then slowly and carefully insert your knuckle. Spiral following the student's exhalation. Work on the other side and then do both sides simultaneously.

Fig. 15 *Massaging the Eye Socket*

7. The next Points 8 and 9, are located directly above the apex and on the centerline of each ear. Use your knuckle to massage each point individually and then both sides simultaneously.
8. Flush the wind out through your student's arms.

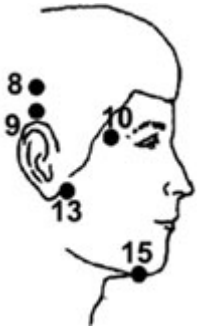


Fig. 16 *Points 8, 9, 10, 13 and 15*

Fig. 17 *Massaging Point 8 above the Ear*

D. Back of the Head

1. Massage Point 27 (Wind Pond) with your knuckle. To find it, search for an indentation on the centerline area in the back of the neck above the base of the skull about one inch above the bottom of the hairline. You will know you found the right “valley” spot when you can spiral with your knuckle without sliding or slipping out of the point.
2. Find the curlicue, the spot (or spots if there is more than one) where the hair spirals, and massage it with your knuckle releasing any wind or stagnant chi that is blocked there.
4. Often it is possible to feel the wind exiting the skull at this point. Gather it by swirling your hands above the head and then direct the wind down the arms, out the hands and into the earth.

To assist your student in moving to daily self-care, you can teach the points on the face so that he can work on them daily, particularly when the condition is present.

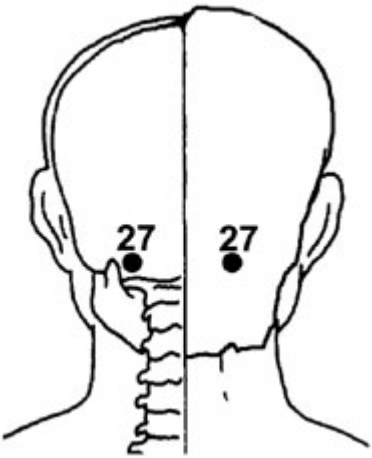


Fig. 18 *Point 27*

Third Wind
Wind that Attacks the Kidneys

This wind is caused by improper eating habits, such as eating too much cold producing food (i.e. very cold drinks, ice cream, frozen or cold food right out of the refrigerator and unripe fruits) and not chewing properly. It always starts from the small intestines rising to the kidneys, moving up above the ears, and accumulating in the head. When this wind gets stuck in the brain, it can attack the nerves, causing the eyes to shake and making the teeth ache.

The small intestines are located over the kidneys. Excessive cold energy contracts the kidneys and makes the psoas muscle spasm and pull the spine towards the thigh. This stops the flow of energy and causes back pain. Bringing the excess heat from the heart down to the psoas muscles and kidneys relaxes and warms the lower back.

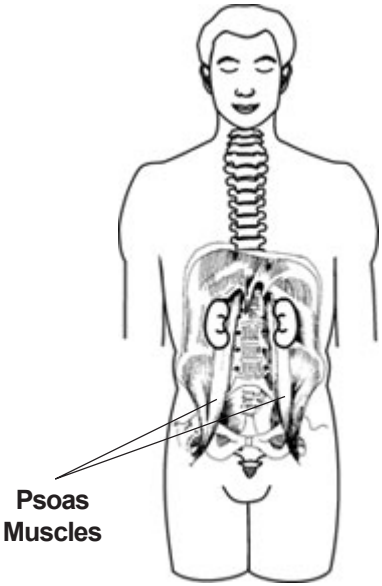


Fig. 5.17 *Psoas Muscles*

A. Lotus Meditation

Imagine the heart as a red lotus flower and the pericardium (the heat-regulating membrane which encloses the heart) as the lotus pads. Visualize the kidneys as being bulbs similar to the clusters or plexuses where the stems of the pads and the lotus flower join together. In a pond or pool there are usually several lotus plants that join together in a cluster, rooting in the mud. From the kidneys (kidney bulbs/clusters), visualize roots extending down through the legs into the watery mud of the earth basin.

1. Breathing deeply into the lower abdomen, visualize your heart as a red lotus flower, your kidneys as its roots and your spine as the stem that connects them.
2. Feel the roots of the lotus extending into the bed of the pond absorbing the right amount of nutrition from the wet earth. Visualize the flower opening to the sun to receive its (fire) energy. Feel the healthy and supple spine as the stem connecting the two energies. Feel the harmony of fire and water, yang and yin, male and female.
3. Inhale into the heart, drawing the warmth from the sun, feeling it come down through the crown of the head, and blend it with the love, joy and happiness in the heart (red lotus). Draw this loving, hot heart energy back to the point opposite the heart in the center of the spine (the point between the scapulae, between T5 and T6 as you slowly inhale. Then exhale (use the heart sound, "***Hawwww***") the hot energy down the spine (lotus stem) to the cool kidneys, warming them and warming the psoas with the loving heat from the heart.
4. See the kidneys as the nourishing bulbs of the lotus with roots that extend down through the legs to the soles of the feet accessing the soothing blue water energy held by the earth.
5. Inhale into the kidneys, feeling the roots of the lotus extend down through the legs to the soles of the feet. With your inhalation draw the cool, soothing, nourishing blue water energy through the soles of the feet, up through the legs to the kidneys. Feel the gentle, calm, peaceful energy of the kidneys blending with the

cool, soothing blue water energy that has come up through the legs. Exhale out with the kidney sound, "***Choooo***". As you exhale send this energy up through the spine (stem) via the wing point to the heart.

6. Alternate inhaling into the heart and into the kidneys in this way for a few times.
7. Relax, breathe normally and move your mind back and forth between the heart and kidneys along the connecting spinal stem. Smile with gratitude to your kidneys, spine and heart.

B. Navel Points for Working with the Kidney Wind

These are not such exact points. It's where you find tension, a lump, stress; it's more of a general area. Hold the elbow there until the tension loosens. Feel the elbow inside the abdomen and pay attention to the expression on the student's face.

1. Point 35 located just above the navel, on the left side.
2. Point 33 located just below the navel, on the left side.
3. Point 33 on the right side.
4. Point 35 on the right side.
5. Point 38 located to side of your student's navel, on the left side. This point relieves the wind that causes back pain.
6. Point 32 located below the navel towards the outside of the body, on the left side.
7. Point 32 on the right side.
8. Point 38 on the right side.
9. Point 36 located above the navel slightly towards the sides of the body, on the right side.
10. Point 36 on the left side.
11. Flush out through Point 53. Sometimes sick energy gets stuck at Point 53 on the leg, so loosen up this point after working on the navel points.

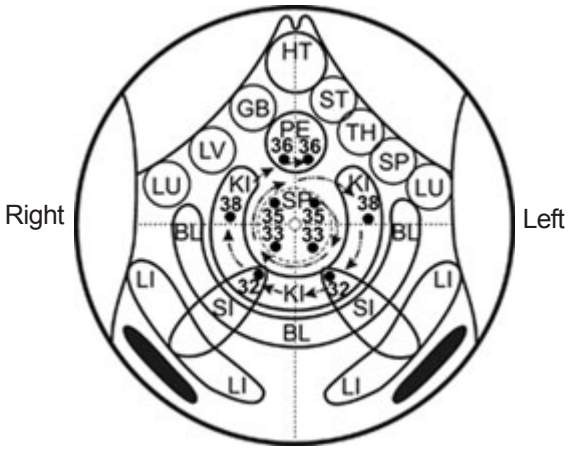


Fig. 19 *Navel Points for the Third Wind*

C. Head

1. Press Point 8 with your knuckle, supporting the head with your other hand. This point is located in an indentation about one finger's width above the tip of the ear. Work on both sides.
2. Instead of venting excess hot energy out through the arms and fingers, bring the excess heat of the heart down to the kidneys. When we bring excess heat down from the heart, heat from the head goes down also.

D. Legs

1. To find the related knee Point 53, lay the palm of your hand on the midline above your student's knee. Your extended index finger should just about touch the gap above the kneecap. You will find the point as you extend your thumb to the inside of the leg and grab the inner thigh muscle.
2. Flush the wind out.
3. Repeat on the other leg.

Fourth Wind

Wind that causes Aches, Tightness, Tiredness and Uneasiness in all the Body and attacks the Vena Cava, Aorta, and Lumbar Plexus

The fourth wind causes a feeling of fatigue, aching, tightness and uneasiness all over the body. This wind arises from too much acidity in the body. Excess acidity in the body will cause an exacerbated mucus production that can host excessive bacteria and viruses and will congest the organs. Acidity will also affect the connective tissues, cartilage and tendons and it makes the bile duct constrict. Excess alkalinity (too many sweets, sweet fruit or vegetables) overstresses the pancreas, so it is important to keep a balance in the body's pH by eating properly. One must change the eating habits and the emotional habits. Mental stress and emotional distress are a main cause of an acidic metabolism because of the overproduction of stress hormones such as adrenaline and insulin which are acidic and flood the entire system.

This wind also attacks the heart, causing pain and heartburn. When this wind activates, it reaches the heart area and comes up to the left shoulder and down the arm along the pericardium meridian. When this wind attacks the lumbar plexus it spreads throughout the whole nervous system. Abdominal breathing and belching to loosen up stuck Chi greatly helps to relieve this wind.

A. Navel Points for the Fourth Wind

Use your elbow to press the following points. Find the tension, hold that point with the elbow until the tension is released and the winds go out. Talk to the winds and send them out to a better home, the earth!

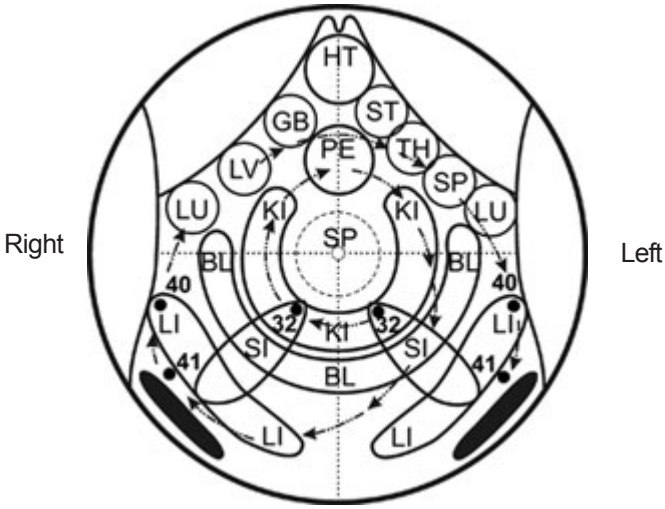


Fig. 21 *Navel Points for the Fourth Wind*

1. First for point 32 located just below the navel, on the left side.
2. Follow with point 32 on the right side.
3. Point 41 on the right side.
4. Point 40 on the right side.
5. Follow with point 40 located right above the hipbone, on the left side.
6. Point 41 located on the lower tip of the hipbone, on the left side.
7. Point 48 located on the front of the leg at the level of the sexual organs towards the inner thigh, on the left side. Use the tip of your fingers for this point.
8. Point 48 on the right side.

B. Chest and Shoulders

Working on the chest and shoulders we find many nerves. “Respect the nerves” by holding still - not “monkeying” around with the nerves.

This wind most often affects the left side only; all of the points described next refer to the left and right sides of the body. If the wind goes to the right side you must also work on the same points on the right side of the body. Usually you have to work on both sides.

1. With the student laying on his back, use your fingers to massage Point 21 located below the collarbone and the area above the left breast . The heart and pericardium meridians both leave the heart and traverse the upper chest going up to the shoulder and down the left arm.
2. Have your student sit up or turn on his side. With your elbow, press Point 20 located above the clavicle, close to the neck.
3. Pinch the trapezium muscle on the area where the neck meets the shoulder. Pull it up and shake it, massaging the muscle and the nerves underneath to release the area.
4. Massage Point 75 located on the outer edge of the shoulder in the depression in the middle of the deltoid muscle. Raise the arm slowly so that the arm is horizontal.
5. Massage Point 25 in the student’s left armpit. Have the student raise the arm slowly straight up as you press and find the point. The student leans into your thumbs.
6. Use your fingers to massage the heart meridian all the way down the inside of your student’s arm, pressing Point 77 on the inner elbow as you go down.
7. Continue massaging the arm down to the tip of the little finger. Pinch the end corners of the fingernail.
8. Flush the winds down the left arm.

Fig. 22 *Massaging Point 75*

C. Legs

1. Press Point 69 or 54 located behind the kneecap.
2. Work on Point 55 located on the inner part of the leg below the knee joint.
3. Work on Point 66 directly below the anklebone on the inside of the foot. Press down with both thumbs.
4. Flush the wind down the legs.

Fig. 23 *Press down on Point 66 and 56 with both thumbs.*

D. Back

1. Ask your student to turn so you can work on his back. Press your elbow on Point 45, in the space between the sacrum and the hip bone. Shake your arm and slightly push the hip bone down towards the buttocks to release the tension in that area.
2. Flush the wind down the legs.
3. Remember to flush out the wind after pressing each Point 69 behind the knees.

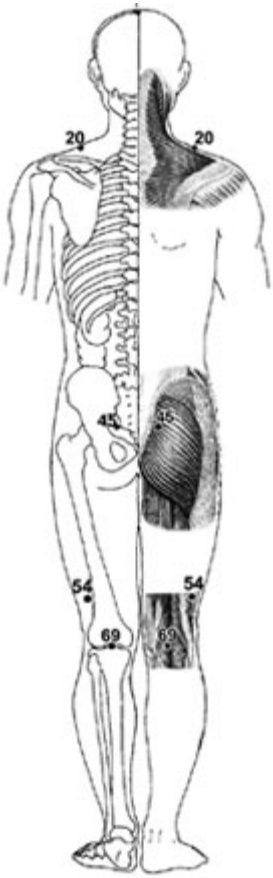


Fig. 24 *Points 45 and 69*

Fifth Wind
The Wind that makes the Abdomen Stiff, Hard, Tight and Tender

This wind is created in the small intestine and causes shooting pains as it travels along the liver meridian. The upper right side of the abdomen will probably be bloated. This wind is caused by food and emotions and it always starts in the intestines. It must first be removed from the small intestine and then from the liver.

When the intestines are bloated with wind, you must first work to clear the large intestines, then small intestines, the liver and the gall bladder with the techniques presented in the first CNT book. When you sense the knots and tangles releasing, then use the elbows.

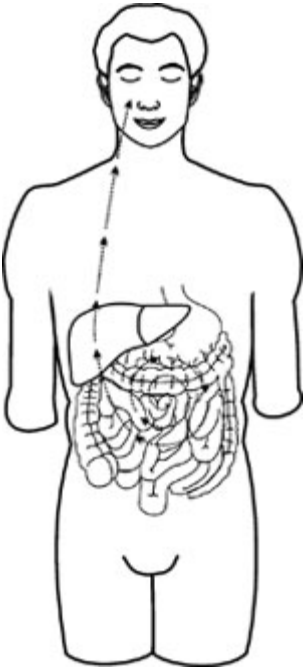


Fig. 25 *Path of the Fifth Wind*

A. Navel Points for the Fifth Wind

Use your elbow to press the following points:

1. Point 35 on the left side.
2. Point 33 located just below the navel, on the left side.
3. Point 33 on the right side.
4. Work on point 35 located just above the navel, on the right side.
5. Point 36 located above the navel slightly towards the sides of the body, on the right side.
6. Point 36 on the left side.
7. Point 41 located on the lower tip of the hipbone, on the left side.
8. Point 41 on the right side.

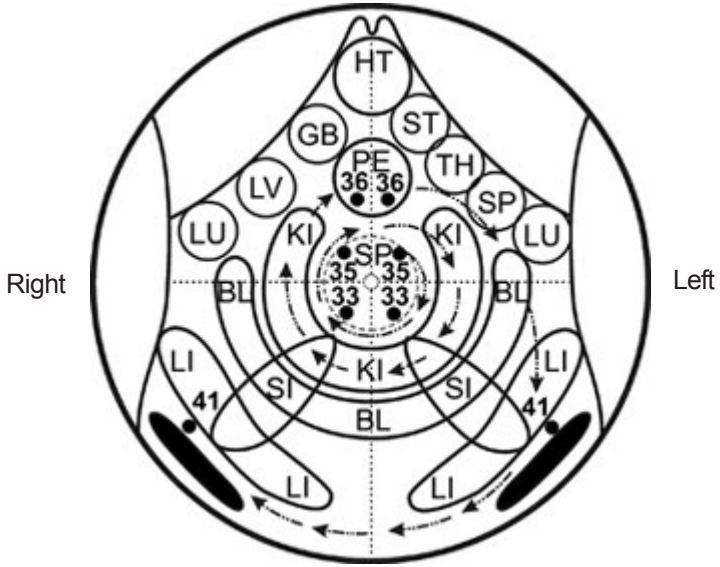


Fig. 26 *Navel Points for the Fifth Wind*

B. Crown and Perineum

1. With your knuckle press on the Crown Point 1 on the intersection of the line drawn between the highest point of the ear and the midline of the nose. As you press this point, guide your student to connect with and lightly contract the perineum. Or put the knuckle in Point 1 and spiral and hold, spiral and hold while the student holds and presses Point 43 with the middle fingers.
2. Press CNT Point 43, (Hui Yin) or have your student press it himself. It is a good idea to cover the student with a sheet or a towel across the genitals so they have a sense of privacy when working on this delicate point. Coach your student to contract his mouth and suck the lips until they are tightly pursed and contract the anus by sensing and pulling up on the front, back, middle, left and right parts of the anus. Hui Yin is where all yin and sick energy gathers.
3. Flush and vent from the head down the arms and out; flush and vent from point 43 down and out the legs.
4. Encourage your student to massage the perineum at home daily while practicing the anus contraction exercises and touching the crown of the head for as long as the symptoms of tightness in the abdomen persist.

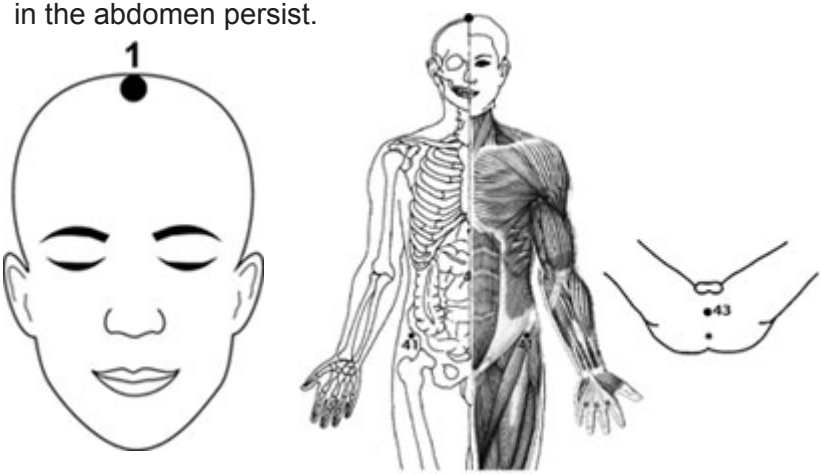
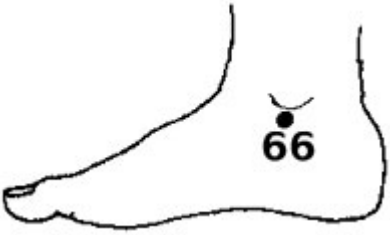


Fig. 27 *Points on the Inguinal Area Crown and Perineum*

C. Legs

1. Press point 57 located on the inner part of the leg below the knee joint with the elbow or thumbs. You can use a little oil here.
2. Work on point 66 directly below the anklebone on the inside of the foot. Use the thumbs to push down and out.
3. Flush the wind down the legs.



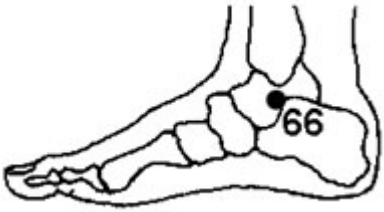


Fig. 28 *Points on the Legs and Feet*

Sixth Wind
Wind that Causes Cramps

This wind causes cramps and tightness in the legs, the back and the neck. The cramps usually start in the abdomen but they attack the nervous system and the muscles. When this wind is present, there is a lot of stiffness and pain.

The cramps created by this wind result from problems with the flow of blood that returns to the heart when the veins, especially the vena cava, are congested. For instance, if the legs get too cold, the muscles contract obstructing the flow of blood and causing cramps. By releasing the wind, the swelling is relieved and the proper flow of blood is restored.

A. Navel Points for the Sixth Wind

Use your elbow to press the following points:

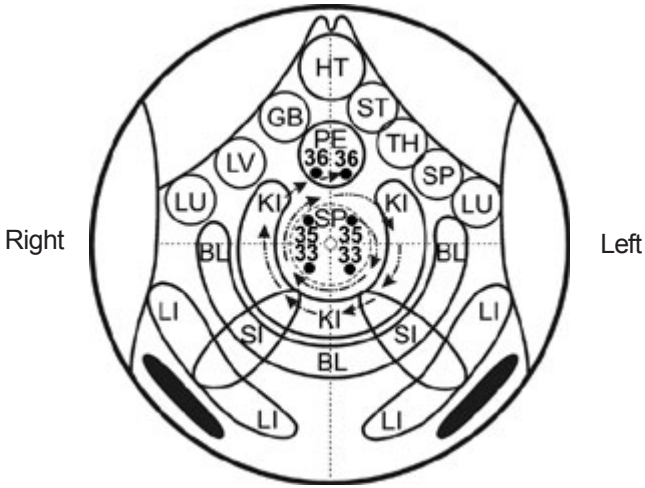


Fig. 29 *Navel Points for the Sixth Wind*

1. Point 35 on the left side.
2. Point 33 located just below the navel, on the left side.
3. Point 33 on the right side.
4. Point 35 located just above the navel, on the right side.
5. Point 36 located above the navel slightly towards the sides of the body, on the right side.
6. Point 36 on the left side.

B. Face

1. Press point 15 in the depression under the chin behind the lower jaw with your thumb. Press up towards the tongue.
2. Press your knuckle into Point 13, located right below the ear-lobe on the edge of the jaw. You may work on each side separately or on both sides simultaneously.
3. Flush the sick energy out through the arms.

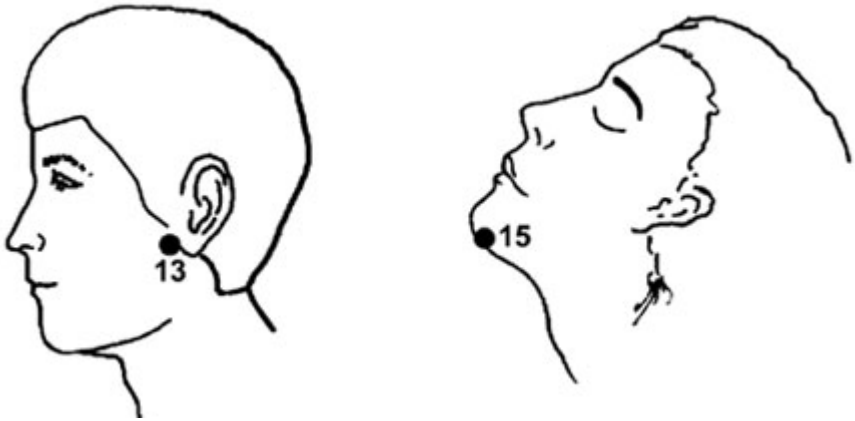


Fig. 30 *Points on the Face*

C. Legs

1. Stretch you student's calves and Achilles' tendons by pushing his feet towards the navel and moving the feet circularly, maintaining tension on the calf muscles.
2. Flush the wind down.
3. Ask your student to turn over. With your elbow, work on Point 69 on the back of the knees in the split of the muscle below the knee.
4. Flush the wind down the legs.
5. Your student should continue the work at home by pulling her toes back toward the navel, and extending the heels until the legs are tight, then releasing and exhaling. Standing on the toes and then rocking back to the heels, lifting the toes can help relieve congestion by encouraging the flow of blood into the calf muscles.

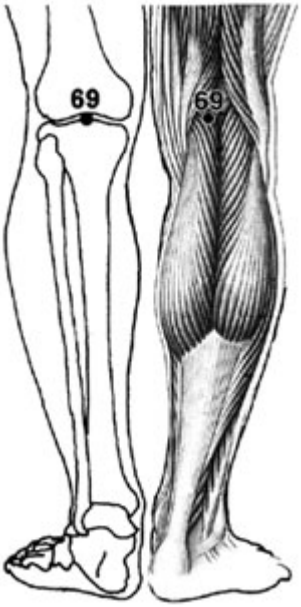


Fig. 31 *Points on the Legs*

D. Slapping Technique

This technique relieves the stagnation behind the knees, elbows and other joints, such as the inside of the ankles and the wrists.

1. Support the extended leg, arm, wrist, or ankle with just a bit of slack in the joint. With the open palm, strike the back of the joint quickly. It may cause a sharp, stinging sensation and even cause a bit of welting and redness which will dissipate as the stagnant blood is reabsorbed into the body. This technique can be painful but it is very effective to stimulate and restore the free flow of clean healthy oxygenated blood into the joints. ***Be careful not to work on varicose veins***. Tell the student to not take a shower or wet the area for 12 hours. Afterwards, the slapped area should not be touched.
2. Flush the wind down.
3. After the treatment, your student should do monkey dancing. Lying on his or her back, she should raise arms and legs towards the ceiling and shake them while breathing deeply into the abdomen. This helps blood circulation and lymph flow. This is a daily practice to get stagnant blood moving.
4. Deep belly laughing, known as “beating the inner drum”, will also help your student as it pumps the abdomen, activating the flow of blood, lymph and Chi and massaging all the internal organs.

Fig. 32 *Slapping Technique*

Seventh Wind
Wind that attacks the Heart causing Shaking

This wind starts in the intestines and it attacks the heart as it rises. When the heart overheats, the jaws tighten, the whole body may shake, and in extreme cases, the body is paralyzed. This is sometimes misdiagnosed as Parkinson's disease. The intestines cover a broad area; when this wind is high and centered in the intestines the heart is attacked directly. Working on this wind also helps to relieve back pain.

The right amount and flow of water and fire energy in the body is very important. In Nature, too much cold makes it impossible for anything to live and too much heat burns everything up. Balance creates a sense of well being.

A. Navel Points for the Seventh Wind

Use your elbow to press the following points:

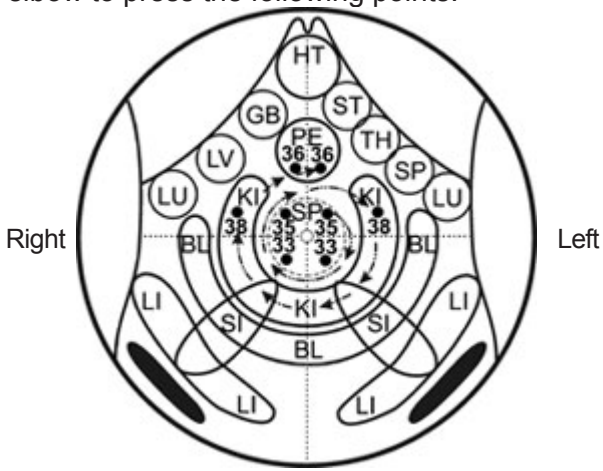


Fig. 33 *Navel Points for the Seventh Wind*

1. Point 35 located just above the navel, on the left side.
2. Point 33 located just below the navel, on the left side.
3. Point 33 on the right side.
4. Point 35 on the right side.
5. Point 38 located to the side of the navel, on the left side.
6. Point 38 on the right side.
7. Point 36 located above the navel slightly towards the sides of the body, on the right side.
8. Point 36 on the left side.

B. Face

1. With the knuckle press Point 13 below the ear towards the end of the jawbone while supporting the face with the other hand.
2. Flush the energy out through the arms.

Fig. 34 *Point 13 on the Face*

C. Feet

1. Press Point 74 (Bubbling Spring) located on the soles of the feet at 1/3 of the distance from the base of the 2nd toe to the heel. As you stimulate the point, guide your student to pull the tips of the toes towards the navel as she inhales bringing the cold refreshing energy of the kidneys from this point at the beginning of the kidney meridian. Ask her to feel the energy going up through the insides of the legs, then through the back of the perineum, up into the lower abdomen wrapping the kidneys and the adrenal glands, and rising all the way up to the heart area just under the collarbones.
2. As you flush the wind out through the feet, ask your student to exhale (with the heart sound) any excess heat from the heart down to the kidneys, then through the back and legs and out through the toes into the earth. Shaking should start reducing immediately. The Lotus Meditation presented in the Third Wind is also very helpful in this case as it uses the cold water energy of the kidneys to reduce excess heat in the heart.
3. Encourage swallowing saliva and frequent belching. This cools the heart down and moisturizes the overheated organs.

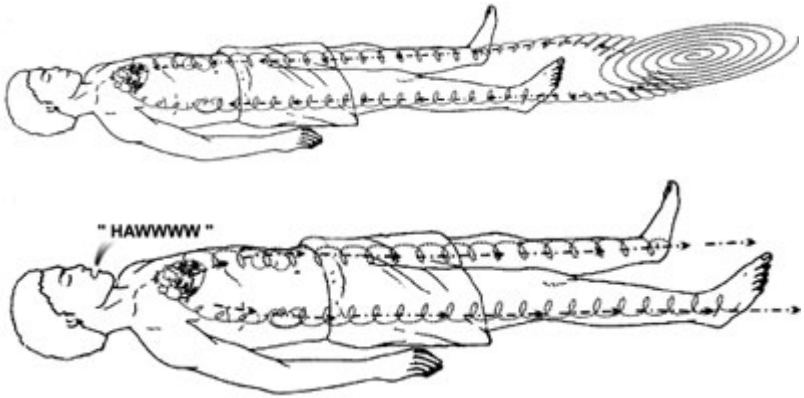


Fig. 35 *Exhale out Excess the Heat with the Heart Sound.*

Eighth Wind
Wind that causes Chest Pain

This wind causes pain in the chest and back as well as allergic rashes. It rises as a result of excess mucus sticking to the veins and arteries, and the lower abdomen often feels like jelly inside. An excessive amount of mucus is created when the body is too acidic, so it is important for the student to eat a greater amount of alkaline foods. Chewing food well and mixing it with saliva promotes good digestion and avoids the problems created by this wind. One should chew so much so that one may “drink one’s food”. Try counting how many times you normally chew a mouthful; then, chew many more times until the solid food becomes liquid. The student should also avoid eating foods to which she is allergic and, if possible, avoid areas where the air pollution is too strong or where there are high concentrations of pollen if this affects her system. Adjusting the acidity and alkalinity of the diet and cleaning out the colon will render deep results. One should also learn to drink one’s own fresh urine to rid the body of excess mucus.

A. Navel Points for the Eighth Wind

Use your elbow to press the following points:

1. Point 35 located just above the navel, on the left side.
2. Point 33 located just below the navel, on the left side. This point (together with Point 38) is good for relieving back pain.
3. Point 33 on the right side.
4. Point 35 on the right side.
5. Point 38 located to side of your student’s navel, on the left side.
6. Point 32 located below the navel towards the outside of the body, on the left side.
7. Point 32 on the right side.
8. Point 38 on the right side.
9. Point 37 located on a line right above the navel, on the right side.

10. Point 37 on the left side.
11. Point 30 located below the lower end of the sternum. Be careful not to press on the tip of the sternum as it is very delicate.

Right

Left

Fig. 36 *Navel Points for the Eighth Wind*

B. Chest

1. Massage the whole chest area. Use the heel of the palm to loosen the entire rib cage. Keep the palm in one place and vigorously spiral and shake. Now work your knuckle between the ribs and right on the rib bones using one hand to hold the rib cage. For women work around the breast, moving it to the side to work on the ribs under it. The chest area may be very painful due to the great number of emotions (i.e. anger, sadness, jealousy, depression, etc.) stored there. Tell your student to keep breathing into the area so that the pain and the emotions can be released.
2. Work on the sternum with your knuckle. Be aware of the tip of the sternum, how soft it is, and do not press too hard.
3. Flush the wind down through the arms.

Ninth Wind
Wind that makes the Legs and Feet Tired

This wind causes a lot of pain and fatigue in the legs and feet. When the legs are tired, winds often accumulate in the chest and abdomen straining the organs and the psoas muscle. When the psoas muscle is tight, it pulls the lower back and the pelvis into painful misalignment. Over time, the muscles are unable to move back into a natural position.

A. Navel Points for the Ninth Wind

Use your elbow to press the following points:

1. Point 35 located just above the navel, on the left side.
2. Point 33 located just below the navel, on the left side.
3. Point 33 on the right side.
4. Point 35 on the right side.

Fig. 37 *Navel Points for the Ninth Wind*

5. Point 36 located above the navel slightly towards the sides of the body, on the right side.
6. Point 36 on the left side.

B. Chest

1. Press your knuckle into Point 22 located right above the nipples. For women you can find the point above the breasts approximately between the 4th and 5th ribs, 1 1/2 to 2 inches down from the collarbone.
2. Do Point 22 on the other side.
3. Flush the wind down the arms.

C. Inguinal Area

There are many blood vessels crossing this area. Working on these points helps restore proper blood circulation and release the nerves. This area is very sensitive, so you should work gently with your elbow. Many people, especially women, have a lot of emotions and guilt stuck in the area under the navel and particularly in the groin. When the psoas muscles are in good shape, this region is not painful at all.

1. Press Point 40 on the left side located right above the hipbone.
2. Press Point 41 on the left side located on the lower tip of the hipbone.
3. Press Point 49 located just inside the lower part of the pelvic bone, on the left side. Ask permission to work on this point and work very respectfully since the area is very close to the pubic bone and thus close to the sexual organs. If your student becomes aroused, help him guide the energy up through the microcosmic orbit.
4. Press Point 49 on the right side.
5. Press Point 41 on the right side.
6. Press Point 40 on the right side.
7. Flush the winds down through the legs.

D. Legs

The following points should be pressed with the tips of the fingers.

1. Work on Point 63 located right above the anklebone on the inner side of the leg.
2. Work on Point 66 located directly below the anklebone on the inside of the foot.
3. Work on Point 55 located in the front of the leg under the knee between the two bones.
4. Work on the other leg.
5. Flush the wind down the legs.

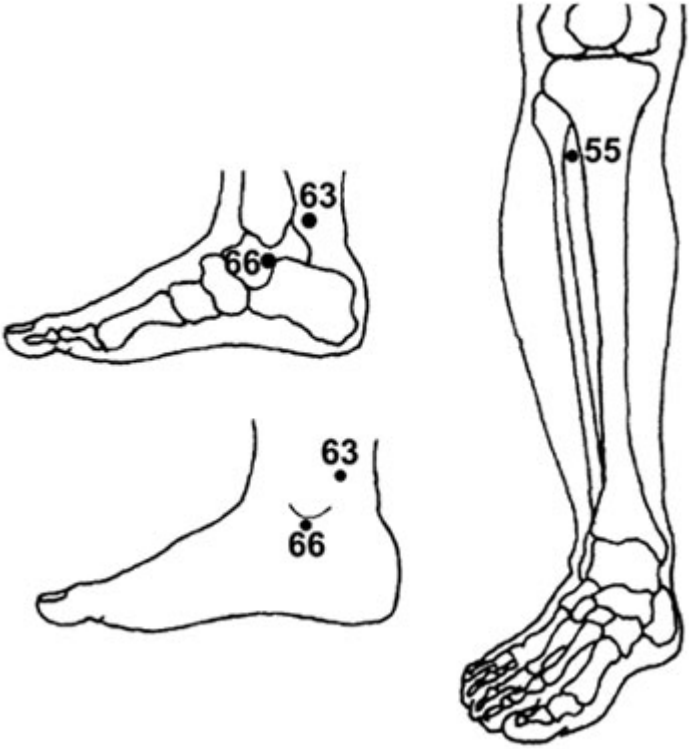


Fig. 38 *Points on the Legs and Feet*

Tenth Wind
Wind that causes Pain, Numbness and Heat

This wind causes pain, numbness and heat that extends from the legs up to the armpits and hands. The heat is felt rising upwards, making it difficult to walk. Working on the center of the navel and the midline up to the sternum works for people with back pain. After 15-20 minutes, it is possible to create a release and restore the ability to walk. This wind also attacks the heart, so you will also need to work on the upper chest.

A. Navel Points for the Tenth Wind

Use your elbow to press the following points:

Fig. 39 *Navel Points for the Tenth Wind*

While working with these navel points rest a finger on point 19.

1. Point 35 located just above the navel, on the left side.
2. Point 35 on the right side.
3. Point 36 located above the navel slightly towards the sides of the body, on the right side.
4. Point 36 on the left side.

B. Chest and Throat:
Releasing these points allows courage to grow

1. Press your knuckle, or thumb, or finger on Point 19, located between the collarbones where they join the sternum.
2. Work on Points 18 located slightly above either side of Point 19, right above the clavicles. There may be pain all over in this area. Work to release the tightness with your thumb and index finger. Massage the entire area and directly over the clavicles as well.
3. Massage and open Point 17 located on the throat on the sides of the depression of the pharyngeal prominence, under the notch on both sides of the voice box.
4. Flush the wind down through the arms.

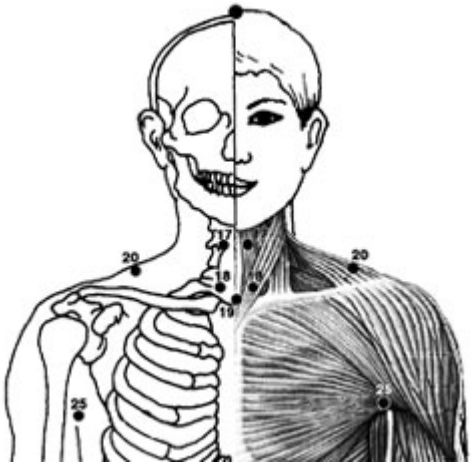


Fig. 40 *Points on the Chest and Throat*

C. Shoulders and Back

This is good for a stiff neck.

1. Press Point 20 with your elbow massaging the whole brachial plexus. Tell your student to slowly turn his head away from the side you are working on as you press down. Try a few drops of oil with this move.
2. With your thumb, press Point 25 on the armpit.
3. Flush the wind out the arms.

Fig. 41 *Point 20 – the Shoulder Well*

D. Feet

First use the two thumbs on Points 66 and 67. Then connect the navel with Points 66 and 67 with the fingers of one hand on the navel while using the thumb to massage down from Points 66 and 67.

1. Work on Point 67 located on the inside of the foot below the anklebone towards the front.
2. Work on Point 66 directly below the anklebone on the inside of the foot.
3. Work on Point 74 on the soles of the feet at 1/3 of the distance from the base of the second toe to the heel.
4. Do the other foot.
5. Flush the wind out.

Eleventh Wind
Wind that affects the Nerves and makes a Stiff Back

This wind affects nearly everyone at one time or another. It collects directly below the navel and it can cause a stiff back and affect the nerves and the lumbar plexus. Before you work on this wind, it is necessary to release the navel area and the psoas muscle with basic Chi Nei Tsang I procedure.

A. Navel Points for the Eleventh Wind

Use your elbow to press the following points:

1. Point 35 located just above the navel, on the left side.
2. Point 33 located just below the navel, on the left side.
3. Point 33 on the right side.
4. Point 35 on the right side.
5. Point 38 located to side of your student's navel, on the left side. This point relieves the wind that causes back pain.
6. Point 32 located below the navel towards the outside of the body, on the left side.
7. Point 32 on the right side.
8. Point 38 on the right side.
9. Point 37 located on a line right above the navel, on the right side.
10. Point 37 on the left side.
11. Point 30 located below the lower end of the sternum. Be careful not to press on the tip of the sternum as it is very delicate.
12. Conclude the massage work by gently using your fingers to massage the area just below the navel.
13. Finally, the student should place her palms over her lower abdomen and warm the area by imagining a fire or the sun burning in her abdomen. You may also directly introduce warming energy into this area with your intention and by sending wind burning energy from your fingertips.

Fig. 42 *Navel Points for the Eleventh Wind*

B. Shoulders

Sometimes before this wind exits the body it moves into areas of the student's body where he is used to storing pain such as the back, hips or shoulders. This is a good sign; it means the winds are moving. Help the student visualize the wind moving out through the legs and toes or through the arms and fingers.

1. Massage Point 75 located on the outer edge of the shoulders in the depression in the middle of the deltoid muscle.
2. With your elbow, press Point 20 on the shoulders at the base of the neck.
3. Flush the winds out through the arms.

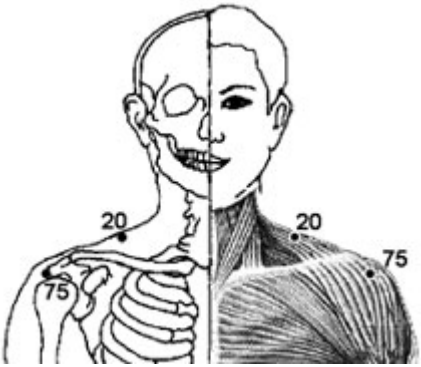


Fig. 43 *Points on the Shoulders*

C. Back

1. Press your elbow on Point 45 located in the space between the sacrum and the hip bone. Shake your arm and slightly push the hip bone down towards the buttocks to release the tension in that area.
2. Flush the wind down through the legs and feet.

Fig. 44 *Massaging Point 45*

Twelfth Wind
Wind that causes Excess Heat and Cold

Your student may complain of excess heat or cold or a rapid alternation of both hot and cold wind. Releasing excess cold and or heat entails gathering the imbalanced wind and sweeping it out. The right temperature in the body provides a sense of well being.

Excessive cold in the kidneys can be a cause of impotence. Erection of the penis is dependent on healthy Chi flow. Venting excess heat from the heart helps to warm the kidneys, which must maintain a measure of internal heat to balance their innate coolness and function properly. This promotes the "Yang within the Yin" and an appropriate flow of Chi. The Lotus Meditation described in the Third Wind is very helpful to balance the cold and hot energies in the body.

A. Navel Points for the Twelfth Wind

Use your elbow to press the following points:

1. Point 35 located just above the navel, on the left side.
2. Point 33 located just below the navel, on the left side.
3. Point 33 on the right side.
4. Point 35 on the right side.
5. Point 38 on the left side.
6. Point 32 on the left side.
7. Point 32 on the right side.
8. Point 38 on the right side.
9. Point 37 located on a line right above the navel, on the right side.
10. Point 37 on the left side.
11. Point 30 located below the lower end of the sternum. Be careful not to press on the tip of the sternum as it is very delicate.
12. Point 41 located on the lower tip of the hipbone, on the left side
13. Point 41 on the right side.

Fig. 45 *Navel Points for the Twelfth Wind*

B. Chest

1. Check the upper part of the rib cage. Release the area on the sternum, between the ribs and directly on the rib bones. For women work around the breast, moving it to the side to work on the ribs under it. When you work on the sternum, be aware of how soft it is and do not press too hard.

Fig. 46 *Massaging the Sternum*

2. As you work, coach your student to make the heart sound and release any excess heat or cold through the feet.
3. Flush the wind down from the left part of the chest through the left arm, and from the right part of the chest through the right arm.

C. Feet: "Dig the soles of the feet and you'll discover gold!" And it feels good!

1. Supporting your student's foot with one hand, press your other elbow on Point 74 on the sole of the foot. This point is like a well, and when sick energy accumulates there, it can remain stagnant for a very long time.
2. Flush down the wind.

Fig. 47 *Digging for Gold*

Applying CNT II to Specific Ailments

A. Heart Attacks and the Life and Death Point

When a person is close to death, the heart begins to struggle. It balloons and expands until it collapses and eventually the heart dies. If you find yourself in a situation where someone is having a heart attack, first, call for an ambulance and then you can work on the person while you wait. You can help the person using wind removal techniques and also working on the “Life and Death Point”.

This point is located on the back between the scapula and the spine between Thoracic 4-5 on the left side. When the person is having a heart attack, this point is very clear as it pulses and pops out. It can be the size of a ping-pong ball. This point can also be used preventively. My master taught me this point when he was close to death, and by working on it, I was able to extend his life.

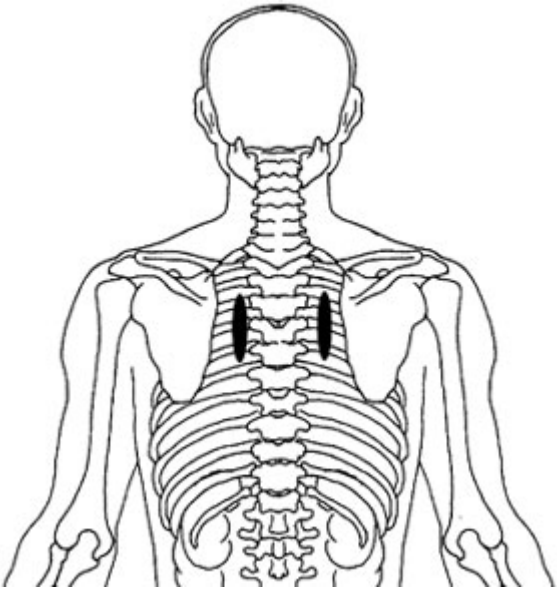


Fig. 48 *Life and Death Point*

B. Arthritis

Arthritis is caused by the wind produced by stagnant and blocked blood. The blood runs up the veins in the legs and arms collecting waste material and toxins on its way back to the heart. Sometimes, this toxic blood and wind collects in the back of the knees or in the bend of the arm, lumbar area of the back especially when people are too emotional, do not exercise enough or eat heavy foods.

Procedure for removing wind from the back of the knees:

1. The student should stand with the back of the knees bare.
2. Support the knee by holding it in the front with one hand. With the palm of the other hand, swiftly slap the back of the each knee about 9, 18 or 36 times, mobilizing your energy from your center. The hand action should be forceful, but not too hard. The skin on the back of the knees will be come quite flushed and the wind will reveal itself in ugly patches that will quickly turn a dark reddish blue and the area will be bruised for a few days. This is a good sign that the windshave been stirred and activated, and they will now exit the body. If there is no wind trapped in this area, this reaction will not occur and the skin will just turn red temporarily.
3. Work on the other knee.
4. The student should not shower immediately after the treatment.

Procedure for removing the wind from the middle bend of the arm:

1. Both you and the student stand facing each other an arm's length apart.
2. Take the elbow of the student and grip it. Slap the inside of the arm in the region of the crease in the elbow 18 times. The skin may become red and blotchy. You have stirred the winds and they will begin to leave the body allowing better circulation in the area just treated.
3. Work on the other arm.

Fig. 50 *Slap the inside of the arm.*

C. Hiatal Hernia

Hiatal hernias are caused by the same wind that attacks the heart. This problem results from problems in the digestive system, compounded by excess weight and progressive weakening of the tissues in the abdomen.

When food is not digested properly, it ferments inside the stomach creating wind. The bloated stomach pushes against the diaphragm, and sometimes a part of the stomach may go through the hiatus, the opening in the diaphragm through which the esophagus and the two vagus nerves pass, enlarging and becoming a hernia. Discomfort comes from the constant pressure of tissue pushing its way through the weakened hiatal opening. As more tissue pushes through the weakened area, the feeling of pressure increases. In addition, gastric acid is not contained in the stomach, and as it flows back into the esophagus, the person experiences a burning sensation and pain that extends all the way to the upper part of the chest. The congestion in the digestive tract also affects the heart, the liver, the spleen and the lungs.

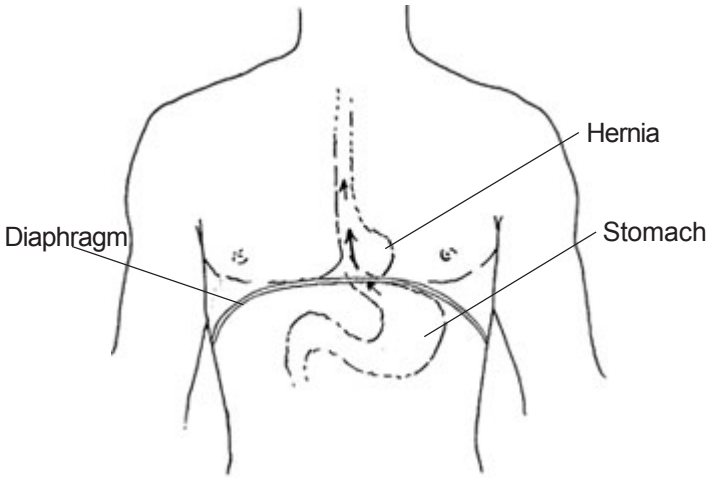


Fig. 51 *Hiatal Hernia*

Another factor that promotes the development of a hiatal hernia is breathing only into the chest. When the main effort is not done by the diaphragm but by the intercostal muscles, the chest goes up and the sides come in creating a vacuum effect that sucks the stomach in towards the chest. Teaching your student to breathe properly is very helpful. Ask him to lower the shoulders and breathe into the bowl of the belly, allowing the breath to expand the ribs in all directions, like an umbrella.

Procedure:

1. Open the wind gates, the navel and the pakua as explained in Chapter Four, Opening the Wind Gates.
2. Massage the abdomen releasing the knots and tangles in the stomach and intestines. Emphasize the work on the left corner of the transverse and descending colon, which is located right below the stomach.
3. Spiral and release the wind through the legs and through the arms.

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Chi Nei Tsang II

Internal Organs Chi Massage

Mantak Chia

Illustrations by Udon Jandee

Chi Nei Tsang II

In this booklet Chi Nei Tsang II builds on the procedures taught in Basic Chi Nei Tsang — sensing and touching the abdomen, then clearing and detoxifying the organs and lymphatic system.

Once the basic procedures have been mastered, the student can use this booklet to work with the Winds in the body which can cause illness and diseases. You will learn how to open the Wind Gates by making "traps" for the winds, using your elbow, fingers and thumbs. Then you can flush the winds out of the body. The effects and locations of the twelve winds are discussed in detail. Diagrams and step by step instructions for flushing out the winds make it easy for both the practitioner and the student himherself to follow the procedures.

The booklet ends with a discussion of the applications of these techniques to a number of specific health problems like heart attacks, arthritis and hiatal hernias.

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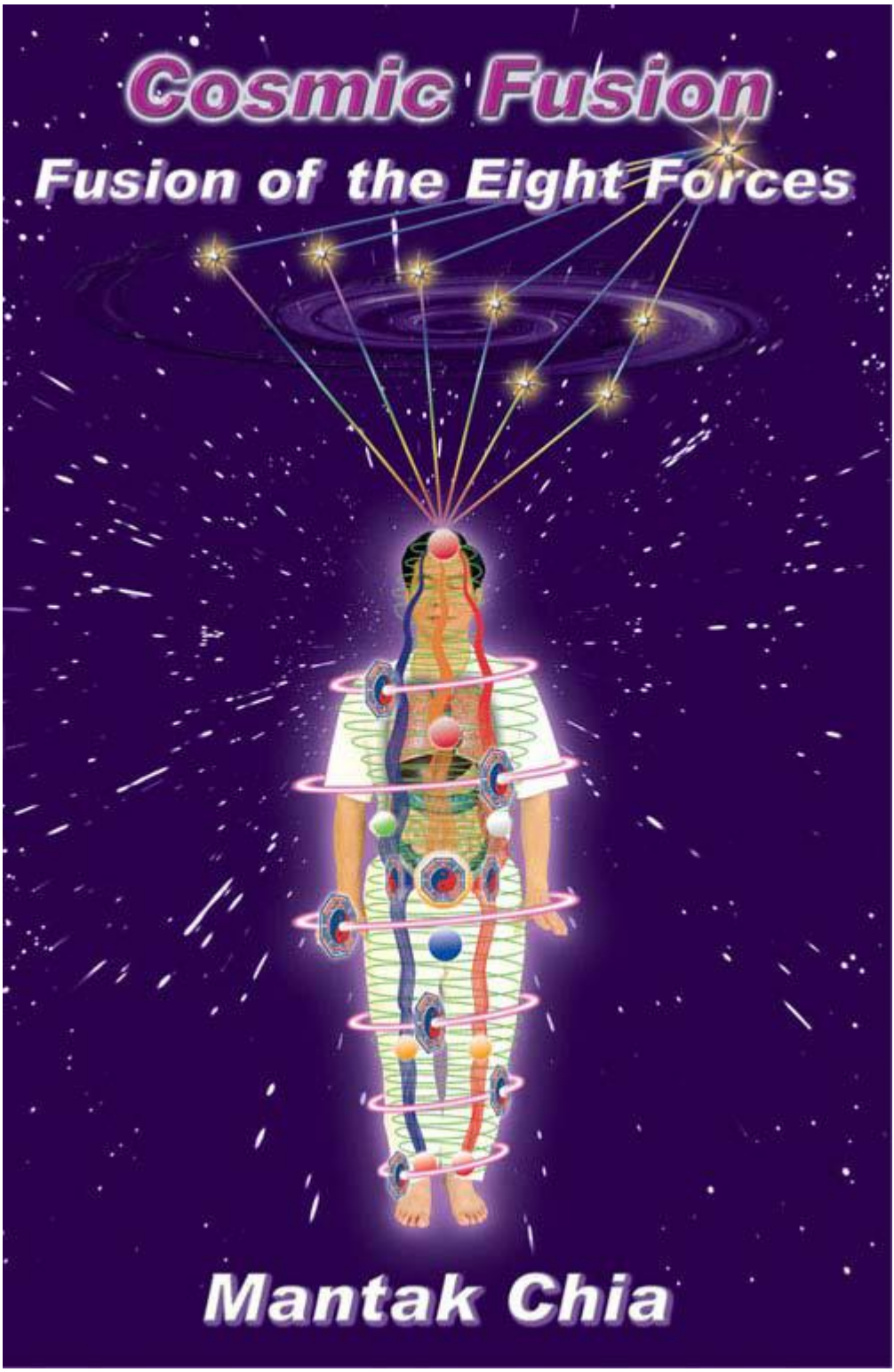
Cosmic Fusion

Fusion of the Eight Forces



Mantak Chia

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Mantak Chia

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About the Author

Mantak Chia

Master Mantak Chia

Master Mantak Chia is the creator of the Universal Tao System and is the director of the Universal Tao Center and Tao Garden Health Resort and Training Center in the beautiful northern countryside of Thailand. Since childhood he has been studying the Taoist approach to life. His mastery of this ancient knowledge, enhanced by his study of other disciplines, has resulted in the development of the Universal Tao System which is now being taught throughout the world.

Mantak Chia was born in Thailand to Chinese parents in 1944. When he was six years old, Buddhist monks taught him how to sit and "still the mind." While still a grammar school student, he learned traditional Thai boxing. He was then taught Tai Chi Chuan by Master Lu, who soon introduced him to Aikido, Yoga and broader levels of Tai Chi.

Years later, when he was a student in Hong Kong excelling in track and field events, a senior classmate named Cheng Sue-Sue introduced him to his first esoteric teacher and Taoist Master, Master Yi Eng (I Yun). At this point, Master Chia began his studies of the Taoist way of life in earnest. He learned how to circulate energy through the Microcosmic Orbit and, through the practice of Fusion of the Five Elements, how to open the other Six Special Channels. As he studied Inner Alchemy further, he learned the Enlightenment of the Kan and Li, Sealing of the Five Senses, Congress of Heaven and Earth and Reunion of Heaven and Man. It was Master Yi Eng who authorized Master Chia to teach and heal.

When Mantak Chia was in his early twenties he studied with Master Meugi in Singapore, who taught him Kundalini, Taoist Yoga and the Buddha Palm. He was soon able to clear blockages to the flow of energy within his own body. He learned to pass the life force energy through his hands also, so that he could heal Master Meugi's patients. He then learned Chi Nei Tsang from Dr. Mui Yimwattana in Thailand.

A while later, he studied with Master Cheng Yao-Lun who taught him the Shao-Lin Method of Internal Power. He learned the closely guarded secret of the organs, glands and bone marrow exercise known as Bone Marrow Nei Kung and the exercise known as Strengthening and Renewal of the Tendons. Master Cheng Yao-Lun's system combined Thai boxing and Kung Fu. Master Chia also studied at this time with Master Pan Yu, whose system combined Taoist, Buddhist and Zen teachings. Master Pan Yu also taught him about the exchange of Yin and Yang power between men and women, and how to develop the Steel Body.

To understand the mechanisms behind healing energy better, Master Chia studied Western anatomy and medical science for two years. While pursuing his studies, he managed the Gestetner Company, a manufacturer of office equipment and became well acquainted with the technology of offset printing and copying machines.

Using his knowledge of Taoism, combined with the other disciplines, Master Chia began teaching the Universal Tao System. He eventually trained other Instructors to communicate this knowledge and he established the Natural Healing Center in Thailand. Five years later, he decided to move to New York, where in 1979, he opened the Universal Tao Center. During his years in America, Master Chia continued his studies in the Wu system of Tai Chi with Edward Yee in New York.

Since then, Master Chia has taught tens of thousands of students throughout the world. He has trained and certified over 2,000 instructors and practitioners from all over the world. Living Tao Centers, Chi Nei Tsang Institutes, Cosmic Healing Forums & Immortal Tao Mountain Sancutaries have opened in many locations in North America, South America, Europe, Asia, Africa and Australia.

In 1994, Master Chia moved back to Thailand, where he had begun construction of Tao Garden and the Universal Tao Training Center fifteen miles outside of Chiang Mai.

Master Chia is a warm, friendly and helpful man who views himself primarily as a teacher. He presents the Universal Tao System in a straightforward and practical manner, while always expanding his knowledge and approach to teaching. He uses a word processor for writing and is totally at ease with the latest computer technology.

Master Chia estimates that it will take thirt-five books to convey the full Universal Tao System. In June, 1990, at a dinner in San Francisco, Master Chia was honored by the International Congress of Chinese Medicine and Qi Gong (Chi Kung), who named him the Qi gong Master of the Year. He is the first recipient of this annual award.

In December, 2000, the Tao Garden Health Resort and Universal Tao Training Center was completed with two Meditation Halls, two open air Simple Chi Kung Pavilions, indoor Tai Chi, Tao Tao Yin and Chi Nei Tsang Hall, Tai Chi Natural Swimming Pool, Pakua Communications Center with a complete Taoist Library, Internal World Class Weight Lifting Hall and complete 8 Court Recreational Facilities.

In February, 2002, the Immortal Tao practices were held at Tao Garden for the first time using Darkness Technology, creating a complete environment for the higher level Taoist practices.

Master Mantak Chia has previously written and published these twenty-two Universal Tao books:

Awaken Healing Energy of the Tao - 1983
Taoist Secrets of Love: Cultivating Male Sexual Energy co-authored with Michael Winn - 1984.
Taoist Ways to Transform Stress into Vitality -1985
Chi Self-Massage: the Tao of Rejuvenation - 1986
Iron Shirt Chi Kung I - 1986
Healing Love Through the Tao: Cultivating Female Sexual Energy - 1986
Bone Marrow Nei Kung - 1989
Fusion of the Five Elements I - 1990
Chi Nei Tsang: Internal Organ Chi Massage - 1990
Awaken Healing Light of the Tao - 1993
The Inner Structure of Tai Chi co-authored with Juan Li - 1996
Multi-Orgasmic Man co-authored with Douglas Abrams 1996 - published by Harper Collins
Tao Yin - 1999
Chi Nei Tsang II - 2000
Multi-Orgasmic Couple co-authored with Douglas Abrams 2000 - published by Harper Collins
Cosmic Healing I - 2001
Cosmic Healing II co-authored with Dirk Oellibrandt - 2001
Door of All Wonders co-authored with Tao Haung - 2001
Sexual Reflexology co-authored with W. U. Wei - 2002
Elixir Chi Kung - 2002
Tan Tien Chi Kung - 2002
Cosmic Fusion - 2002

Many of the books above are available in the following foreign languages:

Arabic, Bulgarian, Czech, Danish, Dutch, English, French, German, Greek, Hebrew, Hungarian, Indonesian, Italian, Japanese, Korean, Lithuanian, Malaysian, Polish, Portuguese, Romanian, Russian, Serbo-Croatian, Slovenian, Spanish, & ***Turkish*** editions are available from the Foreign Publishers listed in the Universal Tao Center Overview in the back of this book.

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Thanks to Juan Li for the use of his beautiful and visionary paintings, illustrating Taoist esoteric practices.

We offer our eternal gratitude to our parents and teachers for their many gifts to us. Remembering them brings joy and satisfaction to our continued efforts in presenting the Universal Tao System. For their gifts, we offer our eternal gratitude and love. As always, their contribution has been crucial in presenting the concepts and techniques of the Universal Tao.

We wish to thank the thousands of unknown men and women of the Chinese healing arts who developed many of the methods and ideas presented in this book. We offer our gratitute to Master Lao Kang Wen for sharing his healing techniques.

We wish to thank Lee J. Holden Jr. for his editorial work and writing contributions, as well as his ideas for the cover. We appreciate his research and great labor. We wish to thank Colin Campbell for his editorial contributions on the revised edition of this book, as well as thanking our Senior Instructors, Rene J. Narvarro and Annette Derksen, for their insightful contributions to the revised version. We thank Joost Kuitenbrouwer for his technical editing and clear writing throughout the book.

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Words of Caution

The practices described in this book have been used successfully for thousands of years by Taoists trained by personal instruction. Readers should not undertake the practice without receiving personal transmission and training from a certified instructor of the Universal Tao, since certain of these practices, if done improperly, may cause injury or result in health problems. This book is intended to supplement individual training by the Universal Tao and to serve as a reference guide for these practices. Anyone who undertakes these practices on the basis of this book alone, does so entirely at his or her own risk.

The meditations, practices and techniques described herein are ***not*** intended to be used as an alternative or substitute for professional medical treatment and care. If any readers are suffering from illnesses based on mental or emotional disorders, an appropriate professional health care practitioner or therapist should be consulted. Such problems should be corrected before you start training.

Neither the Universal Tao nor its staff and instructors can be responsible for the consequences of any practice or misuse of the information contained in this book. If the reader undertakes any exercise without strictly following the instructions, notes and warnings, the responsibility must lie solely with the reader.

This book does not attempt to give any medical diagnosis, treatment, prescription, or remedial recommendation in relation to any human disease, ailment, suffering or physical condition whatsoever.

The Universal Tao is not and cannot be responsible for the consequences of any practice or misuse of the information in this book. If the reader undertakes any exercise without strictly following the instructions, notes, and warnings, the responsibility must lie solely with the reader.

Chapter 1
Cosmic Fusion and the Tao

Cosmic Fusion is the basic Taoist practice of internal alchemy. This is the second book in a three part series. This particular book expands on the concepts and practices introduced in Fusion of the Five Elements. Here in part II, the practice goes to the next level of development.

In the beginning these practices may seem complex and mentally challenging, yet once the formulas are understood and applied, they are quite simple. With practice, the materials become familiar territory that you can traverse easily. Take your time with the formulas. Experiment with what works for you. The formulas are the guidelines to enhance your life. The Cosmic Fusion is a doorway into the vast potential of the self and the Universe. It is a very natural process and the first step into the Taoist alchemical practice.

The Tao 道

The word *Tao* means ***The Way***, the way of nature and the Universe, or the path of a natural reality. It also refers to a way in which we can open our minds to learn more about the world, our spiritual paths and ourselves. Taoism is a practice of body, mind and spirit, not just a philosophy of mind. When we have the true sense of the Tao, of the real knowledge and wisdom, we will be able to make the right decisions in our lives.

Taoism involves many practical disciplines that can restore our lost youth, energy and virtues while awakening our deepest spiritual potentials. Taoists regard these practices as a technology that can help us learn universal truths if we are willing to be receptive.

The ancient masters recognized that these potentials can include the possibility of attaining conscious freedom and existence in the after-death state. Through specific exercises, one can avoid suffering the experience of death by expanding the consciousness beyond the physical body before its demise. This makes it possible to determine one's future existence before leaving this life.

All spiritual paths ultimately lead to the truth. Taoism is both a philosophy and a technology for seeking and finding the truths of the universe, nature, and humanity. Its focus goes beyond one single path or viewpoint. Taoism is not a religion, as it requires no initiations or ceremonies, but it is the outcome of all religions, departing from dogma at the point of truth. It leaves behind all religious beliefs, just like the clothing of past seasons. The Tao is also the goal of science, but it leaves behind all scientific theories as partial and temporal descriptions of the integral truth. Taoism includes all matters of religion and science, yet its breadth goes far beyond the limits of devotion or intellect.

Taoist teachings are like master keys unlocking all doors. They assist people in their lives, as do all religious teachings. Yet the teachings of the Tao transcend religion while retaining the essence of spirituality. They explain and demonstrate the truths of the Universe directly, rather than on the level of emotions, thoughts or beliefs. For this reason, students of the Tao have little cause for skepticism or endless searching.

Philosophy, science and religions all contain some aspects of truth that reflect the Tao. The teachings of the Tao reflect the center of the ultimate truth (ourselves and the Universe) and help us reach it on our own. We can believe in any religion or spiritual path and still benefit from these teachings, because the Tao serves only to promote universal spiritual independence. There are no ultimate masters or gurus in Taoism because we become our own masters, capable of controlling our own destinies and knowing who we really are as we explore the marvelous powers hidden within the Tao of humanity. All the great gods, immortals, sages, saints and holy men and women are our teachers and advisers.

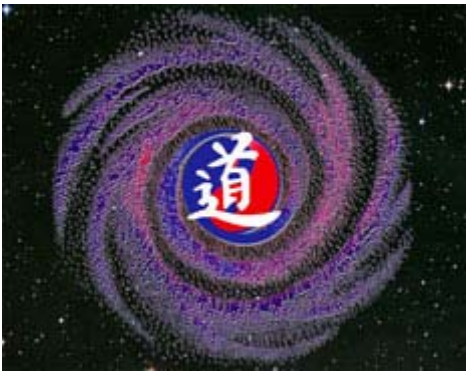
Taoism, which goes back at least seven to eight thousand years, is closely aligned with modern technology and science. Browsing through a bookstore, you will find that many recent books use the concepts of Taoism to explain relationships expounded by the “new” physics. Today, a lot of the world’s intellectual effort is directed toward external technological development.

Thousands of years ago, the Taoists directed their consciousness inwardly, and developed a science of inner alchemy. Chinese written history has a 4700 year history and the language has not changed significantly over the centuries, so even the oldest documents can be read today. A lot of information was accumulated in

each dynasty. The Taoist sages, who learned and perfected methods to prepare and leave the body, recorded all the practical details. These, along with philosophical thought, were collected, filling many volumes which constitute the Tao Canon.

These transformative formulas endure, a gift from the original Taoist sages to all who are willing to put them into practice. The Universal Tao is concerned primarily with the practical approaches perfected by the Taoist sages.

Universal Tao System



The ancient Taoists saw the importance of working on all three levels of our being: the physical body, the Energy Body and the spirit. All three are important in forming a ladder with which we may climb consciously into the spiritual worlds and, just as important, back into the physical world to be creatively active here. This ladder enables Taoists to learn about the inner worlds and to return to the physical with knowledge and increased energy. An Immortal Body, which is developed in the practice of Internal Alchemy, enables one to establish a constant link between life and the after-death (or pre-birth) state.

Ancient Taoist sages believed we were born to be immortal. We become mortal by draining ourselves of Chi through engaging in excessive sexual activity, indulging in negative emotions, and depending on material sources to supply our life-force. The masters recognized that different levels of immortality can be achieved through internal alchemy, and they devised many practices for this purpose. The ability to transcend even death through the transmutation of one's physicality into the Immortal Spirit Body is the highest goal of Taoism. This level, known as physical immortality, takes the longest to achieve.

Healing the Physical Body: Becoming like a Child to return to the Original Source

Taoist practices teach to conserve the physical energy so that it will no longer scatter and deplete as a result of our worldly interactions. Full spiritual independence requires that we avoid being drained of this energy through the eyes, ears, nose, and mouth or through excessive sex. The novice in the Universal Tao System begins with a wide range of exercises that develop the physical body into an efficient and healthy organism, able to live in the world and yet stay free of the tensions and stresses of daily life. One aspires to return to a childlike state of innocence and vitality, to regain the Original Source that is our birthright. Specific goals of this level are to learn how to heal oneself, how to love oneself, and how to love others.

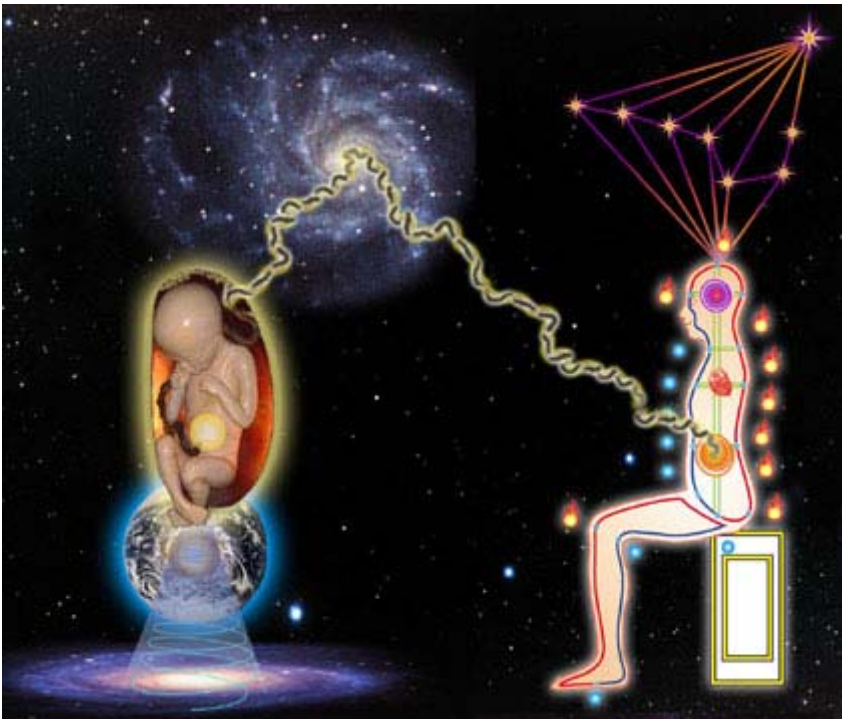


Fig. 1.1 *Returning to the Original Source.*

The first level of practice is to develop a healthy body, which can take months of diligent training. During this process we learn how to condense and conserve our life-force through the *Microcosmic Orbit* meditation, *Healing Love* practices, *Inner Smile*, *Six Healing Sounds*, and *Iron Shirt Chi Kung*. We learn to gather and refine our life-force into a Chi Ball (energy sphere) so it will not dissipate when we are ready to leave this world. As people grow older, their life-force weakens, often resulting in illness and suffering. Using drugs to combat illness drains so much of the body's life-force that there may not be enough energy left to follow the primordial light (clear light) to the Wu Chi (our original source God) at the moment of death. The basic practices of the Universal Tao ensure that we retain enough of our health and vital energy to make that journey.

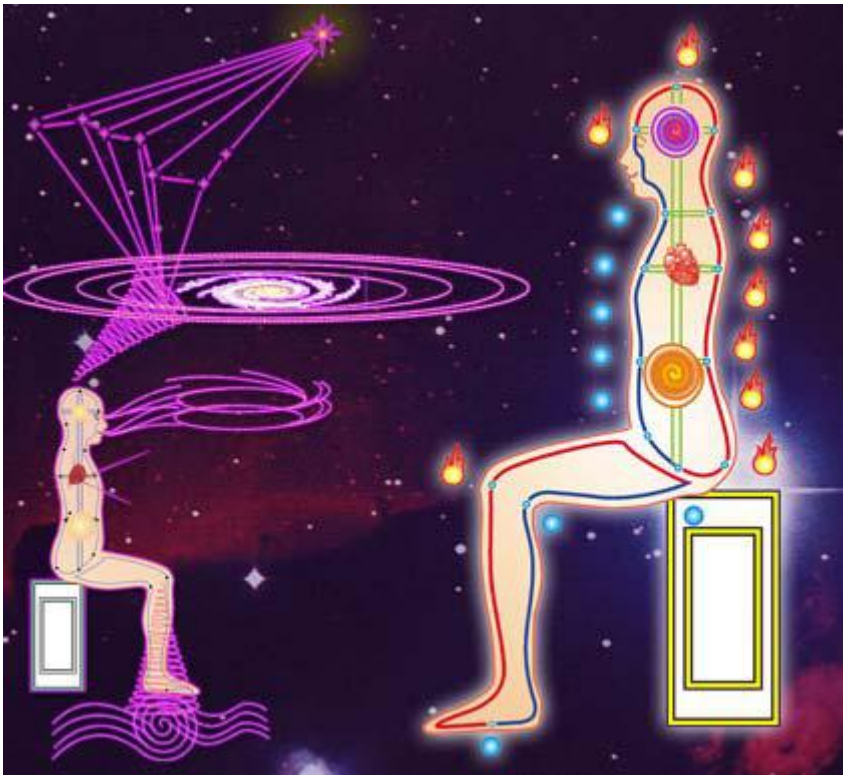


Fig. 1.2 *Sit down and start to move the orbit in the fast speed, from 1000 rotations per minute, to 10,000 per minute and up to 30,000 per minute.*

Stopping energy leakage through conservation and recycling.

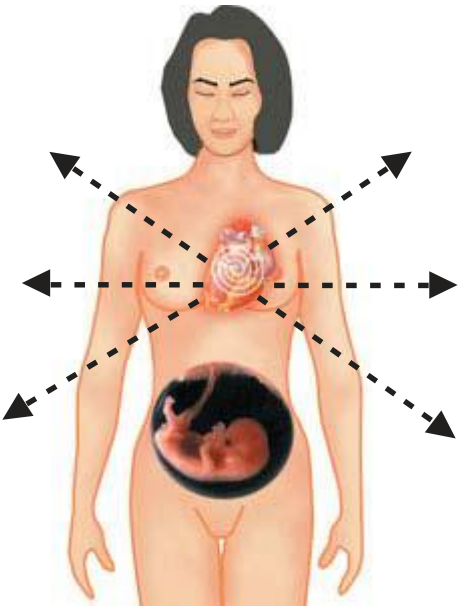


Fig. 1.3 *Heart Leakage*

The Microcosmic Orbit is the body's major energy pathway. Along this path there are nine openings. If we learn how to seal them when they are not in use, that simple act of conservation will save an immense amount of energy.

The Microcosmic Orbit meditation is the first step toward attaining these goals, as it develops the power of the mind to control, conserve, recycle, transform and direct Chi (the Chinese term for energy, or life-force) through the body's primary acupuncture channels. By learning how to manage our Chi effectively, we gain better control over our lives; by using our energy wisely, we discover that we already have plentiful Chi.

At this stage, one also learns to connect with and draw from the unlimited source of Universal Love, a Cosmic Orgasm formed by the union of the three main sources of Chi accessible to humans: the *Universal (Heavenly) Force*, the *Earth Force* and the *Higher Self (Cosmic) Force*. This process is both energizing and balancing. It prepares one for working with greater amounts of Chi in the higher levels of meditative practice, particularly in developing the Energy Body.

Abdominal Brain

Learning to empty the mind is one of the most important Universal Tao practices. Letting go of judgments, suspicions and the incessant repetitive thought process is a simple way to recharge the body, the brain and the spirit. Science has proven that we have about 60,000 thoughts per day and of those 60,000 thoughts 95% of them are the same thoughts we had yesterday. By activating the abdominal brain, we are able to clear the mind and create space for more creative mental activity.

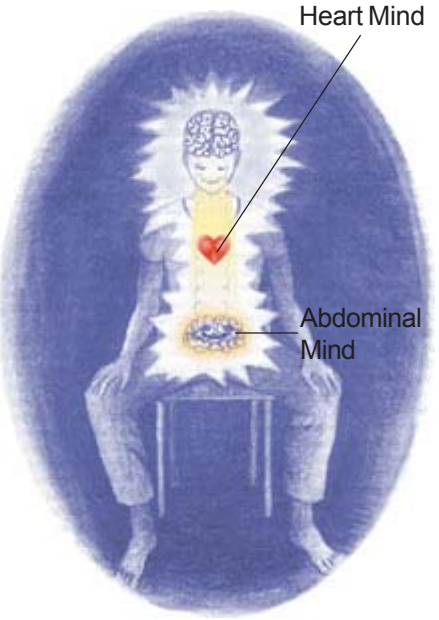


Fig. 1.4 *Upper and Lower Brains*

The brain spends up to 10 times more energy than the rest of the body. Even when we are not working or thinking consciously, our mind still wanders. In Taoism this incessant thinking is called the "Monkey Mind". If we can stop the mind and empty the energy from the brain down to the organs, there will be tremendous amount of energy stored in the body. This abundance of energy can later return back to the brain. When the energy returns, our thoughts are much more refined, creative and focused.

The abdominal brain is located in the Lower Tan Tien, the reservoir of energy located about an inch below the navel and three inches inside the body. This is the very center of our being. It is called the abdominal brain because it is a center for wisdom. Science is learning that the same chemical activities that go on in the brain, go on in the abdomen. The difference is that the abdomen is not connected with the senses. The senses tend to pull our energy and awareness outside of ourselves. This leads to the constant analyzing of situations and people. The abdominal brain is a much deeper sense of awareness, where our "gut feelings" originate. When the abdominal brain is activated, we open up to more guidance, deeper intuition and full body awareness.

Transforming Negative Energy into Virtues: Opening the Heart

The Inner Smile and Six Healing Sounds are simple yet powerful practices that teach us how to relax and heal the vital organs and to transform negative emotions back into a rich source of energy. They help open the heart center and connect us with unlimited Universal Love, improving daily interactions and providing a vehicle for the virtues, which derive from the internal organs. Taoists perceive the heart as the seat of love, joy and happiness, which can connect with Universal Love. It is also a cauldron in which the energies of our virtues are combined and strengthened. Through the Inner Smile, you will feel these virtuous energies generated from their respective organs. These virtues are then gathered into the heart to be refined and blended into compassion, the highest of all virtues. This is a most effective way to enhance one's best qualities.

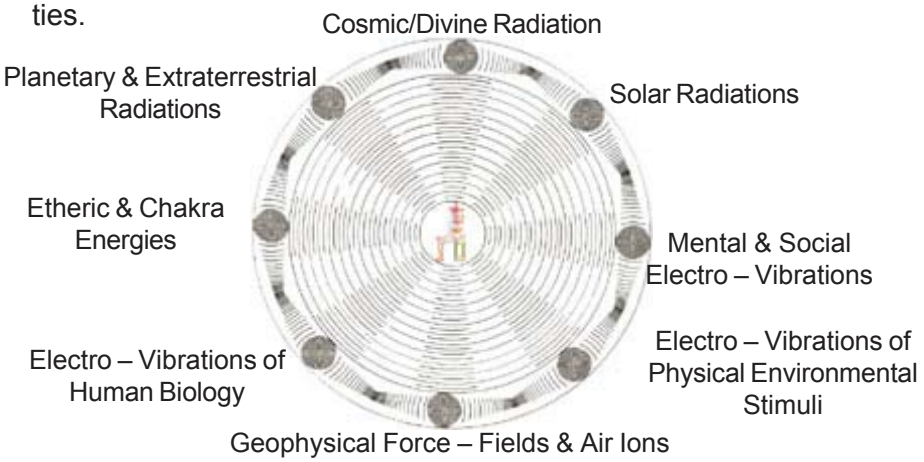


Fig. 1.5 Cosmic/Divine Radiation Fields

Another important beginning practice teaches the student of the Tao how to gain strength through the conservation and recycling of sexual energy (*Healing Love through the Tao*). When collected, sexual energy (*Ching Chi*) becomes an incredible source of power that can be used by the individual or shared with a sexual partner through the Microcosmic Orbit pathway during sexual intercourse. With practice, singles and couples can learn to increase and intensify sexual pleasure. The collected and transformed sexual energy is an important alchemical catalyst to be used in the higher meditations.

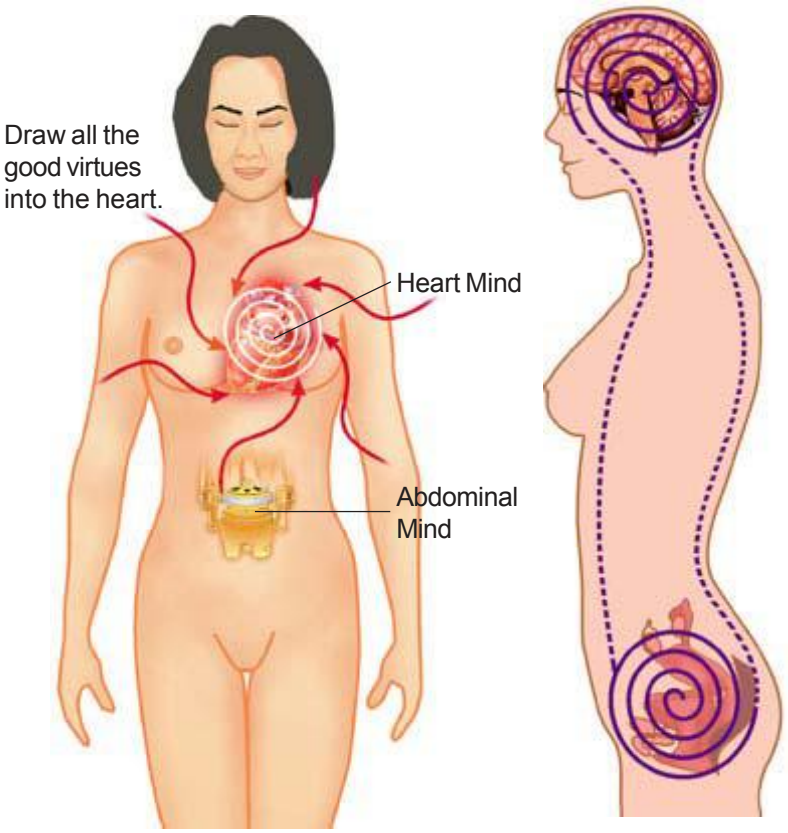


Fig. 1.6 *Conserving, recycling and transforming the energy.*

Once you have an abundance of sexual energy, you can connect to the unlimited Cosmic Orgasm experienced every moment by your Higher Self, which is the most basic energy in every cell of your body.

Managing the Life-Force

In the practices of Iron Shirt Chi Kung and Tai Chi Chi Kung, one learns to align the skeletal structure with gravity to allow a smooth, strong flow of energy. With strong fasciae, tendons, and bone marrow and good mechanical structure, we can manage our life-force more efficiently. The body also gains a sense of being rooted deeply in the earth, so one can tap into the Mother Earth healing force.

Cosmic Nutrition

The Taoist approach to diet is based on determining the body's needs and then fulfilling them according to the five elements of nature, which support the five major organs of the body. This system reveals and strengthens any weak organs by balancing one's food intake to enhance any deficient elements. It does not condemn most foods that people enjoy (including sweets), but instead creates a better program in which these foods can support the body's internal balance rather than disrupt it. Choosing and combining foods in this way can help us avoid the cravings we sometimes fall prey to.

Developing the Energy Body: Our Vehicle to Travel in Inner and Outer Space

The next level of the Universal Tao system consists of the *Fusion of Five Elements, Cosmic Fusion,* and *Fusion of the Psychic Channels*. These practices build and enhance the basic Universal Tao exercises. They use the extra energy saved through the foundation practices, including recycled negative energies, to build a strong Energy Body that will not dissipate. Developing this Energy Body awakens a part of oneself that perceives and acts free of environmental, educational and karmic conditioning. Once the Energy Body is strong, it becomes a vehicle (like the space shuttle) to help the untrained soul and spirit for the long journey home, back to the Wu Chi.

Fig. 1.7 *Fusion is the First Step in achieving Union of our Three Bodies.*

If we do not have a chance to practice awakening or to give birth to the soul and immortal spirit during life, the primordial light will awaken us at the moment of death. Unfortunately, we may be too untrained and inexperienced to follow this light. To prepare for the journey, the Energy Body is a vehicle of great importance. We can train and educate the Energy Body so it can help the untrained soul and spirit recognize and follow the primordial light back to our original source.

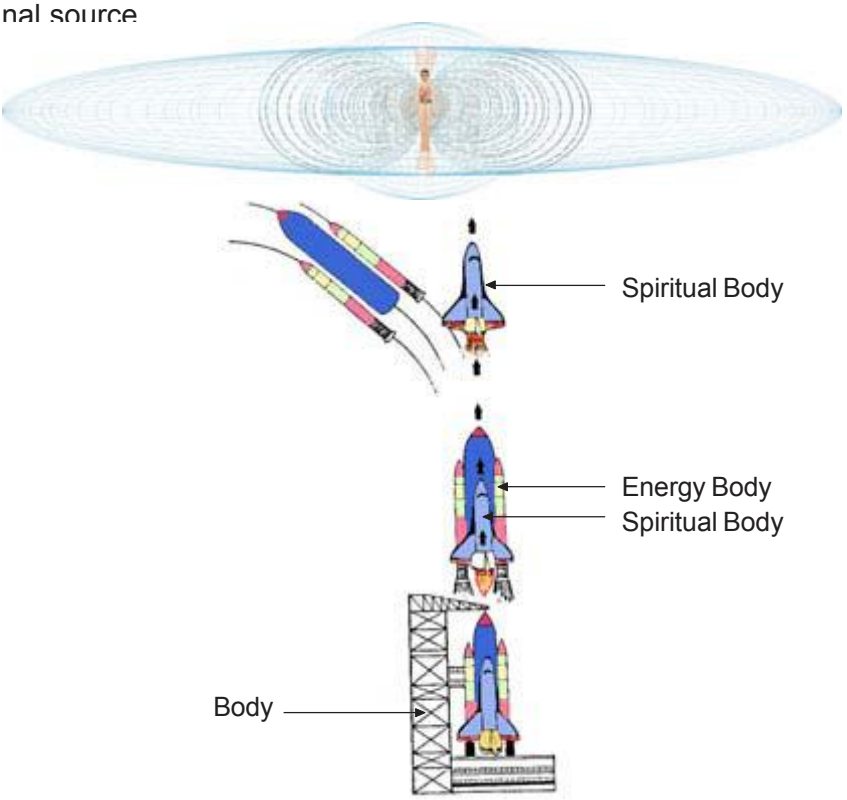


Fig. 1.8 *Energy Body blasting off the Spiritual Body and enters outer space.*

When we are ready to give birth to the real soul, the Energy Body will act like a booster rocket to help boost the soul into its higher dimension of the immortal spirit. At the highest level, all three of these bodies merge into one.

Each level of development gives us a chance to go further in the journey back to the Wu Chi. Taoist methods of absorbing stellar energies help rejuvenate the physical body and strengthen the soul and spirit bodies for their inter-dimensional travels.

Recycling our Negative Emotions

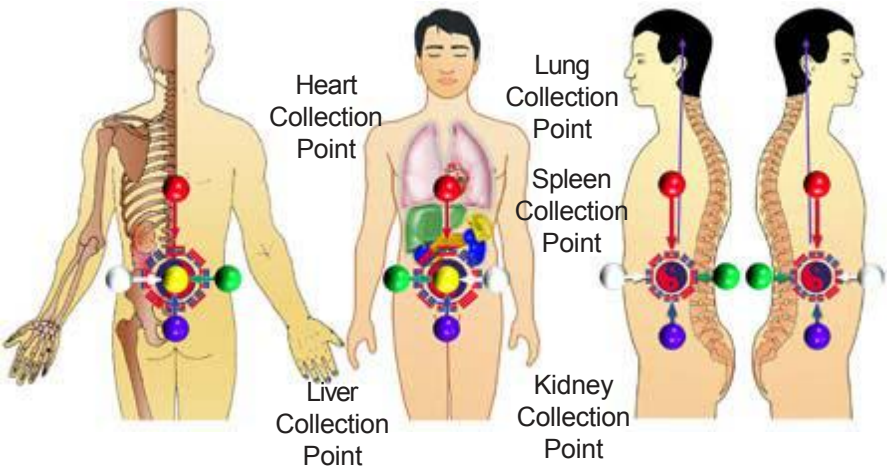


Fig. 1.9 *There are Five Major Collection Points of the Emotions reflected on all four sides of the body.*

Our emotional life, filled with constant vicissitudes, drains our vital energy. Through the Fusion meditations, one learns to transform the sick or negative energy that has been locked up in the vital organs. Taoists understand morality and good deeds as the most direct path to self-healing and balance. To be good to others is good for oneself as well. All the good energies we create are stored in the Energy Body like deposits in a bank account. By helping others and giving them love, kindness and gentleness, we receive positive energy in return. When we open our hearts, we are filled with love, joy and happiness.

From Taoist experience, we know that when we leave this world we can go directly to heaven, depending on how much energy we have been able to transform into the Energy Body prior to death. Just like money in the bank, the more we transform our physical being to our spiritual being, the more we have in heaven. The more good we do here, the more positive energy we have up there.

Forming the Spirit Body:
Planting the Seed of Immortality – Lesser Kan & Li

The Inner Alchemy meditation of the Lesser Enlightenment of Kan and Li (water and fire, multi-orgasmic sexual energy and compassion) reunites the male and female within each of us. It involves the practice of self-intercourse, which by internal sexual coupling of the energies enables one to give birth to the soul body. The soul body then acts as a "baby sitter" to help nurture the spirit body. The soul is the seed, but it can also be matured into the immortal body if one has not had the chance to raise the spirit body in this life. Practitioners of Taoist Alchemy believe that if we give birth to the spirit body and develop the immortal body in this life, we can overcome the cycle of reincarnation.

Fig. 1.10 *Creating the Energy Body in preparation for the Spiritual Body.*

Once the "baby sitter" or soul body is formed, it is in the Yin stage, or infancy (soul embryo). We need to feed, raise, educate and train the young soul to become fully grown.

Once the soul body is developed, we can give birth to the spirit body. To cultivate the young spirit body until it is fully mature can take 14 to 18 years. We also use the energies of nature (trees, sun, moon and stars); virtually all sensory experiences of a positive nature become nourishment for the growth of the spirit within the physical body.

Many masters who attained this level of the immortal body were able to transform the material into the immaterial and transfer it into the spirit body. At the moment of death, they were able to transfer their consciousness, their energy and the physical elements of their bodies up with them into the spirit body, although even this level is not yet the true immortal body. In this process their physical bodies actually shrank in size; they may have weighed two-thirds of their usual weight after their physical deaths occurred. This meant they had successfully transformed much of their material being into an immaterial state while retaining full consciousness.

Cultivating the Yang Stage of the Immortal Body: Marrying the Light - Greater Kan and Li

Fig. 1.11 *Greater Kan and Li*

To merge with the light of the Tao, we must awaken and nourish the awareness that we are in truth children of the light. Once we have fully grown the spirit body, it will be the same frequency as the light of the Tao and can become one with that light. Other traditions refer to this light by such names as the Holy Spirit or Great Spirit; we also refer to it as the “outer light.”

The Greater Kan and Li meditation teaches us how to recognize the inner light of our own spirits and shows us how to merge with or “marry” it to the outer light. Once we connect with and “marry

the light," we give birth to the second stage of the true immortal spirit. Taoists refer to this as the Yang body. One continues to transform the physical body energy to feed the immortal spirit so it can mature.

At this stage of practice, we learn to digest increasingly higher-grade energies of the Higher Self and Universal Forces from the sun, moon, planets, stars and galaxies, and from the mind of the Tao itself. An awakening to that which is eternal and enduring occurs through this practice. Cognizant of our true nature as spirits, we experience the ability to leave the physical body and travel in the immortal spirit body, which leads to experience of the inner worlds of spirit. Fear of death is vanquished as we become familiar with life beyond physicality.

Greatest Enlightenment of Kan and Li

At this level one transfers all physical essence into the immortal body. When all the body's material elements are transformed into subtle Chi, what remains is known as the "rainbow body." When a master of this level leaves this world, there is nothing left of the physical body but nails and hair. Death is still necessary to speed up the process.

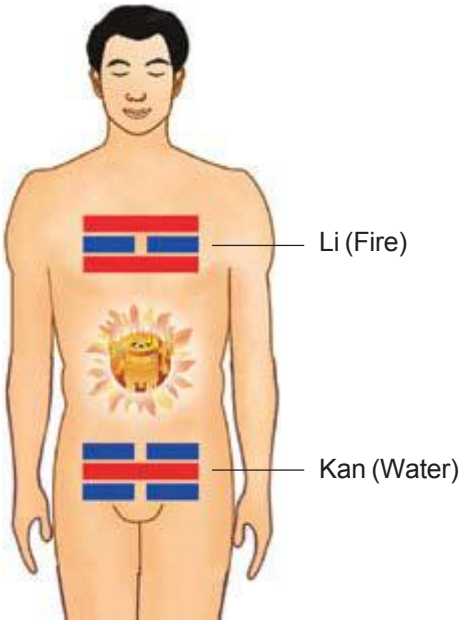


Fig. 1.12 *Union of Fire and Water*

Sealing of the Five Senses, Congress of Heaven and Earth, Reunion of Heaven and Man

At this level death is transcended entirely. One can simply transform the physical body into the immortal body and leave this world or return to it at will. This is the state of complete physical immortality. It takes from eighty to a few hundred years to complete these practices and transform all the material elements of our body into the immaterial. The final goal of ascending to heaven in broad daylight is reached.

There are records in Chinese history of many thousands of Taoist immortals who reached the level of daylight ascension in the presence of many witnesses. In the Bible, Elijah and Moses also accomplished this feat. In the final stage of this practice, the adept can unite the immortal spirit body, the Energy Body, and the physical body, or separate them at will. It is then that the human being knows full and complete freedom as an immortal, where no world is a boundary.

Chapter 2
Taoist Cosmology

Ancient Taoism is rooted in deep observation of naturally occurring Universal processes and their effects upon human beings. Newtonian physics of the West understands these processes as the mechanics of cause and effect. Taoism understands them as the interactions of a vast sea of energy that is constantly creating and recreating the universe in infinite ways. Most religions and esoteric systems study these processes (the ways of God) through scriptures and practices based upon the immaterial. Taoism studies both the material and immaterial aspects of nature and the Universe in the belief that the immaterial is both the source for the material and a product of it. In other words, physical and non-physical processes are sources for each other.

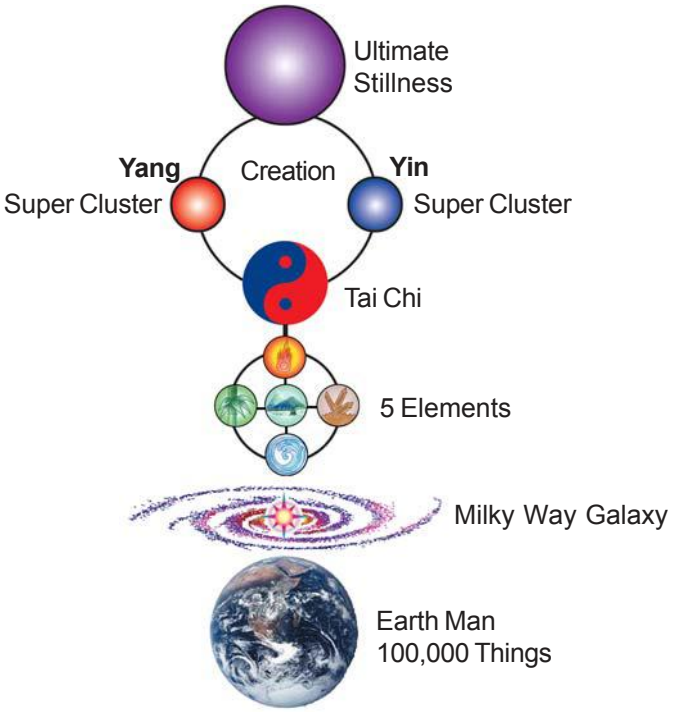


Fig. 2.1 *Taoist Cosmology*

The Void: Our Original Source

Through observing nature and the effects of energy within the human body, the ancient Taoists were able to trace the universal energy back to its point of origin. Upon developing an empirical approach with which to contact this source of observable phenomena, they established the concept of the primordial void as the point of departure for all creation. This void was given the name Wu Chi, which is depicted as an empty circle in traditional Taoist art because it is beyond human description. For energy to begin generating the effects and forms of nature and the universe, something had to stir within the Wu Chi. This first stirring created the division between the material and the immaterial as all the processes of the universe began at this time.

Yin and Yang

Fig. 2.2 *Duality of Yin and Yang*

Taoists refer to the first observable variations of the Universal Force, which emanates from the Wu Chi, as Yin and Yang. These two qualities of this force can be understood as the positive and negative poles of the primordial energy. Yin and Yang are inseparable tendencies of all energy, and it is impossible to have one without the other. Their interactions are the root of all universal action; hence, the polarities of Yin and Yang are an intrinsic factor of all creation.

The theory of Yin and Yang is one of the most simple and sublime symbols of the way nature and the Universe interact. The circle that encompasses the symbol is representative of the Tao, the undifferentiated whole, the Universe, ultimate reality. Yin and Yang are terms that shed light on the process of the Tao. Yin describes the feminine, the contracting, the dark, deep side of nature and Yang describes the masculine, projective, electric, light, surface

side of nature. Yin and Yang are not two separate states, but an interwoven aspect of one. Just as day cannot exist without night, or male without female, Yin and Yang are opposite co-existing elements of the same Universal substance. They are an interwoven and continuous processes of decaying and becoming. Yin and Yang describe the process of a changing dynamic picture of reality.

Five Major Forces of the Universe

The Taoists observed that Yin and Yang interactions follow five basic patterns which came to be known as the Five Tendencies or Five Processes of Energy. (Such interactions have been misleadingly translated as Five Elements, thereby confusing the process with the actual physical elements.) In Taoism the physical elements found in nature symbolically express the Five Tendencies of Energy in motion. Thus fire represents energy rising; water represents energy sinking; wood represents energy expanding; metal represents energy solidifying; and earth represents stable or centered energy. Each of the five elemental tendencies of energy are dependent upon the interactions of Yin and Yang emanating from the primordial void.

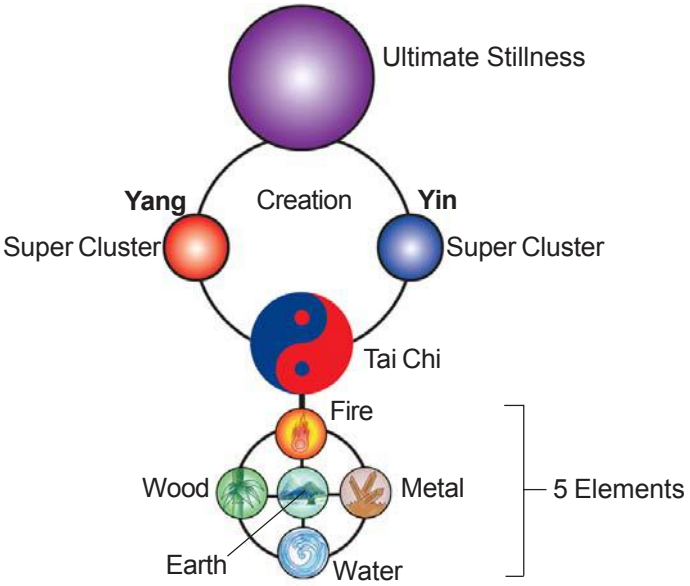


Fig. 2.3 *Oneness, Duality and the Five Elements*

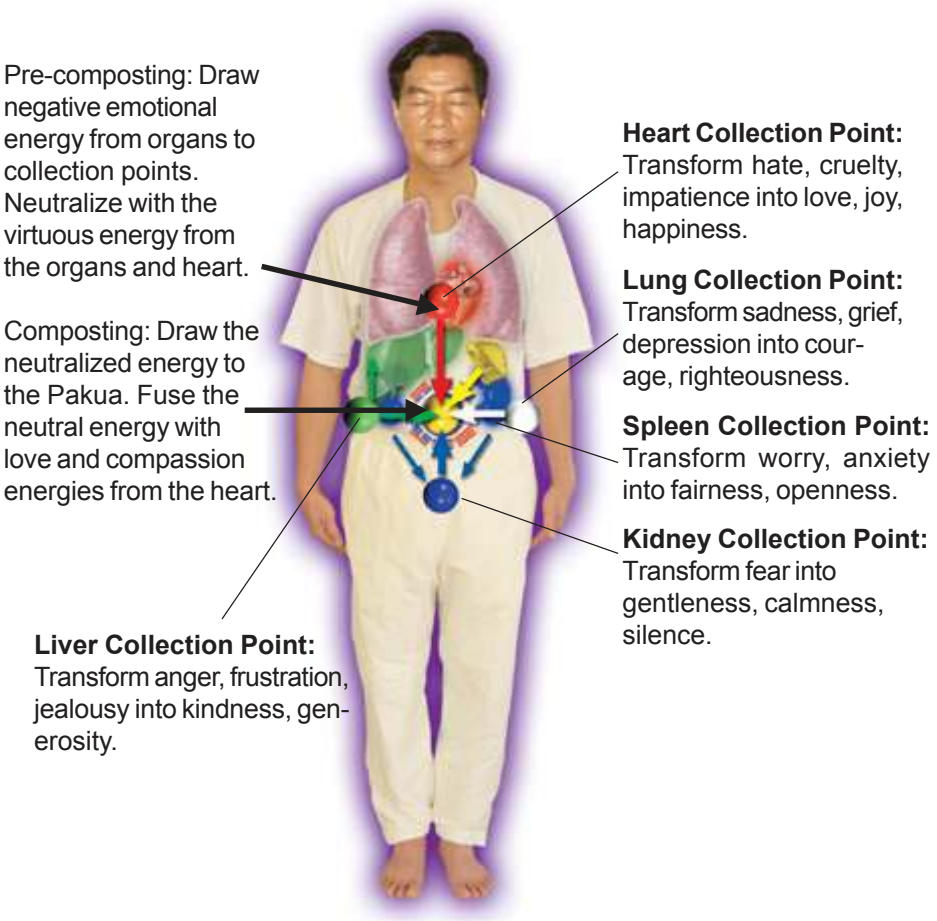


Fig. 2.4 *Transform Excess Negative Energy into Positive Energy*

The Five Elemental Forces are expressions of energy that can be observed in nature and throughout the universe. In space they influence the motions of all stars, planets and cosmic phenomena. In nature they promote interactions between the five elements of fire, water, wood, metal and earth. Within the human body they affect the five major organs of the heart, kidneys, liver, lungs and spleen. Just as western science understands the atoms and sub-atomic particles to be the fundamental units of all matter, the Five Elemental Forces are understood to be the essence of all processes. The forces that influence the cosmos are identical to those which affect nature and our bodies.

Eight Forces

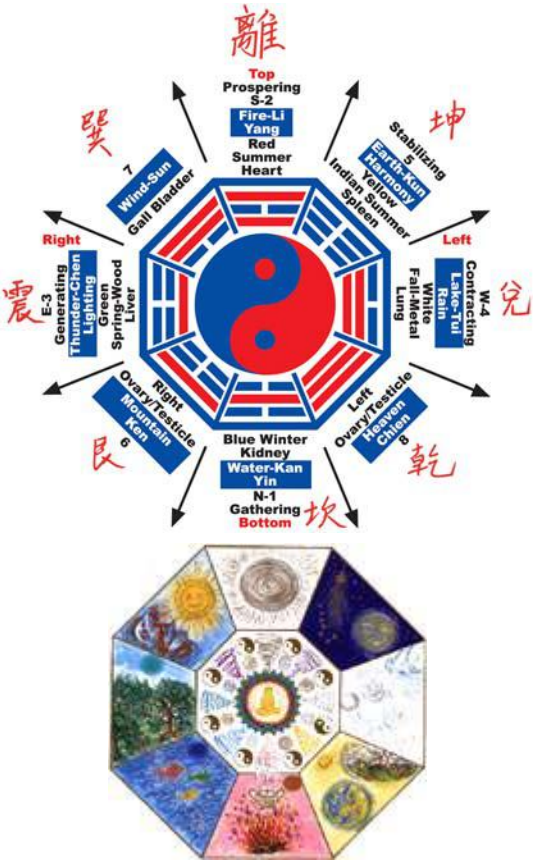


Fig. 2.5 *Eight Forces and Directions*

The Eight Forces represent a more detailed aspect of the forces of nature and the Universe. They are represented by the symbol of the pakua and the eight trigrams. In Fusion of the Five Elements, the pakua was introduced as a way to direct and gather the Chi into a pearl at the lower abdomen. In Cosmic Fusion, the pakuas are used in greater detail to create a stronger connection with the forces of nature and draw much more energy into the pearl.

Using the pakua in the meditation practice is a way to focus energy. The pakua creates a vortex that enables the practitioner to collect, gather and condense Chi. This vortex of energy is used to not only create a strong connection within ourselves, but a harmonious relationship with all the forces of nature.

Return to the Wu Chi

The Taoists realized that we are connected to the stars through our bodies as the human form is a product of stellar energy and matter. With the basic understanding that man, nature and the universe are expressions of primordial energy (or the Wu Chi), the Taoists devised methods to tap the energy of the five elements. This was done to enhance the processes of the Five Elemental Forces within our bodies, which can promote health, refine our spirits, and eventually reunite us with our source, the Wu Chi. Deep within our subconscious minds are memories and desires for the unity and bliss which preceded the dense vibrations of our gross physical state. So the ultimate purpose of Taoist practice is to return to our original state, the Wu Chi.

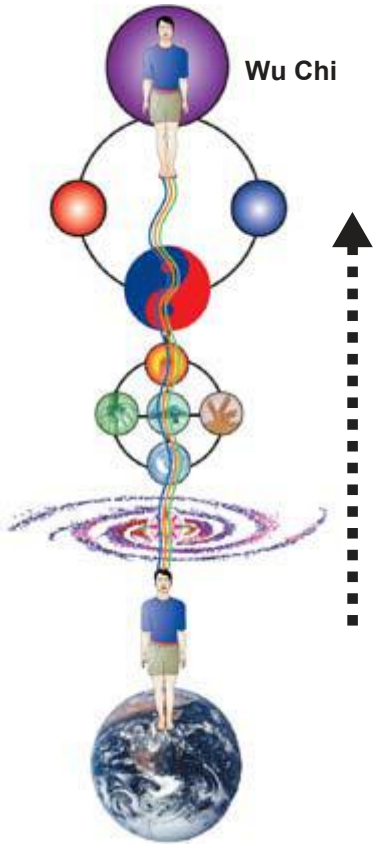


Fig. 2.6 *Return to the Oneness (Wu Chi)*

In the advanced disciplines of the Universal Tao students begin to work more consciously with the Five Elemental Forces emanating from the cosmos. Advanced practice involves collecting and absorbing energy from different sources in the universe while traveling in the energy and spirit bodies. Taoists move closer to the original source through the vastness of space in the same way a traveler moves from station to station in a train. Generations of Taoist masters have refined and mapped the simplest and safest approaches to follow. Because it is impossible to realize the Wu-Chi in one step, the journey is divided into several stages.

Returning to the Wu Chi: First Three Steps

1. The first step of stage one is to upgrade and maintain your physical health while stabilizing your financial and social conditions. Your body is a vehicle for processing energy, and the healthier you are, the more energy it will process at a faster rate. Your health and processing capabilities will enhance greatly through the Microcosmic Orbit, Six Healing Sounds, Inner Smile, Healing Love and Iron Shirt Chi Kung practices. Your finances and social interactions should be stable so that you can create space in your life for these disciplines.
2. Next you will learn how to use accumulated energies for traveling beyond this earthly plane to the moon, sun and planets. This is similar to the way a space shuttle uses a booster rocket to push it beyond the earth's gravitational field. In Taoism the Microcosmic Orbit and Fusion practices create the Energy Body to help boost the immortal body (spiritual body) out of this world. The healthier you are internally, the more power you will be able to generate to leave the confines of the physical body. When you can travel out of this reality and back, you will gain the raw materials necessary to build more powerful energy and spirit bodies for longer and farther journeys.
3. The higher practices involve traveling to and from the stars and constellations particularly the North Star and Big Dipper using the energy and spirit bodies. The North Star is a stable and constant point in the sky. For Taoist practitioners, using the North Star was a way to find direction in the Universe. The North Star is the gate of heaven. In the higher practices, the energy is drawn into the body to create that connection between the physical and the Universal bodies.

The human body is a powerful transformer. The sexual energy is the body's most powerful source of fuel for journeys to the higher planes. This is why the Healing Love practice is so important for spiritual development. The practice of Iron Shirt Chi Kung also helps the physical body absorb cosmic energy through the skin and bones to be transformed and refined into more fuel. Fusion of the Five Elements provides another mode of energy refinement through the transformation of negative energies into positive life-force, which is lighter and healthier for the body. All of these internal methods help one develop the means of traveling beyond this world. Their ultimate purpose (after rejuvenating the body) is to accumulate the raw materials for the construction of a stronger and more powerful vehicle for the return to the Wu Chi.

Many other systems have their own means of returning to the source. Monks, nuns and priests emphasize detachment from the world and non-involvement in worldly affairs. They have no relationships with other people and no sex, which leaves them with abundant sexual energy to be transformed and used for higher spiritual work. Such spiritually inclined people make the best and most use of sexual energy. In general, when normal people accumulate sexual energy to the same degree as monks, nuns or priests, they have no way to control it, and internal imbalances are created until it is released. The Universal Tao practices can give anyone the ability to use this energy to improve the body and spirit.

One should not believe in the Taoist teachings without experiencing the practice and its results first hand. This involves learning about the human body, the Universal forces which affect it, and the inherent desire we all have to return to our source. Taoism offers a clear, direct path to the Wu Chi, whereas many other systems provide only dogma and restrictions that can hinder spiritual growth. The Tao is not an escapist philosophy, however, as there is no need to remove yourself from society or restrict your relationships or sexual love. You can continue to live normally as you accumulate energies that will gradually improve your health while providing raw materials for the highest spiritual growth.

Chapter 3
Goals of the Fusion Practice

The Taoist study of **Inner Alchemy** was introduced in Fusion of the Five Elements. The Taoists developed the Fusion of the Five Elements practice to develop connections between and gain control of the inner and outer Universes.

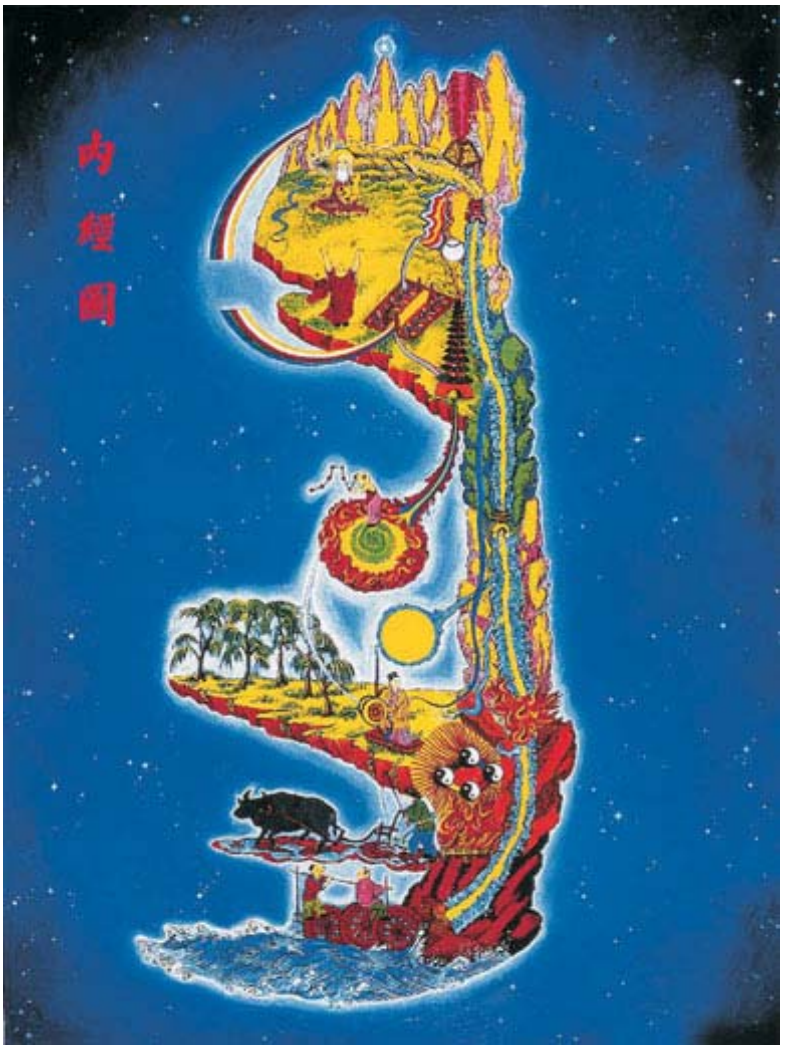


Fig. 3.1 *Taoist Inner Alchemy*

They understood that virtually everything that exists in the Universe can be broken down into the Five Elements. The Fusion practice begins by understanding the dynamics of the Universe, the planet Earth, and the human body with respect to their relationships to these Five Elements.

Fig. 3.2 *Five Elements, the Planets and the Cosmos*

The knowledge of Inner Alchemy is a necessary step in becoming connected to the outer Universe, from which an unlimited supply of powerful energy is available to be used for an individual's physical and spiritual benefit.

The five basic formulas of Fusion I, II, III can be likened to wiring blueprints for making the subtle energy the vehicle, the spaceship connections that link vital organs, glands and senses so that their respective energies can be fused and balanced in the collection point and the pakua. The formulas lead the student systematically through the process of creating four pakuas and an energy pearl.

Five Element Organ Correspondences					
Yin Organs	Liver	Heart	Spleen	Lungs	Kidneys
Yang Organs	Gall Bladder	Small Intestine	Stomach, Pancreas	Large Intestine	Bladder
Openings	Eyes	Tongue	Mouth, Lips	Nose	Ears
Positive Emotions	Kindness Generosity	Love, Joy	Fairness, Openness	Righteousness, Courage	Gentleness
Negative Emotions	Anger Envy Frustration	Hate, Impatience	Worry, Anxiety	Sadness, Depression	Fear, Stress
Transform Pure Organ Energy into a Virgin Child Dressed in	Green	Red	Yellow	White	Blue
Transform Pure Child Energy into an Animal	Green Dragon	Pheasant, Red Bird	Phoenix, Yellow on Red	White Tiger	Blue Deer
Earth Force takes the form of	Green Dragon	Pheasant, Red Bird	Phoenix, Yellow on Red	White Tiger	Black Tortoise
Directions	East	South	Center	West	North
Planets	Jupiter	Mars	Saturn	Venus	Mercury
Universal Energy Force	Generating	Prospering	Stabilizing	Contracting	Gathering

Fig. 3.3 *Five Element Organ Energy Chart*

Energy drawn from the organs and senses into the collection point and transformed negative emotions are fused and condensed into a pearl through the pakuas. When the resulting pearl, with its refined, balanced, neutralized energy is circulated through the Microcosmic Orbit, the body absorbs this enhanced life-force. The pearl is then used to form the Energy Body.

Cosmic Fusion builds on the foundation of internal alchemy laid in Fusion of the Five Elements. The student is encouraged to take this opportunity to review the basic Fusion practice.

Once the negative emotions have been drawn out and transformed, the pearl is moved through the creation cycle, nurturing the virtues. These qualities are cultivated, blended and condensed into the pearl, forming the energy of compassion —the essence of the senses, glands, organs and the mind.

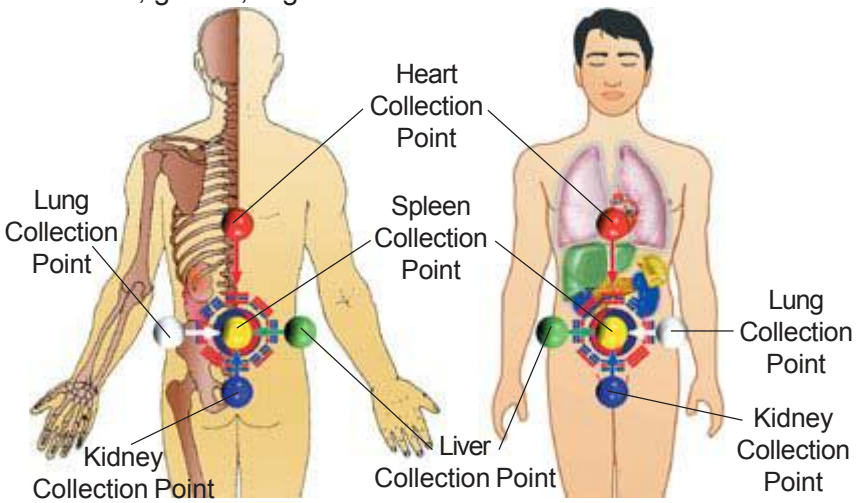


Fig. 3.4 *Front and Back Collection Points*

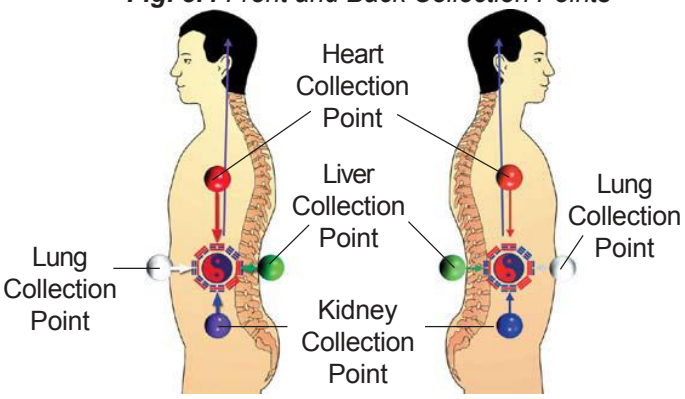


Fig. 3.5 *Left and Right Collection Points*

This highly refined pearl can now be used to open and clear four of the eight specific energy channels in the subtle body: the Three Thrusting Channels used for cleansing and protection, and the protective belt route that surrounds the Thrusting Channels.

Inner Universe reflects the Outer

The Fusion practice offers a practical way to strengthen the conscious connection with the outer Universe. During the practice of Fusion, the essence of life-force energy found in the organs, glands and senses is transformed, purified, condensed and combined with the Universal, Cosmic Particles and Earth Forces in order to achieve internal balance. This transformation of quality energy into a harmonious whole can effect positive changes in the human body. Controlling this energy enables each individual to attain balance and harmony of these energies on physical, emotional and spiritual levels. Because the inner Universe is a reflection of the outer one, the balance and harmony attained in the inner Universe enables the individual to attain balance and harmony with the outer Universe. Fusion of the Five Elements, the first in a series of the Taoist practice of Inner Alchemy, focuses on the interaction and fusion of all five elements and their correspondences. To understand this interaction, especially with respect to the organs, glands and senses of the human body, it helps to be aware of one of the Taoist laws of the Universe: *Nothing remains the same; everything changes because the Five Energies of Nature constantly interact and change*. This acknowledgement that change is constant contrasts sharply with the Western framework. Under this assumption, each individual's disposition and health is influenced by the balance within him or her of these five energies, a balance affected by the ever-changing conditions of the Universe.

The outer Universe is comprised of Universal Force, Cosmic Particle Force and Earth Force from which all things emerged and whose three combined forces sustain all existence. The concept of Inner Alchemy is grounded in the Taoist belief that the inner Universe is a reflection of the outer Universe. There are connections that can be made between the inner and outer Universe through which energy, recognized and experienced in the inner Universe as Chi, or life-force, can be greatly increased and enhanced by the immense power of the outer Universe.

Overview of the Cosmic Fusion
Universal Tao divides Fusion into Three Parts

Fusion of the Five Elements

First Part

Fusion of the Five Elements makes use of pakuas and energy collection points to balance, connect and draw out negative emotional energies found in the organs. These energies, along with their corresponding glands and senses energies, are then fused and transformed into pure, life-force energy.

The purity of this energy has an adhering and magnetizing quality enabling it to condense into a ball of refined energy which is called the pearl.

The pearl is then used to connect to the Universal, Cosmic Particle and Earth Forces whose energies become part of the pearl. A soul or Energy Body is formed from the pearl, enabling the individual to go beyond connecting with the forces of the universe on a purely physical level. Later the pearl returns to the organs and glands to enhance them and provides a protection to the physical and soul body.

Fig. 3.6 *Forming the Compassion Heart.*

Second Part

Cosmic Fusion focuses on using the pearl to grow or intensify the energy of good virtue. It makes use of the interaction of the elements described as the Creation Cycle of the Five Elements Theory to circulate positive Chi or virtuous energy through the major organs. All the energy gathered during this cycle is combined to form a beautiful pearl of Compassion energy. This pearl is then used to open and cleanse specific channels that pass through the physical body into the Energy Body.

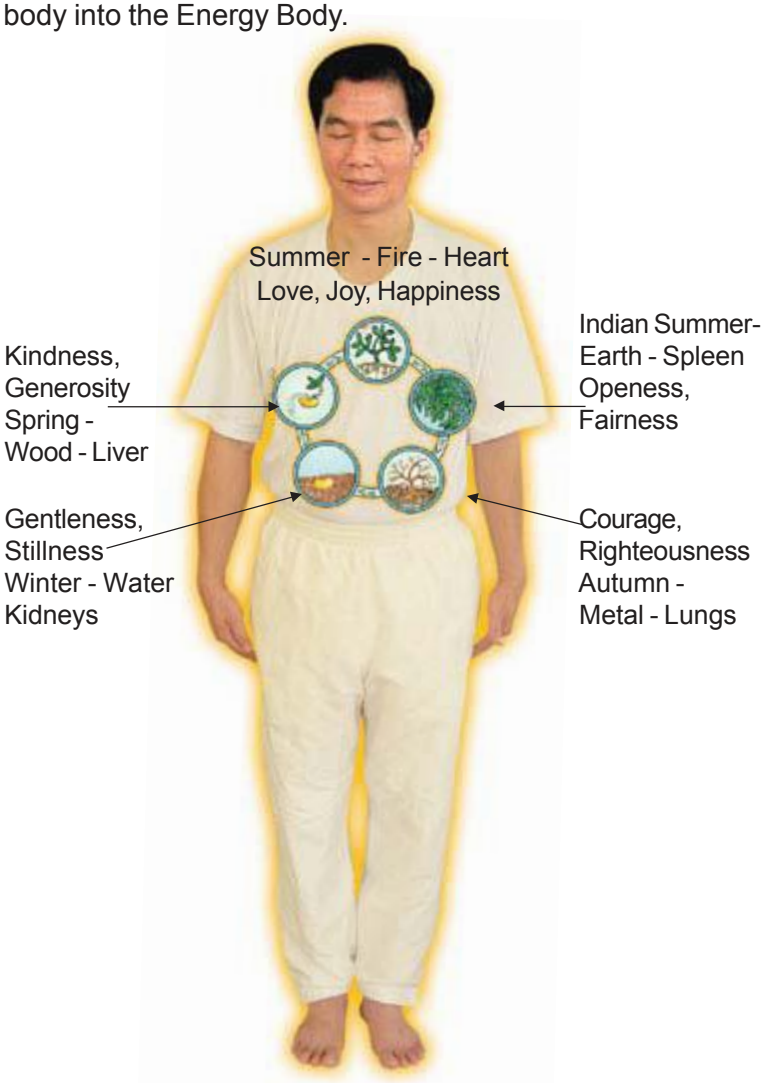


Fig. 3.7 *Creation Cycle in Nature and Human Body*

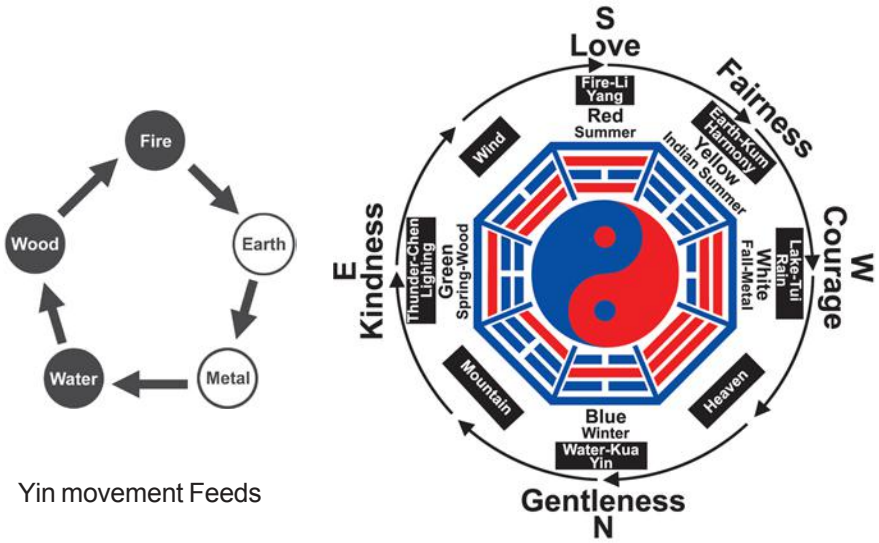


Fig. 3.8 *Creation Circle*

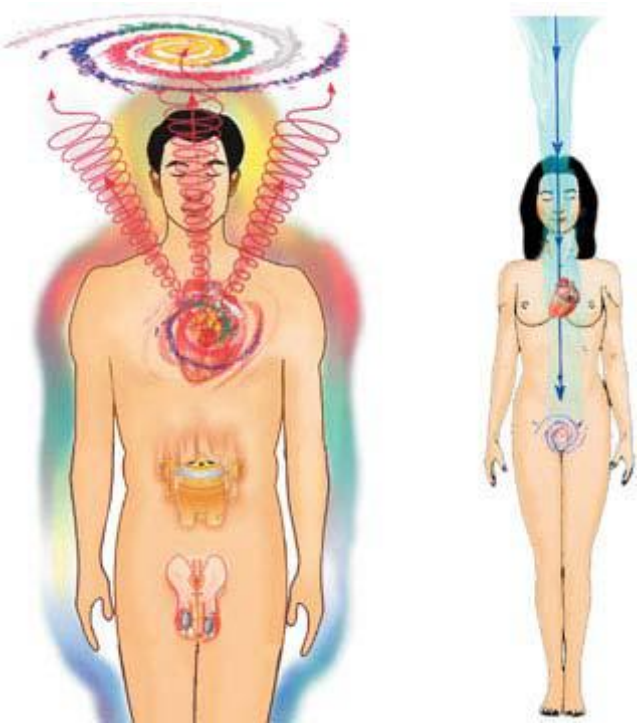


Fig. 3.9 *Forming the Cosmic Compassion of the Heart*

Third Part

The energy of the positive emotions of all the organs is absorbed into the pearl and then circulated in four of the eight special channels: the Microcosmic Orbit (Governor and Functional Channels), the Thrusting Routes, and the Belt Routes. The Thrusting Routes run through the center of the body, linking the "chakra" centers. The Belt Routes spiral around the body strengthening the aura and providing a form of psychic self-defense.

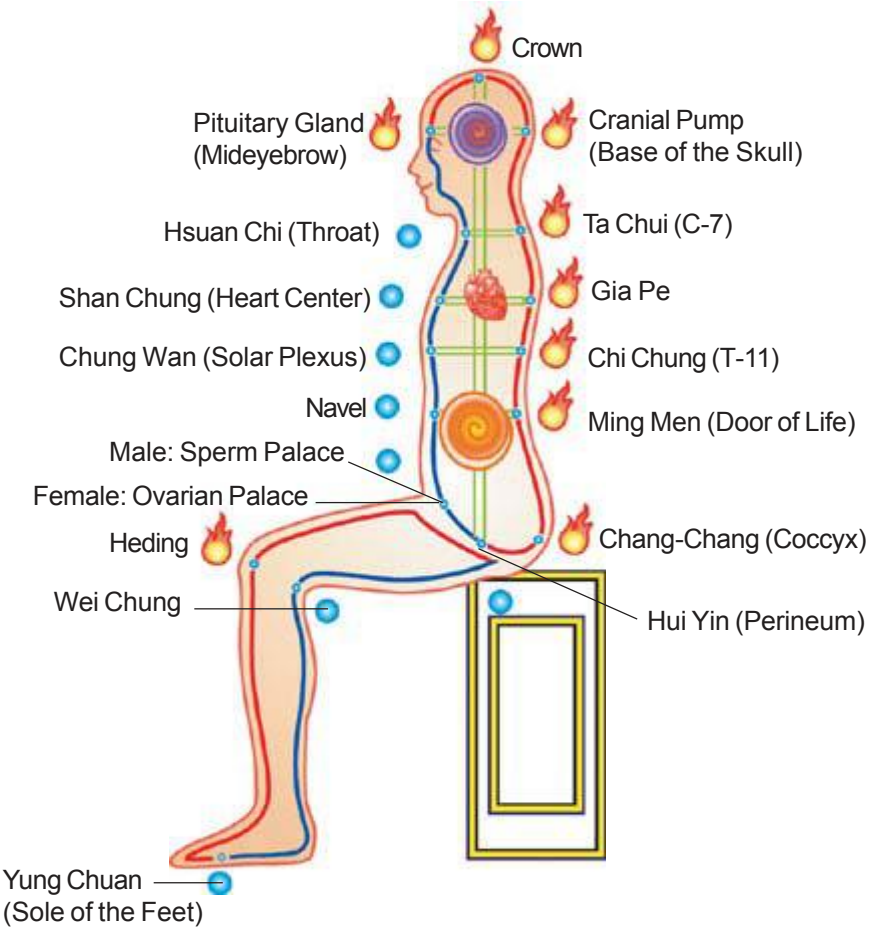


Fig. 3.10 *Cosmic Orbit with Ancient Chinese Points*

The three Thrusting Channels, sometimes referred to as Thrusting Routes and the Belt Channels or Belt Routes, opened during Cosmic Fusion, permit a freer flow of energy throughout the body.

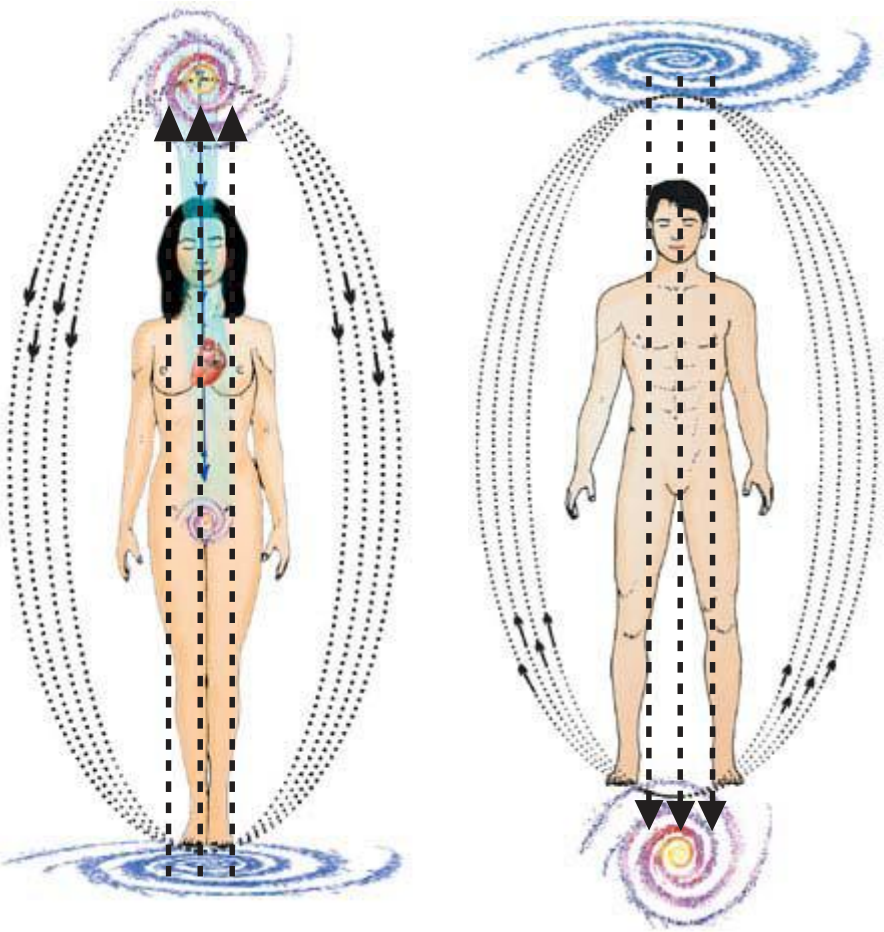
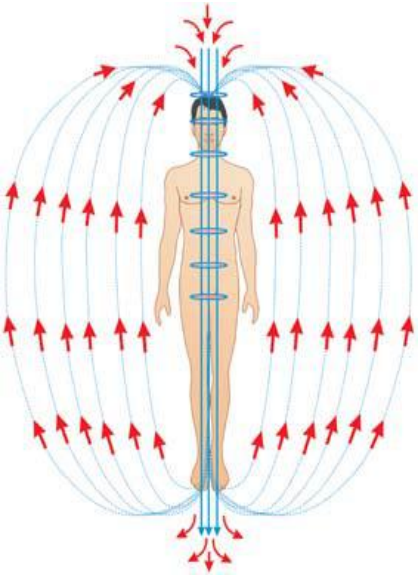


Fig. 3.11 *Cosmic Thrusting Channels Women and Men*

The Thrusting Channels are opened first. Their primary function is to cleanse specific energy pathways in the body, thereby opening them up for the energy to flow freely. The Belt Channel surrounds the physical body and the internal Thrusting Channels. Both channels help to build a denser body and provide protection to the body, but they have another function.

Use eyes to help spiral the Belt Channels.



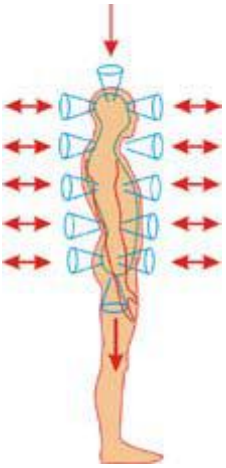


Fig. 3.12 *Belt Channels and Thrusting Channels*

With the additional energy generated during the practice of Cosmic Fusion, you will have enough energy to create a new Energy Body above the physical body. Another important aspect of the Fusion of the Five Elements practice is learning how to temporarily separate the Energy Body and the Physical Body. In life, our three bodies, the Physical Body, Energy Body, and Spirit Body (consciousness) all overlap and are generally inseparable. At death, the physical body is no longer a fit vehicle for holding the material five elements together and Chi and consciousness are forced to leave. To avoid the traumatic disorientation and confusion that can occur at death when the energetic essence and consciousness are involuntarily thrust out of the physical body into unknown territory, we can familiarize ourselves with the "out-of-body realm" by temporarily separating the Energy Body and Spirit Body from the Physical Body, as a "dress rehearsal" for death.

Consciousness always requires some sort of vehicle to manifest. Its gross vehicle is the physical body. Its more subtle vehicle is the Energy Body (sometimes referred to as the "subtle" body). We emphasized earlier that the virtues are the true energetic essence of our organs. Although we may identify ourselves more with our physical body than anything else in the world, it is our energetic essence, not our physical body, that survives after death and has the capacity to be immortal.

The Thrusting Channels and Belt Channels can be extended up into this Energy Body and Spirit Body. In this way they serve as connecting links between the organs and glands of the Physical Body and the transferred consciousness that is the Energy Body. Eventually, the channels serve as conduits through which the Spirit Body is boosted to the Mid-Plane. These advanced practices are called the meditations of Kan and Li.

If the Energy Body is thought of as a booster rocket, then the Spirit Body is the shuttle. Once the Spirit Body is boosted through the open channels into the Mid-Plane, it collects a higher quality of energy. The Spirit Body then returns with the higher quality energy to the Physical Body. In the next effort this energy is used to construct a stronger, more intense Energy Body that can boost the Spirit Body to a higher Mid-Plane level. The cycle continues bringing the Spirit Body to higher and higher levels, while increasing the life-force energy for use by the Physical, Energy and Spirit Bodies.

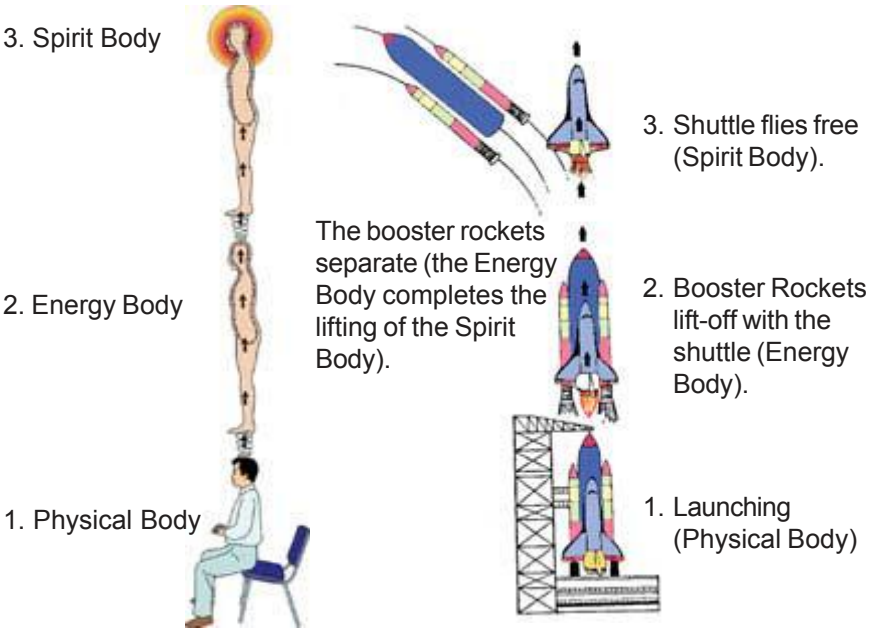


Fig. 3.13 *Energy, Physical and Spiritual Bodies*

By regularly turning the awareness inward in the Fusion of the Five Elements practice, we gradually come to know our energetic essences as well as we know our face, our arms and our legs. We learn to distill these essences into a pearl, as a sort of "space capsule" to carry our essential energy and consciousness out of the physical body. With regular practice, Taoists who follow the path of Inner Alchemy learn to move their Energy Body and consciousness in and out of their physical body as easily as one might walk from one room into another.

Chapter 4
Energetic Preparations for Meditation Practice

Meditation practices are enhanced by developing one's sensitivity to subtle energy and by exercising to improve postural alignment, increase flexibility of the spine and deepen relaxation of the physical body. The next sections present a series of suggested exercises to help the student meet these goals.

Chi has many sensations. Some of the most common are tingling, heat, expansion, an electrical sensation (like the feeling of static electricity), pulsation or effervescence. This is not the actual Chi itself, but the signs of increasing Chi in a particular area. Chi itself is more mysterious, subtle beyond definition. For more details in the practices of Spinal Cord Breathing, Rocking the Spine and the Inner Smile to relax the whole body check with the book by Mantak Chia "*Awaken Healing Light*".

Preparing for the Fusion Meditations

Prepare the Environment

Find a quiet place to meditate where there are no distractions. Some places have naturally peaceful Chi: mountains, forests, caves, gardens, monasteries or beautifully designed meditation rooms. Once you have experienced such a place, you can just recall it. Set aside a corner of your room for your practice and recall your connection to the forces of nature.

Keep your meditation place clean and pleasant.

Avoid interruptions. Plan to meditate early in the morning before other people are awake: the body is rested, the air is fresh, and the earth itself is energized.

Late at night is also fine. Select a time that works well for you with your own rhythms and schedule.

If you allow yourself time each day to cleanse your emotional, energetic and physical bodies, you will soon reap the rewards in every area of your life.

Conserve Energy and Purify your Body with an Appropriate Diet

To clear your digestive tract, it helps to reduce the amount you eat, to eat less meat, fish and poultry and to increase the amount of fiber in your diet. Unless you are a vegetarian, it is recommended that you eat about 80 percent grains and vegetables, 10 to 15 percent fish and only 5 percent meat and chicken.

Loosen, Stretch and Warm Up the Body before Meditating

Once you have a quiet place and are ready to meditate, spend time loosening up the body, particularly the spine, before you sit down to practice.

The Universal Tao recommends doing some stretching exercises, Chi Kung and Tai Chi before you begin to meditate. These exercises are both invigorating and relaxing; they relieve muscle tensions, stimulate the blood circulation, get rid of stale air in the lungs and oxygenate the blood. As an alternative, you can take a relaxing stroll outside.

Doing some movement before entering the stillness of meditation can help you shake off the sluggishness that comes from being too sedentary and ease the tensions that might build up during a hectic day. Then when you sit down, you are ready to begin. Use the Simple Chi Kung exercises to loosen your spine and prepare the mind and body for meditation.

Wear Loose and Comfortable Clothing

The clothing you wear for meditation should be loose and comfortable. It is very important that your clothes restrict neither the Chi flow, the blood circulation, the nervous system nor the breath.

It is preferable to wear clothing of natural fibers so your body can breathe. During meditation, all the pores open wider and breathing in energy through them requires looser clothing. When you have learned to breathe through the skin, your body will need to contact more fresh air.

Establish a Stable Sitting Position

The body must be stable for the mind to be stable. It has been said, "An anxious mind cannot exist in a relaxed body." The mind and body are clearly connected and when the body and breath become peaceful, the mind easily follows.

If your posture is firm and balanced, it will be easy for you to relax, and you will already be halfway toward achieving a tranquil and focused mind. But if your posture lacks balance and stability, your muscles will soon tire and become tense, your attention will waver like a candle in the wind.

Consider seven points in preparing a good meditation posture: base, hands, spine, shoulders, chin, eyes and tongue.

1. **Base**: Your base is the foundation of a good meditation posture. To accommodate the movement of internal and external forces generated by the Taoist practices we need to stay grounded and establish a good connection with the earth's energy. The more Chi one moves through the body, the more important grounding becomes to prevent overheating of the organs and other negative side effects.

   The soles of the feet provide an ideal connection to the earth through the Yung Chuan (Bubbling Spring) points. These are specifically designed to absorb the earth's energy and conduct it up into the body. The legs also help filter the raw energy to make it more readily digestible.

   It is best to sit on a straight backed chair to practice the Fusion Meditations. Your weight should be evenly divided over four points: your two feet and the two sitting bones (the tuberosities of the ischium) *(Fig. 4.1)*. Place the feet flat on the floor the same distance apart as the hips. The calves of the legs should be vertical, like pillars. Try to have the knees and hips at the same level, or keep the knees slightly higher.

   The part of the pelvis known as the ischium is structurally designed to hold a tremendous amount of weight. Avoid leaning back and sitting on the coccyx and sacrum instead of the ischium. Honor Mother Nature's design by sitting on the ischium and not on the tailbone, which puts pressure on the sacrum, one of the major pumps in the spine for cerebrospinal fluid, a vital cushion for the nervous system. Check to make sure your weight is evenly distributed over the four points to establish a solid base to support the body during meditation.

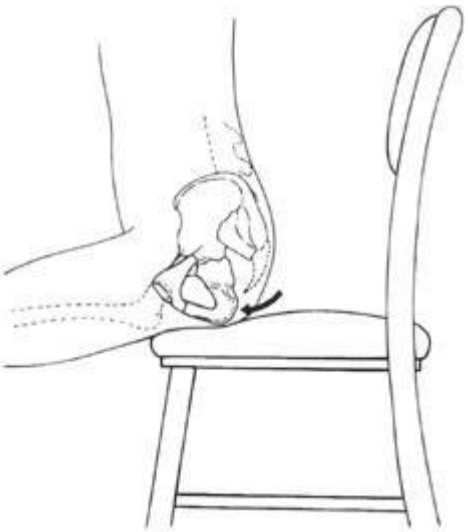


Fig. 4.1 *Sitting Bones*

2. **Hands**: Let your hands rest in your lap, clasped together with the right palm over the left palm and the right thumb and forefinger wrapped around the base of the left thumb. You may rest your hands on a pillow placed on your lap *(Fig. 4.2)*. The clasped hand position works especially well to consolidate and balance the energies generated during the meditation.

Fig. 4.2 *Using a small pillow helps release shoulder stress.*

3. **Spine**: The spine should be straight but not stiff and in good vertical alignment with gravity. You can imagine your head being pulled up by a string. As it rises, allow the spine to elongate, increasing the space between vertebrae *(Fig. 4.3)*.

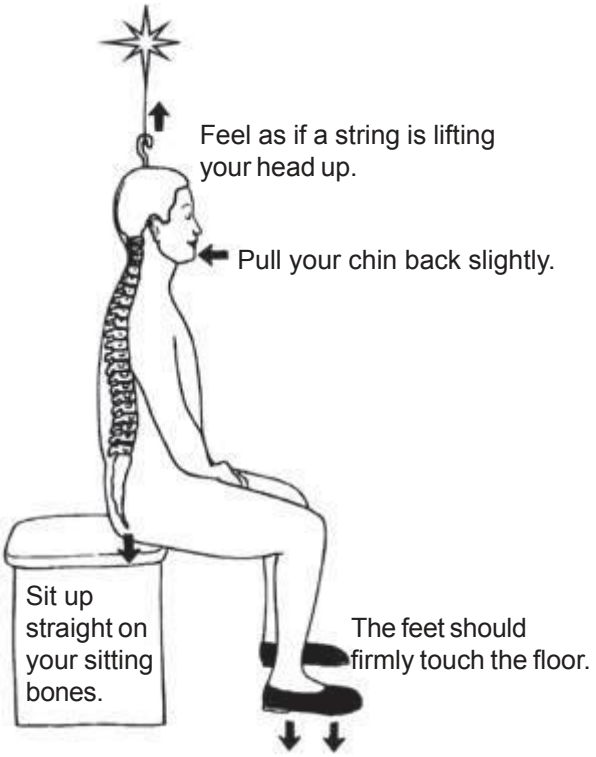


Fig. 4.3 *Correct Sitting Position*

Some people find their backs become tired during long rounds of meditation. Good alignment helps prevent this by taking some of the stress off the muscles and putting it instead on the skeletal structure where it belongs. The skeletal structure is designed to support hundreds of pounds without effort when properly aligned. Practicing Iron Shirt Chi Kung and Tai Chi is very helpful for strengthening the muscles you use in sitting and for learning the body mechanics of good alignment.

The spinal column houses many nerves, and it is also a major part of the Microcosmic Orbit pathway. If the spine feels relaxed, clear and open, the mind will feel more awake and alert too.

4. **Shoulders**: The shoulders should be relaxed and balanced over the hips. The armpits should be slightly open allowing enough space to hold a Ping Pong ball *(Fig. 4.4)*. This permits free circulation of blood and Chi into the arms and keeps the nerves in the arms from being impinged.

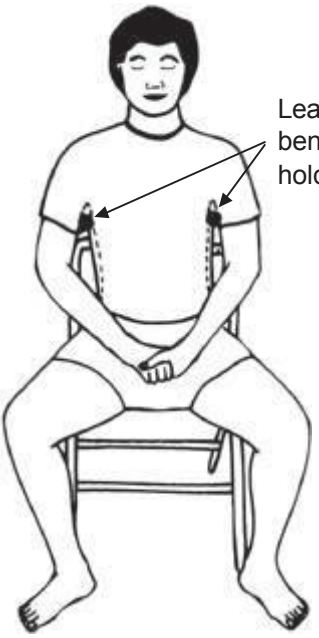


Fig. 4.4 *Arms' Position*

5. **Chin**: The chin should be drawn back slightly, with as little strain as possible, so that the ears are over the shoulders. If you strain too much to bring the head back, your muscles will soon tire.
6. **Eyes**: Your eyes should generally be closed or slightly open with the gaze directed downward. Or you can focus on the nose, and from the nose focus into the heart. You can open the eyes for a while if you feel sleepy or distracted *(Fig. 4.5)*.
7. **Tongue**: The tip of the tongue should be touching the upper palate *(Fig. 4.6)*. This connection acts like a switch in that it connects the Tu Mo and Ren Mo, the Governor and Functional Channels. The best point for you to use is the one where you feel the strongest sensation of Chi.

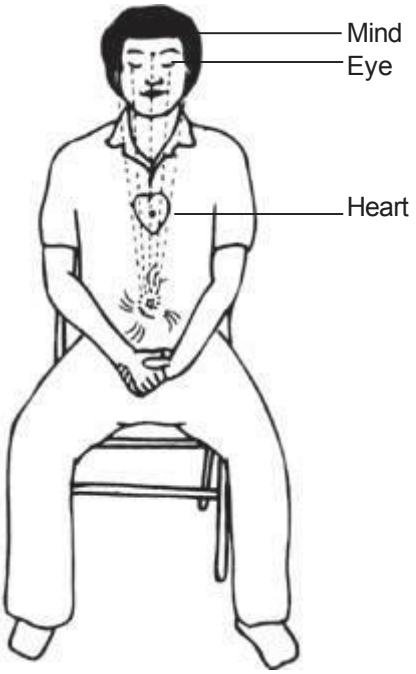


Fig. 4.5 *Turn the mind and eyes inward. Focus into the heart and then down into the navel.*

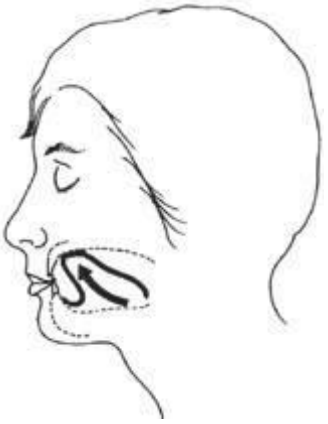


Fig. 4.6 *Touch the tip of your tongue against the upper palate.*

Fig. 4.7 *Smile to the organs and feel the organs smile back to you.*

Chapter 5
Beginning Fusion Element Meditation

Pakua

Fig. 5.1 *Pakua - Eight Forces*

The pakua is a symbol of the eight forces. In the Fusion of the Five Elements meditation the pakuas are used to gather and collect the energy of the organs and fuse them into a pearl. Here in the Cosmic Fusion meditation, the pakuas are again used to fuse energy into a pearl. Now, instead of just using the energy within the body, we combine the energy of the organs with the energy of the Universe. This is a technique used in the Fusion practice to condense and gather the abundant energy that surrounds us into something that is usable and digestible to the body. Forming the pakuas will be used in all the Fusion formulas.

The first step is to form the pakua at the lower abdomen to connect with and attract the five energies and the eight forces. The goal is to balance and transform the emotional energies of the organs. The next step is to form the facial pakua. The facial pakua gathers and transforms the energy of the senses and the thoughts down to the lower abdomen. The Universal pakua is then created to gather and collect the energy of the Universe into the lower abdomen. All these energies once gathered are condensed into an energy ball, or a pearl of white light. This highly refined ball of energy is then circulated through all the channels as a way to open, heal and revitalize the body, mind and spirit. This is the beginning of the transference of consciousness to a new realm.

Chanting

Chanting has been used in all systems of spirituality to help connect the practitioner to their higher source. In Christianity, chanting and singing is used to connect with God. In Buddhism and Hinduism, chanting is used to clear the space, to open the body and connect themselves with the Buddha or Hindu God or Goddess. The power of chanting and singing can be seen not only in a religious setting, but in all levels of society as well. Singing and listening to music is a very natural way to move energy.

In the Taoist practice, chanting is used to invoke the forces of the Universe. It is not necessarily about harmony. We want to get depth and power to the vibration to open the lower abdomen and create internal power. When you chant try to feel the vibration coming from the Lower Tan Tien.

Chanting in the Pakua is very similar to the sound in the genes when the replicating strands of DNA cross over. The eight sounds are the song of the crossing of the chromosomes like two serpents entwining and then they making love and one becomes two.

The pakua is a symbolic representation of the forces of nature. By chanting the names of these forces, we are able to make a connection with that force. Also, Yin and Yang are chanted as a way to contract and expand energy. The combination of chanting the forces and Yin and Yang helps to bring the power of the Universe to you as a tuning fork.

Chanting greatly increases the power and the coherence of the Pearl. After toning all eight directions, the forces of the Universe

are fused into the Pearl. The Yin and Yang (Tai Chi spines) chanting helps to expand and gather, as well as contract and store the force. This will help create the connection between your internal energy and the energy of the Universe.

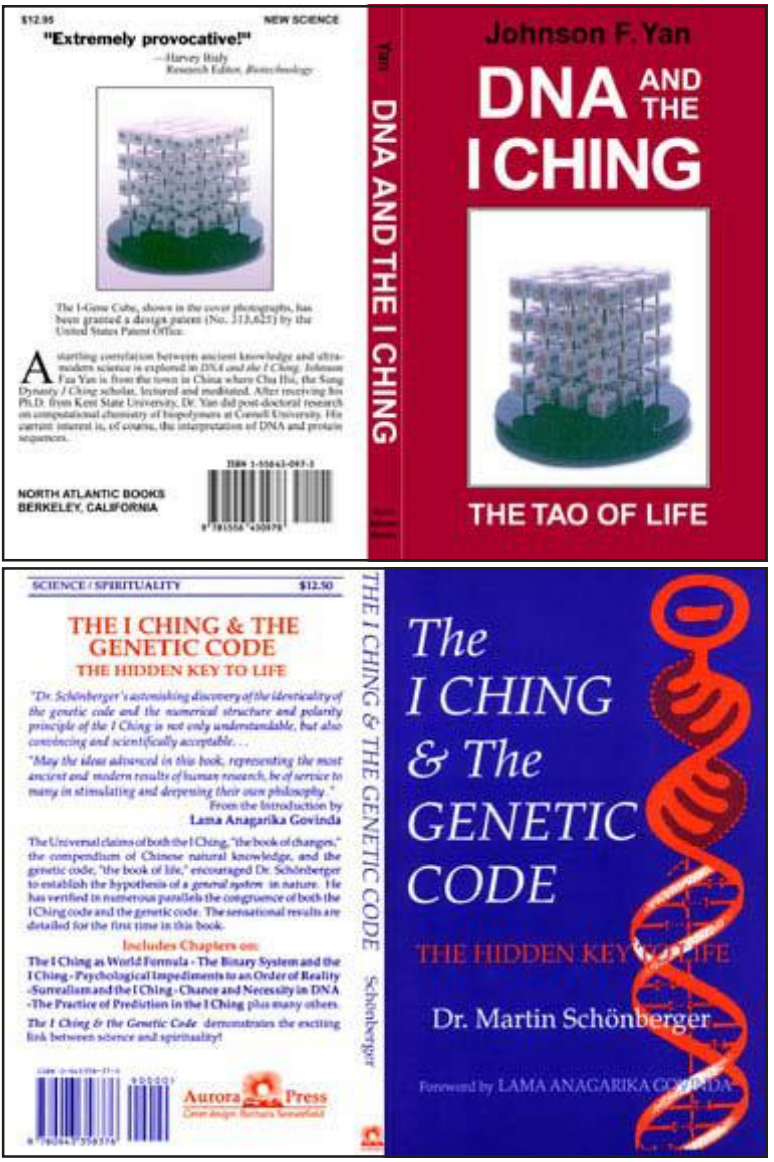


Fig. 5.2 *DNA and the I Ching book cover and the I Ching and the Genetic Code book cover*

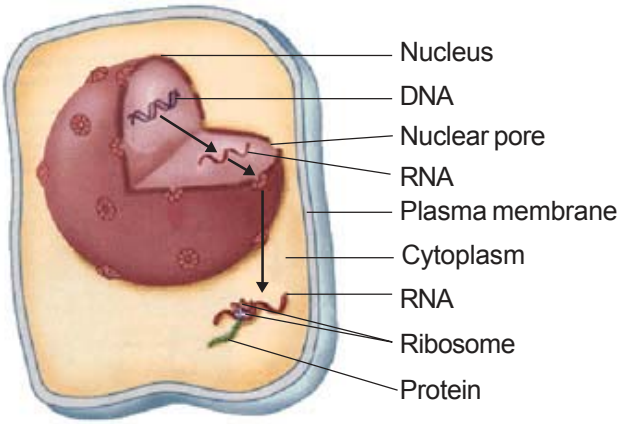


Fig. 5.3 *When the frequency is 8Hz transcription occurs in the nucleus, translation takes place in the cytoplasm.*

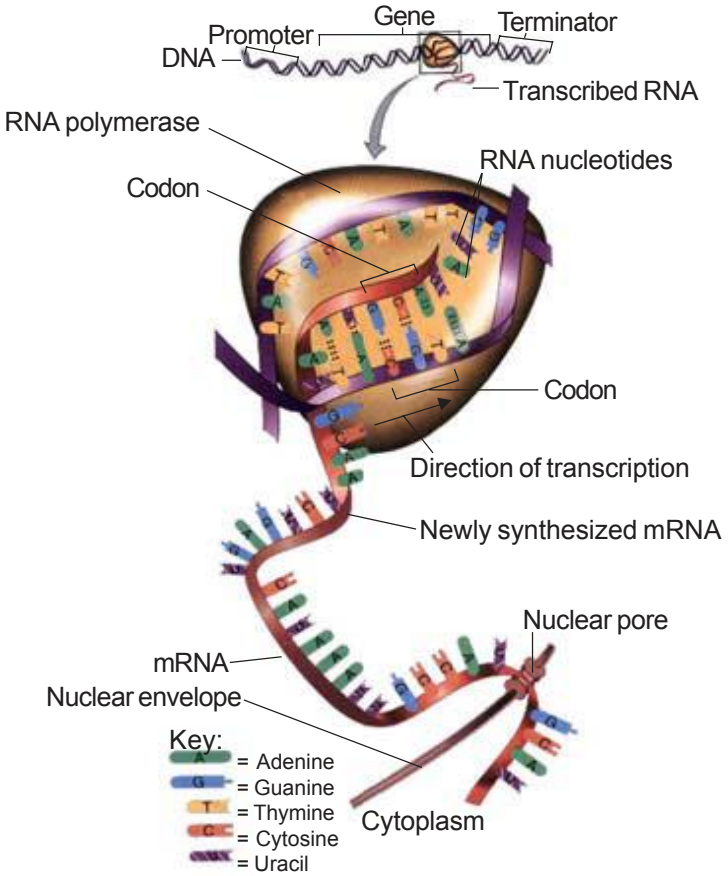


Fig. 5.4 *During transcription, the genetic information in DNA is copied to RNA which in the Tao is known as cupping or self-intercourse.*

Formula One: Forming the Pakuas

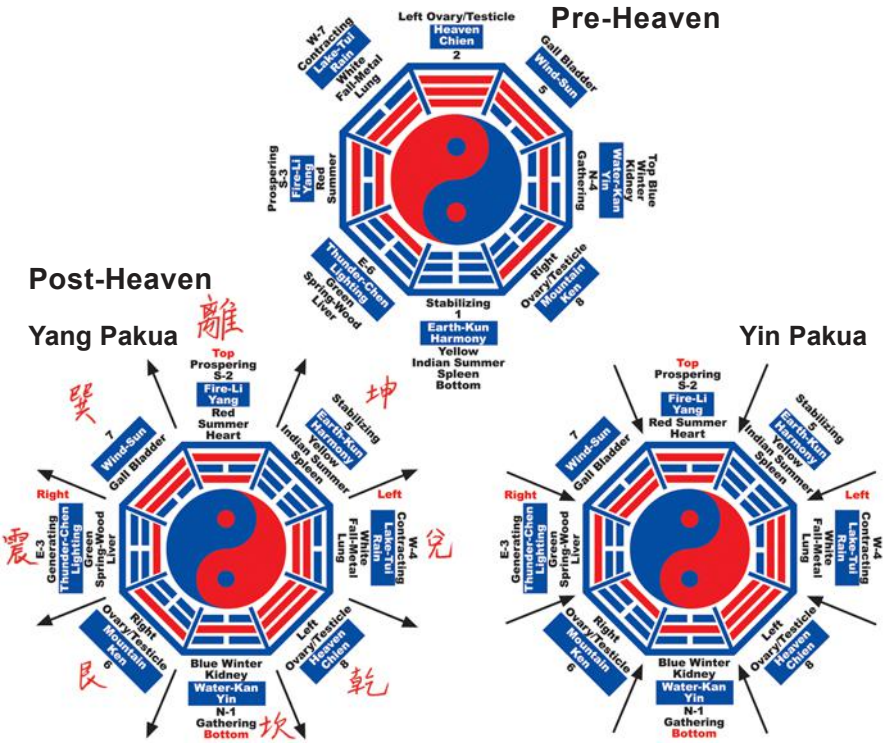


Fig. 5.5 *Pakua - Tai Chi Symbol -*
Three Outside Lines - Eight Connecting Lines

There are two arrangements of the pakuas: the Pre-Heaven and the Post-Heaven. It is said that the Pre-Heaven pakua was discovered by Fu Hsi, a legendary figure of early Taoist history, as the Ho-Tu, inscribed, some say on a horse, others say on a dragon that rose from the river Ho to reveal itself to Fu Hsi. The Post-Heaven pakua was revealed to another legendary king, Yü, the Great, as the Lo-shu. This time it was written on the shell (back) of a tortoise that emerged from the river Lo. The Pre-Heaven pakua shows the unchanging cycle movement of these energies, the natural order of the universe and is the foundation of Fu Hsi's divinational trigrams/hexagrams, of the I Ching. The Post-Heaven pakua shows the opposing interaction and movement of these energies, which are responsible for the changes and creation of all the things in the universe, in nature and in our own lives.

Creating the Front Pakua

Drawing the Pakua on the Abdomen: the Front Pakua

It is important to get familiar with visualizing the pakua. Training the mind to concentrate on a single image is of immeasurable value for spiritual practice. The image of the pakua allows the mind to focus and fuse energy. This first step is essential to the rest of the Fusion practice. One of the best ways to get this image deeply connected in the mind is to draw it on a piece of paper and place it over your abdomen. Or, if you are a little more adventurous draw it directly on the abdomen. When you draw the pakua, use blue for Yin, red for Yang and black for the frame. Sometimes it helps to work with a partner. Draw the pakua over your partner's abdomen, and do the meditation facing one another. This way you can glance at the pakua and know what forces to work with. Be creative. Do whatever works so that you get the image planted firmly in your mind.

The pakua is between the underside of the rib cage and above the pubic bone. When we chant the symbols of the trigrams, you can use your finger to draw them on your own abdomen, or while you look at the pakua on your partner.

There are 3 different major centers for generating the frequency which fuse together to form the main energy center of the body. 1. Tan Tien, the Chi Center can be measure like heat in the infrared. 2. Throat Center. 3. Third Eye Center.

Fig. 5.6 *Pakua in the Abdomen*

Practice

1. Four Signs

Kan: First Sound

a. **Kan** (Yin-Yang-Yin). The power symbol of the Water gathering and yin power, connected with the kidneys, ears and sexual organs. Evoke the energy of the symbol by repeating its sound, **Kan,** several times or until you feel the connection with the energy of Kan, which is spreading down to the sexual organs and the kidneys. The Kan sound should come from the abdomen and the throat.

b. First chant the name of the trigram Kan in a long and deep sound while you picture the symbols and touch your lower abdomen. Your eyes look down to the lower abdominal area.

Fig. 5.7 *Kan (Yin-Yang-Yin)*

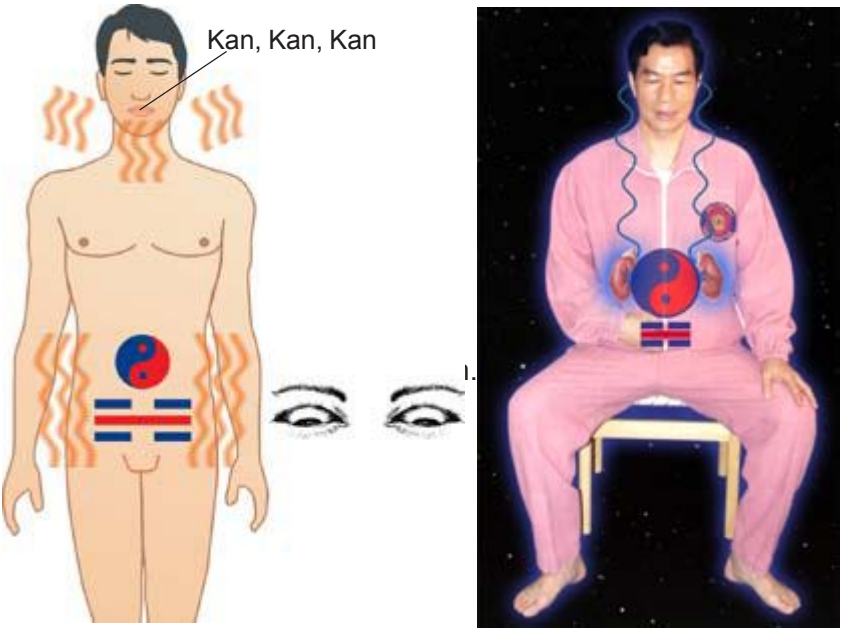


Fig. 5.8 *Chant Kan (Ears and Kidney connects to the Kan)*

c. Next, chant the Yin and Yang lines of the symbol one after the other (Yin-Yang-Yin). Start from the inner side, close to the Tai Chi symbol.

d. **Yin Contract**: First expand the mind and the hands and palms to touch the universe, the cosmic. Chant the Yin, Yin, Yin as long as you feel comfortable, and continue moving your palms and draw the cosmic Chi from the universe into the navel, and feel the navel has suction. Feel your hands and the Tan Tien; the throat has the power of sucking the Chi down the Yin line to the navel. Rest. (Fig. 5.9)

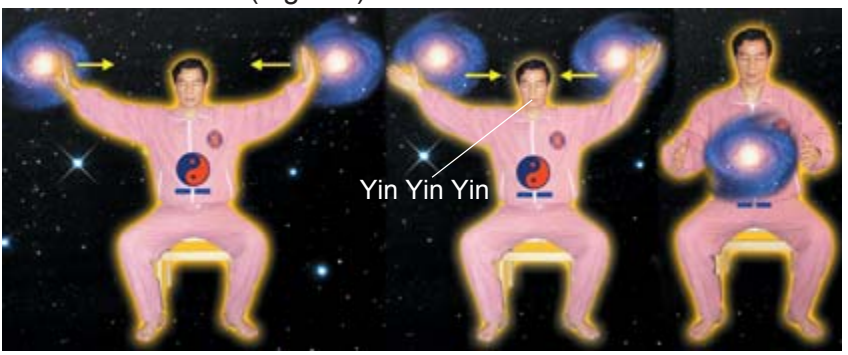


Fig. 5.9 *Yin Line — — Yin Contract*

e. **Do the Yang Line**: Be aware of the Tan Tien, throat, crown and the palms close to the navel and slowly chant the long Yang sound and turn the palms out. Gradually move the palms to the left and right sides and feel your palms very long and big touching the cosmic. Rest and feel your palms in touch with the cosmic Chi. (Fig. 5.10)

Fig. 5.10 *Yang Line — Yang Expand*

f. **Do the Yin Line again**: Yin contracts; expand the mind and the hands and palms to touch the sky and the cosmic. Chant the Yin, Yin, Yin as long as you feel comfortable and continue moving your palms and draw the cosmic Chi from the universe into

the navel, and feel the navel has suction. Feel your hands and the Tan Tien; the throat has the power; the Chi goes down the Yin line to the navel. Rest for a while. Feel the vibrations inside as you chant the trigram. (Fig. 5.11)

Fig. 5.11 *Yin Yang Yin Trigram*

Rest. Repeat the words " Kan" at the lower abdominal in your mind and let your eyes look down at the lower abdominal. Then you close your eyes and picture the symbols: Kan (Yin-Yang-Yin), smile and be aware the kidneys, ears and the power of the yin and gathering power. Try to imagine them in your mind's eye and feel them imprinted on your abdomen and vibrating inside you.

Rest and project the symbol into the universe and feel the symbol in the universe reinforce the Kan in the abdomen.

Note: Doing the chanting together in a group makes it much more powerful.

Fig. 5.12 *Kan in the abdomen*

Li: Second Sound

a. The second sound is **Li** (Yang-Yin-Yang), the power symbol of the Fire, connected with the heart, the prospering power. The eyes look up at the upper abdominal, the Li Kua. The sound comes out from the area between the chest and the throat. Repeat this sound until you feel the vibration of the fire expanding upwards in the chest.
When you chant **Li** you feel the energy going up.
When you say **Li** the eyes look up.

Fig. 5.13 *Li (Yang-Yin-Yang)*

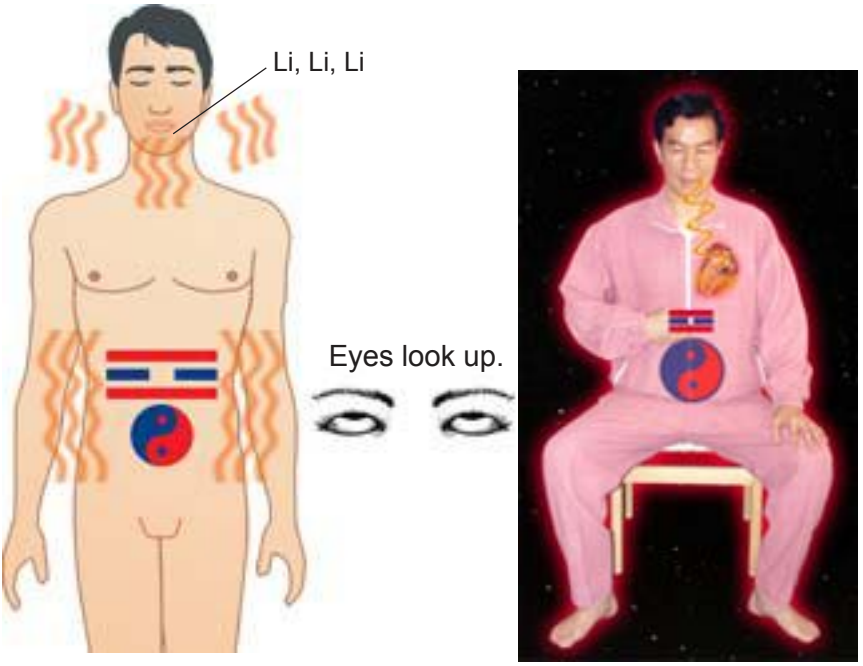


Fig. 5.14 *Chant Li (Tongue and Heart connect to the Li)*

b. Chant the name of the trigrams Li in a long and deep voice while you picture the symbols and touch your lower abdomen and upper abdomen. (Fig. 5.14)
c. Next, chant the Yang and Yin lines of the symbol one after the other (Yang-Yin-Yang). Start from the inner side close to the Tai Chi symbol.

d. **Yang Expand**: Be aware of the Tan Tien, the throat, crown and the palms close to the navel and slowly chant the Yang long sound. Turn the palms out and gradually move the palms to the left and right side. Feel your palms very long and big as they touch the cosmos. Rest and feel your palms touch the cosmic Chi. (Fig. 5.15)

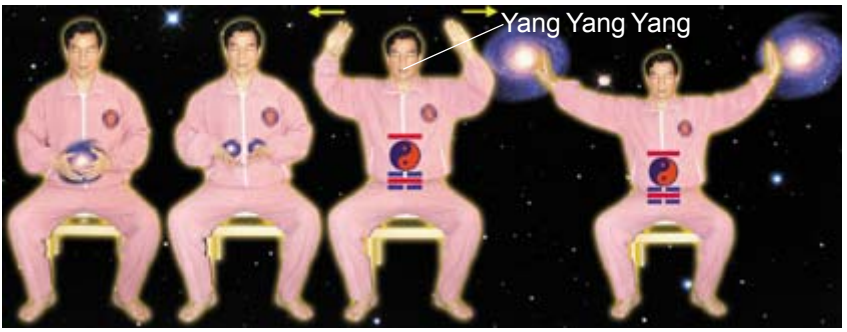


Fig. 5.15 *Yang Line — Yang Expand*

e. **Yin Contract**: Your mind and the hands and palms touch the sky, the cosmos. Chant the Yin, Yin, Yin as long as you feel comfortable, and continue moving your palms up. Draw the cosmic Chi from the universe into the navel, and feel the navel has suction. Feel your hands and the Tan Tien. The throat has the power; draw the Chi into the Yang line to the navel. Rest for a while. (Fig. 5.16)

Fig. 5.16 *Yin Line — — Yin Contract*

f. **Do the Yang again**: Be aware of the Tan Tien, the throat, crown and the palms close to the navel and slowly chant the Yang long sound. Turn the palms out and gradually move the palms to the

left and right side. Feel your palms very long and big as they touch the cosmos. Rest and feel your palms touch the cosmic Chi. (Fig. 5.17)

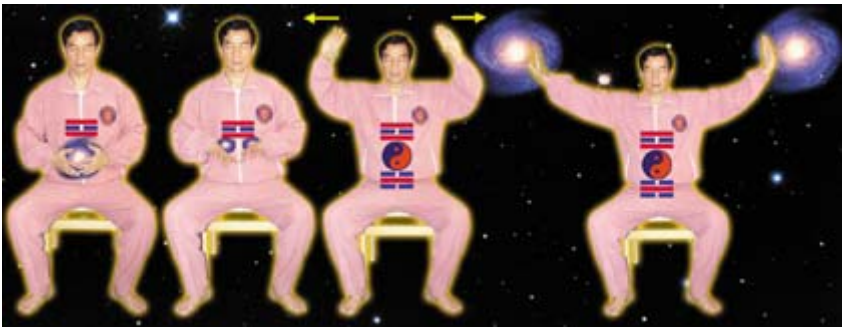


Fig. 5.17 *Yang Line — Yang Contract*

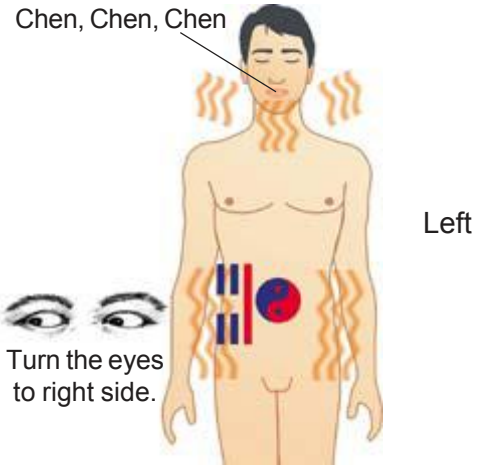
g. **Repeat the word "Li"** in your mind and let your eyes look at your Li Kua. Close your eyes and picture the symbol Li, still moving your eyes up. Smile and be aware of the heart, tongue and the prospering power of fire. Imagine them in your mind's eye; feel them imprinted on your abdomen and vibrating inside you. Rest and project the symbol into the universe and feel the symbol in the universe reinforce the Kan in the lower abdomen.

Fig. 5.18 *Li above the Navel*

Chen: Third Sound

a. The third sound is **Chen** (Yang-Yin-Yin), the power symbol of the Thunder and the Lightning, connected with the liver and the eyes, the wood element and gathering power. This sound evokes the trigram Chen that is placed on the right side (below the liver) and the sound comes out as "djen". Repeat the sound until you feel a vibration of energy below the liver, at the right side of the pakua. When you chant "Chen" the eyes look to the right side.

Fig. 5.19 *Chen (Yang-Yin-Yin)*



Left

Fig. 5.20 *Chant Chen (Eyes and Liver connect to the Chen)*

b. **First chant the name of the trigram Chen** ("Djen") in a long deep throat sound while picturing the symbol and touching the right side of your abdomen. Feel the vibration of the lightning and the thunder. Look at the right side of the body, close your eyes and visualize at the symbol of Yang-Yin-Yin. Smile and be aware of the liver, the eyes and the power of generating, lighting and thunder power.

c. **Yang Expand**: Be aware of Tan Tien, the throat, crown and the palms close to the navel and slowly chant the long Yang sound. Turn the palms out and gradually move the palms to the left and right sides and feel your palms very long and big touching the cosmos. Chant the Yang, Yang, Yang as long as you feel comfortable. Rest for a while. Feel the vibrations inside as you chant the trigram. (Fig. 5.21)

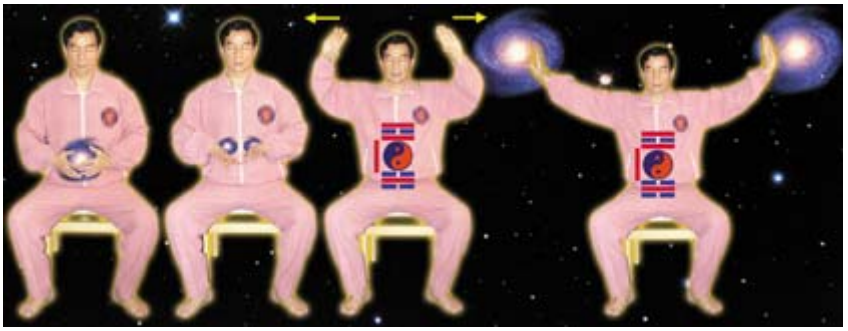


Fig. 5.21 *Yang Line — Yang Expand*

d. **Yin Contract**: Be aware of the Tan Tien, the throat, crown and the palms close to the navel and slowly chant the Yin long sound as the palms touch the universe. Chant the Yin, Yin, Yin as long as you feel comfortable and continue moving your palms back. Draw the cosmic Chi from the universe into the navel and feel the navel has suction. Feel your hands and the Tan Tien; the throat has the power, the Chi goes down the yin line to the navel. Rest for a while. Feel the vibrations inside as you chant the trigram. Rest and feel your palms touch the cosmic Chi. (Fig. 5.22)

Fig. 5.22 *Yin Line — — Yin Contract*

e. **Do the Yin line again**: be aware of the Tan Tien, the throat, crown and the palms move out to touch the universe. Chant the Yin long sound. Chant the Yin, Yin, Yin as long as you feel comfortable and continue moving your palms back and draw the cosmic Chi from the universe into the navel and feel the navel has suction. Feel your hands and the Tan Tien; the throat has the power, the Chi goes down the yin line to the navel. Rest for a while. Feel the vibrations inside as you chant the trigram. (Fig. 5.23)
Rest for awhile and feel the vibrations inside.

Fig. 5.23 *Yin Line — — Yin Contract*

Tui: Fourth Sound

a. The fourth sound is **Tui** (Yang-Yang-Yin), the power symbol of Lake and Rain, connected with the lungs and nose, the metal element and contracting power. This sound evokes the trigram Tui, that is placed on the left side (opposite Chen) and the sound comes out as “tway”. Chen and Tui are throat sounds. Repeat the sound until you feel a vibration of energy at the left side of the pakua.

Fig. 5.24 *Tui (Yang-Yang-Yin)*

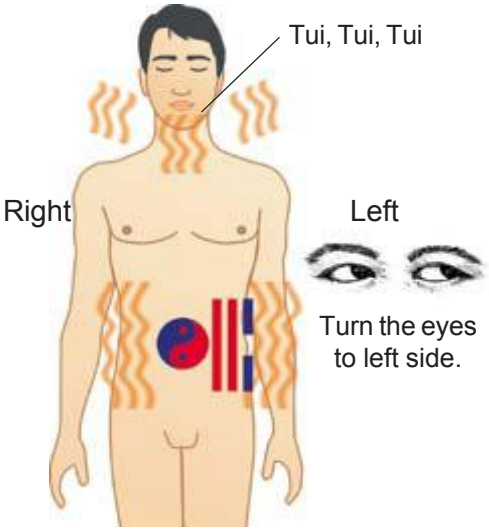


Fig. 5.25 *Chant Tui (Nose and Lung connect to the Tui)*

b. **Next chant the name of Tui** in a long deep voice while picturing the symbol and touching the left side of your abdomen. Feel the vibration of the rain and the lake. Look at your left side, close your eyes and visualize at the symbol of Yang-Yang-Yin. Smile and be aware of the lungs, nose and the power of contracting rain and lake.
c. Do the Yang Line, **Yang Expand**; be aware of Tan Tien, the throat, crown and palms close to the navel and slowly chant the long Yang sound. Turn the palms out and gradually move the palms to the left and right sides and feel your palms very long and big touching the cosmic. Chant the Yang, Yang, Yang. (Fig. 5.26)
d. Do the Yang line again. **Yang Expand**; be aware of Tan Tien throat, crown and palms close to the navel and slowly chant the long Yang sound. Turn the palms out and gradually move the palms to the left and right sides and feel your palms very long and big touching the cosmos. Chant the Yang, Yang, Yang.

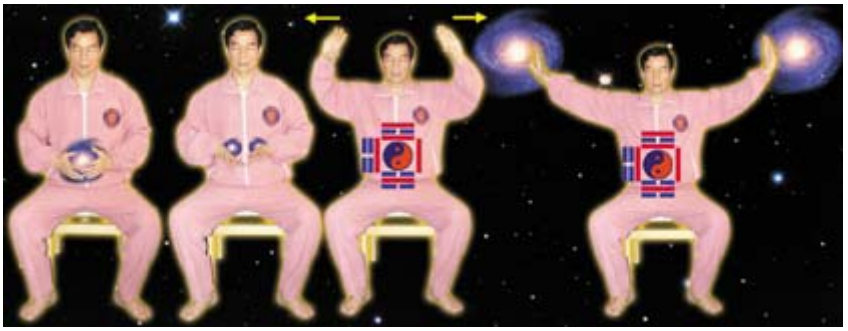


Fig. 5.26 *Yang Line — Yang Expand*

e. **Yin Contract**: Chant the Yin, Yin, Yin as long as you feel comfortable, continue moving your palms and draw the cosmic Chi from the universe into the navel and feel the navel has suction. Feel your hands and the Tan Tien; the throat has the power and the Chi goes down the yin line to the navel. Rest for a while. Feel the vibrations inside as you chant the trigram. Finish. Rest for awhile and feel the vibrations inside. (Fig. 5.27)

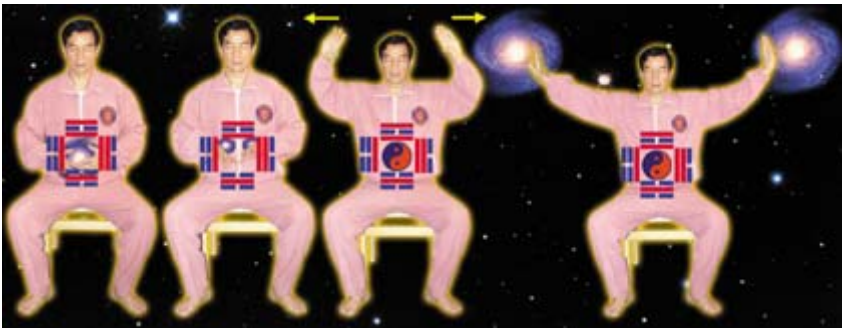


Fig. 5.27 *Yin Line — — Yin Contract*

2. Continue the practice with the next four symbols.

The last four trigrams of the pakua are: **Kun** (Yin-Yin-Yin), the Earth power, **Ken** (Yin-Yin-Yang), the Mountain power; **Sun** (Yin-Yang-Yang), the Wind power and **Chien** (Yang-Yang-Yang), the Heaven power.

Go through the same procedure as with the first four symbols to evoke the energy and connect it to the pakua.

a. Do all the 8 symbols together quickly Kan, Li, Chen, Tui, Kun, Ken, Sun, Chien (6 sets).
b. Be aware of the pakua and see it imprinted deep into the abdomen.
c. Be aware of the Tai Chi symbol and start to chant, Tai Chi, Tai Chi, and Tai Chi faster and faster. Feel the Tai Chi symbol moving faster and faster now.

Practice of the Next Four Symbols.

Symbol Kun - Earth

Stabilization power stomach and mouth, spleen and pancreas.

Focus on Kun, Yin-Yin-Yin. Chant Kun and then chant Yin-Yin-Yin repeatedly. You can use the hand to help draw in the energy back to the Pakua. Later on, you do not need to use your fingers. Picture the symbol Kun in front of you and expand it very far away to connect with the centering, stabilizing power. Let the energy with the symbol come to you until it sticks to your forehead. Bring it down to the south/west (upper left corner) in the abdominal Pakua.

Fig. 5.28 *Chant Kun (Earth, Mouth and Spleen connect to the Kun)*

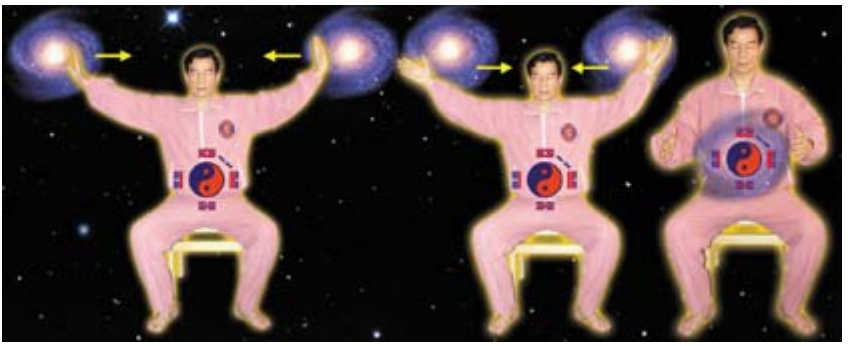


Fig. 5.29 *Yin Line — — Yin Contract*

Fig. 5.30 *Yin Line — — Yin Contract*

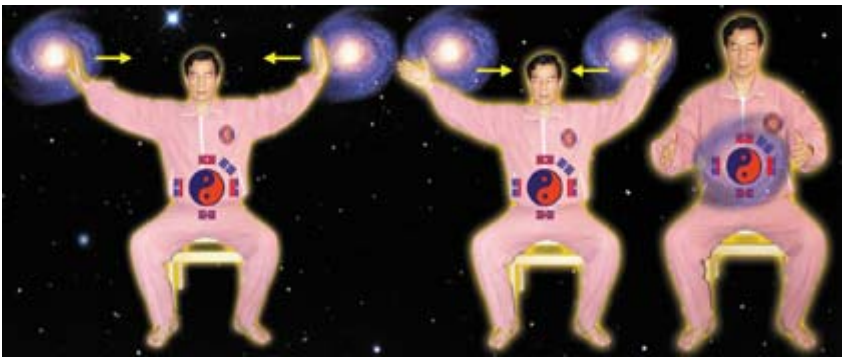


Fig. 5.31 *Yin Line — — Yin Contract*

Symbol Ken - Mountain

Yin side of water power and with bladder and sexual organs.

Focus on Ken, Yin-Yin-Yang. Chant first Ken and then Yin-Yin-Yang repeatedly. It is a nose/throat sound. Mark the symbol with your fingers and your eyes/mind on your forehead. Rest and feel the symbol imprinted on your forehead. Expand it far away to make the connection with the stable and strong mountain power. Feel the symbol with the energy come back. Move it to its place in the pakua on your abdomen in the lower right corner.

Fig. 5.32 *Chant Ken (Mountain connects to the back of the skull)*

Symbol of Sun - Wind

Also connects with the gall-bladder and wood power.

Focus on Sun, Yin-Yang-Yang. Chant Sun and then Yin-Yang-Yang repeatedly. Picture the symbol on your abdomen mark it with your fingers at the abdomen first and then just with your eyes and mind. Picture the symbol very far away to connect with the power of the wind until it comes back to you and sticks to your abdomen. When the reinforced symbol sticks to your abdomen, move it down to the upper right corner of your abdominal Pakua.

Fig. 5.33 *Chant Sun (Wind connects to the base of the skull)*

Symbol of Chien - Heaven

Also connects with the yang side of metal power and large intestine.

Focus on Chien, Yang-Yang-Yang. Chant Chien and then Yang-Yang-Yang repeatedly. Mark the lines of the trigram on the abdomen with your fingers and your eyes/mind. Rest and feel the symbol imprinted on the abdomen. Expand it very far away to connect with the power of Heaven. Do it several times until you feel that the symbol is coming back and sticks on your abdomen. Bring this reinforced trigram down to the lower left corner of your abdominal Pakua.

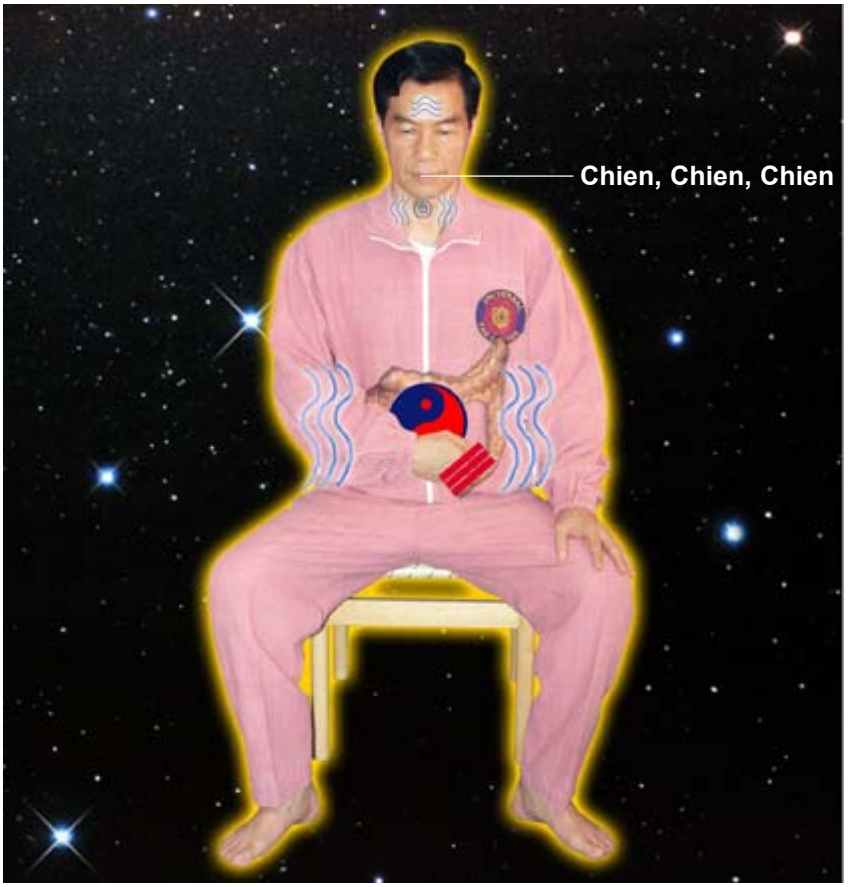


Fig. 5.34 *Chant Chien (Heaven connects to the forehead bone)*

When you finished the last imprinting of these first four symbols, make the Tai Chi symbol, spiraling with the fingers around the navel and saying: **Tai Chi, Tai Chi, Tai Chi**. This is an abdominal sound. Continue to chant it more inwardly, **Tai Chi**, **Tai Chi**, **Tai Chi**, at the same time spiraling with your fingers and eyes. When you finish the chanting, rest. Feel the Kan and the Li, the Chen and the Tui join together, fusing the energy of these forces inside of you.

We now combine the four trigrams.

- First look at your pakua and say the name of the symbol and its Yin-Yang components.
- Chant Kan - Li - Chen - Tui while moving your eyes down-up -right-left. Repeat several times.
- Rest; spiral with your fingers around the navel and continue the spiraling movement of the eyes awhile chanting Tai Chi, Tai Chi, Yin - Yang, Yin - Yang until you feel the Tai Chi symbol spiraling in the middle of the pakua connecting the trigrams together. Feel a big space, a fire burning inside of you.

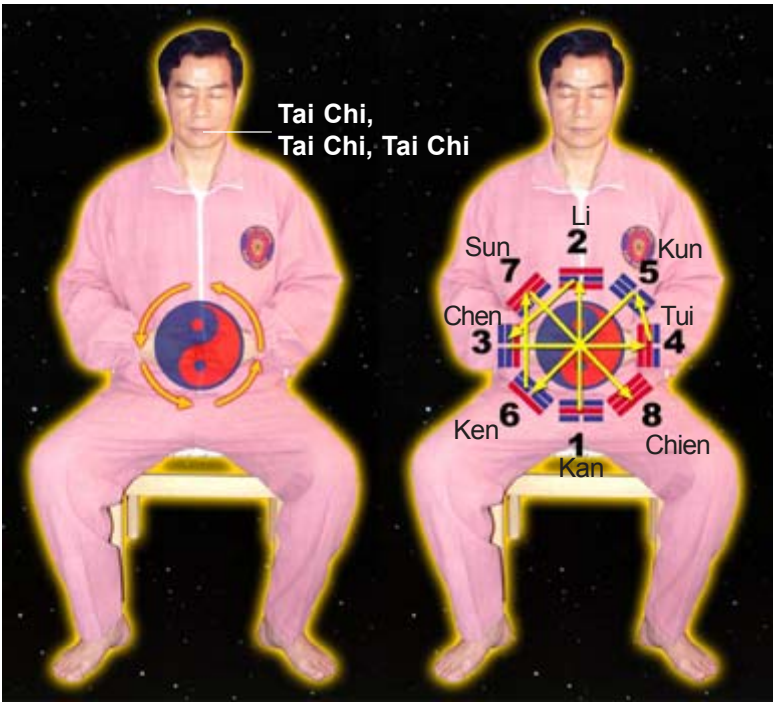


Fig. 5.35 *Finish the imprinting the four symbols and four trigrams.*

Merging Energy of both Pakuas and establish the Cauldron.

a. Copy the front Pakua to the back Pakua and let the Tai Chi symbol spiral. Be aware of the front Pakua spiraling in one direction and the back Pakua in the reverse direction. You can start the front Pakua spiraling counterclockwise and the back clockwise in reverse. Merge the energy of the front and the back Pakua right in the center of the Tan Tien and form a space there for the cauldron. At this point, leave the spinning energy moving. Feel the both Pakuas still spinning and drawing Cosmic Force from all directions. Rest, and then start spinning the energy.

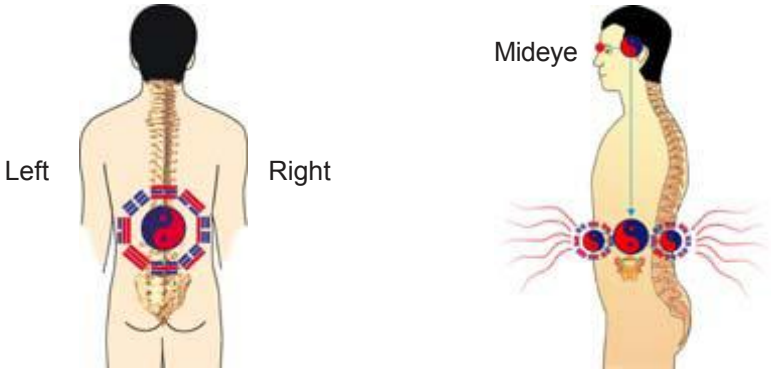


Fig. 5.36 *Back Pakua*

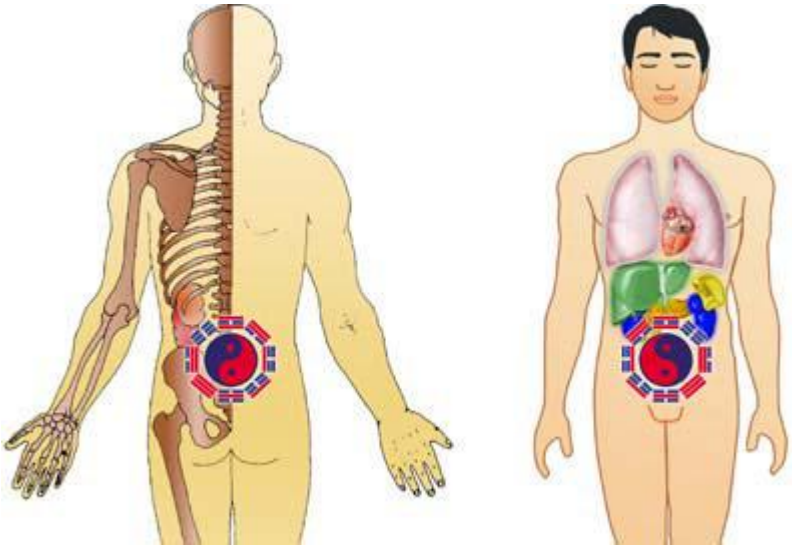


Fig. 5.37 *Front and Back Pakua*

b. When both pakuas are spiraling, focus on the center and look down while being aware of the front and the back pakuas. Chant Yin-Yang and spiral with your mind's eye in the center. Feel the big space of the front pakua and the back pakua coming into the center, merging together and creating a big space inside you for the cauldron. Feel the cauldron inside you spiraling like a big ball of fire, creating a suction in the middle of the front and the back pakua. Feel that, while you continue to chant the Tai Chi subvocally, the energies of both pakuas are sucked into the center, the cauldron. Feel the fire burning in the cauldron like a candle. Be aware of your center and of the energy there.

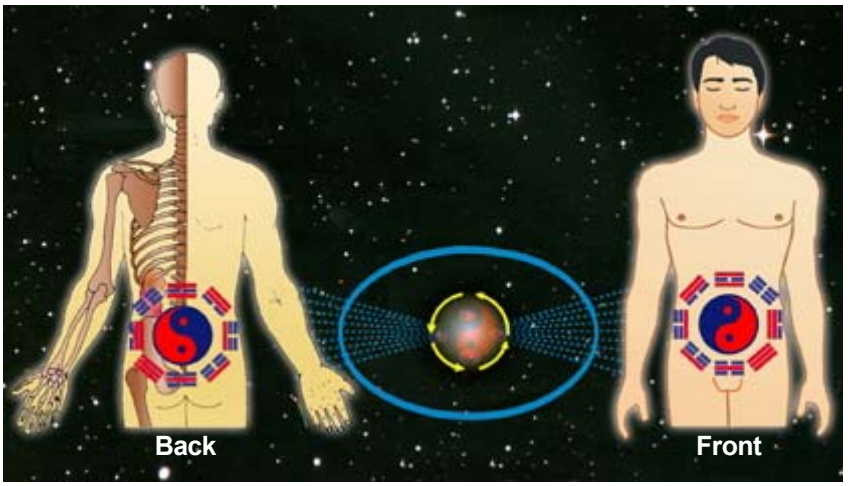


Fig. 5.38 *Both Pakuas are spiraling and drawn into the center.*

1. Creating the Right Pakua

The right pakua is a copy of the back pakua moved to the right side. Use your finger to point to the right side on the same level with the navel while you picture the symbol of Pakua. Then make the Tai Chi symbol, spiraling from the bottom to the right to the top and to the left. Chant Tai Chi and follow the spiraling with your fingers at the same time. Rest, feel the pakua spiraling and drawing energy.

2. Creating the Left Pakua

This pakua is a copy of the front pakua moved to the left side. Use your fingers to point to the left side ao the same level with the navel picture the symbol of the Pakua. When you feel that you are in the rhythm continue in your mind using your mind's eye to move. Chanting the Tai Chi, Tai Chi and spiraling with your hand in the middle of the left pakua. Continue spiraling with your mind/eyes until you feel the energy moving.

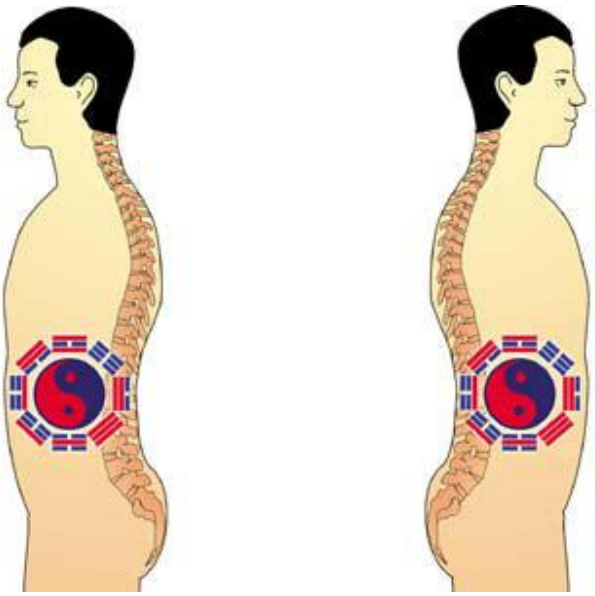


Fig. 5.39 *Left and Right Pakua*

3. Merging the Energies of the Four Pakuas together in the Cauldron

Go back to the right pakua, activate it and let it spiral. Go back to the left pakua and reactivate it, spiraling the Tai Chi. Focus on the center as you chant the Tai Chi and be aware of the centers of the front, back, right and left pakuas. Feel that the energies of the pakuas are sucked into the center. Feel the energy become violet light, and your mind, eyes and center spiraling.

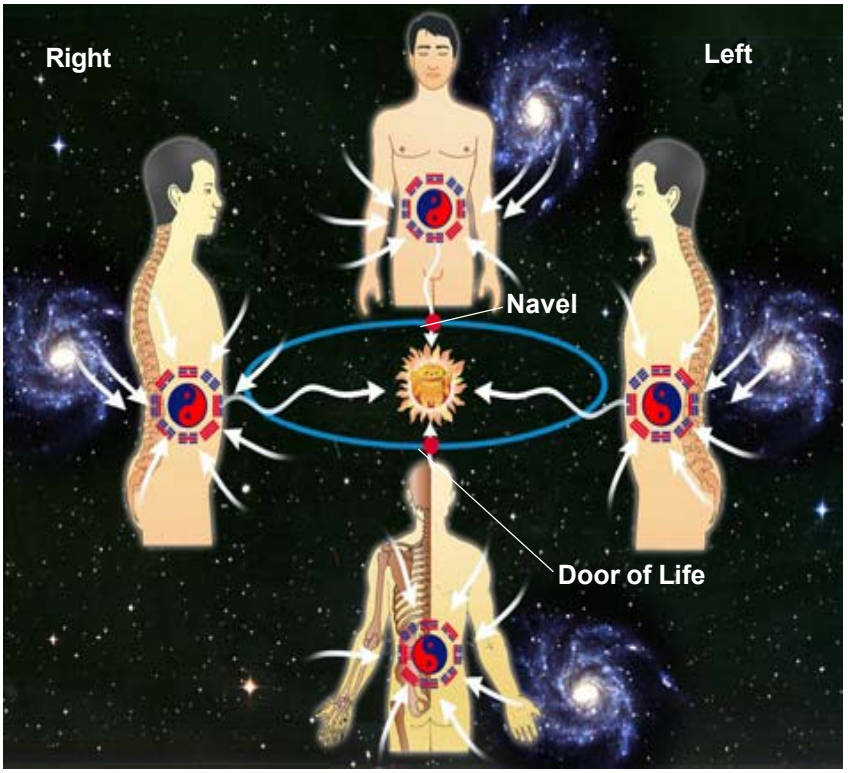
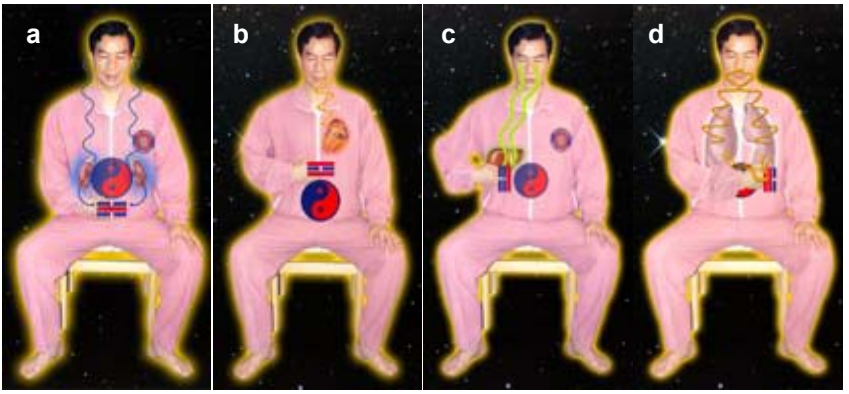


Fig. 5.40 *Four Pakuas spiral and are being drawn into the Center of the Cauldron.*

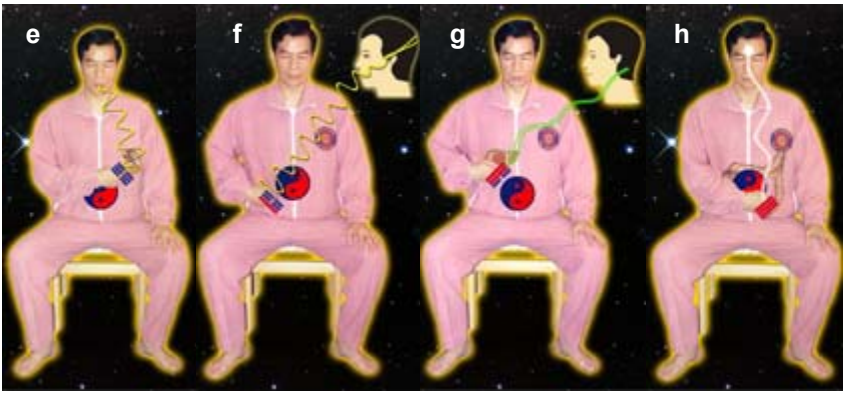
4. Connecting the Organs and Senses with the Abdominal Pakua.

a. Bring your ears and kidneys to the Kan below.
b. Your tongue and heart to the Li on the top.
c. The mideyebrow and the liver to the Chen on your right side.
d. Your lungs and your nose to the Tui on your left side.
e. Your mouth to the Kun on your upper left side.
f. You can also connect the back part of your skull to the Ken.
g. The base of the skull to the Sun
h. The forehead point to the Chien.

Spiral the Tai Chi symbol of this pakua drawing all the energy of the organs and the senses to the center, where all these energies are combined and condensed.



a. *Kan - Ear and Kidneys* ***b.*** *Li - Tongue and Heart*
c. *Chen - Mideyebrow and Liver* ***d.*** *Tui - Lung and Nose on Left Side*



e. *Kun - Mouth and Upper Left Side* ***f.*** *Ken - Back part of the Skull*
g. *Sun - Base of the Skull* ***h.*** *Chien - Forehead Point*
Fig. 5.41 *Connecting the Organs*

Activate the Facial Pakua by enhancing it on the Forehead

The forehead Pakua is the reverse of the abdominal pakua. Use the fingers to point at the position of the Pakua. The Yin and Yang sounds generate from the abdomen but emphasis on the throat, nasal and the third eye. Later on, mark the symbol with your eyes and mind.

When you rest after making the specific sound, feel that the symbol of the trigram is imprinted on the forehead. Send this symbol out into the space in front of you to make the connection with the force of the Universe and let it come back to your body. Bring the reinforced symbol down to the trigram in the pakua in the abdomen and start to work with the next symbol.

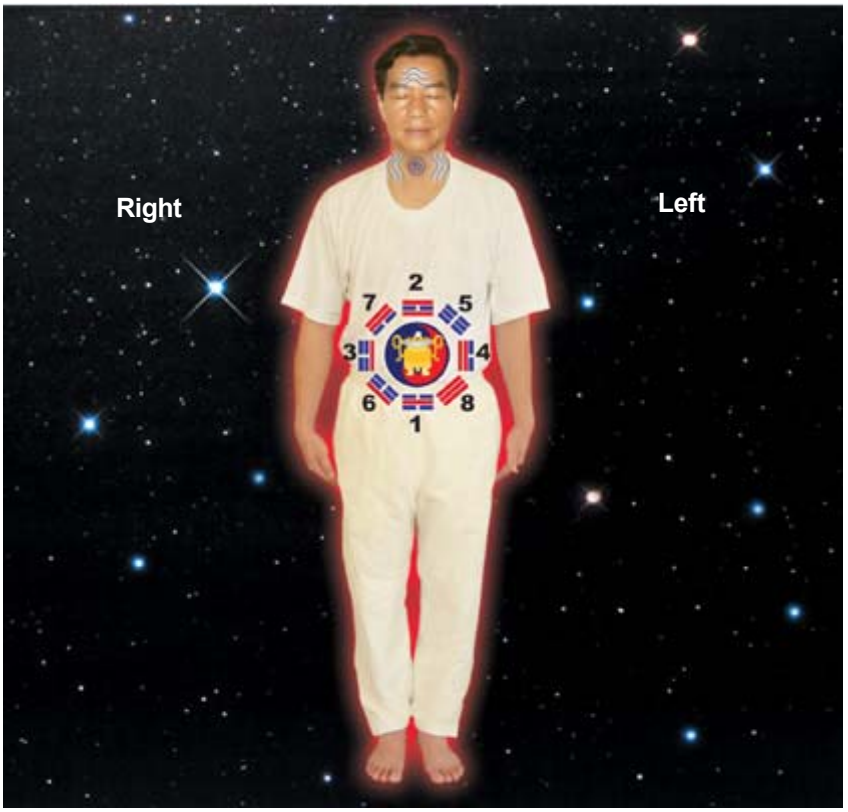


Fig. 5.42 *Enhancing Pakua on the Forehead*

Facial Pakua

To practice this stage, we form a pakua on the face. This pakua has its face in front of us (as if the symbol is looking toward you), so that the Chen will be on the left side and the Tui will be on the right side and all the other trigrams will be arranged accordingly. The Tai Chi symbol will be on your the center at the mid-eyebrow and expands up and down to the forehead and the ridge of the nose right where the cavity of the spirit is. All the senses are controlled from this point. When information and energy from outside is coming in to trigger the senses, you will feel it first very strongly in this center and then the senses will connect immediately to the center of the front pakua below.

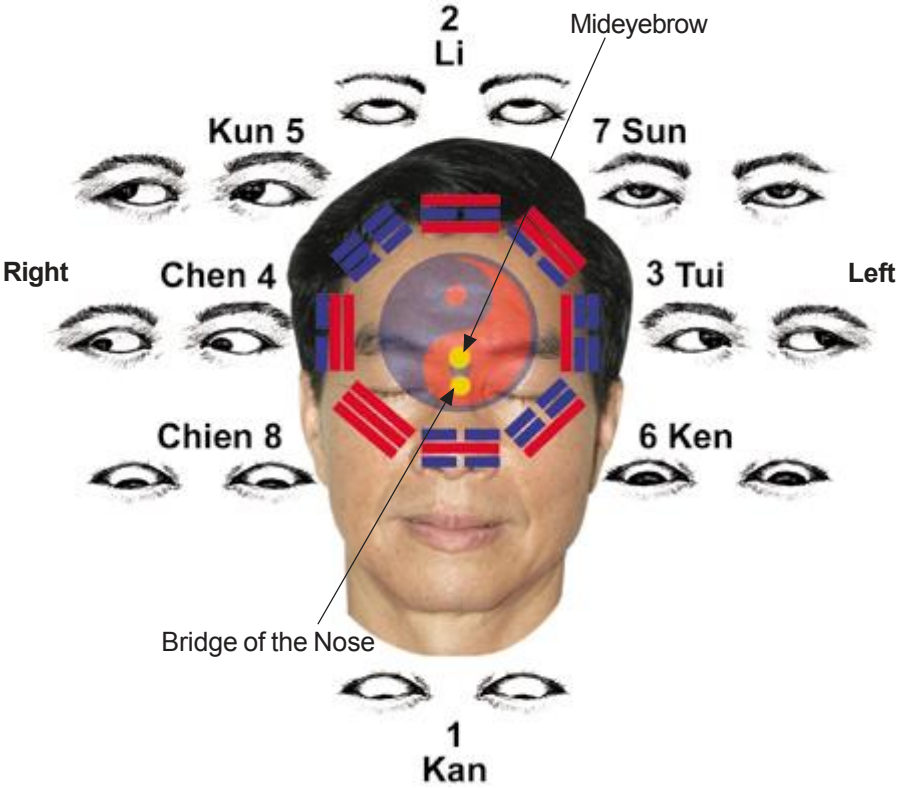


Fig. 5.43 *Use the Eye Mind Power "I" to help move the Eight Forces.*

Practice to form the Facial Pakua.

1. In order to help you get more Chi from the universe, you can start with the "Opening the Three Tan Tiens to the Six Directions" (See the book "*Cosmic Healing I*" by Mantak Chia). If you have not learned this, you can just start with forming the Pakua.

Fig. 5.44 *Opening the Three Tan Tiens to the Six Directions*

2. Then smile, feel your senses turned inward, feel them connecting to the organs. Your mideyebrow connects to your eye and liver, your tongue connects to the heart, your ears connect to the kidneys, your nose connects to your lungs and your mouth connects to the spleen. Feel all the senses turned inward to the mideyebrow and down to navel, going deep inside you. Your abdomen is like a big ocean, a big space, big like a whole universe.

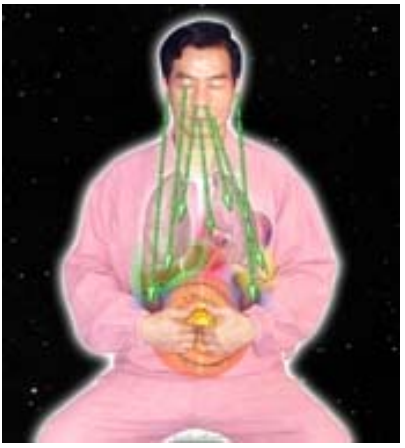


Fig. 5.45 *Turn all senses inward*

3. Reactivate and reinforce the pakua in your lower abdomen.
   a. Touch your Lower Tan Tien and start chanting Kan-Li-Chen-Tui-Kun-Ken-Sun-Chien touching each of the kuas as you chant them. Continue to chant the kua symbols subvocally in your mind and holding the symbol in front of your eyes. Be aware of the Heart Pakua.

Fig. 5.46 *Touch Lower Tan Tien and chant.*

   b. Spiral the Tai Chi symbol from the bottom to the right and up, chanting it while spiraling with your hand, eyes and mind. Continue to spiral with your mind and eyes only and feel the heart pakua also spiraling. The energy is pulling inward and the Tai Chi symbol is spiraling and changing to violet light.

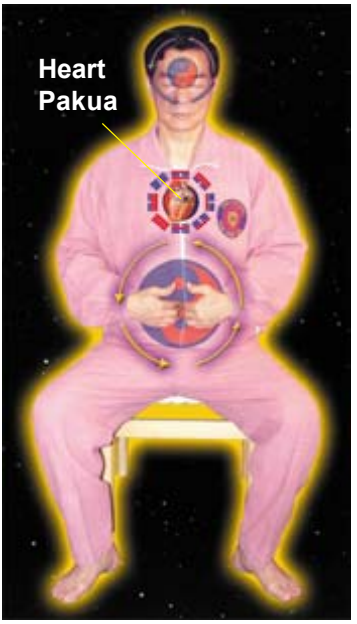


Fig. 5.47 *Tai Chi symbol spiraling*

Start the Practice of the Facial Pakua with the First Four Symbols.

Symbol of Kan - Water ☵

a. Be aware of the mideyebrow. Use the fingers of either the right or left hand to touch below your nose. Eyes look down to the bridge of the nose. Focus on the Kan, Yin-Yang-Yin. Chant the word Kan repeatedly, vibrating it in the brain, making a throat, nose and third eye sound. Picture the trigram on your face and expand it very far away to the ocean. Feel that the energy of the Kan comes right in front of you, allowing the feeling to expand on bridge of the nose. Be aware of the Kan in your lower abdomen and move the powerful Kan from your face to your lower abdomen where it is supposed to be.

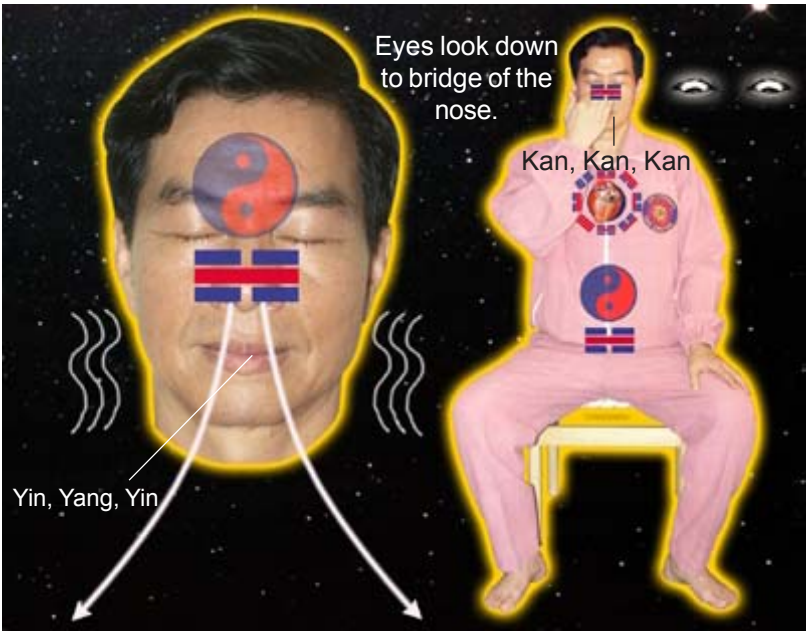


Fig. 5.48 *Kan on the face below the nose.*

b. **Yin Contract**; First expand the mind and the hands and palms to touch the sky, the cosmos. Chant the Yin, Yin, Yin as long as you feel comfortable, and continue moving your palms. Draw the cosmic Chi in from the universe into the face and feel the mideyebrow has suction. Feel your palms, fingers and the Tan Tien, the mideyebrow has power, the fingers can move in and touch below the nose. The Chi goes to the Yin line in the navel. Rest and Smile, breathing the cosmic Chi. (Fig. 5.52)

Fig. 5.49 *Yin Line — — Yin Contract*

c. **Yang Expand**: Do the Yang line; be aware of the Tan Tien, throat, bridge of the nose, the palms, the fingers and touch the face. Slowly chant the long Yang sound and turn the palms out. Gradually move the palms to the left and right sides and feel your palms very long and big touching the cosmos. Rest and smile, the Chi goes to the Yang line in the navel.

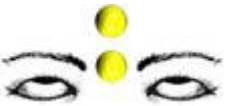
Fig. 5.50 *Yang Line —— Yang Expand*

d. **Yin Line again**, Yin contracts; expand the mind. Repeat as in the first Yin line. Rest for awhile. Feel the vibrations inside.

Fig. 5.51 *Yin Line — — Yin Contract*

Symbol of Li - Fire

a. Focus on the Li Yang-Yin-Yang trigram. Repeat it several times using your fingers on your mideyebrow. Eyes look up to the forehead and picture a flame burning and chant Li, Li, Li repeatedly. Then chant the Yang-Yin-Yang. Picture the trigram right on your face and expand it very far away. See a fire burning, expanding warmth. Let the energy stay on your forehead as a bright red light. Bring it down to the Li in the Pakua in your abdomen and feel a burning sensation in that area.
b. **Yang Expand:** Do as before.
c. **Yin Contract:** Do as before.
d. **Yang Expand:** Do as before.

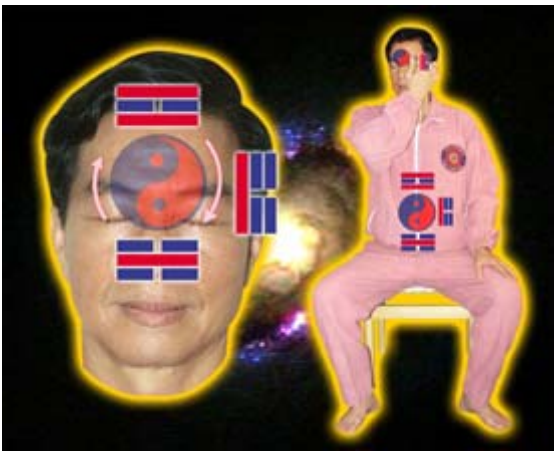


Eyes look up
to the forehead.

Fig. 5.52 *Li on Forehead*

Symbol of Chen - Thunder

a. Focus on Chen, Yang, Yin, Yin. Chant this symbol as a throat and nose sound repeatedly and then chant Yang-Yin-Yin. The eyes look to the left temple bone. Picture the symbol in front of you, expand it very far away to the power of the lightning and thunder. Let the energy come to you, feel the tingling on your left temple bone and move this energy sensation down to the left side of the abdominal pakua. Be aware of Kan, Li, Chen. Visualize them very clearly.
b. **Yang Expand:** Do as before.
c. **Yin Contract:** Do as before.
d. **Yin Contract:** Do as before.



Eyes look to left
temple bone

Fig. 5.53 *Chen on Forehead*

Symbol of Tui - Lake

a. Focus on Tui, Yang, Yang, Yin. Chant Tui repeatedly with a nose sound that is vibrating in the nose. Then chant Yang-Yang-Yin; eyes look to the right temple bone. Picture the symbol on your right temple bone and expand it very far away to the power of the lake, rain and metal element. It is a condensing power. Move it down to the right of the abdominal pakua.

   Combine the four symbols together with the Tai Chi symbol. Feel the Tai Chi symbol spiraling inside your head and feel the center of your abdomen nice and warm like a fire burning inside you.

b. **Yang Expand:**
   Do as before.

c. **Yang Expand:**
   Do as before.

d. **Yin Contract:**
   Do as before.

Eyes look to right
temple bone.

Fig. 5.54 *Tui on Forehead*

Kun ☷ ☷

Imprint Kun on your forehead. Start chanting Kun-Kun-Kun, and then use the fingers and palms to help activate the cosmic force Yin-Yin-Yin, Yin-Yin-Yin, marking the lines with your fingers on your forehead. Project the symbol into the universe as you breathe through your forehead. Picture the symbol breathing in violet/blue and when it connects to your forehead bring it down to its place in the lower pakua.

a. **Yin Contract**, Do as before.
b. **Yin Contract**, Do as before.
c. **Yin Contract,** Do as before.

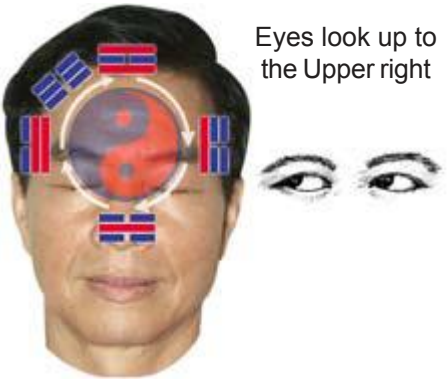


Fig. 5.55 *Kun*

Ken ☶ ☶

Imprint Ken on your lower left cheek bone. Start by the eyes looking down to the lower left cheek bone, chanting Ken-Ken-Ken, and then Yin-Yin-Yang, Yin-Yin-Yang, Yin-Yin-Yang, marking the lines with your fingers on your forehead. Project the symbol into the universe as you breathe through your forehead. Picture the symbol with its violet/blue and bright red colours in front of you and when it connects to your forehead bring it down to its place in the lower pakua.

a. **Yin Contract:** Do as before.
b. **Yin Contract:** Do as before.
c. **Yang Expand:** Do as before.

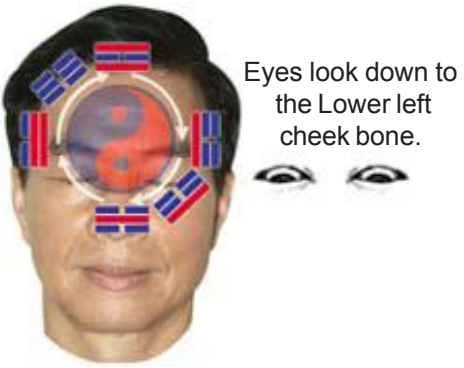


Fig. 5.56 *Ken*

Sun

Imprint Sun on your upper left eyebrow. Start with the eyes looking up to the upper left eyebrow, chanting Sun-Sun-Sun, and then Yin-Yang-Yang, Yin-Yang-Yang, Yin-Yang-Yang, marking it with your fingers on your forehead. Project the symbol into the universe as you breathe through your forehead. Picture the symbol with its violet/blue and bright red colors in front of you and when it connects to your forehead bring it down to its place in the lower pakua.

a. **Yin Contract:** Do as before.
b. **Yang Expand:** Do as before.
c. **Yang Expand:** Do as before.

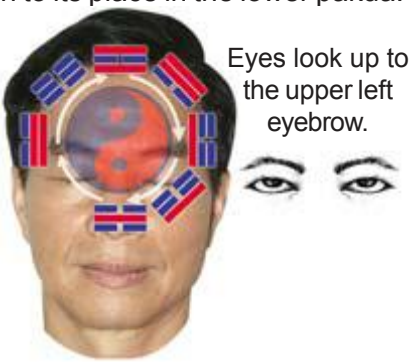


Fig. 5.57 *Sun*

Chien

Imprint Chien on your lower right cheek bone. Start with the eyes looking down to the lower right cheek bone, chanting Chien-Chien-Chien, and then Yang-Yang-Yang, Yang-Yang-Yang, marking it with your fingers on your forehead. Project the symbol into the universe as you breathe through your forehead. Picture the symbol with its bright red colors and when it connects to your forehead, bring it down to its place in the pakua in your lower abdomen.

a. **Yang Expand:** Do as before.
b. **Yang Expand:** Do as before.
c. **Yang Expand:** Do as before.

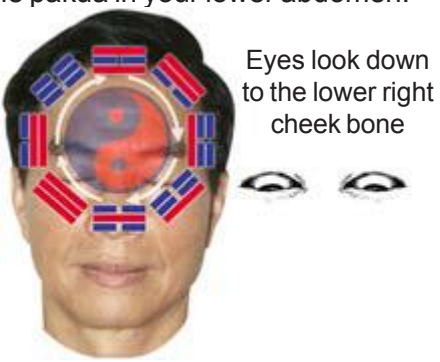


Fig. 5.58 *Chien*

Note: Any time that you feel the energy shooting into your forehead, right where the senses' control is located, bring both the senses' energy and the energy from the universe down to your abdomen.

4. Form the pakua on your face to turn the senses inward.

   Chant Kan-Li-Chen-Tui-Kun-Ken-Sun-Chien and mark the place of the specific kua with your fingers.

   a. Kan is on your bridge of the nose.
   b. Li at the top of your forehead.
   c. In this pakua Chen is on (inside) your left ear.
   d. Tui is on (inside) your right ear.
   e. Kun in your brain above the right eye.
   f. Ken inside your cheek bone on the left side.
   g. Sun in your brain above the left eye.
   h. Chien inside your cheek bone on the right side above.

   Repeat the chanting in your mind and let your eyes move to the place of each kua. Feel the power of the symbols attracting your senses in to the mideyebrow. Chant and spiral the Tai Chi symbol with your finger and then only with your mind. Let the Tai Chi spin fast and faster. Keep on chanting the Tai Chi symbol until the energies are pulled to the center of the pakua. You should feel that all the energy is flowing to the center of the face pakua and connecting to center of the brain, the crystal room, and keep on spiraling and be aware of the Lower Tan Tien, Tai Chi, and also the spiraling of the facial pakua itself. Feel a very strong center in your forehead and bring it down to the center of the lower pakua.

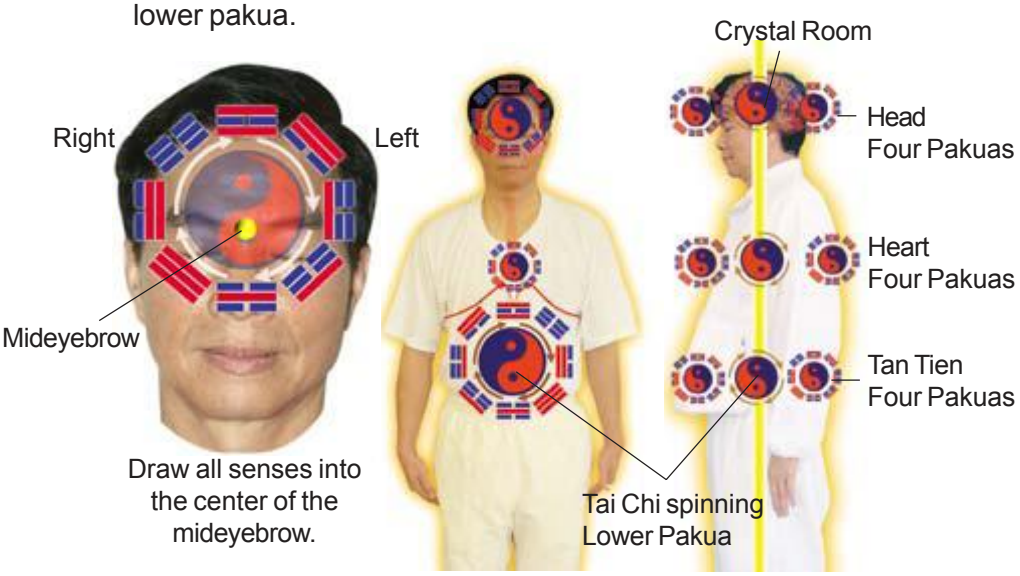


Fig. 5.59 *Pakua on your face to turn the senses inward*

Creating the Back Pakua on the Head

Duplicate trigrams, pakua and the Tai Chi symbol to the back and spiral clockwise while chanting the Tai Chi, Tai Chi. The mind and the eyes are spiraling as well, going faster and faster. When you spiral as fast as possible, you will feel that the energy is drawing into the back Pakua.

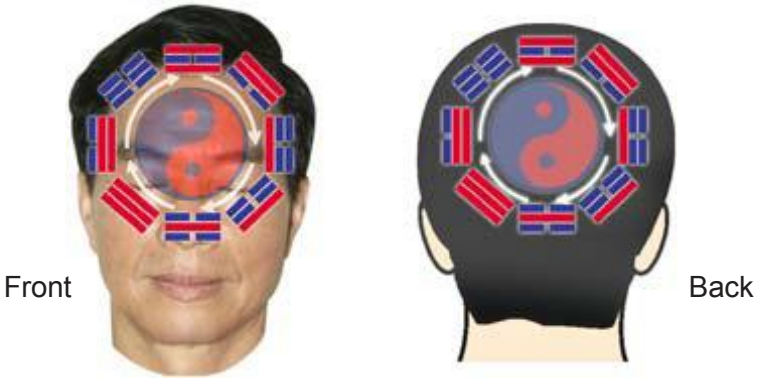


Fig. 5.60 *Pakua on the Head*

Be aware of the front and back Pakuas and spiral them. Spiral in the center faster and faster drawing the front and back into the center.

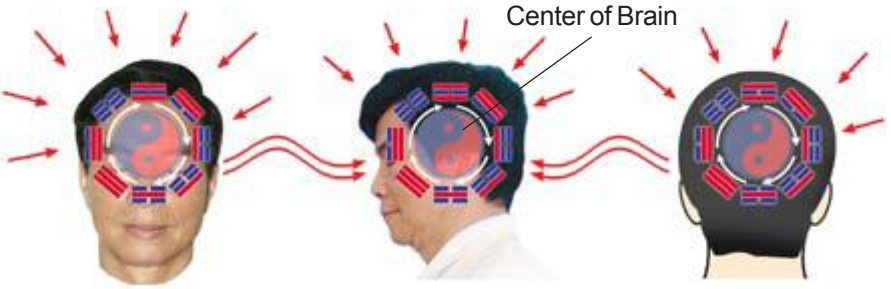


Fig. 5.61 *Front and Back Pakuas spiraling.*

Duplicate the front Pakua to the left side and let the Tai Chi symbol spin.

Duplicate the back Pakua to the right side of the head and let the Tai Chi symbol spin. Become aware of the center of the brain, the crystal room and let it spin faster and faster, drawing the energy of the left and right Pakuas into the center.

Fig. 5.62 *Energy of the left and right Pakua into the center of the Brain.*

Be aware the front, back, left and right Pakuas and let them spin. Put more attention on the center of the brain and let the center spin faster and faster, drawing all the energy into the center.

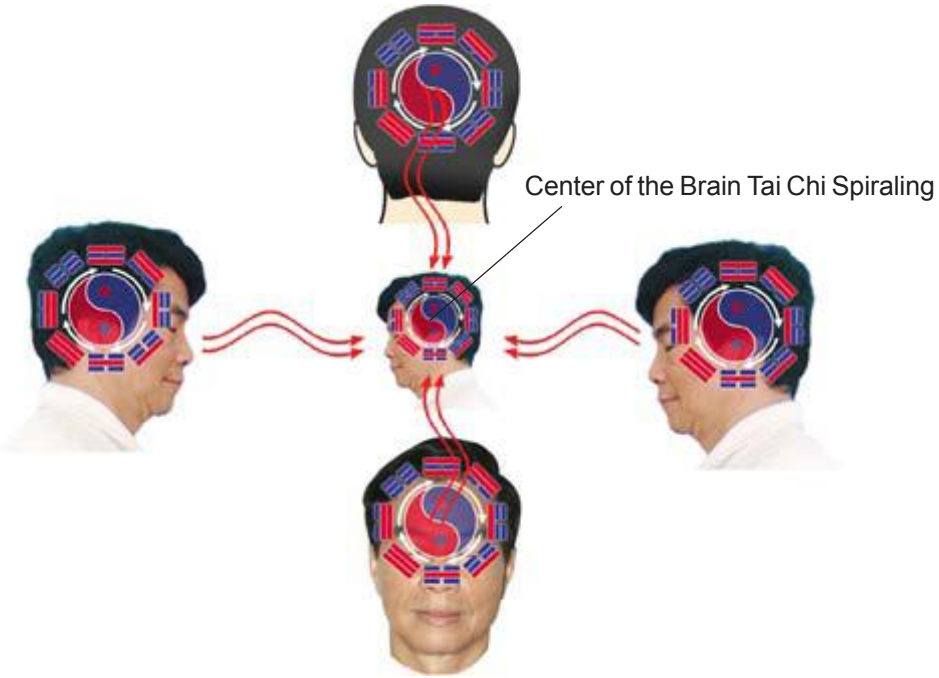


Fig. 5.63 *Draw all the energy into the Center.*

Connecting the Senses with the Sense Control of the Facial, Heart and the Abdominal Pakuas.

Repeat the facial pakua again: Kan-Li-Chen-Tui-Kun-Ken-Sun-Chien. This time, when you spiral the Tai Chi symbol as you chant Tai Chi, add the motion of the Yin coming in and the Yang going out. Your mouth is open projecting the sound of Yang into space. Your fingers are pointing out into space as well. With the sound of Yin your fingers are pointing in towards your forehead, which facilitates the inward movement of the energy. Picture a Tai Chi spiraling inside your brain, right behind your forehead. Point, spiral with your fingers saying Yin-Yang, Yin-Yang, Yin-Yang, and then Tai Chi, Tai Chi, Tai Chi. Continue saying it in your mind and feel the pakua deep inside your head (about 2-3 cm behind your forehead). All the senses are drawn together inside the center of the facial pakua (the senses' control point) and their energy is brought down to the Tai Chi of the lower abdominal pakua.

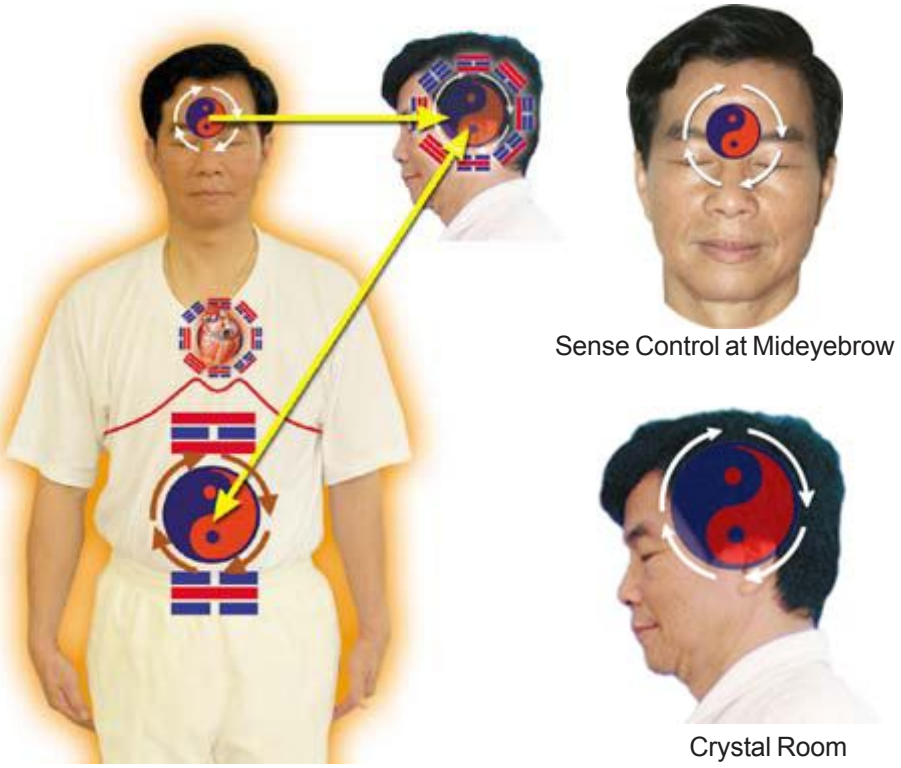


Fig. 5.64 *Let the center of the brain, the heart and abdomen pakuas and all Tai Chis spiral together.*

Blending all the Energy of the Organs and Senses together in the Cauldron

Look down to your center in the Tan Tien and focus on the pakua on the back and on the right and the left pakua. When you focus on them, they will just start spiraling on their own. Look down into your center, into the cauldron and start spiraling the Tai Chi symbol in the center of your cauldron while chanting Tai-Chi, Tai-Chi, Tai-Chi. Rest. Continue to spiral with only your mind and feel that the energy of your senses and organs is coming right down to your center, where all the energy blends into one central energy. Rest. Spiral the energy in your abdomen. Smile to this energy and feel very calm and peaceful.

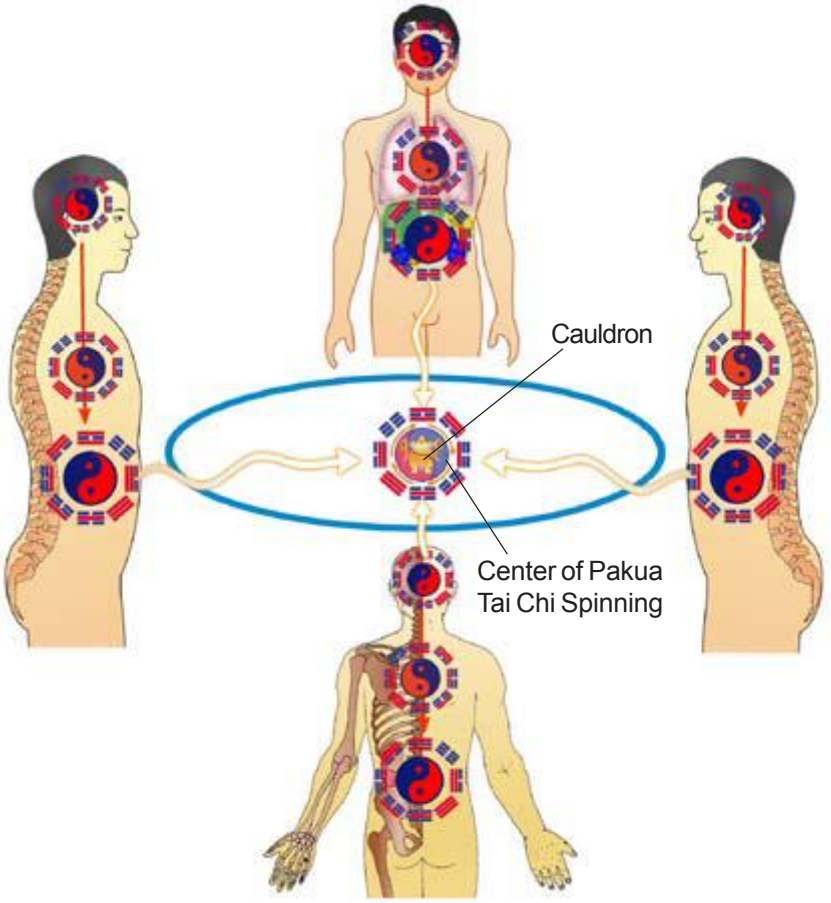


Fig. 5.65 *Draw all the sense into the center of the Pakua and Tai Chi.*

Expanding the Pakua in the Universe.

The power of the symbol is the power of the throat, the power of the word. The forces of the universe are Yin and Yang forces and the kua is a very ancient symbol of power. When you project the pakua out, using the pakua breathing, you connect to the Yin and the Yang power in the universe. When you breathe to the kua out there in space and connect to it, you will feel it connect to the kua in your abdomen as well.

Fig. 5.66 *Pakua in the Universe*

Fig. 5.67 *Feel the Pakua Breathing and Pulsating.*

1. Start chanting Kan-Li-Chen-Tui-Kun-Ken-Sun-Chien touching each of the kuas as you chant them. Continue to do this with only your mind, saying the name of the kua and holding the symbol in front of your eyes. Then spiral the Tai Chi symbol from the bottom to the right and up, chanting it and spiraling with your hand, eyes and mind. Continue to spiral with your mind and eyes only. Feel that the energy is drawn inward and the Tai Chi symbol is spiraling and changing to violet light.
2. Activate the facial pakua. Chant each of the symbols and point to them on your face; Kan-Li-Chen-Tui-Kun-Ken-Sun-Chien. Do it several times and make then the Tai Chi symbol on your forehead: Tai Chi, Tai Chi, Tai Chi, spiraling with your fingers over the third eye area. Feel the energy drawn into the center of the forehead, drawing the senses inwardly to the senses control and connecting down to the lower pakua. On their way down they collect the energy from the organs as well.

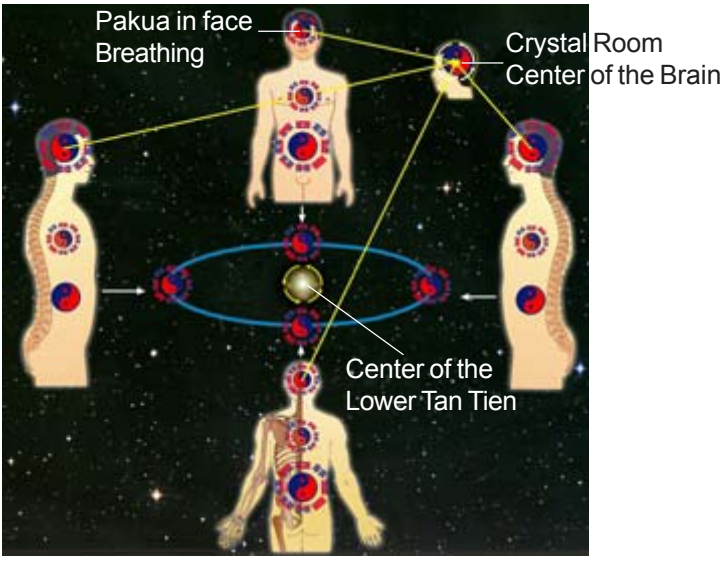


Fig. 5.68 *Four Head Pakuas*

3. Chant now Yin-Yang, Yin-Yang, Yin-Yang. Contract with Yin and expand from the forehead out with Yang. Use your fingers to point the direction of the energy, in and out.
4. Rest. Smile, feel the Tai Chi very deep inside you spiraling and chant Tai Chi, Tai Chi, Tai Chi, Tai Chi. Feel the facial pakua go into your head.

5. Become aware of the Kan symbol. Picture the Kan symbol and project it out down all the way to the galaxy. Chant Kan, Kan, Kan. Chant and picture the Yin-Yang-Yin lines and feel that the power is going out all the way to outer space.

   Start then with the Yin-Yang breathing. Inhale, Yin contracting with bright violet light, exhale, Yang expanding with bright red light. Inhale, contracting, exhale, expanding. Feel the kua of the facial pakua and the abdominal pakua breathing and at the same time, feel the kua in the universe breathing. Picture the Yin-Yang-Yin very clear in your mind as well as very far away in space. Exhale, hold your breath and feel the symbol breathing. Inhale, breathe without breathing and feel the connection with the kua out there. Keep on breathing in this way until suddenly the kua out there comes to you and enforces the Kan in your abdomen.
6. Repeat the same procedure for Li, sending it out, up into the universe, for Chen sending it out into the space on your right side, Tui to the space on your left side, Kun to the space upper left, Ken to the lower left side, Sun to the upper right side of the universe and Chien to the lower left side of the universe.
7. Now picture all the kuas together and repeat their names very slowly: Kan-Li-Chen-Tui-Kun-Ken-Sun-Chien. Rest. Feel the universal pakua covering you. Feel this pakua breathing and pulsating together with your pakua in the abdomen and on your face, drawing the energy back into the lower pakua, into your center. Sit back and smile to the pakua inside you and to the pakua in the universe. Rest, concentrate and condense all the energies in the cauldron.

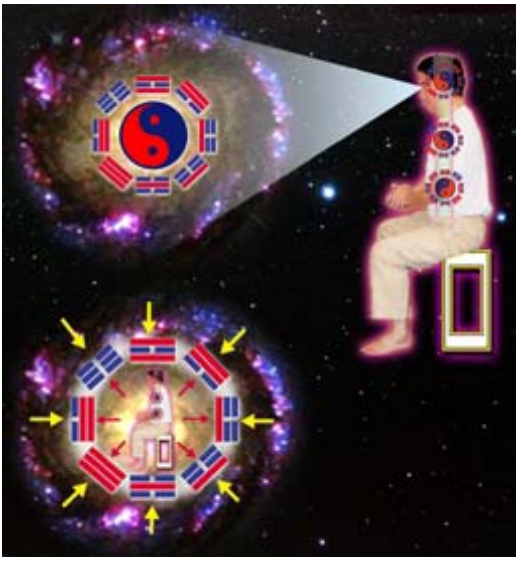
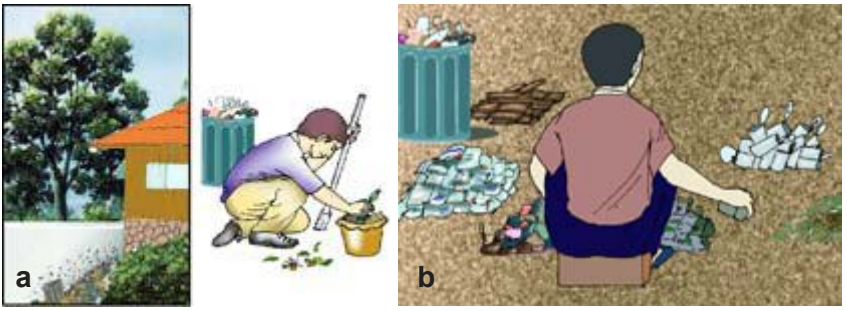


Fig. 5.69 *Feel all the Pakua and Universal Pakua breathing and pulsating. Feel a big Pakua cover you, breathing and pulsating.*

Formula Two: Transforming the Negative Emotions of Each Organ into Pure Life-Force Energy

Taoists reason that the negative emotions can be transformed to become our life-force and position energy. Therefore to expel or suppress unwanted, negative emotions is to expel or suppress life-force. Rather than suppressing them, you gain more by composting, recycling or transfering the negative into positive energy and experiencing these emotions. This means you permit them to emerge, observing and accepting them, but do not let them run wild or trigger other negative emotions. Instead transform them not only into useful life-force energy, but also into another, higher consciousness that is your spiritual energy.



a.*Pile all the garbage together, just like mixing all the emotions together.*
b.*Separate the garbage, just like separating emotions & transfer them.*

c.*Recycle and compost.*
d.*Recycling the garbage into compost and growing flowers and vegetables.*
e.*Eating the food grown from the compost.*

Fig. 5.70 *Transforming the Negative Emotions*

In the Taoist cosmology, the emotions originate from the vital organs, which correspond to the Five Phases of energy. They are also the reservoir of spiritual energy. By transforming the negative emotions in the organs, you are nourishing the spirit of that organ. Fear originates in and is stored in the kidneys, anger and frustration originate in and are stored in the liver, impatience, hastiness and hatred originate in and are stored in the heart, sadness and depression originate in and are stored in the lungs and worrying originates in and is stored in the spleen.

In the Tao, the main idea is to find a balance between the positive and the negative emotions. The negative emotions are like weeds, they are always there, and one could never totally get rid of them. The other point is that the soil needs them as fertilizers and they also help hold the soil in place. But at the same time the danger is that they will take over the garden if we don't control them. We need to cultivate the plants we want (our good virtues) to prevent the weeds from taking over the garden. It is the same with the negative emotions; they should only be kept in balance with the positive ones and one shouldn't waste time trying to get rid of them altogether. The work should be done on the positive emotions, constantly cultivating and nurturing them in order to grow the good virtues and to keep the right balance with the negative emotions. Negative emotions breed negative emotions and positive emotions breed positive emotions.

Fig. 5.71 *Yin and Yang balance negative and positive emotions but they do not get rid of them.*

We work in this formula with the counteracting or controlling cycle and we use collection points to gather and neutralize the negative emotions of each organ. We then blend the emotional energies together in the pakua, transforming them into pure life-force.

Fig. 5.72 *Keep on cultivating the positive emotions.*
Do not let the weeds out grow the vegetables.

Practice:

1. Preparation

When you begin, first do Formula Two and then continue with this practice.

a. Sit properly on a chair and feel yourself aligned with the forces.
b. Do the crane and turtle neck and the spinal cord breathing
c. Smile down and generate the qualities of loving energy from the heart. Breathe down radiance to the heart making it feel soft in the heart.
d. Be aware of the Tan Tien Chi and the front pakua, the pakua on your face, and the universal pakua. Feel them all breathing together. Feel all your senses and mind turned inwards to the cauldron. Turning the senses inward initiates the training process of inner observation. In developing the ability to focus inward – to smell, listen, taste, see and hear the organs and their activities – and to observe your negative emotions without predetermined judgments, you have the opportunity to develop your true nature.

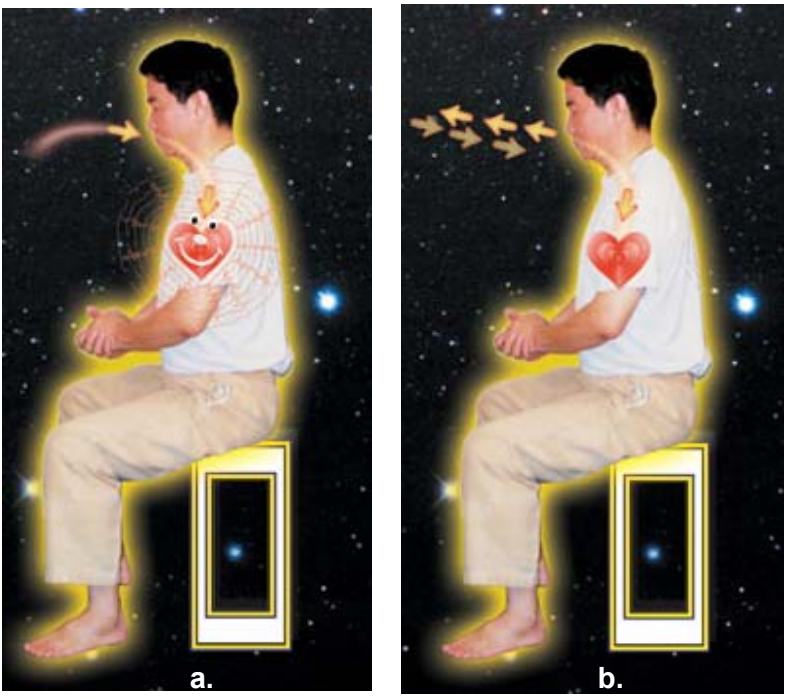


Fig. 5.73 *Feel joy and happiness.*
a. *Inhale to the heart and smile to the heart.*
b. *Exhale to the heart, smile to heart and make the heart feel soft.*

2. Real Practice

A. Bring your attention to your kidneys.

Listen to the kidneys, observe your kidneys. Be aware of any fear in the kidneys. Accept your fear; smile to the heart and let the love radiate to the kidneys. Be aware of the Kan, the water power. Chant the Kan and connect your kidneys with this energy. Let love activate the gentleness, calmness and stillness, the essence of this power, a blue light. Wrap the gentleness, calmness around your fear, balancing it and transforming your fear.

Form with your mind a collection point at your perineum and let any fear that is still in the kidneys go down to the collection point. Balance these emotions here also with the positive feeling of gentleness and calmness.

a. **b.**

Fig. 5.74
a. *Fear - Gentleness*
b. *Fear into Gentleness and Calmness*

B. Bring your attention to your heart.

Connect the tongue with your heart, speak with your heart (the spirit of your heart). Observe your heart. Be aware of any impatience, hastiness, cruelty, hatred, arrogance in your heart. Accept these feelings. Be aware of the Li, the fire power. Chant the Li and connect your heart with this power, a red light. Feel the warmth, love, happiness and inner joy, the essence of this power. Help transform the hatred into love. Wrap the love, the warmth and inner joy around your impatience, arrogance, balancing them with and transforming your impatience, hastiness, arrogance.

Form with your mind a collection point near the heart center and spiral all the negative energies that are still in the heart to this collection point. Chant the Li again and balance the emotions in the collection point.

a. **b.**

Fig. 5.75 a. *Impatience, Hastiness and Hatred*
b. *Love, Joy and Happiness*

C. Spiral, blend and transform the energy of the heart and the kidneys at the front pakua.

Spiral and breathe the energies out of the kidney and heart collection points to the front pakua. Blend and spiral them together in the front pakua. (The pure energy trapped in these negative feelings will be freed and released to the center of the pakua). Chant Tai Chi, Tai Chi, Tai Chi. Yin-Yang, Yin-Yang, Yin-Yang. Spiral these energies until they become a bright, golden energy. This energy radiates love and gentleness from the center of the pakua and your being.

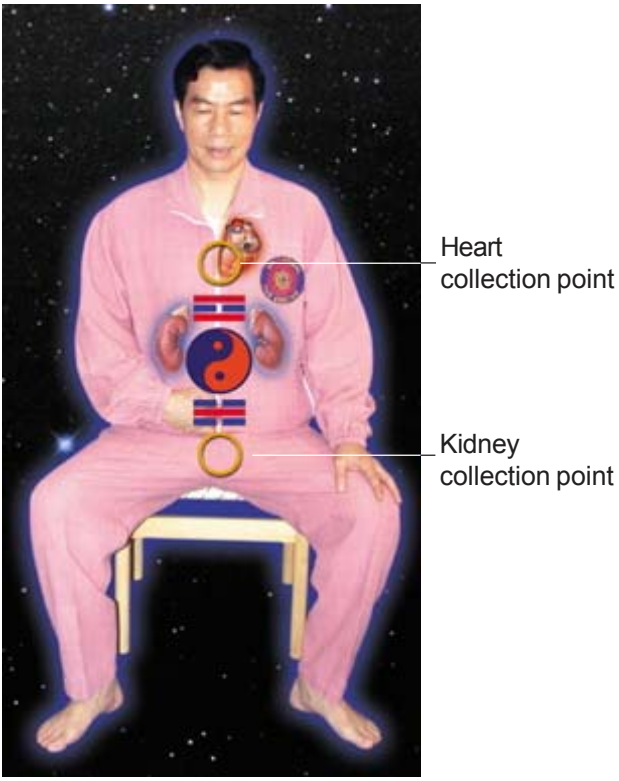


Fig. 5.76 *Spiral, blend and transform the energy of the heart and the kidneys.*

D. Bring your attention to your liver.

Connect the eyes with the liver and observe your liver. Be aware of any anger, frustration, aggressiveness, guilt in the liver. Accept this feeling. Be aware of the Chen. Chant the Chen and connect your liver with the power of the thunder and the wood, a green light. Feel the kindness, the essence of the wood power. Wrap this feeling of kindness around your anger, balancing them together and transforming your anger. Feel that you can forgive. Forgiveness is one of the most important practices of the Taoist system.

Form with your mind a collection on the left side of the pakua, on the nipple line, and spiral all the negative energies that are still in the liver to this collection point. Chant the Chen again, connect with the wood power and balance the emotions in the collection point.

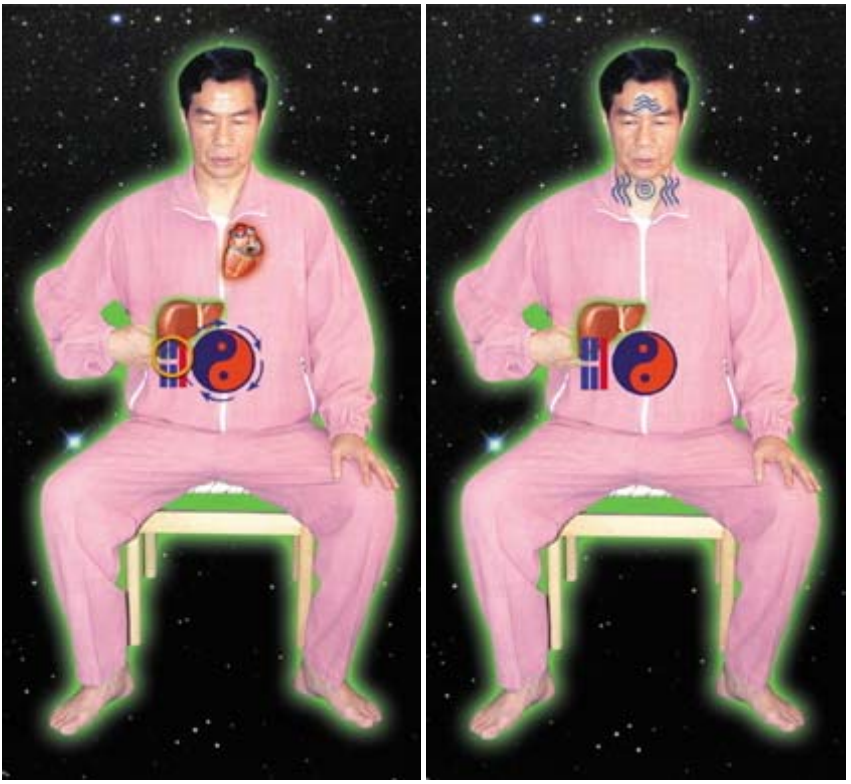


Fig. 5.77 a. *Anger and Frustration in the Liver*
b. *Love from heart and gentleness from kidneys help tranfrom the anger and frustration into kindness.*

E. Bring your attention to your lungs.

Connect your nose with your lungs and observe your lungs. Be aware of any sadness, depression in the lungs. Accept these feelings. Be aware of the Tui. Chant the Tui and connect your lungs with the power of the rain and the metal power, a white light. Feel the courage and the righteousness, the essence of the metal power. Wrap this courage around your sadness, balancing it with and transforming your sadness.

Form with your mind a collection point on the right side of the pakua on the nipple line and spiral all the negative emotions that are still in the lungs to this collection point. Chant the Tui again, connect with the metal power and balance the sadness with the courage here again.

F. Spiral, blend and transform the energy of the liver and the lungs at the front pakua .

Spiral and breathe the negative emotional energies from the liver and lungs collection points to the front pakua. Spiral and blend them at the front pakua. Chant Tai Chi, Tai Chi, Tai Chi, Yin-Yang, Yin-Yang, Yin-Yang. Use the power of pakua to balance and neutralize the sadness and anger. Feel that the pure energy that is trapped in these negative feelings will be freed and released to the center of the pakua. Continue to spiral the liver's and lungs' energies until they become a bright, golden energy that radiates kindness and courage from the center of the pakua and of your being.

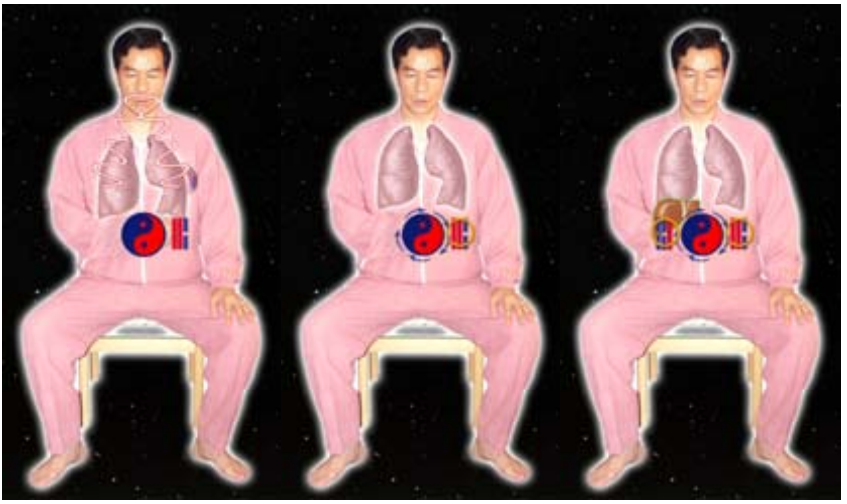


Fig. 5.78 *Spiral, blend and transform the energy of the liver and the lungs.*

G. Bring your attention to your spleen.

Connect your mouth with your spleen and observe your spleen. Be aware of any worry or other emotions you do not like in your spleen. Be aware of the Kun. Chant the Kun and connect your spleen with the earth power, a yellow light. Feel the openness, balance and centeredness of this power, the essence of the earth power. Wrap this around your worries, balancing with and transforming your worries.

Spiral your worries that are still in the lungs to the center of the front pakua, the collection point of the spleen. Chant the Kun again and then Tai Chi, Tai Chi, Tai Chi. Yin-Yang, Yin-Yang, Yin-Yang. Spiral, balance, blend and transform it with the energy that is already there into a bright, golden energy.

a ***b***

Fig. 5.79 a. *Draw attention to your spleen.*
b. *Balance, Openness and Fairness*

H. Spiral all remaining negative energy to the front pakua.

Return to the organs and the collection points, and spiral and breathe to draw out any remaining negative energy. Blend and neutralize it with the energy in the front pakua. See all the organs glowing with light.

I. Be aware of the back, left and right pakuas.

When you have time, you can chant the kuas to enforce the power of the pakuas. Let the Tai Chi in all four pakuas spiral, drawing in, blending and transforming the energies. Continue spiraling and with the spiraling and the breath you draw, suck in the energy to the cauldron, the big empty space in the Tan Tien. Now spiral the energy in the cauldron, chanting subvocally Tai Chi, Yin-Yang, condensing the energy into a bright golden energy ball, a pearl. Bring the pearl to the perineum and circulate it in the Microcosmic Orbit. As the pearl moves through the Microcosmic Orbit, feel that it attracts and absorbs the Universal (at the crown), the Cosmic Particle (at the mideye) and the Earth (at the perineum) Force.

Bring the pearl back into the cauldron. Center yourself in the cauldron and feel your senses and mind drawn inward towards the energy in the cauldron. Feel nice, calm and peaceful inside. When you have time, sit for a while and let this energy and feeling grow inside you.

Fig. 5.80 *Let all the Organ Energy flow down to the Pakua and feel Chi grow inside you.*

Chapter 6
Compassion Fire Meditation Practice of the Creation Cycle

Practice compassion through the act of forgiveness. To forgive is to let go. Always meet conflict with compassion.

The higher practice of inner alchemy is the transformation of the heart energy into love, the liver energy into kindness and generosity, the lung energy into courage, the kidney energy into gentleness and the spleen energy into openess and fairness. Combine all these energies into compassion. Compassion becomes non physical energy which we can carry with us when we leave the world. It is the love and joy we feel within.

Fig. 6.1 *Compassion Fire originates from the Heart.*

Fig. 6.2 *Through Compassion Fire,*
we transmit Positive Energy to Our Surroundings.

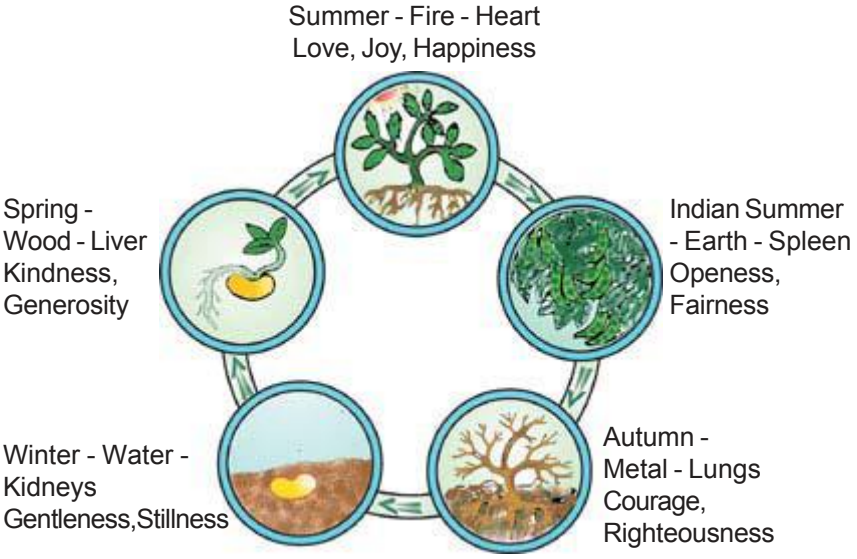


Fig. 6.3 *Creation Cycle in Nature*

Creating compassion energy begins with the creation cycle.

Activate the heart first. It is the fire and the place where the virtue energy can be combined into compassion energy. Go to the kidneys and bring the energy to the collection sphere. Continue with the liver, the heart again, the spleen, the lungs and bring the energy to the respective collection points.

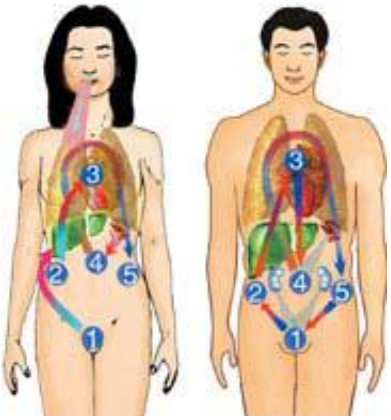


Fig. 6.4 *Creation Cycle*

In the human body the arousal state creates a new chemistry and a new vibration. This 'special' vibration is measured at a frequency of 8Hz/Sec. 'As in the macrocosm, so it is in the microcosm'; hence if we make love, then all cells and the DNA actually make love as well.

The DNA cross over, like two serpents intertwining in an erotic embrace. They make love and they give birth. Any of the cells that do not 'reproduce' will eventually die.

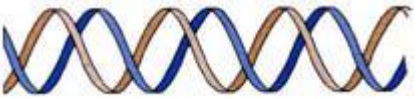


Fig. 6.5 *When we feel love and arousal energy, the DNA crosses over and makes love.*

The two vital states are arousal, leading to orgasm and compassion are inextricably linked to love. When this 'love-vibration' reaches the pineal gland, a new hormone is produced. This in turn creates whole body conductivity. If the vibration is above or below the 8Hz/Sec. frequency, this process does not occur. Only when you feel the waves of orgasmic vibration and unconditional love for the self and others can the process be activated.

Some practices just want to open the heart by temporarily letting us feel love and kindness. The heart is drained through all kinds of giving and donations.

Worldly desire and many businesses work on activating the sexual desire and then draining it out.

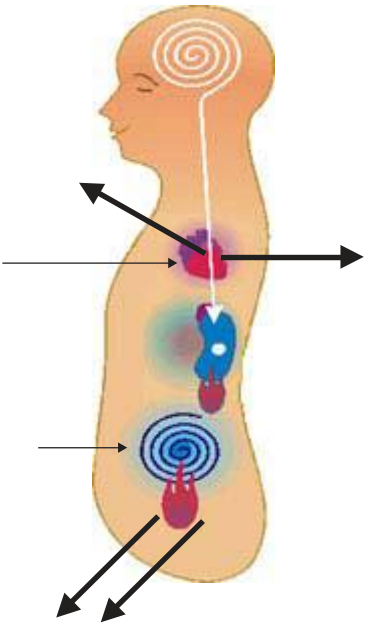


Fig. 6.6 *When the Heart is temporarily open and Sexual Desires activate, these forces will drain us out.*

One Lasting Energy is the Combination of Compassion Energy and Orgasmic Energy

Heart Energy

1. Heart energy is immaterial. When activated it will change into love, but love does not last long.
2. When all the good virtue energy from all the organs combines together into one energy, it becomes compassion energy; it will stay in you longer, but will still disperse.

Sexual Energy

1. Sexual energy when activated from material into immaterial is powerful, but will not last.
2. When the sexual energy is aroused and changes into orgasmic energy, it can charge all the organs, glands, senses and combines into one energy; this energy will stay longer but still will disperse. Orgasmic energy combined with compassion creates one long lasting energy.

After the orgasmic energy has charged all the organs and created the multi-orgasm energy, it can then be combined with the compassion energy at the Tan Tien. This creates the one energy that lasts the longest.

When we are aware of the cosmic galaxy and expand our combined energy of compassion and orgasm through the universe, it multiplies and flows back to us and we will be in touch with universal compassion and unconditional love.

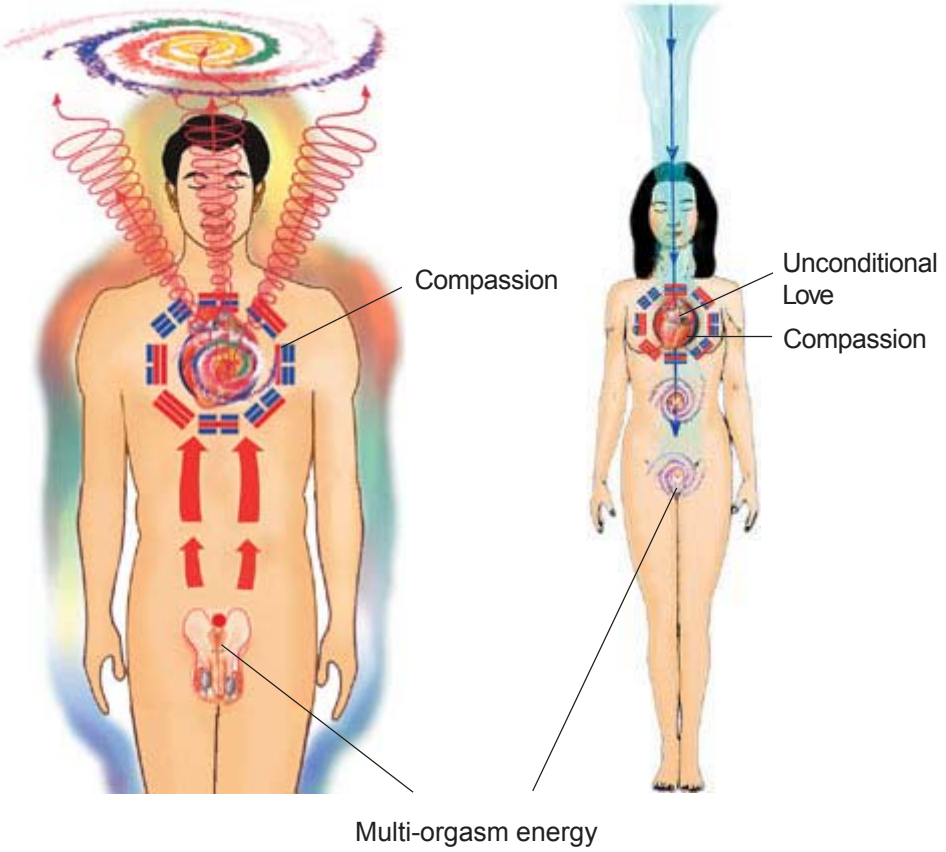


Fig. 6.7 *Through cultivating compassion energy, we can eventually build the one lasting energy.*

Practice of Creating the Compassion Fire and Multi-Orgasm

Compassion originates from the Heart

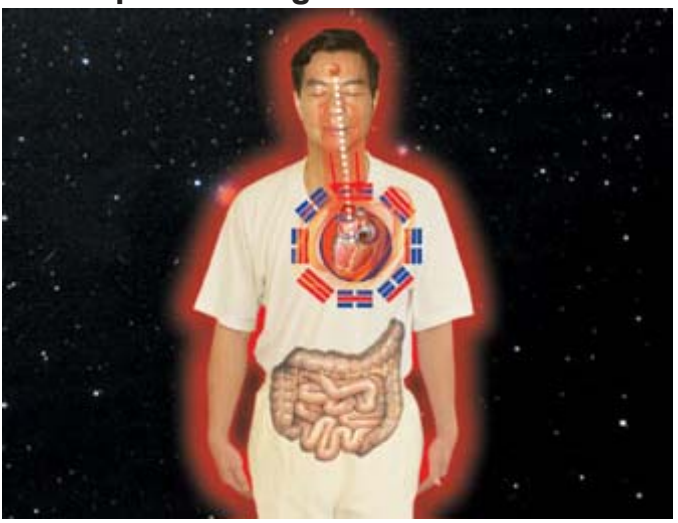


Fig. 6.8 *Smile until you feel the heart soft with love, joy and happiness.*

We can connect with the Universal Love.

1. Be aware of the Tan Tien and the universe and feel the unconditional love flow down.

Fig. 6.9 *Smile to the heart and the small intestine, to make the heart feel soft. Feel the heart pakua spiral.*

2. Smile to the spleen and let the love, joy and happiness from the heart activate the openness and fairness.

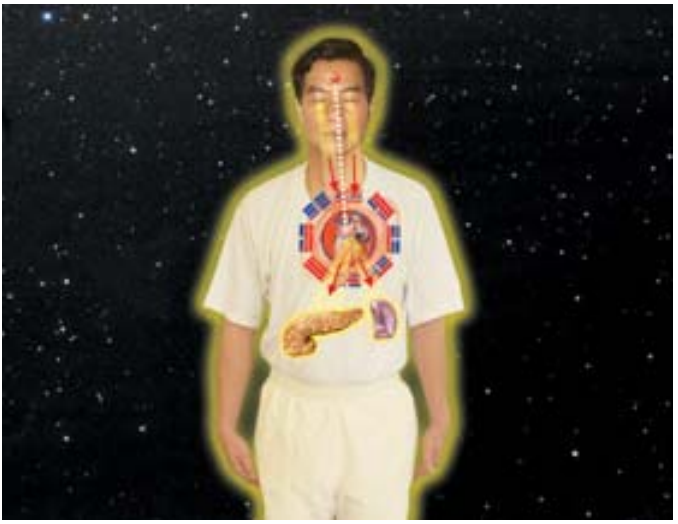


Fig. 6.10 *Let Positive Heart Energies activate Positive Spleen Energies.*

3. Let it flow back to the heart pakua and spiral, blend together and feel the yellow light flow from above and flow down to the heart.

Fig. 6.11 *Blend the Two Energies with Universal Energies.*

4. Smile to the lungs and the large intestine. Send love from the heart to the lungs to activate courage and righteousness.

Fig. 6.12 *Let Love and Joy from the Heart activate Positive Lung Energies.*

5. Let it flow to the heart, spiral and blend with love, joy, happiness, openness and courage. Blend the three energies into one energy, and feel the white light from above flow into the lungs and the heart.

Fig. 6.13 *Blend the Three Energies into One Energy.*

6. Smile to the kidneys and let the love of the heart activate the gentleness, softness and calm in the kidneys.

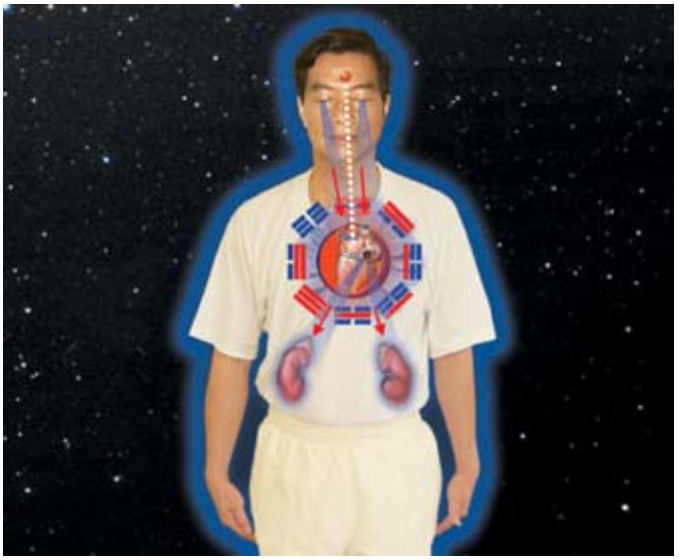


Fig. 6.14 *Let Love and Joy from the Heart activate Positive Kidney Energies.*

7. Let the gentleness, softness and calm in the kidneys flow into the heart. Blend and spiral into one energy.

Fig. 6.15 *Blend Positive Kidney Energies with the Compassion Energy in the Heart.*

8. Smile to the liver and gall bladder. Let the softness and the love from the heart flow down to activate the kindness and generosity of the liver.

Fig. 6.16 *Let Love and Joy from the Heart activate Positive Liver Energies.*

9. Let the kindness and generosity flow to the heart, spiral and blend in the heart to become compassionate; be aware of the green light flowing from above.

Fig. 6.17 *Blend Positive Liver Energies into the Compassion Energy.*

10. Smile to the heart and feel all the good virtuous energy from all the organs flow into the heart and spiral and blend into compassionate energy.

Fig. 6.18 *All the Organs' Positive Energies blend with the Heart to create the Compassion Energy.*

11. Your compassion rises up. Be aware of the galaxy, the cosmos, and expand your compassion through the universe. The universe allows us to be in touch with the universal compassion.

Fig. 6.19 *Expand our Compassion to be in touch with the Universal Compassion.*

12. Let them blend and multiply, and flow back to enhance you. You feel your whole body to be filled with the universal compassion. You have such abundance, it overflows.

Fig. 6.20 *Let the Universal Compassion within us overflow.*

Multi-Orgasm Energy Smile to the Sexual Organs

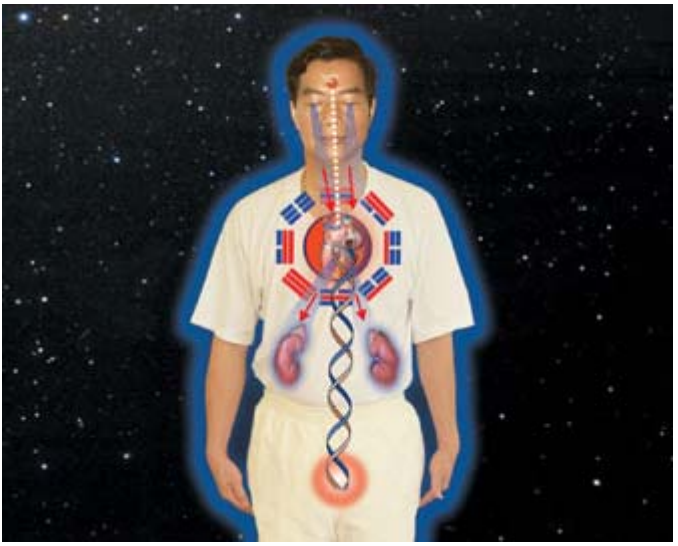


Fig. 6.21 *Smile down to the Heart and feel warm Energy from Heart flow down to Kidney and the Sexual Organs.*

1. Be aware of the sexual organ and use your hand to cover the sexual center. Smile and feel the fire from the Tan Tien flow down.
2. Recall the time when you were with your loved one and the high orgasmic feeling. Guide the orgasmic energy up to the kidneys, and feel the kidneys charge with Chi and orgasm.
3. Guide the orgasmic energy spiraling up to the small and large intestine, liver, spleen, pancreas, stomach, and up to the lungs, and heart. Continue up to the thymus, thyroid and parathyroid and up to the brain and the senses. Charge them with orgasmic energy, and let the Chi flow back down to the sexual organs and blend and spiral into one multi orgasmic energy.

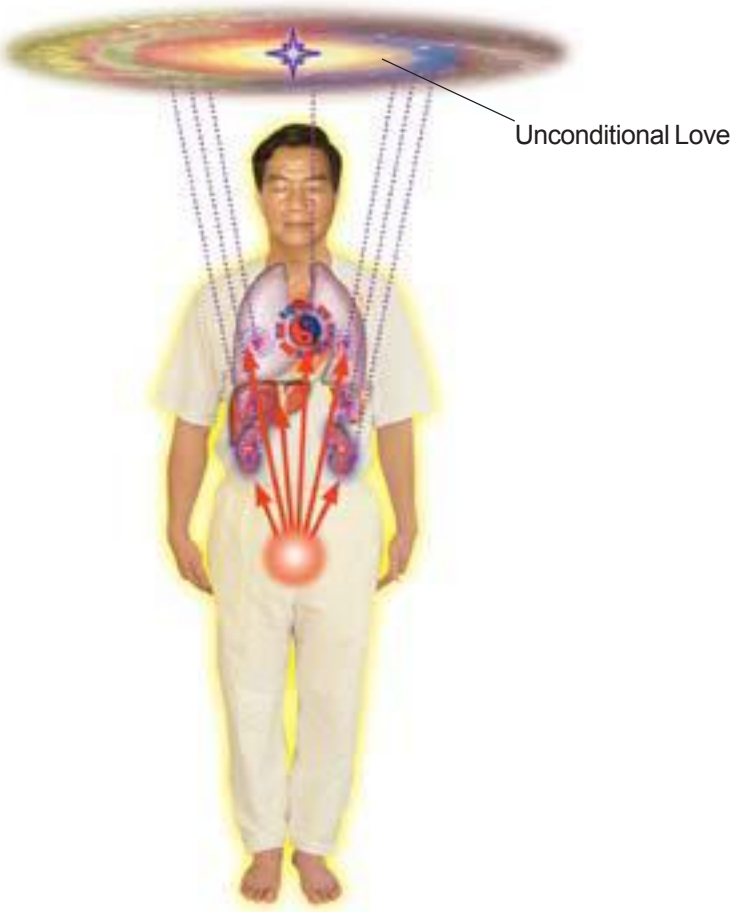


Fig. 6.22 *Bring the Orgasm up spiraling up to the organs.*

4. Be aware of the Muti-Orgasmic Energy in the organs and bring them up to the crown and continue spiral up to the Universe. Let the orgasm multiply and be aware of the Cosmic Orgasmic and let it flow down to the crown and feel all the cells fill with Cosmic orgasm and flow into the heart then down to the sexual organ filling them with compassion and Muti-Orgasmic Energy.

Universal Compassion: Your compassion arises up. Be aware of the multi-orgasm sexual energy and feel it combine with the compassion into one energy at the Tan Tien. Be aware the cosmos galaxy and expand your compassion through the universe. The Universe puts us in touch with the universal compassion.

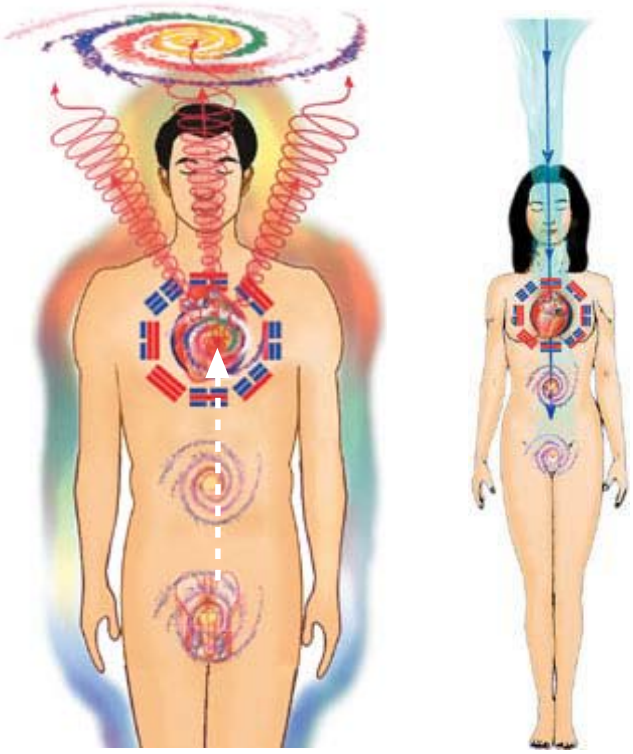


Fig. 6.23 *Universal Compassion*

This compassion practice is the major practice for all the Fusion and Kan & Li practices. The compassion fire is the most important energy of the transformation and will be use in all the practices.

Practice compassion through the Act of Forgiveness.
To forgive is to let go.
Always meet conflict with compassion.

Fig. 6.24 *Be aware of the people that you feel resentment toward.*

Fig. 6.25 *People who make you feel angry.*

Fig. 6.26 *People that you hate or people who hate you.*

Fig. 6.27 *People who hurt you or people who have been hurt by you.*

Fig. 6.28 *Send out the abundance of compassionate energy that you have from the universe, to fill the person and to forgive whatever he/she did to you.*

Oneness with Universe (Oneness with God)

Fuse Inner Positive Energy with Universal Energy through Turning the Dial

In Fusion of the Five Elements, the collection points were used to gather and store the energy of the organs. From the collection points in the body, the energy was drawn down into the pearl. Now, in Cosmic Fusion the collection points are expanded to encompass the Energy Body and the Universal Aura body. So, not only are we fusing the emotional energy of the physical body (negative emotions, senses and thoughts), but now we fuse the energy of the Energy Body and the Universal Body. This creates a much more complete practice and a highly refined pearl of energy. Fusing the elements is the secret to internal alchemy.

You can think of the different collection points like ingredients for a delicious soup. The more energy we can collect, the more spices we have for our soup. Alchemy is like cooking. What creates a really good soup or food is a combination of ingredients. Alchemy is about fusing the elements at our disposal to create balance and harmony within ourselves and the world we live in.

In the beginning of the fusion practice, it seems intricate and detailed. Once you get used to the formulas it is a very easy and simple practice. Learning a new recipe always takes some time and study, but once you have it in your mind, it is easy. The same is true with the fusion practice.

Forming the Collection Points

The collection points were introduced in Fusion of the Five Elements as a way to collect the negative energy from the organs. This energy was then directed into the pearl through the pakuas. In Fusion of the Five Elements the collection points were associated with the energy of the infants and the protective animals. In Cosmic Fusion, we are going to expand this practice by forming the collection points of the Energy Body and the collection points of the Universal Aura Body. These collection points are a reflection of the collection points in the physical body.

For example, the physical heart collection point is located at heart center just behind the sternum. The Energy Body collection

point is located at the Lower Tan Tien at the top of the navel. And, the Universal Aura body collection point is located above the head in the Universe.

These collection points are utilized to create a powerful method of fusing all the elements into the pearl. Once all the collection points are established, the Energy Body and Universal Aura body collection points are rotated. This way there are different colors at the various collection point sites. For example, the collection points at the Energy Body are turned clockwise – the green is on the upper point, red is at the left, white is at the bottom, and blue is on the right. The Universal collection point is rotated counterclockwise – white is the upper point, blue is at the left, green at the bottom, and blue at the right. Creating different colors at each of the collection points takes the fusing process to another level of intensity. These colors are then mixed and blended into the cauldron and formed into a powerful pearl.

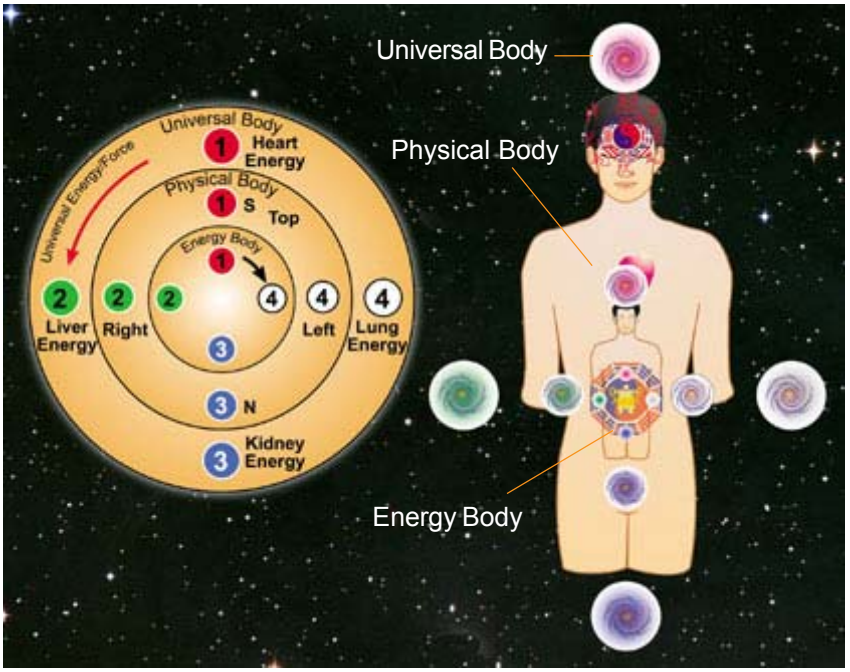


Fig. 6.29 *Fuse inner position energy with universal energy.*

The Concept of Fusing Inner Position Energy with Universal Energy

The fused collection points are utilized to create a powerful method of fusion all the elements into a pearl.

There are four collections points of the elements; fire, water, metal and wood of the physical body, energy body and universal body.

Once all the collection points are established in the Physical Body, the Energy Body and the Universal Body we use a dial to assist in rotating the patterns of energy.

- Understanding that the physical body is more dense and stable; the collections points are fixed.
- The energy body is not fixed and is very sensitive to external events and the universe. This can be changed.
- Universal Energy is always changing and is not fixed. As the planets and the body's celluar matter, nuclei, electrons, protons all move at different speeds; we use the differences to create energy.
- The Dial: We use a dial of color to understand the different patterns of energy that can be created. Fusing different energies will generate more intense energy and a powerful pearl.

  Moving the color dials assists the imaginative mind to connect to the patterns of energy. It is a formula, a pattern for the mind to follow.

  In this approach we fuse inside to outside universe and outside to inside. You mix fire and water first, then wood and metal together. You can do it in pairs of points and then all four points, creating four balls of fused energy which are then spun very fast above the cauldron where they fuse to form a pearl. You can reproduce as many pearls as you want.

  The intensity can make you feel a oneness with the universe as part of you becomes part of the universe and universal forces.

Activate the Three Fires

The Abdominal, the Kidney and the Heart Fires.

Tan Tien Fire: Bring the fingertips to the navel. Feel the abdominal fire warming and opening the Lower Tan Tien. The abdominal fire elicits deep awareness within the body. This awareness has the power to expand and connect to the entire Universe.

Kidney Fire: Bring the palms to the kidneys, the fingertips to the door of life. Feel the warmth in the kidneys, like a fire under the sea.

Heart Fire: Bring the hands to the heart, palms facing the chest. Visualize a glowing ball of light in the heart. Feel the warm radiant energy of compassion shimmering through the chest. Make the heart soft. Remember the Yin within the Yang.

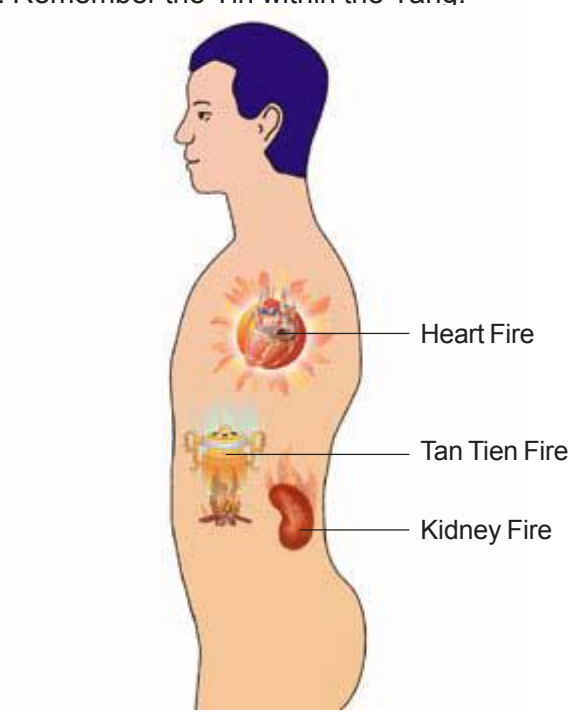


Fig. 6.30 *Activate the Three Fires.*

Create the Front Pakua just behind the navel. Control the formation of the front pakua with assistance from the eyes, ears, nose and mouth. As you balance the energy, let the pakua glow with light.

Chant the Eight Forces by sounding all the trigrams. Visualize the trigrams forming the front pakua. Chant the proper Yin and Yang combinations with each trigram.

Form the Back Pakua: Let it reflect off the front pakua like a mirror. In a similar manner form the **Left** and **Right Side Pakuas**. Feel the energy starting to spiral and blend into the center of the abdomen.

Form the Facial Pakua: The facial pakua is the reverse direction of the abdominal pakua because we are looking at the pakua in front of the face. Feel the energy of the senses and the face gathered and collected. If you have time, chant the eight trigrams of the facial pakua.

Form the Universal Pakua: Feel the immensity of this pakua surrounding your entire body in every direction. Again if time permits, chant the eight directions, forming the pakua.

Be aware of the heart and all the good virtue energy and fuse them together into compassion fire in the heart.

Be aware of the orgasm energy and multiply then to the organs and finally combine them into the heart and becoming one compassion fire of unconditional love.

Form the Collection Points in the Physical Body: Feel the red light in the heart collection point, the blue light in the kidney collection point, the green light in the liver collection point, the white light in the lungs collection point, and the yellow light in the spleen collection point.

Remove Negative Energies from the Organs:

Use the senses to help locate the negative energies in the organs. Look deep inside; smell deep inside; taste deep inside. Locate anything you find that you do not like.

Form the organs' collection points. Spiral the negative energies into the collection points spiraling them into the front pakua where they will blend and transform.

As you spiral the energies from all four Pakuas into the cauldron, you are concentrating them in the cauldron of the body. The cauldron, as the center point of the human being, is the center that contains the essence of all sense, organ and gland energy. The energy directed to the cauldron is transformed and stored for later use in the development of the soul and spirit bodies.

Using the Dial: Feel the reflection of the colors in the collection points in the energy body that surrounds the cauldron.

Feel the outward reflection of the collection points into the Universe. The red ball of light above the head, the blue ball of light deep below the feet, the green ball of light to the right, and the white ball of light to the left.

1. Turn the collection points of the energy body clockwise one station. Turn the collection points of the Universe one station counterclockwise.
2. The physical body collection points always remain stationary. Now the color sequence is red at the physical heart collection point, green below it in the energy body, and white above in the Universal collection point. Below, the physical collection point is blue, the energy body is white, the Universal is green, the right physical body collection point is green, the energy body is blue, and the Universe is red, and on the left the physical body is white, the energy body is red, and the Universe is blue.

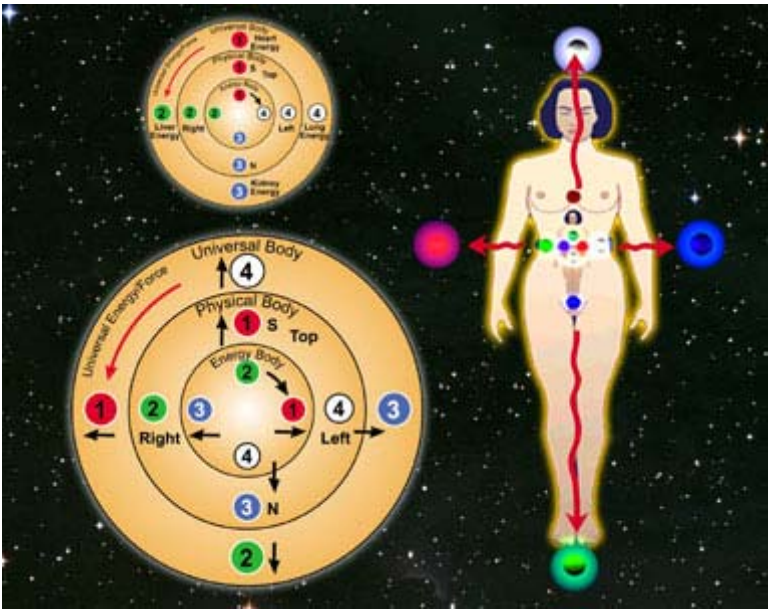


Fig. 6.31 *Fuse inner positive energy out with universal energy through turning the Dial-1.*

3. The fusion process begins here. Fuse the white energy from the energy body with the blue ball in the physical collection point at the perineum, and fuse both of these energies down to the Universal collection point with green light.
4. The same process continues with all the collection points. Next, fuse the green energy body point with the red physical body collection point, moving upward to fuse the white Universal collection point. Feel the energies fusing together above you.
5. Moving to the right side, fuse the blue ball of the energy body collection point with the green ball of the physical body, and outward to fuse with the red ball of the Universal collection point. Feel the energy fuse together at the right side.
6. Moving to the left, fuse the red ball of light of the energy body with the white ball of the physical body and moving out to fuse with the blue ball of the Universal collection point. Feel all these energies fuse together at the left.
7. Now we bring the fusion process back inside the body. Take the fused light below you, drawing it first to the physical collection point and then into the energy body collection point. Bring the fused energy above the head down to the physical collection point and then into the energy body collection point.
8. Draw the fused energy from the right back to the physical body collection point and then to the energy body collection point.

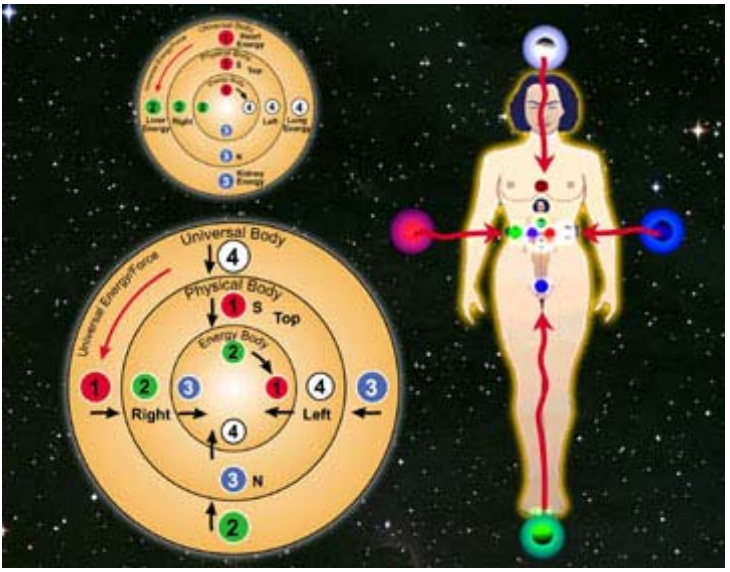


Fig. 6.32 *Fuse the Universal energy force back to inner positive energy and Energy Body through turning the Dial-1.*

Draw the fused energy from the left back to the physical body collection point and then to the energy body collection point. Allow the four balls of fused energy to spiral around the cauldron. Let them increase in intensity and speed, going faster and faster, until they blend in the middle of the cauldron forming the pearl.

9. Feel any residual energy spiral through the pakuas and fuse together into the cauldron, connecting with the brilliant pearl of white light. Feel the colors blend and fuse. This is where the alchemical process comes to life. At any time during the Fusion practice, if you feel the pearl you are working with is lost or diminished simply become aware of the pakuas spiraling into the center of the cauldron.
10. Once you feel the form of the pearl you can simpy fuse the energy from inside of the energy body out to the physical and out to the universe and back and there is no need to be aware of the different color.

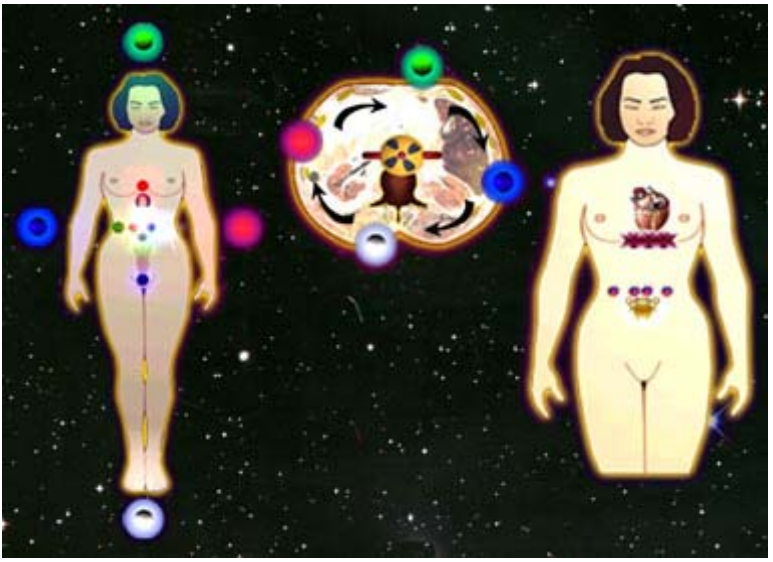


Fig. 6.33 *Four fused energy balls spiral on top of the cauldron, forming one energy pearl.*

Do as above, only the colors are changed and fuse from the energy body to physical body, to the universe and back as Four Balls, spiraling faster and fuse into One Pearl.

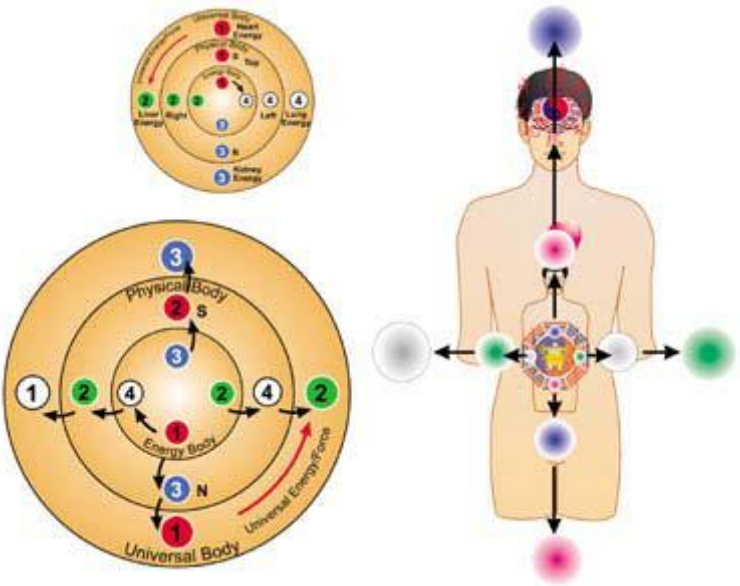


Fig. 6.34 *Fuse inner positive energy with universal energy through turning the Dial-2.*

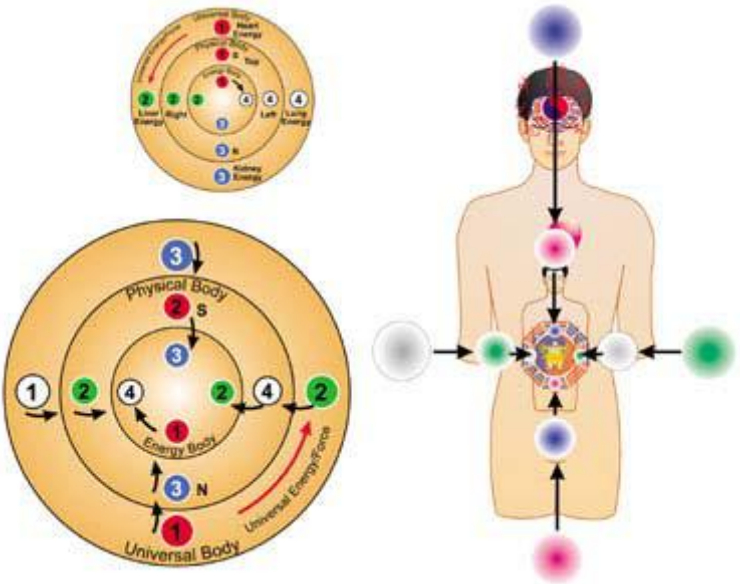


Fig. 6.35 *Fuse the Universe force back to the body and energy body.*

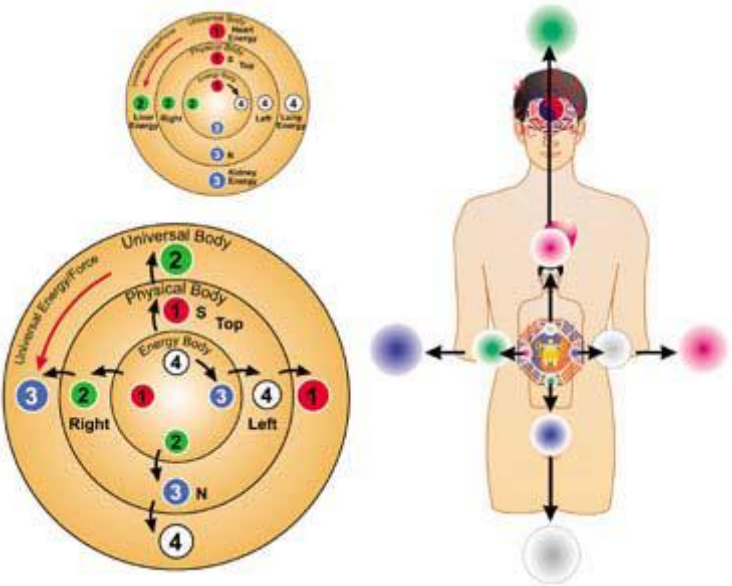


Fig. 6.36 *Fuse inner positive energy with universal energy through turning the Dial-3.*

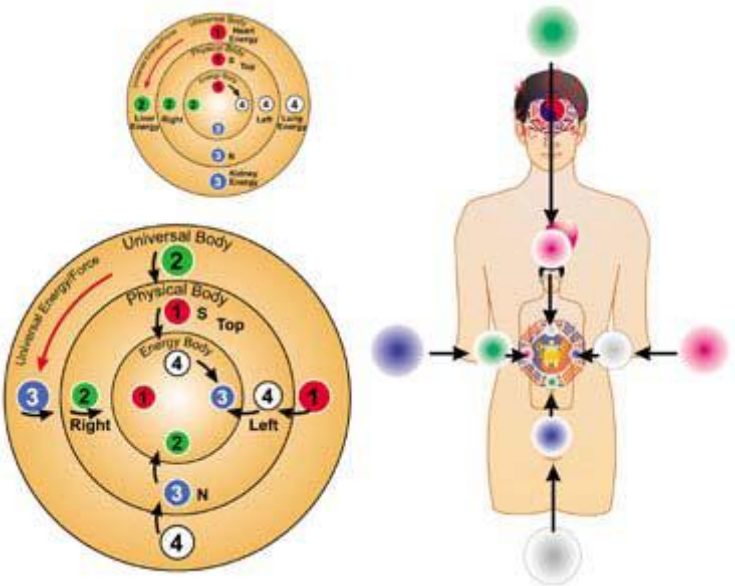


Fig. 6.37 *Fuse the Universe force back to the body and energy body.*

Do the same procedure as before using the Four Fused Energy Balls spiraling on top of the cauldron, forming One Energy Pearl as you turn the Dial. You spend more time using Dial-2 and Dial-3 positions.

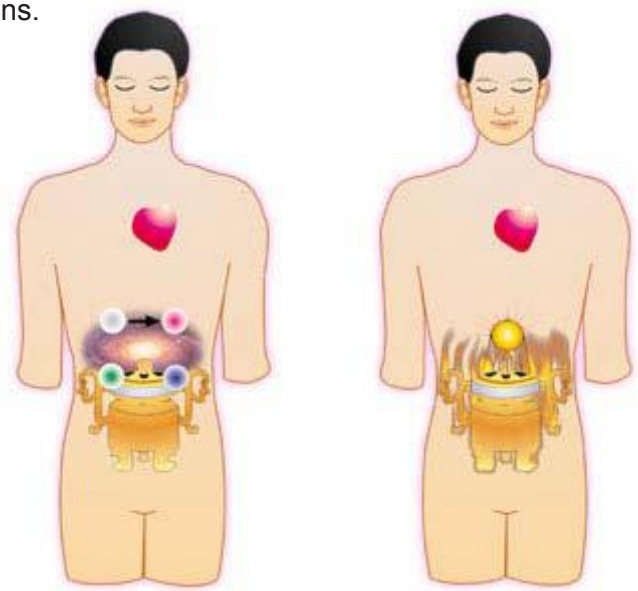


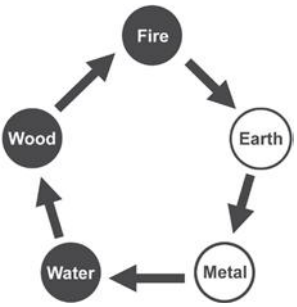
Fig. 6.38 *Forming the Cauldron and the Pearl*

Creation Cycle Foundation Practice

1. Fuse the Pearl to help activate virtue energy. The Inner Smile is the first step to connecting your consciousness to all your organs and glands. This is actually the first step of the Fusion of the Five Elements practice. It is important to remember how powerful and sublime smiling inward can be.
2. The next stage of practice is removing negative emotional energy from the organs. The negative energy is brought from each organ to its corresponding organ collection point and then to the pakua where it is neutralized. When all negative energies are brought to all four pakuas and are under control and all residual energies have been brought to the back and side pakuas, the energies are then spiraled and compressed into the cauldron. There they are formed into the pearl of energy. As you collect the energies and direct their flow to the cauldron, you feel your center point illuminate with the bright light of the pearl.

3. Be aware the energy, physical and universal collection points, fuse them together and fuse back to form the bigger pearl.
4. The pearl is capable of activating, attracting and absorbing a great amount of good virtue energy. For this reason the pearl is circulated to each organ following the Creation Cycle. After practicing Fusion of the Five Elements, the pearl is brought from the cauldron to the perineum and is then circulated in the Microcosmic Orbit.
5. When you are ready to begin Cosmic Fusion, the pearl is brought to the Heart to begin the Creation Cycle. The Heart is the beginning point of this cycle because it is in the Heart that Compassion resides.
6. At this point there is a great awareness of each organ and the energy that each one is supplying. A continuation of this awareness is necessary for properly practicing the Creation Cycle of Cosmic Fusion. It is especially important that all negative energy has been removed and neutralized beforehand; otherwise, as the virtue energy of the pearl increases, so will the negative energy as you move the pearl through the Cycle.
7. In Fusion of the Five Elements, you remove the negative emotion of fear from the kidneys, by first listening to them, because the ears and kidneys have a connection. The removal of fear from the kidneys leaves room for the positive virtue of gentleness inherent in the kidneys to grow.
8. Now, in beginning the Creation Cycle of Cosmic Fusion, you focus your smile on the virtues of joy, love and happiness in the Heart. Feel the virtues growing and purifying. It is important to develop a genuine virtue here. You can spit out words like love, joy and happiness without meaning them. But like the love that is mentioned in the Bible (1 Corinthians 13), it has to be real and true; otherwise it is just a sounding brass or a tinkling cymbal. You have to flesh it out and breathe life into it.
9. Here is the way to do the Creation Cycle of Cosmic Fusion: Feel the unconditional love of the Universe flowing down into the Heart. With this combination of virtues – love, joy, happiness, unconditional love – you can definitely transform yourself, your organs and those around you.

10. Let the positive Heart energies of love, joy and happiness activate the positive Spleen energies of openness and fairness and centeredness. Blend this with the Universal energy and feel the yellow light descending to the Heart and Spleen.
11. Let the positive Heart energies of love, joy and happiness activate the Lung energies of courage, strength and righteousness. Blend these energies with the Universal energy and see the white light from above flow into the Heart and Lungs. Let the Positive Heart energies of love, joy and happiness activate the Kidney Energies of gentleness, softness and calm in the Kidneys. Blend both energies with Universal Energy and see the blue light coming down from above into the Heart and Kidneys.
12. Let the positive Heart energies of love, joy and happiness activate the Liver energies of kindness, generosity and benevolence. Blend these energies with Universal energy and see the green light flowing from above into the Heart and Liver. You can do this meditation a few times.
13. Blend all the positive organ virtues in the Heart, creating Compassion Energy. You may manifest this as a Pearl. Move it in the Microcosmic Orbit spiralling it from 10,000 to 60,000 times a minute.



Yin movement Feeds

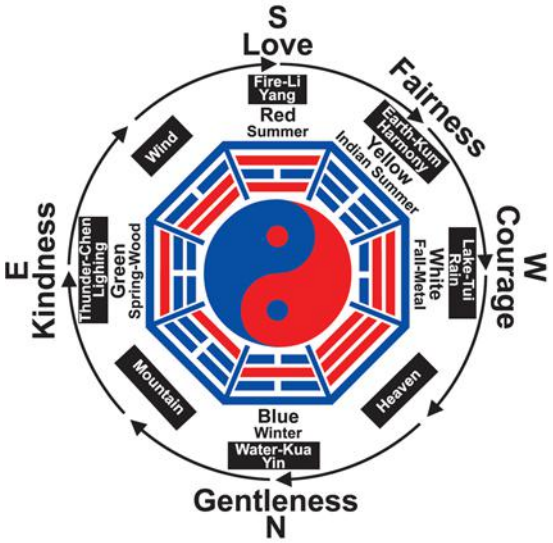


Fig. 6.39 *Creation Cycle*

14. This completes the basic Fusion practice. These steps will be repeated through the rest of the formulas in the book. In the beginning it seems like a lot of work in constructing all the pakuas, chanting, collecting the energy to fuse into the pearl. Once this formula is set up, the whole process happens very quickly. It is not necessary to do all the steps every time. You might only want to chant the trigram one time instead of three. Remember, these extra steps are there to increase the strength of the pearl and expand our consciousness to connect with the Universe. With this powerful pearl it is time to begin Cosmic Fusion with the Creation Cycle.

Begin Cosmic Fusion: Creation Cycle

1. Activate the compassion fire and multi-orgasm energy and combine them together connecting with the universe.
2. Form the pearl through the fuse from the inside to the universe and from the universe and back to the body to the form a pearl. Bring the Pearl down to the Perineum.
3. Feel the pearl connecting to the kidney energy.
4. Listen to the Gentleness Virtue of the Kidneys.
5. The negative emotion of fear has already been removed from the kidneys. The energy remaining in the kidneys is their virtue energy of gentleness. Listen quietly to the gentleness of the kidneys, and be aware of the qualities of gentleness energy: **cold, calm, blue, soft** and **silky** and **tenderness**. Enjoy these qualities. You can intensify them by concentrating on them. Bring the pearl from the perineum to the kidneys, and add the gentleness energy to the pearl at any moment when you feel the pearl weak, just form another pearl.
6. Now bring the pearl back to the kidneys collection point at the perineum, where the gentleness will grow in intensity. All of the neutralized energy that is the pearl now will take on the virtue energy of gentleness.

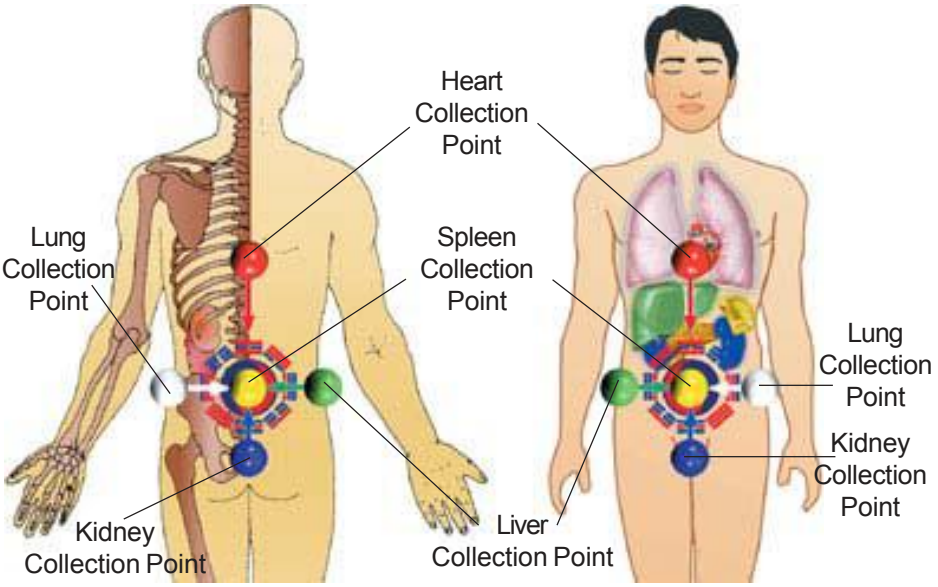


Fig. 6.40 *Front and Back Collection Points*

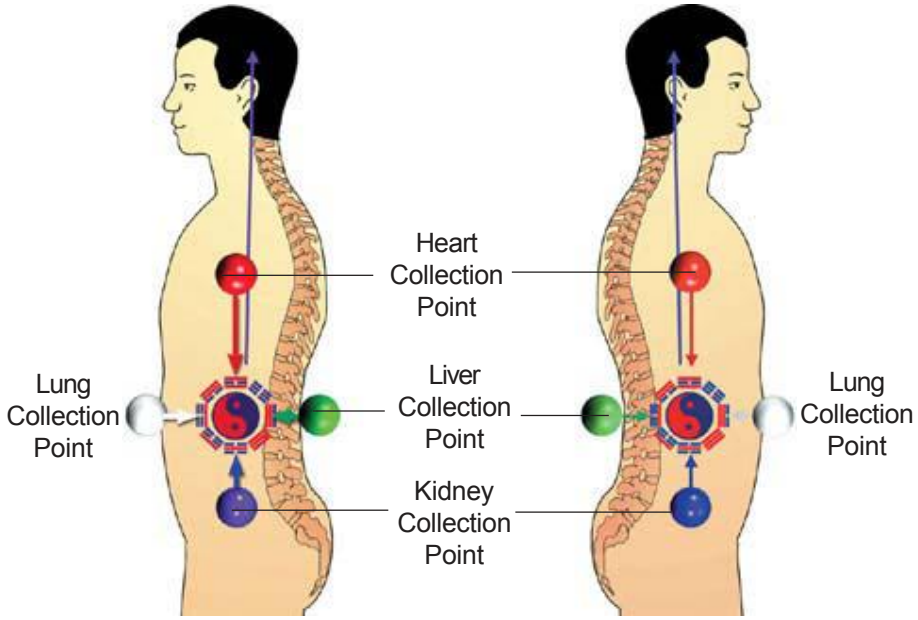


Fig. 6.41 *Left and Right Collection Points*

Direct the pearl to the liver. Gentleness energy fuses with the kindness virtue of the liver.

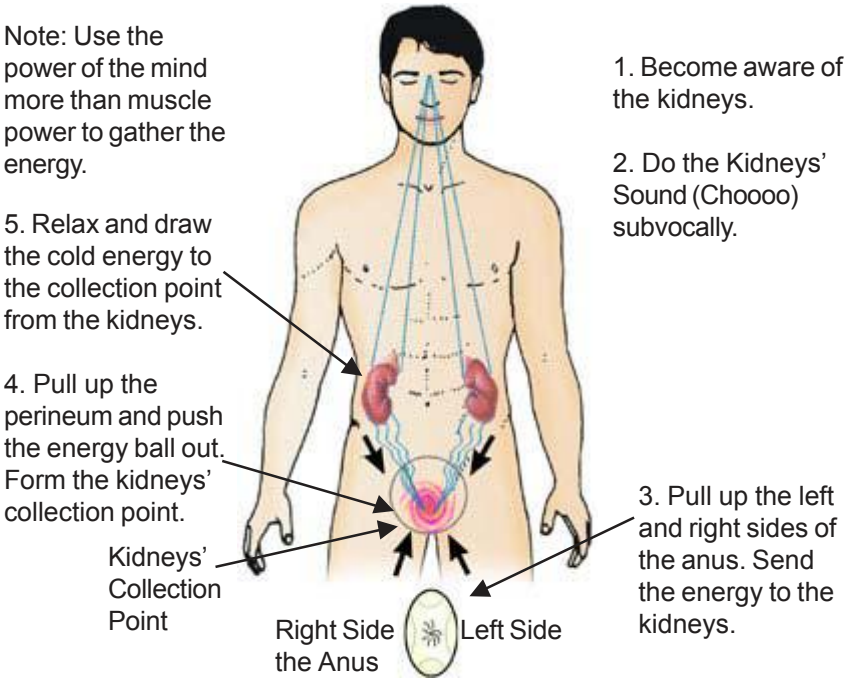


Fig. 6.42 *Forming the Collection Point to gather the Kidneys' Energy.*

7. Gentleness blends with kindness, the virtue of the liver. Look into the liver, connecting the eyes with the liver. Be aware of the kindness energy there. As you bring the pearl carrying the gentleness energy from the kidneys toward the liver, feel the gentleness energy activate and enhance the kindness energy. Enjoy the kindness energy. Feel the kindness intensify. Circulate the kindness energy in the liver. Its qualities can feel **strong, round, smooth, soft, green, sweet and fragrant, warm and pleasant**. You can feel satisfied.

8. Absorb the kindness energy into the pearl, and bring the pearl to the liver collection point (at the level of the navel and in line with the right nipple).

   Here the combination of gentleness and kindness will intensify. Remember to relax and smile. Direct the pearl to the heart. Gentleness and kindness energy fuse with love, honor and respect and joy in the heart.

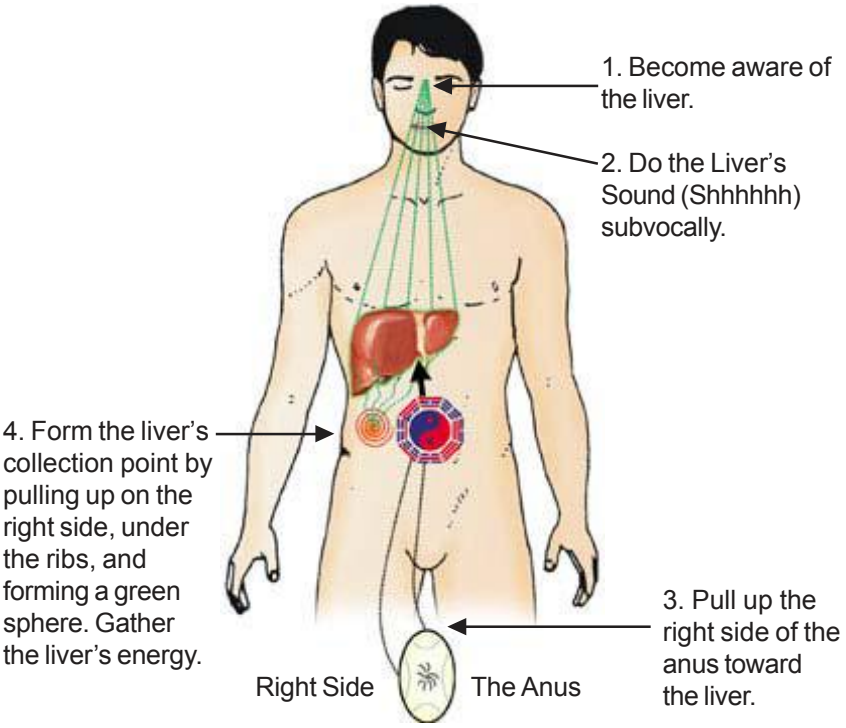


Fig. 6.43 *Forming the Liver's Collection Point to gather the Liver's Energy.*

9. Connect the tongue with the heart. Using your mind's eye and senses, allow the pearl, now consisting of gentleness and kindness, to flow up to the heart. Let the virtue energy of the pearl activate and enhance all the loving energy, joy and happiness, honor, respect and peace in the heart. These good virtues of the heart can feel **straight** and **open, bright red, warm, deep, calm, comfortable** and **satisfying**. Enjoy the virtuous feelings of the heart. The feeling will be different for each person as the energy blends. Feel the warmth and openness in the chest.

10. Let the pearl absorb the honor, respect, love and joy. Bring the pearl down to the heart collection point behind the sternum.

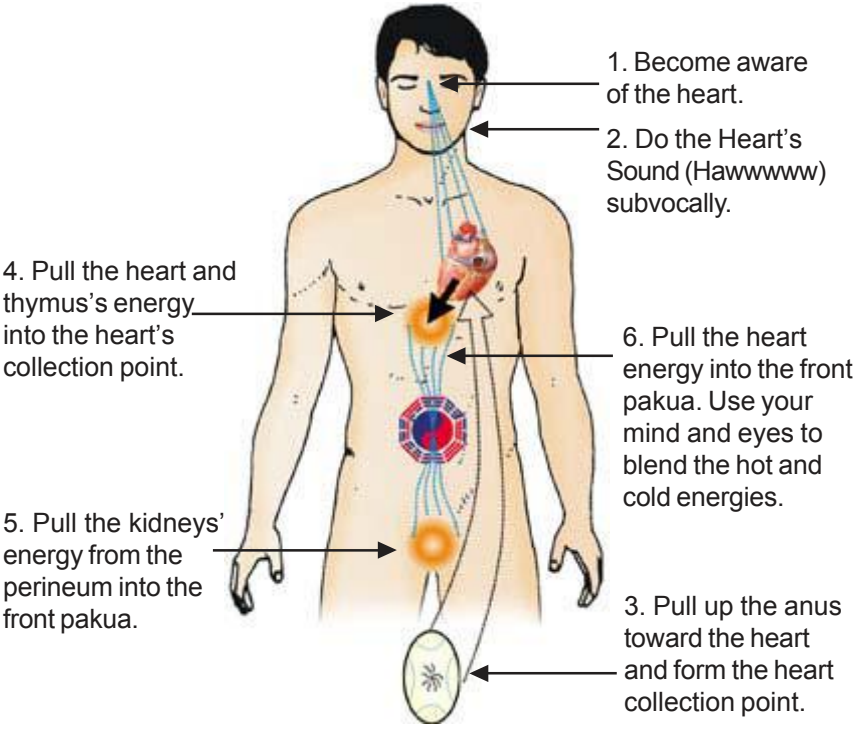


Fig. 6.44 *Form the Heart's Collection Point and blend the Heart's Energy with the Kidneys' Energy in the Pakua.*

The pearl can now blend the virtue energies of the heart in a balanced way with the kindness and gentleness energies already within the pearl. Feel the collection point glowing. Then direct the pearl to the spleen/pancreas.

Note for Women: Women should be careful when the pearl is in the heart center. As a natural endowment women tend to have more loving energy in the heart. When a woman loves she often forgets herself. This amount of love can heat up the heart center and the practice can feel uncomfortable. It is best not to remain for too long in the heart if you feel uncomfortable.

11. Be aware of the connection of the mouth with the spleen and pancreas. As the pearl arrives at the spleen and pancreas, the honor and respect, love and joy energy that is now part of the pearl fuses with the spleen virtues of fairness and openness. The fairness and openness virtues of the spleen can feel **expansive, clean, dry, bright yellow, smooth, warm, clear** and **soft**. Enjoy these feelings.
12. Let the pearl absorb the fairness and openness energy. Feel the pearl take on the qualities of the fairness and openness virtues in addition to the kindness, gentleness, honor and respect virtues that already are present there. Bring the pearl to the spleen collection point behind the navel at the front pakua.

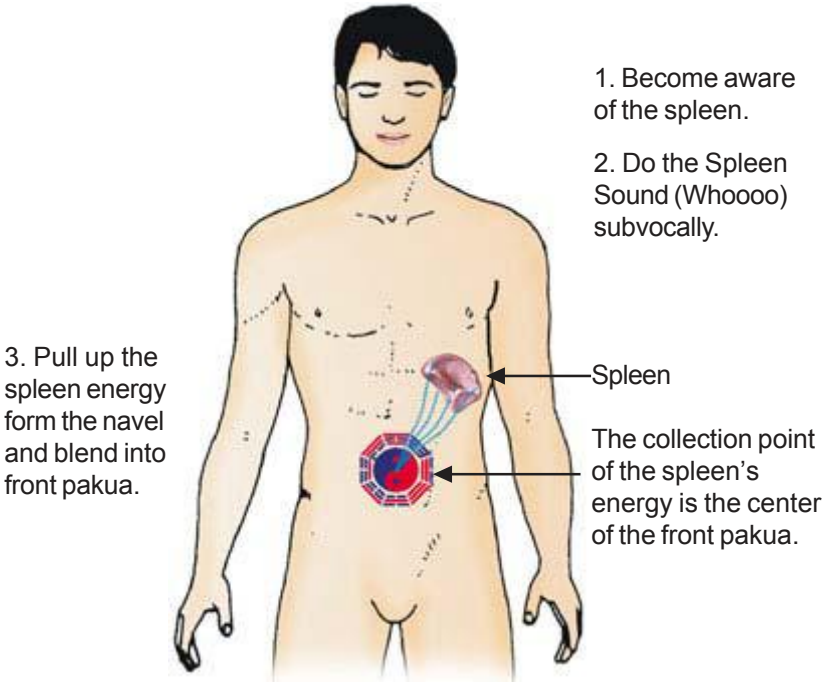


Fig. 6.45 *Gathering the Spleen's Energy Directly into the Pakua.*

Feel the fairness and openness energy intensify as it combines and blends with all the neutral and virtue energies already present in the pearl. Direct the pearl to the lungs.

13. The Energy of fairness and openness fuses with the courage and righteousness virtues of the lungs.

Connect the nose to both lungs. As the pearl arrives at the lungs, split the pearl into two pearls, one for each lung. The energy of fairness and openness that is now part of both pearls fuse and enhances the courage and righteousness energy of the lungs. When you feel righteous, you can feel **tall, straight, uplifted, comfortable, strong, firm, proud** and **satisfied**. The energy can be **fresh, bright, white** and **pure**. Enjoy the qualities of this energy.

14. Let the pearls absorb the courage and righteousness energy. Bring both pearls to the collection point of the lungs (at the level of the navel and in line with the left nipple). Feel the courage and righteousness energy intensify as it circulates in the lungs. Let the pearls blend these virtues with their kindness, gentleness, honor, respect, fairness and openness energies.

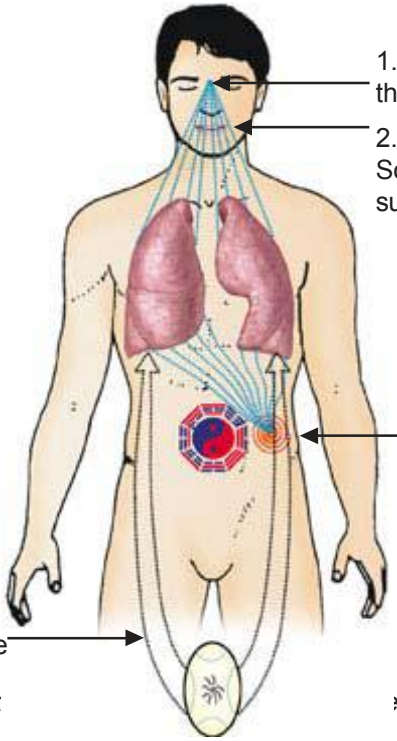


Fig. 6.46 *Forming t* *er the Lungs' Energy.*

Direct both pearls to both kidneys. Courage and righteousness fuse with gentleness: the cycle begins again at the kidneys.

15. As the pearls arrive at each kidney, the combined virtues of the pearls (especially the energy of courage and righteousness) enhance gentleness and the cycle begins again at the kidneys. Repeat the cycle two more times. As you circulate the pearl in the second cycle, you will begin to notice that as the pearl arrives at each organ, the virtues will grow by themselves. Little by little, the energy will blend more evenly.
16. For the third cycle, bring the pearl from collection point to collection point without going into the organ first. With your attention on the collection point, the energy will flow into the organ without conscious effort, and will join with the virtue energy to flow back toward the collection point. In this way the virtue energies are enhanced and increased each time you bring the pearl to a collection point. If you wish you can practice the third round of the Creation Cycle three more times simply by bringing the pearl to the collection points. Each time you blend the energy, you increase it.
17. Your energy now begins to have the quality of fine soup, with the proper combination of ingredients. Be aware of the quality of this energy. It is very special. Fuse all good virtues energies into compassion energy. Creating a pearl of compassion energy requires a tremendous amount of purified energy. Compassion energy is not just love or kindness, gentleness or openness, but is a combination of all the good virtues' energies, blended in proportion to become compassion energy. When you fuse the proportional blend of good virtue energy into a pearl of compassion energy, you will feel more centered. The energy of this pearl feels very different from the pearl you first formed. Move the compassion energy through the microcosmic orbit.
18. When you feel the pearl of compassion energy strongly, move it down to the perineum. Using your mind and senses, begin to move all of the compassion energy through the microcosmic orbit, letting its bright pearl shine as it travels along. Feel the different quality of this energy. Be aware of the loving, comfortable, very beautiful way the organs feel as the energy runs through and spreads into them, filling them with life-force energy. If you feel tired at any time, you can temporarily rest the pearl at your navel and practice the spinal cord breathing technique described in the Chapter preceding this meditation. Return your concentration to the pearl to form it again and return it

to the microcosmic orbit for circulation. Move the pearl through the microcosmic orbit 9-18 times.

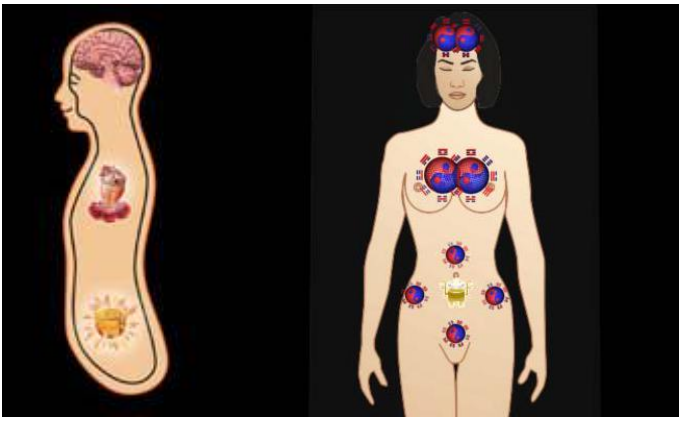


Fig. 6.47 *Circulate the pearl in the Microcosmic Orbit.*

Shoot the Pearl above the Crown.

1. As the pearl runs through the Microcosmic Orbit, begin to activate the Cranial Pump. Press your tongue to the palate, clench your teeth, pull back your chin and roll your eyes up toward the crown. Feel the pulsing in your heart and in your head at the crown. You can touch your pulse at the wrist to help your awareness of the pulse both at the wrist and the crown. Your mind also helps to activate the Cranial Pump.

Fig. 6.48 *Pull the eyes into their sockets.*
Roll the eyes up and look up to the crown.

2. Inhale, be aware of and squeeze the anus and then exhale quickly to push the pearl up through the crown.
3. You might be aware of a light, beam or frequency shooting out of your crown. This is the lead light first introduced in Fusion of the Five Elements. Sometimes it is called an indicator light because it will indicate how high up your pearl will be able to go. Just as a light is used to guide helicopters to their landing point, so will you use the lead light to guide the pearl back to the crown point.
4. Direct all of your senses to push the pearl up to the area six inches to two feet (15-60 centimeters) above your head. Move the pearl up and down, left and right.
5. Feel the Universal Force, the forces of the North Star and Big Dipper above your head, and the Cosmic Particle Force in front of you as they shine down to your pearl. Feel your pearl start to absorb this energy and then feel it expand.
6. Bring your awareness to your feet. Feel the energy supplied throughout your body through your feet. This is the Earth Energy. The pearl continues to expand with all the energy coming to it from outside the physical body.
7. When you are ready, activate the Cranial Pump again. Press your tongue up, clench your teeth, pull back your chin, pull up your anus and look up to the crown. Feel the beating in your heart and the pulse at your crown.
8. Activate the lead light, and let it shine up from your crown. It may feel like a frequency going out of the crown. Draw the pearl down to the lead light. Inhale and draw the pearl down.
9. Circulate the pearl in the Microcosmic Orbit. Then bring it down to the navel and to the cauldron at the body's center. Collect the energy at the cauldron.
10. As you collect the energy and relax the mind, the pearl may disintegrate. Sometimes when you release the pearl, it vanishes. It is returning its energies, now enhanced by all virtue energies and the outside forces, to the organs and glands. They become stronger and healthier each time you practice. Each time you gather the energy and form the pearl again, the pearl will be stronger.

Summary

1. Trust and Believe (Concept and Desire).
2. Visualization turns into activation.
3. Think and let it happen. It will become easier with practice.

Once you understand the practice and go through the practice a few times, you can just simply use the mind and recall the past experience and there is no need to go through all the steps. Think and let it happen.

Fusion Opening: Fusing Universal Energy

1. Inner Smile–Activate Compassion first (Love and Sexual Energy combined).
2. Activate Three Fires.
3. Create Pakuas; Front, Back, Facial, Universal.
4. Form Cauldron, spin Pakuas.
5. Form organ Collection Points of Physicial Body.
   Energy Body and Universal Body.
6. Remove Negative Energy from the Organs.
7. Sense the Colors of the Collection Points imagine the Dial-1,2,3 of Colors.
8. Fuse inner Positive Energy of the Energy Body and Physical Body with Universal Energy through turning the Dial-1,2,3.
9. Fusion of the Universe Energy back into Body and Energy Body.
10. Create Four Balls of fused energy and spin them very very fast above the Cauldron.
11. Form a Pearl.

Begin Cosmic Fusion: the Creation Cycle.

Be aware of the heart and cauldron activating the compassion fire.

1. Listen to the Gentleness Virtue of the Kidneys.
2. Gentleness Energy activates the Kindness Virtue of the Liver.
3. Kindness Energy activates Honor, Respect, Love in the Heart.
4. The Energy of Honesty and Respect activates the Fairness and Openness Virtues of the Spleen and Pancreas.
5. The Energy of Fairness and Openess activates the Courage and Righteousness Virtues of the Lungs.
6. Courage and Righteousness enhance Gentleness: the Cycle Begins again at the Kidneys.
7. Combine all Good Virtues energies into the Heart and create Compassion Energy.
8. Move the Compassion Energy through the Microcosmic Orbit.
9. Shoot the Pearl above the Crown.
10. Practice Chi Massage.

Chapter 7
Opening the Thrusting Channels

Theory of the Thrusting Channels

After the positive emotional energy of the organs is absorbed into the pearl, it is then circulated in four of the four special channels: the Microcosmic Orbit (Governor and Functional Channels), the Thrusting Routes, and the Belt Routes. The Thrusting Routes run through the center of the body, linking the “chakra” centers. The Belt Routes spiral around the body, strengthening the aura and providing a form of psychic self-defense. The second part of the Cosmic Fusion practice involves opening these three Thrusting Channels.

The Thrusting Channels are a powerful means to clean out the negative emotions and detoxify the organs and glands. Set into action, the three Thrusting Channels will serve as strong and efficient ways to check your center and observe the status of your emotions.

The Thrusting Channels run from the perineum to the crown and are separately identified as the Middle, Left and Right Thrusting Channels. The Middle Thrusting Channel begins directly at the perineum and runs vertically up to the crown. The Left Thrusting Channel is located one and a half to three inches to the left of the Middle Channel, while the Right Thrusting Channel is one and a half to three inches to its right.

When you are feeling emotional, you can check the Thrusting Channels, especially the Middle Channel, to discern whether you are off-center. You will know if you are out of balance when you feel the emotions running more on the left side or on the right, instead of through the middle of the body. If you center the emotions through the Middle Thrusting Channel, and keep the Left and Right Thrusting Channels in balance, you will very quickly center yourself. The Thrusting Channels serve as guidelines to decision-making in your daily life.

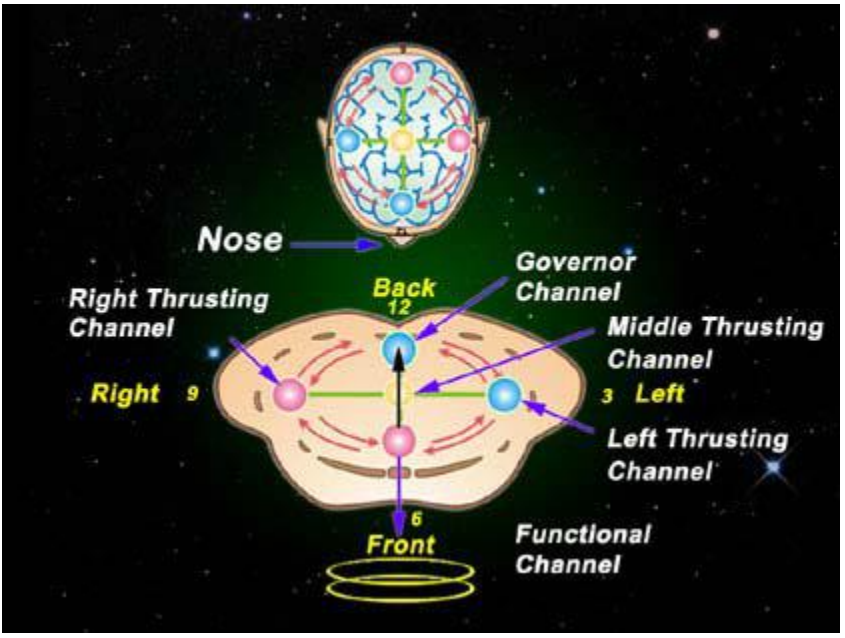


Fig. 7.1 *Four Psychic Channels*

Procedure for Opening the Thrusting Channels

The Thrusting Channels need the tremendous energy of good virtue to help them open. Begin by forming a pearl of virtue energy. With your continued, conscientious practice of the compassion fire and the fuse the inside with the outside energy to form the pearl, you will be able to assimilate the energies into a new and stronger pearl, a pearl that responds to your intention. This means that all you need do to form a new pearl is concentrate on the cauldron and the pearl in it, and on the front, back, left and right pakuas and fuse inside with the outside energy. Control of the internal weather, senses, organs and emotions will be possible in as little as a few seconds. You do not have to go through all the steps of chanting and collecting the energies every time you do the Fusion practice. It is helpful and creates a stronger experience if all the steps are taken. So the first step to opening the Thrusting Channels is to construct the pakuas, chant the eight directions, form the collection points of the Physical Body, the Energy Body and the Universal Body, and fuse them together into the pearl.

The pearl will be thrust up from the perineum (or testicles in men). Each Thrusting Channel precisely penetrates the body.

Although it may seem difficult at first, using your beautiful pearl will help make it easier. Other aids such as pulling up the anus and inhaling help the energy move in each of the three Channels. Once you are able to pass the energy through the Channels, you will find that the energy will move by itself without assistance.

Note: You must be very careful and gentle with this procedure. If the energy reaches the heart and head too quickly using the Thrusting Channels, the heart will become congested and you may experience pressure. If the heart becomes congested and overheats with energy: (1) Do not thrust above the diaphragm and (2) Practice the Heart Sound. Do not overheat the heart, liver or head.

Initially the Thrusting Channels have approximately a one-half to one inch diameter. Once they are activated, they can become very wide. At first concern yourself with drawing the energy directly up. Later, when you have become familiar with the process, the energy can be spiraled up each route.

Seated Position

Like many other Universal Tao exercises, the methods of opening the Thrusting Channels are practiced from a seated position. Sitting on a chair with your feet touching the floor and your spine erect connects you with two important energy “wires”: Earth Energy and Heavenly or Universal Energy. The Energy Body you eventually create needs the ground wire of Earth Energy to hold and support it. Otherwise, you can become disoriented and lost. Once your are more in control of the energy you can practice standing, or lying down on a bed or the floor.

Anal Muscle

If you do not strengthen your anal muscle, you will not progress very far in any of the Universal Tao System's practices. The anus muscle is connected to the perineum and everything in the body above it. If you invest all of your money on building the top floors of a building, and do not invest anything in the foundation, the building will fall. Think of the anus and perineum as your foundation. The anus muscle is used to seal your "lower gate." Closing this orifice helps to retain and prevent loss of your energy.

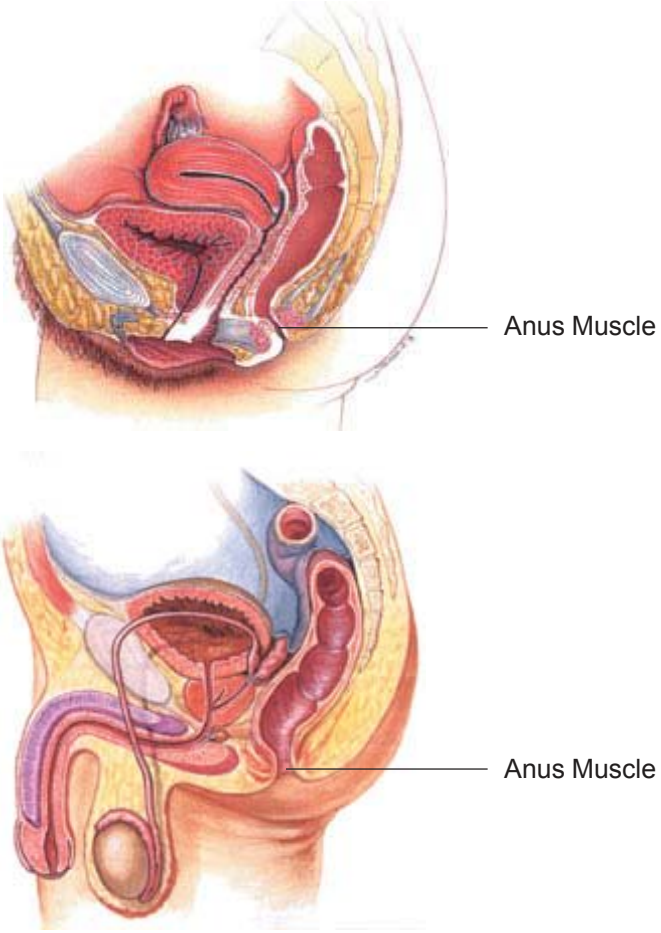


Fig. 7.2 *Anal Muscle*

Saliva

Saliva is yet another aid in performing these exercises. Once you have been able to bring the energy up through all the routes to the crown successfully, saliva generation becomes very important.

In the body, the moon influences the kidneys, which are linked with the salivary glands, the ovaries and semen. When the kidneys are stimulated during sex, the Chi is raised up through the spine, then it flows down in the saliva, and the kidneys' essence transforms into sexual energy. The saliva has two functions: purifying the mouth, and nourishing our immortality, the water of life. The energy from the saliva lubricates 100 joints, and it stimulates and harmonizes the organs. It is very important to enhance the production of saliva by absorbing the moon's energy through the breath absorption exercises. It is a sign that the techniques are working when the saliva floods into the mouth.

Although saliva is a lubricant for the Channels, it first serves as an agent to burn and clean them out of any impurities that could block the flow of energy. So when resting during the practice of opening the thrusting channels move your tongue around to create saliva. Make it thick and swallow down forcefully, feeling it go down the channels that you are working on (See the book *"Elixir Chi Kung"* by Mantak Chia).

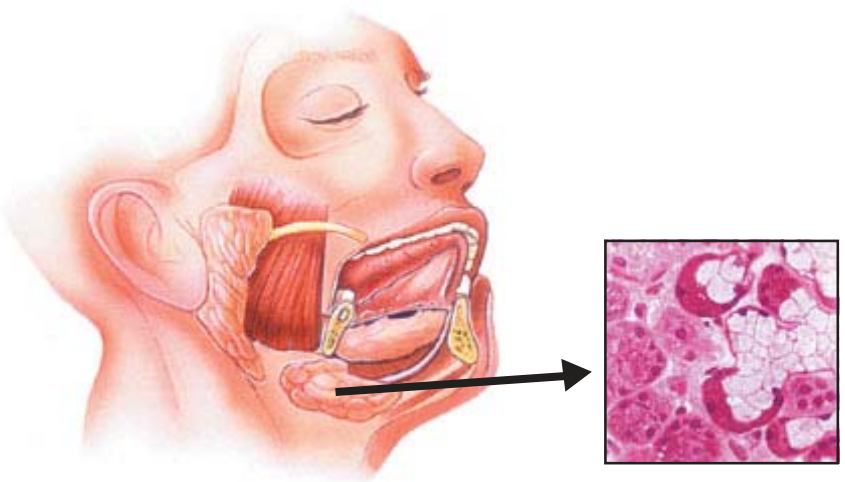


Fig. 7.3 *Saliva*

A person experiences the Thrusting Channels according to his or her kinesthetic or visual perceptions. The majority of people are more kinesthetic and can undeniably feel the quality of the condensed energy as it passes through each level of the channels.

Visual people can see patterns and colors. The Thrusting Channels, like the organs they intersect, have corresponding colors. The Left Channel is Red, Middle - White and Right - Blue. Regardless of your perceptual tendency, both the senses and the organs are used to control the Thrusting Channels.

The denser or more polluted the organ, the more energy is requires to pass through the affected Thrusting Channel.

As a safety precaution and as preparation to be able to move the energy to prevent it from sticking, the Thrusting Channels are opened in four stages. The pearl is brought (1) up to the diaphragm; (2) up to the neck; (3) up to and out of the crown; (4) down to the feet, into the ground; and up to the crown.

This will be done a total of nine times at each stage in the following sequence: (1) left, (2) middle, (3) right, (4) middle, (5) left, (6) middle, (7) right, (8) middle and (9) left.

Men & Women Practices: Open Channels Differently

Once the channels have been completely opened, men and women practice differently. Without stopping, men will thrust the energy directly up through the Thrusting Channels and out of the crown. They then will bring the energy back in to flow down the Thrusting Channels and down through the soles of the feet into the ground. They can continue to bring the flow up around the body and in through the crown. Without stopping, women will thrust the energy down through the soles of the feet into the ground and then up through the Thrusting Channels to and out of the crown. They then spray the energy down around the body, tuck it under the feet and draw it back in through the toes.

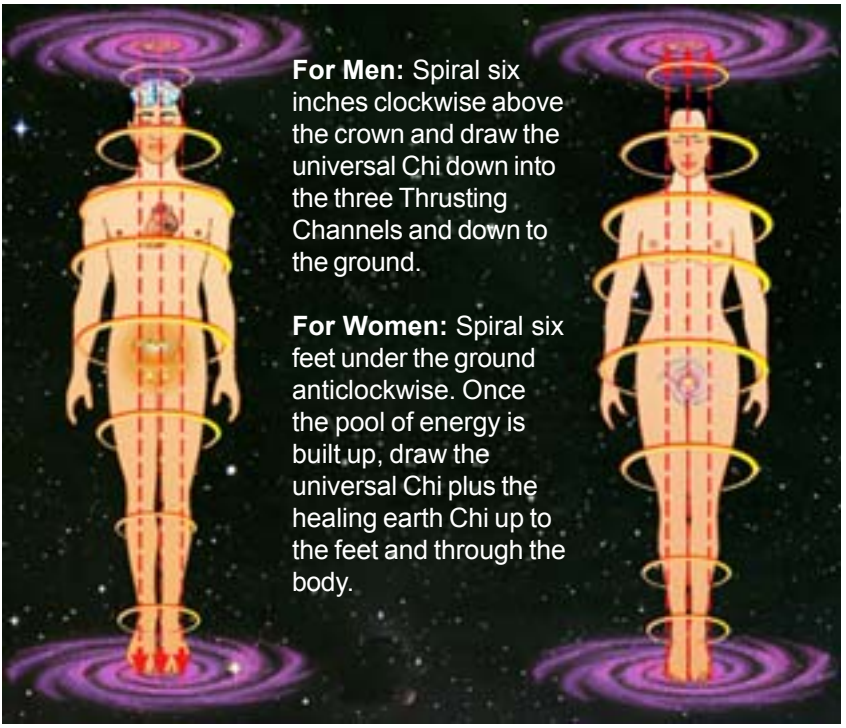


Fig. 7.4 *Cosmic Thrusting and Belt Channels*

Practice of Opening the Thrusting Channels

1. Form a Pearl and Send it to the Perineum

In a seated position smile down to your organs and glands, and put yourself in a state of relaxation and happiness. Begin with the meditation exercises of the Creation Cycle to form a pearl of compassion energy.

As you have learned, there are many steps in forming such a pearl. However, once you have programmed yourself to all of these steps through continued practice, you can simply push the button and the whole program is activated. When you are able simply to sit quietly and feel the sensation of compassion energy forming, you are pushing the button and the entire process takes very little time. In other words once you have experienced compassion energy, all you need to do is to recall the state to create the energy again. You will not need to go through the entire process each time. You will know when you look at the pearl whether or not the process has been completed. If you find something is not right, you can review the steps and find out where the problem is.

As the pearl is forming, use your mind and senses to control it. Slowly move it down to the perineum. At any time during your practice, if the pearl seems to weaken, diminish, or you lose track of it, return to the navel and quickly form a new pearl. Bring that pearl to the perineum and resume practice.

While you are learning how to bring the energy up through the channels, it is easier to focus on the organs the channel passes through than to focus on the channel. You might think of the process as learning how to read. Once you are able to read, you no longer have to think about your ABC's.

2. Stage One: Thrusting Channels to Below the Diaphragm

A. Left Thrusting Channel to the Diaphragm

In all Universal Tao practices it is important to train the power of the mind and senses to control our energy (Chi). The power of mind, eye and heart guides the Chi, providing a way to control and direct your life force. Breathing techniques also help to activate the Thrusting Channels. It is necessary to have some control over independent breathing through each nostril. Since in the beginning this is difficult to do, you can use your right index finger to cover the right nostril. Feel the breath on the left side only. Use the left eye, ear, and nostril to assist you in drawing up the energy.

1. Left Testicle (Men), Left Ovary (Women) and Left Kidney
   a. Sit up, using your mind, heart and eye power to look inside and be aware of the perineum. Also become aware of your left nostril, left ear, left eye and left anus.
   b. Activate the Left Thrusting Channel by inhaling through the left nostril in short sips (about ten percent of lung capacity with each breath.)
   c. Then men slightly pull the left testicle and the left side of the anus up toward the left. Women slightly pull the left side of the anus up toward the left. Draw the pearl up with each sip of air. The left eye should internally look down, and then use the mind/eye power to look up as the pearl is drawn up. (The physical eyes do not actually look up.) Women direct the pearl to the left ovary and the left kidney; men direct the pearl to the left kidney.
   d. Exhale, relax the eye and the muscles, letting the pearl drop to the left side of the anus (and left testicle in men), and rest. Rest and feel the left side become lighter as the energy begins to flow up without effort. Practice nine times. Each time you rest use your mind to trace the Left Thrusting Channel.

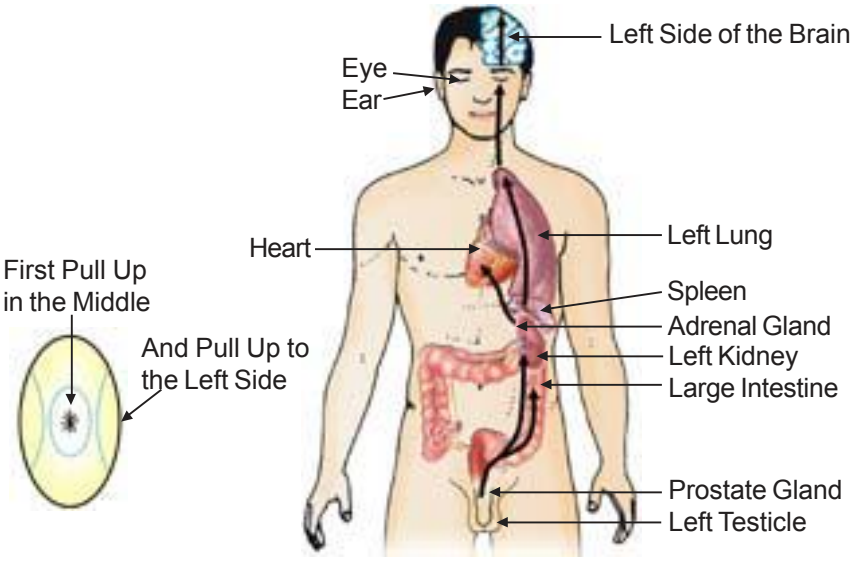


Fig. 7.5 *Left Part in the Male*

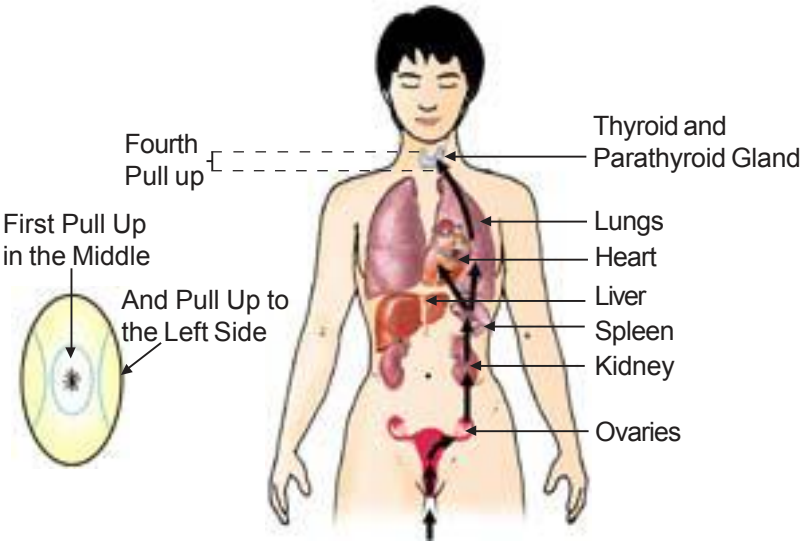


Fig. 7.6 *Left Part in the Female*

2. Spleen

Close the right nostril, inhale, and pull up. As you sip in the air, use the mind power and the left eye, ear and nostril to draw the energy up from the left testicle (men), through the left ovary (women), the left kidney, and up to the spleen. Exhale; release the energy down. Practice nine times. Rest, and feel the energy flow up the Left Thrusting Channel to the spleen under the diaphragm.

B. Middle Thrusting Channel to the Diaphragm

1. Prostate (Men) or Cervix (Women)

Men concentrate on the middle of the scrotum, perineum, and anus. Women concentrate on the middle of the perineum and anus. Inhale, and pull up the middle of the scrotum (men), perineum and anus. Use all the senses to draw the energy up to the prostate (men) or cervix (women). Look up with both eyes as you do so. Relax the eyes and anus muscle, and let the pearl drop back down to the perineum and scrotum (men). Feel the energy begin to flow up as you rest. Do this nine times.

2. Small/Large Intestine, Aorta and Vena Cava

Inhale and pull up the scrotum (men only) and anus. Use the eyes, ears, and nose to draw the energy to the prostate/cervix, small intestine, large intestine, aorta and vena cava. Do not thrust beyond the diaphragm. Practice nine times. Rest, and feel the energy flow up through the Middle Thrusting Channel to the vena cava.

3. Stomach and Pancreas

Follow the above procedure and thrust through the middle organs to the stomach and pancreas. Practice nine times. Swallow the saliva, rest and feel the energy flow in the Middle Thrusting Channel up to the diaphragm.

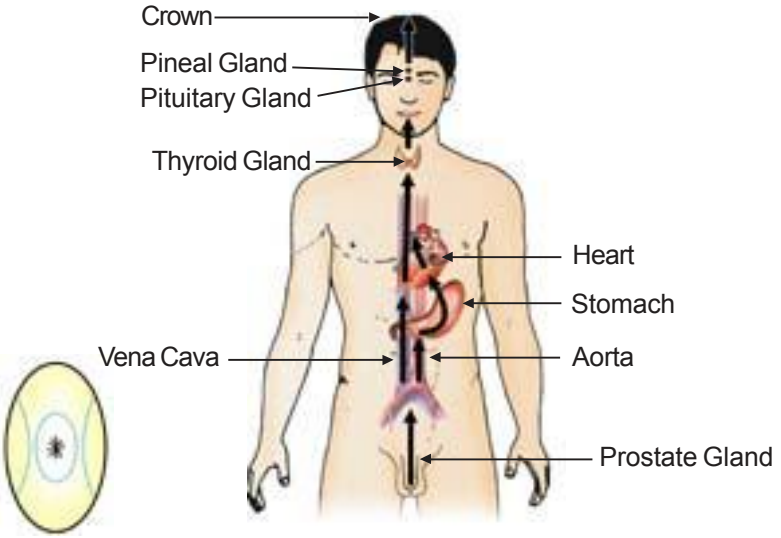


Fig. 7.7 *Middle Part in the Male*

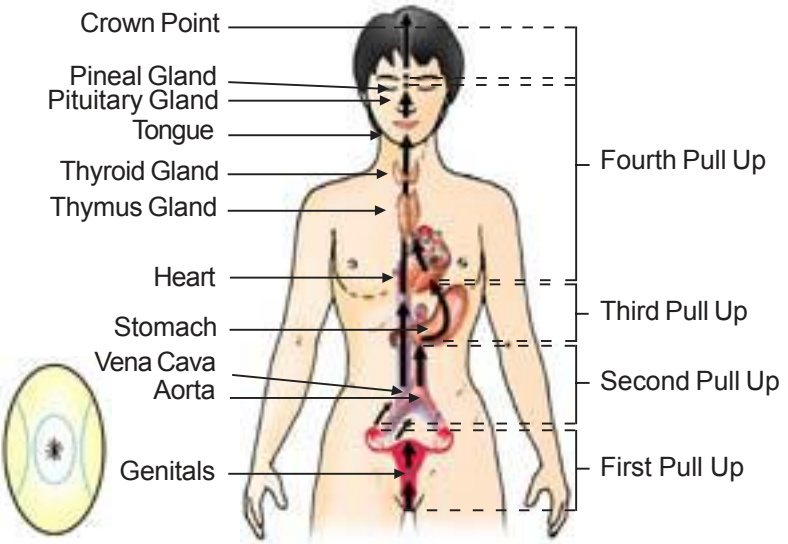


Fig. 7.8 *Middle Part in the Female*

C. Right Thrusting Channel to the Diaphragm

1. Right Testicle (Men), Right Ovary (Women) and Right Kidney
   a. Close the left nostril with the index finger of the left hand. Use the right eye, ear and nostril to direct the energy up the right channel. Put your right hand on the right kidney.
   b. Inhale in short sips equal to ten percent of lung capacity. Look up with the right eye. Pull up the right testicle (men only) and the right muscle of the anus toward the right side. Direct the energy up the right Thrusting Channel to the right ovary (women) and kidney. Practice nine times.
   c. Exhale and rest. Let the pearl drop down, returning to the perineum and right testicle (men only.) Feel the right side become lighter as the energy flows up the Right Thrusting Channel to the right kidney without effort.

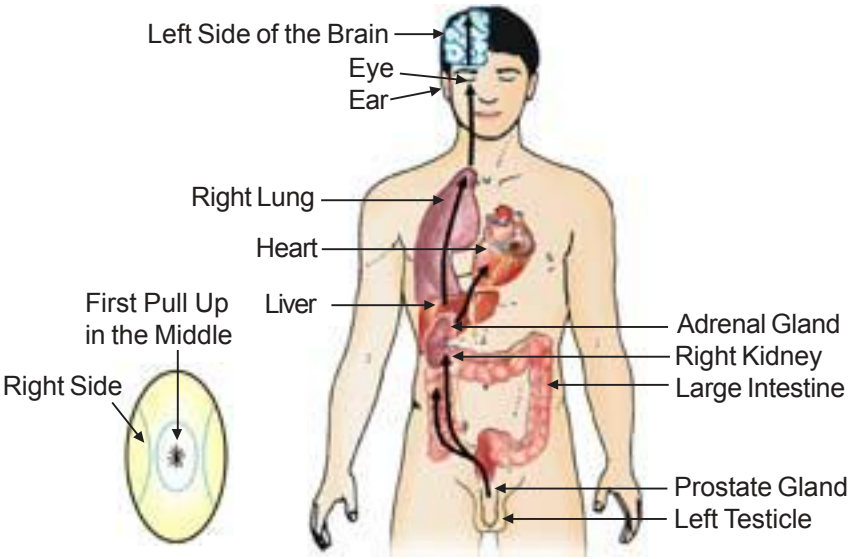


Fig. 7.9 *Right Part in the Male*

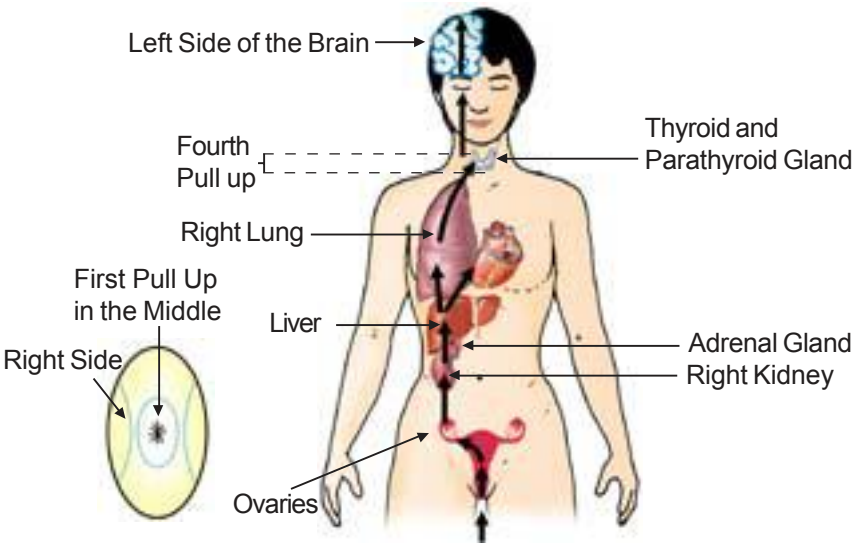


Fig. 7.10 *Right Part in the Female*

2. Liver

Close the left nostril, inhale and pull up. Use the right eye, ear and nostril; draw the energy up from the right testicle (men only), through the right ovary (women only), the right kidney and up to the liver. Exhale, relax and let the pearl return to the perineum. Practice nine times. Rest, and feel the flow of energy through the Right Thrusting Channel to the liver, under the diaphragm.

a. Combine all Three Routes

Continue to practice moving the pearl up and down through a combination of all three Thrusting Channels to under the diaphragm in the following nine steps until the energy is flowing easily: (1) Left Channel; (2) Middle Channel; (3) Right Channel; (4) Middle; (5) Left; (6) Middle; (7) Right; (8) Middle; and (9) Left. It helps to quicken the speed with each attempt.

Note: Stay relaxed during this exercise, and avoid using force. Once you are accustomed to thrusting the pearl and feel that the channels are clear, there is no need to close the nostrils for the left and right channels. Just simply pull up the perineum and anus, and use the power of the mind.

b. Clearing the Routes with Saliva
End by preparing the saliva. First sweep your tongue across the outer surface of your upper teeth, starting on the left side at your wisdom tooth, with the tip of the tongue going along the gums. When you arrive at your upper right wisdom tooth, move the tip of your tongue down to the lower right wisdom tooth and move along the front of the lower teeth. When you arrive at the lower left wisdom tooth, start again at the upper wisdom tooth. Circle around in this manner a few times. Then similarly sweep along the inner surface of the upper and lower teeth and gums. Your mouth will begin to fill with saliva.

Gather the saliva into a ball using your tongue. Press your tongue to the roof of your mouth and swallow the saliva quickly with a gulping action. Feel the saliva burn out the impurities in the Channels and lubricate them.

Practice this stage for about one or two weeks until you can control the energy very well, then continue to the next stage. Each time you finish, move the energy in the Microcosmic Orbit and collect the energy in the cauldron. When you are ready to continue to the next stage, practice Spinal Cord Breathing at this point in your preparation.

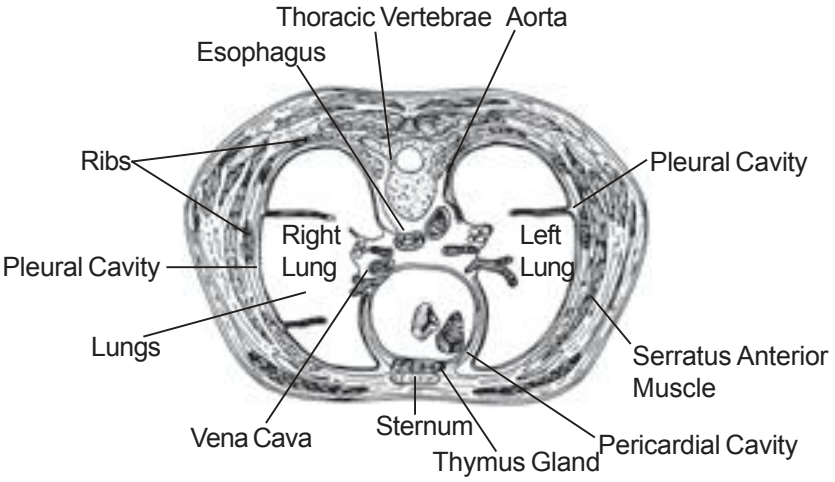


Fig. 7.11 *Cross Section of the Thorax*

3. Stage Two: Thrusting Channels to the Neck

A. Left Thrusting Channel to the Neck

1. Diaphragm

Using the procedure described above, bring the pearl up the Left Thrusting Channel to below the diaphragm and let it return down to the perineum.

2. Left Thyroid and Parathyroid Glands

Using the same procedure, bring the pearl up through the left ovary (women), left kidney and spleen, and continue to bring the pearl up to the left lung, and left thyroid and parathyroid glands. Hold for a while, and then exhale. Let the pearl return to the perineum. Practice nine times.

Be aware of the energy flow up to the neck through the Left Thrusting Channel.

B. Middle Thrusting Channel to the Neck

1. Diaphragm

Using the procedure described above, bring the pearl up the Middle Thrusting Channel to below the diaphragm, and let it return down to the perineum.

2. Thymus, Thyroid and Parathyroid Glands

Using the same procedure, bring the pearl up from the perineum through the prostate (men), cervix (women), small/large intestine, aorta and vena cava, stomach and pancreas. Continue to bring the pearl up to the heart, to the thymus gland under the sternum, and up to the middle of the neck, thyroid and parathyroid glands. Practice nine times. Exhale, relax and let the pearl drop down again.

Be aware of the Middle Thrusting Channel as the energy flows up to the neck.

C. Right Thrusting Channel to the Neck

1. Diaphragm

Using the procedure described above, bring the pearl up the Right Thrusting Channel to below the diaphragm and let it return down to the perineum.

2. Right Thyroid and Parathyroid Glands

Using the same procedure, bring the pearl up from the perineum to the right ovary (women), right kidney, liver and continue to bring the pearl up to the right lung and to the right thyroid and parathyroid glands. Exhale, and slowly release the energy down. Practice nine times.

Be aware of the Right Thrusting Channel as the energy flows up to the neck.

D. Continue to Practice the Three Thrusting Channels to the Neck

Practice all three Thrusting Channels to the neck, nine times each, as delineated for the diaphragm: left, middle, right, middle, left, middle, right, middle and left.

E. Clear the Routes with Saliva

If your throat feels dry, you can collect and warm the saliva in your mouth. Tighten your neck a little bit, and swallow the saliva with a guttural sound down to the stomach. Feel the saliva like a fire clearing all three channels.

Practice this stage for about one or two weeks, each time finishing by moving the pearl in the Microcosmic Orbit and collecting it in the cauldron.

F. Rest and Concentrate on All Three Channels

Rest and concentrate on all three channels, visualizing the left route as red, the middle as white, and the right as blue.

4. Stage Three: Thrusting Channels to the Crown

In stage three of opening the Thrusting Channels, the pearl is thrust through the channels up to and out of the crown.

A. Left Thrusting Channel to Crown

1. Left Eye

Follow the above procedure for thrusting through the Left Thrusting Channel to the neck, and continue thrusting to the left eye.

2. Crown

Repeat the Left Thrusting Channel to the left eye and continue to thrust the pearl up through the left hemisphere of the brain to the crown. Practice nine times. Rest, and mentally trace the Left Thrusting Channel from the perineum to the crown.

B. Middle Thrusting Channel to the Crown

1. Mideyebrow

Repeat the Middle Thrusting Channel procedure as described to the neck and continue thrusting to the mideyebrow.

2. Crown
Repeat the Middle Thrusting Channel to the mideyebrow, and continue to thrust the pearl up through the pituitary gland to the pineal gland at the crown. Practice nine times. Rest, and mentally trace the complete Middle Thrusting Channel.

C. Right Thrusting Channel to the Crown

1. Right Eye
Repeat the Right Thrusting Channel procedure as described to the neck and continue thrusting to the right eye.
2. Crown
Repeat the Right Thrusting Channel to the right eye, and continue thrusting the pearl up to the right hemisphere of the brain and then to the crown. Practice nine times. Rest and trace the route mentally from the perineum to the crown.

D. Continue to Practice the Three Thrusting Channels to the Crown

Continue to practice the three Thrusting Channels to the crown nine times as was delineated for the diaphragm and again for the neck: left, middle, right, middle, left, middle, right, middle and left.

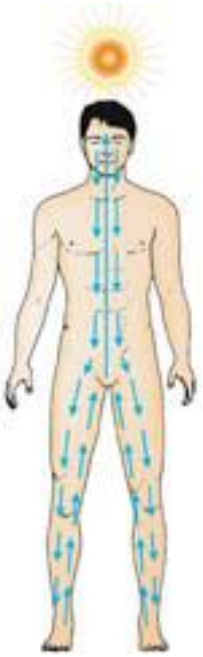


Fig. 7.12 *Three Thrusting Channels up to the Crown*

You now have succeeded in bringing the pearl through the Thrusting Channels to the crown. Your goal is to follow the sequence above using nine thrusts distributed among these three channels. Be aware of how and where the energy flows through the three Thrusting Channels, and how the three channels penetrate all the organs and glands. These channels are very powerful. They clean, detoxify and purify the organs at a much deeper level.

E. Bring the Pearl into the Microcosmic Orbit

When you have finished this stage of practice, you can bring the pearl into the Microcosmic Orbit and circulate it. Feel the Microcosmic Orbit encircling the Thrusting Channels. The top and bottom of the Thrusting Channels are joined with the Microcosmic Orbit at the crown and the perineum.

Use your mind to assist the flow of energy through the Thrusting Channels and through the Microcosmic Orbit when the pearl reaches the crown point or the perineum point.

Your Microcosmic Orbit practice will change dramatically after you learn the Fusion of the Five Elements meditations. When you first practice the Microcosmic Orbit, the energy you move through your channels is raw energy. By contrast, when you reach the level of Fusion practice, the energy is more refined and condensed, and it is therefore much more powerful. The Fusion practice includes the Microcosmic Orbit, so it might be said that the Fusion meditation is simply a more advanced way of practicing the Microcosmic Orbit meditation.

Practice this stage for two or three weeks until feel you have gained control of the energy.

5. Extending the Three Thrusting Channels above the Crown

Once we have purified and transformed the negative energy of the organs back into usable life-force energy (Fusion of the Five Elements), distilled this energy along with the virtue Chi of the organs into the pearl (Cosmic Fusion), and opened all our reservoirs or special channels, giving us a larger energy capacity, we can increase our virtue energies further by connecting with the external sources of Five Elements Chi and directing the external Chi toward its associated organs. Moving the pearl out of the physical

body makes it easier for the pearl to absorb these energies. It becomes like an antenna that receives the external Chi and conducts it into the physical body. In this way, we again nourish our health in this life as well as strengthening the Energy Body and spirit in preparation for the next.

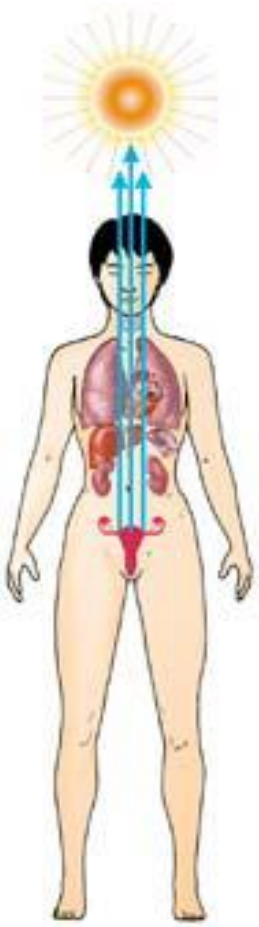


Fig. 7.13 *Three Thrusting Channels above the Crown*

After you gain full control of the energy, you will be able to send the pearl out of the body at the crown. Begin to practice quickly forming a fresh pearl in the practice of formimg the pearl by fuse in and out and back to the inside to form a pearl. Follow with the Creation Cycle. Then, thrust the pearl up through the Thrusting Channels to quickly clear out these routes. You are now ready to extend the channels above the crown.

Bring the energy down to the perineum, and start with the Left Thrusting Channel up to the left crown. Push the pearl out at the crown of the head to about three to six inches (seven and a half to fifteen centimeters) above the crown. Similarly, push the pearl out of the crown through the Middle Thrusting Channel, and then the Right Thrusting Channel.

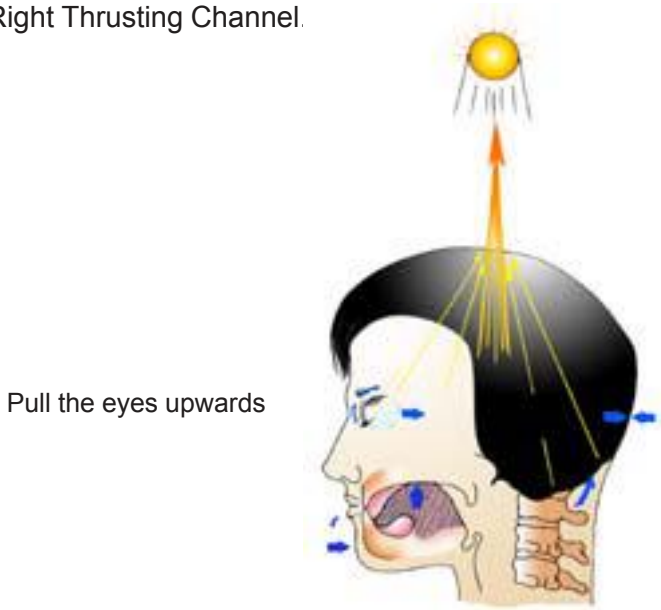


Fig. 7.14 *Use Physical and Mental Power to push the Pearl of Energy up through the Crown.*

Each time you push the pearl out at the crown, be aware of an energy ball hovering about six to ten inches (fifteen to twenty-five centimeters) over the crown. Draw and absorb the Heavenly Energy to the pearl. Then slowly let the energy melt and flow down to the crown, and then into the body, all the way down through the three Thrusting Channels to the perineum.

6. Stage Four: Leg Routes and Thrusting Channels into the Ground

In the final stage of opening the Thrusting Channels, the energy will go all the way down to the feet and into the ground, and then up through the channels with each thrust. After you have formed another new pearl by practicing Fusion of the Five Elements and the Creation Cycle of Cosmic Fusion, bring the energy down to the perineum.

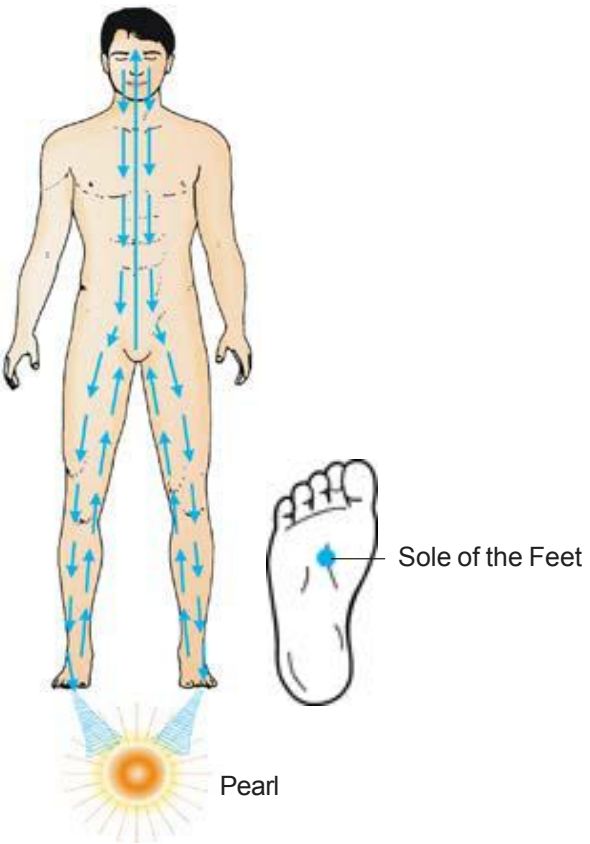


Fig. 7.15 *Three Thrusting Channels down to the Ground.*

A. Bring the Energy Down to the Soles of the Feet

1. Left Thrusting Channel

Split the pearl in two, and bring the energy from the perineum down the back of both legs to the backs of the knees, and then down to the heels and soles of the feet. Stop for a while, and absorb the Earth Energy through the soles. Then bring the energy up the front of the legs through the big toes, knees, front of the thighs, all the way back to the perineum. Recombine the pearl at the perineum. Then run the energy through the Left Thrusting Channel by slightly tightening the left side of the anus and looking up with the left eye. Bring the pearl all the way up through the left hemisphere of the brain and left crown, and out to three inches (seven and a half centimeters) above the crown. Relax, and bring the pearl down to the perineum.

2. Middle Thrusting Channel

From the perineum, split the pearl, and bring the pearl down the backs of both legs to the soles of both feet. Absorb the Earth Energy through the soles, then move the energy up to the toes, to the knees, returning to the perineum. Recombine the pearl at the perineum. Now bring the pearl all the way up the Middle Thrusting Channel, squeezing the middle of the anus and looking up with both eyes. Bring the pearl all the way up through all the organs and glands to the crown, and out to three inches (seven and a half centimeters) above the crown. Then bring it down to the perineum again.

3. Right Thrusting Channel

From the perineum, split the pearl, and bring it down the backs of both legs. Absorb the Earth Energy through the soles of the feet. Then bring the pearl up again to the perineum. Recombine the pearl at the perineum. Use the right anus muscle, look up with the right eye, and bring the pearl all the way up the Right Thrusting Channel through the right hemisphere of the brain and out of the crown three inches (seven and a half centimeters.) Bring it down to the perineum.

Continue bringing the pearl to the Thrusting Channels in the following sequence: left, middle, right, middle, left, middle, right, middle, and left, finishing each step by looping the pearl through the leg route. End on the left side of the perineum. Swallow the saliva, as described before.

B. Bring the Energy into the Ground

Once you have practiced bringing the pearl down to the soles of the feet for a while, add a new step. Begin by shooting the energy from the perineum down the backs of the legs and through the soles of the feet, from six inches to one foot into the ground. Feel a connection or rooting to the earth, then draw the energy up to the soles of the feet, to the toes, up the front of the legs, and into the Thrusting Channels.

With this step you have completed opening all the Thrusting Channels. Practice for two or three weeks until you develop full control of the energy traveling through these channels.

7. Men and Women Now Practice Differently

At this stage all the Thrusting Channels and Leg Routes are

open, and men and women start to practice differently. Both quickly practice Fusion I, and the Creation Cycle and Thrusting Channels of Fusion II, and bring the pearl to the perineum.

A. Men start by bringing the Pearl to the Crown.

Men bring the pearl from the perineum up to and out of the crown to about six inches (fifteen centimeters.) Feel your pearl hook up with the higher energy source, Heavenly Energy. Absorb this energy into the pearl. Then bring the energy back into the body. As it enters the crown, let the pearl split in three. Feel the energy penetrate through three holes at the top of the head. Feel it flowing back down to the perineum through the three Thrusting Channels, penetrating all the organs and glands.

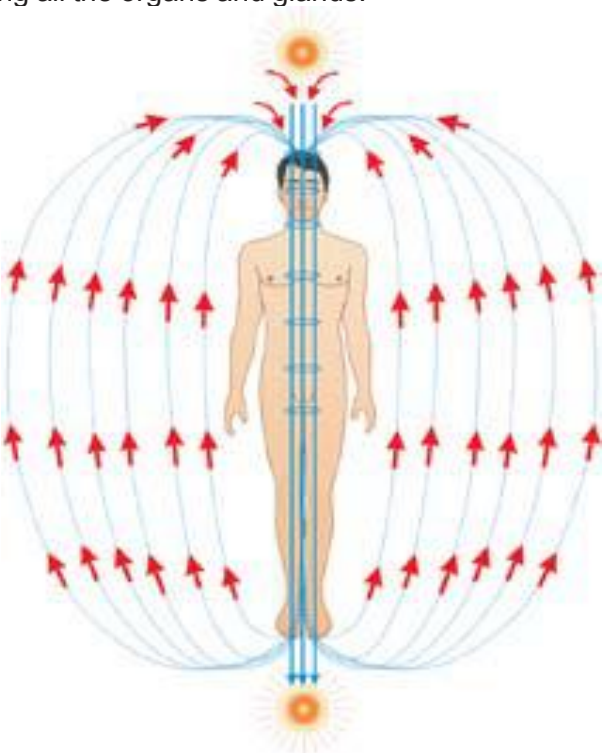


Fig. 7.16 *Bringing the Pearl to the Crown*

From the perineum men will push and guide the energy down the back of both legs to the soles of the feet, and then six to twelve inches (fifteen to thirty centimeters) into the ground. Feel a connection or rooting to the earth, then draw the Earth Energy up to the soles of the feet. Bring the energy to the toes. Start to spread

the energy out from the ten toes, shooting the energy up to and into the crown, like a waterfall with a reverse flow. Draw the pearl back down to the perineum, and then repeat the process.

Practice nine times. Feel the flow of energy like a magnetic field surrounding your body.

B. Women start by bringing the Pearl to the Feet.

Women bring the pearl down to the perineum, divide it, and shoot it down the backs of both legs, through the soles of the feet, six to twelve inches (fifteen to thirty centimeters) into the ground. Feel a connection or rooting to the earth, and absorb the Earth Energy into the pearl. Then draw the Earth Energy up to the soles of the feet. Bring the energy all the way up the front of the legs to the knees, and back to the perineum. As the energy travels up the legs, feel it penetrate the bones.

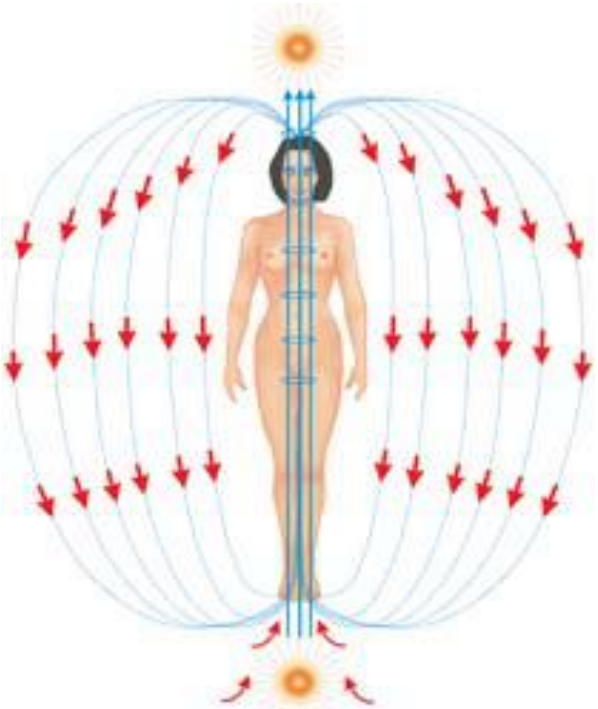


Fig. 7.17 *Women bring the Pearl to the Feet.*

Spread the energy into the three Thrusting Channels, and thrust it as though it were on a three lane highway all the way up to the crown. Feel the energy spread from the crown like a spring or wa-

ter fountain pouring out of the body, entering into the soles of the feet, where it again joins together with energy from the earth. While the energy is outside and circling the body, it is also gathering pure, radiant Cosmic Energy. Repeat this meditation nine times.

8. Finishing the Meditation

Both men and women should finish by collecting the energy at the cauldron and practicing Chi Massage. This completes the practice of the Thrusting Channels. Continue to practice for a few weeks until you gain control of it.

Additional Exercise for Opening the Thrusting Channels

Alternate Nostril Breathing

The alternate nostril breathing helps to generate more power in moving the pearl up and down the Thrusting Channels. By closing one side of the nose, it is easier to move the pearl through the specific left or right channels.

Hold the right nostril closed with the finger tips.

Inhale up through the left nostril, and feel the pearl move up from the perineum to the crown.

Exhale out through the left nostril and bring the pearl back down to the perineum.

Inhale through the left nostril and bring the pearl to the Middle of the perineum.

Close both nostrils and suck the pearl up through the middle Thrusting Channel to the crown. This suction is created by an inhaling motion without actually drawing any air into the lungs.

Hold the right arm down towards the ground and exhale any cloudy or gray energy out of the Thrusting Channel.

The same procedure is repeated in the Right Thrusting Channel.

Hold the left nostril closed with the finger tips.

Inhale up through the right nostril, and feel the pearl move up from the perineum to the crown.

Exhale out through the right nostril and bring the pearl back down to the perineum.

Inhale through the right nostril and bring the pearl to the middle of the perineum.

Close both nostrils and suck the pearl up through the Middle Thrusting Channel to the crown.

Hold the left arm out and down to the ground, exhaling any cloudy gray energy down to the Earth.

Repeat 3 – 9 times or until you feel the Thrusting Channels clean and clear with positive energy.

Fig. 7.18 *Alternate Nostril Breathing*

Fig. 7.19 *Exhale cloudy energy out of the Thrusting Channel.*

Summary
Opening the Thrusting Channels

Begin the Fusion practice by Opening the Three Fires, activate the compassion fire forming the pakuas by chanting the eight forces, forming the collection points, fusing the colors, and forming the pearl. Review the explanation discussed previously. Once you feel the pearl is strong and full of energy, you do not have to go through all these stages all the time. Just think and let it happen.

The Thrusting Channels are Opened in Four Stages.

(1) to the diaphragm; (2) to the neck; (3) to and out of the crown; (4) down to the feet, into the ground; and up to the crown.

1. The Left Thrusting Channel penetrates the left testicle (in men), left side of the perineum and anus, left ovary (in women), left kidney, spleen, heart, left lung, left parathyroid and thyroid glands, left ear, left eye, and left hemisphere of the brain.
2. The Middle Thrusting Channel runs through the middle of the scrotum (in men), perineum, middle of the anus, cervix (in women), prostate (in men), aorta, vena cava, pancreas, stomach, heart, thymus gland, throat, tongue, pituitary, hypothalamus, and pineal glands, and crown.
3. The Right Thrusting Channel goes through the right testicle (in men), right side of the perinium and anus, right ovary (in women), right kidney, liver, right lung, right parathyroid and thyroid glands, right ear, right eye, and right hemisphere of the brain.

Note: Avoid overheating the heart, liver, or head. Be very gentle with this procedure. If the energy reaches the heart and head too quickly the heart will become congested and you may experience pressure. If the heart overheats with energy, avoid thrusting above the diaphragm, and practice the Heart Sound (***Hawwww***).

Strengthen your anus muscle, the foundation, connected to the perineum and everything in the body above it. Saliva purifies the mouth, and nourishes immortality. When resting, create and gather saliva. Make it thick and swallow down forcefully.

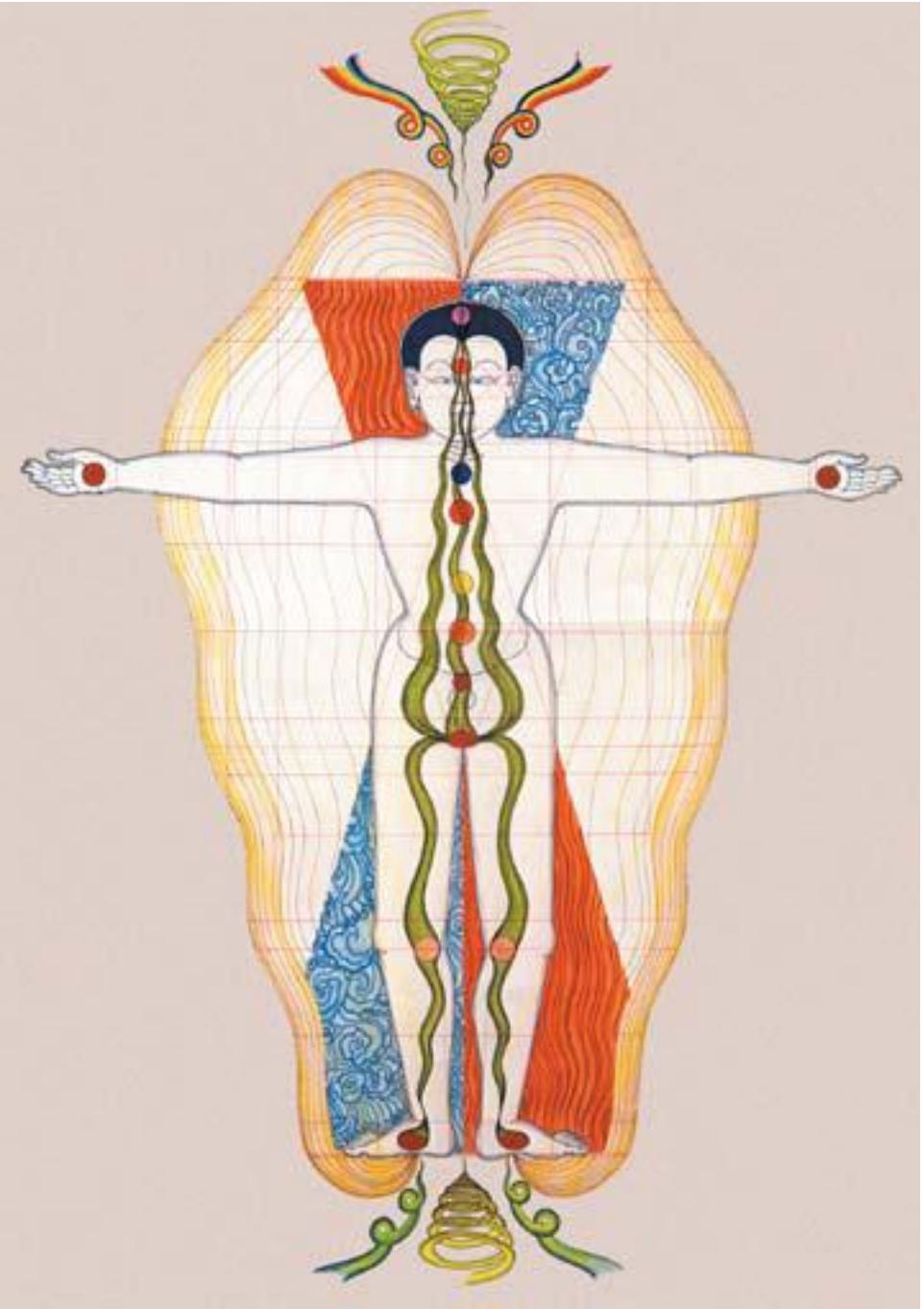


Fig. 7.20 *Thrusting Channel*

Chapter 8
Belt Channels

Theory of the Belt Channel

The Belt Channel is a psychic channel of power and self-defense, encircling the body with energy. It protects the body and fences the energy within the Governor, Functional and Thrusting Channels, while warding off negative energy from the outside world. Starting at the navel each Chi center of the body is crossed and encircled by one level of the continuing Belt Channel.

A cross-section at the navel level would show the Belt Channel connecting to the other channels you have learned to this point. At the front of the body, the Belt Channel connects with the Functional Channel. As it moves to the left side it connects with the Left Thrusting Channel. At the Door of Life in the back, it connects with the Governor Channel. To the right it connects with the Right Thrusting Channel. Returning to the front, the circle is completed.

When you learn to form a pearl practicing Fusion of the Five Elements, and you draw the energy from the front, back and side pakuas at the level of the navel, you are laying the groundwork for the Belt Channels.

Procedure of Forming the Belt Channel

The Belt Channel begins at the navel and spirals upward in a counterclockwise direction through solar plexus, heart, throat, mideyebrow, and crown. Then, reverse the energy flow and circle the pearl clockwise as you move down through the above points to the navel. From the navel continue down to the sexual center, perineum, knees (around both knees), and soles of the feet (slightly into the ground). Finally, reverse the direction and work up through each point back to the navel.

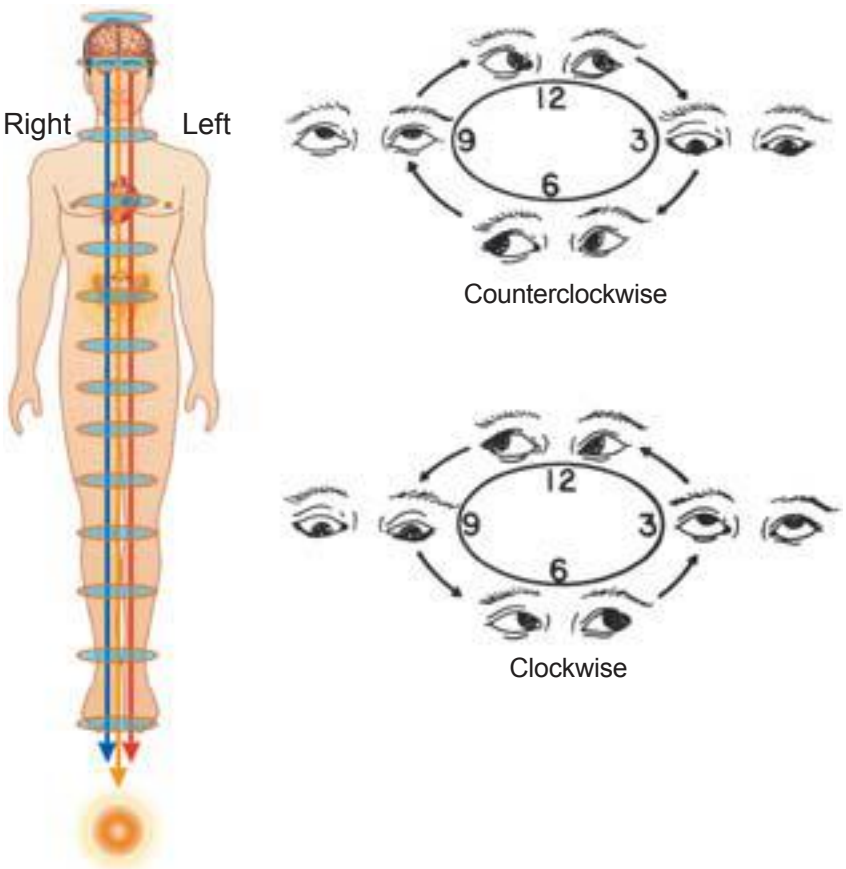


Fig. 8.1 *Use the eyes to help spiral.*

Note:To circle to the left is to circle counterclockwise; circle counterclockwise as you move the pearl up. To circle to the right is clockwise; circle clockwise as you move the pearl down.

The pearl is circulated in each Belt Channel nine times. After the ninth time of circling each point, you will cross each channel internally with the pearl by moving the pearl from front to back, and from left side to right side. Each time you will end with the pearl at the front, and then move on to the next level Belt Channel.

Practice of Forming the Belt Channel

Ascending from the Pakuas

1. Sit up, back straight, shoulders relaxed, feet touching the floor. Hold the hands together, and touch the tongue to the palate.
2. Practice the Inner Smile, Fusion of the Five Elements, chanting, the collection points, fusing the energy into a pearl and the Creation Cycle of Cosmic Fusion. Continue with your practice of Cosmic Fusion by sending the energy through the three full Thrusting Channels (all the way down to the feet and up to the head.)
3. You are ready to begin forming the Belt Channel. First, form the four pakuas and a pearl. Gather the pearl at the cauldron, and bring it to the navel.

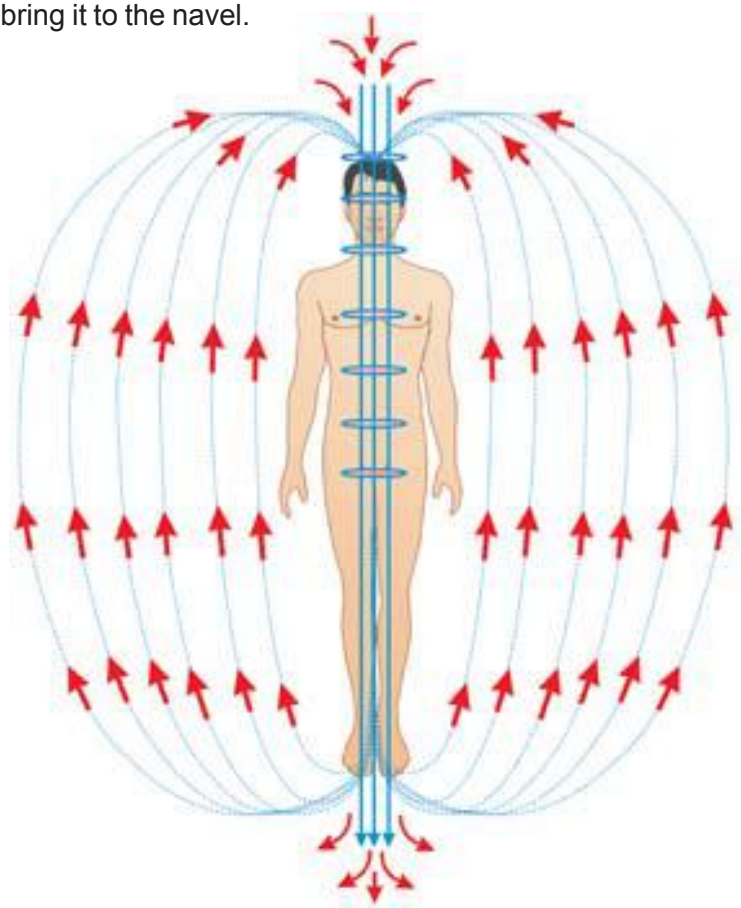


Fig. 8.2 *Moving the Thrusting Channels out of the Body.*

4. Join the four pakuas by circulating the pearl from the ***Navel*** toward the left side (counterclockwise), to the Door of Life, to the right side, and back to the navel.

   In the beginning you can use your hand to assist you in moving the pearl, although your goal is to use your senses to control its movement. Cover the navel with the right hand. Cover the left side pakua with the left hand. Then, move the left hand to cover the Door of Life, and move your right hand to cover the right side pakua. Finally, return the right hand to the navel.

   Circle the pearl nine times counterclockwise. As you are ascending you will circle it nine times counterclockwise from each point in a similar fashion.
5. When you finish circling the pakuas for nine rounds, be aware of the navel. Be aware of the channel of the navel. Form a cross by bringing the pearl from the navel to the cauldron, and all the way back to the Door of Life. Then, bring the pearl back to the cauldron, and use it to connect the side pakuas from the left cross to the right. Return the pearl to the navel.

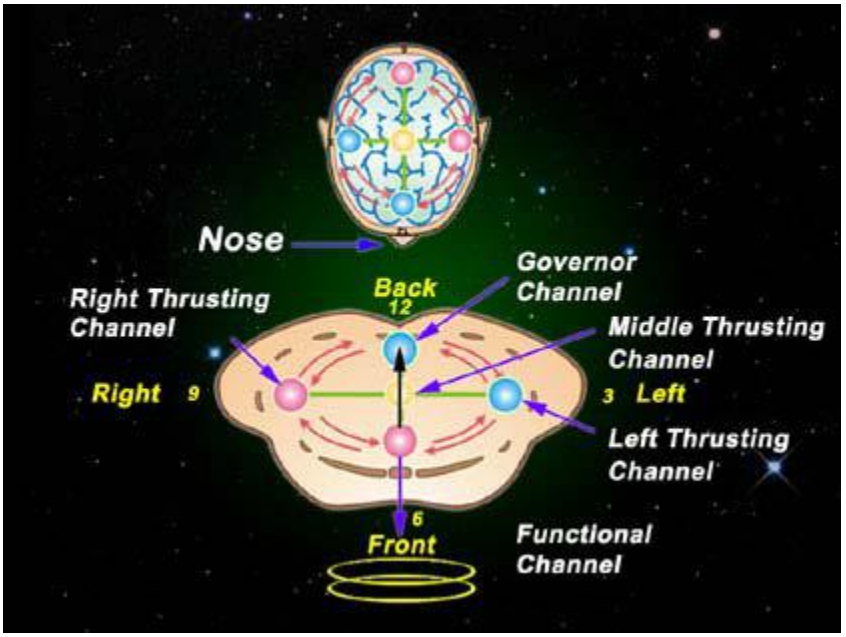


Fig. 8.3 *Cosmic Belt Channels connecting to all the other Channels.*

6. Move the pearl up from the navel to the left side of the rib cage to a position level with the ***Solar Plexus***. Begin to circle the pearl at the solar plexus level. Circle the pearl toward the left through T-11 at the back, to the right, and return to the solar plexus. Circle nine times, ending with the pearl at the solar plexus. Take a moment to perceive it. Then create an internal cross with the pearl, moving it from front to back, and then from left to right.
7. Bring the pearl from the solar plexus to the left side rib cage, this time at the level of the ***Heart***. Circle nine times toward the left to the middle of the shoulder blades, to the right, and back to the heart center. Circle in this manner for nine rounds. Using the pearl, form an internal cross connecting all four sides. Feel the connection of the channel.
8. From the heart center, bring the pearl up to the left side of ***Throat Center*** on the neck. Circle the pearl toward the left and back to C-7, to the right side, and to the middle of the throat center nine times. Use the pearl to form an internal cross connecting all four sides. Practice and master this step before continuing up to the crown.

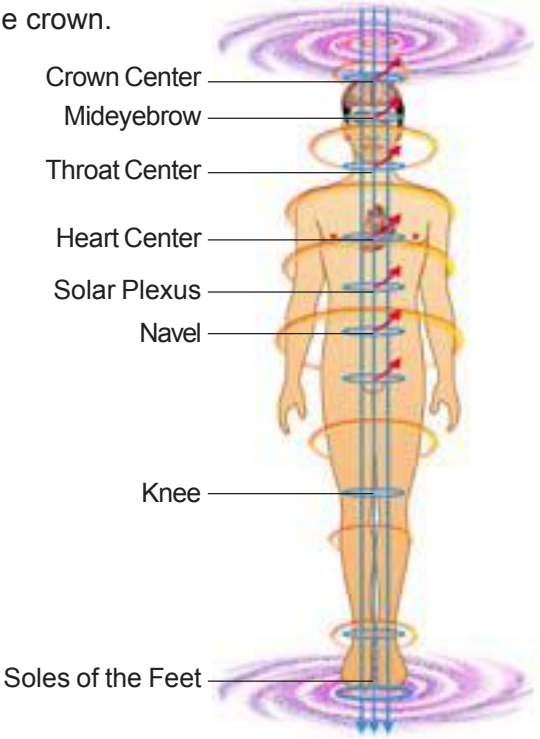


Fig. 8.4 *Bring the pearl up to the upper tip of the left ear.*

9. Bring the pearl up to the upper tip of the left ear at the level of the ***Mideyebrow Center***. Circle the pearl nine times from the left ear back to the small brain, to the right (upper tip of the ear), returning to the mideyebrow. Feel a band of energy flowing around the mideyebrow, ears, and back of the head. Using the pearl, form an internal cross connecting all four sides. The feeling is one of wearing a crown with a cross at its center connecting it.
10. From the mideyebrow bring the pearl up to the left side of the ***Crown***, and circle the energy nine times in a counterclockwise direction at the crown. End with the pearl at the front. Using the pearl, form a cross connecting the front, back, and both sides of this Belt Channel.
11. Allow the pearl to go out above the crown, and circle the energy nine times toward the left forming a ***Halo of Energy***. Use the pearl to cross the halo, front to back, and left to right. Collect the energy from above the head.

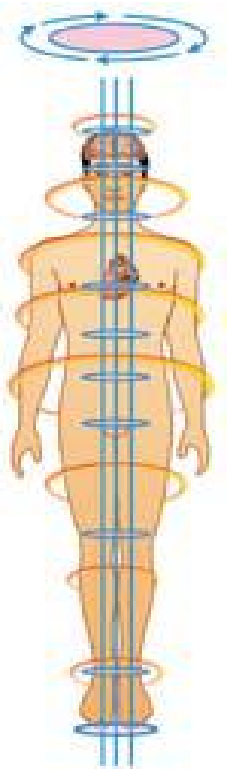


Fig. 8.5 *Spiral out clockwise above the crown.*

12. Now reverse the direction of energy flow to a clockwise direction by circling from the front toward the right, to the back, and to the left. Circle the ***Halo*** nine times, ending with the pearl at the front. Then cross the front to back, and right to left sides. Finish by bringing the pearl to the front of the halo.

Fig. 8.6 *Reverse the direction clockwise.*

13. Next bring the pearl back into the right side of the ***Crown***. Circle toward the right nine times, bringing the pearl to the back, to the left, and ending at the front of the crown each time. Then use the pearl to cross the front, back, and two sides. Return the pearl to the front of the crown.
14. Move the pearl down to the upper tip of the right ear. Circle from the right ear to the back of the head, to the top of the left ear, and to the ***Mideyebrow*** nine times. End at the mideyebrow. Use the pearl to cross the front, back, and two sides at this level, and return it to the front to the mideyebrow position.

15. Bring the pearl down to the right side of the neck at the level of the ***Throat Center***, and circle right to *C-7* at the back of the neck, to the left, and to the front of the throat center. Circle nine times, ending at the front. Cross the front, back, and two sides, also ending by bringing the pearl to the front.
16. Bring the pearl down to the right side rib cage at the ***Heart Center*** level. Circle the pearl toward the right, to the back,and so forth clockwise for nine times, ending at the front of the heart center. Then, use the pearl to cross the front, back, and two sides. Return the pearl to the front again.
17. Move the pearl to the ***Solar Plexus***. Circle it nine times to T-11 at the back, and return to the solar plexus. Cross the front, back, and sides. Return the pearl to the front.
18. Bring the pearl down to the ***Navel***. Circle it back to the Door of Life, and back to the navel nine times. From the navel bring the pearl to the cauldron, back toward the Door of Life, and return it to the cauldron. Use the pearl to cross the right and left sides. Return the pearl to the navel.

Descending From the Pakuas to the Earth.

19. Once you have controlled the pearl to this stage of the meditation, you are ready to move the pearl down to the ***Sexual Center***. Women bring the pearl down to the right side of the ovary center, located three inches below the navel. Men bring the pearl from the navel down to the right side of the sperm palace, one and a half inches below the navel. Circle clockwise back to the sacrum, to the left hip, and to the front of the ovary center/sperm palace nine times. Use the pearl to make a cross. Return the pearl to the front of the sexual center.
20. Bring the pearl down to the right groin. Circle the pearl clockwise around the ***Perineum Point and Lower Hips*** nine times. Use the pearl to form a cross by connecting the front, back, and sides. Return the pearl to the front.
21. Move the energy down and circle toward the back of ***Both Knees***, around and to the front, midway between both knees, moving the pearl clockwise nine times. Use the pearl to form a cross by moving the pearl to the midpoint between the knees and connecting the front, back, and sides from this point. End with the pearl midway between the fronts of both knees.

22. Direct the energy down to the feet, just below the ankles. Circle the ***Soles of the Feet*** nine times moving the pearl clockwise to the heel of the right foot, to the heel of the left foot, to the outer side of the left foot, to the front, midway between both feet. Form a cross. End with the pearl midway between both feet.
23. Move the energy from the front of the feet down to a point ***Beneath the Earth***, and circle toward the right (clockwise) nine times. Use the pearl to form a cross ***Beneath the Earth***. Keep on spiraling more energy to enhance the pearl. Return the pearl to the front of the circle.

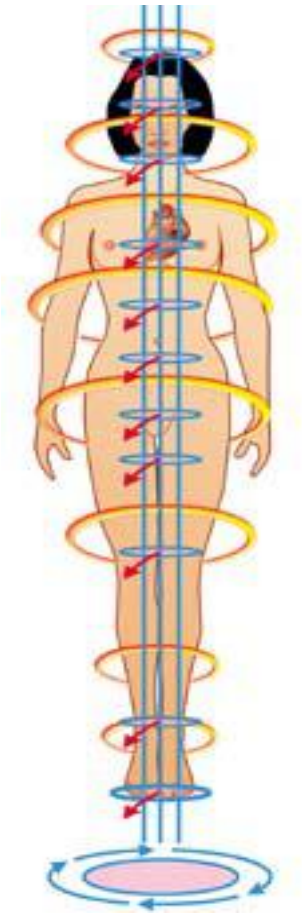


Fig. 8.7 *Bring the Pearl down to the ground, spiral clockwise.*

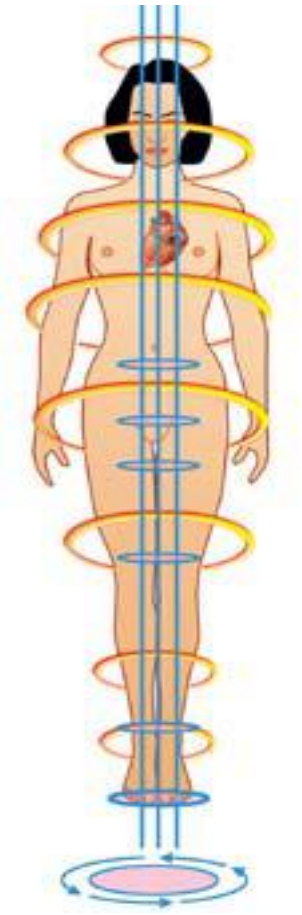


Fig. 8.8 *Spiral reverse counterclockwise moving up.*

Ascending From the Earth Back to the Pakuas

24. Reverse the circle beneath the earth, moving the pearl counterclockwise again nine times. Use the pearl to form a cross, connecting the front, back, and sides.
25. Move the pearl to the outer side of the left foot. Circle the ***Soles of Both Feet*** nine times moving toward the left heel, to the right heel, to the right foot, and to the front (midway) of both feet. Use the pearl to form a cross. End with the pearl at the midway point in the front of both feet.
26. Move up to the left knee. Circle the pearl counterclockwise *at the* ***Knees*** nine times. Use the pearl to form a cross. Return the pearl to the midway point in the front of both knees.
27. From the front of the knees, move up to the left groin area. Circle counterclockwise at the ***Perineum*** nine times. Use the pearl to form a cross. Return the pearl to the front of the perineum.
28. Direct the energy to the left hip, and circle counterclockwise at the ***Ovary/Sperm Palace*** nine times. Use the pearl to form a cross by connecting the front, back, and sides. End with the pearl at the front of the ovary/sperm palace.
29. Return the pearl to the ***navel*** and to the ***Cauldron***.

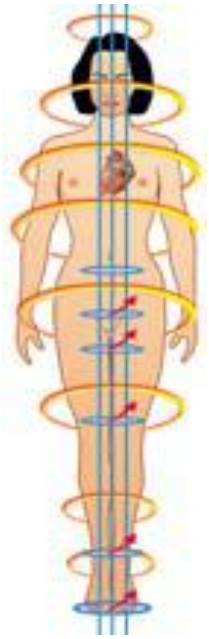


Fig. 8.9 *Bring the Pearl up to the navel.*

Men and Women Practice Differently

***Men**:* Shoot the Pearl out of the Crown, and Spiral the Pearl down from the Crown.

a. Bring the pearl up to the crown.
b. Allow the pearl to go out three to six inches above the head. Circle nine times counterclockwise. Collect the heavenly energy and blend it in the pearl. Then circle it nine times clockwise.
c. Bring the pearl back into the crown point.
d. Spiral it clockwise through each of the Belt Channels all the way down to the soles of the feet.
e. Move the pearl into the earth six to twelve inches to collect the earth energy, and circle the energy nine times clockwise. Reverse the direction spiraling nine times counterclockwise.
f. Return the pearl to the front of the crown, and then back down to the navel and cauldron in the same manner.

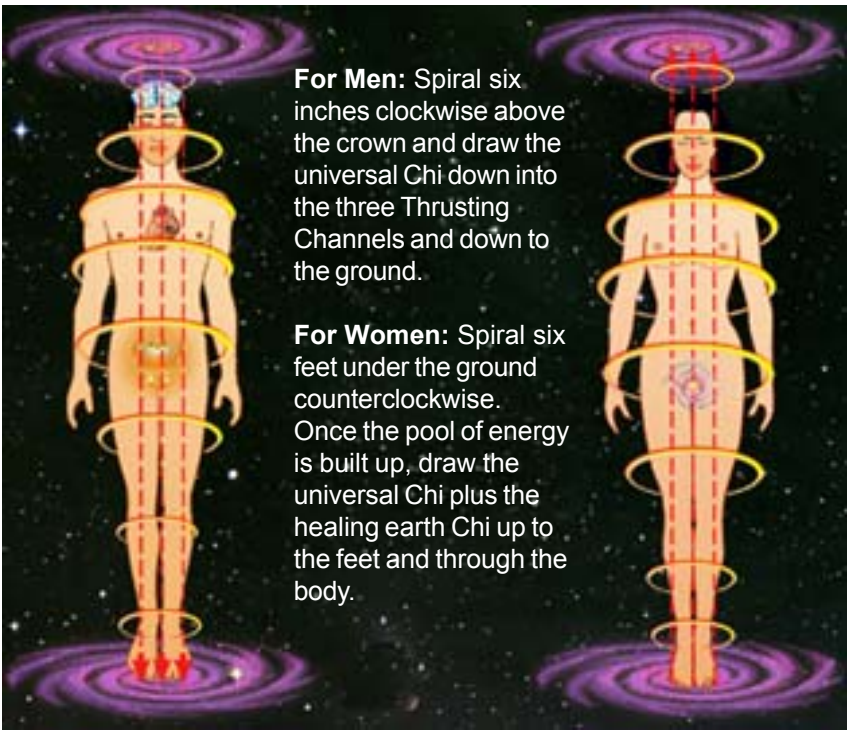


***Fig. 8.10** Men and Women Practice Differently*

***Women**:* Shoot the Pearl into the Earth, and Spiral the Pearl up from the Earth

a. Bring the pearl to the soles of the feet.
b. Move the pearl into the ground six to twelve inches to collect the earthly energy. Circle the energy nine times clockwise. Then nine times counterclockwise.
c. Move the pearl up through the left side of each Belt Channel, spiraling counterclockwise to the crown.
d. Shoot the pearl all the way out at the crown to collect the heavenly energy. Circle the energy counterclockwise nine times. Reverse the direction, and spiral the pearl nine times clockwise.
e. Bring the pearl back down into the right side of the crown. Continue to circle the energy clockwise down through the Belt Channel to the soles of the feet. Return the pearl to the navel and cauldron in the same manner.

Forming a Vehicle

Continue feeling all the pakuas spiraling around the energy center and around the body.

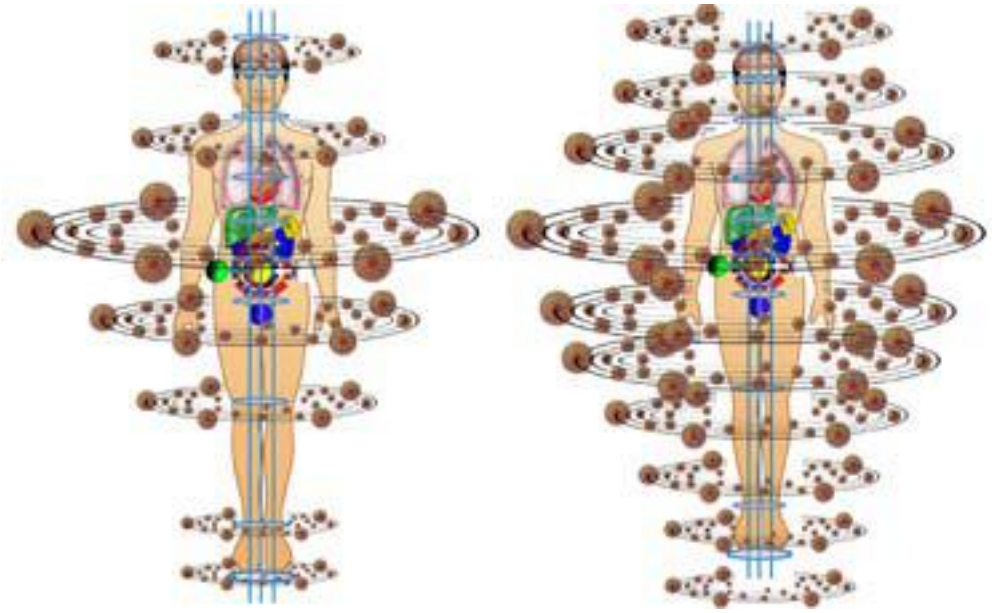


***Fig. 8.11** Spiraling the Pearl and Pakuas faster and faster.*

Let the pakuas spiral faster and start from 10,000 miles per hour up to 60,000 miles per hour and feel the spine getting bigger and bigger.

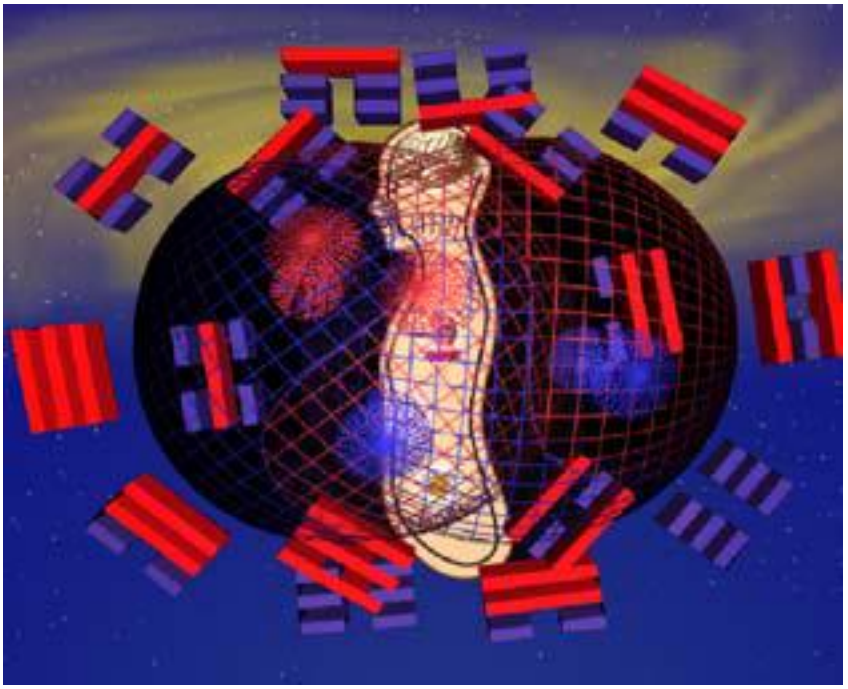


Fig. 8.12 *All the Pakuas become a bigger and bigger Pakua spiraling around whole the body.*

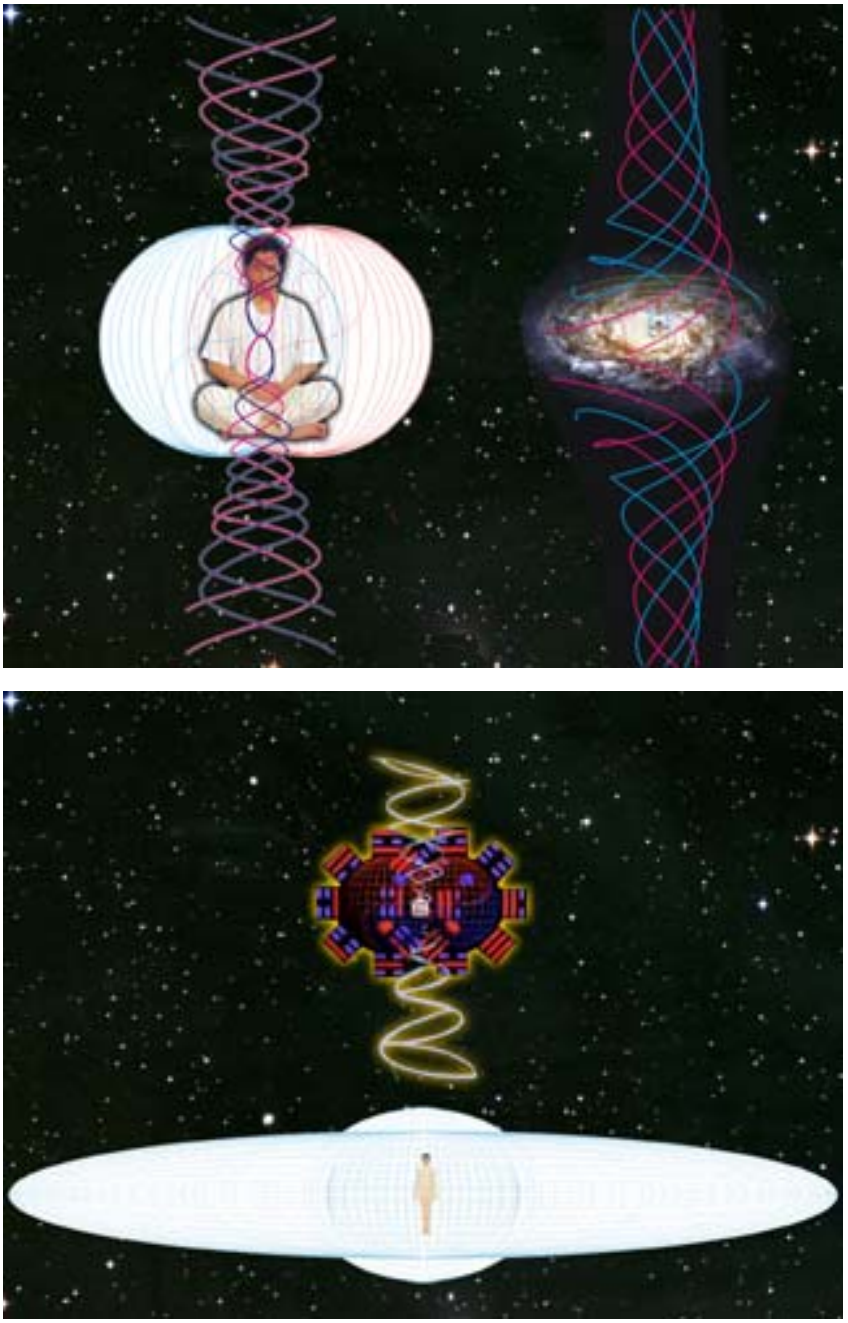


Fig. 8.13 *The spirals of the Pakua form and become a very big kua and form a space ship up to 50 meters in diameter or bigger.*

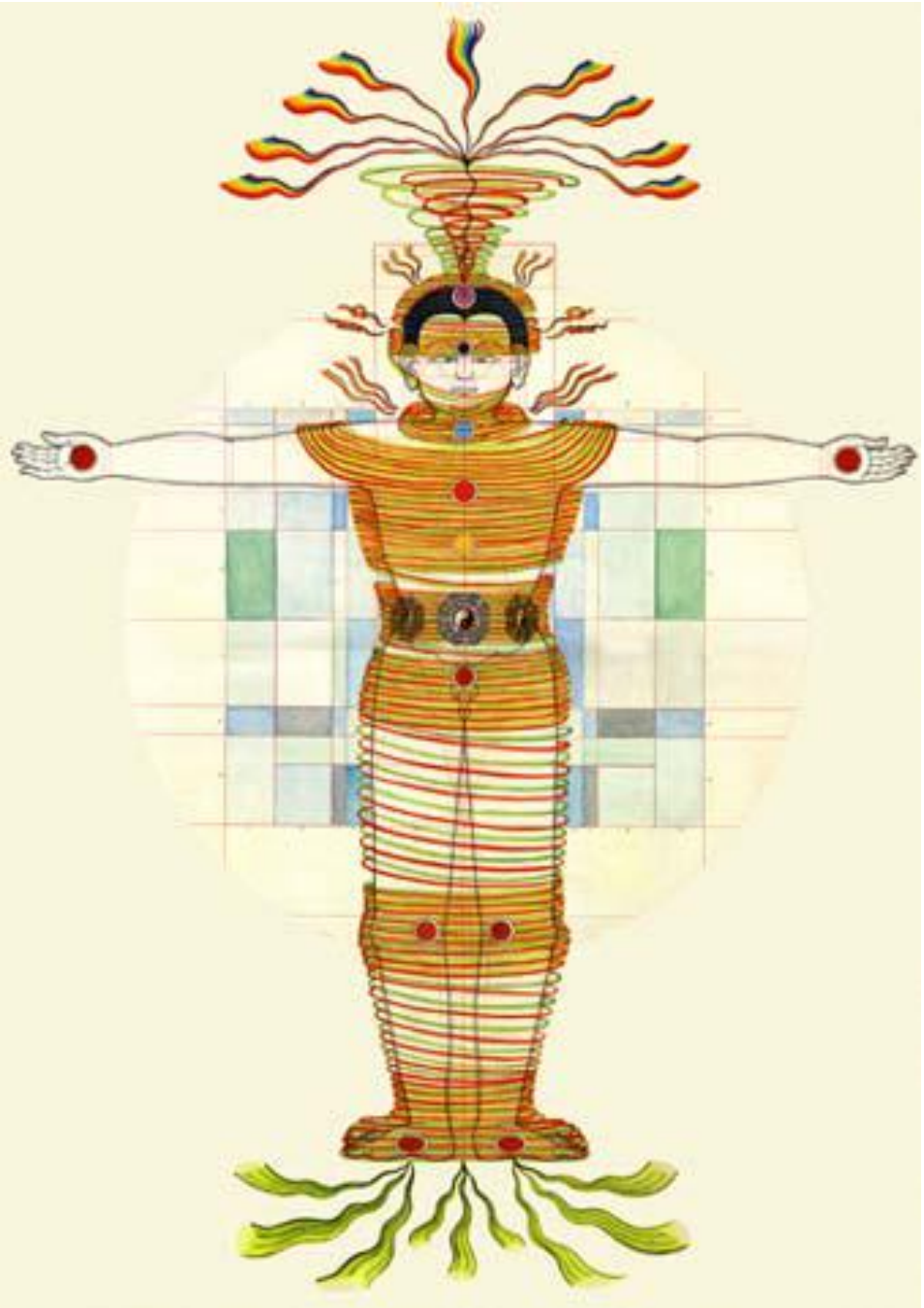


Fig. 8.14 *Belt Channels*

Summary
Procedure of Forming the Belt Channels

Ascending from the Pakuas

1. Practice the Inner Smile from the compassion fire, chanting from pakua, forming the collection points, fusing the energy into a pearl, and the Creation Cycle of Cosmic Fusion.
2. Send energy through the three Thrusting Channels all the way down to the feet and up to the head.
3. Form the four pakuas and a pearl. Gather the pearl at the cauldron, and bring it to the navel.
4. Join the four pakuas by circulating the pearl from the ***Navel*** counterclockwise to the Door of Life and back to the navel. Continue circling the pearl nine times around the Thrusthing Channels and around the body counterclockwise.
5. Form a cross. Bring the pearl from the navel to the cauldron, and back to the Door of Life. Use it to connect the side pakuas. Return the pearl to the navel.
6. From navel move to the left side of the ***Solar Plexus***. Begin to circle the pearl at the solar plexus level. Circle the pearl to the left through T-11 and return to the solar plexus. Circle nine times. Create an internal cross with the pearl.
7. Bring the pearl to the left side of the ***Heart***. Circle nine times towards the left, to the middle of the shoulder blades, and back to the heart center. Use the pearl to form an internal cross connecting all four sides.
8. Next bring the pearl to the left side of the ***Throat Center***. Circle the pearl back to C-7, and to the middle of the throat center nine times. Form an internal cross. **Practice and master this step before continuing up to the crown.**
9. Bring the pearl to the upper tip of the left ear level with the ***Mideyebrow***. Circle the pearl nine times back to the small brain, to the upper tip of the right ear, returning to the mideyebrow. Feel a band of energy flowing around the mideyebrow, ears, and back of the head. Form an internal cross connecting all four sides.
10. Bring the pearl to the ***Left Side of the Crown***. Circle the energy nine times counterclockwise at the crown. Connect the front, back, and both sides of this Belt Channel.

11. Allow the pearl out above the crown. Circle the energy nine times forming a ***Halo of Energy***. Use the pearl to cross the halo, front to back, and left to right. Collect the energy from above the head.

Descending Back to the Pakuas

12. Reverse the energy flow to a clockwise direction. Circle the ***Halo*** nine times. Then cross it front to back, and right to left sides.
13. Bring the pearl back to the ***Crown***. Circle to the right nine times. Then use the pearl to cross the front, back, and two sides.
14. Move the pearl down to the upper tip of the right ear. Circle from the right ear to the mideyebrow. Repeat nine times. Use the pearl to form a cross and return it to mideyebrow.
15. Bring the pearl down to the right side of the neck at the ***Throat Center***. Circle right to *C-7* at the back of the neck. Return to the front again. Circle nine times. Cross the front, back, and two sides. Bring the pearl to the front.
16. Bring the pearl down to the right side of the ***Heart Center***. Circle it clockwise nine times, ending at the front. Then, use the pearl to cross the front, back, and sides. Return the pearl to the front again.
17. Move the pearl to the ***Solar Plexus***. Circle it nine times to T-11 at the back, and return to the solar plexus. Cross the front, back, and sides. Return the pearl to the front.
18. Bring the pearl down to the ***Navel***. Circle it back to the Door of Life, and back to the navel nine times. From the navel bring the pearl to the cauldron, back toward the Door of Life, and return it to the cauldron. Use the pearl to cross the right and left sides. Return the pearl to the navel.

Descending from the Pakuas to the Earth.

19. Once you have controlled the pearl to this stage of the meditation, you are ready to move the pearl down to the ***Sexual Center***. Women bring the pearl down to the right side of the ovary center, located three inches below the navel. Men bring the pearl from the navel down to the right side of the sperm palace, one and a half inches below the navel. Circle clockwise back to the sacrum, to the left hip, and to the front of the ovary center/sperm palace nine times. Use the pearl to make a cross. Return the pearl to the front of the sexual center.

20. Bring the pearl down to the right groin. Circle the pearl clockwise around the ***Perineum Point and Lower Hips*** nine times. Use the pearl to form a cross by connecting the front, back, and sides. Return the pearl to the front.
21. Move the energy down and circle toward the back of ***Both Knees***, around and to the front, midway between both knees, moving the pearl clockwise nine times. Use the pearl to form a cross by moving the pearl to the midpoint between the knees and connecting the front, back, and sides from this point. End with the pearl midway between the fronts of both knees.
22. Direct the energy down to the feet, just below the ankles. Circle the ***Soles of the Feet*** nine times moving the pearl clockwise to the heel of the right foot, to the heel of the left foot, to the outer side of the left foot, to the front, midway between both feet. Form a cross. End with the pearl midway between both feet.
23. Move the energy from the front of the feet down to a point ***Beneath the Earth***, and circle toward the right (clockwise) nine times. Use the pearl to form a cross ***Beneath the Earth***. Keep on spiraling more energy to enhance the pearl. Return the pearl to the front of the circle.

Ascending from the Earth Back to the Pakuas

24. Reverse the circle beneath the earth, moving the pearl counterclockwise again nine times. Use the pearl to form a cross, connecting the front, back, and sides.
25. Move the pearl to the outer side of the left foot. Circle the ***Soles of Both Feet*** nine times moving toward the left heel, to the right heel, to the right foot, and to the front (midway) of both feet. Use the pearl to form a cross. End with the pearl at the midway point in the front of both feet.
26. Move up to the left knee. Circle the pearl counterclockwise *at* the ***Knees*** nine times. Use the pearl to form a cross. Return the pearl to the midway point in the front of both knees.
27. From the front of the knees, move up to the left groin area. Circle counterclockwise at the ***Perineum*** nine times. Use the pearl to form a cross. Return the pearl to the front of the perineum.
28. Direct the energy to the left hip, and circle counterclockwise at the ***Ovary/Sperm Palace*** nine times. Use the pearl to form a cross by connecting the front, back, and sides. End with the pearl at the front of the ovary/sperm palace.
29. Return the pearl to the ***Navel*** and to the ***Cauldron***.

Men and Women Practice Differently

***Men**:* Shoot the Pearl out of the Crown, and Spiral the Pearl down from the Crown.

1. Bring the pearl up to the crown.
2. Allow the pearl to go out three to six inches above the head. Circle nine times counterclockwise. Collect the heavenly energy and blend it in the pearl. Then circle it nine times clockwise.
3. Bring the pearl back into the crown point.
4. Spiral it clockwise through each of the Belt Channels all the way down to the soles of the feet.
5. Move the pearl into the earth six to twelve inches to collect the earth energy, and circle the energy nine times clockwise. Reverse the direction spiraling nine times counterclockwise.
6. Return the pearl to the front of the crown, and then back down to the navel and cauldron in the same manner.

***Women**:* Shoot the Pearl into the Earth, and Spiral the Pearl up from the Earth

1. Bring the pearl to the soles of the feet.
2. Move the pearl into the ground six to twelve inches to collect the earthly energy. Circle the energy nine times clockwise. Then nine times counterclockwise.
3. Move the pearl up through the left side of each Belt Channel, spiraling counterclockwise to the crown.
4. Shoot the pearl all the way out at the crown to collect the heavenly energy. Circle the energy counterclockwise nine times. Reverse the direction, and spiral the pearl nine times clockwise.
5. Bring the pearl back down into the right side of the crown. Continue to circle the energy clockwise down through the Belt Channel to the soles of the feet. Return the pearl to the navel and cauldron in the same manner.

Energy Body

Once you have practiced to this level, you are ready to form the pearl into the Soul Body.

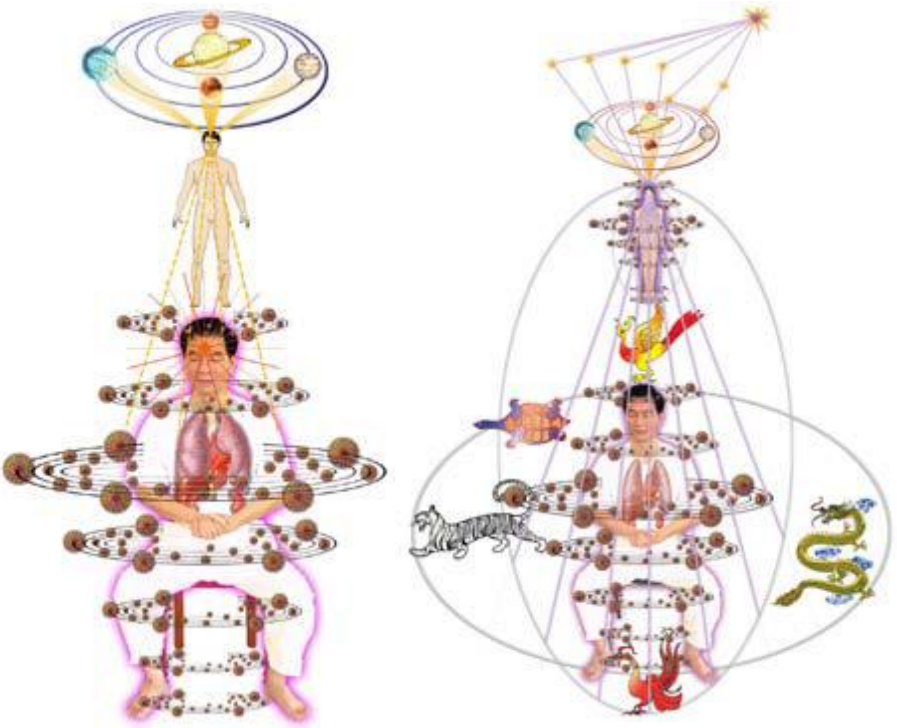


Fig. 8.15 *Energy or Soul Body*

Sorcerers saw that the essence of the universe resembled a matrix of energy shot through by incandescent strands of consciousness or actual awareness. They also 'saw' the essence of the human form. It was not merely an apelike amalgamation of skin and bones, but an egg-shaped ball of luminosity capable of traveling along those incandescent strands to other worlds. (Wagner, Bruce, "You Only Live Twice", *Details*, March, 1994, p.168.)

Just as it is important for the physical body to be strong so we can enjoy optimum health, it is also vital to strengthen the Soul Body so it becomes a sturdy vehicle for our consciousness. Strengthening Chi nourishes our health and spiritual qualities in

this life and builds a strong Soul Body to carry us forth into the "afterlife" (which is, paradoxically, the here and now). We begin to strengthen the Soul Body through what is called in Taoist Inner Alchemy "the Inner Elixir". It is called the Inner Elixir because we are working with the energies already within our own body and converting them into elixir-like healing essences. Through the meditation practices of the Microcosmic Orbit and the Fusion of the Five Elements, we detoxify, nourish, and integrate the physical body, the Energy Body and the emotions.

Always begin by doing the Fusion of the Five Elements practice to clean out the negative emotions.

Chant the eight forces and form the collection points. Let the Pakua spinal around the physical body.

Condense the pearl and practice the Creation Cycle, Thrusting Channels and Belt Channels.

Run the pearl in the Microcosmic Orbit, and control its movement with the senses.

Move the pearl to the perineum. Inhale in short sips, drawing in ten percent of the lungs' capacity, while gently pulling up the anus. Inhale up to the navel, then to the heart.

Inhale up to the crown. Swallow your saliva (imagine swallowing upward,) and exhale forcefully to open the crown and shoot the pearl out.

Practice moving the pearl up to one foot, two feet, three feet, four feet, five feet, and six feet above your head. Go out only as far as you are able to maintain control of the pearl.

Relax the senses, and form the Soul Body.

Run the pearl in the Microcosmic Orbit in the physical body. Open the crown, transfer the Microcosmic pathway into the Soul Body above the head.

Form another pearl in the cauldron, and shoot the pearl into the Soul Body.

Circulate the pearl through the Microcosmic Orbits in both the physical and energy bodies together.

Extend the Thrusting Channels up into the Soul Body.

Practice all the Belt Channels up through the head, or down through the soles, into the Soul Body. Spiral all the pakuas around the Soul Body like a space ship.

Continue to practice until you are in full control of the Soul Body. ***Note*:** You can also form a Soul Body below you by thrusting the pearl through the soles of the feet into the ground.

Spirit Body

Once you are well in control of the Soul Body, you are ready to form the Spirit Body.

Fig. 8.16 *Spiritual Being*

Stage One

Be aware of the Four Pakuas in each center and spiral them around the physical body and the energy body.

1. Begin to form the spirit body after doing the Soul Body practice. Leave the Soul Body above the crown. Form another pearl at the cauldron, and run the Creation Cycle.
2. Form the pearl from compassion energy, a pearl that is more blue and gold than the Soul Body pearl.
3. Move this pearl in the Microcosmic Orbit. Bring it down to the perineum.
4. Inhale in small sips, and pull up the anus. Inhale the pearl to the navel; then to the heart; and to the crown.
5. Inhale again, and swallow up. Exhale forcefully to open the crown, and project the pearl to the perineum of the Energy Body.
6. Exhale, and send the pearl to the heart of the Soul Body. Exhale again, and send the pearl above the crown of the Soul Body.
7. Move the pearl up and down approximately twelve inches (30 centimeters) above the crown of the Soul Body. Then gradually extend the pearl further up in one foot (30 centimeters) increments. Practice until you are able to move the pearl up and down six feet above the Energy Body.
8. Condense the pearl. Condense the Soul Body. Bring both pearls back to the cauldron of the physical body.

Stage Two

1. Repeat steps (1) to (7) above, and run the Microcosmic Orbit in the physical and energy bodies.
2. Transfer the Microcosmic Orbit from the Soul Body into the Spirit Body, and then run the three Microcosmic Orbits together. As an alternative, you can run the Microcosmic Orbit as one large channel incorporating all three bodies.
3. Extend the Thrusting Channels to the Spirit Body.
4. Extend the Belt Channels to the Spirit Body.
5. Finish by condensing the energy of both the Soul and Spirit Bodies into a pearl. Pull the pearl into the physical body.
6. Collect the energy at the cauldron, and practice Chi Massage.

Chapter 9
Fusion as a Bridge

In the overall structure of the Universal Tao, the Fusion Practices serve as a bridge between the basic preparatory practices such as the Inner Smile, the Healing Sounds, the Microcosmic Orbit, Healing Love, Tao Yin, Iron Shirt Chi Kung, Cosmic Chi Kung, Bone Marrow Nei Kung, Tai Chi and the Higher Inner Alchemy Practices of Kan and Li.

The Fusion Practices are traditionally considered as the core of internal alchemy, as they focus on the transformation of emotional energies, contained in the major organs of the body, as centers and fields of energy which resonate, each with their particular frequencies, with the energies and forces of the universe.

Through a process of balancing negative and positive energies (Fusion of the Five Elements), the growth of positive energies (Cosmic Fusion) and the opening of meridians to enhance the circulation of internal energies of the body and make it receptive for outside energies (Fusion of the Psychic Channels), the body gradually becomes more open. Thereby the self-healing process, initiated in the basic practices, is further enhanced.

Once the strength and health of the body have been restoried so that it can serve as a vessel for the forces of the universe and is in a position to process them, it is ready for the higher alchemy in the Kan and Li practices. In these Kan and Li practices the physical body can then give birth to the energy body. Once this has taken place the person is ready to give birth to the spirit body, also called the Light or Rainbow body.

Fusion as a Journey of Self-Transformation

In the Fusion Practices, the body and its path routes are not only cleansed and opened, so that the energy from within and from outside can flow with more power and ease. Also the energy flows in the body are qualitatively raised. Thus the self healing and regenerative capacity of the body, already initiated in the basic practices is further enhanced. As a result, the body's health and vitality receive a new boost and it grows in strength. At the same time, it becomes more able to absorb and process the various forces and energies from the universe, the cosmos and nature.

In the Fusion Practices, the body enters into a dynamic process towards new balances. This is an essential condition for the light to grow inside. This can then in turn attract the light from heaven as its energies become finer, as they blend into a higher quality energy created by the blending of love and compassion. This higher concentrate of energy is then condensed into a pearl which is subsequently circulated through the major organs and the psychic channels in and around the body. The pearl will help the body to feel centered and experience peace and harmony. It will also help to cleanse the special channels and enhance the free flow of energy.

The pearl will facilitate the growth and transference of consciousness from the physical to the energy body and from the energy to the spirit body (Cosmic Fusion), healing it and helping it to center and experience peace and harmony. Through the growth of love and compassion the body is able to radiate out and receive in the love and cosmic energies so that its own Chi is blended with the cosmic Chi and is thereby transformed into a higher quality of Chi.

To facilitate the process of blending and balancing the energies within the body between its organs and the gathering, processing and condensing of energies from the universe and from nature, the pakuas play an essential role (Formula 1, *Fusion of the Five Elements*).

In the earliest stage after conception, the first meridians which rule the circulation of energy of the embryo and which come into existence after the split of the egg and the formation of the body are the governor and conception channels. Successively, all other Yin and Yang meridians form in a symmetric fashion on the Yang and Yin sides of the body.

In ancient Taoists texts they are also called the sun side or outer side and the moon or inner side of the body. The sun side is that side exposed to the sun when one bows down, the moon side is that part which remains in the shadow.

The body might be visualized as grid of conduits of light which link it to the Light in which all energy and matter has its origin, a view which is supported by the new physics.

Unity of Ying and Yang

Basic to the Taoist tradition is the view that positive and negative energies are a manifestation of the very nature of the universe as a unity of opposite energies: Yin and Yang. It is by virtue of the dynamics of the interplay of Yin and Yang that the universe exists and continues to exist. They rule all phenomena in the universe as an infinite web of mutually interconnected processes and their movement. This insight is the theoretical as well as the practical basis of the Fusion Practices.

In Taoist theory, Yin and Yang rule the relationships between stars, planets, the sun and the moon and the earth, light and dark, above and below, man and woman. It is in and through this interplay, that the universe unfolds and functions. If one of them would disintegrate or disappear, the universe would end.

In the Taoist vision on the nature of the universe, the body is a microcosmos, which manifests and reflects in its inner structure the dynamics of the universe. As such it is also ruled by the same forces of Yin and Yang.

These in turn manifest themselves in the universe in the five elements (water, fire, wood, metal and earth). These five elements operate as energies in the body, in and through the five vital organs: the kidney, heart, liver, lungs and spleen. It is the natural capacity of the body to heal and regenerate itself. The body is sustained and nurtured by cooperating and facilitating the workings of the universe through the balancing of the five forces in the organs of the body and the positive and negative properties of each of them.

It is the relationship between the positive and negative energies contained and reflected in the organs, which is the starting point of the Fusion Practices.

In the Taoist tradition, the body has always been viewed as a sacred vessel, which reflects the sacred nature of the universe as a whole. Interfering with its laws of motion, the balance between Yin and Yang is broken and with it harmony and mutual cooperation between the organs and the elements which compose the body.

As a result, the free uninhibited flow of energy streams, and with it the immunity of the body, are affected. In Chinese medicine, of Taoist origin, disease is seen as the outward manifestation of

imbalances within the body. Hence the predominant attention in Chinese medicine and Taoist self-healing practice on the balancing and strengthening of the organs and their cooperative relationships.

The Taoist view on the outer and inner universe (the body), is the fruit of several thousands of years of highly sophisticated empirical observation. Thusly, feeling and sensing in the body and its structure, processes and needs, play a crucial role in creating balance within the body and between its organs and their energies, so that inner peace and harmony may grow (Formula 2, *Fusion of the Five Elements*)

Turning Inward

This involves a process of turning inward and to feel and sense oneself "from within" so that understanding can grow. This in turn further supports the effectiveness of the inward-oriented process of listening. By turning the senses inward and reconnecting them with their corresponding organs (ears/kidneys, eyes/liver, tongue/heart, mouth/spleen, nose/lungs) the process of externalizing the consciousness and thereby draining the energies out of the body can be inverted. This allows the body to come to rest and recuperate its energies and the connected senses.

By protecting the senses from undue outside influences, the life force energies in the body and the higher energies it accumulates, through the blending with the energies from all the directions, but especially those from the stars and the sun and moon and planets, are preserved and can grow without interference (*Cosmic Fusion,* Formula 3).

This process of protection is further deepened and completed in the high formula of Sealing the Five Senses of the Kan and Li Practices where protective auras are created around the body from the accumulated energies of each of the major organs.

There is abundant evidence that in the process of externalization which has been imposed on the body in the process of modernization and its growing pressures on the body, the senses have become atrophied. By turning them inward, it becomes more easy to control them and protect the integrity of the body and its organs so that it can regenerate.

The Taoist approach to the body is rooted in the vision that there is an inner order in the very nature of the universe and all its manifestations. The outer order is a manifestation and reflection of this inner order. If the outer order is in harmony with the inner order, then harmony and peace reign.

As our receptivity and ability to sense and feel ourselves from within grows, so grows our ability to experience the universe within ourselves. By looking deeply into ourselves we grow. Our understanding of our being and body as a microcosmos, and its intrinsic unity with the universe as a macrocosmos, grows.

From Balance through Resonance to Love

As our body and its chemistry and we ourselves are changing, our consciousness and perceptions also change and widen. Then a point will come where we begin to experience ourselves less as separate and isolated from the universe and more in resonance and in tune with the universe.

In this process, we grow more aware of the wave-like nature of our body in and through which the universe pulses within us and how we pulse in and though our bodies with the energies and forces of the universe. At the same time our ability to tune in with the energy of the universe and its frequencies and to absorb and draw this energy into ourselves will grow.

The Fusion Practices serve an essential function in making our being more open through the heightened sensitivity of the body, as our energies become purified and more fine and subtle. The desire rises within the body to enter into the primordial unity with the original energy by which it was originated as a living being.

In the ancient Taoist vision this relationship has always been seen as a love relationship which reveals itself when our body returns to its inner balance and Yin and Yang enter into balance. The ability to attract and conduce the energies from the universe into one body through the network of conduits, represented by the grid of meridians, is dependent on the quality of the inner work towards unity between Yin and Yang.

This meeting between Yin and Yang has in the Taoist tradition been seen as a marriage, born out of love between the opposites, as they move towards unity. The Fusion Practices play an important role in the preparation of a state of being which make this movement towards unity possible.

Enlightenment of the Body and New Physics

The Taoist insight that human beings, with all other phenomena, share common origins in the universe and that our origins are in heaven and originate in the stars is shared in many other ancient cosmologies: those of the African peoples, the indigenous peoples of North and South America, as well as the Australian aboriginal people.

The Taoist tradition, however, is unique in that it has evolved over time concrete practical formulas and practices to work with. These help us to reconnect and in the process rediscover the inherent ecstatic nature of our body, through the process of self-transformation.

These formulas, of which the Fusion Practices are an integral part, are based on the insight of the nature of the meridians and their application in healing the body and restoring its natural functions, which form the basis of Chinese medicine.

A closely related Taoist thesis on the nature of the universe, also to be found in all ancient cosmological traditions, including those in the West (before the scientific revolution did away with them, viewing them as superstition) is the unity, indivisibility and interchangeability of matter and energy.

This thesis finds full support in the new physics which evolved from the beginning of this century with the path-breaking discoveries in quantum physics and relativity theory by the great physicists Bohr, Einstein and Heisenberg.

Their discoveries shattered the foundations of the old paradigm, underlying Cartesian-Newtonian physics, at the basis of modern science. They broke radically new ground in the interpretation of the nature of matter. In the new vision of advanced physics, matter, in its inner nature, is understood as a process and an event. Matter and energy are forms of the same reality. As matter can change into energy, also energy can change into matter. Both matter and energy are viewed in this new interpretation of reality as having their origin in light.

Therefore the Taoist vision on the intrinsic nature of the body as a light body is not a romantic vision, invented by creative minds. The image, underlying it, corresponds to the insights of advanced physics. Thus what has been called in ancient spiritual traditions “enlightenment” refers to a real material process: the illumination of the body.

Here's what distinguishes the Taoist vision from most others: enlightenment is not understood as a process which happens "in the mind", in separation from the body, but the process takes place in and through the body and its progressive transformation.

Thus a true process of spiritual growth in the Taoist vision implies the "enlightenment" of the body. The progression process of illumination is a bodily process, visible to the eye and tangible in the quality of energy which a person manifests and radiates in her/his body. This emphasis on transformation as a bodily process is a principal characteristic of the Taoist tradition. In that respect it differs from other ones, marked by the duality of body and mind and in which the body is viewed as a stumbling block; a hindrance.

This also explains the Taoist insistence on the central importance on rooting and grounding the body in the process of self-transformation. The more one advances in the higher practices, the greater the need to root and ground so that the energies in the body remain in balance. Equally important is centering; the balance between heaven and earth, the energies from above and below are maintained and enhanced.

It is precisely for this reason Taoist practice gives the highest priority to the creation of a healthy and strong body through a healthy and relaxed life style and an intelligent natural diet thanks to which the body can continuously regenerate and rejuvenate itself.

These insights had their basis in a new view on the nature of electromagnetic waves as particular forms of energy and in the insight that light is an electromagnetic field which takes on the form of waves which can travel through empty space as very light vibrations, also called ether. This energy is seen, in both the Chinese and Indian cosmologies, as the mother energy from which the other elements originate and of which the universe, the cosmos and nature are composed: fire and water, wood and metal and water.

In the Taoist system, these elements correspond to the five seasons, temperatures, senses, colors, sounds and positive and negative emotions. They form the theoretical and practical starting point for the Fusion Practices.

Return to Cosmology

The revolutionary implications for our perceptions of the universe, the cosmos, time and space and of nature and ourselves as part of nature are only slowly penetrating into the social consciousness. This social consciousness's view of its conditionings and fixations in cultural patterns and corresponding perceptions of reality prevent it from being open to an understanding our true nature.

There are multiple mechanics at work in present day culture and science and the modern view of reality which tend to prevent us from giving up the mind sets, rooted in the subconscious (and which rule the conscious mind, unaware of the forces by which it is steered). These make it appear as if the universe is composed of an infinite amount of loosely, accidentally assembled particles and solid objects; each having an independent, separate existence, rather than what is actually an ever changing web of unceasingly changing events which are mutually interconnected and interdependent.

The emergence in Western history and culture of the perception of human beings as essentially sovereign and independent from the universe and as its ruler who can alter life and the origins of life at will (with the progress of science and technology) are wholly questioned by the Taoist vision, presented above.

Such a view on the presumed independence and freedom from the laws of motion of the universe also has shaped the basic assumptions on the nature of human beings and social relations which have shaped mainstream social science and psychology, which mirror the basic premises of the Cartesian- Newtonian paradigm.

They support a view of progress and development, the new version of which emerged in the course of this century, which is essentially inspired by the view that reality can be manipulated and engineered without regard for the consequences on Nature. However, with the more recent findings of the adverse effects of such an attitude and the growing concern that the very foundations on which life on earth rest are being jeopardized, the basic premises on which this attitude is based are increasingly being questioned.

At the same time, as a natural consequence, there is a growing interest in the visions which have inspired the ancient cosmologies such as the Taoist one, especially since there is increasing evidence in advanced physics which support such visions. Thus it is

not surprising that one of the leading philosophers of science, Stephen Toulmin, recently published a book, *A Return to Cosmology.*

In his study he traces the process of alienation in Western culture and science, as it came to shape modern life. Especially, he focuses on the relation between body and mind. He foresees a return to ways of looking at reality which help to overcome the duality at the root of this alienation and the imbalances it has brought about in the present day world system and which it feeds through the new communication technologies.

It cannot be emphasized enough that when the Universal Tao system is called a whole of interrelated practices, this is based on the root assumption that it is only in the practice that experience is gained. Therefore, a process of self-transformation is set in motion which makes it possible to come to terms with the patterns within oneself which prohibit one to discover its relevance.

This is the very basis of Eastern epistemologies, not only basic to Taoism but also at the root of other Eastern religious and spiritual traditional epistemologies: that true knowledge can only be acquired experientially and existentially in and through the practice.

Also implicit in the Taoist vision, shared in other ancient cosmologies, is the view is that the universe is alive. Not only as it births life at every instant, but also as it sustains and nurtures life. This view is quite contrary to that underlying the materialist world view, which originated in the West with the advent of modern science, in which the universe is reduced to an accidental anomalous phenomenon .

Religious Nature of Taoist Practice

In the Taoist view, supported by the new physics, the body is not only matter but also a field of consciousness which, by its wavelike nature, is intrinsically related to the whole universe and can also get in touch with it. This provides the very basis for the Cosmic Chi Kung practice as a practice, which helps to enhance and balance the body and which is essential to the Fusion Practices.

These above views are essential to the assumptions on energy underlying the ancient Taoist Practices, contained in the practices of the Universal Tao and which offer a synthesis and which for the

first time have been published in the West. Until recently these were scattered and inaccessible, except for highly fragmented information. Essential to the Taoist tradition is religious practice in the feeling and experiencing of the sacred and the divine, and not in the beliefs about them.

The Taoist view on the nature of religiosity as an experience of connection and reconnection is very much in line with the original meaning of the root of the word religion in Latin, “re-ligare”, to reconnect.

Thus the practice is oriented to rediscovering the intrinsically ecstatic nature of the body in which it spontaneously feels the truthfulness of life as a sacred, naturally ecstatic activity. The whole practice may be summarized in facilitating the process of reconnecting and returning to the state we were in before being born.

Basic to the transformation process which is conducive to this rediscovery is the Healing Love practice by which the sexual energy is retained, its flow is inverted and the nature of this energy is transformed. The Fusion Practices play an essential role in making possible the further refinement of this energy in the Kan and Li practices through new forms of purification and by enhancing the receptivity of the body for higher energies from the universe. The Taoist practice takes literally the Christian tenet that the body is the temple of God by viewing the vital energy or life force energy as a sacred energy through which the body reveals its divine nature as an intrinsic endowment in which heaven and earth merge.

Wisdom of making Friends with the Devil

The three monotheistic religious mainstreams in their institutionalized esoteric form -- the Jewish, Christian and Islamic -- are marked by a deep duality between high and low, sacred and non sacred, right and wrong, good and evil, mind and matter, mind and body, mind and energy. This duality has also shaped other religious and philosophical systems in their social and institutional evolution; systems such as Hinduism, Buddhism, Taoism and Confucianism. These systems have been marked by beliefs and codes of ethics which have tended to split humankind between believers and nonbelievers and between those that are good and those that are bad.

Their focus on the duality between God/ the divine and heaven and earth, God and the Devil, good and evil, mind/spirit and body and on sin and its corollaries, fear and guilt, have created much violence and tend to continue to do so. They have also greatly affected people's sense of dignity, self-esteem and independence, as they have tended to create major dependencies on institutional intermediation with the divine.

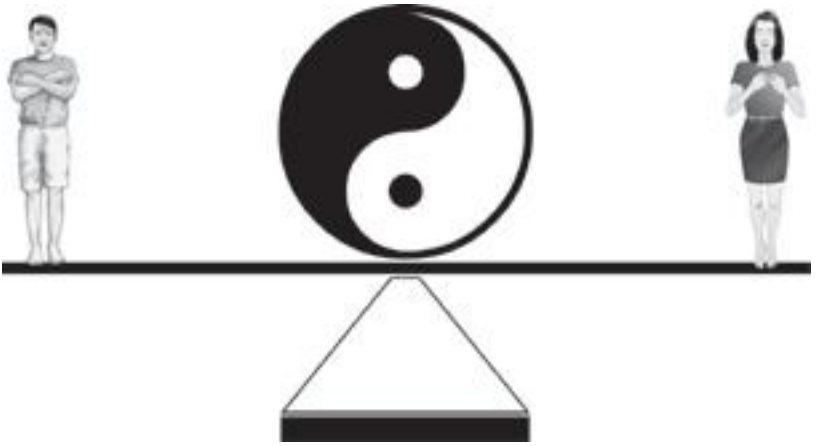


Fig. 9.1 *Balance of Yang and Yin (Good and Bad)*

In many pre-industrial cultures there are proverbs and legends which suggest that it is wise to make friends with the devil rather than fight him. It would seem that such intuitions are based on the insight that it is better to reconcile and accept oneself so that the negative loses its power rather than opposing it, by which its power increases, especially when fear and anger rise and the negative is turned into an obsession. Simple observation confirms the truth of this insight: that the energy of what is viewed as negative and dark increases to the extent that there is an attempt to eradicate it.

This same principle shows up in the martial arts: never initiate the fight but let the enemy come and neutralize him by making use of his own energy, as in the case of Tai Chi and Aikido.

A leading philosopher of culture and humanist therapist in the West, Erich Fromm, has said that the propagation of these views, often in extremely violent ways, has broken the spiritual backbone of the people.

Esoteric systems have, however, never succeeded in wholly eradicating and repressing their esoteric roots, visible in multiple

movements throughout history, in which the body was considered sacred and a temple of the divine and in which sexuality was viewed as intrinsically sacred.

It may be said that all esoteric systems, in their origins, have called on humankind to practice love and compassion and thereby to transcend ego and enter into a state of grace.

Adepts like Jesus who has inspired the Christian tradition, Mohammed in the Islamic tradition and the Gautama in the Buddhist tradition may be seen as great masters. They showed people ways and practices of self-transformation through the practice of love and compassion. By assuming responsibility for themselves, they could attain inner freedom and bliss and transcend themselves.

In the Taoist view, the problem with religion and philosophy is not in the practice, but in the beliefs which often serve to divide rather than unite, inside the person and outside.

Unity of Light and Dark

In the Taoist perspective, there is no sin, as light and dark are two poles of the same indivisible reality. Thus, attempts to eradicate the dark, so that light will prevail, are bound to fail and tend to lead to conflict and violence. Attempts to conquer good at the expense of evil (for example, the Crusades) are bound to generate more violence. And battles to secure good over evil will create more problems than they solve. In the Taoist view there should be neither winners nor losers.

Fig. 9.2 *Light and Dark of the Tai Chi Symbol are connecting.*

Thus, balance between opposite forces and energies, as expressions of Yin and Yang, the positive and the negative, is essential to Taoist perspective, as expressed in the *Tao Te Ching*, attributed to the great Taoist Master of self-transformation, Lao Tzu.

From a Taoist perspective, balance is enhanced by entering into alignment with the universe, when one actualizes the universe within oneself and so is empowered and realizes oneself. This state has also been called a state of Selfhood, as one has returned to one's original Self. This process is also called "returning to one's origins". This means that one has overcome the contradictions and imbalances in oneself, so that Yin and Yang enter into balance and harmonize. The Taoist texts speak of becoming the "Undivided Being". Lao Tzu uses the metaphor of the unhewn log (p'u). It manifests a state of being in which when has returned to the original state of spontaneity, in the old Taoist texts called " Tzu-jan) which can be observed in babies and small children. This reminds us of the saying of Jesus," if you do not become as children, you cannot enter the Kingdom of Heaven".

Thus the Taoist view on harmony does not carry moral overtones, as it refers to a state of being which is intrinsic in the body. This state of being of the body as a microcosmos lies in the balance within and between its major organs, through which our body resonates with the energies and forces of the universe.

In the Taoist perception, there are no heaven and hell outside, above or below us. They are seen as states of being of our bodies and our inner selves and the way we relate to the universe, ourselves and each other. As such they reflect states of balance and imbalance between the positive and the negative. In this view, human beings are responsible for their own state of being, the quality of which depends on their state of self-awareness as the key to self-transformation.

This view is reflected in many ancient spiritual traditions and cultures which suggest that it is wiser to keep the devil as a friend than try to combat him and do away with him.

This liberating view, which frees us from self-condemnation with its tendency to obscure the positive within the negative and its transformational force, is the basis for the Fusion Practices.

Life as an Invitation to Learning

The Chinese character for crisis stands for both a negative occurrence as well as for opportunity and reflects the Taoist view on the unity of the positive and negative. In this perspective, whatever happens in life is to be seen as an invitation for learning and an opportunity for awakening. Theoretically speaking, problems are not problems, but opportunities for self-transformation, since the negative contains the positive, in the same way as the positive contains the negative, like the Yin is in the Yang like the Yang in the Yin. What may be seen and experienced as negative, carries within it the seeds of the positive, just as the light exists within the dark. In this light, all problems of life may be seen as energy potential, which can actually be a learning process.

This is a key premise in the Fusion Practices, and it helps to overcome the duality which we tend to construe, as a result of attachments to our negative experiences and emotions and therefore keep ourselves from entering into balance.

Taoists say that learning is enhanced if the organs feel at ease and find themselves in a state of well being. When a state of disease arises – which in Chinese medicine, of Taoist origin, is seen as a symptom of the breakdown or weakening of the free flow of energy – learning becomes more difficult.

It also points to an attitude which gives primacy to the need to reflect on one's own attitude and perception in resolving problems and to look inward to see in what way one has contributed to the problem and how one can contribute to its solution by changing one's own attitude, perception and way of life.

Thus from a Taoist perspective, problems are not seen as obstacles or difficulties but as opportunities to learn and as learning material.

In this connection, it is interesting to note that the word disaster, common to many European languages, has its etymological root in the Latin substantive "astrum" of which it is a negation by the prefix "dis". This suggests that originally the word had the connotation that if and when one lost touch and became alienated from the stars (as representing our origins), one was in for trouble; imbalances would arise.

Smiling as the Key Taoist Practice

Smiling and relaxation are the beginning practice of the Universal Tao. They are the key to the transformational process and to learning, as a result of which one is enabled to gently and patiently change old patterns into new, concerning oneself and the universe: new breathing, posture, inner and outer movement, and a new perception of reality.

Essential therefore in the Taoist practice to enhance learning and get in touch with the body by turning inward is to learn to relax and smile inward, so that dis-ease, manifest in many forms of stress, is overcome and one returns to a state of ease. Thus it may be said that whereas the Western approach to medicine starts from outside, the Taoist approach starts from within.

It is thus not incidental that the whole practice of the Universal Tao starts with the practice of the Inner Smile. This is actually the first practice of internal alchemy, as it serves to soften our body and its elements in which our consciousness is stored and through which it operates. It is the key agent of the whole activation and transformation process in all the practices. We do not only have a body but we also are our body. By touching it with love and gentleness, its knots and blockages start to dissolve so that the free flow of energy is restored.

Unity of Fullness and Emptiness

It is in this context not surprising that at the heart of the ancient Taoist texts is the emphasis on the practice of turning inward and of stillness. It follows that in the process of meditation as a practice of becoming aware of the inner state of being of the body and its movements, a new and fresh space is created in which renewal and transformation can take place. This space is also called the creation of emptiness and the continuous re-creation of emptiness so that new fullness becomes possible.

In the Taoist as well as in the Buddhist tradition, which historically have been closely related over long periods in Chinese history, emptiness and fullness are indivisible and a condition for each other. In the Universal Tao practices, this view has vast implications. For example, in the universe, emptiness and fullness are indivisible and are the creative source of becoming, evolving and

renewal, so that the universe is reborn in a continual process. We ourselves give thanks to the alternation of the inhale and the exhale, so our body is in a continuous process of dying and being reborn, through which we renew ourselves. The new can only rise if the old dissolves. So it is in Nature with the change of seasons. And so it is with all that is alive in the universe. This is the core wisdom of the *I Ching*.

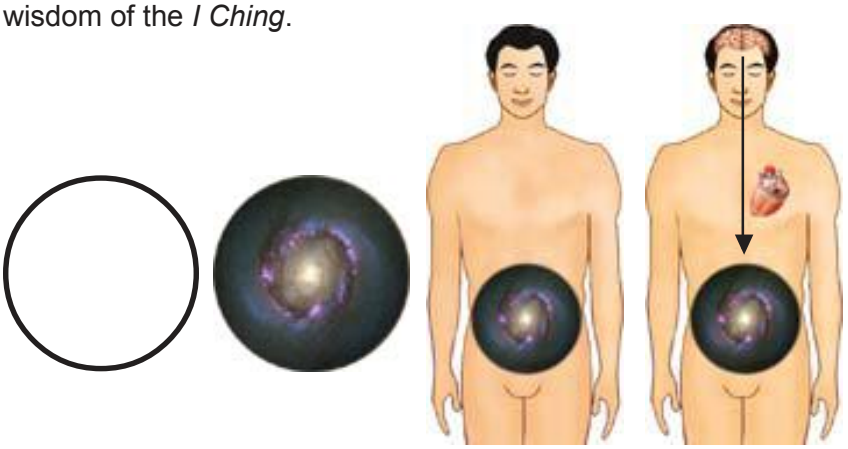


Fig. 9.3 *The core is the center of the universe, earth and the body.*

In the Taoist practice this has a particular application in the counsel to empty the mind and let it come down in the body so that a major source of energy is preserved and can renew itself. At the same time the belly can be filled with Chi, so that the energy streams in the whole body are enhanced and the heart is freed from too much pressure, as the belly helps do its work. Only when we learn to renew ourselves by undoing what has become unnecessary and what obstructs the process of transformation do we renew ourselves and our body. By undoing ourselves from what is no longer needed the new can grow. An ancient Taoist proverb suggests that simplicity comes about by seeing every day what has become dispensable. Then one can walk and move more lightly, both in the mind and with the body.

Jesus often reminded people in His parables of the law of unity and alternation in nature, and in themselves of old and new. In the *Tao Te Ching* this truth is expressed in the use of rich metaphors, for example, the house which acquires its function by being empty and the wheel which receives its function by virtue of its emptiness.

It finds its most pregnant expression however in the law on the unity of living and dying, common to all the great spiritual traditions – Hindu, Buddhist and Christian –, which is also central to Taoist practice. The new can only emerge and grow, if the old dies and is discarded.

Attachment and Detachment

This insight is at the core of the *I Ching* in which nature with its cycles and seasons is held up as a mirror for human beings. It has shaped from ancient times the Taoist proposition that to learn to be and realize oneself, one needs to go with the flow of life and to become like a fish in the water or the clouds in the sky. This insight is essential to give depth to the Fusion Practices and balance attachment with detachment.

A: *Why don't you sit down, relax and let go of the weight and let me take you to the market.*

B: *Thank you for taking me to the market. I don't want to put too much weight on your car.*

Fig. 9.4 *Relax and let go.*

In the Taoist view, attachment and detachment are not to be seen as opposites, which exclude each other. What may be useful and functional in one stage of life, in one particular situation or moment, may well lose its functionality at another time. This explains why Taoists question the usefulness of externally induced and pre-arranged moral codes. Instead , they value, above all, self-cultivation in learning to act in harmony with what is inwardly experienced as genuine and truthful, because it is in tune with the universe in us.

The training in such an attitude in which one frees oneself from fixed rules imposed and determined from outside and one consults one's own body and inner feeling, creates both freedom and flexibility. It helps to avoid being trapped in positions which undermine the capacity to trust oneself, and at the same time raises self-esteem.

In the process of genuine self-reflection and the growth of self-awareness, you learn to look at yourself and your inner life from a distance and as a neutral witness, rather than as a judge. As a result, you grow into a spirit of inner freedom and you learn to look at yourself with a sense of relativity and even with a sense of humor. At the point you are able to truly smile at yourself and have reached the point you can forgive yourself, wisdom is dawning and the knots which you felt were in your way are in the process of dissolving, to create space for new and fresh energy.

Going with the Flow

This view on going with the flow in the universe and within yourself is also the basic principle underlying and inspiring the ancient Taoist arts of self defense. In Tai Chi no position is fixed and the body enters into a continuous flow of movements, as life is movement and in the movement to become one with the universe and its energies and forces one becomes invulnerable. The power gained in the martial arts is not an external but an internal one; it is generated by the process of alignment. It is this alignment through which the body is empowered from below and above and the power can flow from the center.

If you have no center, you can be easily pushed around. A person who is centered has an internal balance. He is more free from external influences and less fearful and suspicious of others, as

he is in tune with himself and the universe. Therefore the fusion practice may be called an internal kind of martial arts by which one learns to playfully bring into balance one's opposites so that a sense of being centered and in harmony arises and thereby self-confidence manifests.

Fig. 9.5 *Balanced, going with the flow*

It should be obvious that the practice of these arts may be most helpful, as they may help you to remember to go with the flow inside yourself and become inwardly soft and flexible. Like all true Chi Kung, the art of moving the Chi and with the Chi, outer flexibility comes from inner relaxation. Only when relaxation deeply enters the body, can it become truly receptive for the energy within and from outside. The same goes for Tai Chi.

In that sense the Fusion Practices may also be seen as an inner play in which you invite your organs as your children to play with each other and see how they can balance and support each other. It may also be compared with an ancient game, which is played by children and adults in different countries in Asia. In Thailand it is called Takara in which the players help each other in keeping the light bamboo ball in the air so that the play can continue. Nobody loses, nobody gains. All share in the joy of the game and in the process train their own ability and help the others to enhance theirs.

Central to the Taoist tradition is that the body expresses and balances both heaven and earth. How could it receive the energies of heaven and earth and become an expression of the universe, if it were not open and flexible and receptive? This explains the crucial role of Chi Kung and the various schools and forms which have been created over the ages, so as to make the body a vessel. As the *Tao Te Ching* says: the function of the vessel is to be empty so that it can be filled.

Secret of Breathing and Relaxation

The essential role of the quality of breathing in all the practices is to enhance detoxification and cleansing, to create new space and openness towards the universe (in the exhale) and to fill the body with new energies and forces, by receiving, enriching and transforming Chi (the life or vital force). Breathing is central to the Taoist practice.

Changes in the quality of breathing from a short, superficial and agitated breath in the upper part of the body to a long, deep and quiet breath in the lower center/ Tan Tien of the body are crucial to the process of inner transformation. This is so because breathing is the bridge between consciousness and the body, and in the breathing process both the body and our awareness change.

The quality of breathing plays a crucial role in the processing and transformation of emotions which is a central theme in the Fusion Practices through the transformation of negative into positive emotions (Fusion of the Five Elements) and the cultivation of positive emotions (Cosmic Fusion). The emphasis in Taoist practice on self-healing is intimately related to the growth of self-awareness with regard to one's pattern of breathing as this determines the ability to regulate, control and balance emotions.

The Inner Smile practice as well as the Healing Sounds practice, designed to balance the negative and positive properties of the organs, are essential as a preparatory practice to the Fusion Practice.

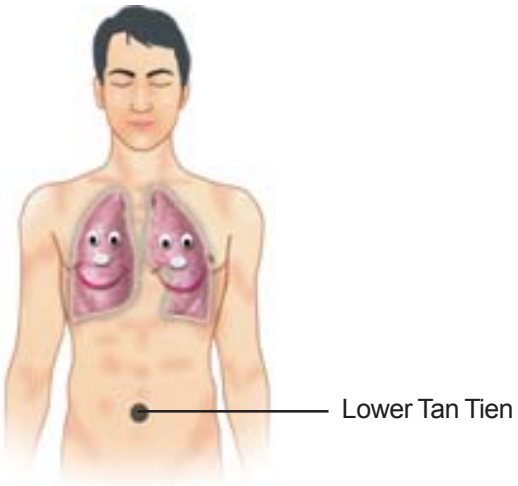


Fig. 9.6 *Smile to the Lungs.*

From the above, it should be clear that the practice of the Inner Smile and the quality of breathing and relaxation – as conditions of the self-healing process – are intimately related.

It is not coincidence that the great sages and masters of self-transformation like the Taoist immortals and the Buddha are always portrayed with an inward-oriented smile, to signify the key to inner freedom and balance and the unity of Yin and Yang. The practice of the Inner Smile as the key to relaxation remains the basis of all the practices of the Universal Tao, from the most basic to the most advanced. It is the key to all forms and stages of self-transformation, as the Taoist masters discovered its secret and its power to initiate and enhance the process of self-transformation. Statues and pictures may remind us of our own transformational potential and may help us to set in motion the internal alchemical process. We may also bring into our mind images of people who have awakened or reminded us in the course of our life of our own potential for transformation and positive qualities, thereby helping us to empower ourselves.

Science of Feeling and the Power of Intuition

In this sense, the Taoist practice is a continuous invitation to turn inward and get in touch with one's own body (and organs). Begin to sense and feel the body's state of being, its expansion and contraction and the state of relations between the major organs and the senses (kidneys/ears, liver/eyes, heart/tongue, spleen/mouth and lungs/nose). Check the state between the major organs and connected organs (kidney/bladder, liver/gallbladder, heart/small intestine, spleen/stomach, lungs/large intestine). Review the overall state of relations between the organs, glands, the nervous system, the spine, the bones, muscles and tendons. How are the relations between the three centers of the body (belly, heart and crystal room)? Check on those between the center and the extremities, the front and the back and the quality of the path routes which carry the flows in the body (the electro-magnetic energy, called Chi, also called the life force or vital force, the blood and the lymph flows).

Any advance in the practice is determined by the growth in ability to feel into the body by going inward and getting in touch with it.

In this context it is of value to realize that the verb "heal", the

substantive “whole”, and the adjective “holy” have the same etymological root. This is in line with the Taoist insight that the process of healing is realized in the process of becoming whole and that holiness is the state of having become whole and in balance with oneself and with the universe within oneself. In this view holiness is not a moral category but an existential and relational state of being.

It is not without reason that Taoist practice has been called a science of feeling, as throughout the ages it has relied on and cultivated it. One may also call the ability to feel the power of intuition or the feeling intellect which exists at every and all levels of our body and bodily awareness in which we are wholly present. In all languages of the world, there are multiple expressions, pointing to the organs, such as the heart or the liver or the kidneys or the blood or the bones or the veins, hands, eyes, ears and feet which reminds us of this intuitive power of the whole body. The reduction of thinking to the mind and the brain, so characteristic of Western reductionism, is entirely alien to all cultural traditions in the East and the South.

It is the feeling that we open the body and open and activate the Chi from within and outside.

It is also through feeling that we can sense, taste, hear and touch the rhythms of earth and heaven and unite with them within ourselves. Becoming aware of our inner movements and what moves us are one and indivisible. In the feeling process, we also become aware of the relativity of our boundaries and learn to experience these not only as limitations and finite but as openings to the unlimited and infinite.

As a result our solitude comes to an end and we become sensitive to our intrinsic relatedness with all that is. In this sense, each practice may be seen as a step to invert the process towards alienation and separation from the sources of life, basic to Western culture and its extension over the world.

Thinking with the Heart

One is reminded of the meeting of Carl Gustav Jung, the famous Swiss psychiatrist and philosopher of culture in the 1920’s with an old Pueblo Indian in New Mexico on one of his visits to the United States of America. Jung narrates in his autobiography that his talk with him was unlike any which he had had with a European. When

Jung asked him how he felt about white people, Ochwia Biano (Mountain Lake) said to him, that to his people, they looked quite cruel in their appearance. “You always have an inflexible expression on your face. You always seem to be wanting something. You are always restless and agitated. We don’t know what you want. You all seem to be quite crazy.” Jung then asked him why he thought them to be crazy. He replied, “They say they think with their head”. Jung, surprised, asked him: “Of course, but tell me, where do you think?” He replied, “We think here.“ And he pointed to his heart. Jung tells how he sank into deep reflection and he remarks, “For the first time in my life, it seemed to me, somebody had shown me the image of how we really are.... This Indian had touched our weak spot and pointed to something to which we are really blind.” Jung viewed the encounter with the Indian as an opportunity, which opened to him a new gate to a primordial and nearly entirely forgotten dimension and form of consciousness which could be revived.

Fig. 9.7 *Smile into the Heart.*

In another passage in his autobiography, Jung narrates a dream which he had during a visit to an Islamic country in North Africa, which deeply touched him. In this dream he had to fight for his survival with a young Arab aristocrat who descended from his horse and wanted to drown him. Jung interpreted the dream as a struggle between his own repressed unconscious (his shadow), which sought to be recognized and accepted and his own consciousness, represented by his rational mind which felt threatened by the unsuspected attack by the young man. He then observes: “In my

unconsciousness, I was in no way aware of such a situation; on the contrary I could not undo myself from a feeling of superiority, as at every step, I was reminded of being a European. I was not prepared to meet the unconscious forces within me, which emerged with such an intensity on behalf of the opposing party and which led to such an intense conflict."

Only several years later did Jung begin to understand the deeper nature of the dream. He began to see in the dream the resurgence of primordial structures or patterns in himself from a well-known past, but a past he had forgotten. He perceived the resurgence of these images as a renewed awareness of a still available potential for life, which was overgrown by civilization, a potential for life, which had been repressed and marginalized into the sub-conscious. In Jung's view, Western culture had become alienated to much of what being human represents: the primordial dimension of our being, which had been relegated to the underground.

Jung was a great admirer of the Taoist tradition and expressed his deep appreciation for its originality and wisdom in writing the foreword for the translation of the *I Ching* into German by Wilhelm Reich (the first translation into a European language).

The split between body and mind, thinking and feeling, matter and spirit, at the root of the formation of Western culture and religion and the birth of modern science, has been aggravated in the course of this century.

Feminine Underground Current

Some historians and scholars, like Morris Berman in his path-breaking studies "The Re-enchantment of The World" and "Returning to Our Senses" have argued, that in the course of this process the feminine dimension of European culture greatly suffered and in order to survive had to make itself invisible and so became its undercurrent. He means by this that in religion, with its reliance on external authority and its contempt for the body as well as in science, with its pursuit of objectivity, at the expense of other sources of cognition, the body was devalued.

Subsequently it could be turned into a mere object, an input and an instrument. It was seen in function of externally determined aims, as defined by the forces of competition, economic rationality and rational management and the new forms of communications

technology. This process has also seriously undermined the position of women and has greatly affected their sense of dignity and self-esteem. It has also challenged the Yin values in society, considered to be counterproductive.

Unquestionably, the growing sense of despair and disorientation which large groups of people in the world today experience is directly related to the split and the resulting imbalances which they experience within themselves.

Restoring the Balance

With the growth of a new world culture, with a process of unceasing economic growth and expansion and the simultaneous rise of both minority affluence and mass poverty, these dualist tendencies are being further aggravated. The rise of fundamentalism and dogmatism, both as an instrument to legitimize power and achieve control and as a response to a growing despair and as an expression of the thirst for security is a further sign in the world rocked by imbalances and social fluctuations has become increasingly uncontrollable. This uncontrollability is seen as unavoidable and inherent in the very mechanics of the system and as an inevitable price for economic growth and advance.

Repression of the body and of sexuality and a search to compensate for it go hand in hand. Thus repression and a desperate search for liberation from it are both on the rise. There is a trend to see the body and sexuality as the source of all evil and start crusades against them so as to secure law and order. There is at the same time a growing obsession to secure and maximize pleasure, a trend which has grown to be the object of ruthless exploitation in which the body and sexuality have become mere commodities on the market. As a result, public life is being sexualized, as a source of economic expansion and profit.

Thus the repression of the body and sexuality have precisely an inverse effect and has become a major source of a fast-growing market and rapidly expanding pleasure and amusement industry, which capitalizes on this repression.

The first law of thermodynamics is that energy cannot be created or destroyed. In terms of Taoist theory, all energy comes forth from the Great Void, the original Wu Chi which undergoes a series of transformations in the formation of the universe. Thus the human body is seen as a particular form of transformation of this

original energy. The second law of thermodynamics states that energy in a closed system tends to become disorganized (entropy). Thus there is an automatic tendency for balance to be lost.

Taoist practice focuses on inverting the process of dispersion and disorganization and restoring balance. This process is set in motion and facilitated by the Healing Love practice through which the unity and balance between love and sex is restored.

Essential to the Healing Love practice is the growth of love and compassion within as a result of which love and compassion with others and the universe become possible and emerge as a natural extension. Once the inner balance is restored, it is possible to act as an effective agent of balance outward.

In the Taoist view, conflict and violence in the outer order invariably have their source in inner conflict and violence, as manifestations of inner imbalance. Equally is outward peace viewed to have its source in inner peace and balance. In this process towards inner balance, Fusion Practices, in conjunction with the Healing Love practice and other practices of the Universal Tao, play an essential role; they honor the body and its intrinsic wisdom and potential for self-healing and rebalancing itself, so that it enters into alignment with the universe.

Joseph Needham, one of the great scholars of the origins of Chinese science and civilization, who was an honored member of the Academia of Science, had called Taoism the feminine undercurrent in Chinese history and culture, with its focus on the power of silence, feeling, sensing, compassion, forgiveness, humility, gentleness, reverence for life and nature and the equality of women.

It was however relegated to the margin of Chinese civilization and its practitioners had often to go underground. As a rule they fiercely stood for the ancient communitarian practices of reciprocity and sharing as well as people's freedom and self-reliance. At the same time, they were opposed to interfering with the natural order, to be respected as a manifestation of the higher orders.

World as a Manifestation and Reflection of the Universe

They valued ancient forms of democratic practice, rooted in a vision of village communities in early times, which formed federations, patterned on the very structure of and alignment with the cosmos. No wonder that they were staunchly opposed to any forms

of feudal and hierarchical power in which undue power was exercised by some over the many and the rise of a wealthy aristocracy which lived at the expense of the common people. They were also opposed to any forms of technology which would harm nature or be at the expense of people's sense of well being. Their attitude towards the universe and towards each other is summarized in the words of Lao Tzu:

The Universe is sacred
You cannot improve it
If you try to
You will ruin it
If you try to hold it
You will lose it
Surrender yourself humbly
Then you can be trusted to take care of all things.
Love the world as you love yourself;
Then you can truly take care of all things.

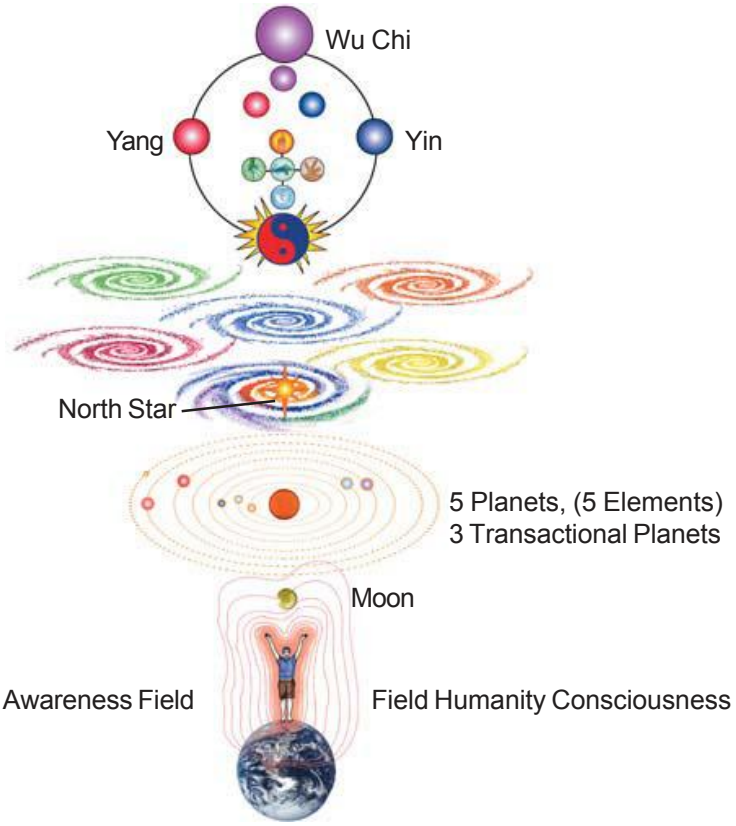


Fig. 9.8 *Alignment of the Cosmos*

It may well be that, precisely because Taoist practitioners refused to be co-opted by the establishment and were relegated to a precarious position, the practices could survive. As such, these practices, as synthesized in the Universal Tao, constitute a synthesis of several thousands of years of the practice by generations of Taoist masters in the science of feeling and sensing inward and of observing the nature of the universe and our relations with it.

The above provides evidence that Taoists over the centuries had a genuine concern about the well-being of the common people and that their practice was no reason to disengage from the world. The many stories and legends of the Immortals show that they were greatly loved, especially by the common people and the poor whom they often protected and helped. Their practice of gentleness (kidney), of generosity (liver), love and respect (heart), fairness and openness (spleen) and courage (lungs) expressed a strong sense of compassion with those who suffered.

Body as the Primary Source of Cognition

In the evolution of Western culture with its progressive disconnection between body and mind, thinking and feeling, rationality and emotions, mind and energy, inner and outer, matter and energy, linearity and spontaneity, feeling as a source of awareness and the primary mode of cognition has been progressively devalued.

It was seen as a feminine value of little use except in some domains as that of the arts and artistic endeavor. In religion it was looked at, together with the body, sexuality and emotions, as a potential source of evil. In science with its drive for objectivity, it was also looked at with suspicion, as it tended to disturb and undermine the demands for objectivity.

Thus it was relegated to a position of inferiority, as it was supposed to interfere with rationality, discipline and order, needed for progress and the growth of modernity, as well as with the need to control the universe, the cosmos, nature and ourselves.

In the Taoist tradition, feeling as the power of intuition, rooted in the body and the ability of self-reflection has always been considered as the primary source of self-awareness. Jung has named this form of cognition the knowledge of the unconscious, which underlies all conscious activity of the mind.

This capacity to intuit reality (the ability to sense reality in its totality may be called an integral form of knowledge) exists in our whole bodily being. It may also be called a mode of thinking with the body which precedes all formalized codes of thinking which evolved with the advance of formal rationality and the split of body and mind, typical of Western culture.

In that sense it may be called a Yin form of cognition, as opposed to the Yang form of cognition, which characterizes the modern world and its connected forms of education, science and technology. Yet there is abundant evidence that at the source of all genuine creativity and inventiveness, including in the field of science, lies the power of intuition.

In that sense, the practice of the Universal Tao and the Fusion Practices, deeply rooted in the Taoist tradition, may be seen as a way to recover this form of knowledge within ourselves so that the split within ourselves between body and mind, feeling and thinking is overcome. In the great Asian traditions, thinking in its restricted sense as the linear activity of the brain has been viewed as interfering with and affecting awareness as the primary and principal form of knowledge, essential for turning knowledge into understanding.

From a Taoist perspective, the primary learning process does not take place in the brain but in the organs. Recent findings corroborate the Taoist vision of the learning process that the brain only processes what is experienced and known intuitively by the organs, in particular those in the lower Tan Tien.

Our deep memory which structures our patterns of reaction and response to the world lies in the organs. In this view, a learning process needs to be rooted in a relearning and a reprogramming of our subconsciousness in the organs from which all conscious activity springs. In terms of contemporary technology the organs are the software and the brains are the hardware.

Unity of What is Above and Below

In many recent attempts to revitalize and recuperate spirituality, a growing need is felt to counter the ominous trend towards a loss of meaning in the world of today. There is a tendency to continue the split, which inspired many spiritual traditions, which tended to be based on the duality of good and evil, higher and lower.

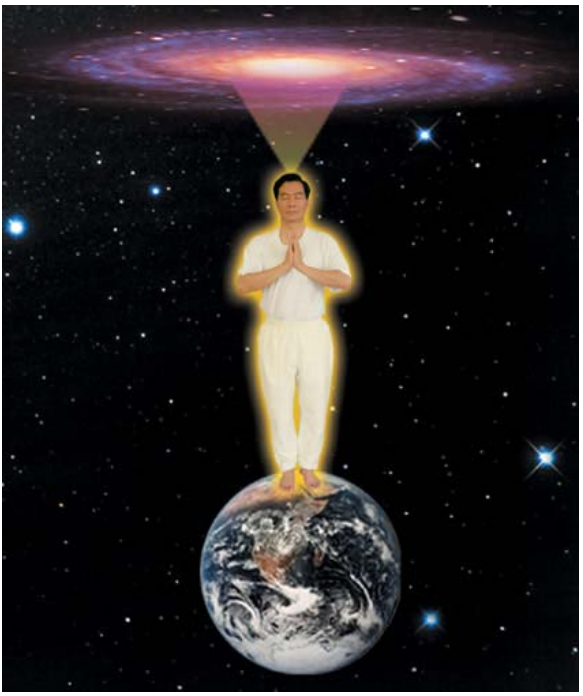


Fig. 9.9 *As Below So Above*

As the lower part of the body and its organs is looked at as associated with the instinctive animal obscure part, connected with sexuality, which prevents the mind and the spirit from its upward vocation, it is ignored and bypassed. The Taoist approach fully honors and recuperates the dignity of the body as a whole. The Tao recognizes the belly and its organs, connected with our sexuality and water energy which is the source of creative power from which all energy transformations flow. By getting in touch with our most intimate parts, we also gain access to the source of our creative powers.

In that sense, the Fusion Practices invite us to reconnect with those parts of ourselves, both physically and psychically, which have been the focus of repression. This repression is not only in most of our cultures but also within ourselves, as we internalized what we learned and accumulated in our culture, at home, in school and though the media. In order to reconnect and truly get in touch with our organs, we need an instrument which is capable understanding them.

That instrument is our intuitive power, which has its roots in our body as earth. It cannot be substituted by any other instrument, including our own intellect through which we are often at risk to become strangers to our own innate wisdom.

Genuine self-transformation can only be realized from within by the one who truly knows her/his personal existential history. We must see the relations between positive and negative emotions as our own most intimate history which we have often hidden from our own senses and which only reveals itself to our own compassionate inner eye and our own loving energy. Only then can we open the path to true healing from within. No medical system, medical doctor, psychologist, psychotherapist or other professional can do what you yourself can do: to observe and understand yourself emotionally and feel what your innermost self needs and longs for.

As such the Fusion Practices are a primary practice to reconnect with the somatic basis of our being and reconnect with the hidden parts of ourselves. Thus the Fusion Practices are exercises in in kinesthetic awareness through which we recover our primary form of knowledge which is somatic and is buried in our very body and our gut. For this we need to go deep down into our own emotional history and learn to feel with and within our entire body.

For this we need to let our rationalizing mind deeply sink into our body and let our intuition take over so that we get in touch with the visceral level of our being. Thus the Fusion Practices are not mental or intellectual exercises to clear our debris or accumulate virtues but an existential transformational exercise to which the formal mind only becomes an impediment.

The Fusion Practices provide a unique way to overcome the dependencies you have grown accustomed to and to train yourself in self-reliance and recover your independence and thereby your self-esteem.

Healing Wounds

Often the question is asked: "Where to begin"? Such questions may suggest a hesitation to enter the practice and face oneself. A path opens at the very moment we start to walk. The inner journey is different for all of us, as our histories are unique. The formulas provide an essential guide, which tells us how to go about, which direction to take, when to walk, when to rest and the stations (practices and their sequences) we should visit.

As suggested earlier, the whole Taoist practice has its beginning in the practice of the Inner Smile. The Inner Smile as the key to refresh, create, transform, attract and blend energies presupposes a basic willingness to enter into an adventure and to face the risks in transforming old to new. It requires above all a willingness to love oneself and self-compassion. Such an inner movement towards the opening of the heart is however only possible if there is some willingness to accept and forgive oneself.

Perhaps the primary key to any process of self-transformation is the willingness to forgive oneself, as it opens the heart and sets in motion and frees the flow of Chi, both from within and from outside. That would seem a primary condition for an open space to emerge in which one can enter into dialogue with the organs and let them speak and listen to what they wish to say.

Yet forgiveness is not an act for once and for all but a primary key in a continuous process of turning inward and practicing inner observation. It is not surprising that when Jesus was asked a question on forgiveness, he pointed to its key role by saying that a man should forgive seventy times seven, meaning that it has no limit. Rather than perceiving forgiveness as a virtue which make all other virtues possible, like love and compassion, it is more useful to see it in terms of a growth generated by process towards balance as a whole between positive and negative emotions (Fusion of the Five Elements) and as the fruit of the creative cycle (Cosmic Fusion).

The refusal or inability to forgive and thereby to love oneself and others may be said to affect all the organs, affecting their chemistry and inhibiting cooperation and balance. Frequently it is rooted in a victim consciousness, which sets into motion negative emotions which tend to reinforce each other. This victim consciousness often has its roots in a presumption of betrayal as a result of which the heart closes, as others are made accountable for one's own negativity and suffering.

As a result there is a refusal to even consider looking inward, as the source of misfortune is placed outward. Thus the heart's natural tendency towards love and compassion is obstructed and the wound is cultivated to legitimize one's withdrawal from life, as a result of which both the internal as well as the inward flow from outside are being impeded. All traumas first of all settle deeply in our organs from where they affect our energy flows. They can only be dissolved with patience and gentleness towards oneself. Only when internally energy is accumulating, can it flow outward.

The strengthening of the organs have in the Taoist tradition a vital role to play in mitigating and achieving control over the negative emotions. Forgiving does not mean that the wound needs to be closed. It may remain but it is no more active in generating toxins and preventing positive emotions from growing. Also forgiving does not means that one forgets. That may be too difficult and is not necessary. Only the charge, which activates to toxins needs to be defused.

The aim of the Fusion Practices also is not to eliminate pain. Pain and joy are intrinsic in life and form a unity of opposites. Attempts to eliminate it create frustration and exasperation and may well make it grow and become more difficult to control, as negative emotions such as fear, anger, worry, sadness and impatience multiply. The more negative emotions are suppressed, the more they have a tendency to run wild.

The purpose of the Fusion Practices is to achieve control and regulate them consciously so that major imbalances can be prevented and the quality of the energies, upon being fused and blended is heightened and transformations into new states of being (the energy body and the spirit body) become possible. Ups and downs are inevitable but as you grow able to accept them and balance them and grow in equanimity, a point is coming when you are less affected by what happens around you; you are less carried away by events and you become less vulnerable.

Rather than to do away with toxins, it is wiser to allow for them and it is easier to control them. This immunity is both raised in balancing positive and negative emotions (Fusion of the Five Elements) and by strengthening the positive emotions (Cosmic Fusion). The unity of the two is of great importance. To make a small tree grow one does not only weed, but also creates optimal conditions for it to grow: that it is planted in good soil, that it receives shade and water and that it is pruned at the right time.

One practical way to effectively deal with the negative emotions is to distinguish between them, so that they can be separated and sorted so they receive the attention they require and they become manageable. We may see them like our children who each have their specific needs. We can give to each one the particular attention they deserve. To deal with them all at once is too difficult and leads easily to discouragement and a sense of powerlessness and defeat. In such a way you more easily work with them.

For each of us, the relations among and between positive and negative emotions is a unique one. So are our needs and styles to deal with them, depending on the culture we have grown up in, our different kinds of education and the ways we have responded to them and have evolved. So we will need to rely on and develop our own imaginativeness to use the formulas creatively so that they may be helpful rather than become an obstacle, as we apply them mechanically. We need to learn to feel what is good for us, and what helps us to be centered, in balance and at peace with ourselves.

Practice of Humor and the Humor of Practice

Crucial to our practice is a sense of humor and playfulness: to avoid the Fusion Practice becoming a reproduction of old patterns in a new form, as we use it as a device to track down our weaknesses in a spirit of self-condemnation. Humor is essential for balancing the energies of and in our organs. Humor is the great regulator which helps us to look with a sense of relativity, playfulness and lightness at ourselves. It is an expression of the compassionate energy of the heart which helps to look with a sense of detachment at ourselves and not to take ourselves so seriously that it becomes difficult to relax and be a witness rather than a severe judge.

With little humor, the Fusion Practice would become an accounting practice in which we record the drawbacks which prevent us from advancing. In focusing on the negative as if it were evil, we lose sight of our creative potential and prevent ourselves to gradually free ourselves from old patterns. Without humor we see no way out except by relying on some external power or force which only further undermines our own original power of self-transformation.

Learning to tend our Garden

What helps is to realize that we do not have negative emotions, per se, but that we and our spirit are in them. They are an integral part of us, and when we want to eradicate them, we destroy ourselves and the spirit contained in the organs.

For the Fusion Practices to become effective, we need to learn to dialogue with our organs. We must learn to express our gratitude to them for the miracle that we are alive thanks to their unceasing work. We need to give them a chance to relax and recuperate. Let us give them a chance to get in touch with each other. They are both our parents and our children. They can store Chi and provide us with energy when we need it. Let us protect them from our anger and other negative emotions, so that they do not have to suffer and feel we drain them. Let them breathe freely, accumulate Chi, expel the accumulated toxins to that we can recover, nourish and sustain our health and vitality.

It is a challenge to see the positive in the negative; negative emotions, when freed from their destructive and explosive charge, contain pure energy which we badly need to develop our vital force.

It helps to accept ourselves if we remember that our negative emotions often mirror forms of resistance which at some time early in life, served as a form of legitimate and understandable protection and rebellion. At that moment they might have been necessary, but at some point they lose their function.

Negative energies may be seen as a kind of garbage. If we discharge it on others and the environment, it becomes a major factor in generating toxins, bacteria, viruses and a variety of forms of disease by which negative emotions are multiplied and become more and more difficult to control. Or they can be seen as highly positive and urgently needed for recycling and composting, so that they can be used to help us grow and improve our balance, so that we do not become a burden and a threat for others and our environment, but a blessing, as our energies contribute to a climate of harmony and peace. The more light and Chi that enters our body and the more we radiate it into others and our surroundings, the less bacteria and viruses have a chance to grow.

The Fusion Practice (Fusion of the Five Elements, Formula Four) provides an effective method for composting, as the negative energies from the different organs, after having been separated out in

the collection points, are brought into the pakuas which act as transformers. They can be blended with the positive energies from the organs as well as the energies from the universe, so that they become purified and enriched; energies of a higher quality and order can be generated. These then may be condensed into a pearl as the embryo of our energy body (Fusion of the Five Elements, Formula 5).

Raising the Quality of Our Energies

The Cosmic Fusion Practices basically serve to consolidate, stabilize and enhance the process towards balance, initiated in the Fusion of the Five Elements practices. The creative cycle practice of Cosmic Fusion specifically serves to further the growth of positive energies in the organs and glands, which in turn will be able to mutually support each other to create a higher quality of energy. This energy is concentrated in the compassion energy from which a pearl is formed. Only when all the positive energies merge into the fire of love and compassion by which the sexual energy is steamed and is transformed, its energy will turn into a higher creative and spiritual energy. This higher energy will then serve to nourish the energy body.

This pearl will be more powerful in healing and cleansing the body than the pearl in the Cosmic Fusion practice and may subsequently serve to create and nourish the energy body. The energy body may in the highest practices give birth to the spirit body. The Cosmic Fusion practice also serves to intensify the process of cleansing and healing through the creation of the three Thrusting Channels and by creating the the nine Belt Channels which serve to protect the body and its energies from negative influences.

Marriage of the Light from Within and from Above

All Universal Tao practices, including the Fusion Practices, consist of two dimensions. One is the activity which focuses on the processes of transformation within the body through cleansing, opening, healing and fortifying the body and raising the quality of its energies. The other activity is to get in touch with the universe, the cosmos and nature and attract their energies and the Light in which they originate towards the body so that the body may process these energies and blend them with its own refined energies.

Fig. 9.10 *Connecting with the Universe*

The Taoist view is that the body by its very nature and structure is a microcosmos which is able to attract and receive and use the energies from the universe, the cosmos and nature to transform itself. Quantum physics confirms the view that the mind is faster than light and that consciousness is a form of energies which can move other energies when tuning into these energies and their frequencies.

The process of getting in touch with the universe and expanding love and compassion begins in the same way as the approach to inward transformation of energy: with smiling, feeling and sensing and radiating out love energy. The cleaner and finer the energy which is emitted, the higher the response from the forces and energies from above, below and around us. The relationship with the universe has been likened with that of a love or courting relationship. In all the mystical traditions the experience of the divine is also experienced as a relationship between the lover and the beloved. Frequently such relationships have been expressed by the great mystics in the most erotic and sensuous language, a reason for which they were as a rule hardly accepted and frequently persecuted.

Through its meridians our body may be seen as a grid of light channels through which it is connected with the light grid of the universe and can tap its unlimited energies.

Learning to embrace ourselves and the universe:

The Fusion Practice may serve to visualize oneself as a network of light and as a light body. Then the practice is not only one of cleansing but also one of filling the meridians with light. Mutations in consciousness start in the body visualization and turn into actualization. But the transformation lies not in the visualization. It is only a vehicle. Actualization is the real experience of the energy transformation in the body, when its chemistry changes and energy is transformed. One begins to sense the truthfulness and miracle of being alive and one starts to feel that one is embraced and pervaded by love and a sense of gratitude for the mysterious ecstatic process taking place in the body arises.

But this is not an end term. It is always only a beginning, as the love of the infinite has no limits neither in time nor space. In the process matter turns into what is immaterial and the immaterial as energy to continue its transformation waits again for a new form to contain it and change its nature and composition. Words help to create an image and when the image is there, the word loses its function. The image serves to help us generate the energy and its transformation. When the energy has come into being, the image needs to be given up so that a new space arises for a new experience. This is an unending process. How wondrous is it that our organs, our body, that sacred vessel, as it is called in the Taoist Canon, remembers its origins and longs to be fused and serve as an instrument of the fusions which unceasingly take place in heaven so that our intrinsically divine nature is realized and can be experienced. For earthlings, the learning process starts from outside. In the process of turning inward, the learning process increasingly becomes internalized. We need the structures and the forms and formulas to help us on our path. Then when we become still, it becomes spontaneous and starts to move by itself.

Then our child has been born and just wants to play without end to feel that they are welcome and loved so that they feel at home. For this quality in us to arise, we need to learn to embrace ourselves and the universe, as a mother her newborn child.

Written by: Joost Kuitenbrouwer
Universal Tao Instuctor

Questions and Answers about the Cosmic Fusion Practice

Q. ***Is the cauldron the point where all the pakuas join together?***
A. Yes.

Q. ***Now that we've learned about the cauldron, where do we collect the energy at the end of meditation practice?***
A. You can collect and store energy at the cauldron or you can continue to collect and store your energy behind the navel. When you collect the energy you make a vortex, which is three-dimensional, so it can veer toward the navel or the cauldron. As you do this you may feel it going deeper and deeper.

Q. ***Do we always have to do 36 and 24 spirals in the collection?***
A. The numbers 36 and 24 are a guide. There is no speed limit for spiralling the energy when you collect it. Some days you might want to do more than that; on many days you may want to do much less. On those days, 12 and 9 may be sufficient. Eventually it will go by itself.

Q. ***How do you collect the energy when there is so much energy all around?***
A. Collecting the energy will eventually become automatic. The safety features are bringing any excess energy from the pelvis up to the navel and and excess energy in the head and heart down to the navel. When you are coming back from the feet to the navel in the belt routes you are also collecting the energy.

Q. ***Does the energy stay in the cauldron or does it spread to the organs?***
A. Both.

Q. ***Should you see the collection points in color?***
A. Some people see, some people feel, and some people can even taste the energies. If you are visual, great. Then you will see the colors. If you work with the colors, the color will tell you if an organ's energy is healthy or not. If you look within and see dark muddy colors, then you know you have to work to make them clear and bright.

This applies to the organs and the collection points. Because the organs are affected by the emotions the colors will be affected.

Q. ***Does the Yin/Yang symbol move inside the pakua?***
A. It spins like a vortex.

Q. ***Is there always a pearl you can work with?***
A. If you practice forming a pearl every day, there will be one there when you sit down to meditate.

Q. ***Is there a minimum size for the pearl?***
A. The size of the pearl is less important than its density. As you add energy to it you might notice it glowing more brightly or feeling more energetic.

When the energy increases you might want to make more than one pearl. Then you can give it away to an organ or into your own atmosphere.

Q. ***Does the belt channel go around both legs or each one separately?***
A. It circles around both legs, although if the energy wants to go around each one, that's okay too.

Q. ***You talk about using the thrusting routes for practical purposes. Can you give an example?***
A. To clean the atmosphere in a room, you shoot the pearl out the crown and let it expand and fill the space. That way you declare the territory as your own—it is permeated now with your energy and consciousness. If there is any negative energy, any negative spirit, it will just leave of its own accord. You can't destroy negative energy, but you can work with it to make it leave, by overcoming it with your own energy. But you don't want to anger another spirit, that's not the Taoist way. Either they are using your energy to protect them or they want to tap into yours to get themselves to a higher level.

Q. ***Is there a breathing technique that will make you more Yin or more Yang?***

A. It's not just breathing. If you eat very Yang foods, like meat and you are trying to be Yin, it won't work. If you work with the Fusion I formula you can balance the energy more easily than with outside forms of breathing or food. Fusion I and the Microcosmic Orbit are natural ways to balance your energy.

Q. ***The meditation seems so long.***

A. Once the channels are open you don't need to spend much time. The training period seems long, but the actual practice can be quite short. When the Thrusting Channels are open you won't need to do any muscle contractions, you won't need to do it in stages, you won't need to inhale several times. You will just sit down and in a couple of minutes you will find yourself in a state where the energy will be strong enough and the channels open enough that the energy will flow through the Thrusting Channels just using the mind itself. In fact, you will be able to do it anytime, not just during meditation.

You can imagine the work it takes to connect pipes from a reservoir to each household in a city. But once the pipe is connected all you have to do is turn the faucet on.

Q. ***What can close the channels?***

A. Stress of any kind can close the channels. Tension contracts everything—muscles as well as emotions. Also, if you stop practicing for a long time the channels will close. A path that's walked on every day will be clear, but if no one travels on it the weeds start growing and soon it is covered back over. That's why we stress the importance of daily practice. Even five minutes a day, is better than one hour once a week. Fusion I and Fusion II practice can be combined together, so you can check the organs, smile down, see what you need to do, and in a few minutes you can do some maintenance work. Then when you have more time you can go and clean the organs and the Thrusting Channels. In the beginning, the Fusion practice needs the mind to form the pakua, and collection points. It's like the Microcosmic Orbit: when you first learned it, it took a lot of concentration on each point and even when it started to run by itself it wasn't dependable. But after a while you could wake up in the morning and feel your Microcosmic Orbit running.

Fusion I and II are more complex and at the beginning you have to develop a different technique to get them running. I just look in the cauldron and it's like a slide projector: I can see everything. Then you can add the collecting of the energy and the blending process.

Everyone we know who has practiced Fusion II for a year or so, can do the creation cycle in a couple of minutes. As you practice and keep adding more details, sooner or later it becomes automatic. If you do Fusion II on a daily basis you will begin to get faster and faster. You will be able to look inside and see what's going on. When the process becomes automatic you open a whole area of possibilities. It will give you more time to practice because you will be doing it so fast. It will be there when you sink into sleep. It will be there when you wake up in the morning.

When you tune into your organs, your organs will have more say over what they want and what they do. So when you work with the formula correctly, the organs will love it. They will have the space and time to be themselves. The brain can be overworked and pushed too hard. It can force any organ to work until it's destroyed. You can see this in people who take drugs to control their emotions.

But when the situation is balanced by using the Microcosmic Orbit, the organs get a chance to balance themselves. The brain has a say but the organ also has a say. Then you can achieve a balance of energy when the intellect and the organs are working together. At this stage, when the senses are drawn in, not distracted and running around, you will feel calm. Gathering and conserving energy is good in itself.

The next thing that happens is that you can begin to gain Real Knowledge. Real Knowledge is beyond intuition; it comes from within and you make better choices and decisions. This Real Knowledge is an inner guide which sometimes manifests in dreams from the unconscious. It can show you a direction in life. You know yourself that these dreams are rare. In the past they only came when you were at a crossroads and there was some danger. But through the practice with emotions, organs and mind, you develop that interior communication that allows you access to Real Knowledge, so you're not operating in a state of emergency but from a state of balance and calm. Those

directions will be easy to follow. So this is a process of purification. The energies will be used with purer intentions.

For example, if you have an excess of fear you feel threatened and isolate yourself. Any decision you make from that standpoint will not lead to happiness. This formula is very important and carries a tremendous amount of responsibility, for whenever you learn something that can change your life in a positive sense you will either do it or forget about it. You often hear people say, "I want to change my karma." This formula is something that can change your karma. So this practice, this opportunity has a responsibility. You will have to take the consequences of doing it or not doing it. Because if you do it you will change.

Q. ***How can I protect myself from negative energy?***

A. The belt routes can protect you. When you circulate the energy through the belt routes, the energy centers are strengthened, and can protect you from absorbing outside energy that you don't want. For instance, in a crowd, if there is energy you don't like, just run the belt routes to protect yourself. This will also protect your aura. If you are upset and have a lot of emotions, the aura is very unstable. The aura might expand or shrink. This protection will become automatic through diligent practice of the belt routes.

Q. ***When you send the energy out like a shower, are you always collecting positive energy? How do we know what energy we are collecting?***

A. There is always heavenly energy around you, and there is always magnetism so when you do this work you are working with earth and heaven energy. It's another responsibility when working with the energy. If you are an ordinary person you are absorbing only a certain level of energy. When you start raising your level, you are raising your level of positive energy. This can change the atmosphere around you (an inner pressure of positive energy). Energy has a magnetic quality that attracts. When you have strong positive pure energy you will be repelling negative energy and you won't be affected by negative energy. For example, if someone is angry you will have enough positive energy to handle it. If you practice this and go to higher levels and

then decide to stop, your pressure will again change and decrease. Our bodies always try to find a balance, that's our inner intelligence. So the pressure has dropped and the body tries to restore the familiar higher pressure. To do this you start absorbing anything, and the most abundant source is the garbage energy: anger, fear, depression, etc. As you build up your strength you need to maintain that higher level and that is a big responsibility.

So when you do the shower of energy you have to depend on the strength of the energy in your pearl. Fusion II jacks up the energy of the pearl you made in Fusion I by imbuing it with the positive qualities in the organs. So it's important to do Fusion I carefully.

When you absorb positive energy you can even affect the bacteria in the air. If you've been practicing the Microcosmic Orbit and Fusion I for a year you've probably noticed that colds don't last as long, and you don't get sick as often.

Q. ***Is it normal to feel pain or discomfort when doing the fusion practices?***

A. You can see that some systems are into suffering: staring at the sun, sticking oneself with needles or standing on one leg for a long time. This is so that when practitioners get to the level of great power, they can withstand the pain. This is how some people learn and they suffer a great deal.

Maybe you cannot take all the energy; some people bathe in the river every day to reduce the heat and can't sleep for weeks and months. When you practice to a certain level there are changes in the body—but you can take those changes. Sometimes as new energy pushes through channels you may feel a headache. Some people feel a stomach cramp when they blend the energy at the cauldron. But that is unusual. It's like trying to help a butterfly when it's hatching. Maybe you want to help by cutting the chrysalis with a scissors. But the butterfly won't survive if you do that. It has to struggle at the beginning in order to survive.

So you will have to grow over the pain. Other systems induce the suffering first. In Chinese, they call it qing ku—you don't have anything and you still have to suffer—but that is not the Taoist way. We prefer to grow first and then experience the grow-

ing pains. You may feel imbalanced from time to time—constipation is a real problem. If you have a good bowel movement at least once a day, you will not suffer so much.

Now that you are more sensitive to energy, you will recognize negative energy right away and you have the tools to neutralize and purify the energy.

Some people, after they study, find that they are reacting differently to their love partners. For some of them, this difference leads to a break-up. When they look back on it, they often realize that the break-up was inevitable and that they were dissatisfied before. For others, especially couples who study together, their relationship becomes more solid and more respectful. In any case, it means that you begin to understand yourself better.

Sometimes you begin to see problems more clearly and see the energy that causes the problems. When you can enhance the energy inside, the problem goes away. There are those who get angry but don't realize they are angry and aren't aware of the effect of the anger on the liver. But those who practice Fusion I can become aware of the liver and very quickly the anger will be gone.

The Taoist system can change the course of your life, change your astrology, change your fortune and your fate. We know that because of the experiences of Taoists over many generations.

The energy inside your organs and brain makes your life what it is. So when you know how to control your energy, your organs and senses, that is the beginning of controlling your future. Those who are controlled by substances like tobacco, alcohol and other drugs are not in control of their lives.

In Taoism you don't run away from problems as long as you are in this world. Actually there is practically nowhere on the planet where you can go without being bothered.

When we started to teach Westerners, we found new ways to teach people how to balance their energy through diet as well as through the Taoist exercises. Those who eat only raw foods will be too Yin and those who eat mostly meat and dairy will be too Yang. But the only way to restore your True Knowledge is when you turn to your internal organs and senses for information. Then you will know how to conduct your life. But until you do that it's hard to know what's good or bad for you.

The golden mean, the middle, moderation are all ways of saying that when you know how nature works you will know the Tao. By knowing the Tao you start to know about God and the universe. Anything that's extreme, you have to back away from. The only thing that lasts long is balanced, middle and center.

Q. ***Is there a problem if I shake a lot during meditation?***

A. Too much shaking can scatter the energy. Moving and stillness have to be balanced. If you remain still for too long the energy might settle. But if you shake and scream and are never still you risk eventually shaking out all your life force.

If you start burning a fire, it gets hotter and hotter. When the water comes to a boiling point you turn it down and cook it very slowly. That way you can get the essence out. If you don't turn down the light all the water will boil away and the pot will be burnt or broken.

When you are into the meditation and very still, movement starts and many things are activated. If the movement becomes very strong it won't last long and you might want to stop it. You have to know the timing. If you start to shake, you can gain power by stopping the shaking and utilizing that energy inside. If you let the shaking continue, you might lose all the energy you built up.

In some forms of therapy people are encouraged to shake and jump and scream to get rid of their anger or depression or anxiety. When the session is over it seems that everything has been worked out but when they get home they are throroughly exhausted. The emotions were shaken out along with the life force. How much better to recycle the energy.

Tai Chi balances the Yin and Yang through movement and stillness. This builds up energy and then you can circulate the energy in the Microcosmic Orbit. The whole secret in the Universal Tao is having the channel for the energy to flow.

Q. ***Why do you create an Energy Body outside yourself?***

A. When you set up the Energy Body and the spirit body they start to draw out the essence of the physical body. Then it starts to work in space.

It's the same reason that every country wants to set up laboratories in space. You can make a lot of things better in space because there's no gravity, no dust and no germs.

The Energy Body will draw the essence up; you might even feel like it's going to pull your whole body up. And then the Energy Body draws the energy from space and the universe and mixes them in. When you bring the energy back into the body the organs will absorb all this energy and start to transform. But if you sit down without a purpose you won't get this effect.

Everytime you add more of your body's energy to the Energy Body, the Energy Body will go higher. Sometimes I feel like all my essence leaves my physical body. When you practice every day it starts to take the essence of this body and transform and mix it with the universal energy and your progress will be remarkable. There will be no resistance. When you're finished meditating, you just shrink the Energy Body down and each time you shrink it down the pearl becomes more refined.

At one time, the Taoist Masters were afraid of losing the pearl in space and did it all inside the body. This was reflected in the art in China where they worked incredible detail on miniature objects. But later the Tao masters discovered that if they know how to send the energy out the head they can expand the Energy Body and then shrink it down. That way they achieved more perfection—it's the same way they make a computer chip.

If you look inside a chip there's a whole city inside it. They draw every detail on paper the size of a football field and then with a special camera they shrink it down and down.

Set it up, do all the detail you want, then shrink it down and pull it back in.

> I had to figure a lot of this out myself. When I heard "transfer your consciousness to the next life" I decided I had to learn how to do this in this lifetime. I kept asking, but everyone had a different answer. They just said it's very simple. I told one master I'd give him anything for the secret; I'd go anywhere to learn. Either he didn't have it or else he wouldn't give it to me. After a while I discovered that I'd have to figure out myself how to transfer whatever I wanted to the Energy Body. I did this because I understood that my Energy Body will live forever.

Focusing on intellectual understanding alone is limiting and stifling. A real practice teaches one how to feel within and derive authentic knowledge based on personal experience. In the Universal Tao, we emphasize the practice of understanding nature, getting in touch with the natural forces, and getting in touch with oneself. Then the principles of philosophy will reveal themselves, and one can have real hope based on what is, not on empty promises that can never be proven.

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Mantak Chia

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The meditations, practices and techniques described herein are ***not*** intended to be used as an alternative or substitute for professional medical treatment and care. If any readers are suffering from illnesses based on mental or emotional disorders, an appropriate professional health care practitioner or therapist should be consulted. Such problems should be corrected before you start training. This booklet does not attempt to give any medical diagnosis, treatment, prescription, or remedial recommendation in relation to any human disease, ailment, suffering or physical condition whatsoever.

Healing Hand

Humans can build all kinds of sophisticated instruments because of the magnificence of the hands and the fingers. Another higher function of the hands is the power of healing. Knowing the major points of the hands and fingers will enable you to stimulate and maintain the organs in good function.

Palms

The palms are where all major energies of Chi join. The palm can be the place from which the life-force is sent out to heal others or yourself. The palm also is the place where energy can be received and enter into the bone structure and into the major organs.

Pericardium

The pericardium (P-8) is the main place of energy concentration. You can collect the energy in this point and transmit stronger energy from this point.

Large Intestine

The large intestine (LI-4) is the major point which controls all the pain in the body, especially in the sense organs (eyes, ears, nose) and headaches.

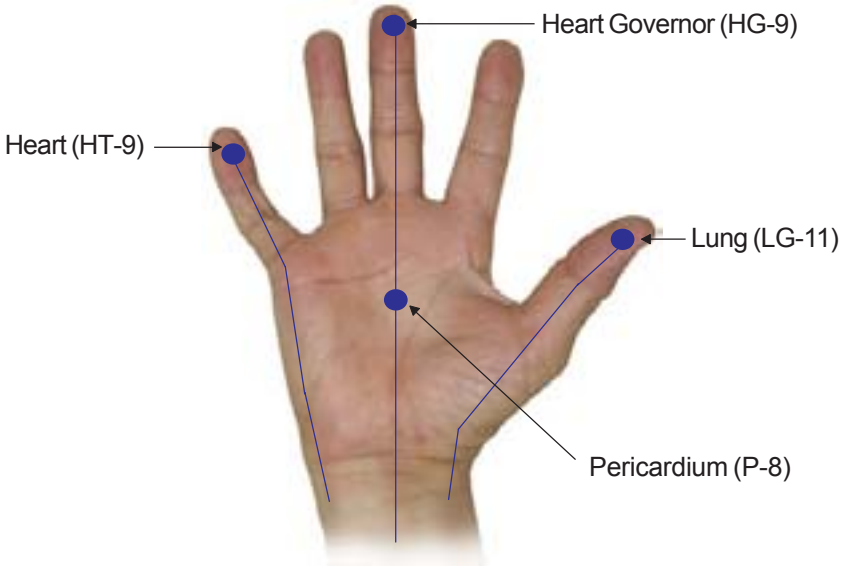

Fig. 1 *Pericardium*

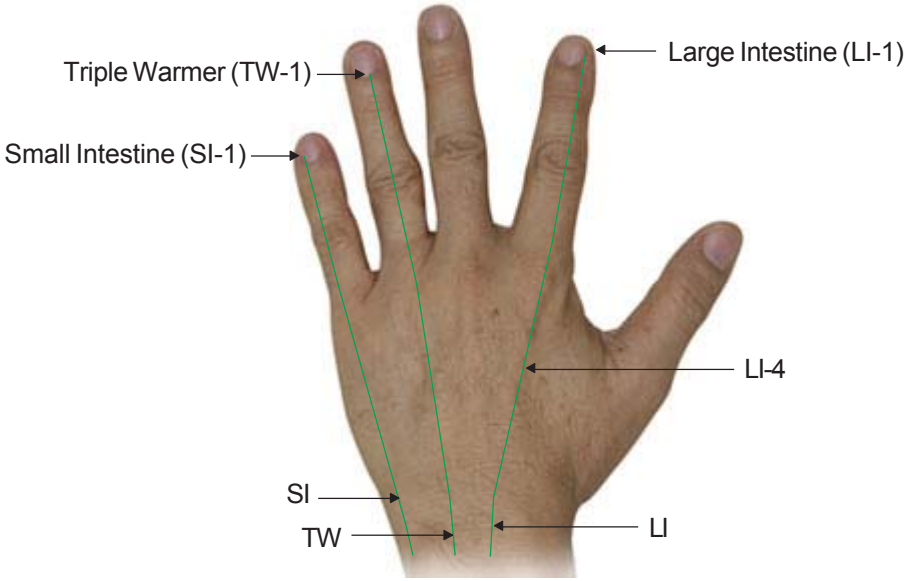

Fig. 2 *Large Intestine*

Major Palm Lines

The three major palm lines are the Life Line, the Line of Intellect and the Line of Emotion.

Fingers have Corresponding Bodily Functions

The fingers are connected to the organs' meridians. The joints of the finger bones are also related to parts of the organs and their corresponding senses and emotions.

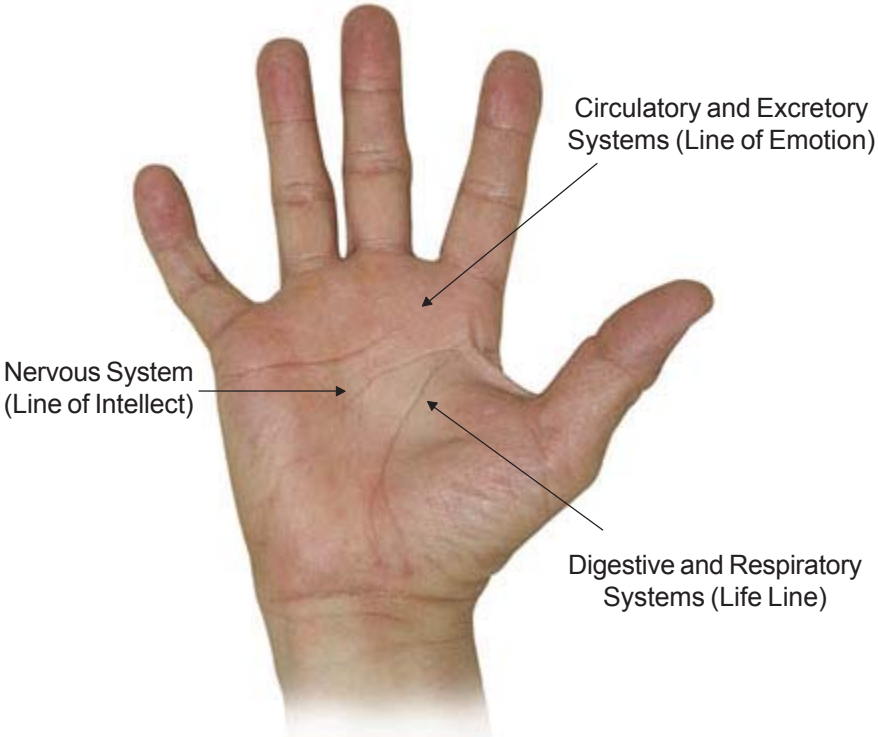

Fig. 3 *Three Major Palm Lines*

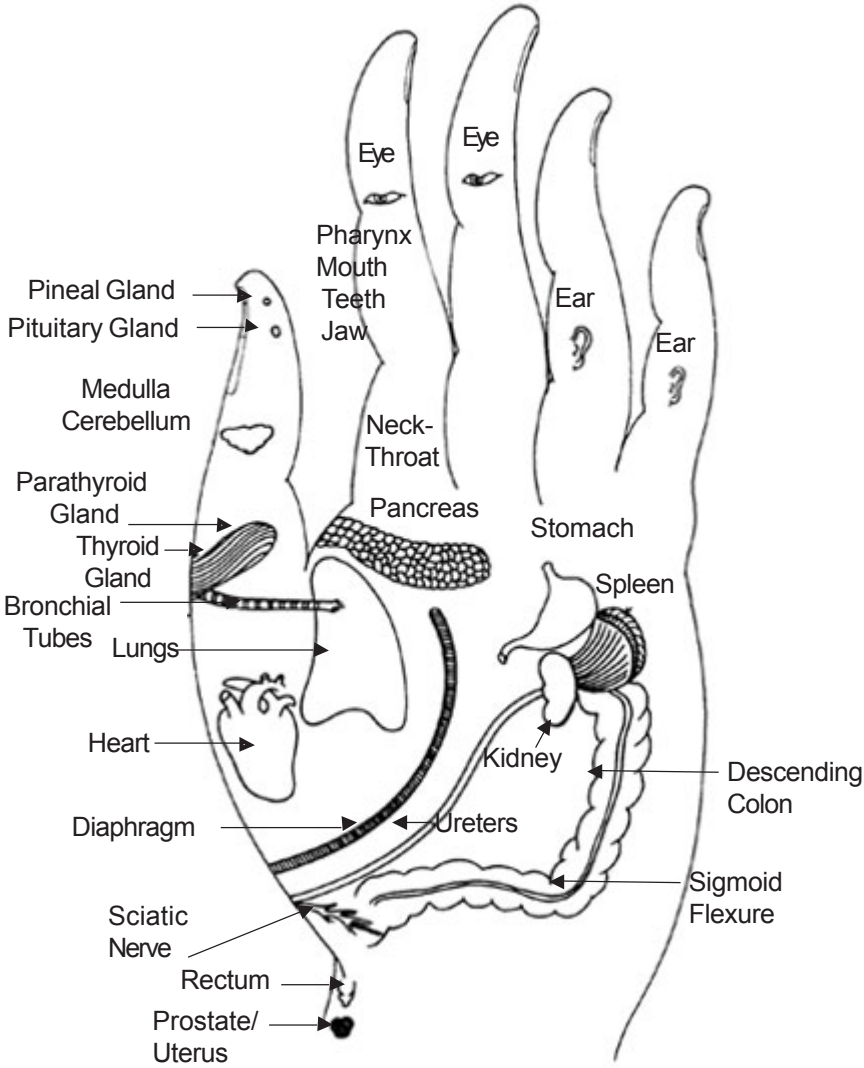

Fig. 4 *Fingers and Their Corresponding Bodily Functions Through the Organs' Meridians*

Massage the Hands

Always start by rubbing your hands until they are warm.

1. Massage the pericardium (P-8). Use the thumb to press the middle of the palm with a circular motion.

Fig. 5 *Massaging the Pericardium with fingers cupped in the palm in a half-fist, the pericardium is the point at the tip of the middle finger.*

2. Massage the hegu (LI-14). Press the thumb around the point in a circular motion, and press more at the index finger bone. Find the pain point and massage it away.

Fig.6 *Massaging LI-14*

3. Massage the major palm lines. Use the thumb to massage along the palm lines. Massage more towards the thumb bone and along that bone. When a lot of emotion is held inside, find the sore point and massage it.

4. Massage the back of the hand. Use the thumb to press along the bones on the back of the hand. When you find a tender spot, take more time to work on it.

5. Massage the fingers. Always rub your hands until warm. Use the right hand's fingers to wrap around the left thumb, and then, one by one, squeeze, hold and release each finger on the left hand three to six times. Start with the left hand and continue to the right hand's fingers, according to the elements of the finger. This will greatly help to control emotions.

Fig. 7 *Massaging the Palm Lines*

Fingers Correspond to Emotions, Elements and Organs

A. Thumb corresponds to the element earth and is associated with the stomach. The corresponding emotion is worry.

B. Index finger corresponds to the element of metal and is associated with the lungs and large intestine. It links with the emotions of sadness, grief and depression.

C. Middle finger corresponds with the element of fire and is associated with the heart, small intestine, circulatory system and the respiratory system. It links with the emotions of impatience and hastiness.

D. Ring finger corresponds to the wood element and is associated with the liver, gall bladder and the nervous system; it corresponds to the emotion of anger.

E. Pinky finger corresponds to the water element; it is associated with the kidneys, and corresponds with the emotion of fear.

Worry

Sadness

Impatience

Anger

Fear

Fig. 8 *Fingers' corresponding emotions, elements and organs*

Head

A. Crown Point

This is located in the center of the crown; in the fontanelle area of an infant's skull there may still be a slight depression. The crown point is the junction of one hundred channels through which the energy of the body passes. Massage this area with both your middle fingers. This will relieve dizziness and headaches, which result from too much energy in the head. It also relieves high blood pressure and stimulates the nervous system.

Fig. 9 *Crown Point is the junction point of one hundred energy channels.*

B. Bring Chi Energy to the Hands and Face

Inhale, contract the sexual organ, buttocks and middle of the anus. Rub the hands, clench the teeth, and put the tongue to the roof of the mouth. When the face, head, and hands are hot, breathe normally and begin to massage.

C. Knock the Head

Hit the head with the knuckles of the hand, knocking all around the head. Knocking the head lightly can help to clear your head, eliminate stubbornness and make your thinking sharper. Many of our students use this knocking of the head to release the pressures that they have from today's life of fast, advanced technology and the feeling of always having to keep up. This is especially true of those graduate students who feel a great deal of pressure and stress in keeping up with their studies. Each year students commit suicide because the pressures and stress accumulate too much in their heads, making them unable to think clearly: they start to feel everything in their society as too much pressure, which leads to worry, fear, sadness, and many, mixed emotions. The simple knocking of the head can release pressure and stress that accumulate there.

Fig. 10 *Knocking the Head*

D. Hold your Breath to Increase Chi Flow

Holding your breath will increase the Chi flow to the face. The head has many channels that join in the skull, especially in the crown point.

E. Scalp

Prepare your hands, head and scalp by warming up. Using both hands like a comb, press hard and move slowly, massage the scalp, going straight back from the hairline to the base of the skull. As you do this, mentally direct your energy from the back of the skull to your feet. Repeat 6-9 times. Massage more in any places in which you feel pain, until the pain goes away.

Fig. 11 *Massaging the Scalp*

F. Crest

Using your thumbs, massage the crest (the edge) at the base of the skull until you feel no pain there. This will help you reduce headaches and eye aches and will increase vision. This place in Tao tradition is called the Pool of Wind which tends to collect the “evil wind”, the major cause of all the pain in the senses.

Fengchi Point (GB-20)

Fig. 12 *Crest - Edge of the Skull*

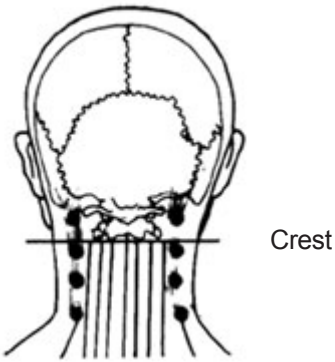

Fig. 13 *Go straight back from the hairline to the base of the skull.*

Face

Natural Beauty

Massaging your face with Chi is a far more effective beauty treatment than the most expensive cream or cosmetic, Your skin will glow brightly and eventually become less wrinkled. There are many meridians passing through or ending at the face. When blocked, they result in reduced flow of Chi energy and circulation. The face is the first impression imprinted in other people's minds. Chi circulation provides it with attractive personal energy.

Fig. 14 *Head and Face*

Fig. 15 *Massage the Whole Face*

Fig. 16 *Massage the Mid Forehead*

Temples

Use your index fingers to massage the temples in a circular motion, first clockwise, then counterclockwise. Massage the forehead and the temples; use the knuckle rub from the middle of the forehead all the way to the temples ten to twenty times. These exercises will reduce headaches in the front and in the temples. Find the painful point and massage it until the pain is gone.

Fig. 17 *Massage the Temples*

Mouth

Depression makes the corners of the mouth drop. Looking cheerful, delightful, more attractive and happy are dependent so much on the eyes and the corners of the mouth. When the muscles of the mouth are loose because of stress, depression, or sadness, the corners of the mouth drop and the energy system is depressed and in low key. No one likes to look at a sad face or a depressed face; it makes other people feel sad and depressed, too.

The flow of energy in the body and the expression of the face are the main attractive powers of a person. Massaging the mouth muscles up will help to lift the corners of the mouth. The Inner Smile and lifting up the corners of the mouth are very important to building up attractive energy.

Beautify the Mouth Massage

Using the thumb and the index finger of the right hand, touch both corners of the mouth and feel the Chi from the thumb and index finger pass to the corners of the mouth. Slowly press and push up about one inch, release and start again at the corners, pressing up ten to twenty times each day.

Cheerful Delight

Mouth Corners Drop

Fig. 18 *Beautifying the Mouth Massage*

Eyes

The eyes are the windows of the spirit. In Taoism we regard the eyes as Yang energy which will guide all Chi flow in the body. The eyes can greatly affect your personality Some people are born with a lot of white in their eyes--three portions of white to one portion of iris—sometimes called “thief eyes” or “danger attack eyes.” Such eyes can result in a suspicious look, portending unpleasant things. Through the exercises, you can gradually correct the white portion of the eyes.

Since the eyes are connected to the entire nervous system, they have a special importance. The eyes reveal the health of your entire body. Through the eyes we can tell which organs are weak and/or toxic. Massaging the eyes will remove stress from the vital organs. Nowadays people use their eyes much more than in the past to read, watch television, and work with computers, electronics and microscopes. This strains them a great deal and makes the openings of the organs loose, so that much of the organ energy is drained out. In Taoism, we regard the eyes as the doorways to the soul as well as the opening of the liver.

A. Bring Chi Energy to the Hands and Eyes

Repeat the procedure for bringing energy to the hands by inhaling; holding the breath; and contracting the sexual organ, buttocks and middle of the anus and both the left and right sides of the anus. Direct the Chi to both eyes. Rub the hands, clench the teeth, place the tongue on the roof of your mouth. Direct the energy to the face and then the hands. When your hands are hot, focus on your eyes until you feel them filled with energy.

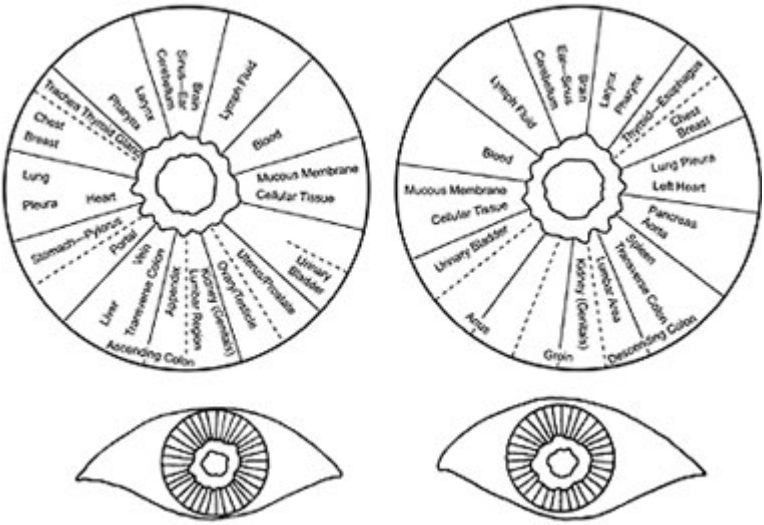

Fig. 19 *Eyes are the Windows of the Spirit*

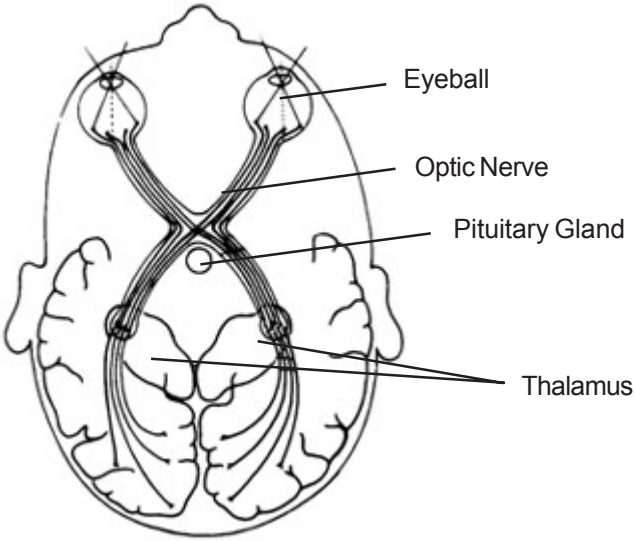

Fig. 20 *Eyes are the Doorways to the Soul*

Fig. 21 *Use the Fingertips to Gently Massage the Eyeballs*

B. For the Eyeballs and Surrounding Area

Close your eyes. Use your fingertips to gently massage your eyeballs through your closed eyelids, six to nine times clockwise, then six to nine times counterclockwise. Then gently massage the area around the lids the same number of times. Be aware of painful spots and massage those places until the pain goes away. Pay special attention to the inner and outer corners of the eyes. These are points of the gall bladder meridian and will relieve eye ailments if massaged.

C. Pull up the Eyelids

Pulling up the eyelids will increase the fluid. Use the thumb and index finger to pinch, pull up and release the eyelids six to nine times.

Fig. 22 *Pull Up the Eyelids*

D. For the Eye Sockets

Bend your index fingers and use the lower section (second phalanx) of each thumb to rub the upper and lower bones of the eye sockets six to nine times.

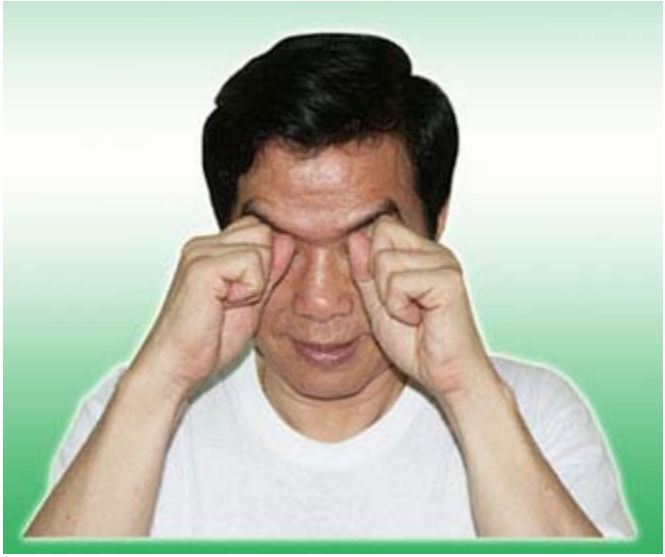

Fig. 23 *Massage the Eye Sockets*

E. For getting a Tear out

Hold an index finger up about eight inches from the eyes, or put a dot on the wall five or six feet away from you. Stare at it intently without blinking your eyes until you feel like a fire is burning in them. The Taoists believe that the toxins will burn out of the body through the eyes. They will begin to tear. Do this to strengthen your eyes. Then, rub your hands until warm; close your eyes and cover your eye sockets with your palms. Feel the Chi from the hands absorbed into the eyes. Rotate your eyes six to nine times, first in a clockwise direction, then counterclockwise.

Fig. 24 *Getting a Tear Out*

Fig. 25 *Absorbing the Chi into the Eyes*

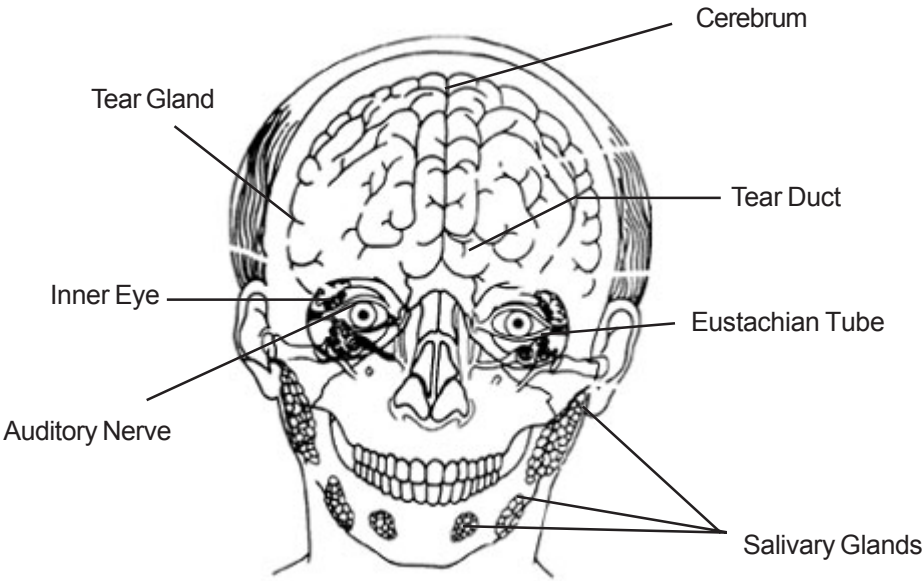

Fig. 26 *Parts of the Eyes Connect with Senses and Brain*

F. Pull in the Eyeballs

The eyes are divided into five parts. Each part is closely connected with the organs and nerves. Become aware of the eyes.

Pulling and pressing the eyeballs will exercise the organs, sense, glands and the brain. This is also the best exercise for the eye muscles. The eyes have many muscles which we do not exercise very much and, thus, they become weak, contributing to poor eyesight.

1. With the eyes still closed and cupped by the palms, inhale, contract the anus and sexual organ, and pull the eyeballs back into the sockets.
2. Contract the middle of the anus and the middles of the eyeballs.
3. Contract the front of the anus and the tops of the eyeballs.
4. Contract the back of the anus and the bottoms of the eyeballs.
5. Contract the right side of the anus and the right sides of the eyeballs.
6. Contract the left side of the anus and the left sides of the eyeballs. This exercise not only strengthens the eyes but also the pituitary and pineal glands and the inner ear including the ear drum and canals. When you pull the eyeballs in and upward and look toward the crown, you are exercising the upper muscles and stimulating the pituitary gland and pineal gland.

When you contract and pull in the middle of your eyeballs, you are exercising the back of the eye muscles and the inner ear.

When pulling in the outer corners of the eyes, you are strengthening the side eye muscles as well as the ear canals end the ear drums.

When pulling in the inner corners of the eyes, you are strengthening the inner side muscles, the tear ducts and the nose.

When pulling in the lower parts of the eyes, you are pressing the lower part of the ear canals and the nervous system.

Pressing into the Inner Ear

Left Eye Pressing into the Ear Canal. Right Eye Pressing into the Eustachian Tube

Pressing into the Pituitary Gland

Right Eye Pressing into the Ear Canal. Left Eye Pressing into the Eustachian Tube

Pressing into the Eustachian Tube

Fig. 27 *Moving the Eyes*

G. Learn to Maintain Eye Contact

Some people in eye to eye contact with other people feel nervous and frightened, and their voices become very low and hard to hear because of weak organs. Some people will look around and not look into your eyes when you talk to them. This can be caused by weakness of the gall bladder and kidneys. To improve this, you can use the Inner Smile, Six Healing Sounds and Tao Rejuvenation, plus the practice of staring.

Look at your face in a mirror for two to five minutes each day for the first week. After ten days you can begin to stare at your eyes and increase your confidence by looking at your irises. Gradually you will lose the fear of looking into other people's eyes.

Nose

The nose has several important functions. When we breathe properly through the nose and not through the mouth, the nose filters out dirt, preventing it from reaching the lungs. It also regulates the temperature of the air: when the air is too cold, the nose will warm it up first. Without this regulating action, extreme temperatures could injure the lungs, make us susceptible to upper respiratory illnesses and subject to getting colds easily. One great advantage about people who practice the Tao System is that they seldom get colds.

The nose has three meridians running through it: the large intestine, the stomach, and the Governor or back Channel. Rubbing the nose strengthens the temperature regulator stimulates the above organs, and increases hormone secretion. In China just a few needles inserted in the nose serve as a general anesthetic for any part of the body to be operated on.

An unhealthy nose affects the personality. A thin, flat and unhealthy looking nose, or a badly shaped nose, can make you less attractive to other people. A strong nose can help you to have good Chi. The nose is the first place into which the breath of life enters.

A weak nose usually will be infected, and a lot of mucous can leak into the sinuses. A weak nose also can affect the voice. A good singer always has a good nose. Rubbing and massaging the nose will increase the Chi and will improve circulation around the nose.

Ears

In China we believe that a person with thick, long ears will have a long, healthy life and that the personality will be more attractive.

The following exercises can prevent hearing loss which occurs gradually as we age. The ears are acupuncture maps of the whole body, containing 120 points. Many acupuncturists now use only the ear points to cure many ailments as well as for weight control.

A. Outer Ear

Repeat the method for bringing energy to the hands, contracting the left and right sides of the anus.

1. Front and back: Make a space between your index and ring fingers and simultaneously rub in front and in back of the ears.

2. Ear shells: Rub the ear shells with all your fingers. This will stimulate the autonomic nervous system and warm up your whole body, especially in the cold weather.

3. Ear lobes: Using your thumb and index finger, pull down on the ear lobes.

Rub in Front and Back of Ears

Rub the Ear Shells

Pull Down on the Ear Lobes

Fig. 28 *Rubbing the Ear*

4. Ear drum exercises: For the outer ear drum, repeat the method for bringing energy to the hands, contracting the left and right sides of the anus. Inhale and then exhale completely. Put your index fingers in your ears; it should feel as if there is a vacuum in the ears. If it does not, then exhale more. Move your index fingers back and forth six to nine times at your own pace until you can feel that the insides of the ears are moving, and pull out the fingers with a quick movement. You should hear a “pop” sound, and you will feel that you can hear better and that your mind is clearer.

Fig. 29 *Outer Ear Drum Exercise*

B. Inner Ear

Repeat the method for bringing energy to the hands, contracting the left and right sides of the anus.

The inside of the inner ear, being inaccessible, is usually not exercised and grows weaker with age. These two exercises use air pressure and vibrations to strengthen the inner ear. The ear canals, the nose canal, and the mouth are connected together, so in this exercise we are using the pressure that builds in the lungs and bringing it back up to the mouth, thus adding pressure to the inner ear drums. This is how to exercise the inner ear drums.

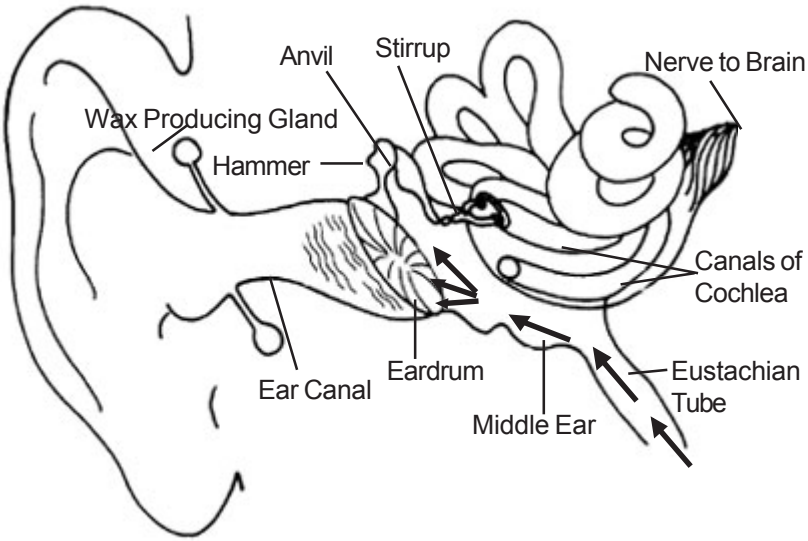

Fig. 30 *Diagram of Inner Ear Drum*

Fig. 31 *Inner Ear Drum Exercise*

Gums, Tongue, Teeth

Healthy teeth require healthy gums as their foundation. These exercises will strengthen both the gums and teeth. Teeth are the excess energy of the bones, and when the teeth get stronger, so do the bones. When the teeth and tongue are strong, your breath improves as well, eliminating bad breath.

We regard saliva as an essential form of energy which can lubricate the organs and digestive system. The tongue is the opening of the heart, and both are made of similar tissue. A healthy and clean tongue will strengthen the organs, especially the heart. You should clean your tongue twice a day with a brush or scrape it with a tongue scraper, and massage your tongue with a tongue depressor or a clean finger. Find the painful spots and massage there until the pain goes away.

A. Bring Chi Energy to the Hands

Repeat the procedure for bringing energy to the hands, contracting the middle of the anus.

B. Gums

Open your mouth and stretch your lips tautly over your teeth. Use three fingertips (index, middle, and ring fingers) to tap the skin around the upper and lower gums. Hit around until you feel warmth in the area.

C. Gums and Tongue

Massage your upper and lower gums with your tongue. Then suck in some saliva, press your tongue tightly against the roof of your mouth, and try to exercise the tongue. When you strengthen your tongue, you are strengthening your heart. Press around. Press the tongue to the roof of your mouth, tighten your neck muscles and swallow the saliva. This lubricates the digestive glands and organs.

Fig. 32 *Hitting the Gums Exercise.Using the Tongue, Massage the Upper and Lower Gums.*

D. Tongue

In a sitting position place the hands on the knees, palms down. Exhale and straighten the arms, spreading the fingers apart and keeping the hands on the knees. Open the mouth as wide as possible and thrust the tongue out and down, focused on the throat. With the tongue out as far possible, gaze at the tip of the nose. The whole body should be tense. Hold the breath for as long as you feel comfortable. Relax with inhalation and regulate the breath. This will help to strengthen the throat, the tongue and the power of speech. These exercises will help to improve foul breath and to clarify speech.

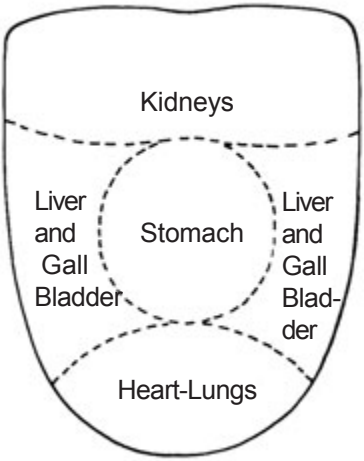

Fig. 33 *Diagram of Tongue Parts and Corresponding Organs*

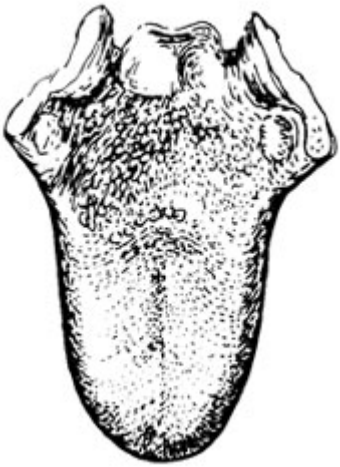

Fig. 34 *Tongue*

Fig. 35 *Press Tongue to the Roof of the Mouth*

Inhale, then exhale as you press your tongue out and down as far as you can. Follow by pulling the tongue in and curling it. Press your tongue to the roof of your mouth as hard as you can, contracting the middle of the anus and the esophagus to help the tongue. With more practice you will know how to use the inside force, the force from the organs, to press your tongue up. Even though the tongue has no bones to exert force, you will still be able to exercise the tongue well.

E. Teeth Clenching

Relax your lips. Click the teeth together lightly and then clench them hard, as you inhale and pull up the middle of the anus. Do this six to nine times. Move your tongue and mouth to create a lot of saliva. The technique of swallowing the saliva is to put the tongue up to the palate and swallow quickly with a hard gulp, sending the saliva down the esophagus to your stomach.

F. Energy to Teeth

Close your mouth and let your teeth touch lightly. Direct the energy to your teeth. Gradually feel the electrical flow of energy there.

Fig. 36 *Click the Teeth Together Lightly*

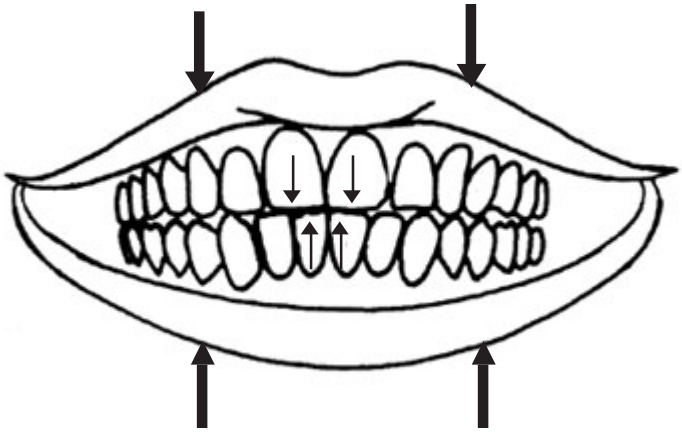

Fig. 37 *Clench the Teeth Together Hard*

Fig. 38 *Throat Glands*

Neck

A. Thyroid and Parathyroid: Site of Courage, the Power of Speech

The neck carries the busiest traffic in the body and is the seat of the thyroid and parathyroid glands. When you massage here, you increase the body's metabolism. Neck tension can also be caused by emotional imbalance. When we are tense and nervous, we are responding to negative emotions, such as anger, fear and sadness. The neck is similar to a traffic bottleneck. All of the signals, as well as the emotions, have to pass through it. When under stress and under emotional strain, the neck starts to accumulate and jam the tension. Unconsciously, the neck muscles tighten, attempting to block out pain. Keeping the neck soft will help Chi flow to the higher center that is located in the brain, keeping the mind and body in harmony together.

Tension in the neck can make you less courageous. When the neck is tense, it will block self expression in the throat. With proper flow of Chi energy, we can express ourselves appropriately at the proper time, place, and in a proper way.

The neck is the passageway of many meridians and is the channel of the Chi energy of the organs. In the middle is the Governor meridian. On the sides are the bladder meridian, the triple warmer meridian and the large intestine meridian. The emotions passing through the meridians of the neck may tense and jam up there.

Emotion:	Organ/Associate Organ:
Anger	Liver/Gall Bladder
Fear	Bladder/Kidneys
Grief	Large Intestine/Lungs
Hastiness	Heart/Small Intestine/Triple Warmer
Worry	Spleen/Stomach/Pancreas

B. Bring Chi Energy to the Hands

Do the procedure for bringing energy to the hands and contract the front of the anus.

C. Whole Neck

Spread your thumbs apart from your other fingers. Alternating hands, rapidly wipe the neck from the chin to the base nine to thirty-six times.

D. Middle Neck

Alternating hands, use the middle three fingers to rapidly wipe down the middle of the neck from the chin to the base nine to thirty-six times. The thyroid and parathyroid glands are in the front section of the neck. Use your thumb and the three other fingers to massage these glands. Find the painful points and massage them until you feel them open. Massaging this area will help to increase metabolism and the power of speaking.

Fig. 39 *Wipe the Neck from the Chin to the Base*

E. Turtle Neck

Sink your chin down, then out and up. Feel your spine press down and then expand. This will help loosen the vertebrae and discs of your neck.

F. Crane Neck

Move your chin forward, circling out, then down, then up, and out again. Feel your spine expand and then contract.

G. Massage the Neck

Massage the points along the back of the neck and on the back along the cervical vertebrae. Start from the shoulders and go up to the base of the skull. Use your fist to hit along the neck. Find any painful spots and any tense spots and massage until they are released. This will greatly help to release the tension of the neck and help to detoxify the toxic accumulations in the neck area, the causes of many headaches.

Fig. 40 *Turtle Neck*

Fig. 41 *Crane Neck*

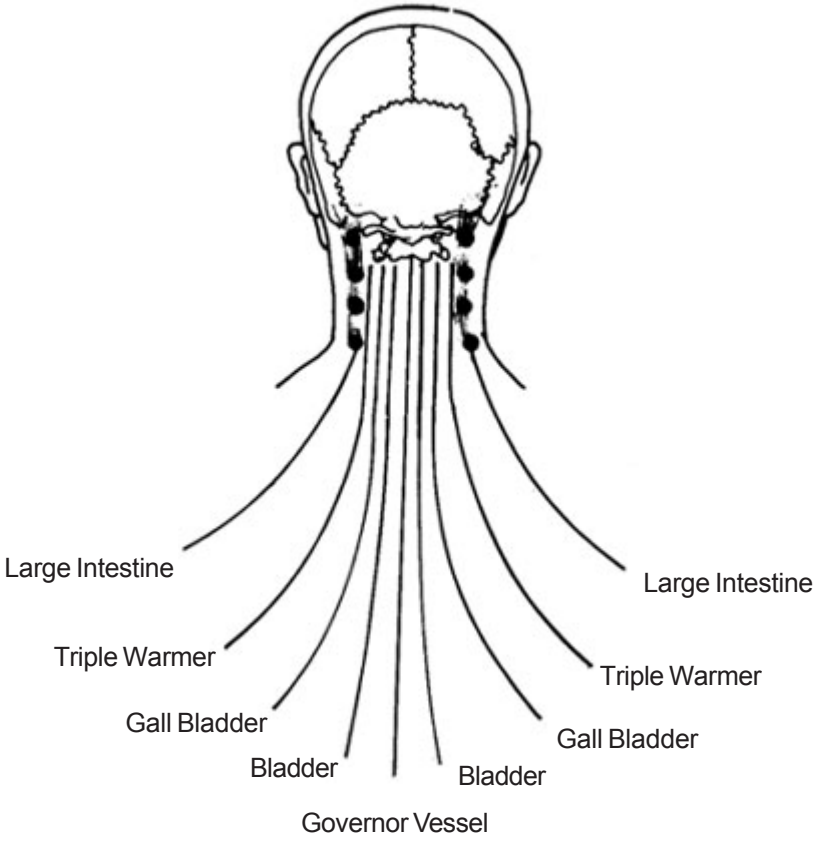

Fig. 42 *Massage the Points Along the Neck*

Shoulders

Many people feel tense and worried, and their shoulders are tight and held up. The way to release the tension is by pulling up your shoulders to press against the neck, tightening the muscles of the neck and shoulders. Hold for a while, exhale deeply, and let them drop down, pulled by gravity like a sack of potatoes. Feel the burden, worry, and stress drop down to the feet and out to the ground. Feel yourself grounded. Do this three to nine times, and the tension and worry will go away.

Relax your shoulders and chest, exhale and release more, until you feel the tenseness gone.

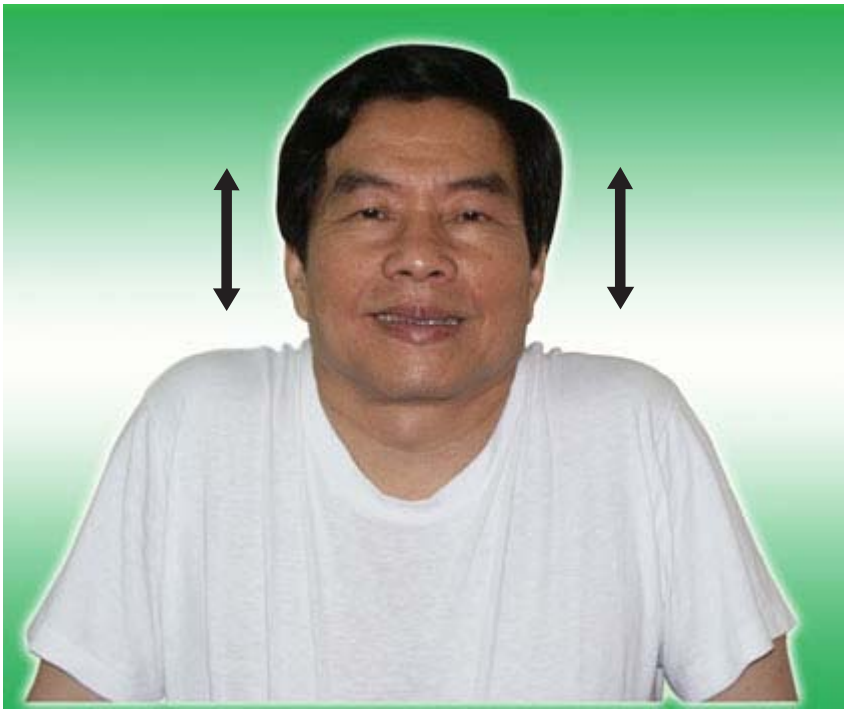

Fig. 43 *Dropping the Shoulders will Help to Release Tension and Worry.*

Detoxifying Organs and Glands

Lightly slapping and tapping over the organs and glands help to shock the toxic sediment and increase the circulation and Chi flow to these areas. Our practitioners claim they are able to heal themselves from many chronic illnesses which are very hard to heal by conventional medicine.

I. Thymus Gland

The thymus gland controls the immune system and is related to longevity. Normally the thymus gland atrophies after childhood. In the higher levels of Taoist practice, the thymus gland can be regrown. This helps maintain health and vitality and supports greater spirituality. Thumbing the thymus gland can help increase the activity and release more hormones.

A. Bring energy to your hands by the usual procedure, contracting the front of the anus and bring the Chi toward the thymus.

B. Make a fist, inhale and thump down the middle of the upper chest from the collar bone to the nipples six to nine times. Do not talk while you are doing this or you might harm yourself.

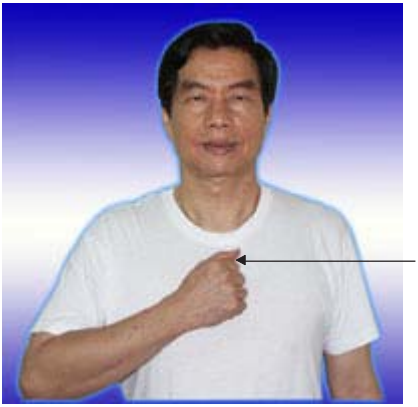

Fig. 44 *Hitting the Thymus Gland*

II. Heart

Lightly slapping an organ stimulates the release of toxins, which allows the organ to rebuild and repair itself. In doing these exercises, be aware that the slapping or tapping should be adjusted by you so as not to use excessive force which may be harmful.

A. Do the energy to hands procedure, contracting the left side of the anus and bringing Chi toward the heart.

B. Slap your heart lightly with your palm six to nine times. Don't speak.

III. Lungs

A. Bring energy to your hands, contracting the right side of the anus and bringing Chi to the lungs.

B. Using your palm, slap up and down your right lung, hitting only as hard as is comfortable. Do not talk. Contract the left side of your anus and slap your left lung. This can help to clean out the mucous and to clean out the lungs.

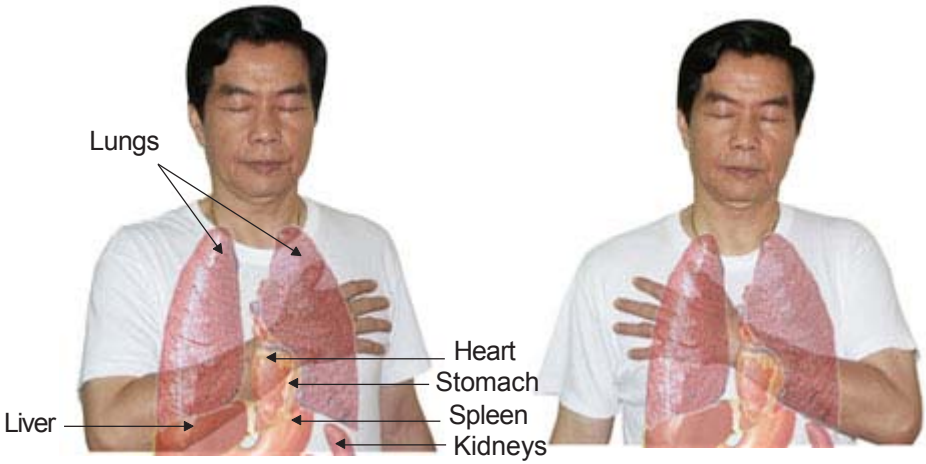

Fig. 45 *Slap at Heart, Lungs and Liver Areas*

IV. Liver

A. Bring energy to the hands, contracting the right side of the anus and bringing Chi to the liver.

B. Using your palm, slap below the rib cage on the right side. Don't speak. This can help to detoxify the liver.

V. Stomach, Spleen, Pancreas

A. Bring energy to your hands, contracting the middle of the anus.

B. Contract the anus at the left side, and slap at the spleen, pancreas and stomach. Place one palm on top of the other and rub below the rib cage, from center to left, then left to center.

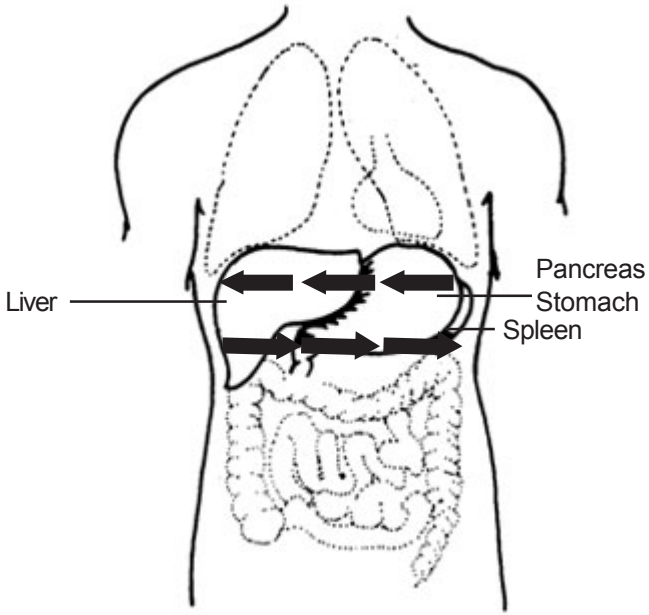

Fig. 46 *Rub the Stomach, Spleen and Pancreas*

Fig. 47 *Rub Back and Forth over the Liver, Stomach and Spleen*

VI. Large and Small Intestines

A.Bring energy to the hands, contracting the entire anus.

B. Small intestine: With palms together, rub a small circle around your navel, first clockwise, then counterclockwise.

The small intestine is one of the longest tubes in the digestive system. A careless diet, too much hot food or dairy products, or too little fibrous food will create mucous that will stick to the walls of the intestine, block the absorption of nutrients and slow down digestion. Once mucous accumulates, it is like a snow ball that will get bigger and bigger, eventually becoming a lump which slows down the traffic of the digestive system.

C. Large intestine: Place one palm on top of the other and rub your abdomen in a large circle. Start on the lower right side and rub up and around in a clockwise direction. This will move the energy in the intestine and relieve constipation. For diarrhea, rub counterclockwise. If you have normal elimination, rub in both directions. These exercises increase the absorption and dissolve the accumulations that stick to the large intestine's wall.

Fig. 48 *Hitting the Sacrum Can Help in Strengthening the Sciatic Nerves*

VII. Kidneys

The kidneys act as helping to filter out waste material from the blood. If there is too much waste in the system, the kidneys cannot filter it all. The waste will tend to collect in the ducts and tubules of the kidneys, impairing their health. By hitting the kidneys' area, we shake out the harmful sediment and help prevent kidney malfunction.

A. Bring energy to the hands, contracting the left and right sides of the anus.

B. Locate the kidneys just above the lowest, or floating, rib in the back on either side of the spine. Make a fist and hit the kidneys with the back of the fist between the wrist and knuckles. Alternate hands and hit only as hard as is comfortable. This will help to shake loose the sediment, crystals, and uric acid that get caught in the kidneys. This will also strengthen the kidneys and relieve back pain.

C. Rub your hands together to warm them. Then rub your palms up and down over the kidneys until they feel warm.

VIII. Sacrum

In the Taoist system the sacrum is regarded as extremely important. It is a pump which helps to bring spinal fluid and energy (Chi) to the brain. It is also the junction where the sexual organs, rectum, and legs meet. Sciatic pain, which shoots down the legs, originates in the sacrum; therefore, strengthening it will release this intense pain.

A. Bring energy to the hands, contracting the back of the anus to the sacrum.

B. Make a fist and use your knuckles alternately to hit both sides of the sacrum. First hit in the area of the eight sacral holes, and then the hiatus, the depression at the bottom of the sacrum.

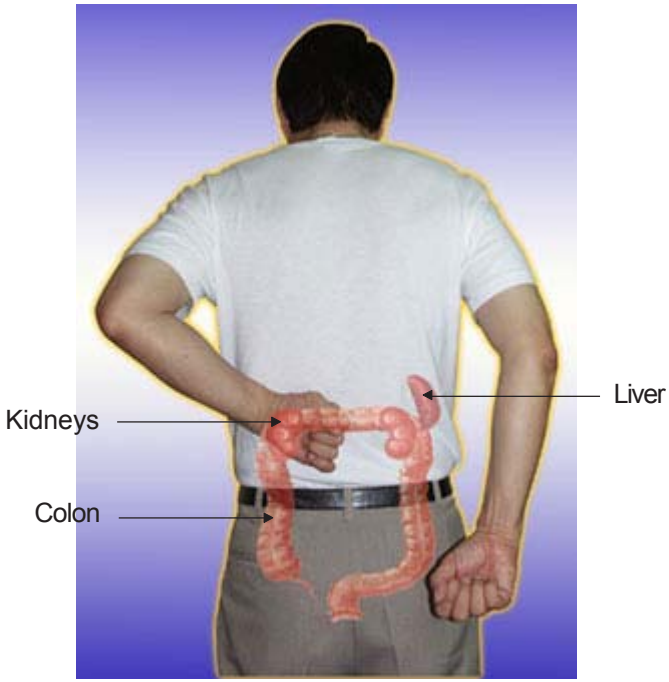

Fig. 49 *Hitting the Kidneys will help to Shake Out Sediment*

Knees and Feet

I. Knees are Toxin Collectors

Toxins tend to collect in the lower limbs because of the slowdown of the circulation due to gravity. The most common places are the back parts of the knees. Slapping at these places will break down the toxins. The body will then eliminate the toxins out of the body by urine, bowel movements and sweat.

A. Bring Chi Energy to the Hands

Bring energy to the hands; do no contractions.

B. Behind the Knees

Prop your leg up on a chair or low table so the knee is straight. Then slap smartly behind the knee nine to eighteen times. Although it hurts, it is extremely beneficial in releasing toxins which accumulate there. This release may be indicated by the appearance of a purple dot. Use discretion as to how hard you slap, since it can be overdone. Repeat this exercise on the other knee.

Fig.50 *Slapping Smartly behind the Knee Helps to Release Toxins*

Fig. 51 *Massaging the Knee Cap*

C. Knee Cap Massage

Massage the knee cap until it is warm, There is very little blood flowing to it and it tends to be quite vulnerable. This practice strengthens it. Massage the other knee cap.

D. Move the Knee Caps

Relax the knee caps, then move them up and down to the left and right and around both clockwise and counterclockwise.

E. Massage the Knees

Falling down is often caused by weak knees. Massaging the knees will improve your stability and flexibility.

II. Feet: Roots of the Body

Strong feet and tendons increase your stability by connecting you to the healing energy of the earth. Feet are the reflexes of the whole body's organs, glands and limbs. (They are like remote controls. Massaging will help to stimulate the organs and glands and increase the circulation.

A. Bring Chi Energy to the Hands

Bring energy to the hands; do no contractions.

B. Massage the Feet

Take off your shoes and stockings and massage the tops and bottoms of each foot with your thumbs and fingers. Be sure to massage the kidney point, the sore spot in the center between the ball of each foot and the adjoining pad. If you are in a hurry, massage the whole of each foot once by rubbing the sole of the foot vigorously and carefully across the top of the other foot, going from the heel to the arch to the toes. The soles of the feet have energy meridians to the entire body. Massage the feet, and when you find painful points massage them until the pain goes away. This will help to clear any blockage of Chi channel flow.

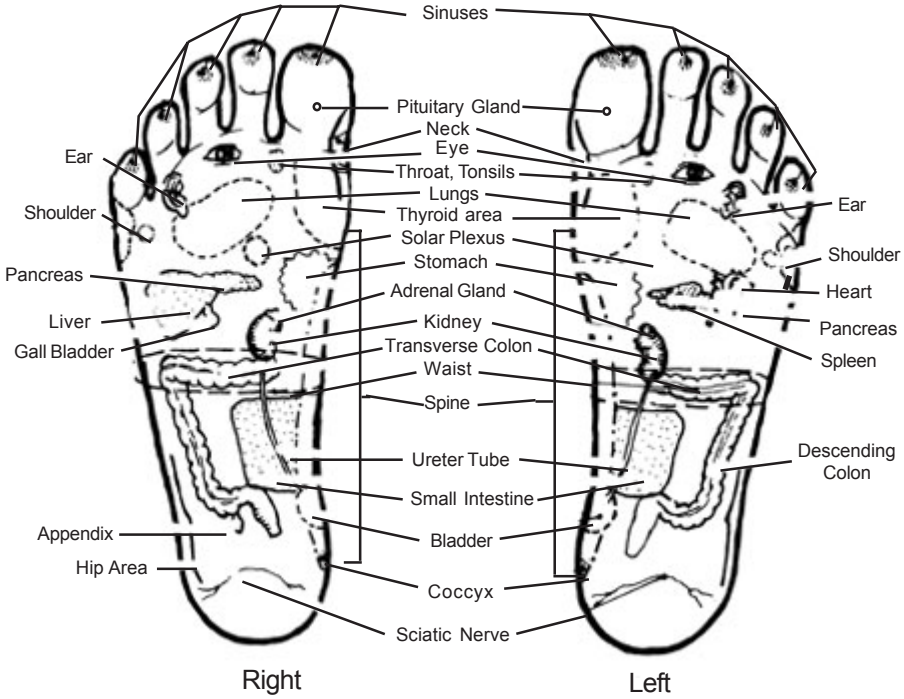

Fig. 52 *Feet are the Reflexes of the Whole Body's Organs, Glands and Limbs*

C. Spread Out the Toes

Spread out and separate all the toes, especially the little toes, and then release. Repeat six to nine times. This is especially good for the tendons of the feet.

Fig. 53 *Separate all the Toes by Spreading them out.*

D. Big and Second Toes

Rub the big toes and second toes together rapidly. This a good exercise to do at odd moments during the day.

E. Rub Feet Together

Keep the feet warm by rubbing them together. This will help to stimulate all the body's organs.

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Sexual Reflexology

The Tao of Love and Sex

Mantak Chia and W.U. Wei

Sexual Reflexology

The Tao of Love and Sex

"Guide for Lovers"

Mantak Chia
and
W.U. Wei

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About the Authors

Mantak Chia

Master Mantak Chia is the creator of the Universal Tao System and is the director of the Universal Tao Center and Tao Garden Health Resort and Training Center in the beautiful northern countryside of Thailand. Since childhood he has been studying the Taoist approach to life. His mastery of this ancient knowledge, enhanced by his study of other disciplines, has resulted in the development of the Universal Tao System which is now being taught throughout the world.

Mantak Chia was born in Thailand to Chinese parents in 1944. When he was six years old, Buddhist monks taught him how to sit and “still the mind”. While still a grammar school student, he learned traditional Thai boxing. He was then taught Tai Chi Chuan by Master Lu, who soon introduced him to Aikido, Yoga and broader levels of Tai Chi.

Years later, when he was a student in Hong Kong excelling in track and field events, a senior classmate named Cheng Sue-Sue introduced him to his first esoteric teacher and Taoist Master, Master Yi Eng (I Yun). At this point, Master Chia began his studies of the Taoist way of life in earnest. He learned how to circulate energy through the Microcosmic Orbit and, through the practice of Fusion of the Five Elements, how to open the other Six Special Channels. As he studied Inner Alchemy further, he learned the Enlightenment of the Kan and Li, Sealing of the Five Senses, Congress of Heaven and Earth and Reunion of Heaven and Man. It was Master Yi Eng who authorized Master Chia to teach and heal.

When Mantak Chia was in his early twenties he studied with Master Meugi in Singapore, who taught him Kundalini, Taoist Yoga and the Buddha Palm. He was soon able to clear blockages to the flow of energy within his own body. He learned to pass the life force energy through his hands also, so that he could heal Master Meugi's patients. He then learned Chi Nei Tsang from Dr. Mui Yimwattana in Thailand.

A while later, he studied with Master Cheng Yao-Lun who taught him the Shao-Lin Method of Internal Power. He learned the closely guarded secret of the organs, glands and bone marrow exercise known as Bone Marrow Nei Kung and the exercise known as Strengthening and Renewal of the Tendons. Master Cheng Yao-Lun's system combined Thai boxing and Kung Fu. Master Chia also studied at this time with Master Pan Yu, whose system combined Taoist, Buddhist and Zen teachings. Master Pan Yu also taught him about the exchange of Yin and Yang power between men and women, and how to develop the Steel Body.

To understand the mechanisms behind healing energy better, Master Chia studied Western anatomy and medical science for two years. While pursuing his studies, he managed the Gestetner Company, a manufacturer of office equipment and became well acquainted with the technology of offset printing and copying machines.

Using his knowledge of Taoism, combined with the other disciplines, Master Chia began teaching the Universal Tao System. He eventually trained other Instructors to communicate this knowledge and he established the Natural Healing Center in Thailand. Five years later, he decided to move to New York, where in 1979, he opened the Universal Tao Center. During his years in America, Master Chia continued his studies in the Wu system of Tai Chi with Edward Yee in New York.

Since then, Master Chia has taught tens of thousands of students throughout the world. He has trained and certified over 1,500 instructors and practitioners from all over the world. Living Tao Centers, Chi Nei Tsang Institutes, Cosmic Healing Forums and Immortal Tao Mountain Sanctuaries have opened in many locations in North America, South America, Europe, Asia, Africa and Australia.

In 1994, Master Chia moved back to Thailand, where he had begun construction of Tao Garden and the Universal Tao Training Center fifteen miles outside of Chiang Mai.

Master Chia is a warm, friendly and helpful man who views himself primarily as a teacher. He presents the Universal Tao System in a straightforward and practical manner, while always expanding his knowledge and approach to teaching.

Master Chia estimates that it will take thirty-five books to convey the full Universal Tao System. In June 1990, Master Chia was honored by the International Congress of Chinese Medicine and Qi Gong (Chi Kung), who named him the Qi gong Master of the Year. He is the first recipient of this annual award.

In December 2000, the Tao Garden Health Resort and Universal Tao Training Center was completed with two Meditation Halls, two open air Simple Chi Kung Pavilions, indoor Tai Chi, Tao Yin and Chi Nei Tsang Hall, Tai Chi Natural Swimming Pool, Pakua Communications Center with a complete Taoist Library, Internal World Class Weight Lifting Hall and complete 8 Court Recreational Facilities.

In February 2002, the Immortal Tao practices will be held at Tao Garden for the first time using Dark Room technology, creating a complete environment for the higher level Taoist practices.

Master Mantak Chia has previously written and published these Universal Tao books:

Awaken Healing Energy of the Tao - 1983
Taoist Secrets of Love: Cultivating Male Sexual Energy
co-authored with Michael Winn - 1984.
Taoist Ways to Transform Stress into Vitality -1985
Chi Self-Massage: the Tao of Rejuvenation - 1986
Iron Shirt Chi Kung I - 1986
Healing Love Through the Tao: Cultivating Female Sexual Energy - 1986
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Fusion of the Five Elements I - 1990
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The Inner Structure of Tai Chi co-authored with Juan Li - 1996
Multi-Orgasmic Man co-authored with Douglas Abrams 1996 - published by Harper Collins
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Chi Nei Tsang II - 2000
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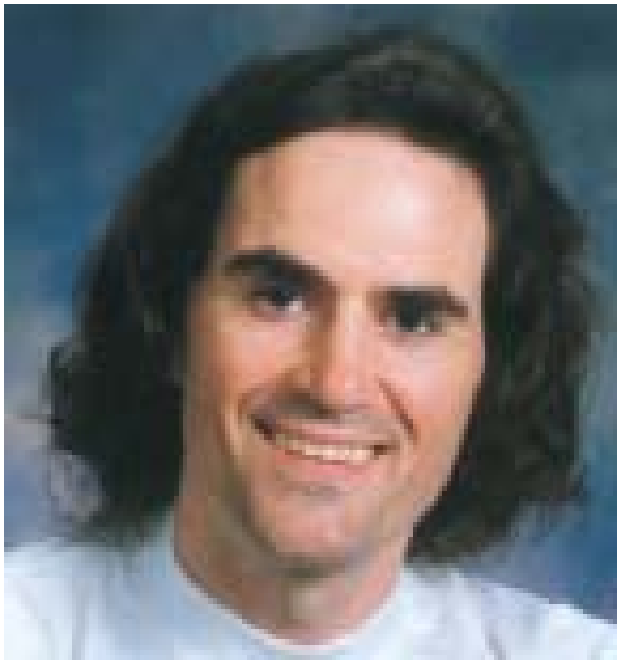
Cosmic Healing II co-authored with Dirk Oellibrandt - 2001
Door of All Wonders co-authored with Tao Haung - 2001
Sexual Reflexology co-authored with W. U. Wei - 2002
Elixir Chi Kung - 2002

Many of the books above are available in the following foreign languages:

Arabic, Bulgarian, Czech, Danish, Dutch, English, French, German, Greek, Hebrew, Hungarian, Indonesian, Italian, Japanese, Korean, Lithuanian, Malaysian, Polish, Portuguese, Romanian, Russian, Serbo-Croatian, Slovenian, Spanish, & ***Turkish*** editions are available from the Foreign Publishers listed in the Universal Tao Center Overview in the back of this book.



William U. Wei

Born after World War I, growing up in the Midwest area of the United States, trained in Catholicism; this student of the Tao started studying under Master Mantak Chia in the early 1980s and in the later 1980s became a Senior Instructor of the Universal Tao (specializing on one on one training). In the early 1990s this Senior Instructor moved to Tao Garden, Thailand, and assisted Master Mantak Chia in building Tao Garden Taoist Training Center. For 6 years this student of the Tao travelled to over 30 countries teaching with Master Mantak Chia and serving as Marketing and Construction Coordinator for the Tao Garden. Upon completion of Tao Garden in December 2000 he became Project Manager (Winter) for the all Universal Tao Publications and products (coordinating the completion of an additional 35 titles). With the purchase of a mountain with four waterfalls in Southern Oregon, USA (late 1990s) this practitioner is presently (Summer) completing a Taoist Mountain Sanctuary for personal cultivation, Higher Level practices and ascension. The author of ***"Living in the Tao"***, the book dedicated to the people who don't know what to know about the unknown; the Taoist poetry books ***"Angel's Heart"***, ***"Earth's Soul"*** and ***"Mountain Stillness"*** expressing the feeling, essence and stillness of the Tao; and co-creator of the Universal Tao formula cards, "Chi Cards" (4 sets of over 140 formulas) with Master Mantak Chia under the pen name the "The Professor - Master of Nothingness"; is planning and working on an additional 12 Taoist prose and poetry books to complete this author's Taoist Series by 2010.

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Thanks to Juan Li for the use of his beautiful and visionary paintings, illustrating Taoist esoteric practices.

We offer our eternal gratitude to our parents and teachers for their many gifts to us. Remembering them brings joy and satisfaction to our continued efforts in presenting the Universal Tao System. As always, their contribution has been crucial in presenting the concepts and techniques of the Universal Tao.

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Lee Holden,
Copy Editor

Words of Caution

The practices described in this book have been used successfully for thousands of years by Taoists trained by personal instruction. Readers should not undertake these practices without receiving personal transmission and training from a certified instructor of the Universal Tao, since some of these practices, if done improperly, may cause injury or result in health problems. This book is intended to supplement individual training by the Universal Tao and to serve as a reference guide for these practices. Anyone who undertakes these practices on the basis of this book alone, does so entirely at his or her own risk.

The meditations, practices and techniques described herein are ***not*** intended to be used as an alternative or substitute for professional medical treatment and care. If any readers are suffering from illnesses based on mental or emotional disorders, an appropriate professional health care practitioner or therapist should be consulted. Such problems should be corrected before training begins.

Neither the Universal Tao nor its staff and instructors can be responsible for the consequences of any practice or misuse of the information contained in this book. If the reader undertakes any exercise without strictly following the instructions, notes and warnings, the responsibility must lie solely with the reader.

This book does not attempt to give any medical diagnosis, treatment, prescription, or remedial recommendation in relation to any human disease, ailment, suffering or physical condition whatsoever.

Forward
"Sexual Reflexology"

When most people hear the term "reflexology" they think of foot massage. In the West, it is common to see charts like the one below, which map out the areas of the body to regions of the feet.

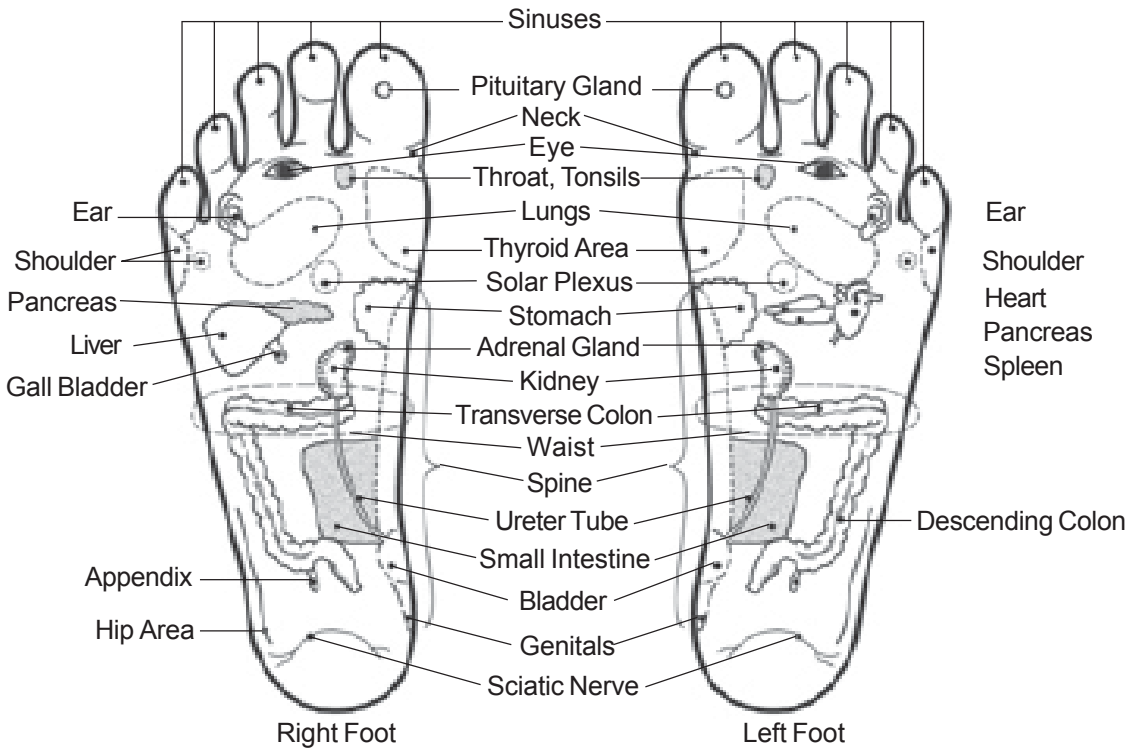


Fig. 1 *Foot Reflexology*

The reason that charts like this make sense is because the human body begins as a single cell which contains a blueprint for the entire body. As the body grows, energy meridians run through it and key parts of the body are mapped over and over again, based on that original blueprint. Rather like a hologram, a three dimensional picture in which every part contains the whole, each part of the body has a mapping for the entire body. These energetic mappings are regularly used in Oriental medicine, and are beginning to be more accepted in the West.

Some of the more common energy mappings in addition to the feet include: hands, eyes, face, ear, tongue, wrists and abdomen. Charts of these reflexes are shown in the figures that follow.

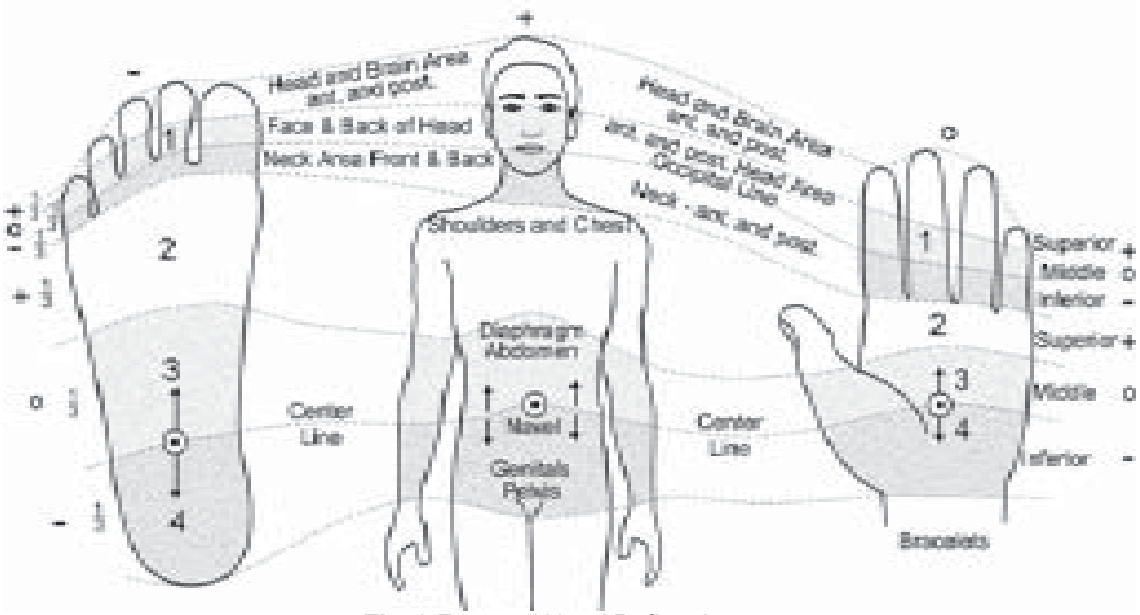


Fig. 2 *Foot and Hand Reflexology*

Reflexology is based on the premise that all our organs have reflex points on other parts of the body. The corresponding points are found by dividing the body into different zones. Organs in a particular zone can be stimulated by working on reflexes in the corresponding reflex point zone. The meridians used in Traditional Oriental Medicine, acupuncture, and shiatsu also indicate mappings of the energetic pathways in the body.

Fig. 3 *Eye Reflexology*

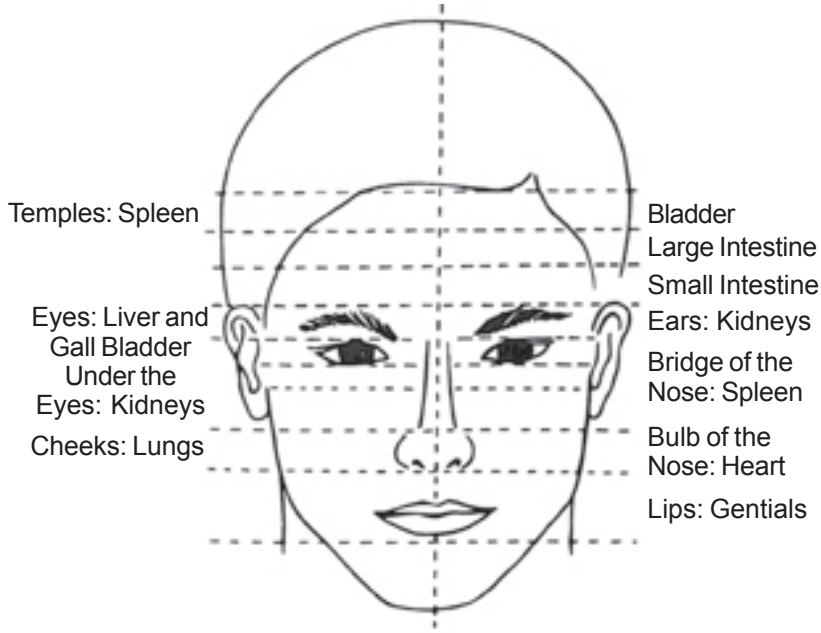


Fig. 4 *Face Reflexology*

The Taoists have long understood these energy correspondences throughout the body, and all of them are used in the Taoist healing arts. In addition to the reflexes already mentioned, Taoist literature includes reflexes for the sexual organs of men and women. These male and female reflexology zones form the basis for this book. Just as a book on foot reflexology goes on to describe methods of massaging the reflexes, so Sexual Reflexology gives applications for using the sexual reflex points in lovemaking. This understanding can help couples and individuals practice the sex act as an act of healing.

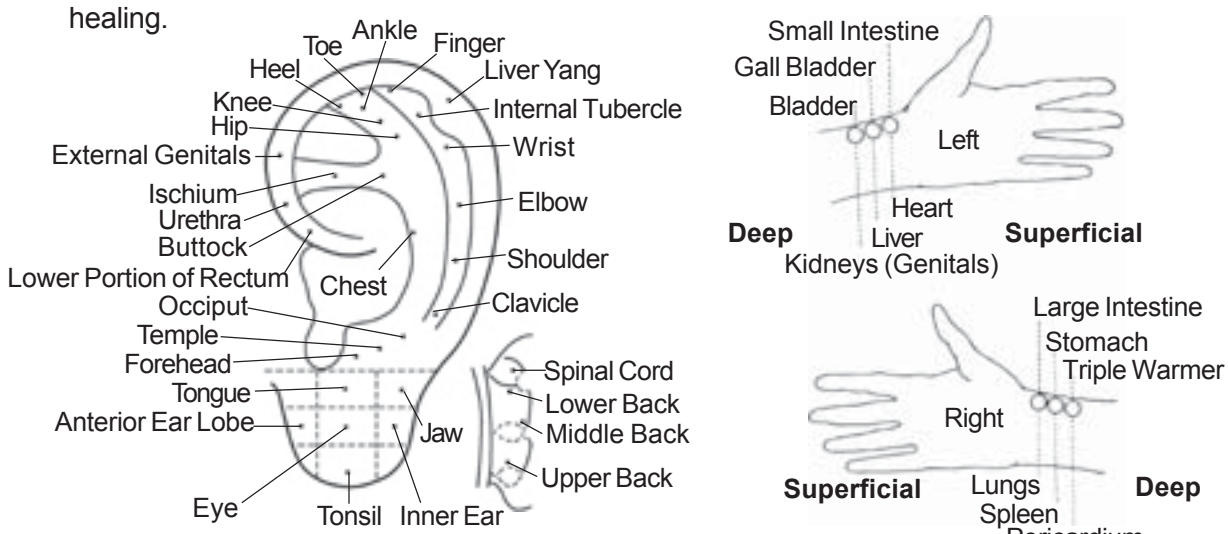


Fig. 5 *Ear and Wrist Reflexology*

In this manner, sexual intercourse becomes a form of ecstatic acupressure. The most powerful reflex points on the body are the sexual organs. The whole body provides the sexual organs with energy, and the whole body (organs and glands) is stimulated when these organs are stimulated. The Taoists call sexual intercourse “healing love”, because of its deep healing properties.

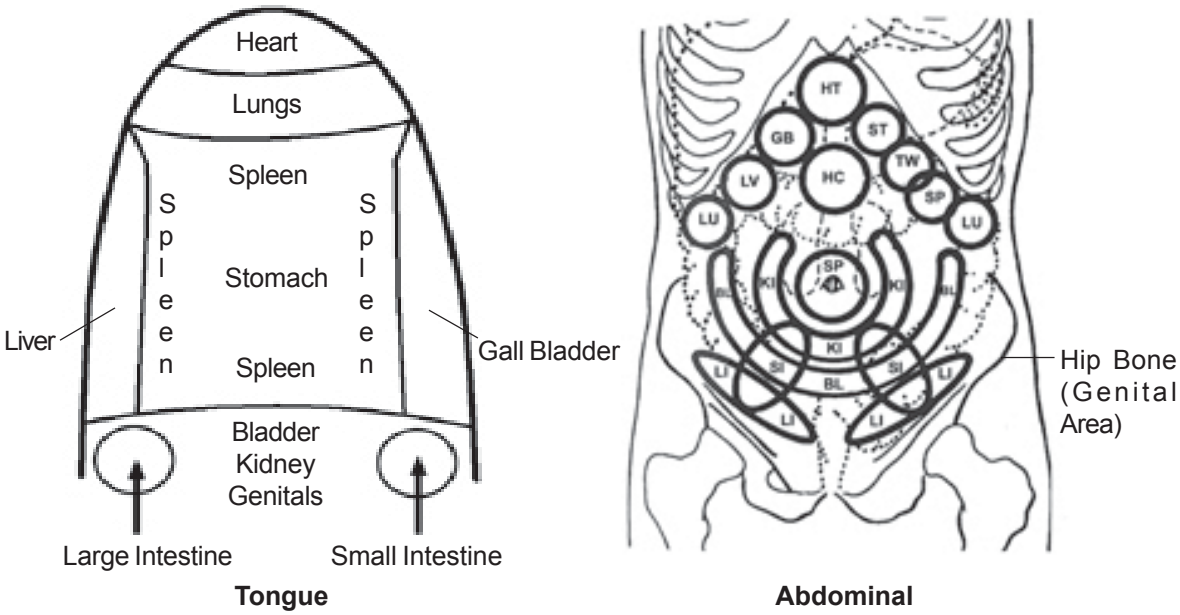


Fig. 6 *Tongue and Abdominal Refleology*

Sexual Reflexology also includes a chapter on “sexercises”, Taoist exercises which improve sexual energy and function, and organs and senses which it reflexes to, and can make for a more fulfilling love life. In addition, Sexual Reflexology can help determine compatibility between partners, using the physical characteristics of both parties.

Since, to understand sexual energy we must have an idea about how all energy circulates in the body, Taoist meditations including the Microcosmic Orbit, Inner Smile and Six Healing Sounds are presented here as fundamental background material. These Taoist practices are covered in depth in other books by Master Mantak Chia.

Sexual Reflexology is a fundamentally important book that combines the classic Taoist sexual texts with modern reflexology theory. It will be useful to any individuals or couples wanting to better understand their sexual energy, and how to cultivate that energy for health and well being. It is a great addition to Master Chia’s earlier works on Male and Female sexual energy, and is welcomed by all students of the Universal Tao.

Jim Wolfe - January 4, 2002
Universal Tao Student

Introduction

When improperly directed the sex impulse can be so strong and compelling that people will risk all they have including their reputation and freedom in order to express this drive. When this force is transmuted and directed in a positive way, it can, however, be used as a powerful creative force in any endeavor that is being pursued, whether in the arts, a career or profession, a loving relationship or in just developing a strong, irresistible magnetic personality.

The human is the only animal who has the ability to direct sexual energy with his imagination whenever he so desires. The only question is: How is it going to be directed? Some choose to use this energy in abusive and negative ways, some merely waste it and disperse it indiscriminately by over-indulging. What we are suggesting is that there are many ways in which we can express this energy, both positively and negatively. With the proper guidance the sex energy can be a rich treasure of joy, happiness and passion. It can be a tool to create and maintain optimum health and vitality, transforming a mediocre life into one of a genius, changing a stress filled, unhappy life into one filled with success and fulfillment. It is simply that powerful.

The vibrations of the mind are easily increased and activated by many different types of stimuli. The mind responds easily to love, deep friendships and music, as well as fear, jealously, drugs, alcohol and the like. But the most intense stimulus is the desire to express the sexual energy. When combined with love, it is the most powerful of all, and remains a virtue only to the degree that it is used discriminately with wisdom, compassion and understanding. With this understanding comes a responsibility to use the extra energy gained in loving and positive ways. This is the only way to create a rich and fulfilled life.

Nothing is more important than relationships. To establish harmonious relationships in all aspects of life is the goal of the Taoist practice. The Universe, Nature and the world we live in operate through relationships, connections and social exchange. To establish harmonious, balanced relationships is the process of the Tao; it is the balance of all apparent opposites, male and female, light and darkness, rest and activity, and electricity and magnetism.

Yin and Yang - Female and Male

The Taoist yin and yang symbol is a representation of this balance and harmony. The male and female energies of Nature are always moving toward balance. The Taoists observed that the way of Nature is interactive and full of creative, life-giving, sexual energy. Rain penetrates the Earth, giving birth to trees and flowers, rivers caress rocks, the ocean plunges into the sand, and the sunshine is absorbed into the womb of the Earth giving birth to all life. Sexual energy is the creative force that permeates the Universe. Life springs forth from balancing male and female energies, through the combination of Yin and Yang. These same principles apply to human relationships. Sexual Reflexology is about discovering balance and harmony within ourselves and in our relationships.

Preliminary Exercises and Meditations

The Taoist practice aims at aligning ourselves with the structure of the Universe. The first step in connecting with the Universe is to establish a harmonious relationship with ourselves. This is the goal of the Universal Tao. Harmonizing all our seemingly separate parts, emotions, thoughts, physical body and spiritual aspirations is accomplished with a variety of Taoist techniques.

It is through the inner journey of meditation that the Taoists come to know themselves. The Universal Tao is a system of self-development and spiritual cultivation. The preliminary exercises and meditations develop inner strength and harmony within, which are indispensable requirements for a fulfilling relationship with another person.

Inner Smile and Six Healing Sounds

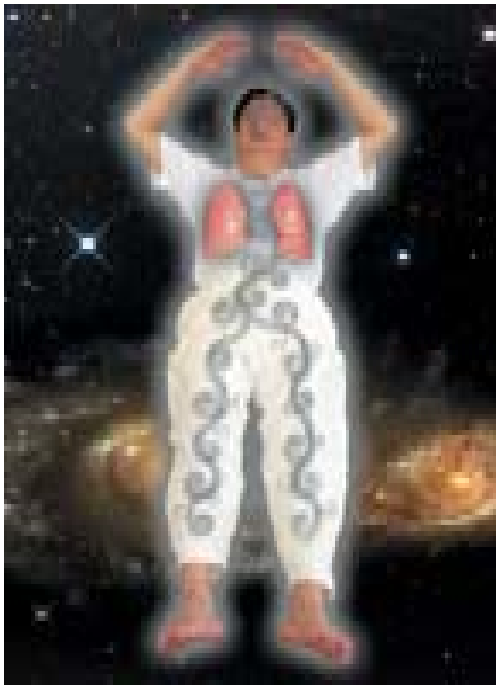
The Inner Smile and the Six Healing Sounds are two meditation techniques that compliment the Microcosmic Orbit. The Inner Smile and Six Healing Sounds focus more on balancing the quality of our internal energy, transforming negative or unproductive energy into positive and useful energy. The Inner Smile and the Six Healing Sounds relax the mind and release emotional tension.

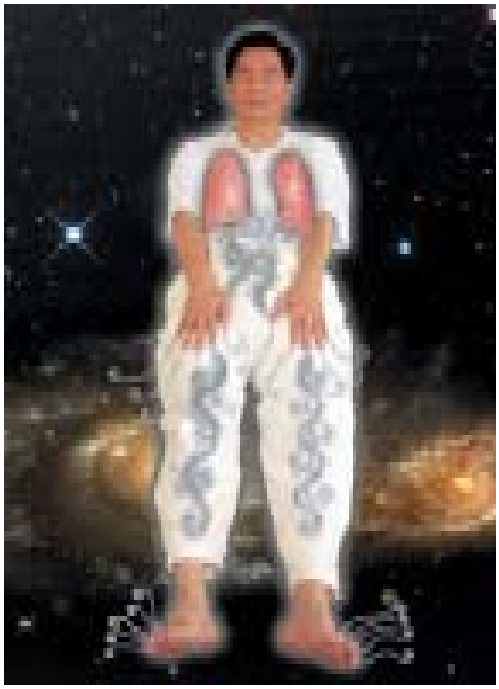
We communicate with our organs through the Inner Smile and Six Healing Sounds, a process of connecting to the Universe and directing loving and appreciative energy to the organs of the body. These meditations are simple ways to harmonize and balance the energy in the vital organs. The Inner Smile is a magical practice of self-development. Smiling inward is a way to show appreciation to all the work the body does for you. By smiling inwardly, the body begins to work with greater efficiency.

In the Taoist practice, it is recognized that the organs are reservoirs of energy and information and a place where Chi can be processed, stored and absorbed into the whole body. Taoists believe that consciousness is not only stored in the brain, but in the vital organs as well. The Inner Smile and the Six Healing Sounds begin the process of listening to the body and developing inner sensitivity. They are a way to develop unity and wholeness within the self.

Inner Smile

Lung Sound

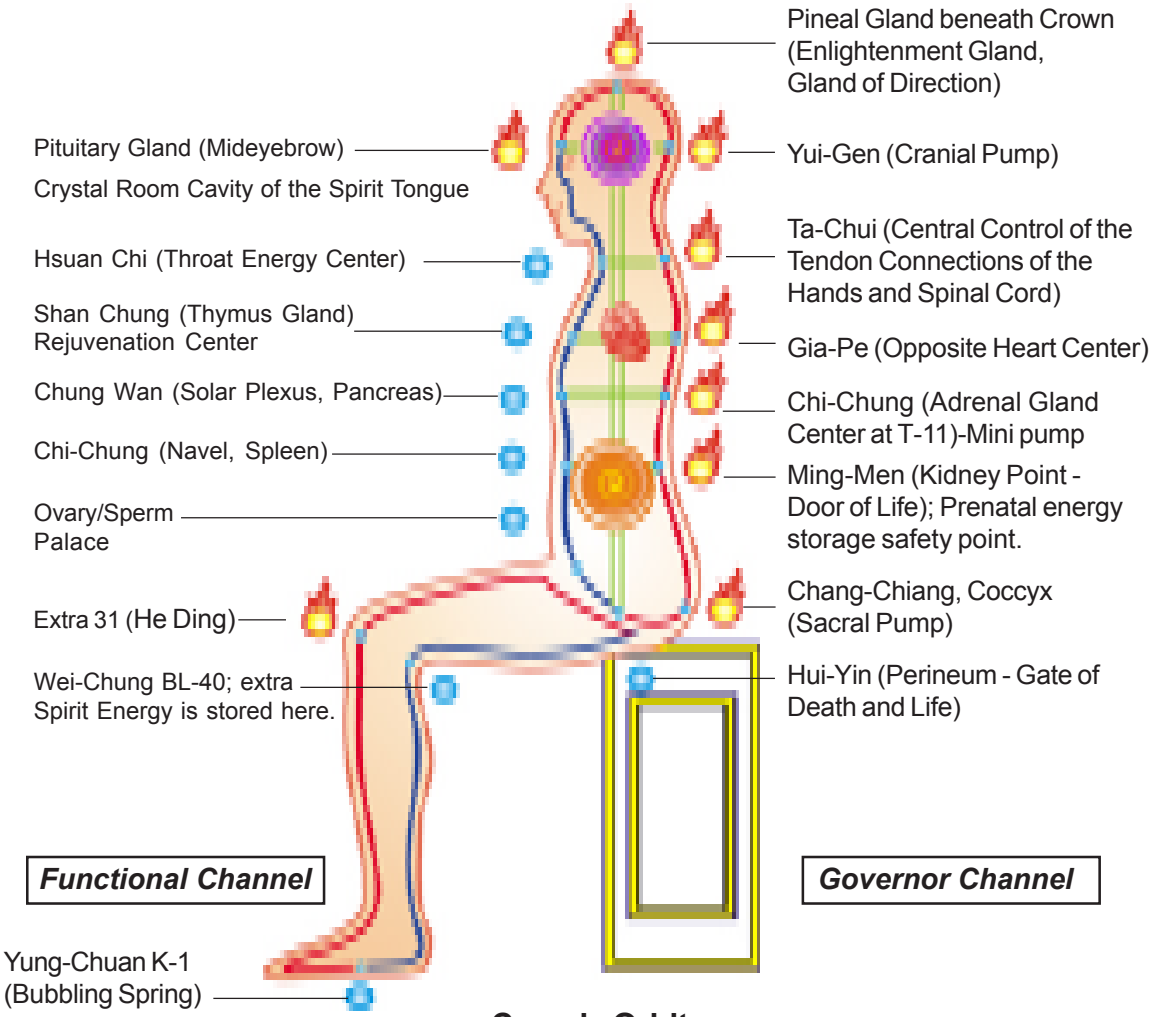




Healing Sounds - Triple Warmer

Microcosmic Orbit

The first step in working with internal energy is the Microcosmic Orbit Meditation. This meditation trains one to sense, direct and cultivate more energy. This meditation is the core technique to all the other Universal Tao practices. The Microcosmic Orbit is the main energetic circuit, nourishing all the channels and meridians in the body. Circulating energy within this channel removes blockages and activates more Chi to revitalize the body. Through this practice, one learns to recognize what Chi feels like while moving energy through the Governor meridian (running up the back) and the Functional or Conception meridian (coming down the front of the body). The Microcosmic Orbit dramatically increases the quantity of our internal energy.



Cosmic Orbit

Healing Love Couple

Ecstatic Acupressure

The Healing Love practice of the Universal Tao refers to the cultivation of sexual energy. Sexual Reflexology is an intricate part of the Healing Love practice. Healing Love utilizes sexual energy for the health of the body, mind and spirit. There are practices for single cultivation (by oneself) and dual cultivation (with a partner). In this book, we will be demonstrating and discussing a variety of Healing Love practices that will bring health and vitality into your life and into your relationships.

Special Note for Women Readers

Please, while reading this book, be aware of two things:

1. ***The practices described originate in a society vastly different from most modern day societies. China was an overwhelmingly male-dominated society in which men possessed the political, civil and monetary power and one in which women had little or no opportunity for independent action or existence.***
2. ***This book has been written by two authors who are themselves male, and therefore may seem to reflect sexuality from the standpoint of a man.***

However, before you prejudge the contents, look at the cover. See the blue of the female figure which emphasizes how mysterious the female (yin) nature appears to men. ***This book has been written with the genuine intention of helping readers to clear away some of the misunderstanding this mysterious female nature can cause in relationships and of assisting couples achieve a deeper understanding of one another's physical and spiritual needs.***

Chapter I
Male and Female Energy

"Her eyebrows are like a bouquet of flowers; her waist is like a roll of silk. With tender passion she stretches out furtively and she gazes coyly at her own body. They first pat and knead their flexed bodies and caress each other from head to toe."

Po Hsing-Chien (Ninth Century Erotic Essay)

It is important to understand the difference between male sexual energy (yang) and female sexual energy (yin). The Taoists understood that men and women are meant to balance, as two opposite halves of a universal whole. This means that we need to respect our differences and understand that it is natural to feel different and to be different. Without this awareness men and women are often at odds with one another. Many of our struggles in relationships come about because we expect each other to be the same. I hear many people complain that their partner does not see things the way they do, or does not do things the way they do. It is important not to fight and struggle with our differences but to make them work in our favor, creating balance and harmony. If we forget this truth we are easily upset and frustrated with the opposite sex. Yet, when we respect this difference, love blossoms like a well nurtured garden. Sexual Reflexology is designed to harmonize these male and female challenges on an energetic level.

Sexually, men are like fire, quick to get hot and quick to explode. Women, on the other hand, are like water, heating up slowly and staying hot longer. This is the reason the male Taoists use a variety of techniques to satisfy a women sexually. Women need foreplay, to be caressed tenderly and embraced with passion. This way the water, the feminine sexual energy, will boil and energy will be exchanged. Thus, the Taoist saying, "Never sail your boat in a rocky river," meaning, that the woman needs to be aroused and lubricated before sexual intercourse.

In cultivating sexual energy, men learn to control ejaculation and achieve a full body orgasm rather than merely a genital orgasm. By learning to transform sperm into Chi, men can become better lovers, more vibrant and youthful and are able to activate the compassionate energy in the heart. For women, cultivating sexual energy is a way to transform blood into Chi. Transforming sexual energy is directly related to the menstrual cycle. From the Taoist exercises, this transformation leads to an abundance of energy, balanced emotions and internal power. For a detailed description of these techniques, refer to my other books "*Multi-Orgasmic Man*" and "*Cultivating Female Sexual Energy*".

Fig.1.1 *Women change blood into Chi.*

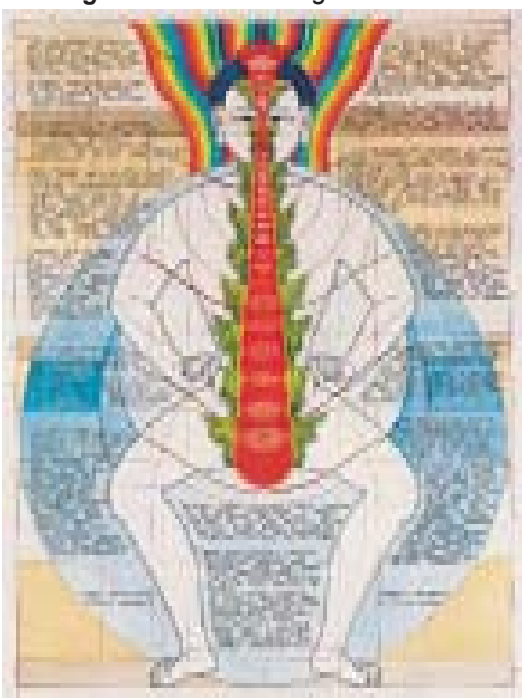


Fig.1.2 *Men change semen into Chi.*

Emotionally, women are like fire and men are like water. It is very easy for women to express their emotions, to get excited, to cry and to feel. For men it is more challenging to be in touch with the heart center. This is how men and women balance emotionally and sexually. Women open and heat the emotional center or the heart center in men and men help open or bring the fire into the sexual center for women. The goal of the Taoist practice is to create this harmonious and flowing exchange of energy.

This is revealed physically by the fact that men project from the sexual center (the penis) and women project from the heart center (the breasts). Projection is the yang or the fire quality of energy. This demonstrates that women are yang emotionally and men are yang sexually. These physical features reveal the energetic and emotional nature of men and women.

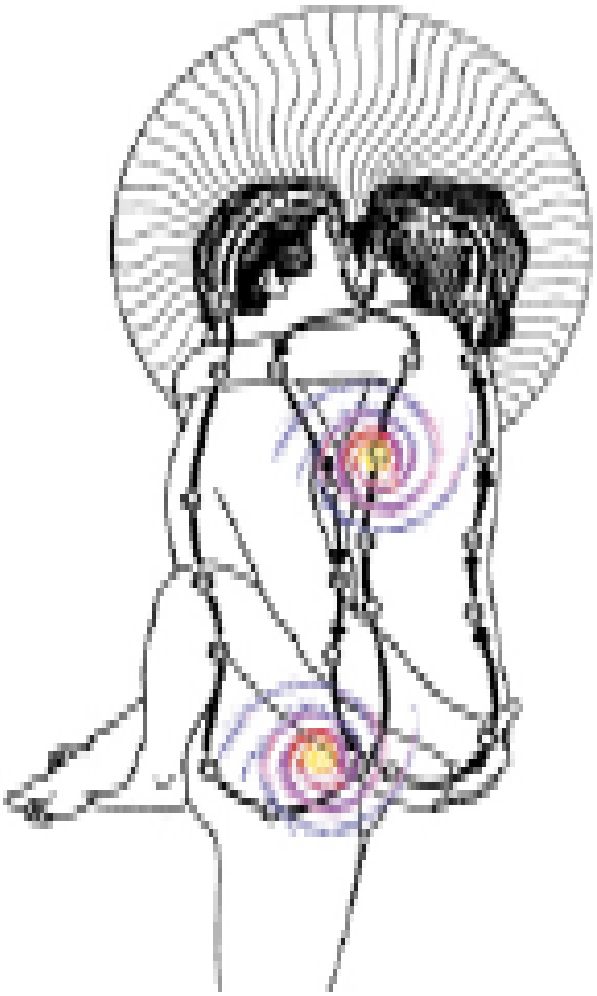


Fig.1.3 *Fusion of the Two Microcosmic Orbits and the Sexual and Heart Centers*

Yin and Yang

The tractor (yang) and the lake (yin) are the energy fields of the man and of the woman. We are talking here about opposites. When the man is hot, the woman is cold. When the woman is hot, the man is cold. So you have a real communication problem. When you're very hot the person with whom you are trying to communicate is cold. Men and women have different types of energy molecularly. It's very hard to interact unless you have a clear understanding of your own energy field and how it interacts with the people around you, especially the energy field of the opposite gender. Getting this understanding opens up communication, which is the key to any relationship.

The tractor and the lake exemplifies what I mean by this difference. When you drive a tractor into a lake, you get stuck. And what happens when the tractor tries to fight the lake? It sinks deeper. Who is stronger, the tractor or the lake? Obviously, the lake is stronger. It not only has its own energy, but it also absorbs all of the energy the tractor exerts. Now the tractor is active energy and the lake is passive energy. The lake is the yin energy or the feminine energy and the tractor is the yang or the male energy. So the woman is far superior to the man in every aspect : physically, emotionally, psychologically and spiritually. Physically, from the waist down, a woman is far superior to a man. She can out-work a man. She lives longer and has more strength. In endurance of pain and physical hardships she far exceeds the man. Her body is structurally far superior to the man's body. Emotionally she works with more of her feelings and has a stronger capacity with her emotional center.

Psychologically she tunes into her inner self with telepathy and clairvoyance. A woman is more apt to make this connection than a man because of her physical structure. A woman is more spiritually attuned than a man because of the inner connection with herself and her understanding and connection with the earth energy, nature.

The key message in "the tractor and the lake" is the ability of the lake to yield to the tractor; and the way of the Tao is to yield because the Tao is feminine. You find this in every aspect. Every time you want to overcome something you yield to its energy and you use its energy for your own benefit and welfare.

When children are born, both genders have to urinate. The male child has all of his equipment down there and he can see everything. He can see his equipment and urinates out. His outlook in life is external because his focus is external. But when the little girl urinates, she's looking to find where it is coming from. She's looking inside herself because she doesn't see anything down there. She's curious about what's inside her. Through spaced repetition, many times urinating and many times puzzling over this issue she begins to look and feel what's inside her.

The male proceeds through life and looks at everything externally. It's all right there. He takes control of his genital area. He becomes the master of it. He understands it and comes in contact with it. The woman, on the other hand, doesn't come into contact with the genitals because they aren't there. They're inside her body. Because they're

inside, she is drawn to look inside her body. As she matures as an adolescent, she begins to form breasts and she begins to get in touch with her chest area thus getting in touch with her heart center, which is the center of the emotions and the feeling center. She starts to work directly with these emotions and feelings. This affects the genders outlook on life: as a woman internalizes, she personalizes or she takes things personally; as a man externalizes, he generalizes or talks in generalities. You can see this has a major impact on how they live and how they communicate with each other, which leads to confusion and differences.

The man seldom touches himself in the chest area. He never gets in touch with his heart center. He never gets in touch with his feelings or his emotions. The woman becomes the master of the emotions and the male becomes the master of the sexual energy or the kidney energy. But both can help one another. An example of this is what I call “boiling eggs”.

Fig. 1.4 *Male fire energy to heat the Female eggs.*

You put two eggs in a pan of hot water and you put them on the burner to boil. The male can get an erection or start the fire, just like that! But it takes awhile for the woman to warm up just as it takes awhile for those eggs to warm up. She needs some foreplay. She needs to be caressed. She needs her eggs warmed up. The eggs in her body, her kidney energy, have to be activated at a slow pace and brought to a boil slowly. The male’s sexual energy normally can turn on and off quickly. But once he understands how her energy functions and learns many of the Universal Tao techniques (such as the shallow thrusting technique) he’ll maintain his fire at a lower temperature so she

can build to her climax, boiling the eggs. As her eggs start to boil, she achieves her orgasm but she also needs to come down slowly. That's why women like a lot of caressing, holding and being with their partner many hours after genital interaction just as you need to cool the eggs down.

The funniest thing about this whole scenario is that the same thing is needed for the heart energy but in reverse. The woman can turn on and off her emotions just as quick as a man can turn on and off his kidney (sexual) energy. She has so much experience working with her feelings in her heart center. She can help a man to get in touch with his feelings and heart center. She has to caress with emotional foreplay, developing and nurturing the man so that he can get in touch with his feelings. Many times, when a man gets in touch with his feelings, he needs to come down slowly (just as she needs to with her kidney energy) to cool the eggs off, or to cool the heart off so that he can get in touch with it. So, both genders, once they understand their energy fields and how they interact, can help develop a nice harmony with one another by helping each other.

Fig. 1.5 *Warming the cauldron in the Heart Center.*

The key to the interaction between the genders is communication; and this means connecting with the heart energy. Taoists really don't look at sex or the use of sexual energy as a moral issue. It's more of a health issue. Once you begin to understand your energy, what it's about and what is it actually for, you can have a much healthier understanding of how to work with it and how it interacts with everyone around you, especially with the opposite gender. The best way to explain this is dual cultivation. The Taoist practices lend themselves to a monogamous relationship similar to playing a doubles tennis match. You have a partner on your team. You learn their form, how

they interact. It takes many years to develop good rapport and a good understanding of each other's moves. The same thing occurs in the Taoist interaction of sexual energies. Once you have a partner in dual cultivation, it takes many years to perfect a nice harmony. And you don't want to switch your partner just like you don't want to switch your partner in a tennis doubles match, because you have to learn again all the various moves and techniques of a new partner. The same concept applies in the Tao with dual cultivation.

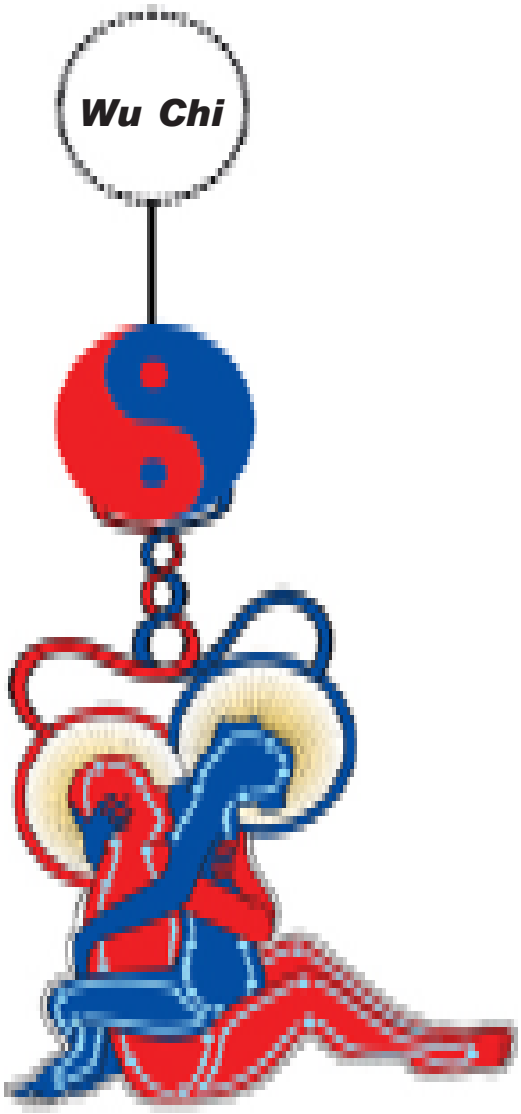


Fig. 1.6 *Wu Chi (Oneness) into Yin /Yang (Duality)*

Just as you practice tennis yourself, your serve and forehand, in singles to help your partner in the doubles, you start to practice the single cultivation aspects in order to be ready for your dual cultivation. You need to perfect the techniques of the Universal Tao system with testicle and ovarian breathing, genital compression and the Big Draw technique. As you work with these techniques, and thus balance the energy internally on a chemical level, you're going to begin to attract a more balanced partner in the future. You should really focus on working primarily with the heart energy, to balance yourself internally with love, compassion and patience, becoming at peace and in harmony within yourself. The key is communication, because the tongue is connected to the heart. You have to explain how you feel, who you are, and where you want to go. With this open and honest communication you will discover if you are compatible with each other sharing the intent to assist each other in your spiritual journeys.

The Taoist's say, "Sex is like an itch. It feels good when you scratch it, but it feels better when you do not have the itch." When you develop this balance you're going to start to attract a person who will be a potential spiritual helpmate and life partner.

The key to the Taoist's sexual practices is Chicken Soup. When you make chicken soup you put a chicken and water in a pot and boil it. After 2 hours you take the chicken out and you have the broth. Now what would you rather eat the chicken or the broth? The broth because it has all the essence of the chicken in it. The same with the sexual practices, the chicken is your genitals and broth is your sexual essence. When you cook (Testicle & Ovarian Breathing and Upward Draw Practices) the chicken (genitals) and draw the broth (essence) up your spine into the brain; you have a brain orgasm instead of a genital orgasm. Now the brain is connected to all parts of the body for a total body orgasm. Now which would you rather have a chicken (genital) orgasm or a broth (essence) brain orgasm? Think about it, the chicken and the broth.

This is further developed in the Universal Tao formulas of the Healing Love dual cultivation practice, looking into each other's eyes, exchanging healing cosmic energy like magnets.

There is one very important fact that you have to understand about when the genders interact. When a man is sexually aroused he is jet-hot (a fire burning) but when a woman is sexually aroused she is icy-cold (a numb burning). When a man is sexually unaroused he is cool (relaxed) but when a woman is sexually unaroused she is warm (cozy). They are opposites. Men understand this hot aroused feeling quite easily. Women feel a hot sensation but it is a different type of hot like an ice cube burning sensation on your skin, which numbs the skin and leaves the woman feeling helpless. That is why a woman is very vulnerable in this aroused state because she loses control of herself; in the same way the man loses control of his feelings when he opens his heart center.

This basic difference between the genders manifests itself on all levels of consciousness. That is why they find it very hard to read and understand each other. They do not think alike; the man thinks with logic and the woman thinks with feeling. Men think methodically; one and one is two, not eleven. They are very structured and predictable; ultimately they become prisoners of their own mind. Women actually think correctly, using their sense of heart direction with their feelings, as one would think in the Tao. But they run into trouble when they mix up their feelings with their imbalanced emotions and they miss the target. There is a big difference between a feeling and an emotion; a feeling is a direction from the heart center (God) and an emotion is a sensation from an imbalanced organ.

As you can see, it is surprising with all these differences, how men and women ever get together at all. It is easy to understand why they have so many problems when they do get together. But if they are compatible they have a great opportunity to develop Divine Love, as spiritual helpmates to one another on the journey into nothingness.

Chapter II
Sexual Energy: Taoist Perspective

Sexual energy is nourishment for the totality of ourselves, the body, the mind and the spirit. It is the water of life, replenishing the gardens of the human temple. The exercises for sexual energy developed in the Taoist teachings are much more sophisticated and focused than in the West. They go right to the source of our sexuality and cultivate it in a way that brings sexual energy and strength to those who use them properly.

The philosophy of Chi (energy) has been part of the Chinese culture for thousands of years. The word Chi has many translations, such as energy, air, breath, life force or vital essence. It is the life giving force that creates movement and sustains the Universe. Chi is what allows planets, suns and stars to revolve around each other. It is the motion of the atom in all physical bodies. It is the force that allows a seed to grow into a powerful tree, or a fetus into a full grown human being. Chi is the animating factor in all living things, nourishing the cycles of life.

The concepts of energy are not only food for thought, but concrete ways in which we can create health, happiness and excitement in our daily lives. Working with energy is a pivotal factor in our overall state of happiness. Energy, like water, is the life giving sustenance of the Earth. Where water flows life flourishes.

That same principle is at work in our bodies. If we want a healthy body, energy must circulate to all parts. Without proper energy flow, the body creates tension, sickness and disease. It is like a stagnant pool, or a dried up garden. Without continuous circulation things have a tendency to become malignant.

Thus, sexual energy, according to the Taoists, is much more than the act of sex, as it permeates all areas of our lives. It influences the health and aging of the body by effecting hormonal production. An abundance of sexual energy repairs hormonal disturbances, reduces cholesterol and blood pressure levels. When sex glands are stimulated, it enhances the hormones secreted by the other major endocrine glands: adrenal, thymus, thyroid, pituitary, and pineal. Much evidence points to the link between harmonious sexual activity and the retardation of aging. Sexual Reflexology stimulates the growth hormones that are just now being discovered to retard aging by Western medicine. Yet, in the Taoist perspective, hormones should be stimulated naturally, through exercises and massage rather than taken externally through medication. The presence of these hormones in the blood does appears to slow the aging process.

With Taoist cultivation of sexual energy techniques, one produces unusually potent hormones by focusing energy directly on the endocrine glands. Sexual energy is not only beneficial to the body, but is the fuel for the emotions as well, which can either

blaze out of control, or create warm comfortable glowing energy in the body. Sexual imbalances can cloud the mind with distorted thoughts and skewed desires, or a balanced sexuality can be the source of creativity and a way of fulfilling our dreams. It is also the energy that can create spiritual fulfillment, as it is a force that unifies and creates wholeness out of opposites.

From this perspective, we can begin to see that it is of utmost importance that we deal with and utilize sexual energy. It is very important to remember that sexual energy must be used in the proper way and not be suppressed or eliminated. Suppressing sexual energy is like trying to hold hundreds of ping pong balls under water. If you press them down, they pop up somewhere else. Instead, Sexual Reflexology seeks to express this energy in a way that will enhance your body, mind and spirit. Otherwise this energy will seek outlets that will be under utilized and wasted or even be potentially detrimental to one's overall health. Whether you have a partner or not, the ideas and exercises in this book are vitally important to sexual health. The Taoists developed these techniques so that we can live in harmony with ourselves and others.

We have compiled a variety of techniques that will most definitely increase the sexual energy of those who engage in these practices. These practices have a profound effect on the rest of our lives because our sexuality is so much a part of being human. There is so much power behind our sexuality that without the proper knowledge of how to manage and direct that energy, it will inevitably go astray. Yet, with the correct knowledge and balanced action, our sexual energy has the potential to bring happiness and joy into all aspects of our lives. It is time that we as human beings tap into our true potential, gaining the insight to create a passionate and powerful life and become all that we are meant to be.

Sexuality, Energy and Relationships

The relationship between men and women has baffled and confused philosophers, scientists and thinkers throughout the ages. Sexuality is a dance that spans the history pages of all societies. It is a ritual that has preoccupied the activities of humankind throughout the eons and still has our present cultures in a quandary. For something that has existed for so long and has been a part of everyone's life throughout history, one would think that humanity would have some expertise on the subject of sexuality. Yet, to this very day, our sexual relationships continue to daze and confuse the spirit of people in profound ways. On the one hand they create passion and love, ignite romance and pleasure and spark the flames of desire that make life worth living. But, on the other hand, sexuality is also a source of destruction and negativity that are the causes of a myriad of problems in society.

Sex is a creative force that moves through the body feeding the emotions and thoughts, and creating the impulse of desire. It is pleasure in its raw and unrefined state. If that energy is not understood and used in the right way, it is the cause of dissatisfaction, destruction and overall unhappiness in our lives. As basic as the duality of man and woman, day and night, sexual energy can be the source of both pain and pleasure.

Sexuality is like the force of fire. When used intelligently, it enhances our lives immensely. With fire, we can warm our houses, cook our food and bring light into dark rooms. But, if we use fire in the wrong way, say, for example, putting it on the roof instead of the fireplace, it will inevitably burn the whole house down. The fire itself is not evil or bad, it is merely a force that needs to be directed in a positive way. The same applies with sexuality; if we use it correctly, it brings us unbelievable pleasure, but if we let this energy run wild without guidance or understanding, it has the potential to destroy our physical and emotional lives.

Fig. 2.1 *Relationship of the Creative Forces*

Not only is there an overall dissatisfaction with sex in our everyday relationships, but we are faced with the malicious acts of rape, abuse and violence. The number of problems in society that revolve around the topic of sexuality is monumental. The echoing question of how to use this energy in positive ways can be heard throughout the world. This book is part of a series of books on the subject of sexual energy from a Taoist perspective. The Taoists have written and taught on this subject for the last 5000 years. This book is written to pass on some of this precious information, and to shed some light on how to create positive fulfilling relationships in your life.

In the tradition of Taoism, sex was seen in an altogether different context than the West. Rather than being the great sin, sexual energy was considered a path toward health and vitality and a way to intimately connect with the divine. That divinity is seen as a state of wholeness and completeness that is implicit in all of us. In the traditions of the East, man and woman represent opposite halves of that universal whole. Each is an earthly manifestation of the two cosmic creative forces, whose intermingling bring forth all phenomena. When man and woman unite in sex, Heaven and Earth are joined.

The first part of this book describes diagnostic techniques to reveal strengths, weakness and imbalances through the observation of external features of the body. These features also reveal compatibility between male and female partners. The next section describes specific exercises (sexercises) that strengthen our sexual imbalances and weaknesses. These exercise postures also bring health, vitality and an abundance of energy to those who practice them.

History of Sexual Reflexology

For thousands of years, the Taoists have explored the human potential in relation to sexuality. The knowledge acquired is a way to enhance relationships, sexual energy, pregnancy, birthing, vitality and health of the body, mind and spirit. The legendary Yellow Emperor (2nd century BC), recorded conversations with Taoist advisors on many subjects. The works, "*Classic of the Plain Girl (Arcane Maid)*" and "*Counsels of a Simple Girl*" are recorded conversations on sexual matters. These recordings give a great deal of information on the use of sexual energy to achieve vibrant health and longevity. These ancient classics are a treasure chest of information on all issues dealing with our sexuality. This book, *Sexual Reflexology*, is a reflection of some of this wisdom.

The following information regarding the determination of sexual inclination, capacity and functioning of human beings has a specific purpose in Taoist sexology. From ancient times and until recently in China, many marriages were arranged by parents. The information they used to determine compatibility and suitability of partners was researched with great care and love and the result was often a very happy and fulfilled marital relationship. Although women have had the right to divorce in China for at least 1000 years, this was a rare occurrence, possibly because everything was so carefully considered in advance. Information used in selecting a compatible marriage partner

was quite complete, including internal factors such as personality, physical compatibility and family circumstances as well as individual intelligence, education and social status from Chinese astrology and reflexology. Reviewing the marital union with such care and great detail resulted in a far greater compatibility in the partnership. With this approach the strength, love and unity of the family unit was greatly enhanced. Considering the exceptionally high divorce rates in Western society today, the valuable information that is provided by such an approach could prove helpful. The unhappiness and emotional difficulties experienced by both parents and children involved in marriage dissolution in our modern society are immeasurable.

While almost any kind of assistance to improve this situation would be useful, the Taoist, time proven system cannot be overlooked as useful to the appropriate union of a man and woman. If a man and woman were able to choose a suitable sexual partner resulting in their greater mutual happiness, this information will have served its purpose. It is with an attitude of reverence for the sanctity of marriage and the union between men and women that this information is offered.

Fig. 2.2 *Union of Sexual Compatibility*

Chapter III
Reflexology

"In their search into the art of lovemaking, the ancient Chinese Taoists went beyond foods and herbs, even beyond erotic techniques ... by consciously maneuvering the human body's Chi, or life-energy. They did this to enhance sexual arousal, control orgasm and intensify ecstasy for both men and women." - Valentin Chu, Yin-Yang Butterfly

Reflexology has traditionally been practiced by massaging and pressing points on the hands and feet. These techniques have been proven to be a powerful method of healing. Yet, reflexology is much more extensive than merely pressure points on the hands and feet. Reflexology refers to reflection, or mirror image. The Taoist sages learned to use external physical features to learn about internal energy, health of the organs and personality. Reflexology teaches that vital energy, or life force, circulates between the organs and every living tissue in the body. Sexual Reflexology uses ancient Taoist wisdom to tap into a rich source of vitality by working with sexual energy and the way it manifests in the body. It is based on the principle that sexual health is an indispensable aspect of a fulfilling life. Discovering the spring of sexual potential within is a way to access the abundance of energy inside us.

In Traditional Chinese Taoist medicine various diagnostic methods recognize a physical connection between a person's external appearance (physiognomy), particularly the visible characteristics of the hand and face and the size, shape and condition of his or her internal organs. It is also believed that various parts of our physical anatomy are directly proportional in size and shape to one another. Thus, a relationship is established between the size and shape of external features, the condition of internal features and a proportionate correspondence with all of the features on the body. This principle is considered a law of anatomy which Taoist physicians know and practice as a science and art, now popularly called reflexology.

Consider how the following external features are used to diagnose the health of the internal organs. The eyes reflect the liver: are they bright or cloudy, do they have occlusions or spots, etc.? A healthy liver will be reflected by a clear, deeply colored iris with no spots, scars, blurry areas, etc. The lips reflect the spleen, the nose reflects the lungs, the ears reflect the kidneys, and the tip of the nose and aspects of the tongue reflect the heart. Color, texture, clarity and so on are the conditions of these external features that directly reflect the health of the internal organ with which they are associated from the meridians or energy lines from the organs to the extremitities of the body.

While single external features are an indication of sexual potential (a larger thumb indicates a larger penis), it is the combination of many external features that reveal the true sexual potential. It is an art to be skilled at these diagnostic techniques and takes many years of training to develop. Using these diagnostic techniques can be very beneficial in revealing our strengths and weaknesses. Once we know ourselves, we can begin to balance those areas that are weak and need extra energy. This way we become a much more complete and unified human being. The Taoists always recommend discovering and improving our weaker areas to promote overall balance.

Compatibility of the Penis and Vaginal Canal

"Man and woman should ebb and flow in intercourse like the waves and currents of the sea. In this manner, they may continue all night long, constantly nourishing and preserving their precious vital essence, curing all ailments and promoting long life."

-Sun Nu Ching (The Classic of the Plain Girl)

The Taoist sexologists teach that sexual intercourse is a form of ecstatic acupressure. The ends of the body are a rich source of acupressure and reflex points. This is why reflexology is usually thought of by pressing the feet, hands, ears or face. Yet, the most intense and powerful reflex points on the body are the sexual organs themselves. Sexual energy is derived from the best energy of the body. The whole body is involved with providing the sexual center with energy. Therefore, the sexual center is the condensation of all the body's energy. This is the reason that the health of the sexual center is critical to the mental, emotional and physical health of ourselves.

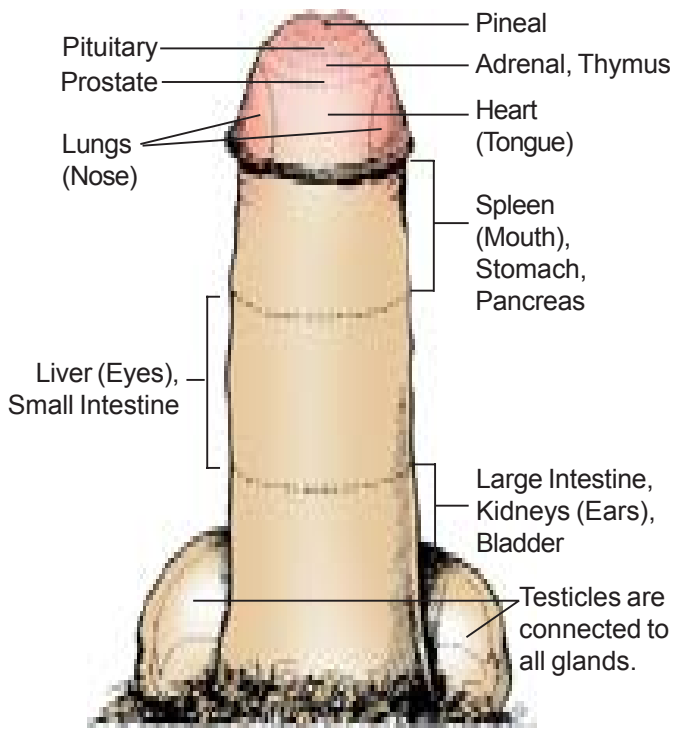


Fig. 3.1 *Reflexology Zones of the Male Sexual Organ*

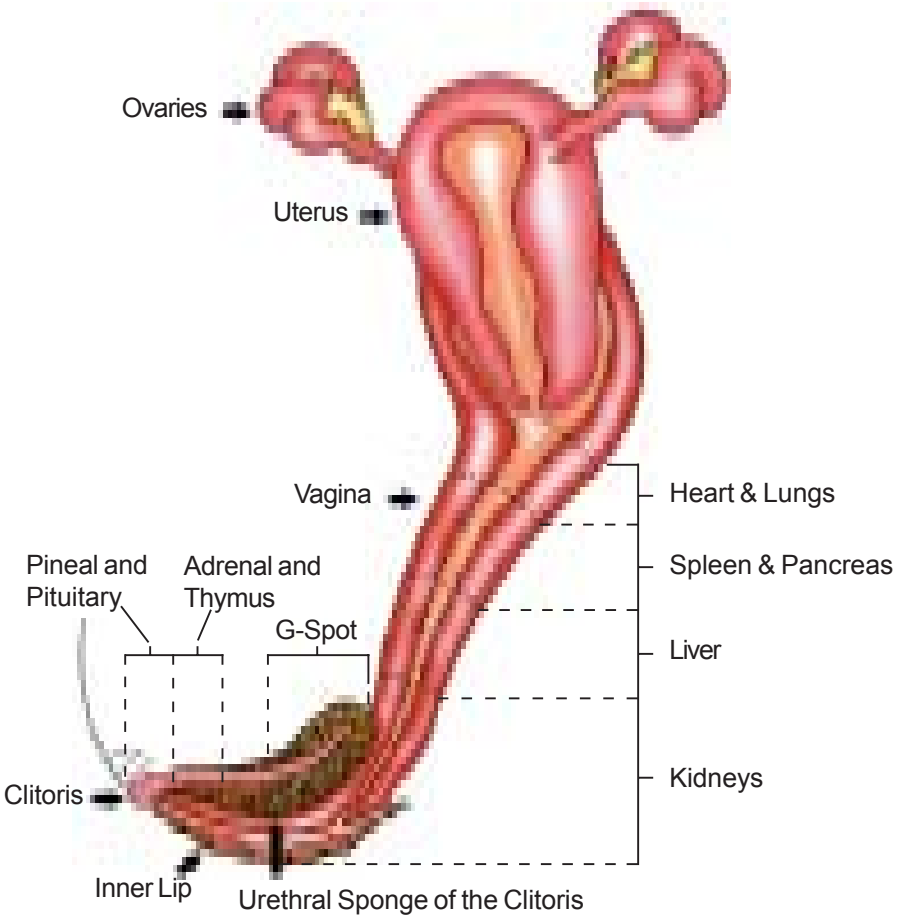


Fig. 3.2 *Reflexology Zones of the Female Sexual Organ*

When the sexual organs of the male and female unite, a wonderful stimulation of energy is experienced through the whole body. Sexual intercourse is an ecstatic acupressure treatment. The Taoist call sexual intercourse "Healing Love" because of its deep healing properties. Ancient Taoist physicians even prescribed certain sexual positions to couples in order to stimulate the Sexual Reflexology points in a particular way.

Sexual Reflexology also helps determine compatibility between partners. To determine this compatibility, sexual desire and physical features of the body are vitally important in establishing a harmonious relationship. This enables the couple's sexual relationship to be fulfilling for both partners. Such compatibility means matching partners in terms of sexual capacity, desire and in the size of the physical organs themselves.There may be substantial variation in the size of men's genitalia, for example. This is neither

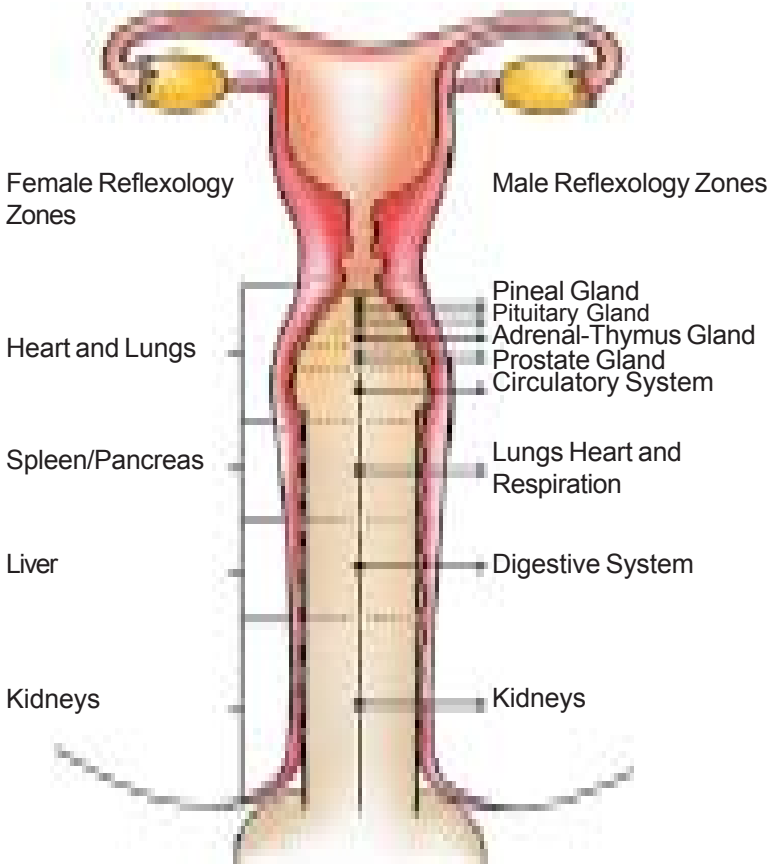


Fig. 3.3 *Interaction of the Female and Male Reflexology Zones*

a positive or negative aspect, but simply means that a man must match the size of his penis with that of his partner's vaginal canal if he is to satisfy her completely. If the length of the man's penis is much longer than the length of his partner's vaginal canal, it is possible for him to cause her harm during intercourse. This also applies to the length and size of the vaginal canal for the women.

One must also consider that to completely stimulate a man's internal organs, the entire length of his penis must be stimulated, thereby exciting all of the penis reflex zones. If one were to concentrate the sexual stimulation on the head of the penis only, the result would be that only the heart and lungs would be stimulated and the kidneys, liver and spleen would be neglected. In time this would result in an imbalance – the heart and lungs being over activated and the liver, spleen and kidneys under activated.

A similar situation exists in the vaginal canal. For a woman to be completely stimulated internally, that is, to ensure equal stimulation of her vital organs, the man's penis must reach to the end of the vaginal canal. It is recognized in Taoist sexology that the

flexibility or elasticity of a woman's vaginal canal is relatively small in relationship to its length, however it has much greater flexibility in width, demonstrated by the fact that the vaginal canal can expand to accommodate a baby traveling through it from the womb during childbirth. Thus, we can see that compatibility of length is more important than compatibility of width. The resultant pleasure of such compatibility leads to sexual fulfillment.

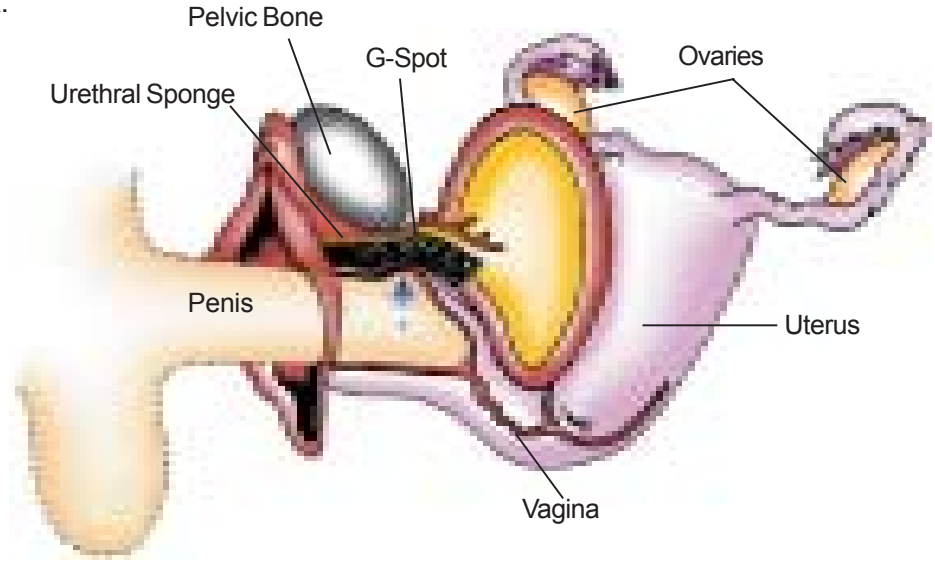


Fig. 3.4 *Shallow thrust massages the area of the G-Spot.*

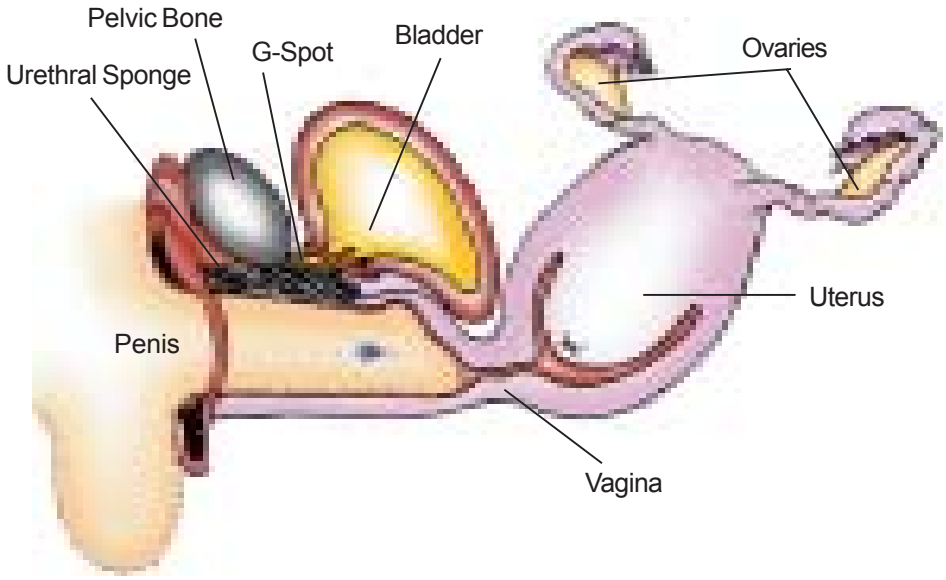


Fig. 3.5 *Deep thrust massages the deeper areas of the vagina by passing the G-Spot.*

Ring Muscles

The ancient Taoists discovered the subtle and intricate power of the ring muscles within the body. The ring muscles refer to the round sphincter muscles: the mouth, eyes, nostrils, anus, genitals and perineum. The ring muscles are located at the ends of the important organ systems, like the alimentary, respiratory, and urogenital tracts. For the body to be in optimal health, it is very important that the ring muscles contract simultaneously, establishing the inner rhythm and structure of the body.

The Taoists discovered the secrets of the ring muscles by observing infants and children. One of the goals of the Taoist practice is to become as vibrant and youthful as a child. Through specific exercises the ring muscles bring our bodies back into harmony with the Tao.

Observe a newborn nursing: as the mouth rhythmically suckles, the eyes contract in unison, the anus and urinary tract contract and release in harmony with the mouth and the hands open and close synchronistically with the sucking of the mouth. This synchronized movement pumps energy throughout the body.

Consequently, when we as adults have a harmonious contraction and relaxation of the ring muscles, the body is full of energy and in good health. In contrast, when this rhythm is out of balance, from stress, sickness, or tension, the body's energy is depleted.

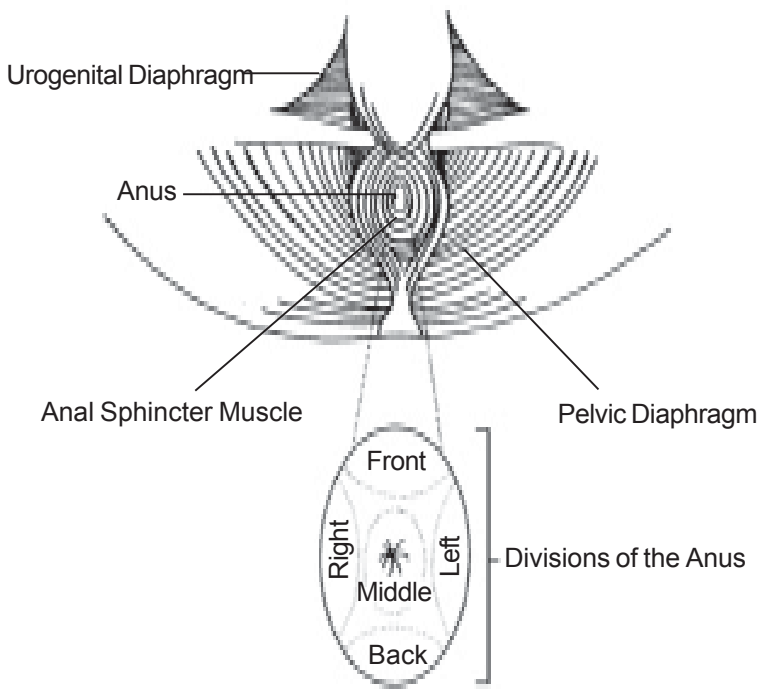
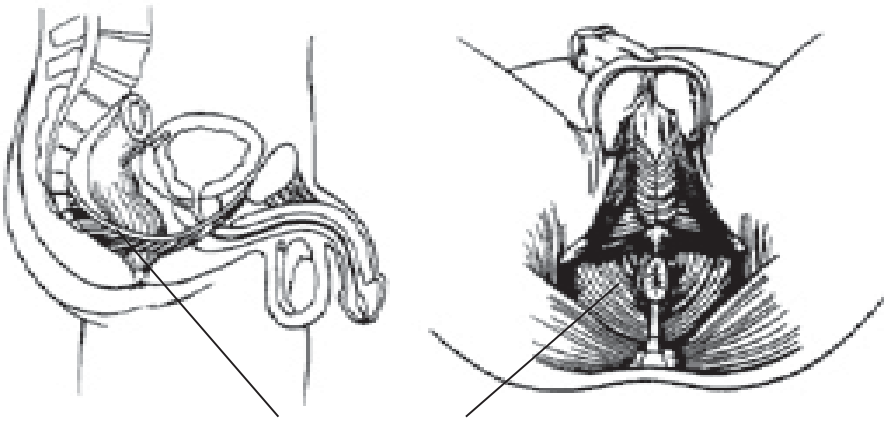


Fig. 3.6 *The anus is divided into five regions.*

All the ring muscles in the body reflect one another. Sexual Reflexology reveals this intimate connection between all the ring muscles in the body. The ring muscles in the face reveal the ring muscles in the urogenital tract, the anus and the perineum. When there is an imbalance of sexual energy it is revealed in the external characteristics of the face. Also, the ring muscles directly influence the health of the internal organs. When the ring muscles are out of balance, the organs become depleted. This depletion in the organs is reflected to the sexual center, as the organs supply the sexual center with energy. All these internal dynamics are reflected in the face, hands, hair and general external characteristics of the body.



Pubococcygeus Muscle (PC Muscle)

Fig. 3.7 *Pubococcygeus Muscle*

Exercising the Ring Muscles

Contract the Mouth: Suck the cheeks into the mouth creating a suction in the mouth. It is a very similar sensation as making “fish lips”. Contract and relax at least 9-36 times. Feel the connection between the mouth and the rest of the body. Notice the connection between the mouth and the lower ring muscles in the anus and perineum for men at the base of the penis and for women the lower part of the vagina . Blink the eyes: Rapidly blink the eyes and look around the room. Exercising the ring muscles around the eyes will improve vision and keep the eyes moist. It is also a very good exercise to wake the body up as it stimulates the nerves. Blink the eyes for at least thirty seconds to one minute. Stimulating the muscles around the eyes helps open the urogenital diaphragm.

Contract the Anus: Contract and relax the anus. Feel the energy from the lower centers surge through the body. There are many Taoist exercises that utilize the power of the anus to circulate energy. The Taoists believe that the strength of the anus is an indispensable aspect of overall health. By contracting the anus, we strengthen the connection in all the ring muscles in the body.

Contract the Perineum and Vagina: Contract and release the muscles in the perineum and vagina. This is the same muscle that is used to stop the flow of urination. This muscle, like the anus, is the floor of the sexual center. By strengthening the perineum and vagina, we are able to contain sexual energy rather than allowing it to drain out of the body. The strength of the perineum is the first step in many other Taoist practices, like the Orgasmic Upward Draw and the Power Lock. You can contract and relax the perineum, vagina and anus at the same time to create more power in the urogenital diaphragm.

Full Body Contraction: Contract and relax all the ring muscles at the same time. Contract the eyes shut, suck in the mouth, squeeze the anus and pull up on the perineum all at once. Then relax. Do this at least 9-36 times. This will greatly strengthen the whole body. Remember that when all the ring muscles are in harmony the body is vibrant and full of life-force.

Contracting the eyes, mouth, anus and prostate gland will activate the center of the brain. When you contract the prostate gland it will activate the pineal gland. The prostate gland has a close connection to the pineal gland which is regarded as the second sexual organ.

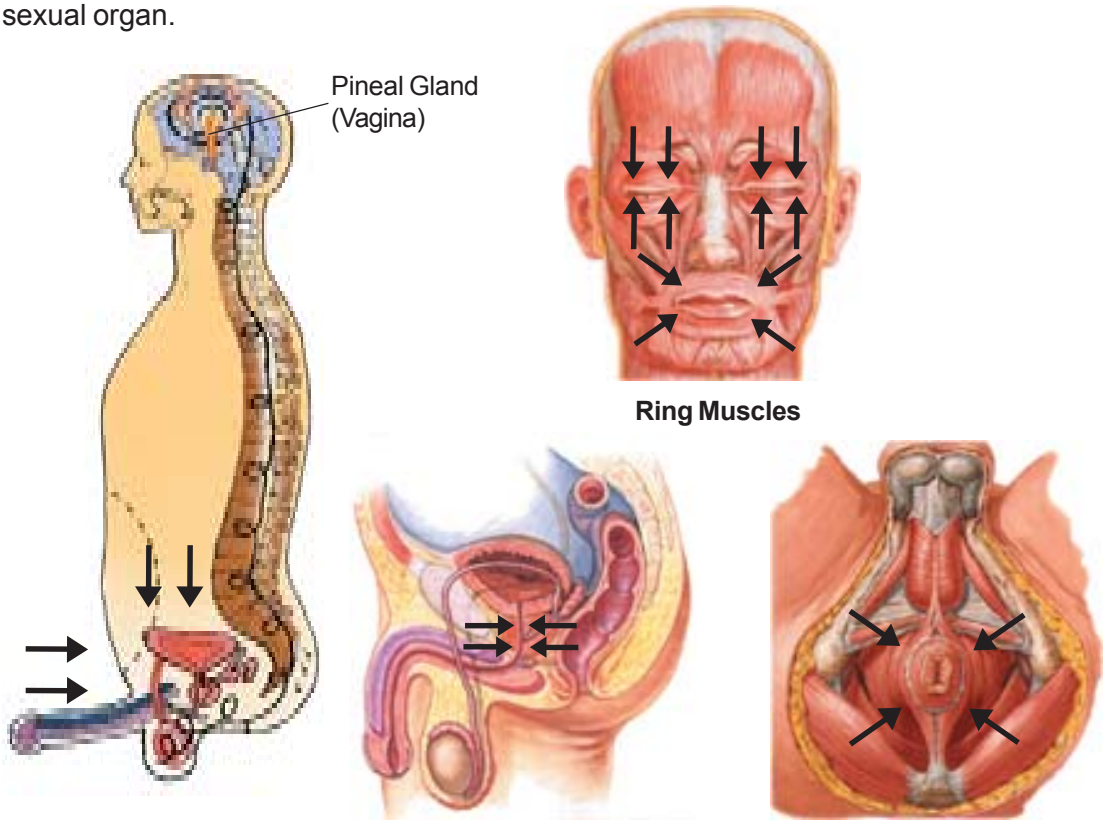


Fig. 3.8 *Male Pelvic Viscera, Prostate, Base of the Penis and Perineum*

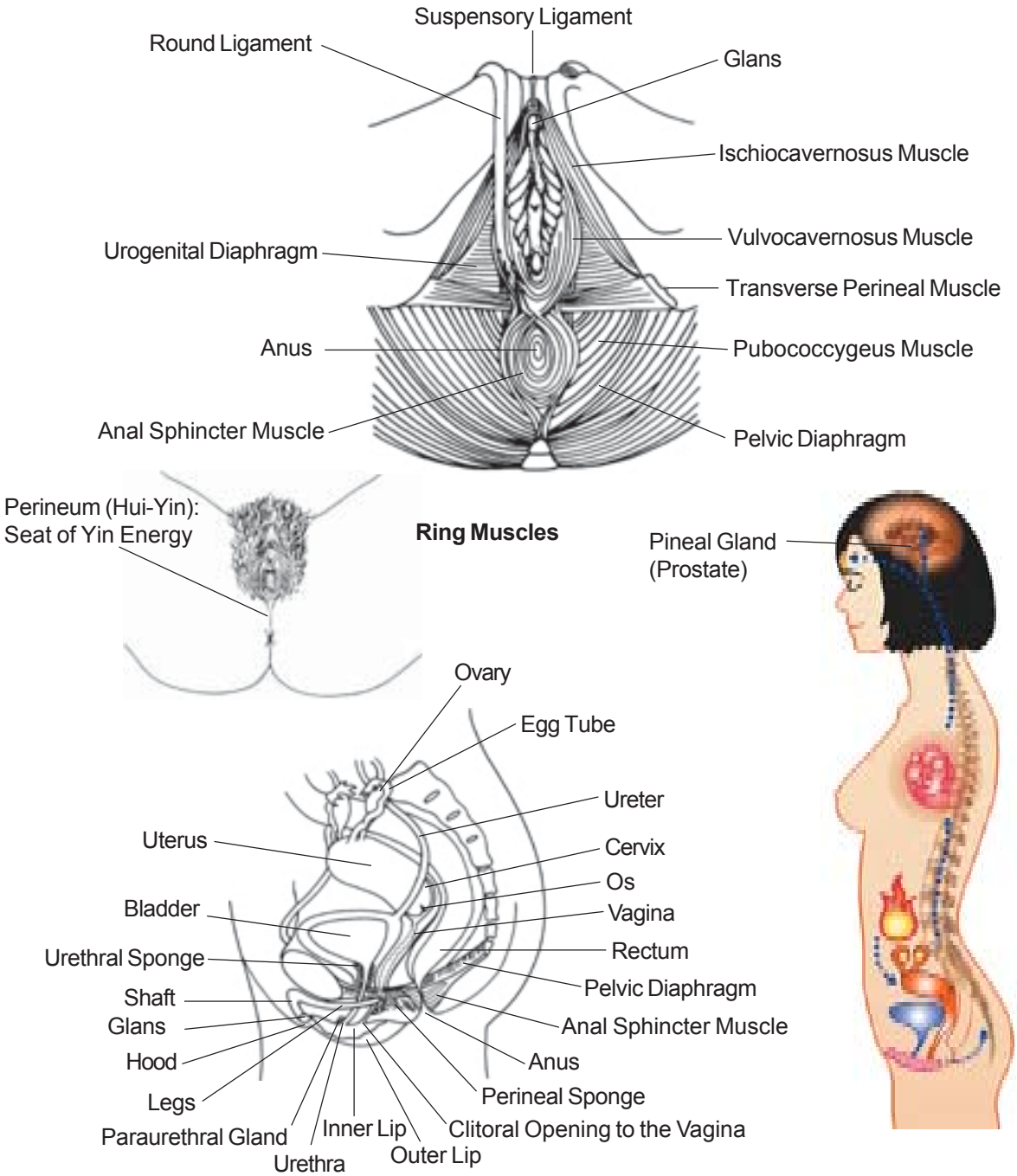


Fig. 3.9 *Women's Genitals: Chi Muscles include the Urogenital Diaphragm, the Pelvic Diaphragm, the Anal Sphincter Muscle and the Pubococcygeus (PC) Muscle.*

Chapter IV
Sexual Healing Positions

Healing positions use the distinct reflexology areas of the penis and vagina. Each Sexual Healing Position puts pressure on different parts of the sexual organs, relative to which part of the body needs to be healed. In stimulating certain areas of the penis or vagina, related organs are stimulated and rejuvenated, and the orgasmic energy is guided up to the specific organs. These ancient techniques have been tested and proven over millenia.

Eight Sexual Healing Positions for Men

With these particular healing positions, the man does the work and the woman is the facilitator for healing. While the man gets specific healing benefits, the woman also gains. All positions are helpful for problems with women's sexual organs because they stimulate the production of sexual hormones and help correct menstrual difficulties. In these positions the male should draw out intercourse for as long as it is comfortable. He should prevent ejaculation by using the anal contractions of the ring muscles using the Anal Contractions of the Testicle and Ovarian Breathing Exercises. (Taoist intercourse using ejaculatory control as explained in this book tremendously heightens the benefits of these exercises.)

Fig. 4.1 Position 1 *— Assists in sex-related problems, such as impotence, premature ejaculation and difficulty in achieving orgasm.*

The woman reclines on her side with her hips bent so that her pelvis faces upward. The man is above and enters her with his penis. This improves all sex-related problems including impotence. It may take some time to gain self-confidence. At first, just insert

the penis and go from there at your own pace. Nearly all men have some sexual ability and thus it is quite uncommon to be totally impotent. Most of the time the erection is lost about halfway into the vagina or some time during intercourse. Failure to reach a climax is often due to the man not being totally present. His mind roams and he drifts off into some fantasy. Because this position is a bit clumsy for the man, he must concentrate on what he is doing. Consequently, his mind will not wander or fantasize.

Fig. 4.2 Position 2 — *Energizes the body.*

The woman reclines on her back. She supports her head and shoulders with a large, high pillow. Then she bends forward at the neck. In such a position the vagina is slightly curved, which allows the penis to be massaged in the right location. Entering from the front, the man penetrates with his penis. After doing this every day for two or three days, the body will be totally rejuvenated. There are benefits for the woman as well because air is drawn up into the vagina, which stimulates her internal organs.

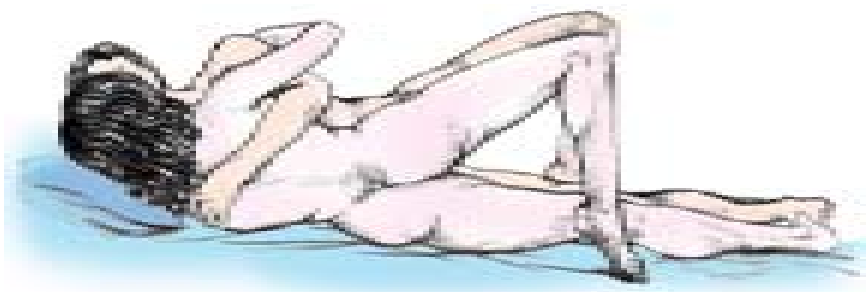


Fig. 4.3 Position 3 — *Strengthens internal organs, including the kidneys, spleen and liver.*

Both individuals lie on their sides face to face. The woman keeps her lower leg straight and bends her upper leg backward. The man inserts his penis. Do this for a maximum of four times a day for twenty days.

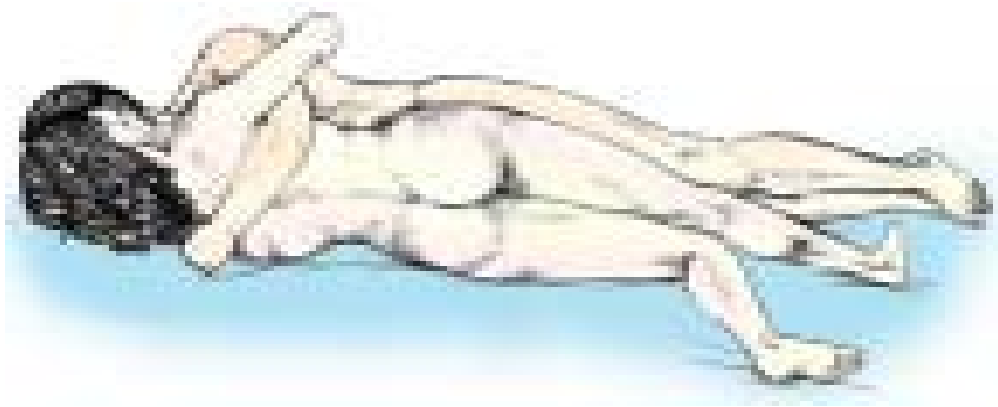


Fig. 4.4 Position 4 — *Strengthens bones.*

The woman reclines on her left side. She bends to her left as far as possible toward her back. The right leg remains straight. Face to face with her, the man finds an angle where he can enter her vagina. He can be a bit on top of her or immediately face-to-face. Use this position for a maximum of five times a day in a ten-day period. This is excellent for healing arthritis, leukemia, and bone marrow diseases. Furthermore, it can speed up healing of broken bones.

Fig. 4.5 Position 5 — *Assists blood vessel problems.*

The position for this is just like Position 4 except the woman reclines on her right side with her right leg bent. The man goes in the same way, face to face but a little bit above. Work in this position a maximum of six times a day for twenty days.

This approach is good for all sorts of blood vessel difficulties, including varicose veins and hardening of the arteries. It also improves high or low blood pressure.

Fig. 4.6 Position 6 — *Addresses blood problems, including blood pressure.*

The man lies down relaxed on his back. The woman is on her knees and faces him. He enters her but she does not move. He moves up and down from the bottom. This position can be done for a maximum of seven times a day for ten days. All manner of blood problems are improved by this position, including anemia, low blood pressure, poor blood quality and blood clots.

Fig. 4.7 Position 7 — *Assists lymphatic system problems.*

The man lies relaxed on his back. The woman kneels above him on her hands and knees. She faces him and can move a little. Essentially though only the man moves after penetration. Use this position a maximum of eight times a day for about fifteen days.

Fig. 4.8 Position 8 — *General healing.*

This position is often hard for the woman. She gets on her knees and then bends all the way backward with her feet under her. She bends back until her head and back are on the floor. The man goes in from in front and above. The woman may want to put a pillow behind her. Use this position a maximum of nine times a day for ten days.

When the woman is in this position the shape of the vagina is changed. The friction from the man's thrusting affects different areas of the penis. Through the process of reflexology, this influences different parts of the body and provides healing stimulation. The male heals himself and the woman is the facilitator. In the woman's healing positions that follow, the woman heals herself and the man is the facilitator.

Seven Sexual Healing Positions for Women

With these positions the male works for the woman. However, unlike the benefits the woman gets from the male's healing positions, he receives no real healing benefit.

How deeply the penis penetrates is important in the woman's healing positions. This is because different Reflexology Zones are located along the length of the vagina. Thus, different portions of the vagina need massage. Penetration can be shallow or deep depending on the specific problem being addressed.

After the penis is inserted in these positions, the woman moves her pelvis for the purpose of massaging and stimulating the vagina. When necessary, the man restrains himself and should communicate with the woman when he has to slow down. He should not ejaculate when in these positions. Repetition requirements are the same for all the positions. They may be done as many as nine times a day for a maximum of ten days.

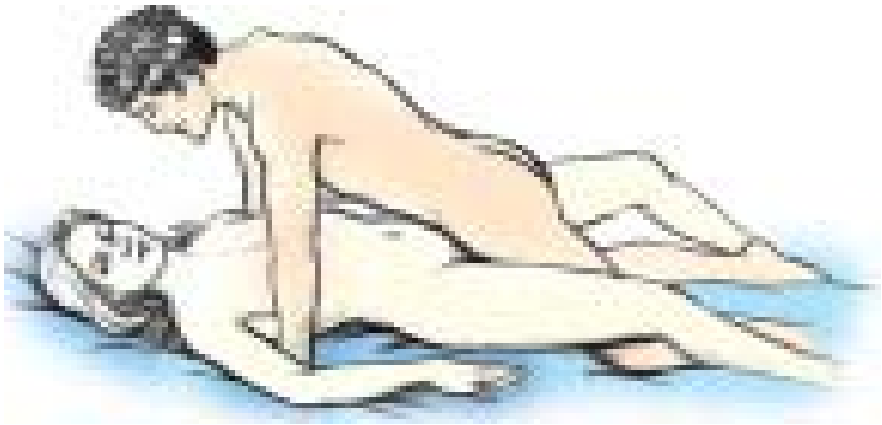


Fig. 4.9 Position 1 — *For fatigue as evidenced by blurry vision, heavy perspiration, weakness, fainting, quick heartbeat and weak, shallow and rapid breathing.*

The woman lies flat on her back and the man is on top of her. He inserts his penis as deeply as he can. The woman rotates in a circular motion beneath him, moving clockwise as well as counterclockwise. The man allows the woman to work and stays in this position until she is satisfied. Orgasm is not, however, the object of the healing exercises, and healing benefits will occur even without orgasm.

Fig. 4.10 Position 2 — *Stimulates the pancreas and liver, is helpful for diabetics. Also aids with hot flashes, weak knees and sore feet and knees after standing for a long time.*

The woman reclines on her back and wraps her legs around the man's thighs but not his back or shoulders. The man is above her on his hands and knees and only inserts the head of his penis about one and one-half to two inches. As above, the woman circles in both directions for as long as she feels comfortable. Because he is on his hands and knees there is shallow penetration. This means that the penis only touches the lung, pancreas and heart zones of the vagina. This position is also good for all the joints.

Fig. 4.11 Position 3 — *Assists the stomach, spleen, female organs and aids digestive problems.*

The woman reclines on her back with her legs locked around the man's midsection. She wraps her arms around him. On his hands and knees, he penetrates her halfway. Once again the woman rotates one direction and then the other for as long as she is comfortable.

Fig. 4.12 Position 4 — *Helps with water retention, kidney and bladder ailments, chronic high fever and pituitary gland problems.*

The man lies on his back. The woman is on her knees and faces the man's feet. The man inserts only the head of his penis. The woman can hold the penis for better control. As above, she circles in both directions as long as she feels comfortable.

Fig. 4.13 Position 5 — *Assists with the nervous system, liver, ulcers and eyesight.*

The man lies on his back with the woman on her knees facing him. The penetration of the vagina alternates from shallow to deep as the woman moves up and down on the penis. As she does so, she rotates her pelvis at the same time. This gives the vagina a complete massage.

Nervous system problems trouble many women. The female menstrual cycle can lead to hormonal imbalances and impact the nervous system. Child bearing can add to the hormonal imbalances that some women experience. This is a very good position to help bring the women's nervous system in balance.

Fig. 4.14 Position 6 — *Addresses energy blockages in the meridians, headaches, poor circulation, menstrual problems.*

The man lies on his back relaxed and the woman is on her knees, supporting herself with one elbow. She is just a little to the side of the man. She holds his penis. With her other hand she hold his head. The penis is allowed to penetrate halfway, but she holds it the entire time. Once again, she rotates in this position for as long as she is comfortable. (Penetration in this position is not easy. That is why the woman must hold the penis.)

Fig. 4.15 Position 7 — *Helps with blood shortage, anemia, poor circulation and pale, dry skin.*

This position is not as difficult as some of the others. The woman reclines on her back. Her knees are up to her chest and her feet are in the air. The man rests on his knees in front of her and enters very deeply. The woman rotates as the man remains still. This position contracts the vagina which allows for very deep penetration. If the man has a very long penis he can wrap the base of the shaft with a handkerchief to prevent it from going too far into the vagina. (This should be done every time if the penis is longer than the partner's vagina.) In addition, the handkerchief makes the penis stand up more and helps preserve the erection. The principle is the same as a "cock ring" which blocks the blood vessels so the blood cannot flow back out of the penis as easily.

Exchange of Energy as a Sexual Healing Prayer

What is True Love? Love combined with Truth equals True Love. While the word "love" has different meanings, True Love means that two hearts are united and there is no gap between them. It is not a social love. The love for a wife or husband is different than the love for a friend. Even the closest friends have a gap between them.

Neither gender should live alone. This is not meant in the sense of actually sharing living quarters, but from the point of view of sexual relationships. The sexes need each other for gratification and in order to heal, balance and adjust their physical bodies. We know from Taoism that every part of the body is holy.

In order to have a full life as human beings we need to understand our sexuality. To do so is to have a Divine Life. Suffering is not divine. When people reach a certain level of existence they become spiritual. The notion of suffering to become spiritual is actually an ego bound concept. People are not forced to suffer. We have a choice. If people had no will power or choice, they would be machines. In the bible, when God told Adam

not to eat from the Tree of Knowledge, He gave him a choice. ("Knowledge" here means religion.) God said that Adam would "die" if he ate from this Tree. Here death means separation from God. Man decided to have the knowledge. After that he became ashamed and tried to cover himself. Before that, he felt pure. It is necessary to return to this purity. If we are to please God, we must please ourselves first, because God is in us. If we lead a Divine Life, we are already in God's Kingdom. There is no need to pay a duty to God. He is capable of doing whatever He needs for Himself.

It is the goal of the Tao to become one complete person. Since man is part of woman and woman part of man, so we have an excellent opportunity to discover each other by living together. Throughout what is known as Sexual Healing Prayers, male and female are united and become one complete person.

A lot of discipline is required of the man during ***Sexual Healing Prayers***. This helps prevent him from giving in to lust. The man attends to the woman with his body. ***Sexual Healing Prayers*** allow people to start and end the day in peace away from worries and struggles.

Because we have our bodies, we should use them and discipline them. They are an instrument for the Soul-Mind to follow the Spirit. If we allow our Spirit to lead us and we follow our intuition, conscience and communication with God, our thinking, emotions and decisions come along too. It is, of course, impossible to get rid of our bodies. They must be satisfied. ***Sexual Healing Prayers*** both satisfy and discipline the body at the same time. When we pray, we should request that our bodies listen to our Spirit. We decide to please our God-Self. We will have a feeling of Pure Love.

As soon as two people meet, they become comparable to a square. Throughout the ***Sexual Healing Prayers*** they are interlaced and share a meeting point. After that, the square turns into a triangle. The woman is totally open and receiving. She is completely yin. The male is at his Taoist orgasm and is giving completely. He is completely yang. The complete yin state and complete yang state make up a perfect yin-yang balance which becomes a circle that has no beginning and no end. There are no cracks and no sharpness in the circle since there is no criticism between the man and woman. For the partners there is only feeling, devoid of judgement or thinking. With their eyes closed they feel each other. This feeling is total love and perfect unification. This union comprises the yin-yang. It is the microcosm and the macrocosm of the universe. It is eternal.

At that instant the partners are beyond space and time. Even if the prayer takes only two minutes, that in itself is time without end. The woman's climax during the ***Sexual Healing Prayer*** may last from two to ten or twenty minutes. During that period she is totally at ease and has no other physical desire. Consequently, the ***Sexual Healing Prayer*** is a kind of meditation. The quivering body and vaginal fluids are a part of the climax and may happen a few times before the woman is entirely opened up. The ***Sexual Healing Prayer*** for the man is the point just before ejaculation, but when he gets to that stage he remains there and holds it, using only feeling and no knowledge.

Indeed, this is the Tree of Life. More than an erection is required for ***Sexual Healing Prayer***. The prostate gland must be swollen to around 98% in order to keep the man's interest up.

Sometimes the purpose of meditation is misunderstood and it is often mixed up with "thinking." Many times when facing a problem people say, "I'll have to meditate on it." The meaning here is "to think." However, the real aim of meditation is to connect with our God-Self.

Sexual Healing Prayers are the finest meditation possible. They blend communication with our God-Self with inner exercise and healing. This is the level of absolute unity, or "no mind." Once this level is reached, people find themselves so fulfilled that they have no desire left for ordinary human sex. Love is beyond studying or teaching. Its origin is the heart and it is genuinely spiritual from the beginning. Love is giving.

During the ***Sexual Healing Prayer*** the man gives himself to his lover. The woman's gift lies in her surrender to the man. The two grow together, trading energy and well being. Thus, sex can be used by people to feel Divinity. The ***Sexual Healing Prayers*** provide total love automatically. This is not, however, the same as the mental picture of romantic love that most people have in their minds. It can be said that it is the apogee of Taoist Sexology. Just as the day is started with the ***Morning Sexual Healing Prayer***, so too is it concluded with the ***Evening Sexual Healing Prayer***. The experience is delightful. People find that they go to sleep relaxed and peaceful. The next day when they wake up they are prepared for the ***Morning Sexual Healing Prayer***,

We must realize that our thoughts form our world. The mind's cognition is essential reality and it comes long before the material world. The material things we can touch and see are brought into existence by the mind. With the right thoughts, anything can be materialized. Thus, in this case, we need merely to concentrate on the right partner and visualize what we want in our mind. Doing this will create the right person for us.

Chapter V
Sexual Energizing Postures

Hand Positions

These are the basic hands positions to energize the body and draw the sexual energy into the brain while doing the Healing Love practices. The stretching exercises and the hand positions drawing the energy to the brain enlarges the sexual organs and the size of the brain (Pineal Gland) giving you strength in the mind (Brain) and body (Organs).

This hand position strengthens the semen and ovaries activating the sacral pump.

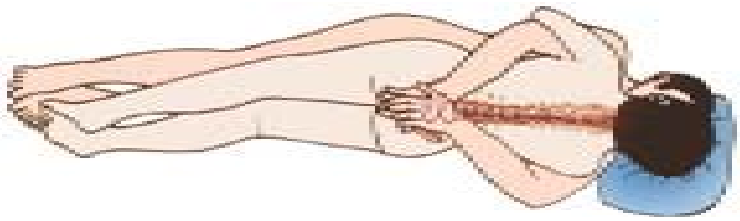


Fig. 5.1 *Sacral Pump Energy Point*

This hand position strengthens the life force and bone marrow activating the Ming Men point.

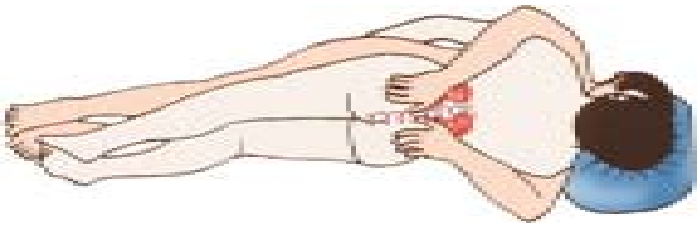


Fig. 5.2 *Kidneys' Energy Point*

This hand position strengthens all the organs and creates more sexual appeal activating the Door of Life.

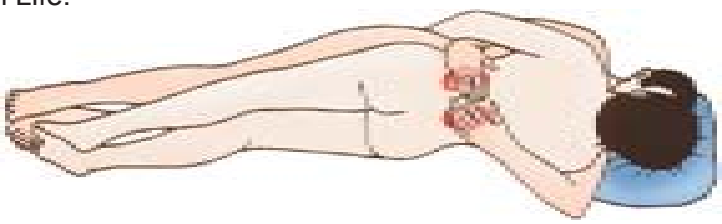


Fig. 5.3 *Adrenal Glands' Point at T-11*

This hand position strengthens the bones and enhances face, eyes and mouth color for a healthier, brighter looking facial appearance activating the T-11 point.

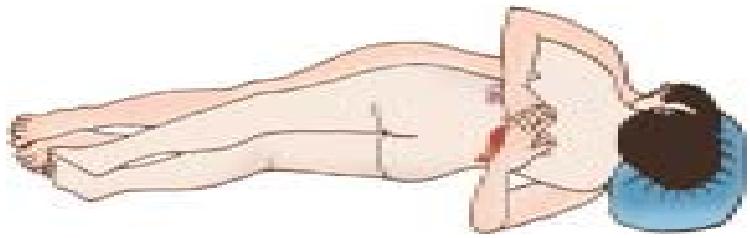


Fig. 5.4 *Liver and Spleen Point*

This hand position strengthens the aorta and vena cava arteries increasing the penis hardness and vagina wetness activating the wing point.

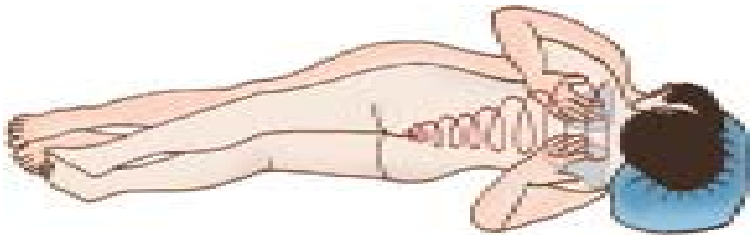


Fig. 5.5 *Heart and Lungs' Point*

This hand position strengthens the liver and spleen creating sexy eyes and a sexier mouth activ

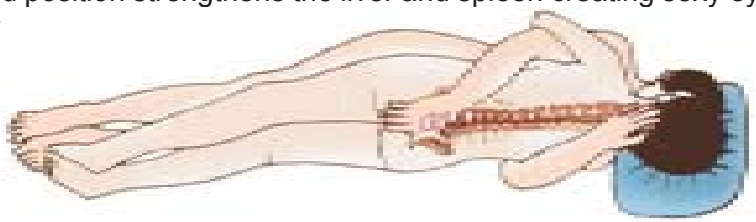


Fig. 5.6 *Sacral and the C-7 Point*

This hand position strengthens all the bones and improves the blood flow to the sexual organs activating the sacral and cranial pumps.

Fig. 5.7 *Sacral and the Neck Point*

This hand position strengthens the white and red blood cells and improves the erection and wetness, opening up women to a greater orgasm by activating the crown point.

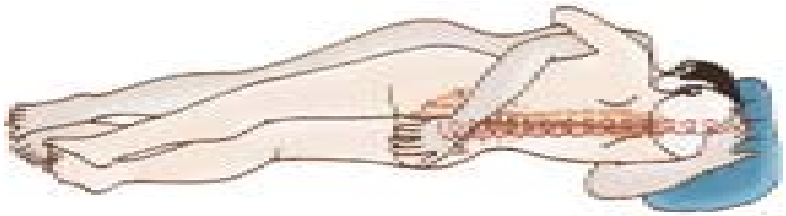


Fig 5.8 *Sacral and the Crown Point*

Healing Love Couples Energize the Senses

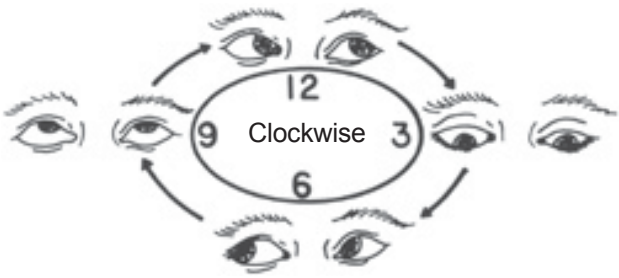


Fig. 5.9

Use mind and eyes to help circulate the energy nine times clockwise and 9 times counterclockwise and collect the energy.

Use Eye Movements in Healing Love Postures

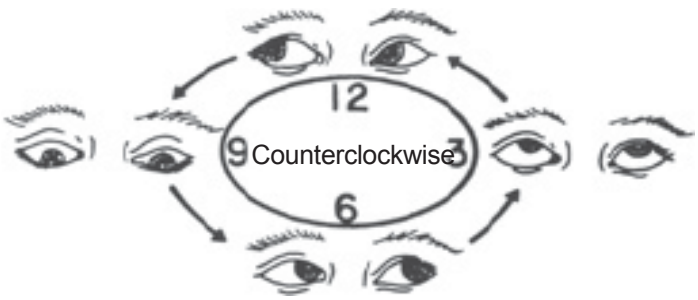


Fig. 5.10 *Eye Movement*

1. **Improve the Eyes:** When you are experiencing a high level of sexual energy and high orgasm, and near ejaculation, exhale through the mouth. Hold the breath, open the eyes wide and look left and right. Inhale and suck in the lower abdomen (reverse breath-

ing) six times. Balance the breath by breathing normally, and feel the orgasm energy flow into all the meridians.

2. **Improve the Hearing:** When close to ejaculation and experiencing a high level of orgasm sexual energy, swallow the Chi down to the Lower Tan Tien six times and grind your teeth with closed mouth. Inhale, hold the breath for a while, and listen to the sound inside the ears. Exhale, flatten the stomach. Inhale, suck up the stomach, hold and let the orgasm Chi spread to the limbs and the whole body. This will improve the hearing until old age.

3. **Balance Organs:** Improves digestion and cures all kinds of diseases. When the sexual energy is very high and ejaculation is near, expand the stomach and use mind power to gather the orgasmic Chi in the stomach. Contract the perineum and anus. This will help the orgasm circulate to all the body organs and glands. After this do the Nine Shallow and One Deep thrusting pattern (explained in *Healing Love* Book). This will help gather the orgasmic Chi; negative Chi will disperse.

4. **Strengthen Erection:** Practice the head stand to help reverse the sexual energy to the head and to all the body. This will make the penis hard with a strong erection.

5. **Return the Chi and Balance the Yin and Yang:** When close to ejaculation, inhale 9 times, hold back the ejaculation (with mind power). Use the left hand to hold the testicles, and feel the orgasmic Chi turn to sexual fluid.

6. **Semen Retention:**Those who release semen only twice monthly or twenty-four times a year, have more potential to live to one or two hundred years, with fine complexions and no ailments.

Healing Love Postures for Universal Tao Practices

The sitting position is perfect for lovemaking and energy connection and circulation for Microcosmic Orbit Meditation.

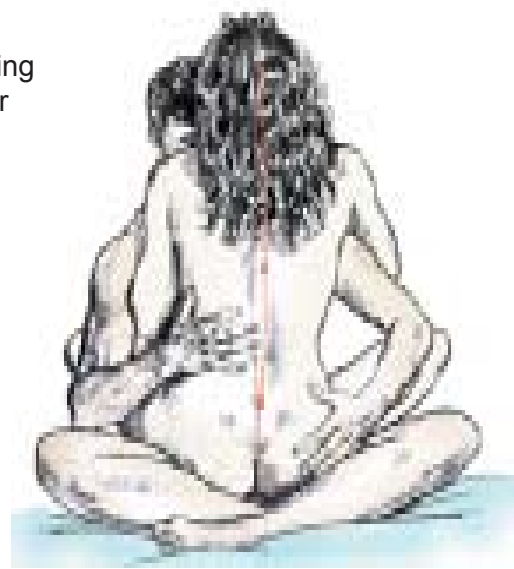


Fig. 5.11 *Microcosmic Orbit Connection*

Couples must first learn to circulate sexual energy in their own body during lovemaking. Later, partners can learn to give and receive sexual energy by using the Microcosmic Orbit.

Fig. 5.12 *Circulating Sexual Energy in Microcosmic Orbit.*

Exchanging and moving the energy allows the couples to give and receive sexual energy fully in healing each other through the Microcosmic Orbit Meditation.

Fig. 5.13 *Exchanging and Moving the Healing Sexual Energy on the Microcosmic Orbit.*

Energizing Postures Eight Healing Benefits

To strengthen the organs and senses you can use the sexual energy by stimulating the Sexual Reflexology points. The organs and senses become stronger and you become more attractive and sexier.

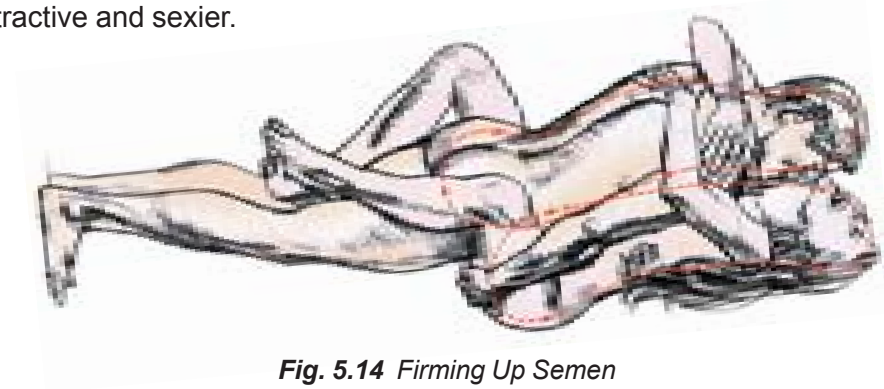


Fig. 5.14 *Firming Up Semen*

The ***First Benefit***, "to firm up the semen", is achieved by carrying out a count of double nine(18). Rest and guide the orgasmic Chi up to the crown; do this twice. When the count is completed the man stops; this causes him to firm up the semen. To eliminate blood leakage of the woman, she should practice twice daily and she should be fine in fifteen days.

The ***Second Benefit*** is called "tranquilizing the life force"; carry out a count of triple nine. Rest and contract lightly and guide the Chi up to the lungs; do 3 more times for the life-force to be harmonized.

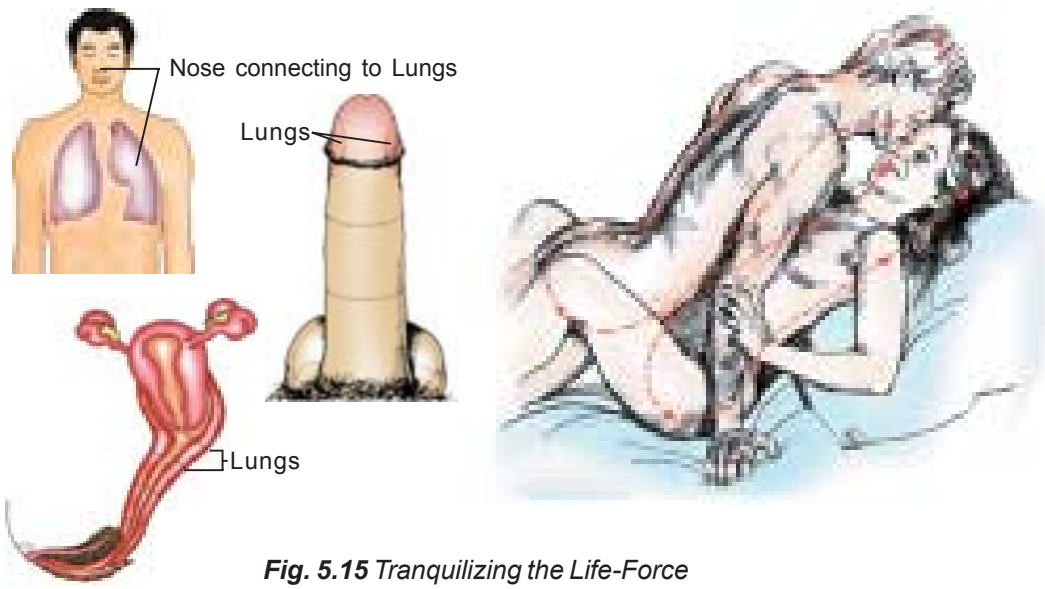


Fig. 5.15 *Tranquilizing the Life-Force*

The ***Third Benefit*** is called “profitably hoarding”; carry out a count of four nines (36) and stop when the count is completed. Rest and guide Chi into the organs; do 4 sets. This causes the couple’s life force to be harmonized; it can help coolness of the woman’s gate.

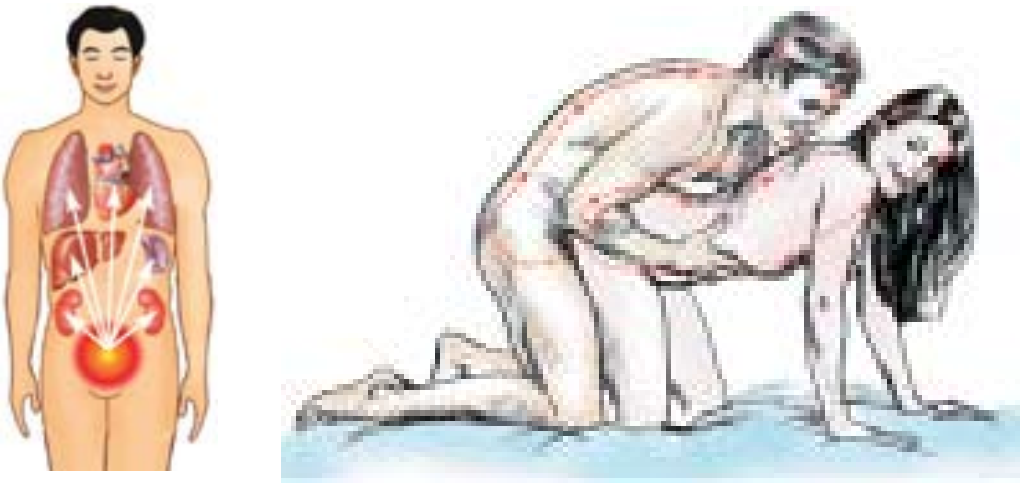


Fig. 5.16 *Profitably Hoarding strengthening all the Senses*

The ***Fourth Benefit*** is “strengthening the bones”; carry out a count of five nines (45) and stop when the count is completed. Rest and guide orgasmic Chi into the bones of the spine, rib cage and hip bones. Do 5 sets. This causes an improvement of the articulation of the joints in the man; it can remove obstruction of the woman’s blood.

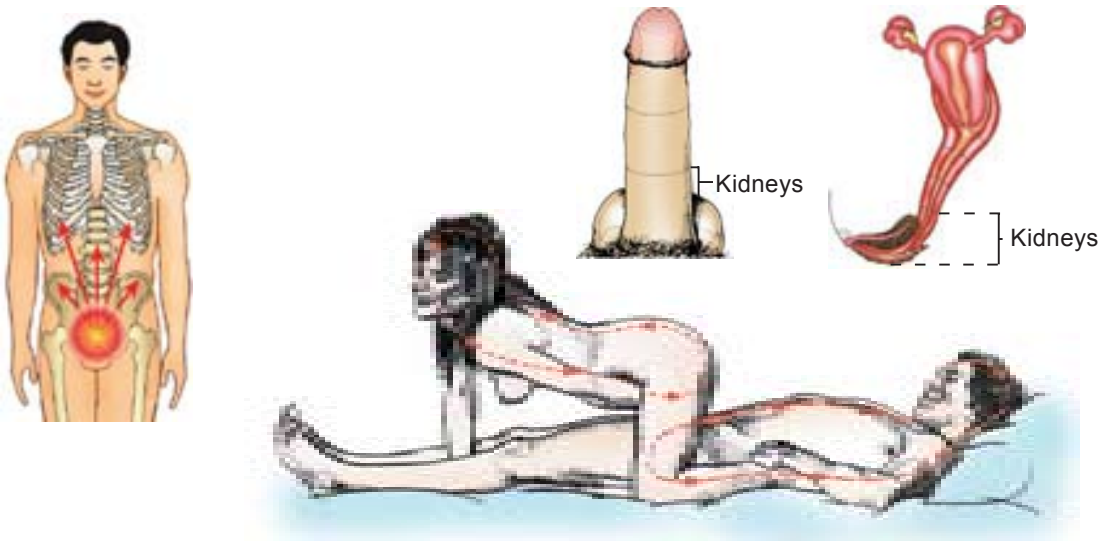


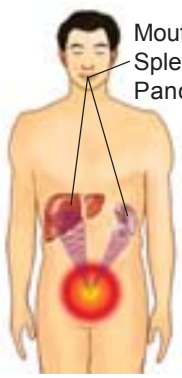
Fig. 5.17 *Strengthening the Bones connecting Kidneys and Eyes*

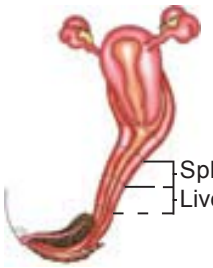
The ***Fifth Benefit*** is "blending the conduits"; carry out a count of six nines (54) and stop when the count is completed. Rest and guide orgasmic Chi into the aorta and the vena cava. Do six sets.

Guide Chi into the Aorta Vena Cava.

Fig. 5.18 *Blending the Conduits*

The ***Sixth Benefit*** is called "storing the blood". He inserts the jade stalk deeply. Carry out a count of seven nines (63) and stop when the count is completed. Rest and move orgasmic Chi into the spleen and liver. Do seven sets. This causes a man's vigor to be strengthened. Further, it can help inefficiencies of the woman's menstrual cycle.





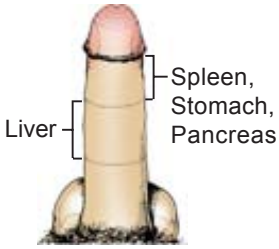


Fig. 5.19 *Storing the Blood*

The ***Seventh Benefit*** is “profiting the fluid”. The man mounts her, carries out a count of eight nines (72) and stops when the count is completed. Rest. Guide the orgasmic Chi into the bone marrow in the hips and rib cage.

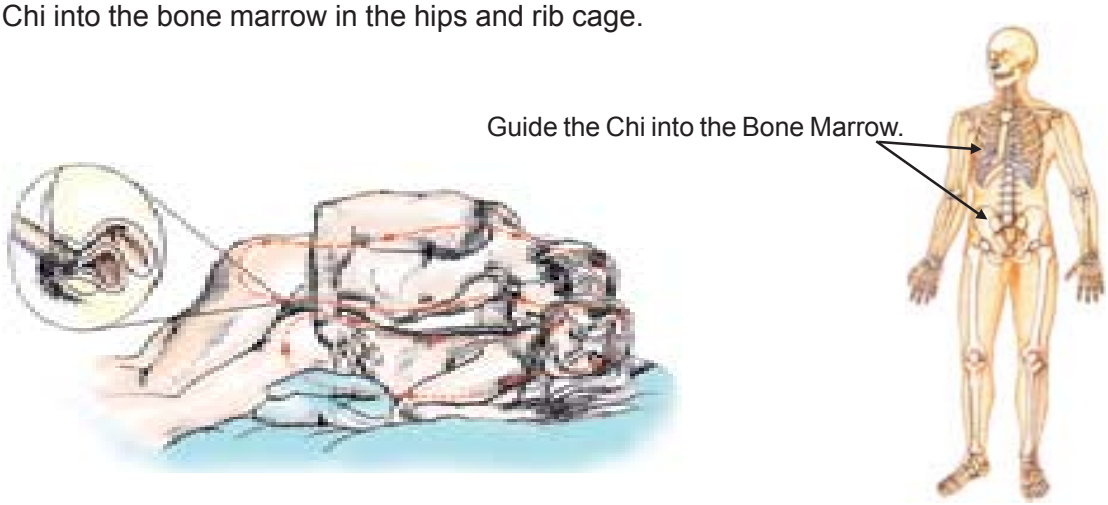


Fig. 5.20 *Profiting the Fluid connecting Kidneys and Eyes*

The ***Eighth Benefit*** is “informing the body”. He carries out a count of nine nines (81) and stops when the count is completed. Rest and guide orgasmic Chi into the bones and bone marrow. Do 9 sets. It causes the man’s bones to be fulfilled.

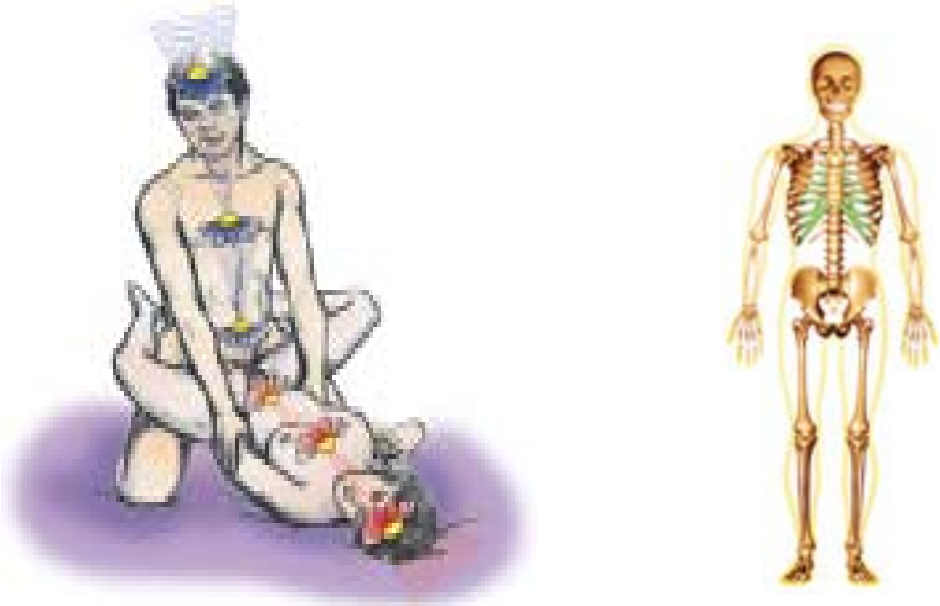


Fig. 5.21 *Informing the Body expanding into the Bones and Bone Marrow*

Chapter VI
Ejaculation and Menstrual Cycle Management

Ejaculation Management

A man may attain health and longevity if he practices an ejaculation frequency of twice monthly, or 24 times in a year. If at the same time he pays careful attention to proper diet and exercise, he will live a long and healthy life. Dr. Sun Ssu-mo

Diet, exercise and sexual restraint constitute the three pillars of Taoist health and longevity programs. Of course these Taoist principles apply equally to males and females. For both genders, semen essence is the energy that propels sexuality. It is the origin of the physical ability for sex as well as sexual interest and emotional affection for the opposite sex. On the other hand, because women do not discharge when they reach orgasm, it does not take away their sexual drive and interest after one act of intercourse. Since the principles required to achieve the harmony of Yin and Yang should be cultivated mostly by men, this chapter is addressed mostly to them. However, the information here should also be studied and comprehended by women who keep company with Taoist men or who wish to convert their men to Taoism (See books: *Taoist's Secrets of Love* and *Healing Love* by Mantak Chia).

According to western medicine, men naturally replace their semen soon after ejaculating and have a virtually limitless supply. This generalization is very misleading. Ejaculation can be compared to blood donation. After donating blood, people feel weak and tired for a day or two, until the lost blood is replenished. Blood clinics suggest that people only donate a few times each year in order to avoid chronic fatigue, lowered resistance and excessive strain on the circulatory system. Chinese medicine holds that the same point applies to semen, except that the loss of semen is even more difficult to replace than blood. A great deal of essence and energy are needed to completely replace semen supplies and restore proper hormone balance after ejaculation.

If the frequency of ejaculation surpasses the body's ability to completely replace the semen, men go through chronic fatigue, decreased resistance, irritability and other indications of depleted essence and energy. Furthermore, they lose all sexual interest in their partners, who could very well desire additional lovemaking. While it may be the case that adolescents and young men in their early 20s replace semen at a pace that permits frequent ejaculation, the idea that this ability goes on indefinitely into adulthood is absurd. Rather it is women, and not men, whose sexual power is virtually unlimited.

It should be noted though, that celibacy is not the answer either, because that deprives men of the benefits of sexual stimulation. The solution then, is ejaculation control. Regular coitus with infrequent ejaculation keeps a man's interest in the act and his ability to continue indefinitely until his mate is completely satisfied. In fact, males who ejaculate one or more times daily might eventually 'lose their mind'. Frequent ejaculation brings about a chronic loss of the vital fluid that the brain and spine need to operate properly. The resulting deficiency of this critical fluid may bring about premature senility, inability to concentrate, chronic depression, loss of sexual drive and numerous related symptoms.

In addition, modern scientific evidence states that every time a man ejaculates there is a meaningful loss of zinc. Zinc is a rare but extremely important trace element. Therefore, ejaculating too often results in a chronic and serious deficiency of zinc. The symptoms of zinc depletion include loss of memory, confusion, paranoia and hypersensitivity to sunlight. It is interesting that these scientific facts seem to substantiate the 'old wives' tale' which claimed that masturbating too often muddles the mind, weakens the spine and causes blindness.

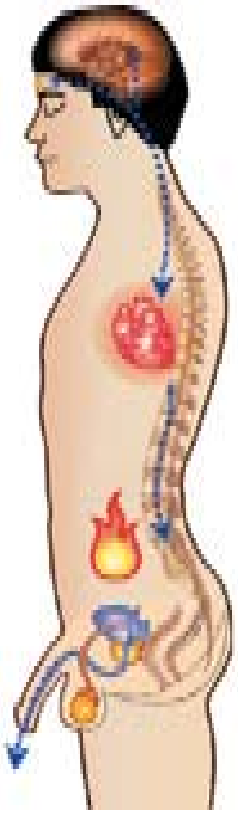


Fig. 6.1 *Through ejaculation zinc is lost which leads to loss of memory, confusion and paranoia.*

Regulating Ejaculation Frequency

Every school of Taoism believes that retaining semen and proper regulation are essential skills for men of the Way. The mavens of ancient China each left us their own personal guidelines determining emission frequency. By putting together their different suggestions with your personal requirements and actual experience, you can easily determine an ejaculation timetable that is appropriate for your personal needs.

To start, let's consider what the Plain Girl said to the Yellow Emperor on the topic. Being a bit confused by the notion of 'sparing vital essence' and ' regulating leakage', the Yellow Emperor expressed his doubts to the Plain Girl. This is what she had to say. Some men are strong, others weak. Some men are old, while others are young. Each person must live according to their own vital force and not try to impel the joys of sex. Impelling joy is harmful.

1) A healthy male of 20 may ejaculate two times a day, but an old one should do so no more than once daily.
2) A 30-year-old male can ejaculate once a day, but only once every two days if he's is not strong.
3) A brandishing 40-year-old man can give off semen once every three days, but if he's lacking power, he may do so only once every four days.
4) A full-bodied man 50 years old may eject semen once every five days, but only every ten days if he is lacking strength.
5) A healthy 60-year-old man may ejaculate once every ten days, but only once every 20 days if he is in poor health.
6) A robust 70-year-old man can eject semen once a month, but one lacking strength should no longer emit semen at all.

During the Tang Dynasty, physician Lee Tung-hsuan, in *Mysterious Master of the Cave*, used the frequency of coitus, rather than the number of days, as his recommended measure for regulating emissions. For example, when having intercourse with women, a man should eject semen only two or three times in a ten day period. The great Han Dynasty adept Master Liu Ching, credited in dynastic archives with living over 300 years, preferred to regulate his semen ejection relative to the universal cycles of seasonal change.

The seasons have an influence on how often a man may allow himself to ejaculate. In spring, once every three days is reasonable, but in the summer and fall twice a month is more appropriate. In the cold of winter, there should be no ejaculation at all. Accumulating Yang essence in winter is the way of heaven. Those who follow this advice will live a long and healthy life. A single ejaculation in winter is one hundred times more harmful than a spring time ejaculation.

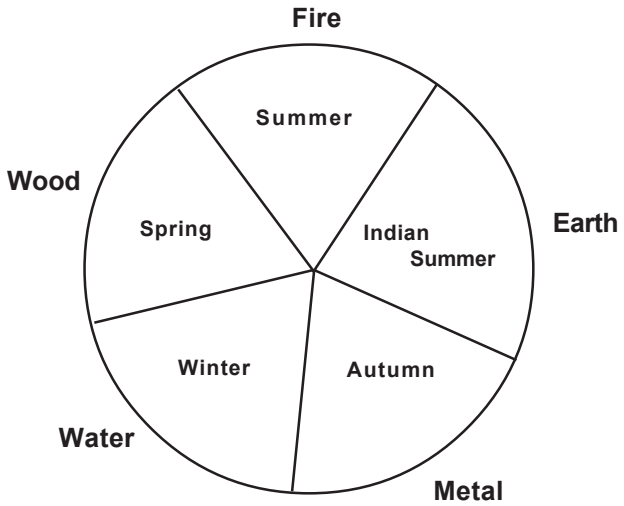


Fig. 6.2 *Seasonal Ejaculation*

The best advice on the topic of ejaculation restraint comes from the centenarian doctor Sun Ssu-mo. This Tang Dynasty Taoist outlived three emperors by following his own advice. The rule of thumb that he recommended is quoted above. In actual practice, however, he only ejaculated one time per 100 copulations. Dr Sun lived to be 101.

Fig. 6.3 *Fire of the Lamps*

Sun Ssu-mo tells us that a man should 'become acquainted' with Taoism by the time he is 30 and 'gain a complete working knowledge' of it by 40. Prior to the age of 40, most men are still extremely potent and vigorous. By the time they are 40, however, they notice their potency decreasing. At the time that his potency declines, numerous ailments will come upon him. Unchecked, he will quickly find himself beyond cure. Dr Sun gives repeated warnings to his male patients of the dangers associated with excessive ejaculation. He makes an analogy with a sputtering oil-lamp which, just prior to being spent, suddenly flares up brightly, then dies. Whenever a man restrains himself and holds onto his semen, it is like adding new oil to a lamp that is about to go out. But if a man ejaculates each time he has sex, it is like taking oil from a lamp that is already

nearly burnt out. Sun Ssu-mo sums by saying that 'if a man wastes his semen, he will soon die. For men, this is the most significant thing to remember about sex.'

By the same token, and in agreement with the Plain Girl, Dr. Sun counsels against total abstinence. The man who has no sexual intercourse with women is prone to restlessness and longs for female companionship. Suppressing the natural urge to expel semen on occasions not only requires great effort but in fact makes it easier to lose semen. This can come during sleep through nocturnal emissions or so-called wet dreams. A single ejaculation is equivalent to one hundred emissions during normal intercourse. Sun Ssu-mo suggests regulating ejaculation according to one's age.

1) By 30, a man begins to lose vitality and should stop wasting semen in a reckless manner. Masturbation should be forsaken and the man should become acquainted with the Tao of Yin and Yang.
2) By 40 a man has reached a pivotal point in his life. To prevent quickly going downhill straight into the grave, which undisciplined sex causes at this stage in life, ejaculation control should become a habit.
3) By 50, his ejaculation should be reduced to no more than once every 20 days.
4) At 60, most men should totally curtail ejaculation (but not intercourse). A man who is very healthy and has a strong libido, however, can continue ejaculating about once a month, or, even better, once in every 100 coitions.
5) This program can continue right on through the seventies. Ejaculation control is important for strong, healthy males as well as for those who are elderly or not so strong. Beginning such a program early in life helps avoid the worst ravages of old age, including the loss of vital energy (For more details see books: *Taoist's Secrets of Love* and *Multi-Orgasmic Man* by Mantak Chia).

Total celibacy for most men is equally as harmful as excessive emission. It creates a strong desire for sex, which causes an imbalance of essence, energy and spirit. Furthermore, it ultimately causes even more loss of sexual essence and energy through the uncontrollable, intense emissions during 'wet dreams'. For those who wish to determine their own emission schedule, the methods of semen retention introduced below must be mastered. Next, follow the guidelines given already using a trial-and-error assessment of your own vitality. A man should feel as light and refreshed after ejaculating as a woman feels after orgasm. He should not be exhausted, drained and uninterested in more sex. An ejaculation of this sort may be experienced only when the semen supply is what the Chinese term 'full' and 'flourishing'. If an emission leaves a man tired and depressed, he should add to the interval between ejaculations.

A man may also help reduce the loss of essence and energy because of semen emission by training himself to 'come lightly' on those occasions when he chooses to ejaculate. Instead of rushing headlong to a fury just before ejaculation, advance to the edge slowly and softly and enjoy the wonderful sensation of release. Following that,

intentionally 'squeeze off' the uro-genital canal with a heavy contraction of the anus and penis before the ejaculation is complete. This will preserve about 20-30 per cent of the semen while still giving the desired ejaculation. Right after ejaculation, rhythmically tighten the urogenital diaphragm for one or two minutes by locking the anal sphincter. This tightens the floor of the pelvis, which gets loose and slack after ejaculation. This practice helps avoid post-coital loss of Chi through the perineum, anus and urogenital canal. This practice is very helpful for women too, because it precludes loss of chi through the vagina and boosts sexual energy to go up the spinal channels to the brain.

Many men are skeptical about this disciplined and unconventional approach to sexual relations. They need to be completely convinced by personal experience that it is necessity. Here are a few easy experiments any man may try to prove the truth of Tao in sex.

1) Try having vigorous intercourse shortly before taking part in an athletic event or stage performance. Do it once with ejaculation and once without and compare the resulting performances. The difference is amazing.
2) Or, have intercourse late at night, once with and once without ejaculation. After that, compare the amount of sleep you need and how you feel when you get up the next morning.
3) An even more striking test is the difference in energy felt during the day after having intercourse upon waking up in the morning. Make sure to try it both with and without ejaculation. There are numerous factors that can be checked, for example, weather, mood and physical condition.
4) You will definitely notice a huge difference in how you feel after having sex with and without ejaculation on an extremely cold day in the middle of winter. You will have a clear understanding of why Peng-Tze says, "One ejaculation in winter is one hundred times more harmful than one in the spring".
5) Those who significantly reduce their ejaculation frequencies in the winter without reducing sexual intercourse are far less likely to suffer from colds, influenza, chills, the winter 'blues' and other symptoms that often accompany cold weather.
6) Furthermore, if you're feeling 'down and out' already, an ejaculation will only pull you deeper into depression. Having a love making session without emitting semen is a terrific way to 'pull yourself up' again.
7) The same principle is true in regard to physical condition. When a man is sick, losing semen only aggravates his condition by robbing him of his biggest source of resistance at the very time he needs it most. On the other hand, disciplined intercourse mitigates a lot of chronic illnesses, especially those affected by hormone levels. Both Miles Davis and Mohammad Ali arrived at these conclusions in exactly the same way - by trial and error. You can do the same thing.

Each man must determine his own ideal rate of semen emission. It is important to know whether it is appropriate to ejaculate or not in a given situation. The calendar can help you decide whether it is OK or not. One thing is quite clear, however. If a man is drunk, or filled with food, or sick, it is best to forgo that short-lived spasm of enjoyment and maintain one's energy. The Taoist text *Essentials for Nurturing Life* warns us that ejaculation is strictly forbidden for a man who is drunk or gorged with food. Discharges at times like this injure a man a hundred times more than under normal conditions and, indeed, may bring about dizziness and ugly sores.

Fig. 6.4 *A drunken man sick and confused.*

Mastering the Techniques of Controlled Contact

All Taoist health regimens, including ejaculation control, involve the Three Treasures of essence (body), energy (breath) and spirit (mind). They are used in conjunction in an effort towards a single goal. The Yellow Emperor's Classic says that 'Spirit directs energy, energy commands essence'. The meaning of this is that the true Taoist man uses his mind to control his breath, breath to control blood, and blood to control semen. This is because 'when blood halts, semen must halt as well'. Ejaculation is always preceded by a quick speeding up of the heart. This tells us the importance of keeping the pulse normal during intercourse. Because breathing controls heartbeat, the primary exercise for developing ejaculation mastery is deep, rhythmic, abdominal breathing done in the same way as during breathing exercises. One need not apply the abdominal and neck locks with each breath while having intercourse. However, the anal lock should be applied frequently. Each application of the anal lock helps to keep the semen from coming out.

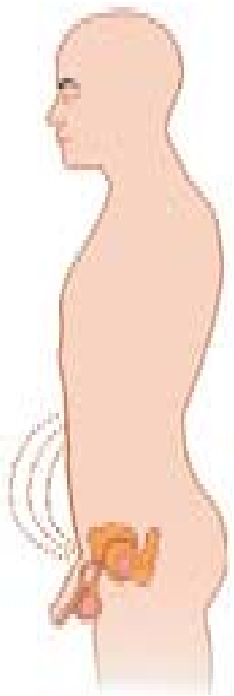


Fig. 6.5 Abdominal Breathing

When you lose track of your breathing, your heart rate increases, which puts you ever closer to the edge of ejaculation. It takes a few years of practice to master total voluntary control over body, breath and mind while having sex. There are, however, some clever tricks invented by ancient practitioners to help fellow Taoists to regain

control over their semen when they feel they are on the verge of ejaculating. The most important are breath retention and 'locking up' the entire sacral area with tight contractions of the urogenital diaphragm. The Taoist physician Lee Tung-hsuan talks about this in *Mysterious Master of the Cave*. The exercise practices of the sexual organs will help stimulate the Reflexology Points of the sexual glands and organs, which will strengthen them. Upon feeling on the verge of ejaculation, a man should always hold back, at least until the woman has reached orgasm. He should remove the Jade Stem a little and put it between the Lute Strings (frenulum of clitoris) and Wheat Buds (labia minor). He should shut his eyes, think about his mind, push his tongue against the roof of his mouth, arch his back, and stretch out his neck. Then he opens his nostrils wide, closes his mouth, and takes in a very deep breath. Doing this in time will postpone ejaculation.

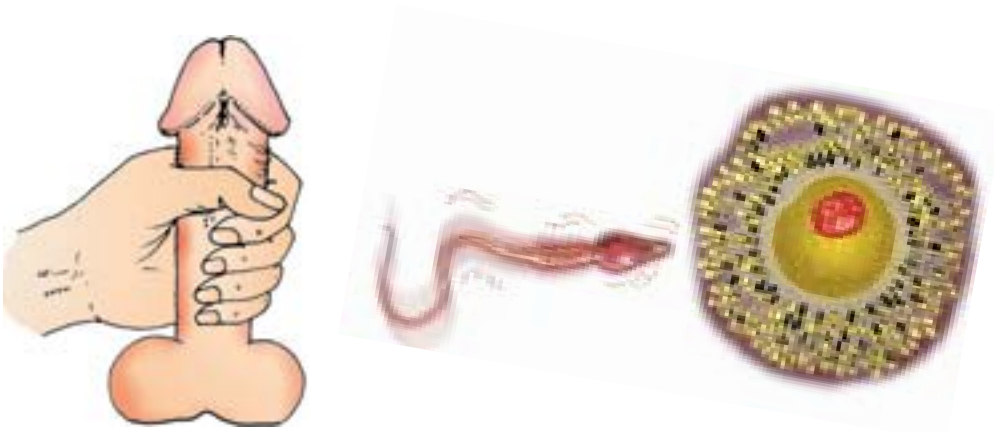


Fig. 6.6 *Penis Massage with Semen and Egg*

Ejaculatory Control Practice

1) Once the feeling for reaching orgasm becomes strong, flex the Chi Muscle as tight as possible, breathing in deeply through the mouth.
2) Visualize the semen contracting back into the body while continually squeezing the Chi Muscle tighter and tighter. Perform this again, massaging yourself until you feel the urge to ejaculate is inevitable.
3) Once you are for sure you are going to climax, squeeze the Chi Muscle as hard as you can while breathing in through the mouth deeply. Continue to tighten the PC muscle to keep from ejaculation.
4) Visualize the semen starting over, contracting back into the brain until the urge subsides. Continue to squeeze the Chi Muscle tighter until the urge to ejaculate has vanished. Do this ejaculatory control exercise 10 times, making sure not to ejaculate during the exercise.

5) If you do ejaculate, you need to develop the Chi Muscle much more.
6) Once the ejaculatory control exercise has taken it's toll on you after 10-20 sets, perform this exercise as many times as it takes to completely exhaust the Chi Muscle. Achieve an erection and flex the Chi Muscle a few times while you massage it to make sure it is quite hard.
7) Once you have a firm erection, squeeze lightly around the penis's shaft, right underneath the head. Now, flex the Chi Muscle as deep as you can until it flutters, then unflex. When you flex the Chi Muscle you should be able to feel the penis throb.
8) Continue to do this over and over again until the erection becomes soft. Achieve another erection, and follow the directions over and over again.

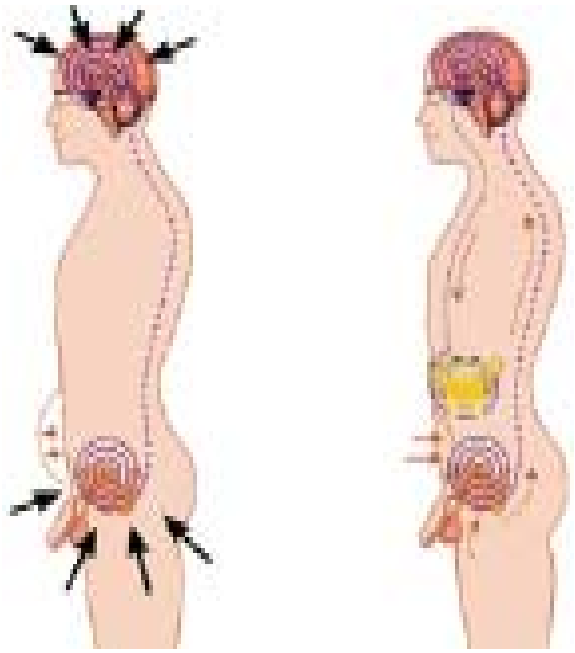


Fig. 6.7 *Ejaculatory Control*

You should perform these exercises every day or at least 4 times a week. You will find that performing them every day not only forms a better habit, but also makes you feel more fit and potent. Once again, Chi Muscle exercises are the most important exercises you can do for penile fitness and strength development. Having a strong Chi Muscle will enable you to experience a whole new level of ecstasy when making love with your partner. Imagine having the ability to actually make your erections hard and keep from ejaculating by simply flexing your Chi Muscle so tight it closes off the ejaculatory canal. If you are ready to wake up every morning with hard erections, and increase your ability to last as long as you want in bed then work on your Chi Muscle. And drawing the sexual energy through the Cosmic Orbit movement to the brain increases sexual hormones to revitalize the brain.

Breathing Exercises

1) Clear your mind of everything, including worries, problems, work, school, relationship troubles, everything.
2) Inhale through your nose as deep as you possibly can. When you feel like you've reached your lungs maximum capacity, keep trying until you cannot breathe in anymore.
3) Hold for a few seconds, and exhale through your mouth slowly, taking 3-4 seconds to fully exhale.
4) Do this for as long as you feel able, do this throughout the whole day, while driving, working, playing, etc. You will feel much more alert. See if you can do this for at least 20 minutes a day.

Buttocks Exercises

When you make love with your partner, 90% of your thrusting power and ability comes from your buttocks. This simple and easy exercise will strengthen, tone, and shape your gluteals for maximum sexual ability and performance, not to mention a better looking backside. You can do this exercise anywhere.

1. Stand up with your feet forward and about shoulder length apart from each other.
2. Standing up, flex and tense your buttocks as tight as you can. Hold for 10 seconds and release. Do this again 5 times to warm up. By now your buttocks should feel a slight burn and that is good.

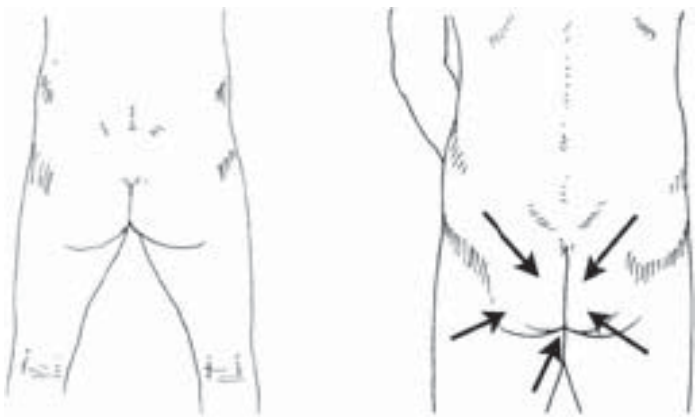


Fig. 6.8 *Buttock Squeezing*

3. Now, lay downon your back on the floor . With your hands to your side, flex your buttocks as tight as you can and hold it for 30 seconds. Once you have released, flex your buttocks rapidly without stopping until you feel total fatigue and cannot flex anymore.

4. You should feel a total burn all over you buttocks and this is what you are trying to accomplish. Rest for 30 seconds and repeat this 5 more times.
5. By now you should feel like your buttocks are totally exhausted, but the workout isn't over yet. Now, flex as hard as you want and hold it. Watch the clock or your wrist watch and hold this for one minute, no matter how hard it gets! This is where your shaping and strength is going to come from, this precise exercise. After the one minute is up, without resting, repeatedly flex and unflex your buttocks over and over again for one minute. If you can, repeat this process again, holding for one minute and flexing for one minute. You should do 4 sets of these. Do what you can for now, and keep in mind just how much you can do until you cannot do anymore. Within a month, you should be able to do 3 or 4 times as much as you can now.

Warming the Stove (For Men)

This method of increasing sexual potency is sometimes called the Deer Exercise, due to the abundance of sexual energy of the deer.

1) To perform this exercise stand in a wide stance or sit on the edge of a chair.
2) Rub the palms together until warm.
3) For men, with one hand cup the scrotum, with the other hand, rub the lower abdomen in both a clockwise and counterclockwise direction.
4) This should be done 100-300 times for optimum benefit. When the Chi moves, some people will belch or move gas.

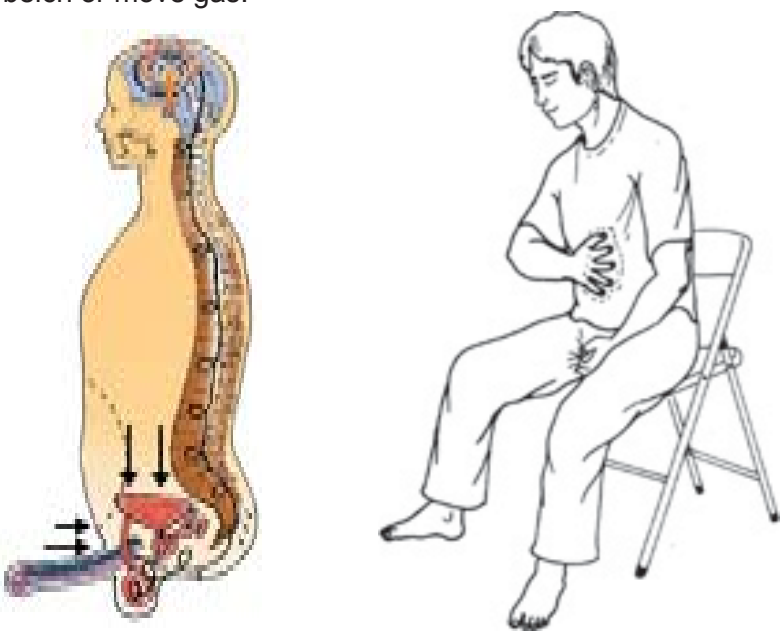


Fig. 6.9 *Warming the Stove*

Ovary Massage

The ovarian massage is the first way to transform the menstrual cycle into life force. This is a great way to bring the female sexual energy through the whole body. It also regulates the menstrual cycle and balances hormones.

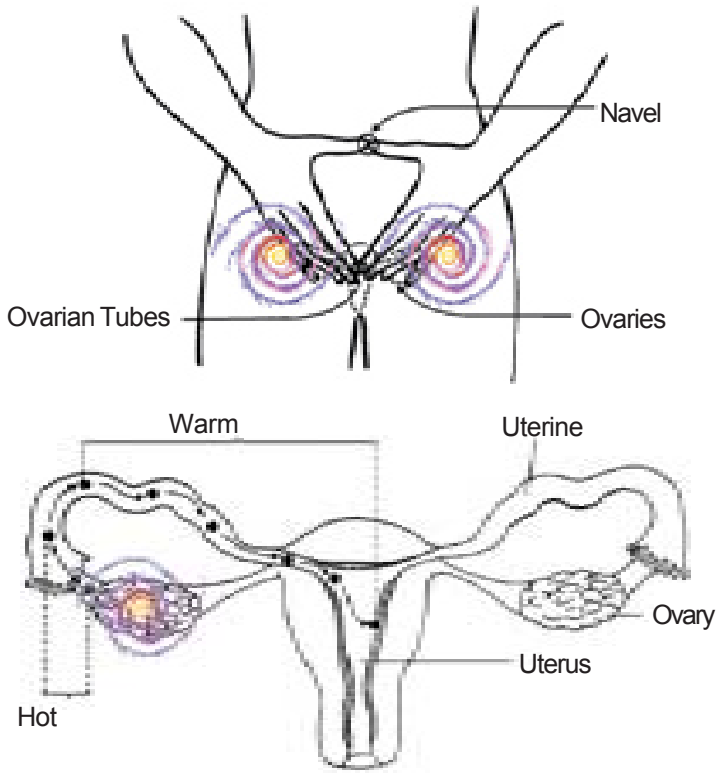


Fig. 6.10 *Ovary Massage*

1) Stand or sit upright and warm up with a few minutes of deep abdominal breathing. Massage the hands vigorously together until warm.
2) Place the hands separately over the ovaries in the lower abdomen and begin massaging the area over the ovaries in a circular clockwise motion about 36 times.
3) Reverse the direction. Next, simply leave the hands resting on the ovaries, feeling the warmth penetrate the skin, energizing the entire area.
4) End with a few Chi Muscle contractions and at least one minute of deep breathing. Do this exercise two or three times daily, in order to stimulate circulation and healing energy into these areas.

Breast Massage

1) Sit comfortably with the back straight, or stand with feet about shoulder width.
2) Rub palms together until warm, place the center of the palms firmly over the nipples and slowly massage in circles, 36 times in each direction.
3) As you massage focus your attention on the heart area, feeling the warmth of the palms radiating into the heart.

   This exercise is extremely beneficial for frigidity or low libido, because it stimulates the entire endocrine system. The breast massage should be performed daily as a way to balance the hormones and menstrual cycle. It is a good exercise to prevent cysts, tumors and breast cancer.

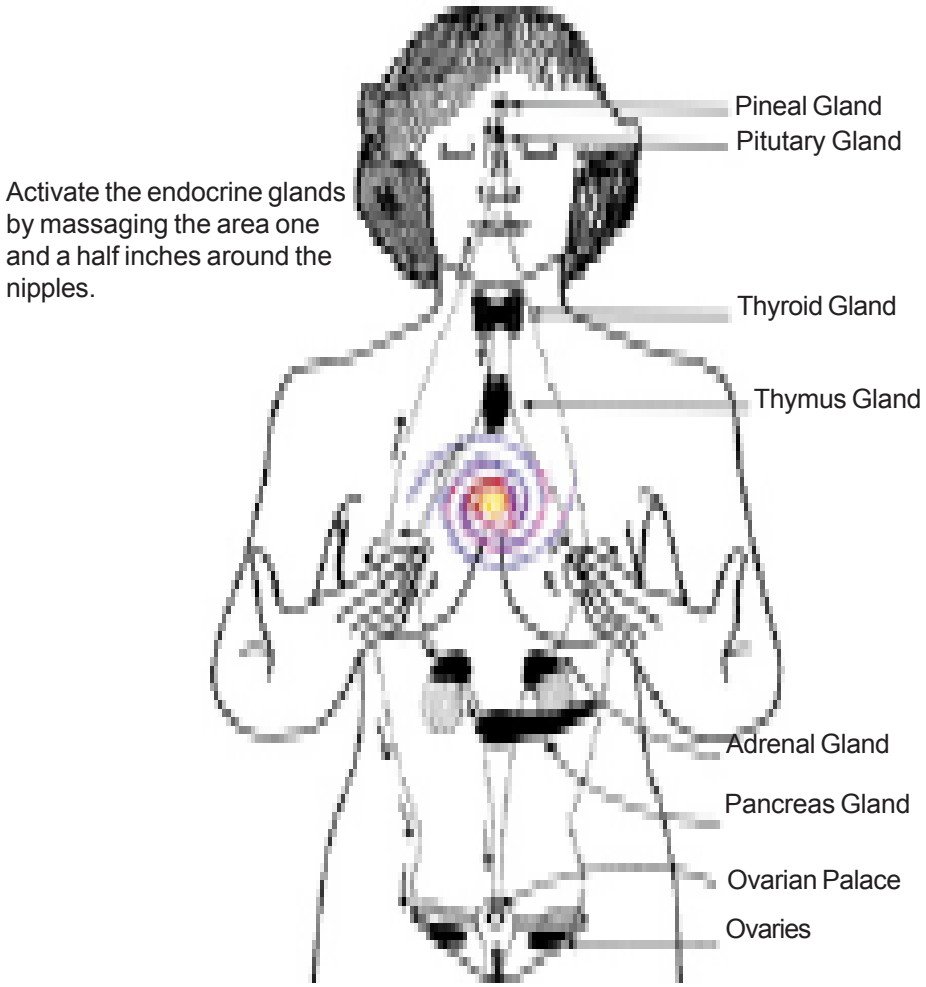


Fig. 6.11 *Breast Massage - Transforming Blood into Chi.*

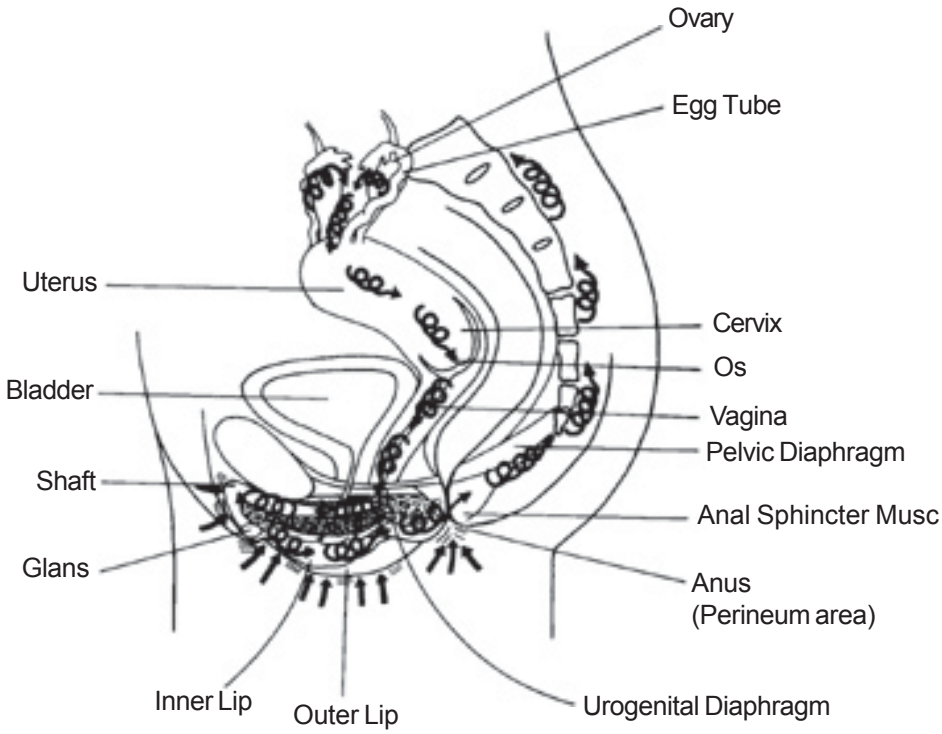


Fig. 6.12 *Ovary Breathing*

Egg Exercises and Vaginal Weight Lifting

The use of a stone egg to strengthen the vagina is a practice, which evolved in ancient China. As time went on, the secret of this practice remained in the Royal Palace and was taught only to the queen and concubines. Many who mastered the technique experienced very good health, remaining young and bountiful with sexual organs in old age as tight and resilient as those of a young, unmarried lady. Some believe that the queen and concubines practiced the technique in order to please the king while making love. Originally, however the Egg Exercise and Vaginal Weight Lifting were implemented for improving health, both physically and spiritually, since these exercises provide more power to the Chi Muscle to lift the sexual energy inward and upward where it will be transformed into higher spiritual energy.

The egg is a marvelous way to strengthen and control the Chi Muscle. It is easier to practice control of this muscle with an egg in the vagina since, as the egg moves, you can feel the direction in which the Chi Muscle moves more distinctly. Controlling this voluntary muscle means control of the many involuntary muscles in this area as well.

Also, as you master the use of this muscle of the vagina and perineum, you simultaneously tone up the lower abdomen. Thus, your performance of Ovarian Breathing, the Orgasmic Draw, and the Organs' Orgasm greatly improves, and the flow of sexual hormones increases (For more details see the book *Healing Love* by Mantak Chia).

Vaginal Weight Lifting is a very powerful practice to strengthen, in addition to the Chi Muscle, the urogenital and pelvic diaphragms. The strength of these two diaphragms is very important since these diaphragms serve as floors to the sexual organs and all vital organs. When the Chi Muscle and diaphragms are loose, Chi pressure will leak out from the organs as they stack upon each other dropping all their weight to rest upon the perineum. When strong, the muscle and the diaphragm function as before, preventing leakage of life force and sexual energies.

Egg Exercise

1. **Insert the Egg:** When you feel you are ready insert the egg into the vagina, large end first.
2. **Horse Stance Alignment:** Align your body in the Horse Stance.
3. **Contract the First Section of Vagina:** Isolate and contract the muscle groups responsible for closing the external vaginal orifice tightly. This will help to keep the egg in the vaginal canal.
4. **Contract the Second Section:** Inhale and contract the vaginal canal muscles immediately in front of the cervix so that you are now contracting two sections at the same time. Keep both points closed. There is no need to use hard muscle contractions. The strength required depends a great deal on the control of these muscles you have gained by practicing the Ovarian exercises.
5. **Squeeze the Third Section:** Slightly squeeze the egg from the middle of the vaginal canal until you feel that you have a good grip on it. Inhale and squeeze again, gradually increasing the squeeze, and then inhale more and squeeze harder. Once you feel you have a good grip on the egg, slowly move it up and down. Start with a slow motion, gradually increasing to a fast motion. When you are out of breath, exhale and rest. The resting period is very important. It is at this time that you will feel Chi build up in this area. Try to master each movement before continuing to the next.
6. **Use the Second Section to Move the Egg Left and Right:** Next move the egg left and right using the top or second section. Practice until you master this action.
7. **Use the First Section to Move the Egg Left and Right:** Next move the egg left and right from the bottom or first section. Using the mind and some muscle movement are important since you cannot move the egg with hard muscle contractions alone. There are many involuntary muscles within the vaginal canal, which the mind and Chi Muscle help to move.

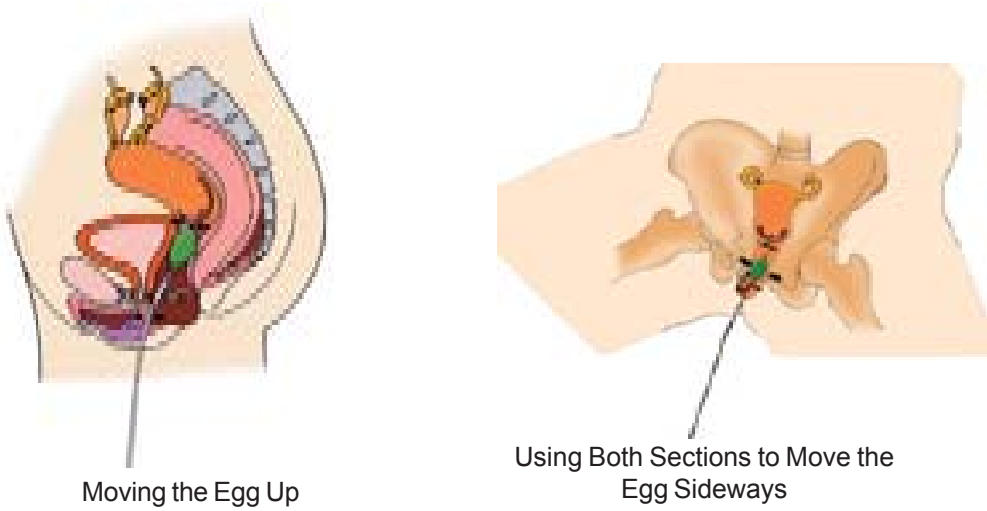
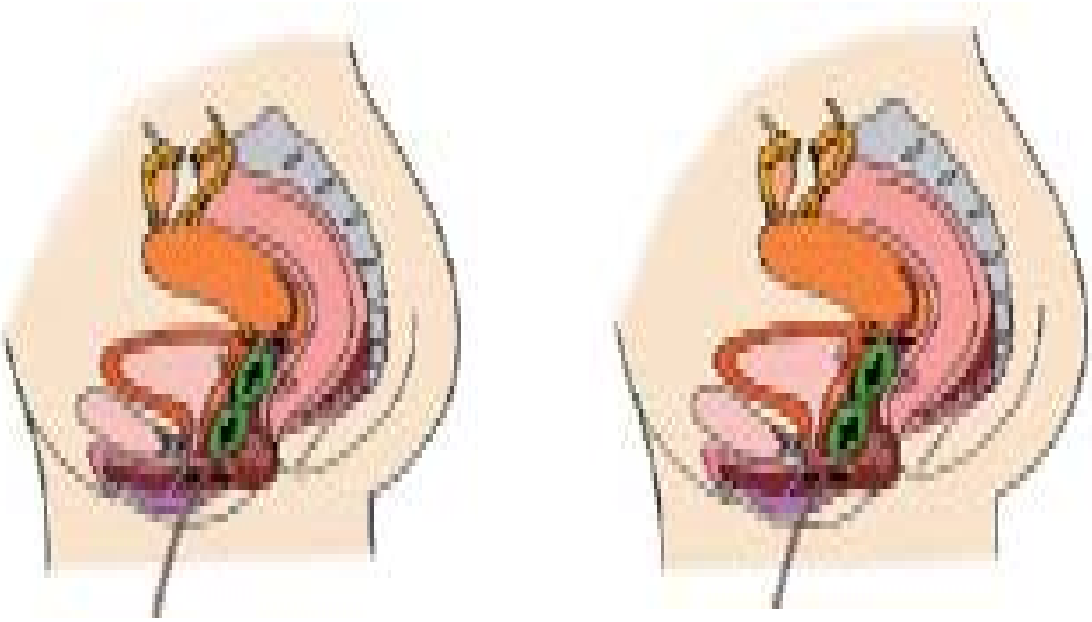


Fig. 6.13 *Egg Exercise with One Egg*

8. **Use Both Sections to Move the Egg Left and Right:** Now move the egg left and right as you wish, holding it by the top and bottom muscles. Master this before continuing to the next.
9. **Use Both Sections to Tilt the Egg:** Next tilt the egg up and down, from the top and the bottom. Master this action.
10. **Combine all Movements:** Combine all of these movements, moving the egg left and right, tilting it up and down, moving it up to touch the cervix and then down to the external vaginal orifice. Rest. All during the Egg Exercise the contraction of the vaginal canal in the area in front of the cervix connecting to the pineal gland and the external orifice is to remain constant until you have finished moving the egg. This particular Egg Exercise should be practiced two to three times per week. You may perform this very same exercise daily without actually inserting the egg by following the same sequence using the contractile strength of the vaginal muscles to suck in an imaginary egg and move it up, down, left and right.

To enhance your development you should begin using a smaller egg. Later, the larger eggs may be used to mark the progress in your “sucking” abilities. Eventually the practice of egg-sucking will become so mastered that you will be able to suck the egg into the vagina from the outside with a vacuum-like form. Such a powerful sucking activity enhances experiences in your life such as childbearing or lovemaking. Imagine the intense pleasure of your lover as he discovers your third hand while you demonstrate to him your power and skill.



Squeezing Two Eggs Apart

Squeezing Two Eggs

Fig. 6.14 *Egg Exercise with Two Eggs*

Chi Weight Lifting

Tying the String to the Weight: After the string has been passed through the egg and secured with a knot at the egg's large end, tie the weight (fishing weight to start) to the string. The weight can also be placed inside a bag or container attached to the string. The weight holder can also be used, first without any weight, and then with the gradual addition of the holding clamp and the weight. Either place a chair in front of you and rest the weight on it, or place the weight on the floor and squat down to facilitate the egg's insertion (Remember to hold the weight with your fingers).

Inserting the Egg: After you have massaged your breasts and vaginal areas in the prescribed manner, kneel down near where the weight is resting, and insert the egg into the vagina, large end first (Use a lubricant if necessary). Close the vagina, contracting the muscles around the egg to hold it.

Swinging the Weight: Swinging the weight gives the practitioner control over the amount of pressure on the groin, which is why lighter weights are recommended. The Chi from the fascial connection between the perineum and the kidneys is used to pull the weight. In the beginning swing the weights gently as you determine the amount of pressure that is comfortable for you.

Inhale as you contract the anus and perineum. Swing the attached weight from 36 to 49 times. Synchronize your breathing with each swing. Inhale as the weight swings inward, and exhale as it swings forward. Pull up against the weight internally with each forward swing, and draw the energy up to the coccyx, the sacrum and eventually all the way through the crown to pineal gland. Each completed swing back and forth should approximate one second.

After a week, try to swing, the weight for 60 counts. More pressure results from the counter-force exerted by the Chi Muscle when heavier weights are swung, but it is wiser to increase this pressure with lighter weights by adding more power to each swing. The lighter weights should be used to their maximum potential, thereby strengthening the Chi Muscle and producing more hormones.

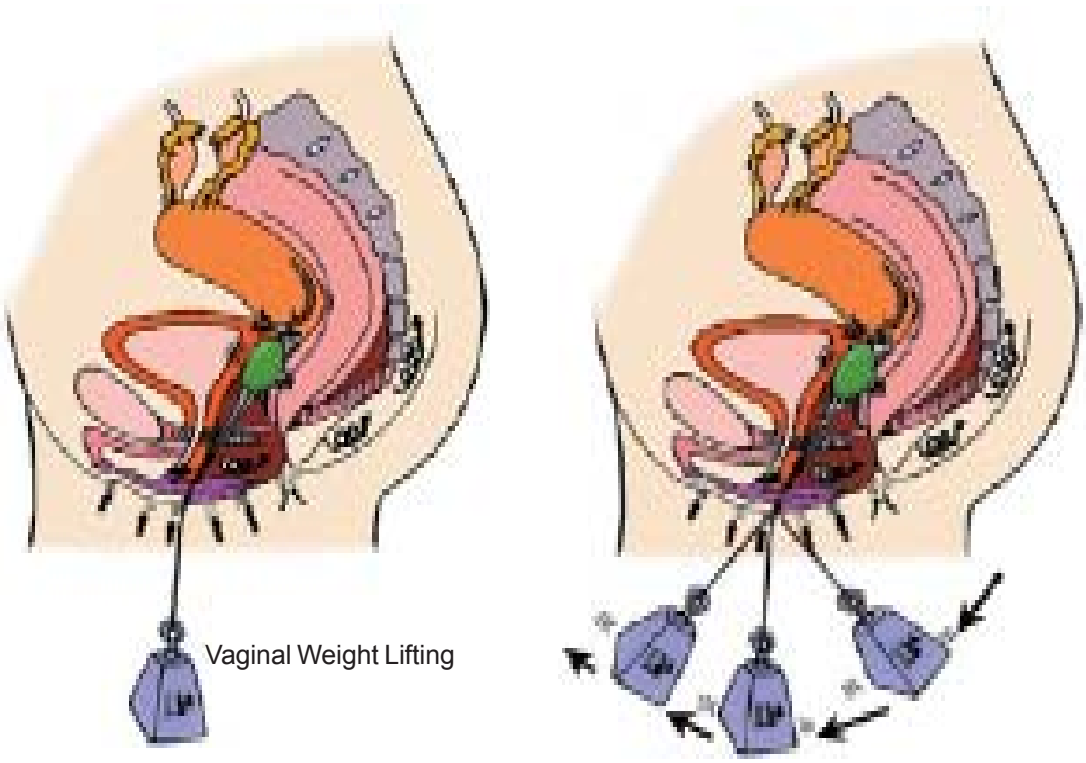


Fig. 6.15 *Chi Weight Lifting*

Physical Sexercises

The physical Sexersises are different from your normal workout. Most of these would not be appropriate at your local fitness or workout club. These exercises focus specifically on the sexual organs and pelvis. Over time, just like any other workout, the strength in this area will dramatically increase. This benefits the whole body, including the mind and the emotions, as sexual health is uplifting to the totality of the individual.

Shaking the Testicles and the Breasts

Shaking the body is a fantastic way to open the meridians. Shaking different parts of the body bring circulation and release of tension. This exercise should be performed naked or with loose clothing.

1) The feet should be a bit wider than shoulder width apart.
2) Start bouncing gently up and down as if there were a large Chi Ball in the center of your belly. Feel all the joints shake loose, the wrists, elbows, shoulders, hips and spine.
3) For men this should cause the penis and the testicles to bounce up and down and they should feel loose.
4) For women, the hopping should cause the breasts to bounce. Feel the sexual organs loose and relaxed.

Continue for at least two minutes at first and eventually longer as your stamina increases. For men, this exercise strongly stimulates the testicles, penis and prostate. For women, it stimulates the ovaries and enhances blood circulation to the sexual center.

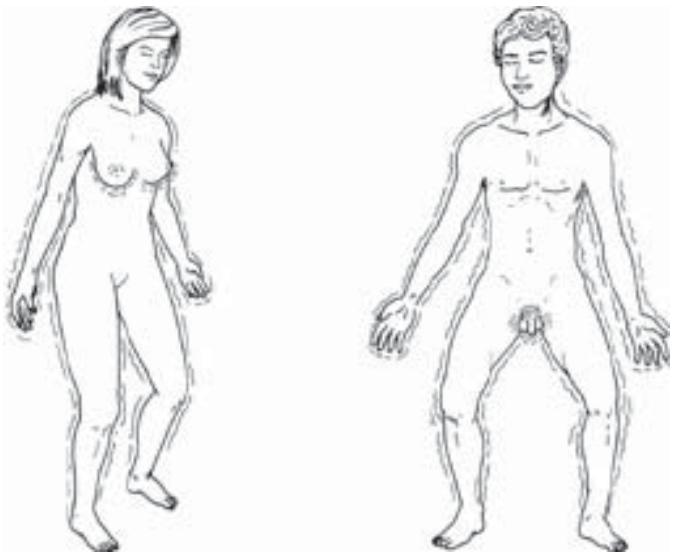


Fig. 6.16 *Woman and man shaking.*

Spiraling Hip and Tail Bone (For Men and Women)

This exercise is performed in a wide stance, with the hands on the hips. Allow the breath to be full and deep, without any specific relation to the movement.

1) Spiral the tail bone, coccyx and sacrum separately from the hips first in a clockwise direction, extending the hips forward and backwards as far as possible.
2) Reverse the direction. Let the movement be relaxed and free, feeling the joints of the hips loosen and stretch.

This exercise relaxes and strengthens the tail bone, hips, and lower back, allowing the sacrum more range of motion and increasing circulation in the sexual center. Spiraling the tailbone stimulates and stretches the nerve fibers in the sacral region, activating the hormones of the testicles, ovaries, prostate, uterus and other sacral glands. As the Taoists say, the gentials get stuck together in the sacrum. By spiraling the hips it will open this area up and unlock the genitals.

Fig. 6.17 *Spiraling into the coccyx and sacrum.*

Secret Taoist Method of Urination (For Men and Women)

Another exercise that greatly strengthens the Chi Muscle is the urination exercise. The practice of this exercise is also designed to strengthen the kidneys, an organ and tendon according to Chinese medicine that regulates sexual function. Therefore, in order to increase one's sexual potential, it is very important to strengthen the kidneys. This exercise helps cure premature ejaculation and impotence when practiced over a period of time. It is a simple exercise that consists of stopping the flow of urine by contraction the PC muscle while going to the bathroom.

1) When you have a full bladder , begin by urinating normally, then contract the Chi Muscle, stopping the flow of urine.

2) Then exhale pressing the lower abdomen and feel pressure on the bladder. Then start to urinate and contract the Chi Muscle.

3) Hold for about three seconds and resume urination. While doing this exercise lower and raise up from your heels three to five time per urination.

4) Doing this exercise a few times a day greatly strengthens the lower diaphragm, all the body tendons and sexual energy.

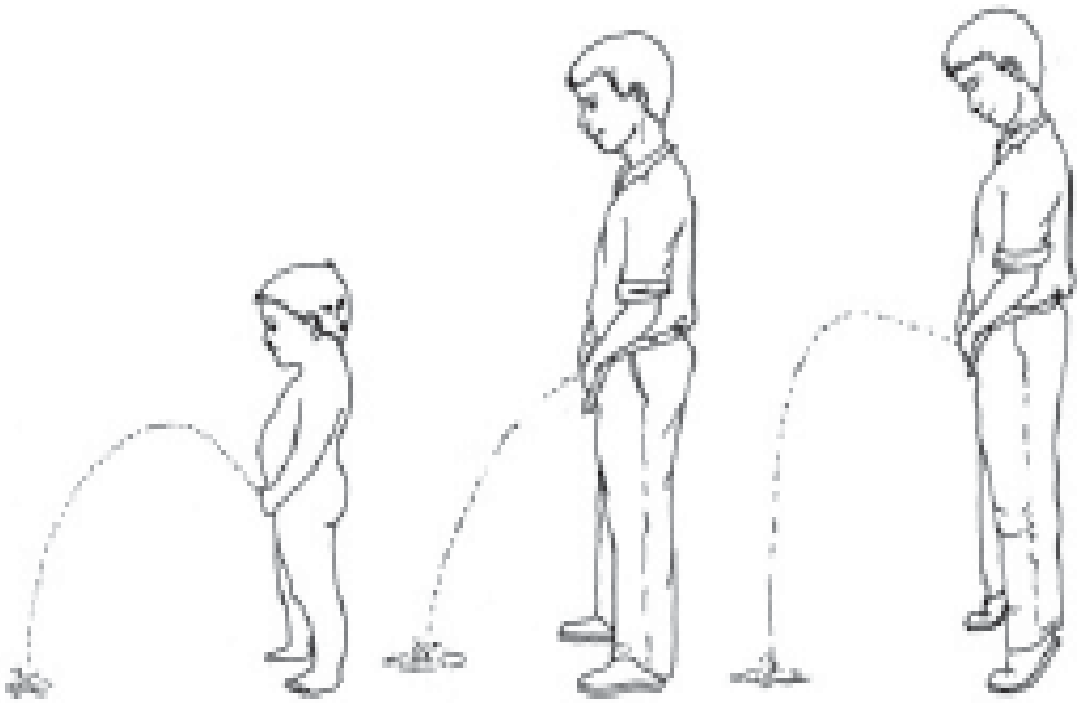


Fig. 6.18 *Method of Urination*

Sun Practice (For Men and Women)

Being naked in the sun is a wonderful way to re-energize the whole body. According to the Taoist masters our bodies can in fact absorb energy from nature. That is why we feel so much more alive at the beach, in the woods or near a lake. For example, just think about where you usually want to go on a vacation. It is probably somewhere out in or near nature, because of the abundance of energy.

A powerful Taoist exercise is to absorb the rays of the sun into the genitals. Find a place, in your back yard, or even in your house where the sun can enter through an open window. Sit or stand comfortably, allowing the rays of the sun to shine on the genitals. Feel the warmth energize and relax the pelvic area. Breathe deeply into the lower abdomen. The morning or late afternoon sun is preferred to the midday sun. The sun around the mid-day (11 a.m. to 1 p.m.) is too strong. The practice only takes about five to ten minutes and not too much longer. Burning the parts of your body where the sun normally doesn't shine is not much fun, so be careful.

Fig. 6.19 *Sun Practice*

Chapter VII
Sexual Reflexology and Physical Characteristics

The study of Sexual Reflexology and physical characteristics will help you determine the sexual potential and physical compatibility of another person. Sexual Reflexology enables you to evaluate a person's internal energy levels, as well as the size and shape of their sexual organs, by combining and observing the external characteristics, beginning with physical appearances of the face, and continuing to other bodily features such as the hair, neck, fingers and hands, and color and structure of the body. The following section will help reveal the strengths and weakness of a person, as well as compatibility between couples.

All external features of the body are helpful in determining the sexual compatibility of partners and one's own internal energy. Yet, it is important to remember that these are only guidelines and many factors need to be taken into consideration before one can really understand another person's capabilities. With practice, one can become skilled at recognizing the sexual inclinations and capacities of others, but in the beginning, the recommendations in this book are merely suggestions.

Physical Features

The Taoists use poetic phrases to indicate the beauty and sacred aspect of the body and sexual organs. The terms used here demonstrate the reverence for the sexual organs and the physical body itself. In the West, sexuality is often used in a derogatory sense, noting that the sexual organs are something dirty and degrading. This attitude creates an array of emotional problems revolving around our sexual nature and relationships in general. If we start to view our sexual energy and sexual organs as sacred, as a source of vital energy, we experience great satisfaction with others and ourselves.

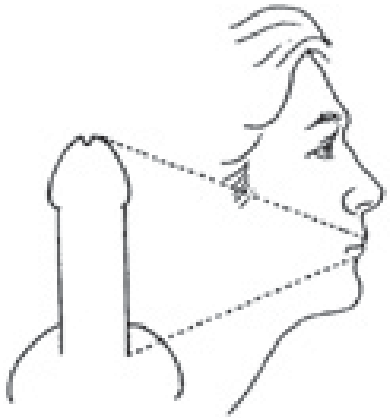
Here is a list of the Taoist terms for our sexuality:

Vagina	Hidden Palace Valley of Solitude Celestial Palace Path of Yin Cinnabar Cave Vermilion Cave
Breasts	Bells of Love
Penis	Jade Stalk Yang Peak Ambassador
Testicles	Dragon Pearls
Intercourse	Clouds and Rain
Clitoris	Precious Pearl Yin Bean Jade Terrace
Cunnilingus	Sipping the Vast Spring
Fellatio	Blowing the Flute
Orgasm	High Tide

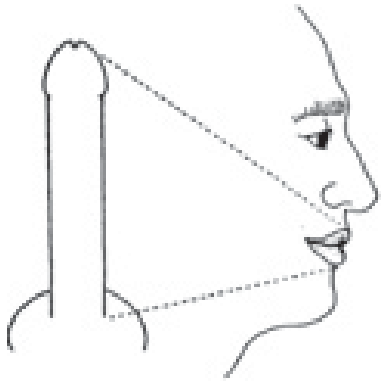
Facial Features

Lips

For some men, a woman's lips may be one of the most attractive physical features. It is said that when a woman wins her lover's affection with her eyes, this love is an intellectual affair. But when she wins her love's affection with her lips, it is a passionate affair. Thus the eyes indicate a more intellectual orientation, while the lips indicate a more emotional orientation. In addition, although it can be said that a man or woman may use their eyes to seduce their partner, it is the lips which will determine the nature of the relationship.



Thin small lips indicate a small penis.



Wide and thick lips indicate a large penis.

Fig. 7.1 *Size of Lips*

The shape of the lips reveals the health of the body. Some lips are full, not necessarily large or small. They have a curved symmetric outline, without drooping or slackness. This reveals strong, healthy organs and sexual energy. When the upper lip arches upward and the lower lip folds downward, creating a slight hollow under the lower lip, this indicates the harmony between the ring muscles and internal organs.

The upper lip relates to the nature of giving love. A protruding upper lip denotes a more giving personality.

The lower lip relates more to the nature of receiving love. A lower lip that is larger than the upper lip will be more likely to enjoy receiving affection than giving it.

Fig. 7.2 *Size and Shape of Lips*

Erotic kissing, involving the lips and tongue, is a part of love play. When couples kiss with their tongues in what is commonly referred to as a “soul kiss” or “French Kissing”, the tongue directly reflects and connects their hearts, while their lips give and receive affection from each other. Also, the Governor and Functional Channels of each partner both connect at the lips and tongue making, as discussed earlier, a complete circuit of energy flow when the couple kisses.

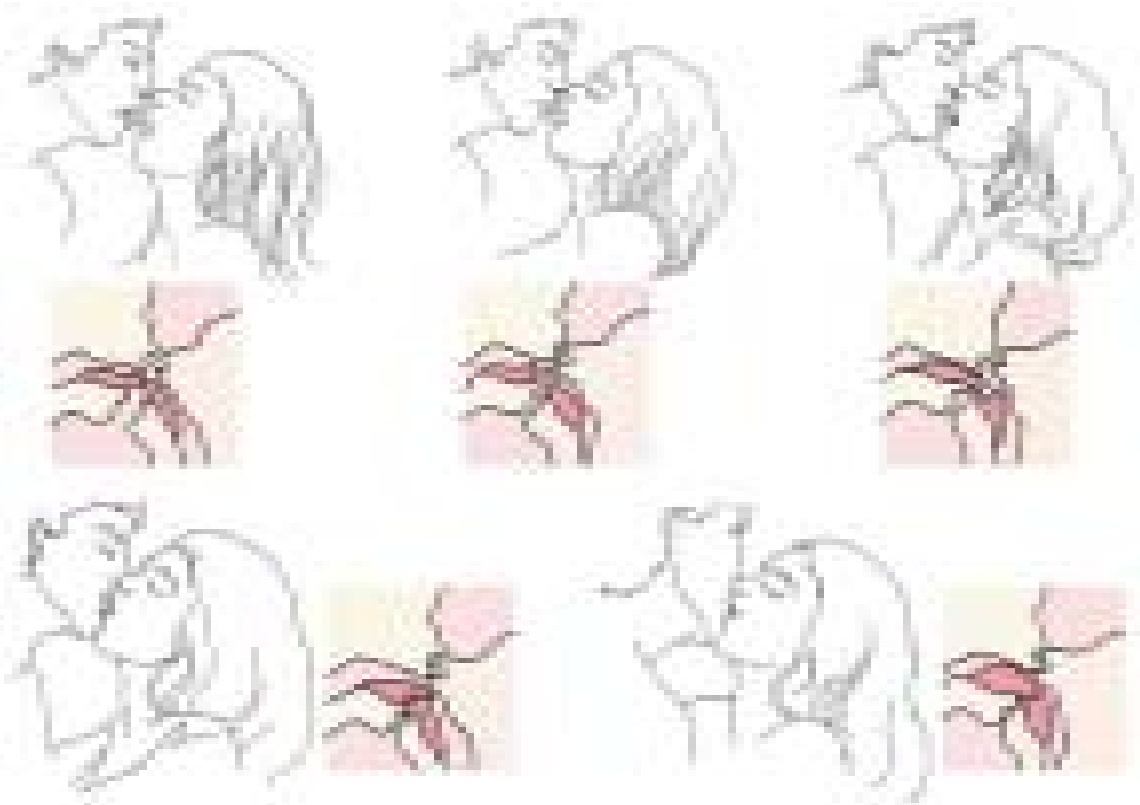


Fig. 7.3 French Kissing

(1) It is believed that the upper lip relates to the nature of giving love, while the lower lip relates to the nature of receiving love. A person with a more protruding, plusher upper lip is usually more giving or aggressive in giving affection, while a person with a fatter, plusher and protruding lower lip will be more likely to enjoy receiving affection than giving it.

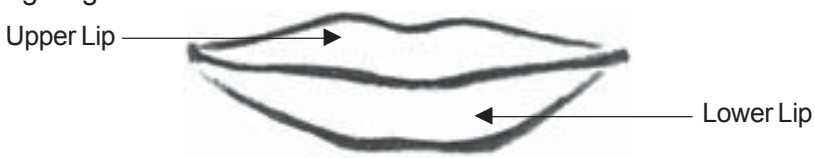


Fig. 7.4 *Upper and Lower Lips*

(2) A woman or man whose lower lip is more sensitive to touch will usually fall in love first and enjoy sex before they engage in an intellectual relationship with their lover.
(3) To be effective in the stimulation of one's partner, the lips must be moist. A sign of sexual arousal in both men and women is when either partner licks their lips, indicating that they are ready for a sexual encounter. In the classics this was called "preparing the field to be ploughed".

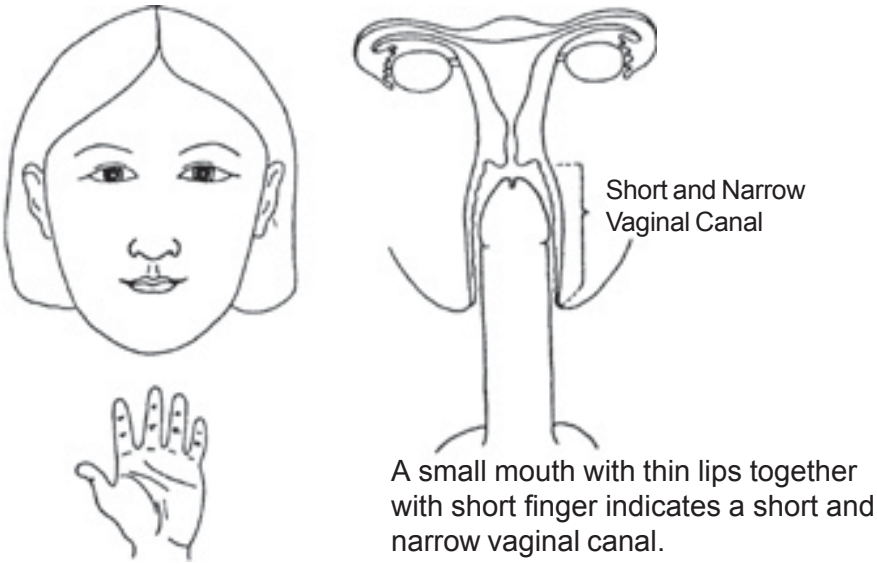


Fig. 7.5 *Size and Shape of Vaginal Canal*

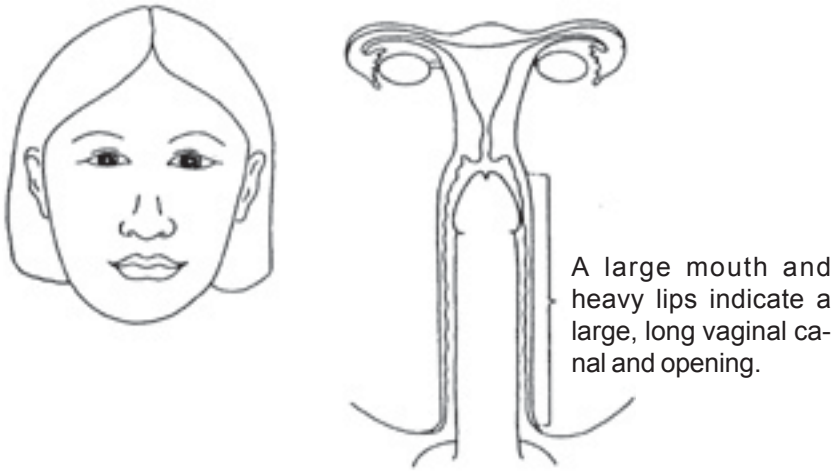


Fig. 7.6 *Long Vaginal Canal*

(4) The mouth and genitals are considered opposite poles of the body and as such, one is regarded as the reflection of the other. Thus, when a person talks incessantly, this indicates that the person is sexually frustrated and the energy is channeled through conversation, rather than sexual expression.
(5) If the person has a large mouth, it indicates that the person has a tendency to scream aloud during orgasm and has a large capacity for sex.

Fig. 7.7 *Large Mouth*

Eyes

There is a strong connection between the eyes and the sexual center. The ring muscles in the eyes correlate with the ring muscles in the urogenital diaphragm. A wink between a couple, for example, affects the ring muscles around the sexual organs; hence the erotic significance of the wink in folklore. Winking gently activates the sexual energy.

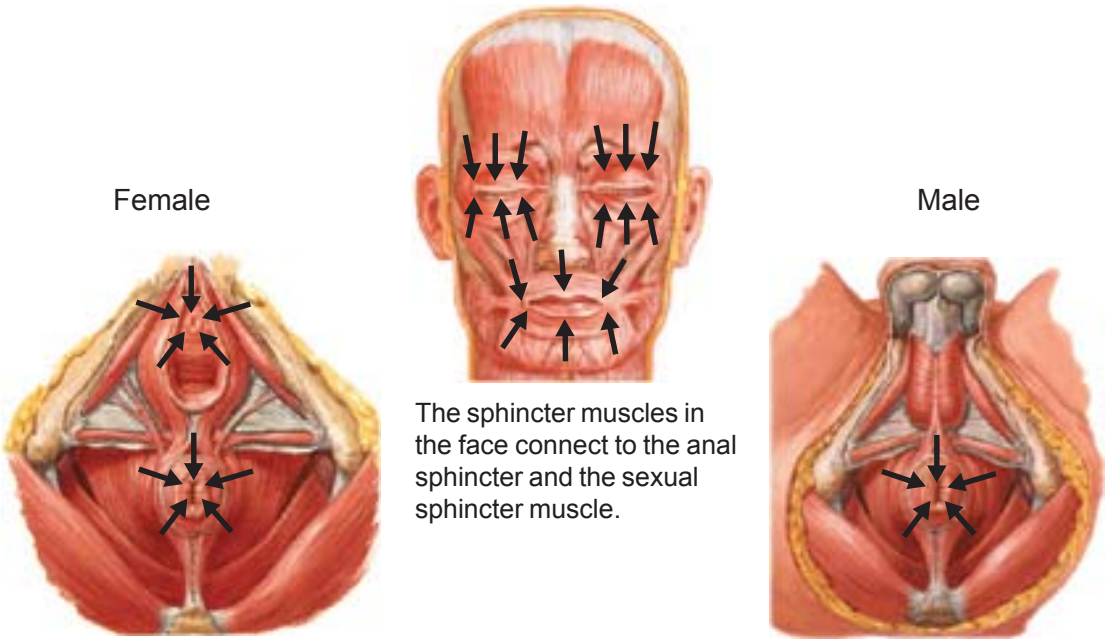


Fig. 7.8 *Ring Muscle of the eyes and Sexual Organs.*

In Chinese medicine, the eyes are considered the windows to a person's soul and physically are connected to the liver. They can be used for diagnosis of internal disorders, but are also the vehicles through which love and sexual potential can be detected. Some of the sexual behavior signals emanating from the eyes, according to Chinese analyses, are:

(1) Dark pupils indicate a very passionate person.

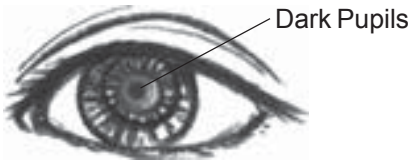


Fig. 7.9 *Dark Pupils*

(2) A peaceful appearance in the eyes of a woman, along with a slightly flushed red color (perhaps faintly pink, but not bloodshot) of the sclera, or white part, indicates a passionate individual with an abundance of sexual energy, good blood circulation and healthy internal organs. Additionally, the woman's vagina will be warm due to her passion and sexual desires.

(3) According to Chinese sexology, a person with big eyes makes a better lover. Since the eyes are an organ of expression, they can emote a feeling or communicate better than speaking.

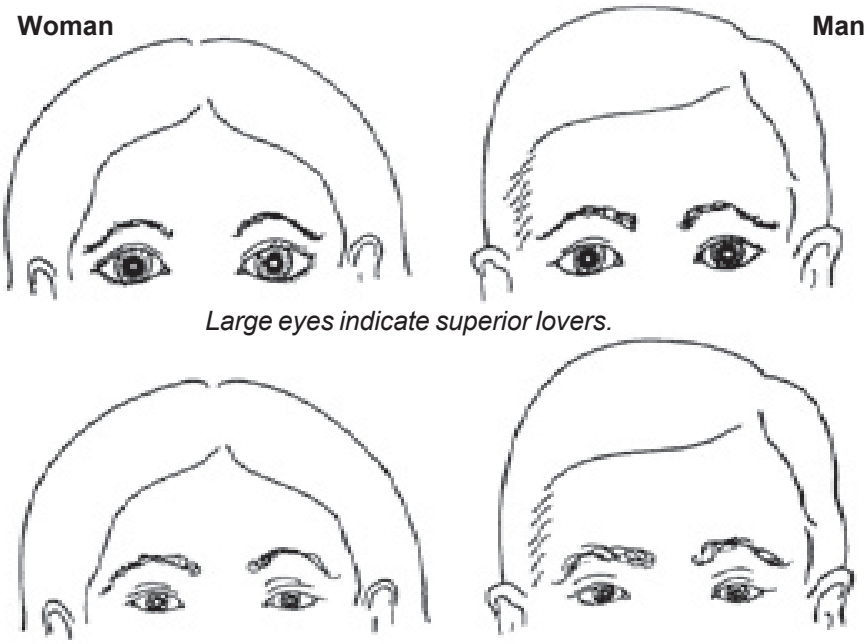


Fig. 7.10 *Size of Eyes*

(a) If a man has large eyes, the Chinese consider him an expert in love affairs in that he is more emotionally involved with sex. On the other hand, a man with small eyes is more rational and intellectual in dealing with sex and women.
(b) Women with big eyes are usually more outgoing and open-minded. This may make her more receptive to male advances. A Chinese proverb quotes, "A lady with big eyes cannot be a poor sex partner." Since the eyes are the windows of the soul, big eyes indicate a love of life, action and passion.

Eyebrows

The eyebrows, according to Chinese Taoist sexuality, express one's inner feelings of love, inner personality and inner sexuality. The eyebrows are full of expression especially in women, usually revealing their emotional state.

Observe the nature of the eyebrows in different situations: shocked, scared, surprised, etc. Notice how they show the state of the emotion being expressed; e.g., expanded eyebrows indicate sorrow or worry. "Flying and dancing" eyebrows indicates joy and excitement. Small and narrow eyebrows indicates sorrow and sadness.

In the Orient, the expression, "making eyes and eyebrows at someone" is used, as opposed to "making eyes at someone," the Western expression. Observe pictures portraying characters from the Chinese or Japanese theater, (e.g. Kabuki theater), and you will see elaborate make-up, especially emphasizing the eyes and eyebrows. Modern women also use make-up on their eyes and eyebrows and many pull hairs from their eyebrows to create a clean shape. The cosmetic industry in the West has provided them with a wide range of eye make-up products: eyeliner, eyeshadow, eyebrow pencils, eyelash curlers, etc. Every imaginable color and all kinds of glitter and sparkle is available. This illustrates that the eyes and the eyebrows are now, as in the past, important expressions of love and attraction.

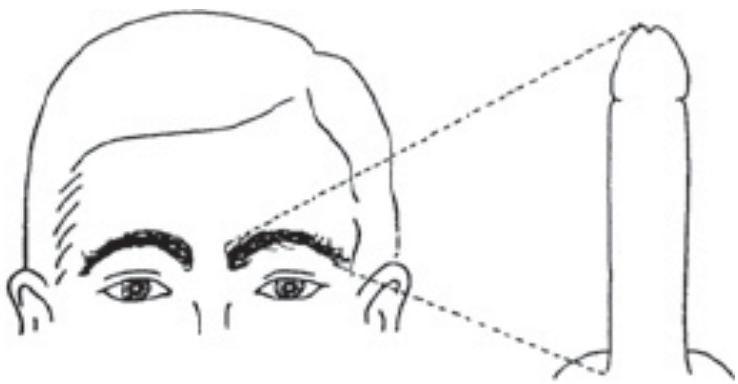


Fig. 7.11 *Full long eyebrows indicate a strong, long penis.*

Women from East and West express the fact that they observe the man's eyes as one of the prerequisites of being with him. He has "smiling eyes" or he has "bedroom eyes", or eyes "that look right through me" are not uncommon expressions in sexual attraction. If a man has eyebrows shaped like crescent moons, he is more sexually oriented than intellectually oriented.

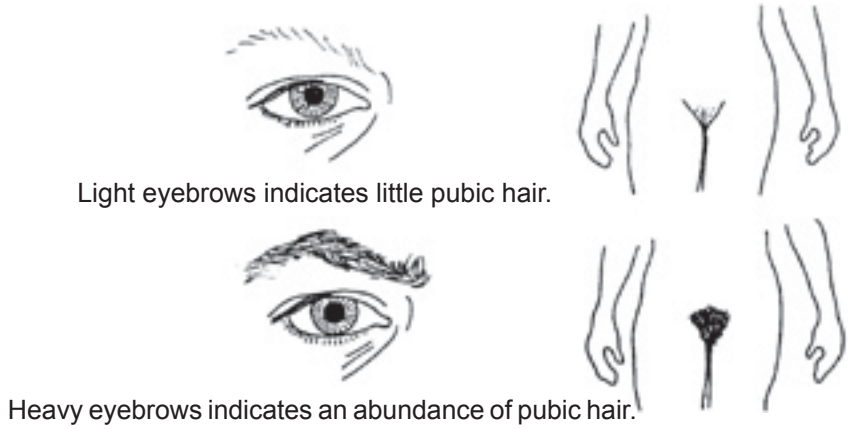


Fig. 7.12 *Shape and Thickness of Eyebrows*

Space between the Eyebrows

The space between the eyes indicates levels of consciousness. It should be wide enough for another eye to fit there. As one ages, this space becomes wider as if to accommodate another eye, indicating that the person has become wiser and more tolerant. This space between the eyebrows, corresponding to the third eye center (or pituitary gland center), also corresponds to the sexual organs. The average space between the eyebrows is one and a half to two index finger breadths. When this space is wider it indicates for both men and women a strong sex drive.

Fig. 7.13 *When the space between the eyebrows is wider than two fingers widths, it indicates a very strong sex drive. In women, a wide space also means her vagina is wide.*

Teeth

According to the ancient Taoist physicians, the aging process begins with a decline in the kidneys and sexual organs energy, manifesting itself in failing eyesight, decaying teeth, receding gums, inflexibility of the spine and finally a decline in the person's sexual potential.

The incisor teeth or "frontal bones" in Chinese medicine, are believed to be associated with the kidneys. Since the kidneys are responsible for our sexual power or strength, it follows that the incisors are indicative of a person's sexual potential. The stomach meridian is also reflected in the upper incisors. This is significant because the stomach and spleen together are called an "Ocean of Food" from which all the organs and ultimately, the body derive nourishment.

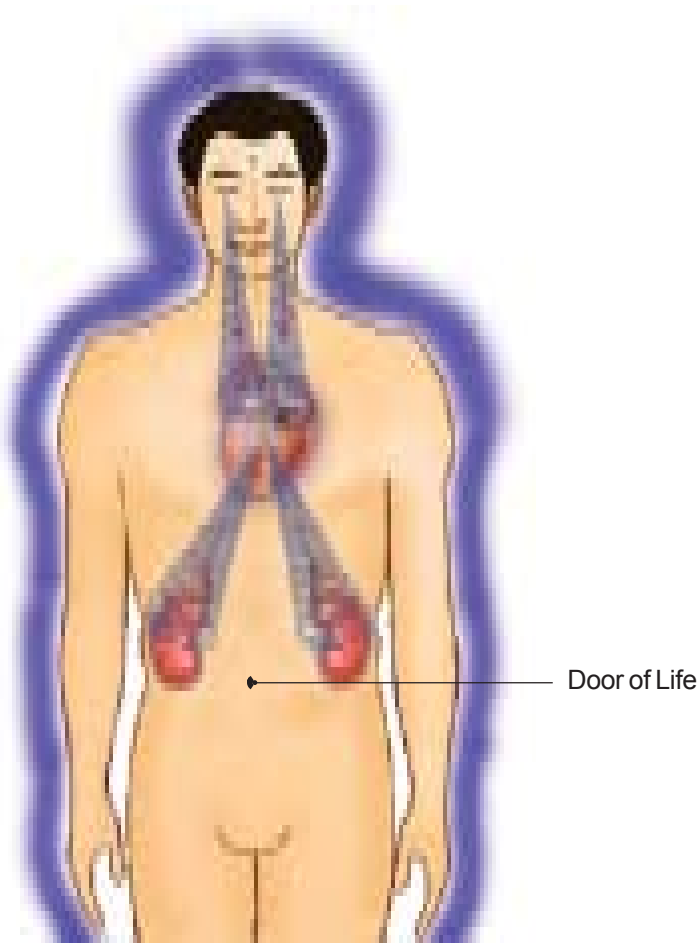


Fig. 7.14 *Kidney Point - Door of Life*

Incisors, canines and molars should all be observed from a sexological point of view. The size of these teeth is important in judging the sexual potential of that person.

(1) A person with large teeth will have a rough head of hair or body hair. This person will be passionate and sexually aggressive.
(2) A woman with tiny, beautifully arranged teeth will have strong and beautifully arranged genitals, and will be very sexually rewarding for her partner.
(3) A man with a good set of teeth usually has strong kidneys and consequently, strong sexual power.

Large teeth indicate a passionate and sexually aggressive personality.

Small teeth indicate a tight vagina.

Fig. 7.15 *Size of Teeth*

Jaw Lines

A strong jaw line with good definition is indicative of a strong sexual potential for both the male and female. A person without a strong jaw line (e.g. a double or triple chin), no jaw line or weak jaw possesses a weaker sexual potential.

Double Chin: Weaker sexual potential Square Jaw Strong Jaw

Fig. 7.16 *Jaw Lines*

Cheeks

For the female, the cheeks are second to the lips on her face in importance in sexuality. Kissing her lips is moments away from kissing her cheeks. The cheeks reflect the kidneys in Chinese Physiognomy. When her cheeks, the lower side of her face, are full, wide and muscular (i.e, firm, not loose), she has strong sexual energy.

Fig. 7.17 *Cheek Size*

Ears

The ears are sexually symbolic appendages, especially for a woman. By studying a woman's ears, a man will be able to determine not only the position of her vagina, but also the size and shape of it in addition to aspects of her inner personality all at once. The woman on the other hand, can determine if a man is strong, robust and healthy from his ears. She will also be able to tell if he is going to live long, be wealthy, etc., all by observing the shape and coloration of his ears.

A. This small ear indicates deficient kidneys' energy and weak sexual potential.

B. An ear that is thick and fleshy all around the rim, is a sign of good health and strong sexual potency.

C. Large ears with fat lobes that protrude from the head indicate good sexual potential and strong kidneys.

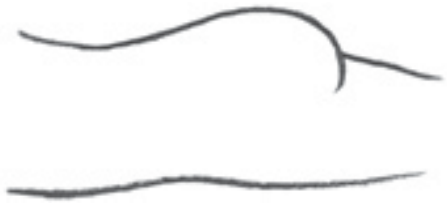
Fig. 7.18 *Size of Ears*

The ideal type of ear is one which is thick and meaty all around the circumference. The color of a healthy ear is pink and slightly transparent looking. This is a sign of good health and strong sexual potential. If the woman is shy and her ears turn red, this indicates good health. If her ears look transparent, this indicates good health, a warm personality and good sex potential, especially if they turn redder than her complexion at times of embarrassment or sexual excitation.

If a man's ears turn redder than his face, this indicates great sexual potential. Large, fat-lobed ears that protrude from the head also indicate good sexual potential, as well as strong kidneys and a strong constitution. He will be supplied with a great deal of kidney Chi.

A person with thin and smaller ears will be deficient in kidney energy and have weaker sexual potential.

Buttocks



A buttock dipping down indicates strong sexual drive.

A big buttock indicates a strong, healthy, good wife and mother.

A sharp upper buttock indicates a weak sex drive.

A small buttock with rounding up and down indicates a medium sex drive.

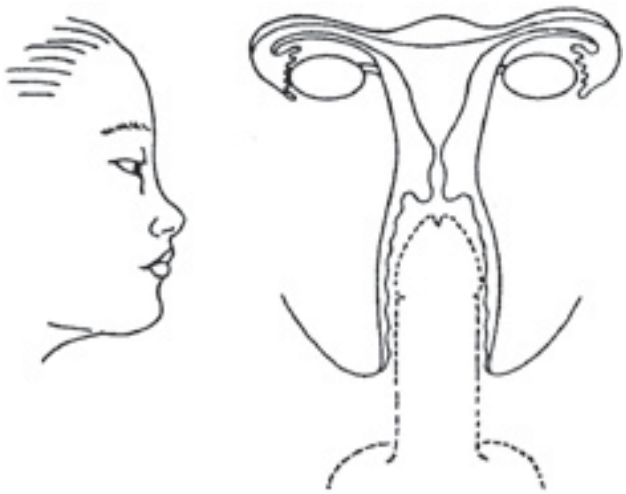
Fig. 7.19 *Buttock Size and Shape*

Nose

The function of the nose, being the instrument of breath, is crucial to a healthy vibrant body. The nostrils can activate all the sphincters (ring muscles) of the body. For example, when a healthy individual is sexually aroused, the nostrils flare open in conjunction with the breath. This activates the energy of the entire body.

Fig. 7.20 *A long nose indicates a long penis.*

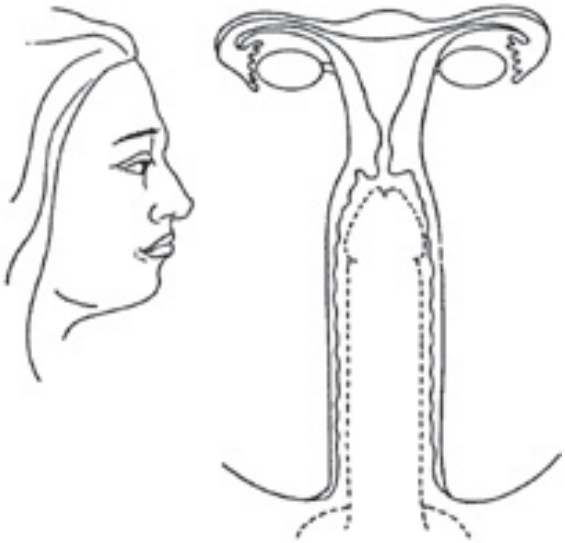
(1) A woman with a small nose has warmth and also the potential for many sex partners.



If the nose is small and flat the vagina is wide with a short channel.

Fig. 7.21 *Size of the Nose*

(2) A woman with a fine, thin, bony, sharp-lined and sharp-tipped nose is more nervous, more sensitive, loses her temper easily and has an erratic personality.



If the nose is long it indicates a deep tubular vagina.

Fig. 7.22 *Size of the Nose*

(3) A woman with a broad flat nose is more likely to be quieter, more domestic and dependent on a man.
(4) A woman with a hawk, or hook-shaped nose is full of energy, sexually aggressive and possibly fierce in nature.
(5) A woman with a depressed root or base of the nose is very aggressive and very emotional.

The small nose indicates a warm personality.

The broad flat nose indicates a quiet, domestic and dependant personality.

Fig. 7.23 *Size and Shape of the Nose*

The 'hawk' or hooked nose of the energetic and often sexually aggressive personality.

The fine thin bony nose indicates a sensitive, more nervous and often erratic personality.

Fig. 7.24 *Size and Shape of the Nose*

In Summary: Facial Features of a Man

(1) If his lips are wide and thick, it is an indication of a bigger penis.
(2) Thin, small lips indicate a smaller penis.
(3) A thick flat nose indicates a thick penis shaft.
(4) A long nose indicates a long penis.
(5) Deep eyes with thin-skinned eyelids indicate a long penis.
(6) A full long eyebrow indicates a strong, long penis.
(7) If the area of the ear's conch, referred to by the Taoists as the "ditch of the ear", is deep-set, it is an indication of a strong penis of good size.
(8) A large, thick neck on a man indicates a very strong and thick penis.

In Summary: Facial Features of a Woman

"We enter this world through the portals of the Jade Gate, and once born we seek forever to return. This eternal truth holds a message: That man's joy and vigor come from the same place as his creation."

- Ming Dynasty anonymous poem

(1) If her mouth is small in width with thin lips, she possesses a short and narrow vaginal canal. Conversely, a woman with a large, wide mouth will have a large, long and wide vagina.
(2) If she has thick lips, her vaginal canal is wide at the entrance and large.
(3) If her lips protrude, her vagina is elastic, in that it can also expand to accommodate a larger penis. It is considered to be an elastic and "moving" vagina with ample lubrication.

(4) A woman with tiny, beautifully arranged teeth will also have very strong and beautifully arranged genitals. Her vagina can accommodate the penis in a perfect and tight way with no empty spaces, permitting maximum contact and friction for maximum pleasure.
(5) If her nose is small and flat, her vagina is wide but the canal is short.
(6) If her nose is long it indicates a deep, tubular vagina.
(7) If a woman has a strong lower chin, no extra jowls and is muscular looking, it reflects a strong genital system, beautifully arranged and a tight muscular vagina. Remember the proportionality and strength of the body suggest the size and shape of the genitals.
(8) A woman with a slim face and muscular lower cheeks will have a vaginal wall that is thick and full of muscles.
(9) Dimples indicate a short and small vagina with expanding capacity. This type of vagina can expand to accommodate a larger penis.
(10) Protruding eyes indicate that the vaginal canal is short.
(11) If she is born nearsighted it is an indication of a short vaginal canal.
(12) If the eyes are deep set, this indicates that her vaginal canal is deep or long.
(13) If her eyes are moist, or sparkling, it means her vaginal lubrication is ample. If her eyes are dry, it means she has less vaginal lubrication, that is, the vagina is more on the dry side.
(14) A full, long, moon shaped eyebrow reveals a healthy, strong vagina with a long canal. Also, when the woman is having her period, the hairs on her eyebrows will stand up more than they normally would.
(15) Sparse eyebrows on a woman indicates she has little pubic hair. If she has heavy eyebrows, she has more pubic hair.
(16) A wide space between the eyebrows for a woman means her vagina is wide. When sexually aroused, this space can be observed to be wider than usual.
(17) The shape of the “ditch” of a woman’s ear (in the conch area) corresponds to the shape of her vagina and its size. A deep-set ear ditch is healthy, indicating a strong vagina.

Massaging the Face

Massaging the face can be very relaxing and enticing. Opening the energy in the face activates the energy in the sexual center. Remember that the face and the sexual center are connected through the ring muscles; when one is stimulated so is the other. Notice all the facial expressions when one is sexually excited! By stimulating the sexual center the facial expression will change and reflect this excitement. Now, the opposite is also true. Stimulating the face can be very erotic and stimulating to the sexual center. Have your partner lie in your lap or between your legs so that it is easy to massage the face. No formal techniques are required, just good intention and a soft touch. Begin

exploring your partner's face with a light and gentle touch. Massage around the eyes, across the forehead, over the cheeks and around the lips. Feel the unique quality of the face. Kissing the face is another way to open the connection between the face and the sexual center. Softly kissing the cheeks, the forehead, the eyes and the nose is very sensual and stimulating.

Fig. 7.25 *Facial Massage*

Hands and Fingers

In Chinese sexology, the middle finger is considered most important in the man, while the pinkie or little finger is most relevant to the woman's sexuality. It is believed that a person with a long middle finger has strong sexuality, while in a woman there is a close relationship between her pinkie finger and her sexual energy. If the pinkie finger is long, she is in possession of great sexual power, her energy will be plentiful, and she will be high-spirited. The pinkie finger is associated with the heart meridian and has a strong energetic connection between the emotions and the sexual center. For men, the middle finger is associated with the pericardium or the circulation sex meridian and is associated with the yang aspect of the heart.

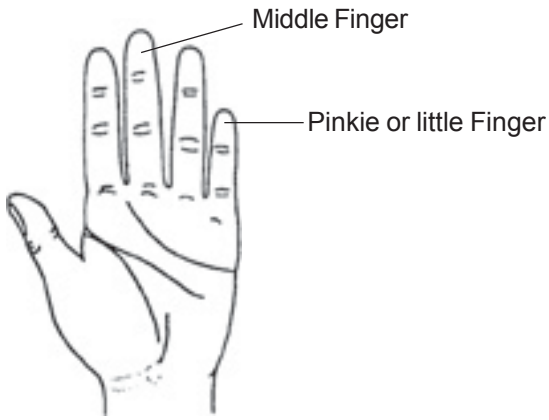
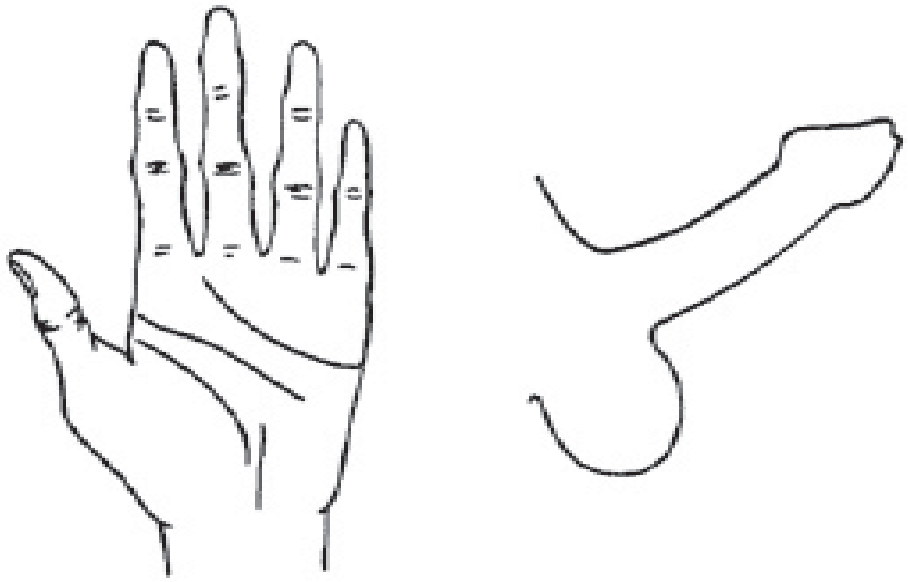


Fig. 7.26 *Finger Points*



Thin fingers are an indication of a thin penis.

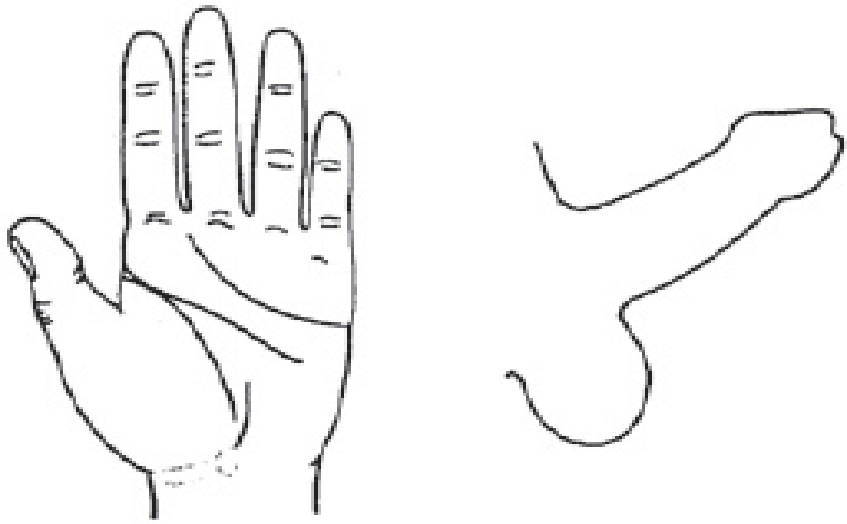
Fig. 7.27 *Size and Shape of Fingers*

Frequent cold hands on a woman means a Yang deficiency; conversely, warm hands indicate a great abundance of Yang energy. A woman suffering from a Yang energy deficiency experiences this deficiency throughout her body, possibly including her vagina. Being cold may reduce her excitability and her size. Thus, a woman with cold hands may not be as passionate as one with warm hands. In having Yin energy in excess, she may have vaginal lubrication, but she may have relatively less vaginal dilation.

Fingers of Man

The size of a man's fingers and thumb reflects the size and shape of his penis. When discussing size and shape, it is important to remember that no one size or shape is better than another. What is important is that the size and shape be in harmony with your partner. The most important factor in sexuality is the quality of our internal energy.

(1) If all of his fingers are fleshy, wide or thick, it is an indication of a thick penis.
(2) If all of his fingers are thin, it indicates a thinner penis.
(3) Long fingers, especially the first finger, indicate a long penis.

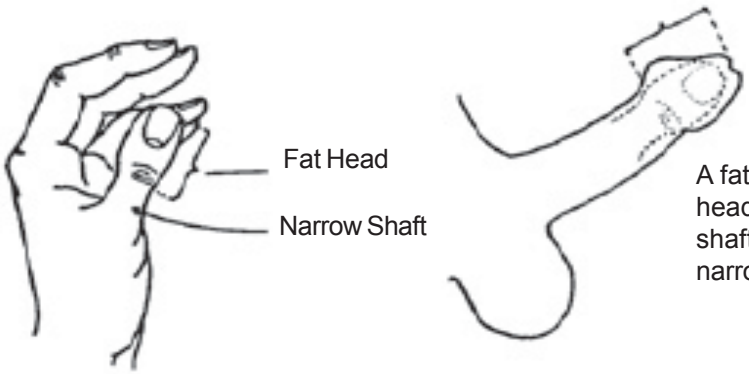


Fleshy fingers are an indication of a thick penis.

Fig. 7.28 *Size and Shape of Fingers*

(4) A good shaped thumb for a man is a fat tip with a small root, thus indicating a penis with a fat head and a thinner penile shaft. Because of its shape it is called a "mushroom" penis, and is best for maximum female vaginal stimulation.

A "Mushroom" with a head and a narrow shaft is best for maximum vaginal stimulation.



A fat head thumb indicates a fat head in the penis. A narrow shaft in the thumb indicates a narrow penile shaft.

Fig. 7.29 *Size and Shape of the Thumb*

Fingers of a Woman

The size and shape of a woman's thumbs reflect the size and shape of her vagina or vaginal canal.

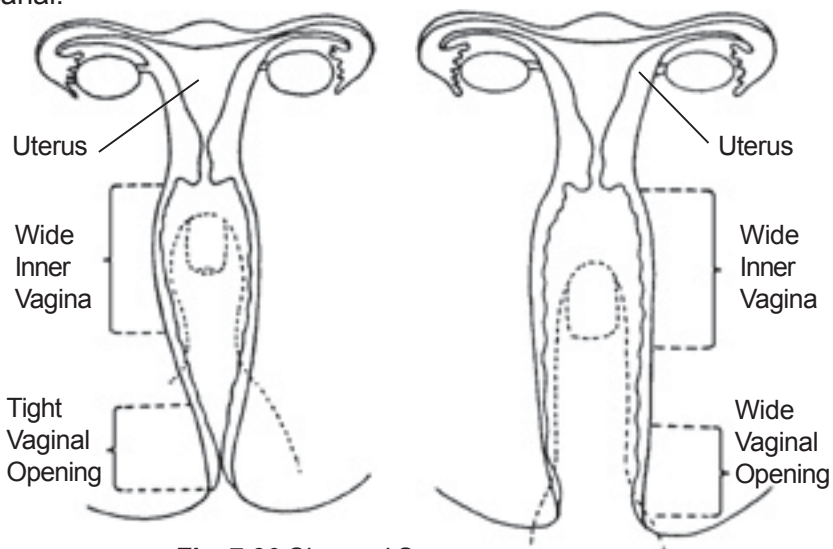


Fig. 7.30 *Size and Shape of Woman's Thumb*

(1) A fat thumb head with a narrow rooted thumb is equivalent to a tight vaginal opening with a vaginal canal that is wider on the inside. This condition is well suited for the mushroom shaped penis.
(2) A thumb that is not fat at the fingernail, or top, but more tubular in shape, reflects a vagina also tubular in shape.
(3) Short fingers accompany a short and narrow vaginal canal.

Massage the Hands

Massaging the hands can relax the whole body. By stimulating the points on the hands, one can activate and balance sexual energy. It can be very erotic for a couple to massage each other's hands, exploring the fingers, lines and palms. The hands are like a map revealing the unique experiences of a person. Send your loving energy through the hands. Work between the finger, across the knuckles and all through the center of the palms. Also, it is very stimulating to lick, suck or kiss the hands of your partner. This elicits a very powerful current of sexual energy through the whole body.

Fig. 7.31 *Hand Massage*

Hair

According to Taoist Medicine, hair on the head, hair on the eyebrows and pubic hair all are related to human sexuality. For the woman, hair on her body is supported by the Yin energy of the kidneys; while in the male, hair is supported by the Yang energy of the kidneys. The hair on the head is directly related to the kidneys. This is due to the fact that the bladder meridians traverse the top of the head. Loss of hair and premature graying are the first manifestations of a lower functioning of the kidneys and the resultant loss of kidney Chi. The kidneys, whose essence nurtures the blood, are no longer doing so efficiently and the result is the initiation of aging. A man's baldness may also be due to a congenital weakness, bad hygiene or inadequate diet and of course, to his inherited genes or ancestral energy.

An abundance of hair are therefore signs of strong sexuality and ample sexual energy in Taoist Medicine.

A man who has abundant body hair has a strong sexual power, even if he is bald or balding on top. It seems that his body hair is formed from the excess energy of the blood and is directed via the lung, which controls the skin, to the surface to be stored as excess body hair. Hair on the face is another sign of strong sexual power in a male. So if he has a full beard or a strong mustache, it indicates strong sexual potential.

From the Nei Ching, regarding the male, we find: "If the whiskers on both cheeks are handsome and long, then the energy and blood in the upper bright yang meridian of the foot (stomach meridian) are strong and abundant. If the blood and energy are in abundance in the lower region of the bright yang of the foot meridian, then the pubic hair and the hair on the chest will be long and handsome."

The Chinese believe that a man with plenty of hair on his chest is in possession of strong sexual capability, while a woman with plenty of fine hair on her body is also in possession of strong sexual capability. The man's hair should be of the yang type, firm and strong, while the woman's hair should be of the yin type, soft and smooth.

The number of hairs on the body are roughly estimated at about five million hairs. At first glance, we would say that most of our hair is located on the head, the underarms, and the pubic regions. However, fine hairs cover the entire body, at densities similar to those on the more obvious regions. Most hairs are short and fine so they escape notice, but hairs are present nearly everywhere. And, in addition to the millions of hairs on the outside of the body, there are also millions of hairs inside the body, for example about in the ears, sweat glands and lining the digestive tract. The estimate of five million hairs on surface of the body is based on information and calculations from Tortora & Grabowski, 2000.

Neck

The neck holds a special place in Chinese Sexology. For instance, one method to tonify the breast size is to massage the thyroid glands on the neck. According to Chinese medicine, stimulating the sexual organs stimulates the thyroid and vice versa, since the thyroid gland and sexual organs are closely related. When a woman is sexually active, her neck will become longer and expand. Massaging or kissing the woman's neck and thus indirectly the thyroid gland, will also stimulate sexual drive.
A large, thick neck on a man indicates strong sexual potential.

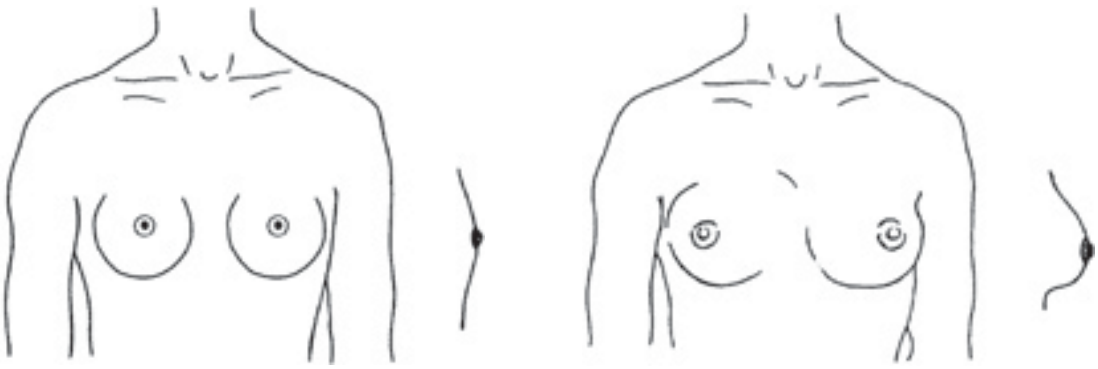
Breasts

According to Traditional Chinese Medicine, the four parts of the woman's body that reflect her sexuality are her face (i.e., eyes and mouth), breasts, buttocks and vagina. The traditional Chinese sexologists called the breasts "the Bells of Love."

Size of the breast is only one factor in describing the female sexual capability and potential. The muscles that support the breast is another factor. The reason for this is that the muscles that support the breast and form the shape of the breast directly reflect the genitals, since the meridians of the stomach pass through the entire breast area, flowing through the lungs and genitals as well. Through this meridian, one organ gives life to another; it follows that if the muscles that form the breast tissue are firm and of good tone, the vaginal muscles will also be firm. Similarly loose pectoral muscles will indicate a loose vaginal grip.

The Chinese have classified the breasts into groups according to sexual potential.

(1) The Plate Type of breast or a small breasted woman, indicates relatively low sexual energy.



The plate type of breast indicates lower sexual energy.

The bowl type of breast indicates a healthy sex drive.

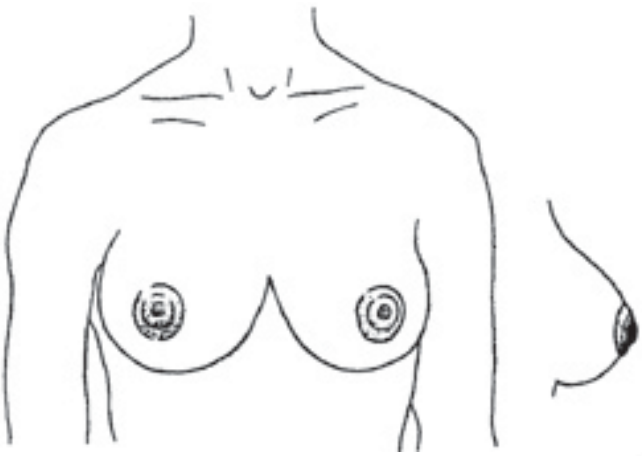
Fig. 7.32 *Female Breast*

(2) The Bowl Type of breast, symmetrical and well-balanced, is shaped like a soup bowl. Each breast is supported by well-toned musculature. This woman will have a high sex drive and is considered the most sexually desirable.

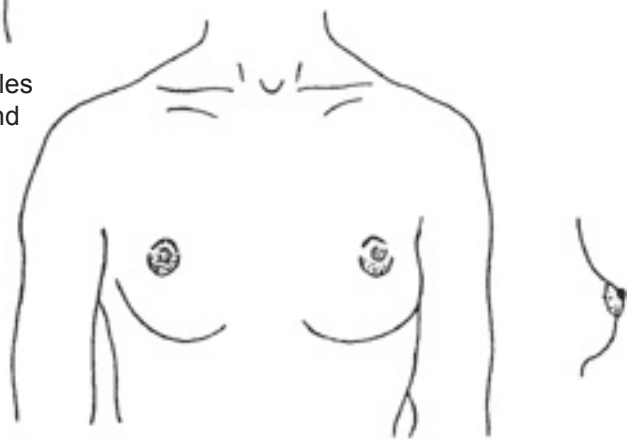
(3) The Ball Type of breast is larger than the bowl type. This woman has even greater sexual energy. When this type of breast includes big nipples and large aureoles, she is sexually powerful.

(4) The Mountain Peak Type of breast is in the shape of a cone with nipples that face the sky. This type of woman is very warm and passionate.

(5) The Pendulum Type of breast is round like a ball hanging from a pendulum. If the muscles supporting this type of breast are solid, this woman's sexual potential is strong. If her muscles are flabby and lack tone, she has a weaker sex drive. If she has no musculature there, as an older woman, she will have lower sexual energy.



The ball type of breast with large nipples and areola indicates a very strong and forceful personality.



The mountain peak type of breast is shaped like a peak with nipples pointing up. This indicates a woman who is very warm and passionate.

Fig. 7.33 *Female Breast Type*

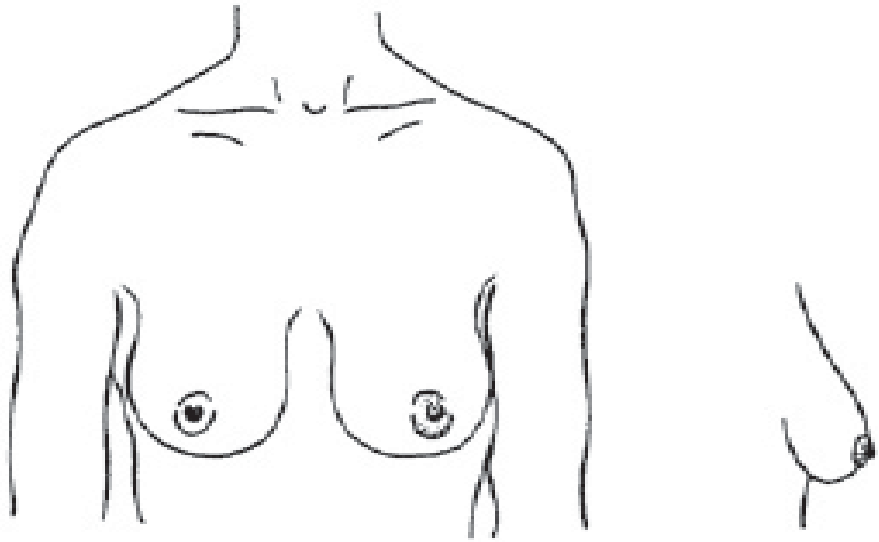


Fig. 7.34 *Pendulum Type of Breast: If the supporting muscles are strong, this indicates strong sexual potential. If the muscles are flabby it indicates a weaker sex drive.*

Female Body

The following points of female beauty are nature's own advertisement of a healthy condition of the sexual system:

1. Large limbs, indicative of strength to sustain the body during the period of pregnancy.
2. Broad hips, indicative of a large pelvis, giving abdominal support during pregnancy and easy delivery.
3. A relative narrow waist, indicating freedom from suppressed menstruation and a proper expansion of the hips.

Breasts, standing out prominently, firm in texture, with large nipples and a bright pink aureole surrounding nipples free from discoloration, all of which indicates a correct condition of the womb.

A graceful carriage of the body, a springing, vigorous, rhythmical step, sweet breath, good teeth, clear complexion, pleasant musical voice, a well-shaped neck and back of head, red and full lips, and a well developed chin, projecting forward slightly, clear, bright, animated eyes; all are indispensable indications of good sexuality.

The points enumerated in the last paragraph apply equally well to estimating the sexual strength of the male, with the addition of broad shoulders and deep chest as well as a contour of body broadest at the shoulders and tapering toward the feet.

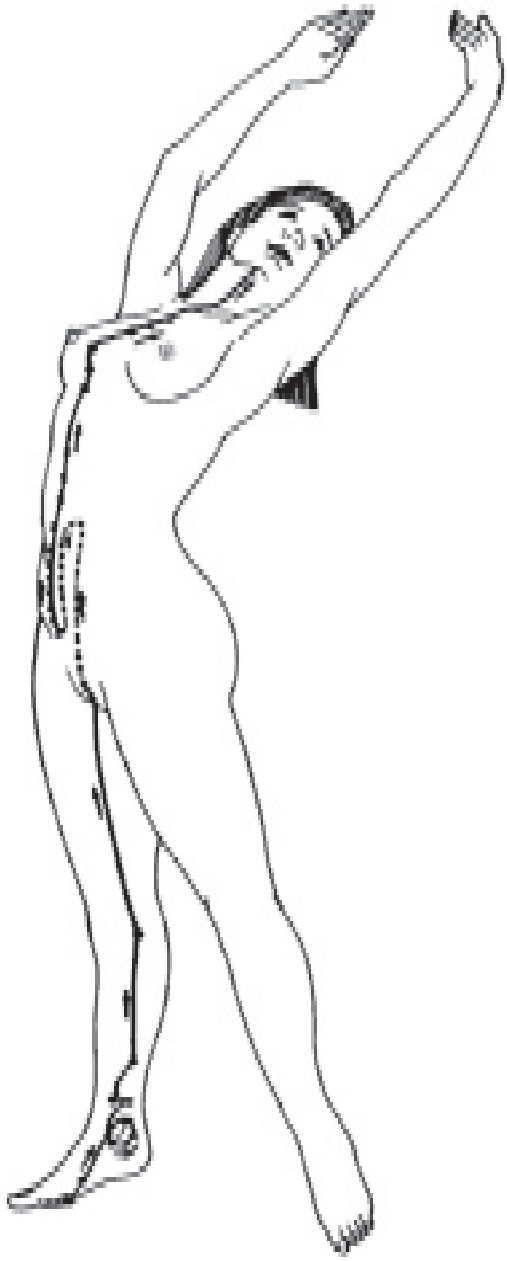


Fig. 7.35 *Female Body*

(Note – In a proportional female figure the waist will measure, in circumference, two-fifths of the height, the hips at broadest part, nine inches more.)

Chapter VIII
Compatibility

"When the same inner sight exists in you as in another, you are drawn to be companions. When a man feels in himself the inmost nature of a woman, he is drawn to her sexually. When a woman feels the masculine self of a man within her, she wants him physically in her."

- Rumi

The compatibility between men and women offers a glimpse into the unity of the Universe. The sexual experience is one of the great gifts of humanity, offering a relatively accessible experience of total balance and harmony and thus serving as a metaphor for the larger purpose of life. That purpose, said the Taoist sages, is to achieve peace and harmony through unification of opposites. Look around you, recognize man and woman as yet another expression of the same cosmic duality that creates day and night, winter and summer, positive and negative, north and south, heaven and earth. Bring together these opposites and the world collapses in spiritual ecstasy say the Taoist teachers, who regard sex to be as natural and indispensable to human health and longevity as rain falling on the fields.

The Taoist view compatibility from a variety of different perspectives. Compatibility refers to the energetic attraction between two people, especially lovers. There are some obvious signs of compatibility that make sense and yet many people overlook them. We can determine compatibility through touch, smell, sight, taste, conversation, holding hands, interest, chemistry and energy.

Compatibility should be like a good red wine, becoming richer and deeper over time. This is why relationships should be given ample time in each stage of progression: courting, dating and marriage. With the Taoist secrets of love techniques, a relationship gets more profound and intense the longer you stay with your partner. This is because the Taoists learn to cultivate energy rather than drain it. If a couple who have deep affection and love for one another drain each other's energy through sexual indulgence, emotional ups and downs, and needless arguments, the intensity and depth of the relationship diminishes. This is one of the reasons for such a high divorce rate in the West. With the Taoist techniques, love grows and flourishes.

In the West, compatibility is sometimes referred to as chemistry. When a couple has "good chemistry" there is electrical, magnetic energy. The age old question is how to keep this magnetism, this chemistry with partners so that it will last a lifetime. The Taoist discovered this secret in the cultivation of energy. When there is energy in a relationship there is interest, excitement and joy.

Fig.8.1 *Fusion of the Microcosmic Orbits*

Compatibility can be revealed through the sense of smell. Smell is one of the primal senses of attraction, both consciously and subconsciously. In some cultures, smelling the neck and the face is just as erotic as passionately kissing. Through the sense of smell we can determine if we are compatible with someone. If their sense of smell is revolting, you might want to reassess the relationship. This does not mean smelling your partner after a three hour workout to determine this; it means the sense of smell in general. Is it pleasant to the nose when you are holding each other close, when you are kissing or snuggling?

There are many ways to determine the compatibility of men and women. For example, when men and women clasp hands, note the harmony or disharmony of the clasp itself. If the hands do not seem to fit harmoniously and if the contact becomes unpleasant when prolonged, it is a sure sign that the dispositions will not harmonize. If the clasp is harmonious and the effect of prolonged contact continues to be agreeable it indicates that the general effect is harmonious.

In every intimate association kisses and caresses will reveal the most important information. Caresses and kisses must be exchanged with great freedom and the kisses must be sufficiently passionate and complete to enable the couple to obtain the complete effect of the flavor of the fluid and the magnetic or electric effect of the caresses. If the caresses exert a highly beneficial effect and the kisses increase in sweetness and enjoyment over time, it is a good indicator of growth potential. If this result is not reached and the kisses become repulsive and the caresses become weak, or the parties find after complete and intimate association that love does not continually augment in intensity, the conditions of harmony are absent and all thought of continued companionship should be dismissed. However the parties may continue to be affectionate friends as long as it is mutually agreeable. This judgment should not be formed hastily and I consider it unsafe to form a conclusion from any impression which may only be mo-

mentary. I recommend that this experiment should last at least six months unless the parties discover in a shorter time that it is positively disagreeable. In some of the best adaptations I have ever known it took some time for the best results to be established, especially in those cases where the parties were young and inexperienced and had not learned the art of expressing their emotions freely. Love, like everything else, is a creature of growth and takes time to develop.

The idea to wait or prolong sexual intercourse allows the heart to be seasoned with love. Sexual intercourse that occurs too soon drains energy, especially if one is not skilled at the Taoist arts of the bedchamber. Promiscuity has a tendency to prevent this energy from cultivating in the heart center.

In walking together, keep in step and notice if it is an easy thing to do and if the gait of one is harmonious with the other. The walk is an unfailing indication of character and it is impossible for persons who experience great difficulty in keeping step or who tire each other by the walk together to harmonize in character.

Notice the effect of conversation. If after a long interview you experience a feeling of fatigue and you find this the usual result, the character is inharmonious with your own. Language is the principal avenue of expression, and its effects cannot be too closely watched. If the conversation inspires you and you feel rested and instructed after each one or this is the general result, the indications are in favor of harmony. Many couples fall in love or notice the attractive energy first from conversation and talking.

Some nationalities are sufficiently well informed to know the desirability of previous tests of intimate association before marriage and the custom of “bundling” among the Dutch and similar customs among other nationalities, have their origin in a crude effort to establish a test of this kind. In the custom of “bundling”, the male and female are each sewed up in sacks in such a manner that it is impossible to have sexual intercourse without rupturing the sacks and thus being detected. In this condition they are allowed to sleep together and note the effect upon their feelings. Whatever may be the general result of such a custom, there is no question as to its value as a test. It is impossible for two persons to sleep together a number of nights without being conscious of increased affection and desire for companionship or the entire loss of such desire. The effect of sleeping together may be summed up as follows: If the parties are not harmonious, they will in a short time exhaust their magnetism to such a degree that all mutual attraction ceases. If they are harmonious, the effect will be delightful and the desire for its continuance will increase for a number of months. Then there will be a culmination in which no great degree of increased desire will be felt, but it will continue to be a pleasant experience. If the parties are perfectly harmonious this may continue for many years, but as a general rule the pleasure of contact will be greatly intensified if they do not continually sleep together. If they are not perfectly harmonious, the magnetism will gradually be lost, hence, as very few couples are perfectly harmonious, it is a good rule to occupy separate beds and sleep together occasionally as desired and as expediency may dictate. The loss of magnetism, and the consequent neutralizing of

affection, will be slow or rapid in its progress as the parties are less harmonious.

The period of experimental courtship may be as long or short as the prudence and the circumstances of the parties may dictate but I suggest that six months is not unreasonably long and I also believe that any reasonable man or woman ought to be thoroughly satisfied with the results of such a test in one year of continued intimate association.

Love Making Energy

"Do you not see that you and I are as the branches of one tree?
With your rejoicing comes my laughter; With your sadness start my tears.
Love, could life be otherwise with you and me?"
- Tsu Yeh Tsin dynasty, A.D. 265-316

Sit cross-legged facing your partner. Bring the hands onto the knees; man's palms face down and woman palms face up. Bring the palms together so that the centers of the palms touch. This is an exercise to balance and harmonize the male and female energies. Take some long slow deep breaths synchronizing the inhale and exhale. Breathe together, inhaling and exhaling in unison. This synchronizes the energy between one another. Feel the exchange of energy flowing between the palms. The Tao calls this exercise energetic lovemaking. You can visualize a God and Goddess above your head making love. Feel the energy pouring down onto the crown of the head and into the whole body. Feel the sexual energy of the Universe in harmony with your own sexual energy. Allow the intimate connection between yourself, your partner and the Universe pulse through your entire being.

Fig. 8.2 *Drawing nectar up to the Golden Flower.*

Chinese Astrology

Over the intervening millennia, humanity has gradually lost its sensitivity to the world of vibration (such as Chi), as we become more concerned with material development, and as our biological conditions have become more clouded and insensitive. Humans are born and nursed in an environment which is strongly influenced by the energy flow (Chi and magnetic forces) on the Earth as well as from other planets and celestial bodies. The following are branches of Chinese Astrology.

Five Element Astrology

When you are born, the first breath of air you take is filled with the energy vibrations of the Five Elements. The Fire element is the sun vibration, the Earth element is the soil or ground vibration, the Metal element is the rocks or mountain vibration, the Water element is the river or lake vibration and the Wood element is the tree vibration. The first environmental energy patterns that you breathe of the five elements connect with the Five Vital Organs (Fire/Heart, Earth/Spleen, Metal/Lungs, Water/Kidneys and Wood/Liver) forming your internal energy blueprint. With this blueprint you have the opportunity to change and balance your organs because you have it from the beginning of your biological life. This is one of the theories in Chinese Astrology, which calculates the expected effect of the environment, including celestial bodies, on an individual.

Although no one can change your inherent energy character within each organ, the energy can be brought closer to harmony by changing the quality and quantity of the energy you receive through diet, meditation and the influence of the environmental energy. Once you are aware of the quality and quantity of the five elements that you possess as well as the status of your organs, it is conceivable that you have a better chance of becoming more balanced and harmonious. You can aquire the ability to mold your own lifestyle to fit your desires and ambitions with these specific attributes. Humans inherit the energy from the environment when they are born and the human body is an image of the universe in terms of energy. One part of the energy is from the planets and celestial bodies, which comprise the Ten Celestial Stems in a person's astrology chart. The other part of the energy is from the earth, which comprises the Twelve Honorary Branches. The Ten Celestial Stems are the vital life forces for each major organ. The Twelve Honorary Branches are the energies that flow through each of the twelve major meridians, which have great influence on the organs.

The combined effect of the stems and branches on the organs is expressed in the relative amounts of Five Elements. The analysis explicitly states the status of each organ at birth. The ten organs are divided into five groups as shown below. Each organ within a group shares the total amount of life force of the group with the other organ. It is desirable for each group to have a total of at least one to two units of life force. All the

parts of the body are connected to form the whole. The parts should not be treated individually. All organs should function in a harmonious manner. Excess of or deficiency in life force in a group will cause an imbalance of energy in each member. Imbalance of life force in a group will affect the other groups through a chain reaction among organs. Each group has a strong connection with a sense organ. For instance, the sense organ for the Gall Bladder and Liver group is the eyes. Imbalance of energy in an organ will manifest itself as sickness, emotion, change of taste and impairing the related sense organ. All of these effects are referred to as the associated conditions of the corresponding organ.

The energy analysis is based on birth hour, day, month and year with personal element and positive (yang) and negative (yin) levels as follows:

Lungs	***Lesser Yin Metal***	***Great Yin Metal***	***Greater Yin Metal***	***Greatest Yin Metal***
Kidneys	***Lesser Yin Water***	***Great Yin Water***	***Greater Yin Water***	***Greatest Yin Water***
Liver	***Lesser Yin Wood***	***Great Yin Wood***	***Greater Yin Wood***	***Greatest Yin Wood***
Heart	***Lesser Yin Fire***	***Great Yin Fire***	***Greater Yin Fire***	***Greatest Yin Fire***
Spleen	***Lesser Yin Earth***	***Great Yin Earth***	***Greater Yin Earth***	***Greatest Yin Earth***
Lg. Intestine	***Lesser Yang Metal***	***Great Yang Metal***	***Greater Yang Metal***	
Bladder	***Lesser Yang Water***	***Great Yang Water***	***Greater Yang Water***	
Gall Bladder	***Lesser Yang Wood***	***Great Yang Wood***	***Greater Yang Wood***	
Sm.Intestine	***Lesser Yang Fire***	***Great Yang Fire***	***Greater Yang Fire***	
Stomach	***Lesser Yang Earth***	***Great Yang Earth***	***Greater Yang Earth***	

Fig. 8.3 *Ten Yin/Yang Organs and Elements*

This represents the energies, emotions and personality you were born with, and your body character is represented by one of the above. The term “yin” in general refers to cold, wet and downward moving characteristics, and the term “yang” refers to warm, dry and upward moving characteristics. Lesser through Greatest refers to levels approaching yang or yin working with each of the five vital organs and their associate organs. This is a very involved science but you can have your analysis done through the Universal Tao, which has a future book “*Cosmic Nutrition*” to explain this concept further.

This gives you an excellent opportunity to discover who is compatible with you at an internal energy blueprint level. This is one method in Chinese Astrology along with the Chinese Twelve Animals and the Nine Stars.

Twelve Animal Astrology

Each of the Chinese animals has certain characteristics and patterns, which help you understand yourself and with whom you are more compatible. The Taoist just uses the animal symbolism because that animal had a similar pattern with that person's energy vibration.

Twelve Animals and Characteristics are:

Rats are: Seductive • Energetic • Of Good Counsel • Charming • Meticulous • Sociable • Jolly • Persistent • Humorous • Intellectual • Lovable • Sentimental • Generous • Honest *but they can also be*: Profiteering • Manipulative • Agitated • Gamblers • Greedy • Petty • Suspicious • Tiresome • Destructive • Power-Hungry.

Buffalos *are*: Patient • Hard-Working • Familial • Methodical • Loners • Leaders • Proud • Equilibrated • Reserved • Precise • Confidence-Inspiring • Eloquent • Self-Sacrificing • Original • Silent • Long-Suffering • Strong • Tenacious *but they can also be*: Slow • Loutish • Stubborn • Sore Losers • Authoritarian • Conventional • Resistant to Change • Misunderstood • Rigid • Vindictive • Jealous.

Tigers *are*: Hugely Generous • Well-Mannered •Courageous • Self-assured • Leaders • Protectors • Honorable • Noble • Active • Liberal-minded • Magnetic • Lucky • Strong • Authoritative • Sensitive • Deep-thinking • Passionate • Venerable *but they can also be:* Undisciplined • Uncompromising • Vain • Rash • In Constant Danger • Disobedient • Hasty • Hotheaded • Stubborn • Disrespectful of Rules • Quarrelsome.

Rabbits *are*: Discreet • Refined • Virtuous • Social • Tactful • Unflappable • Sensitive • Companionable • Solicitous • Ambitious • Gifted • Forgiving • Prudent • Traditional • Hospitable *but they can also be:* Old-Fashioned • Pedantic • Thin-Skinned • Devious • Aloof • Private • Dilettantish • Fainthearted • Squeamish • Hypochondriacal.

Dragons *are*: Scrupulous • Sentimental • Enthusiastic • Intuitive • Shrewd • Tenacious • Healthy • Influential • Vital • Generous • Spirited • Captivating • Artistic • Admirable • Lucky • Successful • Autonomous *but they can also be:* • Stubborn • Willful • Demanding • Irritable • Loud-Mouthed • Malcontent • Otherworldly • Impetuous • Infatuated • Judgmental.

Snakes *are:* Wise • Cultivated • Cerebral • Accommodating • Intuitive • Attractive • Amusing • Lucky • Sympathetic • Elegant • Soft-spoken • Well-Bred • Compassionate • Philosophical • Calm • Decisive *but they can also be:* Ostentatious • Sore Losers • Tight-fisted • Extravagant • Presumptuous • Possessive • Vengeful • Self-Critical • Phlegmatic • Lazy • Fickle.

***Horses** are:* Amiable • Eloquent • Skillful • Self-Possessed • Quick-Witted • Athletic • Entertaining • Charming • Independent • Powerful • Hard-Working • Jolly • Sentimental • Frank • Sensual *but they can also be:* Selfish • Weak • Hotheaded • Ruthless • Rebellious • Pragmatic • Foppish • Tactless • Impatient • Unfeeling • Predatory.

***Rams** are:* Elegant • Creative • Intelligent • Well-Mannered • Sweet-Natured • Tasteful • Inventive • Homespun • Persevering • Lovable • Delicate • Artistic • Amorous • Malleable • Altruistic • Peace-Loving *but they can also be:* Pessimistic • Fussbudgets • Dissatisfied • Capricious • Intrusive • Undisciplined • Dependent • Irresponsible • Unpunctual • Insecure.

***Monkeys** are*: Acutely Intelligent • Witty • Inventive • Affable • Problem-Solvers • Independent • Skillful Business People • Achievers • Enthusiastic • Lucid • Nimble • Passionate • Youthful • Fascinating • Clever *but they can also be:* Tricky Tacticians • Vain • Dissimulators • Opportunistic • Long-Winded • Not all that Trustworthy • Unfaithful • Adolescent • Unscrupulous.

***Roosters** are:* Frank • Vivacious • Courageous • Resourceful • Attractive • Talented • Generous • Sincere • Enthusiastic • Conservative • Industrious • Stylish • Amusing • Contemplative • Popular • Adventurous • Self-Assured *but they can also be:* Nitpickers • Braggarts • Quixotic • Mistrustful • Acerbic • Shortsighted • Didactic • Pompous • Pedantic • Spendthrift • Brazen.

***Dogs** are:* Magnanimous • Courageous • Noble • Loyal • Devoted • Attentive • Selfless • Faithful • Modest • Altruistic • Prosperous • Philosophical • Respectable • Discreet • Dutiful • Lucid • Intelligent *but they can also be:* • Guarded • Introverted • Defensive • Critical • Pessimistic • Forbidding • Cynical • Stubborn • Moralizing.

***Pigs** are:* Obliging • Loyal • Scrupulous • Indulgent • Truthful • Impartial • Intelligent • Sincere • Sociable • Thorough • Cultured • Sensual • Decisive • Peaceable • Loving • Profound • Sensitive *but they can also be:* Naïve • Defenseless • Insecure • Sardonic • Epicurean • Noncompetitive • Willful • Gullible • Earthy • Easy Prey.

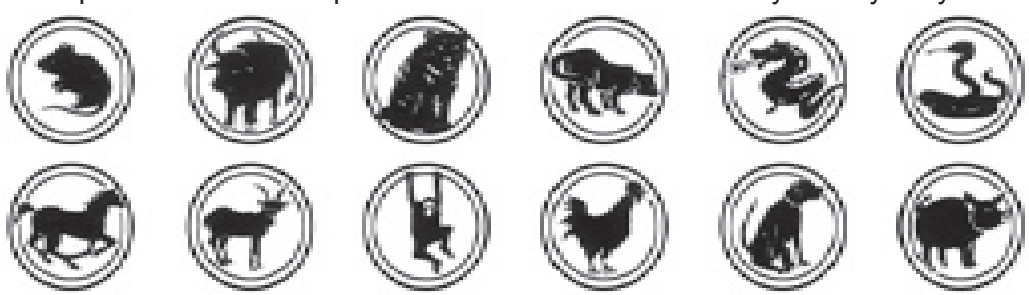


***Fig. 8.4** Twelve Chinese Animals*

Taoist Nine Star Astrology

Taoist Nine Star Astrology is based on the numerology of the Pole Star, Vega Star and the seven stars in the Big Dipper. Taoist Nine Star Astrology is the essence of all the Taoist practices and is based on the Pole Star (Yang), the Big Dipper (7 Points), and the Vega Star (Yin). All movement and energy patterns on Earth are based on the energy fields of these 9 points. Every 26,000 years completes one cycle of Light (Yang) to Darkness (Yin), and presently shifting the Pole Star (Yang) (Center of Galaxy) to the Vega Star (Yin).

*** (1) Vega (Yin)** **(9) North (Pole) Star ***

***(3)**

***(2)** ***(4)**

***(5)** ***(8)**

***(6)** ***(7)**

Fig 8.5 *Big Dipper, Vega and North Star*

Although our planet's polar axis is tilted at 23 degrees with the Star Polaris in Ursa Minor above its northern pole, this is not a constant. Modern astronomers know that approximately every 26,000 years the earth flops to a position where the star Vega in the Constellation Lyra becomes the Pole Star. This shift is fairly dramatic. However, there is a less dramatic wobbling that our planet makes on its axis, a wobbling that invariably alters the North-South Polarity of the Earth. This in turn affects the body channels, the Positive Governor Channel and Negative Functional Channel, and this affects the human electromagnetic field.

Sages in the past were able to observe nine distinguishable electromagnetic phases in this wobbling. Astrology and astronomy have determined that there are Nine Stars in the Northern Sky closely centered around the northern end of the earth's polar axis: Polaris, Vega and the Seven Stars that make up Ursa Major, the Big Dipper (Fig.8.6). They are responsible for the slight electromagnetic shift that occurs. As Nine Star Chi Theory has it, each star is integrally a part of and responsible for each of the distinguish-

able electromagnetic phases. When our planet is under the influence of one of the particular electromagnetic phases, one of the transformations phases or transformations mentioned earlier becomes accentuated. Thus there are five fire years, earth years, water years, wood years and metal years with all elemental transformation phases represented within a nine year cycle, and each year is positive or negative (yin or yang).

In Nine House Astrology a man or woman is not simply born in a particular house, but during his or her lifetime migrates through the yearly, monthly, daily and hourly sequences many times. The belief behind this is that a person can and should become as perfectly balanced as possible through facing and overcoming all the varied experiences presented to him as a result of the influences of the various houses. People follow different patterns because of the influences permanently imprinted upon them at their particular times of birth. The rules that carry them through these cycles remain constant, and it depends upon their state of wisdom as to how well they apply them. The different situations different people face are determined by their state of evolution at the time they re-enter this world. The strength and intensity of troubles or good fortune depend on the strength and (cosmic) maturity of the individual.

Here are the Nine Houses:

(1) Water (Kan-Water)	***Yang within Yin***	***(+)***
(2) Earth (Kun)	***Yin***	***(-)***
(3) Wood (Chen-Thunder)	***Yang***	***(+)***
(4) Wood (Sun-Wind)	***Yin***	***(-)***
(5) Earth (Tai Chi Symbol)	***Yin & Yang***	***(+ & -)***
(6) Metal (Chien-Heaven)	***Yang***	***(+)***
(7) Metal (Tui-Lake)	***Yin***	***(-)***
(8) Earth (Ken-Mountain)	***Yang***	***(+)***
(9) Fire (Li)	***Yin within Yang***	***(-)***

This formation is converted into Sacred Geometry using the Magic Square:

4	***9***	***2***
3	***5***	***7***
8	***1***	***6***

All the numbers add up to 15 in any direction, and 1 + 5 = 6. The movement of the Universe is a spiral moving from 5 to 6 to 7 to 8 to 9 to 1 to 2 to 3 to 4 to 5 as it is in the Magic Square. When you use the Pakua with the 9 Directions, you take each number with this spiral progression and they all add up to a single digit number of 3, 6, or 9, which adds up to 18 (in any direction) or 1 + 8 = 9 (9 Star Astrology).

The Magic Square is also referred to as a Universal Chart, originally found on Wu Hsi's tortoise and thus considered a sign from the Divine Forces. It represents the qualities, order, and movement of all phenomena as expressed in the law of five transformations (phases). Each of nine blocks in the square or magic pakua is a house, which bears certain qualities. This Square is the cornerstone of Nine Star Astrology as it is used in China, Tibet, and Japan.

Chinese Astrology Compatibility

In looking at the compatibility between two people we consider two main factors: the personalities and the sexual energies. These are indicated by the energies of the Personal Element illustrated within the five element cycle. If the elements in two people are on the positive or creative cycle, this generally creates good compatibility between them. If the elements are on the destructive cycle, this can create conflicts between either personalities or sexual energies. This is a very general statement and there are sometimes exceptions to this rule. The upper character of the Personal Element represents the personality (Heart Center). This upper character could be on the creative or the destructive cycle, which is how the emotions are expressed. The lower character of the Personal Element represents the internal or sexual energies (Kidney Center). This lower character could be on the creative or the destructive cycle, which is how the sexual impulses or drives are expressed.

Again, this is a very involved science but you can have your compatibility analysis done through a Chinese astrologer which can be provided by the Universal Tao.

Personal Element

Yin Earth	***Yang Wood***	***Yin Earth***	***Yang Wood***
戊	甲	己	庚
辰	寅	丑	寅
Yin Water	***Yang Metal***	***Yin Water***	***Yang Fire***
Time	***Day***	***Month***	***Year***

Fig. 8.6 *Chinese Eight Force Astrology Chart*

Chapter IX
Sexercises

In the Tao, sexual exercises were not merely a way to enhance sexual pleasure or become more attractive. These exercises were a means to enjoy a more vigorous and healthy body, a way to become sensitive to deeper and more intense emotions and to cultivate spiritual energy. The Taoists believed that the body would stay healthy and youthful as long as it was able to reproduce. When the reproductive energy was in a decline the body would retaliate with sickness or emotional insecurity.

In the East, as well as in the West, exercise is a crucial way to keep the body healthy. But, when it comes to increasing sexual energy, the teachers of the East have taken exercise to a new level. To strengthen our sexual energy and thus strengthen the senses and the whole body, the Eastern traditions have developed exercises that focus specifically on the sexual area.

By strengthening the sexual organs through exercise and massage, we actually affect the rest of the body and senses. It is believed that the sexual organs are the strongest reflex points in the body and when stimulated in the proper way can have a powerful healing effect on the senses and internal organs making you healthier and more sexy. There are pelvic exercises that greatly strengthen the reproductive organs and the complex network of tendons in the surrounding area. Strength in this department is of great importance; it is the root of both a man and woman's health. Leading into the pelvis are a vast number of nerve endings and channels for the veins and arteries. Here are located tissues that communicate with every square inch of the body. All of the major acupuncture meridians that carry energy between the body and the vital organs pass by this area. If it is blocked or weak, energy will dissipate and the organs and brain will suffer. These exercises are designed to charge the brain with energy, increase circulation, stimulate nerve flow, strengthen the urogenital diaphragm and tonify the energy of the sexual organs. Because they focus on enhancing the strength and energy of the sexual area, we have called this workout "Sexercises".

In the Taoist view of sexual health, it is important to cultivate our sexual energy rather than needlessly wasting it. For men, this means regulating and controlling ejaculation. For women, it means working with and balancing the female menstruation cycle.

If men ejaculate too often, it depletes the source of vital energy, not allowing the water of life to spread to the rest of the body. The importance of the man retaining semen is emphasized over and over again in Taoist literature, which is dramatically different to the religious idea of celibacy. In the Tao, regulating and managing ejaculation does not mean becoming a celibate. The basic purpose of these methods is to increase, as much

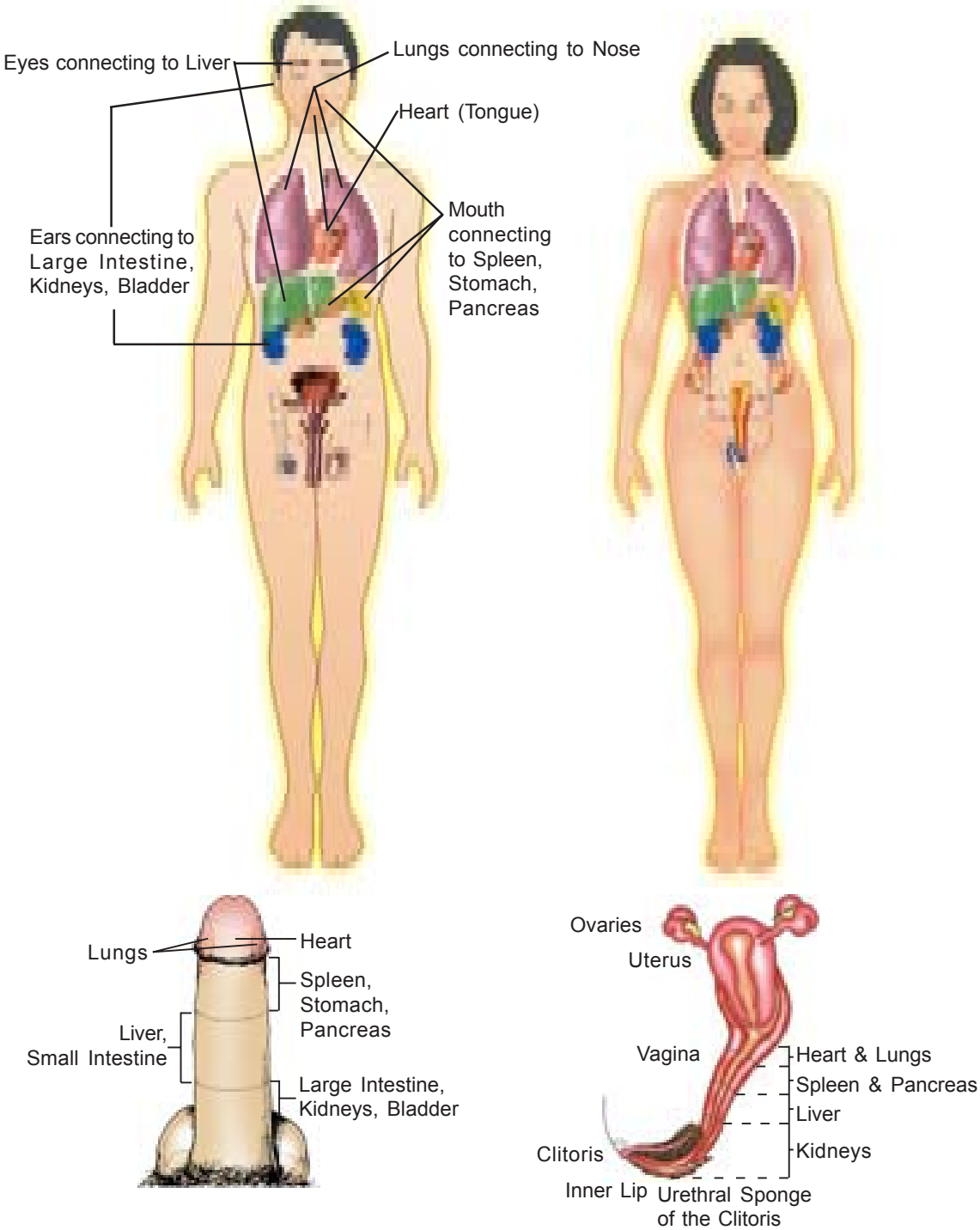


Fig. 9.1 *Sexual Reflexology Points throughout the Body*

as possible, the quantity of the life-giving, age-retarding hormones secreted in a man's body during sexual excitement, while at the same time decreasing, as much as possible, the loss of semen and its related hormones through ejaculation. All schools of Taoism agree that semen retention and proper regulation of its emission are indispensable skills for male adepts. To understand more about this concept I recommend reading *Multi-Orgasmic Man* and *Cultivating Female Sexual Energy.*

Breathing Sexercises

"There is one way of breathing that is shameful and constricted. Then there's another way: a breath of love that takes you all the way to infinity."

- Rumi (Open Secret)

The first step to becoming a more sexually powerful person is to learn how to breathe properly. Many of the Sexercises require a certain level of breath control and when you learn to breath properly the exercises become much easier and much more powerful. Breathing exercises are a direct way to control stress.

For example, think about how you breathe when you are in a terribly stressful situation. The breath gets jammed up in the chest in short shallow gasps that barely allow oxygen into the lungs. Under extreme circumstances the breath might become almost nonexistent. With this type of breathing, life-enhancing oxygen does not flow freely through the body. This creates stress and tension, lodging it in the body rather than allowing it to be processed and released.

Long ago in Chinese medicine it was discovered that the breath is a direct reflection of the emotional state of the body. When someone is sad, they breathe in short inhaling gasps, locking the air in the upper chest. When someone is angry, the breath is usually long contracted exhales, with desperately short inhalations. Even when we are not feeling very emotional, the breath will still reflect the general overall feelings in the body, which are often not very empowering.

Just as correct diet enhances the body's store of nutritional essence, so correct breathing enhances the body's supply of vital energy. Proper breathing is performed by the diaphragm, not the rib cage and the clavicles. Because of laziness, ignorance, smoking, pollution, constipation and other factors, adults these days invariably become shallow chest breathers, rather than the deep abdominal breathers that we are meant to be. All true martial arts and meditation practices use the breath as the gate to control the body.

Breathing abdominally is the most natural thing, it is just that we have forgotten how we used to breathe. Have you ever watched a baby breathe? If not, the next time you have an opportunity, do so. Pay particular attention to how the stomach or abdomen

does the breathing not the chest. This is the natural way, the way we have to return to.

Chest breathing employs the intercostal muscles between the ribs to forcibly expand the upper rib cage, thereby lowering air pressure in the chest so that air enters by suction. However, this leaves the lower lungs, which contain by far the greatest surface area, immobilized. Consequently one must take about three times as many chest breaths in order to get the same quantity of air into the lungs as provided by a single diaphragmatic breath.

Deep Abominal Breathing (For Men and Women)

A complete, deep, abdominal breath should employ three areas of the lungs in a smooth, unbroken expansion that begins at the bottom in the abdomen and not in the upper chest. One first inhales air slowly into the lower lungs by letting the diaphragm expand and balloon downward into the abdominal cavity. When the diaphragm is fully expanded, the intercostal muscles come into play to open the rib cage and fill the middle lungs with air. As the rib cage reaches full expansion, the breather utilizes the clavicles so that air flows into the narrow upper pockets of the lungs.

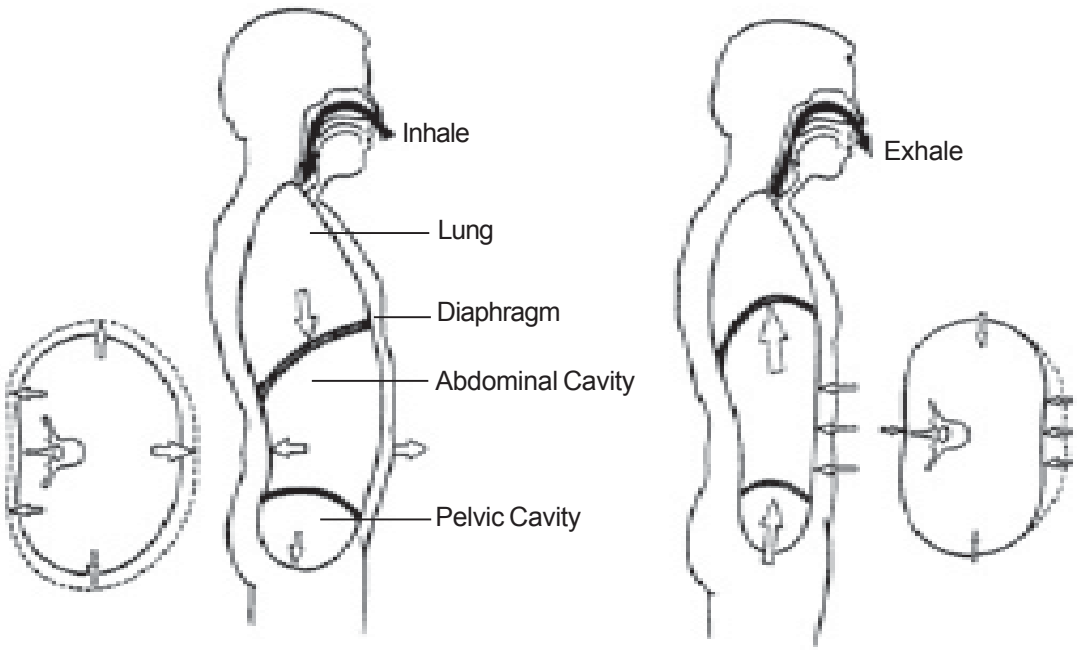


Fig. 9.2 *Deep Abominal Breathing*

Exhale in the reverse manner, releasing air from the upper part of the chest, downward through the ribs, finally expelling the air out the lower lungs by slightly contracting the abdomen. Breathing with the diaphragm in this manner reduces the number of breaths per minute by more than half, greatly enhances respiratory efficiency, saves the heart from strain and conserves vital energy.

This type of breathing has many benefits for the body and emotions. When we are able to breathe in this manner, the body automatically takes it as a sign to be relaxed and calm. This is one of the best ways to combat the stress of everyday life. If you can, practice deep abdominal breathing whenever you have a few extra minutes, driving the car, standing in line, waiting for the dentist, or anywhere else you can imagine; great benefits will result. Pretty soon, with practice, your body will automatically start breathing deeper subconsciously.

Deep abdominal breathing activates the cranial and sacral pumps and keeps the spinal cord fluid moving in the joints and cranium. Spinal cord fluid and seminal fluid are very similar in nature.

As far as increasing sexual energy, the deep abdominal breathing is a wonderful exercise. It sends energy down through the urogenital diaphragm, loosening and relaxing the whole pelvic cavity. Without deep breathing, the lower abdomen has a tendency to become tight and contracted. This leads to low sexual energy or uncontrollable sexual energy. With this tightness in the abdomen there is inevitably an imbalance throughout the sexual area. For men, tightness can cause premature ejaculation, wet dreams, impotence or sexual frustration. For women, this tightness can cause menstrual cramps, frigid sexual energy, PMS and other more complicated emotional problems.

Energy Breathing (For Men and Women)

The energy breath is performed by rapidly expelling air out of the lungs and is designed to create efficient circulation, strengthening the energy of the lower abdominal area. Imagine that there is a small fire right behind the navel. To get this small spark into a vibrant fire needs air. As you perform the exercise, the breath should sound like a bellows, fanning a fire. Start by forcefully expelling all air from the lungs with a strong contraction of the abdominal wall. Immediately after the expulsion of air, let the lungs fill naturally without effort, about half way. When the lungs are half full, immediately contract the abdominal wall again to forcefully expel another gust of air. The exercise should consist of about 20-30 rapid expulsions of air. This strengthens and energizes the lower abdominal area (Sexual Palace and Lower Tan Tien).

Sexercise Massages

Massage is a great way to get in touch with our bodies. It has been used for thousands of years as a way to achieve health, relaxation and longevity. The reason massage is so beneficial is that it releases pent up tension caused by stress, and establishes communication between the mind and body. By increasing circulation, releasing muscle adhesions and generating positive energy, massage is of utmost importance.

Throughout the book we have discussed ways to massage the body to increase energy in the sexual center. Now we discuss massaging the sexual center, not only to enhance sexual energy, but to increase the energy in the whole body.

Testicle Massage

Testicle massage is a way to consciously connect to the male sexual energy. It is critically important to differentiate these exercises from masturbation. In the Tao, the goal of the practice is to harness this vital energy, not to release it. It is essential that you feel the energy and bring it up into the whole body.

Fig. 9.3 *Testicle Massage*

Begin by sitting on the edge of a chair, without pants. (It is possible to do with pants on. If you choose to leave your pants on, it is important to wear them loose, so that the material does not interfere with the massage. It is a good idea to wear pants that do not constrict the blood flow to the genitals. In general, it is always better to wear loose pants and underwear rather than tight). Rub your palms together till warm, then place the tips of all four fingers underneath the testicles, with thumbs on top and massage the testicles firmly by rolling them around between fingertips and thumbs. Roll the testicles about 36 times in each direction. Perform a few PC muscle contractions and finish with deep abdominal breathing.

This exercise increases the production of testosterone, sperm and seminal fluids and elevates male sexual energy in a powerful yet balanced way.

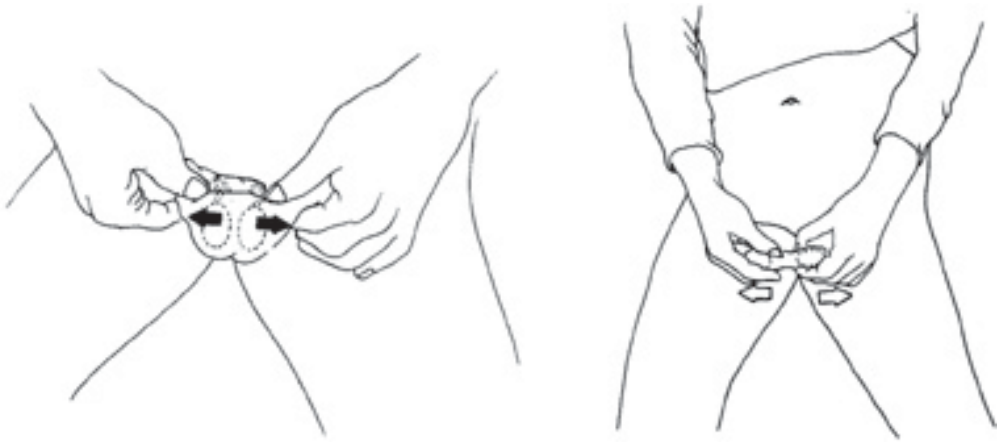


Fig. 9.4 *Testicle Massage*

The testicles are the most important part of the reproductive organs because they hold the key to developing testosterone and sperm. If you neglect them, then you will not be able to perform sexually as you desire. Testicle Massage will aid in the increased production of testosterone, which in turn raises your drive for sex. This exercise also promotes better blood circulation to your testicles, increasing sperm count and ejaculation volume.

The testicles are very vital and important organs in the body, and without them we would be an extinct species. Keeping them in shape will not only give you harder erections, more sex drive and higher amounts of semen, but will also give you a healthier sperm count and chance for conception when you try to have children. The key to proper testicle function and health is better blood circulation to your testicles. Massage in between your testicles with a pumping motion using your thumb and fingers. Massage at the base, pulling down as you massage. Do this for about 3 minutes. Take your hands with your fingers spread apart and grip your testicles at the root and lightly pull them down, bring them back up, them pull them down again, over and over for about 3 minutes. Lightly apply pressure to your testicles, massaging them while doing so. Massaging all around them, working your way around both of the testicles. Continue to repeat all of these steps over and over again. This massaging routine should be done for at least 10 minutes a day, preferably in the morning or before bedtime. Three times a week you should stretch out your testicle skin really well, feeling a good stretch as you pull the skin down. Grasp around the base of your testicles with your thumb and forefinger and squeeze until your testicles are tight together on top of your thumb and forefinger. Take the other hand and apply a small amount of pressure on top of the testicles and massage them in a circular motion. While you are doing this, pull down lightly with the hand grabbing the base of your testicles. Do this for about 3-5 minutes without stopping. After these massaging exercises, your testicles should be stretched out and appear to be hanging lower than normal. They should also appear to be larger. This is

due to the increased blood circulated into your testicles from performing the above exercises. You should do these massaging and stretching techniques at least 3-4 times a week, but daily exercise can be performed for absolute optimal testicle health and fertility. This heat will increase the blood flow as well be absorb into your body quicker, enabling a better, more efficient workout.

Tapping the Dragon Pearls (For Men)

By tapping on the testicles one can directly stimulate the kidney energy of the body. Remember, the kidneys govern the sexual energy. Tapping the testicles stimulates hormonal production through the entire endocrine system.

Stand in a wide stance or sit on the edge of a chair. Rub your palms together until warm, then use one hand to grasp the penis and pull it upwards. The finger tips of the other hand gently tap the testicles, so that they bounce up and down. Do not tap so hard that it is painful, but hard enough to feel it all over the lower abdomen. Do about 36 taps with both hands. After tapping, contract and relax the PC muscle. Follow this with some deep breathing.

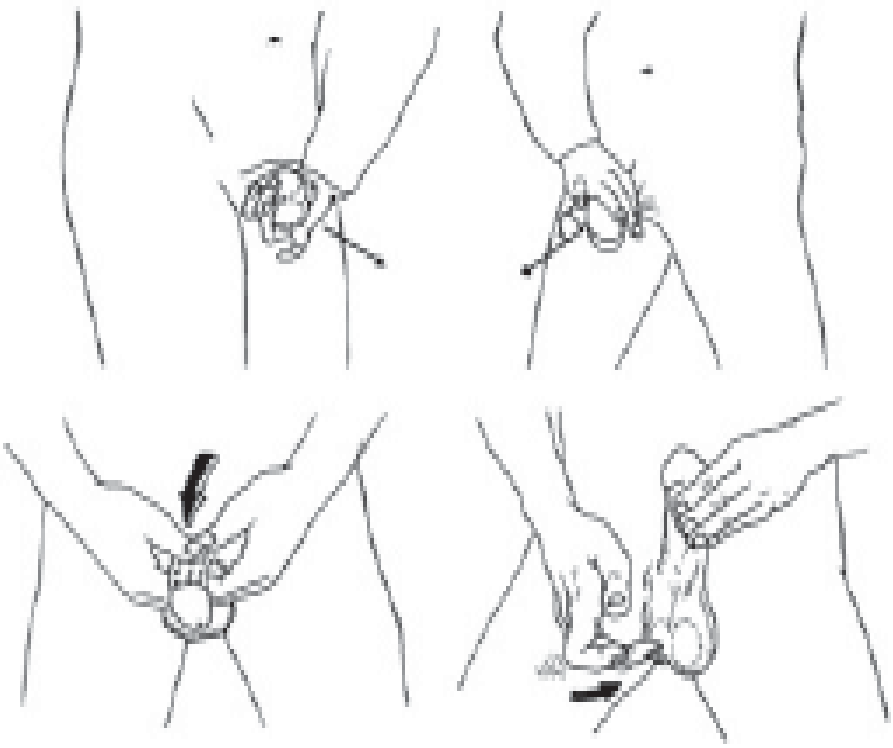


Fig. 9.5 *Testicle Massage and Testicle Tapping*

Penis Power Stretching

To achieve optimal results by stretching your penis, you must understand how the penis works. The penis is made up of cells that enlarge when they fill with blood. These cells are called blood spaces. The blood spaces are within your erectile tissue, also known as the corpora cavernosa. When you stretch the penis, you are stretching all parts of the penis, including the areas that fill with blood. When these areas have stretched to a certain length, the penis will extend longer in both the flaccid and erect state. What most people do not understand is that the penis is probably the easiest part of your body to lengthen and thicken because of the simple fact of how it works. The erection is the size it is because the cells within the penis are a certain size. By naturally exercising blood to fill the spaces, or by stretching the flesh longer, penis enlargement is quite possible with minimal effort.

1. Inhale fully; now exhale and flatten the abdomen while sticking the tongue out. Men use the thumb and index finger to grip the head of the penis; pull the penis and thrust the tongue out more. As for women use the same procedure with the egg with a string to lengthen and strengthen the vagina canal. Squeeze the egg and pull the string. Keep on pulling until you need to inhale. Gasp the air into the intestines; exhale making the "shhhhh" sound until out of breath.

2. In a standing or sitting position, make sure the penis is in a completely flaccid state and grasp around the head, not so tight as to cause pain but just to ensure a good grip.

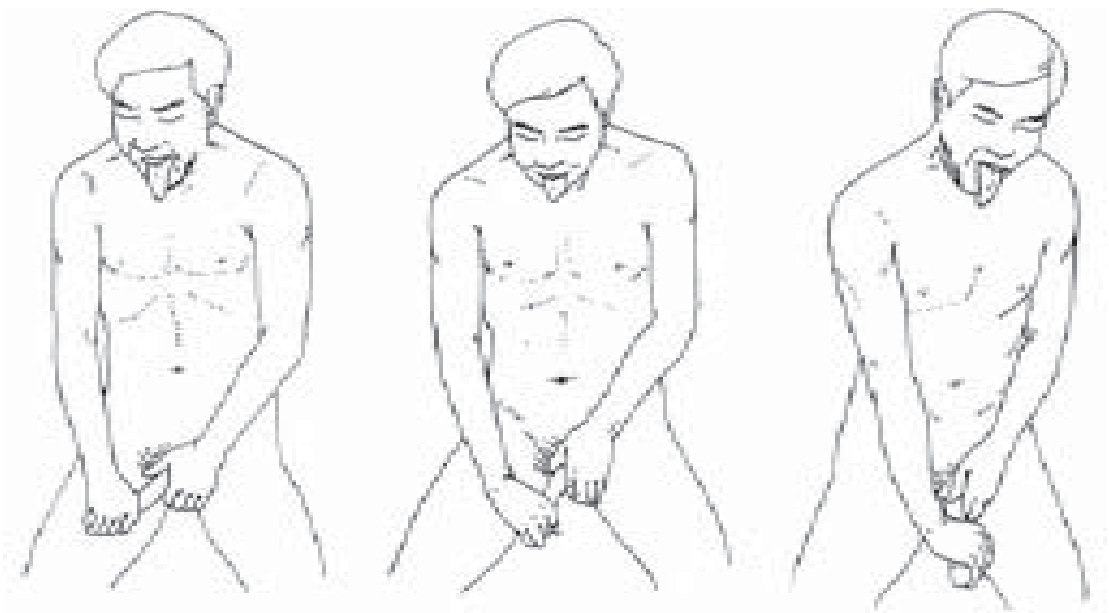


Fig. 9.6 *Power Stretching*

3. Pull the penis directly out in front of you until you feel a good stretch in the middle and at the base. Hold this stretch for a 10 count, rest and feel the energy from the sexual organs. Repeat 3 more times.

4. Now slap your penis against the leg about 50 times to get the blood back into where you have been squeezing.

5. Next, grasp around the penis again, exhale, sticking out the tongue. This time pull to your far left until you feel a good stretch on the right side at the base. Hold this position for a 10 count and repeat. Rest and guide the sexual energy to the crown.

6. Slap the penis against the leg 50 times again.

7. Next, grasp around the penis, sticking out the tongue and holding the breath, only this time pull to your far right until you feel a good stretch on the left side at the base. Hold this position for a 10 count. Repeat 3 more times.

Rotations:

1. Grasp around the penis's head and pull outward until you feel a good stretch.

2. Once extended, begin by rotating the penis in a circular fashion to your left. Not twisting, but rotation around in a circular motion. You should feel a good stretch from all areas of the penis and at the base where it connects. Rotate for 30 rotations, rest for a few seconds and gently contract the anus and perineum guiding the Chi up to the crown. Then repeat 3 more times.

3. Slap the penis against your leg 50 times to get the blood flowing again.

4. Do the same rotation technique as before, only this time to your right. Rotate for 30 rotations, rest for a few seconds, then repeat 3 more times.

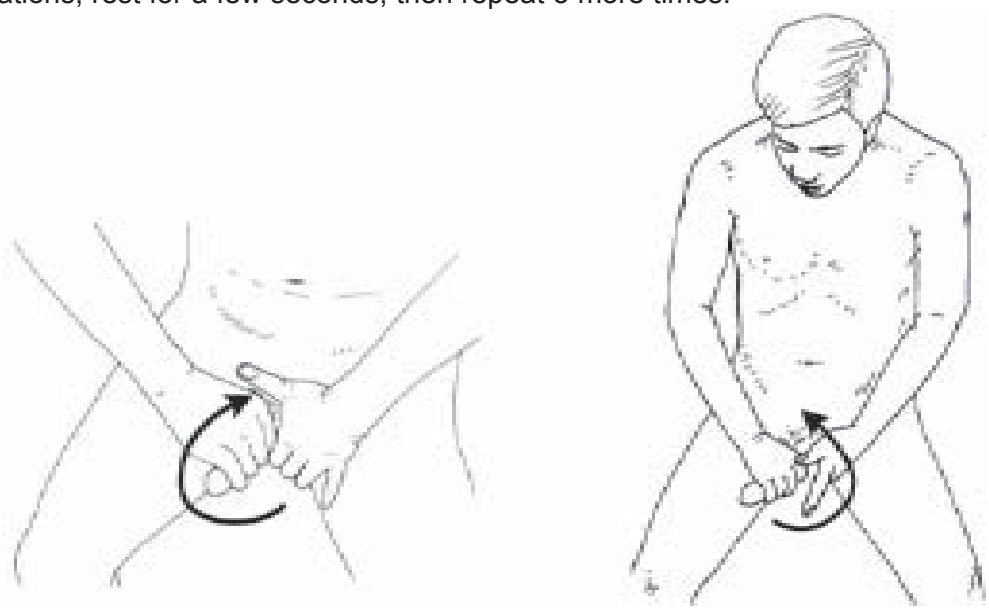


Fig. 9.7 *Rotations*

Hot Hands Warm Up

The purpose in Taoist penis enlargement is to enlarge the corpora cavernosa, the surrounding spongy tissue that fills with blood when you get an erection. If you start out performing the exercises cold, you will experience more blood spots and bumps than you would if you prepared your penis for the physical workout it is about to undergo. Just as you should warm up your body and muscle tissue before any workout, the same should go for your penis. This will prepare it for the workout ahead by making the blood spaces in the corpora cavernosa hot, which expands the tissue and makes it more flexible and spongy. This exercise is called the “hot hand warm up” and should be done before and after every workout you do to your penis and testicles.

1. Rub your hands warm.
2. Hold the penis between the two palms and rub until warm.
3. Hold the testicles between the palms and rub them warm.

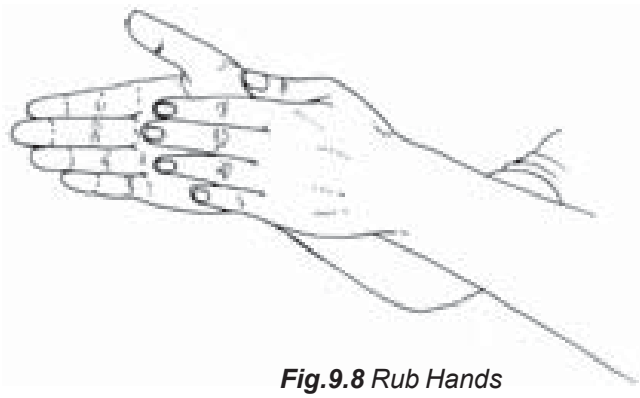


Fig.9.8 *Rub Hands*

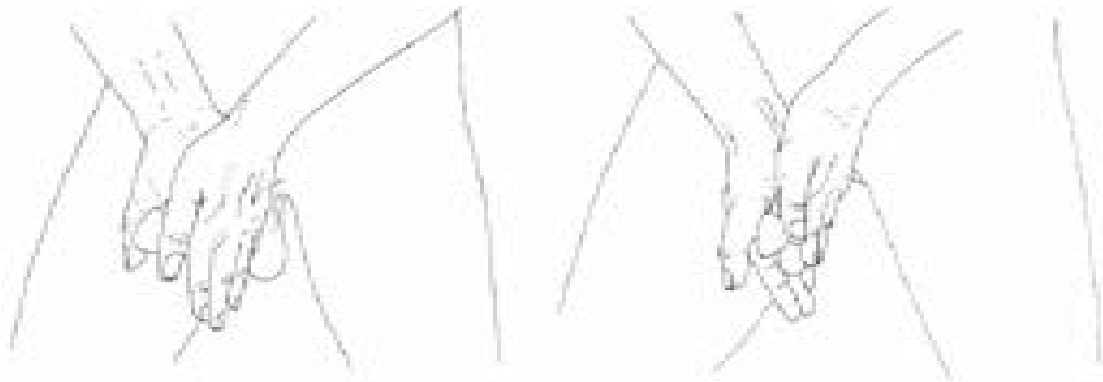


Fig. 9.9 *Hold penis and warm up, followed by testicles.*

Sexual Energy and the Brain

Visualize the Cosmic Orbit movement and fill the organs with Chi. Really focus on your penis while you exercise. Close your eyes and get a good picture in your mind as you exercise. Now, every time you milk, stretch or PC flex, visualize your penis and pineal gland growing a little bit each time and becoming the size that you desire. Focus on every stroke you take and when you stretch visualize a good stretch simultaneously. Focus on the size you want to be and visualize that you have achieved this already. The more you make visualization a regular part of your penile fitness workout, the faster and better results you will attain. This concept goes for anything you do, whether it is penile fitness, exercise, body conditioning or meditation. The more you foresee your results and the more you focus on where you want to be, the faster you will get there. Take care and always remember to visualize your goals. Keeping yourself in top physical shape is very important to your health. Prostate disease and cancer are a leading cause of death in males over the age of 50 and with worsening health conditions each year, things aren't going to get better on their own.

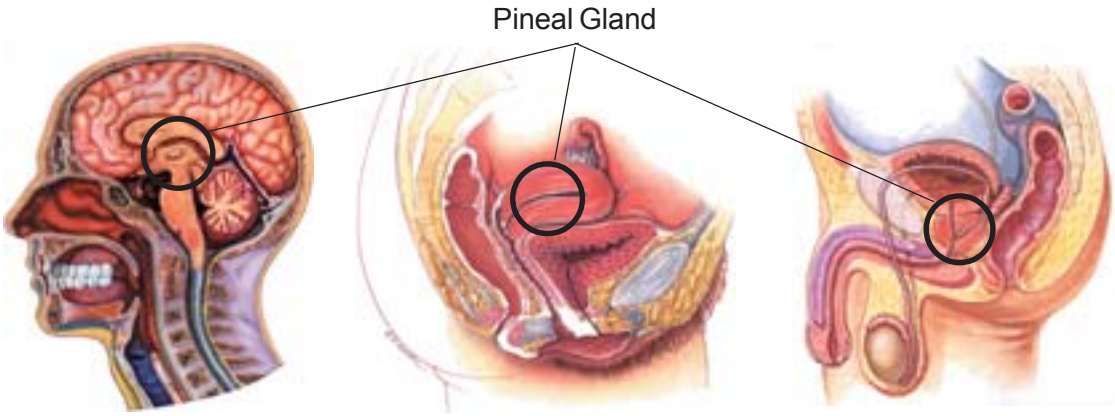


Fig.9.10 *Center of the Brain connects to the Sexual Organs.*

Your ejaculatory strength and ability, your erectile strength and firmness and your prostate health and wellness are all directly influenced by how much you perform these exercises. Regular exercise will massively develop your PC muscle, which in turn will give you hard erections, drastically improve blood circulation to the penis, massively increase ejaculation volume and intensity and actually give you a very healthy prostate. This will help prevent prostate cancer, a leading cause of death in men. The squeeze and flex exercises are simply an advanced PC (pubococcygeus muscle) exercise that incorporates a medium to a tight grip around the erect penis as you perform. This aids resistance to your PC workout by squeezing against the pulsating erection as you flex your PC muscle. Many months of PC Chi Muscle exercise is needed for the average man to be able to last very long in love making.

As you flex the PC muscle contract the eyes, mouth, anus and prostate gland. This will activate the center of the brain.

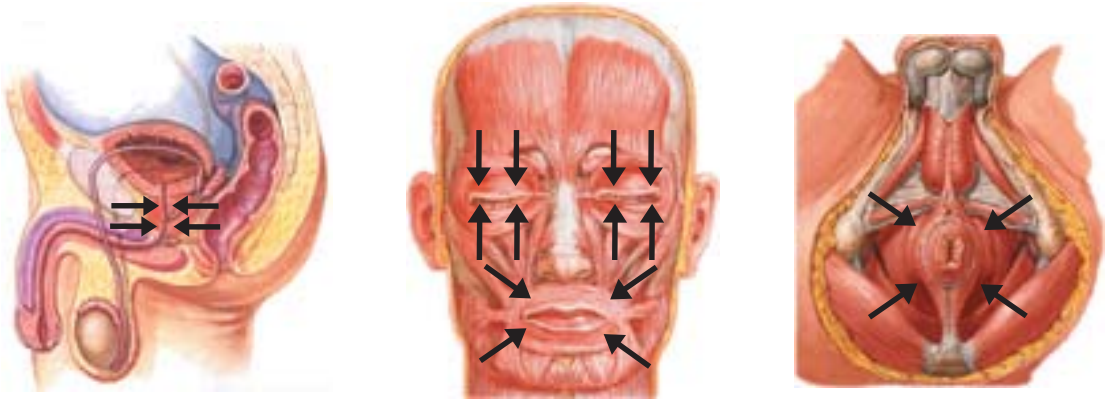


Fig. 9.11 *Pelvic Viscera and Perineum of Male*

PC Muscle and Milking Exercises

These exercises stretch out the central tendon-like tissue in your penis, making it longer, both while erect and flaccid. This exercise also promotes an increase in testosterone and sperm count. It's very sad that in America alone there are more than 30 million impotent men. This is horrifying because all impotence is caused by having a weak, underdeveloped PC muscle and corpora cavernosa (erectile tissue). If you have weak erections or have bouts of impotence regularly, this means that you have very poor blood circulation to your penis and testicles. Having proper blood circulation to any part of your body is vital if good health is desired. A lack of blood circulation to the penis will weaken and shrink the corpora cavernosa and also lessen the sensation and feeling during intercourse, hence promoting impotence. The milking action of stretching will force blood into the blood spaces within the corpora cavernosa, not only enlarging the penis but also training the body to accept more blood flow throughout the entire penis. Regular stretching will ensure a well circulated, healthy and stronger penis after several months of vigorous exercise.

Sexual Organs and the Brain

The Sexual Organs (Ovaries, Testicles, Uterus, Prostate Gland) have a close connection to the center of the Brain, especially the Pineal Gland. Circulating the sexual energy down to the sacrum and then up to the brain, will increase the brain memory. The Taoist sage says, "Return the sexual energy to revitalize the brain."

The center of the brain is connected to the uterus and prostate gland. Contracting and releasing the sex organs increases the blood and sexual hormone circulation to the center of the brain.

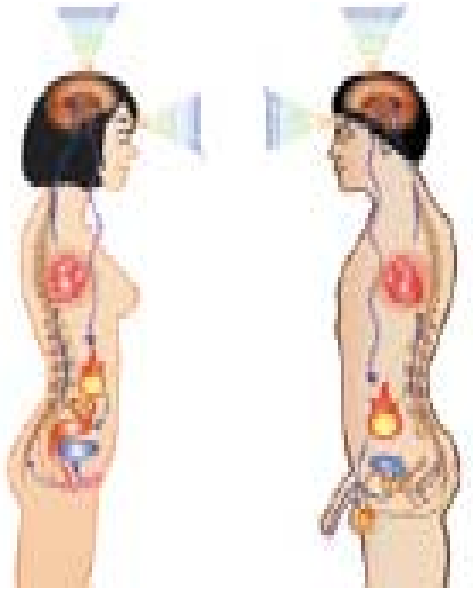


Fig. 9.12 *By drawing the sexual energy up to the brain you are changing the physical (sperms and egg) to etheric and the material to immaterial.*

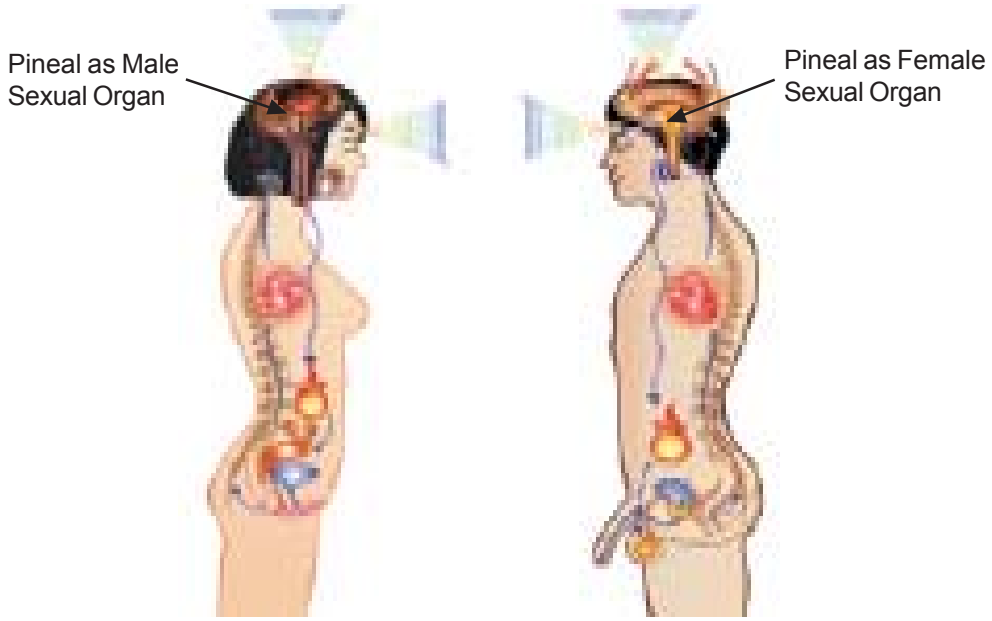


Fig. 9.13 *Pineal Gland is the second sexual organ. In women the pineal is the male sexual organ and in men the pineal is the female sexual organ.*

Chi Muscle

If you are exercising your PC Chi Muscle it will develop your ejaculatory control which will prevent the premature urge to ejaculate. It will also enhance the ability to achieve hard erections; improve blood circulation for enhanced size and sensation; drastically improve sexual stamina; increase ejaculation volume and intensity, improve urinary flow and the ability to have many multiple orgasms. It can actually help save your life by giving you a well developed, healthy prostate.

The first step to beginning your PC workout is locating your PC muscle. Some men have been able to locate their PC muscle for years and didn't even know it. ***Quick Test:*** Get an erection. If you can make your penis move on its own when you have an erection, you have located your PC muscle. If you cannot do this, the next time you urinate, stop the flow of urine before you finish. The muscle you use to stop yourself from urinating is the PC muscle.

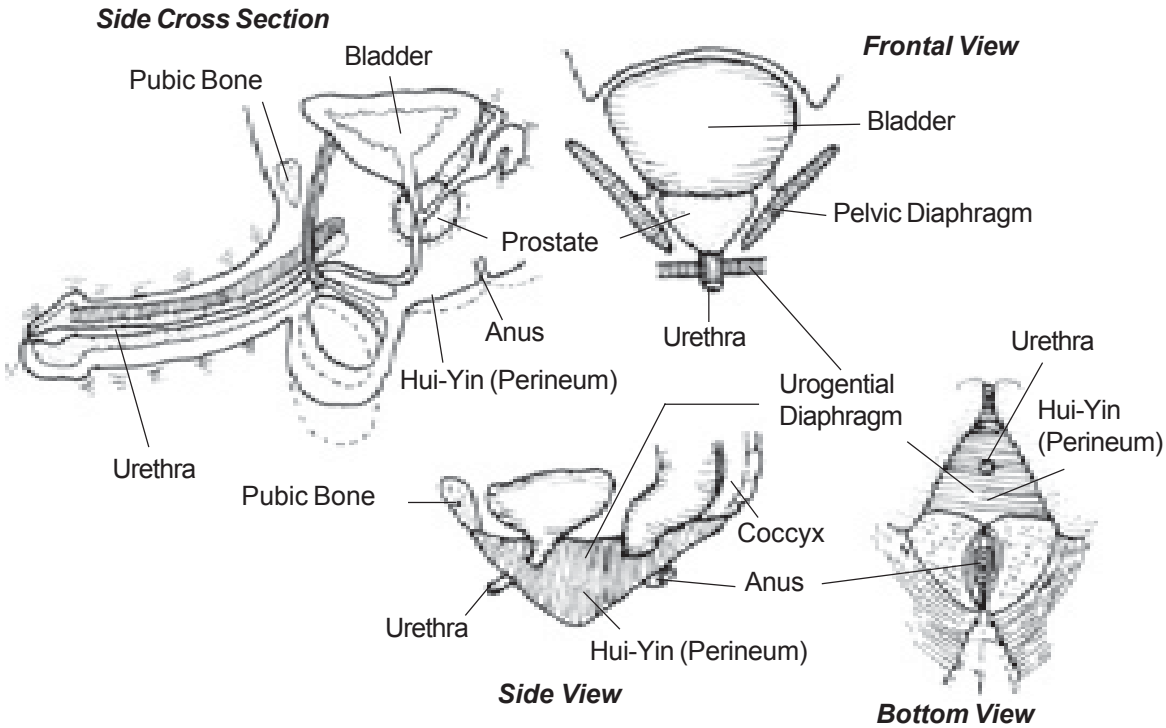


Fig. 9.14 *Male Pelvic and Urogenital Diaphragms*

Men and women (by using their vagina lips) can enhance their sexual prowess and energy by doing at least 200-500 PC flexes a day. Ancient Taoists also called the exercise “tightening the anus” because it also makes your anus tight when you flex. Continue doing about 10 or 20 to see how well you can focus on them. If your PC gets tired after 20 flexes, you are very out of shape. After you do about 20 or so, flex and squeeze really tight and hold it for as long as you can. Though this may be intimidating at first due to the lack of PC strength, within a few months of continual exercise, men will be able to hold off the urge to ejaculate just by squeezing the PC muscle as tight as they can until the urge goes away.

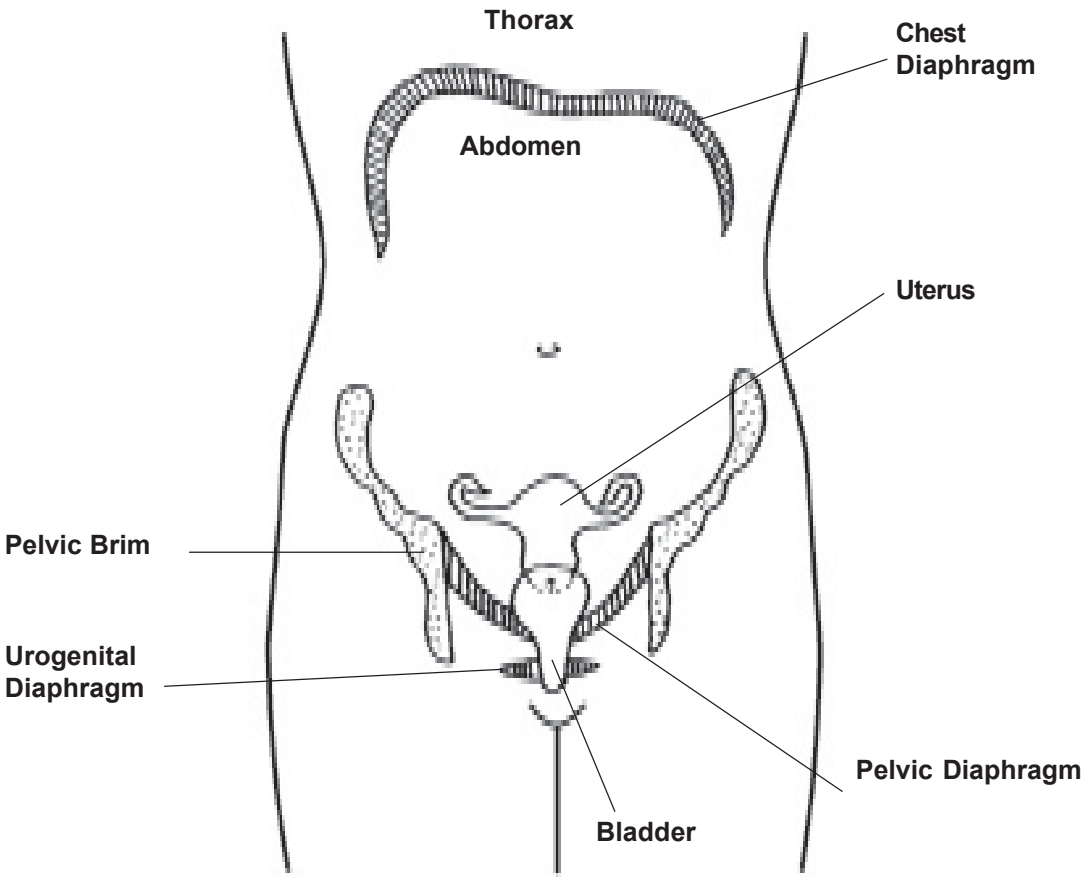


Fig. 9.15 *Female Pelvic and Urogenital Diaphragms*

PC Chi Muscle Exercises

Warming Up: Start out by squeezing and relaxing at a steady pace for a good 30 flexes. At the end of the set, rest for 30 seconds. Continue with 2 more sets, resting for 30 seconds between each set. After this is complete, you should have better control over your PC muscle due to the increased blood and Chi flow.

PC Clamps: Squeeze and release over and over again. Start with sets of 30, and build yourself up to a set of 100 or more. The PC muscle heals quite quickly and you may find yourself waking up with a hard erection every morning. Make sure you do at least 300 PC Clamps a day for the rest of your life. You will soon find that it's the best move you could make for your sexual health and vitality.

Long Slow Squeeze: Warm up with a set of 30 clamps then flex as hard and as deep as you possibly can. When you cannot squeeze any deeper, hold where you are for a 20 count. Rest for 30 seconds. Repeat 5 times. After a month or so of exercising, you should be able to do squeeze and hold sessions for at least several minutes at a time. This particular exercise will give you absolute erections of steel and ability to last as long as you want in bed. Eventually work your way up to 10 sets of 2 minute long holds.

PC Steps Workout: This exercise is simply tightening and loosening your PC muscle in increments. Begin to tighten your PC, hold, then tighten more, hold, a little more, hold, then tighten as much as you possibly can and hold. Hold this for 20 seconds, then untighten a little bit, hold, untighten a little bit more, hold, a little more, hold, then finally release the rest. Do this 5 times with no rest in between.

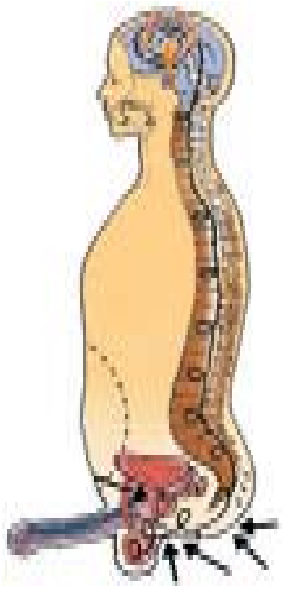


Fig. 9.16 *Chi Muscle Squeeezing*

Testicle Stretching Exercise:

1. Start out just like above warming up and stretching out the skin of the genitals.
2. Grasp around the testicles and penis and begin stretching and exhaling while flattening the stomach and sticking out the tongue. Stop when you feel a good stretch and hold for 20 seconds.
3. After the 20 seconds, relax for a few seconds and grasp around your testicles and penis again.
4. Stretch again, only this time pulling your testicles to the left and your penis to your right. Feel a good stretch and hold for 20 seconds. Rest for 10 seconds.
5. Stretch again only this time pulling your testicles to the right and your penis to your left. Wait until you feel a good stretch and hold for 20 seconds. Rest for 10 seconds.
6. Stretch again only this time pulling your testicles down and your penis up. Wait until you feel a good stretch and hold for 30 seconds.

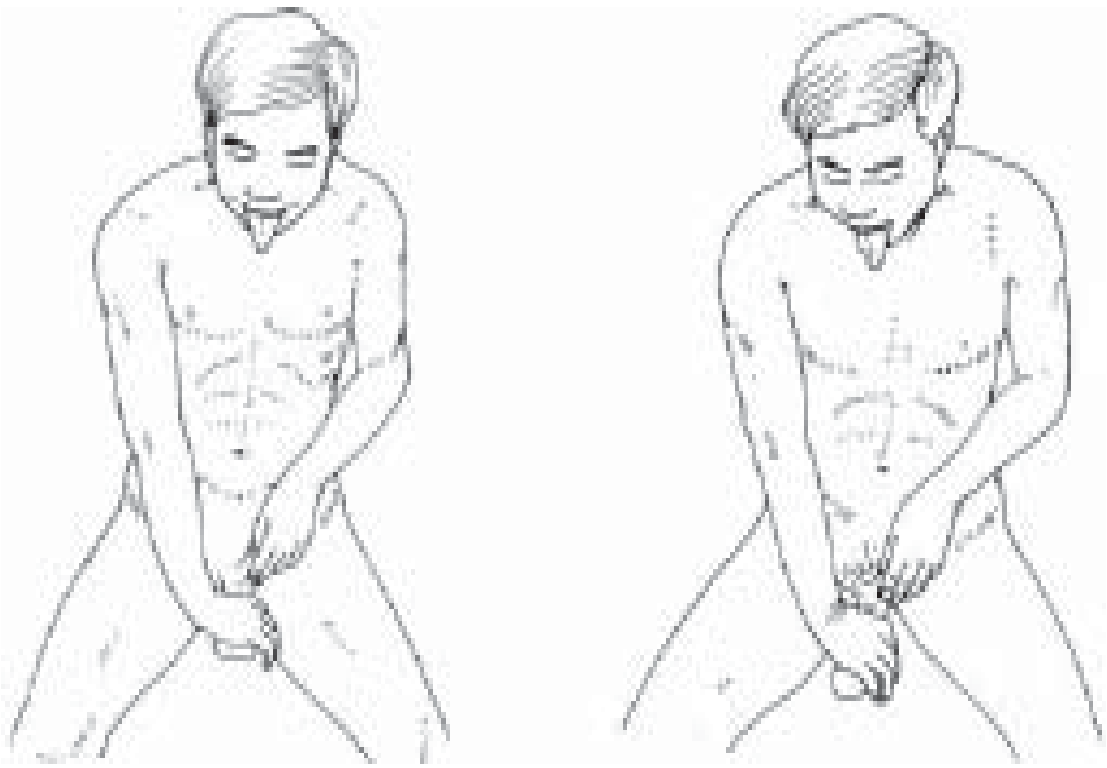


Fig. 9.17 *Testicle Stretching*

Power Milking

The Power Milking is more of a penis enlargement exercise, but it has many beneficial penile health inducing properties when done regularly. The tongue is an important part of the exercise because it is connected to all the tendons of the body, especially the penis, which consists of many tendons. When milking stick the tongue out, and the tongue will get longer as well as the penis. Men should always start out by stretching out the penis lightly by grasping around the head, sticking out the tongue and pulling outward. Rotate your penis with the tongue extended outward in a circular motion. When warming up has been completed proceed with Milking method.

1. Lightly massage the penis to a partial erection to hold blood within its length.
2. Grasp around the base (bottom) of the penis shaft with the thumb and forefinger. This retains the blood within the penis. Grasp all the way around the penis making an "ok" sign with the forefinger and thumb and grip tightly.

Fig. 9.18 *Power Milking*

3. Take your thumb and forefinger, squeeze all the way around your penis and slide forward slowly. This forces the blood within the penis forward into the corpora cavernosa (erectile tissue) and the glans (head).

4. The blood spaces within the penis are forced larger every time you milk forward. As one hand milks forward to the beginning of the head, grasp around the base of the shaft with the other hand, releasing the hand that has reached the head and repeat with the other hand, over and over again at a medium to slow pace (one second intervals).

5. When first starting the Milking, some men experience red spots, bumps, or light bruising on the penis head and surrounding areas. Don't worry because this is perfectly normal and it will usually subside within the first week of exercise. These effects are simply caused by the stretching of the blood spaces within your penis and the new increased blood circulation.

6. In the beginning, start out by doing 300 milks (5 minutes) a day. Follow this by a 15 minute warm up of rubbing. Each milking should last 1 second from grasping the base and sliding to the head. Do this for one week and be sure to do 100 PC Flexes a day. This will aid in the new circulation and strength building taking place within your penis.

7. The second week will be much harder than the first. 10 minutes of continuous Milking then follow by doing 200 PC Chi Muscle Flexes. Do not ease up unless you happen to feel pain, though this is highly unlikely. Apply a warming up rub for 10 minutes to finish the session.

Your choice for lubrication is a crucial one, because if you choose a lubricant that evaporates easily then you will get tired of reapplying it. You can use Johnson's and Johnson's Baby Oil with Vitamin E. It is a good lube for exercise plus is also nice to apply to the penis and testicles after showering, to keep them healthy and supple. If the continuous exercise forms painful bruising on the penis, stop all exercising and wait for the bruising to subside. You can always perform PC Flexes and stretching, and get into the habit of doing PC Flexes while driving or sitting at work, school, etc. PC Flexes are so important to the overall development and health of the penis.

Review the Milking and Holding

Milk and Hold: The milk and hold technique is something men should incorporate after they have milked for at least 20 minutes already. This makes the penis and all of the spongy tissue within the penis warmed up and stretched out enough to the point where chance of injury due to overexertion is very minimal. This exercise thickens and lengthens the penis in both its erect and flaccid state.

Warming Up: Massage the penis to an erection and flex the PC muscle to make it as hard as possible. Once fully erect, pump the PC 20 times to fully expand the penis as much as possible. Squeeze the PC as hard as one can and hold until the erection becomes partial. Now it's time to Milk.

Milking: Apply the choice of lubrication and begin the method of milking. While you milk, visualize the penis lengthening each time you milk down to the head. Milk for 20 minutes continuously without stopping. Once completed, rest for a minute and keep massaging your penis to keep it in a partially erect state. Now we are ready for the milk and hold.

Milk and Hold: Begin Milking just as you have been, performing each milk with about a 2 second interval. Now, after about 20 milks, milk down a little harder than normal. By doing it firmly the hand should stop when it comes to the head. When this happens, pull hard enough to feel a good stretch in the penis. Repeat the 20 milk set then perform the milk and hold with the opposite hand. Continue with this routine over and over again for a total of 500 milkings and 25 milkings and holds.

Cooling Down: At the end of this workout the penis should feel very fatigued and appear quite “pumped” looking. Massage the penis to a full, hard erection and pump the PC muscle several times while massaging to enlarge the penis to its fullest potential. Keep massaging and pumping the PC until the urge to ejaculate is quite strong. Once this sensation is reached, flex the PC as hard as possible, cutting off any possibility of semen being able to pass through the ejaculatory duct. Keep flexing until the urge is gone, then repeat. Do this 5 times to cool down.

Chapter X
Internal Organs and the Five Elements

"The Five Elemental Energies of Wood, Fire, Earth, Metal and Water encompass all the myriad phenomena of nature. It is a paradigm that applies equally to humans."

- Yellow Emperor's Classic of Internal Medicine (2nd Century B.C.)

Sexual prowess, as one aspect of human compatibility and behavior, is derived from the strength of the internal organs. In order to determine by observation one's sexual potential it is necessary to know the person's internal organ energy levels. Using the information derived from Sexual Reflexology, a simple examination of the person's physiognomy can reveal their character or disposition, and will help you to determine the nature of another individual. These principles can also help one better understand their own undiscovered potential.

In Chinese Medicine, the internal organs are much more than the organs themselves. They refer to a quality of energy and are described in the Five Elements. The Five Elements are known as the five phases of cyclical energetic movement in both nature and in ourselves. For example, the heart is associated with the fire element. The quality of fire element is expansive, radiant, bright and warm. The season of the heart is summer, sharing the same qualities of energy. Each organ is associated with a mental and emotional element as well. So each organ has specific characteristics energetically, physically, emotionally and spiritually. In the human body, the goal of the Taoist practice is to keep the Five Elements in harmony. When the Five Elements are in harmony, the body, mind and spirit are in balance.

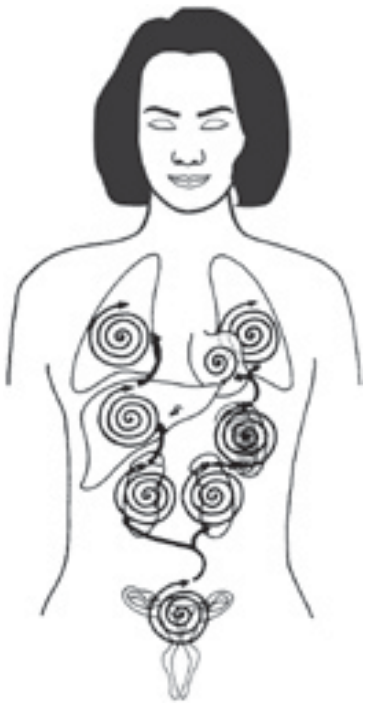


Fig. 10.1 *Draw and spiral the energy around the organs.*

The health of the internal organs greatly affects our sexual energy. Sexual energy is the essence of the internal organs. The body draws the finest energy, especially from the organs, to produce sperm or eggs. When the sexual energy is out of balance, it is reflected in the internal organs and when one or more organs are out of balance, the sexual energy will definitely be affected. The internal organs and sexual energy are a reflection of each other; when one system is improved the other follows.

The best way to keep the Five Elements in balance and harmony is the Six Healing Sounds and the Inner Smile. These techniques are discussed in my book "*Transforming Stress into Vitality*". I highly recommend using these techniques to strengthen the energetic quality of the internal organs.

Kidneys and the Water Element

In Taoist Medicine, the kidneys, one of the five vital organs, are a main source of energy. When they are full of energy, one will be energetic, high-spirited, with plenty of stamina and an abundance of sexual energy. This is all due to the fact that the health of the kidneys is directly related to the health of their corresponding organs, the genitals and consequently to one's sexual functioning and capability. The kidneys are connected by the Taoists to the ears, thereby making the ears the outlets of the kidneys. By observing the shape and condition of a person's ears, you can determine the general strength and condition of the kidneys.

The kidneys in Chinese Medicine represent the water element in the body. Water is associated with the virtue of gentleness and the negative emotion of fear. Gentleness elicits the yin energy of the body. For women, sexual energy is like water. Gentleness stimulates the feminine sexual energy, heating the water element, preparing the body for sexual intercourse.

Female Kidney Energy

To further illustrate the importance of kidney energy as it applies to sexual energy, consider the information set forth in the book entitled *Ni Ching Su Wen,* The Yellow Emperor's classic text on Internal Medicine.

"The kidney energy of a girl becomes abundant at seven years of age. Her baby teeth begin to be replaced by permanent ones, and her hair begins to grow longer. Her governing meridian is open. At approximately fourteen years of age, a woman begins to menstruate and her conception meridian opens and begins to flow, increasing the energy of her connective meridians in great profusion. With menstruation (called in the classics 'Sea of Blood', The Chung Mai) the uterus is now complete and she is capable of impregnation. At the age of twenty-one, the kidney energy of a woman becomes full.

As she reaches adulthood, all her teeth are fully developed and her last molars are in. Her 'Yang Ming' meridians are now full and connect to her face. She is most radiant and beautiful at this time."

This description serves as one example of how the development of the internal organs can be understood from the manifestation of external factors (e.g. teeth, hair and menstruation), all of which combined indicate the level of the kidneys' development.

Therefore, all the surface structures of the body (the eyes, ears, teeth, nose, fingers, etc.) are relevant to human sexuality because they reflect the internal organs.

Kidney Massage

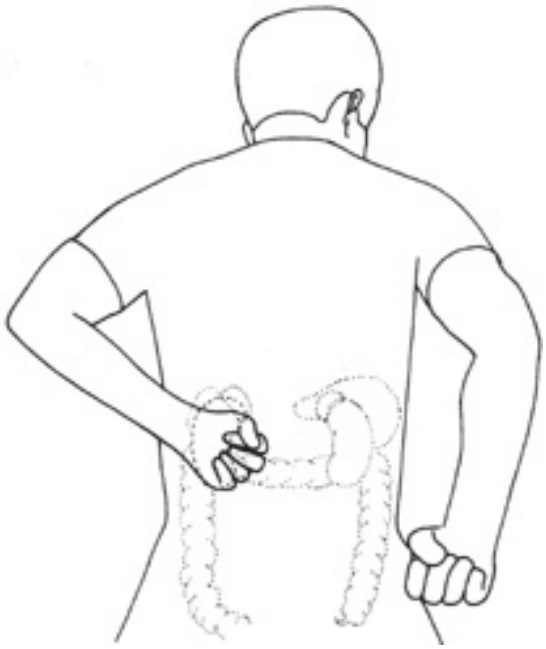


Fig.10.2 *Hitting the kidneys will help to shake out sediment.*

Stimulating and energizing the kidneys is vitally important to healthy sexual energy. Place both hands over the kidneys, on the low back directly above the last rib. Begin to massage the kidney area vigorously with the palms, feeling the heat penetrate deep into the kidneys. Rub vigorously from the lower back, over the kidneys and down to the sacrum. Feel this entire area open and energized. After a few minutes of massaging rest the palms over the kidneys and project energy into the kidneys. You can visualize a bright blue light penetrating into the kidneys transforming any negative energy into positive.

Another very beneficial way to stimulate the kidneys is by gently knocking or tapping the lower back area lightly with a loose fist. Knock all the way down to the sacrum and back up to the kidneys, bringing this vibration into the entire lower back area. Do this about 9 times.

Massage the Ears

The ears, according to Chinese Medicine, are an extension of the kidney energy. One way to stimulate more energy in the kidneys is to massage the ears. The ears have over 120 pressure points. This directly activates sexual energy. That is why couples naturally kiss, nibble and caress each others ears.

Place the ear between the thumb and the first finger. Simply massage the whole ear giving ample pressure to stimulate energy into the entire body. Kissing or nibbling gently on your partners' ears is a way to activate and bring sexual energy through the whole body.

A. Rub in front and back of ears. B. Rub the ear shells. C. Pull down on the ear lobes.

Fig. 10.3 *Chi Self Massage*

Heart and the Fire Element

The heart has a strong connection to the sexual center. The heart is associated with the fire element and is the energetic center of passion and affection. It is known as the "King" of all the internal organs, circulating blood and energy through the entire system. The fire element is associated with the virtues of love and joy and with the negative emotions of hatred and cruelty. Negative emotions are elicited when energy is not flowing or when energy is congested in the heart. Have you ever noticed that when you

do not communicate what is in your heart and hold in your emotions, there is a feeling of congestion? This is how negative energy is formed. Energy becomes negative when it is not flowing. Energy stuck in the heart is one of the biggest sexual problems we face. When the energy in the heart is blocked, it is difficult to feel deeply and connect with your partner. For example, when someone in a relationship does not communicate what is in their heart, energy is congested and negative emotions ensue. Expressing what is in our heart in a clear controlled manner frees this energy and transforms it into something positive.

It is very healthy to establish the intimate connection between the heart and the sexual center. The Tao regards loving energy and sexual energy as the two strongest energies in the body.

Fire energy is also associated with excitement and exhilaration. It is the fire energy in the heart that opens the sexual center. This is why falling in love leads to sexual desire. Many of the Taoist meditations focus on balancing the heart and sexual center. Even the higher level Taoist meditations called Kan and Li (Fire and Water) work on unifying these two energies and steaming their potent force through all the meridians.

Tongue Kung Fu

The tongue is the sense organ of the fire element and the energetic extension of the heart. Exercising the tongue is a great way to open the heart and the sexual energy. There is a very strong connection between the tongue, heart and sexual center. This is why lovers kiss with the tongue. In some cultures kissing with the tongue is just as intimate as making love.

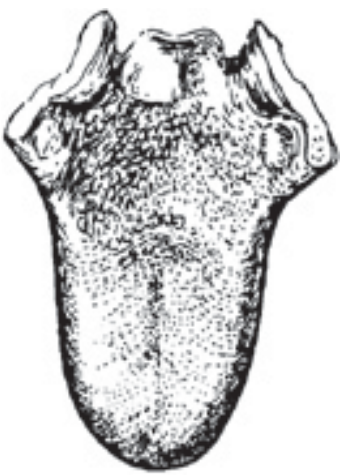


Fig. 10.4 *Tongue*

To exercise the tongue, bring the tip of the tongue in front of the upper teeth inside the lips. Circle the tongue down to the inside lower lip. Continue to circle in front of the teeth and inside the lips about 36 times and then switch directions.

Next, massage the flat part of the tongue against the upper palate vigorously. Feel the heat that is generated through the head and the whole body. Heat is a good sign that the fire element is activated in the heart and sexual center. Massage the tongue against the upper palate at least 36 times.

Massage the Chest Opening the Heart

Massage the chest with the fingers or knuckles. The knuckles are good to use for deeper pressure. Look for tender areas along the sternum and between the ribs along the chest. Press into them gently, massaging until you feel a release. It is especially good to spend time massaging the sternum, releasing emotional energy that has congested in the heart center. To end, place the hands over the chest and project energy into the heart area. Visualize a bright, red, warm glow in the heart. Feel the connection between the heart and the sexual center.

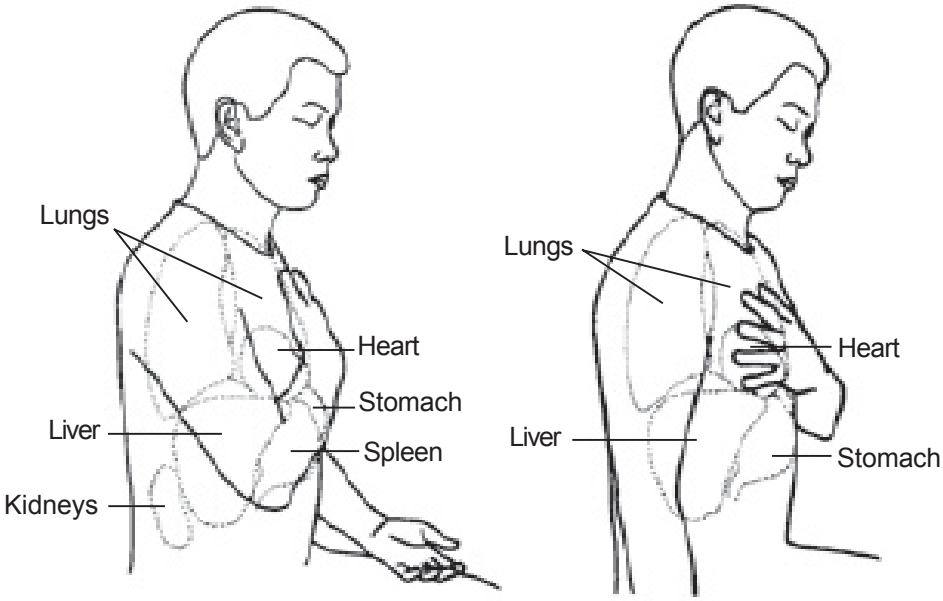


Fig. 10.5 *Place the palm on the chest opening the heart.*

Lungs and the Metal Element

The lungs are the organs of breath, keeping us intimately connected to the Universe. When inhaling we take in the body of the Universe and when exhaling we give back part of ourselves to the Universe. The breath is a metaphor of this dynamic exchange of energy. It represents giving and receiving, ebb and flow, male and female. Simply by observing the dynamics of the breath we can witness the balance of yin and yang and the constant flow and exchange of life force energy within the Universe. Male and female relationships are part of this Universal exchange, creating harmony and balance in all apparent opposites.

The breathing patterns always reflect how we feel. When we become sexually aroused the breath becomes deep and full, pumping energy through the whole body. If the lung

energy is weak or congested, it is difficult to feel aroused and excited. The negative energy of the lungs is depression. Depression is one of the biggest causes of impotence and low sexual energy. On the other hand, when energy is flowing in the lungs, we have a feeling of courage and self-expression. Positive energy in the lungs allows you to breathe in life, to experience it. To feel sexually aroused, the whole body needs to be alive and full of energy. This is what the lungs do when they are healthy and full of energy.

Massage the Lung Points

Stimulate and open the lungs by lightly knocking on the chest with a loose fist. This opens the rib cage and relaxes the diaphragm. Knock just below the collar bone to activate the lung points and to stimulate the lung meridian. Continue to knock on and across the chest for at least one minute with both hands. Afterwards, feel the buzzing and tingling in the chest area. Take two or three long deep breaths. Feel the lungs open and energize.

Liver and the Wood Element

The liver is associated with the wood element and the virtues of kindness and forgiveness. The negative emotions of the liver are frustration (sexual frustration) and anger. When the liver energy is congested, we simply cannot relax. Relaxation is an indispensable quality of good sexual health. When we are tense and tight, energy does not flow.

The liver transfers a tremendous amount of energy to the sexual center. The wood element plays a vital role in the strength of the erection for men and provides the expansive energy for the swelling of the vagina when the woman is sexually aroused. When the wood energy is blocked, men usually have a difficult time getting an erection, even though they may feel aroused. Women may have a difficult time feeling orgasmic. Deep relaxation usually solves these problems. Releasing the congestion in the liver allows the wood energy to flow into the sexual center.

Massage the Feet

The liver meridian runs down the legs and into the feet. Massaging the feet is a great way to relax the body and stimulate the wood element. Whenever the body is able to relax deeper, the sexual center benefits. When the body is under stress and tight, the sexual energy is constricted. Massage the feet with both hands. Pay particular attention to the big toe. This is where the liver meridian ends. Spend at least five minutes on

each foot to ensure that the energy moves into the body. If you want to boost your partners sexual energy immediately, suck or nibble on the big toe.

Spleen

The spleen is associated with the earth element and the virtues of balance and openness. The negative emotions associated with the spleen are worry and anxiety. When the earth element is out of balance, the feelings of the body are disconnected, making it difficult to get in touch with sensation. For example, when the energy of the spleen is congested, it causes the mind to be over active. The over activity in the mind is what causes worry and anxiety. When there is excess energy in the head, it is hard to be in touch with the body.

When energy is flowing in the earth element, we are able to feel our center and our connections to all life. When we feel connected to ourselves, we are able to connect to others, both sexually and emotionally.

Massage the Abdomen

Massage the abdomen in a gentle circle rubbing with the flow of digestion, from left to right. The abdomen is the center of the body. When the abdomen is full of energy, the body is full of energy. (To understand more about the internal organs and the energy of the abdomen it is advisable to read my *Chi Nei Tsang* book). Continue to circle the hands around the abdomen at least 36 times. With the fingertips, feel for any tightness or congestion. Work into the abdomen and feel the release of tightness. Work with your breathing while you are massaging. See if you can breathe all the way into the belly. Remember, the organs provide energy to the sexual center. When the energy in the abdominal area is full, the sexual center is balanced and harmonized.

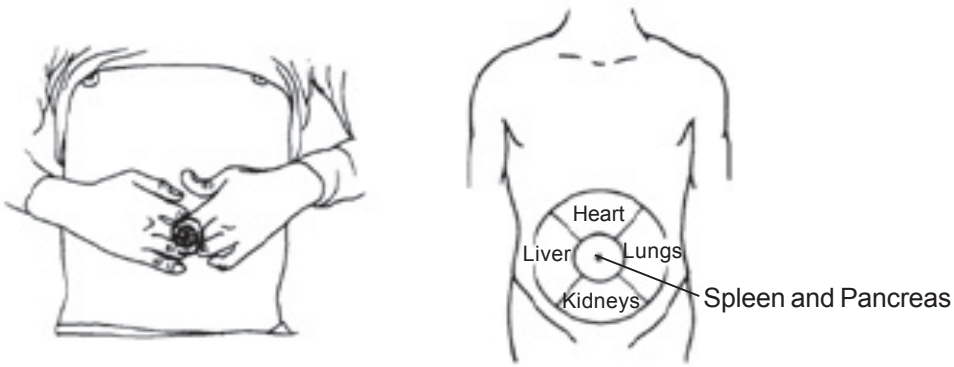


Fig. 10.6 *The major key to maintaining good health is to eliminate tension, worry and toxins every day and maintain good sexual energy by massaging the abodmen.*

Chapter XI
Secret Art of the Jade Chamber

In the *Classic of the Arcane Maid*, an ancient Taoist text, the Elemental Maid discloses the *Art of the Bedchamber* to the Yellow Emperor. It was said that a woman with a richness of Yin and very little Yang was more sexually desirable. Today we might say that the sexually desirable woman has an abundance of female hormones.

There is no joy in Yang without Yin and Yin without Yang is unexcited. In such cases, the man desires copulation but the woman is unhappy or, the woman desires copulation but the man lacks desire. When hearts are out of tune, there is no arousal of the essences. Thus love and pleasure are not forthcoming. However, if the man courts the woman and the woman the man, there is a merging of both minds and desires. They take delight in each other's hearts. Upon the arousal of the woman's passions, she fondles the man's jade stalk and provides it with the power necessary to tap her jewel terrace. This brings an abundance of secretions from both. The jade stalk, greatly enlarged, moves sometimes slowly, sometime quickly. The jade gate opens to ease the entrance of the powerful adversary and absorb its essence, which irrigates the scarlet chamber.

In responding to the man's Yang, the woman shows the following symptoms: *Her ears are hot as though she had drunk rich wines. Breasts protrude firmly so that they fill his hands. The neck moves and legs shake in an agitated fashion. She attempts to hold back her lascivious movements, but all at once she clings to his body and presses hers deeply against him and gently palpates it.* (This describes a basic technique in Chinese massage, which aims at accupoints. The erotic variety of such acupressure acts as a very effective aphrodisiac.)

Next the text goes on to explain to the emperor the reason for awaiting the ***Four Attainments***. It says that *"If the jade stalk is not angry, the man's harmonious essence has not yet arrived. If it is stiff but not hot, his spirit muscle essence has not arrived. If it is big but not yet stiff, the bone essence has not yet arrived. Should it be rigid but not hot, the spirit essence has not arrived".* In order to perform, all four conditions must be met – even if the man already has an erection.

Next, the emperor enquires about a woman's ***Nine Essences.*** He wonders what they are and how he can tell whether they have been aroused. The Arcane Maid says, *"When a woman deeply sighs and swallows, the essence of her lungs has been aroused. If she utters little cries and sucks his mouth, the heart essence has been aroused. When her Yin gate is damp and slippery, the kidney essence has been aroused. Should she enfold and hold him, her spleen essence has been aroused. When she gently bites him, her bone essence has been aroused. Finally, when she caresses his jade stalk, the essence of her blood is aroused."*

The Elemental Maid outlines the ***Five Desires***: *"If a woman bates her breath and restrains her energy, her mind desires sexual union. If both her nostrils and mouth are dilated, her vulva wants union. If she suddenly embraces the man, she wants to climax. If her perspiration drenches her clothes, she wants her heart filled. If she straightens her body and closes her eyes, she is near ecstasy."*

Next, the ***Five Symptoms*** in the woman are mentioned and a recommendation for the appropriate male response is given. *"When her face is flushed, gradually start intercourse. When her breasts are full and her nose perspires, slowly put in the jade stalk. When her throat is dry and she is swallowing, unhurriedly rock the jade stalk. When her grotto is slippery, slowly penetrate to her depths. When her fluids flow to her buttocks, slowly remove the jade stalk."* Although the Elemental Maid appears to be giving advice to the male, her instructions are only for the early stages of the encounter, before it becomes passionate.

In addition, the Elemental Maid discusses the ***Ten Movements*** of a woman in the sweet agony of passion, and urges her to be strong: "*If she holds him with her arms, she desires to press their bodies together and for their genitals to touch. Should she extend her thighs, she wants to rub her upper vulva against him. If she holds in her stomach, she wants to have an orgasm. If she shakes her buttocks, she desires to be sliced deeply to the left and right. If she lifts up her body against his, her libidinous joy is great. If she stretches out lengthwise, her limbs and body are pleased. If her sexual fluids are slippery, she has attained orgasm. Look at these movements in the* ***'Original Nine Postures'*** *and you will know how avid is her ecstasy."*

Arcane Maid's Original Nine Postures

Fig. 11.1 Somersaulting Dragons: The woman reclines on her back with the man prostrate over her. She presses her thighs into the bed. Taking his jade stalk, she pulls at her vulva. He drives at her grain seed and assails her upper part with leisurely, calculated stokes – eight shallow, and two deep. Going in dead, the stalk returns alive, so that he becomes vigorous and strong. She is agitated yet pleased, joyous like a singing maiden. To refrain from ejaculation disperses a hundred illnesses.

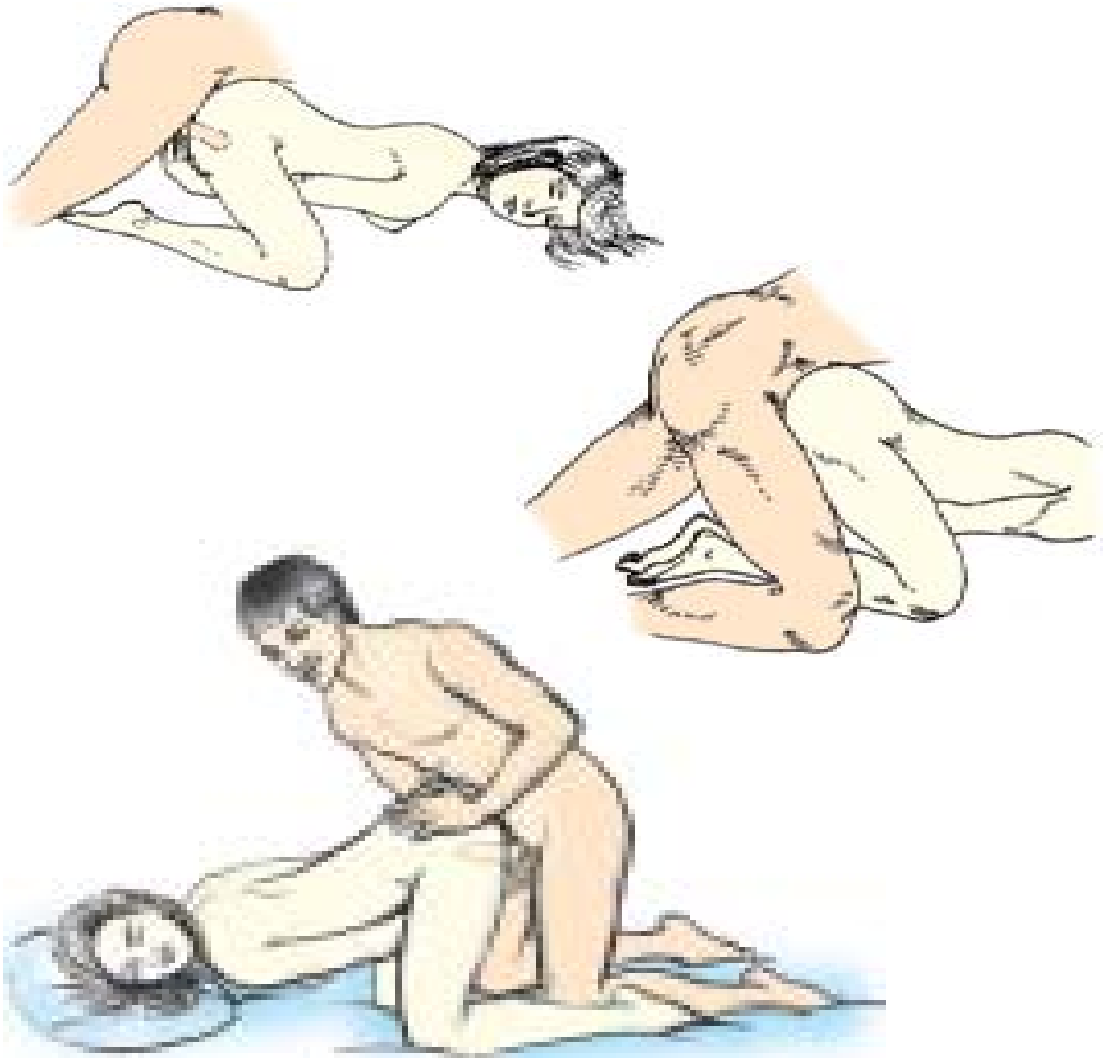


Fig. 11.2 Stepping Tigers: The woman takes a crawling position with the buttocks upward while the head is down. Kneeling behind her, the man clasps her stomach. He inserts his jade stalk, piercing the innermost part of her as deeply and intimately as possible. They take turns advancing and attacking, eight thrusts, five times. As her fluids seep out of her, the jade gate closes and opens. A rest is taken after this occurs. The man will become more virile and a hundred sicknesses will disappear. The Arcane Maid terms this Stepping Tigers since the participants advance and retreat like a pair of tigers. In such a position the jade stalk refrains from stimulating the clitoris, but may penetrate to the flower heart. “Eight thrusts, five times” denotes a total of forty thrusts, with a brief pause after each set of eight.

Fig. 11.3 Wrestling Apes: The woman lies on her back, the man supports her thighs, pushes her knees beyond her breasts, and raises her buttocks and back. He inserts his jade stalk, and stabs her scented mouse. She shakes and rocks. Her fluids flow like rain. He pushes in deeply, without moving. The jade stalk grows strong and angry. He stops when she exults. One hundred sicknesses cure themselves.

Fig. 11.4 Cleaving Cicadas: The woman lies on her stomach and extends her body. Lying on her back the man inserts his jade stalk deeply. He lifts up her bottom slightly so that he can gently tap her scarlet pearls for a total of nine thrusts, six times. Excited, her fluids flow. Her inside Yin throbs quickly while the outside spreads and opens. He stops when she rejoices. Seven injuries eliminate themselves. (There is fairly shallow penetration with the rear entry position and mobility is limited. “Scarlet pearls” means the labia minora, and “Yin” the vagina.)

Fig. 11.5 Mounting Tortoises: The woman lies on her back with her knees bent. The man presses her feet until the knees are at her breasts. He puts in his jade stalk deeply and at times stabs at her infant girl. Carefully thrusting deep and shallow, he reaches her grain seed. She is overcome by great joy, shakes and then lifts her torso. At the point when her fluids overflow, he pierces more deeply and then stops when she rejoices. If no semen is lost, his vigor will multiply a hundredfold. (In this position, which is similar to Wrestling Apes, the man holds the woman's legs instead of her buttocks. It was another favorite ancient Chinese position allowing deep penetration and high mobility. "Infant girl" means the vestibular glands between the labia minora.)

Fig. 11.6 Soaring Phoenix: The woman lies down and raises her legs while the man kneels between her thighs. His hands are on the mat. He slips his jade stalk in deeply and it pierces her mixed rock. Rigid and hot, he guides it in and requests that she start moving. There are eight thrusts, three times. As their buttocks swiftly attack one another, her Yin opens and expands, gushing out its fluids. He halts upon her rejoicing and a hundred illnesses will vanish. (Coital movements here are done mostly by the woman.) The "phoenix" refers to the Chinese mythical *feng huang* bird. "Mixed rock" means four inches deep.)

Fig. 11.7 Bunny Licking Its Fur: The man stretches his legs straight as he lies on his back. She straddles his body with her knees to his sides. She faces his feet with her back to his head. Holding on to the mat as she lowers her head, his jade stalk is inserted until it pierces her lute strings. She celebrates as her fluids gush like a fountain. She is delighted with harmonious pleasure, which moves her spirit and body. Upon her rejoicing he halts. A hundred illnesses will not come about. ("Lute strings" symbolizes one inch inside the Yin. With such shallow penetration, the woman needs some practice to forestall the dislocation of their organs. "Licking bunny" means the male organ.)

Fig. 11.8 Fish Linking Scales: The man lies flat on his back with the woman over him straddling his body. She carefully and slowly inserts his jade stalk, stopping when he is only a little ways in. Rather than penetrate deeply, he imitates a baby sucking at the breast. The woman rocks by herself for a long period. He removes his stalk when she rejoices. This cures all clogging sicknesses.

Fig. 11.9 Cranes Entwining Necks: While the man squats, the woman rides his thighs, her hands holding his neck. She inserts him, letting his jade stalk cut through her wheat bud and jab her seed. He clasps her bottom to help her rocking and rising motions. Feeling wonderful joy, her fluids flow and bubble. He halts when she rejoices. The seven injuries will be healed naturally. (This is another position with the woman above, so it gives her a bit less mobility and shallower penetration. “Wheat bud” is two inches deep, and “seed” means her clitoris.)

Mystical Thirty Postures

The Mystic Master saw his thirty positions as an amplification of the Arcane Maid’s original nine positions. Naming each position, he offers a very short, and sometimes, cryptic description. His positions are simply illustrations, with no trace of motion. However, immediately after the positions he puts forth the dynamic parts of sexual intercourse in fifteen coital movements.

Fig. 11.10 Entangled Silkworms: Lying on her back, the woman hugs the man’s neck with her feet crossed above his back. He puts his knees between her spread thighs while grasping her neck. Then he inserts his jade stalk.

Fig. 11.11 Dragons Twisting: Bending her legs, the woman lies on her back while the man kneels between her thighs. He pushes her feet forward beyond her breasts. Helped by his right hand, his jade stalk enters the jade gate. (This is a version of the Arcane Maid's Wrestling Apes and Mounting Tortoises.)

Fig. 11.12 Fish Eye-to-Eye: This position calls for the couple to lie down facing each other. They proceed to suck one another's lips and tongues. The woman raises one leg above the man's body and he spreads his legs slightly. One hand supports her upraised leg. He slips his jade stalk into her cinnabar grotto. (This position frees the partners' body weight.)

Fig. 11.13 Swifts Sharing a Heart: The woman reclines on her back and stretches out her legs. The man squats over her stomach while his hands embrace her neck. She holds his waist with her hands. He slides his jade stalk into her cinnabar grotto.

Fig. 11.14 Kingfishers Uniting: She reclines on her back, knees raised. The man puts himself between her thighs in a Tartar squat. He holds her waist with his hands and puts his jade stalk into her lute strings. (The Tartar squat is a traditional position of people from the northern China.)

Fig. 11.15 Mandarin Ducks Joining: The woman bends her legs while reclining on her side. She places her upper leg on the man's buttocks. He faces her back and rides on her lower thigh, lifting one knee up against her upper thigh. He then slides in his jade stalk.

Fig. 11.16 Butterflies Fluttering: While the man reclines on his back with his legs extended, the woman sits astride him facing his head. With her feet on the bed, she uses her hand to put his Yang peak into her jade gate.

Fig. 11.17 Wild Ducks Flying Backward: The man reclines on his back and stretches out his legs. The woman sits down on him with his face to her back and uses her feet to hold onto the bed. She lowers her head, takes his jade stalk, and inserts it into the cinnabar grotto.

Fig. 11.18 Sheltering the Reclining Pine: The woman reclines on her back and folds her feet behind the man's waist. They hold each other's waists as he inserts his jade stalk into her jade gate.

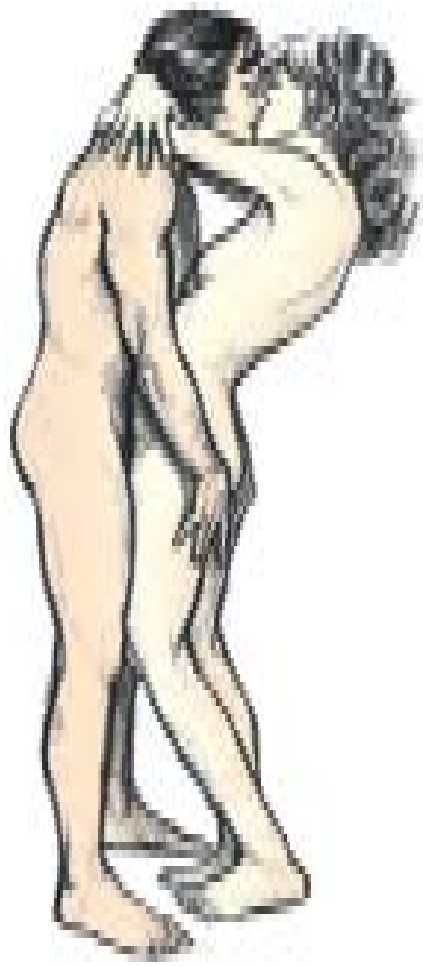


Fig. 11.19 Bamboo by the Altar: Here, the man and woman stand, face each other, embrace and kiss. He slices her cinnabar grotto deeply with his Yang peak, all the way down to her Yang terrace.

Fig. 11.20 Phoenix Holding Fledglings: A large heavy woman can be joined by a smaller man to make a good love union. This is fine excellence!

Fig. 11.21 Seagulls Soaring: The man is near the edge of the bed where he lifts the woman's legs high and inserts his jade stalk into her baby palace.

Fig. 11.22 Wild Horses Leaping: The man lifts her feet while she is on her back and puts them on his shoulders. He slides the jade stalk deep into the jade gate.

Fig. 11.23 Steeds Galloping: The woman reclines on her back. The man squats and holds her neck with one hand while the other hand lifts her leg. He puts his jade stalk into her baby palace.

Fig. 11.24 Horse Shaking Its Hoof: The man puts one of the woman's legs on his shoulder while she lifts the other one herself. The man puts his jade stalk deep into the cinnabar grotto. This is very arousing.

Fig. 11.25 White Tiger Jumping: The woman kneels and her face is lowered. The man, hands holding her waist, kneels behind her and inserts his jade stalk into her baby palace.

Fig. 11.26 Dusky Cicadas Cleaving: The woman lies on her stomach and extends her legs. With his legs bent between her thighs, the man holds her neck with his hands. He then inserts his jade stalk into the jade gate from behind.

Fig. 11.27 Goat Hugging the Tree: The man is seated with legs held out. With her back to his face, the woman sits on his lap. As she lowers her head to look at the insertion of his jade stalk, he abruptly holds her waist, bridling and thrusting.

Fig. 11.28 Jungle Fowl Approaching the Arena: The man crouches Tartar style on the bed as a young maid servant grasps his jade stalk. She proceeds to insert it into the jade gate of his partner. The maid then stands back and tugs the hems of the other woman's skirt to stimulate her legs. Very rousing!

Fig. 11.29 Phoenix Sporting in the Cinnabar Grotto: The woman lifts her feet as she reclines on her back. The man rests on his knees next to her, holding onto the bed. He enters into her cinnabar grotto with his jade stalk. Extremely courtly!

Fig. 11.30 Rock Soaring over Dark Sea: As the woman lies on her back, the man puts her feet on his upper arms. Stretching his hands down to hold her waist, he puts in his jade stalk.

Fig. 11.31 Humming Ape Embracing the Tree: While seated, the man stretches out his legs. The woman spans his thighs and holds him. One of his hands holds her buttocks, and the other holds the bed. He slips in his jade stalk.

Fig. 11.32 Cat and Mouse Sharing a Hole: The man squats upright on his feet and legs. The woman squats on top of him, thighs apart and his jade stalk is penetrating deep inside her.

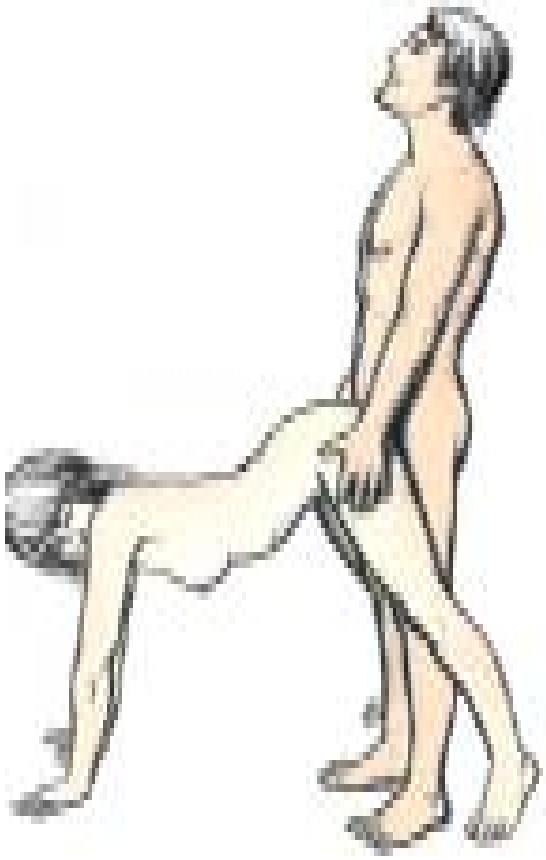


Fig. 11.33 Donkeys of Spring: The woman grasps the bed with both her hands and feet. The man embraces her waist from behind with his hands. He slips the jade stalk into her jade gate. Quite stately!

Fig. 11.34 Dog of Autumn: Both the man and the woman grip the bed with their hands and feet. They are back to back, haunches pressed together. The man lowers his head and uses his hand to push his jade stalk into the jade gate.

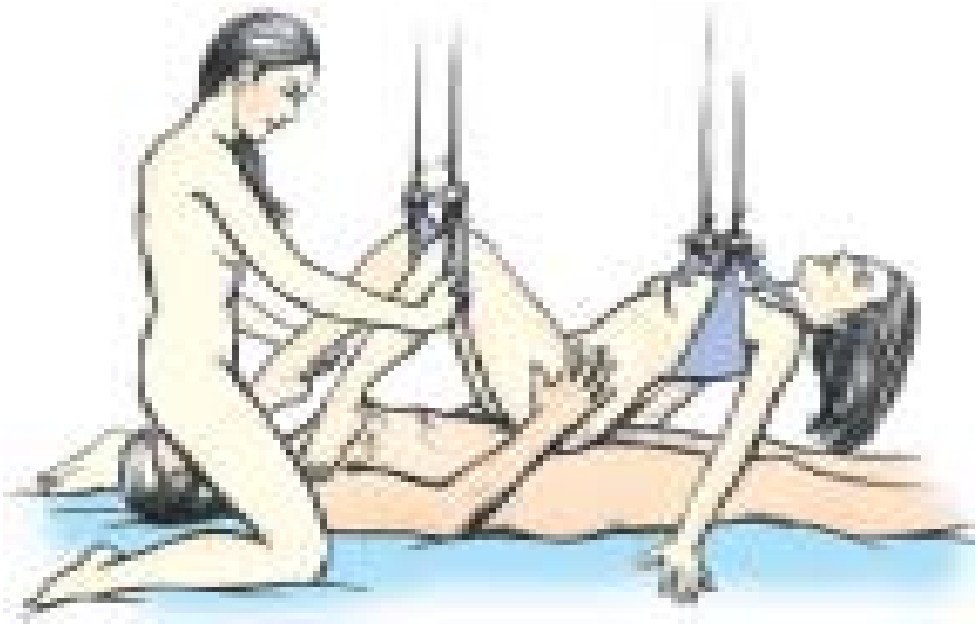


Fig. 11.35 Spider Trapped in Its Own Web: Here, the woman hangs free from a set of ropes attached to the ceiling. It is similar to a swing or riding on a horizontal bar. Her thighs are spread.

Fig. 11.36 Feast of Ponies: The male lies on his back. One woman rides him and another sits on his face. (It should be mentioned that in ancient China, this was a perfectly respectable family union in a country that was traditionally polygamous.)

Fig. 11.37 Old Man Pushing the Wheelbarrow: This position is somewhat strenuous. It usually begins with the woman's on all fours near the edge of the bed. The man stands and inserts his jade stalk from the rear. The woman stretches her legs. The man holds her thighs as though he was holding the handles of a wheelbarrow. They stay attached as he moves backward away form the bed. Her hands support her and she faces the floor. She walks on her hands, coordinating her movement with him. The man walks her forward around the room.

Fig. 11.38 Scissors: This position has both a horizontal and vertical version. They feature a different angle of insertion. The horizontal variation is very restful. The woman reclines on her side and raises her upper thigh. The man lies on his back and spreads his thighs. He moves in between her thighs. Their heads aim in opposite ways and their legs move like two pairs of scissors trying to cut each other. The vertical variation is much more strenuous. The woman stands on her head, her body and legs raised upward with the help of the man. He stands between her spread thighs. The woman holds up her upright body with her hands as the man pierces her by bending his knees and moving up and down.

Chapter XII
Romancing the Moon Grotto

Fig. 12.1 *Pluck and Nurture Technique*

This commentary is taken from "*Yin-Yang Butterfly*" by Valentin Chu and gives you the idea and feeling of romancing the Moon Grotto (vagina) with the "Pluck and Nurture" techniques from the Art of Bedchamber (14th Century China).

Similar to a riffling dragon, the pale wall with its wavelike, tiled top encloses the hidden garden. On the distant side, bamboo swings in the energizing breezes of a summer's day. Goldfish swim lazily in an irregularly fashioned pool framed with greenery and bridged by a slim, arched span of bright cinnabar. To one side a low, meandering house with curled eaves and upswept roof corners can be found. The scent from a bunch of jasmine bushes provides an uplifting sensuousness to the breeze.

Sipping warm rice wine from dainty ceramic cups and nibbling delicacies from several plates, a man and woman sit by a table near a huge boulder. The maidservant who

served the dishes has quickly left. The man and woman talk in quiet voices. As he continues to talk, a long, loose sleeve of his muslin robe hits a pair of chopsticks and they fall off the table. He bends over, squatting under the table to pick them up. Instead his hand touches the woman's petite, delicate foot.

"Oh!" The woman exclaims, seemingly alarmed. The man starts fondling her feet. She blushes a lurid pink. Standing up, the man walks to her side. He holds her cringing shoulders with his hands and places his nose next to the backside of her neck to give a sniff-kiss. "Oh please stop!" She whispers in protest. As his sniff-kisses slowly move to her cheek, she abruptly turns her face and gives him a full kiss on the mouth. She always has appeared coy and acted like a woman of good breeding. Now he knows better. Such women are all alike, with their frigid attitudes but hot lips, modest glances but hard nipples. Often he has noticed a secret curvaceousness in this striking young widow, and he has patiently tried to trap her for months. Their mating dance has been lengthy and hidden behind traditional manners and highly indirect coded messages.. Their time consuming signals and interaction finally made her agree to this supper in his stately garden.

The couple strolls into the house, whispering to each other as they go. They go into the bedchamber. The room contains a huge traditional bedstead, which is practically a room unto itself. A precisely carved ebony lattice frame guards three of the bed's sides. Inside the latticework there is a wraparound muslin curtain. The two flaps in front are held up with a pair of big silver hooks. Beads and semi-precious stones hang from them.

Immediately upon sitting on the bed, they start kissing again. He slowly begins taking off her clothes; her waistband, her silk gown, her sleeveless undergarment, her bodice, and finally her underpants. Her partial resistance combined with partial concession only serves to arouse his eagerness. When they are naked, he views the luscious banquet before him. The almond eyes, the red-red mouth and the naked arms remind him of clean-scrubbed lotus roots. Her breasts are like fresh hills of new tofu with a freshly peeled lotus seed on top.

He is now ready to experience her fineness. When he does, he will add to her essence for his purpose. This will be a wonderfully delicious banquet of longevity. He pays respect to every part of her scrumptious body by touching and kissing her. He alternates subtle tenderness with flagrant boldness. Retreating like a fleeing animal, there are occasional stops to flirt and bait him. For an extended period their entire world is a mixture of limbs and loins; of tender warm skin and damp lips.

He takes a moment to look at this awe-inspiring woman. Her transparent, ceramic flesh, damp with sweat, provides a feminine scent. She breaths deeply, quivering slightly with sensuality from her small navel and her slim waist. And then there is her cinnabar palace protruding very slightly with its abundance of being. She takes a recently opened pomegranate with its red pulp and spreads it before him. Now Yin and Yang are harmonious for a union of exultant happiness.

He starts his hallowed mission into the grotto of love – the mystical grotto – the place where we all enter this world – and the place which grown men strive to enter. As he starts his journey, her black eyes, before half closed in a dreamy velveteen, abruptly open, staring with sharp desire. His skills with the blade have been termed brilliant. His jabs, counters, and returns have conquered the most skilled of bedchamber opponents.

"No! No! No! No!" she gasps to his rhythm.

The silver hooks of the bed drapes clink ever so quietly. The dance of life goes on. While this is an exercise in pleasure for him, it is also of supreme importance. It supercedes ginseng, and is a lot more fun. He rolls her around in different positions. The masters taught him how to elicit the desired effect on her. He recounts without sound to himself the secret words from that astounding volume on sexual alchemy: 'The white tiger swings hither and yon. The blue dragon goes upward and downward. The lunar grotto opens and shuts. The celestial root lunges and strums'. He thinks: 'I must tighten my rectum, hold my breath, and shut all my bodily openings'.

Now the dragon grasps the tiger's buttocks and pushes against the her bosom. He sucks the tiger's tongue, clutches the midsection, and lifts the knees. 'Allow the tiger to move. Let her rock and breathe' he tells himself. The tiger's aureate eyes drift heavenward in elated bliss. 'This works fine', he says to himself. The calm chrysanthemum is changing into a dew-covered peony shaking in a helpless manner in the breeze.

After the tiger's golden eyes drift toward the heavens, he can cull her potion. Very soon she will swim in her own love juices. She has to be the most lascivious woman in China. The peony is dripping with dew, but does not give forth its potion. She's delicate, but stronger than he imagined. This struggle might take some time. The best skills of his bedchamber martial arts must be called into action. He moves on to the ravaging technique of varied thrusts. First he uses nine shallow and one deep thrust. Then he shifts to eight slow and two fast. It seems to be working. The tone of her voice and subtle movements reveal a series of carnal waves in her, yet the mighty burst does not come. She hangs on the edge of the cliff but does not tumble off.

He has to work harder in order to reap her bountiful offerings. Abruptly, there is a piercing warning sound throughout his body. He's on the edge himself. He quickly stops, grasping her to stop her motions. They are two motionless statues. He will start again but first this respite. When they start again he will surely push her over the edge. She is presently absolutely still, yet he senses some tiny palpitations in her moon grotto. Then they grow into spasms. The cinnabar grotto of this wanton female seems to have a life of its own. The grotto opens and closes and squeezes in a most unsettling manner. In seconds, the Yellow River is breaking through its levees. He is ejaculating. His jade stalk, up to now an unvanquishable conqueror, is being exploited helplessly by the throbbing wall of her moon grotto. The flower heart way inside her is eagerly draining his essence.

He is not only defeated but humiliated. He drops to the bed. He feels like an insect sucked dry by a ravenous spider. Devoid of strength he moans: 'What did you do to me! I've had years of cultivation and nurture. Now it is all gone!' She replies softly. 'Sir, you are well known for plucking women. You tried mightily for over two hours to draw out my nectar. Instead, you gave me yours.' Oblivious to his groaning, she continues. 'So is it so wrong for a woman to pluck a man? In the battle of pluck, one must be accepting of defeat as well as triumph.' 'You have destroyed me,' he whines. 'You are a wanton fox devil!' 'Nonsense! Don't believe in shamans. No man is ruined unless they do it too often. It was pleasurable for both of us and it will keep us both young.'

The romancing of the Moon Grotto love play begins long before a kiss or caress. It might start with a subtle innuendo, a titillating encryption, an audacious sexual invitation. Perhaps the body speaks with a look, a grin, a toss of hair or a deep breath. Maybe the opening signals begin amidst an erotic atmosphere of soft lights, sultry music, the sweet smell of flowers or perfume. Partners well known to each other, especially those married for a long time, often minimize or even skip love play, but occasionally returning to the romantic can refresh and revitalize lovemaking. The physical aspect of love play should be approached carefully. In addition, because intercourse is the most intimate act shared by two people, personal hygiene is of extreme importance. Men tend to be more genital oriented than women. Sometimes men might tend to go straight to their partner's genitalia at the beginning of love play. This can reduce the sensitivity of a woman. Quickly beginning sex can be either a potion or a poison — especially for a female. Appropriate do's and don'ts should be respected. As with driving, traffic signs should be followed: "slow," "yield," "stop," "soft shoulder," "curve ahead," "slippery when wet." If one wants to go into uncharted waters, a good plan is to slip in tentatively and slip out immediately. Then observe the partner's reaction. If it is obviously negative, revise your course. If there is halfhearted resistance or ritual, use the Taoist method of two steps forward and one step back. With this tactic in love play, a person can discover unspoken pleasures that both secretly want but are loath to speak of directly.

There is no specific time or place for love play. While some lovers, perhaps out of ingenuity or desperation, like the unconventional, or even dangerous locales, most prefer a romantic environment, perhaps a hidden, moonlit beach or a cozy, dimly lit room, with romantic music or candlelight. It could be the bedchamber with perhaps the bed strewn with flower petals.

Foreplay

The overture to love play can be carefully planned or totally ad-lib. A laugh, a glance, a double entendre, a comment from either partner – nearly anything – can touch off a series of wonderful events. When one strokes the partner's palm very slightly with a finger or sucks a fingertip, an all-night conflagration can be ignited. An occasional butterfly kiss here and there on the partner's arm, face, and neck can titillate. Nibbling the earlobe also excites some partners. In fact, some of the accupoints on the ear are love

points. The natural aroma of a clean woman can be intoxicating to some men, especially during an erotic moment.

A major element in Chinese erotic poetry is olfactory sensitivity. It is found in the famed poem "***Ten Fragrances***". In addition, the French use the term cassolette (perfume pan) to describe the scent of a woman's body: lips, hair, skin, armpits, vulva and even her fingertips. This natural womanly odor is best enjoyed with a sniff-kiss, or Chinese kiss. It is done by putting one's nose next to the partner's body and sniffing in a gentle, loving way. The Chinese use this type of kiss as a loving gesture with small children and as a way of flirting. The Chinese reserve lip kissing for an erotic bedroom act.

Sometimes, if a couple is dining in private it can be stimulating to feed one another. This can vary from spooning food into one another's mouths to transferring food from mouth to mouth. There are numerous foods that are erotic in nature, including peaches, jelly, raw oysters, and clams. Transferring wine from mouth-to-mouth is an age-old erotic act that tantalizes many couples. There are those who enjoy pouring a little champagne into the bellybutton of their mate, and then licking and kissing it. The chilled, fizzing champagne excites some partners. On the other hand, warm rice wine, perhaps Chinese Shaoshing or Japanese Sake, is a good choice too.

A terrific prelude to sex is touch dancing. Many types of dancing evolved from artistic forms and symbolic representations of coitus. Touch dancing permits one to learn a great deal physically about their partner through rhythm, motion and bodily interaction even while fully dressed. A discriminating person can intuitively sense the sexual manner of the dance partner. In private, dancing half dressed or naked is an erotic preliminary to love play. Signs of this prelude are frequently high spirited. Periodic, brief gestures done in an apparently accidental or scatty way are safe in case of opposition. However, they may be quite arousing to a receptive partner.

There are signals that are particularly effective. This is the case whether dealing with a sexually restrained partner or a familiar but up to now platonic friend. One technique is the "dead hand." Here a person "absentmindedly" and gently places their hand on the other's upper arm, shoulder, waist, or thigh. If the person reacts negatively, the hand is quickly removed. However, with no negative reaction, the hand stays without moving, as if dead. If there is a positive reaction, the dead hand becomes increasingly bolder. Another high spirited gambit is a pinch to some taut, fleshy portion of the body. This could be the shoulder if a person is diffident or the thigh or bottom if one is more venturesome.

The surprise single slap, echoing in the receiver's rear, is an attention getter at the right moment, for instance when the person is bent over picking something up. Tickling, while usually thought of as being for children, is also fine for grown-ups, because the feeling is decidedly sexual. The most sensitive spots for tickling are the underarms, behind the knees, the bottoms of the feet, the backside of the neck, the sides of he body, and the inner thighs. Friendly wrestling is an infallible prelude to erotic activities. This

playful scuffle needs neither a referee nor rules. A handcuff hold by the stronger person might well bring about more interesting activities. A prelude with excellent physical possibilities is a pillow fight. This bedchamber activity can disperse hidden sexual enmity. Furthermore, it can bring partners to a point of sensual playfulness. It is best to use down pillows that have no buttons as they make the best weapons. It is possible to hit the other person with gusto and, if done in the right place, not harm them in the slightest. There should, however, be no heavy blows to the face, breasts or genitals. A wild pillow fight might make a mess of feathers, so pillows with synthetic or rag stuffing can be used. The fight can take place while dressed, partially dressed or completely naked, depending on personal taste and the impulse of the moment.

Undressing oneself quickly shows either great urgency or a lack of diplomacy. Disrobing each other can be a strong source of arousal because it is both enticing and sexually arousing. Undressing can be done slowly, as in a game of strip poker. In this game the loser of each round must take off one or more pieces of clothing.

The mouth, with its soft, pliable tissues and excellent tactile and taste sensors, is an erotic organ. This makes kissing both effective and essential in love play. It is exceedingly open to sensual stimulation. The nerve endings on the lips and tongue are quite sensitive. The mouth itself can react erotically to the touch of a partner's lips, tongue and, if in the throes of passion, teeth. The amount of suction used determines the sensation. The olfactory cells in the nervous system in the nose are near the mouth. The odor of a partner's breath, mouth and the nearby skin can be highly bracing, especially if it is combined with the quite personal taste of lips and tongue. In erotic mouth-to-mouth kissing, we touch, taste and smell our partner. This is so intimate that it is akin to coitus. The sensuous kiss can be as soft and changeable as a fluttering butterfly. It may be as deep and lasting as the famed French kiss, used by the young people of Pays de Mont in Brittany, where lovers use their tongues to search and explore each other's mouth. It is even sometimes done for hours on end. Such penetrating kissing is often the first sexually arousing act between lovers. Very often, depending on the mood and degree of intimacy, it leads to other forms such as caressing.

Not only have modern sexologists outlined the erogenous zones, but Taoists of old mapped assorted love spots on the body. Any part of the body, actually, can be an erogenous zone. Stroking the back of the neck softly, kissing the sides of the neck, probing the ear opening with a tongue or softly biting the earlobe may arouse a partner a great deal. Other sensuous parts are the underarms or inside the elbows, thighs, and knees. There are erogenous zones at the lower back; and, as we all know, in the area of the genitals. The love points mentioned by the ancient Taoists are similar but not identical with the modern erogenous zones. Furthermore, sensitivity in the erogenous zones is different from person to person. Some have no sensitivity at all in certain areas. However, some women's breasts are so sensitive that, when caressed, orgasm is reached. There are others though, who are not aroused at all in this fashion. Sensitivity in other areas can vary even more. In general though, most people are erotically sensi-

tive in the erogenous zones. The thoughtful partner first explores and experiments in different areas in love play in order to learn the most effective way to arouse and please the partner. Sensitivity generally increases from the extremities of arms legs to the body, and from the outside portions of the torso to the center. Caressing a partner in the peripheral areas and moving to more sensitive areas can create an increase in desire.

Kissing and caressing are a natural combination in love play. In general, a good lover does not go immediately to the genital area or even the breasts. An inexperienced or aggressive lover, often the male, is often too bold, direct and impatient. Such a person roughly grabs the woman's breasts and buttocks, rams his penis in and ejaculates. This is not only rude and crude, but also almost certain to turn many women off. Gentle and tender caresses, at least at the beginning, are much more likely to arouse her. Stronger and more assertive love play is effective when the partner has already been excited. Many men are more aroused by slow and considerate love play as well. Finally, the sight, sound, and odor of an excited mate can frequently be potent aphrodisiacs.

Most women are quite aroused when their breasts are caressed and kissed. There is a significant nerve link between the lips and breasts, as well as between breasts and genitals. Consequently, mouth-to-mouth kissing can make their nipples become stiff and erect while stimulating the breasts often makes the clitoris also become erect and the sexual fluids flow.

Starting love making with a good kiss helps insure a pleasurable experience for both individuals. Some women are a bit more passionate and more psychological techniques may make their nipples erect. The majority, however are excited by a combination of psychological and physical factors including love play at their breasts. After kissing and caressing his partner's face, neck and shoulders, a good lover moves to her breasts. If done with tenderness and passion, this will greatly stimulate his partner. Most women like having their breasts cupped and lifted with the palms, gently caressed around the nipples and gently squeezed. They enjoy it when their breasts are kissed while their nipples are rhythmically and playfully licked with the tip of the tongue. Varying erotic sensations can be given to the woman using the smooth (bottom) and rough (top) sides of the tongue alternately. Exciting preliminaries such as this should precede going on to the lower areas of the buttocks, groin, perineum, vulva and clitoris.

Love play should progress naturally to the area of the genitals. Touching a lover's genitals can be done with the hand, the mouth or other parts of the body. Next to coitus itself, this is the most passionate and intimate form of sensual communication between lovers. It may be a temporary end in itself to be repeated some other time or it may progress to orgasm or intercourse. Caressing the genitals can be done a number of ways including stroking, fondling, pushing, rubbing, oscillating, tickling, thrusting, kissing, nibbling, licking and sucking.

These can be done with varying pressure, speed, and rhythm. Some are enthralled with continuous, persistent caresses but others prefer a provoking, repeated stop and go manner. Since genital organs are made of tender, sensitive tissue, caressing should

begin with slow, light touches. After that it can progress to a more active, speedier, heavier approach. This gradual progression allows the participants to be both emotionally and physically prepared. For example, it assists genital lubrication, which prevents discomfort and even pain. Different techniques of caressing are appropriate for different areas of the pubic area. Soft strokes and kisses are most arousing on the insides of both the thighs and groin. The cinnabar field and a woman's mons veneris react in a positive manner to a massaging palm. The fleshy buttock can take much heavier caressing, for example, kneading, squeezing, and soft slapping. Stroking the bottom and occasionally moving to the perineum is very evocative. There is a wide range of oral-genital play. It can take the form of gently kissing the partner's genitals using the mouth or tongue in a manner similar to intercourse. Some people find this wonderful, while others are disgusted by it.

One of the most sexually sensitive areas, but often overlooked, is the perineum which is the zone between the anus and the genitals. It corresponds to the hui-yin in acupuncture. This area stimulates a male erection in addition to female desire. Caressing the perineum softly with the fingers or the end of the tongue is very energizing.

While many think of the anus as strictly an organ for excretion, in fact, it is connected to sexual nerves, some of which are quite excited when the anus is caressed. Of course it should be thoroughly washed prior to caressing. The French use the word "postillonage" to describe pressing and poking the anus with a finger, and "feuille de rose" (rose leaf) to describe licking it and probing into it with the end of the tongue.

The caressing and the kissing of the genitals necessarily involves genital fluids. These fluids are nature's inventive preparation for intercourse. They lubricate the sexual organs in order to facilitate coitus. In addition, they are a pheromone that acts as a sexual attractant that excites partners. Taoists of old thought that ample lubrication was of supreme importance for enjoyable sex. Modern sexologists, who suggest substitutes such as saliva or artificial lubricants in case of emergency, agree. Natural ingredients, in sex, as with food, are always the best.

Looked at scientifically, genital fluids are similar to saliva. In fact, the genitals, if carefully washed, have fewer bacteria than the mouth. Male genital secretions are a clear, slippery liquid oozing from the opening of the phallus. They come from two pea-size glands just under the prostate as well as several smaller ones in the urethra. Such secretion is not semen, but if the man becomes extremely aroused there may be a small amount. Women have a similar liquid emitted from four vestibular glands around the vaginal opening. When sexually excited, the wall of the vagina also "perspires" a liquid that at times can be quite plentiful. The ejaculated semen from a man during male orgasm originates in the testicles and prostate. It is a gooey, milk like fluid which becomes more liquid when exposed to air. Some experts hold that some women ejaculate a fluid if they have a deep uterine orgasm. This transparent liquid serves no function biologically but is believed to enhance sexual pleasure.

Caressing the Moon Grotto

Fig. 12.2

Being kissed and caressed by a lover is usually sufficient to arouse a woman so that her moon grotto becomes lubricated and her clitoris stiff. A woman's partner can easily check this by occasional short forays to the area of the vagina as he fondles her thighs and bottom. The clitoris is quite sensitive to touch. The shaft, instead of the sensitive tip, should be caressed. In fact, some women can stand only the lightest touch to the tip, making a heavy caress uncomfortable. The labia minora, or inner lips, and the vulva are next. By taking turns caressing the clitoris and then the vulva, first softly and then a little more firmly, a man may magnify the pleasure of his partner. If he strokes the labia minora and then the edge of the vaginal opening with his middle and index fingers, more lubrication will flow. Taking these secretions with his fingers, he can rub the shaft of the clitoris with them. If the woman spreads her thighs wide, the classic texts tell us, she is responding positively to the love play. When her partner understands her signal, he can probe deeper into her moon grotto. Using one or two fingers to go deep enough to touch her flower heart and lightly stroke it can increase her sensations.

If the woman's orgasm is the goal of the love making, the man can bring this on by stimulating her clitoris. There are women capable of multiple orgasms by way of clitoral stimulation. Some particularly passionate women go from one orgasm to another for a relatively long time. Caressing her "G spot" brings about a much more intense uterine orgasm. However, a lot of women appreciate a deep orgasm more during coitus. This is possible if the man knows the right positions and dynamics. The G spot can be found by inserting the middle and index fingers about two inches inside the opening of the grotto. With finger pads facing the front wall of the grotto canal, massage while exploring. A man can tell from the woman's reaction if he has found the spot (about the size of a bean). It may protrude a little when stimulated. Upon finding it, he can press the spot softly but rhythmically. Using the palm of the other hand to press down on her mons veneris at the same time, the man can increase the pressure on the spot.

Caressing the Jade Stalk

Fig. 12.3

Fondling a man's genitalia can be tricky. A lot depends on whether the man desires to ejaculate. If he doesn't, it is important that he be an expert in the techniques of orgasmic brinkmanship. If he is not, signals can be arranged so that the man can tell the woman when he is nearing ejaculation. A woman with experience can sense when the man is near the edge even without a signal. However, a man's ability to hold back may change from time to time, so it is always best to have some signals.

Caressing the jade stalk should be done by gently stroking the perineum with the fingertips. Next the woman's fingers move softly to the back, bottom and front of the scrotum with tickling but soothing caresses. Because the scrotum is the tenderest part of the male body, the woman should caress and tickle the testicles very gently. She should not pinch, squeeze or nip at them. That is not love play and can cause serious pain, injury or even disability. After the testicles have been caressed, the woman's fingers go to his erect penis. She grips it firmly near the tip with the palms and fingers and moves her grasp toward the base. This makes its skin more taut. This reveals and tightens up the blood filled glans or head. She can stimulate it with the fingertips of her other hand, with brisk, light rubbing. The undersurface of the erect penis is more sensitive than the top side. Indeed the glans and the edge around its base are yet more sensitive. Most sensitive of all is the triangular knot-shaped frenulum on the bottom side of the ridge.

If the glans has been lubricated, the woman can apply the secretion with her fingertips in a circular motion around the glans. This can also be done with her own saliva. The caress can be varied by pumping the shaft up and down with her hand, but she must be careful the man does not ejaculate, unless this is intended. This stop-and-go method can assist the man in delaying or avoiding ejaculation, but it still gives him great pleasure and is tremendously arousing. If she is so moved, she can kiss the stalk while caressing it.

Love Games

Fig. 12.4 Spring Butterfly: In this love game the brush pen represents a Spring Time Butterfly and the body a landscape of valleys and hills which is covered by flowers. The partner lies down with closed eyes and is completely relaxed. The end of the brush is placed here and there mimicking a coquettish butterfly. First it is moved lightly over the hands and feet and proceeds to arms, legs, and various parts of the body. The partner with the brush concentrates on sensitive areas like the fingertips, palms, insides of the elbows, armpits, soles, between the toes, behind the knees, and in particular, the insides of the thighs. Different portions of the face, including the lips, are teased next. The butterfly moves down the neck to the breasts, the cinnabar field, and the groin. The touches are delectable to the partner, especially because they do not know where the butterfly will land next. The light, galvanizing tickles created on the skin will probably bring forth a plea that the touches be firmer. The pleas should not be given into until the damp landing is prepared. For this wonderful stage, the brush should first be dipped in a little aromatic oil. If the woman is the landscape, her areolas and nipples should be caressed with the oiled brush. First, go around and around and then flit between the breasts. After this, spread her legs and allow the butterfly go along her perineum and vulva. Brush her clitoris next, first moving upward and next in a circular motion. For a man, brush his perineum and scrotum as well as the exposed glans. You may give your loved one a delightful and highly memorable hour with this marvelous game. A variation can be for a woman with long eyelashes to play the role of the spring butterfly by blinking. A man's moustache can be used for the same purpose. Such techniques may prove exhausting, however, if the entire landscape is covered.

Fig. 12.5 Peacock Tease: This game was invented hundreds of years ago when peacock feathers were used as a decoration of merit for service to the emperor. Lords interested in a different sort of merit used the peacock feather in a playful manner with their women. Today either partner can use the feather. Feathers from other birds such as ostriches, pheasants, storks and even chickens can be used as well. You should remember, however, that feathers do not have as wide a variety in pressure as an artist's brush.

Fig. 12.6 Spider's Legs: There is a French love game called pattes d'aragnee where the fingertips and finger pads play on the partner's body hair, and sometimes the skin, with the lightest touches possible. As with the spring butterfly, the spider is capable of going all over the body.

Fig. 12.7 Silk Tease: The best thing for this love game is a scarf or lingerie of real silk, but soft acetate will do. Nylon should not be used because it is too stiff. Ball up the scarf or other item a little in your hand, and use it to caress different parts of your partner's body. Silk provides a rich and luxurious sensation which is very different from that of brush-pens or feathers.

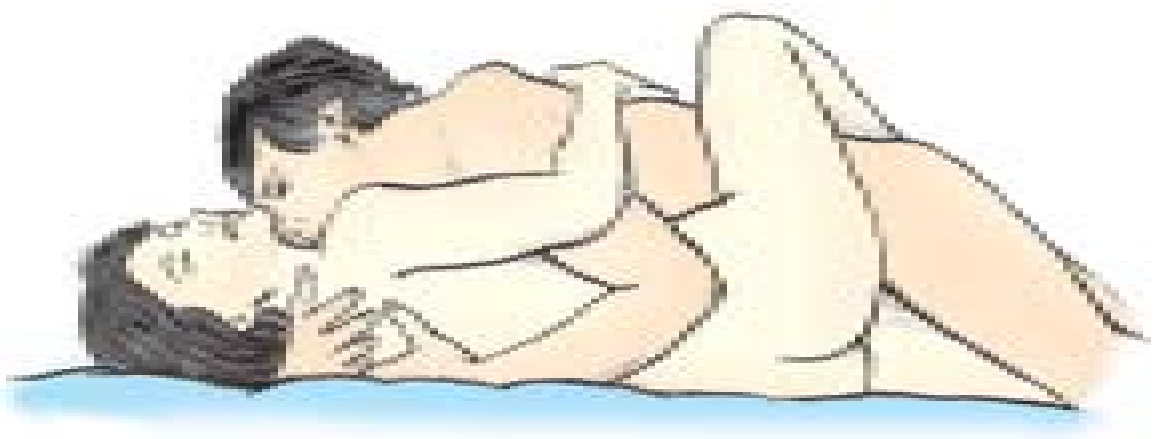


Fig. 12.8 Sniff-Kissing: A sniff kiss is used best if your partner's skin is perfumed slightly with crushed jasmine or tuberose, or if your partner's body gives forth its own sexual aroma. Start by inhaling and sniffing the breath of your lover. Nudge your nose on your partner's cheeks, eyelids and neck, and proceed with the scented pilgrimage up the peaks and down the valleys. The natural odor of excited genitals is a powerful aphrodisiac.

Fig. 12.9 Tongue Sweep: This game usually quite naturally starts with a roving kiss. The tongue is showered on a partner with touches that can be everything from the lightest tickling with the end to a firm brushing with its rough surface. The ear cavity should be paid particular attention to as well as under the chin and the palms and soles. Then go for the belly button, breasts and nipples, inside the thighs and perineum. A good tongue tease will use a lot of saliva no matter how much you may drool. Alternate the sweep with sniff-kisses.

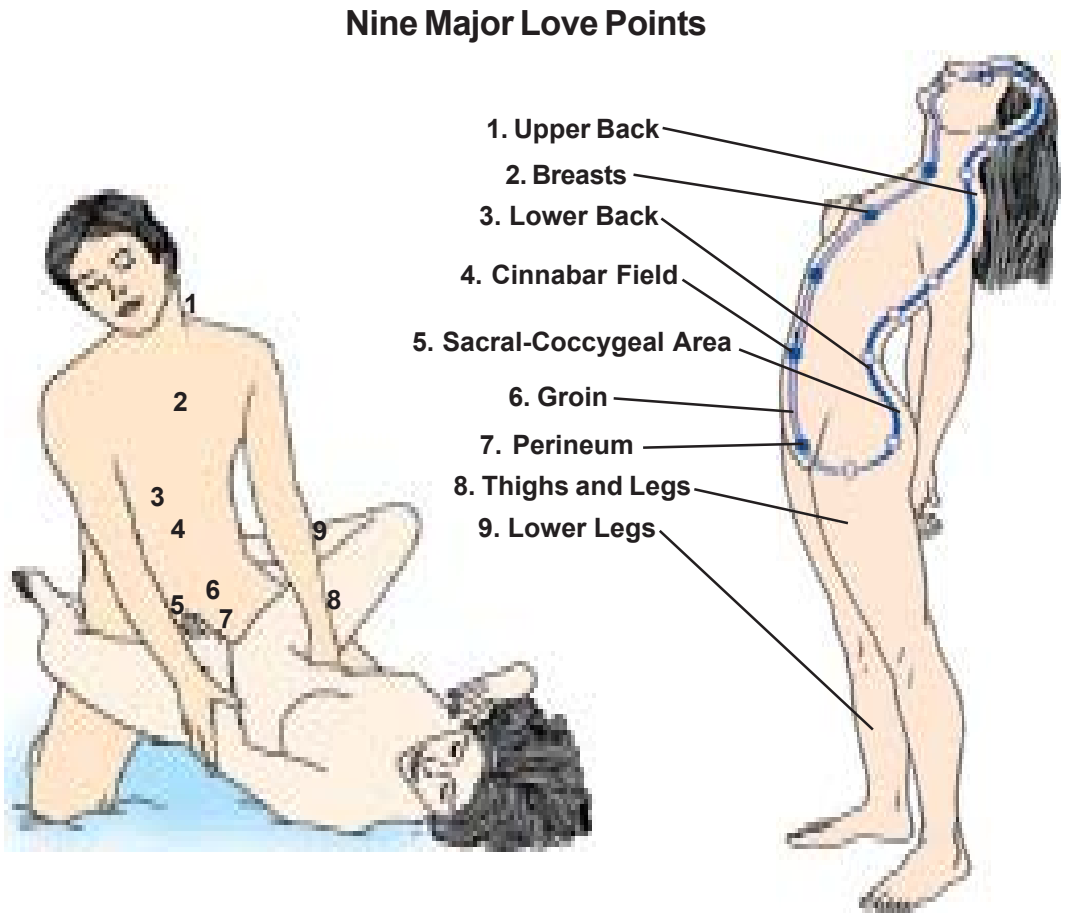


Fig. 12.10 *Nine Major Love Points*

Perineum: The sex crossroads is the hui-yin and is one of the most important love points. It is located at the middle of the perineum, just barely beneath the skin. Acupuncturists use it in treating penile pain, vaginitis, irregular menstruation and a prolapsed uterus. In love play, the perineum may be stroked and the point pressed with a fingertip for four seconds, released and pressed again. This is done about 40 times or for 5 minutes. This spot is one of the two known erection centers for men.

Cinnabar Field: There are seven love points in the area from the belly button to the pubic symphysis (in front of the pubic bone, felt slightly above the genitals). One way to locate them is to think of the distance from the navel to the pubic symphysis as five sections , each a little over an inch long. The umbilicus itself contains a love point. A segment under it is yin-chiao (sexual crossroads). A half a section below is *Chi-hai* (sea gate). This is a major love point next to the cinnabar field. One half a section below that is *Shih-men* (stone gate). Continuing downward, at the bottom of each of the next

three sections are *Kuen-yuan* (pass of primacy), chung-chi (ultimate middle), and chu-ku, the pubic bone. All seven of these love points are closely tied to sexual well-being and sexual desire. While participating in love play each of them should be stroked and pressed with the palm. They should never be pressed heavily with the fingertips but lightly. Press each for about three to five seconds and then release and repeat. The downward movement from the belly button to the genital region using gentle acupressure at each point increases the partner's arousal. The tongue, if made stiff, can be used instead of a finger.

Breasts: The love points on women's breasts can be used for short-term arousal or long-term engagement. Both nipples have love points. The breastbone, at the same level as the nipples, has another. This is something known as the middle cinnabar field. Roughly one inch above each nipple toward the corresponding shoulder there is another love point. Two pair of love points are at the base of the breasts. Excluding the breastbone, love points should be pressed and stroked with the palm and felt lightly with the finger.

Groin: Approximately two inches down the crease between the stomach and the thighs lie a pair of love points. Palpating them, by pushing lightly and stroking along the groin using the fingertips, can assuage frigidity and impotence.

Upper Back: The upper back contains four pairs of love points that may be braced for sexual energy. To find them, envisage on either side of the spine two parallel vertical lines. One is about 1.5 inches and the other about 3 inches from the spine. Their tops align with the lower portion of the second thoracic vertebra. The bottom ones line up with the lower part of the fifth thoracic vertebra. Press each point firmly for a few seconds using the fingertips and then stop. Go to the next point. Repeat the acupressure procedure a few times.

Lower Back: Directly under the second lumbar vertebra on the spine and a bit below the back of the waist, is the ming-men (life gate). This is an important spot for sexual energy and the second center for a man's erection. Pressing on this love point firmly with the fingertips should bring about very satisfying results. Level with this point, on either side of the spine, there are two additional love points. They are about 1.5 and 3 inches from the spine. They should be pressed together with the life gate.

Sacral-Coccygeal Area: Along the sacrum, lined up in a V shape, there are eight love points which can be firmly pressed. There is a ninth spot on the tip of the coccyx.

Thighs and Legs: Midway between the kneecap and the groin on the front of each thigh, lie two love points. Approximately two inches over the knee, where the muscles bulge slightly toward the inside, is another point. Press these firmly using the thumb.

Lower Leqs: The most significant love point on the bottom portion of the leg is *San-yin-chiao* (Intersection of Three Yins). It is on the inside of the shin, approximately three inches above the peak of the medial malleolus and behind the shinbone. Pressing here can cure impotence, frigidity and early ejaculation.

Erotic Massage

Fig.12.11

The Chinese erotic massage, over 3,000 years old, is perhaps one of the most sexually exciting games in love play. It aims not so much at the muscles but at the chi meridians as well as the central nervous system. These meridians control both body and mind. This august classical therapy, when used by a beloved mate for certain parts of the body, can increase the chemistry of desire wonderfully.

The intimate contact of hands and body is a form of indirect communication. It creates a rapport between the individuals. The partners in erotic massage are preferably naked or almost so. This allows the skin-to-skin trade of life force and sexual energy. Any part of the body, barring the genitals, may be touched. All areas, except those that can be injured, such as the abdomen and breasts, may be massaged firmly. Gentle stroking of tender areas is used. The person getting the massage should lie on a floor mat, narrow table, daybed or a bed. A mattress is OK if it is extra firm.

Massage can be done with scented water or oil. If preferred, it is fine to use no lubricant at all. Furthermore, a homemade lubricant can be made with a mixture of two-thirds soybean oil, one-third sesame oil, and a fragrance such as lavender, chamomile, rose, sandalwood or ylang-ylang. Sesame oil is helpful for the skin; ylang-ylang, which comes from a tropical Asian flower, is thought of as an aphrodisiac and assists blood pressure. Such oils can be purchased at Chinese grocery stores, natural food shops and pharmacies.

An erotic massage may involve the entire body. Begin at the fingers and toes and move along the limbs to the remaining part of the body. The massage can take about an hour. There is a shorter variety involving only the torso and thighs. This takes perhaps 20 minutes or less. The person being massaged should relax, eyes closed from time to time, taking slow and deep breaths using the diaphragm. There are numerous techniques for the actual massage. These include effleurage (long, rhythmic stroking), tapotement (patting, percussing), pertrissage (compressing, kneading), rubbing, pinching, pressing, scraping, grasping, hammering, shaking, and vibrating. The techniques use the thumb and finger pads, fingers, palms, palm edges, fists, soles and elbows.

Three Fountains

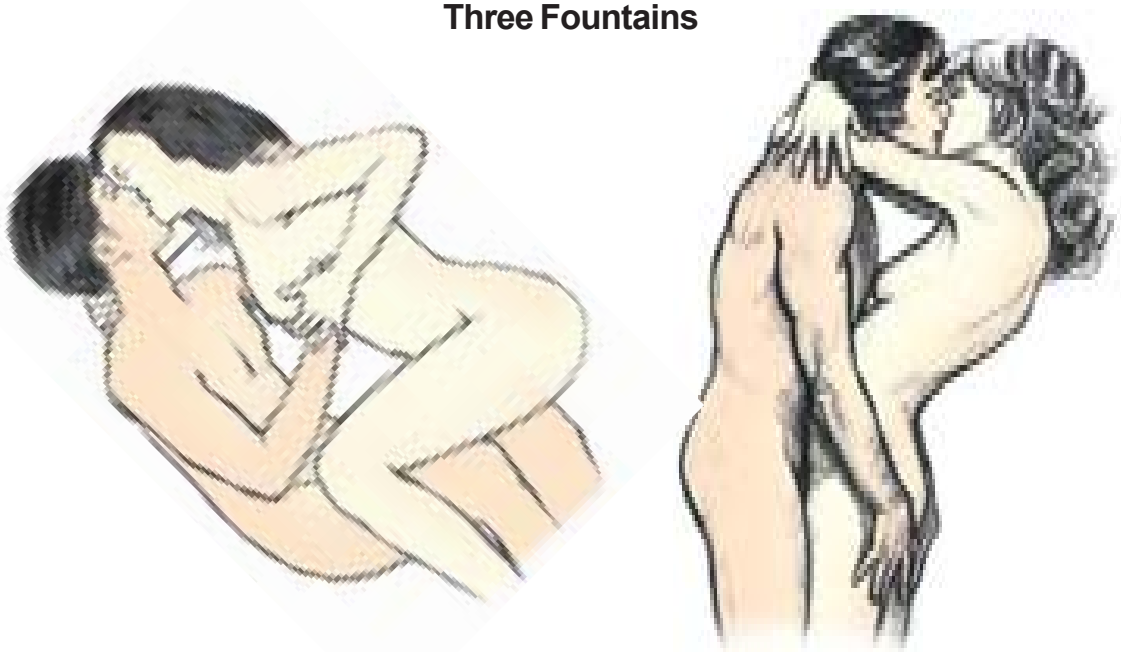


Fig.12.12 Heavenly Fountain: This is a love game that is done while deep kissing. It calls for stimulating the secretion of the lover's saliva, and proceeding to drink it as a potion. While kissing, the tongue is used to caress the partner's tongue. After that, the tip of the tongue is swept over the roof of the partner's mouth beside the molars on both sides. The ducts leading from saliva glands are located here. In addition, sweep over the bottom of the partner's mouth along the inside of the teeth and particularly next to the tongue's root. There are numerous ducts leading from saliva glands. Such stimulation produces a great deal of saliva in the Heavenly Fountains of the partners. Ancient experts in the area of sex believed saliva was a sexual elixir. Nowadays, scientists believe it contains a sexual hormone whose taste is craved by the opposite sex. Drink it directly from the source.

Fig. 12.13 Twin Fountains: People everywhere kiss the female breasts. A male can give his love wonderful enjoyment by sucking on them as if he were a baby. Light and rhythmic sucking with occasional tickling with the tip of the tongue is one method. Gently squeeze as if milking them while sucking. The milk here is of a spiritual variety, unless, of course, the woman is nursing.

Fig. 12.14 Jade Fountain: The jade fountain provides life nutrients for sexual alchemists to drink. Consequently, it is a serious undertaking. It is a most delightful event for love games. This is not an ordinary oral-genital kissing of the vulva. Rather it involves the more complicated extraction of the jade essence from the fountain. For a man, this game has been likened to the splitting of a fresh pomegranate or the "peach of immortality" and the experience for the woman is beyond description.

The first thing necessary in the game is total cleanliness. Lying on her back, the woman bends her knees and spreads her thighs wide. Her feet are on the edge of the bed. Another possibility is to slump in an armchair, with knees over the armrests. Facing her, the man kneels down. The partners could also lie in bed on their sides, or one on top, in opposite directions. These positions are excellent for this game or combined

with Playing the Flute. This is the favorite French game of soixante-neuf, (often called 69). The name itself shows us it is mutual oral-genital play.

First the man kisses the partner's mon veneris. Following that he opens the outside lips of her genitalia with his fingers, and kisses the inner lips. The tongue should be used to stroke the inner lips and by this stage they should already be engorged with blood. Thinking of the vulva as the sides of a boat, the urethra, the vaginal orifice, and the four vestibular glands are on the bottom. Take the tip of the tongue and sweep up and down the bottom of the boat. Drive the tongue into the vagina and then remove it. Repeat this rhythmically. Gradually, he should go on to the clitoral area. Kiss the tiny button with your lips. Suck it ever so gently and tickle the tip with your tongue like a teasing butterfly. The rough surface of the tongue licks up from the bottom of the clitoral shaft. Alternate between caressing the clitoris and the vulva. Concentrate on things that elicit your partner's most excited responses. This will inescapably cause the jade fountain to bubble over with the jade essence of the vestibular glands and the grotto well. Occasionally it produces some interesting sounds too.

Playing the Flute

Fig. 12.15 *Playing the Flute*

This game too, as with the Jade Fountain, necessitates meticulous personal cleanliness and a great degree of delicacy. There are women who love it but others do not care for it. This is often because of the dangers involved. First there is the gag reflex if the man goes deep into the throat. There is also the possibility of accidental swallowing of the semen if the man cannot or will not practice orgasmic brinkmanship. With prac-

tice and cooperation though, everything is under control easily. Other issues are strictly a matter of personal taste.

It is best to begin the game with the woman kissing the man's perineum and scrotum. Following that is the flute playing. The woman should hold the base of the jade flute firmly with one hand so that it stands up and down. A series of light kisses should be given to the glans. Then the woman holds the glans in her mouth by surrounding the ridge with her lips. She licks the glans, especially the small urethral opening, with the tip of her tongue. Next, she should purse her mouth into a tight O shape and picture it as the opening to her grotto. She moves her mouth up and down and lets her partner move the flute in and out. At the same time, her fingers play with his perineum and scrotum. It should be kept in mind that the most sensitive part is the top third of the flute.

A lot of men, perhaps for psychological reasons more than for physical pleasure, like their partners to "deep-throat" the flute. When the tip of the flute contacts the woman's throat, it normally activates the gag reflex. However, by practicing a gradual deepening method, a woman can accept the entire flute easily. Playing the flute, especially deep throat music, can cause a man to ejaculate in the woman's mouth. There are women who avidly swallow the potion. Scientists claim it is clean and harmless. The ancient belief was that it is beneficial. Some women, however, do not like this. It is possible, of course, for a woman to keep the fluid in her mouth and spit it out. Another possibility is to arrange ahead of time for the man to signal when he is on the edge.

Chapter XIII

In Summary

This book on Sexual Reflexology is really a book about energy, the most basic and powerful form of human energy: sexual energy. Without sexual energy none of us would be here. There would be no book to write, and no one to read it. Sexual energy, the primal union of yin and yang forces, drives the universe, and yet, for most people is approached without much understanding. It brings ecstacy and deep joy, but also causes deep pain and heartaches from lack of proper knowledge. It can heal our bodies, or it can cause sickness, confusion and disease.

Through study of Sexual Reflexology it is possible to understand sexual energy from an entirely new perspective and level... but where do you go from here? What do you do now? ***Nothing!*** That's the Way. That's the Tao. It may seem confusing to you now, but after you begin to try some of the concepts and practices in this book, it will begin to make sense to you. You will discover the Non-Doing or Doing Nothing (the Taoist call it "Wu Wei") which may be translated as "effortless action", or "correct action" or just "going with the flow". Correct action (Wu Wei) is the letting go of your will which is action on your part. As you let go, the sexual energy (Chi) flows through you and eventually, by practicing the formulas (correct action) you will connect with that energy and become one with it. And that's the Tao. The information in this book may be studied and comprehended by our mind, but it is only when these concepts come to live in our bodies that we really begin to understand it.

The Tao says there are three ways of Enlightenment. The first way is one of prayer and worship; you can achieve it but you don't know when, why or how. The second way is one of good works and service, but again, you don't know when, why or how. The third way is the Way of the Tao, which is one of knowledge and wisdom. You know when, why and how, because it is an alchemical process on a molecular level working with the highest form of energy (sexual energy) in the body, and this will become clear to you as you practice. You will know when to be hard and when to be soft. That's wisdom, and that's the Tao.

We thank you for your time and attention. We trust you will see your sexual experience a little clearer now and begin to understand the way of your sexuality and begin to incorporate these new ways of understanding human sexual energy into your life, a process which takes many years. It is the work of a lifetime. So, play with these new concepts, new positions, new attitudes and new understandings, but be easy on yourself. There is no right or or wrong way to get in touch with your own personal sexual energy. It takes time, patience, humor and love. We hope you will take these qualities, bring them to your sexual practice and enjoy a whole new way of relating to yourself and your sexual partners that will bring you many years of peace and joy.

Fig. 13.1 *Patience, Humor and Love*

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Sexual Reflexology
The Tao of Love and Sex
★ Guide for Lovers ★

Mantak Chia and W.U. Wei

Illustrated by Udon Jandee

Sexual Reflexology

The procedures presented here are built on the information from Master Chia's first four books on the Healing Love Energy: "Taoist Secrets of Love", "Healing Love", "Multi-Orgasmic Man" and "Multi-Orgasmic Couple". Master Chia and W.U. Wei take the study of reflexology out of the realm of foot massage and into the realms of internal energy pathways, sexuality and compassion to guide students in understandings of Sexual Reflexology.

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Cultivating Female Sexual Energy

Mantak Chia

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I have come upon Master Chia's Taoist practice in my old age and find it the most satisfying and enriching practice of all those I have encountered in a long life of seeking and practicing.

Felix Morrow, Senior Publisher

Healing Love through the Tao

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About the Author

Mantak Chia

Master Mantak Chia

Master Mantak Chia is the creator of the Universal Tao System and is the director of the Universal Tao Center and Tao Garden Health Resort and Training Center in the beautiful northern countryside of Thailand. Since childhood he has been studying the Taoist approach to life. His mastery of this ancient knowledge, enhanced by his study of other disciplines, has resulted in the development of the Universal Tao System which is now being taught throughout the world.

Mantak Chia was born in Thailand to Chinese parents in 1944. When he was six years old, Buddhist monks taught him how to sit and "still the mind." While still a grammar school student, he learned traditional Thai boxing. He was then taught Tai Chi Chuan by Master Lu, who soon introduced him to Aikido, Yoga and broader levels of Tai Chi.

Years later, when he was a student in Hong Kong excelling in track and field events, a senior classmate named Cheng Sue-Sue introduced him to his first esoteric teacher and Taoist Master, Master Yi Eng (I Yun). At this point, Master Chia began his studies of the Taoist way of life in earnest. He learned how to circulate energy through the Microcosmic Orbit and, through the practice of Fusion of the Five Elements, how to open the other Six Special Channels. As he studied Inner Alchemy further, he learned the Enlightenment of the Kan and Li, Sealing of the Five Senses, Congress of Heaven and Earth and Reunion of Heaven and Man. It was Master Yi Eng who authorized Master Chia to teach and heal.

When Mantak Chia was in his early twenties he studied with Master Meugi in Singapore, who taught him Kundalini, Taoist Yoga and the Buddha Palm. He was soon able to clear blockages to the flow of energy within his own body. He learned to pass the life force energy through his hands also, so that he could heal Master Meugi's patients. He then learned Chi Nei Tsang from Dr. Mui Yimwattana in Thailand.

A while later, he studied with Master Cheng Yao-Lun who taught him the Shao-Lin Method of Internal Power. He learned the closely guarded secret of the organs, glands and bone marrow exercise known as Bone Marrow Nei Kung and the exercise known as Strengthening and Renewal of the Tendons. Master Cheng Yao-Lun's system combined Thai boxing and Kung Fu. Master Chia also studied at this time with Master Pan Yu, whose system combined Taoist, Buddhist and Zen teachings. Master Pan Yu also taught him about the exchange of Yin and Yang power between men and women, and how to develop the Steel Body.

To understand the mechanisms behind healing energy better, Master Chia studied Western anatomy and medical science for two years. While pursuing his studies, he managed the Gestetner Company, a manufacturer of office equipment and became well acquainted with the technology of offset printing and copying ma

Using his knowledge of Taoism, combined with the other disciplines, Master Chia began teaching the Universal Tao System. He eventually trained other Instructors to communicate this knowledge and he established the Natural Healing Center in Thailand. Five years later, he decided to move to New York, where in 1979, he opened the Universal Tao Center. During his years in America, Master Chia continued his studies in the Wu system of Tai Chi with Edward Yee in New York.

Since then, Master Chia has taught tens of thousands of students throughout the world. He has trained and certified over 1,200 instructors and practitioners from all over the world. Universal Tao Centers and Chi Nei Tsang Institutes have opened in many locations in North America, Europe, Asia, and Australia.

In 1994, Master Chia moved back to Thailand, where he had begun construction of Tao Garden, the Universal Tao Training Center in Chiang Mai.

Master Chia is a warm, friendly and helpful man who views himself primarily as a teacher. He presents the Universal Tao System in a straightforward and practical manner, while always expanding his knowledge and approach to teaching. He uses a laptop computer for writing and is totally at ease with the latest computer technology.

Master Chia estimates that it will take thirty five books to convey the full Universal Tao System. In June 1990, at a dinner in San Francisco, Master Chia was honored by the International Congress of Chinese Medicine and Qi Gong (Chi Kung), who named him the Qi gong Master of the Year. He is the first recipient of this annual award.

In December 2000, the Tao Garden Health Resort and Universal Tao Training Center was completed with two Meditation Halls, two open air Simple Chi Kung Pavilions, indoor Tai Chi, Tao Tao Yin and Chi Nei Tsang Hall, Tai Chi Natural Swimming Pool, Pakua Communications Center with a complete Taoist Library, Internal World Class Weight Lifting Hall and complete 8 Court Recreational Facilities.

In February 2002, the Immortal Tao practices will be held at Tao Garden for the first time using the Dark Room technology creating a complete environment for the higher level Taoist practices.

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Without my mother and my son, Max, the book would have been academic—for their gifts, my gratitude and love.

Words of Caution

The practices described in this book have been used successfully for thousands of years by Taoists trained by personal instruction. Readers should not undertake the practice without receiving personal transmission and training from a certified instructor of the Universal Tao, since certain of these practices, if done improperly, may cause injury or result in health problems. This book is intended to supplement individual training by the Universal Tao and to serve as a reference guide for these practices. Anyone who undertakes these practices on the basis of this book alone, does so entirely at his or her own risk.

The meditations, practices and techniques described herein are ***not*** intended to be used as an alternative or substitute for professional medical treatment and care. If any readers are suffering from illnesses based on mental or emotional disorders, an appropriate professional health care practitioner or therapist should be consulted. Such problems should be corrected before you start training.

Neither the Universal Tao nor its staff and instructors can be responsible for the consequences of any practice or misuse of the information contained in this book. If the reader undertakes any exercise without strictly following the instructions, notes and warnings, the responsibility must lie solely with the reader.

This book does not attempt to give any medical diagnosis, treatment, prescription, or remedial recommendation in relation to any human disease, ailment, suffering or physical condition whatsoever.

The Universal Tao is not and cannot be responsible for the consequences of any practice or misuse of the information in this book. If the reader undertakes any exercise without strictly following the instructions, notes, and warnings, the responsibility must lie solely with the reader.

The book does not give any diagnoses or suggestions for medication. It does provide a means to improve your health in order to overcome imbalances in your system and to provide a richly rewarding sexual experience. People who have high blood pressure, heart disease, or a generally weak condition, should proceed slowly in the practice, particularly Ovarian Breathing. If there is a medical condition, a medical doctor should be consulted.

Author's Note

In the last pages of this book, the reader will find descriptions of the courses and workshops offered by our Universal Tao Centers. This material is also in effect a comprehensive description of the whole Taoist System. All of my books together will be a composite of this "Taoist world view. Each of my books is thus an exposition of one important part of this system. Each sets forth a method of healing and life-enhancement which can be studied and practiced by itself, if the reader so chooses. However, each of these methods implies the others and is best practiced in combination with the others.

The foundation of all practices in the Taoist System, the Microcosmic Orbit Meditation, is the way to circulate Chi energy throughout the body and is described in my book *Awaken Healing Energy through the Tao*. This practice is followed by the meditations of the Inner Smile and the Six Healing Sounds, set forth in my book *Taoist Ways to Transform Stress into Vitality*. All three meditations are emphasized throughout the Taoist System, and their mastery is essential to your successful practice of Healing Love.

As you read the information provided in this book and become aware of concepts not contained in Western thought, you will deepen your understanding of the relevancy of these practices to your physical, emotional and spiritual advancement.

Mantak Chia

Chapter 1
Taoist View of Women's Chi Energy

A. How Energy is Used.

The Taoist sages looked at their own energy as a total unit. In one day for instance, a young and healthy person earns 100 percent of his required energy from eating, resting, and exercise, and spends approximately 60 to 70 percent maintaining his daily life: working, eating, digesting, breathing, walking, etc. One might consider 100 percent energy as 100 energy credits, similar to bank credit. But, as he ages, he gradually earns less and less, even though his body requires the same expenditures, and he starts to overdraw his account by drawing energy from the vital organs-the kidneys, liver spleen, lungs, heart, pancreas and glands and, finally, from the brain.

Taoism explains that the major way men lose energy is through ejaculation, while women's major loss of energy occurs through menstruation, and not through sexual intercourse. For a young, healthy woman, this means an additional energy expenditure as she carries on her daily business. Assuming that a woman starts having periods at age twelve and continues through menopause in her fifties, she could have as many as 300 to 500 menstrual periods in her lifetime. Each month the ovaries produce an egg that contains highly perfected creative energy. A great deal of energy also goes into creating necessary hormones as well as the uterine lining, which provides a nest for a fertilized egg. If we consider our tremendous population today we cannot afford many children, but we can afford one or two. This means we use only one or two eggs. The remaining 300 to 500 highly charged eggs are eliminated. This expenditure accounts for 30 to 40 percent of a woman's daily energy allotment. If this sexual energy is continually permitted to pour outward, she loses 30 to 40 percent of her life-force energy. However: there is a way to transform this energy into vital energy for the organs, glands, brain, bone marrow and into spiritual energy.

B. Principal Energy-"Ching"

We are all born with an abundance of energy that the Taoists call the principal energy, or "Ching." In women it is Ching, the generative or creative energy, that is necessary to make the eggs, create the uterine lining and hormones, and keep a woman sexually active. The Ching energy, supplemented with the energy of the air we breathe and the food we eat, permits the woman's body to endow her eggs with the life-force energy that will be carried into the next generation.

The Ching energy also converts into life-force energy for the organs, which energy is called "Chi." The ancient Taoists, after identifying this type of energy, observed that conserving or restoring Jing energy could promote a longer and healthier life.*

Sexual energy (creative energy) is the only energy that can be doubled, tripled or increased even more. Therefore, if we want to conserve or restore lost principal energy, sexual energy provides the means to create that extra power if we conserve, recycle, and transform it back into principal energy. We then will have more energy available to transform into Chi, which in turn becomes transformed into another type of energy called "Shen." The word "Shen" means spiritual energy (Fig. 1.1)

C. Emotional Expense

When we are young and healthy we expend this principal energy, or Ching, freely, which serves us well until we reach the age of approximately 24 years. Although in the Tao System it is believed that each person is born with the good virtues of gentleness, kindness, respect, honesty, fairness and righteousness, when he

Ching: Generative or creative energy. Ching is the most refined substance a person is born with. It is also referred to as the "principal Energy" as it is essential for carrying out the functions of the body All other energies in the body are dependent on Ching. Ching is transformed into Chi or life force as it interacts with the vital organs. The conservation and nurturing of ching energy is the basis for the Taoist Internal practices. Jing is stored in all living tissue, especially the kidneys, sperm and ova. Part of Ching is Essential Energy. Ching is the energy produced by the sexual organs. In women it is the energy of the ovaries, in men, that of the sperm. Ching energy is denser than Chi and therefore moves slower when circulated in the body. As Ching energy circulates inside the body the organs are revitalized and nourished.

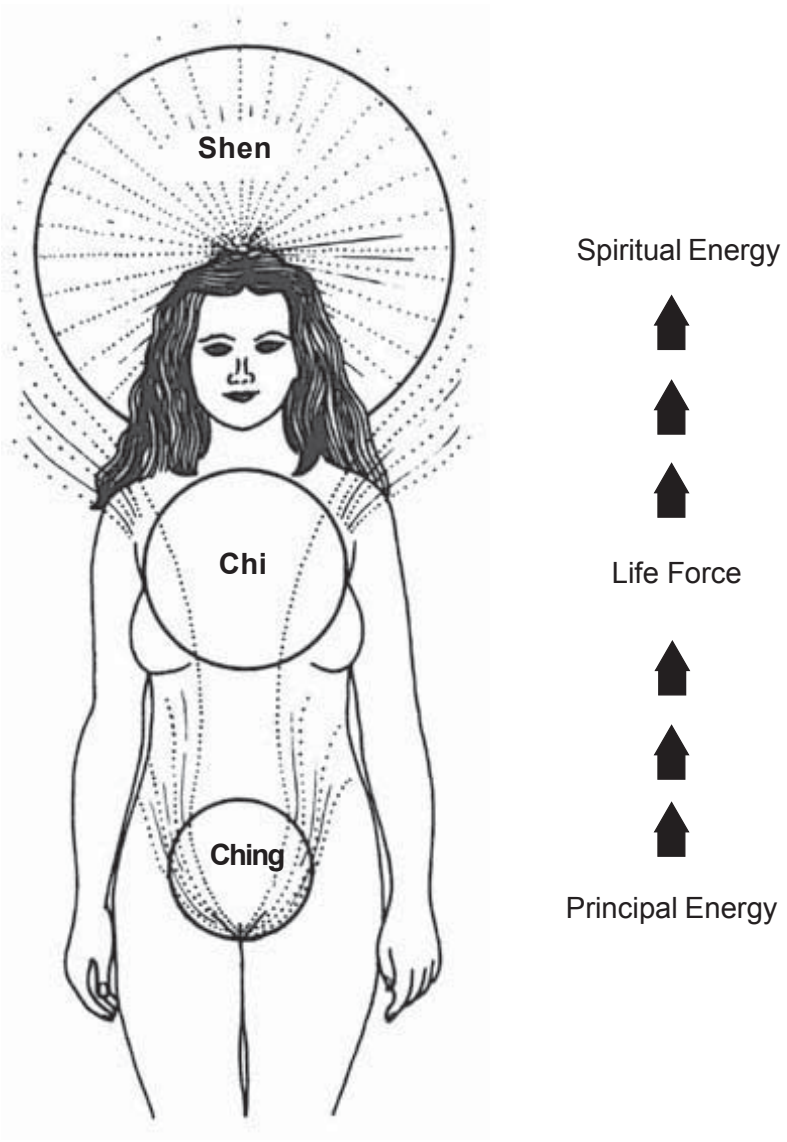


Fig. 1.1 *Transformation of Principal Energy into Life-Force and Spiritual Energy.*

or she grows up all kinds of cultural and social influences gradually change all the good virtues. The person begins to live under constant stress, feeling the pressures of hastiness, anger fear worry and other negative emotions. These gradually eat up the principal life-force, lessening the sexual creative energy. By the age of 24 too much of life's stress has developed and accumulated, accompanied by emotional disturbances or problems, and over stimulated sexual activity. The principal energy, spent so freely in younger years, begins to be transformed into a negative energy, stimulating and forcing more emotional energy and increasing sexual activity

As the negative emotions drain the life-force from us, robbing us of our sexual energy, they can account for a loss of anywhere from 10 to 60 percent of our life-force energy. Too much negative emotional energy leaves us with less life-force energy to work with, and therefore less energy to build hormones and replace the lost sexual energy. There will not be enough energy left with which to build and feed the soul and spirit.

1. "Dumping" Negative Emotions

People regard negative emotions as "garbage energy" which must be disposed of in some way. Since negative emotional energy and sexual energy still constitute our life-force energy, if we dispose of or dump out this "garbage energy," we are also dumping out our life-force. Now, to supply the needs of our bodies, we continue to draw from our principal energy, and by the time we are 40, we have spent 50 to 60 percent of it. By the age of 65 most of us are living from a dwindling amount of this vital energy until finally we run out of it.

The law of energy is that energy cannot be destroyed, it can only be transformed. When you dispose of this negative or "garbage energy" by "dumping" it out, someone else has to pick it up. When you dump your anger on someone, that person also has to dump it, and if he or she cannot dump it on you, it will be dumped onto someone else. This anger will eventually come back to you again with extra force, bringing with it fear, sadness, haste and all kinds of stress. This is also impossible to bear so you again find a way to dump it. There will be no end to the dumping, and the negative emotions will continue to multiply. This will greatly reduce sexual, creative, and generative energy.

D. Life Force Energy (Chi)

1. Transforming Negative Energy into Life-Force Energy (Chi)

You need to know how to transform negative energy into positive energy and good feelings. In this book you will learn how to gradually restore lost sexual, creative and generative energy by opening a certain channel that runs through your body. Once you have your channel open through techniques such as Ovarian Breathing, you can circulate both the negative energy and the sexual energy through this channel. As these two energies are combined and circulated, a natural process of combustion changes the negative energy to life-force energy. This creates a positive energy cycle, giving you more vital energy to cope with your negative emotions.

There is another way to deal with negative emotional energy: by directly transforming it back into positive Chi later in the Healing Tao practice, by learning the Fusion of the Five Elements, the second part of the Taoist meditation, we will learn how to harmonize the different types of emotional energy with the organs that have come to be associated with them. We differentiate these associations (hot/heart/impatient/hasty, cold/kidney/fearful, warm/liver/angry, mild/warm/spleen/worry, and cool/dry/lung/sad/grief), becoming aware of their presence or appearance, as well as the different kinds of negative energy that remain trapped in our organs where they may later turn into illnesses. By using Fusion of the Five Elements, we can counteract, harmonize and transform the negative energy into positive life-force.

2. Gaining Additional Chi through Lovemaking

The only way to gain additional Chi is to transform sexual energy that would normally be released in lovemaking by recycling it back into Chi , thereby providing us with an extra 30 to 40 percent of life-force. In this book you will learn the Taoist methods of Healing Love to accomplish this: namely Ovarian Breathing and the Orgasmic Upward Draw. Both methods will help to recycle and transform a part of the sexual energy into Chi .

3. Chi is the Key to Attaining Good Health.

The Taoist masters view Chi as the key to attaining good health and realize that good health enables us to condense and transfer

more Chi to a higher grade of energy. This enables us to have even more Chi available to build up the energy body or soul body and create and nourish the most important thing in each of our lives: our immortal spirit, or spirit body With our present rate of energy expenditure, we have no extra energy to accomplish this.

In the health field today there are many methods available to help us increase life-force (Chi), such as massage, acupressure, shiatsu, jin shin do, jin shin jyutsu, tai chi chuan, chi kung, health food, herbs, meditation, yoga, etc. However it is the Taoist Masters' view that the most abundant and easiest energy that can be transformed into Chi and a higher grade of energy is sexual energy. In the Healing Love practice we show very clearly a way to recycle sexual energy and store it, but it is most important to transform it first into Chi and then spiritual energy. Otherwise you will gradually build up too much Chi, which can lead to serious imbalances.

Young people, for example, have a lot of life-force energy available, but they do not know how to channel it properly. Their answer is to bum up excess energy in the fastest way: by using drugs, consuming alcohol, smoking, or other stimulants. These methods of stimulation initially give the user ten or twenty times as much energy, but they draw all the energy out from wherever it is available, namely, the organs, glands, and brain. Afterwards the user is left with low-key energy. When he or she wants to return to the same high level of energy, it means a return to the stimulants, but this time the user has less energy to draw from, and the high will not be the same. The result is a higher dosage, or changing to a more powerful stimulant. A person who is in a low-key Chi energy state will not be as affected by the drug because the drug does not have much life-force energy to draw from. For this reason young people become much more easily dependent upon drugs, sex, or other addictions. Transforming the abundant Chi properly will eliminate the need to burn the energy up with stimulants or participate in excessive sexual activity.

E. Creative Force--Sexual Energy

The basic function of sex is reproduction. Beyond that, each time we are sexually active we generate a lot of life-force energy. When we have a normal orgasm, the life-force pours out of us into the universe. If we can learn to redirect the orgasmic energy inward and upward instead of outward, the energy will reach a higher center

of the body and we will experience the even greater orgasmic experience known as total body orgasm, or organs' and glands' orgasm, an experience never felt as a result of normal sex. Thus, we can create more energy: store it, and transform it into life-force energy, thereby increasing our total energy.

1. Positive Energy Will Increase Sexual Creative Energy

Thus far: in keeping with the teachings of the Taoist Masters, we have been classifying our body energy into many different types of energy: positive and negative, sexual, life-force, etc. All of these energies have very different properties. If we identify them, we can start to control them, transforming everything negative into positive, and cultivating the good energies that please us.

Just as negative emotions deplete our life-force, thereby reducing sexual creative energy, cultivating good virtue increases sexual creative energy. By using the Orgasmic Upward Draw method taught in this book, instead of losing sexual energy through outward-leaking orgasms, we bring the highly charged sexual creative energy up to wrap, pack and energy the organs and glands. In the Tao System it is within the organs that our emotions, or virtues, are stored. Once an organ is restored to its original healthy condition, good virtue will emerge and can be cultivated to produce more positive energy to nurture each of the other organs and the glands. As weak, sick organs begin to produce good energy they will gradually affect other organs, making them healthy as well.

2. Good Virtue-the Heart of the Universal Tao

Practicing good virtue is the heart of the Universal Tao. The entire system depends upon the energy of love, joy, kindness, gentleness, respect, and honesty In the Universal Tao we believe that good nature is basic to humans, not because we are afraid of going to hell and burning eternally, of returning as a lower animal form, or of suffering in our next life, but because we believe that doing good for other is equally and immediately beneficial to ourselves. It is a simple concept. When you are kind to others, you are kind to your liver, the organ associated with kindness. Your liver becomes stronger as you give it more Chi. The idea is that you do good to others as you do to yourself, but not out of fear of being punished.

In the Healing Love practice we return the how of our sexual creative energy into our organs and glands to strengthen the

weakened body and increase the life-force. The development of more good life-force helps in the transformation of all anger, fear, sadness and depression.

3. Losing-Energy Pleasure and Gaining-Energy Pleasure

If a woman is not interested in having a baby, her sexual activity is for pleasure only. The Taoists identify two kinds of pleasure: "losing-energy pleasure" and "gaining-energy pleasure." Most of us are well experienced in losing-energy pleasure.

We have described the brief, intense pleasure that drugs, such as marijuana, heroin, cocaine, or amphetamines, introduce into the system as they quickly draw and burn up life-force from a person's organs, brain, and glands. This is like a bonfire started with gasoline; it burns very intensely and is very gratifying, but the fuel is gone and the fire becomes extinguished all too soon. The increased desire to experience that intense excitement, followed by the increased use of drugs, draws out the vital energy from the organs as well as from the brain and bone marrow.

Some of the entertainment we seek is also losing-energy pleasure. When we are entertained in excess with activities such as watching television, energy from our organs is required to pay attention, and so our life-force energy is drawn out toward the event we are watching and hearing. We imagine ourselves to feel good because we perceive ourselves as relaxing, thereby decreasing our stress. We do feel the release, but our vital organs are being drained of their life-force by this excessive energy expenditure. This stress to our organs creates a negative energy: and if they do not have the means to transform it back into positive energy, we will accumulate too much and eventually our negative emotions will burst out.

Even though something such as quiet music can help us relax and create a sense of harmony in the body, too much attention to it will make our eyes, ears and nervous system lose energy to the outside. Afterwards, we continually seek new songs, movies and shows because these things are never satisfying our needs, but are further arousing and increasing our need for stimulation. The more we try to satisfy one or two of the senses by an outside means, the greater the need for satisfaction we create for all the senses. When you try to satisfy the mouth and tongue, the eyes, ears and nose need something to stimulate them. It is a never-ending,

increasing requirement of the senses. Multibillion-dollar businesses have arisen to satisfy our senses. They make tremendous profits because ultimately they do not really satisfy us or bring us true joy and true happiness. If these companies created entertainment that would satisfy us for a long time, they would go out of business.

The Taoists regard our organs as the body's parents and the senses as the children. When they separate there is no harmony, but rather disharmony and need. People try to search for happiness, satisfaction and love outside of themselves rather than within. They listen to the desires of their bodies rather than their minds and spirits. The more they search, the more they create a need and will never really find what they are looking force Instead they create a deterioration within themselves. True happiness, true joy and true satisfaction come with inner peace.

By turning inward we will not lose the energy outward, and so can gain energy for ourselves. For example, if we eat a tasty food but do not have an inner harmony in our organs and senses, our eyes will want more, like children in a toy store. We might decide to see a movie, and then the ears want to be stimulated as well. We then might decide to go to a nightclub or a bar In the end we might feel the need to get drunk, to smoke, or take drugs. Turning sexual energy and the resultant orgasm inward is the first step to gaining-energy pleasure and to a control of the senses. Once you have more sexual energy inside, the organs will become stronger and will then be able to control, satisfy: and balance the senses.

4. Beyond Orgasm

The normal outward-pouring orgasm is a form of losing-energy pleasure, i.e., we release life-force energy out and we experience pleasure. In the Taoist view of arousal, however it is the fusion of all the energy contributed by the organs and glands with the highly refined sexual energy that creates orgasmic energy. Rather than releasing orgasms outward, as in the normal sexual act, we learn to turn this energy inward to recycle, increase and highly refine it. Through the practice of the life-force meditation known as the Microcosmic Orbit meditation, we begin to learn how to recycle the ovaries' energy. In the beginning it is difficult and you must practice to retain the energy within yourself, but once you feel and gain control of your own energy: you will experience new pleasures which are indescribable. This sensation is called "Beyond Orgasm" or "Valley Orgasm."

The concept of an orgasm that is "Beyond Orgasm" is difficult to explain because we do not have a word in Western languages or a cultural concept to express it. It is a new idea to us. Remember however that when the automobile was invented, few people thought it could replace the horse. Later people realized the benefits of the horseless carriage.

Cultivation of "Beyond Orgasm" can be compared to climbing a 10,000-foot mountain. In normal orgasm we run up 1,000 feet and run back down and try again tomorrow to get past 1,000 feet. Most people climb the mountain this way, perhaps reaching 2,000 feet on a good day The sensations may be limited to the genitals or rhythmic pulsations, and relaxation may be experienced throughout the entire body, but the energy itself is lost to the universe and can no longer be developed inside the body. "Beyond Orgasm" goes further and further each time. When you climb this 10,000-foot mountain, you climb to 1,000 feet, rest, set up camp and spend the night. The next day you climb further, rest and camp, and you continue in this manner until you reach the peak. There you enter another realm of pleasure.

F. What is Ovarian Kung Fu?

Originally the Taoist sexual exercises were called "Ovarian Kung Fu". Some students feel this sounds too violent or too much like martial arts. The term "kung fu," however means discipline or intensive work, referring to one who puts time into practice. Ovarian Kung Fu implies an expression of power and control, of the ability to take command of one's body and sexual life.

In the Universal Tao System's Ovarian Kung Fu training, we practice to gain, increase, collect and transform ovarian (sexual) energy; It is important to remember that building up energy in your body without knowing what to do with it is dangerous. Some systems advocate releasing the energy from time to time in some way, like releasing a pressure valve. They will recommend occasional outward-pouring orgasms for this purpose. The Universal Tao System, however: stresses the importance of learning the Microcosmic Orbit, the means by which the energy can be circulated in the body ultimately to be stored in a safe area (the navel) for later use and transformation into a higher form of energy. If you consider a computer analogy, learning how to push a button will not teach you how to operate a computer. Although pushing the

button will give you a result, until you know and understand the system, you will not be able to control that result. To insure proper training in the art of Healing Love, the concepts, the steps involved, and an idea of the pleasure that lies ahead will be explained in detail.

G. Women's Sexual Energy

1. The Ovaries contain Life Force Energy.

As previously stated, the Ching (principal) energy of a woman provides her with life-force energy. This life-force energy is contained to a large extent in the ovaries. It is here that the hormones are produced that determine a woman's breasts, voice, etc. The ovaries constantly produce sexual energy. The Ovarian Breathing Process to be taught in this book releases the energy produced by the ovaries, and makes it possible to store this energy, which has a Yang (active) quality, in the woman's body After ovulation and before menstruation the energy is milder as the properties of the energy change from Yang to Yin (passive). Also, during this part of the cycle the energy is at its highest stage of development for absorption and transformation.

Ovarian Breathing, if practiced every day, can start the absorption process and conserve the life-force energy that otherwise would be lost through menstruation. This is the process by which the sexual energy is transformed to Chi. As a result of this practice, women often notice a distinct shortening of the duration of the menstrual flow, or a decrease of cramps or other problems associated with their periods. With continued practice menstruation may cease, because all the sexual energy is being transformed into a higher life-force energy.

Under ordinary circumstances menstruation can stop for a variety of reasons, such as poor diet, depression, emotional stress, childbirth or menopause. Since a functioning body draws its energy from every resource it has, a body requiring additional energy makes compensations to supply that energy where it is needed. A nursing mother for example, will not experience menstruation, because the blood normally involved in the menstrual cycle would be drawn to the breast and converted into milk. Menstruation resumes only when nursing stops. Women athletes, when under strict training, will cease menstruating because all the energy has

been transferred into physical fitness. Similarly, it should be noted that many women, after menopause, lead very active, healthy lives, and usually do well in pursuing their careers, because their bodies now have the benefit of energy formerly required to maintain their monthly cycles.

It is beneficial to understand that menstruation is for the purpose of the next generation. Energy not used for this purpose but conserved through Ovarian Breathing becomes part of the vital energy of the body thereby prolonging youth and providing ample energy for transformation into a higher form of energy. The transformed energy is a creative and healing energy which can raise a woman's life-force potential and ultimately increase her spiritual energy. Also, the cessation of menstruation can be reversed at any time and restored to normal flow after a few months of stopping the practice.

2. Ovarian Energy Develops a Higher Consciousness

Ovarian energy is the energy used for the development of one's higher consciousness. These practices that transform the sexual energy into Chi provide the foundation for the spiritual exercises that transform sexual and Chi energy into Shen, a sheer spiritual energy. The process of cleansing the internal organs of negative emotions described previously is called "inner alchemy" by the Taoists, and it is this inner alchemy that restores to the organs their birthright of love, joy, gentleness, kindness, respect, honesty fairness, and righteousness. Once the organs are cleansed and healthy, and you have developed the ability to transfer and transform sexual energy into life-force energy, the spiritual development can begin. It is at this level that the generative energy of the ovaries is used in what the Taoists call "giving birth to yourself,. which means developing the spirit body from which you will attain enlightenment.

3. Ovary Energy--the Best Cosmetic

The ovaries contribute most of their energy during sexual arousal. Many other organs are contributors--the liver spleen, kidneys, heart, lungs, and brain, as well as glands-the pineal, pituitary thymus, thyroid and adrenal. All of these energies blend together to form sexual energy, a highly charged force that brings us to the point of orgasm. It is at this point that our habit of losing-energy

pleasure must be over come. By doing Ovarian Kung Fu exercises, we can transfer this energy to a higher quality energy by moving it up the spine to the brain. Because the property of sexual energy during arousal is Yang (or active) in nature, you can revitalize the nervous system, increase brain power and memory, and stay healthy and youthful. As a great secret taught by the Taoist sages to empresses and concubines, these methods enabled the women in an emperor's court to maintain their sexual activity, beauty, and health for a long time. Many Taoist women consider the results of these exercises to be the best cosmetic in existence.

4. Duration of a Woman's Sexual Life

In ancient Chinese history very little was written about the sexual experiences of women, although there does exist the documentation of Su Nu, the medical and spiritual guide to the Yellow Emperor who in almost endless lists detailed the voluptuous responses of women to their capable lovers. We also have read that nuns in Buddhist convents could learn exercises that would eliminate their menstrual cycles forever: (The exercises were called "Slaying the Red Dragon). Therefore, what knowledge we now have of the duration of a Taoist woman's sexual life passed down to us verbally from the Taoist sages varies greatly with the outlook and lineage of the Master: Some Taoist Masters advise women to stop having sex after 40, due to the supposed worn out state of the body caused by childbirth. With the Ovarian Kung Fu method as it is now taught by The Universal Tao, a woman can continue sexual activity for as long as she desires because no energy is lost: in fact, energy is gained through the transformation of her sexual energy.

5. Organs' Orgasm--the True Orgasm

A. Outward Orgasm

Generally the orgasmic feeling is a pulsation of the vagina, the ovaries and the cervix. In the Tao System we say that a lower center or genital, orgasm happens only in the genital region and pours outward: we call this an "outward orgasm." It takes a short time to occur but it takes a long time to bring the woman to this kind of orgasm.

B. Inward Orgasm

The "inward orgasm," or the "organs' and glands' orgasm," is extended for the woman. Her partner must stimulate her to bring the orgasm inward and upward, stage by stage, and organ by organ. The orgasmic feeling can be amplified intensely in this way but how much it intensifies depends upon how much she practices. By moving the pulsation into the organs, a new field of orgasm is opened up that she has never felt before.

In usual sexual practices, muscles are tense and the fluids of the glands pour out, losing in this outward flow the sexual energy of these glands as well. This kind of orgasm is temporary, short and not continuous. In Taoism it is said that when all the energy pours out, that is the end of the glands.

In an inward orgasm, or organs' orgasm, the orgasm actually travels through all the organs, glands and nervous system, thrilling and revitalizing them with the life-force of sexual, creative and generative energy.

6. Who is Responsible for your Orgasm?

Many women have sexual experiences but are unable to experience an orgasm. Often a woman will blame her male partner saying that he does not know how to bring her to orgasm, and that he ejaculates too soon. Sex is a two-person happening. The energies of both people must bring their hormones into harmony.

H. Good Sexual Relationship--the 3 Levels of Sexual Energy

To establish and maintain a good sexual relationship, the energies of both partners must be on the same level: they both must be healthy physically and emotionally and their spiritual levels must be the same. Then, when the two people are together their energies--physical, emotional, and, finally, spiritual--unite as one.

1. Physical Level

Tuning yourself before making love is very important. How much differs from woman to woman, depending upon her level of energy. The practices of Ovarian Breathing and the Orgasmic Upward Draw strengthen a woman's vagina and direct the Chi flow to her sexual organs. Many women who do not exercise the lower region--the ovaries, cervix and vagina--lack Chi flow and lose muscle tone.

Eventually the energy leaks out, turning the sexual region cold. Their menstrual periods might come at the wrong time. They might have pre-menstrual syndrome, headaches, lower abdominal aches, or adverse emotional reactions, any of which can affect their energy levels, lowering their sexual energy as well as their general energy. It takes a much longer time for a woman to be aroused to her "boiling point," or point of orgasm, than it takes a man to become aroused. It takes more heat and energy to bring ice water to a boil, just as it takes longer for a partner to arouse a woman if her sexual region is cold. If a man is low in "fire energy" (male sexual Yang energy) he will not have enough energy to melt the "ice" and will not be able to bring the woman to her "boiling point."

For men the recycling of sexual energy is very important. Such techniques as Testicle Breathing, Scrotal Compression and the Big Draw recycle a man's sexual energy and increase his Yang (hot) sexual potential. These techniques are presented in the book *Taoist Secrets of Love: Cultivating Male Sexual Energy*.

2. Emotional Level

Often when a man and woman first meet, there is an unexplained attraction for one another. The reason might be that at the time they both have a high energy level, as well as emotional and spiritual levels. It is as if a strong magnetic force has drawn them together. Sometimes, after marriage stress occurs because of family troubles, children, etc., and their energies are drained, gradually wearing out their magnetic forces until there no longer is a strong attraction between them. During this period the man and woman seem far apart and alone. We see many people starting out in the practices of the Microcosmic Orbit and Taoist Secrets of Love become aware of and improve the foods they eat and do regular exercises to increase their romantic forces and reestablish a close feeling with their partner. Orgasms come much easier then.

3. Spiritual Level

If a couple can find time to do meditation together, sit with each other or do palm-to-palm touching of one another, they will quiet down and be able to feel the energy of the partner. Energy can still be exchanged with your partner even if he is low in energy and unable to move it. You can expand your Microcosmic Orbit into his,

and he can do the same with you so that you can help one another move the energy.

If he is in a low mood, you can assist him by sending him your smiling energy. If you learn the Fusion of the Five Elements, you can actually absorb his negative emotions and fuse them to return good life-force back to him. He can do the same to you.

A good sexual relationship can involve many other factors, but it must have a good beginning, like fine wine.

I. Goal of Taoist Meditation

1. Discovery of Chi

Long ago it was discovered that the most effective way to observe the subtle workings of the Tao and the inner nature of men and women was through quieting the mind in sitting meditation. It was the practice of sitting meditation that revealed the existence of Chi as a subtle electromagnetic force flowing within the body The pathways the Chi followed revealed the meridian system of the human body.

2. The Body is composed of Three Parts.

Through such meditation the early Taoists developed a greater refinement and increased awareness of the body as a composite of three parts: the physical body, soul body and spirit body. (Fig. 1-2) These three bodies were studied to differentiate each one's nature and purpose.

Unlike other meditative traditions of Asia, which cultivate the soul and spirit at the expense of the physical body, the ancient Taoists considered all three bodies important. The Taoists found a way to climb consciously into the spiritual realms, and equally important, to climb back into the physical world to be creatively active here.

3. Developing the Physical Body

The novice in the Universal Tao System begins with a wide range of exercises which develop the physical body into an efficient and healthy organism, capable of living peacefully in the world, and yet

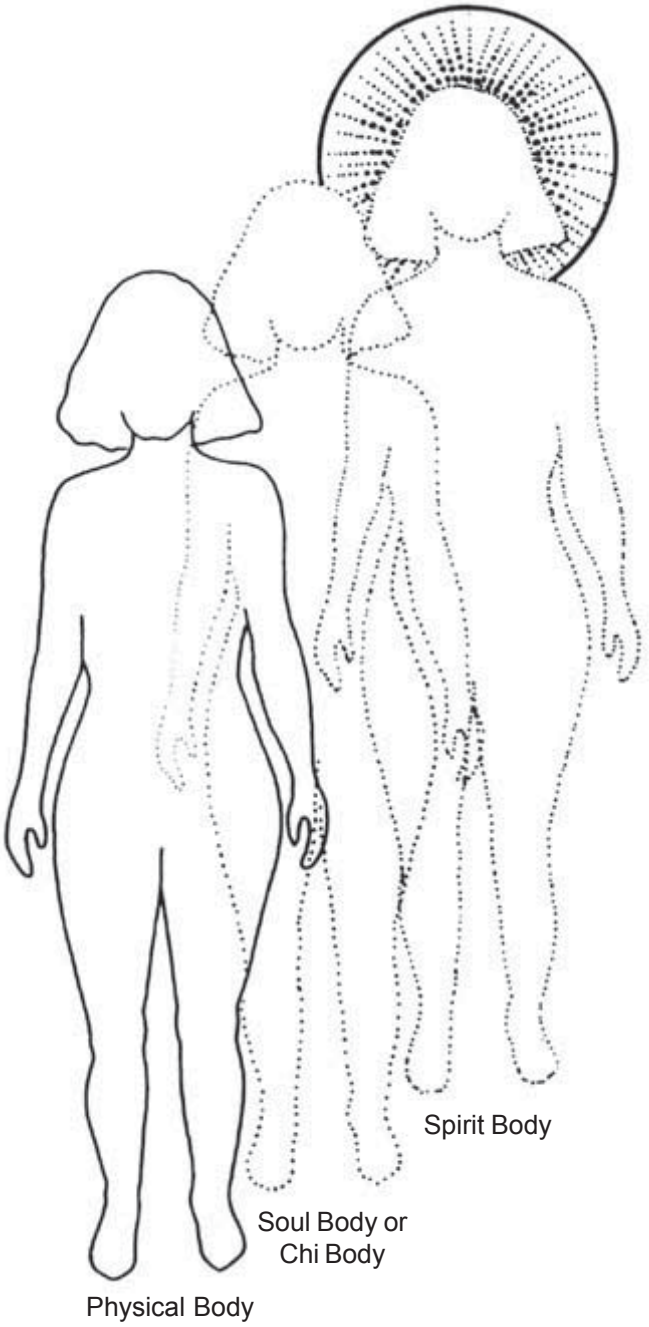


Fig. 1.2 *Three Bodies*

free of the tensions and stresses of ordinary daily life. The aim of the first level is to develop self-awareness of the physical body and its energy relationship with the environment and other people. At this level one learns to heal oneself by learning to sense and direct the circulation of Chi within the meridian system of the body (the Microcosmic Orbit Meditation). The practice of loving self-awareness generates a positive energy condition in which greater respect and love for others radiates constantly without conscious effort. The healthier the body is, the more Chi it can produce and transfer into spiritual energy. By practicing in this life to transfer Chi energy into spiritual energy, we give birth to ourselves, raise our souls and spirits, and educate them.

The first level of Taoist practice is accomplished by utilizing the Microcosmic Orbit Meditation, Six Healing Sounds, Inner Smile, Fusion of the Five Elements, Tai Chi Chi Kung, Five Elements Nutrition, and Iron Shirt Chi Kung. As the awareness of the physical body is developed, increased levels of energy are made available by controlling and transforming sexual energy through Seminal Kung Fu and Ovarian Kung Fu practices.

4. Giving Birth to the Self, the Soul Body

Giving birth to the self, the goal of Taoist meditation, is awakening that part of oneself which perceives and acts free of the boundaries of environmental education and karmic conditioning. The birth of the self is not a symbolic image or poetic metaphor: it is an actual process of energy conversion leading to the formation of a subtle body with the capacity to develop reasoning, feelings and a will of its own.

Chapter 2
Women's Sexual Anatomy

The publication of Masters and Johnson's *Human Sexual Response* in 1966 opened the floodgates for books, articles, and seminars that interlocked with the sexual revolution of the sixties and seventies. The little-known profession of sexology burgeoned.

Gradually sexologists began to pay attention to the particular sexual needs of women. They noticed that it was a rare man who went to his grave without ever having an orgasm, yet there were quite a number of women having little experience in sexual orgasm. Lonnie Barbash addressed herself to "pre-orgasmic" women in her book *For Yourself*. In *The Hite Report* Shere Hite disclosed how women brought themselves to orgasm, based on the anecdotal responses of hundreds of women to her vast questionnaire. Compiled by the Federation of Feminist Women's Health Centers, the book entitled *A New View of a Woman's Body* took a new look at women's genitals and redefined the clitoris.

It is a social fact that most women have never looked closely at another woman's genitals. Of the women who picked up a mirror to scrutinize their own (after making sure the door was locked or that no one else was home), many were left with the feeling that somehow they were not put together entirely correctly The sexual isolation of women results in the complete absence of a socially acceptable word that encompasses everything we can see in a mirror, "Down there" is probably the closest we have come to saying that there exists a large area that we recognize as being our sexual organs. (Fig. 2.1)

A. Mount of Venus

Starting at the front and top is the Mount of Venus (also called the mons veneris, or mons, for short). (Fig. 2.2) The color, amount, texture and distribution of hair will depend a great deal upon age and inherited characteristics and can vary from a few straight hairs to a bushy growth extending up the abdomen or down the thighs. The mons is a cushion of fat protecting the pubic bone underneath. The pubic bone is the place where the pelvic bones are joined.

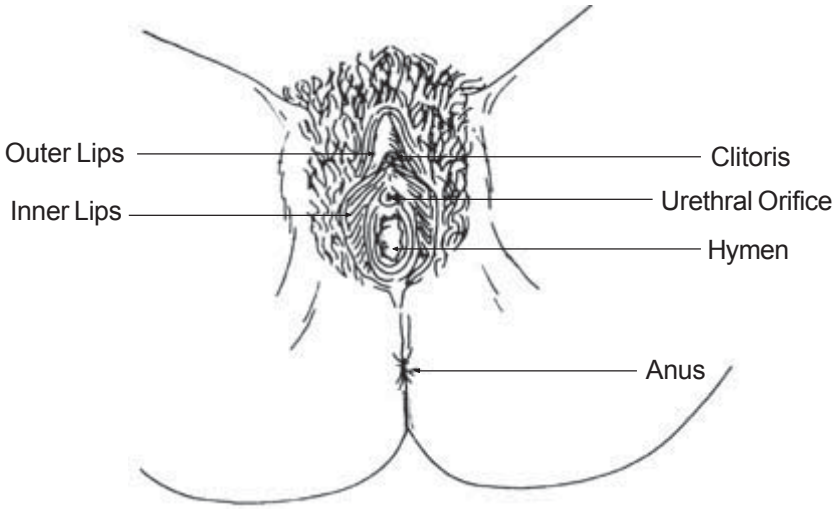


Fig. 2.1 *Woman's Genitals*

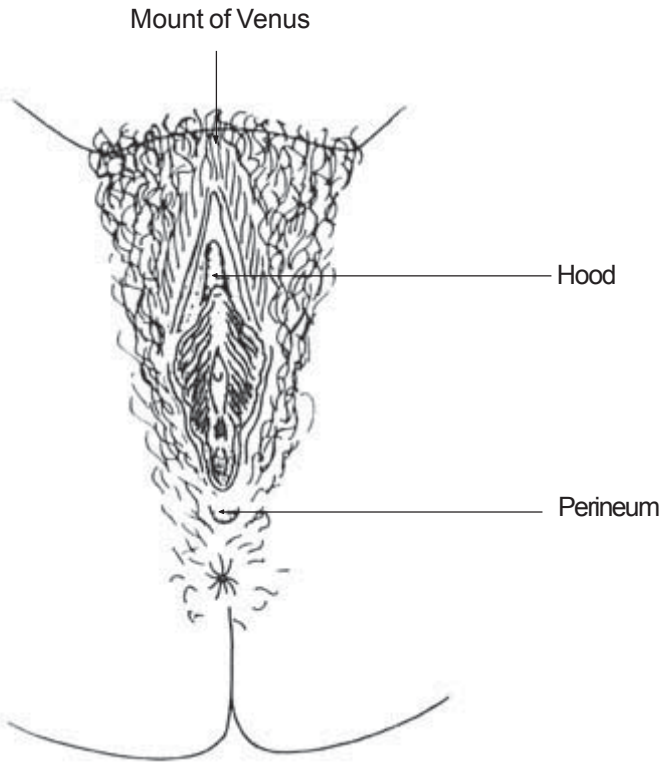


Fig. 2.2 *Mount of Venus*

together by cartilage, which during pregnancy softens so that the bones can separate, if necessary, during childbirth. The mons divides and separates into what is called the outer lips, or labia majora, which are of similar skin and hairiness to the mons.

B. Inner Lips

Inside the outer lips are the inner lips, the labia minora. The skin of the inner lips is very different in color and texture because of their relation to the mucous surfaces, in the same way that the lips of the mouth are different from the skin of the face. In an unaroused state the inner lips can vary in color from pink to dusky pink to dark maroon or purple. Sometimes the inner lips are pink and ridged, and sometimes they are long and wavy. Some women's inner lips are larger than the outer lips, and when these women are standing up, the inner lips can be seen protruding from between the outer lips. During sexual arousal the inner lips, richly supplied with blood vessels, become engorged and swell to two or three times their resting size. As orgasm approaches they can go through a dramatic color change, sometimes turning crimson or a dark wine color:

C. Glans of the Clitoris

Following the small lips to the top, they join together to form the hood that protects the glans of the clitoris. Usually the glans in the unerect state is nestled under the hood. (Fig. 2.3 (a)) You can see it by pulling back on the hood. The glans of the clitoris is loaded with nerves, and for most women the glans is the most acutely sensitive spot in their sexual anatomy. Some women find that it is so sensitive that direct stimulation can be irritating. The shaft of the clitoris feels like a strong rubber band under the surface between the glans and the mons. As sexual excitement mounts, the shaft thickens and shortens, and the glans, shaft and supporting structures become erect. As with men, there can be a dramatic change in size and shape. (Fig. 2.3(b)) Some women find that with intense prolonged arousal the swollen inner lips can obscure the glans almost entirely.

D. Urethra and Vagina

Down from the glans is the opening to the urethra. Below this is the opening to the vagina. A woman's urethra is about one and a

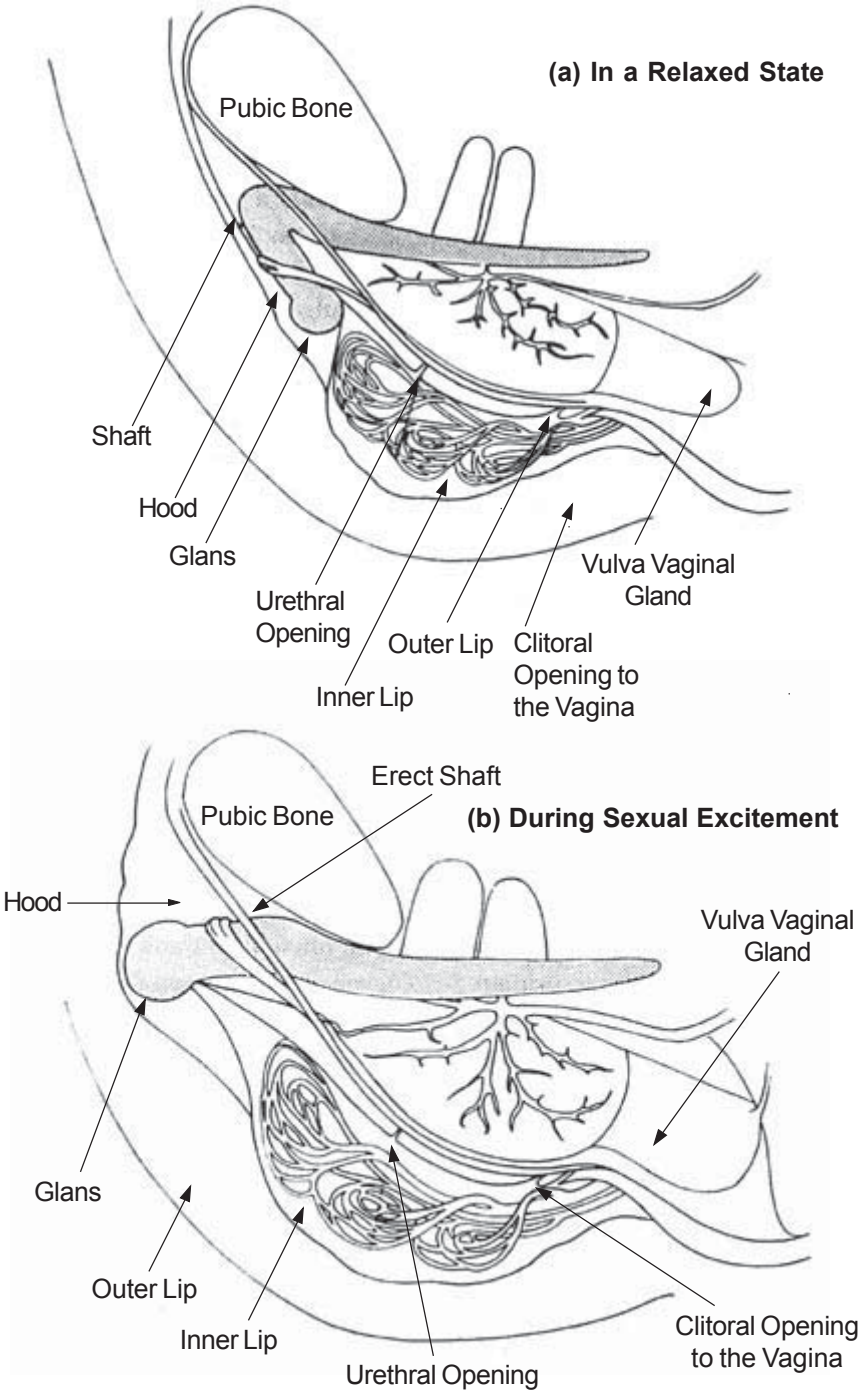


Fig. 2.3 *Cross- Section of the Clitoris*

half inches long from the outside to where it opens into the bladder: This short distance from the outside to the inside helps explain women's propensity toward bladder infections (cystitis).

E. G-Spot

Surrounding the urethra is a plexus of blood vessels. Since these blood vessels had no name in medical books, a group of women named the area the urethral sponge. (See *A New View of a Woman's Body*.) During sexual excitement the blood vessels engorge and a bulge can be felt through the vaginal wall. This bulge has been named the "G-Spot," after Grafenberg, one of the first sexologists. It can be explored by feeling around the front and upper part of the inside of the vagina. (It has also been said that the G-Spot is located one-half inch deeper than a woman's longest finger)

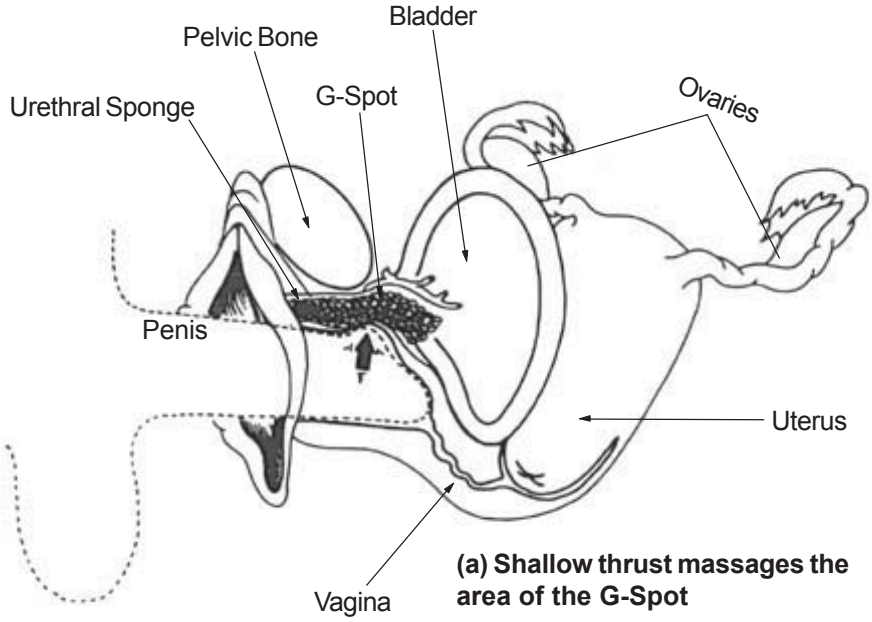
The G-Spot can be difficult to reach during intercourse in a face-to-face position, except with those men whose penises, when erect, press up against their bellies. A change in position may be necessary if a woman wants her G-Spot stimulated more directly. Rear entry is one way. Fingers are often effective and direct. A woman stimulating herself might choose to squat or lie down with her legs up in the air in order to reach it better. Her partner might find it easier to reach if she is lying on her stomach. During coitus, if the woman is on top she can position herself pretty precisely for such stimulation. (Fig. 2.4(a) and (b))

Some women, while holding their partners tightly, enjoy the sensation of an erect penis pushing on their lower abdomen, immediately above the pubic bone, stimulating the G-Spot from the other side.

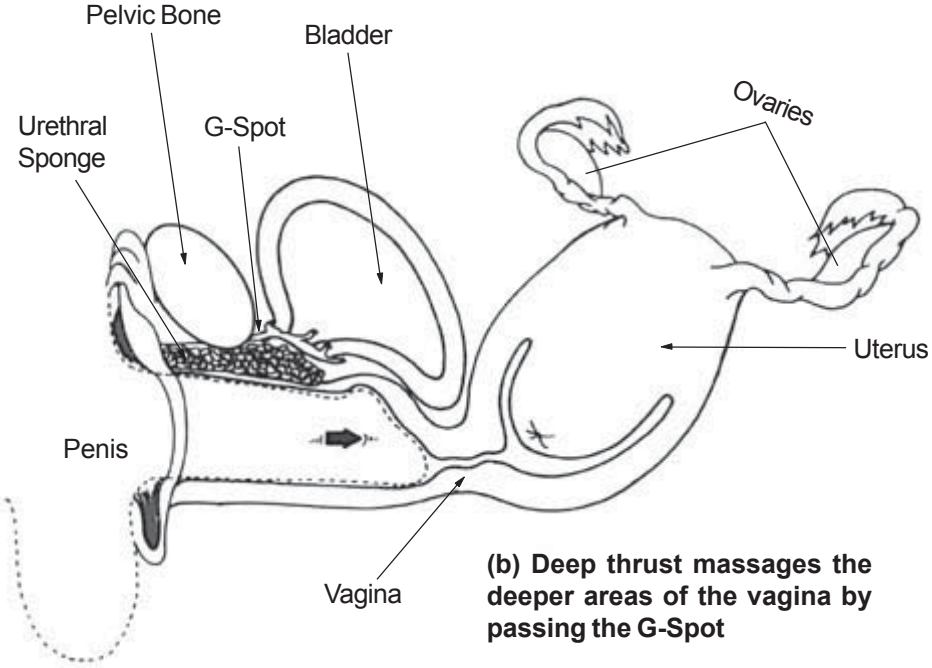
When the G-Spot is massaged, often a woman's first impression is that she has to urinate. Sexologists assure women that if the pressure is continued there will be a transition to sexual arousal.

One of my students reported: "When I worked in a women-controlled clinic, we always talked rather glowingly of the virtues of the diaphragm. Every once in a while a woman would tell us that she didn't like the diaphragm because it interfered with her sexual enjoyment, that it covered up something. That was before the G-Spot became well known, and I think now that that was probably what these women were talking about."

Some women find that stimulation of the G-Spot can trigger an



(a) Shallow thrust massages the area of the G-Spot



(b) Deep thrust massages the deeper areas of the vagina by passing the G-Spot

Fig. 2.4 *Shallow and Deep Thrust*

orgasm, while many women enjoy G-Spot stimulation as part of the whole panoply of sexual stimulation.

F. Female Ejaculation

An ancient Taoist Master discovered that a woman, when reaching a higher point of orgasm, had different responses which ejaculated different "waters." Three waters, or types of fluid, involved in female orgasms were found to exist. The lubrication experienced during arousal is considered the first water: the fluids emitted during a normal orgasm are the second water: and the third water of a female ejaculation, never experienced by many women, is released from the G-Spot. However with or without G-Spot stimulation, there are women who ejaculate when they have an orgasm. This ejaculation, which can be quite copious, produces fluid that is much like seminal fluid. It is definitely not urine. However many women who have experienced ejaculation report that they were dismayed and embarrassed, feeling certain that they had urinated. They then learned to withhold this reaction. Now that the fact of women's ejaculations is known, there will probably be much relief, relaxation, and increased pleasure by the women who have this capacity. As yet, no research has discovered where this fluid is made or stored.

G. First Lubricative Fluid of the Vagina

Inside the vagina the walls rest against each other: but the potential for space exists. With a plastic speculum, flashlight and mirror you can look inside the vagina yourself. You will probably first see the pink, ridged walls of the vagina. The many folds account for its tremendous elasticity During sexual arousal, lubricative fluid oozes out of the walls in a kind of sweating action. At the back of the vagina is the cervix, the only portion of the uterus visible in the vagina. The cervix is round with a hole or slit in it. This is the opening of the cervical canal which goes into the uterus. Most sexologists agree that women have little sensation beyond the outer third section of the vagina. However many women strongly disagree, saying that they experience terrific pleasure with deep penetration either by penis or finger at the back of the vagina, and many women feel pleasurable contractions of the uterus during orgasm.

There may be mucous dispersing from the cervix. The source and purpose of the mucous will be discussed in the next section.

H. PC Muscle and Chi Muscle

Feeling around the periphery of the vagina at about the depth of one knuckle, you may be able to discern the edges of the Pubococcygeal Muscle (PC, also sometimes referred to as the Love Muscle. (Fig. 2.5)

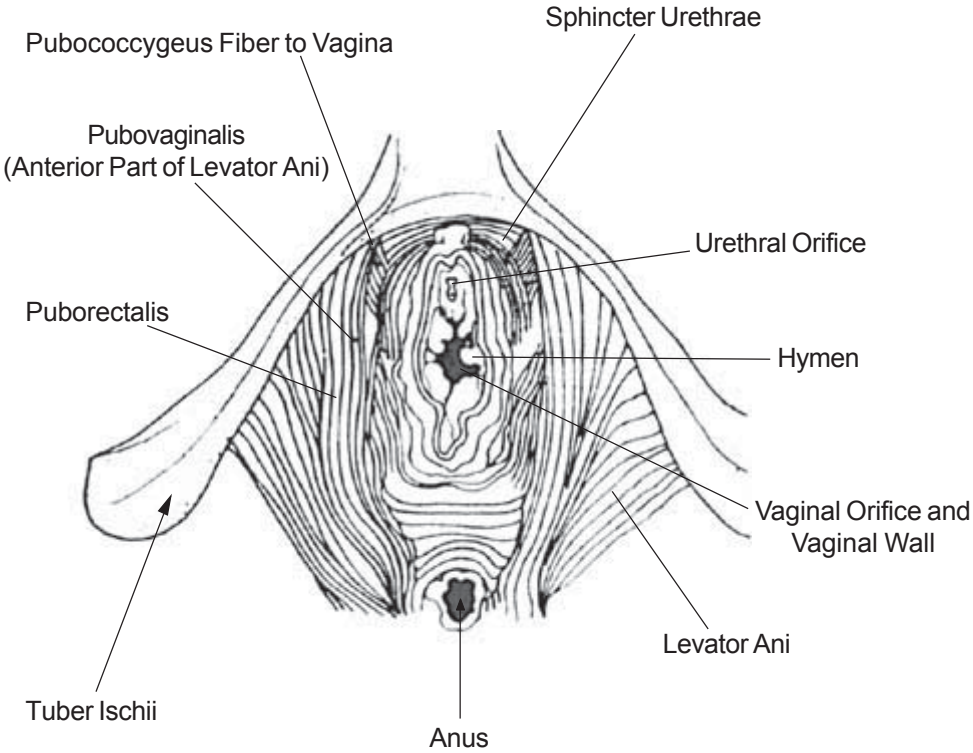


Fig. 2.5 *Love Muscle includes the Pubococcygeus (PC Muscle), Pubovaginalis and Pubo-Rectalis*

A contraction of the vagina is a contraction of the PC Muscle. You can tell for sure that that is what you are feeling if you can squeeze your fingers with it. The PC Muscle is one part of a group of muscles we refer to as the Chi Muscle. The Chi Muscle surrounds the anus, vagina, and urethra and provides support for the reproductive organs. (Fig. 2.6) This is the muscle of Perineum Power and is associated by the Taoists with many organs of the body, as will be described in Chapter 5.

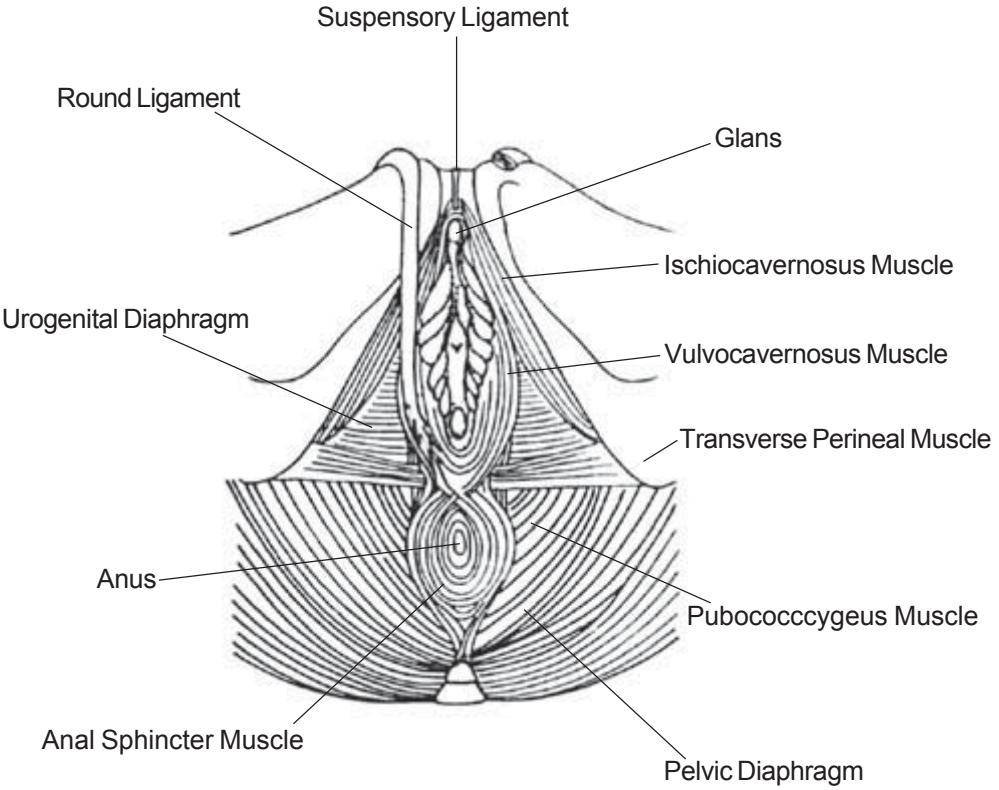


Fig. 2.6 *Chi Muscle includes the Urogenital Diaphragm, the Pelvic Diaphragm, the Anal Sphincter Muscle and Pubococcygeus (PC Muscle).*

A well-exercised PC Muscle is considered by some sexologists to be the key to healthy sexual functioning for both men and women. Poor muscle tone leads to sexual difficulties as well as other physiologic problems, such as difficulty in childbirth and urinary incontinence. In fact, the first professional to publicize the importance of good PC tone taught exercises to women in preparation for childbirth. His name, Kegel, is still associated with these exercises. The PC Muscle is crucial to Ovarian Kung Fu exercises.

You can test the tone of the PC Muscle by interrupting a stream of urine. This ability is due solely to the PC Muscle. Many women have become dexterous at squeezing this muscle because they

found it enhanced their sexual pleasure.

Sexologist Bryce Britton, in her book *The Love Muscle: Every woman's Guide to Intensifying Sexual Pleasure*, includes detailed descriptions of how to use the PC Muscle as well as outlining an exercise program for sexual fitness.

I. Perineal Sponge

Inside the back part of the entrance to the vagina is another area of blood vessels called the perineal sponge. (Fig. 2.7) During sexual arousal the perineal sponge thickens, narrowing the entrance to the vagina.

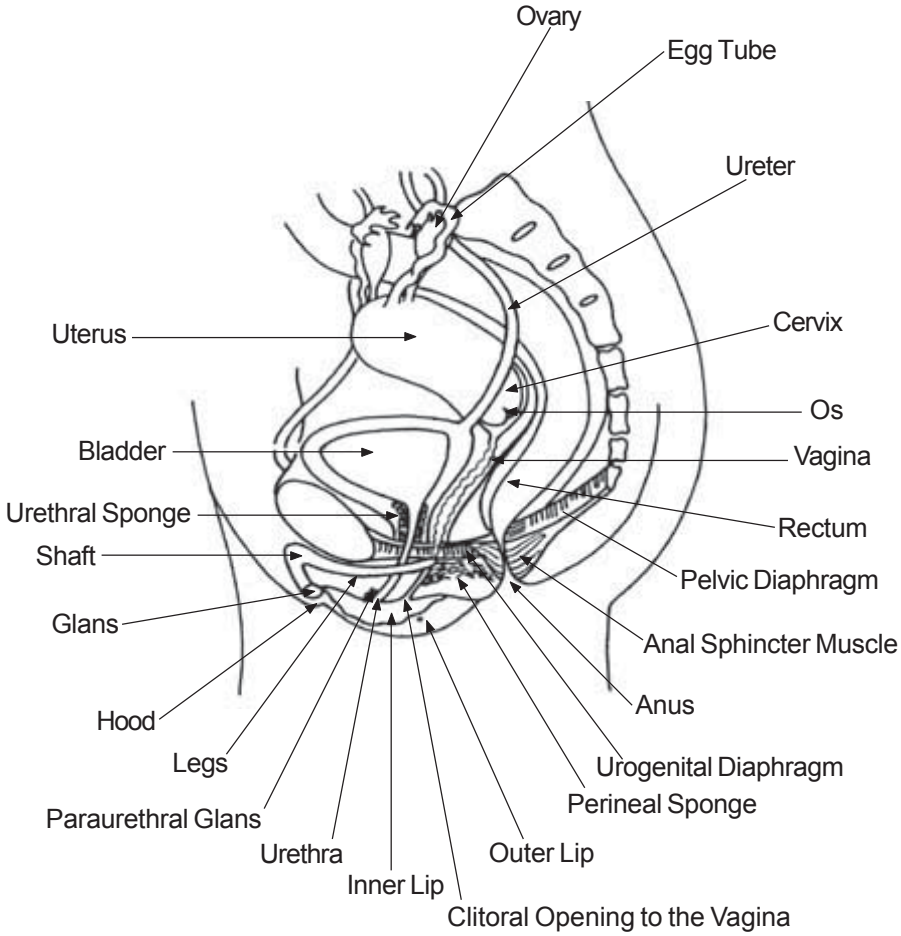


Fig. 2.7 *Perineal Sponge*

J. Perineum

The perineum region includes the anus and sexual organs, but the point of the perineum is located between the back of the vaginal opening and the anus. (Fig. 2.8)

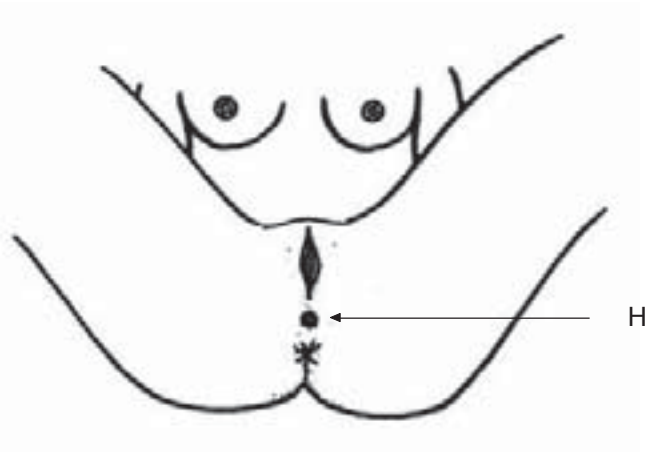


Fig. 2.8 *Perineum (Hui- Yin)*

The anus is a sexual orifice for some women, and quite sexually taboo for others. To prevent vaginal and bladder infections all women should know that fingers or penis should be washed after anal contact.

Fig. 2.9 *Love Making*

Chapter 3
Sexual Response Cycle

Women's sexual responses were described by Masters and Johnson as being in four phases: excitement, plateau, orgasm, and resolution. These phases are demarcated by physiological changes in the sexual organs. In the excitement phase the vagina sweats, and the broad ligament which supports the uterus pulls up: this in turn enlarges the back of the vagina in the plateau phase. A myriad of changes occur during orgasm, including for some women changes in skin color on the back and chest, or tingling or contractions in the hands and feet. In the resolution phase there is a gradual return to the resting state. (Fig. 3-1)

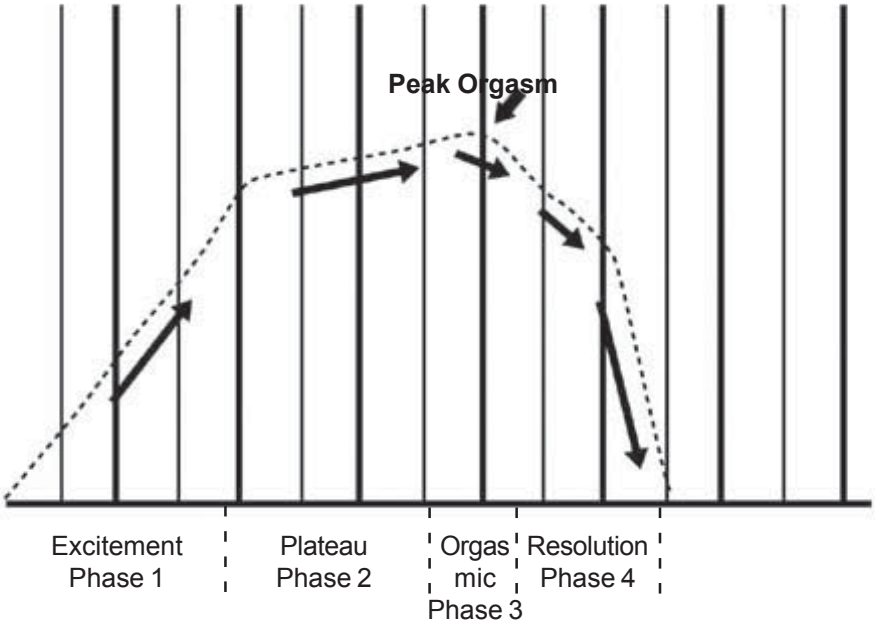


Fig. 3.1 *Ordinary Peak Orgasm*

Most writings on women's sexual responses describe women as having a long arousal period. Yet in Shere Hite's research (*The Hite Report*) most women describe themselves as reaching orgasm within minutes after they start masturbating. Does this long arousal period indicate the flexibility of women's sexual responses? Or is it due to inept lovers or women's reticence to tell their partners what would please them?

A. Clitoris and Vaginal Orgasm

Most sexologists and other people limit the definition of the clitoris to the glans. The vagina and the inner lips are seen as separate and distinct entities, the inner lips having no purpose other than to protect the urethral and vaginal openings. Even though Masters and Johnson described the vivid changes of the inner lips during sexual excitement, they still did not identify them as being part of the woman's sexual organs.

For over half a century a battle raged over the location of women's orgasms. Freud and many of his followers maintained that clitoral orgasms were experienced by girls, but that adult women transferred their sexual response to the vagina. Masters and Johnson concluded from their studies that all orgasms are clitoral in origin.

Feminists, concerned about the effects on women's psyches and sex lives, did a lot of research, both in medical libraries and among themselves in self-help groups, and they talked to numerous women about their sexual experiences. From all these sources they concluded that women have one unified sex organ, but that all parts react during sexual arousal no matter what part is being stimulated.

When all the aspects of this sexual organ are viewed together we see the erectile tissue of the small lips, glans and shaft, urethral sponge and perineal sponge. Add this all together and inch-for-inch women seem to have about as much erectile tissue as men. This similarity in structure suggests a similarity in function also, and further suggests a possible similarity in men's and women's sexual drives and responses. How much is related to how we are constructed, and how much is from our socialization?

B. Depletion of Sexual Energy

Most men are aware of the depletion of energy they feel as a result of ejaculation, and most women are also aware of a depletion. The Taoists observed that while men lose their energy through ejaculation, women lose most of their energy through their menstrual periods. Although many women do not perceive a loss of energy, certainly those whose periods are preceded by a week or two of breast tenderness, water retention, or pelvic congestion, or whose periods are accompanied by strong cramps, heavy bleeding, backache, nausea, diarrhea, or outbreaks of herpes, etc., will notice the draining effect of these cyclical functions.

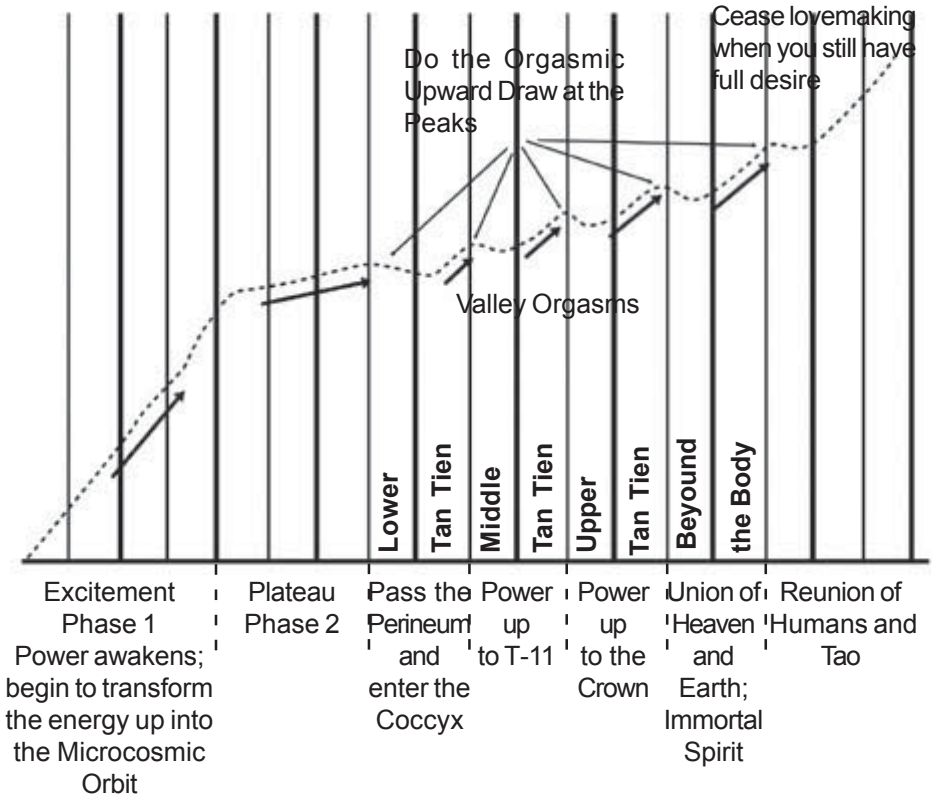


Fig. 3.2 Sexual Energy Chart

C. Ovarian Kung Fu

The Ovarian Kung Fu exercises are practiced in two parts: The first part, Ovarian Breathing, retrieves the biological energy that goes into making eggs, uterine lining, cervical mucous, and the attendant hormones produced in the ovaries and the adrenal and pituitary glands.

The second part, the Orgasmic (Inward and) Upward Draw, involves the transformation of sexual energy, i.e., the circulation of the aroused energy back into the body rather than the discharge of it into the universe.

Both exercises involve bringing the energy from the reproductive and sexual organs up the spine to the brain. Once the brain is filled with energy, the energy will travel down the front of the body to the heart, and then continue down to be stored at the navel.

The first exercise helps reduce the loss of energy from menstruation, enabling women to experience shorter, less troublesome periods. The second exercise conserves the biological energy lost through orgasm, prolongs and emphasizes the orgasm, and brings it up into the organs as well as to a higher energy center there to attain a higher state of consciousness. It also brings intense pleasure. (Fig. 3.2)

In the process of learning these exercises women come into closer contact with their cycles, learning to make finer discriminations in their muscle movements and energy flow, and to increase, deepen and extend their sexual pleasure. Ultimately they will zero in on the process of transformation, recognizing and achieving the link between sexuality and spirituality

Fig. 3.3 *Sexual Energy Connection*

Chapter 4
Microcosmic Orbit

"Reject all reasoning about sex: practice special exercises. To be able to make love and not emit is the secret of returning the semen. Increasing and aiding the semen is then the way of the life-force." Plain Woman's advice to the Yellow Emperor second century B.C.

In centuries past the Emperor of China invariably called in the court sages, usually Taoist, to obtain advice on his sex life. Before accepting the advice of any sage, so the story goes, the Emperor required any prospective Master to prove his sexual control. He did this by offering the would-be advisor a full glass of wine and demanding the sage insert his penis into it. If he was truly a Master he could absorb the wine into his penis, and then release it back into the wine glass. This was taken as absolute proof that the sage could also absorb a woman's sexual fluids, her Yin essence, and therefore knew the secrets of immortality.

Today women can learn the secrets of the Taoist Immortals, be in control of their sexuality and embark on a journey with a partner that will enrich them both. When they master these techniques for retaining their sexual power and then willingly share it, they will feel differently about themselves and each other:

A. Learn to circulate your Chi in the Microcosmic Orbit

By far the most powerful energy exchange between two partners occurs at the level of subtle energy. The Taoists have been studying the circulation of subtle energy through certain energy points in the body for thousands of years and have verified, in detail, their importance. These energy points form the basis for acupuncture. Although Western medical research has acknowledged acupuncture as being clinically effective, scientists admit they cannot fully explain why the system works. The circulation of energy through these energy points, or meridians, is called the Microcosmic Orbit. (Fig. 4.1)

All students of the Universal Tao System are taught to circulate their Chi in the Microcosmic Orbit, a necessary step to understanding the cultivation of Ching from the raw physical level

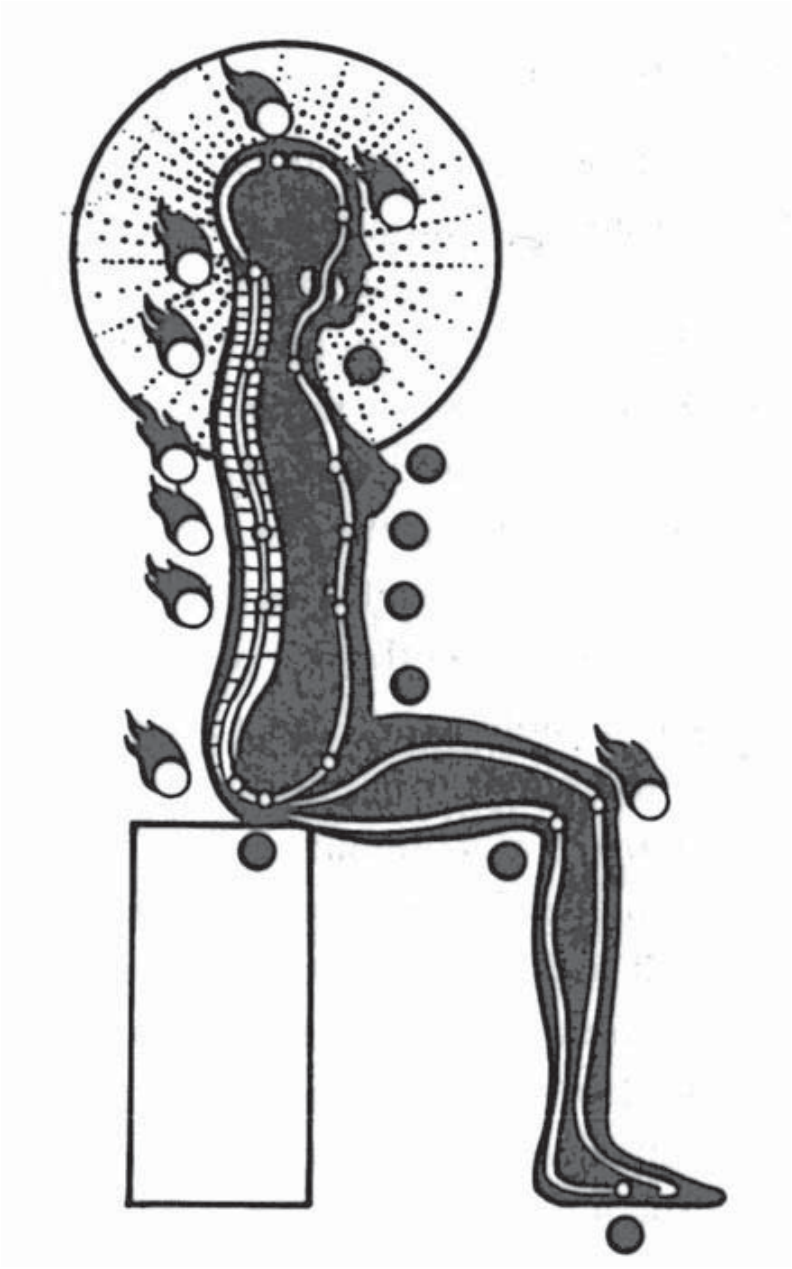


Fig. 4.1 *Microcosmic Orbit*

of eggs to the refined subtle energy of a Shen, or spiritual being. Once they have opened their Microcosmic Orbit, they have already experienced a minor enlightenment. The mind has begun to realize it has control over its own subtle energy. Ultimately one learns that the movement of subtle energy is totally a power of the mind.

B. Discovery of the Microcosmic Orbit

A few thousand years ago everything in the world was so simple: there were no televisions, radios, theaters, or nightclubs as entertainment, and no houses to care for; all of which drain energy and disturb the mind. The air was pure. Natural energy was abundant to humans.

When the sun set, people could not fall asleep right away, and they dared not roam around the jungle in the dark. One way to occupy their time was to sit down and quiet themselves. Once they were able to quiet their minds to a certain extent, their body functions started to quiet down as well. They started to notice the flow of something in the body. The flow began in the navel, traveled down to the perineum and up the spine to the head, down the front through the tongue, to the throat and then down to the navel. The circulation of energy through this route came to be known as the Microcosmic Orbit.

The more they were able to still their minds and bodies, the more intense the flow would be. As they continued to still their minds, they began to discover more paths opening and to feel the energy flow in a straight direction, up and down. From the perineum up to the head, the flow was then felt passing through the major organs in three channels, which later became known as the Thrusting Channels. As their practice continued, they felt the energy start to flow in a circular motion, similar to a belt, around a major energy center that they discovered in the navel, the Belt Channel.

As time went on they discovered that there existed in their bodies 32 energy channels, each one corresponding to a specific organ. They passed down this knowledge they had learned generation after generation until more and more people practiced it, and in this way identified the acupuncture meridians which became basic to the Taoist System.

Every person has the same body, the same channels, and has a soul and spirit. After many hundreds of years of practice, trial and

error, improving and passing down, the Taoist Esoteric Yoga System came into being.

C. Two Major Energy Channels of the Microcosmic Orbit - Functional and Governor

It is much easier to cultivate your energy if you first understand the major paths of energy circulation in your body. The nervous system in humans is very complex and is capable of directing energy wherever it is needed. However the ancient Taoist Masters discovered there are two energy channels that carry an especially strong current.

One channel, the “Functional” or “Yin” Channel, begins at the base of the trunk midway between the vagina and the anus at the perineum point. It goes up the front of the body past the mons, abdominal organs, heart, and throat and ends at the tip of the tongue. The second channel, the “Governor” or “Yang” Channel, starts in the same place. It flows from the perineum upward into the tail bone, then up through the spine into the brain and back down to the roof of the mouth. (Fig. 4.2)

The tongue is like a switch that connects these two currents when it is touched to the roof of the mouth just behind the front teeth, the energy can flow in a circle up the spine and back down the front. The two channels form a single circuit that the energy loops around. This vital current circulates past the major organs and nervous systems of the body, giving cells the juice they need to grow, heal, and function.

D. Sexual Energy

1. Primordial Energy

The sexual energy that moves in the Microcosmic Orbit is a primordial energy. Human life begins with the union of an egg and a sperm cell. This is the original act of Kung Fu in the balancing of Yin and Yang. Ovarian Kung Fu is the re-creation of that act within the female body. However instead of forming a fetus from a fertilized egg growing inside the womb, the ovarian energy mounts to higher energy centers inside the body, and we give birth to ourselves on a spiritual level. The sexual energy is drawn upward through the Microcosmic Channel where it literally gives rebirth, a “new life”--

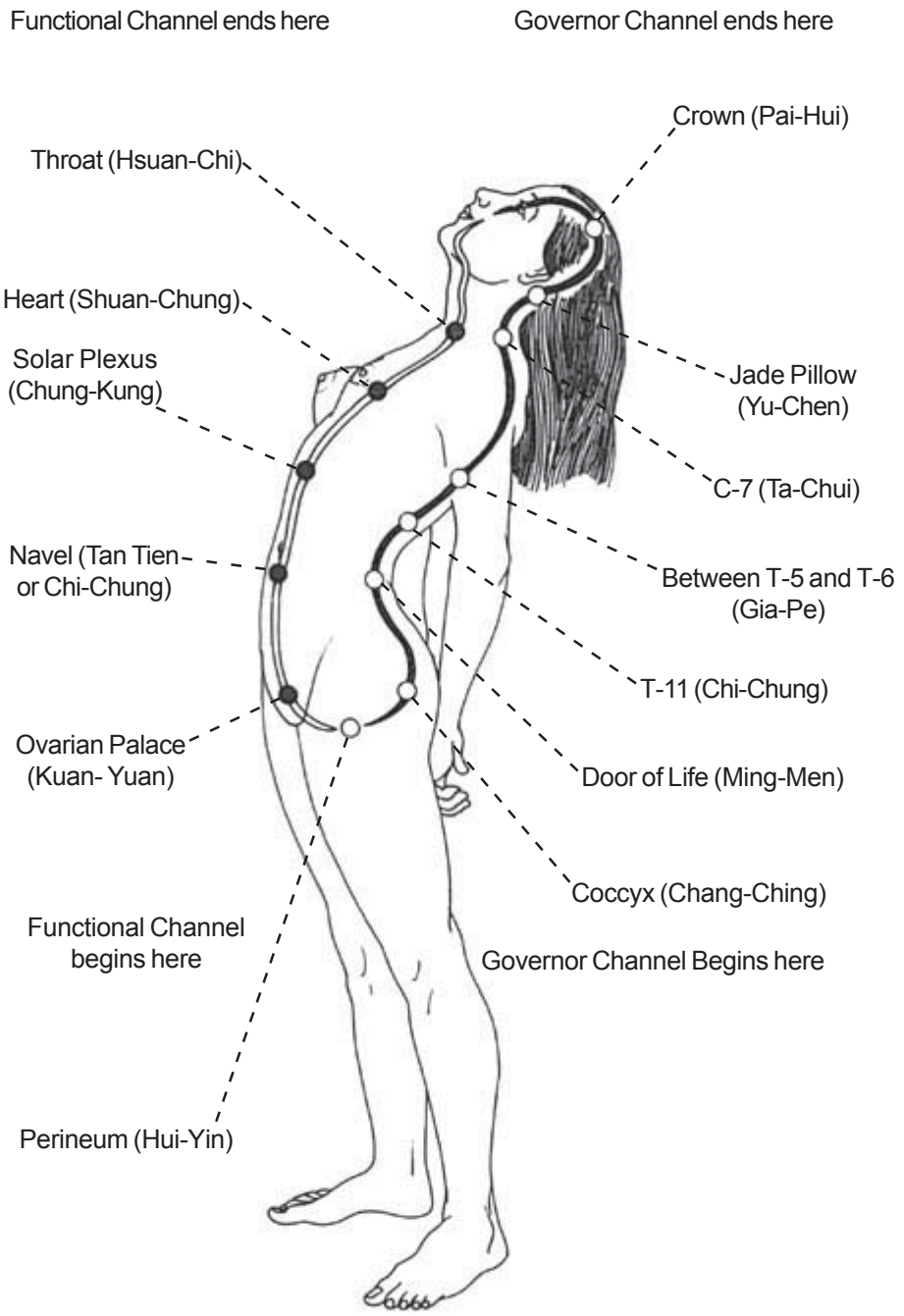


Fig. 4.2 *Functional and Governor Channels*

and brings the confidence of controlling a powerful flow of creative energy and the satisfaction of a deep sense and higher balance of harmony with the world.

2. A Powerful, Versatile Energy

The methods of Chi cultivation explained in detail in this book from Ovarian Breathing to the Ovarian Upward Draw method to Beyond Orgasm all involve drawing sexual energy stored in the ovaries up the spinal column and into the brain. When the brain is full, this energy will travel down the front into the throat, heart and navel. The brain and pituitary gland will aid in distributing this powerful energy to wherever it is needed. This is a unique attribute of sexual energy, or Ching, over other types of Chi that have their own special functions, e.g., liver Chi. Sexual energy is extraordinarily versatile and can be transformed into many different functions. This is one reason it is so nourishing to our spiritual being. Our inner spiritual being can easily digest it, almost as if it were baby food.

The loop of energy circulating about the body in the Microcosmic Orbit, carrying the sexual current from the ovaries and spreading vitality to other parts of the body, also has a profound effect on health in a specific way. It is this energy that triggers the glands to release the sex-stimulating hormones which regulate body chemistry and ultimately affect your ability to do anything. It has an especially strong influence on the quality of your lovemaking, because on the biological level sex is largely a question of hormonal balance.

The benefits of the Microcosmic Orbit extend beyond facilitating the flow of sexual energy: they include the prevention of aging and the healing of many illnesses, ranging from high blood pressure, insomnia and headaches to arthritis. Whether it be for fighting off an illness, answering a child's question, painting, or making love, the energy that flows in the Microcosmic Orbit is available when we need it.

E. Sealing the Energy within the Body

After opening up the Microcosmic energy channel, it is important to keep it clear of physical or mental blockages, thereby making it possible to pump a greater amount of sexual energy up the spine. If this channel is blocked by tension during the sexual excitement of lovemaking, ovarian energy will not be able to rise to the brain.

The sexual power is then lost until the body goes through the long and physically taxing process of manufacturing more ovarian energy. The Microcosmic Orbit is an important step to sealing this energy within the body so that it will circulate and revitalize all parts of the mind and body. Otherwise, when intense sexual energy pressure builds in the head, much of it escapes out of the eyes, ears, nose and mouth and is lost.

F. Opening the Microcosmic Energy Channel

The easiest way to open the Microcosmic energy channel is to sit in meditation a few minutes each morning and relax. Allow your energy to automatically complete the loop by letting your mind flow along with it. Start in the eyes, and mentally circulate your attention with the energy as it goes down the front through your tongue, throat, chest and navel, and then up the tail bone and spine to the head.

At first it may feel like nothing is happening, but eventually the current will begin to feel warm in some places as it loops around. The key is simply to relax and try to bring your mind directly into the part of the loop being focused on. This is different from visualizing an image inside your head of what that part of the body looks like or is feeling. Experience actual Chi flow. Relax and let your mind flow with the Chi in the physical body along a natural circuit to any desired point, e g., your navel, perineum, etc.

Even if you do not sit daily and circulate the Microcosmic current, just being aware that it exists in your body and functions automatically during these practices should help you more quickly master the methods of Taoist loving. You may even learn it through your lovemaking: all it takes is attention. The best lover is a fully relaxed woman who understands what is going on inside her.

A way to become more in touch with your energy is to lie next to your partner with your ear or nose near your partner's nose. Synchronize your breathing and begin to feel the mingling of your breaths and energies. You might also hug each other for a prolonged period and begin to feel the energy in the abdomen with each breath. The woman who masters this easy flow of energy inside her body's Micro cosmic Orbit will find tapping into her sexual powers a simple and natural step.

The more conscious you become of the functioning of subtle Chi energy in your body, mind, and spirit, the greater your freedom

to creatively love and be yourself.

Those interested in fully mastering this method of relaxation and opening the Microcosmic Orbit can refer to my first book, *Awaken Healing Energy Through the Tao.*

Study of the Microcosmic Orbit is highly recommended to all students of Sexual Kung Fu who seek to truly master the techniques taught here. Progress to the higher levels of transforming sexual energy without first learning the Microcosmic Orbit is very difficult. Many people may already have open channels and simply need to be made aware of them. Anyone can start to relax in a pleasing, natural setting.

Mastering the Microcosmic current also prepares the serious student for utilizing other energy-conserving techniques that complement Sexual Kung Fu, such as Iron Shirt Chi Kung I, II, and III, a method of packing and storing Chi energy into vital organs. Another powerful technique is Tai Chi Chi Kung, a condensed form of Tai Chi Chuan that circulates Chi energy among body, mind, and spirit, and strengthens muscles, tendons and bones.

Fig. 4.3 *Loving Energy*

Chapter 5
Cultivating Ovarian Power

I. Activation and Control of Ovarian Energy

A. Importance of Sexual Organs' Exercise

America is presently exercise oriented. However with the exception of sexual intercourse, few exercises strengthen the crucial pelvic muscles. Pelvic exercises do exist which can increase Chi in these areas, thereby greatly strengthening the reproductive organs and the complex network of tendons surrounding them.

Strength in this region is of inestimable importance. Leading into the pelvis is a vast number of nerves, blood vessels and lymph glands. Here terminate tissues communicating with every square inch of the body. All of the major acupuncture meridians, which carry Chi to the vital organs, pass through this area. If it is blocked or weak, energy will dissipate, and the organs, as well as the brain, will suffer. This is what happens to many people in old age. As their rectal and pelvic muscles sag and become loose, their vital Chi energy slowly drains out, leaving them weak and feeble.

1. Celibates

No matter who you are, sexual energy is constantly building up and accumulating in the sexual region. Some negative evidence has been collected regarding the health of celibates based on studies of priests and nuns who use only willpower to suppress the sexual fire within. !t has been found that the practice of celibacy by women has brought on the eventual deterioration of the sexual organs caused by long-term congestion in the ovaries or breasts, in turn affecting the internal organs.

Some celibates are able to transform their sexual energy naturally, and as a result no problems arise in the celibate state. A woman who is not so naturally enlightened will find an accumulation in her body and sexual organs of too much sexual energy. This energy tends to need a release, and if the woman has no way to handle the problem properly, the energy can affect her adversely, multiplying her negative emotions. Without properly cultivating

sexual energy and opening the energy channels between the lower and upper body the sexual energy is blocked, thereby congesting blood and hormones in the woman's genitals, ovaries, and cervix. Such problems can be avoided by practicing the Ovarian Breathing and Orgasmic Upward Draw exercises.

B. Ovarian Breathing Cultivates Ovarian Power

1. Woman's Menstrual Cycle

It is said that anatomy is destiny: women are born to be mothers. A baby girl's ovaries are immature, small and smooth, but they contain the power necessary to create the 300-500 eggs she will produce in her reproductive years and a reserve of potentially 450,000 eggs.

Every woman has a profound connection with her menstrual cycle. Women students of the Universal Tao System have revealed how sensitive they are to what seems to be subtle changes in their cycles: they notice right away if their periods are one day early or late, if they last a day longer or are a day shorter and if the consistency or color varies from what they have come to expect.

Apparently many women remember an event that occurred the day they received their first periods. Those memories may be pleasant or unpleasant, but they remain indelible. One woman remembers it was the first time a man tried to pick her up: another woman remembers that her mother slapped her face (a gesture of welcome into the world of being a woman): another woman hit a home run in a softball game that day.

Many women's cycles become a source of much confusion and uncertainty. They are unsure about fertile times, are ashamed of secretions and odors, are discontent with available birth control methods, develop anger at common childbirth practices, or harbor a simultaneous dependency on and distrust of the medical profession.

Some women go through life with few problems during their cycles, having easy periods, uncomplicated births, or smooth transitions into menopause. Others have distressing problems with their periods, such as recurrent vaginal infections, abnormal Pap smears, difficult births, hysterectomies, or they take synthetic hormones because of disabling hot flashes.

Major changes can occur in the menstrual cycles as well as in many other aspects in the lives of some women simply by practicing Ovarian Breathing.

The point is that, even if a woman has two or three children and does not plan to have more, her body continues cyclically to produce ovary energy. Instead of wasting that energy, it can be conserved through transformation into another form for later use. The Ovarian exercises provide a way to use that Ovarian power:

2. Yang Energy and the Menstrual Cycle

There are three distinct parts to the menstrual cycle. First, there is the period itself. Following menstruation, an ovary spurts several immature eggs into action, and usually one egg matures completely. Surrounded by a jelly-like covering, it breaks out of the ovary. That period of time, from the end of the bleeding until ovulation, is the time of maximum ovary power During this part of the cycle the Taoists believe that the ovaries' energy is at its most Yang, or most hot.

After ovulation the ruptured area of the ovary heals and forms the corpus luteum, or yellow body. This yellow body produces progesterone. The function of progesterone is to keep the uterine lining from sloughing off. If the egg unites with a sperm and a pregnancy starts, progesterone will be secreted during the entire pregnancy. If there is no fertilization, the ovary will produce a spurt of estrogen, and the menstruation cycle will begin.

The Taoists note, and women's experiences to date confirm, that the part of the cycle between menstruation and ovulation is the time that a woman will receive the maximum benefit from the practice of Ovarian Breathing, with continued practice then being optional until the next cycle. The process of Ovarian Breathing will draw energy out of the egg. Imagine having access to an energy that is powerful enough to bestow life!

C. Diaphragms

The body possesses not one but several diaphragms. Everyone is familiar with the thoracic diaphragm in the chest, separating the heart and lungs from the abdominal organs and assisting us in breathing. When you inhale, this diaphragm lowers, thus increasing the space in the chest and allowing the lungs to fill: the deeper the breath, the lower the diaphragm moves.

Less is known about the pelvic and urogenital diaphragms, which separate the pelvis from the perineum. To practice Ovarian Breathing properly you must use not only the chest diaphragm, but also the pelvic and urogenital diaphragms. (Fig. 5.1) These serve as flood gates, opening to spurt energy to the organs, or as pistons, pumping the energy up to higher centers. True breathing comes from these lower diaphragms. It is an exceedingly important element in the Taoist practice of transmitting the energy generated from the sexual organs into a higher energy form.

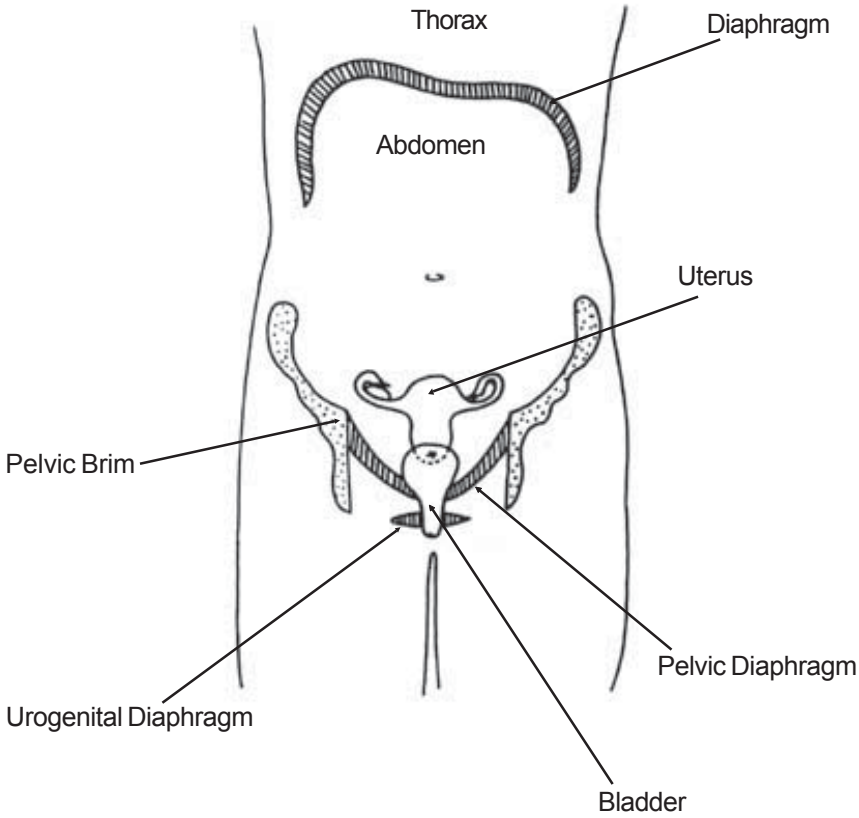


Fig. 5.1 *Deep breathing issues from pelvic and urogenital diaphragms.*

1. Pelvic Diaphragm

The pelvic diaphragm is a muscular wall that extends across the lower part of the torso. It is suspended between the symphyses

pubis (pubic bones) in front and the coccyx (at the bottom of the spine) in back. (Fig. 5.2) There are several organs that penetrate this muscular partition as it lies between the pelvic cavity and the perineum. These organs are the urethra, the vagina and the rectum. One function of the pelvic diaphragm is to support these organs: therefore, control over this diaphragm provides you with greater control over these organs. The pelvic diaphragm is also the floor of the abdominal cavity, which contains the stomach, small and large intestines, liver bladder and kidneys. It lifts up and helps shape these vital organs.

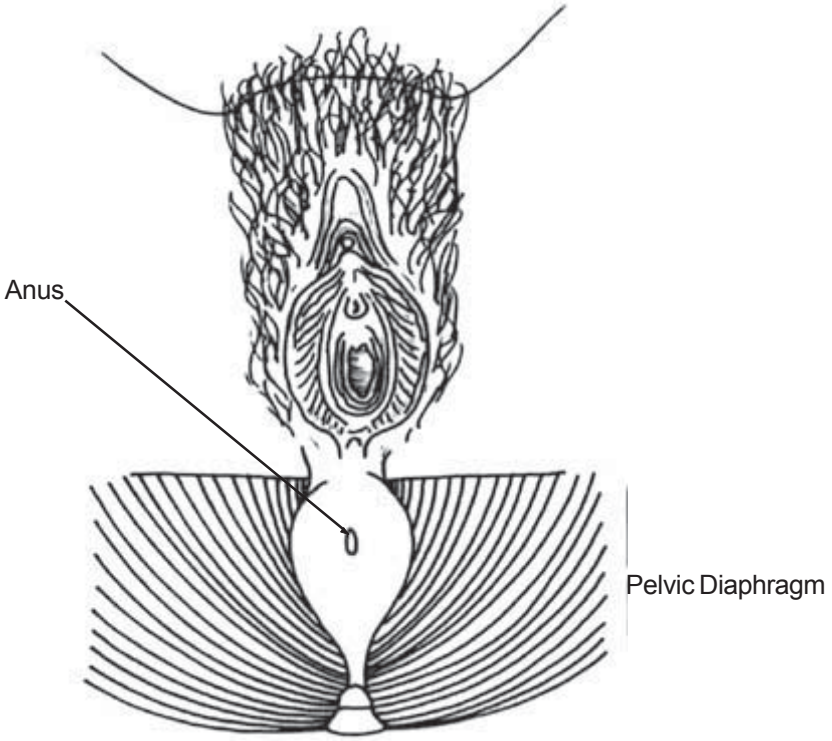


Fig. 5.2 *Pelvic Diaphragm*

2. Urogenital Diaphragm

At the perineum, the point midway between the anus and vagina below the pelvic diaphragm, is another muscular diaphragm, the urogenital diaphragm. This is penetrated by the urethra, and on its underside is attached the shaft of the clitoris. (Fig. 5.3)

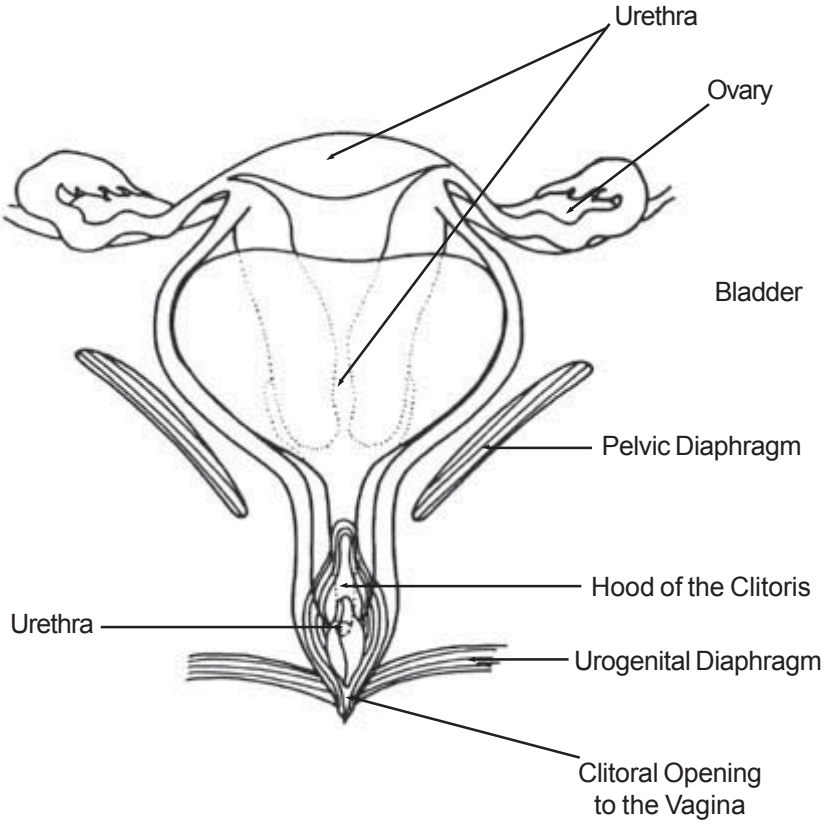


Fig. 5.3 *Urogenital Diaphragm*

These two diaphragms seal and hold the life-force, or Chi energy to prevent its escape through the lower openings in the body when the openings passing through these diaphragms are tightly sealed, Chi pressure will be increased in the abdomen. When Chi pressure (pounds per square inch, or psi) strengthens, it will invigorate the vital organs, helping to improve the flow of Chi and blood.

The importance of these anatomical structures will become apparent as you study the Universal Tao System in its entirety. As previously mentioned, Iron Shirt Chi Kung exercises also help to develop power and strength in these areas and are a perfect complement for anyone seeking a daily regimen that will assist in the practice of Ovarian Kung Fu. (See the section at the end of this book entitled “The Universal Tao System” for a further description.)

D. Sacral and Cranial Pumps move Chi up the Spine

Contained and protected within your spinal column and skull is the very “heart” of your nervous system. (Fig. 5.4(a)) Cushioning it is the cerebrospinal fluid, “cerebro” for the head and “spinal” for the vertebrae. This fluid, as described by the Taoists long ago, is circulated by two pumps. One is located in the sacrum and is known as the Sacral Pump. The other is in the region of your upper neck and head and is known as the Cranial Pump. (Fig. 5.4(b)) Many people who have activated these pumps have reported the sensation of a “big bubble” of energy traveling up their spine during Ovarian Breathing.

1. Sacral Pump

Taoists regard the sacrum, containing the Sacral Pump, as a point at which the sexual energy coming up from the ovaries and perineum can be held and then transformed as it is given an upward push. It can be compared with a way station that refines the ovaries’ energy, or Ching Chi, as it circulates in the body. If the opening of the sacrum to the spinal column (the sacral histus) is blocked, the life-force cannot enter and flow up to the higher center:

2. Cranial Pump

The cranium of the skull has long been regarded by Taoists as a major pump for the circulation of energy from the lower centers to the higher centers. Medical research has recently confirmed that minute movements of the joints of the eight cranial bones occur during breathing. Cranial movement is responsible for the production and function of the cerebrospinal fluid surrounding the brain and spinal cord, and this is necessary for normal nerve and energy patterns in the entire body. Strengthening the cranial joints can increase energy and alleviate symptoms such as headaches, sinus problems, visual disturbances and neck problems.

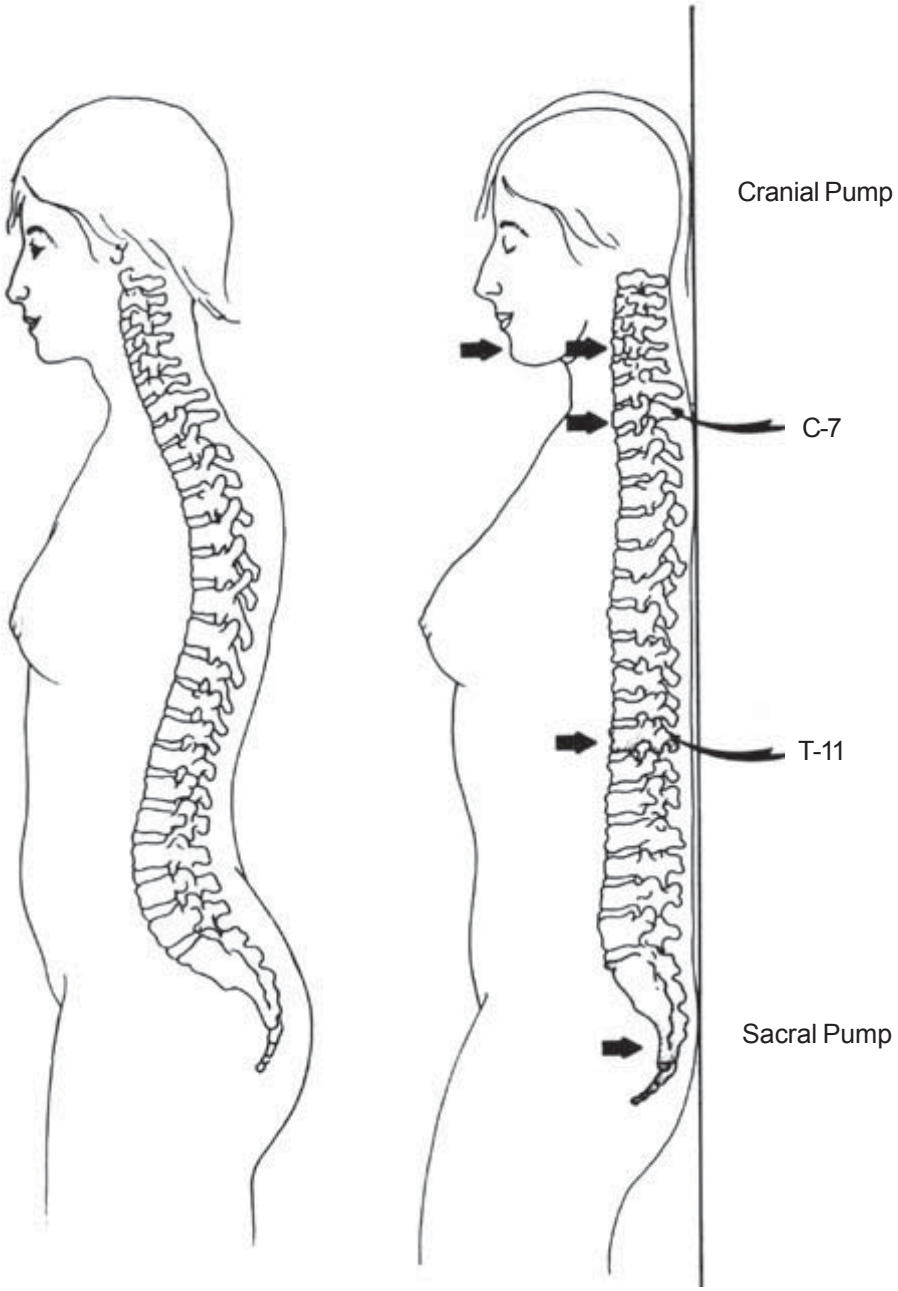


Fig. 5.4(a) Natural Curvature of the Spine (b) Sacral Pump and Cranial Pump

In Taoism, cultivation of the movement of the pelvis, perineum, urogenital disphragm, anus, and the Sacral and Cranial Pumps is very important and necessary in helping to move the sexual energy up the spine.

In Ovarian Breathing, we use the mind and a slight tensing of the neck and jaw to help activate the Sacral and Cranial Pumps. In the Orgasmic Upward Draw we use a stronger power lock of the neck, teeth and muscles, a deep breath, and eye movement to assist in the activation of these pumps.

E. Chi Muscle assists in controlling the flow of Chi.

As we have already learned, one of the main objectives of the Taoist practice is to increase the flow of Chi, our life-force, to our organs and glands. The Inner Smile and Microcosmic Orbit Meditation are very important methods of reaching this objective, especially in the Healing Love practice, because they can help you open the channel through which the sexual energy has to flow up, assisting you in controlling the flow of sexual power. However without directing sexual healing energy to the organs, lovemaking becomes a normal social act, ending up in the loss and depletion of gland and organ energies. Crucial to the ability to control this flow of sexual energy is the development of a strong Chi Muscle.

1. Perineum Power

Included in the perineum region are the anus and sexual organs. The perineum region is known as the seat of Yin (cold) energy, and is closely connected to the organs and glands. (Fig. 5.5) The Chinese term for perineum, Hui-Yin, means the collection point of all Yin energy, or the lowest abdominal energy collection point. It is also known as the Gate of Death and Life. This point lies between the two main gates. The front gate, or sexual organs' gate, is the big life-force opening: here the life-force can easily leak out and deplete the organs' function. Although the walls of the vagina are tight during youth and after a refreshing sleep, they become looser as we age or when fatigued. The walls of the vagina, housing the PC Muscle, must be strong in order to permit the life-force energy to flow and increase their strength. The second gate, the back gate, is the anus.

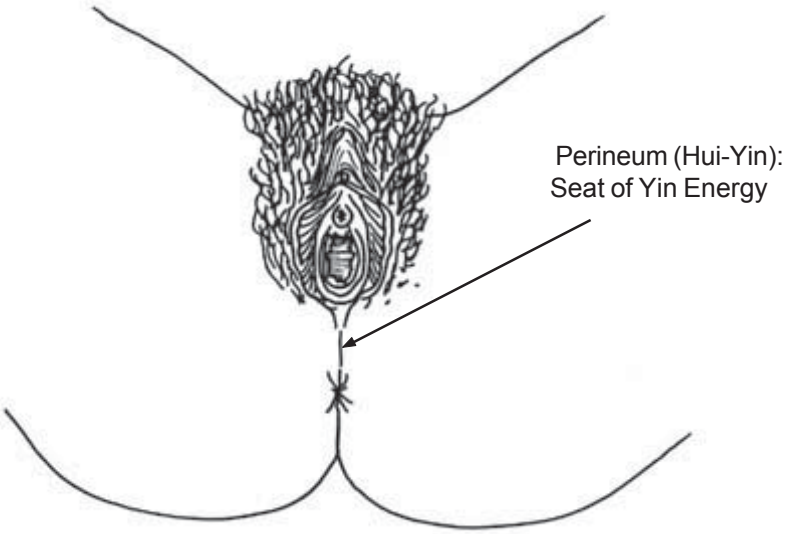


Fig. 5.5 *Perineum*

Taoists regard the perineum region as the lowest disphragm, one that functions like a pump. Control of the Chi Muscle, consisting of the PC Muscle, the muscles of the pelvic and urogenital disphragms, the sphincter muscle of the anus, and many involuntary muscles located in this perineum region, influences the pumping action. As Ovarian Breathing floods this region with energy, the perineum, vagina and anus begin to tighten almost immediately. In the Tao practices, especially in Iron Shirt Chi Kung, the perineum's power to tighten, close and draw the life-force back up the spine is an important factor.

2. Anus is connected to Organ Energy.

The various sections of the anus region are closely linked with the organs' and glands' Chi. When not sealed or closed tight, we can easily lose the nutrition needed for our life-force and sexual energy through 'a river of no return": they will flow out and will not recycle.

3. Anus Region is divided into Five Sections.

The anus is divided into five sections: (a) middle, (b) front, (c) back, (d) left, and (e) right. (Fig. 5.6) By contracting and pulling up the various sections of the anus, you are also pulling up the perineum region, which partially consists of the anus.

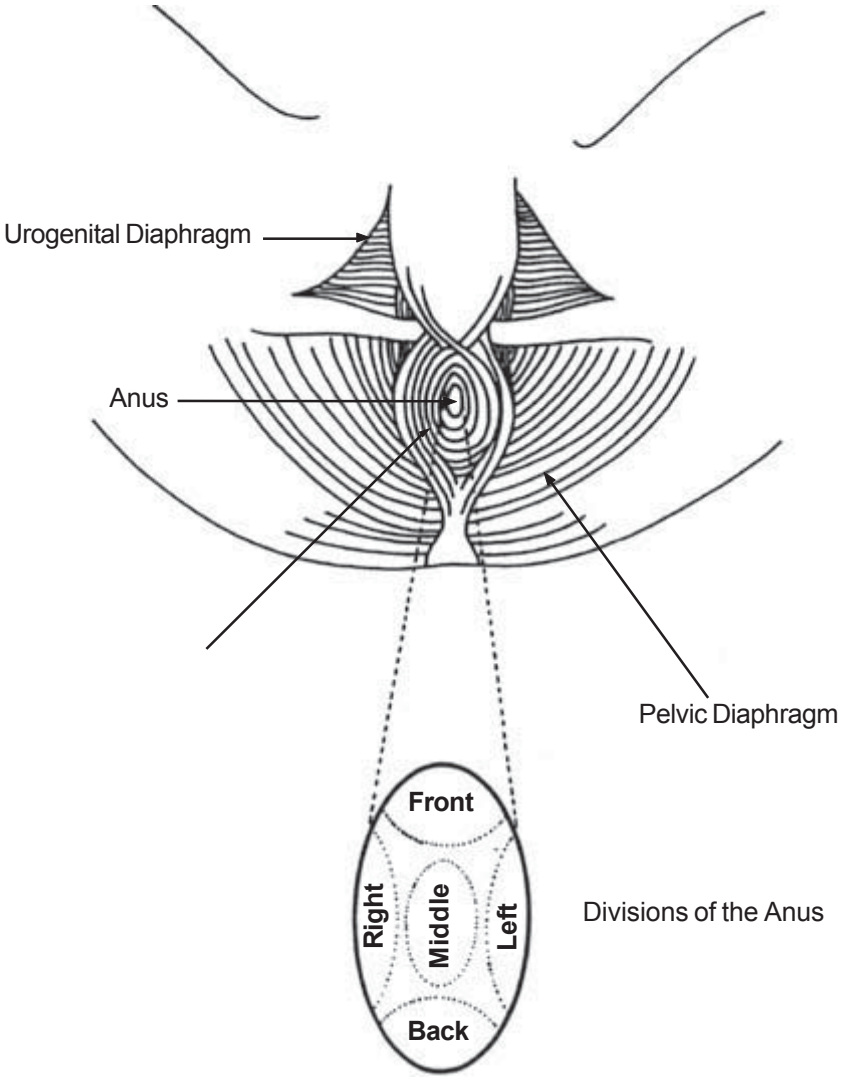


Fig. 5.6 *Anus is divided into Five Regions.*

A. Middle Part

The middle of the anus Chi is connected with the organs and glands as follows: the vagina-uterus, aorta and vena cava, stomach, heart, thyroid, parathyroid, pituitary and pineal glands and top of the head. (Fig. 5.7).

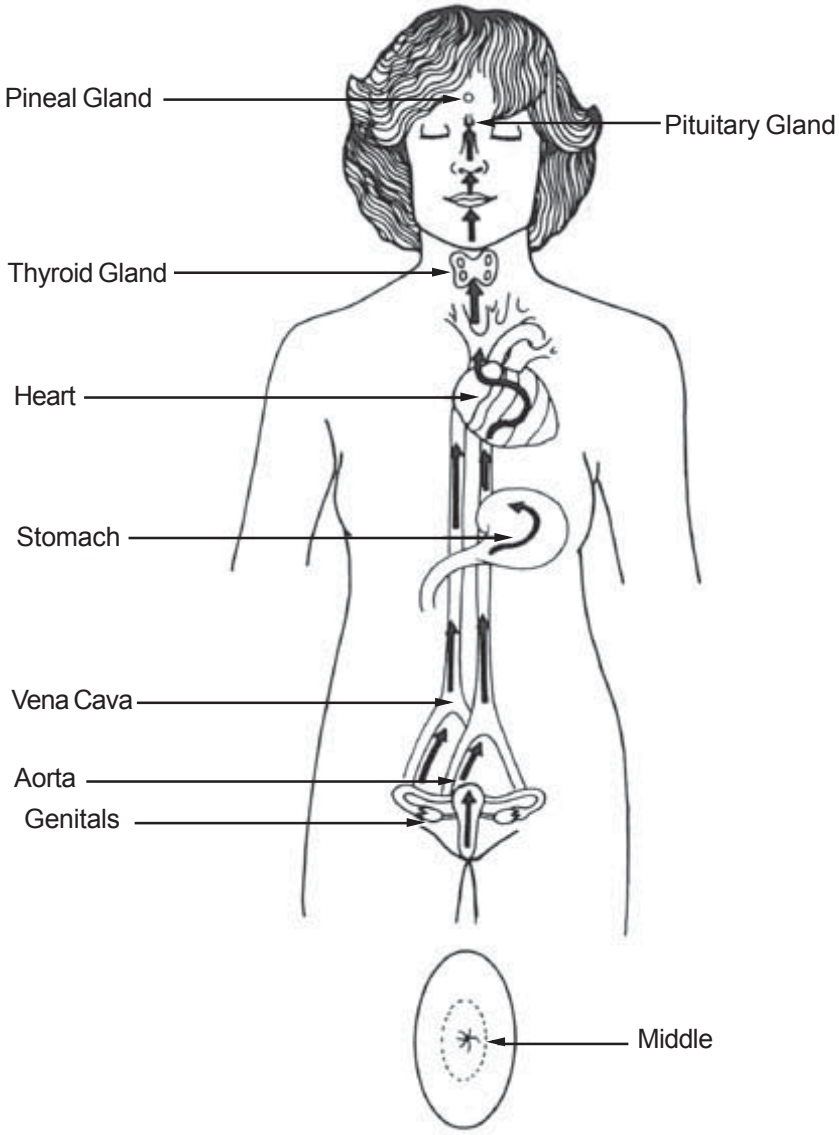


Fig. 5.7 *Middle Part Anus Pull Up*

B. Front Part

The front of the anus Chi is connected with the following organs and glands: the bladder: cervix, small intestine, stomach, thymus and thyroid glands and front part of the brain. (Fig. 5.8)

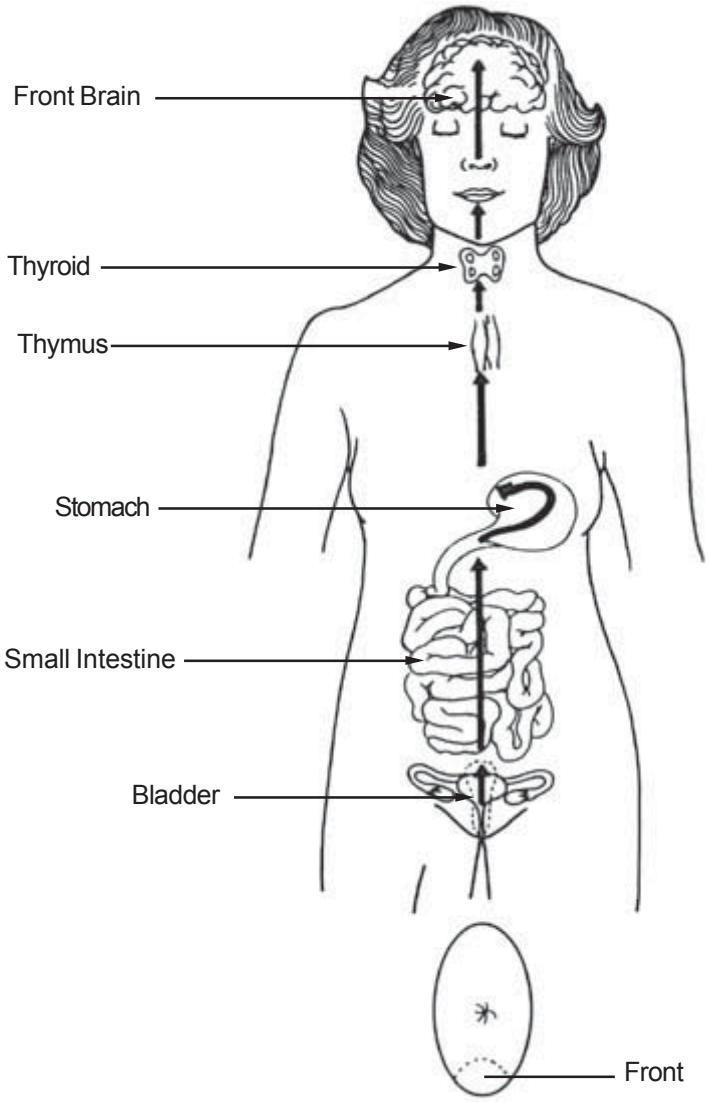


Fig. 5.8 *Front Part Anus Pull Up*

C. Back Part

The back part of the anus Chi is connected with the organ and gland energies of: the sacrum, lower lumbar,: twelve thoracic vertebrae, seven cervical vertebra: and small brain (cerebellum). (Fig. 5.9)

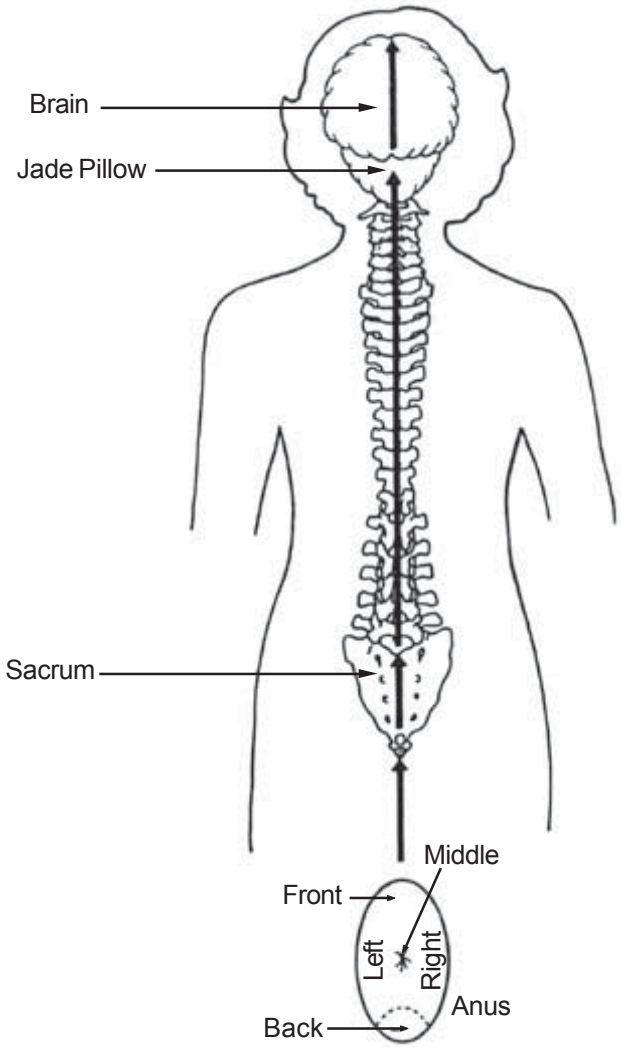


Fig. 5.9 *Back Part Anus Pull Up*

D. Left Part

The left part of the anus Chi is connected with the organ and energies of: the left ovary, large intestine, left kidney, left adrenal gland, splee, left lung and left hemisphere of the brain. (Fig. 5.10)

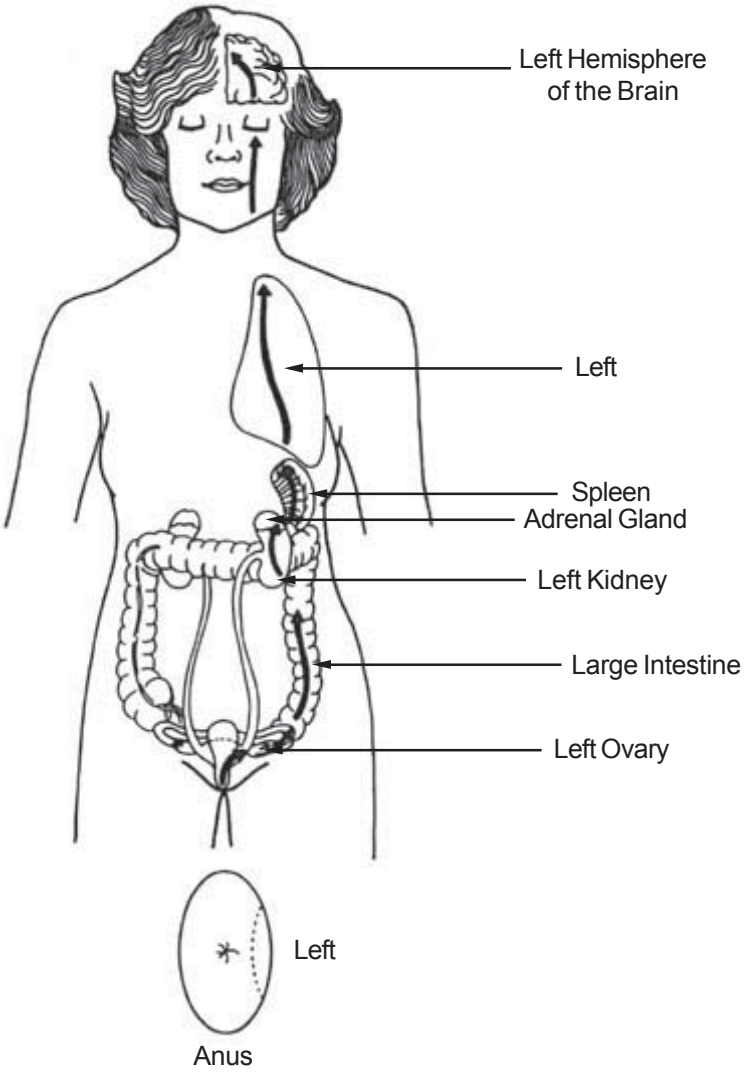


Fig. 5.10 *Left Part Anus Pull Up*

E. Right Part

The right part of the anus Chi is connected with the organ and gland energies as follows: the right ovary, large intestine, right kidney, right adrenal gland, liver, gall bladder, right lung and right hemisphere of the brain. (Fig. 5.11)

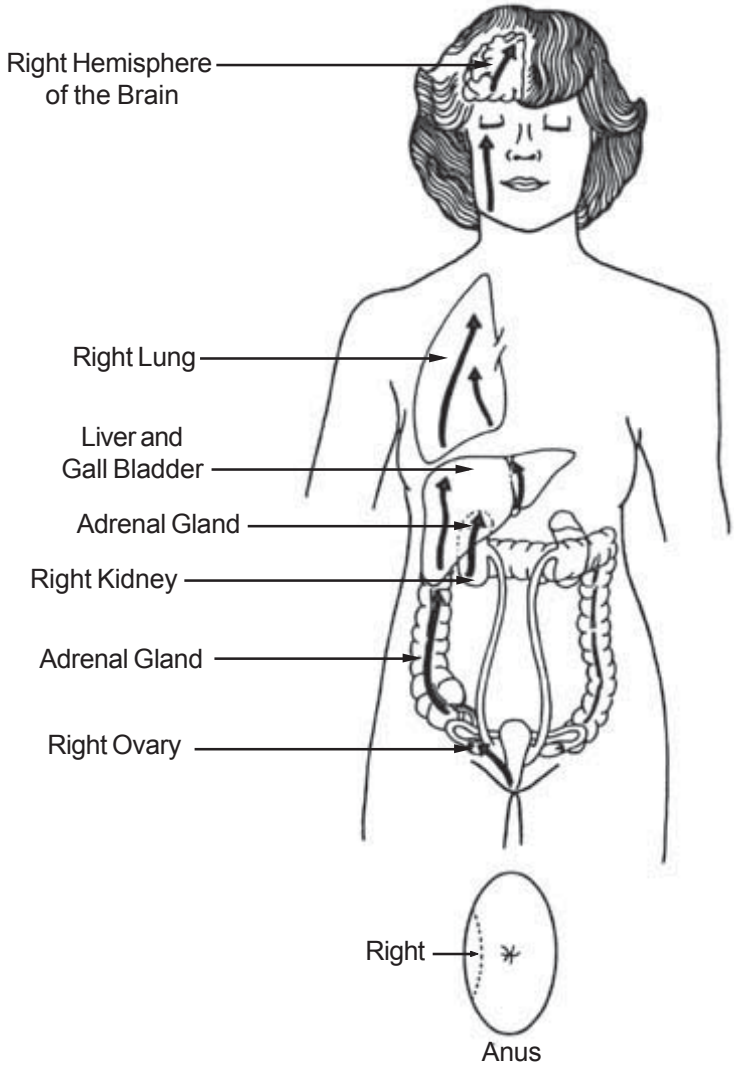
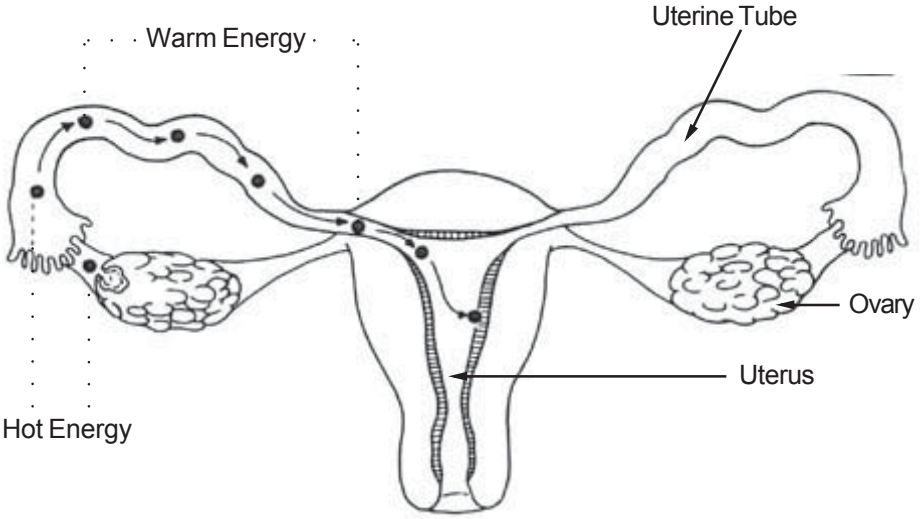


Fig. 5.11 *Right Part Anus Pull Up*

Once you are well trained in controlling the Chi Muscle, you can easily guide the sexual healing energy to the particular organs or glands that you need to heal, or guide the energy to help your partner during lovemaking. In the latter part of the Orgasmic Upward Draw, you will learn how to guide your orgasms to the organs and glands.

F. Yang Ovaries' Energy-Healing and Creative Power

The ancient Taoists had extraordinarily astute powers of observation, and their findings on the subject of sex are surprisingly consistent over long stretches of time, which in China means not hundreds but thousands of years. This is significant because many groups did not know of any others' abilities, whereabouts, or even existence, since these esoteric practices were kept very secret.



During the first stages of ovulation the erengy is hot. As the egg travels toward the uterus the energy turns warm.

Fig. 5.11 *Energy of Ovulation*

They noted that the ovaries, as the factory that produces sexual energy in the form of eggs and female hormones, are of prime importance, because all of the vital organs, such as the brain, must contribute some of their own reserves to create and maintain them. Further their records point out that in the first part of a woman's cycle, there is a tremendous storage taking place of hot life-force

energy which they called Yang Ching Chi (Ovarian Chi). (Fig. 5.12) As previously noted, Yang energy activates and charges an egg during a woman's ovulation with full potential life-force, and this is a sign of a strong and youthful energy with the power to create and heal.

Ovarian Chi, or Ching Chi, is denser than the life-force, or Chi, that normally circulates in the Microcosmic Orbit. Since it is thicker and slower to move, this energy needs all the help it can get to move upward to a higher energy center. Therefore it is important to be sure the channel of the Microcosmic Orbit is open and the Chi is flowing before proceeding to Orgasmic Breathing or the Orgasmic Upward Draw. Then the more inward the orgasm, and the more you can bring it upward, the more you will heal and revitalize as the Ching Chi (sexual energy) travels through the channel in its loop up the spine to the head and down the front through the navel, genitals and perineum, linking the various organs and glands with each other and with the brain. This energy can also be used to heal and revitalize your partner:

As the woman's cycle continues and the egg moves out of the body the experience of heat gives way to what has been described as a mildly warm quality. All sexual energy, whether male or female, is Yin in its latent or resting state. At this time the aroused sexual energy, now more Yin in nature, is more healing than creative. It is important to use this sexual energy and not let its vitality pour outward. IF it does, you have to start the process all over again.

II. Single Cultivatlon: Ovarlan Breathing, Ovarian and Vaginal Compression

Ovarian Breathing: The Ovarian Breathing exercise that follows will help you to open and utilize the channels of the Microcosmic Orbit, a process described briefly in Chapter 4 and in depth in the book *Awaken Healing, Energy Through the Tao*. In Ovarian Breathing you use your mind to draw the warm, Yang, vital egg energy up the spine to your head and to the third eye (located mid-eyebrow), down through the tongue, the heart, the solar plexus, finally to be stored in the navel. You will be drawing on the energy generated by the ovaries, eggs and hormones themselves. At first the process is slow, but later a simple thought will send delightful waves of energy up your back to your head.

Ovarian Compression: The second exercise, Ovarian Compression, trains you to have more control of the Chi Muscle to build up warm Ching energy in the ovaries and to move this energy safely upward.

Orgasmic Upward Draw: A third exercise, the Orgasmic Upward Draw, is the subject of Chapter 6. You will learn how to contend with the Ching energy when it is aroused, and how to extend the orgasm inward and upward. This is the most powerful way to energize and revitalize the organs, glands and brain. Like a wild mare, this energy is the most difficult to control. It is recommended that in the beginning you practice this exercise alone, using self-arousal, before attempting to tame your sexual energy at its most explosive time, i.e., with a lover during lovemaking.

A. Ovarian Breathing

1. Overview of the Exercise

The Ovarian Breathing exercise involves a gentle contraction of the Chi Muscle, as delicate as the closing petals of a flower and so minimal that any less would do nothing at all. The various postures will be described below, although it would be best to try this exercise standing up or sitting on the edge of a chair

You will be bringing your awareness to both ovaries. Then you will gather more energy in the area to be described as the “Ovarian Palace,” from which you will move the energy through the uterus to the perineum. From there you will guide it up your back to the brain, and then using your tongue as a switch, you will guide it down to your navel, where it can be stored.

We have noted that the energy of the ovaries is regarded as hot energy and, as such, can be stored in the heart center or navel center Some people store too much energy in the heart and find it causes heartburn and difficulty in breathing. This means there is excess energy that is not circulating sufficiently. Therefore, in the early stages of your practice, we advise you to store the sexual energy in the navel, and as your practice continues, store it in the heart to increase love, joy and compassion.

2. Postures

There are three postures in which to practice Ovarian Breathing: sitting, standing and lying.

A. Sitting

For simplicity and comfort, sit on a chair (Fig. 5.13) Sitting lends ease to a practice that favors relaxation and good concentration.

Fig. 5.13 *Sitting Posture*

Sit on the edge of a chair with both the legs and buttocks supporting your weight. Do not put all the weight on the sitting bones because in time this can create sciatic nerve pain. The vagina and perineum should not be constricted but should be covered with comfortable underwear or loose clothing to protect them from any draft. As a helpful technique used since olden times, a woman can place a hard, round object, perhaps a ball, in such a way that it presses directly on her vagina and clitoris during practice, or she can sit on the heel of one foot, pressing it tightly against the clitoris to help the Chi activate easily. If you practice the Microcosmic Orbit circulation and Iron Shirt Chi Kung, you should be well practiced at directing energy upward and can omit this step.

Raise the tongue to the roof of the mouth: this is essential in circulating the Chi and completing the loop between the front and back channels of the Microcosmic Orbit. (Fig. 5.14) The feet are firmly planted on the floor with the hands resting palms-down on the knees. The back should be quite straight at the waist, but slightly round at the shoulders and neck. This very minor forward curvature of the upper back tends to relax the chest, and helps the power flow through the neck, chest, and abdomen. Keep the chin slightly tucked in. Military posture, with shoulders thrown back and head held high, tends to lodge power in the upper body and prevent its circulating back down to lower centers.

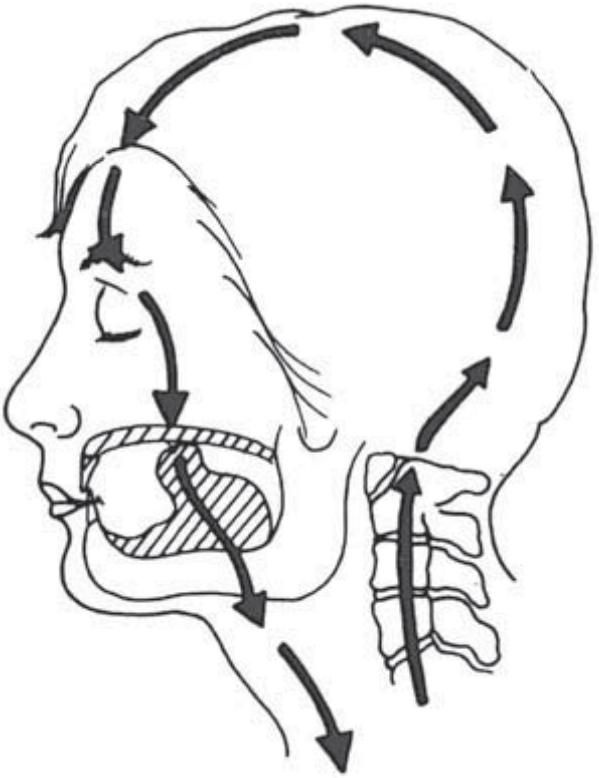


Fig. 5.14 *Tongue touches the palate so the energy can flow down.*

A variant of the sitting position is to sit cross-legged, either in the lotus position or American Indian style. We appreciate the esoteric virtues of the lotus position, but Chinese practice attributes serious disadvantages to this sitting position. Some monks suffered severe sciatic nerve pain or were crippled by lengthy meditation in the lotus position. Also, turning the soles of the feet away from the ground prevents you from directly drawing in through the feet the earth's Yin power. When you are very good at controlling and directing the energy, you can sit in any position and still direct the energy as you wish. Howeve, the human body is designed to absorb earth energy through the kidney (K-1 point) and other meridians in the feet and filter it before passing it up to the coccyx and brain. Some people can develop problems if they absorb too much "raw" earth Chi directly into their perineum and sacrum, as occurs in the lotus position. Eventually they become allergic to this undigested energy and experience numerous unpleasant reactions. Nevertheless, the lotus position may be used by those accustomed and devoted to it, as long as they are comfortable and can apply their whole attention to the exercise. Few cross-legged positions afford the relaxation of the perineum provided by sitting on the edge of a chair.

B. Standing

Another good position is standing. The above instructions on raising the tongue tip to the palate and maintaining correct posture apply equally to this position.

Standing is particularly favorable for Ovarian Breathing because the sacrum and pelvis can relax. Standing up straight in a relaxed manner encourages good posture. The hands are at the aides and the feet are shoulders' width apart. Discipline yourself to relax if you feel too tense, or the Chi power may stick in the heart region and make you irritable.

C. Lying

In the beginning, before you learn to control the energy, do not lie flat on your back when performing these exercises. In this position the chest sits higher than the abdomen and receives too much energy. Nor should you lie on the left side. Both of these positions unduly stress the heart. The proper lying position is on the right

side. A pillow placed beneath the head should raise it about three or four inches, so that the head sits squarely on the shoulders. The four fingers of the right hand are placed immediately in front of the right ear while the thumb sits behind the ear and folds it slightly forward to keep it open. The ear must stay open to permit air to flow through the Eustachian tube and keep the left and right ears' pressures balanced. This is important because you can create a lot of Chi pressure during this practice. The left hand rests on the outer left thigh. The right leg is straight: the left leg, which rests on the right, is slightly bent. (Fig. 5.15)

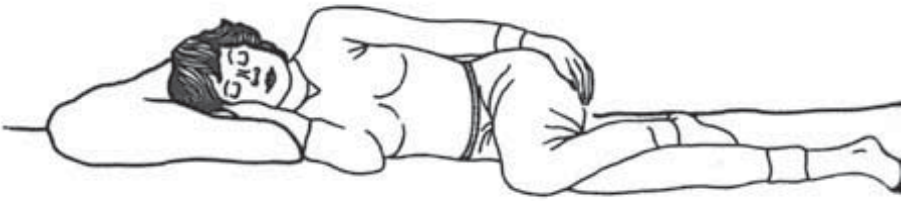


Fig. 5.15 *Best way to practice Ovarian Breathing lying down is on the right side of the body with a pillow beneath the head, the right leg extended, the left leg resting on the right thigh, and the right hand supporting the head.*

Lions often sleep in a similar position. Animals have a wise instinct since this position frees the spinal column from the pressure of gravity, allowing it to assume its natural curvature. Lying on the right side can relieve the spine from stress.

As mentioned previously, when you have mastered the energy well, you can lie on your back to practice, but make sure that the energy is not stuck in the chest and the heart. Do not lie on the left side.

3. Step-By-Step Guide

In this section we will explain each step in great detail. In Section 4 we guide you through the practice. Finally, in Section 5 we give a summary of the practice, to be used as a guideline only when you are more advanced.

Unless otherwise specifically indicated, all breathing is to be done through the nose. Nasal breathing affords better control of the air in haled. It filters and warms the air and supplies life-force of a well-balanced quality.

Sit erect on the edge of your chair with your feet flat on the floor approximately shoulders' width apart. Remember to wear loose pants or comfortable underwear to protect the vaginal opening from drafts and to avoid leakage of Chi. Do not practice naked in a cold room, or you will lose a lot of Chi.

Make sure you feel very relaxed. If you are tense, do some stretching exercises or take a walk first in order to disperse tension.

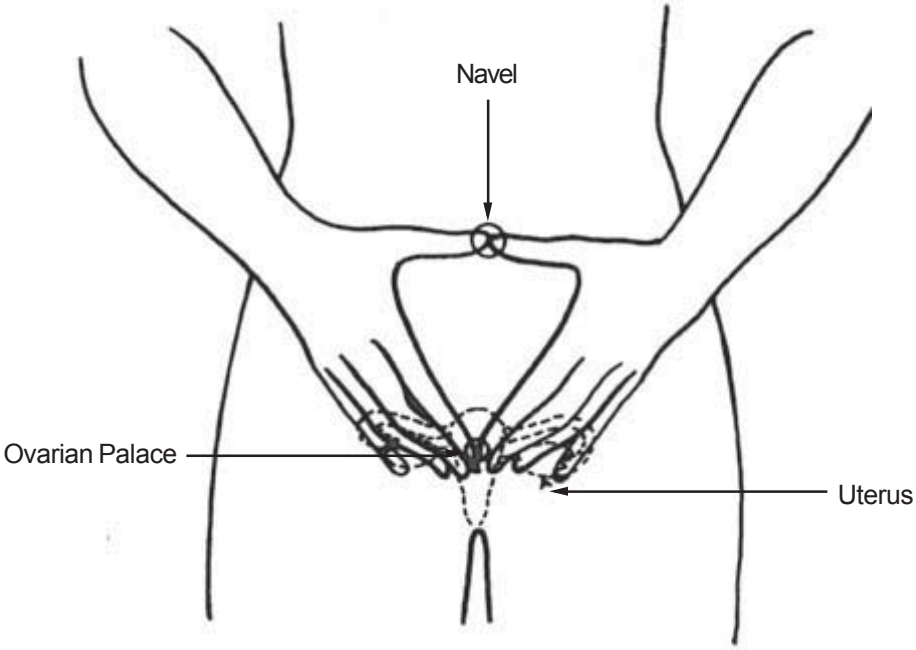


Fig. 5.16 *Locating the Ovaries and the Ovarian Palace*

A. Bringing Energy into the Ovarisn Palace and Down to the First Station: Perineum

(1) Bringing Energy into the Ovarian Palace

Begin the exercise by locating the Ovarian Palace. Place both thumbs on the navel and use your index fingers to form a triangle. The place where the index fingers touch is the Ovarian Palace. Spread out your little fingers evenly: underneath the points where they rest are the ovaries. (Fig. 5.16) As your little fingers rest on them, become aware of them. Rub the ovaries until you feel them warming. Concentrate in order to produce more energy from the ovaries and eggs. Simultaneously use your mind to control the P-C Muscle to close and open slightly the vagina as delicately as the petals of a flower: The energy may begin to manifest itself with such sensations as warmth, tightness, swelling. tingling, etc. Each person can react differently from the energy. When you start to feel something, inhale and bring the energy to the Ovarian Palace (where the index fingers touch). The gentle opening and closing of the vagina and the concentration of your mind gradually will enable you to collect and absorb the ovaries' energy into the Ovarian Palace.

(2) First Station: Perineum

Inhale a short sip of air only land inhale in this manner every time you are asked to inhale throughout this exercise). As you inhale, pull the ovaries' energy down from the Ovarian Palace to the perineum by contracting both the outer and inner lips of the vagina, pulling downward toward the perineum, and then contract and pull up the front of the anus (perineum). Remember that contraction of the vagina is a contraction of the PC (Pubococcygeal) Muscle, one part of a group of muscles we refer to as the Chi Muscle. This action initiates the contraction of the entire Chi Muscle group, which continues when the anus is contracted and pulled up. Since the anus belongs to the area known as the perineum, we can say that "to contract and pull up the anus" is "to contract and pull up the perineum." To avoid confusion from this point on in describe the contractions used in Ovarian Breathing, we will describing the contraction of the Chi Muscle as "to contract and pull up the perineum." You might feel the route the energy follows, i.e., traveling from the top of the uterus down into the uterus, through the cervical canal and vagina, and down to the perineum. The energy might

make a detour to the shaft and glans of the clitoris before arriving at the perineum. In any case, you should feel the energy move from the Ovarian Palace to the perineum, whether or not you experience the exact route it follows. Hold your breath, inhale in short sips, close the vagina tightly and retain the ovaries' energy at the front part of the perineum for a while. (Fig. 5.17)

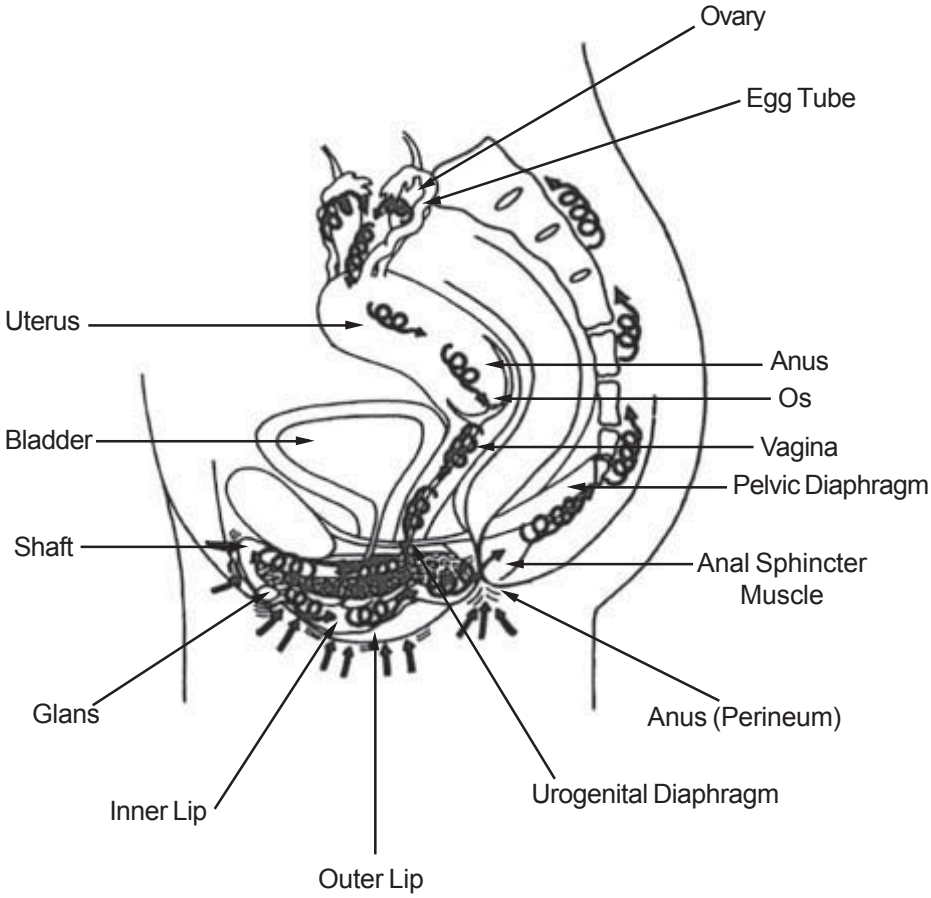


Fig. 5.17 *Ovarian Breathing*

Exhale. Now concentrate on that warm feeling and mentally guide it from your ovaries to the front part of your perineum, letting the energy flow to the perineum via the uterus, down through the cervical canal and along the back wall of the vagina. Feel the flow as it

travels the few inches to the perineum, an action induced by setting your mind at the perineum to hold the energy there. It is important to learn to maintain your attention at the perineum, because if you release it, the warm sexual energy will leak out. Be aware of the energy now flowing from the Ovarian Palace to the perineum. With each inhalation and exhalation counting as one, repeat the process nine times per session. Each time return to the ovaries, and while there inhale and exhale several times to build up more energy before you begin the process again.

(3) Retention of Sexual Energy at the Perineum Point

Think of drinking a full glass of water through a straw. You cannot draw all the water in one sip, you have to break the flow in order to breathe, and if you do not hold or retain the water that you already have in the straw, the water will flow out. In order to drink again you will have to begin drawing through the straw all over again. However if you place your finger over the top of the straw while you breathe short sips of air you can hold the water inside it. Similarly, the retention of the Ching Chi at the perineum is very important, for if you release your attention, the warm energy will drop down to the sexual organs and leak out of the vagina. By practicing, you will learn to use the power of the mind to hold the energy there. Practice for several days or until you are successful.

(4) Returning to the Ovarian Palace

As you strive to reach each energy transformation point in Ovarian Breathing, you must begin each time by returning to the Ovarian Palace to collect the ovaries' energy. Practice Ovarian Breathing by opening and closing the vagina slightly in order to collect the energy in the Ovarian Palace. Once you feel that enough ovaries' energy has been collected, repeat the process of bringing energy to the perineum: each time inhale a little sip of air and close the vagina with minimal movement of the Chi Muscle. At the same time that you close the vagina, pull slightly downward toward the perineum, and then contract and pull up the front part of the perineum. Hold your breath, inhale in short sips, close the vagina tightly and use your mind to create an awareness of the perineum point, thereby drawing the ovaries' energy to this point. Retain the energy at the front part of the perineum. Upon exhalation rest for a while, mentally guiding and feeling the Ching Chi as it travels from

the Ovarian palace down to the vagina, clitoris and perineum, while maintaining your awareness of the perineum point and continuing to hold energy there.

In the Taoist practice sexual energy is the primary energy. If you only exercise the muscles and have no knowledge about life-force and sexual energy, then the benefits are less. Practice to this point for one to two weeks, or until you can definitely feel the energy at the perineum, the ovaries and the Ovarian Palace. There will be a sensation of energy traveling down to the vagina. and then there will be a strong feeling as the energy travels gradually to the clitoris.

Remember: unless specifically indicated otherwise, all breathing is to be done through the nose since nasal breathing affords better control of the air inhaled. Also, all inhalations are short sips of air:

The whole body must relax. Allow all tension to flow out of you as if you were in meditation. Use the mind alone to raise and lower the sexual energy. With practice you will learn to identify the hot Ching Chi stored in the ovaries' area. Always start your breathing and collecting in the ovaries first, until you get in touch with the energy

B. Moving the energy up the Spine through the Second Station: Sacrum, First Energy Transformation Point

Along with the ability to hold sexual energy; the sacrum also helps transform it into the first stage of life-force energy.

(1) Guiding Energy to the Sacrum

Guide the ovaries' warm energy down from the Ovarian Palace to the perineum and up to the sacrum by first inhaling a short sip of air slightly contracting and closing the vagina's outer and inner lips, pulling downward toward the perineum, and then contracting and pulling up the front part of the perineum. Pause for a while, holding your breath, inhale in short sips, close the vagina tightly and retain the ovaries' energy at the front part of the perineum. Be aware of the Ching Chi as it flows to this point. Exhale and return to the ovaries, maintaining a part of your awareness at the perineum to retain the energy that you have brought there. Practice Ovarian Breathing by opening and closing the vagina slightly and collect the energy in the Ovarian Palace. Once you feel that enough ovaries' energy has been collected, inhale and close the vagina, pulling

downward toward the perineum, and then contract and pull the front part of the perineum upward to bring energy to this area. Rest briefly and be aware of the energy that travels from the ovaries down to the vagina, clitoris and perineum. Inhale slightly. Now pull up the middle part of the perineum, and at the same time pull up the back part of the perineum toward the coccyx at the very bottom of your spine.

(2) Activating the Sacral Pump

Slightly arch your lower back outward thereby tilting the sacrum downward to bring the energy to this point. As you pull the Ovarian energy up the front, middle and back parts of the perineum to the

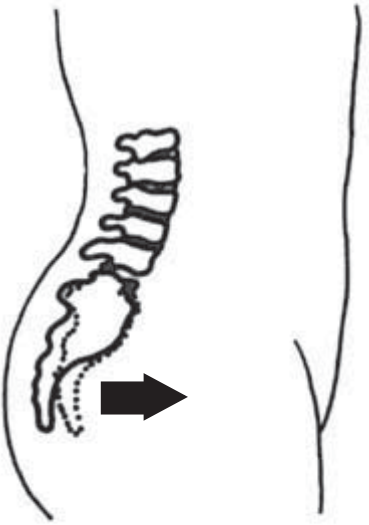


Fig. 5.18 *Activating the Sacral Pump involves tilting the sacrum down without moving the hip bone.*

coccyx and then to the sacrum, hold the sacrum down to help activate the Sacral Pump (Fig. 5.18), which action will be further accentuated if you gently tighten the back of your neck and skull bones. In the beginning use a wall as a guide by pushing the sacrum against the wall, thereby exerting force on it. Hold the energy at the sacrum for a while, then exhale, but continue to focus your attention on this point.

(3) Opening the Sacral Hiatus

The hiatus opening of the sacrum is an indentation in the bone of the sacrum located a little up from the tip of your spine, and is the place through which, once opened, you will draw your warm, ovarian energy into the spine, (Fig. 5.19) It is usually a little difficult to work because ovarian energy is denser than Chi and has to be pumped through. Some people experience pain, a tingling sensation, or "pins and needles" when this energy enters the hiatus. If this happens to you, do not be upset. You can help pass the energy through the hiatus if you are having trouble by gently massaging the area with a silk cloth from time to time.

(4) Resting to Feel the Energy move Unassisted

Now let your sacrum and neck relax back to their normal positions. As they relax you will feel the energy move by itself, assisted by the activation of both the Sacral and Cranial Pumps. At the same time practice Ovarian Breathing. Bring the energy up to the sacrum again and hold it there until you can feel the hiatus at the sacrum open and the energy gradually move up. You will actually feel the warm energy move up a little at a time. Practice nine times, then rest. The resting period is very important. Many times while you are resting the energy will rise up through the point you had been focusing on. If you can, still your mind and use it to guide the energy along the pathway you have been working on for a while, and then rest your mind and let the energy move by itself: the energy will automatically flow through this pathway

(5) Exercise to help open the Sacrum

If you have trouble feeling the energy at the sacrum, the following exercise can be helpful in opening the sacrum. Try rocking your sacrum back and forth and then hold the hips stationary moving the sacrum only. The sacrum and the hips are three separate pieces of bone which eventually become fused because we do not exercise them. (Fig. 5.20) Use both hands to hold the hips and try to rock the sacrum. In the beginning it is difficult to do, but after a while you will gradually separate the hips from the sacrum. You can also ask a friend to hold your sacrum with one hand while his other hand is on your hip in order to let you know if it is the hip or the sacrum that you are moving. After this exercise hold still and observe the effect of the pumping.

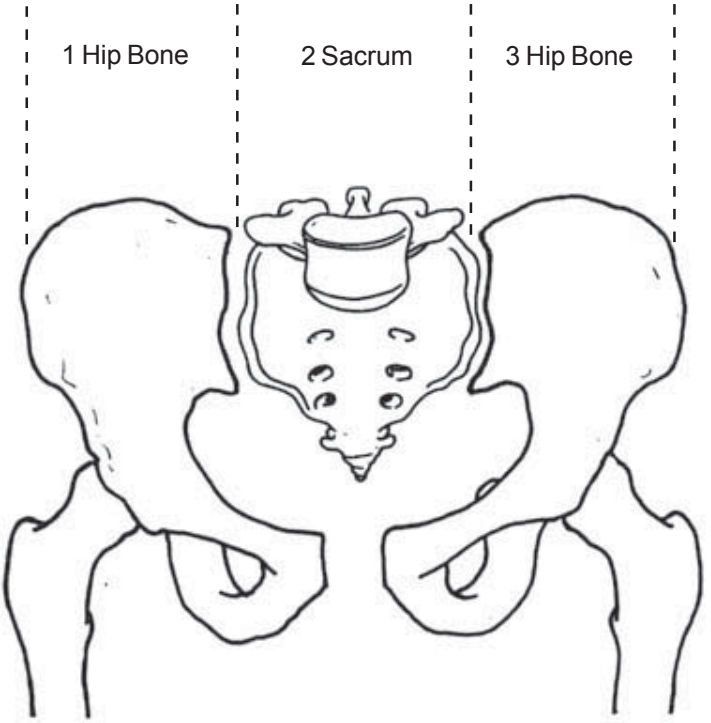


Fig. 5.20 *Sacrum and the hip bones are three separate pieces of bone which, through lack of exercise, become fused.*

(6) Sacrum assists in transforming Raw Sexual Energy into Life-Force Energy.

The Taoist masters discovered that the sacrum has the ability to transform sexual energy into a life-force energy that is more readily accepted by the organs and glands. Therefore, the practitioner must be aware of the state of the energy entering the middle part of the body. Some people practice by pulling up only the middle part of the perineum, causing the raw ovaries' energy to shoot up the middle part of the body and become stuck in the organs and glands. Unaccustomed to handling this kind of raw sexual energy, the organs and glands will suffer from such disorders as indigestion, overheating (especially the liver), pain in the kidneys and back, and worst of all, heart congestion. These and other symptoms have come to be known as the "Kundalini Syndrome," and they occur because the person is not open enough to channel

this raw sexual energy before it enters the vital organs. This phenomenon is mentioned in the books entitled *Kwantida-Psychotic or Transcendental*, by Lee Sanella, M.D., and *Stalking the Wild Pendulum*, by Itzhak Bentov. These books contain examples of many people who suffer from the inability to control the rising energy. The energy they hold in their hearts or in their heads is either too raw or too hot for those organs, with parts of the organs having an allergic reaction to that energy. However the symptoms disappeared once they learned about and felt the connection of the tongue to the roof of the mouth during the Microcosmic Orbit meditation. This connection allows the energy flowing up the spine through the major stations to transform into life-force energy and flow down to the navel. Many never know how to escape their problem of too much raw sexual energy rising up because they never learn how to bring the energy to the proper channels to circulate it back down.

Once you have practiced Ovarian Breathing and have felt the sexual energy circulate and become transformed, your organs will begin to adapt to and withstand the ovaries raw sexual energy. This energy can then be directly transformed and refuted whenever the body requires it without problems arising.

C. Third Station: T-11, Sexual- Energy Transformation Point

If you have managed to bring the energy up through the sacrum, spend the next week drawing the ovaries' energy to T-11 (the eleventh thoracic vertebra) in your mid-back opposite your solar plexus. T-11 also has the ability to transform the sexual energy into life-force energy.

(1) Collecting Energy in the Ovarian Palace

In the same manner as above, start with Ovarian Breathing, collecting the ovaries' energy in the Ovarian Palace by opening and closing the vagina with a minimal movement of the Chi Muscle. Inhale with a short sip, close the vagina slightly, pulling the energy downward toward the perineum. Then contract and pull up the front part of the perineum and pause for a while, holding your breath and retaining the energy at this point. Be aware of the Ching Chi that has been brought there. Inhale in short sips, close the vagina tightly and concentrate on retaining the ovaries' energy at the front part of the perineum. Exhale and return to the ovaries, but maintain a part

of your awareness at the perineum to retain the energy that you have brought there. Continue to practice Ovarian Breathing by opening and closing the vagina slightly and collecting the energy in the Ovarian Palace.

(2) Drawing Energy to T-11

Once you feel that enough ovaries' energy has been collected, inhale using a short sip and close the vagina by pulling downward, thereby pulling the energy down to the perineum, and then contract and pull the front part of the perineum upward to bring energy to this area. Rest for a while and be aware of the energy that travels from the ovaries down to the vagina, clitoris and perineum. Inhale a short sip and pull up the middle and back part of the perineum toward the coccyx to bring the energy to the sacrum. Slightly tilt the sacrum outward as if you were pushing the sacrum to the wall. Pause for a while and feel the Sacral Pump activate. Inhale a short sip again without exhaling, and tilt your spine outward against the imaginary wall to straighten T-11. This will create an upward pumping action which will pull the ovaries' energy up to T-11. (Fig. 5-21) Retain the energy at this point until the area feels full and until you feel the energy continue to open T-n and move up by itself. When you feel uncomfortable exhale and regulate your breath.

(3) Flexing the T-11 Point assists in activating the Sacral and Cranial Pumps and the Adrenal Minipump.

As previously noted, Ovarian energy is denser than Chi. You will have to accommodate it by flexing the part of your back housing T-11 in and out, thereby straightening the spine at this point and loosening it for freer passage of the warm energy. Then allow your sacrum, T-11 and neck to relax back to their normal positions. This action will help to activate both the Sacral and Cranial Pumps, as well as another mini pump located at the adrenal glands, a little at a time. If you have trouble feeling this, return again to the Ovarian Palace and repeat the process. Practice nine times, then exhale and relax every part of the body. Concentrate on T-11 and feel the energy flow up to this point.

In Taoist practice we regard T-11 as the adrenal glands' energy center The adrenal glands sit atop your kidneys end can act as a mini pump. When you arch the T-11 point you create a vacuum (or mini pump) in this area to push the energy up higher. The sacrum,

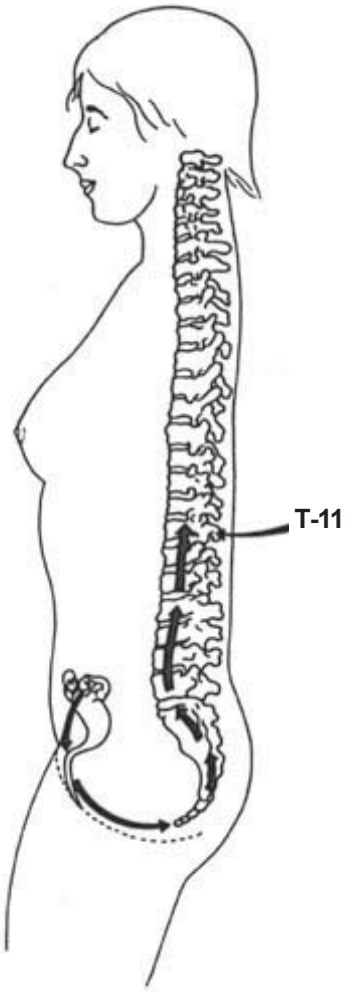


Fig. 5.21 *Guiding Energy up to T-11.*

T-11, C-7 and Jade Pillow in Taoism all are regarded as places that have the ability to transform sexual energy into life-force energy. In the T-11 area the Door of Life (the Ming Men, or mid-point of the spine) is also located. The Ming Men does not have this property, but in the Microcosmic Orbit it is regarded as a very important safety point, as well as the strengthening point of the kidneys.

D. Fourth Station: C-7, Sexual Energy Transformation Point

Your next stopping point is at cervical-7, or C-7, located at the point of your spine at the base of your neck. You can feel it as the vertebra that sticks out when you bend your head down. This point controls the energy provided to the hands and neck, and is the connecting point providing power to the scapulae and spinal cord. This point also has the ability to transform sexual energy into life-force energy.

(1) Collecting Energy in the Ovarian Palace

Practice in the same manner described above. Collect the ovaries' energy at the Ovarian Palace. Inhale with a short sip, close the vagina slightly, pulling the energy downward toward the perineum. Then contract and pull up the front part of the perineum and pause for a while, holding your breath and retaining the energy at this point. Be aware of the Ching Chi that has been brought there. Inhale in short sips, close the vagina tightly and concentrate on retaining the ovaries' energy at the front part of the perineum. Exhale and return to the ovaries, but maintain a part of your awareness at the perineum to retain the energy that you have brought there. Continue to practice Ovarian Breathing by opening and closing the vagina slightly and collecting the energy in the Ovarian Palace.

(2) Drawing Energy to C-7

Once you feel that enough ovaries' energy has been collected, inhale a short sip of air and close the vagina, pulling the ovaries' energy downward toward the perineum, and then pull the front part of the perineum upward to bring energy to this area. Rest for a while and be aware of the energy that travels from the ovaries downto the vagina, clitoris and perineum. Inhale a short sip and contact the middle and back part of the perineum, and then pull the energy up to the sacrum, T-11 and C-7. When you reach C-7, push slightly from the sternum, to the back, and feel the push of C-7 and both shoulders as they activate to draw the energy up. (Fig. 5.22) This action will activate the thymus gland to increase the upward pulling power. Hold the energy at this point as comfortably as you can. Now during practice you will find that gradually you are able to hold your breath longer and increase your capacity to intake

air. Exhale, and then let your sacrum, T-11 and neck relax, returning to their normal positions. Concentrate on C-7. This action will help to activate all three pumps (Sacral, Adrenal and Cranial) a little at a time. If you have trouble feeling this action, return to the Ovarian Palace and repeat the process. Practice nine times. Remember that you must return to the source of energy in order to bring it to the higher center

Fig. 5.22 *Guiding Energy up to C-7.*

E. Fifth Station: Jade Pillow, Mini-Storage and Transformation Point for Sexual Energy

Your next stopping place is your Jade Pillow. This is located at the back of your head between cervical-1, or C-1, and the base of the skull. This point also can serve as a small storage and transformation point for sexual energy.

(1) Collecting Energy in the Ovarian Palace

Practice in the same manner as previously described. Collect the ovaries' energy at the Ovarian Palace. Close the vagina with a minimal movement of the Chi Muscle, pulling down the ovaries' energy to the perineum. Feel the sensation as the vagina closes, and then pull up the front part of the perineum to bring the ovaries' energy to this point. Hold your breath and retain the energy at the front part of the perineum. Be aware of the Ching Chi that has been brought there. Exhale and return to the ovaries, but maintain an awareness of the perineum to retain the energy that you have brought there. Practice Ovarian Breathing by opening and closing the vagina slightly in order to collect the energy in the Ovarian Palace.

(2) Drawing Energy to the Jade Pillow

Once you feel that enough ovaries' energy has been collected, inhale a short sip and close the vagina, pulling the ovaries' energy downward to the perineum, and then contract and pull the front part of the perineum upward to bring energy to this area. Rest for a while and be aware of the energy that travels from the ovaries down to the vagina, clitoris and perineum. Inhale another short sip and bring the energy up to the sacrum, T-11, and C-7, and then slightly push the chin down and pull it back, moving it toward the back of the neck at the base of the skull. (Fig. 5.23) Feel this push create a force that activates the Cranial Pump, which will help to pump the dense ovaries' energy. Hold the energy at this point for a while, feeling it being stored and transformed. Exhale, then permit your sacrum, T-11 and neck to relax in their normal positions. This action will help to activate the Adrenal, Sacral and Cranial Pumps again. Retain the energy at the base of the skull. Repeat this entire process nine times.

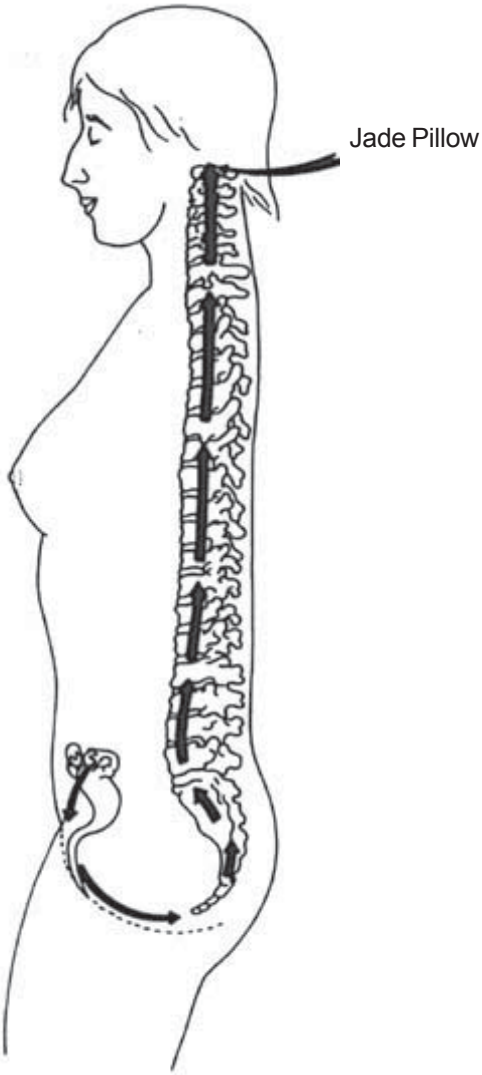


Fig. 5.23 *Guiding Energy up to the Jade Pillow.*

F. Sixth Station: Crown Point, Larger Storage Point For Sexual Energy

Your next stopping point is called the Pai-Hui, located at the midpoint or crown, of your head and is the center housing the pineal gland. This point is a larger storage point.

(1) Collecting Energy in the Ovarian Palace

Practice in the same manner: only this time you will fill the "straw" to the top. Collect the ovaries' energy at the Ovarian Palace. Close the vagina with a minimal movement of the Chi Muscle, pulling the ovaries' energy down to the perineum, and feeling the sensation as the vagina closes: contract and pull down the front part of the perineum to bring the energy there. Hold your breath and retain the energy at the perineum. Be aware of the Ching Chi that has been brought to this place. Exhale and return to the ovaries, but maintain an awareness at the perineum to retain the energy that you have brought there. Practice Ovarian Breathing by opening and closing the vagina slightly in order to collect the energy in the Ovarian Palace.

(2) Drawing Energy to the Crown Point

Once you feel that enough ovaries' energy has been collected, inhale a short sip and close the vagina by pulling downward to bring the ovaries' energy to the perineum, and then contract and pull up the front part of the perineum to bring energy to this area. Rest for a while and be aware of the energy that travels from the ovaries down to the vagina, clitoris and perineum. Inhale and tilt the sacrum and T-11 to the back in order to straighten the spinal curve out a little bit and thereby help activate the lower Sacral Pump. At the same time push the sternum in toward the back, tuck your chin in a little, and squeeze the back of your skull: this will activate the upper Cranial Pump. Continue pulling up to the point at the top, the center of the head. (Fig. 5.24) As you continue to inhale, bring the energy down to the perineum, up to the sacrum, T-11, C-7, lade Pillow, and then turn your eyes and other senses upward to help guide the energy up to the point of the Pai-Hui, or crown point, and the pineal gland.

(3) Resting and using your mind to guide energy to the Brain

Once the energy finally has completed its course up into your head, use your eyes and other senses to help retain it in the brain, holding it at the top of your brain as comfortably as possible. Exhale, then let your sacrum, T-11 and neck relax, returning to their normal positions. This will help to activate the three pumps: Sacral, Adrenal and Cranial. Use your mind to guide the energy station-to-station up the spine to the top of the head. Fix your attention and eyes at

the crow·n point. Remember it is the resting, period that is the strongest in guiding the energy to the brain. Repeat this process nine times.

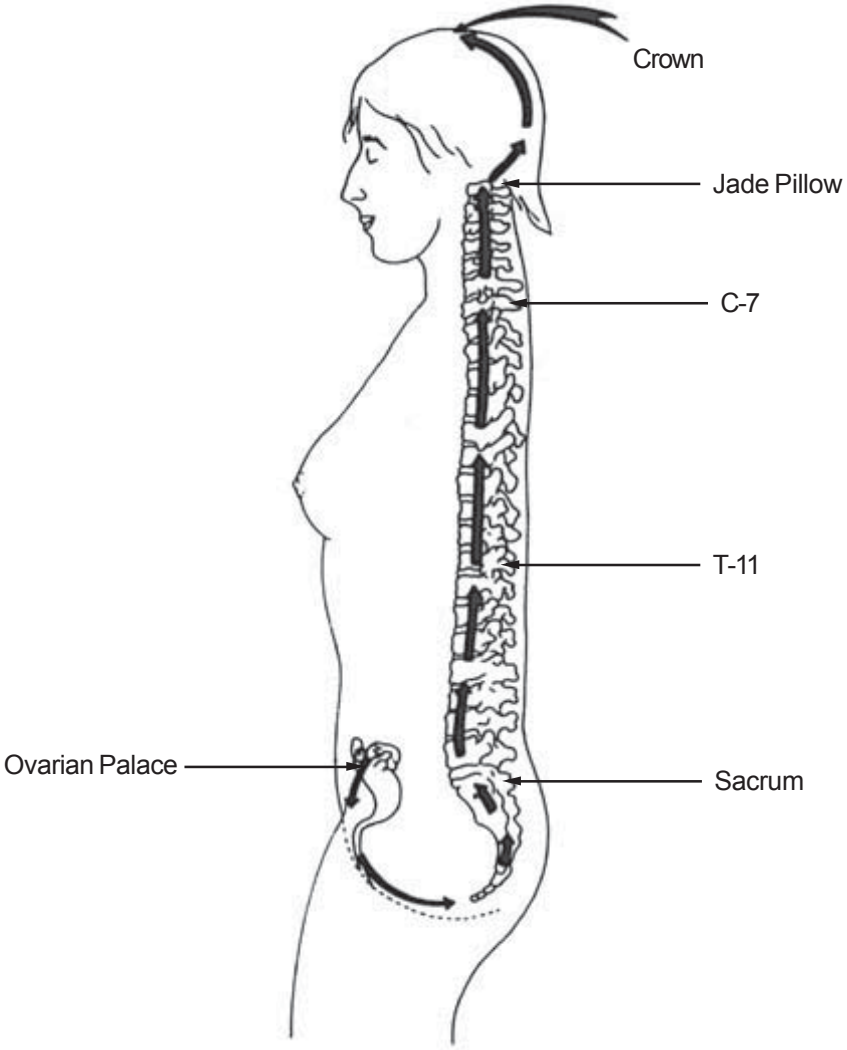


Fig. 5.24 *Guiding Energy up to the Crown Point.*

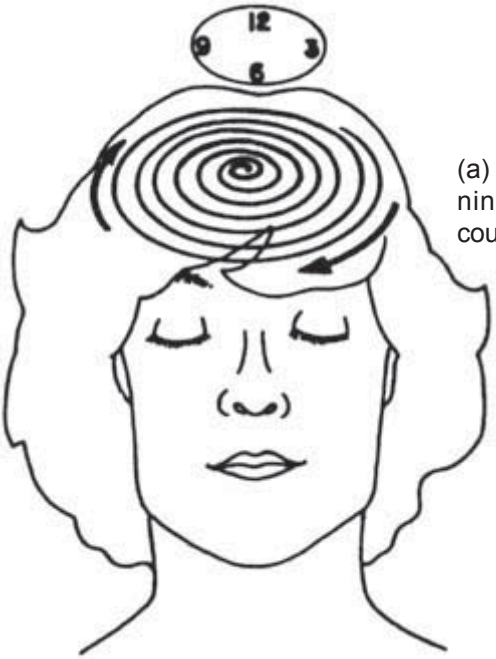
G. Circulating the Energy in the Brain

(I) Filling the Brain Cavity with Creative Sexual Enengy

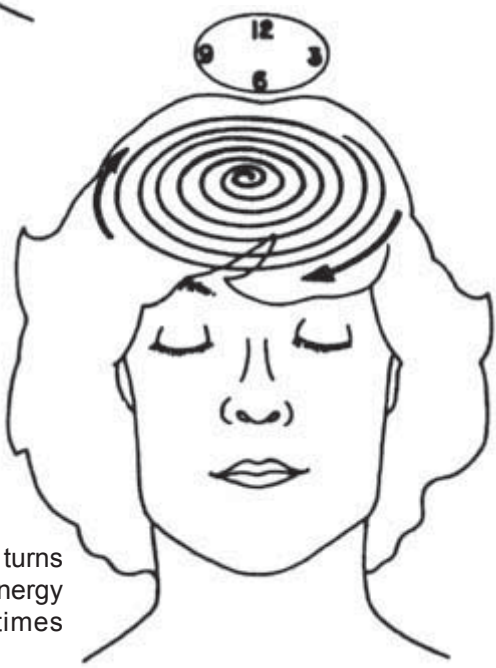
When you have finished practicing nine times, and can feel the ovaries' sexual energy fill the brain, start to circulate the energy in the brain for nine, eighteen, or thirty-six counterclockwise revolutions. There is a very distinct feeling of spinning outward. (Fig. 5.25(a)) When this circulation is completed, turn the energy back into the center of the brain for nine, eighteen, or thirty-six clockwise revolutions. (Fig. 5.25(b)) This should feel pleasant and energetic and will help to balance the left and right sides of the brain, vitalizing it to increase memory and think more clearly, and it will introduce you to the beginning stages of the ability to control sexual energy and emotional frustrations. As people age and use up much of their Chi, they gradually drain themselves of brain energy and spinal fluids, drying them up and leaving a cavity. Ovarian Breathing transports creative sexual energy to refill this cavity and thereby revitalize the brain. Taoists regard sexual energy as similar to brain energy.

(2) Touching the Tongue to the Palate to Permit the Energy to flow down to the Navel for Storage.

Be sure the tongue is touching the palate (behind the front teeth will suffice), so that the warm ovaries' energy can flow down to the third eye, to the inside of your nose, and through the tongue from which it is now able to travel down the throat to the heart center.



(a) Circulate the energy in the brain nine, eighteen or thirty-six times counterclockwise (Spinning outward).



(b) When the counterclockwise turns are completed, circulate the energy nine, eighteen or thirty-six times clockwise (Spinning inward).

Fig. 5.25 *Circulating Energy in the Crown*

(Fig. 5-26) Retain the energy in the heart center for a while, filling it with energy until it feels open: enjoy the feeling of love, joy and peace: then bring it down to the solar plexus and to the navel. Collect the sexual energy at the navel where it can be safety stored.

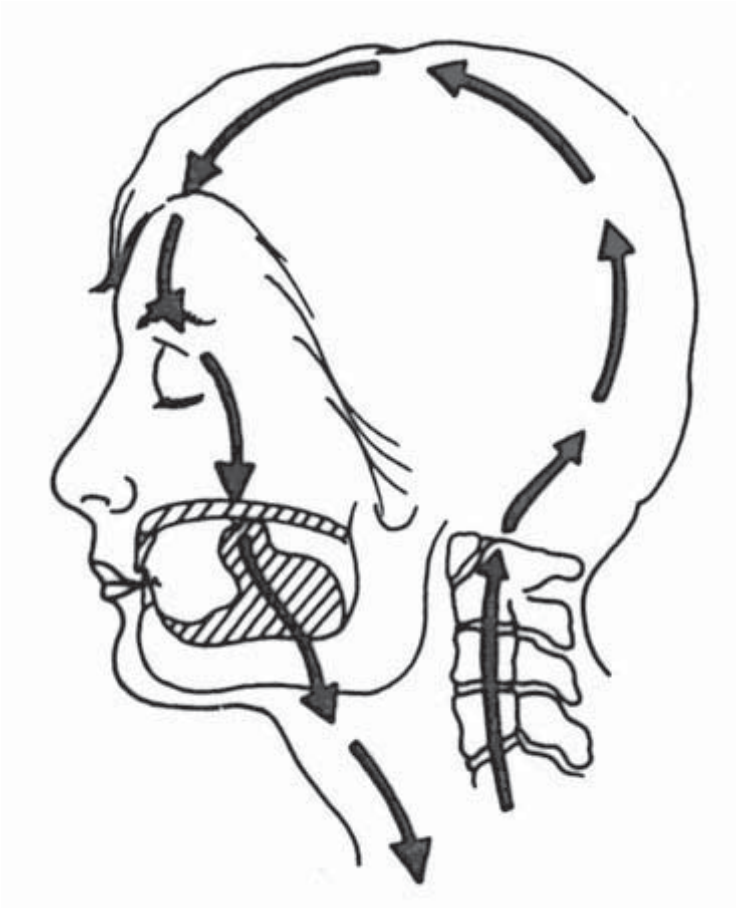


Fig. 5.26 *Tongue touches the palate so the energy can flow down.*

H. Collecting the Ovaries' Sexual Energy at the Navel

It is very important to end by storing the energy in the navel. Most ill effects of the practice are caused by an excess of energy in the head or the heart. The navel can safely handle the increased energy generated by the ovaries.

(1) Spiraling the Energy around your Navel Center

To collect the ovaries' energy concentrate on your navel area, which is about one and a half inches inside your body. Use your mind, eyes and other senses to mentally move the energy in and out, spiraling it around your navel 36 times. Do not spiral above the thoracic diaphragm or below the pubic bone. Start by spiraling counterclockwise outward. (Fig. 5.27(a)) Then reverse the direction of the spiral and bring it back to the navel, circling it clockwise 24 times. (Fig. 5.27(b)) Use your finger as a guide the first few times. The energy is now safely stored in your navel, available to you whenever and wherever your body needs it.

(a) Collect the energy in the navel, circling it 36 times counterclockwise, and

Fig. 5.27 *Collecting Smiling Energy in the Navel*

(b) 24 times clockwise

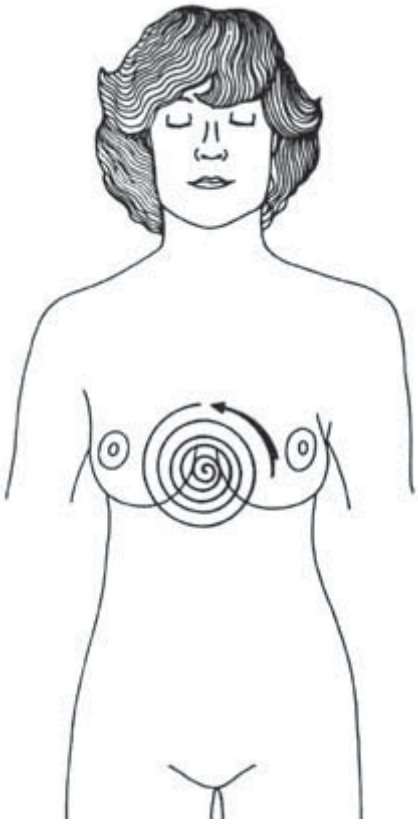
Fig. 5.27 *Collecting Smiling Energy in the Navel*

I. Collecting Energy in the Heart

The energy can also be stored in the heart. If you are a Yang body type (meaning your energy runs hotter than most people, perhaps manifesting in a hot temper), you should not start by storing the sexual energy in the heart center. Instead, begin by storing it in the navel. Once the navel is filled, this is an indication that the channels are open enough to begin to store energy in the heart without problems.

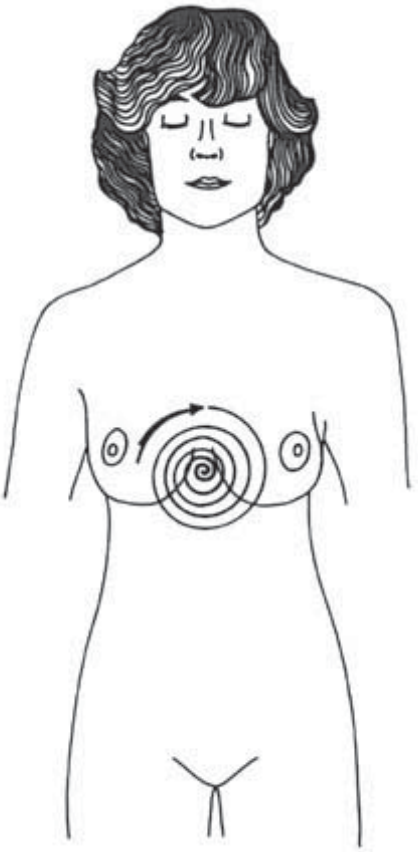
The heart center is a powerhouse for a woman. It is the seat of love, joy, happiness, and is the center of rejuvenation since it is the site of the thymus gland. With this center open a woman will experience these positive emotions along with an energetic

approach toward herself, and she will be provided with abundant healing energy to heal herself and others. If the heart center is opened before she is ready, the Microcosmic Orbit will not be complete and the energy will not circulate property. The sexual energy can adhere to the heart, and the heat generated and congested there can cause great problems such as uneasiness, shortness of breath, or pain in the chest. If these problems happen to you, practice the Healing Sound of the heart as detailed in the book *Taoist Ways to Transform Stress into Vitality*, lightly tap the chest and the heart, and use your hands to brush your chest down· ward until you belch to release the trapped energy.



(a) To collect the energy in the heart,
Spiral around the heart collection point 36
times counterclockwise, and

Fig. 5.28 *Collecting Smiling Energy in the Heart*



(b) 24 times clockwise.

Fig. 5.28 *Collecting Smiling Energy in the Heart*

(1) Spiraiing the Energy around your Heart Center

To collect the ovaries' energy in the heart, concentrate on your heart center located up one inch from the lower tip of the sternum, and about one and a half inches inside your body. It is approximately three inches in dimension. Use your mind, eyes and other senses to mentally move the energy in and out, spiraling around your heart center 36 times. (Fig. 5.28(a)) Do not spiral above the diaphragm or below the pubic bone. Start by spiraling counterclockwise outward. Then reverse the direction of the spiral, returning the energy to the heart center circling it 24 times. (Fig. 5.28(b)) Use your finger

as a guide for the first few times. The energy is now safely stored in your heart center available whenever and wherever your body needs it.

J. Bringing Energy to the Brain With One Action

In the beginning travel from station to station, until you feel that the back channel, or Governor Channel, is more open. Once you have mastered the process you can practice the Ovarian Breathing exercise and the energy will travel up to the brain in one sweet drawing-up of the "straw," using a single, clean inhalation and one contraction of the vagina. Exhale, then inhale and bring the energy up again. Practice this a few times, but since the ovarian energy is warm, be sure to put your tongue up to your palate and bring the energy down to the navel. Eventually all you will need is your concentration on both your ovaries and the crown of your head to mentally move the sexual energy from the ovaries all the way up to the brain in one step.

K. Effects of Ovarian Energy

This subtle exercise puts you in touch with your Ovarian energy. Women report that they feel the energy moving up their spine: some say it feels wide, thick like honey, and slow. Most women who perceive the temperature at all say it feels warm. Some women experience it as cool at first, but after practicing for a while, notice it changes to warm. Some experience sensations in their genitals or on their thighs, usually describing them as warm to hot. Many women describe the energy as warmer wider heavier or thicker than the organ Chi energy circulated in the Microcosmic Orbit. This is because the Ovarian energy is heavier and denser:

It is not unusual that the energy feels cold when there is a lot of healing going on, such as in women who have menstrual problems. The sensations can vary over time. What is important to know is that if the energy feels warm, it must be circulated and not left up in the head.

One session of Ovarian Breathing should take about ten minutes. When completed four to seven times a week, women have reported noticeable changes in their menstrual cycles, such as less bleeding, leas cramping, and a reduction in breast pain. With continued practice, menstruation ceases. The energy conserved in such a manner becomes part of the vital energy of the body increasing the

available energy for transformation into a higher form. Also, there is historical evidence that the women who practice Ovarian Kung Fu, when they decide to have children, will produce very healthy well-balanced children.

Some perform Ovarian Breathing and then proceed directly to the Microcosmic Orbit Meditation. The practice can be done any time and virtually anywhere, once you have achieved the direct pathway from the ovaries to the brain. When you find yourself with unstructured time, e.g., waiting in line, commuting, at your desk, looking at television, in bed, etc., carry out several series of contractions. as many as you choose to fill the time available. The main consideration is that the back be properly straight, the chest relaxed, and the vagina protected from the breeze. You must also remember to touch your tongue to your palate after you practice three or four times.

Take your time to really feel the warmth when you practice. Do not rush it, and always maintain the action of the pumps as you breathe in and out. Use a more mental than physical pull when you do the exercise. Let the warm feeling be your guide. Always remember to bring the energy down to the navel after a few breaths, since the navel is roomy and a safe place to store this warm vital energy.

It is highly desirable to use Ovarian Breathing to tone the pelvic diaphragm. The whole lower abdomen is deeply massaged each time the pelvic diaphragm flexes. Life-force flows into the region through periodic waves of breath which stimulate the glands and vital organs.

Ovarian Breathing has tremendous implications for women's control over their reproductive systems. There is not enough evidence to conclude that women can control their fertility through this method. History records, however that when a woman practices the Orgasmic Upward Draw, she can control her cervix and urethra very well, squeezing the urethra (before the cervix) tightly so a man's sperm cannot enter the cervix to join with her egg.

There is too little evidence to come to any conclusions about the effectiveness or reversibility of this method when used for birth control. However some women are experimenting with this method, trusting that it will be reversible just by stopping the practice for a couple of months. These women feel justified in using themselves

as their own laboratories, since the method is gentle and appears to be under control. So many women, out of desperation to control their reproductive systems, have already accepted the wholesale experimentation of dangerous birth control methods, by supposedly trustworthy institutions, such as IUDs, DES, morning-after pills, sequential birth control pills, and forced sterilization.

4. Steps to Practice

The following is a step-by-step guide through the practice.

a. Sit erect on the edge of your chair with your feet flat on the floor about shoulders' width apart. Make sure you feel very relaxed. If you are tense, do some stretching exercises, practice the Inner Smile to the tense part, or take a walk to disperse tension.

b. Find the Ovarian Palace by placing both thumbs at the navel and forming a triangle with your index fingers. Spread your little fingers: the place where they come to rest is the site of your ovaries. Become aware of them. Rub the ovaries until they become warm. Concentrate to produce more energy from the ovaries and eggs. Use your mind and very little pressure on the P-C Muscle to close and open the vagina. When you feel enough energy has been generated, inhale a short sip of air, bringing the energy to the Ovarian Palace.

c. Inhale another sip of air and create a downward pulling action of the ovaries' energy to the perineum by contracting the outer and inner lips of the vagina. Then contract and pull up the front part of the perineum so that the energy will travel there. Maintain an awareness of the front part of the perineum for a while.

d. Exhale and breathe normally Rest and guide the warm feeling from your ovaries to your perineum, letting the energy flow to the perineum via the uterus, down through the cervical canal and along the back wall of the vagina. At the same time feel it flow the few inches to the perineum, an action induced by putting your mind at the perineum and maintaining your attention there. Inhale and exhale several times from the ovaries to build up more energy. The retention of the ovaries' sexual energy (Ching Chi) at the perineum is very important, for if you release your attention, the warm energy will leak out.

e. Start at the Ovarian Palace and use Ovarian Breathing, inhaling and exhaling until you feel that the energy is ready. Inhaling in short sips, draw the warm energy from your ovaries to the perineum,

and then by pulling up the middle and back of the perineum, draw the energy up to your coccyx, located at the very bottom end of your spine. The sacral hiatus, an area made mostly of bone and located a little up from the tip of your spine at the sacrum, is the opening through which the energy must pass.

Once you have pulled the warm energy of the ovaries down to the perineum, contracted the front of the perineum, and then pulled up the middle and back part of the perineum, follow by tilting the sacrum, slightly arching your lower back outward and pushing the bottom of your sacrum as if you were standing with your back against and wall and flattening against it. Then tilt the sacrum downward and hold it in this position in order to activate the Sacral Pump, which will be further accentuated if you gently tuck in your chin and straighten the back of your neck and skull. Hold the energy at the sacrum for a while, then exhale but continue to maintain your attention at the sacrum. Repeat the process nine times.

f. Once you have managed to bring the energy up through your coccyx and sacral hiatus, spend the next week drawing the warm energy to the eleventh thoracic vertebra (T-11) in your mid-back opposite the solar plexus. Practice in the same manner, inhaling short sips of air while pulling and guiding the energy from the perineum up your spine to the sacrum, and then to T-11. Pull up and retain the energy at T-11, tilt to the back, and feel the point fill with energy and continue to open as the energy moves up by itself.

T-11 is the energy center for the adrenal glands, which sit on top of your kidneys. In Taoist practice we regard the adrenal glands as a mini pump. As you arch, you will create a vacuum here to push the energy up higher:

g. Your next stopping place is at the base of the neck, called cervical-7, or C-7. Practice in the same manner as described above: inhaling short sips of air and pumping energy from the ovaries down to the perineum and up to the sacrum and T-11. Slightly push from the sacrum to bring the energy to C-7, and then pull and guide it there. Repeat this process nine times.

h. Your next stopping place is your Jade Pillow. This is located at the back of your head, between cervical-1, or C-1, and the base of the skull. Practice in the same manner as described above, inhaling short sips as you continue to pump the ovaries' energy down to the perineum and up to the sacrum, T-11, C-7, C-1 and Jade Pillow. There is a small storage place in this area where you

can store the ovaries' energy for further use, although it is the upper part of the brain that is the largest storage place for energy. Repeat the process nine times.

i. Your next stopping point and a larger storage place for the energy is the Pai-Hui, located at the crown of your head. Practice in the same manner only this time fill the "straw" to the top. Tilt the sacrum to the back in order to straighten the curve of the spine outward a little bit: this will help to activate the lower pump. At the same time push the sternum to C-7, tuck in your chin a little, and squeeze the back of your skull. This will activate the upper Cranial Pump. Continue to pull up to the point at the center of the top of the head. Repeat nine times.

j. Touch the tongue to the palate to permit the energy to flow down to the third eye, to the inside of your nose, through the tongue and down to the heart center. Pause for a while at the heart center and feel the energy fill and open this center as it transforms into loving energy. Then bring the energy down to the navel center for storage. Here spiral the energy 36 times counterclockwise and outward, then reverse and circle inward 24 times.

Once you finish the last set of nine, and you feel the ovaries' sexual energy fill the brain, begin to turn the energy to circulate it in the brain counterclockwise for nine, eighteen, or thirty-six revolutions, and then change directions, circulating the energy clockwise for nine, eighteen, or thirty-six revolutions. Use your mind, eyes and senses to assist you. Rest and mentally guide the energy from the Ovarian palace to the top of the crown.

5. Summary of Ovarian Breathing

a. Bring your attention to your ovaries and breathe into them.

b. Direct your attention to the Ovarian Palace, lying between the ovaries.

c. Contract the vagina slightly, pulling the ovaries' energy down to the perineum, then contract and pull up the front part of the perineum to bring the energy there while simultaneously inhaling a short sip of air. Rest, holding your breath, and feel the flow of the energy, from the Ovarian Palace to the vagina, the clitoris and the perineum. Exhale, with your mind retaining the energy there. Repeat this procedure nine times.

d. Continue to retain the ovaries' energy at the perineum, and at the same time return your partial attention to the ovaries and the

Ovarian Palace. Collect the energy there, then simultaneously inhaling short sips, very slightly contract the vagina, the front part of the perineum, then the middle and back part of the perineum, and inhale the ovaries' energy to the coccyx and up to the sacrum. Exhale. Repeat nine times.

e. Holding the ovaries' energy at the sacrum, return your attention to the ovaries, and bring the energy to the Ovarian Palace. Inhale short sips of air as you lightly close the vagina and simultaneously contract the front part of the perineum. Bring the Chi to the perineum, pause for a while, and inhale. Pull up the middle and then back parts of the anus. Pull the energy up to the coccyx and sacrum. Pause and inhale and push the sacrum back as if it were pushed against a wall to open the hiatus so that Chi can enter the spinal cord. Move the energy to T-11. Exhale. Repeat nine times.

f. Holding the Ovarian energy at T-11, return your attention to the ovaries and the Ovarian Palace. Inhale short sips of air, lightly closing the vagina while simultaneously contracting the front, middle and back of the perineum. Move the energy from the ovaries to the perineum, sacrum, T-11 and C-7. Hold and retain it there. Exhale. Repeat nine times.

g. Holding the Ovarian energy at C-7, return your attention to the ovaries and to the Ovarian Palace. Inhale short sips of air slightly close the vagina while simultaneously lightly contracting the front, middle and back of the perineum, and move the energy from the ovaries to the perineum, sacrum, T-11, C-7 and Jade Pillow. Exhale. Repeat nine times.

h. Holding the Ovarian energy at the Jade Pillow, return your attention to the ovaries and repeat the process, proceeding from the ovaries to the brain, to the top of the head, to the crown. Repeat nine times. When the energy has filled the brain, permit it to spiral in the brain nine, eighteen, or thirty-six counterclockwise revolutions and then nine, eighteen, or thirty-six clockwise revolutions. Place the tongue up on the palate and allow the energy to flow down to the third eye, tongue, throat and heart. Pause for a while at the heart and feel the sexual (creative) energy transfer into loving energy, and then move down to the solar plexus and the navel. Collect the energy at the navel.

Remember! The Energy from the Ovaries in Ovarian Breathing is Warm Energy. Be sure to bring it down after Four Inhalations!

B. Ovarian and Vaginal Compression

1. Compressing Air into the Ovaries increases Sexual Power.

Many benefits of Ovarian Breathing are magnified when performed in conjunction with the Ovarian and Vaginal Compression exercise. This exercise reduces mental problems, strengthens the ovaries and the cervix, and increases the power of the vaginal muscles. It helps you consciously to direct energy into and out of the pelvic region. It builds your sexual power dynamically by using the vital Chi from the upper part pushed by the compressed air and packed try its charge into your ovaries to increase the ovaries' energy. By packing the Chi into the ovaries and the vagina, you warm up the sexual region so that you can be more sexually active, easily aroused, and easily have an orgasm. When the sexual region has less Chi, it gets cold and is difficult to arouse. This can be compared to attempting to boil ice water as opposed to room temperature water: it takes much more heat to bring the ice water to the boiling point.

Of the three suggested positions, sitting or standing are preferable. Inhale a fairly large amount of air into the throat and swallow the air. Swallowing drives the air down to the solar plexus. From the solar plexus the air is rolled down into the pelvic region. From there it will be driven down both sides of the vagina to be compressed there. (Fig. 5.29) This is accomplished by contracting the abdominal muscles downward in a slow wave. The vagina seems to expand, a flush of heat is experienced, and after a short time the power driven into it flows up the spine to the head, which also becomes very warm.

2. Ovarian and Vaginal Compression Exercise Step-By-Step

a. Sit on the edge of your chair with your feet flat on the floor about as far apart as your shoulders' width. Feel the feet support a part of the weight; do not place it all on the sitting bones. Wear loose clothing so that it will be easy to compact the Chi.

b. Inhale through the nostrils into the throat. From there swallow the air down to the solar plexus, midway between your heart and your navel. Do not stop at the heart center. Imagine air as a ball.

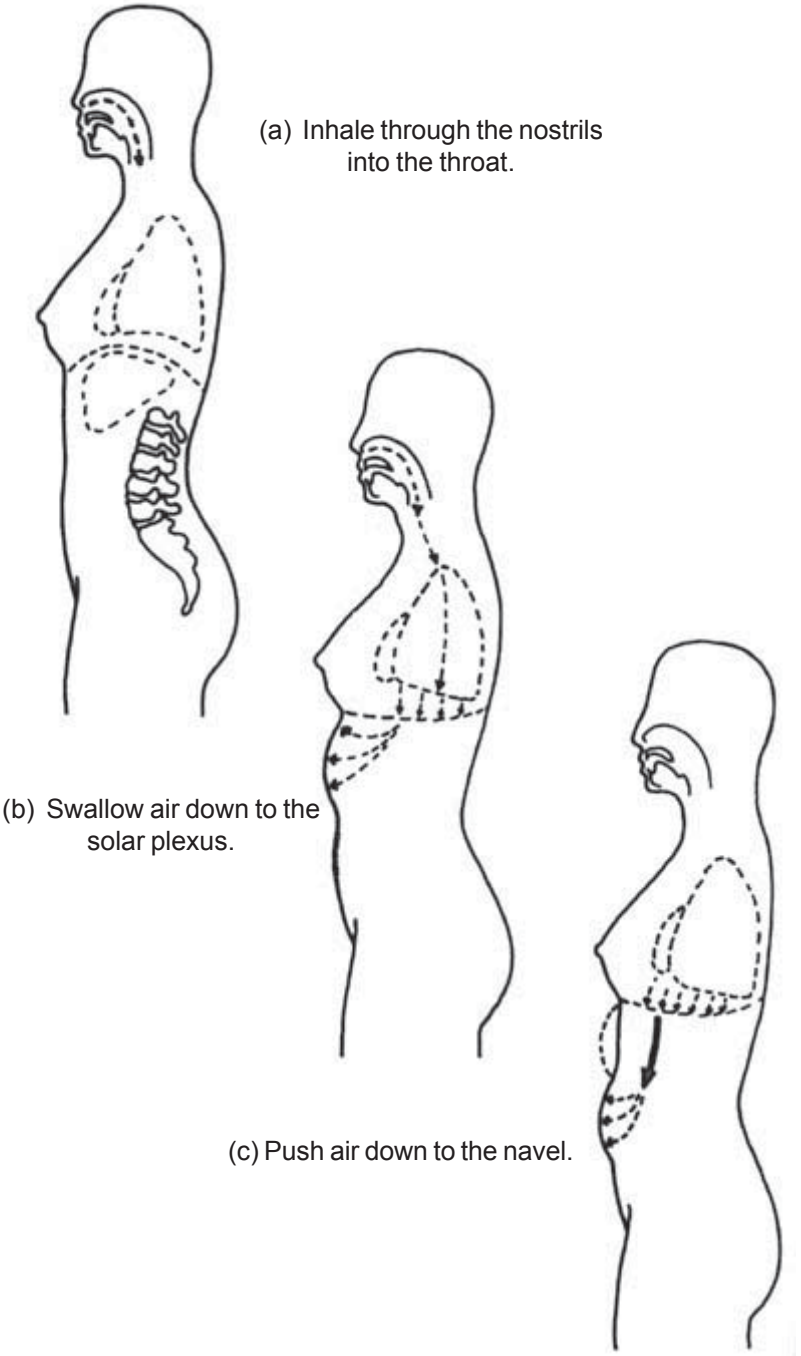
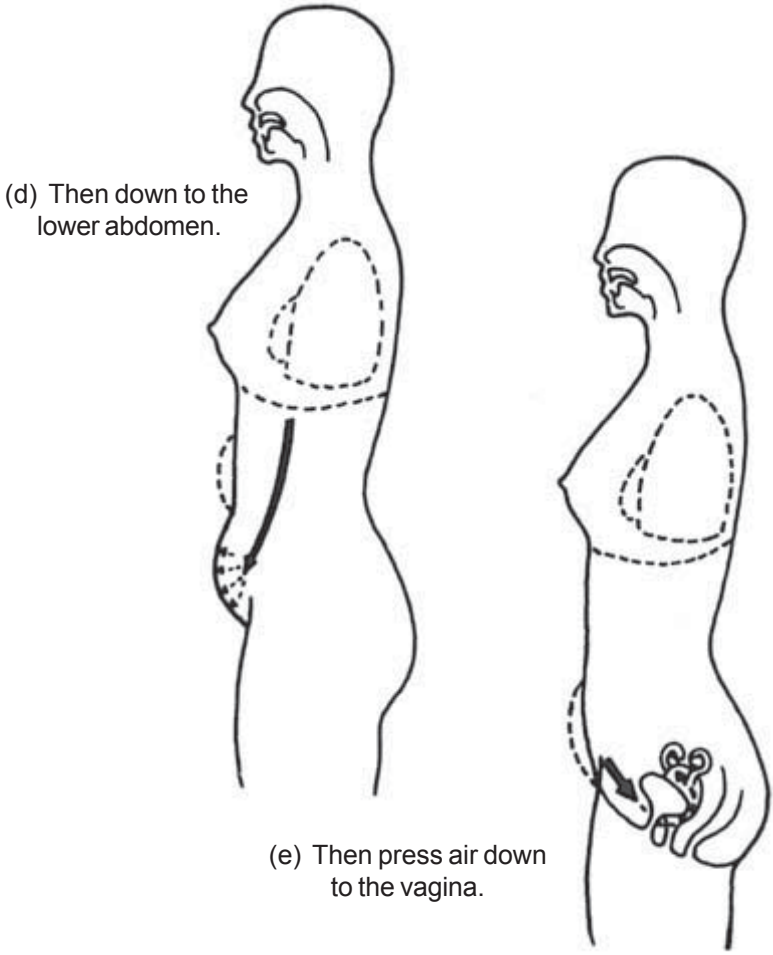


Fig. 5.29 *Ovarian and Vaginal Compressing*



c. First the ball sits behind the solar plexus. From this point roll it down to the navel, then into the pelvis, and spread it out to both sides of the ovaries. This is accomplished by contracting the abdominal muscles downward in a slow wave. Feel the Chi pressure drop around the ovaries, pack and compress the ovaries to energy them, and gradually pack the cervix. Squeeze the inner and outer lips of the vagina tightly and keep on pushing into the vagina as if you were blowing up a balloon, until the vagina feels like it is expanding.

d. Forcibly compress the air into the ovaries for as long as you can. Once the air is driven into the ovaries, you will experience a

flush of heat. After a short time the power driven into the ovaries flows up the spine to the head, which also becomes very warm. The minimum period for each compression should be 30 to 40 seconds. Slowly work up to at least one minute. Every single Ovarian Compression shoots tremendous energy into the vagina. With compression lasting an entire minute the exercise takes full effect. The anal sphincter and perineum muscles must be squeezed tightly during this exercise to prevent leakage of energy.

e. When you have finished the compression, exhale and relax completely. Saliva accumulates in the mouth during compression: swallow it before exhaling.

f. After complete exhalation, take a number of quick, short breaths to recover your wind. Dart the air in and out of the nostrils to quickly regain capacity for another compression. Remember to breathe through the nose, and do not inhale unduly large quantities of air. This process is called “Bellows Breathing” because you must pump your lower abdomen in and out quickly in order to do it.

This exercise quickly charges the whole body. If you feel ill or out of sorts, several Ovarian Compressions will restore you to good form. Perform the exercises in the following sequence:

(1) First practice one Ovarian Compression.

(2) Then, rotate the waist with the arms at shoulder level.

(3) Rest for a moment and repeat the exercise.

Remember to keep the tongue up on the palate when compressing the air. In the beginning perform two to three compressions, gradually increasing to five.

When you have grown stronger you may do five compressions in succession, and then rest by rotating your body from the waist. Begin a second series of five compressions. Keep the breathing between compressions short and shallow so you do not lodge power high in the body.

Practice Ovarian Breathing and Ovarian and Vaginal Compression twice a day for approximately fifteen minutes in the morning and fifteen minutes in the evening. Regular practice of these breathing techniques yields many benefits in addition to those already mentioned, such as a decrease in insomnia and nervousness, and an improvement in overall energy.

The exercise should start to take effect within three days after its commencement. The ovaries feel warm and may itch, or feel

somewhat tingly an indication that the ovaries are receiving unusually high amounts of vital force. These signs occur only if the exercise is done properly. A month or two of exercise will produce substantial increases in strength and well-being.

3. Summary of Ovarian and Vaginal Compression

a. Choose your preferred position.

b. Breathe in very slowly through the nose, concentrating on the throat. Compress the air in the throat until you can inhale no further:

c. Swallow strongly to the solar plexus and hold the air there as if it were a ball.

d. Press the ball of air down to the navel region.

e. From the navel press the ball of air down to the pelvic region.

f. Press the ball strongly and continuously into the ovaries until you can hold your breath no longer: At the end of your breath capacity swallow the saliva strongly

g. Rest by taking quick, shallow breaths through the nose.

h. Relax by rotating the waist several times.

i. Start with 5 repetitions and increase slowly to 36 at a sitting.

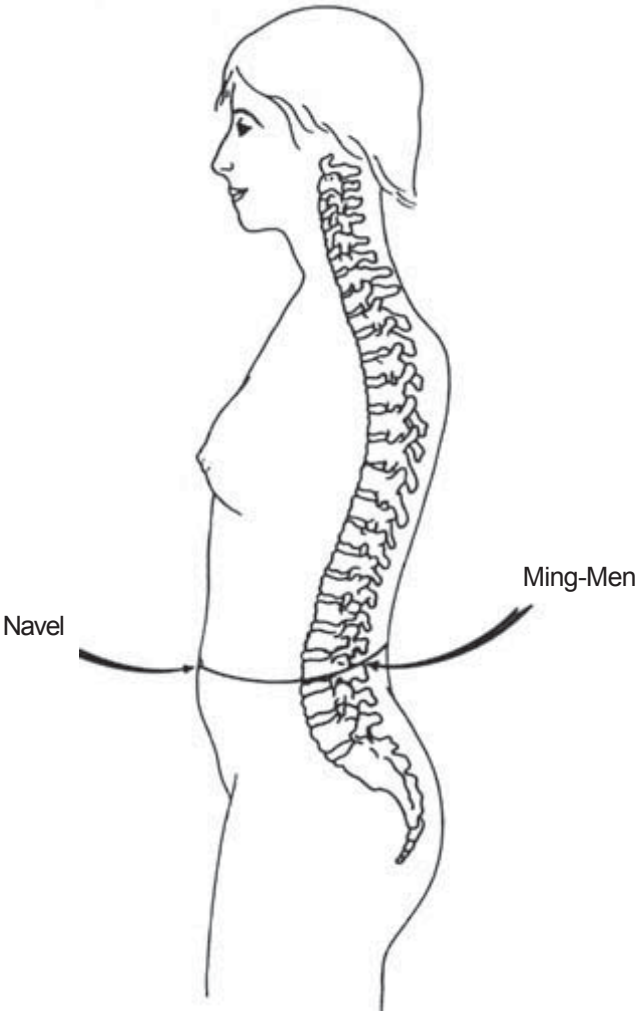
j. Keep the tongue up on the palate.

C. Venting Exercises for High Blood Pressure

After practicing Ovarian Compression for two to six weeks, some women with high blood pressure notice a large flow of Chi energy to the head. They feel tension in the head because the blood has followed the upward flow of the vital power. This is not unlike a mild symptom of the “Kundalini Syndrome,” in which freed energy races about the body out of control.

If you suffer from high blood pressure and have not practiced meditation to open the Microcosmic Omit, which distributes the energy evenly throughout the circuits of the body, you can meditate on two points to vent excess pressure. These are the Ming-Men, or Door of Life, on the spine directly opposite the navel (between lumbar 2 and 3), and the Yuang Chuan (K-1 point), the kidney point, on the soles of your feet.

To locate the Ming-Men, place a string around the waist like a belt. Make it perfectly horizontal and place it across the navel. The Ming-Men lies where the string meets the spine. When you bend over backward from the waist, the point feels like a hole in the spine. (Fig. 5.30)



The Ming-Men is located opposite the navel
between the second and third lumbar vertebrae.

Fig. 5.30 *Ming-Men Point*

Excess energy down to the Ming-Men. This draws the Chi and blood there. The hand can help to induce the Chi now. The right hand, like a pitcher sends out energy; the left hand, like a catcher receives the energy. In this way the energy can be brought down more easily.

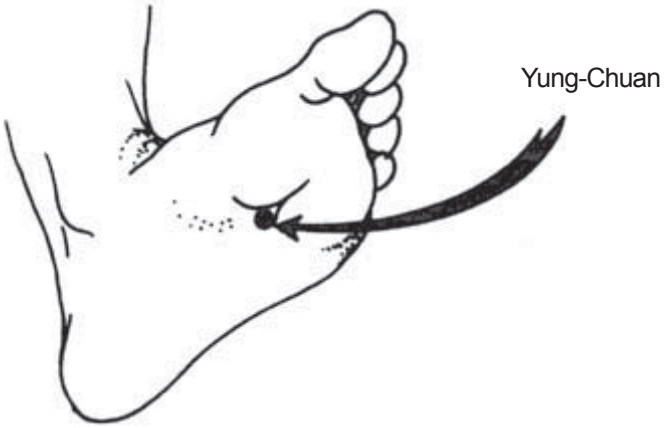


Fig. 5.31 *Yuang Chuan (K-1) Point*

The Yuang Chuan Point: The Yuang Chuan point is the Yin-energy entry point. The Taoists regard the soles of the feet as the roots of the body, and the root is important as the foundation for the work of the spirit body. Once you have found the points on both feet, tape onto them spiny little balls such as prickly chestnuts or plain tree seed pods. Place both soles on the ground and press firmly on the spiny ball while concentrating on the kidney-1 point (also known as the bubbling spring"). You can help guide the energy down to the soles by placing your left palm on the sacrum, and the right palm on the top of the head guide the energy from the crown to the Ming-Men, down to the sacrum, down to the backs of the knees, and finally to the soles through the backs of the legs.

After a short time of practice you will feel the power flow to the Ming-Men. Direct it down through the spine and backs of the legs to the Yuang Chuan. Press down on the balls of the feet so that you feel the soles very distinctly. In severe cases it may take a month or two to get the power into the Ming-Men and bring it down to the Yuang Chuan.

If blood flows too strongly to the head during or after compression, vent the power by practicing the Ming-Men and Yuang Chuan exercises right after compression. Imbalanced force will flow down the body through these two points. After practicing the exercises, many students open the Microcosmic Orbit so that their energy

flows in a continuous circuit, and there will be no need to bring the energy down through the back to the soles. You can also bring it down the front of the body through the heart and navel, down to the perineum, and down to the backs of the knees to the soles. This alone has often ended high blood pressure.

Many benefits of Ovarian Breathing are magnified when performed in conjunction with the Ovarian Compression exercise. If the ovaries are too cold, there will be a reduction in desire for sex. Ovarian Compression, by warming the ovaries, will warm your heart as well. It helps you calm down when sexually over-excited by teaching you to consciously direct energy into and out of the pelvic region. It builds your sexual power dynamically by using the vital Chi taken from the air and packing its charge into your Ching Chi.

Refer to Chapter 6 for more safety tips in performing the exercises in this chapter.

Fig. 5.32 *Healing Love Connection*

Chapter 6
Orgasmic Upward Draw

A. Sexual Energy and Women

In ancient times the Taoists saw men and women as worthy partners and adversaries. Their sexual union reflected the union of Yin and Yang on the cosmic level. Their different approaches to life and problem-solving brought harmony to the earth.

Taoists regard man as fire and woman as water: Fire, when started, burns very fast and does not last long. As we mentioned earlier it takes time for water to reach its boiling point, just as it takes time to bring a woman to her boiling point. Once she reaches that point, she will maintain it for a long time.

Taoists have described women as sexually superior to men, yet we see today that many women are sexually unhappy. Because the response times of men and women are different, the sexual embrace occurs, many times, without the full arousal of the woman. The vaginal spasms which occur at this arousal level are mistaken as the total orgasm. However since the woman has reached only half of her potential for orgasm, she reports feeling let down, frustrated, alienated, angry, restless, and isolated.

To experience the multilevel of a complete orgasm, a woman must be aware that there are many steps she must climb, with each step energizing certain parts of the body. The complete orgasm is desirable because it energizes and brings pleasure to the entire body. Conversely the repeated interruption of orgasm at lower levels creates energy imbalances, since only some of the organs and glands are stimulated and not the entire body. If a man can prolong his erection, he can help bring the woman to higher levels with simple movements, and the couple will be able to reach the highest harmony they can attain in lovemaking.

The Orgasmic Upward Draw (more simply referred to in this chapter as the Orgasmic Draw) exercise taught here is a way to increase the sexual potential of a woman by warming up her sexual region ahead of time to avoid this depressing chain of events.

In all of the basic sexual studies conducted, many parallels have

been made between a man's orgasm and a woman's orgasm, especially in what is called rhythmic pulsations, which have been measured at eight-tenths of a second. Research has also found' that when a woman's sexual organs are considered as one functioning unit, the amount of erectile tissue is about the same as for a man. Therefore, there is no reason to believe that women's orgasms are any less strong or powerful than men's.

The Taoist sages noted that through internal alchemy, women, using the same method used by men of turning their aroused sexual energy inward and upward, can transform this energy into a power which fills certain reservoirs in their bodies, eventually enabling them to reach the ultimate spiritual accomplishment. The Orgasmic Draw is a preparation for the spiritual practices of Kan and Li, which rely on the power of the stored sexual energy (Ching) to be transferred into a new life-force energy (Chi), and Chi into spiritual energy (Shen).

Women have the capacity for virtually inexhaustible sexual pleasure, far greater than the capacity of men. Even though women do not lose very much energy during intercourse as a result of orgasm, that small unit of sexual energy multiplies, and the longer an orgasm lasts, the more sexual energy can be produced. If thought of in units, the energy can be multiplied by the woman from 10 units to 100, 1000, or to hundreds of thousands of units. However if this small unit of energy is disposed of, it no longer is within reach, and there will be no opportunity to transform it to the higher energy level.

On a day-to-day level, this storehouse of sexual energy expresses itself as an abundance of loving and healing energy enough for each woman to not only love and heal herself physically and psychically but to extend that loving and healing to various relationships in her life and commitments in her community and global sphere. It is no accident that women become involved in professions such as nursing and teaching, occupations which require the generation of tremendous amounts of loving, caring, and healing energy.

Aside from being a thrilling experience, the Orgasmic Draw is a technique reaping benefits such as organ and gland rejuvenation. Every time aroused sexual energy is routed to the brain, memory improves, cell are nourished, and a wonderful feeling engulfs the body from the top of the scalp to the tips of the toes.

B. Ovarian Breathing and the Orgasmic Draw

Up to this point you have learned Ovarian Breathing as a means to pump quiet sexual energy created in the ovaries to the brain. The Orgasmic Draw will teach you how to draw the far denser "aroused" sexual energy upward. The means by which you will accomplish this initially is muscle power: You will use it not only to stop the outward movement of the orgasm, but to actually change the direction of the energy inward and upward. Eventually the control will become more internal, the muscles of the pelvic diaphragm will begin to develop, and you will be controlling the Orgasmic Draw with your mind.

The temperature of sexual energy is the second major difference between Ovarian Breathing and the Orgasmic Draw. The aroused sexual energy cultivated in the Orgasmic Draw is cooler than the biologic, reproductive (or sexual) energy that is produced by the ovaries and harnessed during the process of Ovarian Breathing. It is also cooler than aroused sexual energy in men, which is considered hot Yang energy. It is the cool quality of this energy that enables it to be stored in the brain for future use.

As in Ovarian Breathing, the Chi Muscle plays a great role in directing the energy. To review briefly: contracting the front of the anus (part of the perineum region) brings the energy from the ovaries (the Ovarian Palace) to the perineum point. Pulling up the middle and contracting the back of the anus (the perineum region) directs the energy from the perineum to the coccyx. This maneuver is useful while you are still at the basic level of practice. As your practice continues, the control becomes both automatic and internal.

1. Single and Dual Cultivation

Even though most people settle upon a particular formula of how they like to have sex and stick to this formula, this does not mean that they would not like another means of gratification if it were offered in a safe and caring way A woman can enrich her life both physically and spiritually by learning the Orgasmic Draw as taught here using two pathways: Single and Dual Cultivation, which are by no means mutually exclusive. Single Cultivation is usually practiced by the woman who does not have a sexual partner or whose sexual partner is not practicing the Big Draw (the man's version of the Orgasmic Draw. Many women who practice Dual

Cultivation, i.e., with a partner who practices the Big Draw, find that the route of Single Cultivation (Ovarian Breathing, the Orgasmic Draw and meditation, as well as Iron Shirt Chi Kung and Tai Chi) cannot be overlooked.

A woman who practices alone begins to feel the spaciousness inside of her, the blending of her body with the universe, and an increased sensitivity to those around her. Sometimes these experiences are mere glimpses, but with continued practice they can become part of her living reality.

A woman practicing with a partner can learn how to share energy with her partner and can begin to approach the experience of the "Valley Orgasm" or "Beyond Orgasm" state, an experience of heightened awareness for both partners. As the two different souls or two spirits (Yin and Yang) unite, an alchemical fusion of energy occurs that gives birth to a new consciousness for both partners. As they reach the point of "Beyond Orgasm," each having opened their Microcosmic Or bit, Thrusting Channel and Belt Channel, both will feel the sexual energy shoot out of their hearts to the tops of their heads.

A. Solo Practice

The importance of Single Cultivation, especially at the beginning, is strongly recommended. With solo practice you will be better able to tune into your own responses and thereby have more control over your sexual energy. Between the time you start to experience sexual excitement and the time an orgasm is imminent is a gap you can play within. If you start the Orgasmic Draw when you are only slightly aroused, you will not feel very much sensation. If you wait until you are at the point of pouring the energy out, you may or may not be able to capture and prevent it from leaving your body. Your solo practice is invaluable in enabling you to sense these distinctions and turn them into reflexes.

After you have practiced and feel you have learned the Orgasmic Draw well, you can try it with a partner but it should be a partner who is interested in these practices or who is aware that you want to recycle your sexual energy. It is important to be perfectly frank with your partner so that both of you know what is going on.

B. Practicing with a Partner

If you have a partner who is also practicing the Big Draw and Testicle Breathing, you are one of the luckier ones. You will have the opportunity to experience the exchange of energy with your partner and the possibility of entering into the "Beyond Orgasm" state mentioned above. If, however you have mastered the techniques of the Healing Love exercise, and your male partner does not practice these Taoist Secrets of Love techniques, you will be far superior to him. Then, if you use the Orgasmic Draw on him, you will drain his life-force from him, possibly causing him great harm and creating negative forces within yourself.

The word Tao means "way" and, as described above, those who seek union with the Tao are trying to find the "way" of the universe from which all of nature proceeds. There are many paths to travel along this "way" and many have sought a path in which sex is perceived as spiritually undesirable. Such people recoil from Taoist Dual Cultivation and label those who practice it as following the "Left-Hand Path" (as opposed to the "Right-Hand Path" of celibacy). Dual Cultivation, properly practiced, is a safe path, reaping benefits for the body mind and spirit.

C. Overview of the Orgasmic Draw

In the Ovarian Breathing exercise you moved warm reproductive sexual energy (ovarian energy or Ching Chi), that lies in the ovarian in its Yang state, up to the head and then down into the body. With the Ovarian Compression exercise you forced the Chi energy that is produced in the vital organs and glands-heart, Lungs, spleen, thymus and, etc: down to mix with the warm Ching Chi resting in the sexual organs to heat up this region. Then you moved the resulting warm energy upward and circulated it.

In the Orgasmic Draw you will arouse yourself in the direction of an orgasm, collect all the organs' and glands' energy to mix with the sexual energy): move that orgasmic feeling inward and extend it longer and at a higher center to be then moved into the organs, glands and finally the nervous system, so that the orgasm reaches energy cell of the body. As a result you will experience a new kind of orgasm which you have never experienced before. The cool, Yin, sexual energy stored in the ovaries is at your command. You can gather it quickly and build rapidly to a climax, turning it inward and thereby extending the orgasm for as long as you desire, or you

can deposit it in the “slow cooker” for a longer and more voluptuous experience. Ultimately the erection of the clitoris and the internal sensations of fullness and expansion will result in a rhythmic outpouring release. Once you master this Taoist technique, you will find the easiest flowing channel in the body flows directly up to the brain and higher center of the body. Practice is essential since initially you must learn to control the anus Chi Muscle and the involuntary muscle of the pelvic diaphragm to change the rhythmic outpouring of energy into an inward and upward draw of energy, and to help push the sexual energy up through the spine into the upper body

1. Four Levels of the Orgasmic Upward Draw Practice

A. Beginning Stage

You will use the muscles of the fists, jaws, neck, feet, perineum, buttocks, and abdomen to help activate the Sacral and Cranial Pumps, divert the ovarian energy and orgasmic feeling, and push the energy upward into the organs and glands in the amused state.

B. Intermediate Stage

You will use less muscles tension of the fists. jaws and feet, increase your reliance on the Chi Muscle of the perineum, pelvic diaphragm and sphincter and employ the Sacral and Cranial Pumps to help move the sexual energy upward.

C. Advanced Stage

Less muscle tension of the Chi Muscle of the perineum will be required and more use of the Sacral and Cranial Pumps to provide greater power for the mind to move Ching Chi to the crown center. By concentrating power at the upper part of the crown, you will draw the energy from the lower center to the higher center.

D. Most Advanced Stage

You will only use pure mind control: there is no need for use of muscles. The mind’s power will command the ovaries’ sexual power to move up and down into the organs, glands and nervous system, and to envelop, pack and revitalize it at your will.

2. Explanation of Procedure

In this exercise you will need to arouse yourself 95 to 99 percent of the way to orgasm. As you master the Orgasmic Draw, you may fine tune your orgasm and gradually cultivate it to go beyond 100 to 200 percent arousal, even up to 1,000 percent. To initially achieve arousal you will massage the breasts. Once you feel that orgasm is imminent, you will stop and practice the Orgasmic Draw method three to nine times per session, or until the orgasm turns inward, flowing into the Microcosmic Orbit and entering into the organs and glands as the lower-center arousal subsides. This will count as one exercise. You will repeat this procedure: stimulating yourself, and then practicing the Orgasmic Draw until the arousal subsides and the orgasmic feeling moves upward.

Practice makes perfect. Once you totally gain control of your sexual organs and the energy involved in solo practice, you will naturally have full control during sexual intercourse. You can continue to have sex and practice at the level you have reached. Some will naturally become skillful much more quickly than others if they have trained their minds through yoga, meditation or other mental disciplines. If you are not involved in a program of daily physical discipline, do some warm-up exercises and stretching before practicing the Orgasmic Draw. Iron Shirt breathing and packing directly assists in the execution of the Orgasmic Draw. These exercises will tone up the energy in your organs, making it easier to feel your internal Chi energies, and thus speed up the command of your sexual energy:

People spending years and years earning a doctorate in medicine or a Ph.D. in any high technological science know that such knowledge is important to making a living in this worldly life. However, people must also consider learning the high technology about themselves, one involving an energy body and a spiritual body and earning a doctorate in preparation for the next life. All of the energy practices of this life can be transferred to your next life if you start to practice while you still have an abundance of that energy. Consciously you will transfer your own identification to a spiritual body. Therefore, it is worthwhile to spend time on practice to earn this highest of human technological degrees.

D. Orgasmic Draw, or How to transform aroused Sexual Energy into total body orgasm.

1. Practice in an Unaroused State

A. Pre-Exercise

While learning the exercise, first practice in an unaroused state.

(1) Lower Abdominal Breathing

From your practice of the Microcosmic Orbit you may now find yourself breathing normally in the lower abdomen, with little or no movement of the chest and shoulders. Lower abdominal breathing is the way we breathe when we are babies, and the way we breathe when we are asleep or in deep relaxation. Many of us have to relearn how to breathe into the lower abdomen when awake and alert, Lower abdominal breathing causes the diaphragm to move lower during inhalation, thus elongating the lungs and providing more lung area to be filled with air. Check yourself at random during the day and discover from which area you are breathing. You can practice lower abdominal breathing anytime. In addition to increasing lung capacity abdominal breathing will also greatly strengthen the lower abdominal muscles, which will help you to control lower abdominal energy. (Fig. 6-1)

(2) Diaphragm

Sit or stand in a comfortable position. Exhale, flatten your abdomen, and exhale once more, relaxing the diaphragm down to press against the organs, especially the adrenal glands (located on top of each kidney). Relaxing the diaphragm in the exhale position requires practice. Your mind can help to guide the diaphragm and you can use the Inner Smile to smile to it. The diaphragm can become stuck on the rib cage if is too tight, and this will make it difficult to move it up and down. You can assist its movement by rubbing along the bottom of the rib cage until the tightness and pain are gone. This will enable the diaphragm to stretch and you will find your breath becoming deeper: making it easier to practice abdominal breathing.

(3) Energy Ball

Now inhale without expanding the abdomen. You should feel a

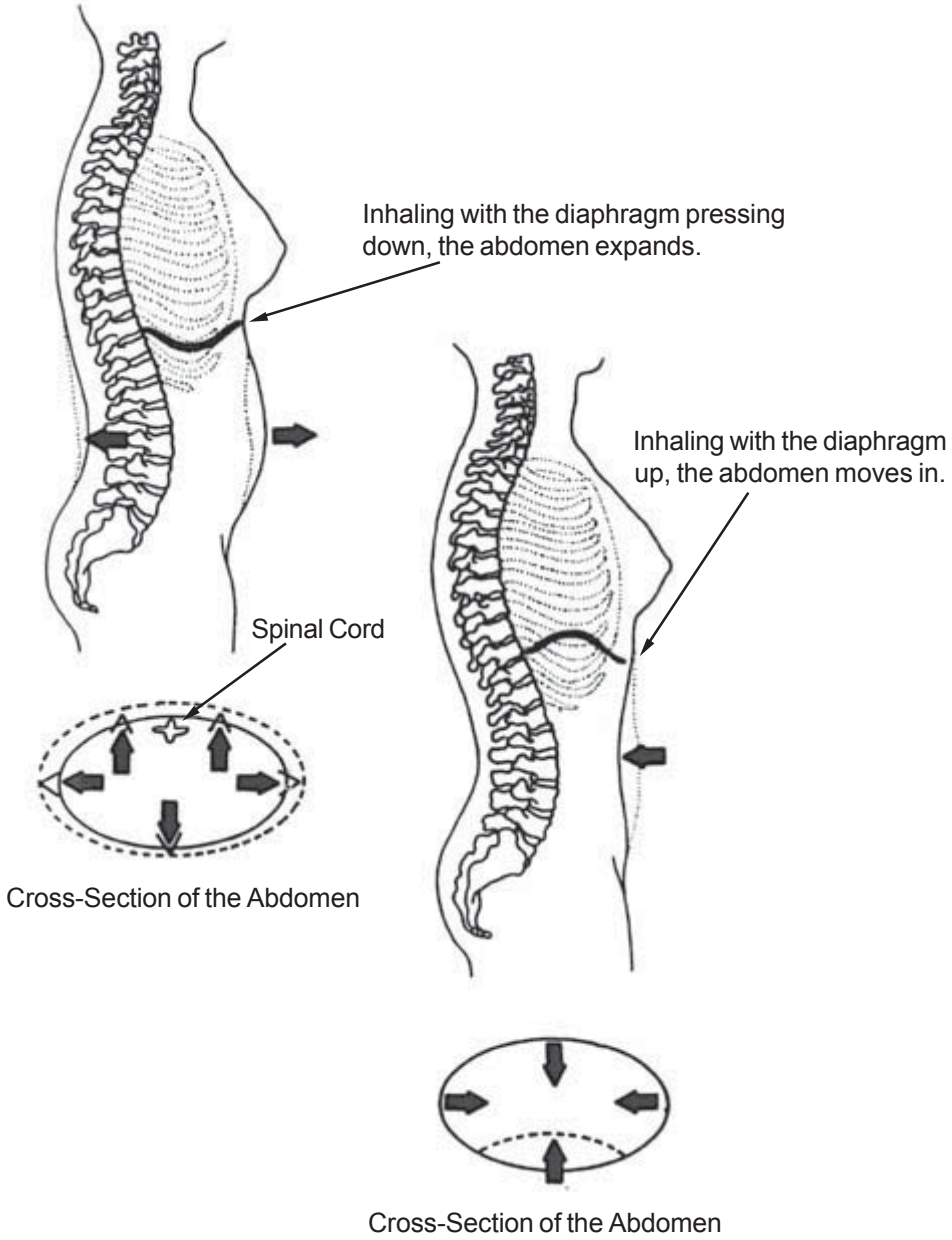


Fig. 6.1 *Lower Abdominal Breathing: Breathe as a round shape, expanding all sides and not the stomach only.*

pressure on the lower abdomen which serves to pack the organs into a smaller place. This will help to concentrate the energy in the lower center and pack and condense the energy into an energy ball, which we call a “crystal” ball. Exhale and relax. This condensed energy· will be of tremendous use in later higher practice of the Taoist system as you form the energy body and spiritual body that give birth to the soul and spirit.

B. Relationship of the Palate to the Organs

The palate and the tongue are closely related to the organs and glands. Knowing how to activate the palate, the floor of the Cranial Pump, will enable you to trigger that pump’s action, thereby assisting the flow of Chi.

(1) Front Palate

The front part of the palate near the teeth and the inside gum is related to, and is the reflex point of, the heart and small intestine.

(2) Middle Palate

The middle part of the palate before the soft palate is related to, and is the reflex point of, the liver and gall bladder:

(3) Back Palate

The soft palate located toward the back of the mouth is related to, and is the reflex point of, the kidneys and bladder.

(4) Front of The Mouth

The point at the front of the mouth between the upper and lower teeth is related to, and is the reflex point of, the lungs and large intestine.

(5) Jaw Line

The jaw line between the lower teeth and gums is related to, and is the reflex point of, the spleen, stomach and pancreas.

C. Activating the Pumps

In these exercises, we combine lower abdominal breathing together with muscle power locks.

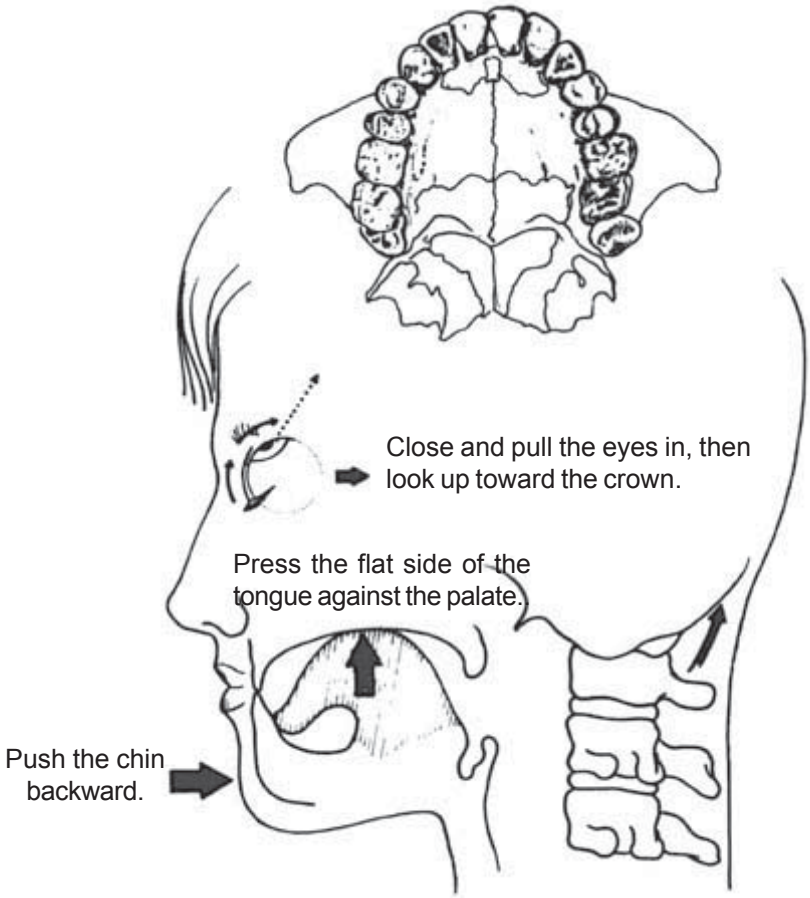


Fig. 6.2 *Activating the Cranial Pump.*

(1) Activation of the Cranial Pump (Fig. 6-2)

The muscle power lock that is responsible for activating the Cranial Pump is accomplished by squeezing the muscles of the tongue against the palate and teeth, while simultaneously squeezing the muscle at the back and base of the skull, thereby activating the Cranial Pump as well as all of the pumps in the body.

(A) Teeth

Clenching the teeth will help to squeeze the temporal bones, and when released will activate the Cranial Pump. The cranial bone,

located at the palate, is called the palatine bone. Clenching the teeth will also stimulate the lungs and large intestine.

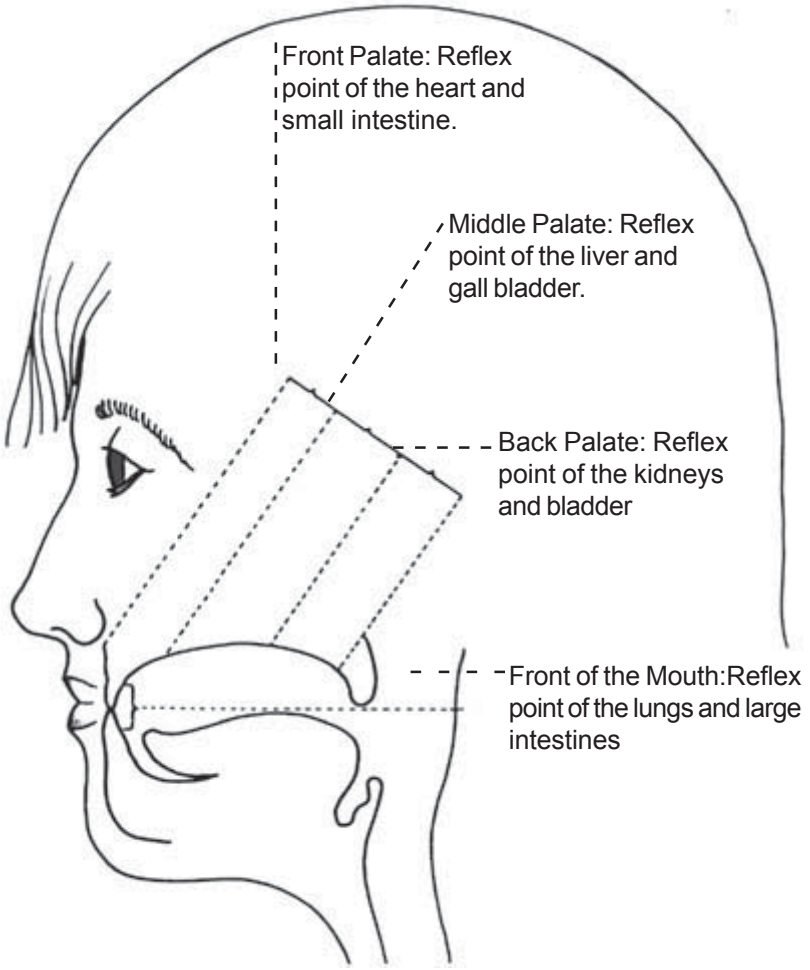


Fig. 6.3 *Relationship between the Palate and the Organs*

(B) Tongue

Press the flat side of the tongue to the middle of the palatine bone and the tip of the tongue against the lower front comer made by the gum and teeth. Pressing the tongue firmly to the palate, the floor of the Cranial Pump, will help activate the Cranial Pump and stimulate the palate, the reflex point of the liver and gall bladder. It

also stimulates the jaw line, the reflex point of the spleen, stomach and pancreas, and the tip of the tongue. (Fig. 6-3)

(C) Chin

Activate the back side of the Cranial Pump by pushing the chin backward (not up or down). You will feel a tightening at the back and base of the skull, or occipital bone. In the beginning, you will have to squeeze the muscle at the back of the skull to activate the base of the Cranial Pump.

(D) Eyes

The eyes contain many muscles around the orbital bones (the cavities of the skull containing the eyes) which will also help to increase the pumping action. Rolling and pulling up the eyes and squeezing the muscles into the orbital bones will also help to activate the Cranial Pump. Look up and slightly pull the eyes up toward the crown at the top of the head. You will feel a pressure there. This will activate the top of the Cranial Pump.

You are now clenching the teeth and pressing the tongue to the palate, pushing the chin to the back, looking up with your eyes and focusing them on the top, or crown, of the head. Once the Cranial and Sacral Pumps are properly activated, the pulling-up action (or suction) will increase, thereby helping to pull the sexual energy up. In the higher part of spiritual practice, the pumping action of the Cranial Pump is very useful in thrusting the spiritual body out of the physical body through the crown.

(2) Activation of the Musculatory Pump

Activating the Musculatory Pump will create a pumping action to draw the sexual energy upward. Taoist Masters discovered that as you create other muscle power locks by squeezing the muscles to the bones of various parts of the body and then releasing them, you will increase the pumping action of the fluids in the body. As you continue in your practice to train your mind to perform this squeeze, the pumping action of the body will greatly improve.

We often feel our hands and feet as the first parts of our bodies to grow cold. Since the arms and legs are the body's extremities, the circulation of fluids to them tends to slow down as time goes by, resulting in the accumulation of many toxins in these areas.

(A) Arms

To activate the arms' pumping action, start by clenching your fists and rolling four fingers of each hand (excluding the thumb) under pressing them firmly to the palms. When you feel the pressure, roll the fingers as if you were rolling paper. Press your thumbs firmly to the fingers. (Fig. 6.4) Inhale and squeeze the lower arms' muscles to the ulnae and radii (two forearm bones). Hold for a while and release. You will gradually feel a strong pumping action beginning. Gradually increase the squeeze to include the upper arms, squeezing the muscles around the humeri (upper arm bones). Practice until you master this, and then continue to the next step. These movements will assist in drawing the sexual energy up.

Clench the fists to activate the arms' pumping action

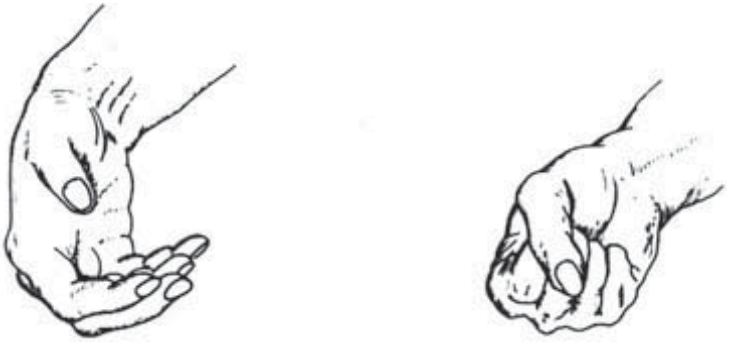
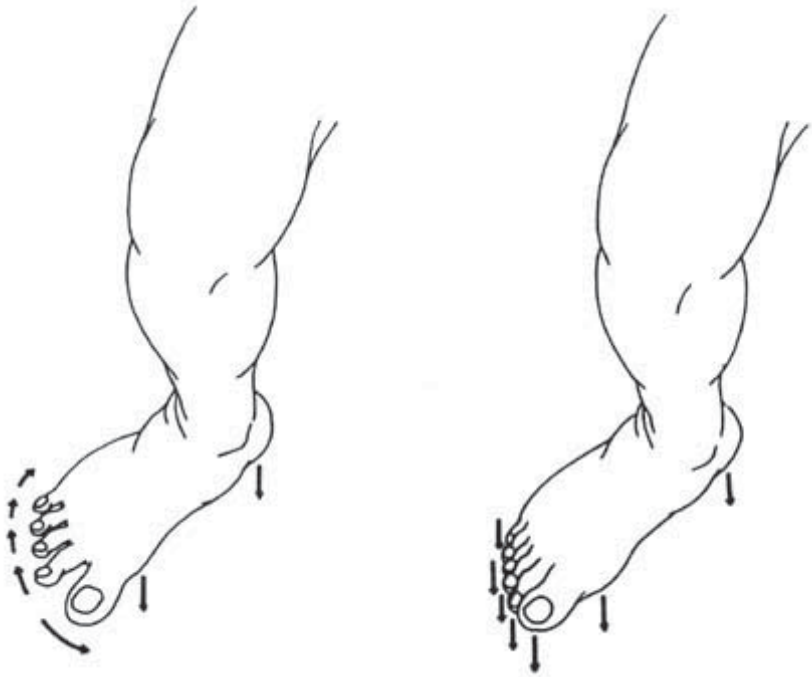


Fig. 6.4 *Arm's Pumping Action*

(B) Legs

To activate the legs' pumping action, start by pressing the soles of the feet to the floor firmly and spreading out the toes. First spread the small toes outward, then the fourth, third, second and finally, the big toes. (Fig. 6.5(a)) This spreading action will greatly activate the muscles and tendons of the legs to create the pumping action. Since the feet have very dense tendons, pressing the toes firmly to the floor will feel like a clawing action. Now curl the toes up, keeping them spread apart with the soles still touching the floor (Fig. 6.5(b))



(a) Press down and spread out the toes to activate the muscles and tendons of the legs.

(b) Curl the toes up, keeping them fully in contact with the ground.

Fig. 6.5 *Leg's Pumping Action*

Feel as though you are inhaling through your feet, and squeeze the muscles of the legs to the tibiae and fibulae bones (lower leg bones). Hold for a while, then release them. Gradually move up to the femurs (thigh bones), squeeze the muscles tightly to the bones, and release them to increase the pumping action. These movements will assist in drawing the sexual energy, upward when you perform the Orgasmic Upward Draw.

(C) Buttocks

The buttocks consist of many large muscles and are a major factor in assisting the upward flow. Activate these muscles by inhaling as if through the buttocks and pulling up both buttocks, squeezing them toward the anus. You will physically feel as though lifted from the chair you are sitting on. Continue the squeeze, which

now moves into the pelvic bones. Hold for a while, and release. Practice a few times, until you master it.

Although the squeezing described seems like many separate actions, mastering them in this way, step-by step, enables you ultimately to put them together in such a fashion that they become one effort.

(3) Combining the Steps

(a) Sit on the edge of a chair or stand with the feet comfortably apart and the knees slightly bent. Feel yourself relax and smile to your self. Then, make your body tense, and relax again. Such activity will induce greater relaxation.

(b) Begin abdominal breathing nine, eighteen or thirty-six times. Exhale, flattening the abdomen, and inhale without expanding the abdomen.

(c) Clench the teeth. Press the tip of the tongue against the lower front corner of the jaws and teeth and the flat part to the palate, and push the chin to the back. Squeeze the fists and arms' muscles, spread the toes, press the toes and the feet to the ground, and squeeze the muscles to both leg bones. Hold for a couple of moments. Again, although these steps seem disjointed when practiced individually, as they all are mastered and then combined, they will become one unified action easily performed.

(d) Exhale and relax.

(e) Now inhale, hold, and clench the feet, fists, teeth, perineum, and buttocks. Exhale and relax.

(f) Inhale again, hold, and clench the teeth, fists, feet, perineum, and buttocks: tilt the sacrum back, slightly arching the back to help the energy flow more easily into the spine. Exhale and relax.

(g) This time, add an upward movement of the eyes: looking up will help focus the energy toward the brain. Practice again: inhale, hold, clench everything, and look up. Exhale and relax.

(h) Now it is time to add the last item, which will force the energy up into the brain. Perform all the clenching, and then a series of nine strong contractions of the perineum. These contractions are essential to keep the orgasm in the body and propel it upward.

2. Practice in an Aroused State

A. Overview

Now that you have practiced all the clenching exercises, you are ready to try the Orgasmic Draw in an aroused state. To reach an aroused state you will massage the breasts, and stimulate the clitoris, in whatever position you are accustomed to. As you approach what you consider to be a high state of arousal, provide enough time before you know you will climax. Then clench everything, and while holding your breath, simultaneously execute nine hard contractions. Later when we fully describe the Orgasmic Upward Draw, we will go into detail on how to move the sexual energy up.

You will notice that after your first Orgasmic Draw there will be a transfer of aroused energy upward, first moving up the spine to the top of the head and to the pineal gland (through the Governor Channel), then down (through the Functional Channel) as the energy continues in the Microcosmic Orbit. When you feel the energy fill the Orbit, you will start to move the orgasm s aroused energy into the ovaries, then into the left and right kidneys, to the liver spleen and lungs, and finally up to the left and right sides of the brain, completing what we call the "organs' and glands' orgasm." Additional stimulation will again raise the level of sexual arousal, and you will be able to practice another Orgasmic Draw. If you wish, you can then continue to complete a set of three to six draws. Practice three to six repetitions once or twice a day, and you will quickly refine your ability to do the Orgasmic Draw. Practice until you can fully control the manner of transferring the orgasm upward, using your mind to circulate the orgasm through the Microcosmic Orbit to all of the glands and organs, thereby increasing the amount of energy going to the brain. You will find that as control of the Orgasmic Draw gradually moves inside, the process will require less and less physical clenching. Ultimately, after perhaps six months to a year of practice, the control will be totally internalized.

B. Importance of Virtue Energy

Raising the organs' and glands' Chi to increase the ovaries' sexual energy is one of the most important ways to rejuvenate the organs and glands and start the return of youthful feelings. The

most rejuvenating energy, virtue energy: is generated from the organs:

(1) Gentleness from the kidneys and bladder:
(2) Kindness from the liver and gall bladder:
(3) Honor respect, joy and happiness from the heart and small intestine:
(4) Fairness from the spleen, stomach and pancreas:
(5) Righteousness from the lungs and large intestine.

The sexual organs are linked to all of the major organs and glands. With proper stimulation, as the Taoists classically state, the energy of the glands and organs will contribute to full sexually aroused energy: and all the good virtue energy emerging from them will combine into the best energy we know; the energy of compassion. If you can redirect the energy of compassion back to the organs, you will charge them to their fullest extent, and negative energy will have no room to remain. If you have too much negative energy in the organs and do not try to remove it, when you begin to multiply your sexual energy, the negative energy will increase, and so will your negative emotions.

The Microcosmic Orbit Meditation, Inner Smile, Six Healing Sounds, and Healing Love practices all help to transform negative emotional energy into good virtue energy. A more extensive practice of transforming negative energy into good virtue and blending all virtues with the energy of compassion will be explained in a later practice of the Healing Tao, called Fusion of the Five Elements. When fully aroused sexually the glands, organs and nervous system will be exercised to their fullest extent as well.

C. Massaging breasts will raise the Organs and Glands' Chi.

When you massage the breasts or the clitoris, be aware of the Chi energy that is activated as you stimulate the many nerves they contain. The nerves are connected to all the major organs and glands of the body beginning at the top of the crown with the pineal gland. From this point you will begin to feel the stimulation of all the glands and organs as the sensation descends and flows throughout your body Use your mind to guide the glands' and organs' Chi to flow to the breasts, blending their energies to produce the best possible glands' and organs' Chi. This special blending of organs' and glands' Chi can have a very powerful creative and healing effect.

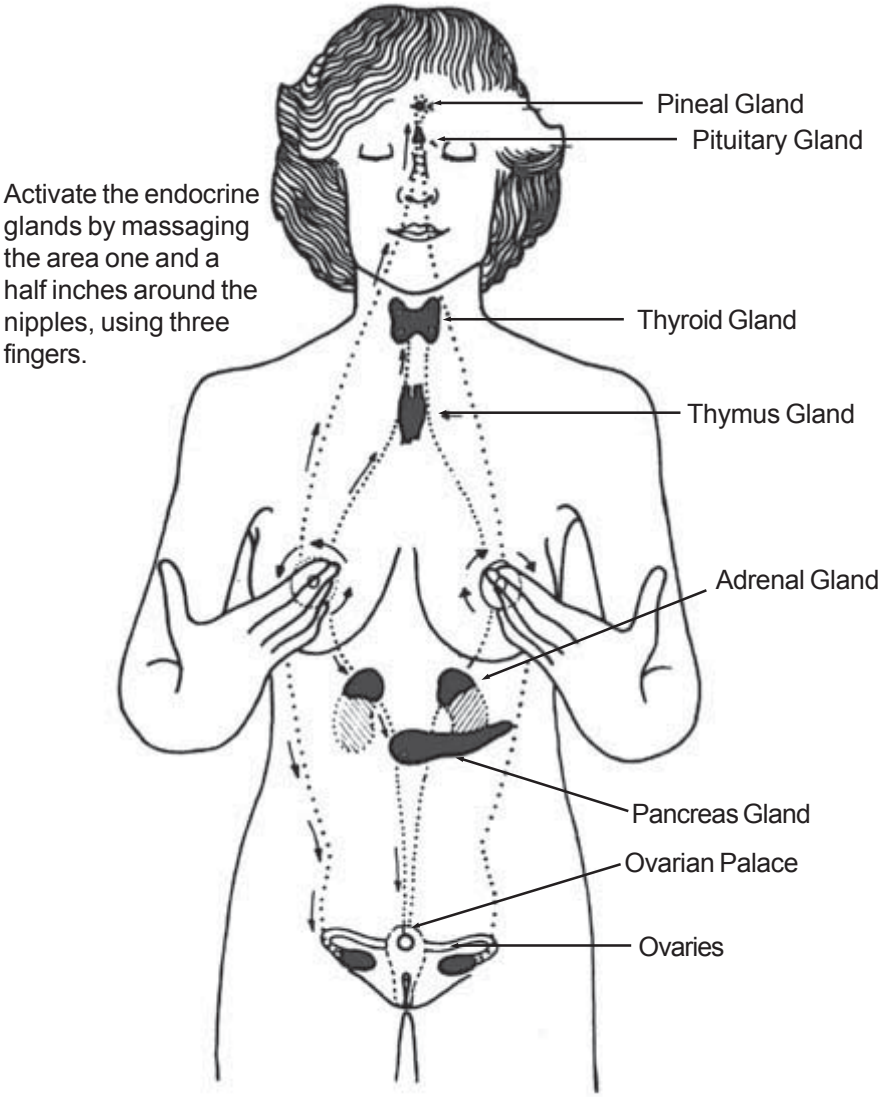


Fig. 6.6 *Activating the Endocrine Glands*

(1) Gland Chi Arousai

When certain glands are stimulated to secrete their hormones (Fig. 6.6), the organs with which they are associated become activated, and eventually every cell of the body is affected. Stimulation of the breasts especially affects the pineal, pituitary and thymus glands.

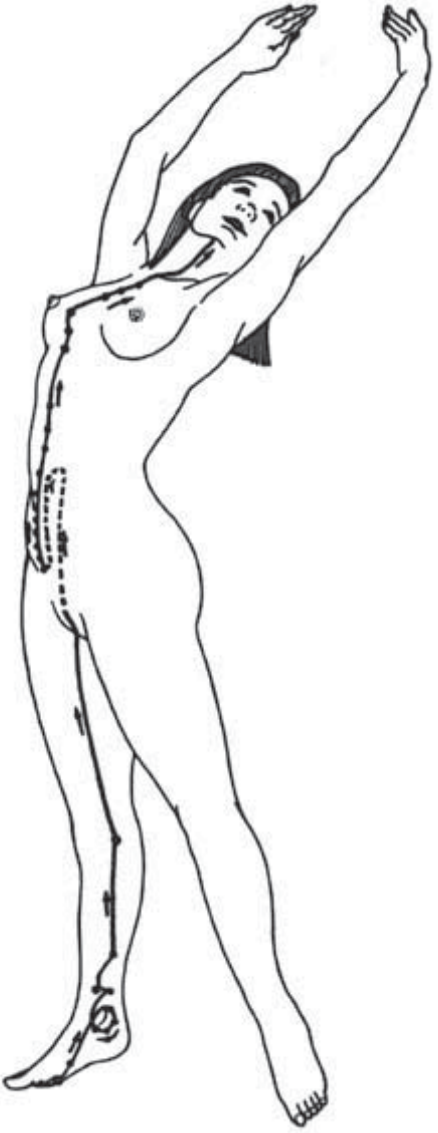


Fig. 6.7 *Course of the Kidney Meridian*

(A) Pineal Gland Chi

The kidney meridian passes through the breasts (Fig. 6.7), and as you use your fingers to gently massage the nipples, their stimulation activates the kidneys and bladder as well, which, in turn, help to activate the sexual glands. The clitoris, having a direct relationship to the pineal gland at the hormonal pathway, responds and brings the sensation to this point. The pineal gland is the body's time clock and compass and in later practice has the ability to reflect light. When it is fully developed, it can see the true light of creation and will guide the spirit back to the place of its origin. (Fig. 6.8)

(B) Pituitary Gland Chi

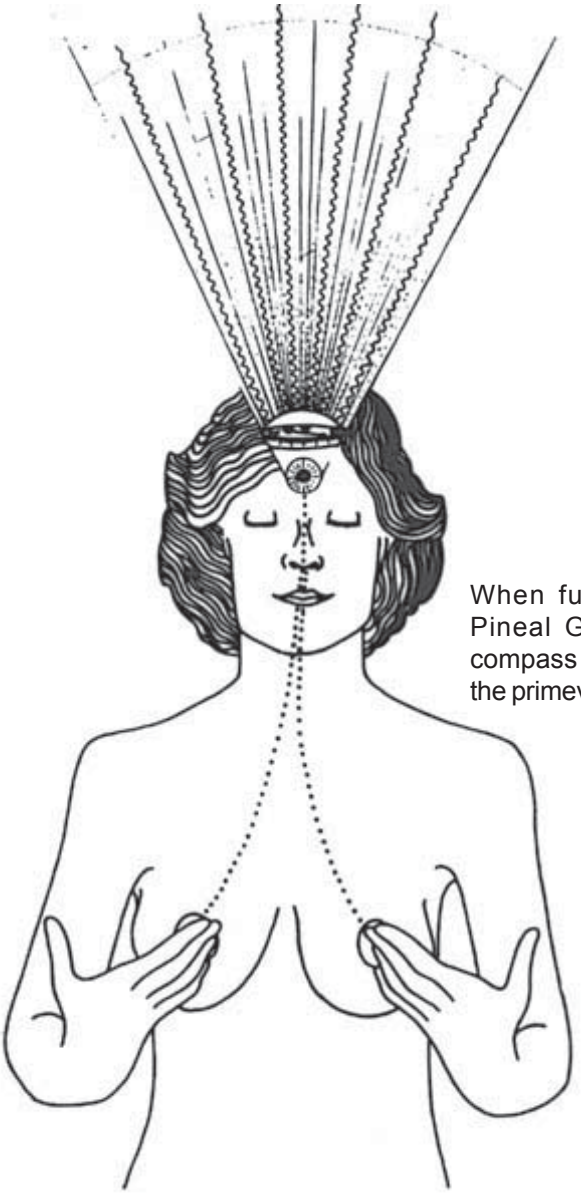
From the pineal gland the sensation descends into the next gland along the hormonal pathway the pituitary gland, situated at the hind part of the third eye energy center. This gland has a wide range of effects upon growth, metabolism and other functions of the body. Taoists believe the pituitary gland governs intelligence, thought and memory. The pituitary is the master gland from which all other glands are activated.

(C) Thyroid and Parathyroid Glands' Chi

As the energy continues to descend the hormonal pathway the thyroid and parathyroid glands become activated. The thyroid gland is situated on either side of the trachea, or windpipe, close to the larynx and arising from the same tissue, and almost from the same spot, as the anterior of the pituitary gland. Opposite the C-7 point, the thyroid gland corresponds to the C-7 energy center. It is the gland that is vitally important to growth. Heavier in the female than in the male, this gland becomes enlarged during sexual excitement, menstruation, and pregnancy. The Taoists consider this an energy gland, regulating the metabolism of the cells in the body, and one of the most important centers because it controls the growth and development of the body and mind. It is also considered the great link between the brain and the reproductive organs.

(D) Thymus Gland Chi

Next in the descending order of the hormonal pathway is the thymus gland, or gland of rejuvenation, located at the gland of



When fully developed, the Pineal Gland becomes the compass guiding the spirit to the primeval Tao.

Fig. 6.8 *Activating the Pineal Gland*

heart energy center and descending from, covering and overlapping the upper portion of the heart. This is a lymphoid organ (related to the lymphatic glands which reaches its greatest size at the beginning of puberty and gradually diminishes in side and activity as time goes on. The Taoists consider this to be a gland that, when properly activated and harmonized with the energy from the pituitary gland energy center and the generative force of the sexual organs, can reverse the aging process.

(E) Pancreas Gland Chi

The energy then descends to the pancreas, located between the lower part of the stomach between the liver and spleen. The pancreas is a gland that maintains control over digestion, body temperature and blood sugar levels.

(F) Adrenal Glands Chi

Next, in descending order are the adrenal glands situated atop the kidneys at the adrenal glands' energy center or T-11. The adrenal glands', or energy glands', function is to support the kidneys, but they are also the major producers of adrenalin in the body. Adrenalin is a hormone which stimulates the heart, thymus gland, liver spleen and pancreas. In addition, the adrenal glands support the functions of the kidneys, spine and nervous system, brain, bones and bone marrow. Stimulation of the adrenal glands adds strength and alertness to both physical and mental activity.

(G) Sex Glands Chi

Stimulation of the kidneys occurs when the kidney meridian running through the breasts is massaged. In turn, all the other glands become stimulated until finally the sexual organs, last in descending order of the hormone pathway, become energized. Hormone secretions from the sex glands are responsible for sexual response, sexual energy and reproduction. The sex glands include the vagina, uterus and breasts, but it is the Ovarian Palace which houses the woman's sexual energy center. All other energy now is awakened.

Balancing and raising the energy level of the glands in the body is an important part of the Taoist way of developing, healing and strengthening the physical body. This is crucial to the higher levels of practice in which all the glands provide nourishment to the formation of a spiritual body.

(2) Organ Chi Arousal

With the glands activated, a response can be felt in the organs. This response will have physical and mental manifestations described as follows:

(A) Lung and Large Intestine Chi *(Fig. 6.9)*

The first Chi that can be felt is the Chi of the lungs and their associated organ, the large intestine. The properties of the lungs are dryness and coolness: their virtue energies are courage and righteousness. The feeling of righteousness can be as different as each person. It might feel straight or tall, or like a bright white color pure, fresh and uplifting. Feel this energy generate from the lungs.

The negative emotions of the lungs are sadness and grief. The feelings can be experienced as flat, or like a collapsed ball: they can be gray, musty, cold and low, with no force: downtrodden. Since you do not like to feel this way, cultivate good virtue and connect yourself with the good feelings of the lungs mentioned above: pure, fresh, uplifting. Bring these good feelings to the breasts.

The lungs' Chi readiness is manifested physically by faster breathing and copious saliva, which you feel must be swallowed quickly. These signs indicate that the Chi of the lungs is ready to come forth.

(B) Heart and Small Intestine Chi *(Fig. 6.10)*

Second is heart Chi: the heart's associated organ is the small intestine. The heart contains hot energy. Its virtues are honor; respect, joy and happiness. These virtues are manifested in feeling straight and open: they are bright red, warm, full, comfortable, secure and satisfying. The negative manifestations of heart and small intestine Chi are impatience, hastiness and cruelty. This can feel spiny or sharp, muddy, burnt, noisy, irregular and irritating, all feelings that you do not like to have in your system.

The physical manifestations of heart energy are revealed by observing the tongue becoming mobile, saliva seeming to overflow, and a growling sound emanating from the throat. These are signs that the Chi of the heart is prepared.

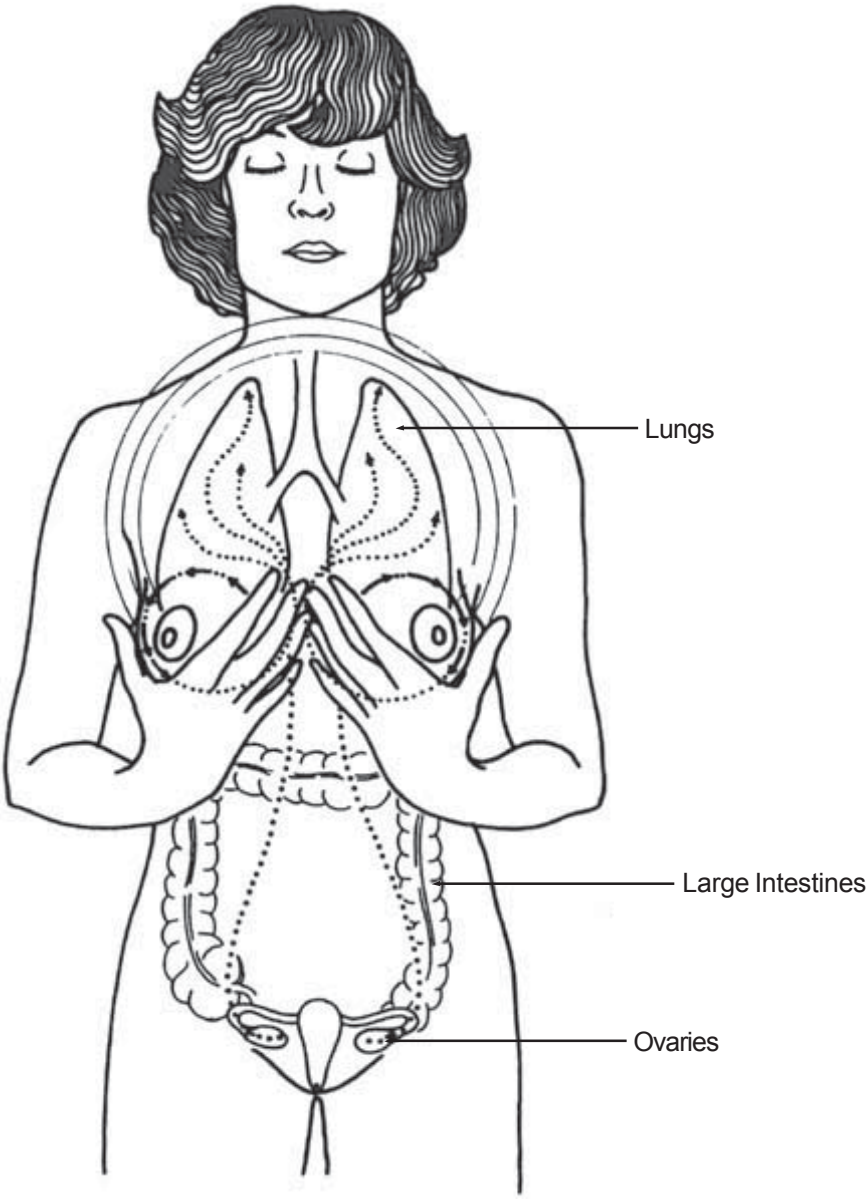


Fig. 6.9 *Lungs and Large Intestine Chi*

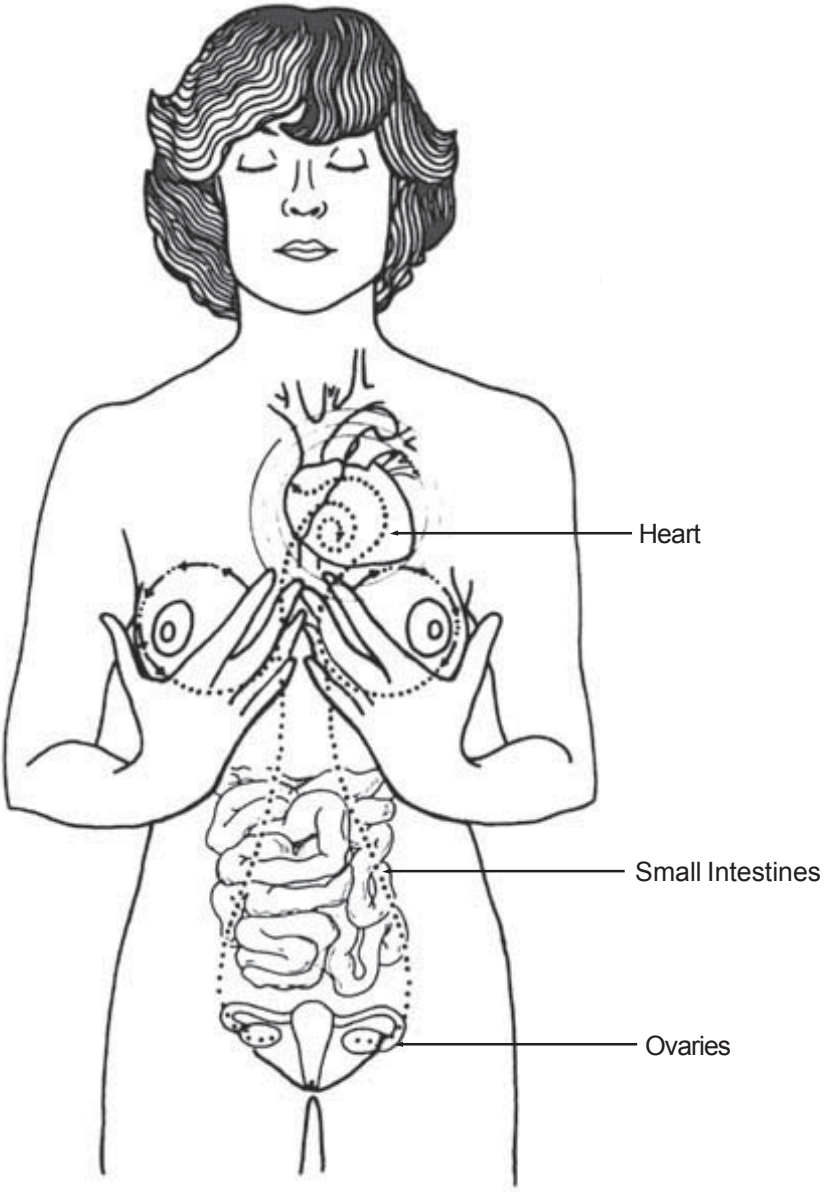


Fig. 6.10 *Heart and Small Intestine Chi*

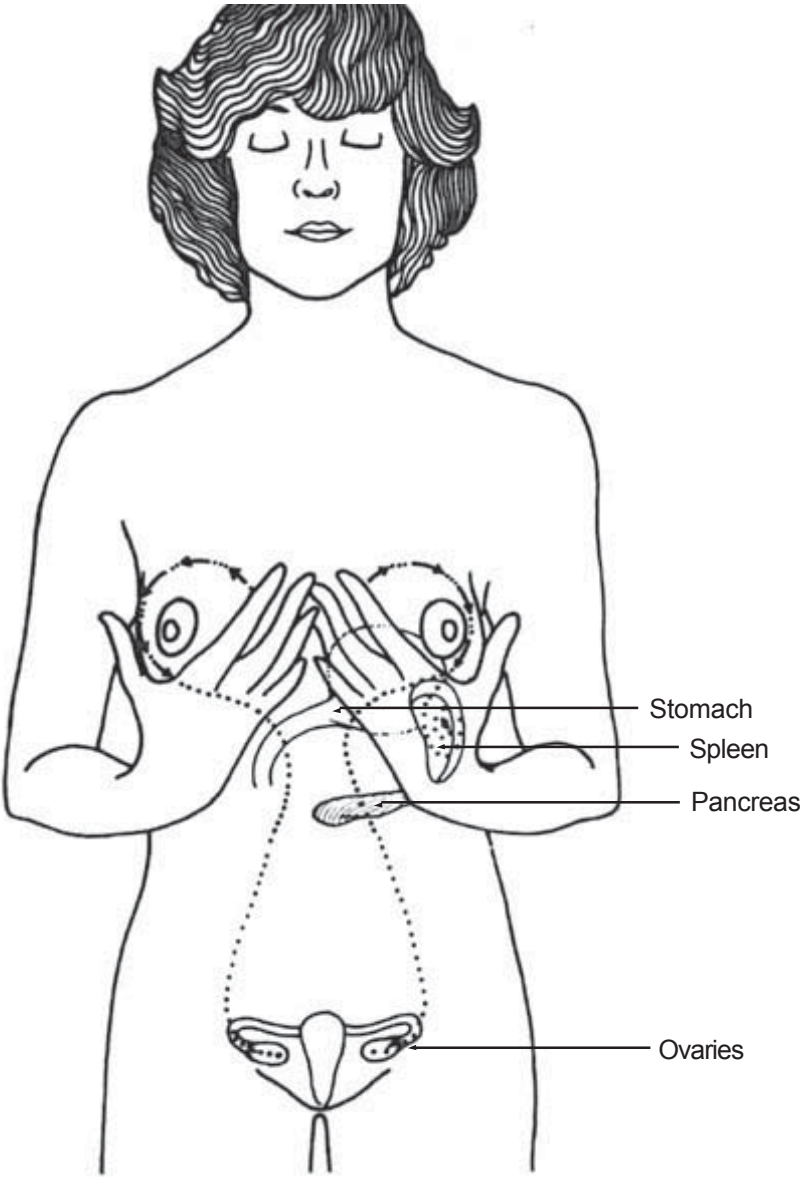


Fig. 6.11 *Spleen, stomach and Pancreas Chi*

(C) Spleen, Stomach and Pancreas Chi *(Fig. 6.11)*

The third Chi is felt from the spleen and its associated organs, the stomach and pancreas. Mild, harmonic energy is the property of the spleen. Fairness its good virtue, and the feeling can be a wide-open chest, clean, soft and balanced, even smooth. The negative emotion of worry feels irregular cloudy, humid, uncertain and out of proportion.

The physical manifestation of these organs' energy can be observed when your hands have the desire to grasp and squeeze the breasts. This indicates that the spleen energy is in readiness.

(D) Kidneys and Bladder Chi *(Fig. 6.12)*

Next is the Chi of the kidneys and their associated organ, the bladder; Their property is cold energy, and their virtues are gentleness. alertness and stillness. This can feel round, full, expansive, bright blue, fresh, cool and comfortable, pleasant to the ear: mild, and honey-like in taste. The negative feelings are fear, stress, fright, awkwardness, tiny, compressed, dark, gray, cloudy, a cold chill, tight or closed in, and scattered.

The physical manifestation of these organs' Chi can be observed when you feel as if you are drowning with fluid in the vagina. This means that the Chi of the kidneys is ready.

(E) Liver and Gall Bladder Chi *(Fig. 6.13)*

Liver Chi will be felt next. The liver's associated organ is the gall bladder. Its properties are warm and energetic. The virtues are kindness and self-expansion. They can feel round, smooth, soft, green, sweet, fragrant, warm and pleasant, nurturing, and as if they were gently expanding. The negative emotions are anger aggression, arrogance and can feel spear-like or sharp, cloudy, hot and explosive, loud, painful, tough, rough, and bitter.

The physical manifestation of these organs' Chi can be observed when the eyes become watery. This is the indication that the Chi of the liver is ready.

(F) Bone Chi

The next Chi that will be felt is bone Chi. When you feel like sucking the tongue, the Chi from the bones is prepared.

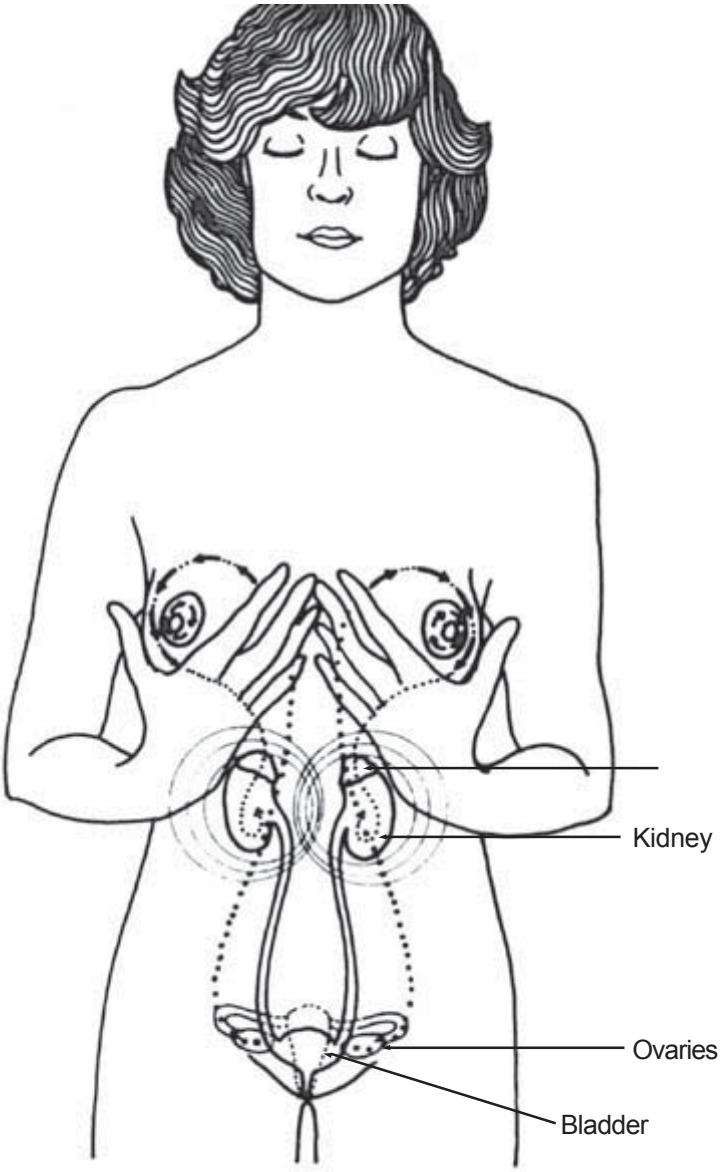


Fig. 6.12 *Kidneys, Adrenal Glands and Bladder Chi*

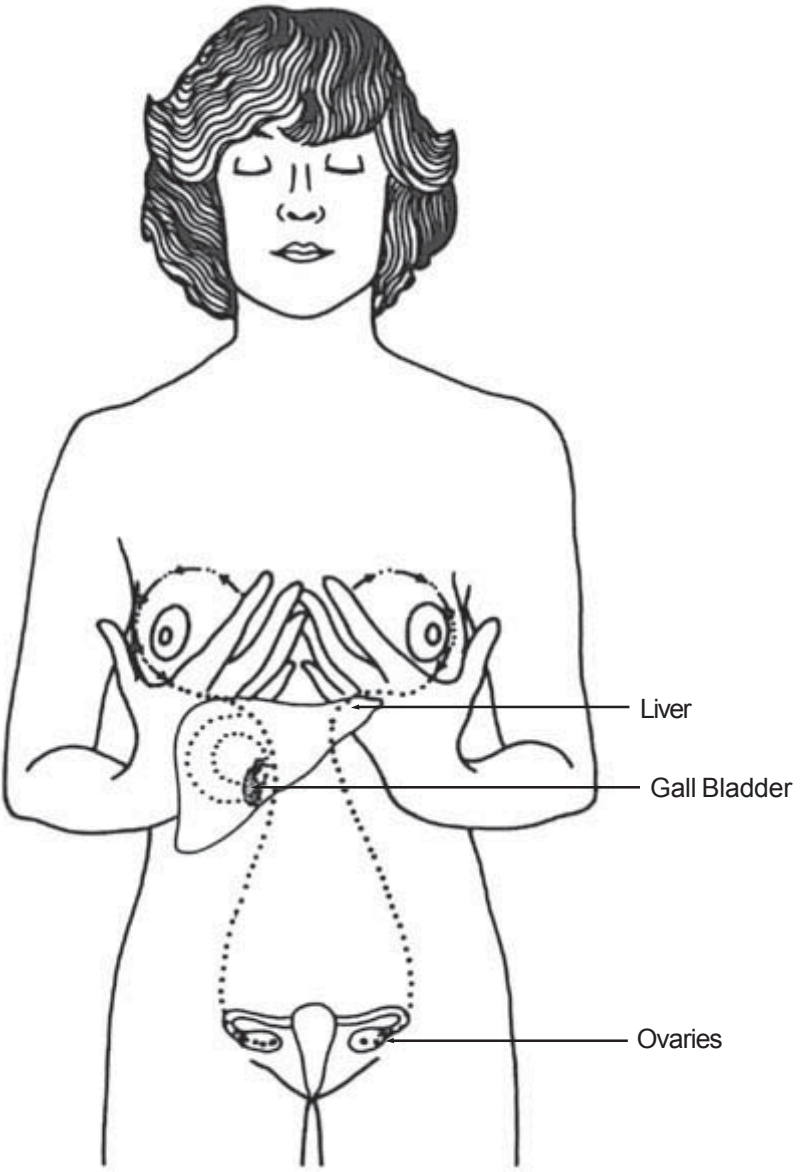


Fig. 6.13 *Liver and Gall Bladder Chi*

(G) Tendons and Sinews Chi

Tendons and sinews Chi is ready and will manifest itself you feel like raising your legs.

(H) Blood Chi

Blood Chi is ready when you are moved to touch your vagina and clitoris.

(I) Chi of the Flesh

Finally you will feel the Chi of the flesh. You will feel that this Chi is ready when the urge is to massage the nipples, vagina and clitoris.

3. Procedure of Massaging the Breasts

Begin the procedure by massaging the breasts to activate the ovaries' sexual energy, which in turn will activate the energy of the glands and organs. This exercise can be performed while sitting on a chair or on the edge of a bed.

A. Begin in a Sitting Position.

Be seated. As in Ovarian Breathing, you will want a steady and fairly firm pressure on the vagina's opening, especially on the clitoris. Sit on a fairly hard, round object such as a ball or a rolled-up washcloth. You may immediately experience a pleasant sensation due to the stimulation of the genital area. If you are well-practiced in Iron Shirt and the Microcosmic Orbit, you will not require an object.

B. Bring Chi up the Spinal Cord.

At this stage of your practice, you should be able to pull the middle and the back part of the anus up, thereby bringing the Chi up through the spinal cord, and then all the way up to the pineal gland. Hold it there for a while. Then pull up the left and right sides of the anus, and bring the Chi to the left and right nipples.

C. Warm your Hands.

Inhale and rub your hands together vigorously. This will create heat in your hands by bringing the energy of your body into your palms and fingers. Place your hands on your breasts in order to feel the heat from your hands entering the skin.

D. Massage the Glands

(1) Place the tongue on the roof of the mouth.

(2) Maintaining constant contact with the skin, very lightly massage your breasts using the second, middle and fourth fingertips of both hands. Moving your right hand clockwise and your left hand counterclockwise, gently press the breasts against the rib cage, proceeding very slowly down to the area of the xyphoid process under the base of the sternum. Bring your awareness there.

(3) To activate the glands, press your three fingers to the kidney point located approximately one and a half inches in from the nipple. This point is determined by taking the second joint on the middle finger of each hand and placing it directly on the nipple with the hands against the sides of the body The fingers will automatically fall so that the tips are at this kidney point. Use the same three fingers and massage, circling around toward the center (right hand clockwise, left hand counterclockwise). That circle will touch the kidney liver pericardium and spleen meridians.

(4) Continue to massage your breasts with your fingertips barely touching the skin and gently rotating. Massage them very slowly in an outward, circular motion (right hand clockwise, left hand counterclockwise). Bring your awareness there.

(5) When you feel the clitoris is activated, the sexual energy will surge to the head and activate the pineal gland. You might feel a pressure present in the head as the energy begins to radiate, like a beacon from a lighthouse, to the pituitary gland.

(6) Continue massaging and move your attention down to the pituitary gland, feeling the intense pressure in the forehead as it radiates a blue light.

(7) Permit the activated energy to descend to the thyroid and parathyroid glands. Feel the expansion of these two glands as they become activated by the Chi of the sexual, pineal and pituitary glands, and then feel them radiate the energy outward. Blend their Chi together with the Chi of the two higher glands. Let this special blend of glands' Chi flow down to the thymus.

(8) Continue to gently massage the breasts and settle your mind on the thymus gland, activating that gland. Feel it expand and blossom like a flower. Blend all the glands Chi gathered together thus far and permit their energy to radiate to the breast. Use your mind to blend their Chi in the breasts.

(9) Let the specially blended Chi flow down to the pancreas and feel the pancreas activate. Let the pancreas energy flow to the breasts.

(10) Allow the mind to concentrate on the adrenal glands, letting the special blend of energy you have created activate the adrenal glands. As you feel them activate, expand and release this special energy: bring this energy up to the breasts, where all the glands' energy is blending together .This glands' energy will help to activate the organs' Chi.

E. Massage the Organs

(1) Be aware of your nose and lungs, and continue to rub your breasts slowly, feeling the Chi from the thymus activate the breasts' and lungs' Chi. Feel the energy of righteousness as straight, bright white, pure and expanding. Fill the lungs and direct their Chi to the breasts.

(2) Be aware of your tongue and heart. Feel the Chi from the heart in the form of joy, happiness, respect and honor and direct this energy to the breasts. Think of the breasts as melting pots that will melt the glands' and organs' energy, fusing them into a very special kind of hormonal energy and the kind of compassion which is capable of rejuvenating the glands, organs and whole system.

(3) Direct your attention to your mouth: move your mouth around and be aware of the sexually aroused energy as it activates the spleen energy. Raise the virtuous energy of fairness, and feel it manifested in a wide open feeling in the chest. Feel the Chi of the spleen and direct it to the breasts. Feel the virtues fuse.

(4) Now direct the sexual Chi, which started from the clitoris and the breasts, to the kidneys. Activate the kidneys' Chi and expand the virtuous energy of gentleness, alertness and stillness, bringing it to the breasts. As you rub your breasts and activate each organ's Chi, this Chi will automatically be drawn to the breasts. Feel the Chi start to fuse with all the other Chi virtues, combining into a very special Chi.

(5) Direct the sexual Chi to the liver to activate the liver's Chi. Raise the kindness virtue and the feeling of self-expansion, also drawing these feelings to the breasts. At this time you should feel the vagina moistening from a sweating action of the vaginal walls, plus the secretion of glandular fluid. Soon the clitoris will become

engorged with blood and will become erect, and the nipples will become firmer: The outer lips of the vagina will become swollen to nearly twice their size. The inner lips will also swell.

(6) Then, place the palms of the hands on the knees, place your attention upon your breasts, and experience the energy there. By now you have accumulated a lot of energy in the breasts, where it all has melted together into compassion Chi. The nipples have become hard and erect with the swelling of the breasts. Let the energy flow like a funnel into the nipples as you feel the tingling warmth of sexual arousal. Wait a few moments as the breast energy accumulates in the nipples, and then using your concentration let the energy drop like a plumb line down into the ovaries. Your "inner eye" can help to direct the Chi there. Pause and feel the accumulated breast energy and wary energy.

(7) Become aware of your breathing and concentrate your attention on the ovaries, sending each exhalation directly to the ovaries. Concentrate on the ovaries, and use your mind and some muscles to move the lips of the vagina until you feel them swell. The PC Muscle will be tense, and then will relax and begin to pulsate. Feel an increase in the pulsation of the vagina, and feel it open and close like the petals of a flower: When this energy becomes strong, let the vagina close in and draw the energy from both ovaries to merge in the Ovarian Palace (located three inches below the navel at the cervix). You can slightly squeeze, tensing the cervix, and concentrate the sexual energy at this point. You are entering the orgasmic phase. With these practices you can direct the orgasm inward, and you can extend the orgasm more than you have ever dreamed you could. You have now completed stage one of the Orgasmic Draw. The Chi, which is ready is now comprised of the organs', glands', virtues' and sexual energies. Practice this stage, activating the clitoris and the thymus and pineal glands, for a week before you proceed with the Orgamic Draw. You will actuallyfeel the Chi in these areas. Then continue with this exercise, now moving to the lungs, the heart and spleen, etc., for another week. Once you are able to practice the entire sequence well, activating and collecting the glands' and organs' Chi will take only five to ten minutes per session. When you feel that the sexual Chi is ready at the Ovarian Palace, you can begin the Orgasmic Draw.

4. Procedure of the Orgasmic Draw: Moving the Aroused Organs' and Glands' Chi Upward Step-By-Step

A. Begin in with the Breast Message.

Use the same sitting position as you did previously for the breast massage. If sitting on a chair have your feet fist on the floor: If you need some more stimulation you can use the hard, round object previously described to press against the opening of your vagina, touching your clitoris. Stimulate yourself by rubbing your breasts, activating the organs' and glands' Chi. Fuse this with the sexual energy to become the energy of healing and compassion. Direct the sexual energy from the nipples down to the ovaries, and expand the energy into the ovaries and genitals, finally concentrating it in the Ovarian Palace.

B. Perform Muscle Contractions at the Point of Orgasm.

Inhale deeply through your nose when you are near or in the midst of orgasm. Simultaneously clench both fists and claw your feet down, making them feel like vacuum pumps sucking at the floor: At the same time clench your jaw, tighten the Cranial Pump at the back of your neck, and press your tongue firmly to the roof of your mouth.

C. Bring the sexual energy down to the Perineum (Hui-Yin).

Inhale once more and draw up the entire genital-anus region, concentrating on the Hui-Yin (perineum), urogenital diaphragm, and especially the front part of the perineum. Pull the energy from the Ovarian Palace downward to the perineum by squeezing the vagina's outer and inner lips as tightly as possible, feeling the force squeeze the clitoris. Holding your breath for a while, inhale again, contract and pull down the front part of the anus, holding your breath for a while. Feel the sexual energy being pulled down and collected at the perineum. With all muscles flexed, inhale, clench, and pull up your Ovarian Palace and sexual region repeatedly, holding the energy at the front part of the perineum. Practice nine of these hard contractions, inhaling without exhaling. Each time pull down from the Ovarian Palace to the front part of the perineum. Retention of the energy at the perineum is very important. If it is released, the sexual energy will drop down to the sexual organs or leak out the vagina, and you will have to start the exercise again. To retain the

energy at a certain point means you must settle your mind and concentrate on that point. When you become out of breath, exhale and release all the muscles in the body: You may feel energy rush up, down and around the sexual region, especially during this resting period. Use your mind to guide the energy from the Ovarian Palace to the front part of the perineum.

After practicing this exercise for a week or two, you may begin to feel the muscle contractions automatically pull your vagina in and squeeze the clitoris. The anus will feel as though closed very tightly. Remember that unless otherwise indicated, all breathing is through the nose. The whole body must relax on the exhale. Allow all tension to flow out of you as if you were in meditation. Practice this exercise for at least one week.

D. Raise the sexual energy to the sacrum by arching the sacrum and activating the sacral pump.

Start with arousing the breasts to stimulate the glands' and organs' energies to fuse with the sexual energy. Clench the fists, feet, neck and jaws on inhalation. Draw up the entire genital area, urogenital diaphragm, anus, and especially the vagina. Squeeze the energy tightly to the clitoris and pull it up to the perineum. Rest for a while, inhale again and contract the front part of the anus, drawing the sexual energy down from the ovaries to the perineum. Holding your breath for a while, inhale again, and contract the middle part of the anus. At the same time contract the back part of the anus and pull up toward the coccyx, a little up from the bottom tip of your spine, drawing the sexual energy up through the perineum, and continue to draw it up to your coccyx. Feel it enter the hiatus in the sacrum.

Activate your Sacral Pump by arching the sacrum back and outward thereby straightening the sacrum. This makes it easier for the Chi to rise. Hold the energy at the sacral area and continue to inhale and pull the sexual energy in from the Ovarian Palace and sexual organs, until you feel the energy in your clitoris and your vagina begin to subside. Sometimes this requires three to nine inhalations with increasingly harder contractions. Squeezing the buttocks more tightly may help you force the sexual healing energy (Ching Chi) into the sacrum. When you are out of breath, exhale. Then relax and let your sacrum and neck return to their normal positions. This resting period will induce the activation of the Sacral

and Cranial Pumps. You will gradually have the sensation of something entering into the spinal cord as the sacrum begins to open for more Chi to flow.

If you are well practiced in Ovarian Breathing, or have already opened your Microcosmic Orbit, this step of the Orgasmic Draw will be much easier. Otherwise, the sacral area is usually a little difficult to pump the energy through since, as previously noted, sexual energy is denser than other types of Chi, and aroused sexual energy is denser still. This is where the Sacral Pump enters in. As mentioned in the Ovarian Breathing exercise, some people will experience pain, tingling, or a “pins and needles” sensation when the sexual energy enters the sacral hiatus. This should not be alarming. Remember you can assist the sexual energy in its upward push past the coccyx by gently massaging the area with a silk cloth from time to time.

E. Draw sexual energy to T-11 by bowing the spine outward.

Once you are able to move the energy through your sacrum, spend the next week drawing the energy to T-11 (on the spine, opposite your solar plexus). Repeat the same procedure: arousing, clenching, and inhaling. Pump the energy up to the perineum, sacrum, and then to T-11. Again, because sexual energy is denser than life-force (Chi), you have to accommodate it by bowing your spine outward, as if you were backing up against a wall and pushing toward it to straighten your spine. This will increase the pumping action and allow for a freer passage of Ching Chi. Retain the energy at T-11 until this point feels full of energy. Practice nine hard contractions. Each time bring the energy from its source at the Ovarian Palace to T-11: each time inhale without exhaling. Then exhale and relax every part of your body, mentally guiding the Chi to flow from the Ovarian Palace to T-11.

F. Push from the sternum and bring sexual energy to C-7. Your next station is C-7 (at the base of your neck). Practice in the same manner as described above: continue to draw the energy down to the perineum and up to the sacrum (arching the sacrum), up to T-11 (bowing the spine outward), to C-7, and push the top of the sternum back toward C-7 at the base of the neck. This will help increase the pumping action of the spine, activate the thymus gland, join the thoracic and cervical vertebrae, and help push the sexual energy up.

G. Straighten the spine and bring the sexual energy to the base of the skull Jade Pillow).

The next stopping place is your Jade Pillow (located at the back of your head between C-1 and the base of the skull). Practice in the same manner as previously described: continue to draw the energy down from the Ovarian Palace to the perineum, up to the sacrum (arching the sacrum), up to T-11 (bowing the T-11 outward), up to C-7 (pushing from the sternum to C-7), thereby straightening the entire spine. Inhale and pull up to the Jade Pillow, then push the chin in toward the back and base of the skull. This will activate the Cranial Pump. At this point clench the teeth, squeeze the muscles at the back of the skull, and press your tongue hard to the palate. All of these movements will increase the Cranial pumping action. The Cranial Pump, as it fills with energy and begins to move the energy through, may pound furiously.

H. Activate the cranial pump and bring the sexual energy to the crown (Pai-Hui).

The next station for energy is the Pai-Hui (located at the crown of your head). Draw two imaginary lines from the tip of your nose and the tip of an ear straight up to the top of the head. The point where they meet is the center of your head, or crown. Press around this area and find the most sensitive spot. This is the Pai-Hui. You will be able to confirm this as the proper spot when you feel the energy reach this point.

Repeat the same process of arousing the sexual energy by massaging the breasts. When you are ready bring the energy down from the Ovarian Palace, draw it up to the sacrum, T-11, and C-7, straighten the spine, and draw the energy up to the Jade Pillow. Tuck your chin in slightly and squeeze the skull to further activate the upper Cranial Pump. Maintain a straight upper spine. Turn your eyes and all your senses up to the top of the crown. Press your tongue firmly to the palate to help activate the Cranial Pump located there. Persist in pulling the energy to the top of your head until you feel the aroused energy at the lower center subside, all the energy having been transferred to the higher center. Practice nine hard contractions and continue to inhale, each time pulling the energy from the Ovarian Palace up to the crown. Use your mind, eyes and all of your senses to spiral the sexual creative energy nine, eighteen, or thirty-six times, first in a clockwise, and then in a

counterclockwise direction. Some people feel the energy first start to flow counterclockwise. If this is the case, simply let it flow. When the spiraling has finished, rest for a while and be aware of the sensational feeling as the energy enters the brain. Let the extra energy flow down the front channel, or Functional Channel, to the third eye, nose, throat, heart center, solar plexus, and finally to the navel where this extra energy can be stored.

When the energy finally goes up into your head, it will produce a very distinct warm and tingling sensation. The usual immediate response is that it feels good and amazingly refreshing. Some people claim they can think more clearly and are more creative. This is possible once they have reached the stage where they can easily convert the Ching Chi into expanded consciousness automatically. As previously emphasized, this sexual energy is later converted into original Chi, the pure Life-force, during the spiritual levels of the Taoist practice.

Remember that all the organs and glands are activated as a result of this massage.

5. Learn to use your mind to direct the aroused Organs' and glands' CMI.

Practice the Orgasmic Draw until you can pull the sexual energy up from the ovaries to the pineal gland in one draw of the "straw." In the beginning simply move from one station to another. Later this back channel, the Governor Channel, will feel more open. Eventually you will be able to settle your mind on the ovaries and the pineal gland at the crown of the head, and bring the sexual energy from the ovaries all the way up to the brain through what has been previously described as the Thrusting Channel, using only the power of the mind and all the senses. Up to this point in your practice, you had incorporated the assistance of muscle power to direct the sexual energy upward. At this stage, through practice, the muscles have become well developed and are responding automatically This allows you the freedom to eventually use only the power of your mind and senses to direct the aroused organs' and glands' Chi upward.

You must take time to really feel the sexual energy when you practice. Do not rush, and always maintain that pumping action after the exercise as you breathe in and out. Gradually use your mind more and your body less as you practice. Let the feeling of the energy be your guide.

A. Golden Nectar

Since this sexual energy, compared to other sexual energy is cooler and more creative, it cannot harm you if left in the head. When you feel that the energy has filled the brain, you will feel a honey-like fluid flow from the pituitary gland down to the nose, palate and tongue. The taste will vary with different people and on different days. It is called “Golden Nectar” and can taste delicate, like champagne, honey, coconut juice, or perhaps slightly metallic. It can feel like a warm tingling sensation on your tongue. For some people the energy flows from the brain into the pituitary gland, down the nose, palate and mouth, to the throat, heart, solar plexus, and finally to the navel. As your practice grows, the ovaries’ energy will flow thicker eventually feeling like honey flowing from a jar (the brain) into a cauldron (the navel).

B. Circulating the Energy during Lovemaking

During lovemaking we need to move the energy in a circle, and not just store it in the brain, in order to direct the excess energy to revitalize the organs and glands. This circulation is aided by the internal pressures you create during the Orgasmic Draw as you squeeze the perineum and buttocks. As you press the lower trunk energy into and up the spine, press the energy in your upper body downward, and hold the contraction as long as you can. When you exhale completely relax the entire body. The natural direction of the Chi is to continue in a circle up the back of your body and down the front to the navel.

Continue cycling the sexual energy in this way until your orgasm travels upward into the organs, glands and higher center In the beginning this might take three to nine such cycles, but after you have practiced for a while, one such round is enough.

6. Organs’ Orgasm

A. Characteristics of Each Organ

In the Tao system we believe the organs and glands are the creation and storage places of the positive and negative emotions of our life. Each organ and gland stores and accumulates different kinds of emotional energy. Once the organ is depleted and weak, the negative emotions easily settle in, or the organ is influenced by the

other organs of the body. If we become aware of the source of unwanted energy; we will have a way to correct it. Each organ's characteristics (i.e., associated organ, element, etc.) are as follows:

(1) Lungs

Associated organ: large intestine. Element: metal. Season: autumn-dryness. Negative emotions: sadness, grief, sorrow. Positive emotions: righteousness, surrender letting-go, emptiness. Parts of the body: chest, inner arms, thumbs. Senses: nose-smell, mucous, skin, touch.

(2) Kidneys

Associated organ: bladder, Element: water, Season: winter, Negative emotion: fear. Positive emotions: gentleness, alertness, stillness. Parts of the body: side of foot, inner legs, chest. Senses: ears- hearing, bones.

(3) Liver

Associated organ: gall bladder, Element: wood. Season: spring. Negative emotions: anger, aggression. Positive emotions: kindness, self-expansion, identity Parts of the body: inner legs, groin, diaphragm, ribs. Senses: eyes-sight, tears.

(4) Heart

Associated organ: small intestine. Element: fire. Season: summer, Negative emotions: impatience, arrogance, hastiness, cruelty, violence. Positive emotions: joy, honor sincerity creativity, enthusiasm, spirit, radiance, light. Parts of the body: armpits, inner arms. Senses: tongue-taste, speech.

(5) Spleen

Associated organs: pancreas, stomach. Element: earth. Season: Indian summer, Negative emotions: worry, sympathy pity. Positive emotions: fairness, compassion, centering, music-making. Parts of the body: neck. Senses: mouth-taste, appetite.

(6) Triple Warmer (Circulation Sex)

There is no element, season or emotion associated with the Triple Warmer. The Triple Warmer refers to the three energy centers of the body:

The upper level: brain, heart, lungs. Property: hot.

The middle level: liver kidneys, stomach, pancreas, spleen. Property: warm.

The lower level: large and small intestines, bladder sexual organs. Property: cool.

The main goal of the organs' orgasm is to strengthen, satisfy and restore the organs to their natural state in order to generate good virtue and healing for ourselves and others.

B. Organs' Orgasm Practice Step-By-Step

Once you have practiced the steps above and have become successful in moving the aroused sexual Chi in the Microcosmic Orbit, you can begin to move this orgasm energy into the organs. Remember as you follow the steps below, always move the Chi in the Microcosmic Orbit first before continuing.

(1) Once the sexual energy is aroused, inhale and pull up the left and right anus to draw the energy to the left and right ovaries. Circulate the energy in the Microcosmic Orbit, and then drop the sexual Chi into the ovaries.

(2) When you begin to feel the sexual energy in the ovaries, move it to the left and right kidneys. Wrap the orgasmic energy: now highly refined by all of the organs and glands, with all of the combined virtues of those organs into compassion energy. Feel the kidneys bathe in this healing, creative and revitalizing energy. The actual sensation of a kidneys' orgasm is different from anything else. In fact, as you bring the compassion energy to each organ, each will have a different type of orgasmic feeling that is beyond words. It is greater than anything you have ever experienced. The organs' orgasms have a longer-lasting orgasmic feeling, bringing good health, fulfillment, joy and happiness. This kind of joy and fulfillment comes only from the sexual, creative, and generative qualities of the compassion energy that fills the organs.

Every time you move the orgasmic energy in the Microcosmic Orbit, pull it up to the ovaries, then to the left and right kidneys, and proceed, moving the energy up to:

(3) the spleen (on the left) and the liver (on the right):

(4) the left and right lungs: and

(5) the left and right sides of the brain.

(6) When you have become proficient in the Microcosmic Orbit

and moving the energy to the left and right organs, contract the middle anus to bring the sexual energy to the cervix:

(7) the aorta and venacava:

(8) the pancreas: and

(9) the heart. Be very careful moving the energy to the heart because problems can be created here. Be careful in the beginning not to draw too much sexual Chi into the heart.

(10) Next take the energy to the thymus gland. This is very important for women because when this center is rejuvenated, the sexual energy will be able to increase a great deal with the assistance of that gland, thereby increasing the assistance of the other glands.

(11) Next bring the energy to the thyroid and parathyroid glands:

(12) then to the pituitary gland:

(13) to the pineal gland; and

(14) up to the crown.

(15) A final refinement to remember is that the lower contraction is not centered In the stomach or abdominal region. You must not tighten your stomach muscles during the Orgasmic Draw as this will draw Chi away from the Microcosmic Orbit. We must concentrate on the front of the undertrunk, i.e., the vagina, perineum, and urogenital diaphragm. Our goal is to so train these muscles that by using them we can flood the body with restorative energy. Directing power from the lower trunk toward the center of the body pours energy into the navel region. Since ovary and egg energy, like the blood, tend to follow the Chi energy, the navel, in effect, grips the ovary and egg energy and pulls it up into the body through the spine. Therefore, if you contract the urogenital diaphragm as if you were holding in a bladderful of urine, you will lock the passages so tightly that no internal urge can burst through the sealing rings of muscle. Make sure that there is no infection in the urinary tract which can cause infection in the bladder when you stop the urine.

C. Daily Practice

Nothing will come of nothing. You must spend time in practice to reap the benefits. An ounce of practice is worth a ton of theory. Modem life, it seems, affords little time for anything but acquiring and spending. You must be willing to surrender some time to advance. The practice must become part of your daily routine. You will make some progress if you do the exercise more often than

not. If, however you practice as regularly as getting out of bed in the morning, progress will be swift, Chi will begin to build in your upper body, and you will be able to collect it at your navel.

Once you have mastered this technique, it requires only a few minutes each day to bring the sexual Chi to all the organs and glands with simply a few Orgasmic Draws. After a while when you do the Orgasmic Draw a few times you will feel, all at once, the sexual energy filling the organs and glands quickly.

If you can, practice six or nine complete contractions of the Orgasmic Draw, with each complete draw consisting of nine hard contractions. If possible, practice both in the morning and at night, and you will progress quickly. Once you have mastered the technique, eighteen to thirty-six repetitions performed morning and night should not be unduly strenuous. If you become extremely aroused, do fewer repetitions. With such intensity of training, you will easily develop the muscle tone required within a month or two. How quickly you progress is not important: what is essential is that you progress steadily. Rock bottom minimum should be one round per day; just to maintain the practice.

The preferred times for these exercises are from eleven a.m. until one pm., and eleven pm. until one a.m. During these periods the tide of Yin energy changes to Yang, and vice versa. At these times the power flows very well. If it is impossible to practice during these hours, do not be discouraged because as long as you exercise daily, you will definitely advance.

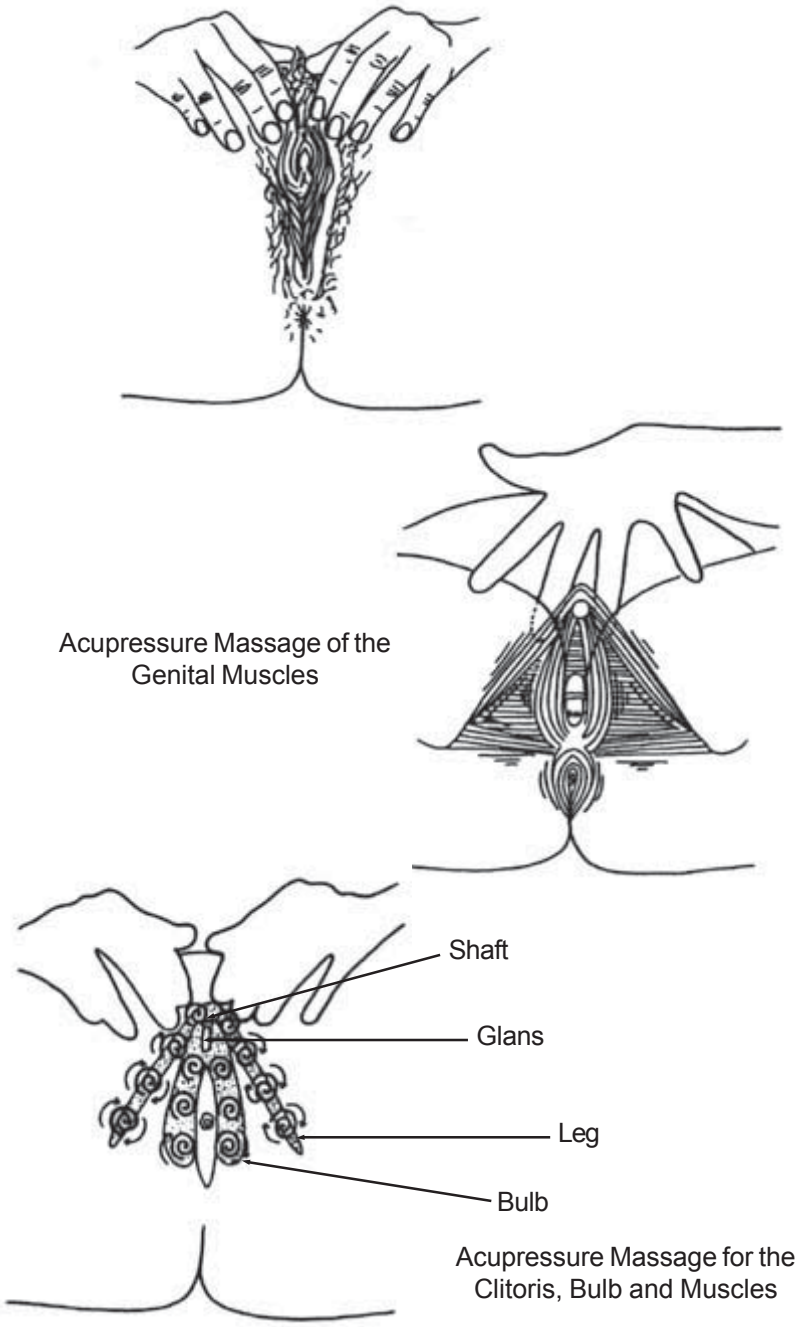


Fig. 6.14 *Massaging the Genitals after Practice*

D. Massage

After each practice session of the Orgasmic Draw, be sure to massage your breasts and genitals. This will disperse any energy that did not get drawn up and will alleviate any feelings of congestion or fullness.

Use your hands or a silk or taffeta scarf. Briskly rub your breasts in a circular motion, pressing them against your ribs. Then massage the mons and outer lips of the vagina, the perineum and the sacrum. This active massage should be done until you feel a cleanliness in your breasts and genitals. (Fig. 6.14)

One woman reported that she stopped the massaging step because she did not think it was important, and then noticed an increase in breast congestion right before her period. When she resumed the massage practice, she did not have any more problems premenstrually.

E. Safety Points for Ovarian Breathing, Ovarian Compression, and the Orgasmic Draw

1. Never lie flat on your back during these exercises. The Chi power may stick in your chest, causing considerable irritability and undue pressure on your heart.

2. Never lie on your left side when practicing. This also stresses the heart and overfills it with energy.

3. Never place any objects under your side while in the lying position. This will bend the channel of energy and way cause back pain.

If any of the problems mentioned in points 1 to 3 arise, release the energy safely by using the venting exercise described in Chapter 5. Any pain or discomfort should disappear within one week of beginning to vent.

4. Practice on an empty, but not hungry, stomach whenever possible. Always wait at least one hour after eating.

5. Wear loose clothes or wrap yourself in a light blanket during this practice. You will perspire if the exercises are done properly and will suffer a chill if you are not covered. After practice, change your clothes so that you are removed from the moisture of the fabric. There should be a gentle flow of clean air in the room. Avoid any drafts or wind. Wind tends to blow the Chi power away. It might cause your energy to become cold easily.

6. As you advance, beads of sweat may accumulate on your brow. Rub this sweat into the skin--it has desirable properties which should be returned to the body.

7. Do not breathe through the mouth during these exercises. It is easier to control the flow of air when breathing through the nose. Inhalation through the nose charges the air with energy and invigorates the brain.

8. Do not be concerned if you feel little effect during the first days or weeks of practice. Each person needs a varying amount of time before heat flows from her ovaries.

9. You must develop intense concentration. Keep your mind from wandering. Alow thoughts and images to leave without following them. Empty the vessel of the mind of thoughts, and powerful energy will stream into the void. Your power of concentration will develop greatly if you persist in this discipline. Learn the Microcosmic Orbit meditation, and carry it out immediately after practicing the Orgasmic Draw.

10. During the resting period close the eyes and follow the energy's path. The mind should not stray to thoughts or fantasies, but should flow with the course of the energy. This may sound very difficult. You will be amazed at how quickly you can become sensitive to your own energy. When you experience these energies within yourself, you will know exactly what we mean. Since the energy flows along natural courses, it guides your mind even as your mind guides the energy.

11. Those who suffer from constipation should practice in the morning. These exercises will help greatly to remedy the problem.

12. If you are infected with venereal disease, thoroughly cure your self before engaging in this exercise. Otherwise the pain will be quite severe when you draw so much blood and power to the pubic region.

F. Cleansing Side Effects

Although they may appear elementary. the exercises in this and the preceding chapter are highly refined techniques for increasing vital power. They are like sharp swords which must be used with care to perform their functions without harming oneself. If you follow the instructions closely you will not suffer any distressing side effects. Study the methods with seriousness, assimilate every line of the text, and persist until you have succeeded.

1. It has been our experience that many students of this method soon begin to move their bowels with unaccustomed ease. Some will pass an unusual amount of gas for a time and move the bowels two or three times per day. In this way the body uses its new resources thoroughly to cleanse and purify itself by completely natural means. The unusual number of evacuations and gas decreases within one or two months.

2. This purgative detoxification is followed by regular bowel movements and a deep sense of bodily purity and strength. The saliva becomes lighter and sweeter. Improvement in bowel function arises from the increased flow of vital energy into the entrails. This energizes the involuntary muscles and allows them to function with ease. There may also be a noticeable increase in burping, which is a healthy exhalation of impurities and noxious gas within the body Burping also lessens after a time, as the body becomes more refreshed.

3. The Orgasmic Draw is excellent for improvement of hemorrhoids. Hemorrhoids are caused by sedentary life styles, accumulated heavy toxins, gravitational pooling of blood, stressful bowel movements, and depressed levels of Chi energy in the Hui-Yin. In already existing hemorrhoids, the Orgasmic Draw may cause increased hemorrhoids bleeding for two to four weeks. If the bleeding is not excessive, perform the exercise at half strength. You will gradually be cured. The exercise remedies specific causes of hemorrhoids by evacuating stagnant blood from the anal blood vessels. While performing the Orgasmic Draw as a cure for hemorrhoids, you may use medication to speed the healing process. Horsetail Grass (Equisetum Narvensis) is an excellent remedy used as a tea and in sitz baths. People who have serious hemorrhoid problems should consult a doctor:

G. Summary of the Orgasmic Draw Exercise

1. Sit with your feet flat on the floor. Use the stimulation of a hard object against your vagina and clitoris, if necessary. Rub your breasts to stimulate yourself. Direct the sexual energy from the nipples down to the ovaries, and expand the energy in the ovaries and genitals, finally concentrating it in the Ovarian Palace.

2. Inhale deeply through your nose when you are near or in the midst of orgasm while simultaneously clenching both fists, clawing your feet, clenching your jaws, tightening the Cranial Pump at the

back of your neck, and pressing your tongue firmly to the roof of your mouth.

3. Inhale once more, drawing up the entire genital-anus region, especially concentrating on the front part of the Hui-Yin (perineum) and the urogenital diaphragm. Pull the energy from the Ovarian Palace downward to the perineum by squeezing the vagina's outer and inner lips as tightly as possible, thereby squeezing the clitoris. Hold your breath for a while, inhale again, contract and pull down the front part of the anus, again holding your breath. Feel the sexual energy collect at the perineum. With all muscles flexed, inhale without exhaling, clench, and pull up your sexual region nine times, holding the energy at the front part of the perineum. Retention of the energy here is very important. When out of breath exhale and release all the muscles in the body. Rest. Use your mind to guide the energy from the Ovarian Palace to The front part of the perineum.

4. Arouse the breasts again, and with an inhalation clench the fists, feet, neck and jaws. Draw up the entire genital area, urogenital diaphragm, anus, and especially the vagina, squeezing the energy tightly to the clitoris and pulling it up to the perineum. Rest for a while, inhale again and contract the front part of the anus, pulling the sexual energy down from the ovaries to the perineum. Hold your breath for a while and inhale again, contract the middle part of the anus and then the back part of the anus, pull the sexual energy up through the perineum, and continue to draw it up to your coccyx to enter the hiatus in the sacrum.

Arch the sacrum back and outward, straightening it, to activate the Sacral Pump. Hold the energy here and continue to inhale three to nine times, pulling the sexual energy in from the Ovarian Palace and sexual organs, with increasingly harder contractions if necessary, until the energy in your clitoris and your vagina subsides. Squeezing the buttocks mote tightly may be helpful. When you are out of breath, exhale: then relax and let your sacrum and neck return to their normal positions, and rest to induce the activation of the Sacral and Cranial Pumps as the Chi enters the spinal cord through the sacrum.

5. To draw the energy to T-11, repeat the same procedure described in 1. through 4. above. Bow your spine outward and straighten your spine to accommodate the dense sexual energy and increase the pumping action. Retain the energy at T-11 until

this point fills with energy. Bring the energy from the Ovarian Palace to T-11 nine times with hard contractions, inhaling each time without exhaling. Exhale and relax every part of your body, mentally guiding the Chi to flow from the Ovarian Palace to T-11.

6. To draw the energy to C-7, practice in the same manner as described above. As you bring the energy to C-7, inhale and push the top of the sternum back toward the base of the neck to straighten the entire spine, increase the pumping-up of the energy, activate the thymus gland, and join the thoracic and cervical vertebrae.

7. To draw the energy to your Jade Pillow, practice in the same manner as previously described. Inhale and pull up to the Jade Pillow, pushing the chin in toward the back and base of the skull to activate the Cranial Pump. Clench the teeth, squeeze the muscles at the back of the skull, and press your tongue hard to the palate to increase the pumping action.

8. Next draw the energy to the Pai-Hui, or crown of the head. Repeat the same process, maintaining a straight upper spine. Turn your eyes and all your senses up to the top of the skull. Press your tongue firmly to the palate to help activate the Cranial Pump. Continue to pull the energy to the top of your head until you feel the aroused energy at the lower center subside. Practice nine hard contractions and continue to inhale, each time pulling the energy from the Ovarian Palace up to the crown. Use your mind, eyes and all your senses to spiral the sexual creative energy nine, eighteen, or thirty-six times, first in a clockwise, and then in a counterclockwise direction. When the spiraling has finished, rest for a while and feel the energy enter the brain. Eventually by settling your mind on the ovaries and the gland at the crown of the head, you will bring the sexual energy from the ovaries to the brain by using only the power of the mind and all the senses.

9. The cool energy can be left in the brain or when you feel the brain is full, let the extra energy (Golden Nectar) flow down the Functional (front) Channel to the third eye, nose, throat, heart center solar plexus, and finally to the navel where it can be stored.

10. During lovemaking do not store the energy in the brain, but circulate it to direct the excess energy to revitalize the organs and glands. Squeeze your buttocks and perineum, and press the lower-trunk energy into and up the spine. At the same time press the energy in your upper body downward, holding the contraction as long as possible. Then exhale completely and relax the entire body

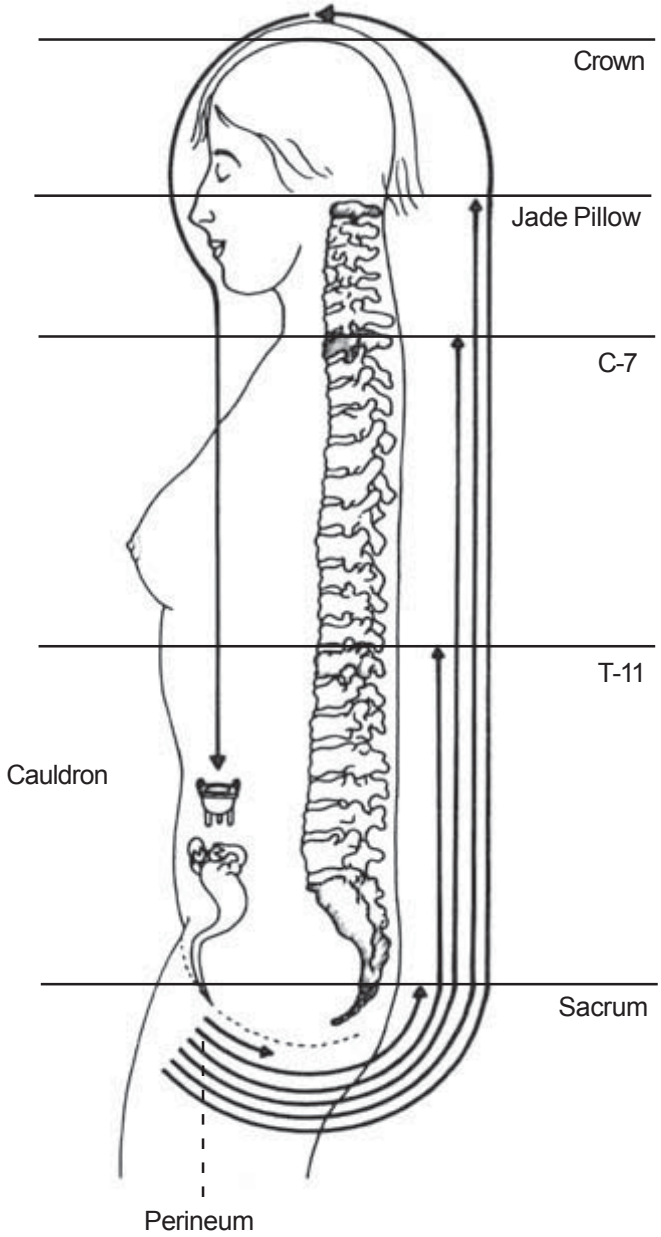


Fig. 6.15 *Internal Alchemy begins at the Cauldron.*

The Chi will continue to circle up the back and down the front of your body to the navel. Continue cycling the sexual energy in this way until your orgasm travels upward into the organs, glands and higher center

H. The Orgasmic Draw is the Basis for Alchemical Sex

To make full use of the Chi Ching gathered at the navel requires study of the Taoist methods of meditation. Slightly behind or below the navel is the Lower Tan Tien Center, the lower field of energy in the body within which the Taoists store Chi before refining it back upward. The Chi moves in circles among the lower, middle, and upper Tan Tien. Each time it spirals past it is refined into a higher quality of Chi. The process of refining and balancing the energy is taught in the Microcosmic Orbit, the Fusion of Five Elements, and the Lesser Enlightenment of Kan and Li courses.

It is not unlike taking crude honey mixed with wax, dirt and dead bees, and methodically refining it into the sweetest of nectars. Taoists treat the ovaries like raw honey. The Orgasmic Draw is the step of preventing the raw honey from leaking out of an old bucket and storing it in a new and well-sealed "jar" In this "jar" or "cauldron," placed at the level of the navel about two-thirds of the way back toward the spine, the ancient Masters mixed and cooked the different Chi energies of the body in a process they called "alchemy" the precursor of modern chemistry. (Fig. 6.15)

The secret alchemical agent they used was nothing more than ordinary sexual "essence," i.e., Ching. Without it, however, none of the higher levels of alchemical meditation would work. The Sexual Kung Fu exercises of Ovarian Breathing, Ovarian Compression, and the Orgasmic Draw may seem simple and too rudimentary to affect spiritual development, but their proper mastery is essential before you can move on to a loving relationship in full command of your sexual and spiritual powers. Your sexual essence is an elixir of life and the fountain of your youth, and is well worth training vigorously to safeguard.

Fig. 6.16 *Internal Alchemy begins at Cauldron with the Sexual Center.*

Chapter 7
Egg Exercises
Tips to Increase Sexual Energy

A.Introduction to Egg Exercises- Vaginal Weight Lifting

The use of a stone egg to strengthen the vagina is a practice which evolved in ancient China. As time went on, the secret of this practice remained in the Royal Palace and was taught only to the queen and concubines. Many who mastered the technique experienced very good health, remaining young and bountiful, with sexual organs in old age as tight and resilient as those of a young, unmarried lady. Some believe that the queen and concubines practiced the technique in order to please the king while making love. Originally, however the Egg Exercise and Vaginal Weight Lifting were implemented for improving health, both physically and spiritually, since these exercises provide more power to the Chi Muscle to lift the sexual energy inward and upward where it will be transformed into higher spiritual energy.

The egg is a marvelous way to strengthen and control the Chi Muscle. It is easier to practice control of this muscle with an egg in the vagina since, as the egg moves, you can feel the direction in which the Chi Muscle moves more distinctly. Controlling this voluntary muscle means control of the many involuntary muscles in this area as well. Also, as you master the use of this muscle of the vagina and perineum, you simultaneously tone up the lower abdomen. Thus, your performance of Ovarian Breathing, the Orgasmic Draw, and the Organs' Orgasm greatly improves, and the flow of sexual hormones increases.

Vaginal Weight Lifting is a very powerful practice to strengthen, in addition to the Chi Muscle, the urogenital and pelvic diaphragms. The strength of these two diaphragms is very important since these diaphragms serve as floors to the sexual organs and all vital organs. When the Chi Muscle and diaphragms are loose, Chi pressure will leak out from the organs as they stack upon each other, dropping all their weight to rest upon the perineum. When strong, the muscle

and the diaphragm function as seals, preventing leakage of life-force and sexual energies.

1. Selection of your Egg

Gem and mineral shops generally have a large selection of sizes and materials as well as prices. We researched and tested several different materials and found a volcanic rock called obsidian carved into egg shapes which contained the properties that we are looking for: embracing the Yang power of the volcano, but originating from the Yin power of the center of the Earth. These characteristics attract and concentrate the Yin essence of a woman. Further details, as well as the eggs themselves, can be obtained from the UniversalTao System.

When you look at the eggs you will have to decide what size looks like it might feel comfortable in your vagina. The eggs range in size from that of a quail egg to jumbo supermarket eggs. Most women choose a medium-sized one, that is, an egg approximately one inch in diameter made of either stone or wood. Wooden eggs can be easily drilled for the attachment of weights, and are therefore suited for the Vaginal Weight Lifting practice. We prefer to use stone eggs, such as obsidian, for the internal sucking exercise because of their smooth, non-porous nature. The smaller the egg, the more work your muscles will have to do because they will have to contract more strongly to cause any movement of the egg. Select an egg with a smooth surface.

2. Care for the Egg

Proper attention and care to one's feminine hygiene is an absolute necessity prior to beginning this practice. Cleanliness of the vaginal canal and the eggs are equally important. Wooden eggs should be boiled or cleaned every one to two months with a diluted vinegar solution (one tablespoon per quart of water) and allowed to dry for at least one hour; since the wooden egg easily absorbs vaginal fluid and can be a culture for germs if permitted to remain wet. A stone egg should be boiled by bringing it to the boiling point, and then allowing it to cool down. Boiling the stone egg is necessary prior to its first use. After that, simply wash it with water after each time you use it. A word of caution about using soap or detergent: some people are allergic to certain chemicals that are found in

soap and detergent, especially when inserted into the channel where the membranes are very sensitive. Also, many women are unknowingly allergic to alcohol (isopropyl or rubbing type), therefore its use should be avoided for cleansing purposes.

3. Caution in Practicing the Egg Exercises

a. Before practicing the egg exercises, you must first master Ovarian Breathing.

b. You must be fully aroused before inserting the egg. If you produce very little fluid naturally, use a lubricant.

c. Married women should use a smaller egg.

d. Do not practice lying down.

e. If a problem arises and the egg becomes stuck, do not panic. Lie down and relax and the egg will come out.

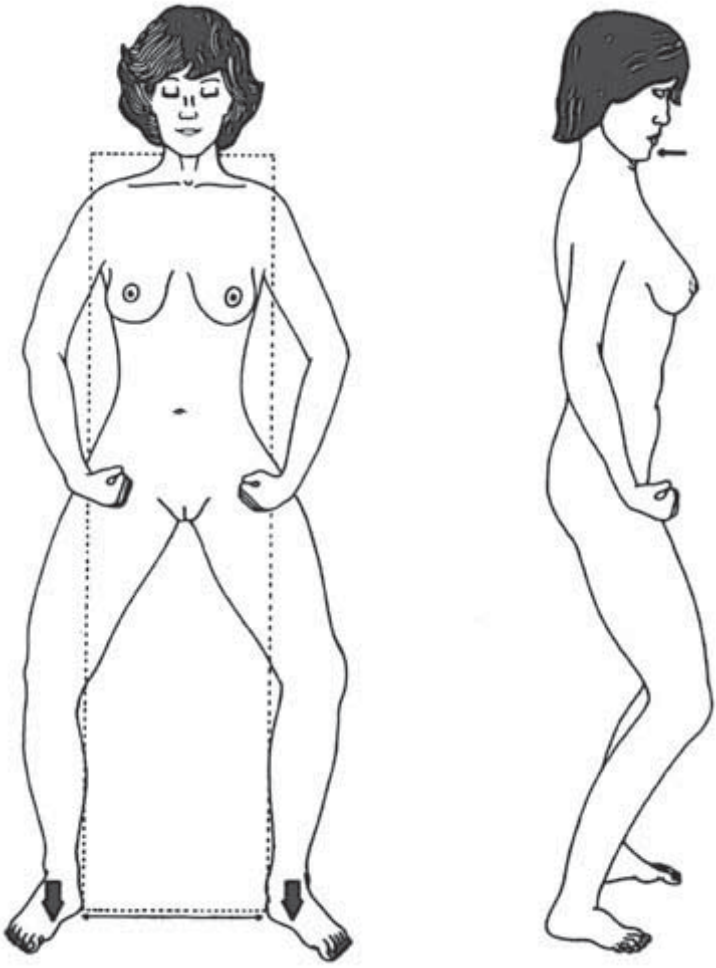
4. Using the Egg

A. Beginning the Exercise

The first time you use the egg, you will probably want to, and should, exercise all precaution until you become accustomed to it. Each time before practicing the egg exercise, you must warm yourself by massaging the breasts, making sure the vagina is expanded and some lubricating fluid is being emitted. In this chapter we provide you with a simple breast massage to warm you up. If you decide to practice immediately after the Orgasmic Draw, there is no need to try this simple version of massage because you have already massaged the breasts before the Orgasmic Draw. Once you master the Egg Exercise you can practice it in conjunction with the Orgasmic Draw or Ovarian Breathing by placing the egg in the vagina while practicing. However it is important that you, separate every exercise at first, and then join them at a later time when you become more proficient.

To assist you in inserting the egg easily if necessary, use a lubricating jelly: any spermicidal jelly or cream that is not petroleum based, any natural lubricating oil, such as a raw cooking oil, that you know is safe, or any lubricant that you have used that you do not have a chemical reaction to. Always insert the wider end of the egg first. Once inserted, assume the standard Horse Stance posture (feet shoulders' width apart and firmly grounded: ankles and knees bent: groin folded: spine and neck in alignment). Elevate

your arms in front of you to a 45-degree angle with your palms facing upward. Assume a clenched fist position. It is from this basic rooting stance that each of the Egg Exercises is Performed. (Fig. 7.1(a) and (b))



(a) Feet shoulder's width apart and firmly grounded.

(b) Side View

Fig. 7.1 *Horse Stance for the Egg Exercise*

The cervix represents the back limit of the vagina. Squeezing the muscles the way you would to have a bowel movement will expel the egg. In the beginning make sure not to practice on a cement floor so that if the egg drops out, it will not break. You can also place a towel under your feet.

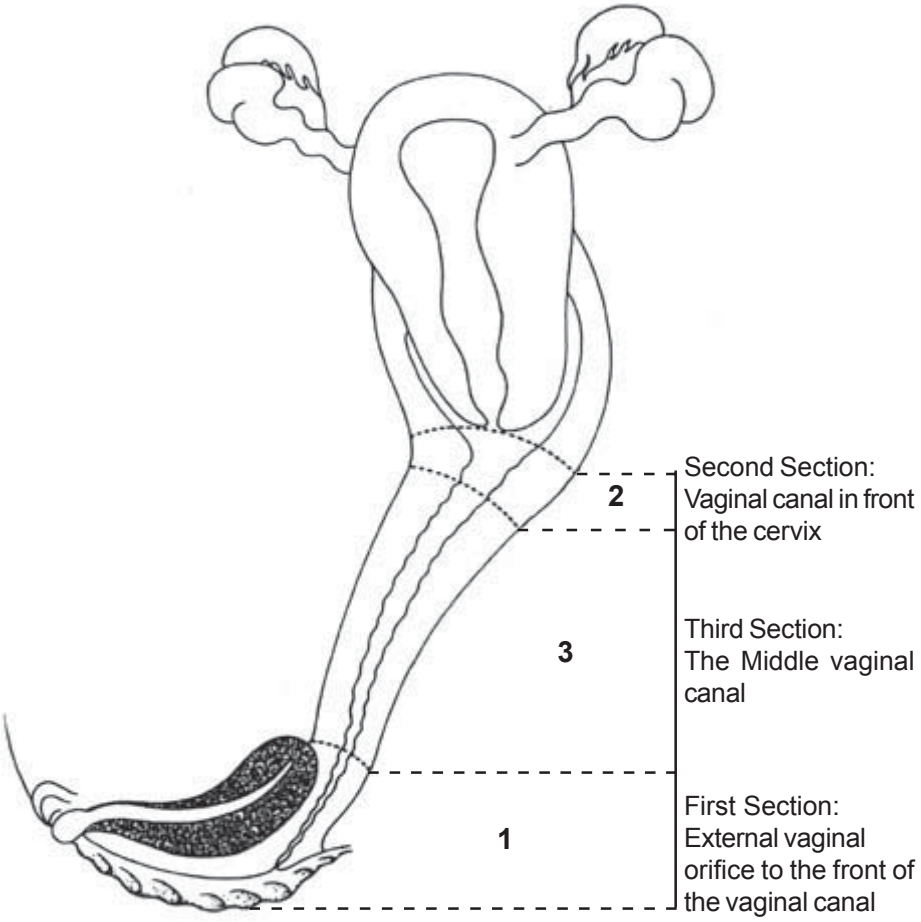


Fig. 7.2 *Three Sections of the Vagina*

B. Three Sections of the Vaginal Canal *(Fig. 7.2)*

With the practices of Ovarian Breathing and the Orgasmic Draw, you began to gain control of your Chi Muscle. To gain further control

through the Egg Exercise, we divide the vaginal canal into three sections.

(1) The external vaginal orifice and front of the vaginal canal

The first section includes the muscles of the external vaginal orifice and the front part of the vaginal canal. When the egg is inserted, you will contract the uterus, closing the orifice tightly so that the egg cannot drop out.

(2) The anterior of the cervix

The second section to be contracted consists of the muscles of the vaginal canal immediately in front of the cervix.

(3) The middle of the vaginal canal

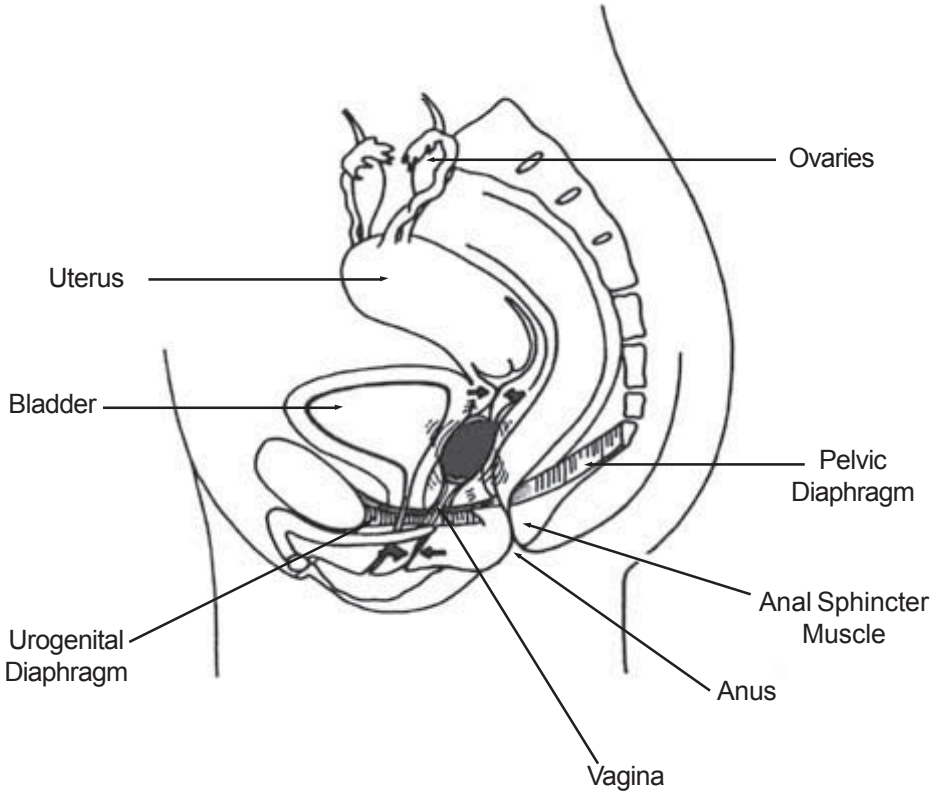


Fig. 7.3 *Moving the Egg*

The third section encompasses the muscles of the middle of the vaginal canal. These are the muscles that will move the egg up and down, left and right, and tilt it in different directions. (Fig. 7.3) You will practice moving and using these muscles until you master their movement as easily as using your hand. As you play with the direction you will learn to differentiate each movement of these muscles. If you have a male partner he will soon notice the results of this practice. Practice for a few minutes at a time, as often as you like. Insert the egg before practicing Tai Chi, Iron Shirt, or any of the other physical practices. Gradually increase the length of time you retain it. Just remember that it is there, since laughing, sneezing, or coughing can sometimes cause the egg to blast out of the vagina quite unexpectedly.

5. Two Eggs Technique

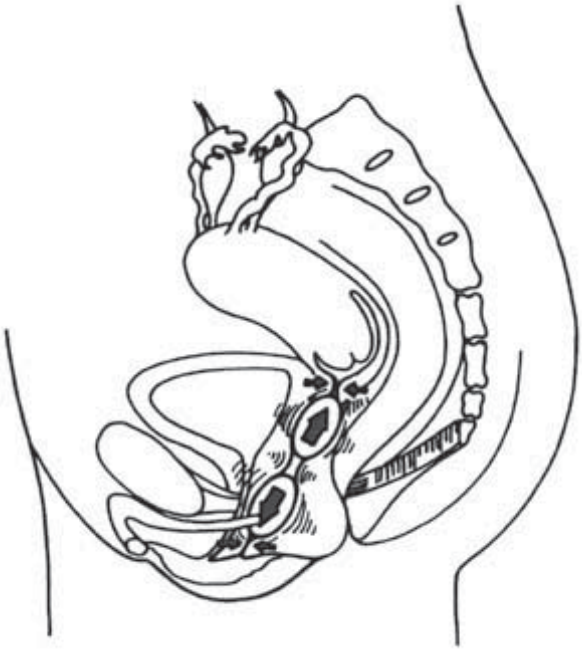
You can upgrade the practice by using two eggs in the vagina at the same time, moving them up and down, in different directions, or banging them together to achieve a vibration that will stimulate the inside organs. (Fig. 7.4) Two eggs are more difficult to manage, quite like drawing a square and circle simultaneously using both hands. It is important to know how to manage one egg well first.

Once you are well trained and are master of the Chi Muscle, you can dispense with the eggs, using your mind and the appropriate muscles to move the sexual energy as you wish.

B. Breast Massage Techniques Preliminary to the Egg Exercise

The importance of a preliminary massage before practicing the Egg Exercise and Vaginal Weight Lifting cannot be overlooked. Its purpose is to stimulate hormone secretion from the breasts and ovaries. Once ejected from their glandular source, these hormones become available for transformation into higher energy as they travel along the pathway of the Orgasmic Draw. Performing the massage with a silk or taffeta cloth creates a certain friction which is more conducive to hormonal stimulation, and is, therefore, more efficient in obtaining results.

Begin the massage by gently but firmly pushing the fatty tissue of the mound of each breast against the rib cage, moving two or three fingers of each hand in small circular movements. Start at



Squeezing Two Eggs Apart

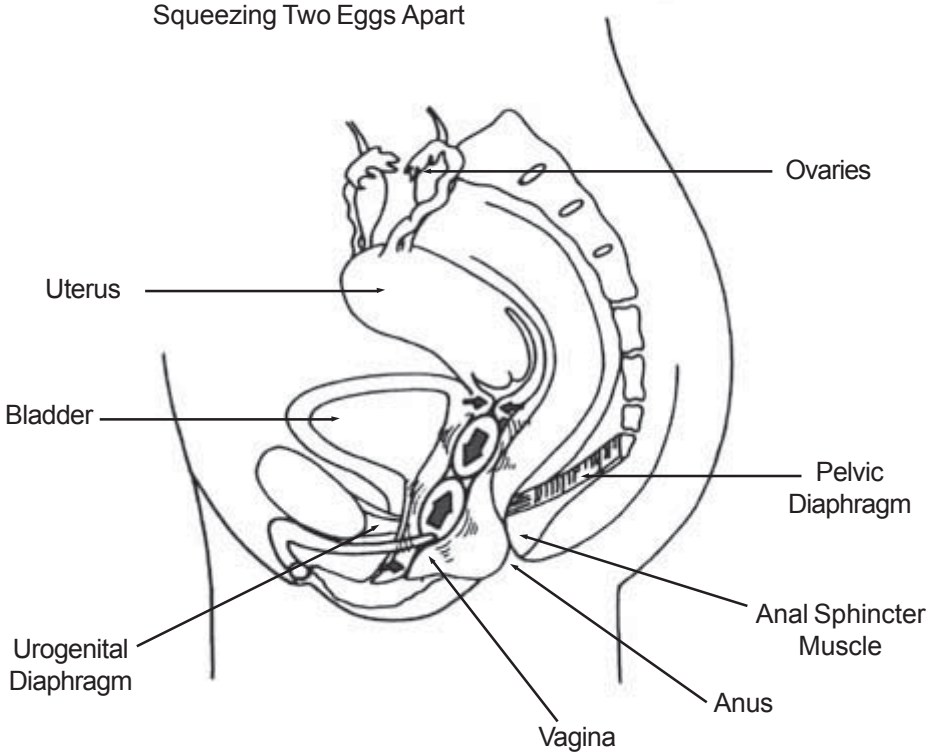


Fig. 7.4 *Squeezing Two Eggs Together*

the central nipple areas and work your way around and outward until each entire breast has been massaged. When using a cloth both sizes can be worked simultaneously if a long enough piece of cloth is used (three feet by ten feet is a good size to work with).

Be observant of the body's signals that the hormone secreting process has begun: erect nipples and a subtle filling or hardness of the breast are two positive indicators. Breast massage will increase the energy flow to the breasts, thereby helping to break down congestion which, over a long period of time, can contribute to the development of cancer.

Breast cancer is the leading cause of cancer death in women. If discovered early enough, it can be cured. In the interest of broadening our awareness of the body's ever-changing state of health, we suggest that once a month, ideally after each menstrual period, women regularly incorporate into their practice a simple technique of breast self-examination for early detection of breast cancer. Always look thoroughly for any changes that your breasts may have undergone since your last checkup. Stand in front of a mirror and become familiar with their appearance. Is there any unusual dimpling or puckering of the skin, discoloration, ulceration, hardening or lump? Have the superficial blood vessels grown larger or increased in number? Has the size, shape or contour of your breasts changed? Next, elevate your hands above your head and ask yourself the same questions.

After completing the breast massage, the genital area should be massaged. Using the same cloth and fingertip circular motions, cover the entire mons and labial area inch by inch. After having sufficiently stimulated the clitoris, warm, moist vaginal secretions will mark the body's readiness for the egg's insertion. (For a more detailed approach to breast massage, return to Chapter 6).

C. Summary of Egg Exercises Step-By-Step

1. Insert the Egg

When you feel you are ready, insert the egg into the vagina, large end first.

2. Horse Stance Alignment

Align your body in the basic Horse Stance described earlier.

3. Contract the First Section

Isolate and contract the muscle groups responsible for closing the external vaginal orifice tightly. This will help to keep the egg in the vaginal canal.

4. Contract the Second Section

Inhale and contract the vaginal canal muscles immediately in front of the cervix so that you are now contracting two sections at the same time. Keep both points closed. There is no need to use hard muscle contractions. The strength required depends a great deal on the control of these muscles you have gained by practicing the Ovarian exercises of Chapters 5 and 6.

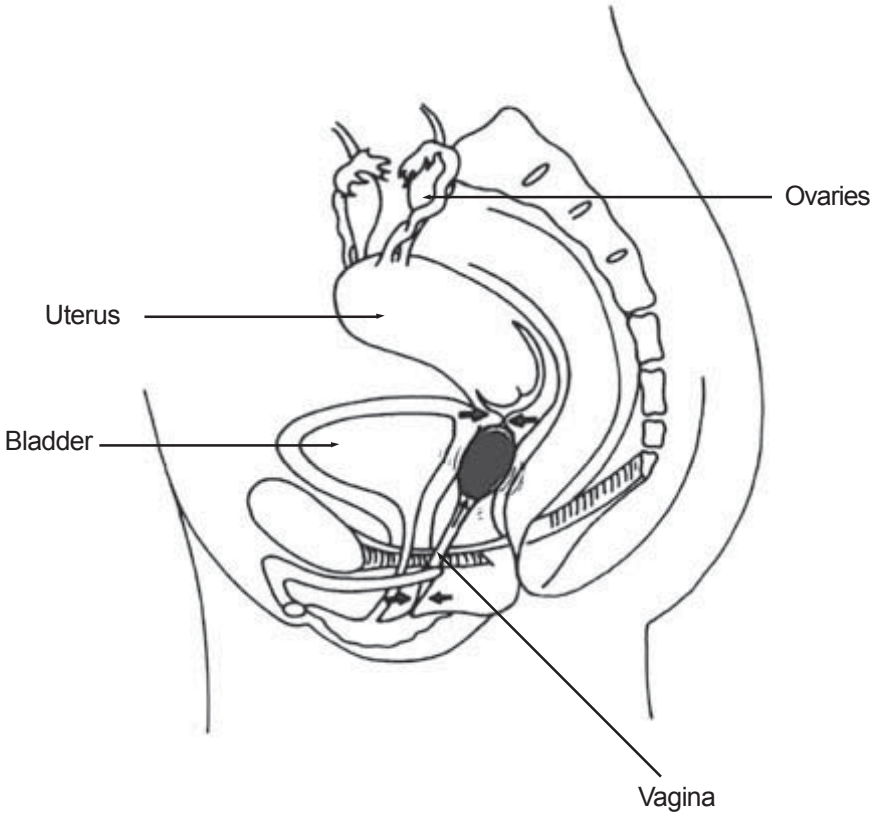


Fig. 7.5 *Moving the Egg up.*

5. Squeeze the Third Section

Slightly squeeze the egg from the middle of the vaginal canal until you feel that you have a good grip on it. Inhale and squeeze again, gradually increasing the squeeze, and then inhale more and squeeze harder (Fig. 7.5) Once you feel you have a good grip on the egg, slowly move it up and down. Start with a slow motion, gradually increasing to a fast motion. When you are out of breath, exhale and rest. The resting period is very important. It is at this time that you will feel Chi build up in this area. Try to master each movement before continuing to the next step.

Fig. 7.6 *Using the Second Section to move the Egg Sideways.*

6. Use the Second Section to Move the Egg Left and Right

Next move the egg left and right using the top, or second, section. Practice until you master this action. (Fig. 7.6)

7. Use the First Section to Move the Egg Left and Right

Next move the egg left and right from the bottom, or first, section. Using the mind and some muscle movement are important since you cannot move the egg with hard muscle contractions alone. There are many involuntary muscles within the vaginal canal which the mind and Chi Muscle help to move.

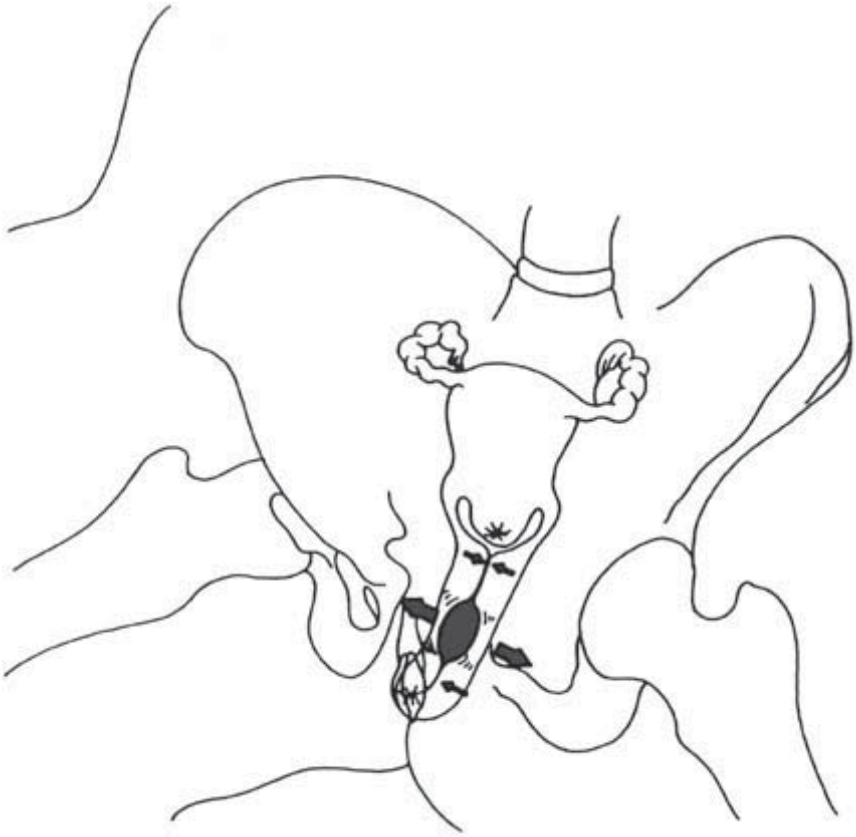


Fig. 7.7 *Using Both Sections to move the Egg Sideways.*

8. Use Both Sections to Move the Egg Left and Right

Now move the egg left and right as you wish, holding it by the top and bottom muscles. Master this step before continuing to the next exercise. (Fig. 7.7)

9. Use Both Sections to Tilt the Egg

Next tilt the egg up and down from the top and the bottom. Master this action.

10. Combine all Movements

Combine all of these movements, moving the egg left and right, tilting it up and down, moving it up to touch the cervix, and then down to the external vaginal orifice. Rest. All during the Egg Exercise the contraction of the vaginal canal in the area in front of the cervix and the external orifice is to remain constant until you have finished moving the egg.

This particular Egg Exercise should be practiced two to three times per week. You may, and should, perform this very same exercise daily without actually inserting the egg by following the same sequence using the contractile strength of the vaginal muscles to suck in an imaginary egg and move it up, down, left and right.

To enhance your development you should begin using a smaller egg. Later the larger eggs may be used to mark the progress in your “sucking” abilities. Eventually the practice of egg-sucking will become so mastered that you will be able to suck the egg into the vagina from the outside with a vacuum-like force. Such a powerful sucking activity enhances experiences in your life such as childbearing or lovemaking. Imagine the intense pleasure of your lover as you demonstrate to him your power and skill.

D. Egg Exercise during Ovarian Breathing and Orgasmic Draw

Once you master the Egg Exercise described above, you can combine the practice with Ovarian Breathing and the Orgasmic Draw. Each will enhance the others practice.

1. Prepare with Breast Massage

Prepare with the breast massage until you feel yourself ready, and insert the egg into your vagina.

2. Align Yourself in the Horse Stance

Align your body in the basic Horse Stance described earlier.

3. Close the External Vaginal Orifice

Isolate and contract the individual muscle groups responsible for tightly closing the external vaginal orifice.

4. Gather the Energy at the Ovarian Palace

Gather the energy from the ovaries and the breasts at the Ovarian Palace. Inhale slowly and deeply. Draw the sexual energy down through the uterus to the clitoris and hold it there.

5. Grip and Move the Egg

Contract and hold the lower; then middle and upper vaginal muscles and feel your grip on the egg. Then push the egg deeply up into the vaginal canal. Move it up and down and feel the increasing sexual energy.

6. Begin Ovarian Breathing and the Orgasmic Draw

As you feel more energy gather at the vaginal canal, follow the procedures of Ovarian Breathing and the Orgasmic Draw. Pull the energy to the front part of the perineum, to the sacrum, T-11, C-7, C-1, Jade Pillow, and crown. Circulate the energy in the brain and bring it down the front channel to the third eye, tongue, throat, heart center solar plexus and navel. Collect the energy at the navel. Please review the details of the practice of Ovarian Breathing and the Orgasmic Draw in Chapters 5 and 6.

E. Vaginal Weight Lifting (Fig. 7.8)

The only difference between the Egg Exercise and Vaginal Weight Lifting procedure is the addition of a weight to the specially drilled egg. As mentioned earlier in weight lifting, we use wooden eggs. Usually an egg is chosen of approximately a one-inch diameter with holes drilled in it through which a string can be threaded for attachment to a weight. Use a sturdy string that can sustain at least ten to twenty pounds of weight, or use three strands of string. Begin with a one-half pound weight. You can buy a half-pound plate that has a hole through which the string can be tied, or use a small cotton or plastic bag into which a weight can be placed and the bag easily attached to the egg's string and hung.

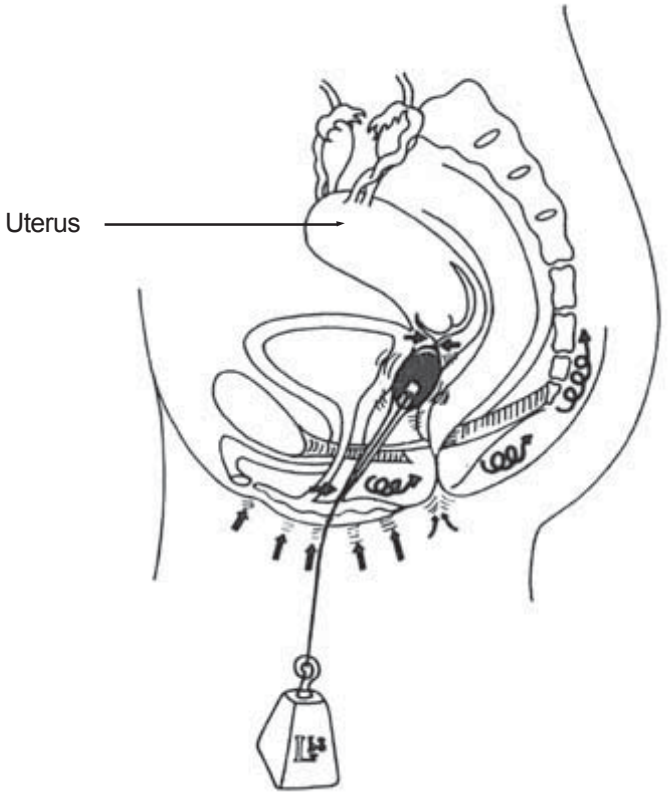


Fig. 7.8 *Vaginal Weight Lifting*

Suspending weights from the egg is a most effective way to increase the strength of the pelvic and urogenital diaphragms and the vaginal muscles. This is also a tremendous exercise for the cervix, the ovaries, and the organs and glands. With the increase in weight the vagina alone does not have enough strength to lift the weight, making it necessary for all the internal organs and glands to join in contributing to the strength. The heavier the weight the more counter pressure must be exerted by the vagina, the cervix, the ovaries, the diaphragm, the organs and glands. This extended effort will result in increased Chi pressure and hormone production. Make sure you can handle the weight well before adding more to it.

The exact sequence of steps is then followed as described in the Egg Exercise above. This time, however do not move the egg up and down. Hold it by tightening and squeezing the external and middle sections of the vaginal canal around the egg and pulling the egg up. Do not release it. This exercise is to be performed one time only, two to three times per week, with the weight gradually increasing in one-half pound increments, and not exceeding ten pounds.

1. Practical Exercise Step-By-Step

A. Insert the egg while holding the string and weight.

Place a chair in front of you and then place the weight on the chair: If you are not already prepared, start with the breast massage, followed by massaging the mons, the perineum, and the coccyx. When you feel the Chi is ready insert the wooden egg with the string attached into the vagina, always attempting to increase the force of suction used to draw it in. Use the other hand to hold the string with the weight.

B. Assume the Horse Stance.

Align your body in the basic Horse Stance described earlier.

C. Grip the egg using the muscles of the vaginal canal and release the string and weight.

Inhale, closing the external and internal vagina tightly. At the same time contract the uterus so that the vaginal canal has been closed on both ends. Inhale, squeeze the egg tightly, and pull it up until you feel you have gripped the egg firmly, then slowly release the string with the weight attached. Do not remove your hand in case you did not grip the egg firmly enough. If the egg with the weight attached falls out, it might hurt you.

D. Use the cervix to pull the weight up.

Hold your breath and contract harder. Inhale and start to pull from the cervix and feel the force of the cervix helping to pull up the weight. When you feel you are holding the egg with the weight securely start to rock the pelvis, thus rocking the weight, 30 to 60 times. (Fig. 7.9) This will generate a tremendous energy. When

you feel the energy build up, inhale slowly and deeply down to the ovaries, gathering your sexual energy, and carry it through the uterus and down to the clitoris. Hold it there.

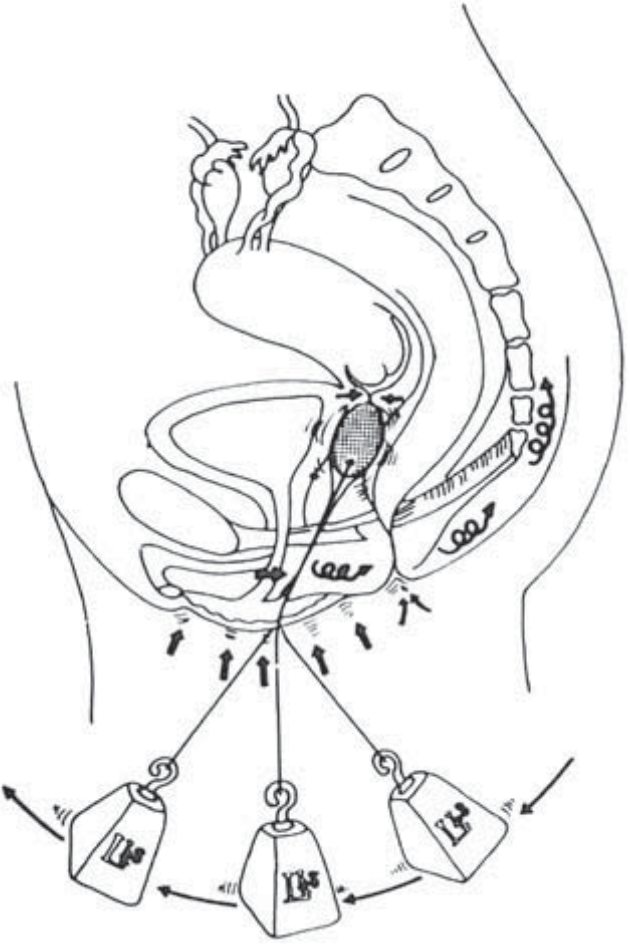


Fig. 7.9 *Swinging the Weight Back and Forth.*

E. Employ all the muscles of the vaginal canal.

Contract and hold the lower then the middle and upper vaginal muscles, so that the egg pushes deeply up into the vaginal canal and the weight will not pull the egg out.

F. Bring the energy into the head.

Now draw all the energy you have just gathered up the spine and into the head, as you continue to hold the egg deeply inside of you

G. Continue pulling the energy into the brain.

Still holding the same breath, continue gathering and pulling the sexual energy up into the head, where the brain can now be bathed in this wondrous nourishment.

H. Hold the energy in the brain.

Hold this energy in your brain, initially for 30 to 45 seconds, and gradually increase this time period.

I. Bring the energy to the navel.

Finally, stick the tongue up to the palate, exhale, bring the energy down, and collect it in the navel point.

J. Rest the weight on the chair and expel the egg.

Grip the string on the weight and place the weight on the chair Let the egg go, utilizing the contractile strength of the vaginal muscles to expel it.

K. The ovaries pull and lift the egg and weight upward.

When you feel you can pull from the cervix well, begin to use the force of the ovaries. You will try only the left side first, then the right ovary; and finally both sizes together When you feel you can once again secure the egg in the vaginal canal, use your mind and start to contract the left ovary, wrap the Chi around that ovary, and then pull from the left ovary toward the cervix and the vaginal canal, pulling The egg and attached weight upward. Do the same on the right side, and then both sides together.

L. The kidneys pull the egg and weight.

Next move to the kidneys and the adrenal glands situated on top of them. Practice using the force of each kidney separately first in order to identify the feeling. Inhale and use the contraction of both kidneys to help pull the weight up. Then, starting with the left kidney

and making sure you feel the force coming from there, use your mind to contract the muscles around the left kidney even more, and wrap it with Chi. Then pull the left kidney down again, pulling it toward the left ovary and the bladder. The ovary, in turn, will pull on the cervix: the cervix will pull on the vaginal canal; the vaginal canal will pull on the egg: and the egg will pull on the weight. In other words, once you have secured the egg in the vaginal canal, you will pull with the higher organs and glands which, in turn, will pull on the lower organs and glands, and they, in their turn, will pull on the egg and weight. Practice the same procedure with the right kidney. Once you have mastered the left and right kidneys, combine both kidneys in the practice. This will give you a great deal of internal force to pull an even heavier weight.

M. The spleen and liver pull the egg and weight.

Next move up to the spleen and liver. Start again on the left side, contracting the muscles around the spleen, situated beneath the left side of the rib cage. Contract and wrap the Chi around and into the spleen. Pull the spleen toward the left kidney, pull the kidney to the bladder and left ovary, the left ovary to the cervix, the cervix to the vaginal canal, and the vaginal canal to the egg and weight. Practice the same procedure on the liver which lies under the right side of the rib cage. Pack, wrap and pull the liver up and toward the right kidney, to the bladder and right ovary, to the cervix, to the vaginal canal, and to the egg and weight.

N. The lungs are employed next.

Moving to the lungs, start with the left lung first. Practice contracting the left lung and wrapping Chi around it until you actually feel the lung contracting. When you have again secured the egg in the vagina, begin to contract the lung with more force and pull from the lung to the spleen, then to the kidney, bladder and left ovary, cervix, vaginal canal, and egg and weight. Practice in the same manner on the right side, beginning with the right lung.

O. Be cautious with the heart as it pulls on the egg and weight.

As you move on to the next organ, the heart, be cautious, making sure that you are well in control of the other organs first. The heart and lungs can easily become congested with energy and can cause

chest pain and difficulty in breathing. If you have this problem, tap the area around the heart and practice the healing sound of the heart (as described in the book *Taoist Ways to Transform Stress into Vitality*). Practice until you can control the contraction of the heart muscle and wrap the Chi around the heart. Again, secure the egg in the vaginal canal, contract the heart and lungs and pull up toward the spleen, liver adrenal glands and kidneys, bladder and ovaries, cervix, vaginal canal, egg and weight.

P. The thymus gland is difficult to contract.

The thymus gland is difficult to contract because of its location under the sternum. The only way to do this is to sink the chest and sternum down, press the sternum to the back, and contract and wrap it with Chi. Mastering this contraction and wrapping the heart and lungs with Chi will help greatly in contracting the thymus gland. Once again, secure the egg in the vaginal canal, sink the sternum to the back and contract the lungs, from left to right, toward the thymus under the sternum, then contract the heart to the thymus which is in close proximity. Pressing and contracting the heart will greatly increase the force of the thymus. Feel all three organs and the gland create the force to pull the spleen, liver, kidneys, bladder ovaries, cervix, vaginal canal, egg and weight.

Q. Pulling from the pituitary and pineal glands all the way to the brain.

The pituitary and pineal glands are the most difficult to master If, however you master all the other organs, these glands will be easier to learn to control. The tongue and eyes act as major tools in exerting force on the pituitary and pineal glands. Practice first, by pressing the tongue to the palate and turning the eyes upward. Contract the eye muscles toward the middle of the brain to the pituitary gland. Contract the muscles of the skull and squeeze the brain into itself toward the pituitary gland, located in the middle of the brain. Concentrate on and contract the middle part of the anus and pull all the way up into the brain. Contract the lungs, heart and thymus gland and push up toward the middle of the brain. Now secure the egg in the vaginal canal, press your tongue firmly to the palate with the tip of the tongue, touching the lower jaw behind the teeth and the flat part of the tongue touching the middle of the palate. Turn

your eyes up toward the middle of the brain, and squeeze the head muscles toward the brain's middle area. Contract the lungs, heart, and thymus gland, and press upward to the middle section of the brain. The pituitary gland, together with all of the other glands and organs pull up the spleen, liver kidneys, bladder, ovaries, cervix, vaginal canal, egg and weight. Repeat the practice, now focusing on the pineal gland.

When finished with all of these steps, make sure that you circulate the energy for a few rounds in the Microcosmic Orbit, finally collecting it in the navel. Since all the steps of this exercise are very important and extremely powerful, you must use caution. Gradually you will feel all the organs and glands contributing to the internal force that will pull the weight. If you have already mastered the organs' orgasm, you will handle this exercise with ease.

R. Cleanse the Egg Thoroughly.

Since the mucous secretions on the egg are an ideal medium for bacterial growth, be sure to cleanse the egg thoroughly after each use.

S. Massage yourself.

Massage the Hui-Yin point in the perineum. Massage the mons and the coccyx. This massaging after each exercise is very important. It will help you clear the remaining energy so that the body can absorb it easily.

T. Channel the energy in the Microcosmic Orbit.

Gently tap the lower abdomen with your palm to remove the excess energy from the ovaries, vagina and clitoris. Sit down quietly and channel the excess energy in the Microcosmic Orbit, so that all your organs will benefit.

F. Herbs to Tone Your Ovaries - Special Recipes for Women

Women who experience any weakness of their sexual organs will find it quite to their advantage to follow two of Maneewan Chia's simple and delicious recipes.

1. Ovaries' Strengthening Tonic

To gradually increase the energy flow in the ovaries, sample this

mixture.

1 cup whiskey
1 cup honey
1 cup lemon juice

Stir the mixture well until the honey dissolves. Store the mixture in a previously sterilized jar. Shake the jar well before each use. Drink one to two tablespoons daily.

Caution: If you are experiencing a very heavy menstrual flow, refrain from taking the mixture for a few days until you have normalized. This recipe will last several months, and the more it ages, the better it becomes. Store it in a cool dry place.

2. Don Quai-Chicken Soup

As an herb containing numerous invaluable properties, Don Quai should become an integral component of a woman's health care regimen.

Loaded with good nutrition for the ovaries and hormones, this herb is essentially required by a woman's body throughout her lifetime. It is especially good as a blood tonic, being quite rich in iron, and it is great for alleviating a variety of menstrual problems. Don Quai is taken only one to two times per month and only after the menstrual cycle has ended, never during the cycle.

This herb can be obtained in Chinese herb stores located in every Chinatown. Many of these stores have mail order services.

Simply place one to two heads of the herb (about one inch in size) in chicken broth or soup, and season as desired. Simmer in a slow cooker for approximately three to five hours.

Vegetarians can make Don Quai in the same manner using the slow cooker and a meatless broth.

After using Don Quai on a regular basis for a one- or two-month peroid, you will notice a definite increase in your strength.

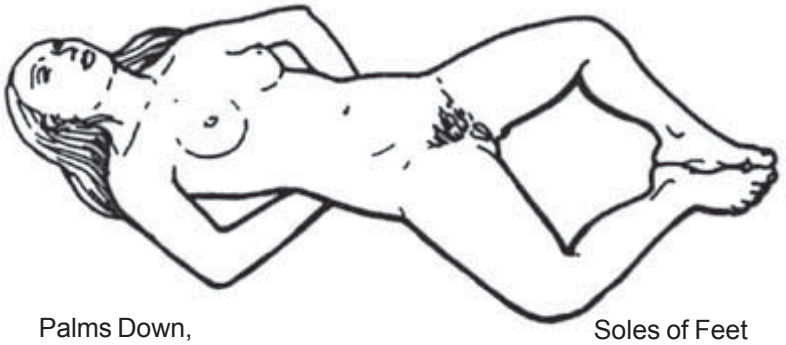
G. Sunning (Fig. 7.10)

If you are lucky enough to have a sunny area with some privacy; you will probably enjoy this practice.

The sun's energy is very healing and soothing to the genitals and can be absorbed by the ovaries through the genitals. The best time of day is in the early morning (between seven a.m. and nine a.m.) and in the late afternoon (between three p.m. and five p.m.)

Absorbing Yang Energy

This position completes the energy circulation through the hands and feet.



Palms Down,
Thumbs Touching

Soles of Feet
are touching.

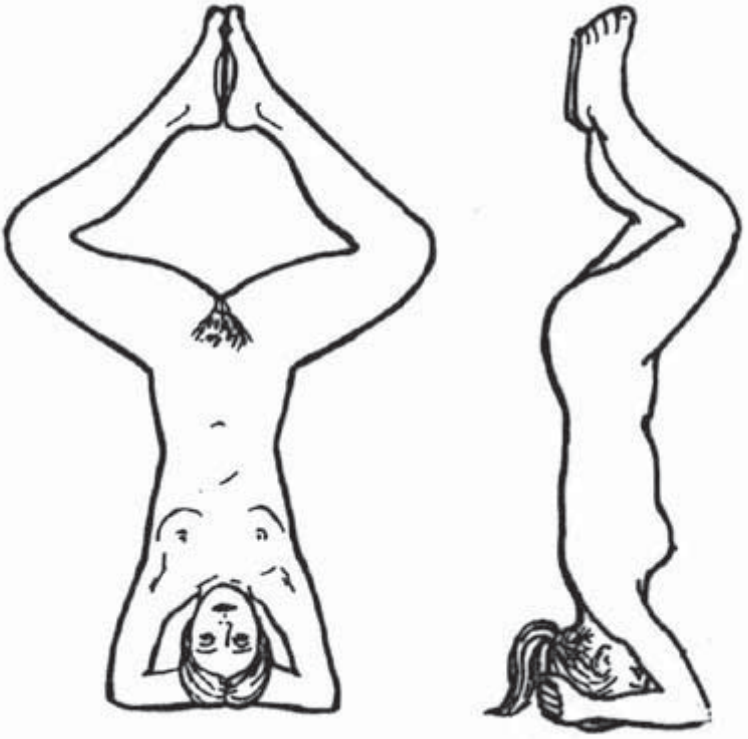


Fig. 7.10 *Sunning*

Sunning should be done no more than five minutes in the beginning eventually working up to ten minutes.

Massage the mons area and alongside the outer lips. Open the labia to the sun and use your mind to draw the solar energy into your ovaries. Let this energy mix with your own energy as you circulate it in the Microcosmic Orbit.

Fig. 7.11 *Loving*

Chapter 8
Dual Cultivation

A. Introduction to Dual Cultivation

1. Opening the Healing Love Energy Channel

Most people would agree that sex is enjoyable. In this book you are learning how to utilize the normal sexual energy that you create and how to multiply it. By now you should be aware of the fact that if you do not transform the sexual energy that you produce, but let it drain out, you lessen your vitality. This is accompanied by more and more psychologically draining effects, such as tiredness or depression, or actual physical suffering, such as pain in the back or kidney areas. If you continue to deplete yourself, eventually you will drain the vitality from all the organs and glands, making the body weak, sick and old.

As previous chapters have indicated, in order to transform the sexual energy, you must direct it upward to a higher energy center. Doing this requires channeling the flow of this energy. We have stressed the need and importance of opening the channels of the Microcosmic Orbit, the main route through which the energy begins to travel.

In ancient times, the ways to develop Chi flow were regarded as top secret, especially the way to channel sexual healing energy. Sexual energy is extremely powerful as a means to attain rejuvenation and a higher spiritual energy. There are textbooks, such as the Plain Lady book, a sexology book written thousands of years ago in ancient China by an unknown author, demonstrating various traditional positions for having sex and promoting healing. But these books do not show how to channel the energy. At the time this book became available, the Taoist system of channeling energy was not available to the general public, but remained a secret taught only verbally to the Emperor and a few others who were not permitted to put it into writing.

We feel today that the time is right to teach people how to benefit from this transformed energy, or Healing Love, because many people misuse their sexual energy, hurting themselves and others.

Our purpose in writing this book is to help people benefit from the channeling of this energy.

2. Sexual Organs are the Roots of Life.

The Taoist system regards the sexual organs as the roots of life, connected to all other glands and organs. Once you begin to practice the methods taught in this book, you will begin to feel the close relationship of the glands and organs, especially the pineal and pituitary glands, kidneys, liver, lungs, and heart.

3. Energizing all the Organs and Glands

The ovaries have a close connection with the sexual organs, and by properly channeling their energy using certain lovemaking and hand positions, we can learn to use sexual healing energy to vitalize our entire systems. There are hundreds of lovemaking positions and hand gestures. The purpose of a position is to stimulate, according to reflexes, and to energize all the internal organs. These positions help only if the energy channel through which you move the energy upward is open; otherwise, the lovemaking positions and hand gestures will not have much meaning. The exercises described in this book are part of the Healing Love practice: however to a certain extent, they can also stand alone as guidelines to your own sexual practice. In particular the Anus Chi Muscle exercise and the Breast Massage will help you get in touch with your organs' and glands' energy.

4. Exchanging Energy with your Partner

Many couples have used the techniques described here; they are no longer mysterious and they are no longer only in the province of Taoist Masters. These techniques can increase the possibility that you will experience Beyond Orgasm (Valley Orgasm) whenever you have the desire. This is one of the goals of this book.

Synchronizing your breathing with your partner's and then harmonizing your breathing seems to come quite naturally to many people. Lying with noses in proximity, you begin to feel the two breaths be come one. Breathing in and out together is the principal way to begin to build up Chi in both you and your partner: This buildup of Chi can be a relaxing time, or it can be arousing, depending upon your intention.

No doubt you and your partner are both eager to enjoy your sexual pleasures together. Use this book as a tool in learning how to practice and use the Orgasmic Draw in order to multiply your orgasms and bring you both to the point of Valley Orgasm. As you practice the Orgasmic Draw, your partner practices the Big Draw as taught in the companion book *Taoist Secrets of Love: Cultivating Male Sexual Energy*. These practices will give you both a great deal of energy to share. This energy can be transferred back and forth between you and your partner through your tongues or genitals--each organ acting as a switch to transfer energy between the two channels that complete each one's Microcosmic Orbit. In fact, with practice you will be able to exchange energy in a variety of ways, including over physical distance. Some people will actually feel the energy circulate in their own Microcosmic Orbit and will feel that energy transfer into their partner. Some couples have described the feeling of the energy as a cocoon surrounding them, and some feel the energy between them or above them.

5. Valley Orgasm and Hhw to get there.

Difficult to explain in words, a person must reach a certain level in lovemaking to understand what is meant by Valley Orgasm (Beyond Orgasm). The major sensation is the atmosphere between you and your lover. If you are both in a low mood, or one of you is in a low energy cycle, it becomes difficult to reach this point. Meditating to move the energy in the Microcosmic Orbit will help bring each of you to the same energy level and is most important to the initiation of sexual pleasure. The more you and your partner can meditate and practice the Orgasmic and Big Draw together the more both of you will harmonically tune in to each other.

Practicing such techniques as Tongue Kung Fu, as described in the book *Taoist Secrets of Love: Cultivating Male Sexual Energy,* will greatly contribute to foreplay and sexual arousal. When you feel you are ready to engage in lovemaking, and have built up sexual arousal substantially you can begin to use the Orgasmic Draw, while your partner uses the Big Draw. After each Orgasmic or Big Draw, the energy starts to move between you, fusing you into an energetic or meditative state that can make you both feel connected and simultaneously experience a cosmic tranquility. You can understand how difficult it is to describe this state; it is similar to

describing what meditation feels like. You must experience it yourself. In order for you and your partner to experience the energy, you must begin with the basic training described in this chapter initially using some external help (i.e., breathing techniques, muscle locks, placing of hands, etc.) to guide you into the internal practice (mind control). We will elaborate on a few lovemaking and hand positions to help you and your partner open the channels faster so that the exchange of Valley Orgasms will be easier.

6. Sexual Organs' Exercise Positions

There are a few basic positions that we use in lovemaking, and from these basic few come hundreds of others. Many simply alter the positions of the legs: one leg up and one leg down, or both legs up, etc. This slight differential accounts for many positions, but as we have emphasized, although certain positions help you to reach a certain area of the sexual organs to stimulate certain reflexes, it is the channeling of the sexual healing energy that is most important. If you cannot channel the energy; these positions and hands gestures are meaningless. The nine basic positions are as follows:

A. Face to Face

(1) The woman lies on her back with the man on top. (Fig. 8.1(a))

(2) The woman lies on her side with her hips twisted so that her pelvis is facing upward. (Fig. 8.1(b))

(3) The man lies on his back with the woman on top. (Fig. 8.1(c))

(4) The man is in a sitting position and the woman sits on his lap. (Fig. 8.1(d))

(5) The man and woman lies on their sides facing each other (Fig. 8.1(e))

B. Back Facing

(1) The woman bends over: supporting herself with her hands and knees, and the man kneels behind her: (Fig. 8.2(a))

(2) The man lies on his back, while the woman is on her knees facing his feet. (Fig. 8.2 (b))

(3) The man sits up, and the woman sits on his lap facing his feet. (Fig. 8.2(c))

(4) The man and woman lies on their sides with the man facing the woman's back. (Fig. 8.2(d))

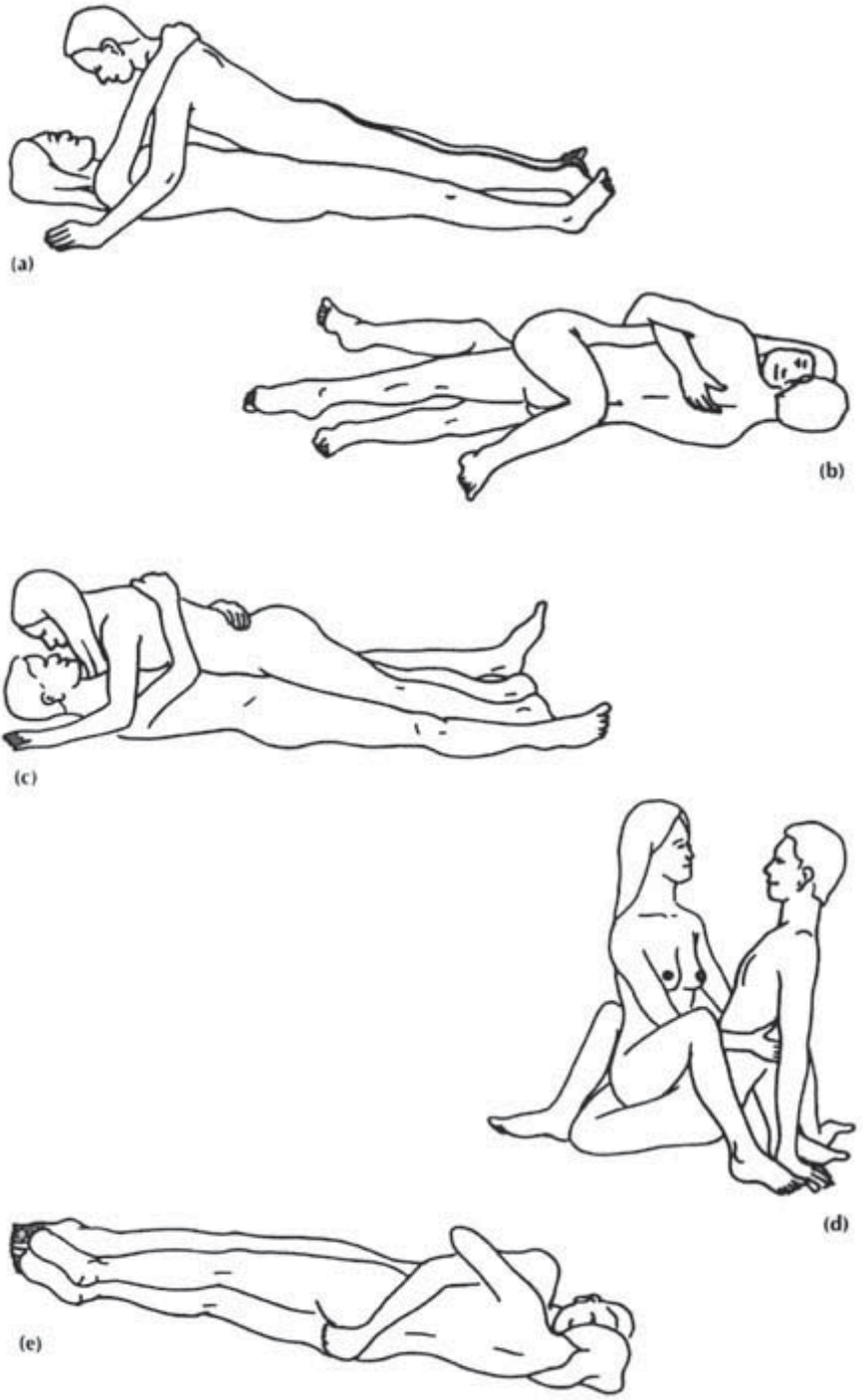


Fig. 8.1 *Face-to-Face Positions*

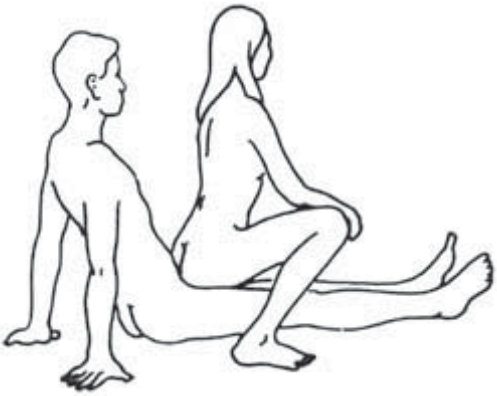


Fig. 8.2 *Back-Facing*

The basic principle is that the one who moves is the one who brings healing to the other while the one who does not move receives the healing. The inactive person can easily concentrate. When the mind is quiet, this partner will be able to feel his or her partner's sexual healing energy.

7. Hand Gestures link the Meridians of the Fingers and Toes with their Corresponding Organs.

The hands and feet are the outer extremities of the body and they are linked to the organs, glands and nervous system through a system of meridians, or energy routes, through which the energy of the organs and glands flows. Finger gestures have been used frequently in the ritual Taoist practices and are most useful to join the circuit and channel the energy through the meridians.

In lovemaking we stimulate and increase the sexual healing energy to flow through the subtle meridian channels. If we do not direct the energy back from the extremities, the energy can leak out through the hands and feet. Knowing the fingers' and toes' corresponding meridians can help to develop the ability to channel the outward flow of energy back through the meridians to the area you choose to direct it.

There are hundreds of hand gestures used in various other systems. If you are not trained and familiar with their usage, you will not be able to discern their power, although many people claim to have such ability. Some people spend a lot of time learning many gestures which in actuality have similar uses or only one use. When careful study is made, there are only a few basic hand positions that are effective. The simplest ones are the most useful; however the most important factor is the energy flow, not the simplicity.

A. Fingers and their Corresponding Organs

The fingers correspond to certain organs as described below and this connection influences bodily functions.

(1) The thumbs correspond to the lungs meridian (Fig. 8-3(a));

(2) The index fingers correspond to the large intestine meridian (Fig. 8-3(b)):

(3) The middle fingers correspond to the pericardium meridian (Fig. 8-3 (b)):

(4) The ring fingers correspond to the triple warmer meridian (Fig. 8-3(b)):

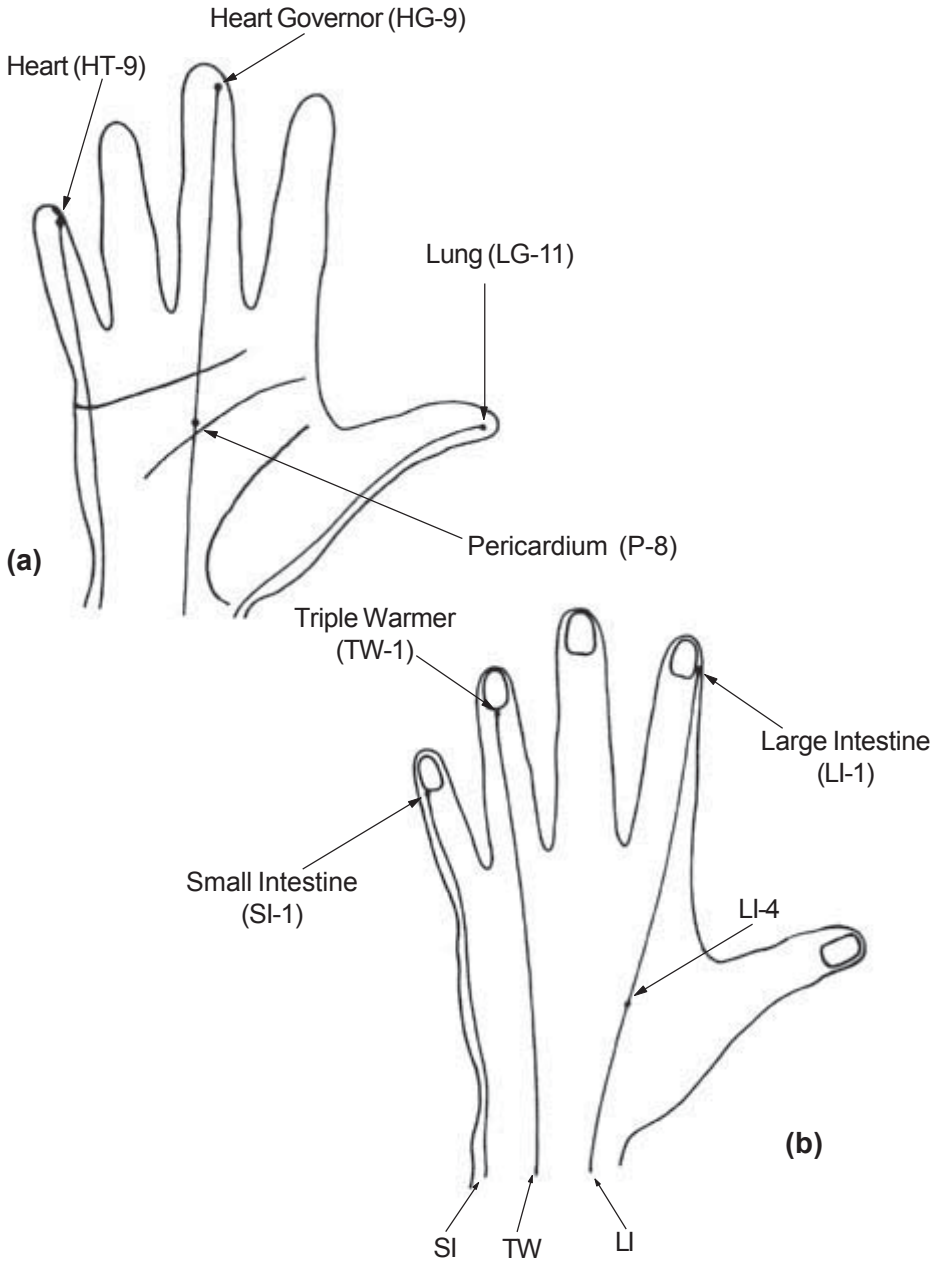


Fig. 8.3 *Fingers and Corresponding Organs*

(5) The pinkie fingers correspond to the heart and small intestine meridian. (Fig. 8-3(a) and (b)).

B. The toes correspond to specific organs

The toes also correspond to specific organs, thereby affecting the body's functions. (Fig. 8.4)

(1) The big toes correspond to the liver and spleen meridian;
(2) The second toes correspond to the stomach meridian;
(3) The fourth toes correspond to the gall bladder meridian;
(4) The small toes correspond to the bladder meridian.

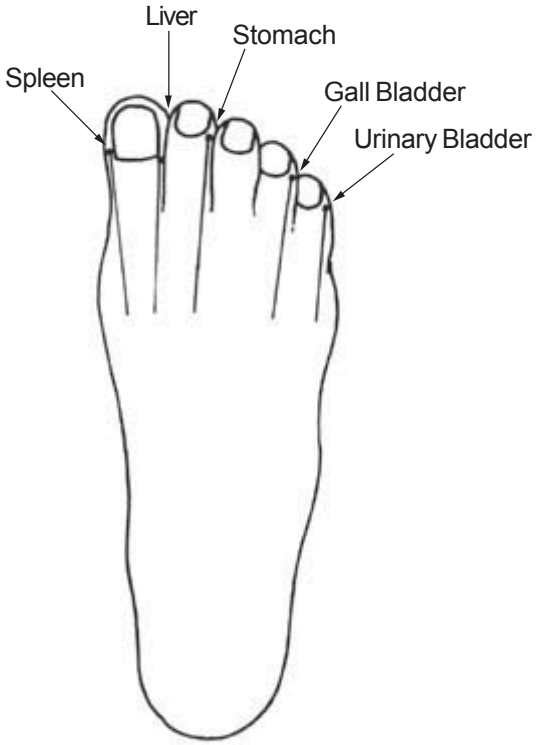


Fig. 8.4 *Energy Meridians in the Toes*

B. Descriptions of Positions and Hand Gestures for Healing Love

1. Love Making Positions

According to the *Plain Lady* book mentioned above (also called *Shu Nu Ching, or White Madame*), there are eight healing positions for men and seven for women. All these positions are helpful to heighten the lovemaking experience, but their most important

function is healing: through the use of the energy that is generated. Since the *Plain Lady,* book does not teach moving energy, a process which requires meditation practice, all the positions described in that book for healing have to be practiced many times a day for many days to reap any benefits. In the sexual healing energy practice we are describing here, we began, with such energy practices as Ovarian Breathing, the Orgasmic Upward Draw, the Egg Exercise, etc., all of which assist you in gaining control of your sexual energy and directing the energy to the place that you designate without merely depending upon reflexes and the positions used.

Although we will describe in detail only two positions, these two positions can be used to benefit both partners. As both partners alternately move, they alternately bring Chi to the area, gland or organ of his or her partner: Remember the basic principle is that the one who moves is the one who brings healing to the other while the one who does not move can easily quiet the mind and concentrate to feel and receive the partner's sexual healing energy.

Once you master the energy and can direct the energy as you wish using the mind and some muscles, the positions and gestures will not be very important.

A. Man on Top Position (Fig. 8.5)

This is the most common of the lovemaking positions. The woman lies on her back with her legs spread. She may have a pillow under her buttocks to raise her pelvis. The man lies flat on top of the woman or supports some or all of his weight on his elbows, hands or knees. Remember the Taoist theory that men are like fire and women are like water: Fire is easy to light, or is activated faster and burns easily, as most men usually become active sexually initially and seem aggressive. A woman, like water may be passive in the beginning, and usually needs to be moved to lovemaking by a man. So in the beginning of lovemaking, it is beneficial for the woman to lies on her back and the man to use foreplay to bring the woman to the boiling point. Once a woman is active and aroused, she should play an active, or aggressive, part also by such activities as kissing him, playing with his tongue and ears, and holding and massaging his penis. All these activities will create a sense of harmony. Ordinarily the couple will then first move into the basic position, and then continue with other positions, most likely ending up in the basic man on top position again.

Fig. 8.5 *Man on Top Position*

8. Benefits of the Man on Top Position

There are benefits to this position.

(1) First, the entire systems of both the woman and man become energized. The *Plain Lady* book recommends practicing three sets of nine shallow penetrations and one deep penetration three times a day for twenty days. (The nine shallow thrusts stimulate the plexus of nerves surrounding the woman's G-Spot and are best for exchanging sexual energies, while the deep thrust forces air out of the vagina, creating a vacuum inside the woman during the nine shallow thrusts that follow. This has a very stimulating effect on the

woman.) In many years of experience in teaching and practice, we have found that both partners can be energied in one extended lovemaking session in which sexual healing energy is brought directly to the organs and glands. We stress the importance of the man not ejaculating and thus losing the energy. In this more passive position it is easy for the woman to draw and direct the healing energy up the spine, as she learned to do in Single Cultivation practicing the Orgasmic Upward Draw, and then down the front channel. In this way she will be able to guide the sexual healing energy to her organs and eventually through her partner's Orbit to his organs.

(2) Secondly, the face to face position is greatly satisfying to the senses and emotions. It permits all five sensory organs of both partners to come in contact: the tongues, ears, eyes, mouths, noses, and all hair and skin. These senses, especially the tongues and eyes, are the major carriers of life-force energy. We have mentioned that the tongue works like a switch. Once you have completed the Microcosmic Orbit by using the connective tongue, the Chi flows through the tongue. As you kiss and move your tongue to touch your partner or his tongue touches your sensory organs, you can feel those senses become stimulated which, in turn, stimulate the flow of energy from your corresponding organs.

(3) In this position it is easy for the woman and man to help each other open or clear their Microcosmic Orbit channels easily by moving a hand to the point that needs the energy flow.

(4) This position also gives a woman the greatest stimulation. Her clitoris is stimulated, and the man is able to reach her G-Spot. The weight of the man on top gives pressure to the woman's pubic bone, as well as to her breasts, and these pressures will help the woman become stimulated much faster.

(5) The woman can follow rhythmically by wriggling her hips, bumping and grinding in response to the pressure of the man as he presses down and thrusts inside. These movements create a certain kind of Chi pressure in the organs and glands, doubling the Chi in the cavities of the body, thereby permitting the energy to circulate much faster and exchange more easily.

(6) In this position, the farther up in the air the woman legs are, the deeper the penetration the man can accomplish in his thrusting, making this a particularly good position for a couple trying for a pregnancy. It is important, however to make sure that the uterus is not penetrated.

Fig. 8.6 *Woman on Top Position*

C. Woman on Top Position (Fig. 8.6)

Known as the sixth position in the *Plain Lady* book, the position with the woman on top will help to increase blood circulation.

As we live our modern lives, we have a tendency to overeat fatty foods which cause the blood to clot and settle in certain parts of the organs. This clotting causes a slow-down of the blood flow and creates a situation in which heat cannot be released or circulated to a cooler part of the body where the temperatures can be exchanged. The temperature of the whole body rises, resulting in an overheating of the organs. During lovemaking when we generate sexual, organ, and gland energy and fuse them into a very special kind of energy which we call Love's Special Energy, a harmonic

fusion occurs which helps to dissolve these blood clots. The kidneys and liver play the major role in this work.

In this position, the man can easily pull sexual energy to the kidneys and liver. When the woman is on top, the woman is freer to be active and so it is easy for her to direct the stimulation of the vagina and clitoris and maintain a certain angle to her sexual organs in a way that only she knows will stimulate her. Therefore, this position can help a woman with menstrual problems, such as cramps, most of which are caused by insufficient blood circulation in the ovaries and cervix. By directly stimulating the sexual glands, the clitoris, and the G-Spot, and pulling the sexual healing energy directly to the ovaries and cervix, the problem can be alleviated.

To attain this position the man lies on his back and the woman, on her knees and facing him, lowers herself onto his erect penis. Either the man or woman can guide the penis into the vagina. Couples may start in this position or arrive at it by rolling over from the man on top or the side by side position. Begin with the man in motion in order for the woman to receive the healing energy and reach the boiling point. Embrace each other making sure you do not bend the penis or let it slip out of the vagina.

D. Benefits and Drawbacks of the Woman on Top Position

There are both good and bad points to this position.

(1) The woman on top makes the woman experience a more active role, a sense of superiority, a free feeling of movement, and a sense of doing whatever she wishes. This helps to make the woman more open to the world and able to better understand men. Some women become tense when they consider that men try to rule the world in every respect. However it is the rule of nature that Yin and Yang must be balanced. In every situation women play an equally important role. In Taoism we regard timing as very important. When the Yang is too extreme, the Yin takes over. When the Yin is too extreme, the Yang takes over. Likewise, during the beginning of sex the man is on top to arouse the woman, because he, like fire, is aroused more easily than the woman. Once the woman is aroused, she will assume the top position to arouse the man. In this way the roles are interchangeable.

In the top position the woman can experience putting the penis into her vagina, and can take as long as she desires to insert it to give the feeling of prolonged genital sensitivity. Both will feel the

gentleness of the slowly spreading vagina as the penis is inserted.

(2) The woman can direct the glans of the penis to stimulate it in the most sensitive way by placing it only in the two inches that form the outer vagina. It is difficult for a man to remain in only the first two inches. The man tends to want to plunge deeper into the tighter area which alleviates his anticipation, but which also, because of its tightness, makes him finish fast.

The woman receives the sexual healing energy by permitting the man to do the thrusting as she guides his penis to the area she would like to have stimulated. In this position the man or woman can use their hands to stimulate the clitoris which will help the woman reach the boiling point faster.

(3) The man can enjoy the stimulation of liver energy by using his eyes to watch the expression of the aroused woman, her face and her breasts, and see the sexual organs in contact, moving in and out of each other. Once the eyes are stimulated, the man can bring the sexual energy to the liver by slightly contracting the right size of the anus. The woman can use her free hand to arouse her nipples, or her partner's nipples. This will greatly stimulate both partners' organs and glands.

(4) The woman on top is a good position for the later months of pregnancy since it allows intercourse without her growing belly getting in the way. It is also good for the man who has a big stomach in relieving the pressure since, during the sexual act, the stomachs will meet first rather than the sex organs. Older men, and men who have heart problems, are also helped by this position since the man does not expend vigorous energy Because the man can be less active, he can easily guide the energy to strengthen the heart.

(5) The woman on top has to be very careful that she does not move too vigorously which may bend and hurt the erect penis. This type of injury takes a long time to heal. Make sure that the penis has a full erection. If the penis becomes soft, start with slow movements to build up again to the high energy point. When the penis is soft, or during vigorous thrusting, the penis can slip out or half-way out of the vagina, and this is when it can get hurt easily

2. Traditional Lovemaking Positions and Healing

The following are a few classic lovemaking and healing positions as outlined in the *Plain Lady* book. We list these positions for your reference only. With a properly opened energy channel you can guide the energy to heal yourself as you wish at any time and in

any position, so it does not matter at all how many positions you use. For the most part you can use the few basic positions as outlined and change them into hundreds of positions. We want you to concentrate on the energy, not on the positions or gestures. Practice will help you to understand the energy. Many people like to read and listen to philosophy but if they do not practice and experience it, they find it very difficult to understand. Working on the energy is the best way to experience the higher spiritual work.

There are several positions of healing for men and women. Remember that when the man is more active, he gives the healing. The woman lies still to receive it, quieting her mind to feel the energy., and using her concentration to guide the energy only for the purpose and to the place she needs healing. When the man lies still, the woman does the healing.

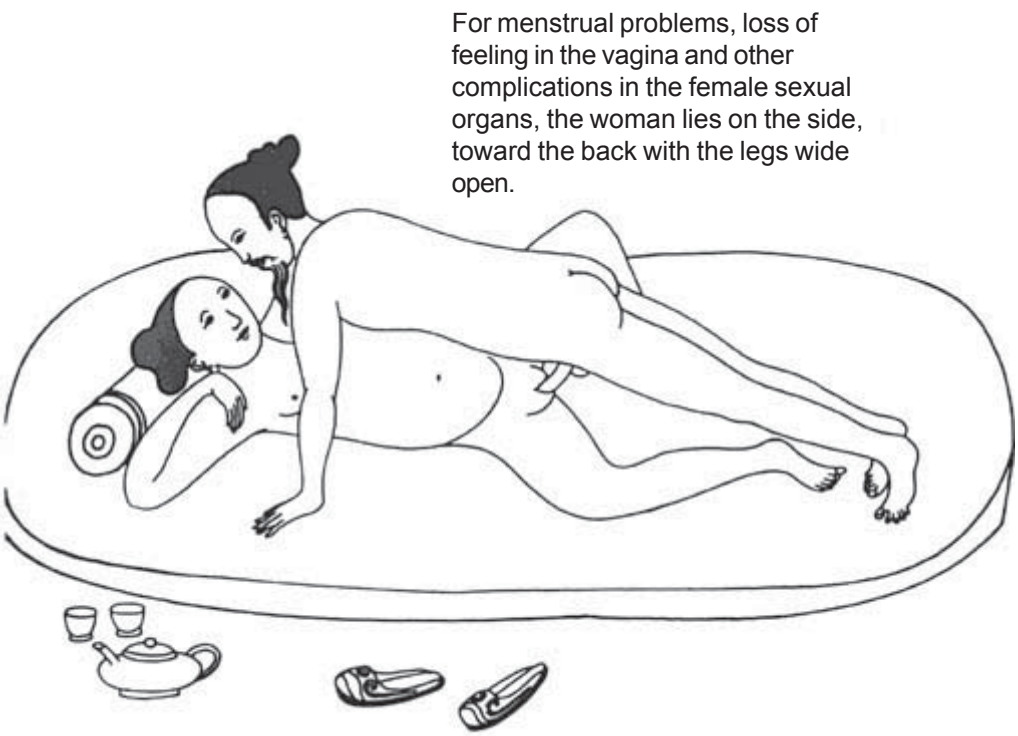


Fig. 8.7 *First Position is for Healing.*

A. The First Position is for Healing (Fig. 8.7).

The first position is for healing, supplying energy for women who are experiencing any kind of menstrual problem, such as cramps or excessive bleeding, loss of feeling in the vagina, or any other female problem. The woman, lying on either side or on her back with her legs spread wide open, has the task simply to maintain that position and receive the healing energy of the man who is accommodating her position with his own and is penetrating. Practice up to two sets of nine penetrations in this position per day for fifteen days.

Fig. 8.8 *Second Position is for Energizing the Body and Healing the Sexual Organs.*

B. The Second Position is for energizing the body and healing the sexual organs. (Fig. 8.8)

Position number two is for energizing the body, and is especially beneficial to those who suffer from low energy. By healing the female sexual organs, the basic energizing organs of the body, general weakness and lack of energy will be improved. To achieve this

position, the woman lies on her back with her head and shoulders supported by a big pillow, and the legs spread wide apart. This position tilts the head forward and tends to curve the vaginal channel. The man enters from the front, penetrating in three sets of nine, three times a day for twenty days.

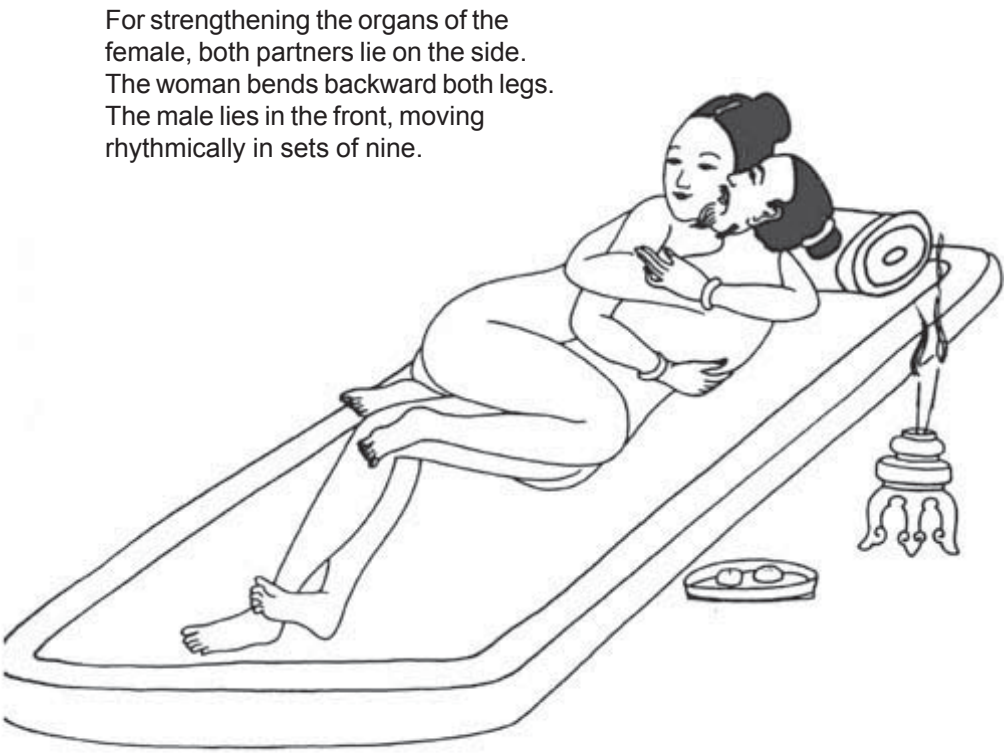


Fig. 8.9 *Third Position is for Strengthening all the Internal Organs*

C. Position Three is for strengthening all the Internal Organs .(Fig. 8.9)

The third position is for healing and strengthening all the internal organs. The woman lies on either side with both legs held together and bent backward from the knees. The man, lying in front of her: penetrates from the front, performing four sets of nine penetrations up to four times a day for twenty days.

D. Position Four is for Healing Bone Problems.(Fig. 8.10)

The fourth position is for healing any kind of bone problems, such as bone weakness. In addition to helping speed up the healing process of broken bones, this position also alleviates circulatory system problems and heals arthritis. (One cause of arthritis, according to Chinese medicine, is bad circulation.) By increasing metabolism and thereby circulation, the risk of disease of the bone marrow, or leukemia, is also lessened. To attain this position, the woman lies on her left side with the left leg bent backward as far as possible, and her right leg stretched out straight and free. The man faces the woman to penetrate, practicing five sets of nine penetrations, up to five times a day for ten days.

For weakness in the bones and joints and circulation problems, the woman lies on the left side with the left bent backwards as far as possible. The right leg should be straight. the man lies on his right side facing the woman, penetrating gently in a rhythm of nine.

Fig. 8.10 *Fourth Position is for Healing Bone Problems.*

E. The Fifth Position heals Blood Vessel Problems. (Fig. 8.11)

Position number five is for any kind of blood vessel problem, such as varicose veins, hardening of the arteries, high or low blood pressure, or blood clots. Excessive blood clotting, practically ignored in Western medicine, is a very important part of the theory of pathology in Chinese medicine, and is treated as a kind of blood disease. The position is the same as the fourth position, except it is executed with the woman on her right side in six sets of nine penetrations, up to six times a day for ten days.

For blood vessel problems, varicose veins, hardening of the arteries and high blood pressure, the woman lies on her right side with the right leg bent back as far as possible. the left leg is straight while the man penetrates, moving in a rhythm of nine

Fig. 8.11 *Fifth Position Heals Blood Vessel Problems*

For increasing blood production, high blood pressure or other blood-related problems, the man lies on his back while the woman sits on top facing him. The woman remains passive while the man moves.

Fig. 8.12 *Sixth Position increases Blood Count.*

F. Position Six increases Blood Count. (Fig. 8.12)

This position is for generating and building more blood, especially in those who lack the capacity for generating new blood, such as a woman who bleeds excessively or is anemic. It is also beneficial in stabilizing blood pressure. For this position the man is on his back in a relaxed position and the woman is upright, facing him, on her knees and on top of him. She does not move; it is the man who moves up and down beneath her: The woman must spread her legs appropriately to be able to hold this position properly.

G. Position Seven is for Lymphatic System Problems.(Fig. 8.13)

This position improves the functioning of the lymphatic system.The man again lies on his back and relaxes while the woman kneels over him facing toward his feet on her hands and knees. the man penetrates and moves in this position. The woman can move slightly if she chooses, but basically it is the man who is giving the healing.

For problems related to the lymphatic system, the man lies on his back, the woman over him on her knees. The woman remains still, while the man moves in sets of nine.

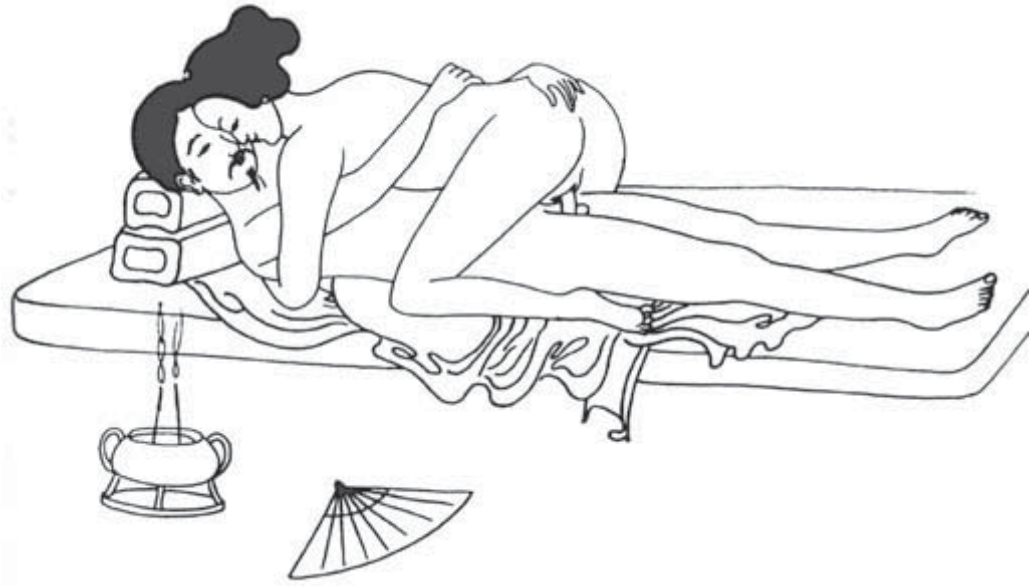


Fig. 8.13 *Seventh Position is for Lymphatic System Position.*

H. Position Eight is to tone the entire Body. (Fig. 8.14)

This position is for healing the body in general. It is a difficult position. The woman is on her knees and bending all the way over backwards, as far back as she can go. The farther she can bend and the closer she comes to a backbend, the more ideal. If it is impossible to go very far, use a pillow to prop yourself up, and bend

as far back as you can without hurting yourself, spreading the legs wide enough so that the man can penetrate from the front. He performs most of the movement.

For all-purpose healing the woman should lie on her back with the legs bent at the knees and the back flat on the bed. The man penetrates from the front, moving in sets of nine.

Fig. 8.14 *Eighth Position is to tone the Entire Body.*

I. Position Nine is for lack of Energy. (Fig. 8.15)

This position is for those who feel weak all the time, have blurry eyes, perspire frequently and profusely often feel faint, experience fast heartbeats, or any similar symptoms. During contact in this position, the woman is basically the one who moves, rotating her hips in a circular pattern, and it is she who does the healing. If the man becomes too excited and in danger of ejaculating, the woman

has to rest for a while. The man can perform the, Big Draw to regain control or rest so that he does not ejaculate. The woman is on her back, and the man, leaning on his hands so as not to put all of his weight on her penetrates from the front as deeply as possible. This will allow enough room for the woman to rotate, first nine times in a clockwise direction, resting, rotating nine times in a counterclockwise direction, and then resting again. If it is comfortable, she can rotate all the way around. She is doing the work, and should continue to do so until she feels she has generated enough energy. This can be practiced nine times a day for ten days.

Fig. 8.15 *Nine Position is for Lack of Energy.*

J. Position Ten heals the Sexual Glands and Organs, the Endocrine Glands, the Pancreas and Liver. (Fig. 8.16)

This position helps to heal and improve the functioning of the sexual glands, sexual organs, endocrine glands and liver. It is particularly good for those suffering from diabetes. For this position the woman lies on her back and wraps her legs around the man's thighs, not his buttocks or back. The man penetrates shallowly an inch and a half using only the head of the penis. The woman rotates her hips both clockwise and counterclockwise for nine times and then rests. Initially she can rotate nine times in one direction and then rest, and then return nine times in the opposite direction and rest.

Fig. 8.16 *Tenth Position heals the Sexual Glands and Organs, the Endocrine Glands, and the Pancreas and Liver*

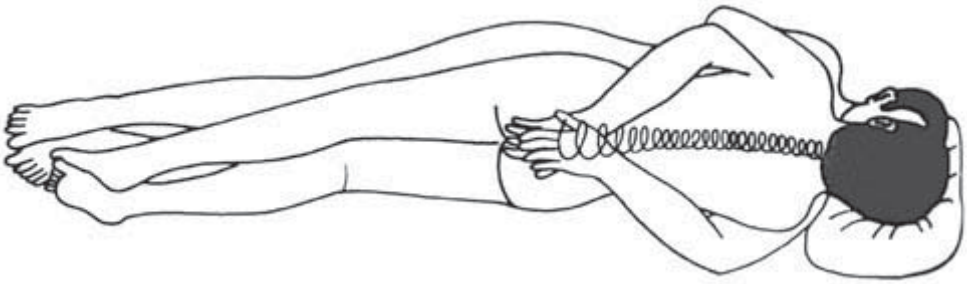


Fig. 8.17 *Sacral Pump Energy Point*

3. Basic Hand Positions to Energize the Body. (Fig. 8.17)

Using hands to assist in the circulation of sexual healing energy in the Microcosmic Orbit to energize the system is one of the most important aids in this Taoist practice. During lovemaking the more you can extend and draw an orgasm upward rather than outward, by performing the Orgasmic Draw while your male partner uses the Big Draw to draw in his own sexual healing and control the loss of semen, the more the sexual energy can be increased. At this point if we can guide the energy flow into the proper channels, the benefit will be tremendous.

There are distinctions among our different energy centers which expand as our awareness expands. As we open ourselves up and discover these distinctions, we open ourselves to their possibilities. It is important to realize that even when you keep yourself open to recognize the distinctions as they exist in you, others may recognize some you may not be aware of. Do not let your ego limit you. As your awareness expands, it is the quality of your maturing awareness that makes the distinctions. Working at something to develop awareness of it and being able to make distinctions are what opens up a subject for us.

The first area in which you begin to feel the energy is in the sex centers, which, as you have learned, are located differently in men and women. In males it is found at the base of the penis and the pubic bone area, while in females, in the Ovarian Palace. When the sex center is not activated and becomes “closed,” many different sexual difficulties arise, as well as feelings of self-destructiveness, self-hatred, a negative attitude and orientation toward life, low or no

energy or enthusiasm, and listlessness. The feeling is agitated and lazy at the same time. This all promotes violent behavior. Bring your attention to this area and radiate, like the sun radiates, your sexual energy from your organs. When energy begins to move and the sex center begins to open up, the sense is one of creative and personal power with the ability to get things done. There is an appreciation for fun and pleasure in life, and vitality.

The perineum area has the characteristics of being grounded, solid, and peaceful when it is open, resulting in a certainty and a security within ourselves and a security within change. When it is closed, there is paranoia, or fear of change. Feeling insecure, wishy-washy, fickle, upset or lonely are the sensations experienced. During the process of your practice, when energy is stuck there, you can feel shaking, jerking or chills. Radiate your sexual energy down into the perineum and create a star or sun glowing there that is beautiful. Feel grounded, solid, peaceful, filled with certainty and the ability to be secure within change. You are now ready to bring the sexual energy to the first energizing point.

A. Sacral Pump Energy Point

As you or your partner approach orgasm and you practice your respective Draws, exchange the excess Yin and Yang energies and feel the orgasm move upward. Lie still and quiet for a moment, embracing each other and put both of your palms on your partner's buttocks, with the fingers touching the crest of the buttocks, and the palms covering the buttocks toward the sacrum. (Fig. 8.17) The man should do the same to the woman in each of these exercises. Feel the sexual healing energy from your partner's hands pass to your buttocks and give you assistance in raising your own sexual healing energy up the spine. At the same time slightly pull up the vagina and the front part of the anus, and then pull up the middle and back part of the anus to draw up the sexual healing energy, to the Sacral Pump. Feel a warmth and tingling in the sacrum, or other sensations as this point opens up.

Enjoy this moment of peace. Feel the tension and stress begin to melt away in the legs, hips, pelvis, chest and head as you radiate this point. Think of this point as the place containing rootedness to past and present that goes down into the legs, connecting with the nerves there. When it is closed, the past seems a prison, housing unconscious fears and hopelessness that things will remain as

they always have been, never improving. Sense and radiate at this point all the treasures in your past that will become your resource, and the blossoming of all your deep potentials as they become part of your daily living, balancing you in time and space. The feeling is often wide because the energy is awake everywhere. Here is the place where we can blend the earth energy, sexual energy and refined energy. Take as long as you wish to enjoy this point.

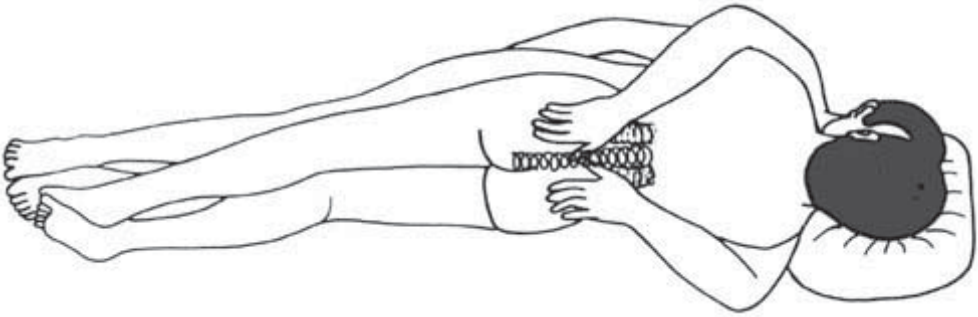


Fig. 8.18 *Kidneys' Energy Point*

B. Kidneys' Energy Point

When the feeling in the sexual organs subsides, the energy flow is low and you can resume lovemaking, building up to the height of sexual healing energy. Perform the Orgasmic and Big Draw again, exchange the excess Yin and Yang energies, and embrace again in stillness. Both partners should now place their hands and palms on the other's left and right hips with the fingers touching each other on the hips, and the palms covering the hips and facing toward the kidneys and adrenal glands. (Fig. 8.18) These points are key energy sources. At the same time slightly pull up the front, middle, and back parts of the anus and bring the sexual-healing energy up to the Door of Life point (located opposite the navel between Lumbar 2 and Lumbar 3). Hold the energy at this point for a while, then slightly pull up the left and right part of the anus, bringing more energy directly to the kidneys. Wrap the sexual energy around the kidneys like a cocoon, and then pack the energy into the kidneys.

The Taoist system regards the kidneys as transformers. When the kidneys are strong, they fill with Chi pressure, enabling them to

perform the very important task of cleaning out the toxins and waste materials which have become embedded in the cells. Once the toxins are cleaned out, the cells will energize. Taoists also regard the kidneys and each kidney's surrounding area as the places where prenatal energy (our principal energy) and sexual essences are stored. The refined foods, pollution, toxins, etc., of modern life gradually deplete the kidneys as a source of energy. Energy depletion from the kidneys, blockage of energy flow, or a closing of the kidney point are believed to be major causes of many disturbances, such as back pain, imbalance, depression, the feeling of being taken advantage of and fear.

(1) Excessive loss of semen creates fear.

Excessive loss of sperm energy drains the kidneys. This depletion is the major reason for fear in men, causing them to lose confidence in sex and in life, not an uncommon situation for men in today's world. Using sexual stimulants creates a speedy depletion of a man's sexual energy, similar to trying to pour gasoline onto old half-burned wood; you only speed up and use up the vital energy stored in the body that is so necessary to life. If your partner ejaculates, holding him at these specific kidney points will be the most important way to revitalize him, thereby helping him to recover lost energy much faster than any kind of drug or sexual stimulant.

Holding your partner's little fingers can also help to overcome this fear. The little fingers are the beginning and ending of the heart and small intestine meridian. When the kidneys generate fear, this fear will first affect the adrenal glands, and these glands will stimulate hormones that affect the heart, thereby increasing the meridian energy, a condition that can tilt the whole system off balance. Holding the little fingers will regulate the flow and balance of energy. In this way your partner can recover his confidence, and give his heart to you. Remember that lovemaking is caring about each other. If he cares about you, you must care about him.

When the kidney point is open and radiating, there is a sense of openness, generosity, abundance and balance. All fears are outshone in that radiance.

Fig. 8.19 *Adrenal Glands Point at T-11*

C. Adrenal Glands Point at T-11

When you feel that the sexual energy is low, resume lovemaking to the point of high energy. Next move the energy up to the rejuvenation energy center or Thoracic-11 (T-11), located at the spinal joint of the two lowest floating ribs. You and your partner should put the heel of both palms on each of these lowest ribs with the palms covering between the second and third lumbar vertebrae. (Fig. 8.19) These areas are where the kidneys are located, above which the adrenals rest. The adrenal glands, located on a long muscular band which can be felt along the entire back in this area, secrete certain hormones to increase the growth and vital force of the trillions of cells of the body. It is the adrenal glands that will make cells last longer and stay younger.

Our modern lives abound with tremendous stress. We are fearful on the streets, in planes, and in the working place. We are burdened with all kinds of excitement, such as the stimulation of television or radio commercials constantly trying to sell more things to us. All of this stress depletes the adrenal glands' function, and this depletion locks the adrenal glands' point and becomes the main cause of hypertension, listlessness, depression, sadness, frustration, insomnia, and low-key performance.

To bring the sexual energy to the adrenal glands, slightly pull up the front, middle, and back of the anus, and thus the Chi Muscle. Pull the sexual energy up to T-11 and feel the energy there. Then contract the left and right anus and pull up more energy to the kidneys and the adrenal glands. Wrap and pack the energy there, and feel the warm sexual energy vitalize the glands. Remember that these exercises can be performed simultaneously by both partners.

When the adrenal glands' point is open, you will feel energetic, confident, filled with a sense of vitality, and the ability to get things accomplished.

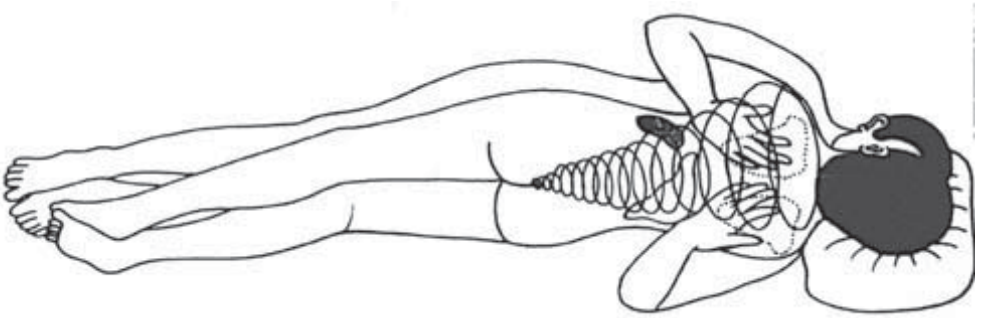


Fig. 8.20 *Liver and Spleen Point*

D. Liver and Spleen Energy Point

The fourth Upward Draw (or Big Draw for your partner) energizing point is the liver and spleen point, situated at the ninth and tenth ribs and on the muscular band just below the scapulae. Put your fingers on the scapulae with the middle of the palms immediately below the lower tip of the scapulae. (Fig. 8.20) As you cover this area, feel your Chi energy activate your partner's energy Slightly contract the front, middle, back and then the left and right sides of the anus, and bring your own energy up to the liver and spleen, continuing up to the point between the scapulae. The liver is the main storage house of energy and contains the capacity for natural beauty. The liver and spleen energy point, when open, provides a sense of freedom and the ability to take risks for ourselves and others. Opening this energy point and radiating energy there can also help to relieve anger, panic, worry and anxiety, fears of the past, back pain, release the tension of the diaphragm, generate deeper breaths, and improve digestion. You might release gas and begin to yawn a great deal as your digestive system is clearing itself. You sense an opening to the present moment.

In the beginning you can practice drawing upward to one or two points only. When you are more advanced, all of these upward contractions will become more automatic, and eventually you will be able to energize the whole line of points at once. Do not, however

confuse the points with the actual organs. These points simply correspond to the organs.

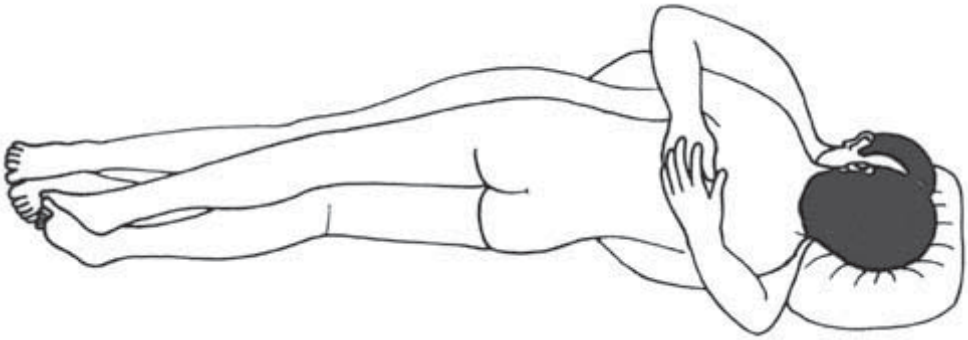


Fig. 8.21 *Heart and Lungs' Point*

E. Heart and Lungs' Point

The fifth Upward Draw (or Big Draw) point is the heart and lungs energizing point, located between the fourth and fifth ribs. Feel the crest of the scapulae and follow each scapula down to the center point between them at the spinal cord, opposite the heart center. Use your palms to cover the area between the scapulae and the spinal cord. (Fig. 8.21) Feel your energy pass to your partner and your partner's energy pass to you. Slightly contract the front, middle, back, left and right parts of the anus, and bring the sexual energy to the lungs and heart. Be very careful in pulling the energy to the heart and lungs since excess energy at these points can cause pain in the chest. The completion of the Microcosmic Orbit is very helpful in preventing such congestion. The Healing Sounds of the heart and lungs are also helpful in relieving congestion, as are brushing-down with the palms or stroking or tapping the chest. (See the book *Taoist Ways to Transform Stress into Vitality* for an elaboration of the Six Healing Sounds).

In addition to chest pains the heart center, when closed, leaves us with a feeling of ignorance of our real relationship to things. We may feel sorry for ourselves, unloved, and incapable of love. We often feel under attack. We can feel overwhelmed, rushed, cruel, arrogant and lonely. Usually the worst feeling is one of unworthiness or lack of deserving. When that heart center is open, we feel sunshine from the inside. We have a sense of joy and love that is

sometimes a floating sensation. In all of our meditations it is important to fill our hearts with loving, smiling energy, because when we feel love, we are truly related to all things. There is a sense of honor and respect. When open this point will also help to increase circulation and improve respiration, which will quickly energize the entire body. It can help to relieve upper back pain, shoulder: neck and arm tensions and pains, and provide a way to recover from tiredness. Allow this energy to circulate through your being to create the feeling of gratitude that will be the catalyst for all your spiritual work and enlightenment.

F. C-7 Point

The sixth energizing point is the C-7 point, the largest protrusion of the spinal column located at the junction of the shoulder and the base of the neck. This point controls all the tendons of the body. The Taoists regard this as the great union point of the Chi flow connecting the hands, head and spine. Opening and connecting this point is very important to the practices of Healing Hand Kung Fu, Iron Shirt Chi Kung, and Tai Chi Chi Kung. (A description of these practices can be found in the last chapter of this book entitled *The Universal Tao System: Courses Given in Various Centers*). Place your left hand on C-7 and the right hand on the sacrum. (Fig. 8.22) Contract and bring the sexual energy up to this point.

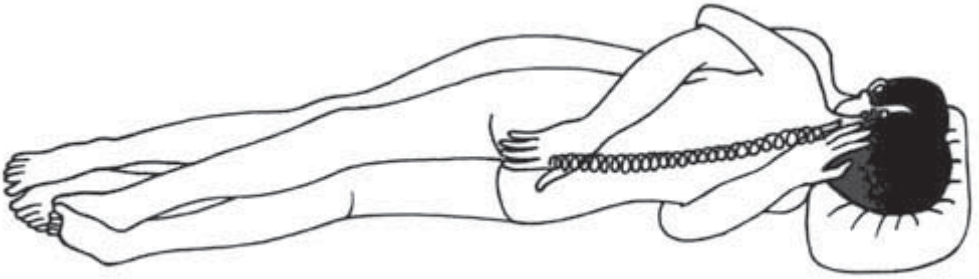


Fig. 8.22 *C-7 Point*

The C-7 energy point, when it is closed, stirs within us the feeling of denial of our connectedness, as if we stand as individuals against the rest of the world. It also creates the feeling of being inappropriate

and ill-fitting, or not being in the right place. It is demonstrated in a stubborn viewpoint, while at the same time being burdened by our inappropriateness. As the point opens up and radiates the energy, the experience is as though a mantle is being draped from our necks down onto our arms, giving us the ability to embrace each other in our humanity, opening our viewpoints and flexibility, our appropriateness, manifested in the feeling of connectedness. As the feeling spreads farther down our arms to our hands, we become mote aware of the healing ability in our palms.

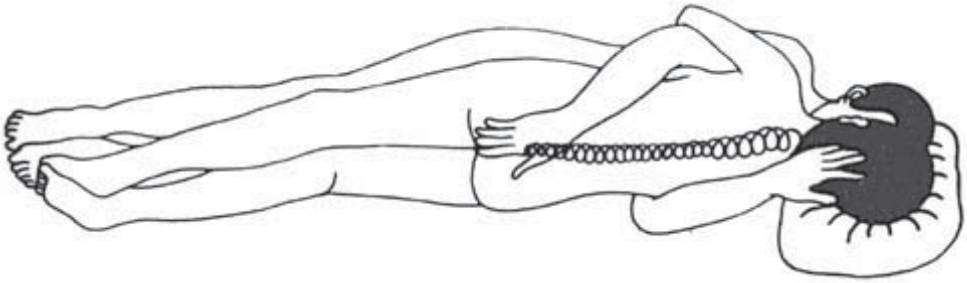


Fig. 8.23 *Neck Point*

G. Neck Point

The seventh energizing point is located at the middle of the back of the neck, between the third and fourth cervical vertebrae. Use your left palm to cover this point and the right palm to cover the sacrum as you slightly contract the front, middle, and back parts of the anus. (Fig. 8.23) (There is no need to contract the left and right parts.) Bring the energy to the neck and feel the neck energize. The neck is the busiest traffic area in the body. All the controls of the body including all emotions, are signaled from the brain and pass through this “bottleneck.” When under stress and emotional strain, the neck begins to accumulate and jam with tension.

The neck is the passageway of many meridians channeling the organs’ Chi energy to and from higher centers. In the middle of the neck runs the Governor Channel, while the bladder, triple warmer and large intestine meridians travel along the sizes of the neck. Emotions, generating from the organs (anger from the liver fear from the kidneys and bladder, grief from the lungs and large intestine.

hastiness from the heart and the small intestine, and worry from the spleen, stomach, and pancreas) “jam” in the neck causing the neck to be stiff.

Oftentimes when your partner has lost too much sexual energy, it will result in an increase in tension, creating a greater emotional “jamming” in the neck. As a result your partner will be easily angered, fearful, and frustrated. The neck point is a marvelous place to release the tensions arid emotions of your partner. Hold this point gently.

There is no need to contract the anus, just hold your partner and mentally guide the sexual healing energy to melt the tensions and emotions away. You can lightly massage to help release the tension. This will increase your partner’s relaxation tremendously

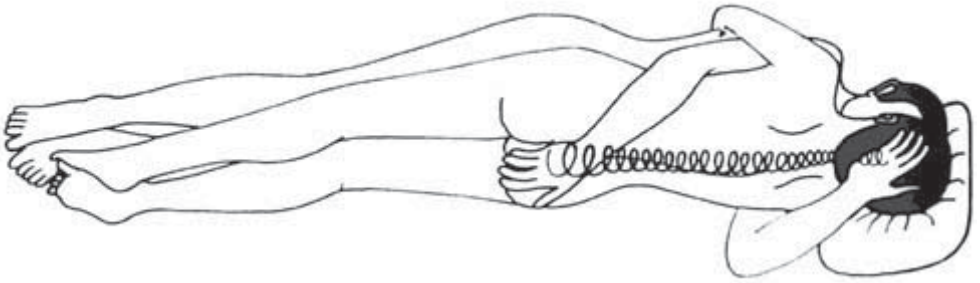


Fig. 8.24 *Base of the Skull (Jade Pillow) Energizing Point*

H. Jade Pillow Energizing Point

The eighth energizing point, the Jade Pillow, is located between C-1 and the base of the skull (the occipital bone) in a little hollow between two muscle bands and outsize of the spinal column. Embrace your partner quietly and place your left palm over the base of the skull on the hollow place, with the right palm over his sacrum. (Fig. 8-24) Feel the heat that is generated as the sexual healing energy passes to your partner while your partner’s energy passes to you. There is no need to contract the anus. Use your concentration to direct your energy to melt tension and clear the mind.

Radiating the energy in the Jade Pillow will impart to you a sense of being able to draw inspiration in. This point is connected very much with our breathing, as well as a part of the brain that is located there. When it is blocked, the sensation is of a burden that is suffocating you. As you guide sexual energy to this point, and the energy accumulates there, you can work out this block. The brain revitalizes, the mind clears, consciousness increases, and memory improves. There is a limitless feeling as of a sky. As it opens, breathing becomes easier and an inspirational sensation occurs, as if something beyond our imagination can enter and operate through us. Rest your attention at this point, quieting the mind, and look into the spaciousness and luminosity. This point also influences the eyes, ears, nose and mouth.

I. Crown Energizing Point

The ninth point, at the top of the head above the mid-brain, is called the crown point (the Pai-Hui, or GO-20), and is the seat of the pineal body. Its functions are related to sensitivity and the sexual cycle. The crown point governs hearing, body rhythms, equilibrium, the perception of light through the eyes and skin, and is the superior counter support of the brain and spinal cord. In Chinese it is called the “Hundred Point Joint:”.

When the crown energy point is closed, we do not feel in charge of our lives, but rather out of control and reckless. We are filled with delusions and pride, and experience erratic mood swings and headaches. When the crown is open, we are guided by higher forces. We radiate happiness, blossoming like a flower giving off a fragrance. We rule over our own expression and experience.

In the latter part of the higher Taoist practice, this point serves as a compass directing a person’s soul and spirit to the place where he or she is eventually supposed to go. Once this point is fully developed, you will see a clear creative light, giving direction and sustenance to your spirit body.

Once you reach this higher level of sexual healing energy, very slightly pull up the front, middle and back of the anus and the Chi Muscle, and bring the Chi to the top of the head. (Fig. 8-25) Assist this movement by looking up with your eyes while concentrating on the highest point. In the beginning you might feel pressure or a sense of expansion in the middle of the head. This is an indication of energy reaching this point. Use your mind, your eyes and all the

senses to move the energy in a clockwise motion, circulating it nine: eighteen, twenty-four, or thirty-six times, depending upon how you feel.

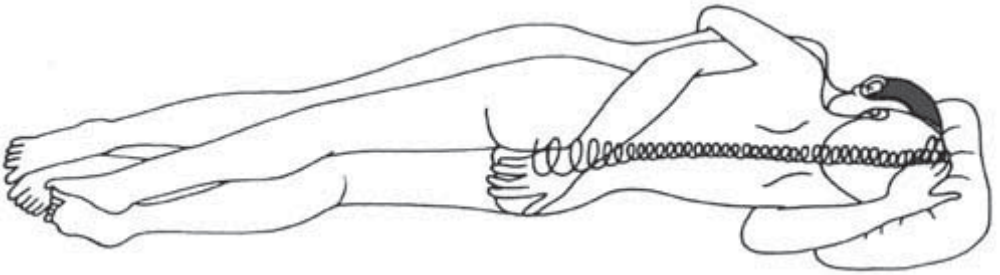


Fig. 8.25 *Crown Energizing Point*

Again it is important to emphasize the opening of the Microcosmic Orbit. With the Orbit open, you will easily be able to guide the sexual healing energy up to the top of the head, and when energy has filled this point, it will overflow, pouring down to the middle of the eyebrows where the pituitary gland is housed. The Taoists regard this point as the "Original Cavity of the Spirit." The crown energizing point houses the master endocrine control gland, the pineal gland, regulating growth, gonadal, adrenal and thyroid functions.

J. Third Eye Point

The third eye point, located between the eyes in the center of the forehead, radiates like sunshine, or the opening of a flower as the sexual energy flows down from the top of the head to this area. When the forehead is open there is a sense of purpose, a direct and simple knowledge, an intuitive wisdom and sense of direction in life. A sense of your own personal being emerges. As the positive energy accumulates there and ripens, you smell fragrances, taste the nectar trickling down onto the tongue, or see a beautiful, blue pearl. When closed, the feeling is of the mind wandering and indecisive, fickle, and often agitated. An internal dialogue of self-criticism and invalidation continues endlessly. When this center is closed, you feel you have no direct knowledge or perception.

K. Throat Center

From the third eye point, the energy will continue to flow down to the nasal passages, the palate, the tongue, the throat center .The throat center is located at the notch at the base of the throat and top of the sternum. It is a place of communication and change. When open, our expressions flow, both verbal and non-verbal. This point has the power of the word: what you say and what you ask for come about. Openness in that center promotes speech, so that the sentences we use are the ones we live out. An open throat center also brings about lucidity in dreams, the expressions between our souls and our other selves. When the center is closed, you can feel choked up, as with guilt, and you may have difficulty swallowing, as if there were a lump in the throat. You may feel an unwillingness to change. Feel the energy radiate into the throat, as though you are sunbathing there. Let go of all things and all memories of that closed feeling. Feel the throat open and blossom with the power of speech. Be aware of the lucidity in your dreams and a flexibility manifested in your ability to express yourself.

The energy continues to flow down to the heart center again, at the middle of the breast, one inch from the lower end of the sternum. This heart center point is a very important point in the woman's practice. It is the seat of energy transformation, and thus the seat of healing and loving energy in a woman. From the heart point the energy will flow down to the solar plexus, and then down to the navel.

L. Navel Center

As the navel center opens, we feel a sense of balance, equanimity and centeredness, of allowing ourselves to be as we are, and everything else to be as it is, which takes no effort. The experience is one of mindfulness. An open navel center allows us to let things be, put a value on everything, and feel true abundance. When it is closed, there is a lack of balance and centering. The navel center is a storage place for excess energy, and so is a storage place for the energy of our work. As we continue to bring the energy to the navel center the navel naturally centers and opens. As you feel the energy accumulating in the navel, you will find it to be the place of value, the original connection you had with your mother and the place of nourishment as you came into this world. Here we feel the natural abundance of all things.

Try to practice holding one point at a time, and move up one by one in sequence. Do not practice all the points in one session in the beginning. Once you feel that all your partner's channels are open, you can choose the appropriste points to use at that time. Judge by the needs of your partner. Discuss the hand positions ahead of time with your partner describing what you would like to accomplish, and share the entire book with him so that he can understand the practice. Your mutual understanding and working together on the practices described here will result in harmony.

Once you have completely opened your partner's back channel with the help of your hands, you can use the hands to help speed up the flow of sexual energy.

C. Step-By-Step Practice to Balance and Harmonize the Total System

While your sexual organs are in contact with your partner, you are joining with his or her front channel, the Functional Channel. The energy flowing through each one's. Functional Channel is more easily joined when there is sexual arousal. At this time a lot of energy is generated from the organs and glands, and it all flows down to the sexual region. Remember that if you do not redirect it up, the most vital force that your body creates will be lost to the universe, with no benefit to you at all unless your intention is to bear a child.

1. Guide the Aroused Sexual Energy up the Spine.

Begin by guiding the aroused sexual healing energy up the spinal column to the points listed below one at a time with the assistance of the hands. As you become more advanced in the practice, you can put your hands on different points, thereby causing the energy to jump faster.

A. Kidneys' Point

Start with foreplay to bring your partner or your partner to bring you, up to the boiling point. Remember that if the organs, glands and sexual energy are not ready when you engage in lovemaking, there will be less energy to exchange. This can be harmful to the organs, glands, and sex organs. When you feel the sexual healing energy is activated, embrace each other for a while. Then both of you can begin to use your hands simultaneously or one can

singularly touch the other if you both choose. Put your right hand on the sacrum with the middle finger touching the tip of the coccyx and the palm covering the sacrum, especially the opening of the sacral hiatus. (Fig. 8.26) Feel the heat being absorbed into the spinal cord as it helps to activate the Sacral Pump which moves the energy upward. Place your left hand on the Door of Life, opposite the navel and between Lumbar 2 and Lumbar 3. Feel the sexual energy moving upward from the sexual region, past the sacrum and up to the kidneys' point. Use the anus muscle to hold and guide the energy up, if necessary At this time you can inhale to pack and wrap the sexual healing energy, bathing the kidneys with healing, creative and generative energy.

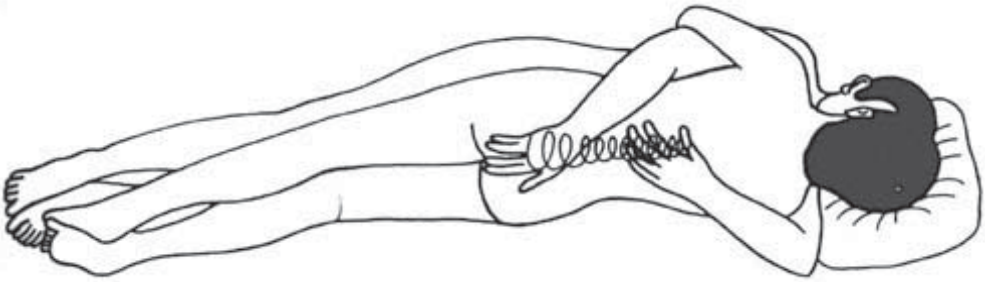


Fig. 8.26 *Move the Energy to the Kidneys Point.*

B. T-11 Point

When you feel the sexual energy level is low, your partner or you should resume a three shallow-one deep, a six shallow-one deep, or a nine shallow-one deep series of penetrations. Taoist Masters discovered the G-Spot many thousands of years ago. In all their manuals on sex they always advised shallow thrusts because the glans, or head, of the man's penis will stimulate the glans, or clitoris, of the woman, and fit right behind the pelvic bone where the G-Spot is. Build the energy to the point in which both of you can exchange the energy. Embrace quietly for a while with the right hand still holding the sacrum, and move the left hand to the T-11, the point of the adrenal glands. (Fig. 8.27) Hold this position until both of you feel the energy move.

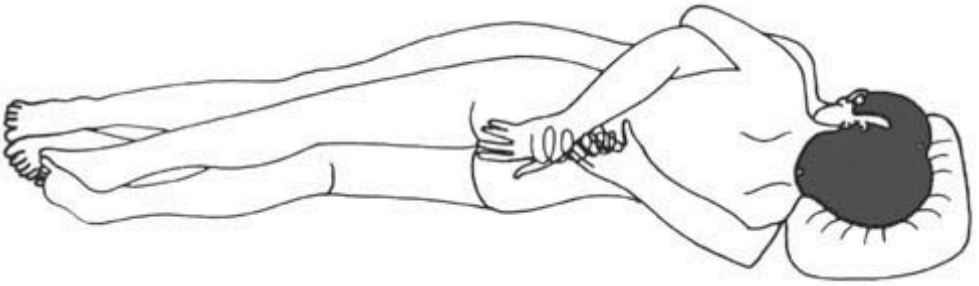


Fig. 8.27 *Move the Energy to the T-11 Point.*

C. Liver and Spleen Point

Repeat the above step, but this time move the left hand to your partner's liver and the spleen point, below and between the scapulae. (Fig. 8.28)

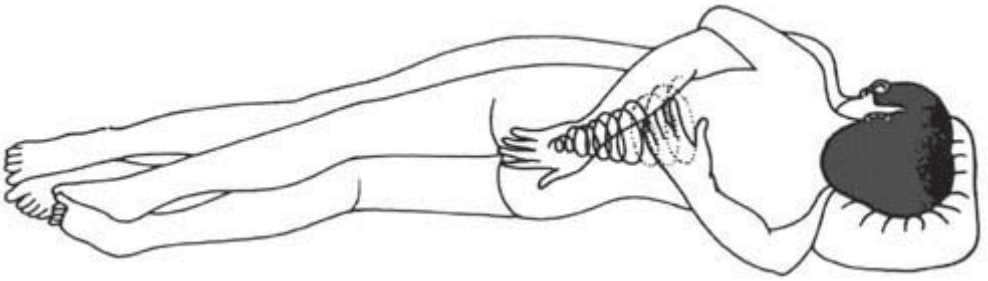


Fig. 8.28 *Move the Energy to the Liver and Spleen Point.*

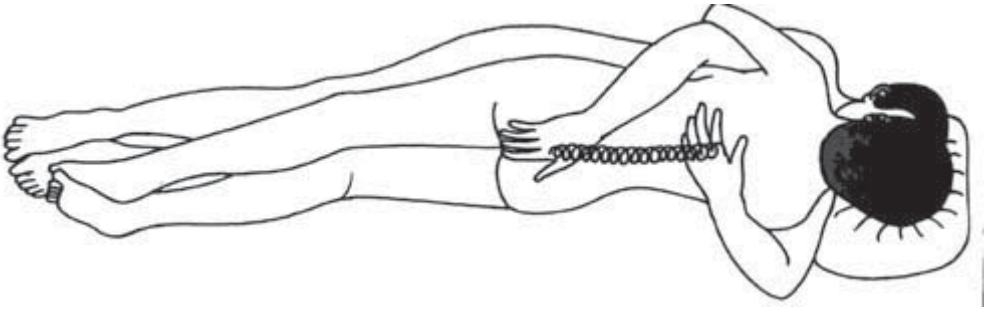


Fig. 8.29 *Move the Energy to the Heart Point.*

D. Heart Point

Repeat step (b) again. After both of you have built up to the height of sexual-healing energy, embrace again. The right hand remains at the sacrum and the left hand moves to the heart point, located opposite the heart center and between the fourth and fifth ribs. (Fig. 8.29)

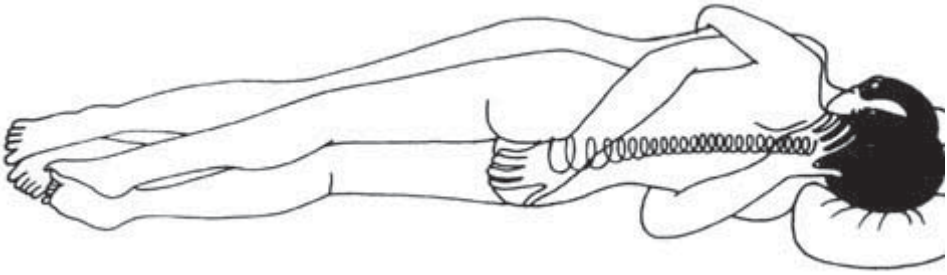


Fig. 8.30 *Move the Energy to the C-7 Point.*

E. G-7 Point

Build the sexual energy to its highest point again and embrace. Maintain the position of the right hand and move the left hand to the C-7 point at the base of the neck. (Fig. 8.30) Feel the sexual energy being drawn up, activated toy your partner's palms, the anus Chi Muscle, and the eyes-mind concentration.

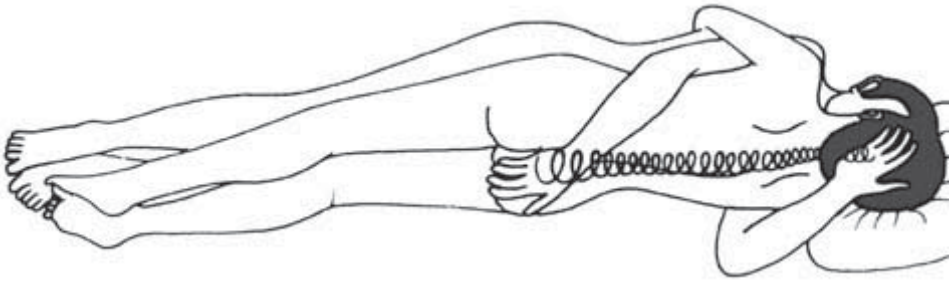


Fig. 8.31 *Move the Energy to the Jade Pillow Point.*

F. Jade Pillow Point

Build up the sexual energy and embrace. The right hand remains on the sacrum. The left hand is moved to the base of the skull.

(Fig. 8.31) When you join this point with the sacrum point, you will activate the Sacral Pump and Cranial Pump, and so will greatly feel the flow of sexual energy. The consistent increase in the activity of these pumps is very important to your health, and mental and spiritual practice.

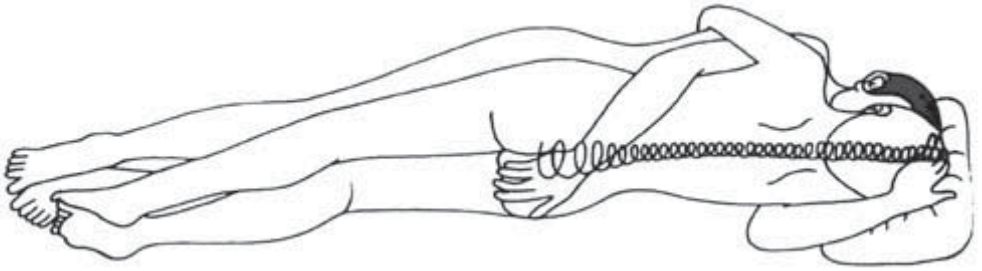


Fig. 8.32 *Move the Energy to the Crown Point.*

G. Crown Point

Build up to highest point of sexual energy arousal and embrace, with the right hand remaining on the sacrum. Move the left hand to the top of the crown. (Fig. 8.32) If the channels are well open, you will gradually feel energy flow like a fountain of youth up to the head, and then a sprinkling of the energy in the brain. Once it fills the brain, the energy will shower down the front channel to the tongue, the heart, and then down to the navel.

H. Exchange the energy using the eyes, nose and tongue.

Now look into your partner's eyes. At this point there is a lot of energy in the eyes that can be exchanged. You can feel that you are looking into your partner's soul. His and your eyes, like magnets, draw and pull from each other: At this moment the energy exchange through the eyes and tongue is very deep.

Rub your nose against your partner's nose. Feel a spark of energy jump from one to the other.

Move your tongue into your partner's mouth. Touch his tongue and massage it with your tongue. Feel the sparkling energy pass from your tongue to your partner's tongue. The fragrance of the energy flowing from mouth to mouth, from palate to palate, is beyond words.

The eyes, nose and tongue of each of you help to join and encourage the flow of sexual energy down the front channels. If you and your partner now have a lot of saliva, be sure that you both are in good health before swallowing it.

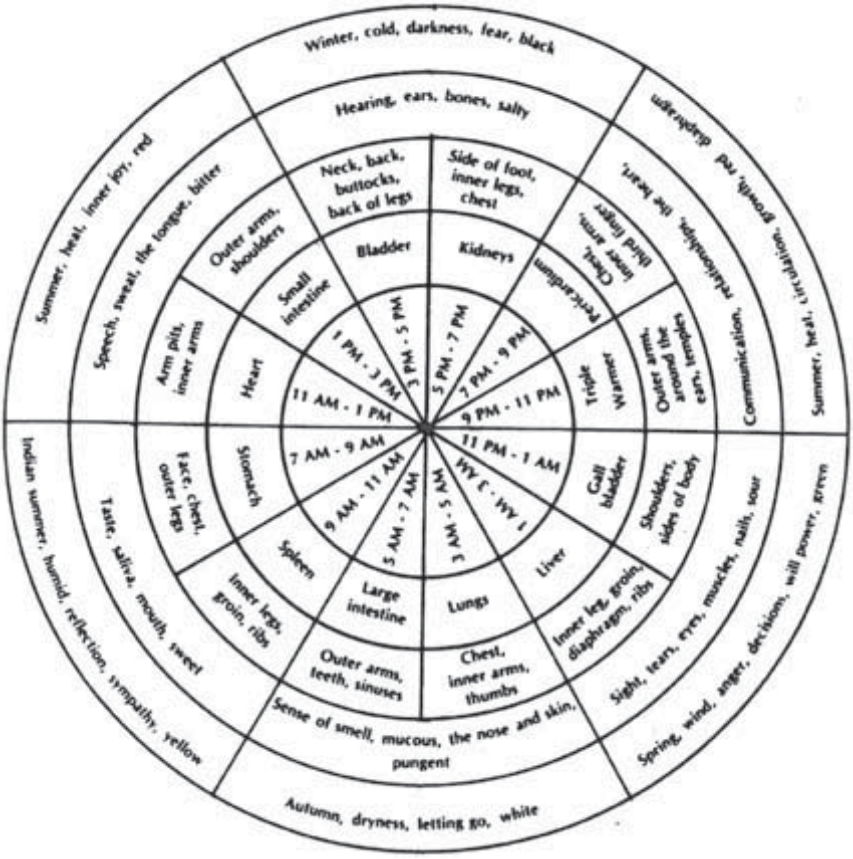


Fig. 8.33 *Body Clock Chart*

I. Certain times of the day heighten the Healing effect. (Fig. 8.33)

The Taoists believe that the organs of the body and their corresponding meridians are activated and stimulated during certain times of the day. Since good health exists when there is a complete

balance of energy within the organs and meridians of the body, sexual activity being stimulating and energizing when properly done, can further deplete a body that is suffering from an energy imbalance when practiced at a low energy time. Since the sex act leaves a person open and vulnerable to universal energies, it is wise to choose a time when the universal energy will be beneficial.

The best time for sex is in the early morning when your body is well rested. A particularly bad time for sex is in the late evening, especially when you are tired or under emotional stress, because the organs' energy is not strong enough to handle the sexual energy. A nap or rest beforehand is recommended if this is the only time convenient for you.

The hand positions described in this chapter are used in most of the positions that we described previously in this chapter: These positions can help you and your partner stimulate each other in one particular area of the sexual organs to initiate a greater reflex of the organs. But the most important part of the practice is to open the channels so that the sexual energy can abundantly flow directly to the organs and glands to stimulate them as well. Once you master the opening of the channels, you can direct the sexual energy more with your mind and less with your hands, or without using the hands entirely.

Try to practice one position at a time to make sure you both feel the opening of the channels. If you are quite sure you are open, make sure that your partner is also open. If you cannot open your partner's channel, you can send some more of your sexual energy to him, or if you cannot open your channel, your partner can send his sexual energy to you. When a woman sends her sexual energy at this time, as well as during the time of exchanging energy she enhances the lovemaking and helps her partner by squeezing his penis tightly. First she must be sure that her partner is in a safe stage of arousal, or he may ejaculate. Squeeze and hold for a while, then release. (Fig. 8.34)

Exhale and mentally send the sexual energy to the point where your partner needs help, covering it with your palms. With practice you will feel your energy pass more easily through your hands to reach the point that you intended. You will sense the energy, even taste it.

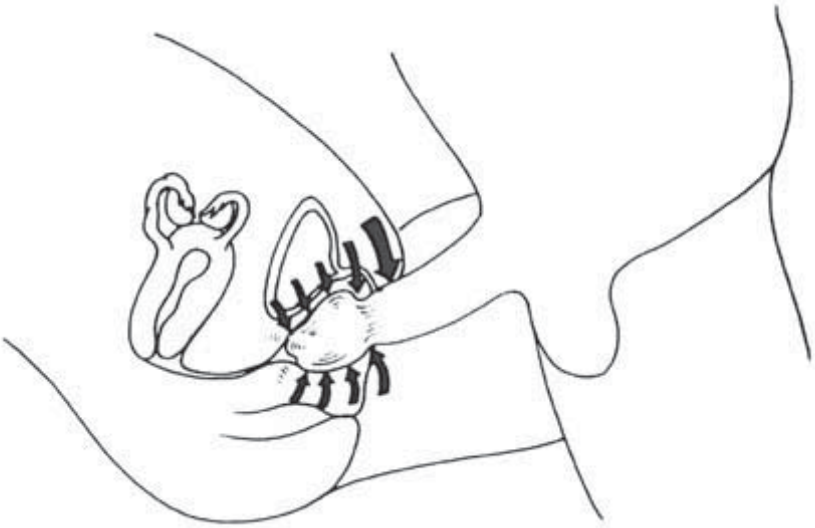


Fig. 8.34 *To help the man delay or stop ejaculation, the woman grips tightly with her vagina the head and shaft of the penis.*

D. Valley Orgasm

A Valley Orgasm is the means to attaining more pleasure, more healing energy, and more energy to transform into a higher spiritual energy. A Valley Orgasm in a man occurs when he is 99 percent of the way to ejaculation. At this point he pulls out of the vagina and, practices the Big Draw to milk his prostate gland of semen, and rather than release it outwardly, send it in an inward and upward direction where the energy will be transformed. He relaxes, allowing the sexual organs to settle down to approximately a 60 percent arousal, and then he begins again by practicing sets of nine shallow-one deep penetrations to bring him again 99 percent of the way to ejaculation. Again he does the Big Draw, the exchange, and then relaxes, setting down a bit and then coming back up again. Each time he draws back and sends the energy upward, he doubles and triples his sexual energy. He can continue to multiply it in this way and draw the energy to higher centers as long as he does not let the sexual energy escape. Sexual energy is the one energy that can be multiplied without end and can continue increasing. Each time the orgasmic feeling will come up higher than the last time:

each time it is brought through the Microcosmic Orbit to all the organs and glands. This kind of higher center organs' and glands' orgasm is very different from the lower orgasm which is confined to the genitals, very brief and leads to vital energy loss.

Do not confuse the orgasm with ejaculation: they are two different things. An orgasm can last as long as you want, and can travel as high as you want. Once the man has ejaculated, however the orgasm is gone. The most pleasurable time is the peak of the orgasm right before ejaculation. Many people want to go beyond that point, however and if they have not been trained to control it, the point beyond ejaculation will be the end of the orgasm, and thus the end of the buildup of sexual energy at that time.

The Valley Orgasm in women is more intense than in men. Women can achieve almost as high an orgasm as they desire, and can cultivate their orgasm higher and higher. In an earlier chapter we stated that women do not lose much energy in normal sex, and that most of their energy is lost during menstruation. Even though women can have an ejaculation during sexual intercourse as men do, they lose only fluid and not an egg. Men during ejaculation lose about 200 million sperm. Women can arrive 99 percent of the way to the point of orgasm, perform the Orgasmic Draw to bring the orgasm higher in the Microcosmic Orbit, exchange energy with the organs, rest, and begin again to achieve a higher orgasm. Each time the woman holds back, the sexual energy doubles, triples and keeps on growing as long as she holds back, drawing the energy upward and inward.

Compared with men, women have a much easier time learning the sexual draw exercise, since women do not have to control ejaculation. Also, the emotional hookup that ties men to their ejaculations is not true for women and their periods. The notion of reducing menstrual tension does not threaten most women's view of their femininity.

1. Increasing Sexual Energy through Several Upward Draws

As we have described, in a Valley Orgasm we use several upward draws to bring the energy inward and upward. It seems that the more that is drawn up, the more energy is produced again in inexhaustible amounts, provided the energy is not released outward. This drawing up or holding back consists of one round of both partners approaching 99 percent of orgasm, drawing the sexual

energy up, and controlling the sexual organs to return them to 60 percent orgasm. Each time you perform the upward draw you will increase internal energy significantly and it will become more and more internal. Instead of losing all that energy as in ordinary sex, and feeling depressed and exhausted afterwards, after an upward draw you will have more energy than before and feel refreshed and filled with healing energy.

In some cases people have so much tension and anger that when they allow their sexual energy to release outward, they feel they have released the tension too. However in actuality the tension is building up again and now they have no other way to handle it. The only way to rid themselves of it is to dump out their life-force, mixing their sexual energy with anger and other negative emotions.

The ancient Taoist System described the benefits of these methods in detail as follows:

A. First Upward Draw

After you or your partner have reached the 99 percent of orgasm point and have first used the Orgasmic or Big Draw to draw the sexual orgasm energy upward, this sexual energy will rise to increase the energy of the entire body.

B. Second Upward Draw

The second upward draw will strengthen the senses and rejuvenate the entire body.

C. Third Upward Draw

With the third upward draw the body starts to improve the immune system to resist disease, illness, flus and colds. Many of my students have used this system to help them overcome a cold or the flu.

D. Fourth Upward Draw

The fourth upward draw will help to stabilize and balance the internal organs. Many people are born with misplaced or unstabilized organs. One person's ears are lower while another's are higher or of a different shape. The same thing holds true for internal anatomy as for external anatomy. In some the kidneys may be too far back, or too far forward. The stomach may be in a dropped

position, the pancreas too high, or the lungs too high, too low, too big, or too small. These unstabilized organs can cause all kinds of physical problems for us. Chronic problems, unbeknownst to the afflicted individual, could be caused by a mislocation of his or her organs. A dropped stomach or uterus, for example, can be improved by the power of sexual energy. Once you can increase the internal Chi pressure, it will start to stabilize the organs.

E. Fifth Upward Draw

The fifth upward draw improves blood vessel problems or high blood pressure, and, in an anemia's case, increases blood production.

F. Sixth Upward Draw

The sixth upward draw can help to strengthen lower back problems.

G. Seventh Upward Draw

The seventh upward draw strengthens the extremities, bones and bone marrow.

H. Eighth Upward Draw

The eighth upward draw can help to strengthen the spleen and the body's aura. This will help to protect the person from bad emotions being thrust upon him or her externally.

I. Ninth Upward Draw

The ninth upward draw will help to build and strengthen the spiritualized body and serves as spiritual food.

J. Tenth Upward Draw

The tenth upward draw is a completely spiritualized or psychic state, not limited by time and space.

2. Dual Cultivation of the Valley Orgasm

A. Solo Practice as Preparation

Initially the Orgasmic Draw is physically demanding. However with solo practice the orgasm is moved more smoothly from the genital area up to the brain by internal control and eventually is directed solely by the mind. It is important to do a lot of solo practice before attempting this with a partner mainly to avoid discouragement. According to Shere Hite, author of *The Hite Report*, most women who masturbate achieve orgasm within a few minutes. However with a partner a woman can prolong the arousal period and often become distinctly more aroused. The precision and timing of the Orgasmic and Big Draw come with practice. With a cooperative partner there is yet another world to experience.

B. Exchanging Energy

When you approach orgasm and do the Orgasmic Draw, the aroused ovary energy goes up to the brain. As you pump it up, this cool energy accumulates in the head. If you have practiced the Microcosmic Orbit you know that the tongue acts as a switch in your own body, uniting the two acupuncture meridians that make up the Orbit. The genitals also are a switch, and thus, no matter what your position, energy that has been built up can now be funneled into your partner's Microcosmic Orbit and vice versa.

The energy can travel in a variety of routes. One route can be from your tongue to your partner's tongue, down your partner's Functional Channel to the navel, then down to his genitals, switching over to your genitals, up your spine and round and round. It can circulate through both of your Microcosmic Orbits simultaneously, or you both might experience the energy outside of your bodies, feeling like a cocoon around you both, or a presence above your heads, etc. Since a woman's aroused energy is not as hot as a man's, your partner might perceive the cool energy from you, or you may notice warm energy from him entering your body.

Each woman's perception can be different. Some might feel cold energy, like a draft, traveling through her head. Some might feel like permitting the pulsation to go out, and then pulling it in and drawing it up.

C. Sexual Vampirism

The issue of one partner draining the other's sexual/life-force energy is an old one in Taoist circles. Legend has it that old men in China would seek out young women who did not have any children women who, in the old man's frame of reference, had a maximum of Yin energy. Then, without letting the woman know what they were doing, they would do the Big Draw while their penis was in the vagina, and drain out the women's Yin energy thereby increasing their own energy at the woman's expense. A woman who masters this system can be more powerful than a man. Woman can drain a man's energy many times faster than man can drain woman's. There are many stories existing about people who have used the system in the wrong way and with the wrong intention, and who have become too powerful in an evil way. Using the system in a selfish way tends to lead to an evil energy, which will eventually destroy the practitioner. However the same sexual energy properly used can help you achieve good health and higher spiritual attainment.

According to the Taoists, even assuming no evil intentions, the draining of a partner's energy can happen unintentionally especially if only one partner knows the practice. The safeguard against this is the circulation of the energy through both partners' bodies. This exchange of energy eliminates the possibility of one partner gaining energy while the other one loses.

3. Transforming Sexual Energy into Spiritual Love: Cultivating the Valley Orgasm

A. Yin and Yang Exchange

"Yang can function only with the cooperation of Yin, Yin can grow only in the presence of Yang". -*Yellow Emperor's Female Consultant on Sex.*

Our universe changes perpetually because of the eternal flow of Yin and Yang energies. The very essence of Yin-Yang exchange is the cyclical alternation of day and night. Due to this alternating energy flow, or respiration of the heavens, living things can grow. Were there only day and no night, all would be burnt: or if there were only night and no day, nothing would have strength to grow. As living things, humans are also subject to the law of Yin and Yang exchange.

The human being can live happily only if he or she is in harmony with the principles of life. If one violates the law of the Yin and Yang interchange, by forbidding the sexual communion of Yin and Yang energy, energy will not flow in the body. The life-force will slowly stagnate and leak out. Life will become a long slide into depression, interspersed by spasms of enslavement to the passions.

If you have learned to increase your orgasm through the Orgasmic Upward Draw, you are on the threshold of a new experience. That experience will alter your perceptions of your own body and mind. It will change the way you see your lover and change your understanding of sex and love.

"Drawing Nectar up to the Golden Flower" is incomplete without the exchange of Yin and Yang energy. (Fig. 8.35) The Golden Flower is the light at the crown of the head. The Orgasmic Draw pulls up and conserves your nectar, or sexual essence. It is the exchange of your Ching with your lover's that transforms it, and in the process gives an experience of sex which is deeply shared as love. Your orgasm be totally unlike that known as a simple, local, outward-pouring and short orgasm. As you make love over a period of time, the pleasure spreads, filling the Microcosmic Orbit and the entire body Unlike the ordinary quick orgasm, or peak orgasm, whose thrilling moment is confined primarily to the genital area, this orgasm will deliver to you a new sense of equilibrium that will be stored in your body long after your pleasure has become a fleeting memory

Taoists advocate the Valley Orgasm as a continual rolling expansion of the orgasm throughout the whole body prolonging inward orgasm to a half-hour one hour two hours, or longer in a gradual, but ultimately greatly heightened ecstasy. You can enjoy this form of sexual love indefinitely without paying for your pleasure with your life-force.

During the Valley Orgasm, lovers can relax and have all the time in the world to share their tenderness. There is no frenzied explosion, only wave after wave of higher subtle energies bathing the entwined man and woman. The Valley Orgasm is not a technique, but rather a certain kind of experience that the lovers allow to happen to themselves, encouraged by a time-tested process.

The Valley Orgasm is made up of all the methods you have learned thus far: the Orgasmic Draw for women, the Big Draw for men, the healing positions, the hand-energized positions, and

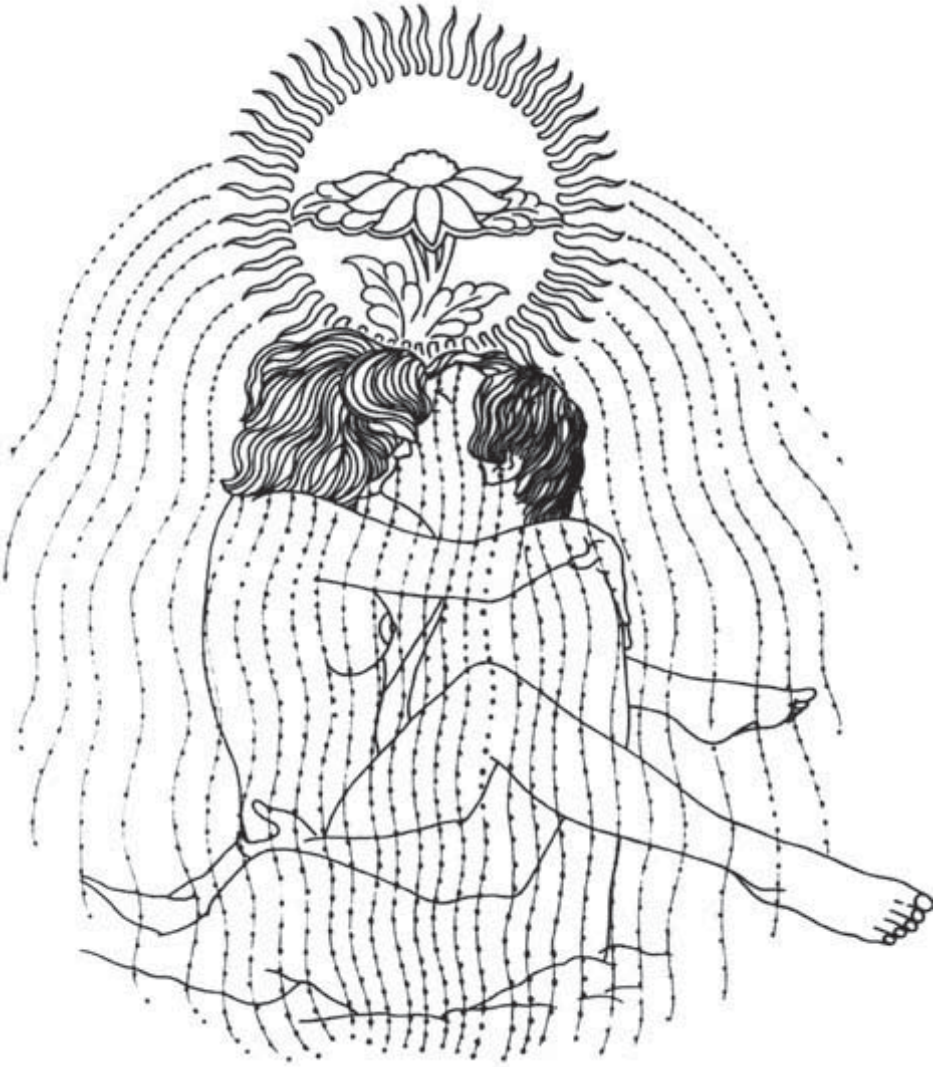


Fig. 8.35 *"Drawing Nectar Up to the Golden Flower"*

increasing sexual energy through the upward draw. All this combines to make the best orgasm you can have. Yin and Yang exchange is one of the major parts of the Valley Orgasm.

4. Valley Orgasm Step-By-Step

A. First Upward Draw

(1) Timing

Bear in mind that when the woman is active, she can control the thrusting of nine shallow-one deep in order to stimulate the glans of the clitoris and the G-Spot, with the shallow thrusts entering only approximately two inches into the vaginal orifice, thereby touching the G-Spot. When you become stimulated, start to amplify the orgasm to a higher more intense sensation. Use the Ovarian Breathing technique, gently open and close the vagina, and slightly pull the Chi Muscle up to bring the orgasm higher. When you reach the point of orgasm, rest with the glans of your partner's penis touching the G-Spot. If it is in the proper spot, it will feel as though fitting in a slot. Rest here and exchange the sexual energy.

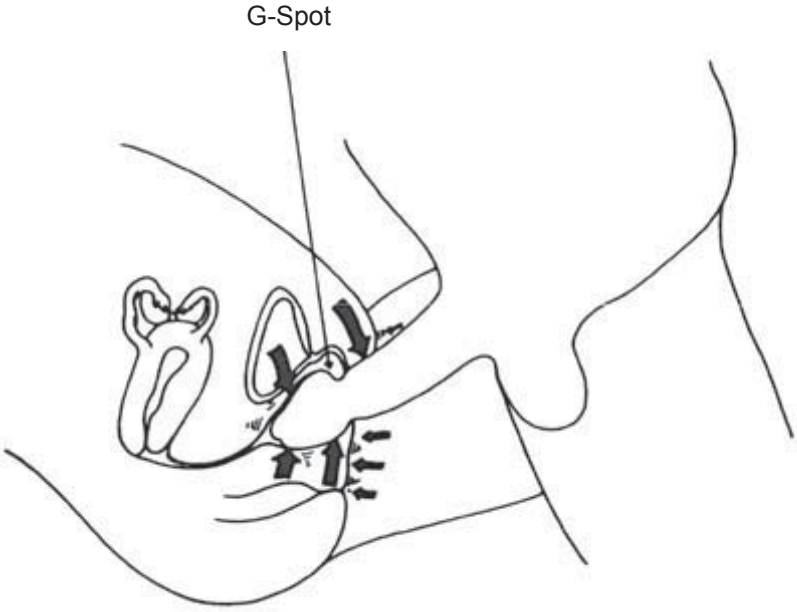


Fig. 8.36 *The woman holds tightly the head of the penis in the ares of the G-Spot. Through muscular pressure she massages the penis.*

You must take care that your partner does not reach the point of no return. When he is near of ejaculation, pull his penis out to the point of your G-Spot where the energy can be exchanged. Rest at this point. If you are good at helping your partner to stop or control the ejaculation. you can squeeze the base, not the head, of the glans of the penis, and this will block the urge to ejaculate. (Fig. 8.36) There is danger in bad timing; therefore, if you do not master this firm gripping technique, your partner can lose his semen. This means that you must use this grip before the urge to ejaculate occurs, and not right at the moment of ejaculation. A firm grip accounts for the success of this technique. Important to developing this grip are the Orgasmic Draw and the Egg and Vaginal Weight Lifting exercises. Delaying ejaculation will also help your partner to maintain his erection, enabling you both to proceed to the next exchange faster (Fig. 8.37) For additional information on delaying ejaculation in men, please read the section entitled “The Secrets of Semen Retention” in the book *Taoist Secrets of Love: Cultivating Male Sexual Energy*.

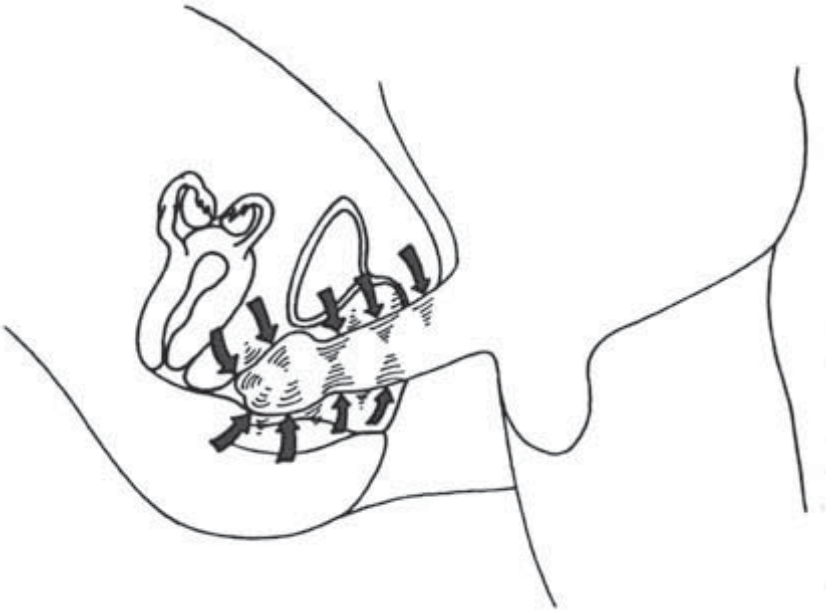


Fig. 8.37 *The woman presses on the penis to prevent loss of erection.*

Fig. 8.38 *Exhale and let cool woman's Yin energy flow into your partner.*

Relax and exchange the energy. At this point, it would be good for your partner to practice the hard contractions of the Big Draw first until he is able to move his Yang sexual energy upward and gain control of it. Once he learns and masters this, you will not have to grip the glans of his penis to assist him in this control. Feel his hot, male, Yang energy begin to pass to you. This hot energy is unlike your energy. Once you feel it, inhale and take your turn to practice the Orgasmic Draw, drawing your Yin sexual energy plus his Yang sexual energy up to the higher center. First permit the energy to flow into your Microcosmic Orbit. Then exhale, and let the cool, female Yin energy flow into your partner .(Fig. 8.38) At this point your partner can use the gentleness of Testicle Breathing (as

described later in this chapter) to absorb the cold Yin testicle energy into his system.

Remember you cannot receive his power without giving freely of your own. The exchange heals both partners. Man needs the soft receptive energies a woman provides to achieve perfect balance. Similarly, woman needs the expanding male energies to attain her own higher harmony. This is nature's underlying reason for attraction between the sexes.

If the man has been inactive, he will now perform the thrusting. When he approaches the point of orgasm, again he should withdraw the penis to the area of the G-Spot and execute the hard contractions of the Big Draw until he gains control again, exhaling his excess Yang energy to you. You will follow with the Orgasmic Draw to draw your energy plus his upward, and send him your excess Yin energy.

(2) Embracing after Lovemaking

When you cease active lovemaking, begin your embrace in any pleasing position. If the man is heavy, the woman is usually on top. If the woman is stronger than the man, she is usually on the bottom so that he can draw the power more readily. If the woman is weak, she may be on top where she can draw easily. In any case, make sure it is a position you can rest in for a long while. You should keep two extra pillows handy for this purpose.

(3) Coordinate your Breathing with your Lover's.

Remember that "Chi" means "air" or "breath" in Chinese. Life is breath. All living activity has the quality of inhalation, exhalation, or some Combination of the two. This is why Chinese philosophy classifies everything as Yin (exhalation) or Yang (inhalation) to a greater or lesser degree. The act of love is essentially an act of respiration. You breathe your Ching into your lover's body and soul. You inhale this life energy by drawing it up to the head, and exhale it by venting it to your partner.

It follows that after both of you have exchanged the sexual energy and embraced, you will coordinate your breathing. In a chest to chest position, each partner places an ear near the other's nose. In this position you can easily feel the other's breathing. In the act of love the breathing cycles stimulate and harmonize all of life's

processes. Physically breathing together unifies the two partners and focuses the rhythm of all of their energies so that together they may contact the source of their own life current. You should become so sensitive to the presence of your partner's breathing that each deep, strong breath is as powerful as the feeling of your partner pushing his penis into your vagina.

To coordinate your breathing you will exhale deeply first and feel the Yin essence of breath penetrate into your partner. Wait for your partner to inhale and absorb this Yin essence, and then exhale, sending the Yang essence of his breath to you. (Fig. 8-39) Continue to coordinate the breathing until both of you feel in balance.

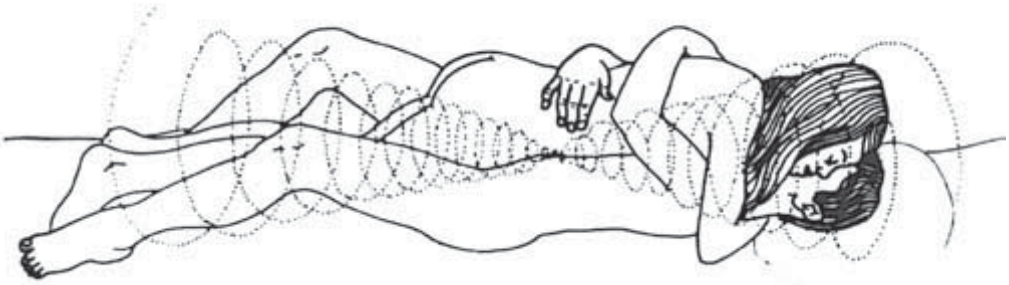


Fig. 8.39 *Absorb Yin and Yang after Lovemaking.*

(4) Inhale Power up the Spine to the Head:

Exhale out the G-Spot and Penis

After you breathe together for a time, gradually draw the power up to the crown of the head. Upon inhalation the man mentally conceives the Yin power moving from the vagina into the penis: the woman uses her mind to bring the Yang power from the penis into the G-Spot and clitoris. Both draw the power back to the perineum, or Hui-Yin, and the coccyx, or Chang-Chiang, and bring it up to T-11, C-7, C-1, the Jade Pillow and up to the crown, or Pai-Hui. From there the energy travels through the tongue which, throughout the entire exercise, is to be raised to the top of the mouth. The goal is not to use muscular force, as in the Orgasmic Draw or Big Draw, but simply to use the power of thought to direct the sexual energy. "Think" the energy up to the crown point. Although this instruction

seems incomprehensible at first, those who have begun the practice of Sexual Kung Fu will begin to feel the power and will understand intuitively what is meant. The power will rise to the head eventually as your mind learns how to direct its own Chi energy to connect mind and body.

In the beginning you can accelerate the exchange of Yin and Yang power with the help of the hands' energizing points and long, deep, muscular contractions. When you feel the expansion and heat from the glans of your partner and your vagina fills with fluids, inhale slowly and deeply through the nostrils. While you inhale, contract the vagina, perineum, anus and buttocks, and as you slightly tighten this contraction, "think" the energy into the clitoris and G-Spot, past the Hui-Yin, into the Chang-Chiang and up the spine to the crown of the head. When you have finished the inhalation, hold the breath and contraction for as long as possible. Keep drawing the power up to the head until you can hold the breath no longer.

When your partner releases his breath, consciously giving you his excess hot, Yang energy, you must exhale deeply to bestow the Yin energy upon him. Release all tension by relaxing the head, throat, chest, abdomen and pelvis. Let the relaxation spread from the top to the bottom of the body in a wave. When the gentle wave reaches the pelvic region, send the Yin energy into your partner through the clitoris and G-Spot. This contraction and relaxation should be executed gently, creating a feeling of pulsation traveling between your body and his.

Lovingly offer him the essential energy. This surrender shall carry with it all the emotions of love and devotion. This is not sentimentality. It with inspire him to surrender his nourishing Yang essence and to totally embrace the Yin within Yang. This is the nature of a woman's fulfillment. If you attempt to withhold your energy, he will sense, consciously or unconsciously, your feeling of separateness, even though it may be nothing more than an obstruction in the energy flow (usually in the heart). Allow him to absorb the Yin energy he needs as you surrender the excess. The Yang energy will flood your entire body while the Yin floods his.

If you are just beginning to practice, you may be so overwhelmed by the sensation of sexual love that it will seem impossible to distinguish his Yang energy from your Yin. Everything may seem hot and explosive and as though comprised of a single energy. As

you build up your nervous system to handle higher charges of energy using the healing and meditative techniques, the exchange of Yin and Yang energy will gradually evolve into awareness. If you build energy at successive points in the body, greater powers of exchange will be available to you and your partner. Begin by drawing the power to the Hui-Yin, or perineum, and meditating there.

In this first upward draw of the Valley Orgasm, if both of you have an open Microcosmic Orbit and can circulate the healing and energizing sexual energy, the Orbits will fill with energy, passing it through all the organs and glands, thereby helping to energize the entire body system.

(5) Helping your partner to Clear and Open a Blockage.

If you have more power than your partner; help him now to open his centers by directing your power to his unopened centers. Both must concentrate on these points. The Chi will flow to whatever place the mind focuses on. Proceed one point at a time. Both can use the palm-energizing method and concentration to help open the blockage.

Remember that you cannot open all the points in one sexual embrace. To open one point may take many exchanges of Yin and Yang. If your partner ejaculates there will be no energy to exchange since most of it will be lost and little will remain to be transferred.

The resting periods are most important since it is at this time that you can actually feel the energy exchange. This is the time that you and your partner can assist each other in clearing blockages, or you can help him to open his Microcosmic Orbit.

(a) Embrace each other and then put your right hand on your partner's sacrum with the middle finger touching the tip of the coccyx and the palm covering the sacrum, especially the opening of the hiatus. Feel the heat being absorbed into the spinal column and helping to activate the Sacral Pump, which will be instrumental in moving the energy upward. Place your left palm on his Door of Life, opposite the navel and between Lumbar 2 and Lumbar 3. This will help your partner move the sexual energy up to the kidneys' area. Your partner does the same to you. Once you become adept at this and feel the point opening, move up to the next point.

(b) Move the left hand to the T-11, the adrenal glands' point, with your right hand remaining on the sacrum.

(c) Next move the left hand up to the liver and spleen point,

below and between the scapulae, maintaining the right hand on the sacrum.

(d) The next point is the heart and lung point, located between the fourth and fifth ribs and opposite the heart center. Again, place the left hand on this point, leaving the right hand on the sacrum.

(e) Progress upward through the remaining points: the C-7, the middle of the back of the neck, the Jade Pillow near the base of the skull, and the top of the crown. Move onto each point gradually to make sure it is open. For more details on the hands' energizing points, refer to earlier descriptions in this chapter.

It is also possible to jump over a point if you feel you need more energy at another moment in time. If both of you are fairly open, you can both simply place your right hands on your sacrum, and your left hands on the bases of the skulls or the tops of the crowns.

(6) Return to Lovemaking

Decide on who is to be the active one and return to lovemaking. After another round of 81 shallow and 9 deep thrusts, as you again approach orgasm or your partner ejaculation, you will gradually feel the orgasm move up the spine a little bit. It can spread to the entire back, or climb higher than the normal orgasms you have had before. With the first Valley Orgasm, feel the orgasm climb, approaching the organs. Rest, drop down into the valley again, and this time climb higher. Rest again, drop down into the next valley and climb even higher. You will find that each valley will have a different orgasmic sensation, and you will not always return to the same old valley.

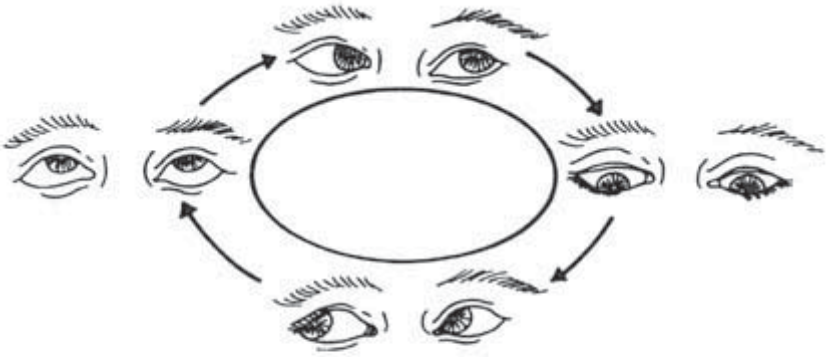
B. Second Upward Draw

Resume lovemaking, build up the sexual energy to the limit that you can tolerate. Rest with the penis glans touching the G-Spot. Permit your partner to perform the Big Draw a second time to prevent ejaculation in order for the orgasm to rise higher. When your partner releases his Yang energy, you can perform the Orgasmic Draw, bringing the energy all the way up to the head and the senses by means of the sacrum and the spine. This upward draw can help to strengthen the senses.

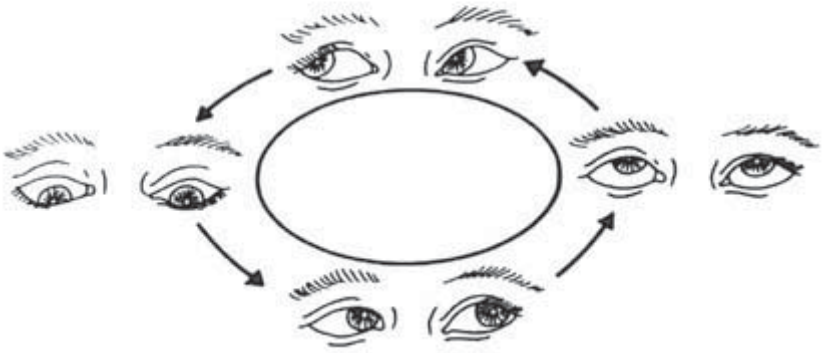
Using gentle contractions and pull-ups of the Chi Muscle is very important in directing the energy to the senses.

(1) Bring the Sexual Energy to both Eyes.

Pull up the left and right perineum to bring the sexual energy to both eyes. When you feel either hot or cold energy at the eyes, move them around beginning with a clockwise direction (Fig. 8.40(a)) and returning in a counterclockwise direction in order to absorb the energy inward. (Fig. 8.40(b))



(a) Use the mind and eyes to help circulate the energy nine times,



(b) and counterclockwise nine times.

Fig. 8.40 *Using the Eyes to direct the Sexual Energy.*

(2) Bring the Healing Energy to both Ears.

Bring the healing energy to both ears by pulling up the left and right sides of the perineum and moving your ears around if possible. If this is impossible, mentally move the energy around the ears.

(3) Bring the Healing Energy to the Tongue.

Contract and pull up the middle part of the perineum, and bring the healing energy to the tongue. Move the tongue around.

(4) Bring the Energy to the Nose.

Contract and pull up the front part of the perineum, and bring the energy to the nose. When finished, exchange the energy with your partner:

C. Third Upward Draw

It requires practice for you to control the sexual energy well enough to proceed to the third upward draw. Proceed gradually, making certain that as you continue along each step, you have firm control over your sexual energy first. Meanwhile, your partner also plays a big part since he must control his own sexual energy.

(1) Bring the Energy up the Spine to the Crown.

Resume lovemaking, building up the sexual energy to the limit that you can take. Rest the penis glans at the G-Spot. Let your partner perform the Big Draw a third time to prevent ejaculation so that the Orgasm can be raised higher. When your partner releases his Yang energy you can perform the Orgasmic Draw, bringing the energy through the sacrum all the way up the spine to the crown. Remember that the third upward draw helps to improve the immune system's resistance to disease. The glands, especially the thymus gland, and the bone marrow play a substantial role in a healthy immune system.

(2) Use your Eyes and Mind to move the Energy.

When the energy reaches the brain, turn your eyes, ears, and tongue up to the pineal and pituitary glands, moving the eyes and using the mind to move the generative sexual energy for the purpose of revitalizing the glands.

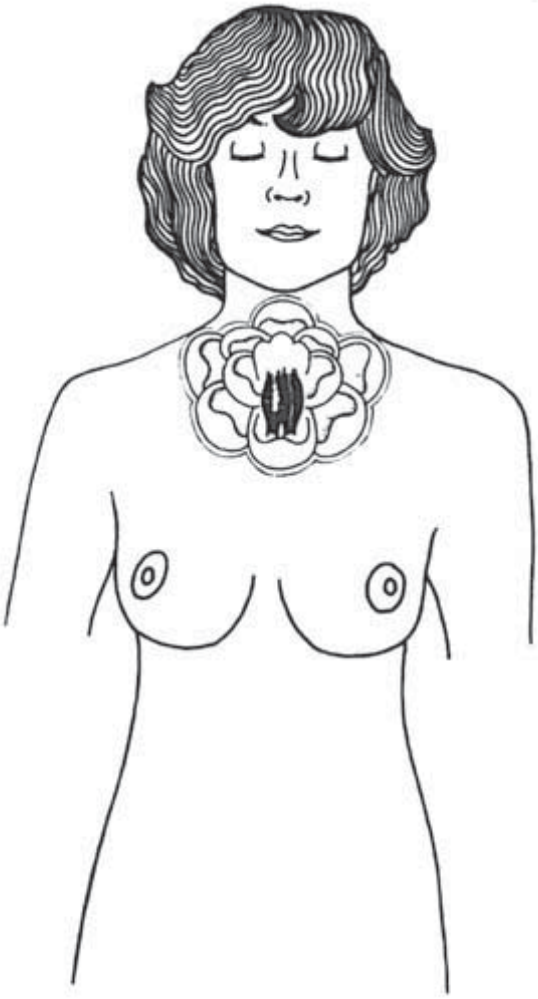


Fig. 8.41 *Blossoming of the Thymus Gland*

(3) Flow of Nectar to the Thymus Gland.

When the pineal and pituitary glands are filled with the sexual energy, they will produce a certain kind of fluid that we have been describing as nectar. This nectar is a mixture of sexual energy and hormones released from the glands. The property of this very special kind of hormone has special life-giving and healing energy. It will flow down through the palate to the throat and thymus gland.

Creative sexual energy has a very close relationship with the thymus gland, with each one enhancing the other: When there is an excessive loss of sexual or ovaries' energy the first to 6e affected are the pineal, pituitary and thymus glands.

As the fluid and the energy flow into the thymus gland, you gradually will feel the gland blossom like a Flower (Fig. 8.41) this will be manifested in a sensation of fullness underneath the sternum. The thymus gland is regarded by Taoists as the seat of greater enlightenment, the seat of love and the seat of life-force or Chi, energy.

(4) The Ribs absorb the overflow of Nectar.

Once the nectar has filled the thymus gland, the overflow of energy, will be absorbed into the ribs, thereby helping to increase bone marrow in which is produced white blood cells, which help protect the body against foreign substances and infection. The flat chest bones are the major producers of white blood cells.

D. The Fourth Upward Draw will help to stabilize the internal organs.

Once you can master the third upward draw, and have filled the glands with the energy, you can begin to bring the sexual energy to the organs. Again you will employ the assistance of the Chi Muscle in the perineum region as an important aid. You will use gentle contractions and slight pull-ups to help. By the time you have reached this level of practice, your body has become more adept at controlling the sexual energy. You will now bring the sexual energy directly to the organs to transform it into a higher energy, otherwise the system can become allergic to its own raw sexual energy. The Taoist Masters discovered that all the energizing points of the spine (the sacrum, T-11, C-7, C-1, Jade Pillow, etc.) can help to transform the raw sexual energy into what will be the primary stage of life-force energy.

(1) Bring the Sexual Energy and the orgasmic vibration to the Ovaries and Kidneys. (Fig. 8.42)

Proceed as before, approach the high point of orgasm, rest and exchange the energy. After the exchange, begin to bring the energy to the ovaries and then to the kidneys. Using gentle contractions

Fig. 8.42 *Bringing Sexual Energy to the Kidneys*

and slight pull-ups, left and right, of the Chi Muscle as an aid, bring the sexual energy and the vibration of the orgasm to the ovaries. Start with the left side first, and wrap the energy around the left ovary. Then bring the vibration of the orgasm and the sexual energy to wrap the left kidney. Gradually you will feel the energy start to vitalize the glands and organs. This orgasmic vibration felt at the ovary and kidney has a very different sensation than genital orgasm. It can feel gentle, cool, and clean, filling you with the sensational fulfillment of a true orgasm. Each organ and gland will create a different kind of orgasm from the other but all will be different and more fulfilling than genital orgasm. Once you have mastered bringing the sexual energy and orgasmic vibration to the left ovary and kidney, begin to bring the energy to the right side. When you feel the fulfillment on the right side, bring this fulfillment to both sides simultaneously. You will gradually feel the kidneys' and ovaries' region as stronger warmer and filled with life-force. You should master each organ, then gradually move on to the next one, continuing one at a time.

(2) Bring the Sexual Energy and orgasmic vibration to the Spleen and Liver.

The next organs to bring the energy to are the spleen and liver: Using gentle contractions again and slightly pulling up the left and right sides of the Chi Muscle, bring the sexual energy and its orgasmic vibration up to the left ovary. Pause for a while. Bring it up to the left kidney; pause and wrap the energy and the orgasm around this kidney, inhaling and pulling it up to the left side underneath the rib cage to the spleen. Wrap the sexual energy and the orgasmic vibration around the spleen, gradually increasing the orgasmic sensation which, again, will feel very different from the other organs' orgasm, and more fulfilling than a genital orgasm. Next, bring the energy and orgasm to the right side and the right ovary, the right kidney and then the liver. Giving a more intense orgasm than any other organ, the liver can generate the sensations of warmth, expansion, energy, loveliness, kindness, and a very euphoric and satisfying kind of feeling.

(3) Bring the Orgasm and Sexual Energy to the Lungs.

Next bring the orgasm and the sexual energy to the left lung, first passing through the left ovary, left kidney, spleen, and finally to the lung. Once you master the left side, begin to bring the energy to the right side, and then both sides together. Each person can have a different orgasmic feeling.

E. The Fifth Upward Draw increases the amount of blood vessels and blood circulation.

(1) Wrap and energize the cervix with the sexual energy.

After the fifth exchange of energy, pull the middle part of the Chi Muscle at the perineum up toward the cervix, which has a great supply of blood flowing through it. When strong, it will help tremendously in increasing blood circulation as it is wrapped and energized with the orgasmic feeling.

(2) Pull the energy up to the aorta and vena cava.

Next pull up to the aorta and vena cava, the main arteries and veins leading from and to the heart, respectively. When these are strong, the flow of blood will increase. Bringing the orgasmic

vibration and sexual energy to these vessels will help increase the flow of blood through the heart. In the later practice of the higher levels of the Universal Tao, the mind is used to amplify the orgasmic vibrations in these vessels to create an even greater flow of blood.

(3) Pull up the Sexual Energy to the Heart.

Next pull up sexual energy to the heart, the organ responsible for pumping the blood. Wrap and energize the heart, bring the orgasmic vibration there, and feel the heart unfold like a blossoming flower.

Remember that in attempting to bring the energy to the heart you must be very cautious, since the heart easily becomes congested with excess energy causing pain and breathing difficulties. As previously indicated, if you experience these problems, practice the Heart Sound, gently tap the chest around the heart, and brush down your chest with your hands to try to force the excess energy out of this area. Then do not practice the heart upward draw for several days. Instead, return to the fourth upward draw until you master that.

F. Sixth Upward Draw, the plateau phase: circulate your microcosmic orbit into your lover's orbit.

Depending upon the level of vital energy and the spiritual development of the individual lovers, a couple over time will experience new "openings" that occur during their lovemaking. This means you will suddenly find you have made a quantum leap in your feelings and awareness. This usually happens during the plateau phase of the Yin Yang exchange. The period of lovemaking when you are not thrusting passionately is referred to as the "plateau" phase, as opposed to the `peaks," the moments prior to the orgasm that is averted by doing the Orgasmic Draw and Big Draw. The plateau is the physically passive exchange of energy that occurs between the peaks.

The subtle energies within your resting bodies are not passive at all, but are moving dynamically between partners, building to a new level of sexual-electromagnetic tension. It is an internal wave of energy building up, similar to an ocean wave that gathers momentum and crashes, only to be replaced by the next wave. After the sexual energy has been raised to a high intensity by thrusting and drawing it up the spine on the route of the Microcosmic

Orbit with the Orgasmic Draw and the Big Draw, the Yin-Yang exchange can begin to happen in many different ways.

Fig. 8.43 *Fusion of the Microcosmic Orbits*

(1) Joining the Two Microcosmic Orbits

In the beginning the energy exchange between lovers may seem to be chaotic and occurring between any two points of bodily contact. As you grow more accustomed to the energy gained by stopping the man's ejaculation, you will begin to discriminate the clearly defined channels of the Microcosmic Orbit rising up the spine and descending the front of the body. During the plateau phase of lovemaking you may feel a warm flowing current passing between your vagina and his penis and between your lips.

These are two individual Microcosmic Orbits joined into one larger flow circling your two bodies. (Fig. 8.43) This experience will greatly enhance the balance of energy in both lovers and deepen the bond of loving in their life. The Chi flow is increased in amplitude; you may even feel like a warm electric current is passing between you. This effect often occurs in lovers in good health, who have practiced the Orgasmic Draw and the Big Draw, after only a few lovemaking sessions.

Both the man's and woman's Microcosmic circuits can be joined in a number of different ways. The most common is the intersection of their two circular Orbits at the mouths and genitals, forming a Figure eight. The Figure eight can cross as the Microcosmic energy drawn by the man up his spine is passed into the woman through his tongue, which acts like an electrical switch. The male energy then enters her Microcosmic Orbit and travels down her front, or Functional Channel, and down through her vagina, into his penis and back up his spine.

The woman circulates her Orbit in a parallel fashion, up her back channel and down his front channel, before it reenters her body at the vagina and proceeds back to her perineum and spine. This is the simplest way to direct this level of exchange of Yin and Yang energy.

Each couple can play with different Figure eight patterns of exchange. At first you may verbally tell your lover what you are concentrating on. Later as you become more sensitive to your own and your lover's energy, the Chi exchange itself will become a silent language, punctuated by the pleasure of sending a tingling warm current into your lover the Figure eight may cross at your mouths only, or at your genitals. It may snake around your Governor Channels, up your spine and down his, or vice versa.

At this level many couples experience spontaneous openings of some of the eight special psychic channels taught in the Fusion of the Five Elements Meditation of theUniversal Tao. (Fig. 8.44) These channels include the positive and negative arm and leg routes, the Belt Routes spiraling around the body and the Thrusting Route up the center of the body. Do not be alarmed if your energy begins moving in ways you are not accustomed to. Many lovers experience a column of energy rising on a line midway between their bodies. If this is your experience, simply relax and enjoy the interplay of these subtle energies. Some couples report the Chi shooting up to the top of their heads and showering down a fountain of “nectar”. Others feel as though wrapped in a cocoon with their lover with lines of invisible energy being spun around them.

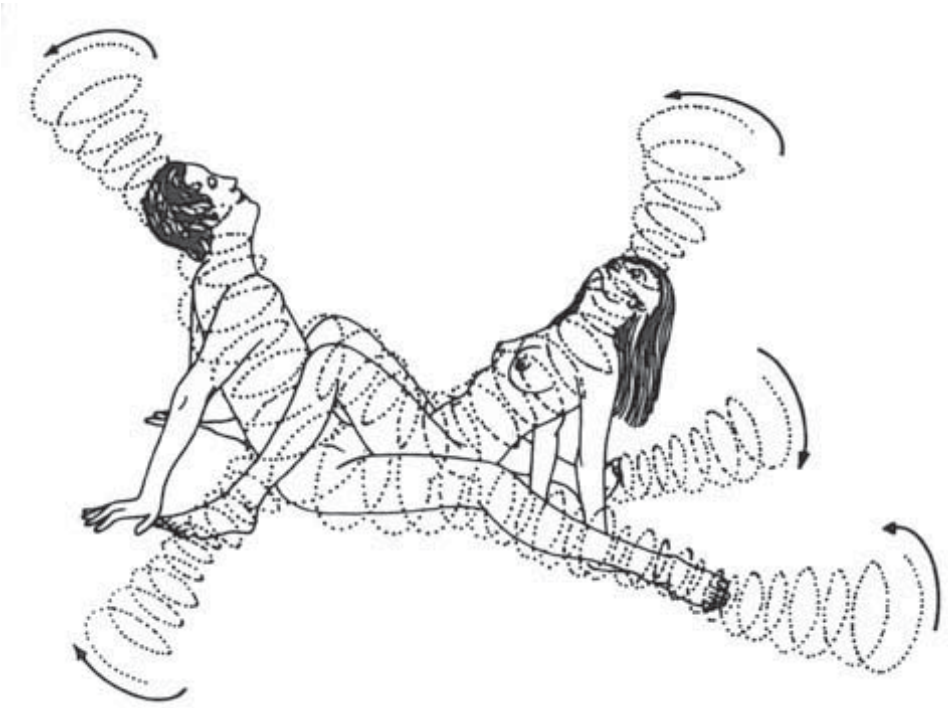


Fig. 8.44 *Spontaneous Opening of the Nine Belt Routes during Heightened States of Energy Arousal*

When you have opened all your psychic channels and you know what is possible in terms of energy exchanges, you will then be free to choose the path of expressing your love at will. It is interesting that lovers who know nothing of these esoteric methods sometimes have similar experiences during normal sex. Although unable to exchange energy at will, they do know the sensations first-hand from the spontaneous opening of their subtle energy channels. The Taoist practices of Healing Love are designed to focus your awareness on the infinite possibilities that lie within you. This concentrated awareness is what spontaneously sparks these experiences of divine energy exchange. In this sense love is universally the path to the greatest freedom: thus, the more you share with your lover; the more choices are open to you.

5. Cultivating the Valley Orgasm

The Valley Orgasm is a true fusion of two lovers' beings, shared in an intensified and balanced way. As an even higher experience of Yin Yang exchange that goes beyond the Microcosmic, it may occur spontaneously in any couple dedicated to expanding their love and spiritual awareness. No technique can guarantee it will happen, but the methods taught here vastly increase the probability of a couple enjoying regular Valley Orgasms during lovemaking. It is a state of prolonged orgasm, the balancing of Yin and Yang, a function of opposites, a melting. However do not be disappointed if you learn to block ejaculation and master the Orgasmic Draw and Big Draw, but do not soon have a Valley Orgasm. This happens frequently and should be expected, especially in a stressful urban setting where there are so many distracting forces working against the sustained balance of subtle energies.

A.Cultivation in the Three Tan Tiens

During a Valley Orgasm the lovers simultaneously experience an opening of a specific energy center. This releases a tremendous energy that is truly thrilling as it radiates to fill every cell of your body and joins you with your lover. The Hindus call these centers "chakras". The Taoists refer to them as lower middle and upper Tan Tiens, and locate them in the abdomen, heart, and head. (Fig. 8-45)

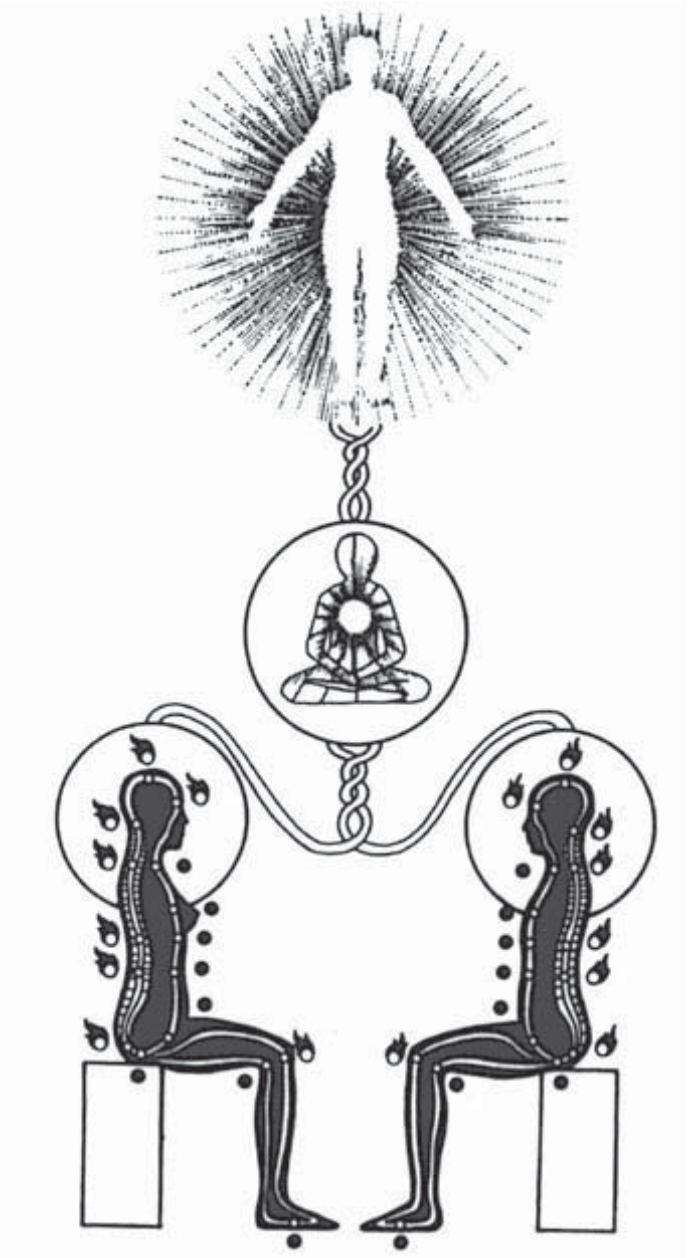


Fig. 8.45 *Taoist Practices of Healing Love open the Way to experience the Greatest Freedom.*

In truth, the entire body is one Tan Tien, or energy center but in practice it is easier to learn with smaller vortexes of energy until you can handle the greater power. The sequence of opening them is generally to start with the lowest center and move up. If the higher centers open before the lower ones, the energy may be unstable and short-lived. In that case the lovers should direct their higher energy into the lower centers to create a more grounded polarity. Filling the lower body with higher energies will lend greater fullness to the feeling of intimacy and create a greater foundation for future exploration of the spiritual world of the two lovers.

By opening these energy centers you transform your sexual essence into spirit. The Valley Orgasm is actually a fusion of Ching, Chi and Shen (sexual, life-force and spiritual energy) in two lovers. (Fig. 8.46) All three are normally present in everyone, but in a divided and weakened state. The two lovers can supply energies missing in their partner and bring out recessive energies with the simple presence of the opposite subtle polar energy. When you open a new energy center your mind makes a leap in awareness by fusing these three in a spontaneous alchemical process. Your own spirit is purified and is one step closer to becoming centered in your body. It is important to know that these centers cannot be forced open, any more than a child can suddenly be forced to grow up. There are natural stages. That is why you must relax to entice the Tan Tiens to open; then you will experience a Valley Orgasm as a spontaneous gift, a sparkling jewel bestowed upon you by the Tao. This state has been described as one of profound clarity and serenity but even these phrases are insufficient to convey its deep beauty and truth.

B. Cultivation of Deep Relaxation

The more deeply you learn to relax during the Yin-Yang exchange, the more deeply you can surrender yourself to your lover the more likely you are to reach the balance of polar forces needed to open each center. This process happens in a split second, but can take months or years of subtle fine tuning of energy between lovers. That is why a commitment is usually needed to get to the higher levels of Dual Cultivation--it requires a great deal of time to understand the play of subtle forces, and to refine your more gross physical and emotional energies.

Fig. 8.46 *Bringing Sexual Energy to the Kidneys*

C. Development of a Strong Nervous System

Your nervous system must also be strong enough to handle the increased flow of Chi experienced during a Valley Orgasm. Any Tai Chi, Yoga, Chi Kung or other purifying meditative work is invaluable

in developing this kind of strength as it speeds up and clarifies the process.

D. Mental Spiraling of the Energy

The Valley Orgasm can happen when both lovers have harmonized their will power and their breathing during the Yin-Yang exchange. The energy is flowing between the man and woman as they collectively focus their attentions on each center. It helps to mentally spiral the energy in a three-inch diameter circle (male clockwise, female counter clockwise) at a point about three inches inside the body near each center You should experiment with the location of the point you focus on, as some people find the energy is more powerful a little closer to the spine.

The Chi energy likes to move in a spiraling motion; therefore, by mentally spiraling at key points, you may trigger the release of a far more powerful Valley Orgasm. This spiraling movement of the Chi itself is caused by the interaction of male and female energies. This can be seen geometrically in the symbol of the female--the circle, and that of the male--a straight line with an arrowhead. The fusion of these two signs is a spiral: a circular energy containing a linear energy moving toward the center of the circle. When a man and woman make love, the same thing occurs: the Yang Chi enters the circle of the Yin Chi. The Chi fuses, and the circle of energy expands and spirals upward through both bodies. The energy will naturally travel in a sequence, spiraling through the following centers.

(1) Navel Center, or Lower Tan Tien

Many routes of the body join at the navel center or lower Tan Tien. When the navel is open, all routes in the body will be joined. You will regain something of the terrific vitality of the newborn baby for its energy has been fed to it by the mother through the navel.

(2) Solar Plexus

The solar plexus controls the digestive system, stomach, spleen and liver. This will greatly strengthen your health and will. At the solar plexus center the power is much stronger purer and widespread. However you must first open the navel for the power to flow up.

(3) Heart Center, or Middle Tan Tien

Important to strengthening the heart, lungs and thymus gland and to amplify your power of love, sympathy and rejuvenation is your heart center. This is the center of the middle Tan Tien, and extends into the areas immediately above and below it.

Fig. 8.47 *The Vallrey Orgasm is actually the fusion of Ching (Essential Energy), Shen (Spirit) andChi (Vital Energy).*

(4) Throat

The throat energy center is the thyroid gland and is the energy's doorway between man and heaven. Since it controls speech, it is also known as the center.

(5) Yin-Tang, or Third Eye

The Yin-Yang, or third eye, is located between the eyebrows, and controls the nervous system and soul. Its development calms the person and lessens the influence of stress and fear.

(6) Pai-Hui (Crown) or Upper Tan Tien

Finally direct the power to the Pai-Hui, the crown, the center of spiritual knowledge, and the doorway to higher spiritual evolution.

6. Valley Orgasm Summary

a. First make love actively using three or six shallow strokes for each deep one, or nine shallow and one deep.

b. Stop thrusting when you feel you are approaching orgasm. Use the Orgasmic Upward Draw, or your male partner the Big Draw, to bring power up to the Pai- Hui (crown).

c. Embrace and synchronize the breathing. Place yourselves in comfortable positions without undue stress on the limbs.

d. Open the Microcosmic Orbit by directing your Chi around the circuit with the power of thought.

e. Exchange power by circulating your energy in and around your entwined bodies using meditation. Focus your attention on the polar balance of energy in your lower Tan Tien. When the power builds, move it upward in a wave toward your middle and upper Tan Tien.

f. When your energy has been transformed up, or you feel the loss of 50 percent of your arousal, start to thrust again if you wish and build up more energy, keeping the urogenital diaphragm closed, and stopping before ejaculation.

g. Exchange power several times. Each time try to bring the energy up to increasingly higher centers, meditating on each Tan Tien for as long as you feel comfortable.

The exchanging practice is a mental and spiritual operation. The higher energy in woman is different from man, a study that merits a complete undertaking and is projected for a later volume.

E. Helpful Hints

Many women who have partners will want to share the techniques learned here with their partners to enhance their mutual experiences. The following are some helpful hints in sharing the practice.

1. For Lesbian Couples

Women who share these techniques with their women partners will find it easy to communicate the information, since they both practice the same exercises. One area that the Taoists claim is important is the polarity of Yin and Yang. For Valley Orgasm to be experienced, the Taoists say that the polarity of Yin and Yang work together to produce a synthesis of their opposing qualities. If both partners are women, therefore Yin in nature, there may not be enough tension, or magnetic energy available to "lift off: ' as it were. One way to increase the polarization is for one partner to acquire more Yang energy. Since the most Yang source in our environment is the sun, one partner can take more sun, the absorption of which will increase her Yang energy. If possible, she can take the solar energy into her ovaries via the genitals, if she has the privacy to do this. Otherwise, she can sit in the sun and "think," or mentally direct, the energy into her ovaries.

2. In Teaching your Man

Once a woman masters these techniques, she can more easily share the information with her partner. The best way would be for him to carefully read the instructions in the companion volume, *Taoist Secrets Of Love: Cultivating Male Sexual Energy*. Short of that, a woman should know that when teaching a man, there are some essential differences that must be considered.

A. Testicle Breathing

Testicle Breathing is performed similarly to Ovarian Breathing. A man has a visible testimony of his testicles lifting up with a contraction of the pubococcygeal muscle (PC Muscle). Also, temperature-wise, the energy for the man is cool or cold (remember the ovarian energy during Ovarian Breathing is warm). Therefore, it is not necessary to emphasize bringing down this energy into the navel--the cool energy in his head will not harm the brain. He is

welcome, of course, to bring the energy down to the navel and circulate it in the Microcosmic Orbit.

B. Big Draw for Men

Having a partner who believes that withholding ejaculation is an acceptable idea removes one major obstacle. The will to want to try this method is already a step in the right direction, and you will soon have a partner with whom to practice and with whom to escalate the pleasure of sexual contact. Teaching the Big Draw to a man is a matter of great magnitude since men have a hard time controlling ejaculation. First of all, it will take a lot of solo practice before he feels comfortable with his control over his ejaculation. With you the additional excitement makes it more difficult to control. The role of coach and trainer, willing to guide him through the steps of the Big Draw, will serve you both best.

We have received varying reports from women students who have helped to cultivate the practice in their partners. One described her experience as if she were at a sporting event, rooting him on, which made her feel involved in his Big Draw and gave her something to do as she waited. Another woman felt neglected, noting that all the emphasis was on his Big Draw. In her workshop training it was emphasized that the woman had to be patient for a time in order to help him. Therefore, attitude plays a large role in your success.

C. Stopping Ejaculation

The Brauers, in their book *ESO: Extended Sexual Orgasm*, offer several techniques for delaying ejaculation and orgasm. One simple way is for both men and women to push down, as though having a bowel movement, and feel the genitals bulge. Holding the breath naturally accompanies this maneuver. It seems to work very temporarily however: while you are actually bearing down the sexual sensations do not exist, then when you inhale and relax you are almost back where you started. It is, though, a chance to switch gears to a different kind of stimulation.

Another technique to delay ejaculation described in the Brauers' book is called the "scrotal pull." Its effectiveness is based on the fact that ejaculation will not occur when the testicles are low rather than being pressed against the body. You can both learn how to do

this. The Bauers instruct the man to “grasp the scrotum between your testicles with the thumb and forefinger of your left hand. When you are near orgasm, pull firmly down.” Another way is to “make a ring with your left thumb and forefinger between your testicles and body and pull downward.”‘

The companion book for men, *Taoist Secrets of Love: Cultivating Male Sexual Energy*, describes other helpful techniques to delay ejaculation in men. The “Cold Water Skinny-Dip” is one method: that is, having a bowl of cold water by the bed for him to stick his penis in if he wishes to take a breather to get more control over himself. Another technique is the “Century Count,” which is counting to 100 very slowly.

Sharing the techniques of the practice of Healing Love promotes kindness, understanding, selflessness, pleasure and happiness in you and your partner and is well worth the time spent in learning.

Fig. 8.48 *Vallrey Orgasmic Couple*

Chapter 9
Interview: Ovarian Kung Fu Practitioner

The following interview with a 43-year-old Ovarian Kung Fu Practitioner and movement teacher was conducted by a Taoist teacher: Michael Winn.

Question: How long have you been practicing Ovarian Kung Fu?

Answer: For three years.

Question: Did you find the techniques difficult to learn?

Answer: I found them easy to learn, especially since from the very beginning the benefits were so immediately obvious. I was motivated to practice, but it did require a certain amount of time to completely embody them and make them a part of my life.

Question: Did you learn them alone or with a partner?

Answer: Initially I practiced alone having just ended a relationship. I immediately found they empowered me with control of my own sexual energy, and rediscovered sexuality as a resource for cultivating myself.

Question: What do you mean by resource?

Answer: In the sense that the Taoists speak of cultivating one's nature, refining energy for personal and spiritual development, with sexual energy being one raw material from which that refinement is accomplished. I actually had the experience of being able to direct my sexual energy within my body, and watch it transform my body and my emotions.

Question: Did you have a sense of sexual energy as a resource before you began Taoist practices?

Answer: No, not specifically as a resource. I felt confused after growing up in this Western culture which perpetuates a sense of separation of body and spirit. I am naturally a very sensuous person and totally enjoy the physical aspects of sex. I always had a sense of the mystical quality or spiritual communion possible in a sexually and emotionally intimate relationship. I longed for inner union and knew I would need to experience that union within myself before I would be able to experience it with a partner. This longing fueled my spiritual quest, leading me to meditation and eventually to the

Taoist sexual practices.

Learning the Taoist sexual practices helped ground my meditations in my body and in my daily relationships. I was attracted to them because of the value placed on harmonizing heaven and earth, spirit and body. Sexual energy became for me a valuable resource as a fuel for my spiritual journey. I discovered I could enjoy sex and transform it into spiritual energy at the same time. The pleasure of sex actually became more intense and exquisite. Pleasure became ecstasy and ecstasy grew into bliss.

Question: Does this mean that sex is now something that you can have with yourself?

Answer: Yes. Almost like a twenty-four-hour-a-day experience of my being alive as a sexual being. That energy is now there and available to me constantly. Before I was stuck in a bit of a polarity: I was either blocking the sexual energy if I wasn't in a relationship in which I could express it, or feeling impelled to get involved in a relationship in order to experience it. Now I feel more sexually aroused and alive. I feel my energy is at its fullest potential, and are more "turned on" by life all the time. Now I don't feel that I always have to interact with a man in order to express it. Because my sexual energy flows in clearer channels, I can tolerate a higher level of energy without feeling an urgency to discharge it.

Question: What happens with the sexual energy when you are not interacting and making love?

Answer: When I first began doing Ovarian Breathing, I discovered immediately that I could move the sexual energy easily from my genitals throughout my whole body. It's very simple, but very powerful. I can increase my ability to be connected and present in life. Over time I have been able to refine it so that I can share more energy with other people in my work and daily relationships. It doesn't come across necessarily as purely sexual, but I know it is my sexual energy that I have transformed into healing and loving energy.

Question: Do you think that men are more attracted to you now that you do the Ovarian practice?

Answer: They seem to be.

Question: Has it changed the kind of men that you attract?

Answer: I would say that I seem to be more attractive to people in general. Although I seem to be more attractive to men, judging by the feedback that I get, I am attracting in a way that feels

comfortable. I do not feel that men are leering at me. I used to feel that whenever I was strongly in touch with the full power of my sexual energy that I was somehow putting out a strong sexual message, inviting a kind of response that I really didn't want. Now I feel that people are interested in me as a whole person.

Question: Would you call this a personal magnetism?

Answer: Yes. A personal magnetism.

Question: Have you ever practiced Ovarian Kung Fu with a man?

Answer: Yes. I practiced by myself for about three months, and then I was very fortunate in attracting a man who had been doing the Taoist sexual practices for a period of time.

Question: During those first three months, did you see any changes in your menstrual period, or did you experience any other physical changes?

Answer: My periods had been healthy and trouble-free so I really didn't notice any change. But friends who have begun the practice who have had any kind of difficulty before have experienced dramatic improvement in terms of a relief of menstrual cramps, a shorter flow, and fewer pre-menstrual symptoms.

Question: What about emotions? Sexuality is supposed to be linked with emotions in many different ways. Once you began this practice, did change your connection to your emotions?

Answer: Yes. Since at the time I began Ovarian Kung Fu I was already involved with other Taoist practices, it's difficult to differentiate which was having the effect on my emotions. I know that the Fusion of the Five Elements, Part I. had a profound effect on my emotional state since it involved recycling negative emotions into a purer form of energy. Combining that with the Taoist sexual practice, I gained a tremendous sense of personal responsibility of being in charge of and able to direct both my sexual and emotional energy

Question: Do you feel the Fusion and Ovarian Kung Fu practices go together?

Answer: Yes. It is wonderful to do the Taoist sexual practice with a partner but it is extremely helpful to do the Fusion practice because it keeps the emotional energy so clear. It puts a relationship on a wholly different level without the normal kind of emotional confusion that often comes into a male-female relationship.

Question: Do you feel it is dangerous for someone to do just the sexual practice if it is not balanced by clearing out all the negative emotions?

Answer: I would say that really depends upon the person. If two people are very responsible about their emotions, acknowledging them so that they are able to let them go, then they will probably do well with just the sexual practices. But they would still benefit from doing the rest of the meditation practices as well. For couples who have any emotional confusion, I would say it is essential to do Fusion at the same time as the regular sexual practices.

Question: Do you know of anyone who is doing these practices who has had problems with them?

Answer: No, I don't. Everyone I know who has practiced them has been quite enthusiastic about the benefits.

Question: And there are no side effects?

Answer: I have never known anyone, male or female, who has had any side effects. This practice allows sexual energy to be transmuted and not just conserved. It also refines and spreads it throughout the body, revitalizing the whole body in mind and spirit. So the practice itself removes the negative side effects of sexual desire, which for most people appears as sexual frustration. Sexual frustration is simply blocked sexual energy.

Question: Once you became involved with your lover; did you find a big difference between the other lovers you've had who were not doing these practices?

Answer: Yes. It was quite dramatically and wonderfully different. This relationship, which continues happily, has all the elements that had been wonderful in my other relationships in terms of closeness and pleasure, but goes far beyond anything that I have ever experienced before. The whole quality of the relationship is very clear.

We experience very clear communication, a flow, and a true bonding on many, many levels that I hadn't experienced before. We are connected emotionally, mentally and psychically, and are often able to know what the other is thinking. We feel that even at long distances we are able to make love. We have a feeling of the spiritual connection that is very, very satisfying.

Question: What about women who learned the practices but who have been unable to find a man who would do these practices? Do you have any friends like that?

Answer: I think everyone I have known who has learned the practices has wanted to find a partner. It is interesting to me that people I speak with about the benefits of the practice are all initially

cynical and suspicious. Most of us experience a lot of our greatest pleasure in life sexually, so we do not really want to give up the known for the unknown. Since this practice has spiritual benefits, most people think that it won't feel quite as good on the physical level. People are often a little reluctant initially to try. But everyone I know, once they learn the practices, wants to find a partner with whom to practice because they find the quality of their sexual experience far more pleasurable and satisfying, and they want to find someone with whom to share.

Question: What problems exist for the woman who does the practice, while her partner does not?

Answer: The quality of these relationships is probably better than previous relationships. Some of the refined sexual energy spills over and the partner probably picks up on it on subconscious levels.

Question: Do you think there is danger of abuse, of someone drawing the energy out from the other person, something like "sexual vampirism"?

Answer: A method can always be abused. It is very important for anyone planning to do these practices with a partner to have a clear commitment to sharing fully to attain mutual spiritual growth.

Question: Can you describe your experience of orgasm with your partner?

Answer: The orgasm is a Valley Orgasm, rather than a Peak Orgasm. I experience a slow wave of energy rising within me. This actively stimulating phase rises to a prolonged peak of excitement, then I deeply relax in the "valley" for a period. I repeat this cycle two, three or more times. Each succeeding peak of excitement is higher and each valley is more deeply relaxing so that more and more of my whole body-mind-spirit is at the same time aroused and deeply surrendering.

The Valley Orgasm occurs spontaneously in the state of deep relaxation, and it is a very powerful experience which I feel in every cell, every particle of my being as an exquisite, ecstatic melting. The feeling of connection with my partner is profound. My whole being is shared with his, and his with mine, as one flow that knows no boundaries.

Sometimes our awareness expands to include the whole cosmos, and there is a powerful sense of being omnipresent and a part of all things. Sometimes the orgasm has felt like nuclear fusion and fusion occurring simultaneously as though I am both

expanding infinitely and fusing into a point of nothingness. I have experienced a tremendous spectrum of sensations each time. In the beginning sometimes we spent the whole day making love and meditating with the energy we generated. I am always in awe of the tremendous power residing in male and female. We are all closer to being gods and goddesses than we think.

Question: Are you able to distinguish your energy from his during the cycling and sharing?

Answer: I definitely can distinguish his energy and can also feel the quality of the merging. I had been practicing the Microcosmic Orbit Meditation for about a year before I began doing the sexual practice, and had practiced the Single Cultivation of Ovarian Kung Fu for several months before actually being with my partner: Because my partner was also experienced in the practice, our merging was really spontaneous without any need to control it. I could feel from our first sharing the energy moving naturally into the Microcosmic, Belt and Thrusting Channels. If you meditate in these channels daily, your lovemaking energy will flow effortlessly into them.

Question: How long do you make love during this practice?

Answer: Several hours. Sometimes two hours, sometimes three or four. Quite frequently we experience the peaks and valleys all night, but with naps during some of the valleys. There is a saying that in love there is no sense of time. This really describes Taoist lovemaking. There is a sense of all the time in the world, of being in eternity and of having more and more energy available. Now that we have created so many connections, we don't really need to spend as much time. Once we made love for only 30 seconds before experiencing a Valley Orgasm, but the polarity between us was so powerful that the Valley Orgasm lasted for hours. Now we are much more tuned to each other and feel that we are making love all the time.

Question: Are these cycles of the peaks and valleys determined by the male's erection?

Answer: I would say that the cycles of peaks and valleys is deter mined by both people. Both partners move to greater and greater excitement, and when a partner feels he or she is coming to the point of no return, then both partners pull the energy up to mingle it and share it in the quiet valley stage. It has always seemed spontaneous when another crest and wave begins, drawing both

of us into it.

Question: During that resting period when you have reached the high peak of stimulation and have allowed that Chi energy to move up the body until the whole body feels tingling, warm and vibrant, is there a danger of feeling unconscious with this energy?

Answer: If I'm extremely fatigued there is a tendency to be more unconscious with it. My experience in general is of going into a totally altered state, finding a melting point with my partner in which I am very aware and yet very at ease. Then I can meditate and further refine our lovemaking.

Question: The technique of the Valley Orgasm as it is described requires you to meditate at different levels, or Tan Tiens. Did you find yourself able to meditate at specific centers with this energy?

Answer: It's very hard to generalize because every experience is unique. I found initially that the energy first moved in the Microcosmic Orbit, but I also started noticing that it would move through the whole body. It would tend with each valley to move up through another center. There would be times in the valleys when it would seem like a showering-up, sometimes more in the center or in the back, while at other times it would be like the rush of a rocket taking off, straight up.

Question: Does this feeling linger after lovemaking?

Answer: There is the sense of being a unique male and female each in our respective bodies, and yet being all man and all woman, god and goddess. I have clearly experienced this before in other sexual relationships, but in this relationship it exists all the time.

Question: After practicing in this relationship for almost three years, what has been the evolution of this practice?

Answer: I would say that one of the aspects of all the Taoist practices is the sense of active awareness of drawing energy in directly from the stars, the sun, the earth, and from one's sexual partner What I feel is that I have been able to absorb, be nourished by, and bring into my own life some of the real masculine, Yang, qualities of my partner. With my partner's Yang energy as a resource available to me, I have been able to be more assertive, more creative, and more outspoken. The exchange with my partner of the whole essence of his being has enabled me to amplify my own personality and to include his qualities.

Question: How has the male energy you absorbed affected your daily meditations?

Answer: I want to be more integrated, including integrating the male and female energies within myself. Becoming more integrated and more balanced is one of the benefits of this practice. Being able to exchange with my partner has really enhanced my spiritual growth.

The same energy that could have been lost at times in emotional confusion or through miscommunication has become an energy resource that is available for my own growth. There is clarity that is illuminating in terms of my emotional and spiritual life. It is also more refined energy.

My partner's energy is now available for my spiritual growth, and my energy is available for him.

Question: What do you feel is the highest level of this practice?

Answer: Refinement of one's own sexual, emotional, and mental energies into subtle spiritual energy and into a spiritual body that lives within the physical body yet is free to move anywhere in time and space is the highest level. The sexual practice conserves and refines the fuel, but it is within the Kan and Li meditations that the real alchemy occurs. The essence of the Kan and Li practice is fire and water male and female energies uniting creatively within each Tan Tien or center in the body.

Through the self-intercourse of Kan and Li, one impregnates oneself, nourishes the fetus, and finally gives birth to a spiritual child that dwells within. Then the challenge is to nourish the spiritual child with strong, refined energy and virtue through the ups and downs of daily living. And how does my partner fit into this? I enhance his self-generation as he helps me with mine.

Question: You can be both the mother and father of this spiritual child by having the additional help of outside masculine energy?

Answer: Yes. What I like so much about the Taoist practices is that in cultivating our own nature, we attain our fullest flowering and give birth to ourselves. With a partner in Dual Cultivation, there is obviously an added energy and mutual support in addition to joy and pleasure. I also know that I can cultivate my own sexual energy myself, and be creative with it.

Question: Do you feel the sexual cultivation practice is essential to your spiritual growth?

Answer: Yes, but it is not essential to have a partner. These practices can be done by a woman who has a commitment to

celibacy as a way of utilizing her sexual energy for her own spiritual growth and directing the transformed energy toward service to others. For a woman who does want a partner eventually Single Cultivation allows her to take her time to choose her partner well without rushing into a relationship purely to satisfy sexual needs. So I would say Single Cultivation is essential. Dual Cultivation is valuable, but optional.

There is something else that I feel is very important since we are talking about the benefits. From the beginning these practices were very tranformative, enhancing my sense of being in control of my own energy and my own destiny. I have grown more responsible and able to use my energies creatively.

Question: Is the Tao all about controlling your emotions and energies? How does this figure in being effortless and flowing free?

Answer: I think about life as a river. Before I practiced Fusion and Ovarian Kung Fu, I felt in my emotional and sexual life as if I were a leaf on a current, and it was the current of circumstance that would sometimes direct me. Now, knowing these Taoist practices, I feel that t am more like a raft, and I can use the current for the purpose of following the river. When I look at my past and all the suffering that I went through in some of my emotional and sexual relationships, and I look at friends now, I see that the Taoist practices allow us to be in the river in a way that's harmonious and flowing without being knocked against the rocks. We are the navigators.

Question: Let's talk a little about the psychology of relationships. How do you feel this practice changes the psychology of the battle of the sexes?

Answer: I think it is essential for both partners to enter into a relationship with the intention of moving the energy up and fully sharing, because it is an exchange of energy designed to be redirected toward growth. This growth will naturally take its own direction, emotionally and spiritually. As the energy moves up during the practice, it takes care of itself. Everything else will flow naturally from that. The power struggle tends to dissolve. When things occur that must be clarified, the tools are available. It seems there is a harmony and a flow that is present that really extends far beyond the sexual act. There is also the other tremendous benefit of feeling attuned to the other person, wherever he might be.

Question: Why do you think this happens?

Answer: My experience is that as the energy moves up there

are bondings, at the heart level, and the mental and spiritual level, and those bondings are very profound.

Question: I have some specific questions about the actual technique. Do you really feel the energy flow up the spine in very direct pathways? It seems when you are making love these energies all get mixed together: This is a little confusing.

Answer: I think there is an interesting distinction between practicing on my own, if I am stimulating myself, my whole being is totally involved with another person. More of my whole body gets aroused when I am with my partner. So when the energies move up, they are more likely to expand and to fill my whole body. When I am alone I have a clearer sense of the energy going up my spine. If I'm with my partner I have a sense of the energy moving up through my whole body. Sometimes I have the sense of not only my own energy but also of his, as one column or wave moving upward.

Question: Have you discovered any additional techniques to aid this sexual practice?

Answer: My lover and I have discovered certain things spontaneously. It requires a great deal more discipline for men to cultivate this practice than it does for women. For women, it is really control of the pelvic-floor muscles.

All I really need to do is contract my pelvic-floor muscles in the direction of my coccyx and tilt my pelvis slightly and the energy will just begin to move up. Sometime I will stroke up my partner's spine with my hand or he will stroke up my back as we are beginning to go into the resting phase. This gives us both the clear sense that we are directing the energy up. Sometimes we touch each other's heads on the crown, and this helps focus the energy there. The energy then begins to shower down. One of the most delicious and exquisite qualities of the Valley Orgasm is that the energy moves up the whole body and through the crown, sometimes moving out of the body and then showers down like an exquisitely delicious nectar showering down through all the cells and all the atoms of the body.

Question: Have you found the practice has increased or decreased your sexual desire?

Answer: My sexual desire is about the same, but I feel much more satisfied. Also, my perception of sex and sexual relationships has continued to expand. I feel I am very slowly moving toward my goal of being totally alive, making love with the whole universe in

every movement. I feel immensely grateful to have a partner with whom to practice loving.

We feel that we are always together and whether we are physically together or apart, we can make love and share our energies. Our transformed sexual and emotional energies nourish our spirits and are shared with others as love.

Fig. 9.1 *Loving Couple*

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Healing Love through the Tao

Cultivating Female Sexual Energy

Mantak Chia

Illustrated by Juan Li

The sexual guidance and exercises presented in this book are being introduced plainly to the Western public for the first time. For thousands of years Taoist Masters only taught these secrets to very small numbers of people (who were sworn to silence), in the royal courts and in esoteric circles. This Taoist Master, as a practitioner of this ancient sexology, feels the need to share this knowledge with the world.

There are two main practices which the author teaches women to cultivate and enhance their sexual energy. One is Ovarian Breathing, which can shorten menstruation, reduce cramps and compress more life-force energy (Chi) into the ovaries for more sexual power. Another, the Orgasmic Upward Draw, can be done solo or with one's sexual partner. When this practice is mastered one can experience a total body orgasm that is beyond ordinary vaginal orgasm without losing life-force energy.

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Master Mantak Chia, born in Thailand, comes from the ancient lineage of Taoist Masters. Now based in Northern Thailand, he is also the author of *Awaken Healing Energy through the Tao, Taoist Secrets of Love: Cultivating Male Sexual Energy, Taoist Ways to Transform Stress into Vitality, Awaken Healing Light, Chi Self-Massage, Iron Shirt Chi Kung I, Bone Marrow Nei Kung, Fusion of the Five Elements I, Chi Nei Tsang I, Tao Yin, Tai Chi Chi Kung I, Chi Nei Tsang II, Multi-Orgasmic Man, Cosmic Healing I, Mutli-Orgasmic Couple* and *Cosmic Healing II*.

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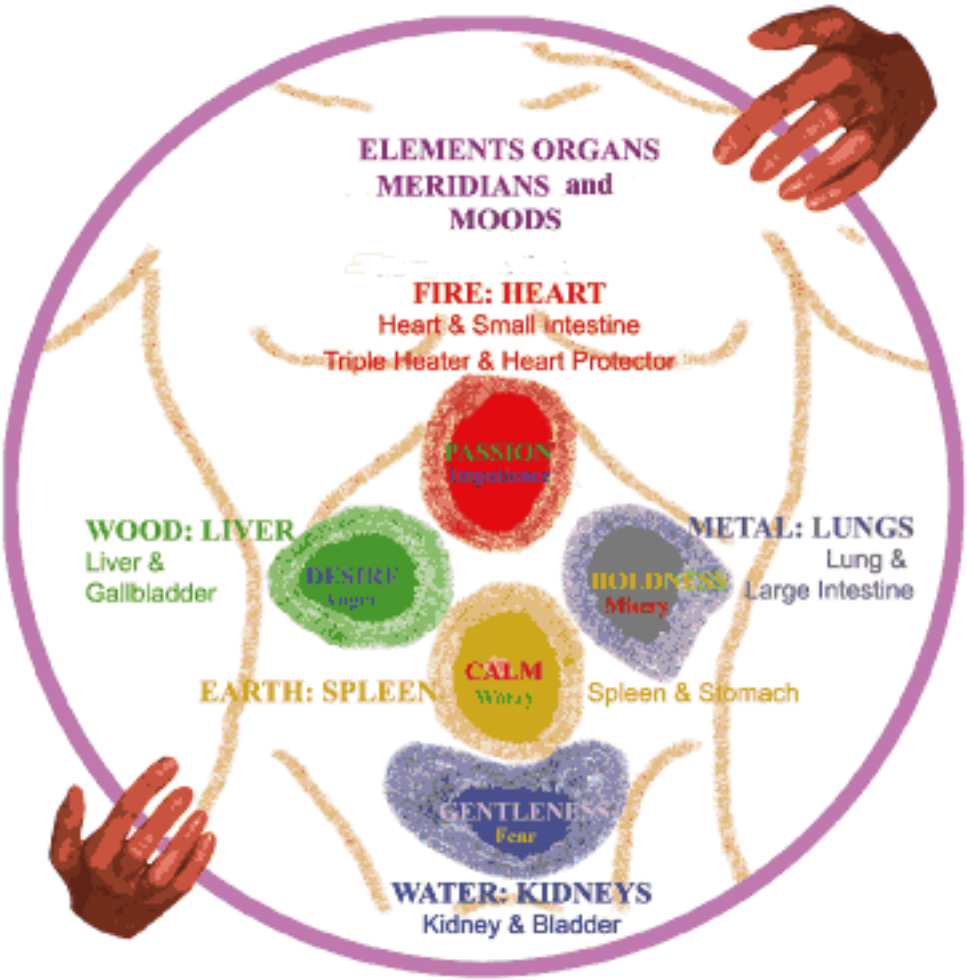
a Touch of Sex

taoist foreplay: shiatsu secrets for love



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a Touch of Sex

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You will learn from this book

How you can become a far more effective Lover

however good you are already

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and how to overcome unlucky stars

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know when the right moment comes

Secrets of Sex Magic

and keeping safe from sexual vampires and parasites

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The meditations, practices and techniques described herein are ***not*** intended to be used as an alternative or substitute for professional medical treatment and care. If any readers are suffering from illnesses based on mental or emotional disorders, an appropriate professional health care practitioner or therapist should be consulted. Such problems should be corrected before you start training. This booklet does not attempt to give any medical diagnosis, treatment, prescription, or remedial recommendation in relation to any human disease, ailment, suffering or physical condition whatsoever.

Whole Body Love-Shiatsu

In this Chapter you will learn to feel

* **areas of arousal**
* **pathways for your hands**
* **secret connections**

Whole Body Love-Shiatsu

When Lovers first touched they invented what we call Love-Shiatsu.

Huang-Ti (2697-2598 BCE) the Yellow Emperor codified the theory behind the therapy. Treatment, he decreed, should vary according to application, whether to stimulate desire, sexual or other healing.

In those days they searched for immortality as the logical extension of perfect health. The Yellow Emperor is said to have attained it by having sex with 1200 wives and concubines. The Queen Mother of the West likewise but with numbers unrecorded.

The Emperor and his female advisor Su Nu are credited with creating the 'Su Nu Ching', a dialogue of sexual practice with such exchanges as:

Huang Ti: 'And what is the method of nine shallow and one deep?'
Su Nu: 'That means to thrust nine times shallow and then one deep, in time with the breath. Too shallow may not yield the greatest pleasure, too deep may be injurious.'

Later Taoist sex manuals continued the tradition of treating both genders as equal, but as Dynasties came and went, mixed fortunes followed for the practices.

Nowadays we like one-to-one relationships and are perhaps sceptical of immortality. But that isn't to say we can't enjoy the secrets that kept the Yellow Emperor going and the Queen Mother coming.

And Lovers have always touched.

It starts with a look, a gaze in each other's eyes

Then Mind follows Eye

and Hand follows Mind

Prepare your Lover

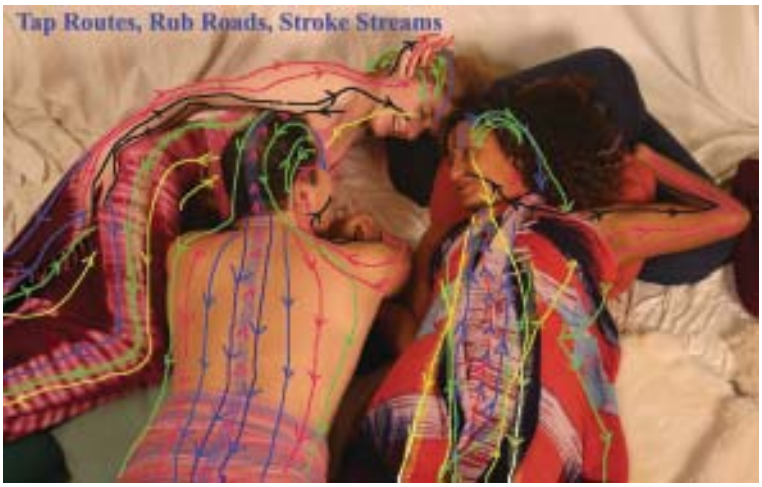
by first lightly tapping or patting up and down the body.

You don't have to follow exactly the lines pictured - they are just there to give you an idea of the directions of flow in the meridians.

Tapping wakes up the nerves. How do you like to be woken up?

Tap very gently on softer areas such as the belly and face, and not at all on breasts and genitals.

Get feedback from your Lover on how it feels: would they like a drum solo in some places - such as the sacrum and shoulder-blades, or would they prefer tippy-toe tap?



From Tapping to Rubbing, not too hard, not too soft.

The nerves are awake, ready to be coaxed into action.

Follow the meridian routes more or less, just to let them know you will be back. Still avoid the genitals, for now.

And when you have tapped and rubbed, its time to tease: long languorous strokes along the channels. brushing close by your lover's sex, using your hands to hint at what's ahead.

IF YOU'VE MADE THE TIME - TAKE YOUR TIME

Secrets of Foreplay
Pat before petting, Tap before tupping
Start with clothes on: they'll come off by themselves

Taoists see sex as the servant, not the master.

If the products of our pleasure are not being deployed to start new life, they say, we can internalise the intense energy, all the hormones and nutrients, to improve our own lives.

From foreplay to climax a Taoist controls and harvests the abundance of reproductive power otherwise wasted in unmindful intercourse: yang having the power to repopulate a continent in a single ejaculation, yin with eggs to generate hundreds of lives.

They taught the Emperors, their wives and concubines, to recycle this potent life force and harmonize their cycles of pleasure through a process known as Inner Alchemy.

Love-Shiatsu Numerology

FIRST for a good start
ease your way down

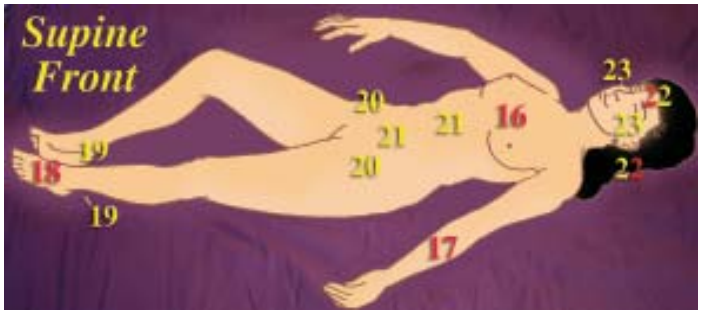
Here are some numbers to guide you around the erotic landscape.

You will see from the following pages where you can place your hands, fingers and thumbs to lay and light the fires.

The sequence and points of connection help you find your own way - no need to get too technical about it!

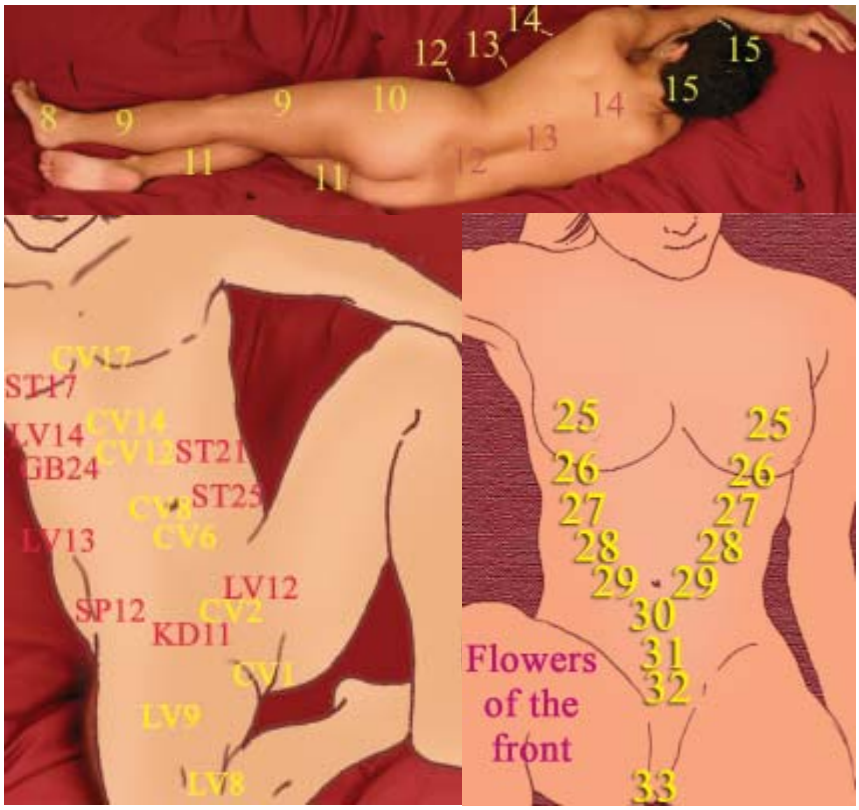
Be creative, enjoy your pleasures.

SECOND make your way
up the side



THIRD
wander
up &
downthe
front

FOURTH after the front, turn your attention and loving caresses to the other side



FIFTH then teasingly down to heaven

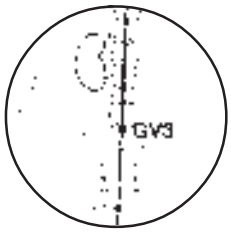
You don't even need to know the names and locations of the points. By following the simple hand-by-hand routine illustrated in the next pages you will connect all the arousal points and give your partner a wonderful sensual experience.

Remember, if you are doing it with sensitivity, care and love, you are doing it right. It is a really good idea to ask your partner how it feels.

Hands on: Getting Started

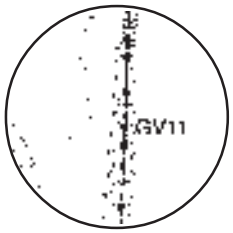
FIRST going down

a good brisk hand-rub before you touch will energise your hands.



GV 3, A powerful arousal point for both sexes, just above the sacrum, at the back of the Sexual centre.

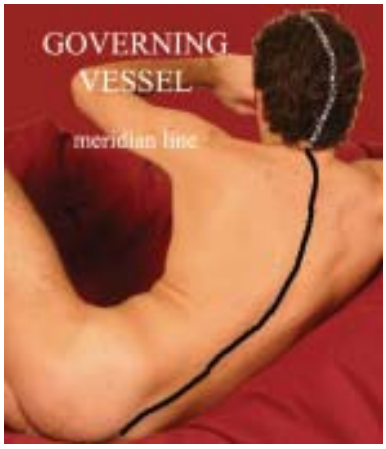
For women helps in regulating menstruation and on men to overcome impotence.

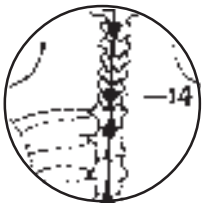


GV11, centre of the Fire of Love, back of the Heart, between the shoulder-blades.

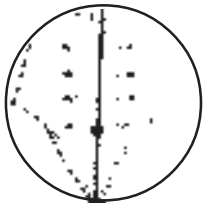
Your hands alight blending the Heart Love with Sexual Desire, harmonising Fire and Water, Yin and Yang.

Shiatsu Secret : Let your hands be still, resting on your Lover. Feel the warmth. Close your eyes. Imagine both hands in a pool of warmth, surrounding and connecting them.





GV14 sends a warm rush of spinal fluid up to the brain, generating excitement and warming the neck.



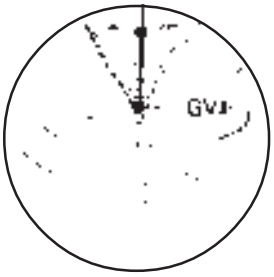
GV2 VALLEY OF DELIGHT
arousal point

Leaning for Love: the pleasure of giving pleasure. Tease and tantalise. Wandering hands, rippling through meridians, spreading desire, releasing pheronomes and hormones.

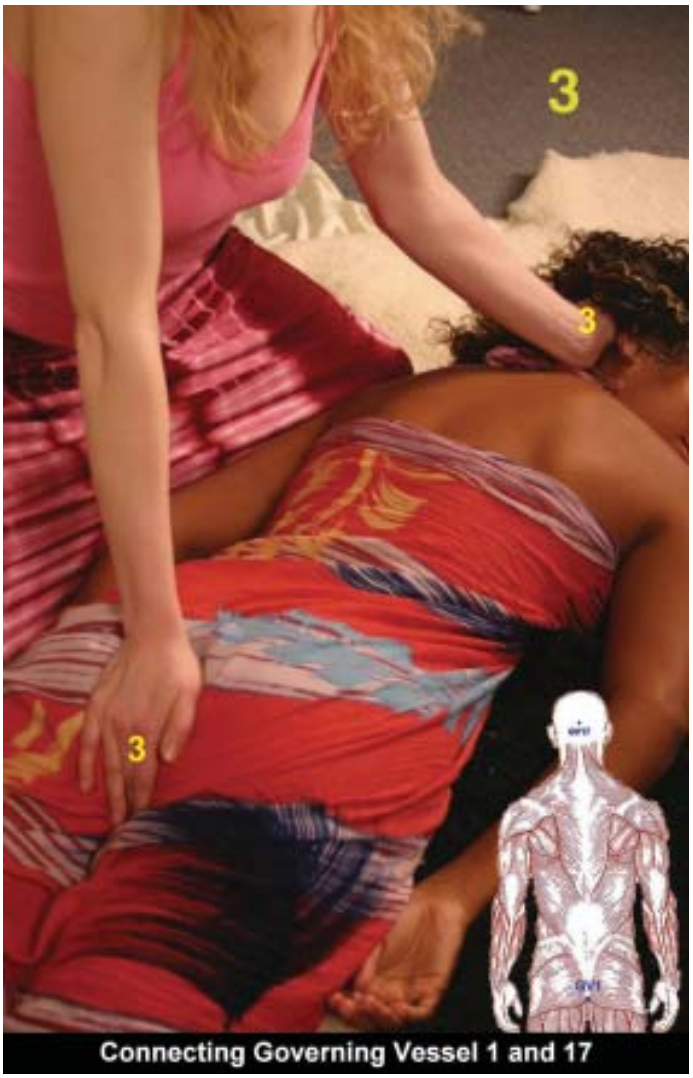
Shiatsu Secret: Imagine the pool of warmth spreading out until it feels like you are touching your Lover in only one place. When it feels like that to you, your Lover too will feel as if you are touching in just one place however far apart your hands.

GV17 JADE PILLOW, where the impulse of passion flows into the brain, loving and rejuvenating and coursing through the cranial ocean to open the mid-eye.

GV1 LASTING STRENGTH
waves of electric pleasure coursing through the sacral bone, the sacred connection with the nerves of love



Sliding along the river of love into realms above and below, connecting the Gate of Heaven with the Door to Earth



Shiatsu Secret: Move just one hand at a time as you palm your Lover's body

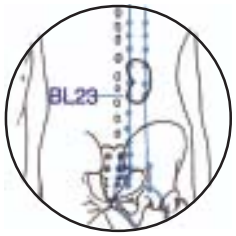
SI 11 ease the shoulders with gentle palm or focussed finger.

"Secret Instructions of the Jade Chamber" is a Taoist text on harmonizing male (yang) and female (yin) energies for mutual nourishment, yin drawing on yang and yang from yin.

Single, Dual and Multiple Cultivation can be practised, for pleasure, health and longevity, healing, self-realization and, ultimately, experiencing a self beyond the cycle of life and death.

Listen carefully to the breath below and follow its rhythm, hands and heart dance together courting lust.

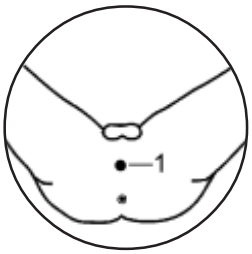
Shiatsu Secret: Each time you move one hand, again imagine the pool of warmth connecting both your hands and the places you are touching on your Lover's body



BL 23 KIDNEY connector point.

Sexual vitality for both sexes.

Enhances male stamina



CV 1 Gate of Life and Death, so named because the retention of sexual energy is said to prolong life.

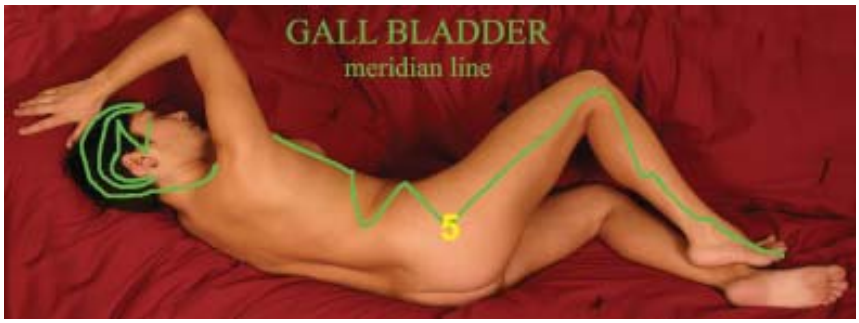
CV1 subtle use as arousal point for both sexes, especially good for prolonging male orgasm.

Clinical use helps with prevention and relief of prostate conditions.

Part Receiver's legs with your knee, your thumbs either side of spine. Arousal energy starts to wake up and flow.

Shiatsu Secret: Hold the vision of the the pool of wamth each time you move your hands. Your Lover will feel as if their whole body is being bathed in love and warmth. You are preparing for Passion

GB30 JUMPING CIRCLE
starting point for a beautiful spiral massage around the buttocks

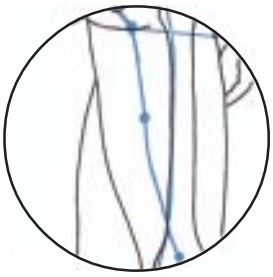


The Chou Dynasty (770 BCE to 222 BCE) had a Taoist doctrine although Taoism was not yet a formal religion.

Women were thought to have an unexhaustable supply of yin essence. A man who ejaculated or used up his yang essence without absorbing enough yin could experience health problems and even death.

Kneel between legs, move hands to buttocks, sending flashes of desire along the sides of the body. Rub cheeks together to stimulate arousal..

More Secrets await discovery in the points of connection. Tune in to your partner's response to your every touch. Don't be afraid to ask: 'How does this feel?' 'Do you like it?' 'Would you like more?'



BL37 warms the whole leg and sends the love-signals both ways

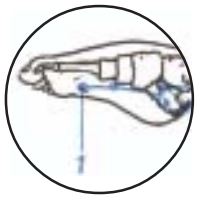
The Ch'in Dynasty (221 BCE to 24 CE) changed from Taoism to the quite different Confucianism, which considered women inferior.

Sex was considered to be for procreation only, otherwise sinful.

However, religious and magical Taoism peacefully co-existed with behavourial Confucianism until a Taoist resurgence in the Later Han Dynasty (25 CE to 220 CE) saw the rehabilitation of sexual practices and the reappearance of texts attributed to the Yellow Emperor.

Starting the Tease: stay kneeling between the legs. Move hands away from the erogeneous zone but still on the Bladder meridian which carries arousal messages through the whole energy-body, head to toe.

Heart Protector 8 palming Bladder 37



KD1 BUBBLING SPRING where you keep your feet on the ground

KD3 GREAT STREAM can be used to either stimulate or balance desire in both sexes

BL60 KUNLUN MOUNTAIN
pinching here gives a good idea of the strength of your partners libido: the stiffer the stronger! Also a useful point to press during labour.

CV2 the most potent feminine arousal point and also quite effective for men

Reaching the feet a wealth of sexual connections await. Support your Lover's foot on your pubic bone, site of Conception Vessel 2. Feeling the strength of your partner's achilles tendon can give an indication of sex drive.

Pressure to Kidney 1 & 3 and Bladder 60 supported by the Conception Vessel

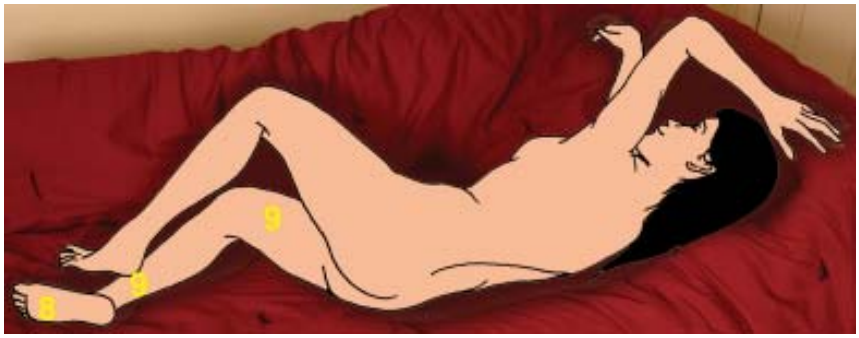
In the confusion of Three Kingdoms & Six Dynasties (221 CE to 590 CE) conflicts arose between Taoist, Confucian and the newly arriving Buddhist doctrines.

The rise of Buddhism under the Northern Wei (386-534 CE) led to persecution of practitioners of the Old Ways.

Healing and Sex became politicised.

SECOND
going up

LV9 a subtle arousal point, situated on the pleasure-muscles of the inner thigh, the approach to the sexual organs



SP 6 MEETING OF 3 YIN versatile point helpful for conditions of impotence, frigidity and premature ejaculation. Other uses include regulating menstruation, control of uterine bleeding, relieving pain of external genitals, treating sterility, seminal emissions, lapse of the uterus, difficult labour.

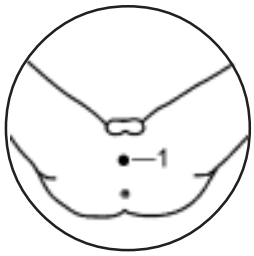
Cruising palms, aware of the slow soft bolts of desire. Face hides the longing ache inside.

Then in the Sui Dynasty (590 CE to 618 CE) Taoism again became the official religion and sexual literature again flourished.

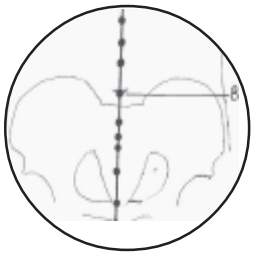
Secrets of the Jade Chamber appeared.

Under the Tang (618 CE to beginning of Sung 960 CE) Taoism became "the Establishment". From later Sung to the present, forms of Taoism evolved integrating some Buddhist and Confucian doctrines.

Move in for more close-contact work straddling your CV1 across your Lover's Liver meridian and your Spleen meridian nestling their Bladder meridian.

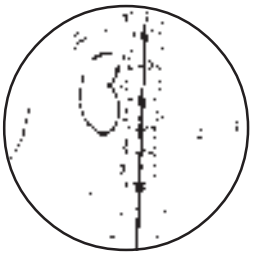


CV 1 Gate of Life and Death, so named because the retention of sexual energy is said to prolong life. CV1 subtle use as arousal point for both sexes, especially good for prolonging male orgasm. Clinical use helps with prevention and relief of prostate conditions.

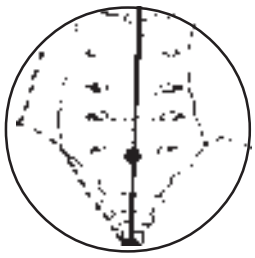


CV 8 SPIRIT'S PALACE GATE In the centre

CV2 the most potent feminine arousal point and also quite effective for men

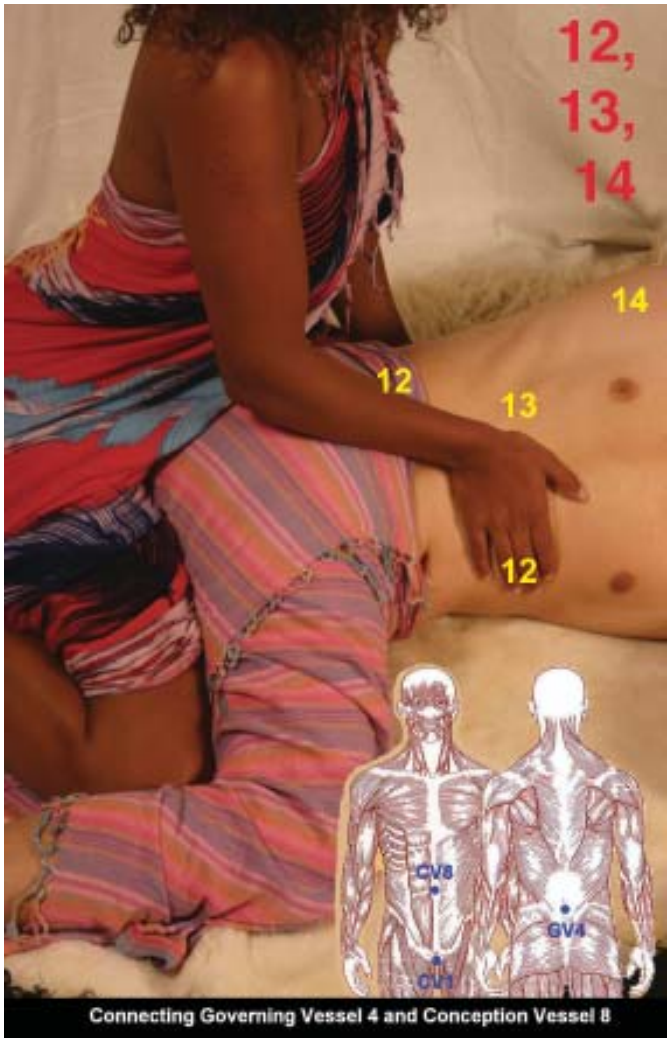


GV 4 MING MEN - DOOR OF LIFE the point where Life enters at the moment of conception. Powerful arousal point, also for male sexual stamina. Usefuil for relief of post-coital lower back pain.



GV2 VALLEY OF DELIGHT arousal point

Your leg presses against CV1 and GV2 while your Lover's buttock touches your CV2. Stay in position long enough to feel total connection before continuing your seductive upward journey.



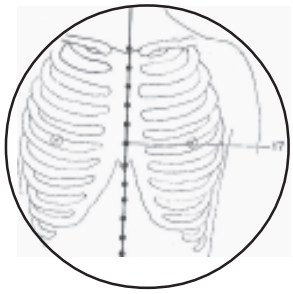
Connecting Governing Vessel 4 and Conception Vessel 8

The front-back connection between your hands reveals another secret: the pool of warmth becomes an electric charge

The search for eternal health and infinite pleasure continued. Chinese alchemists sought an Elixir to render their Emperors immortal and perpetually potent.

This external alchemy lost its appeal when it despatched a few courtiers and kings as well as a number of alchemists.

GV15 Calms the mind, sending waves of relaxation through the nervous sytem, making it receptive to arousal



CV17 CENTRAL ALTAR Also known as the Sea of Tranquility and the point for sharing true love. Connectionn here calms the mind, balances emotions and calms the spirit of the Heart.

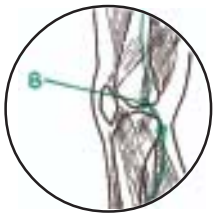
Physicians in the Tang Dynasty (618-906 CE) vivisecting condemned prisoners described flows of energy through invisible channels which excited certain sensations in different parts of the body, ceasing at the moment of death. If this flow could be sustained…

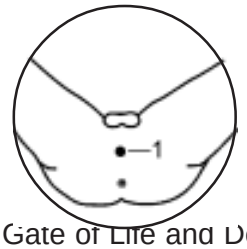
The shiatsu pressure-points for infinite pleasure indefinitely prolonged were passed down through the secret lineages of the Fang-Shi.

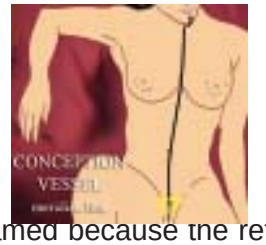
Connecting these two points in the centre of the chest and base of the skull sends waves of bliss throughout the whole being, flooding both the physical and the energy bodies.

Heart Protector 8 connecting Conception Vessel 17 and Governing Vessel 15

LV8 regular massage improves sexual function



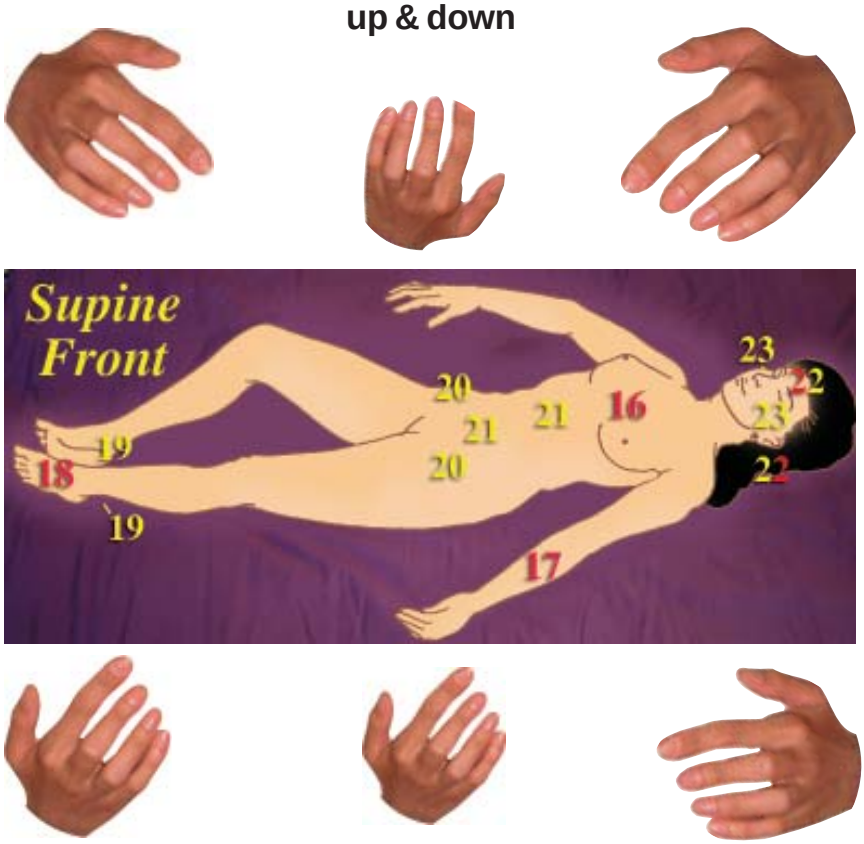




CV 1 Gate of Life and Death, so named because the retention of sexual energy is said to prolong life. CV1 subtle use as arousal point for both sexes, especially good for prolonging male orgasm. Clinical use helps wioth prevention and relief of prostate conditions.

Stretches tend to disperse Qi so not too many for Love-Shiatsu. A stretch here, however, is well-timed to ease the build-up of sexual tension likely to have arisen from the previous close connections. Time for a breather before heading on down. And even for this, a nice straddle keeps up the interest: CV1 sitting on LV8.

THIRD
up & down



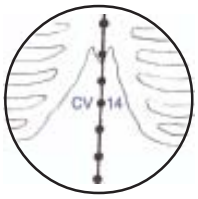
Nowadays we are not Emperors and Empresses – are we?

We go to work, we play, we sleep. Our society has different turbulences to cope with. Rather than having our heads cut off for speaking out of turn we are more likely to experience stress in the work-place leading to heart disease and suchlike, but still ingest toxic substances for moments of immortality.

And we still have sex. Our ideal is to have a nice meal, a bottle of wine, frantic sex hoping we come together, then fall asleep or take a shower.

KD1 BUBBLING SPRING
where you keep your feet on the ground, mostly

CV14 GREAT PALACE
Access the Heart Fire of a Lover.
This is the Gateway to the Heart itself,
the Sovereign.



LV 3 GREAT RUSHING
particularly recommended for female sexual energy

LV 4 MIDDLE BARRIER
recommended for male
sexual energy

BL60 KUNLUN MOUNTAIN
pinching here gives a good idea of the strength of your partners libido: the stiffer the stronger! Also a useful point to press during labour.

KD3 GREAT STREAM
can be used to either stimulate
or balance desire in both sexes

CV2 the most potent feminine
arousal point and also quite effective for men

Kidney 1 connecting to Conception Vessel 14 and HP8 to Liver 4

On reaching the feet, hold KD1 to your CV14 connecting your Lover's Bubbling Spring to your Heart Fire. With one hand you grasp LV3 (on a woman) or LV4 (on a man). With the other fondle BL60 and KD3. And the heel rests on CV2: can this be the Way to heaven?...yes, but just one of many. Hold for long enough to feel it, rhythmically rocking and rubbing.

ST21 On the route of the Nine Flowers loving down to Heaven, very comforting: helps digest all the TLC

ST25 Heavenly Axis awakens sensuality and opens the belly to pleasure

LV14 Cyclic Gate just below the underswell of the breast just waiting to be rubbed.

GB24 warms the ribs and softens feelings of anxiety or indecision.

Of course your Lover thinks you are giving them the massage but check out all your own sexy points you are covering with their feet. Holding Bubbling Spring against your belly, rock in a circular rhythm so that you feel it where it matters and they feel it all over. This foot-belly massage can be one of the most sensuous experiences you can share.

Belly Massage with Kidney 1

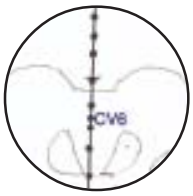
Meanwhile they feel the warmth of your belly, the movement of your muscles under their feet while your slow rocking rhythm vibrates up the legs to the hips, ready for your next move.

SP12 Gently stroking or simply holding this point with a still palm spreads warmth and pleasure across the genital area

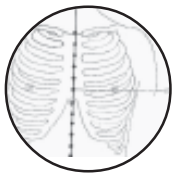
LV12 Increases energy circulation and genital sensitivity.

KD11 helps with male arousal difficulties

Hand-stepping up the body of your Beloved, a trio of loving points lurk in both hips waiting for you to find them and wake them.



CV6 Sea of Qi Male sexual energy-centre and also to connect with the essence of the feminine, related to the feminine reproductive cycle. Clinical use of this point helps with menstrual difficulties.

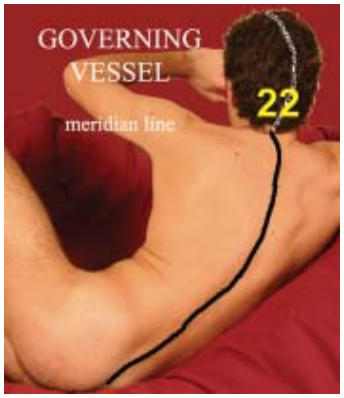


CV17 CENTRAL ALTAR Also known as the Sea of Tranquility and the point for sharing true love. Connectionn here calms the mind, balances emotions and calms the spirit of the Heart.

As well as offering a loving touch and lovely points of connection, placing your hands in such a position lets you move easily from one part of the body to another.

Think about where you want to go next, place your hands to keep a connection, and move yourself smoothly to the new position. But remember: hold still until you feel the pool of warmth.

YIN TANG
Very special point that opens the Third Eye as a portal to the world of Spirit. When Lovers gaze into each other's eyes, they can see into each other's soul through this gateway.



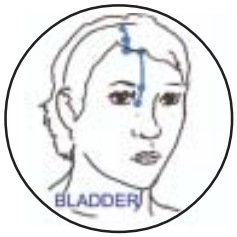
GV17 JADE PILLOW, where the impulse of passion flows into the brain, loving and rejuvenating and coursing through the cranial ocean to open the mid-eye.

Connecting these two points creates a vortex of energy whirling through the brain. This is a magical connection: the point in the Giver's palm, HP8, is an extension of the Heart chakra and can be used to convey the wave of love which then flows through the energy channels and floods the whole being.

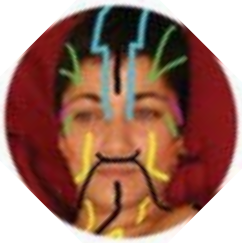
From the comfort of this position you can give the spiralling massage of Love-Shiatsu to many easily reachable parts

STOMACH

GALLBLADDER



BLADDER



TRIPLE HEATER

LARGE INTESTINE

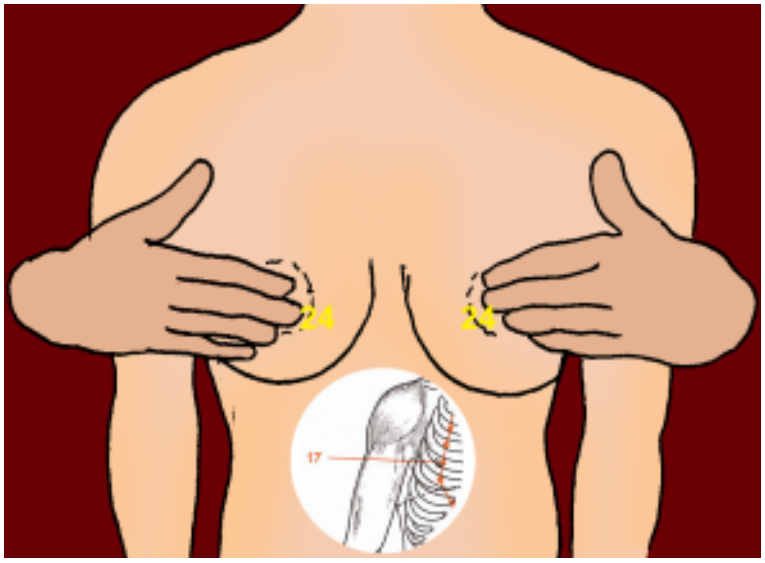
SMALL INTESTINE

Don’t be too surprised if by now you find your Lover wanting to respond

Time spent on the Face is seldom wasted. Here bloom the flowers of the Elemental organs:Heart in the tongue which you might leave for later, Spleen in the lips, Lung in the nose, Kidney in the ears and Liver in the eyes.

The Meridians of Stomach, Gallbladder and Bladder begin on the face and Small Intestine, Large Intestine and Triple-Heater end here.

And don’t you just love your face being stroked?



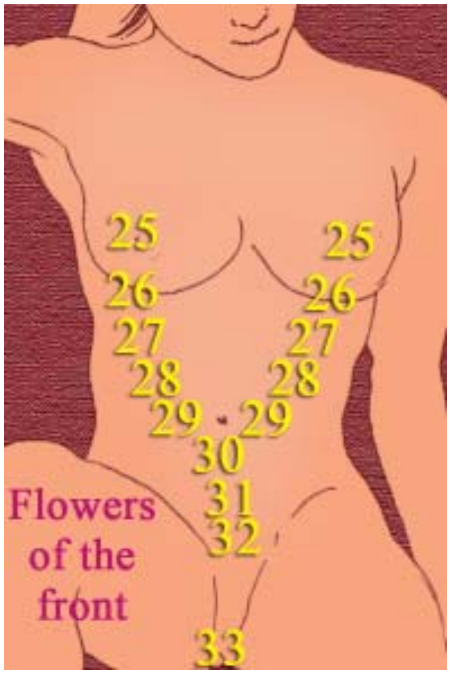
ST17 Breast Palace - strong feminine arousal point, stimulating nipple/vulva connection while nurturing, soothing and harmonising heart and mind.

FOURTH
up the other side

You've done the Back, one Side and the Front of your Lover....just go back and do the other Side, and make it a tease...

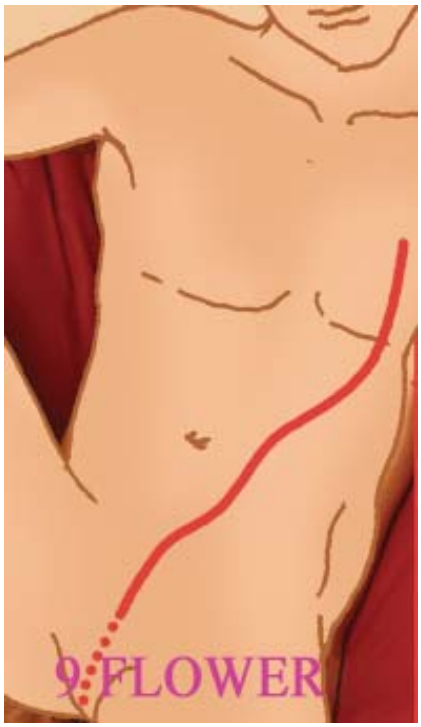
returning, eventually, to ...

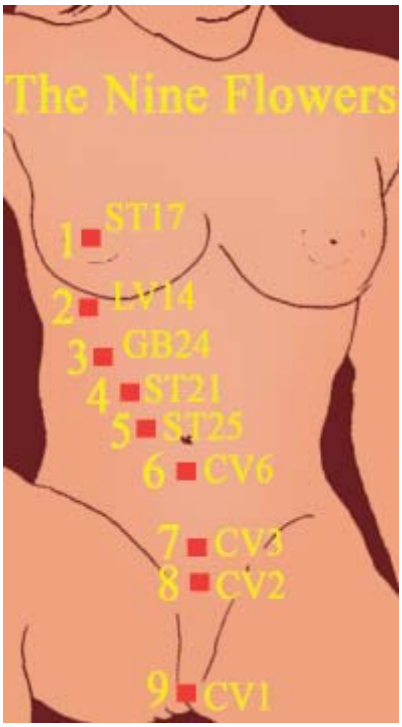
FIFTH
DOWN TO HEAVEN



NOW SLOW DOWN

DOWN
DOWN
down


9 FLOWER


The Nine Flowers
1 ST17
2 LV14
3 GB24
4 ST21
5 ST25
6 CV6
7 CV3
8 CV2
9 CV1

ST17 Breast Palace - strong feminine arousal point, stimulating nipple/ vulva connection while nurturing, soothing and harmonising heart and mind.

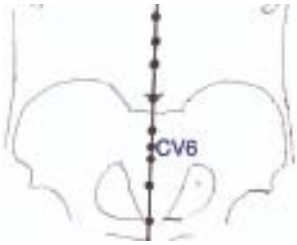
LV14 Cyclic Gate just below the underswell of the breast just waiting to be rubbed

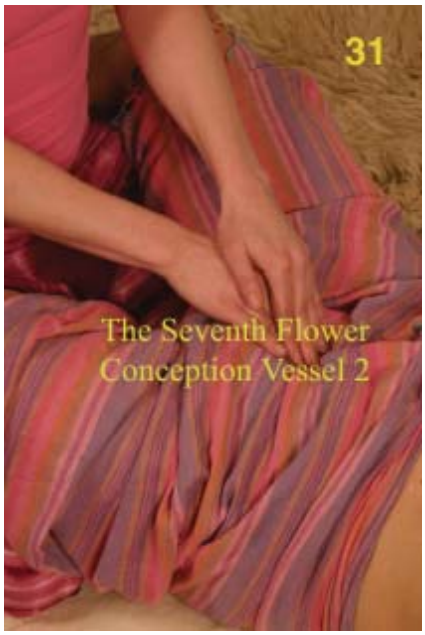
GB24 warms the ribs and softens feelings of anxiety or indecision.

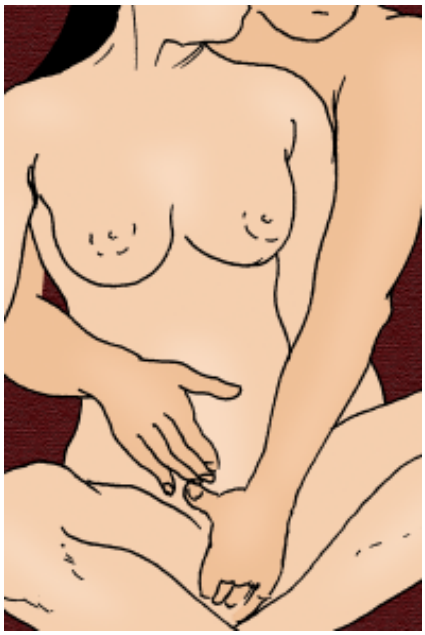
ST21 wandering down to Heaven, digesting all the love

ST25 Heavenly Axis awakening sensuality and opening the belly to pleasure

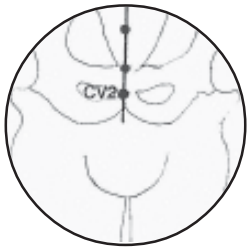
CV6 Sea of Qi Male sexual energy-centre. The most potent male arousal point also connects with the essence of the feminine



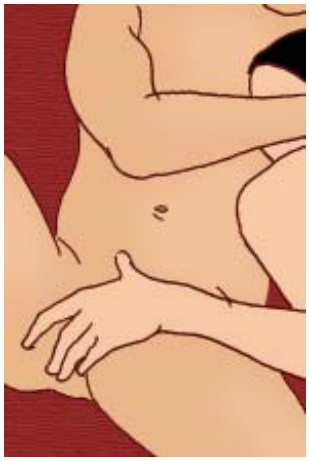


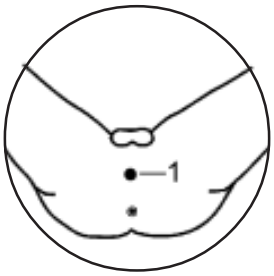


CV2 the most potent feminine arousal point and also quite effective for men



Eighth and Ninth Flowers

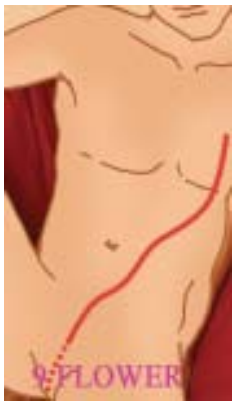




CV 1 Gate of Life and Death, so named because the retention of sexual energy is said to prolong life, and subtle use as arousal point for both sexes, especially good for prolonging male orgasm.

After exchanging Love-Shiatsu, open to your creativity. Try tongue instead of hand, for instance...

Let the power of points, meridians and elements inspire you!



Master School

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Tao Garden Wellness Retreat is Mantak Chia's home, school and training center. The Resort is a perfect place to relax and get away from the pressures of every day life for groups or meetings. Please look into our Web Site: ***www.tao-garden.com***

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Mantak Chia

Mantak Chia is one of the world's leading teachers of Taoist practices. He has taught thousands of students and hundreds of teachers across the world and has written over twenty books, including Sexual Reflexology.

Kris Deva North is principal and co-founder of the Zen School of Shiatsu. He integrates Taoist healing traditions with modern Life-training techniques.

Kris Deva North

Are you aroused more quickly, your partner more slowly? Knowing the psycho-sensual secrets of shiatsu helps you become a better lover, however good you are already is reveqled in this booklet.

Taoist traditions combined the study of sex with medicine: certain pressure-points and meridians were found to stimulate and sustain sexual desire, for longer and more pleasurable sexual encounters.

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Techniques

“ Floor stretching with a TWIST ”

By
Ryan Hoyme
CMT, NCTMB, HST

“ Conform the treatment to the client…Not the client to the treatment ”

**“ ANCIENT MASSAGE…TRADITIONAL THAI MASSAGE…THAI YOGA MASSAGE…
THAI MASSAGE…THAI MASSAGE/AMERICAN STYLE ”**

Different terminology is used in Western languages for ‘Thai Massage’. As ‘Thai Massage’ originally was an Indian yoga massage, it is often nowadays called ‘Thai Yoga Massage’ to highlight this background. To distinguish ‘Thai Massage’ from sex ‘massages’, the term ‘Traditional Thai Massage’ or ‘Ancient Massage’ is widespread. You may also come across ‘Nuad’, ‘Nuat’ or ‘Nuad Phaen Boran’ (differently spelled), the Thai language expressions for ‘Thai Massage’. The tradition was brought to Thailand by Ayurvedic doctors. To honor this line of tradition, we prefer to call it ‘Thai Yoga Massage – Ayurvedic Bodywork’.

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Legal Disclaimer

All models are at least 18 years of age. The techniques, ideas, and suggestions in this document are not intended as a substitute for proper medical advice! Consult your physician or health care professional before performing or receiving a massage, particularly if you are pregnant or nursing, or if you are elderly, or if you have any chronic or recurring conditions. Any application of the techniques, ideas, and suggestions in this document is at the reader's sole discretion and risk.
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RULES AND RECOMMENDATIONS

Always have them fill out a health form (Go over it with them and find out if this style is contraindicated)

Balance (You have to be able to balance your body weight)

Compression (Compressing areas of the body with your hands, fingers, elbows, knees, feet, ect…)

Depth (The depth of pressure is different for everyone)

Even small framed people can perform these techniques

For only some people (Dumb it down for the average American)

Good body mechanics is the key

Holds (compressions and stretches) can last 10-30 seconds

Initiate Good, Slow, Speed (Very slow movements)

Just try it, it won't hurt much

Know the signs of sprains/strains and bone problems

Language: it's like learning a new language to totally understand the true belief of ancient Thai Massage

More than just massage…it's a form of art

Not a substitute for medical care

Organize all of your supplies before you start

Practice, practice and more practice

Quit your whining and get started

Routines (Your own) will help you remember

Start them supine (Start at the feet and work your way up the body), side-lying, prone, and finish with sitting

Time: 50% on the lower body and 50% on the upper body, within a 60- to 90-minute session, vs. the typical two-hour or longer sessions in Thailand

Unilaterally treat each side the same (What you do on one side, make sure you perform the same on the other side)

Vitalize your creativity

Walk on their back with the aid of a chair or something to hold onto

X…

Y…

Z…

THAI MASSAGE BASICS

(A must know for Sports Massage Therapists)

It is really difficult if you haven't had extensive training in Thai massage. This book is great for incorporating stretching techniques on the floor and calling it Thai Massage / American Style gives you a little leeway, so you don't have to concentrate on the medicine aspect of this style. Always 'Water Down' the techniques for the average non-flexible person and always use your balance.

Closely linked

- Thai massage has been called “Yoga for lazy people” or “Thai Yoga Massage.”
- Breema is very closely linked with Thai massage (Except that there are few pauses and no force with the techniques).
- Shiatsu is similar to Thai massage, except that it does not involve as much stretching.
- Numerous techniques can be readily adapted to a Shiatsu session or table massage.
- Sports massage Therapists are usually well trained at Thai massage.

The six key points of Thai Massage

1. **Yoga –** An ancient Indian science of holistic health dating back thousands of years. Yoga means “union,” yoga is a science which brings us in union with the divine. Yogasanas are postures that stretch the muscles, relax the body, calm the mind, and relieve tension. We practice yogasanas, pranayama (breathing techniques), and meditation to prepare ourselves for giving Thai Massage; many yoga stretches are used in Nuad Bo-Rarn. As the recipient receives the benefits of yoga passively, Thai massage has been described as “Yoga that works as massage” or “Yoga for lazy people.”
2. **Exercise –** The giver of Thai massage is always moving in a consistent rhythm and simultaneously benefits from the techniques being applied. Nuad Bo-Rarn is a form of exercise toning both the giver and the receiver.
3. **Meditation –** Thai massage is given in a meditative state and from the principle of compassion. The rhythmic manipulations of Thai massage provide a haven for a natural response towards deep meditation.
4. **Reflexology –** Thai massage acts not only as a kind of “passive yoga” but also as a form of reflexology; focusing on the feet, hands, ears and face.
5. **Acupressure –** In Nuad Bo-Rarn we work on the energy lines (called Sen Lines) of the body to relieve tension and blockage so that the energy can flow freely. These lines are similar to the meridians followed in the Chinese system of acupuncture but more closely resemble the “nadis” of the Ayurvedic system from India. The acupressure points are worked using the thumbs, elbows, fists, and heels.
6. **Healing Art –** The combination of yoga, reflexology, and acupressure make Thai massage a very unique healing art which integrates mind, body, and spirit; thereby improving overall health and well-being.

Techniques

The techniques of Thai massage are applied very, very slowly. Thai Therapists are encouraged to realize that it is impossible to be working too slowly as long as there is some movement. Thai Massage is a combination of gentle rocking, range of motion, acupressure, reflexology, energy work, pressure applied to energy lines and points and compression and decompression of joints and stretching (Passive yoga). Techniques are always applied in a rhythmic manner, with rolling or circular application rather than direct focused point pressure as in other systems.

In Thai massage, it is not just the hands that are used; but also the Therapist’s feet, forearms, knees, and elbows are used as well. The Therapist will use his or her body weight to achieve a greater stretch. No oil is ever used. Begin with the feet, and then you work up the legs, to the stomach, back and arms. Finally, you end at the head and neck, having gradually relaxed everything.

Positions

- Side lying
- Prone
- Supine (Most of the Tx is spent Supine)
- Sitting

Pressure points

The various pressure points on the body are as essential to Thai Massage as the energy lines. These points are akin to the pressure points in Chinese acupressure, the basis of the concept being similar, but the working of the pressure points in Thai Massage is much less specific and all on the exterior. The Therapist presses these points to achieve a state of relaxation in the patient. This is done because the points within the body build up levels of stressed energy that must be relieved. The Therapist is taught to work the area of each pressure point, after pressing, by applying a broader pressure using the thumb, the finger, or the palm and moving in a circular motion.

Contraindications for Thai massage:

- Thai massage is unsuitable for anyone with a serious heart condition or high blood pressure that is not under "control".
- Thai massage is unsuitable for those with osteoporosis or very brittle bones.
- Thai massage is unsuitable for those who have had spinal fusions or an artificial joint such as a hip or knee replacement.
- Thai massage is unsuitable for those with lymphatic cancer.
- Thai massage is unsuitable for those with hemophilia or phlebitis.

Treatment

The massage is preformed on a floor mat with the receiver wearing loose, comfortable clothing. The work is very rhythmical and meditative. The massage is usually given in silence. Mimic each stretch identical on the other side of the body. The treatment can last from two to three hours.

The whole idea of Thai Massage is the working of the entire body. The Therapist too is trained to think in terms of the “whole body” concept, and not just yours. The pressure we have been referring to, an essential part of the Thai Massage Method is the natural and balanced pressure applied to a patient by the Therapists whole body and body weight. Rather than applying pressure that originates from the Therapists finger, thumb or palm, the Therapist always works with straight arms and a straight back so that the strength and balance of applied pressure comes directly from the weight of his body. This makes the art of Thai Massage a more controlled engagement of the Therapist’s senses and physical applications, and it is a feature that makes Thai massage so unique.

Thumbs

Much of the work in Thai massage is done with the thumb (Southern style). This is particularly true for applications intended to affect the energy lines and pressure points of the body. The Therapist will always work with the ball of the thumb, not the tip. This is related to pressure application using a balanced weight. The ball of the thumb can be used in a much more therapeutic way because it covers a larger area and because the pressure applied comes from the whole arm, not a levered pressure that would come from the tip of the thumb.

In work that requires the fingers, the Therapist uses a circular motion rather than a direct pressure from the finger tip. The principle here is related to that in using the ball of the thumb rather than the tip, but the fingers bring in another dimension to Thai Massage. Above it was said that the bones are never worked on directly. They are not, but they are worked indirectly. One way is by the working of the area around the bones; another is the use of the fingers moved in a circular motion over the bone. In all facets of Thai Massage where the fingers are used, a very light soothing pressure is applied by moving the fingers in a circular motion.

Contraindications

The average American needs the watered down version of Thai massage (We are generally less flexible). Not everyone is flexible, so the Therapist has to design the treatment for the client. Adjust the stretch to the client, not the client to the stretch.

Energy lines

The working of the energy lines is the most fundamental aspect of the Thai Massage, but both before and after the working of these lines the Therapist is trained to apply palm pressure to the legs, the arms, and the back for the purpose of body relaxation. The palm pressure applied is not a hard press, nor is it the rough sort of working you might receive in other types of massage. In Thai Massage the palm pressure is intended to both loosen up and relax. Traditional Thai massage is based on an energetic paradigm of the human body/mind. Energy is thought to travel on pathways throughout the body called Sen, with specific points of energy on these pathways called nadis. Thai massage moves energy freely along these pathways, thereby facilitating balance and health.

SUPINE #1

A. B.

A. Overlap feet and compress
B. Compress both feet (Plantar flexion)

A. B.

A. Hold foot and extend toes
***Hold foot and flex toes**
B. Place your fingers between their toes and stretch

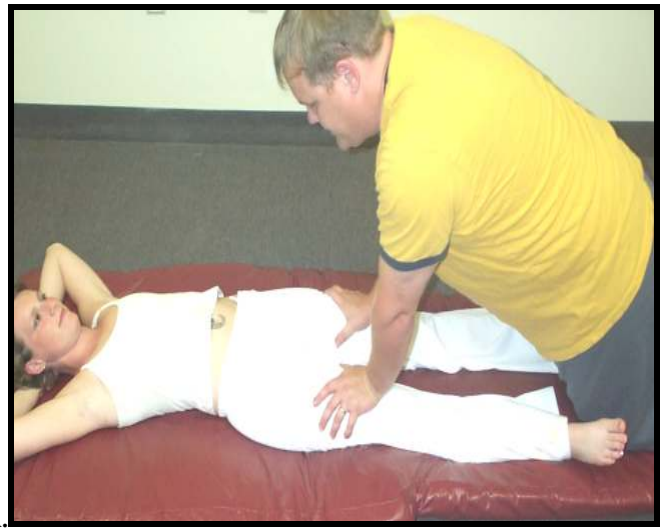
A. B.

A. Twist foot in opposite directions
B. Compress shin region, cup heel and use your body weight to dorsiflex the ankle

SUPINE #2

A. B.

A. Compress quad region, cup heel and use your body weight to dorsiflex the ankle
B. Compress the shin region (No pressure on the tibia)

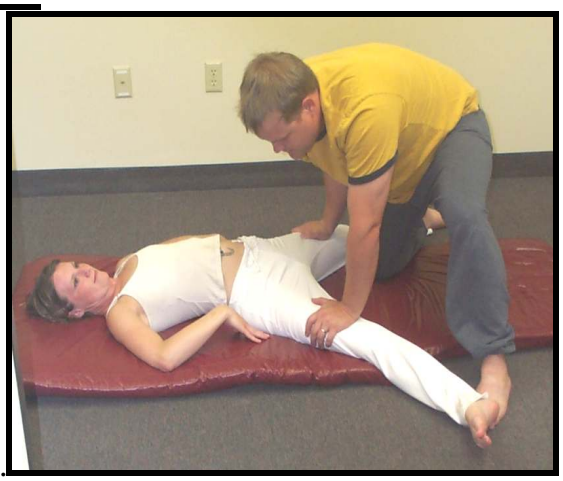
A.  B.

A. Compress the quads
B. Compress the hip region and cup it (No pressure on the hip bone)

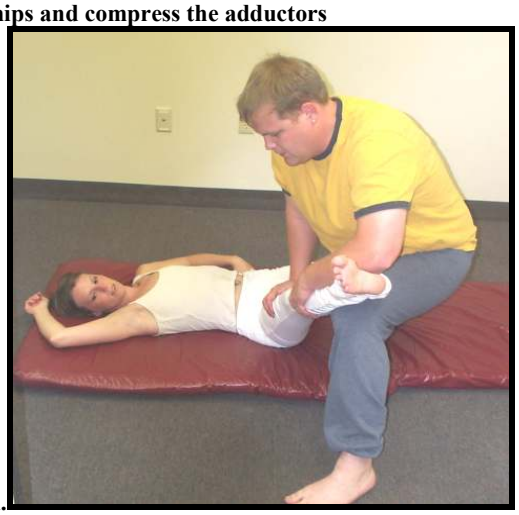
A. B.

A. Knees on quads, compress the hip region and cup it (No pressure on the hip bone)
B. Knees on quads and compress the shoulder region

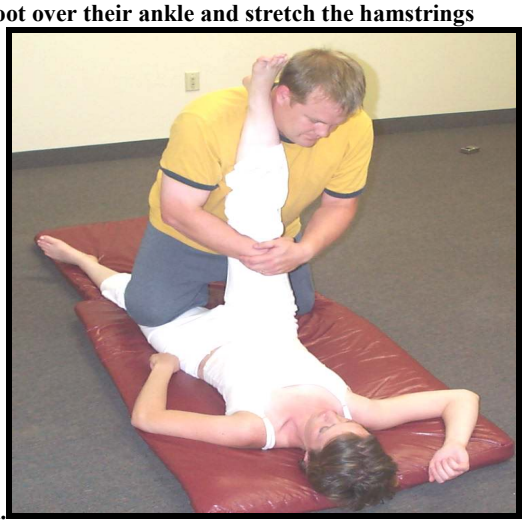
SUPINE #3

A. B. 

A. Externally rotate both hips and compress the adductors
***Only abduct the legs and compress the quads**
B. Use your feet to adduct the legs and compress the quads
***Externally rotate the hips and compress the adductors**

A.  B.

A. Compress the quad and use your knee to compress their calf region
B. Overlap your foot over their ankle and stretch the hamstrings

A.  B.

A. Compress their quads with your knee and compress their quads while you stretch their hams
B. Hold onto their ankle and traction

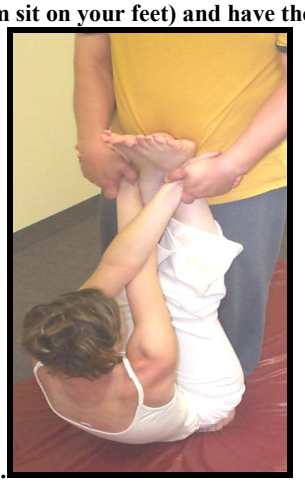
SUPINE #4

A. B.

A. Hold onto their ankle and traction while you are rotating the leg in different positions
B. Make sure legs are straight and dorsi flex the calves

A. B.

A. Overlap both legs and traction
B. Have the client cross both legs (Have them sit on your feet) and have them cross their arms and you pull towards you

A.  B.

A. Have the client straighten both legs (Have them sit on your feet) and have them cross their arms and you pull towards you
B. Have the client straighten both legs (Have them sit on your feet) and you pull one arm towards you

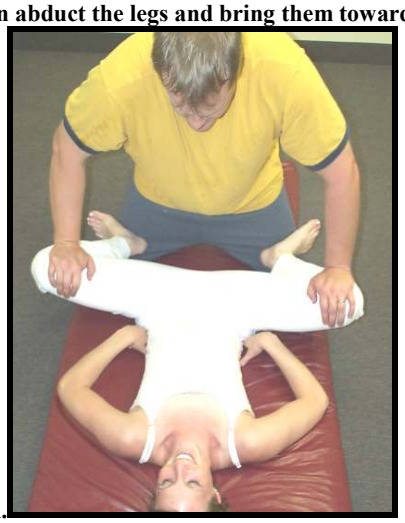
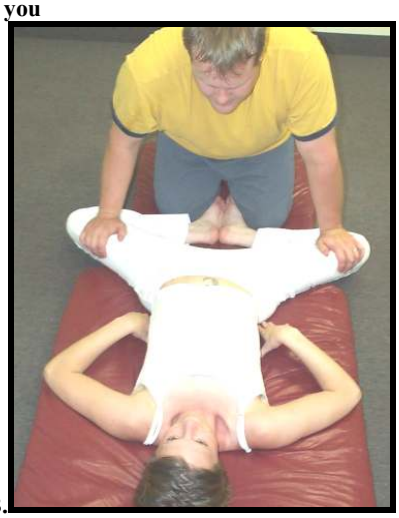
SUPINE #5

A. B.

A. Place their ankle below their knee, then cup heel and perform dorsiflexion with your forearm (Bring their flexed knee backwards
B. Abduct their legs, cup heels and perform dorsiflexion with your forearms

A. B.

A. Abduct legs (Knees slightly bent) and compress medial side of their knees
B. Your knees in their glutes then abduct the legs and bring them towards you

A.  B. 

A. Abduct their legs and place their feet on your quads (Knees slightly flexed) and compress medial side of their knees
B. Externally rotate hips (Knees slightly bent) and compress adductors

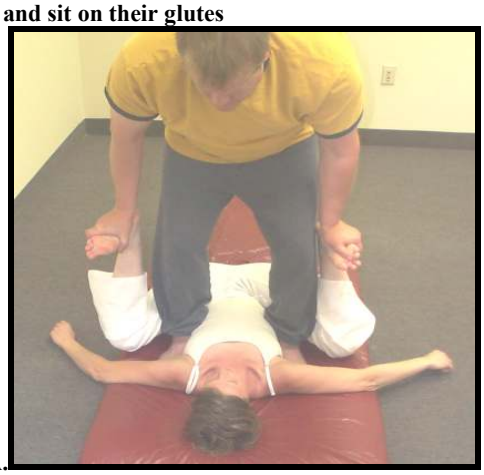
SUPINE #6

A. B.

A. Externally rotate hips (Knees slightly bent) and dorsiflexion ankles with your forearms
B. Externally rotate hips (Knees slightly bent) and compress their shoulder region

A. B.

A. Externally rotate hips (Knees slightly bent) and pull ankles down while compress your knees on their hams
B. Externally rotate hips and sit on their glutes

A.  B.

A. Externally rotate hips and compress their feet towards the floor
B. Externally rotate hips and compress their hams/glutes with your knees

SUPINE #7

Step #1 – Flex their knees and rest their feet on your knees
Step #2 – Lean your body weight back and lift their knees

A. **B.**

A. Pull their legs at a 45 degree ankle
B. Their glutes and low back are resting on your quads while you stretch the hams (Knees slightly flexed)

A. **B.**

A. Their glutes and low back are resting on your quads while you stretch the hams
B. Their glutes and low back are resting on your quads while you dorsiflexion their ankles (Knees bent)

SUPINE #8

A. B.

A. Use your toes to compress their upper ham and pull their ankle towards you
B. Have their hip externally rotated (That foot under their hams) and compress their shoulder and adductors

A. B.

A. Compress their hams (Knee slightly bent) with your foot and traction both legs
B. Place your feet under their glutes (Try to lift with your toes) and traction both legs

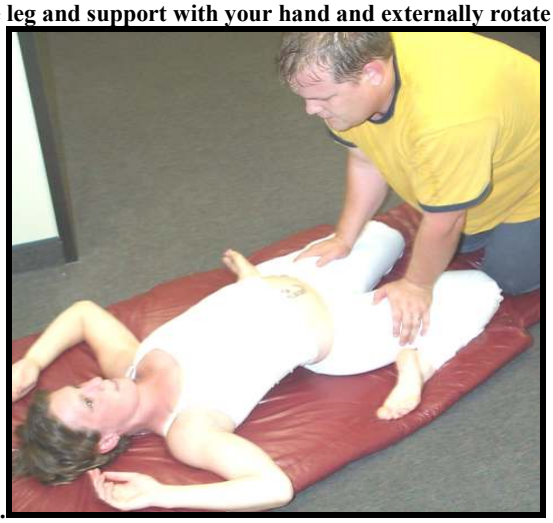
A. B.

A. Compress their quads with your knee and flex their other knee with pressure on their shin (Not on tibia)
B. Flex one of their knees and rotate out, then compress rotated knee with your hand on their quad, and finally abduct the other leg with your foot

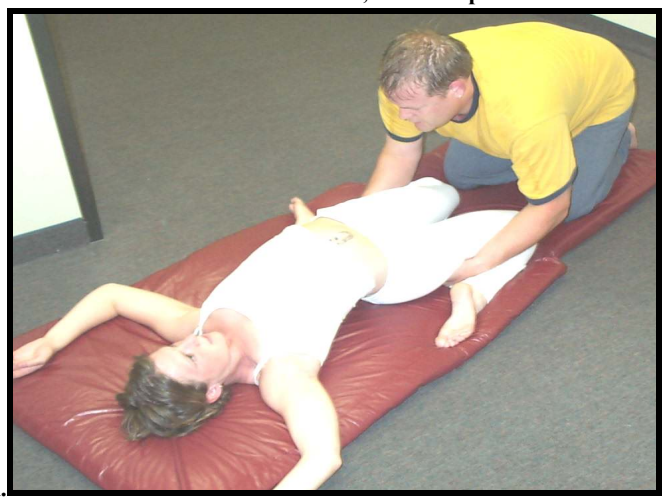
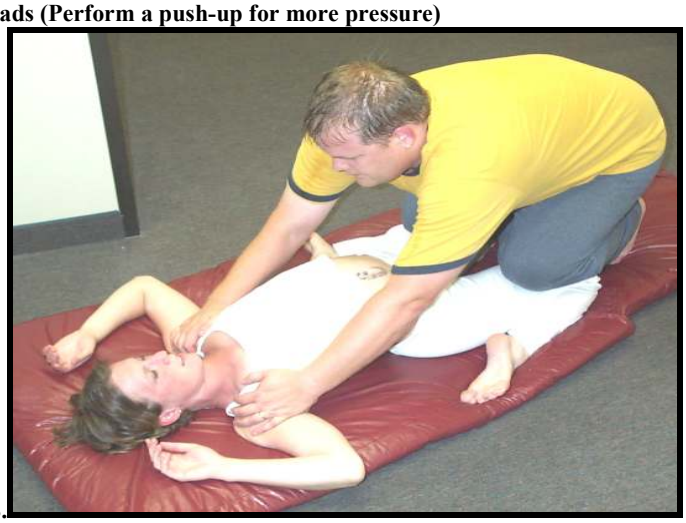
SUPINE #9

A. B.

A. Flex one of their knees and rotate out, then compress rotated knee with your hand on their quad, and finally abduct the other leg with your foot and place your other hand on their shoulder region
B. Abduct one leg and support with your hand and externally rotate their other leg, and finally compress their calf on your quads

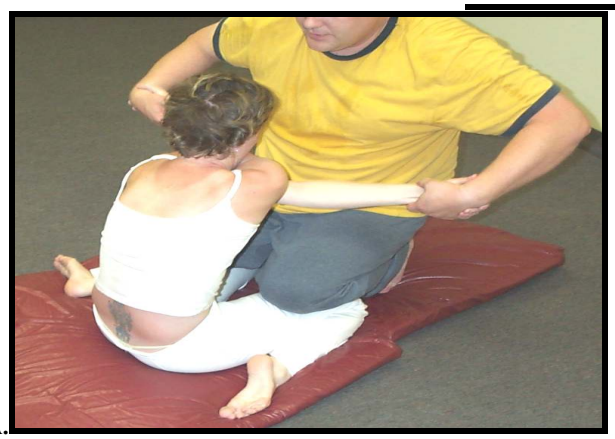
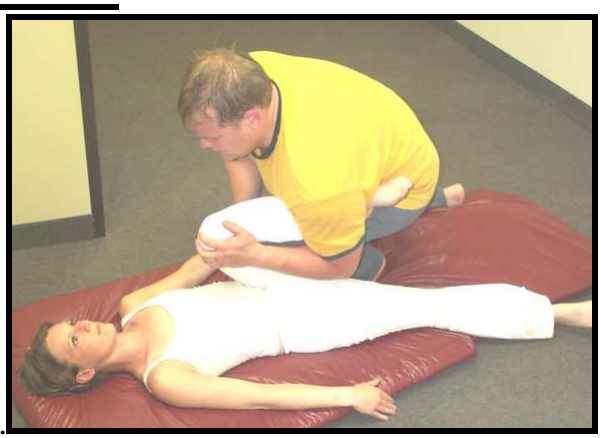
A.  B.

A. Flex both of their knees and rotate out, then compress both of their quads
B. Flex both of their knees and rotate out, then compress both of their quads (Perform a push-up for more pressure)

A.  B. 

A. Flex both of their knees and rotate out, then compress both of their hams and calves
B. Flex both of their knees and rotate out, then compress both of their quads with your knees and compress their shoulder region with your hands

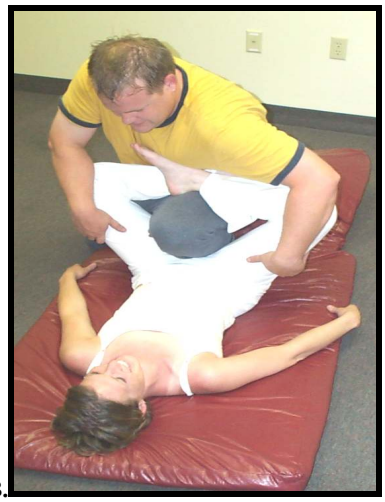
SUPINE #10

A.  B. 

A. Flex both of their knees and rotate out, then compress both of their quads with your knees and cross their arms while you pull them towards you
B. Flex their knee and compress their abductors and medial side of their knee at the same time

A. B.

A. Place your knee under their back of their knee and place your hands on their quads and pull towards you
B. Place your foot in between their legs and externally rotate one leg (Knee slightly bent) and use your one forearm to compress both of your calves together

A. B. 

A. Compress their calf on your quads while you compress their hip region (Not on the hip bone)
B. Externally rotate both hips and compress one of their adductors

SUPINE #11

A. B.

A. Externally rotate both hips and compress one of their adductors; your hands are compressing their shoulder region
B. Place your feet under their low back and compress their shoulder region

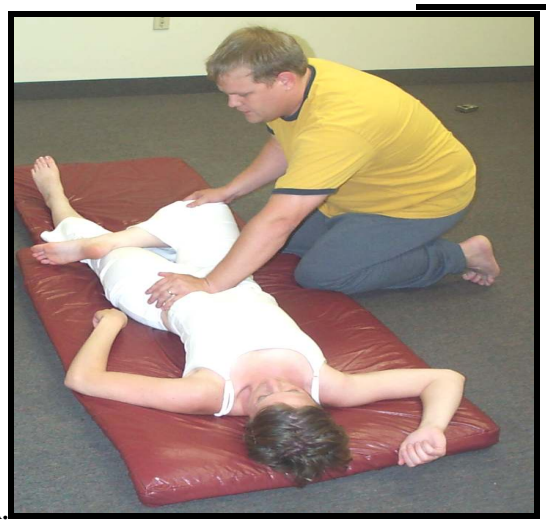
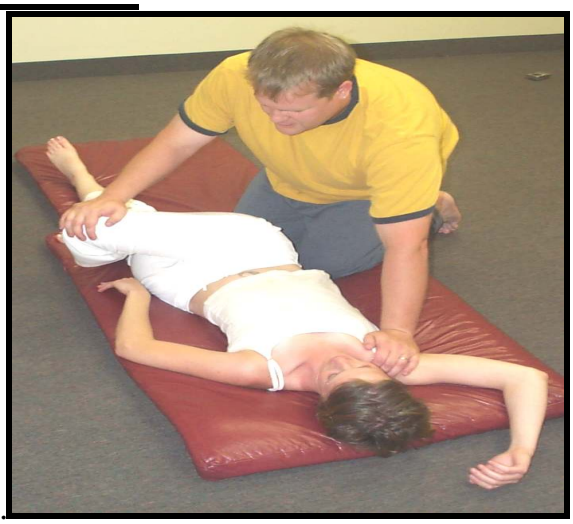
A. B.

A. Flex their knee while you are compressing their hams with your knee and compress their shoulder region with your other knee
B. Rotate one leg other the other leg (Knee slightly bent) and compress their glutes with your knee and compress their shoulder with your hand

A. B.

A. Rotate one leg over their other leg and pull towards you (Your knees are their for support)
B. Rotate one leg over their other leg and push towards them

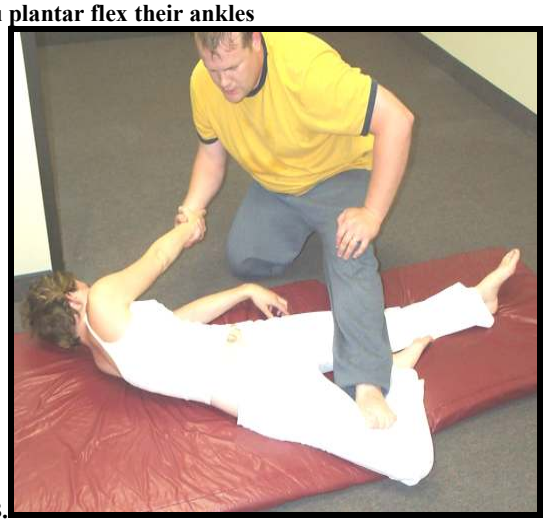
SUPINE #12

A.  B. 

A. Place one other their legs over their quads and compress their medial knee and opposite hip (No pressure on hip bone)
B. Place one leg over their other leg and compress on their shoulder and lateral side of their knee

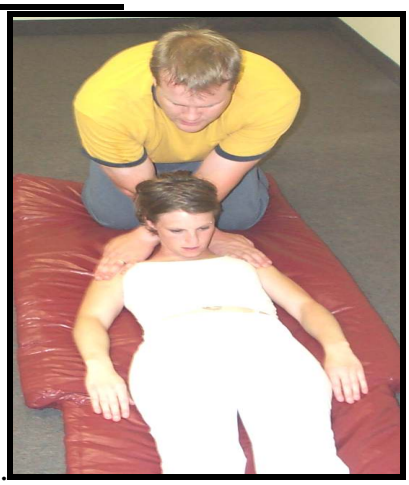
A. B.

A. Overlap your ankle other their ankle and their other foot compresses your shoulder region while you lean into them, and finally compress both shoulders
B. Overlap both of their ankles and compress both of the hams while you plantar flex their ankles

A. B. 

A. Lift under their back and rest your elbows/forearms on your quads
B. Externally rotate their hip (Knee slightly bent) and compress their adductors and traction their opposite arm towards you

SUPINE #13

A. B. 

A. Cross one of your arms and place your hand on their shoulder and use your other hand the compress towards the floor
B. Cross both of your arms and compress their shoulders while you use your forearms to flex the neck

A. B.

A. Place one hand on their forehead and the other one over their jaw, then traction
B. Place your shin under their neck and your calf compresses their head back

A. B.

A. Push their shoulder towards their feet and bilaterally flex their neck with your feet
***Cross your legs and perform the same technique**
B. Wrap your pinkies between their pinky/ring finger and thumb/index, then wrap all three fingers of yours under their hand, and finally spread with your thumbs

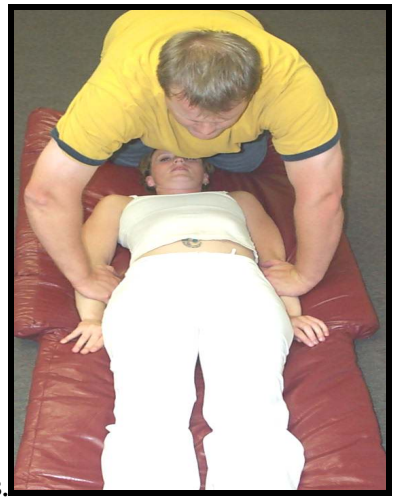
SUPINE #14

A. B.

A. Wrap your pinkies between their middle/index fingers and middle/ring fingers, then place two fingers between their thumb/index fingers and one finger between their pinky/ring fingers, then wrap the rest of your fingers under their hand and spread with your thumbs
B. Place their palms on your knees and pull their forearm towards you

A. B.

A. Place their palm on your knee and pull their forearm towards you
B. Interlock your hands with their hands and pull towards you

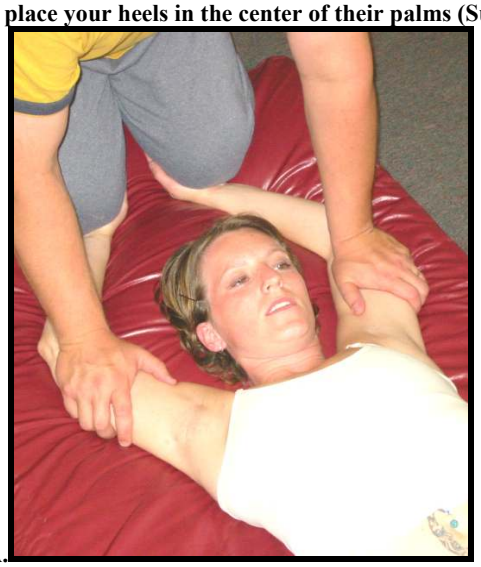
A. B. 

A. Internally rotate both arms and compress tricep region
***Externally rotate both arms and compress bicep region**
B. Internally rotate both arms and compress extensor region
***Externally rotate both arms and compress flexor region**

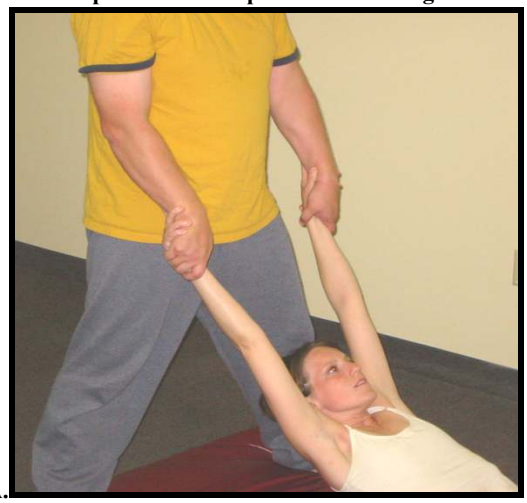
SUPINE #15

A. B.

A. Place both of their arms behind their back and compress their shoulders
B. Palms facing up and place your heels in the center of their palms (Support your body weight)

A.  B.

A. Place your knees in their palms and compress bicep/tricep region
B. Place your knees in their palms and compress shoulder region

A.  B.

A. Interlock each others wrists and traction
B. Have them cross their hands and interlock each others wrists and traction

SUPINE #16

A. B.

A. Flex their elbow and rotate their wrists (Palm on the mat) and compress their tricep region
B. Place your toes under their upper back (Try to lift your toes up) and interlock each others wrists and traction

A. B.

A. Compress their abdomen area (Not a lot of pressure) and traction their leg and arm (Same side)
B. Compress their abdomen area (Not a lot of pressure) and traction their leg and arm (Opposite side)

A. B.

A. Traction their leg and arm, then compress their hip region (Not on the hip bone, just below)
B. Traction their leg and arm, then place one of your legs under their low back (Try to lift their lower back)

SUPINE #17

A. B.

A. Flex their torso and compress their glute region (Not for everyone)
B. Flex their torso region and compress their calf region with your knees while performing traction on their arms (Not for everyone)

A. B.

A. Flex their torso region and compress their calf region with your knees while performing compression on their glute region with your elbows (Not for everyone)
B. Flex their torso and hold down their ankle region (Not for everyone)

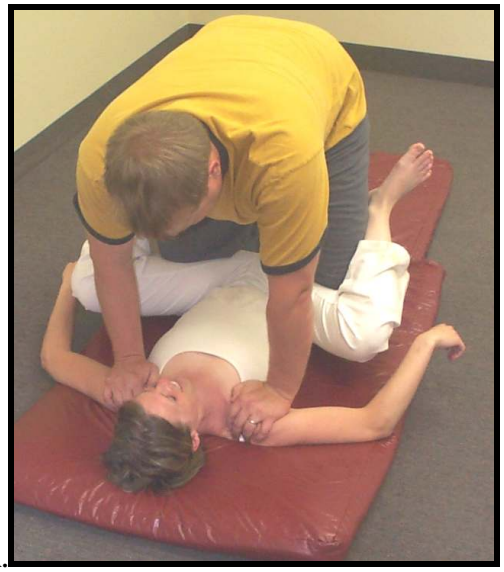
A. B.

A. Externally rotate their hips (Knees slightly bent) and cup their heels while you are performing dorsiflexion with the ankles (With your forearms)
B. Bring their leg over and compress their hip and shoulder region

SUPINE #18

A. B.

A. Bring their leg over (Support it with your shin) and traction their opposite arm towards you
B. Compress their hams your knee (Their knee slightly bent) and externally rotate/abduct the other leg

A.  B.

A. Your knees on their adductors/hams and compress their shoulder region
B. Your knees on their adductors/hams and compress their adductors with your hands

A. B.

A. Your knees on their hams and dorsiflexion their ankles
B. Their hams on your quads and compress their quads

SIDE LYING #1

A. B.

A. Bring their leg over their other leg and traction their opposite arm and compress their hams with your knee
B. Bring their leg over their other leg, then compress their glutes (With your knee) and compress your hands on their other glute and shoulder

A. B.

A. Abduct their leg (Support it with your stomach region) and traction opposite arm
B. Abduct their leg and cup heel, and then perform dorsiflexion with your forearm

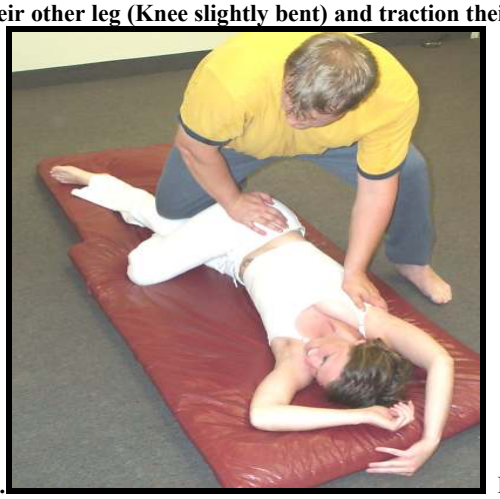
A. B.

A. Abduct their leg (Support it with your stomach region) and compress their shin region (Not the tibia)
B. Abduct their leg (Knee slightly bent) and compress glute region with your knee and wrap your arm under ther leg and pull their back to the floor

SIDE LYING #2

A. B.

A. Traction their arm and leg, then compress your foot just below the hip bone
B. Bring their leg over their other leg (Knee slightly bent) and traction their opposite arm while compressing their hams with your knee

A.  B.

A. Bring their leg over their other leg (Knee slightly bent), then compress your knee in their adductors, and compress shoulder region to the floor
B. Bring their leg over their other leg (Knee slightly bent), then compress your knee in their adductors and the other knee in their hip region, and compress shoulder region to the floor

A. B.

A. Lift bottom leg straight up and compress shoulder region to the floor
B. Lift bottom leg straight up and traction bottom arm towards you

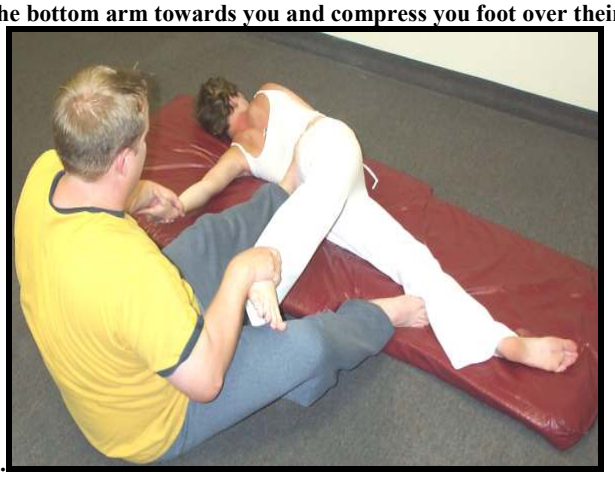
SIDE LYING #3

A. B.

A. Lift bottom leg straight up and compress hip region
B. Traction both arms towards you and compress you foot over their spin (Not on it)

A. B.

A. Traction both arms towards you and compress you foot over their spin (Not on it) and use your other foot to compress their hams
B. Traction the bottom arm towards you and compress you foot over their spin (Not on it) and use your other foot to compress their hams

A.  B.

A. Traction the bottom arm towards you and compress you foot over their spin (Not on it), while you are performing traction to the top leg (Towards you)
B. Traction the top arm towards you and compress you foot over their spin (Not on it), while you are performing traction to the top leg (Towards you)

SIDE LYING #4

A. B.

A. Traction the top arm towards you and compress you foot in their glute region, while you are performing traction to the top leg (Towards you)
B. Traction the bottom arm towards you and compress you foot in their glute region, while you are performing traction to the bottom leg (Towards you)

Traction the bottom arm towards you and compress you foot in their glute region, while you are performing traction to the top leg (Towards you)

PRONE #1

A. B.

A. Compress their arch region with your knuckles
***Use your heels to compress their arch region (Picture didn't turn out)**
B. Use your knees to compress their arch region while compressing their calf regions with your hands

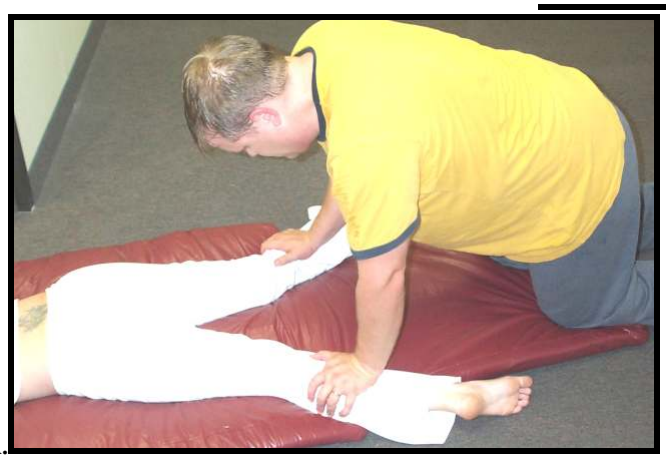
A. B.

A. Use your knees to compress their arch region while compressing their hams with your hands
B. Use your knees to compress their calf regions while compressing their hams with your hands

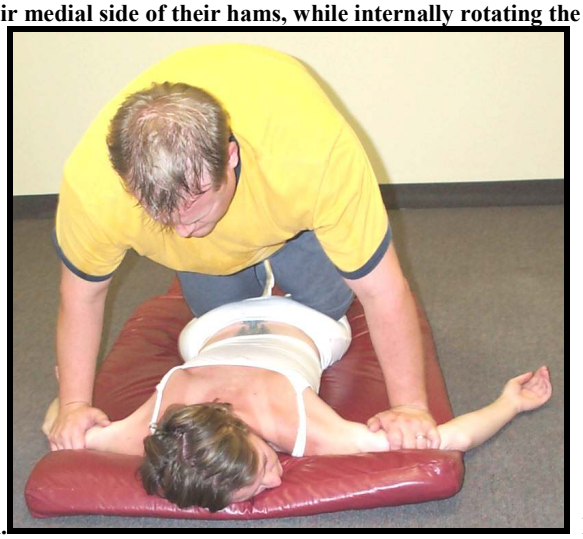
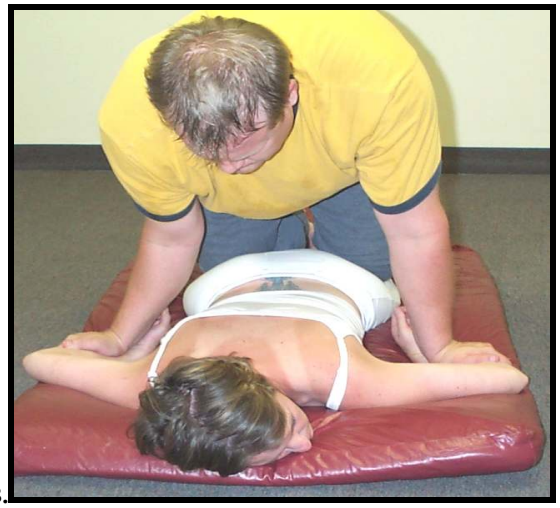
A. B.

A. Use your knees to compress their hams while compressing their glutes with your hands
B. Use your knees to compress their glutes while compressing their shoulder region with your hands

PRONE #2

A.  B.

A. Compress their medial side of their calves, while internally rotating the legs
B. Compress their medial side of their hams, while internally rotating the legs

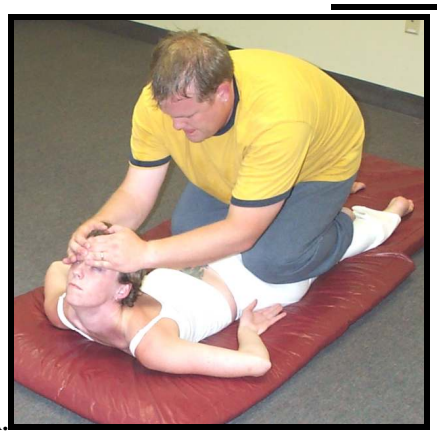
A.  B. 

A. Use your knees to compress their glutes while you are compressing their bicep/tricep regions with your hands
B. Use your knees to compress their glutes while you are compressing their flexor regions with your hands

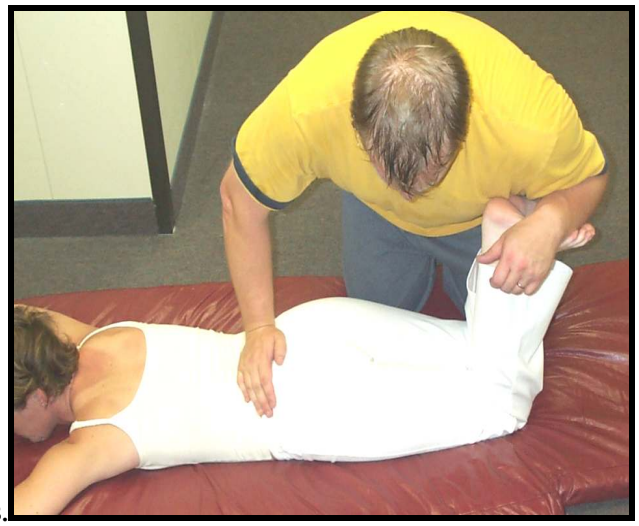
A. B.

A. Use your knees to compress their glutes while you are compressing their palms with your knuckles
B. Use your knees to compress their glutes while you are compressing the sides of their spine with the ulna side of your hand

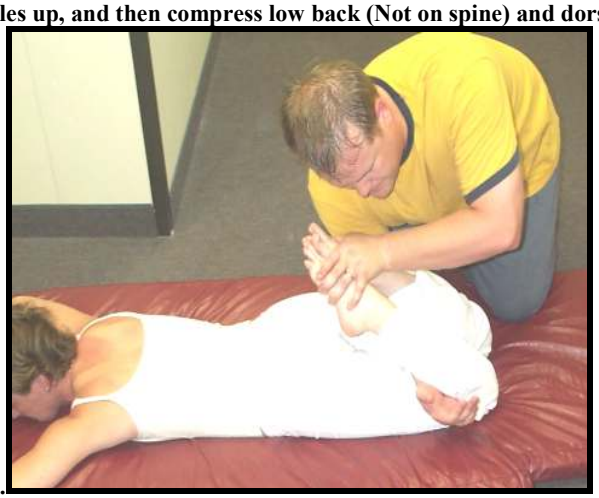
PRONE #3

A.  B.

A. Use your knees to compress their glutes while you are extending the neck
B. Compress the lower back and compress the shoulder

A. B. 

A. Flex both of their knees and plantar flex their ankles
B. Raise ankles up, and then compress low back (Not on spine) and dorsiflex ankles with your forearms

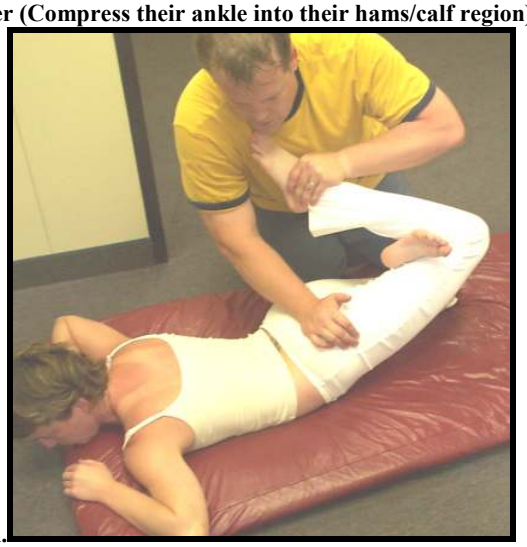
A.  B.

A. Flex both of their knees, with your arm on their hams/calves and plantar flex their ankles
B. Compress glute and compress shin region (Not the tibia) on your quads

PRONE #4

A. B.

A. Flex one of their knees, with your arm on their hams/calves and plantar flex their ankles
B. Cross their leg over (Compress their ankle into their hams/calf region) and compress the lower back (Not the spine)

A.  B.

A. Cross their leg over (Compress their ankle into their hams/calf region) and compress the lower back (Not the spine), and finally bring their foot towards you
B. Cross their leg over (Compress their ankle into their hams/calf region) and compress the lower back (Not the spine), and finally bring their foot straight up (Your hand under their knee)

A. B.

A. Compress their glute region and lift the legs up
B. Compress the glute region with your knee and lift the ankle up

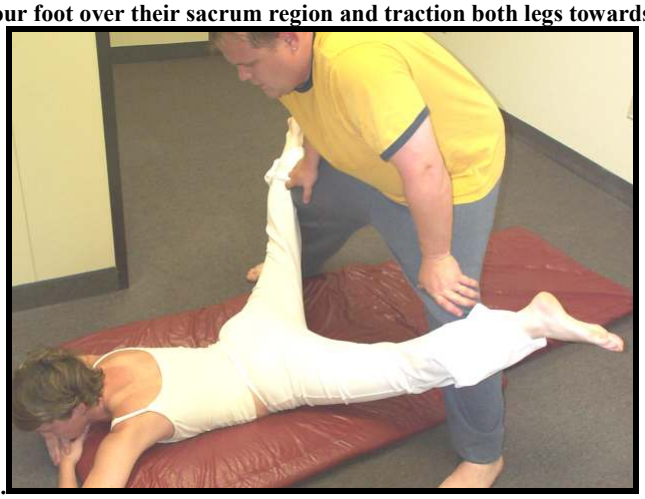
PRONE #5

A. B.

A. Place your foot over their spine and traction opposite arm/leg
B. Place your foot over their spine and traction both legs towards you

A. B.

A. Traction both legs up
B. Place your foot over their sacrum region and traction both legs towards you

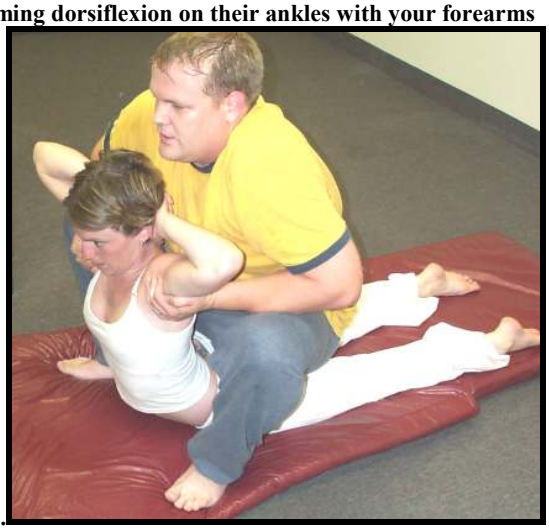
A.  B.

A. Abduct both legs and have their adductors rest on your knees
B. Abduct both legs and have their adductors rest on your knees and then traction both arms towards you

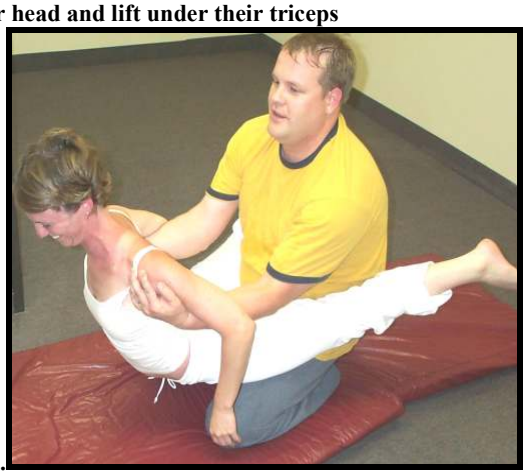
PRONE #6

A. B.

A. Abduct both legs and have their adductors rest on your knees and then traction both arms (Crossed) towards you
B. Have their knees rest on your knees, and then cup heels while performing dorsiflexion on their ankles with your forearms

A. B. 

A. Have their calves rest on your quads and support their knees with your hands (Don't sit on them for this)
B. Sit on their glutes, and then have them interlock their hands behind their head and lift under their triceps

A. B. 

A. Sit on their glutes, and then lift under their shoulder region
B. Have them rest their quads on your quads, and then lift under their shoulder region (COBRA)

PRONE #7

A. B.

A. Have them rest their quads on your quads, and then interlock wrists and traction arms (COBRA)
B. Have them place their ankles up, then sit on their feet and interlock wrists and traction arms

A. B.

A. Externally rotate their hips and place your feet in between them, then interlock wrists and traction arms
B. Sit on glutes and lift up legs

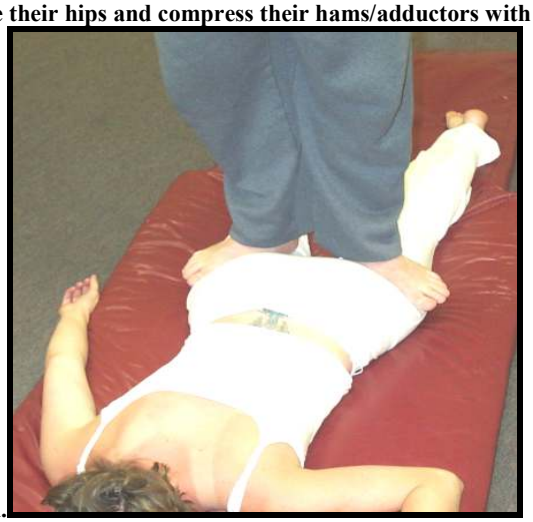
A. B.

A. Externally rotate their hips and compress their abductors with your knees, while you are compressing their low back region
B. Externally rotate their hips and compress their abductors with your knees, while you are compressing their upper back region

PRONE #8

A. B.

A. Externally rotate their hips and compress their abductors with your knees, then interlock wrists and traction arms
B. Externally rotate their hips and compress their hams/adductors with your shins, then interlock writs and traction arms

A.  B.

A. Get your balance and compress hams with your feet (Support your body weight)
B. Get your balance and compress glutes with your feet (Support your body weight)

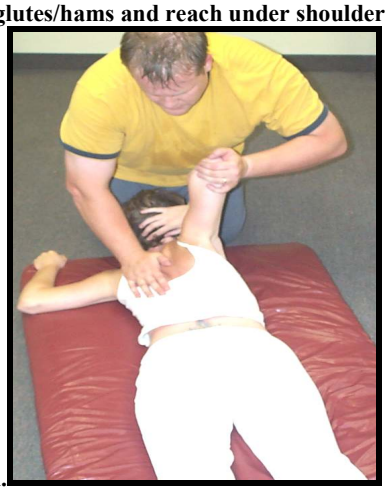
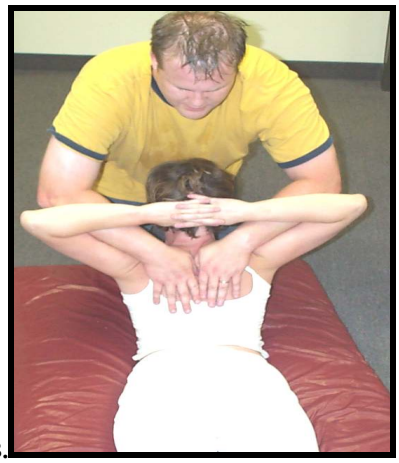
A. B.

A. Get your balance and compress hams with one foot and the other foot over the lower spine (Your arch is over the spine) (Support your body weight)
B. Abduct the legs with your shins and compress their glutes

PRONE #9

A. B.

A. Compress your knees in their glutes/hams and interlock wrists and traction arms
B. Compress your knees in their glutes/hams and reach under shoulder and pull towards you

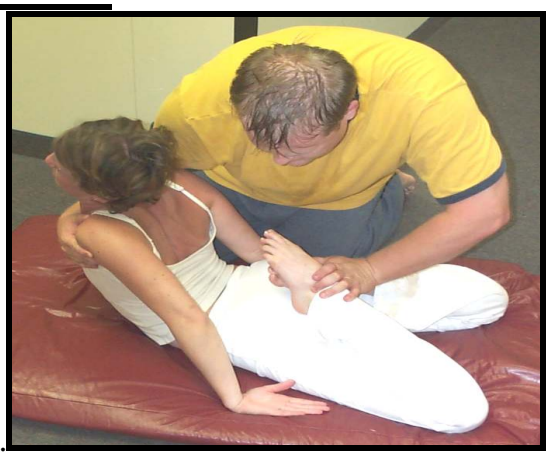
A.  B. 

A. One hand behind their head and compress their upper back while you are compressing the elbow region
B. Have them interlock their hands behind their head and place your hands on their upper back and then lift up

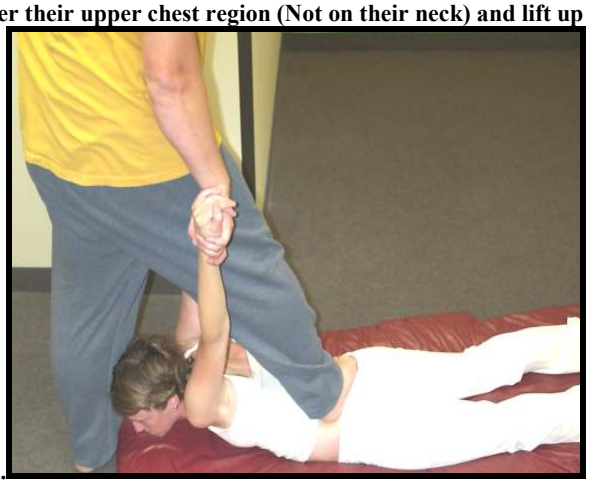
A. B.

A. Interlock wrists and traction arms
B. Bring their arms back (Compress them together) and lift their arms toward their head while compressing their low back region

PRONE #10

A. B. 

A. Wrap your arm over their upper chest region (Not on their neck) and lift up while compressing glute/low back region
B. Wrap your arm over their upper chest region (Not on their neck) and lift up while flexing both knees

A.  B.

A. Compress low back (Your arch is over their spine) and traction arms
B. Bring legs towards you while compressing their side

A. B.

A. Compress their feet on your hips
B. Compress on their medial side of their lower leg

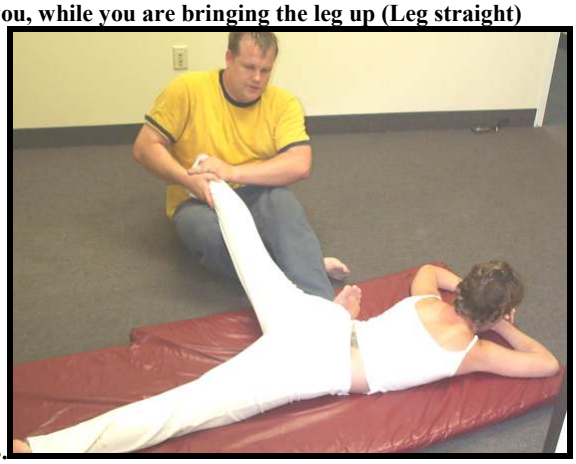
PRONE #11

A. B.

A. Compress their hams with your foot and traction their other leg
B. Compress their side with your foot and traction their arm towards you

A. B.

A. Bring your arm under their arms and try to bring them together while you are bringing the leg up (Knee slightly bent)
B. Bring your arm under one of their arms and try to bring it towards you, while you are bringing the leg up (Leg straight)

A. B. 

A. Compress their lower back and lift leg straight up
B. Compress with your foot just below hip bone and traction leg towards you

PRONE #12

A. B.

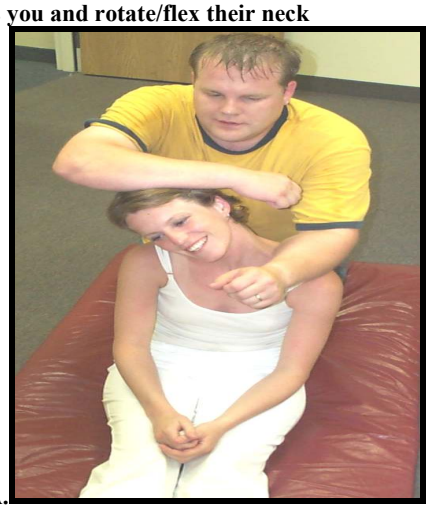
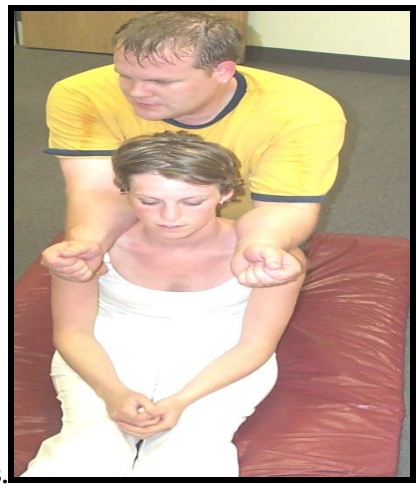
A. Compress with your foot just below hip bone and traction leg/arm towards you
B. Have their quads rest on your knees and compress their feet together

***Have their quads rest on your knees and cross their feet together**

SITTING #1

A. B.

A. Traction their arm towards you and bilaterally flex their neck
B. Traction their arm towards you and rotate/flex their neck

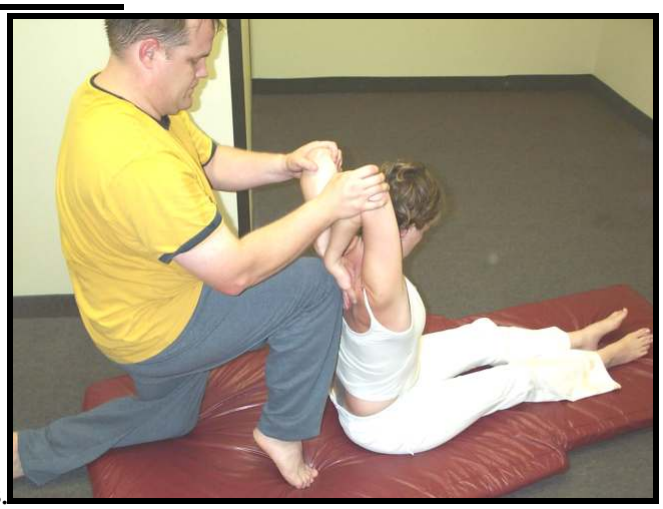
A.  B. 

A. Use your forearms to compress their shoulder and side of their head
B. Use your forearms to compress their shoulders

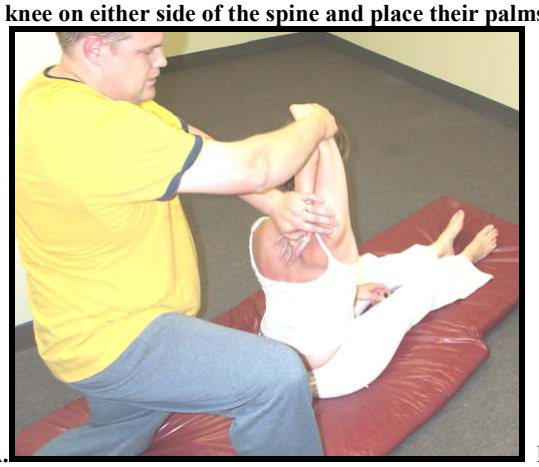
A. B.

A. Traction arm and push upper back (Twisting their torso)
B. Compress their shoulder and push the other shoulder (Twisting their torso)

SITTING #2

A. B. 

A. Compress your knee on either side of the spine and bring arms tow
B. Compress your knee on either side of the spine and place their palms on your knee and pull elbows towards you

A.  B.

A. Flex their elbow and raise it up, then place their hand on their upper back region and pull their elbow towards you
B. Have them cross one leg over the other leg (Ankle resting on their quad) and compress their upper back

A. B.

A. Have them cross their legs and support their neck while you push their abductors
B. Have them cross their legs and traction opposite arm while their other hand is resting on their head and then push the bicep region

SITTING #3

A. B.

A. Compress their bicep/tricep region into your quads
B. Hold elbow region and traction arms up

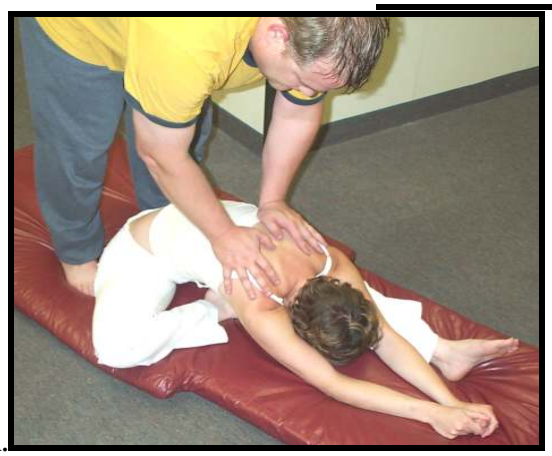
A. B.

A. Bring elbows together and lift arms up while you compress their back
B. Compress bicep region and pull them back onto you

A. B.

A. Have them interlock their hands behind their head and go under their arms and hold their hands while bringing their elbows toward you
B. Have them place one hand behind their head and compress shoulder while you bring their arm back

SITTING #4

A.  B.

A. Have one leg straight and the other one externally rotated (Knee slightly bent) and compress their upper back
B. Externally rotate both legs (Knee slightly bent) and compress their upper back

A. B.

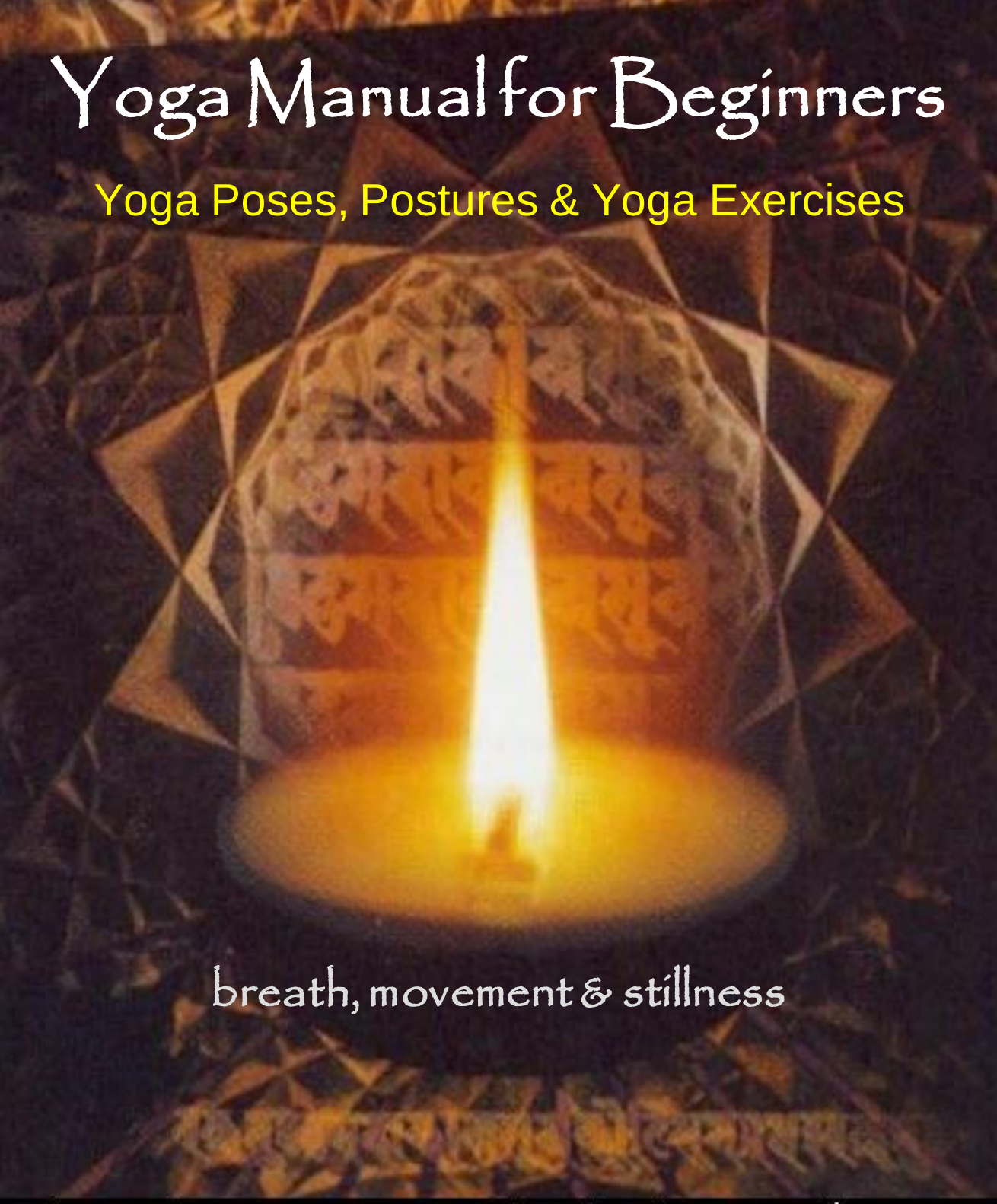
A. Interlock both of your arms under their arms and compress their upper back while you bring their arms up
B. Their legs are straight and compress their upper back

A. B.

A. Place your feet under their glutes and traction their arms back (Try to lift them up with your toes)
B. Compress the sides of their spine with your feet and traction their arm
***Walk the back with your feet**

Yoga Manual for Beginners

Yoga Poses, Postures & Yoga Exercises



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The most beautiful experience we can have is the mysterious – the fundamental emotion which stands at the cradle of true art and true science.

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Living Philosophies, 1931

Dedicated to all the practitioners of yoga.

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SoundBodyYOGA

& FOREWORD

Sound Body YOGA® is a state of the art yoga practice that works on the premise that a 'sound' body is a catalyst to a healthy mind and spirit. Dr. Freedom and Leela have founded this unique yoga practice which uses breath and sound as the energy source to strengthen, stretch, and balance the body. Dr. Freedom, using the ancient wisdom of his ancestors from India, coupled with his western scientific knowledge in Chiropractic and Leela, through her studies in Western classical voice with emphasis on breath and sound have developed a safe and powerful yoga practice that naturally aligns the body, relaxes the mind, and rekindles the spirit.

Sound Body YOGA® programs are individually designed using sequences from various yoga and health disciplines which balance the body and mind to its peak level of performance. Specific yogic and relaxation response techniques are also prescribed as treatment and preventative measures.

FOREWORD

Dr. Freedom is a Chiropractic physician, yogi (living with yoga), a writer, a musician, and the author of, Yogic Works. Dr. Freedom´s partner, Leela Barbara Fraser, a classical vocalist and also a yogi is the co-author.

For many of us the practice of yoga is to attend a class two to three times a week in a studio with a sticky mat. Although this is one aspect of my ancient tradition, there is a lot more to yoga than what we know as 'yoga' in the west. Asana practice or yoga postures are just an initiation to the great tradition of yoga. Yoga is a way of life. To us, the practice of yoga continues not only during asana practice, but is part of the business day. Yoga is sitting in traffic, smiling at a child, recuperating from an illness, sitting silently, or watching a beautiful sunset. Yoga is to be 'present' in the moment, to breathe consciously and observe how the inner and outer worlds interact with each other. Yoga is taking the outer journey in, and the inner journey out, finding the space in the 'middle' where these journeys meet as one, and always observing with virgin eyes.

Most of us are afraid of change and yoga is all about change. Change is the only consistent aspect of life. Asana practice, breathing, and meditation all unleash us from our conditioned patterns into the unknown self. As in her book, Parable of the Talents, Octavia Butler writes, "All that you touch, you change. All that you change, changes you. The only lasting truth is change."

Living with yoga or practicing as a yogi has been a crucial aspect of Dr. Freedom´s human earthly journey. Through my ever-changing lifestyle, I have had a multitude of life changing experiences at unusual places and with profound personalities.

The practice of yoga has not only kept me physically fit, but my mind remains flexible, calm, alert, and in the moment. My love and compassion for fellow humans, exploring the depths of the human potential and the kinetic body, understanding the mind, travel, adventure, music, interaction with nature, and yoga have continued to cycle me around the globe.

In the early 80's I began my Chiropractic practice. I had a passion for sharing the dynamics of the human body. I wanted everyone to live without pain in their bodies. I soon realized many physical pains were rooted deep in mental and emotional issues. No matter how much I changed the structural dysfunctions, the pains remained. I wanted to know ways to undo my sufferings and those of my fellow humans. At this time I published my first book, Treating Neck Problems the Natural Way.

In the early 90's a sudden flash, a paradigm change lifted me from a busy chiropractic practice in Delta, British Columbia to a lovely shrine in the village of Makindu, Kenya. Here, I would spend thousands of hours sitting silently under the canopy of stars. In the daytime I would overlook Mt. Kilimanjaro and the lovely cornfields rising from the red earth. Soon I became immersed in chanting and singing (a powerful devotional aspect of yoga). For almost a decade I travelled around this lovely earth collaborating with various musicians, spiritualists, swamis, sages, monks, and yogis. Leading meditations, chants, and relaxation practices became part of my daily lifestyle. I visited, sang, and stayed at shrines, temples, schools, homes, villages, executive offices, and concert halls.

I wanted people to know how to live 24 hours a day, not just for the length of a yoga class. I wanted people to recognize how we grasp rigid ideas of the way we think things ought to be, and in reality how life unfolds its own play. I would ask, "Are we peaceful inside?" I wanted people to live in compassion - to enjoy, enjoy, enjoy, and then move on.

Since 2000, I travelled a new journey along with my partner Leela which took us across Canada, throughout America, Mexico, Malaysia, United Kingdom, India, Kenya, and now has rested us in the tropics of Costa Rica.

These four years took us from the tranquil Oregon Coast to the dynamic yoga studios of California. We drove across to central Canada, enjoyed the glacier waters of Lake Louise, and sang relaxation music to the athletes at the Pan American Games in Winnipeg. We practiced yoga at the rising full moon on the peaks of the Grand Canyon and witnessed snow flakes practicing the TREE asana in the red mountains of Sedona. We soaked in the blazing hot springs of Death Valley in the morning and froze in the glacier waters of Yosemite in the evening. Saw a beautiful sunrise at the Red Rock Canyon in Las Vegas, led a lovely chanting concert in a yoga studio, and concluded with the dancing waters at The Bellagio. We shared yoga on the beach with corporate computer executives in Clearwater, Florida. We sang with hundreds at a 4 a.m. music concert in a 300 year old hacienda in Queretaro, Mexico.

For a full year we traversed through my genetic homeland, India. From the river banks of the Ganges in Varanasi, we travelled to Sarnath where Buddha delivered his first sermon. We paid homage at the tomb of St. Mother Teresa in Calcutta. We visited Gandhi's home in Mumbai and seeked audience with the Dalai Llama in Dharamsala, McLeod Ganj. We spent a month at the sacred Golden Temple in Amritsar. We strolled through the deserts of Rajasthan, rested under the coconut groves of South India, and climbed to the base of the Himalayas. We were barraged by the ever-increasing human population of this land. With cramped rickshaw rides on bumpy, chaotic dirt roads with excessive noises, smells, and ever-staring passers by, hours of sitting and stretching the body and mind at all levels was absolutely necessary. This was the true practice of yoga - living in the muddy waters and staying afloat above it. We collaborated with some of the finest musicians in South India and sang, recorded, and produced our 7th relaxation and meditation recording titled, 'RU'.

Travel was not always positive and fun. The horrid events of 9/11 had a slight trickle in my life. I often became a target of slurs. The worst was a group of young men shouting, "That's Osama Bin Laden, kill him". It is in these moments that I lived my practice of yoga.

Of course a couple of trips to Kenya, to my birthplace, always made me feel grounded. Here I felt connected with my inner self. Sitting in the ARK National Park watching the elephants, rhinos, and buffaloes interact took me to a higher space. In nature 'change is the rule', animals live from moment to moment. Watching the animal postures has always given me a better insight on the way the 'animal' asanas are to be practiced.

Costa Rica is a land of rich coasts and the people greet each other with the saying 'PURA VIDA' – pure life. For the past year we have enjoyed interacting with the countless practitioners of yoga who attend regular classes at the chain Grupo Multi Spa. The president of the spa, David Mears, shared this wonderful saying which clearly summarizes the practice of living yoga:

1. SPEAK THE TRUTH –THERE IS LESS TO REMEMBER (Sat)
2. NO RAIN, NO RAINBOWS (Chitt)
3. THERE ARE TWO WAYS TO BECOME RICH –
   MAKE MORE OR DESIRE LESS (Anand)

Although this book deals primarily with asana practice, below are 12 easy and practical ways which have helped us stay healthy and enjoy a balanced lifestyle:

1. Eat moderately and regularly
2. Exercise and get plenty of fresh air
3. Choose a pleasant occupation
4. Develop an easy-going personality
5. Maintain great personal hygiene
6. Drink wholesome liquids
7. Avoid stimulants and sedatives
8. Get plenty of rest
9. Have a daily bowel movement
10. Enjoy a healthy sex life
11. Get prompt health care when ill
12. Be in nature at least twice a day

Enjoy this book as it unfolds years and years of our experiences living in yoga. Remember change is the only lasting truth. Enjoy your changes….

sound body Yoga

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WHAT IS YOGA?

Yoga योगा literally means 'to unite with the self' or 'become one'. The root word of yoga is 'yuj', which means to yolk or go within the center. In the simplest terms, yoga is a practice of uniting the body, thought, and breath for living in the present without 'suffering'. There are 3 fundamental components in the journey of yoga:

Asana – the practice of static and dynamic body movements to align and balance the physical components;
Prana – the practice of coordinating all body and mind activities with the breath;
Dhayana – the practice of focusing thoughts inward, awakening creative awareness, and relaxing the mind.

Yoga is an ancient art which gives a wealth of knowledge on how to exercise the mind and body to unlock the full human potential. Asana practice is one way to achieve this. The practice of asanas challenges thought and breath patterns. Regular practice of yoga unites the body, mind, and breath in a synchronous flow. There are many other dimensions to the discipline of yoga, some of which include: spiritual undertakings, dietary rules, sound and mantra techniques, awareness of subtle energy levels, etc. All these practices, including those discussed in this book, are aimed at bringing consciousness to a state of 'awakened contentment'.

This book primarily emphasizes the physical aspects of the body - asana and prana. Yoga is the mother of all physical exercises. It encompasses: flexibility, strength, balance, coordination, conditioning, cardiovascular training, visceral balancing, and mind-body fitness. Asanas influence the nervous, cardiovascular, respiratory, musculo-skeletal, endocrine, reproductive, and digestive systems. The systems in the body work in a harmonious unit where a change in one system manifests a complimentary change in all others.

THE MUSCULO-SKELETAL SYSTEM & YOGA

Yoga is a whole body practice. Every muscle, joint, and ligament are part of the whole body system. When the range of motion of one joint is increased it affects the entire system, and vice versa. Ultimately, the body will go where the mind leads it to. The best starting point is to have an inspired, focused, committed mind, with an attitude of wanting to balance the body.

An open, flexible mind is the beginning to a healthy yoga journey. Many seekers of yogic study want to see quick changes, and fast results. The reality is that on a physical level, stretching and committing to improve flexibility takes time, hard work, and patience, requiring a lot of trust in the body's ability to improve. There is NO instant gratification, but positive results become evident over time when one is PATIENT and PERSISTENT, maintaining a regular asana program.

Body postural alignment is a crucial component of asana practice. In our material world all machines require that the composite parts are in alignment with one another in order to function properly. The doors in the home, the zipper on the purse, the tires on the car, etc. all require the parts to be in alignment with one another in order to function properly. Likewise, yoga is a structural and mechanical practice with a dynamic component that involves the joints and muscles to function in alignment with each other. If the structural body alignment is not correct, severe damage of the joints and supporting ligaments may result. We have overemphasized postural alignment in this book so YOU may have the best experience practicing yoga, injury free. Postural re-alignment is a major component of asana practice. Optimum postural alignment in every asana will prevent soft tissue injuries, and give maximum benefit.

The body joints function best when they remain within their given range of motion, the muscles surrounding the joints provide balanced tension maintaining alignment both at the joint, and between the joints. Loss of mechanical alignment at the joint level or at a compensating joint can lead to extreme wear, tear, and pain.

Most of us look at the body through a very narrow scope, focusing on the 'tree' instead of the 'forest'. In regards to localized joint imbalance or injury, an attitude of specialization is far too common. For example, if a runner has a knee problem, all too often the tendency is to treat the knee without regard to other parts of the body that might be causing damage. The knee problem could easily be the result of a hip or back dysfunction, or a foot imbalance, both common causes of knee injuries. On the other hand, if a cyclist has a back problem, the root of the injury will more than likely be the position of the legs on the bike, or possibly the position of the foot on the pedal.

An overall description of the musculo-skeletal system is described to insure a deeper understanding of the body. Knowing the science and mechanics of the body helps create positive changes in the yoga journey.

I. MECHANICAL ALIGNMENT & POSTURE

THE IMPORTANCE OF POSTURE IN YOGA

Posture is basically the way the body mechanically aligns and positions itself in space throughout the day. Body posture changes every few minutes in adaptation to various activities and stresses. The total visual posture is therefore the long-term average of the total alignment in space. Postural habits developed over the years often reflect the unconscious patterns of the mind. Yoga is a practice that will bring the body back to optimum posture.

WHAT IS OPTIMUM POSTURE?

Optimum posture is when the body is mechanically aligned with minimum strain on the muscles, ligaments, and joints. In this efficient position the fewest restrictions are imposed on the muscular and nervous systems, energy is not wasted to simply hold the body up. This energy can be utilized for creativity and productivity. Optimum posture consists of a combination of the following: chin lock, neutral spine, core engagement, sternum lift, shoulder blade retraction, joint mobility, muscle flexibility, and diaphragmatic breathing. These qualities are discussed later in greater detail.

BENEFITS OF OPTIMUM POSTURE:

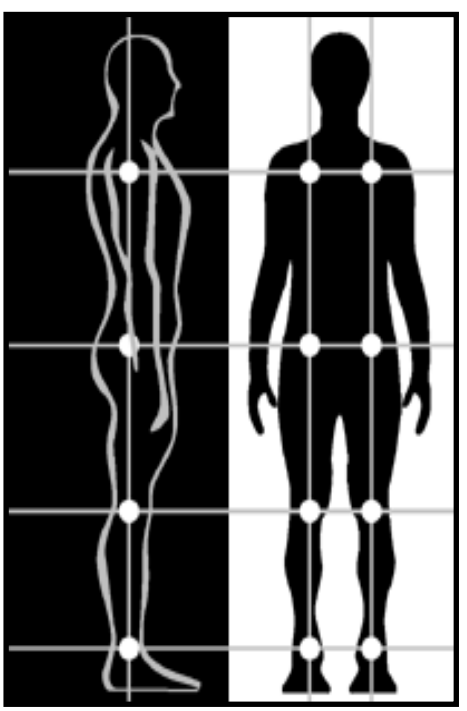
- Decreased stress and tension in the supportive skeletal muscles
- Less wear and tear in the joint structures
- Increased contracting/relaxing ability of the diaphragm enhancing the amount of air capacity in the lungs
- More flexibility in joint movement
- Reduced strain on the neck, jaw, and upper back muscles
- Increased amount of energy
- More positive, confident self-image
- Relaxed state of mind, carrying the body effortlessly

DETERMINING OPTIMUM STANDING POSTURE

A complete structural alignment and postural evaluation is necessary to ascertain the main deviations that have developed within the musculo-skeletal system of the body. Here is a quick reference check to evaluate your posture.

Check **P**oints (the back against a wall)
• Stand at ease, feet parallel, hip-width apart
• The heels touch the wall
• The knees are relaxed, neither bent nor hyper-extended
• The gluteals touch the wall and pelvis is neutral
• There is a light hollow space between the contact points of the neck, low back, and the wall
• The shoulder blades contact the wall
• The shoulders and hips are parallel to the ground
• The back of the head touches the wall, and the head lies directly over the trunk
• The ears align directly over the middle of the shoulders
• The eyes and chin are parallel with the ground

A general rule of thumb for maintaining optimum posture is to maintain maximum height without feeling any strain in the muscles and joints.



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NEUTRAL SPINE

WHAT IS NEUTRAL SPINE?
Neutral spine is the position of the spine where every joint is held in optimal position, allowing an equal distribution of force through the entire body structure. In neutral spine the body is in a natural upright position where the spine retains its natural curves.

DETERMINING 'NEUTRAL SPINE' IN STANDING POSTURE
Stand with the back against a wall, feet hip-width apart, in alignment with the knees.

Rotate the bottom of the tailbone forward, under the body, into a full pelvic tilt (this position will straighten the curve in the low back). Image 1. Now rotate the hips so the tailbone is pointing in the opposite direction, away from the buttocks (this position will increase the curve in the lumbar spine). Image 2. These two points represent full lumbar flexion/extension range, and neutral, of course, is in the middle. Image 3.

Repeat this movement several times slowly decreasing the range b e middle (neutral) is found. Another way to find this neutral space i e hands on the outer edges of the pelvis with the finger tips below bone. The objective is to pivot the hips back and forth until th e absolutely perpendicular to the mat. When neutral spine is isolat s and multifidus spinal muscles (the CORE) are engaged together with equal effort. To maintain this neutral position, the deep and often weakest transverse abdominis muscle must be activated. Gently pull the navel up and in, contracting the lower abdominal muscles, to activate this muscle.

THE CORE

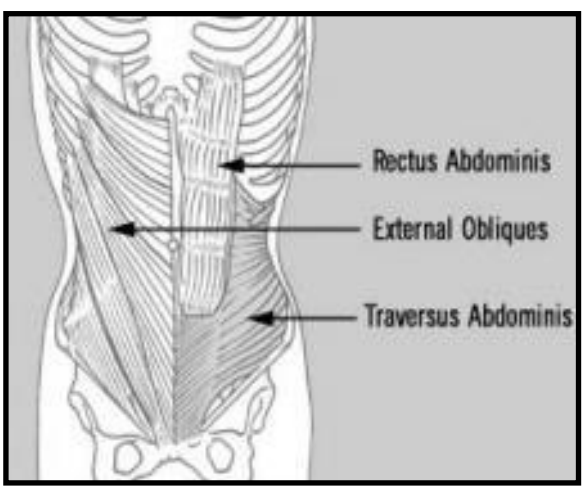
The core involves the muscles between the ribs and the hips. Collectively the muscles of the core function as a supportive girdle, placing the body in optimum posture. If the core is strong, the upper body is held up easily and the weight in the spinal joints are distributed evenly without stress. On the other hand, if the core is weak, the posture collapses, there is overcompensation of the primary muscle groups, and breathing technique becomes improper. The navel, at the center of the core, is the starting point for all yoga asanas.

There are five muscle groups that make up the core in the trunk region: Rectus Abdominis, External Obliques, Internal Obliques, Transverse Abdominis, and Multifidus. These muscles control the movement of the trunk in flexion, extension, side bending, and rotation. These muscles are part of almost every body movement, they are the core of strength and power. These muscles are essential for optimum postural alignment and also prevent back injury.

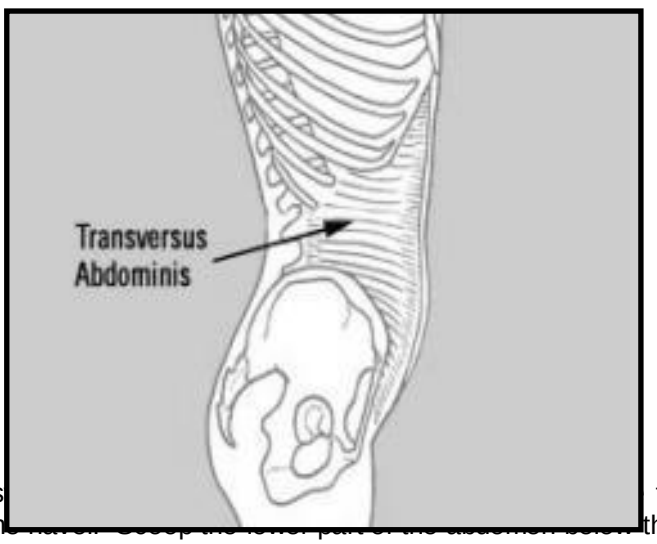
1. **The Rectus Abdominis** muscle runs the length of the central abdominal area, from the pubic bone to the sternum. The Rectus Abdominis flexes the trunk toward the hips.

2. **The External Obliques** run diagonally down from the lower ribs, and connect to the front top of the pelvis and pubic bone. External Obliques aid in the rotation of the trunk. When the right External Oblique is activated, the trunk rotates to the left.

3. **The Internal Obliques** lie underneath the External Obliques, and run diagonally in the opposite direction of the External Obliques. The Internal Obliques start from the top of the hips, and connect to the lumbar region and the lower ribs. Internal Obliques aid in rotating the trunk in the same direction as the side they are on. The left Internal Oblique twists the torso to the left, therefore, the left Internal Oblique, and the right External Oblique work together to twist the trunk to the left.



4. **The Transverse (Transversus) Abdominis** Muscle is the most important stabilizer in the abdominal muscle quartet. The Transverse Abdominis Muscle runs horizontally across the abdominal wall, underneath the External and Internal Obliques. The Transverse Abdominis runs from the top of the hip, lumbar region, across the pelvis, and connects to the pubic bone. This muscle bridges the gap between the ribs and hips, and lies closest to the intestinal region. The muscle wraps around the body from the navel to the spine and its primary function is to stabilize the body, and pull the belly in. The Transverse Abdominis Muscle is often weakened by pregnancy, chronic sitting, and general inactivity; and when weakened, it cannot provide the stability and support necessary to protect the lower back from injury. Weakness in the Transverse Abdominis Muscle is often the cause of that little belly bulge seen, even in slim individuals.



To identify the Trans the fingers of the left hand slightly below th the navel 'up and in' to activate and feel the transverse abdominis muscle.

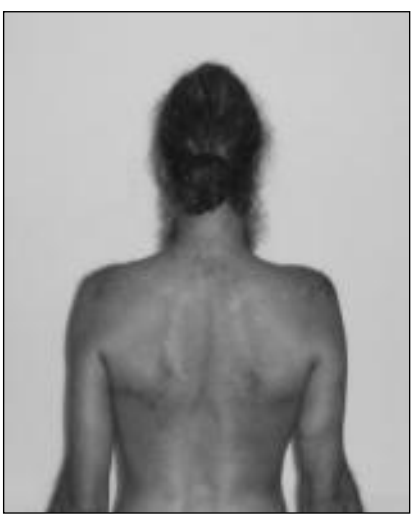
5. **The Multifidus** are a small group of muscles that stabilize the vertebrae of the back, and are often recruited as a result of successful optimum posture.

To identify these muscles, stand in neutral and place the fingers of the left hand slightly left of the middle lower back. Wave the right arm up and feel the Multifidus Muscles activate.

RIB CAGE EXPANSION & SHOULDER BLADE RETRACTION

Most individuals typically elevate and roll their shoulders forward, collapsing the chest. To insure efficient stress-free posture, lift the sternum, expand the ribcage, and retract the shoulder blades to encourage proper shoulder blade positioning. To practice ribcage expansion, stand with the back against a wall, feet hip-width apart, in alignment with the knees. Maintain a neutral spine and face the palms forward by the sides of the body. The shoulders are level with each other. Instead of forcefully retracting the shoulder blades back, think of opening the ribcage from the front, as this uses a different set of muscles, and lets the shoulder girdle remain soft and free.

In the second phase, maintaining a neutral spine, lift the chest out and slowly raise the arms laterally along the wall in a circular motion till the arms are at shoulder height, parallel with the mat. The goal is to bring awareness to the movement of the shoulder blades without losing the integrity of the CORE. Once the arms are parallel with the mat, drop the shoulder blades down further and keep the chin retracted. Keep the shoulder blades secured against the wall, the rib cage expanded, and the core locked as the arms are lowered back down to optimum posture.



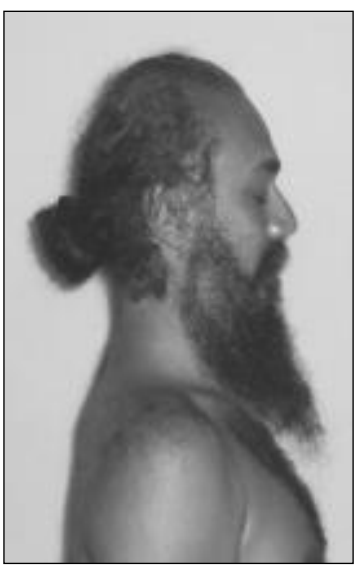
CHIN LOCK &

NECK RETRACTION

The posture of the neck determines the position in which one holds the head. Many postural adaptations develop during adolescence. For example, if you are tall during high school you probably have to look down at your peers and begin to hunch over. On the other hand, if you are short, you often develop the habit of extending the neck backward as you look up. Over time the body adapts to these postures. Under such circumstances the slightest trauma to the neck will result in acute, or short and severe symptoms flaring up.

In ideal posture (looking at the head from the front) both the eyes, ears, and shoulders are parallel to the ground. From the side profile the ears are in line with the shoulders and form a perpendicular line with the ground.

Most individuals stand with their head thrust forward. When the head is forward, the chin is slightly extended, and a great deal of muscle tension, tightness, and fatigue is experienced at the base of the neck and the top of the upper back. If one holds a 10-pound weight with the arms extended forward, after a short while, the muscles employed to support this weight become fatigued, and pain sets in throughout the arms and neck. Take the same weight, brace it tightly to the body so minimal or zero muscle effort is required, and one can easily hold this weight for extended periods. For every one-inch shift from the head's center of gravity, the neck and shoulder muscles must recruit an additional 10-pound force.



For example, a person employed as an assembly line quality-control checker, who is required to bend over a moving conveyor belt to eyeball products as they pass by is in a position where the head leans forward 4 inches from the normal center of gravity. In this case, the muscles supporting the head will require an extra 40-pound force to do their job – that is, to hold the head up! When this type of activity is pursued over long periods, the body considers this to be an imbalance of what nature intended. The muscles revolt against the undue stress on the ligaments and joints of the neck. This out-of-alignment posture may eventually lead to osteoarthritic changes in the neck.

Similarly, in individuals with bad neck posture, the center of gravity of the head shifts away from the neck and body. The poor posture stresses the neck muscles, causing the muscles to work harder and burn more energy just to hold the head up all day!

If one has a tendency to walk with the shoulders hunched forward, during episodes of physical and mental stress this misaligned posture becomes worse, the head slouches forward, causing undue stress on the neck.

Remember the three "P's":

PRACTICE
PERFECT
POSTURE

Optimum chin and neck posture is achieved by gently drawing the chin backward, not dropping, into the neck and lifting the top of the head up to the sky.

When practicing extension asanas, work into the asana with neck retraction and then let the head tilt back gently. Keep the tongue touching the roof of the mouth and keep the mouth closed. This position will protect the muscles in the front of the neck from over stretching.

II. STRETCHING OF MUSCLE GROUPS

The primary function of muscles is to move the joints and to stabilize the body posture. Stretching muscles in a controlled, systematic manner is an integral part of yoga asana practice. It is necessary to have a deep understanding of the mechanisms and benefits of stretching before embarking on the yoga journey. Stretching muscles has several positive effects which include:

IMPROVED JOINT MOTION: The greatest benefit of stretching is the enhanced ability of the body to perform physical activity. The more flexible a joint is within its 'normal' range, the greater its ability to move through a wider range of motion, and the more efficient the joint function. Stretching muscle groups 20 minutes, 3 times a week, can increase the joint range of motion by 30 percent.

PREVENTION FROM INJURY: Normal flexibility, within the joint range of motion prevents joint injury. The majority of traumatic muscular or ligamentous injuries occur when a joint is pushed beyond its normal range of motion. The nerves that control muscle function and give muscles their memory are surrounded by a sheath of muscle. If the sheath surrounding the nerve is elongated through controlled stretches, the memory of the muscle adapts to this greater range of motion. When a joint is pushed beyond its 'normal' range, the muscles are able to react effectively, reducing the likelihood of injury.

IMPROVED COORDINATION: Optimum flexibility and range of motion increases neuromuscular coordination. The speed of nerve impulses is enhanced by stretching the muscles around the joints. When coordination is improved the central nervous system becomes more sensitive to physical demands placed on it, opposing muscle groups function more efficiently, faster, and in a coordinated manner.

PROMOTION OF JOINT ELASTICITY: Stretching increases the temperature of the muscle tissue being stretched, in turn increasing the blood nutrients supplied to the joint structure. This process promotes greater elasticity in the surrounding tissue.

ENHANCED POSTURE AND MOVEMENT: Stretching helps to realign and regenerate soft tissue structures that have less than optimum development due to normal biomechanical wear and tear, and poor posture. The realigning of tissue structure improves muscular balance and kinesthetic awareness. This realignment of tissue structure also promotes and maintains optimum posture, healthy movement in daily activities, and healthy movement during regular asana practice.

BASIC RULES ABOUT STRETCHING

NO BOUNCING: Hold a static stretch to build up soft tissue tension so change occurs in tissue length. Bouncing can tear tissues or cause injuries in other affected areas.

NO PAIN: Stretching should not cause a sensation of discomfort; sharp pain, particularly, indicates that the muscle is being stretched too far.

DO NOT HOLD THE BREATH: Relax, breathe slowly and rhythmically, and focus on the muscles when stretching. Lengthen and stretch the muscle tissue upon exhalation.

KNOW WHAT AREA NEEDS TO BE STRETCHED AND WHY: Each individual requires different areas of flexibility. Assessments are helpful to recognize the tight, unstable areas, and appropriate stretches need to be prescribed. Maintain a balance between stretching and strengthening exercises to insure joint stability, minimizing the chance of joint injury.

WATCH FOR MUSCLE SUBSTITUTION: Be specific on the muscle group being stretched. Make sure that compensatory muscle groups are not overpowering.

GENERAL STRETCHING TIPS

Stretching the muscle groups is only beneficial when done correctly. Just as there is more than one way to achieve a set goal, there is more than one stretch to enhance flexibility. Based upon our experiences, gradual, slow, sustained stretches, reaching away, using correct technique prevents injuries from occurring. Stretch to the point of moderate tension and maintain the stretch for a minimum of 30 - 45 seconds, preferably 45 seconds – 1 ½ minutes. Relax for 5 - 10 seconds between stretches and repeat on the other side. Spend additional time stretching muscles that are chronically tight. Perform 2 - 3 sets per stretch, time permitting, repeating the stretch on the same muscle group. Once the body is warmed up, stretches may be held for longer periods of time.

WARM UP & COOL DOWN

WARM UP

Warming up the body by increasing the blood circulation and heart rate is an essential part of yoga. Although some individuals use the Sun Salutation as a warm-up in yoga, if convenient, we recommend a 10 - 12 minute warm-up consisting of a brisk walk, cycling, running, etc. The warm-up should be intense enough to increase body temperature, to warm up the muscles and cause a slight sweat but not cause any fatigue.

THE BENEFITS OF WARMING UP

• Increase body and tissue temperature
• Increase blood flow through the active muscles
• Increase the heart rate, preparing the cardiovascular system for work
• Increase the exchange rate of oxygen and carbon dioxide from hemoglobin in the blood
• Increase the speed at which nerve impulses travel, facilitating body movements
• Increase reciprocal innervation efficiency, allowing muscles to contract and relax faster and more efficiently
• Decrease muscular tension
• Enhance the ability of connective tissue to elongate

COOL DOWN

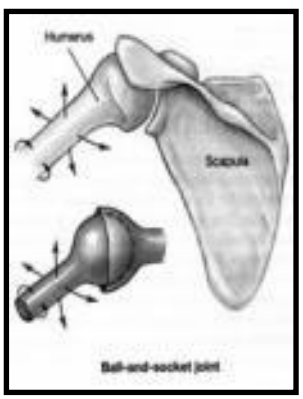
The cool-down period is just as important as the warm up. The cool-down period helps the body return to its pre-yoga practice state, a small investment of time for the many benefits received. A minimum cool down of 10 – 15 minutes is recommended after each yoga session. *CORPSE* is commonly practiced during the cool-down period. A properly performed cool down will:

• Help clear the muscles of accumulated lactic acid
• Lessen excessive fatigue
• Reduce soreness and cramps
• Keep muscles from tightening up
• Lower blood pressure
• Return the body temperature back to resting levels
• Restore the heart rate to a resting level

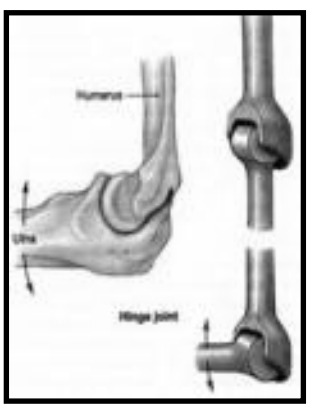
In short, a cool down speeds overall recovery in preparation for subsequent yoga sessions. A cool down is also helpful to relax and unwind the mind, a transition from the intensity of the yoga session to the day-to-day activities. Cooling down is a wonderful way to re-align or re-position the body's postural mechanics. Positioning the body in anatomical optimum posture in *CORPSE*, minimizes the stress on the body joints and muscles. Maintaining this posture for at least 10 – 15 minutes re-educates the body (hardware) and mind (software) to adapt to this comfortable, stress-free posture.

III. JOINTS

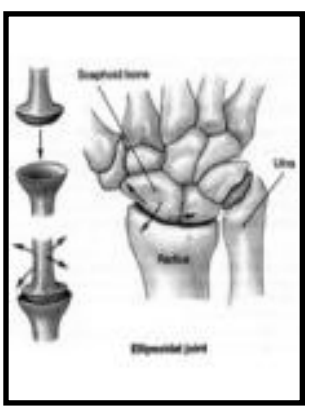
There are more than 180 joints in the body which can be broken down into 3 basic types:



1. Ball and socket



2. Hinge



3. Multiple

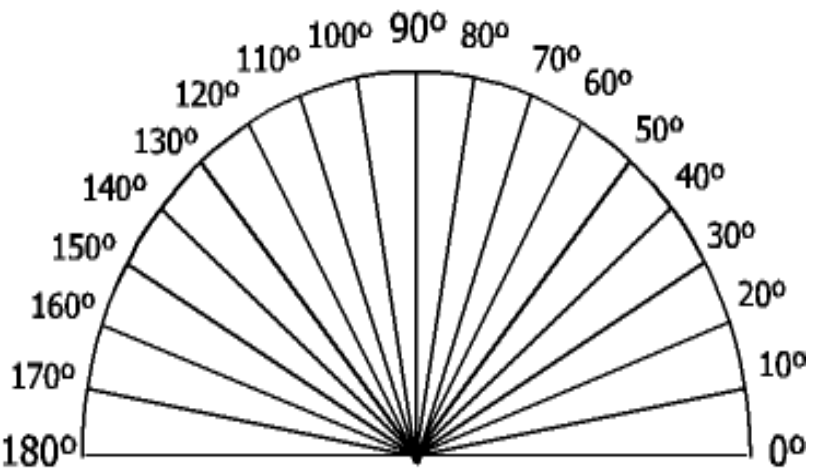
The larger ball and socket joints located at the pelvis, and the smaller ball and socket joints of the shoulder comprise the core structure. The 4 limbs then follow the pattern of strong but less flexible hinge joints, followed by more flexible multiple joints.

JOINT RANGE OF MOTION

Each joint has a general range of motion within which it efficiently functions. All movement requires a coordination of joints that emanates from the core structure outward to the extremities. As long as this integrated joint system remains in alignment, overall motion is fluid, accurate, and energizing. Should postural deviations develop, however, the whole structure starts wrenching out of alignment and the range of the joint can become restricted or hyper-mobile.

Be aware not to overextend the 'normal' range of body joint movement. Constant overstretching of the joint range is counterproductive, can result in lax or hyper-mobile joint movement, eventually effecting optimum posture causing wear and tear. Below is a list of the 'normal' range of body joint movement.

WHAT IS THE 'NORMAL' RANGE OF BODY JOINT MOTION?



<u>CERVICAL (Neck)</u>

Flexion: 45 degrees	Touch sternum with chin
Extension: 55 degrees	Point up with chin
Lateral Bending: 35 degrees	Bring ear close to shoulder
Rotation: 70 degrees	Turn chin to shoulder

<u>THORACIC AND LUMBAR SPINE (mid-low back)</u>

Flexion: 75 degrees	Bend forward at the waist
Extension: 25 degrees	Bend backward at the waist
Lateral Bending: 35 degrees	Bend spine to the side
Rotation: 45 degrees	Turn spine backward

SHOULDER

Abduction: 180 degrees	Bring arm up sideways
Adduction: 45 degrees	Bring arm toward the midline of the body
Internal Rotation: 70 degrees	Rotate shoulder inward
External Rotation: 90 degrees	Rotate shoulder outward
Vertical Extension: 45 degrees	Raise arm straight backward
Vertical Flexion: 180 degrees	Raise arm straight forward

ELBOW

Flexion: 145 degrees	Bring forearm to the bicep
Supination: 90 degrees	Turn forearm so palm faces up
Pronation: 90 degrees	Turn forearm so palm faces down

HIP

Flexion: 125 degrees	Flex knee and bring thigh close to abdomen
Extension: 30 degrees	Move thigh backward without moving pelvis
Abduction: 45 degrees	Swing thigh away from midline
Adduction: 25 degrees	Bring thigh toward and across midline
Internal Rotation: 45 degrees	Flex knee and swing lower leg away from midline
External Rotation: 45 degrees	Flex knee and swing lower leg toward midline

KNEE

Flexion: 135 degrees	Touch calf to hamstring

ANKLE

Dorsi Flexion: 20 degrees	Bend ankle so toes point up
Plantar Flexion: 45 degrees	Bend ankle so toes point down
Inversion: 35 degrees	Turn foot so the sole faces in
Eversion: 20 degrees	Turn foot so the sole faces out

JOINT TISSUE FUNCTION

Of the five main types of joint tissue: muscle, bone, tendon, ligament, and cartilage; muscle and bone tissue have the greatest blood supply, and heal most quickly if damaged. At the other end of the spectrum, cartilage receives no blood supply and heals the slowest when traumatized.

The rate of healing of most body tissue is directly related to the degree of blood vessel supply. The circulatory system is the transport infrastructure that services the joints, and the blood cells are the transport vehicles that bring oxygen, nutrition, and remove waste. The greater the blood supply, therefore, the faster the healing process.

Cartilage, however, does not have the ability to heal itself, it relies on a completely different mechanism. Cartilage is a tough, jelly-like substance that covers the articulating surfaces of joints. Within this jelly are pockets where cells live. These cells can divide and multiply adding layers of cartilage from within. The articulating joints are surrounded by a liquid filled capsule that bathes the joint with a lubricating fluid called synovial fluid. The inside of the capsule contains cells that release nutrients into this synovial fluid, and remove waste products from the fluid. The cartilage cells, therefore, clean and repair themselves via the synovial fluid rather than a direct blood supply.

An important distinction to be made between blood and synovial fluid, however, is that blood has a pump, the heart, that keeps blood moving at approximately 72 beats per minute, 5,700 liters per day. Synovial fluid does not have a pump to keep the fluid circulating, it depends on movement to keep it fresh. This mechanism is often referred to as the 'joint-pump'. Much like stirring sugar in coffee, joint movement circulates the synovial fluid, enabling it to seep through the cartilage, nourishing the cells and removing cell waste. This is a practical mechanism, as long as a joint keeps moving. Asana practice is a fantastic way to mobilize joints and to maintain optimum function of the 'joint-pump'.

JOINT HEALTH MAINTENANCE & JOINT PAIN

All movement creates a slight amount of wear and tear that causes the involved cells to break down and be replaced. With more then 100 trillion cells in the body, roughly 3 billion of them are replaced every minute. The body is equipped with a marvelous cellular repair and replacement mechanism that works non-stop without disrupting normal organ function. This everyday maintenance mode is called stasis, where the maintenance crew 'keeps up with the upkeep' of the body.

If injury or trauma occurs, the body's repair mechanism kicks into overdrive to restore the injured site as quickly as possible. Although the rest of the body continues receiving maintenance, grand-scale renovation now takes place at the site of injury. Like a building under renovation, the injured area becomes busy with activity. White blood cells actively demolish injured cells and red blood cells actively deliver new building materials needed for cell replication. This microbiological repair activity in the injured area leads to the crowding of cells, in turn leading to heat and swelling. The swelling itself often brings with it various degrees of discomfort, but it is a part of the body's natural self-repair mechanism that should be permitted to function as much as is bearable. If the body is well-nourished, mechanically aligned, and functionally mobile, swelling decreases usually 24 hours after the repair process begins.

If proper postural alignment is lacking, however, the normal, everyday joint wear becomes replaced by constant low-level joint trauma. If the breakdown process is greater than the repair process can handle, then the swelling and resultant discomfort can become chronic, spreading to other joints. A vicious negative chain reaction of misalignment-compensation occurs among the joints, and chronic breakdown occurs within the joints. A growing nightmare cycle of pain and inactivity is manifested.

JOINT PAIN

Joint pain occurs when muscles move the joints and bones in ways that violate the body's natural design. Pain is the body´s way of communicating that there is a problem and it needs to be fixed. Ignoring or suppressing pain signals with 'pain killers' increases joint damage if the fundamental cause is not corrected.

Pain in the low back, shoulders, neck, elbows, wrists, hips, knees, feet, and so on are frequently a result of compromised postural alignment leading to excessive wear within the moving, load-bearing parts of the system. Every time we turn around, take a step, move our wrist, etc. the deviated joint experiences another micro trauma. Life literally becomes a daily grind as the joint wears down and becomes debilitatingly painful.

The core muscle tone of the postural muscles must be balanced to restore this structural alignment and symmetry to the musculo-skeletal system.

JOINT BREAKDOWN MECHANISM

If the body is subjected to prolonged periods of sitting or standing in misaligned, fixed positions, two separate destructive processes begin to occur within the joint.

1. CARTILAGE DETERIORATION

Firstly, when cartilage deterioration occurs the nourishing, cleansing 'JOINT PUMP' mechanism ceases to function efficiently, cell nourishment is compromised, and cell function becomes sluggish. In this deterioration, the structural integrity of the cartilage starts to weaken, making it less wear resistant and more susceptible to injury. At the same time, the cleansing mechanism within the joint becomes increasingly inefficient. Like rusting hinges and clogging water pipes, waste starts accumulating within the joint itself causing it to become increasingly rigid and painful.

2. EXTREME JOINT WEAR

Secondly, when extreme joint wear occurs the postural muscles surrounding the joint start to weaken. The postural muscles lose the ability to keep the joint in structural and mechanical alignment. The joint lacks structural stabilizers, so the wobbling joint starts tilting, twisting, and grinding down stressed areas on the cartilage surface. The resulting discomfort leads to increased joint wear and discomfort, decreased activity, and postural muscle weakness. The resulting cycle of increased wear - decreased activity - increased waste build-up sets the stage for chronic joint breakdown, commonly referred to as ARTHRITIS.

JOINT REPAIR AND MOBILITY RESTORATION

The rehabilitation or repair of joint movement begins with the restoration of proper structural re-alignment within the overall musculo-skeletal system. This four part rehabilitation process must be coordinated simultaneously, and may take weeks or months to return the joint to a balanced state.

1. If the joint has been in a fixed dysfunctional position and has lost its normal joint flow, it is necessary to have it mobilized by a professional and adjusted into dynamic motion. The adjustment is like jump starting a sluggish car battery.

2. The brain, the software, needs to be re-programmed to co-ordinate and execute a newly re-aligned postural pattern throughout the day.

3. The responsible postural muscle groups, the hardware, need to be re-trained to structurally support the realigned posture.

4. The aligned posture must be maintained with regular asana, joint movement, and stability practice.

MULA BANDHA

In yoga there are three classic areas of focused potential and dormant energy in the human body:

Pelvis - Mula
Solar – Uddiyana
Throat – Jalandhara

The pelvic or mula region is the most powerful of the three areas where there is an abundance of potential energy. This energy is generally scattered and used intermittently for sexual acts. Asana practice is a wonderful way to cultivate and use this energy for physical strength and mental clarity. The powerful technique used to awaken and direct this energy is called the Mula Bandha.

The word 'bandha' is defined as 'a seal' - to seal within, interconnect the inner systems. The bandhas are engaged physically, but their effects are on the overall energy and awareness levels of the mind. The Mula Bandha used in yoga asanas has many benefits. The Mula Bandha works synergistically. Engaging the 'core lock' enables the asanas to be held longer, protecting the low back muscles, making the practice of asanas safer. When the Mula Bandha is fully engaged, dormant potential energy is activated into the conscious network resulting in more support in the core lock. The distal muscle groups relax drawing the body energy levels from the periphery to the center.

Females engage the Mula Bandha by exhaling, contracting the muscles between the pubic bone and the tailbone, and lightly drawing the perineum up and in toward the abdomen. Pull the pelvic floor up toward the spine and feel the lower, deep abdominal muscles engage. Initially the anus and genitals need to be contracted, but with practice over time these areas become relaxed and the contraction is isolated to the perineum (the space between the anus and genitals). Specifically draw the opening of the cervix up and in.

Males engage the Mula Bandha by lifting up the space an inch above the perineum, forming a triangle. The perineal space becomes indented, domed, and sucked in and up, creating empty space for the front of the pubic bone and sacrum to move toward each other.

The intensity of the Mula Bandha contraction can be carried from 15 - 100 percent and it may be held for as long as possible. The Mula Bandha may be rhythmically engaged and released with each breath. The Mula Bandha can be engaged in most yoga asanas and is very effective in extension asanas such as: *COBRA*, *BRIDGE*, *UPWARD FACING DOG*, and *CAMEL*. Engaging Mula Bandha is not a straining act, but a controlled, focused practice.

The practice of Mula Bandha may appear very simple at first glance, but to fully grasp the subtleties at an awareness level requires several months of persistent practice.

YOGA PRACTICE TIPS

Yoga is a delicate form of body/mind exercise and therapy. Specific yoga asanas assist to realign the joints, increase flexibility, restore normal range of motion, and improve overall posture. Asanas also indirectly balance the nervous, cardiovascular, respiratory, endocrine, and digestive systems. The systems in the body work as a symbiotic unit, where a positive change in one system usually results in a complimentary change in all the other systems. On the other hand, if asanas are incorrectly practiced, serious complications may result in the systems mentioned above. Regular asana, breathing, and meditation practice maintains the physical body in optimum condition, and promotes healing in an unhealthy body.

Here are several yoga practice tips that will enhance your journey of reaching a balanced physical and mental state.

AGE LIMITATIONS: Asanas may be practiced by all age groups, male and female.

AWARENESS: Do not practice the yoga asanas mechanically, be aware of your mental and physical state throughout the practice.

BATHING: Take a cool or lukewarm shower before asana practice to awaken and prepare the mind and body for a focused practice.

BREATHING: Breathing is the mainstay of yoga. Often when the asana becomes difficult, the tendency is to hold the breath without realizing. Keep breathing, even during the most complex asanas. Conscious breathing provides more energy during the asana practice and helps to prevent injury.

CLOTHING: Wear loose, light, non-binding, comfortable clothing; and remove any jewelry, or constricting accessories that may restrict the blood circulation when practicing yoga as the body must bend, twist, or elongate easily. It is helpful to wear regular workout clothes. Leggings and tank tops for women, and a t-shirt or tank top and shorts for men are recommended. Yoga is practiced bare foot.

CONTRA-INDICATIONS: Avoid yoga practice if you are: experiencing fractured bones, suffering from an acute or chronic ailment or disease, or recuperating from an operation. Consult a primary health care practitioner before commencing asana practice.

CONSULTATION: It is advisable to consult your physician before embarking on the journey of yoga. Find out if your body is physically fit to endure all the asanas.

COUNTER-ASANA: It is important that asana practice is balanced, backward bends are followed by forward bends and vice versa, and that whatever is practiced on one side of the body is repeated on the other side. This concept of counter-asana is necessary to bring the body back to a balanced state. Specific counter-asanas are recommended for certain asanas described in this book. However, in some cases, when practicing a particular asana prescribed for therapeutic reasons, a counter-asana may not be needed.

DIET: There are no special dietary rules for asana practitioners although it is healthier to eat natural fresh foods in moderation. Eat foods that digest and assimilate easily and make the body feel energetic.

DISTRACTIONS: Mute the cellular or telephone during asana practice. It is also helpful to silence the thoughts.

EMPTY STOMACH: Practice at least 2 or 3 hours after consuming food to ensure the stomach is empty. This is one reason why early dawn or dusk practice is recommended.

EMPTYING THE BOWELS: It is helpful to empty the bowels and bladder before commencing the asanas.

FLUID REPLACEMENT: Drink plenty of water before, during, and after yoga practice. Keep the body well hydrated. Drink small sips of water at room temperature. A lemonade drink with sugar and salt is very refreshing and balances the metabolites well.

FREQUENCY: Practice yoga daily, if possible, but no less than three times a week. Practicing yoga daily is like feeding nutritious food to the body and the mind daily. The ultimate benefit of yoga arrives when yoga becomes a daily habit in taking care of the body and mind. As the frequency of practice increases, the mind benefits from stress relief, and the body becomes stronger, more flexible, energetic, and balanced.

HAIR: Tie the hair back or in a bun when practicing yoga.

INVERSION ASANAS: Do not practice any inverted asanas if there is excessive gas or fermentation in the intestines, during menstruation, or in the later stages of pregnancy. Those experiencing high blood pressure, cardiovascular disease, or retinal disorders should also refrain from inversion asanas.

LENGTH OF PRACTICE: It is healthy to practice 1 - 1½ hours of yoga every other day, if not daily. If experiencing exhaustion after yoga practice, reassess the length of practice time.

LIMITS: Recognize the limits of the body´s normal range of motion, do not overstretch or force yourself into any asana; do not exceed the body´s capacity.

MAT: Always use a non-slip yoga mat surface, adding stability to the asana practice. The mat prevents the feet, hands, and elbows from slipping and sliding. The contact friction provided by the mat helps the body stretch further without straining to hold slipping limbs. The mat also provides a cushioned, warm insulation, and clean surface between the body and the floor. The yoga mat can easily be rolled and/or folded for use in various asanas, for travel, or to simply carry to yoga class.

MAT MAINTENANCE: The yoga mat is best maintained by wiping it by hand with a soft cloth with vinegar or mild detergent and warm water. Top loading washing machines should NOT be used to clean the mat, the mat can be damaged during the spin cycle. Front loading washing machines may be used if the mat becomes very soiled. Place no more than four mats in a large front loading washing machine with a little mild liquid detergent in cold water. Roll the mat in a towel to gently squeeze the water out, and allow the mat to air or drip dry.

MEDICAL CONDITIONS: Yoga is therapeutic when asanas are practiced to suit your specific needs. Some asanas can be damaging and counter productive. Seek professional advice for your specific body type and condition prior to beginning yoga practice.

MENSTRUATION: It is best to avoid any difficult asana practice during the 2 days of heavy flow. Do NOT practice any inversion asanas, stick to easy, relaxed breathing asanas.

MIRROR: If possible, practice under the direct supervision of a professional teacher, if this is not possible, practice in front of a mirror to maintain proper body positioning. Be aware of proper joint alignment, especially in the ankle, knee, shoulder, and neck regions.

NO STRAINING: Do not exert undue force or overstretch while practicing asanas. Beginners may find the muscles stiff at first, but after several weeks of regular practice the muscles become very supple.

PAIN: The yoga routine should be pain free. If any unusual pain or discomfort is felt, please stop and consult a professional.

PLACE OF PRACTICE: Practice in a well-ventilated room where it is calm and quiet. Asanas may also be practiced outdoors in a pleasant surroundings around nature. Do not practice in a strong wind, in the cold, in the direct sun, around polluted air, or near unpleasant odors. Do not practice in the vicinity of furniture or anything that prevents free fall to the ground, especially while performing inversion asanas. Often accidents occur because of falls against an object.

PREGNANCY: Prenatal Yoga is a perfect time to nourish and positively influence a growing fetus. Just as a wonderful seed when properly cared for with healthy nutrition, air, water, and light blossoms into a flower, then into a delicious fruit; yoga gives the growing child a great head start. In the 9 months in the womb followed by the 3 subsequent years with the mother, the child establishes fundamental rhythm, thought, breathing patterns, and a core value system to cope with in life. After this period, the child becomes a product of its ever-changing environment. The sitting asanas described in this book are very helpful during pregnancy as they stretch open the pelvis, making the delivery process easier. The standing asanas strengthen the legs and thighs, and assist to carry the baby in the womb. The core and Mula Bandha locks are paramount to practice throughout the day during early pregnancy. These locks are helpful in recognizing and releasing tension in the pelvic muscles. During labor this practice also helps to relax between contractions and prevent fatigue. During pregnancy, the body produces the hormone 'relaxin' which increases flexibility in the ligaments and joints. Many asanas become easier to practice as the pregnancy progresses.

RELAXATION: Conclude each yoga practice session with a minimum of 10 - 15 minutes cool down in a relaxation, breathing, or meditative asana.

REST: After every 2 - 3 asana sequences it is helpful to sit silently in *EASY SITTING* or *SITTING ON KNEES* with the eyes closed, being aware of the natural breath, of the parts of the body that have just been stretched, and of any thoughts or feeling that have risen in the mind. After 3 long and easy breaths, continue the practice. This not only rests the body, but also develops awareness of the internal energy patterns, and the mental and emotional processes. This rest period is as important as the asanas themselves and should not be neglected. If extensive fatigue or tiredness is experienced at any point during the asana session, rest in *CORPSE* or *CHILD.*

SEQUENCE OF YOGA ASANAS: In the Yoga Series, it is very important that the asanas be practiced in the order described. They are designed in a sequential pattern for a specific reason where one asana leads and prepares the body for the next without causing any injury.

SUNBATHING: Never practice asanas for extended periods under the direct sun or after a long period of sunbathing as the body temperature is overheated.

SWEATING: It is common to sweat during the practice of yoga. Use a towel to wipe the sweat dry and change into dry clothing before the relaxation asanas to prevent a chill. Do not bathe or shower until the sweat has dried naturally.

TERMINATION OF ASANA: Pain that arises during asana practice should only be temporary and not sharp. If the pain from asana practice persists, then the asana practice may be incorrect. Terminate the asana practice immediately and, if necessary, seek professional care.

TIME OF PRACTICE: Asanas may be practiced at any time of the day, except after meals. In traditional yoga it is recommended to practice asanas two hours prior to dawn, finishing at sunrise, as the environment is quiet and tranquil at this hour. The activities of digestion have stopped, the mind has no deep impressions on the conscious level, and is relatively empty of thoughts at this time. Although the muscles are more stiff early in the morning compared to late afternoon, nevertheless, this time has a unique awakening and refreshing experience. Dusk, or the two hours around sunset, is also a wonderful time to relax, unwind, and rejuvenate.

WALL: It is very difficult to recognize whether the body is in neutral, or rotating. The use of a wall as a reference guide is very helpful to instil neutral positioning during asana practice. In most asanas, alignment is in a linear plane. Always think of lifting and reaching up from the navel to the crown of the head, and grounding down from the navel to the heels.

WATER: Keep the body well hydrated during yoga practice. Drink small sips of water at room temperature.

BREATHING

IMPORTANCE OF BREATHING IN YOGA

The practice of yoga is intimately connected with the breath capacity. The greater the breath capacity, the stronger the quality of the asana practice.

Yoga brings more awareness to the body and breath. Just as levels of flexibility and strength become obvious through asana practice, so do the different types of breathing patterns. Breathing can be quiet or noisy, heavy or soft, relaxed or tense, deep or shallow, and energizing or depleting.

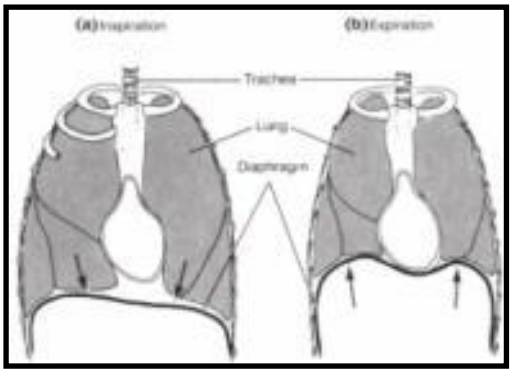
Yoga practice reveals the power of breath on the body and mind, and vice versa. When an individual is tense or guarded, for example, the tendency is to hold the breath and then take fast, shallow breaths. Relaxed breathing is slower and softer, and has a steady, gentle, even pattern. This deep, slow, relaxed breathing helps relax the mind and provides immediate energy to the body.

THE DIAPHRAGM MUSCLE

The term diaphragm literally means 'through a fence'. The diaphragm muscle sits in the middle of the trunk and regulates the pattern of breathing. This large dome-shaped muscle separates the heart and lungs above it from the abdominal cavity and digestive organs below. The muscle fibers extend inward, toward the center of the body and insert into a central tendon that has no attachments to the skeleton. The diaphragm muscle coordinates the amount of breath (air) entering and leaving the lungs.

BREATHING MECHANICS

The diaphragm works like a balloon. When relaxed, the diaphragm is curved upward like a dome. On inhalation, the diaphragm contracts, pushes the intestines down into the abdomen and lengthens the chest cavity above. As the diaphragm contracts, lowers, it takes on a funnel shape, creating a vacuum effect in the lungs causing an increased volume of space. The lungs have no capacity to expand or contract on their own, they simply respond to the size and shape of their container, the chest cavity. When the chest expands air rushes in to fill the vacuum in the lungs. When the container shrinks, the lungs are compressed and air is pushed out. The lower the diaphragm distends on contraction, the greater the resulting vacuum and subsequent air filling in the lungs. When air enters the lungs, the muscles in the ribs and chest contract, causing them to lift up and away from the body. This action also assists the diaphragm by increasing the pressure outside the lungs, allowing more air to inflate the lungs. The amount of air exhaled and the rate of expulsion is of equal importance. When the diaphragm relaxes and the abdominals contract, a recoil action results in the lungs and ribs. This recoil action decreases the pressure outside the lungs expelling air out, much the same way as a balloon expels air.



HOW TO BREATHE

In basic yoga practice breathing in and out through the nose extends the length of respiration. When breathing out of the mouth, the exhalation can become very short. Often, in difficult poses there is a tendency to hold the breath completely. Avoid holding the breath by keeping the awareness on the breath. As a general rule, breathe through the nose in an even, rhythmical pattern, extending the duration of the exhalation. Allow the breath to flow in a pattern of an outgoing and incoming ocean wave. In certain asanas it is also helpful to exhale on a vocal chant which focuses the mind in the present moment, lengthening the duration of exhalation.

WHAT EFFECTS BREATHING PATTERNS

Breathing patterns are directly related to optimum posture. Toned and supportive spinal muscles assist in deep rhythmic breathing. The spine forms a strong column that supports the expansion of the ribs up and out. The erector spinae muscles run up each side of the spine acting like guy-wires supporting the spine and rib cage. When optimum posture is lost the body curves over in a slump, the head tips forward, and the chest collapses. Dysfunctional posture significantly limits the capacity to breathe deeply. The collapsed chest puts pressure on the diaphragm, limiting its ability to expand and contract.

Breath movements can also be limited by short or tight abdominal muscles. Chronic pain in the low back, pelvis, or abdomen also effects breathing patterns as this restricts movement of the diaphragm. In fact, most pain, chronic or acute, is accompanied by abnormal breathing patterns.

BENEFITS OF DIAPHRAGMATIC BREATHING

• Utilizes the lower lobes of the lungs
• Causes equal expansion of the alveoli in the lungs
• Improves lymphatic drainage from the lower lungs
• Massages the liver, stomach, intestines, and other organs that lie immediately below the diaphragm
• Exerts a positive effect on the cardiac functions and coronary supply
• Improves oxygenation of the blood and circulation
• Relaxes the abdomen
• Slows the fluctuations of the mind

ALIGNMENT & POSITIONING

It is important to keep the body in alignment during asana practice to prevent joint injury and to improve the quality of the practice. Be conscious of the following:

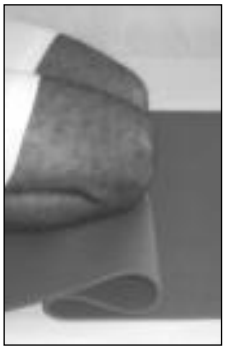
ARM AND HAND ALIGNMENT: When raising the arms overhead, keep the arms parallel with the ears and lightly contact the tips of the thumbs or face the palms inward.

CHIN LOCK AND NECK RETRACTION: Maintain a neutral spine in most asanas to avoid vertebral damage of the facets in the neck. In neutral spine the chin and neck are drawn back, not down.

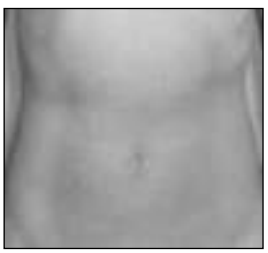
FEET POSITIONING: Flare the toes and ground them into the mat.

HAND POSITIONING: Flare the hands and fingers open, flattening them as pancakes into the mat.

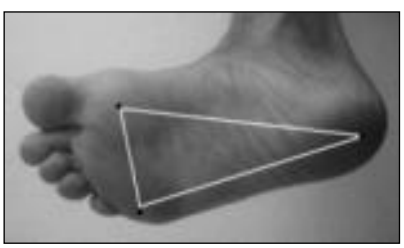
KNEE AND ANKLE ALIGNMENT: In asanas such as *WARRIOR* where the knee is bent, align the knee directly over the ankle to avoid excessive stress on the knee joint.



KNEELING: When sitting on the knees, place the body weight on the tibial tuberosity, the thick bumpy bone just below the kneecap. Do not place the body weight on the kneecap. Double fold the mat to soften the area below the knees for protection.



MOVEMENT FROM THE NAVEL: Use the navel as the center of axis in any asana where there is movement. Pivot movement from the navel.



PLACEMENT OF THE BODY WEIGHT IN THE FEET: In standing asanas, distribute the body weight in a triangular format. Lift up on the toes whenever possible, fully grounding the feet.

PLACEMENT OF THE BODY WEIGHT IN THE HANDS: Do not place the body weight in the wrists in asanas where the weight is distributed in the hands. Place the body weight in the palms in a triangular format.

SHOULDER AND WRIST ALIGNMENT: In asanas such as *NEUTRAL TABLE*, align the shoulders directly over the wrists to avoid excessive strain on the wrist joints.

SHOULDER BLADE MOVEMENT: Keep the shoulder blades free, floating, and retracted. Lift the sternum up and out, away from the body. This position automatically retracts the shoulder blades.

AWARENESS DURING ASANA PRACTICE

There are 4 sequential ways to direct awareness during asana practice:

BODY: The awareness is focused on the actual physical movements, the interaction between the various components of the body, i.e. bones, joints, ligaments, muscles, abdominal organs, etc.. This method of practice includes single-pointedness in the physical body.

MIND: The focus is placed on disassociating from the thoughts arising in the mind as the body stretches further into the asana.

BREATH: The body and mind focuses are integrated through breath. In addition to the awareness of physical and mental movements described above, individual movements are synchronized with the breath. The movements become slower, which in turn slows the brain waves, increasing the breath capacity, further enhancing relaxation and awareness. Breathing should be practiced as indicated in the description of each asana.

SOUND: The final practice is to coordinate and integrate the following: reaching with the body, stilling the mind, enhancing the breath, and releasing sound. In each asana in Sound Body YOGA the breath is exhaled on the mantra 'AUM', uniting all the participants with one sound and synchronous breath.

WHAT MAY BE EXPERIENCED FROM YOGA PRACTICE

Beginners may experience a mild soreness or achiness the day following each practice session. This soreness is due to the release of built up toxins and lactic acid. The discomfort is short-lived, and with regular practice, it too shall pass.

The body may feel lethargic or tired during the initial weeks. The body is detoxifying, cleansing, and regenerating.

Some individuals have extra energy after their yoga practice, making it difficult to fall asleep. If this happens, practice yoga in the morning. This heightened state of energy will balance in a few days.

Yoga directly effects the biochemistry of the body. Many individuals experience a change in their appetite, an increase in urination, or regular bowel movements. Keep the body hydrated.

Peaks and valleys are common to all yoga practices. Some days the body will be very strong and on others very flexible. There may be weeks where there is no significant change at all. Continue the practice persistently.

ASANA CATEGORIES

RELAXATION ASANAS

The importance of Relaxation Asanas cannot be over-emphasized. They must be practiced before and after the asana session and at any time when the body becomes tired. The asanas may appear very easy at first, yet to practice them correctly is difficult as the tension in all the muscle groups of the body must be consciously released. The muscles often seem to be completely relaxed but, in fact, tightness still remains. Even during sleep, relaxation is elusive. Relaxation Asanas give the body and mind the rest it badly craves. Constant postural abnormalities put excess strain on the muscles around the spine which rarely relax even in the supine position. In these cases, the prone relaxation asanas are very relaxing to the spine and related structures. Relaxation Asanas may be practiced during any time of the day for rejuvenation. They may be combined with daily relaxation activities.
Relaxation Asanas fall into 5 categories: *kneeling, sitting, standing, supine, and prone.*

SITTING ASANAS

Sitting Asanas stretch the entire spine, enhance flexibility, and often relieve lower back complications caused by compression in the spine. Seated flexion stretches elongate the lower back and hamstring muscles. The Sitting Rotational Asanas stimulate the digestive system, and aid in massaging the abdominal organs. They also improve lateral flexibility in the spine, removing stiffness in the neck and shoulders. Sitting Relaxation Asanas calm the mind, bring a fresh supply of oxygen to the brain, and assist in rejuvenation.
Sitting Asanas fall into 4 categories: *Sitting on the gluteals, forward flexion, and spinal rotation.*

KNEELING ASANAS

Kneeling Asanas allow for coordinated pivoting movement between the hips and the spine. Flexion and extension movements can easily be made while being in close contact with the mat. In these asanas the spine can move in a coordinated manner while remaining in optimum posture. Kneeling Asanas are generally recuperating and relaxing, and are beneficial for the reproductive and digestive systems. Extra care must be taken to double fold the mat under the knees when in this asana position.
Kneeling Asanas fall into 4 categories: *kneeling, flexion, extension, and relaxation.*

STANDING ASANAS

In general, this series of asanas have a stretching and strengthening effect on the back and lower extremity muscles. Standing Asanas are particularly helpful in correcting problems for those who spend a lot of time sitting, and have stiffness or pain in the back. These asanas improve posture, balance, and muscular coordination. They also strengthen the muscles used to keep the back erect during meditation, increasing the oxygen capacity. Many Standing Asanas are influential in developing body strength and balance. Those individuals suffering from low back pathologies will find great comfort in simply practicing the basic *GAZE*.
Standing Asanas fall into 5 categories: *standing, balance, rotation, extension, and inversion.*

BALANCE ASANAS

Balance Asanas develop the cerebellum, the brain center that controls the body in motion. Many of us are uncoordinated in our movements. The body constantly compensates for the lack of balance which is why optimum posture is not maintained. This inefficient method expends maximum effort and energy with minimum results, creating considerable additional strain on the whole physiological system. Balance Asanas induce physical balance, stilling unconscious movement. As the moving body attains balance it becomes increasingly free to rely on other forces, such as gravity to support and propel it, instead of working against it. This way, the body conserves its own energy and achieves grace and fluidity of motion.

As well as inducing physical balance, Balance Asanas develop an equilibrium of the mind, giving a more mature outlook on life. The focus required to perform these asanas with steadiness and stillness assists in developing concentration and balance at the emotional and mental levels. Balance Asanas revitalize the nervous system and assist in removing stress and anxiety.

Balance Asanas may be difficult to perform at first if a sense of balance has not been developed, however, the body is very adaptable and progress is made very quickly with regular practice. When practicing these asanas, it is most important to steady the mind through concentration on a fixed point. Gazing at a spot or mark on the wall allows the body to maintain seemingly difficult positions for long periods of time.

Balance Asanas fall into 2 categories: *standing (combinations of balancing on the hands, feet, or knees) and inversions.*

EXTENSION ASANAS

Extension, or Backward Bending Asanas, are postures that turn the body out to face the world. They are stimulating and extroverting. Inhalation is encouraged because they expand the sternum and ribcage out. These asanas are also dynamic postures which move counter to gravity, and therefore, require strength and energy to practice.

Extension Asanas challenge the rigid body armour as they stretch the abdominal muscles and assist in toning and strengthening the muscles that control the spine. The spinal column is a 'stack pile' of vertebrae and discs. Groups of muscles extend along the spinal column, covering and supporting it from all sides. Maintenance of the spine in a straight and aligned position, despite all movement, depends totally on the balanced, supportive contraction and tone of these muscles. The majority of backache has its origin in muscular imbalance. If these imbalances are prolonged, then the 'stack pile' of the vertebral column misaligns, the ligaments are strained, and symptoms of spinal pathologies begin to manifest.

Regular practice of Extension Asanas can prevent postural defects and neuromuscular imbalances of the vertebral column. As with all asanas, it is important to perform these practices with proper control and synchronization of breath so the whole group of muscles are uniformly contracted.

Extension Asanas often invoke fear in beginners. Not knowing where the body is going can be a frightening experience. Often the body does not have strength or flexibility to support itself in these positions because it is working against the forces of gravity. A great way to develop confidence and strength in Extension Asanas is to begin practicing Extension Asanas against the wall. A simple practice is to stand in OPTIMUM POSTURE, 12 - 18 inches facing away from the wall, lean back, reach the arms and hands overhead, and place the palms against the wall, fingers pointing down. Push the hips and sternum away from the wall, straightening the arms. Let the neck and head drop back gently and keep the mouth closed. As this practice becomes easier. Walk the feet further away from the wall and reach down lower with the palms keeping the arms straight.

Extension Asanas fall into 4 categories: *standing, kneeling, supine, and prone.*

FLEXION ASANAS

As a general rule, Flexion Asanas are easier to practice compared to Extension Asanas. Flexion Asanas, or Forward Bending Asanas, are passive in that the force of gravity is used to stretch the specific muscle groups. Extension Asanas move the body against gravity, while Flexion Asanas use gravity to help release tension, reaching and lengthening the muscle fiber. This is a process of curling in or going inward, counteracting the extroversion and dynamic opening up of the Extension Asanas. In forward flexion the chest and abdomen are compressed in exhalation, inducing a state of relaxation.

In our sedentary lifestyles of little or no exercise, we often become stiff and inflexible, unable to bend forward easily. Our minds are becoming increasingly active while our bodies have become physically more rigid. Flexion Asanas are very effective to relax both the mind and body. In the East, Forward Bending Asanas are also associated with lowering the self, bowing, projecting the act of humbleness. The inability to bend forward can indicate a personality which is arrogant, stiff, proud, or stubborn.

Flexion Asanas primarily loosen the spine, restoring optimum health, increasing vitality. These Flexion Asanas direct the spine into the primary curve, or the shape the spine originates within the womb. In Flexion Asanas the articulations of the vertebrae are separated, stimulating the nerves, improving circulation around the spine, restoring the natural flow of the cerebral spinal fluid (CSF) nourishing the spinal cord. Normal flow of the CSF balances the activity in the brain. Flexion Asanas are very important in restoring and maintaining flexibility and strength in the spine. These asanas act by compressing and massaging the abdominal structures, influencing the digestive and elimination organs.

Most day-to-day activities involve flexion movement of the limbs. Although the body joints flex, they do not stretch and flex fully to their end range of motion. For example, one may bend over to tie shoelaces for a few seconds but the low back and hamstring muscles do not get a complete stretch. The axis of pivoting for most Flexion Asanas is the pelvis, not the waist. Bending from the hips gives greater flexibility of movement and creates a stronger pressure against the abdomen. Do not force the back to bend further forward then present flexibility allows. The muscles should be relaxed, allowing gravity and the exhalation to stretch and move the body toward the feet. With regular practice, even the most rigid spine develops flexibility. Bending and reaching the head toward the feet creates a great stretch in the low back. The greatest culprit or the weakest link invariably restricting flexion movement is the hamstring muscle group. In most individuals the hamstring muscle is generally weak and tight. Great focus and concentration needs to be addressed to these powerful muscles in the back of the thighs. They need not only be stretched but also strengthened, alternating with various yoga asanas.

It is not necessary to practice all the Flexion Asanas one after the other. Begin with the easier preliminary practices and gradually build up to the more advanced ones as the spine becomes more flexible.

When practicing Flexion Asanas from a sitting position, particularly those in which the legs are separated, it is helpful to sit with the gluteals and perineum on the mat, rather than on the coccyx. The correct position is obtained by sitting with the legs slightly separate and placing the hands on the mat, on either side of the hips, with the fingertips pointing forward. Then, using the arms and hands as support, lift the buttocks slightly from the floor and, while lowering them, tilt the pelvis forward. Always lengthen the spine and reach out and away when practicing flexion asanas.

Flexion Asanas fall into 4 categories: *standing, kneeling, sitting, and inversion.*

INVERSION ASANAS

Inversion Asanas reverse the action of gravity on the body. Instead of everything being pulled down toward the feet, the orientation shifts toward the head. On a mental level, Inversion Asanas turn everything upside-down, throwing a new light on old patterns, giving a new perspective. Generally these asanas improve health, reduce anxiety and stress, and increase self-confidence. They also increase mental power, concentration, and the capacity to sustain large workloads without strain.

Inversion Asanas encourage a rich blood supply to the brain, nourishing the nervous tissue, and flushing out toxins. Blood and lymph accumulated in the lower extremities and abdomen are drained back to the heart, then circulated to the lungs for oxygenation, cleansed, and recirculated back to the rest of the body. This process nourishes the cells in the entire body. While in the Inversion Asana, the breath becomes slow and deep, maximizing the exchange of oxygen and carbon dioxide, encouraging proper respiration.

Inversion Asanas fall into 4 categories: *kneeling, standing, supine, and inversion.*

PRONE ASANAS

Prone Asanas are dynamic postures which move counter to gravity, requiring energy and strength to practice. In the prone position the front of the body and face are in direct contact with the mat, positioning in a surrendering posture. Lifting the body or limbs up from a neutral prone position against gravity requires tremendous effort, coordination, and concentration. Using the breath as a fulcrum, the body can sustain in a Prone Asana much longer with great stability. Prone Asanas are exhausting to practice but rejuvenating in the relaxed phase.

Prone Asanas fall into 3 categories: *extension, relaxation, and flexion.*

SUPINE ASANAS

Supine Asanas are generally rejuvenating. When lying on the back, face up, in the supine position the body rests more comfortably with the assistance of the equal balance of gravitational force. Supine Asanas are generally more passive and easier to practice compared to Prone Asanas. They are often used at the end of the yoga session to unwind and rejuvenate the body before sinking into *CORPSE*. The Supine Asanas are very helpful for individuals experiencing low back complications. The spine can be securely grounded into the mat while the surrounding areas are systematically stretched or strengthened.

Supine Asanas fall into 3 categories: *flexion, rotation, and extension.*

ROTATION ASANAS

Rotation Asanas are very effect for spinal rejuvenation. Every asana series must include at least one asana from this group, preferably following the Flexion and Extension Asanas. The twist imposed on the spine and the whole trunk exercises and stretches the muscles, making the spinal column more flexible, stimulating the spinal nerves. It also has a strong influence on the abdominal muscles, alternately stretching and compressing the abdominal contents, as the body twists from one direction to the other. Beginners must be very careful to gently twist the trunk only to the point where the body comfortably allows.

Most of the Rotation Asanas stimulate the region around the navel. This nourishes organs such as the pancreas, kidneys, stomach, small intestines, liver, and gall bladder; relieving associated disorders. These asanas have a strong influence on the total health and vitality of the body.

Rotation Asanas assist in resolving complicated problems that appear too difficult to solve. These asanas often untangle physical knots giving insight and inspiration, helping the mind to systematically approach the tangled knots of life.

Rotation Asanas fall into 3 categories: *sitting, supine, and standing.*

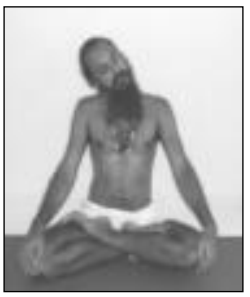
For everything there is a season,
And a time for every matter under heaven:
A time to be born, and a time to die;
A time to plant, and a time to pluck up what is planted;
A time to kill, and a time to heal;
A time to break down, and a time to build up;
A time to weep, and a time to laugh;
A time to mourn, and a time to dance;
A time to throw away stones, and a time to gather stones together;
A time to embrace, And a time to refrain from embracing;
A time to seek, and a time to lose;
A time to keep, and a time to throw away;
A time to tear, and a time to sew;
A time to keep silence, and a time to speak;
A time to love, and a time to hate,
A time for war, and a time for peace.

- Ecclesiastes 3:1-8 -

RELAXATION ASANAS

WARM UP & COOL DOWN ASANAS

Sitting, Relaxation



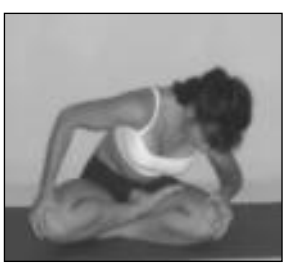
NECK MOVEMENTS **GREEVA SANCHALAN asana**

Sit in *EASY SITTING, SIITING ON KNEES*, or *LOTUS,* in optimum posture. Close the eyes and slowly move the head in a circular, clockwise motion, do not strain. Feel the muscles in the entire neck stretch fully. Synchronize 3 full cycles with 3 respirations. Repeat in a counter-clockwise direction. In the next sequence, side bend the neck to the right, maintain the asana for 3 respirations, and then repeat on the other side. Next, forward flex the head bringing the chin toward the chest and maintain the asana for 3 respirations. Extend the neck back, chin up, and maintain the asana for 3 respirations.

Precaution: Practice the neck movements very gently as there are several sensitive nerves and arteries in the neck region which may be damaged if the movement is rapid and excessive.

SHOULDER ROTATIONS **SKANDHA CHAKRA asana**

Sit in *EASY SITTING, SITTING ON KNEES*, or *LOTUS*, in optimum posture. Place the fingers on each shoulder. Rotate both elbows together in a backward circular motion. Synchronize 3 full cycles with 3 respirations. Repeat by rotating both elbows in a forward circle. In the next sequence, alternate simultaneously rotating the right elbow forward and the left elbow backward. Synchronize 3 full cycles with 3 respirations. Repeat in the other direction.



SUFI ROLLS **UPAVISTHA CHAKRA**

Sit in *EASY SITTING* or *LOTUS*, in optimum posture. Place the palms on the knees. Bend in full forward flexion and slowly rotate the upper body in a circular, clockwise direction to right lateral flexion, extension, left lateral flexion, and back to forward flexion. Increase the arc of movement with each sequential circle. Synchronize 5 full cycles with 5 respirations. Keep the eyes closed. Repeat in the other direction.

COW′S FACE **GOMUKH asana**

Sit in *EASY SITTING* or *SITTING ON KNEES*, in optimum posture. Internally rotate the left shoulder and place the back of the left hand on the spine between the shoulder blades. Reach the right hand over the right shoulder and clasp the fingers of the left hand. Press the head against the raised elbow. Pull the right elbow toward the crown of the head and the left elbow to the sacrum. Keep the eyes closed. Maintain the asana for 15 respirations. Repeat on the other side.

REVERSE PRAYER **PARIVRITTA NAMASTE asana**

Sit in *EASY SITTING* or *SITTING ON KNEES*, in optimum posture. Internally rotate the left shoulder and place the back of the left hand on the left side of the spine, next internally rotate the right shoulder and place the back of the right hand on the right side of the spine. Approximate both the palms together contacting the wrists with the fingers pointing up toward the head. The thumbs are touching, and the forearms are parallel with the mat. Gaze at a fixed point or keep the eyes closed. Maintain the asana for 10 respirations.

ANKLE ROTATION **GOOLF CHAKRA asana**

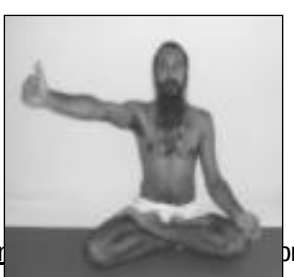
Sit in *SEATED BASE*, feet separated, legs extended, and heels in contact with the mat. Curl the toes, rotate the right foot clockwise from the ankle synchronizing 10 cycles with 10 respirations. Repeat in a counter-clockwise direction. Gaze at the toes. Repeat the sequence with the left foot.

PALMING **HAST ANKHA asana**

Sit in *EASY SITTING, SITTING ON KNEES*, or *LOTUS*, in optimum posture with the eyes closed. Vigorously rub the palms together until they become hot. Place the palms gently over the eyelids and massage the outside of the eyes. Feel the warmth and energy transmit from the hands into the eyes, relaxing the eye muscles. Remain in this position until the heat from the palms is absorbed by the eyes. Rub the hands and repeat this procedure 2 more times.

EYE GAZING **NASIKAGRA DRISHTI asana**

Variation 1: Sit in *EASY SITTING*, *SITTING ON KNEES*, or *HALF LOTUS* in optimum posture. Place the left hand on the left knee and reach out with the right arm straight, at eye level. Hold the right hand in a fist with the thumb pointing up to the sky. Gently make a circular arc motion with the right arm and follow the thumb with the eyes. The head remains still. Synchronize 5 full cycles with 5 respirations. Repeat in the other direction. Next, place the right thumb directly in front of the nose, focus on the thumb nail, exhale and take the thumb away in a straight line parallel with the mat, inhale and take the thumb back. Repeat this sequence 5 times with both hands.



Variation prayer Keep and gaze at the tip of the nose, or gaze at the eyebrow center. Maintain the asana for 10 respirations.

sound body Yoga

GAZE

Standing, Relaxation

VERBAL SUGGESTIONS

• Engage the core at all times during the asana.
• Retract the chin and shoulder blades.
• Distribute the weight evenly between the balls and heels of the feet.
• Maintain optimum posture throughout the asana.

INITIAL POSITION

Stand in optimum posture, feet hip-width apart.

POSITION, MOTION, and BREATH

Lift the toes, spread them apart, then lower them down with the weight evenly distributed and grounded in the mat. The hands are by the sides in anatomical neutral position, and the palms face forward. Feel total awareness of the body, and do not be distracted by sounds, smells, tactile impulses, or stray thoughts. Engage optimum posture, core lock, and Mula Bandha. Keep the body tall. Maintain balance in the bottom of the feet. Lift up from the kneecaps, squeeze the thighs and gluteals, keep the legs straight and knees unlocked. Inhale, lift up from the navel, stretch the crown of the head up, and lengthen the spine. Exhale, draw the shoulder blades down and back, and lift the sternum. Reach down with the arms and stretch the fingers open. Gaze at a fixed point. Maintain the asana for 5 respirations.

PRIMARY GOALS

• Stabilize the optimum neutral standing posture
• Encourage equal balance on both sides of the body
• Coordinate the movement of breath, stillness of mind, and balance of posture

COMMON OVERSIGHT

Avoid distractive thoughts that prevent uniting the breath with the stillness of the body.

DRISHTI asana

BENEFITS

- Stabilizes the pelvis and core
- Develops strength in the ankle and feet muscles
- Establishes balance coordination
- Improves posture

MODIFICATIONS

Intermediate – *GAZE PRAYER:* Inhale, place the palms together into prayer position over the heart with the forearms linear. Exhale, lower the shoulders down, retract the chin, squeeze the hands together and lift the crown of the head up. Close the eyes. Maintain the asana for 5 respirations.

Between each standing asana neutralize in *GAZE* before proceeding to the next asana. Maintain a particular focus on either the navel, the tip of the nose, the midpoint between the eyebrows, or a fixed point during yoga practice. Fixing the gaze on a particular point is helpful in steadying the mind. Wandering eyes are accompanied by distracting thoughts. Traditionally, yoga was practiced in solitude, not in groups, for a particular reason. In a yoga class with many students there are countless distractions (such as comparing one´s self to others or wondering who just entered the room). No matter where one is, thoughts continuously arise. Concentrating on the breath, with a fixed gaze at a point, enables one to observe these thoughts without being involved and distracted by them. In time, the mind begins to silence, a degree of balance develops, and one is no longer tossed around by emotional responses to situations.

CONTRA-INDICATIONS

None

CHILD

Kneeling, Prone, Inversion, Relaxation

VERBAL SUGGESTIONS

• The pelvic and abdominal muscles must remain active during the entire asana.
• Pivot from the hips when bending forward.
• The chin is retracted into the neck and shoulders are drawn back during the entire asana.
• Maintain a focus on the breath.

INITIAL POSITION

Sit upright on the knees and heels, and lower the forehead to the mat.

POSITION, MOTION, and BREATH

Kneel on the mat with the tops of the feet flat on the mat. The big toes are together and heels separated. Lower the gluteals down to the inside surface of the feet. The heels touch the sides of the hips. Inhale, lengthen the neck, retract the chin, and lift up from the crown of the head. Lift the sternum and draw the shoulder blades further down. Place the palms face down beside the head, elbows bent. Close the eyes. Maintain the asana for 10 respirations.

PRIMARY GOALS

- Increase flexibility in the hips
- Elongate and stretch the spine
- Enhance the breath

COMMON OVERSIGHT

Practice these asanas to align the body, internalize the focus, and restore energy. Do not rush in and out of these asanas. Surrender the forehead and thoughts to the mat and let go tension. 0

BAL asana

BENEFITS

- Stabilizes the pelvis and hips
- Relaxes the body and mind
- Elongates the spine from the sacrum to the base of the skull
- Facilitates mental and physical balance without causing strain or pain
- Restores energy
- Assists in digestion

MODIFICATIONS

Beginners – *FETUS*: From *CHILD*, roll to one side and rest the head on the folded hands.
Intermediate – *RABBIT:* From the final position in *CHILD*, inhale, internally rotate the shoulders, reach back, and grasp the heels with the hands. Exhale, squeeze both the arms into the body and approximate the head to the knees. Close the eyes. Maintain the asana for 10 respirations.
Advanced – *HARE:* Sit upright on the knees and heels, inhale, reach the arms overhead, palms face forward. Lengthen the neck, retract the chin and lift up from the crown of the head. Lift the sternum and draw the shoulder blades further down. Engage the core, exhale, pivot from the hips and lower the forehead to the mat. The arms fully extended in front, and the palms are face down on the mat. Close the eyes. Reach forward with the extended fingers and lower the tailbone into the mat. Maintain the asana for 10 respirations.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: high blood pressure or retinal disorders.

PRECAUTION

When sitting on the knees, place the body weight on the tibial tuberosity, the thick bumpy bone just below the kneecap. Do not place the weight on the kneecap. Double fold the mat to soften the area below the knees for protection.

DIAPHRAGMATIC BREATHING

Supine, Relaxation

INITIAL POSITION

Lie face up, knees bent, and palms face up beside the body.

POSITION, MOTION, and BREATH

Retract the neck and shoulder blades and maintain optimum posture. Place the right palm below the navel, the left palm over the center of the heart, and breathe through the nose. Observe the spontaneous breath without controlling it in any way, allow it to be absolutely natural. The right hand rises and falls with every breath, and there is no movement in the left hand. Try not to expand the chest or move the shoulders. Close the eyes. Breathe with a slow, deep, even rhythm. Inhale deep, dropping the diaphragm as much as possible without expanding the rib cage. Maintain the asana for 5 respirations.

PRIMARY GOALS

- Engage the diaphragm and increase the quality and quantity of breath

COMMON OVERSIGHT

There may be a feeling of light-headedness due to the extra breath. Breathe slow and deep.

SWAS asana

VERBAL SUGGESTIONS

- Relax the abdomen.
- Be aware of each inhalation and exhalation.
- Breathe only through the nose.

BENEFITS

- Massages the abdominal organs
- Relaxes the body and mind
- Increases and improves the exchange of incoming oxygen and outgoing carbon dioxide gases during respiration

Most individuals loose the technique to breathe properly after the age of three. Yoga practice provides a wonderful opportunity to re-learn the connection between breath, posture, and movement.

CONTRA-INDICATIONS

None

CORPSE

Supine, Relaxation

INITIAL POSITION

Lie face up, legs extended, and arms by the sides.

POSITION, MOTION, and BREATH

The feet are relaxed, hip-width apart. The palms are face up, and the shoulder blades are comfortably retracted in optimum posture. The head and spine are in a straight line and the chin is retracted. Close the eyes and be aware of the natural rhythmic breath flow without controlling it in any way.

PRIMARY GOALS

- Relax the entire body
- Regulate the rhythm of breath
- Bring awareness of stresses in the body and mind

COMMON OVERSIGHT

Do not be distracted by sounds and thoughts. Breathe slow and deep, focusing inward. Maintain this asana for at least 5 – 10 minutes to experience the full benefits.

SHIV asana

VERBAL SUGGESTIONS

• Check the entire body for signs of tension and relax muscles that are tense, tight, or contracted.
• Use a wiggling or rocking motion to relax these muscles.
• Be aware of each inhalation and exhalation.
• Breathe only through the nose.

BENEFITS

• Relaxes the body and mind
• Increases and improves the exchange of incoming oxygen and outgoing carbon dioxide gases during respiration
• Decreases thoughts, stress, and tension

It is extremely essential to end every yoga asana session with *CORPSE*. This asana can also be used briefly in the beginning or middle of every session to recognize areas requiring relaxation.

RE-POSTURING: Lying in *CORPSE* is a wonderful way to re-align the body postural mechanics. By positioning the body in anatomical optimum posture there is minimum stress on the body joints and muscles. Maintaining this posture for at least 10 –15 minutes re-educates the body (hardware) and mind (software) to adapt to this comfortable and stress-free posture.

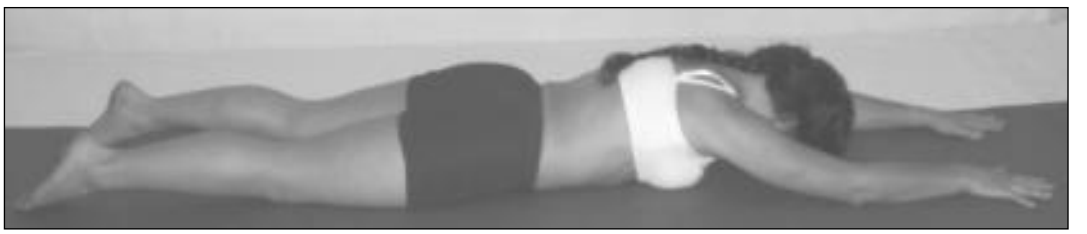
CONTRA-INDICATIONS

None

sound body Yoga

REVERSE CORPSE

Prone, Relaxation



VERBAL SUGGESTIONS

• Check the entire body for signs of tension, and relax muscles that are tense, tight, or contracted.
• Use a wiggling or rocking motion to relax tension in the muscles.
• Be aware of each inhalation and exhalation.
• Press the navel into the mat on every inhalation and lengthen the duration of respiration.
• Breathe only through the nose.

INITIAL POSITION

Lie face down, forehead on the mat, arms overhead, and palms face down.

POSITION, MOTION, and BREATH

The tops of the feet rest on the mat, hip-width apart. Inhale and fully extend the arms overhead, parallel with the ears. The fingers are separated and grounded. Exhale, retract the shoulder blades, and stretch the toes away from the body. Relax the body and mind from any distracting activity. Close the eyes. Be aware of the natural rhythmic breath flow without controlling it in any way. Feel the navel press into the mat on inhalation.

To return to seated position, increase the depth of the breath, move the fingertips and toes, exhale, and roll to the right into *FETUS*. Inhale and slowly rise to a seated position. The eyes remain closed throughout this movement.

PRIMARY GOALS

• Relax the entire body
• Regulate the rhythm of breath
• Be aware of stresses in the body and mind

COMMON OVERSIGHT

Do not be distracted by sounds and thoughts. Breathe slow and deep, focusing on the navel area. Maintain the asana for at least 5 – 10 minutes to experience the full benefits.

BENEFITS

- Relaxes the body and mind
- Increases and improves the exchange of incoming oxygen and outgoing carbon dioxide gases during respiration
- Decreases thoughts, stress, and tension
- Aligns the body posture
- Elongates the spine

MODIFICATIONS

Reverse Corpse 2: The arms may be folded with the forehead resting on the mat or on the forearms.

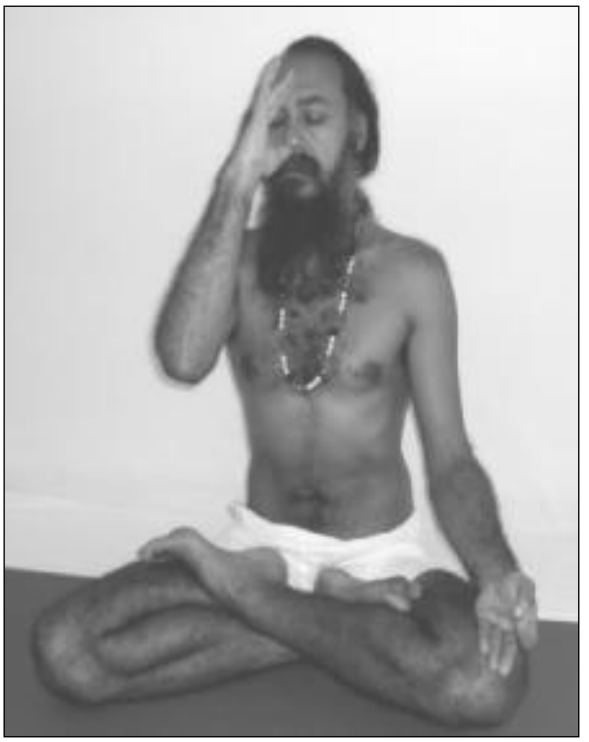
This is an extremely powerful alternative to end a yoga asana session. *REVERSE CORPSE* can also be used briefly in the beginning or middle of every session to recognize areas requiring relaxation.

CONTRA-INDICATIONS

None

ALTERNATE NOSTRIL BREATHING

Sitting, Relaxation



VERBAL SUGGESTIONS

- Maintain an optimum seated posture throughout the asana.
- Retract the chin into the neck, and expand and lift the rib cage during the entire breath sequence.
- Concentrate on balancing the right and left sides of the body.
- Keep a focus on the breath, and do not be distracted by thoughts.
- Do not force the breath, allow the air to gently draw into the nostril.
- Feel the diaphragm drop on the inhalation.

INITIAL POSITION

Sit upright, cross-legged, or on the knees.

POSITION, MOTION, and BREATH

Maintain optimum seated posture and gaze at the eyebrow center or close the eyes. Take the right hand and gently place the thumb against the right nostril. Inhale slowly through the left nostril as deep as possible and sustain the breath for a count of 3. Close the left nostril with the right ring finger, simultaneously release the thumb from the right nostril and exhale fully out of the right nostril. Sustain the exhalation for a count of 3. Inhale in the right nostril and gently press the thumb against the right nostril. Sustain the breath for a count of 3 and exhale fully out of the left nostril. This is one cycle. Repeat for 10 cycles.

PRIMARY GOALS

- Optimize the function of both sides of the brain
- Relax and balance the body and mind

COMMON OVERSIGHT

It is important to maintain an optimum seated posture. Practice *PRANAYAMA* after yoga and before meditation.

PRANAYAMA asana

BENEFITS

- Balances the natural breathing cycle
- Alleviates headaches
- Increases the breath capacity
- Reduces the effects of stress
- Facilitates mental and physical balance without causing strain or pain
- Enhances mental clarity

Although breathing is mainly an unconscious process, the quantity, duration, and flow of breath can be managed. Mastering the flow of breath forms a bridge between the conscious and unconscious areas of the mind. The practice of *PRANAYAMA* releases the energy trapped in nervous unconscious mental patterns toward creative and positive activity.

PRANAYAMA is a unique practice that balances breath between the two nostrils. Normally the flow of breath alternates from one nostril to the other at various times during the day. In a healthy person the breath will alternate between nostrils every 2 - 3 hours. Most of us are not in optimum health so this time period varies considerably and may sometimes fluctuate between 4 - 6 hours, creating imbalance, draining energy in the body and mind.

The breath flow in nasal cycle corresponds with brain function. The right hemisphere, or the right side of the brain, fosters the abstract, creative, and emotional nature, influenced by the left nostril. The logical, rational, mental, and numeric thought is accomplished by the left hemisphere and responds to the flow of the right nostril.

As a rule, when the right nostril is restricted, the result is mental and nervous disturbance, and if the left nostril is involved, there is chronic fatigue and reduced creative energy.

CONTRA-INDICATIONS

Do not practice *PRANAYAMA* if the nasal passages are blocked due to a cold. During the infectious period of a cold, forced breathing through the nose may lead to complications.

PRECAUTION

Be slow and rhythmic in the breathing. There may be a sensation of dizziness or light headedness due to the excessive intake of oxygen.

sound body Yoga

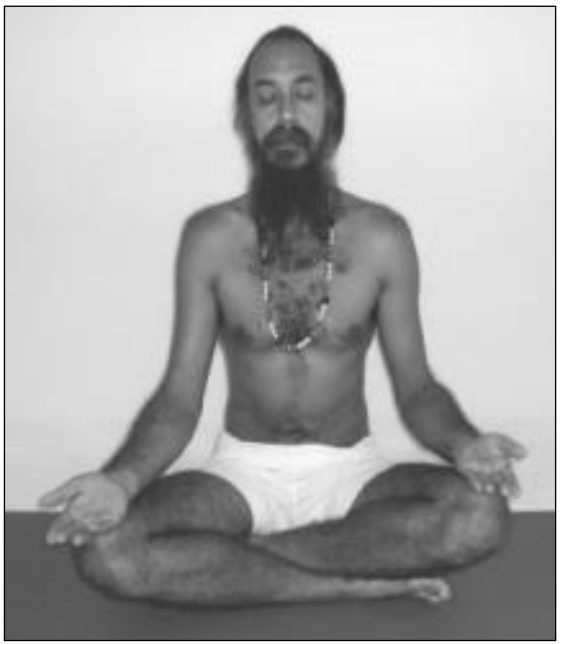
Sometimes your joy is the source of your smile, but sometimes your smile can be the source of your joy.

-Thich Nhat Hanh -

SITTING ASANAS

EASY SITTING/LOTUS

Sitting, Relaxation



VERBAL SUGGESTIONS

• The pelvis and abdominals must remain active during the asana.
• Retract the chin into the neck, and expand and lift the rib cage.
• Concentrate on physical balance equalizing the weight on the right and left sides of the body.
• Maintain a focus on the breath.

INITIAL POSITION

Sit upright on the gluteals, legs straight in front of the body.

POSITION, MOTION, and BREATH

Bend the right leg and place the right foot under the left thigh. Bend the left leg and place the left foot under the right thigh. Lift the sternum and retract the shoulder blades. Place the hands on the knees, palms face up. Inhale, lengthen the neck, retract the chin, and lift the crown of the head. Draw the shoulder blades further down. Gaze at the eyebrow center or close the eyes. Maintain the asana for 10 respirations.

PRIMARY GOALS

• Improve upper body posture
• Increase flexibility in the hips
• Strengthen the core
• Elongate the spine
• Enhance the breath
• Relax the body and mind

COMMON OVERSIGHT

Although *EASY SITTING* is a simple, relaxing meditation posture, it is difficult to sustain for long periods of time unless the knees are close to the mat, or touching the mat. In this position most of the body weight is supported by the gluteal muscles, causing the low back to stiffen. One easy way to overcome this difficulty is to prop the gluteals on to a cushion, automatically dropping the knees to the mat. It is extremely important to keep the upper body in optimum alignment in all sitting asanas so the breath flows freely.

SUKH/PADAM asana

BENEFITS

- Stabilizes the pelvis and hips
- Increases breath capacity
- Elongates the spine from the sacrum to the base of the skull
- Facilitates mental and physical balance

MODIFICATIONS

Intermediate – *HALF LOTUS:* Sit upright with the legs straight in front of the body. Bend the right leg and place the bottom of the right foot against the inner left thigh. Bend the left leg and place the left foot on top of the right thigh. Without straining, try to place the upper heel close to the abdomen. Lift the sternum, retract the shoulder blades, and engage the core. Place the hands on the knees, palms face up. Inhale, lengthen the neck, retract the chin, and lift the crown of the head. Draw the shoulder blades further down, and expand and lift the rib cage. Gaze at the eyebrow center or close the eyes. Maintain the asana for 10 respirations. Repeat on the other side.

Advanced – *LOTUS:* Sit upright with the legs straight in front of the body. Slowly and gently bend the right leg and place the right foot on top of the left thigh. The bottom of the right foot faces upward and the heel is close to the pubic bone. Bend the left leg and place the left foot on top of the right thigh. Without straining, place the upper heel close to the abdomen. In the ideal position both knees eventually touch the mat. Lift the sternum, retract the shoulder blades, and engage the core. Place the hands on the knees, palms face up. Inhale, lengthen the neck, retract the chin, and lift the crown of the head. Draw the shoulder blades further down, and expand and lift the rib cage. Gaze at the eyebrow center or close the eyes. Maintain the asana for 20 respirations. Repeat on the other side.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: hip, knee, or ankle problems; sciatica; low back complications; or injuries to the coccyx.

SEATED BASE

Sitting, Strength

VERBAL SUGGESTIONS

• The pelvis and abdominals must remain active.
• Maintain an optimum posture.
• Retract the chin, lift the sternum, and draw the shoulders back.
• The legs and thighs remain in contact with the mat.
• Keep a focus on the breath.

INITIAL POSITION

Sit upright with the legs extended, and feet together.

POSITION, MOTION, and BREATH

Engage optimum posture, core lock, and Mula Bandha. The legs are outstretched, hamstrings and calves contact the mat, feet are together, and the toes point toward the head. The arms are beside the body and the palms rest on the mat face down. Inhale, lengthen the neck, retract the chin, lift up from the crown of the head. Draw the shoulder blades down and lift the sternum. Gaze at the tip of the nose. Maintain the asana for 5 respirations.

PRIMARY GOALS

• Develop the core
• Elongate the spine
• Balance the pelvis

COMMON OVERSIGHT

Do not lose the integrity of optimum posture. Keep the upper body vertical. The lower extremity and heels remain fully connected with the mat.

PRARAMBHIK STHITI

asana

BENEFITS

- Stabilizes the pelvis and hips
- Strengthens the core
- Increases breath capacity
- Elongates the spine from the sacrum to the base of the skull

MODIFICATIONS

Intermediate – The arms are straight, elevated to the sides at shoulder height, and the palms face forward. Reach the arms out in opposite directions. Gaze at the tip of the nose. Maintain the asana for 5 respirations.

Advanced – The arms are straight, elevated above the head, parallel with the ears, and the palms face inward. Reach the arms up. Gaze at the tip of the nose. Maintain the asana for 5 respirations.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: abdominal complications or injuries to the coccyx.

SEATED BUTTERFLY

Sitting

VERBAL SUGGESTIONS

• Engage the abdominals and lift the rib cage to maintain the integrity of optimum posture.
• Retract the chin into the neck and draw the shoulders back.
• Lower the knees further to the mat on each exhalation.

INITIAL POSITION

Sit upright on the gluteals with the bottom of the feet in contact with each other.

POSITION, MOTION, and BREATH

Interlace the fingers on the upper, outer parts of the feet. Contract the abdominals, lower the ribs toward the pelvis, round the spine, and approximate the knees toward each other. Inhale, engage the core lock, and lengthen the neck and the crown of the head. Draw the shoulder blades down and back, and lift the sternum. Exhale, maintain a straightened arm position, keep the spine straight, and lower the knees to the mat. Gaze at the tip of the nose. Maintain the asana for 5 respirations.

PRIMARY GOALS

• Increase flexibility in the hips
• Strengthen the core
• Open the chest cavity
• Elongate the spine
• Balance the pelvis

COMMON OVERSIGHT

Do not lose the integrity of optimum posture in exchange for opening the hips and lowering the knees to the mat.

TITTALI asana

BENEFITS

- Stabilizes the pelvis and mobilizes the spinal joints
- Improves upper back posture (rounded shoulders)
- Massages the abdominal organs
- Very helpful in menstrual disorders and pregnancy

MODIFICATIONS

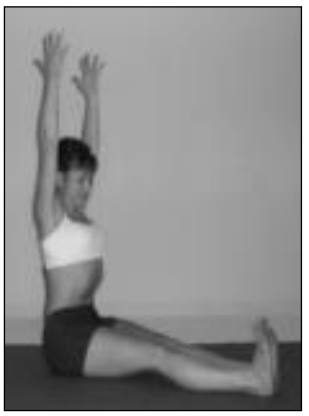
Beginners - Maintain optimum neutral posture and lower the knees to the mat minimally. Gaze at the tip of the nose. Maintain the asana for 5 respirations.
Intermediate - Maintain optimum posture, core lock, and Mula Bandha. Lower the knees as close to the mat as possible. Gaze at the tip of the nose. Maintain the asana for 5 respirations.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: hip pathologies, injuries to the sacro-iliac or coccyx, groin injuries, or inguinal hernias.

SEATED FORWARD FOLD

Sitting, Flexion, Inversion



VERBAL SUGGESTIONS

• Visualize the body sitting tall against the wall. Roll the spine off the wall without allowing the hips to move. Keep the hips fixed as the spine moves forward toward the feet.
• Maintain a neutral spine even when the body moves forward. The hips are fixed; there is no change in the hip position.
• As the body moves forward, the spine moves one vertebra at a time. The abdominals contract to maintain the spinal stretch.
• The feet are flexed, and the toes face directly up.

INITIAL POSITION

Sit with the legs extended, hip-width apart. The arms are overhead shoulder-width apart, palms face inward.

POSITION, MOTION, and BREATH

Engage optimum posture, core lock, and Mula Bandha. Draw the shoulder blades down, lift the sternum, and elongate the neck. The arms are overhead, parallel with the ears. The legs are fully extended and the toes point toward the head. Inhale, exhale and pivot forward from the hips. Reach out, lengthen the arms, and flex the body forward. The arms remain parallel with the ears and approximate the feet. Move through the spine one vertebra at a time engaging the core at all times. Keep the eyes closed. Maintain the asana for 5 respirations.

PRIMARY GOALS

• Increase articulation, flexibility, and lengthen the spine
• Strengthen the core
• Stretch the hamstrings

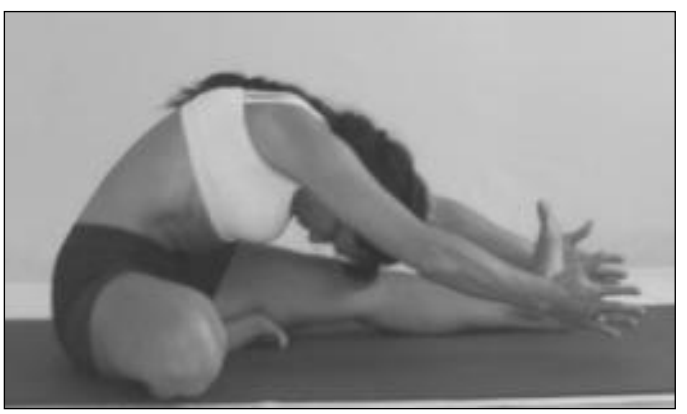
COMMON OVERSIGHT

Many individuals do not have the flexibility to sit upright in optimum posture. Beginners may sit on a pillow to attain neutral optimum posture. Do not grab the toes upon full forward flexion. Maintain the integrity in the abdominal and spinal muscles.

PASCHIMOTTANA asana

BENEFITS

- Stretches the hamstrings
- Increases the flexibility of the hip joints
- Massages the abdominal contents
- Elongates the spine from the sacrum to the base of the skull



MODIFICATIONS

Variation 1: Extend the left leg straight and place the bottom of the right foot against the inner left thigh. The arms are held overhead maintaining optimum posture. Gaze at the tip of the nose. Maintain the asana for 5 respirations. Repeat on the other side.
Variation 2: Extend the left leg straight and place the bottom of the right foot against the inner left thigh. The arms are held overhead. Maintain optimum posture, core lock, and Mula Bandha. Pivot from the hips and reach out toward the feet keeping the arms parallel with the ears. Keep the eyes closed. Maintain the asana for 5 respirations. Repeat on the other side.

CONTRA-INDICATIONS

Do not practice this asana if experiencing lumbar pathologies.

SEATED HIP OPENER

Sitting, Rotation, Balance

VERBAL SUGGESTIONS

• Contract the abdominals and elevate the rib cage to secure the integrity of optimum posture.
• Extend the reach between both hands.
• Retract the chin into the neck and draw the shoulders back.
• Keep the spine erect, perpendicular to the mat.
• Stretch the hamstrings further with each exhalation.

INITIAL POSITION

Sit upright with the legs extended, and feet together.

POSITION, MOTION, and BREATH

Lift the sternum and retract the shoulder blades. Engage optimum posture, core lock, and Mula Bandha. Bend the right knee and place the bottom of the right foot on the inside of the left thigh, the heel approximates the groin. Inhale, grasp the instep of the left foot with the left hand and extend the knee elevating the leg and foot in the air to a 45 degree angle. Push the left heel out straightening the leg. Exhale, elevate and externally rotate the right arm out, palm face up. Form a straight line between both arms maintaining an optimum neutral spine. Gaze at the right palm. Maintain the asana for 5 respirations. Repeat on the other side.

PRIMARY GOALS

• Increase flexibility in the hips
• Open the chest cavity
• Elongate the spine
• Balance the pelvis
• Stretch the hamstrings
• Develop total body strength
• Stretch and open the shoulder blades

COMMON OVERSIGHT

Do not lose the integrity of optimum posture in exchange for opening the hips.

UPAVISTHA SHRONI PRASARITA asana

BENEFITS

- Stabilizes the pelvis and hips
- Opens the hip joints
- Elongates the spine from the sacrum to the base of the skull
- Opens the chest cavity
- Stretches the hamstrings

MODIFICATIONS

Intermediate – Sit upright with the legs extended, and feet together. Lift the sternum and retract the shoulder blades. Engage optimum posture, core lock, and Mula Bandha. Bend the knees, grasp the instep of the right foot with the right hand and the left foot with the left hand. Lower and balance the body weight back onto the gluteals. Push the heels out extending the legs into a straightened position, and elevate both the legs and feet in the air to a 45 degree angle. Keep the spine erect. Gaze at a fixed point. Maintain the asana for 5 respirations.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: hip or shoulder pathologies, injuries to the sacro-iliac or coccyx, groin injuries, inguinal hernias, or in the last 3 months of pregnancy.

sound body Yoga

Your vision will become clear only when you look into your heart.

Who looks outside, dreams.

Who looks inside, awakens.

- Carl Jung -

KNEELING ASANAS

NEUTRAL TABLE

Kneeling, Relaxation

VERBAL SUGGESTIONS

- Engage the core at all times to protect the spine and rib cage.
- Retract the chin and lengthen the neck.
- Maintain optimum spine, stabilizing the hips in neutral without rotating from one side to the other.
- Flatten the palms into the mat.
- Maintain a straight line from the crown of the head to the base of the spine.

INITIAL POSITION

Position the body on the hands and knees.

POSITION, MOTION, and BREATH

The shoulders are directly over the hands and hips over the knees. Place the hands flat on the mat shoulder-width apart, fingers spread apart and pointing forward. The feet are hip-width apart. Retract the shoulder blades, engage optimum posture, core lock, and Mula Bandha. The chin is retracted, and neck lengthened. Gaze at a fixed point. Maintain the asana for 5 respirations.

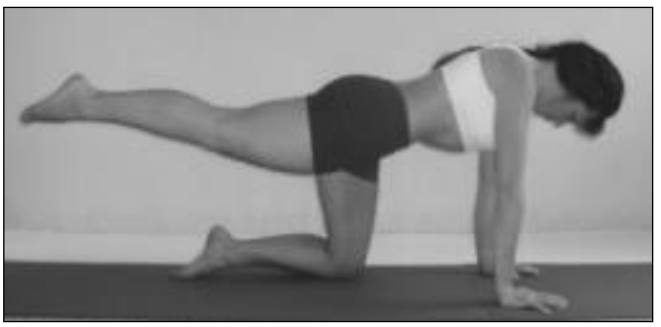
PRIMARY GOALS

- Spinal and core balance
- Relax the body and restore energy

COMMON OVERSIGHT

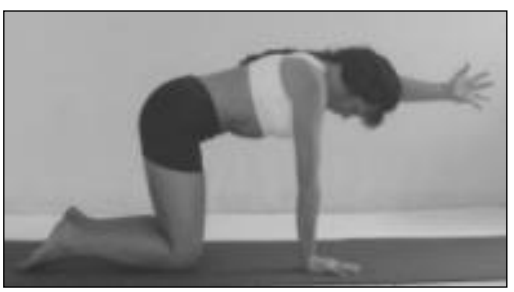
Place the weight on the tibial tuberosity, the thick bumpy bone under the knee, to avoid stress on the kneecap. If the trunk is not fully engaged in the intermediate and advanced asanas, the spine will sag and the hips will rotate from side to side as the leg raises or the arm extends. Be conscious of the core lock, especially during movement.

ADHO PURVOTTANA asana



BENEFITS

- Stabilizes the pelvis and shoulder joints
- Enhances the integrity of posture, core, and Mula Bandha locks
- Encourages awareness of breathing techniques



MODIFICATIONS

Beginners – Variation 1: *NEUTRAL TABLE RAISED LEG:* From *NEUTRAL TABLE*, inhale, exhale, then extend and reach the right leg out straight back. Maintain the stillness and integrity of the trunk. The raised leg is parallel with the mat. Engage optimum posture, core lock, and Mula Bandha. Gaze at a fixed point. Maintain the asana for 5 respirations. Return to *NEUTRAL TABLE*. Repeat on the other side.

Beginners – Variation 2: *NEUTRAL TABLE RAISED ARM:* From *NEUTRAL TABLE*, inhale, exhale, then extend and reach the left arm out straight, palm faces inward. Maintain the stillness and integrity of the trunk. The raised arm is parallel with the mat. Engage optimum posture, core lock, and Mula Bandha. Gaze at a fixed point. Maintain the asana for 5 respirations. Return to *NEUTRAL TABLE*. Repeat on the other side.

Intermediate – *NEUTRAL TABLE ALTERNATE ARM/LEG:* From *NEUTRAL TABLE*, inhale, exhale, then extend and reach the left arm out straight, palm faces inward. Extend the right leg back while maintaining the stillness and integrity of the trunk. The raised arm and leg form a straight line with each other. Engage optimum posture, core lock, and Mula Bandha. Gaze at a fixed point. Maintain the asana for 5 respirations. Return to *NEUTRAL TABLE*. Repeat on the other side.

CONTRA-INDICATIONS

Do not practice the advanced asana if experiencing: knee, shoulder, or hip complications; or in the advanced stages of pregnancy.

PRECAUTION

When sitting on the knees, place the body weight on the tibial tuberosity, the thick bumpy bone just below the kneecap. Do not place the weight on the kneecap. Double fold the mat to soften the area below the knees for protection.

COW / CAT

Kneeling, Extension, Flexion

VERBAL SUGGESTIONS

• Engage the core all times to protect the spine and rib cage.
• Maintain optimum spine at the start and end positions of the asana.
• Inhale upon extending the entire spine and exhale upon flexion, slowly moving vertebra by vertebra.
• Retract the shoulders down and back upon extension of the spine.
• Do not bend the elbows, and align the arms vertically, parallel with the thighs.

INITIAL POSITION

Position the body on the hands and knees.

POSITION, MOTION, and BREATH

Place the hands face down on the mat directly under the shoulders, the fingers are flat and spread apart. The hips are over the knees and the feet are hip-width apart. Retract the shoulder blades, engage optimum posture, core lock, and Mula Bandha. Retract the chin and lengthen the neck. Gaze at the tip of the nose. This is *NEUTRAL TABLE*. Inhale, raise the chest and head upward and accentuate the lordotic curve of the entire spine into *COW*. The core is fully engaged and the arms are straight. Exhale, pivot from the navel and curl the entire spine slowly bringing the head toward the navel making a kyphotic curve with the spine into *CAT*. Gaze at the tip of the nose. Repeat the *COW/CAT* Cycle for 5 respiration.

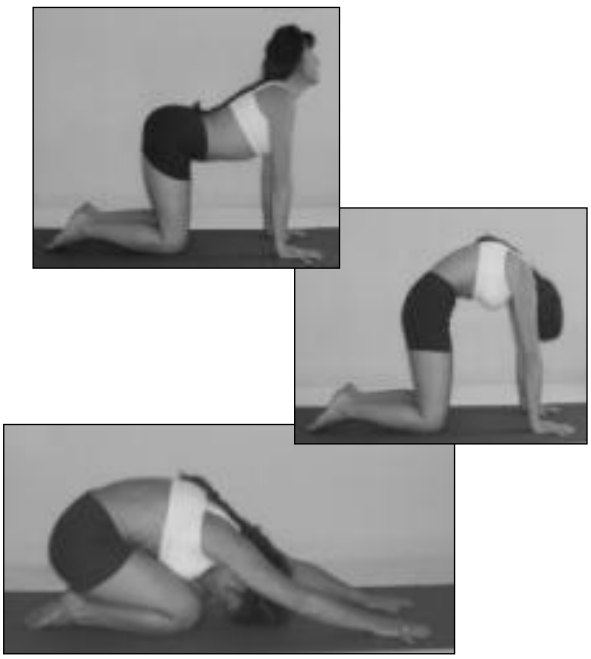
PRIMARY GOALS

• Spinal flexibility
• Shoulder and hip mobility

COMMON OVERSIGHT

Be conscious of the core locks, especially during movement. Lead each movement with the breath commencing the spinal movement from the navel and continuing the respiration till the very end of the sequence.

MARJARI asana



BENEFITS

- Increases the flexibility of the spine
- Stabilizes the pelvis and shoulder joints
- Enhances the integrity of posture, core lock, and Mula Bandha
- Encourages awareness of breathing techniques
- Decreases lower back tension
- Gently tones the female reproductive system and is helpful for the relief of menstruation cramps

MODIFICATIONS

Intermediate – *COW/CAT/HARE* Cycle: From *NEUTRAL TABLE*, inhale, raise the chest and head upward and accentuate the lordotic curve of the entire spine. The core is fully engaged and the arms are fully extended. Exhale, pivot from the navel, curl the entire spine slowly bringing the head toward the navel making a kyphotic curve with the spine. Continue lowering further down bringing the gluteals to the heels and place the forehead on the mat in *HARE*. The hands remain shoulder-width apart. Inhale, keep the arms straight and lift up from the navel extending the entire spine, moving one vertebra at a time. The Intermediate Asana is practiced as a cycle going from *COW* on inhalation to *CAT*, and then to *HARE* on exhalation. This *COW/CAT/HARE* Cycle is known as *CHAKRA VAK ASANA*. Gaze at the tip of the nose. Repeat this cycle for 5 respirations.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: symptoms of whiplash, spinal complications, or in the advanced stages of pregnancy.

PRECAUTION

When sitting on the knees, place the body weight on the tibial tuberosity, the thick bumpy bone just below the kneecap. Do not place the weight on the kneecap. Double fold the mat to soften the area below the knees for protection.

STRIKING COBRA

Kneeling, Prone, Extension, Flexion

VERBAL SUGGESTIONS

- Engage the core at all times to protect the spine.
- The hands do not move during the entire asana.
- The nose and chest should brush the surface of the mat when the body moves forward and backward.
- Inhale on the forward movement and bring the chest as close to the mat as possible.
- The hips and thighs are raised off the mat.
- Increase the extension of the entire spine by pushing the chest out, lifting the shoulders up, and retracting the shoulder blades.
- The pelvic and abdominal muscles must remain active.
- Coordinate movement with the breath.

INITIAL POSITION

Sit on the knees and put the weight on the bottom of the toes.

POSITION, MOTION, and BREATH

Inhale, reach the arms overhead shoulder-width apart, palms face forward. Lengthen the neck, retract the chin, lift the crown of the head, draw the shoulder blades further down, and lift the sternum. Exhale, pivot from the hips and lower the forehead to the mat with the arms fully extended in front of the shoulders and come into *HARE* on the toes. The palms are face down on the mat. Engage the gluteal and pelvic girdle muscles. Ground the hands into the mat, and without moving their position, slowly lift and hover the head and chest over the mat moving forward into the final position of *COBRA*. Lift the knees off the mat, engage the gluteals and abdominal muscles, and place the body weight between the palms and the bottom of the feet. Retract the shoulder blades and lift the crown of the head. Gaze at a fixed point. Maintain the asana for 5 respirations and return back slowly to *HARE* on the toes, in the reverse sequence. Repeat the sequence 5 times.

PRIMARY GOALS

- Improve spinal flexion and extension range
- Encourage shoulder blade retraction
- Strengthen the arm and shoulder muscles
- Stretch and expand the chest cavity
- Develop body strength

COMMON OVERSIGHT

The forward movement is made with a unified effort of the core engagement, erector spinae, pelvic girdle, and shoulder muscles. Practice this asana to align the body, internalize the focus, and restore energy. Do not rush the movements of the asana. In the final *HARE*, surrender the forehead and thoughts to the mat and let go tension.

SHASHANK BHUJANG asana

BENEFITS

- Opens and stretches the chest cavity
- Stretches the anterior spinal ligaments and abdominal contents
- Aligns upper body posture, especially rounded shoulders
- Strengthens the upper body
- Enhances breath capacity
- Increases the flexibility of the entire spine

CONTRA-INDICATIONS

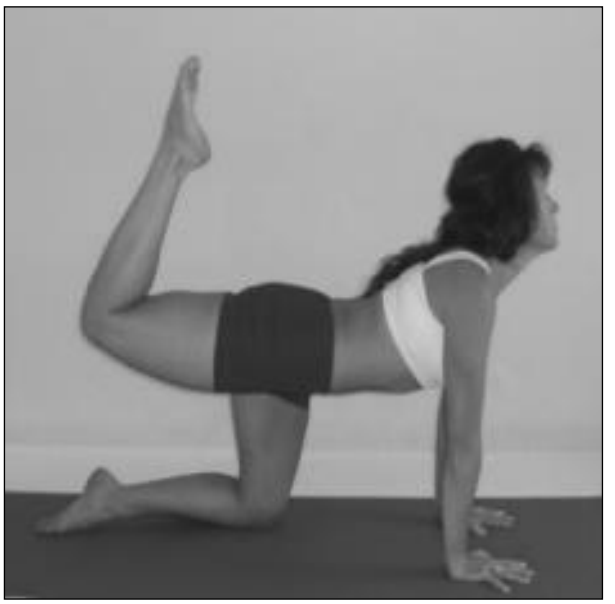
Do not practice this asana if experiencing: lumbar disc problems, sciatica, visceral or lung complications, high blood pressure, retinal disorders, or after 3 months of pregnancy.

PRECAUTION

When sitting on the knees, place the body weight on the tibial tuberosity, the thick bumpy bone just below the kneecap. Do not place the weight on the kneecap. Double fold the mat to soften the area below the knees for protection.

TIGER

Kneeling, Extension, Flexion, Balance



VERBAL SUGGESTIONS

- Engage the core at all times to protect the spine and rib cage.
- Inhale upon extending the entire spine and exhale upon flexion. Slowly move vertebra by vertebra.
- Retract the shoulders down and back upon extension of the spine.
- Keep the arms and thighs vertical.
- The head to knee movement is similar to the bellows of an accordian, expanding upon inhalation and contracting on exhalation.
- The knee and leg are aligned so there is no rotation of the hips during movement.

INITIAL POSITION

Position the body on the hands and knees.

POSITION, MOTION, and BREATH

Shoulders are directly over the hands and the hips over the knees as in *NEUTRAL TABLE*. The feet are hip-width apart. Retract the shoulder blades, engage optimum posture, core lock, and Mula Bandha. The chin is retracted and neck lengthened. Inhale, pivot from the navel and raise the right leg and thigh keeping the knee bent to a height parallel with the mat. Point the toes of the right foot to the back of the head, simultaneously extend the head and spine, and look up at the eyebrow center. Create a lordotic curve of the entire spine. Hold this position. Exhale, pivot from the navel, bend the right knee and swing it under the hips toward the head. Simultaneously flex the head down toward the right knee. Create a kyphotic curve of the entire spine. Gaze at the knee. Repeat this asana 5 times on one side. Repeat on the other side.

PRIMARY GOALS

- Spinal mobility
- Hip flexibility

COMMON OVERSIGHT

Place the weight in the tibial tubersosity, the bumpy bone under the knee, to avoid stress on the kneecap. Be conscious of the core locks especially during movement. Lead each movement with the breath commencing the spinal movement from the navel, continuing the respiration till the very end of the sequence. The movements of the head and knee are synchronized. The arms remain fully extended. The hips do not rotate from side to side.

VYAGHR asana

BENEFITS

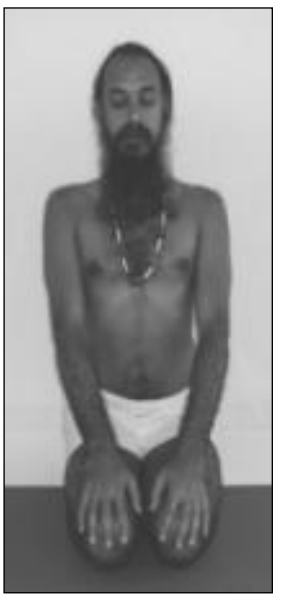
- Increases the flexibility of the spine
- Mobilizes the hip joints
- Stabilizes the pelvis and shoulder joints
- Enhances the integrity of posture, core, and, Mula Bandha locks
- Encourages awareness of breathing techniques
- Strengthens the gluteal muscles

CONTRA-INDICATIONS

Do not practice this asana if experiencing: symptoms of whiplash, menstruation, spinal complications, hip pathologies, or in the advanced stages of pregnancy.

SITTING ON KNEES

Kneeling, Relaxation



VERBAL SUGGESTIONS

- The pelvis and abdominals must remain active during the asana.
- Maintain optimum posture.
- Retract the chin, lift the sternum, and draw the shoulders down and back during the entire asana.
- Concentrate on physical balance.
- Equalize the weight on the right and left sides of the body.
- Maintain a focus on the breath.

INITIAL POSITION

Sit upright on the knees and heels.

POSITION, MOTION, and BREATH

Kneel on the mat, bring the big toes together and separate the heels. Lower the gluteals onto the inside surface of the feet. The heels touch the sides of the hips. Place the hands on the knees, palms face down or at the sides. Inhale, lengthen the neck, retract the chin, and lift up from the crown of the head. Lift the sternum and draw the shoulder blades down. Relax the arms and follow the breath. Gaze at the eyebrow center or close the eyes. Maintain the asana for 10 respirations.

PRIMARY GOALS

- Improve upper body posture
- Increase flexibility in the hips
- Strengthen the pelvic muscles
- Elongate the spine
- Enhance the breath
- Relax the body and mind
- Assist in digestion

COMMON OVERSIGHT

Although *SITTING ON KNEES* and variations are simple meditation postures, they can become difficult to sustain for long periods of time as the legs begin to 'fall asleep'. A folded blanket or a small cushion may be placed between the gluteals and the heels to remedy this imbalance. It is extremely important to keep the upper body in optimum alignment in all sitting asanas so the breath flows freely.

VAJR asana

BENEFITS

- Stabilizes the pelvis and hips
- Helps with hernias and hemorrhoids
- Helps with digestion after meals (sit and breathe rhythmically for 5 minutes)
- Elongates the spine from the sacrum to the base of the skull
- Facilitates mental and physical balance without causing strain or pain
- Stretches the muscles of the feet
- Helpful in sciatica and sacral infections
- Alleviates menstrual cramps
- Assists in labor

SITTING ON KNEES is an effective alternative meditation asana for individuals having difficulty sitting cross-legged. The body can maintain an upright position without much effort and breath flows freely in this asana.

MODIFICATIONS

Intermediate – *HERO:* Assume *SITTING ON KNEES*, raise the left knee and place the left foot on the mat beside the inside of the right knee. Place the left elbow on the left knee and rest the chin in the palm of the left hand. The right palm rests on the right knee. The body is completely motionless, and the spine and head are in neutral posture. Gaze at a fixed point or close the eyes. Maintain the asana for 10 respirations. Repeat on the other side. (This asana is a reflective posture, balancing the mind and increasing the power of concentration.)
Advanced – *SITTING ON TOES*: Assume *SITTING ON KNEES*, lift the heels and place the weight into the bottom of the toes and the palms on the knees. Gaze at a fixed point or close the eyes. Maintain the asana for 5 respirations. If there is pain in the thighs or ankles, the knees may be separated slightly while maintaining the asana. Keep a focus on the breath when the toes begin to cry for attention.

CONTRA-INDICATIONS

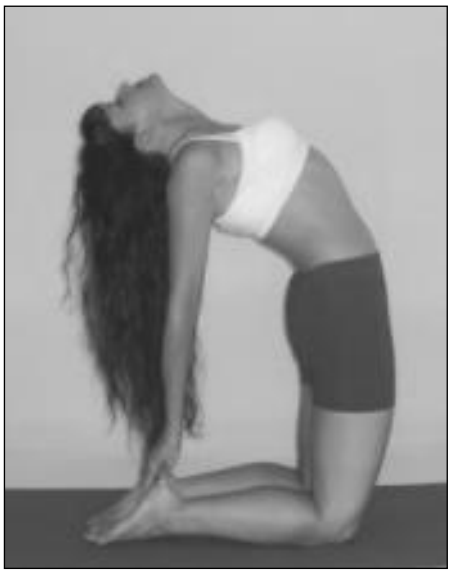
Do not practice this asana if experiencing: problems in the hips, knees, or ankles; varicose veins; or blood circulation complications.

PRECAUTION

When sitting on the knees, place the body weight on the tibial tuberosity, the thick bumpy bone just below the kneecap. Do not place the weight on the kneecap. Double fold the mat to soften the area below the knees for protection.

CAMEL

Kneeling, Extension



VERBAL SUGGESTIONS

• Contract the gluteal and thigh muscles.
• Press the shin bones down and lift up from the heart.
• Contract the core, drop the shoulder blades, and push the pelvis forward.
• The weight of the body is evenly support by the legs and arms.
• The arms anchor the shoulders to maintain the arch of the back.
• Relax the spinal muscles into the stretch.
• Focus on the breath.

INITIAL POSITION

Sit upright on the knees.

POSITION, MOTION, and BREATH

The feet are hip-width apart with the tops of the feet flat on the mat. The arms are at the sides of the body. Engage optimum posture, core lock, and Mula Bandha. Inhale, retract the chin, lengthen the neck, and lift up from the crown of the head. Draw the shoulder blades down, lift the sternum, and raise the arms to shoulder level. Exhale, lean back and slowly grasp the right heel with the right hand and the left heel with the left hand. Do not strain. Push the abdomen and thighs forward and extend the spine in a controlled manner. The thighs are vertical. Extend the head gently back. Gaze at the eyebrow center. Maintain the asana for 5 respirations.

PRIMARY GOALS

• Improve upper body posture
• Stretch the chest and abdomen
• Open the hips
• Open the heart, the emotional center
• Retract the shoulders

COMMON OVERSIGHT

It is extremely important to engage the core and lower back muscles to protect the spine. Full benefits of the posture are attained when the shoulders are dropped, the hips are pushed forward until the thighs are vertical, and the shins are grounded into the mat. Be very careful when extending the neck. (Due to the extensive stimulation of this asana, the body must be balanced with a flexion counter-asana such as *CHILD*.)

USHTRA asana

BENEFITS

- Stretches the anterior portion of the spine
- Increases flexibility in the extension range of the body
- Stretches and stimulates the abdominal contents
- Improves shoulder posture
- Opens the heart and evokes emotional responses
- Stretches the hips

MODIFICATIONS

Beginners - *MODIFIED CAMEL:* The feet are hip-width apart with the tops of the feet flat on the mat. Sit on the heels. The hands are placed beside the heels on the mat, palms face forward. Engage optimum posture, core lock, and Mula Bandha. Inhale, retract the chin, lengthen the neck, and lift up from the crown of the head. Inhale, draw the shoulder blades down, lift the sternum, and raise the gluteals off the heels. Keep the hands grounded on the mat. Do not strain. Push the abdomen and thighs forward and extend the spine in a controlled manner. Extend the head gently back. Gaze at a fixed point. Maintain the asana for 5 respirations.

Intermediate - *HALF CAMEL:* From the initial kneeling position in *CAME*L, inhale, engage optimum posture, core lock, and Mula Bandha. Exhale and rotate the upper body to the right. Reach back slowly with the right hand and grasp the left heel. Simultaneously lift from the core, stretch the left arm straight above the head parallel with the left thigh, palm faces inward. Gaze at the finger tips. Maintain the asana for 5 respirations. Repeat on the other side.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: chest, shoulder, or knee ailments; problems in the low back; sciatica; whiplash symptoms; or in the late stages of pregnancy.

PRECAUTION

When sitting on the knees, place the body weight on the tibial tuberosity, the thick bumpy bone just below the kneecap. Do not place the weight on the kneecap. Double fold the mat to soften the area below the knees for protection.

SUPINE QUAD STRETCH

Supine, Extension

VERBAL SUGGESTIONS

• Retract the chin into the neck, lift the sternum, and draw the shoulders down and back.
• Keep the knees in contact with the mat and separate them if necessary.
• Do not put pressure on the knees.
• Keep a focus on the breath.
• Push the weight into the shins and lift up on the hips.

INITIAL POSITION

Sit upright on the knees and heels.

POSITION, MOTION, and BREATH

Place the big toes together and separate the heels. Lower the buttocks onto the inside surface of the feet with the heels touching the sides of the hips. Place the hands face down beside the feet. Inhale, lengthen the neck, retract the chin, and lift the crown of the head. Lift the sternum and draw the shoulder blades further down. Exhale, bend and walk the hands back until the body weight is supported by the forearms and elbows. Roll the upper spine and bring the back or crown of the head to the mat. Place the palms face up beside the thighs. Gaze at the eyebrow center. Relax the arms and follow the breath. Maintain the asana for 5 respirations.

PRIMARY GOALS

• Stretch the quadriceps
• Open the chest
• Extend the spine
• Invigorate the abdominal contents
• Stretch the ankles

COMMON OVERSIGHT

Maintain the pressure and weight in the shins when extending backward. Do not rush out of the asana. Return in reverse order lifting from the core with the assistance of the elbows.

SUPTA VAJR asana

BENEFITS

- Stretches the quadriceps
- Massages and stimulates the abdominal contents
- Elongates the spine from the sacrum to the base of the skull
- Facilitates deeper breathing

MODIFICATIONS

Beginners – From a kneeling position, gluteals resting on the heels, place the palms face down beside the hips. Bend backward creating a slight extension in the spine gently stretching the quadriceps, keeping the chin locked.

Follow this asana by counter balancing with *CHILD*.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: problems in the hips, knees, or ankles; a quadricep strain; sciatica; sacral complications; whiplash injuries; spinal osteoporosis; or after 3 months of pregnancy.

PRECAUTION

When sitting on the knees, place the body weight on the tibial tuberosity, the thick bumpy bone just below the kneecap. Do not place the weight on the kneecap. Double fold the mat to soften the area below the knees for protection. DO NOT attempt this asana if experiencing any knee problems.

sound body Yoga

Listen to the Exhortation of the Dawn!
Look to this Day!
For it is Life, the very Life of Life.
In its brief course lie all the
Verities and Realities of your Existence.
The Bliss of Growth,
The Glory of Action,
The Splendor of Beauty;
For Yesterday is but a Dream,
And To-morrow is only a Vision;
But To-day well lived makes
Every Yesterday a Dream of Happiness,
And every Tomorrow a Vision of Hope.
Look well therefore to this Day!
Such is the Salutation of the Dawn!

- Kaildasa -

STANDING ASANAS

HALF MOON LUNGE

Standing, Balance, Lateral

VERBAL SUGGESTIONS

• The front knee is lined over the ankle.
• The front thigh is parallel to the mat.
• The back leg and thigh are straight.
• Distribute the weight evenly between both feet.
• Align the hips parallel with the mat.
• Lift the ribcage up to the sky.
• Palms face forward with the fingers flared open.

INITIAL POSITION

Stand in optimum posture, feet hip-width apart.

POSITION, MOTION, and BREATH

Lift the toes, spread them apart, then lower them down with the weight evenly distributed and grounded in the mat. The hands are by the sides, in anatomical neutral posture. Engage optimum posture, core lock, and Mula Bandha. Keep the body tall. Heel/toe the feet approximately 4 - 5 feet apart. Pivot both feet 90 degrees to the right, parallel with each other. The back heel will raise off the mat. Inhale, lift up from the waist and the crown of the head, and raise the arms laterally reaching out in a circular motion overhead. The arms are straight, parallel with the ears, and palms face forward. Square the hips parallel pushing the right hip back, and the left hip forward. Exhale, sit and lower the hips down until the front thigh is parallel to the mat, and the left knee is over the ankle. The back right leg is fully extended with the knee locked, the heel is raised with the body weight evenly distributed in the ball of the back foot and the sole of the front foot. The head, neck, and spine are linear. Reach up with the arms and ribcage. Gaze at a fixed point ahead. Maintain the asana for 5 respirations. Repeat on the other side.

PRIMARY GOALS

• Strengthen the lower body, leg, ankle, and feet muscles
• Develop hip flexibility
• Integrate overall body strength
• Lengthen the spine

COMMON OVERSIGHT

Align the front knee directly over the front ankle. Keep the back leg straight and fully aligned. Reach up tall in the trunk lifting the sternum and rib cage.

ARDHA ANJANEY asana

BENEFITS

- Builds lower body strength
- Opens the hips
- Focuses energy in one direction
- Coordinates body balance
- Develops concentration

MODIFICATIONS

Beginners - To decrease the intensity of this asana, drop the back knee gently so it contacts the mat.

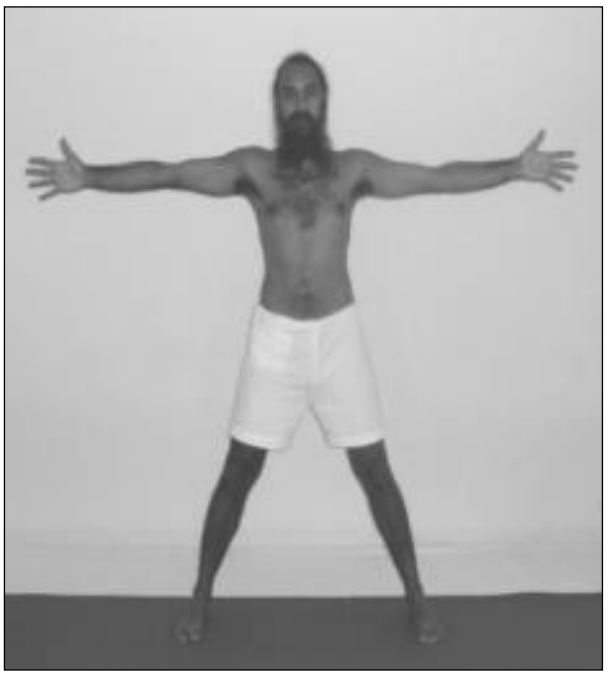
Advanced - *PRAYER TWIST LUNGE:* From final *LUNGE* Position, place the palms over the heart in prayer position pushing the hands into each other. Contract the shoulders back and rotate the upper body to the side of the extended straight leg. Rotate the left elbow to the inside of the left thigh and the right elbow parallel with the left. Lower the hips and straighten the arms so the folded hands are parallel with the mat. Bring the lower shoulder blade back and the upper shoulder blade forward.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: ankle, knee, or hip complications; shoulder problems; or symptoms of whiplash.

FIVE POINTED STAR

Standing, Strength



VERBAL SUGGESTIONS

• Engage the core at all times throughout the asana.
• Retract the chin and shoulder blades.
• Distribute the weight evenly between the balls and heels of the feet.
• Maintain optimum neutral posture throughout the asana.
• Reach out fully to the sides with the arms.
• The body stretches in five separate directions - pushing down into both feet, out through both arms, and up through the crown.

INITIAL POSITION

Stand in optimum neutral posture.

POSITION, MOTION, and BREATH

The body weight is evenly distributed and grounded in the mat. The arms are straight, elevated to the sides at shoulder height, and palms face forward. The feet are aligned under the elbows. Engage optimum posture, core lock, and Mula Bandha. Inhale, keep the body tall, push down on the mat with the feet and lift from the knees while squeezing the thighs and the gluteals. Open the webs of the hands, stretch the fingers, and reach out with the palms. Exhale, drop and retract the shoulder blades gently lifting the sternum. Stretch the crown of the head up, retract the chin, and gaze at a fixed point. Maintain the asana for 5 respirations.

PRIMARY GOALS

• Stabilize the optimum neutral standing posture
• Facilitate equal distribution of body weight in both feet
• Encourage equal balance on both sides of the body

COMMON OVERSIGHT

When the arms are fully extended the shoulders must remain retracted, down, and back. Engage the core and maintain optimum posture at all times.

PANCH TARA asana

BENEFITS

- Stabilizes the pelvis and core
- Develops strength in the muscles of the shoulders and feet
- Establishes balance and coordination
- Improves posture
- Increases breath capacity
- Stretches the upper body

MODIFICATIONS

Intermediate – Close the eyes and accentuate the stretch further with every exhalation. Maintain the asana for 5 respirations.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: whiplash symptoms, or complications in the chest and shoulder region.

sound body Yoga

HALF FOLD

Standing, Flexion, Inversion

VERBAL SUGGESTIONS

- Engage the core at all times throughout the asana.
- Lock the chin and retract the shoulder blades.
- Distribute the weight evenly between both feet.
- Ground the feet in the mat, stretch the arms away from the body, and push the tailbone back.
- In the final position the palms face each other and hands are fully flared.

INITIAL POSITION

Stand in optimum posture, feet hip-width apart.

POSITION, MOTION, and BREATH

Lift the toes, spread them apart, then lower them down with the weight evenly distributed and grounded in the mat. The hands are by the sides in anatomical neutral posture. Engage optimum posture, core lock, and Mula Bandha. Keep the body tall. Maintain the balance in the bottom of the feet. Lift up from the kneecaps and squeeze the thighs and gluteals. The legs are straight and knees unlocked. Inhale, lift up from the waist and the crown of the head, and raise the arms laterally reaching out in a circular motion overhead. The palms face each other and are parallel with the ears. Pivot the body forward from the hips until the spine and arms are horizontal, parallel to the mat, forming a right angle with the thighs and legs. The head, neck, arms, and spine are linear. Gaze at a fixed point. Maintain the asana for 5 respirations.

PRIMARY GOALS

- Stabilize the pelvic region
- Encourage equal balance on both sides of the body
- Elongate the spine
- Develop core and upper body strength

COMMON OVERSIGHT

It is important to reach out fully with the arms, and to retract the shoulder blades and chin, maintaining optimum posture.

ARDHA HAST PAD asana

BENEFITS

- Stabilizes the pelvis and core
- Stretches the muscles of the upper body and spine
- Improves posture
- Develops upper body balance and strength

CONTRA-INDICATIONS

Do not practice this asana if experiencing: complications in the chest and shoulder region, lumbar injuries, or symptoms of whiplash.

sound body Yoga

CRESCENT MOON

Standing, Balance, Strength

VERBAL SUGGESTIONS

• Engage the core at all times throughout the asana.
• Retract the chin and shoulder blades.
• Distribute the weight evenly between the balls and heels of the feet.
• The palms face inward and the fingers are spread apart.
• Reach and extend the distance between both hands without rotating the spine.

INITIAL POSITION

Stand in optimum neutral posture, feet hip-width apart, the hands are by the sides, palms facing inward.

POSITION, MOTION, and BREATH

Lift the toes, spread them apart, then lower them down with the weight evenly distributed and grounded in the mat. Engage optimum posture, core lock, and Mula Bandha. Keep the body tall. Maintain the balance in the bottom of the feet. Lift up from the kneecaps, squeeze the thighs and gluteals, keep the legs straight, and knees unlocked. Inhale, raise from the navel, stretch the crown of the head up, and lengthen the spine. Exhale, drop the shoulders and lift the sternum. Slowly raise the right arm laterally in a circular motion above the head and simultaneously reach down with the left hand bending sideways to the left. The palms face toward the body. The right arm is in line with the right ear. Reach up with the right hand and approximate the left hand down to the mat increasing the concavity of the curve on the left side. Gaze at the raised hand. Maintain the asana for 5 respirations. Repeat on the other side.

PRIMARY GOALS

• Stretch the lateral and oblique muscles
• Stabilize optimum neutral standing posture
• Massage abdominal contents
• Open the shoulder girdle and chest cavity

COMMON OVERSIGHT

It is common to rotate the body when extending the arms overhead. Lock the core, stabilize and retract the shoulder blades, and then raise the arms.

ARDHA CHANDR asana

BENEFITS

- Stabilizes the pelvis and core
- Opens and stretches the sides of the body
- Promotes increased breath capacity
- Stretches the shoulders and upper body
- Improves posture

MODIFICATIONS

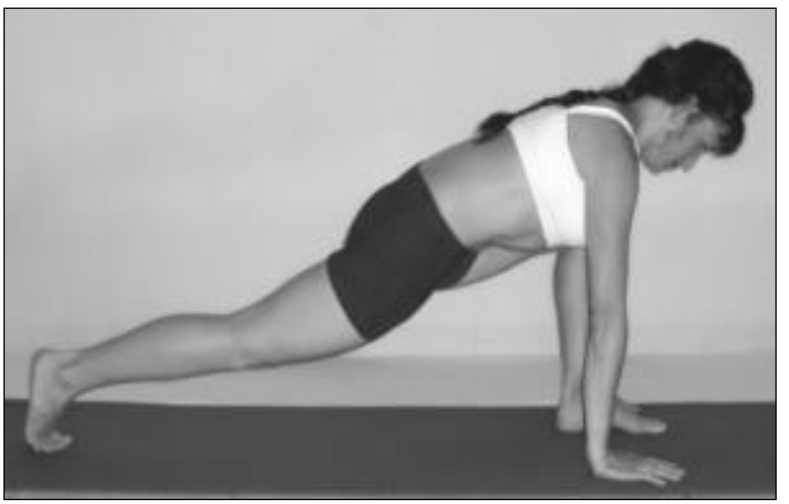
Intermediate - *CRESCENT MOON 2:* Inhale, raise from the navel, stretch the crown of the head up, and lengthen the spine. Interlace the fingers in prayer, index fingers pointed, and slowly raise both arms overhead. Exhale, side bend to the left stretching the fingers, arms, and upper body to the left, increasing the concavity of the curve on the left side. Maintain the balance in the bottom of the feet. Lift up from the kneecaps, squeeze the thighs and gluteals, keep the legs straight, and knees unlocked. Gaze at the hands. Maintain the asana for 5 respirations. Repeat on the other side.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: shoulder or chest complications, hernias, or whiplash symptoms.

LUNGE

Standing, Balance, Strength



VERBAL SUGGESTIONS

• Engage the core at all times to maintain the integrity of the spine.
• Retract the chin and elongate the neck during the entire asana.
• Keep both legs fully active during the asana.
• Distribute the body weight evenly between the feet and the palms.
• Retract the shoulder blades back.

INITIAL POSITION

Position the body on the hands and knees.

POSITION, MOTION, and BREATH

The hands are placed directly under the shoulders, the chin is retracted, and the neck lengthened. Engage optimum posture, core lock, and Mula Bandha. Extend the right leg fully and balance the weight in the ball of the right foot. Bend the left knee and place the left foot beside the left thumb. Align the shoulders, elbows, and wrists in a straight line. From a side view, the head, body, and extended heel are linear. Gaze at a fixed point. Maintain the asana for 5 respirations. Repeat on the other side.

PRIMARY GOALS

• Develop upper body
• Improve core abdominal muscle strength
• Stretch the hips
• Align posture

COMMON OVERSIGHT

Focus on the individual components of the asana. The spine sags and the hips rotate if the core is not fully engaged throughout the movement. Maintain a neutral position in the neck, do not extend up, and retract the shoulder blades. Distribute equal weight in both feet and the palms are flat on the mat.

ASHWASAN CHALAN asana

BENEFITS

- Stabilizes the pelvis and strengthens the transverse abdominis muscle
- Develops stability in the shoulders and hips
- Encourages full body stabilization and coordination
- Develops the arches of the feet
- Improves upper body posture

MODIFICATIONS

Beginners – Contact the knee of the extended leg with the mat. Gaze at a fixed point. Repeat on the other side.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: abdominal hernias; stomach ulcers; shoulder, hip, or wrist problems; menstruation; or in the advanced stages of pregnancy.

RAISED ARMS

Standing, Extension, Balance

VERBAL SUGGESTIONS

- Engage the core at all times during the asana.
- Distribute the weight evenly between both feet.
- Reach up and back with the arms.
- The hands are fully flared open in the final position.

INITIAL POSITION

Stand in optimum posture, feet hip-width apart.

POSITION, MOTION, and BREATH

Lift the toes, spread them apart, then lower them down with the weight evenly distributed and grounded in the mat. The hands are by the sides in anatomical neutral posture. Engage optimum posture, core lock, and Mula Bandha. Keep the body tall. Maintain the balance in the bottom of the feet. Lift up from the kneecaps and squeeze the thighs and gluteals. The legs are straight and knees unlocked. Inhale, lift up from the waist and the crown of the head, and raise the arms laterally reaching out in a circular motion overhead. The palms face forward and are parallel with the ears. Pivot back from the hips and gaze at the finger tips. Maintain the asana for 5 respirations.

PRIMARY GOALS

- Elongate the spine
- Encourage equal balance on both sides of the body

COMMON OVERSIGHT

Slowly reach up and out with the arms, coordinating the breath with the movement. Lift up from the navel.

HAST UTTHAN asana

BENEFITS

• Elongates the muscles of the upper body and spine
• Improves posture
• Stretches the contents of the chest region

CONTRA-INDICATIONS

Do not practice this asana if experiencing: complications in the chest and shoulder region, middle ear problems, or symptoms of whiplash.

sound body Yoga

REVERSE TRIANGLE

Standing, Rotation, Balance

VERBAL SUGGESTIONS

- Engage the legs and hips.
- Distribute the weight evenly between both feet.
- Lift the sternum up to the chin.
- Reach and extend from hand to hand.
- Drop the lower rib cage to the mat.
- Draw the shoulder blades toward the hips.
- Rotate the hips to the center.

INITIAL POSITION

Stand in optimum posture, feet hip-width apart.

POSITION, MOTION, and BREATH

Lift the toes, spread them apart, then lower them down with the weight evenly distributed and grounded in the mat. The hands are by the sides in anatomical neutral posture. Engage optimum posture, core lock, and Mula Bandha. Keep the body tall. Heel/toe the feet approximately 3 - 4 feet apart. Extend both knees and turn the left foot to the left side, perpendicular to the right. Inhale, lift up from the waist and the crown of the head, and bring both arms level at shoulder height. The arms are parallel with the mat and palms face forward. Exhale, pivot forward and rotate to the left, reach and place the right palm on the mat beside, or outside the left foot. Push the right hip back minimizing the rotation. Inhale, draw the left shoulder back and push the right hand into the mat. Exhale, reach the left arm up to the sky and ground the feet into the mat. Flare the fingers of the raised hand. Both arms are parallel with each other. Gaze up at the left hand and lift up on the tailbone and kneecaps. Maintain the asana for 5 respirations. Repeat on the other side. To return to initial position, slowly heel/toe back to center, and lift up very slowly into GAZE.

PRIMARY GOALS

- Stretch the upper back and shoulders
- Improve body balance
- Develop oblique muscles
- Open the rib cage and chest
- Stretch the hamstring, inner thigh, and calf muscles

COMMON OVERSIGHT

To prevent the feeling of fainting or dizziness, make controlled heel/toe movements to the center, and return very slowly to initial standing position.

PARIVRITTA TRIKON asana

BENEFITS

- Stretches the hamstring and spinal muscles
- Develops body balance and strength
- Massages and tones abdominal contents, stimulating digestion
- Develops oblique trunk muscles
- Stimulates the nervous system
- Strengthens the pelvic region
- Opens up the upper spine, chest, and shoulder blades

MODIFICATIONS

Beginners - The legs may be separated 3 - 4 feet, and the knees may be slightly bent. Support the left hand on the right shin, and when comfortable, work it down the leg. Gaze down at the mat if there is strain on the neck. Maintain the asana for 3 respirations. Repeat on the other side.

Intermediate - Pivot forward from the hips, rotate the body to the left, and reach down with both hands to the left foot. Place the palms flat beside the left foot. Approximate the forehead to the left knee, lift the tailbone and shoulder blades up to the sky, and lock the front knee. The body weight is evenly distributed in both feet. Maintain the asana for 5 respirations. Repeat on the other side. Slowly pivot and heel/toe the feet to the center, lift up slowly, and return to initial position.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: high blood pressure, spinal and hip complications, sciatica, heart disease, abdominal hernias, shoulder complications, symptoms of whiplash, or in the last 3 months of pregnancy.

SQUAT

Standing, Strength, Balance

VERBAL SUGGESTIONS

• Place the majority of the body weight in the heels.
• Lower the hips and raise the chest.
• Raise the arms fully and flare the hands.
• Squeeze the gluteal, pelvic, and thigh muscles.
• Engage the core at all times.
• Retract the chin and shoulder blades during the entire asana.
• Ground the feet into the mat and stretch the arms up, away from the body.

INITIAL POSITION

Stand in optimum posture, feet hip-width apart.

POSITION, MOTION, and BREATH

Lift the toes, spread them apart, then lower them down with the weight evenly distributed and grounded in the mat. The hands are by the sides in anatomical neutral posture. Engage optimum posture, core lock, and Mula Bandha. Keep the body tall. Maintain the balance in the bottom of the feet. Lift up from the kneecaps and squeeze the thighs and gluteals. Inhale, lift up from the waist and the crown of the head. Raise the arms laterally and reach out in a circular motion overhead. The palms face each other and the arms are straight, parallel with the ears. Exhale, bend at the knees, lower down into a full squat and sit like a crow. Keep the weight evenly distributed in the feet. Gaze at a fixed point. Maintain the asana for 3 respirations.

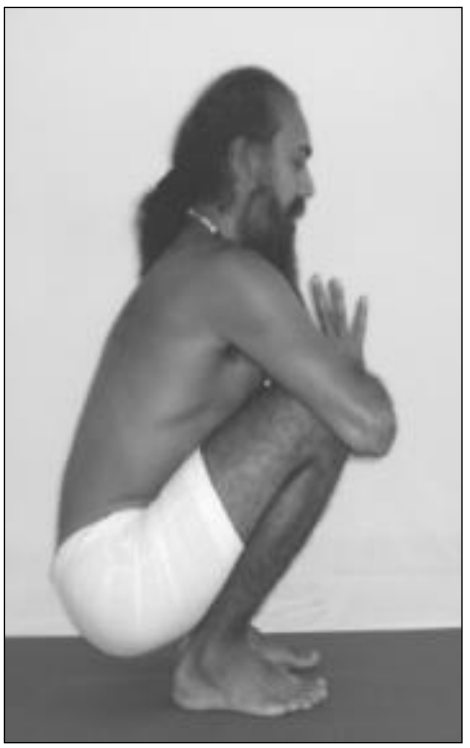
PRIMARY GOALS

• Tone the gluteal, pelvic, and thigh muscles
• Stimulate the circulatory and metabolic systems
• Elongate the spine
• Develop core and upper body strength

COMMON OVERSIGHT

The gluteals are lowered and engaged at all times. Maintain optimum neutral posture at all times. Keep the knees aligned with the ankles. Focus on the breath, especially when the asana becomes difficult. The heels remain in full contact with the mat.

KAKI asana



BENEFITS

- Stabilizes the pelvis and core
- Builds strength in the low back
- Assists for easier bowel movements
- Strengthens the gluteals and lower extremities
- Invigorates the metabolic systems of the body
- Very helpful in childbirth

MODIFICATIONS

Intermediate – *SQUAT PRAYER*: In the final position of *SQUAT*, lower the arms and fold the hands in prayer over the heart. Maintain a neutral spine and keep the shoulders retracted. Gaze at a fixed point. Maintain the asana for 5 respirations.

Squatting is an active way of sitting, it stretches the low back and engages the hips. In the Eastern and Oriental cultures squatting is a ·normal· way of sitting instead of using chairs. Eastern cultures often assume a squatting position when using the toilet. It is also common for women of the East to deliver their babies in maternity wards in the squatting posture.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: varicose veins; or complications in the knee, hip, or ankle regions.

THUNDERBOLT

Standing, Strength

VERBAL SUGGESTIONS

- Place the majority of the body weight in the heels.
- Lower the hips and raise the chest.
- Reach out with the arms fully, and flare the hands.
- Squeeze the gluteal, pelvic, and thigh muscles.
- Contract the knees together without separating them.
- Level the thighs parallel with the mat.
- Engage the core at all times throughout the asana.
- Retract the chin and shoulder blades.
- Ground the feet into the mat and stretch the arms away from the body.

INITIAL POSITION

Stand in optimum posture, feet together.

POSITION, MOTION, and BREATH

Lift the toes, spread them apart, then lower them down with the weight evenly distributed and grounded in the mat. The hands are by the sides in anatomical neutral posture. Engage optimum posture, core lock, and Mula Bandha. Keep the body tall. Maintain the balance in the bottom of the feet. Lift up from the kneecaps and squeeze the thighs and gluteals. The legs are straight and knees unlocked. Inhale, lift up from the waist and the crown of the head, raise both arms in a circular motion overhead, parallel with the ears, palms face inward. Exhale, bend at the knees, squat as if sitting in a chair and bring the thighs parallel with the mat. Contract the abdominal muscles, draw the gluteals back and align the knees over the ankles. Gaze at a fixed point. Maintain the asana for 3 respirations.

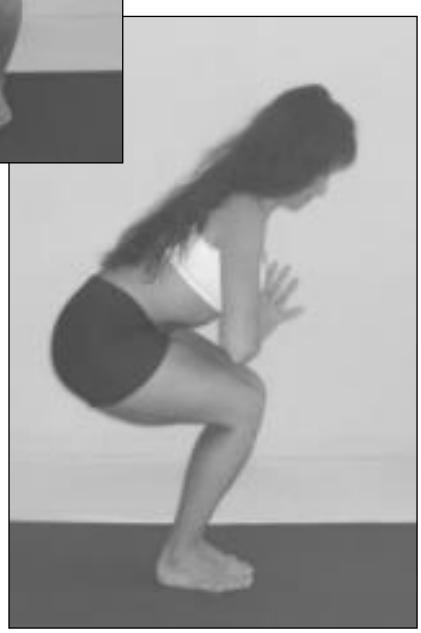
PRIMARY GOALS

- Tone the gluteal, pelvic, and thigh muscles
- Stimulate the circulatory and metabolic systems
- Elongate the spine
- Develop core and upper body strength

COMMON OVERSIGHT

The gluteals are lowered and engaged at all times. Focus on the breath especially when the asana becomes difficult to maintain.

UTKAT asana



BENEFITS

- Stabilizes the pelvis and core
- Builds strength in the mid and low back
- Strengthens the gluteals and lower extremities
- Invigorates the metabolic systems of the body

MODIFICATIONS

Intermediate - *THUNDERBOLT PRAYER:* Assume *THUNDERBOLT* with the feet together. Lower the arms and fold the hands over the heart. The chin and shoulder blades are retracted. Gaze at a fixed point. Maintain the asana for 5 respirations.
Advanced - *THUNDERBOLT PRAYER TWIST:* From the final position of *THUNDERBOLT PRAYER*, rotate the left elbow to the outside of the right thigh. The feet and knees are together. Lower the hips, and straighten the arms so the folded hands are parallel with the mat. Bring the lower shoulder blade back and the upper shoulder blade forward. Do not rest the elbows on the knees. Gaze at a fixed point. Maintain the asana for 5 respirations. Repeat on the other side.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: complications in the chest, shoulder, knee, or ankle regions.

TRIANGLE

Standing, Balance, Strength, Inversion, Lateral

VERBAL SUGGESTIONS

- The legs are active.
- Distribute the weight evenly between both feet.
- The hips, head, and chest are in the same plane.
- The arms are linear.
- Reach and extend out with both hands.
- Drop the lower rib cage to the mat.
- Draw the shoulder blades back.
- Maintain lateral bending.
- Rotate the upper hip back.

INITIAL POSITION

Stand in optimum posture, feet hip-width apart.

POSITION, MOTION, and BREATH

Lift the toes, spread them apart, then lower them down with the weight evenly distributed and grounded in the mat. The hands are by the sides in anatomical neutral posture. Engage optimum posture, core lock, and Mula Bandha. Keep the body tall. Heel/toe the feet approximately 4 - 5 feet apart. Extend both knees and turn the right foot out to the right side, perpendicular with the left. Inhale, lift up from the waist and the crown of the head, bring both arms level at shoulder height, parallel with the mat, palms face forward. Exhale and side bend to the right; do not rotate the body forward. Slide the right hand down the front of the right leg and place the right hand on or near the right heel. Reach the left arm up to the sky, the palm faces forward, and fingers flare open. Both arms are parallel with each other. Gaze up at the left hand. Maintain the asana for 5 respirations. Repeat on the other side. To return to initial position, heel/toe back slowly and lift up very gently into *GAZE.*

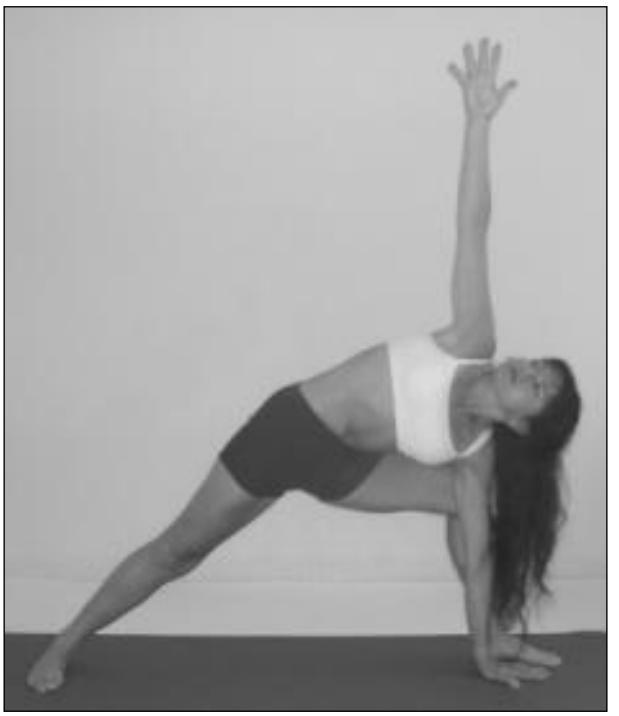
PRIMARY GOALS

- Stretch the upper back and shoulders
- Improve body balance
- Develop oblique muscles
- Open the rib cage and chest

COMMON OVERSIGHT

Beware of keeping the upper shoulder up and lowering the bottom side to the mat. Do not flex and bend forward. Pay particular attention to the hips and maintain a complete lateral side bend. To prevent the feeling of fainting or dizziness, make controlled heel/toe movements and return very slowly to initial standing position.

TRIKON UTTHITA asana



BENEFITS

- Stretches the hamstring and spinal muscles
- Improves posture
- Massages and tones abdominal contents
- Improves blood flow to the brain
- Enhances circulation
- Opens the upper spine and shoulder blades

MODIFICATIONS

Beginners – The legs may be separated 3 - 4 feet and the knees may be slightly bent. Slide the right hand down to the shin, and when comfortable work it down the leg. Gaze down at the mat if there is strain on the neck. Maintain the asana for 3 respirations. Repeat on the other side.

Variation 1 - *TRIANGLE 2:* Keep the left knee extended and bend the right knee. The right thigh is parallel to the mat and the right knee lines up over the right ankle. Gaze up at the left hand. Maintain the asana for 5 respirations. Repeat on the other side. To return to initial position, pivot the feet heel/toe to the center and lift up very slowly.

CONTRA-INDICATIONS

Do not practice the asana if experiencing: high blood pressure, spinal complications, sciatica, heart disease, abdominal hernias, shoulder complications, symptoms of whiplash, or in the last 3 months of pregnancy.

WARRIOR

Standing, Balance, Strength

VERBAL SUGGESTIONS

- The heels are linear.
- The back foot is turned in 90 degrees and fully grounded in the mat.
- The front knee is lined over the ankle.
- The front thigh is parallel to the mat.
- Distribute the weight evenly between both feet.
- Align the hips parallel with the mat.
- Lift the sternum up to the sky.

INITIAL POSITION

Stand in optimum posture, feet hip-width apart.

POSITION, MOTION, and BREATH

Lift the toes, spread them apart, then lower them down with the weight evenly distributed and grounded in the mat. The hands are by the sides in anatomical neutral posture. Engage optimum posture, core lock, and Mula Bandha. Keep the body tall. Heel/toe the feet approximately 4 - 5 feet apart. Turn the left foot out to the left side, perpendicular to the right. The heels are linear. Inhale, lift up from the waist, stretch the crown of the head up, and raise the arms laterally reaching out in a circular motion overhead. The arms are straight, parallel with the ears and palms face forward. Line the hips parallel, then bring the right hip back and the left hip forward. Exhale and lower the hips down until the left thigh is parallel to the mat and the left knee is over the ankle. The back right leg is full extended. The head, neck, and spine are linear. Reach up with the arms and the ribcage. The body weight is evenly distributed between the feet. Gaze at a fixed point. Maintain the asana for 5 respirations. Repeat on the other side.

PRIMARY GOALS

- Strengthen the lower body, leg, ankle and feet muscles
- Develop hip flexibility
- Integrate overall body strength

COMMON OVERSIGHT

Align the front knee directly over the front ankle. Keep the back leg straight and fully aligned. Maintain the integrity of the neutral hips.

VIRABHADR asana

BENEFITS

- Builds lower and upper body strength
- Opens the hips
- Focuses energy in one direction
- Coordinates body balance
- Develops concentration

MODIFICATIONS

Variation 1 - *WARRIOR 2:* Lift the toes, spread them apart, then lower them down with the weight evenly distributed and grounded in the mat. The hands are by the sides in anatomical neutral posture. Engage optimum posture, core lock, and Mula Bandha. Keep the body tall. Heel/toe the feet approximately 4 - 5 feet apart. Turn the left foot out to the left side, perpendicular to the right. Align the hips and raise the arms to shoulder height, parallel with the mat, palms face up. Exhale and lower the hips down until the left thigh is parallel to the mat and the left knee is over the ankle. The back left leg is full extended. The head, neck, and spine are linear. Create a tug-of-war between the arms. Align both shoulders over the hips. The body weight is evenly distributed between the feet. Gaze at the fingers of the right hand. Maintain the asana for 5 respirations. Repeat on the other side.

Variation 2 - *WARRIOR 3: BOW AND ARROW:* From the final position in *WARRIOR 2*, clasp the left hand into a fist, thumb pointing up, to hold an imaginary bow. Lower the right hand to chest height, grasp an imaginary arrow, and pull the bow string back with the right hand. Create a stretch in the chest cavity between the left and right hands. Gaze at the clenched fist ahead. Maintain the asana for 5 respirations. Repeat on the other side.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: ankle, knee, or hip complications; shoulder problems; or symptoms of whiplash.

We don't see things as they are, we see them as we are.

- Anais Nin -

BALANCE ASANAS

TREE

Standing, Balance

VERBAL SUGGESTIONS

• Engage the core at all times to avoid pelvic rotation and collapse in the trunk.
• Maintain a straightened leg on the side contacting the mat.
• Distribute the weight evenly in the foot supporting the body weight.
• Externally rotate the hip on the elevated thigh.
• Retract the shoulders when the arms are elevated.

INITIAL POSITION

Stand in optimum posture.

POSITION, MOTION, and BREATH

Engage optimum posture, core lock, and Mula Bandha. Stabilize the hips and pelvis, and keep the body tall. Ground the right foot into the mat and bend the left knee. Grasp and place the sole of the left foot on the inside of the right thigh. The left heel is close to the perineum, upper inner thigh; the toes point down; and the left knee points out laterally to the side. Grasp the left foot until the body posture balances, then place both hands in prayer position in front of the chest with the forearms parallel to the mat. Gaze at a fixed point. Maintain the asana for 5 respirations. Repeat on the other side.

PRIMARY GOALS

• Stabilize the pelvic muscles
• Correct postural deviations
• Encourage body equilibrium

COMMON OVERSIGHT

Do not rush through the movement of raising the foot to the thigh and lose the focus of engaging the pelvic and core muscle groups, resulting in the rotation of the pelvis and collapse of the hips on the straight leg side. Keep the palms in direct contact with each other.

VRIKSH asana

BENEFITS

- Stabilizes the pelvis and core
- Develops strength in the muscles of the ankles and feet
- Opens up the hips
- Establishes balance and coordination
- Improves posture

MODIFICATIONS

Intermediate - *TREE 2:* From the final prayer position in the Beginners, raise both arms extending them overhead, palms together. The palms are parallel with the ears and the elbows are bent. Retract the chin, lift the sternum and lower the shoulders. Maintain a steady gaze on a fixed point. Maintain the asana for 5 respirations. Repeat on the other side.

Advanced - *TREE 3:* From the final position in the Intermediate, *TREE 2*, raise both arms extending them overhead, palms together. The arms are straight, parallel with the ears. Retract the chin, lift the sternum and lower the shoulders. Maintain a steady gaze on a fixed point. Maintain the asana for 5 respirations. Repeat on the other side.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: injuries to the foot and ankle, varicose veins, dizziness, or middle ear complications.

PALM TREE

Standing, Balance

VERBAL SUGGESTIONS

• Engage the core at all times.
• Distribute the weight evenly on the balls of the feet.
• Retract the shoulders and chin when the arms are elevated.
• Maintain an optimum spine throughout the asana.
• Palms face forward.

INITIAL POSITION

Stand in optimum posture, feet together.

POSITION, MOTION, and BREATH

Ground the feet into the mat, engage optimum posture, core lock, and Mula Bandha stabilizing the hips and pelvis. Keep the body tall and raise the arms overhead, palms face forward. Stabilize the feet into the mat then slowly lift up on the balls of the feet. Gaze at a fixed point. Maintain the asana for 5 respirations.

PRIMARY GOALS

• Stabilize the pelvic muscles
• Correct postural deviations
• Encourage body equilibrium
• Develop muscles of the legs and feet

COMMON OVERSIGHT

Do not rush through the movement of raising up on the balls of the feet losing the focus of engaging the pelvic and core muscle groups.

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TAD asana

BENEFITS

- Develops strength in the ankles and arches of the feet
- Opens up the hips
- Establishes balance and coordination
- Improves posture

MODIFICATIONS

Intermediate - *PALM TREE SQUAT:* From the final elevated Beginner's position, stay on the balls of the feet, and lower down into a full squat. The arms are elevated and palms face forward. Gaze at a fixed point. Maintain the asana for 5 respirations. Raise the body up and return to neutral standing position.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: injuries to the feet or ankles, varicose veins, knee problems, dizziness, or middle ear complications.

AIRPLANE

Standing, Balance, Strength

VERBAL SUGGESTIONS

- Engage the core at all times to avoid pelvic rotations and trunk collapse.
- Maintain a straightened leg and thigh on the side fixed vertical to the mat.
- Distribute the weight evenly in the foot supporting the body weight.
- Retract the shoulders when the arms are elevated.
- The raised leg, upper body, head, and arms are all in the same plane, mimicking an airplane.

INITIAL POSITION

Stand in optimum posture, feet together.

POSITION, MOTION, and BREATH

Lift the toes, spread them apart, then lower them down with the weight evenly distributed and grounded in the mat. The hands are by the sides in anatomical neutral position. Engage optimum posture, core lock, and Mula Bandha. Keep the body tall. Maintain the balance in the bottom of the feet. Lift up from the kneecaps and squeeze the thighs and gluteals. Keep the legs straight. Inhale, lift up from the waist and the crown of the head, raise both arms parallel to the mat at shoulder height, palms face forward. Gaze at a fixed point. Exhale, pivot forward from the hips bringing the upper body to a *HALF FOLD* keeping the arms to the sides at shoulder height. Balance the body weight in the right foot and raise the left leg and thigh back, parallel to the mat, in line with the upper body. In the final position the palms face down. Maintain the asana for 3 respirations. Repeat on the other side.

PRIMARY GOALS

- Build overall body strength
- Strengthen the ankles and arches of the feet
- Develop balance, strength, and coordination
- Correct postural deviations and develop body balance
- Coordinate hip and shoulder strength

COMMON OVERSIGHT

Beware of hyper-extending or collapsing on the standing knee. Avoid rounding the upper back or rotating the hips on the elevated leg. Stabilize the standing knee.

DEK asana

BENEFITS

- Stabilizes the pelvis and core
- Develops strength in the ankle and feet muscles
- Opens the hips
- Establishes balance and coordination
- Improves posture and body strength

MODIFICATIONS

Advanced – *AIRPLANE 2:* From the final position, rotate the arms forward in front of the head in prayer. Gaze at a fixed point. Maintain the asana for 5 respirations. Repeat on the other side.

Like the *FIVE POINTED STAR*, there are five vectors of pull: two arms, two legs, and the head. Radiate out in these five directions from the navel center.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: injuries in the feet or ankles, shoulder problems, varicose veins, dizziness, or middle ear complications.

DANCER

Standing, Balance, Strength

VERBAL SUGGESTIONS

- The core must be engaged at all times to avoid pelvic rotation and trunk collapse.
- Maintain a straightened leg on the side fixed to the mat.
- Distribute the weight evenly in the foot supporting the body weight.
- Retract the shoulders when the arm is elevated.
- Reach the raised arm forward and push the elevated leg back into the hand.
- Feel the legs as a bow and the trunk and raised arm as the arrow.
- Keep the spine in optimum neutral.

INITIAL POSITION

Stand in optimum posture, feet together.

POSITION, MOTION, and BREATH

Lift the toes, spread them apart, then lower them down with the weight evenly distributed and grounded in the mat. The hands are by the sides in anatomical neutral position. Engage optimum posture, core lock, and Mula Bandha. Keep the body tall. Maintain the balance in the bottom of the feet. Lift up from the kneecaps, and squeeze the thighs and gluteals keeping the legs straight, and knees unlocked. Lift up from the waist and the crown of the head, lengthen the spine, and bend and lift the right leg. Raise the left arm to shoulder height, arm straight, parallel with the mat, palm facing inward. Bend the right knee and grasp the instep of the right foot with the right hand, maintaining balance. Gaze at a fixed point. Inhale, slowly raise, extend, and stretch the right thigh and leg back as high as possible. Raise the right leg directly behind the body, avoiding rotation of the left hip. Simultaneously bend forward from the hips with the left leg perpendicular to the mat. Maintain the asana for 5 respirations. Repeat on the other side.

PRIMARY GOALS

- Develop balance and stability
- Strengthen the ankles and arches of the feet
- Stretch open the hips
- Develop hip and shoulder strength

COMMON OVERSIGHT

Do not rush through the movement of raising the leg and thigh losing the focus of engaging the pelvic and core muscle groups resulting in the rotation of the pelvis and collapse of the hips. Beware of hyper-extending the neck and the standing knee.

NATRAJ asana

BENEFITS

- Stabilizes the pelvis and core
- Develops strength in the ankle and feet muscles
- Opens the hips
- Establishes balance coordination
- Improves posture
- Stretches the hamstring muscle group
- Cultivates strength with stability

MODIFICATIONS

Intermediate – Elevate the thigh and leg maximally without compromising the core lock.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: shoulder, hip, foot, or ankle injuries; varicose veins; dizziness; or middle ear complications.

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STANDING ONE LEG RAISE

Standing, Balance, Strength

VERBAL SUGGESTIONS

• Engage the core at all times to avoid pelvic rotations and trunk collapse.
• Maintain a straightened leg on the side fixed to the mat.
• Distribute the weight evenly in the foot supporting the body weight.
• Go through the motion very slowly.
• Maintain optimum neutral posture.
• Keep the hips level.

INITIAL POSITION

Stand in optimum posture, feet hip-width apart.

POSITION, MOTION, and BREATH

Lift the toes, spread them apart, then lower them down with the weight evenly distributed and grounded in the mat. The hands are by the sides in anatomical neutral position. Engage optimum posture, core lock, and Mula Bandha. Keep the body tall. Maintain the balance in the bottom of the feet. Lift up from the kneecaps, squeeze the thighs and gluteals, the legs are straight, and knees unlocked. Inhale, lift up from the waist and the crown of the head, and lengthen the spine. Fully extend the right leg in front of the body, parallel with the mat. Exhale, drop the hips in line with each other and draw the shoulder blades down and back, arms are at the sides, palms face forward. Gaze at a fixed point. Maintain the asana for 5 respirations. Repeat on the other side.

PRIMARY GOALS

• Stretch the hamstrings
• Strengthen the ankles and arches of the feet
• Enhance body balance
• Stretch and open the pelvic and hip muscles
• Develop hip strength

COMMON OVERSIGHT

Do NOT rush through the movement of raising the leg and thigh out, losing the focus of engaging the pelvic and core muscle groups, resulting in the rotation of the pelvis and collapse of the hips on the straight leg side. Do not raise the leg too high so the hips remain square.

UTTHITA HASTA PADANGUSTH asana

BENEFITS

- Stabilizes the pelvis and core
- Develops strength in the ankle and feet muscles
- Opens up the hip joints
- Establishes balance and coordination
- Improves posture
- Stretches the hamstrings

MODIFICATIONS

Beginners - Keep the elevated knee slightly bent and support the raised leg under the knee with the hands.

Advanced - STANDING *SIDE LEG RAISE:* Maintain a straight spine, extend the right leg and simultaneously rotate the right hip to the right. Raise the left arm above the head, keep the arm straight, palm faces inward.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: injuries in the feet, ankles, or hips; varicose veins; dizziness; or middle ear complications.

PATIENT CRANE

Balance, Strength

VERBAL SUGGESTIONS

• Engage the core at all times during the asana.
• Balance the body weight in the palms, knees, and upper arms.
• Straighten the arms as much as possible.
• Align the body parallel with the mat.
• Focus on the breath and remain calm.

INITIAL POSITION

Squat on the mat.

POSITION, MOTION, and BREATH

Place the feet hip-width apart. Place the palms face down in front of the feet, shoulder-width apart, fingers point forward. Lift the heels and balance the weight on the balls of the feet. Let the knees fan outward. Engage the core lock and Mula Bandha. Lean forward so the outer elbows are cupped in the inside of the knees. Gaze at a fixed point. Squeeze the elbows into the knees, tip the body weight forward raising one foot off the mat, then raise the other foot. Balance the body weight in the hands and knees. Bring the big toes together and try to straighten the arms. Align the body parallel with the mat. Maintain the asana for 3 respirations.

PRIMARY GOALS

• Stimulate the circulatory and metabolic systems
• Improve body balance
• Develop the core and upper body strength
• Enhance focus and concentration

COMMON OVERSIGHT

This asana requires more coordination then strength. Be patient, engage the core and use the breath to balance the body weight in the palms. Keep a steady focus on a fixed point and practice being still.

BAK DHYAN asana

BENEFITS

• Stabilizes the pelvis and core
• Builds strength in the upper body
• Develops balance and coordination
• Invigorates the metabolic and vascular systems

MODIFICATIONS

Beginners – Lift only one foot off the mat.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: complications in the wrists, shoulders, or upper extremity; high blood pressure; or vascular disease.

SIDE PLANK

Balance, Strength

VERBAL SUGGESTIONS

• The core must be engaged at all times to maintain the integrity of the spine.
• Distribute the weight between the bottom foot and palm.
• Do not place all the weight on the supporting wrist.
• The heels, heart, and chest are linear
• The hips are aligned one on top of the other - lift them high.
• Lift the ribcage high.
• The arms are perpendicular to the mat -press them away from each other.
• Reach out from the crown of the head to the bottom of the feet.

INITIAL POSITION

Position the body face down on the mat with the weight distributed in the balls of the feet and the hands - as in *HIGH PLANK*.

POSITION, MOTION, and BREATH

The hands are placed directly under the shoulders, the neck is retracted but lengthened with the head facing down in neutral posture. Engage optimum posture, core lock, and Mula Bandha. From a side view, the body is linear from the crown of the head to the heels and the weight is evenly distributed between the toes and the palms. Align the shoulders, elbows, and wrists in a straight line. From the final position of *HIGH PLANK* bring the feet together and rotate on to the right side so the inner thighs are in contact. Engage the core fully and lift up. Straighten the right arm and stabilize the weight between the right palm and the outside of the right foot. The lower right hand is directly under the shoulder. The chest faces sideways, perpendicular to the mat. Slowly raise the left arm parallel to the right arm. The left palm faces forward and the fingers of the right palm face away from the crown of the head. Gaze at the left hand. Maintain the asana for 5 respirations. Repeat on the other side.

PRIMARY GOALS

• Develop and tone upper body and arms
• Improve core abdominal muscle strength
• Coordinate balance
• Integrate muscle coordination of the lower and upper body

COMMON OVERSIGHT

Focus on the individual components of the asana. The spine and hips sag if the core is not fully engaged, placing extra pressure on the wrists.

PARSAVAKONA asana

BENEFITS

- Stabilizes the pelvis
- Strengthens the transverse abdominis muscle
- Develops stability in the shoulders and hips
- Encourages full body stabilization and coordination
- Integrates full body muscle balance

MODIFICATIONS

Beginners – From the final position of *HIGH PLANK* bring the feet together and rotate on to the right side so the inner thighs are in contact. Straighten the right arm and stabilize the weight between the right palm and the outside of the right foot. Bend the left knee and place the left foot on the mat in front of the right knee. Place the left hand on the left hip. The left arm may be raised, the palm faces forward. Gaze at the left hand. Maintain the asana for 5 respirations. Repeat on the other side.

Intermediate – From the final position of *HIGH PLANK* bring the feet together and rotate on to the right side so the inner thighs are in contact. Straighten the right arm and stabilize the weight between the right palm and the outside of the right foot. The lower right hand is directly under the shoulder. The chest faces sideways, perpendicular to the mat. The left arm rests on the left hip. Gaze at a fixed point. Maintain the asana for 5 respirations. Repeat on the other side.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: abdominal hernias, stomach ulcers, shoulder or wrist problems, menstruation or in the advanced stages of pregnancy.

We rarely hear the inward
music,
but we're all dancing to it
nevertheless.

- Jellaludin Rumi -

SUPINE ASANAS

SUPINE KNEE TO CHEST

Supine, Flexion, Relaxation

VERBAL SUGGESTIONS

• Keep the head and spine fully connected with the mat.
• Draw the knees into the chest very gently maintaining the core lock. Do not force the hip movement.

INITIAL POSITION

Lie face up and bring both knees to the chest.

POSITION, MOTION, and BREATH

Lie face up, knees bent, feet together, and neck and shoulder blades retracted in optimum posture. Inhale, interlock the fingers, and grasp the legs below the knees. Exhale, retract the head and shoulders into the mat and gently draw the knees to the chest. The elbows are close to the sides of the body. Relax the eyes. Maintain the asana for 5 respirations.

PRIMARY GOALS

• Stretch the low back
• Open the hips
• Massage the abdominal organs

COMMON OVERSIGHT

Do not lift the hips and head off the mat. The goal is to stretch the lower back and hip region.

SUPTA PAVANMUKT asana

BENEFITS

- Stretches the muscles in the low back
- Elongates the spine
- Massages the abdominal organs

CONTRA-INDICATIONS

Do not practice this asana if experiencing: lumbar disc problems, sciatica, visceral complications, or in the final 3 months of pregnancy.

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SUPINE LEG RAISE

Supine, Flexion

VERBAL SUGGESTIONS

• Engage the core at all times to protect the lumbar spine.
• The lowered leg and hip remain fixed to the mat.
• Maintain optimum posture at the start and end positions of the asana.
• The palms remain face up beside the body with no engagement.

INITIAL POSITION

Lie face up and extend the legs flat on the mat.

POSITION, MOTION, and BREATH

The palms are face up beside the body. Retract the shoulder blades, engage optimum posture, core lock, and Mula Bandha. Inhale and vertically raise the left leg without moving the right leg and pelvis off the mat. Gaze at the toes of the raised leg. Maintain the asana for 5 respirations. Repeat on the other side.

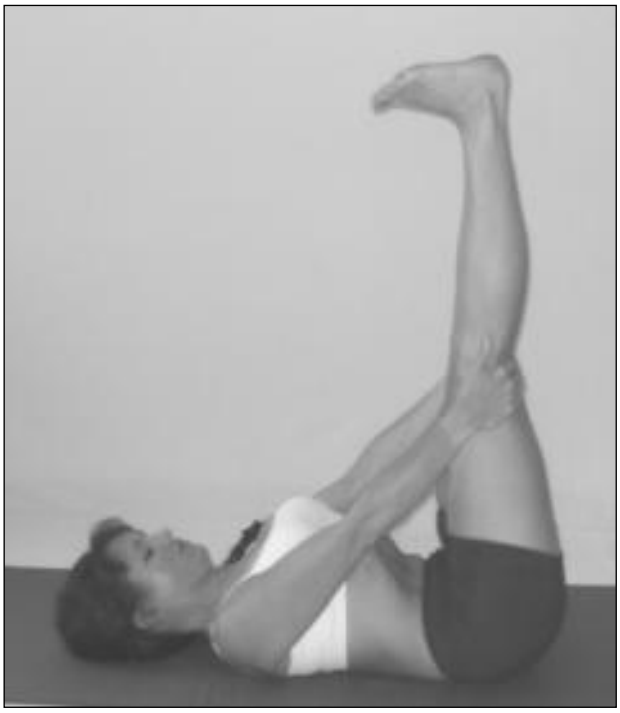
PRIMARY GOALS

• Open the hips
• Strengthen the low back
• Stretch the hamstrings

COMMON OVERSIGHT

Do not rush through the movement of raising the legs, losing the focus of engaging the pelvis and core.

SUPTA UTTHAN PAD asana



BENEFITS

- Stabilizes the pelvis
- Stretches the hamstrings
- Develops the core abdominal muscles
- Isolates individual pelvic movement
- Massages the abdominal organs

MODIFICATIONS

Intermediate - *SUPINE DOUBLE LEG RAISE:* The palms are face up beside the body. Retract the shoulder blades, engage optimum posture, core lock, and Mula Bandha. Inhale, raise the left leg as high as possible and follow by raising the right leg. Both legs and thighs are vertical and parallel with each other and may be supported with the hands. Gaze at the toes. Maintain the asana for 5 respirations.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: hamstring muscle tears, abdominal hernias, stomach ulcers, during menstruation, or in the advanced stages of pregnancy.

BRIDGE

Supine, Extension, Balance

VERBAL SUGGESTIONS

• Engage the core at all times to protect the lumbar spine.
• Consciously move very slowly through each vertebra, one by one.
• Maintain optimum posture in the start and end positions of the asana.
• Exhale upon lowering to start position, slowly moving vertebra by vertebra.

INITIAL POSITION

Lie face up, knees bent.

POSITION, MOTION, and BREATH

The feet are stabilized, hip-width apart. The arms are beside the body, palms face up. Retract the shoulder blades, engage optimum posture, core lock, and Mula Bandha. Inhale and move through the spine, one vertebra at a time, raising the hips off the mat. Lift the body so the weight stabilizes on the upper shoulder blades. The chest and navel are in a straight line and the chin is retracted. Gaze at a fixed point. Maintain the asana for 5 respirations.

PRIMARY GOALS

• Mobilize spinal joints
• Improve leg strength
• Develop core abdominal muscles
• Stabilize the hips and pelvis

COMMON OVERSIGHT

Do not rush through the movement losing the focus of moving one vertebra at a time. When practicing *BRIDGE 3*, be fully aware that the hips do not rotate. Practice the asana with full stability.

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SETU asana

BENEFITS

- Stabilizes the pelvis
- Mobilizes the spinal joints
- Improves upper back, rounded shoulder, posture
- Massages the abdominal organs
- Very helpful in menstrual disorders and pregnancy

MODIFICATIONS

Intermediate - *BRIDGE 2:* From the raised position, maintain optimum posture, core lock, Mula Bandha, and raise both arms laterally in a circular motion overhead. The arms rest on the mat above the head, palms face up. Gaze at a fixed point. Maintain the asana for 5 respirations.

Advanced - *BRIDGE 3:* From *BRIDGE 2*, maintain optimum posture, core lock, and Mula Bandha. Exhale and extend the right leg fully, parallel with the left thigh. Hold for 2 respirations. Gaze at a fixed point. Repeat on the other side.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: abdominal hernias, stomach ulcers, lumbar pathologies, menstruation, or in the advanced stages of pregnancy.

DEAD BUG

Supine

VERBAL SUGGESTIONS

• Keep the head and spine fully connected with the mat.
• Draw the shoulder blades into the mat.
• Gently pull the knees into the mat with each exhalation.

INITIAL POSITION

Lie face up on the mat with the knees bent.

POSITION, MOTION, and BREATH

The feet are hip-width apart and the neck and shoulder blades are retracted in optimum posture. Inhale and grasp the instep of both feet with the hands respectively. Exhale, externally rotate the hips, knees, and ankles pushing the feet away from the hands. Straighten the legs perpendicular to the mat. Gently pull the feet down so the thighs are parallel with the mat. Keep the low back grounded to the mat. Align the ankles over the knees and lengthen the spine. Retract the chin, head, and shoulders into the mat. Close the eyes. Maintain the asana for 5 respirations.

PRIMARY GOALS

• Stretch the hamstrings and inner thighs
• Open the hips

COMMON OVERSIGHT

Do not force the hips and knees into the mat. Stretch very gradually.

TITIB asana

BENEFITS

- Stretches the hamstring muscles
- Opens the hips
- Elongates the spine
- Massages the abdominal organs

CONTRA-INDICATIONS

Do not practice this asana if experiencing: hip or knee problems, or visceral complications.

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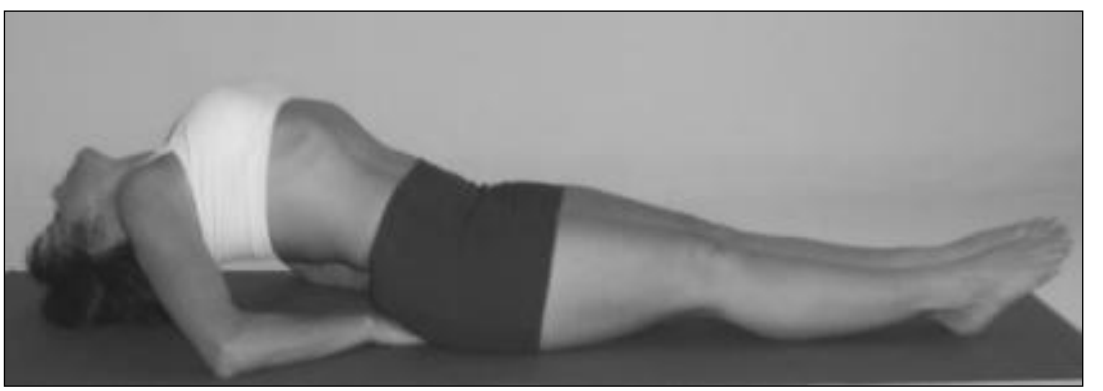
FISH

Supine, Extension

VERBAL SUGGESTIONS

- Raise the chest with the least amount of weight on the head.
- Recruit the core when lowering the head to the mat.
- Point the toes away from the body and engage the thighs.
- Retract the shoulder blades down.
- Ground the hips and lift the heart.
- Relax and extend the neck back.



INITIAL POSITION

Lie face up, legs extended, and arms by the sides.

POSITION, MOTION, and BREATH

The feet are together. Place the palms face down underneath the gluteals. The hands rest side-by-side in the shape of a triangle. Draw the elbows as close to the spine as possible. Inhale, press down on the elbows and forearms, and lift the chest recruiting the core muscles. Extend the spine and arch the back. Lower the head back until the crown rests on the mat. Gaze at a fixed point. Maintain the asana for 5 respirations.

PRIMARY GOALS

- Stretch the chest cavity
- Retract the shoulders
- Extend the spine

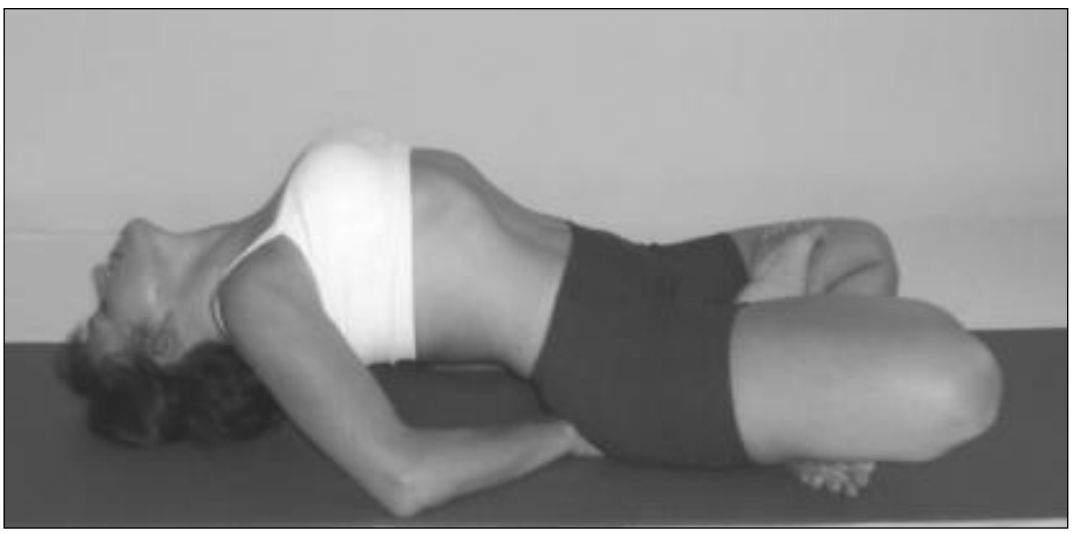
COMMON OVERSIGHT

It is important to lift the chest and lower the head in a controlled manner. If there is pain or strain in the neck, immediately draw the chin into the chest.

MATSYA asana

BENEFITS

- Improves upper body posture
- Stretches the abdominal contents
- Opens the chest cavity and the front of the neck



MODIFICATIONS

Intermediate – *CROSS-LEGGED FISH:* Lie face up and place the legs in cross-legged posture, one leg over the other, as in *HALF LOTUS*. Place the palms face down underneath the gluteals. The hands rest side-by-side in the shape of a triangle. Gently bend back supporting the body weight with the forearms, elbows, and core lowering the head and spine to the mat. Draw the elbows as close to the spine as possible. Inhale, press down on the elbows and forearms and lift the chest recruiting the core muscles. Extend the spine and arch the back. Lower the head back until the crown rests on the mat. Gaze at a fixed point. Maintain the asana for 5 respirations. Lower the body to the mat and repeat on the other side, switching legs.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: cervical disc problems, abdominal hernias, chest complications, shoulder or neck problems, menstruation, or after 3 months of pregnancy.

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SUPINE BUTTERFLY

Supine, Relaxation

VERBAL SUGGESTIONS

- Lower and relax the hips on the exhalation.
- Keep the spine in optimum neutral position on the mat.
- Lower the shoulder blades down.
- Ground the hips and gluteals into the mat.
- Relax and retract the chin into the neck.
- Push the soles of the feet into each other.

INITIAL POSITION

Lie face up, legs extended, and arms by the sides.

POSITION, MOTION, and BREATH

Place the palms face up beside the body. Retract the shoulder blades, engage optimum posture and core lock. Inhale, bend the knees, place the bottom of the feet in contact with each other and approximate the heels toward the tailbone. Exhale and lower the knees into the mat. The spine remains flat and in contact with the mat. Gaze at the tip of the nose. Maintain the asana for 5 respirations.

PRIMARY GOALS

- Increase flexibility in the hips
- Balance the pelvis
- Elongate the spine
- Stretch the inner thigh muscles

COMMON OVERSIGHT

Keep the spine and low back in contact with the mat when lowering the hips.

SUPTA PADAM TITALI asana

BENEFITS

- Improves posture
- Stretches the abdominal contents
- Helpful during menstruation and pregnancy
- Stretches and opens the hips

MODIFICATIONS

Intermediate – *SUPINE CROSS-LEGGED BUTTERFLY:* Lie face up, extend the legs, arms are by the sides, palms face up. Retract the shoulder blades, maintain optimum neutral posture, and engage the core lock. Inhale, bend the left leg and place the left heel under the right gluteal. Bend the right leg and place the right foot over the web of the right leg and thigh. Without straining, try to place the upper heel close to the abdomen. Exhale and lower the knees into the mat. The spine remains flat and in contact with the mat. Gaze at the tip of the nose. Maintain the asana for 5 respirations. Repeat on the other side, switching legs.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: knee or low back complications; sacro-iliac, coccyx, or groin injuries; inguinal hernias; or hip and shoulder pathologies.

REVERSE TABLE

Supine, Extension, Balance, Strength

VERBAL SUGGESTIONS

- The pelvis and abdominals must remain active during the entire asana.
- Keep the palms flat on the mat.
- Straighten the arms so the shoulders are in line above the wrists.
- The feet are grounded into the mat.
- The arms and legs form a 90 degree angle with the mat and the body.
- Engage the core.

INITIAL POSITION

Sit upright on the gluteals, knees bent.

POSITION, MOTION, and BREATH

Sit upright, lift the sternum, and retract the shoulder blades. Engage optimum posture, core lock, and Mula Bandha. The knees are bent, the feet are hip-width apart and firmly grounded into the mat. The palms are face down on the mat, shoulder-width apart, fingers point toward the feet, 8 - 12 inches behind the hips. Inhale, lengthen the neck, retract the chin, and engage the core. Press through the arms and hands, straighten the elbows, and lift the hips and body up, parallel with the mat. Press the feet into the mat and let the crown of the head gently roll back toward the mat. Lift the rib cage up. Gaze at a fixed point. Maintain the asana for 5 respirations.

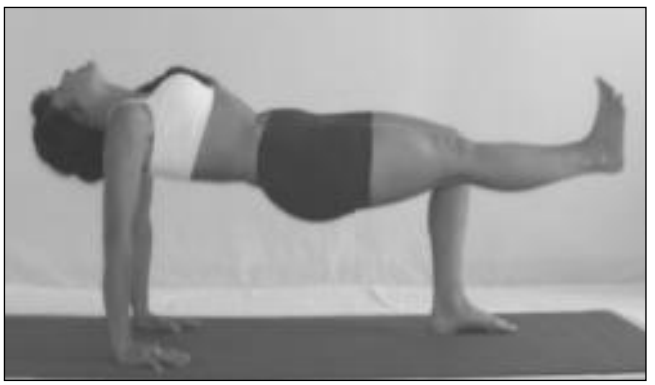
PRIMARY GOALS

- Open the rib cage, chest, and shoulders
- Elongate the spine and balance the upper and lower extremities

COMMON OVERSIGHT

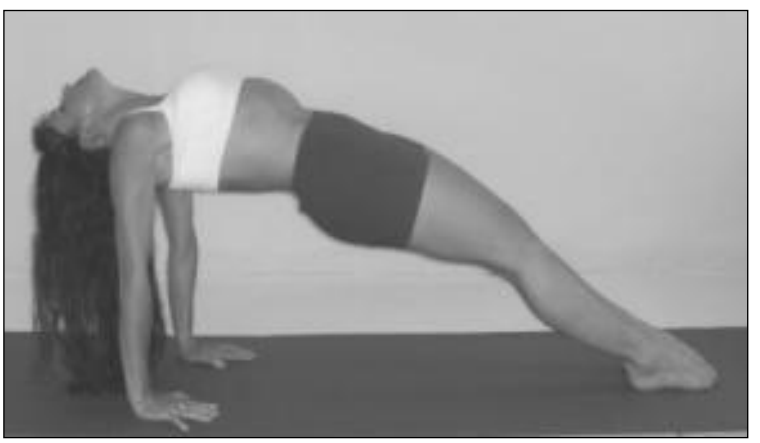
Do not lose the integrity of the core. Make the lift from the core. Place the body weight evenly in the palms and feet.

URDHV PURVOTTANA asana



BENEFITS

- Stabilizes the pelvis and hips
- Strengthens the core
- Stretches open the chest cavity and shoulders
- Releases upper body tension and creates expansion in the joints



MODIFICATIONS

Intermediate – *REVERSE TABLE 2:* From the final position in *REVERSE TABLE*, extend the right leg and thigh straight, parallel with the mat, toes point toward the head, avoiding pelvic rotation. Maintain the asana for 5 respirations. Repeat on the other side.
Advanced – *REVERSE TABLE 3:* Sit upright with the legs fully extended. Lift the sternum and retract the shoulder blades. Engage optimum posture, core lock, and Mula Bandha. The feet are together, and the toes point away from the body. The palms are shoulder-width apart, fingers point toward the feet, 8 - 12 inches behind the hips. Inhale, lengthen the neck, retract the chin, engage the core, press through the arms and hands, straighten the elbows, and lift the hips up. Press all the 10 toes into the mat and let the crown of the head gently roll back toward the mat. The bottom of the feet are firmly grounded into the mat. Lift the sternum and rib cage up. Gaze at a fixed point. Maintain the asana for 5 respirations.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: wrist, shoulder, or ankle problems; high blood pressure; chest complications; or symptoms of whiplash.

PRECAUTION

Keep the mouth closed so the tip of the tongue contacts the roof of the mouth to protect the muscles of the neck.

BOAT

Supine, Flexion, Balance, Strength

VERBAL SUGGESTIONS

- Keep the core engaged.
- Retract the chin and maintain neutral spine.
- The body weight pivots from the sacral region.
- Draw the navel into the spine.
- Roll the trunk off the mat one vertebra at a time, while the legs are extended.
- Keep the shoulder blades retracted and off the mat.
- The arms are parallel with the mat.
- Point the toes away from the body.

INITIAL POSITION

Lie face up, knees bent, arms by the sides.

POSITION, MOTION, and BREATH

Lie face up, knees bent, feet together, neck and shoulder blades retracted in optimum posture. The arms are by the sides, palms face up. Inhale, stabilize the pelvis, exhale and engage the core. Contract the abdominal muscles, roll the upper body off the mat, and reach the arms toward the feet. Simultaneously lift both legs and thighs up forming an angle of 30 degrees with the mat. Retract the head and shoulders. The elbows are close to the sides of the body. Gaze at the feet. Maintain the asana for 3 respirations. When returning to initial position bend one leg and place the foot on the mat and then bring the other foot down.

PRIMARY GOALS

- Strengthen the core
- Massage the abdominal organs
- Build overall strength

COMMON OVERSIGHT

Engage the core fully prior to lifting up. Lift up using the navel as the center. Be careful not to forcefully lift the neck up. If there is strain in the low back, bend the knees and bring the feet to the mat.

NAUK asana

BENEFITS

- Strengthens the core and low back
- Coordinates upper, mid, and lower body strength
- Massages the abdominal organs

MODIFICATIONS

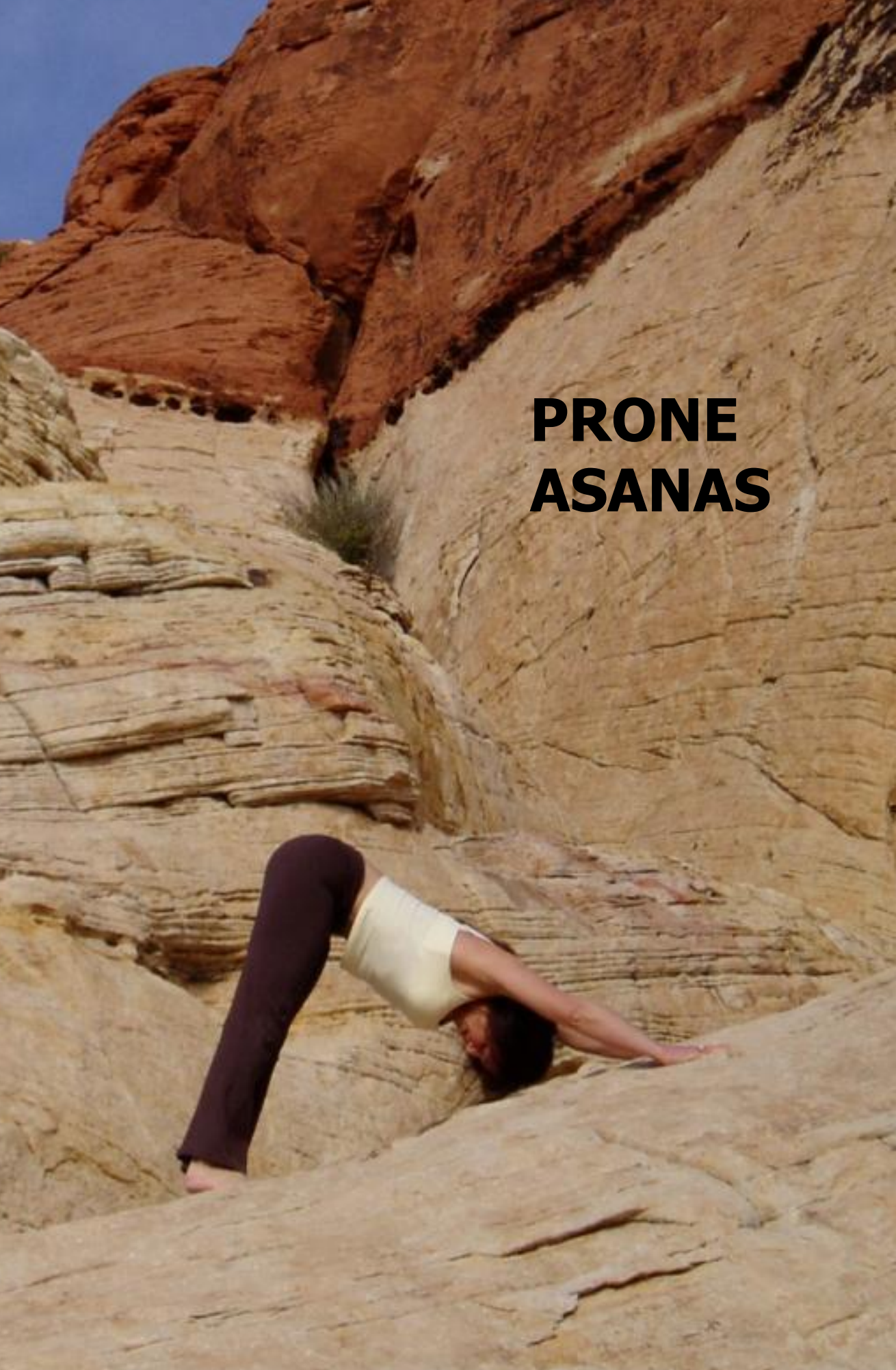
Beginners - Bend the knees and keep the feet on the mat when lifting the spine off the mat.
Intermediate - *BOAT 2:* Lie face up, knees bent, feet together, neck and shoulder blades retracted in optimum posture. The arms are by the sides on the mat beside the thighs, palms face down. Inhale, stabilize the pelvis, exhale, and engage the core. Contract the abdominal muscles, and roll the upper body off the mat. Simultaneously lift both legs and thighs up, forming an angle of 30 degrees with the mat. Retract the head and shoulders. The arms remain straight with the palms contacting the mat. Gaze at the feet. Maintain the asana for 3 respirations. When returning to initial position bend one leg and place the foot on the mat and then bring the other foot down.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: lumbar disc problems, sciatica, visceral complications, or in the final 3 months of pregnancy.

No matter how you think it is,
it's different than that!

- Rumi -



PRONE ASANAS

DOWNWARD FACING DOG

Standing, Inversion, Flexion, Strength

VERBAL SUGGESTIONS

• Engage the core at all times during the asana to protect the spine and rib cage.
• Lengthen the neck, retract the chin, and face the head toward the feet.
• Ground the heels into the mat and walk the hands forward.
• Lift the pelvis up in the air.
• Pull the navel into the spine for an upward lift.
• Place the body weight in the finger pads, not the wrists.
• Maintain a straight line from the crown of the head to the tailbone and another straight line from the tailbone to the heels, forming an inverted 'V'.
• Maintain an inverted 'V' position, press the chest toward the mat, and let the head align in neutral with the arms.

INITIAL POSITION

Position the body on the hands and knees in *NEUTRAL TABLE*.

POSITION, MOTION, and BREATH

The shoulders are directly over the hands, and hips over the knees. Place the hands flat on the mat, shoulder-width apart, the fingers are evenly spread, pointing forward. The tops of the feet contact the mat, hip-width apart. Retract the shoulder blades, engage optimum posture, core lock, and Mula Bandha. The chin is retracted, and neck lengthened. Roll onto the bottom of the feet and ground the heels fully into the mat. Inhale and raise the hips up in the air. Walk the hands to the front of the mat. Exhale, press the chest toward the mat, draw the shoulder blades back, and let the head fall in neutral posture. Keep the heels grounded into the mat and align the ears parallel with the arms. The arms, spine, and legs form two sides of an equal triangle or an inverted 'V'. Gaze at the feet. Maintain the asana for 5 respirations.

PRIMARY GOALS

• Stretch the spine, the lower extremity, and hips
• Open the chest cavity
• Strengthen the upper extremity

COMMON OVERSIGHT

Balance the body weight between the bottom of the feet and the pads of the fingers. Use the breath to assist the core to raise the hips. In the *DOWNWARD FACING DOG 2*, if the trunk is not fully engaged, the spine sags and hips rotate from side to side as the leg raises. Be conscious of the core lock, especially during movement.

ADHO MUKHA SVAN asana

BENEFITS

- Stabilizes the pelvic and shoulder joints
- Enhances the integrity of optimum posture, core lock, and Mula Bandha
- Encourages awareness of breathing techniques
- Increases circulation to the head and feet
- Massages abdominal organs
- Aligns the spine
- Builds upper body strength
- Balances the upper and lower body

MODIFICATIONS

Intermediate – *DOWNWARD FACING DOG 2:* From the final position in *DOWNWARD FACING DOG*, inhale, exhale fully, then extend the right leg back forming a straight line from the right wrist to the extended heel. Maintain stillness and the integrity of the trunk. Engage optimum posture, core lock, and Mula Bandha. Gaze at the lowered foot. Maintain the asana for 3 respirations. Return to *DOWNWARD FACING DOG*. Repeat on the other side.

CONTRA-INDICATIONS

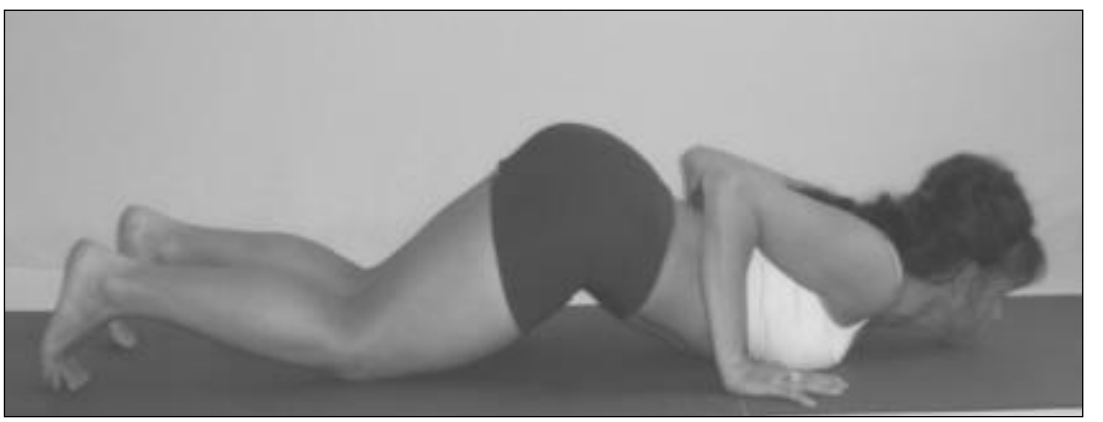
Do not practice this asana if experiencing: wrist, shoulder, or hip complications; high blood pressure; chest complications; or in the advanced stages of pregnancy.

EIGHT LIMB SALUTATION

Prone, Extension

VERBAL SUGGESTIONS

• Distribute the weight evenly between the toes, knees, palms, chest, and chin.
• Increase the extension of the entire spine in this asana by pushing the palms into the mat and retracting the shoulder blades.



INITIAL POSITION

Lie face down, forehead on the mat.

POSITION, MOTION, and BREATH

The palms face down on the mat beside the shoulders with the elbows bent. The feet are hip-width apart, and the bottom of the toes contact the mat. Inhale, lift the buttocks, hips, thighs, abdomen, and forehead off the mat; and keep the chin, chest, hands, knees, and toes in contact with the mat. Retract the shoulder blades. Engage the gluteal and pelvic girdle muscles. Gaze at the eyebrow center. Maintain the asana for 5 respirations.

PRIMARY GOALS

• Improve spinal extension in the lumbar and cervical spine
• Strengthen the arm and shoulder muscles
• Stretch and expand the chest cavity

COMMON OVERSIGHT

The lift is made with a unified effort of the low back, pelvic girdle, and shoulder muscles. Balance the weight evenly in all areas that contact the mat.

ASHTANGA NAMASKAR asana

BENEFITS

- Opens and stretches the chest cavity
- Stretches the anterior spinal ligaments and abdominal contents
- Aligns upper body posture, especially rounded shoulders
- Strengthens the upper body
- Increases the stability of the pelvic region
- Enhances the breath capacity

CONTRA-INDICATIONS

Do not practice this asana if experiencing: lumbar disc, shoulder, or wrist problems; sciatica; visceral or lung complications; or after 3 months of pregnancy.

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HALF PIGEON

Prone, Inversion, Flexion

VERBAL SUGGESTIONS

- Place the front leg parallel with the front of the mat.
- Maintain central alignment of the upper body.
- Elongate the neck.
- Press the upper foot and shin into the mat.
- Place the body weight in the hands, forearms, and shins.
- Use the exhaling breath to release muscle tension in the hips.

INITIAL POSITION

Position the body on the hands and knees in *NEUTRAL TABLE*.

POSITION, MOTION, and BREATH

Place the hands flat on the mat shoulder-width apart, directly under the shoulders. The fingers rest flat on the mat, evenly spread, pointing forward. The hips are directly over the knees and the feet are hip-width apart. Retract the shoulder blades, engage optimum posture, core lock, and Mula Bandha. The chin is retracted, and neck lengthened. Lift up to *DOWNWARD FACING DOG*. Look up between the hands, place the top of the right ankle near the left wrist and drop the right knee near the right wrist. Roll the upper part of the left foot on the mat and drop the right hip. The right shin is in contact with the mat and parallel to the front edge of the mat. The right foot is parallel with the body. Reach both hands forward, bend the elbows, and rest the forearms on the mat. Gently lean the entire trunk toward the mat and rest the forehead between the palms. Square the shoulders to the mat. The back leg and foot are stretched straight back. The left foot and knee remain in contact with the mat. Line the body by rolling the hips down to the mat. Close the eyes. Maintain the asana for 5 respirations. Repeat on the other side.

PRIMARY GOALS

- Stretch the pyriformis muscle
- Open the hips
- Stretch the iliopsoas muscle

COMMON OVERSIGHT

Use the core and breath to engage the spine in neutral, otherwise, the hips will rotate from side to side causing imbalance. Maintain optimum posture from the sacrum to the crown of the head. Maintain a focus on stretching the pyriformis muscle in the hip region.

AADHO MUKHA EKA PADA RAJAKAPOT asana

BENEFITS

- Releases and opens the hip joints
- Stretches the pyriformis and iliopsoas muscles

MODIFICATIONS

Beginners – The front leg may be bent and not fully squared with the top of the mat.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: wrist and hip complications, pelvic pathologies, or in the advanced stages of pregnancy.

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LOCUST

Prone, Extension

VERBAL SUGGESTIONS

• Engage the gluteal, thigh, and pelvic girdle muscles.
• Contract the lower back and gluteal muscles, apply pressure into the hands, and elevate the lower extremities.
• Contract the abdominal muscles to prevent hyper-extension of the low back.

INITIAL POSITION

Lie face down, forehead on the mat, palms face down beside the body.

POSITION, MOTION, and BREATH

The feet are together and the top of the feet contact the mat. Retract the shoulder blades. Inhale, and in one fluid movement lift the thighs and legs off the mat. Engage the gluteal, thigh, and pelvic girdle muscles. The legs and thighs are straight and the bottom of the feet face up in the air. The arms remain straight and the upper body is in neutral posture. Close the eyes. Maintain the asana for 5 respirations.

PRIMARY GOALS

• Strengthen the low back muscles
• Improve extension range of the lumbar spine
• Develop the pelvic and gluteal muscles
• Tone the abdominal contents

COMMON OVERSIGHT

The lift is made with a unified effort of the low back and pelvic girdle muscles.

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SALABHA asana

BENEFITS

• Stimulates the abdominal contents
• Strengthens the lower back and the gluteal region
• Increases the stability of the pelvic region

MODIFICATIONS

Intermediate – *LOCUST 2:* Place the palms face up underneath the pubic bone. Raise both legs and thighs simultaneously to an equal height. Close the eyes. Maintain the asana for 3 respirations.

CONTRA-INDICATIONS

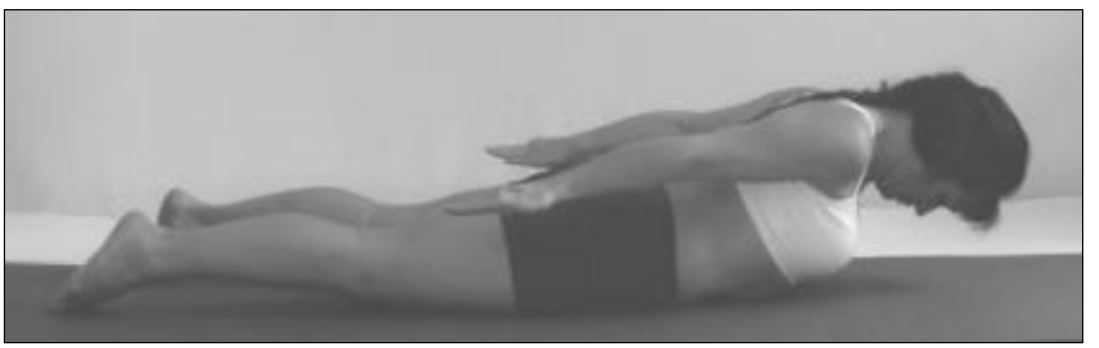
Do not practice this asana if experiencing: lumbar disc problems; sciatica, visceral, or cardiac complications; hernias; or after 3 months of pregnancy. .

747 and SNAKE

Prone, Extension

VERBAL SUGGESTIONS

• Engage the core at all times to protect the spine.
• Raise the head and palms 6 - 8 inches off the mat.
• Raise only the chest, upper body, head, and arms off the mat.
• Lengthen the body from the crown of the head.
• There is no contraction in the low back.
• The head and neck are in neutral posture to prevent hyper-extension of the neck.



INITIAL POSITION

Lie face down, forehead on the mat, palms face down beside the body.

POSITION, MOTION, and BREATH

The feet are hip-width apart and the top of the feet contact the mat. Retract the shoulder blades and engage the core lock. Inhale, draw the shoulder blades down and together, raise the chest and lift the palms 6 - 8 inches off the mat. The head, neck, and upper body are raised off the mat in neutral posture. The legs and thighs are in contact with the mat. Gaze at a fixed point. Maintain the asana for 5 respirations.

PRIMARY GOALS

• Strengthen the upper back and shoulders
• Improve posture
• Tone the abdominal contents

COMMON OVERSIGHT

The lift is made with a unified effort of the core engagement and muscles in the shoulder blade region. Avoid hyper-extension of the neck.

sound body Yoga

747 and NAAG asana

BENEFITS

- Improves upper body posture
- Develops the muscles in the shoulder blade region
- Stretches the chest cavity
- Decreases stress and tension in the upper back
- Tones the abdominal contents

MODIFICATIONS

Intermediate - *747 LEGS RAISED:* Place the palms face down beside the body. Raise the head, upper body, and arms 6 - 8 inches off the mat. Simultaneously raise both legs to an equal height off the mat. Gaze at a fixed point. Maintain the asana for 5 respirations.
SNAKE: Interlock the hands behind the back, raise the arms and chest, and squeeze the shoulder blades back toward each other. Reach back with the hands, and reach out from the crown of the head. The chin is retracted into the neck. Gaze at the tip of the nose. Maintain the asana for 5 respirations.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: shoulder or chest complications, whiplash symptoms, or in the final 3 months of pregnancy.

SUPERMAN

Prone, Extension, Balance, Strength

VERBAL SUGGESTIONS

• Engage the core at all times to protect the spine.
• Contract the lower back and gluteal muscles and elevate the lower extremities.
• Extend and lengthen the body from the crown of the head to the base of the feet.
• Contract the abdominals to prevent hyper-extension of the low back.

INITIAL POSITION

Lie face down, forehead on the mat, arms overhead, and palms face down.

POSITION, MOTION, and BREATH

The feet are hip-width apart, and the tops of the feet contact the mat. Retract the shoulder blades and engage the core lock. Inhale, and in one fluid movement lift the thighs, legs, chest, arms, and head off the mat. Engage the gluteal, thigh, and pelvic girdle muscles. The legs and thighs are raised and held straight. The bottoms of the feet are face up in the air. The arms and head are raised 6 - 8 inches off the mat, the head is in neutral position, the arms are straight, and the palms face down. There is a longitudinal pull between the top of the head, hands, and feet. Gaze at a fixed point. Maintain the asana for 5 respirations.

PRIMARY GOALS

• Strengthen the low back muscles
• Improve extension range of the lumbar spine
• Engage the core
• Develop pelvic and gluteal muscles
• Strengthen the shoulders
• Tone the abdominal contents

COMMON OVERSIGHT

Lift the body with a unified effort of the core engagement, low back, pelvic girdle, and shoulder muscles. Lift up and away.

MAHAPURSH asana

BENEFITS

• Stimulates the abdominal contents
• Strengthens the lower back and the gluteal region
• Improves posture
• Increases the stability of the pelvic region

MODIFICATIONS

Beginners - *SUPERMAN ALTERNATE ARM/LEG RAISE:* The right arm is beside the body, palm face down; and the left arm is extended overhead parallel with the ear, palm facing in. Simultaneously raise and extend the left arm, right leg and thigh. The head is raised 3 - 4 inches off the mat. The left foot and right hand remain in contact with the mat. Gaze at a fixed point. Maintain the asana for 3 respirations. Repeat on the other side.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: lumbar disc problems; sciatica, visceral, or cardiac complications; shoulder problems; hernias; or after 3 months of pregnancy.

HIGH PLANK

Prone, Strength, Balance

VERBAL SUGGESTIONS

• The core must be engaged at all times to maintain the integrity of the spine.
• Retract the chin and elongate the neck.
• Both legs are fully active.
• Retract the shoulder blades, and lower the tailbone toward the heels.

INITIAL POSITION

Position the body on the hands and knees in *NEUTRAL TABLE*.

POSITION, MOTION, and BREATH

From *NEUTRAL TABLE*, engage optimum posture, core lock, and Mula Bandha. Extend both the legs fully. From a side view the body is linear from the crown of the head to the heels, and the weight is evenly distributed between the balls of the feet and the palms. Align the shoulders, elbows, and wrists in a straight line. Gaze at a fixed point. Maintain the asana for 5 respirations.

PRIMARY GOALS

• Develop upper body
• Improve core abdominal muscle strength
• Align posture

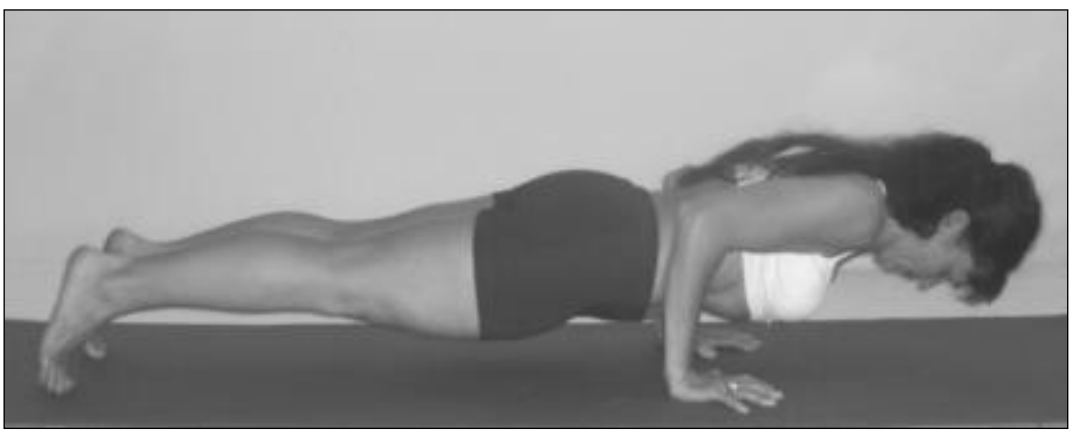
COMMON OVERSIGHT

Focus on the individual components of the asana. The spine sags and the hips rotate if the core is not fully engaged throughout the movement. Drop the shoulder blades down and back, and do not raise the neck. Maintain a neutral position.

CHATURANGA DAND asana

BENEFITS

- Stabilizes the pelvis and strengthens the transverse abdominis muscle
- Develops stability in the shoulders and hips
- Encourages full body stabilization and coordination



MODIFICATIONS

Intermediate – *HIGH PLANK 2:* Lift one foot a couple of inches off the mat without compromising technique. Hold for one full breath. Repeat on the other side.
Advanced – *LOW PLANK:* From *HIGH PLANK,* maintain optimum posture, core lock, and Mula Bandha. Stabilize the body weight in the hands and the balls of the feet. Lower the body down and forward on to the bottom of the toes to approximately 4 inches off the mat. The elbows are bent and align over the wrists, forming a 90 degree angle with the mat. Maintain the integrity of the technique, keeping the body linear. Gaze at a fixed point. Maintain the asana for 2 respirations.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: abdominal hernias, stomach ulcers, shoulder or wrist problems, menstruation, or in the advanced stages of pregnancy.

BOW PRONE

Prone, Extension

VERBAL SUGGESTIONS

• The legs are the anchor for the weight of the upper body.
• The legs move back and the rest of the body moves up.
• Use the breath to lift the legs and chest off the mat.
• Balance the body weight in the navel.
• The lower body is active and the upper body is relaxed.

INITIAL POSITION

Lie face down, forehead on the mat.

POSITION, MOTION, and BREATH

The legs are extended, feet hip-width apart, the arms and hands are beside the body, and the palms face up. Bend the knees, clasp the hands around the ankles, and bring the heels toward the gluteals. Retract the chin and shoulder blades. Inhale, engage the quadricep, hamstring, and gluteal muscles. Push the feet away from the body into the hands. Extend the spine and simultaneously raise the thighs, chest, and head off the mat. The arms are straight, neck is neutral, and the abdomen supports the entire body off the mat. Gaze at a fixed point. Maintain the asana for 5 respirations.

PRIMARY GOALS

• Extend the spine
• Open the chest and front of the shoulders
• Stretch the hips and thighs

COMMON OVERSIGHT

The lift is made with a unified effort of the core engagement, low back, and thigh muscles. Align the knees with the hips. Do not extend the neck.

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ADHO DHANUR asana

BENEFITS

- Stretches the spinal ligaments and muscles
- Massages the entire abdominal contents
- Opens and stretches the upper body
- Aligns the spine, and improves mid-back posture

MODIFICATIONS

This asana can be held in a steady position for 5 breaths or gently rock in unison with the breath, lifting on inhalation and lowering on exhalation.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: cardiac problems, lumbar disc problems, sciatica, symptoms of whiplash, visceral complications, hernias, colitis, ulcers, menstruation, or during pregnancy.

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COBRA

Prone, Extension

VERBAL SUGGESTIONS

- Engage the core at all times during the asana to protect the spine.
- The pelvis and the palms carry most of the body weight in the movement.
- Increase the extension of the entire spine by pushing the sternum out and retracting the shoulder blades.
- Do not over-extend the neck back in the extension position, keep the chin retracted.

INITIAL POSITION

Lie face down on the mat.

POSITION, MOTION, and BREATH

Place the palms face down on the mat beside the top of the head with the elbows bent. Engage core lock and Mula Bandha. Inhale, lift up from the chest, roll off the elbows, straighten the arms, and place the body weight in the palms, thighs, and the bottom of the toes. Retract the shoulder blades and lengthen from the crown of the head. Engage the gluteal and pelvic girdle muscles. The thighs remain on the mat. Gaze at the tip of the nose. Maintain the asana for 5 respirations.

PRIMARY GOALS

- Strengthen the low back muscles
- Improve spinal extension range
- Encourage shoulder blade retraction
- Strengthen the arm and shoulder muscles
- Stretch and expand the chest cavity

COMMON OVERSIGHT

The lift is made with a unified effort of the core engagement, low back, pelvic girdle, and shoulder muscles. Use the breath and the core to extend the spine.

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BHUJANG asana

BENEFITS

- Opens and stretches the chest cavity
- Stretches the anterior spinal ligaments and abdominal contents
- Aligns upper body posture, especially rounded shoulders
- Strengthens the upper body
- Increases the stability of the pelvic region
- Enhances breath capacity
- Helps with menstrual disorders

MODIFICATIONS

Beginners – Keep the elbows bent and the navel in contact with the mat. Limit the extension of the neck and low back. Gaze at the tip of the nose. Maintain the asana for 3 respirations.
Intermediate – Straighten the arms and retract the chin and shoulder blades. Lift the knees and thighs off the mat. Gaze at the tip of the nose. Maintain the asana for 5 respirations.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: lumbar pathologies, sciatica, visceral or lung complications, menstruation, or after 3 months of pregnancy.

SPHINX

Prone, Extension

VERBAL SUGGESTIONS

• Engage the core at all times to protect the lumbar spine.
• The pelvis carries most of the body weight in the movement.
• The tops of the feet are compressed into the mat.
• The neck is elongated in neutral position.

INITIAL POSITION

Lie face down, feet hip-width apart, and forehead on the mat.

POSITION, MOTION, and BREATH

Place the palms and forearms face down on the mat beside the ears with the elbows bent. Retract the shoulder blades, engage optimum posture, core lock, and Mula Bandha. Inhale, place the body weight in the pelvis and palms, and lift the upper body and head off the mat without releasing the core lock. The palms, forearms, abdomen, legs, and tops of the feet remain on the mat. Engage the quadriceps and gluteal muscles. Gaze at a fixed point. Maintain the asana for 5 respirations.

PRIMARY GOALS

• Strengthen the low back muscles
• Engage the core
• Enhance shoulder blade retraction

COMMON OVERSIGHT

The lift is made with a unified effort of the core engagement and low back muscles. These muscles protect the spinal vertebral joints during movement.

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URDHAV asana

BENEFITS

• Stretches the anterior spinal ligaments and abdominal contents
• Stimulates digestion

MODIFICATIONS

Beginners – Lift up only to the point where the neck remains in neutral with the rest of the spine.
Intermediate – Extend further keeping the spine aligned.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: lumbar disc problems, sciatica, visceral complications, symptoms of whiplash injury, menstruation, or pregnancy.

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UPWARD FACING DOG

Prone, Extension, Strength

VERBAL SUGGESTIONS

• Engage the core at all times to protect the spine and rib cage.
• Inhale upon extending the entire spine and exhale upon flexion.
• Slowly move vertebra by vertebra.
• Retract the shoulders down and back upon extension of the spine.
• Keep the arms and thighs vertical.

INITIAL POSITION

Lie face down on the mat.

POSITION, MOTION, and BREATH

Place the palms on the mat beside the chest, the elbows are bent, and the feet are hip-width apart with the top portion of the feet in contact with the mat. Retract the shoulder blades, engage optimum posture, core lock, and Mula Bandha. Inhale, place the body weight in the pelvis and palms, and lift the upper body and head off the mat, extending the elbows without releasing the core lock. As the trunk moves forward through the arms, press the feet into the mat. Engage the quadriceps and gluteal muscles and raise the thighs and legs off the mat. Retract the shoulder blades and chin. In the final position, optimum posture is maintained from the navel up. Gaze at a fixed point. Maintain the asana for 5 respirations.

PRIMARY GOALS

• Strengthen the low back muscles
• Develop the core
• Enhance shoulder blade retraction
• Strengthen the muscles of the arms and shoulders

COMMON OVERSIGHT

The lift is made with a unified effort of the core engagement, low back, and pelvic girdle muscles. Engage the core to support the lift and place minimal pressure in the palms and feet. The chin and shoulder blades remain retracted throughout the movement.

URDHAV MUKHA SVAN asana

BENEFITS

- Opens and stretches the chest cavity
- Stretches the anterior spinal ligaments and abdominal contents
- Aligns the upper body posture
- Strengthens the upper body
- Enhances the breath capacity

MODIFICATIONS

Beginners – Raise the upper body only, not the thighs. Maintain the asana for 3 respirations.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: visceral or lung complications, lumbar disc problems, sciatica, menstruation, symptoms of whiplash injury, or during pregnancy.

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Maui says,

The best things in life aren't things . . .

1. Speak the truth, there is less to remember.

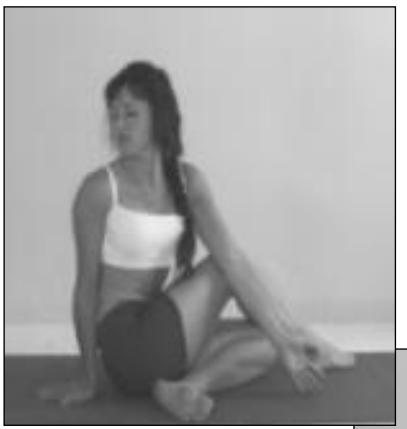
2. There are two ways to become rich – make more or desire less.

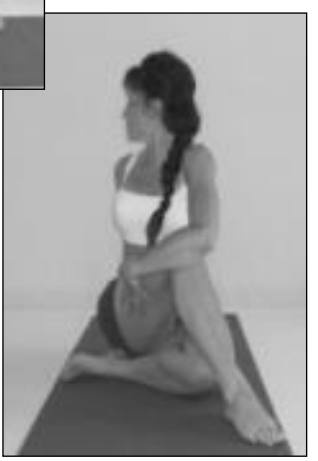
3. No rain, no rainbows.

ROTATION ASANAS

SEATED HALF SPINAL TWIST

Sitting, Rotation





VERBAL SUGGESTIONS

- Lift the sternum, retract the chin, draw the shoulders back, and maintain optimum posture during the entire asana.
- Keep the gluteals fixed to the mat.
- Keep the back arm perpendicular to the mat.
- Rotate further on each exhalation.
- The feet are firmly grounded in the mat.
- The arms act as levers for the rotation of the spine.
- Pivot from the tailbone up.

INITIAL POSITION

Sit upright with the legs extended.

POSITION, MOTION, and BREATH

Lift the sternum and retract the shoulder blades. Engage optimum posture, core lock, and Mula Bandha. Bend the left knee and place the left heel outside the right hip. The outside edge of the left foot is in contact with the mat. Bend the right knee and place the right foot flat on the mat with the Achilles Tendon in contact with the left knee. The foot is in line with the left thigh. Both the gluteals remain in contact with the mat. The right arm is placed directly behind the tailbone with the palm flat on the mat and the fingers point away from the body. Inhale and place the left elbow outside the right knee. Use the right arm as a lever, exhale and rotate the spine to the right pivoting from the tailbone to the base of the skull. Keep the spine erect and look over the right shoulder. Maintain the asana for 5 respirations. Repeat on the other side.

PRIMARY GOALS

- Stretch the muscles of the back and abdomen
- Increase spinal and hip flexibility

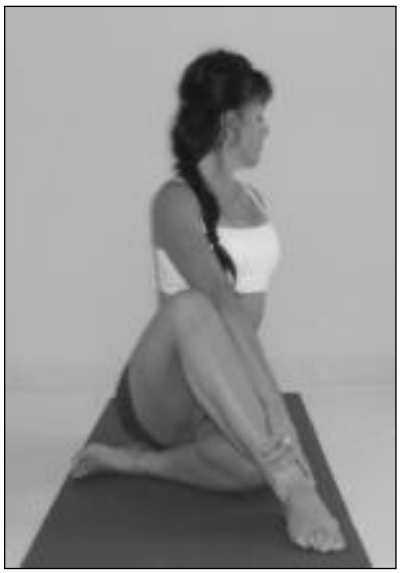
COMMON OVERSIGHT

Do not lose the integrity of optimum posture in exchange for the rotation of the spine. Keep the gluteals fixed on the mat.

ARDHA MATSYENDR asana

BENEFITS

- Stretches the abdominal contents
- Increases spinal mobility
- Elongates the spine from the sacrum to the base of the skull
- Opens the rib cage



MODIFICATIONS

Variation 1 - *SEATED HALF SPINAL TWIST 2:* The legs and feet remain in the same position. Inhale, bring the right arm in front of the body and reach the palm to the inside of the right foot. The left arm is placed directly behind the tailbone with the palm flat on the mat, fingers pointing away from the body. Use the left arm as a lever, exhale and rotate the spine to the left pivoting from the tailbone to the base of the skull. Keep the spine erect and look over the left shoulder. Maintain the asana for 5 respirations. Repeat on the other side.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: hip pathologies, injuries to the spine, abdominal complications, hernias, or in the last 3 months of pregnancy.

UNIVERSAL SPINAL TWIST

Supine, Rotation, Relaxation

VERBAL SUGGESTIONS

• Create a long straight line from the crown of the head to the heel of the straight leg.
• Keep the shoulder blades on the mat.
• The palm of the elevated arm is face up.
• Rotate the spine further with each exhalation.
• Feel the spinal joints stretch up and out.
• Push the upper knee and hip down on every exhalation.

INITIAL POSITION

Lie face up, legs extended, and feet together.

POSITION, MOTION, and BREATH

Keep the left leg fully extended, and place the right foot on the mat. Lift the sternum, retract the shoulder blades, and engage optimum posture. Inhale, grasp the outside of the right knee with the left hand and pull it to the chest. Exhale and rotate the right knee over to the left side of the body. Gently press the right knee down. The right leg may be bent or straight. Stretch the right arm to the side at shoulder height, palm facing up. Rotate the head to the right and gaze at the right hand. Maintain the asana for 5 respirations. Repeat on the other side.

PRIMARY GOALS

• Mobilize the spine
• Open the hips

COMMON OVERSIGHT

Keep the lower hip and leg fixed to the mat. Increase the rotation and stretch with every exhalation. Do not force the stretch.

SHIV UDARAKARSHAN asana

BENEFITS

• Relieves tension and fatigue in the low back
• Opens spinal and hip joints
• Massages the abdominal organs
• Stretches the shoulder articulations

MODIFICATIONS

Variation 1 - *UNIVERSAL SPINAL TWIST 2:* Bend both knees and bring them to the chest. Exhale and rotate the knees over to the left side of the body with the left hand. Gently press the knees down. Stretch the right arm to the side at shoulder height, palm face up. Rotate the head to the right and gaze at the right hand. Maintain the asana for 5 respirations. Repeat on the other side.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: abdominal hernias, lumbar disc pathologies, hip disorders, or in the last 3 months of pregnancy.

STANDING TRIANGLE SPINAL ROTATION

Standing, Rotation, Balance, Inversion

VERBAL SUGGESTIONS

- The feet are straight and parallel.
- The legs are active.
- Distribute the body weight evenly between both feet.
- Rotate the spine using the hands as the fulcrum.
- Lift the raised shoulder back, and the lowered shoulder forward.

INITIAL POSITION

Stand in optimum posture, feet hip-width apart.

POSITION, MOTION, and BREATH

Lift the toes, spread them apart, then lower them down with the weight evenly distributed and grounded in the mat. The hands are by the sides, in anatomical neutral posture. Engage optimum posture, core lock, and Mula Bandha. Keep the body tall. Heel/toe the feet approximately 3 - 4 feet apart. Inhale, lift up from the waist and the crown of the head. Exhale, pivot the body forward from the hips and grasp the outside of the right leg, near the ankle, with the left hand. Inhale, internally rotate the right shoulder, reach behind the spine, and approximate the back of the right hand close to the left hip. Rotate the head to the right and look over the right shoulder. Further accentuate the rotation lifting the right shoulder up to the sky and dropping the left shoulder into the mat. Lift the tailbone and the back of the knees up to the sky. Gaze at a fixed point over the shoulder. Maintain the asana for 5 respirations. Repeat on the other side.

PRIMARY GOALS

- Stretch the upper back and shoulders
- Rotate and stretch the trunk
- Open the chest
- Invert the upper body
- Stretch the hamstrings

COMMON OVERSIGHT

Fully rotate the entire spine, not just the neck. To prevent the feeling of fainting or dizziness, make controlled heel/toe movements and return very slowly to initial standing position.

PARIVARTANA TRIKON asana

BENEFITS

- Stretches the hamstring and spinal muscles
- Develops body balance and strength
- Massages and tones the abdominal contents
- Improves spinal rotation mobility
- Enhances circulation
- Opens the upper spine and shoulder blades

MODIFICATIONS

Intermediate – *STANDING TRIANGLE SPINAL ROTATION 2:* Exhale, pivot the body forward from the hips and place the left palm on the mat in the center between both feet. Inhale, externally rotate and elevate the right arm over the shoulder, perpendicular to the mat. Both arms are parallel with each other. Gaze up at the right hand. Further accentuate the rotation between both hands by simultaneously reaching up with the right arm, and pressing down into the mat with the left palm. Lift up behind the knees and up on the tailbone. Maintain the asana for 5 respirations. Repeat on the other side. Pivot the feet heel/toe to the center, and lift up very slowly to return to initial position.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: high blood pressure, spinal complications, sciatica, heart disease, abdominal hernias, shoulder complications, symptoms of whiplash, or in the last 3 months of pregnancy.

SUPPORTED KNEE SPINAL ROTATION

Standing, Rotation, Balance

VERBAL SUGGESTIONS

• Engage the core at all times to avoid pelvic rotations and collapse of the trunk.
• Maintain a straightened leg on the side fixed to the mat.
• Distribute the weight evenly in the foot supporting the body weight.
• Maintain the hip in neutral position on the elevated thigh.
• Retract the shoulders when the arms are elevated.
• Maintain optimum posture throughout the asana.
• The palm is face up on the elevated arm.

INITIAL POSITION

Stand in optimum posture and ground the feet into the mat.

POSITION, MOTION, and BREATH

Stand in optimum posture, engage core lock and Mula Bandha, stabilizing the hips and pelvis. Keep the body tall. Flex the right knee and elevate the right thigh parallel to the mat. Inhale, lift the right arm above the head and internally rotate the right shoulder. Exhale reach down with the right hand and hold the inside of the right knee. Inhale, raise the left arm overhead and externally rotate the shoulder. Exhale and lower the left arm to shoulder height, parallel with the mat, palm faces up. Rotate and reach back with the left arm and look over the left shoulder. Gaze at the left hand. Maintain the asana for 5 respirations. Repeat on the other side.

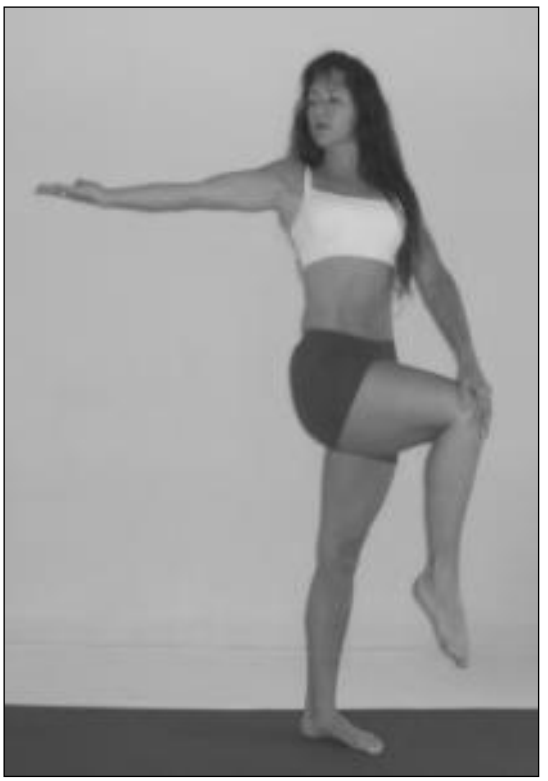
PRIMARY GOALS

• Develop the core
• Open the chest cavity
• Develop shoulder strength
• Encourage body equilibrium

COMMON OVERSIGHT

Do not rush through the movement of elevating the thigh, losing the focus of engaging the pelvic and core muscle groups, resulting in the collapse of the hips on the straight leg side. Rotate the shoulder and arm from the trunk keeping the spine in neutral.

SALAMBA JANU MERU DANDA PRIVARTANA PURVOTTANA asana



BENEFITS

- Stabilizes the pelvis and core
- Develops strength in the ankle and feet muscles
- Opens up the shoulders and chest
- Establishes balance and coordination
- Develops focus and concentration
- Improves posture

MODIFICATIONS

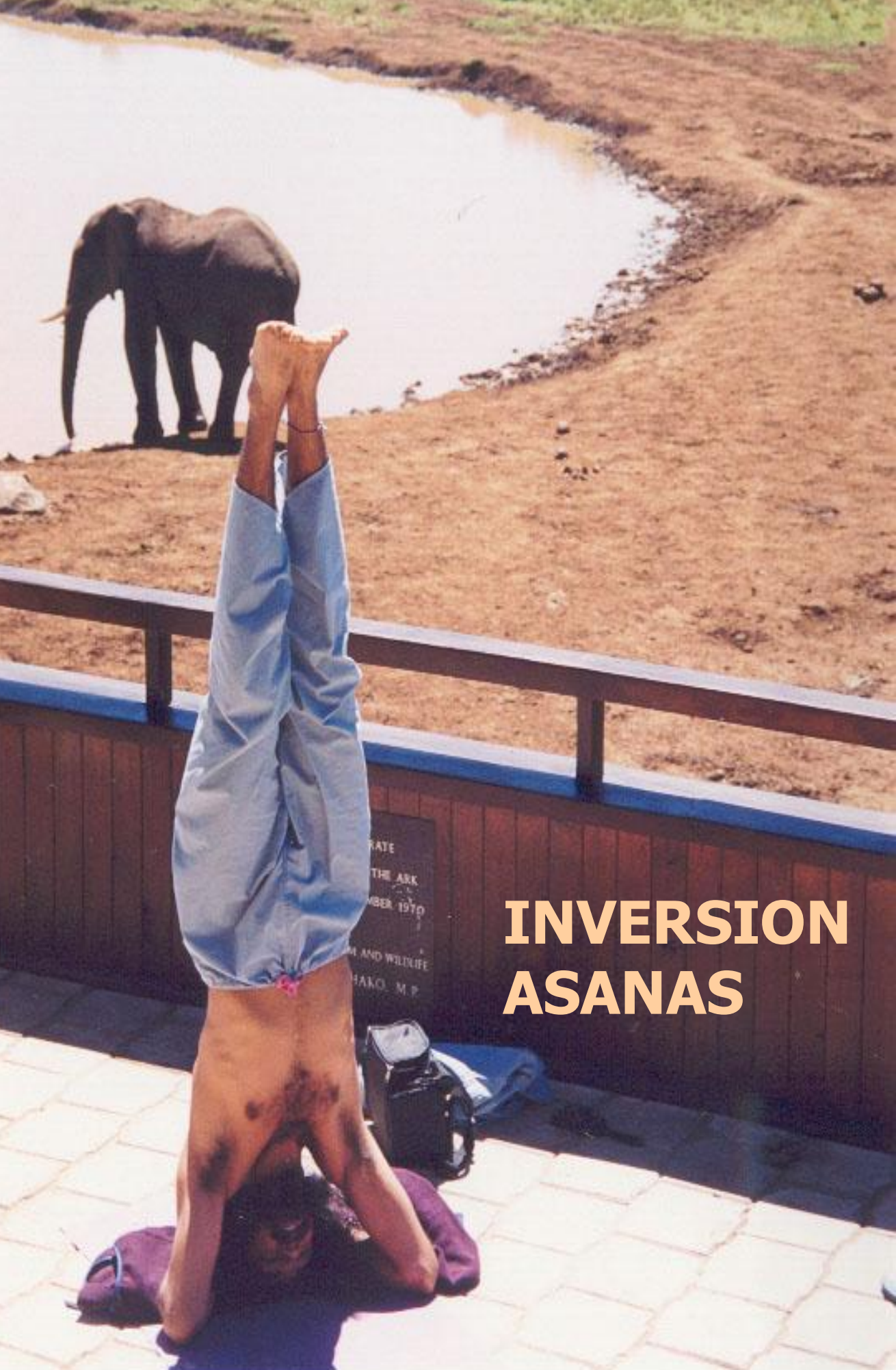
Intermediate - *SUPPORTED KNEE SPINAL ROTATION 2:* Stand in optimum posture, engage core lock, and Mula Bandha. Stabilize the hips and pelvis, keeping the body tall. Flex the right knee and elevate the right thigh parallel to the mat. Inhale, lift the left arm above the head and internally rotate the right shoulder. Exhale and reach down with the left hand, holding the outside of the right knee. Inhale, raise the right arm overhead, externally rotate the shoulder and lower the right arm to shoulder height, parallel with the mat, palm facing up. Rotate and reach back with the right arm. Rotate the head, and look over the right shoulder. Gaze at the right hand. Maintain the asana for 5 respirations. Repeat on the other side.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: injuries to the shoulders, feet, and ankles; varicose veins; dizziness; or middle ear complications.

People usually consider walking on water or in thin air a miracle. But I think the real miracle is not to walk either on water or in thin air, but to walk on earth. Every day we are engaged in a miracle which we don't even recognize: a blue sky, white clouds, green leaves, the black, curious eyes of a child -- our own two eyes. All is a miracle.

- Thich Nhat Hanh -



INVERSION ASANAS

FORWARD FOLD

Standing, Flexion, Inversion

VERBAL SUGGESTIONS

• Distribute the weight evenly between both feet.
• Maintain an optimum neutral posture throughout the asana, elongating the spine.
• Bring the chest in toward the thighs.
• Relax the neck and allow the head to hang freely.
• Stretch the crown of the head to the mat.
• The palms are fully flared open and rest flat on the mat.
• Lift the tailbone up toward the sky.
• Breathe and accentuate into the stretch.

INITIAL POSITION

Stand in optimum posture, feet hip-width apart.

POSITION, MOTION, and BREATH

Lift the toes, spread them apart, then lower them down with the weight evenly distributed and grounded in the mat. The hands are by the sides in anatomical neutral posture. Engage optimum posture, core lock, and Mula Bandha. Keep the body tall. Maintain the balance in the bottom of the feet. Lift up from the kneecaps and squeeze the thighs and gluteals. The legs are straight and knees unlocked. Inhale, lift up from the waist and the crown of the head. Raise the arms laterally reaching out in a circular motion overhead. The palms face forward and the arms are parallel with the ears. Exhale and pivot forward from the hips. Reach out and forward maintaining optimum posture until the palms reach the mat on either side of the feet. Gaze at the knees. Maintain the asana for 5 respirations.

PRIMARY GOALS

• Stretch hamstrings and low back
• Elongate the spine
• Massage internal organs

COMMON OVERSIGHT

Bend the knees to release the stress on the low back. Do not force the stretch. To prevent the feeling of fainting or dizziness, return very slowly to initial standing position.

HAST PAD asana

BENEFITS

- Stretches the hamstring and spinal muscles
- Improves posture
- Massages and tones the abdominal contents
- Improves blood flow to the brain
- Enhances circulation

MODIFICATIONS

Variation 1 - *RAG DOLL:* From *FORWARD FOLD*, grasp the elbows with the opposite hand so the arms are folded. Drop the head and neck. Shake the head motioning 'yes' and 'no' to fully relax the upper body and neck. Gaze at the knees. Maintain the asana for 10 respirations.

Variation 2 - *DOUBLE ANGLE:* From *FORWARD FOLD*, externally rotate the shoulders and interlock the hands behind the spine. Inhale and raise the arms parallel to the legs. Retract the shoulder blades. Lift the hands and tailbone up toward the sky, and push the feet into the mat. Maintain a neutral upper body posture. Gaze at a fixed point. Maintain the asana for 5 respirations.

Variation 3 - *GORILLA:* From *FORWARD FOLD*, place the hands under the feet, palms face up, and walk the toes to the wrists. The knees may be slightly bent to protect the low back. Inhale and lift the upper body and neck looking straight up. Exhale and fold the head down to neutral. Straighten the knees, inch by inch, to increase the stretch. Gaze at a fixed point. Repeat the asana cycle for 5 respirations.

Variation 4 - *FORWARD FOLD GRASPING ANKLES:* From *FORWARD FOLD*, exhale and drop the head lower, down to mat and grasp the Achilles Tendons. Lift up from the tailbone to increase the stretch. Gaze at a fixed point. Maintain the asana for 10 respirations. Lift up very slowly and return to initial standing position.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: high blood pressure, spinal complications, sciatica, heart disease, abdominal hernias, or symptoms of whiplash.

Variation 1 - *RAG DOLL*

Variation 2 - *DOUBLE ANGLE*

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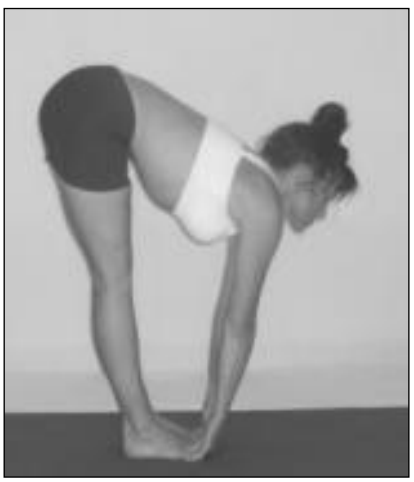

Variation 3 - *GORILLA*

Variation 4 - *FORWARD FOLD*
GRASPING ANKLES

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CRANE

Standing, Flexion, Inversion

VERBAL SUGGESTIONS

• Maintain optimum neutral posture throughout the asana, elongating the spine.
• Relax the neck and allow the head to hang freely.
• Stretch the crown of the head to the mat.
• The palms are fully flared open and pushed flat on the mat.
• The elbows are straight.
• Do not rotate the hip of the elevated leg.
• Lift the tailbone up toward the sky.
• Bring the chest in toward the thigh.
• Breathe and accentuate into the stretch.

INITIAL POSITION

Stand in optimum posture, feet hip-width apart.

POSITION, MOTION, and BREATH

Lift the toes, spread them apart, then lower them down with the weight evenly distributed and grounded in the mat. The hands are by the sides in anatomical neutral posture. Engage optimum posture, core lock, and Mula Bandha. Keep the body tall. Maintain the balance in the bottom of the feet. Lift up from the kneecaps and squeeze the thighs and gluteals. The legs are straight and knees unlocked. Inhale, lift up from the waist and the crown of the head. Raise the arms laterally reaching out in a circular motion overhead. The palms face forward and the arms are parallel with the ears. Exhale and pivot forward from the hips. Reach out and forward maintaining optimum posture until the palms reach the mat beside the toes. Keep the right leg straight and elevate the left leg straight back, pointing the toes away from the head. Gaze at the knees. Maintain the asana for 5 respirations. Repeat on the other side.

PRIMARY GOALS

• Stretch hamstrings and low back
• Lengthens the spine
• Massage the internal organs
• Strengthen the hip region

COMMON OVERSIGHT

Bend the knees to release the stress on the low back. Do not force the stretch. Reach down into the stretch instead of forcing and bouncing. To prevent the feeling of fainting or dizziness, return very slowly to initial standing position.

BAK asana

BENEFITS

• Stretches the hamstring and spinal muscles
• Improves posture
• Develops the muscles of the hip region
• Massages and tones the abdominal contents
• Improves blood flow to the brain
• Enhances circulation
• Improves body balance and strength

CONTRA-INDICATIONS

Do not practice this asana if experiencing: high blood pressure, spinal complications, sciatica, heart disease, hip pathologies, abdominal hernias, or symptoms of whiplash.

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CROWN BASED

Standing, Flexion, Inversion

VERBAL SUGGESTIONS

• Keep the feet straight and parallel.
• Distribute the weight evenly between both feet, pushing into the mat.
• The legs remain active throughout the asana.
• Lift the tailbone up to the sky.
• Point the fingers forward and press the palms into the mat.
• Retract the chin and shoulder blades.

INITIAL POSITION

Stand in optimum posture, feet hip-width apart.

POSITION, MOTION, and BREATH

Lift the toes, spread them apart, then lower them down with the weight evenly distributed and grounded in the mat. The hands are by the sides in anatomical neutral posture. Engage optimum posture, core lock, and Mula Bandha. Keep the body tall. Heel/toe the feet approximately 4 - 5 feet apart. Inhale, lift up from the waist and the crown of the head. Raise the arms laterally reaching out in a circular motion overhead, palms face forward. Exhale, pivot the body forward from the hips and set the palms on the mat, shoulder-width apart. The head, neck, and spine are linear, and the arms are straight. The body weight is evenly distributed between the hands and feet, and the head hangs in a relaxed, inverted position. Lift the tailbone up to the sky. Gaze at a fixed point. Maintain the asana for 5 respirations.

PRIMARY GOALS

• Stretch the calf and hamstring muscles
• Strengthen the ankle and feet muscles
• Elongate the spine
• Invert the upper body

COMMON OVERSIGHT

Avoid overstretching the leg and thigh muscles when separating the feet. To prevent the feeling of fainting or dizziness, make controlled heel/toe movements and return very slowly to initial standing position.

PRASARITA PADOTTAN asana

BENEFITS

- Stretches the hamstring and spinal muscles
- Improves posture
- Massages and tones abdominal contents
- Improves blood flow to the brain
- Enhances circulation
- Opens the upper spine and shoulder blades

MODIFICATIONS

Beginners - The arms are vertical and the crown of the head is lowered toward the mat.
Intermediate - *CROWN BASED:* Heel/toe the feet further apart. Bend the elbows and rest the crown of the head on the mat in a relaxed position. Drop the forearms beside the head, and interlock the hands around the crown of the head. Close the eyes. Maintain the asana for 5 respirations.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: high blood pressure, spinal complications, sciatica, heart disease, abdominal hernias, shoulder complications, symptoms of whiplash, or in the last 3 months of pregnancy.

SHOULDER STAND

Supine, Inversion, Balance, Flexion

VERBAL SUGGESTIONS

- Engage the core at all times to protect the lumbar spine.
- Consciously move very slowly through each vertebra, one by one.
- Lift the body up and away from the shoulders.
- Use the palms to support the low back.
- Draw the shoulder blades and elbows toward each other.
- Bring the chin into the chest.
- Maintain optimum posture at the start and end positions of the asana.
- Exhale upon lowering to the initial position, slowly moving vertebra by vertebra.

INITIAL POSITION

Lie face up, knees bent.

POSITION, MOTION, and BREATH

1. Lie face up, bend the knees toward the chest, and push the feet and knees together. The neck and shoulder blades are retracted in optimum posture, the arms are beside the body, and the palms are face down.
2. Engage core lock and Mula Bandha. Raise the legs perpendicular to the body. The hips remain in contact with the mat.
3. Inhale, push down on the arms and hands, smoothly roll the gluteals off the mat, moving through the spine one vertebra at a time raising the hips off the mat. Move the legs over the body past the head and the arms and palms face down on the mat. Raise both legs to a vertical position, keeping them straight and together.
4. Turn the palms up, bend the elbows shoulder-width apart, and place the hands behind the rib cage beside the spine. Lift the body so the weight stabilizes in the upper shoulder blades. The palms cup the rib cage to support the weight of the body. The chin is retracted and approximates the chest. The legs are vertical with the trunk, and the body is supported by the shoulders, arms, neck, and the back of the head. The arms provide stability. The toes point away from the head. Gaze at the toes or close the eyes. Maintain the asana for 10 respirations.

PRIMARY GOALS

- Mobilize spinal joints
- Invert and flush the physiological systems in the body
- Develop core abdominal muscles
- Stabilize the hips and pelvis

COMMON OVERSIGHT

Do not rush through the movement and lose the focus of moving through, one vertebra at a time. In the Intermediate and Advanced Asanas become fully aware of the placement of the body so the asana may be performed with full stability. Keep the neck in neutral position with no rotation.

5. To return to initial position, bring the legs forward until the feet are above and behind the back of the head and the legs are straight. Slowly release the position of the hands and place the arms on the mat beside the body, palms face down. Using the abdominal contraction, gradually lower each vertebra of the spine to the mat followed by the gluteals and the legs, resuming to their initial vertical position. Lower the legs to the mat by slowly bending the knees. Balance and control the movement so the body contacts the mat slowly and gently.

BENEFITS

- Stretches the entire spine
- Improves circulation of blood in the lower extremity
- Massages abdominal organs
- Stimulates the glandular systems

MODIFICATIONS

Beginners - Follow the sequence from positions 1 – 3 only.
Intermediate - *PLOW:* From the final raised position in *SHOULDER STAND*, bring the legs forward and begin to lower the feet until they are above and behind the back of the head. The legs remain straight. Slowly release the position of the hands and place the arms on the mat beside the body, palms face down. Lower the legs further directly behind the head, parallel to the mat. The bottom of the toes contact the mat behind the head and the legs remain straight. The chin is retracted, the palms and arms are face down on the mat with the weight of the body in the arms, shoulders, head, and toes. Close the eyes. Maintain the asana for 10 respirations.
Advanced - *DEAF MAN:* From *PLOW*, slowly bend and drop the knees beside the ears. Rotate the arms around and grasp the ankles. The top of the feet and shins rest on the mat. The gluteals are in the air and the body weight rests in the shoulders, head, and feet. Close the eyes. Maintain the asana for 10 respirations.

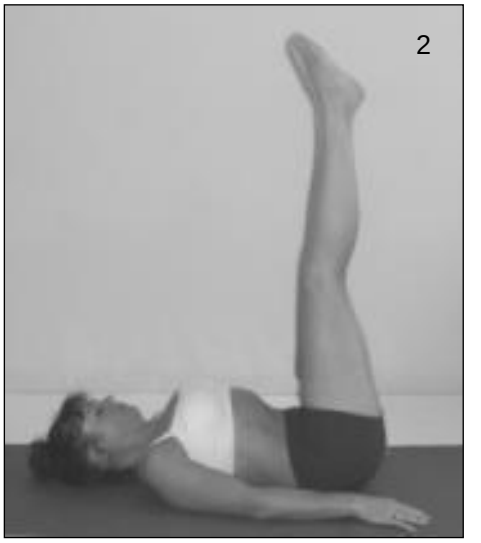
CONTRA-INDICATIONS

Do not practice this asana if experiencing: low back injuries, sciatica, spinal pathologies, neck trauma, symptoms of whiplash, spinal osteoporosis, cardio vascular disease, or in the advanced stages of pregnancy.

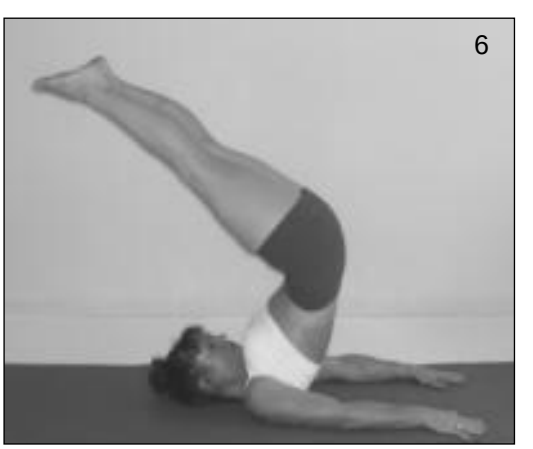
PRECAUTION

Keep the neck straight. Do NOT turn the head from side to side. This may cause severe damage.

SHOULDER STAND SEQUENCE



SHOULDER STAND



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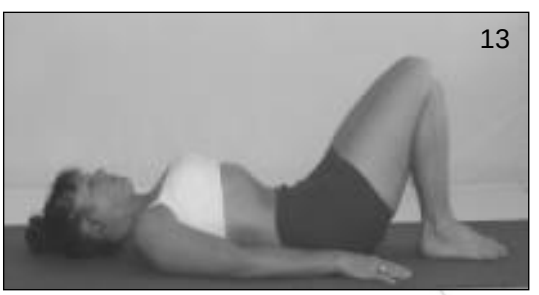
PLOW

DEAF MAN



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HEADSTAND

Inversion, Balance, Strength

VERBAL SUGGESTIONS

- The pelvic and abdominal muscles must remain active throughout the entire asana.
- Pivot from the hips when raising the body.
- Keep the body weight in the forearms.
- Maintain a focus on the breath.
- The body must remain linear.

INITIAL POSITION

Sit upright on the knees and heels in *SITTING ON KNEES.*

POSITION, MOTION, and BREATH

Sit facing a wall with the knees approximately 2 feet from the wall. Lift up on to the toes, place the forearms on the mat, fingers interlocked (knuckles touching the wall), and elbows about 6 inches in front of the knees. The distance between the elbows is equal to the distance from each elbow to the interlocked fingers, forming an equilateral triangle. Lower the crown of the head on the mat between the interlocked fingers, and wrap the hands around the head to make a firm support. Lock the core, come up on the toes, and raise the gluteals in the air. Slowly walk the feet toward the trunk and head, gradually moving the spine toward the wall in a vertical position. Bend the knees slightly and push the weight in the feet and forearms. Transfer the body weight from the toes to the forearms, and to the crown of the head. Maintaining a steady balance, raise one foot off the mat approximately 10 inches. Maintain the balance and then raise the other foot balancing on the forearms and head. Bend the knees and gradually raise the legs in a controlled movement. Adjust the upper body slightly to balance the weight of the legs and thighs. Contract the muscles of the low back and fold the legs back so the feet move toward the gluteals. The thighs are parallel with the mat and the feet are

PRIMARY GOALS

- Reverse the body flow and cleanse the physiological systems
- Enhance the breath
- Relax the body and mind
- Assist in digestion
- Develop focus and strength
- Awaken awareness

COMMON OVERSIGHT

Do not rush in and out of this asana. Surrender the forehead and thoughts into the mat and let go all the tension. The body weight is placed primarily in the forearms and when the asana is in neutral, the crown of the head rests on the mat. When releasing from the asana, stay in *CHILD* for at least one minute to restore blood pressure and blood flow to the head. Sudden movement to an upright position can result in fainting.

together, parallel with the mat. Begin raising the knees to a vertical position. Slowly straighten the hips raising the thighs upward, in line with the upper body. Straighten the knees and raise the legs until both the heels and legs contact the wall. The entire body is in a straight line. Slowly transfer the body weight fully into the forearms and head, moving one heel at a time away from the supportive wall. Maintain a steady balance. In the final position the body is linear and the feet are parallel with the mat. Gaze at a fixed point. Maintain the asana for 10 respirations.

To return to starting position, contact both heels back with the wall and slowly bend the right knee. Continue lowering the right knee and foot toward the mat. As the right foot approaches the left knee, bend the left knee, and in a controlled manner bring both feet down to the mat. Distribute the body weight in the toes, knees, forearms, and head. Lower down to the initial position with the fingers interlocked. Rest in *CHILD* for a minute before returning to an upright position.

BENEFITS

- Increases blood flow to the brain releasing toxins
- Reverses the effects of gravity on the body
- Revitalizes the visceral organs
- Encourages deeper respiration
- Relaxes the body and mind

MODIFICATIONS

Beginners - Follow the asana sequence, with Position 5 as the final position. Gaze at a fixed point. Maintain the asana for 5 respirations.
Intermediate - Use the wall as a support.
Advanced - After holding the final asana position daily for one minute over a period of 30 days, attempt can be made to practice this asana without the wall as a support. It is advisable to have a spotter.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: high blood pressure, heart disease, vascular disease, retinal disorders, ear infections, neck complications, headaches, symptoms of whiplash, spinal osteoporosis, menstruation, or during pregnancy.

HEADSTAND SEQUENCE

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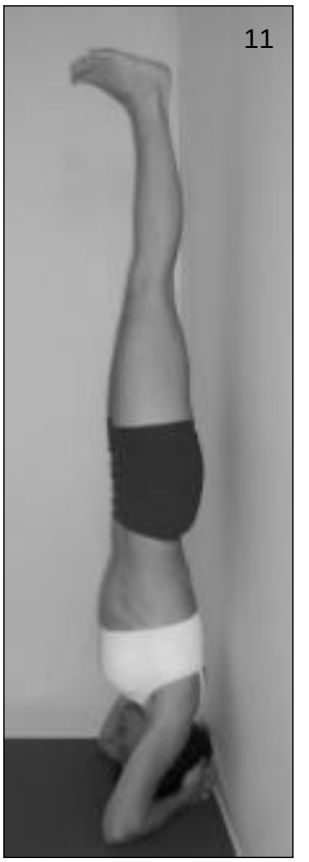

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Yoga

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PARTNER ASANAS

PARTNER YOGA

Partner Yoga is a wonderful alternative to the traditional practice of yoga. This addition to the yoga journey can be practiced by anyone - couples, friends, parents, or children. For couples, practicing Partner Yoga is a great way to strengthen the relationship by fortifying trust and communication. It is also a wonderful way for parents and kids to bond together. Friends can use Partner Yoga to help each other stay motivated and committed to their wellness plan. Practicing yoga with a partner is uplifting and inspiring, and it helps raise both individuals to greater heights.

Partner Yoga asanas require 100% participation and trust by both parties. Partners have the opportunity to support and assist each other. The skills of observation and communication are developed fostering the qualities of trust and vulnerability. Virtually any yoga asana can be modified to be practiced with a partner. Like most yoga asanas, Partner Yoga asanas also focus on the breath and mind, and increase strength and flexibility. Partners have to rely on each other's support to maintain correct body alignment, balance, and concentration to dissolve each other's physical tension. In a deeper sense, this physical support fosters deeper feelings of nurturing and acceptance. Introduce another individual to the journey of yoga using Partner Yoga asanas.

Like traditional yoga, there are hundreds of various Partner Yoga asanas. Three basic Partner Yoga asanas are demonstrated in the following pages:

1. Easy Sitting Spinal Rotation
2. Child - Fish
3. Standing Forward Flexion

PARTNER EASY SITTING SPINAL ROTATION

Sitting, Rotation, Relaxation

VERBAL SUGGESTIONS

• The pelvis and abdominals must remain active.
• The gluteals are fixed to the mat.
• Maintain optimum posture.
• The chin is retracted into the neck and the shoulders are drawn back during the entire asana.
• Concentrate on the physical balance, equalizing the weight on the right and left sides of the body.
• Push gently into both the hands.
• Keep the focus on the breath, breathing in unison with your partner.
• Rotate further with each exhalation.

INITIAL POSITION

Both partners sit upright, legs straight in front of the body, back to back in contact with the partner.

POSITION, MOTION, and BREATH

Both partners bend the right leg and place the right foot under the left thigh. Bend the left leg and place the left foot under the right thigh. Lift the sternum; retract the shoulder blades; and engage the core, Mula Bandha and optimum posture lock. Inhale, lengthen the neck, retract the chin, and lift up from the crown of the head. Exhale, rotate to the left, place the right palm on the left knee and reach and place the left palm on your partner's right knee. Close the eyes or gaze at a fixed point. Maintain the asana for 5 respirations. Repeat on the other side.

PRIMARY GOALS

• Improve upper body posture
• Increase flexibility in the spine
• Relax the body and mind
• Connect with the partner's spine and breath

COMMON OVERSIGHT

Although *EASY SITTING* is a simple posture, it is difficult to sustain for long periods of time unless the knees are close to the mat, or touching the mat. Otherwise, most of the body weight is supported by the gluteal muscles and the low back stiffens up. One easy way to overcome this difficulty is to prop the gluteals on to a cushion, which will help drop the knees to the mat. It is extremely important to keep the upper body in optimum alignment in all sitting asanas so the breath flows freely.

DWI SUKH-MATSYENDR

asana

BENEFITS

• Stabilizes the pelvis and hips
• Develops spinal flexibility
• Increases the breath capacity
• Elongates the spine from the sacrum to the base of the skull
• Facilitates mental and physical balance with the partner without causing strain or pain

MODIFICATIONS

Beginners - Sit in *EASY SITTING*.
Intermediate - Sit in *HALF LOTUS*.
Advanced - Sit in *FULL LOTUS*.

CONTRA-INDICATIONS

Do not practice this asana if experiencing: injuries to the coccyx or hips, sciatica, knee or shoulder problems, or low back complications.

sound body Yoga

PARTNER CHILD-FISH

Kneeling, Prone, Supine, Inversion, Flexion, Extension

Partner 2 Partner 1

VERBAL SUGGESTIONS

• Partner 1 raises the chest with the least amount of weight on the head.
• Partner 2 points the toes away and engages the thighs.
• Partner 1 lowers the shoulder blades down.
• Partner 1 grounds the hips and lifts the heart.
• Partner 2 relaxes the neck back into the extension.
• Partner 1 recruits the core when lowering the head to the mat.

INITIAL POSITION

Both partners sit back to back. Partner 1, kneel on the mat with the tops of the feet flat on the mat and Partner 2, sit upright with the legs straight in front of the body.

POSITION, MOTION, and BREATH

Partner 1: Place the big toes together, separate the heels and lower the gluteals onto the inside surface of the feet. The heels touch the sides of the hips. Inhale, lengthen the neck, retract the chin, lift up from the crown of the head, and lift the sternum. Raise the arms laterally overhead, parallel with the ears. Exhale, pivot from the hips and lower the forehead to the mat, elbows bent on the mat, palms face down.
Partner 2: Sit on Partner 1's gluteals, facing away from Partner 1. Gently, with awareness, roll back, over Partner 1's spine, moving one vertebra at a time. In the final position the back of the heads will be in contact. Partner 2 reaches the arms overhead and Partner 1 reaches up and holds Partner 2's wrists, slowly lengthening Partner 2's arms. Close the eyes and breathe in unison. Maintain the asana for 5 respirations.

To return to starting position, Partner 2 remains passive and relaxed while Partner 1 pushes his/her hands into the mat, raising and returning to a sitting position as Partner 2 slides off Partner 1. Both partners return sitting back to back for 3 respirations and switch positions.

PRIMARY GOALS

• Stretch the chest cavity
• Increase flexibility in the hips
• Elongate and stretch the spine
• Enhance the breath capacity
• Relax the body and mind

COMMON OVERSIGHT

It is important to lift the chest and lower the head in a controlled manner. If there is any pain or strain in the neck immediately draw the chin into the chest.

DWI BAL-MATSYA asana

BENEFITS

- Improves posture
- Stretches the abdominal contents
- Opens the chest cavity
- Develops breath synchronicity between partners

CONTRA-INDICATIONS

Do not practice this asana if experiencing: cervical problems, abdominal hernias, chest complications, shoulder or neck problems, high blood pressure, retinal disorders, whiplash injuries, menstruation, or after 3 months of pregnancy.

PRECAUTION

When sitting on the knees, place the body weight on the tibial tuberosity, the thick bumpy bone just below the kneecap. Do not place the weight on the kneecap. Double fold the mat to soften the area below the knees for protection.

PARTNER FORWARD FOLD

Standing, Flexion, Inversion

VERBAL SUGGESTIONS

- The core must be engaged at all times.
- Retract the chin and shoulder blades.
- Distribute the weight evenly between both feet.
- Maintain optimum posture throughout the asana.
- Bring the chest in toward the thighs.
- The head hangs freely and the neck is relaxed.
- Stretch the crown of the head to the mat.
- Breathe and accentuate into the stretch.

INITIAL POSITION

Stand in optimum posture, back to back with the partner, one foot away from each other.

POSITION, MOTION, and BREATH

Place the feet are hip-width apart. Lift the toes, spread them apart, then lower them down with the weight evenly distributed and grounded in the mat. The hands are by the sides in anatomical neutral posture. Engage optimum posture, core lock, and Mula Bandha. Keep the body tall. Maintain the balance with the bottom of the feet. Lift up from the kneecaps, squeeze the thighs and gluteals, the legs are straight and knees unlocked. Inhale, lift up from the waist and the crown of the head, reach back and interlock hands with your partner. Exhale and pivot forward from the hips. Reach forward to *HALF FOLD*, maintain a neutral spine and lengthen the chest. Gently pull the partners arms as the gluteals come into contact. Gradually move the hands to hold your partner's forearms lowering into *FORWARD FOLD*. Gaze at the knees. Maintain the asana for 5 respirations.

PRIMARY GOALS

- Stretch the hamstrings and low back
- Elongate the spine
- Massage the internal organs

COMMON OVERSIGHT

Listen to the partners cues, do not force into the stretch. Bend the knees to release the stress on the low back. To prevent the feeling of fainting or dizziness, return very slowly to initial standing position.

DWI HAST PAD asana

BENEFITS

- Stretches the hamstring and spinal muscles
- Improves posture
- Massages and tones the abdominal contents
- Improves blood flow to the brain
- Enhances circulation
- Builds a closer connection with the partner

MODIFICATIONS

Intermediate: Partner 1 inhale, and lift up to *HALF FOLD* parallel with the mat. Partner 2 exhale, and flex further into *FORWARD FOLD*. Maintain the asana for 5 respirations. Both partners return to *FORWARD FOLD*. Next, Partner 2 inhale, lift up to *HALF FOLD*, parallel with the mat. Partner 1 exhale, and flex further into a *FORWARD FOLD*. Maintain asana for 5 respirations. Both partners return to *FORWARD FOLD* and then slowly return to starting standing position together.

CONTRA-INDICATIONS

Do not practice the asana if experiencing: high blood pressure, spinal complications, sciatica, heart disease, abdominal hernias, or symptoms of whiplash.

If I were not a physicist, I would probably be a musician. I often think in music. I live my daydreams in music. I see my life in terms of music.

- Albert Einstein -

PRENATAL YOGA

PRENATAL YOGA

Pregnancy is a wonderful opportunity for the mother to not only connect with the growing child but to reconnect with the neglected 'inner child'. Prenatal Yoga provides a perfect time to nourish and positively influence a growing seed. Just as a wonderful seed when properly cared for with healthy nutrition, air, water and light blossoms into a flower and then a delicious fruit, you too can give the growing child a great head start. In the first 9 months in the womb followed by the subsequent 3 years with you, the mother, the child establishes fundamental rhythm, thought, breathing patterns, and a core value system to cope with in life. After this period the child becomes a product of its ever-changing environment.

Prenatal Yoga allows the mother to balance herself inside out and influence the child in healthy way. During this growth in the womb the placenta is the exchange barrier for the child. The mother not only influences the feeding and excreting of the child but every thought and action of the mother directly or indirectly influences the child. Pregnancy is a delicate time and correct asana practice is a must as. Improper practice may result in complications to the mother and the growing fetus.

Prenatal **Y**oga allows the mother to:

- Breathe relaxed using the diaphragm
- Learn asanas to increase flexibility, balance and strength
- Relax the mind and body
- Manage stress
- Connect and influence the child positively
- Take the worry away from pregnancy
- Give the child the healthiest start in life

In the following pages are a few special asanas tha pregnancy. Adapt the asanas to meet your particular any asana. Likewise, do not be too easy on yourse abdominal muscles and the amniotic sac in the womb. Listen to the body – be the best judge of what asanas YOU can practice during pregnancy.

The Sitting Asanas are very important, as they stretch open the pelvis, making the delivery process easier. The Standing Asanas strengthen the legs and thighs and assist to carry the baby in the womb. The body secretes a hormone called 'relaxin' during pregnancy which increases flexibility in the ligaments and joints. Some asanas are easier to practice as the pregnancy progresses. It is more effective to practice yoga 15 minutes daily than practicing a 1 ½ hour session once a week. Rest, relax, and incorporate the breathing exercises in the daily routine. Observe the delicate changes in the body and enjoy the growth of the child.

CONTRA-INDICATIONS

Although this asana routine is safe, it is advisable to consult your primary health care practitioner to know if there are any asanas which may be contra-indicated for your body during pregnancy.

PRENATAL YOGA & LOW BACK

During pregnancy, as the abdominal contents distend due to the growing fetus, extra stress is placed on the low back, increasing the lordosis in the lumbar region. The perineal, pelvic tilt, and Mula Bandha are paramount to practice to counter-balance the stress in the low back. Learn to consciously recognize and release tension in particular muscles of the pelvis. During labor, this practice will help to relax between contractions and prevent the body from fatiguing. Rest is as equally important component to decrease stress in the low back. Below are four positions that will help relieve the stress in the low back when lying or sleeping

1. Lie on the side with a pillow under the neck. Bend both legs to 90 degrees and place a cushion between the knees.

2. Lie on the side with a pillow under the neck, bend the top leg to 90 degrees and rest the top leg and thigh on the cushion. The bottom leg is straight.

3. Lie on the side, bend both legs to 90 degrees, and place small cushions under the abdomen.

4. Lie on the back with a pillow under the neck, bend the legs and place a cushion under the knees so the low back is grounded.

PRENATAL YOGA ROUTINE

1. DIAPHRAGMATIC BREATHING

2. SUFI ROLLS

3. HALF LOTUS

4. COW'S FACE

5. REVERSE PRAYER

6. SEATED BUTTERFLY

7. SEATED BASE

sound body Yoga

8. COW

9. CAT

10. NEUTRAL TABLE ALTERNATE ARM/LEG

11. HARE

12. MODIFIED HEADSTAND

13. RABBIT

14. SITTING ON KNEES

15. DOWNWARD FACING DOG

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16. CROWN BASED

17. FORWARD FOLD

18. THUNDERBOLT

19. SQUAT

20. RAISED ARMS

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21. STANDING SPINAL TWIST

22. GAZE PRAYER

23. FIVE POINTED STAR

24. TREE

25. SUPPORTED KNEE SPINAL ROTATION 2

26. TRIANGLE

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27. REVERSE TABLE

28. SUPINE DOUBLE LEG RAISE

29. BRIDGE SUPPORTED

30. SUPINE CROSS-LEGGED BUTTERFLY

31. SUPINE BUTTERFLY

32. DEAD BUG

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33. SUPINE KNEE TO CHEST

34. SUPINE CRESCENT MOON

35. FETUS

36. CORPSE

37. EYE GAZING

38. ALTERNATE NOSTRIL BREATHING

39. LOTUS

sound body
Yoga

MEDITATION

MEDITATION

Meditation is an extremely important component of yoga practice. Meditation is one of the oldest relaxation techniques, and increased research and interest in the mind-body connection has made it possible for this ancient practice to become part of the mainstream society today.

The effects of meditation involve various physiological and psychological mechanisms.

THE PHYSIOLOGICAL MECHANISMS INCLUDE:
• reduced blood pressure
• brain wave resonance and coherence
• a shift in the balance between the activating and quieting components of the automatic nervous system
• decreased effects of aging
• decreased muscle tension
• reduced levels of fear
• rhythmic heart and respiration rate
• increased circulation of endorphins

THE PSYCHOLOGICAL MECHANISMS INCLUDE:
• relaxation and alertness
• effective handling of stressful stimuli
• habituation
• deautomatization
• freeing from conditioned responses
• healing stress-related disorders

Meditation improves overall mental and physical health, making it possible to relax and live a balanced life. The positive effects of meditation begin to show at various levels of practice. Generally, one develops a greater feeling of self-respect and deals with issues more confidently. Emotionally, the mind becomes more stable, balanced, and centered. Psychosomatic symptoms decrease and the body experiences an abundance of energy.

The effects of meditation are also visible in work-related areas. Decisions can be made with greater clarity. Responsible decisions are made naturally, intuitively, and energetically. One´s outlook or perspective of situations becomes broader, and the relationships with co-workers becomes easier and more harmonious. In this relaxed state, work is enjoyable, with less seriousness and greater creative thought. The ability to function at optimum potential and contribute with maximum ability increases.

On a personal level, meditation brings about positive, significant changes in the quality of friendliness and the respect of another's space. The levels of understanding and trust are heightened. Family issues are dealt with more honesty, love, and with a supportive, relaxed attitude.

MEDITATION PRACITICES

WHAT IS MEDITATION?

Meditation is a practice that trains the mind to transcend the thought process, focusing and living in the present moment, instead of wandering into past and futuristic thoughts. Being in the present moment is an extremely difficult task in our hurried and busy lives. The goal of meditation is to be aware and live in the present moment. The practice allows one to enter each moment with wisdom, lightness, and a sense of humor. It is the art of opening and letting go (emptying), rather than closing and holding (filling).

WHAT TECHNIQUE IS RIGHT FOR YOU?

Finding what works for you is important. Like the practice of yoga, it is important to find a facilitator, experienced in meditation, who can design a meditation program specifically for you. Remember, no previous experience is necessary.

BASIC GUIDELINES:

Meditate daily - make this a personal practice for life. Begin meditating for 10 - 15 minutes, working up to 20 - 30 minutes, twice daily. Find a location that is quiet, and set it aside for meditation only.

Sit comfortably on the mat with the spine erect, in optimum posture, preferably in *HALF LOTUS.* The eyes are parallel with the mat, chin is retracted, tongue is slightly touching the upper palate with an inner smile, and the hands are on the lap with the right hand resting in the left. Breathe diaphragmatically letting the belly expand with each inhalation and contract with exhalation. Breathe slowly and gently. When a feeling or thought arises, do not chase it away, but recognize it 'just as a thought', let it pass, and maintain a focus on the breath. Program the mind with suggestions such as, "I am as steady as a mountain" or "I am becoming motionless like a statue". This way the asana will quickly become still and, after a while, will be comfortable for extended periods of time. This practice is known as complete body stillness and mind alertness.

Do not judge the quality of the meditation practice as good or bad. Meditation is a transformational change and every day the 'relaxation response' is reinforced by simply being there.

Maintain the feeling of mindful meditative awareness throughout the day; use it to center while performing worldly tasks. Over time, after regular meditation practice, the mind becomes extremely calm, centered, and focused. Use the moments after meditation as an opportunity to be creative in making personal and business decisions. The big picture becomes very clear.

KNOWLEDGE LOCK

GYAN MUDRA

Knowledge is a unique characteristic of consciousness. Knowledge may be developed by practice, or by revelation of knowledge through exposure of awareness. The knowledge developed through the senses and the mind is known as intellect. When this knowledge is applied through experience and is shared with others it becomes *gyan* - wisdom. A major part of retaining knowledge is the development of short and long term memory.

The Gyan Mudra, *KNOWLEDGE LOCK*, is used for the development of memory and knowledge. The awareness of wandering thoughts becomes focused into the light touch and energy exchange between the fingers and thumbs. This brings the focus into the body and slowly directs it back into the mind.

Sit in *HALF* or *FULL LOTUS*, keep both the hands gether the upper tip of index finger and upper tip of thumb. Gently contact with light pressure. Keep the other three fingers straight and touching each other. The thumb and index finger form the letter O. To experience the full effects from the Gyan Mudra, practice at least 15 minutes of continual contact in one sitting.

BENEFITS

- Develops memory
- Changes the behavioral attitudes of: irritation, instability, anger, impatience, and restlessness to behaviors calm and cheerful
- Increases concentration
- Assist in relieving tension headaches

MEDITATION & CONCENTRATION PRACTICES

The yoga asana practice prepares the body for Dhayana practice. Dhayana is the practice of focusing thoughts inward, awakening awareness, and coordinating the mind activities with the breath.

The main purpose of the Meditation Asanas is to allow the body to sit for extended periods of time without movement or discomfort so the body may relax, rejuvenate, and revitalize. Only when the body is still and steady for some time is the sensation of meditation experienced. Deep meditation requires the spinal vertebra to remain steady, in optimum posture, without conscious effort. The more still the body remains the greater the ability to concentrate with a single-pointed mind. Why not lie in *CORPSE*, then, for meditation since it satisfies all the requirements? In *CORPSE* there is a tendency to drift into sleep. It is essential to remain awake and alert while going through the various stages experienced in meditation.

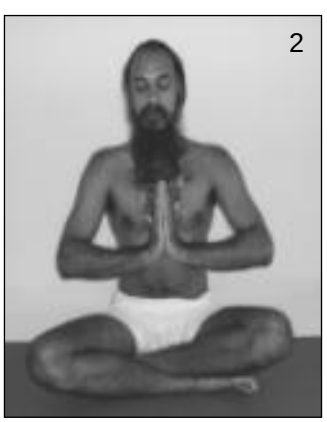
Listed below is a powerful series of Dhayana practices progressing from Beginners to Advanced. Practice one of the variations at the Beginners' level for at least 40 continuous days before progressing to the Intermediate level. Practice one of the Intermediate sets for at least 90 continuous days before progressing to the Advanced level. Practice the Advanced set for at least 120 continuous days to experience the complete results. It is best to practice a set immediately following asana practice. Do not rush through the practice, enjoy the positive changes the journey unfolds.

BEGINNERS

Variation 1 - Sit in *EASY SITTING* or *SITTING ON KNEES* in optimum posture, hands in prayer over the heart. Gaze at the eyebrow center. Maintain a gentle rhythmic breath flow. Sit in the asana for 1 minute.

Variation 2 - Sit in *EASY SITTING* or *SITTING ON KNEES* in optimum posture, hands in prayer over the heart. Gaze at the tip of the nose. Maintain a gentle rhythmic breath flow. Sit in the asana for 2 minutes.

Variation 3 - Sit in *EASY SITTING* or *SITTING ON KNEES* in optimum posture, hands in *KNOWLEDGE LOCK* resting on the knees. Gaze at the tip of the nose. Maintain a gentle rhythmic breath flow. Sit in the asana for 2 minutes.



INTERMEDIATE

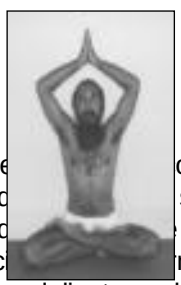
Variation 1 - Sit in *HALF LOTUS* or *SITTING ON KNEES* in optimum posture, hands in *KNOWLEDGE LOCK* resting on the knees. Gaze at the tip of the nose. Maintain a gentle rhythmic breath flow. Sit in the asana for 5 minutes.

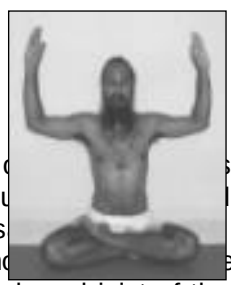
Variation 2 - Sit in *HALF LOTUS* or *SITTING ON KNEES* in optimum posture. Fold the hands in prayer overhead with the elbows straight. Gaze at the eyebrow center. Maintain a gentle rhythmic breath flow. Sit in the asana for 3 minutes.

ADVANCED

Variation 1 - Sit in *L* *KNEE* mum posture. Fold the hands in prayer overhead wit Gaze at ebrow center. Maintain a gentle rhythmic breath flow. Sit in the asana for 3 minutes.

Variation 2 - Sit in *LOTUS* or *SITTING ON KNEES* in optimum posture, hands in *KNOWLEDGE LOCK,* elbows bent to 90 degrees, palms face forward. Gaze at the tip of the nose. Maintain a gentle rhythmic breath flow. Sit in the asana for 5 minutes.





PRECAUTION: If there is e omfort s, ankles, or knees after sitting for some time in a Med slowly u l massage them. Initially the legs may fall 'asleep' and a sens or a feeling of 'pins and needles'. When the blood c ns to n e no pain. However, be aware that the knee is a very delicate and often abused joint of the body. Be careful not to strain the knee, especially while moving into or out of the Meditation Asanas. Do not on any account use undue force or strain to sit in a Meditation Asana. Stretch the legs fully before returning to a standing position.

In all the Meditation Asanas it is arbitrary which leg is placed uppermost. It is a matter of personal preference and depends on which ever is the more comfortable. Ideally, the leg position should be alternated so that the balance on both sides of the body is maintained.

PRACTICE NOTE: A useful suggestion to overcome this difficulty of sitting cross-legged on the mat is to prop the gluteals on to a cushion, automatically dropping the knees to the mat. It is extremely important to keep the upper body in optimum alignment in all sitting asanas so the breath flows freely.

SOUND AND GROUP CHANTS

The attraction to meditation is increasing due to the extremely busy and active lifestyles we lead. Silent and still meditations offer an antidote to the active distractions in our lives.

Another dominant form of meditation in East Asia, and India in particular, is chanting (now becoming very popular in the West). This kind of meditation is widespread and utilized by more individuals than other forms of silent meditation. Chanting is often done collectively using a short phrase (a mantra), a simple melody, or is sometimes sung on a single tone. The simplicity of the melody allows for group participation; no one needs a developed sense of musicianship in order to participate.

Chanting, as a meditative practice, has great efficacy. First, chanting unites the body, breath, and mind into a single activity. This is a very effective means for developing concentration, one-pointedness of mind. Other forms of concentration meditations are more difficult because the mind tends to wander easily from the object of concentration. In chanting, however, because the body, breath, and mind are all united on a single activity, the development of concentration happens rapidly and with less effort.

Chanting unites the musical and discursive (wandering) functions of the mind which do not normally work together. However when chanting, the discursive functions of the mind become one with the music. The result is an energizing of the mind, with a positively altered state of consciousness.

Chanting creates a state of relaxation with an abundance of energy. Chanting meditation, as a social activity, unites participants, creating a feeling of closeness between fellow humans. The collective voice of a group chant is a clear example of the core understanding of dependent origination, inter-dependent transformation. The sound of the chant constantly changes; this displays the core truth of constant change.

Finally, when the chant ceases, this is a clear display of the truth of impermanence. There is a great silence, and as John Cage quotes: “My favorite piece of music is the one we hear all the time if we are quiet.”

The experience of chanting is essentially audible breath, and in the sounds of chanting, one begins and ends with breath. Chanting is, “life’s mystery,” the gateway between earth and the unknown.

BENEFITS OF SOUND ENHANCEMENT

- Develops and increases the lung capacity, increasing the oxygen content deeper into the body tissues, and releasing more carbon dioxide.
- Allows for complete self-expression, and is a vehicle to release pent-up emotions.
- Increases self-confidence allowing the expression of thoughts and feelings with full emotion.
- Increases the breath capacity by developing the muscles in the diaphragm and abdominal regions.
- Allows a focus in the present state-of-mind, there is less preoccupation about events in the past or future.
- Promotes a healthier attitude toward the body, as relaxed muscle groups in the upper body allow a free passage of air during sound production.
- A richer, pleasant speaking and sounding voice improves the expression of speech and enhances the personality.
- Improves overall health, increasing the levels of creativity, imagination, bringing a zest of energy to all those with whom you interact.

ACOUSTIC POSTURE

TONGUE POSITION

The acoustic posture of the jaw, tongue, and lips determines the quality of vocalization and sound production. There is an extensive amount of nervous sensation in the lips and tongue. Vocalization with true feeling is a sensory experience and can be fully expressed and communicated when the vocal apparatus is correctly utilized.

The tongue is a large flexible muscle which fills most of the lower jaw. The position of this muscle determines the quality of enunciation, articulation and resonance of sound. The tongue, along with the vocal cords, form and shape words and sounds by way of a reflex mechanism sent by impulses from the mind. The tongue movements may be slight but changes in sound will be dramatic. A relaxed tongue is the key to a full and clear sound.

JAW POSITION

It is also extremely important to keep the jaw relaxed during vocalization. The jaw must relax and drop naturally swinging, down and back. This is the only movement necessary for vocalization. Tension and stress are the greatest enemies of the jaw and often hinder this free swinging motion. The clenched jaw not only causes tension and tightness in the jaw muscles, but also restricts sound production.

In the neutral position the jaw lies slightly behind the upper face and is rotated down so the back molars are separated. Hold the head and neck in an optimal posture and relax the muscles of the lower face and neck. Now grab the jaw at the chin and gently push it down and up to open and close the mouth respectively. Let these movements be simple, making sure the tongue lies flat and still in the mouth. Imitating a yawn is one way to experience this natural dropping of the jaw. If the jaw juts forward or up, relax the cheek muscles under the eyes and the jaw will naturally start dropping.

RESONANCE AND HUMMING

Resonance is amplification of the vocal tone which gives sound quality, richness, projection, and beauty. Do not confuse resonance with loudness. Even the softest tones have a component of resonance in them. When you 'hum' with an open throat, feel a vibration in the mask (front of the face). This phenomenon is known as resonance.

As sound passes the upper vocal tract, including the throat and mouth cavities, certain aspects of the sound are amplified or suppressed depending upon the positioning or tension of the muscles in the pathway. This phenomenon of vibration and amplification of sound is known as resonance. Resonance is usually felt more in singing than in speaking, but it exists in both functions.

Humming will improve the efficiency of resonance. When the throat, jaw, and tongue are relaxed, it is an effective way to feel forward resonance in the mouth. Relax the jaw, rest the tongue, keep the soft pallet high, and create an open throat feeling. Let the lips loosely touch by separating the teeth.

On an easy light tone, in the middle range, 'hum' the consonant 'm' establishing a vibration in the mask.
Hummmmmmmmmmmmmmmmmmmmmm …

Are the lips closed lightly, but not too tight?
Let the buzzing sensation spread as far as possible through the head and body. Bending the head forward will increase the sensation of buzzing.

Feel a buzzing sensation in the following areas when you hum:

top of the head
sinus cavities (cheekbone area)
mask (front of the face)
teeth
back of the neck
rib cage
forehead
nose
lips
throat
chest
upper back

MANTRA CHANTS

Mantras are mystic syllables which are sung to specific sounds in a chant form to create a state of inner balance.

The mantra AUM – (OM) signifies the vibrational energy resonating in every molecule in the universe. AUM also signifies the oneness of the mind, body, and breath. AUM represents:
'A' - creation, the sound of the manifest world, the sound of waking consciousness, and the sound of gross experience.
'U' - sustenance, the sound of the unmanifest world, the sound of dreaming consciousness, and the sound of subtle experience.
'M' - death, the non-manifest world, the sound of dreamless sleep, and the sound of potential experience.
The fourth sound is the ultimate silence, the sound of the unmanifest world, it is the ultimate goal, the incomparable target.

Over time one gradually comprehends and practices the essence of the mantra AUM, with an increased insight into the natural play of life. Eventually one moves to the direct experience of the Absolute Reality, the consciousness that permeates in everything.

Here are three powerful ancient mantras written in specific chant form to be practiced before, during, and after yoga practice.

1. AUM

Variation I

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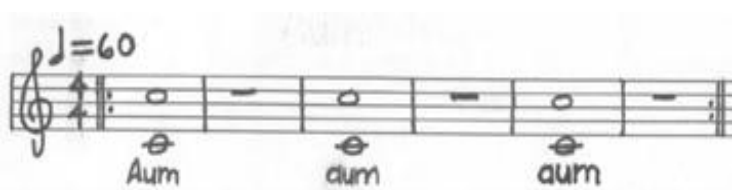
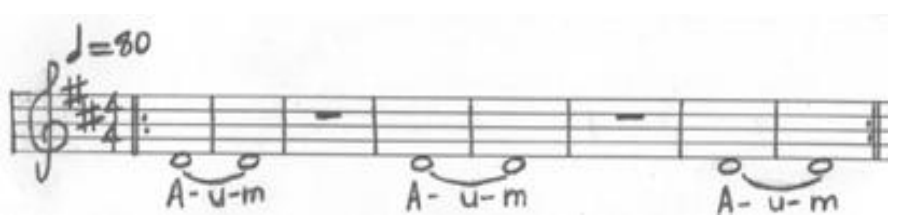


Variation II



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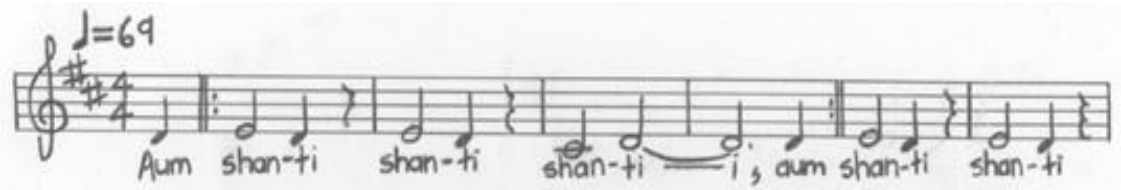
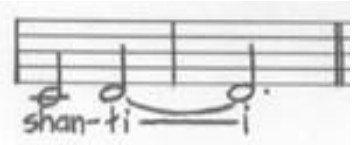
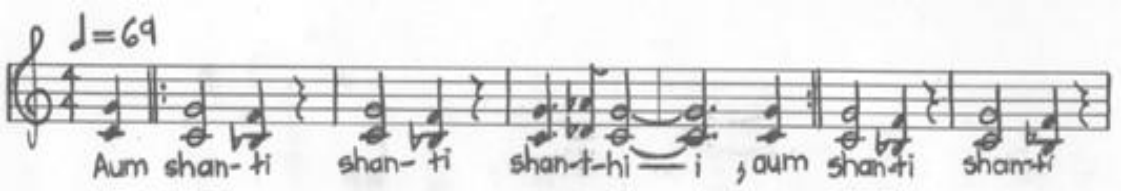
2. AUM SHANTI SHANTI SHANTI

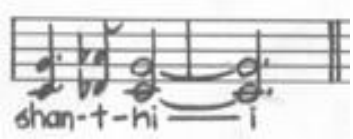
Variation I



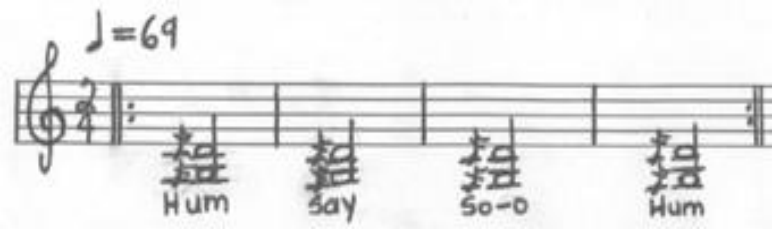


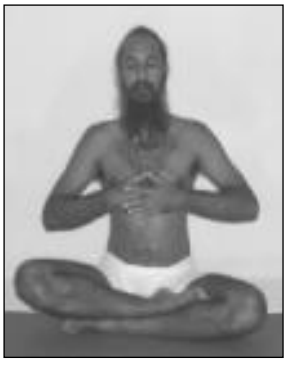
Variation II





3. HUM SAY SO HUM





On the following pages you will find several asana series which are designed for specific areas and conditions. In all the series hold the asanas for a minimum of 3 breaths, and where applicable repeat on the other side.

ASANA SERIES

SUN SALUTATION

1. GAZE PRAYER
2. RAISED ARMS
3. FORWARD FOLD
4. LUNGE
5. HIGH PLANK
6. EIGHT LIMB SALUTATION
7. UPWARD FACING DOG
8. DOWNWARD FACING DOG
9. LUNGE
10. FORWARD FOLD
11. RAISED ARMS
12. GAZE PRAYER

BENEFITS

• Stretches the upper and lower body muscle groups
• Improves posture
• Massages and tones the abdominal contents
• Improves blood flow to the brain
• Enhances circulation
• Opens the upper spine and shoulder blades
• Develops core and upper body strength

The Sun Salutation is a wonderful, powerful series of asanas that awaken the entire body systems. The Sun Salutation stimulates and balances the circulatory, digestive, endocrine, excretory, musculo-skeletal, nervous, and respiratory systems. The name itself means to give reverence to the internal sun as well as the external sun. Stay focused on the internal light and warmth the body creates during this salutation series.

In this series, 12 asanas are linked by a continuous flowing motion accompanied by 5 deep breaths (inhalations and exhalations). To experience the best effects from this series, practice all the asanas slowly and consciously, staying focused on the correct technique and breath. It is best to practice this series focusing on the rising or setting sun.

MODIFICATIONS

Advanced:
The Jump Back is a highly proficient alternative that can be used in the Advanced Sun Salutation series going from *FORWARD FOLD* to *HIGH PLANK,* omitting the *LUNGE*. The core must be fully engaged to avoid any injuries.

The *LOW PLANK* may be substituted for the *EIGHT LIMB SALUTATION.*

PRIMARY GOALS

• Stretch the musculo-skeletal system
• Strengthen the core
• Elongate the spine
• Invert and stretch the entire body
• Develop inner focus

COMMON OVERSIGHT

Make controlled synchronous movements when practicing this series. Do not rush through the asanas. Initiate each asana with the support of the breath.

SURYA NAMASKAR

JUMP BACK

CONTRA-INDICATIONS

Do not practice this asana if experiencing: high blood pressure, spinal complications, sciatica, heart disease, shoulder or wrist complications, symptoms of whiplash, or in the last 3 months of pregnancy.

1. GAZE PRAYER

2. RAISED ARMS

3. FORWARD FOLD

4. LUNGE, RIGHT FOOT BACK

5. HIGH PLANK

6. EIGHT LIMB SALUTATION

sound body
Yoga

7. UPWARD FACING DOG

8. DOWNWARD FACING DOG

9. LUNGE, RIGHT FOOT FORWARD

10. FORWARD FOLD

11. RAISED ARMS

12. GAZE PRAYER

MOON SALUTATION

1. GAZE PRAYER
2. RAISED ARMS
3. FORWARD FOLD
4. LUNGE
5. HALF MOON LUNGE
6. HIGH PLANK
7. LOW PLANK
8. UPWARD FACING DOG
9. DOWNWARD FACING DOG
10. LUNGE
11. HALF MOON LUNGE
12. FORWARD FOLD
13. RAISED ARMS
14. GAZE PRAYER

The Moon Salutation is quite similar to the Sun Salutation except there is an addition of the *HALF MOON LUNGE*. This asana adds the dimension of balance and concentration to the series. The Sun Salutation consists of 12 asanas which reflect the 12 hours of the day. The Moon Salutation comprises of 14 asanas relating to the 14 lunar phases. Practice this series at night especially under the moon light. Full moon is a powerful time to practice the Moon Salutation. Stand in *GAZE PRAYER* for a few minutes keeping a steady focus on the moon before practicing this series.

The Moon Salutation stimulates and balances the circulatory, digestive, endocrine, excretory, musculo-skeletal, nervous, and respiratory systems.

PRIMARY GOALS

- Stretch the musculo-skeletal system
- Strengthen the core
- Elongate the spine
- Invert and stretch the entire body
- Improve balance and coordination
- Develop inner focus

COMMON OVERSIGHT

Make controlled synchronous movements when practicing this series. Do not rush through the asanas. Initiate each asana with the support of the breath.

sound body Yoga

CHANDRA NAMASKAR

BENEFITS

- Stretches the muscle groups in the upper and lower body
- Improves posture
- Massages and tones abdominal contents
- Improves blood flow to the brain
- Enhances circulation
- Improves body balance
- Opens the upper spine and shoulder blades
- Develops core and upper body strength

CONTRA-INDICATIONS

Do not practice this asana if experiencing: high blood pressure, spinal complications, sciatica, heart disease, abdominal hernias, shoulder complications, symptoms of whiplash, or in the last 3 months of pregnancy.

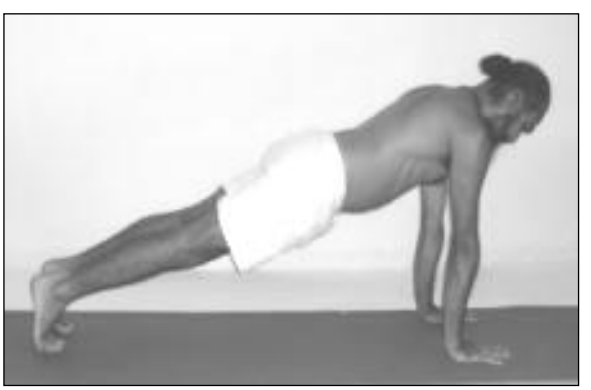
1. GAZE PRAYER

2. RAISED ARMS

3. FORWARD FOLD

4. LUNGE, RIGHT FOOT BACK

5. HALF MOON LUNGE



6. HIGH PLANK

7. LOW PLANK

8. UPWARD FACING DOG

9. DOWNWARD FACING DOG

10. LUNGE, RIGHT FOOT FORWARD

11. HALF MOON LUNGE

12. FORWARD FOLD

13. RAISED ARMS

14. GAZE PRAYER

sound body Yoga

BALANCE SERIES

1. GAZE

2. PALM TREE

3. TREE 3

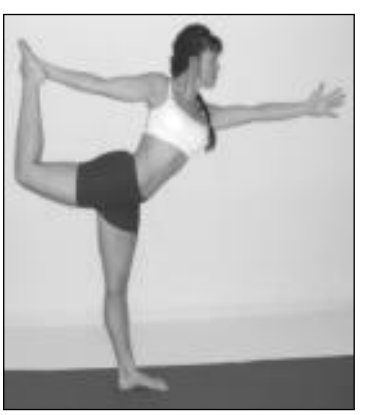
4. HALF FOLD

5. AIRPLANE 1

6. AIRPLANE 2

7. HALF MOON LUNGE

8. THUNDERBOLT PRAYER TWIST



9. DANCER

10. STANDING ONE LEG

11. STANDING SIDE LEG RAISE

12. WARRIOR 1

13. WARRIOR 2

14. TRIANGLE

15. REVERSE TRIANGLE

16. STANDING SUPPORTED KNEE SPINAL ROTATION 1

17. STANDING SUPPORTED KNEE SPINAL ROTATION 2

18. GAZE PRAYER

EASY SERIES

1. GAZE PRAYER

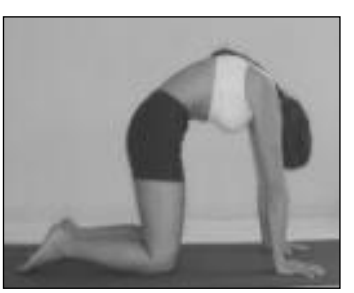
2. FIVE POINTED STAR

3. TREE 3

4. PALM TREE

5. RAG DOLL

6. COW



7. CAT

8. CHILD

9. SITTING ON KNEES

10. KNEELING 5 STAR

11. SEATED SPINAL TWIST

12. SEATED BUTTERFLY

13. BRIDGE

14. SUPINE LEG RAISE

15. UNIVERSAL SPINAL TWIST 1

16. CORPSE

sound body Yoga

ENERGY BOOSTER SERIES

1. GAZE

2. THUNDERBOLT

3. FORWARD FOLD

4. DOWNWARD FACING DOG

5. LUNGE

sound body Yoga

6. HALF MOON LUNGE

7. PRAYER TWIST LUNGE

8. WARRIOR 3

9. TRIANGLE

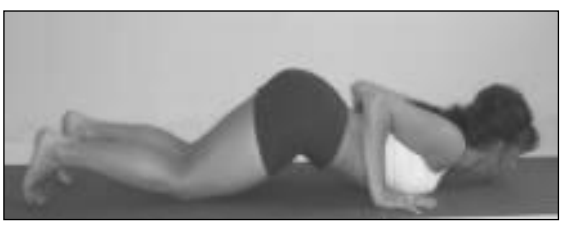
10. GAZE PRAYER

sound body Yoga

FLEXION/EXTENSION
MAT SERIES

1. CHILD

2. HARE

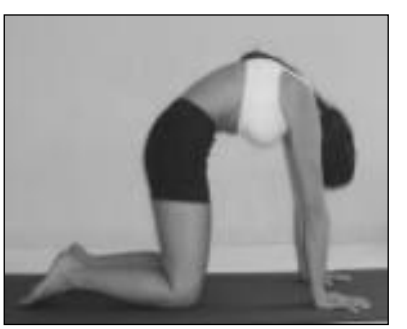


3. EIGHT LIMB SALUTATION

4. UPWARD FACING DOG

5. NEUTRAL TABLE

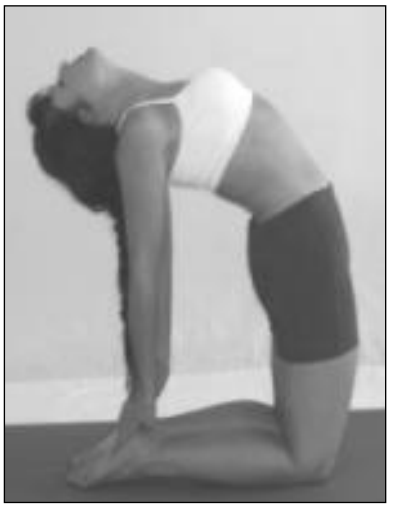
6. COW



7. CAT

8. DOWNWARD FACING DOG

9. SITTING ON KNEES



10. CAMEL

11. CHILD

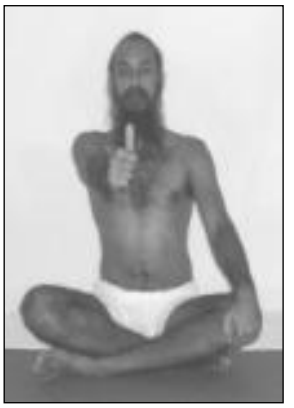
12. SUPINE QUAD STRETCH

13. HARE

sound body Yoga

FOCUS & CONCENTRATION SERIES

1. EYE GAZING VAR. 1



2. EYE GAZING VAR. 1

3. EYE GAZING VAR. 2

4. CHILD

5. MODIFIED HEADSTAND

6. DOWNWARD FACING DOG

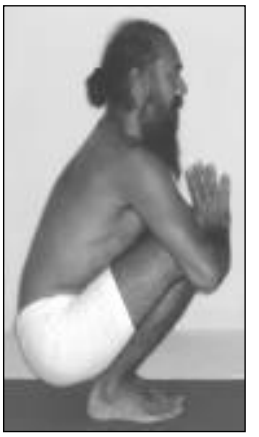
7. FORWARD FOLD

8. SQUAT

sound body Yoga

9. CRANE

10. HEADSTAND



11. SQUAT PRAYER

12. TREE 3

13. SUPPORTED KNEE SPINAL ROTATION 1

14. WARRIOR 2

15. WARRIOR 3

16. HERO

17. RABBIT

sound body Yoga

HEAD TO HEART SERIES

1. HALF FOLD

2. AIRPLANE 1

3. AIRPLANE 2

4. TRIANGLE

5. REVERSE TRIANGLE

6. STANDING TRIANGLE
SPINAL ROTATION 1

7. STANDING TRIANGLE
SPINAL ROTATION 2

8. CROWN BASED

sound body
Yoga

9. DOUBLE ANGLE

10. FORWARD FOLD

11. RAG DOLL

12. DOWNWARD FACING DOG

13. MODIFIED HEADSTAND

14. CHILD

sound body Yoga

HEALTHY SPINE SERIES

1. CORPSE

2. SUPINE KNEE TO CHEST

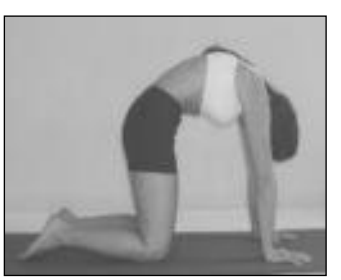
3. UNIVERSAL SPINAL TWIST 2

4. BRIDGE

5. SUPINE LEG RAISE

6. BOAT 2

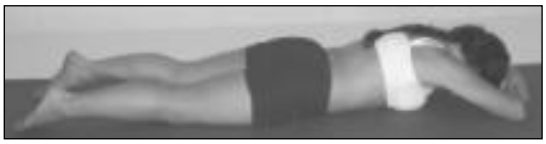
7. COW



8. CAT

9. CHILD

sound body Yoga



10. REVERSE CORPSE 2

11. LOCUST 1

12. SPHINX

13. 747

14. GAZE

15. FIVE POINTED STAR

16. THUNDERBOLT

17. SQUAT

18. SITTING ON KNEES

19. RABBIT

sound body Yoga

INTENSIVE SERIES

1. PATIENT CRANE

2. SQUAT

3. HIGH PLANK

4. DOWNWARD FACING DOG

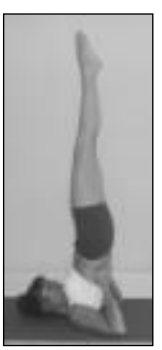
5. HEADSTAND

6. CHILD

7. COBRA

8.SIDE PLANK

9. REVERSE TABLE 3



10. SHOULDER STAND

11. BOAT 1

12. PALM TREE

13. PALM TREE SQUAT

14. THUNDERBOLT

15. THUNDERBOLT PRAYER TWIST

16. AIRPLANE 1

17. REVERSE TRIANGLE

18. WARRIOR 2

19. DANCER

20. THUNDERBOLT

21. SQUAT

22. CHILD

sound body Yoga

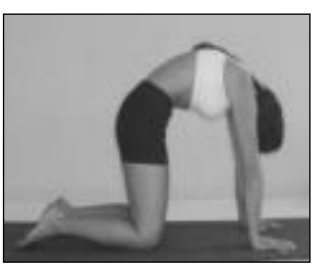
KNEELING SERIES

1. SITTING ON KNEES

2. HALF CAMEL

3. HARE

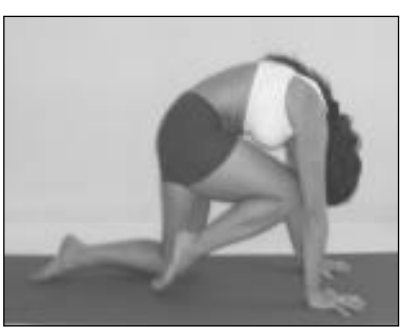
4. COW



5. CAT

6. CAMEL

7. TIGER A

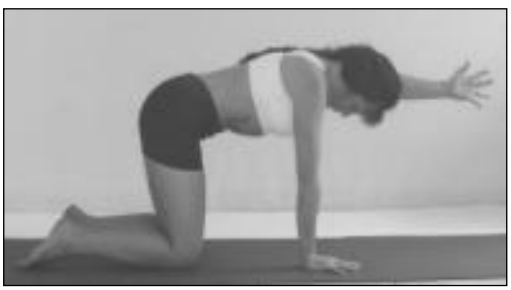


8. TIGER B

9. REVERSE QUAD STRETCH

10. RABBIT

11. NEUTRAL TABLE



12. NEUTRAL TABLE RAISED ARM

13. NEUTRAL TABLE RAISED LEG

14. NEUTRAL TABLE ALTERNATE ARM/LEG

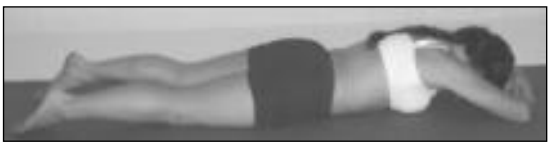
15. HALF PIGEON

16. SITTING ON TOES

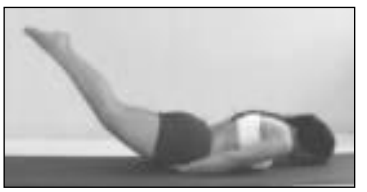
17. HERO

sound body Yoga

LONG SERIES



1. REVERSE CORSPE 2



2. LOCUST 2

3. SUPERMAN

4. BOW PRONE

5. UPWARD FACING DOG

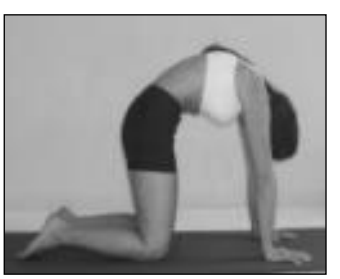
6. EIGHT LIMB SALUTATION

7. HIGH PLANK

8. DOWNWARD FACING DOG

9. NEUTRAL TABLE

10. COW



11. CAT

12. TREE 3

13. GAZE

14. SUPPORTED KNEE SPINAL ROTATION 1

15. DANCER

16. AIRPLANE 1

17. HALF FOLD

18. THUNDERBOLT

19. SQUAT

20. SEATED BUTTERFLY

21. SEATED HIP OPENER

22. SEATED FORWARD FOLD

23. REVERSE TABLE

sound body Yoga

24. TIGER A

25. TIGER B

26. HARE

27. DOWNWARD FACING DOG

28. LUNGE

29. PRAYER TWIST LUNGE

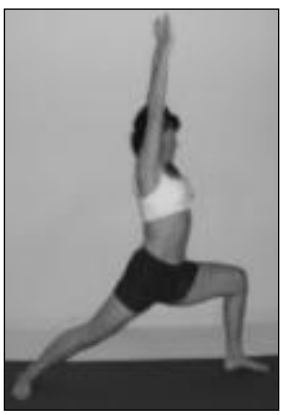
30. DOWNWARD FACING DOG

31. TRIANGLE

32. CROWN BASED

33. STANDING TRIANGLE SPINAL TWIST 1

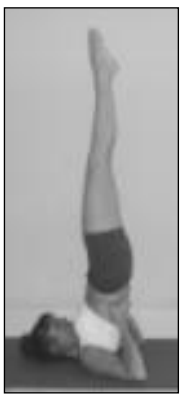
34. REVERSE TRIANGLE



35. WARRIOR 1

36. SUPINE KNEE TO CHEST

37. BRIDGE



38. SHOULDER STAND

39. FISH

40. BOAT 2

41. DEAD BUG

42. UNIVERSAL SPINAL TWIST 2

43. CORPSE

44. FETUS

45. ALTERNATE NOSTRIL BREATHING

46. PALMING

sound body Yoga

MENSTRUATION SERIES

1. GAZE PRAYER

2. CRESCENT MOON 1

3. NECK MOVEMENTS

4. SHOULDER ROTATIONS

5. SUFI ROLLS

6. SEATED BUTTERFLY

7. SEATED HALF SPINAL TWIST

8. COW'S FACE

sound body Yoga

9. COW

10. CAT

11. CHILD

12. SUPINE CROSS-LEGGED BUTTERFLY

13. UNIVERSAL SPINAL TWIST 2

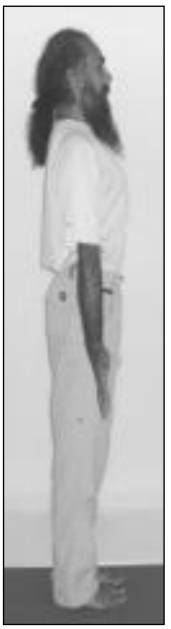
14. DIAPHRAGMATIC BREATHING

15. PALMING

16. EASY SITTING/LOTUS

sound body Yoga

OFFICE STANDING SERIES



1. GAZE

2. RAISED ARMS

3. FIVE POINTED STAR

4. TREE 1

5. THUNDERBOLT

6. DOUBLE ANGLE

sound body Yoga

7. HALF FOLD

8. COW'S FACE

9. CRESCENT MOON 2

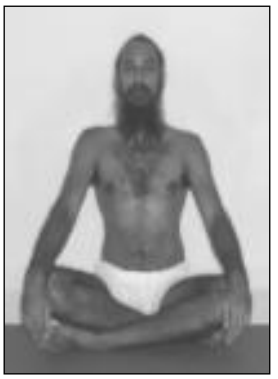
10. SUPPORTED KNEE SPINAL ROTATION 1

11. STANDING SPINAL TWIST

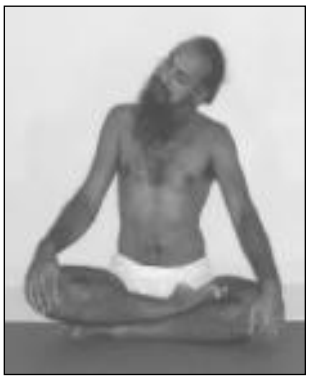
12. GAZE

sound body Yoga

RELAXATION SERIES



1. EASY SITTING

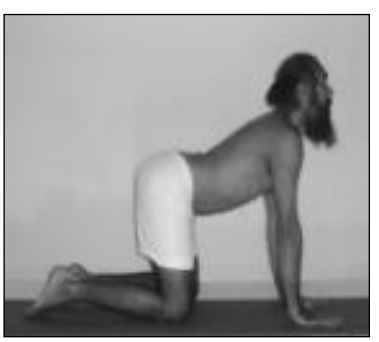


2. NECK MOVEMENTS

3. SHOULDER ROTATIONS

4. SUFI ROLLS

5. CHILD



6. COW

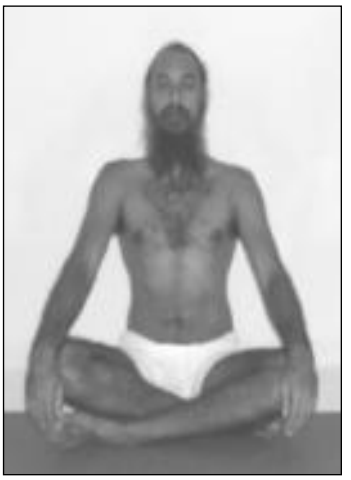
7. CAT

sound body Yoga

8. SUPINE KNEE TO CHEST

9. DIAPHRAGMATIC BREATHING

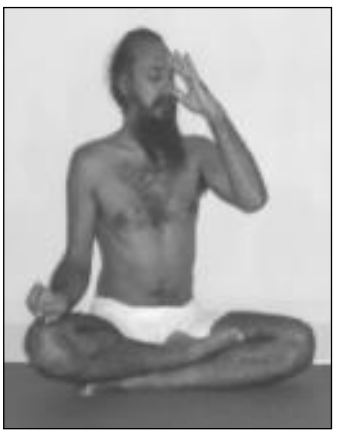
10. SEATED HALF SPINAL TWIST



11. EASY SITTING

12. EYE GAZING VARIATIONS 1,2

13. PALMING



14. ALTERNATE NOSTRIL BREATHING

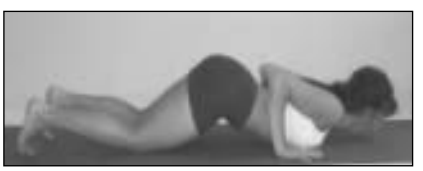
SEXUAL BALANCE SERIES

1. SITTING ON KNEES

2. COW

3. CAT

4. HIGH PLANK



5. EIGHT LIMB SALUTATION

6. LOCUST 2

7. SUPERMAN

8. HARE ON TOES

9. COBRA

10. UPWARD FACING DOG

11. DOWNWARD FACING DOG

12. SQUAT

13. BRIDGE

14. SUPINE DOUBLE LEG RAISE

15. SUPINE BUTTERFLY

16. DEAD BUG

17. DEAF MAN

18. CROSS-LEGGED FISH

19. DIAPHRAGMATIC BREATHING

20. FETUS

21. SEATED BUTTERFLY

22. EASY SITTING/ LOTUS

23. ALTERNATE NOSTRIL BREATHING

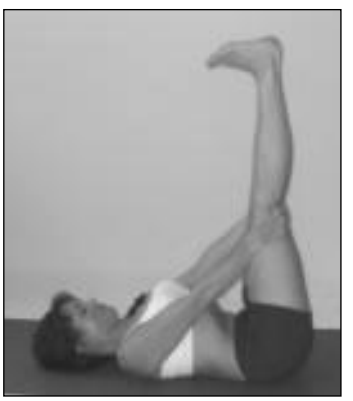
sound body Yoga

SUPINE SERIES

1. CORPSE

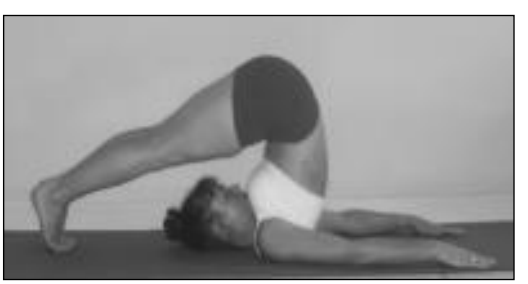
2. BRIDGE 2

3. BRIDGE 2



4. SUPINE DOUBLE LEG RAISE

5. SHOULDER STAND



6. PLOW

sound body Yoga

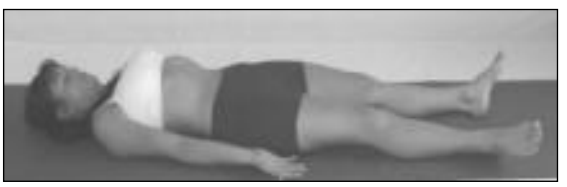
7. DEAF MAN

8. DEAD BUG

9. SUPINE KNEE TO CHEST

10. BOAT 1

11. UNIVERSAL SPINAL TWIST 2



12. CORPSE

sound body Yoga

UPPER BACK & SHOULDERS SERIES

1. EASY SITTING/LOTUS

2. NECK MOVEMENTS

3. SHOULDER ROTATIONS

4. SUFI ROLLS

5. COW'S FACE

6. REVERSE PRAYER

7. 747 LEGS RAISED

8. SNAKE

sound body Yoga

9. SUPERMAN

10. COBRA

11. CAMEL

12. CHILD

13. REVERSE TABLE

14. FISH

15. CORPSE

sound body
Yoga

16. FIVE POINTED STAR

17. HALF FOLD

18. AIRPLANE 1

19. AIRPLANE 2

20. TRIANGLE

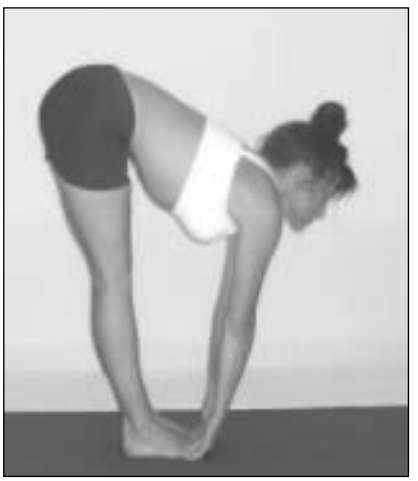
sound body
Yoga

21. REVERSE TRIANGLE

22. STANDING TRIANGLE SPINAL ROTATION 1

23. STANDING TRIANGLE SPINAL ROTATION 2

24. DOUBLE ANGLE



25. GORILLA

26. DOWNWARD FACING DOG

27. REVERSE CORPSE 1

sound body Yoga

WARRIOR/SIDE BEND SERIES

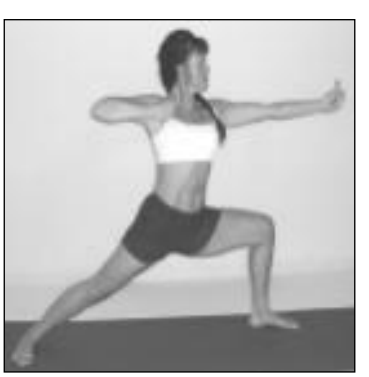
1. GAZE

2. CRESCENT MOON 1

3. CRESCENT MOON 2

4. WARRIOR I

5. WARRIOR 2



6. WARRIOR 3

sound body Yoga

7. TRIANGLE

8. HALF MOON LUNGE

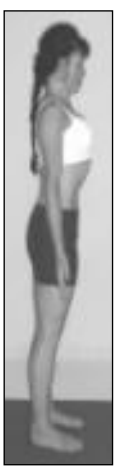
9. PRAYER TWIST LUNGE

10. REVERSE TRIANGLE

11. STANDING TRIANGLE SPINAL ROTATION 1

12. STANDING TRIANGLE SPINAL ROTATION 2

13. FIVE POINTED STAR



14. GAZE

sound body Yoga

WHOLE BODY SERIES

1. GAZE

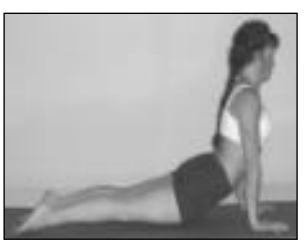
2. THUNDERBOLT

3. HALF MOON LUNGE

4. PRAYER TWIST LUNGE

5. TRIANGLE

6. DOWNWARD FACING DOG



7. UPWARD FACING DOG

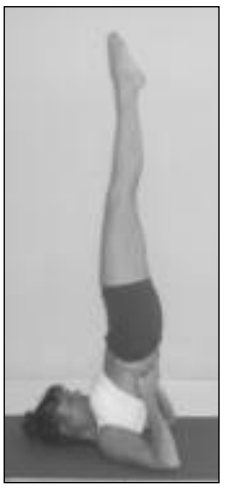
8. SUPERMAN

sound body Yoga

9. HIGH PLANK

10. SIDE PLANK

11. REVERSE TABLE

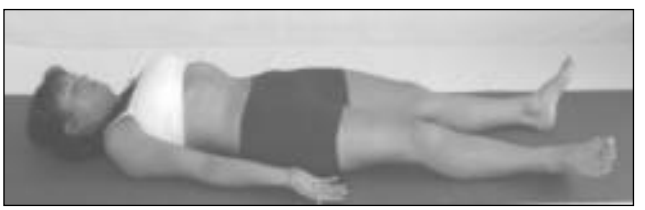


12. SHOULDER STAND

13. BOAT 1

14. FISH

15. UNIVERSAL SPINAL TWIST 1



16. CORPSE

DEFINITIONS OF YOGIC TERMS

ASANA - physical position in space, the connection and movement of the physical body.

ASHTANGA - The eight paths in the journey of yoga, includes:
YAMA - Personal Values
NIYAMA - Commitments
ASANA - Physical Postures
PRANAYAMA - Energy Awareness through Breath
PRATYAHARA - Sensual Balance
DHARANA - Single-pointedness
DHAYANA - Awareness
SAMADHI - Contentment

AUM – OM - the vibrational energy resonating in every molecule in the universe sounding like the syllable OM or AUM - the feeling of oneness with the mind, body, and breath. Aum is the trinity of creation, sustenance, death, and the ultimate silence.

BANDHA - locks in the body where innervation in that specific area stimulates energy.

DHAYANA - the inner focus on a single-pointed thought.

GYAN MUDRA - finger posture lock which innervates the awareness center.

NAMASTE - a salutation to the spirit within all.

PRANA - the life force and energy within the breath.

SHANTI - peace and tranquility.

TEN GATES - 2 eyes, 2 ears, 2 nostrils, 1 mouth, urinary and defecatory orfices, and the space on the crown of the head where the soul opens to the universe.

THIRD EYE - the space directly above the eyebrows, allows for intuitive focus and concentration.

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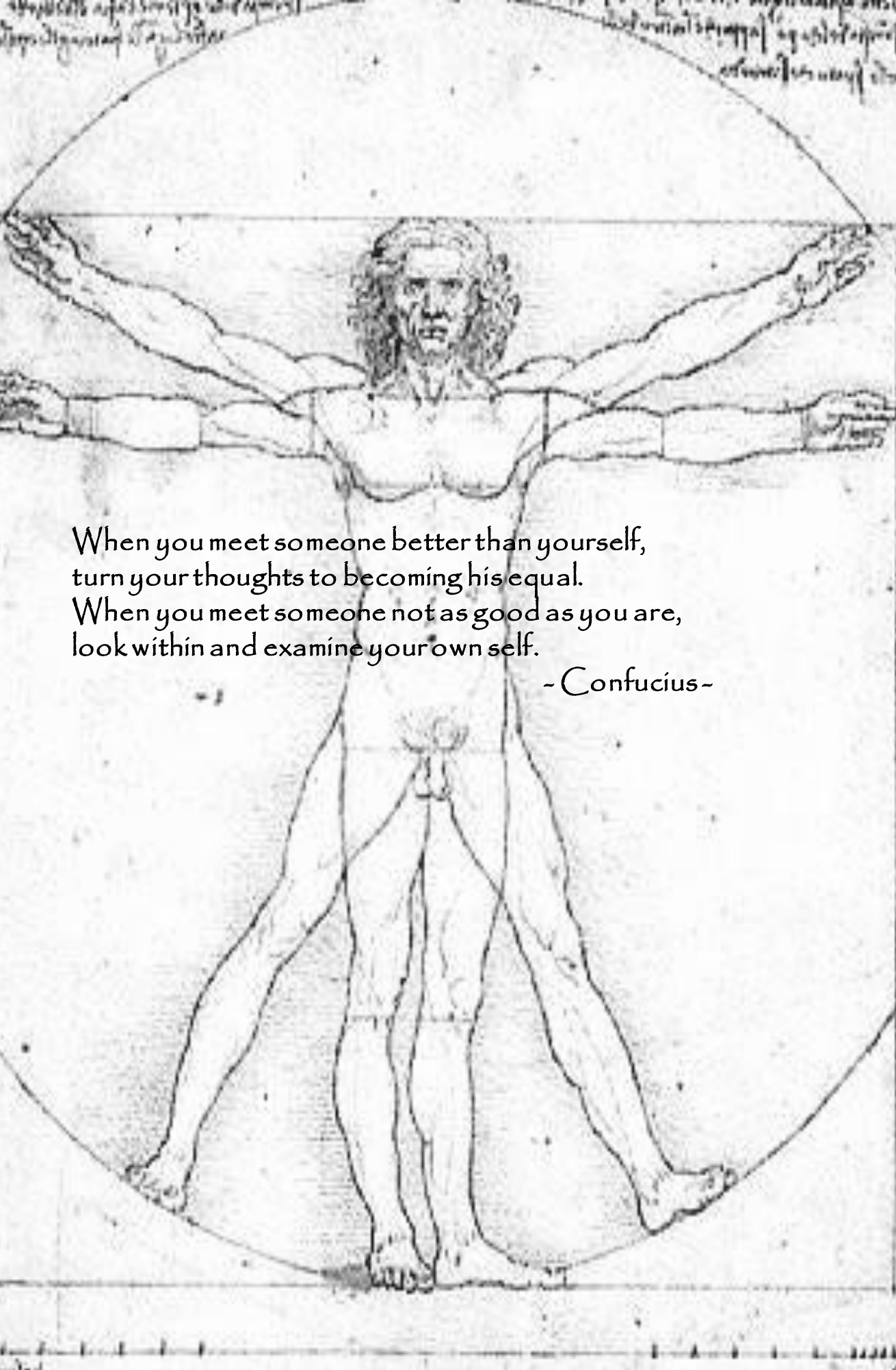


When you meet someone better than yourself,
turn your thoughts to becoming his equal.
When you meet someone not as good as you are,
look within and examine your own self.

~Confucius~

WHAT THIS BOOK WILL DO FOR YOU?

Dr. Freedom and Leela have combined the ancient wisdom of the East with the scientific knowledge of the West to give YOU an integrated and coordinated approach to yoga. Practical techniques of yoga are described in a simple, safe, and scientific manner. Basic asanas: neutral, sitting, standing, lateral bending, rotation, flexion, extension, inversion, and combinations of these are introduced. To experience the best results, practice daily. It is more effective to practice yoga for 40 minutes daily, then to practice for 1½ hours twice a week.

For most people, yoga is simply a means to maintain health and well-being in an increasingly stressful society. In other cases, yoga practice has both physical and mental, therapeutic effects. Yoga is not a substitute for conventional medical care, but is very helpful in balancing the neuromuscular and endocrine systems which directly influence all other systems and organs of the body.

Regular yoga practice of asanas can improve and assist in: breathing, balance, circulation, concentration, confidence, digestion, excretion, energy levels, flexibility, focus, menstruation, mental dexterity, muscle tone, overall well being, patience, posture, range of motion, relaxation, sexuality, respiration, stability, stamina, strength, thought, and tone.

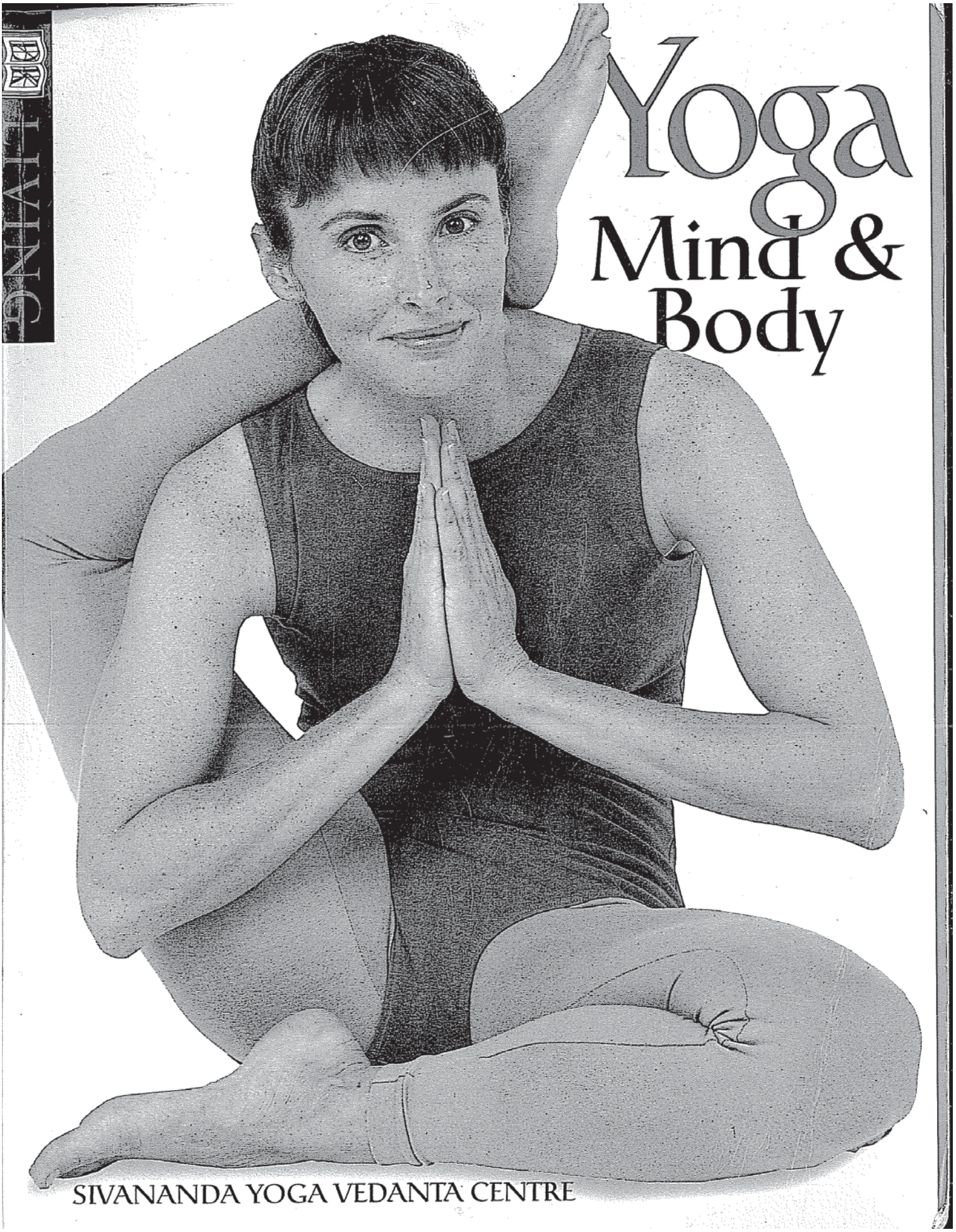
A regular asana, breathing, and meditation practice also helps to maintain the physical body in optimum condition, and promotes healing in an unhealthy body.

At first glance some of the asanas may appear to be simple exercises. Be absolutely aware that incorrect practice can easily result in complications. There are several different asanas discussed in this book. Find asanas that work for YOU, and practice them daily until positive changes manifest in the body.

What are waiting for? All you need to do is commit your mind, body, and breath to take you on an enhancing journey of health, joy, and contentment. Make a daily appointment with yourself and show up to enjoy the experience!

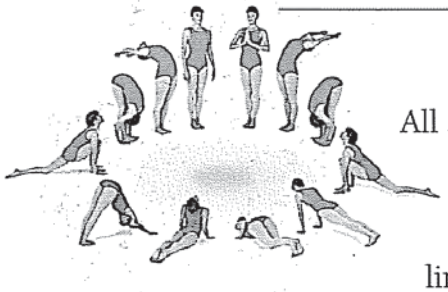
LIVING

Yoga Mind & Body



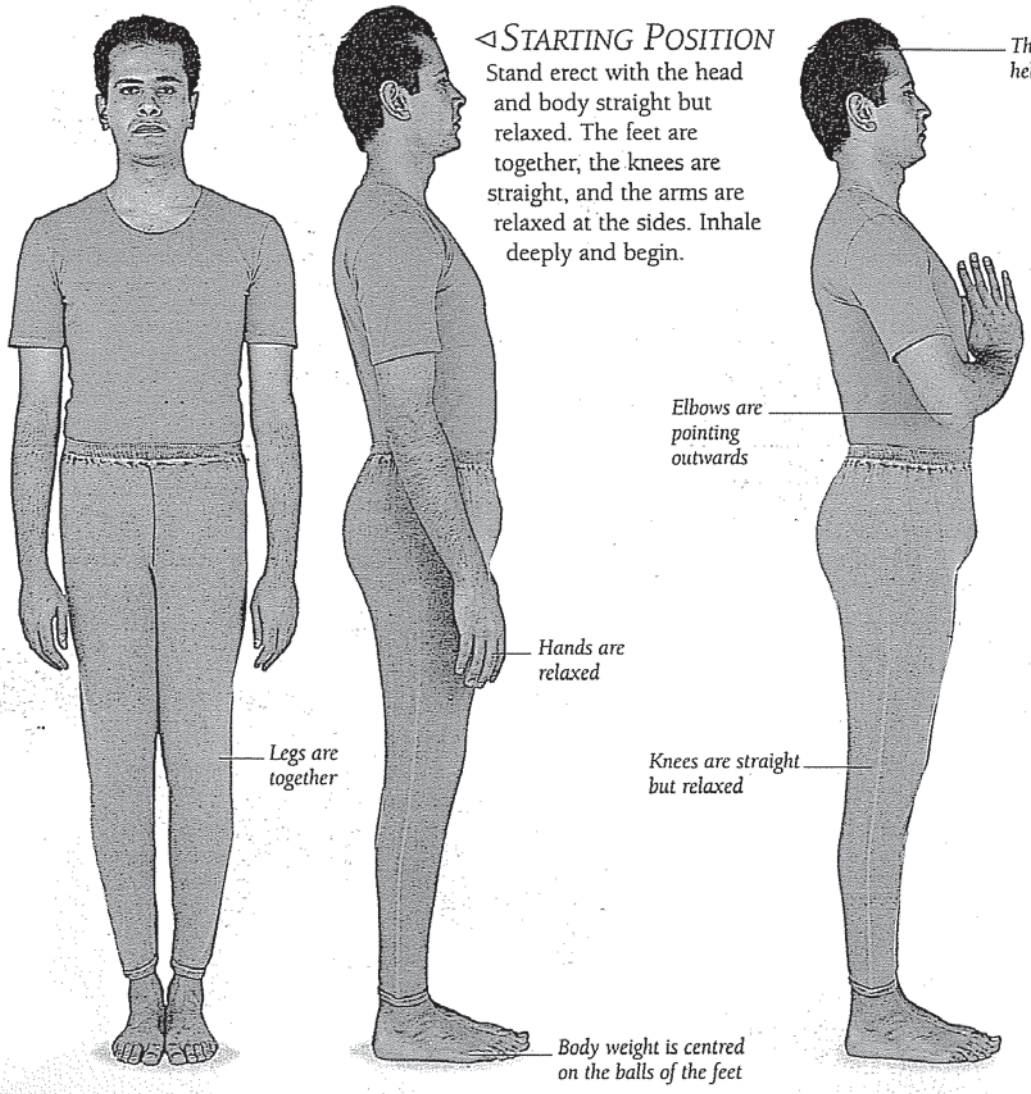
SIVANANDA YOGA VEDANTA CENTRE

THE SUN SALUTATION



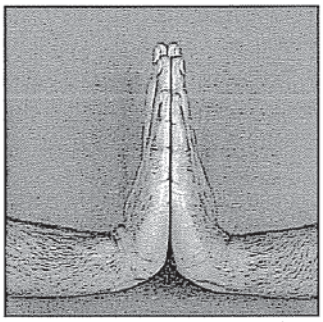
Surya Namaskar

All sessions of Yoga asanas begin with the Surya Namaskar, or Sun Salutation. This excellent warming-up exercise consists of a sequence of 12 positions that move the spine in various ways and promote flexibility in the limbs. It is of special benefit to beginners, to stiff people, and to the elderly, as it helps the body to gain flexibility. It also regulates the breath, and focuses the mind.

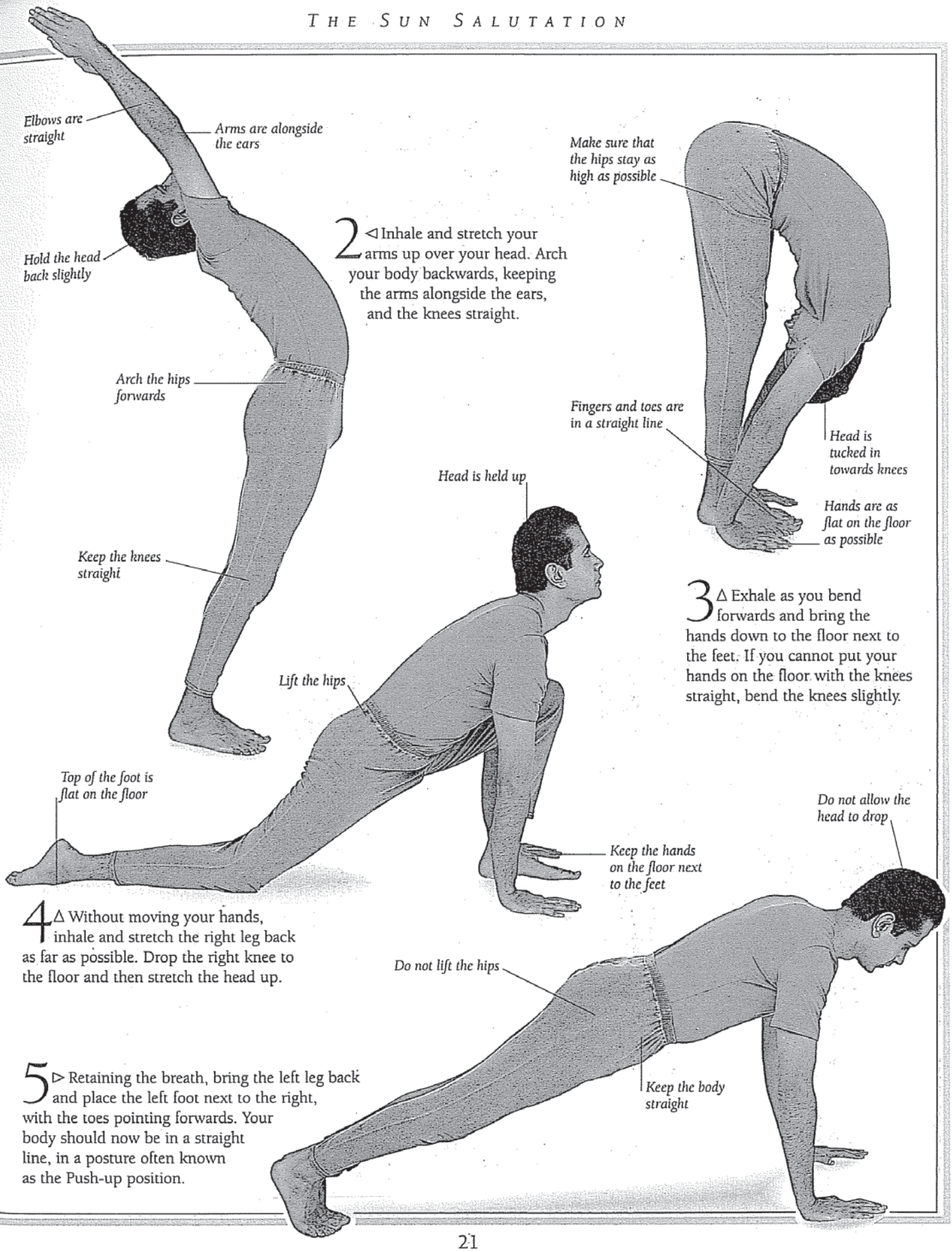


◁ *STARTING POSITION*
Stand erect with the head and body straight but relaxed. The feet are together, the knees are straight, and the arms are relaxed at the sides. Inhale deeply and begin.

1 As you exhale the breath, bring your hands together at the chest in the Prayer position. This is a powerful physical, mental, and psychic way of centring the body.



PRAYER POSITION
Bringing the hands up from the sides, place the palms flat against each other at the centre of the chest. The elbows are pushed out to the sides.

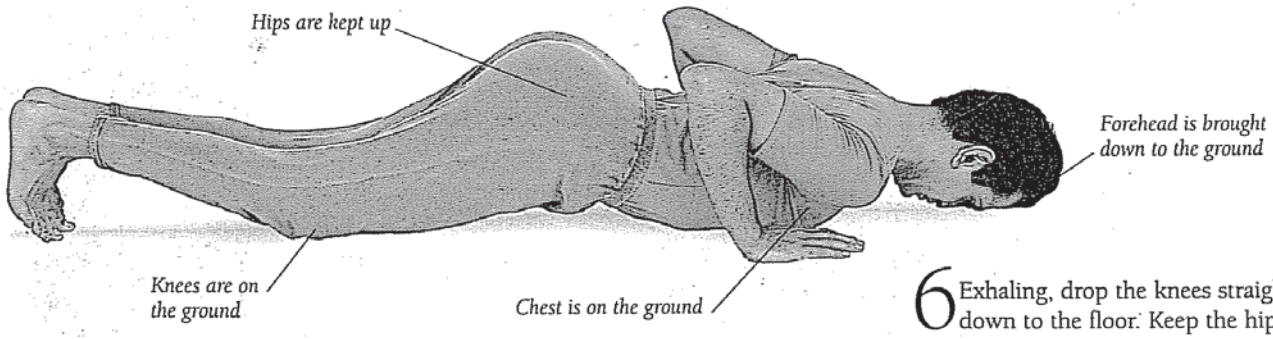


2 ◁ Inhale and stretch your arms up over your head. Arch your body backwards, keeping the arms alongside the ears, and the knees straight.

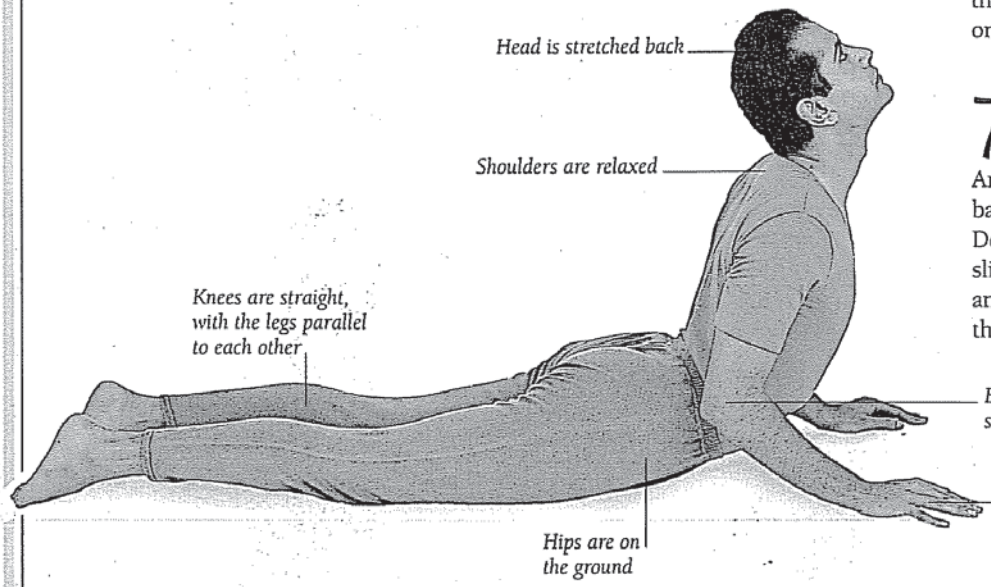
3 △ Exhale as you bend forwards and bring the hands down to the floor next to the feet. If you cannot put your hands on the floor with the knees straight, bend the knees slightly.

4 △ Without moving your hands, inhale and stretch the right leg back as far as possible. Drop the right knee to the floor and then stretch the head up.

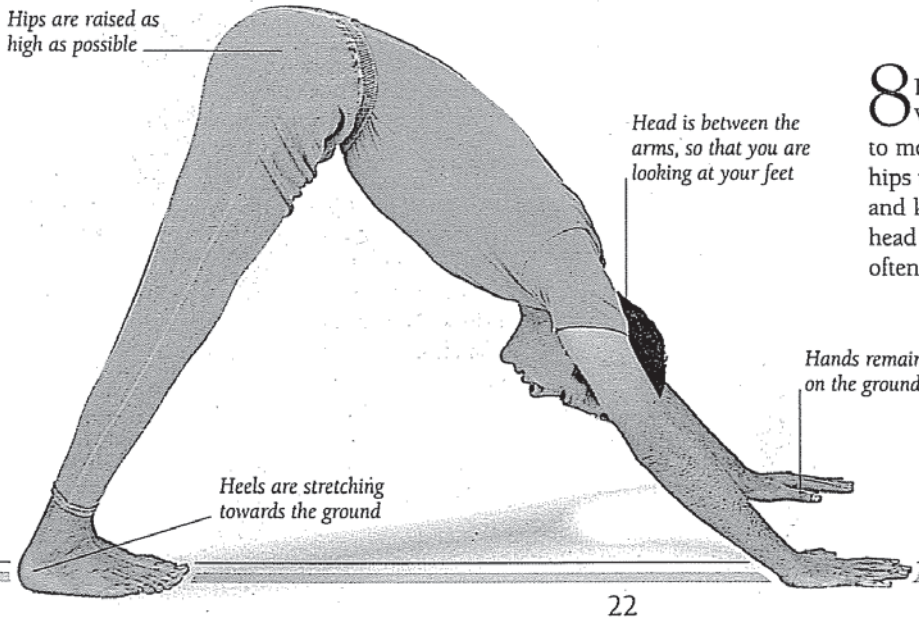
5 ▷ Retaining the breath, bring the left leg back and place the left foot next to the right, with the toes pointing forwards. Your body should now be in a straight line, in a posture often known as the Push-up position.



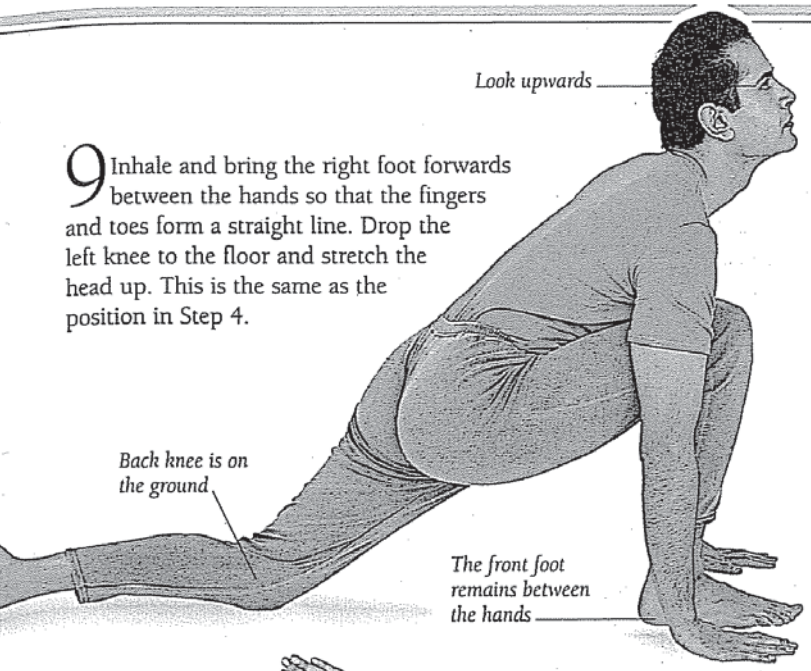
6 Exhaling, drop the knees straight down to the floor. Keep the hips up. Without rocking the body backwards, bring the chest straight down to the floor between the hands. Bring the forehead to the floor; beginners may place the chin on the ground if this is difficult to do.



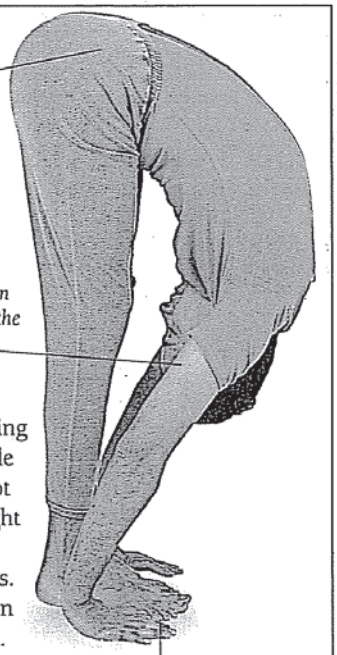
7 Inhale as you slide the body forwards until the hips are on the ground. Arch the chest up and bring the head back into the Cobra pose (see pp.64–5). Do not move the hands. The elbows are slightly bent, with the shoulders down and back, so that there is no tension in the neck or shoulder area.



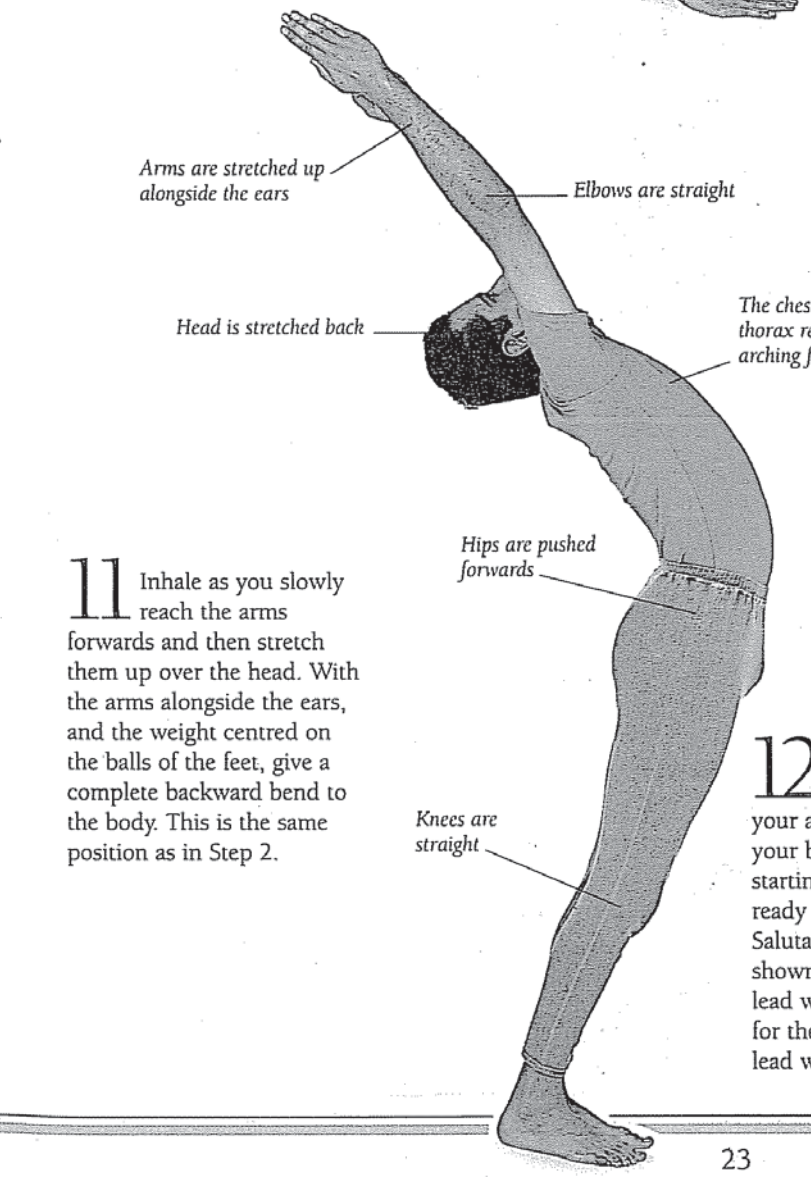
8 Exhale as you tuck the toes under. Without allowing the hands or feet to move from their positions, bring the hips up. Push the heels towards the floor and keep the knees straight. Drop the head down between the arms. This is often referred to as the Inverted "V" pose.



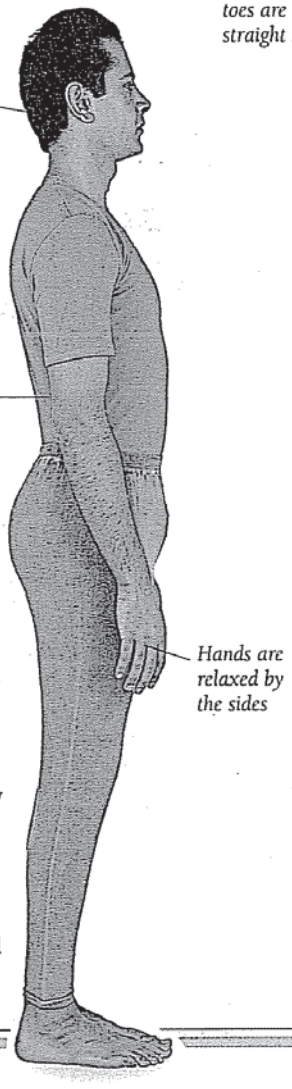
9 Inhale and bring the right foot forwards between the hands so that the fingers and toes form a straight line. Drop the left knee to the floor and stretch the head up. This is the same as the position in Step 4.



10 ▷ Without moving the hands, exhale as you bring the left foot forwards next to the right foot. The forehead is down towards the knees. This is the same position as that shown in Step 3.



11 Inhale as you slowly reach the arms forwards and then stretch them up over the head. With the arms alongside the ears, and the weight centred on the balls of the feet, give a complete backward bend to the body. This is the same position as in Step 2.

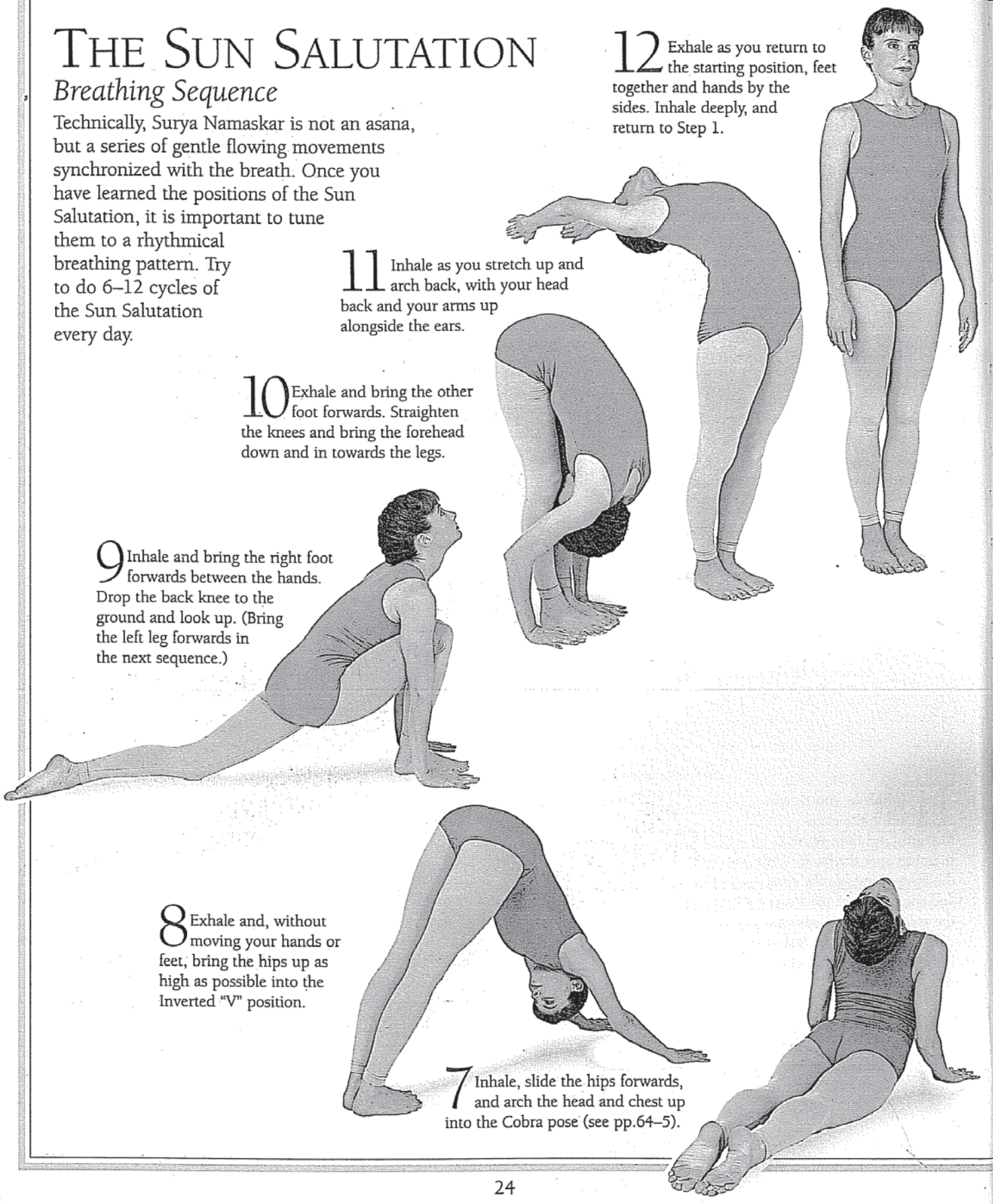


12 ▷ Exhale as you stand upright and bring your arms down alongside your body, returning to the starting position. You are now ready to begin the next Sun Salutation cycle. In the steps shown here, you are asked to lead with the right leg, but for the next cycle, you should lead with the left leg.

THE SUN SALUTATION

Breathing Sequence

Technically, Surya Namaskar is not an asana, but a series of gentle flowing movements synchronized with the breath. Once you have learned the positions of the Sun Salutation, it is important to tune them to a rhythmical breathing pattern. Try to do 6–12 cycles of the Sun Salutation every day.



12 Exhale as you return to the starting position, feet together and hands by the sides. Inhale deeply, and return to Step 1.

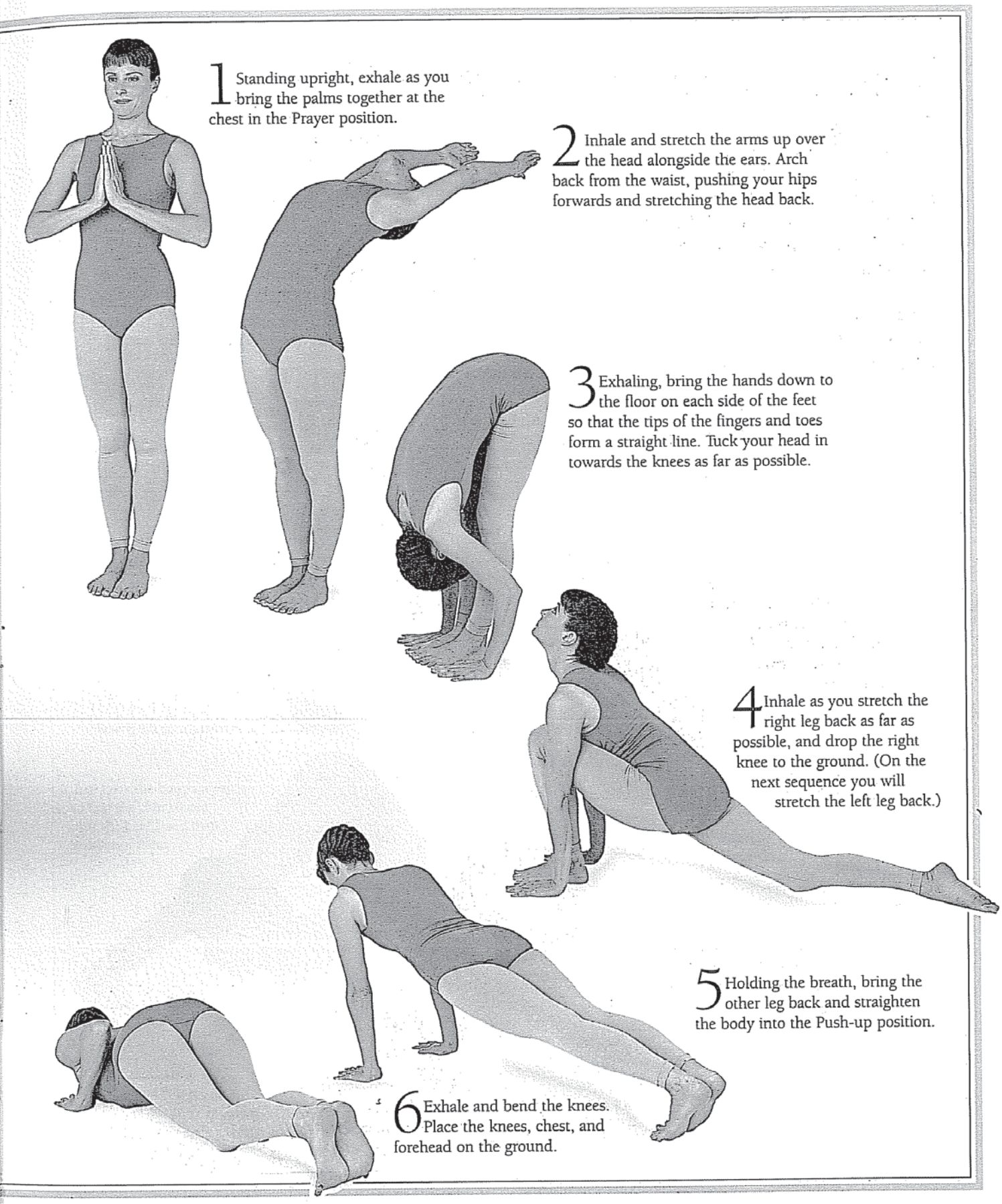
11 Inhale as you stretch up and arch back, with your head back and your arms up alongside the ears.

10 Exhale and bring the other foot forwards. Straighten the knees and bring the forehead down and in towards the legs.

9 Inhale and bring the right foot forwards between the hands. Drop the back knee to the ground and look up. (Bring the left leg forwards in the next sequence.)

8 Exhale and, without moving your hands or feet, bring the hips up as high as possible into the Inverted "V" position.

7 Inhale, slide the hips forwards, and arch the head and chest up into the Cobra pose (see pp.64–5).



1 Standing upright, exhale as you bring the palms together at the chest in the Prayer position.

2 Inhale and stretch the arms up over the head alongside the ears. Arch back from the waist, pushing your hips forwards and stretching the head back.

3 Exhaling, bring the hands down to the floor on each side of the feet so that the tips of the fingers and toes form a straight line. Tuck your head in towards the knees as far as possible.

4 Inhale as you stretch the right leg back as far as possible, and drop the right knee to the ground. (On the next sequence you will stretch the left leg back.)

5 Holding the breath, bring the other leg back and straighten the body into the Push-up position.

6 Exhale and bend the knees. Place the knees, chest, and forehead on the ground.

1

THE HEADSTAND

Sirshasana

The Headstand, one of the most powerful postures, is often referred to as the "King of the Asanas" because of its numerous mental and physical benefits. Many rightly see it as a panacea for all human ailments. If you have only a short time to practise, and want to maximize the benefits, do the Headstand. In this inverted position, at least 90 percent of the body weight should rest on the elbows. Hardly any pressure should be taken by the head or neck.

PHYSICAL BENEFITS

- Gives the heart a well deserved rest, as gravity helps to return venous blood to the heart.
- Regular practice helps to strengthen the respiratory system and the circulation, keeping them flexible and slowing down the rate of breathing and the heartbeat when at rest.
- The body is generally enhanced by the deep breathing, and the brain, spine, and entire nervous system receive a rich supply of nutrients. This refreshes and rejuvenates the entire body.
- Relieves varicose veins.

MENTAL BENEFITS

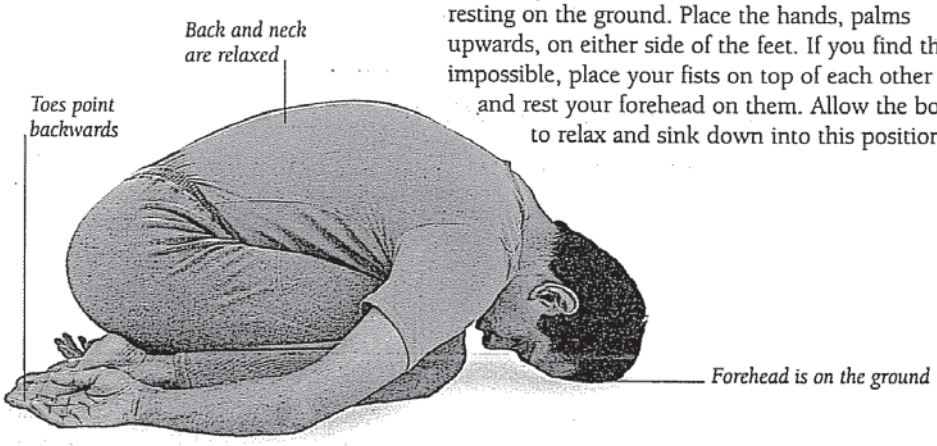
- Increases memory, concentration, and intellectual capacity.
- Enhances all the sensory faculties.

PRANIC BENEFITS

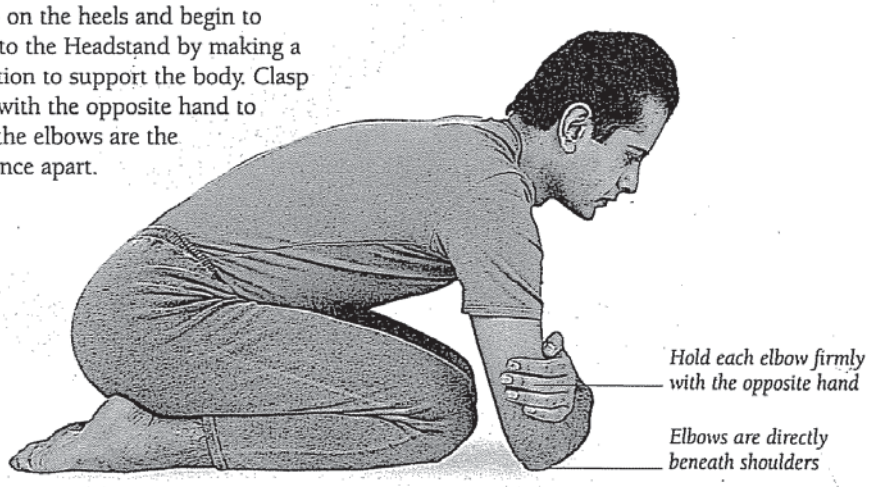
- "He who practises the Headstand for three hours daily conquers time." – *Yoga Tatwa Upanishad.*
- Sublimates sexual drive by transmuting seminal energy into Ojas-Shakti.

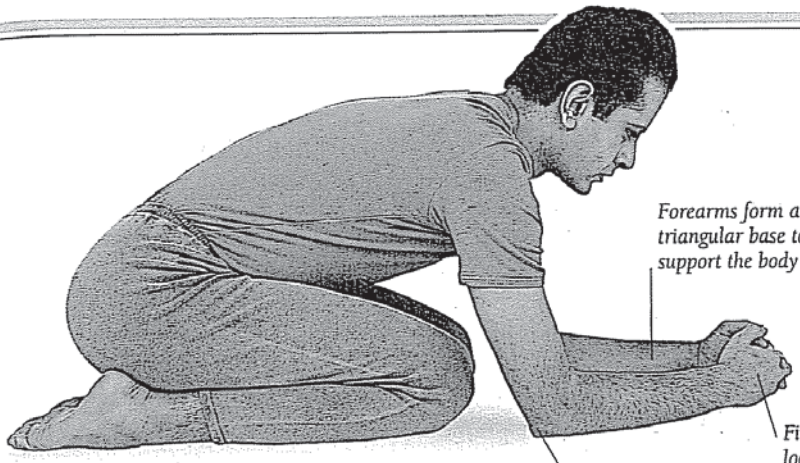
STARTING POSITION: CHILD'S POSE

Begin by sitting on the heels with the forehead resting on the ground. Place the hands, palms upwards, on either side of the feet. If you find this impossible, place your fists on top of each other and rest your forehead on them. Allow the body to relax and sink down into this position.

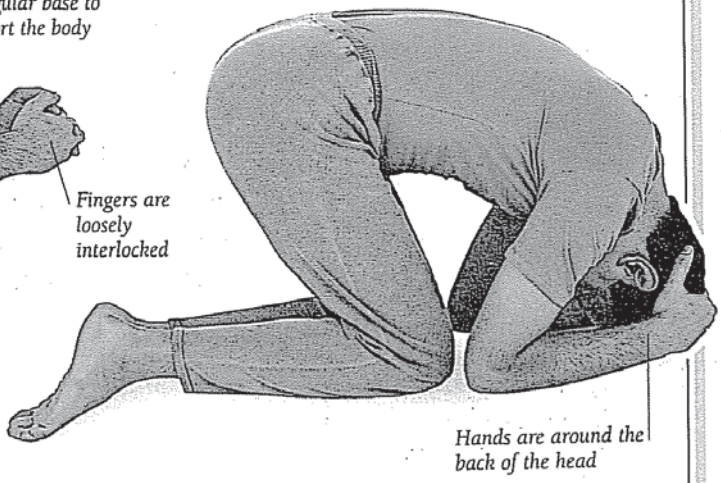


1 ∇ Sit up on the heels and begin to come into the Headstand by making a firm foundation to support the body. Clasp each elbow with the opposite hand to ensure that the elbows are the correct distance apart.





2 ▲ Release the elbows without moving them. Clasp the hands together on the ground in front of your face to form a firm tripod position.

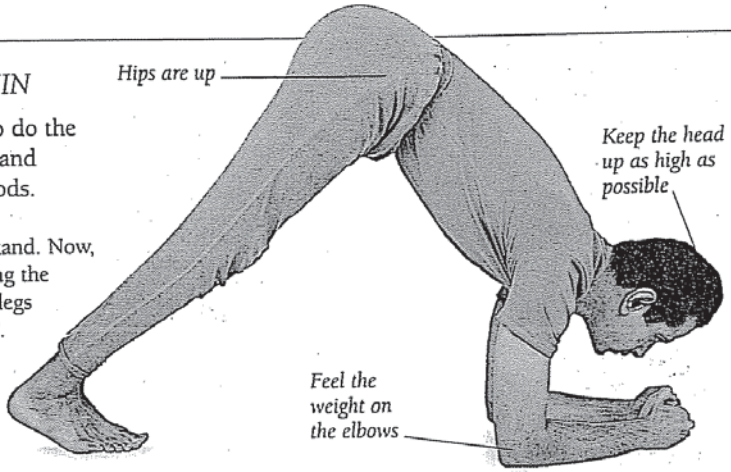


3 ▷ Without moving the arms, place the top of the head on the ground, with the back of the head firmly against the clasped hands.

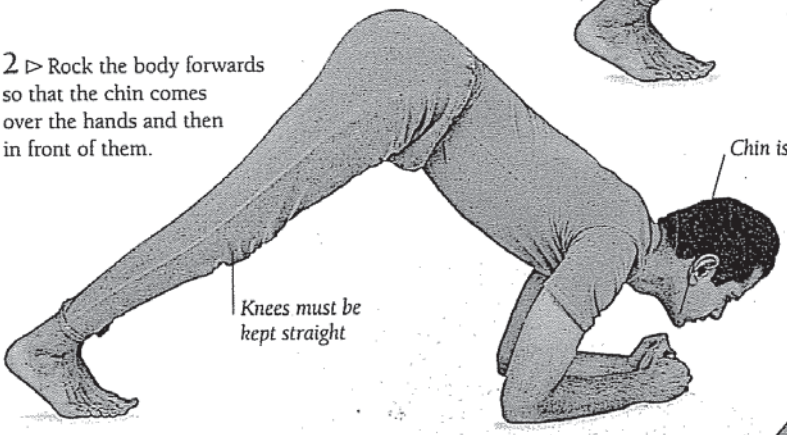
PREPARATORY EXERCISE: THE DOLPHIN

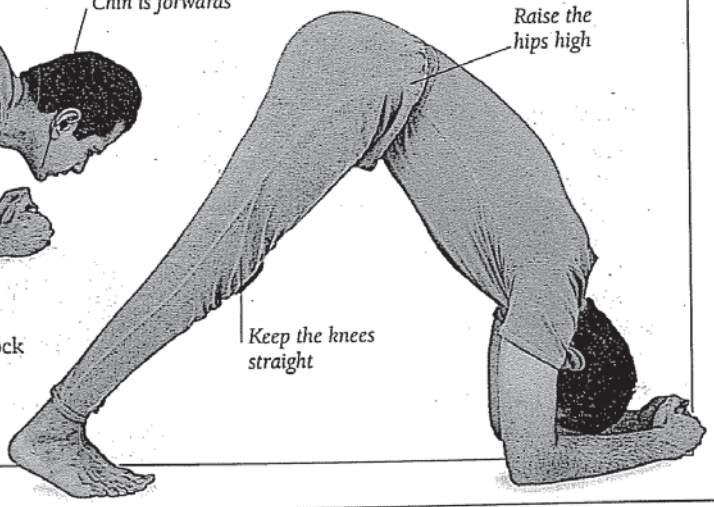
The Dolphin is recommended even when you are able to do the Headstand, as it will strengthen the arms and shoulders and enable you to hold the position correctly for longer periods.

1 ▷ Follow Steps 1 and 2 of the Headstand. Now, keeping the head up and without moving the feet away from the arms, straighten the legs so that hips rise to form an inverted "V".



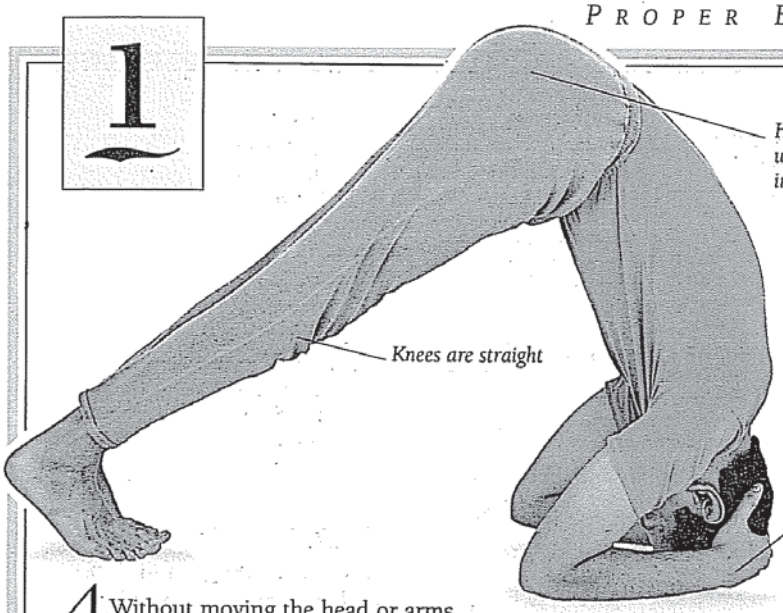
2 ▷ Rock the body forwards so that the chin comes over the hands and then in front of them.



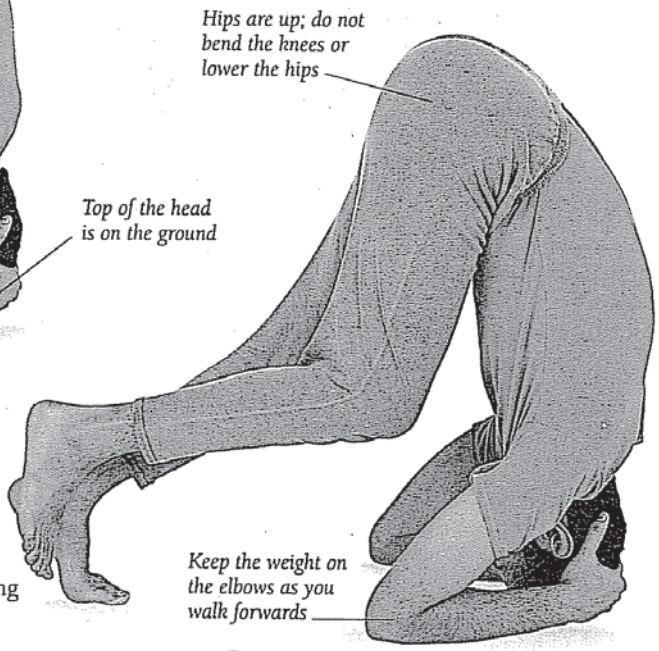


3 ▷ Push the body backwards as far as possible. Rock back and forth 8–10 times before relaxing into the Child's pose. Repeat this process 3–4 times daily to strengthen the arms and shoulders.

1

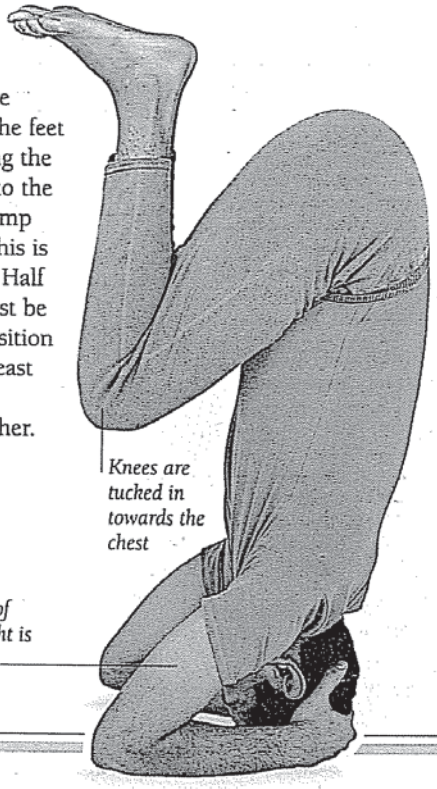


4 Without moving the head or arms, straighten the knees, raising the hips up so that the body forms an inverted "V". Keep pushing down with the elbows.

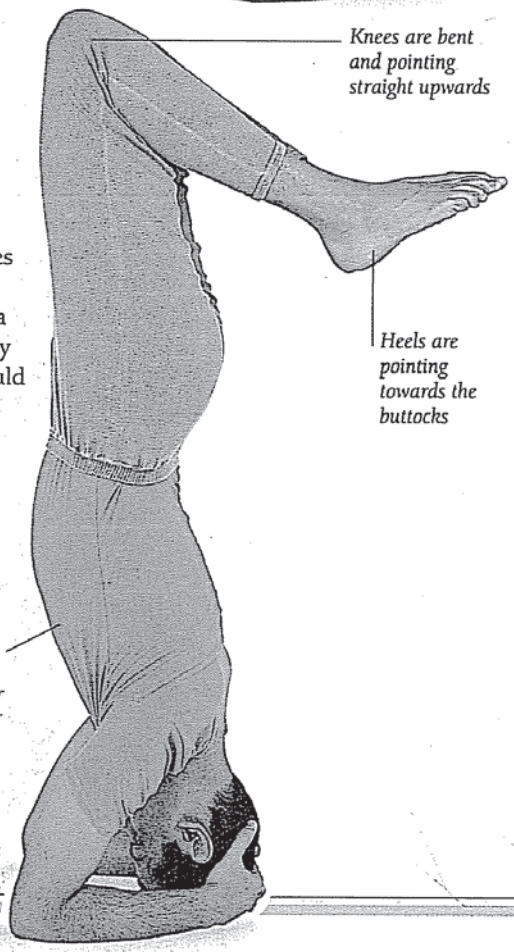


5 Walk the feet forwards towards the face. As the feet come closer to the head, feel the back straightening until the hips are over the head.

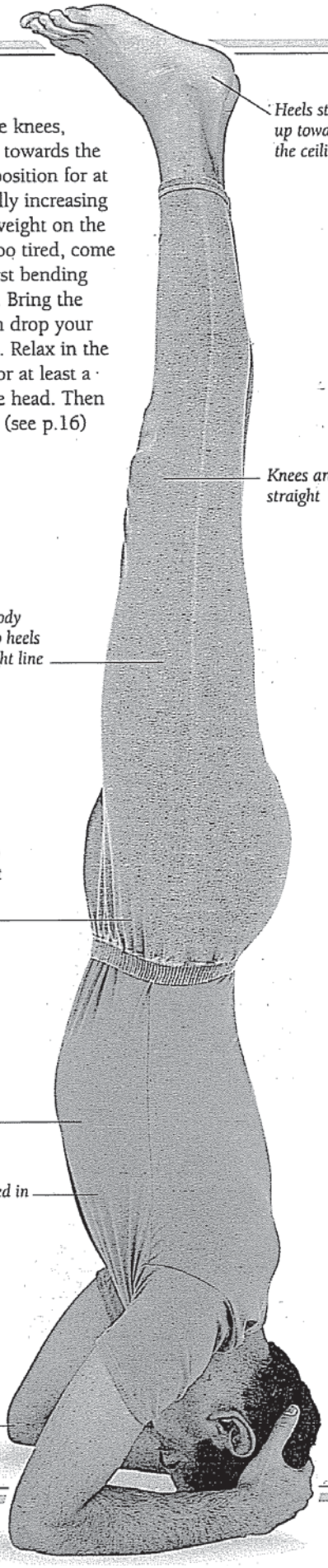
6 Slowly bend the knees and lift the feet off the ground. Bring the heels up and close to the buttocks. Do not jump into the position. This is often known as the Half Headstand. You must be able to hold this position comfortably for at least 30 seconds before proceeding any further.

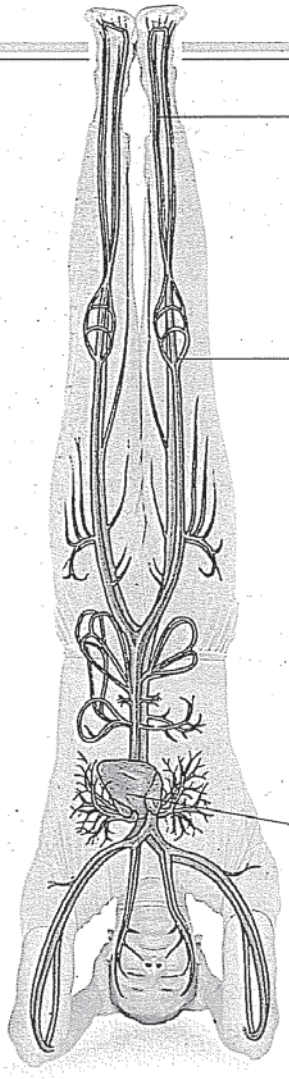


7 Bring the knees up. Feel that your hips are like a hinge that is slowly opening. You should not be in a hurry.



8 Slowly straighten the knees, bringing the feet up towards the ceiling. Try to hold the position for at least 30 seconds, gradually increasing to 3 minutes. Keep the weight on the elbows. Before you are too tired, come out of the position by first bending the knees, then the hips. Bring the feet to the floor and then drop your hips back onto the heels. Relax in the Child's pose (see p.26) for at least a minute before raising the head. Then relax in the Corpse pose (see p.16) before continuing.



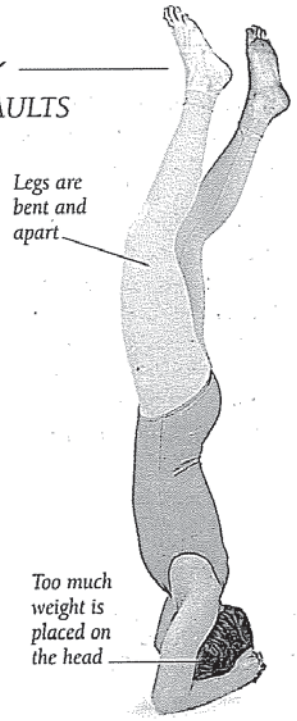


Chief Benefit

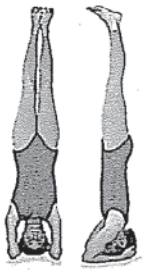
The Headstand gives the heart and the circulatory system a rest, as blood in the veins of the legs flows naturally back to the heart, rather than having to be pumped back.

Common Faults

- Legs are dropping back and are not together.
- Knees are bent.
- Weight is being placed on the head, rather than on the elbows.
- Shoulders are hunched.
- Back is arched.
- Elbows are too far apart.
- CAUTION: You should not attempt the Headstand if you have high blood pressure, are more than four months pregnant, have glaucoma or similar eye problems, have recently suffered whiplash or a similar injury, or if you have been advised against this form of exercise.



HEADSTAND *Variations*



STARTING POSITION

Once you have mastered the basic Headstand, and can hold it comfortably for at least 3 minutes, try some variations from that position. All start from the Headstand. They are designed to improve flexibility, concentration, and balance. They also strengthen the muscles of the back and shoulders, and give an extra stretch to the legs and thighs.

◁ ONE LEG TO GROUND

Keeping one leg up, exhale and lower the other leg until the foot is 5cm (2in) from the ground. Inhale as you raise the leg up again. Repeat 2–3 times on each side.

BOTH LEGS TO GROUND ▽

Keeping the legs together, exhale as you lower them, stopping 5cm (2in) from the ground. Feel as though the hips are pulling back, to counter-balance the weight of the legs.

Foot is lowered to within 5cm (2in) of the ground

Knees are straight

Keep the elbows firmly pushed onto the ground

Knees are kept straight

Hips are up and back

Feet are lowered to 5cm (2in) from the ground

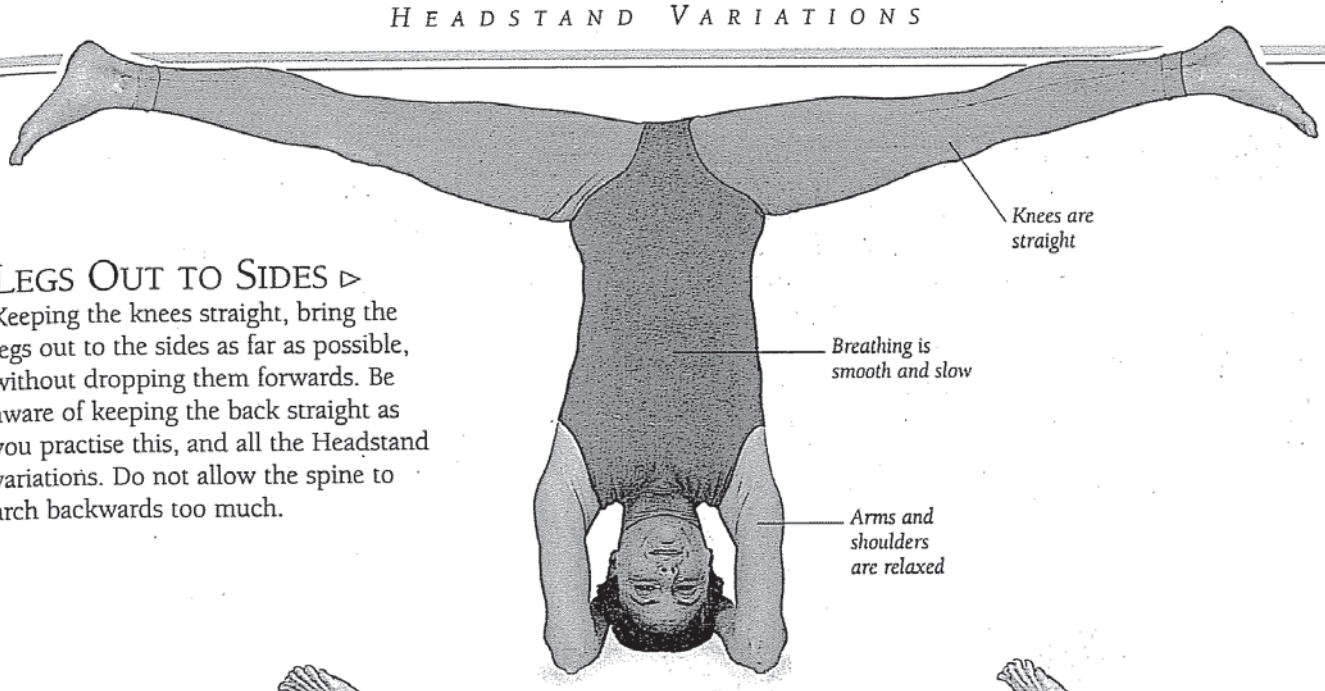
Knees are straight

Back remains straight

Body is relaxed, with weight on the elbows

LEGS TO FRONT AND BACK

Keeping the knees straight, bring one leg forwards and the other back. Stretch the heels out away from each other. Change legs, reversing the position several times. Finish by bringing your legs back to the starting position and straightening the body before continuing with the asanas.

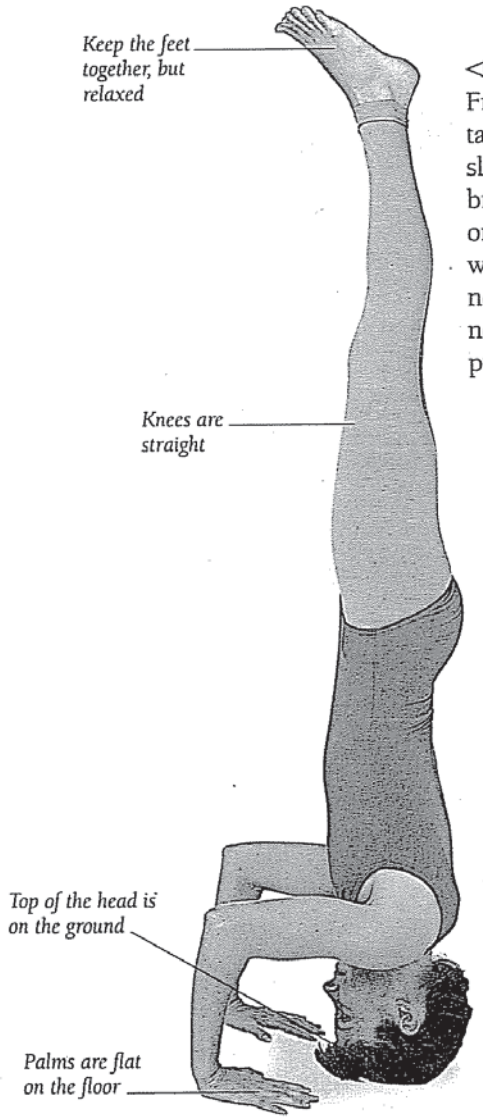


LEGS OUT TO SIDES ▷

Keeping the knees straight, bring the legs out to the sides as far as possible, without dropping them forwards. Be aware of keeping the back straight as you practise this, and all the Headstand variations. Do not allow the spine to arch backwards too much.

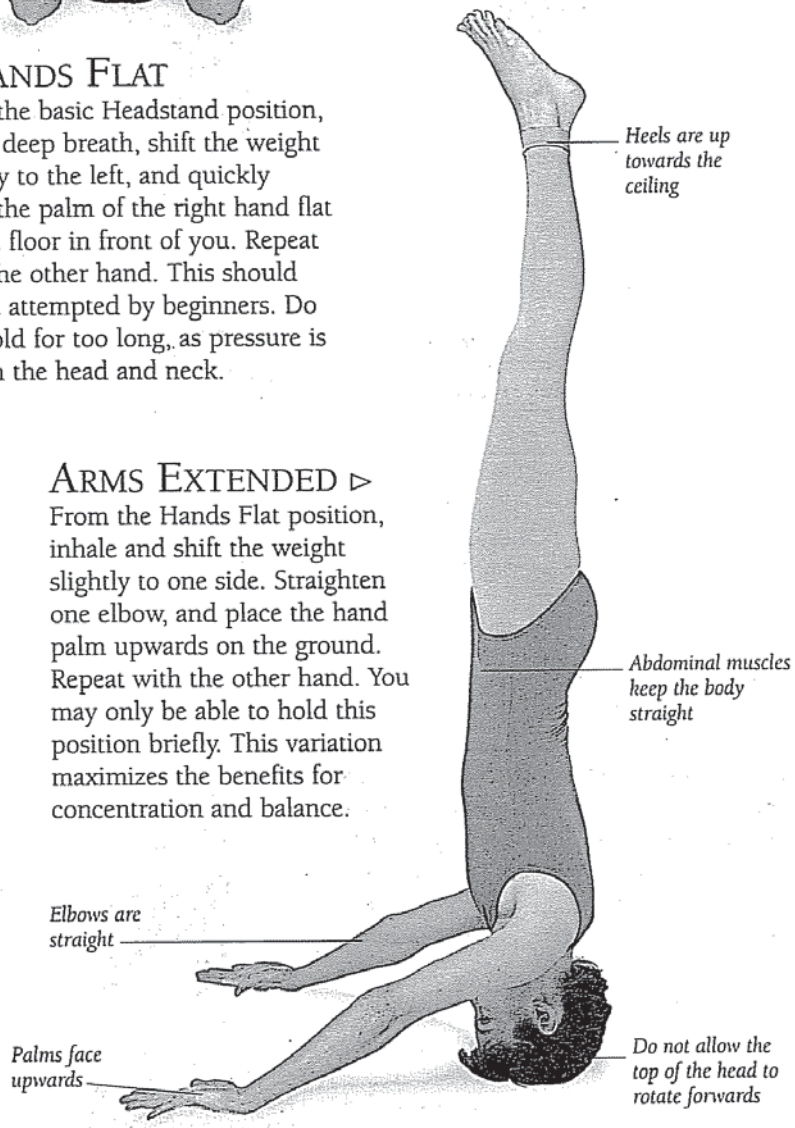
◁ HANDS FLAT

From the basic Headstand position, take a deep breath, shift the weight slightly to the left, and quickly bring the palm of the right hand flat on the floor in front of you. Repeat with the other hand. This should not be attempted by beginners. Do not hold for too long, as pressure is put on the head and neck.



ARMS EXTENDED ▷

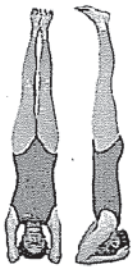
From the Hands Flat position, inhale and shift the weight slightly to one side. Straighten one elbow, and place the hand palm upwards on the ground. Repeat with the other hand. You may only be able to hold this position briefly. This variation maximizes the benefits for concentration and balance.



THE SCORPION

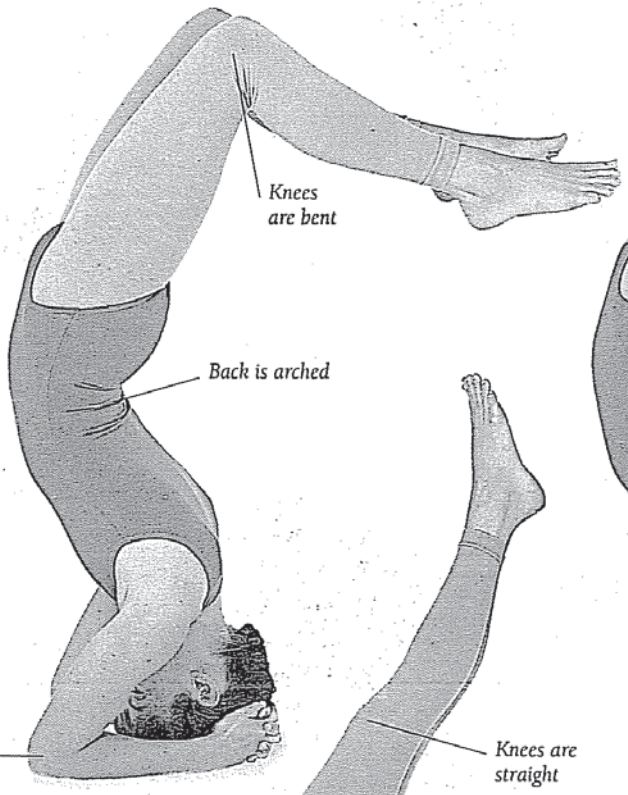
Vrichikasana

The Scorpion, which is an advanced position, promotes balance and brings harmony to the body and the mind. Before attempting this pose, you should feel secure in the Headstand, and be able to hold it for at least 3 minutes.

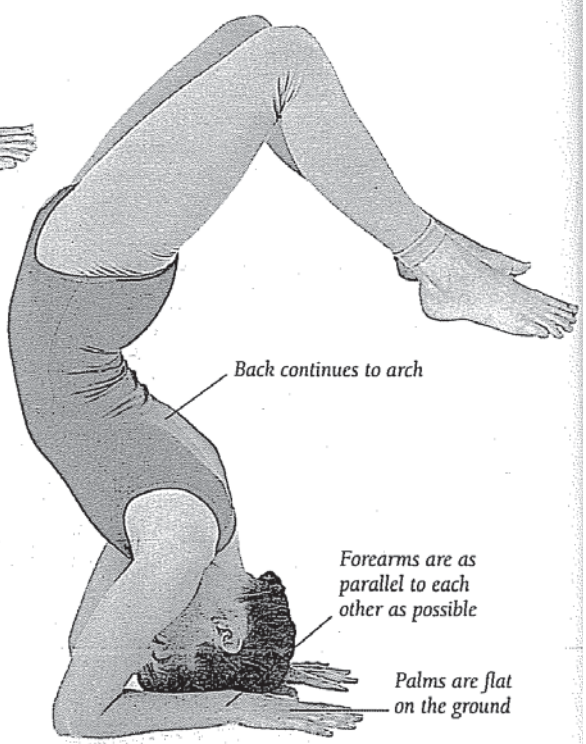


STARTING POSITION

1 Starting from the Headstand (see pp.26–9), bend the knees and begin to bring the feet slowly down towards the head. Arch the entire body backwards, being sure to keep the weight of the body on the elbows.

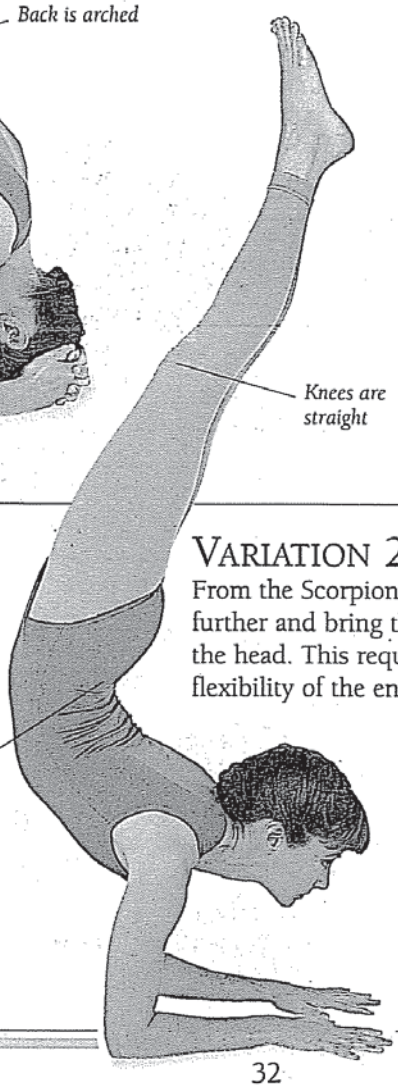


2 Release the inter-locked fingers slowly, and move your hands apart, bringing them to lie flat on the ground on either side of the head. Feel confident in this position before continuing. Inhale deeply as you pause before trying the next step.



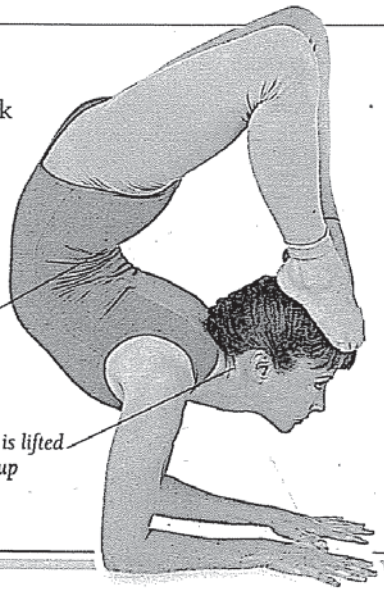
VARIATION 1

From the Scorpion, straighten the legs, keeping the weight on the elbows. This pose demands more strength, but less upper back flexibility.



VARIATION 2 ▷

From the Scorpion, arch the back further and bring the feet onto the head. This requires great flexibility of the entire spine.



3 Keeping the back arched, lift the head as you bring the shoulders back into a position directly above the elbows. You are now in the Scorpion position. It requires a good deal of concentration, strength, and upper back flexibility. Hold the position only for as long as you feel comfortable.

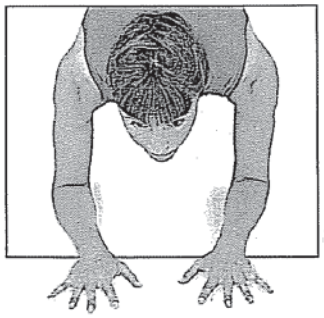
Legs are relaxed and parallel to each other

Feet are relaxed

Head is raised up as high as possible

Shoulders are directly over the elbows to provide support for the body

Very little weight is placed on the hands, but they do provide additional balance



STABLE BASE

In the Scorpion position, keep the hands apart and the head up. The weight of the body rests on the elbows, while the hands provide extra stability.

2 THE SHOULDERSTAND

Sarvangasana

The Shoulderstand is said to benefit the whole body; its Sanskrit name comes from "sarva", meaning "all parts". When practising the Shoulderstand, you may have the impression that the body is being bent backwards, but the Shoulderstand is actually a forward-bending exercise, with the main stretch taking place in the shoulder, neck, and upper back regions. For the Shoulderstand and asanas following on in this series, you will need at least 30cm (1ft) between the fingertips and any wall when your arms are fully extended.

PHYSICAL BENEFITS

- The chin presses on the throat, bringing a rich blood supply.
- The thyroid gland is massaged and brought to its proper level of activity.
- Centralizes the blood supply in the spinal column and stretches the spine, helping to keep it strong and elastic.
- As most of the body is inverted, it prevents venous blood stagnating in the lower limbs and encourages circulation, helping to relieve varicose veins.
- Encourages deep abdominal breathing, massaging the heart and lung regions.

MENTAL BENEFITS

- Relieves lethargy and mental sluggishness.
- Helps to cure insomnia and depression.

PRANIC BENEFITS

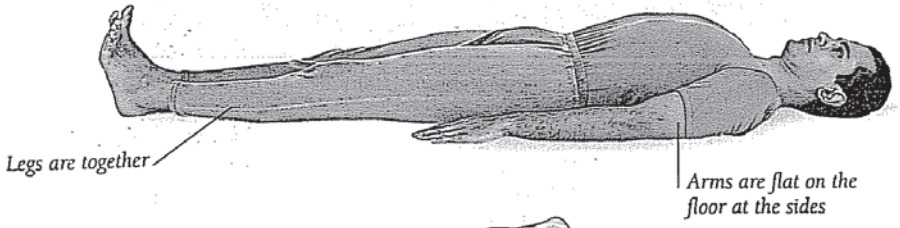
- The focus is on the psychic energy centre, Vishuddha Chakra, in the throat region.
- Stimulates pranic flow in the stomach, small intestine, urinary and gall bladders, pericardium and kidney meridians.

PREPARATORY EXERCISES

All these exercises are performed lying on the back. Their purpose is to strengthen the muscles of the abdomen and lower back gradually, preparing them for the Shoulderstand and other asanas.

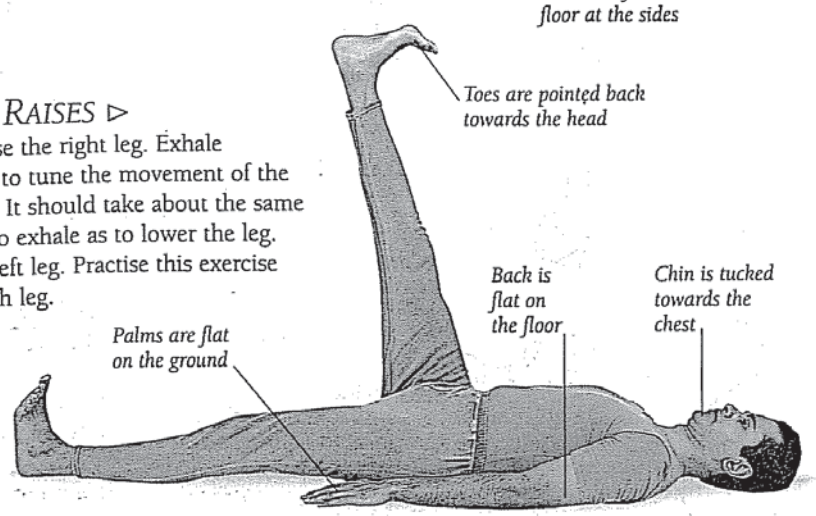
STARTING POSITION

Lying flat on the ground, bring the legs together and the hands flat on the floor next to the sides, keeping the back flat against the ground. Hold the chin towards the chest, so that the back of the neck stays flat.

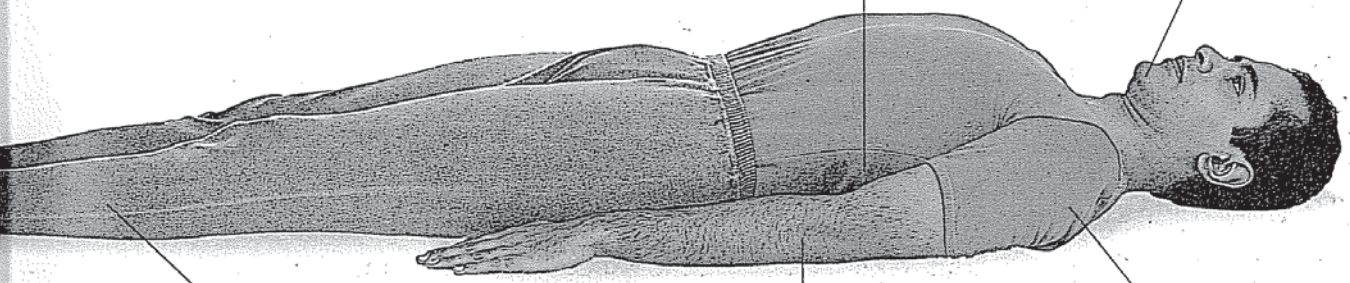


SINGLE LEG RAISES ▷

Inhale as you raise the right leg. Exhale and lower it. Try to tune the movement of the leg to the breath. It should take about the same amount of time to exhale as to lower the leg. Repeat with the left leg. Practise this exercise 2–5 times on each leg.

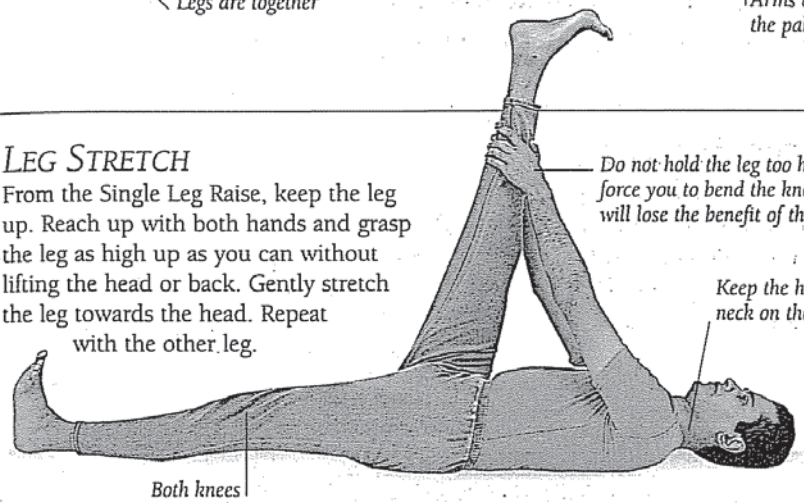


1 Lying flat on your back, bring the feet together and stretch the arms behind your head to make sure that you have enough space. Return the arms to the floor next to the hips, and place the hands flat on the floor.



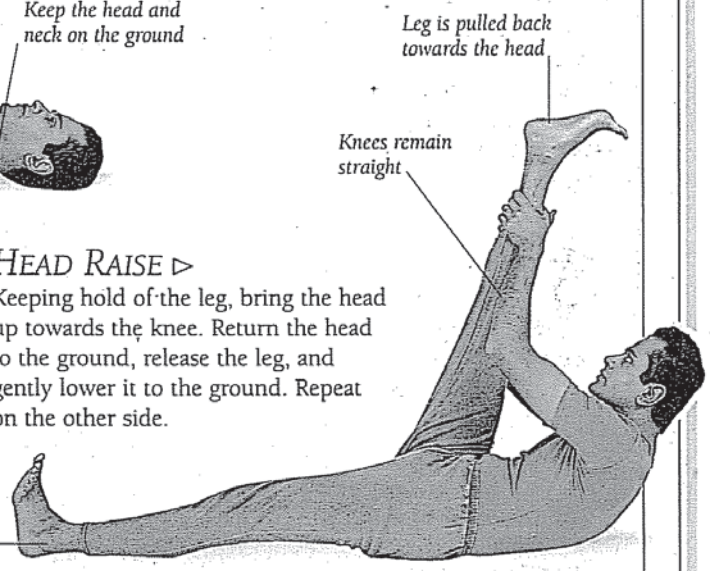
LEG STRETCH

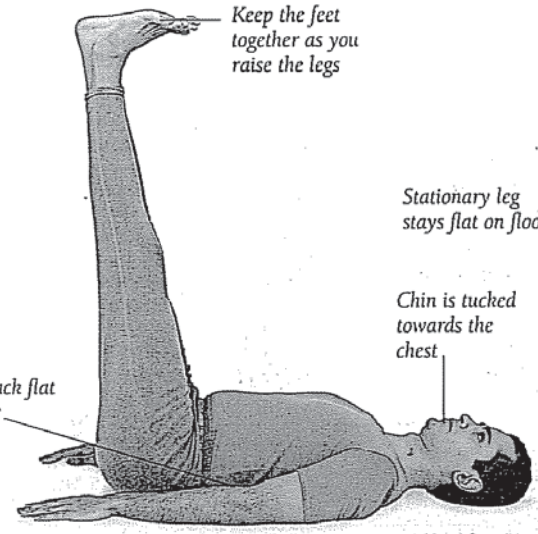
From the Single Leg Raise, keep the leg up. Reach up with both hands and grasp the leg as high up as you can without lifting the head or back. Gently stretch the leg towards the head. Repeat with the other leg.



HEAD RAISE ▷

Keeping hold of the leg, bring the head up towards the knee. Return the head to the ground, release the leg, and gently lower it to the ground. Repeat on the other side.

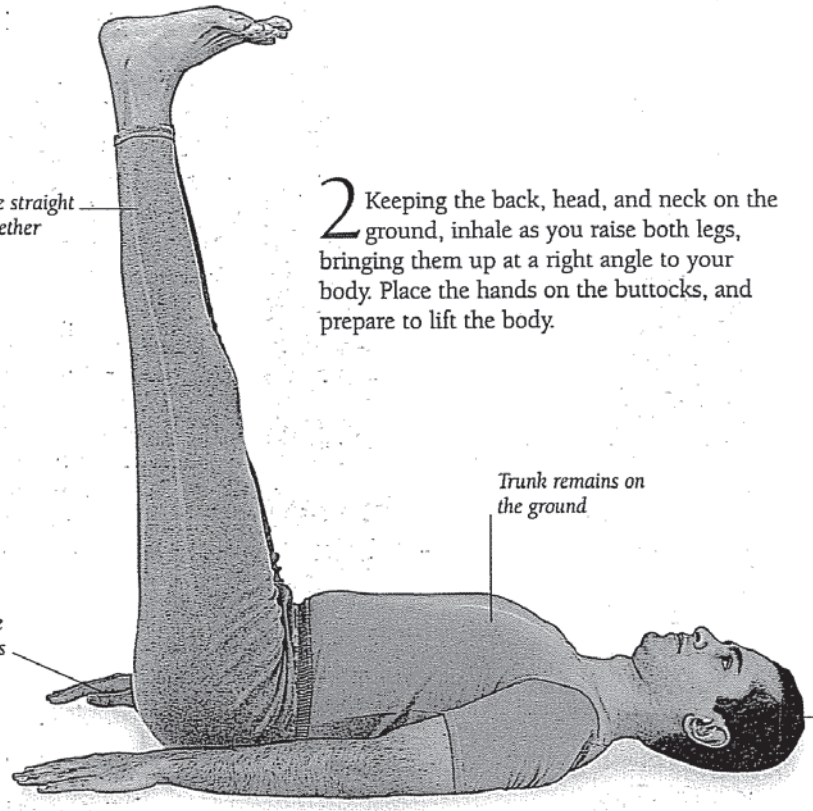




◁ DOUBLE LEG RAISES

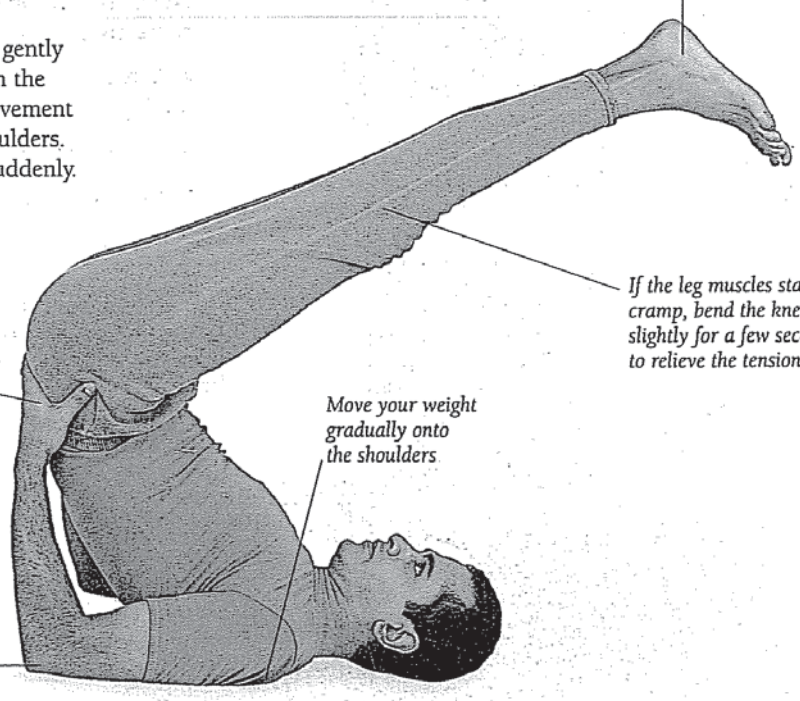
Inhale as you raise both legs, keeping them together. Keep your back flat and the chin forwards, as arching the back will put undue strain on it. Exhale as you slowly lower the legs, pushing the back flat against the ground. Repeat at least 5–10 times. If you have a very weak back, practise Single Leg Raises until the muscles are strong enough for this exercise.

2

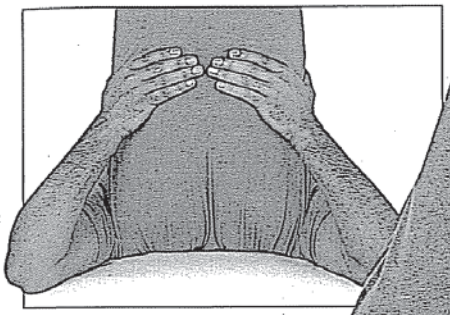


2 Keeping the back, head, and neck on the ground, inhale as you raise both legs, bringing them up at a right angle to your body. Place the hands on the buttocks, and prepare to lift the body.

3 Begin to push the body up gently by walking the hands down the back. Continue this gradual movement until you are resting on the shoulders. Never move into the position suddenly.

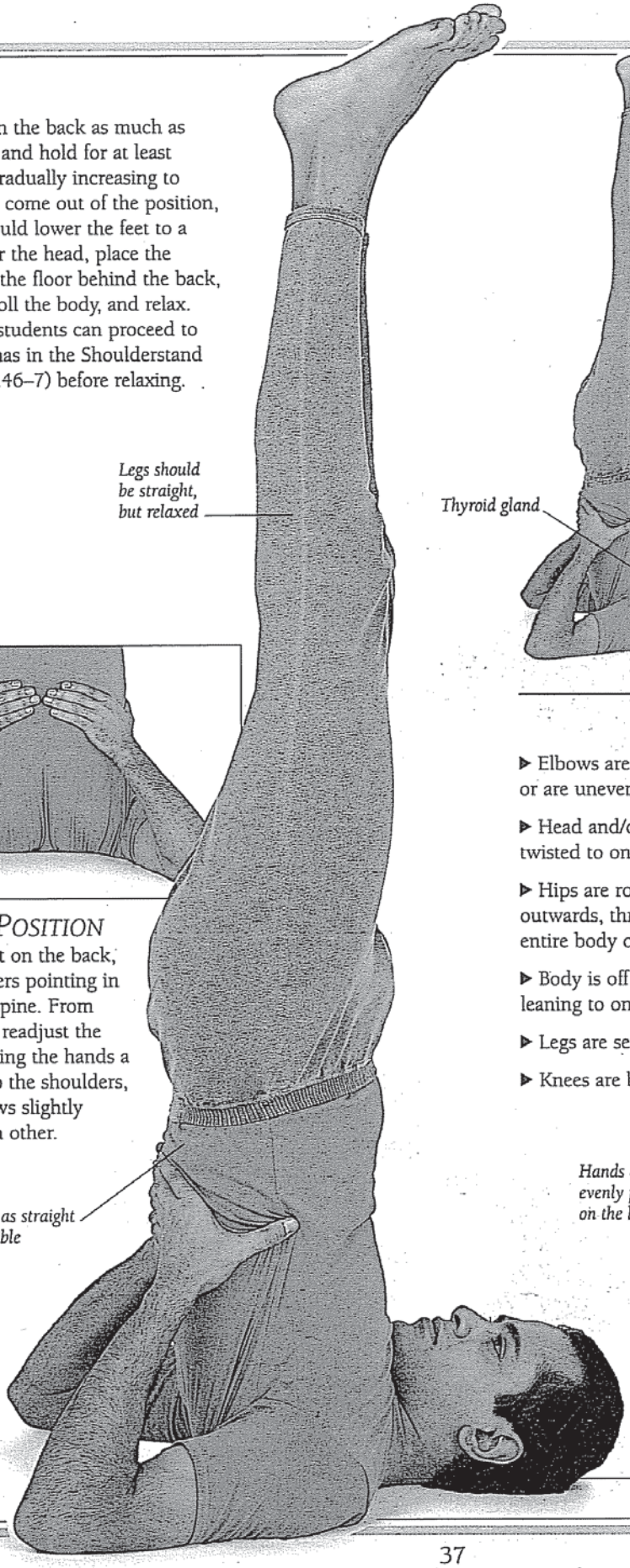


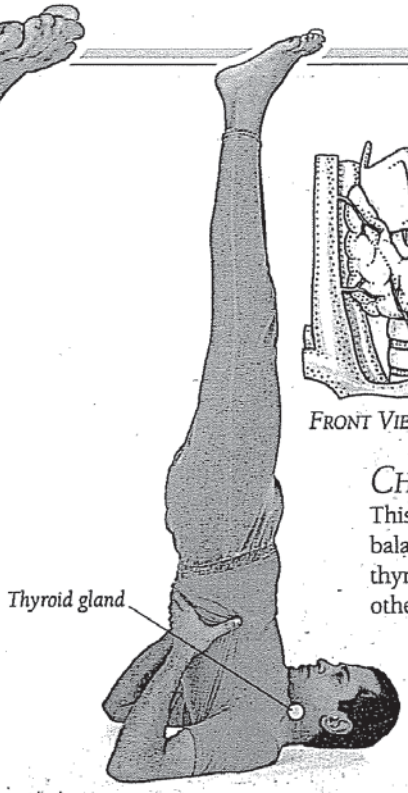
4 Straighten the back as much as possible, and hold for at least 30 seconds, gradually increasing to 3 minutes. To come out of the position, beginners should lower the feet to a 45° angle over the head, place the hands flat on the floor behind the back, gradually unroll the body, and relax. Intermediate students can proceed to the other asanas in the Shoulderstand Cycle (see pp.46–7) before relaxing.

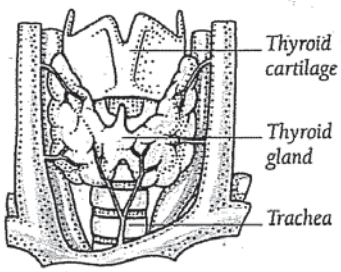


Hand Position

Hands are flat on the back, with the fingers pointing in towards the spine. From time to time, readjust the body by moving the hands a little closer to the shoulders, and the elbows slightly closer to each other.







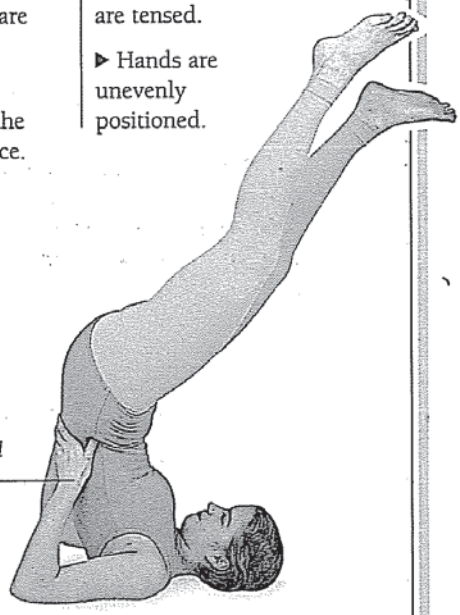
FRONT VIEW OF THROAT

Chief Benefit

This position strengthens and balances the function of the thyroid, which supervises the other glands, promotes the growth and development of the body, regulates metabolism and heat production, and controls the heart rate.

Common Faults

- Elbows are too far apart or are unevenly positioned.
- Head and/or neck are twisted to one side.
- Hips are rotated outwards, throwing the entire body off balance.
- Body is off centre, leaning to one side.
- Legs are separated.
- Knees are bent.
- Breath is held or erratic.
- Feet and/or calves are tensed.
- Hands are unevenly positioned.

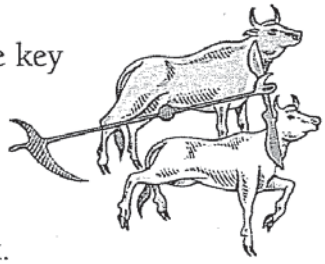


3

THE PLOUGH

Halasana

Keeping the spine flexible is the key to maintaining a youthful body. The Plough, an extreme forward-bending exercise, promotes both strength and flexibility in all the regions of the back and neck.



PHYSICAL BENEFITS

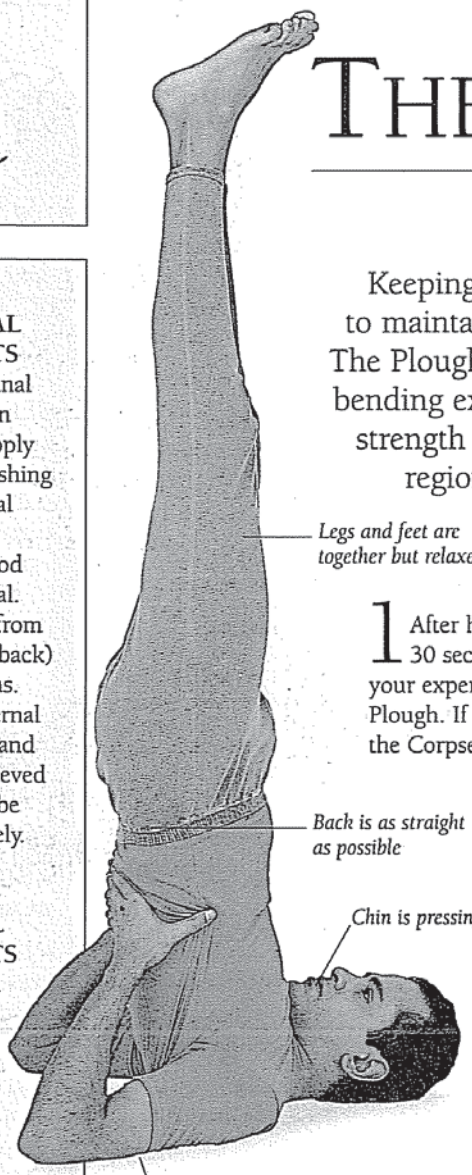
- Stimulates the spinal nerves and brings an increased blood supply to the region, nourishing many of the essential internal organs.
- Improves the blood circulation in general.
- Releases tension from the cervical (upper back) and shoulder regions.
- Massages the internal organs; indigestion and constipation are relieved and can eventually be eliminated completely.

MENTAL BENEFITS

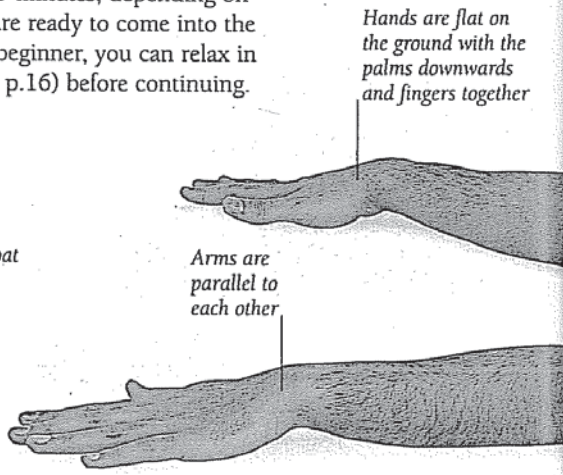
- Relieves insomnia and restless sleep.
- Enhances physical and mental relaxation.
- Helps to develop mental poise and inner balance.

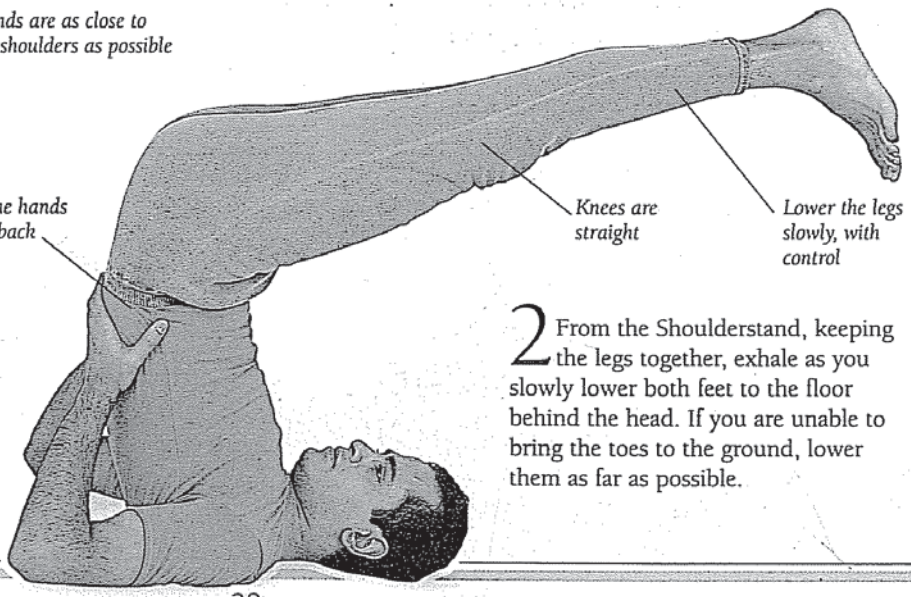
PRANIC BENEFITS

- Brings a greater concentration of prana to the neck, the cervical (upper back) region, and to the throat.
- Stimulates the stomach, spleen, small intestine, heart, liver, gall bladder, and kidney nadis (acupuncture meridians).



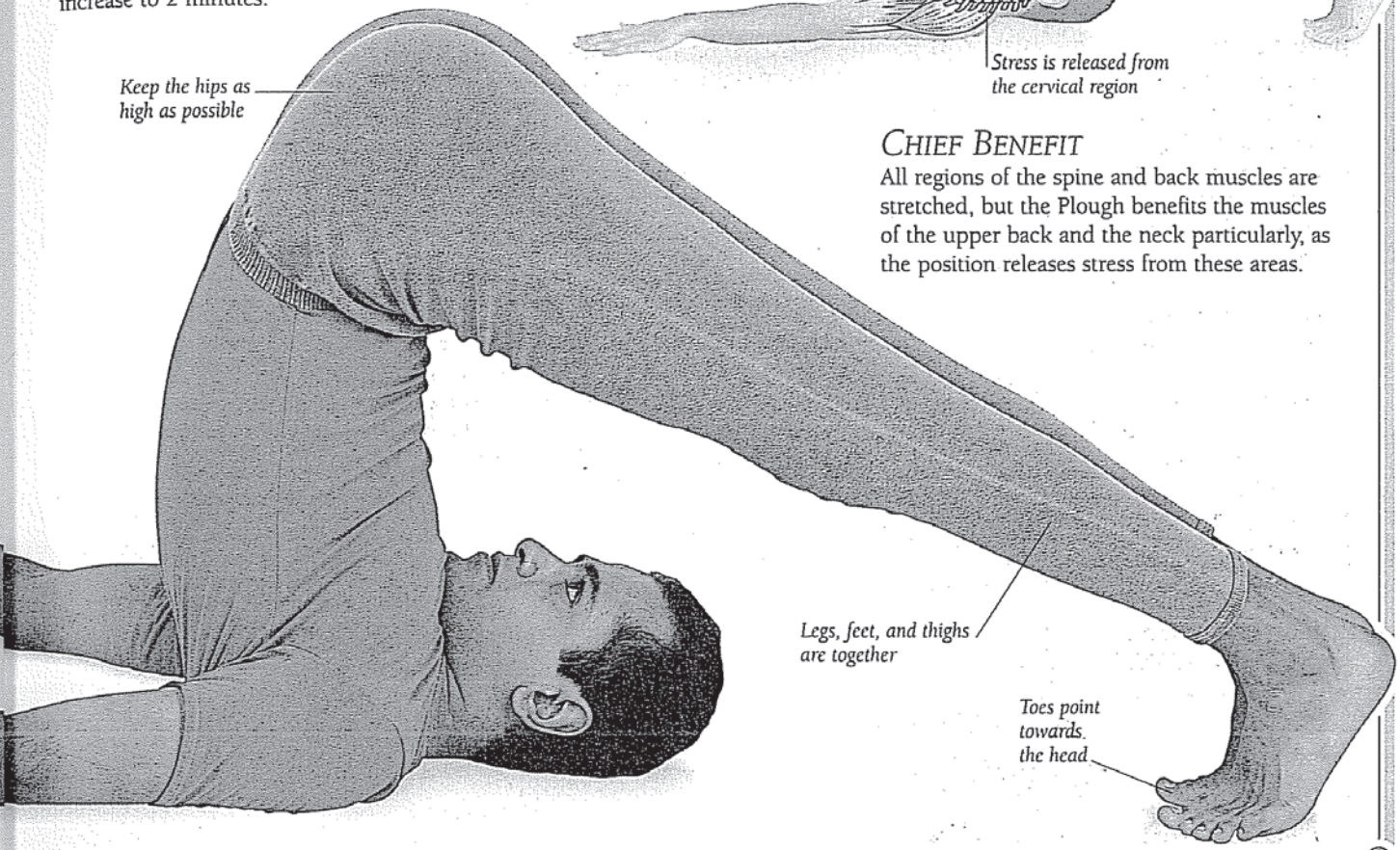
1 After holding the Shoulderstand for between 30 seconds and 3 minutes, depending on your expertise, you are ready to come into the Plough. If you are a beginner, you can relax in the Corpse pose (see p.16) before continuing.

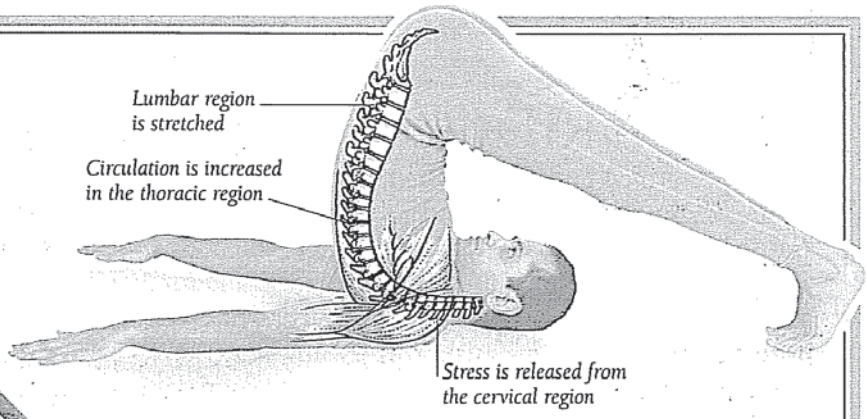




2 From the Shoulderstand, keeping the legs together, exhale as you slowly lower both feet to the floor behind the head. If you are unable to bring the toes to the ground, lower them as far as possible.

3 If you can bring the toes to the floor, place the hands flat on the ground behind the back, palms downwards. Tuck the toes in towards the head and gently push the heels towards the ground. Hold for at least 30 seconds, breathing gently. Gradually increase to 2 minutes.





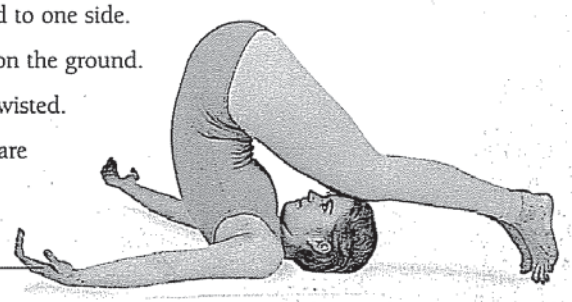
CHIEF BENEFIT

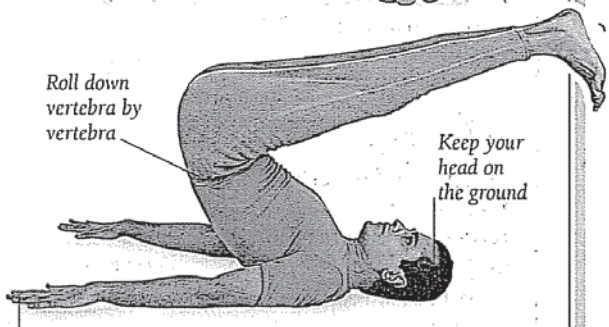
All regions of the spine and back muscles are stretched, but the Plough benefits the muscles of the upper back and the neck particularly, as the position releases stress from these areas.

COMMON FAULTS

- Knees are bent.
- Hands are out to the sides and/or are held with palms upwards.
- Head and/or neck are twisted.
- Legs are skewed to one side.
- Hands are not on the ground.
- Shoulders are twisted.
- Hips and back are not lifting up.

▶ CAUTION: If the toes do not comfortably reach the ground, keep the hands on the back, supporting the back muscles until they become more flexible.





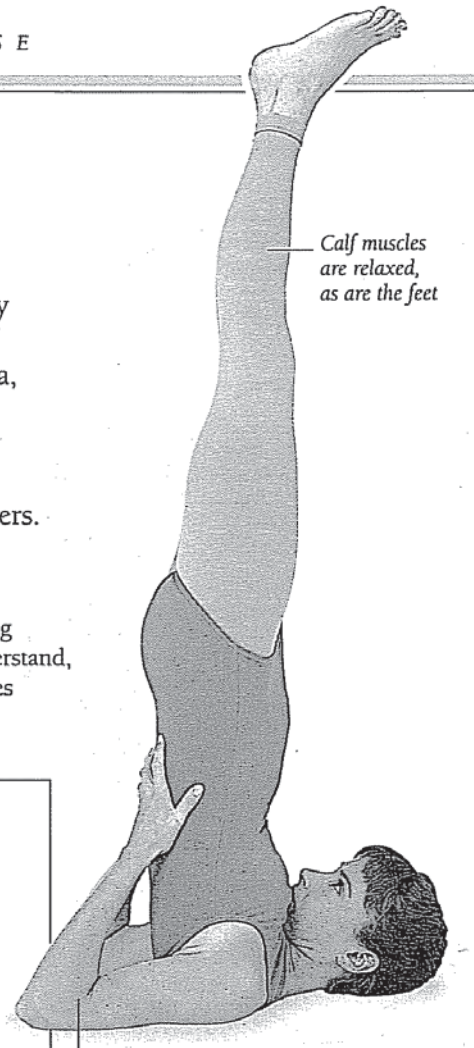
4 To come out of the pose, return to the Shoulderstand, and lower your feet half-way to the ground. Place your palms flat on the ground behind the back, and breathe gently as you roll down slowly with control, keeping your head on the ground. (For Plough variations, see pp.44–5.)

THE BRIDGE

When performed immediately after the Plough, the Bridge acts as a gentle counter-pose to complement and enhance the benefits of both the Shoulderstand and the Plough. It assists the body in releasing any tension that may have built up in the thoracic and lumbar regions of the spine while practising the two previous asanas. Sethu Bandhasana, as the Bridge is called in Sanskrit, is usually practised as part of each asana session. Two methods of coming into the Bridge are shown here – one for intermediate students and one, in the box below, for beginners.

STARTING POSITION ▷

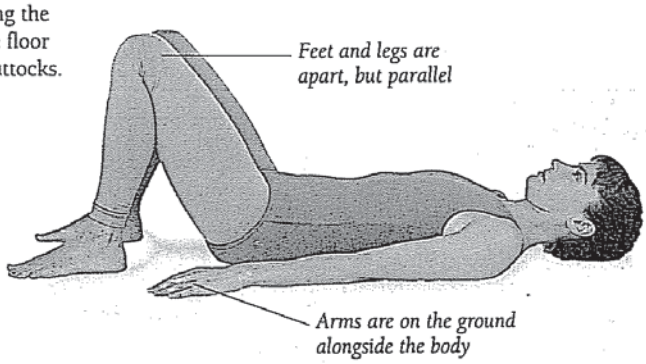
For intermediate students, the starting position for the Bridge is the Shoulderstand, which should be held for 1–3 minutes before moving on to the Bridge.



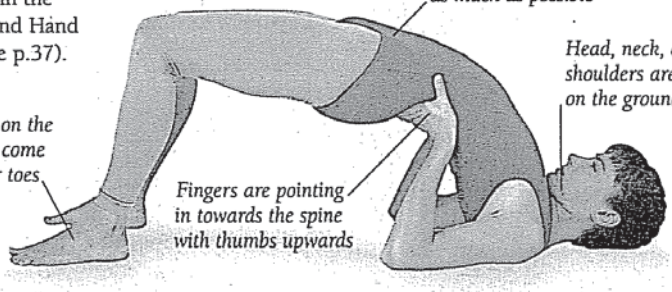
BEGINNER'S METHOD

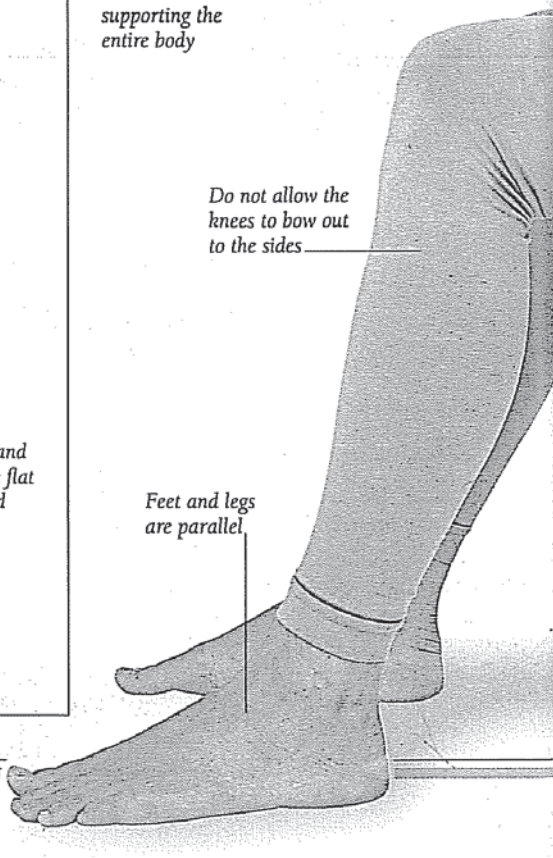
You should be able to hold the Bridge position comfortably for at least 30 seconds before you attempt any of the Bridge variations (see pp.42–3).

1 Start by lying flat on the back, with your arms at your sides. Bend both knees and bring the feet flat on the floor close to the buttocks.

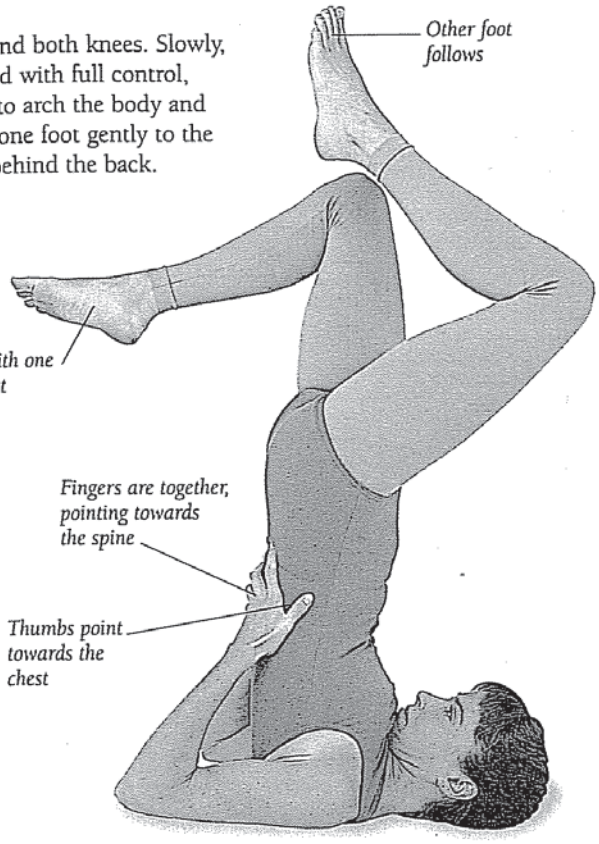


2 Raise the hips, and bring the hands onto the back, placing them in the same way as that shown in the Shoulderstand Hand Position (see p.37).



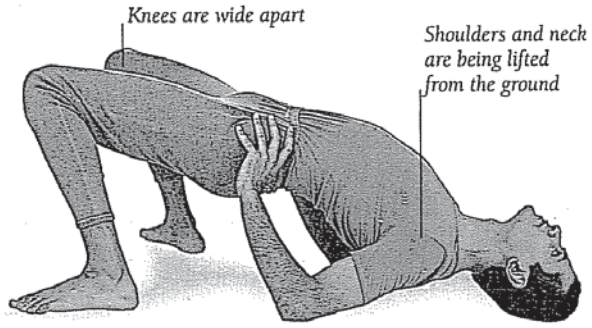


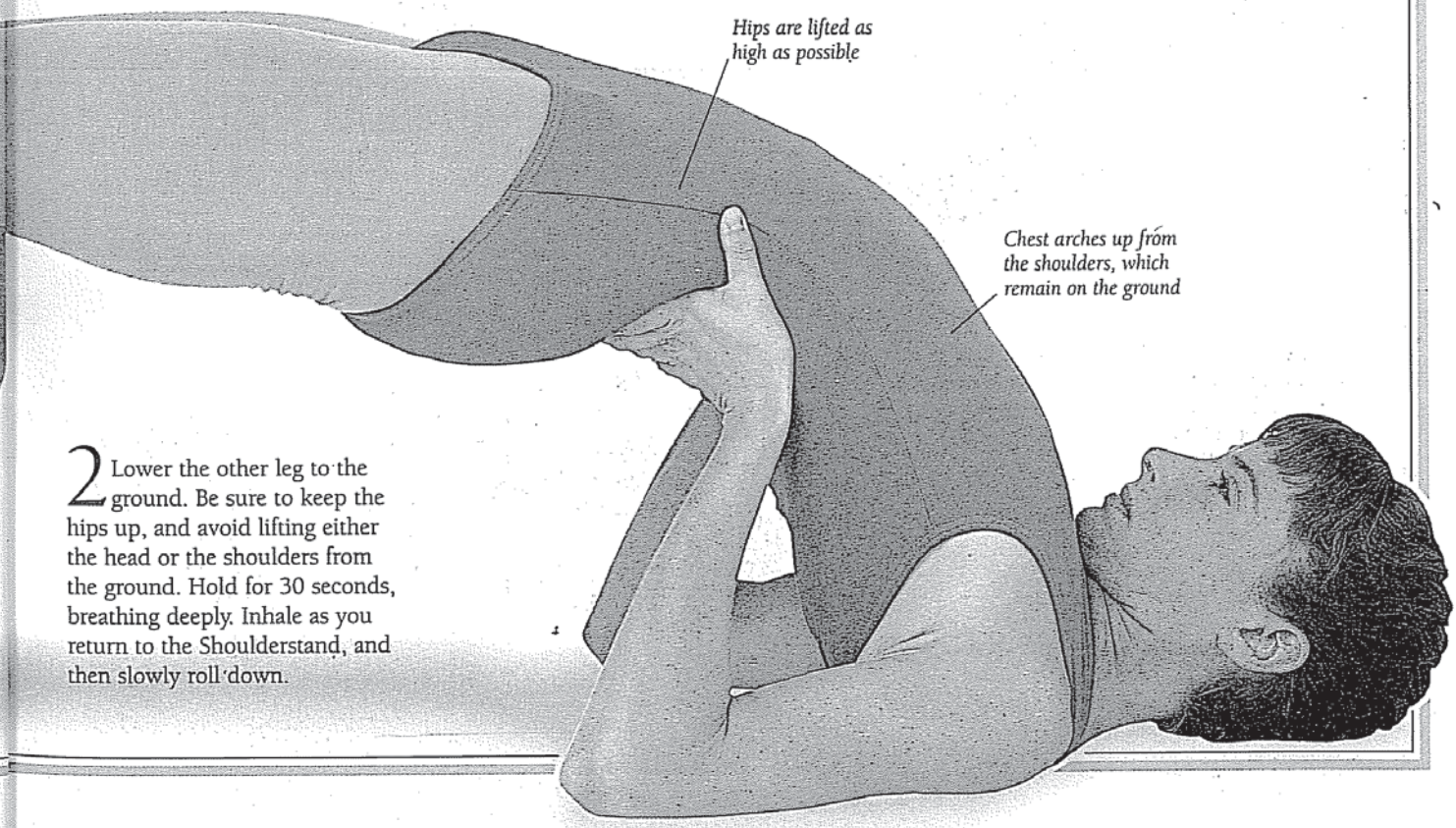
1 Bend both knees. Slowly, and with full control, begin to arch the body and lower one foot gently to the floor behind the back.



COMMON FAULTS

- Hips are dropped towards the floor.
- Knees are bowing out to the sides.
- Toes are turning out to the sides.
- Head and/or neck are lifting off the ground.
- Shoulders are being raised from the ground.
- Hand position has changed.
- NOTE: One of the greatest benefits of the Bridge is the promotion of suppleness in the wrists. Changing your hand position should be avoided, as it will deprive you of this benefit.

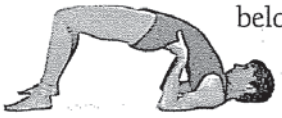




2 Lower the other leg to the ground. Be sure to keep the hips up, and avoid lifting either the head or the shoulders from the ground. Hold for 30 seconds, breathing deeply. Inhale as you return to the Shoulderstand, and then slowly roll down.

BRIDGE *Variations*

The Bridge itself is a very simple, but powerful, posture. Once you have mastered it, there are many possible variations that can be tried. Some of these, such as the "One Leg Up" position shown below, are quite simple and can easily be performed by beginners. This pose forms part of the Shoulderstand Cycle (see pp.46–7).



STARTING POSITION

ONE LEG UP

From the basic Bridge pose, lift one leg and bring the foot up towards the ceiling. This is a simple variation but as you practise it, be sure not to allow the hips to drop. Hold this for at least 10 seconds, gradually increasing to 30 seconds. Lower the leg, and repeat the exercise on the other side.

Foot is lifting up towards the ceiling

Bring the leg towards the head as much as possible

Keep the leg straight

Hips are lifted as high as possible

Thumbs are pointing upwards; fingers are in towards the spine

Head, neck, and shoulders are flat on the ground

The other foot remains flat on the floor

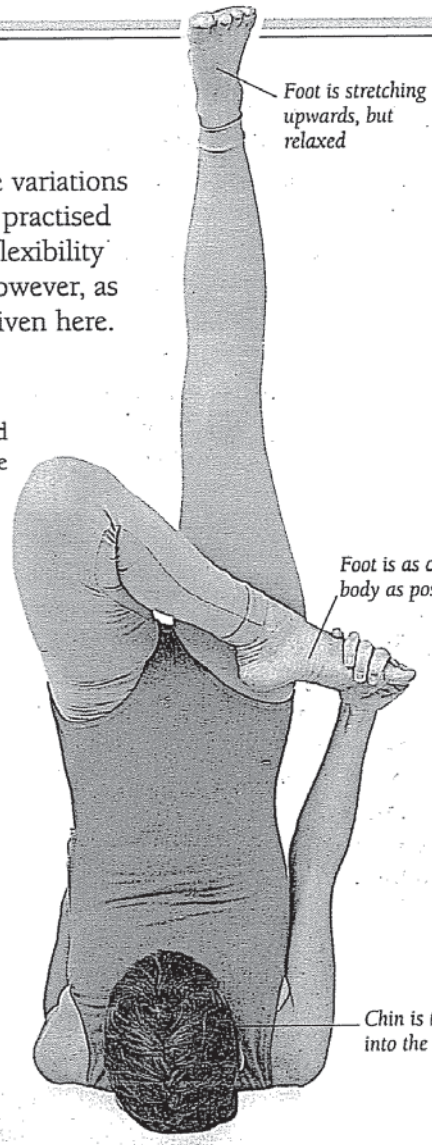
BRIDGE *Advanced Variations*

Do not be in a hurry to move on to advanced variations. The simple variations of the Bridge are the most important, and it is these that should be practised regularly. Even the basic posture will develop greater strength and flexibility in your body, and will help your mind to become more focused. However, as the mind often craves variety, some more advanced variations are given here.

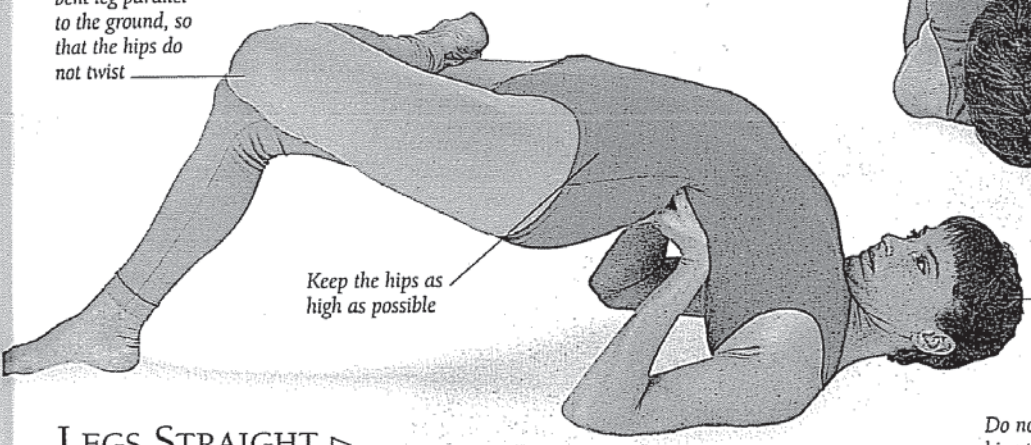
BRIDGE IN HALF LOTUS

Neither this nor the Legs Straight pose should be attempted until you have gained sufficient suppleness in the hips and wrists. The starting position for the Bridge in Half Lotus is the Shoulderstand (see pp.34–7).

1 While in the Shoulderstand position, bend the left knee and place the left foot on the right thigh in the Half Lotus position. If you need to, use the hand to bring the foot as far up the thigh as possible

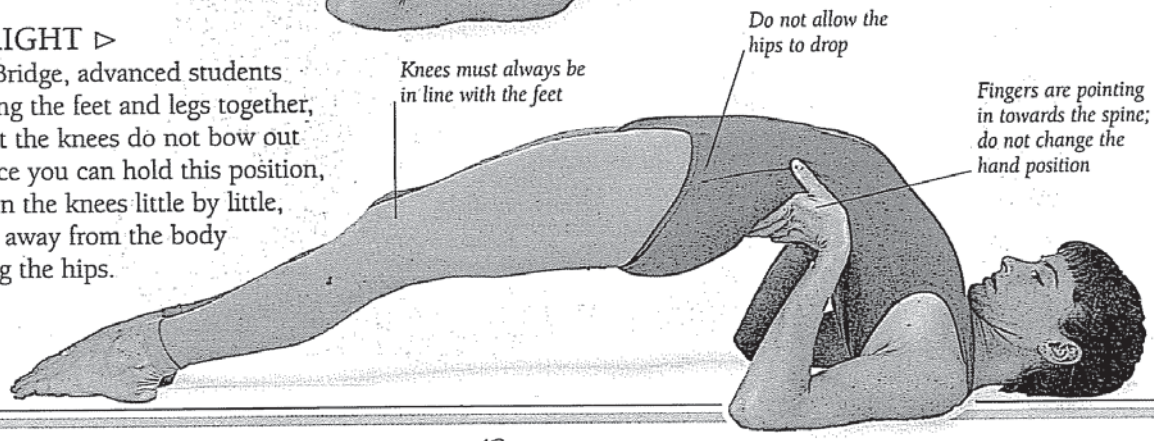


2 ▽ With both hands on the back in the Shoulderstand hand position, bend the right knee and gently lower the right foot to the ground. Hold for as long as you feel comfortable. Remaining in Half Lotus, take a deep breath and return to the Shoulderstand. Straighten the leg, and repeat on the other side.



LEGS STRAIGHT ▷

From the basic Bridge, advanced students can begin to bring the feet and legs together, making sure that the knees do not bow out to the sides. Once you can hold this position, start to straighten the knees little by little, walking the feet away from the body without lowering the hips.



PLOUGH *Variations*

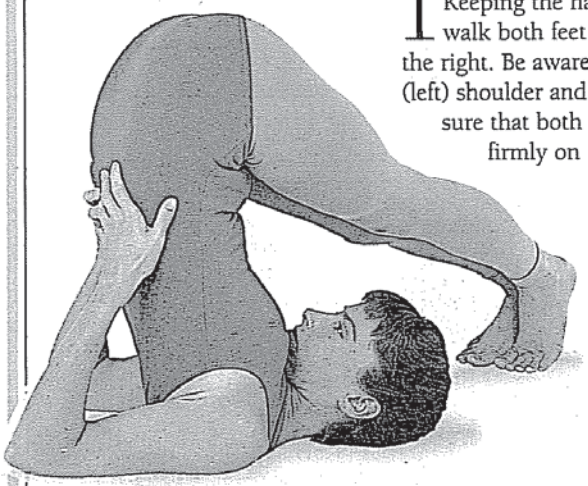
STARTING POSITION

Variations on the Plough greatly increase flexibility in the cervical region of the spine. The superficial and deep muscles of the back, shoulders, and arms are also stretched and strengthened. The Plough (see pp.38–9) is the starting position for this series of variations. If you cannot comfortably hold the Plough, or your feet do not come to the floor, do not attempt them.

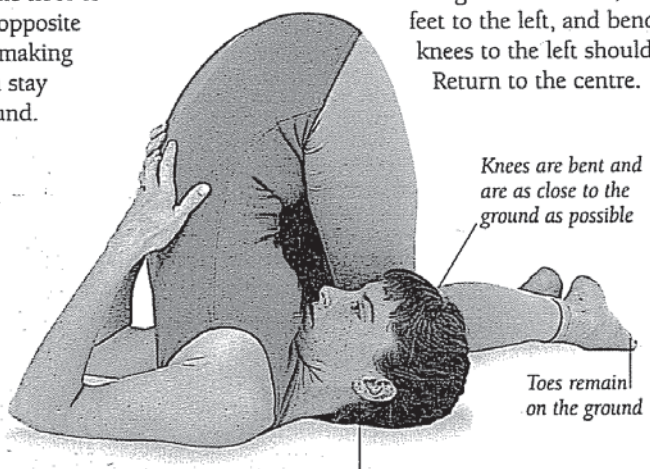
KNEES TO SHOULDER

This asana, known as Karna Peedasana, gives a gentle, but firm, stretch to each side of the spine in turn.

1 Keeping the hands on the back, walk both feet along the floor to the right. Be aware of the opposite (left) shoulder and elbow, making sure that both of them stay firmly on the ground.

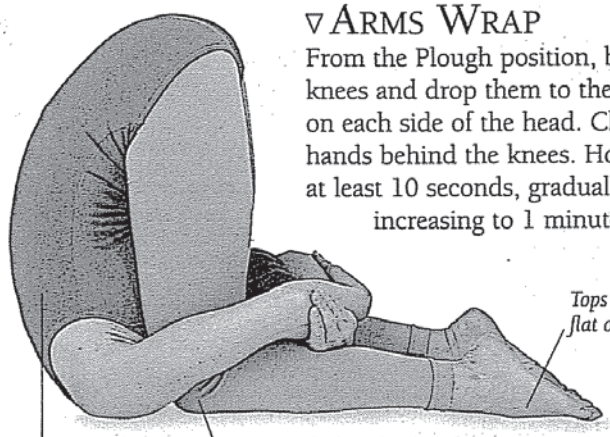


2 Bend both knees to the right shoulder. Hold for 10 seconds, gradually increasing to 1 minute. Straighten the knees, walk the feet to the left, and bend the knees to the left shoulder. Return to the centre.



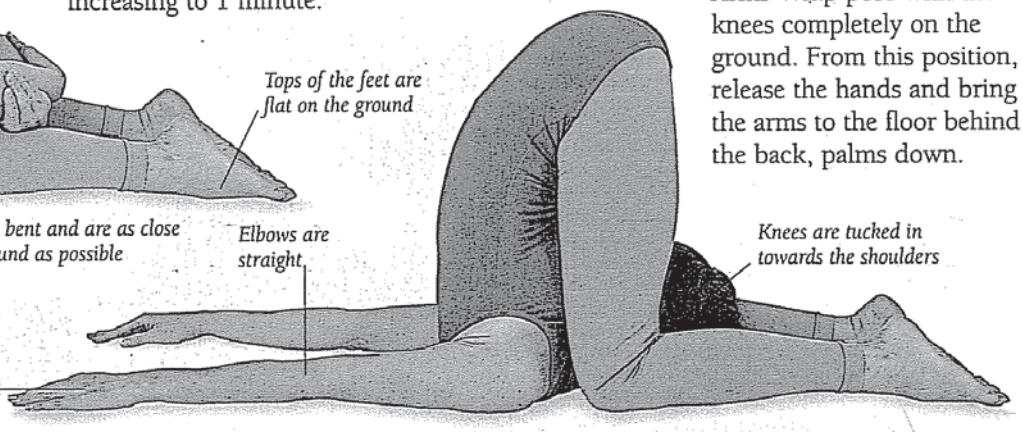
▽ ARMS WRAP

From the Plough position, bend the knees and drop them to the ground on each side of the head. Clasp the hands behind the knees. Hold for at least 10 seconds, gradually increasing to 1 minute.



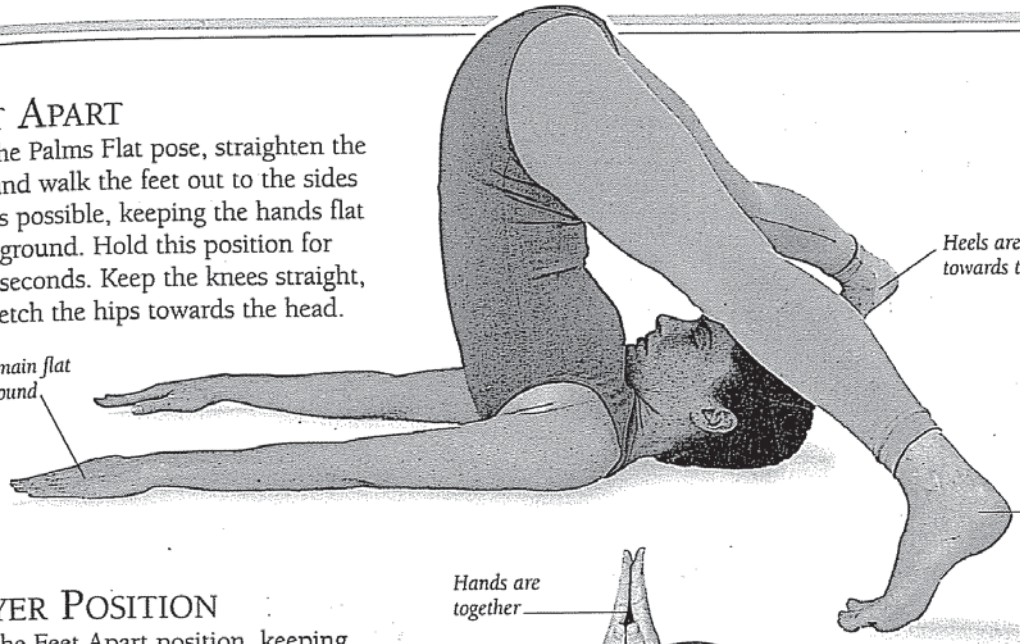
▽ PALMS FLAT

Only attempt this position when you are able to do the Arms Wrap pose with the knees completely on the ground. From this position, release the hands and bring the arms to the floor behind the back, palms down.



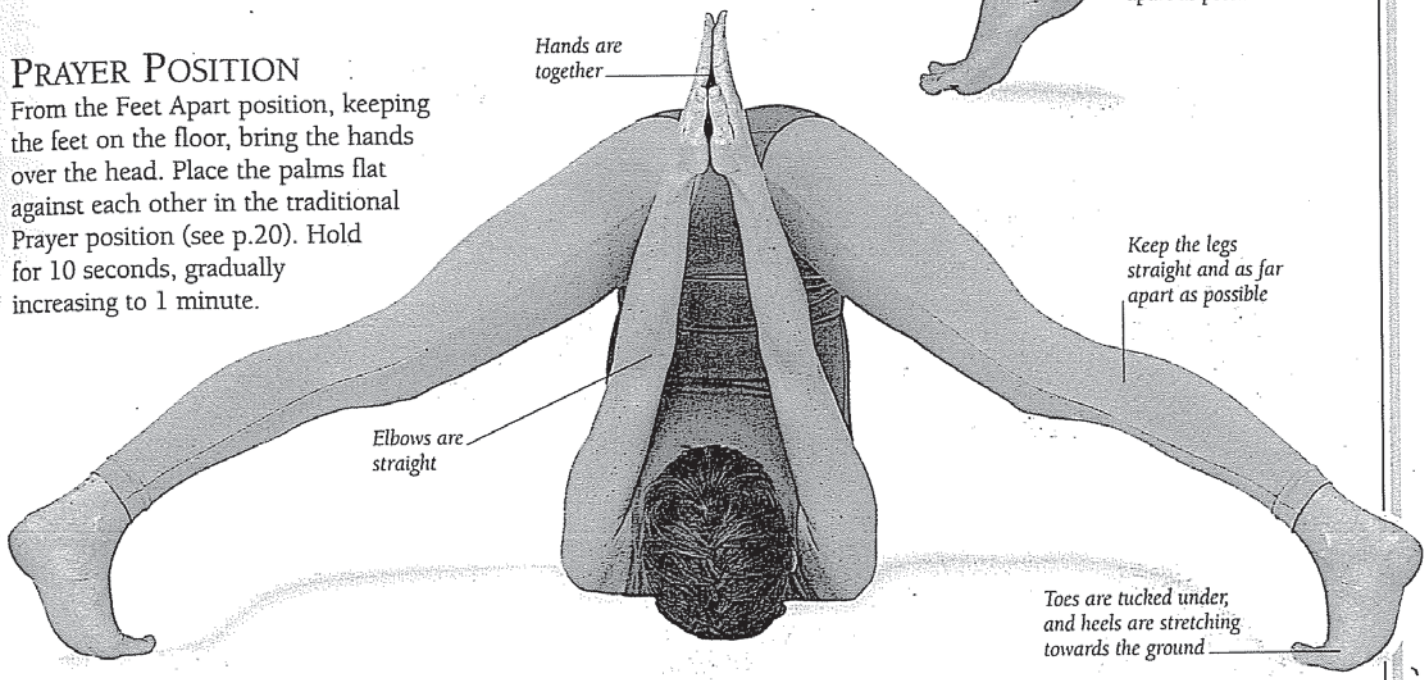
FEET APART

From the Palms Flat pose, straighten the knees and walk the feet out to the sides as far as possible, keeping the hands flat on the ground. Hold this position for 10–30 seconds. Keep the knees straight, and stretch the hips towards the head.



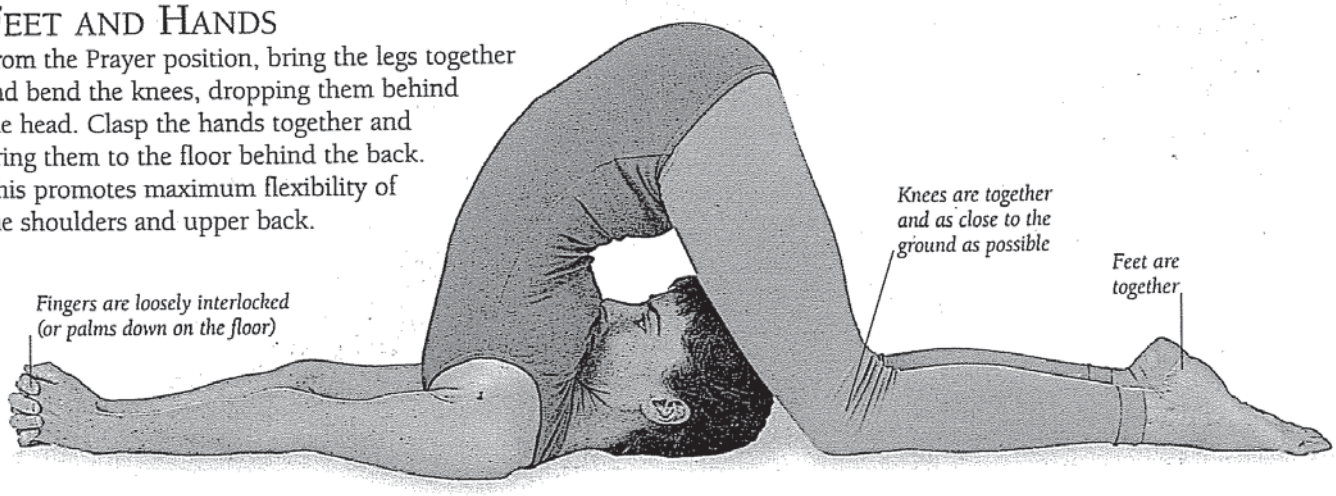
PRAYER POSITION

From the Feet Apart position, keeping the feet on the floor, bring the hands over the head. Place the palms flat against each other in the traditional Prayer position (see p.20). Hold for 10 seconds, gradually increasing to 1 minute.



FEET AND HANDS

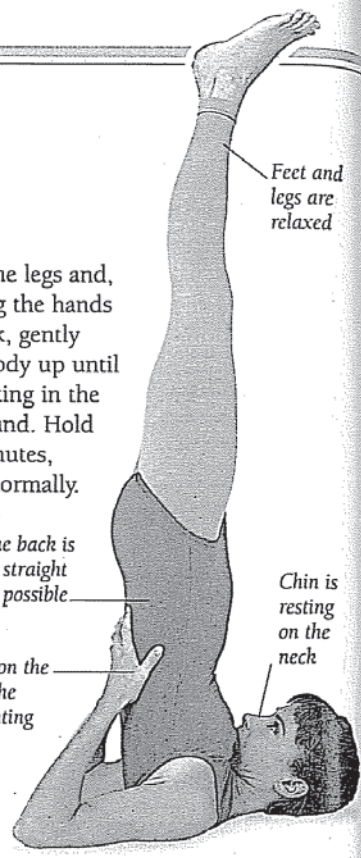
From the Prayer position, bring the legs together and bend the knees, dropping them behind the head. Clasp the hands together and bring them to the floor behind the back. This promotes maximum flexibility of the shoulders and upper back.



THE SHOULDERSTAND CYCLE

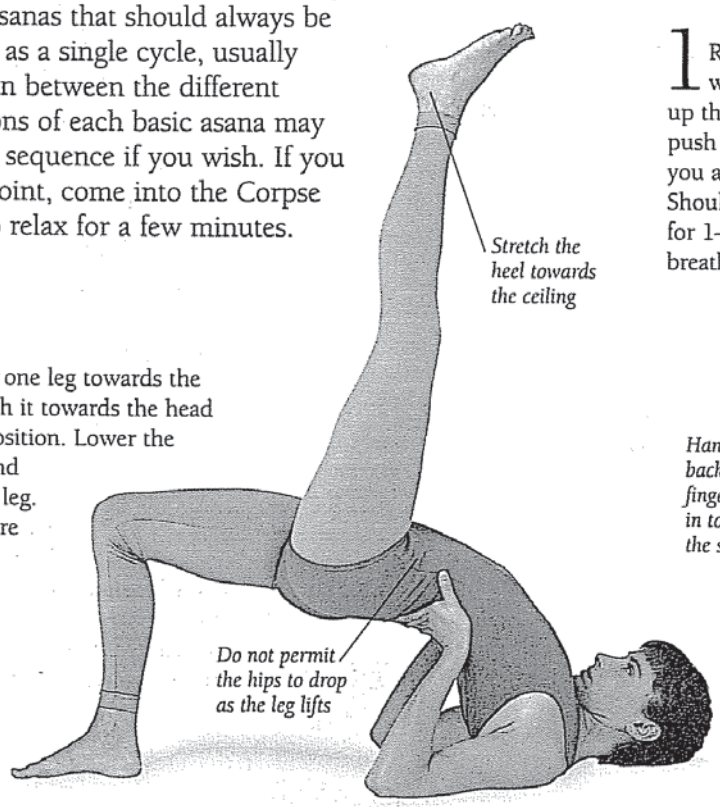
The Shoulderstand, the Plough, and the Bridge form a group of asanas that should always be done in sequence as a single cycle, usually without relaxing in between the different positions. Variations of each basic asana may be inserted in the sequence if you wish. If you feel tired at any point, come into the Corpse pose (see p.16) to relax for a few minutes.

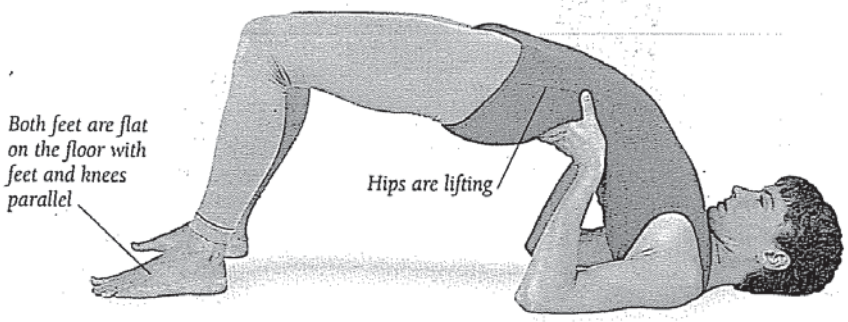
1 Raise the legs and, walking the hands up the back, gently push the body up until you are resting in the Shoulderstand. Hold for 1–3 minutes, breathing normally.



STARTING AND FINISHING POSITION

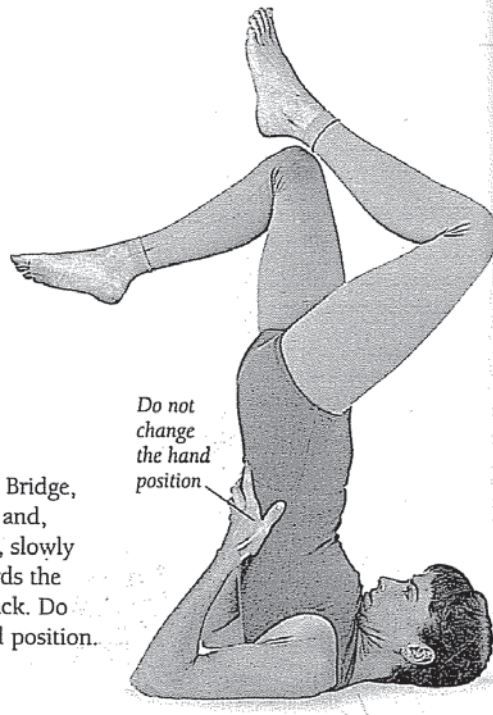
7 Inhale as you lift one leg towards the ceiling and stretch it towards the head in the One Leg Up position. Lower the foot to the ground, and repeat with the other leg. Return to Step 1 before rolling down gently.

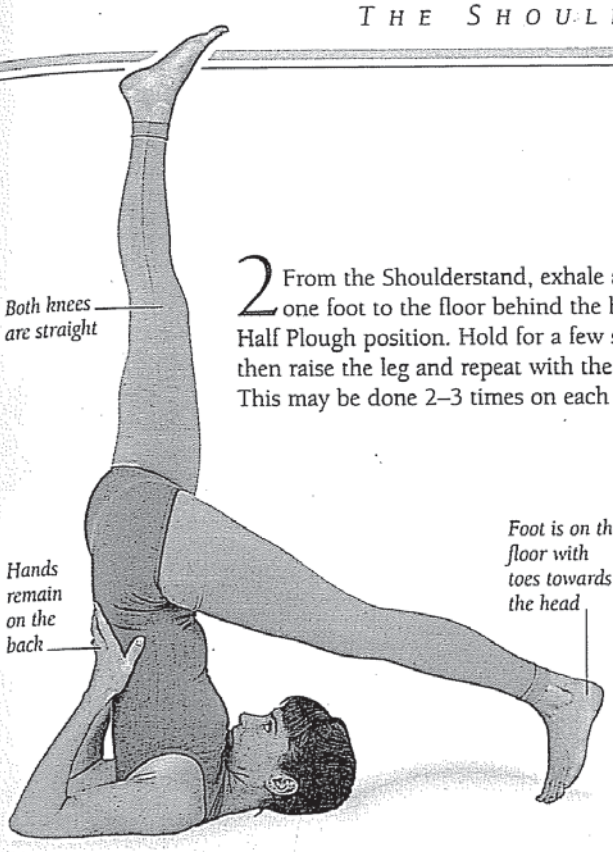




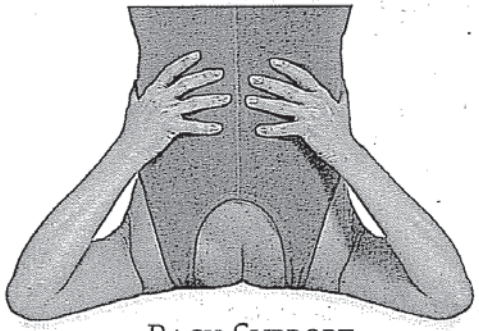
6 Bring both feet flat on the floor behind the back, into the Bridge position. Stretch the hips up as high as possible, keeping the feet and legs parallel. Hold for 1–3 minutes, breathing normally.

5 To come into the Bridge, bend both knees and, leading with one foot, slowly lower both legs towards the ground behind the back. Do not change your hand position.





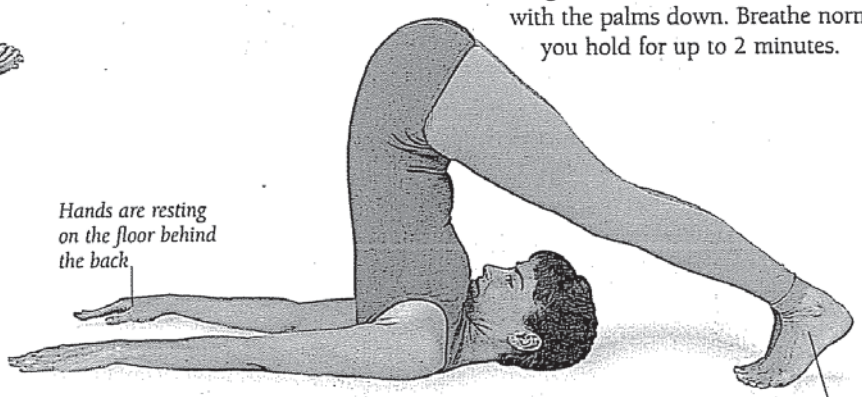
2 From the Shoulderstand, exhale as you bring one foot to the floor behind the head in the Half Plough position. Hold for a few seconds, then raise the leg and repeat with the other leg. This may be done 2–3 times on each side.

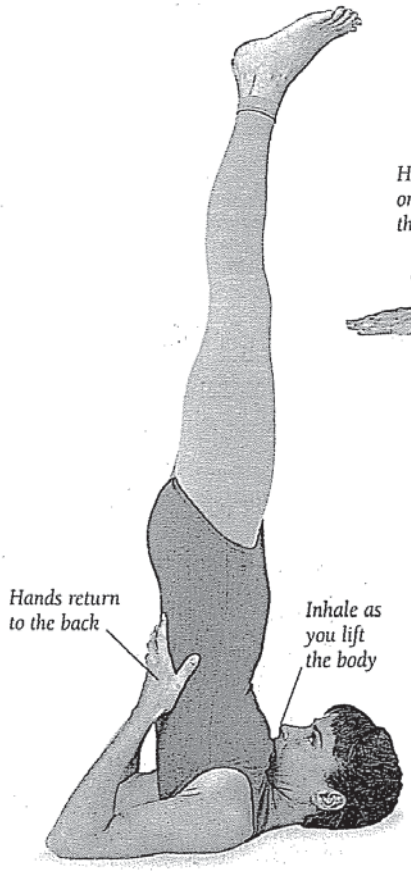


BACK SUPPORT

While in the Shoulderstand position or the Bridge, keep the hands flat on the back, with the fingers pointing in towards the spine, to provide additional support.

3 From the Shoulderstand, exhale as you slowly lower both feet to the floor behind the head into the Plough position. Bring the arms to the floor behind the back with the palms down. Breathe normally as you hold for up to 2 minutes.





4 From the Plough, support your back with your hands again, and return to the Shoulderstand, as a preparation for coming into the Bridge. Breathe normally while you hold the position.

4

THE FISH

Matsyasana

As the counter-position to the Shoulderstand (see pp.34–7), Matsyasana gives a backward stretch to the cervical, thoracic, and lumbar regions of the spine, and expands the chest fully. It is called the Fish because this position fills the lungs with air, improving the ability to float in water.

PHYSICAL BENEFITS

- ▶ Removes stiffness in the cervical, thoracic, and lumbar regions, increasing nerve impulse and blood circulation in these areas.
- ▶ Gives a natural massage to the shoulders and the neck.
- ▶ Corrects rounded shoulders.
- ▶ Increases the capacity of the lungs.
- ▶ Relieves spasms in the bronchial tubes.
- ▶ Helps to relieve asthma and other respiratory problems.
- ▶ Energizes the parathyroid glands.
- ▶ Stimulates and tones the pituitary gland and the pineal gland.

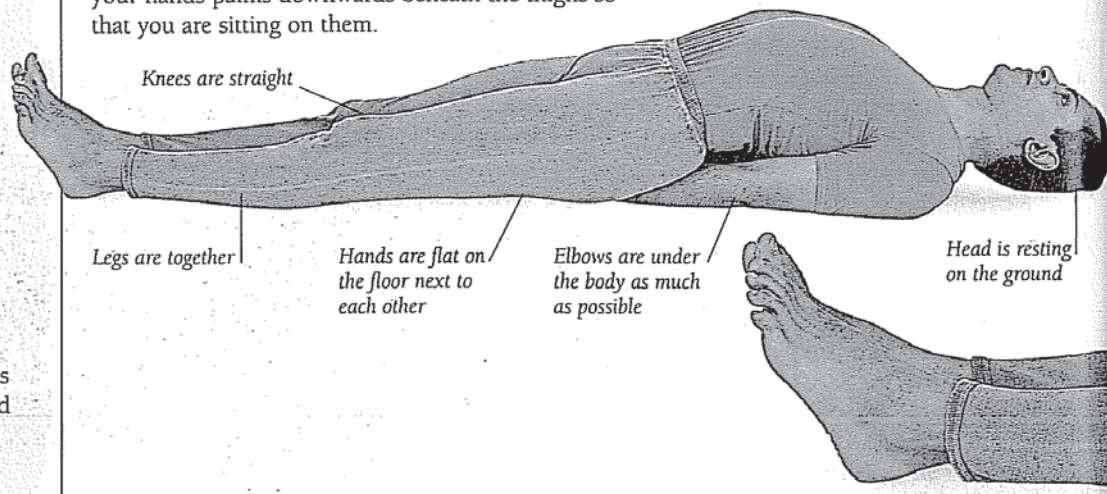
MENTAL BENEFITS

- ▶ Regulates moods and emotions.
- ▶ Relieves stress and mental agitation.

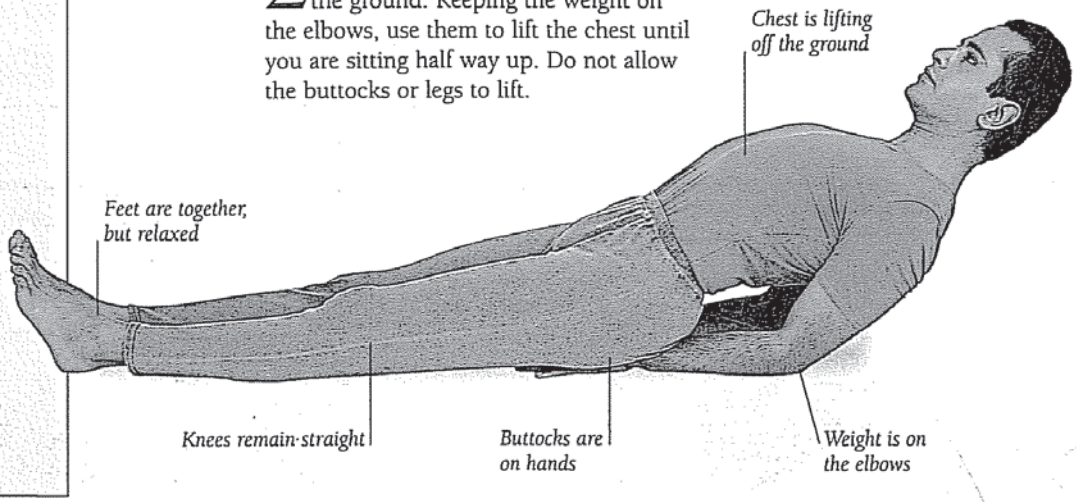
PRANIC BENEFITS

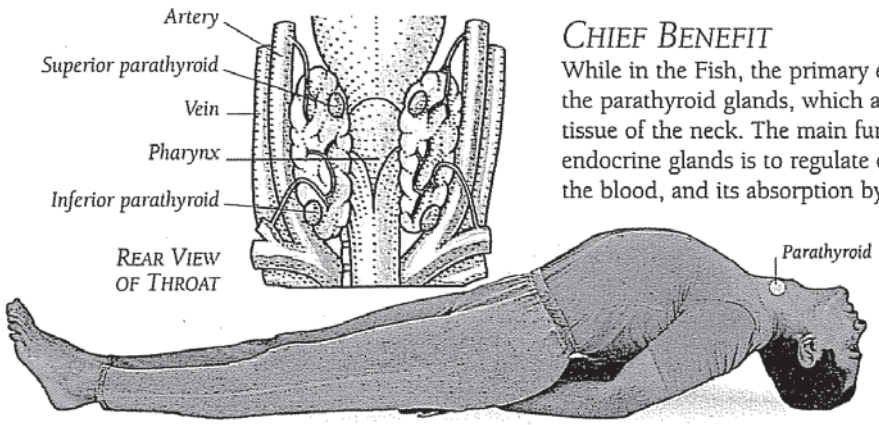
- ▶ Brings increased prana to the neck and shoulder regions.
- ▶ Relieves pranic blocks from the lung, stomach, and spleen meridians.

1 Lying flat on your back, begin by bringing your legs and feet together, keeping the knees straight. Place your hands palms downwards beneath the thighs so that you are sitting on them.



2 Bending the elbows, push them into the ground. Keeping the weight on the elbows, use them to lift the chest until you are sitting half way up. Do not allow the buttocks or legs to lift.

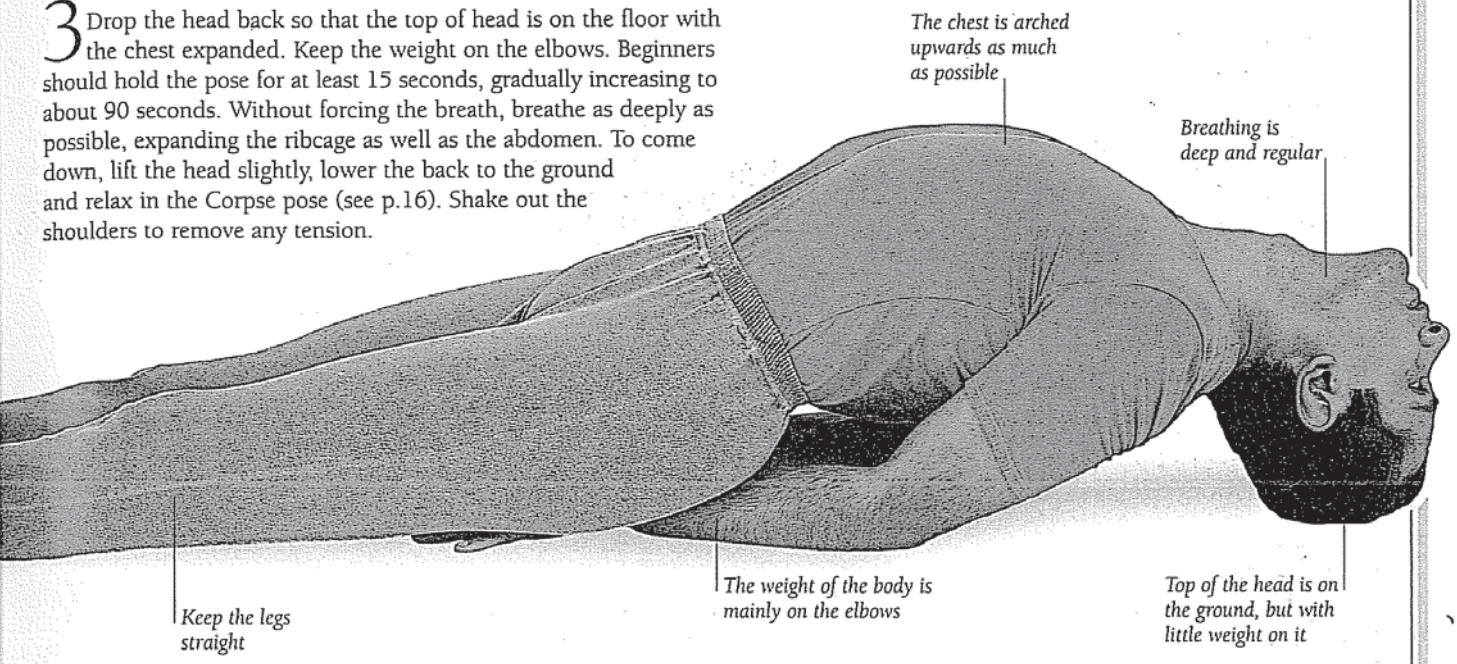




CHIEF BENEFIT

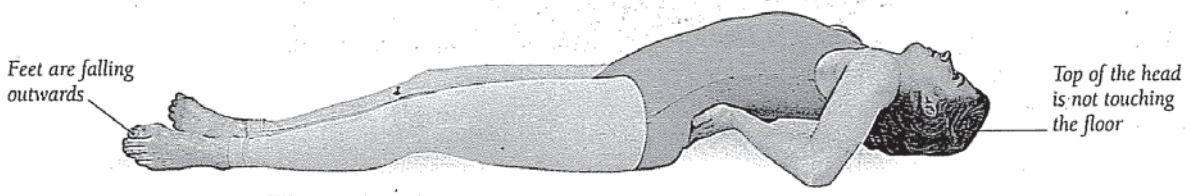
While in the Fish, the primary energy of the body is focused on the parathyroid glands, which are embedded in the thyroid tissue of the neck. The main function of these four small endocrine glands is to regulate calcium, controlling its levels in the blood, and its absorption by the body. The presence of calcium is important for the contraction of all muscles, including the heart, for proper blood clotting, for good bone strength and plasticity, and for strong teeth and the prevention of tooth decay.

3 Drop the head back so that the top of head is on the floor with the chest expanded. Keep the weight on the elbows. Beginners should hold the pose for at least 15 seconds, gradually increasing to about 90 seconds. Without forcing the breath, breathe as deeply as possible, expanding the ribcage as well as the abdomen. To come down, lift the head slightly, lower the back to the ground and relax in the Corpse pose (see p.16). Shake out the shoulders to remove any tension.



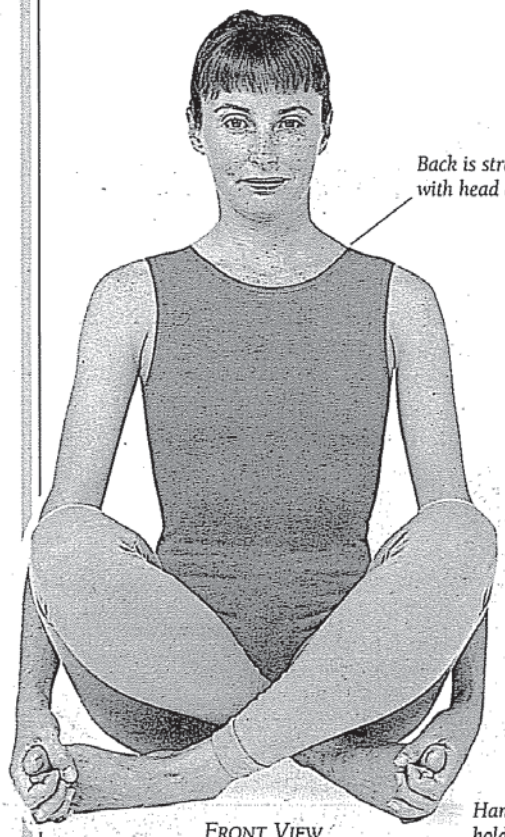
COMMON FAULTS

- Feet are not being held together, but are rotating outwards.
- Body is not straight.
- One or both knees are bent.
- Back of the head, rather than the top, is on the ground.
- Buttocks are lifting up from the floor.
- Elbows are sticking out.
- Weight is on the head and/or neck, instead of on the elbows.
- Breathing is irregular and/or forced.

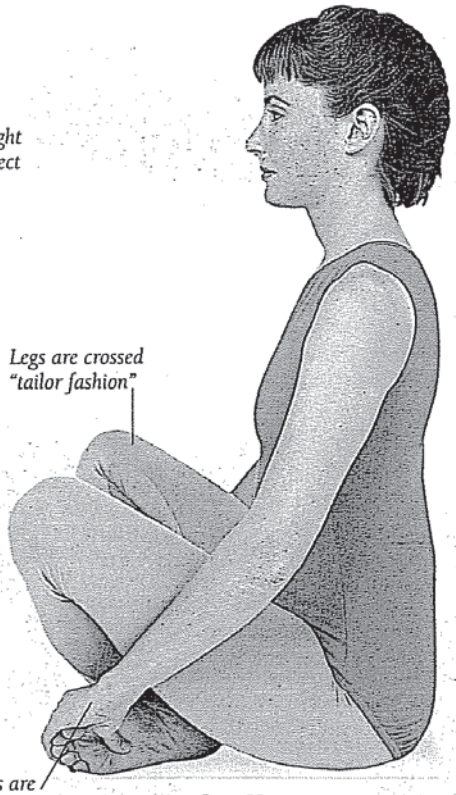


FISH *Variations*

Once you have mastered the Fish pose, and can hold it for at least 2 minutes, you may want to try one of these advanced variations.



FRONT VIEW

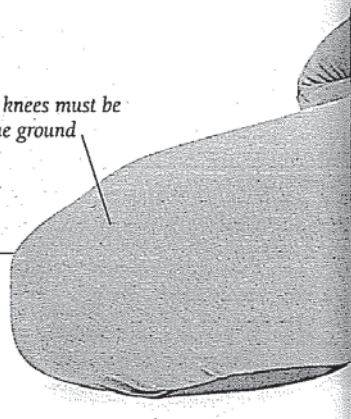


SIDE VIEW

CROSS-LEGGED

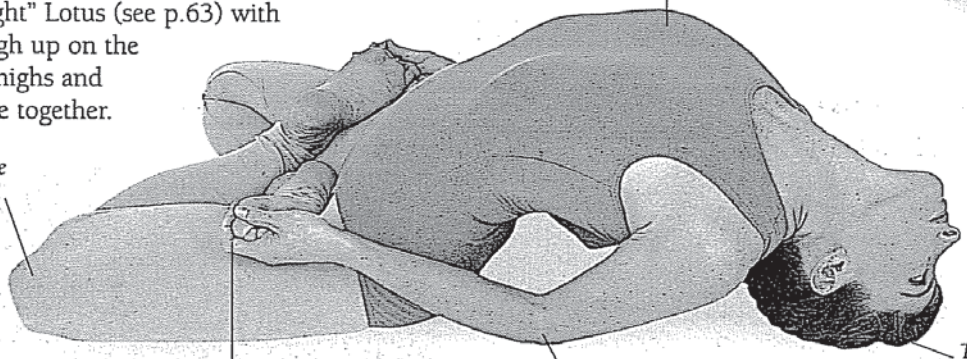
Practising the Fish with the legs crossed, or in the Lotus position (bottom left), helps to prevent loss of prana through the lower limbs.

1 ◁ Start by sitting in the Easy Sitting position (see p.17). You should feel comfortable in this pose before trying what is an advanced Fish variation. Now lift your knees slightly, and bring your arms around the outside of the legs. Catch hold of your feet firmly.

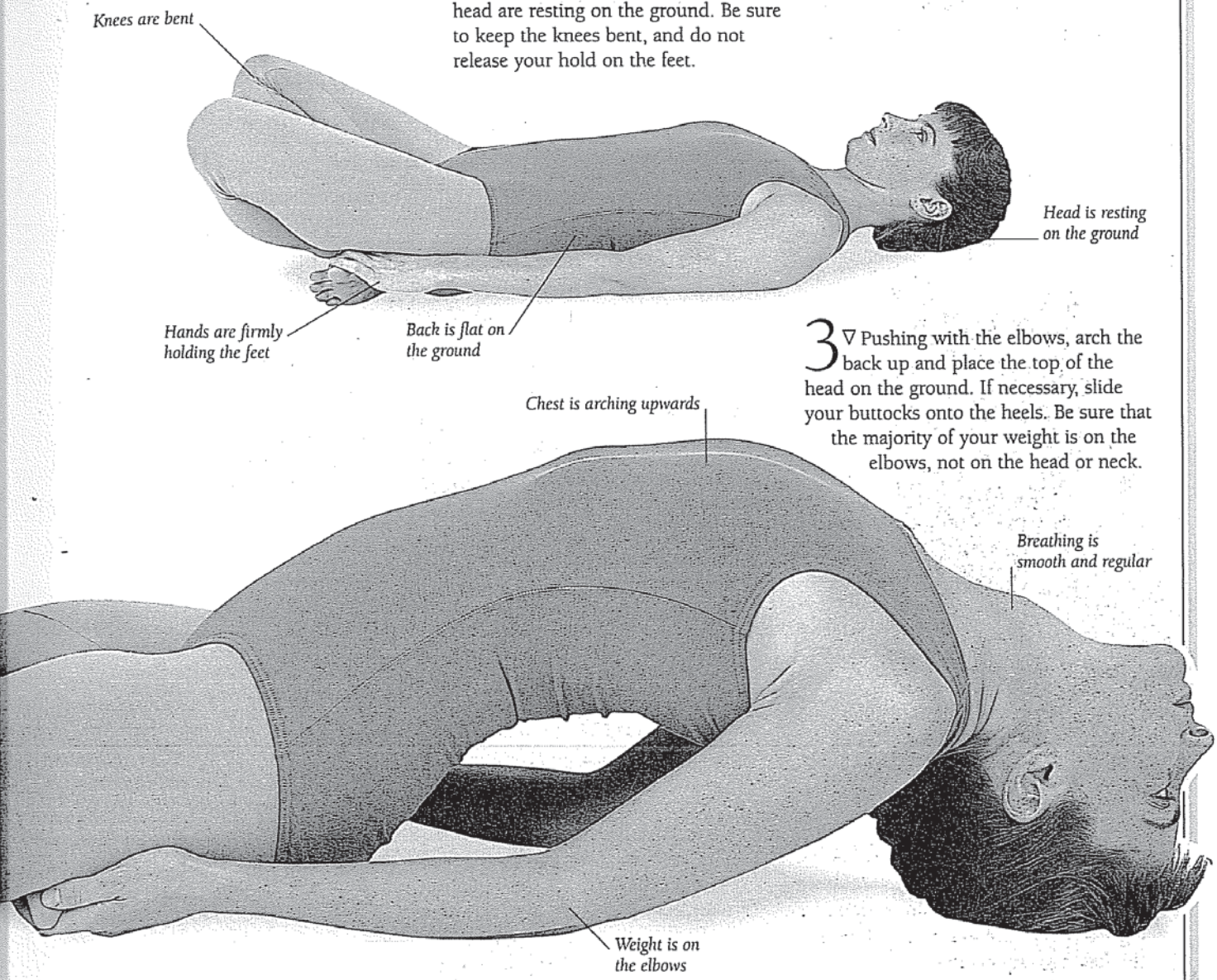


FISH IN LOTUS POSITION

This is an advanced variation. It is better not to attempt it until you can sit comfortably in a good "tight" Lotus (see p.63) with the feet high up on the opposite thighs and knees close together.



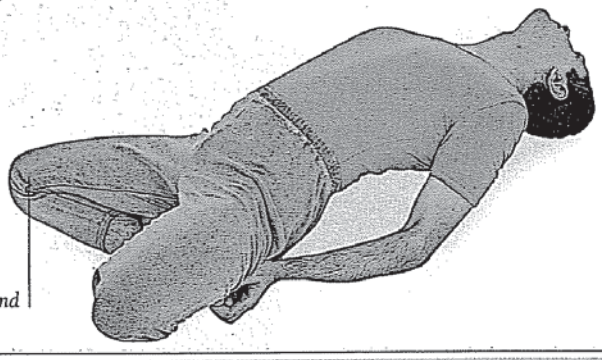
2 ∇ Keeping hold of the feet, slowly lie back until the entire back and the head are resting on the ground. Be sure to keep the knees bent, and do not release your hold on the feet.



3 ∇ Pushing with the elbows, arch the back up and place the top of the head on the ground. If necessary, slide your buttocks onto the heels. Be sure that the majority of your weight is on the elbows, not on the head or neck.

COMMON FAULTS

- ▶ One or both knees are raised up from the ground.
- ▶ Body is twisted to one side.
- ▶ Head is not touching the ground.
- ▶ Neck is twisted to one side.
- ▶ Weight is on the head or neck, instead of on the elbows.
- ▶ Chest is not arching upwards.
- ▶ Breathing is irregular, or fast, or breath is being held.
- ▶ The back of the head, instead of the top of it, is resting on the ground.



5 THE FORWARD BEND

Paschimothanasana

In this asana, the body is folded almost in half, giving a comprehensive stretch to the entire back of the body, from the skull down to the heels. It is a very simple, yet powerful, position to practise. In the words of the *Hatha Yoga Pradipika*, "This most excellent of asanas makes the breath flow through the Sushumna, rouses the gastric fire, makes the loins lean, and removes all diseases". (For Forward Bend variations, see pp.56–9.)

PHYSICAL BENEFITS

- ▶ Powerfully massages all the abdominal organs.
- ▶ Stimulates and tones the digestive organs, increases peristalsis, and relieves constipation and other problems.
- ▶ Counteracts obesity and enlargement of the spleen and liver.
- ▶ Regulates the pancreatic function, providing a valuable aid for those with diabetes or hypoglycaemia.
- ▶ Mobilizes the joints and increases elasticity in the lumbar spine.
- ▶ Relieves compression of the spine and sciatica.
- ▶ Strengthens and stretches the hamstrings.

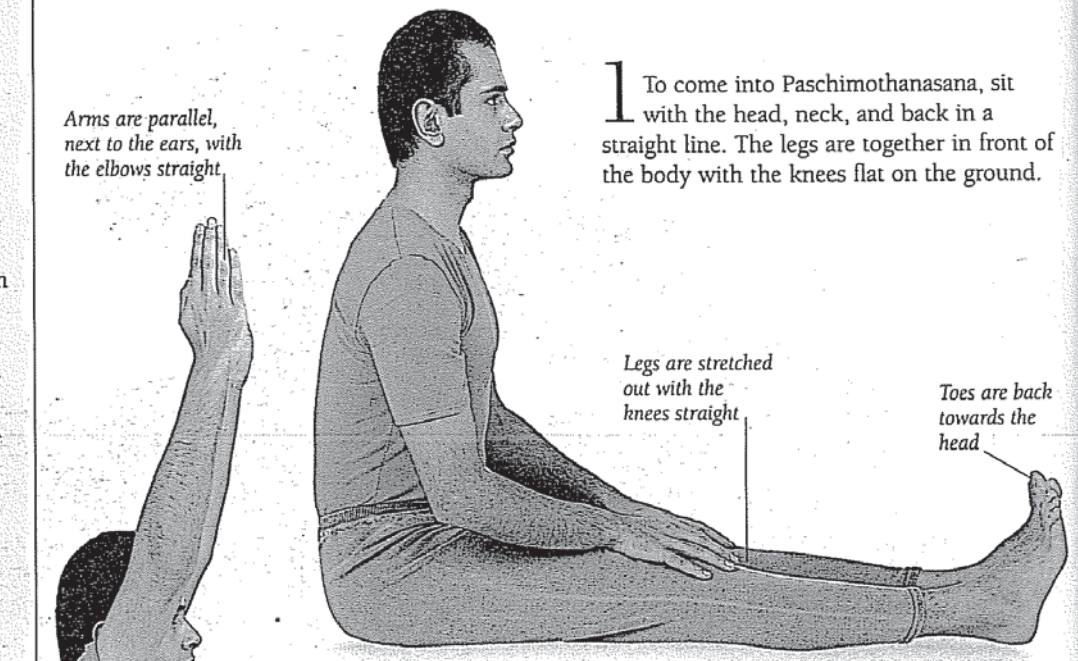
Don't do this excessively

MENTAL BENEFITS

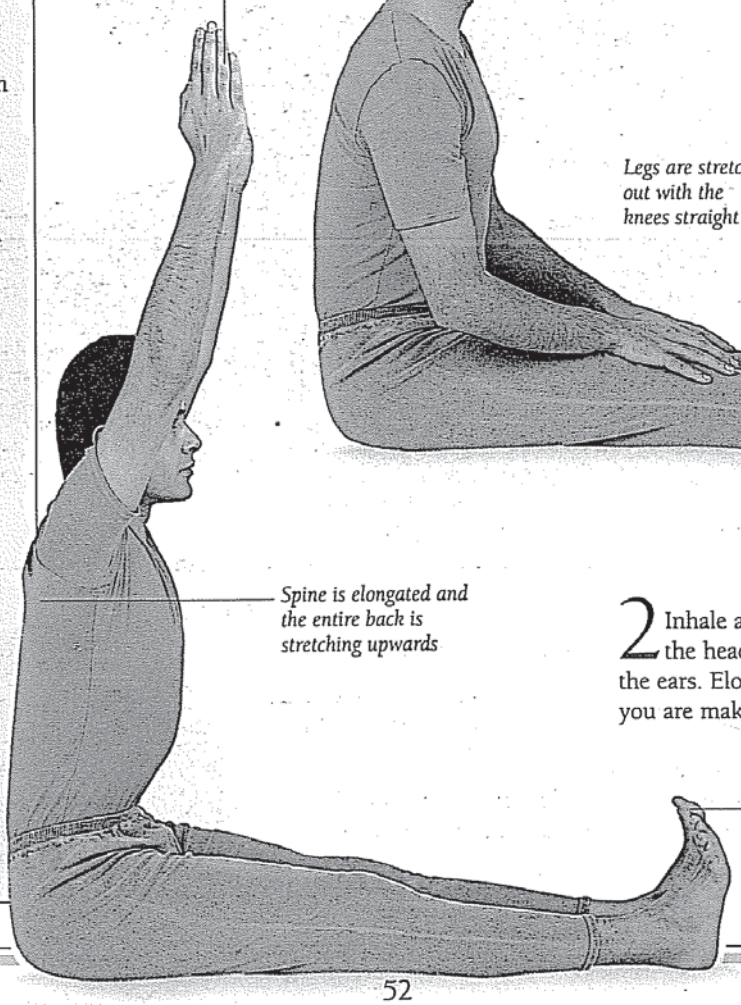
- ▶ Greatly enhances concentration and mental endurance.
- ▶ Invigorates the mind and nervous system, controlling many nervous complaints.

PRANIC BENEFITS

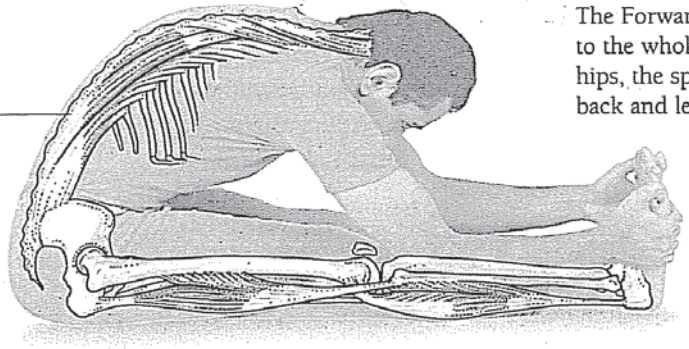
- ▶ Balances the prana; meditation is possible only when the vital energy is centred.
- ▶ Establishes perennial "youth".



1 To come into Paschimothanasana, sit with the head, neck, and back in a straight line. The legs are together in front of the body with the knees flat on the ground.

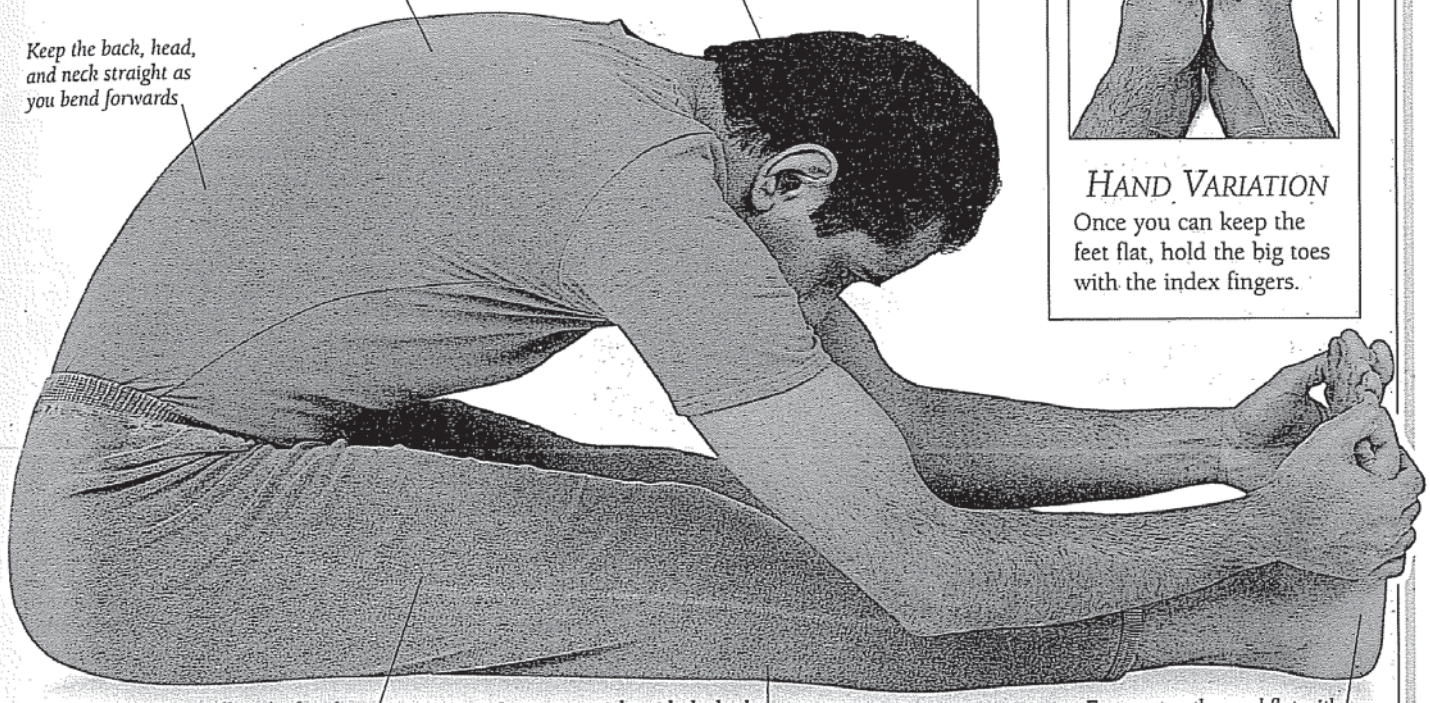


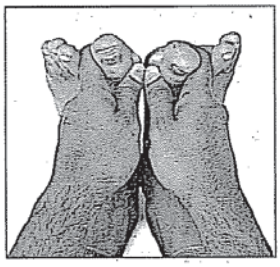
2 Inhale as you stretch both arms over the head, stretching them up alongside the ears. Elongate the spine; feel as though you are making yourself as tall as possible.



CHIEF BENEFIT

The Forward Bend gives a complete stretch to the whole posterior of the body – to the hips, the spine, and the muscles of the back and legs. Indeed, Paschimothanasana is derived from the Sanskrit word for "west", which is often used as a metaphor for the back of the body.





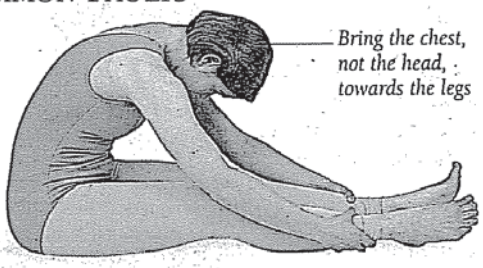
HAND VARIATION

Once you can keep the feet flat, hold the big toes with the index fingers.

3 Δ Exhale, and bend forwards from the hips. Reach forwards to catch hold of the feet as you bring the chest down towards the thighs. If you cannot reach the toes, grasp the ankles, or even the shins. Hold the position for at least 10 seconds, gradually increasing to about 3 minutes. Repeat 3–5 times. To release the position, inhale, and stretch your arms and body up (see Step 2).

COMMON FAULTS

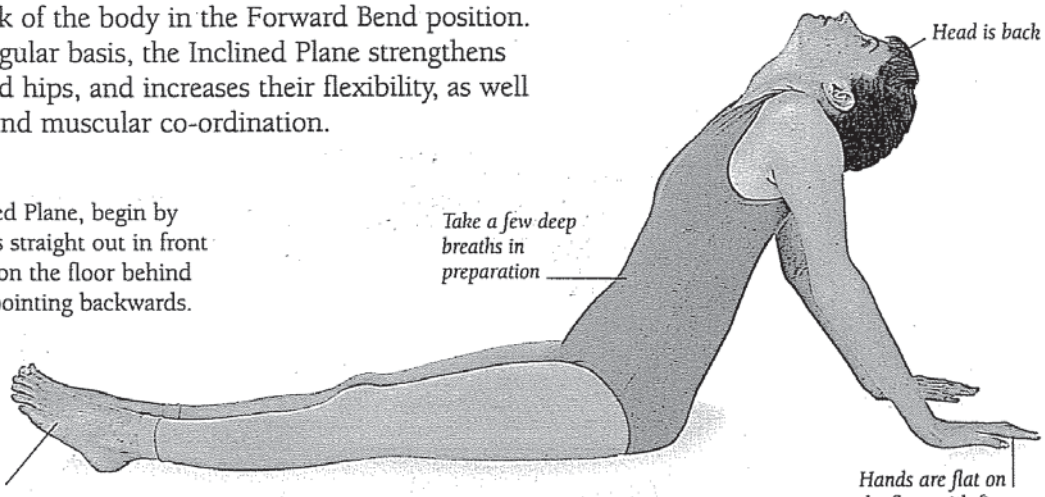
- ▶ Knees are bent upwards.
- ▶ Back is rounded and the head, rather than the chest, is down towards the knees.
- ▶ The feet are apart and the toes are rotating outwards.
- ▶ Toes are not pointed back.

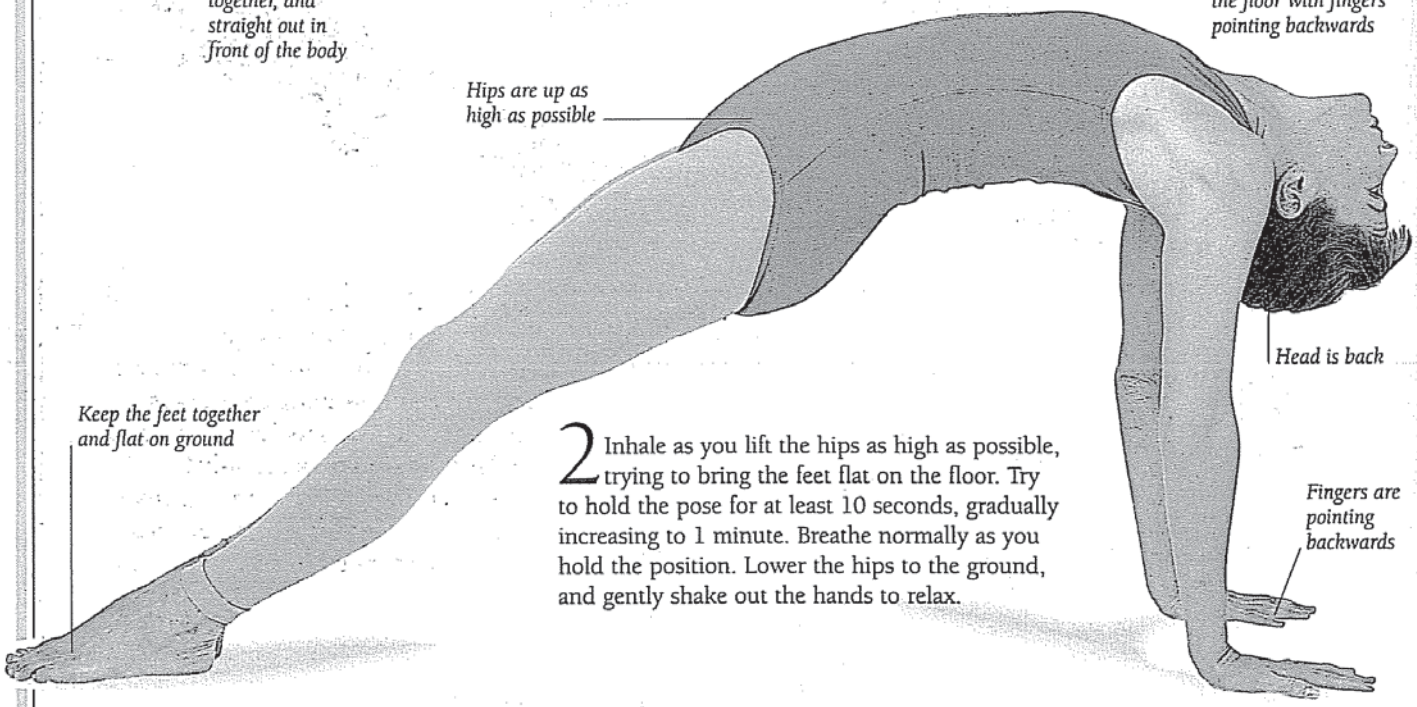


THE INCLINED PLANE

As a counter-pose, the Inclined Plane complements the complete stretch given to the back of the body in the Forward Bend position. When practised on a regular basis, the Inclined Plane strengthens the shoulders, arms, and hips, and increases their flexibility, as well as developing balance and muscular co-ordination.

1 To come into the Inclined Plane, begin by sitting up with both legs straight out in front of you. Place the hands flat on the floor behind your back with the fingers pointing backwards. Drop your head back and rest on your hands.

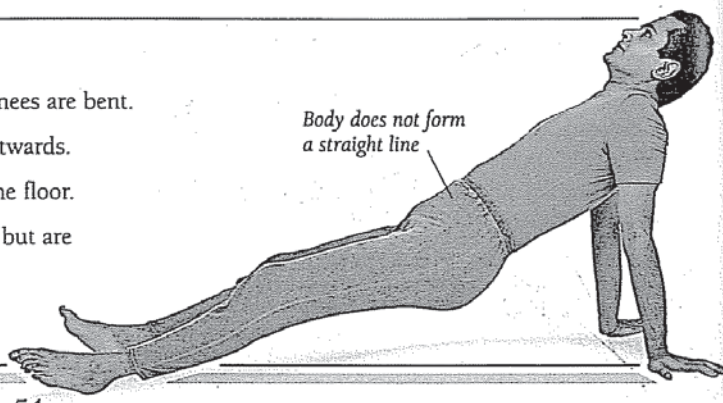




2 Inhale as you lift the hips as high as possible, trying to bring the feet flat on the floor. Try to hold the pose for at least 10 seconds, gradually increasing to 1 minute. Breathe normally as you hold the position. Lower the hips to the ground, and gently shake out the hands to relax.

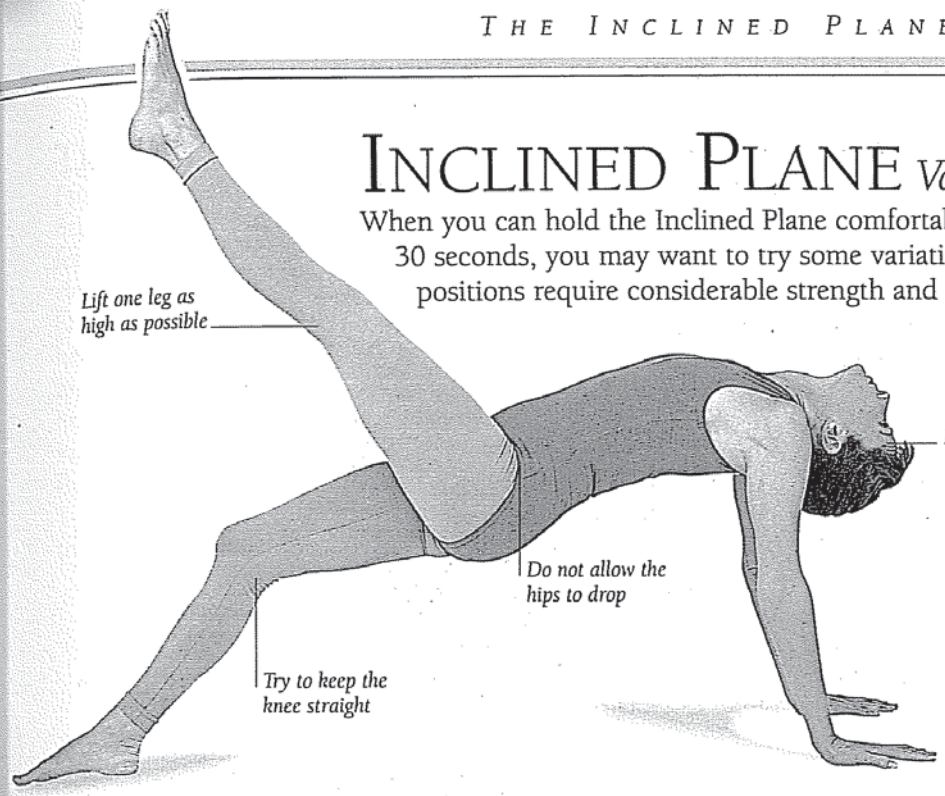
COMMON FAULTS

- Head is allowed to come forwards, rather than dropping back.
- There is tension in the neck and shoulders.
- Hips are rotated outwards and/or dropped. They should be raised as high as possible.
- One or both of the knees are bent.
- Hands are rotated outwards.
- Feet are not flat on the floor.
- Feet are not straight, but are falling out to the sides.
- Legs are apart.



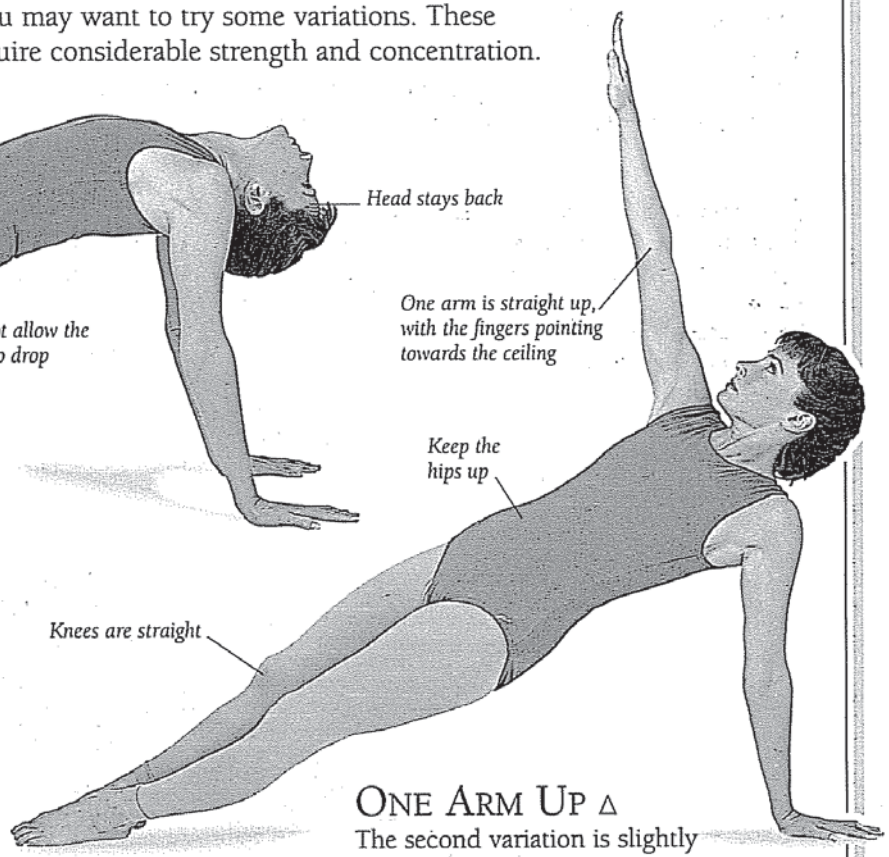
INCLINED PLANE *Variations*

When you can hold the Inclined Plane comfortably for at least 30 seconds, you may want to try some variations. These positions require considerable strength and concentration.



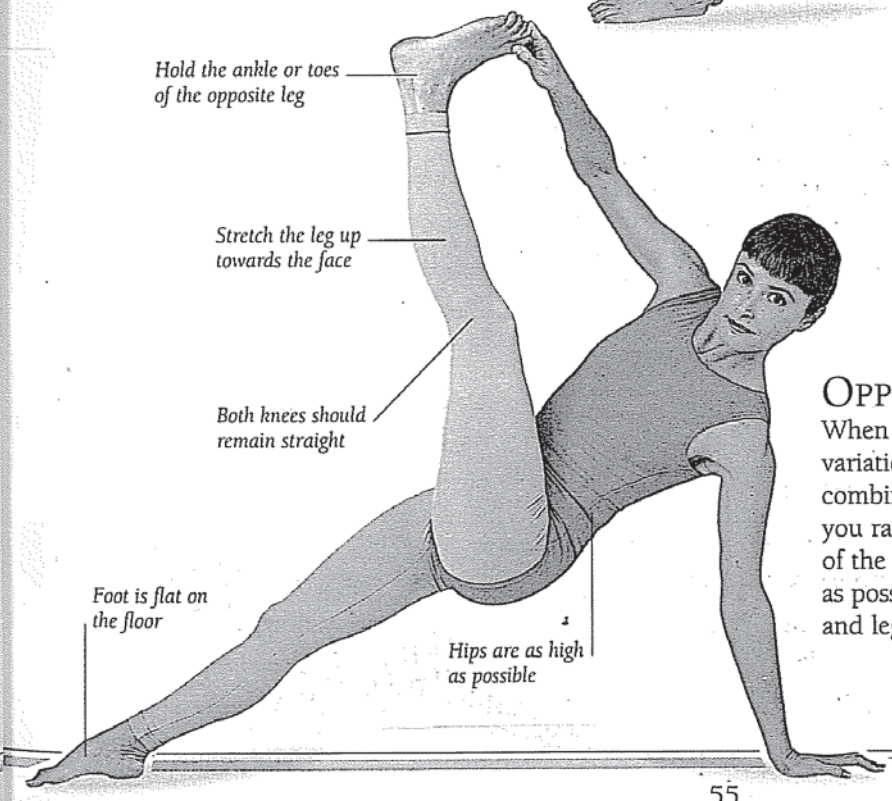
ONE LEG UP △

From the Inclined Plane, keep the head back, and inhale as you lift one leg towards the ceiling. Hold it up for a few seconds, lower it to the ground, and repeat with the other leg.



ONE ARM UP △

The second variation is slightly more tricky, and requires considerable concentration. Keeping both knees straight, and your shoulders as parallel to the ground as possible, inhale and lift one arm towards the ceiling. Hold it straight up for a few seconds, then lower it, and try to raise the other arm.



OPPOSITE SIDES

When you have mastered both of the above variations, you are ready to try this one, which combines the two. With your hips up, inhale as you raise one arm and the opposite leg. Catch hold of the ankle or foot, and bring it as close to the face as possible. Hold for a few seconds. Lower the arm and leg, and repeat with the other arm and leg.

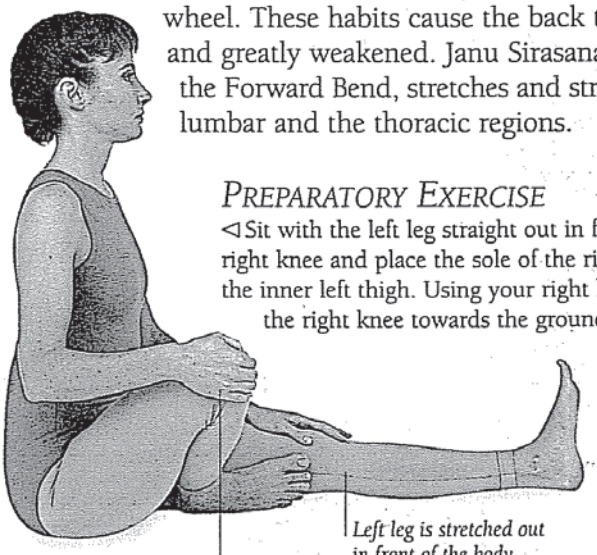
FORWARD BEND

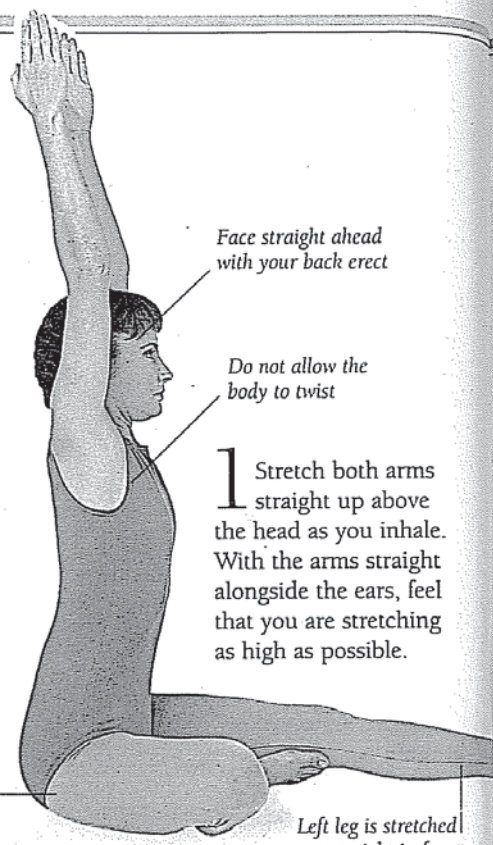
Variations with Knees Bent

Many people suffer from lower back pain as a result of time spent hunched in front of a computer screen, desk, or steering wheel. These habits cause the back to become tight and greatly weakened. Janu Sirasana, a variation of the Forward Bend, stretches and strengthens both the lumbar and the thoracic regions.

PREPARATORY EXERCISE

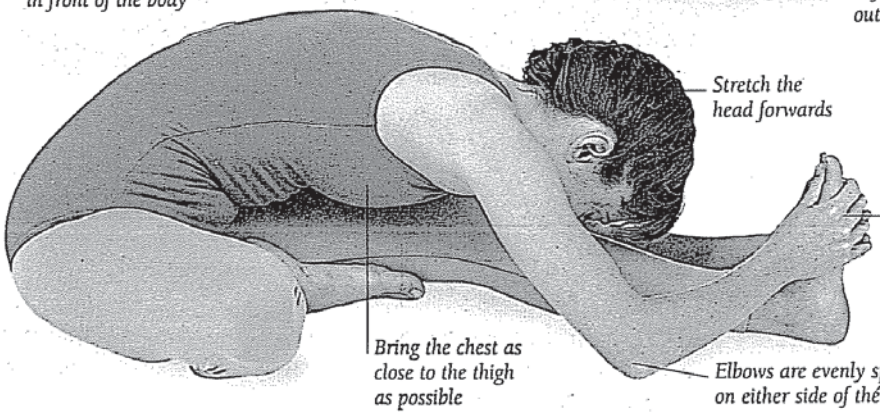
◁ Sit with the left leg straight out in front of you. Bend the right knee and place the sole of the right foot flat against the inner left thigh. Using your right hand, gently bounce the right knee towards the ground for about 1 minute.





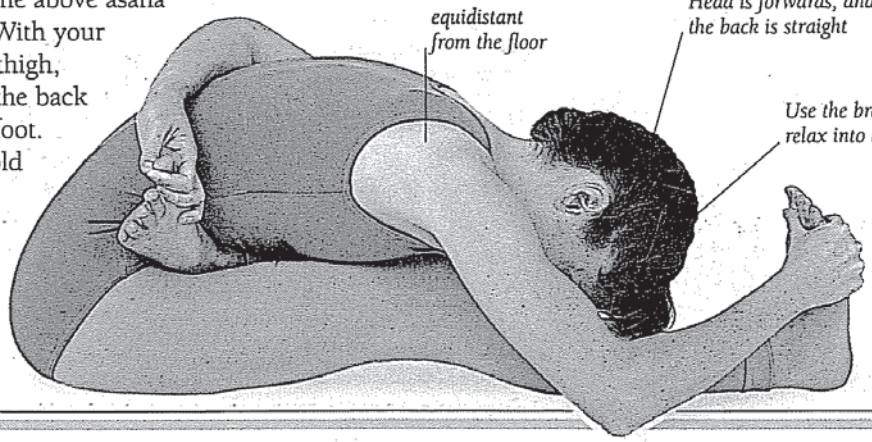
1 Stretch both arms straight up above the head as you inhale. With the arms straight alongside the ears, feel that you are stretching as high as possible.

2 Exhale as you reach forwards, bending from the hips, to catch hold of the left foot. Keep the body straight. Hold for 10 seconds, gradually increasing to 1 minute. Inhale as you stretch upwards. Repeat the exercise on the other side.



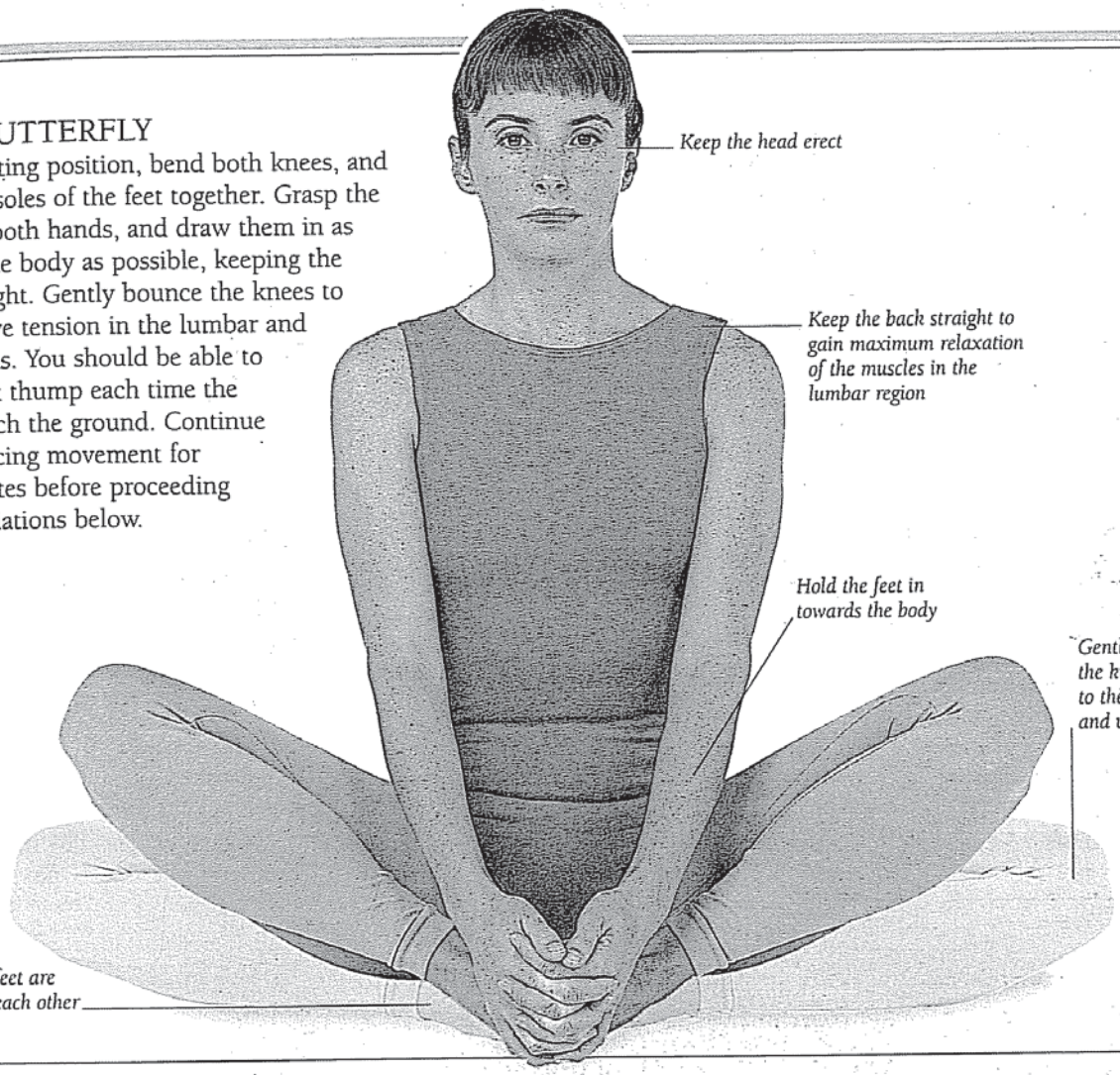
HALF LOTUS FORWARD BEND

If you are very flexible, try the above asana in the "bound" Half Lotus. With your left foot high on your right thigh, bring your left arm behind the back and catch hold of your left foot. Bend forwards and catch hold of the right foot with the right hand. Hold for as long as is comfortable. Release the foot, and inhale as you sit up. Repeat on the other side.



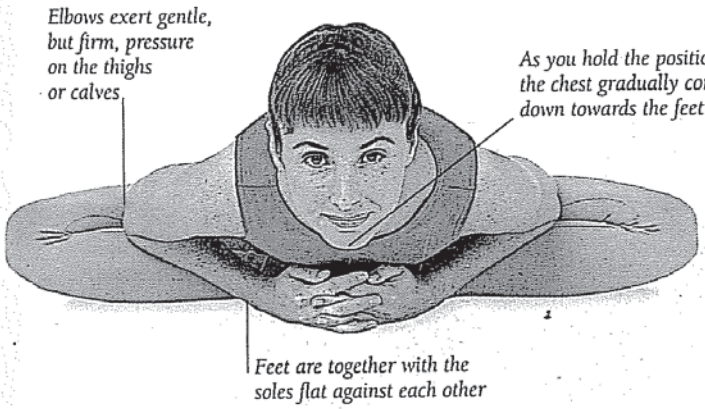
THE BUTTERFLY

From a sitting position, bend both knees, and bring the soles of the feet together. Grasp the feet with both hands, and draw them in as close to the body as possible, keeping the back straight. Gently bounce the knees to help relieve tension in the lumbar and hip regions. You should be able to hear a soft thump each time the knees touch the ground. Continue this bouncing movement for 1–3 minutes before proceeding to the variations below.



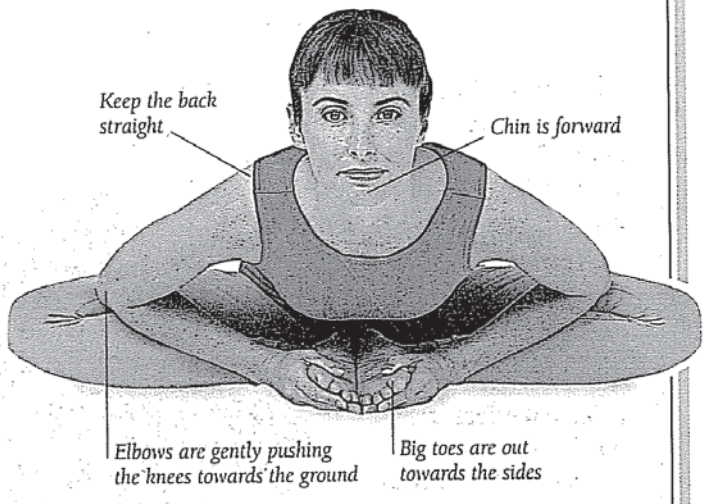
BHADRASANA

With the knees wide apart (see above), use the elbows to push the knees and thighs gently towards the ground. Exhale as you lower the chest towards the feet. Hold for about 10 seconds, but once you can relax and breathe into the position, try to increase the time to 1 minute.



CHEST TO FEET

This further variation has a stronger stretching effect on the inner thighs and hips. Turn the feet until the soles face up towards the body, and bring the chest down to the feet.



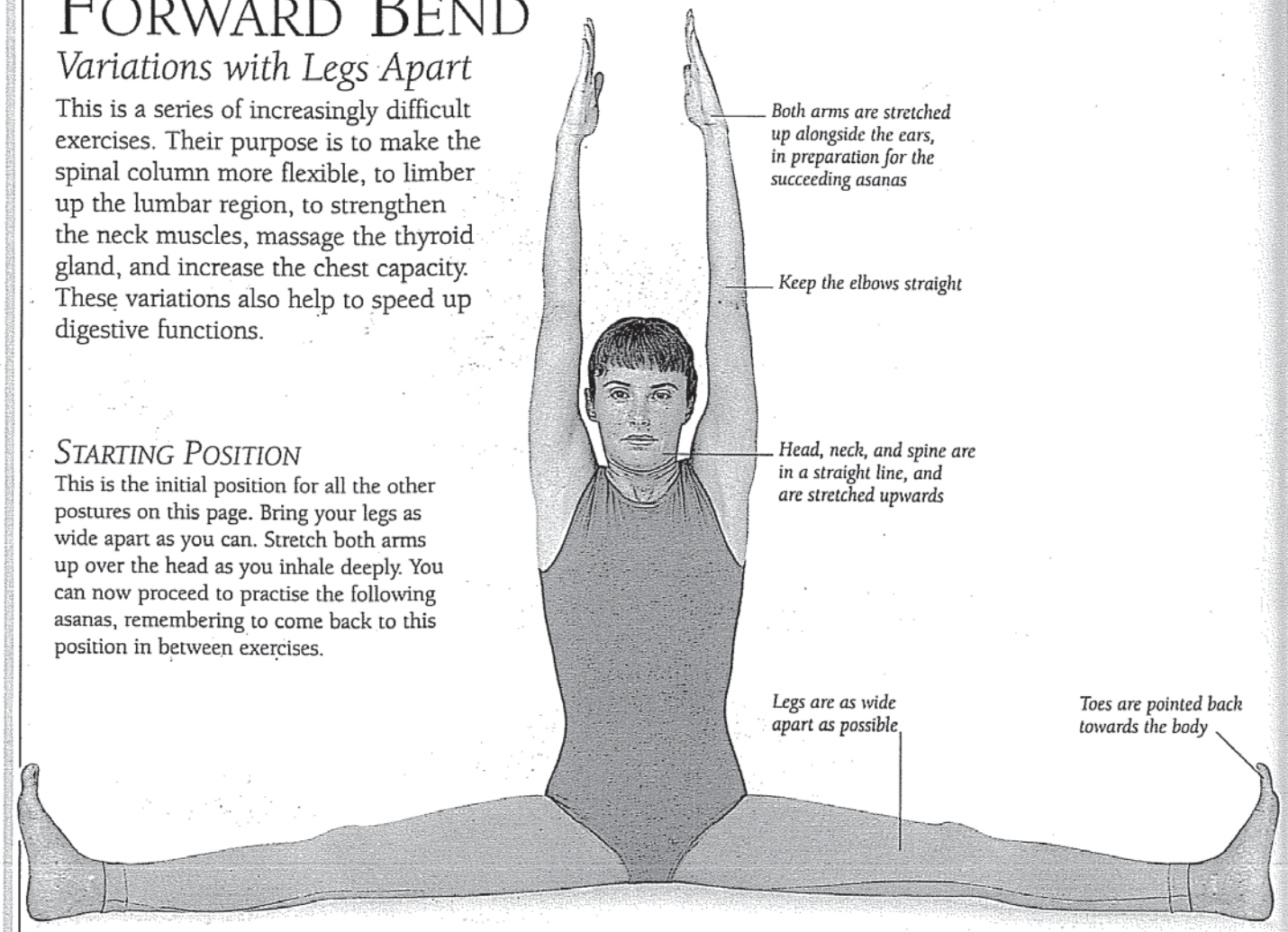
FORWARD BEND

Variations with Legs Apart

This is a series of increasingly difficult exercises. Their purpose is to make the spinal column more flexible, to limber up the lumbar region, to strengthen the neck muscles, massage the thyroid gland, and increase the chest capacity. These variations also help to speed up digestive functions.

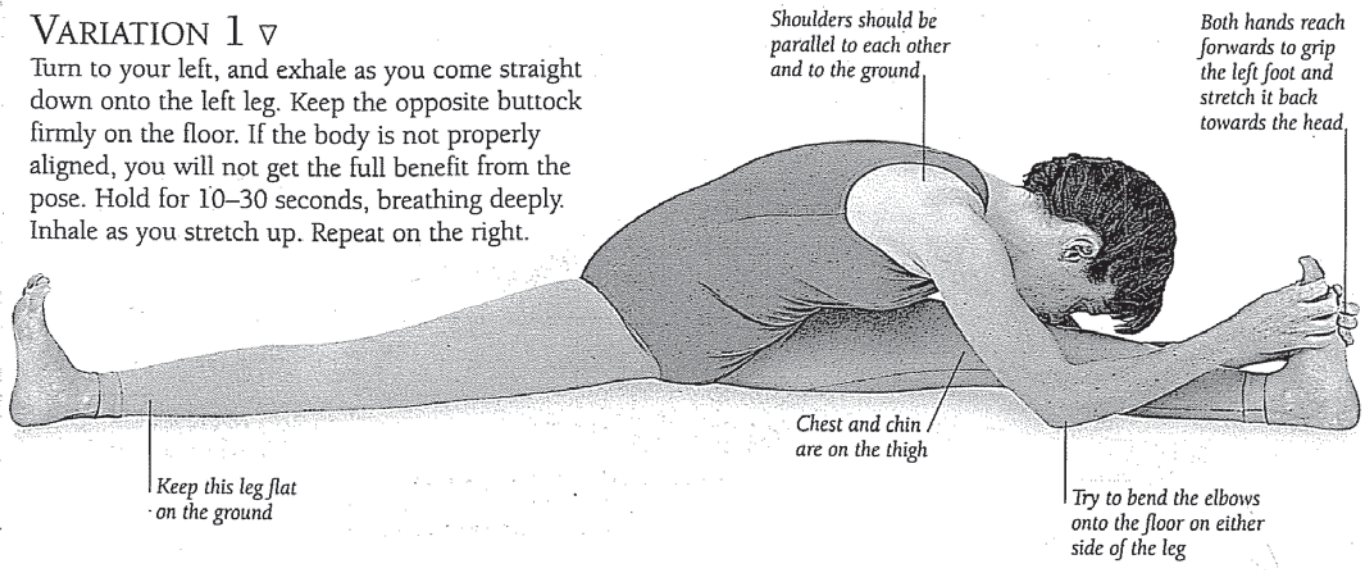
STARTING POSITION

This is the initial position for all the other postures on this page. Bring your legs as wide apart as you can. Stretch both arms up over the head as you inhale deeply. You can now proceed to practise the following asanas, remembering to come back to this position in between exercises.



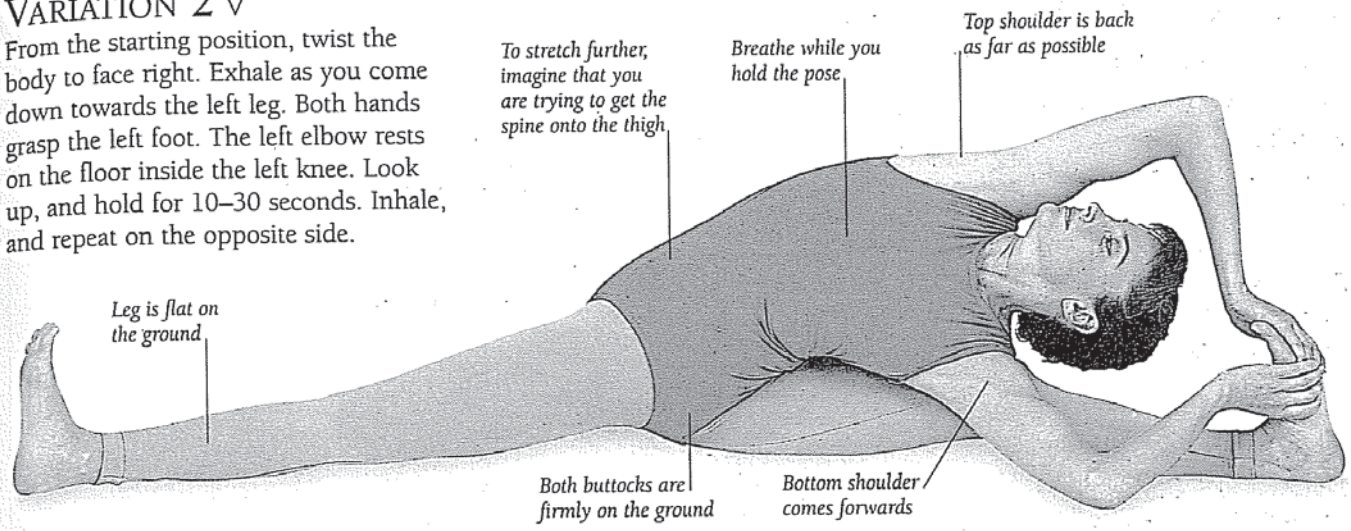
VARIATION 1 ▽

Turn to your left, and exhale as you come straight down onto the left leg. Keep the opposite buttock firmly on the floor. If the body is not properly aligned, you will not get the full benefit from the pose. Hold for 10–30 seconds, breathing deeply. Inhale as you stretch up. Repeat on the right.



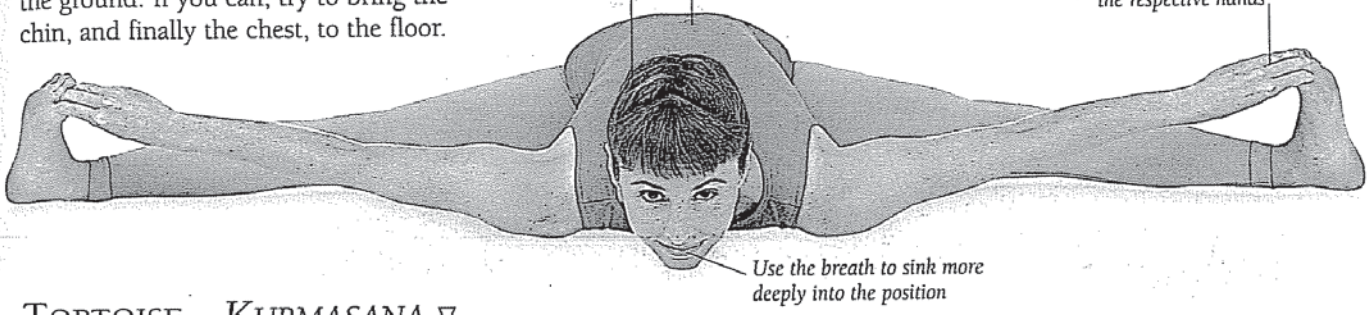
VARIATION 2 ▽

From the starting position, twist the body to face right. Exhale as you come down towards the left leg. Both hands grasp the left foot. The left elbow rests on the floor inside the left knee. Look up, and hold for 10–30 seconds. Inhale, and repeat on the opposite side.



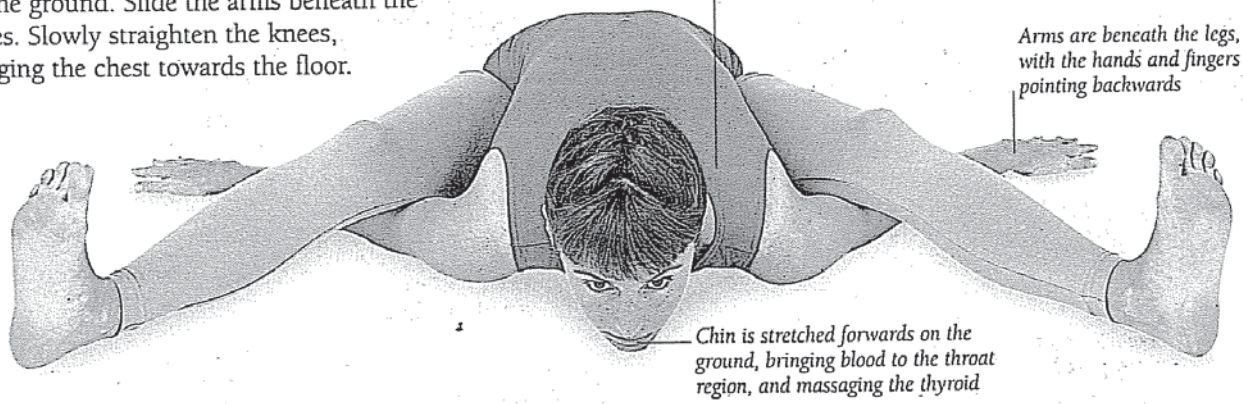
VARIATION 3 ▽

Exhale as you bring the body forwards. Grasp the toes of both feet. Breathe slowly and deeply. Try to bring the forehead to the ground. If you can, try to bring the chin, and finally the chest, to the floor.



TORTOISE - *KURMASANA* ▽

This pose stretches the spinal column and rejuvenates the whole nervous system. From the starting position, bend the knees upwards slightly. Place the hands, with palms downwards and fingers pointing back, on the ground. Slide the arms beneath the knees. Slowly straighten the knees, bringing the chest towards the floor.

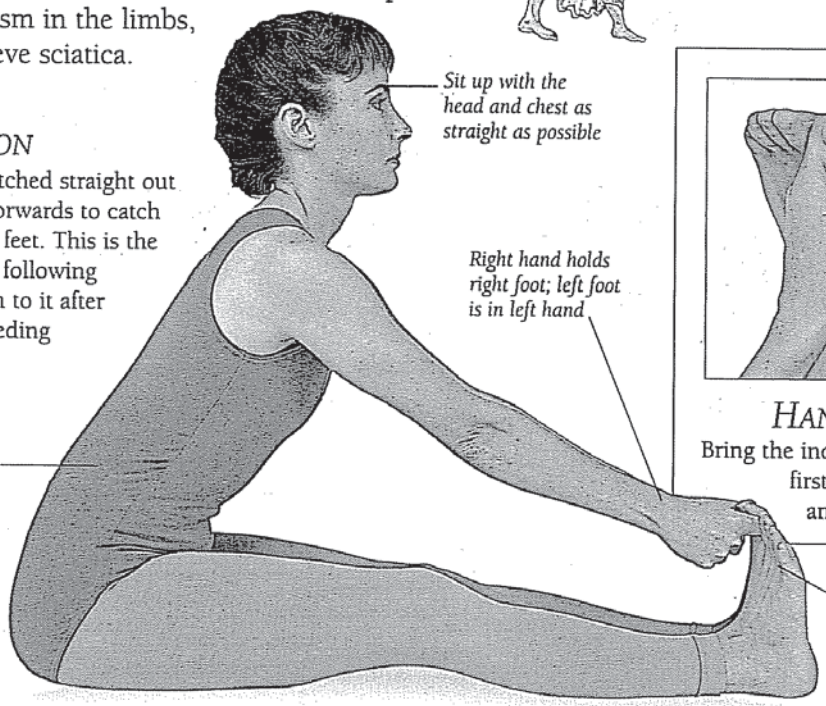


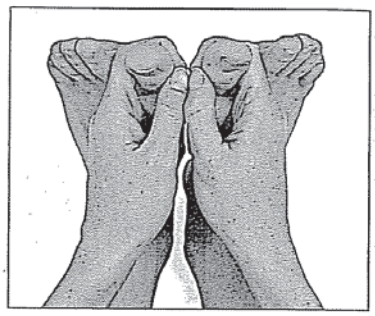
THE SHOOTING BOW

Akarna Dhanurasan, or the Shooting Bow, stretches the legs, hips, and lumbar region, strengthens the hands and feet, and invigorates the nerve impulses to these regions. Regular practice of this asana has been found to help in alleviating rheumatism in the limbs, and it can even relieve sciatica.

STARTING POSITION

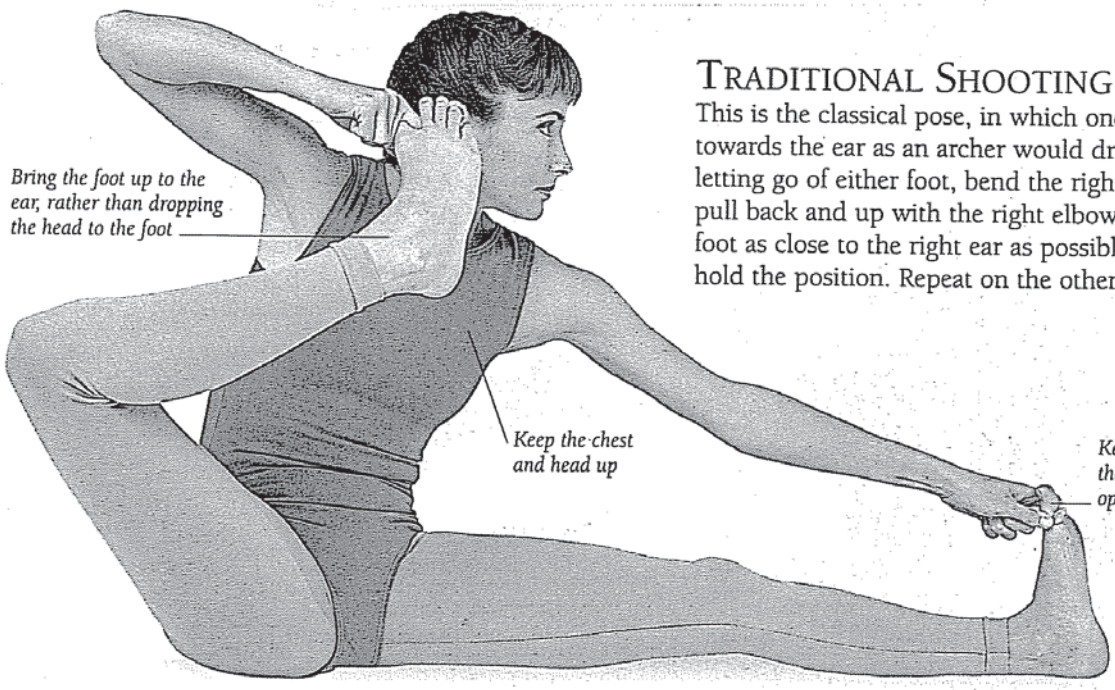
Sit up with the legs stretched straight out in front of you. Reach forwards to catch hold of the toes of both feet. This is the starting position for the following asanas. Be sure to return to it after each pose, before proceeding to the next position.





HAND POSITION

Bring the index fingers between the first two toes of each foot, and grip the big toes.



TRADITIONAL SHOOTING BOW

This is the classical pose, in which one foot is drawn back towards the ear as an archer would draw his bow. Without letting go of either foot, bend the right knee. Inhale as you pull back and up with the right elbow, bringing the right foot as close to the right ear as possible. Breathe as you hold the position. Repeat on the other side.

SHOOTING BOW

Variations

By moving the limbs in slightly different directions, these variations on the Shooting Bow bring additional benefits.

VARIATION 1

Keeping the weight firmly on both buttocks, inhale as you raise the right leg. Visualize yourself bringing the straight leg up alongside the ear, without relinquishing your grip on the opposite foot. Hold the position for at least 2–5 deep breaths. Practise 2–3 times on each leg.

Look straight ahead

Raised leg is straight

Lower leg is kept straight

Keep a firm hold of the opposite foot

VARIATION 2

Bend the left knee and place it on top of the right thigh. Hold the left foot with the right hand. Extend the left hand to hold the right foot. Bending the right elbow, inhale and pull back, bringing the left foot up towards the right ear. Hold for 3–5 seconds before lowering. Repeat on the opposite side.

Right elbow is pulled back behind the right ear

Chest is lifting up

Left elbow is straight

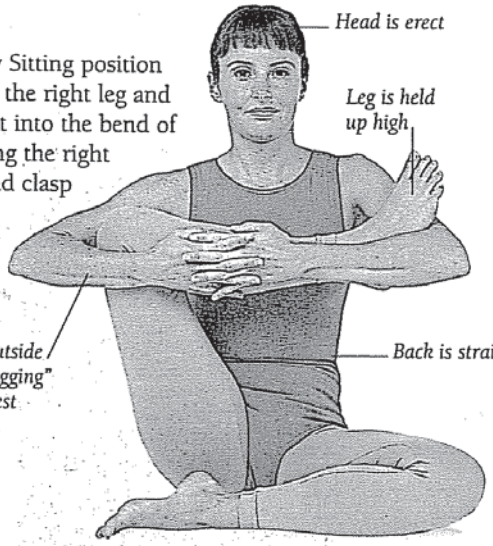
Index finger is hooked round the big toe

Right leg is straight

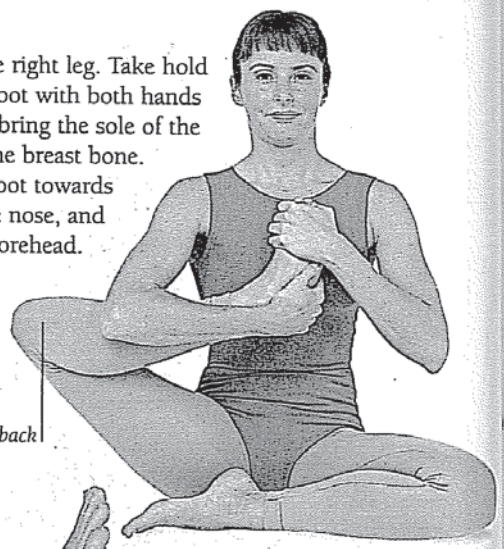
EKA PADA SIRASANA

This "One Foot to Head" pose is an advanced position, providing a full stretch for both the lumbar and thoracic regions. Be sure to warm the body up properly before attempting it. You should never force or strain to come into any position.

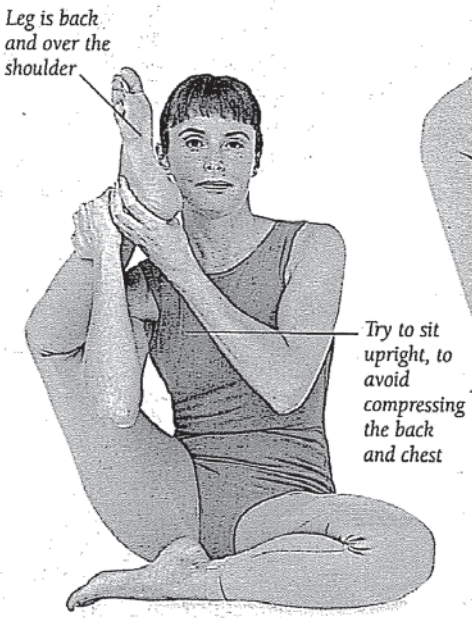
1 From the Easy Sitting position (see p.17), lift the right leg and place the right foot into the bend of the left elbow. Bring the right arm outside leg and clasp the hands. Gently rock to and fro for a few minutes.



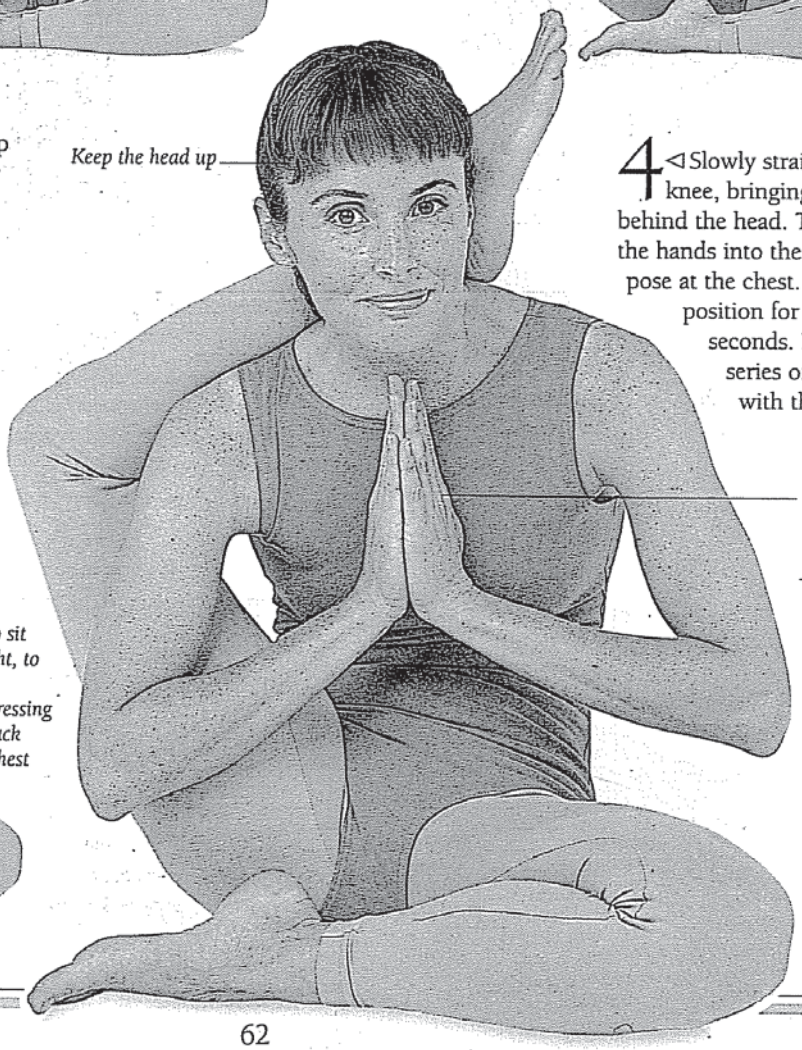
2 ▷ Release the right leg. Take hold of the right foot with both hands and gently try to bring the sole of the foot flat against the breast bone. Slowly slide the foot towards the chin, then the nose, and finally up to the forehead.



3 ▽ Release the hold on the foot. Drop the right shoulder down slightly for a moment, bringing it under the right knee, and then straighten the body as much as possible.

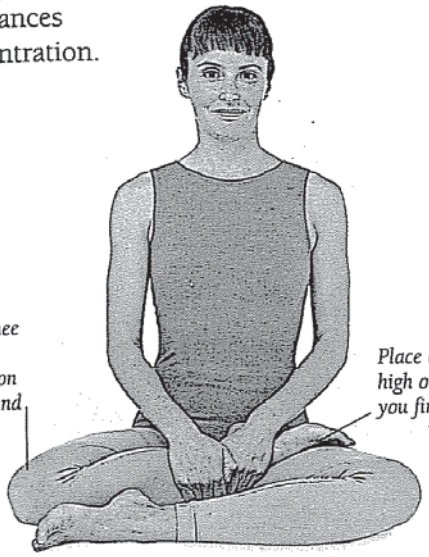


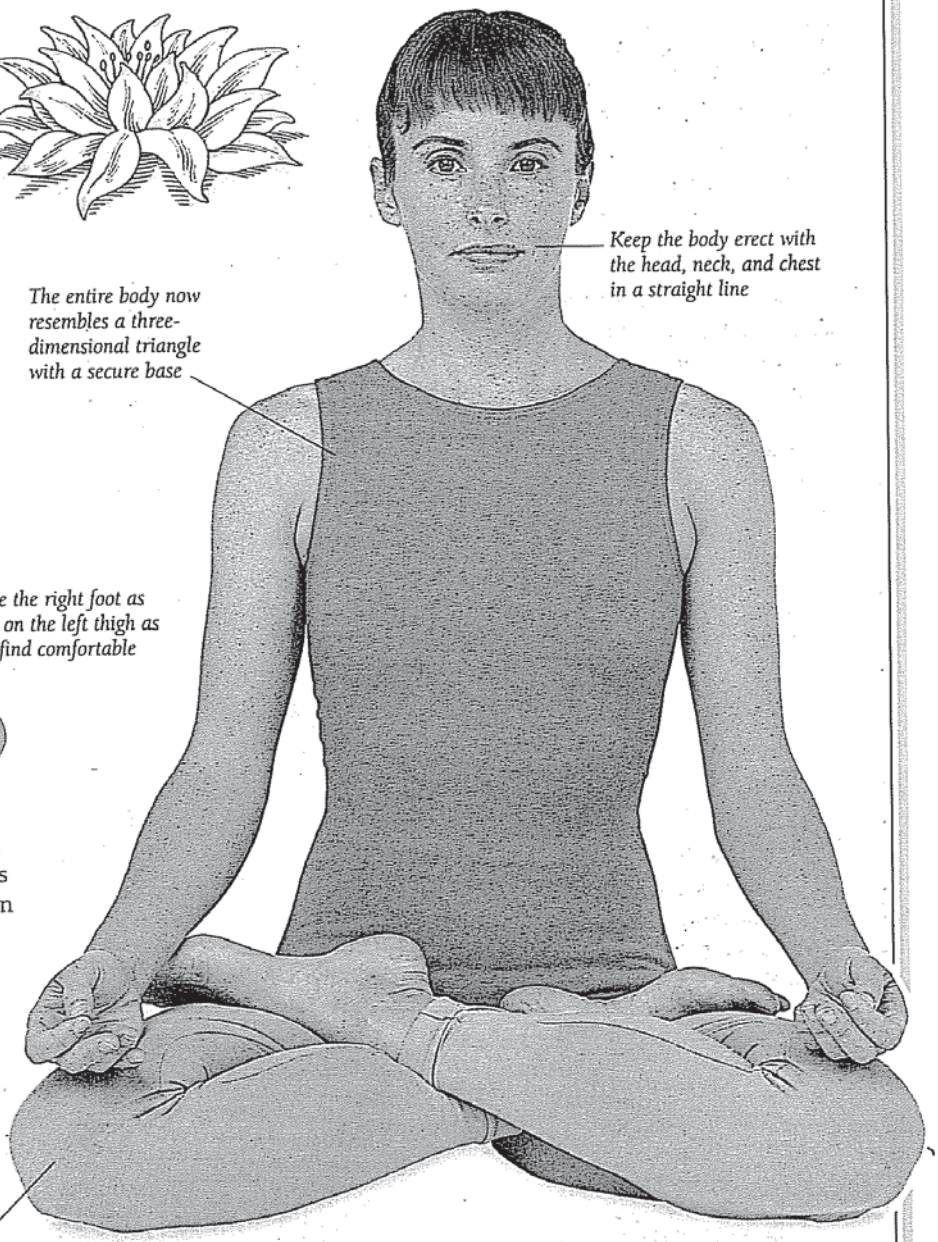
4 ◁ Slowly straighten the knee, bringing the foot behind the head. Try to bring the hands into the Prayer pose at the chest. Hold the position for a few seconds. Repeat this series of exercises with the left leg.



LOTUS

This classic sitting pose, also known as Padmasana, is greatly revered as a position for meditation and pranayama because it enhances concentration.



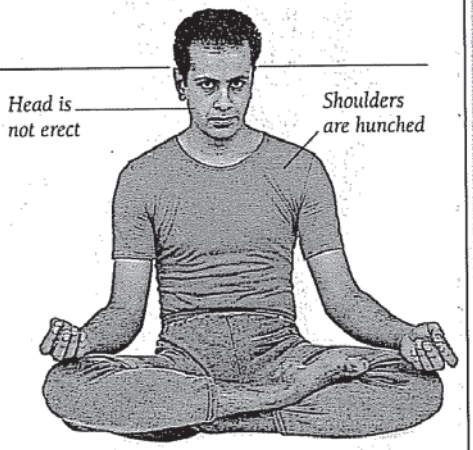


1 Δ From the Easy Sitting position (see p.17), take hold of your right foot with both hands and place it on your left thigh. The foot will turn slightly so that the sole is facing upwards.

2 Next, take hold of the left foot and bring it up onto the right thigh. For meditation, place the hands in Chin Mudra pose or join them in other positions (see p.17).

COMMON FAULTS

- ▶ Knee(s) are lifted off the ground.
- ▶ Back is rounded, or twisted to one side.
- ▶ Foot is not high enough on the thigh.
- ▶ Body is leaning to one side.
- ▶ The back is hunched, compressing the ribcage and impeding proper breathing.
- ▶ Shoulders are hunched and not level.
- ▶ Head is drooping, or twisted to one side.
- ▶ Shoulder blades are too far apart.
- ▶ Upper body is leaning forwards, instead of being perpendicular to the ground.
- ▶ CAUTION: Many people, particularly Westerners, find the Lotus position a difficult one to achieve. Beginners are not recommended to try it.



6

THE COBRA

Bhujangasana

The *Gerunda Samhita* notes that this asana, which resembles a cobra with its hood raised, "increases the bodily heat, destroys diseases, and by the practice of this posture the Serpent-Goddess (Kundalini) awakens".

PHYSICAL BENEFITS

- The arching of the spine increases flexibility, rejuvenates spinal nerves, and brings a rich blood supply.
- Works, massages, and tones the back muscles.
- Stretches the thoracic region and expands the rib cage, bringing relief from asthma.
- Gentle pressure on the abdomen massages all organs.
- Helps to relieve many utero-ovarine and menstrual problems.

MENTAL BENEFITS

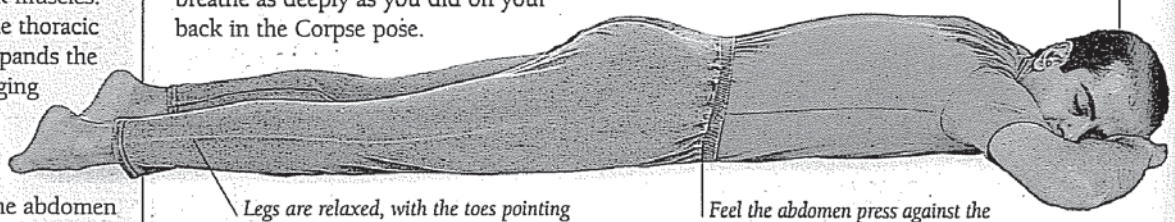
- Demands considerable concentration, and thus strengthens this faculty.

PRANIC BENEFITS

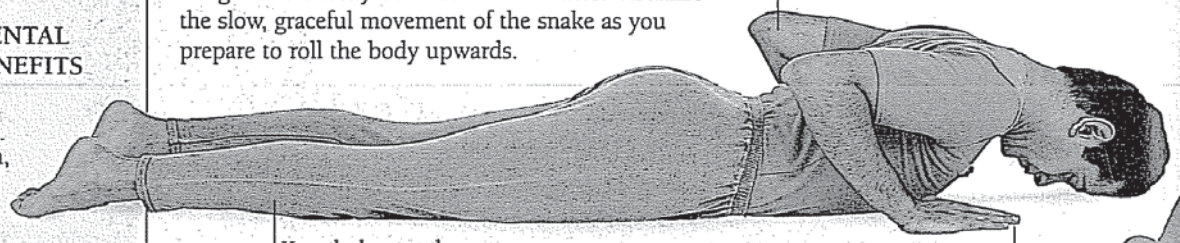
- Stimulates pranic flow to the lung, stomach, kidney, urinary bladder, and spleen meridians.
- Awakens the Kundalini (potential spiritual energy), thus assisting the realization of one's full potential.
- Bhujangasana produces bodily heat.

STARTING POSITION ▽

This is the relaxation position before and after each of the next few asanas. As you relax on your abdomen, breathe as deeply as you did on your back in the Corpse pose.

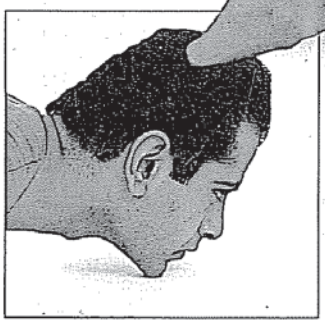


1 ▽ Bring the legs together and the forehead to the ground. Place the hands, palms downwards, on the ground directly beneath the shoulders. Visualize the slow, graceful movement of the snake as you prepare to roll the body upwards.



2 Begin with the head bent downwards and the forehead touching the ground.

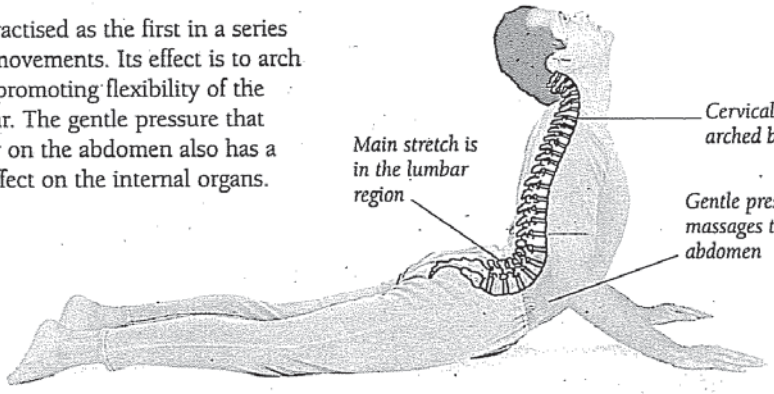
3 As you inhale, slowly raise the forehead and bring the nose to the ground.



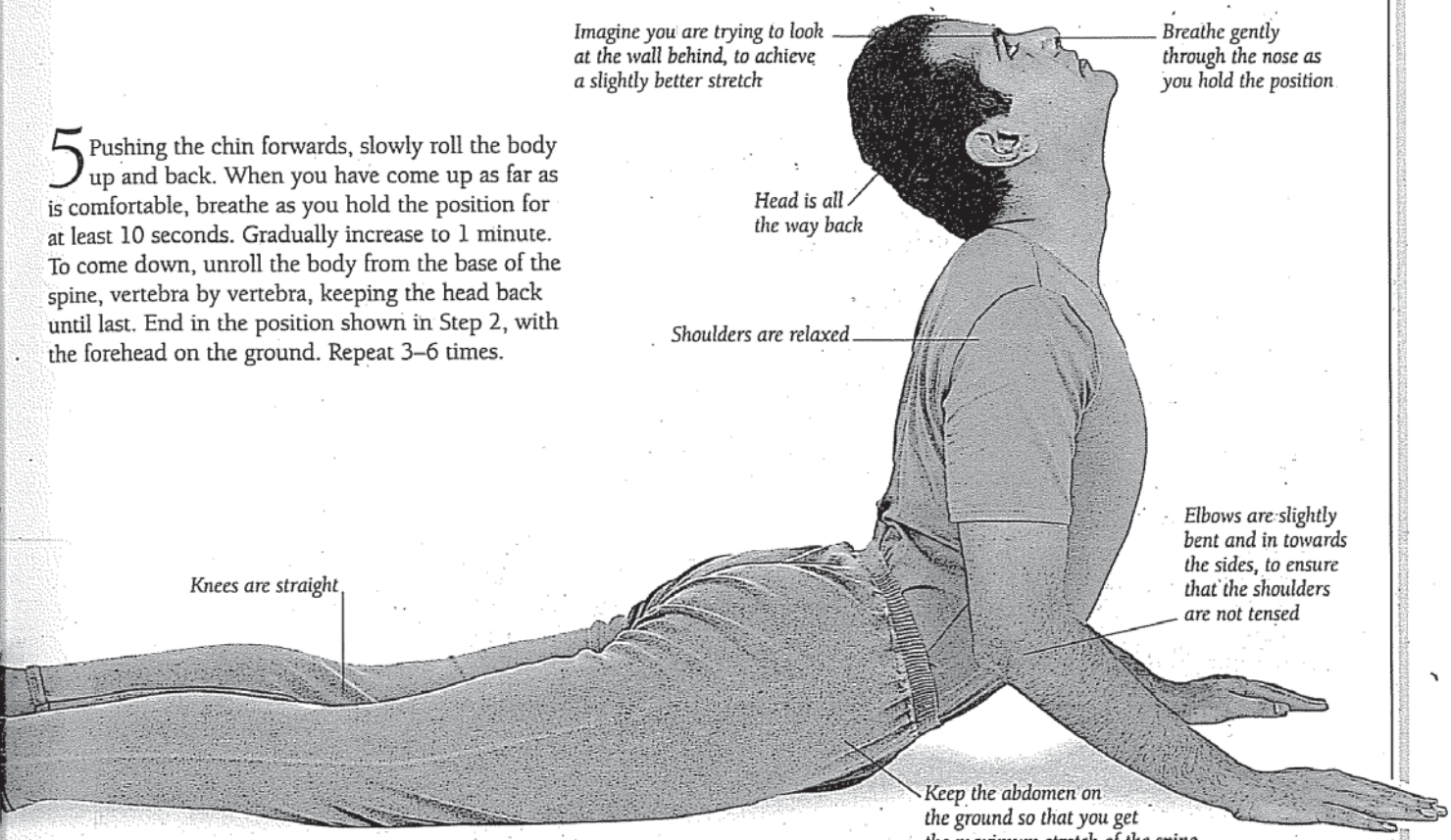
4 Roll the head upwards, raising the nose and brushing the chin on the floor.

CHIEF BENEFIT

The Cobra is always practised as the first in a series of backward bending movements. Its effect is to arch the spine back gently, promoting flexibility of the lower back in particular. The gentle pressure that the pose brings to bear on the abdomen also has a beneficial massaging effect on the internal organs.

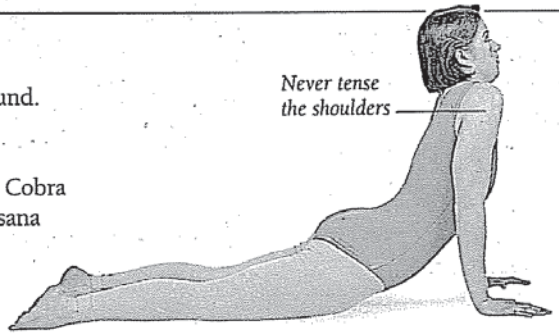


5 Pushing the chin forwards, slowly roll the body up and back. When you have come up as far as is comfortable, breathe as you hold the position for at least 10 seconds. Gradually increase to 1 minute. To come down, unroll the body from the base of the spine, vertebra by vertebra, keeping the head back until last. End in the position shown in Step 2, with the forehead on the ground. Repeat 3–6 times.



COMMON FAULTS

- ▶ Using the arms to push the body up into the Cobra, rather than rolling the body up into the position.
- ▶ Elbows are straightened and the shoulders are tensed and hunched.
- ▶ One arm is pushing harder than the other, causing the body to twist.
- ▶ Abdomen is lifted off the ground.
- ▶ Head is dropping forwards.
- ▶ CAUTION: Do not practise the Cobra while pregnant, although this asana is an excellent way to prepare the body for pregnancy.

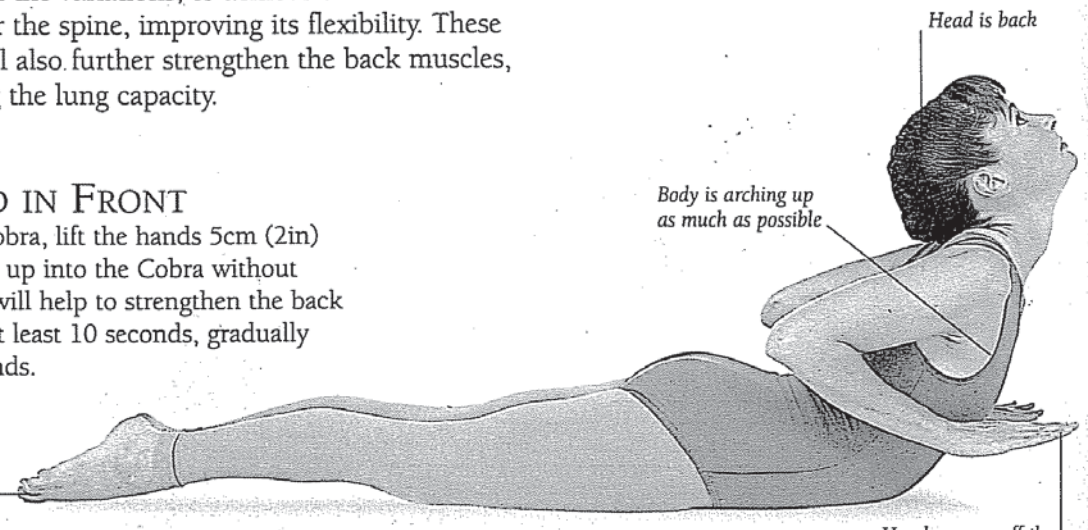


COBRA *Variations*

Once you have mastered the Cobra, it is recommended that you attempt some of the variations, to achieve the maximum backward stretch for the spine, improving its flexibility. These Cobra variations will also further strengthen the back muscles, as well as increasing the lung capacity.

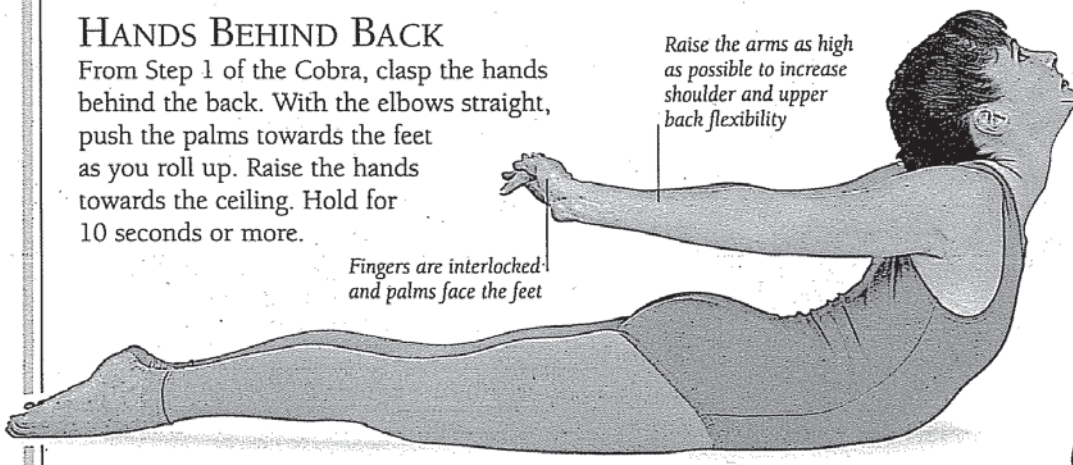
HANDS RAISED IN FRONT

From Step 1 of the Cobra, lift the hands 5cm (2in) from the ground. Roll up into the Cobra without using the arms. This will help to strengthen the back muscles. Hold it for at least 10 seconds, gradually increasing to 30 seconds.



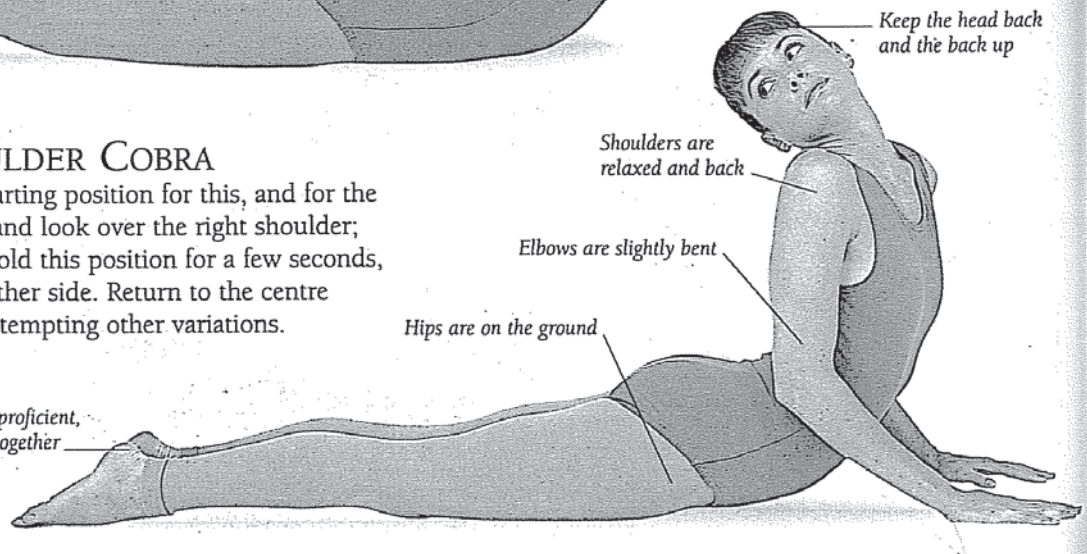
HANDS BEHIND BACK

From Step 1 of the Cobra, clasp the hands behind the back. With the elbows straight, push the palms towards the feet as you roll up. Raise the hands towards the ceiling. Hold for 10 seconds or more.



OVER THE SHOULDER COBRA

The Cobra itself is the starting position for this, and for the King Cobra poses. Turn and look over the right shoulder; try to see the left heel. Hold this position for a few seconds, and then repeat on the other side. Return to the centre before rolling down or attempting other variations.



KING COBRA

From the Cobra, move the legs apart and walk the hands back towards the hips as far as possible. Most people will have to straighten their elbows a bit, and perhaps come up onto the finger tips. Now bend the knees and bring the feet up to the head.

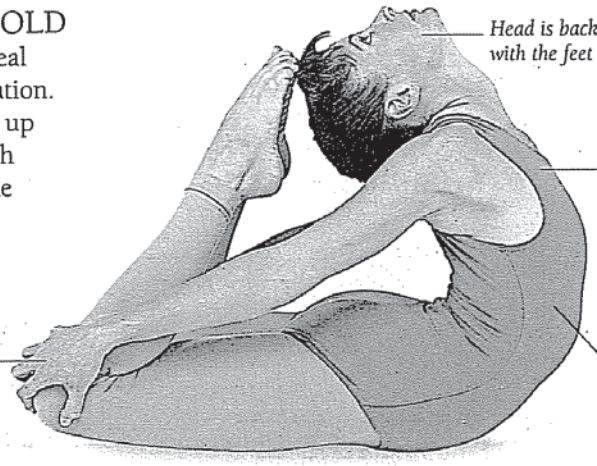
Chest expands as the shoulders are arched back

Allow the abdomen to rise slightly from the ground

Keep the hips and buttocks down

KING COBRA - KNEE HOLD

This last variation requires a great deal of strength, flexibility, and concentration. From the King Cobra, lift the hands up from the ground one at a time. Reach the hands back and catch hold of the respective knees.



Head is back as far as possible, with the feet resting on the top

Breathe as deeply as possible

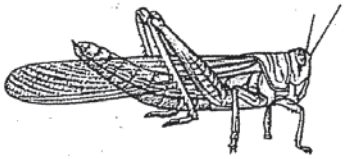
Arch the chest forwards

Hands have a firm hold on the knees, pulling them in towards the body

7

THE LOCUST

Salabhasana



The Locust gives a wonderful backward bend to the spine, serving as a counterpose to the Shoulderstand, the Plough, and the Forward Bend. You should master the Half Locust (Steps 1–2) before attempting the Full Locust (Step 3).

PHYSICAL BENEFITS

- ▶ Brings a rich blood supply to the spine.
- ▶ Tones the nerves and muscles, particularly in the neck and shoulders.
- ▶ Increases abdominal pressure, regulating intestinal function and strengthening the abdominal walls.
- ▶ Improves sluggish digestion.
- ▶ Expands the chest, benefiting sufferers from asthma and other respiratory problems.
- ▶ Strengthens shoulder, arm, and back muscles.
- ▶ Regular practice of the Locust relieves back pains and sciatica.

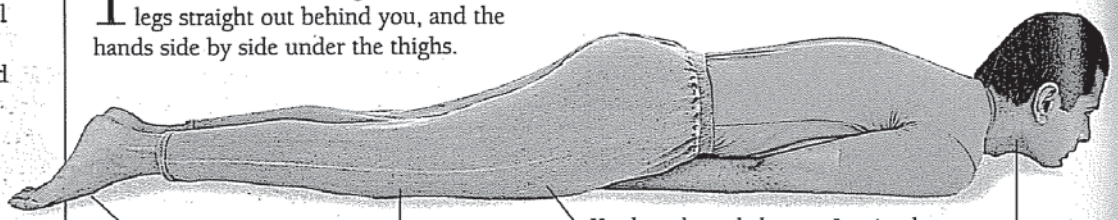
MENTAL BENEFITS

- ▶ Encourages concentration and perseverance.

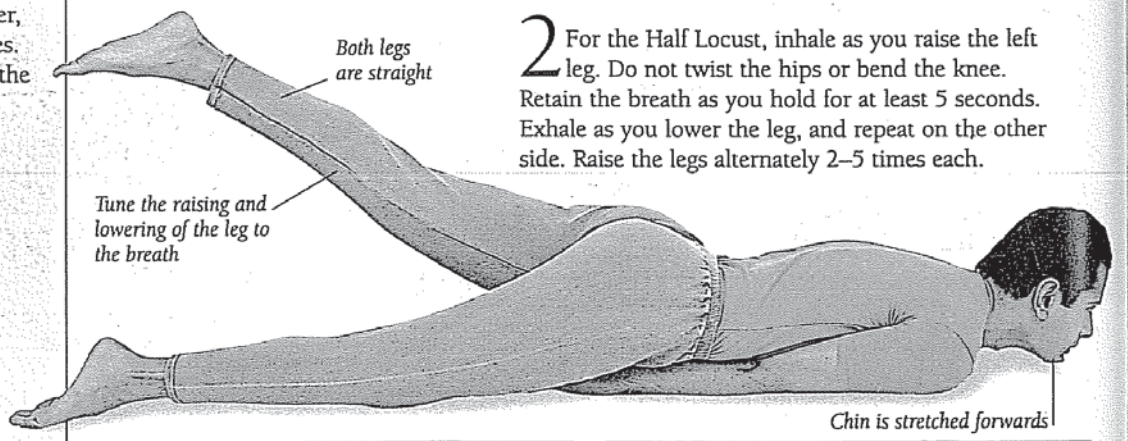
PRANIC BENEFITS

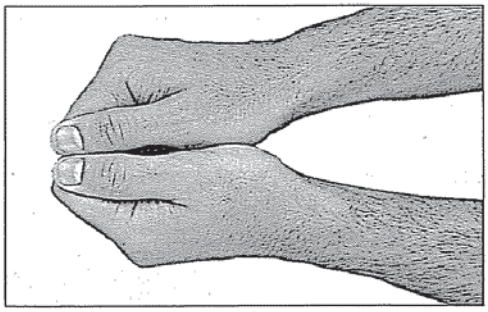
- ▶ Stimulates pranic flow in the lung, stomach, spleen, heart, liver, small intestine, pericardium, and bladder meridians.
- ▶ "Increases the digestive fire" – an ancient Yogic way of saying that the energy flow maximizes the use of all nutrients.
- ▶ Produces bodily heat.

1 Lie face down on the ground with the legs straight out behind you, and the hands side by side under the thighs.

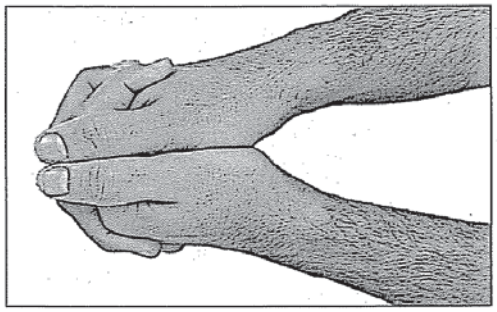


2 For the Half Locust, inhale as you raise the left leg. Do not twist the hips or bend the knee. Retain the breath as you hold for at least 5 seconds. Exhale as you lower the leg, and repeat on the other side. Raise the legs alternately 2–5 times each.





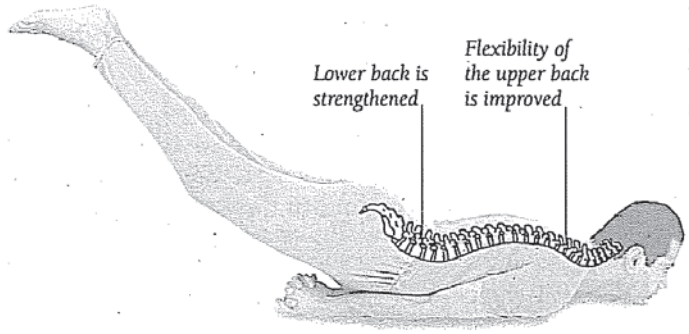
HAND POSITION 1
Making fists of the hands, bring them together beneath the thighs with the wrists touching.



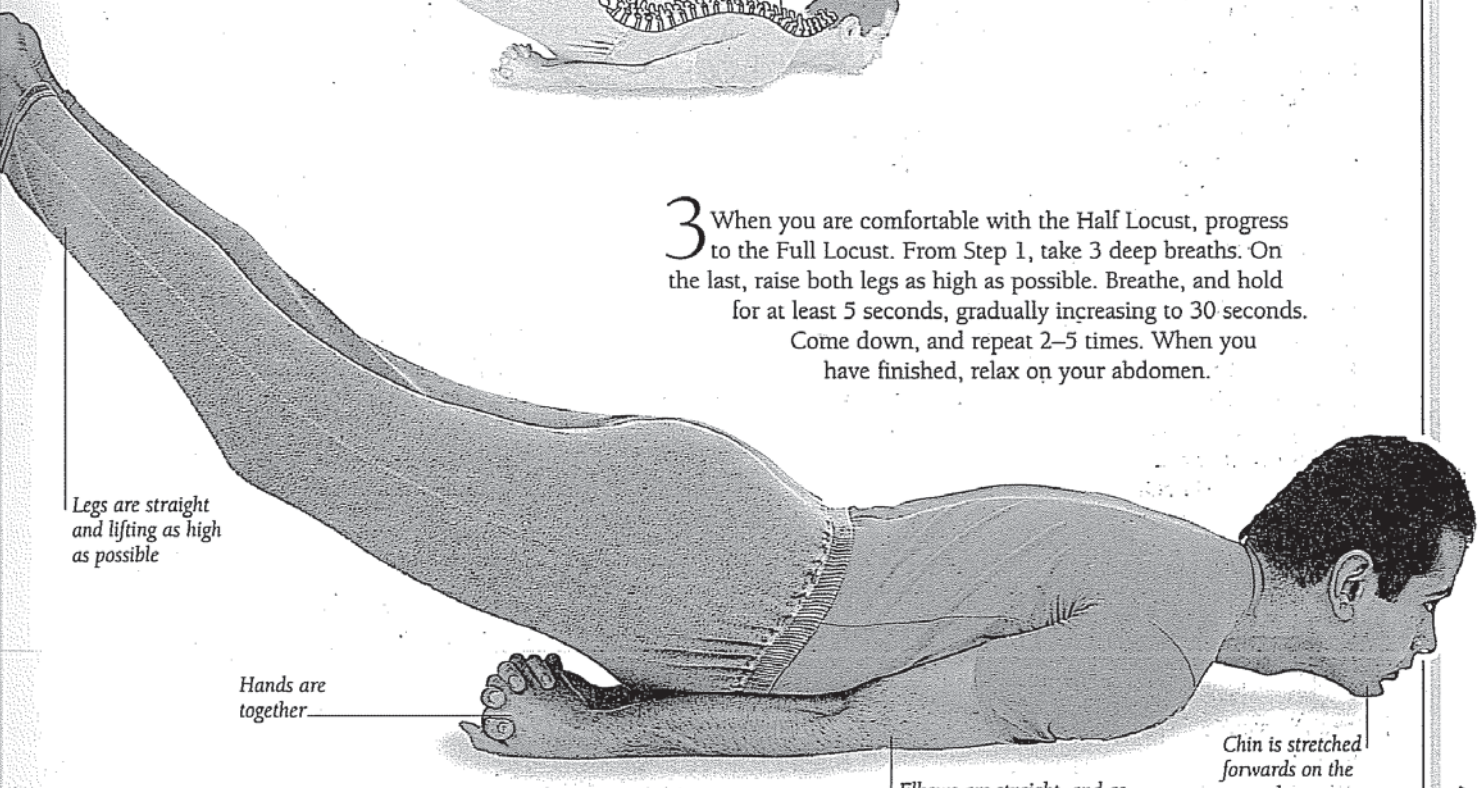
HAND POSITION 2
If you find this position more comfortable, clasp the hands together and interlock the fingers.

CHIEF BENEFIT

The Locust brings flexibility to the cervical (upper back) region, and strength to the lower back, but it is important to stretch the chin as far forwards as possible if these benefits are to be gained. When you first attempt the Locust, you may be disappointed to find that your feet rise only slightly from the floor. Do not be discouraged. This will improve rapidly with practice.

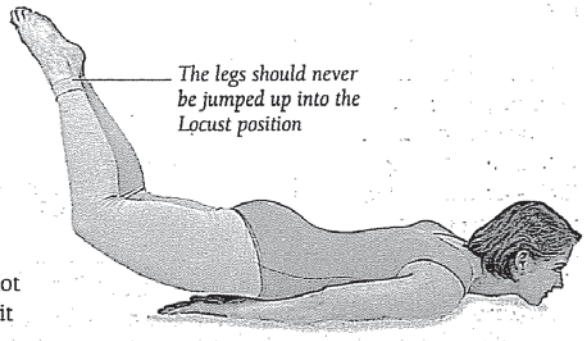


3 When you are comfortable with the Half Locust, progress to the Full Locust. From Step 1, take 3 deep breaths. On the last, raise both legs as high as possible. Breathe, and hold for at least 5 seconds, gradually increasing to 30 seconds. Come down, and repeat 2–5 times. When you have finished, relax on your abdomen.



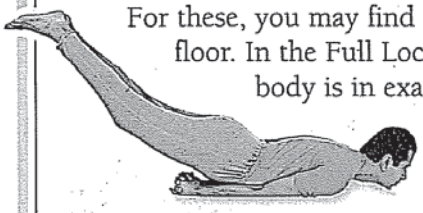
COMMON FAULTS

- ▶ Jumping, or trying to throw, the legs up into the position.
- ▶ The nose or forehead, rather than the chin, is resting on the ground.
- ▶ The chin is lifted off the ground.
- ▶ Hips are twisted.
- ▶ Knees are bent.
- ▶ One leg is higher than the other.
- ▶ Hands are twisted into different positions.
- ▶ Hands are apart instead of being held together.
- ▶ Breath is being held while in the position.
- ▶ CAUTION: The Locust should not be attempted while pregnant, as it puts pressure on the abdomen.



LOCUST *Variations*

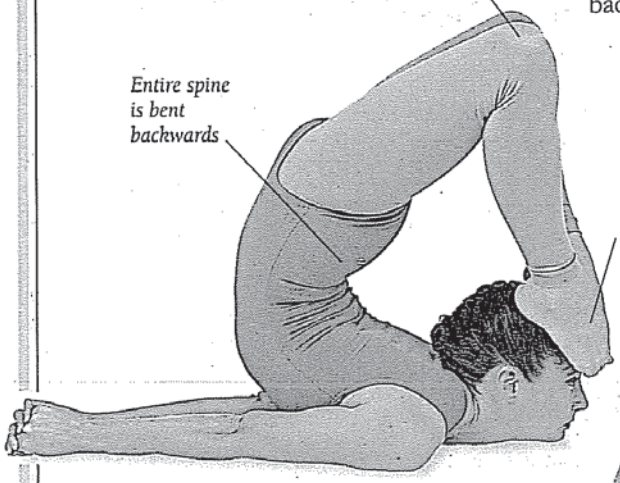
Once you have mastered the Locust, your back is ready to try the following variations. For these, you may find it helpful to place the hands palms downwards on the floor. In the Full Locust, with the feet raised directly above the head, the body is in exactly the opposite position to that of the Shoulderstand (see pp.34–7). The first two variations should not be attempted until you are able to lift your legs to an angle of 45 degrees above the ground in the Locust.



STARTING POSITION

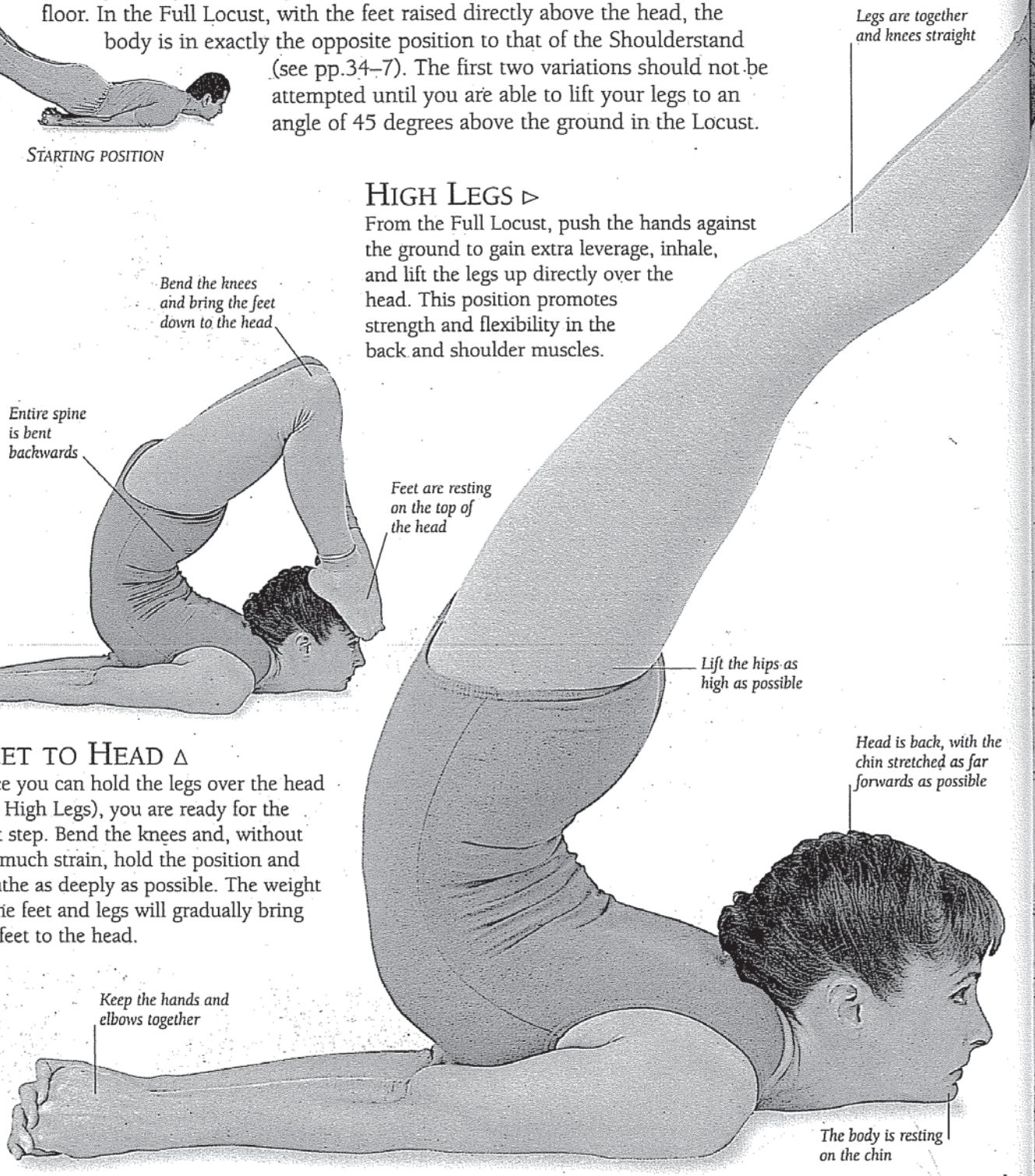
HIGH LEGS ▷

From the Full Locust, push the hands against the ground to gain extra leverage, inhale, and lift the legs up directly over the head. This position promotes strength and flexibility in the back and shoulder muscles.



FEET TO HEAD △

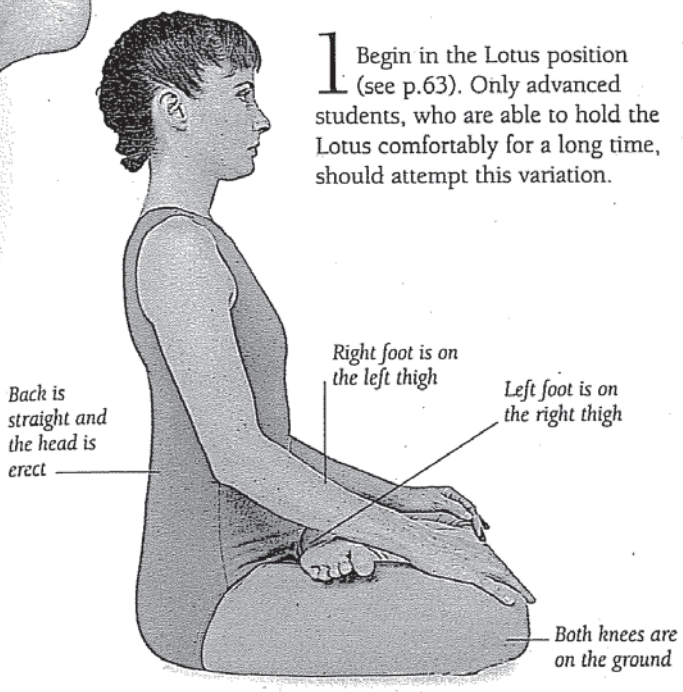
Once you can hold the legs over the head (see High Legs), you are ready for the next step. Bend the knees and, without too much strain, hold the position and breathe as deeply as possible. The weight of the feet and legs will gradually bring the feet to the head.



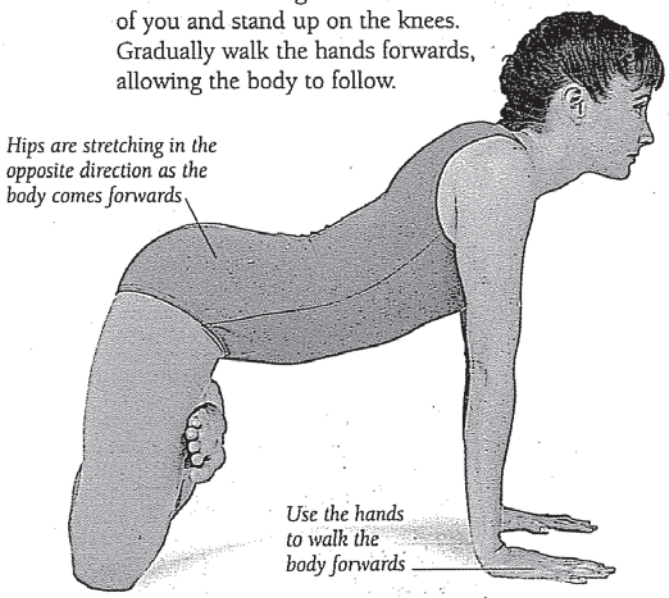
LOCUST IN LOTUS

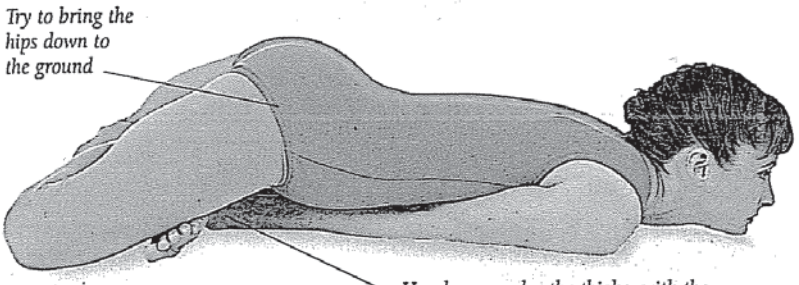
This variation on the Locust is an advanced asana that promotes great flexibility in the hip and lumbar, as well as the cervical, regions of the back.

1 Begin in the Lotus position (see p.63). Only advanced students, who are able to hold the Lotus comfortably for a long time, should attempt this variation.



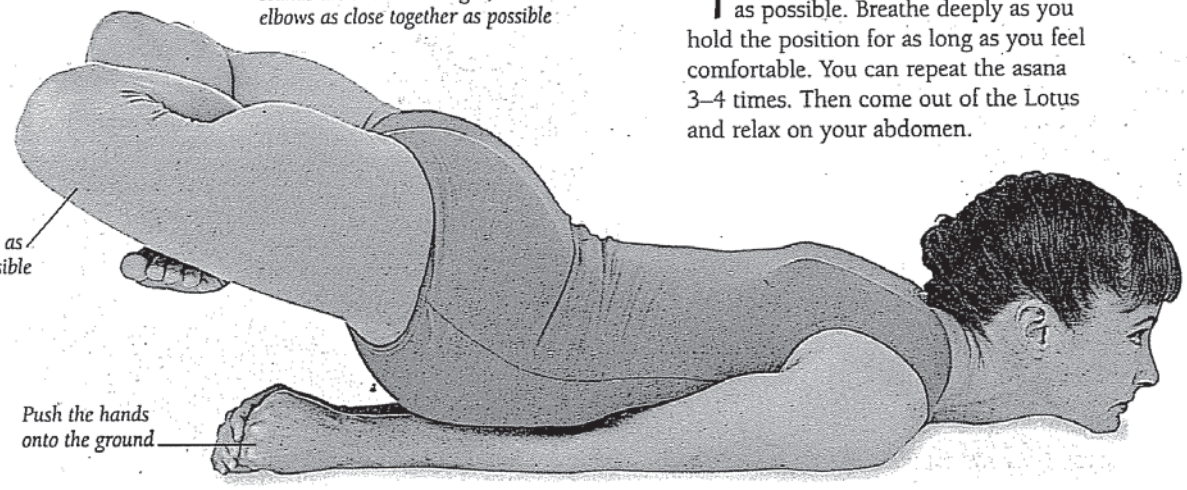
2 From the Lotus, bring your hands to the ground in front of you and stand up on the knees. Gradually walk the hands forwards, allowing the body to follow.





3 ◁ Come over onto the abdomen. Bring the hips down as flat on the floor as possible. Stretch the chin forwards. Clasp the fists and bring the hands beneath the body.

4 ▽ Inhale and lift the knees as high as possible. Breathe deeply as you hold the position for as long as you feel comfortable. You can repeat the asana 3–4 times. Then come out of the Lotus and relax on your abdomen.



8

THE BOW

Dhanurasana

The Bow gives a full backward bend to all parts of the back, combining and enhancing the benefits of the Cobra and the Locust. These three exercises form a set, and should be practised together. As the Forward Bend flexes the spine, the Bow extends it.

PHYSICAL BENEFITS

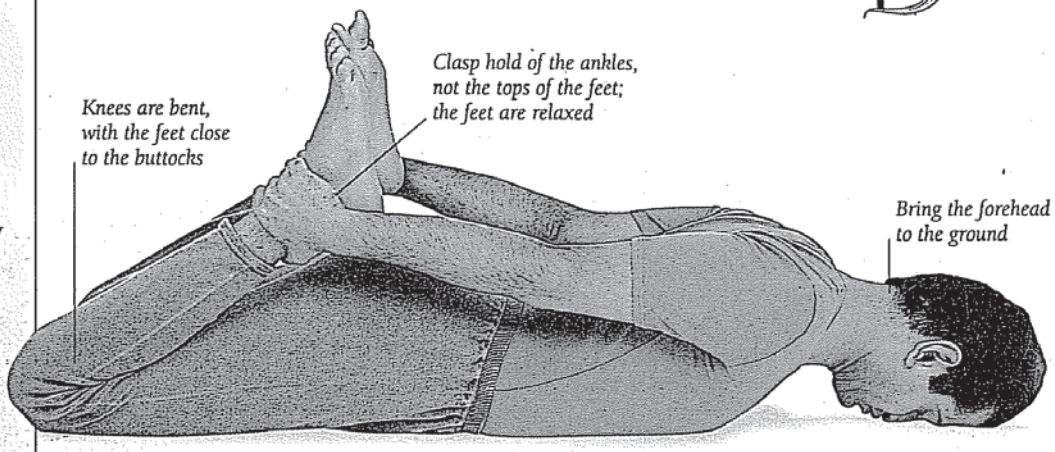
- ▶ Massages and invigorates the internal organs, especially the digestive organs.
- ▶ Strengthens the abdominal muscles.
- ▶ Expands the chest region – a benefit to people suffering from asthma and other respiratory problems.
- ▶ Enhances the elasticity of the spine.
- ▶ Massages all the muscles of the back.
- ▶ Just as the Forward Bend hyper-extends the spine, so the Bow hyper-contracts it.

MENTAL BENEFITS

- ▶ Regular practice develops internal balance and harmony.
- ▶ Strengthens concentration and mental determination.

PRANIC BENEFITS

- ▶ The person who practises the Bow regularly can never be lazy, but will be full of energy, vigour, and youthful vitality.
- ▶ Stimulates the lung, small intestine, stomach, liver, and urinary bladder meridians.

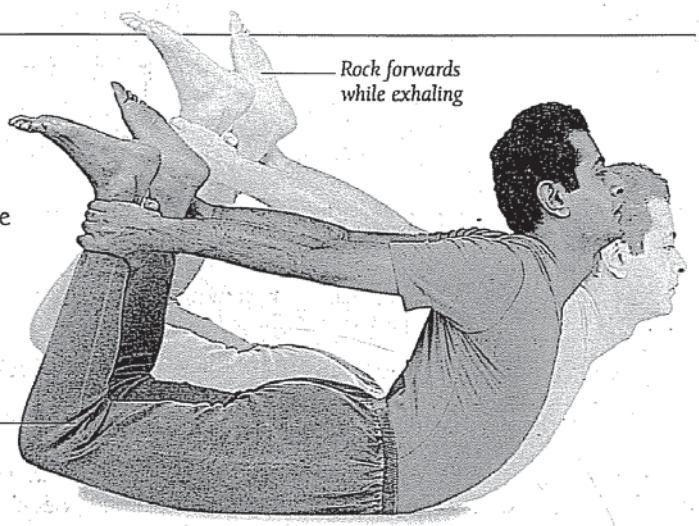


1 △ Lying on your abdomen, place the forehead onto the ground. Bend the knees, bringing the feet up. Reach back to grasp the respective ankles. The feet should be relaxed. There is no need to point the toes, as this uses energy unnecessarily.

2 ▷ Keeping the arms straight, inhale as you arch the entire body upwards. Lift the head, chest, and thighs off the ground. Hold the position for at least 10 seconds, increasing gradually to 1 minute. Repeat the pose 3–5 times.

ROCKING BOW

With the head back and the body arched upwards, use the breath to rock the body back and forth. Inhale as you rock back, and exhale as the body comes forwards. Remember to keep the elbows straight.



CHIEF BENEFIT

The Bow gives a full backward bend to the whole of the spine and all the muscles of the back, from the neck to the lower back, or lumbar region.

Entire body is bent backwards

Bring the feet as high, and as far away from the body, as possible

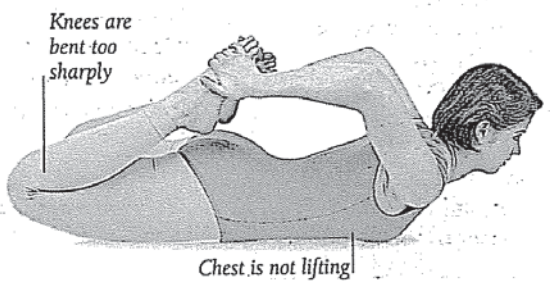
Keep your head back and look up; this will lift the chest higher

Keep the elbows straight

The entire body is resting on the abdomen

COMMON FAULTS

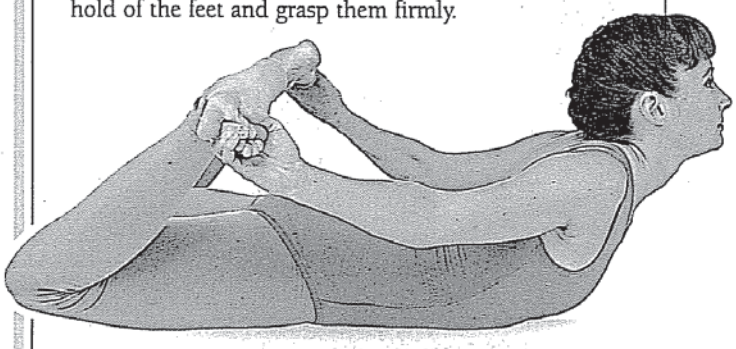
- Hands are clasped around the feet, rather than around the ankles.
- Only the upper part of body is being lifted up from the ground.
- Elbows are bent, and the knees are bent too sharply, allowing the heels to come down to the buttocks.
- Body is twisted to one side.
- Head is forwards, rather than being stretched up and back.
- CAUTION: Do not attempt the Bow, or any Bow variation, while pregnant, as these asanas increase the pressure on the abdomen.



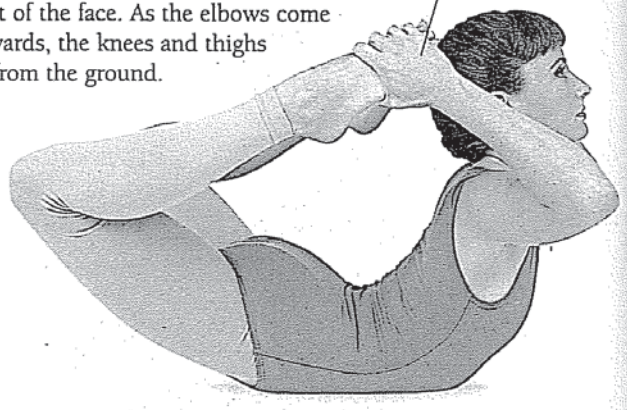
BOW *Variations*

As the spine and shoulders gain flexibility, you can begin to attempt the following advanced variations of the Bow. The first sequence shows the steps for moving from the Bow into the Full Bow position, an asana that produces an even more comprehensive bending of the spine.

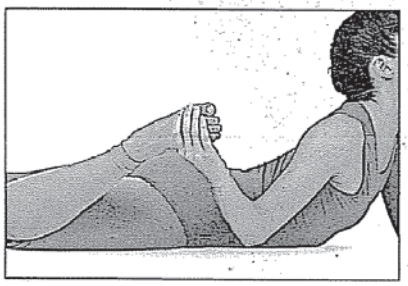
1 Rest on the abdomen with the knees bent and the feet raised. Lift the head and the chest from the ground. Turn the toes outwards slightly, and bring the hands under and around the feet. Take hold of the feet and grasp them firmly.



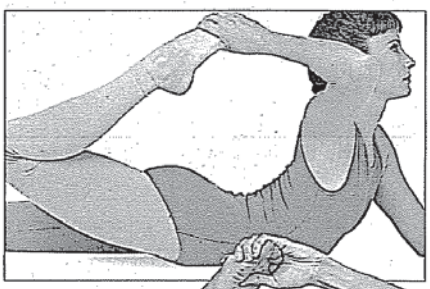
2 Gradually rotate the shoulders, bending the elbows and bringing them down, then out and forwards in front of the face. As the elbows come forwards, the knees and thighs lift from the ground.



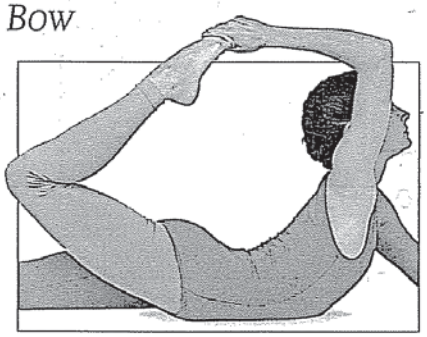
PREPARATORY EXERCISE - HALF FULL BOW



1 If you are unable to come into the Full Bow, this variation will encourage the necessary flexibility. With the elbow bent, bring the hand under the foot to grip it.

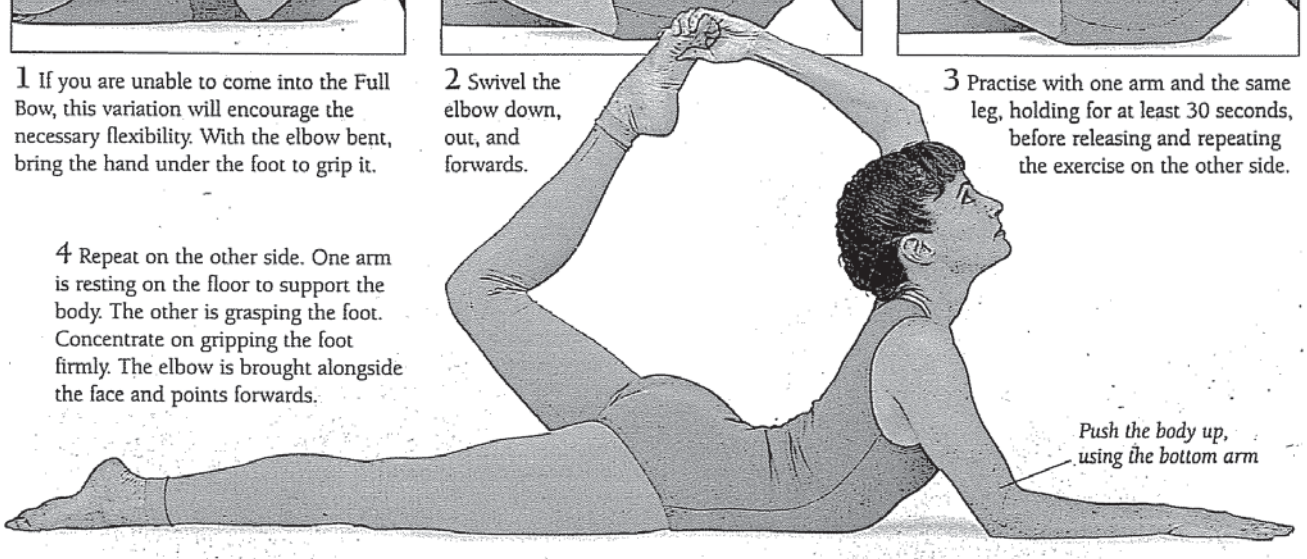


2 Swivel the elbow down, out, and forwards.



3 Practise with one arm and the same leg, holding for at least 30 seconds, before releasing and repeating the exercise on the other side.

4 Repeat on the other side. One arm is resting on the floor to support the body. The other is grasping the foot. Concentrate on gripping the foot firmly. The elbow is brought alongside the face and points forwards.



3 Arch further to come into the Full Bow. Breathe, and hold the pose for as long as is comfortable. Once you can hold it for 30 seconds or more, you can try to rock backwards and forwards, without releasing your grip on the feet.

The elbows are forwards and up

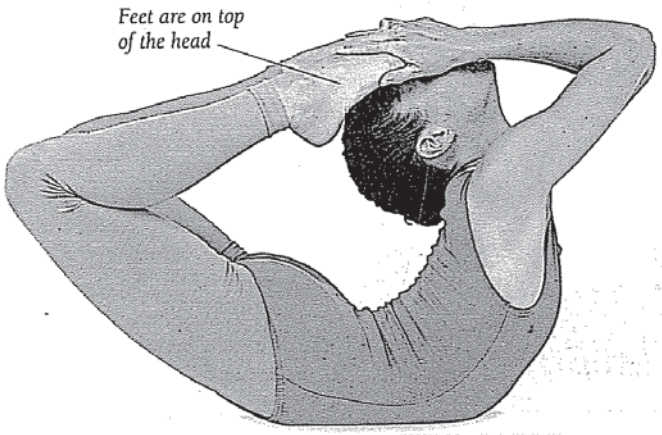
Head is back

The chest is fully expanded

Thighs are raised as far as possible

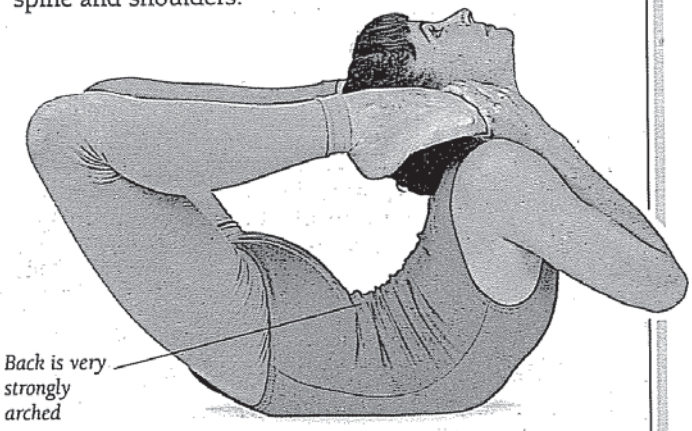
Feet to Head

From the Full Bow, gently try to bring the feet down and place them on the top of the head.



Feet to Shoulders

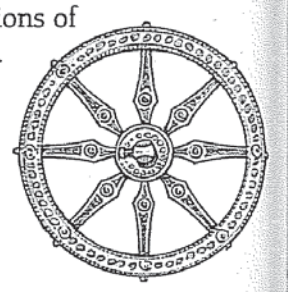
This even more advanced variation, bringing the feet to the shoulders, requires great flexibility of the entire spine and shoulders.

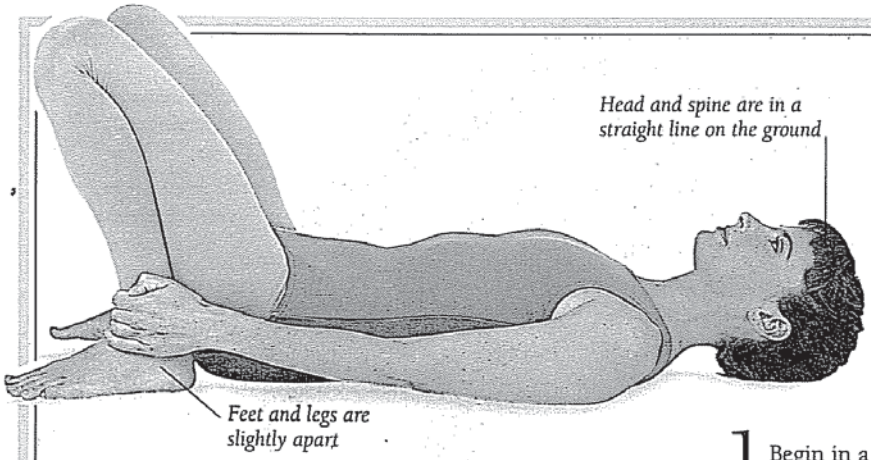


THE WHEEL

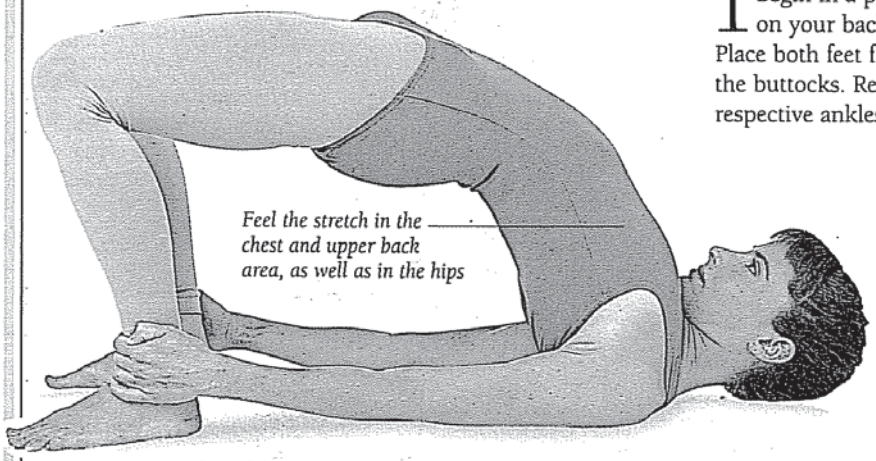
Chakrasana

This asana strengthens the muscles of the abdomen and thighs. It makes the back and hips supple, improves memory, and is said to relieve afflictions of the trachea and larynx.

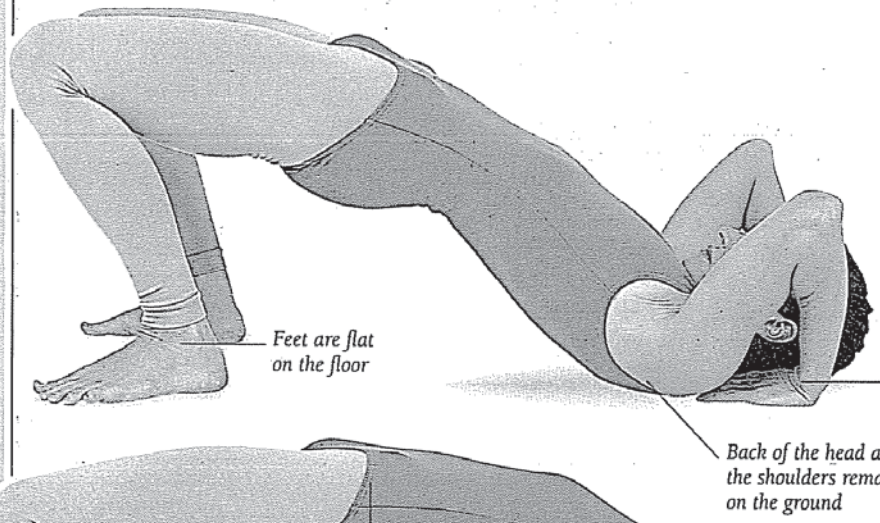




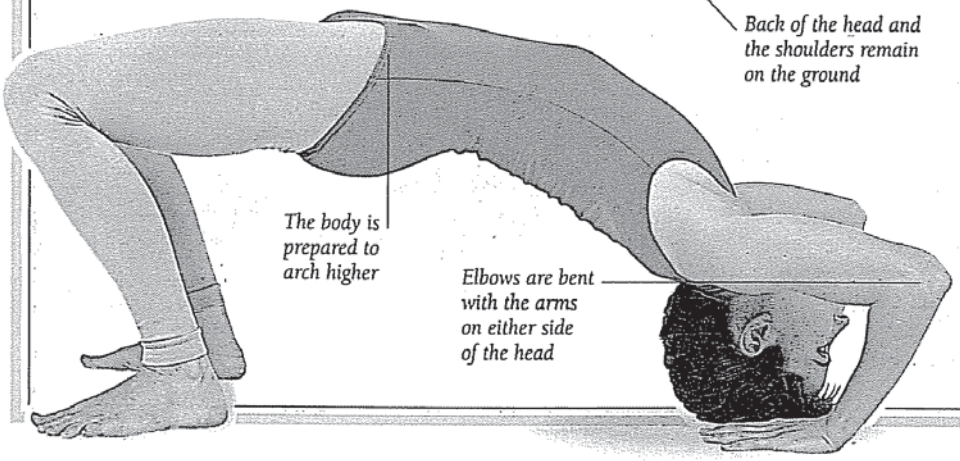
1 Begin in a preliminary pose, lying flat on your back with your knees bent. Place both feet flat on the floor close to the buttocks. Reach down and grasp the respective ankles with both hands.



2 Keeping the feet, head, and shoulders on the floor, arch the hips and chest up as high as possible. Breathe deeply and gently as you hold for at least 10 seconds. Lower the hips to the ground for a few moments and repeat 3–5 times.



3 When you find that Step 2 has become easy (which may take several weeks of practice), you can try this next step. With the hips up as high as possible, release the grip on the ankles and bring the hands to the ground behind the shoulders.



4 With the feet and knees parallel, begin to lift the body off the ground by pushing with the hands and feet. As the body begins to rise, the hips will lead, followed by the chest. The neck will arch back as you bring the top of the head to the ground in preparation for the final Wheel position.

Hips are stretching upwards

More flexible people may try to straighten the knees

Head is down between the arms

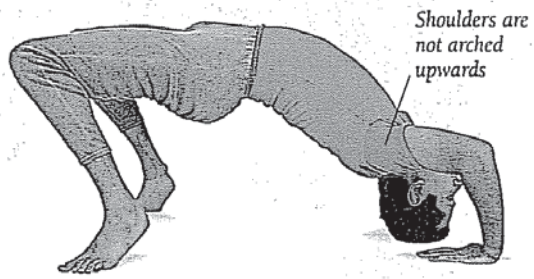
Keep the elbows straight

Do not allow the feet to turn outwards, as this will rotate the hips as well, and you will lose the correct alignment of the body

5 Inhale as you straighten the elbows, arching the hips and chest up as high as possible. Allow the head to drop back. Breathe deeply as you hold this position for at least 10 seconds, gradually increasing. When you find that you can hold it comfortably for 30 seconds, you may want to try some of the variations shown on the following pages.

COMMON FAULTS

- Hips are dropped, instead of pushing upwards.
- Head is resting on the ground.
- Feet and knees are turned out.
- Legs are not extended.
- Hips are rotated outwards, spoiling the alignment of the body.
- Feet are not flat on the ground.
- There is no comprehensive arch to the back.
- Body is twisted to one side.
- Hands are not in line with each other on either side of the head.
- Arms are not extended.



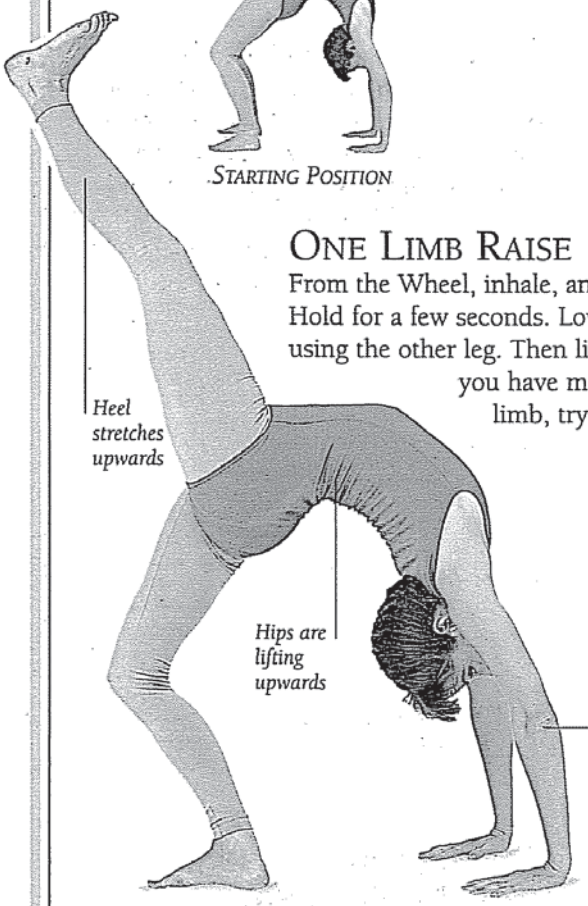
WHEEL *Variations*

When you feel that you can stand firmly and comfortably in the Wheel, many variations await you. These are designed to bring an even greater increase of strength and flexibility to the spine, shoulders, and upper back.

STARTING POSITION

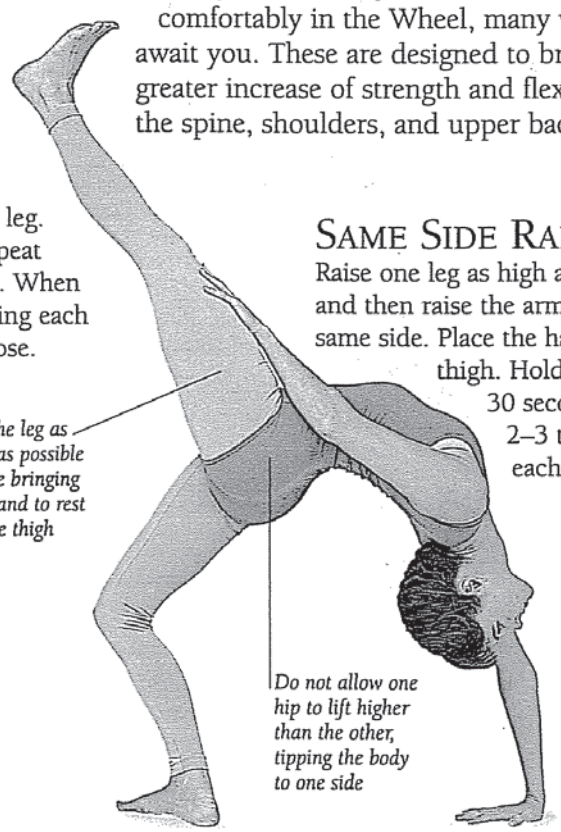
ONE LIMB RAISE

From the Wheel, inhale, and raise one leg. Hold for a few seconds. Lower, and repeat using the other leg. Then lift each arm. When you have mastered raising each limb, try the next pose.



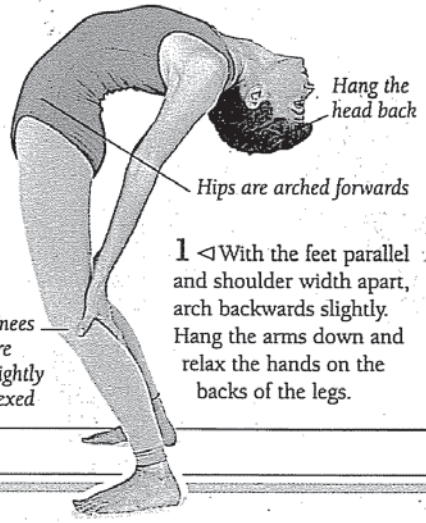
SAME SIDE RAISE

Raise one leg as high as possible, and then raise the arm on the same side. Place the hand on the thigh. Hold for up to 30 seconds. Repeat 2–3 times on each side.



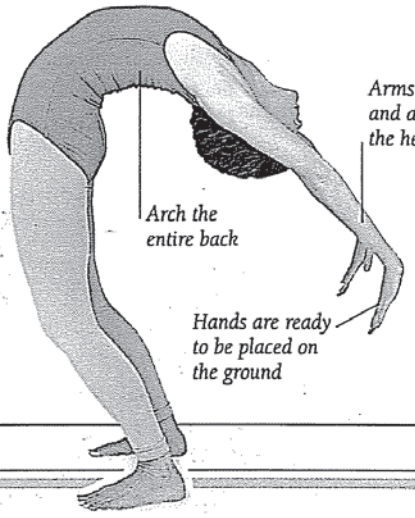
STANDING WHEEL

Advanced students can try to come into the Wheel from a standing position. This will give you a complete backward bend to all parts of the back, neck, shoulders, and limbs. Relax at the end of Step 1 before proceeding to Steps 2 and 3.

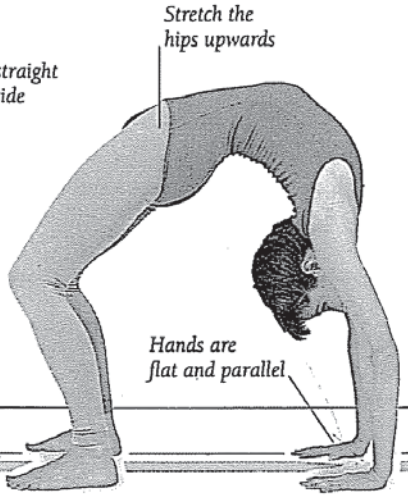


1 ◁ With the feet parallel and shoulder width apart, arch backwards slightly. Hang the arms down and relax the hands on the backs of the legs.

2 ▽ Bring the arms up and back, and continue to arch the body backwards. Look at the ground behind your head, and imagine placing your hands on it.

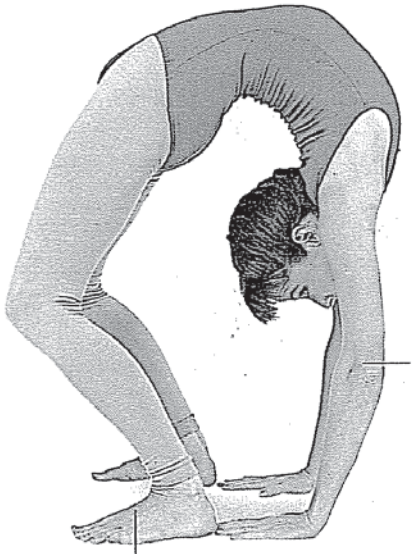


3 ▽ Slowly lower the hands to the ground, bending the knees more as necessary. Hold for as long as you feel comfortable, breathing deeply. Repeat the pose several times if you wish.



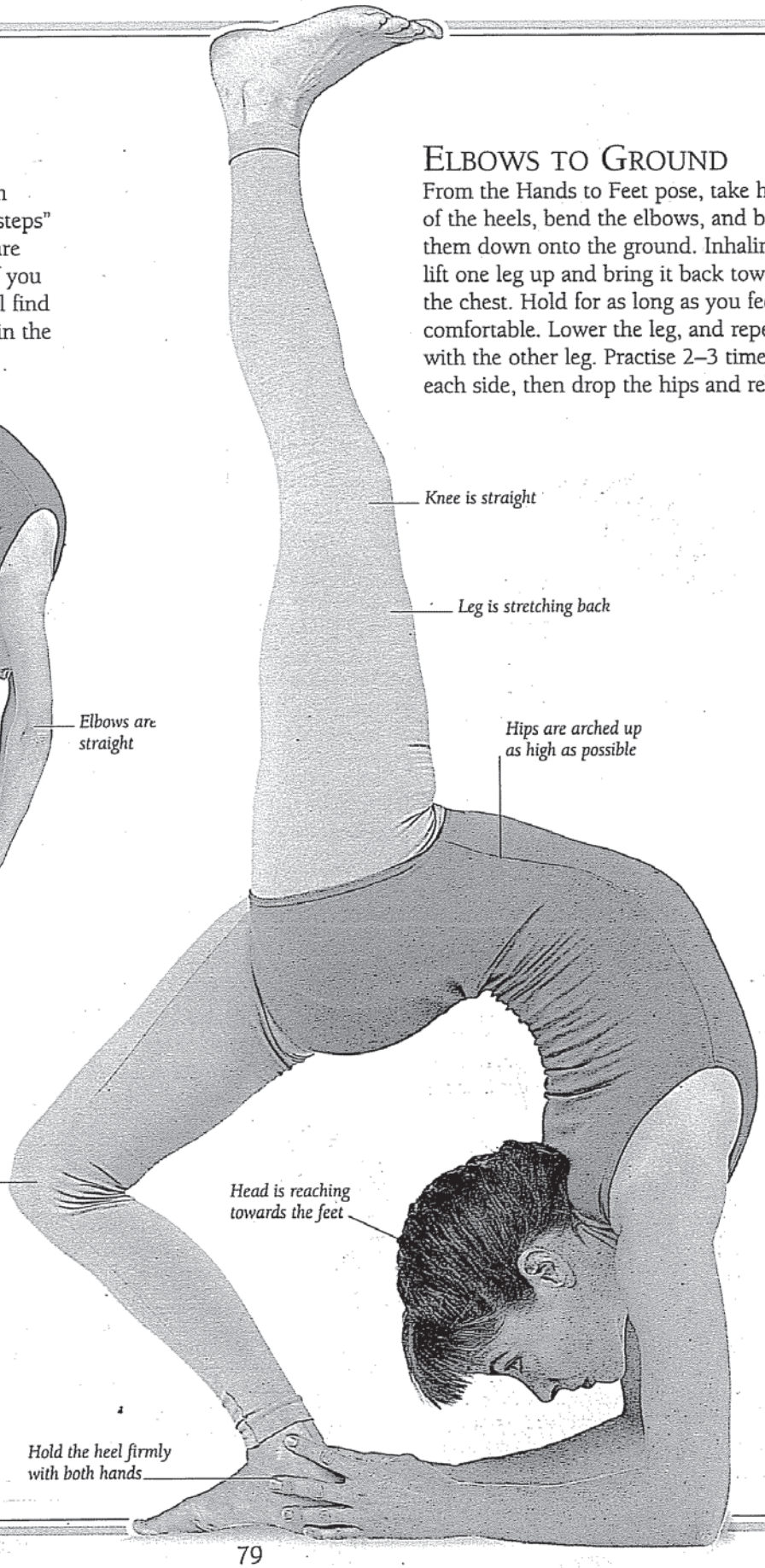
Hands to Feet

From the Wheel, walk the hands in towards the feet. Take very small "steps" with the hands. Imagine that you are trying to catch hold of the heels. If you practise on a regular basis, you will find yourself rapidly gaining flexibility in the spine and shoulder joints.



Elbows to Ground

From the Hands to Feet pose, take hold of the heels, bend the elbows, and bring them down onto the ground. Inhaling, lift one leg up and bring it back towards the chest. Hold for as long as you feel comfortable. Lower the leg, and repeat with the other leg. Practise 2–3 times on each side, then drop the hips and relax.

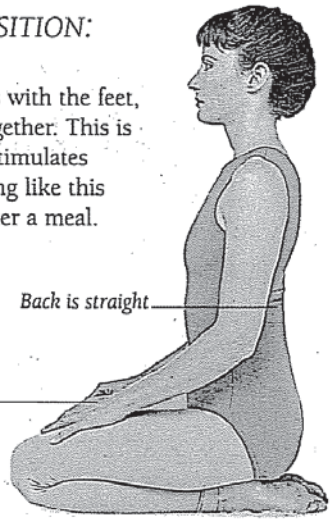


BACKWARD BENDS

Here we have a series of backward bending asanas that begin in Vajrasana, sitting on the heels with knees and feet together and the whole weight of the body on the knees and ankles. Each of these backward bends brings great steadiness to the body, as well as giving an excellent backward bend to the spine and back muscles. Vajrasana resembles Namaz, the Muslim prayer pose, and is a traditional Zen pose for meditation.

STARTING POSITION: VAJRASANA

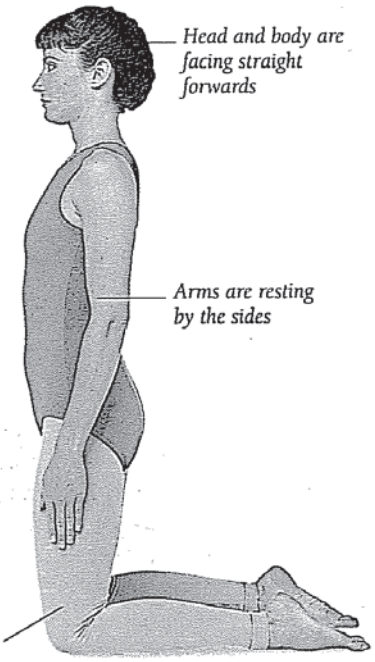
Sit up on the heels with the feet, knees, and legs together. This is Vajrasana, which stimulates digestion. Try sitting like this while eating, or after a meal.



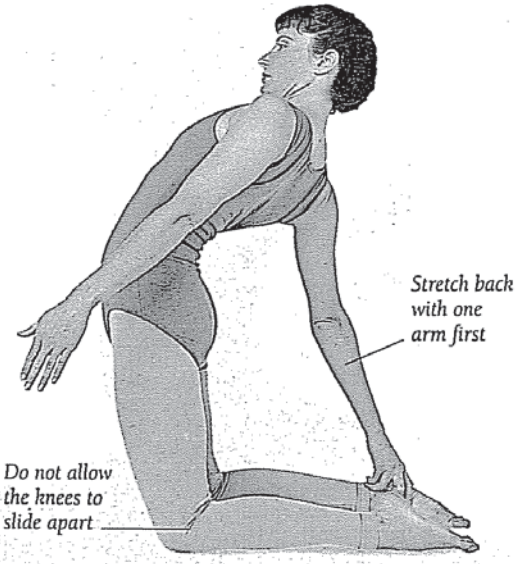
THE CAMEL

This position, known as the Asana of Firmness or the Sitting Wheel, strengthens the thighs while improving the flexibility of the back.

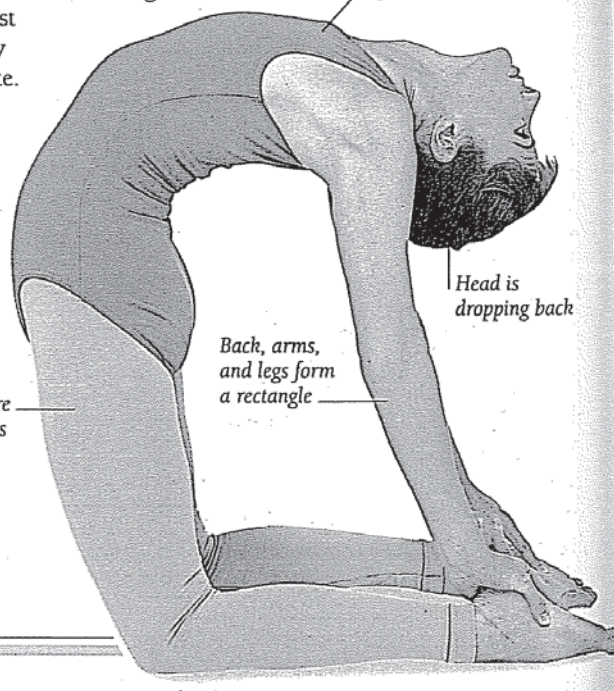
1 ▷ From Vajrasana, inhale as you lift the hips and trunk, standing up on the knees to prepare for the Camel. The hips and body rise, but the legs and feet do not change position.



2 ▽ With the right hand, clasp hold of the right heel. If you find it difficult to reach the heel, place the right hand flat on the floor behind the right foot.

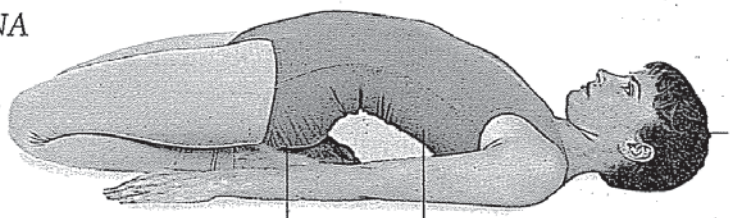


3 ▽ Allowing the head to drop back, reach down with the left hand to grasp the left heel (or place the left hand flat on the ground parallel to the right hand). Breathing gently, hold for at least 10 seconds, gradually increasing to 1 minute. Sit back on the heels and relax in the Child's pose (see p.26). Repeat 2–3 times.



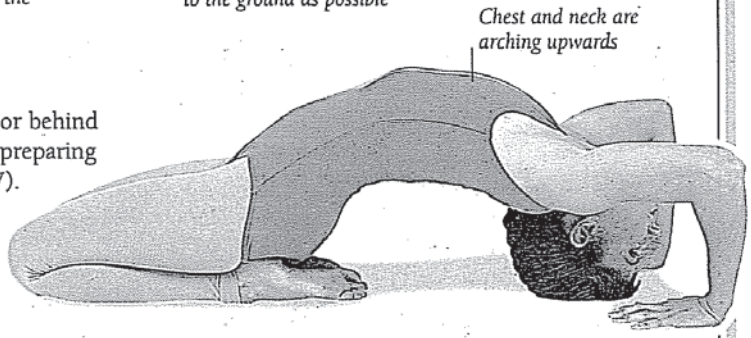
FULL DIAMOND - *POORNA SUPTA VAJRASANA*

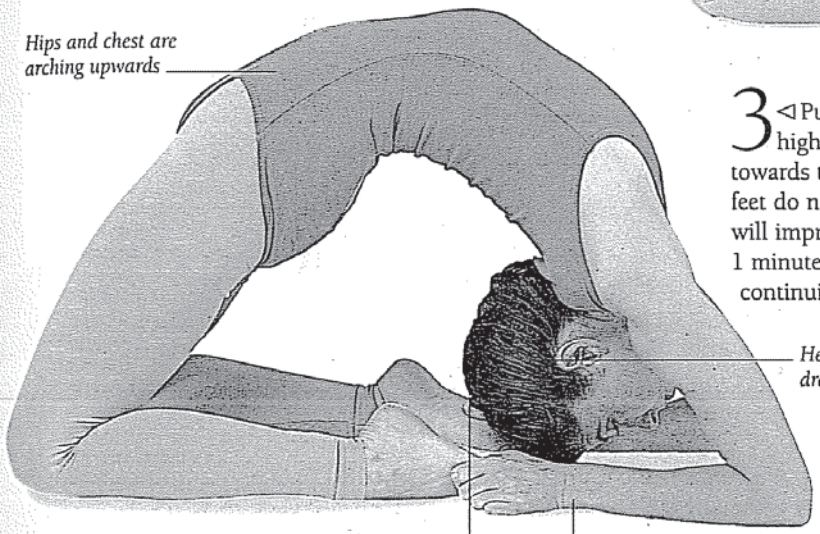
Full Diamond in Vajrasana is an advanced and challenging asana.



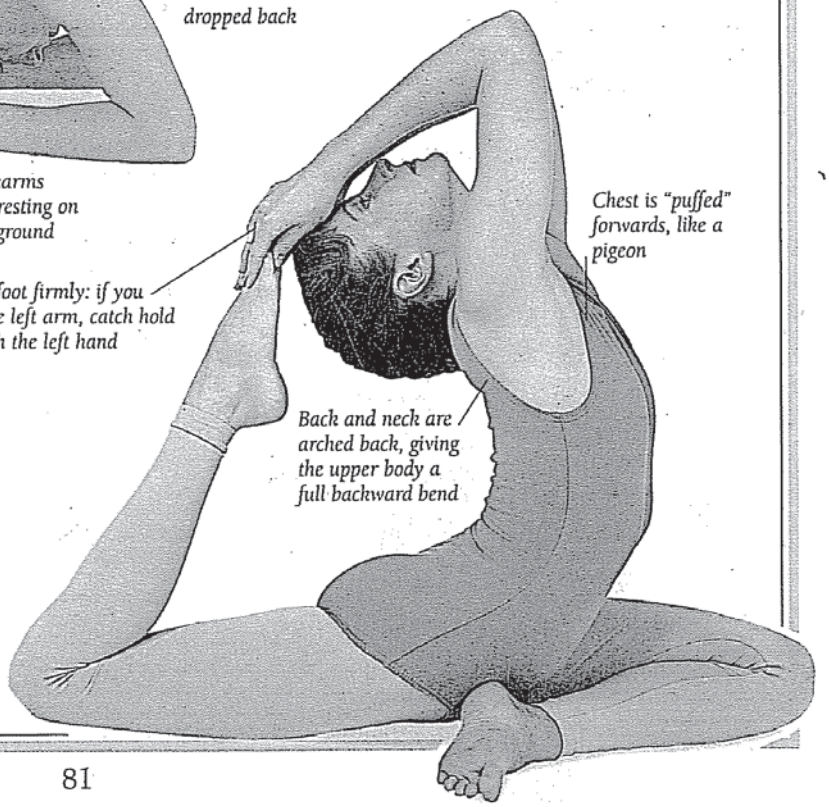
1 From Vajrasana, lie back onto the heels. Imagine that you are trying to bring the back flat onto the ground, though the heels are under the body. Keep the heels parallel to each other beneath the body.

2 ▷ Place the hands flat on the floor behind the shoulders, as you did when preparing to come into the Wheel (see pp.76–7). Lift the chest, sliding the top of the head onto the ground.





3 ◁ Pushing with the hands, lift the hips and chest as high as possible. Gradually "walk" the hands and head towards the feet. Do not be discouraged if the hands and feet do not meet; with practice, your backward bending will improve. Hold for 10 seconds, gradually increasing to 1 minute. Relax in the Child's pose (see p.26) before continuing with your asanas.



PIGEON - *KAPOTHASANA*

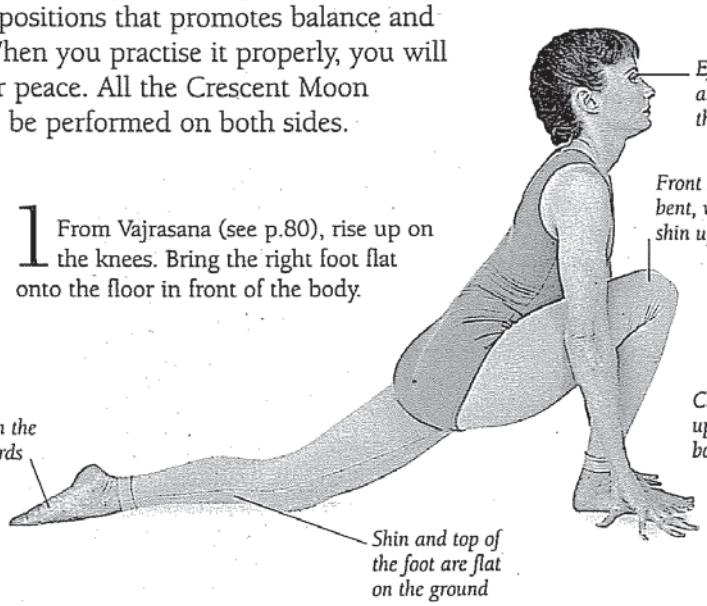
From Vajrasana, straighten the right knee and slide the leg back until the right thigh is by the left foot. Bend the right knee until the foot and calf are upright. Reach both arms over the head and catch hold of the right foot. Drop the head back and try to bring the right foot to the top of the head. Hold for at least 10 seconds. Return to Vajrasana, and repeat on the other side.

THE CRESCENT MOON

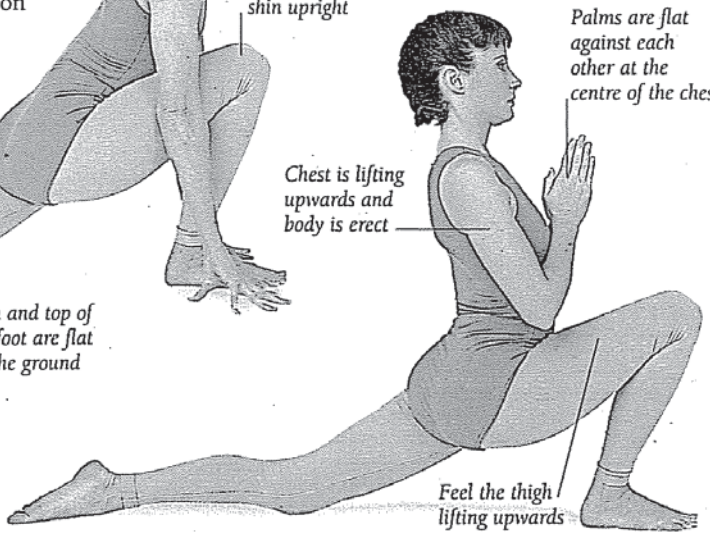
and Variations

An excellent backward-bending exercise, the Crescent Moon also stretches the hips, thighs, and legs. It is a beautiful flowing series of positions that promotes balance and concentration. When you practise it properly, you will derive great inner peace. All the Crescent Moon variations should be performed on both sides.

1 From Vajrasana (see p.80), rise up on the knees. Bring the right foot flat onto the floor in front of the body.

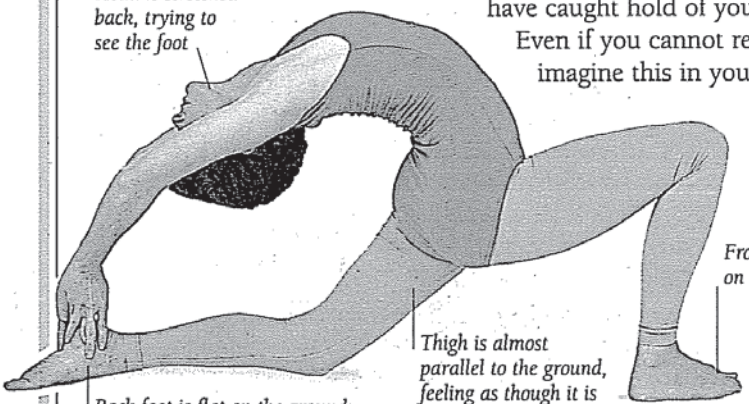


2 ▷ Bring the palms together at the chest in Prayer position. Hold this pose for a few moments to achieve your physical and mental balance, in preparation for the Crescent Moon.



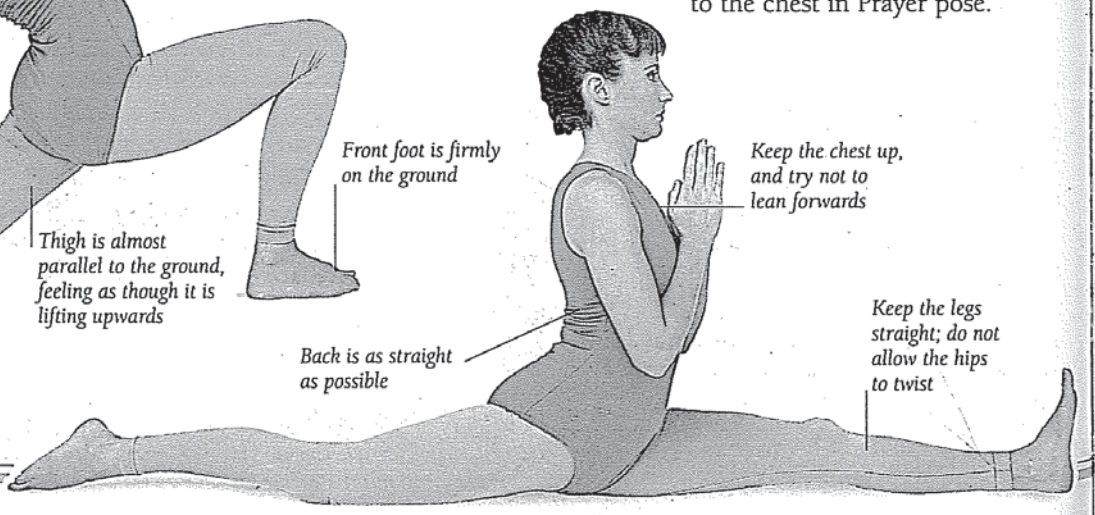
HANDS TO ANKLE

When you have sufficient spinal flexibility, continue from Crescent Moon, arching back until you have caught hold of your back foot. Even if you cannot reach the foot, imagine this in your mind.



ANJANEYASANA

From Step 1 above, lift the toes of the front foot and slide the heel forwards, until the back of the front leg and the front of the back leg rest on the floor. Keep facing forwards. Bring the hands to the chest in Prayer pose.



3 Straighten the elbows, stretching the arms up and back over the head. As the arms arch back, allow the body to follow. Be aware of keeping the palms flat against each other and the arms straight alongside the ears. Hold for as long as it feels comfortable. Repeat on the other side.

Arms are stretched back

Chest and the entire upper body are arched

Head is dropped back

Knee is directly above the toes

Hips are lifting and stretching forwards

Top of the foot remains flat on the ground

Keep the right foot flat on the ground

CRESCENT *ANJANEYASANA*

From Anjaneyasana, straighten the elbows. Keeping the palms flat against each other, bring the arms up and alongside the ears. Arch back into this variation of the Crescent Moon that benefits the spine, hips, and thighs.

Chest is arched and facing straight ahead

Head is back with arms alongside the ears

Legs should be straight, and flat on the ground

Hips must be straight, not rotated to either side

PIGEON IN *ANJANEYASANA*

From Anjaneyasana, bend the back knee and bring the foot up towards the head. Bring both arms over the head, catch hold of the foot, and try to bring it to the head.

Elbows are pointing upwards on either side of the head

Head is back to the foot

Be careful to keep the hips straight

Front heel is stretching forwards

9

THE SPINAL TWIST

Ardha Matsyendrasana

After the forward and backward bending of the spine, the Spinal Twist gives a lateral stretch to the vertebrae, back muscles, and hips. This important asana takes its Sanskrit name from the great sage Matsyendra, one of the first teachers of Hatha Yoga.

PHYSICAL BENEFITS

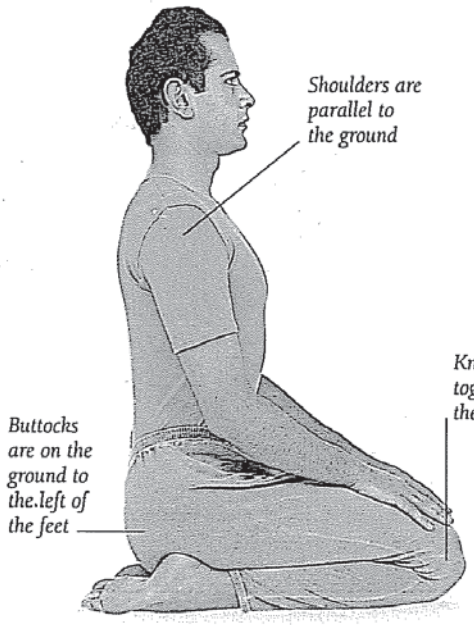
- ▶ Helps to keep the spine elastic by retaining side-to-side mobility.
- ▶ Helps to relieve muscular problems in the back and hips.
- ▶ Removes adhesions in the joints caused by rheumatism.
- ▶ Increases the synovial fluid of the joints, and makes the joints very active.
- ▶ Tones the roots of the spinal nerves and the sympathetic nervous system, and brings a fresh supply of blood.
- ▶ Massages the abdominal muscles, relieving digestive problems.
- ▶ Benefits the gall bladder, spleen, kidneys, liver, and bowels.

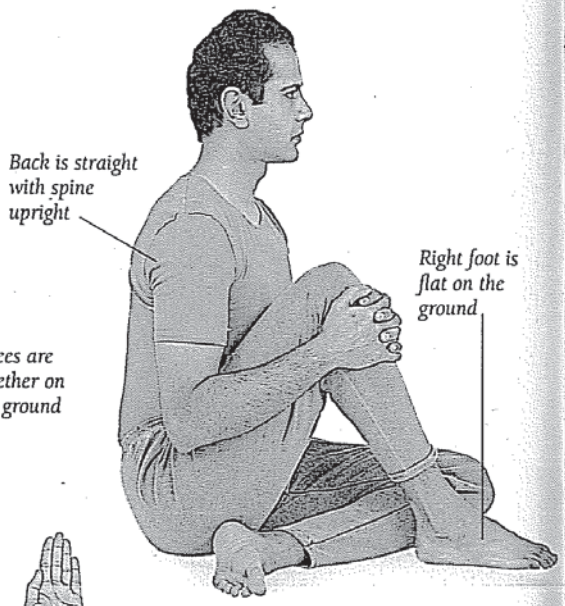
MENTAL BENEFITS

- ▶ Helps to cure disorders of the nervous system.
- ▶ Brings peace of mind.

PRANIC BENEFITS

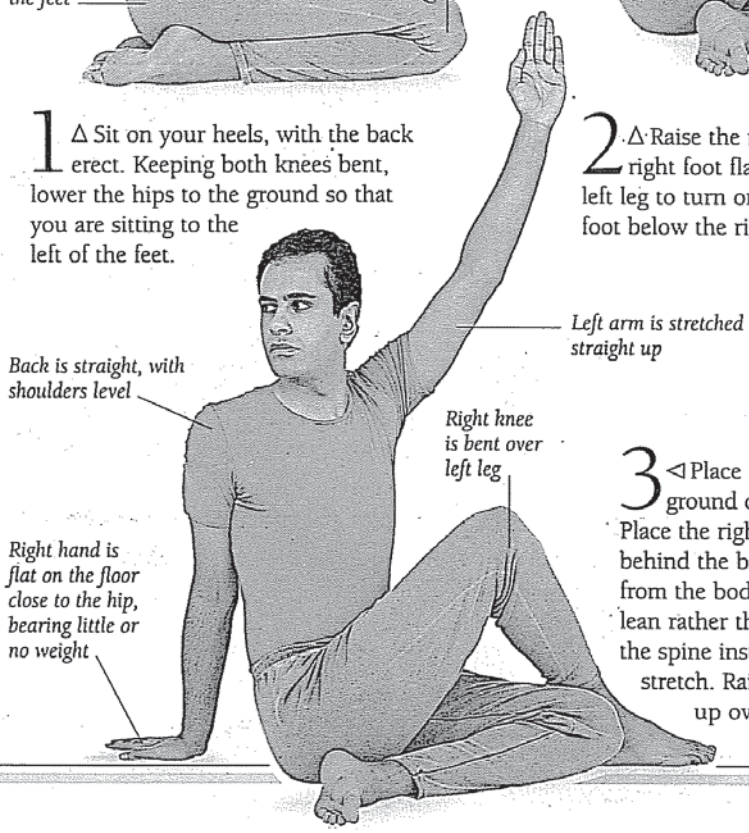
- ▶ Augments the Prana Sakti (vigour and vitality), removing innumerable diseases.
- ▶ Rouses the Kundalini (potential spiritual energy).





1 △ Sit on your heels, with the back erect. Keeping both knees bent, lower the hips to the ground so that you are sitting to the left of the feet.

2 △ Raise the right knee and place the right foot flat on the floor. Allow the left leg to turn on its side, with the left foot below the right leg.



3 ◁ Place the right foot on the ground outside the left thigh. Place the right hand flat on the floor behind the back, but not too far away from the body, as this will make you lean rather than twist, compressing the spine instead of giving it a lateral stretch. Raise the left arm straight up over the head.

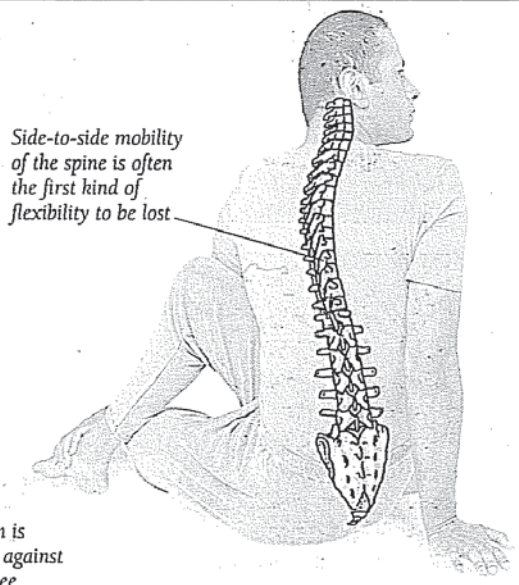
Head is erect and turned to look over the shoulder

Shoulders are parallel to the ground

Left arm is pushing against right knee

Spine is straight

Right hand is holding the left ankle

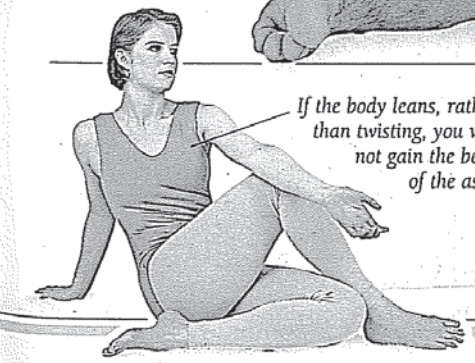


Side-to-side mobility of the spine is often the first kind of flexibility to be lost

CHIEF BENEFIT

The Spinal Twist gives a lateral stretch to the entire body. This helps to keep the spine elastic by retaining and improving its side-to-side mobility.

4 Bring the left arm over the right side of the right knee. Reach around to catch hold of the right ankle. Hold the pose for at least 30 seconds, working up to 1 minute, breathing deeply. Release, and repeat on the other side.



If the body leans, rather than twisting, you will not gain the benefit of the asana

COMMON FAULTS

- Buttocks are lifting off the ground.
- Back is not straight, and the body is leaning, rather than twisting laterally.
- Looking over the wrong shoulder.
- Hand is allowed to hang freely, rather than clasping the opposite ankle.
- Foot is not flat on the ground.
- Back hand is too far from the body.

STARTING POSITION

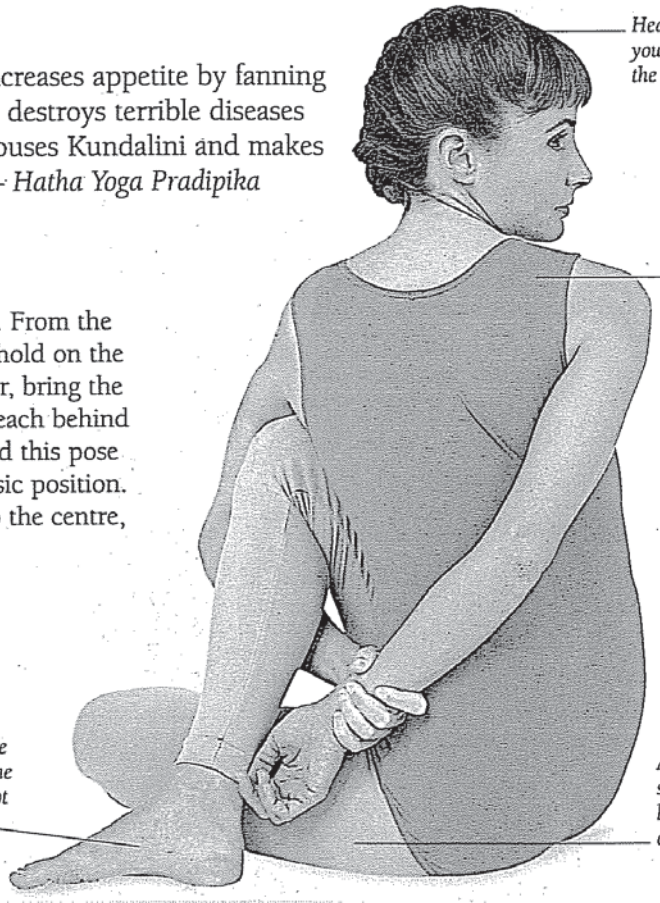
SPINAL TWIST

Variations

"Matsyendrasana increases appetite by fanning the gastric fire, and destroys terrible diseases in the body. ... It rouses Kundalini and makes the moon steady." – *Hatha Yoga Pradipika*

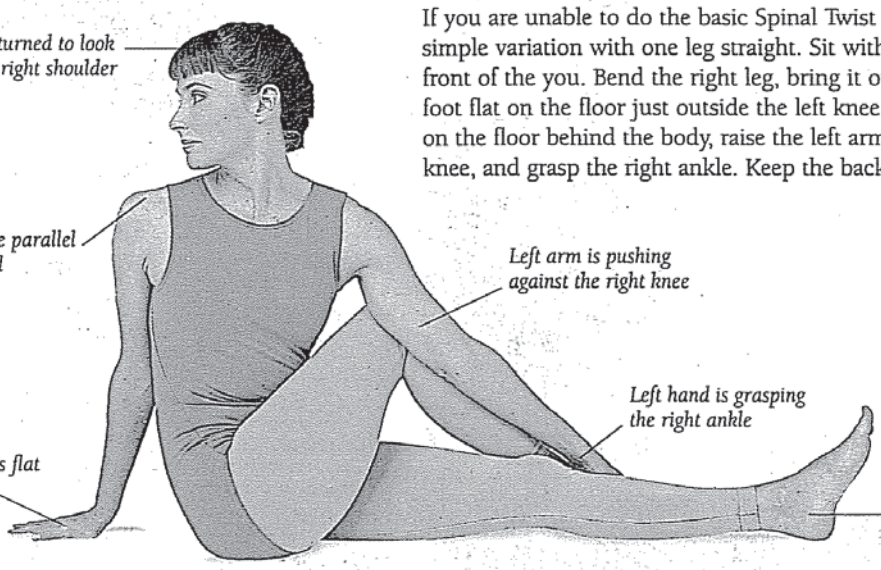
WRIST GRASP

This is a variation of the Spinal Twist. From the basic position (see p.85), release the hold on the ankle: Without dropping the shoulder, bring the left hand under the right knee, and reach behind the back to grasp the right wrist. Hold this pose for as long as you would hold the basic position. Release your grasp, bring the body to the centre, and repeat in the opposite direction.



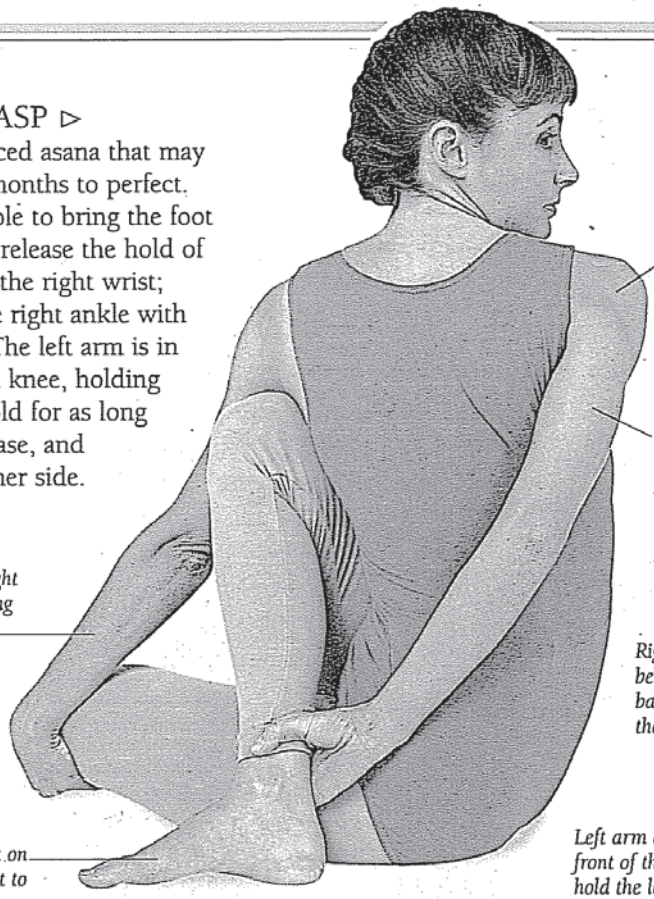
BEGINNER'S VARIATION

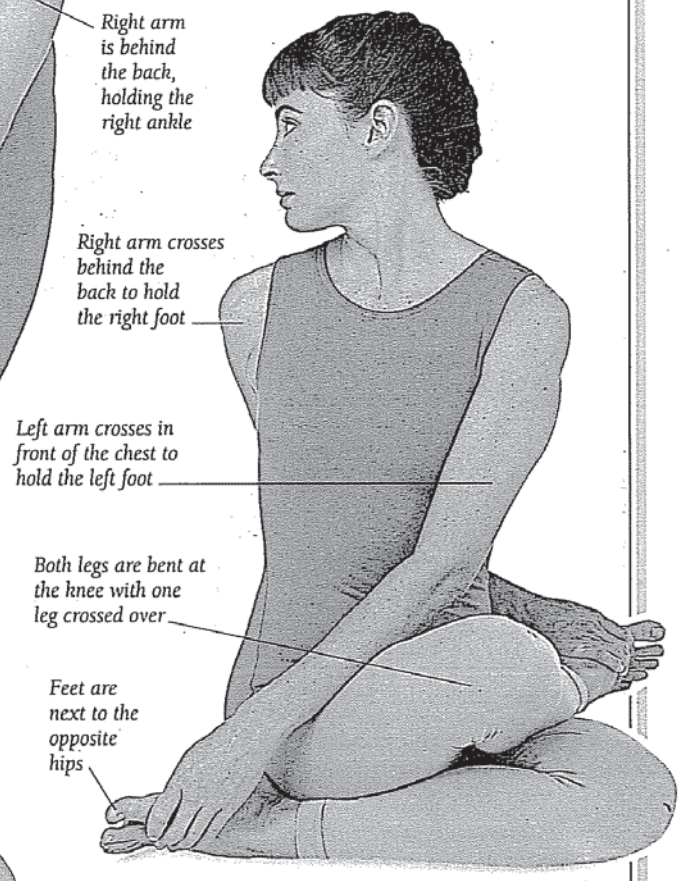
If you are unable to do the basic Spinal Twist (see pp.84–5), try this simple variation with one leg straight. Sit with both legs straight out in front of the you. Bend the right leg, bring it over the left, and place the foot flat on the floor just outside the left knee. With the right hand flat on the floor behind the body, raise the left arm, bring it over the right knee, and grasp the right ankle. Keep the back as straight as possible.



ANKLE CLASP ▷

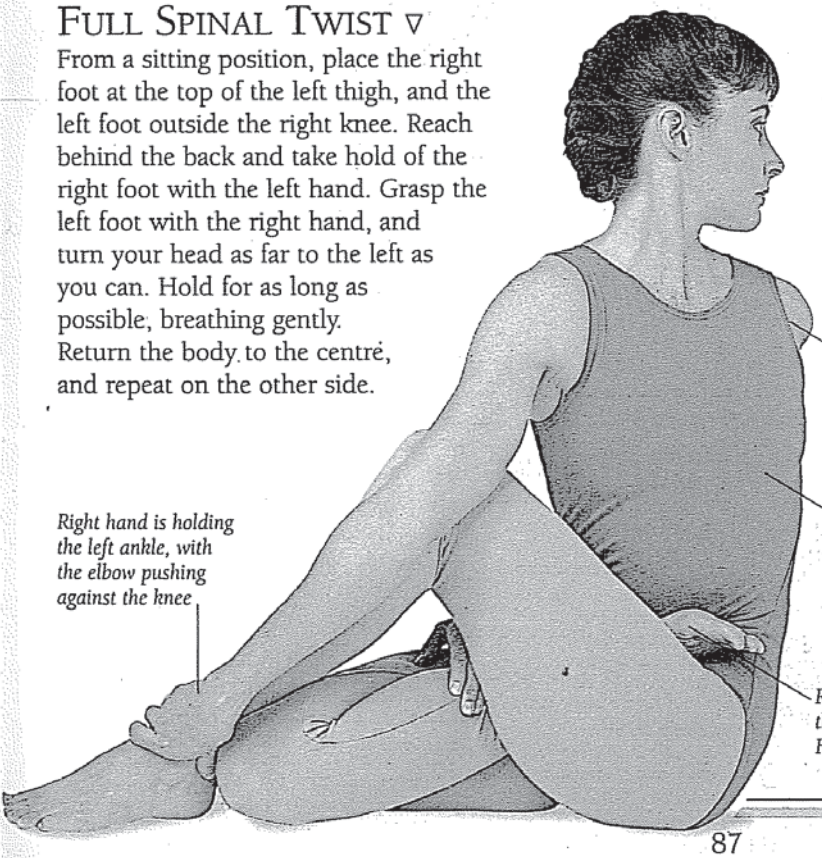
This is an advanced asana that may take you many months to perfect. When you are able to bring the foot close to the hip, release the hold of the left hand on the right wrist; catch hold of the right ankle with the right hand. The left arm is in front of the right knee, holding the left knee. Hold for as long as possible. Release, and repeat on the other side.





FULL SPINAL TWIST ▽

From a sitting position, place the right foot at the top of the left thigh, and the left foot outside the right knee. Reach behind the back and take hold of the right foot with the left hand. Grasp the left foot with the right hand, and turn your head as far to the left as you can. Hold for as long as possible, breathing gently. Return the body to the centre, and repeat on the other side.



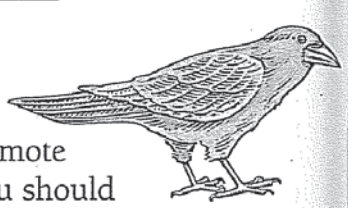
KNEES TOGETHER △

Bend both knees, with the right knee directly over the left knee. Bring the right arm behind the back, and grasp the right foot. The left arm crosses the body to hold the left foot. Hold for 10 seconds, gradually increasing to 1 minute. Release, and repeat on the opposite side.

10A

THE CROW

Kakasana



The Crow and the Peacock (see pp.90–1) are excellent balancing exercises that promote physical and mental balance. You should perform one or the other as a Basic Asana.

PHYSICAL BENEFITS

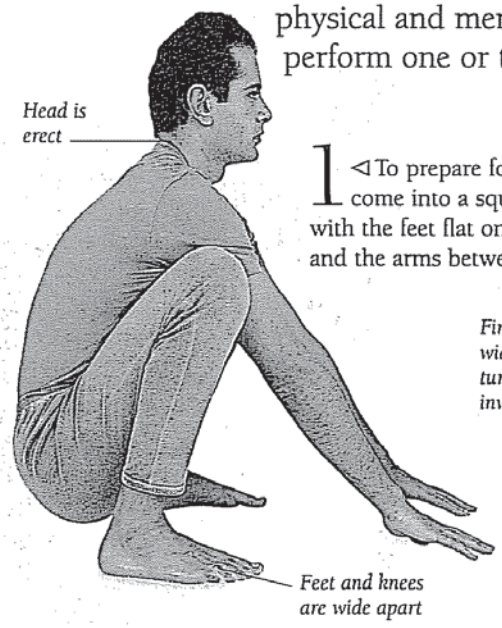
- ▶ Strengthens the arms, wrists, and shoulders.
- ▶ Stretches all the muscles in these regions, bringing increased flexibility.
- ▶ Stretches and "lubricates" the joints, tendons, and ligaments of the upper body.
- ▶ Expands the chest and increases breathing capacity.
- ▶ Revitalizes the nerves and muscles of the hands, the wrists, and the forearms.
- ▶ Prepares the chest and arms for any kind of strenuous work.

MENTAL BENEFITS

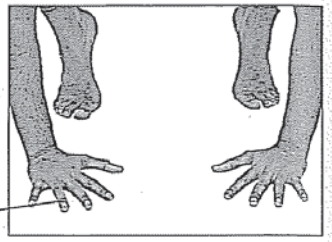
- ▶ Like all the balancing positions, the Crow demands, and greatly develops, the powers of concentration.
- ▶ Nourishes mental poise and awareness.
- ▶ Encourages a feeling of inner balance.
- ▶ Prepares the mind for meditation.

PRANIC BENEFITS

- ▶ Removes lethargy.
- ▶ Brings new-found energy flowing into the shoulders and arms.

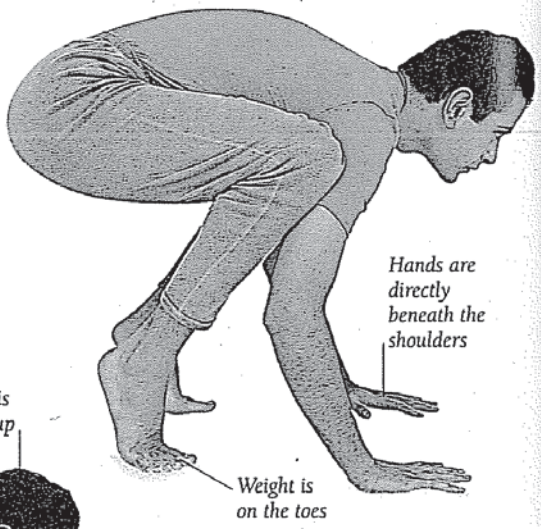


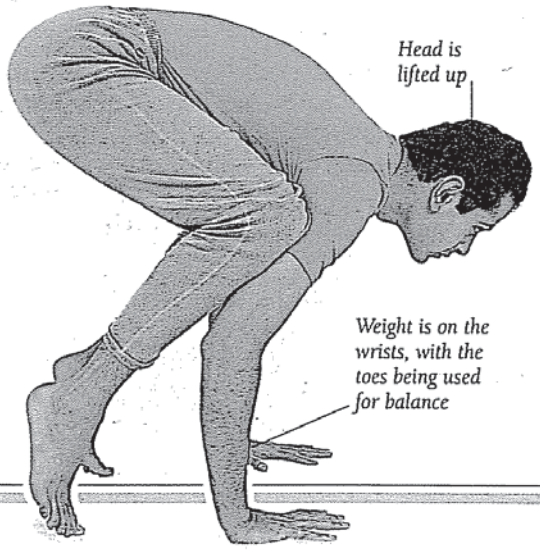
1 ◁ To prepare for the Crow, come into a squatting position with the feet flat on the ground and the arms between the knees.



2 △ Place the palms flat on the floor directly below the shoulders. Spread the fingers like the feet of a crow.

3 ▷ Bend the elbows outwards, so that the upper arms can act as supports. Rise onto your toes, and rest the knees on the respective upper arms.

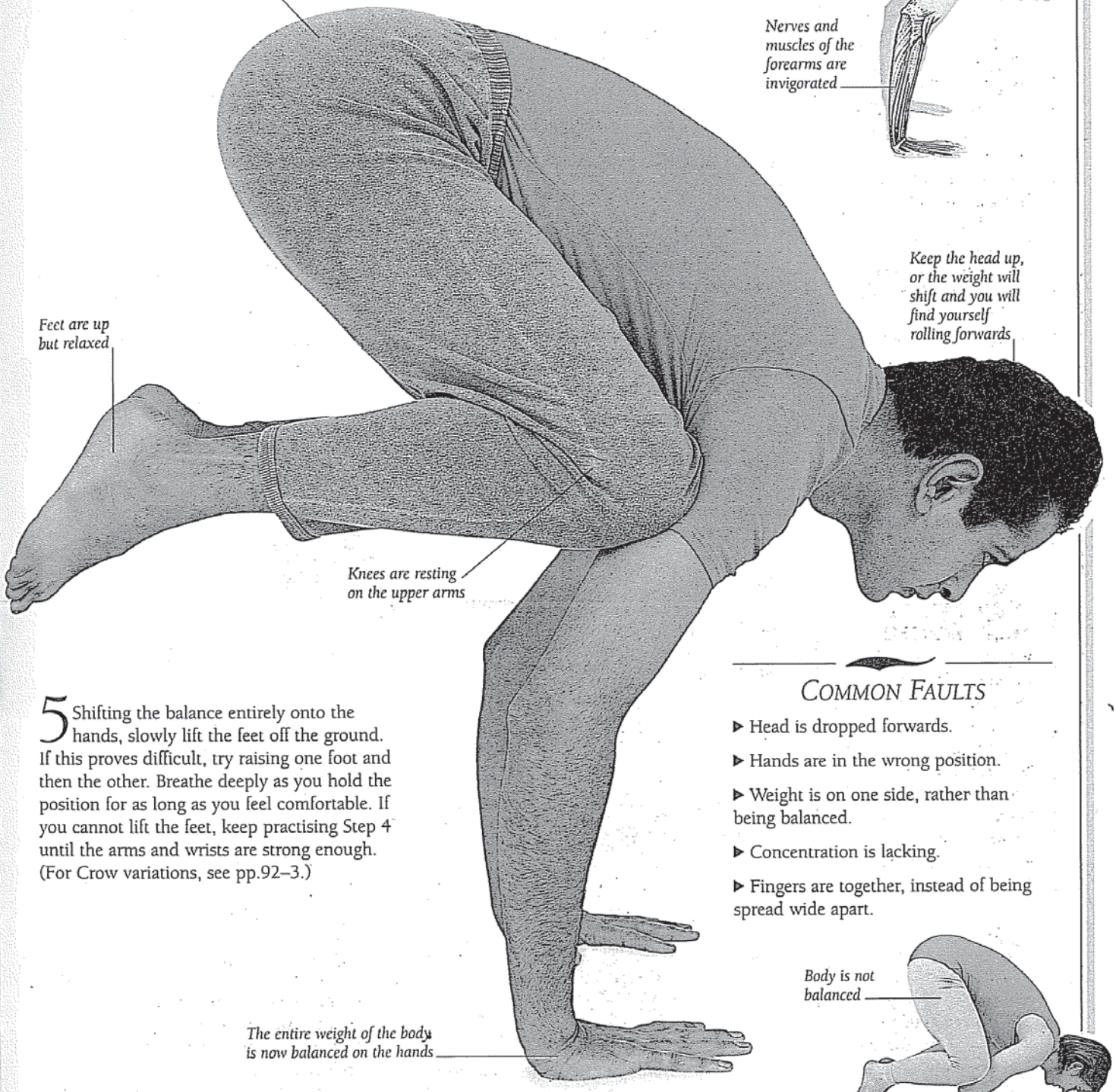




4 ◁ Focus the eyes on a point a little way in front of the body, and inhale deeply. Retain the breath as you gradually shift the weight forwards onto the hands. You will feel the stretch in the forearm and wrist. This is an excellent position for combating the ravages of tendonitis.

CHIEF BENEFIT

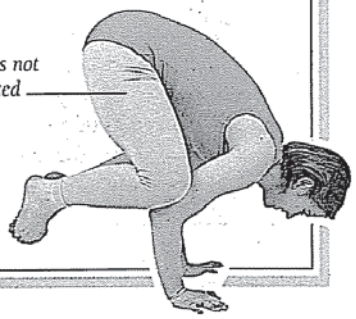
Since the Crow demands a high level of concentration, it enhances this faculty. The position also brings a flow of energy to the lower arms, wrists, and hands.



5 Shifting the balance entirely onto the hands, slowly lift the feet off the ground. If this proves difficult, try raising one foot and then the other. Breathe deeply as you hold the position for as long as you feel comfortable. If you cannot lift the feet, keep practising Step 4 until the arms and wrists are strong enough. (For Crow variations, see pp.92–3.)

COMMON FAULTS

- Head is dropped forwards.
- Hands are in the wrong position.
- Weight is on one side, rather than being balanced.
- Concentration is lacking.
- Fingers are together, instead of being spread wide apart.



10B

THE PEACOCK

Mayurasana

The peacock, with its long tail feathers, symbolizes beauty and immortality in Indian tradition. This pose is an alternative to the Crow (see pp.88–9).

PHYSICAL BENEFITS

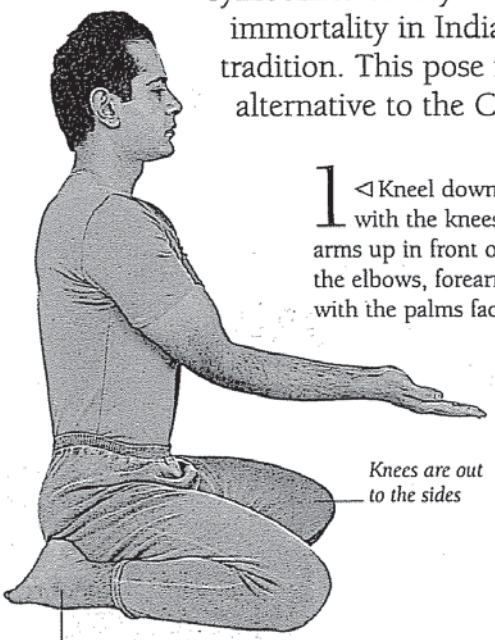
- ▶ Combats all types of digestive problems.
- ▶ Pressure of the elbows massages all parts of the digestive system, revitalizing the stomach, liver, and intestines.
- ▶ Relieves such long and short term problems as indigestion, constipation, diabetes, and piles.
- ▶ Strengthens arm and wrist muscles, and develops flexibility, relieving repetitive strain injuries.
- ▶ Develops physical balance and alignment.

MENTAL BENEFITS

- ▶ Enhances mental balance, concentration, and determination.
- ▶ Removes lethargy, and general feelings of weakness and impotence.
- ▶ Eases many mental disorders.

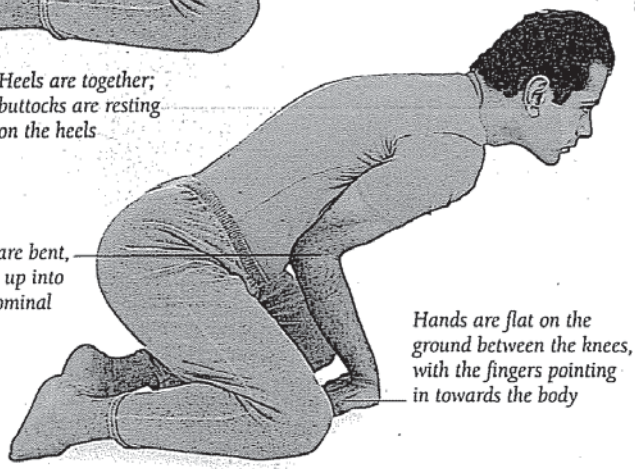
PRANIC BENEFITS

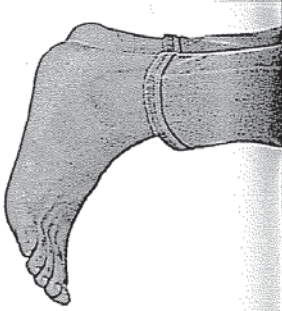
- ▶ The position of the elbows stimulates and enhances pranic flow to the spleen, kidney, heart, lung, small intestine, and pericardium meridians.
- ▶ Awakens Kundalini Shakti (full psychic potential).



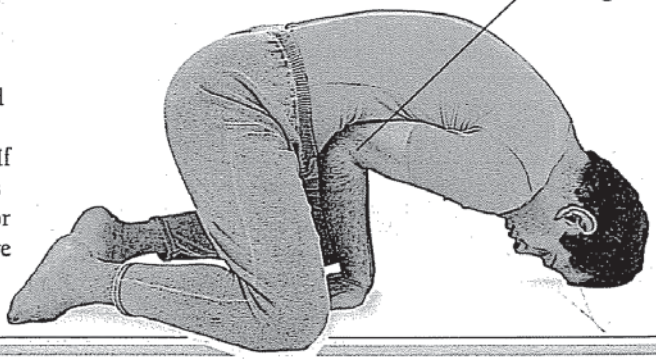
1 ◁ Kneel down; sit back on your heels with the knees wide apart. Lift the arms up in front of the body, and bring the elbows, forearms, and hands together, with the palms facing upwards.

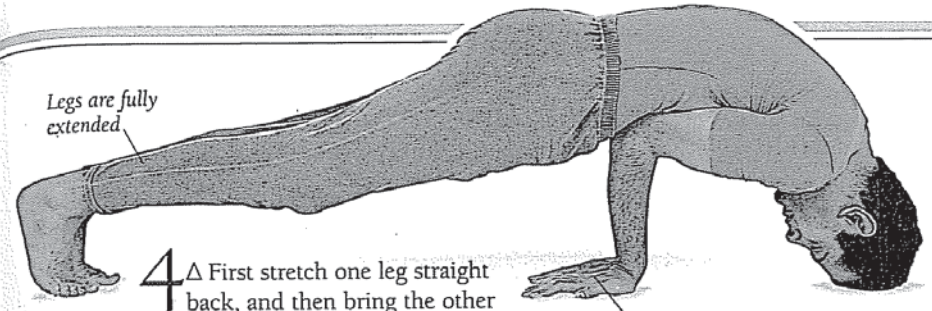
2 ▽ Place the palms of both hands on the ground, with the fingers pointing backwards. Bend forwards, and place the abdomen on the elbows.





3 ▷ Slowly lean forwards, and lower your head until the forehead is resting on the floor. If the pressure on the wrists seems too great, continue to practise for a few days, or even weeks, before proceeding to Step 4.

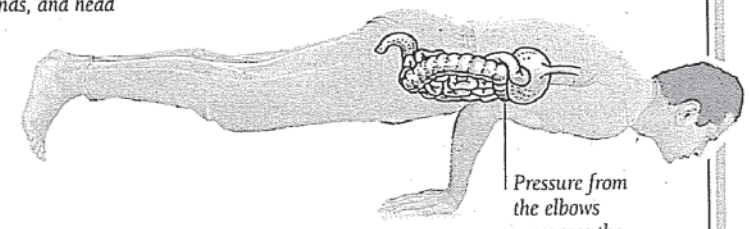




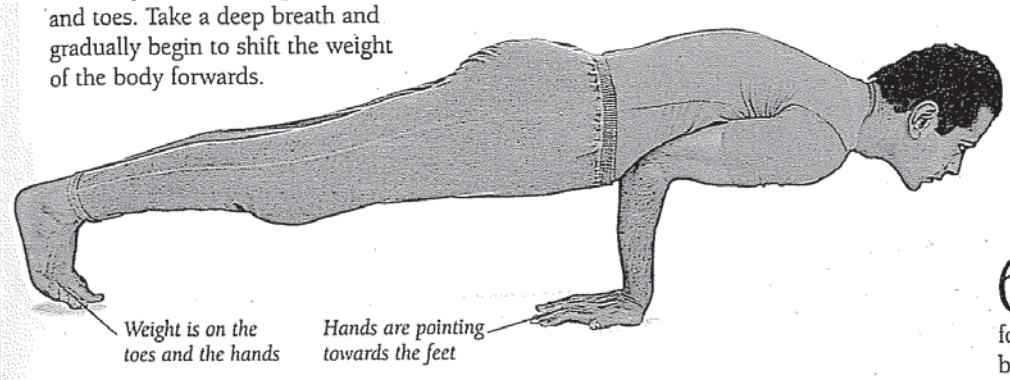
4 △ First stretch one leg straight back, and then bring the other leg out beside it. This position brings great flexibility and strength to the wrists and forearms.

Chief Benefit

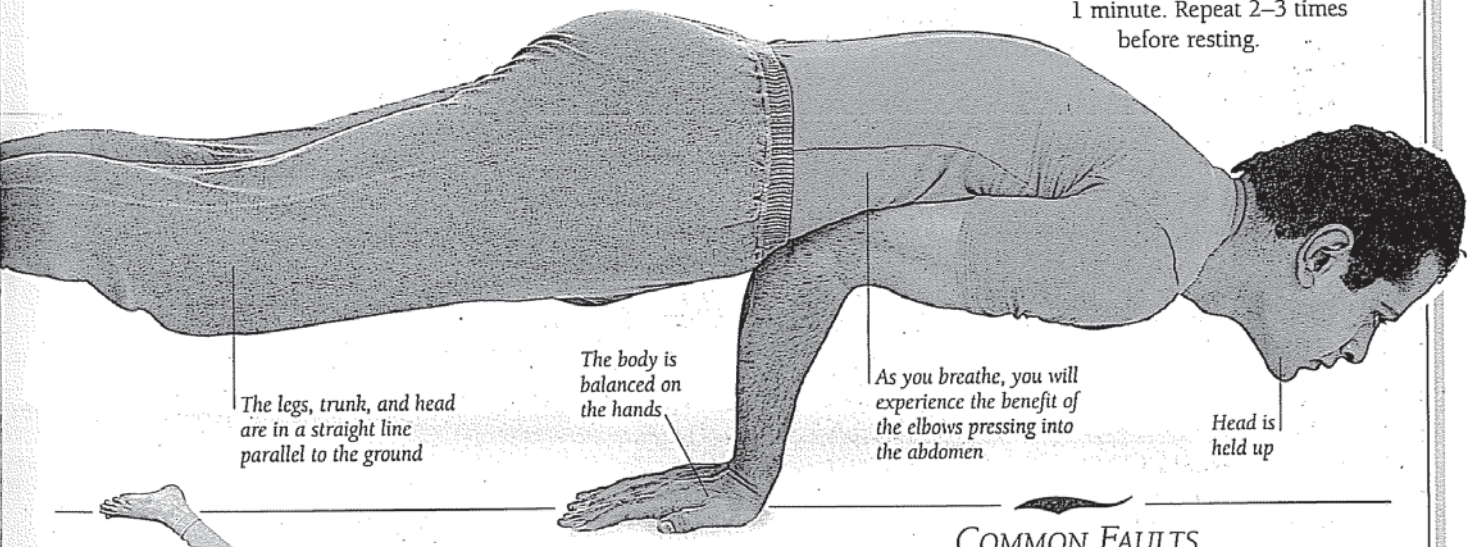
The principal benefit of the Peacock asana derives from the pressure that the placement of the elbows puts upon the abdomen. This massages and revitalizes the internal organs, curing many digestive diseases.

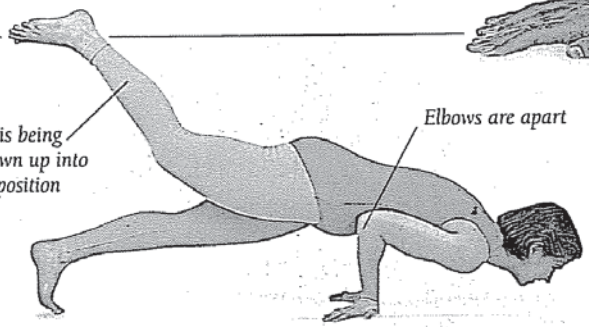


5 ▽ Lift the head off the ground. The body is now resting on the hands and toes. Take a deep breath and gradually begin to shift the weight of the body forwards.



6 ▽ Do not attempt to lift the feet. Let them rise as the weight shifts forwards. Hold for at least 10 seconds, breathing gently. Gradually increase to 1 minute. Repeat 2–3 times before resting.



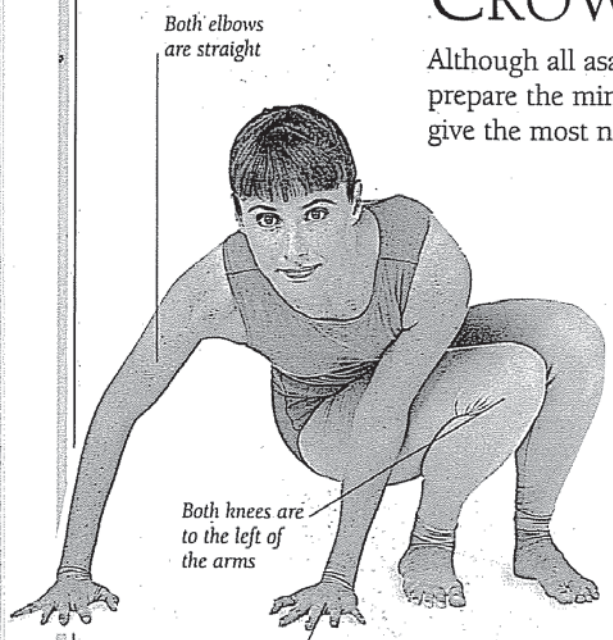


Common Faults

- ▶ Trying to jump, or throw the legs, up into the position.
- ▶ Elbows are not together.
- ▶ Weight may shift to one side, causing you to topple over sideways.
- ▶ Hands are not centred, but are out towards the sides.
- ▶ Concentration is lacking.
- ▶ CAUTION: This position should not be attempted while pregnant.

CROW *Variations*

Although all asanas are designed as mental as well as physical exercises to prepare the mind and body for meditation, it is the balancing poses that give the most noticeable improvement in the powers of concentration.

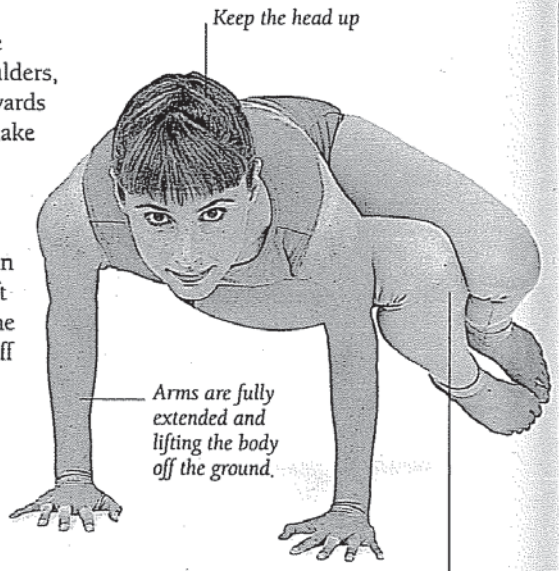


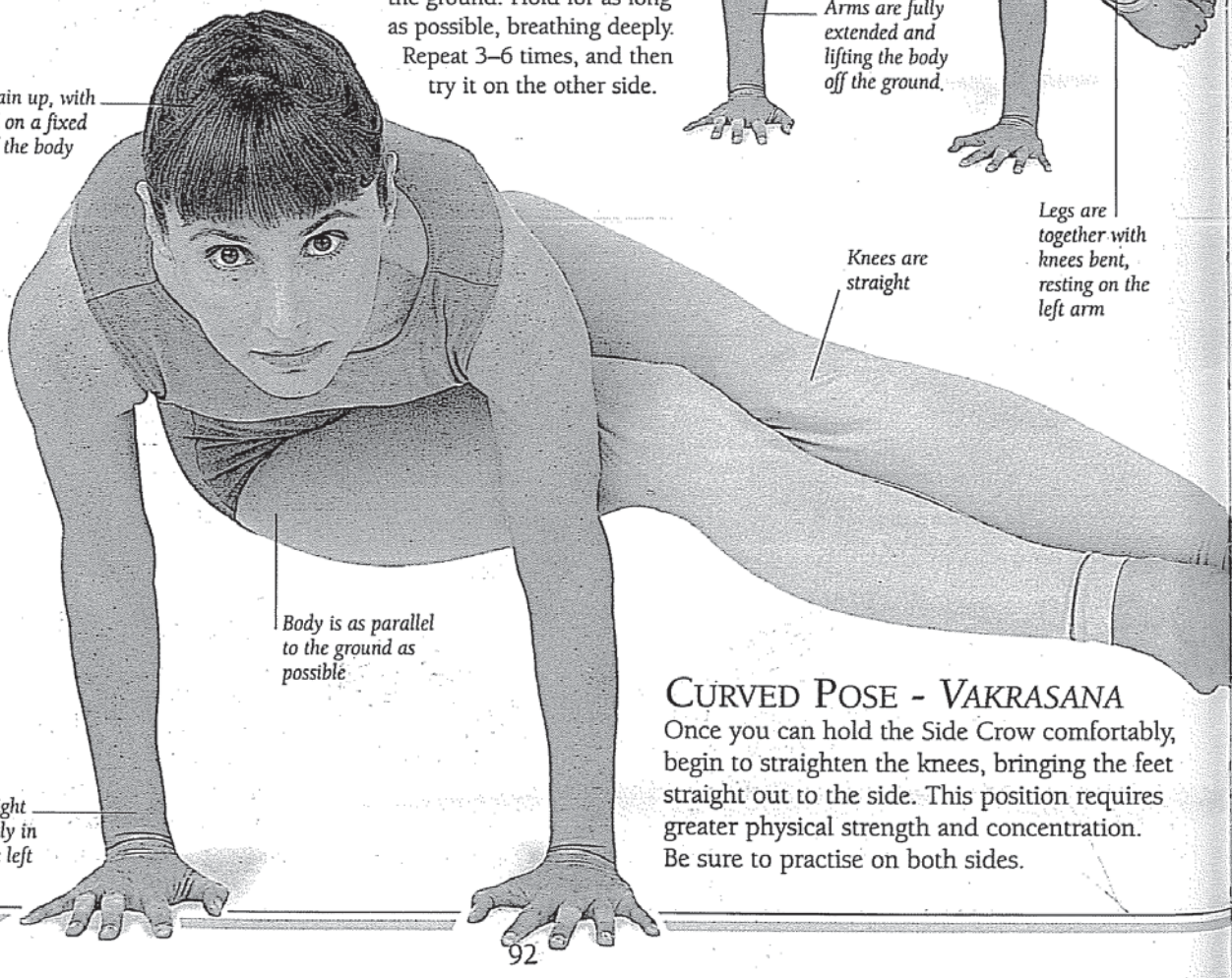
SIDE CROW - *PARSWA KAKASANA*

To come into the Side Crow, begin in a squatting position with both knees to the left of the body.

1 ◁ Place the hands on the ground beneath the shoulders, and slide the right hand forwards about 5cm (2in). This will make it easier to balance.

2 ▷ Focus the eyes on a point about 50cm (2ft) in front of the body. Gently shift your weight forwards onto the left arm and raise both feet off the ground. Hold for as long as possible, breathing deeply. Repeat 3–6 times, and then try it on the other side.





CURVED POSE - *VAKRASANA*

Once you can hold the Side Crow comfortably, begin to straighten the knees, bringing the feet straight out to the side. This position requires greater physical strength and concentration. Be sure to practise on both sides.

Feet to Sides

Assume the Crow pose (see pp.88–9) with the knees resting on either arm. Slowly straighten each leg from the knee. Hold this position for as long as you feel comfortable.

Inner thigh is resting on the arm

Both feet are extended out in front on either side of the body

Hands are directly beneath the shoulders

Cock Pose - *Kukutasana* ▷

This advanced asana, which starts in the Lotus pose (see p.63), requires a great deal of hip flexibility. Slide each arm into the space between calf and thigh. Place the hands flat on the ground and, shifting the weight forwards, stand up on the hands.

Shoulder and wrist muscles are greatly strengthened

Arms bear the full weight of the body

Each foot is resting on the opposite thigh

Peacock

Variations

Once you can hold the Peacock pose easily (see pp.90–91), try these variations. If you can do the Lotus, you may find the Peacock in Lotus easier than the regular Peacock.

The back and legs are in a straight line

Heels Up

From the Peacock, slowly lower the chin to the floor holding the body straight, raising the legs at an angle to the ground. Hold for as long as you feel comfortable.

The chin is down towards the ground, with the feet extended up in the air

The body's centre of balance is different because the legs do not extend out as far

Knees are raised as high as possible

Entire weight of the body is on the hands

Elbows are pressing into the midriff

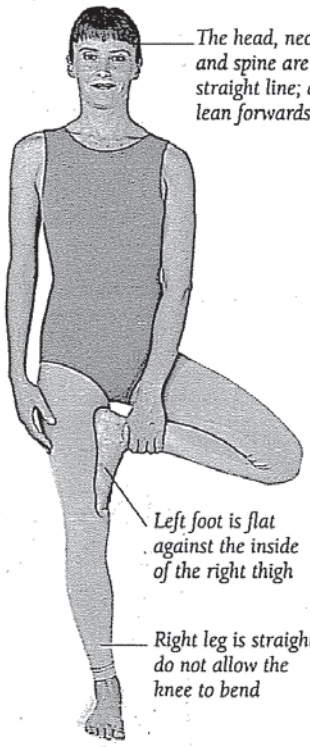
Peacock in Lotus

Begin in the Lotus position (see p.63). Using your hands, stand up on your knees, lean forwards and, placing the elbows against the midriff, follow the steps for coming into the Peacock. Your centre of balance will have changed, facilitating the position.

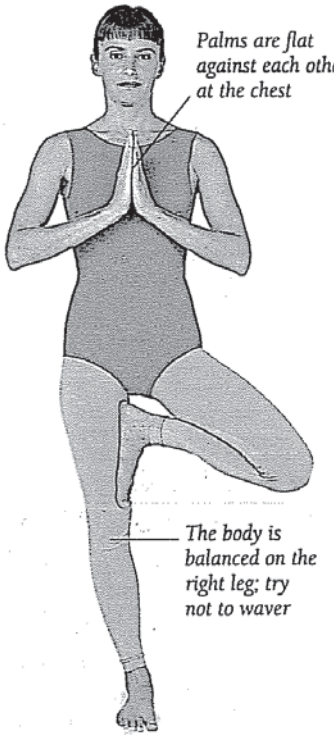
THE TREE

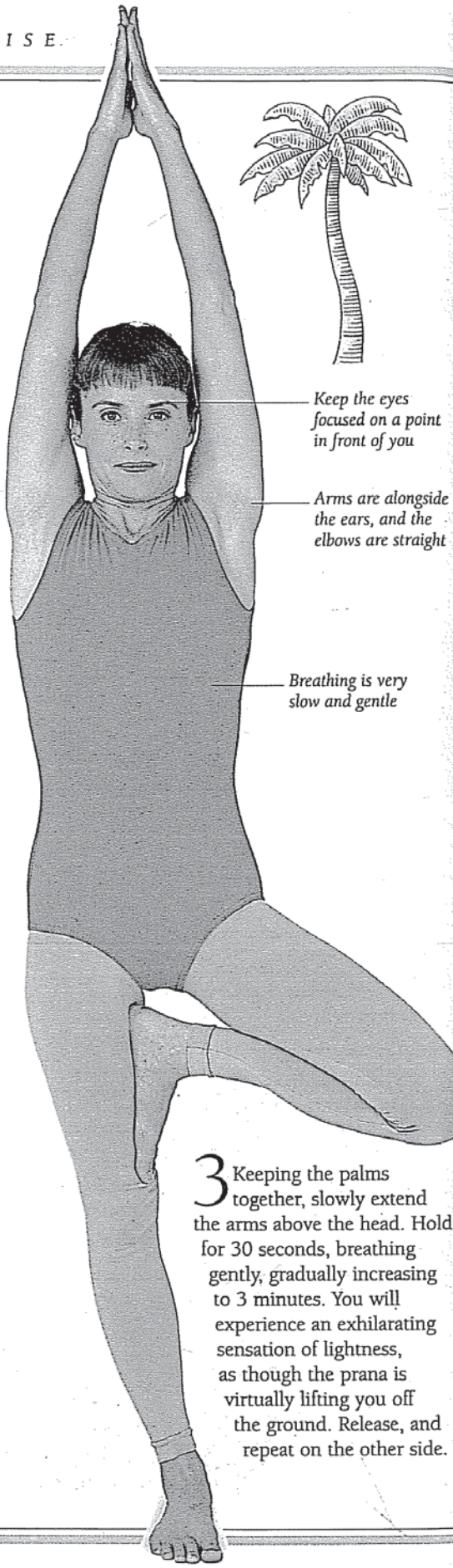
The asanas shown here are further balancing exercises. For the most part, these are physically simple, and yet they are mentally highly demanding. These postures develop, to the highest degree, the powers of mental concentration and single-mindedness of thought, as well as physical balance.

1 ∇ Stand up straight, balancing on the right foot. Bend the left knee and, helping with your hand, place the foot against the opposite thigh with the knee pointing outwards.



2 ∇ Focus on a point straight in front of you. Release your hold on the foot and bring both hands together at the chest in Prayer position. Find your balance.





3 Keeping the palms together, slowly extend the arms above the head. Hold for 30 seconds, breathing gently, gradually increasing to 3 minutes. You will experience an exhilarating sensation of lightness, as though the prana is virtually lifting you off the ground. Release, and repeat on the other side.

COMMON FAULTS

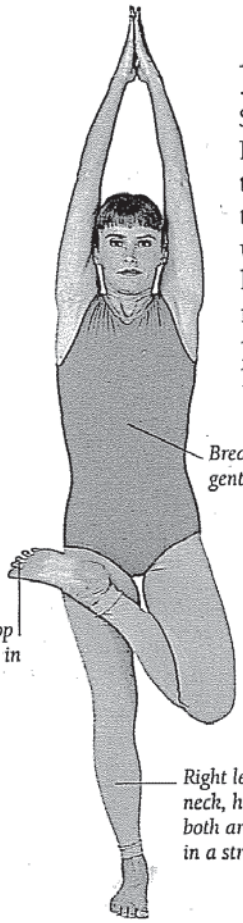
- ▶ Body is leaning to one side, or twisted with one hip pushing out.
- ▶ Standing knee is bent, or rotated outwards.
- ▶ Palms are not flat against each other.
- ▶ Elbows are not straight above the head.
- ▶ Thumbs are crossed, instead of side by side.
- ▶ Bent knee is coming forwards, rather than pointing out to the side.
- ▶ Eyes are looking downwards.
- ▶ Mind lacks proper concentration.

ADVANCED BALANCES

These poses are for more advanced, and more flexible, students. Fixing the eyes on a point in front of you is the key to balancing the body.

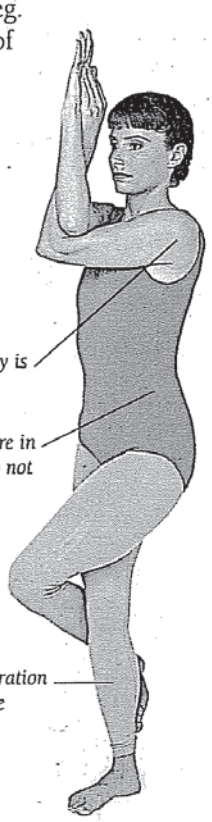
HALF LOTUS TREE ▷

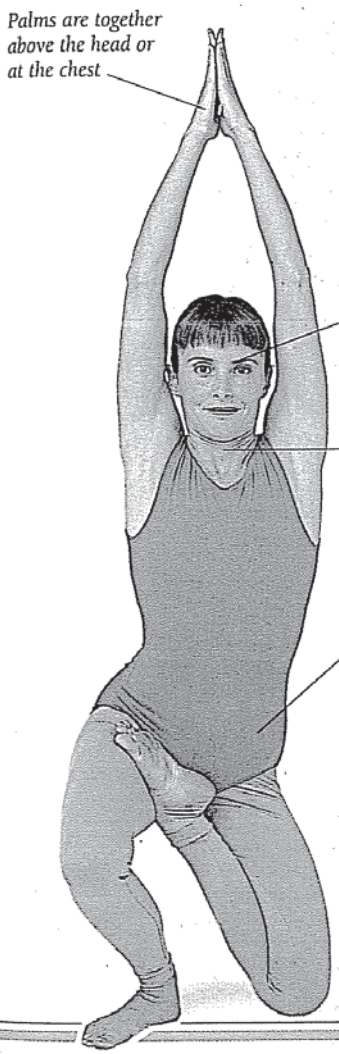
For this Tree variation, place the foot on the opposite thigh in Half Lotus position. Hold the pose for as long as you feel comfortable. Make sure you practise on both sides.



EAGLE - *GARUDASANA* ▽

Stand erect, balanced on your right leg. Bring the left leg across and in front of the right, and hook the foot behind the right ankle. With the right arm upright in front of the face, bring the left arm across and in front of your right, then behind it. Try to have the palms as flat together as possible. Repeat on the left leg.



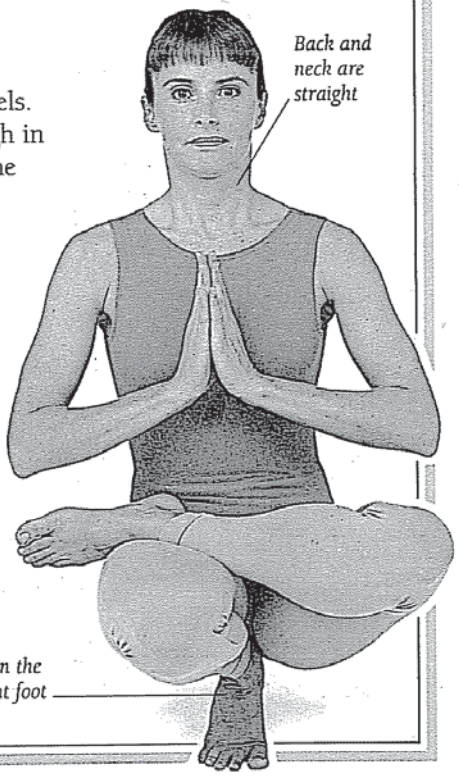


◁ *VATYANASANA*

Standing up straight, place the left foot on the right thigh in Half Lotus. Slowly bend the right knee until the left knee rests on the ground. Hold for as long as possible. Stand up and repeat on the other side.

TIP-TOE POSE - *PADANDGUSHTASANA* ▷

Kneel with the buttocks on the heels. Place the left foot on the right thigh in Half Lotus. Place your hands on the floor next to you and slowly shift the weight forwards onto the toes of the right foot. Bring the hands together at the chest. Hold for as long as you feel comfortable. Repeat on the opposite side.



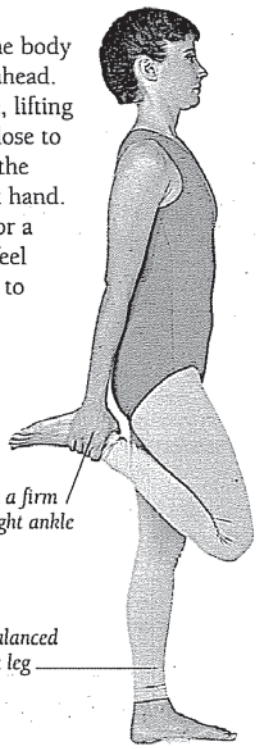
NATARAJASANA

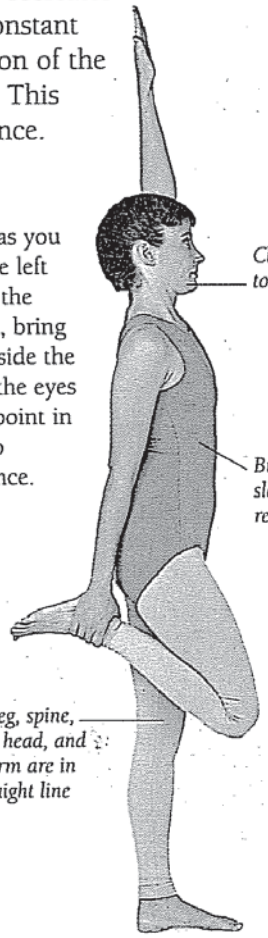
Nataraja, Siva as the Cosmic Dancer, destroys and recreates the Universe with each step. He symbolizes the constant flow of energy and matter, as well as the destruction of the old self in preparation for the creation of the new. This asana stretches the upper body and develops balance.

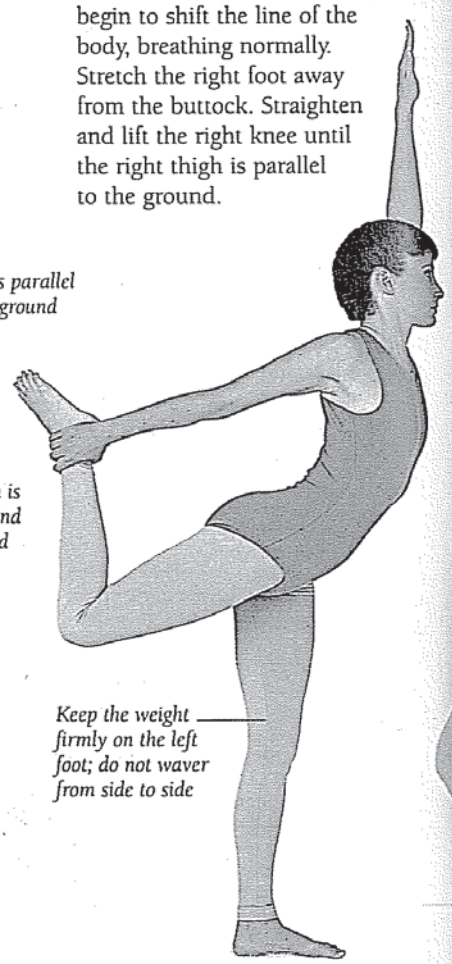
1 ▷ Stand with the body facing straight ahead. Bend the right knee, lifting the foot until it is close to the buttock. Grasp the ankle with the right hand. Hold the position for a moment until you feel balanced and ready to proceed to Step 2.

2 ▷ Inhale as you stretch the left arm up. With the elbow straight, bring the arm alongside the left ear. Keep the eyes focused on a point in front of you to maintain balance.

3 ▷ Without releasing the hold on the ankle, slowly begin to shift the line of the body, breathing normally. Stretch the right foot away from the buttock. Straighten and lift the right knee until the right thigh is parallel to the ground.

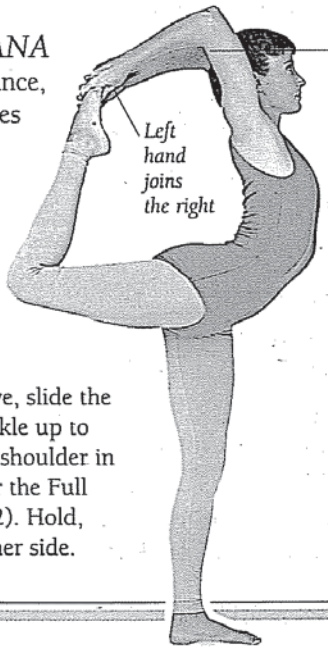


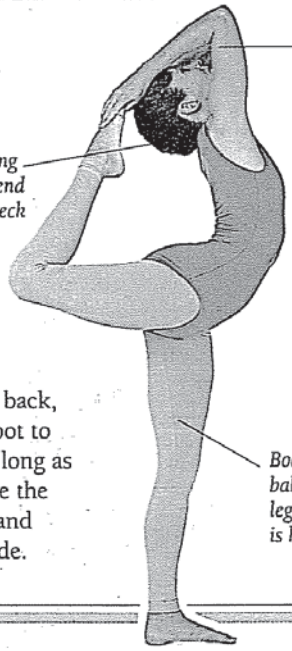




FULL NATARAJASANA

As well as developing balance, this advanced pose provides a full backward bend to the upper body.





1 From Step 3 above, slide the hand from the ankle up to the toes, rotating the shoulder in the way described for the Full Bow (see p.74, Step 2). Hold, and repeat on the other side.

2 Arching the head back, try to bring the foot to the head. Hold for as long as is comfortable. Release the hold, lower the foot, and repeat on the other side.

4 Focus the eyes on a point on the floor just in front of the body. Keep the left arm alongside the ear, and slowly shift the weight forwards until the chest and arm are parallel to the ground. Hold the position for as long as you feel comfortable. Release, and practise on the other side.

Keep the foot up as high as possible

Keep the arm straight and alongside the ear

Right arm is pulling against the right leg

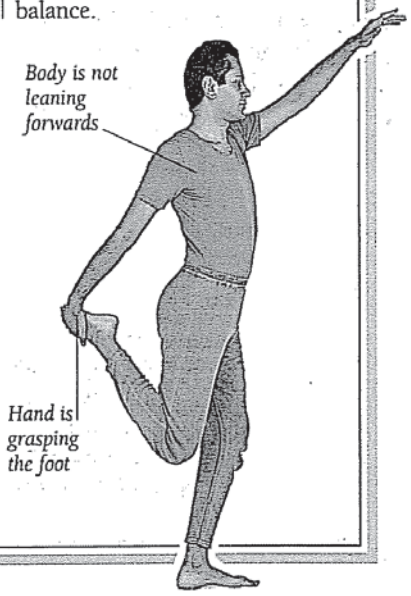
Remember to breathe as you hold the position

The right thigh, spine, neck, head, and left arm are in a straight line, parallel to the ground

Foot is planted firmly on the ground

COMMON FAULTS

- Bent knee is not lifting.
- Body is turning outwards.
- Standing leg is bent.
- Upper body is upright, rather than leaning forwards.
- Right arm is not parallel to the right thigh.
- Arm is not alongside the ear.
- Head is twisted to one side.
- Upper foot, rather than the ankle, is being held.
- Standing foot is not firmly planted; this allows the body to waver.
- Eyes are not focused on a point in front of the body.
- Breathing is erratic or tense.
- Mind is not concentrated, making it difficult to maintain balance.



11

THE STANDING FORWARD BEND

Pada Hasthasana

This is the first of the standing poses. In effect it is similar to Paschimothanasana, the sitting Forward Bend (see pp.52–3). If it is remembered that "you are as young as your spine", Pada Hasthasana will be seen as a veritable elixir of youth. Its practice promotes a continued youthful vigour throughout life.

PHYSICAL BENEFITS

- Lengthens the spine, making it supple and elastic. Can even give a little extra "growth".
- Mobilizes the joints.
- Invigorates the entire nervous system.
- Stretches the hamstrings and muscles of the back of the legs and the lower body.
- Stretches all the muscles on the posterior side of the body.
- Rectifies shortening of the legs resulting from fractures, and can correct inequalities in the length of the legs.
- Increases the blood supply to the brain.

MENTAL BENEFITS

- Greatly enhances concentration.
- Expels Tamas (inertia or laziness), stimulating intellectual capacities.

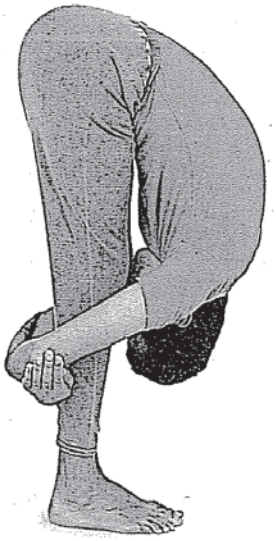
PRANIC BENEFITS

- Renders the body light by expelling Tamas.
- Purifies and strengthens the Sushumna nadi (the central astral nerve tube that induces meditation).
- Invigorates the Apana Vayu (downward-moving, or efferent, prana).

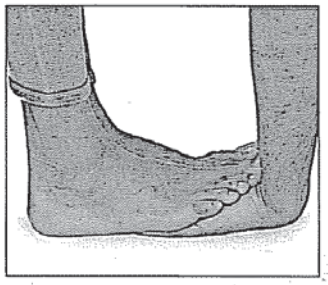
1 With the legs together, centre the weight of the body on the balls of the feet. Inhale deeply as you stretch both arms straight up over the head. Feel as though the entire body is extending upwards.

HAND VARIATIONS

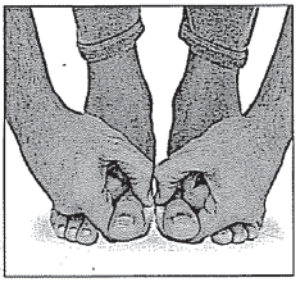
Once you have gained sufficient flexibility in the back of the legs, and are able to hold the Standing Forward Bend comfortably for several minutes, you may wish to try these three hand position variations. They stretch the muscles in different ways.



VARIATION 1
Reach behind the legs and catch hold of each elbow with the opposite hand.



VARIATION 2
Lift the front of the feet off the ground, slide the hands under them, and lower the feet.



VARIATION 3
For this traditional hand position, bring the forefingers around the respective big toes.

2 Exhale, stretching down towards the ground. Catch hold of the back of the legs wherever you feel comfortable. Breathe gently as you hold this position for at least 10 seconds. Gradually increase the time to 1 minute. As you hold the pose, feel the hips stretching upwards.

Keep the body weight centred; do not allow the hips to drop backwards

Knees are straight

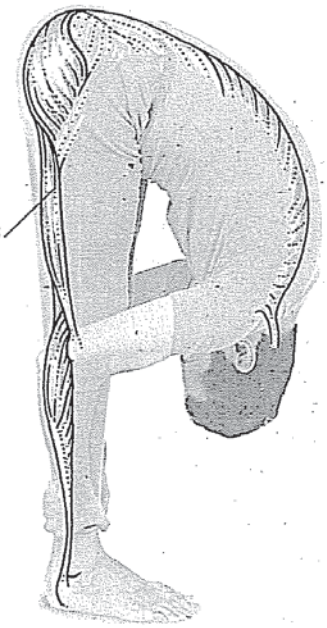
Forehead is in towards the legs

Hold the legs wherever you can comfortably reach, without straining or bending the knees

Feet remain next to each other

CHIEF BENEFIT

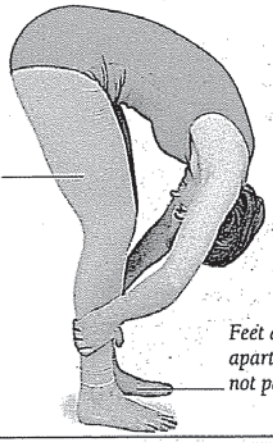
The Standing Forward Bend gives a complete stretch to the entire posterior of the body, from the back of the scalp to the back of the heels. The position enables the body to take advantage of the force of gravity. If the head and neck are kept relaxed, their weight will aid the body in stretching a bit further, provided that the knees are not allowed to bend.



All the muscles of the back of the body are stretched

COMMON FAULTS

- Weight of the body is on the heels.
- Back is rounded.
- Weight is unevenly placed, causing the body to tilt to one side.
- Feet are apart and/or turned out.
- Knees are bent.
- Hips are dropping back.
- Head is forced towards the knees.



Legs should be straight

Feet are apart and not parallel

12

THE TRIANGLE

Trikonasana

The last of the 12 Basic Asanas, the Triangle provides the entire body with an invigorating lateral stretch. When practised on a regular basis, it makes the body feel "lighter" and improves all other asanas.

PHYSICAL BENEFITS

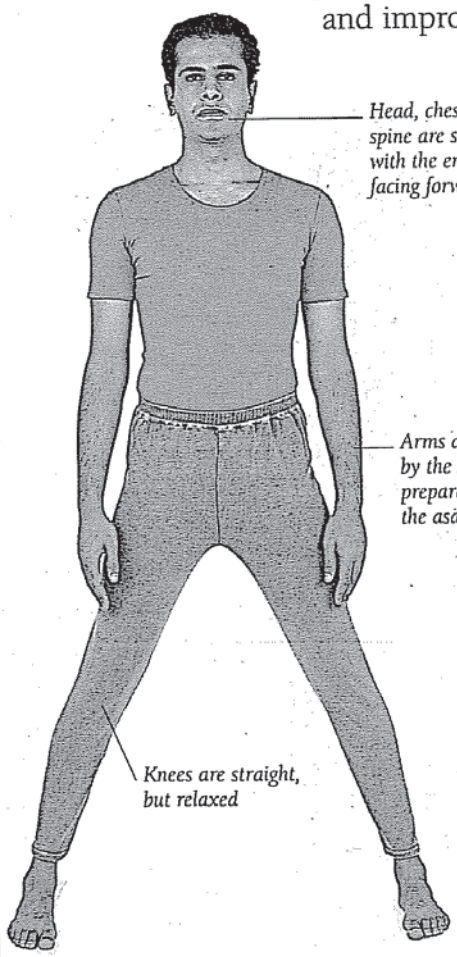
- ▶ Stretches the spine and trunk muscles.
- ▶ Tones the spinal nerves and abdominal organs, improving the working of the bowels.
- ▶ Practice of the Triangle improves the appetite and assists digestion.
- ▶ Promotes flexibility of the hips, spine, and legs.
- ▶ Reduces or eliminates pain in the lower back.
- ▶ Invigorates the circulation.
- ▶ Practice is especially beneficial to anyone who suffers from a shortening of one leg as a result of a fracture of the hip, thigh bone, or bones of the lower leg.

MENTAL BENEFITS

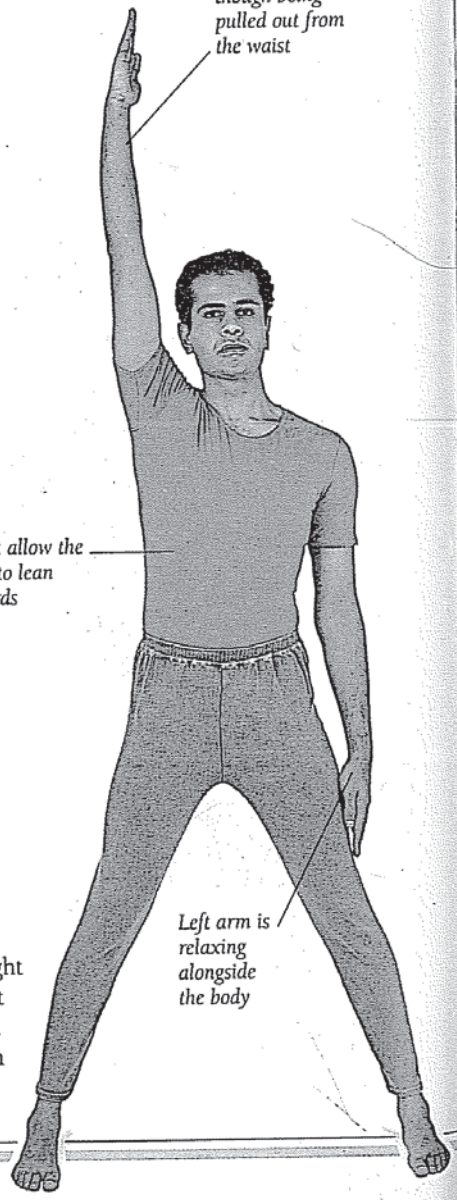
- ▶ Alleviates anxiety and hypochondria.
- ▶ Reduces mental stress.

PRANIC BENEFITS

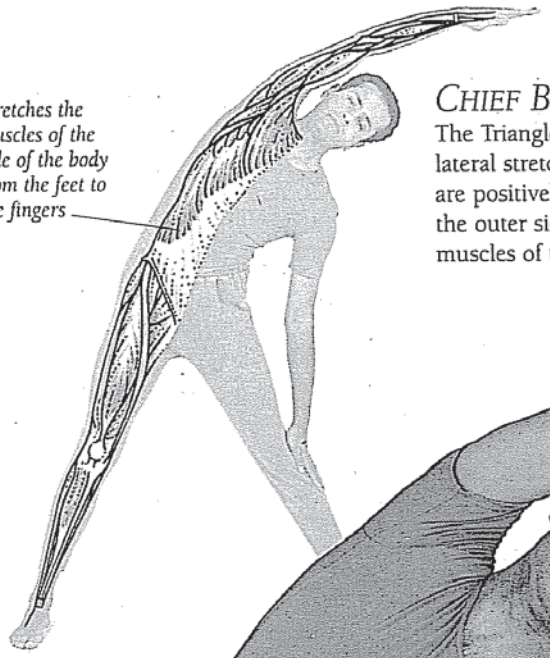
- ▶ Stimulates pranic flow to the spleen, liver, large intestine, gall bladder, small intestine, and heart meridians.
- ▶ Steadies the energy, and gives a final "push" to the process of nadi purification begun in the other asanas.



1 To come into the position, stand erect facing directly forwards. Place the feet slightly more than shoulder width apart. Balance the weight of the body evenly between the two feet.

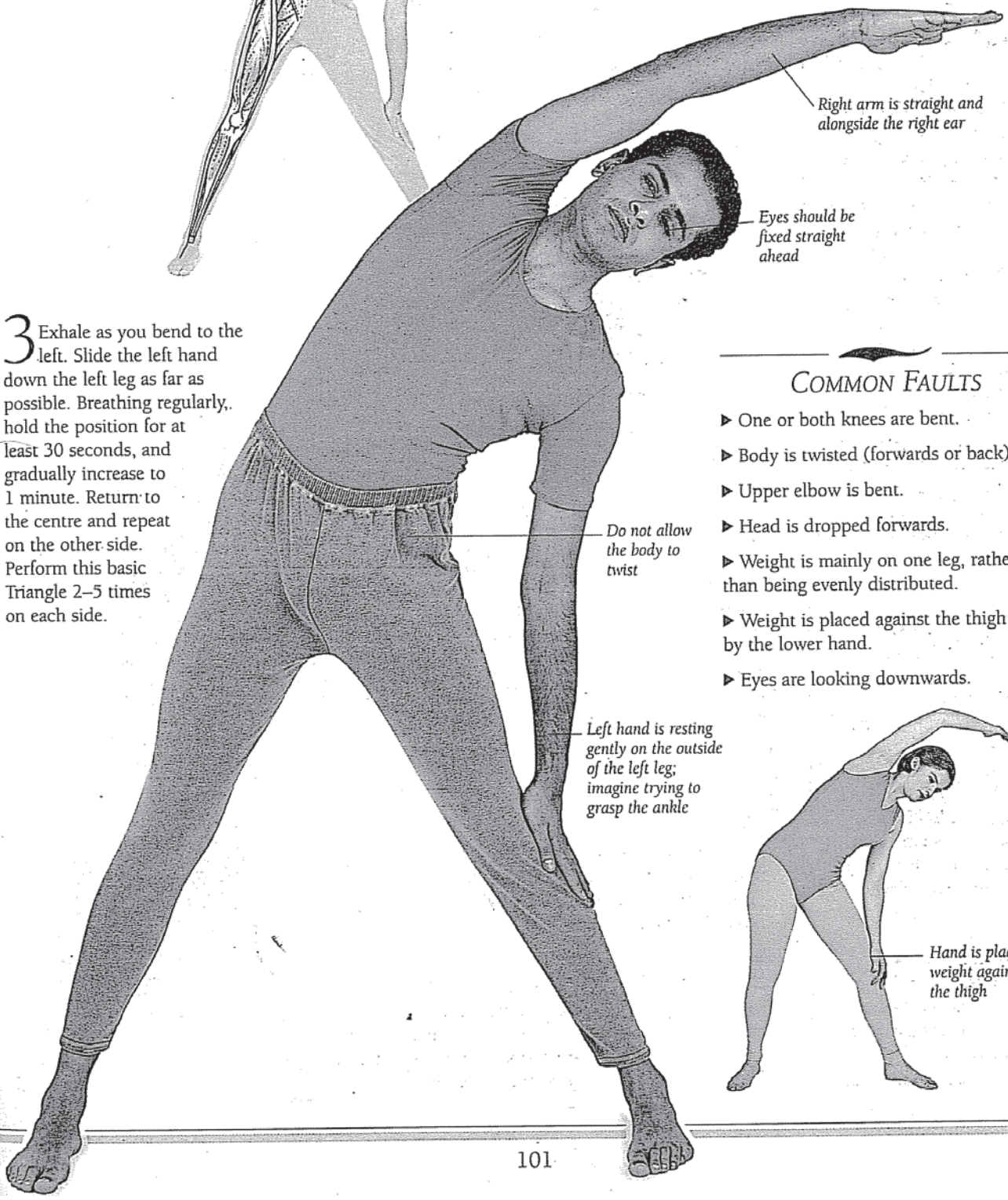


2 Inhale as you bring the right arm up alongside the right ear. Stretch the arm up as high as possible, and feel the stretch along the entire right side.



CHIEF BENEFIT

The Triangle gives an excellent, and complete, lateral stretch to the entire body. All the muscles are positively affected, but especially those along the outer side of the body. These include the muscles of the ankles, legs, hips, and arms.



3 Exhale as you bend to the left. Slide the left hand down the left leg as far as possible. Breathing regularly, hold the position for at least 30 seconds, and gradually increase to 1 minute. Return to the centre and repeat on the other side. Perform this basic Triangle 2–5 times on each side.

COMMON FAULTS

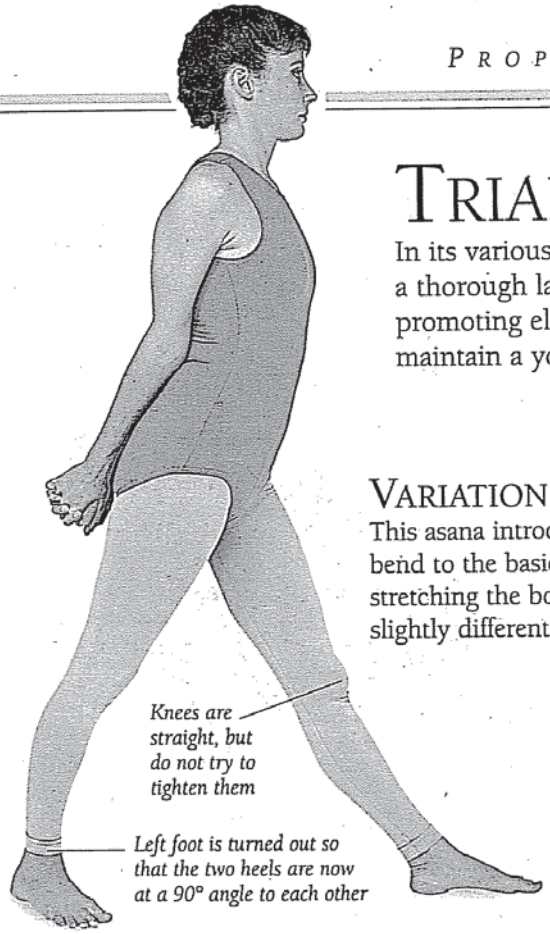
- One or both knees are bent.
- Body is twisted (forwards or back).
- Upper elbow is bent.
- Head is dropped forwards.
- Weight is mainly on one leg, rather than being evenly distributed.
- Weight is placed against the thigh by the lower hand.
- Eyes are looking downwards.

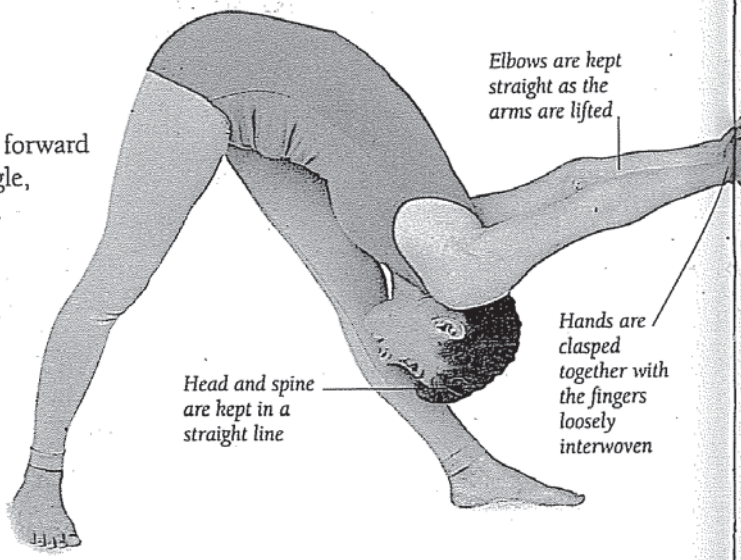
TRIANGLE *Variations*

In its various permutations, the Triangle ensures a thorough lateral stretch to all parts of the body, promoting elasticity of the spine and helping to maintain a youthful posture.

VARIATION 1

This asana introduces a forward bend to the basic Triangle, stretching the body in a slightly different way.





1 Standing with the feet a little more than shoulder width apart, turn the left foot out. Clasp the hands behind the back and inhale deeply.

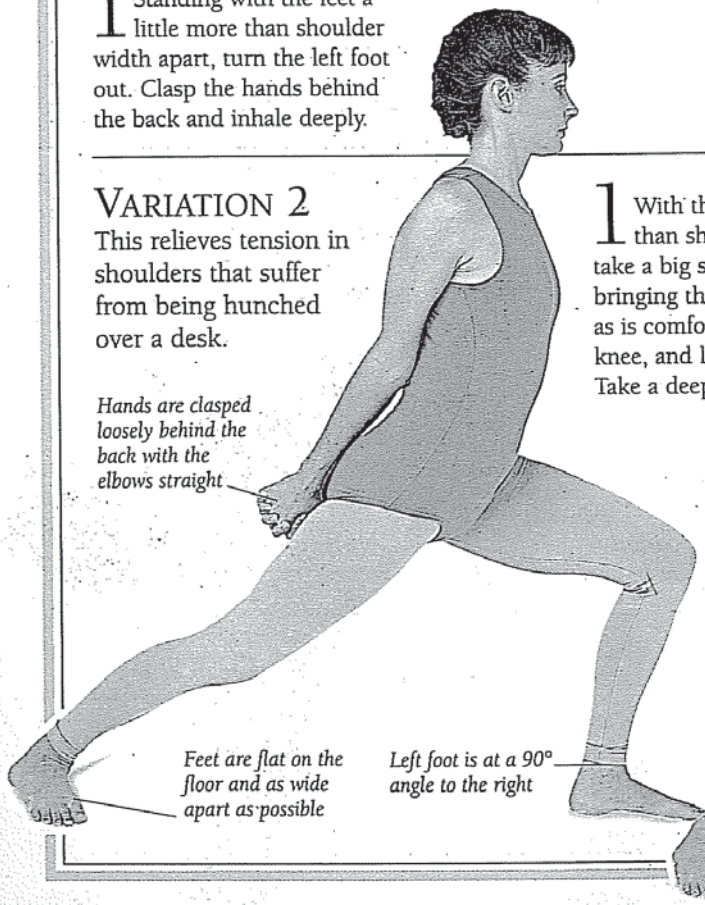
2 Exhale and bend forwards, bringing the forehead towards the left knee. Lift the arms as high as possible and hold the position for at least 10 seconds, gradually increasing to 1 minute. Inhale as you stand up to the starting position, and repeat on right side.

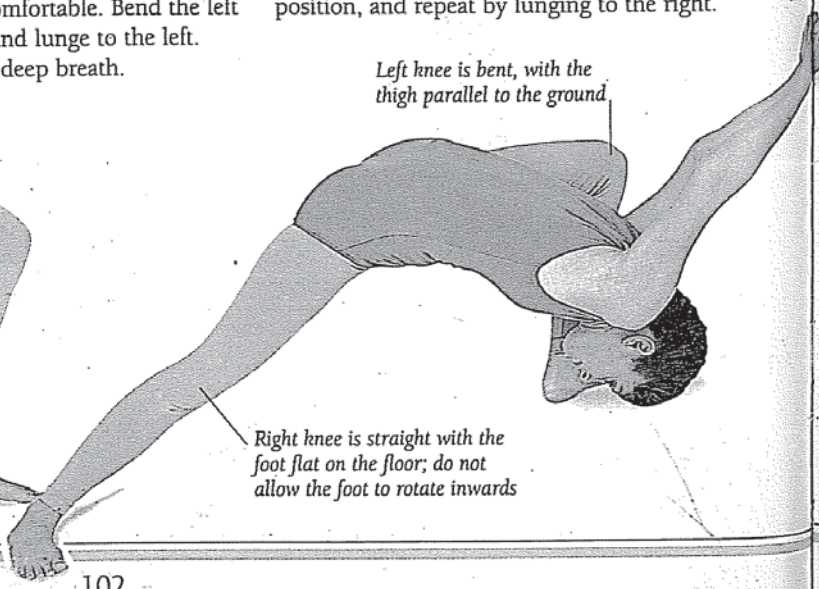
VARIATION 2

This relieves tension in shoulders that suffer from being hunched over a desk.

1 With the feet slightly more than shoulder width apart, take a big step to the left, bringing the feet as wide apart as is comfortable. Bend the left knee, and lunge to the left. Take a deep breath.

2 Exhale as you bring the forehead towards the ground just inside the left foot. Hold for at least 10 seconds, breathing gently. Gradually increase to 1 minute. Return to the starting position, and repeat by lunging to the right.





VARIATION 3

This is a further variation in which the body is stretched in a "deep lunge" position. Practise on both sides.

Keep the body centred; do not lean to one side as you bend the knee

1 ◁ With your feet a bit more than shoulder width apart, turn your left toes outwards and bend the left knee. Bring your arms parallel to the ground at shoulder level.

Right foot is flat on the ground

The body forms a straight line from the foot to the finger tips

The left knee is directly over the left foot

Elbows are straight

2 △ Place your left hand flat on the floor inside the left foot. Bring your right arm up next to your ear. Hold for 10 seconds, increasing to 1 minute.

Head and chest are held erect

Arms and shoulders are in a straight line

VARIATION 4

This apparently simple variation involves considerable chest and shoulder flexibility. Watch the alignment of arms and chest.

1 ◁ Stand with the feet a little more than shoulder width apart. Raise the arms until they are held straight out from the shoulders.

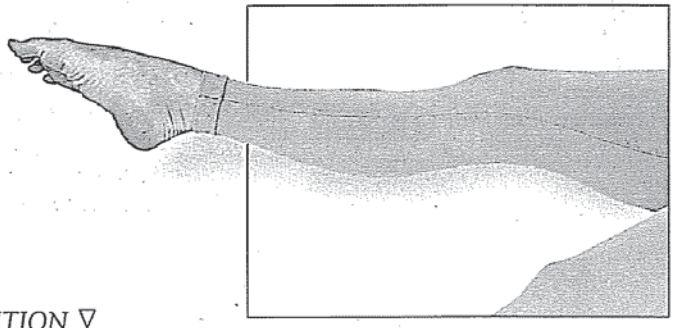
Legs are straight

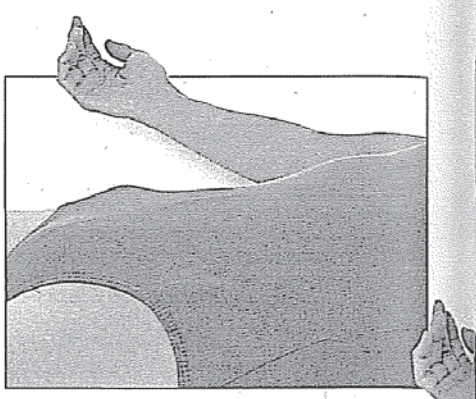
2 ▽ Twisting from the hips, place the right hand flat on the ground outside the left foot. Align the body so that shoulders, chest, and arms form one straight line. Look up at the left hand. Hold for at least 10 seconds, and then repeat on the other side.

Right shoulder is directly over the right hand

FINAL RELAXATION

Just as it is important to begin every asana session with a period of relaxation, it is also essential to finish by spending about 10 minutes in the same way. The asanas tense and relax the various parts of the body, and to get the maximum benefit from them, it is important to give the physical, mental, and pranic energy an opportunity to circulate properly.



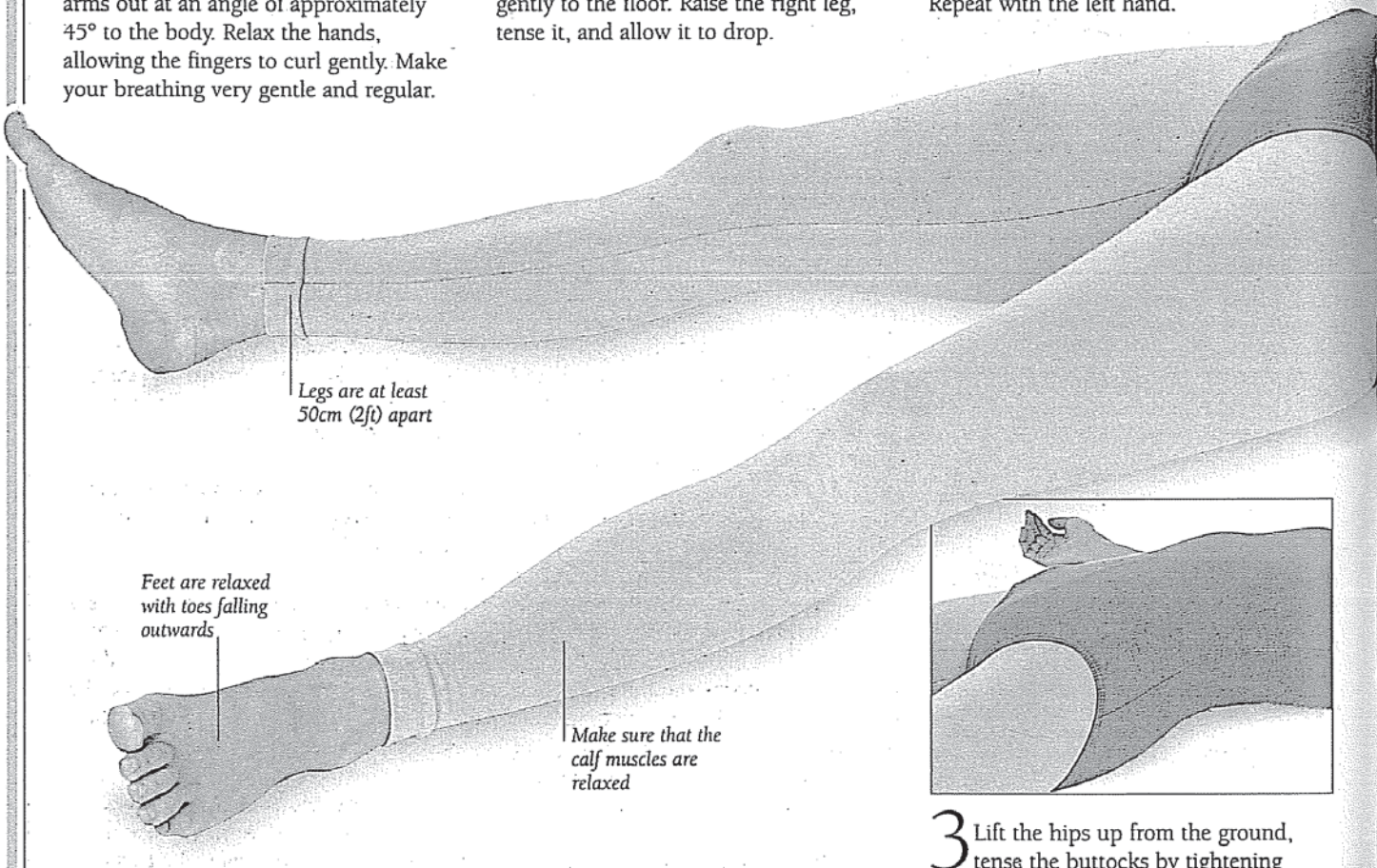


STARTING POSITION ▽

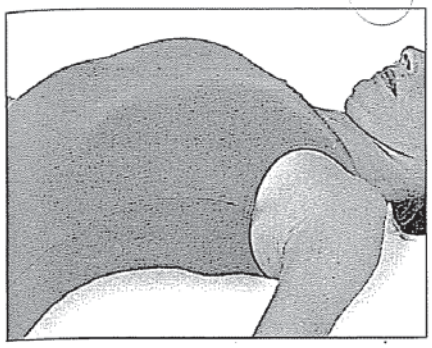
Lying flat on your back, bring the feet at least 50cm (2ft) apart, and allow the toes to fall outwards to the sides. Have the arms out at an angle of approximately 45° to the body. Relax the hands, allowing the fingers to curl gently. Make your breathing very gentle and regular.

1 Raise the right leg 5cm (2in) from the ground, tense the muscles, and then release them, allowing the foot to fall gently to the floor. Raise the right leg, tense it, and allow it to drop.

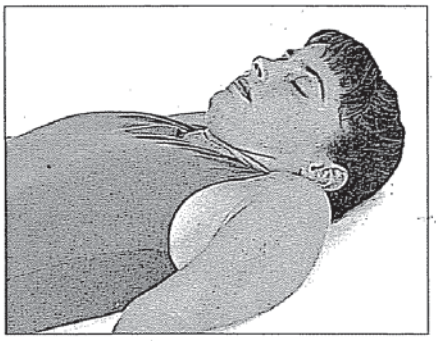
2 Lift the right arm 5cm (2in) from the ground. Clench the hand, release the tension, and let the hand fall gently. Repeat with the left hand.



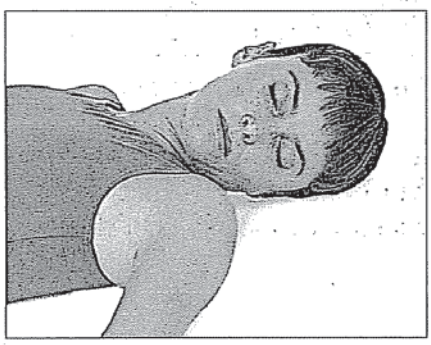
3 Lift the hips up from the ground, tense the buttocks by tightening them as much as possible, and release.



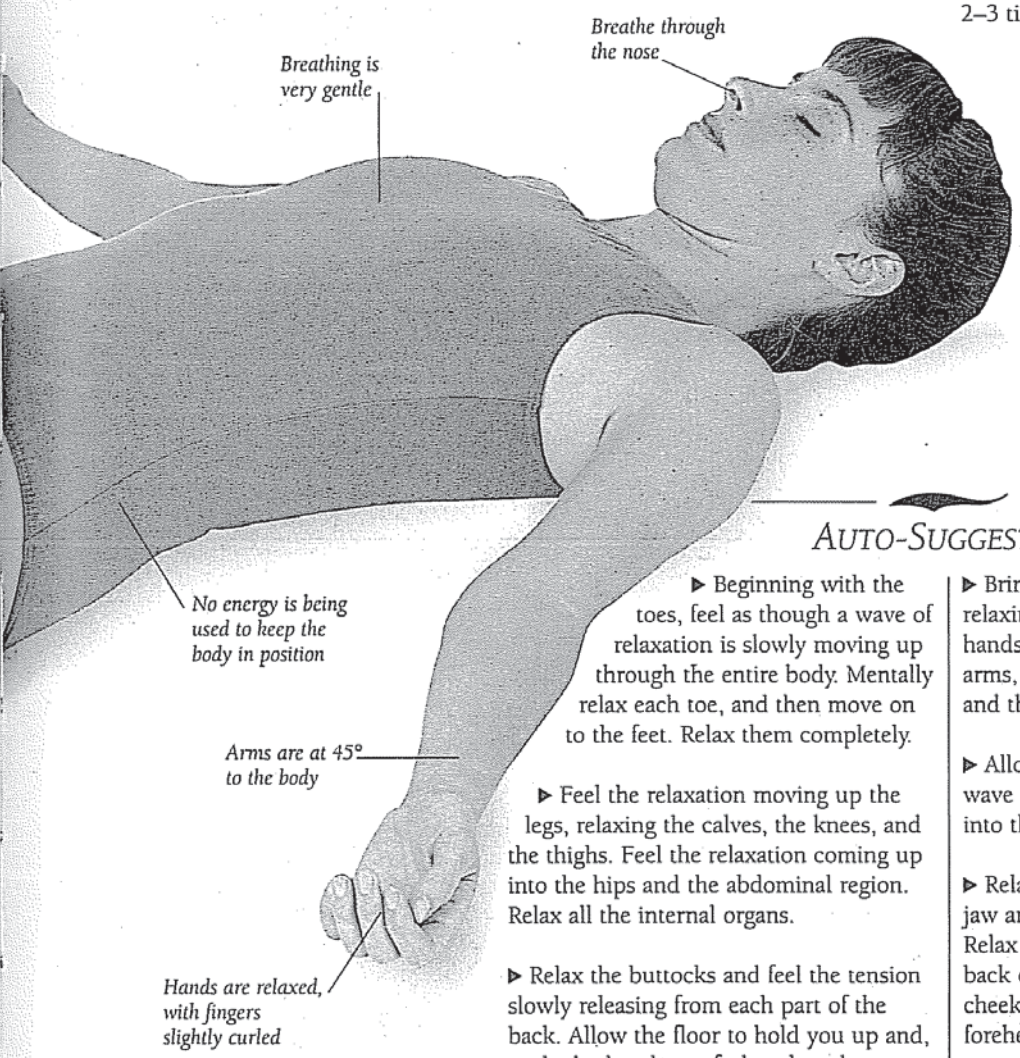
4 Raise the chest off the ground, tense it, and release. Allow it to fall back.



5 Raise the shoulders. Tense them, try to bring them together, and release.



6 Slowly roll the head from side to side, bringing one ear down to the ground, and then the other. Repeat this 2–3 times before returning to the centre.



7 Now begin the process of auto-suggestion below. This should be done mentally. There is no need to move the body at all.

AUTO-SUGGESTION

▶ Beginning with the toes, feel as though a wave of relaxation is slowly moving up through the entire body. Mentally relax each toe, and then move on to the feet. Relax them completely.

▶ Feel the relaxation moving up the legs, relaxing the calves, the knees, and the thighs. Feel the relaxation coming up into the hips and the abdominal region. Relax all the internal organs.

▶ Relax the buttocks and feel the tension slowly releasing from each part of the back. Allow the floor to hold you up and, as the body relaxes, feel as though you are sinking down into the ground.

▶ Feel the relaxation coming into the chest, breathing very slowly and gently.

▶ Bring your attention to the fingers, relaxing each one in turn. Then relax the hands. Feel the relaxation moving up the arms, relaxing the wrists and forearms, and then the upper arms.

▶ Allow the shoulders to relax. Feel the wave of relaxation moving up the neck into the head.

▶ Relax the face and head. Begin with the jaw and let the mouth hang open slightly. Relax the tongue and the muscles at the back of the throat. Relax the chin and the cheeks, then the eyes and eyebrows, the forehead, and the scalp.

▶ Finally, relax the brain. All cares and worries are gone. Allow the mind and body to remain in this state of relaxation for at least a further 5 minutes.

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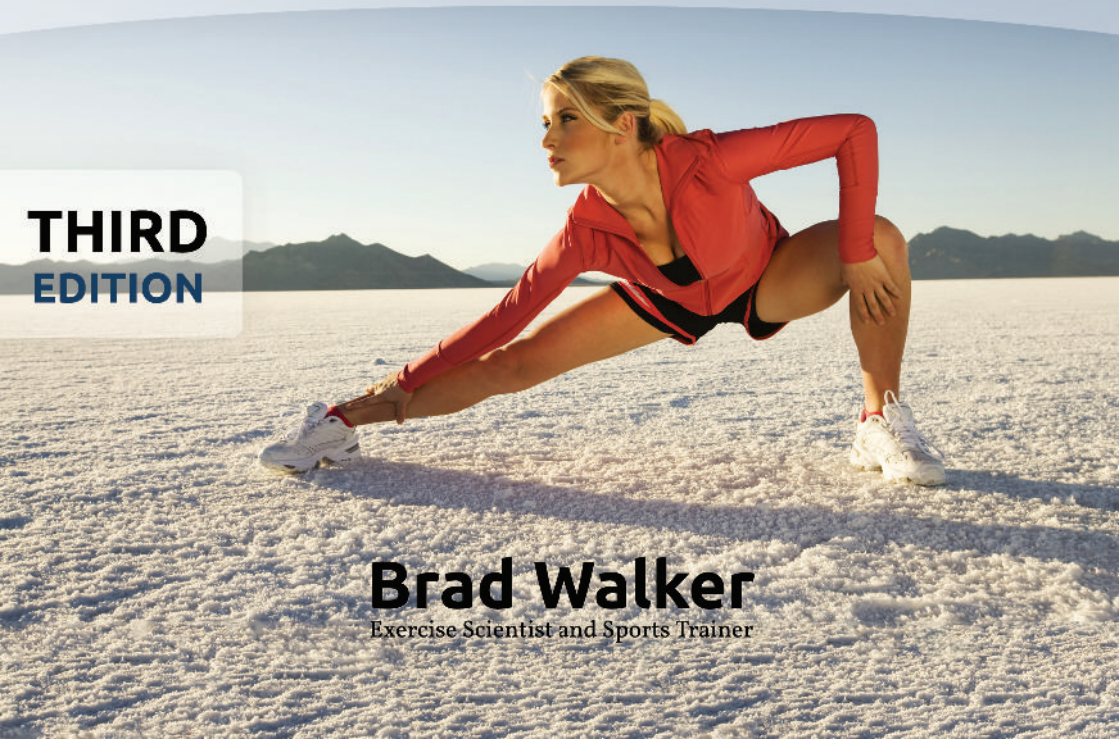

THIRD EDITION

Brad Walker
Exercise Scientist and Sports Trainer

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Chapter 4
The Types of Stretching

Stretching is slightly more technical than swinging a leg over a park bench. There are methods and techniques that will maximize the benefits and minimize the risk of injury. In this chapter we will look at the different types of stretching, the particular benefits, risks and uses, plus a description of how each type is performed.

Just as there are many different ways to strength train, there are also many different ways to stretch. However, it is important to note that although there are many different ways to stretch, no one way, or no one type of stretching is better than another. Each type has its own advantages and disadvantages, and the key to getting the most out of stretching lies in being able to match the right type of stretching to the purpose, or goal trying to be achieved.

For example; PNF and passive stretching are great for creating permanent improvements in flexibility, but they are not very useful for warming up or preparing the body for activity. Dynamic stretching, on the other hand, is great for warming up but can be dangerous if used in the initial stages of injury rehabilitation.

Although there are many different ways to stretch, they can all be grouped into one of two categories; static or dynamic.

Static Stretches

The term static stretches refers to stretching exercises that are performed without movement. In other words, the individual gets into the stretch position and holds the stretch for a specific amount of time. Listed below are five different types of static stretching exercises.

Static Stretching

Static stretching is performed by placing the body into a position whereby the muscle (or group of muscles) to be stretched is under tension. Both the antagonist, or opposing muscle group and the agonist, or muscles to be stretched are relaxed. Then slowly and cautiously the body is moved to increase the tension on the stretched muscle (or group of muscles). At this point the position is held or maintained to allow the muscles to relax and lengthen.

The stretch to the right is a classic example of a static stretch in which the opposing muscles and the hamstring and back muscles are relaxed.

A minimum hold time of about 20 seconds is required for the muscles to relax and start to lengthen, while diminishing returns are experienced after 45 to 60 seconds.

Static stretching is a very safe and effective form of stretching with a limited threat of injury. It is a good choice for beginners and sedentary individuals.

Passive (or Assisted) Stretching

This form of stretching is very similar to static stretching; however another person or apparatus is used to help further stretch the muscles. Due to the greater force applied to the muscles, this form of stretching can be slightly more hazardous. Therefore it is very important that any apparatus used is both solid and stable. When using a partner it is imperative that no jerky or bouncing force is applied to the stretched muscles. So, choose a partner carefully; the partner is responsible for the safety of the muscles and joints while you are performing the stretching exercises.

The stretch on the left is an example of a passive stretch in which a partner is used to stretch the chest and shoulder muscles.

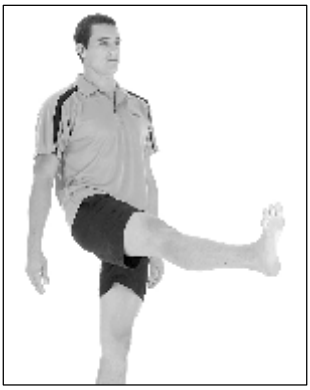
Passive stretching is useful in helping to attain a greater range of motion, but carries with it a slightly higher risk of injury. It can also be used effectively as part of a rehabilitation program or as part of a cool-down.

Active Stretching

Active stretching is performed without any aid or assistance from an external force. This form of stretching involves using only the strength of the

opposing muscles (antagonist) to generate a stretch within the target muscle group (agonist). The contraction of the opposing muscles helps to relax the stretched muscles.

A classic example of an active stretch is one where an individual raises one leg straight out in front, as high as possible, and then maintains that fixed position without any assistance from a partner or object.



Active stretching is useful as a rehabilitation tool and very effective as a form of conditioning before moving onto dynamic stretches. This type of stretching exercise is usually quite difficult to hold and maintain for long periods of time and therefore the stretch position is usually only held for 10 to 15 seconds.

PNF Stretching

PNF stretching (*Proprioceptive Neuromuscular Facilitation*), sometimes referred to as *Facilitated Stretching*, is a more advanced form of flexibility training that involves both the stretching and contracting of the muscle group being targeted. PNF stretching was originally developed as a form of rehabilitation and for that function it is very effective. It is also excellent for targeting specific muscle groups, and as well as increasing flexibility, it also improves muscular strength.

There are many different variations of the PNF stretching principle and sometimes it is referred to as Contract-Relax stretching or Hold-Relax stretching. Post Isometric Relaxation (PIR) is another variation of the PNF technique.

To perform a PNF stretch, the area to be stretched is positioned so that the muscle (or group of muscles) is under tension. The individual then contracts the stretched muscle group for 5 to 6 seconds while a partner (or immovable object) applies sufficient resistance to inhibit movement. The force of contraction should be relative to the level of conditioning. The

contracted muscle group is then relaxed and a controlled stretch is immediately applied for about 30 seconds. The athlete is then allowed 30 seconds to recover and the process is repeated 2 to 4 times.

Information differs slightly about timing recommendations for PNF stretching. Although there are conflicting responses to the questions; *for how long should I contract the muscle group* and *for how long should I rest between each stretch*, it is my professional opinion, that through a study of research literature and personal experience, the previous timing recommendations provide the maximum benefits from PNF stretching.

Isometric Stretching

Isometric stretching is a form of passive stretching similar to PNF stretching, but the contractions are held for a longer period of time. Isometric stretching places high demands on the stretched muscles and is not recommended for children or adolescents who are still growing. Other recommendations include allowing at least 48 hours rest between isometric stretching sessions and performing only one isometric stretching exercise per muscle group in a session.

A classic example of how isometric stretching is used is the *Leaning Heel-back Calf Stretch* to the right. In this stretch the participant stands upright, leans forward towards a wall and then places one foot as far from the wall as is comfortable while making sure that the heel remains on the ground. In this position, the participant contracts the calf muscles as if trying to raise the heel off the ground.

To perform an isometric stretch; assume the position of the passive stretch and then contract the stretched muscle for 10 to 15 seconds. Be sure that all movement of the limb is prevented. Then relax the muscle for at least 20 seconds. This procedure should be repeated 2 to 5 times.

Dynamic Stretches

The term dynamic stretches refers to stretching exercises that are performed with movement. In other words, the individual uses a swinging or bouncing movement to extend their range of motion and flexibility. Listed below are four different types of dynamic stretching exercises.

Ballistic Stretching

Ballistic stretching is an outdated form of stretching that uses momentum generated by rapid swinging, bouncing and rebounding movements to force a body part past its normal range of motion.

The risks associated with ballistic stretching far outweigh the gains, especially when greater gains can be achieved by using other forms of stretching like dynamic stretching and PNF stretching. Other than potential injury, the main disadvantage of ballistic stretching is that it fails to allow the stretched muscle time to adapt to the stretched position and instead may cause the muscle to tighten up by repeatedly triggering the stretch reflex, (*discussed in chapter 5*).

Dynamic Stretching

Unlike ballistic stretching, dynamic stretching uses a controlled, soft bounce or swinging movement to move a particular body part to the limit of its range of motion. The force of the bounce or swing is gradually increased but should never become radical or uncontrolled.

Do not confuse dynamic stretching with ballistic stretching. Dynamic stretching is slow, gentle and very purposeful. At no time during dynamic stretching should a body part be forced past the joints normal range of motion. Ballistic stretching, on the other hand, is much more aggressive and its very purpose is to force the body part beyond the limit of its normal range of motion.

Active Isolated Stretching

Active isolated (AI) stretching is a form of stretching developed by Aaron L. Mattes, and is sometimes referred to as *The Mattes Method*. It works by contracting the antagonist, or opposing muscle group, which forces the

stretched muscle group to relax. The procedure for performing an AI stretch is as follows.

1. Choose the muscle group to be stretched and then get into a position to begin the stretch.
2. Actively contract the antagonist, or opposing muscle group.
3. Move into the stretch quickly and smoothly.
4. Hold for 1 to 2 seconds and then release the stretch.
5. Repeat 5 to 10 times.

While AI stretching certainly has some benefits (mainly for the professional or well conditioned athlete), it also has a number of unsubstantiated claims. One such claim is that AI stretching does not engage the stretch reflex (or myotatic reflex) because the stretch is only held for 2 seconds or less.[1,2] This however, defies basic muscle physiology. The stretch reflex in the calf muscle for example is triggered within 3 hundredths of a second, so any claim that AI stretching can somehow bypass or outsmart the stretch reflex is nothing more than wishful thinking.

Resistance Stretching and Loaded Stretching

Resistance stretching and loaded stretching are a form of dynamic stretching that both contract and lengthen a muscle at the same time. They work by stretching a muscle group through its entire range of motion while under contraction. For this reason, both resistance stretching and loaded stretching are as much about strengthening a muscle group as they are about stretching it.

Like AI stretching above, resistance stretching and loaded stretching do have their benefits. Five time Olympic swimmer, Dara Torres credits a portion of her swimming success to the use of resistance stretching. However, these forms of stretching place high demands on the musculo-skeletal system and are therefore only recommended for professional or well conditioned athletes.

[1] Mattes, A. 2000 *Active Isolated Stretching: The Mattes Method* Pages 1, 3, 6.
[2] Wharton, J & P. 1996 *The Whartons' Stretch Book* Page xxiii.

Chapter 5
The Rules for Safe Stretching

As with most activities there are rules and guidelines to ensure that they are safe. Stretching is no exception. Stretching can be extremely dangerous and harmful if done incorrectly. It is vitally important that the following rules be adhered to, both for safety and for maximizing the potential benefits of stretching.

There is often confusion and concerns about which stretches are good and which stretches are bad. In most cases someone has told the inquirer that they should not do this stretch or that stretch, or that this is a "good" stretch and this is a "bad" stretch.

Are there only good stretches and bad stretches? Is there no middle ground? And if there are only good and bad stretches, how do we decide which ones are good and which ones are bad? Let us put an end to the confusion once and for all.

There is no such thing as a good or bad stretch!

Just as there are no good or bad exercises, there are no good or bad stretches; only what is appropriate for the specific requirements of the individual. So a stretch that is perfectly safe and beneficial for one person may not be safe or beneficial for someone else.

Let us use an example. A person with a shoulder injury would not be expected to do push-ups or freestyle swimming, but that does not mean that these are bad exercises. Now, consider the same scenario from a stretching point of view. That same person should avoid shoulder stretches, but that does not mean that all shoulder stretches are bad.

The stretch itself is neither good nor bad. It is the way the stretch is performed and whom it is performed on that makes stretching either effective and safe, or ineffective and harmful. To place a particular stretch into the category of "good" or "bad" is foolish and dangerous. To label a stretch as "good" gives people the false impression that they can do that stretch whenever and however they want and it will not cause them any harm or injury, which is misleading and dangerous.

The specific requirements of the individual are what are important!

Remember, stretches are neither good nor bad. However, when choosing a stretch there are a number of precautions and checks that need to be performed before giving that stretch the okay.

1. **Firstly, make a general review of the individual.** Are they healthy and physically active, or have they been leading a sedentary lifestyle for the past 5 years? Are they a professional athlete? Are they recovering from a serious injury? Do they have aches, pains or muscle and joint stiffness in any area of their body?

2. **Secondly, make a specific review of the area, or muscle group to be stretched.** Are the muscles healthy? Is there any damage to the joints, ligaments, tendons, etc.? Has the area been injured recently, or is it still recovering from an injury?

If the muscle group being stretched is not 100% healthy, avoid stretching that area altogether. Work on recovery and rehabilitation before moving onto specific stretching exercises. If however, the individual is healthy and the area to be stretched is free from injury, then apply the following rules and guidelines to all stretches.

Warm-up prior to stretching

This first rule is often overlooked and can lead to serious injury if not performed effectively. Trying to stretch muscles that have not been warmed, is like trying to stretch old, dry rubber bands; they may snap.

Warming up prior to stretching does a number of beneficial things, but primarily its purpose is to prepare the body and mind for more strenuous activity. One of the ways it achieves this is by increasing the body's core temperature while also increasing the body's muscle temperature. This helps to make the muscles loose, supple and pliable, and is essential to ensure the maximum benefits are gained from stretching.

A correct warm-up also has the effect of increasing both heart rate and respiratory rate. This increases blood flow, which in turn increases the delivery of oxygen and nutrients to the working muscles. All this helps to prepare the muscles for stretching.

A correct warm-up should consist of light physical activity, like walking, jogging or easy aerobics. Both the intensity and duration of the warm-up (or how hard and how long), should be governed by the fitness level of the participating athlete, although a correct warm-up for most people should take about five to ten minutes and result in a light sweat.

For more information about stretching and the warm-up, refer to *How to use Stretching as part of the Warm-up* in chapter 6.

Stretch before and after exercise

The question often arises: *Should I stretch before or after exercise?* This is not an either / or situation; both are essential. It is no good stretching after exercise and counting that as the pre-exercise stretch for next time. Stretching after exercise has a totally different purpose to stretching before exercise.

The purpose of stretching before exercise is to prepare the individual for activity and help prevent injury. Stretching does this by lengthening the muscles and associated soft tissues, which in turn increases range of motion. This ensures that we are able to move freely without restriction or injury occurring.

However, stretching after exercise has a very different role. Its purpose is primarily to aid in the repair and recovery of the muscles and associated soft tissues. By lengthening the muscles, stretching helps to prevent tight muscles and delayed onset muscle soreness (DOMS) that sometimes accompanies strenuous exercise.

After exercise stretching should be done as part of a cool-down. The cool-down will vary depending on the duration and intensity of exercise undertaken, but will usually consist of five to ten minutes of very light physical activity and be followed by five to ten minutes of static stretching exercises.

An effective cool-down involving light physical activity and stretching will help to: rid waste products from the muscles; prevent blood pooling; and promote the delivery of oxygen and nutrients to the muscles. All this helps to return the body to a pre-exercise level, thus aiding the recovery process.

Stretch all major muscles and their opposing muscle groups

When stretching, it is vitally important that attention is paid to all the major muscle groups in the body. Just because a particular sport places a lot of emphasis on the legs, for example, does not mean that one can neglect the muscles of the upper body in a stretching routine.

All the muscles play an important role in any physical activity, not just a select few. Muscles in the upper body, for example, are extremely important in any running sport. They play a vital role in the stability and balance of the body during the running motion. Therefore it is important to keep them

both flexible and supple.

Every muscle in the body has an opposing muscle that acts against it. For example, the muscles in the front of the leg, (the quadriceps) are opposed by the muscles in the back of the leg, (the hamstrings). These two groups of muscles provide a resistance to each other that balance the body. If one group of muscles becomes stronger or more flexible than the other group, it is likely to lead to imbalances that can result in injury or postural problems.

For example, hamstring tears are a common injury in most running sports. They are often caused by strong quadriceps and weak, inflexible hamstrings. This imbalance puts a great deal of pressure on the hamstrings and can result in a muscle tear or strain.

The same principle applies to the left and right sides of the body. Some sports and activities place more emphasis on one side of the body, which can result in differing levels of flexibility from one side of the body to the other.

For example, baseball pitchers often develop an imbalance between their pitching arm and their non pitching arm. Typically the pitching arm and shoulder become stronger and tighter than the non pitching arm and shoulder. This can lead to uneven forces that pull on the cervical and thoracic regions of the spine, resulting in abnormal curvature, which can increase the likelihood of injuries to the neck, upper back and shoulders.

Stretch gently and slowly

Stretching gently and slowly helps to relax the muscles, which in turn makes stretching more pleasurable and beneficial. This will also help to avoid muscle tears and strains that can be caused by rapid, jerky movements.

Stretch ONLY to the point of tension

Stretching is NOT an activity that is meant to be painful; it should be pleasurable, relaxing and very beneficial. Although many people believe that to get the most from their stretching they need to be in constant pain. This is one of the greatest mistakes that can be made when stretching. Let me explain why.

When the muscles are stretched to the point of pain, the body employs a defense mechanism called the *stretch reflex* (or myotatic reflex). This is the body's safety measure to prevent serious damage occurring to the muscles, tendons and joints. The stretch reflex protects the muscles and tendons by contracting them, thereby preventing them from being stretched.

So to avoid the stretch reflex, avoid pain. Never push the stretch beyond what is comfortable. Only stretch to the point where tension can be felt in the muscles. This way, injury will be avoided and the maximum benefits from stretching will be achieved.

Breathe slowly and easily while stretching

Many people unconsciously hold their breath while stretching. This causes tension in the muscles, which in turn makes it very difficult to stretch. To avoid this, remember to breathe slowly and deeply during all stretching exercises. This helps to relax the muscles, promotes blood flow and increases the delivery of oxygen and nutrients to the muscles.

An example

By taking a look at one of the most controversial stretches ever performed, we can see how the above rules are applied.

The stretch below causes a negative response from many people. It has a reputation as a dangerous, bad stretch and should be avoided at all costs.

So why is it that at every Olympic Games, Commonwealth Games and World Championships, sprinters can be seen doing this stretch before their events? Let us apply the above checks to find out.

Firstly, consider the person performing the stretch. Are they healthy, fit and physically active? If not, this is not a stretch they should be doing. Are they elderly, overweight or unfit? Are they young and still growing? Do they lead a sedentary lifestyle? If so, they should avoid this stretch.

This first consideration alone would most likely prohibit 25% of the population from doing this stretch.

Secondly, review the area to be stretched. This stretch obviously places a large strain on the muscles of the hamstrings and lower back, so if the hamstrings or lower back are not 100% healthy, do not do this stretch.

With the high occurrence of back pain among the population, this second consideration could easily rule out another 50%, which means this stretch is

only suitable for about 25% of the population. Or, the well trained, physically fit, injury free athlete. Then apply the six precautions above and the well trained, physically fit, injury free athlete can perform this stretch safely and effectively.

Remember, the stretch itself is neither good, nor bad. It is the way the stretch is performed and whom it is performed on that makes stretching either effective and safe, or ineffective and harmful.

Chapter 6
How to Stretch Properly

When to stretch?

Stretching needs to be as important as the rest of our training. If we are involved in any competitive type of sport or exercise then it is crucial that we make time for specific stretching workouts. Set time aside to work on muscle groups that are tight or especially important for your particular sport. The more involved and committed we are to exercise and fitness, the more time and effort we will need to commit to stretching.

As discussed in chapter 5 it is important to stretch both before and after exercise, but when else should we stretch? Stretch periodically throughout the entire day. It is a great way to stay loose and to help ease the stress of everyday life. One of the most productive ways to utilize time is to stretch while watching television. Start with five minutes of marching or jogging on the spot then take a seat on the floor in front of the television and start stretching.

Competition is a time when great demands are placed on the body; therefore it is vitally important that we are in peak physical condition. Flexibility should be at its best just before competition. Too many injuries are caused by the sudden exertion that is needed for competitive sport. Get strict on stretching before competition.

What type of stretching?

Choosing the right type of stretching for the right purpose will make a big difference to the effectiveness of any flexibility training program. To follow are some suggestions for when to use the different types of stretches. (For more detailed information refer to chapter 4.)

For warming up, dynamic stretching is the most effective, while for cooling down, static, passive and PNF stretching are best. For improving range of motion, try PNF and Active Isolated stretching, and for injury rehabilitation, a combination of PNF, Isometric and Active stretching will give the best results.

Hold, Count, Repeat

For how long should we hold each stretch? How often should we stretch? For how long should we stretch?

These are the most commonly asked questions when discussing the topic of stretching. Although there are conflicting responses to these questions, it is

my professional opinion, that through a study of research literature and personal experience, I believe what follows is currently the most correct and beneficial information.

The question that causes the most conflict is: *For how long should I hold each stretch?* For Static and Passive stretching, some text will say that as little as ten seconds is enough. This is a bare minimum. Ten seconds is only just enough time for the muscles to relax and start to lengthen. For any real improvement to flexibility, each stretch should be held for at least twenty to thirty seconds.

The time committed to stretching should be relative to the level of involvement in our particular sport. So, for people looking to increase their general level of health and fitness, a minimum of about twenty seconds will be enough. However, if involved in high level competitive sport we need to hold each stretch for at least thirty seconds and start to extend that to sixty seconds and beyond.

How often should I stretch? The same principle of adjusting the level of commitment to the level of involvement in our sport applies to the number of times we should stretch each muscle group. For example, the beginner should stretch each muscle group two to three times. However, if involved at a more advanced level, we should stretch each muscle group three to five times.

For how long should I stretch? The same principle applies. For the beginner, about five to ten minutes is enough, and for the professional athlete, anything up to two hours. If we are somewhere between the beginner and professional adjust the time spent stretching accordingly.

Do not be impatient with stretching. Nobody can get fit in a couple of weeks, so do not expect miracles from a stretching routine. Looking long term, some muscle groups may need a minimum of three months of regular stretching to see any real improvement. So stick with it, it is well worth the effort.

Sequence

When starting a stretching program it is a good idea to start with a general range of stretches for the entire body, instead of just a select few. The idea of this is to reduce overall muscle tension and to increase the mobility of the joints and limbs.

The next step should be to increase overall flexibility by starting to extend the muscles beyond their normal range of motion. Following this; work on specific areas that are tight or important for your particular sport. Remember, all this takes time. This sequence of stretches may take up to three months to see real improvement, especially if we have no background in agility based activities or are heavily muscled.

Limited data exists on what order individual stretches should be done in. However, some researchers have suggested designing flexibility training programs that start with the core muscles of the stomach, sides, back and neck, and then work out to the extremities. Others have recommended starting with sitting stretches, because there is less chance of accidental injury while sitting, before moving on to standing stretches.

The exact order in which individual stretches are done is not the main point of emphasis; the main priority is to cover all the major muscle groups and their opposing muscles, and to work on those areas that are most tight or more important for your specific sport.

Once we have advanced beyond improving overall flexibility and are working on improving the range of motion of specific muscles, or muscle groups, it is important to isolate those muscles during the stretching routines. To do this, concentrate on only one muscle group at a time. For example, instead of trying to stretch both hamstrings at the same time, concentrate on only one at a time. Stretching this way will help to reduce the resistance from other supporting muscle groups.

Posture

Posture, or alignment, while stretching is one of the most neglected aspects of flexibility training. It is important to be aware of how crucial it can be to the overall benefits of stretching. Poor posture and incorrect alignment can cause imbalances in the muscles that can lead to injury. While proper posture will ensure that the targeted muscle group receives the best possible stretch.

In many instances one major muscle group can be made up of a number of different muscles. If posture is poor or incorrect certain stretching exercises may put more emphasis on one particular muscle within that muscle group, thus causing an imbalance that could lead to injury.

The picture on the right, for example, shows the difference between good posture and poor posture when stretching the hamstring muscles (the muscles at the back of the upper legs).

During this stretch it is important to keep both feet pointing straight up. Allowing the feet to fall to one side will put more emphasis on one particular part of the hamstrings, which could result in a muscle imbalance.

Note the athlete on the left; feet upright and back relatively straight. The athlete on the right is at a greater risk of causing a muscular imbalance that may lead to injury.

How to use stretching as part of the warm-up

Lately, I have been receiving a lot of questions referring to recent studies and research findings about stretching. The most common question I receive concerns the role that stretching plays as part of the warm-up procedure.

Currently, there seems to be a lot of confusion about how and when stretching should be used as part of the warm-up, and some people are under the impression that stretching should be avoided altogether.

This is a very important issue and needs to be clarified immediately. The following information is provided to dispel some common myths and misconceptions about stretching and its role as part of the warm-up.

What has science got to say?

Most of the studies I have reviewed attempt to determine the short term, or one-off effects of stretching on injury prevention. This is a mistake in itself and shows a lack of understanding as to how stretching is used as part of a conditioning or injury prevention program.

Stretching and its effect on physical performance and injury prevention is something that just can not be measured scientifically. Sure we can measure the effect of stretching on flexibility with simple tests like the *Sit and Reach Test*, but then to determine how that effects athletic performance or injury susceptibility is very difficult, if not near impossible. One of the more recent studies on stretching supports this view by concluding; *Due to the paucity, heterogeneity and poor quality of the available studies no definitive conclusions can be drawn as to the value of stretching for reducing the risk of exercise-related injury.*[1]

To put the above quote in layman's terms; there has not been enough studies done and the studies that have been done are not specific or consistent enough.

[1] Weldon, SM. The efficacy of stretching for prevention of exercise-related injury: a systematic review of the literature. *Manual Therapy*, 2003 Volume 8, Issue 3, Page 141.

The greatest misconception

Confusion about what stretching accomplishes, as part of the warm-up procedure, is causing many to abandon stretching altogether. The key to understanding the role stretching plays can be found in the previous sentence; but you have to read it carefully.

Stretching, as part of the warm-up!

Here is the key: Stretching is a critical part of the warm-up, but stretching is NOT the warm-up.

Do not make the mistake of thinking that doing a few stretches constitutes a warm-up. An effective warm-up has a number of very important key elements, which all work together to minimize the likelihood of sports injury and prepare the individual for physical activity.

Identifying the components of an effective and safe warm-up, and executing them in the correct order is critical. Remember, stretching is only one part of an effective warm-up, and its place in the warm-up procedure is specific and dependant on the other components.

The four key elements that should be included to ensure an effective and complete warm-up are:

1. **The general warm-up**: This phase of the warm-up consists of 5 to 15 minutes of light physical activity. The aim here is to elevate the heart rate and respiratory rate, increase blood flow and increase muscle temperature.

2. **Static stretching**: Next, a few minutes of gentle static stretching should be incorporated into the general warm-up to gradually lengthen all the major muscle groups and associated soft tissues of the body.

3. **The sports specific warm-up**: During this phase of the warm-up, 10 to 15 minutes of sport specific drills and exercises should be used to prepare the athlete for the specific demands of their chosen sport.

4. **Dynamic stretching**: Lastly, the warm-up procedure should finish with a number of dynamic stretching exercises that mimic the common movements of the sport or activity to follow. For example, arm rotations for swimming, or swing kicks for running sports. Remember, the force of the bounce or swing is gradually increased but should never become radical or uncontrolled.

All four parts are equally important and any one part should not be neglected or thought of as not necessary. All four elements work together to bring the body and mind to a physical peak, ensuring the athlete is prepared for the activity to come.

Please note the following points

1. Dynamic stretching carries with it an increased risk of injury if used incorrectly. Refer to chapter 4 for more information about dynamic stretching.

2. The time recommendations given in the above warm-up procedure relate specifically to the requirements of a serious athlete. Adjust the times accordingly if your athletic participation is not of a professional manner.

3. Recent studies have indicated that static stretching may have a negative effect on muscle contraction speed and therefore impair performance of athletes involved in sports requiring high levels of power and speed. It is for this reason that static stretching is conducted early in the warm-up procedure and is always followed by sports specific drills and dynamic stretching. Recent studies suggest no detrimental effects when static stretching is conducted early in the warm-up.[2]

What conclusions can we make?

Stretching is beneficial, when used correctly. Remember, stretching is just one important component that assists to reduce the risk of injury and improve athletic performance. The best results are achieved when stretching is used in combination with other injury reduction techniques and conditioning exercises.

[2] Taylor, KL. Sheppard, JM. Lee, H. Plummer, N. Negative effect of static stretching restored when combined with a sports specific warm-up component. *Journal of Science and Medicine in Sport*, 2009 Nov; 12(6):657-61.

Chapter 7
Flexibility Testing

To really take advantage of the many benefits of stretching, a record of flexibility should be kept. For sports trainers and coaches in particular, it is vitally important to test and chart an athletes' flexibility on a regular basis. This is important for two reasons.

Firstly, it provides a starting point from which to measure improvements and gives an indication of any areas that may be weak, limited or inflexible.

Secondly, in the event of an injury, this baseline flexibility provides a goal to achieve before resuming exercise or returning to competition. It is vitally important that flexibility is regained after an injury. Therefore having a record of what the level of flexibility was before the injury is very useful as a target to achieve.

During the year set a minimum standard of flexibility for the activities engaged in. If an athlete becomes injured, it should be the goal to achieve the minimum standard of flexibility required for that activity before returning to exercise, competition or strenuous training.

What follows is a brief example of a few basic flexibility tests. These are the most commonly used tests but they are by no means the only ones. If more are required, consult a professional sports trainer for ideas about tests that are specific to the athletes' particular sport. Remember *The Rules for Safe Stretching* in chapter 5 and once a test is used it is important not to vary it in any way. It must be kept the same each time it is used.

All the following tests are best done using a goniometer; a devise for measuring body limb angles. If a goniometer is not available, any standard 360 degree protractor will give a good indication of the angle at a particular joint.

Sit and Reach Test

The sit and reach test is probably the most common test used to measure flexibility in the back, hips and hamstring muscles.

Sit on the floor with your legs straight and your feet flat

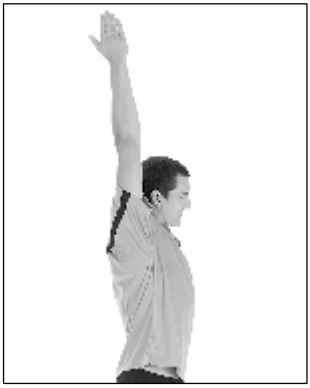
against an upright board. Bend forward reaching towards, or as far past, your toes as possible, and then record the distance reached. This test will give a good indication of hamstring, hip and back flexibility.

Shoulder Flexibility Test

Unfortunately, participants in sports such as swimming, tennis (or any racket sport), any of the throwing events in athletics and especially contact sports, are extremely susceptible to injuries of the shoulder. Shoulder flexibility should be a prime concern for anyone participating in these sports.

Start by standing upright with the hand pointing down. In this position the hand represents the 0 degree position.

Then raise the arm directly forward and above the head, as in the picture to the right. Its furthest point is then recorded. An average acceptable reading of 180 degrees is expected for athletes.



Now move the arm down and behind the back to its furthest position, as in the picture to the right. This measurement is recorded and should exceed 50 degrees.

Hamstring Flexibility Test

Lie on the ground face up, with arms straight beside the body, as in the picture below. Raise one leg as far up as possible. Keep the leg straight and measure the angle at the hip joint. An angle of 90 degrees is considered average to good.

Chapter 8
135 Unique Stretching Exercises

In this second half of the book there are 135 photographs of unique stretching exercises, each with an accompanying description explaining how the stretch is performed. These stretching exercises are not specific to any particular sport or any particular type of person. Of course all of them will not be relevant to everyone, but a great number of them will be suitable for most athletes, coaches, trainers and health care professionals.

If you find a particular stretch difficult to perform, start with the stretches that are more comfortable for you, and return to the more difficult stretches when your flexibility has improved.

An index is included on page 44 to assist in finding individual stretches, and each stretch has been arranged to correspond with a particular body part or major muscle group. For example, when looking for stretches for the shoulders, look to that particular heading. The stretches have been arranged so as to start with the neck and work down to the ankles and feet.

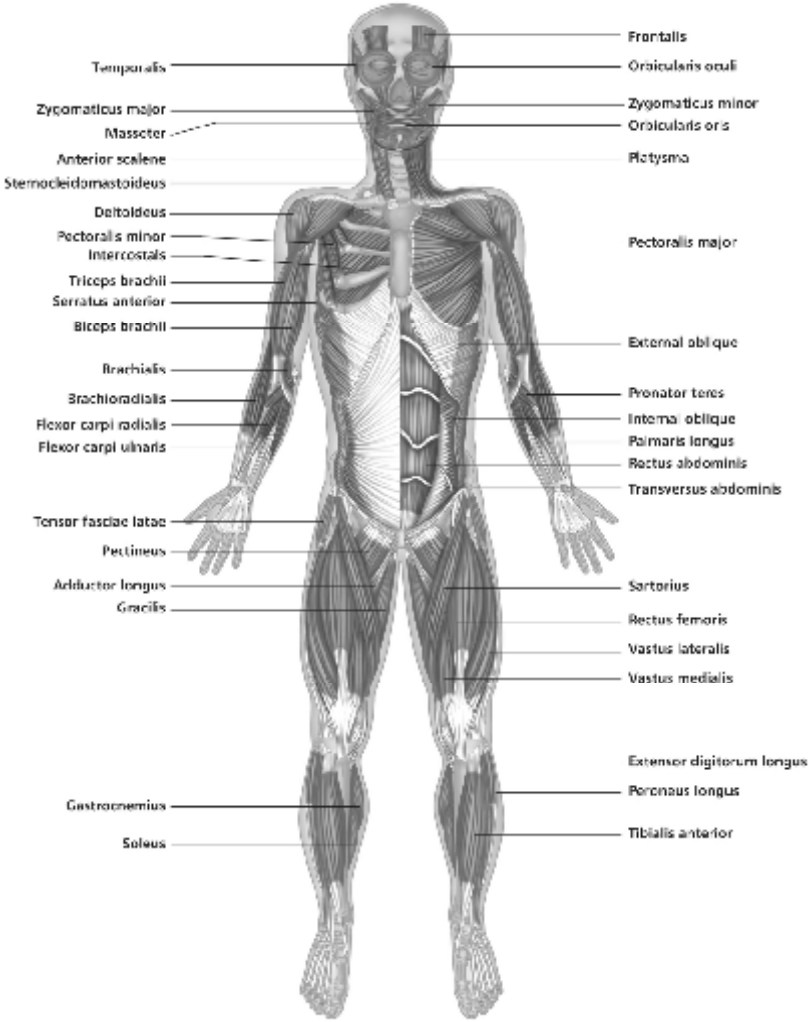
On the following two pages there are anatomical diagrams of the major muscles of the body, and at the beginning of each section there is a list of the individual muscles that the stretches target. By matching the list of individual muscles at the beginning of each section, with the anatomical diagrams on the next two pages, you can see exactly which muscles are being stretched during each stretching exercise.

For a more comprehensive explanation of the muscle anatomy involved during each of the stretching exercises, please refer to *The Anatomy of Stretching* at www.AnatomyOfStretching.com.

Important!

Remember to always follow *The Rules for Safe Stretching* in chapter 5, and if you have any pre-existing injuries or ailments please consult a sports doctor or physical therapist before attempting any of the following stretches. Discontinue any exercise that causes pain or severe discomfort and consult a medical expert.

Muscular System (anterior view)



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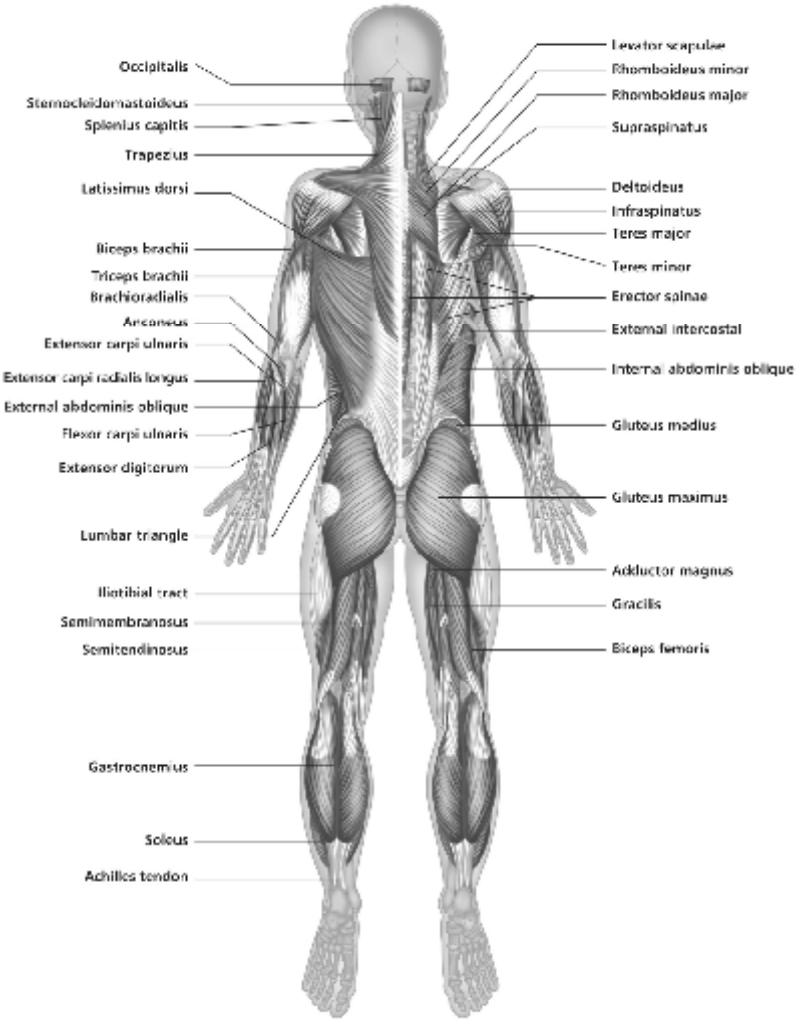
Muscular System (posterior view)



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Stretches for the Neck and Shoulders

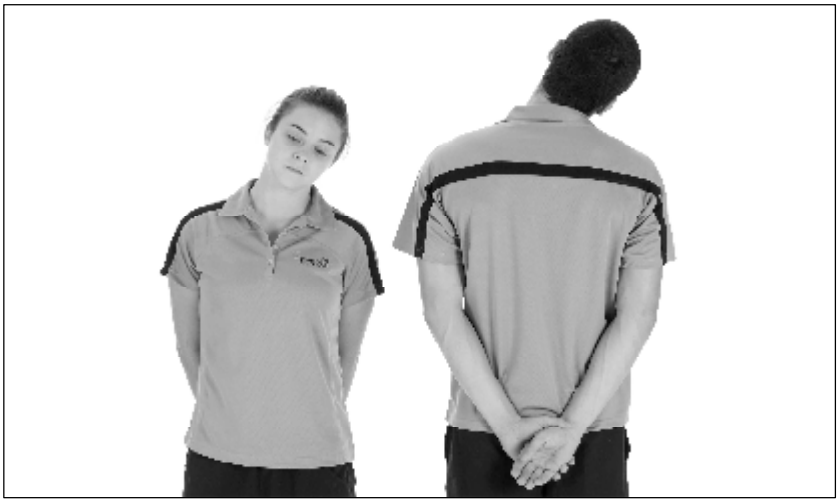
The neck and shoulders are comprised of a multitude of small muscles that control the head and upper arm. The muscles around the neck and shoulder, along with the structure of the joints, allow for a large range of motion of the head and upper arm; including flexion, extension, adduction, abduction and rotation.

The anatomical structures of the neck and shoulder joints are commonly over-stretched by applying too much force to the targeted muscle groups. Please take extra care when performing the following stretches and always follow *The Rules for Safe Stretching* in chapter 5.

Sports that benefit from these neck and shoulder stretches include: Archery; batting sports like Cricket, Baseball and Softball; Boxing; contact sports like Football, Gridiron and Rugby; Golf; racquet sports like Tennis, Badminton and Squash; Swimming; throwing sports like Cricket, Baseball and Field events; and Wrestling.

The major muscles being stretched.

Deltoid anterior, medius, posterior
Infraspinatus
Levator scapulae
Longissimus capitis
Longissimus cervicis
Omohyoid
Platysma
Scalenus anterior, medius, posterior
Semispinalis capitis
Semispinalis cervicis
Serratus anterior
Spinalis capitis
Spinalis cervicis
Splenius capitis
Splenius cervicis
Sternocleidomastoid
Sternohyoid
Sternothyroid
Subscapularis
Supraspinatus
Teres major
Teres minor
Trapezius



A01 - Lateral Neck Stretch: Look forward while keeping your head up. Slowly move your ear towards your shoulder while keeping your hands behind your back.

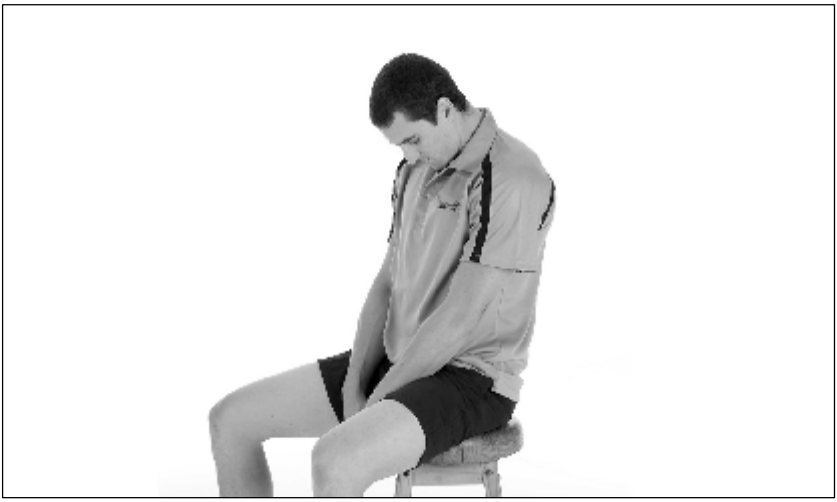
A02 - Rotating Neck Stretch: Stand upright while keeping your shoulders still and your head up, then slowly rotate your chin towards your shoulder.

A03 - Forward Flexion Neck Stretch: Stand upright and let your chin fall forward towards your chest. Relax your shoulders and keep your hands by your side.

A04 - Diagonal Flexion Neck Stretch: Stand upright and let your chin fall forward towards your chest. Then gently lean your head to one side.

A05 - Neck Extension Stretch: Stand upright and lift your head, looking upwards as if trying to point up with your chin. Relax your shoulders and keep your hands by your side.

A06 - Neck Protraction Stretch: While looking straight ahead, push your head forward by sticking your chin out.



A07 - Sitting Neck Flexion Stretch: While sitting on a chair, cross your arms and hold onto the chair between your legs. Let your head fall forward and then lean backwards.

A08 - Parallel Arm Shoulder Stretch: Stand upright and place one arm across your body. Keep your arm parallel to the ground and pull your elbow towards your body.

A09 - Bent Arm Shoulder Stretch: Stand upright and place one arm across your body. Bend your arm at 90 degrees and pull your elbow towards your body.

A10 - Wrap-around Shoulder Stretch: Stand upright and wrap your arms around your shoulders as if hugging yourself. Pull your shoulders back.

A11 - Cross-over Shoulder Stretch: Stand with your knees bent. Cross your arms over and grab the back of your knees, then start to rise upwards until you feel tension in your upper back and shoulders.

A12 - Reaching-up Shoulder Stretch: Place one hand behind your back and then reach up between your shoulder blades.

A13 - Elbow-out Rotator Stretch: Stand with your hand behind the middle of your back and your elbow pointing out. Reach over with your other hand and gently pull your elbow forward.

A14 - Arm-up Rotator Stretch: Stand with your arm out and your forearm pointing upwards at 90 degrees. Place a broom stick in your hand and behind your elbow. With your other hand pull the bottom of the broom stick forward.

A15 - Arm-down Rotator Stretch: Stand with your arm out and your forearm pointing downwards at 90 degrees. Place a broom stick in your hand and behind your elbow. With your other hand pull the top of the broom stick forward.

A16 - Reverse Shoulder Stretch: Stand upright and clasp your hands together behind your back. Keep your arms straight and slowly lift your hands upward.

A17 - Assisted Reverse Shoulder Stretch: Stand upright with your back towards a table or bench and place your hands on the edge of the table or bench. Keep your arms straight and slowly lower your entire body.

Stretches for the Arms and Chest

The arms and chest are comprised of a number of both large muscles (Pectoralis major, biceps) and small muscles (Pectoarlis minor, teres major). These muscles are primarily responsible for shoulder stabilization and arm movement.

Sports that benefit from these arm and chest stretches include: Archery; Basketball and Netball; batting sports like Cricket, Baseball and Softball; Hiking, Backpacking, Mountaineering and Orienteering; Ice hockey and Field hockey; Martial Arts; racquet sports like Tennis, Badminton and Squash; Rowing, Canoeing and Kayaking; Swimming; throwing sports like Cricket, Baseball and Field events; Volleyball; and Wrestling.

The major muscles being stretched.

Biceps brachii
Brachialis
Brachioradialis
Coracobrachialis
Extensor carpi radialis longus and brevis
Extensor carpi ulnaris
Extensor digiti minimi
Extensor digitorum
Extensor indicis
Extensor pollicis longus and brevis
Flexor carpi radialis
Flexor carpi ulnaris
Flexor digitorum profundus
Flexor digitorum superficialis
Flexor pollicus brevis
Flexor pollicis longus
Opponens digiti minimi
Opponens pollicis
Palmer interossei
Palmaris longus
Pectoralis major
Pectorilis minor
Pronator teres
Supinator
Triceps

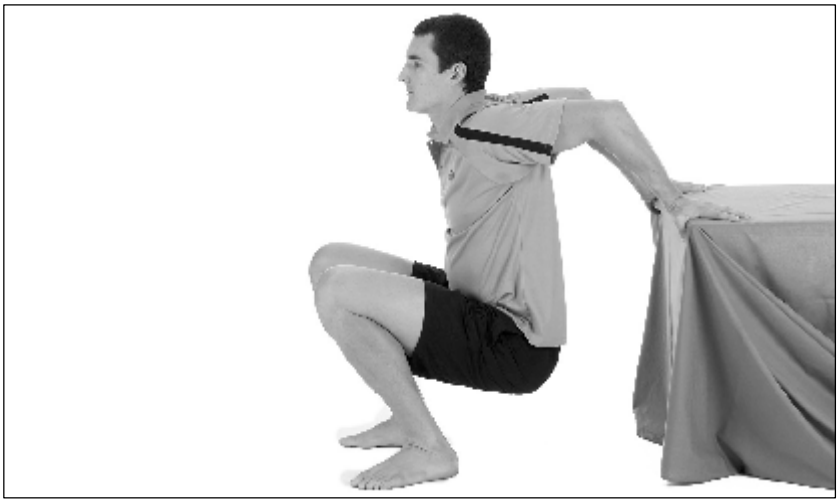
B01 - Above Head Chest Stretch: Stand upright and interlock your fingers. Bend your arms and place them above your head while forcing your elbows and hands backwards.

B02 - Partner Assisted Chest Stretch: Extend both arms parallel to the ground and have a partner hold on to your hands, then slowly pull your arms backwards.

B03 - Seated Partner Assisted Chest Stretch: Sit on the ground and have a partner stand behind you. Reach behind with both arms and have the partner further extend your arms.

B04 - Parallel Arm Chest Stretch: Stand with your arm extended to the rear and parallel to the ground. Hold on to an immovable object and then turn your shoulders and body away from your outstretched arm.

B05 - Bent Arm Chest Stretch: Stand with your arm extended and your forearm pointing up at 90 degrees. Rest your forearm against an immovable object and then turn your shoulders and body away from your extended arm.



B06 - Assisted Reverse Chest Stretch: Stand upright with your back towards a table or bench and place your hands on the edge of the table or bench. Bend your arms and slowly lower your entire body.

B07 - Bent-over Chest Stretch: Face a wall and place both hands on the wall just above your head. Slowly lower your shoulders as if moving your chin towards the ground.

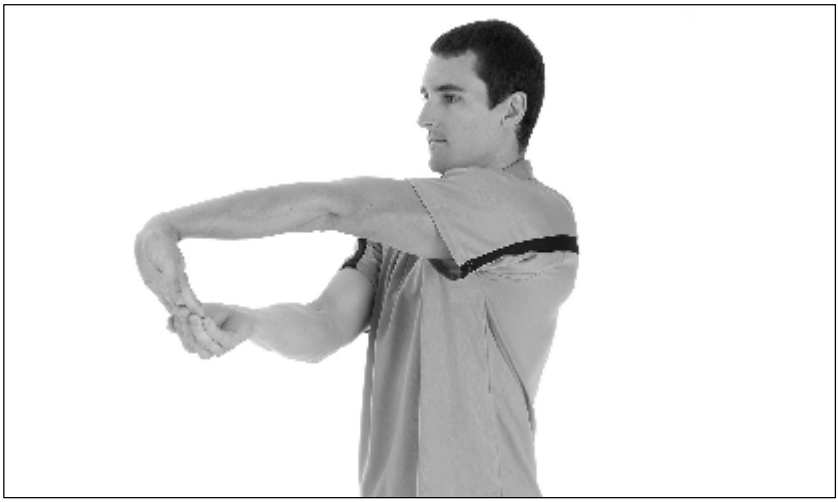
B08 - Kneeling Chest Stretch: Kneel on the floor in front of a chair or table and interlock your forearms above your head. Place your arms on the object and lower your upper body toward the ground.

B09 - Reaching-down Triceps Stretch: Reach behind your head with both hands and your elbows pointing upwards. Then reach down your back with your hands.

B10 - Assisted Triceps Stretch: Stand with one hand behind your neck and your elbow pointing upwards. Then use your other hand (or a rope or towel) to pull your elbow down.

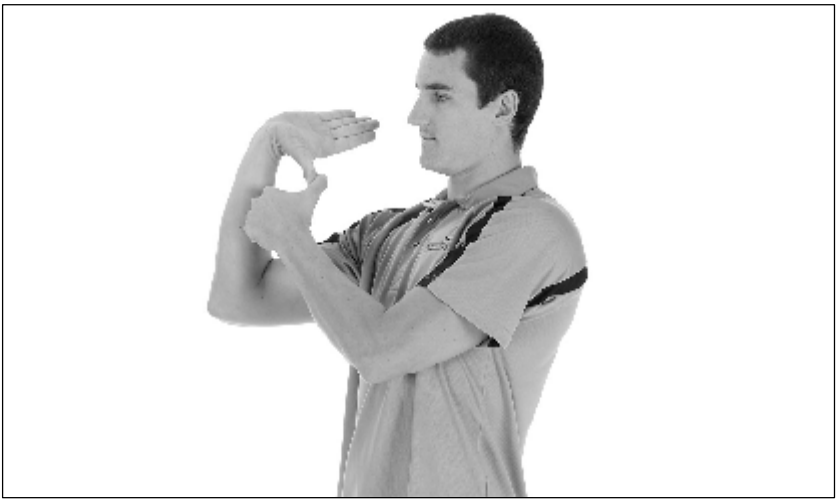
B11 - Kneeling Forearm Stretch: While crouching on your knees with your forearms facing forward and hands pointing backwards, slowly move rearward.

B12 - Palms-out Forearm Stretch: Interlock your fingers in front of your chest, then straighten your arms and turn the palms of your hands so that they face outwards.

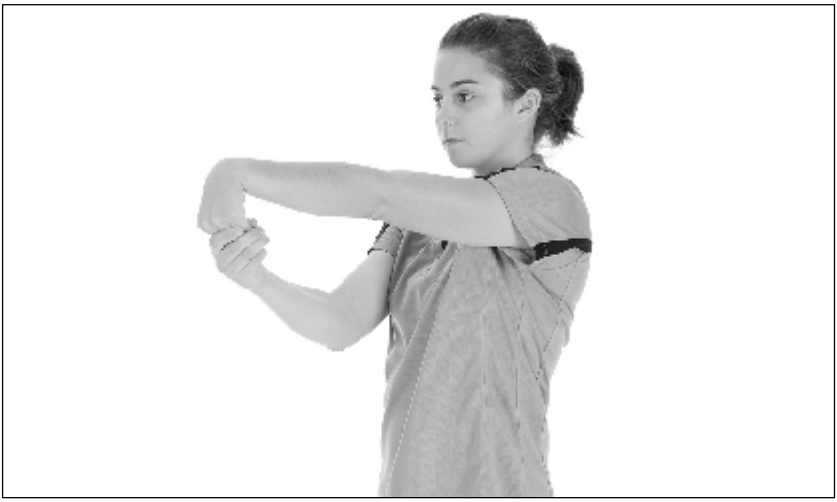


B13 - Fingers-down Forearm Stretch: Hold onto your fingers and turn your palms outwards. Straighten your arm and then pull your fingers back using your other hand.

B14 - Finger Stretch: Place the tips of your fingers together and push your palms towards each other.



B15 - Thumb Stretch: Start with your fingers pointing up and your thumb out to one side, then use your other hand to pull your thumb down.



B16 - Fingers-down Wrist Stretch: Hold on to your fingers and straighten your arm, then pull your fingers towards your body.

B17 - Rotating Wrist Stretch: Place one arm straight out in front and parallel to the ground. Rotate your wrist down and outwards and then use your other hand to further rotate your hand upwards.

Stretches for the Stomach

The muscles around the stomach extend from the bottom of the rib cage down to the front of the pelvic bone. The primary action of the stomach muscles is to both flex and rotate the lumbar spine.

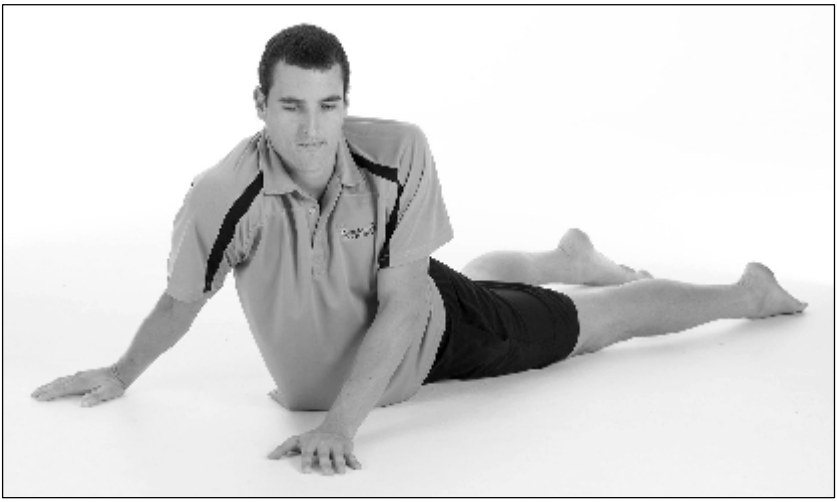
Sports that benefit from these stomach stretches include: Basketball and Netball; batting sports like Cricket, Baseball and Softball; Boxing; contact sports like Football, Gridiron and Rugby; Golf; Hiking, Backpacking, Mountaineering and Orienteering; Ice Hockey and Field Hockey; Ice Skating, Roller Skating and Inline Skating; Martial Arts; Rowing, Canoeing and Kayaking; Running, Track and Cross Country; running sports like Football, Soccer, Gridiron and Rugby; Snow Skiing and Water Skiing; Surfing; Walking and Race Walking; and Wrestling.

The major muscles being stretched.

Obliques external and internal
Transversus abdominis
Rectus abdominis

C01 - On Elbows Stomach Stretch: Lie face down and bring your hands close to your shoulders. Keep your hips on the ground, look forward and rise up onto your elbows.

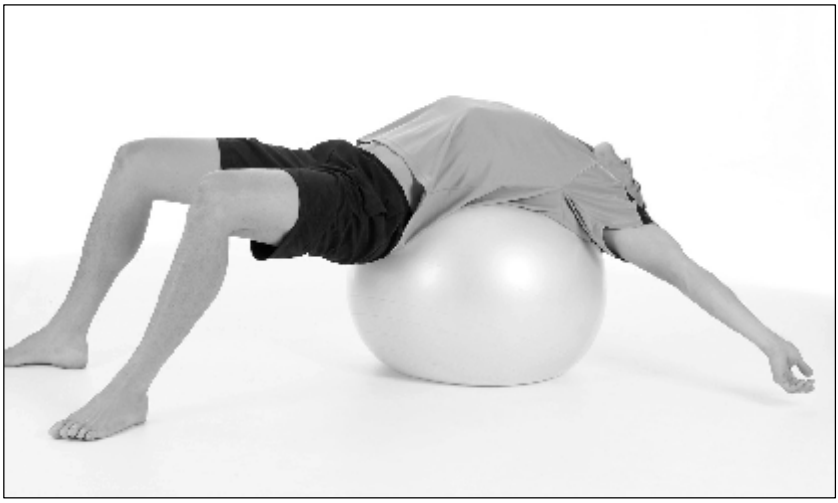
C02 - Rising Stomach Stretch: Lie face down and bring your hands close to your shoulders. Keep your hips on the ground, look forward and rise up by straightening your arms.



C03 - Rotating Stomach Stretch: Lie face down and bring your hands close to your shoulders. Keep your hips on the ground, look forward and rise up by straightening your arms. Then slowly bend one arm and rotate that shoulder towards the ground.

C04 - Standing Lean-back Stomach Stretch: Stand upright with your feet shoulder width apart and place your hands on your buttocks for support. Look upwards and slowly lean backwards at the waist.

C05 - Standing Lean-back Side Stomach Stretch: Stand upright with your feet shoulder width apart and place one hand of your buttocks. Look up and slowly lean backwards at the waist, then reach over with your opposite hand and rotate at the waist.



C06 - Back Arching Stomach Stretch: Sit on a Swiss ball and slowly roll the ball forward while leaning back. Allow your back and shoulders to rest on the ball and your arms to hang to each side.

Stretches for the Back and Sides

The muscles around the spine, and the broader area of the back, are primarily responsible for stabilizing the spinal column and keeping the back in an upright position. The muscles of the back and sides allow the upper body and spine to move in flexion, extension and rotation.

Sports that benefit from these back and side stretches include: Archery; Basketball and Netball; batting sports like Cricket, Baseball and Softball; Boxing; contact sports like Football, Rugby and Gridiron; Cycling; Golf; Hiking, Backpacking, Mountaineering and Orienteering; Ice Hockey and Field Hockey; Ice Skating, Roller Skating and Inline Skating; Martial Arts; racquet sports like Tennis, Badminton and Squash; Rowing, Canoeing and Kayaking; Running, Track and Cross Country; running sports like Football, Soccer, Gridiron and Rugby; Snow Skiing and Water Skiing; Surfing; Swimming; throwing sports like Cricket, Baseball and Field events; Volleyball; Walking and Race Walking; and Wrestling.

The major muscles being stretched.

Iliocostalis cervicis
Iliocostalis thoracis
Iliocostalis lumborum
Intercostals external and internal
Interspinales
Intertransversarii
Latissimus dorsi
Longissimus thoracis
Multifidus
Quadratus lumborum
Rhomboids
Rotatores
Semispinalis thoracis
Spinalis thoracis

D01 - Reach Forward Upper Back Stretch: Stand with your arms out in front and your hands crossed over, then push your hands forward as far as possible and let your head fall forward.

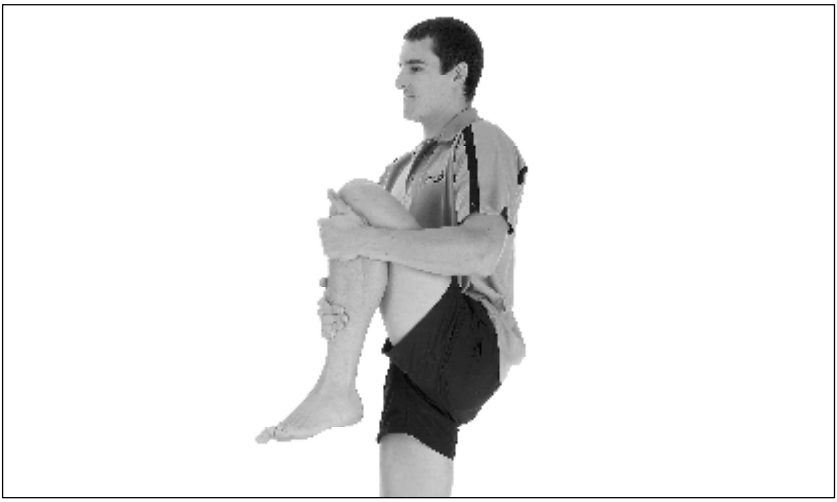
D02 - Reaching Upper Back Stretch: Sit in a squatting position while facing a door edge or pole, then hold onto the door edge with one hand and lean backwards away from the door.

D03 - Reach-up Back Stretch: Stand with your arms crossed over and then raise them above your head. Let your head fall forward and reach up as high as you can.

D04 - Lying Whole Body Stretch: Lie on your back and extend your arms behind you. Keep your toes pointing upwards and lengthen your body as much as you can.

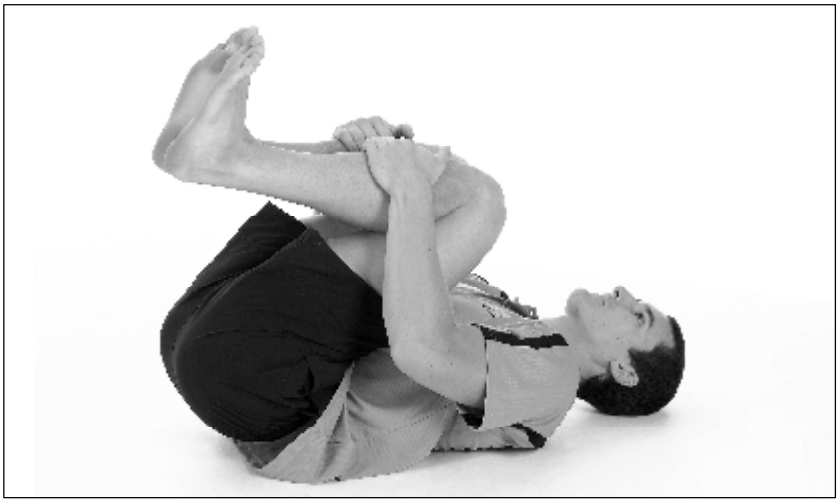
D05 - Sitting Bent-over Back Stretch: Sit on the ground with your legs straight out in front or at 45 degrees apart. Keep your toes pointing upwards and rest your arms by your side or on your lap. Relax your back and neck and let your head and chest fall forward.

D06 - Sitting Side Reach Stretch: Sit with one leg straight out to the side and your toes pointing upwards. Then bring your other foot up to your knee and let your head fall forward. Reach towards the outside of your toes with both hands.

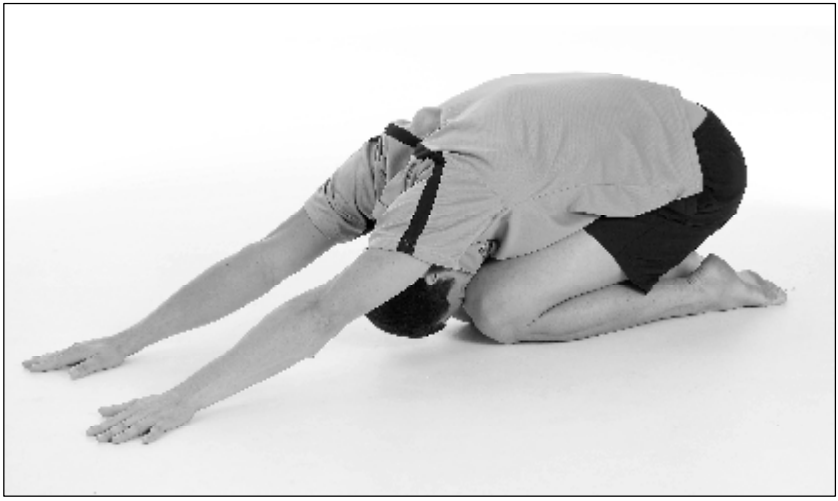


D07 - Standing Knee-to-chest Stretch: While standing, use your hands to bring one knee into your chest.

D08 - Lying Knee-to-chest Stretch: Lie on your back and keep one leg flat on the ground. Use your hands to bring your other knee into your chest.

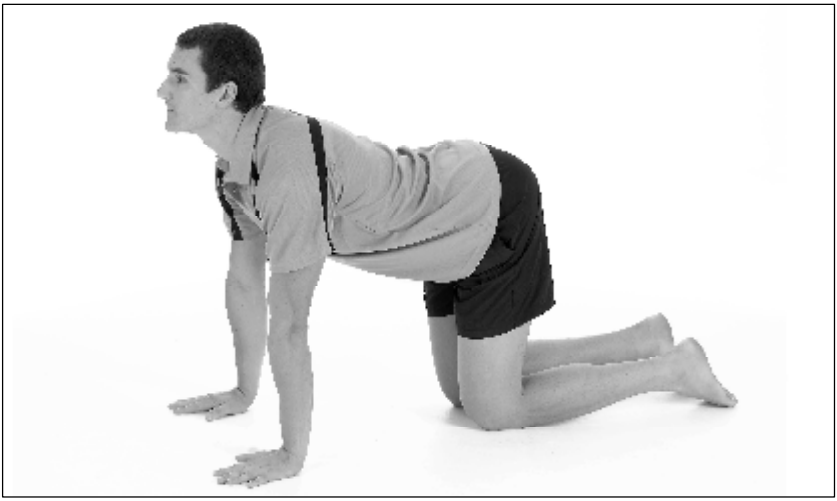


D09 - Lying Double Knee-to-chest Stretch: Lie on your back and use your hands to bring both knees into your chest.



D10 - Kneeling Reach Forward Stretch: Kneel on the ground and reach forward with your hands. Let your head fall forward and push your buttocks back towards your feet.

D11 - Kneeling Back-arch Stretch: Kneel on your hands and knees. Let your head fall forward and arch your back upwards.



D12 - Kneeling Back-slump Stretch: Kneel on your hands and knees. Look up and let your back slump downwards.

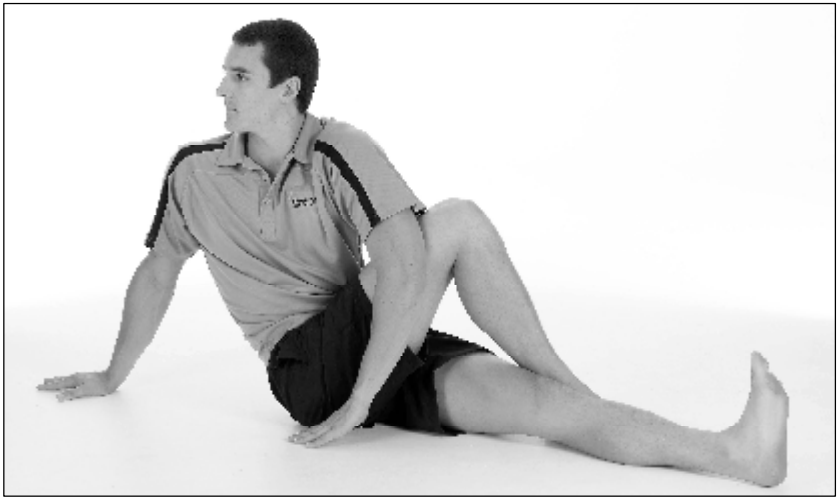
D13 - Kneeling Back Rotation Stretch: Kneel on the ground and raise one arm upwards while rotating your shoulders and middle back.

D14 - Standing Back Rotation Stretch: Stand with your feet shoulder width apart. Place your hands across your chest while keeping your back and shoulders upright. Slowly rotate your shoulders to one side.

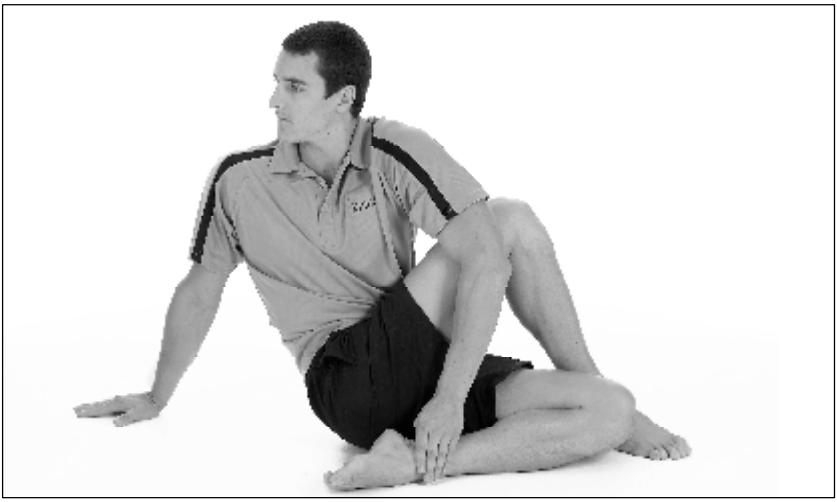
D15 - Standing Reach-up Back Rotation Stretch: Stand with your feet shoulder width apart. Place your hands above your head while keeping your back and shoulders upright. Slowly rotate your back and shoulders to one side.

D16 - Lying Leg Cross-over Stretch: Lie on your back and cross one leg over the other. Keep your arms out to the side and both legs straight. Let your back and hips rotate with your leg.

D17 - Lying Knee Roll-over Stretch: While lying on your back, bend your knees and let them fall to one side. Keep your arms out to the side and let your back and hips rotate with your knees.

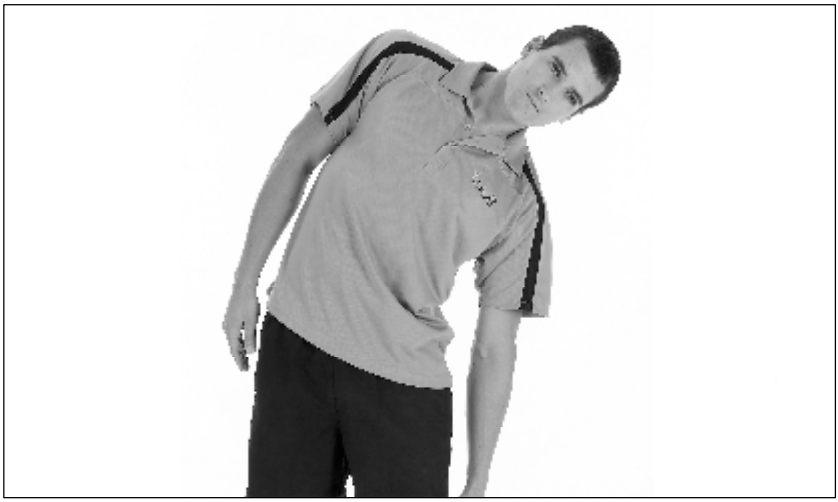


D18 - Sitting Knee-up Rotation Stretch: Sit with one leg straight and the other leg crossed over your knee. Turn your shoulders and put your arm onto your raised knee to help rotate your shoulders and back.



D19 - Sitting knee-up Extended Rotation Stretch: Sit with one leg crossed under the other and the other foot crossed over your knee, then turn your shoulders and put your arm onto your raised knee to help rotate your shoulders and back.

D20 - Kneeling Reach-around Stretch: Kneel on your hands and knees and then take one hand and reach around towards your ankle. Keep your back parallel to the ground.



D21 - Standing Lateral Side Stretch: Stand with your feet about shoulder width apart and look forward. Keep your body upright and slowly bend to the left or right. Reach down your leg with your hand and do not bend forward.

D22 - Reaching Lateral Side Stretch: Stand with your feet shoulder width apart, then slowly bend to the side and reach over the top of your head with your hand. Do not bend forward.

D23 - Sitting Lateral Side Stretch: Sit on a chair with your feet flat on the ground, then slowly bend to the left or right while reaching towards the ground. Do not bend forward.

Stretches for the Hips and Buttocks

The hips and buttocks are comprised of a number of both large muscles (Gluteus maximus) and small muscles (Piriformis). These muscles are primarily responsible for hip stabilization and lower leg movement. The muscles around the hip and buttocks, along with the structure of the hip joint, allow for a large range of motion of the leg; including flexion, extension, adduction, abduction and rotation.

Sports that benefit from these quadriceps stretches include: Cycling; Hiking, Backpacking, Mountaineering and Orienteering; Ice hockey and Field hockey; Ice Skating, Roller Skating and Inline Skating; Martial Arts; Rowing, Canoeing and Kayaking; Running, Track and Cross Country; running sports like Football, Soccer, Gridiron and Rugby; Snow Skiing and Water Skiing; Walking and Race Walking.

The major muscles being stretched.

Gemellus superior and inferior
Gluteus maximus
Iliacus
Obturator internus and externus
Piriformis
Psoas major
Psoas minor
Quadratus femoris

E01 - Lying Cross-over Knee Pull-down Stretch: Lie on your back and cross one leg over the other. Bring your foot up to your opposite knee and with your opposite arm pull your raised knee down towards the ground.

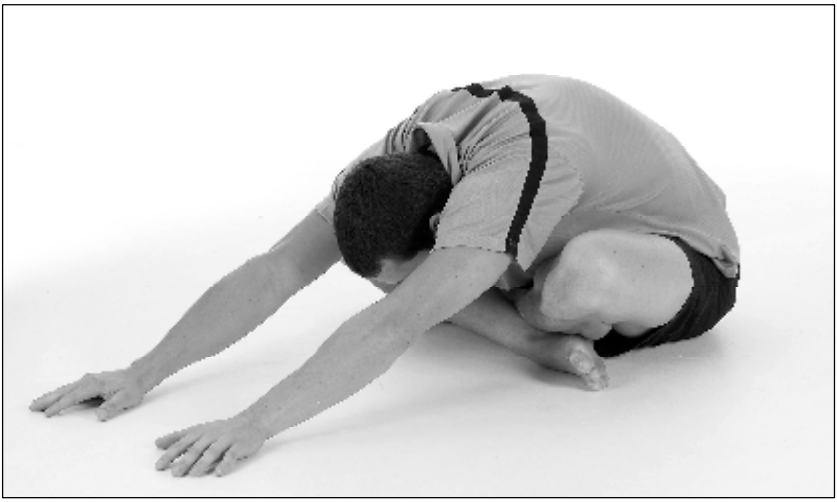
E02 - Lying Leg Tuck Hip Stretch: Lie face down and bend one leg under your stomach. Lean towards the ground.

E03 - Standing Leg Tuck Hip Stretch: Stand beside a chair or table and place the foot furthest from the object onto the object. Relax your leg, lean forward and bend your other leg, lowering yourself towards the ground.

E04 - Standing Leg Resting Hip Stretch: Stand beside a chair or table for balance, bend one leg and place your other ankle on to your bent knee. Slowly lower yourself towards the ground.

E05 - Sitting Rotational Hip Stretch: Sit with one leg crossed and your other leg behind your buttocks then lean your whole body towards the leg that is behind your buttocks.

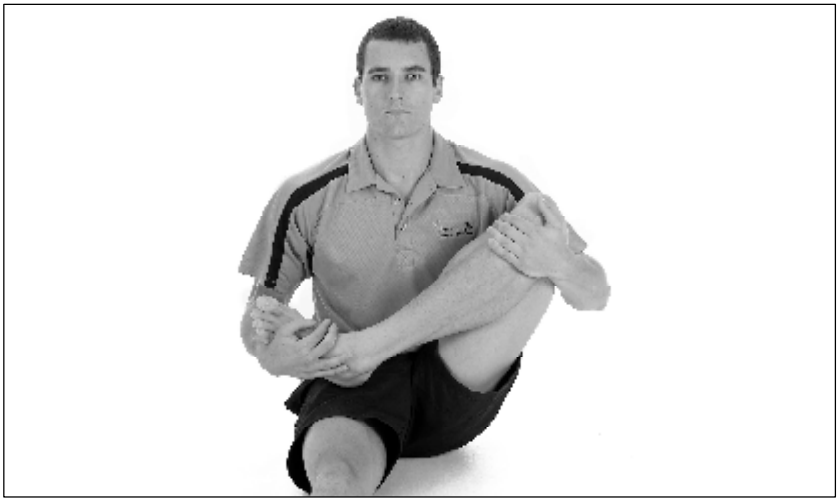
E06 - Standing Rotational Hip Stretch: Stand beside a table and raise your lower leg out to the side and up onto the table. Then slowly lower your body.



E07 - Sitting Cross-legged Reach Forward Stretch: Sit with you legs crossed and your knees out, then gently reach forward.

E08 - Sitting Feet-together Reach Forward Stretch: Sit with the soles of your feet together and your knees out, then gently reach forward.

E09 - Sitting Knee-to-chest Buttocks Stretch: Sit with one leg straight and the other leg crossed over your knee. Pull the raised knee towards your opposite shoulder while keeping your back straight and your shoulders facing forward.



E10 - Sitting Foot-to-chest Buttocks Stretch: Sit with one leg straight, hold onto your other ankle and then pull it directly towards your chest.

E11 - Lying Cross-over Knee Pull-up Stretch: Lie on your back and cross one leg over the other. Bring your foot up to your opposite knee and with your opposite arm pull your raised knee up towards your chest.

E12 - Sitting Leg Resting Buttocks Stretch: Sit with one leg slightly bent. Raise your other foot up onto your raised leg and rest it on your thigh, then slowly reach forward.

E13 - Lying Leg Resting Buttocks Stretch: Lie on your back and slightly bend one leg. Raise your other foot up onto your bent leg and rest it on your thigh. Then reach forward, holding onto your knee and pull towards you.

Stretches for the Quadriceps

The quadriceps is a large group of muscles located in the anterior (front) of the thigh. They originate from above the hip joint and extend to below the knee. The primary action of the quadriceps is to extend the knee joint, but in conjunction with a number of other muscles in the front of the hip, they are also associated with hip flexion.

The following quadriceps stretches (F02, F04, F05, F06, and F07) place the knee joint into full flexion, which can stress the anatomical structures of the knee joint. If you have a knee injury or suffer from knee pain, take extra care when performing these stretches or avoid them altogether.

Sports that benefit from these quadriceps stretches include: Cycling; Hiking, Backpacking, Mountaineering and Orienteering; Ice Hockey and Field Hockey; Ice Skating, Roller Skating and Inline Skating; Martial Arts; Running, Track and Cross Country; running sports like Football, Soccer, Gridiron and Rugby; Snow Skiing and Water Skiing; Surfing; Walking and Race Walking.

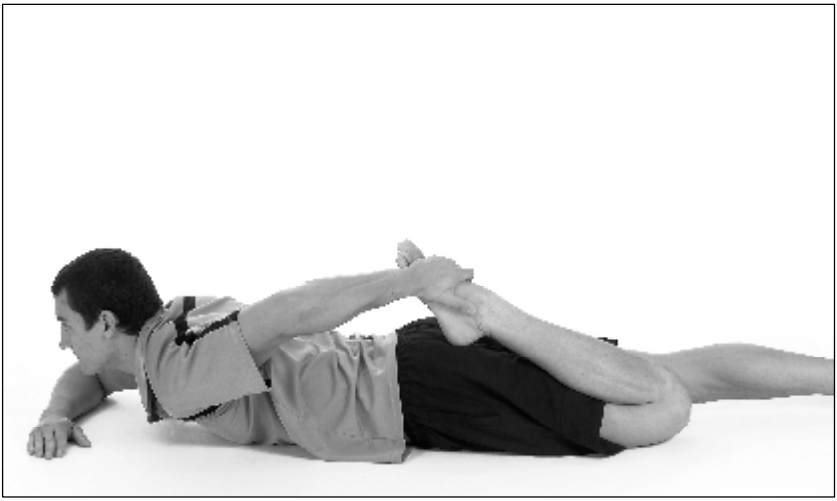
The major muscles being stretched.

Rectus femoris
Sartorius
Vastus intermedius
Vastus lateralis
Vastus medialis

F01 - Kneeling Quad Stretch: Kneel on one foot and the other knee. If needed, hold on to something to keep your balance and then push your hips forward.

F02 - Standing Quad Stretch: Stand upright while balancing on one leg. Pull your other foot up behind your buttocks and keep your knees together while pushing your hips forward. Hold on to something for balance if needed.

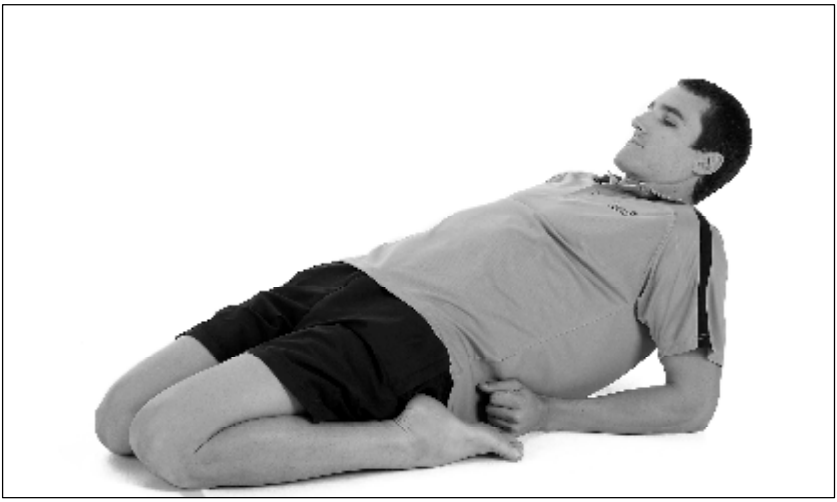
F03 - Standing Reach-up Quad Stretch: Stand upright and take one small step forward. Reach up with both hands, push your hips forward, lean back and then lean away from your back leg.



F04 - Lying Quad Stretch: Lie face down, reach back with one hand and pull one foot up behind your buttocks.

F05 - Lying Side Quad Stretch: Lie on your side and pull your top leg behind your buttocks. Keep your knees together and push your hips forward.

F06 - Single Lean-back Quad Stretch: Sit on the ground, bend one knee and place that foot next to your buttocks. Then slowly lean backwards.



F07 - Double Lean-back Quad Stretch: Sit on the ground, bend both knees and place your feet next to your buttocks. Then slowly lean backwards.

Stretches for the Hamstrings

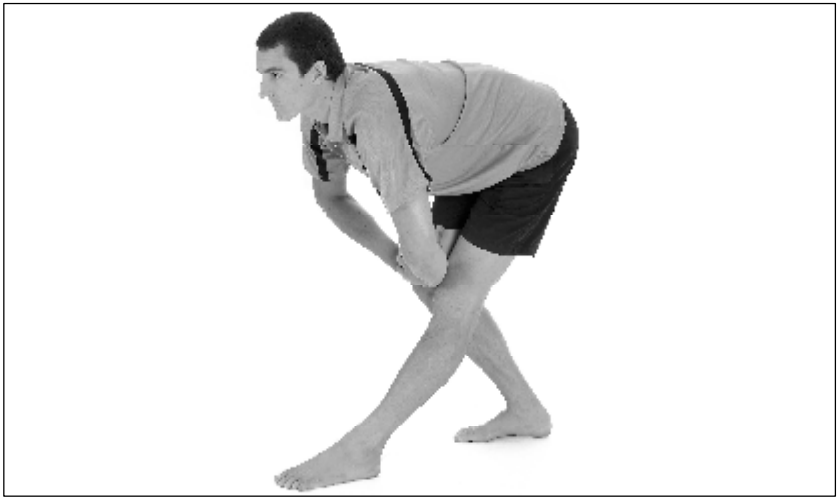
The hamstrings are a large group of muscles located in the posterior (rear) of the thigh. They originate from the bottom of the hip bone and extend to below the knee. The primary action of the hamstrings is to flex the knee joint.

Sports that benefit from these hamstring stretches include: Basketball and Netball; Cycling; Hiking, Backpacking, Mountaineering and Orienteering; Ice Hockey and Field Hockey; Ice Skating, Roller Skating and Inline Skating; Martial Arts; Running, Track and Cross Country; running sports like Football, Soccer, Gridiron and Rugby; Snow Skiing and Water Skiing; Surfing; Walking and Race Walking; and Wrestling.

The major muscles being stretched.

Biceps femoris
Semimembranosus
Semitendinosis

G01 - Sitting Reach-forward Hamstring Stretch: Sit with both legs straight out in front, or at 45 degrees apart. Keep your toes pointing straight up, make sure your back is straight and then reach forward.

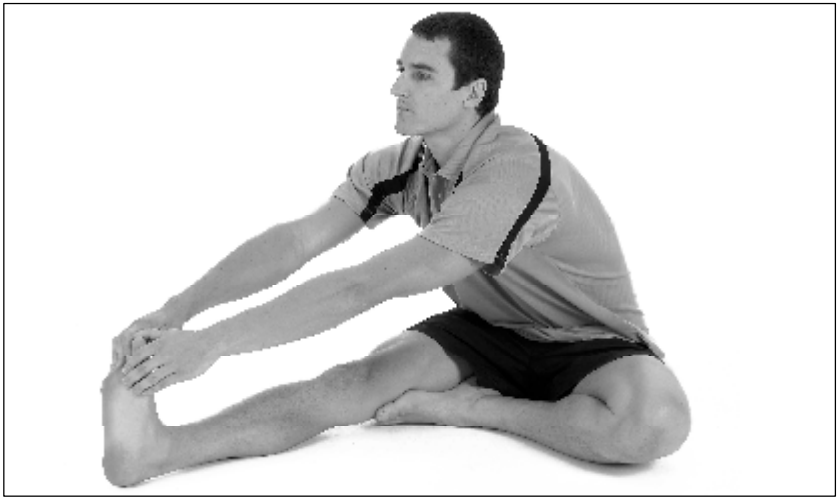


G02 - Standing Toe-down Hamstring Stretch: Stand with one knee bent and the other leg straight out in front. Point your toes towards the ground and lean forward. Keep your back straight and rest your hands on your bent knee.

G03 - Standing Toe-up Hamstring Stretch: Stand with one knee bent and the other leg straight out in front. Point your toes upwards and lean forward. Keep your back straight and rest your hands on your bent knee.

G04 - Standing Leg-up Hamstring Stretch: Stand upright and raise one leg on to an object. Keep that leg straight and point your toes upwards. Keep your back straight and lean your upper body forward.

G05 - Standing Leg-up Toe-in Hamstring Stretch: Stand upright and raise one leg on to an object. Keep that leg straight and point your toes upwards. Then point the toes of your other foot inward and lean forward while keeping your back straight.

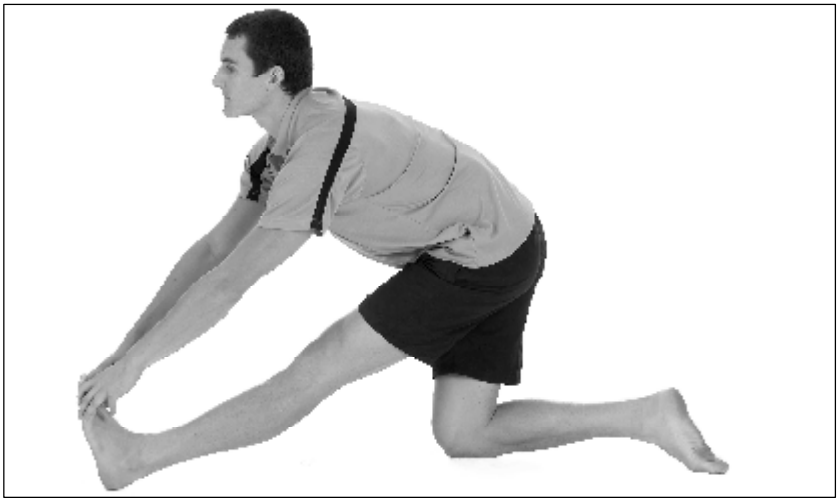


G06 - Sitting Single Leg Hamstring Stretch: Sit with one leg straight out in front and point your toes upwards. Bring your other foot towards your knee and reach towards your toes with both hands.

G07 - Lying Partner Assisted Hamstring Stretch: Lie on your back and keep both legs straight. Have a partner raise one of your legs off the ground and as far back as is comfortable. Make sure your toes are pointing directly backwards.

G08 - Lying Bent Knee Hamstring Stretch: Lie on your back and bend one leg slightly. Pull the other knee towards your chest and then slowly straighten your raised leg.

G09 - Lying Straight Knee Hamstring Stretch: Lie on your back and keep your legs straight. Raise one leg and pull it towards your chest.



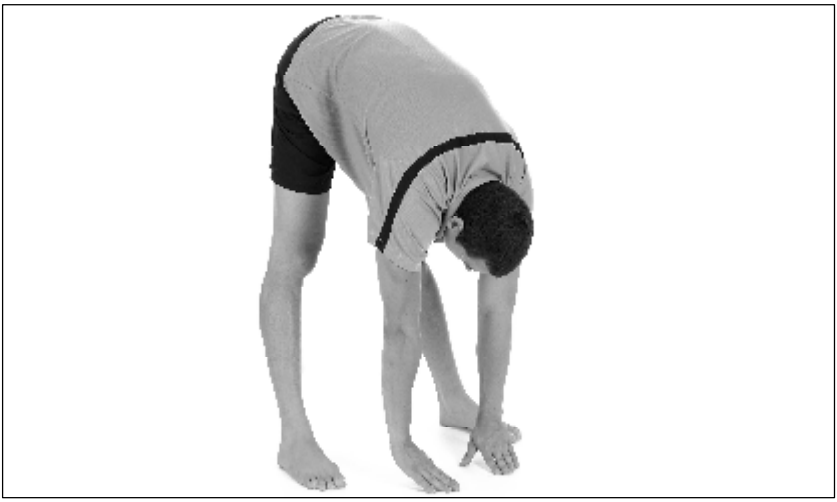
G10 - Kneeling Toe-up Hamstring Stretch: Kneel on one knee and place your other leg straight forward with your heel on the ground. Keep your back straight and point your toes upwards. Reach towards your toes with one or both hand.

G11 - Sitting Leg Resting Hamstring Stretch: Sit with one leg straight out in front and your toes pointing upwards. Cross your other leg over and rest your foot on your thigh. Lean forward, keep your back straight and reach for your toes.

G12 - Standing Leg-up Bent Knee Hamstring Stretch: Stand with one foot raised onto a chair or an object. Bend your knee and let your heel drop off the edge of the object. Keep your back straight and move your chest towards your raised knee.

G13 - Standing High-leg Bent Knee Hamstring Stretch: Stand with one foot raised onto a table. Keep your leg bent and lean your chest into your bent knee.

G14 - Sitting Bent Knee Toe-pull Hamstring Stretch: Sit on the ground with your knees slightly bent. Hold onto your toes with your hands and pull your toes towards your body. Keep your back straight and lean forward.



G15 - Standing Reach-down Hamstring Stretch: Stand with your feet shoulder width apart. Bend forward and reach towards the ground.

Stretches for the Adductors

The adductors are a large group of muscles located on the medial (inner) side of the thigh. They originate at the bottom of the hip bone and extend down the inside of the thigh attaching to the medial side of the femur. The primary action of the adductors is to adduct (draw towards the midline) the hip joint.

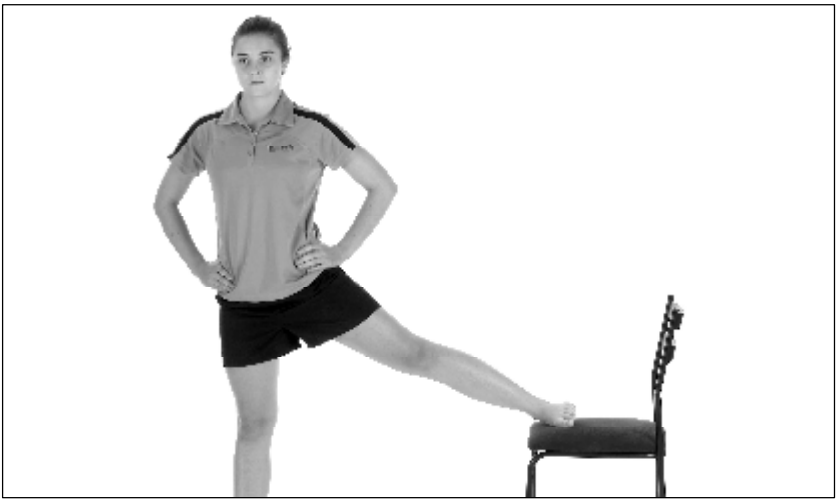
Sports that benefit from these adductor stretches include: Basketball and Netball; Cycling; Hiking, Backpacking, Mountaineering and Orienteering; Ice Hockey and Field Hockey; Ice Skating, Roller Skating and Inline Skating; Martial Arts; Running, Track and Cross Country; running sports like Football, Soccer, Gridiron and Rugby; Snow Skiing and Water Skiing; Surfing; Walking and Race Walking; and Wrestling.

The major muscles being stretched.

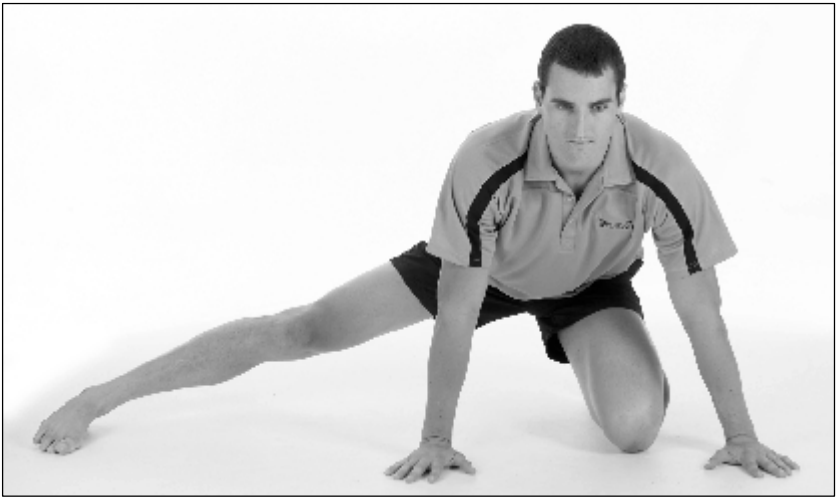
Adductor brevis
Adductor longus
Adductor magnus
Pectineus
Gracilis

H01 - Sitting Feet-together Adductor Stretch: Sit with the soles of your feet together and bring your feet towards your groin. Hold onto your ankles and push your knees toward the ground with your elbows. Keep your back straight.

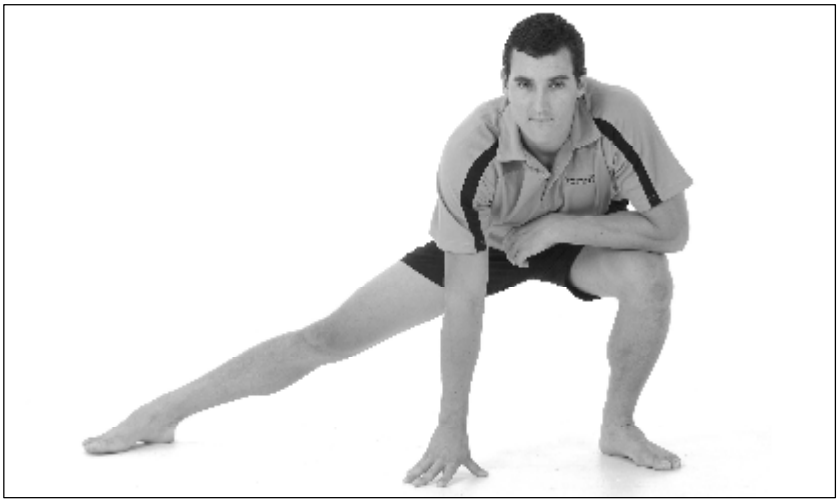
H02 - Standing Wide Knees Adductor Stretch: Stand with your feet wide apart and your toes pointing diagonally outwards, then bend your knees, lean forward and use your hands to push your knees outwards.



H03 - Standing Leg-up Adductor Stretch: Stand upright and place one leg out to the side and your foot up on a raised object. Keep your toes facing forward and slowly move your other leg away from the object.

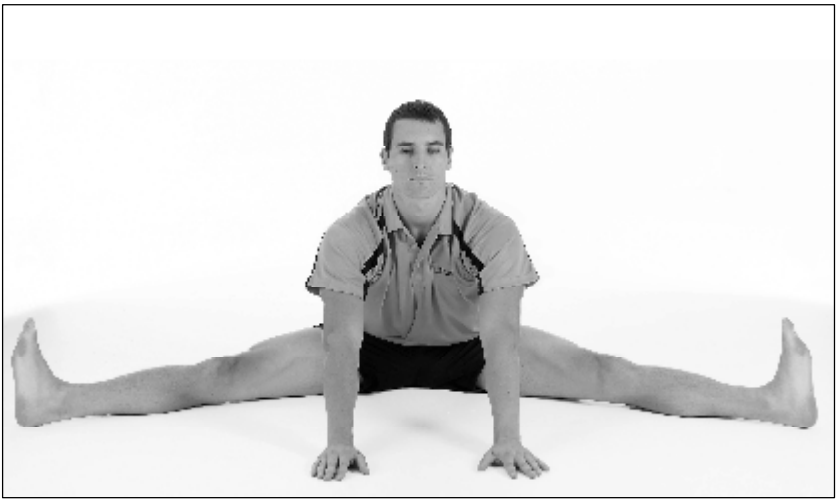


H04 - Kneeling Leg-out Adductor Stretch: Kneel on one knee and place your other leg out to the side with your toes pointing forward. Rest your hands on the ground and slowly move your foot further out to the side.



H05 - Squatting Leg-out Adductor Stretch: Stand with your feet wide apart. Keep one leg straight and your toes pointing forward while bending the other leg and turning your toes out to the side. Lower your groin towards the ground and rest your hands on your bent knee or the ground.

H06 - Kneeling Face-down Adductor Stretch: Kneel face down with your knees and toes facing out. Lean forward and let your knees move outwards.



H07 - Sitting Wide-leg Adductor Stretch: Sit on the ground with your legs straight out and as wide apart as possible and then reach forward while keeping your back straight.

H08 - Standing Wide-leg Adductor Stretch: Start by standing with your feet wide apart and your toes pointing forward. Then lean forward and reach towards the ground.

Stretches for the Abductors

The abductors are located on the lateral side (outside) of the thigh and hip. They originate at the top outer edge of the hip bone and extend down the outside of the thigh attaching to the lateral side of the tibia. The primary action of the abductors is to abduct (draw away from the midline) the hip joint.

Sports that benefit from these abductor stretches include: Cycling; Hiking, Backpacking, Mountaineering and Orienteering; Ice hockey and Field hockey; Ice Skating, Roller Skating and Inline Skating; Martial Arts; Rowing, Canoeing and Kayaking; Running, Track and Cross Country; running sports like Football, Soccer, Gridiron and Rugby; Snow Skiing and Water Skiing; Walking and Race Walking.

The major muscles being stretched.

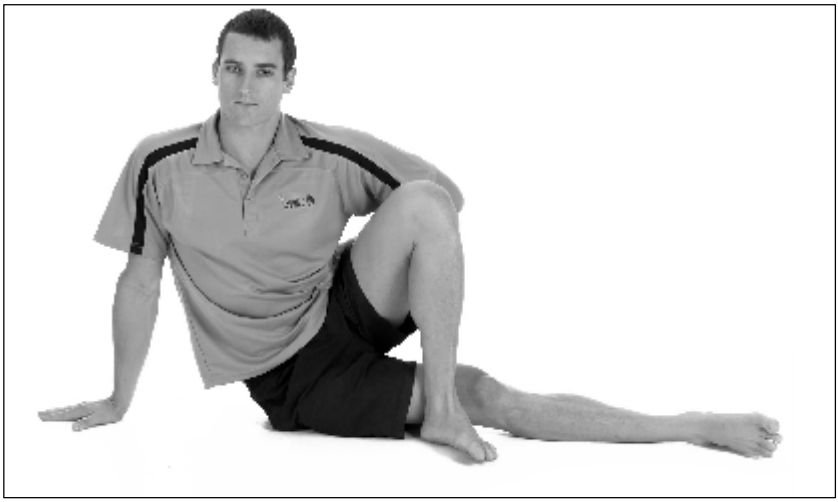
Gluteus medius
Gluteus mininus
Tensor fasciae latae

I01 - Standing Hip-out Abductor Stretch: Stand upright beside a chair or table with both feet together. Lean your upper body towards the chair while pushing your hips away from the chair. Keep your outside leg straight and bend your inside leg slightly.

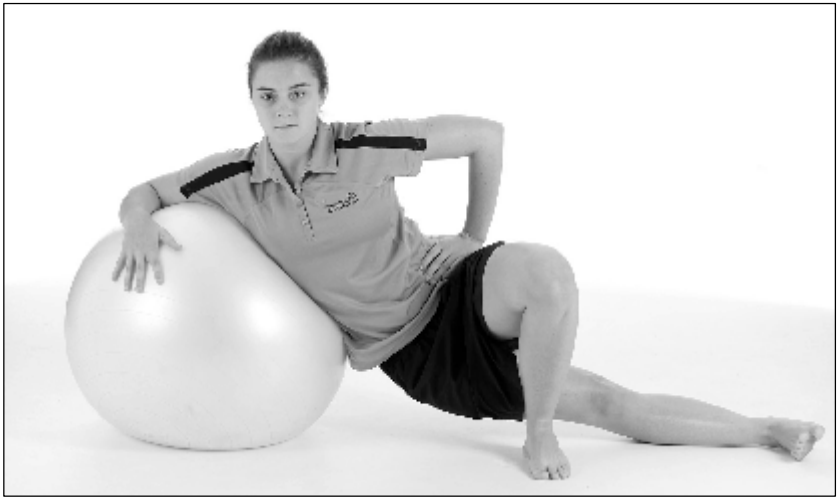
I02 - Standing Leg-cross Abductor Stretch: Stand upright and cross one foot behind the other. Lean towards the foot that is behind the other.

I03 - Leaning Abductor Stretch: While standing next to a pole, or door jam, hold onto the pole with one hand. Keep your feet together, and lean your hips away from the pole. Keep your outside leg straight and bend your inside leg slightly.

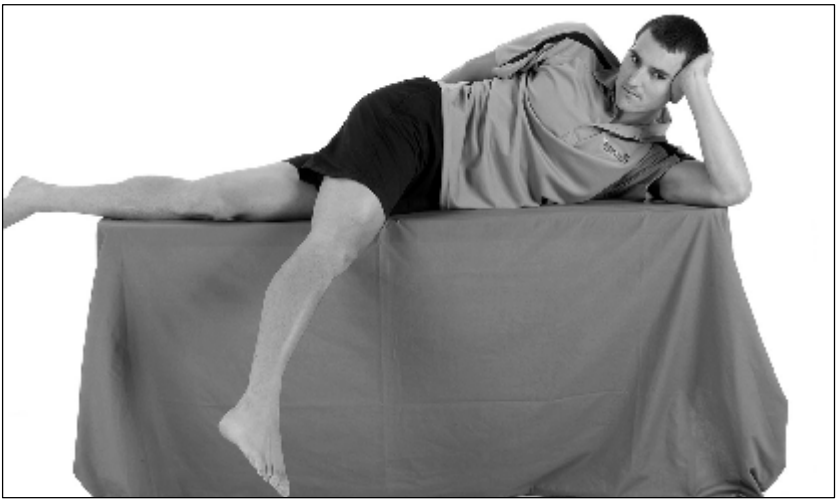
I04 - Standing Leg-under Abductor Stretch: While standing lean forward and hold onto a chair or bench to help with balance. Cross one foot behind the other and slide that foot to the side. Keep your leg straight and slowly bend your front leg to lower your body.



I05 - Lying Abductor Stretch: Lean on your side on the ground and bring your top leg up to your other knee. Push your body up with your arm and keep your hip on the ground.



I06 - Lying Swiss-ball Abductor Stretch: Lean on your side on a Swiss ball and place one leg straight out to the side. Bring your top leg up to your other knee and push your hip towards the ground.



I07 - Lying Leg-hang Abductor Stretch: Lie on your side on a bench, let your top leg fall forward and off the side of the bench.

Stretches for the Upper Calves

The upper calf muscles are located on the posterior (rear) of the lower leg just underneath the knee joint. They originate at the bottom of the femur, just above the knee joint, and extend down into the Achilles tendon. The primary actions of the upper calf muscles are to plantar flex the ankle joint and flex the knee.

The calf muscles and Achilles tendon are commonly over-stretched by applying too much force to the targeted muscle groups. Please take extra care when performing the following stretches and always follow *The Rules for Safe Stretching* in chapter 5.

Sports that benefit from these upper calf stretches include: Basketball and Netball; Boxing; Cycling; Hiking, Backpacking, Mountaineering and Orienteering; Ice hockey and Field hockey; Ice Skating, Roller Skating and Inline Skating; Martial Arts; racquet sports like Tennis, Badminton and Squash; Running, Track and Cross Country; running sports like Football, Soccer, Gridiron and Rugby; Snow Skiing and Water Skiing; Surfing; Swimming; Walking and Race Walking.

The major muscles being stretched.

Gastrocnemius
Plantaris

J01 - Standing Toe-up Calf Stretch: Stand upright and place the ball of your foot on a step or raised object. Keep your leg straight and lean towards your toes.

J02 - Standing Toe Raised Calf Stretch: Stand with one knee bent and the other leg straight out in front. Point your toes upwards and lean forward. Keep your back straight and rest your hands on your bent knee.

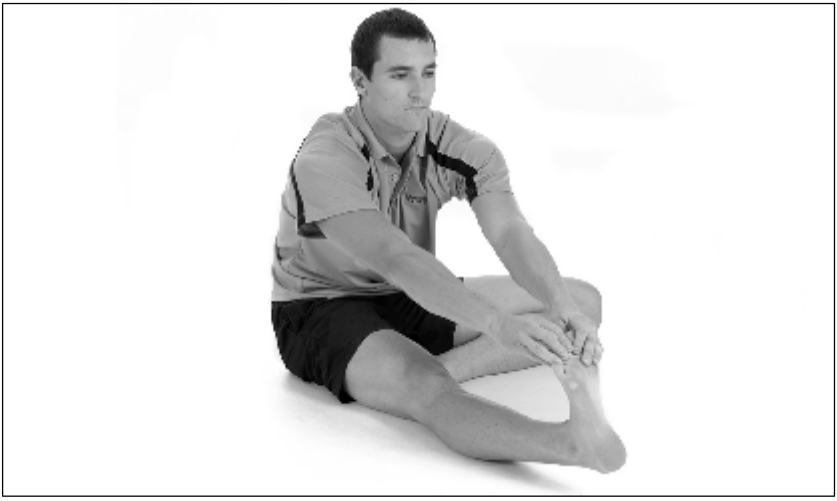
J03 - Single Heel-drop Calf Stretch: Stand on a raised object or step. Put the ball of one foot on the edge of the step and keep your leg straight. Let your heel drop towards the ground.

J04 - Double Heel-drop Calf Stretch: Stand on a raised object or step. Put the balls of both feet on the edge of the step and keep your legs straight. Let your heels drop towards the ground.

J05 - Standing Heel-back Calf Stretch: Stand upright and take one big step backwards. Keep your back leg straight, your toes pointing forward and push your heel to the ground.

J06 - Leaning Heel-back Calf Stretch: Reach towards a wall and place one foot as far from the wall as is comfortable. Make sure that both toes are pointing forward and your heel is on the ground. Keep your back leg straight and lean towards the wall.

J07 - Crouching Heel-back Calf Stretch: Stand upright and place one foot in front of the other. Bend your front leg and keep your back leg straight. Push your heel to the ground and lean forward. Place your hands on the ground in front of you.



J08 - Sitting Toe-pull Calf Stretch: Sit with one leg straight out in front and your toes pointing upwards. Reach forward and pull your toes back towards your body.

Stretches for the Lower Calves and Achilles

The lower calf muscles are located on the posterior (rear) of the lower leg below the knee joint. They originate at the top of the tibia, just below the knee joint, and extend down into the Achilles tendon. The primary action of the lower calf muscles is to plantar flex the ankle joint.

The calf muscles and Achilles tendon are commonly over-stretched by applying too much force to the targeted muscle groups. Please take extra care when performing the following stretches and always follow *The Rules for Safe Stretching* in chapter 5.

Sports that benefit from these lower calf stretches include: Basketball and Netball; Boxing; Cycling; Hiking, Backpacking, Mountaineering and Orienteering; Ice hockey and Field hockey; Ice Skating, Roller Skating and Inline Skating; Martial Arts; racquet sports like Tennis, Badminton and Squash; Running, Track and Cross Country; running sports like Football, Soccer, Gridiron and Rugby; Snow Skiing and Water Skiing; Surfing; Swimming; Walking and Race Walking.

The major muscles being stretched.

Flexor digitorum longus
Flexor hallucis longus
Peroneus longus and brevis
Soleus
Tibialis posterior

K01 - Standing Toe-up Achilles Stretch: Stand upright and place the ball of your foot onto a step or raised object. Bend your knee and lean forward.

K02 - Single Heel-drop Achilles Stretch: Stand on a raised object or step and place the ball of one of your feet on the edge of the step. Bend your knee slightly and let your heel drop towards the ground.

K03 - Standing Heel-back Achilles Stretch: Stand upright and take one step backwards. Bend your back knee and push your heel towards the ground.

K04 - Leaning Heel-back Achilles Stretch: Reach towards a wall and place one foot as far from the wall as is comfortable. Make sure that both toes are pointing forward and your heels are on the ground. Bend your back knee and lean towards the wall.

K05 - Sitting Toe-pull Achilles Stretch: Sit on the ground with your knees slightly bent. Hold onto your toes with your hands and pull your toes towards your body.

K06 - Crouching Heel-back Achilles Stretch: Stand upright and place one foot in front of the other. Bend your front leg and your back leg and then push your back heel towards the ground. Lean forward and place your hands on the ground in front of you.

K07 - Kneeling Heel-down Achilles Stretch: Kneel on one foot and place your body weight over your knee. Keep your heel on the ground and lean forward.

K08 - Squatting Achilles Stretch: Stand with your feet shoulder width apart. Then bend your legs and lower your body into a sitting position. Place your hands out in front for balance.

Stretches for the Shins, Ankles, Feet and Toes

The muscles of the shin originate at the top of the tibia, just below the knee joint, and extend down the front of the shin and over the ankle joint. The primary action of the shin muscles is to dorsiflex the ankle joint.

The feet and ankles are comprised of a multitude of small muscles that control the foot. The muscles around the feet and ankles, along with the structure of the joints, allow for a large range of motion of the feet and ankle; including plantar flexion, dorsiflexion, inversion, eversion and rotation.

Sports that benefit from these shin, ankles and feet stretches include: Basketball and Netball; Boxing; Cycling; Hiking, Backpacking, Mountaineering and Orienteering; Ice hockey and Field hockey; Ice Skating, Roller Skating and Inline Skating; Martial Arts; racquet sports like Tennis, Badminton and Squash; Running, Track and Cross Country; running sports like Football, Soccer, Gridiron and Rugby; Snow Skiing and Water Skiing; Surfing; Swimming; Walking and Race Walking.

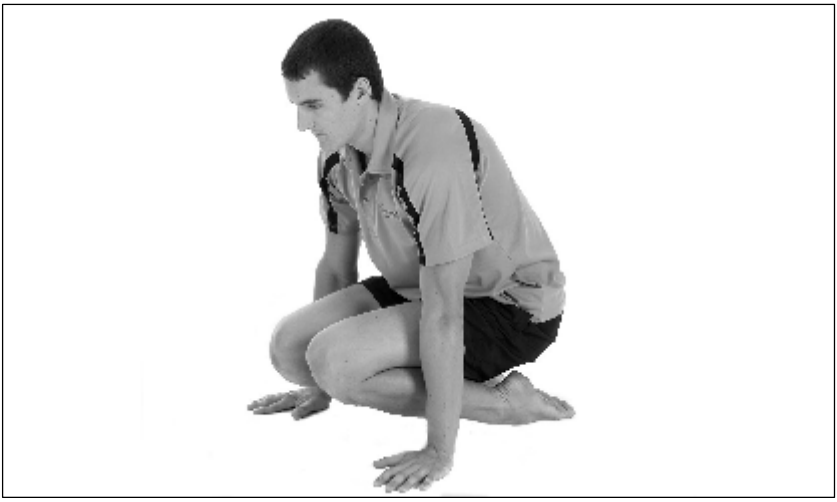
The major muscles being stretched.

Abductor digiti minimi
Abductor hallucis
Adductor hallucis
Extensor digitorum longus
Extensor hallucis longus
Flexor digiti minimi brevis
Quadratus plantae
Tibialis anterior

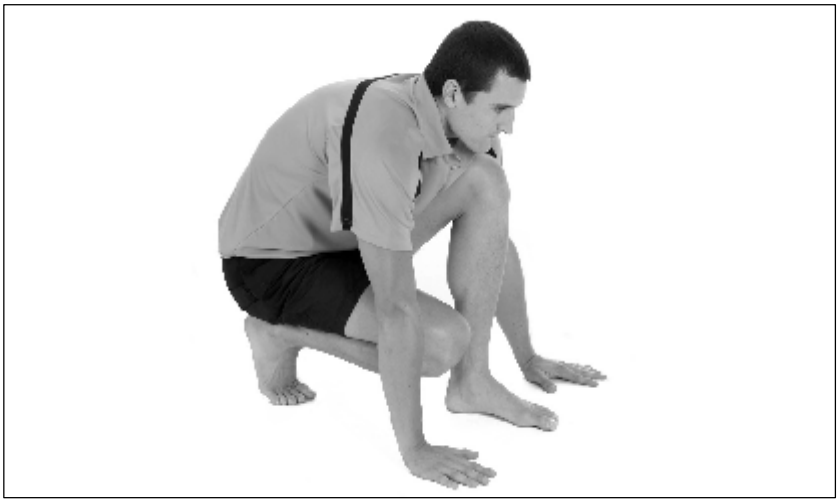
L01 - Foot-behind Shin Stretch: Stand upright and place the top of your toes on the ground behind you. Push your ankle to the ground.

L02 - Front Cross-over Shin Stretch: Stand upright and place the top of your toes on the ground in front of your other foot. Slowly bend your other knee to force your ankle to the ground.

L03 - Raised Foot Shin Stretch: Stand with your back to a chair. Place the top of your toes onto the chair and then push your ankle downwards.



L04 - Double Kneeling Shin Stretch: Sit with your knees and feet flat on the ground. Sit back on your ankles and keep your knees together. Place your hands next to your knees and slowly lean backwards while raising your knees off the ground.



L05 - Squatting Toe Stretch: Kneel on one foot with your hands on the ground. Keep the toes of your rear foot on the ground, slowly lean forward and arch your foot.

L06 - Ankle Rotation Stretch: Raise one foot off the ground and slowly rotate your foot and ankle in all directions.

Top 5 Stretches for each Sport

The stretches below are a short list of some of the most beneficial stretches for each sport. Obviously there are a lot more, but these are a great place to start.

Sports	Stretches
Archery	A16, B12, C02, D06, D14
Basketball	A05, B13, F03, H05, K07
Backpacking	C02, D11, E07, G03, K07
Batting sports:	
(Cricket, Baseball, Softball, etc.)	A09, B16, C03, D02, D18
Boxing	A01, A07, B08, B17, D17
Canoeing	A13, A16, B06, D20, E04
Contact sports:	
(Football, Gridiron, Rugby, etc.)	A02, A07, E08, F01, H05
Cross Country	C05, F03, I04, K07, L01
Cycling	B06, D08, E05, F05, J03
Field Hockey	D22, E07, F02, H04, J02
Golf	A17, B12, D06, D18, I04
Gridiron	D13, E10, F06, G13, H02
Hiking	C03, D11, E03, G01, J03
Ice Hockey	D23, E08, F01, H02, K07
Ice Skating	D07, E03, E12, F01, H01
Inline Skating	D09, E04, E10, F03, H04
Kayaking	A13, A17, B07, D18, E03
Martial Arts	B17, C05, D13, G05, H06
Mountaineering	C02, D09, E01, G03, L02
Netball	A02, B14, F03, H05, K04
Orienteering	C03, D13, E04, G06, K02
Race walking	D17, E05, F03, J02, K04
Racquet sports:	
(Tennis, Badminton, Squash, etc.)	A14, B07, B17, C03, D16
Roller Skating	D08, E04, E13, F06, H03
Rowing	A15, A16, B06, C05, E01
Running	C03, F01, G04, I02, K04
Rugby	D17, E04, F01, G04, H05
Snow Boarding	D13, E01, E13, F01, I04
Snow Skiing	D06, D22, F06, I03, K07
Soccer	F01, G05, H05, J06, L02
Surfing	C05, D16, E07, F05, I02

Swimming	A12, A14, B08, D04, J03
Throwing sports:	
(Cricket, Baseball, Field Events, etc.)	A13, A17, B14, B17, D18
Volleyball	A12, D22, E10, H02, K07
Walking	D21, E08, F05, J03, K01
Water skiing	B01, C03, D10, E09, F06
Wrestling	D15, D22, E06, G01, H06

Top 5 Stretches for each Sports Injury

The stretches below are a short list of suggested stretches to help with a number of common sports injuries. The following stretches are beneficial for the prevention and long term rehabilitation of the injuries listed below; however, they are not to be used in the initial stages of injury rehabilitation. Stretching during this early stage of the rehabilitation process can cause more damage to the injured tissues. **Avoid all stretching during the first 72 hours after any soft tissue injury**, and remember to follow *The Rules for Safe Stretching* in chapter 5.

Sports Injury	Stretches
Head and Neck	
Whiplash & Wryneck	A01, A02, A04, A07, A11
Hands and Fingers	
Thumb Sprain	B12, B13, B14, B15, B17
Finger Sprain & Tendonitis	B11, B12, B13, B14, B17
Wrists and Forearm	
Wrist Sprain & Tendonitis	B04, B11, B12, B16, B17
Carpel Tunnel & Ulnar Tunnel Syndrome	B02, B11, B13, B16, B17
Elbow	
Elbow Sprain	A08, A16, B10, B11, B17
Triceps Tendon Rupture	A09, B01, B06, B09, B10
Tennis, Golfers & Throwers Elbow	A12, A14, A16, B01, B10
Shoulder and Upper Arm	
Biceps Bruise, Strain & Tendonitis	A17, B02, B06, B07, B11
Chest Strain	A14, A17, B04, B05, B07
Impingement Syndrome	A16, B01, B06, B07, B10
Pectoral Muscle Insertion Inflammation	A14, B01, B04, B05, B07
Rotator Cuff Tendonitis	A09, A12, A13, A14, A15
Frozen Shoulder *(Adhesive Capsulitis)*	A08, A14, A16, B06, B07
Back and Spine	
Muscle Bruise & Strain	D05, D08, D13, D18, D22
Ligament Sprain	D01, D05, D09, D14, D21

Abdomen

Muscle Strain	C02, C03, C05, D14, D21

Hips, Pelvis and Groin

Hip Flexor Strain & Iliopsoas Tendonitis	C03, F01, F02, F03, F05
Groin Strain & Tendonitis	H01, H02, H04, H06, H08
Osteitis Pubis	G04, G13, H02, H05, H07
Piriformis Syndrome	E01, E03, E05, E09, E11

Hamstrings and Quadriceps

Quadriceps Bruise, Strain & Tendonitis	C05, F01, F02, f05, F06
Hamstring Strain	G01, G05, G08, G11, J03
Iliotibial B& Syndrome	D22, I02, I03, I05, I07

Knee

Medial Collateral Ligament Sprain *(MCL)*	F03, F05, H02, H04, H07
Anterior Cruciate ligament Sprain *(ACL)*	F01, F02, F03, G03, J03
Osgood-Schlatter Syndrome	C03, F02, F03, F04, F06
Patellofemerol Pain Syndrome	F01, F02, F05, H05, I04
Patellar Tendonitis *(Jumpers Knee)*	F02, F03, F06, H04, I02

Lower Leg

Calf Strain	G03, G13, J03, J06, K02
Achilles Tendon Strain & Tendonitis	K01, K02, K04, K05, K07
Shin Splints *(MTSS)*	J06, K02, K04, K07, L02
Anterior Compartment Syndrome	F02, L02, L03, L04, L06

Ankle and Feet

Ankle Sprain	J03, J06, K04, L02, L06
Posterior Tibial Tendonitis	H08, J02, K01, K04, K07
Peroneal Tendonitis	J04, K02, K04, L02, L06
Plantar Fasciitis	J03, J06, K04, K07, L05

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Brad is an internationally recognized stretching and sports injury consultant with over 20 years of practical experience in the health and fitness industry. Brad is a Health Science graduate of the University of New England with postgraduate accreditations in athletics, swimming and triathlon coaching. Brad has worked with elite level and world champion athletes and lectures for Sports Medicine Australia on injury prevention.

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Dustin is a Level I Artistic Gymnastics coach with over 6 years of professional coaching experience. He holds a Certificate II and III in sport and recreation and is Head Coach & Coordinator of men's gymnastics at the Gold Coast Gymnastics Club in Queensland, Australia. His sporting achievements include state representation for soccer and baseball, and a 3rd place finish for trampoline at the Queensland championships.

Shannon Austin

Shannon has 14 years of gymnastics competition experience with numerous national and international rankings; including a Level 10 National and State ranking; and a 1st place Level 9 ranking at the 2006 International Hawaii Aloha Gymfest. She currently works as a gymnastics coach at the Gold Coast Gymnastics Club in Queensland, Australia and is studying Secondary Education and PE at university.

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The author, Brad Walker, is a Health Science graduate of the University of New England with postgraduate accreditations in athletics, swimming and triathlon coaching. He has coached elite level and world champion athletes from sports as diverse as triathlon, motor cycle racing, roller skating, squash and baseball, and has lectured extensively on sports injury prevention and rehabilitation.

Brad has written more books and articles on stretching and flexibility than any other author; including the *Anatomy of Stretching* and the *Anatomy of Sports Injuries*. His stretching and sports injury articles have been published in numerous health and fitness magazines and extensively online at sites such as About.com and Athletes.com. Amazon has listed his books on five Best-Seller lists and Google cites over 100,000 references to him on the internet.

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Robert: (Pullman, USA)

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Occupational injury and the chiropractor

Chiropractic daily practice involves the constant performance of various forms of manipulative therapy and other manual tasks in a variety of different working postures which subject the musculoskeletal system to potentially large repetitive mechanical loads. This says nothing about the non-physical stress factors, such as financial concerns and patient demands, that may independently contribute to the onset of occupationally related back pain. Moreover, many of the common manipulative skills and techniques force practitioners to bend and twist the trunk (Figs 5.1 & 5.2), generate pushing and pulling actions, and simultaneously reach and stretch around the patient (Fig. 5.3). The constant lifting of patients, readjusting their body weight and position on the table prior to the thrust, represent professional physical risk factors for the chiropractor. The overall stress could substantially increase during mobilization procedures, which require the clinician to adopt awkward postures for extended periods of time. The majority of our manipulative techniques, particularly side posture skills, combine a degree of forward flexion and lateral bending plus a rotational component, potentially positioning the spinal joints at the end of their passive range. This could lead to injury over a period of time as a result of fatigue or uncontrolled movements (McGill 2002c). It has been stated that the cause of worker injury is heavily influenced by the way the worker moves and the next leap toward zero injury rate may be 'fitting the person to the task', or retraining the way the worker moves instead of 'fitting the task to the person' (McGill 2009). This concept is explored in greater detail in Chapter 3 dealing with the biomechanical considerations of spinal manipulative skills.

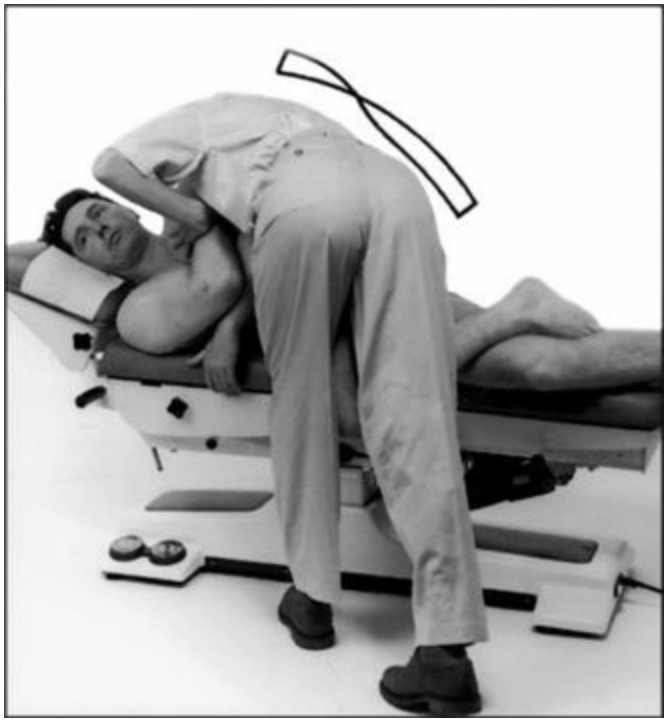
Figure 5.1

Figure 5.2

Figure 5.3

In addition, this twisting/torsion activity may be a physical risk factor and it has been responsible for an increase in disc prolapse as awkward twisting movements are closely related to these discal injuries and back pain (Adams et al. 2002a) (Fig. 5.4). The crucial aspect of these movements is that the clinician is strongly advised to avoid the end of the passive range of movement (McGill 1998) and awkward twisting as it is likely that the main movements of the lumbar spine are forward and lateral bending (Adams et al. 2002a). The soft tissues of the upper back and shoulder girdle are particularly vulnerable to injury because of the high loads encountered as a result of repetitive tasks as a consequence of manual thrusting (Fig. 5.5). In addition, Marshall and McGill (2010) have demonstrated that excessive twisting in combination with repetitive flexion extension motion may cause radial delamination of the disc while repeated flexion caused more posterior/posterolateral tracking of the nucleus giving guidance to prevention and rehabilitation

strategies.



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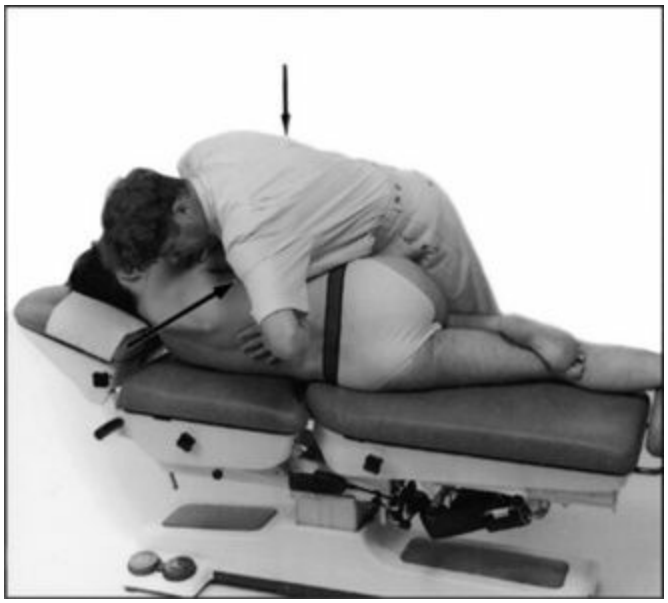


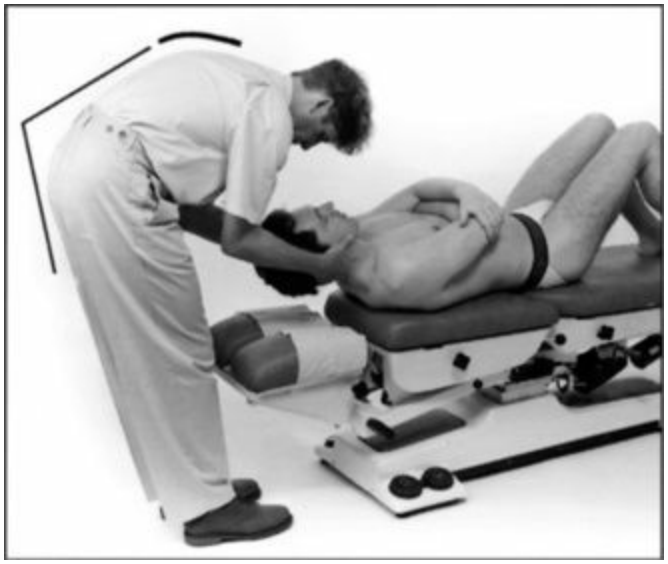
Figure 5.5

A study that reported a high prevalence of neck and shoulder pain (50%) experienced by chiropractors in the UK is of particular importance. Prevalence appears to be much higher than in previously surveyed groups such as: other health professions, light industry and general population studies. A significant correlation was found between the body mass index and grip strength, however no apparent relationship was observed between gender, age, technique, stress, activity levels or the other variables examined. However, it was apparent that many of the responders (68% of females and 48% of males) felt that their work aggravated their pain. Further research is warranted in respect of

support of the table and advantage created by the position of the centre of gravity. This subsequently compromises the mechanical advantage of the practitioner's body weight and body drop thrust. This posture places greater demands on the practitioner in terms of overall work demand. Flexion angles are increased and there is more stress on the shoulders. The jugular notch and contact point have become uncoupled and all the mechanical levers are influenced, compromising thrust efficiency and patient comfort.

4) Techniques that require the practitioner to reach around the patient (Fig. 5.11) require a great deal of trunk flexion thereby stressing the lumbo-pelvic region of the spine. However, if the practitioner maintains a 45° stance to the table, keeps the hips and knees flexed and leans over the patient positioning the centre of gravity close to the patient, the effects of the mechanical overload may be negated. Keeping the shoulders parallel to the table decreases the torque in the thoracolumbar spine. This also controls the twist in the arm. Bending the contact arm elbow also reduces mechanical loading on the shoulder girdle.

5) Manipulative techniques for the cervicothoracic spine illustrate the use of correct positioning of the jugular notch and the targeted joint dysfunction (Fig. 5.12). Flexion of both hips and knees while leaning against the table distributes the weight of the practitioner over the centre of the spine. This reduces mechanical stress even though it appears that trunk flexion is excessive. The shoulders are relaxed and level decreasing spinal twist and maximizing the thrust speed of the shoulder girdle. Note the position of the shoulder relative to the trunk and the upper arm. There is very little forward rotation which may compromise the anterior capsular region.



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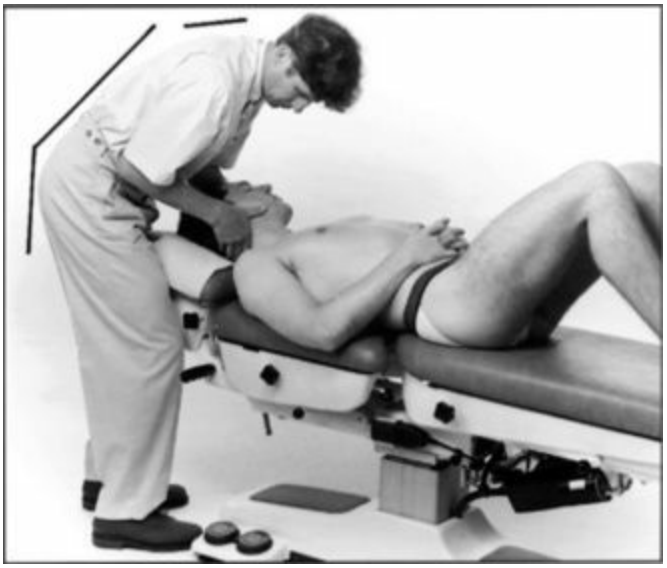

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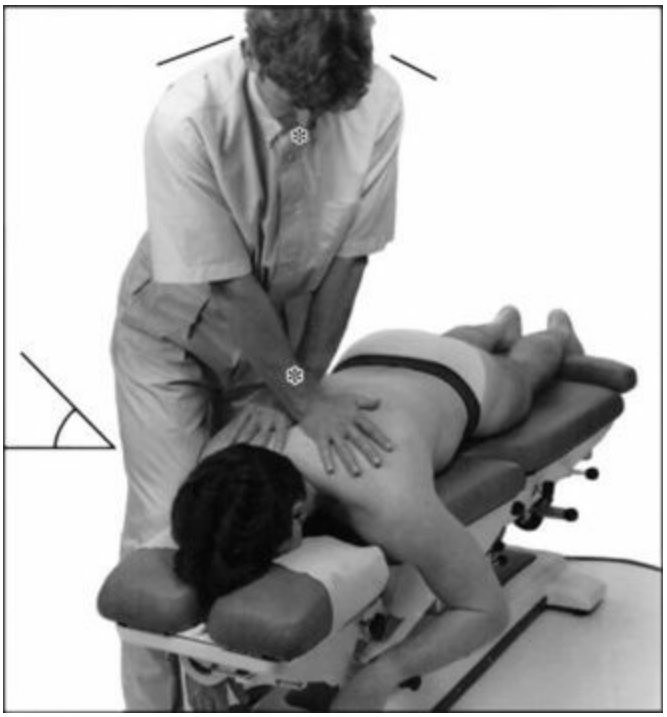

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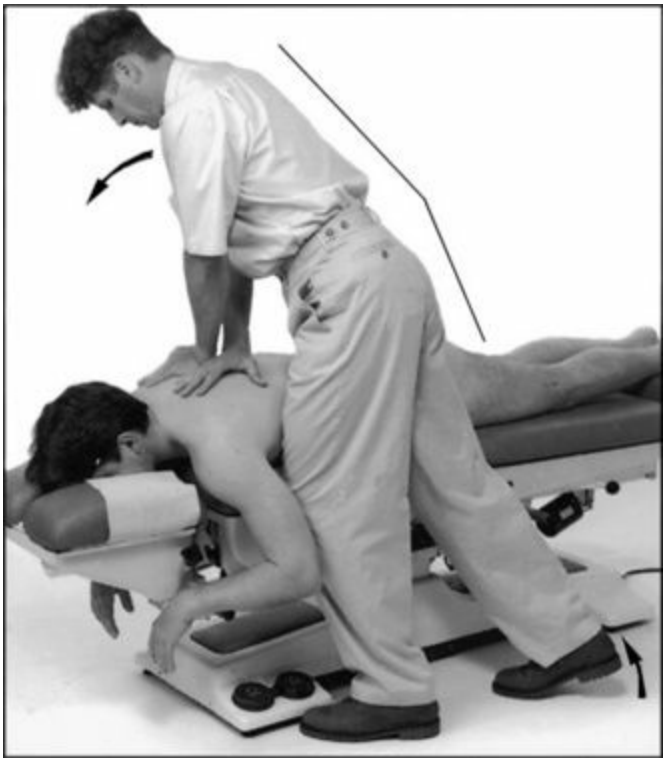

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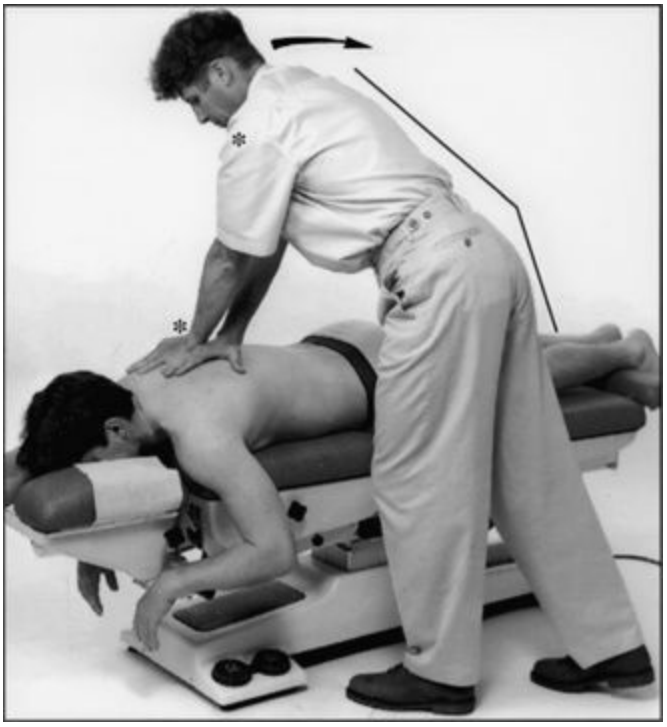

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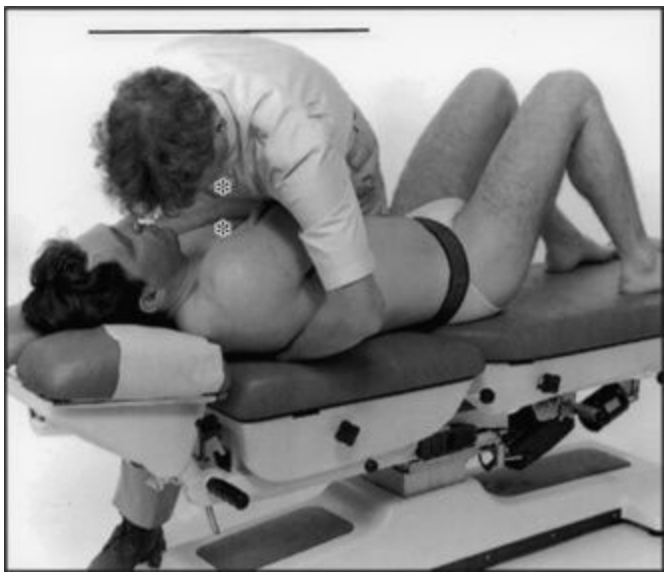


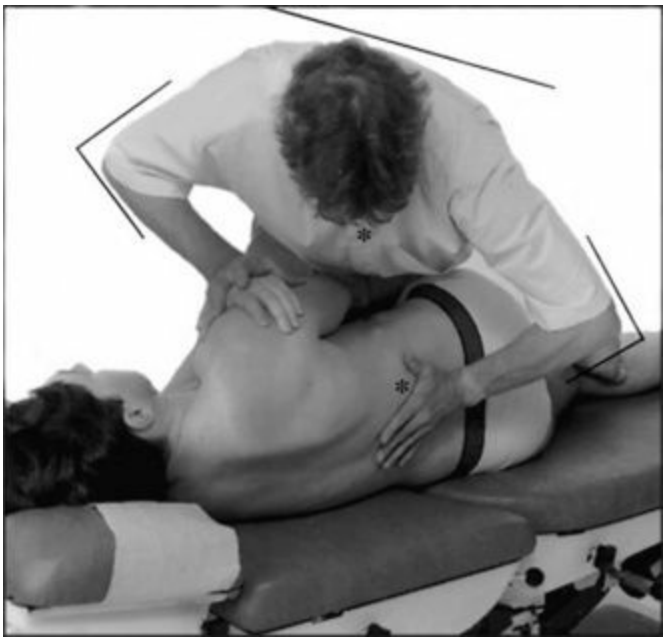
Figure 5.11

Figure 5.12

Lumbar/pelvic region and posture

The high incidence of low back pain in the general population would suggest that chiropractors spend the majority of their clinical time treating low back pain. The high incidence of low back and sacroiliac pain reported in chiropractors could be the result of the rigorous physical demands and skill required to perform side-posture rotational diversified manipulative techniques. These techniques place increased demands on the practitioner to control his/her weight plus the weight and movement of the patient simultaneously. The patient is far less stable in the side-lying position

This technique requires more work, does not localize thrust forces and may not be as clinically specific. These techniques will be described in greater detail in Chapters 8, 9, 10 and 11.



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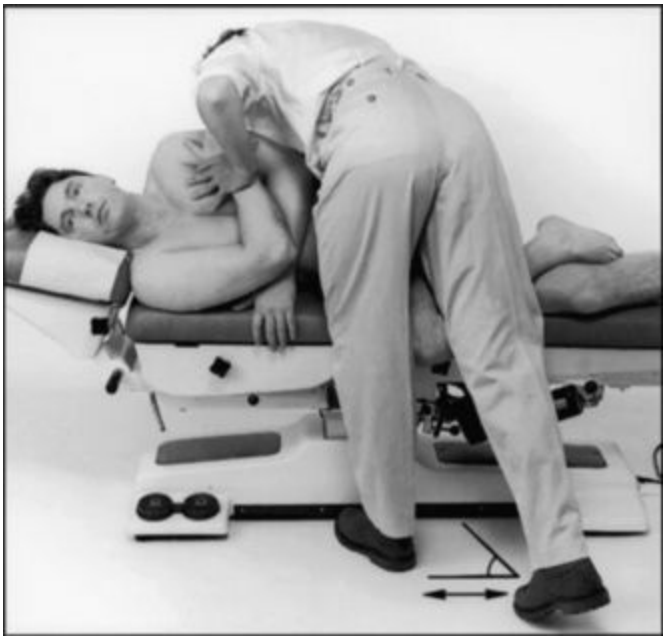


Figure 5.15

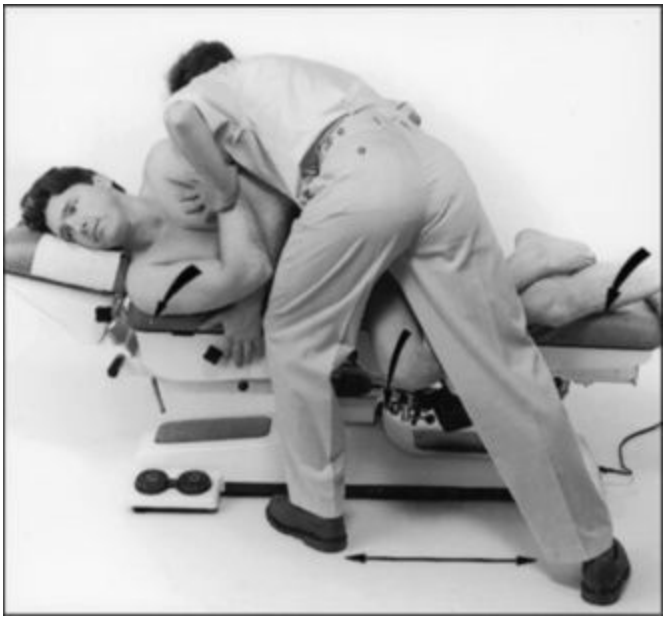


Figure 5.16

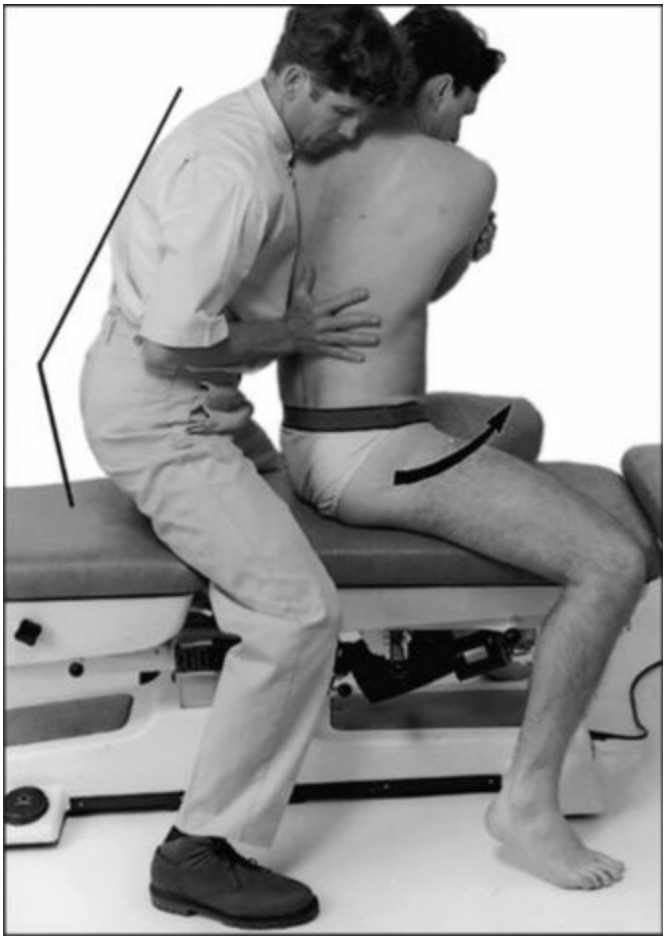


Figure 5.18

Figure 5.17

Summary

The chapter, thus far, has also presented an introduction to some of the current thoughts concerning work-related postures with more specific attention to more common postural and positional errors associated with manipulative skills and techniques of the spine and pelvis. The overall aim was to

strength of the hand and finger and upper body muscles, particularly the shoulder girdle, is mandatory and will enhance the learning of all skills. As an introduction to the basic manipulative hand skills, the following flexibility, strength and balance exercises are presented in Figures 5.20 - 5.24C. It is recommended that they be practised daily in combination with all other skills. A general exercise programme covering full body flexibility, strength, endurance, balance and cardiovascular fitness is advised to meet the new physical demands required during the acquisition of manipulative skills. Improving muscular speed and coordination and at the same time increasing joint range of motion and stability through strength training will cause adaptive changes in the neuromuscular system. *Speed, strength, coordination and finesse* are the core elements for the development of foundation manipulative psychomotor skills. The importance of developing bilateral strength, dexterity and flexibility will give the student and graduate the confidence to learn these skills equally on both sides of the body and expand these skills and procedures over a period of time at both the undergraduate and postgraduate levels.

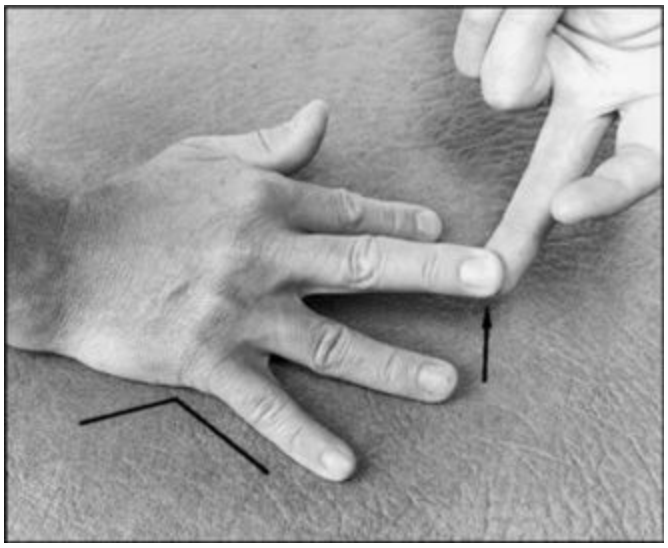


Figure 5.29

Chiropractic arch hand skills and variations

The basic V-arched bridge posture of the hand (Figs 5.25 - 5.26B) provides the foundation for a number of other important hand configurations used during the application of a variety of regional manipulative procedures common to the diversified approach to manipulative care. This hand posture provides the flexibility and the versatility necessary for the transition of manipulative forces between the practitioner and the patient. The following modifications describe a number of the most common chiropractic arch derivatives.

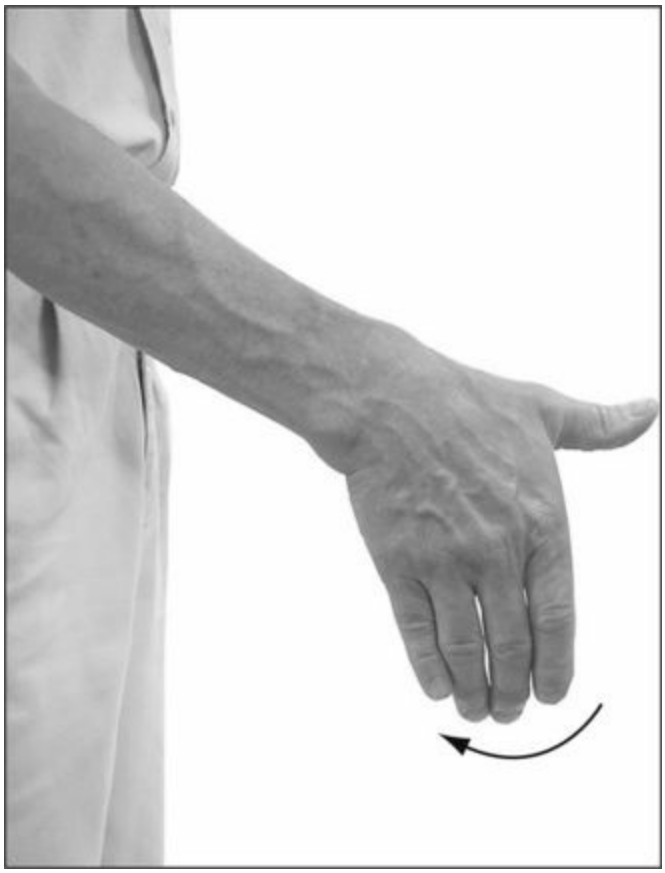


Figure 5.33

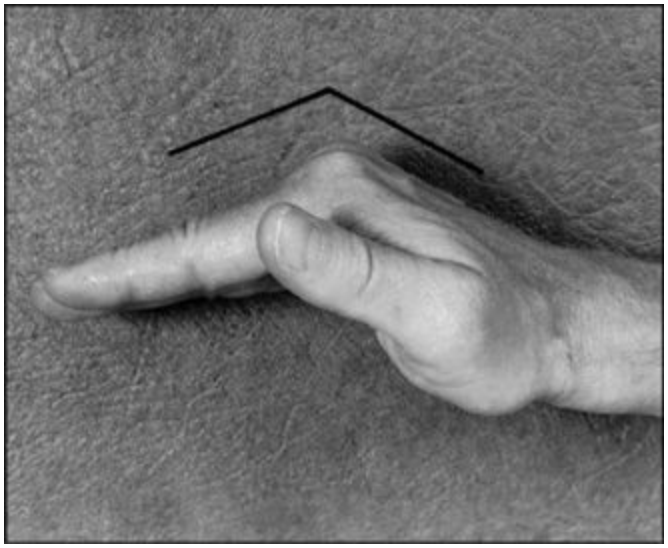


Figure 5.34

1) The ability to separate the thumb and index finger is necessary to manoeuvre the contact fingers around various anatomical locations. Therefore, the flexibility of the web of the hand should be maximized. This can be extended to the other fingers as well. Figure 5.20 illustrates the position of the fingers and thumb, and shows the required flexibility using a slow developmental stretch (SDS) or proprioceptive neuromuscular facilitation (PNF) or post-isometric relaxation (PIR) procedures. Remember that some people have natural flexibility and relatively looser ligamentous structures. If you are tight jointed and less flexible, you have a great deal of work ahead of you, but with time and regular stretching flexibility will improve. In either case the basic skills still prevail in terms of light, gentle approach to patient contact and skill application.
2) The ability to gain both 90° of flexion and extension at the wrist is necessary for many of the manipulative skills. Figure 5.21A demonstrates the flexibility required while Figure 5.21B illustrate the position to introduce SDS, PNF and/or PIR to increase comfortably the soft tissue extensibility and the range of motion of the wrist and forearm musculature. The elbow is kept relatively straight during this exercise. This exercise may be better accomplished with the forearm supported on a table or bench.
3) Strength training is an integral component of any fitness programme that will accelerate the learning of these skills and reduce possible joint injury as a result of the demands placed upon the upper extremity during manipulative skills. Stability during skill performance is necessary for efficient execution but also to decrease uncontrolled movements and potential injury. Any number of methods to gradually increase strength and stabilize the wrist and hand can be used. Balance the exercise by using small hand weights for arms, forearm and finger strength for both flexor and extensor mechanisms (Fig. 5.22). Begin with wrist curls in both flexion and extension and then incorporate arm and shoulder repeats. A full upper body exercise programme to include push-ups should be incorporated into the undergraduate teaching programme. Gradually increase training repetitions on a very gradual basis to ensure neural adaptation and training response without any overuse injuries.

stabilize the contact. Tension should be felt equally throughout the hand and fingers with *no excessive muscular tension* in the forearm, upper arm, or shoulder region. This only creates a hard contact which may aggravate symptoms and influence patient comfort and compliance.

4) The position of the arm and forearm in relation to the wrist and basic hand contact is important. This will ensure better transfer of thrust force generated from muscle contraction in the shoulder girdle and central body to the arm, wrist and hand through the contact point via a coordinated body drop. With the hand in the basic bridge posture with a hypothenar contact, the angle between the forearm and the hand should be about 100–110° with the extensor muscle group in line with the hand, the elbow locked but not hyperextended. The shoulder should be relaxed, lowered and slightly adducted to the chest (Fig. 5.27). Move the arm further forward and back to get a feel for the strain on the wrist and hand. Remember that stressing passive joint structures at their extreme end range may compromise tissue integrity leading to injury. This needs to be acknowledged and avoided, particularly at the undergraduate level where these skills are initialized.

5) There are three common errors encountered when learning hand posture skills.
   i) The student often assumes that the *only real contact* is the pisiform. There is a tendency to lift all the fingers up from the surface of the table, hyperextending the wrist (Fig. 5.28A). This limits the stability of the arch and flexes the arm excessively. The pisiform is a bony contact and could feel much harder to the patient when applied during potentially painful clinical conditions (Fig. 5.28B).

Figure 5.20

Figure 5.21A

Figure 5.21B

Figure 5.22

Figure 5.23

Figure 5.24A

Figure 5.24B

Figure 5.24C

Figure 5.25

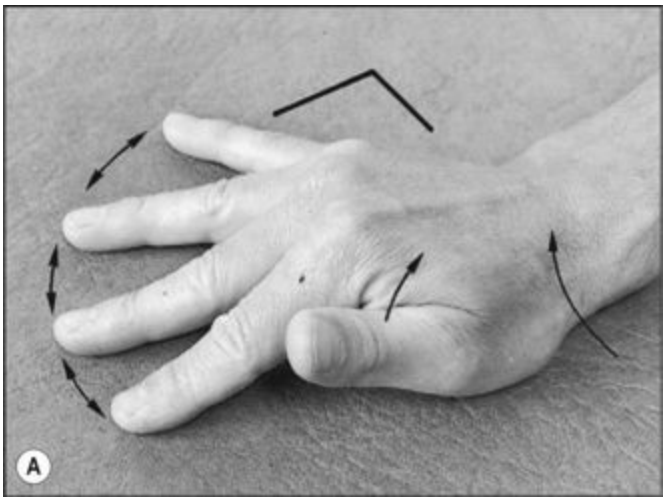


Figure 5.26A

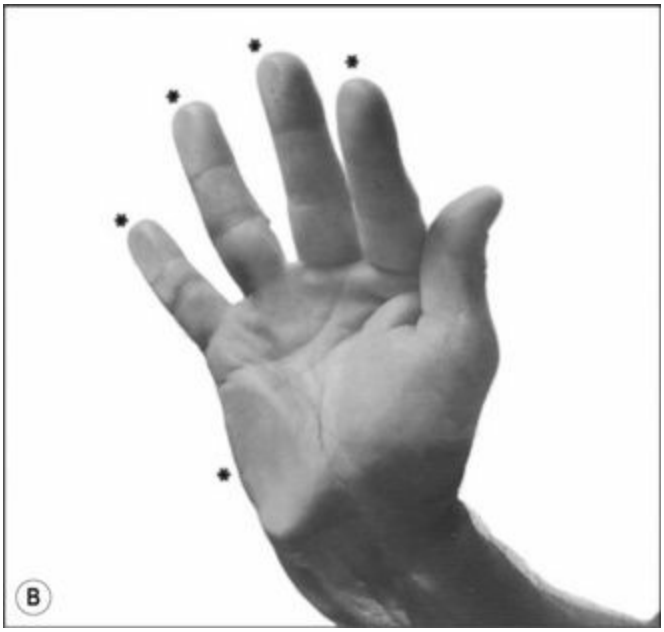


Figure 5.26B

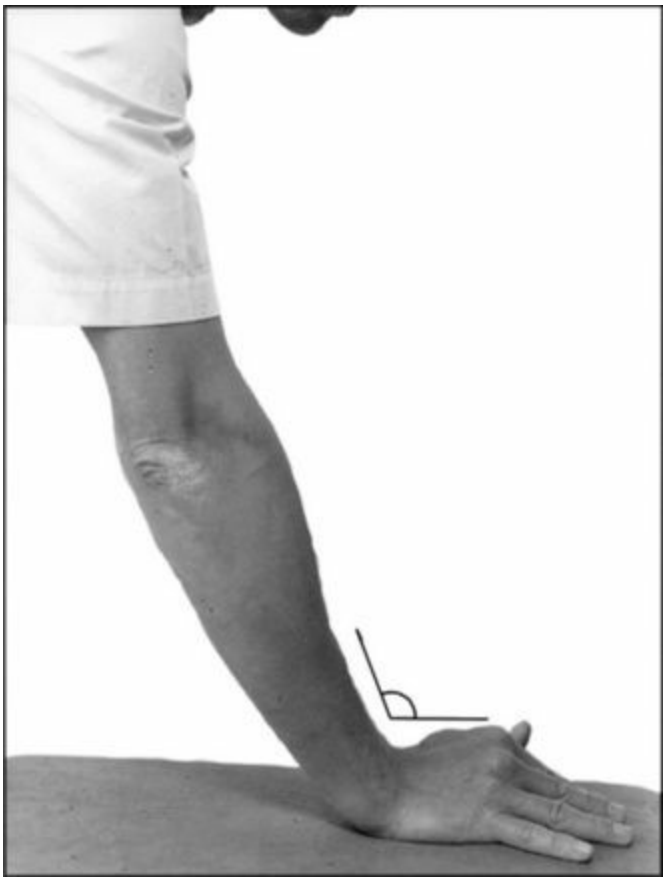


Figure 5.27

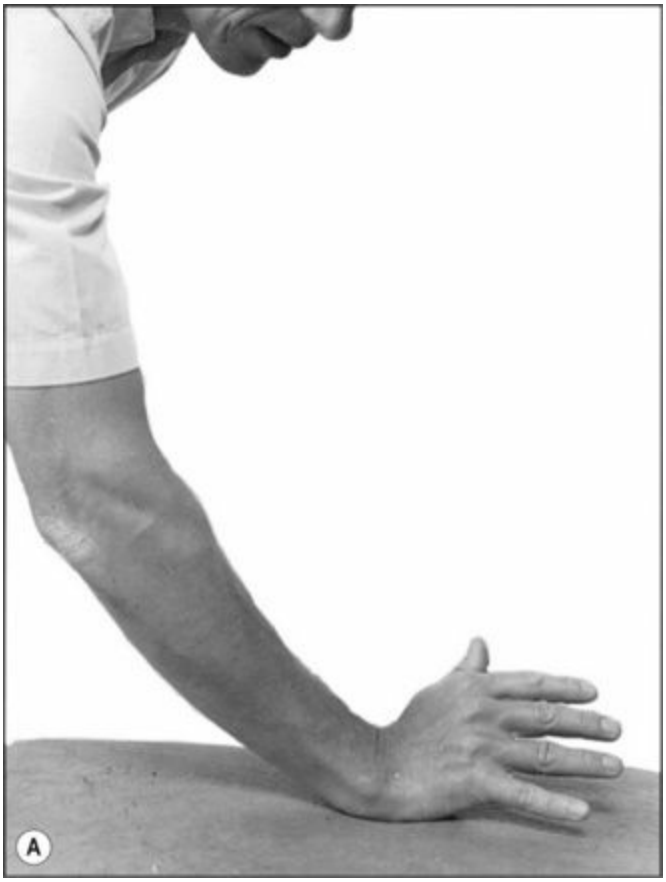


Figure 5.28A

Figure 5.28B

Hyperextending the wrist statically at the passive joint end range for a period of time combined with increased tension in the extensor muscle group could contribute to an overuse injury scenario. These unnecessary aspects of the skill need to be addressed early in skill learning.

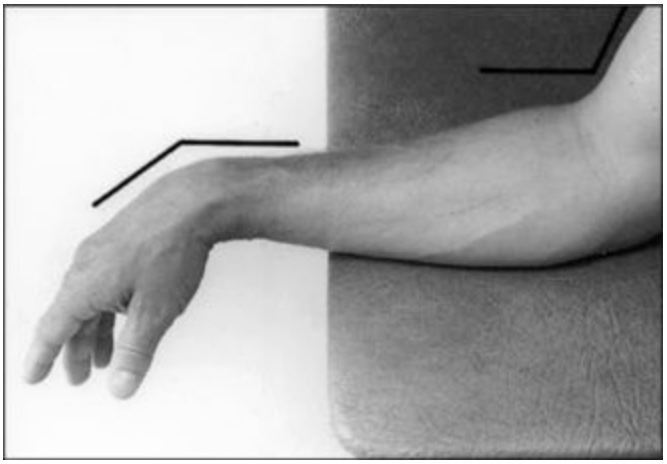


Figure 5.30

Figure 5.31

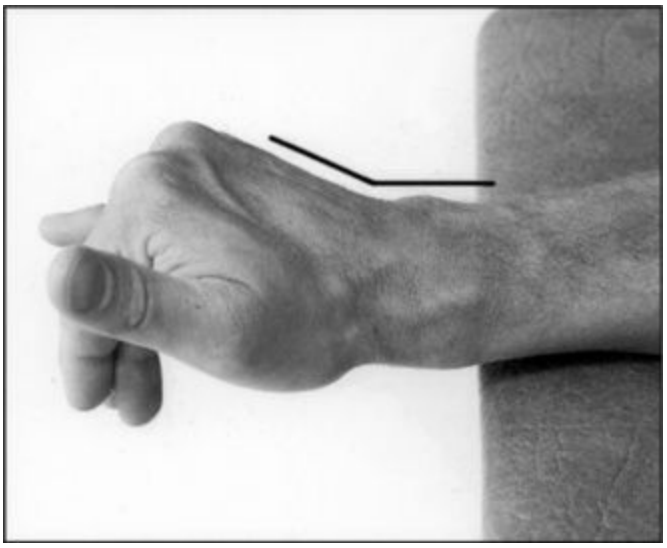


Figure 5.32

Index/metacarpal/interphalangeal contact

The finesse and control associated with this particular contact is one of the most difficult to learn.

important in training the hands to perform various fine and controlled movements consistently. This particular contact is performed with the wrist in extension and radial deviation which may stress the wrist structures (Figs 5.34 - 5.36). Caution is recommended during the acquisition and use of this particular contact.

1) The basic hand bridge configuration is supinated perpendicular to the table from the prone position until the extreme lateral edge of the hypothenar eminence and the metacarpal aspect of the hand is in contact with the surface of the table (Fig. 5.34). The hand and forearm are relaxed at all times during this procedure to learn the value of sustained light touch.
2) The wrist is then radially deviated slowly bringing the proximal aspect of the lateral edge of the hypothenar eminence into contact with the table to make the actual contact point firm. The wrist remains slightly flexed (Fig. 5.35A). There will be some muscular contraction of the flexors and abductors of the hypothenar eminence so that the fifth digit remains flat on the contact and the contact point is firm (Fig. 5.35B)).
3) There is only one minor error to be aware of during the learning of this hand skill.

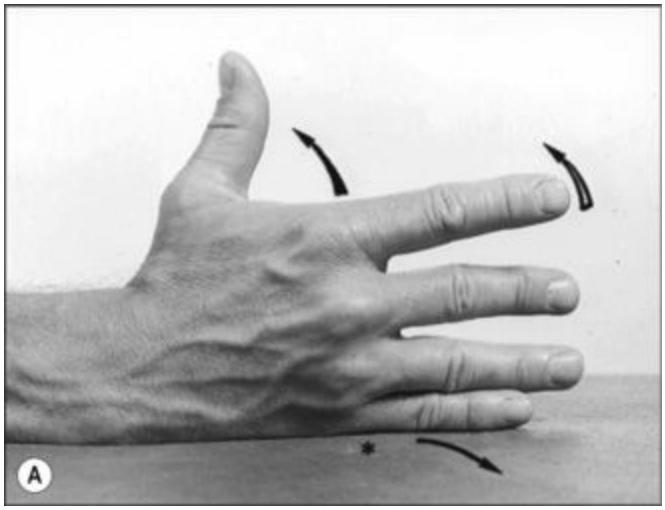


Figure 5.35A

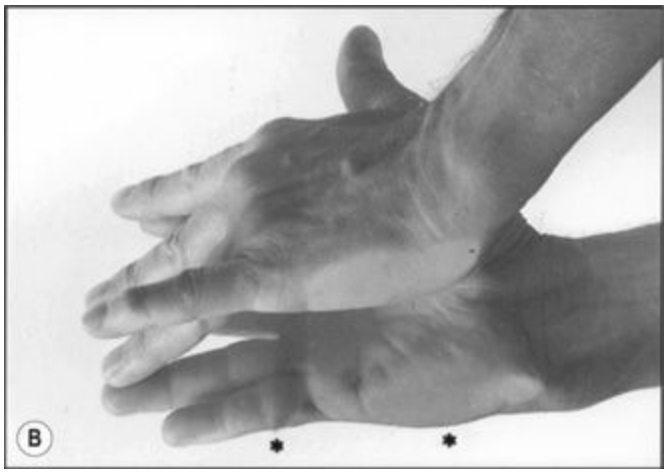


Figure 5.35B

There is a tendency to radially deviate the hand beyond the specified range causing excessive muscular contraction in the hand and forearm musculature. This toughens the contact and causes excessive muscle contraction in the forearm, stressing the wrist (Fig. 5.36) which also destabilizes the contact point resulting in potential injury.

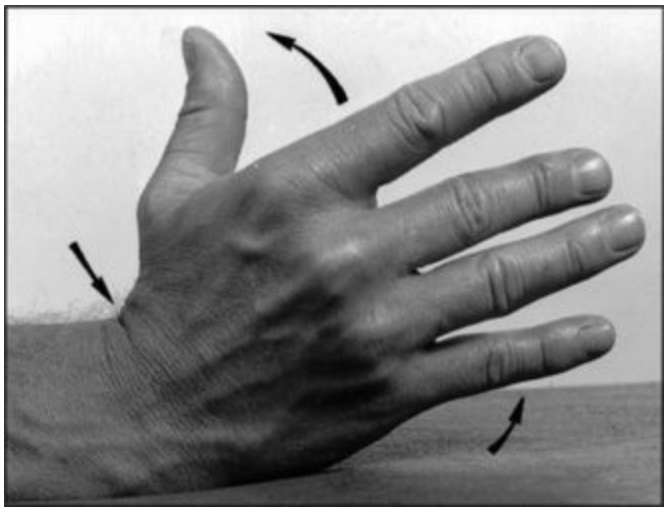


Figure 5.36

Thenar contact

This contact has considerable clinical use as an acceptable alternative to the hypothenar/pisiform contact. The only problem is that the thenar contact is not as natural a hand position. It is also a slightly larger muscle mass, which may dissipate some of the thrust force. However, because of its muscle bulk, the thenar eminence offers considerable comfort for the patient and at the same time provides a specific contact point. There are two types of thenar contact, prone and supine (Figs. 5.37A - 5.39C). The prone contact is generally used for lower thoracic manipulation, whereas the supine thenar is most commonly used for the anterior thoracic and rib manipulative procedures which will be described in more detail in Chapters 8, 9, 10 and 11.

1) The starting position is the elbow at 90°, the wrist held in the neutral position with the hand *totally* relaxed in *ulnar deviation.* There should be very slight flexion of the wrist. The wrist should feel floppy. Tension is produced in the thenar muscles by adducting the thumb towards the index finger and the fourth and fifth digits are slightly elevated (Fig. 5.37A). This ensures that the centre of the thenar eminence is in full contact with the table or anatomical landmark (Fig. 5.37B). The thumb and first two digits stabilize the hand.
2) There is one minor fault associated with learning this skill: namely over-pronating the contact point which places internal torsional stress on the arm and shoulder. This is not a natural posture for the upper extremity and any excessive movement may result in a number of overuse problems associated with the shoulder and wrist in the future.

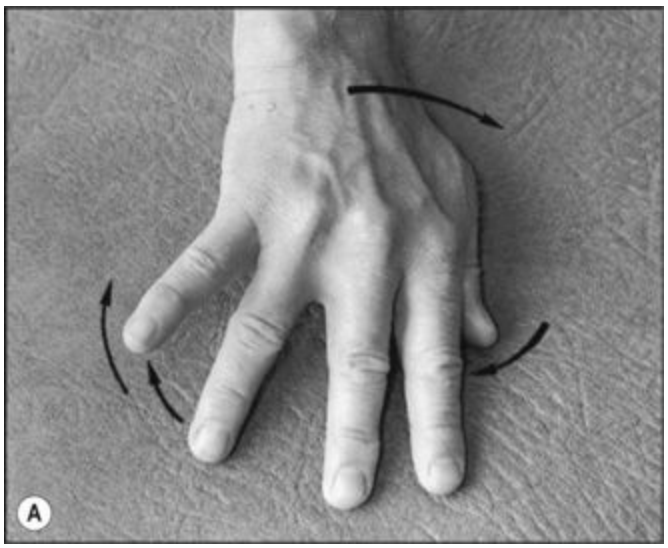


Figure 5.37A

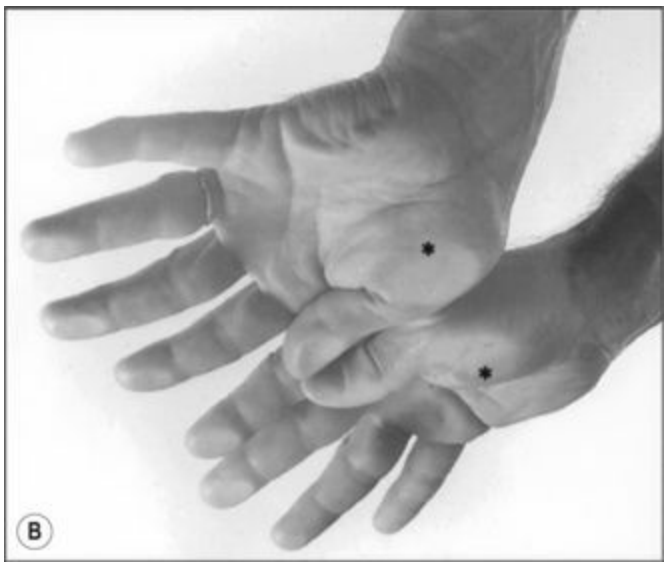


Figure 5.37B

Supine thenar contact

1) Begin with the hand flat on the table with the palm side up, fingers together and the thumb adducted close to the palm. Adduct the thumb fully bringing it in line with the index finger (Fig. 5.38). This maximizes the contraction of the thenar musculature making the contact point firm yet comfortable for the patient.
2) Flex the distal and proximal interphalangeal joints. This action gives the hand more depth making it a better fulcrum for anatomical contact (Fig. 5.39A). The hand is relatively relaxed and the thenar eminence is marginally contracted. Allow the thumb to extend into a vertically orientated posture for another useful contact (Fig. 5.39B). Another useful posture for this procedure involves extending the hand at the metacarpophalangeal joint and flexing the distal and proximal interphalangeal joints (Fig. 5.39C). This requires a significant amount of skill acquisition to assimilate these various configurations. These postures will be administered for the appropriate

clinical intervention.

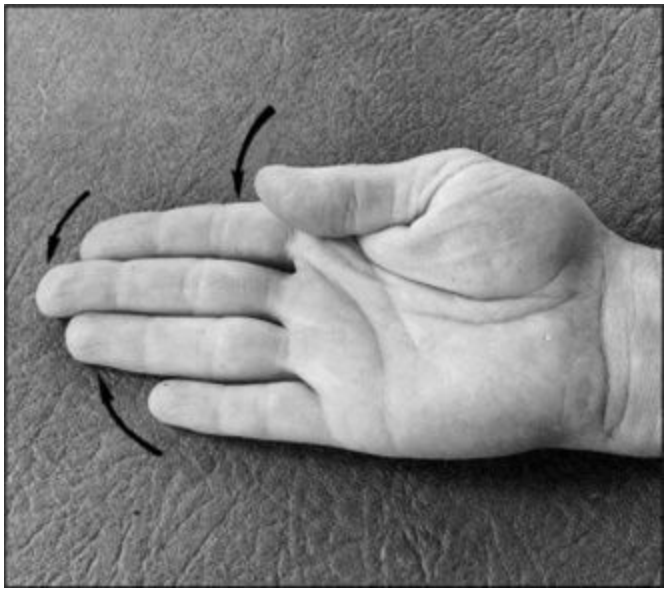


Figure 5.38

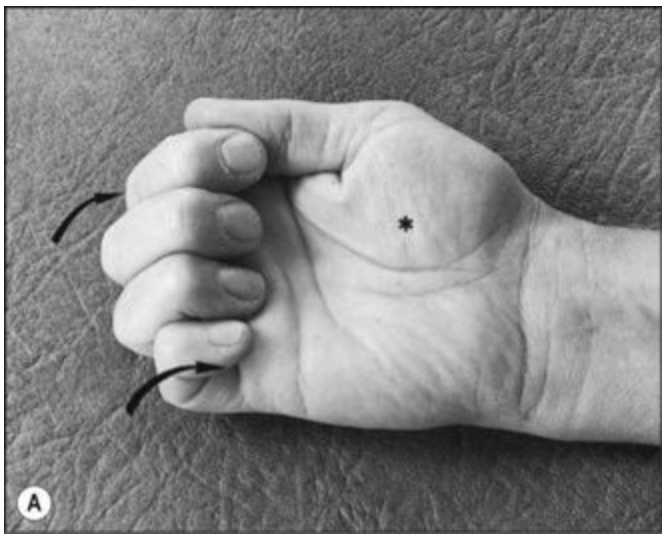


Figure 5.39A

Figure 5.39B

Figure 5.39C

Summary

This chapter has presented a comprehensive description of the more common hand contact postures associated with chiropractic manipulative therapeutic intervention. The importance of being able to use one's hands skilfully and confidently during the application of spinal manipulative therapy has been emphasized. These are considered first-order or basic skills, particularly at the undergraduate level. The significance of maintaining moderately firm hand and arm musculature without excessive muscle tension or joint ranges of motion at the wrist and elbow has also been highlighted to avoid unnecessary injury and poor skill acquisition. The significance of avoiding extreme flexion/extension and radial/ulnar deviated postures was reviewed in light of the excessive mechanical loads created when transferring loads while performing manipulative procedures.

Careful attention and adherence to the sequential steps and fundamental movements adds to the overall process of manipulative skills learning, development and long-term mastery. The interface between the practitioner's hands and the patient as an integral aspect of that special clinical communication should not be casually overlooked.

iii) Do not lift the patient to the edge of the table unassisted. It is difficult and awkward. The patient under most circumstances (except during extremely acute situations) is quite capable of assisting the practitioner in shifting body weight. Think of your own back and potential spiral injury.

Figure 5.40

Figure 5.41

Figure 5.42

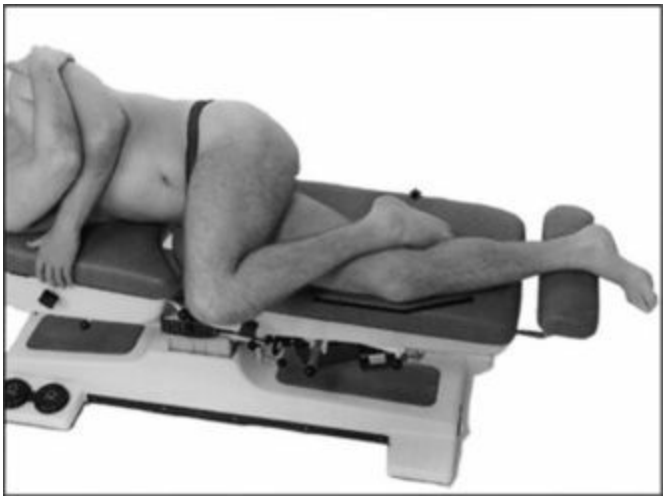


Figure 5.43

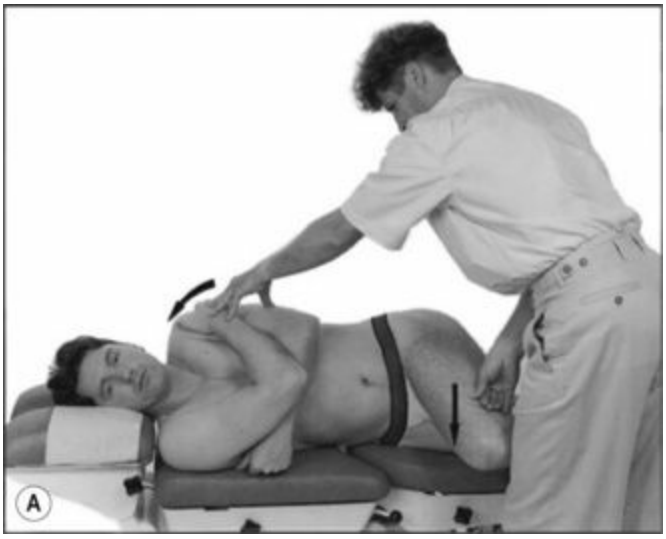


Figure 5.44

Figure 5.45A

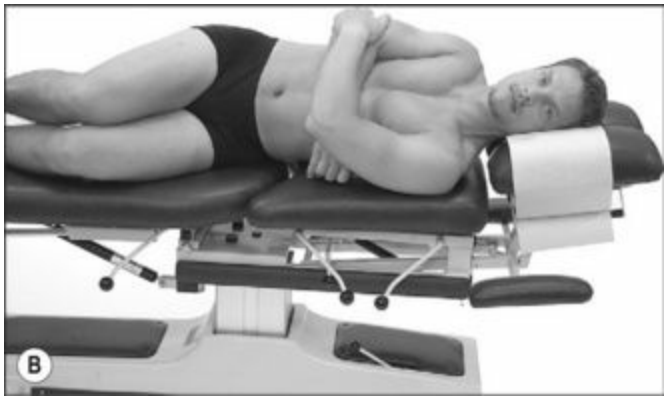


Figure 5.45B

Side-posture skills – practitioner position

Once the patient is comfortable, secure and stable on the table the next step is to correctly position the practitioner's body weight over the patient. The next series of steps are important in balancing the weight of both the practitioner and the patient during the manipulative procedure. One of the most commonly observed mistakes by students is their rushing through this series of skills, thus mauling the patient into submission. *The movements should be slow and methodical.* Repeat them in sequence as often as required until the pattern becomes smoother. Focus on patient comfort and confidence.

1) The practitioner directly faces the patient at 90° to the table and places the cephalad hand over the patient's hand on the shoulder or over the crossed arms, keeping the arm relatively straight while applying minimal pressure down and slightly cephalad to hold the patient on the table. This maintains patient position and controls the patient's upper body weight. Simultaneously, the practitioner pushes the patient's top leg down very slowly only a few inches with the fingertips to be gently placed between the practitioner's thighs just above the knees (Fig. 5.46A). This is the thigh sandwich or thigh squeeze. This controls patient leg weight and position. The feet should be about hip distance apart. The patient's top leg should be flexed 90° at the hip to create some tension in the posterior ligament system decreasing the lumbar lordosis, which is a key factor in side posture manipulation. The patient's leg should be clasped by the practitioner just above the knee in the region of the vastus medialis. The patient's arms can be folded lower on the chest wall to maintain upper body stability (Fig. 5.46B). This keeps the practitioner upright and balanced with the sternal notch positioned over the lumbar spine to allow maximum use of the practitioner's own body during this procedure.

2) There are four commonly encountered errors to note during this part of the skill.

i) The practitioner should not lie on the patient with the forearm when stabilizing the upper body. This shifts the practitioner's centre of gravity cephalad and has a tendency to drag the patient forward, compromising the efficiency of the procedure.

ii) *Do not* push the patient's upper body back with the support hand to counter the force being applied to the pelvis. This creates unwanted torque in the spine and increases patient resistance. The support hand should be used to maintain the patient on the table for a sense of security with the

pressure directed down towards the table. Using the patient's upper torso to develop tension will be described in more detail in Chapters 8 and 9 as this is an important skill in developing joint preload and stabilizing other structures in the lower back and pelvic regions.

iii) *Do not* climb aboard or mount the patient and ram his or her knee into your groin when attempting to secure and position the patient's upper leg, while precariously balanced on the tips of the toes. This is very clumsy and extremely unskilled and may simply require a table height change.

iv) *Do not* squeeze the patient's knee and leg too tightly with your own legs during the thigh sandwich manoeuvre. This compresses the knee, causing excessive flexion which may cause discomfort and pain. This may disrupt comfort and compliance. *Provide feedback* for each other on this point when working in pairs in the workshop or skills laboratory. The thigh sandwich or squeeze should be very light for the best results and control. Try to ensure that the patient's leg is not being jammed into the table during this procedure and ensure that they are close enough to the edge of the table to create some leverage. This is crucial for the next set of steps in developing preload and a transitional point in the lumbopelvic region.

3) *The next step is a critical transition* for overall practitioner positioning and control. The practitioner begins to shift and position body weight over the patient. The most advantageous position is with the practitioner placed at a 45° angle to the table in a *low fencer* or *lunge stance position* described in Chapter 6. The actual movement sequence will be called the 45° pivot shift. This starts with the feet positioned hip distance apart. With the feet maintained in this position, the clinician swivels on the metatarsal pads to face the table at a 45° angle. This has to be done very slowly to maintain control of both the practitioner and the patient. Maintain a light thigh sandwich throughout the pivot shift. The patient should not move during this procedure and movements have to be light over the patient. The clinician's head, shoulders, pelvis, knees, and feet should all finish at 45° to the table. The patient's position is stable (S). The fencer posture reduces any torsional stress to the practitioner and patient. Prior to transferring weight over the patient to develop preload, the back leg must be repositioned to permit better use of the plantar flexion action to come later. After the practitioner has shifted a thigh sandwich should be maintained with the back leg perpendicular pushing towards the patient's thigh. Then the lower leg is extended and the toe placed on the ground. This is the *duff* move (Fig. 5.47).

4)i) With the back leg and foot in the duff posture and the back thigh perpendicular to the floor to maintain patient leg flexion, transfer the practitioner's body weight forward towards the patient and over the front foot by plantar flexing the rear foot. Consciously maintain a light thigh squeeze during the weight transfer to control leg weight and position. This action is extremely important for all side posture manipulative procedures. Transferring the weight over the metatarsal heads gives the clinician more spring and control of body weight and position. This shifts the weight towards and down over the patient to position the practitioner's centre of gravity as close to the target joint as possible (Fig. 5.48). Additional support and spring come from flexion of the front knee. The clinician also leans against the cushion of the table with the left knee for additional support. The back foot is maintained in a plantar flexed posture. The patient's flexed leg is stabilized in the same

position during the pivot shift to the fencer stance. There should be no muscular tension or excess weight on the patient to maintain control and compliance. Learn to feel the play in the lumbar spine and pelvis without creating too much tension from the position established in Figure 5.48. Pull the pelvis towards the practitioner in succession several times to appreciate the give and play in the spine while stabilizing the upper body. Do not push down on the pelvis or rib cage to maintain patient stability and comfort.

5) There are four commonly encountered errors to be aware of during the performance of this procedure.

i) *Do not* separate the feet more than hip distance. This effectively eliminates thigh sandwich control. Loss of control of the patient's leg subsequently jeopardizes control of the entire lower body of the patient (Fig. 5.49). The practitioner's back leg must remain perpendicular to the floor to maintain the thigh sandwich and hip flexion.

ii) The angulation of the feet (optimally 45°) has a tendency to drift into an exaggerated fencer stance position with the front foot parallel to the table and the hind foot perpendicular and flat on the floor with no plantar flexion (Fig. 5.50). A thigh sandwich is impossible to perform in this position when the practitioner's back leg is not perpendicular to the floor to maintain hip flexion and control. Under these circumstances the patient's leg drops through the practitioner's legs offering no stability and tension. This has to be observed and avoided. This reduces the spring on the feet, keeps the clinician's body weight back from the table, compromising the overall efficiency of the manipulative procedure. The back leg should not be straight.

iii) *Do not* over-rotate one part of the body during the pivot shift, producing unwanted torsion in the spine and mechanical stress on the right anterior glenohumeral joint capsule which may lead to injury (Fig. 5.51). This usually occurs because the sequence is performed too quickly. The lower leg often compensates by kicking out to balance the trunk torsion. This could result in repetitive torsional injuries to both the lumbar and thoracic spines and shoulder. The body moves as a single unit.

iv) The practitioner's body weight can be too far from the table and the patient. This will undermine patient stability, increase the lever arms acting on the patient and affect the quality of the body drop (Fig. 5.52). Note the distance between the practitioner and the targeted lumbar spinal region. Optimal foot placement requires that the practitioner's front foot should be positioned slightly under the table. Practitioners should be able to view about two-thirds of their feet when looking down. This gives practitioners enough room to apply a body drop but also brings their weight closer to the table to ensure patient stability and efficiency of the manipulative procedure.

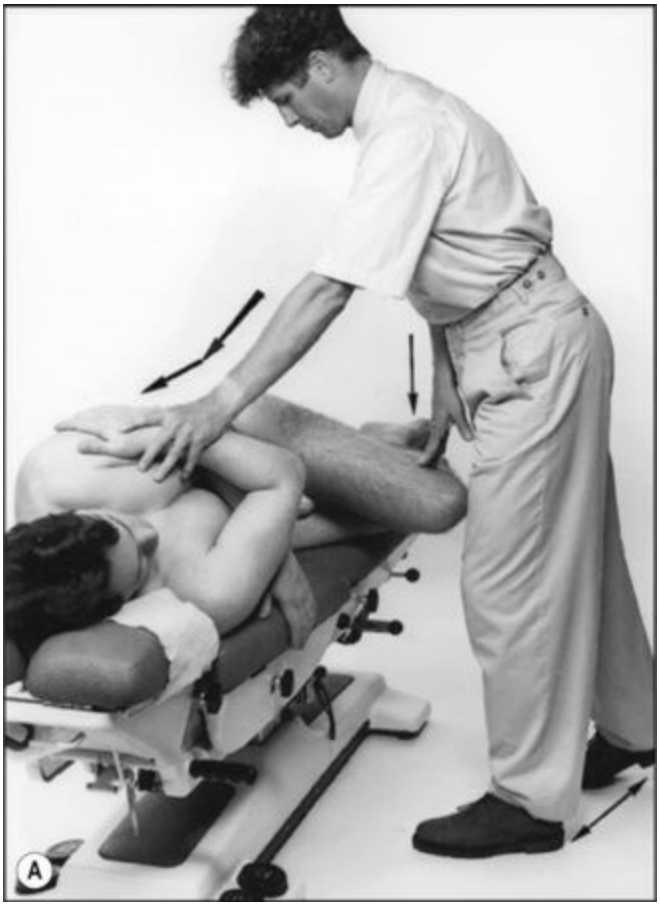


Figure 5.46A

Figure 5.46B

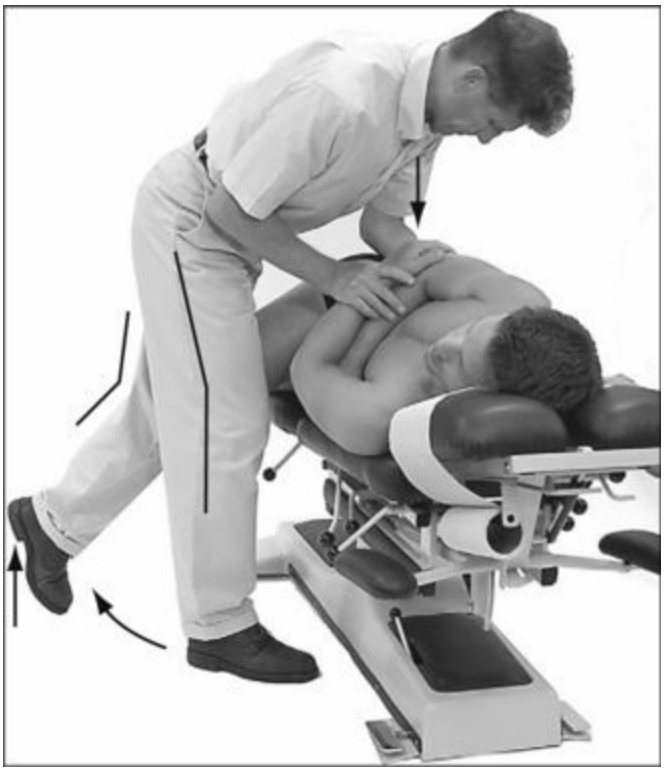


Figure 5.47

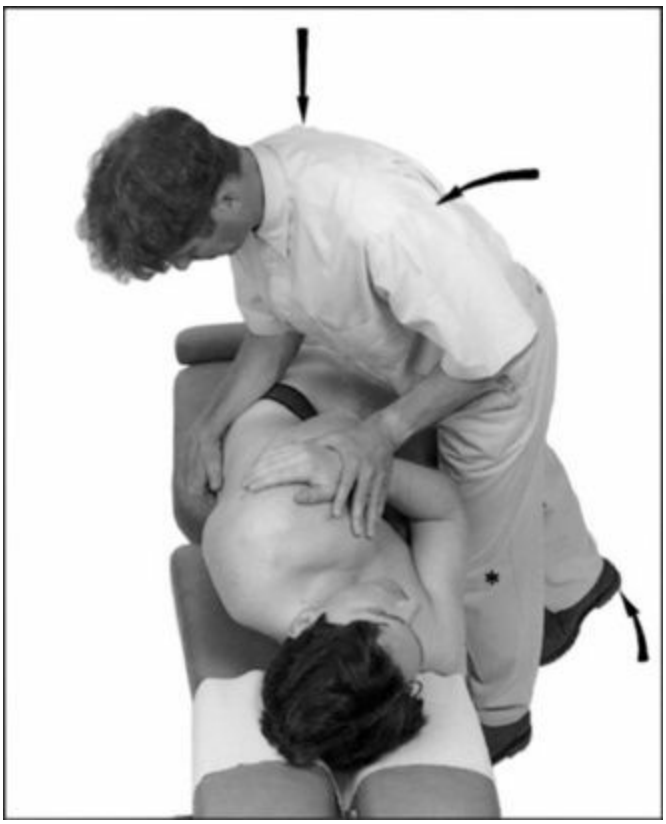
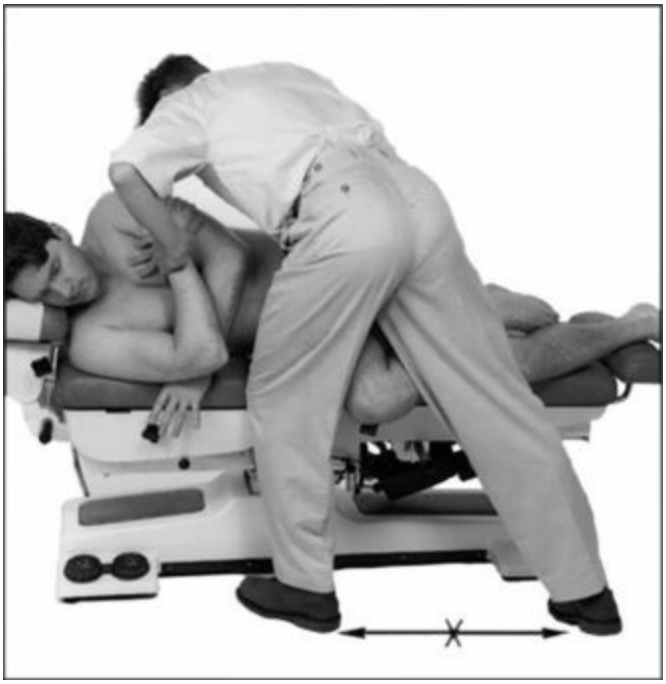


Figure 5.48



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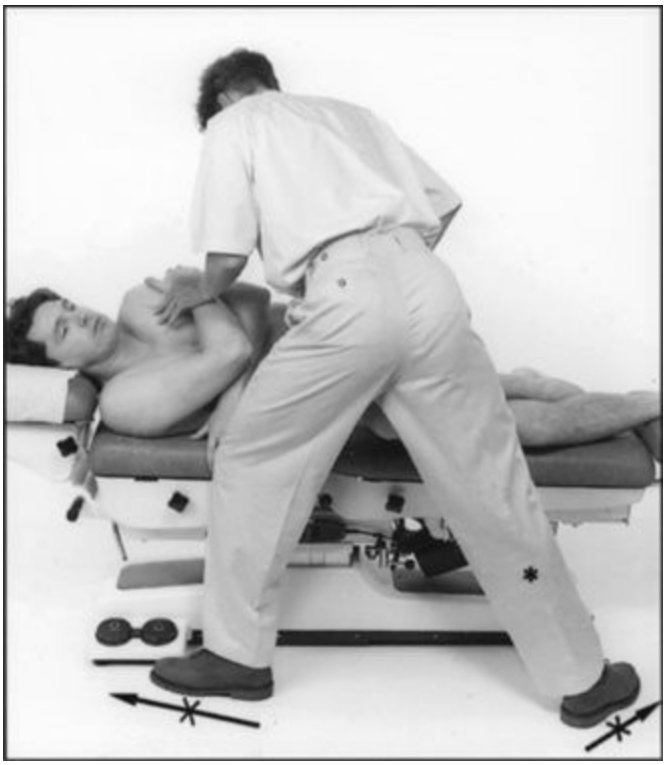

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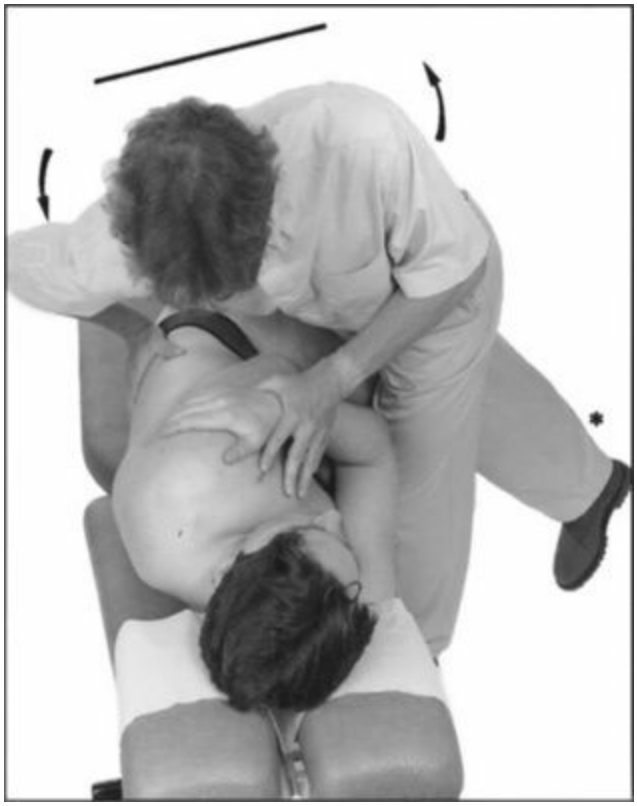

Figure 5.51

Figure 5.52

Supine posture skills – patient

1) The patient lies with knees and hips flexed to relax the abdominal muscles and the hamstrings.

Flexion of the hips also slightly flattens the lumbar lordosis and relaxes the paraspinal musculature. The hands are comfortably interlaced and placed across the lower part of the chest. This ensures relaxed shoulders. The head is supported on a flexed and upright headpiece according to the clinical needs of the patient (Fig. 5.53). There are many alternatives of this basic theme which are tailored to the needs of the patient. All of the above cater to patient comfort and relaxation and will be reviewed in the appropriate chapters.

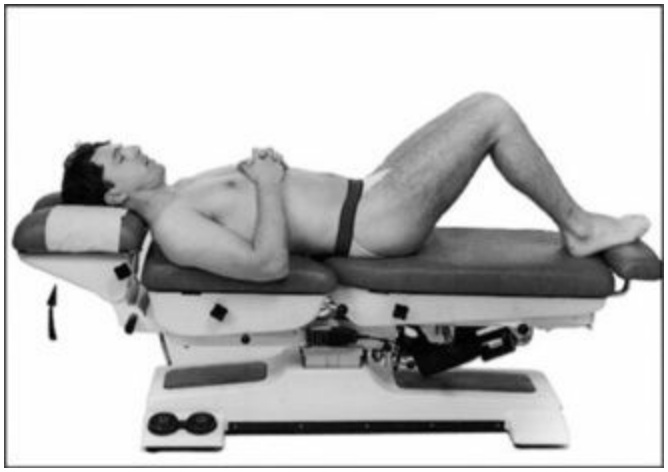

Figure 5.53

Prone posture skills – patient

1) The patient lies face down with the headpiece dropped slightly below the horizontal neutral position to flex the upper thoracic lower cervical region to reduce any tension and control potential symptoms. The feet are slightly elevated which takes the tension off the posterior leg musculature using the adjustable rear foot rest (Fig. 5.54). The arms are placed over the table supports to maintain shoulder relaxation and prevent the practitioner from stepping on the patient's hands. Cushion support is introduced under the lumbar and pelvic region on a case by case situation. Some patients require more cushioning and support than others. See Chapters 12 and 14 for more specific details for specialized patient populations.

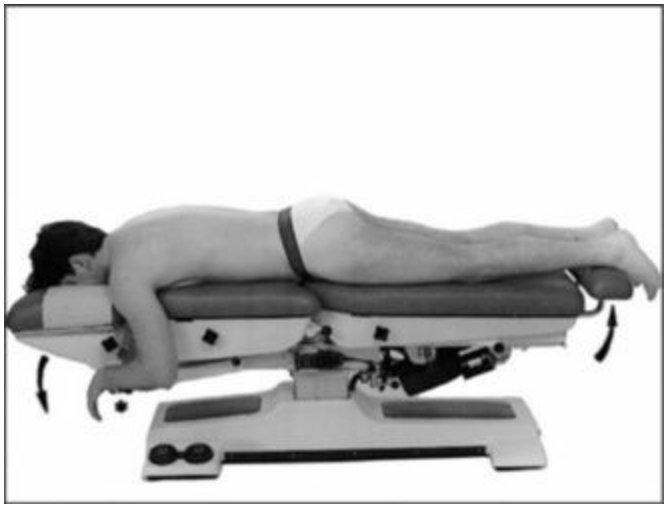

Figure 5.54

Recommended table height

1) This is a personal preference in most instances. For the uninitiated, the ideal height is where the top of the table lines up just at or above the level of the knee joint line in the fencer stance (Fig. 5.55). This allows the practitioner to lean comfortably against the table during side-posture skills, thus supporting his or her weight and providing patient balance. This height will change according to the size of the patient. The table height influences the efficiency of the manipulation will be affected because of inappropriate weight distribution and patient control. A vertically adjustable table is a clinical necessity to maintain this ideal height relative to the patient. This will be discussed in more detail in subsequent chapters describing the individual manipulative procedures.

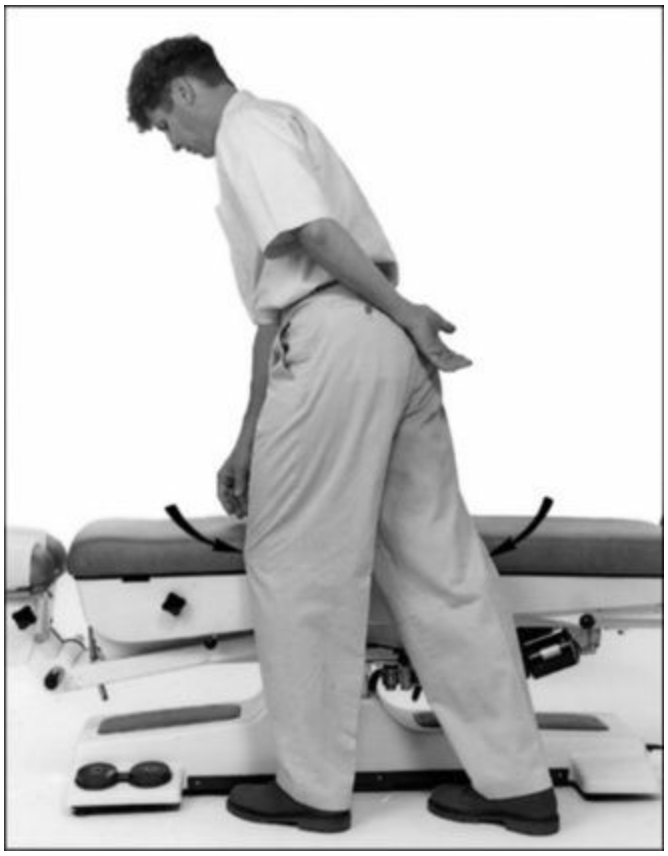

Figure 5.55

Summary

The overall effect of this step-by-step procedure is to produce an effortless process for patient comfort and relaxation with a minimum amount of effort by the practitioner. Weight distribution of both the patient and the practitioner are considered fundamental factors in maintaining overall management and control. The above skills should be learned *slowly,* and practised until they become a smooth series of movements in preparation for more advanced skills learning.

This chapter has presented a fairly comprehensive description of side-posture positioning skills

C1

Figure 7.1 Anatomical relationship of top of C1 (black *) to mastoid process (white *) and angle of mandible (>).

The bony occipital rim can be palpated medially from the mastoid process, deep to the overlying muscles trapezius, rectus capitus posterior major and rectus capitus posterior minor. The bony external occipital protuberance (EOP) is found by moving in a cephalad direction and serves as one of the attachment points for the trapezius muscle, an important postural muscle.

Moving inferiorly in the midline from the EOP, the palpator will come across a soft tissue depression followed by the first bony prominence, which is the spinous process of the second cervical vertebra (C2) (see Fig. 7.2). The spinous process of C2 is large and bulbous and generally bifid, although this may not be palpable because of the overlying ligamentum nuchae. The posterior tubercle of C1 is between the occipital rim and the spinous process of C2, but is generally not palpable. Palpation of this area is aided by flexing the head in the seated position or by lowering the headpiece in the prone position.

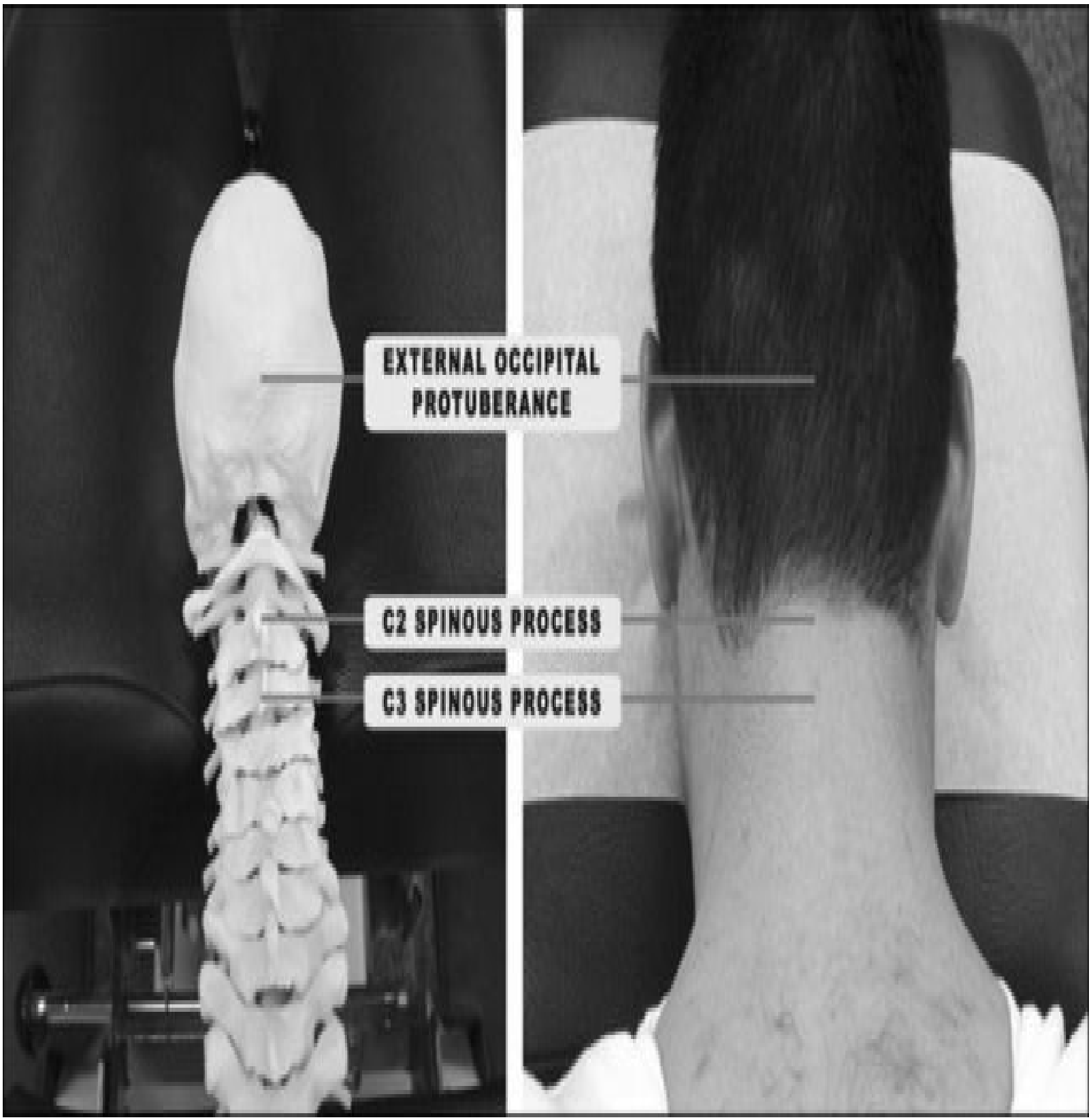

Figure 7.2 Location of the important anatomical landmarks on the posterior aspect of the cervical spine.

Continuing inferiorly in the midline with the head slightly flexed, the next spinous process to be found is C3 spinous process which is small, pointed and hides underneath the large spinous process of C2. The spinous processes of C4, C5 and C6 are generally palpable as they are larger than the spinous process of C3 (see Fig. 7.2).

The spinous process of C7 or ‘vertebra prominens, is the most prominent in the cervical spine. Sometimes however, the spinous process of C6 may be large and difficult to distinguish from that of C7. Therefore, place the index finger on the uppermost spinous process and the middle finger on the adjacent spinous process inferiorly. Next slowly extend the head and neck several times. The spinous process of C6 will move during extension while that of C7 will remain stationary, thereby providing a distinction between the two (see Fig. 7.3).

Figure 7.3 Procedure to locate the spinous process of C7 (vertebra prominens).

The zygapophyseal or facet joints are important pain-generating structures in the spine. Affected facet joints are generally tender to palpation and may be described as ‘boggy’ or ‘puffy’ because of inflammation. The facet joints are generally 1.5 and 2 fingers lateral to the spinous processes and at the level of the interspinous space. Palpation of the facet joints and adjacent articular pillars is usually done using the index and thumb of one hand while the other hand stabilizes the patient’s head (see Fig. 7.4).

Figure 7.4 Palpitation of cervical spine facet joints.

Thoracolumbar spine

Various landmarks from the shoulder girdle are useful in identifying the approximate level of spinous processes in the upper and middle thoracic spine. When patients are in the prone lying position they tend to elevate their shoulders. Therefore, gently pull down their shoulders to the normal standing or sitting position.

In this position, the acromioclavicular (AC) joint of the shoulder is level with the spinous process of T1. For the scapula, the superior angle overlies the second rib while the medial angle or the 'root of spine' of the scapula is at the level of the spinous process of T3 and the inferior angle is level with the spinous process of either T7 or T8. Generally, the scapula overlies ribs 2–7 or 2–8 (see Fig. 7.5).

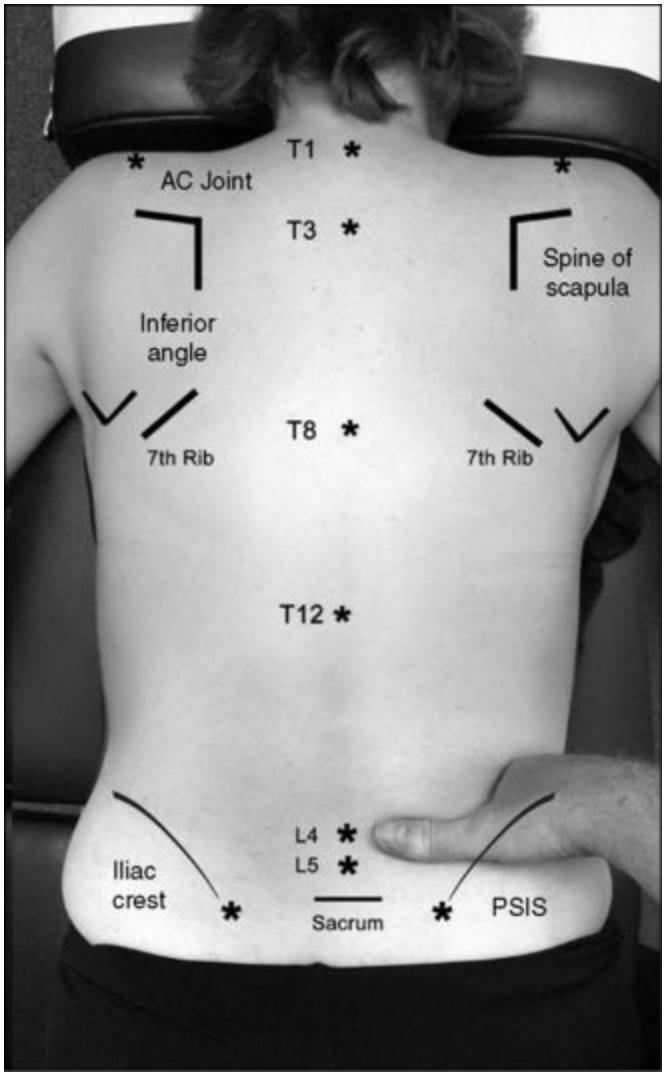

Figure 7.5 Anatomical relationship of bony landmarks to spinal levels. AC, acromioclavicular; PSIS, posterior superior iliac spine.

The pelvic girdle also provides important landmarks for identifying the position and level of various spinal segments (see Fig. 7.5). The posterior superior iliac spine is very subcutaneous, lying

just beneath the 'dimples of Venus'. The posterior superior iliac spine (PSIS), as well as the posterior inferior iliac spine, identify the longitudinal extent of the sacroiliac joint with the sacral tubercle of S2 approximating the joint's midpoint.

The top of the iliac crest is useful in identifying the approximate location of the spinous process of L4, although variation exists and it may also be level with the L4–L5 space or the L5 vertebral body. Palpation of the lumbosacral junction inferiorly should help to clarify any variation of this landmark (see Fig. 7.6).

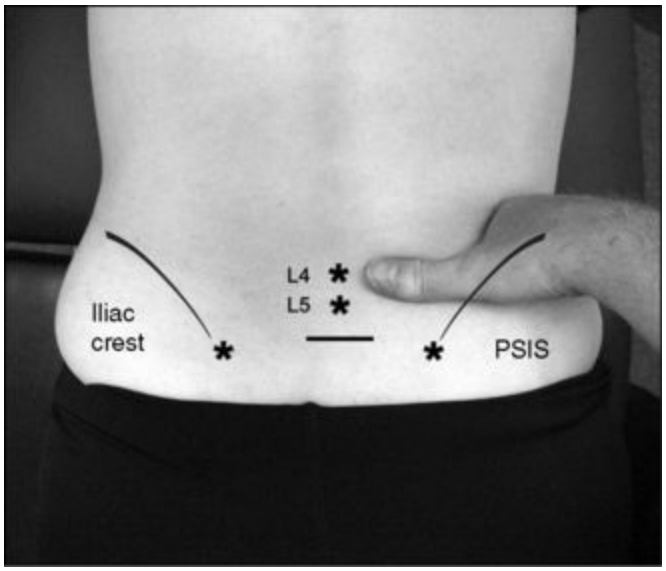

Figure 7.6 Location of L4 spinal level in prone position. PSIS, posterior superior iliac spine.

This procedure may be used in both the prone and side-lying positions. With the palm open and fingers fully extended, thumb abducted, simply roll the index finger over the skin from the inferior to superior position. The thumb will point towards the midline and correspond to a particular spinal level, typically L4 (see Fig. 7.6). Figure 7.7 illustrates the side-lying position.

Figure 7.7 Location of L4 spinal level in side-lying position.

Additionally, halfway between the inferior angle of the scapula and the superior aspect of the iliac crest is useful in identifying the approximate level of T12–L1 (see Fig. 7.5). Palpation of the spinous processes of T12 and L1 usually identifies this level because of the distinct differences between the shapes of the two spinous processes.

Some important spinal relationships

In addition to the surface, non-spinal landmarks, manual therapists should be aware of useful relationships between the different vertebral structures.

The thoracic spine transverse processes are important structures to locate as their short levers are used in spinal mobilization or manipulative therapy. From the upper to lower thoracic spine, the relationship between spinous to transverse processes change due to the change in shape and direction of the spinous processes. For T1–T4, the corresponding transverse process is located at the level of one spinous process above. For T5–T8, the corresponding transverse process is located approximately two interspinous spaces above while the transverse processes of T9–T12 again correspond to one spinous process above (see Fig. 7.8).

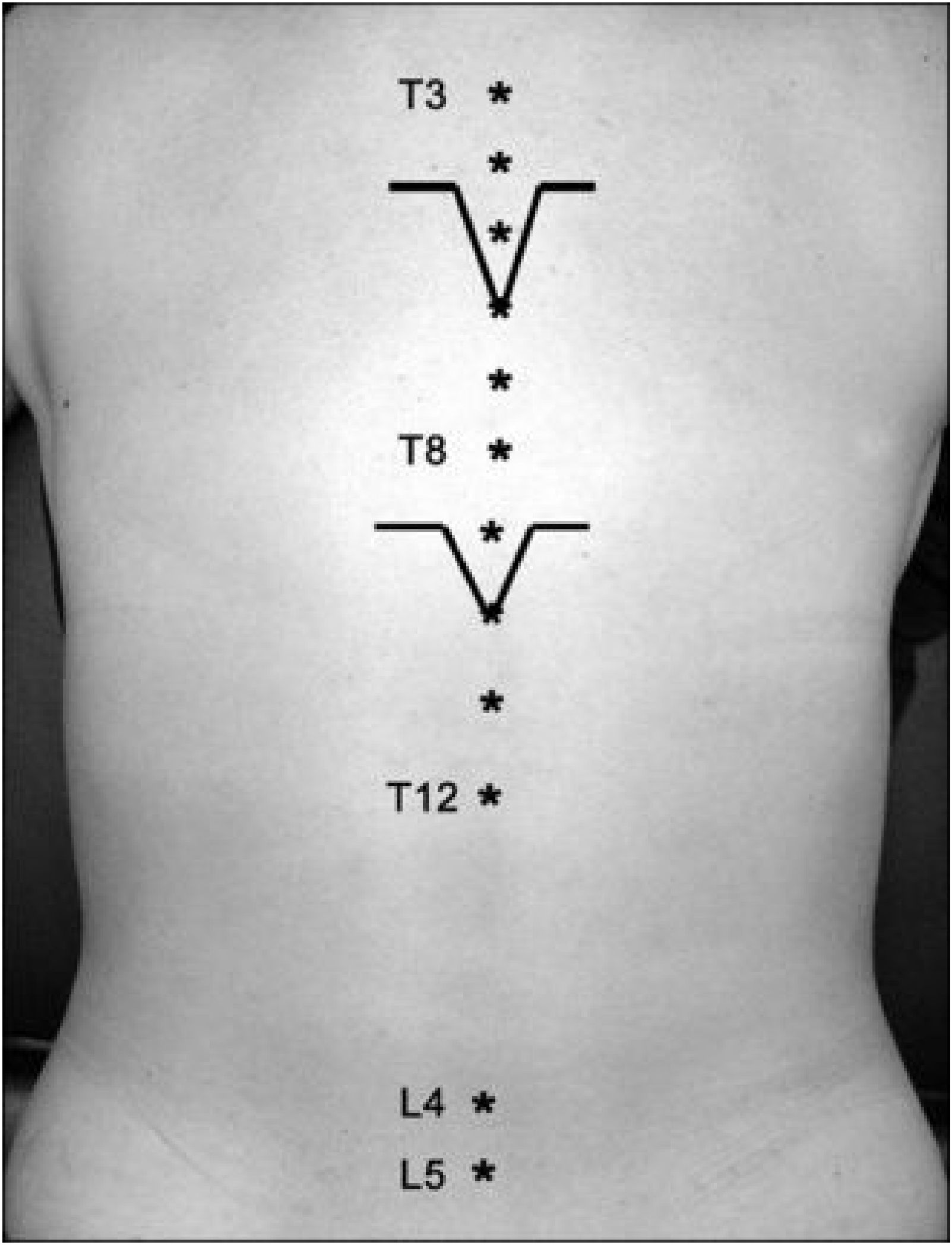
T3
T8
T12
L4
L5

Figure 7.8 Anatomical relationship of transverse to spinous process in the thoracic spine.

In the lumbar spine, specific hand contacts for manipulations are made over the facet joints making their location important. As a rule, the lumbar facet joints are located at the level of the interspinous space of adjacent vertebrae and approximately 1.5 to 2 fingers lateral to the spinous processes. The upper lumbar facet joints are closer to the spinous processes than the lower lumbar vertebrae as the width of the lumbar vertebral segments increases inferiorly.

Figure 7.9 illustrates the approximate location of the left facet joint of L4–L5 in the right lateral decubitus position. The side-lying position is a common position for lumbar spine manipulations.

Figure 7.9 Location of left L4–L5 facet joint in sidelying position.

Figure 8.1A

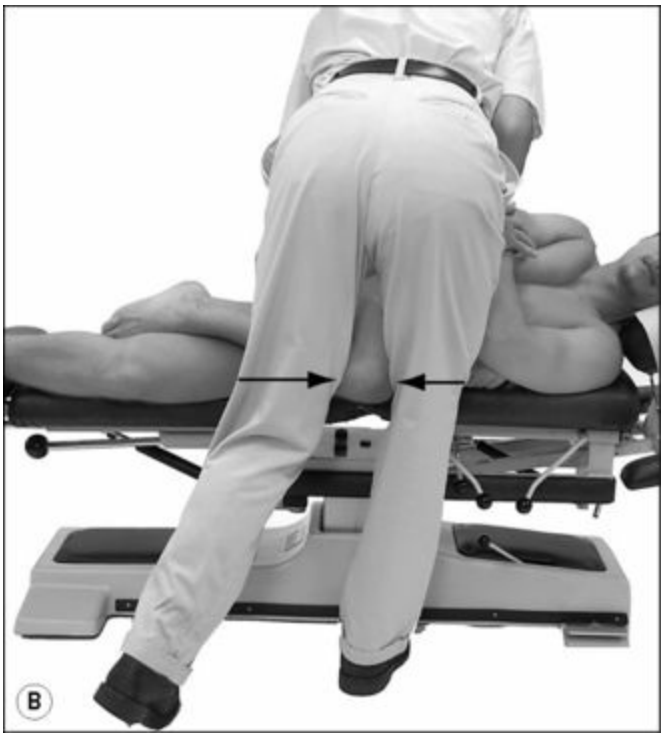

Figure 8.1B

Figure 8.2

Figure 8.3

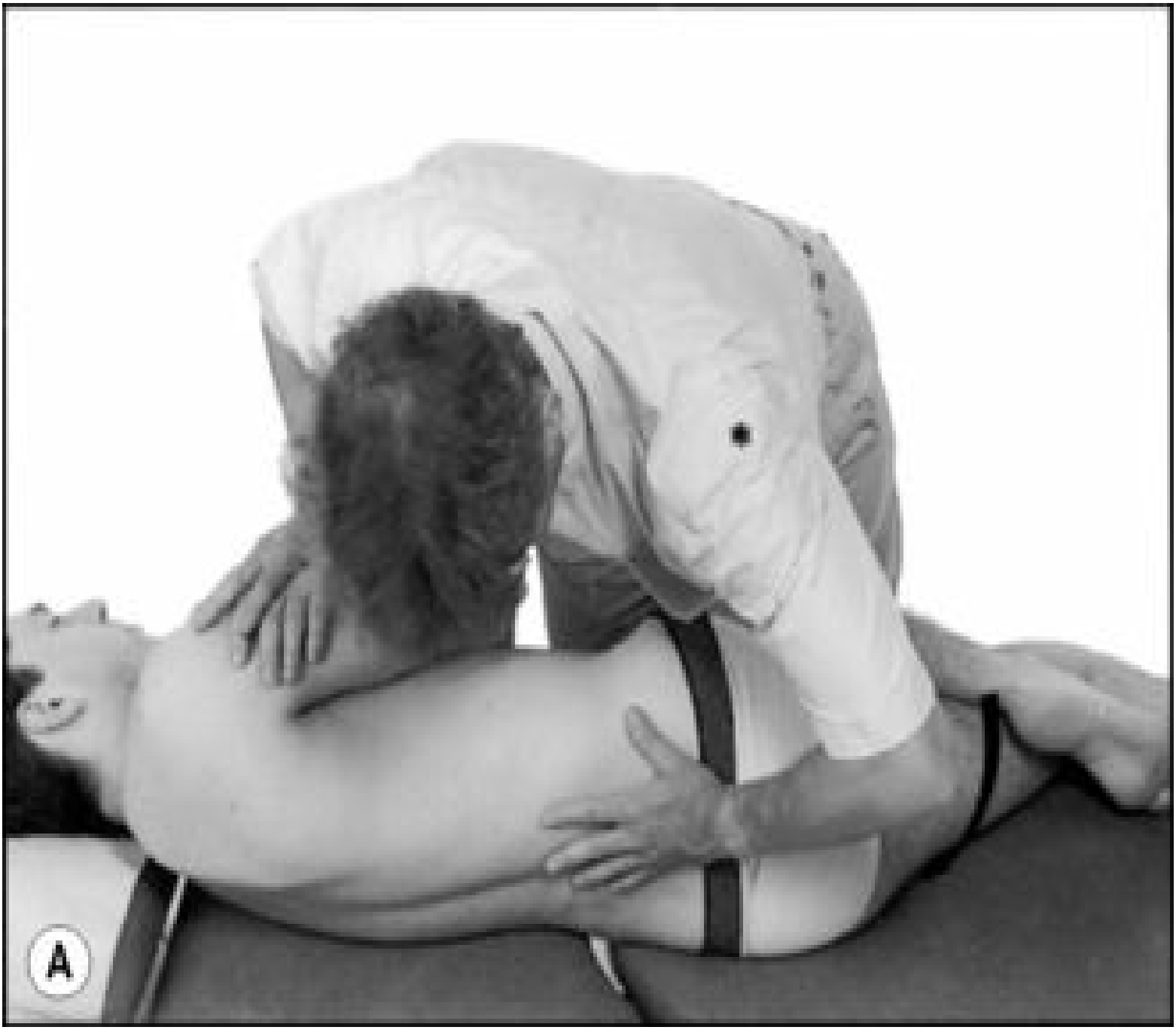

Figure 8.4A

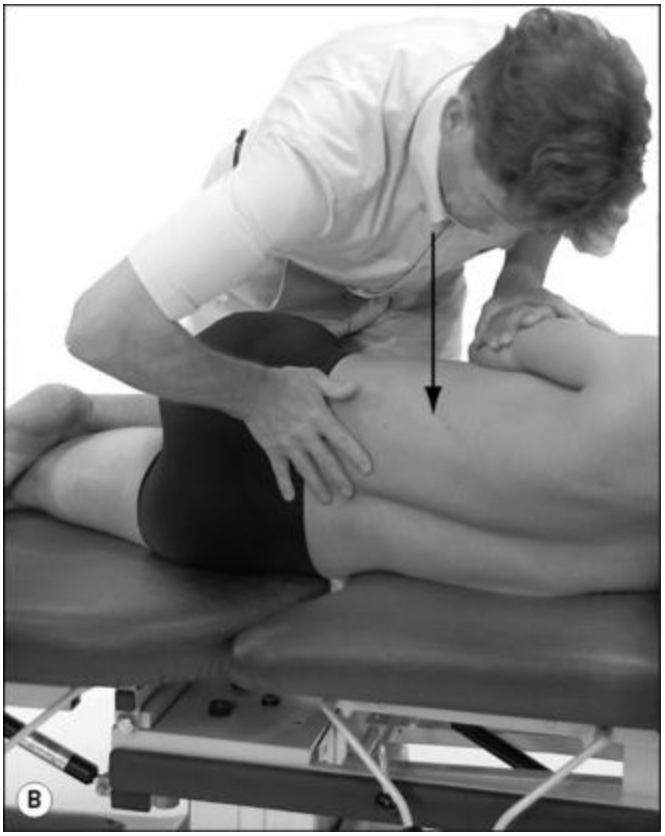

Figure 8.4B

Figure 8.5

Figure 8.6

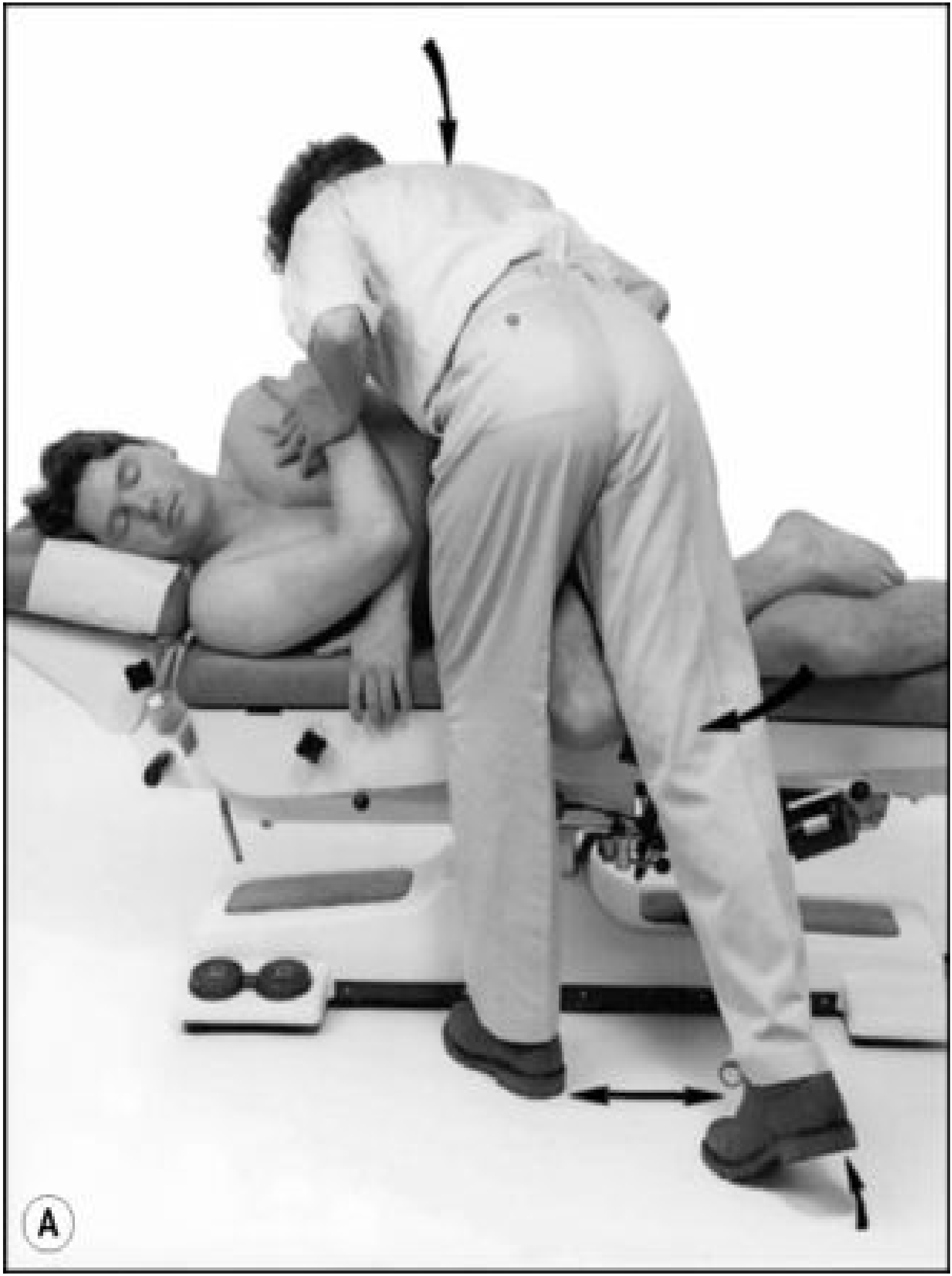
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Figure 8.7A

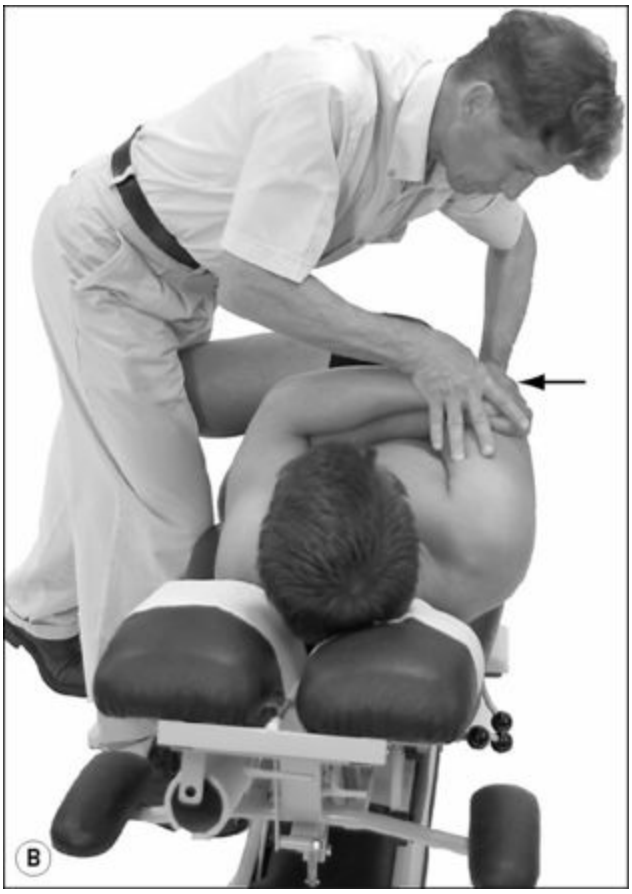
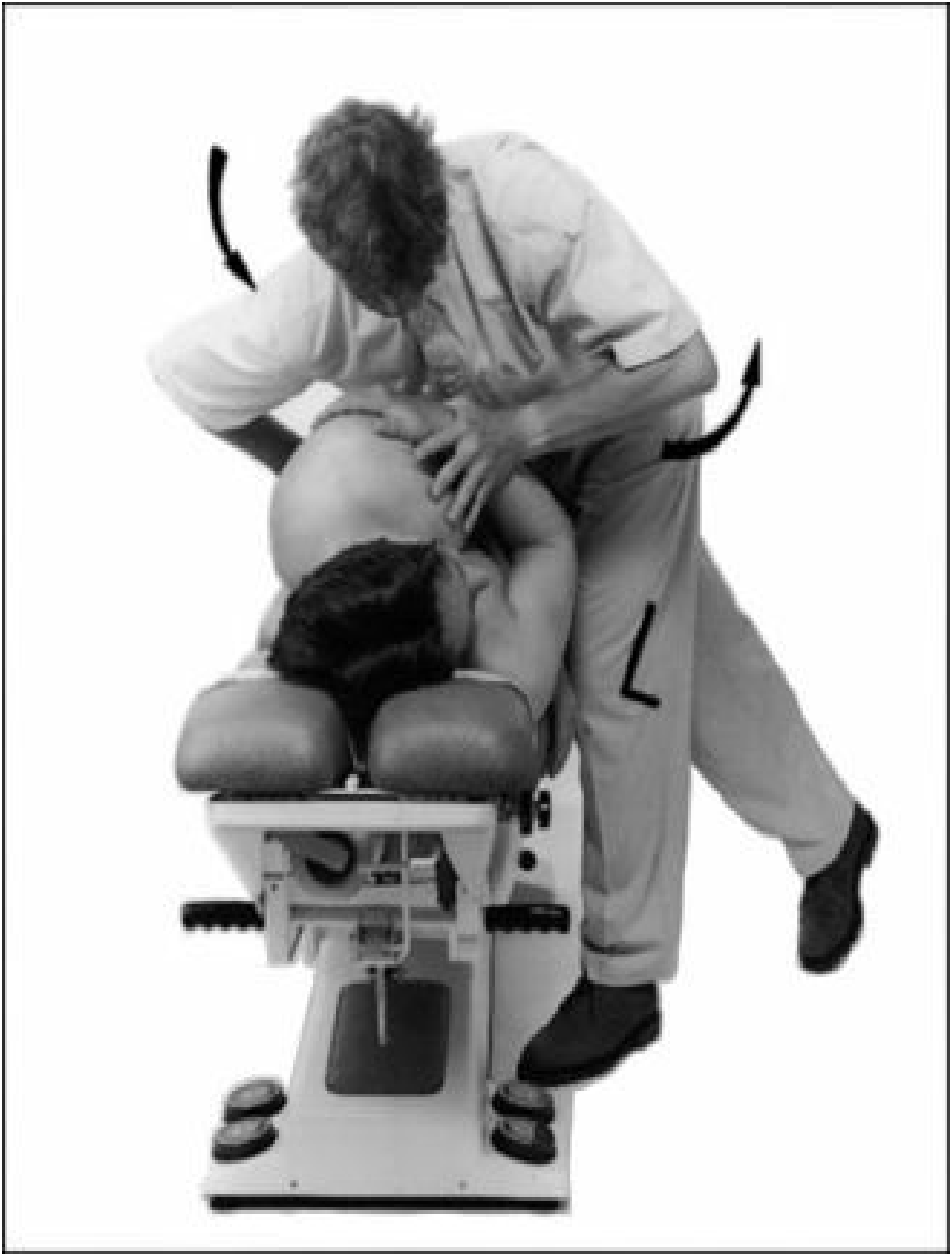


Figure 8.7B



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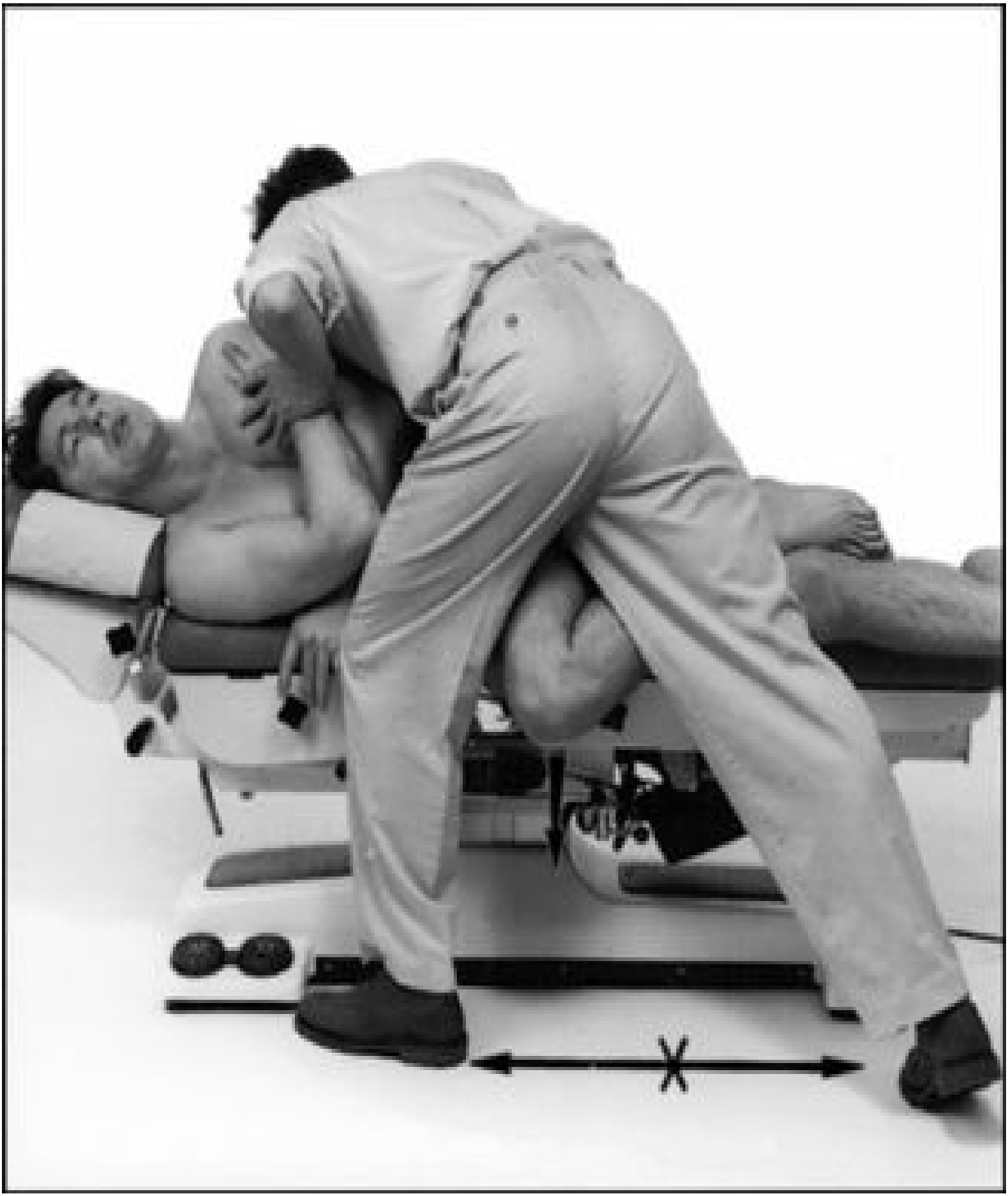

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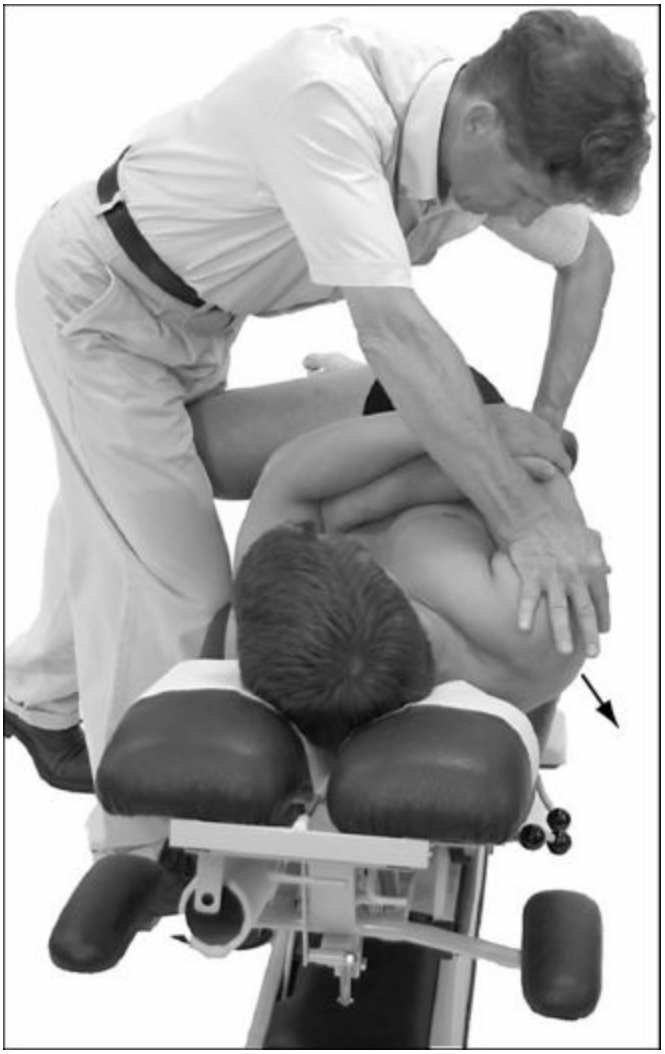

Figure 8.10

Figure 8.11

Figure 8.12

A

Figure 8.13A

B

Figure 8.13B

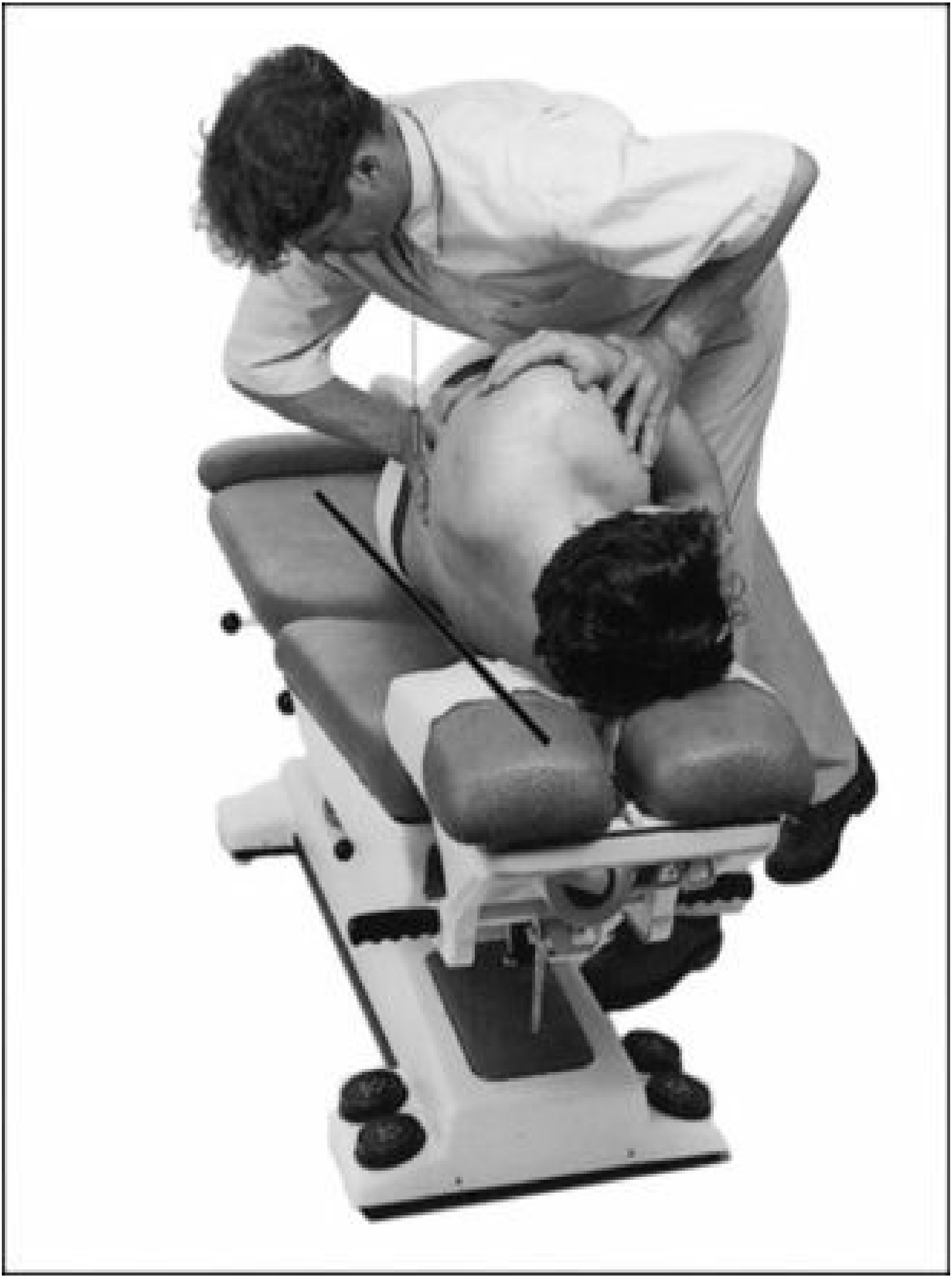

Figure 8.14

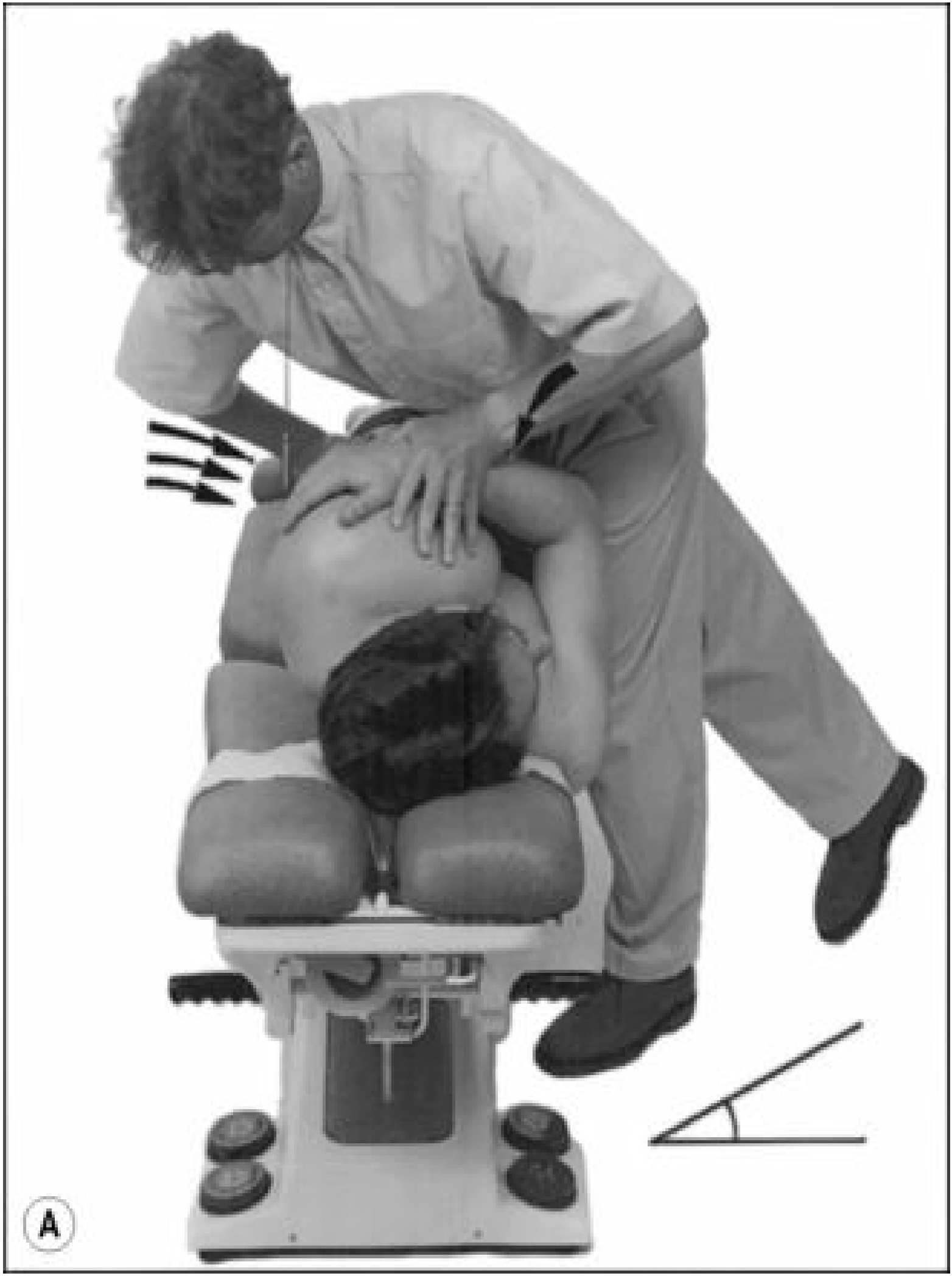
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Figure 8.15A

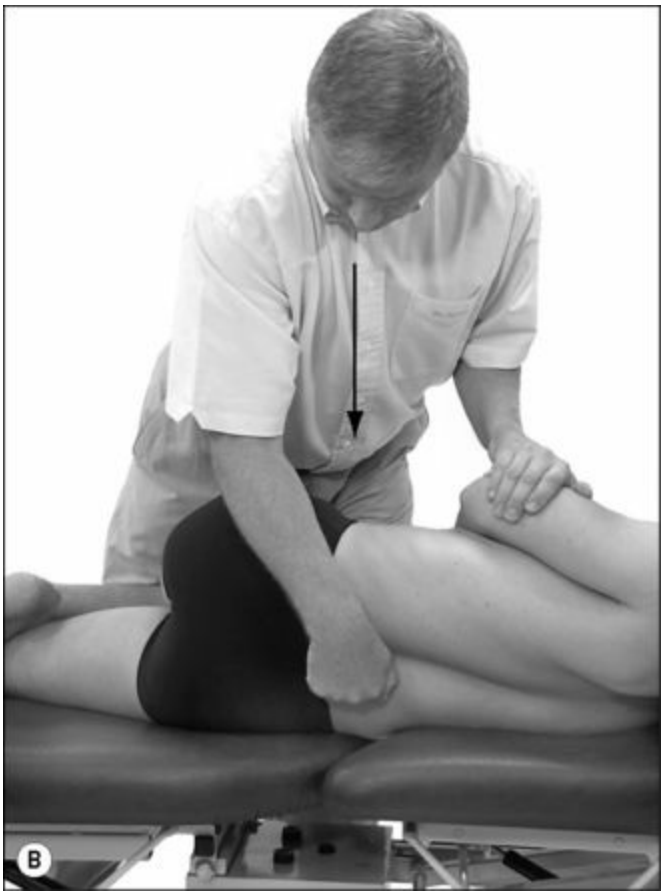


Figure 8.15B

A dynamic manipulative thrust should not be applied at this stage, only mock preloads (mini-midi thrust) to learn to appreciate joint resistance and the tightening of the targeted joint and surrounding tissue. Care must be taken not to stress the tissue over a period of time, which may cause unwanted reactions during practice sessions and erroneous joint movement.

13) There are a few errors to be aware of during this last section.

i) Over-rotating the pelvis forward and too quickly causes excessive twist in the thoracic spine and thoracocolumbar region and loss of control of the patient before the manipulative thrust or end-range mobilization procedures. The upper back is pushed too far back and the pelvis too far forward (Fig. 8.16). Also note the tension in the shoulder girdle (*). It is difficult for the patient to relax under this excessive tension. The practitioner is also pushing down on the patient's shoulders to maintain some stability.

ii) The most common mistake encountered occurs during transferring of body weight. The tendency is to push up and then straight down instead of forward and then down over the patient to centre the body weight. In this instance the body weight is over the front of the table (Fig. 8.17). This movement brings the patient too far forward on the table and the clinician's suprasternal notch and weight are not centred over the sacroiliac joint. Further movement will compromise the patient's stability on the table and the patient may automatically roll

uncontrollably forward, resulting in emergency evasive action by the clinician/student to keep the patient on the table. Note the stress on the contact arm (*). Application of a mobilization or manipulative force at this point will only bring the patient precariously close to the edge of the table.

iii) Students have a tendency to focus on the PSIS contact point. Unnecessary muscular forces may cause fatigue and possible patient distress if the contact is also painful. Patients will typically resist this type of approach, which decreases the efficiency and smooth performance of the skill. This is not good technique.

Figure 8.16

Figure 8.17

One of the most common errors at this stage is the excessive use of muscular force and overall workload by the student while attempting to develop tension at the specific sacroiliac joint via the PSIS contact. It is a natural tendency to work harder than is necessary. The awkward movements trying to control patient motion often result in an increase in pressure over the patient. The firmer the contact the better the manipulative technique is not valid. The procedure revolves around positioning and patient comfort. Keep things light at all times with no excessive movements. The important considerations for students at this stage are:

- minimize effort
- minimize pressure over the patient
- minimize positional movements, including pivot shift and weight transfer
- do not rush the preload
- remember leverage system and transitional point (joint localization).

Up to this point there should be no excessive tension across the lumbosacral joint complex. The transition point for maximum biomechanical effect must be directed towards the sacroiliac joint. This is the essence of the skill and will be the basis for a number of other procedures presented in this and other chapters dealing specifically with side-posture skills. The skills have been introduced to position the patient and isolate the joint movement effectively using both long and short levers to their maximum efficiency.

The next series of steps will bring the sequence to the point of maximum joint tension or *preload appreciation,* concentrating on incorporating the short levers. The ability to appreciate these subtle movements and joint tension components takes time and development through years of practice and application of accepted scientific models and physiological behaviour.

Move *slowly and methodically.* The movement sequence should not be hurried. There is a natural tendency to rush the process and attempt an adjustive thrust. This may reinforce unwanted habits which are sometimes difficult to modify in the long term.

At this point:

- the patient should be relaxed, comfortable and stable in the side posture
- the practitioner should be positioned with body weight forward
- the centre of gravity should be close vertically to the sacroiliac joint (suprasternal notch)
- the contact shoulder, arm and hand are relaxed with **no** compressive force placed over the PSIS
- there should be no muscular tension in any part of the practitioner's body apart from the front leg.

It is recommended that students must not proceed past this point until the sequence of skills thus

far is efficiently performed. The movements of both the practitioner and the patient are very small in relation to the whole manipulative skill. This is the essence of control – limit the amount of movement and control the patient.

The following steps of this manipulative skill will function to introduce the short levers to develop joint tension and apply preload prior to the adjustive thrust. During this final step, it is recommended that the patient's breathing pattern be incorporated as part of the overall skill sequence. The patient will be requested to breathe in and then slowly out as tension and joint preload are applied across the sacroiliac joint and surrounding soft tissues. This action may help to focus the patient's attention and assist overall relaxation. It is recommended that the practitioner also coordinate his/her breathing pattern with that of the patient, which may help to focus the effort required for the eventual dynamic thrust. This breathing pattern may quite simply distract the patient's attention from the impending manipulation by reducing muscular tension, maintaining trunk flexibility and patient control.

Tension in the contact arm/shoulder girdle should take place only during the final stages of the manipulative skill towards the end of the breathing cycle. This tension should be applied gradually. All aspects of the sequence are equally important.

Ischial tuberosity (IT) contact

This anatomical landmark contact point is commonly used for adjustments/manipulations for *sacroiliac joint flare dysfunction.* This adjustive procedure is driven by modified standing and prone sacroiliac joint palpation and provocation tests (Byfield 2002).

This manipulative procedure involves *the same sequential steps* previously described for the PSIS contact above and side posture skills in Chapter 5 up to where the contact hand is applied to the IT anatomical landmark. It should also be pointed out that the IT represents a very large and broad contact that has a tendency to distribute the manipulative forces over a wider area, (Figs 8.18 - 18.22). With this in mind, the muscular power required for this set of skills may seem to exceed the student's capabilities. Keep this in perspective and concentrate on the slow movement and gradually develop the necessary strength to perform an efficient overall manipulative procedure. The majority of the muscular power is used only at the end of the sequence, just as the preload is applied, and during the manipulative thrust itself. On a clinical note, this particular manipulation is not recommended during the treatment of suspected lumbar intervertebral disc herniation (Cassidy et al. 1993). This is a clinical observation but recent evidence would suggest that this adjustive/manipulative procedure tends to cause flexion of the lumbar spine or flattening of the lordosis which stresses the posterior passive structures, thus jeopardizing spinal stability at the end range of full flexion. This could potentially place the disc under excessive compressive loads, contraindicating this particular procedure.

1) To develop tension in the surrounding soft tissues, three simultaneous actions are required.

i) The contact hand is pulled caudad and around the IT drawing tissue and at the same time the

contact arm is brought in toward the body in a slow controlled scooping movement (arm is extended and adducted across the chest wall) (Fig. 8.18). This causes dorsiflexion (extension) of the wrist during this movement (*).

ii) The student/clinician assists the innominate flexion by pivoting and moving the hips cephalad with the knees bent and feet planted hip distance apart at the same time, thereby keeping the torso in the same position, which is now positioned behind the contact point. There is only a minimal pivot shift into a semi-fencer stance (not 45° to table) (Fig. 8.19). If additional tension/leverage is required, the patient's leg is allowed to drop towards the floor marginally via the thigh sandwich control.

iii) As the hips pivot forward, the practitioner's torso becomes positioned closer and behind the contact hand and arm for additional support, shortening the levers (Fig. 8.20). The contact arm is positioned close to the body to reduce any torsional effects. This is a very large and stable structure that cannot be moved by the arm only. Effective use of the shoulder girdle and the body weight will minimize any excessive mechanical effects. The torsion in the lumbar region is minimal (*). Appreciation of both joint and soft tissue tension and the muscular force required for joint preload should be introduced gradually.

2) The indifferent hand (right) adds slight traction and downward pressure in a cephalad direction. The indifferent arm is kept close to the practitioner's body (Fig. 8.20).

3) An alternative forearm contact may be used and is just as effective. The flexor region of the contact forearm contacts the IT in the same way as the pisiform/hypothenar contact (Fig. 8.21). The arm is pulled toward the body in a similar scooping action to cause flexion of the innominate. The use of this contact does not subject the shoulder girdle to the same physical demands. Note the lack of torsion in the lumbar spine (*). The arm is adducted towards the body to assist the appropriate tension.

4) There is one major error to be aware of while learning this particular set of manipulative skills combined with those already presented in the section on PSIS contact (above).

Figure 8.18

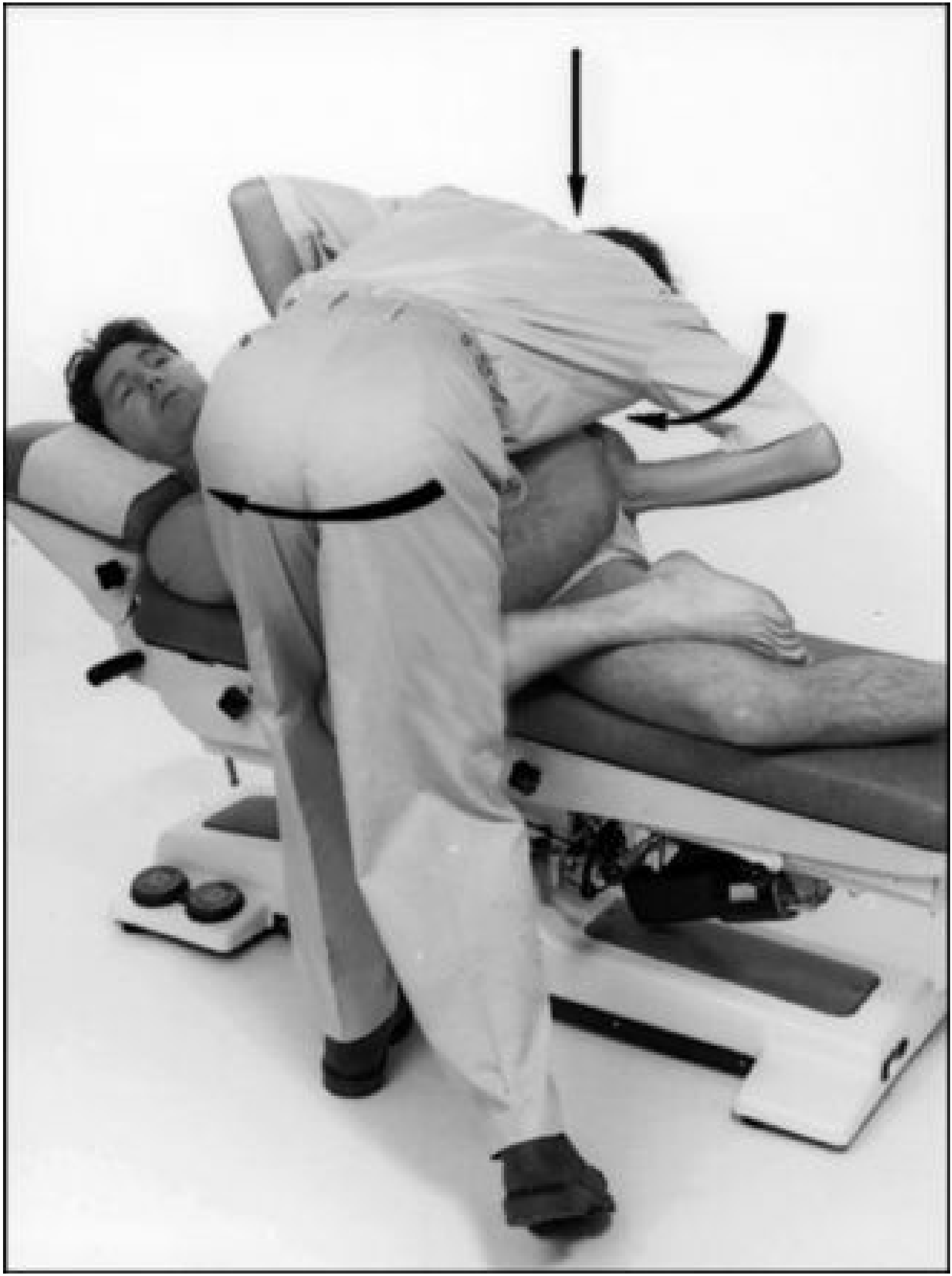


Figure 8.19

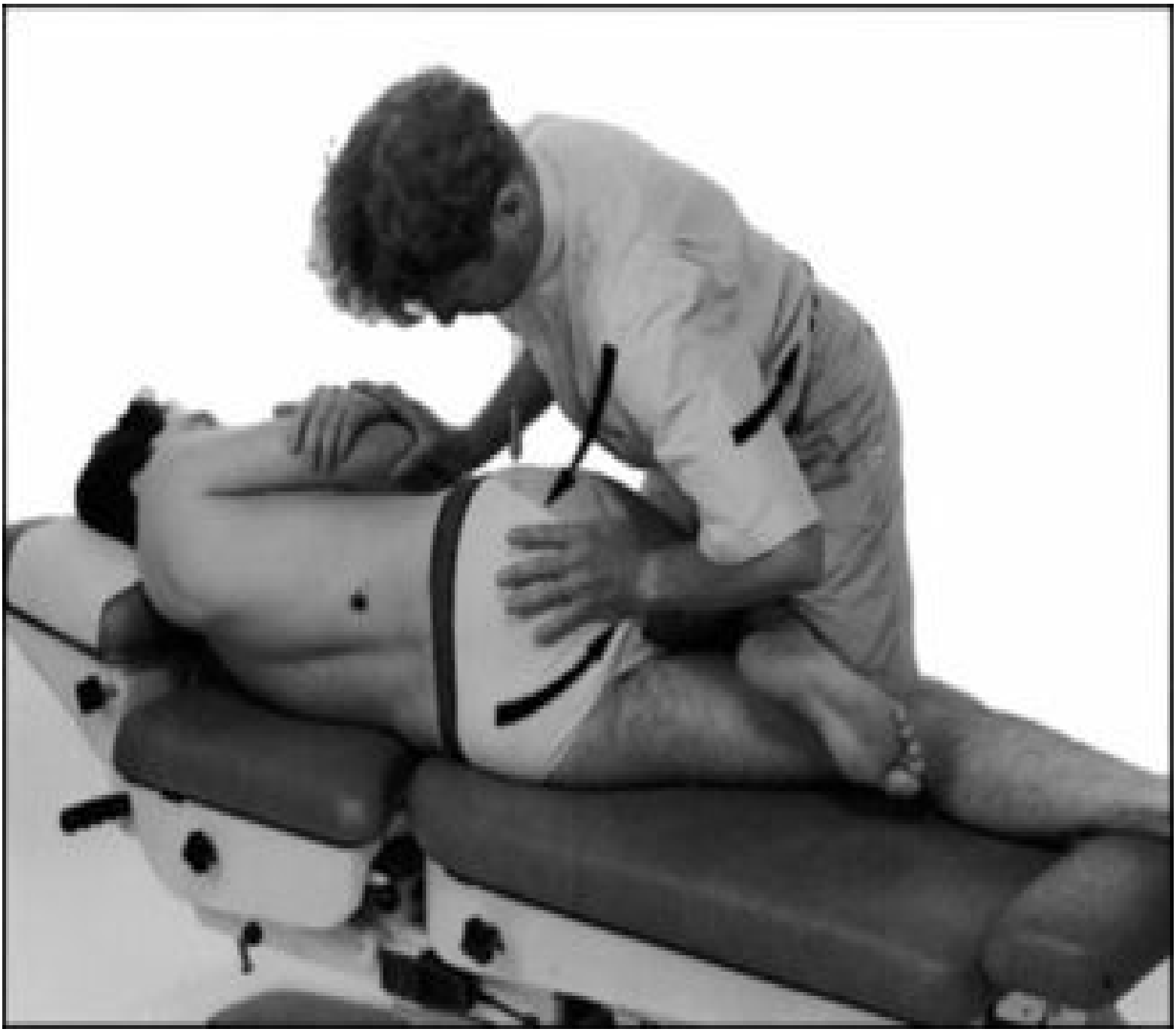


Figure 8.20

Figure 8.21

The practitioner's torso drifts ahead of the contact point, increasing the mechanical stress on the arm and shoulder (Fig. 8.22). This places the centre of gravity at a disadvantage. The whole body moves forward during the hip pivot action in the cephalad direction, causing unnecessary torque of the student/clinician's shoulder. As a result of the lack of an efficient scooping action of the contact arm and hand to assist flexion of the innominate, the student attempts to push the IT cephalad against considerable resistance (Fig. 8.22).

Figure 8.22

Sacral base (SB) contact

This anatomical landmark contact point is often used for adjustments/manipulations to correct sacroiliac dysfunction. The sacrum represents a smaller anatomical landmark and lever compared to the larger PSIS and IT, which may provide additional biomechanical advantage to both the patient and the manipulator. Nonetheless, a substantial amount of control is necessary to manoeuvre the small levers prior to the dynamic thrust. The biomechanical effects upon the joint should be almost identical. This particular contact point may have more direct biomechanical effect upon the lumbosacral joint merely from its proximity and anatomical location.

This particular manipulative skill is almost self-explanatory. The anatomical contact point is on the sacral base just superior and lateral to the second sacral tubercle, (Figs. 8.23 - 8.26). The

sequence of skills is exactly the same as that described and practised for the PSIS contact, except for some minor modifications related to the contact hand and arm and the position of the practitioner. The angle of the sacroiliac joint to the vertical or *y*-axis will have an influence on the direction of the preload and manipulative thrust. The joint is angled laterally from the vertical line. This will be described in the next sequence of adjustive skills. The side posture positional skills have previously been described. Position the patient accordingly.

1) The hypothenar or thenar contact points are used for the sacral base/sacroiliac joint contacts. The hypothenar is the easiest adaptation already described above for the PSIS; however, the thenar provides an excellent contact point for this configuration. Everything is the same for this base contact, already described for the PSIS sacroiliac procedure, except that after the tissue has been drawn, the contact hand is placed just lateral to the first sacral segment or just superior and medial to the PSIS on the base of the sacrum (Fig. 8.23). Then proceed with the other steps as described above. Remember, the bridged hand posture is essential. Note the symmetry in the shoulder girdle, the position of the body weight over the contact point and the lack of torque in the shoulder. The elbow has to drop slightly to accommodate the angulation of the sacroiliac joint.
2) The thenar eminence contact is slightly more difficult to perform as the wrist is pronated, which may cause some torque at the shoulder joint (*) (Fig. 8.24). Note the symmetry of the shoulders. The practitioner slowly rotates the pelvis forward as the body weight drops to develop preload prior to the dynamic body drop thrust or mobilization procedure. Note the angle of the contact arm accommodating the specific anatomical line of the sacroiliac joint.
3) As a result of the movement of the arm to position the thenar contact, the shoulder has to rotate forward. To reduce this effect upon the shoulder girdle structures the practitioner's torso has to move their centre of gravity cephalad (Fig. 8.25). This is not the most advantageous posture for the optimal use of the practitioner's body weight and the efficiency of the overall manipulative skill. The thenar eminence offers advantages in terms of comfort and ease of localization. Contacting the sacral base on the side in contact with the table (contralateral joint/lesion down) offers stability for the patient and may accommodate symptoms. During this procedure the arm is angled toward the table to come in line with the sacroiliac joint to improve the efficiency of the procedure either as a manipulative thrust or mobilization (Fig. 8.25).
4) As described previously, there are similar errors to be aware of while learning this set of manipulative skills.

Figure 8.23

Figure 8.24

Figure 8.25

The most common one encountered for both the hypothenar/pisiform and thenar contacts is the excess torque of the shoulder when the hand contact is made (Fig. 8.26). The shift of the body weight forward reduces the efficiency of the manipulative response. Care must also be taken to accommodate the angle of the sacroiliac joint for both lesion up and lesion down skills.

Figure 8.26

Figure 9.1

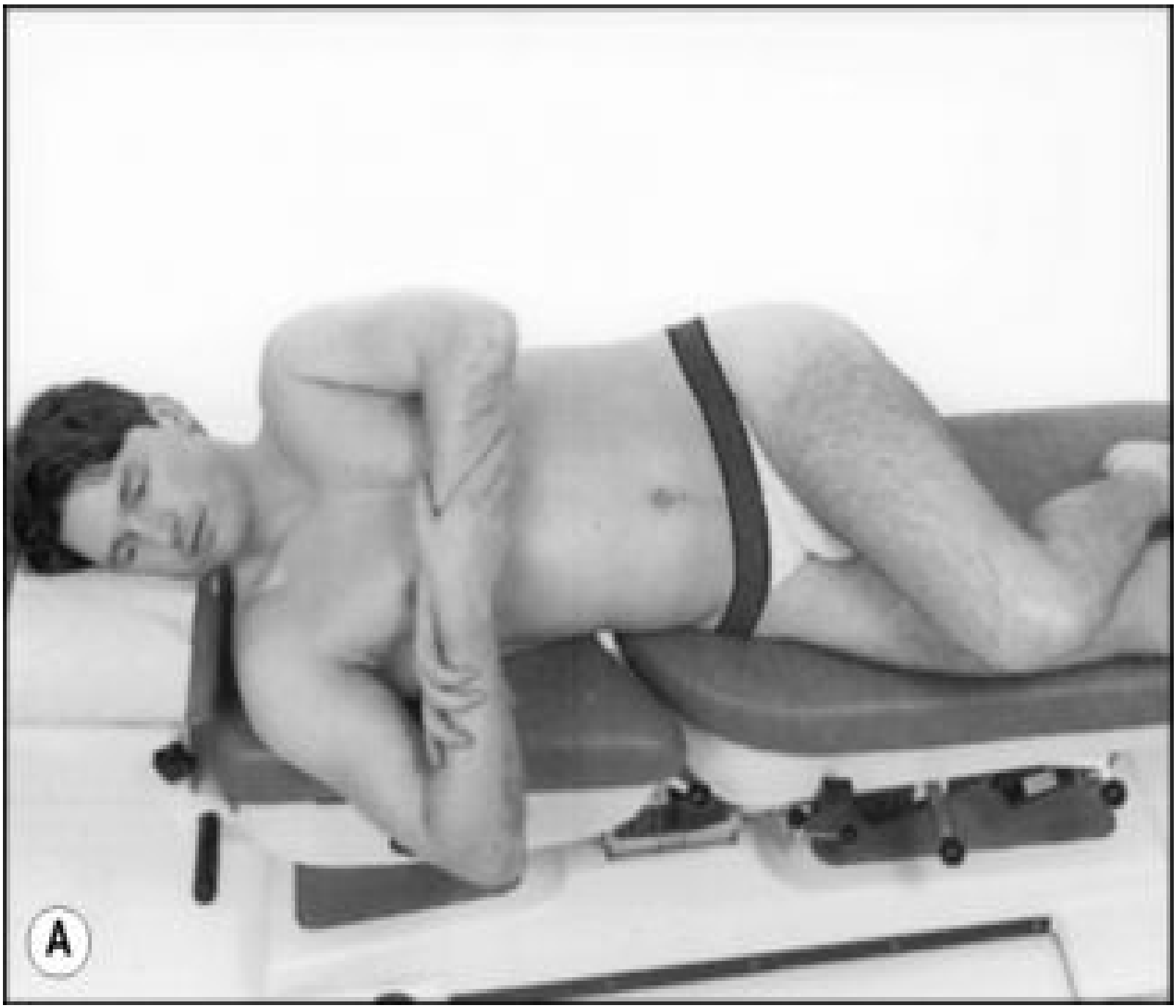


Figure 9.2A

Figure 9.2B

Figure 9.3

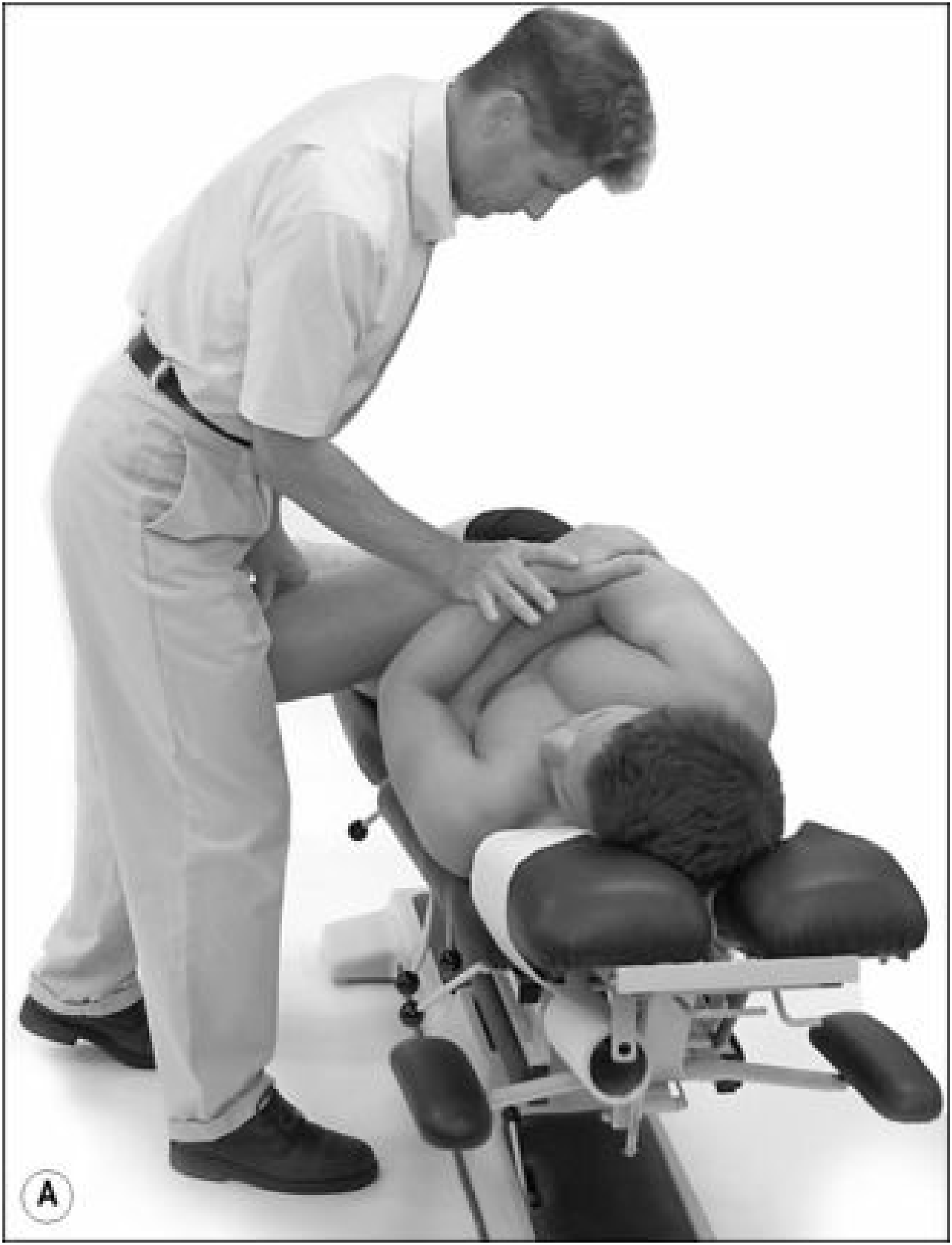

A

Figure 9.4A

Figure 9.4B

Figure 9.5

Figure 9.6

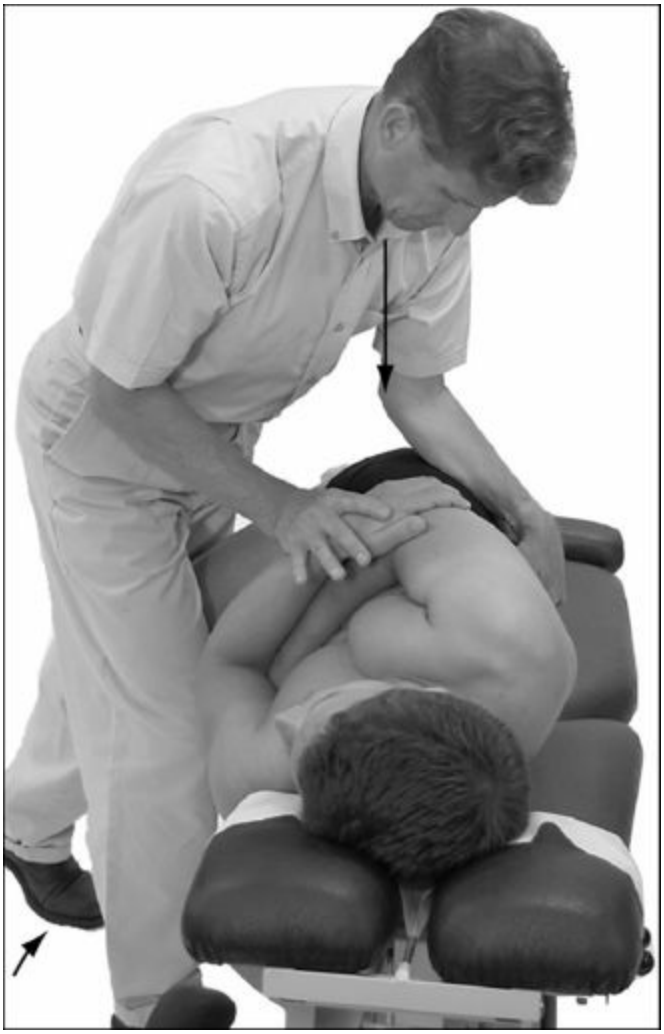


Figure 9.7

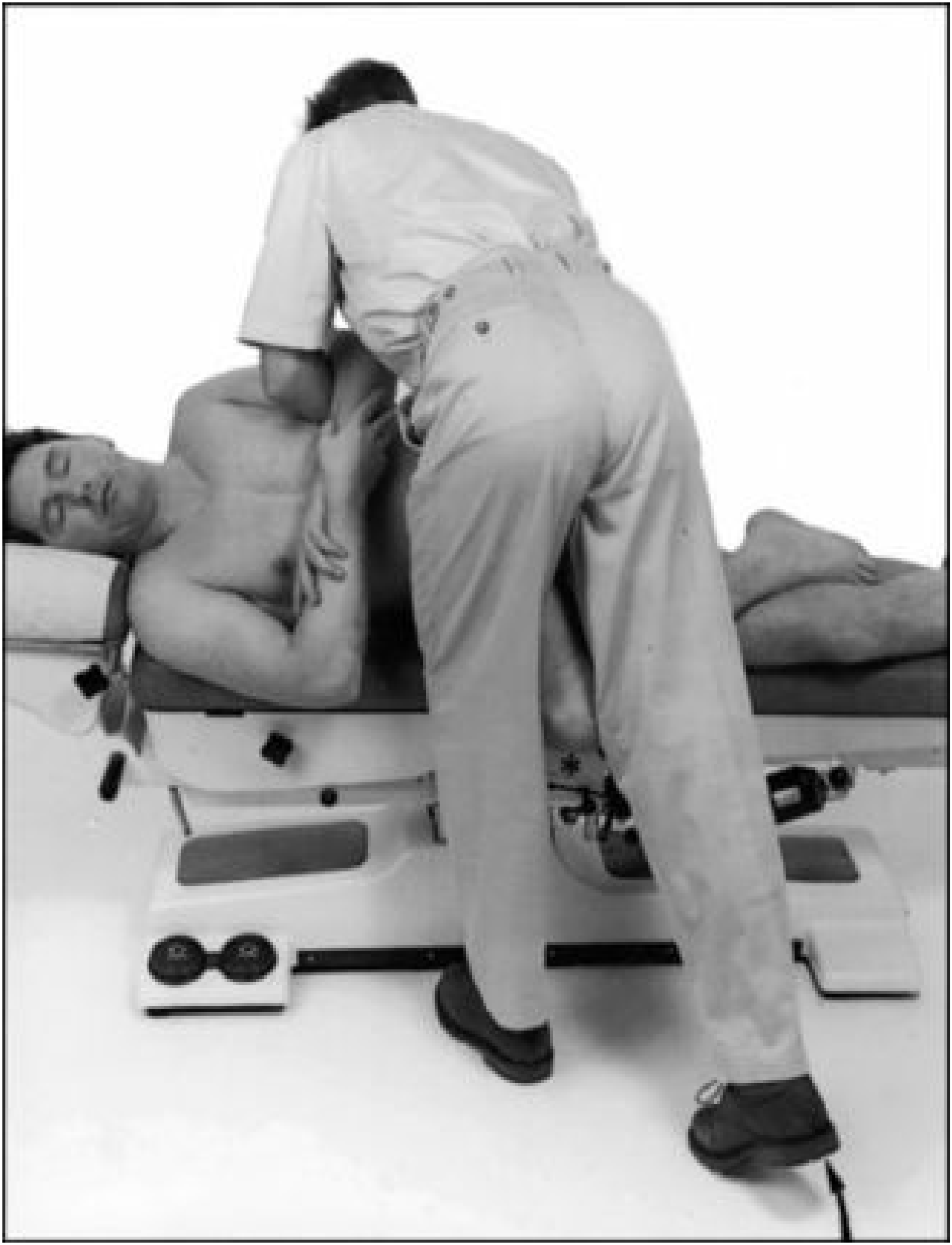


Figure 9.8

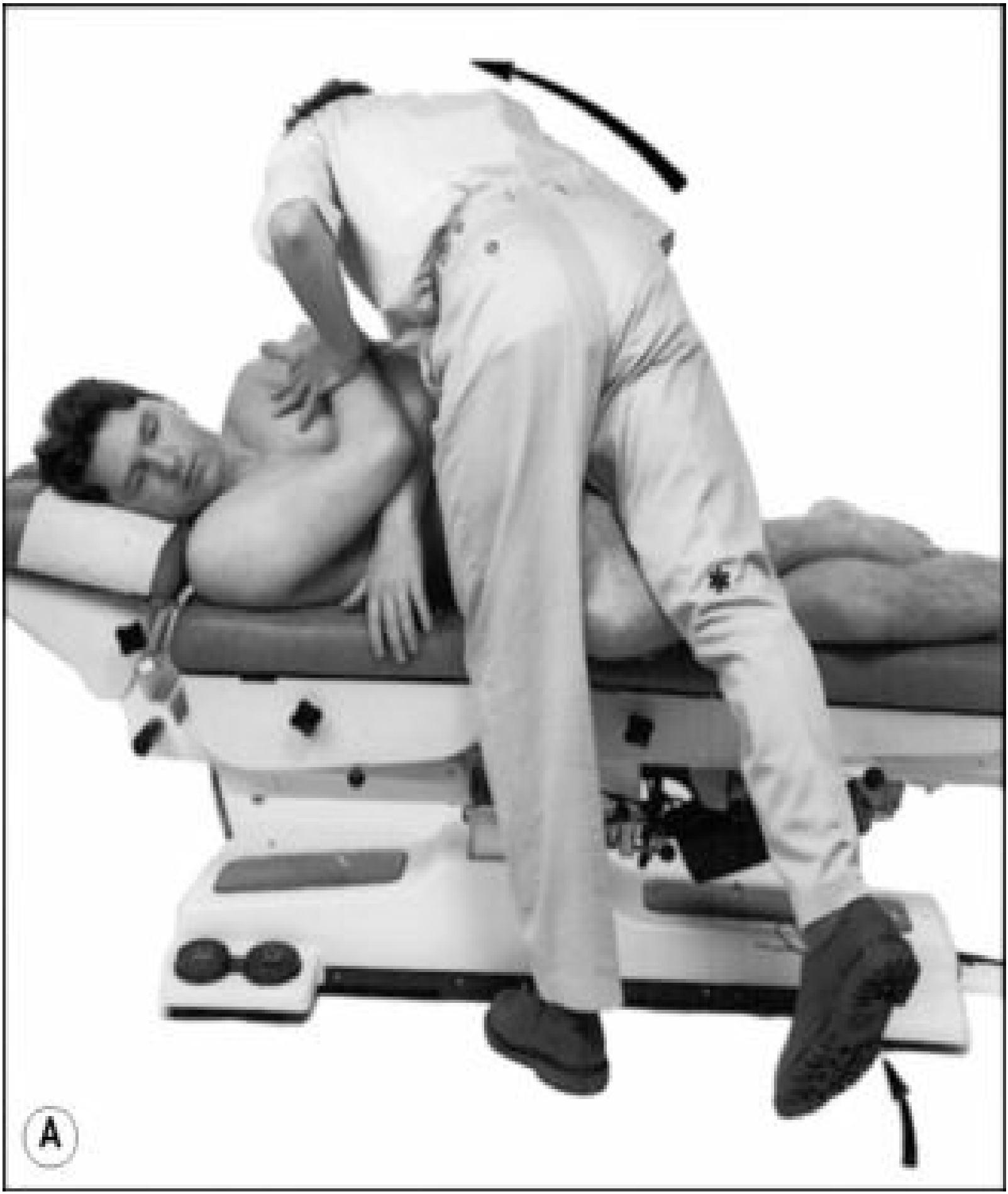


Figure 9.9A

Figure 9.9B

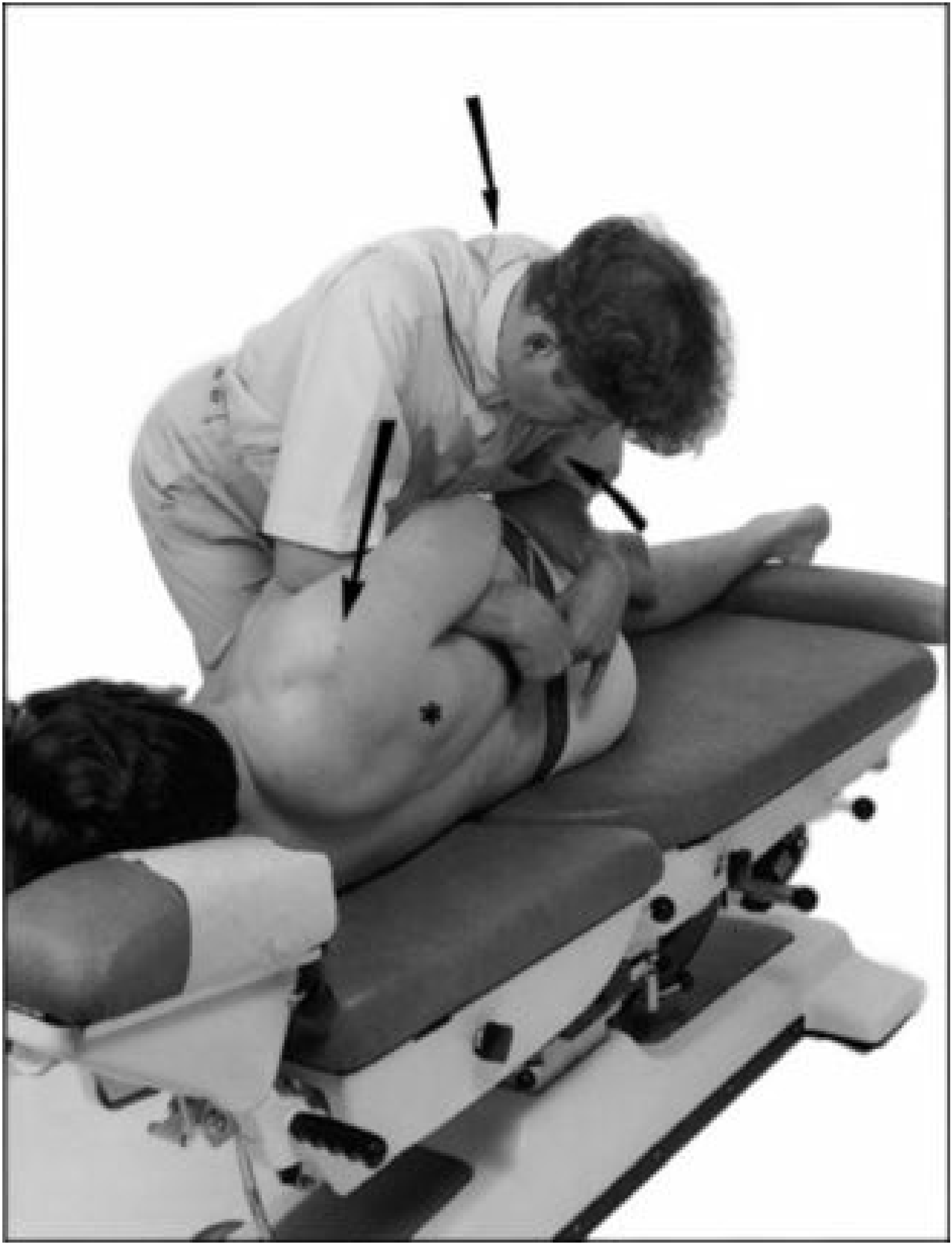


Figure 9.11A

Figure 9.11B

Figure 9.12

1) Place the patient in the side posture as described previously (Chapter 5) with the patient's arms folded with the hand placed on the anterior deltoid area and no torso rotation (Fig. 9.1). An alternative arm configuration can be incorporated at this point and learned by the student which includes bringing the arms lower and closer to the practitioner to reduce leverage (Fig. 9.2A). The practitioner is in the starting posture perpendicular to the patient with hip flexed to 90° and parallel to the table. The practitioner's cephalad hand supports the patient's upper body and the caudad arm is resting on the lateral pelvic crest region just above the greater trochanter. The patient's pelvis should be at right angles to the table or just slightly supinated.
2) The L3/L4 intersegmental location and isolation is secured as described in Figures 9.1 and 9.2A except that the interspinous space is palpated with the fingers of the caudad hand only (Fig. 9.11A). Hip flexion is secured once tension and separation in the interspinous soft tissue of L3/L4 is perceived (Fig. 9.11B). The practitioner is positioned in a ski stance at this stage with the patient's thigh secured in a thigh sandwich.
3) A reinforced fingertip goose-neck hand posture is formed with the caudad hand. The middle finger is flexed at both the proximal and distal interphalangeal joints in a cup-like fashion and is placed on the contralateral, lateral edge (down side) of the spinous process of L4 providing a hooking action of the fingers. The middle finger of the cephalad hand can be used to pull any excess tissue towards the clinician to make a more secure contact for the reinforced finger. The flexor aspect of the forearm (fleshy part) is simultaneously and very gently placed over the posterior gluteus medius portion of the pelvis just below the region of the pelvic crest and just above the greater trochanter, forming a 90° angle. There should be no downward pressure of the arm on the pelvic musculature or sciatic notch as this can be very painful for a patient already presenting with back and leg pain. The arm and hand are basically placed in position with little or no tension. Monitor patient relaxation and reactions at all times. Prior to the pivot shift and weight transfer, the practitioner should be in a relaxed position with both cephalad and caudad arms and hands in position, with the patient's weight balanced on the table. Note the placement of the cephalad arm close to the practitioner's body (*) to shorten that lever and ensure control of the counter-rotation of the upper body (Fig. 9.12). The patient is in line on the table. There is no downward pressure over the iliac crest soft tissues or spinous process contact.
4) Pivot 45° maintaining patient control and hand contact position. Transfer weight by lifting and flexing the plantar flexors of the back leg (this has been described in Chapter 8 (Fig. 9.13A). During this action the contact arm is rolled slightly forward on the pelvic position, increasing the angle at the wrist to increase the leverage and also ensure that the forearm contact is not placed over the sensitive lateral hip soft tissues (gluteus medius) (Fig. 9.13B).
5) With the weight positioned over the contact hand, the practitioner slowly lowers body weight towards the patient and simultaneously slowly pulls the contact arm back towards the body pulling

the pelvis anterior at the same time, using the thigh sandwich to facilitate this action (Fig. 9.14A). The support arm/hand maintains the upper body in place on the table being careful not to push posterior. This provides the mechanism for counter-rotation to develop the transition point. The main component of counter-rotation and tissue/joint elimination is a direct result of the anterior movement of the patient's pelvis towards the table (Fig. 9.14B). The cephalad hand holds the upper torso down on the table with minimal superior and posterior traction. The purpose of the support hand is to secure the patient on the table and help to stabilize the clinician's weight. The support arm blocks forward movement of the patient. The hand posture is maintained throughout the entire procedure. The patient's leg lever is supported by the thigh sandwich and is slowly brought down towards the table/floor to increase leverage at the transition point (Fig. 9.14C).

6) With the practitioner's weight forward over the front leg and coming down through the patient's leg, the contact arm very slowly continues to pull the pelvis forward by keeping the arm close and tucked into the body. This ensures that all the tissue slack is taken out (end of the passive range of motion near the elastic barrier) and the segments below the L3/L4 are stabilized (Fig. 9.15A). The pelvis continues to roll anterior to increase counter-rotation (Fig. 9.15B). The cephalad arm is also kept in close to the body to make the practitioner more compact during preload and subsequently prior to the delivery of a 'mock' thrust at the end of the passive range of motion. At this point only appreciate the tension. As the weight is coming down on the patient instruct him to breathe out to assist the weight transfer, maintaining appropriate hip flexion, thigh sandwich and leg leverage to assist in developing the transition point. Note the position of the plumbline, indicating the position of the body mass. Compare the subtle movements between Figure 9.14 and Figure 9.15. The hand posture is maintained throughout the entire procedure. There should be no pressure down on the pelvis. The action is purely a pulling one.

7) **There are several common errors to be aware of during the learning of this manipulative procedure.** The errors associated with this manipulative skill are the same as those encountered with the double spinous skills and other side-posture procedures thus far including: (i) over-rotating and twisting the spinal elements at the wrong level; (ii) poor hand skills and goose-neck hand posture; (iii) excessive body weight and compression over the sensitive tissue of the buttock region; and (iv) permitting the patient's leg to drop below the 90° threshold of hip flexion which may compromise segmental specificity.

A

Figure 9.13A

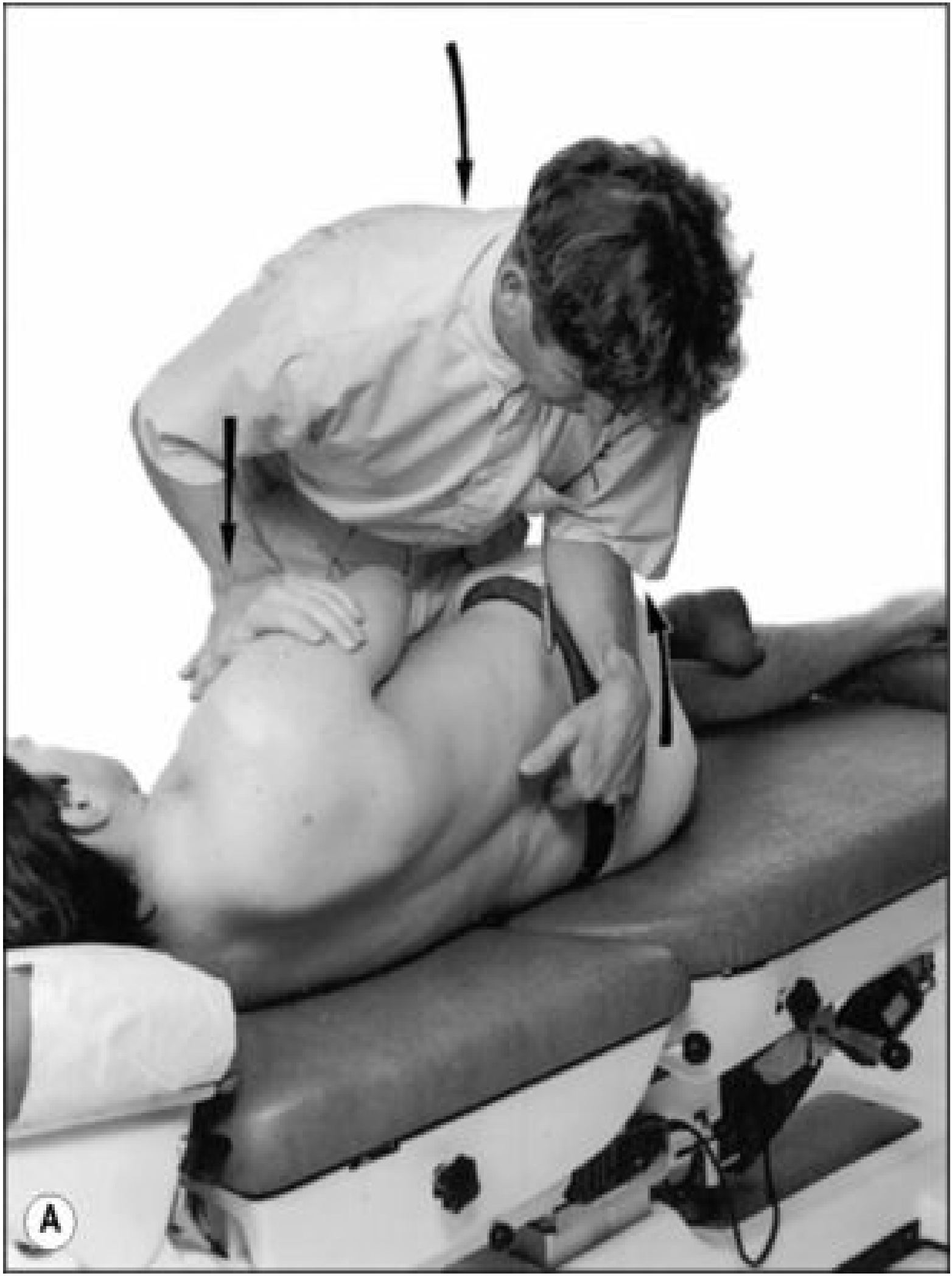

A

Figure 9.14A

B

Figure 9.14B

Figure 9.14C

A

Figure 9.15A

B

Figure 9.15B

Figure 9.16 illustrates several errors listed above including:

i) over-rotating the practitioner's upper back

ii) pushing the patient's upper body too far back excessively twisting the spine

iii) applying downward pressure on the sensitive iliac crest instead of pulling

iv) loss of hand posture on the spinal segment (*).

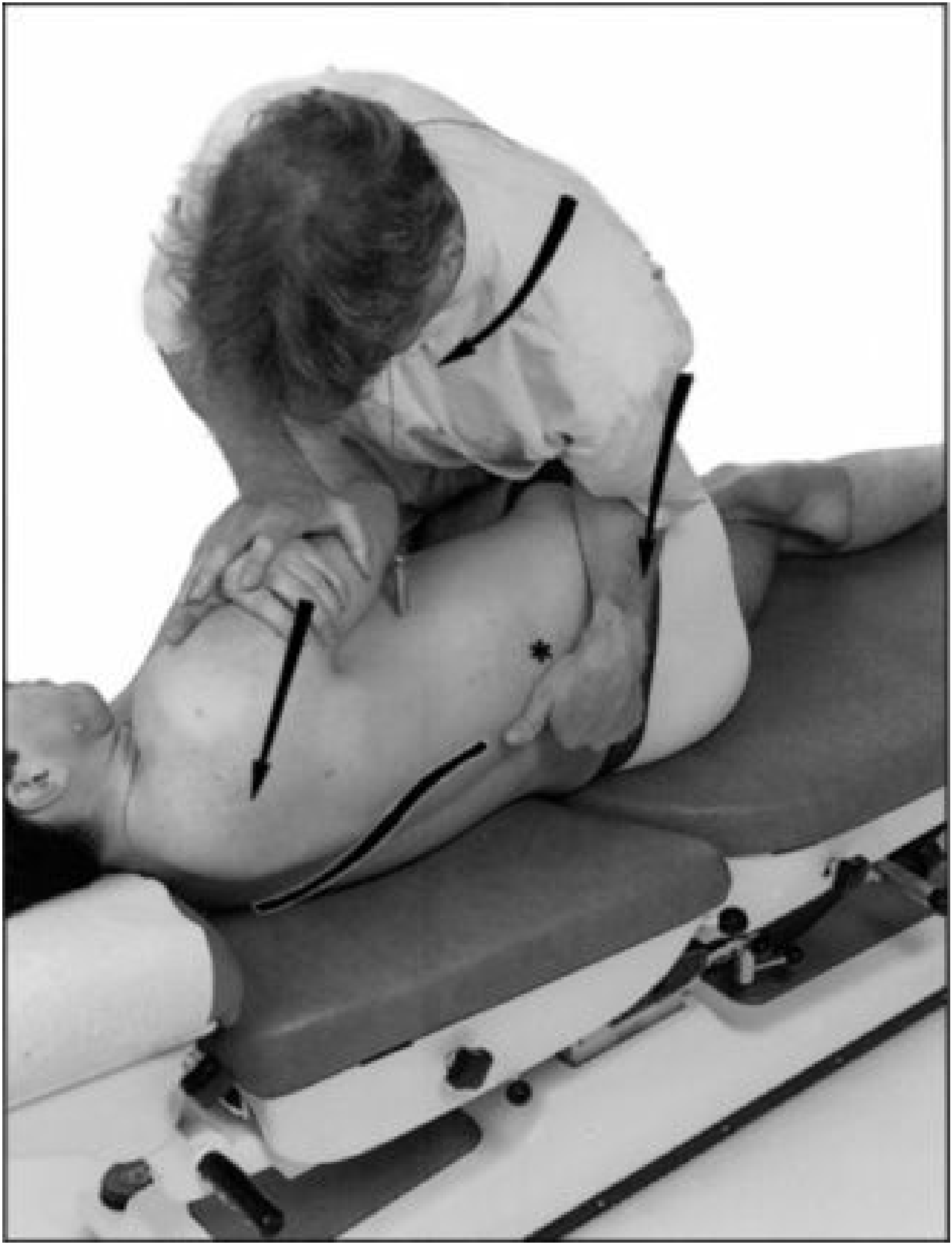


Figure 9.16

1) A reinforced middle finger in a goose-neck hand posture is placed on the ipsilateral lateral edge or spinous lamina juction of L3. The skin slack is initially removed by pulling the skin with the support hand thumb towards the table. The interphalangeal joints are positioned at 90° with slight ulnar deviation of the wrist. The flexor portion of the forearm is gently placed upon the lateral aspect of the buttock just below the pelvic crest lateral to the posterior superior iliac spine with both arms held relaxed and close into the body (Fig. 9.17). Note the position of the plumbline relative to the hand. There should be no downward pressure over the iliac crest and no excess cephalad push with the indifferent arm.
2) The practitioner transfers body weight forward by plantar flexing the rear foot from the *duff* position (Fig. 9.18A). Note the 45° position of the practitioner and the bend in the legs to add spring and to control the patient's leg drop (thigh sandwich) (*). *Also note that the practitioner is leaning the front leg against the chiropractic table for additional support.* At the same time the contact arm is also brought slightly forward on the pelvic contact, exaggerating the hand posture to bring the forearm just slightly lateral to the posterior superior iliac spine, well away from the sensitive lateral hip musculature (Fig. 9.18B). This will provide the practitioner with more leverage across the pelvis to reach joint tension and apply preload.
3) Very slowly
   i) Pull the pelvic contact towards the body, tucking the contact arm into the body to the point when movement of the L3 spinous process is perceived and tissue resistance between the contact finger pads and the pelvic contact is increasing. This should occur at a point when the contact arm is at a 90° angle at the elbow (Fig. 9.19). At this point the pulling action is stopped (as opposed to the spinous pull described above).
   ii) The practitioner simultaneously pushes gently down on both contact points on the spinous process of L3 and the pelvic contact with the arm (Fig. 9.19). The natural movement of the practitioner's weight assists this down through the long levers of the patient's leg. The pull-push action needs to be equally balanced. This overall movement increases the tissue tension below the L3 contact point, thereby stabilizing the other local segments and ensuring that the transition point occurs at the L3/4 motion segment.
   4) **There are several potential learning errors to be aware of during this set of manipulative skills.** These are very similar to those associated with any of the side-posture skills learned thus far. This is particularly applicable to the double spinous and the single spinous processes described above. The spinous push provides a very safe and efficient procedure for side-posture lumbar spine manipulation, but there are some very specific and subtle skills that must be adhered to for successful performance of these procedures. There are a number of spurious skills associated with this procedure including: (i) a tendency to over pull the pelvis and push down with too much force on the sensitive pelvic musculature; (ii) the pulling-pushing action is not equivalent; (iii) the practitioner is too far back and the weight is

not over the appropriate spinal level increasing the overall workload; (iv) performing the sequence of skills too quickly; and (v) a tendency to just pull the pelvis similar to the spinous pull skills and not incorporate a push component.

Figure 9.17

A

Figure 9.18A

B

Figure 9.18B

(ii)
(i)

Figure 9.19

Spinous hook/pull

Spinous push

This manipulative procedure is far more complex than the spinous pull in terms of performance and overall psychomotor skills. It is essentially the same as the single spinous–spinous pull except for the following subtle differences: (1) segmental localization and specific facet contact stabilization take place from above the contact on the spinous instead of from below (i.e. finger pad contact is on L3); (2) reinforced fingertip contact is placed on the ipsilateral side of the spinous process of the upper segment of the motion segment being isolated; and (3) the short levers are controlled by a pull–push action on the pelvis rather than just a pulling action with leverage via the innominate and femur (Byfield 2005).

Therefore, the patient is placed in the side posture as described above in Figure 9.12 and following in Figures 9.13A and 9.13B, including the pivot shift into a fencer stance with the appropriate amount of body weight transfer up and towards the patient. To this point the only significant difference is the placement of the contact hand and finger pad, which is described previously in Figure 9.5 and below in Figures 9.14 and 9.15.

Figure 9.13B

may assist this procedure if the patient is sensitive (Fig. 9.28B). This particular skill can be extended to the thoracic spine and can include both mid to lower thoracic facet mobilization and costo-transverse joint mobilization using the pelvis and specific thoracic or rib angle as the specific anatomical contacts for the manual procedure. Another useful skill is a long-axis traction/distraction mobilization procedure for the lumbopelvic joint and soft tissue structures incorporating dysfunction at the thoracolumbar region (Fig. 9.28C).

10) Flexion distraction is a very common technique within the chiropractic profession. This technique is performed using a specifically designed table to provide a mechanical loading effect at a specific region of the lumbar spine in a particular plane and around a specific axis of motion. This is characteristically driven by patient symptoms and clinical findings whereby very conservative methods are initially incorporated to control pain and begin to improve function. This particular technique is supported by the use of a sophisticated piece of equipment that can be adapted for the specific clinical purpose (Fig. 9.24).

Figure 9.20

Figure 9.21

Figure 9.22

Figure 9.23

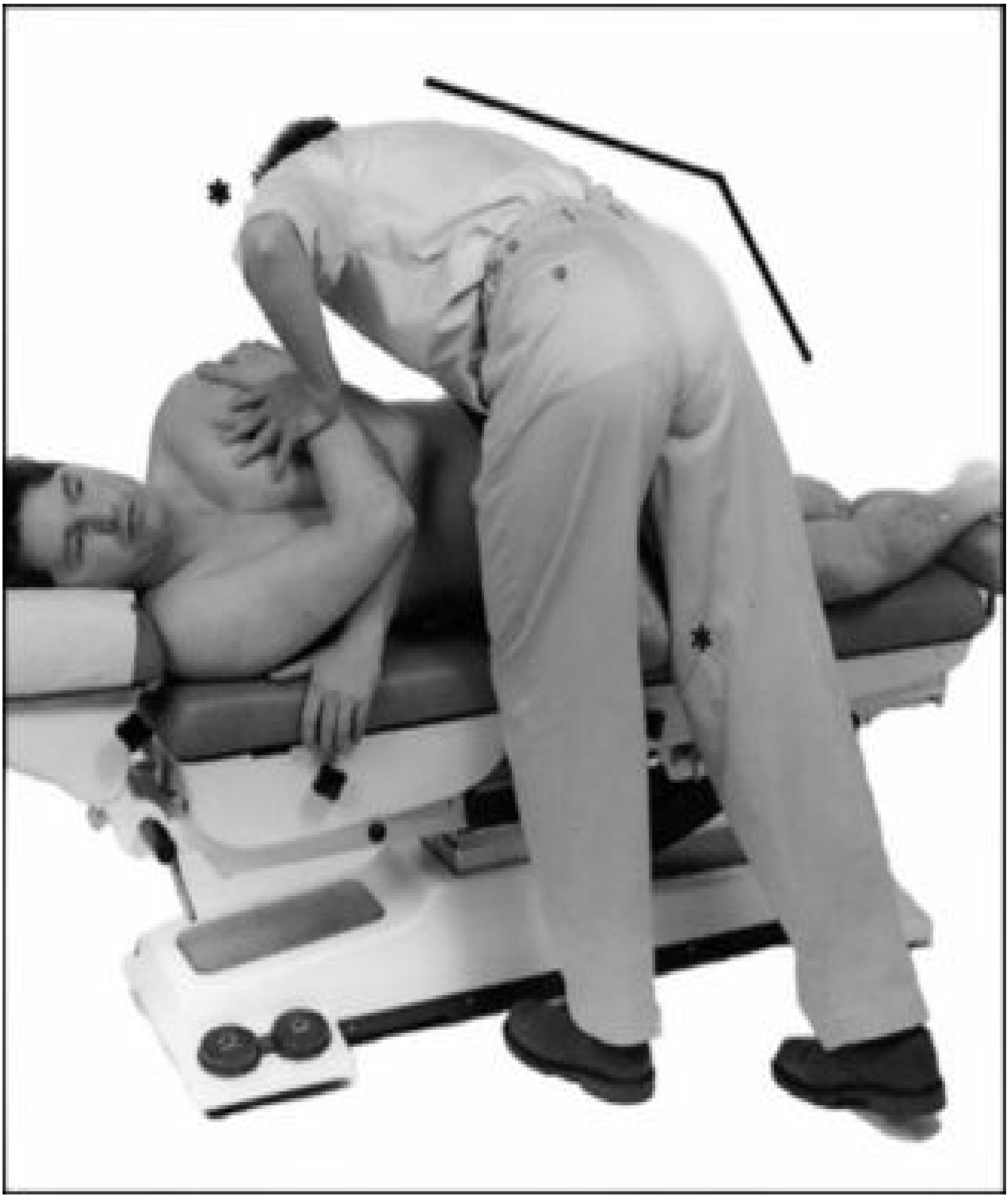


Figure 9.24

Figure 9.25

A

Figure 9.26A

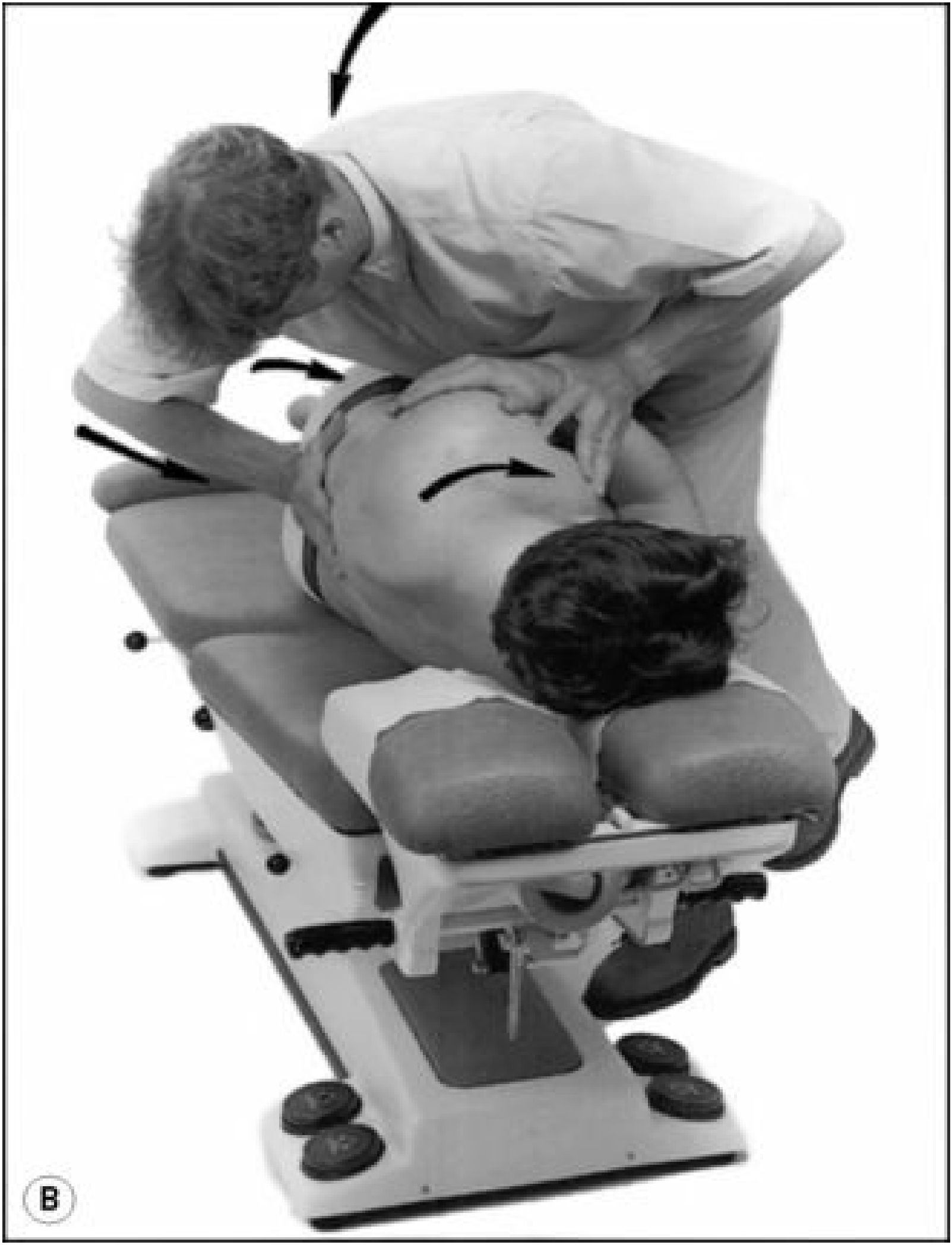

B

Figure 9.26B

C

Figure 9.26C

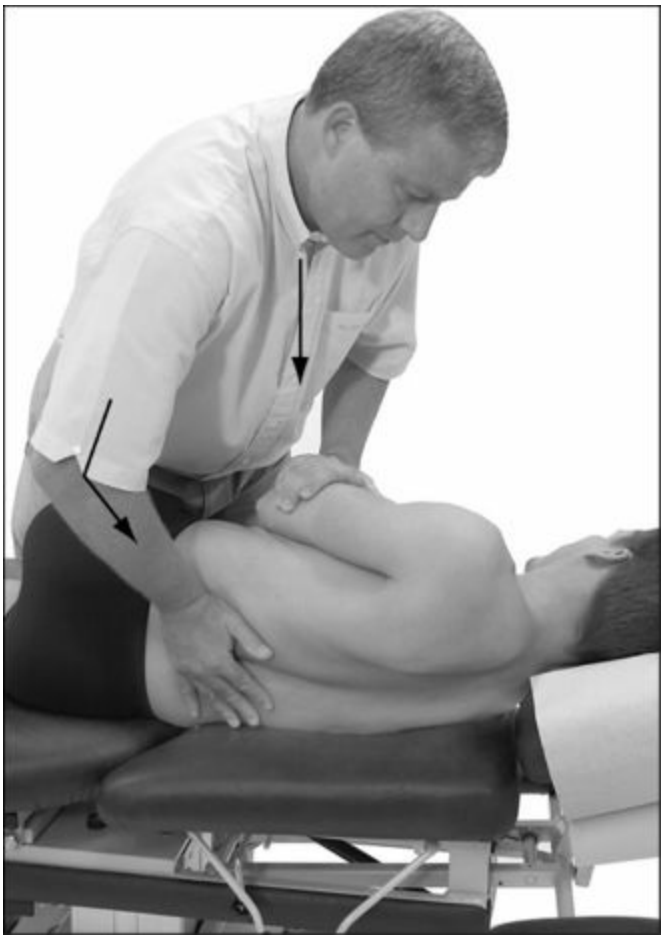


Figure 9.27

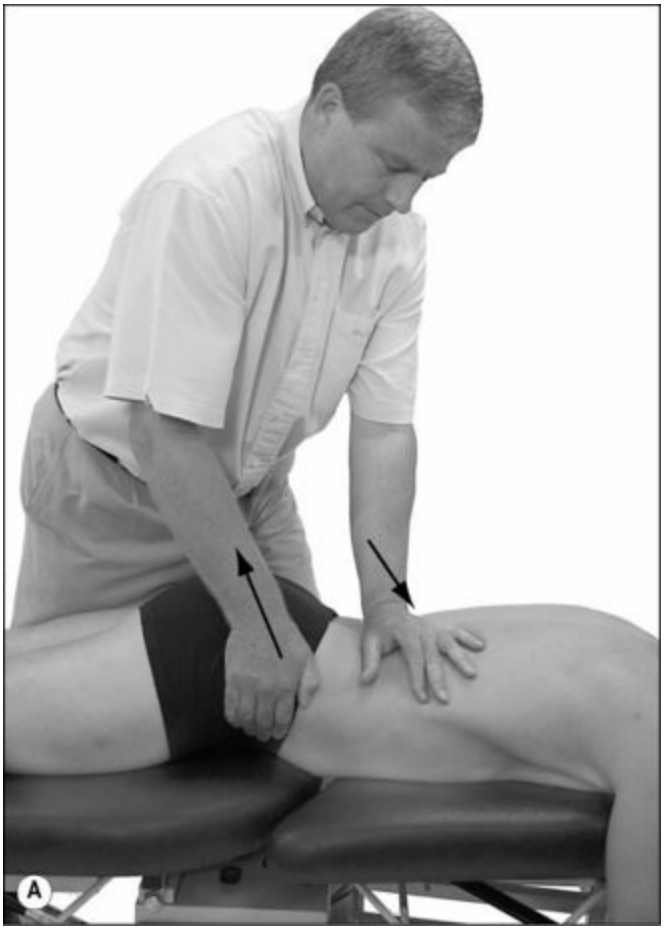


Figure 9.28A

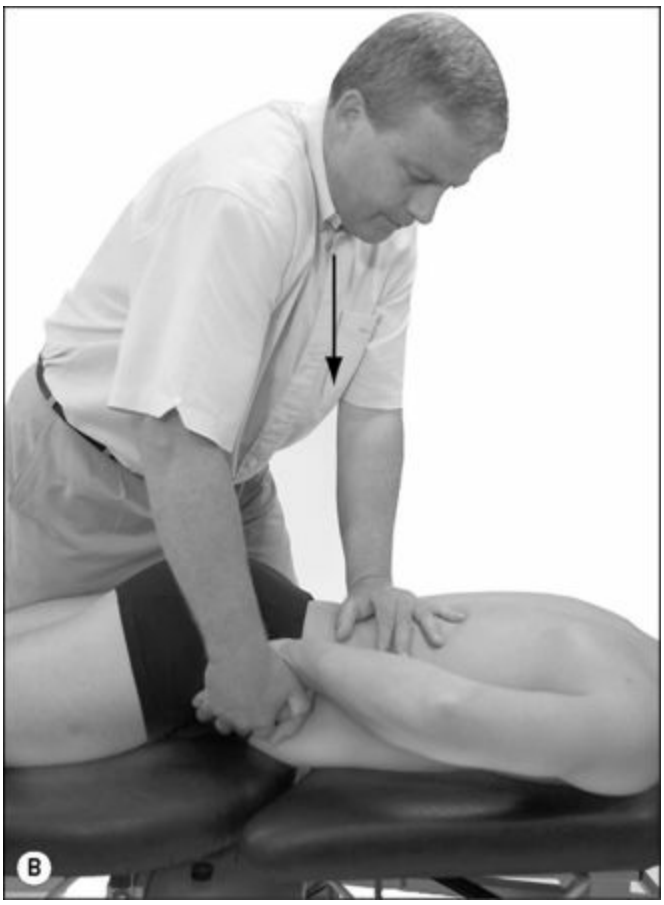


Figure 9.28B

Figure 9.28C

There are several potential errors associated with learning these side-posture skills:

1. The most common is ‘rolling’ the patient too fast and too far, thus losing complete control.
2. Excessively twisting or rotating the contact arm placing it 90° to the spine to get more push on the short lever contact, produces a pile-driver effect. This can introduce mechanical compression to already irritated soft tissues and compromise patient comfort and cooperation during the procedure.
3. Excessively pushing the upper body backwards instead of maintaining upper body position subjects the thoracolumbar spine to increased torsional stress which may aggravate thoracolumbar symptoms.

Summary

This chapter has presented the basic skills necessary for a variety of side-posture manipulative procedures that are used within chiropractic practice. Supine procedures have been avoided as they represent procedures that are specifically selected under special clinical circumstances and are essentially skills to be incorporated at the postgraduate level. Prone mobilization and other skills in this posture have been presented to increase skill selection at the clinical level. Problem solving and appropriate manual skill selection have been covered to some degree in this chapter as one of the advanced clinical activities incorporated during patient care. Moreover, the side posture is more difficult to learn in terms of skill acquisition, because the clinician has to learn to control both his/her movement/weight and the patient's unstable position simultaneously. Supine and prone skills are simply easier to learn, not used as often and do not generate the same amount of tension and leverage characteristic of side-posture manipulative procedures. However, a number of prone mobilization skills are useful procedures for the undergraduate to assimilate from a mixed collection of cases. Managing an acute low back episode or an osteoporotic patient requires judicious selection of manual intervention. There are other procedures which are driven by the type of equipment that permits a practitioner with a good understanding of the

Figure 9.29

pathophysiology to manage various spinal conditions. The use of flexion/distraction or tables that permit lateral flexion and rotation around the long axis of the table increase the variability open to a chiropractor. This was covered briefly in this chapter as well as in Chapter 14, which deals with the elderly patient. This approach permits the practitioner to intervene in a particular case from the outset

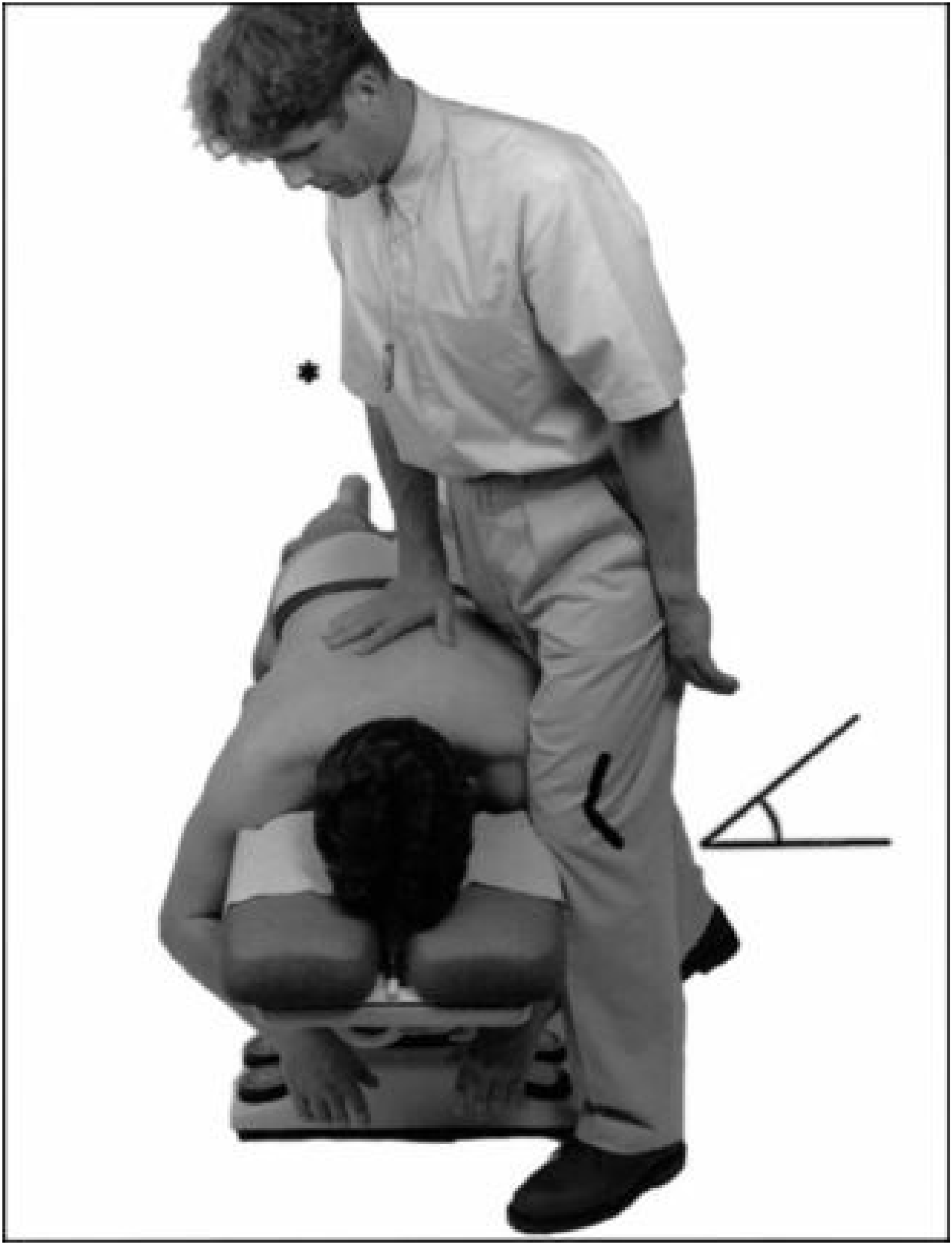


Figure 10.1

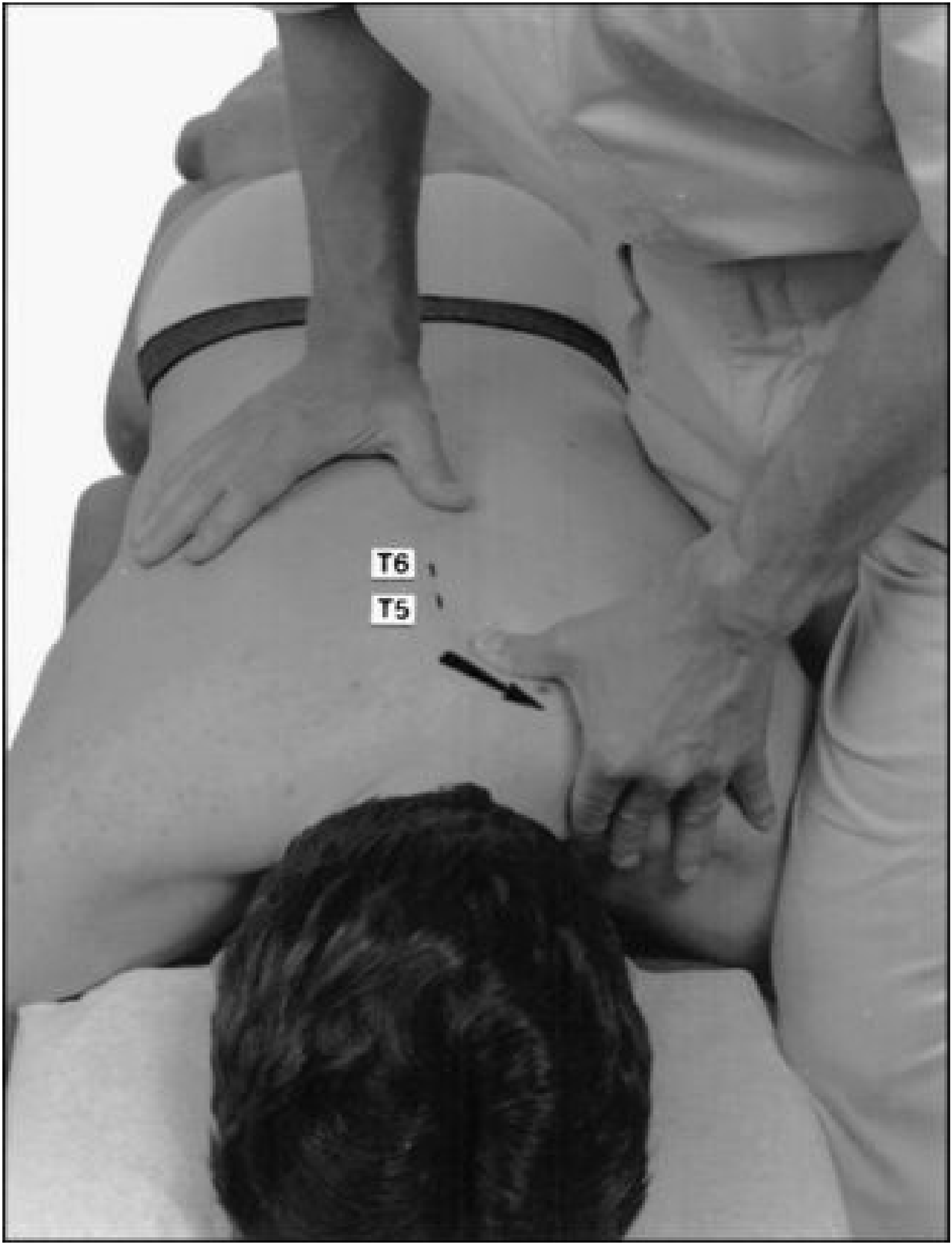

T6
T5

Figure 10.2

Figure 10.3

A

Figure 10.4A

Figure 10.4B

A

Figure 10.5A

B

Figure 10.5B

Figure 10.6

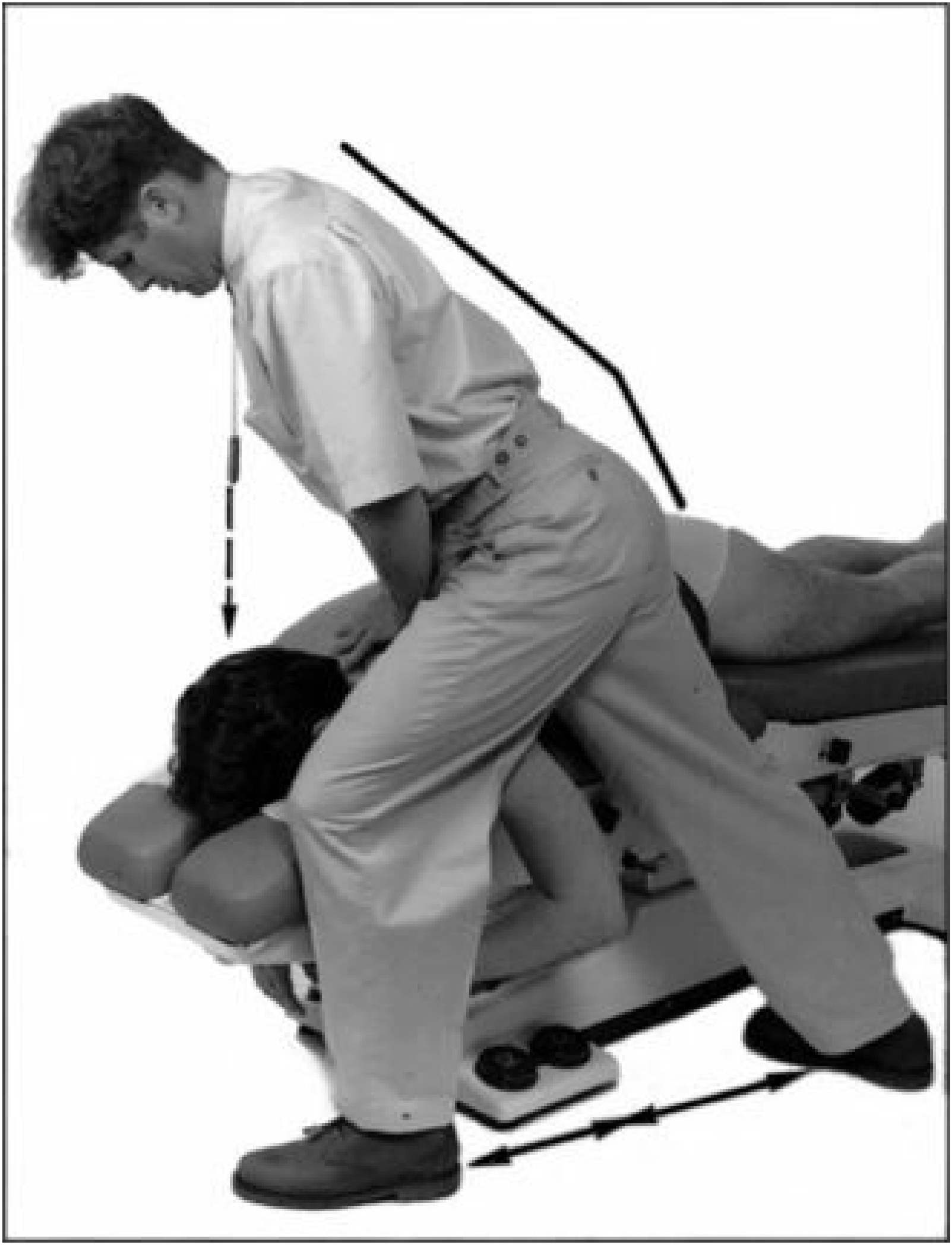


Figure 10.7

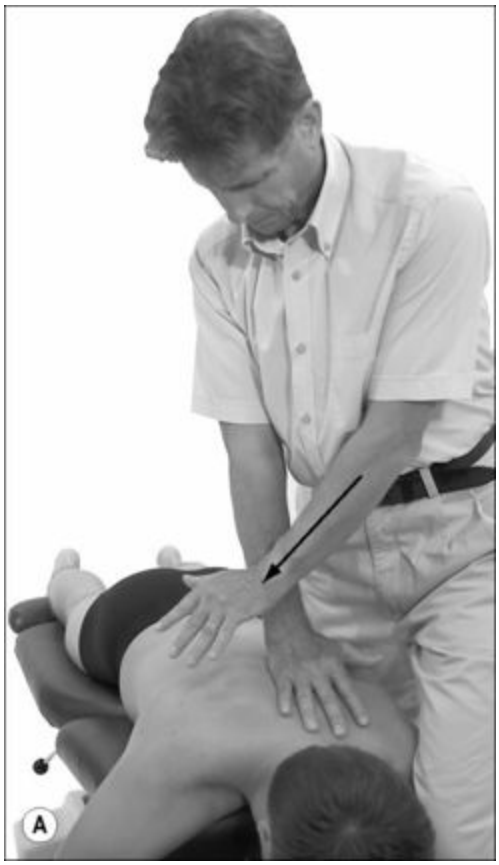


Figure 10.8A

Figure 10.8B

A

Figure 10.9A

Figure 10.9B

Figure 10.10

Figure 10.11

Figure 10.12

Figure 10.13

A

Figure 10.14A

B

Figure 10.14B

Figure 10.15

Figure 10.16

Figure 10.17

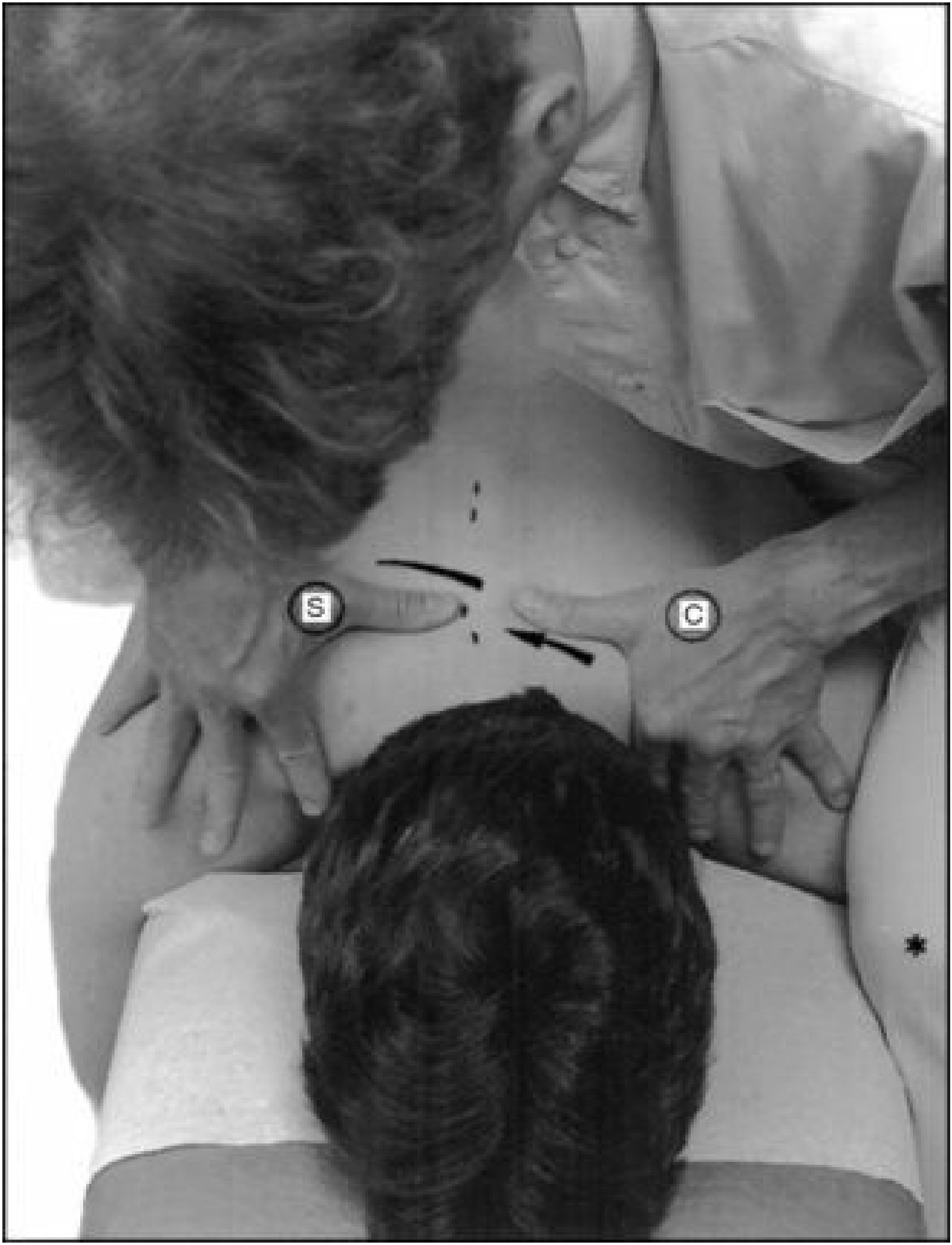

S
C

Figure 10.18

Figure 10.19

Figure 10.20

Figure 10.21

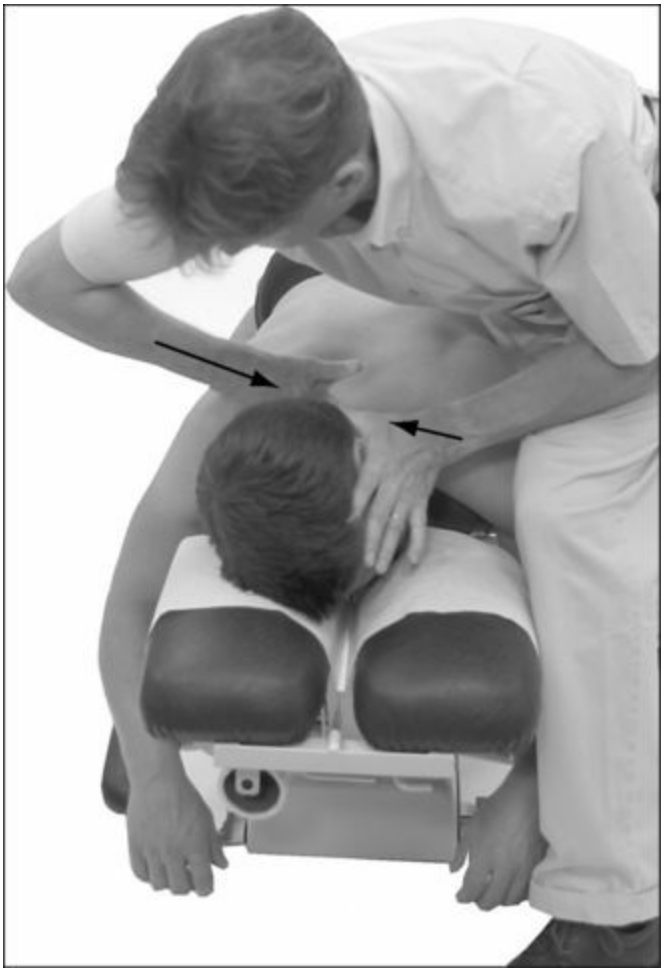


Figure 10.22

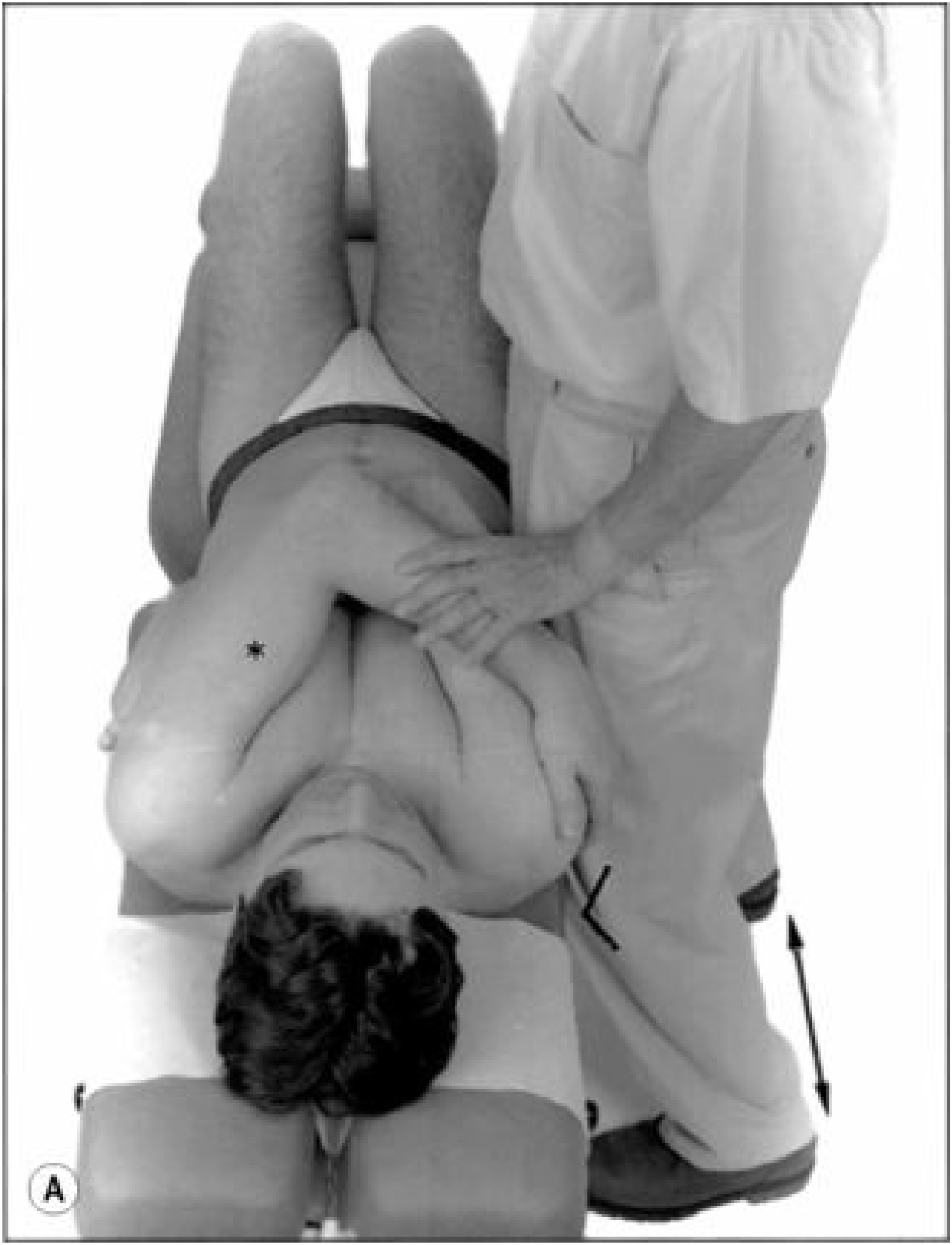

A

Figure 10.23A

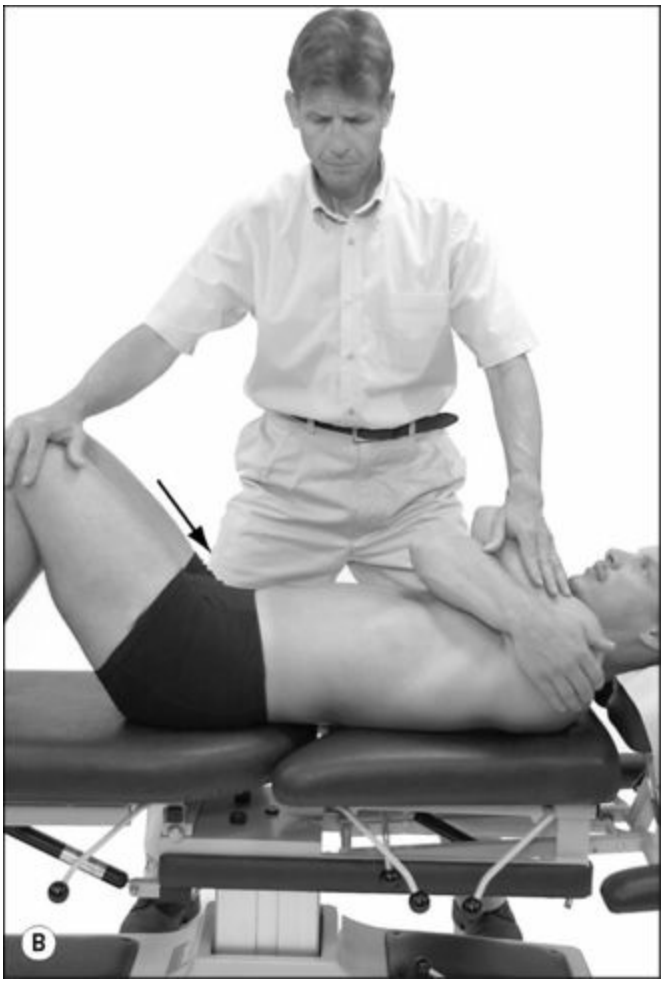


Figure 10.23B

Figure 10.24

Figure 10.25

Figure 10.26

Figure 10.27A

Figure 10.27B

Figure 10.28

Figure 10.29

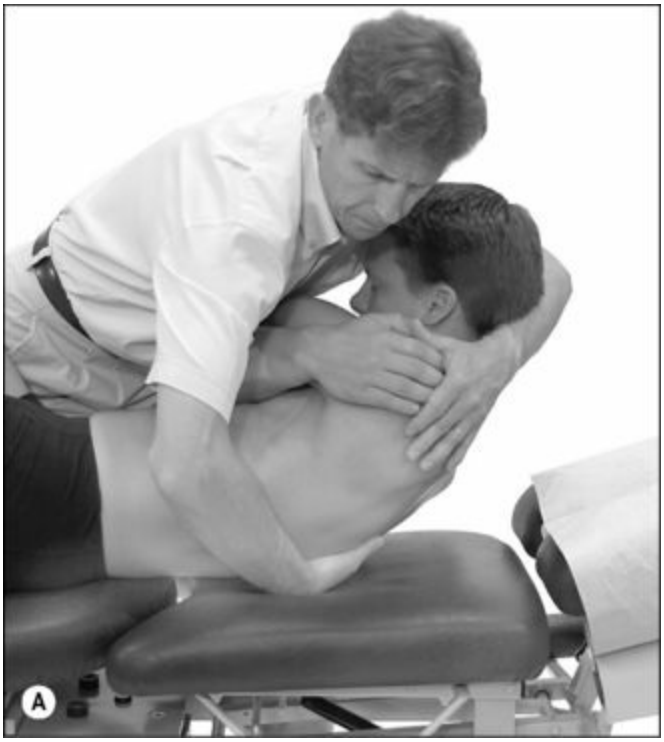


Figure 10.30A

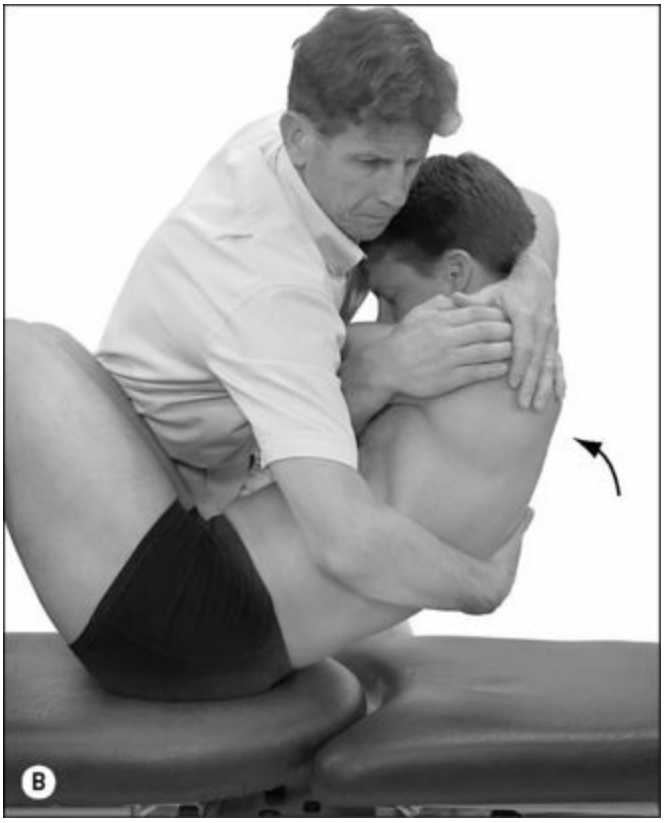


Figure 10.30B

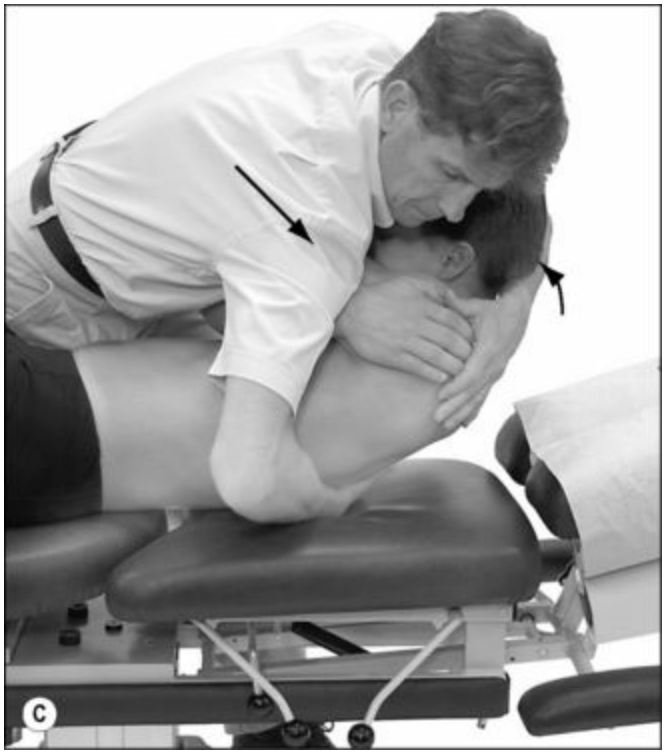


Figure 10.30C

Single transverse process – prone

This manipulative procedure is also known as reinforced unilateral (Byfield 1996) and hypothenar transverse rotational adjustment (Bergmann & Peterson 2011). This particular sequence of skills probably represents the fundamental positioning for many of the prone manipulative procedures (Figs 10.1 - 10.7). With the patient lying passively prone, the student can concentrate on important individual posture and positioning skills. The patient is positioned so that the head-piece is dropped down slightly from a neutral horizontal position to relax the upper back region and the feet are elevated only minimally to flex the knees and relax the hamstrings. If the patient experiences any low back pain whilst in this position, then a roll can be placed under the abdomen for the period of the procedure. Lying in the prone position with the lumbar spine in a flexed posture for extended periods of time compresses the intervertebral disc anteriorly and could potentially aggravate discogenic pain. Conversely, lying with the spine slightly extended could cause facet irritation or increase the pressure on the posterior aspect of the intervertebral disc and create a consequent difficulty in rising from the table into the upright posture. One of the most potentially difficult activities to appreciate with respect to patients in the prone posture involves the patient rising from the table without placing the spinal facets under any undue mechanical load, which may result in the aggravation of an existing pain-producing condition. This can be avoided by instructing the patient to avoid leading with extending the spine, but by rather bracing the lower back and pelvis via co-contracting the trunk stabilizers and pushing themselves up on all fours to avoid any sudden uncontrolled movements that may result in acute mechanical (nociceptive) pain (McGill 2002). Alternatively, the practitioner assists in turning the patient into a side-laying posture, before asking the patient to move, again with assistance, as a unit into the seated position. This must be reinforced through a training process and we must not take

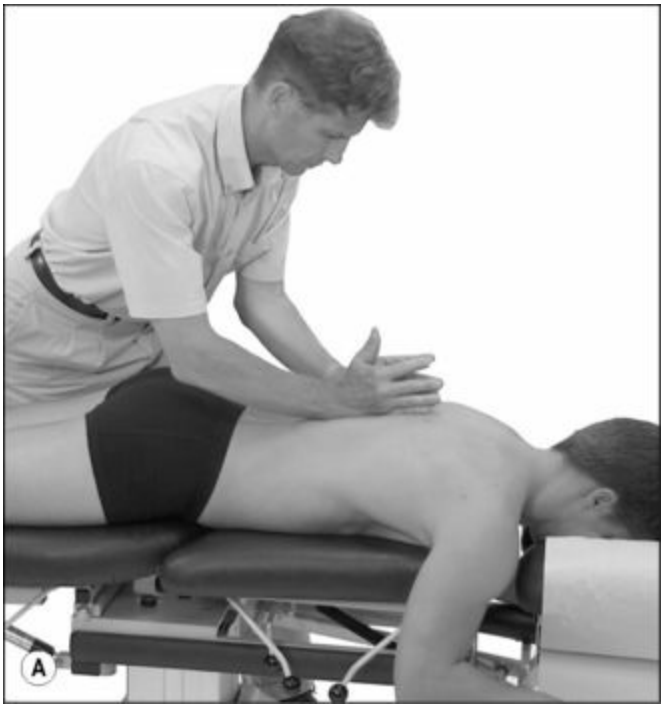


Figure 10.31A

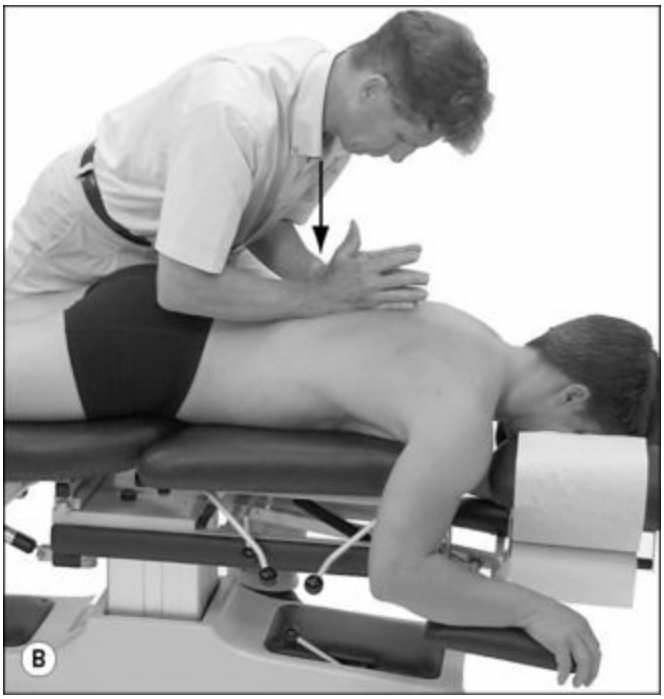


Figure 10.31B

C

Figure 10.31C

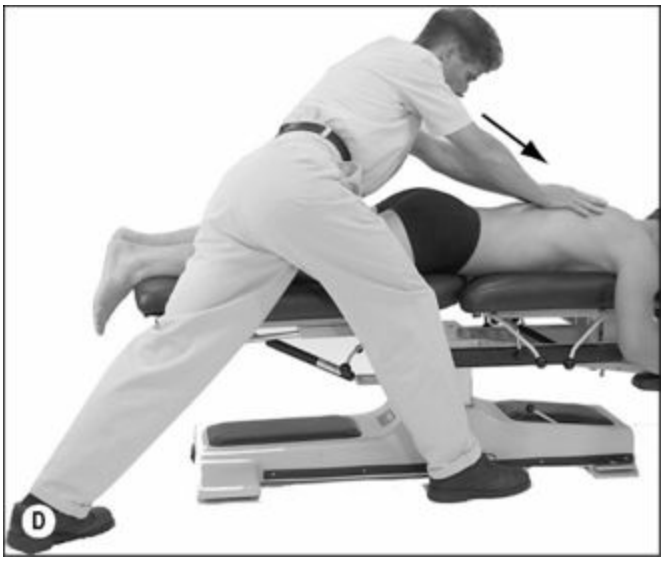


Figure 10.31D

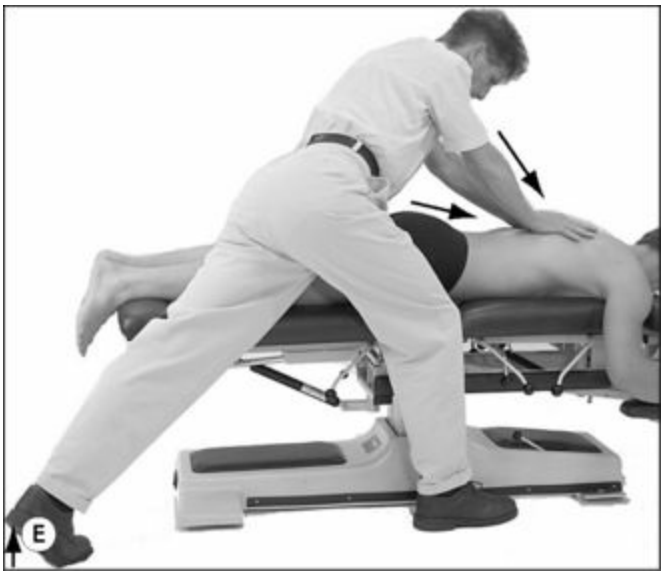


Figure 10.31E

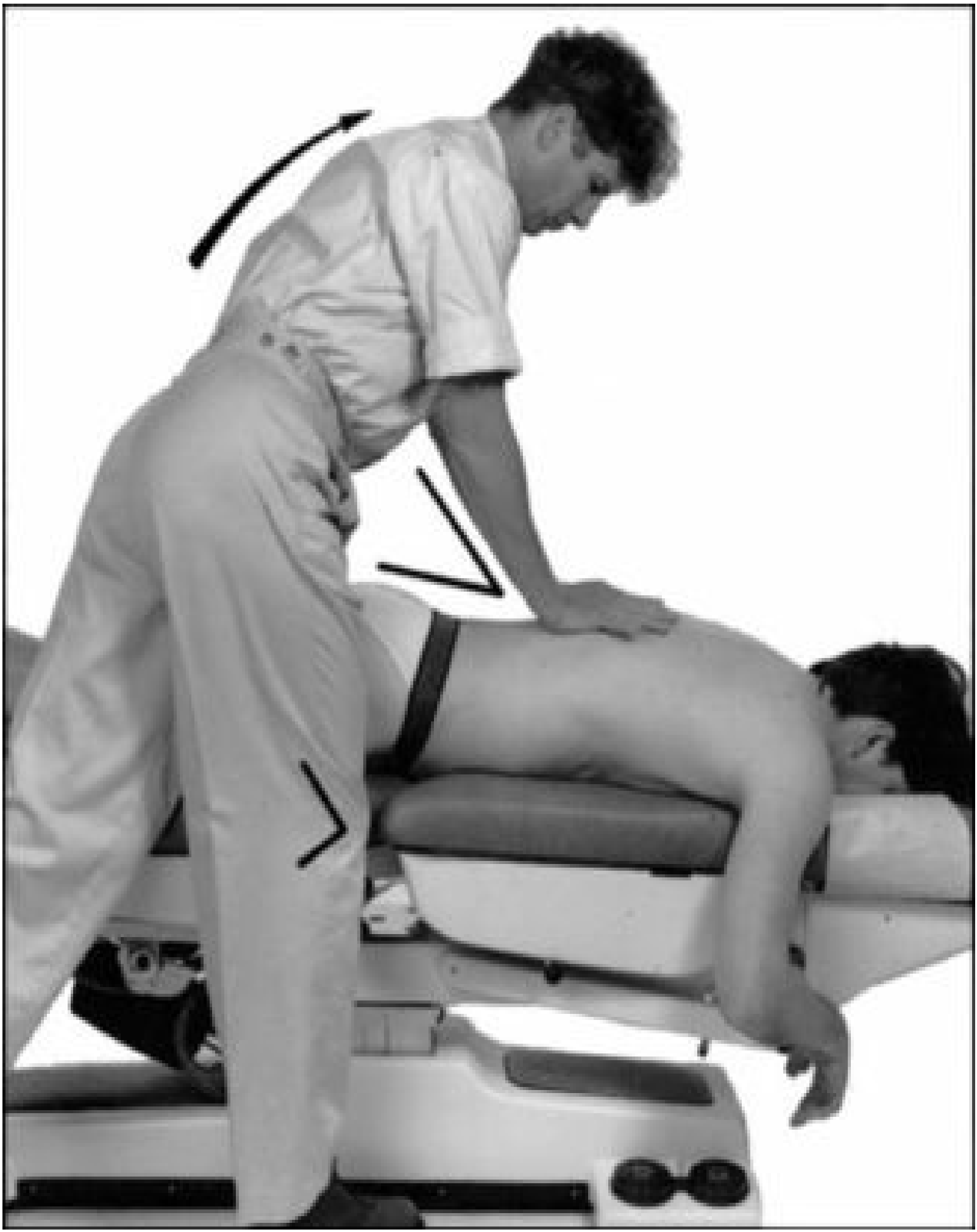


Figure 10.32

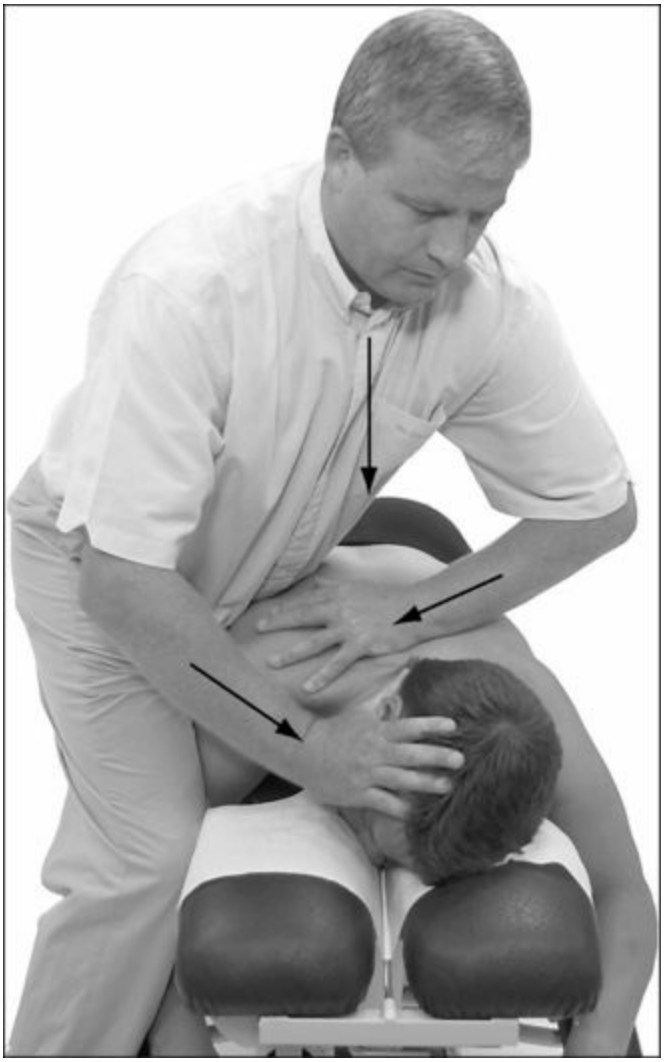


Figure 10.34

Additional thoracic procedures

There are a number of additional manipulative skills for the thoracic spine, particularly those commonly incorporated clinically for dysfunction syndromes related to the cervicothoracic and thoracolumbar junctions (Figs 10.33A-10.35D). These regions, as mentioned earlier in the chapter, offer a clinical challenge for the clinician and a variety of skills are available to address this common source of local and referred mechanical pain. This is by no means exhaustive, but will provide the undergraduate with a number of additional psychomotor skills and manual procedures for a number of clinical scenarios. It should be emphasized that the previous skills must be assimilated before going on to this next series.

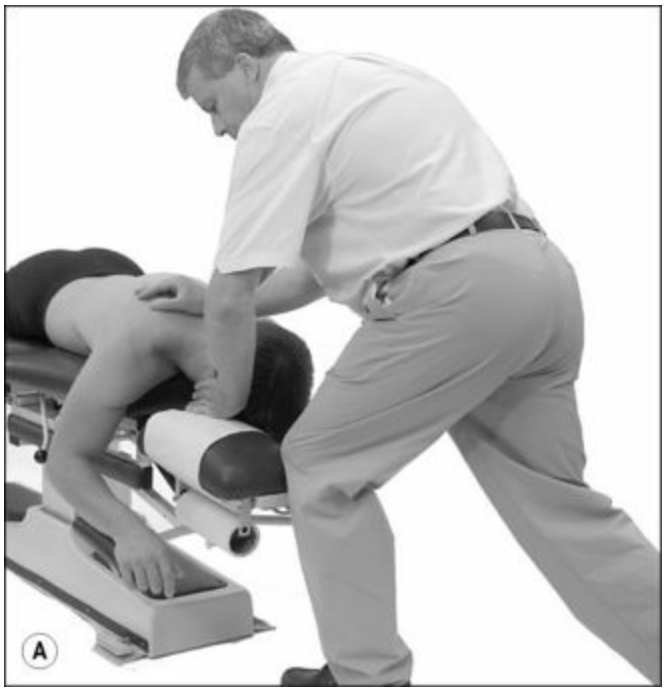


Figure 10.33A

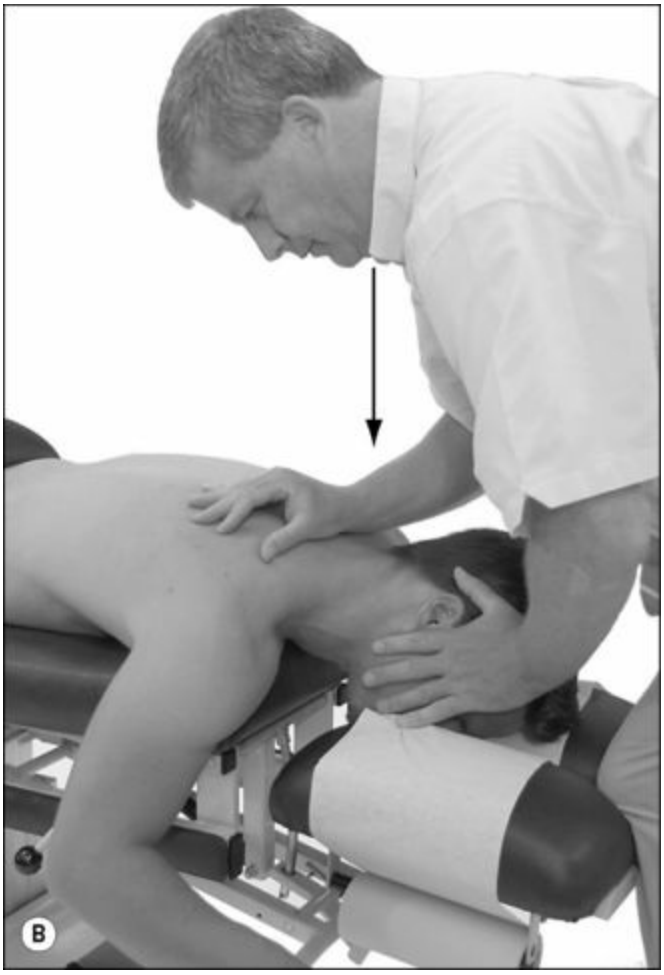


Figure 10.33B

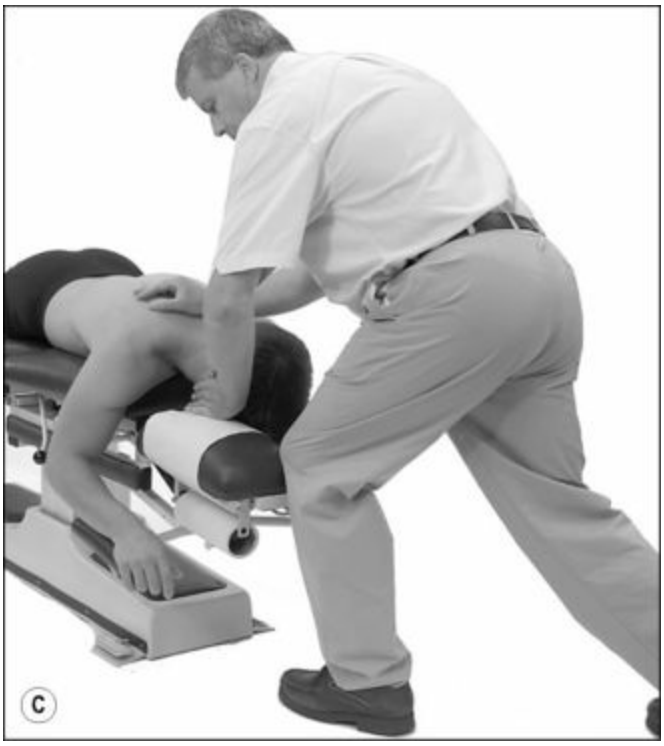


Figure 10.33C

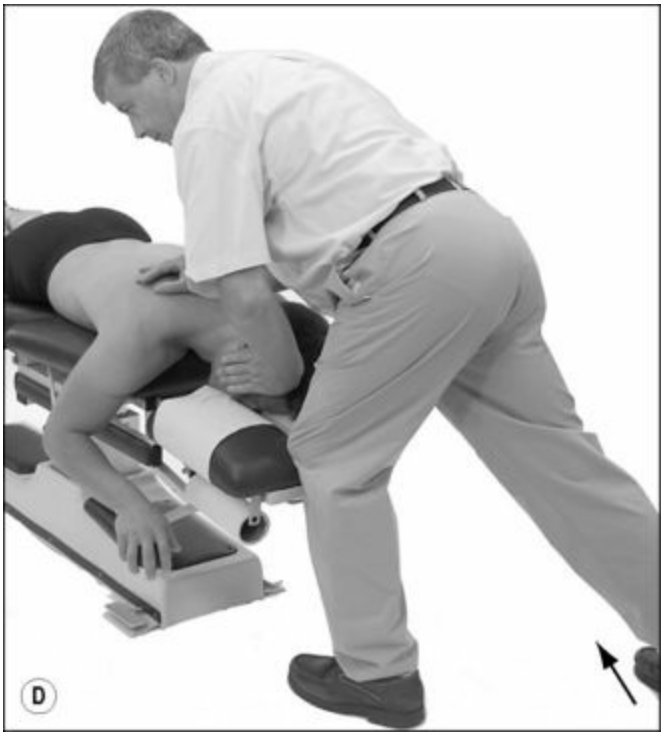


Figure 10.33D

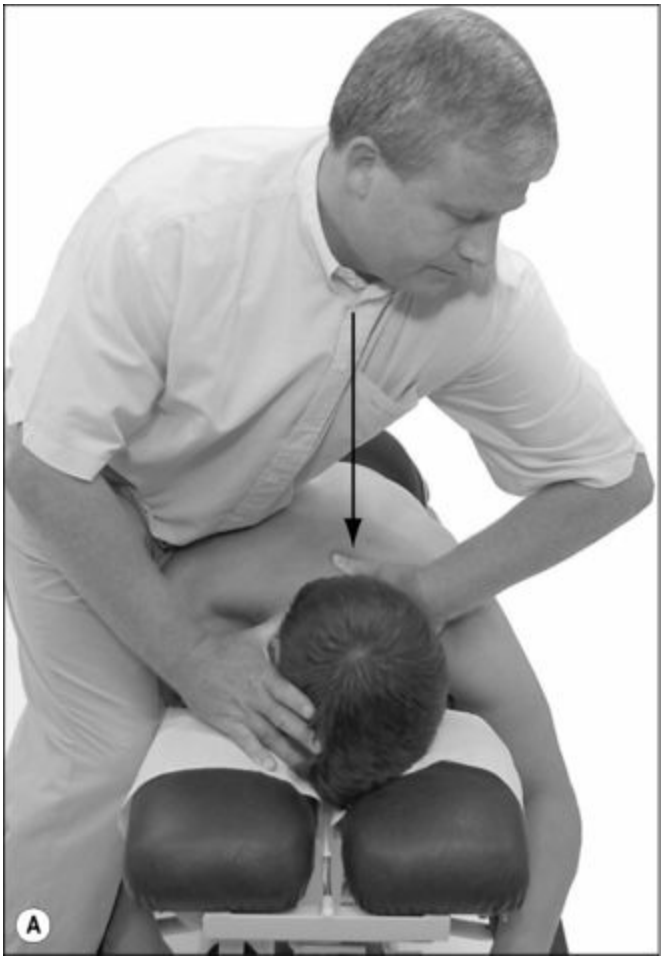


Figure 10.35A

Figure 10.35B

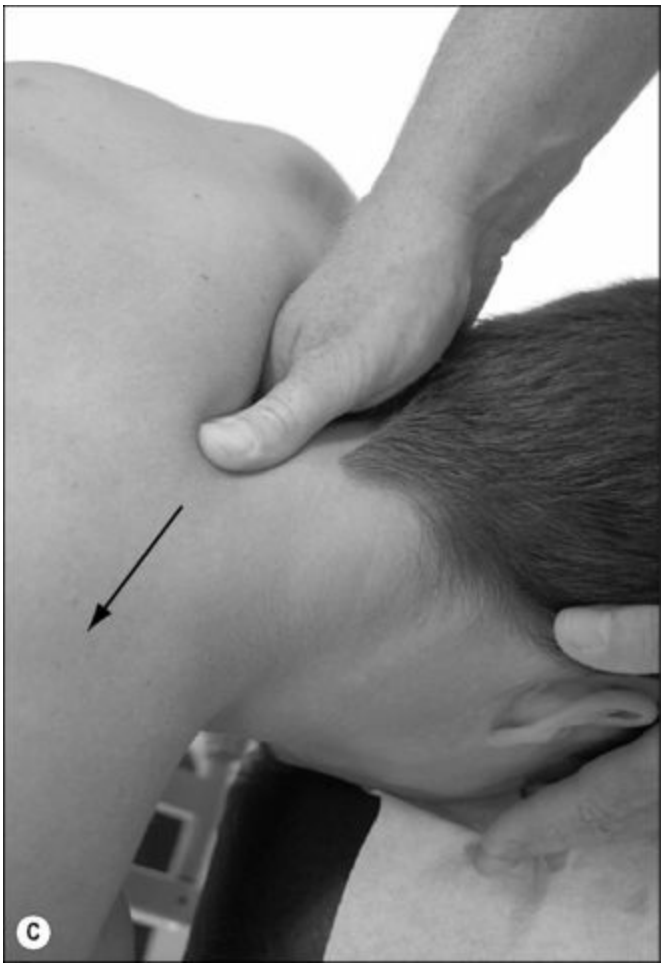


Figure 10.35C

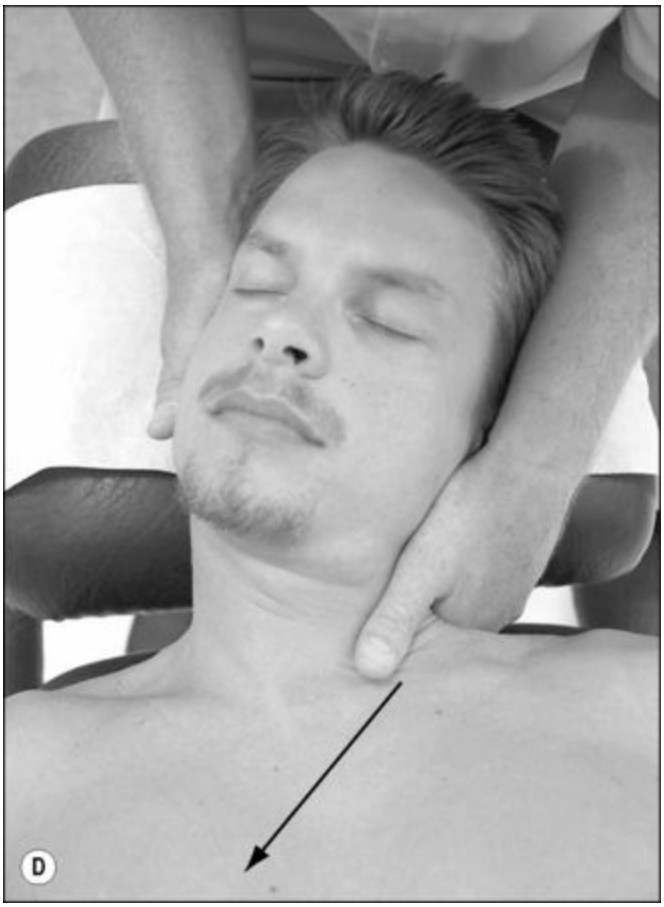


Figure 10.35D

Mid–lower cervical spine manipulative skills

Articular process (AP) – supine, (Figs 11.1 - 11.15)

Spinous-lamina (SL) – supine, (Figs. 11.16 - 11.21)

Transverse process (TP) – supine, (Figs 11.22 - 11.26)

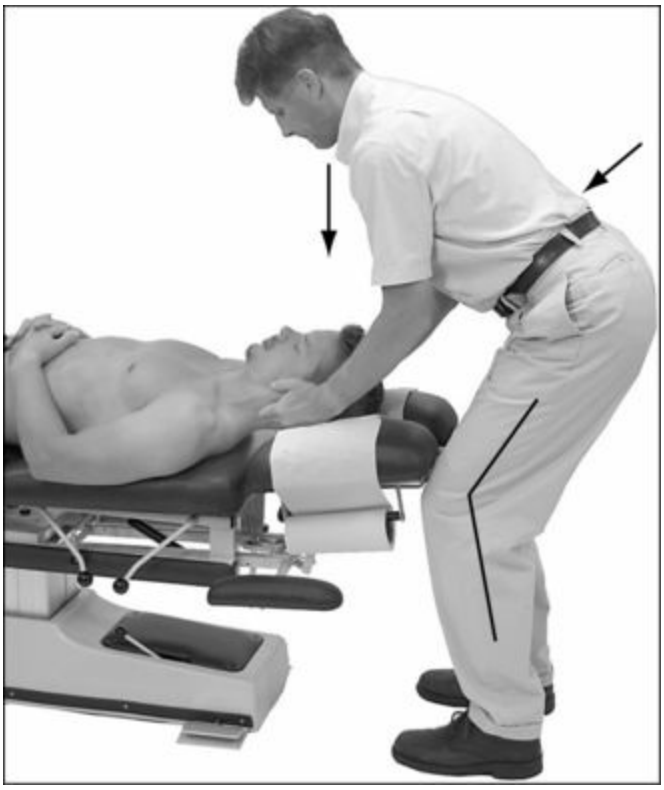


Figure 11.1

Figure 11.2

Figure 11.3

Figure 11.4

Figure 11.5C

Figure 11.6

Figure 11.7B

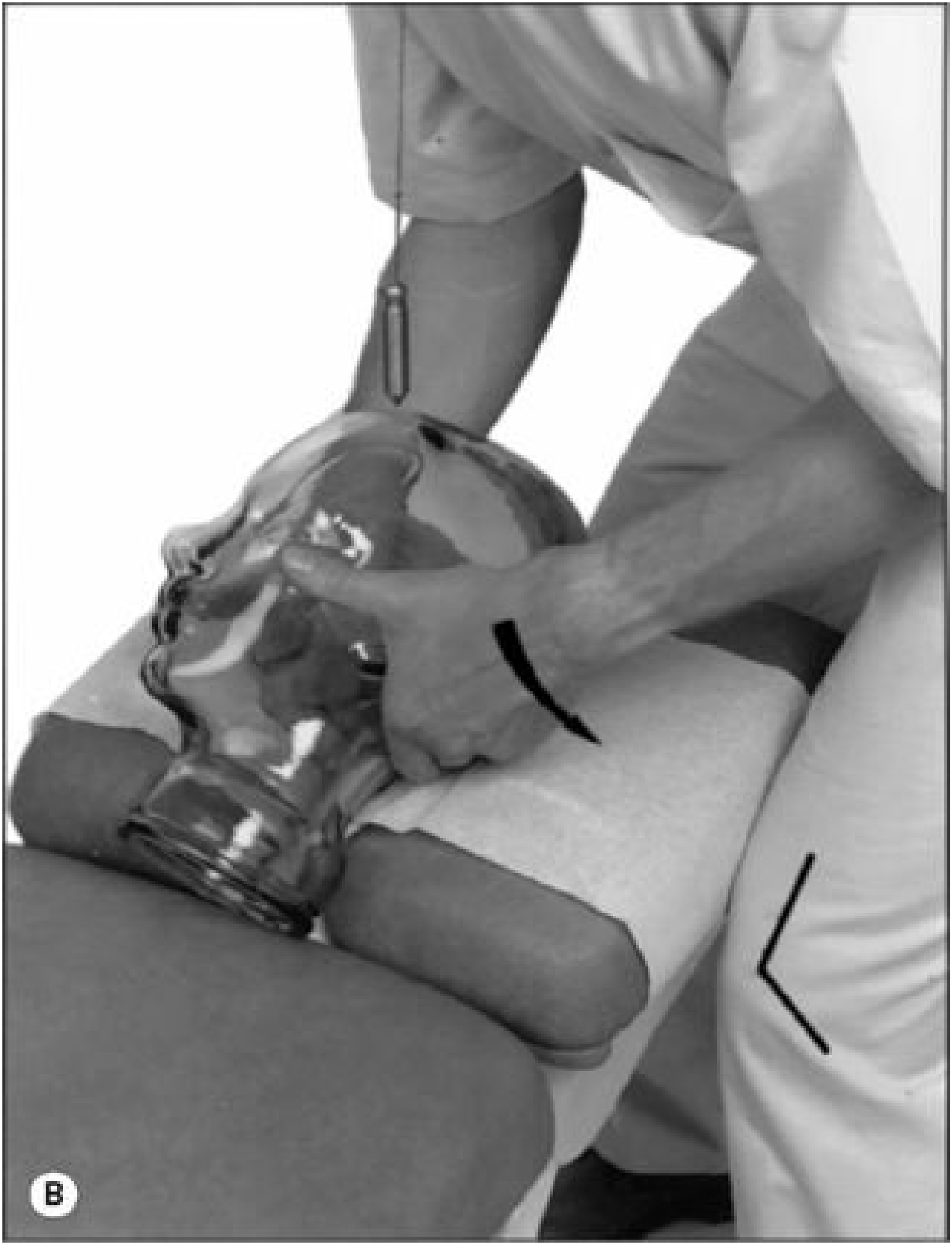

B

Figure 11.8B

Figure 11.9B

C

Figure 11.9C

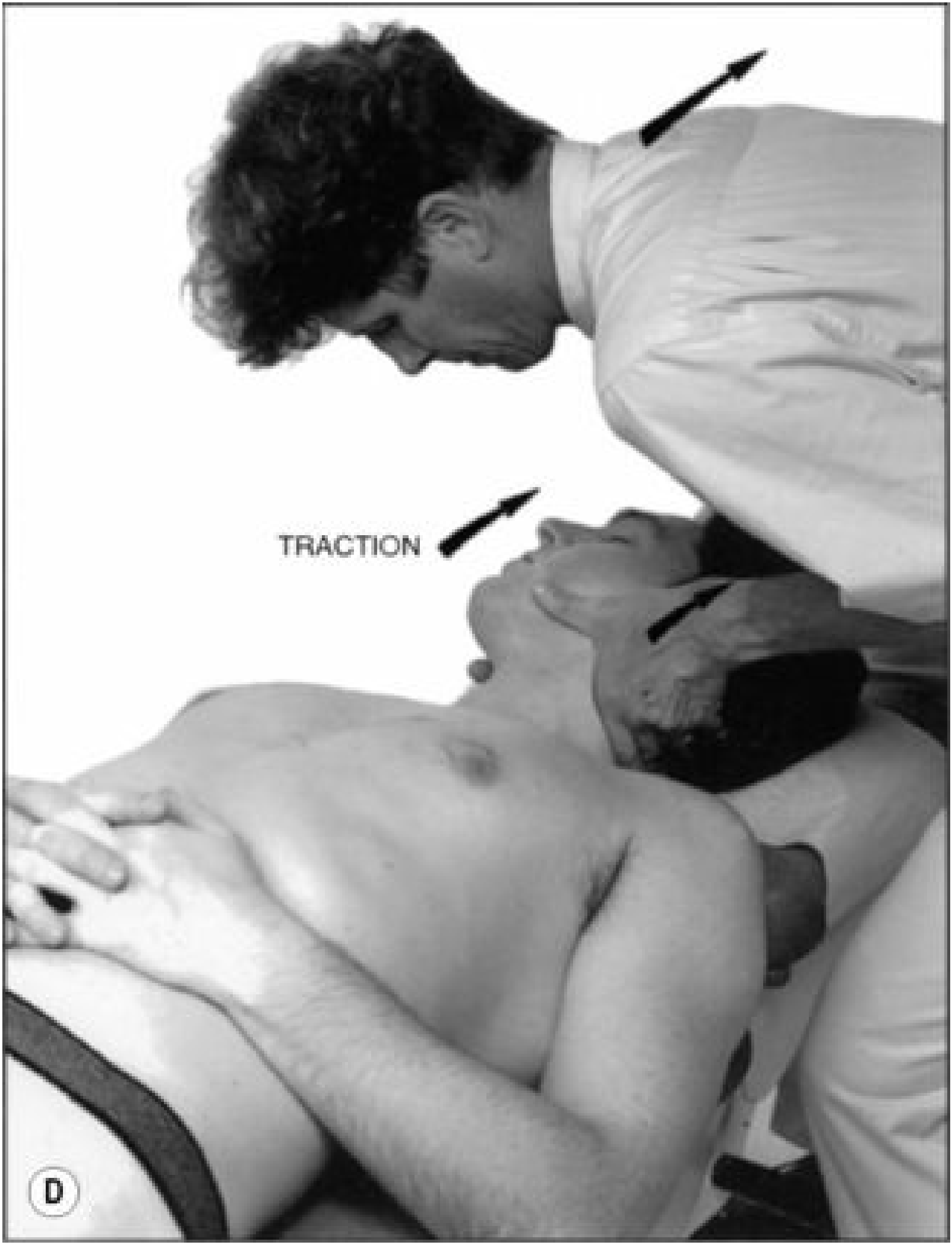

TRACTION
D

Figure 11.9D

Figure 11.10

Figure 11.11

Figure 11.12

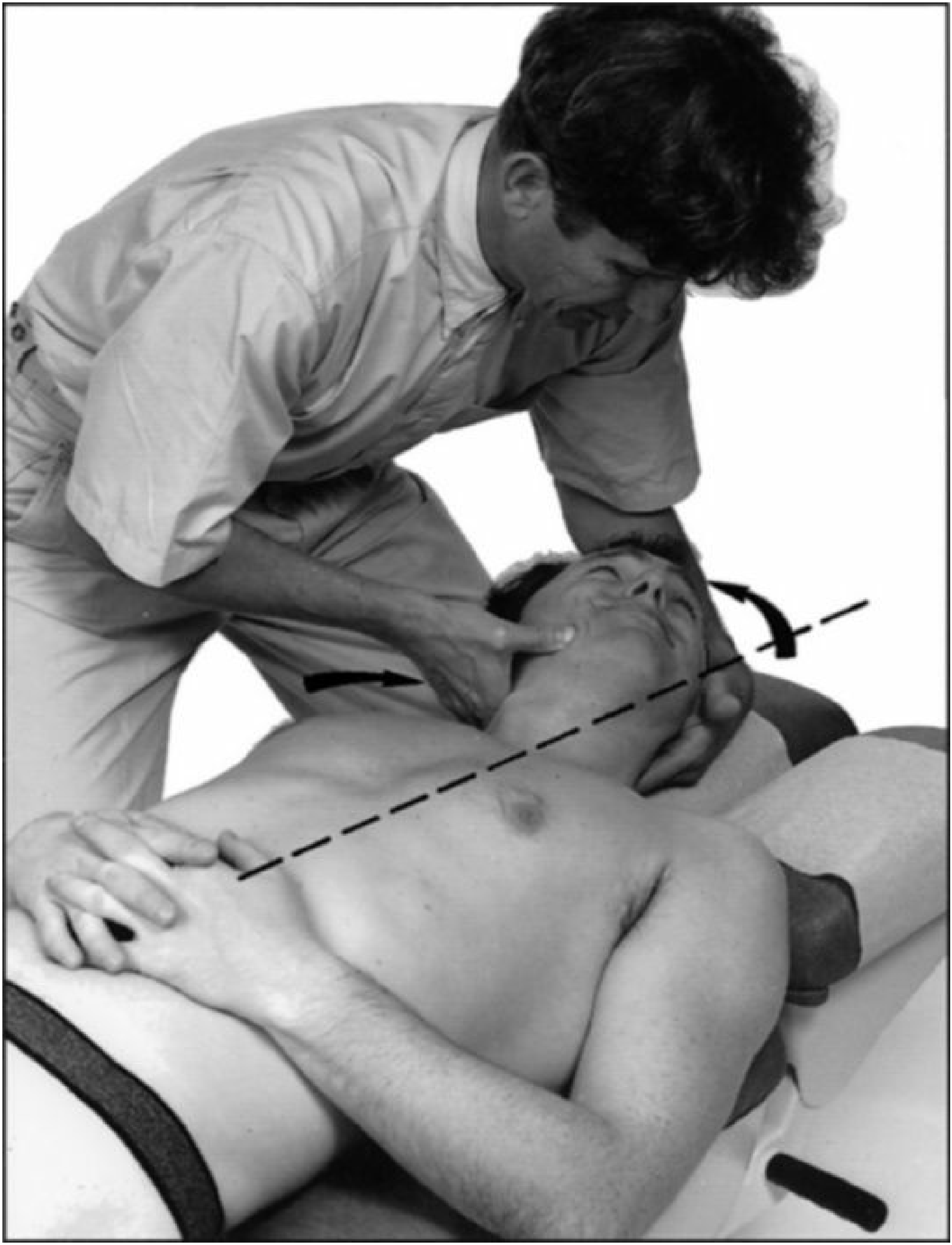


Figure 11.5A

Figure 11.5B

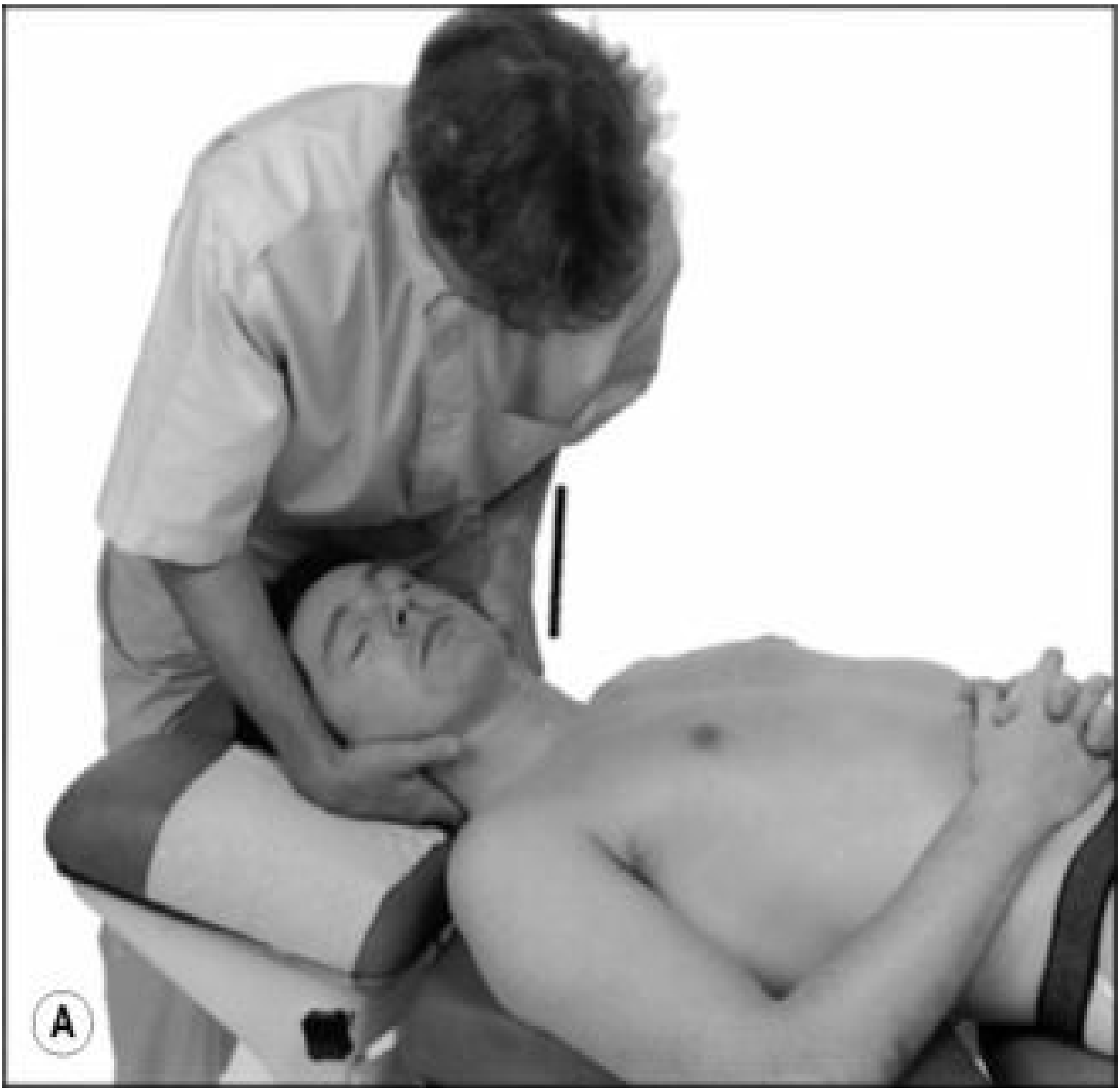


Figure 11.7A

A

Figure 11.8A

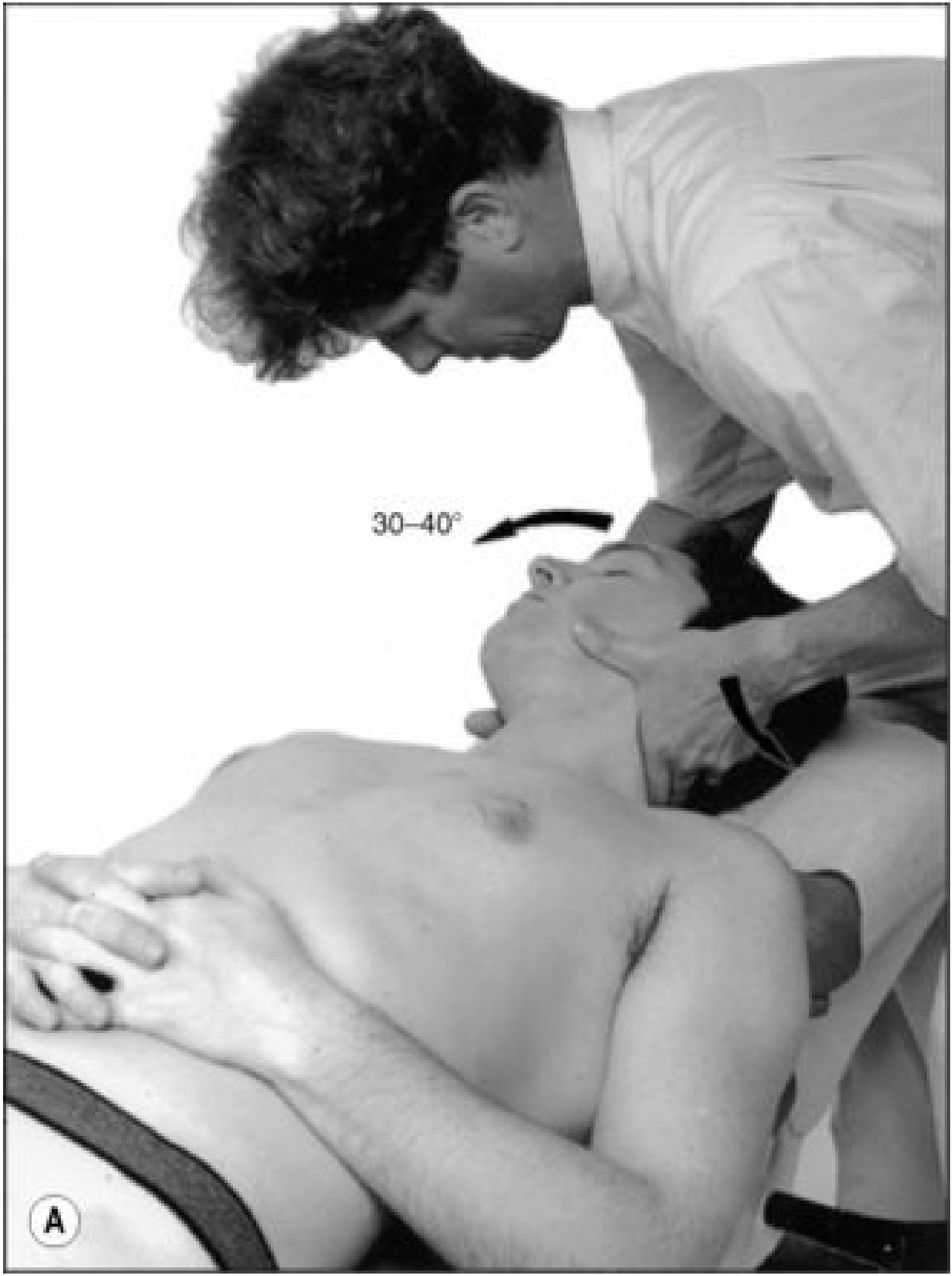

30–40°
A

Figure 11.9A

Steps i–iv have been separated and should be practised in sequence until they are performed with a degree of confidence and skill. This section should not be rushed and the importance of the slow controlled movements at the wrist should be emphasized. *Care should be taken not to maintain joint tension for too long and there is no dynamic thrust at this point.* All movements are small in all planes and controlled for skill learning and patient comfort.

10) There are a number of potential learning errors associated with the acquisition of these manipulative skills.

i) Failing to move to the side of the lesion or anatomical contact point may increase cervical rotation and force the practitioner's arms out from the body producing much longer levers acting on sensitive structures of the cervical spine. This causes the practitioner to assume an inefficient posture which places increased mechanical loads on the lumbar spine and twists the shoulder (*) (Fig. 11.10). *Note the excess rotation of the head and neck.*

ii) The most common mistake is rotating the head and neck too far when attempting to establish joint tension prior to preloading (Fig. 11.11). Additional movement at the elbows and shoulders and a failure to keep the arms in close to the body usually causes this situation (*). This has to be carefully monitored by the student to eliminate potential mechanical stress to the sensitive structures at risk in the cervical spine. Note the excessive angulation of the right wrist that over time could produce an overuse strain/sprain of the wrist structures which must be avoided.

iii) Pushing the medial side of the contact finger forcibly into the sensitive spinal structures instead of rolling the contact hand by ulnar deviating the wrist in an attempt to achieve a bony contact. This is often caused by keeping the hand too rigid and stiff and not using a *relaxed semi-arched posture* (*) (Fig. 11.12). Note the fact that there is no space between the web of the contact hand and the mandible (*). *Watch for patient's reaction!* Care must always be made to maintain a middle finger wrap around the rim of the occiput with ulnar deviation of the indifferent/support hand to ensure symmetry of activity. The hand can drift up over the occiput that is not optimal.

iv) Introducing excessive secondary lateral bending combined with surplus rotation will stress the soft tissues of the cervical spine. These are exaggerated movements that are not well tolerated, particularly when the patient is presenting with neck pain. This may also pull the head away from the central axis of the body (Fig. 11.13). The practitioner shifts more than 45° to the side of the lesion. *These exaggerated movements should be avoided at all costs.*

v) Do not lift the head off the headpiece and support the weight of the head in the hands (Fig. 11.14). It is very difficult for the practitioner to control head and neck rotation and lateral bending, plus develop the feel of joint tension when he is holding a 12 lb (5.6 kg) weight in the hands. This will automatically produce longer levers, which may influence the dynamic thrust and compromise control of the excess movements. Failure to pivot shift to side of the lesion

will complicate the situation. Loss of lumbar lordosis with flexion up to the full passive end range places the practitioner at risk of potential injury over a period of time.

vi) Do not bend the wrist of the contact arm. This is not stable. Keep it straight or only slightly flexed in its most mechanically advantaged posture (Fig. 11.15).

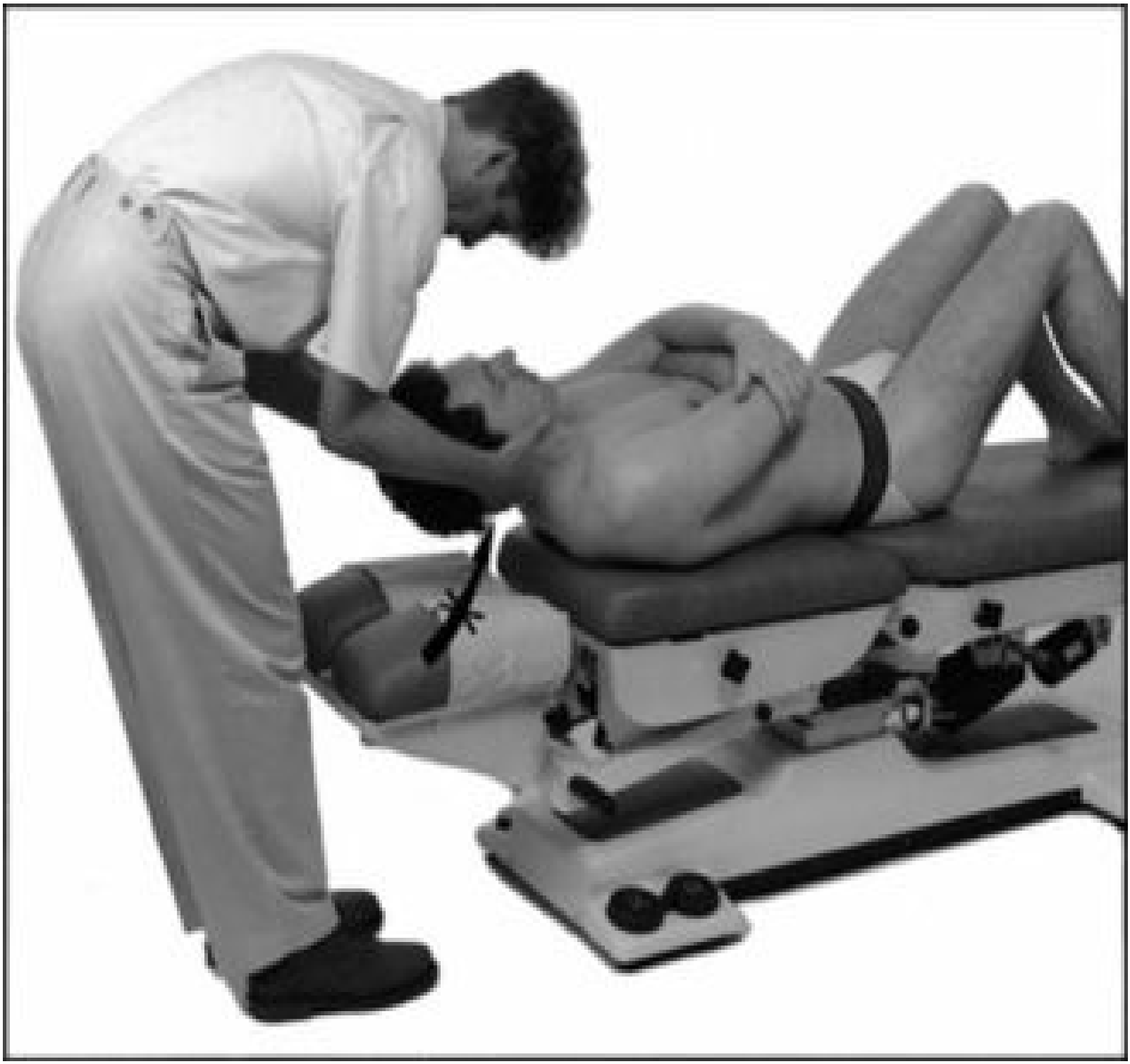


Figure 11.14

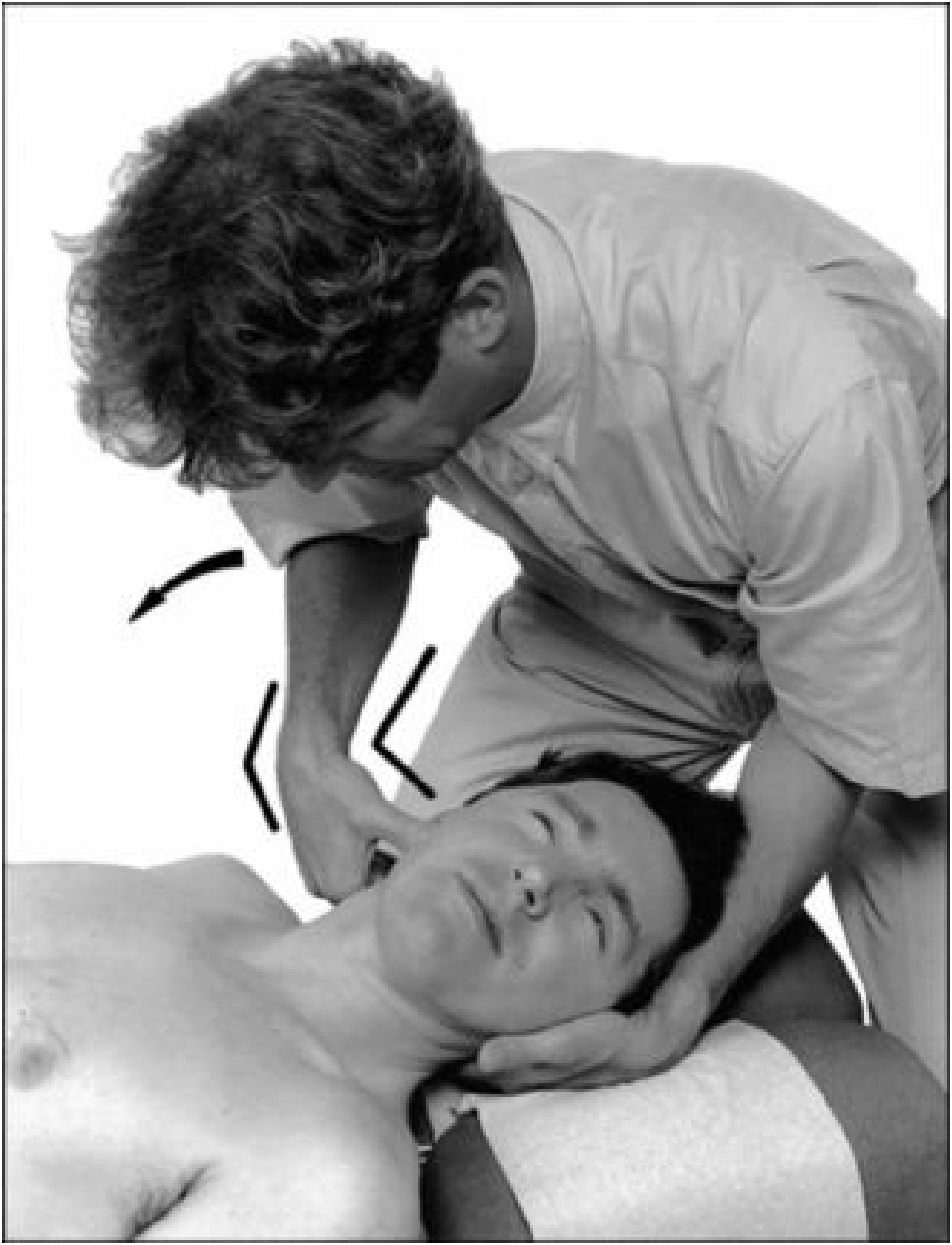


Figure 11.16

Figure 11.18

Figure 11.17

4) The practitioner moves 45° to the ipsilateral side of the SL contact and *simultaneously rotates the head about 30° in the safe zone* to the contralateral side using the support hand. Care is taken not to lose contact on the SL during this rotation, and try not to dig your fingers into the soft tissue (Fig. 11.19). The contact fingers actually move in the same direction as the head to maintain the soft tissue contact over the SL of C5 or other contact depending on the clinical indications. It is important that as the head rotates away the finger pad contact perceives and resists spinous movement at C5 towards the contact. Keep both arms close to the body during all phases of this procedure (*).
5) Joint tension without over-rotation up to preload is achieved by marginally laterally flexing the head and neck towards the contact finger by simultaneously pulling the head towards the contact hand and pushing gently along the SL contact in the line of the forearm to create joint tension (Fig. 11.20). This action can be aided by dipping the upper body down which keeps the arms close to the body, maintaining short lever action. The head and neck should not stay in this position for extended periods to avoid possible joint or muscular reflex reactions. Please avoid the temptation to thrust or push too hard along the contact point.
6) A traction component can be added to assist additional joint tension at the C4/C5 motion segment. This is performed by slowly tractioning the support hand around the rim of the occiput in a cephalad direction. The fingertip contact will resist this movement.
7) There are at least two major errors associated with the learning of this particular sequence of skills.
   i) Do not permit the arms to drift out from the body (Fig. 11.21). This reduces the mechanical advantage of the contact points, increases the movement about the cervical spine and compromises the efficiency of the dynamic thrust.
   ii) A straight contact hand instead of a chiropractic arch posture will not stabilize the contact point and eliminate the flexibility and firmness of the procedure. The position of the thumb does not stabilize the contact hand. Over-rotating the head and standing at the head of the table are additional errors to be aware of. Pulling the contact fingers off the SL as the head is rotated is another movement pattern to avoid.

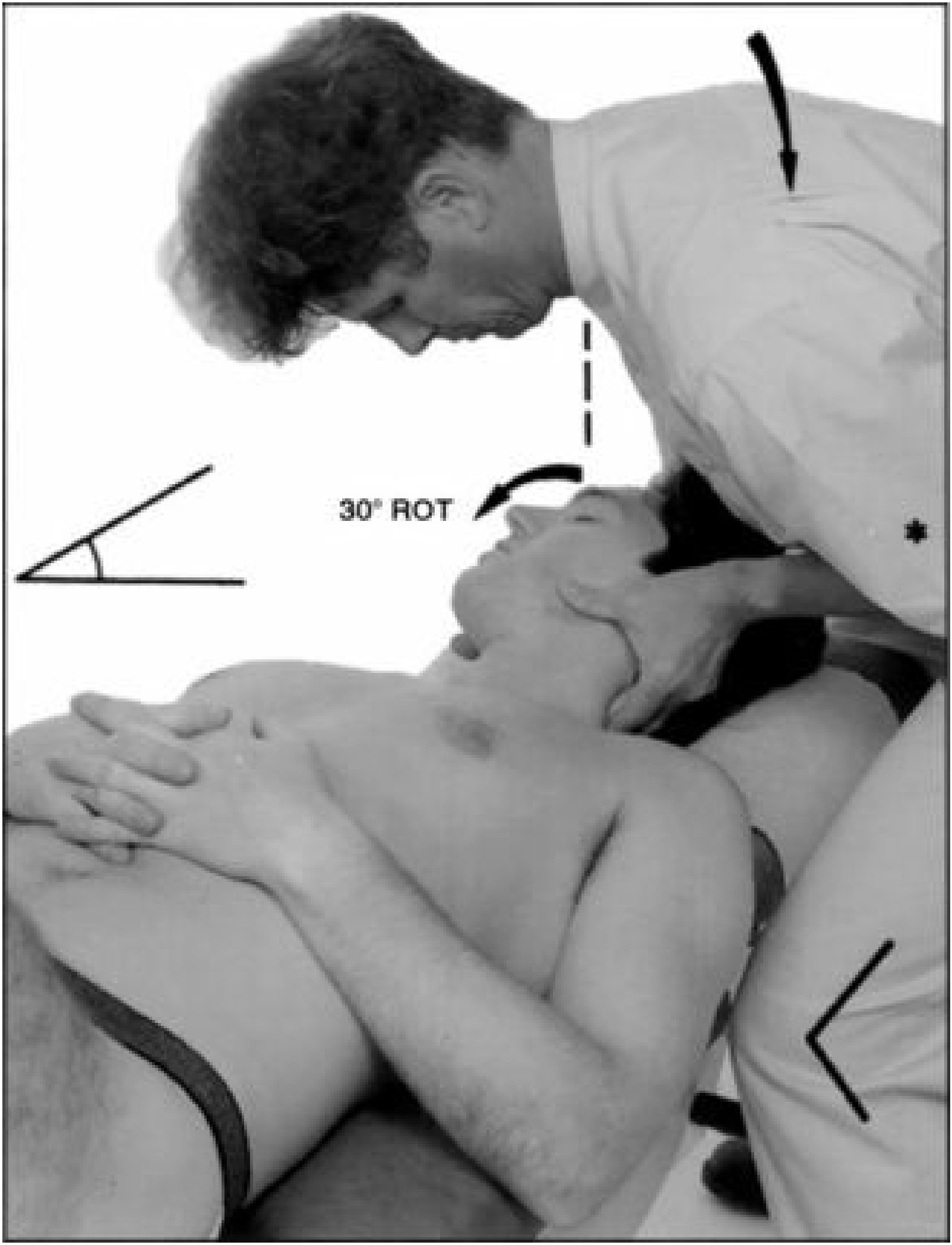

30° ROT

Figure 11.19

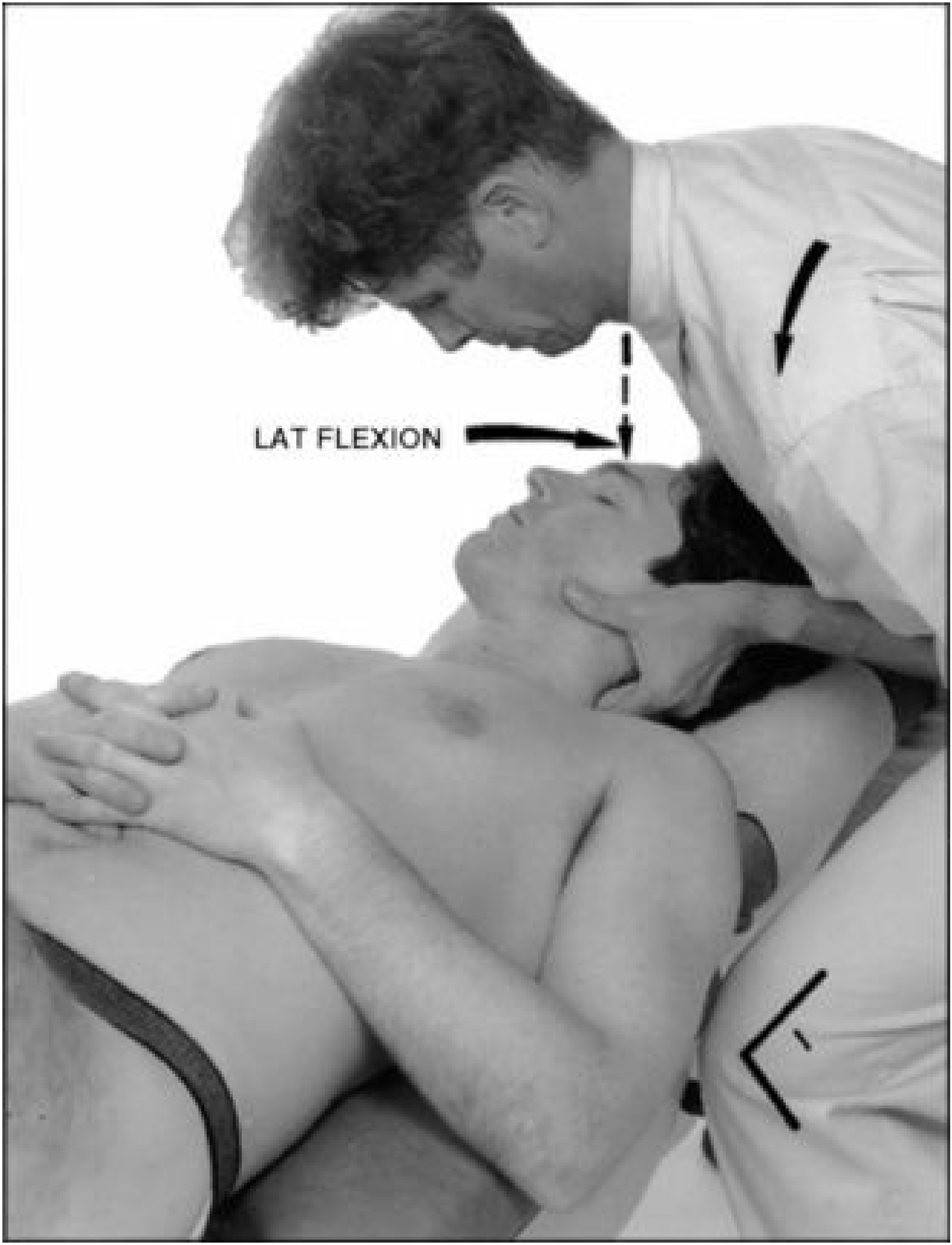

LAT FLEXION

Figure 11.20

Figure 11.22

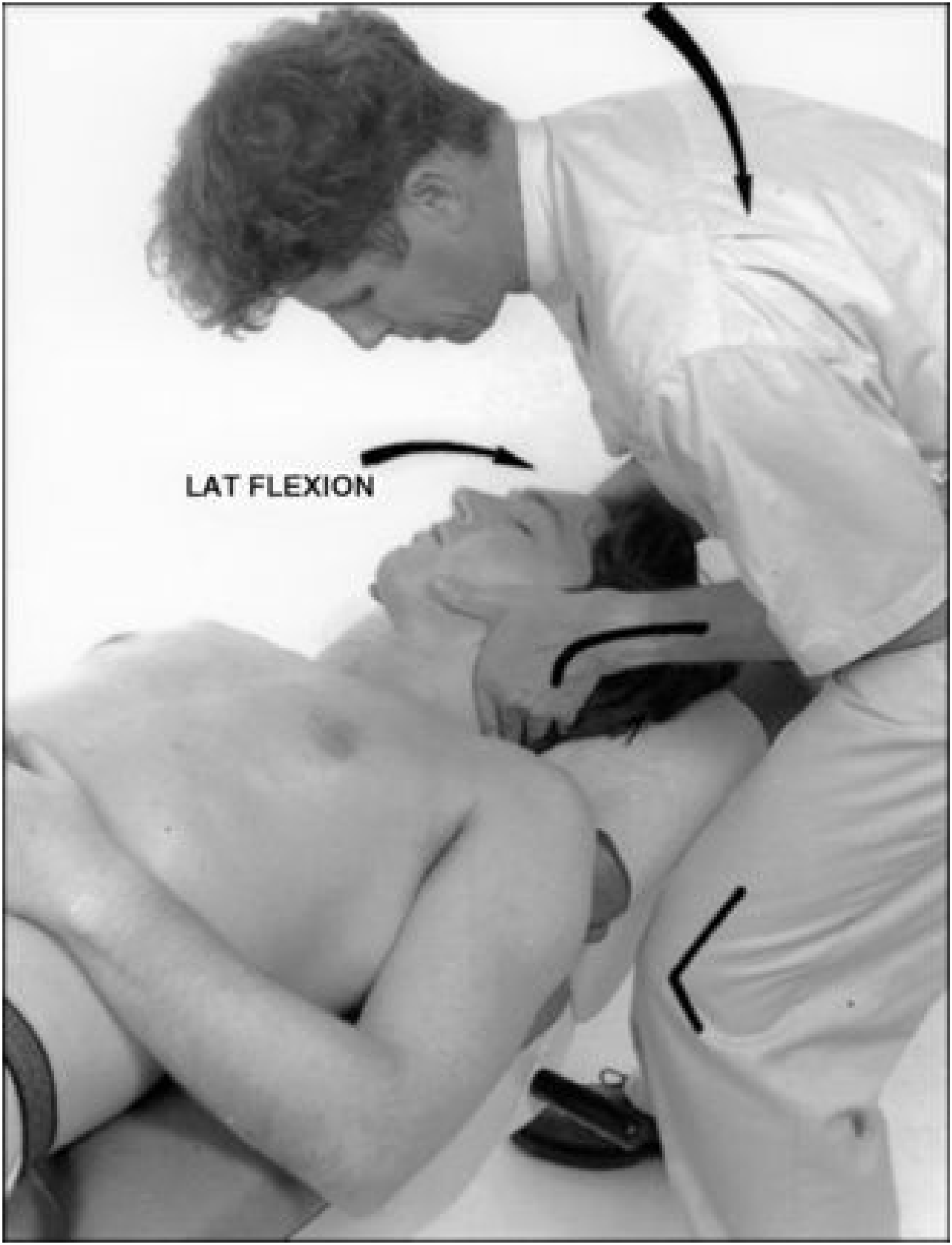

LAT FLEXION

Figure 11.23

Figure 11.24

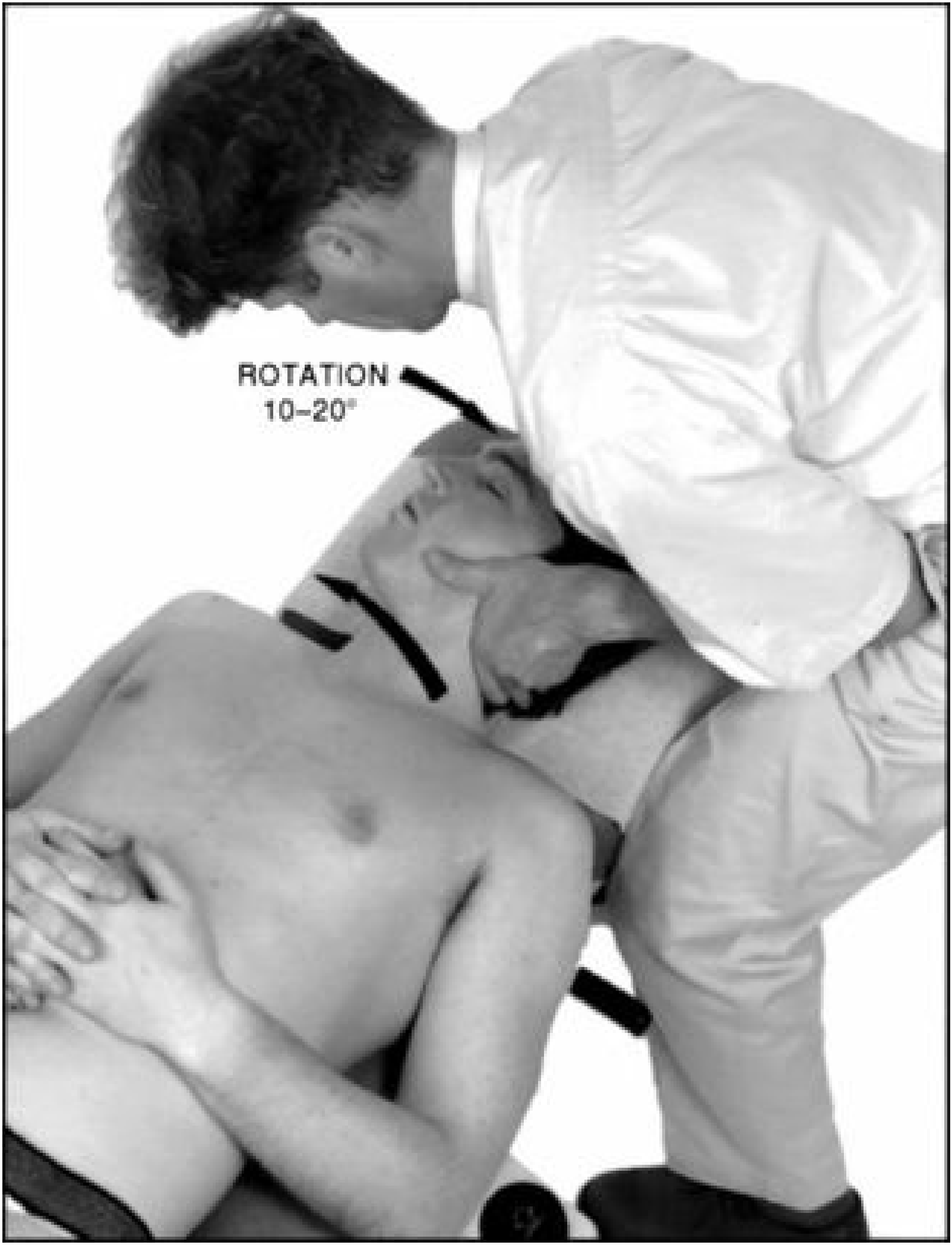
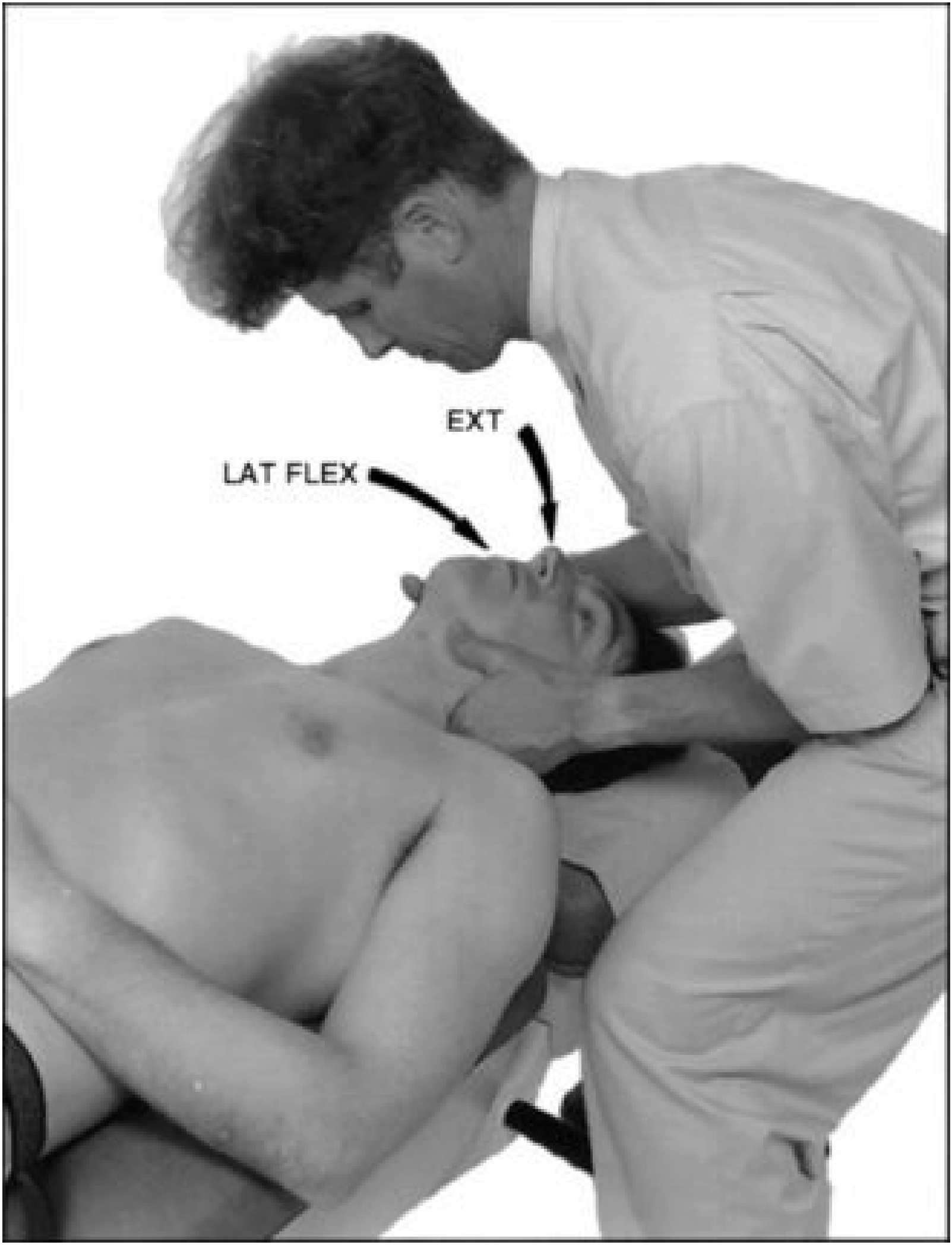

ROTATION
10–20°

Figure 11.25


EXT
LAT FLEX

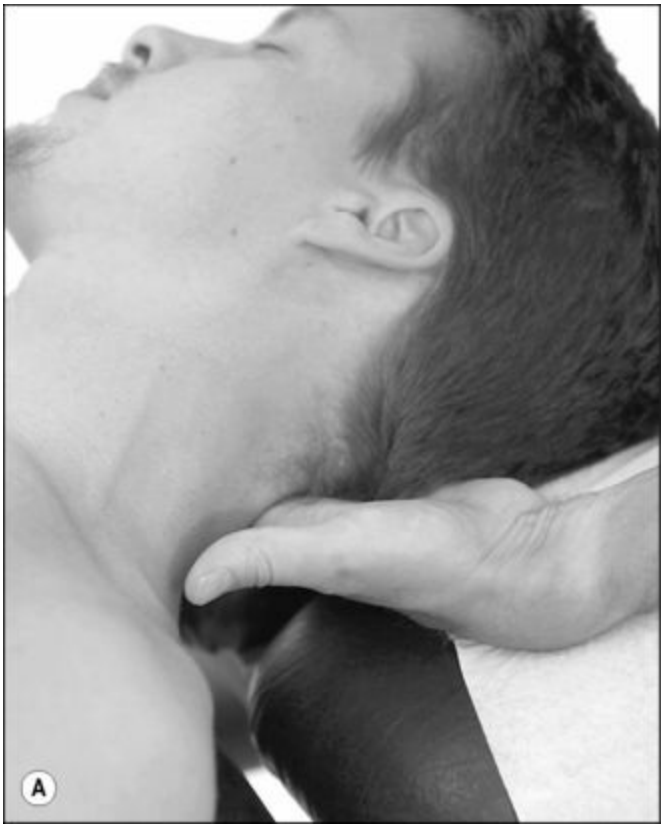


Figure 11.27A

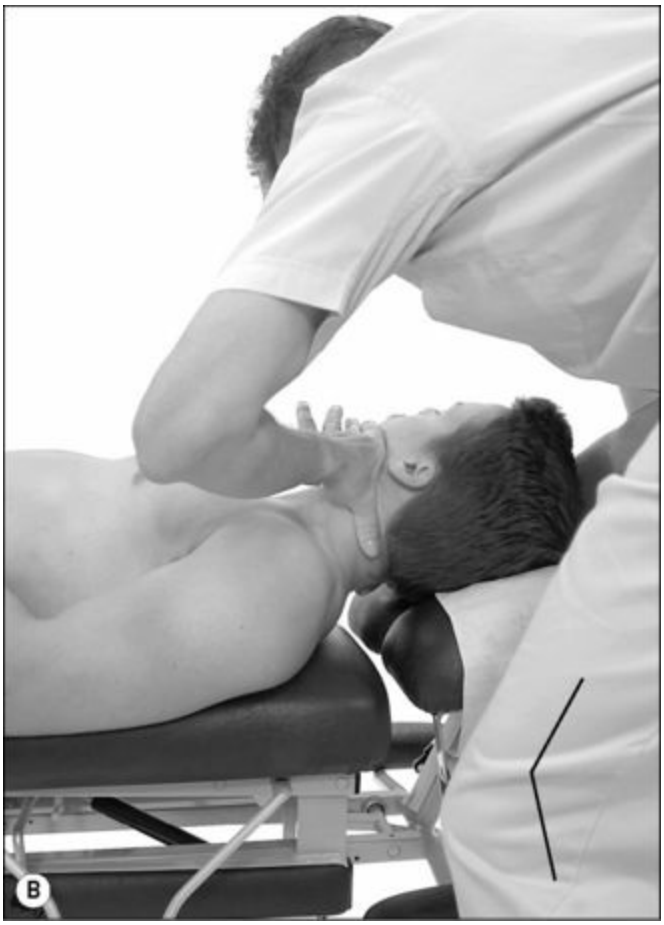


Figure 11.27B

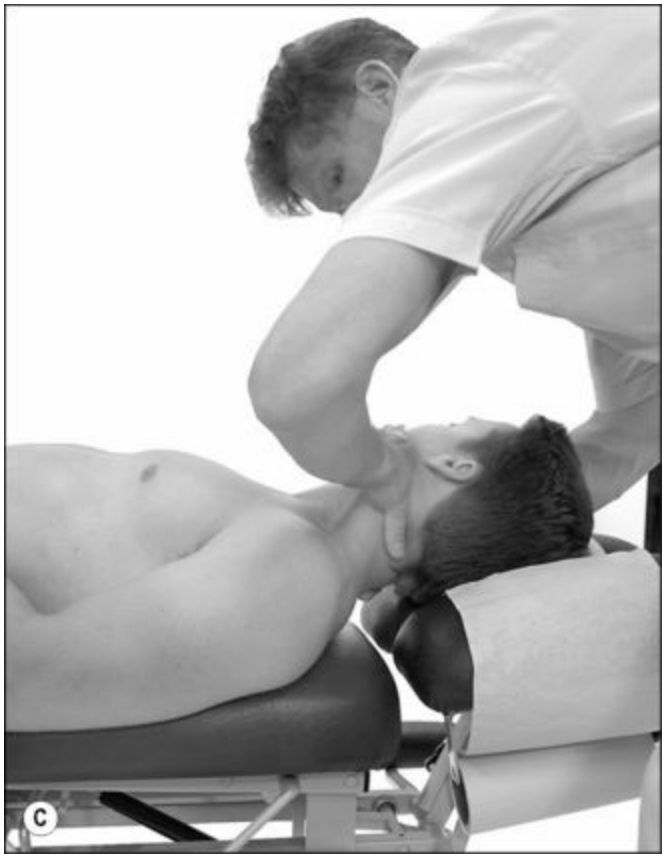


Figure 11.27C

Sitting cervical skills (Figs 11.28A-E)

1) The sitting position can be an effective clinical alternative, particularly if the patient is unable to lie supine. However, the effects of gravity acting on the head will cause some degree of muscle activity and possible reflex resistance by the patient. This may compromise control of the manipulative skills. The key is to learn to regulate actively the amount of rotation, lateral bending and flexion, plus manage the weight of the patient's head, all at the same time. The starting position is with the practitioner standing perpendicular (right angles) to the patient assessing the contralateral cervical spine facet joints with the middle finger acting as a segmental locator (Fig. 11.28A). The practitioner assumes a modified ski stance to ensure good balance. This requires that the height of the patient is compatible with that of the practitioner. This may require that the table is raised or lowered appropriately.
2) Once the segment has been located on the contralateral side the opposite hand reaches around and replaces the localizing finger pad with a middle finger contact over the SL and AP region of the targeted motion segment (Fig. 11.28B). The thumb of the contact hand is placed just ahead of the ear of the patient and the other fingers drape over the soft tissues of the cervical spine to add support.
3) The indifferent hand contact is crucial in this manipulative procedure to support the weight of the head. The middle finger wraps around the inferior aspect of the occipital rim and the thumb is placed in exactly the same position as the contact configuration. The remaining fingers support the

weight of the head (Fig. 11.28C). Ensure that the arms are tucked in close to the side of the body to shorten overall leverage.

4) The next sequence is to bring the target joint to tension. Flexion is initiated first, followed by rotation and then lateral flexion at the desired level. All movements must be small and controlled within patient and joint tolerance (Fig. 11.28D). The key here is to flex the head and neck forward in the sagittal plane first followed by the other ranges.

5) Preload is an essential psychomotor skill with this particular procedure. Maintain stability of the indifferent hand and slowly pull the contact arm/hand through in rotation in the direction of eventual dynamic thrust impulse (Fig. 11.28E). This particular procedure is not the most common clinical skill, but from a training perspective it provides the undergraduate with an opportunity to learn patient stability and segmental localization skills. Keep close to the patient to reduce the levers. The practitioner maintains the ski stance during the entire procedure to ensure good leverage and positioning. Do not let the head drop forward too far, stressing the soft tissues and articular elements. This is often as a direct result of standing to the side or slightly behind the patient instead of right angles. This tends to over-rotate and laterally flex the cervical spine

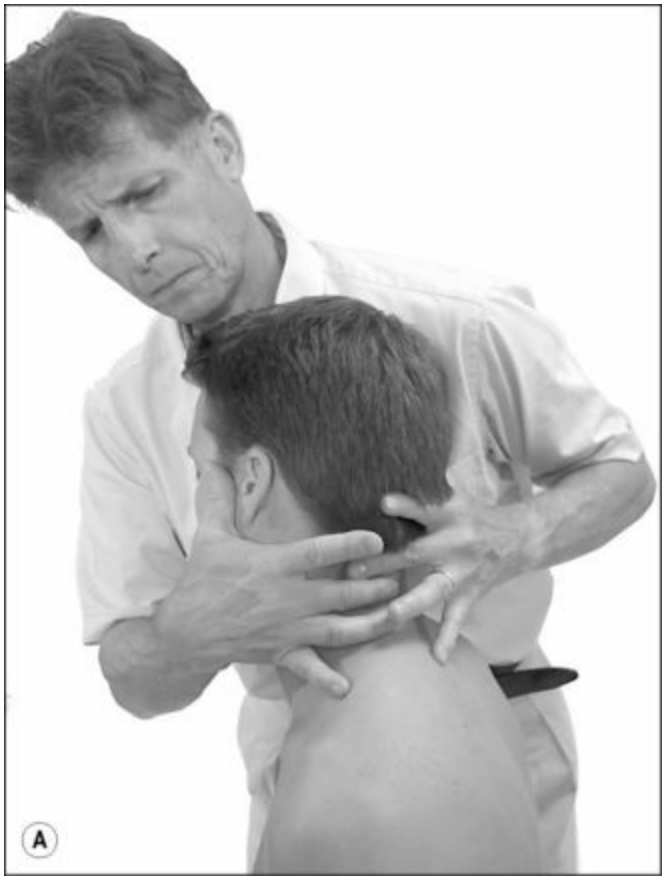


Figure 11.28A

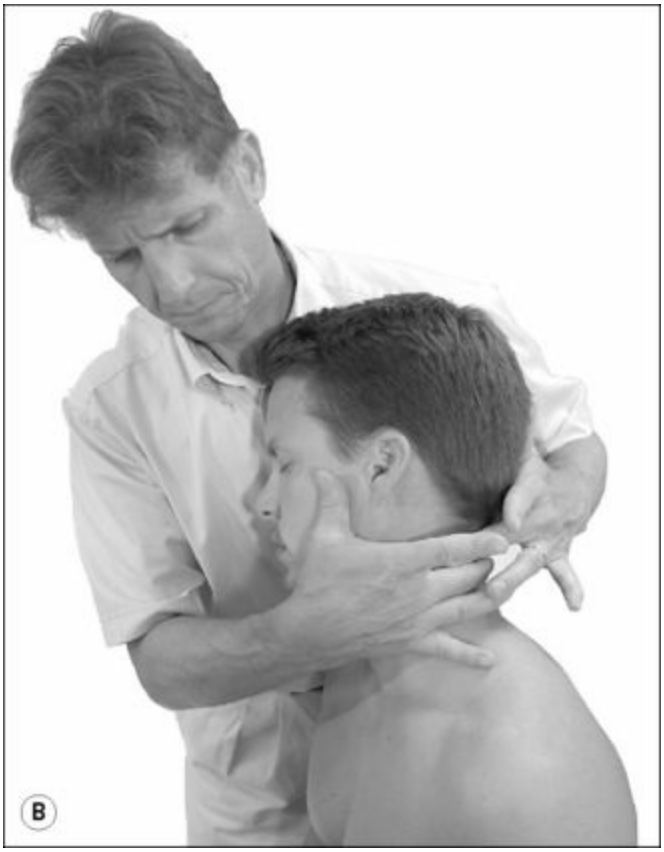


Figure 11.28B

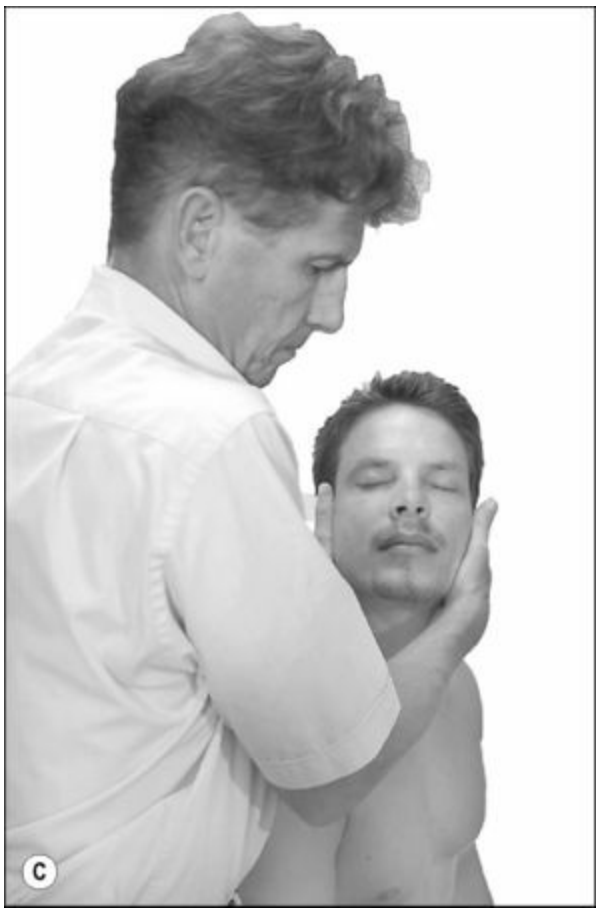


Figure 11.28C

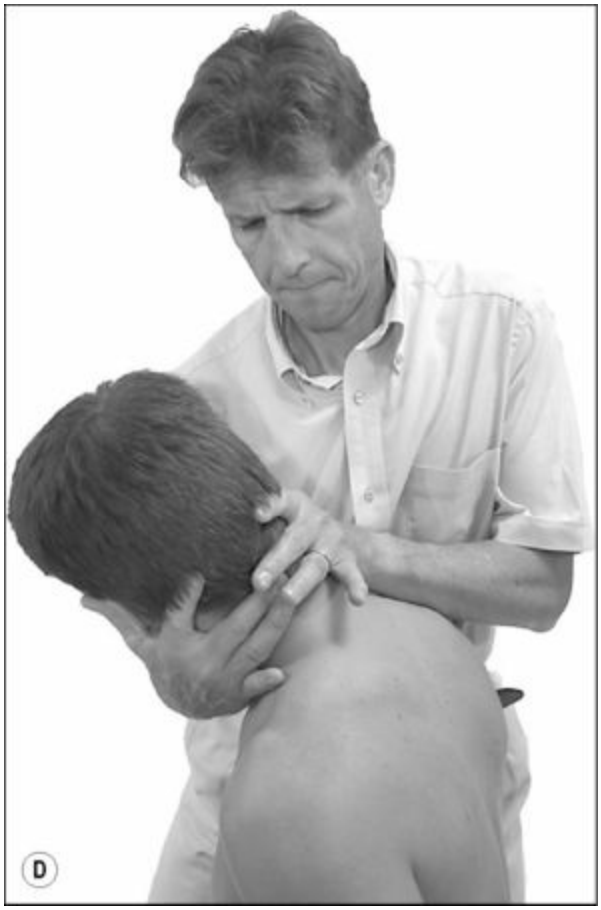


Figure 11.28D

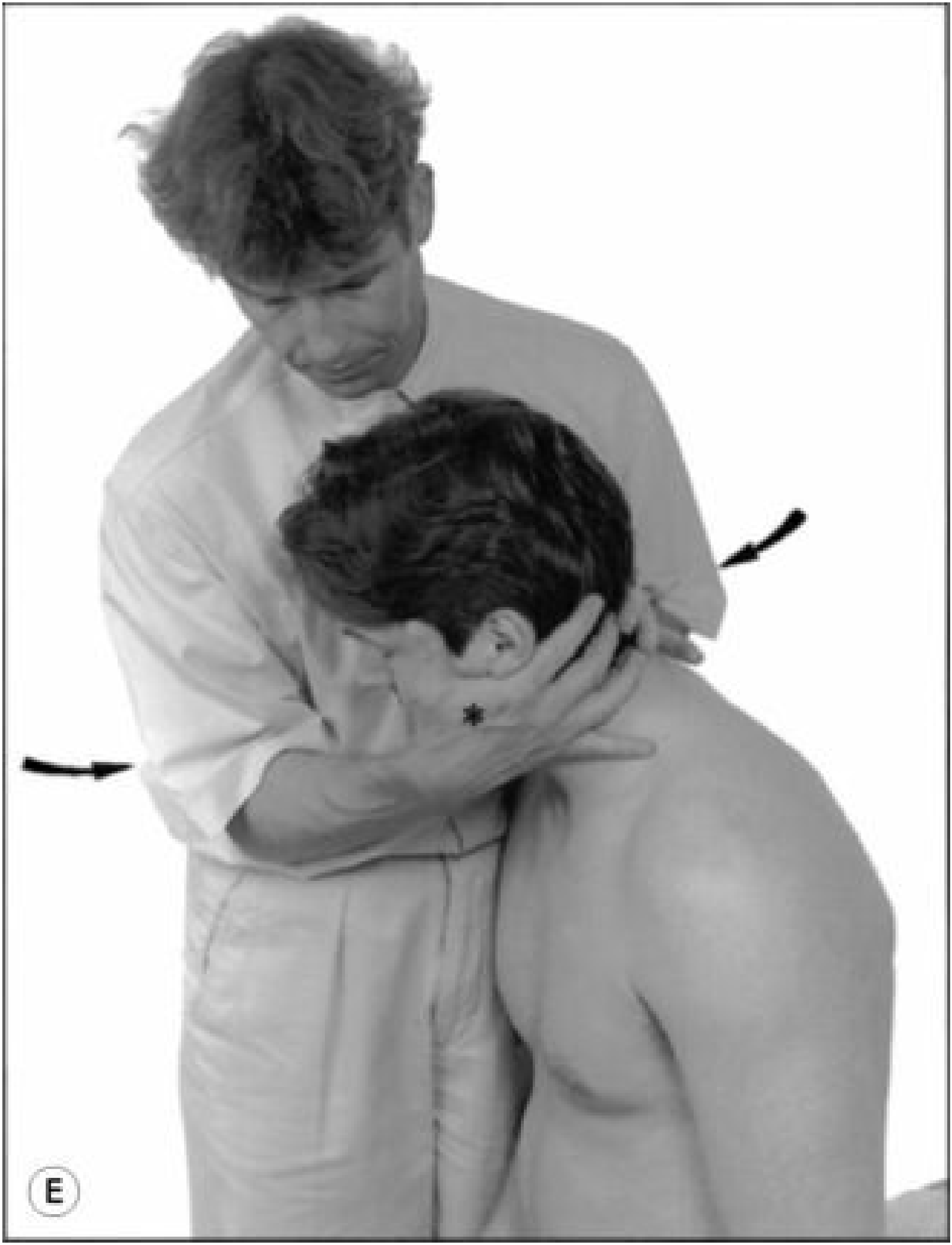

E

Figure 11.28E

Upper cervical spine manipulative skills: an introduction

It would be appropriate to include some of the basic skills associated with the 'upper cervical techniques'. These techniques are taught in many institutions throughout the world integrated into an overall diversified biomechanical model. This section will include a small section addressing some of the basic skills related to the upper cervical spine, particularly those related to the recoil thrust technique.

The upper cervical region constitutes a challenge to the practitioner of manipulative therapy, particularly in light of the greater potential for side-effects and adverse reactions following manipulation of the upper cervical spine than for any other spinal location. This may be partly the result of the extent of the innervation of this region and the neuroanatomical connections via the cervical trigeminal nucleus (Bogduk 1992, 2001a, 2002, 2003, Humphreys et al. 2003, Vernon 2001). Nonetheless, toggle–recoil and other upper cervical techniques incorporate *absolutely no forced rotation or other extreme range of motion*, which inherently reduces joint and tissue stress. This, in theory, should automatically present added clinical value as an additional method potentially minimizing possible post-treatment reactions. This area of the head and neck is extremely sensitive to movement via connections with the middle ear and cerebellum. The head and neck are neutral throughout the entire procedure, the patient is in a relaxed position and there is no prestress or preload force applied to the contact articulation. The technique provides a very useful method for those patients in whom the introduction of a dynamic thrust has been relatively contraindicated. In addition, the toggle–recoil is the only unique chiropractic technique that has demonstrated clinical effectiveness in a clinical trial investigating migraine headaches (Whittingham & Nilsson 2001, Whittingham et al. 1994). The downside to the technique is the fact that it appears to introduce higher forces to the spine when compared with other manipulative techniques, such as rotary and lateral flexion procedures (Kawchuk & Herzog 1993).

The toggle–recoil is classified as a neutral posture, short lever thrust (Grice & Vernon 1992), given in a specific direction with a designated depth and rapid speed (refer to the specific section in Chapter 6). The thrust is characterized by a fast release, rapid and sudden contraction of both triceps and pectoralis muscles simultaneously, creating leverage with both arms to apply the manipulative force directed to a specific point through the hands. The force of the adjustment will be delivered equally with both arms as a result of this arrangement. The 'recoil' component is generated mainly by the stretch response in the biceps before full extension of the elbows takes place. The contact hands are also actively lifted away from the patient's spine as part of the recoil procedure. This is usually where individual style is developed. The elbow joints are subsequently protected from repetitive impact trauma and the patient is spared full thrust forces. The trunk and shoulders are stable to maximize the rapid delivery of the dynamic recoil impulse thrust. A joint crack or 'pop' associated with cavitation is not characteristic of this technique procedure and should not be the therapeutic

goal.

To perform the toggle–recoil technique for the upper cervical spine, a free-fall headpiece and drop mechanism is most commonly incorporated with a set spring reset/release apparatus to take up part of the force and assist in force application. This technique requires a specially designed table, similar to the model illustrated throughout the text with the appropriate mechanical drop devices. Such a design minimizes potential injury to the patient and allows for some counter-resistance of the fixed vertebrae. The movable headpiece has a fixed and constant depth of approximately half a centimetre with a variable resistance control depending on the size of the patient and the force required. This maintains a certain amount of control throughout the procedure combined with a standard and repeatable application in most instances. Upper cervical recoil manipulative procedures are delivered primarily to the atlas and, to a lesser degree, the axis. From a mechanical perspective, it would seem difficult to isolate a single articulation during such a generalized thrust combined with a rather broad-based contact. Typically, the hand contact is either the reinforced hypothenar/pisi-form or double thumb combination. The thumb contact may provide a more realistic and accurate point of hand contact, considering the size of the transverse process or lateral mass of the atlas and the anatomical proximity of the atlas and axis.

The recoil thrust is characteristically performed with the patient in the side posture for correction of upper cervical dysfunction. The thrust skills can be applied to other areas of the spine and the extremities in various postures using prop/drop mechanisms to facilitate the therapeutic thrust.

The following section describes some of the basic skills associated with preparation of the upper cervical spine for application of a toggle–recoil thrust(Figs. 11.29 - 11.32). This is by no means exhaustive, considering all the diagnostic and therapeutic indications for this particular manipulative intervention. The skills are once again basic in nature, to provide an introduction to this traditional chiropractic manipulative approach. Special attention to the finesse, speed and control that are required for this recoil technique will be acknowledged. Only one contact, the posterior aspect of the transverse process of the atlas, will be included (*if you can find it!!)*. This section will describe only patient preparation skills. Establishing a firm and accurate contact with the spine will improve the successful delivery of the toggle thrust and the outcome of the manipulative procedure. There will be no delivery of a dynamic toggle–recoil thrust at the undergraduate level. The patient is lying in the right-side posture recumbent position, as described in Chapter 5, with both knees flexed.

1) The patient is lying in the right side posture with the head supported by the headpiece which is elevated to accommodate the width of the patient's shoulder. The head is placed in a neutral positon and is slightly flexed to open the suboccipital region. The practitioner stands in front of the patient at a 45° angle to the head in a crouched ski posture. The thumb of the left hand, after the TP of Cl has been located with either finger, draws the tissue slack away from the practitioner being careful not to drag too much hair (Fig. 11.29).
2) The hypothenar/pisiform aspect of the right hand (the contact hand) follows the locating/tissue slack thumb drawing more tissue if necessary in the same direction (Fig. 11.30). The contact is

light with no excess pressure over this naturally sensitive and tender area. The contact hand forms a firm but relaxed chiropractic arch over the anatomical contact. The other fingers support the placement by lightly gripping the cervical musculature.

3) The support hand reinforces the contact hand position (Fig. 11.31). Both hands are in a high relaxed arch posture to maintain a high degree of hand skill and anatomical specificity. Both arms are flexed equally. There should be no pressure over the contact point and the arms should be totally relaxed.

4) The practitioner completes the series of skills by positioning the suprasternal notch directly over the contact hand. The practitioner is in a relaxed ski crouch stance, with the arms equally flexed at the elbows and the shoulders are level to maintain symmetry required for the dynamic thrust (Fig. 11.32). There should be no noticeable pressure over the contact point and no dynamic impulse should be rendered.

Figure 11.29

Figure 11.30

Figure 11.31

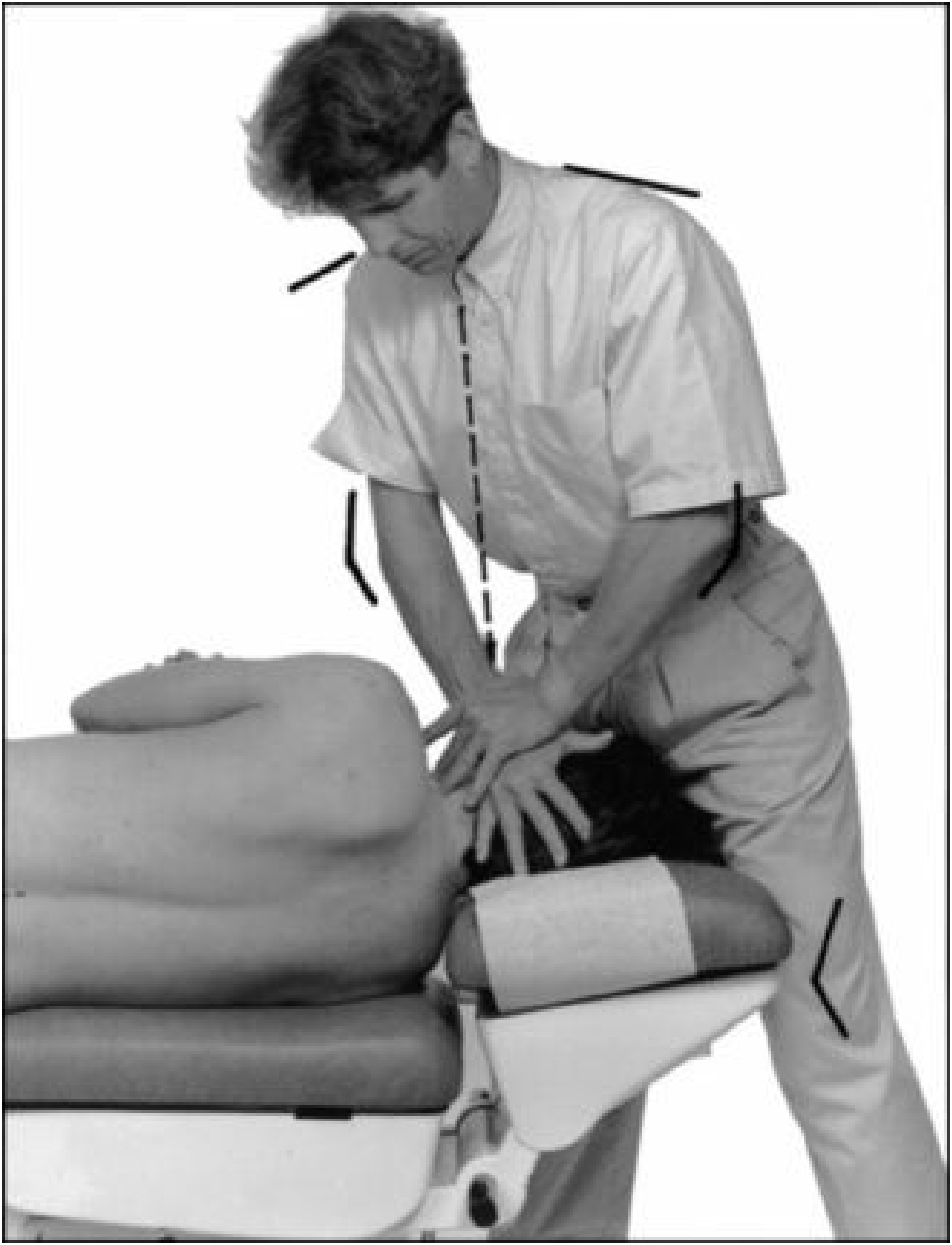


Figure 11.33

Figure 11.34

Figure 11.35

Figure 11.36

Figure 11.37

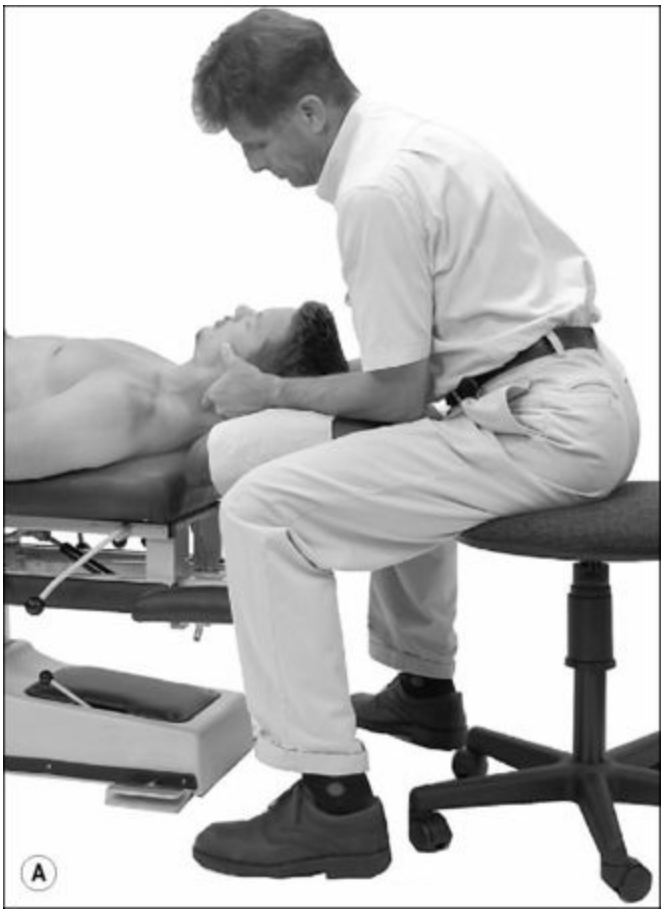


Figure 11.38A

Occipital rim (OC)

With the patient in the supine posture, the practitioner can apply a cephalad traction component along the entire rim of the occiput (Figs. 11.38B & 11.38C). This can be done as a reflex traction skill or combined with a dynamic impulse thrust. At this stage it is recommended that the impulse thrust be avoided to allow the other essential skills to develop. The purpose of this skill is to stretch the upper cervical joint capsules and, to a lesser degree, the posterior musculature, without subjecting the area to excessive mechanical stress. Applying traction to the occiput is a skill on its own.

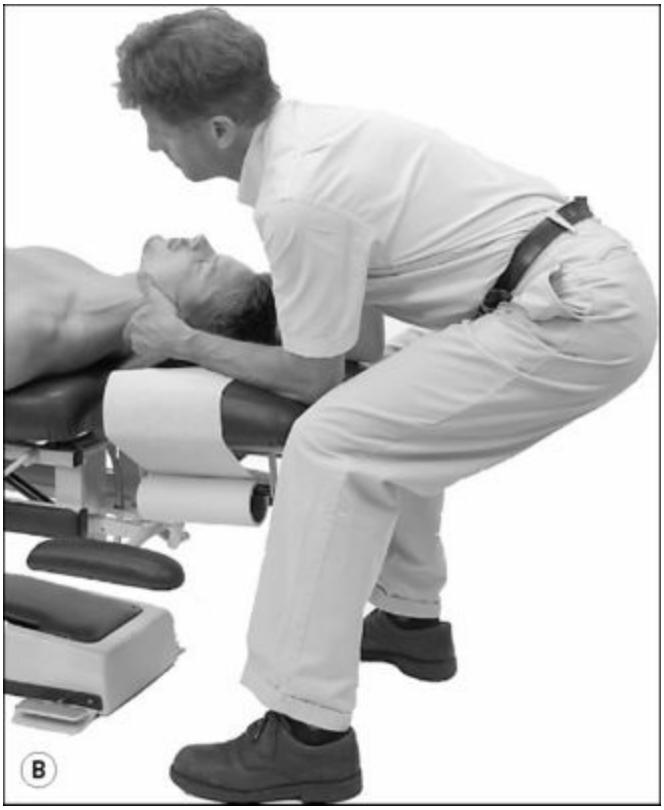


Figure 11.38B

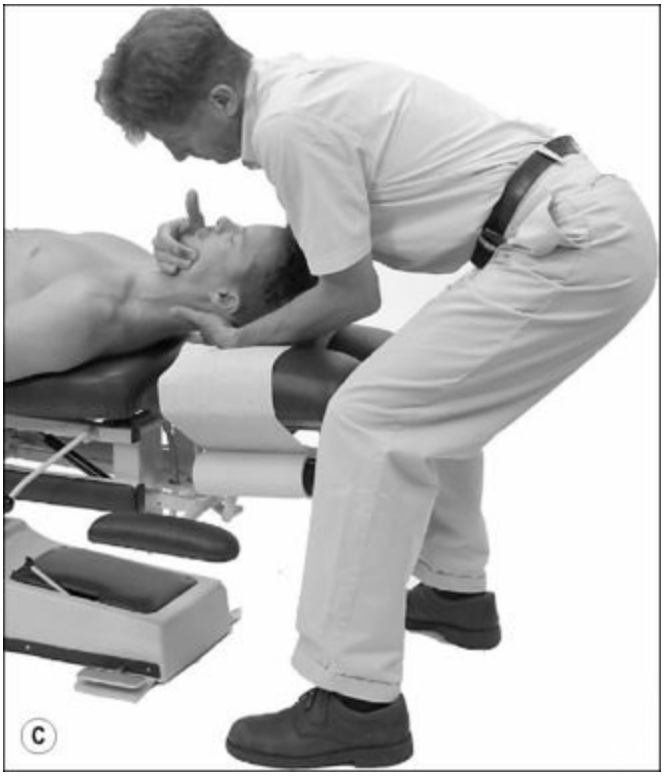


Figure 11.38C

the mother (parent) should stay in close attendance within the infant's view, holding their hand and comforting them. This is generally only helpful if the parent is relaxed and comfortable with the situation, so detailed explanations of the chiropractors' intentions and actions as the examination/treatment happens is vital. The chiropractor should also reassure the parents and emphasize the non-traumatic nature of the interventions.

Figure 12.1 Angled memory foam wedge

Examination techniques for infants

Inverted hang

The inverted hang (DeJarnette 1979) is a test that is used extensively in the chiropractic profession and can give some very useful results, but it needs to be used with caution**. It is absolutely contraindicated in haemorrhagic disease of the newborn or any other condition involving bleeding or haemorrhage. Inversion should also be avoided if there is hydrocephalus, hip instability or any neurological symptoms, (i.e. epilepsy)**. The inverted hang should be avoided in the first month of life, as up to one-quarter of infants that have experienced normal vaginal delivery

have an asymptomatic intracranial hemorrhage (Huang & Robertson 2004, Looney et al. 2007, Roland et al. 1990). That said, the test provides, in not too severely compromised babies older than 4 weeks, definitive indications of where a lesion is located and where to focus treatment.

Method

The baby should lie supine on the chiropractors' lap, with the soles of the feet facing the chiropractors' body. The lower limbs (not just the ankles) are gripped so that the feet can be dorsiflexed (using a pistol grip with the forefinger performing the dorsiflexion) (Fig. 12.2). The chiropractor, sitting on the edge of the bench, gradually lowers his/her knees so the baby angles down towards the floor without being startled. Slowly, the chiropractor lifts the baby up by the legs so he or she hangs in inversion over the chiropractor's lap (if the baby is small enough) or over the bench or floor (Fig.12.3). The baby is then gently returned to the chiropractor's lap, the chiropractor's knees being used as the fulcrum to lie the head back down. This can be a little tricky if the infant goes into hyperextension, so the parent may need to guide and support the infant's head.

Figure 12.2 Inverted hang stage 1

Figure 12.3 Inverted hang stage 2

The chiropractor should explain the procedure and reassure the parents (particularly first-time parents) prior to performing the inversion: the author will never forget having a mother burst into tears when she saw her beloved baby inverted.

Results

- The head rotates in one direction: fixation of C1–C2 (change the baby's position first to make sure that he or she is not looking at Mum)
- The head is held in lateral flexion: occipital condyle or cervical facet fixation (possible KISS I syndrome)
- The neck is in extension: bilateral occipital condylar compression (possible KISS II syndrome)
- The neck is held in flexion: cranial dural restriction
- The baby's trunk adopts a laterally flexed or twisted posture: thoracic/rib fixation and/or body fascial restriction
- The leg lengths are uneven: sacro-iliac ligamentous injury/instability (Williams 2005).

Most babies, certainly those below 6 months of age, should 'enjoy' being hung upside down; if this distresses them, this is another sign of a spinal or cranial restriction or compression.

Assessment of trunk flexibility

This procedure (which can be used up to 3 months of age) is a very useful method of finding and correcting fascial restrictions occasioned by intrauterine constraint.

Method

The baby is held by the chiropractor, one hand under the pelvis and the other hand under the shoulders, neck and occiput. The baby is gently flexed and extended, ease of motion and restriction being ascertained. The baby is then laterally flexed at the trunk to the left and right, the trunk is then twisted to the left and right. Restriction in any direction is noted (Fig. 12.4).

Figure 12.4 Assessment of lateral flexion

Correction

If, for example, the baby is restricted in left lateral flexion, the baby should be taken gently into right lateral flexion (the direction of freedom) as far as possible until a release is felt in that direction. The infant should then move more easily into the previously restricted direction. This principle is applied to all directions of restriction: go into the opposite free direction until it releases or unwinds and then recheck the areas of previous restriction.

Assessment of the cervical spine

In those older children who can sit still, conventional static and motion palpation procedures can be employed, but in infants this is not the case. With younger babies, the easiest method is for the chiropractor to cross his/her leg over, ankle onto thigh in a figure 4, and sit the baby in the recess formed. The baby's head is held over the fronto-parietal area, while the other hand presses the infant's transverse processes individually from T1 to C1, posterior to anterior, feeling for pliability. Any rotation, bilateral fixation or restriction is then easily palpated (Fig.12.5).

Figure 12.5 Assessment of the cervical spine

Cervical spine examination can also be performed supine, with the examiner laterally flexing the

infant's neck and feeling for restriction of the cervical facet joints (Fig.12.6).

Figure 12.6 Spine cervical palpation

Examination of the thoracic and lumbar spine

Thoracic and lumbar spine examination in infants who cannot sit unsupported (before aged 6 months) can be performed a number of ways; firstly static palpation and gentle segmental springing can be undertaken with the infant supine on the adjusting table or on the memory foam wedge. For the more stressed infant, examination of all spinal regions may have to be carried out while being held by a parent over their shoulder (Fig.12.7) or lying prone on the parents' stomach with the parent in turn lying on the adjusting table. Static palpation and segmental springing are performed in a very similar way to the adult, but with obviously much decreased force; this activity, therefore, requires more refined palpation skills.

Figure 12.7 Spinal palpation

Motion palpation of the thoracic and lumbar spine in infants can be problematic requiring the

application of specialized techniques.

The easiest method for motion palpating the ribs and thoracic and lumbar spine in an infant is with the infant lying prone over the chiropractor's lap (it is advisable to use a towel or other covering to protect the chiropractor's clothing). The infant's head and face hang over the lateral edge of one thigh, facing the floor. The doctor's legs are then slowly opened and closed by a few centimetres; this creates some extension in the spine and ribs and allows motion and any restrictions present to be assessed (Fig. 12.8). This is useful as far up the spine as T1 and as low as L5.

Figure 12.8 Motion palpation prone

This is also a good position for static palpation and to look for any static spinal rotations or vertebral malpositions.

Sacroiliac joint examination

Sacroiliac joint assessment is also easily performed with the infant prone on the examiner's lap. The relative position of the posterior superior iliac spine (PSIS) should be noted. The chiropractor can then extend the infant's thigh and, as the leg is extended, the ability of the PSIS to rotate to the anterior is palpated (Fig. 12.9). Sacroiliac joint end play can be evaluated and any flexion/extension lesions of the SI joints noted. An indicator the author has found to be reasonably reliable for indicating sacral position is the buttock squeeze. The method is to remove or pull down the nappy and squeeze the buttocks together and observe the gluteal cleft (Fig. 12.10). Deviation of the cleft to either side indicates an anterior sacrum on that side. There will often also be poor lower body flexibility and sometimes an unwillingness to abduct the knees with the hip and knees flexed.

Figure 12.9 Sacroiliac palpation

Figure 12.10 Gluteal squeeze

Often asymmetric fat creases are apparent on the thighs or over the sacrum in the presence of hip pathology. This can also be due to a lesion of the sacrum. Sacroiliac pliability can be assessed with the infant supine. One ileum is grasped over the PSIS by one hand and the sacrum on that side is sheared against it by the other hand. This is then repeated on the opposite side; the pliability of each joint is assessed and compared for restriction.

Manipulative treatment

There are numerous manipulative techniques in chiropractic many of which can be adapted for paediatric use. The purpose of this chapter is not to give the reader a detailed ‘how to’ of chiropractic technique, but some guidance of manipulative strategies and adaption’s for paediatric use.

Cervical spine

Great care needs to be taken when adjusting the cervical spine of young children and infants in particular. It should be remembered that the infants' cervical spine has poor neuromuscular control, which leaves it vulnerable to trauma, for example from just being picked up without supporting the head.

The frontal angle of C0–C1 is increased (Biedermann 2005) in infants. The facet joint angles in the cervical spine are less oblique in young babies and children, and the uncinate processes are horizontal (Pauc 1980). This allows considerable motion of the cervical spine in flexion and extension, but increases vulnerability to damage with careless handling. Weinstein (2001) stated that the paediatric spine is between 5 and 10 times less stiff than the adult's spine; meaning that the depth and force of manipulative procedures in children should be much less.

Strong rotary manipulation of the cervical spine is, in the author's opinion, inappropriate in young infants and the achievement of an audible osseous release is not necessary. It should be remembered that the parents may be very nervous about their child undergoing any manipulation, and loud noises and rapid movements of the infant's head and neck can increase the parental stress, making case management more difficult.

Digital cervical

The fingertip is an excellent contact point for corrections in the infant's spine; the spinous, lamina and transverse processes are the main vertebral contact points used. Which vertebral contact point is chosen depends on the desired line of drive, i.e. whether the chiropractor is trying to establish motion in rotation, the posterior-anterior (anterior-posterior) or inferior-superior (superior-inferior) directions.

When adjusting the atlas the transverse processes and posterior arch are the main contact points, the indifferent hand stabilizes and supports the infant's head and neck on the contralateral side, a small amount of lateral flexion and rotation of the infant's spine may be needed to gain sufficient joint tension. The infant's neck can be very mobile in lateral flexion and rotation, therefore attention should be given to trying to establish lateral flexion and rotation at the segmental level to gain the necessary joint tension, rather than laterally flexing and rotating the whole of the cervical spine. It is very important for the chiropractor to think clearly about the line of drive of the correction bearing in mind the angulations of the facet joints to be corrected. This is best accomplished by lining up the forearm of the contact hand in the same plane as that of the impulse or adjustive thrust (Fig. 12.11). The thrust used is a low amplitude fast impulse; the depth varies according to the size of the child. One illustration of the amplitude of this thrust is that on newborns and young infants it is only of the depth of thrust that would be tolerable on one's eyeball.

Figure 12.11 Digital cervical adjustment

Cervical bridge

The previously described cervical bridge examination technique can be easily adapted for correction of cervical restrictions. The examiner's forefinger and thumb bridge around the infant's cervical spine while the infant is stabilized in the chiropractors lap with the front of the infant's skull stabilized by the indifferent hand. Contact points are the lamina–pedicle junction or the transverse processes. The side of posterior rotation of the transverse process (lack of anterior glide on that side) is identified. A direct but gentle pressure is exerted in that direction, after a few seconds a soft tissue 'give' is felt; this is then 'set' with a fast flick (a rapid contraction of either the wrist extensors or the wrist flexors

on the side of correction) in the direction of correction. The author equates this to the soft tissue 'give' of the muscular contraction at the vertebral level releasing and then the fast stretch 'set' is applied at the ligamentous barrier. The infant will tend to wriggle against the pressure, which instead of being disruptive often facilitates the adjustment. If no soft tissue give is felt, the opposite side should be taken gently to the anterior for a few seconds and held in the opposite direction (using the 'rusty hinge' principle). A fast stretch is not used on that side. The original direction of the adjustment is then repeated and the soft tissue 'give' is then usually achieved and the high-velocity flick is applied (Fig. 12.12).

Figure 12.12 Cervical bridge adjustment

Thoracic and lumbar spine

Prone corrections

Prone adjustments of the thoracic spine are easily accomplished for young infants in the same position that palpation takes place; across the chiropractors lap using finger-tip contacts. The contact points can be bilateral transverse processes, unilateral transverse process, bilateral/unilateral rib angles or a spinous process.

The chiropractor can use bilateral finger contacts to the infant's transverse processes (Fig. 12.13). This would be the most common contact for segmental restriction in the thoracic spine. If significant unilateral vertebral restriction or rotation is present, the contact can be a unilateral transverse process (Fig. 12.14). These contacts can be reinforced by the other hand, if required, to stabilize the contact and the thrust.

Figure 12.13 Bilateral TVP adjustment stabilized with indifferent hand

Figure 12.14 Unilateral TVP contact

Spinous process contacts are less commonly used but are also very effective for treating extension restrictions of the thoracic and lumbar spine, and for correcting static vertebral posteriority. The contact point is usually the tip of the spinous process with the tip of the first or second finger (Fig. 12.15). The lateral aspect of the spinous may be contacted if there is a static rotation or a restriction joint play in rotation. Spinous contacts can be supported by the other hand if desired, but due to the contact area being very small it is often easier not to. The direction of the thrust is of great import and is generally performed in the plane of the facet joints, i.e. posterior to anterior and inferior to superior when adjusting the spine. The direction of rib angles is mainly posterior to anterior, although some accommodation should be made if one of the ribs sits in a more superior or inferior direction. The thrust is a gentle 'set' and may or may not be accompanied by joint cavitation. The depth of the thrust depends on the age of the infant/child, but is never at a level to cause discomfort to the infant/child.

Figure 12.15 Spinous contact

Vertical lift adjustments

The thoracic spine (below T2) and the upper lumbar spine is most easily adjusted once the infant has gained adequate head control, by using the weight of the infant to assist with the correction. The chiropractor picks up the infant with both hands around the thorax, fingers to the spinal segments/ribs to be adjusted and extends the infant over his or her hip or thigh a few degrees; this allows tension to be introduced into the involved segment (Fig. 12.16). The area of fixation – spine or ribs – is contacted with two fingers on either side (rotation can be corrected by primarily contacting only one side). A flexion flick of the wrists performs the adjustment, usually with a joint cavitation, but this is not necessary as long as motion is improved.

Figure 12.16 Vertical lift adjustment

With slightly older infants who need less stabilization and have more body weight, the chiropractor can lift the infant up in front of him or her and adjust the involved vertebral level with the flexor wrist-flick. This can also be performed with the baby facing away from the chiropractor,

who then uses the thumbs to contact the involved vertebra. A wrist extension flick is then used to complete the adjustment (Fig. 12.17).

Figure 12.17 Vertical left thumb contacts

Side posture – lumbar spine

Rotational fixations of the lumbar spine can be addressed in young infants by a side-posture correction. This is accomplished with small infants side-lying in the chiropractor's lap on the side of spinous rotation or anterior sacrum, with the baby's inferior arm stabilized and held between the chiropractor's thighs (Fig. 12.18). The upper shoulder is held with one hand, the infant's upper leg being flexed and the pelvis stabilized with the practitioner's wrist. Contact is made with the mamillary process using the first two fingers of the chiropractor's inferior hand. Tension is taken up and a gentle 'flick' adjustment is given, usually with an audible osseous release.

Figure 12.18 Side-posture correction on lap

Older infants are better adjusted on an adjusting table. The infants leg can be stabilized by the chiropractors thigh; keeping the infants knee straight and flexing the hip will help gain tension (Fig. 12.19).

Figure 12.19 Side posture toddler

Pelvic corrections

Side posture

Side posture adjustments to the pelvis can be used for infants and young children as detailed above for the lumbar spine. The contact points are obviously different and depend on what the chiropractor is trying to achieve. The main contact points are the PSIS, ischium, and the upper and lower sacrum. Excessive trunk rotation of the infant/child should be avoided and the thrust should be shallow and fast.

Prone corrections

Prone pelvic adjustments are commonly used on infants and young children. The application often involves the application of a high-velocity impulse at the point of the range of motion the chiropractor has palpated a restriction. For example with the infant prone, the chiropractor extends the infant's thigh and palpates the anterior rotation of the PSIS at the point of restriction a very shallow high-velocity impulse is then applied (see Fig. 12.9). The sacrum can also be the contact point, especially on the posterior side (the side opposite gluteal cleft deviation). Drop piece techniques can be used on the pelvis for older children, but this is not recommended for infants, as it often stimulates a Moro type stress response and can cause the infant to become distressed.

Supine corrections

Correction of an infant sacrum supine takes place with the hands in the same position as for the assessment detailed earlier in the chapter. The side of posterior restriction is held in posterior to anterior stress and this is continued until a soft tissue give is felt; with this a fast stretch impulse (via the wrist flexors) is given to set the adjustment (Fig. 12.20). In an infant it is also advantageous to ensure the sacrum is able to rotate about the axis of the second sacral tubercle. To facilitate this it is necessary to open the posterior aspect of the sacroiliac joints and encourage the flexion-extension motion of the sacrum. The chiropractor's hand contacts the supine infant's anterior superior iliac spines and squeezes them gently together, opening the sacroiliac joints. The doctor's other hand cups the sacrum (with a nappy in situ!); this hand gently flexes and extends (rocks) the sacrum to encourage the motion (Fig. 12.21).

Figure 12.20 Supine sacroiliac adjustment

Figure 12.21 Sacral mobilization supine

Side-posture modifications

Flex the hips less than usual to reduce adverse pressure being placed on the abdomen by the flexed upper thigh. Position the patient further away from the clinician, so as to provide more support for the abdominal region on the table. If the patient complains of stretching or pressure in the groin, abdomen or ribs consider whether there is too much rotation, torque or hip flexion (Bartol 1997, Esch & Zachman 1991, Fligg, 1986). It is advisable to assist your patient on and off the bench and help support the abdomen when moving the patient into position (Fig. 13.2). If needed, place a pillow or folded towel between the abdomen and the table to support the weight of the fetus.

Figure 13.2 Support the abdomen when moving the patient into position.

Prone modifications

Certain tables have an abdominal/thoracic section that can be dropped away, and a lumbar/pelvic section that can be raised to reduce pressure onto the abdomen (Fig. 13.3). In tables with spring-supported drop pieces, the tension should not offer much resistance (Esch & Zachman 1991). In addition commercially made pregnancy pillows can be used to allow the patient to lie prone more comfortably by reducing abdominal pressure and pressure on enlarged and tender breast tissue (Figs 13.4 & 13.5).

Figure 13.3 Bench modification showing abdominal/thoracic section dropped away, and a lumbar/pelvic section raised to reduce pressure onto the abdomen.

Figure 13.4 Commercially made pregnancy pillow allows a pregnant patient to lay prone more comfortably by reducing pressure on the breast tissue and abdomen.

Figure 13.5 Pregnant patient lying prone on a commercial pregnancy pillow.

The use of pillows may allow prone positioning on a flat bench. The pillows should be sufficiently high to take pressure off the abdomen. The knees should be flexed to take stress off the lower back, and the feet should be elevated with a pillow or roll (Fig. 13.6).

Figure 13.6 Bench modification with pillows to reduce abdominal and breast pressure in a prone pregnant patient.

Supine modifications

After the first trimester the length of time the patient is supine may need to be limited as pressure can be exerted on the aorta and superior vena cava, possibly decreasing the fetal circulation or reducing the maternal cardiac output. The clinician must be vigilant for warning signs such as shortness of breath, and increased breathing.

When positioning the patient supine, the head and shoulders should be elevated enough to avoid cardiovascular stress and the knees should be supported in a flexed position. Triangular 'wedge' pillows are available commercially and work well for these purposes; alternatively normal pillows can be used (Fig. 13.7).

Figure 13.7 The use of pillows to elevate the neck and upper thoracic region of a pregnant

patient to allow for more comfort in the supine position.

Anterior thoracic adjustments may be beneficial in the thoracic spine in pregnancy, but may need modification. Breast tenderness may make this technique uncomfortable for the patient. This can be reduced by the use of a rolled up towel being placed just below the breasts and the patient crossing their arms over it so reducing pressure directly over the breast tissue (Fig. 13.8). In late pregnancy because of an increase in size and weight, the patient may be more difficult to elevate and lower than a non-pregnant patient. To overcome this, the patient can be rolled to the side, allowing the contact hand to be placed appropriately and then gently rolled back over your contact and a thrust delivered though the arms.

Figure 13.8 Towel placement to optimize comfort in performing a cross-armed anterior thoracic adjustment.

When the patient is ready to stand up from a supine position following treatment, she should be instructed to first turn onto her side. From this position she should lower her feet/legs over the side of the table and push herself up onto her arms. This avoids the hazard of possible abdominal muscle strain from a 'sit-up' in late pregnancy, which can complicate labour (Esch & Zachman 1991). The clinician should be at hand to assist the patient if needed.

Sitting techniques

If the patient is uncomfortable in side posture, supine or prone positioning, sitting techniques can be used. Sitting manipulative/mobilization can be performed in the cervical, lower thoracic and lumbar regions. A single, high-velocity short-amplitude thrust can be applied either through the spinous process for the lumbar spine (Fig. 13.9), transverse process for the thoracic spine (Fig. 13.10), or the rib angle for the lower ribs. By applying repetitive low-velocity low-amplitude thrusts using the above contacts, this position can also be used for mobilization.

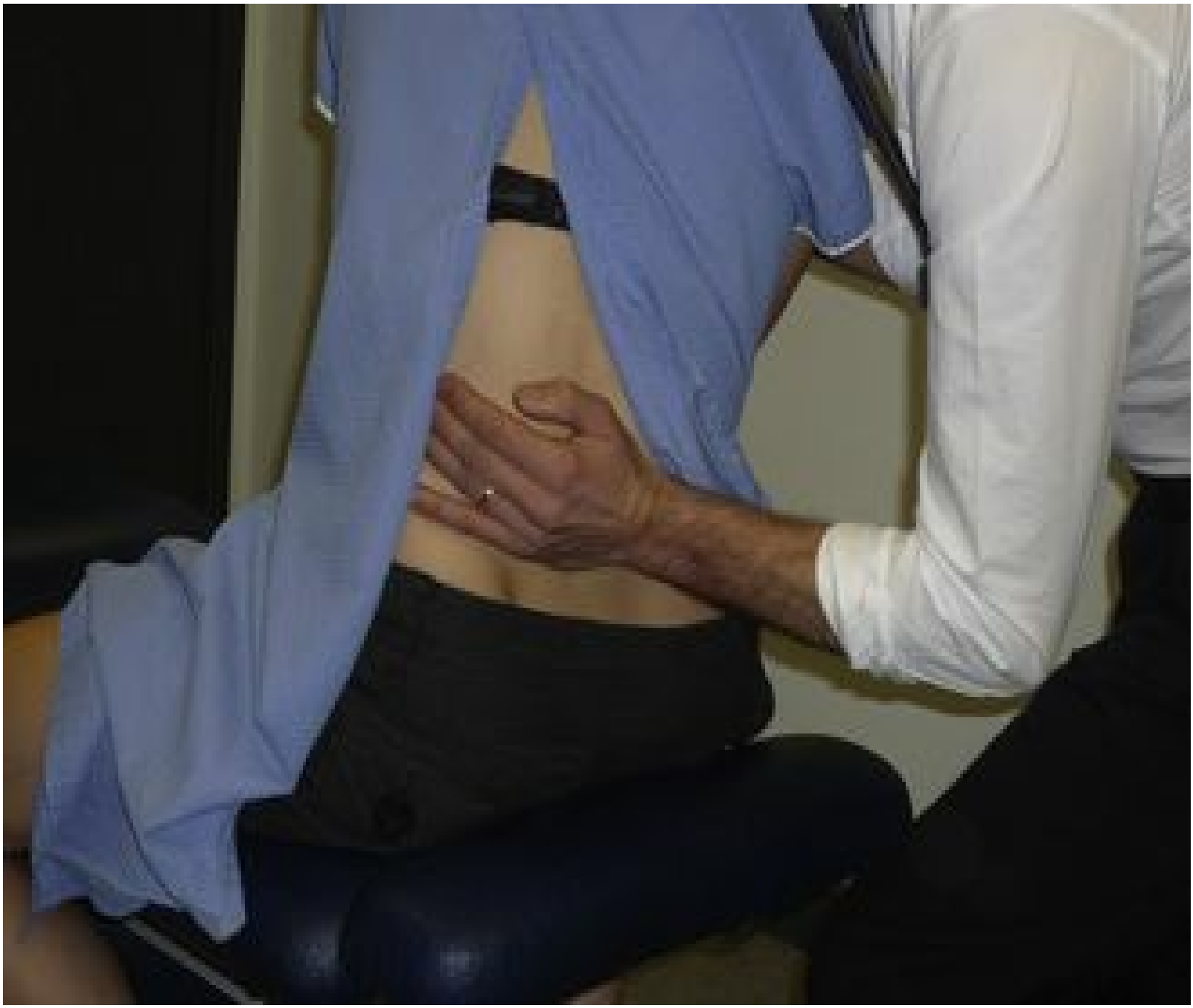


Figure 13.9 A lumbar sitting adjustment showing a mamillary process contact.

Figure 13.10 A sitting rib adjustment showing an angle of the rib contact.

Caution however is needed when applying these techniques to the thoracic and lumbar spine to avoid rotation which may cause transverse fascial plane torque creating foetal stress and maternal discomfort. Sitting cervical techniques can be performed as usual throughout pregnancy as described in Chapter 11 of this text.

Kneeling techniques

The knee–chest table is designed to allow for less restriction of the torso when performing a posterior to anterior lumbar or thoracic manipulation. This patient position with no compression of the abdomen is useful for treating pregnant patients who cannot lay prone or in the side posture (Plaugher & Lopes 1990).

Commercial knee–chest tables are available, but they may not be economically viable. Alternatively, some chiropractic benches can be modified to allow the clinician to make use of kneeling techniques. For this type of procedure the patient is positioned at the cephalic end of the bench with a flat pillow or folded blanket on the floor for the patient to kneel upon. The headpiece is positioned so that the thoracic spine is level with or slightly higher than the lumbar spine. The knees should be positioned so that the femurs are almost perpendicular to the floor and the hands should rest on the armrests (Fig. 13.11). The patient should be relaxed and not supporting the chest with the upper extremities. A number of different lumbar and thoracic spine techniques can be carried out in this position, dependent on the hand contact position. This position is rarely used for adjusting the sacroiliac joints with the exception of the sacrum.

Figure 13.11 Bench modification to allow the clinician to make use of kneeling techniques.

Since the torso is unsupported in this position it can move more freely in a posterior to anterior direction during manipulation. The magnitude of the force needed for most kneeling techniques is, therefore, less than that required for side-posture and prone manipulation. The clinician also has a greater mechanical advantage with the patient in this position, so care must be taken to limit the amount of force used (Plaugher & Lopes 1990).

Preload is applied by contacting the appropriate short lever arm (spinous process, mamillary process (Fig. 13.12), transverse process (Fig. 13.13), rib angle) and translating the joint involved to pretension. Care must be taken to translate the involved segment along the line of the facet joint orientation while minimizing unnecessary extension of the spine. Once preload has been reached a high-velocity short-amplitude thrust can be applied. At the end of the thrust the hand contact and pressure are maintained for 1–2 s, allowing the viscoelastic tissues time to adapt. This is followed by a gradual release of pressure. The toggle–recoil thrust is contraindicated when performing kneeling manipulations (Howe 1993).

Figure 13.12 A kneeling lumbar adjustment using a bilateral mamillary body contact.

Figure 13.13 A kneeling thoracic adjustment using a reinforced unilateral contact.

Mechanical pelvic blocking

Low force such as pelvic blocking can be used in clinical situations where a less forceful approach is indicated. Though it must be remembered that lying prone is contraindicated after the first trimester, due to abdominal compression. Dr DeJarnette developed blocking techniques as part of the diagnostic and treatment system known as sacro-occipital technique (SOT) (DeJarnette 1984). Pelvic blocks, however, can also be used based on mechanical principles where the patient's body weight is used to relax soft tissue structures, thereby releasing muscular and fascial influences on the sacroiliac joints and lumbar motion segments. This approach can theoretically aid in stabilizing sacroiliac joint separation and help control hypermobility.

Mechanical prone pelvic blocking techniques

Mechanical indicators for prone blocking are based on functional leg length analysis and pelvic torsion patterns. To help determine leg length the patient can be assessed in the prone position by comparing the relative levels of the medial malleolli. With a true functional short leg it is usual to find a high iliac crest with a posterior inferior posterior superior iliac spine (PSIS) and an anterior inferior sacral base on static palpation on the side of the short leg. This pattern is usually associated with sacral nutation on sacroiliac motion palpation or prone springing. It is worth noting that sacroiliac instability may well be made worse by prone blocking and should therefore be avoided in such cases and supine blocking used instead.

Lay the patient prone, with a pelvic-board under their pelvis. Place the short leg block under the thigh at the level of the greater trochanter, inserting it sufficiently to support approximately 60% of the weight of the pelvis. The block should be angled 45° cephalad, with the centre of the block being under the hip joint. The long leg block is angled 45° caudad at the level of the ASIS, with the centre of the block being under the spine of the ilium. The blocks are angled to face each other but when in position can be adjusted if needed for patient comfort (Fig. 13.14). If there is any increase in patient discomfort, remove the blocks and reassess the patient's condition and treatment options.

Figure 13.14 Mechanical prone blocking for a sacroiliac extension restriction on the left.

When in position, the patient should be monitored at all times. The short leg should be approaching level in comparison with the long leg, or in some cases even longer, and there should be a reduction in hypertonicity of the spinal musculature and/or a reduction in symptoms. If this is not found remove the blocks and reassess. In the case of an anatomical short leg, the leg will still lengthen, but will usually not become equal to the long leg. The duration of blocking will vary from patient to patient, but usually 4–10 minutes is sufficient. While on the blocks the clinician can do soft tissue work to aid muscle relaxation, such as myofascial trigger point therapy and fascial release techniques. It is worth remembering that too long on the blocks may be more detrimental than a too shorter time. The blocks should be removed at the same time by pulling them smoothly and slowly outward in the same direction they are laying.

Mechanical supine pelvic blocking techniques

Supine blocking is often useful in the treatment of sacroiliac joints laxity where the aim is to use the patient's body weight to approximate the affected joint and 'de-stress' the non-contractile supporting elements and guarding musculature. According to Forrester & Anrig (1998) sacroiliac laxity will often allow pelvic torque that can create stress on the uterine ligaments and pelvic soft tissues and therefore the fetus itself. The clinical diagnosis of a sacroiliac laxity should be based upon indicators from both the case history and physical examination, including the active straight leg raise test described by Mens et al. (2001), as motion palpation is unreliable. Hochman (1999) also advocates the use of a standing stress test, whereby the patient stands with both arms extended out in front of them with their feet about 20 cm apart. The practitioner applies a downward pressure onto both arms and any relative strength or weakness is noted. The patients then shifts their weight, first onto one leg and then the other, with the practitioner testing the arm strength in both positions. Arm weakness found on the side of increased weight bearing may indicate sacroiliac laxity. The validity of this test however has not been investigated. For those experienced in SOT, this can supplement the arm fossa test.

Position the patient supine, with a pelvic-board under the pelvis. Place the first block horizontally, perpendicular to the spine under the functional short leg side, with the top of the patients iliac crest located in the middle of the block. The second block is placed under the greater trochanter contralaterally and angled 45° cephalad, with the centre of the block under the acetabulum. The pelvis should be level from side to side and from inferior to superior, if not the blocks can be positioned further in or out to achieve this balance (Fig. 13.15). When correct placement is obtained the patient often feels comfortable with less pain if there is residual discomfort elevate the feet a few inches to take the stress off the lumbo-sacral junction. The blocking duration will vary based on the individual however should not take more than a couple of minutes. If discomfort develops, remove the blocks and reassess the patient.

Figure 13.15 Mechanical supine blocking for a pelvic instability with a right sided functional short leg

Trochanteric belts can be useful in the management of this condition (see the section on support belts later in this chapter) and treatment should include exercises to enhance the force closure mechanism of the sacroiliac joints.

Mechanical drop techniques

Most chiropractic benches come with optional cervical, thoracic, lumbar and pelvic drop-pieces, which can be used with a number of techniques to reduce the amount of applied force needed. The drop-piece tension should be set with minimal resistance. The patient's body weight is stabilized over the drop-piece until an adjustive thrust is applied. The thrust imparts motion to the contacted anatomical structure that remains in motion until the conclusion of the drop completing the manipulation/mobilization.

Prone pelvic mechanical drop techniques

Sacroiliac prone – thrust (extension restriction) (Fig. 13.16)

Position the patient prone so that the anterior superior iliac spines (ASISs). Bilaterally are just superior to the edge of the pelvic drop-piece, which is then cocked. The clinician takes a fencer's stance on the ipsilateral side of the bench at the level of the pelvis. Contact is made by the hypothenar eminence of the caudate hand that is in a chiropractic arch, being placed onto the inferior medial aspect of the patient's PSIS. The indifferent hand is placed over the contralateral PSIS. The thrust is a body-drop combined with a shoulder thrust with the line of drive being posterior to anterior and inferior to superior.

Figure 13.16 Sacroiliac prone drop technique for an extension restriction with posterior superior iliac spine contact.

Sacroiliac prone – leg thrust (extension restriction) (Fig. 13.17)

Position the patient prone so that the ASISs are just superior to the edge of the pelvic drop-piece, which is then cocked. The clinician takes a fencer's stance on the ipsilateral side of the bench slightly cephalad to the pelvis. Using the caudal hand the clinician flexes the patient's knee to 90° on the ipsilateral side and asks the patient to hold this position while the clinician now places the caudate hand under the knee on the medial aspect so cupping it. The lower leg can now be relaxed and supported by the clinician's arm. The cephalad hand forms a chiropractic arch and is placed on the ipsilateral PSIS. The leg is then lifted, extending the hip until movement is felt at the pelvis. A shoulder thrust is then given, (with or without a body-drop), by the cephalic hand in a posterior to anterior line of drive.

Figure 13.17 Sacroiliac prone drop technique for an extension restriction with posterior superior iliac spine contact and hip extension.

Sacroiliac prone – ischial thrust (flexion restriction) (Fig. 13.18)

Position the patient prone so that the ASISs are just superior to the edge of the pelvic drop-piece, which is then cocked. The clinician takes a fencer's stance on the ipsilateral side of the bench at the level of the pelvis. The cephalad hand is made in to a chiropractic arch and the hypothenar eminence is placed on to the patient's ipsilateral ischial tuberosity. The caudad hand also forms a chiropractic arch and is placed over the dorsum of the contact hand to reinforce the contact. The thrust is from a body-drop combined with a shoulder thrust, with the line of drive inferior to superior and posterior to anterior.

Figure 13.18 Sacroiliac prone drop technique for a flexion restriction with reinforced ischial tuberosity contact.

Sacroiliac prone – sacral and ASIS thrust (flexion restriction) (Fig. 13.19)

Position the patient prone so that the ASISs are just superior to the edge of the pelvic drop-piece, which is then cocked. The clinician takes a fencer's stance on the ipsilateral side at the level of the pelvis. The cephalad hand contacts the patient's ipsilateral ASIS. The caudad hand forms a chiropractic arch and the hypothenar eminence contacts the ipsilateral sacral base. The cephalad contact impulses anterior to posterior, while the caudad contact thrusts posterior to anterior with enough thrust to release the drop mechanism.

Figure 13.19 Sacroiliac prone drop technique for a flexion restriction with anterior superior iliac spine contact and sacral base contact.

Sacroiliac prone – ischial and PSIS thrust (flexion and/or extension restriction) (Fig. 13.20)

Position the patient prone so that the ASISs are just superior to the edge of the pelvic drop-piece. The pelvic and lumbar drop-pieces are then cocked so that they will drop together. The clinician takes a fencer's stance on the side of the extension restriction at the pelvic level. The clinician's caudad hand is in a chiropractic arch and contacts the ipsilateral PSIS with the hypothenar eminence. The cephalad hand, also in a chiropractic arch, is positioned so that the hypothenar contacts the contralateral ischium.

Figure 13.20 Sacroiliac prone drop technique for a reciprocal flexion and extension restriction with anterior superior iliac spine and ischial tuberosity contact.

Supine pelvic mechanical drop techniques

Sacroiliac supine – pubic rami contact (extension restriction) (Fig. 13.21)

Position the patient supine so that the PSISs are just superior to the edge of the pelvic drop-piece. The pelvic and lumbar drop-pieces are then cocked so that they will drop together. On the side of the extension restriction the patient slightly flexes the knee so the foot comes to rest on the footpad of the bench. The clinician takes a fencer's stance on the involved side at the level of the pelvis. The cephalad hand is placed so that the web of the hand contacts the patient's pubic rami on the ipsilateral side with the thumb facing interiorly (the clinician must use their judgement regarding any instability present of the symphysis pubis when using this contact). The caudad hand stabilizes the lower limb by contacting the ipsilateral knee. An impulse is given from the cephalad contact from anterior to posterior and superior to inferior. This thrust must be sufficient to drop the pelvic-drop mechanism. An impulse from the caudad contact is given simultaneously in an anterior to posterior direction.

Figure 13.21 Sacroiliac supine drop technique for an extension restriction with a pubic rami contact.

Sacroiliac supine – knee high, ASIS thrust (flexion restriction) (Fig. 13.22)

Position the patient supine so that the PSISs are just superior to the edge of the pelvic drop-piece, which is then cocked. The clinician is positioned in a fencer's stance at the level of the pelvis on the ipsilateral side. The patient flexes the ipsilateral hip to 90° and bends the knee. The cephalad hand contacts the ipsilateral ASIS, while the caudad hand cups the patient's flexed knee. The cephalad hand thrusts anterior to posterior while the caudad hand stabilizes the knee and leg.

Figure 13.22 Sacroiliac supine drop technique for a flexion restriction with an anterior superior iliac spine contact.

Points to remember when using the drop mechanism

The correct drop-piece tension should be set to the individual patient. This tension should be strong enough to support the patient's weight, without dropping but light enough so only minimal force is needed to overcome the resistance. This is achieved by setting the tension so that the drop-piece only just fails to support the patient weight then increasing the tension by three half turns of the tension control dial to the right. Pre-tension especially posterior to anterior is not necessary, as this will tend to release the drop-piece before the impulse is applied. Care must be taken to make the patient fully aware of what to expect when the drop mechanism collapses, especially the sound that the table makes.

Figure 14.1

Figure 14.2

Figure 14.3

Figure 14.4

Figure 14.5

Figure 14.6

Figure 14.7

Figure 14.8

Figure 14.9

Figure 14.10

Figure 14.11

Figure 14.12

Figure 14.13

Figure 14.14

Figure 14.15

Figure 14.16

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Figure 14.18

Figure 14.19

Figure 14.20

Figure 14.21

Figure 14.22

Figure 14.23

Figure 14.24

Figure 14.25

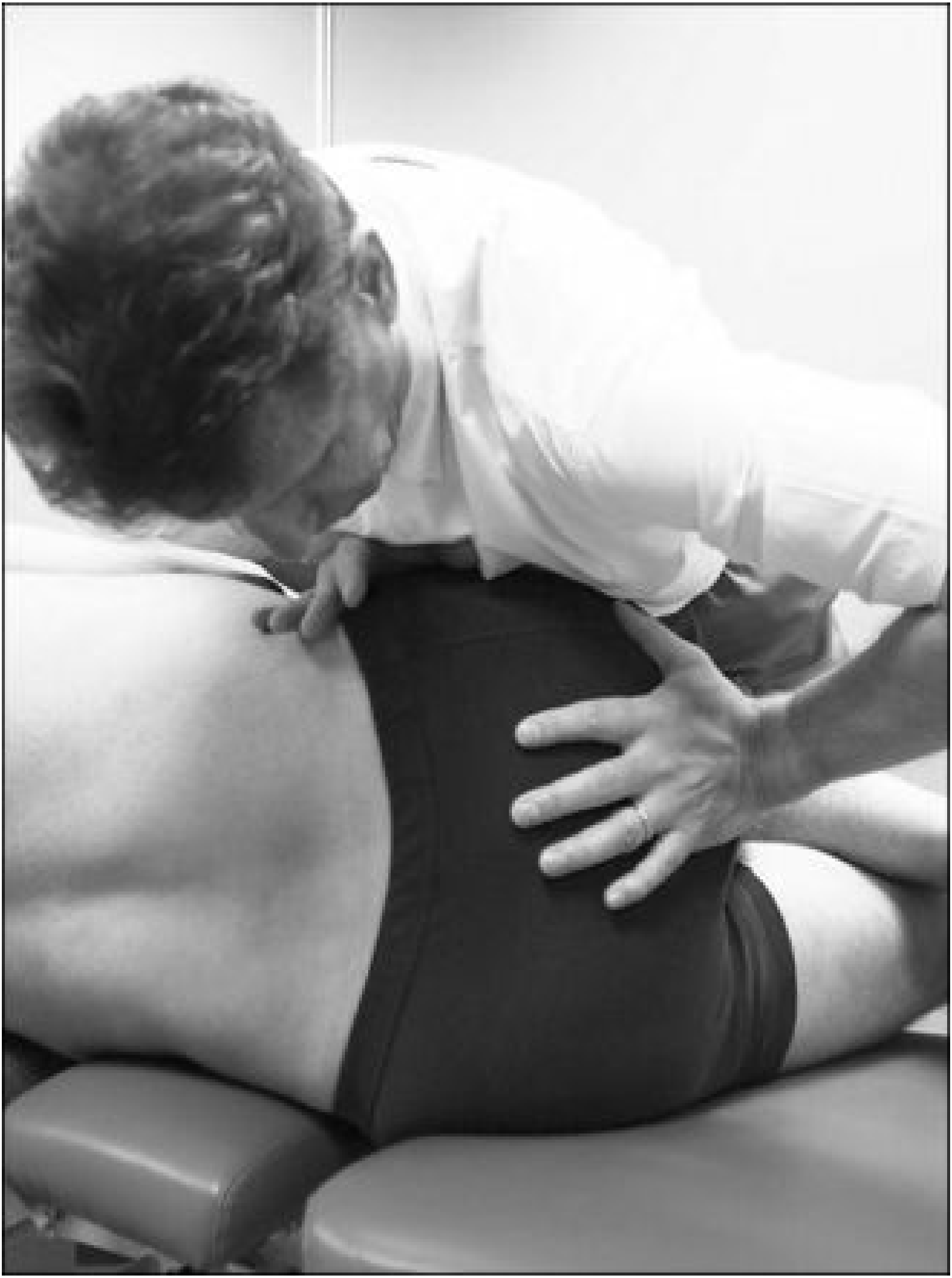

Figure 14.26

Figure 14.27

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Figure 14.29

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Figure 14.32

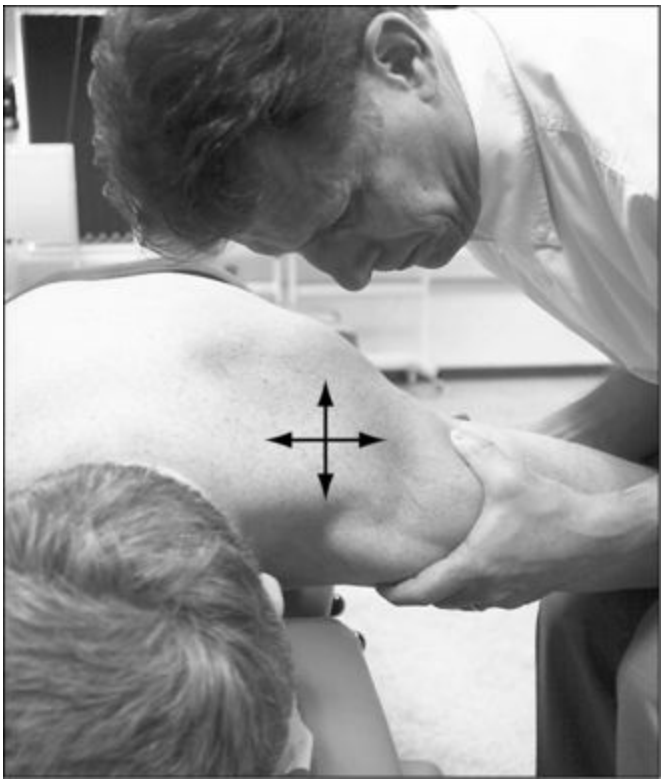

Figure 14.33

Figure 14.34

• amount of force applied or necessary depending on the clinical implications

• speed of thrust/mobilization force.

All procedures must at all times be performed within the patient's tolerance and consideration of any underlying conditions should drive the decision to implement manual care in light of the scope of chiropractic practice. The following series of illustrations represent the authors' preferred manipulative skills and procedures for the various regions of the spine, pelvis and major extremity joints (hip and shoulder) of the elderly patient. This is by no means a complete list, but it provides the reader with a guide to the therapeutic approach to this expanding patient population. Refer back to the relevant chapters for additional instruction on specific manual skills for various areas of the spine and pelvis.

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PART ONE

Anatomy, Pathology, and Assessment

CHAPTER 1 Anatomy and Physiology Review

CHAPTER OUTLINE

Introduction 2
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Motions of the Lumbar Spine and Pelvis 5
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OBJECTIVES

After completing this chapter, the student should be able to:

1. Describe the structure of the lumbar spine and pelvis.
2. Discuss the importance and implications of the lumbar spinous processes to assessment and treatment.
3. Discuss the importance and implications of the posterior superior iliac spine (PSIS) and anterior superior iliac spine (ASIS) to assessment and treatment.
4. Describe the structure and function of the lumbar spinal, sacroiliac, and hip joints.
5. Describe the motions of the lumbar spinal, sacroiliac, and hip joints.
6. List the attachments and actions of the muscles of the lumbar spine and pelvis.
7. Classify the muscles of the lumbar spine and hip joints into their major structural and functional groups.
8. Explain why knowing the actions of a muscle can facilitate palpating and stretching it.
9. List and describe the structure and function of the ligaments of the lumbar spine and pelvis.
10. Explain how ligaments and antagonist muscles are similar in function.
11. Describe the major precautions and contraindications when working on the low back and pelvis.
12. Define each key term in this chapter.

KEY TERMS

abdominal aorta
abdominal aponeurosis
annulus fibrosus
anterior longitudinal ligament
anterior sacroiliac ligaments
anterior superior iliac spine (ASIS)
cardinal planes
central canal
circumduction
closed chain
coccyx
contralateral muscles
contralateral rotation
counternutation
disc joint
facet joints
femoral artery
femoral nerve
femoral triangle
femoral vein
femoropelvic rhythm
glide
hyperlordotic
hypolordotic
iliac crest
iliofemoral ligament
iliolumbar ligaments
ilium
interspinous ligaments
intertransverse ligaments
intervertebral foramina
intrapelvic motion
ipsilateral rotation
ischiofemoral ligament
ischium
lamina
laminar groove
ligamentum flavum
ligamentum teres
lordotic curve (lordosis)
lumbar spine
lumbosacral joint
nucleus pulposus
nutation
open chain
pars interarticularis
pelvic bones
posterior longitudinal ligament
posterior sacroiliac ligaments
posterior superior iliac spine (PSIS)

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pubis
pubofemoral ligament
reverse actions
sacral base
sacral tubercles
sacroiliac joint (SIJ)
sacrospinous ligament
sacrotuberous ligament
sacrum
sciatic nerve
segmental joint level
spinous process
supraspinous ligament
thoracolumbar fascia
translation
vertebral foramina
zona orbicularis
zygapophyseal joints (Z joints)

INTRODUCTION

This chapter is an overview of the anatomy and physiology of the low back and pelvis. Having a solid foundation in the structure and function of a region allows you to understand and better apply treatment techniques to that region. For more complete coverage of the structure and function of the low back and pelvis, anatomy, physiology, and kinesiology textbooks should be consulted.

THE LUMBAR SPINE AND PELVIS

The low back is defined by the **lumbar spine**, and the pelvis is defined by the bones of the pelvic girdle. The lumbar spine is composed of five vertebrae, named L1 to L5 from superior to inferior. The pelvis is composed of the two pelvic bones and the sacrum and coccyx (the pelvic bones are also known as the coxal, innominate, or hip bones) (Fig. 1-1).

Lumbar Spine

From a lateral view, the healthy lumbar spine can be seen to have a **lordotic curve (lordosis)**, which is defined as being concave posteriorly and convex anteriorly (Fig. 1-2). (The terms *lordotic* and *lordosis* are often used to denote an excessive and unhealthy lordotic curve. However, these terms are also used to refer to the healthy and normal curve of the low back and neck.) All lumbar vertebrae have a **spinous process** that extends posteriorly and can usually be palpated. How easy or difficult it is to palpate the lumbar spinous processes depends largely on the degree of the client's lordotic curve. Because the lumbar curve is lordotic, the spinous processes are recessed and not as superficial for palpation as are the spinous processes of the thoracic spine. However, some clients' lumbar curves are decreased or even straight; a decreased or absent lordotic curve is termed **hypolordotic**, making palpation of the spinous processes much easier. If, on the other hand, the client's lumbar curve is excessive, it is termed **hyperlordotic**; the spinous processes of a hyperlordotic lumbar spine are more difficult to palpate. Other prominent lumbar bony landmarks are the **lamina**, **laminar groove**, mammillary process, transverse process, facets, **pars interarticularis**, and vertebral body. The spinal cord travels through the **central canal** formed by the **vertebral foramina** (singular: foramen), and the lumbar spinal nerves travel through the **intervertebral foramina** between adjacent vertebrae (Fig. 1-3).

Because of the lordotic curve and the thick musculature that overlies the lumbar spine, the only easily palpable bony landmark is the spinous process. Therefore, the spinous processes (and laminae) are used when contacting the lumbar spine for motion palpation assessment and joint mobilization treatment.

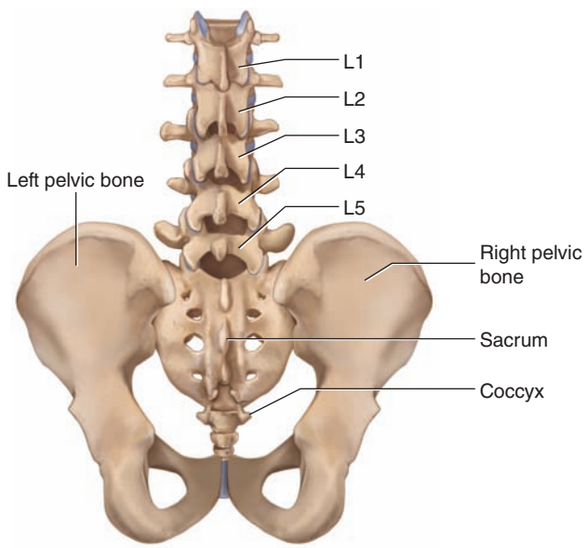


Figure 1-1 Posterior view of the lumbar spine and pelvis. The lumbar spine is composed of five vertebrae, named L1 to L5 from superior to inferior. The pelvis is composed of the two pelvic bones and the sacrum and coccyx.

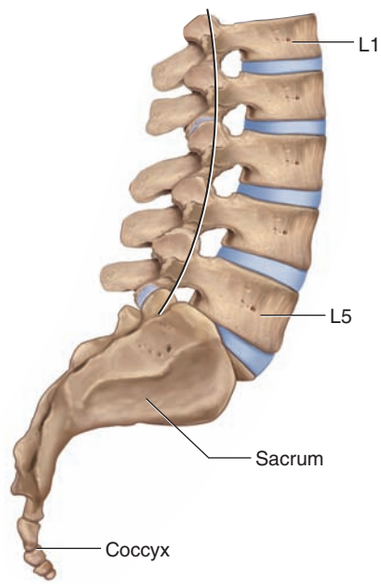


Figure 1-2 Right lateral view of the lumbar spine. The lumbar spine's curve is described as lordotic, with its concavity facing posteriorly and its convexity facing anteriorly.

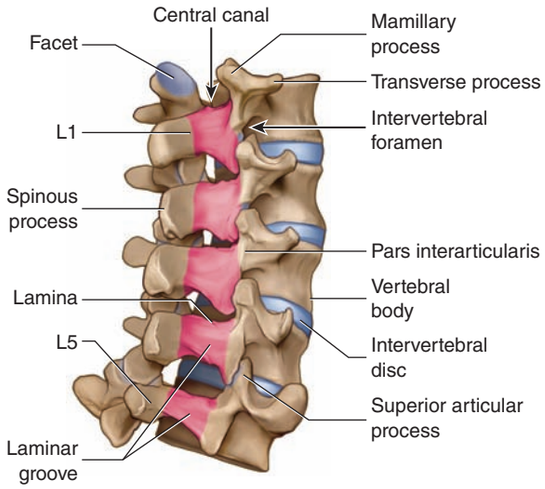


Figure 1-3 Right posterolateral view of the lumbar spine. Prominent bony landmarks are labeled.

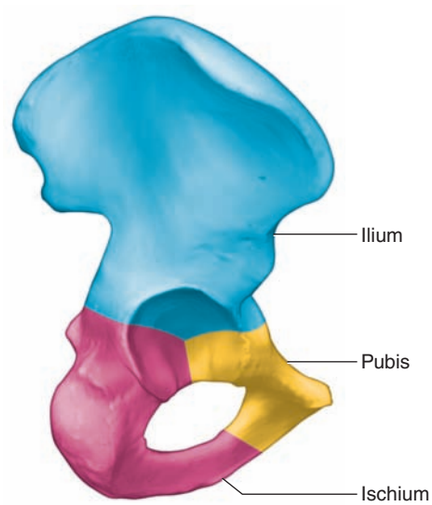
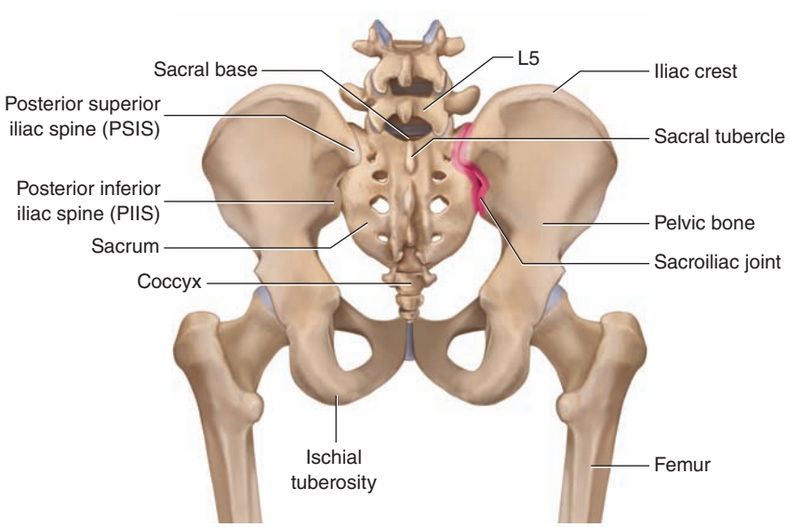


Figure 1-4 Lateral view of the right pelvic bone. The ilium, ischium, and pubis have been colored to discern their borders: The ilium is blue, the ischium is pink, and the pubis is yellow.

Pelvic Girdle

The bones of the pelvic girdle are the two **pelvic bones** and the **sacrum** and **coccyx** (see Fig. 1-1). Each pelvic bone is composed of three bones—the **ilium**, **ischium**, and **pubis**—that fuse together embryologically (Fig. 1-4). The sacrum is composed of five vertebrae that did not fully form and fused together to create a triangular-shaped bone. The triangular-shaped sacrum is upside down, with the **sacral base** located superiorly and the apex located inferiorly. Between the sacrum and iliac portion of the pelvic bone on each side of the body is a **sacroiliac joint (SIJ)**. The coccyx, usually considered to be the evolutionary remnant of a tail, is composed of four poorly formed vertebral segments that often fuse as a person ages. There are a number of important bony landmarks of the pelvis. On the posterior side are the **posterior superior iliac spine (PSIS)**, posterior inferior iliac spine (PIIS), greater sciatic notch, ischial tuberosity, ischial spine, and **sacral tubercles** (Fig. 1-5A). A dimple in the skin of the client can usually be seen where the skin falls in on the medial side of the PSIS (Fig. 1-5B). Locating this dimple is helpful when palpating for the PSIS. On the anterior side are the **anterior superior iliac spine (ASIS)**, anterior inferior iliac spine (AIIS), and pubic tubercle (Fig. 1-6). The **iliac crest** is located laterally between the PSIS and ASIS (see Figs. 1-5A and 1-6). The PSIS and ASIS are easily palpable and important contacts for stabilization of the pelvis when stretching the client. The PSIS and sacral tubercles are also important when performing motion palpation assessment of the SIJs of the pelvis,



A

B

Figure 1-5 Posterior views of the lumbar spine and pelvis. **(A)** View of bones and bony landmarks. **(B)** Dimples are usually visible immediately medial to the PSISs.

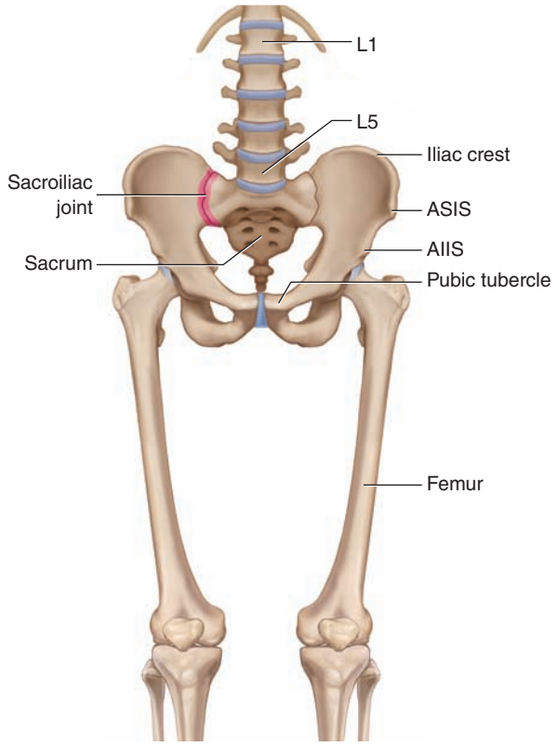


Figure 1-6 Anterior view of the lumbar spine and pelvis. The prominent bones and bony landmarks have been labeled. *AIIS*, anterior inferior iliac spine; *ASIS*, anterior superior iliac spine.

and the PSIS is an important contact point when mobilizing the SIJ.

LUMBAR SPINAL JOINTS AND PELVIC JOINTS

Lumbar Spinal Joints

In the lumbar spine, three joints are located between each two adjacent vertebrae: one **disc joint** (intervertebral disc joint) and two paired (left and right) **facet joints**. The disc joint is located anteriorly, and the facet joints are located posterolaterally (Fig. 1-7A).

The disc joint is a cartilaginous joint composed of outer fibers called the **annulus fibrosus** that encircle the inner **nucleus pulposus**. The annulus fibrosus is composed of 10 to 20 layers of fibrocartilaginous fibers that attach along the periphery of the bodies of the two adjacent vertebrae. The annular fibers provide a strong and stable enclosure for the nucleus pulposus.

The nucleus pulposus is a thick jellylike substance located within the disc joint (Fig. 1-7B). It has two main functions:

1. It holds the two vertebral bodies apart, which not only creates a larger intervertebral foramen where the spinal nerve enters and exits the spine but also allows the disc joint a greater range of motion.
2. It provides cushioning to the spine.

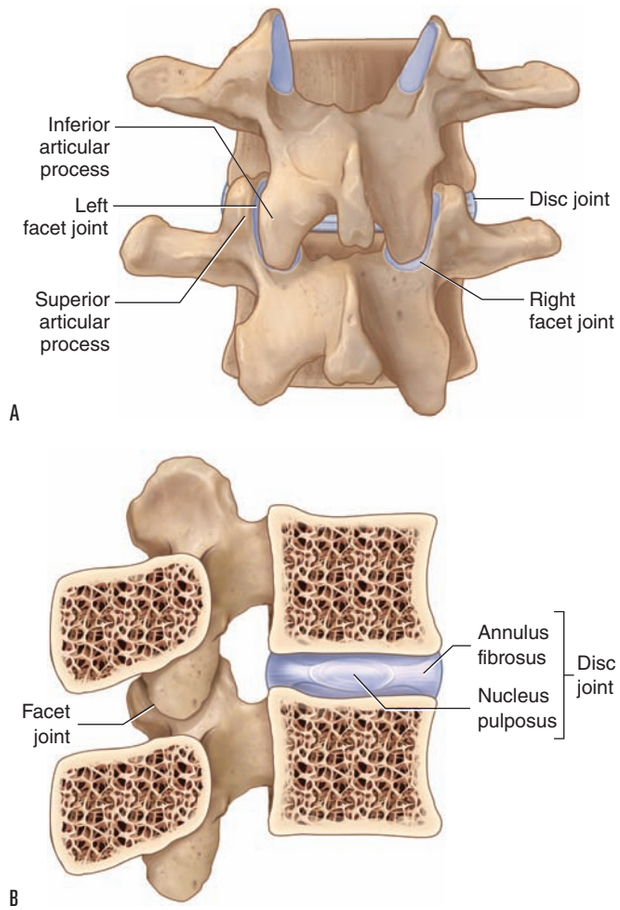


Figure 1-7 The disc and facet joints of the spine. **(A)** Posterior view. The disc joint is located anteriorly; the paired facet joints are located posterolaterally. **(B)** Right lateral view of a sagittal plane cross section. The disc joint is composed of the outer annulus fibrosus fibers and an inner nucleus pulposus. (Courtesy of Joseph E. Muscolino.)

As a whole, the disc joint itself has three major functions:

1. The disc joint bears the weight of the body above it. The increasing size of the vertebral bodies and discs descending the spine helps the disc joints bear the increasing weight of the body above it.
2. The disc joint's thickness allows for a great deal of motion. Overall, the intervertebral discs comprise 25% of the height of the entire spine. The greater the relative height of the discs compared to vertebral body height, the greater the possible range of motion at that region of the spine.
3. The intervertebral discs help to absorb shock.

Each facet joint is a synovial joint that is located between the inferior vertebra's superior articular process and the superior vertebra's inferior articular process (see Fig. 1-7). It is called a facet joint because the joint surface of each of the articular processes has a facet (a smooth flat surface) on it. The scientific name for facet joints is **zygapophyseal joints**,

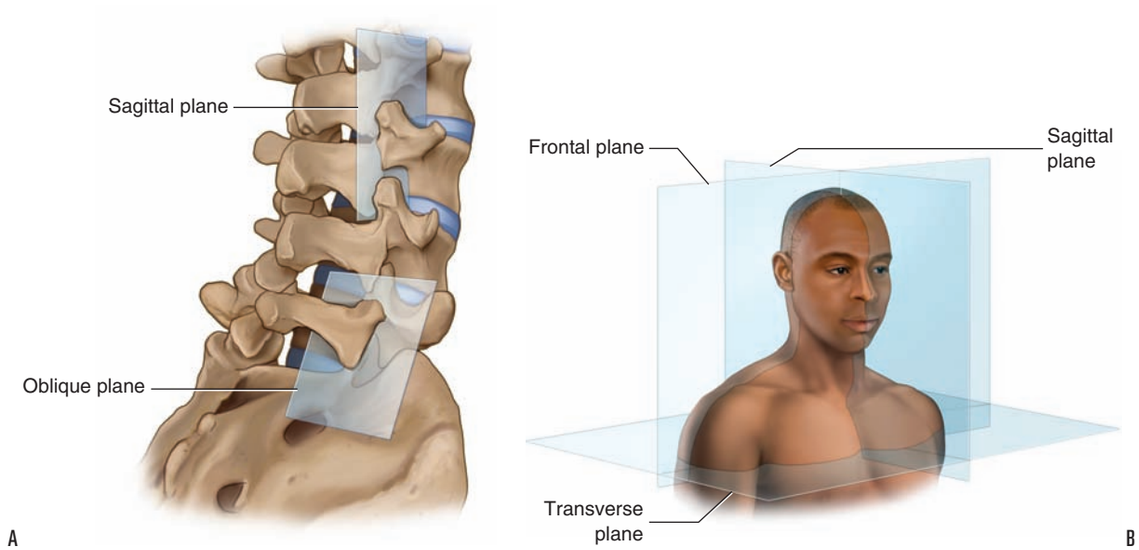


Figure 1-8 Plane of the facet joints of the lumbar spine. **(A)** The plane of the lumbar facets is oriented in the sagittal plane, except for the facet plane of the lumbosacral joint, which is oriented in an oblique plane that is close to the frontal plane. Right posterolateral oblique view. **(B)** Review of all three cardinal (major) planes of the body. ([**B**] Reproduced with permission from Muscolino JE. *Advanced Treatment Techniques for the Manual Therapist: Neck*. Baltimore, MD: Lippincott Williams & Wilkins; 2013.)

hence they are also often known as **Z joints**. Facet joints function to guide motion at that segmental joint level of the spine. The term **segmental joint level** refers to a specific joint level of the spine that includes the disc and facet joints at that level. For example, the joint between L3 and L4, known as the L3-L4 joint, is a segmental level; the L4-L5 joint is another segmental level. The joint between L5 and the base of the sacrum is known as the L5-S1 joint, or simply the **lumbosacral joint**. An understanding of the posture of the lumbosacral joint is extremely important toward understanding pelvic tilt posture and its effect on the lumbar lordotic curve.

The disc joint determines how much vertebral motion is possible at a particular segmental level, and the facet joints determine the type of motion (i.e., the direction of motion) that can occur there. In the lumbar spine, the plane of the facets is vertically oriented in the sagittal plane. An exception to this is at the L5-S1 level where the facet plane is oriented in an oblique plane that is very close to the frontal plane (Fig. 1-8A). *Note*: Figure 1-8B is a review of the three cardinal (major) planes of the body. The three **cardinal planes** are the sagittal, frontal (also known as coronal), and transverse. Any plane that is not perfectly sagittal, frontal, or transverse is an oblique plane.

Because of the sagittal plane orientation of the lumbar facets, the lumbar spine moves extremely well in flexion and extension (sagittal plane motions). Because the facets of the lumbosacral joint are oriented approximately within the frontal plane, right and left lateral flexion motions occur more freely at that level. It is important to be aware of the type of motion that each level of the spine allows when performing joint mobilization (discussed in Chapter 10).

Pelvic Joints

Pelvic joints can be divided into two categories: joints between the pelvis and adjacent body parts and joints located within the pelvis. The lumbosacral joint is located between the pelvis and trunk (more specifically, between the sacrum of the pelvis and L5 of the lumbar spine) (see Fig. 1-2), and the hip joints are located between the pelvis and the thighs (more specifically, the femurs of the thighs) (see Fig. 1-6). Within the pelvis, there are two SIJs and one symphysis pubis joint. Each SIJ is located posteriorly between the sacrum and the iliac portion of the pelvic bone on that side (see Figs. 1-5A and 1-6). The symphysis pubis joint is located anteriorly between the two pubic bone portions of the pelvic bones (see Fig. 1-6).

MOTIONS OF THE LUMBAR SPINE AND PELVIS

Lumbar Spine Motions

The lumbar spine can move axially and nonaxially in all three cardinal planes (sagittal, frontal, and transverse). The axial motions, shown in Figure 1-9, are as follows:

- Extension and flexion in the sagittal plane
- Left lateral flexion and right lateral flexion in the frontal plane
- Right rotation and left rotation in the transverse plane

The term **ipsilateral rotation** is used to describe the motion created by a muscle that rotates the trunk to the same side

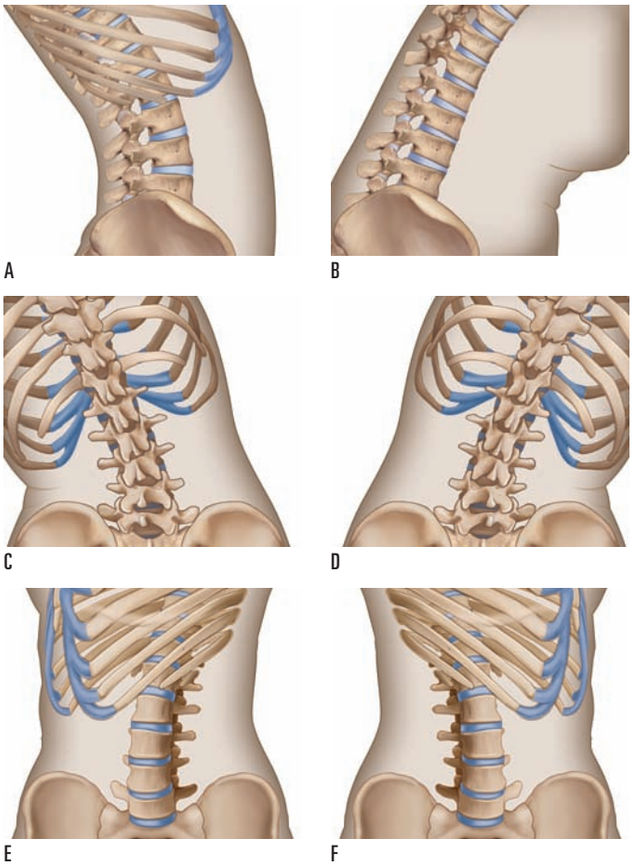


Figure 1-9 Six axial cardinal plane motions of the lumbar spine. **(A, B)** Extension and flexion in the sagittal plane respectively; lateral views. **(C, D)** Left lateral flexion and right lateral flexion in the frontal plane respectively; posterior views. **(E, F)** Right rotation and left rotation in the transverse plane respectively; anterior views.

as where the muscle is located—in other words, a left-sided muscle that rotates the trunk to the left side is performing ipsilateral rotation, as is a right-sided muscle that rotates the trunk to the right side. The term **contralateral rotation** is used to describe the motion created by a muscle that rotates the trunk to the opposite side from where it is located—in other words, a left-sided muscle that rotates the trunk to the right side is performing contralateral rotation, as is a right-sided muscle that rotates the trunk to the left side.

The spinal joints of the trunk can also circumduct. **Circumduction** is not a joint action but a series of four joint actions performed in sequence: left lateral flexion, flexion, right lateral flexion, and extension. If these joint actions are carried out sequentially, one at a time, the trunk will transcribe a square shape. However, if these joint actions are performed smoothly, as is usually done, with the "corners" of the joint actions rounded off, then the trunk moves in a cone shape (Fig. 1-10) that leads many therapists to describe the motion as rotation. However, circumduction is not rotation—in fact, no transverse plane rotation occurs with circumduction. All four joint actions of circumduction occur in the sagittal and frontal planes.

Table 1-1 shows average healthy ranges of axial motion for the lumbar spine as well as the thoracic spine and the thoracolumbar spine. It is important to keep in mind that not every client will necessarily have these ranges. Ranges such as those shown in Table 1-1 are averages across the entire population. Elderly people usually have a smaller range of motion than do younger people, and people with chronic injuries may also have decreased ranges of motion.

The lumbar spine can also move nonaxially. Nonaxial joint motion is known as **translation**, or **glide**. The lumbar spine can translate/glide anteriorly and posteriorly, laterally to the right and left, and superiorly and inferiorly. Anterior translation is

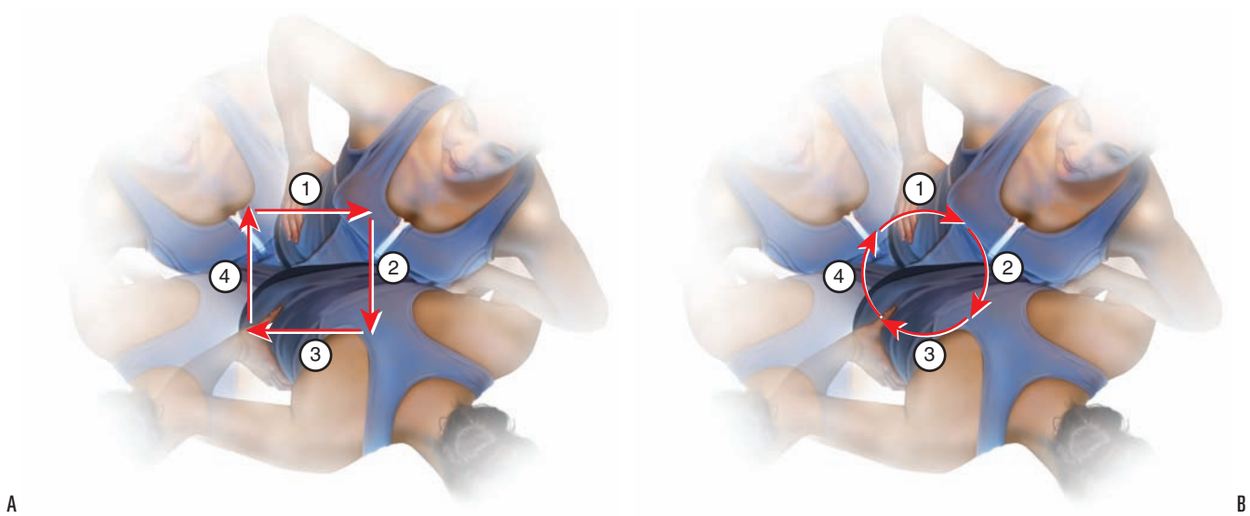


Figure 1-10 Circumduction of the trunk at the spinal joints. Circumduction is a series of four joint actions (left lateral flexion, flexion, right lateral flexion, and extension) carried out one after the other. **(A)** Joint actions shown sequentially. **(B)** Joint actions with the corners "rounded off."

TABLE 1-1 Lumbar, Thoracic, and Thoracolumbar Spine Ranges of Motion

Average Healthy Ranges of Motion Measured from Anatomic Position

	Lumbar Spine (L1-L2 to L5-S1)	Thoracic Spine (T1-T2 to T12-L1)	Thoracolumbar Spine (T1-T2 to L5-S1)
Flexion	50 degrees	35 degrees	85 degrees
Extension	15 degrees	25 degrees	40 degrees
Right lateral flexion	20 degrees	25 degrees	45 degrees
Left lateral flexion	20 degrees	25 degrees	45 degrees
Right rotation	5 degrees	30 degrees	35 degrees
Left rotation	5 degrees	30 degrees	35 degrees

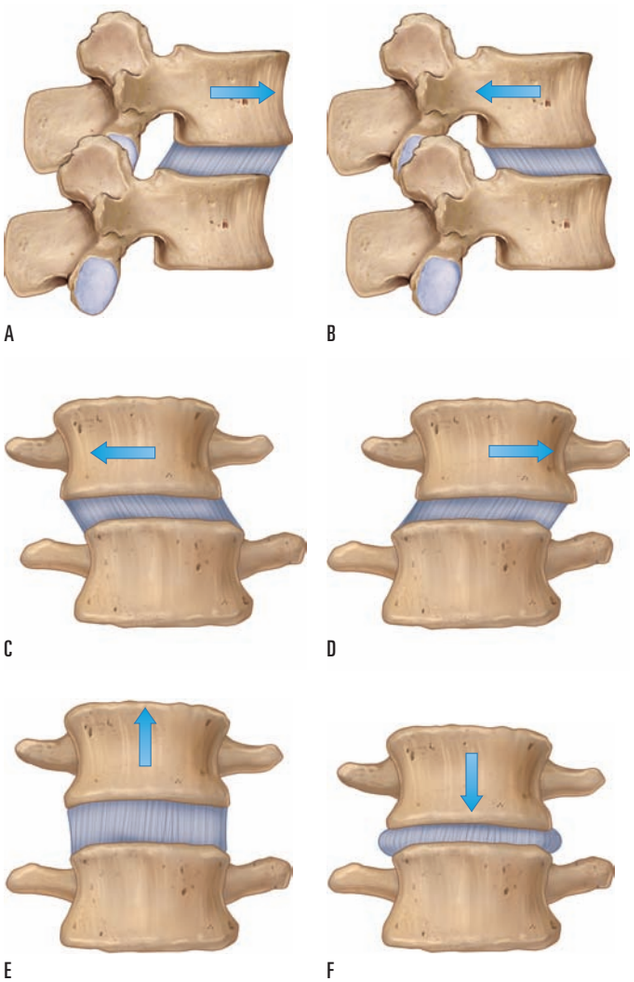


Figure 1-11 Nonaxial motions of the lumbar spine. **(A, B)** Anterior glide (protraction) and posterior glide (retraction), respectively; right lateral views. **(C, D)** Right lateral glide and left lateral glide, respectively; anterior views. **(E, F)** Superior glide (also known as distraction or traction) and inferior glide (also known as compression), respectively; anterior views. (Courtesy of Joseph E. Muscolino.)

also called protraction, and posterior translation is also called retraction. Superior translation is also called distraction or traction, and inferior translation is also called compression (Fig. 1-11). Nonaxial glide motions of the lumbar spine are not as large in excursion as in other regions of the spine but should be considered. Superior glide/traction is especially important because it helps to decompress the joints of the spine.

Pelvic Motions

Pelvic motion can be considered in two ways. The pelvis can move as a unit relative to adjacent body parts. Motion can also occur within the pelvis; this is called intrapelvic motion.

Motion of the Pelvis as a Unit at the Hip Joint(s)

When the pelvis moves as a unit, it can move relative to both thighs at the hip joints or relative to one thigh at the hip joint on that side. These motions are anterior and posterior tilt in the sagittal plane, depression and elevation in the frontal plane (depression is also known as lateral tilt; elevation is also known as hip hiking), and left rotation and right rotation in the transverse plane. It is helpful to understand that motions of the pelvis at the hip joint are **reverse actions** of standard action motions of the thigh at the hip joint. In other words, the same functional group of muscles that moves the thigh at the hip joint when the pelvis is stabilized/fixed also moves the pelvis at the hip joint when the thigh is stabilized/fixed. The thigh moves at the hip joint when the distal end of the lower extremity kinematic chain is free to move, in other words, **open chain** kinematics; the pelvis tends to move at the hip joint when the distal end of the lower extremity kinematic chain is stabilized/fixed, in other words, **closed chain** kinematics. Specific pelvic reverse actions relative to the same-side thigh are as follows: pelvic anterior tilt is the reverse action of thigh flexion, pelvic posterior tilt is the reverse action of thigh extension, pelvic depression is the reverse action of thigh abduction, pelvic elevation is the reverse action of thigh adduction, pelvic contralateral rotation is the reverse action of thigh lateral rotation, and pelvic ipsilateral rotation is the reverse action of thigh medial rotation (Fig. 1-12 and Table 1-2).

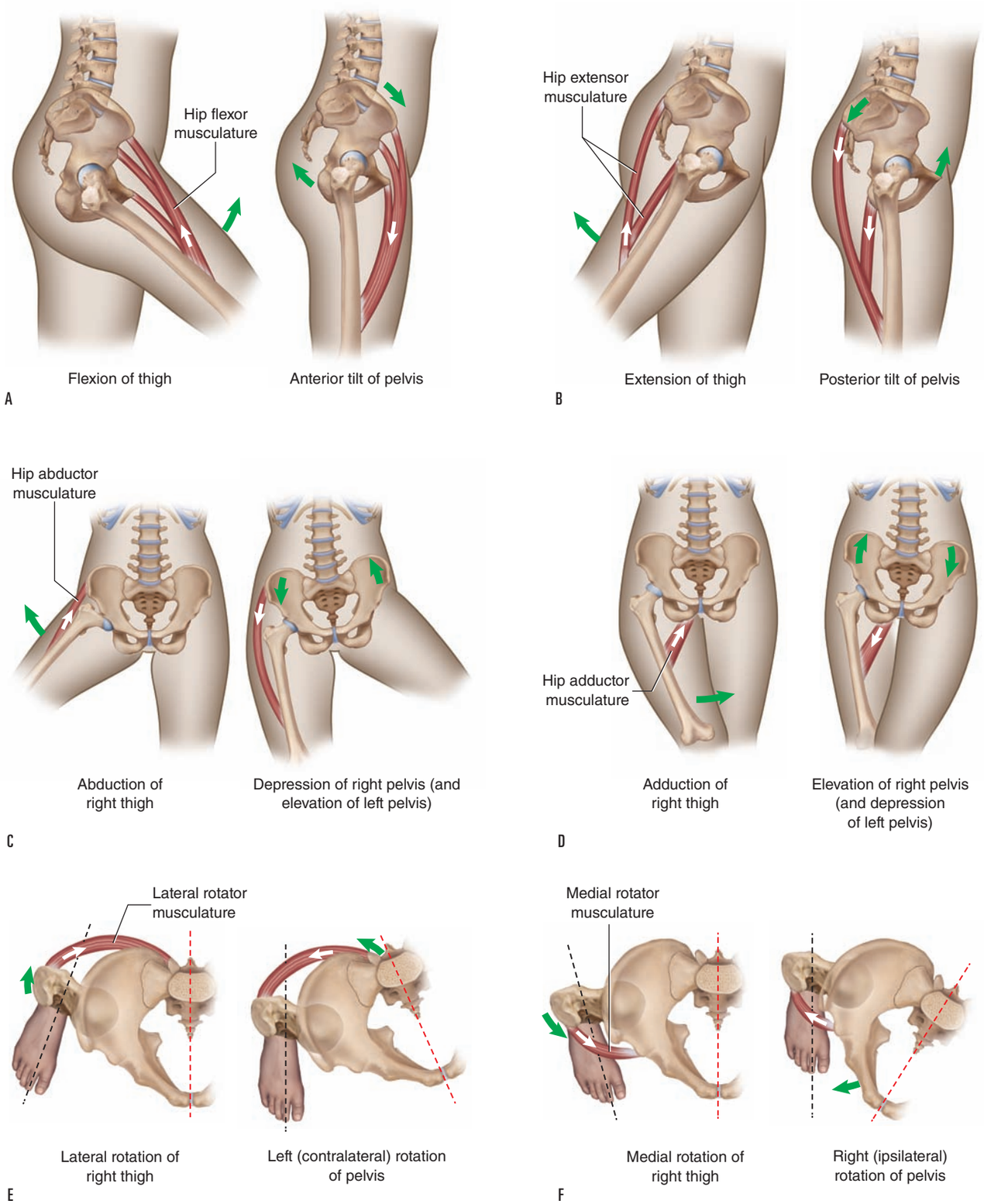


Figure 1-12 Joint actions of the pelvis at the hip joint are the reverse actions of the thigh moving at that hip joint. **(A, B)** Pelvic anterior tilt is the reverse action of thigh flexion; pelvic posterior tilt is the reverse action of thigh extension. **(C, D)** Pelvic depression is the reverse action of thigh abduction; pelvic elevation is the reverse action of thigh adduction. **(E, F)** Pelvic contralateral rotation is the reverse action of thigh lateral rotation; pelvic ipsilateral rotation is the reverse action of thigh medial rotation.

TABLE 1-2 **Standard and Reverse Actions at the Hip Joint**

Standard Open Chain Thigh Actions	Reverse Closed Chain Pelvic Actions
Flexion	Anterior tilt
Extension	Posterior tilt
Abduction	Depression
Adduction	Elevation
Lateral rotation	Contralateral rotation
Medial rotation	Ipsilateral rotation

BOX 1.1

Horizontal Flexion and Extension

Two other motions of the thigh at the hip joint are named. They are horizontal flexion (also known as horizontal adduction) and horizontal extension (also known as horizontal abduction) (see accompanying figures). Horizontal abduction is a posterior/lateral motion of the thigh at the hip joint when the thigh is already flexed to 90 degrees **(Fig. A)**; horizontal adduction is an anterior/medial motion of the thigh at the hip joint when the thigh is already flexed to 90 degrees **(Fig. B)**. Horizontal adduction is useful when stretching the musculature of the posterior pelvis.

Motion of the Pelvis as a Unit Relative to the Lumbosacral Joint

The pelvis can also move relative to the trunk at the lumbosacral joint. These are the same named actions as when the pelvis moves at the hip joint: anterior and posterior tilt in the sagittal plane, elevation and depression in the frontal plane, and right rotation and left rotation in the transverse plane. Similar to pelvic motion being reverse actions of the thigh at the hip joint, pelvic actions can also be reverse actions of the trunk at the lumbosacral joint. When the inferior end of the body (the pelvis) is stabilized/fixed and the superior end of the body (the trunk) is free to move, the trunk moves at the lumbosacral joint (this could be looked at as open chain kinematics); when the superior end of the body (the trunk) is stabilized/fixed and the inferior end of the body (the pelvis) is free to move, the pelvis moves at the lumbosacral joint (this could be looked at as closed chain kinematics). Specifically, pelvic anterior tilt is the reverse action of trunk extension, pelvic posterior tilt is the reverse action of trunk flexion, elevation of the right side of the pelvis is the reverse action of trunk right lateral flexion, elevation of the left side of the pelvis is the reverse action of trunk left lateral flexion, pelvic rotation to the right is the reverse action of trunk rotation to the left, and pelvic rotation to the left is the reverse action of trunk rotation to the right (Fig. 1-13 and Table 1-3).

BOX 1.2

Pelvic Posture and the Spine

The base (superior surface) of the sacrum forms the base upon which the spine sits. Therefore, if the posture of the pelvis changes, the posture of the sacral base changes, and the posture of the spine changes. For this reason, pelvic posture is critically important to the posture of the spine, and it is important for the therapist to be aware of all muscular, ligamentous, and other fascial structures that can affect the posture of the pelvis. See Chapter 2 for more details.

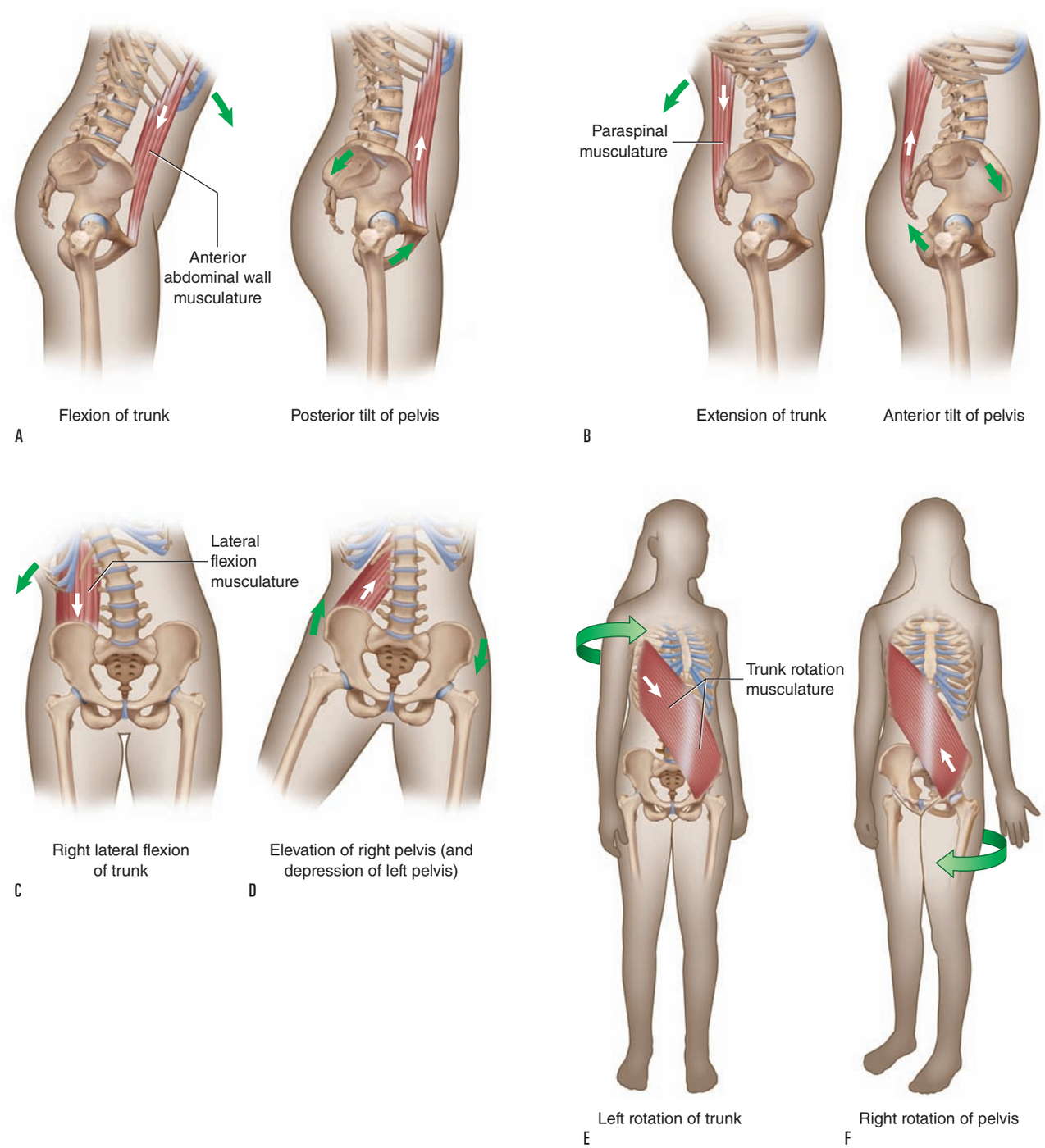


Figure 1-13 Joint actions of the pelvis at the lumbosacral joint are the reverse actions of the trunk moving at the lumbosacral joint. **(A, B)** Pelvic posterior tilt is the reverse action of trunk flexion; pelvic anterior tilt is the reverse action of trunk extension. **(C, D)** Pelvic right side elevation is the reverse action of trunk right lateral flexion (pelvic left side elevation is the reverse action of trunk left lateral flexion). **(E, F)** Pelvic right rotation is the reverse action of trunk left rotation (pelvic left rotation is the reverse action of trunk right rotation).

TABLE 1-3 Standard and Reverse Actions at the Lumbosacral Joint

Standard Open Chain Trunk Actions	Reverse Closed Chain Pelvis Actions
Extension	Anterior tilt
Flexion	Posterior tilt
Right lateral flexion	Right side elevation*
Left lateral flexion	Left side elevation*
Left rotation	Right rotation
Right rotation	Left rotation

*When one side of the pelvis elevates, the other side of the pelvis depresses.

Even though the pelvis can move at the hip joint(s) and the lumbosacral joint, pelvic motion at the hip joints is functionally more important, both from the standpoint of posture and motion.

Intrapelvic Motion

Motion can also occur within the pelvis; this is termed as **intrapelvic motion**. Intrapelvic motion involves motion of a pelvic bone relative to the sacrum or motion of the sacrum relative to the pelvic bone at the SIJ located between them (this also involves motion between the pelvic bones at the symphysis pubis joint anteriorly). These motions can be named for the sacral motion that occurs or for the motion of the pelvic bone.

When describing the sacral motion within the sagittal plane (or near sagittal plane), the terms **nutation** and **counternutation** are used. When the sacral base drops anteriorly, it is called nutation; when the sacral base moves in the posterior direction, it is called counternutation (Fig. 1-14). Nutation can also be described as anterior tilt; counternutation can also be described as posterior tilt.

When describing motion of the pelvic bone at the SIJ in the sagittal plane (or near sagittal plane), the terms *posterior tilt* and *anterior tilt* are used. In effect, posterior tilt of the pelvic bone is the reverse action of nutation of the sacrum at the SIJ, and anterior tilt of the pelvic bone is the reverse action of counternutation of the sacrum at the SIJ. The pelvic bone can also be described as moving in the transverse plane. The term *internal* (*or medial*) *rotation* describes the anterior surface of the pelvic bone orienting medially (in effect, toward the opposite side of the body). This motion gaps (opens) the posterior aspect of the SIJ (and approximates [closes] the anterior aspect of the SIJ). The term *external* (*or lateral*) *rotation* describes the anterior surface of the pelvic bone orienting more laterally (toward the same side of the body). This motion gaps the anterior aspect of the SIJ (and approximates the posterior aspect of the SIJ) (Fig. 1-15). In effect, intrapelvic motion involves one side of the pelvis moving relative to the other side. SIJ motions are small but are very important. An understanding of this motion is critically important when performing joint mobilization technique.

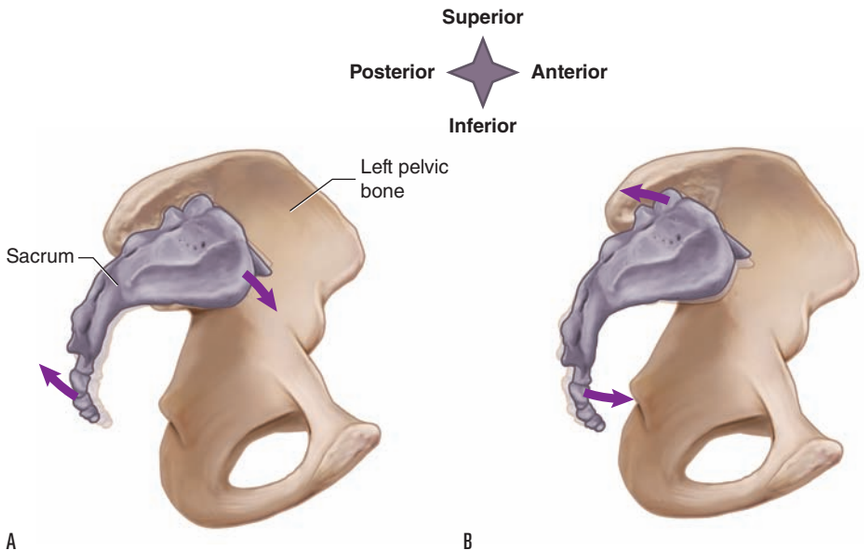


Figure 1-14 Right lateral view of nutation and counternutation of the sacrum. **(A)** Nutation. **(B)** Counternutation.

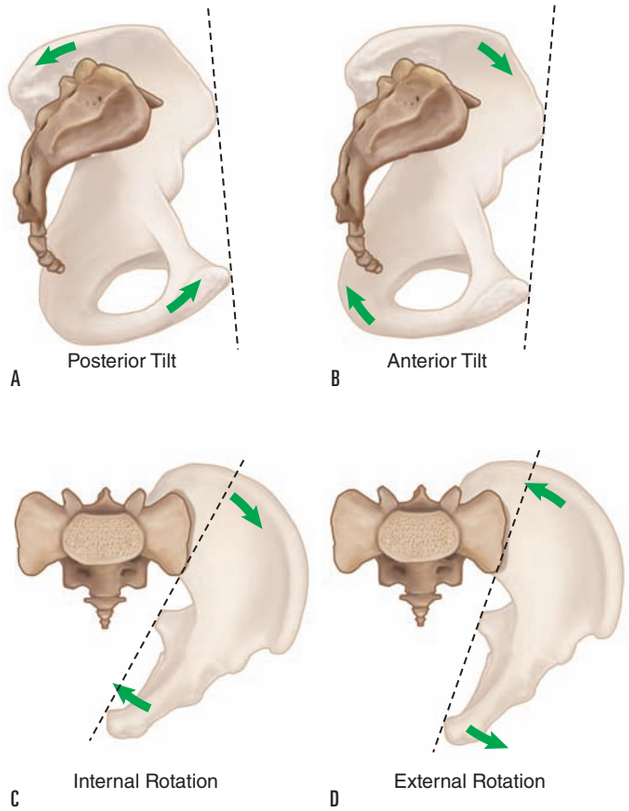


Figure 1-15 Motion of the pelvic bone at the SIJ. **(A, B)** Right lateral view of posterior tilt and anterior tilt, respectively. **(C, D)** Superior view of internal rotation and external rotation of the pelvic bone, respectively.

MUSCULATURE OF THE LUMBAR SPINE AND PELVIS

To perform clinical low back and pelvis treatment that is accurate and specific, the therapist needs to know the attachments and actions of the muscles of the region. For example, to know where to place the palpating hand when applying deep tissue work into the low back and pelvis, the manual therapist must know the attachments of the target muscle to be worked to be able to locate the target muscle accurately.

Furthermore, the therapist needs to know the target muscle's mover actions. Knowing the mover actions allows the therapist to ask the client to contract and engage the target muscle so that it palpably hardens. This hardening helps to distinguish the target muscle from the adjacent soft tissues, thereby alerting the therapist to its exact position and depth. Knowing a target muscle's mover actions is also important when stretching the client, regardless of the stretching technique that is employed. Stretching a muscle is accomplished by lengthening it, which involves doing the opposite of the muscle's mover actions. For example, if the target muscle is a trunk extensor, it is stretched by flexing the client's trunk; if the target muscle is an anterior tilter of the pelvis, it is stretched by posteriorly tilting the client's pelvis, and so on.

Before memorizing the detailed actions of each muscle of the trunk or pelvis, it is helpful first to visualize each muscle within its larger structural and functional groups. Figures 1-16 through 1-18 display the muscles of the trunk and pelvis.

Muscles of the Trunk

The muscles of the trunk can be divided into posterior and anterior groups. Although this division is not perfect (e.g., the external and internal abdominal oblique muscles of the anterior abdominal wall attach all the way around to the posterior abdominal wall), it is a good beginning framework. It is also helpful to view the muscles as being located either on the right side or the left side of the trunk. Therefore, for this book's purposes, the trunk muscles may be divided into four major structural groups, each in its own quadrant:

- Anterior right side
- Anterior left side
- Posterior right side
- Posterior left side

Viewing the muscles as part of these larger structural groups enhances the therapist's understanding of the *functional groups* of muscle movers. This is so because structural groups largely determine functional groups—that is, the structural location of a muscle largely determines its mover function of the trunk. There are six major functional groups of muscles of the trunk: flexors and extensors in the sagittal plane, right lateral flexors and left lateral flexors in the frontal plane, and right rotators and left rotators in the transverse plane (alternatively, their reverse pelvic actions could be named and considered instead; see Table 1-3).

Knowing the structural location of a muscle helps make it possible to understand its action and place it into its functional group for standard and reverse actions without having to memorize this information. For example, all muscles that cross the spinal joints anteriorly are flexors of the trunk at the spinal joints and posterior tilters of the pelvis at the lumbosacral joint. Similarly, all muscles that cross the spinal joints posteriorly are extensors of the trunk at the spinal joints and anterior tilters of the pelvis at the lumbosacral joint. Whether anterior or posterior, if the muscle is located to the right side of the trunk, it can right laterally flex the trunk at the spinal joints and elevate the pelvis on the right side (and consequently depress the pelvis on the left side). Similarly, muscles on the left side can left laterally flex the trunk and elevate the left side of the pelvis (and consequently depress the right side of the pelvis).

It is also important to know the rotation action of the target muscle when treating it. The rotation component of a muscle's actions is more challenging to visualize immediately because it is less dependent on the muscle's structural location, as noted in the previous paragraph. As with all muscles, the direction of the muscle's line of pull determines the muscle's action, and the direction of the muscle's fibers essentially determines the line of pull. Muscles that perform flexion, extension, right lateral flexion, and/or left lateral

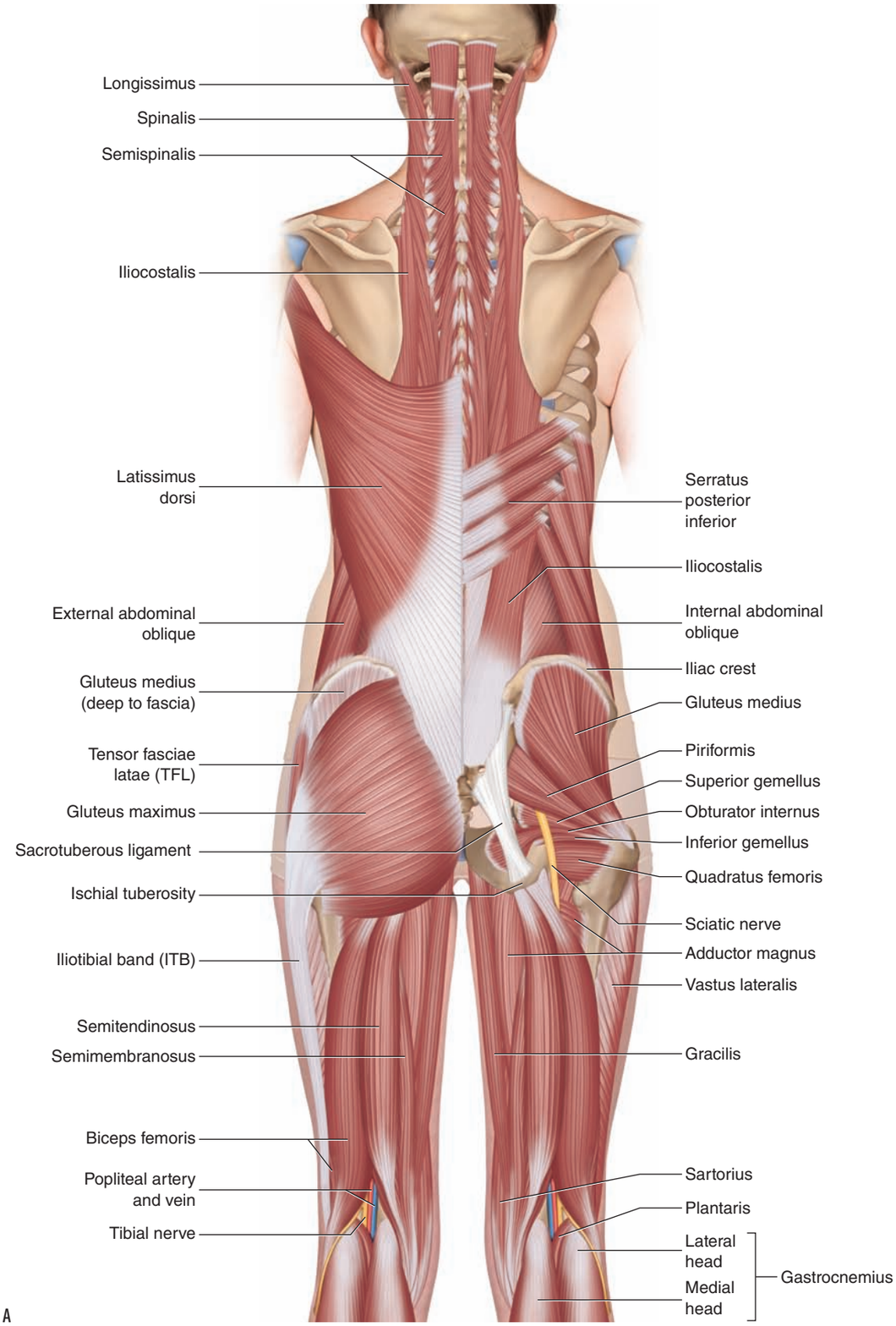


Figure 1-16 Posterior view of the musculature of the low back and pelvis region. **(A)** Superficial view on the left with an intermediate view on the right. *(continued)*

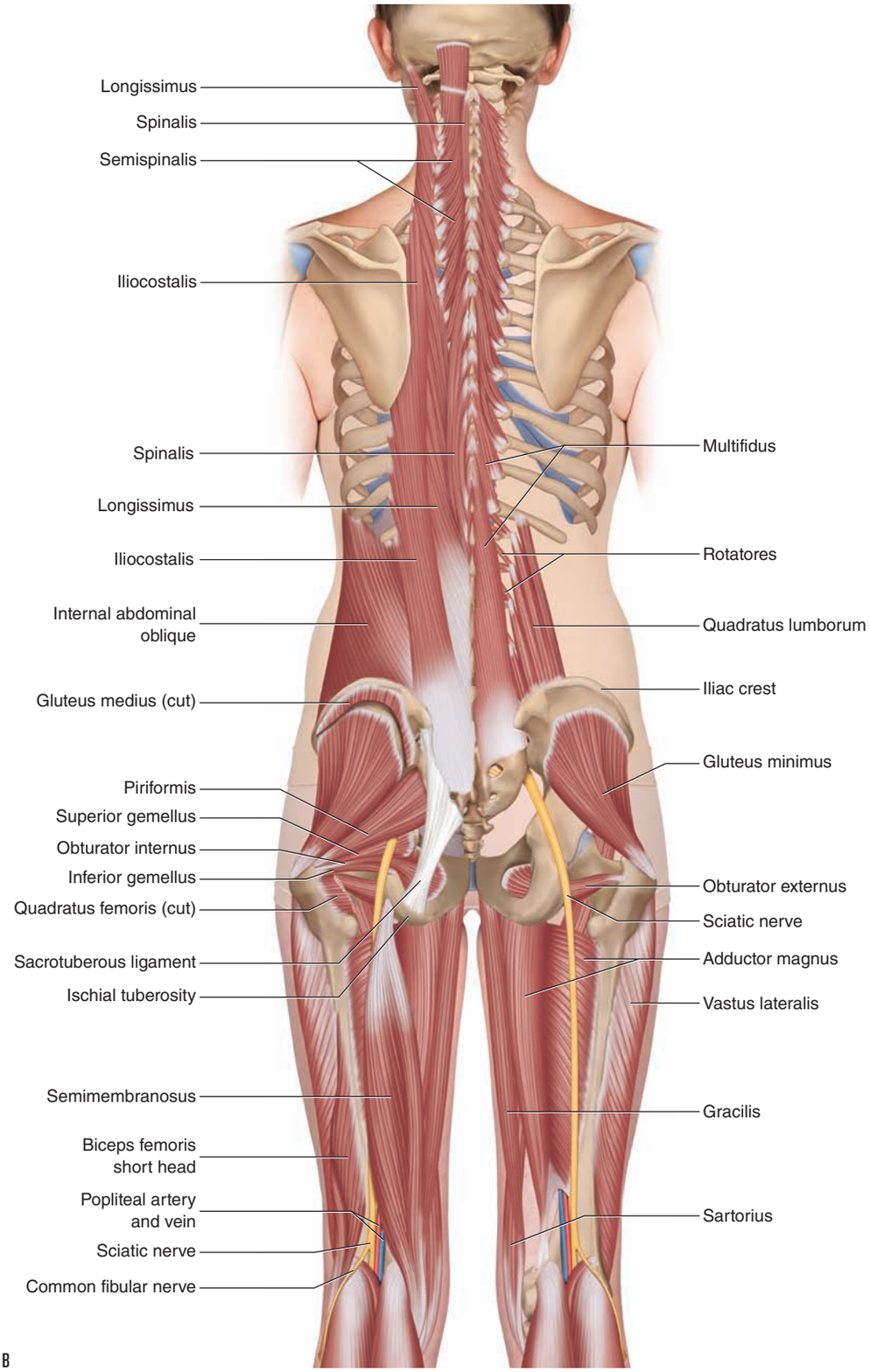


Figure 1-16 *(continued)* **(B)** Deeper set of views.

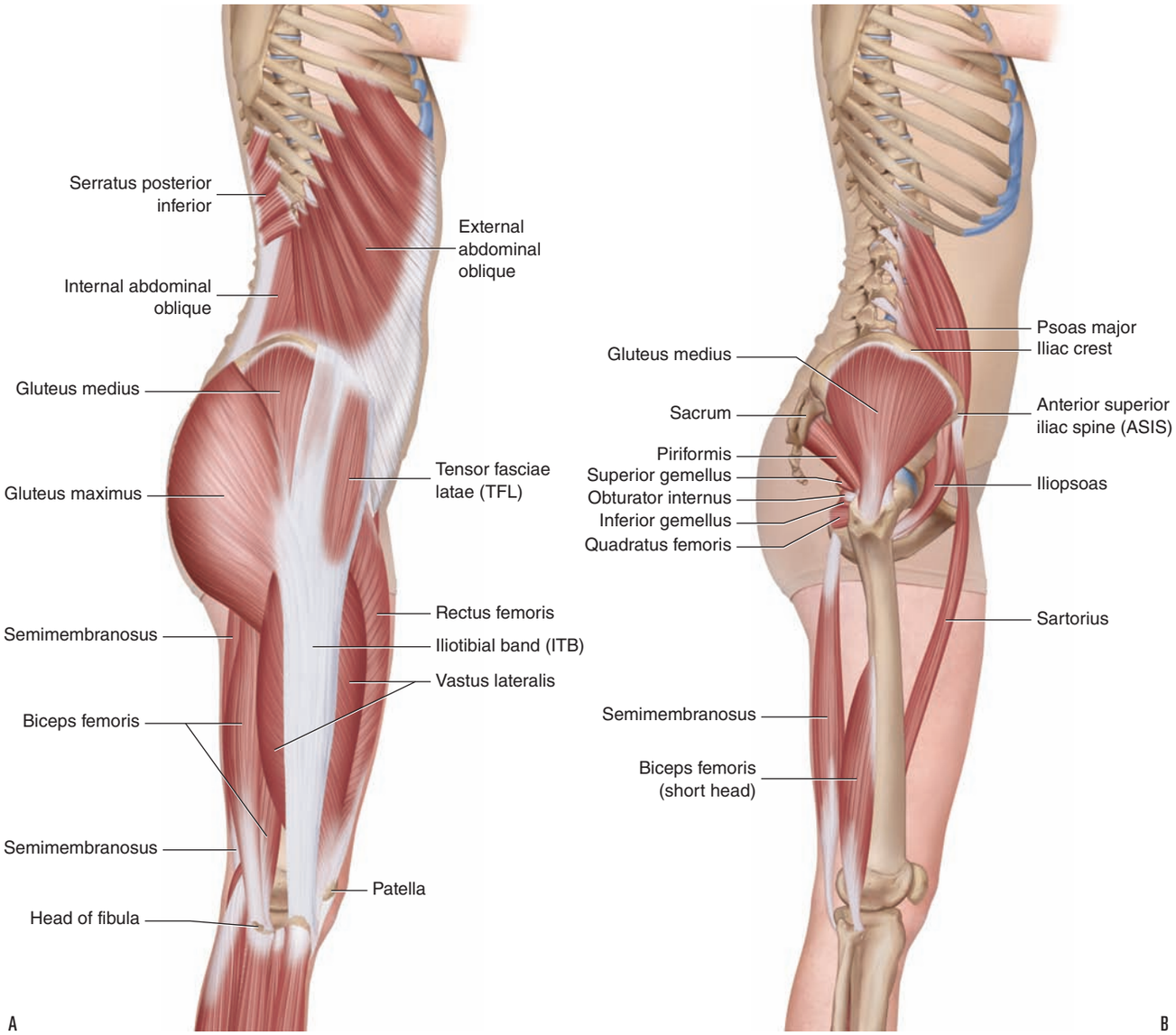


Figure 1-17 Right lateral views of the musculature of the low back and pelvis region. **(A)** Superficial view. Deeper view.

flexion must have a vertical component to their fiber direction. Muscles that perform right or left rotation must have a horizontal component to their fiber direction; in fact, it can be helpful to view them as partially "wrapping" horizontally around the trunk. Thus, considering the fiber direction of a trunk muscle is important when determining its rotational ability.

These six major functional groups are not mutually exclusive. A muscle can be a member of more than one functional group. For example, the right external abdominal oblique can flex, right laterally flex, and left (contralaterally) rotate the trunk at the spinal joints. Knowledge of the functional group actions of musculature is critically important when learning to perform multiplane stretching, which is presented in Chapter 6.

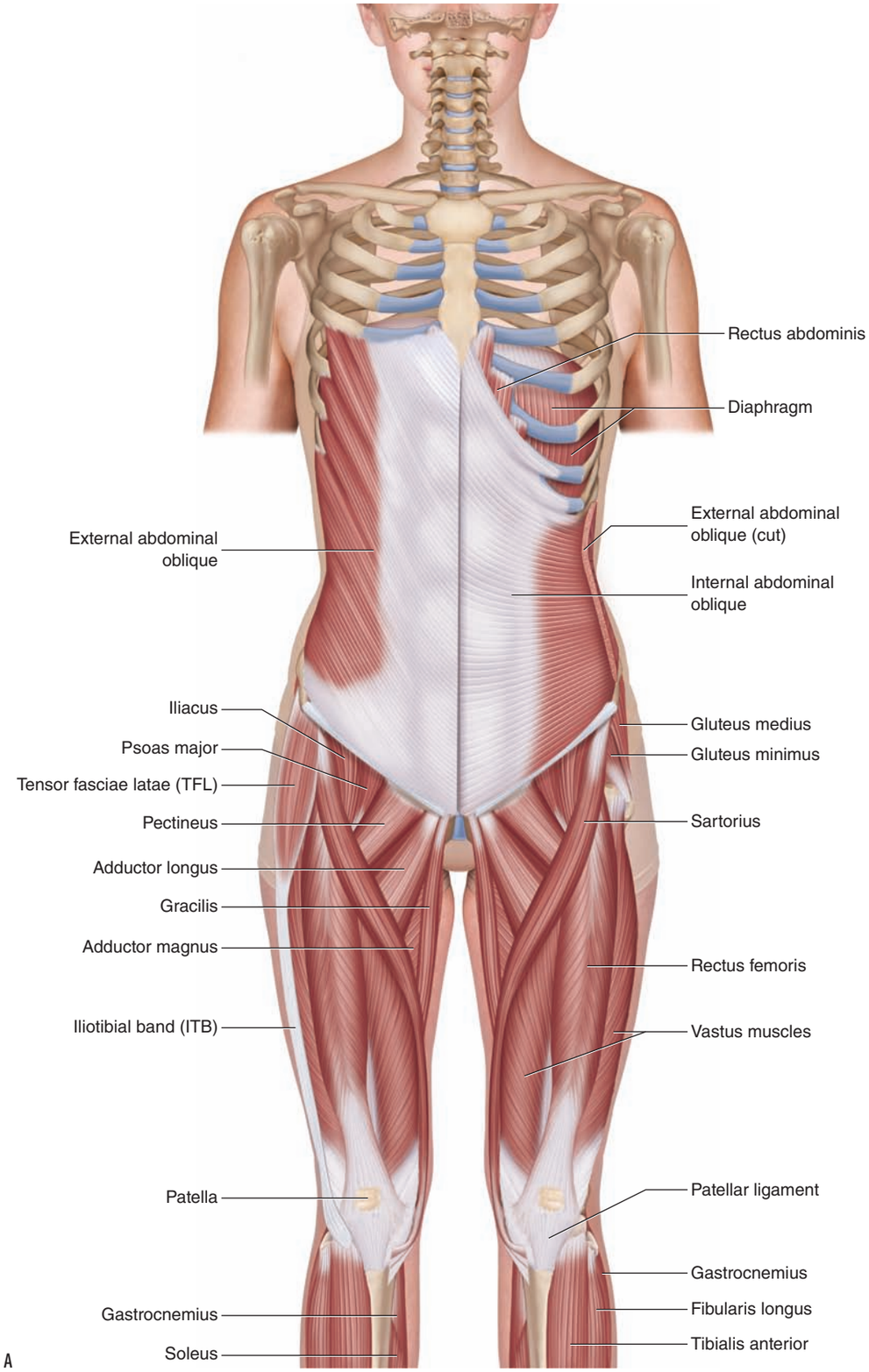


Figure 1-18 Anterior views of the musculature of the low back and pelvis region. **(A)** Superficial view on the right with an intermediate view on the left. *(continued)*

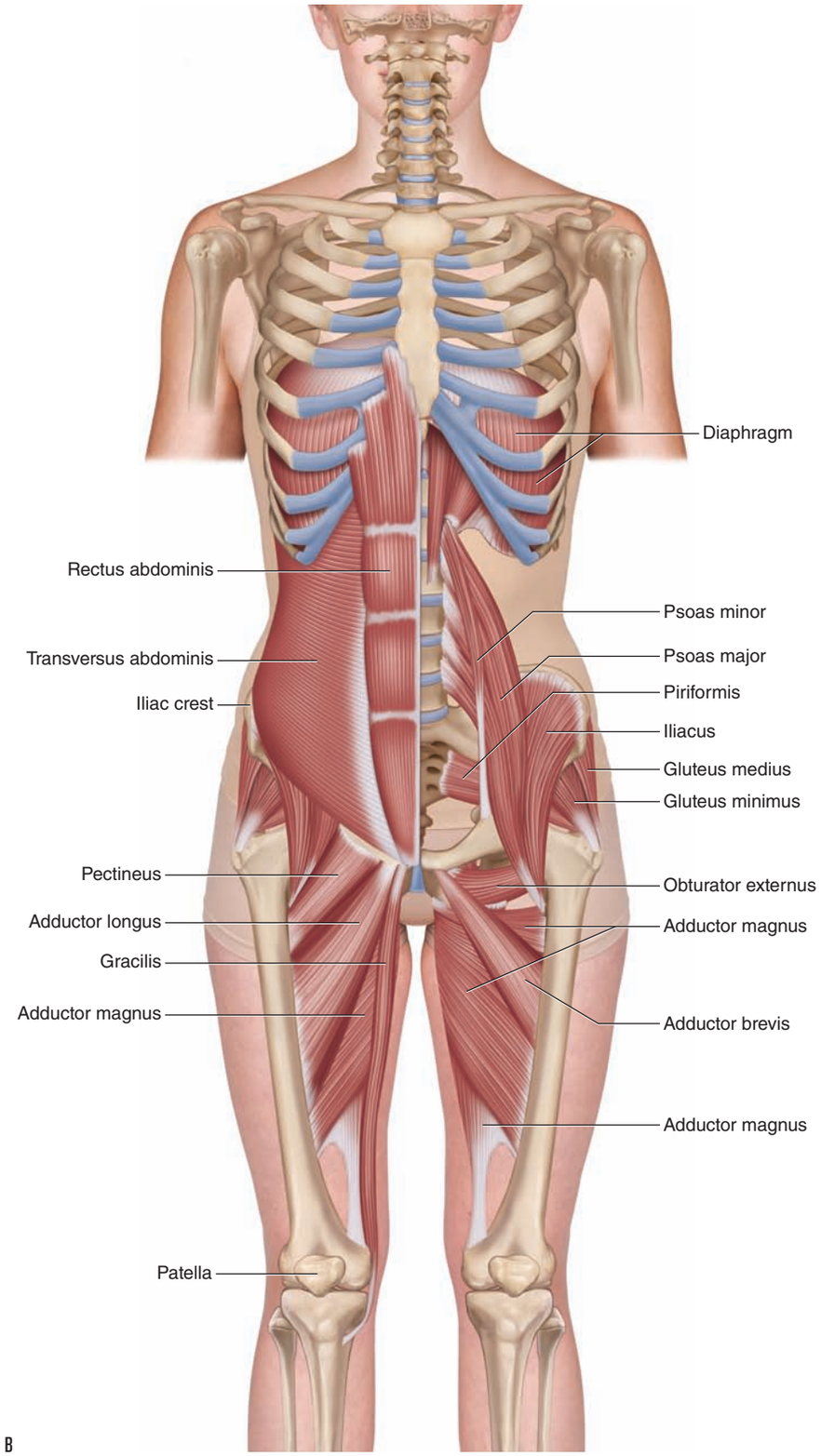


Figure 1-18 *(continued)* **(B)** Deeper set of views.

Figures 1-19 through 1-29 (in the following Attachments and Actions boxes) illustrate the individual muscles and muscle groups of the trunk along with their specific attachment and action information.

1.1 ATTACHMENTS AND ACTIONS

Erector Spinae Group

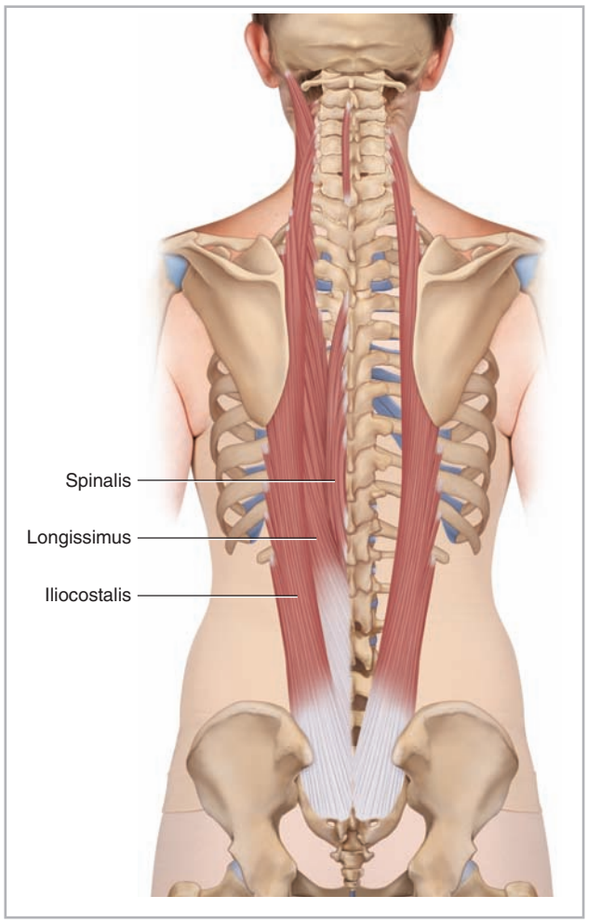


Figure 1-19 Posterior view of the erector spinae musculature of the low back. The erector spinae is composed of three subgroups: iliocostalis, longissimus, and spinalis. All three subgroups are shown on the left side; only the iliocostalis is shown on the right side.

- The erector spinae in the trunk and pelvis attaches from the sacrum, medial iliac crest, vertebral transverse and spinous processes, and angles of ribs *to* angles of ribs and transverse and spinous processes of vertebrae above.
- As a group, the erector spinae extends, laterally flexes, and ipsilaterally rotates the trunk at the spinal joints. It also anteriorly tilts and contralaterally rotates the pelvis and elevates the same-side pelvis at the lumbosacral joint.

1.2 ATTACHMENTS AND ACTIONS

Transversospinalis Group

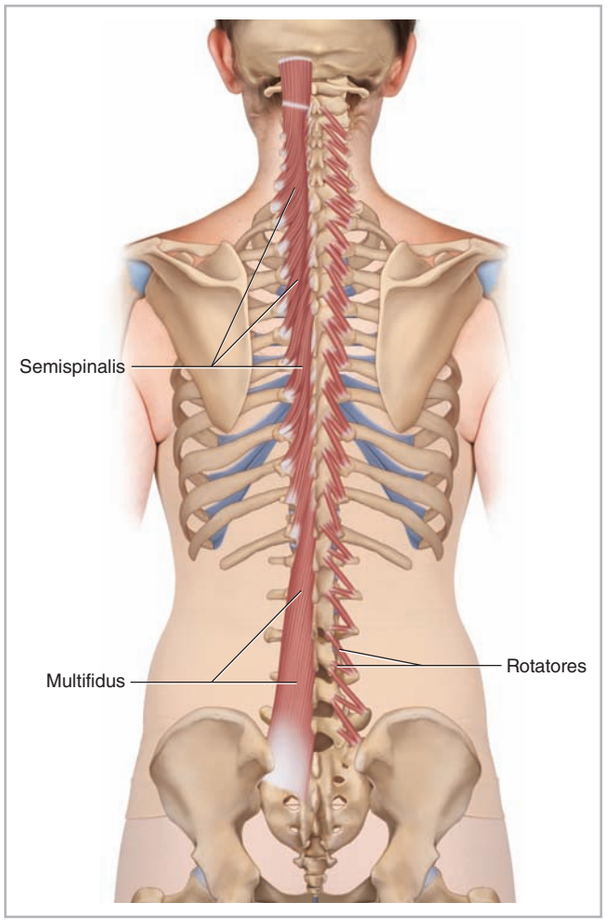


Figure 1-20 Posterior view of the transversospinalis musculature. The transversospinalis is composed of three groups: semispinalis, multifidus, and rotatores (the semispinalis does not attach into the lumbar spine). The multifidus and semispinalis are shown on the left side, and the rotatores are shown on the right side. *Note*: The multifidus is the largest muscle of the lumbar spine.

- The multifidus and rotatores of the transversospinalis group in the trunk lie within the laminar groove of the lumbar and thoracic spine. The multifidus attaches from the sacrum and PSIS and the mammillary processes of the lumbar spine and transverse processes of the thoracic spine *to the* spinous processes of vertebral segments three to four levels superior to the inferior attachment. The rotatores attach from transverse processes of the lumbar and thoracic spine to vertebral segments one to two levels superior to the inferior attachment.
- As a group, the transversospinalis extends, laterally flexes, and contralaterally rotates the trunk at the spinal joints. It also anteriorly tilts and ipsilaterally rotates the pelvis and elevates the same-side pelvis at the lumbosacral joint.

1.3 ATTACHMENTS AND ACTIONS

Quadratus Lumborum

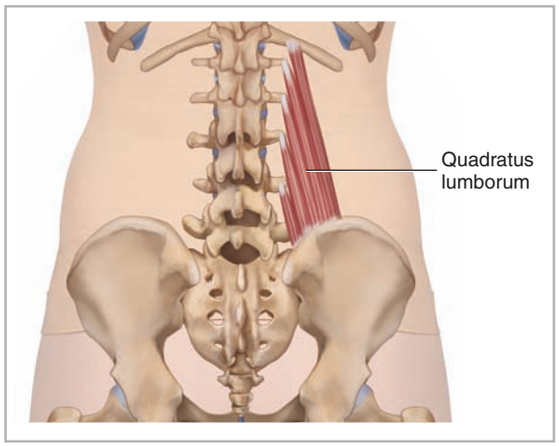


Figure 1-21 Posterior view of the right quadratus lumborum.

- The quadratus lumborum attaches from the inferomedial border of the 12th rib and the transverse processes of L1-L4 *to the* posteromedial iliac crest.
- The quadratus lumborum elevates the same-side pelvis and anteriorly tilts the pelvis at the lumbosacral joint and extends and laterally flexes the trunk at the spinal joints. It also depresses the 12th rib at the costovertebral joint.

1.4 ATTACHMENTS AND ACTIONS

Serratus Posterior Inferior

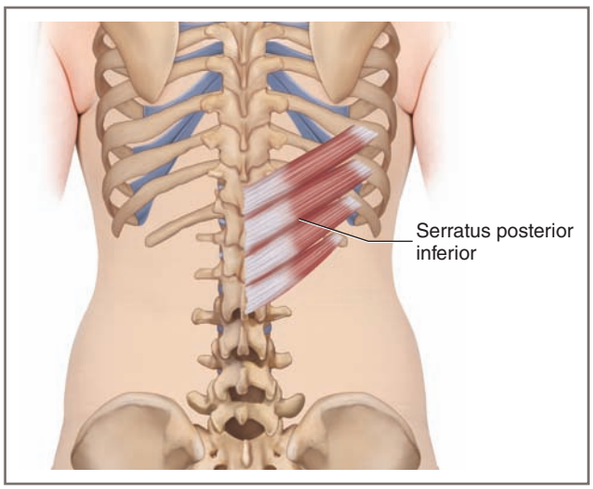


Figure 1-22 Posterior view of the right serratus posterior inferior.

- The serratus posterior inferior attaches from the spinous processes of T11-L2 *to* ribs 9 through 12.
- The serratus posterior inferior depresses ribs 9 through 12 at the sternocostal and costospinal joints.

1.5 ATTACHMENTS AND ACTIONS

Latissimus Dorsi

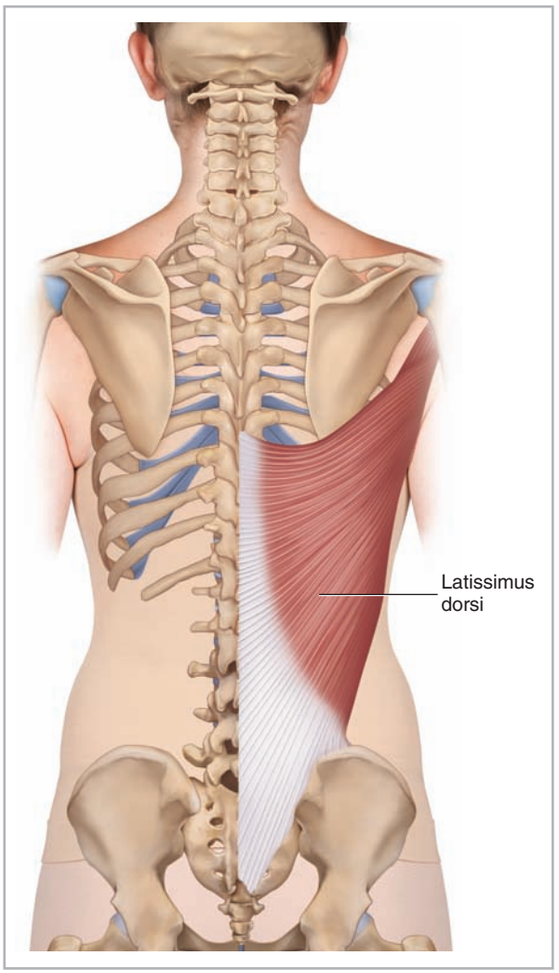


Figure 1-23 Posterior view of the right latissimus dorsi.

- The latissimus dorsi attaches from the spinous processes of T7-L5, the posterior sacrum, and the posterior iliac crest (via the thoracolumbar fascia) *to the* lowest three or four ribs and the inferior angle of the scapula *to the* medial lip of the bicipital groove of the humerus.
- The latissimus dorsi extends, medially rotates, and adducts the arm at the glenohumeral joint. It also anteriorly tilts the pelvis at the lumbosacral joint. Via its attachment to the scapula, it can also depress the scapula (shoulder girdle) at the scapulocostal joint.

1.6 ATTACHMENTS AND ACTIONS

Rectus Abdominis

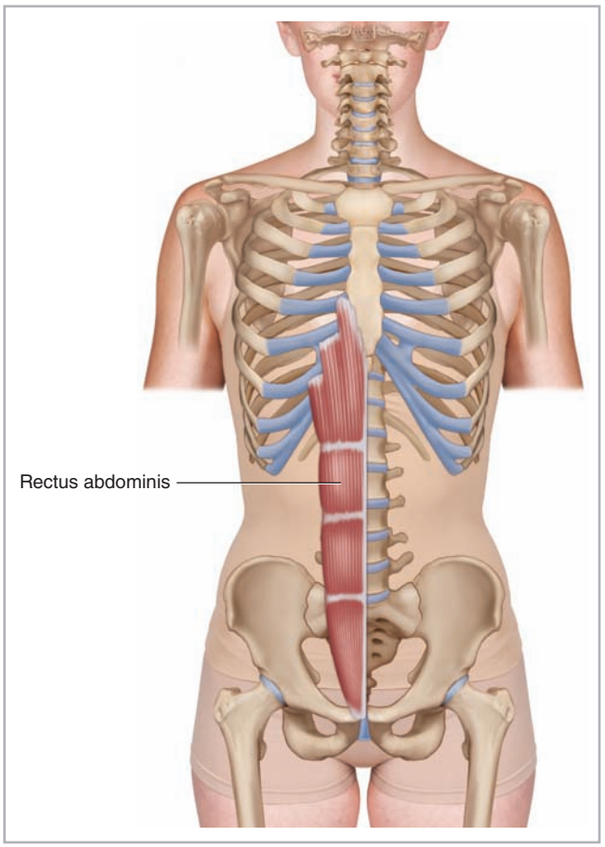


Figure 1-24 Anterior view of the right rectus abdominis.

- The rectus abdominis attaches from the crest and symphysis of the pubic bone *to the* xiphoid process of the sternum and the costal cartilages of ribs 5 through 7.
- The rectus abdominis flexes and laterally flexes the trunk at the spinal joints and posteriorly tilts the pelvis at the lumbosacral joint. The rectus abdominis also compresses the abdominal contents.

1.7 ATTACHMENTS AND ACTIONS

External Abdominal Oblique

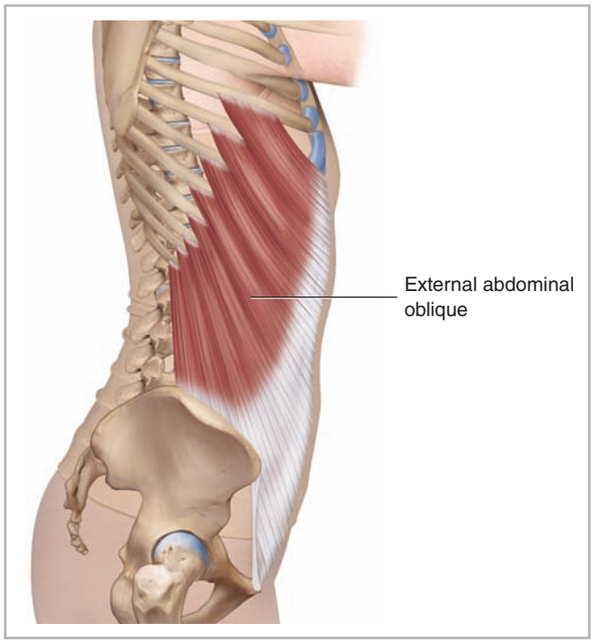


Figure 1-25 Lateral view of the right external abdominal oblique.

- The external abdominal oblique attaches from the abdominal aponeurosis, pubic bone, inguinal ligament, and the anterior iliac crest *to the* lower eight ribs.
- The external abdominal oblique flexes, laterally flexes, and contralaterally rotates the trunk at the spinal joints. It also posteriorly tilts and ipsilaterally rotates the pelvis and elevates the same-side pelvis at the lumbosacral joint. The external abdominal oblique also compresses the abdominal contents.

1.8 ATTACHMENTS AND ACTIONS

Internal Abdominal Oblique

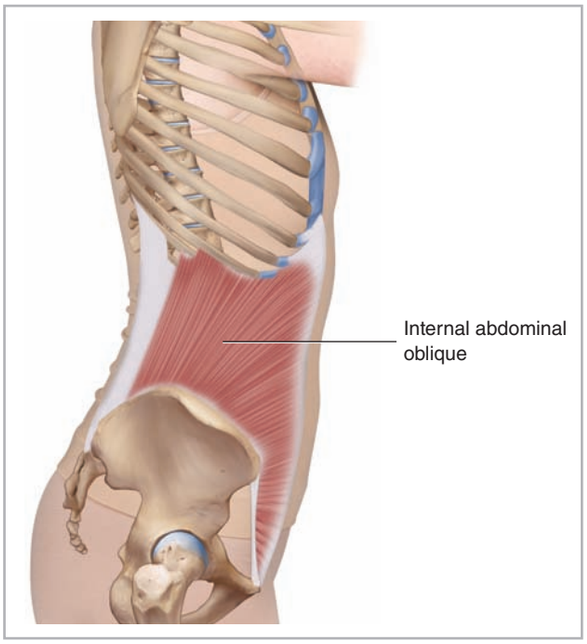


Figure 1-26 Lateral view of the right internal abdominal oblique.

- The internal abdominal oblique attaches from the inguinal ligament, iliac crest, and thoracolumbar fascia *to the* lower three ribs and the abdominal aponeurosis.
- The internal abdominal oblique flexes, laterally flexes, and ipsilaterally rotates the trunk at the spinal joints. It also posteriorly tilts and contralaterally rotates the pelvis and elevates the same-side pelvis at the lumbosacral joint. The internal abdominal oblique also compresses the abdominal contents.

1.9 ATTACHMENTS AND ACTIONS

Transversus Abdominis

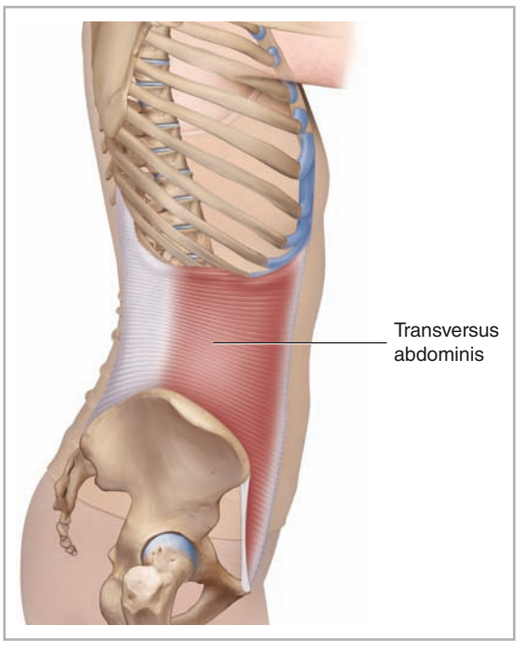


Figure 1-27 Lateral view of the right transversus abdominis.

- The transversus abdominis attaches from the inguinal ligament, iliac crest, thoracolumbar fascia, and the costal cartilages of ribs 7 through 12 *to the* abdominal aponeurosis.
- The transversus abdominis compresses the abdominal contents.

1.10 ATTACHMENTS AND ACTIONS

Psoas Minor

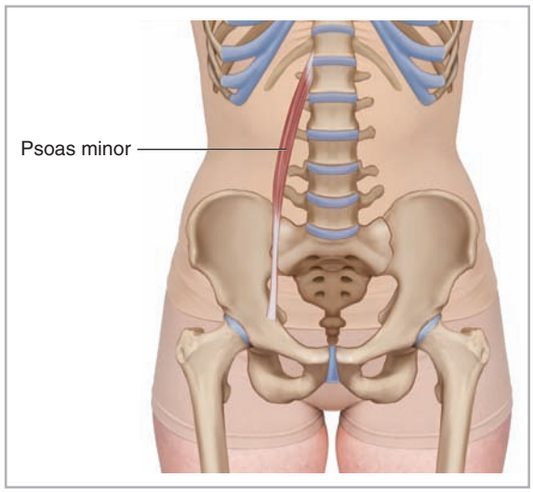


Figure 1-28 Anterior view of the right psoas minor.

- The psoas minor attaches from the anterolateral bodies of T12 and L1 *to the* pelvic bone.
- The psoas minor flexes the trunk at the spinal joints and posteriorly tilts the pelvis at the lumbosacral joint.

1.11 ATTACHMENTS AND ACTIONS

Diaphragm

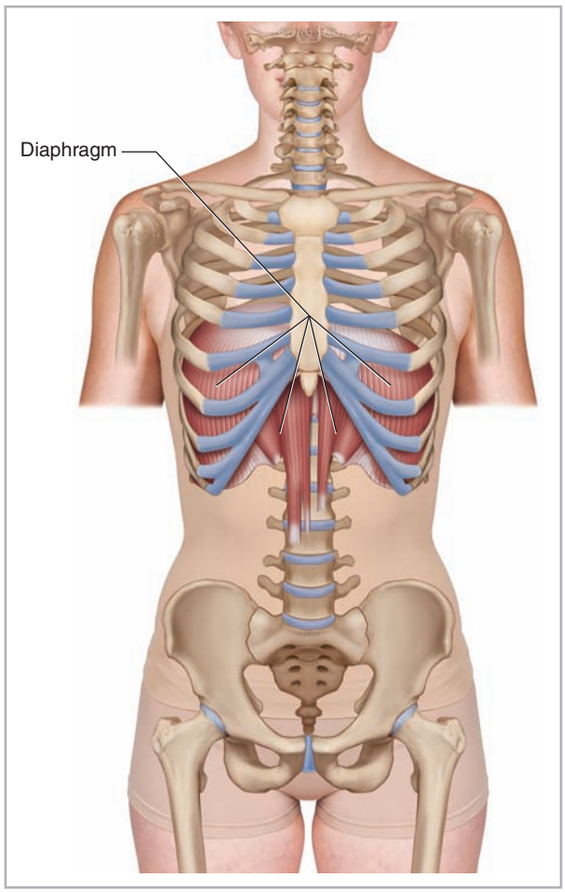


Figure 1-29 Anterior view of the diaphragm.

- The diaphragm attaches to the internal surfaces of the sternum, the lower six ribs and their costal cartilages, and L1-L3.
- The diaphragm increases the volume of the thoracic cavity by its central dome dropping down and/or by pulling the rib cage attachment up.

Muscles of the Pelvis

Similar to learning the muscles of the trunk, it can be helpful to first look at the functional groups of muscles of the pelvis when learning or reviewing them. Before doing that, it is important to first place muscles of the pelvis into their three major categories. They are

- Muscles that attach from the pelvis to the trunk and cross the lumbosacral joint
- Muscles that attach from the pelvis to the thigh/leg and cross the hip joint
- Pelvic floor muscles that are located wholly within the pelvis

Pelvic Muscles that Cross the Lumbosacral Joint and Attach onto the Trunk

Muscles of the pelvis that cross the lumbosacral joint to attach onto the trunk were described in the previous section on "Muscles of the Trunk." Their reverse action pelvic motions occur when their superior trunk attachment is fixed, and the pelvic attachment moves instead. Given that they are the same trunk muscle groups simply looked at from the perspective of their pelvic action, they can also be divided into the same four quadrants. The anterior muscles posteriorly tilt the pelvis, the posterior muscles anteriorly tilt the pelvis, the muscles on the right side elevate the right side of the pelvis (and therefore depress the left side of the pelvis), and the muscles on the left side elevate the left side of the pelvis (and therefore depress the right side of the pelvis).

As with the discussion of these muscles from the perspective of the trunk, understanding pelvic rotation motions by these muscles requires visualizing the horizontal component to the fiber direction of the muscles. Alternately, you simply realize that because these are reverse actions, if a muscle rotates the trunk in one direction, it must rotate the pelvis in the opposite (reverse) direction. See Table 1-3 for more information on this.

Pelvic Muscles that Cross the Hip Joint and Attach onto the Thigh/Leg

Muscles that cross the hip joint are usually thought of with respect to their open chain motion of the thigh relative to the pelvis at the hip joint. As such, you can also divide the musculature that moves the thigh at the hip joint into quadrants. The flexors are located anteriorly, extensors posteriorly, abductors laterally, and adductors medially. Rotation musculature is not as easily equated with location; however, as a general rule, lateral rotators are located posteriorly and medial rotators are located anteriorly. However, looking at these muscles' open chain actions on the thigh is not as important as understanding their closed chain actions on the pelvis. This is crucially important because the foot is so often on the ground, causing closed chain kinematic pelvic motion. Posture and motion of the pelvis then have repercussions on spinal posture and motion (see Chapter 2). See Table 1-2 for more information on the standard/reverse actions of the thigh and pelvis at the hip joint for these muscles. Following are hip joint muscles of the pelvis.

Figures 1-30 through 1-39 (in the following Attachments and Actions boxes) illustrate the individual muscles and muscle groups of the pelvis at the hip joint along with their specific attachment and action information.

1.12 ATTACHMENTS AND ACTIONS

Tensor Fasciae Latae

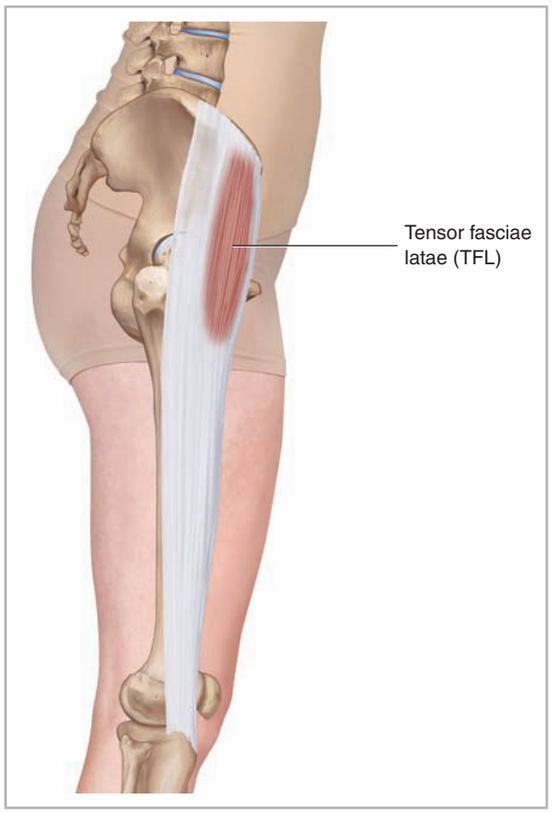


Figure 1-30 Lateral view of the right TFL.

- The tensor fasciae latae (TFL) attaches from the ASIS and anterior iliac crest *to the* iliotibial band (ITB), one-third of the way down the thigh.
- The TFL flexes, abducts, and medially rotates the thigh at the hip joint and anteriorly tilts and depresses the same-side pelvis at the hip joint.

1.13 ATTACHMENTS AND ACTIONS

Rectus Femoris

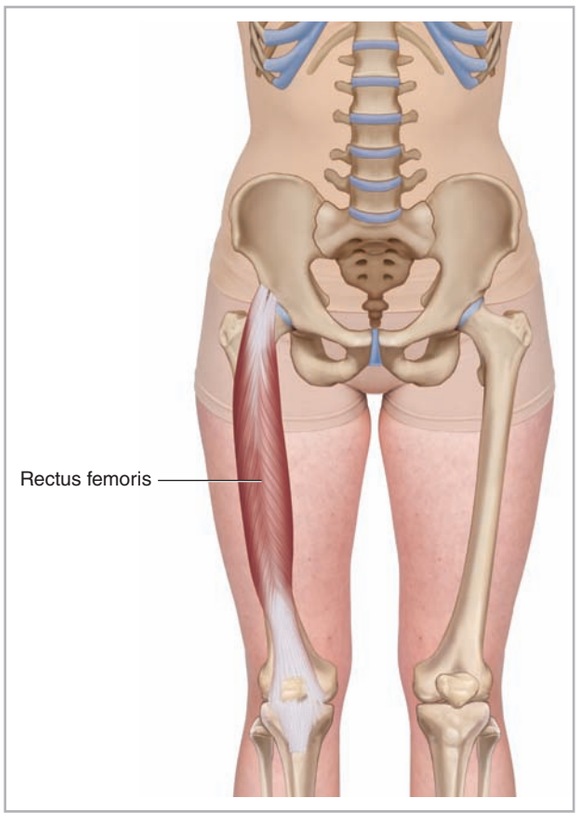


Figure 1-31 Anterior view of the right rectus femoris of the quadriceps femoris group.

- The rectus femoris of the quadriceps femoris group attaches from the AIIS *to the* patella and then onto the tibial tuberosity via the patella ligament.
- The rectus femoris flexes the thigh at the hip joint and anteriorly tilts the pelvis at the hip joint. It also extends the leg (and/or thigh) at the knee joint.

1.14 ATTACHMENTS AND ACTIONS

Sartorius

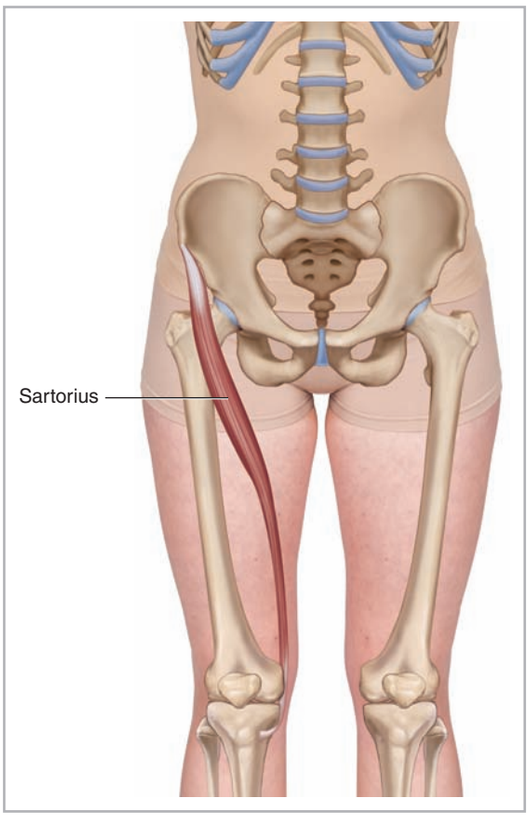


Figure 1-32 Anterior view of the right sartorius.

- The sartorius attaches from the ASIS *to the* pes anserine tendon at the proximal anteromedial tibia.
- The sartorius flexes, abducts, and laterally rotates the thigh at the hip joint and anteriorly tilts the pelvis and depresses the same-side pelvis at the hip joint. It also flexes the leg (and/or thigh) at the knee joint.

1.15 ATTACHMENTS AND ACTIONS

Iliopsoas

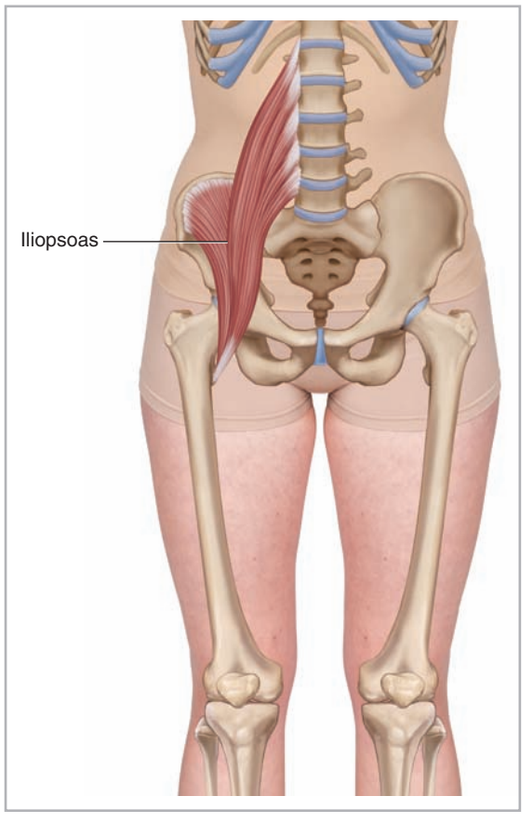


Figure 1-33 Anterior view of the right iliopsoas muscle. The iliopsoas is composed of the iliacus and psoas major muscles.

- The psoas major of the iliopsoas attaches from the anterolateral bodies and discs of T12-L5 and transverse processes of L1-L5 *to the* lesser trochanter of the femur. The iliacus of the iliopsoas attaches from the internal surface of the ilium *to the* lesser trochanter of the femur.
- Both the psoas major and iliacus flex and laterally rotate the thigh at the hip joint and anteriorly tilt the pelvis at the hip joint. The psoas major also flexes, laterally flexes, and contralaterally rotates the trunk at the spinal joints.

1.16 ATTACHMENTS AND ACTIONS

Adductor Group

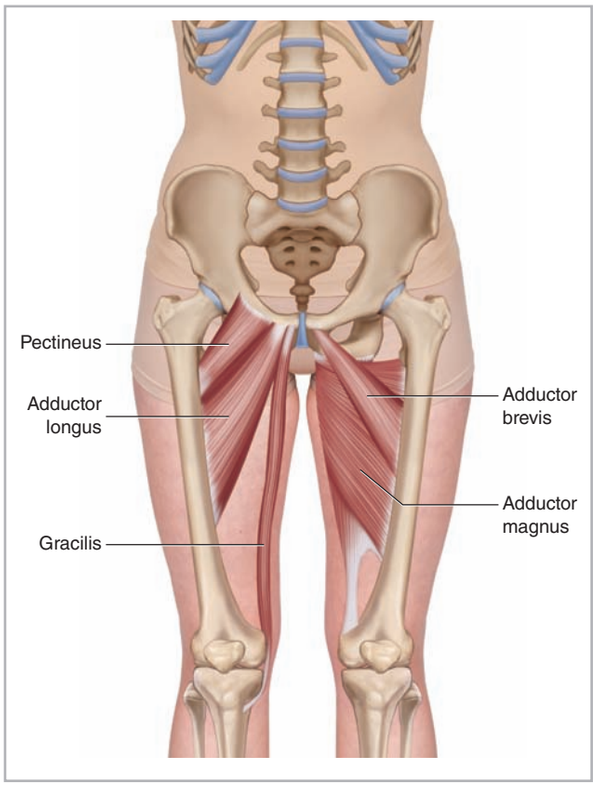


Figure 1-34 Anterior view of the adductor group. The adductor group is composed of the pectineus, adductor longus, adductor brevis, adductor magnus, and gracilis. The pectineus, adductor longus, and gracilis are shown on the client's right side (left side of figure); the adductor brevis and adductor magnus are shown on the client's left side (right side of figure).

- The adductor group attaches from the pubic bone and ischium *to the* linea aspera, pectineal line, adductor tubercle of the femur, and the pes anserine tendon at the proximal anteromedial tibia.
- As a group, the adductors adduct, flex, and medially rotate the thigh at the hip joint and anteriorly tilt and ipsilaterally rotate (and elevate the same-side) pelvis at the hip joint. The gracilis can also flex the leg (and/or thigh) at the knee joint. The adductor magnus extends the thigh and posteriorly tilts the pelvis at the hip joint.

1.17 ATTACHMENTS AND ACTIONS

Hamstring Group

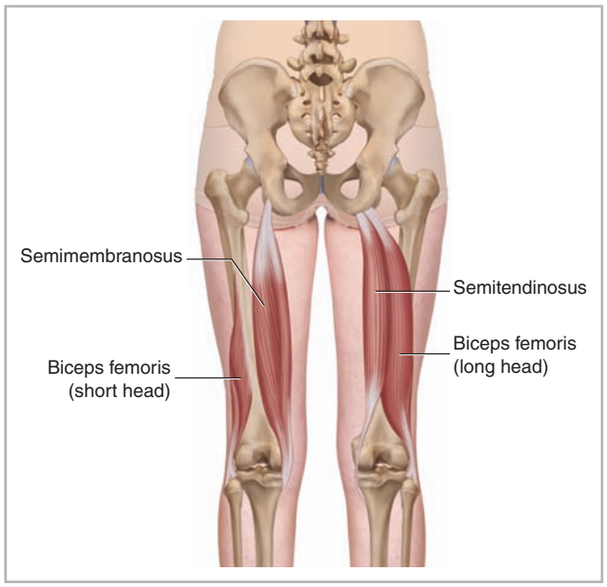


Figure 1-35 Posterior view of the hamstring group. The hamstring group is composed of the semitendinosus and semimembranosus medially and the biceps femoris laterally. The semitendinosus and long head of the biceps femoris are shown on the right side; the deeper semimembranosus and short head of the biceps femoris are shown on the left side.

- The biceps femoris attaches from the ischial tuberosity (long head) and linea aspera of the femur (short head) *to the* head of the fibula. The semitendinosus attaches from the ischial tuberosity *to the* pes anserine tendon at the proximal anteromedial tibia. The semimembranosus attaches from the ischial tuberosity *to the* posterior surface of the medial condyle of the tibia.
- As a group, the hamstrings extend the thigh and posteriorly tilt the pelvis at the hip joint. They also flex the leg (and/or thigh) at the knee joint. (*Note*: The short head of the biceps femoris does not cross the hip joint and therefore has no action at that joint.)

1.18 ATTACHMENTS AND ACTIONS

Gluteus Maximus

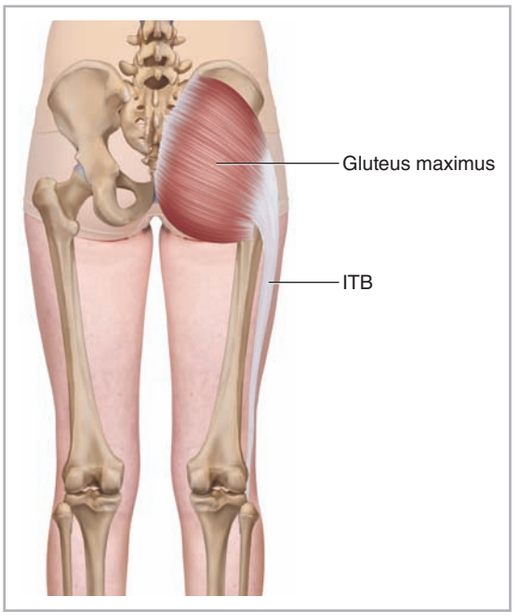


Figure 1-36 Posterior view of the right gluteus maximus. *ITB*, iliotibial band.

- The gluteus maximus attaches from the posterior iliac crest, posterolateral sacrum, and coccyx *to the* gluteal tuberosity and ITB.
- The gluteus maximus extends, laterally rotates, abducts (upper fibers), and adducts (lower fibers) the thigh at the hip joint. It also posteriorly tilts and contralaterally rotates the pelvis at the hip joint.

1.19 ATTACHMENTS AND ACTIONS

Gluteus Medius

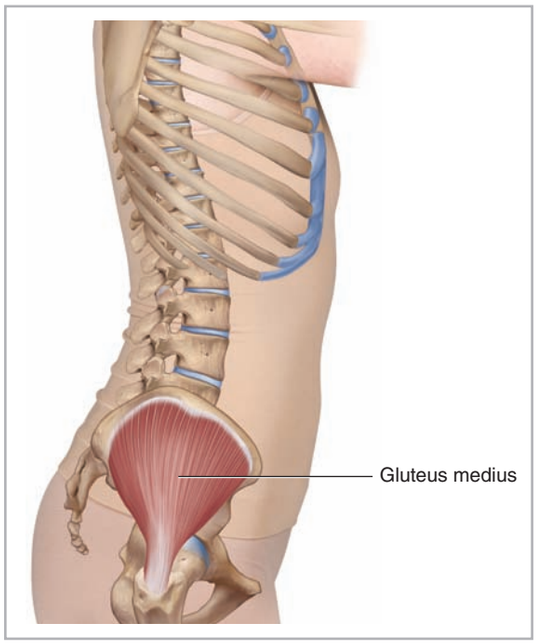


Figure 1-37 Lateral view of the right gluteus medius.

- The gluteus medius attaches from the external ilium *to the* greater trochanter of the femur.
- The entire gluteus medius abducts the thigh at the hip joint and depresses the same-side pelvis at the hip joint. The anterior fibers also flex and medially rotate the thigh and anteriorly tilt and ipsilaterally rotate the pelvis at the hip joint; the posterior fibers also extend and laterally rotate the thigh and posteriorly tilt and contralaterally rotate the pelvis at the hip joint.

1.20 ATTACHMENTS AND ACTIONS

Gluteus Minimus

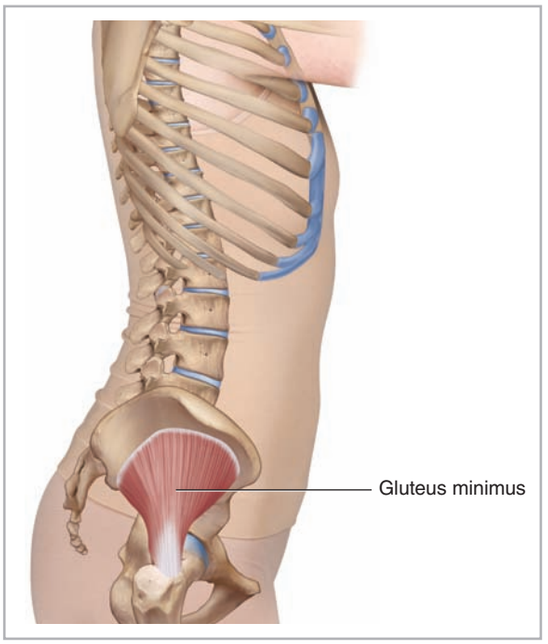


Figure 1-38 Lateral view of the right gluteus minimus.

- The gluteus minimus attaches from the external ilium *to the* greater trochanter of the femur (*Note*: The gluteus minimus is located deep to the gluteus medius).
- The entire gluteus minimus abducts the thigh at the hip joint and depresses the same-side pelvis at the hip joint. The anterior fibers also flex and medially rotate the thigh and anteriorly tilt and ipsilaterally rotate the pelvis at the hip joint; the posterior fibers also extend and laterally rotate the thigh and posteriorly tilt and contralaterally rotate the pelvis at the hip joint.

1.21 ATTACHMENTS AND ACTIONS

Deep Lateral Rotator Group

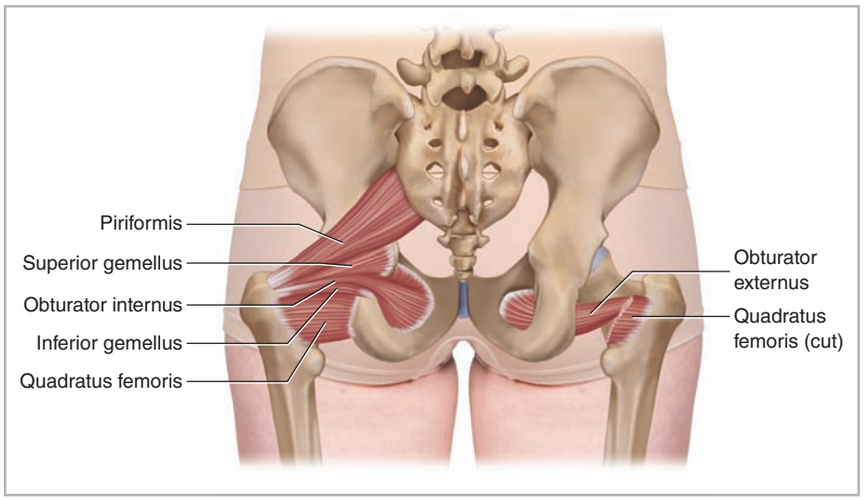


Figure 1-39 Posterior view of the deep lateral rotator group. All muscles of the group are drawn on the left side (the obturator externus is not seen). The quadratus femoris has been cut on the right side to visualize the obturator externus.

- The deep lateral rotator group attaches from the sacrum (piriformis) and the pelvic bone (the rest of the group) *to the* (or nearby the) greater trochanter of the femur.
- As a group, the deep lateral rotators laterally rotate the thigh at the hip joint and contralaterally rotate the pelvis at the hip joint. If the thigh is first flexed to 90 degrees, the deep lateral rotators can horizontally extend (horizontally abduct) the thigh at the hip joint. *Note*: If the thigh is first flexed (approximately 60 degrees or more), the piriformis changes to become a medial rotator of the thigh at the hip joint instead of a lateral rotator.

BOX 1.3

Femoropelvic Rhythm

The term **femoropelvic rhythm** is used to describe the coordinated rhythm to how the femur and pelvis move. For example, when flexing the thigh at the hip joint to lift the foot up into the air anteriorly, the brain usually co-orders the pelvis to drop into posterior tilt because this facilitates bringing the foot even higher. Therefore, by femoropelvic rhythm, thigh flexion couples with pelvic posterior tilt. Similarly, thigh extension couples with pelvic anterior tilt. (*Note*: Femoropelvic rhythm is not the same as reverse actions at the hip joint. For example, the reverse action of thigh flexion at the hip joint is anterior pelvic tilt [not posterior pelvic tilt as with femoropelvic rhythm] at the hip joint).

Pelvic Floor Muscles Wholly Located Within the Pelvis

Muscles of the pelvic floor do not cross from the pelvis to another body part; therefore, they do not move the pelvis as a unit relative to the trunk or thighs. Rather, their function is primarily to stabilize the sacroiliac and symphysis pubis joints as well as to create a stable floor for the visceral contents of the abdominopelvic cavity.

Figure 1-40 (in the following Attachments and Actions boxes) illustrates the muscles of the pelvic floor along with their specific attachment and action information. Pelvic floor work is often performed intrarectally or intravaginally and is therefore usually beyond the scope of practice for most manual therapists. However, some pelvic floor musculature (coccygeus and levator ani) are partially accessible from the outside, inferior to the piriformis.

1.22 ATTACHMENTS AND ACTIONS

Pelvic Floor Musculature

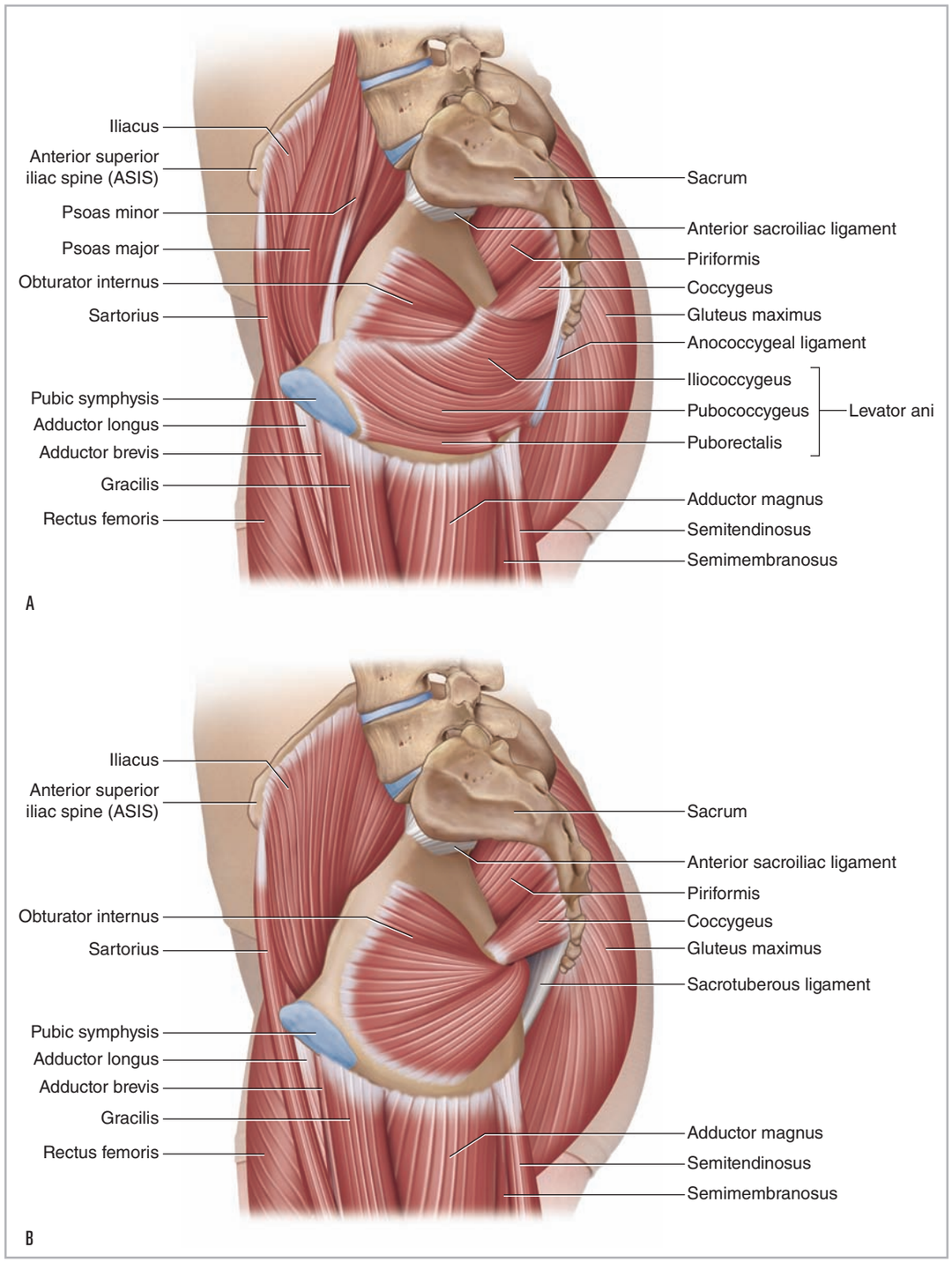


Figure 1-40 The muscles of the pelvic floor. **(A, B)** Medial views of the right side of the pelvis. **(A)** Superficial. **(B)** Deep. *(continued)*

1.22 ATTACHMENTS AND ACTIONS *(continued)*

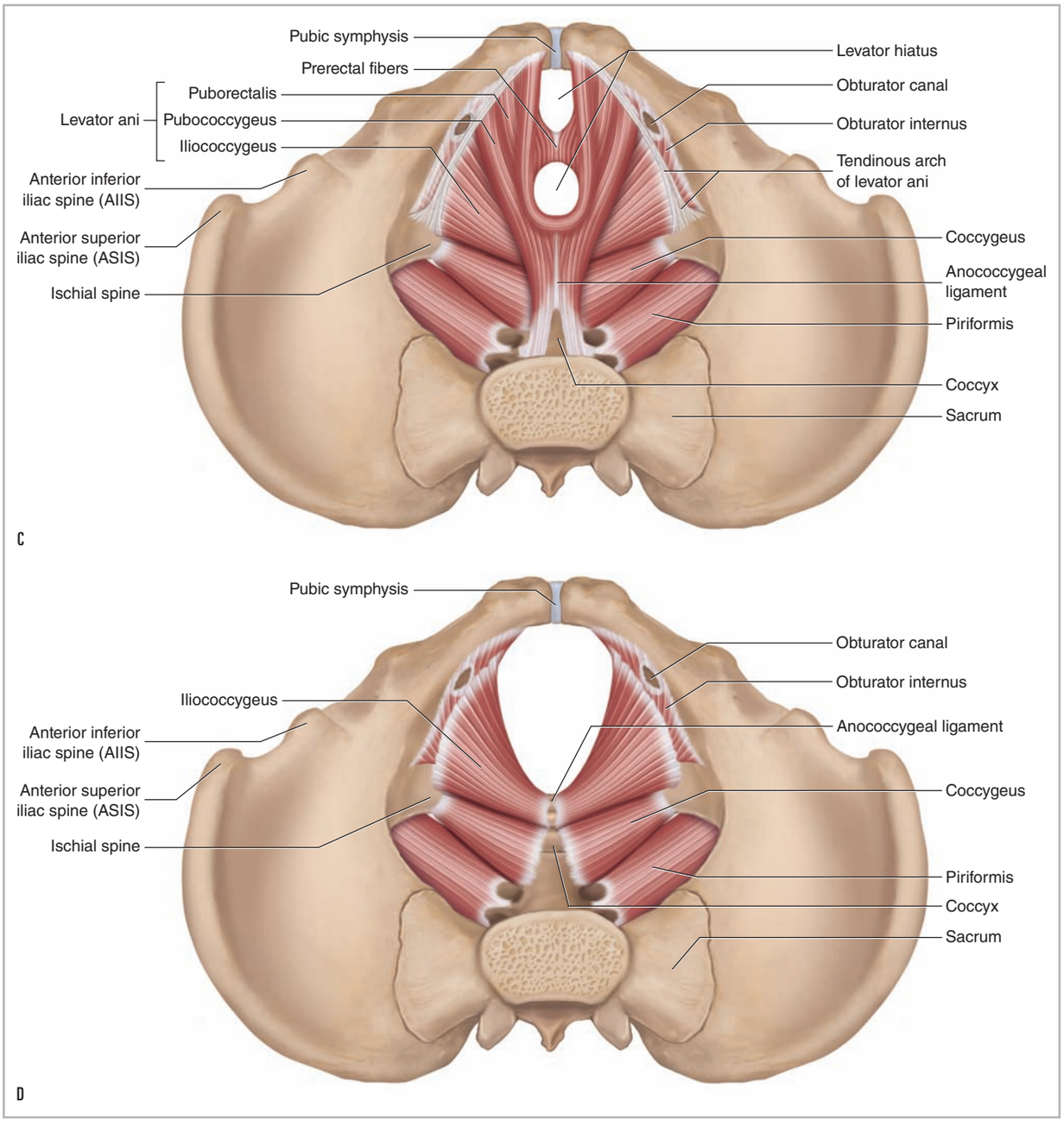


Figure 1-40 *(continued)* **(C, D)** Superior views of the muscles of the female pelvic floor. **(C)** Superficial. **(D)** Deep.

LIGAMENTS OF THE LUMBAR SPINE AND PELVIS

As with the muscles, it is also helpful to know the ligaments of the lumbar spine and pelvis to be able to effectively stretch the client. Whatever technique is used, the purpose of stretching is to loosen all soft tissues that are taut and restricting joint motion. Even though the function of a ligament is to stabilize and limit motion of the bones to which it attaches, a taut ligament can be just as culpable as a tight muscle in excessively restricting the motion of a joint. Therefore, when a client presents with a tight low back, a basic knowledge of the ligaments of the lumbar spine and pelvis is valuable.

The "action" of a ligament is similar to that of an antagonist muscle. If an antagonist muscle is tight, it restricts motion that is opposite that of its mover action(s). For example, if a trunk extensor (located posteriorly) is tight, it restricts motion of the trunk anteriorly into flexion. Because the limited motion is usually to the side of the body opposite the side on which the muscle is located, antagonist muscles are sometimes called **contralateral muscles**; *contralateral* literally means *opposite side*. Similarly, ligaments tend to be located contralaterally, on the other side of the joint from the motion that they limit. For example, if the trunk resists moving into flexion, the taut ligaments that would restrict this motion are located posteriorly (where antagonist trunk extensor muscles are located). If the motion that is limited is right lateral flexion of the trunk, the taut ligaments limiting this motion would be located in the left side of the trunk (where antagonist left lateral flexor muscles are located) (Fig. 1-41).

As is typically the case, rotation is a bit trickier. Just as muscles that perform rotation may be on either side of the body in relation to the rotation they create, ligaments that restrict right or left rotation can also be located on either side of the body. Similar to musculature, determining a ligament's role in restricting rotation can best be seen by looking at how the ligament (partially) "wraps" around the body part in the transverse plane.

Ligaments of the Lumbar Spine

The major ligaments of the lumbar spine are shown in Figure 1-42. The **supraspinous ligament**, **interspinous ligaments**, fibrous capsules of the facet joints (which are ligamentous in structure and therefore also function to limit motion), **ligamentum flavum**, and **posterior longitudinal ligament** are all located posterior to the axis of motion for flexion and extension of the spine; therefore, they all limit flexion. The **anterior longitudinal ligament** is located anterior to the axis of motion for flexion and extension of the spine; therefore, it limits extension. The **intertransverse ligaments** are located laterally. They limit lateral flexion to the opposite side of the body (contralateral lateral flexion) from where they are located. Many of these ligaments also act to limit rotation of the lumbar spine to one side or the other.

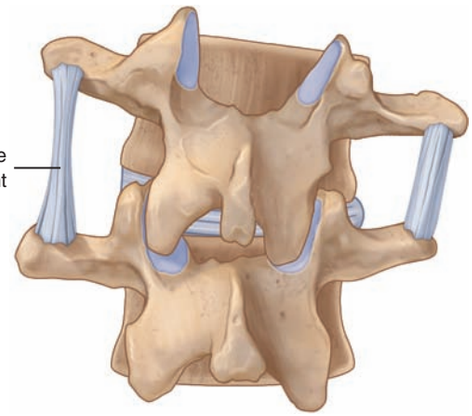


Figure 1-41 Ligament function. Posterior view of two vertebrae that illustrates how a ligament becomes taut and limits motion of the bones of a joint in the direction opposite the ligament's location. In this example, when the superior vertebra right laterally flexes, the intertransverse ligament located on the left side becomes taut and limits this motion. (Courtesy of Joseph E. Muscolino.)

Ligaments of the Pelvis

The bones of the pelvic girdle are well supplied with ligaments for stabilization (Fig. 1-43). Most lumbar spinal ligaments continue down to connect the lumbar spine to the sacrum and pelvic bones. The **iliolumbar ligaments** can be viewed as extensions of the intertransverse ligaments between L4 and the pelvis and L5 and the pelvis. Within the pelvis itself, copious ligaments provide stabilization to the SIJ, both posteriorly and anteriorly. Besides the **posterior sacroiliac ligaments** and **anterior sacroiliac ligaments** that attach directly from the sacrum to the pelvic bone on each side, note the strong and powerful **sacrotuberous ligament** and **sacrospinous ligament** posteriorly.

Ligaments of the Hip Joint

Connecting the pelvic bone to the femur on each side are the ligaments of the hip joint. The fibrous capsule of the hip joint is reinforced by three capsular ligaments: the **iliofemoral ligament** anteriorly, the **ischiofemoral ligament** posteriorly, and the **pubofemoral ligament** medially (Fig. 1-44). The iliofemoral ligament primarily limits extension of the thigh and posterior tilt of the pelvis at the hip joint. The ischiofemoral ligament, due to its horizontal wrapping around the joint, primarily limits medial rotation of the thigh and ipsilateral rotation of the pelvis at the hip joint. The pubofemoral ligament primarily limits abduction of the thigh and depression (lateral tilt) of the same-side pelvis at the hip joint. The joint capsule is reinforced near the neck of the femur; this area is termed the **zona orbicularis**. Internal within the joint is the **ligamentum teres** that connects the head of the femur to the acetabulum and limits axial distraction (traction) of the joint (see Fig. 1-44).

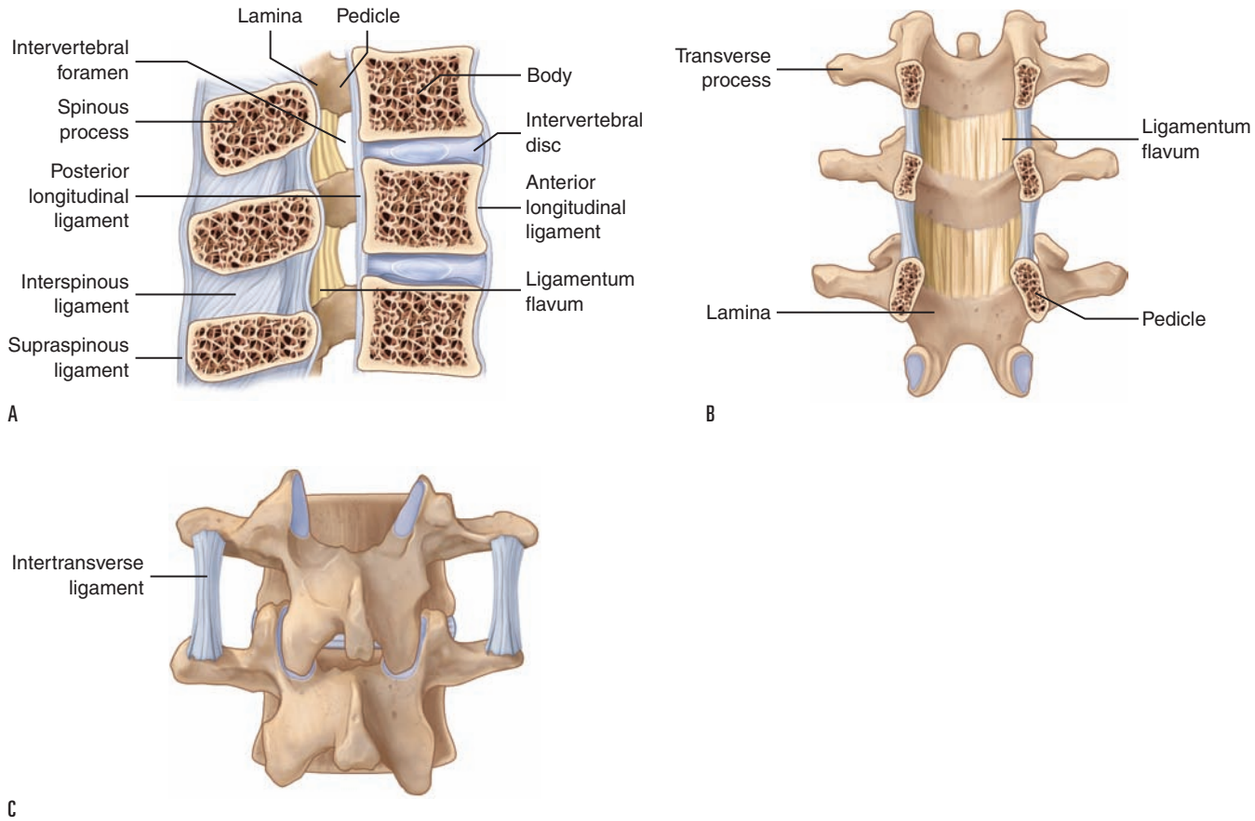


Figure 1-42 Ligaments of the spine. **(A)** Right lateral view of a sagittal plane cross section through the spine. **(B)** Anterior view of a frontal plane section through the pedicles of the spine in which the ligamentum flavum inside the spinal canal can be seen. **(C)** Posterior view depicting the intertransverse ligaments. (Courtesy of Joseph E. Muscolino.)

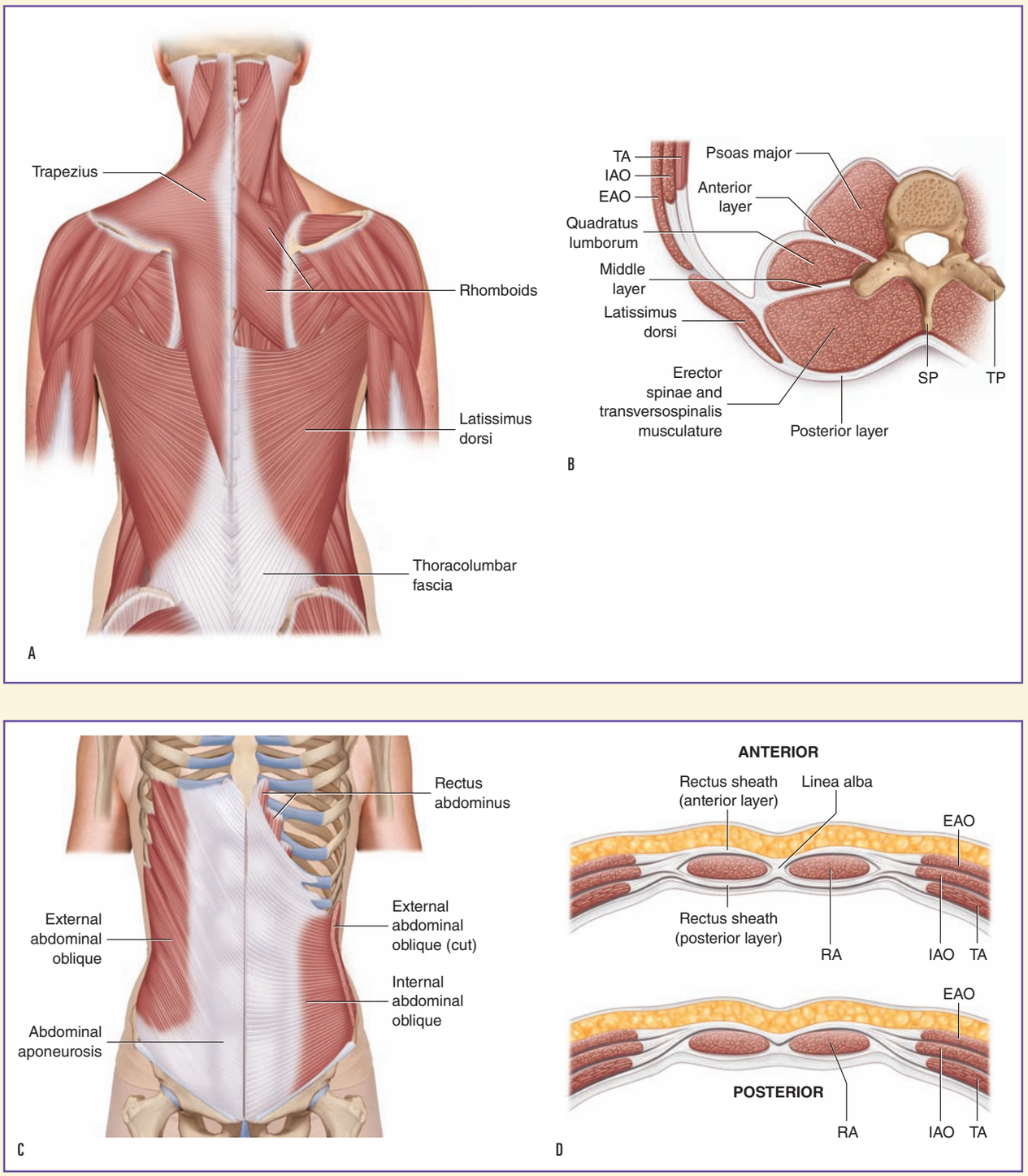
BOX 1.4

Thoracolumbar Fascia and Abdominal Aponeurosis

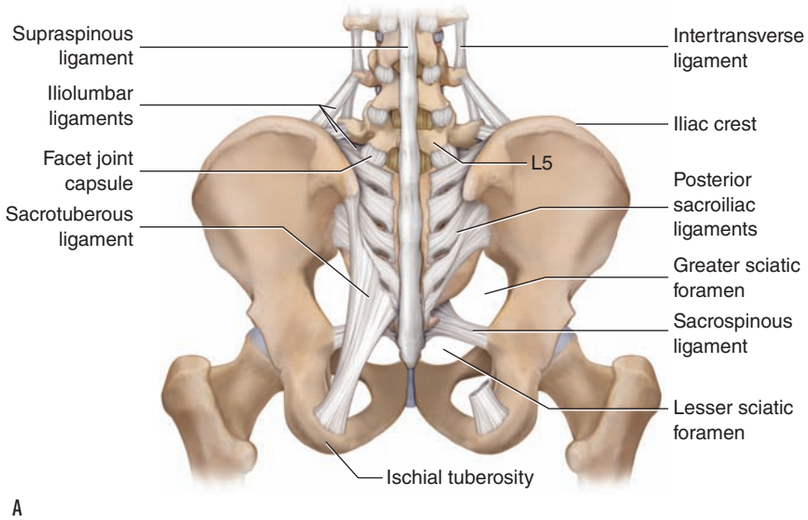
In addition to the fibrous fascial ligaments and joint capsules of the lumbosacral and sacroiliac region, further stabilization is provided by the **thoracolumbar fascia** posteriorly and the **abdominal aponeurosis** anteriorly. The thoracolumbar fascia is well developed in the lumbar region where it divides to form three layers: a posterior layer superficially, a middle layer between the erector spinae and transversospinalis musculature and the quadratus lumborum, and a deep anterior layer between the quadratus lumborum and psoas major **(see Figs. A and B)**. The abdominal aponeurosis is created by the anterior aponeuroses of the external and internal abdominal obliques (EAO and IAO) and transversus abdominis (TA) muscles and forms a sheath around the rectus abdominis musculature **(see Figs. C and D)**. (*Note*: The abdominal aponeurosis does not totally ensheathe the rectus abdominis at its inferior end, as seen in the lower figure of D.)

continued

BOX 1.4 *(continued)*



Thoracolumbar fascia. **(A)** Posterior view. **(B)** Transverse plane cross-section view. Abdominal aponeurosis. **(C)** Anterior view. **(D)** Transverse plane cross-section views. Upper figure: upper trunk. Lower figure: lower trunk. EAO, external abdominal oblique; IAO, internal abdominal oblique; SP, spinous process; TA, transversus abdominis; TP, transverse process.



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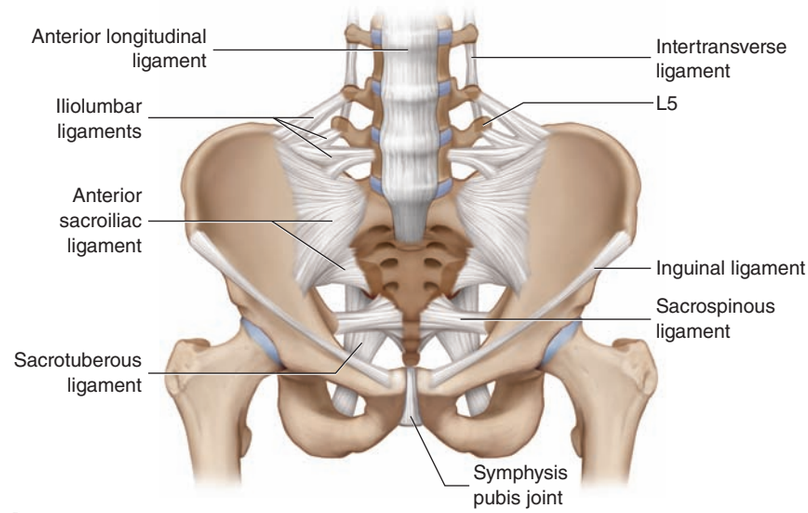


B

Figure 1-43 Ligaments of the pelvis. The SIJ is well stabilized posteriorly and anteriorly by ligaments. **(A)** Posterior view. **(B)** Anterior view.

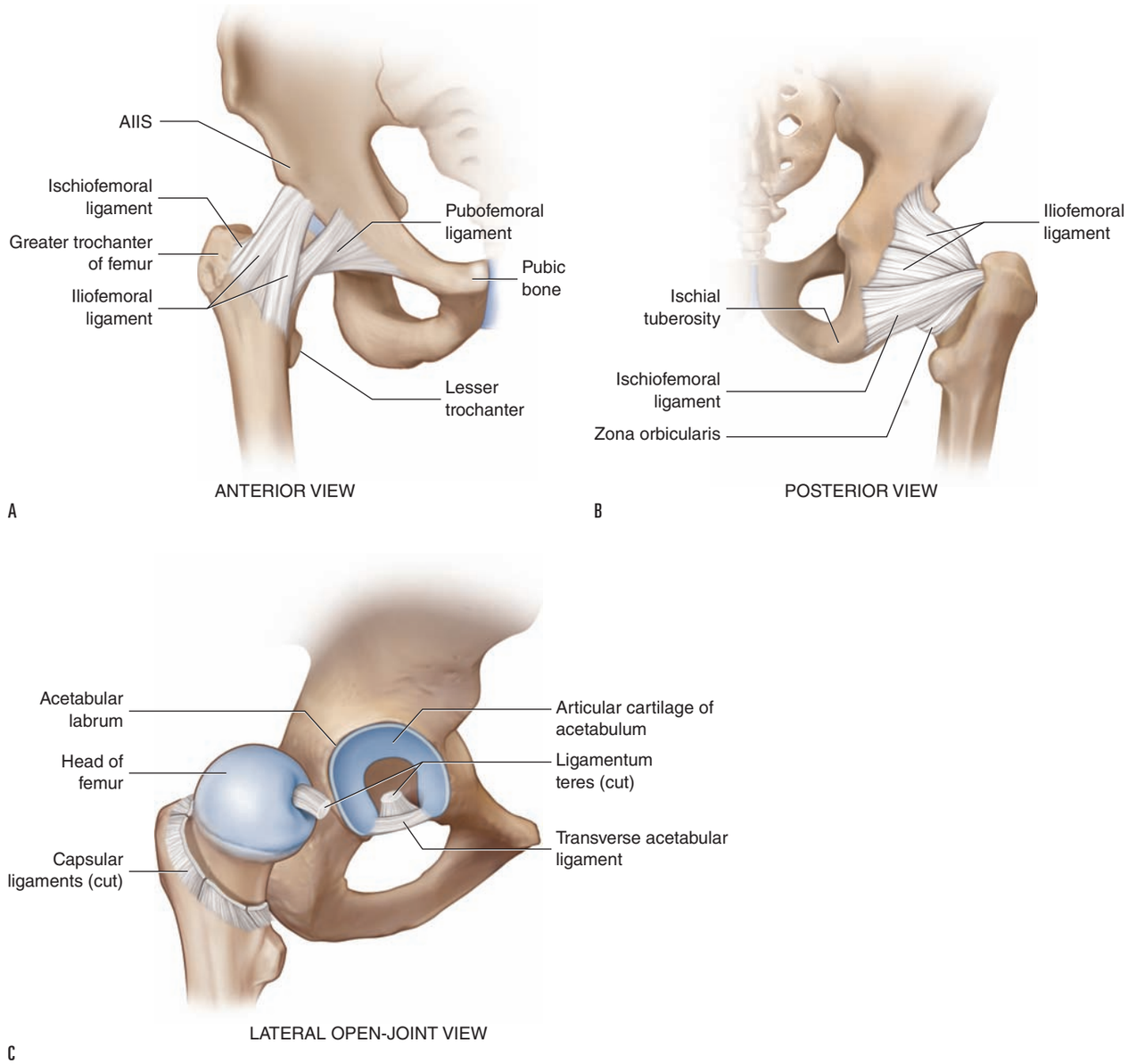


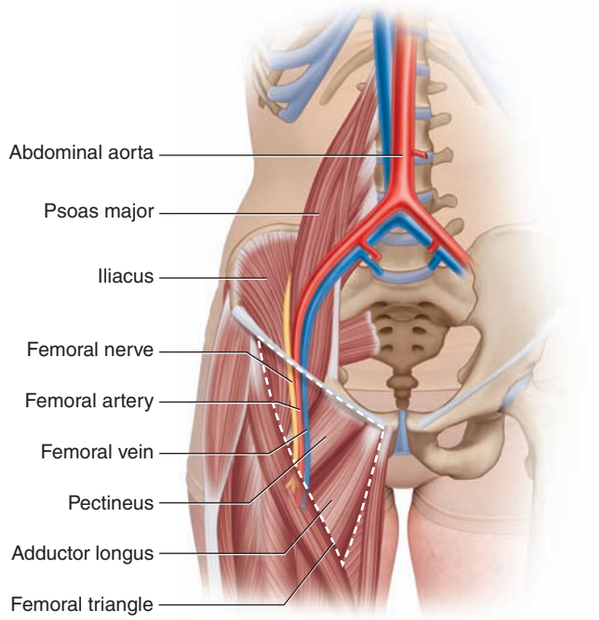
Figure 1-44 Ligaments of the hip joint. **(A)** Anterior view. **(B)** Posterior view. **(C)** Lateral open-joint view. *AIIS*, anterior inferior iliac spine. ([**C**] Modeled from Neumann DA. *Kinesiology of the Musculoskeletal System: Foundations for Physical Rehabilitation*. 2nd ed. St. Louis, MO: Mosby Elsevier; 2010.)

PRECAUTIONS

The low back and pelvic region contains a number of neurovascular structures (nerves, arteries, and veins) whose locations are important to know because they contraindicate deep pressure. These structures are located both anteriorly and posteriorly (Fig. 1-45). However, even though caution is called for in the vicinity of these structures, it should not prevent therapeutic work entirely. A good guideline when working near any neurovascular structure is to begin with light to medium pressure before transitioning to deeper pressure. Knowledge of the anatomy of the region can allow work to be performed therapeutically and safely. Chapter 3 discusses other cautions and contraindications for specific pathologic conditions.

Anterior Structures: Abdominal Aorta

The **abdominal aorta** is located within the abdominal cavity, running along the midline of the anterior surfaces of the vertebral bodies and discs (see Fig. 1-45A). Because it is



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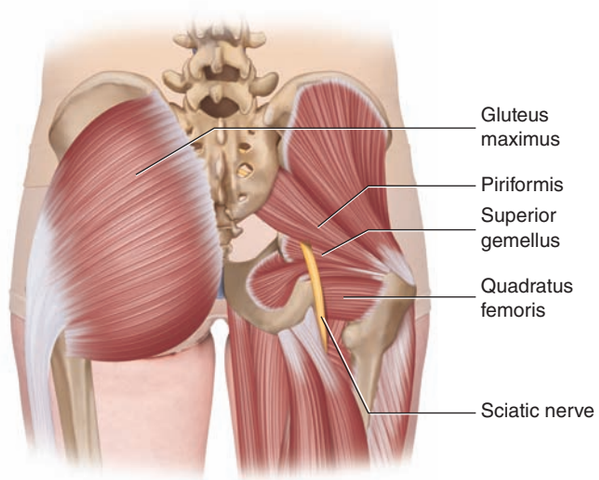

B

Figure 1-45 Neurovascular structures of the low back and pelvis. **(A)** Anterior view showing the abdominal aorta and the femoral triangle containing the femoral nerve, artery, and vein. **(B)** Posterior view showing the sciatic nerve.

located so deeply, it is rarely accessed. However, pressure can be placed upon it if the therapist is working the belly of the psoas major within the abdomen and is working slightly too medially. For this reason, when palpating for and working the psoas major, it is important to be mindful of the location of the aorta and to make sure that no pressure is being placed upon it. It is usually easy to know when the fingers are pressing on the aorta, or any artery for that matter, because a pulse can be felt. If a pulse is felt, move laterally off the aorta.

Anterior Structures: Femoral Triangle

The **femoral triangle** is the name given to the region in the proximal anterior thigh; immediately distal to the inguinal ligament; and overlying the adductor longus, pectineus, and iliopsoas muscles. Within the femoral triangle are the **femoral nerve**, **femoral artery**, and **femoral vein** (see Fig. 1-45A). It is important to be mindful of these structures when work is being done to the proximal attachments of the hip flexor and adductor musculature. If a pulse is felt, you are on the femoral artery. It is not necessary to stop working. Instead, either slightly move your palpating fingers or try to gently displace the vessel to one side or the other and continue working in that spot. When first applying pressure in this region, be sure to begin with lighter pressure because deep pressure could compress the artery and block its blood circulation, thereby blocking palpation of its pulse as well.

If pressure is applied in this region and the client feels a sharp pain that shoots into the anterior thigh, then it is likely that the femoral nerve is being compressed. As with the femoral artery, either slightly move your palpating fingers or try to gently displace the nerve by accessing from one side or the other and continue working in that spot.

Posterior Structures: Sciatic Nerve

The **sciatic nerve** is the largest nerve in the human body; it is approximately a quarter inch in diameter. It emerges in the gluteal region between the piriformis and superior gemellus muscles (although variations are common in which part or all of the nerve emerges through or superior to the piriformis) (see Fig. 1-45B). It then runs superficial to the rest of the deep lateral rotator muscles (and deep to the gluteus maximus) in

1.1 THERAPIST TIP

Gluteal Work and Referral Symptoms

Pain or other referral symptoms experienced into the lower extremity when applying pressure to the gluteal region can result from pressure directly on the sciatic nerve. However, pressure to the gluteal region in the vicinity of the sciatic nerve can also refer symptoms into the lower extremity because of trigger point (TrP) referral. Therefore, it can be difficult to be certain of the cause of the referral. Referral caused by direct nerve pressure tends to feel like a shooting pain; however, this is not always the case. Consulting a TrP referral illustration may help (see Chapter 2 for illustrations of TrPs and their referral zones). If your client's pain falls within the typical TrP referral pattern, it is more likely that the pain is a TrP referral, but this is not definite. If the referral does not coincide with the typical TrP referral pattern, then you are most likely pressing directly on the sciatic nerve and should move your pressure slightly so as to remove pressure from the nerve. When in doubt, it is always wise to be cautious and change the location of your pressure.

1.2 THERAPIST TIP

Working with the Client Prone

Many clients have a difficult time spending long periods of time lying prone because this position causes the lumbar spine to be unsupported, placing stress upon the posterior musculature and ligaments. This can be true for anyone, but is especially true if the client is experiencing an acute condition of the low back. This is ironic and unfortunate because the soft tissue work necessary to help alleviate a low back problem is best done with the client prone. When confronted with this circumstance, the therapist has three choices:

- Limit the time that the client spends prone.
- Place a small roll under the client's lumbosacral area.
- Work with the client side-lying instead (and place a small pillow between the client's thighs/knees.

Also of value is to have the client stretch her low back as soon as she gets up from the prone position. The yoga Child's Pose is an excellent way to accomplish this (see accompanying figure).

Lateral View of the Child's Pose

the gluteal region before entering the thigh. Because the sciatic nerve is deep to the gluteus maximus muscle, it is not very superficial and therefore not easily injured with soft tissue work. However, deeper work can translate to the sciatic nerve and the therapist should be mindful of this, especially when performing deep work on the quadratus femoris muscle.

Motions

Another caution should be mentioned, even though it does not involve an anatomic structure per se. When treating the client's low back, be aware that many clients do not tolerate well any extension beyond anatomic position and/or any extreme or fast rotation motions. This is especially true with elderly clients, but it may also be true for middle-aged or younger clients. The lumbar spine has limited rotation ranges of motion. Further, rotation and extension motions cause the surfaces of the facet joints to approximate each other; if they are injured or irritated in any way, and/or if there are degenerative joint changes (osteoarthritis), this can result in pain. For this reason, it is always wise to be aware of this possibility. When stretching or otherwise moving the client, it is advisable to increase these ranges of motions gradually over the span of several visits if necessary.

At the hip joint, caution must be exercised whenever the client's thigh is moved into flexion combined with adduction and medial rotation. This is especially important for clients who have had hip replacement surgery.

CHAPTER SUMMARY

This chapter presented a review of the essential anatomy and physiology of the low back and pelvis. The lumbar spine is composed of five vertebrae. Landmarks of the lumbar spine that are particularly important for stretching and joint mobilization techniques are the spinous processes and laminae. Each lumbar spinal joint level has two paired facet joints and a disc joint. The lumbar spine moves very well in all ranges of motion except rotation.

Structurally, the musculature of the low back can be divided into four quadrants: anterior right, anterior left, posterior right, and posterior left. Functionally, the muscles of the low back can be divided into six major mover groups: flexors, extensors, right and left lateral flexors, and right and left rotators.

Structurally, the muscles of the pelvis can be divided into three categories: muscles crossing the lumbosacral joint from the trunk onto the pelvis, muscles crossing the hip joint from the lower extremity onto the pelvis, and pelvic floor muscles. As with the muscles of the trunk, pelvic muscles that cross the hip joint can also be divided into four quadrants: anterior, posterior, lateral, and medial. Functionally, these muscles are usually considered from their open chain action on the thigh. However, their closed chain action on the pelvis is likely more important; certainly, it is with regard to their effect on the posture of the pelvis and therefore the lumbar spine.

CHAPTER 2

Common Musculoskeletal Pathologic Conditions

CHAPTER OUTLINE

Introduction 39
Hypertonic Musculature 39
Joint Dysfunction 53
Sprains and Strains 55
Sacroiliac Joint Injury 57
Pathologic Disc Conditions and Sciatica 59
Piriformis Syndrome 64
Degenerative Joint Disease 65
Scoliosis 66
Anterior Pelvic Tilt and Hyperlordotic Lumbar Spine 68
Facet Syndrome 70
Spondylolisthesis 71
Chapter Summary 72

OBJECTIVES

After completing this chapter, the student should be able to:

1. Explain why it is important to understand the pathomechanics of a condition.
2. Describe the presentation, mechanism, and causes of each of the conditions covered in this chapter.
3. Describe how the gamma motor system, muscle spindles, muscle memory, and resting muscle tone work together to create hypertonic musculature.
4. Compare and contrast a globally tight muscle with a myofascial trigger point.
5. Describe the difference between the pain-spasm-pain and contraction-ischemia cycles.
6. Describe the relationship between adhesions and mobility.
7. Identify the four main ways that a muscle can become hypertonic.
8. List and describe the two major types of joint dysfunction.
9. Compare and contrast a sprain and a strain.
10. List and describe the different types of pathologic disc.
11. Describe the relationship between tight muscles and a pathologic disc.
12. Describe the relationship between tight muscles and degenerative joint disease.
13. Define scoliosis and explain how a scoliotic curve is named.
14. Describe the relationship between excessive anterior tilt and hyperlordotic lumbar spine.
15. Describe facet syndrome and explain how it is assessed.
16. Describe the causes and symptoms of spondylolisthesis.
17. Define each key term in this chapter.

KEY TERMS

adaptive shortening
adhesions
anterolisthesis
bone spurs
central canal stenosis
contraction-ischemia cycle
degenerative joint disease (DJD)
disc bulge
disc herniation
disc prolapse
disc rupture
disc thinning
facet syndrome
fascial adhesions
fibrous adhesions
gamma motor system
globally tight muscle
hyperlordosis
hyperlordotic lumbar spine
hypermobile
hypertonic
hypomobile
ischemia
joint dysfunction
locked long
locked short
lower crossed syndrome
macrotraumas
mechanism
meniscoid body
meralgia paresthetica
microtearing
microtraumas
misalignment
motion palpation
muscle memory
muscle spindle fibers
muscle spindle reflex
muscle splinting
myofascial trigger point
osteoarthritis (OA)
osteophytes
pain-spasm-pain cycle
pathomechanism
pathophysiology
piriformis syndrome
resting tone
sacral base angle
sacroiliitis
scar tissue adhesions
sciatica
scoliosis
sequestered disc
space-occupying lesions
spondylolisthesis
spondylosis
sprain
strain
stretch reflex
subluxation
swayback
trigger point (TrP)
Wolff's law

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INTRODUCTION

Proper therapeutic treatment of a client's low back and pelvis depends on an accurate assessment of the client's condition(s) as well as a clear understanding of the mechanism of the pathologic condition(s) that the client is experiencing. Therefore, this chapter offers a brief description of the most common pathologic musculoskeletal conditions that affect these regions. Chapter 3 discusses the procedures used to assess these conditions.

When treating a healthy or unhealthy low back and pelvis, it is most important to understand the **mechanism**, or physiology, of how these regions function. Normal mechanics of the low back and pelvis are addressed in Chapter 1. However, when a person has a pathologic condition, the mechanics are altered. Each pathologic condition has a unique physiologic mechanism, **pathophysiology** or **pathomechanism**, that, when understood, can guide critical reasoning regarding the therapeutic tools that should be used. Rather than asking the learner to apply a memorized "cookbook" routine from one technique or another that may be ineffective or perhaps even hurt the client, this chapter will encourage learning how to choose the technique protocols that will safely and most effectively help the client.

BOX 2.1

Musculoskeletal Pathologic Conditions

The following musculoskeletal pathologic conditions are presented in this chapter:

1. Hypertonic (tight) musculature
2. Joint dysfunction
3. Sprains and strains
4. Sacroiliac joint injury
5. Pathologic disc conditions and sciatica
6. Piriformis syndrome
7. Degenerative joint disease (DJD)
8. Scoliosis
9. Anterior pelvic tilt and hyperlordotic lumbar spine
10. Facet syndrome
11. Spondylolisthesis

HYPERTONIC MUSCULATURE

Hypertonic, or tight, musculature is an important condition to discuss for two reasons:

1. It is the most common presenting complaint that a manual therapist will confront.
2. It is usually a component of every other musculoskeletal condition of the low back and pelvis.

Of further significance is the fact that tight musculature is so often ignored by conventional medical professions. There are medical specialties for every organ system of the body, but there is no "muscle doctor." Even the chiropractic profession usually relegates the importance of tight musculature to a position of lesser importance compared with joint positioning and function. Perhaps the importance of tight musculature is overlooked because it does not show on x-rays, other radiographic imaging, or in laboratory results. For this reason, manual therapists who are highly trained in muscle palpation assessment skills and soft tissue treatment techniques have the opportunity to step into this niche.

Description of Hypertonic Musculature

A **hypertonic** muscle is one that has too much tone; "hyper" denotes an excessive amount. Tone refers to tension; in other words, it is the pulling force of a muscle. The degree of tone that a muscle has varies based on the degree of its contraction. There are two types of hypertonic musculature: a **globally tight muscle** and a myofascial trigger point (TrP). The first term is used to describe an entire muscle or large portion of a muscle that is too tight; the second term is used to describe a small focal area of muscle tightness that can refer pain to a distant site.

Globally Tight Musculature

When you consciously contract a muscle, its tone is high. However, when a muscle is at rest and you are not consciously directing it to contract, other than a small amount of baseline tone to maintain the posture of the joint, it should be relaxed. This condition is called **resting tone**. A resting tone greater than the amount needed to maintain joint posture is what defines a muscle as being hypertonic. Other terms often used synonymously are spasm, cramp, and contracture, all of which essentially describe a muscle whose baseline tone is excessive or hypertonic.

Mechanism of Globally Tight Musculature

The physiologic mechanism of a globally tight muscle is determined by **muscle spindle fibers** (also known as spindle fibers or spindle cells). Muscle spindle fibers are located within the belly of a muscle and lie parallel to the regular fibers of the muscle. Similar to these regular muscle fibers, spindle fibers have the ability to contract and relax. But they also possess another feature that regular muscle fibers do not. Muscle spindles are receptor cells that have the ability to detect when they are being stretched. They are sensitive to both how quickly and how far they are stretched. The sensitivity of their setting is determined by the **gamma motor system** of the brain, which can order them to contract and tighten or allow them to be relaxed and loose. The tighter the muscle spindles are set, the more sensitive they are to stretch; the looser they are, the more tolerant they are to being stretched.

If a muscle is stretched, all of the fibers within the muscle, both regular and spindle, are lengthened. If this stretch occurs quickly or is farther than the spindle fibers can com-

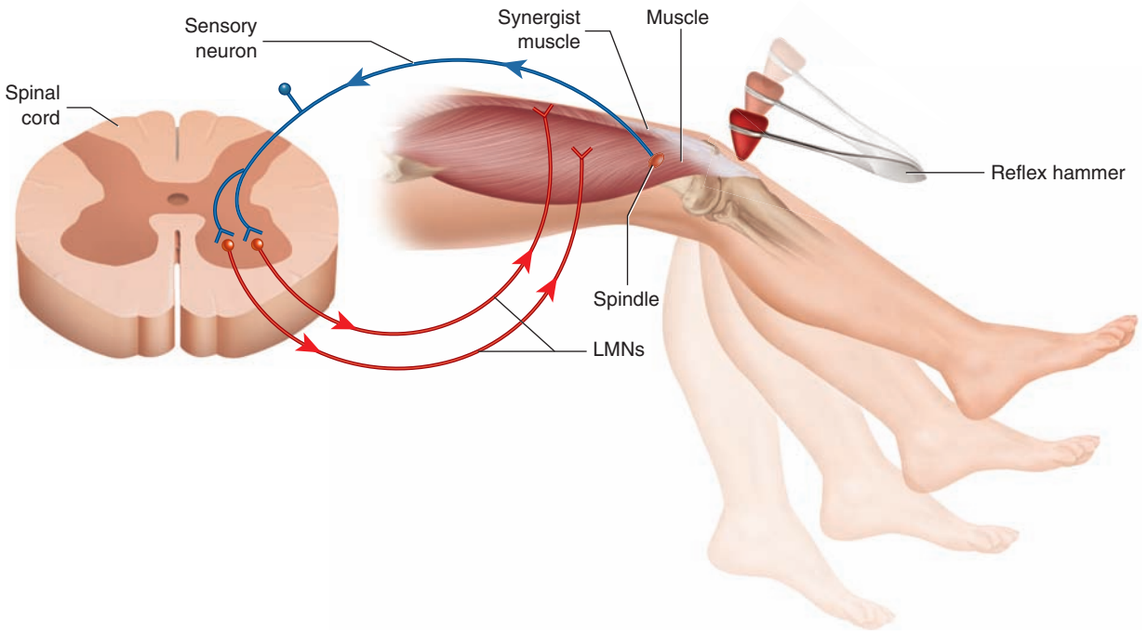


Figure 2-1 Muscle spindle reflex. A reflex hammer is used to strike and cause a quick stretch of the distal tendon of the quadriceps femoris (knee joint extensor musculature), triggering the muscle spindle reflex. A signal is sent to the spinal cord via a sensory neuron. In response, a signal is sent from the spinal cord through lower motor neurons (LMNs) to tell the muscle to contract, causing extension of the leg at the knee joint.

fortably allow, it sends a signal via a sensory neuron into the spinal cord. This sensory neuron then synapses with lower motor neurons (LMNs) that return to the muscle, ordering the regular fibers of the muscle to contract (Fig. 2-1). This is called the **muscle spindle reflex**, or **stretch reflex**, and is protective in nature. By tightening the muscle, the stretch is stopped, and the muscle is protected from being overstretched and perhaps torn.

The stretch reflex is usually only thought of as protecting a muscle from strong forces such as whiplash accidents. However, the stretch reflex is also responsible for setting resting tone of the musculature. When the gamma motor nervous system directs the spindle fibers within a muscle to contract, they shorten. Then when the person moves, as soon as that muscle is stretched even a small amount more than the length of its spindles, the stretch reflex will cause the muscle's fibers to contract to the tension level set for the spindles. In this manner, the length of a muscle's fibers, or its tone, will match the length and tone set for its spindles. The term **muscle memory** is often used to describe this baseline tone of a muscle. Muscle memory resides in the nervous system, not in the muscle itself.

Causes of Globally Tight Musculature

There are a number of causes for globally tight musculature. Four of the most common causes are as follows:

1. Overuse
2. Splinting
3. Adaptive shortening
4. Overstretching

In each case, the muscle memory tone set by the gamma motor system and the muscle's stretch reflex is increased. Although this chapter addresses each cause separately, when a client presents clinically with tight musculature, the mechanisms of the causes can and often do overlap.

Muscle Overuse

Overuse of a muscle fatigues it. Overuse also increases its level of tension. This increases the muscle's pulling force on its tendons and bony attachments, irritating these structures and causing pain. In response to this pain, the nervous system signals the muscle to contract, which creates increased tightness of the entire muscle. This is a protective mechanism meant to decrease or prevent motion that might further irritate or injure the musculature and/or other soft tissues. Muscle tightness causing pain, which then triggers further tightness, which then triggers further pain, and so forth, is known as the **pain-spasm-pain cycle**. Prolonged contraction of a muscle can also result in a disruption of the blood circulation to the area. Initially, the prolonged contraction interrupts venous return of blood, causing a buildup of waste products. These waste products are acidic and irritate the muscle tissue, causing increased pain, which then further perpetuates the pain-spasm-pain cycle. The result is increased reflexive spasm of the muscle (Fig. 2-2).

BOX 2.2

Fascial Adhesions

When muscles are tight, another factor that must be considered is fascial adhesions. **Fascial adhesions**, also known as **scar tissue adhesions** (or **fibrous adhesions**, or more simply **adhesions**), are composed of fibrous fascia collagen fibers (see accompanying figure). These collagen fibers are the same substance that makes up tendons, ligaments, and other fibrous fascial tissues. Although adhesions are normally thought to be deposited in sites of trauma (i.e., scar tissue), they are in fact deposited continuously between the soft tissues of the body. These fibers increase the stability of the tissues by binding/connecting the tissues together. However, if adhesions build up excessively, they may bind together the two opposing surfaces of a soft tissue interface, which should slide along one another when movement is needed; this results in restricted mobility. In a client with an active lifestyle, these fibers do not get the chance to build up because as the client's body moves, adhesions that have formed are broken up and resorbed. However, a sedentary lifestyle encourages adhesions to build up progressively until mobility is greatly restricted. Although adhesions do not actually cause an increase in the baseline resting tone contraction level of a muscle, they do add to the muscle's tightness by decreasing the muscles' ability to stretch and lengthen. If a muscle cannot lengthen, then it cannot allow movements of the body performed by the antagonists to that muscle.

The mobility of ligaments, joint capsules, and all other soft tissue can be affected by adhesions as well. Manual treatment techniques such as massage, stretching, and hydrotherapy all help to break up adhesions in muscles and other soft tissues.

Fascial collagen fibers have a spiderweb appearance. Educator and author, Gil Hedley, uses the term *fuzz* to describe fibrous fascia. (Photo © Ronald A. Thompson. Courtesy Ron Thompson.)

Muscle overuse is often thought of in terms of an activity such as playing sports or working out at a gym. If the same muscle or muscle group is used repeatedly without rest, it will gradually fatigue and become painful. However, overuse can also result from prolonged unhealthy postures. Although less dramatic, poor posture is often a greater contributor to muscle tightness than overuse from activity.

One of the most common postures that causes tightness of low back musculature is when the trunk is flexed forward such that its weight is no longer centered over the pelvis. This happens every time that you lean forward to work down low in front of yourself, or when you bend forward to pick up something from the ground. Without muscles to counteract the force of gravity, the trunk would naturally fall forward. Low back extensor muscles, such as the erector spinae, must eccentrically contract to slow your body's descent as you flex forward, then isometrically contract if you hold the imbalanced forward-flexed posture, and then concentrically contract to extend back to anatomic position (Fig. 2-3). Because of the tremendous amount of time that many people spend in forward-flexed postures, tightness of the posterior low back musculature is very common.

If the client is pregnant or if the client is overweight with a large abdomen, the increased weight carried anteriorly can imbalance the client's center of weight anteriorly, increasing the forward flexion force upon the client's trunk. This would

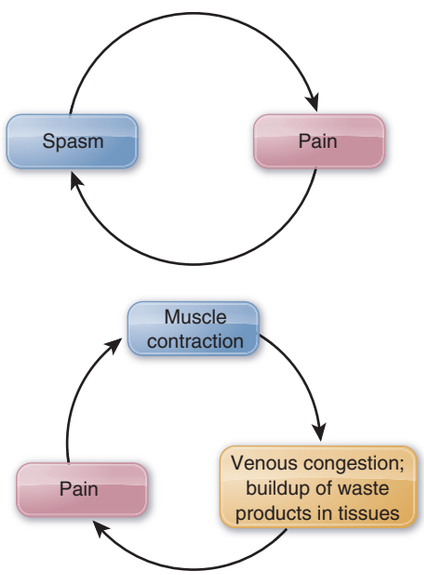


Figure 2-2 Pain-spasm-pain cycle. **(A)** A tight (spasmed) muscle pulls excessively on its attachments, causing pain. In response to the pain, the muscle's tension level increases. **(B)** When a muscle is tight, its contraction can also reduce venous blood flow, resulting in a buildup of acidic waste products in the area. This causes further pain, which perpetuates the pain-spasm-pain cycle. (Reproduced with permission from Muscolino JE. *Advanced Treatment Techniques for the Manual Therapist: Neck*. Baltimore, MD: Lippincott Williams & Wilkins; 2013.)

Figure 2-3 Prolonged postures and low back tightness. **(A)** Flexing the trunk when working down in front of the body causes the body weight of the trunk to be imbalanced. This requires isometric contraction of the posterior low back extensor muscles to hold the trunk in this posture. **(B)** Carrying a baby on a hip requires isometric muscular contraction of the elevators of the pelvis on that side.

have to be counteracted by the postural isometric contraction of the low back extensor musculature. With excessive work, postural muscles of the low back will likely fatigue and tighten.

Muscle Splinting

Muscles of the low back and pelvis may tighten not only if the muscles themselves are irritated and overused but also if any other tissues of the region become irritated or injured. This is especially true of the tissues of the sacroiliac joints and the facet joint capsules and ligaments of the lumbar spine. This phenomenon is called **muscle splinting**, and it is a protective mechanism for these fragile and vulnerable tissues. By tightening, the musculature acts as a splint to the area, blocking motion and thereby allowing the tissues of the area to rest and heal. Therefore, overt traumatic injury or irritation to any tissues of the joints of the low back and pelvis can cause the muscles of the region to tighten and splint the area.

Adaptive Shortening

Adaptive shortening occurs when a muscle is held in a shortened state for a prolonged time and adapts to that shortened state by increasing its tone. Adaptive shortening is a protective mechanism. If a muscle is shortened and slackened, then when it contracts to move the body, the muscle would be unable to generate tension on its attachments until all the slack has been removed. This would not only cause an inefficient delay in movement but it could also be dangerous in a fight-or-flight scenario. For this reason, the nervous system adaptively shortens the muscle by increasing its tone to match the shortened length. The net result is that if a certain posture is held for a long time, the musculature will shorten and adapt to that posture so it is ready to create tension and movement immediately if needed. One example of this is the posture of the hip joint when sitting. Sitting places the hip joint into flexion, shortening the hip flexor muscles that cross the joint anteriorly, attaching from the pelvis to the thigh. This chronic posture of allowing the hip joint to be flexed can result in adaptive shortening of the hip flexor musculature bilaterally. Their tightness will then tend to create an excessively anteriorly tilted pelvis because hip flexor musculature's reverse action is anterior tilt of the pelvis at the hip joint (see Anterior Pelvic Tilt and Hyperlordotic Lumbar Spine section).

Muscle Overstretching

Another common reason for the low back muscles to tighten is overstretching of the musculature. As described previously, if the low back is stretched too fast or too far, it can activate the muscle spindle's stretch reflex and cause a spasm. Even though this reflex is protective, the spasming often persists long after the initial event that triggered it, resulting in a chronic posture of tight musculature of the region.

Overstretching a muscle can be caused traumatically, as with a fall or other injury. It can also occur when doing stretches as part of a health and fitness regimen. This is especially true if stretching is done too vigorously when the muscles have not yet warmed up, as often occurs when stretching is done before an exercise routine. For this reason, it is increasingly recommended that stretching be done after exercising, when the muscle tissues are warm. Thus, even though stretching is a valuable part of a health and fitness regimen, when it is performed too aggressively, it can be detrimental to musculoskeletal health. Moderation is the key.

Overstretching also often occurs in a much more insidious and seemingly innocuous manner. Simple postures assumed and carried out during the day can be the culprit. Examples include poor ergonomics at the workplace, such as bending down to work low in front of your body instead of working up higher in front of yourself, or twisting to one side to work off to the side in front of yourself instead of working directly in front of yourself. Postures and activities outside of work can also contribute. Bending forward during hobbies or activities such as cleaning or gardening can overstretch the low back extensors of the spine. Sleep posture can be equally problematic. If the client sleeps in a position that is halfway between side-lying and being on the stomach, the lumbar spine is torqued/rotated. This posture can easily cause an overstretch of the opposing rotator musculature that is antagonistic to this position, resulting in waking during the night or the next morning with tight muscles caused by the stretch reflex.

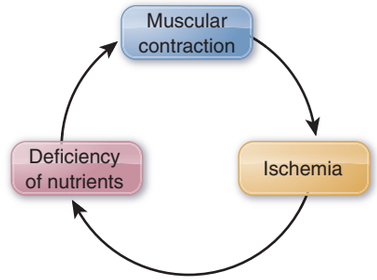


Figure 2-4 Contraction-ischemia cycle. If a muscle contraction is strong enough, it can compress arteries and reduce arterial blood flow to the local tissues. This results in ischemia, which can then cause myofascial TrPs to develop in the muscle. (Reproduced with permission from Muscolino JE. *Advanced Treatment Techniques for the Manual Therapist: Neck*. Baltimore, MD: Lippincott Williams & Wilkins; 2013.)

Myofascial Trigger Points

The other type of hypertonic musculature is a **myofascial trigger point**, often referred to simply as a **trigger point (TrP)**, and known in lay terms as a muscle knot. As described previously, a TrP is a focal area of muscle tightness that can refer pain to a distant site. TrPs are often divided into active and latent TrPs. Latent TrPs require pressure to be applied to them for referral of pain to occur. Active TrPs can refer pain without pressure.

Mechanism of Myofascial Trigger Points

Unlike globally tight musculature, whose mechanism is the muscle spindle reflex under the direction of the gamma motor system of the brain, a myofascial TrP is a local phenomenon. Muscle contraction occurs via the sliding filament mechanism. During this mechanism, crossbridges of myosin and actin (filaments found within the muscle fibers) constantly form, release, and reform to create the muscle contraction. Necessary to the release of these crossbridges is supply of energy in the form of adenosine triphosphate (ATP) molecules, which are created by a supply of glucose (blood sugar) delivered in the arterial blood supply to the musculature. If this arterial blood supply is cut off (often due to compression caused by the muscle's own contraction), then the muscle tissue is deprived of nutrients, including glucose. This loss of arterial blood supply is called **ischemia**; the creation of ischemia by muscular contraction is called the **contraction-ischemia cycle** (Fig. 2-4).

When ischemia, resulting in the loss of ATP formation, occurs in a small region of muscle fibers, the crossbridges in this region cannot be released, and a TrP forms. Therefore, the mechanism for TrP formation and perpetuation is ischemia at the local level. Treatment should be aimed at relieving ischemia by manual therapy that increases local blood circulation. Deep stroking massage (usually for a duration of approximately 30 to 60 seconds) is increasingly being recommended as the treatment of choice to work a myofascial TrP.

Causes of Myofascial Trigger Points

The four most common causes of myofascial TrPs are as follows:

1. Acute or chronic overuse of the muscle, including concentric and eccentric contraction with activity as well as isometric contraction with posture
2. Chronic stretch of the muscle
3. Prolonged immobility of the muscle
4. Trauma/injury to the muscle

Common Myofascial Trigger Points of the Low Back and Pelvis and Their Referral Zones

A TrP can form anywhere within a muscle. However, there are certain locations within muscles where TrPs tend to form more commonly than others. Further, each TrP within a muscle tends to have a characteristic referral zone. Each referral zone is usually divided into primary and secondary referral zones. A TrP most commonly refers to its primary referral zone; when more severe, it usually also refers to its secondary referral zone. Figures 2-5 to 2-22 illustrate common TrP locations and their corresponding referral zones for the muscles of the low back and pelvis. The locations of TrPs are indicated by Xs. Primary referral zones are indicated in dark red; secondary referral zones are indicated in light red.

Summary of Hypertonic Musculature

It is important to distinguish between globally tight musculature and myofascial TrPs because optimal treatment approaches differ for the two conditions. Manual and movement therapy for a globally tight muscle might be performed locally at the tight muscle, but its intended consequence is to

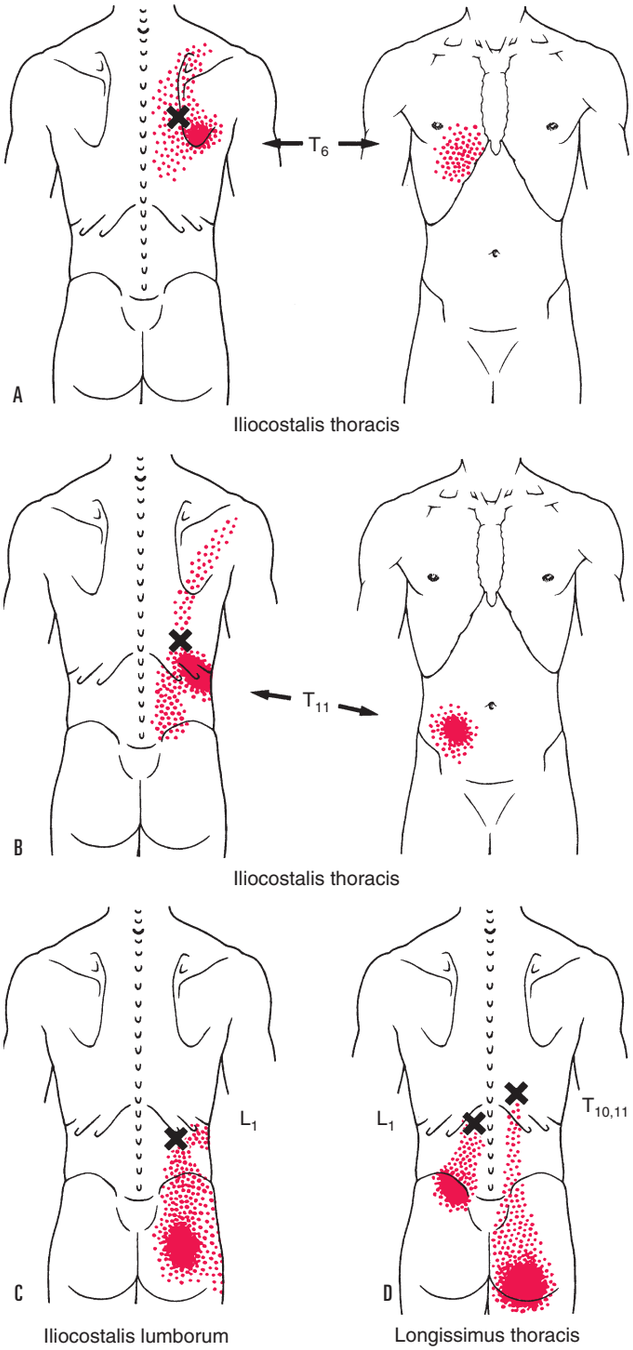


Figure 2-5 Erector spinae TrPs and their corresponding referral zones. **(A)** Upper iliocostalis thoracis. **(B)** Lower iliocostalis thoracis. **(C)** Iliocostalis lumborum. **(D)** Longissimus thoracis. *TrP*, trigger point. (Reproduced with permission from Simons DG, Travell JG, Simons LS. *Upper Half of Body*. 2nd ed. Baltimore, MD: Lippincott Williams & Wilkins; 1999. *Travell & Simons' Myofascial Pain and Dysfunction: The Trigger Point Manual*; vol 1.)

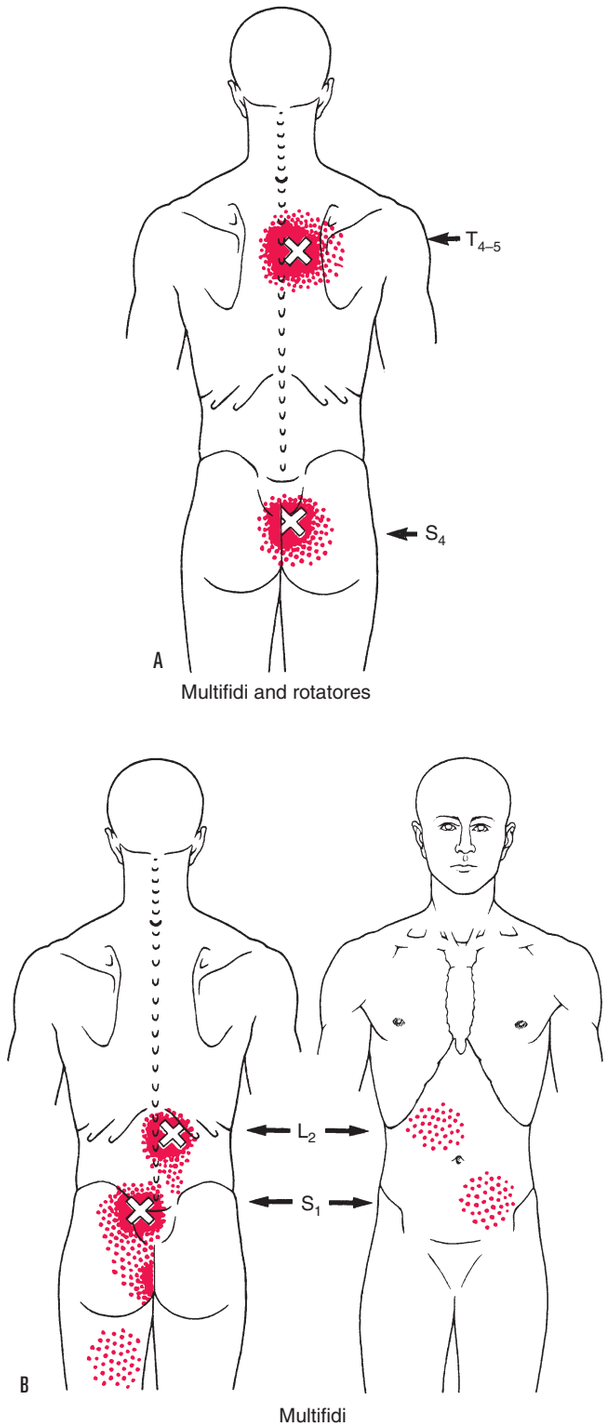


Figure 2-6 Transversospinalis multifidus and rotatores TrPs and their corresponding referral zones. **(A)** Midthoracic and sacral multifidus and rotatores. **(B)** Lumbar and upper sacral multifidus. *TrP*, trigger point. (Reproduced with permission from Simons DG, Travell JG, Simons LS. *Upper Half of Body*. 2nd ed. Baltimore, MD: Lippincott Williams & Wilkins; 1999. *Travell & Simons' Myofascial Pain and Dysfunction: The Trigger Point Manual*; vol 1.)

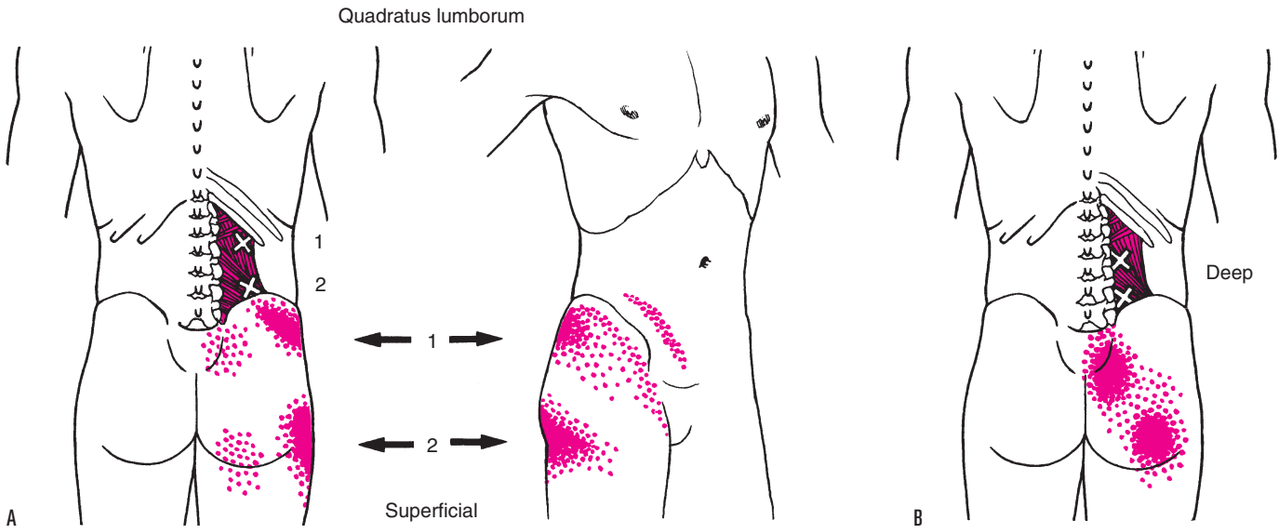


Figure 2-7 Quadratus lumborum TrPs and their corresponding referral zones. **(A)** Lateral (superficial) TrPs. **(B)** Medial (deep) TrPs. *TrP*, trigger point. (Reproduced with permission from Travell JG, Simons DG. *The Lower Extremities*. Baltimore, MD: Lippincott Williams & Wilkins; 1992. *Travell & Simons' Myofascial Pain and Dysfunction: The Trigger Point Manual*; vol 2.)

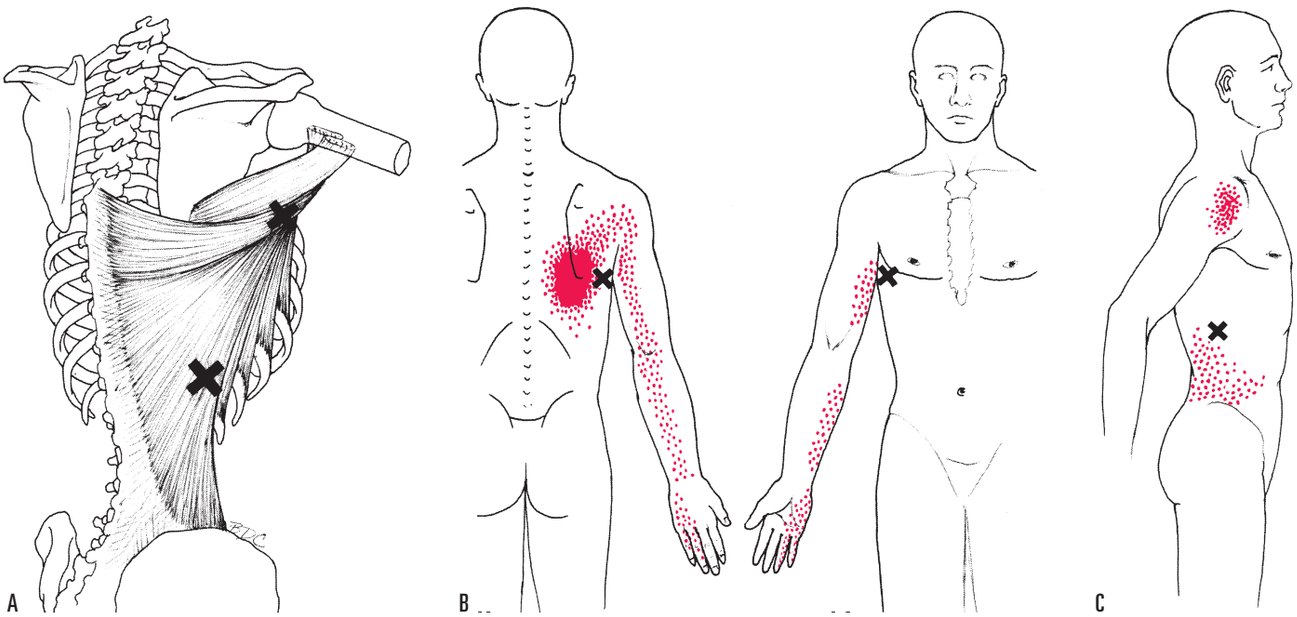


Figure 2-8 Latissimus dorsi TrPs and their corresponding referral zones. **(A)** Posterolateral view of two most common TrPs. **(B)** Upper TrP. **(C)** Lower TrP. *TrP*, trigger point. (Reproduced with permission from Simons DG, Travell JG, Simons LS. *Upper Half of Body*. 2nd ed. Baltimore, MD: Lippincott Williams & Wilkins; 1999. *Travell & Simons' Myofascial Pain and Dysfunction: The Trigger Point Manual*; vol 1.)

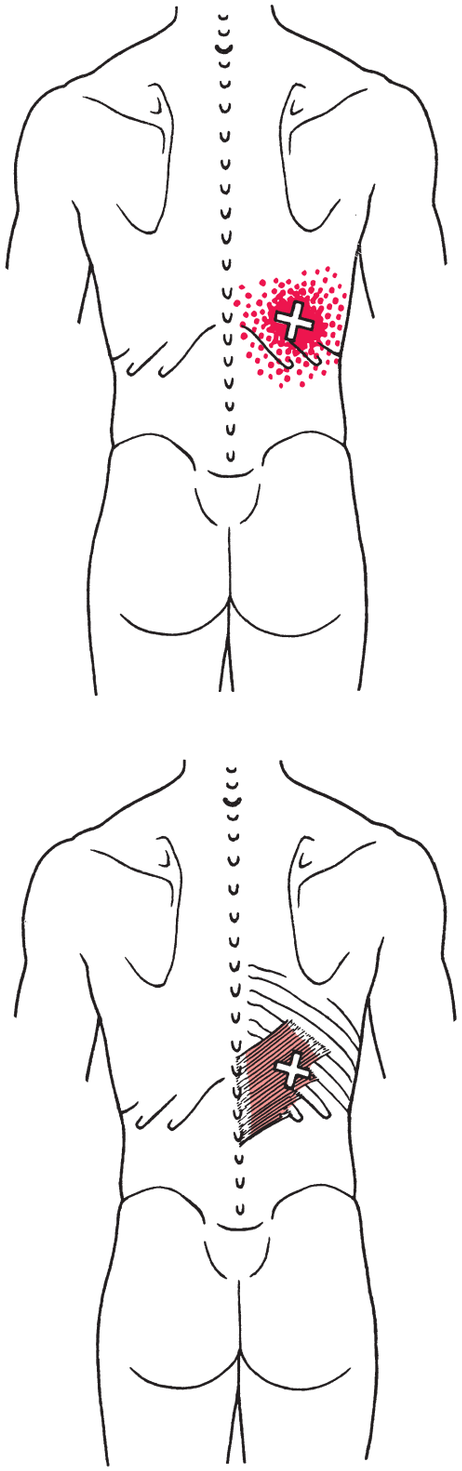


Figure 2-9 Serratus posterior inferior TrPs and their corresponding referral zones. *TrP*, trigger point. (Reproduced with permission from Simons DG, Travell JG, Simons LS. *Upper Half of Body*. 2nd ed. Baltimore, MD: Lippincott Williams & Wilkins; 1999. *Travell & Simons' Myofascial Pain and Dysfunction: The Trigger Point Manual*; vol 1.)

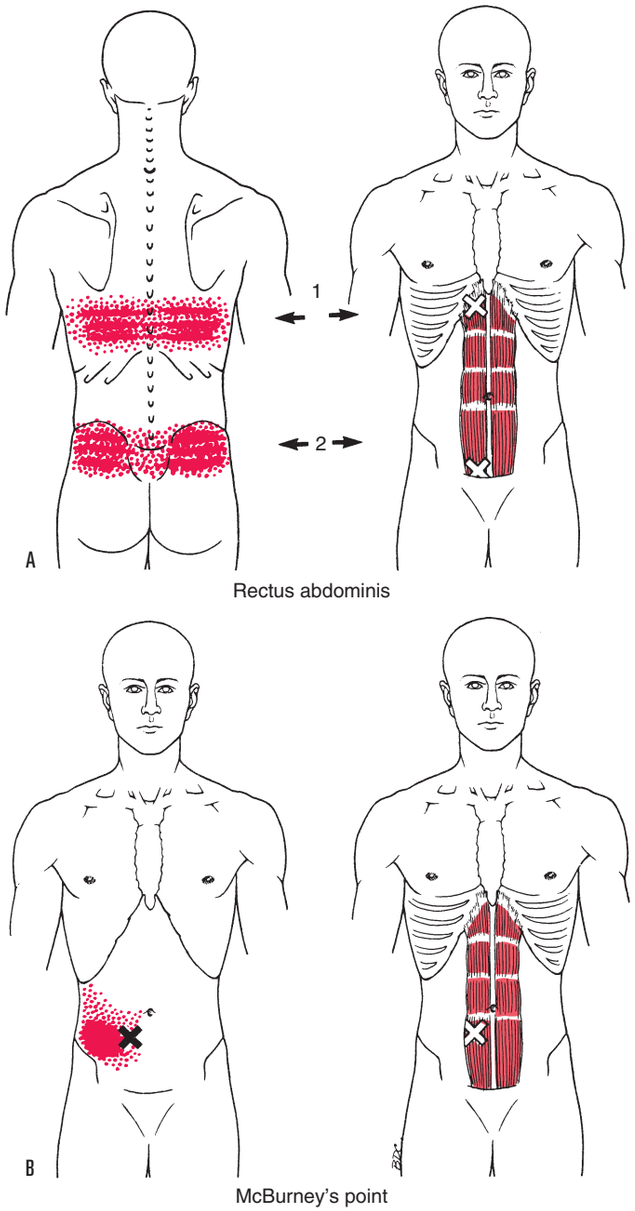


Figure 2-10 Rectus abdominis TrPs and their corresponding referral zones. **(A)** Pain can refer into the back bilaterally. **(B)** Pain from a lateral right-sided TrP can refer to the region of the appendix (over McBurney's point). *TrP*, trigger point. (Reproduced with permission from Simons DG, Travell JG, Simons LS. *Upper Half of Body*. 2nd ed. Baltimore, MD: Lippincott Williams & Wilkins; 1999. *Travell & Simons' Myofascial Pain and Dysfunction: The Trigger Point Manual*; vol 1.)

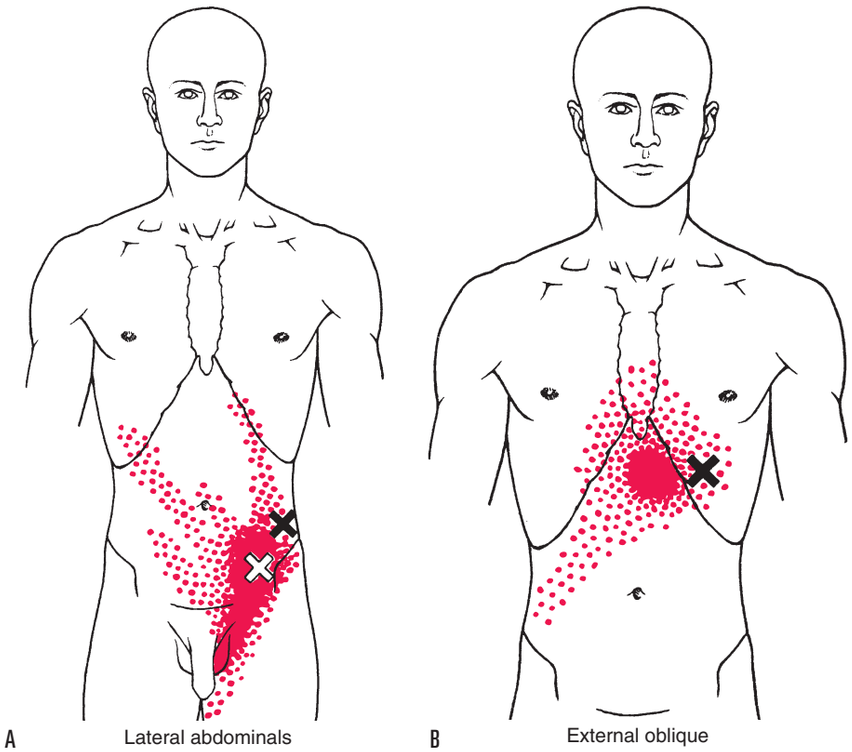


Figure 2-11 Anterolateral abdominal wall muscles: External and internal abdominal oblique and transversus abdominis TrPs and their corresponding referral zones. **(A)** Anterolateral abdominal wall TrPs. **(B)** Upper external abdominal oblique TrP. *TrP*, trigger point. (Reproduced with permission from Simons DG, Travell JG, Simons LS. *Upper Half of Body*. 2nd ed. Baltimore, MD: Lippincott Williams & Wilkins; 1999. *Travell & Simons' Myofascial Pain and Dysfunction: The Trigger Point Manual*; vol 1.)

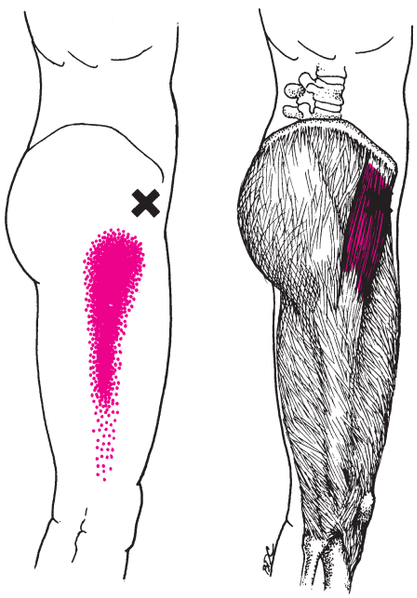


Figure 2-12 Tensor fasciae latae TrPs and their corresponding referral zones. *TrP*, trigger point. (Reproduced with permission from Travell JG, Simons DG. *The Lower Extremities*. Baltimore, MD: Lippincott Williams & Wilkins; 1992. *Travell & Simons' Myofascial Pain and Dysfunction: The Trigger Point Manual*; vol 2.)

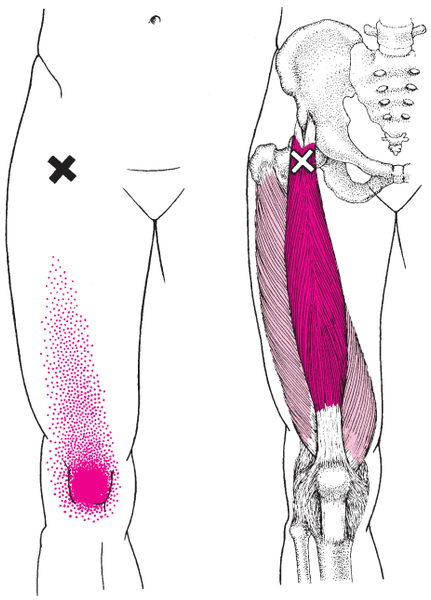


Figure 2-13 Rectus femoris TrP and its corresponding referral zones. *TrP*, trigger point. (Reproduced with permission from Travell JG, Simons DG. *The Lower Extremities*. Baltimore, MD: Lippincott Williams & Wilkins; 1992. *Travell & Simons' Myofascial Pain and Dysfunction: The Trigger Point Manual*; vol 2.)

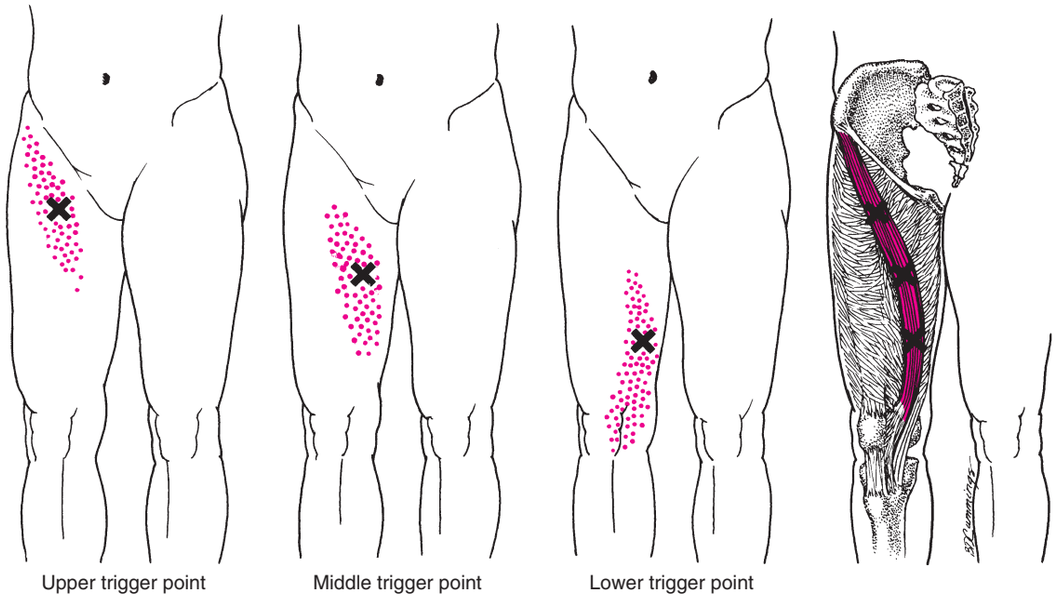


Figure 2-14 Upper, middle, and lower sartorius TrPs and their corresponding referral zones. *TrP*, trigger point. (Reproduced with permission from Travell JG, Simons DG. *The Lower Extremities*. Baltimore, MD: Lippincott Williams & Wilkins; 1992. *Travell & Simons' Myofascial Pain and Dysfunction: The Trigger Point Manual*; vol 2.)

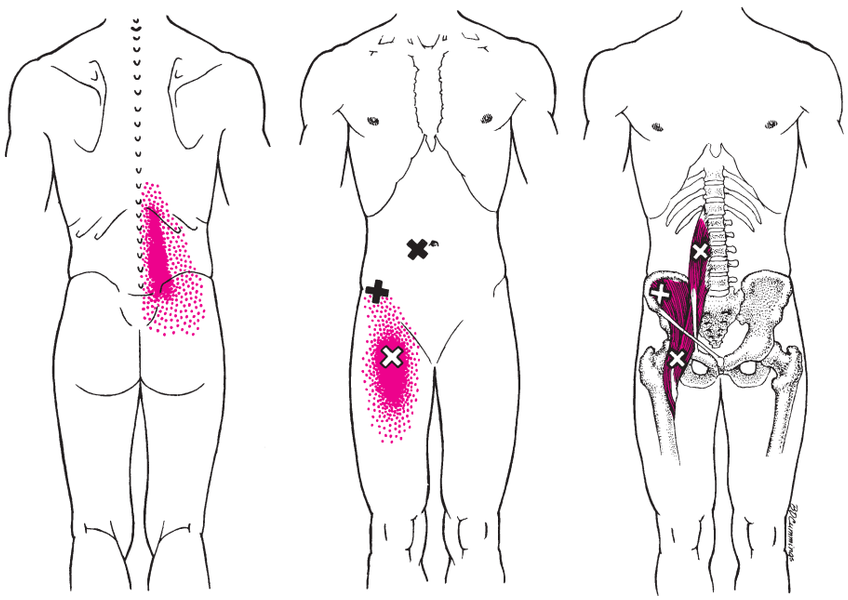


Figure 2-15 Iliopsoas TrPs and their corresponding referral zones. *TrP*, trigger point. (Reproduced with permission from Travell JG, Simons DG. *The Lower Extremities*. Baltimore, MD: Williams & Wilkins; 1992. *Travell & Simons' Myofascial Pain and Dysfunction: The Trigger Point Manual*; vol 2.)

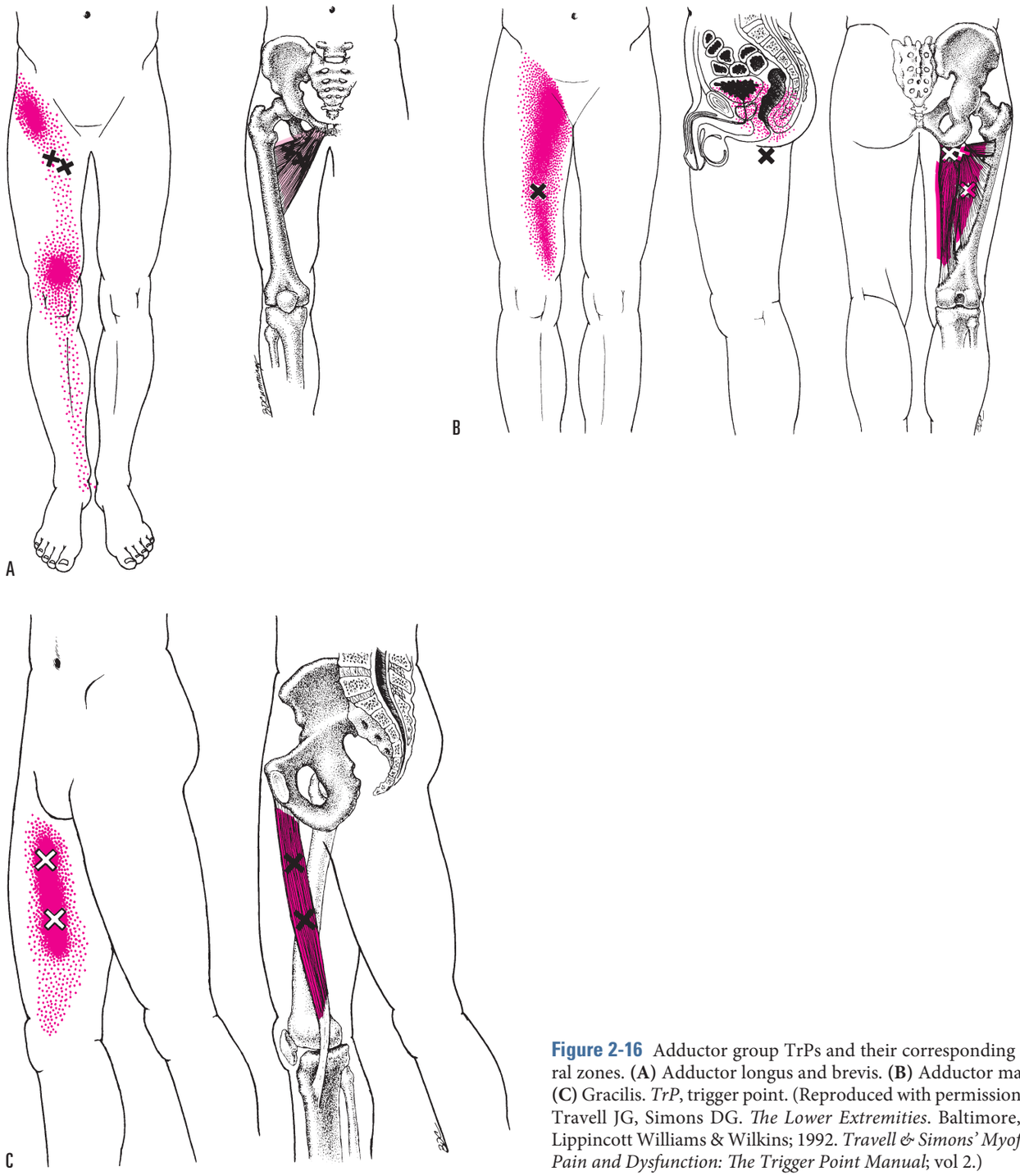


Figure 2-16 Adductor group TrPs and their corresponding referral zones. **(A)** Adductor longus and brevis. **(B)** Adductor magnus. **(C)** Gracilis. *TrP*, trigger point. (Reproduced with permission from Travell JG, Simons DG. *The Lower Extremities*. Baltimore, MD: Lippincott Williams & Wilkins; 1992. *Travell & Simons' Myofascial Pain and Dysfunction: The Trigger Point Manual*; vol 2.)

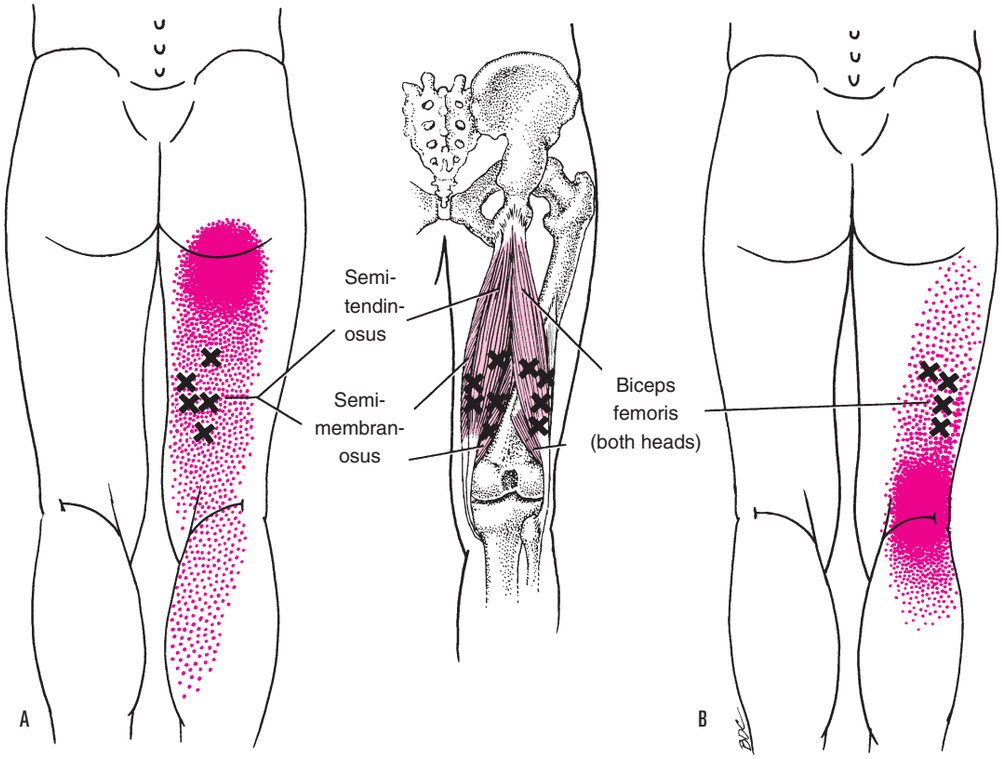


Figure 2-17 Hamstring group TrPs and their corresponding referral zones. *TrP*, trigger point. (Reproduced with permission from Travell JG, Simons DG. *The Lower Extremities*. Baltimore, MD: Lippincott Williams & Wilkins; 1992. *Travell & Simons' Myofascial Pain and Dysfunction: The Trigger Point Manual*; vol 2.)

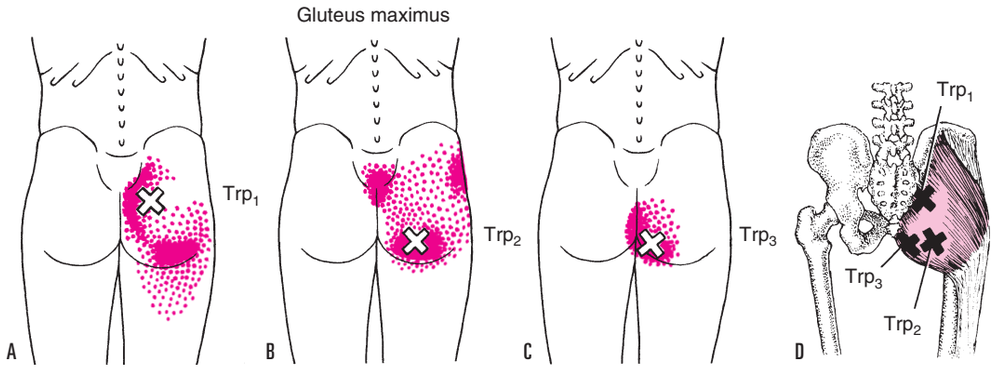


Figure 2-18 Gluteus maximus TrPs and their corresponding referral zones. **(A)** Upper TrP and its referral zone. **(B)** Lower midline TrP and its referral zone. **(C)** Lower medial TrP and its referral zone. **(D)** TrPs. *TrP*, trigger point. (Reproduced with permission from Travell JG, Simons DG. *The Lower Extremities*. Baltimore, MD: Lippincott Williams & Wilkins; 1992. *Travell & Simons' Myofascial Pain and Dysfunction: The Trigger Point Manual*; vol 2.)

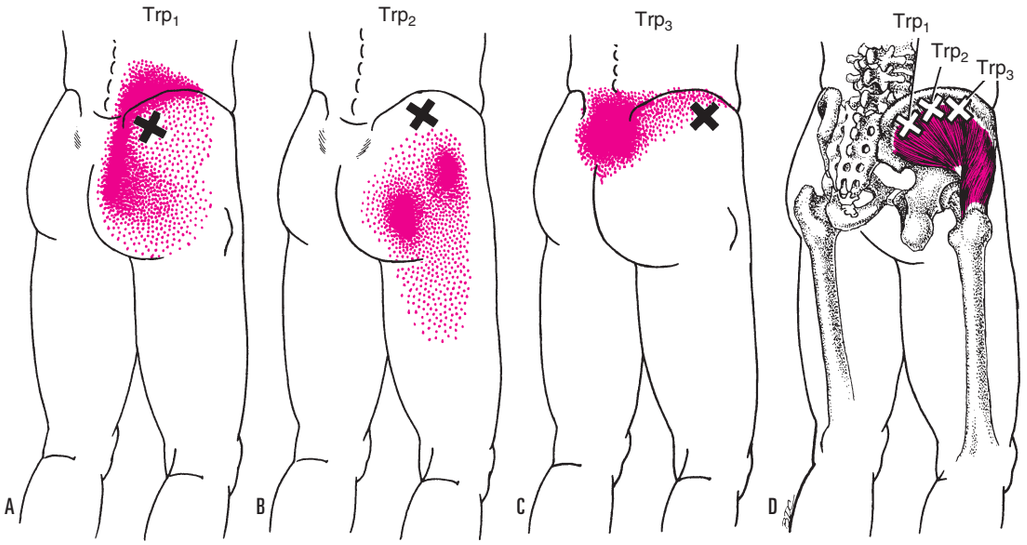


Figure 2-19 Gluteus medius TrPs and their corresponding referral zones. **(A)** Posterior TrP and its referral zone. **(B)** Midline TrP and its referral zone. **(C)** Anterior TrP and its referral zone. **(D)** TrPs. *TrP*, trigger point. (Reproduced with permission from Travell JG, Simons DG. *The Lower Extremities*. Baltimore, MD: Lippincott Williams & Wilkins; 1992. *Travell & Simons' Myofascial Pain and Dysfunction: The Trigger Point Manual*; vol 2.)

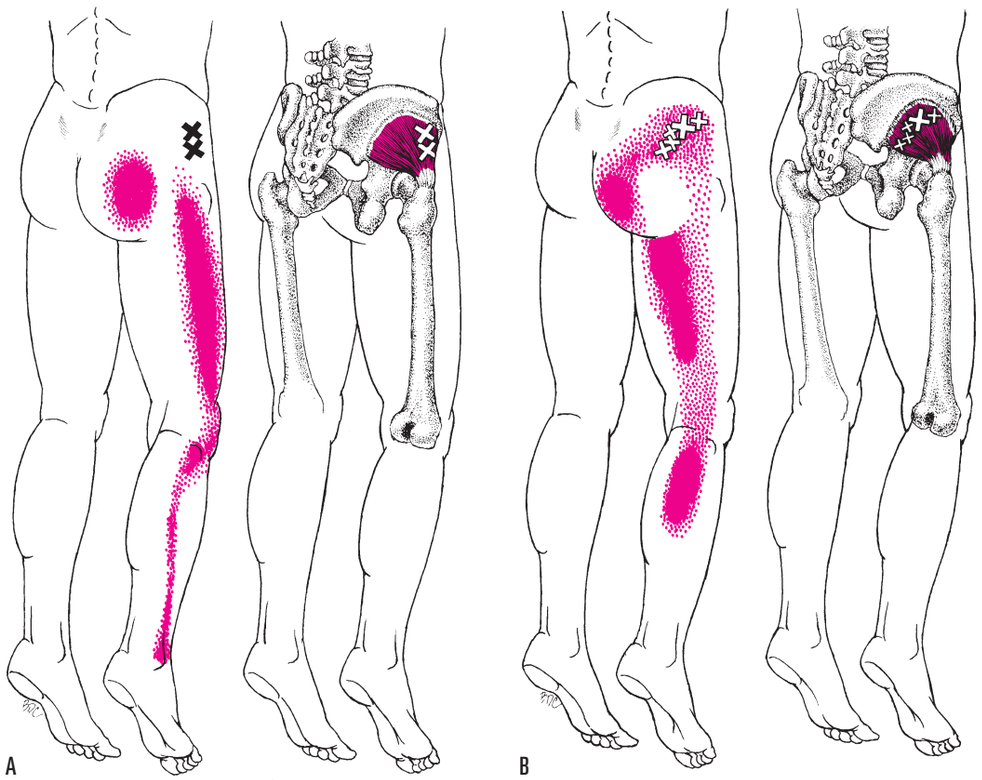


Figure 2-20 Gluteus minimus TrPs and their corresponding referral zones. **(A)** Anterior TrPs. **(B)** Posterior TrPs. *TrP*, trigger point. (Reproduced with permission from Travell JG, Simons DG. *The Lower Extremities*. Baltimore, MD: Lippincott Williams & Wilkins; 1992. *Travell & Simons' Myofascial Pain and Dysfunction: The Trigger Point Manual*; vol 2.)

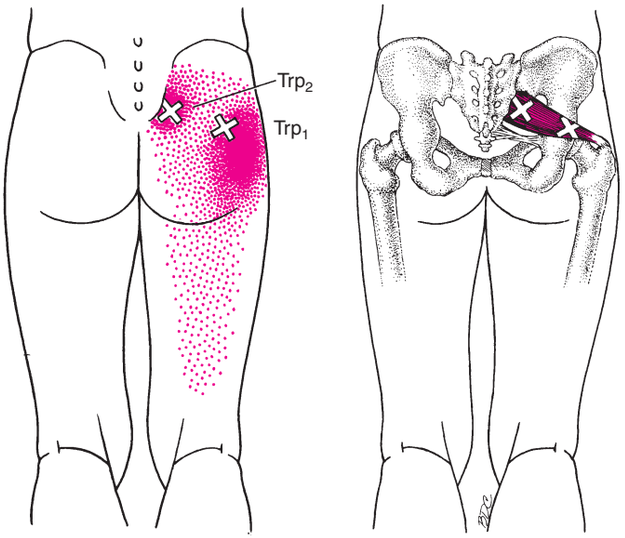


Figure 2-21 Piriformis TrPs and their corresponding referral zones. *TrP*, trigger point. (Reproduced with permission from Travell JG, Simons DG. *The Lower Extremities*. Baltimore, MD: Lippincott Williams & Wilkins; 1992. *Travell & Simons' Myofascial Pain and Dysfunction: The Trigger Point Manual*; vol 2.)

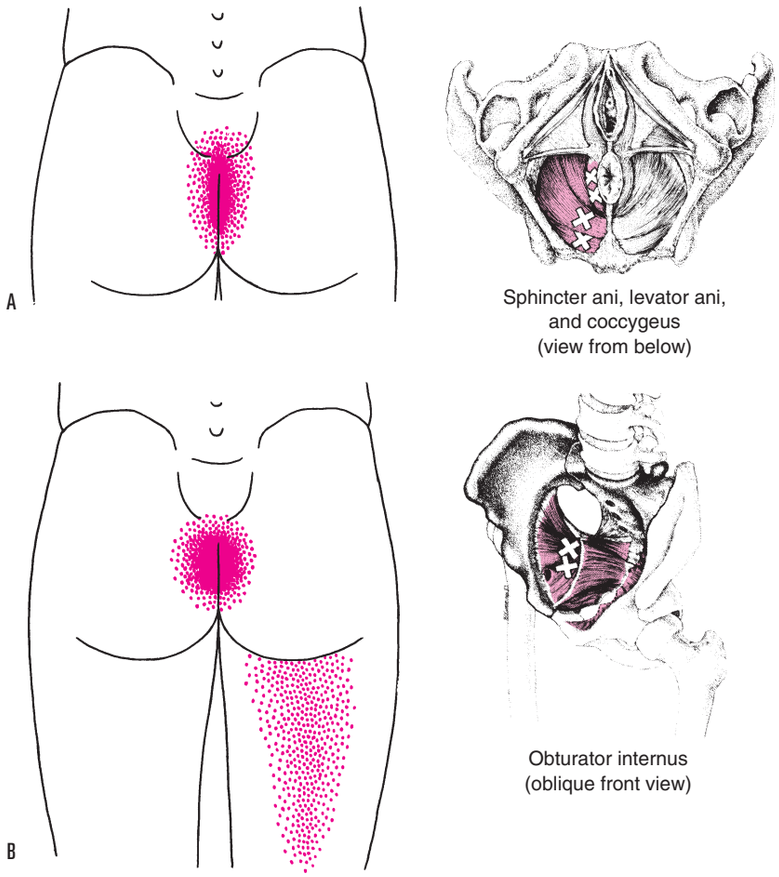


Figure 2-22 Pelvic floor musculature TrPs and their corresponding referral zones. **(A)** Coccygeus, levator ani, and sphincter ani. **(B)** Obturator internus. *TrP*, trigger point. (Reproduced with permission from Travell JG, Simons DG. *The Lower Extremities*. Baltimore, MD: Lippincott Williams & Wilkins; 1992. *Travell & Simons' Myofascial Pain and Dysfunction: The Trigger Point Manual*; vol 2.)

cause the gamma motor system of the central nervous system to change its pattern of muscle memory that determines the tone of that muscle. In contrast, treatment of a TrP is aimed directly at causing a local change in the muscle tissue itself, increasing blood supply where the TrP is located.

However, all hypertonic musculature, whether it is a globally tight muscle or a myofascial TrP, can decrease motion at the joint that is crossed by that muscle. Once joint motion has been restricted for a prolonged time, the functioning of that joint may become impaired. This condition is known as joint dysfunction and is discussed in the following section.

2.1 TREATMENT CONSIDERATIONS IN BRIEF

Hypertonic Musculature

Every technique presented in this book addresses tight musculature. Certainly, all forms of massage therapy, stretching, and hydrotherapy are effective for the treatment of hypertonic musculature. In particular, deep stroking massage is recommended for the treatment of myofascial TrPs. For more details, see Chapter 3.

JOINT DYSFUNCTION

Like hypertonic musculature, joint dysfunction is usually present as a component of most pathologic musculoskeletal conditions of the low back and pelvis. Tight muscles and joint dysfunction seem to follow a cyclical pattern. If tight muscles are present, they restrict joint motion, which leads to adhesions in the periarticular soft tissues (tissues located around the joint) and causes joint dysfunction. Similarly, if joint dysfunction is present, the lack of proper movement will either lead to adaptive shortening and tightening of the muscles, and/or the pain with attempted motion will cause splinting of the adjacent musculature. For this reason, most musculoskeletal problems involve a combination of tight musculature and joint dysfunction. The benefits of massage for the musculature are clear, as are the benefits of stretching for the musculature and joints and of joint mobilization for the joints.

2.1 THERAPIST TIP

Massage and Chiropractic

Tight musculature and joint dysfunction usually coexist in every musculoskeletal condition. For this reason, massage therapy and chiropractic (or osteopathy) ideally complement each other, and massage therapists are often employed in chiropractic offices. In chronic conditions, fibrous adhesions are also nearly always present, reinforcing the need for chiropractic manipulation and massage as well as moist heat and stretching techniques.

BOX 2.3

Subluxation/Misalignment Versus Joint Dysfunction

The terms **subluxation** and **misalignment** are commonly used in chiropractic and osteopathic practices. Although these two terms are often used to denote joint dysfunction, they are not actually synonymous with joint dysfunction. Subluxation and misalignment, as well as saying that a bone is *out of place* refer to the static structural/postural alignment of a vertebra. If in neutral anatomic position, a vertebra is slightly rotated, laterally flexed, flexed, or extended, then it is said to be subluxated or misaligned. Joint dysfunction, on the other hand, refers to the functional motion of a vertebra at its spinal joints.

However, there often is a relationship between the static alignment of a vertebra and its functional motion. A vertebra that is misaligned is often misaligned because of asymmetry of tight musculature and/or adhesions. The same tight musculature and adhesions may certainly affect the motion of the vertebra, causing a hypomobile joint dysfunction. This relationship is not always present, however. A helpful analogy is that of a door that naturally sits slightly ajar. If you look at its static position, you would say that it is misaligned because it is ajar. However, to determine whether the door functions correctly, you would need to see if it can move through its full range of motion, opening and closing all the way. If it can do that, then it is functioning fine, even if it is "misaligned." When there is a discrepancy between structure and function, proper functioning is usually more important.

Description of Joint Dysfunction

Joint dysfunction means that the function of a joint is unhealthy. Given that joint function is to allow movement, two forms of joint dysfunction exist. A **hypomobile** joint is restricted in motion and moves too little; a **hypermobile** joint has excessive motion and moves too much.

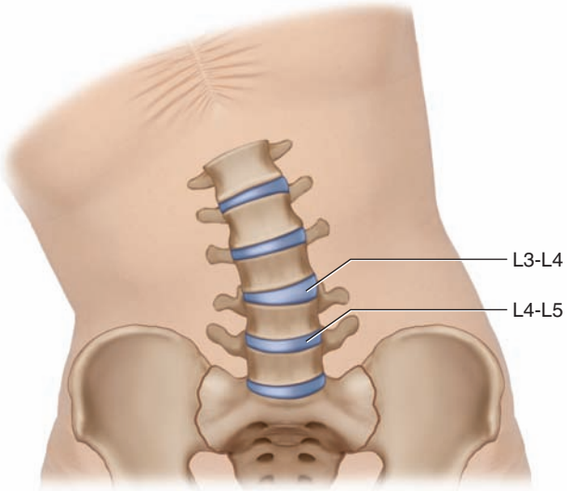


Figure 2-23 Joint hypomobility. A joint dysfunction hypomobility at one segmental level of the lumbar spine usually results in a compensatory joint dysfunction hypermobility at the adjacent level. Here, L4-L5 is hypomobile, and L3-L4 is a compensatory hypermobility.

Although both hypermobilities and hypomobilities can occur in the lumbar spine and pelvis, the more common presenting complaint, and the one that manual therapists are better able to treat, is hypomobility. Because a lumbar spinal joint can move in multiple directions, it can be hypomobile in one or more of its six cardinal ranges of motion: flexion, extension, right and left lateral flexion, and right and left rotation (for a table of average ranges of motion of the lumbar spine, see Table 1-1 in Chapter 1). For example, it is possible for a lumbar spinal joint to move perfectly well into right lateral flexion (as well as other ranges of motion) but not move well into left lateral flexion. For this reason, to accurately assess a joint hypomobility, the specific range of motion that is restricted should be determined.

However, assessing the overall gross range of motion of a specific motion of the low back (such as right lateral flexion) does not necessarily indicate the range of motion of specific segmental joint levels of the low back. In other words, a client may have a full 45-degree range of motion into right lateral flexion of the lumbar spine as a whole; however, the client may be restricted and hypomobile within a specific portion of the lumbar spine, say at the L4-L5 segmental joint level. If the client is compensating with more motion at the adjacent L3-L4 joint level, then this hypermobile L3-L4 joint will mask the hypomobile L4-L5 joint level (Fig. 2-23).

Mechanism and Causes of Joint Dysfunction

There are usually two major mechanisms that can cause a hypomobile joint. One is tight (hypertonic) muscles that cross the joint; this is especially true of smaller, deeper intrinsic muscles of the joint, such as rotatores, interspinales, and intertransversarii of the low back. The other is taut soft tissues resulting from the buildup of fibrous adhesions; this is especially important if the adhesions build up in the joint capsules and ligaments of the joint because they directly and intimately limit the motion of the joint.

There are also two major mechanisms that cause a hypermobile joint. Certainly, an overstretching injury of the joint's soft tissues, especially the joint capsules and ligaments, will result in an unstable hypermobile joint. Another common mechanism that creates a hypermobile joint is excessive joint movement in compensation for an adjacent hypomobility. This is especially true in the spine, where multiple joints are located next to each other.

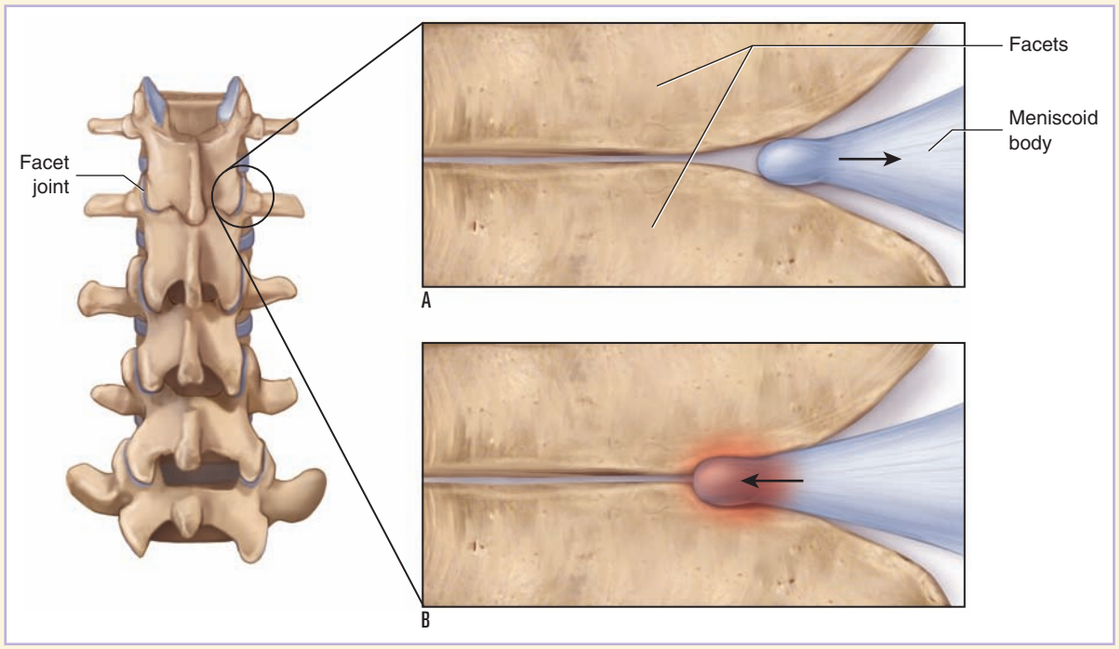
The example used in the preceding section demonstrates why it can be important to detect early a segmental hypomobility. If L4-L5 is hypomobile and L3-L4 compensates by becoming hypermobile, in time, L3-L4 level will likely be overused and become fatigued and painful. This will lead to the pain-spasm-pain cycle, which in turn will result in a tightening of the smaller intrinsic muscles around the L3-L4 joint, causing it to become hypomobile as well. As a result, demand will be placed on the next segmental level, L2-L3, to become further hypermobile to compensate for the two hypomobile segments below it. Naturally, in time, this level may be similarly overused and then become hypomobile itself. Segmental joint dysfunction hypomobilities tend to have a domino effect, spreading through the spine until sufficient hypermobile compensation is not possible and the overall gross range of motion of the spine is decreased. However, this point is often reached late in the disease process. If not detected early, delayed treatment allows tight musculature to become chronic and more fascial adhesions to form. For this reason, it is important to locate and identify segmental joint hypomobilities early when only one, or perhaps two, are present. The assessment technique for segmental joint hypomobility is called joint play assessment, or **motion palpation**, and is addressed in Chapter 3. Treatment is then aimed at introducing motion into these restricted joints.

It should be emphasized that joint dysfunction is not necessarily a problem of the entire low back and/or pelvis. Rather, it is more focused on a specific segmental joint level of the region. When joint dysfunction of a segmental joint level occurs, it is often the result of a tightening of the smaller, deeper, intrinsic postural muscles that cross just that joint or perhaps a couple of joints in that area. Examples are the rotatores, multifidus, intertransversarii, or interspinales. Similarly, taut fascial tissues, likely the result of fascial adhesions, are not necessarily present in every area of the low back. Instead, they may be present in the joint capsules and ligaments of a specific joint level or a couple of joint levels. The same process that a manual therapist often sees on a larger level is simply being played out on a smaller, more focused level.

BOX 2.4

Causes of Joint Hypomobility

In addition to tight musculature and fascial adhesions, two other mechanisms exist that can cause joint hypomobility. One is bone spur formation at the joint margins; this is part of the DJD process (DJD is covered in more detail later in this chapter). If a bone spur becomes large enough, it can block and limit joint motion at that segmental level. The other mechanism is the presence of a meniscoid body within the joint space. A **meniscoid body** is a fibrous, fatty, soft tissue that is usually present at the periphery of a joint space. The meniscoid body functions to increase the congruity of the joint by helping the two joint surfaces better fit together. However, if it displaces and moves toward the center of the joint, it can jam between the two bones and cause a blockage and restriction of motion (see accompanying figure).



(A) A meniscoid body's normal and healthy relationship to the facet joint. **(B)** A meniscoid body jammed between the two facets of the joint. (Adapted with permission from Muscolino JE. *Advanced Treatment Techniques for the Manual Therapist: Neck*. Baltimore, MD: Lippincott Williams & Wilkins; 2013.)

2.2 TREATMENT CONSIDERATIONS IN BRIEF

Joint Dysfunction

Every technique presented in this book can be used to address hypomobile joint dysfunction. Massage and stretching can be used to loosen tight muscles associated with hypomobility as well as to stretch the taut soft tissues associated with it. However, the best technique to target the specific segmental hypomobilities is joint mobilization. Hydrotherapies can also be beneficial for softening and loosening these tight/taut soft tissues. Hypermobile joint dysfunction is more problematic to treat. For more details, see Chapter 3.

SPRAINS AND STRAINS

Sprains and strains are usually addressed together because they are similar in nature. Technically, when a ligament or joint capsule is torn, it is termed a **sprain**; when a muscle is torn, it is termed a **strain** (Fig. 2-24).

Description of Sprains and Strains

Sprains and strains tend to occur together because the force that is necessary to tear one tissue will likely cause tearing of the other. However, sprains and strains are not always equally present. An injury may present as a minor sprain but be a major strain or vice versa. The severity of a sprain or a strain is expressed as follows:

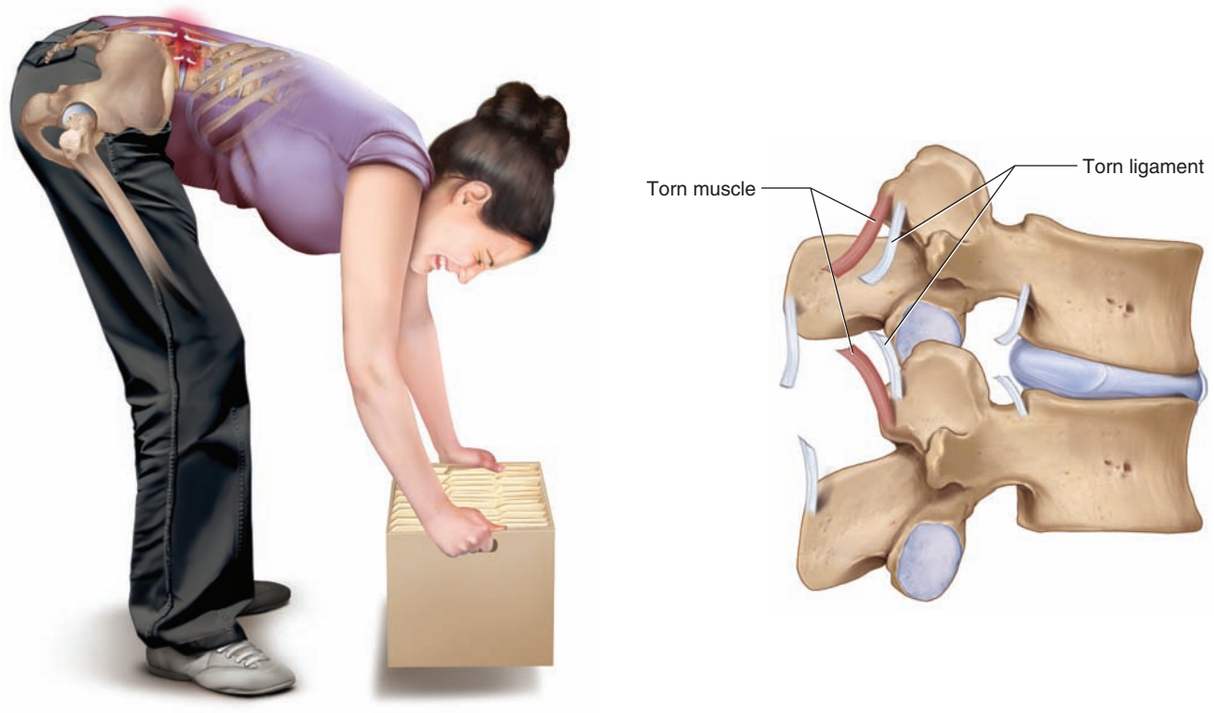


Figure 2-24 Low back strain and sprain. Attempting to lift a heavy object that is in front of the body places a strong force on the posterior tissues of the low back. If this force is excessive, a tearing of the low back extensor musculature, termed a strain, can occur. A tearing of ligament, termed a sprain, can also occur.

2.2 THERAPIST TIP

Strain

The term *strain* is often used loosely. At times, a client who is described as having a strain actually has a muscle spasm. As explained previously, when a muscle is stretched too quickly or too far, the muscle spindle's stretch reflex is initiated, which causes the muscle to contract (spasm). This reflex prevents the muscle from being torn and therefore strained. However, the resulting muscle spasm is often described as a strain (certainly, if some tearing occurred before the stretch reflex engaged, then it would truly be a strain in addition to a spasm). However, it is possible to justify the use of the term strain in this scenario from another perspective. Any strenuous use of a muscle usually results in a normal and healthy amount of **microtearing** of the muscle's fascial tissue. This fascial microtearing is necessary so that the fascia can mend and heal larger. This allows for more sarcomeres and sarcoplasm to be placed in the muscle fiber when a muscle hypertrophies after exercising. Hence, this microtearing could be interpreted as a minor strain of the muscle. The most important point is to understand the mechanism of what is occurring so that treatment is appropriate for the condition.

- Grade I: minor tear
- Grade II: moderate tear
- Grade III: marked tear or complete rupture

Given that strains and sprains involve torn soft tissue, pain, inflammation, and bruising are usually present when the sprain and/or strain are in the acute stage. Muscular splinting/spasming is also present in the acute stage and often persists long-term.

Although sprains and strains are similar, functionally, they present quite differently. Sprains are worse than strains because ligaments lack a good blood supply and therefore do not heal well. For this reason, once a ligament has been stretched and torn, it usually heals stretched out and remains that way for the rest of the client's life, resulting in chronic joint hypermobility. Musculature, on the other hand, has a good blood supply, so strains usually heal well if properly treated. However, the presence of a good blood supply also causes more bleeding and bruising with strains. Strains also usually hurt more than sprains because muscle tissue has more sensory nerve endings than ligaments.

Mechanism and Causes of Sprains and Strains

The mechanism for sprains and strains is similar. An excessive pulling force causes a disruption of the fibers of the ligament or musculature (see Fig. 2-24). This pulling force

can occur during a macrotrauma, such as bending over to lift a heavy object, a fall, or a car accident. It can also occur from repeated postural or movement microtraumas, such as overuse injuries that place excessive tension on ligaments and muscles over time; repeated bending is a good example of this.

The function of a ligament is to limit motion of a joint; therefore, if the ligament is torn and stretched, the joint tends to become hypermobile and less stable. This may be masked during the acute phase by muscular splinting/spasming. Strains, on the other hand, tend to result in joint hypomobility, both because of muscular spasming that occurs in the short run and often continues into the long run, as well as the formation of scar tissue adhesions that occur during the healing process. Although adhesions are necessary to repair and mend torn soft tissues, if excessive adhesions are allowed to form, the tissue will lose its mobility, resulting in decreased ranges of motion.

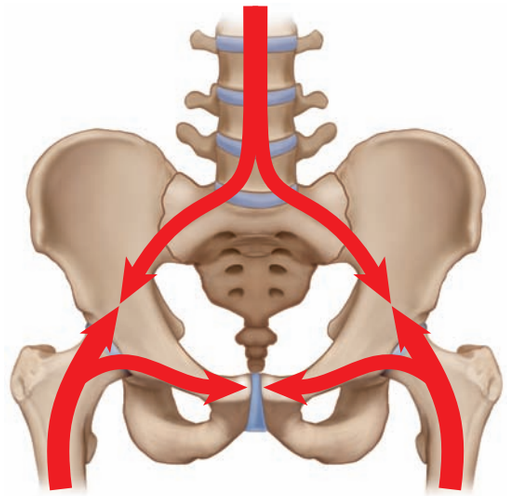


Figure 2-25 The SIJ is located in the pelvis and is subject to forces from the spine above and from the lower extremities below.

2.3 TREATMENT CONSIDERATIONS IN BRIEF

Sprains and Strains

Icing is especially useful for treating acute strains and sprains. Massage is helpful for sprains and strains when the condition is subacute and/or chronic. Stretching is helpful for subacute and chronic care of strains. For more details, see Chapter 3.

SACROILIAC JOINT INJURY

Injury to the sacroiliac joint (SIJ) is extremely common. Indeed, a large number of low back problems emanate from the SIJ.

Description of Sacroiliac Joint Injury

The SIJ is located in the pelvis, which is a transitional body part located between the lower extremities and the spine. Therefore, the SIJ is subjected to a great deal of physical stresses both from below and above (Fig. 2-25). When injured, the SIJ can be inflamed, sprained, and/or strained. Inflammation of the SIJ is termed **sacroiliitis**. If ligaments of the SIJ are overstretched or torn, it is a sprain; if muscles of the SIJ are overstretched or torn, it is a strain.

Mechanism and Causes of Sacroiliac Joint Injury

As stated, the SIJ is subjected to a great deal of physical stresses both from below and above. From below, the SIJ can be irritated from excessive motion of the lower extremities as well as impact forces from contact with the ground when walking, running, or jumping. From above, the SIJ can be irritated from excessive motion of the spine as well as weight-bearing compression forces from the body weight above when sitting or standing and forces placed on the joint when bending over. Macrotrauma injuries such as falls and car accidents can also contribute to SIJ injuries. The sum of these physical forces can result in inflammation to the joint, in other words, sacroiliitis.

Because of the ligamentous nature of the SIJ, sprains are especially common. The SIJ has little or no musculature that crosses the joint and attaches from the sacrum to the ilium. For this reason, musculature has a limited ability to stabilize the SIJ. Although some muscles come from another bone and then attach to both the sacrum and the ilium, such as the erector spinae and the latissimus dorsi, these muscles do not cross from the sacrum to the ilium. Even the piriformis, which does cross the SIJ, does so by skipping attachment to the iliac portion of the pelvic bone, and indeed by skipping the pelvic bone entirely, to then attach to the greater trochanter of the femur; therefore, its role is involved in stabilization of the hip joint as well as the SIJ.

As a result, the SIJ must depend on its ligament complex for the vast majority of its stability. Indeed, the SIJ is extremely well supplied with ligamentous tissue (Fig. 2-26). This means that when the SIJ is injured, it is usually a sprain that occurs, not a strain. And because ligaments have a relatively poor blood supply, they do not heal well; therefore, an SIJ sprain usually results in a chronic hypermobile joint that remains unstable. A strain to SIJ musculature can occur but is far less common in occurrence and/or is usually a small component of the client's SIJ injury.

Sacroiliac Joint Muscle Splinting and Symptoms

Regardless of whether the condition is sacroiliitis, SIJ sprain, or SIJ strain, adjacent musculature commonly tightens in an attempt to splint the joint. When compensatory muscular

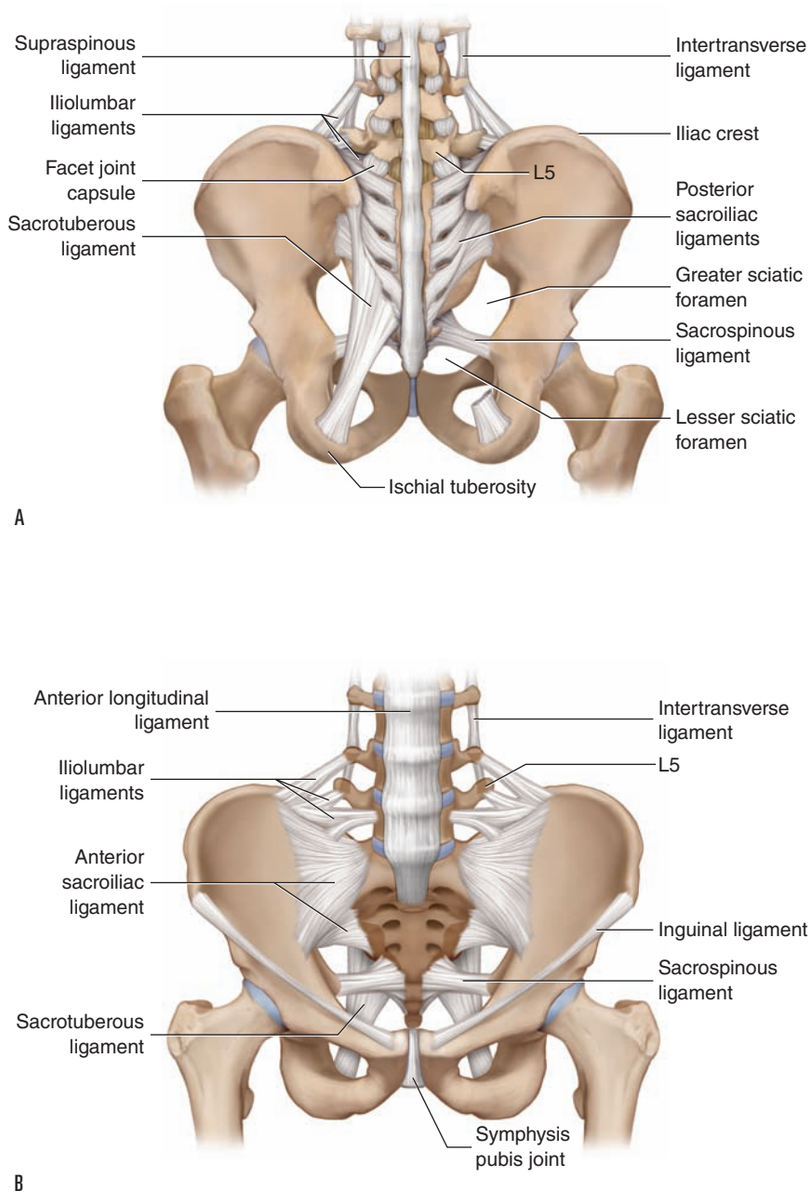


Figure 2-26 Ligaments of the SIJ. **(A)** Posterior view. **(B)** Anterior view.

spasming accompanies an SIJ injury, it is usually the same-side piriformis, lumbar erector spinae and transversospinalis musculature, superomedial fibers of the gluteus maximus directly next to the posterior superior iliac spine (PSIS), and the hamstrings. The same-side gluteus medius and the other deep lateral rotators are also often involved (Fig. 2-27). These same muscles on the other side may also become involved because one SIJ often becomes hypermobile to compensate for the other SIJ if the other SIJ is hypomobile or injured.

SIJ symptoms classically include pain during prolonged sitting or standing, bending, and with excessive walking. The quality of the pain is usually dull but can become sharp at times. The pain is usually located directly over the SIJ, immediately medial to the PSIS. Pain may also be located lateral to the PSIS in the superomedial fibers of the gluteus maximus or can be superior to the sacrum in the erector spinae and

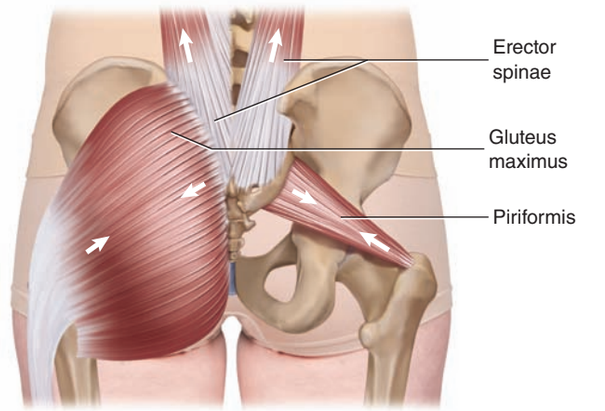


Figure 2-27 When the SIJ is injured, muscles in the region often splint to protect the joint.

transversospinalis musculature (overlying the lumbosacral joint). Due to the fact that injury to one SIJ often results in compensation by the other SIJ, it is common for SIJ pain to switch from one side of the body to the other.

2.4 TREATMENT CONSIDERATIONS IN BRIEF

Sacroiliac Joint Injury and Sprain

Treatment to an irritated/injured SIJ involves moist heat, massage, and stretching to the compensatory tight muscles of the region. If the SIJ is hypomobile, then stretching and joint mobilization are especially important. If the SIJ is hypermobile, then the ultimate treatment is for the client to engage in strengthening exercise to stabilize the region. For more details, see Chapter 3.

2.3 THERAPIST TIP

Sacroiliac Joint Injury and the Hamstrings

Hamstring musculature often tightens for stabilization and splinting when the SIJ on that side of the body is injured. The hamstrings do not attach directly into the sacrum; however, their contractile pull is transferred to the sacrum via their fascial connection into the sacrotuberous ligament, which does attach into the sacrum. The therapist should always assess the hamstrings in all clients who present with an injured SIJ.

PATHOLOGIC DISC CONDITIONS AND SCIATICA

Pathologic discs of the lumbar spine are extremely common. Although any pathologic disc is potentially serious, the degree of symptoms and functional impairment can vary tremendously. Some pathologic discs require immediate surgery, whereas others cause no problem and may be found, if at all, only incidentally when magnetic resonance imaging (MRI) or a computed tomography (CT) scan is done for another reason.

Description of Pathologic Disc Conditions

There are two major types of pathologic conditions of the intervertebral disc:

- Disc thinning
- Bulging or rupture of the fibers of the annulus fibrosus

Disc thinning involves a decrease in the height of the disc. Given that the volume of the inner nucleus pulposus determines the height of the disc, disc thinning occurs as the nucleus pulposus gradually desiccates with age. This condition usually occurs when the client is middle-aged or older. The danger of disc thinning is that as the two adjacent vertebrae approach each other, there is a decrease in size of the intervertebral foramina at that level through which the spinal nerves pass (Fig. 2-28). Because greater disc thickness allows for greater range of motion of that intervertebral joint, disc thinning can also result in decreased range of motion.

Thus, if disc thinning becomes marked in degree, spinal nerve compression is possible. Because a spinal nerve carries both sensory and motor neurons, altered sensation can occur wherever the sensory neurons of that spinal nerve originated

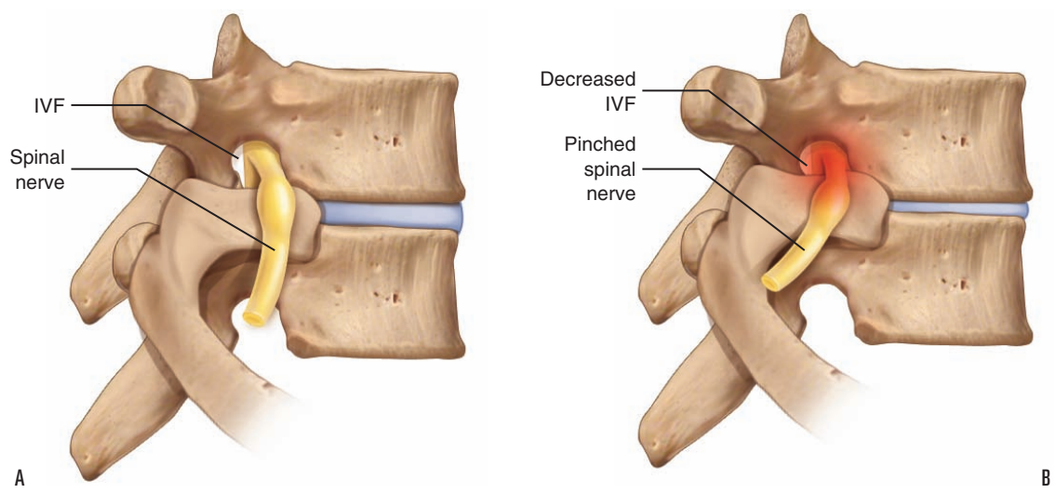


Figure 2-28 Disc height and the size of the intervertebral foramen. **(A)** The disc is healthy and there is a normal-sized intervertebral foramen (IVF) through which the spinal nerve travels. **(B)** The disc has thinned, resulting in an IVF that is decreased in size and impingement of the spinal nerve. (Reproduced with permission from Muscolino JE. *Advanced Treatment Techniques for the Manual Therapist: Neck*. Baltimore, MD: Lippincott Williams & Wilkins; 2013.)

and/or altered motor function can occur wherever the motor neurons of that spinal nerve end. Sensory symptoms can include tingling, numbness, or pain; motor symptoms can include twitching, weakness, or flaccid paralysis of the musculature. Because the lumbar and sacral spinal nerves innervate the lower extremity, these symptoms occur in the pelvic (gluteal) region, thigh, leg, and/or foot. However, for most clients, disc thinning does not usually progress to the point that nerve compression with lower extremity referral occurs.

The other major type of pathologic disc condition is a weakening of the outer annulus fibrosus that leads to a bulging or rupture of its fibers. This condition has three major types/gradations of severity:

- Disc bulge
- Disc rupture
- Sequestered disc

The mildest form is a **disc bulge**. In this condition, the annular fibers weaken and allow the nucleus pulposus to push against the annulus, causing it to bulge outward (Fig. 2-29A). A disc bulge is considered the mildest form because the annular fibers are still intact. A **disc rupture** is considered the next degree of severity because the annular fibers have weakened to the point that the pressure of the nucleus pulposus causes them to rupture. In this case, the nucleus pulposus can actually extrude through the annulus and enter into the intervertebral foramen or spinal canal. A disc rupture is also known as a **disc herniation** or **disc prolapse** (Fig. 2-29B). The third and most severe form of this pathologic disc condition is the sequestered disc. A **sequestered disc** is a disc rupture in which a portion of the nucleus pulposus that extrudes through the annular fibers separates from the inner core of nucleus pulposus (the term "sequester" literally means to set apart or separate) (Fig. 2-29C). It cannot rejoin the disc and is left to float within the intervertebral foramen or spinal canal.

The danger with disc bulges, herniations, and sequestrations is that the disc can push outward and compress the spinal nerve within the intervertebral foraminal space or the spinal cord within the central spinal canal at that level. Therefore, they are considered to be **space-occupying lesions**. (*Note*: DJD, covered later in this chapter, is another common example of a space-occupying lesion that can compress spinal nerves). With a bulging disc, the bulging annular fibers can compress the neural structures; with a ruptured or sequestered disc, the nucleus pulposus can create the compression.

If a pathologic disc compresses nerve roots of the sciatic nerve, a condition called **sciatica** can occur. The sciatic nerve is the largest nerve in the human body. It measures approximately a quarter inch in diameter and is composed of L3, L4, L5, S1, and S2 nerve roots. Symptoms of sciatica can be sensory and/or motor because both sensory and motor neurons are located in the sciatic nerve. Pain and/or motor weakness of sciatica can occur in the posterior thigh, or leg, or anywhere in the foot (Fig. 2-30).

The actual determinant of the severity of these conditions is the degree of nerve compression that occurs. For this reason, a large disc bulge can be much more problematic than a small disc rupture. Sequestered discs are usually the worst because the extruded fragment of nucleus pulposus remains in the intervertebral foramen or spinal canal and can continue to compress the spinal nerve or spinal cord, respectively.

Mechanism of Pathologic Disc Conditions

Annular bulges and ruptures occur as a result of forces that stress and weaken the annular fibers. These can be **microtraumas** or **macrotraumas**. Microtraumas are small physical stresses. One example is the everyday compression that results from supporting the weight of the trunk, neck, head, and upper extremities. Another example is holding a prolonged posture that stresses the disc, such as maintaining a bent-over posture of the trunk to work down in front of the body. Postures in which the trunk is held forward in flexion are especially prevalent and contribute to disc problems. The po-

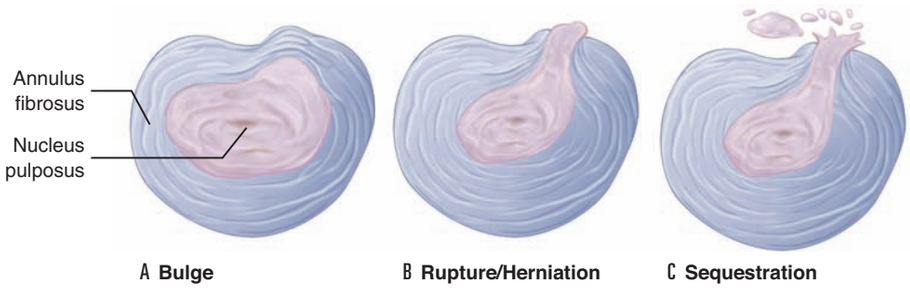


Figure 2-29 Three forms of pathologic disc conditions. **(A)** Disc bulge. The annulus fibrosus weakens and bulges, but the nucleus pulposus remains within the annular fibers. **(B)** Disc rupture/herniation. The annular fibers have ruptured/herniated, and the nucleus pulposus material extrudes through the annulus but remains attached to the core of nuclear material. **(C)** Sequestered disc. A sequestered disc is a disc rupture/herniation in which a piece of the nucleus pulposus that has extruded through the annulus separates from the core of inner nuclear material. (Reproduced with permission from Muscolino JE. *Advanced Treatment Techniques for the Manual Therapist: Neck*. Baltimore, MD: Lippincott Williams & Wilkins; 2013.)

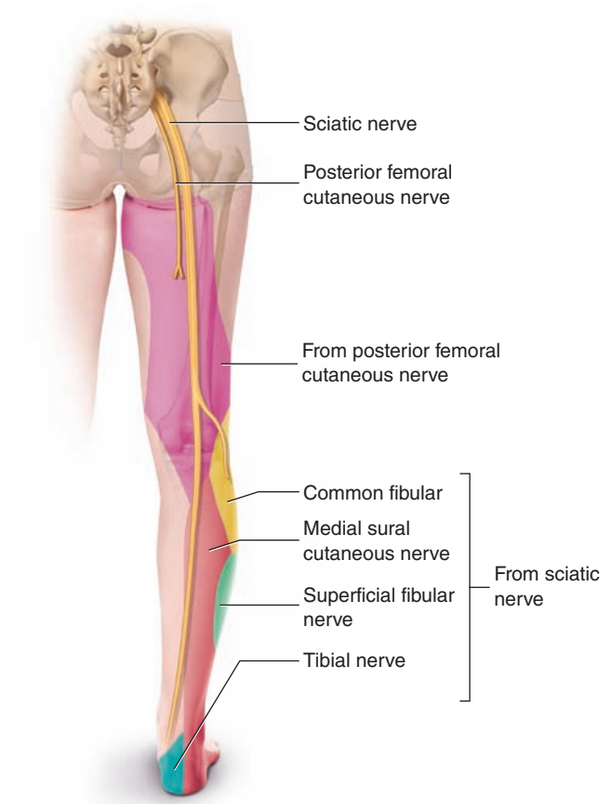


Figure 2-30 The sciatic nerve provides sensory innervation into the lower extremity.

Figure 2-31 Nucleus pressure against the posterior annular fibers. Flexion of a vertebral joint creates a compression force at the anterior disc that pushes the nucleus pulposus posteriorly against taut posterior annular fibers. Repeated flexion postures can lead to excessive wear against the posterior annulus. (Adapted with permission from Muscolino JE. *Advanced Treatment Techniques for the Manual Therapist: Neck*. Baltimore, MD: Lippincott Williams & Wilkins; 2013.)

sition of flexion pulls taut the posterior annular fibers while at the same time pushing the nucleus pulposus posteriorly against these taut fibers. Continual flexion postures cause eventual weakness and fraying of the posterior fibers of the annulus (Fig. 2-31). These microtraumas accrue over time and gradually weaken the annulus until the nucleus either causes it to bulge or ruptures through it.

Macrotraumas such as severe traumatic sports injuries or falls may also cause discs to bulge or rupture. Often, a weakened disc from repeated postural microtraumas coupled with a somewhat traumatic event will cause the integrity of the fibers of the annulus fibrosus to fail, resulting in a bulge or rupture of its fibers.

Most often, the annulus weakens and/or ruptures posterolaterally regardless of whether the pathologic disc occurs as a result of microtrauma or macrotrauma. The prevalence of flexion postures contributes to this problem because flexion causes the nucleus pulposus to push backward against the posterior annular fibers, gradually weakening them. However, because the posterior longitudinal ligament of the spine reinforces the annulus midline posteriorly (posteromedially), the effect of the physical stress of constant and recurring flexion postures usually manifests posterolaterally. Because the intervertebral foramina are located posterolaterally, most disc conditions result in compression of a spinal nerve in the intervertebral foramen on one side. If a disc were to bulge or rupture in the midline posteriorly, it would compress directly on the spinal cord in the central spinal canal.

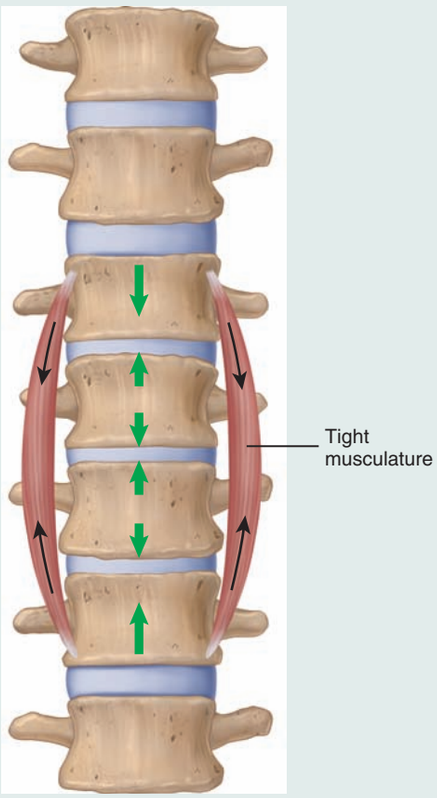
The symptoms of a lumbar disc bulge or rupture may refer to the lower extremity, occur in the low back alone, or both. Because most disc bulges/ruptures occur posterolaterally, compressing the spinal nerve in the intervertebral foramen, the result is unilateral sensory or motor symptoms that occur in the lower extremity on that side. Occasionally, a disc bulge or rupture may occur in the midline posteriorly. In such an instance, depending on which neurons of the cord are compressed, symptoms may be felt in the lower extremity unilaterally or bilaterally (Fig. 2-32).

Symptoms may also be local if the small nerves in the disc area are compressed. When this occurs, pain occurs directly from this compression. Low back muscles may then protectively splint to stop movement that may further harm the

2.4 THERAPIST TIP

Tight Muscles and Disc Problems

Perhaps the least appreciated but common microtrauma that contributes to spinal disc problems is tight muscles. When spinal muscles become tight, their attachments pull toward the center, drawing the vertebrae crossed by these muscles toward each other. This results in an increased compression on the discs (see accompanying figure). Clients commonly have chronically tight low back muscles, which can contribute significantly to an eventual pathologic disc.



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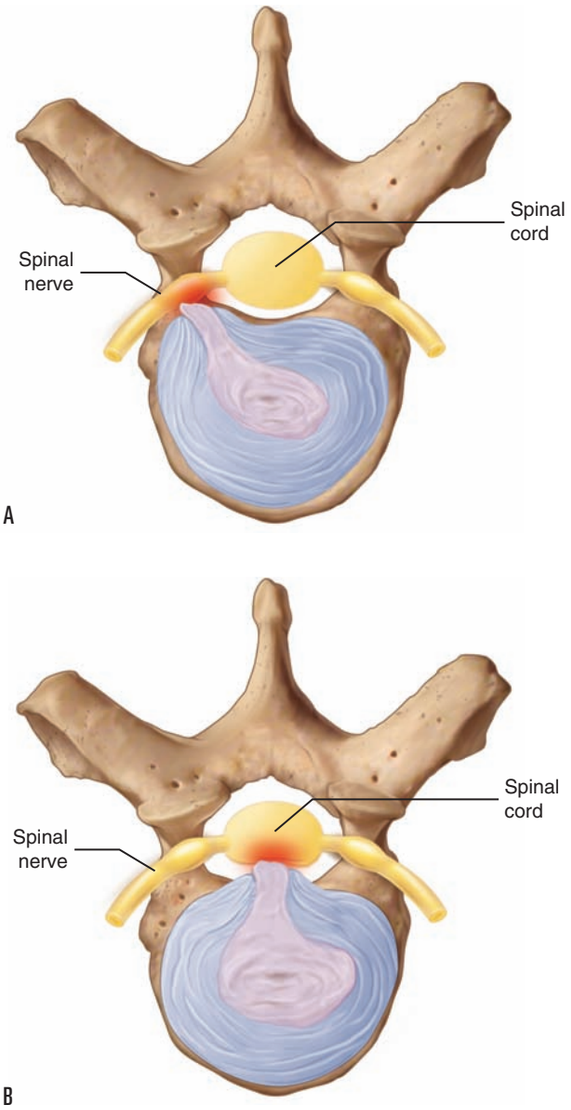


Figure 2-32 Disc herniation. **(A)** A posterolateral disc herniation presses on the spinal nerve as it passes through the intervertebral foramen. **(B)** A midline posterior herniation compresses the spinal cord in the spinal canal. (Reproduced with permission from Muscolino JE. *Advanced Treatment Techniques for the Manual Therapist: Neck*. Baltimore, MD: Lippincott Williams & Wilkins; 2013.)

BOX 2.5

Central Canal Stenosis

Another space-occupying condition that can cause referral into the lower extremity is **central canal stenosis**. As its name implies, the space within the central spinal canal where the spinal cord is located becomes stenotic (narrowed/closed). This condition usually occurs in the elderly as ligaments hypertrophy (thicken) and bone spurs from DJD develop, pushing into the central spinal canal and compressing the spinal cord. This condition usually continues to progress and can become very debilitating. Extension of the lumbar spine usually increases lower extremity pain/symptoms because extension narrows the diameter of the spinal canal; flexion usually relieves lower extremity pain/referral because flexion increases the diameter of the lumbar spinal canal.

disc. Unfortunately, the severity of the muscle spasming itself may cause pain, and the muscle splinting can increase the compression force on the discs, further aggravating the condition by increasing the size of the bulge or rupture. Note that when a disc condition is acute, inflammation can contribute to the neural compression, with the swelling itself producing symptoms. As the episode passes from the acute stage to the subacute and chronic stages, symptoms often decrease because swelling has diminished.

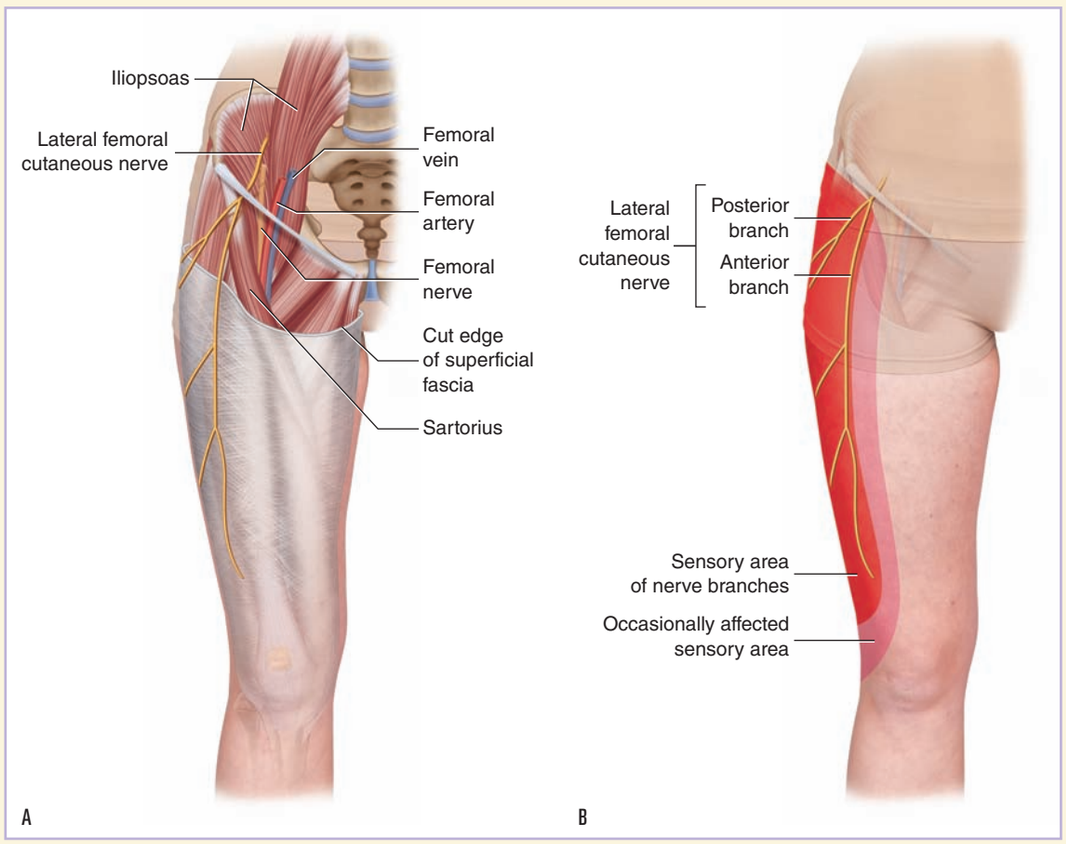
Although local low back pain or spasming may occur, lumbar pathologic discs often show no local symptoms at all and present with only lower extremity referral symptoms. Pain, tingling, numbness, or weaknesses that are referred in the lower extremity should be a red flag that a disc problem may exist. However, this does not mean that all lower extremity referral symptoms come from a lumbar disc bulge or rupture. Other conditions such as piriformis syndrome (see next section) or meralgia paresthetica (Box 2.6) may also

BOX 2.6

Meralgia Paresthetica

The sciatic nerve is not the only nerve that can be compressed and cause referral into the lower extremity. The lateral femoral cutaneous nerve, which exits from the pelvis into the anterolateral thigh between the pelvic bone and the inguinal ligament, can also be compressed. When this occurs, the resulting condition is called **meralgia paresthetica**.

Because the lateral femoral cutaneous nerve is solely sensory, this condition results only in altered sensation, usually tingling or pain, into the anterolateral thigh (see accompanying figures). The most common causes of meralgia paresthetica are wearing low-rise jeans or a belt too tightly, being overweight with increased weight carried in the anterior abdominal region, and tightness of various hip flexor muscles, including the iliopsoas, sartorius, and/or tensor fasciae latae. With the increased rates of obesity in the United States, the incidence of meralgia paresthetica will likely increase in the future.



Meralgia paresthetica. **(A)** Meralgia paresthetica is caused by compression of the lateral femoral cutaneous nerve. **(B)** Area of sensory symptoms in the anterolateral thigh.

refer symptoms to the lower extremity. Although a reasonably accurate assessment can be made with the appropriate orthopedic assessment procedures (see Chapter 3), if a lumbar disc condition is suspected, the client should be referred immediately to a physician for a definitive diagnosis.

2.5 TREATMENT CONSIDERATIONS IN BRIEF

Pathologic Disc

Massage can be extremely beneficial to help decrease muscular spasms associated with a pathologic disc. Stretching is also helpful, but caution is advised if the client's trunk is extended or laterally flexed to the side of a pathologic disc. It is contraindicated to place the client in any position that causes or increases referral of symptoms into the lower extremity. Icing may help decrease some of the inflammation that accompanies a pathologic disc. For more details, see Chapter 3.

PIRIFORMIS SYNDROME

Piriformis syndrome is a condition in which the piriformis muscle compresses the sciatic nerve, causing symptoms of sciatica into the lower extremity (see previous section).

Description of Piriformis Syndrome

Normally, the sciatic nerve exits from the internal pelvis into the buttocks between the piriformis muscle and the superior gemellus muscle. However, approximately 10% to 20% of the time, part or all of the sciatic nerve either exits through the piriformis, or above it, between the piriformis and the gluteus medius (Fig. 2-33). Regardless of the relationship of the piriformis and sciatic nerve, if the muscle is tight enough, the nerve may be compressed, resulting in sciatica. This condition is often said to cause "pseudo sciatica"; however, this term does not make sense and shows a bias toward bony or disc impingement on the nerve. If compression of the sciatic nerve occurs and symptoms of sciatica are experienced, then regardless of the cause, it can be correctly termed sciatica.

Mechanism and Causes of Piriformis Syndrome

The piriformis muscle can become tight due to overuse. The piriformis acts as a lateral rotator of the thigh at the hip joint as well as a contralateral rotator of the pelvis at the hip joint (contralateral rotation of the pelvis occurs when planting and cutting [planting the foot and pivoting to change directions] during sports). The piriformis is also functionally important toward stabilizing the sacrum at the sacroiliac joint and stabilizing the hip joint.

2.6 TREATMENT CONSIDERATIONS IN BRIEF

Piriformis Syndrome

Because piriformis syndrome is a condition of muscular origin, it makes sense that it will respond well to soft tissue manipulation. Moist heat, massage, and stretching are all very beneficial. For more details, see Chapter 3.

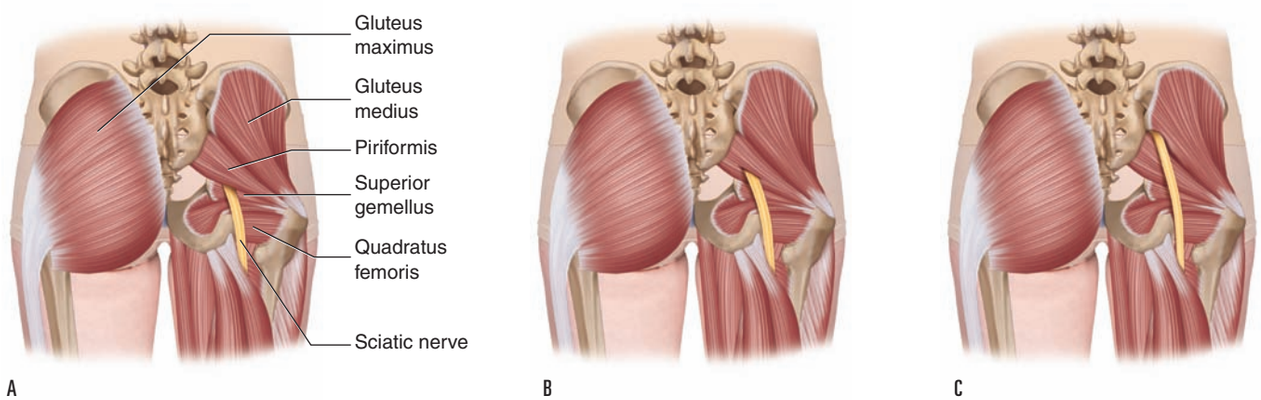


Figure 2-33 Relationship of the sciatic nerve to the piriformis. **(A)** The usual relationship is for the sciatic nerve to emerge from the internal pelvis into the gluteal region between the piriformis and the superior gemellus. **(B, C)** Sometimes, part or all of the sciatic nerve exits through the piriformis or above the piriformis, between it and the gluteus medius.

DEGENERATIVE JOINT DISEASE

Degenerative joint disease (DJD) is a disease in which the joint surfaces of bones deteriorate. DJD is a normal response to the physical forces that are placed on the joints as you age. However, if the degree of progression is either more than is typical for the client's age or impairs function, it is considered a pathologic disease process. DJD is also known as **osteoarthritis (OA)**; when this condition occurs in the spine, it may also be called **spondylosis**. Most older middle-aged and elderly clients who state that they have "arthritis" have DJD.

2.5 THERAPIST TIP

The Terms *Degenerative Joint Disease* and *Osteoarthritis*

Arthritis literally means "joint inflammation" ("arthr" means joint; "itis" means inflammation). The term *degenerative joint disease* is gradually replacing the term *osteoarthritis* because inflammation is rarely involved in this condition, making the suffix "itis" inappropriate. Inflammation is usually present only when the condition has progressed and is more severe.

Description of Degenerative Joint Disease

The beginning stage of DJD involves breakdown of the articular cartilage that covers the joint surfaces of the two bones of the joint. As the condition progresses, calcium is deposited within the bone that underlies the articular cartilage (subchondral bone). In the later stage of DJD, calcium deposition begins to occur on the outer surfaces of the bones of the joints, and **bone spurs** (also known as **osteophytes**) protrude at the joint margins (Fig. 2-34). DJD can affect both the disc and facet joints of the spine. These bone spurs are easily seen on radiography, making radiographic analysis (x-ray) the best and easiest means to assess DJD.

Because DJD occurs as a result of accumulated physical stresses, radiographs of most middle-aged people will reveal at least some lumbar spinal DJD. Most of the time, the presence of DJD is an incidental finding, and the condition causes no symptoms. However, if the condition progresses to the point of functional impairment, a decrease of motion can occur at the joint where the DJD is present. This is a result of the presence of bone spurs that block full range of motion of the affected joint. Furthermore, if the calcium deposition creates bone spurs that are large enough to encroach on the spinal nerve in the intervertebral foramen or on the spinal cord within the spinal canal, the calcium deposition can cause compression of nervous tissue, resulting in referral into the lower extremities. When the calcium deposits of DJD cause compression of a spinal nerve or the spinal cord, DJD is similar in mechanism to a bulging or ruptured disc in that it is a space-occupying lesion that compresses nerve tissue.

Mechanism and Causes of Degenerative Joint Disease

The mechanism of DJD is a simple wear and tear response of the cartilage and bony surfaces of a joint resulting from the physical stress that is placed on the bones at the joint. If the degree of physical stress is more than the joint can absorb, the articular cartilage begins to degrade, and in so doing, more stress is transmitted to the subchondral bone. Excessive stress on the subchondral bone then causes calcium to be deposited along the margins of the bones of the joint, a physical process known as **Wolff's law**. Wolff's law states that calcium is deposited in response to the physical stress that is placed on a bone. This process is meant to strengthen bone by increasing its calcium mass; however, if the stresses placed on the bone are excessive, ex-

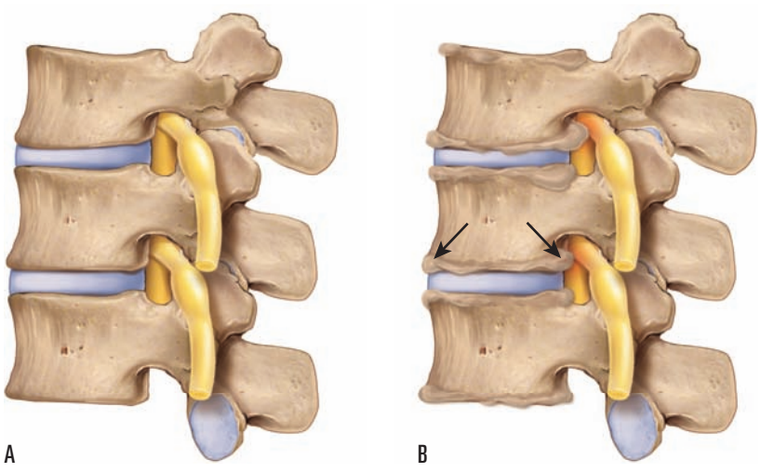


Figure 2-34 DJD and bone spur formation. **(A)** Healthy spine. **(B)** Bone spurs along the joint margins. (Reproduced with permission from Muscolino JE. *Advanced Treatment Techniques for the Manual Therapist: Neck*. Baltimore, MD: Lippincott Williams & Wilkins; 2013.)

cessive calcium deposition occurs, resulting in bone spurs, as described previously. Movement and weight bearing are everyday microtrauma stresses that affect joints. Tight musculature, especially chronically tight postural muscles, can also be viewed as repeated microtrauma that adds compression forces to the joints that the tight muscles cross. Certainly, more powerful macrotraumas, such as falls and other traumatic injuries, can also greatly contribute to the progression of DJD.

2.6 THERAPIST TIP

Is Degenerative Joint Disease the Cause of the Client's Pain?

DJD must be fairly marked in its progression to actually compress spinal nerves or the spinal cord and cause symptoms. However, physicians often wrongly blame DJD for a client's pain when the pain is actually caused by tight muscles and other taut or irritated periarticular soft tissues located around the joint. Tight muscles are probably the most common aggravated periarticular soft tissue. When the physician orders and views radiographs (x-rays) of the client's low back, if any DJD is present, as is usually the case in most middle-aged and older adults, it is often blamed for the client's pain. But the muscles and other soft tissues are not visible on radiographs, and these tissues often are the real culprit. When this is the case, the manual therapist can provide an important service by relaxing, softening, and loosening the muscles and other soft tissues of the low back and pelvis. Further, because tight muscles and other soft tissues can add to the physical stress on joints, improving the health of the soft tissues can also decrease the progression of the client's DJD and possibly even help to keep it from causing nerve compression.

2.7 TREATMENT CONSIDERATIONS IN BRIEF

Degenerative Joint Disease

Massage can be extremely beneficial in helping to decrease the muscular spasms that often coexist with and increase the physical stresses that foster DJD. Stretching is also helpful for the taut soft tissues that likely exist. However, if the DJD is advanced to the point that it is causing neural compression, then the client should not be laterally flexed to the side of a bone spur or placed in any position that causes or increases referral of symptoms into the lower extremity. If neural compression and/or nerve irritation is present, icing may help to decrease some of the accompanying inflammation. For more details, see Chapter 3.

SCOLIOSIS

Scoliosis is, by definition, a lateral flexion deformity of the spine. Although the spine should have curves in the sagittal plane, in the frontal plane, it should ideally be straight. Any curve that is present in the frontal plane is a scoliosis.

Description of Scoliosis

The shape of a scoliotic curve is usually described as being a C-curve, an S-curve, or a double S-curve (Fig. 2-35). Further, like most conditions, a scoliosis can be mild in presentation or more severe. The severity of a scoliotic curve can be measured by drawing a line along the superior surface of the body of the uppermost vertebra of the scoliotic curve and another line along the inferior surface of the body of the lowermost vertebra of the scoliotic curve, and then measuring the angle that is created by their intersection (Fig. 2-36). It is also important to note that although scoliosis is defined by its frontal plane lateral flexion, transverse plane rotation is also present. In the lumbar spine, facet joint lateral flexion couples with contralateral rotation; this results in the spinous processes rotating into the concavity of the curve (see Fig. 2-35). This coupled rotation can have repercussions during the postural assessment exam because if the therapist uses visualization of the spinous processes to assess the degree of scoliosis, when the spinous processes rotate into the concavity, the degree of scoliosis appears to be less (Fig. 2-37). For this reason, when possible, it is best to view an x-ray to determine the degree of a client's scoliosis.

Mechanism and Causes of Scoliosis

The curvature of the lumbar spine is largely determined by the posture of the pelvis. The 5th lumbar vertebra sits on the base of the sacrum of the pelvis; therefore, if the sacrum

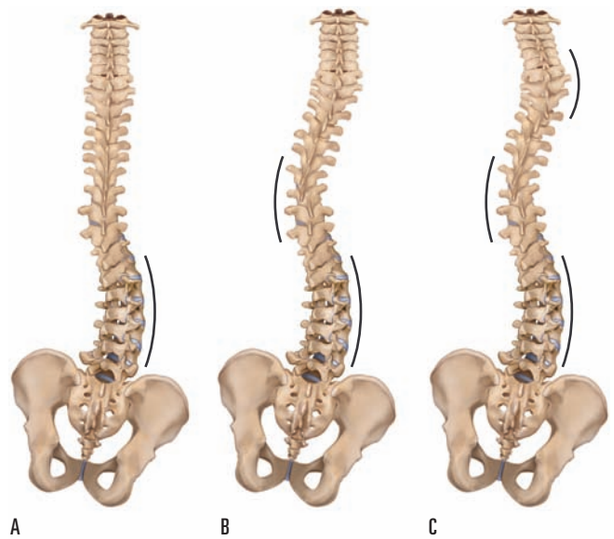


Figure 2-35 Scoliotic curves. **(A)** C-curve. **(B)** S-curve. **(C)** Double S-curve.

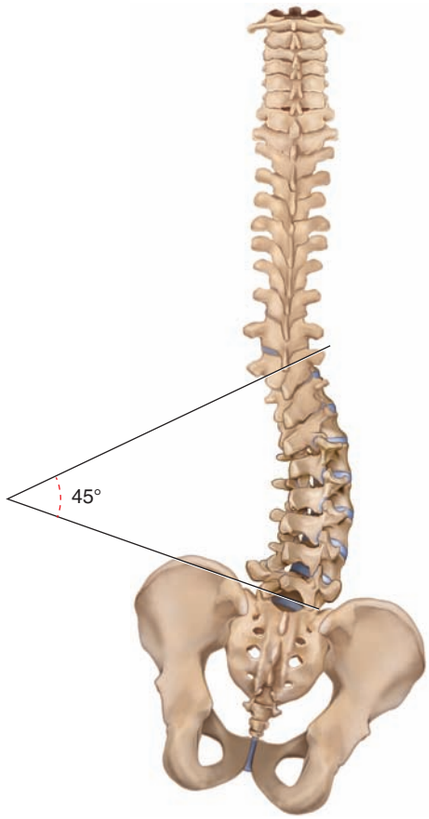


Figure 2-36 A scoliotic curve can be measured by drawing a line along the superior margin of the body of the upper vertebra of the curve, another line along the inferior margin of the body of the lower vertebra of the curve, and then measuring the angle formed by their intersection.

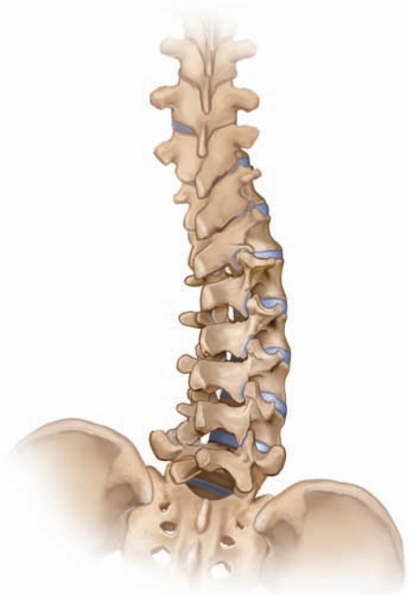


Figure 2-37 In the lumbar spine, the spinous processes rotate into the concavity of a scoliosis, making the scoliosis less evident during visual examination.

changes its posture, the lumbar spine must accordingly change its posture. If the sacrum tilts in the frontal plane, then like the Leaning Tower of Pisa, the spine will lean to that side. This would result in the head being unlevel, and therefore the eyes and inner ears being unlevel, throwing off our sense of balance and making it difficult to see. To compensate, the spine bends in the frontal plane to bring the head back to level, thereby creating a scoliotic curve (Fig. 2-38). A number of factors can unlevel the sacrum. A tight quadratus lumborum could pull the pelvis and sacrum up on one side; similarly, tight hip abductors (e.g., gluteus medius) could pull the pelvis and sacrum down on one side. An anatomically short femur or tibia can create a lower extremity that is shorter on one side than the other, dropping the pelvis/sacrum on that side. Excessive pronation of the foot, resulting in a dropped arch, can also result in a shorter lower extremity on that side.

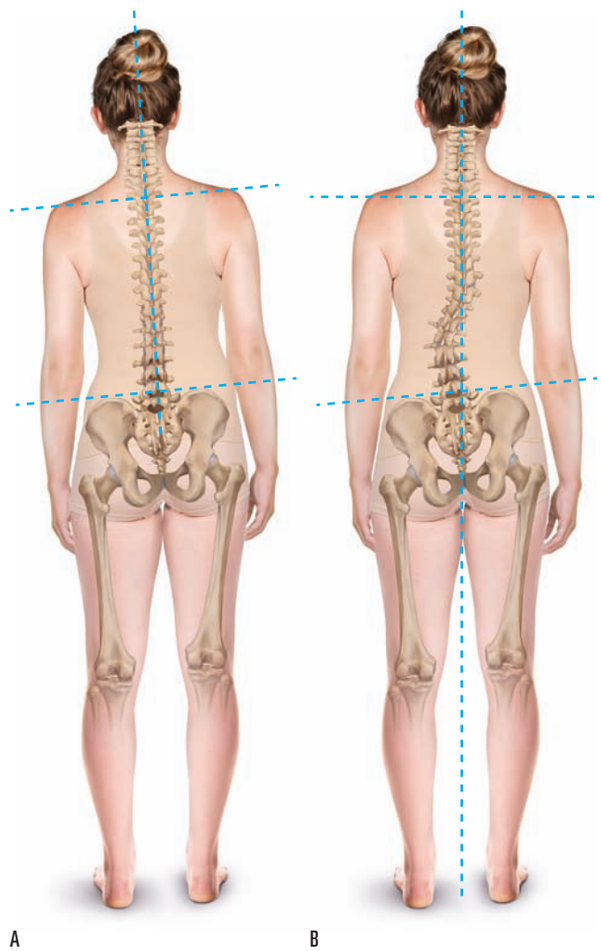


Figure 2-38 Scoliosis as a compensation for unlevel sacral posture. **(A)** If the sacrum is unlevel in the frontal plane, the spine would slant to the side where the sacrum is low. This results in the head, and therefore the eyes and inner ears being unlevel. **(B)** As a compensation, a scoliotic curve of the spine brings the eyes and inner ears to be level.

Sometimes, the cause of a scoliotic curve is unknown. Idiopathic scoliosis, which usually occurs in adolescent girls and is often quite severe, has no known cause (idiopathic literally means "of unknown origin").

Regardless of the cause, it is important to treat scoliosis because it can continue to progress throughout a person's life, often increasing between one-half and one degree per year.

2.7 THERAPIST TIP

Scoliosis and Tight Muscles

Muscles are usually tight on both sides of a scoliotic curve. The muscles are lengthened and tight on the convex side (often termed "**locked long**") and shortened and tight on the concave side (often termed "**locked short**"). Although it is important to work both sides, it is especially important to work the shortened concave-side muscles with massage and stretching and to work the lengthened convex-side muscles with massage and strengthening exercise.

2.8 TREATMENT CONSIDERATIONS IN BRIEF

Scoliosis

Moist heat, massage, and stretching can be very beneficial for clients with scoliosis. When stretching, it is important that the client focus the stretch so that the lateral flexion component of the stretch is opposite to the concavity of the curve. In other words, if the concavity is oriented to the right, the stretch should be into left lateral flexion. For more details, see Chapter 3.

ANTERIOR PELVIC TILT AND HYPERLORDOTIC LUMBAR SPINE

The healthy lumbar spine should have a lordotic curve (also known as a lordosis). However, it is very common for the degree of lumbar extension, described as lordosis, to be excessive.

Description of Anterior Pelvic Tilt and Hyperlordotic Lumbar Spine

When the lumbar lordosis is excessive, it is described as a **hyperlordotic lumbar spine** (**hyperlordosis**), and commonly called a **swayback**. The problem with this condition is that it places excessive pressure on the facet joints of the spine and the posterior margins of the discs (Fig. 2-39). This can lead to irritation, injury, and pain. This can be easily felt by simply tilting the pelvis anteriorly and arching the back; this usually causes immediate low back discomfort or pain. More seriously, because lumbar extension/lordosis decreases the size of the intervertebral foramina as well as the central spinal canal, this condition can predispose the client to nerve compression. Increased compression to the facets and posterior disc margins can also further the progression of DJD (see section on Degenerative Joint Disease earlier in this chapter), causing increased bone spurs, which can also further aggravate nerve compression.

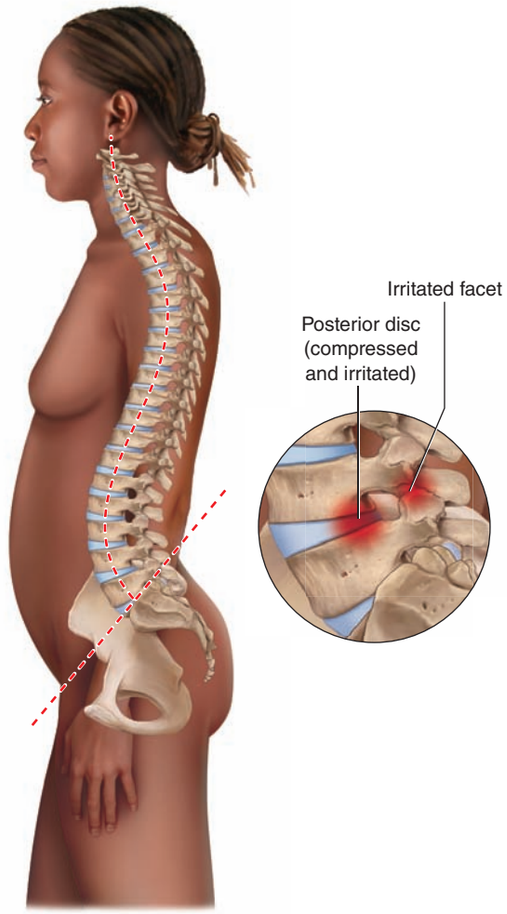


Figure 2-39 A hyperlordotic lumbar spine places greater weight-bearing force on the facet joints and the posterior discs.

2.8 THERAPIST TIP

The Terms *Lordosis* and *Lordotic*

Because many people use the terms *lordosis* and *lordotic* to denote an excessive and unhealthy lordotic curve/lordosis, it is important to understand whether a person is referencing to a normal lordosis or an excessive lordosis when using these terms. An excessive lordosis is most accurately termed a hyperlordosis/hyperlordotic curve.

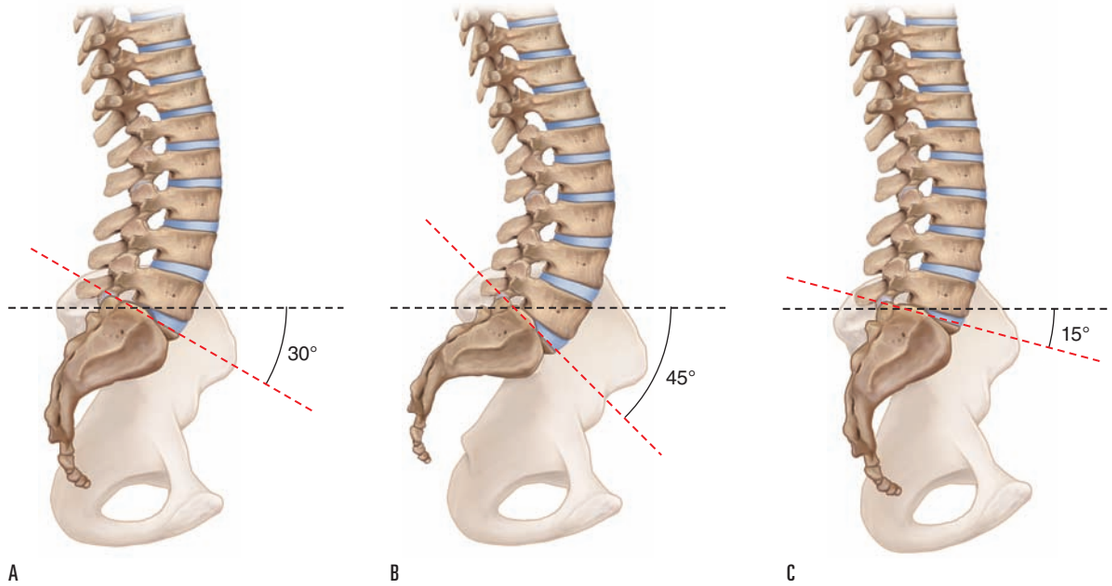


Figure 2-40 Sacral base angle and lumbar lordosis. The sacral base angle is formed by measuring the intersection of a line drawn along the base of the sacrum and a horizontal line. **(A)** Normal sacral base angle of 30 degrees and a healthy lumbar lordosis. **(B)** An increased sacral base angle results in increased lumbar lordosis. **(C)** A decreased sacral base angle results in decreased lumbar lordosis.

Mechanism and Causes of Anterior Pelvic Tilt and Lumbar Hyperlordosis

The cause of a hyperlordotic lumbar spine is almost always an increased anterior tilt posture of the pelvis. The lumbar spine sits on the sacrum of the pelvis. If the sacrum tilts anteriorly within the sagittal plane, the lumbar spine must compensate by increasing its extension/lordosis to maintain the head upright so that you can see forward and have your ears level for balance. The degree of a person's pelvic tilt is measured by the **sacral base angle**. The sacral base angle is formed by drawing two lines, one horizontal and another along the base of the sacrum, and then measuring the angle formed between them. A sacral base angle of approximately 30 degrees is usually stated as being ideal. A greater sacral base angle results in a hyperlordotic lumbar spine, and a lesser sacral base angle results in a hypolordotic lumbar spine (Fig. 2-40). Therefore, the root of a lumbar hyperlordosis usually rests in the sagittal plane posture of the pelvis. Treatment must be directed toward remedying the increased anterior pelvic tilt.

Muscles of Pelvic Tilt

The tilt posture of the pelvis in the sagittal plane is determined by the forces placed on it. Most commonly, these forces result from muscle pulls. Within the sagittal plane, the hip flexor muscle group and the low back extensor muscle group do anterior tilt of the pelvis, and the hip extensor muscle group (gluteals and hamstrings) and the anterior abdominal wall muscle group do posterior tilt of the pelvis (see Chapter 1 for more details on the musculature of pelvic tilt). It is very common for hip flexor and low back extensor anterior tilters to be excessively tight and for the anterior abdominal wall and gluteal region posterior tilters to be excessively weak. It is often stated that the anterior tilters are facilitated and the posterior tilters are inhibited in tone. When viewing this pattern from the side, you see that a cross ("X") is formed, with one arm of the cross representing the facilitated anterior tilters and the other arm representing the inhibited posterior tilters. Because of this crossed pat-

2.9 TREATMENT CONSIDERATIONS IN BRIEF

Anterior Pelvic Tilt and Hyperlordotic Lumbar Spine

Soft tissue work for clients with increased anterior tilt of the pelvis and the compensatory hyperlordosis of the lumbar spine that follows is extremely valuable. The primary goal for the manual therapist is to loosen anterior tilters of the pelvis (hip flexors and low back extensors) and to have the client strengthen posterior tilters of the pelvis (anterior abdominal wall and gluteal muscles in the buttocks). For more details, see Chapter 3.

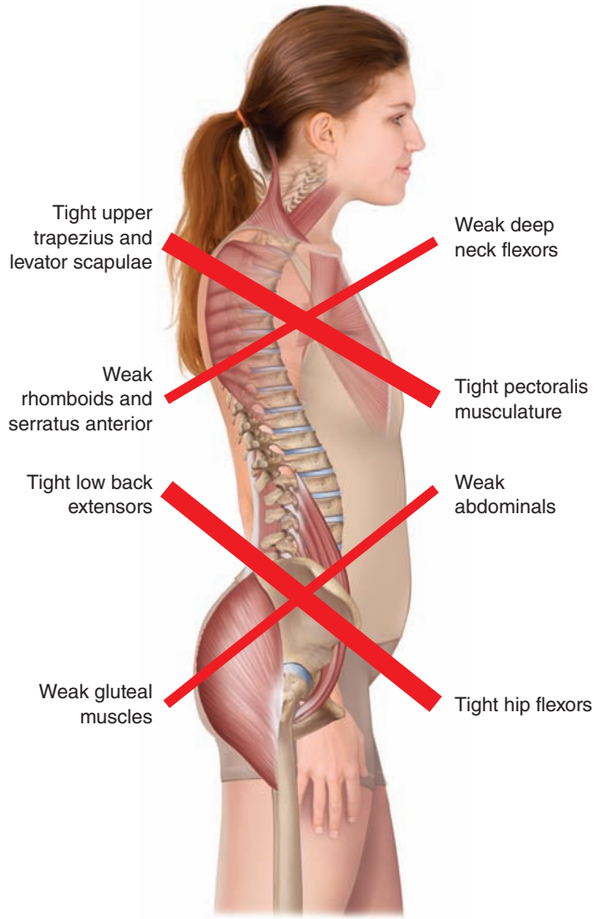


Figure 2-41 Lower crossed syndrome.

tern, this condition is often described as the **lower crossed syndrome** (there is an upper crossed syndrome in the upper body as well) (Fig. 2-41).

Excessive anterior tilt can also be caused or increased by excessive weight carried anteriorly in the abdominal region. Further, if an excessive pelvic anterior tilt and lumbar hyperlordotic posture become chronic, ligament laxity/tautness will occur as well as fascial adhesions that resist normalization of this condition.

2.9 THERAPIST TIP

Pelvic Posture and Swayback

A hyperlordotic lumbar spine (swayback) is a postural syndrome that is ultimately related to an increased anterior tilt of the pelvis. For this reason, assessment of the sagittal plane anterior and posterior tilt muscle groups of the pelvis is essential in all clients who present with this condition.

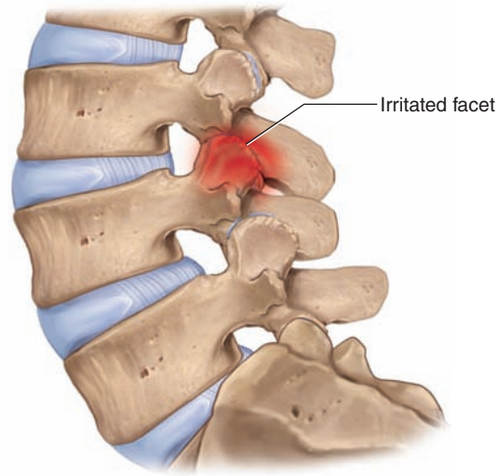


Figure 2-42 Facet syndrome is caused by excessive physical stress on the facets.

FACET SYNDROME

As described in its name, facet syndrome is a condition of the facet joints of the spine.

Description of Facet Syndrome

Disc joints and facet joints each have their own functional role within the spine. As a rule, disc joints bear weight and facet joints guide motion. When excessive compression force is placed upon the lumbar facet joints, they can become irritated and painful. The resulting condition is termed **facet syndrome**.

Mechanism and Causes of Facet Syndrome

Facet syndrome can occur for a number of reasons. Common among them is excessive time spent in a posture of extension or motions into extension because extension transfers weight bearing from the anteriorly located discs to the posteriorly located facets (Fig. 2-42). Having an increased anterior pelvic tilt with a compensatory hyperlordotic lumbar spine (see previous section) is a major predisposing factor

2.10 THERAPIST TIP

Assessing Facet Syndrome

Facet syndrome is extremely simple to assess. Have the client move his or her lumbar spine into extension. If there is no pain, he or she does not have facet syndrome. If he or she has facet syndrome, this motion will reproduce low back pain (of course, it should be kept in mind that pain resulting from lumbar extension can also be caused by other conditions).

for this condition. Facet syndrome is extremely easy to assess because lumbar extension range of motion will reproduce the client's pain. Although facet syndrome is an irritation/inflammation of the articular surfaces of the lumbar facets, it is usually accompanied by spasming/hypertonicity of the paraspinal musculature. This muscle tightening can then add to the client's pain.

2.10 TREATMENT CONSIDERATIONS IN BRIEF

Facet Syndrome

Moist heat, massage, and stretching can all be very beneficial for clients with facet syndrome. The primary focus for the manual therapist is to counsel the client on decreasing the causes of the condition, usually excessive postures and motions into extension. Also important is to relax the concomitant muscle spasming that usually accompanies the facet joint irritation. For more details, see Chapter 3.

SPONDYLOLISTHESIS

Spondylolisthesis is a condition of the spine in which one vertebra slips on the vertebra below it. This condition usually occurs in the lumbar spine. *Note*: Spondylolisthesis should not be confused with spondylosis; spondylosis is another term for DJD (OA) of the spine.

Description of Spondylolisthesis

As stated, spondylolisthesis is a slippage of one vertebra on the vertebra below it. This slippage is usually anterior in direction and can therefore also be described as an **anterolisthesis** (Fig. 2-43). Lateral slippage (laterolisthesis) and posterior slippage (posterolisthesis) may occur but are far less common. Indeed, when the term *spondylolisthesis* is used, unless otherwise specified, it is usually assumed that an anterolisthesis is present.

Figure 2-44 A spondylolisthesis can be measured by dividing the superior margin of the body of the vertebra below into four equal sections and then subdividing each of these four sections by 10. The spondylolisthesis seen here is grade 1.2.

Mechanism and Causes of Spondylolisthesis

Most often, a spondylolisthesis is due to a break in the pars interarticularis of the vertebra (see Fig. 1-3), allowing the body of the superior vertebra to slip anteriorly along the body of the vertebra below. This break could be congenital or it could be acquired via trauma. The degree of spondylolisthesis can be measured by how far the superior vertebral body slips on the inferior vertebral body. Generally, the grading is done on a scale of 1 to 4; the grading may be further defined by subdividing each grade by 10 (Fig. 2-44).

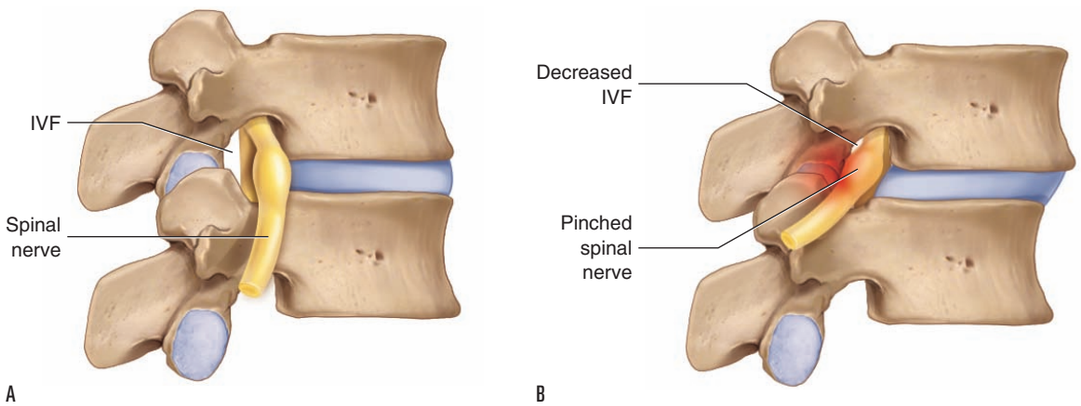


Figure 2-43 Spondylolisthesis. **(A)** Healthy posture of L4 on L5. **(B)** Spondylolisthesis of L4 on L5. Right lateral views.

The symptomology of spondylolisthesis can be due to tension on the soft tissues that are tractioned by the slippage. It is also common for spasming of the adjacent musculature to occur in an attempt to splint the region; this muscle spasming can increase the client's pain. More seriously, if the vertebra slips sufficiently, the intervertebral foramina can be narrowed, resulting in compression of the exiting spinal nerve(s) at that level (see Fig. 2-43). When this occurs, referral into the lower extremity can occur. Spondylolistheses (plural of spondylolisthesis) tend to be very unstable. The posture of the vertebra may be healthy for an extended period of time, and then a particular motion or posture of the body may cause it to slip, thereby exacerbating the condition.

2.11 THERAPIST TIP

Spondylolisthesis

If a client has a lumbar spondylolisthesis (anterolisthesis), it can be helpful to place a roll under his or her lumbosacral region to help support the spine when he or she is lying prone. This prevents the spondylolisthesis vertebra from slipping anteriorly. In fact, placing a roll under the lumbosacral region can be beneficial for most all clients lying prone, not just those with spondylolisthesis or other low back problems.

2.11 TREATMENT CONSIDERATIONS IN BRIEF

Spondylolisthesis

Soft tissue work into the tight musculature that usually accompanies a spondylolisthesis can be very helpful. But ultimately, the best treatment for this condition is for the client to strengthen his or her core musculature to stabilize the region. For more details, see Chapter 3 and Chapter 12 (available online at thePoint.lww.com).

CHAPTER SUMMARY

Clinical manual therapy requires a knowledge base of normal anatomy and physiology of the human body. It also requires an understanding of the altered physiology, in other words, pathophysiology, that occurs with each musculoskeletal condition with which the client might present. In addition, it requires the ability to accurately assess these conditions. Chapter 1 reviewed the anatomy and physiology of the low back and pelvis, this chapter presented the most common musculoskeletal conditions of the low back and pelvis that a manual therapist will encounter in practice, and Chapter 3 discusses the assessment of these conditions. Competent clinical orthopedic practice rests on a clear understanding of these three cornerstones of knowledge and understanding: anatomy and physiology, pathophysiology, and assessment.

CHAPTER 3

Assessment and Treatment Strategy

CHAPTER OUTLINE

Introduction 74
Health History 74
Physical Assessment Examination 75
Treatment Strategy 90
Assessment and Treatment of Specific Conditions 91
Chapter Summary 94

OBJECTIVES

After completing this chapter, the student should be able to:

1. Explain why it is important to understand the mechanics of a healthy low back and pelvis and the pathomechanics of a pathologic condition when doing assessment.
2. Explain the difference between a diagnosis and an assessment.
3. Describe the purpose and role of the health history in assessment.
4. Describe the principle by which assessment tests work.
5. Explain what is meant by a positive result and a negative result for an assessment procedure.
6. Describe the difference between a sign and a symptom and give an example of each.
7. Describe the purpose of postural assessment and give an example of a postural deviation.
8. Perform and describe the roles in assessment of active range of motion (ROM), passive ROM, and manual resistance.
9. Describe the role of palpation in assessment.
10. Describe joint play assessment.
11. List the special assessment tests for a lumbar disc and the special assessment tests for the sacroiliac joint.
12. Describe and perform each of the special assessment tests presented in this chapter.
13. Describe the mechanism underlying each of the special assessment tests presented in this chapter.
14. State and be able to perform the assessment procedures for each of the conditions presented in this chapter.
15. Define each key term in this chapter.

KEY TERMS

active range of motion (active ROM)
active straight leg raise (active SLR)
ASIS compression test
assessment
assessment procedure
assessment test
bad posture
cough test
diagnosis
end-feel
full SLR test
Gaenslen's test
good posture
health history
iliac crest compression test
intrathecal pressure
joint play assessment
manual resistance (MR) assessment
motion palpation
Nachlas' test
negative test result
palpation
passive range of motion
passive straight leg raise (passive SLR)
physical assessment examination
piriformis stretch test
positive test result
postural assessment
posture
PSIS compression test
range of motion (ROM) assessment
report of findings
sacroiliac joint medley of tests
sign
slump test
special assessment tests
symptom
thigh thrust test
treatment plan
treatment strategy
Valsalva maneuver/test
Yeoman's test

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INTRODUCTION

To provide proper therapeutic treatment to a client's low back and pelvis, it is necessary to perform an accurate assessment of the client's condition and gain a clear understanding of the mechanism behind the pathologic condition. This chapter covers the assessment procedures that should be performed before treatment can be decided upon. The review of anatomy and physiology in Chapter 1 and the discussion of pathologic conditions in Chapter 2 form the foundation for this chapter. Therefore, both chapters should be read before starting this chapter.

Assessment usually consists of two main parts:

- **Health history**. When meeting with a new client, or when seeing a repeat client who has a new condition, begin the assessment by obtaining the health history, which is a written and/or verbal history of the client's health. The intention behind the health history and the examination is to gain a thorough understanding of the client's specific condition(s) so that proper treatment can be applied.
- **Physical assessment examination**. This examination usually involves several components:
  - Postural assessment
  - Range of motion (ROM) assessment
  - Palpation assessment
  - Joint play/mobilization assessment
  - Special assessment

These assessments are recommended to all therapists when assessing a client's condition, although they need not be done in the order shown here. *Note*: Before performing joint play/mobilization, be sure to check with local and state licensure/certification regulations for compliance with scope of practice.

After gathering all the information from the health history and physical assessment examination, the assessment is made, and the appropriate treatment strategy is determined. The next step is to complete a **report of findings**, in which the client is informed of what was found in the assessment and what treatment is recommended. With the client's consent, treatment can begin.

3.1 THERAPIST TIP

Diagnosis and Assessment

Although it is a fine line, there is a distinction between diagnosis and assessment. With a **diagnosis**, a physician definitively determines the condition that a patient has and informs the patient of the findings. **Assessment**, on the other hand, is carried out not for the purpose of informing the client of the condition but to help the therapist determine which treatment techniques are safe and effective to perform and which treatment techniques to avoid. Of course, if there is any doubt as to the safety and efficacy of treatment, referral of the client to a physician for a definitive diagnosis is strongly recommended.

HEALTH HISTORY

Think of the health history as a conversation between the therapist and the client. The health history may begin by having the client complete a written questionnaire about the present condition as well as his or her past health history. The conversation continues with a verbal history in which the client answers additional questions regarding his or her health.

The health history is usually done before the physical assessment exam because it helps reveal the problem regions that need to be assessed during the physical exam. If the history is thorough enough, the signs and symptoms discussed during the conversation will often indicate the client's condition or conditions, allowing the examination to be more focused and efficient. During the history, there is no one required order to the questions asked, however, it may be helpful to the individual therapist to develop and follow a consistent order when conducting health histories. Such consistency not only helps keep thoughts organized but also increases efficiency when returning later to review a client's information. However, it is also important to be flexible with questions. The client's answer to one question will often determine the follow-up questions. Although it is impossible to state every question that should be asked during a health history, some of the key questions are listed in Box 3.1.

BOX 3.1

Health History Questions

1. What are your height and weight?
2. Are you right-hand or left-hand dominant?
3. What is the problem area?
4. When did symptoms first begin?
5. What precipitated the problem? Was there a trauma or did it begin insidiously?
6. Have you had this problem before?
7. Have you had any other problems with your low back or pelvis before?
8. If there is pain, is the quality of the pain sharp or dull?
9. On a scale of 0 to 10, where 0 is no pain at all and 10 is the worst pain you can imagine having, what number would you assign your pain level?
10. Are there shooting pains or other referral of symptoms down into the lower extremities (buttock, thigh, leg, or foot)?
11. Are the symptoms (pain or other symptoms) related to the time of day? If so, is it worse first thing in the morning or at the end of the day?
12. Are the symptoms related to certain postures or activities?
13. Does the pain increase with prolonged standing or prolonged sitting?
14. Are there other precipitating factors that cause the symptoms?
15. What increases the symptoms? What decreases the symptoms?
16. Overall, since the problem began, is the severity getting better, worse, or staying the same?
17. Have you had this condition treated yet? If so, by whom? What was their assessment/diagnosis? What was their treatment? What was your progress with this treatment? May I have written permission to contact the therapist/physician about your treatment?
18. What do you think is the cause of your condition?

In addition to questions that are specific to the client's presenting complaint, it is also valuable to gather information about the client's general health.

1. Do you have any other health conditions, musculoskeletal, or otherwise?
2. What is your history of broken bones/fractures, car accidents, and other physical traumas?
3. Are you on any medications? Do you take them regularly, or are they only for a temporary condition?
4. How much do you exercise?
5. What postures (at work and home) do you assume most often?
6. In what position(s) do you sleep?
7. Do you smoke? Do you drink alcohol? If so, how much, and how often?
8. What is your stress level?
9. Is there a family history of musculoskeletal problems?
10. Is there anything else that you would like to add that I have not asked about?

PHYSICAL ASSESSMENT EXAMINATION

As discussed in Chapter 2, what is most important when assessing and treating the low back and pelvis is to understand the mechanisms of lumbar, pelvic, and hip joint function. When a person has a pathologic condition, the mechanics of these regions are altered. This alteration usually results in a tissue or tissues whose integrity has been compromised. Knowing this can help guide the therapist's assessment of the client's condition. The essence of an **assessment test** (**assessment procedure**) is to further stress the compromised tissue with the intention of reproducing or creating signs or symptoms of the problem. If the therapist understands the mechanics that underlie pathologic conditions, it is possible to use critical thinking to reason out not only which tissues are stressed but also how to further stress those tissues. In this manner, almost every assessment test can be thought through logically and understood without rote memorization.

3.2 THERAPIST TIP

Signs and Symptoms

When an assessment test yields signs and/or symptoms, it is important to distinguish between the two. A **symptom**, by definition, is subjective in nature and can be experienced only by the client. For example, pain is a symptom. No one can tell the client that he or she does or does not have pain; only the client can report having pain and what level it is. In contrast, a **sign**, by definition, is objective—that is, the therapist can verify and report it. The degree of the sign can also often be measured. For example, when a client is performing joint range of motion (ROM), the therapist can objectively determine whether the client's motion is decreased and even measure it in degrees. The client history and exam should include both the objective signs found and the subjective symptoms that the client reports.

If an assessment test reproduces signs and/or symptoms of the condition, it is a **positive test result**, and the therapist knows that tissue is unhealthy. For example, if Nachlas' test (a special assessment test for the sacroiliac joint [SIJ]) results in pain in the SIJ, the test result is considered to be positive for a pathologic condition of the SIJ. If no signs or symptoms are reproduced, then it is a **negative test result**. A negative test result may indicate one of two things: either the client does not have the condition or the degree of the condition is mild and below the threshold to yield a positive finding. Every assessment procedure has a certain sensitivity to detecting the presence of the condition for which it is designed.

It is important to note that if the test creates signs and symptoms, but not the signs or symptoms of the condition for which the test is designed, then the assessment test result is still considered to be negative. In the case of Nachlas' test, knee pain that occurs during the procedure does not indicate injury to the SIJ, even though knee pain is a symptom reported by the client. Knee pain during the assessment test is likely due to the knee joint compression that occurs during the test and is not relevant to assessment of the SIJ.

When assessing the client's low back and pelvis, it is important to perform all pertinent assessment procedures. Even if one test result is positive and indicates that the client has a certain condition, the other assessment procedures should still be done because a client may have more than one condition.

The following are the components of a thorough physical assessment examination of the client's low back and pelvis:

1. Postural assessment
2. ROM and manual resistance (MR)
3. Palpation
4. Joint play/mobilization
5. Special assessment tests

The next section addresses each physical assessment in more detail.

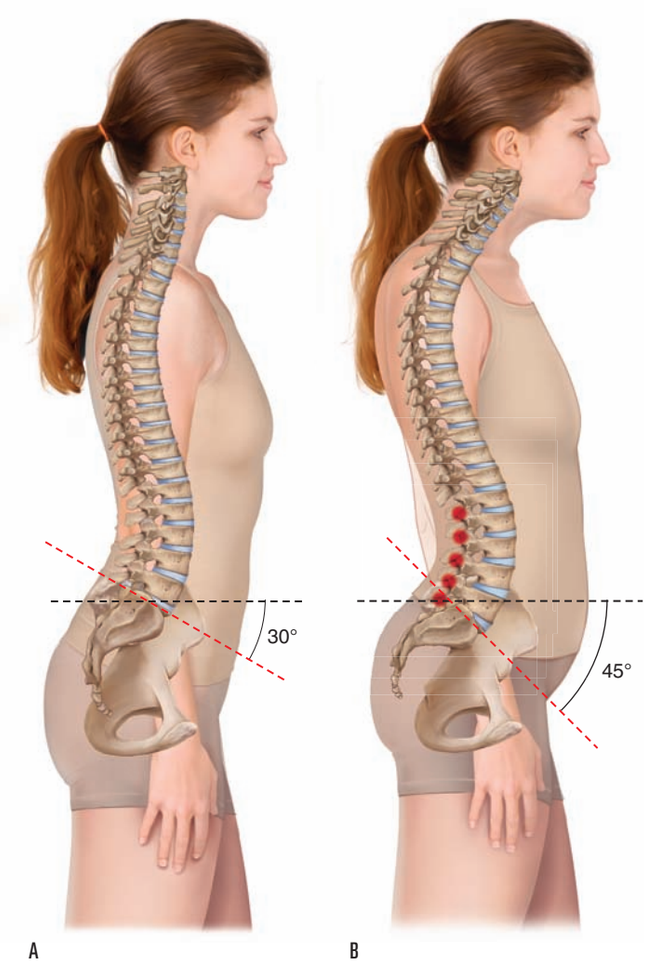


Figure 3-1 Good and bad low back posture. **(A)** The client's posture is considered good because the sagittal plane tilt of the pelvis and the lumbar lordotic curve are within normal limits. **(B)** The posture could be called bad because the pelvis is excessively anteriorly tilted and the lumbar lordosis is increased. This places increased weight-bearing stress on the facet joints of the lumbar spine and creates shortening of some muscles and lengthening of others.

Postural Assessment

Postural assessment is usually the first physical assessment procedure that is performed. The term **posture** means position; therefore, in postural assessment, the client's static position is evaluated. Before evaluating a client's posture, it is important to understand what is meant by good posture and poor posture. **Good posture** is defined as a balanced posture that is symmetrical and does not place excessive stress on the tissues of the body (Fig. 3-1A). **Bad posture**, in contrast, is asymmetrical and/or imbalanced and places excessive physical stress on the tissues of the body (Fig. 3-1B). When evaluating a client's posture, look for asymmetries and deviations, as these will indicate increased stress forces on the tissues of the body. When a client has a postural deviation, it is important to determine why it is occurring and what tissues are stressed as a result of the posture.

A client may assume an infinite number of postures during the day. Unfortunately, therapists usually perform only standing postural assessment, often using a plumb line. (A plumb line is a string that has a weight attached to it ["plumb" comes from the Latin word for *lead*] so that the string hangs perfectly vertical, allowing the therapist to check for symmetry relative to the vertical line.) Although standing posture may be important to evaluate, it is not the only posture that should be assessed. In fact, depending on the client's profession, hobbies, and activities, it may not even be pertinent to the client's condition. It is important to assess all postures that the client assumes. For clients with low back and pelvis problems, sitting posture is especially important, such as when sitting at a desk or driving a car. For this reason, it is important to inquire

about what types of seated postures the client engages in and how many hours of the day the client spends in each. Given that most people spend 6 to 8 hours a day sleeping, it is also important to find out what position or posture the client usually sleeps in (this is usually done during the health history).

A few examples will illustrate the critical reasoning skills involved in a client's postural assessment in which a postural deviation is found.

- **Example 1:** A common postural deviation occurs when one iliac crest is higher than the other. This is often caused by increased tension of some of the muscles in the region, for example, hip joint abductors (e.g., gluteus medius) on the low iliac crest side and/or elevators of the pelvis (e.g., quadratus lumborum) on the high iliac crest side. The therapist would need to know to specifically evaluate for these tight muscles during the palpation and ROM assessments. If these muscles are tight, treatment might target these muscles and include home advice for the client regarding stretching and/or hydrotherapy. A high iliac crest may also result in a compensatory scoliosis; therefore, the therapist should know to assess for this condition. Other recommendations to help alleviate unlevel iliac crest height might include avoiding certain postures or modifying postures, and activities that cause or perpetuate this condition.
- **Example 2:** If the client's posture shows that the pelvis is excessively anteriorly tilted, it would be reasonable to suspect that the hip flexor muscles and/or low back extensor muscles are tight because these are muscles that pull the pelvis into anterior tilt. The therapist would then focus on assessing these muscles; if they are revealed to be tight, the therapist would direct treatment and home advice toward their care.

Given the focus and scope of this book, only postural deviations of the low back and pelvis have been mentioned. However, postural deviations often involve the entire body, with a problem in one area causing secondary consequences and compensations in other regions. For example, a dropped arch in the foot may lead to an iliac crest height that is low on one side with a compensatory scoliosis that may reach to the cervical spine. For this reason, postural assessment should always address the client's entire body from the feet to the head. After the therapist has taken a look at a full body assessment of the client's posture, then appropriate treatment can be performed.

Range of Motion and Manual Resistance Assessment

Range of motion (ROM) assessment is usually performed directly after postural assessment. There are two types:

- **Active ROM**
- **Passive ROM**

Active ROM is performed by asking the client to actively contract the muscles of the low back, pelvis, and hip joint to move through the cardinal plane ROMs (Fig. 3-2A). Passive

Figure 3-2 Active and passive ROM. **(A)** The client is actively moving the right thigh into flexion. **(B)** The client's right thigh is being passively moved into flexion by the therapist.

ROM is performed by passively moving the client through these cardinal plane ROMs (Fig. 3-2B). *Note*: Oblique plane ROMs can and often should also be assessed. The six cardinal plane ROMs for the lumbar spine and hip joint are as follows:

- Sagittal plane: flexion and extension
- Frontal plane: right lateral flexion and left lateral flexion for the lumbar spine; abduction and adduction for the hip joint
- Transverse plane: right rotation and left rotation for the lumbar spine; lateral rotation and medial rotation for the hip joint

When performing ROM assessment, two important factors should be considered:

- The presence of pain at any point during the ROM
- The actual amount of the ROM measured in degrees

The discussion that follows illustrates how critical reasoning is used when performing ROM assessment.

If pain is present with active ROM, the assessment is considered positive. The presence of pain indicates that three possible circumstances exist:

1. The "mover" muscles that are contracting to create the motion are strained, causing the client to experience pain when contracting them.

2. The ligaments/joint capsules of the joint(s) being moved are sprained, causing the client to feel pain when these structures are moved.
3. The (antagonist) muscles on the other side of the joint from the direction of motion performed are strained and/or spasmed, causing the client to feel pain when these muscles are stretched.

3.3 THERAPIST TIP

Unhealthy Joint Surfaces

In addition to strain of mover musculature, sprain of ligaments and joint capsules, and strain/spasm of antagonist musculature, a fourth condition can cause pain with active or passive ROM: an unhealthy joint surface at the joint being moved. For example, if there is degenerative joint disease (DJD) (osteoarthritis) of a joint surface, then motion at that joint may result in compression of that joint surface with resultant pain.

Therefore, pain with active ROM can result from a strain of the mover musculature, a sprain of the joint(s), and/or a strain or spasm of the antagonist muscles. One or any combination of these conditions can exist. Conversely, if no pain is present, then the client does not have any of these conditions.

If the client has pain with one or more active ROMs, then it is necessary to repeat these motions passively. If the client also experiences pain with passive motion, then the client has either a sprain, because ligaments and joint capsules are still being moved, or a strain or spasm of the antagonist muscles, because they are still being stretched. During passive ROM, mover muscles are no longer contracting, so pain with passive ROM does not indicate a strain of the mover musculature of that motion.

The process of elimination leads to the conclusion that if active motion causes pain and passive motion does not, then the client must have a strain of the mover musculature. If the client experiences pain with both active and passive motion, then the client at least has a sprain and/or a problem with the antagonist muscles.

To now determine whether the client also has a strain of the mover musculature, a third assessment procedure must be performed: **manual resistance (MR) assessment**. The client attempts to perform the ROM that caused pain while the therapist provides resistance to prevent the client from actually moving the joint(s). This causes the client's mover musculature to contract isometrically (Fig. 3-3). Both the therapist and the client should exert a moderately strong force that is enough to challenge the mover muscles and determine if they are healthy. Pain with resisted motion indicates a strain of the mover musculature because the mover muscles are working in this scenario. Given that the ligaments/joint capsules and the antagonist muscles are not moved with an isometric contraction, pain with resisted motion does not indicate a ligament sprain or strain/spasm of the antagonist muscles.

Figure 3-3 The therapist is providing MR to the client's thigh as the client attempts to move the thigh into flexion.

The challenge is discerning pain that occurs from a sprain (resulting from ligaments/joint capsules being moved) from pain that occurs from a strain/spasm of the antagonist muscles (resulting from the antagonist muscles being moved/stretched). Each of these conditions can cause pain with both active and passive ROM, and neither condition causes pain with resisted motion. The best way to differentiate between them is to ask the client where the pain is occurring, if pain is present. Pain that is located in soft tissue on the other side of the joint where the antagonist muscles are located indicates strain/spasm of the antagonist muscles. If the pain is located deep in the joint, it indicates a sprain of the ligamentous and joint capsule tissues of the joint. Another approach is to have the client isometrically contract the antagonist muscles against your resistance. This will stress the antagonist muscles but not the ligaments/joint capsules (because the joint did not move).

In addition to the presence of pain, the other factor to consider when performing ROM assessment is the actual ROM—that is, the joint's degree of movement in each direction. In effect, ROM assessment is an assessment of the ability of the tissues to stretch when being moved. The amount of movement that the client exhibits can be compared to the standard ideal ROMs that are listed in Chapter 1. This comparison helps determine if the client's motion is normal and healthy or if the joints are hypermobile or hypomobile. If the client's ROM is greater than the standard ROM, the joint is hypermobile, usually indicating lax ligaments and joint capsules. If the client's ROM is less than standard, the joint is hypomobile, indicating overly contracting muscles (muscle spasming), excessively taut ligaments/joint capsule, fibrous adhesions within the soft tissues, and/or joint dysfunction.

3.4 THERAPIST TIP

Evaluating Range of Motion

It is important to keep an open mind when comparing a client's ROMs with the standard ROMs presented in the table in Chapter 1. The standard values are an average across the population, so a difference of the client's motion by a few degrees is not necessarily important. In addition, younger clients usually have greater ROMs than do older clients.

In addition to evaluating the absolute measure (in degrees) of motion at the joint, it is also important to compare the motion of the client's lumbar spine to the right with its motion to the left. This should be done for lateral flexions in the frontal plane and rotations in the transverse plane. If motion to one side is decreased, then assuming that the other side is healthy, the therapist knows what normal ROM for the client is and can determine what the treatment goal is when working to restore motion to the hypomobile side. Similarly, motions of the thighs at the right and left hip joints can be compared; this can be done for all three cardinal plane motions. *Note*: The client's other side is not always healthy; this can usually be determined by evaluating the client's history.

Active ROM, passive ROM, and MR are extremely valuable techniques when assessing a client's low back and pelvis. These procedures assess strains, sprains, and spasmed muscles, all of which are common musculoskeletal conditions that lead clients to consult manual and movement therapists.

Figure 3-4 Standing palpation of the iliac crests. **(A)** The iliac crest on the right side is higher than the iliac crest on the left side, indicating an asymmetry of the pelvis in the frontal plane. **(B)** Palpation of the lumbar spinous processes.

Palpation

Perhaps no assessment procedure is more important to the manual therapist and integral to musculoskeletal assessment than palpation. **Palpation** involves the physical assessment of the client's bony and soft tissues through touch, usually with the pads of the fingers.

Palpation of bony landmarks can be important for determining the underlying skeletal structure that could otherwise be seen only on radiographic imaging (x-ray). In the low back/pelvis region, it is important to feel for the iliac crests, anterior superior iliac spines (ASISs), and posterior superior iliac spines (PSISs) to assess the posture of the client's pelvis (Fig. 3-4A). It is also important to palpate the spinous processes of the lumbar spine to assess the degree of the client's lordosis (Fig. 3-4B). Through chronic postures and physical traumas, the normal lordotic curve may be increased, decreased, or even, at times, reversed. Because a lordotic curve is concave posteriorly, it can be challenging to palpate all five lumbar spinous processes. If all the spinous processes of the lumbar spine can be easily felt, this indicates a decreased lumbar curve.

After assessing the bony posture of the lumbar spine and pelvis, soft tissue palpation can be performed. Once a soft tissue has been located, the quality of the tissue is assessed. If the tissue being assessed is a muscle, the qualities to look for are whether it is hard or soft. Tight (overly contracted) muscles feel hard; loose, relaxed muscles are soft. If the muscle is hard, is the entire muscle hard? Or are there perhaps small knots of tightness or taut bands within the muscle? Small knots may be myofascial trigger points, whereas taut bands are usually a result of bundles of muscle fibers that are either overly contracted and bunched up or overly stretched and pulled taut. Taut bands are usually strummable, similar to twanging a guitar string.

Whether muscle tissue, other soft tissues, or bone is being assessed, palpation can provide a great deal of useful information. Palpating for swelling and increased temperature may reveal tissue inflammation; palpating for thickness and increased density within a soft tissue may reveal the buildup of fibrous adhesions within the tissues. It is also important to palpate the

end-feel of a joint's ROM. The **end-feel** of the low back's joint motion occurs at the end of passive ROM and should have a small, healthy bounce or spring to it. An end-feel that is hard and unyielding, as if a concrete wall has been reached, usually indicates DJD (arthritic) bone spurs, or perhaps markedly spasmed muscles or adhesions in the soft tissues.

The health history and ROM examination, which are usually done before palpation, often give the therapist some advance guidance about where to focus attention when palpating. Palpation often serves to confirm or eliminate the clinical impression that the therapist began to form during the earlier phases of the assessment procedures.

Joint Play/Mobilization Assessment

Joint play assessment is essentially a focused and specific form of passive ROM assessment. Instead of moving or stretching the entire low back or pelvis in a certain direction, the motion is directed at one segmental joint level. This is important because it helps narrow down the area where the problem exists. For example, if the therapist passively moves the client's entire low back into right lateral flexion and the motion is decreased, the only information that procedure reveals is that decreased motion, or hypomobility, exists in that direction. It does not reveal whether every joint of the lumbar spine is hypomobile in that direction, or whether the hypomobility is present at just one or a few of the segmental joint levels. Joint play assessment makes it possible to discern this.

In fact, it is entirely possible for there to be a hypomobile joint level within the lumbar spine in right lateral flexion passive ROM while the entire lumbar spine has a normal degree of motion. If one segmental level is hypomobile and produces insufficient movement, another adjacent joint level might become hypermobile to compensate. This makes it possible for the gross ROM of the entire lumbar spine to be normal while lumbar hypomobilities and hypermobilities are present. Therefore, the only way to determine the health of a specific segmental joint level is to employ joint play assessment.

Joint play assessment is performed similarly to the joint mobilization technique (for a detailed explanation of how to perform joint mobilization, see Chapter 10). The therapist pins (fixes/stabilizes) one lumbar vertebra, usually by positioning the client such that body weight creates the stabilization force or by pinning the vertebra with a thumb pad, while moving the vertebra immediately above (along with the rest of the spine above that point) relative to the lower vertebra (Fig. 3-5). This procedure isolates the motion to the segmental joint level that is located between these two vertebrae, thereby allowing the therapist to assess specifically that joint level's end-feel motion. By performing joint play assessment at each level of the low back, it is possible to assess specific hypomobilities and hypermobilities throughout the lumbar spine and target treatment to those levels. This technique can also be used to assess the segmental motion of one SIJ of the pelvis relative to the other. This is accomplished in a similar manner: one pelvic bone is stabilized and the other pelvic bone or sacrum is moved relative to it (see Chapter 10). Joint play assessment is also known as **motion palpation**.

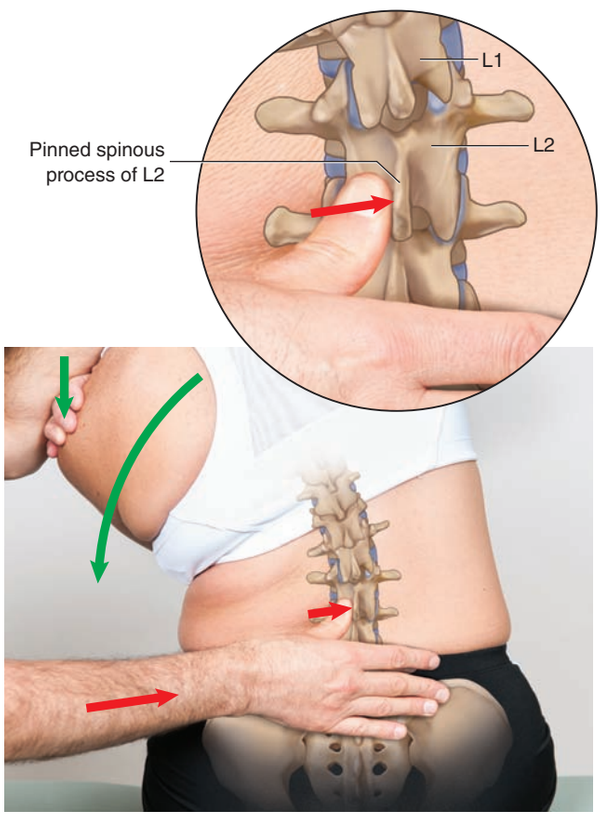


Figure 3-5 Left lateral flexion joint play assessment of the lumbar spine. The pelvis and lower lumbar spine are stabilized by body weight and the therapist's thumb while the rest of the body, and therefore the vertebra immediately superior, is moved into left lateral flexion relative to it. Joint play allows for specific assessment of the soft tissues of only that segmental level of the spine. In this figure, the L1-L2 joint is being assessed.

3.5 THERAPIST TIP

Joint Play Assessment

Joint play assessment, like joint mobilization technique, is performed by bringing the client's joint to the end of its passive ROM and then gently applying a small, even, steady force for less than a second that further stretches the joint in the desired direction. It cannot be emphasized too strongly that the force applied to assess joint play must be gentle, even, steady, and for less than 1 second. Joint play assessment and joint mobilization technique should never involve any type of fast or sudden thrust. A fast thrust within the realm of joint play is defined as a chiropractic or osteopathic adjustment and cannot be legally performed by most manual therapists.

Before employing joint play/mobilization, be certain it is within the scope of practice of your profession. If there is any doubt about the ethical or legal application of joint play/mobilization within your profession, please check with your local, state, or provincial licensing body; your certifying body; and/or your professional organization.

Special Assessment Tests

Although most sprains, strains, and spasms can be assessed accurately with the procedures already introduced, several conditions of the lumbar spine and pelvis require knowledge of specific procedures known as **special assessment tests**. Each special assessment test yields valuable information about the possible existence of a specific condition or type of condition. The most frequently used special assessment tests for the low back and pelvis are listed in Box 3.2.

BOX 3.2

Special Assessment Tests

- Space-occupying lesion tests
  - Straight leg raise (SLR)
  - Cough test
  - Valsalva maneuver
  - Slump test
  - Piriformis stretch test
- Test for injured tissue
  - Passive SLR
  - Active SLR
  - MR
  - Nachlas' test
  - Yeoman's test
  - SIJ medley

Common uses of the special tests in Box 3.2 include the following:

- SLR tests, cough test, Valsalva maneuver, slump test, and piriformis stretch test are used to assess a space-occupying lesion of the lumbar spine and buttocks. The lesions these tests are most often used to assess are pathologic (bulging or herniated) lumbar discs and lumbar spine bone spurs from DJD (osteoarthritis), but these four tests may also be used to assess swelling or a tumor in the lumbar spine, or piriformis syndrome in the buttock.
- Piriformis stretch test is used to assess a tight piriformis that might be compressing the sciatic nerve in the buttock.
- Active and passive SLR tests can also be used to assess for sacroiliac and lumbar strains and sprains as well as sacroiliitis.
- Nachlas', Yeoman's, and SIJ medley tests are used to assess injury to the SIJ.

Space-Occupying Lesion Tests

Following are assessment tests that are used to assess conditions caused by space-occupying lesions.

Straight Leg Raise Tests

Both **active SLR** and **passive SLR** tests are designed to pull long and taut the sciatic nerve on the posterior side of the body. If a space-occupying lesion in the lumbar spine such as a pathologic disc or bone spur is encroaching into the central canal or the intervertebral foramen, a nerve root that contributes to the sciatic nerve will be pulled against the encroachment and compressed. This compression can refer symptoms into the lower extremity.

Active SLR test is performed by asking the client to actively raise the thigh into flexion at the hip joint while keeping the knee joint fully extended. Passive SLR test is performed in a similar manner except that the client is passive as the therapist moves the client's lower extremity. In each case, it is important that the knee joint remains fully extended (hence the name *straight* leg raise) (Fig. 3-6A). If flexion is introduced into the knee joint, tension on the sciatic nerve will be lost, and it will be slackened and no longer compressed against the disc or bone spur. Compression of the sciatic nerve against the space-occupying lesion can cause sensory symptoms such as pain or tingling to refer down into the lower extremity (buttock, thigh, leg, and/or foot). SLR test for a space-occupying condition is considered to be positive if lower extremity referral symptoms are experienced. It is important to note that local low back pain alone does not constitute a positive SLR test for a space-occupying lesion (local pain can occur with SLR if the client has a sacroiliac or lumbar sprain or strain, or sacroiliitis); lower extremity referral symptoms must occur for a space-occupying lesion to be assessed. It should be pointed out that compression of the sciatic nerve due to a tight piriformis (piriformis syndrome) may also yield a positive with SLR. SLR test to assess a space-occupying condition can be performed actively or

3.6 THERAPIST TIP

Straight Leg Raise

SLR assessment requires the client to be able to flex the thigh at the hip joint while maintaining the knee joint in full extension. This posture is extremely difficult for a client who has very tight hamstrings because hip joint flexion and knee joint extension stretch these muscles. If the client's hamstrings are so tight that the client cannot bring the thigh very far up into flexion, then the SLR test is not valid because sufficient tension could not be placed on the sciatic nerve to assess a space-occupying lesion. It is also important to make sure the client does not compensate for tight hamstrings by posteriorly tilting the pelvis; doing so would diminish the tension on the sciatic nerve, thereby lessening the efficacy of the SLR assessment test.

Figure 3-6 SLR tests. **(A)** Active SLR. **(B)** Passive SLR. **(C)** Full SLR test. SLR tests tense and pull long the sciatic nerve. If a space-occupying lesion is present, such as a bulging disc as seen here, compression of the associated nerve can occur, causing sensory symptoms into the lower extremity on that side.

passively because the same mechanism of pulling long the sciatic nerve occurs in either case; however, it is most often performed passively.

SLR test can be augmented to become **full SLR test** by adding in adduction of the thigh at the hip joint, dorsiflexion of the foot at the ankle joint, and eversion of the foot at the subtalar joint (Fig. 3-6B). The idea behind full SLR test is that these added joint postures increase the tension on the sciatic nerve. Thigh adduction stretches the entire sciatic nerve around the ischial tuberosity as it crosses the hip joint. Dorsiflexion and eversion of the foot increase the stretch tension on the tibial nerve portion of the sciatic nerve because the tibial nerve enters the foot by crossing the ankle joint region posteriorly and medially.

Cough Test and Valsalva Maneuver

Both the **cough test** and **Valsalva maneuver/test** are designed to increase **intrathecal pressure**, or pressure on the spinal nerves in the intervertebral foraminal spaces. The mechanics are the same as with the SLR tests: Increased compression on these neural structures can cause referral of symptoms into the lower extremity in a client with a space-occupying

Figure 3-7 Cough test and Valsalva maneuver. **(A)** In the cough test, the client is asked to cough forcefully. **(B)** In the Valsalva maneuver, the client is asked to inhale a deep breath and hold it and then bear down as if moving the bowels. ([**A**] Reproduced with permission from Muscolino JE. *Advanced Treatment Techniques for the Manual Therapist: Neck*. Baltimore, MD: Lippincott Williams & Wilkins; 2013. [**B**] Adapted with permission from Muscolino JE. *Advanced Treatment Techniques for the Manual Therapist: Neck*. Baltimore, MD: Lippincott Williams & Wilkins; 2013.)

lesion. However, whereas the SLR test only increases compression to the lumbar spine (and perhaps the lower thoracic spine), the cough test and Valsalva maneuver cause increased compression to be experienced throughout the entire spine. Therefore, they will also assess a pathologic disc and advanced DJD of the cervical spine (if the client experiences referral symptoms into the upper extremity).

The cough test is performed by asking the seated (or standing) client to forcefully cough (Fig. 3-7A). The Valsalva maneuver is performed by asking the seated client to take in a deep breath, hold it in, and bear down as if moving the bowels (Fig. 3-7B). To preserve client modesty and avoid possible embarrassment, avoid eye contact with the client when the Valsalva maneuver is being performed. In each case, as with the SLR tests, local pain in the low back is not a positive sign. A positive sign is the presence of referral symptoms into the lower extremity (or upper extremity for a cervical spine space-occupying lesion).

3.7 THERAPIST TIP

Valsalva Maneuver

Performing the Valsalva maneuver also results in a temporary decrease in blood flow to the heart and brain, possibly causing the client to become dizzy and perhaps even faint. Completing the maneuver also causes a sudden increase in blood flow to the heart. This can cause an increased strain on the heart and may be risky for clients who have a weak heart (as from congestive heart failure or other advanced cardiac disease). Therefore, it is safer to perform the Valsalva maneuver with the client seated.

Slump Test

View the video "Slump Test" online on thePoint.lww.com

The **slump test** places tension on the entire spinal cord and peripheral nerves of the upper and lower extremities. Although this test is most effective at assessing a pathologic condition of the lumbar spine and sciatica, it can also be useful for assessing a space-occupying lesion in the cervical spine and thoracic outlet syndrome. (For a detailed description of cervical spine conditions and thoracic outlet syndrome, see Muscolino JE. *Advanced Treatment Techniques for the Manual Therapist: Neck*. Baltimore, MD: Lippincott Williams & Wilkins; 2013.)

The slump test works by increasing tension on the spinal cord and spinal nerves by means of a pulling force. If a space-occupying lesion is already compressing the nervous system structures, then pulling on the nerves by means of the test will likely tether the spinal nerves against this space-occupying lesion. Referral of sensory symptoms into the lower extremity is considered a positive result for a space-occupying lesion of the lumbar spine. (If sensory symptoms refer into the upper extremity, the result is positive for a space-occupying lesion of the cervical spine or thoracic outlet syndrome.)

As with the other special tests, local low back (or neck) pain does not constitute a positive test result.

The slump test is performed in several sequential steps, each one adding to the tension placed on the spinal cord and nerves. The motions may be performed actively or passively.

1. Begin with the client seated, hands clasped behind the back (Fig. 3-8A). (Clasping the hands behind the back places tension on the brachial plexus and begins the assessment for thoracic outlet syndrome.)
2. Next, ask the client to slump the thoracic and lumbar spine (Fig. 3-8B).
3. Now ask the client to flex the neck and head (Fig. 3-8C).
4. You can then add to neck/head flexion by pressing the client's head and neck further into flexion (Fig. 3-8D). These flexion motions of the spine stretch the spinal cord and also add to the tension on the brachial plexus.
5. The client's knee joint is then fully extended (Fig. 3-8E).
6. Finally, the foot can be dorsiflexed (Fig. 3-8F). These motions of the lower extremity add more stretch to the spinal cord and also stretch the sciatic nerve in the lower extremity, thereby assessing a space-occupying lesion of the lumbar spine (as well as piriformis syndrome).

Figure 3-8G illustrates the sum tension of these steps on the neural structures. Because the slump test places so much tension on the spinal cord and nerves, it is common for a healthy client to feel some pain and discomfort during the procedure. Thus, for the test result to be considered positive, the client should either experience a reproduction of the lower or upper extremity symptoms that they have been experiencing or a high level of pain/discomfort during the procedure.

Piriformis Stretch Test

The **piriformis stretch test** is used to assess piriformis syndrome, that is, compression of the sciatic nerve by the piriformis. As its name implies, the piriformis muscle is stretched, thereby increasing its tautness and its compression on the sciatic nerve. Stretching a muscle is done by simply moving the client's body into the opposite of its joint actions. Two excellent stretches for the piriformis are shown in Figure 3-9. In Figure 3-9A, the client's thigh is flexed and then horizontally adducted (horizontally flexed) because the piriformis is a horizontal abductor (horizontal extensor) when the thigh is first flexed. In Figure 3-9B, the client's thigh is flexed and laterally rotated because the piriformis is a medial rotator when the thigh is first flexed. If the client experiences a pulling (stretching) sensation or pain in the buttock, it is likely due to a tight piriformis but does not indicate compression of the sciatic nerve, therefore the test is not considered to be positive. For the piriformis stretch test to be considered positive, the client must experience referral of symptoms distally into the lower extremity (thigh, leg, and/or foot).

Figure 3-8 The slump test. The slump test is performed in several sequential steps. **(A)** The client is seated and clasps the hands behind the back. **(B)** The client slumps the thoracic and lumbar spine forward into flexion. **(C)** The client flexes the neck and head. *(continued)*

Figure 3-8 *(continued)* **(D)** The therapist adds to the neck/head flexion. **(E)** The client's knee joint is extended. **(F)** The client's foot is dorsiflexed. **(G)** This figure shows the biomechanics of the slump test, highlighting the stretch/tension that is placed on the spinal cord and nerves. (Reproduced with permission from Muscolino JE. *Advanced Treatment Techniques for the Manual Therapist: Neck*. Baltimore, MD: Lippincott Williams & Wilkins; 2013.)

Figure 3-9 Stretches for the piriformis. **(A)** Horizontal adduction of the flexed thigh. **(B)** Lateral rotation of the flexed thigh.

Note: The relationship between the piriformis muscle and sciatic nerve can vary. Usually, the sciatic nerve exits the pelvis inferior to the piriformis. However, some or all of the nerve may exit through or above the piriformis. Regardless of the relative relationship between these two structures, a tight piriformis can potentially compress the sciatic nerve and cause piriformis syndrome.

Tests for Injured Tissue

Following are assessment tests that are used to assess conditions caused by injury to soft tissues at a joint such as sprain, strain, and irritation/inflammation. *Note*: Even though SLR tests are forms of active and passive ROM tests and have therefore already been discussed under the "Range of Motion and Manual Resistance Assessment" section, they and MR are discussed again here in their context to other assessment tests for injured tissue.

Passive Straight Leg Raise

Passive SLR test is performed as described earlier in this chapter in the section on special orthopedic assessment tests for space-occupying lesions. The difference is that now the intended assessment is for sprains and irritation/inflammation of the SIJ and lumbar spinal joints; the test is considered to be positive if local pain is felt in the SIJ region or lumbar spine (referral pain down the lower extremity is not the criterion for a positive test now). Passive SLR test is performed by the therapist raising the client's thigh into flexion at the hip joint while keeping the client's knee joint fully extended. It is important that the knee joint remains fully extended (hence the name *straight* leg raise) (Fig. 3-10A). Because the client is not engaging musculature of the region to create this motion, the client is passive. Flexing the thigh at the hip joint and keeping the knee joint fully extended places a stretch on the hamstrings. This pulls them taut, creating a tension/pulling force on the pelvic bone on that side. Therefore, as the client's thigh is lifted into flexion, that side pelvic bone will be pulled into posterior tilt. Because the other pelvic bone is stabilized on the table and not moving, motion will occur between the pelvic bones at the SIJs. If either side SIJ is sprained/inflamed, pain will be felt locally at the SIJ (Therapist Tip 3.8).

Most commonly, an SIJ sprain/inflammation will be felt when the thigh is at approximately 30 degrees of flexion. As the thigh is lifted higher than 30 degrees, the sacrum will posteriorly tilt with the pelvic bone, and as the sacrum reaches the end of its posterior tilt ROM at the lumbosacral joint relative to the L5 vertebra, it will begin to pull L5 into flexion. Once L5 is pulled into flexion to the end of its flexion ROM, L4 will flex. This motion will continue up to the lumbar spine as the thigh is moved farther and farther into flexion. If any of these lumbar spinal joints are sprained/inflamed, pain will be felt locally at that level. Generally, the higher the thigh is raised when pain occurs, the higher the region of the spine that is assessed.

Active Straight Leg Raise Test

Active SLR test is performed in a similar manner to passive SLR test except that the client is asked to actively raise the thigh into flexion at the hip joint by engaging the hip flexor muscles (Fig. 3-10B). This will also cause pelvic and lumbar musculature to engage to stabilize the pelvis and spine as the thigh is lifted. (*Note*: It will also cause the psoas major to contract as a mover of the thigh. When contracting, the psoas major will exert tension on its spinal attachments as well as the thigh, causing compression and anterior shear of the lumbar spine, which could add to the local low back pain of active SLR.) The joints are being moved in an identical manner as when the test was performed passively; therefore, active SLR test will assess sprains and irritations/inflammations of the sacroiliac and lumbar spinal joints just as passive SLR test did. However, because the client is actively contracting the musculature of the region, active SLR test will also assess strains of musculature. Active SLR test is considered to be an excellent screening test for the region because it will be positive with both sprains (and inflammations) of the joint ligaments and capsules, and strains of the musculature of the joint.

A

B

Figure 3-10 SLR tests to assess sprains and strains. **(A)** Passive SLR moves the sacroiliac and lumbar spinal joints and therefore assesses for a sprain of these joints**. (B)** Active SLR moves the joint tissues, and it requires musculature to engage; therefore, it assesses both sprains and strains.

3.8 THERAPIST TIP

Straight Leg Raise and Sacroiliac Joint Assessment

When performing the SLR test to assess for sprains/inflammations and/or strains of the SIJ, although it is typical to assess the same-side SIJ as the thigh being raised, the SIJ on the opposite side of the body of the thigh being raised is also sometimes assessed. The mechanism for the SLR test is as follows: If the right thigh is flexed, then the right pelvic bone will move into posterior tilt. Because the left pelvic bone is stabilized on the table, it will not move. Therefore, motion occurs between the two pelvic bones. If the right SIJ is mobile, the right pelvic bone will move relative to the sacrum at the right SIJ. Therefore, motion is introduced into the right SIJ and if it is injured, pain would occur locally at that joint; therefore, the right SIJ is assessed. However, if the right SIJ is hypomobile and does not move, then when the right thigh is raised and the right pelvic bone posteriorly tilts, the sacrum will be "locked" to the right pelvic bone, and they will move as a unit relative to the left pelvic bone. This motion will occur at the left SIJ. When this occurs, if the left SIJ is injured, then pain would be felt at that joint and that joint is assessed. Further, even if the right SIJ is mobile and allows motion, as the thigh is lifted higher, there will be a point where the end of ROM of the right SIJ will be reached and motion will start to occur at the left SIJ, assessing the left-sided SIJ. For these reasons, regardless of which thigh is lifted into flexion, either SIJ could be assessed. Even though performing SLR test on one side could assess either SIJ, it is usual and customary to perform this test on both sides of the client's body.

3.9 THERAPIST TIP

Straight Leg Raise Test and Antagonist Musculature

It is usually stated that passive SLR test assesses only sprains, and that active SLR test assesses both sprains and strains. However, this is a bit of an oversimplification. Both passive and active SLR tests also assess for strains and spasms of the antagonistic musculature of the joint(s) because both tests require them to stretch to allow the joint to move (whether the joint moved passively or actively).

Manual Resistance Test

MR is another test that is used to assess strains of musculature. As its name implies, MR test is performed by the therapist using his or her hands to add resistance to the client's attempted joint motion. The MR must be strong enough to stop the client from actually moving the joint. Therefore, the contraction is isometric (see Fig. 3-3). If the client's musculature engages but no joint motion occurs, then the musculature will be stressed and assessed, but the joint ligaments and capsule will not. Therefore, MR test assesses for strain of the mover muscles of the joint, but not sprains of the joint.

Nachlas' and Yeoman's Tests

View the video "Nachlas Orthopedic Assessment Test for the Sacroiliac Joint" online on thePoint.lww.com

Nachlas' test and **Yeoman's test** both assess injury to the SIJ, primarily sprain and irritation/inflammation. These two tests are similar in that each one introduces a motion/torque into the SIJ of the prone client; if the joint is injured, this motion will stress the tissues and cause pain. Nachlas' test is performed by passively flexing the client's knee joint by bringing the client's heel toward the same-side buttock (Fig. 3-11A). This causes a stretch of the quadriceps femoris muscles. Specifically, when the rectus femoris of the quadriceps is stretched, it is pulled taut, causing a pulling force to be placed on its attachments. This pulls on the anterior inferior iliac spine (AIIS), causing anterior tilt of the pelvic bone on that side. Because that pelvic bone moves and the other pelvic bone does not because it is stabilized against the table, motion is introduced into the SIJs. Usually, Nachlas' test primarily assesses the same-side SIJ, but as explained in Therapist Tip 3.8, the opposite-side SIJ can be assessed as well.

Yeoman's test works on a similar principle. It is performed by the therapist using one hand to lift the client's thigh into extension, with the client's knee joint partially flexed (Fig. 3-11B). The client's rectus femoris, as well as all hip flexor musculature, is stretched, causing a force of anterior tilt on the client's same-side pelvic bone. Because the other pelvic bone is stabilized against the table, the force is introduced into the SIJs. The therapist uses the other hand to press down on the client's PSIS to both stabilize the pelvic bone on that side from lifting off the table and to increase the anterior tilt motion of that side pelvic bone.

Nachlas' test causes only a mild stress to the SIJs, so it usually only shows positive if the SIJ injury is moderate or marked in degree. Yeoman's test is more forceful and will show positive with a mild SIJ injury as well. One limitation to the Nachlas' test is that because it requires maximal flexion of the client's knee joint, it cannot be performed if the client has a unhealthy knee joint on that side that cannot tolerate full flexion.

Sacroiliac Joint Medley of Tests

The **sacroiliac joint medley of tests** is a series of five assessment tests to determine if the SIJ is the causative agent of the client's pain. It assesses if the SIJ is sprained and/or irritated/inflamed. If three or more of the five tests reproduce the client's pain, the medley of tests is considered to be positive. The five tests are the PSIS compression test, iliac crest compression test, ASIS compression test, thigh thrust test, and Gaenslen's test. Each test is considered to be positive if the client experiences pain at the SIJ.

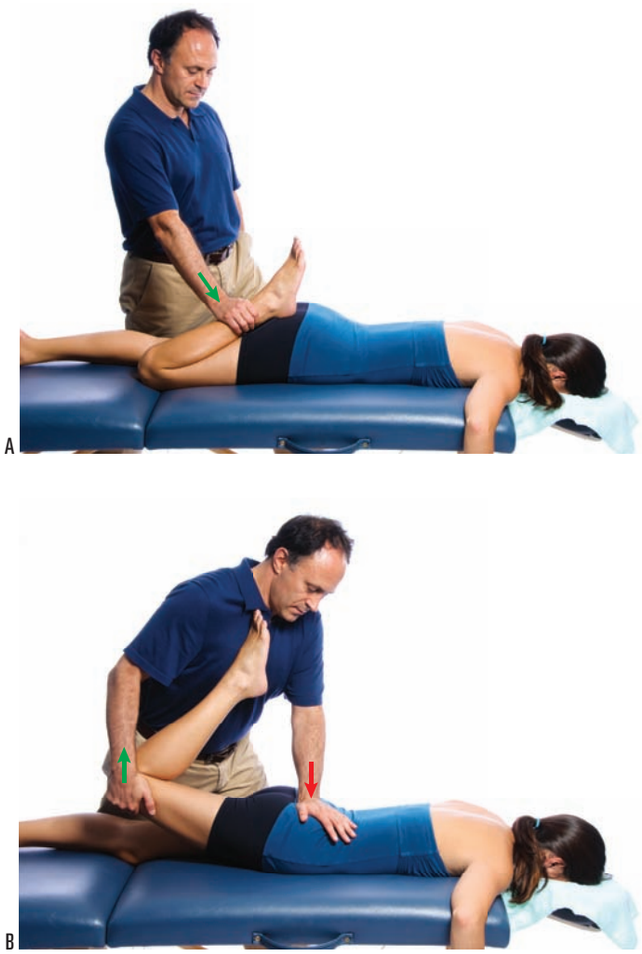


Figure 3-11 Nachlas' and Yeoman's tests for the SIJ. **(A)** Nachlas' test is performed by bringing the client's heel to the same-side buttock. **(B)** Yeoman's test is performed by lifting the client's thigh into extension with the knee joint flexed while stabilizing the same-side pelvic bone from lifting into the air and adding to the anterior tilt of the pelvic bone on that side of the body. (Reproduced with permission from Muscolino JE. Orthopedic assessment of the sacroiliac joint. *MTJ*. Fall 2010: 91–95.)

PSIS compression test is performed with the client prone. The therapist places his hands on the client's PSISs. Each PSIS is placed in the groove between the thenar and hypothenar eminences of the therapist's hand (the intereminential groove), and the therapist then adds a compression force downward (Fig. 3-12A). Both SIJs are tested simultaneously with this test.

Iliac crest compression test is performed with the client side-lying. The therapist places his hands on the client's iliac crest and adds a compression force downward (Fig. 3-12B). This test primarily assesses the SIJ that is away from the table, although some compression force is transferred to the other SIJ, so it may elicit pain there as well. The test is usually performed again with the client on the other side.

ASIS compression test, thigh thrust test, and Gaenslen's test are performed with the client supine. For the **ASIS compression test**, the therapist places his hands on the client's ASISs. As with the PSIS compression test, each ASIS is placed in the intereminential groove of the therapist's hand. The therapist then adds a compression force downward and somewhat laterally (Fig. 3-12C). Both SIJs are tested simultaneously with this test.

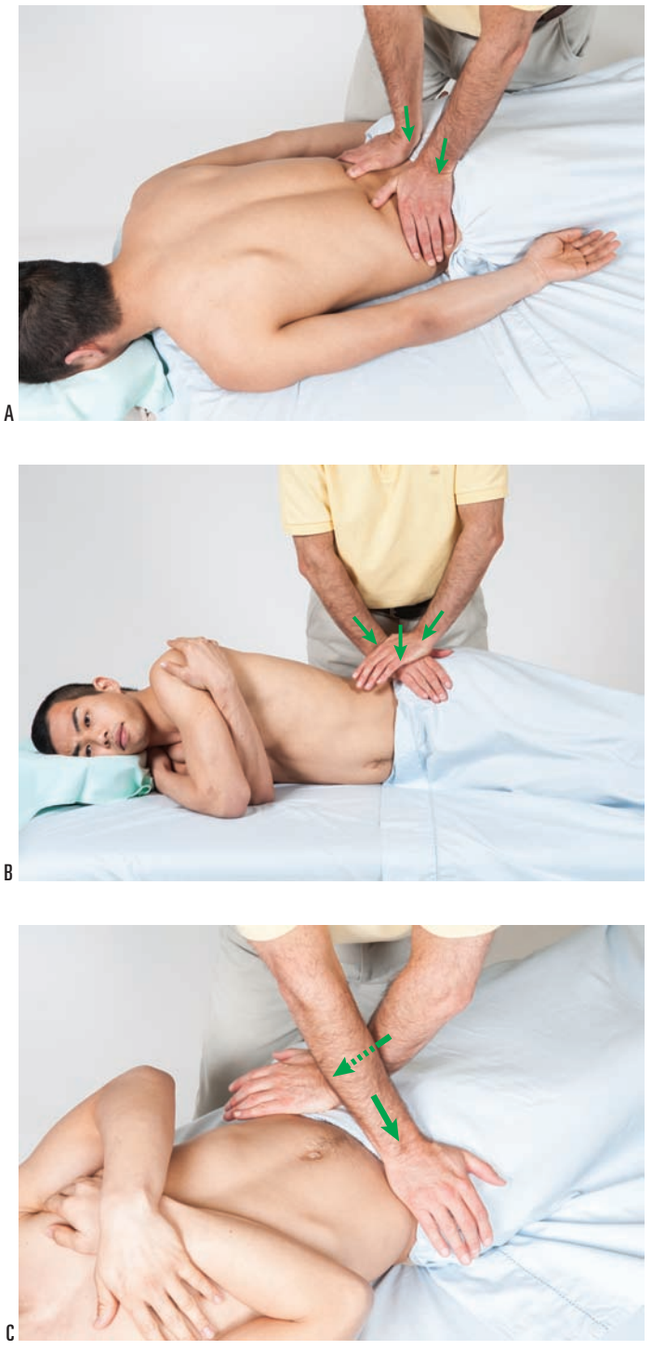
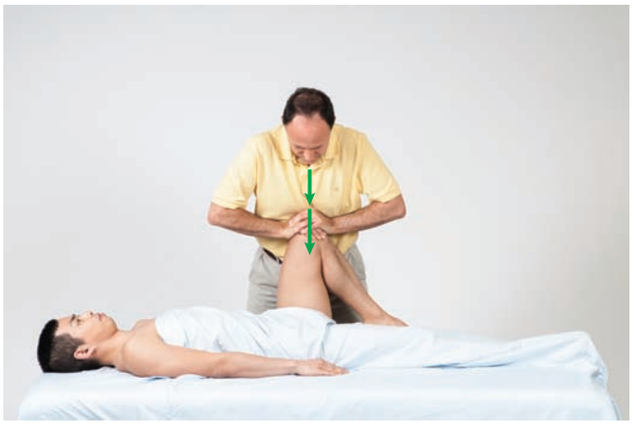


Figure 3-12 SIJ medley of tests. If three or more of these five tests are positive, the SIJ is considered to be the causative agent of the client's low back/pelvic pain. **(A)** PSIS compression test. **(B)** Iliac crest compression test. **(C)** ASIS compression test. *(continued)*



D

E

Figure 3-12 *(continued)* **(D)** Thigh thrust test. **(E)** Gaenslen's test.

Thigh thrust test is performed by placing a downward compression force on the client's knee with the client's thigh flexed to 90 degrees (Fig. 3-12D). This test assesses only the side where the pressure is applied, so it is repeated on the other side of the body.

For **Gaenslen's test**, the client needs to be positioned far to the side of the table where the therapist is standing. One thigh is dropped into extension off the side of the table while the client hugs the other thigh into the chest. The therapist adds downward pressure on the thigh that is off the table, bringing it farther into extension. This stretches the client's hip flexors, causing the same-side pelvic bone to anteriorly tilt. Having the client hug the other thigh into the chest posteriorly tilts and stabilizes the other pelvic bone. The therapist can add to this stabilization of the other side of the pelvis by pressing against the client's posterior thigh (Fig. 3-12E). The mechanism for Gaenslen's test is that torque is added into the SIJs by having one pelvic bone anteriorly tilted while the other is posteriorly tilted. Both SIJs are assessed with this test, but the dropped-thigh side is primarily tested. For this reason, Gaenslen's test is usually repeated on the other side of the body.

TREATMENT STRATEGY

Once the health history and physical assessment examination have been performed, a **treatment strategy** can be developed. This involves creating a **treatment plan** for the client. Three principle components of a treatment plan must be determined:

1. Treatment techniques that will be used during the sessions
2. Frequency of sessions
3. Self-care advice that will be given to the client

Treatment Techniques

The pathomechanics of the condition will determine the objectives of care, which in turn will determine the treatment techniques to be used. Most conditions of the low back and pelvis involve tight/taut soft tissues (hypertonic musculature and fascial adhesions), so loosening these tissues is usually the primary focus of treatment. Most conditions that have been present for some time also involve joint dysfunction hypomobilities, so joint mobilization should be another focus. It is essential to address both of these aspects of the condition if the client's musculoskeletal health is to improve.

The treatment techniques presented in this book are designed to address tight muscles and other taut soft tissues as well as joint dysfunction hypomobilities. These techniques tend to be most effective if performed after the client's tissues have been warmed up. Choosing which technique to use is often a matter of both the therapist's and the client's personal preferences. The most effective approach is usually to combine multiple techniques within the treatment plan. (Before employing any new technique in your practice, be sure that it is within the scope of practice of your profession.)

Frequency of Sessions

Once the techniques have been chosen, the next step is to decide the optimal frequency of care. Again, this depends on the circumstance. If a client is basically healthy and simply wants to maintain good health, the frequency might vary from once a week to once a month, depending on the client's lifestyle and health. However, if a client has a musculoskeletal condition that needs to be remedied, physical rehabilitation requires a frequency of two to three times per week. This is common in physical therapy, chiropractic, strength training, and sport training, and the same holds true for manual therapy.

Each treatment session must build on the previous one if the client is to improve. Performing a treatment physically changes both the state of the tissues and the neural patterns for muscle contraction. As time passes after the session, these changes are gradually lost as the body reverts back to the pattern of its pathologic condition. If too much time elapses between visits, then the client continually regresses back to his or her dysfunctional pattern before the successive treat-

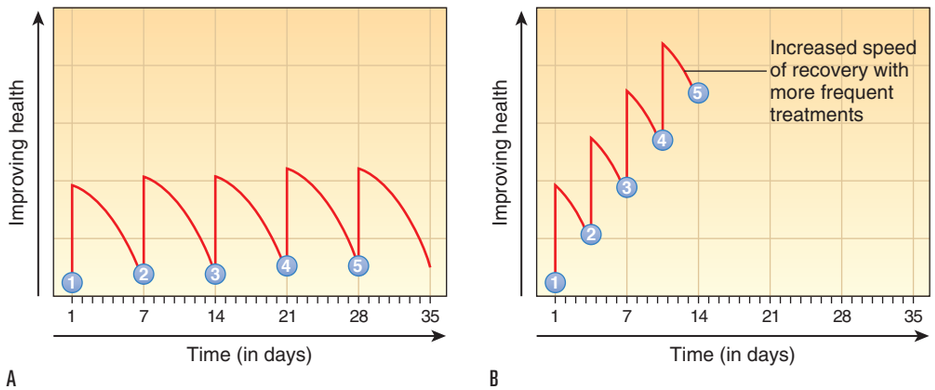


Figure 3-13 Effects of frequency of care. **(A)** Treatment frequency of once per week. **(B)** Treatment frequency of twice per week. Note the increased speed of recovery of the client's condition when treatments are more frequent. Numbered treatments are indicated in blue circles. (Reproduced with permission from Muscolino JE. Treatment planning and client education. *MTJ*. Winter 2010: 91–95.)

ment occurs. Therefore, for care to be effective and efficient, treatments should be spaced no more than 2 to 3 days apart until the desired improvement has been achieved (Fig. 3-13). Although this may seem like a strong commitment to ask of a client, it is the most time-efficient and cost-efficient approach.

Self-Care Advice

It can be very helpful to involve the client in his or her own treatment plan. Regarding self-care advice, it is extremely valuable to offer the client suggestions about postures, hydrotherapy (hot and cold), stretching, and strengthening (if your scope of practice permits). After all, even if a client sees the therapist three times a week for an hour at each session, the client is still on his or her own for the other 165 hours of the week. If the client is engaging in unhealthy postures and activities at home and work, this can easily overwhelm the therapist's ability to assist. If instead the client uses that time to further the objectives of the treatment plan, then recovery will proceed more quickly. For more on self-care advice, see Chapter 11 (available online at thePoint.lww.com).

3.10 THERAPIST TIP

Giving Self-Care Advice

It is best to avoid overrecommending when giving self-care advice to clients. Whereas many clients will do one, two, or, perhaps, three recommended stretches, if the therapist gives them four, they will probably become overwhelmed and do nothing. Whether the threshold for being overwhelmed is 4 or 10, in general, the best rule regarding self-care advice is to give the client as much as he or she will do, and no more. The exact amount will vary according to the client's level of self-discipline and enthusiasm. Once the client is comfortable with the stretches or other self-care advice that is recommended, more can gradually be added in future sessions.

ASSESSMENT AND TREATMENT OF SPECIFIC CONDITIONS

Chapter 2 discussed the musculoskeletal conditions of the low back and pelvis that a manual therapist is most likely to encounter. This chapter has introduced and explained how to perform orthopedic assessment tests that are available to the manual therapist to assess these musculoskeletal conditions. Part 2 of this book explains how to perform the advanced treatment techniques that can be used to treat these conditions. The following is a brief overview that links the condition with its corresponding assessment procedure and its corresponding treatment.

Hypertonic Musculature

Tight muscles are assessed by measuring the client's passive ROMs. If an ROM is restricted, then the antagonistic muscles (generally located on the other side of the joint) to that motion are most likely tight. Tight musculature is not the only tissue that can restrict joint motion. Whenever an active or passive ROM is restricted, any taut tissues on the other side of the joint may contribute to the restriction in motion, including ligaments and joint capsules.

Whether they are a result of increased active muscle tone or adhesions, the treatment options available to the manual therapist to help loosen tight musculature and other soft tissues are many, ranging from soft tissue manipulation, to hydrotherapy, and to stretching techniques and joint mobilization.

Joint Dysfunction

Joint dysfunction is assessed with joint play assessment, also known as motion palpation.

If a specific segmental vertebral level is found to be hypomobile, then the only effective treatment option is to perform joint mobilization technique. If a client has a hypermobility, a manual therapist can do little to nothing to directly help because every treatment tool that a manual therapist employs is aimed at increasing, not decreasing, mobility. However, if the joint hypermobility exists as a compensation for an adjacent hypomobility, then the hypermobility may be alleviated if the adjacent hypomobility is mobilized. *Note*: Strengthening musculature around a hypermobile joint is helpful. If strength training is within your scope of practice/license, then it should be employed.

Lumbar Sprains and Strains

Assessing a sprain or a strain of the low back can be done by using active ROM and passive ROM (specifically active and passive SLR tests) as well as MR. The acronym commonly used to describe the care routine for an acute sprain or strain is RICE (rest, ice, compression, and elevation). RICE care should continue as long as inflammation is present in the tissues. This may be days, weeks, or even months or more—do not follow a cookbook rule for when to apply ice application. If inflammation is present, icing is appropriate.

Care for a chronic sprain is usually geared toward the tight muscles that usually occur as a compensation for the excessive motion. These tight muscles often cause pain and are in need of treatment. In addition, the best long-term approach that a client can take with a sprain is to strengthen the musculature of the region. Stronger musculature can compensate for the loss of stability of the stretched ligaments and help prevent painful muscle spasms.

Care for a chronic strain is geared toward loosening the muscles if they have become hypertonic and also eliminating or decreasing the formation of further adhesions. For this reason, once adhesions have mended the strained (torn) muscle tissue, and the tissue's integrity has returned, it is important to begin soft tissue manipulation and stretching to minimize tightness and prevent the formation of further adhesions. If there is any doubt about whether tissue integrity has returned, consent from a physician should be obtained.

Sacroiliac Joint Injury

Injury (sprain, strain, or irritation/inflammation) to the SIJ can be assessed with active SLR test, passive SLR test, Nachlas' test, Yeoman's test, and the sacroiliac medley of tests. If either SLR test is used, injury to the SIJ will usually cause pain at approximately 30 degrees of thigh flexion. Nachlas' test will usually only show positive if the injury is moderate or marked in degree; Yeoman's test is more sensitive and will usually detect a mild SIJ injury. For the SIJ medley of tests to be considered positive, at least three of the five tests should elicit pain in the SIJ.

Care for a SIJ injury depends on what type of injury is present. SIJ sprains and strains should be treated similarly to lumbar sprains and strains (see preceding section). If no sprain or strain is present and the SIJ is simply irritated/swollen, then icing and rest are appropriate. Prolonged sitting, particularly prolonged driving, is especially stressful to the SIJs and should be eliminated or decreased.

Pathologic Disc and Sciatica

Assessing a pathologic lumbar disc condition (a disc bulge or rupture) and the resultant pressure on the sciatic nerve (sciatica) can only be done definitively by magnetic resonance imaging (MRI) or computed tomography (CT) scan. However, the SLR test, cough test, Valsalva maneuver, and slump test may also be used. Although these assessment procedures are not as accurate as an MRI, they are usually effective at accurately assessing a pathologic disc that is moderate or marked in severity. If a lumbar disc bulge or rupture is moderate or severe in presentation, it will likely produce a positive test result for most or all assessment procedures. However, a mild case may produce a negative result for many of the tests and a positive result for others. If there is any question about whether a client has a pathologic disc bulge or rupture, it is advisable to refer the client to a physician for a definitive diagnosis.

Treating a client with a lumbar disc problem contraindicates doing anything that would increase pressure on the disc, thereby increasing the size of the bulge or rupture. Strong compression over the spine should be avoided, and all movements of the client's lumbar spine should be done with caution. As a rule, anything that increases the referral symptoms of the disc lesion is contraindicated. There are opposing viewpoints on what type of motions are safe and effective for a client with a lumbar disc injury. Some authorities recommend flexion motions and avoiding extension (or avoiding extension with lateral flexion if the disc injury is posterolateral); others recommend that the client perform extension motions and avoid flexion. The argument for flexion is that it opens up the vertebral and intervertebral foramina. The argument for extension is that it removes tension on the posterior annular fibers and pushes the nucleus pulposus anteriorly away from the posterior annular fibers. See Chapter 11 (available online at thePoint.lww.com) for both flexion and extension exercises for the lumbar spine.

The primary focus of manual therapy is to loosen the tight muscles that surround the disc because they can increase compression on the disc, furthering the problem. As a general rule, Western-based Swedish strokes are usually fine as long as the pressure is not so great that the vertebral joints are actually moved, thereby placing stress on the discs. Because of the movement involved in stretching and joint mobilization, these treatment techniques should be avoided or done prudently at or near the level of the disc lesion. Lumbar spine

traction/distraction, if performed prudently, is indicated and can be beneficial for relieving disc pressure.

Piriformis Syndrome

Piriformis syndrome is best assessed with the piriformis stretch test as well as palpation of the piriformis muscle. However, any of the assessment tests for pathologic discs or other space-occupying lesions may also show positive for piriformis syndrome. These tests include SLR, cough test, Valsalva maneuver, and slump test.

Treatment for piriformis syndrome is aimed at relaxing and loosening the piriformis muscle. Heat, soft tissue manipulation, and stretching are all effective means to accomplish this. If the piriformis is tight as a compensation to stabilize the sacrum when there is an underlying SIJ injury, resolving the SIJ condition is necessary if any lasting relief of the piriformis is to occur.

Degenerative Joint Disease

Physicians assess DJD by radiograph or other radiologic examination such as MRI or CT scan. Manually, DJD of the lumbar spine and SIJs is difficult to assess through palpation because the bone spurs of DJD are located deep within the client's tissues. Advanced DJD will impede motion of the affected joints so passive ROM will be decreased and will often have a hard palpatory end-feel to the motions.

There is nothing that a manual therapist can do to directly affect the bone spurs of DJD itself. However, manual therapy can play an extremely important role indirectly. The principal cause of DJD is physical stress to the joint, and one of the components of the physical stress is the compression force caused by tight muscles that cross the joint. If manual therapy relaxes tight musculature, less physical stress will be placed on the joint, and that can lead to a decrease or cessation in the rate at which the condition progresses. Therefore, even though manual therapy cannot reverse the condition, it can decrease its progression.

If the DJD is advanced and the client has a bone spur that is pushing on adjacent tissue, causing inflammation, another treatment option is the use of cryotherapy (the application of ice). If the bone spur is pressing on a spinal nerve, any positioning/stretching/joint mobilization that increases that nerve compression should be avoided.

Scoliosis

If scoliosis is severe enough, it can be assessed through visual and palpatory examination. However, for a definitive diagnosis, radiographic examination via an x-ray should be ordered by a physician.

Treatment of scoliosis by a manual therapist has two objectives: one is to work on the spinal joints and the other is to work the spinal musculature. Joint mobilization can be performed to increase motion of hypomobilities found within the scoliotic spine. Each vertebra within a scoliotic curve is laterally flexed and rotated. As a result, the vertebral segment will usually have decreased ROM in the opposite lateral flexion direction and also in the opposite rotation direction. The manual therapist can perform joint mobilization to decrease these hypomobilities. If the scoliosis is severe and/or very chronic, it is unlikely that joint mobilization will greatly reduce the degree of scoliosis, but it is often very effective at decreasing or stopping the progression of the condition.

Perhaps even more important is the role of the manual therapist in treating the associated spinal musculature. Asymmetric muscular pull can contribute to a scoliotic curvature by pulling the vertebrae in one direction. Therefore, the role of the manual therapist is to reduce muscular hypertonicities that can contribute to the problem. This can be done via heat, soft tissue manipulation, and stretching. If strengthening is within the therapist's scope of practice, it should also be done. Although it is beneficial to relax and stretch as well as strengthen all musculature of a scoliotic curve, as a general rule, musculature in the concavity of the curve needs to be loosened, and musculature on the convex side of the curve needs to be strengthened.

Anterior Pelvic Tilt and Hyperlordotic Lumbar Spine

Anterior pelvic tilt and hyperlordotic lumbar curvature can be assessed via visual examination. A more definitive diagnosis of the degree of the condition can be obtained via a physician-ordered radiograph.

Treatment of this condition is aimed at loosening the anteriorly placed hip flexor musculature as well as the posteriorly placed low back extensor musculature. This can be accomplished by using heat, soft tissue manipulation, and stretching. If strengthening is within the therapist's scope of practice, strengthening of the posterior hip extensor musculature and the anterior abdominal wall musculature should also be done. Although self-care is important in all conditions, it is especially important with dysfunctional postural patterns such as excessive anterior tilt. The client should be counseled regarding proper posture and stretches for the hip flexors and low back extensor muscles.

Facet Syndrome

Facet syndrome is assessed by asking the client to perform extension of the lumbar spine; pain located at the spinal joints indicates facet syndrome.

Because facet syndrome is often caused by excessive anterior pelvic tilt with resultant increased lumbar lordosis, treatment should be directed at improving the client's posture. This can be best accomplished by applying moist heat, soft tissue manipulation, and stretching to the musculature of anterior tilt, in other words, the hip flexors and low back extensors. And if strengthening is within the therapist's scope of practice, then strengthening of the posterior

tilt musculature, hip extensors, and trunk flexors (anterior abdominal wall) should also be done. Self-care stretches that posteriorly tilt the client's pelvis and flex the client's lumbar spine should also be recommended (see Chapter 11, available online at thePoint.lww.com). Because facet syndrome is often accompanied by muscular spasming, it is important to relax this musculature as well.

Spondylolisthesis

Spondylolisthesis is diagnosed by a physician from lateral view radiographs. A break in the pars interarticularis and/or a slippage of one vertebra on the vertebra below indicates spondylolisthesis. By far, the most common type of spondylolisthesis involves an anterior slippage of the upper vertebra and is termed an *anterolisthesis*. Less common, the upper vertebra slips posteriorly and is termed a *posterolisthesis*, or slips laterally and is termed a *laterolisthesis*.

Manual therapy treatment of a spondylolisthesis cannot change the break in the pars interarticularis. Instead, treatment is aimed at reducing any associated muscle spasm and increasing the stability of the lumbar spine through core stabilization strengthening, if this is within the therapist's scope of practice. Muscle spasm is best reduced via moist heat, soft tissue manipulation, and stretching. Core stabilization strengthening should be directed toward the anterior abdominal wall musculature as well as the low back extensor muscles (see Chapter 12, available online at thePoint.lww.com).

Because an excessive lumbar lordotic curve, often caused by excessive anterior tilt of the pelvis, exacerbates the slippage of an anterolisthesis, remedying this postural condition through hands-on care and self-care advice (see the previous section on "Anterior Pelvic Tilt and Hyperlordotic Lumbar Spine") is an important component of the care of this condition.

CHAPTER SUMMARY

There is an adage in the world of medicine that treatment should never be administered without a diagnosis. Similarly, in the world of clinical orthopedic manual therapy, treatment should only be performed if an assessment is first made. This chapter covers the orthopedic assessment tests that manual therapists can perform to assess their clients' lower back and pelvic conditions. Of course, there are limits to the ability of these tests to fully and accurately assess every condition. If after performing these assessment tests, there is still doubt about the client's condition, referral should be made to a physician for an accurate and thorough diagnosis/assessment. Once the therapist is armed with an accurate assessment, and therefore a fundamental understanding of the pathomechanics of the client's condition, safe and effective treatment can be determined and carried out.

PART TWO

Treatment Techniques

CHAPTER 4

Body Mechanics for Deep Tissue Work to the Low Back and Posterior Pelvis

CHAPTER OUTLINE

Introduction 96
Mechanism 96
Overview of Technique 98
Performing the Technique 99
Deep Tissue Work Routines 122
Chapter Summary 132
Case Study 133

OBJECTIVES

After completing this chapter, the student should be able to:

1. Describe the mechanism for producing deep tissue pressure.
2. Discuss the roles of internally and externally generated forces when doing deep tissue work.
3. Describe in steps an overview of the usual protocol for performing deep tissue work to the low back and pelvis.
4. Explain why the therapist's position and the client's placement on the table are important.
5. Describe the roles of the treatment contact hand and the bracing/support hand.
6. Describe the importance of the positioning of the feet when doing deep tissue work.
7. Explain the importance of stacking the upper extremity joints when doing deep tissue work.
8. Explain why it is important to align your core with the stroke and use your core and/or lower extremities when performing deep tissue work.
9. Explain why it is important to communicate with the client when doing deep tissue work.
10. Describe the possible role of ice when doing deep tissue work.
11. Describe the usual breathing protocol for the client during deep tissue work.
12. Explain how to transition from sustained compression to short deep stroking massage and long, deep strokes with proper body mechanics.
13. Define each key term in this chapter and explain its relationship to deep tissue work to the low back and pelvis.
14. Perform deep tissue work to the client's low back and pelvis using the five routines presented in this chapter.

KEY TERMS

brace hand
contact hand
deep pressure
deep stroking massage
deep tissue work
drag
external generation of force
inclined back
internal generation of force
ischemic compression
knife-edge
myofascial TrP
slide
stacked joints
stooped back
support hand
sustained compression
target musculature
treatment contacts
trigger point (TrP)
vertical back

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INTRODUCTION

Western-based massage technique is a type of bodywork that involves the introduction of force (pressure) by physically pressing into the soft tissues of the client's body, usually the muscular and fascial tissues. The purposes of introducing pressure to physically work on the client's tissues are many. They include producing changes in local fluid circulation, affecting neural proprioceptive feedback loops, and physically breaking patterns of fascial adhesions. The pressure that is applied can range from very light to very deep. Not everyone wants or needs to have **deep pressure/deep tissue work** performed; certainly, there are times when light work is preferable. However, when deep tissue work is desired or needed, it is important for you to be able to generate this deep pressure with the least amount of effort and physical stress to your body. In essence, this chapter is about learning how to employ proper body mechanics so that you work smart instead of working hard. The body mechanics that are demonstrated in this chapter can be applied to all manual therapy strokes and techniques.

BOX 4.1

Body Mechanics for Deep Tissue Work Routines

The following body mechanics for deep tissue work routines are presented in this chapter:

1. Medial low back—paraspinal musculature
2. Lateral low back—quadratus lumborum
3. Middle and upper back—paraspinal musculature
4. Posterior pelvis—gluteal region
5. Lateral pelvis—abductor musculature

4.1 THERAPIST TIP

Strokes and Techniques

This chapter is not about recommending any one massage stroke (e.g., compression or effleurage) or proprietary technique over another. Every stroke and every technique has merit. Similarly, no one stroke or technique is the magic bullet. If it were, everyone would be doing that stroke or technique, and no others would exist. Learning to be a clinical orthopedic manual therapist involves learning how to choose which strokes to use for which client based on the needs of the client who is lying on the table at that point in time. Strictly adhering to cookbook techniques is not recommended. The thrust of this book is to employ critical thinking based on a fundamental understanding of the anatomy, physiology, and kinesiology of the body as well as an assessment and understanding of the pathomechanics of the client's condition presented in Part 1 of this book. Once that is accomplished, the goal is to then effectively and appropriately apply the advanced techniques that are presented here in Part 2 of this book.

Note: For the most part, this text uses the terms *deep pressure* and *deep tissue work* synonymously, but a distinction can be made. Deep tissue work implies that deeper tissues are the target structures being worked. Deep pressure does not; it can be employed for deeper or superficial tissues. However, because deep tissues usually require deeper pressure to reach them, this text uses these terms somewhat interchangeably.

Note: In the Technique and Self-Care chapters of this book (Chapters 4 to 12), green arrows indicate movement, red arrows indicate stabilization, and black arrows indicate a position that is statically held.

MECHANISM

Because biomechanical principles follow the basic laws of physics, efficient biomechanics for performing deep tissue work techniques for the musculature of the low back and pelvis are identical to the biomechanical principles and guidelines for doing deep tissue work for any part of the body. Creating pressure is a matter of generating force into the client's tissues. Force can be generated in two ways: externally or internally. The **external generation of force** comes from the force of gravity by using your body weight. The **internal generation of force** comes from the contraction of your muscles.

Externally, the force of gravity acts on the mass of your body to create body weight. You can take advantage of your body weight to generate pressure into the client's tissues by simply dropping down and leaning into the client. Pressure derived this way is effectively free because it takes no effort on your part. For this reason, it should be used whenever possible. Because your core is the largest, most massive part of your body, you need to position it over the client and behind your contact whenever possible.

After you have generated as much force as possible via gravity and body weight, any additional force that you generate must come internally from the contraction of your muscles. This requires effort on your part, so it can be tiring. To minimize fatigue and wear and tear on your body, it is important to always use the largest muscles possible. This is especially important when it comes to deep tissue work. These larger muscles primarily are located proximally in the body.

4.2 THERAPIST TIP

Choosing the Right Table

View the video "Body Mechanics and Electric Lift Table" online on thePoint.lww.com

Choosing the right table can be critically important to good body mechanics. The two most important parameters of a table when considering body mechanics are its width and

continued

4.2 THERAPIST TIP *(continued)*

height. When considering the width of a table, two competing concepts are client comfort and therapist body mechanics. The wider a table is, the more comfortable it is for the larger client. However, a wider table places the client farther from the therapist and forces the therapist to work much harder to position the core over the client's body. This often results in the therapist having to lean over and compromise his body mechanics. In effect, having a wide table provides comfort for the occasional large client, but the therapist must struggle with all the rest of the clients. Possible compromises include tables that have sidepieces that can make the table wider for the larger client but be removed when working with smaller clients **(Fig. A)**. Other tables have a scoop in the middle that narrows the table width around the low back and pelvis of the client **(Fig. B)**. This allows the therapist to place his core closer to the client for efficient body mechanics. Another feature that some tables have is additional face cradle holes that allow for the face cradle to be moved to one side, thereby allowing the client to lie closer to the side of the table **(Fig. C)**. This prevents you from having to lean over, thereby reducing stress to your back. It also allows you to get your core in closer to the client, permitting more efficient use of your body weight and the engagement of larger muscles. If your table has these holes, it is wise to take advantage of them for better body mechanics.

Even more important than table width is table height. As a rule, when generating deep pressure, you want the table to be as low as possible so that you can more easily position your body above the client to take advantage of gravity and body weight. It is likely that the most common error when trying to employ efficient body mechanics is that the therapist positions the table too high. This likely happens because many therapists begin their massage education in school with classes that teach light pressure work. Therefore, it is easy to work with the table high. Often, the therapist becomes accustomed to keeping the table at this height even though deeper pressure techniques are later learned and employed. With the table too high for the techniques now being used, the therapist struggles to achieve pressure, believing that he is too weak when the real culprit is a table that is too high. Even though most tables are adjustable in height, it is important to choose a table that can go low enough so that the top of the table is well below the bottom of your knee joint.

For any therapist who has a stationary practice in one location, it is an extremely wise decision to buy an electric lift table. This allows easy adjustment of the table height with the touch of a pedal. Adjusting the table height is not only important between clients of different sizes but it is also important when working on the same client if the client changes position, such as when changing from supine

A

B

C

continued

4.2 THERAPIST TIP *(continued)*

or prone to side-lying. It is also important when changing contacts that are used to work on the client. For example, work with thumb or finger pads requires a far lower table than work with the elbow or forearm. Further, there are many stretches for the low back and pelvis that require the table to be very low and others that require the table to be high. It is logistically impossible to change the table height between each of these stretches. The purchase of an electric lift table is an investment in the quality of your practice as well as an investment in your success!

OVERVIEW OF TECHNIQUE

The *science* of performing deep tissue work to the low back and pelvis follows the laws of physics and, whenever possible, involves the use of body weight and the contraction of larger muscles instead of smaller ones. The *art* of performing deep tissue work lies in exactly how these guidelines are carried out and applied. The following is an overview of deep tissue work to the medial low back region of the client. In this example, the **target musculature**, the musculature being worked, is composed of the paraspinal muscles that lie directly lateral to spinous processes in the lumbar region.

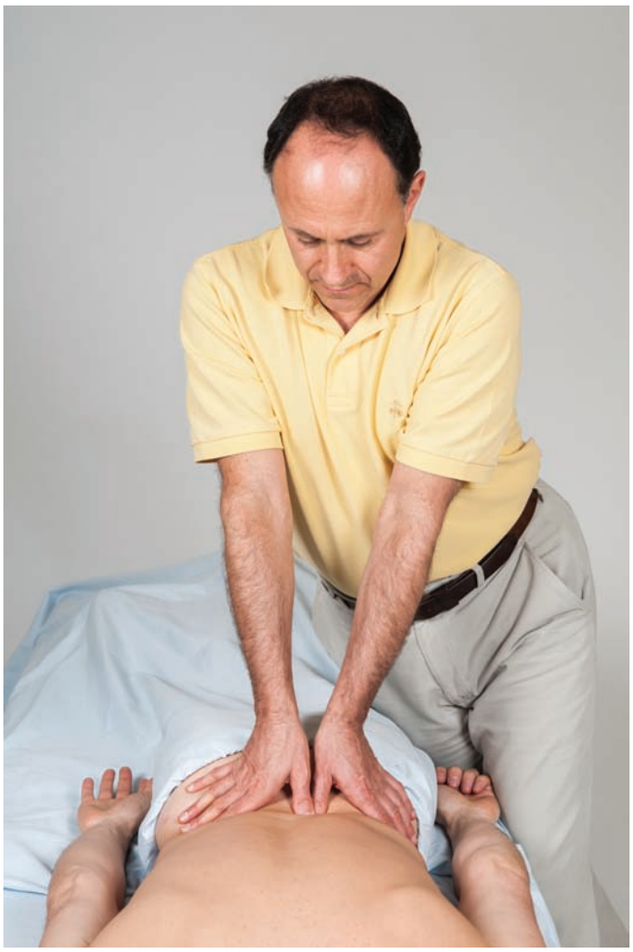


Figure 4-1 Starting position for deep tissue work to the left side of the low back.

Starting Position:

- The client is prone. You are standing at the side of the table, close to the client.
- Your left hand is the **contact hand**, and it is placed on the left side of the client's low back.
- Your right hand is the **brace hand** or **support hand**, and it is placed over the contact hand.
- Note that your elbows are tucked in front of your body so that you can use your core body weight behind your contact when pressing into the client (Fig. 4-1).

Step 1: Place Contact on the Client's Musculature:

- The contact hand is the one that actually contacts the client.
- A wide choice of contacts can be used when working the client's low back (see Choosing the Treatment Contact section).
- In Figure 4-2, the thumb pad of the left hand is being shown as the contact and is placed directly lateral to the midline on the left side of the client's body over the lumbar region.

Step 2: Brace/Support the Contact:

- Place the thumb pad of your right hand over the thumb pad contact of the left hand to brace/support it. Proper

Figure 4-2 Thumb pad contact with the other thumb as the brace.

Figure 4-3 The thumb pad contact with the ulnar side of the other hand as the brace.

location of the brace is to place the right thumb pad on the dorsal surface of the distal phalanx of the thumb, in other words, on the thumb nail (Fig. 4-2).

- An alternative brace/support contact is shown in Figure 4-3.

Step 3: Apply Pressure:

- Now perform the deep tissue work by pressing into the client's musculature with the thumb pad of your left hand.
- This pressure is supplemented by pressure from the right hand that braces the left (contact) hand. In effect, both hands function as treatment hands to generate pressure into the client.
- It is important to slowly sink into the client's tissues and to apply the pressure as close as possible to perpendicular to the contour of the client's body that you are working.
- The movement for this pressure should originate from your core body weight (Fig. 4-4).

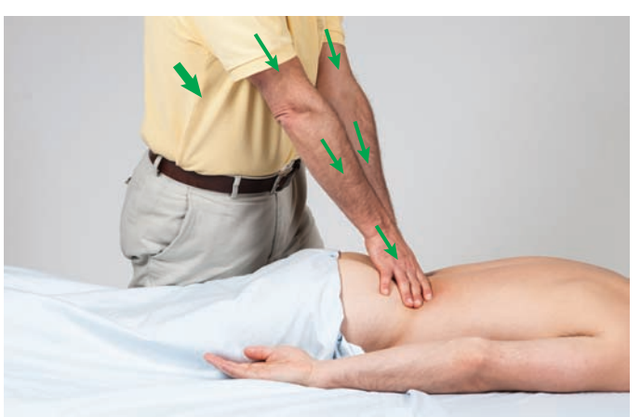


Figure 4-4 Generation of force from the core. When applying pressure into the client, as much of the force as possible should originate from the core body weight.

PERFORMING THE TECHNIQUE

4.1 Positioning the Client

Generating deep pressure with body weight works best when you are directly over the client. This is facilitated by having the client as close to the edge of the table as possible. When working with the client supine, it is easy to ask the client to lie toward one side of the table or the other. But when the client is prone, because of the location of the face cradle, the client usually has to lie at the center of the table. If your table allows for the placement of the face cradle to be changed to be more to the side of the table, then it is helpful to position the client closer to the side so that it is easier to lean over and use your body weight (Fig. 4-5).

4.2 Adjusting Where You Stand

When working the back with the client prone, it is important for the therapist to stand as close as possible to the region of the client that is being worked. This allows the therapist to better position the trunk/core of the body over the client, allowing for optimal use of body weight. When working the pelvis or lumbar region, the therapist should stand directly to the side of the pelvis or lumbar spine of the client (Fig. 4-6A). If the lower thoracic region is worked, then the therapist should adjust the standing position to be at the side of the table next to the lower thoracic spine of the client (Fig. 4-6B).

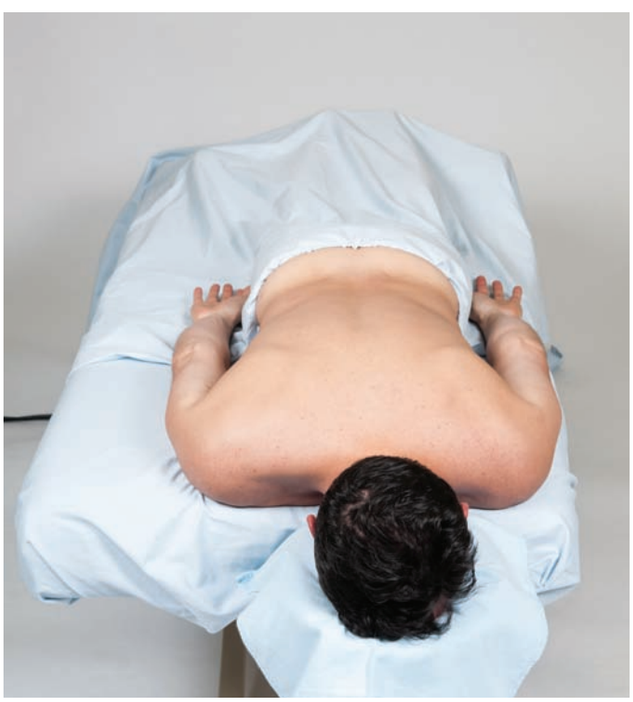


Figure 4-5 If the table allows for the prone client to lie close to the side of the table, it allows for the therapist to more easily position body weight over the client.

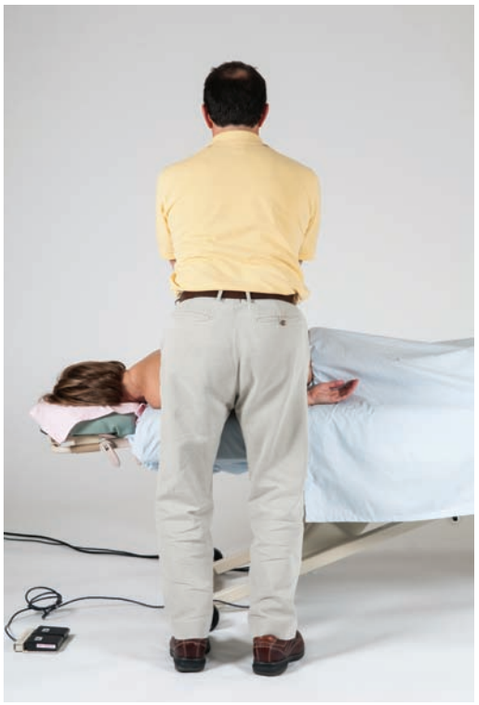
Figure 4-6 Adjust where you stand. When working the lumbosacral region **(A)** or the lower thoracic region **(B)**, the therapist stands at the side of the table, adjacent to the region being worked. When working the upper and middle thoracic region, the therapist stands at the head of the table, between the face cradle and the top of the table **(C)**. Standing above the face cradle leads to poor body mechanics **(D)**.

To work the upper and middle thoracic region, you need to choose which side of the client you want to work and stand on that side of the table, between the face cradle and the top of the table. This allows you to place your core directly over the client's upper thoracic region on that side of the body (Fig. 4-6C). A common error is for the therapist to stand above the face cradle at the head end of the table. Standing here only distances you from the client, causing you to lean over the client to reach the low back; this compromises body mechanics and does not allow for the efficient use of body weight (Fig. 4-6D). Optimally positioning your core requires you to optimally position where you stand.

4.3 Positioning the Feet

View the video "Foot Position and Body Mechanics" online on thePoint.lww.com

Positioning the feet is extremely important because it determines where the core of the body is oriented. If the stroke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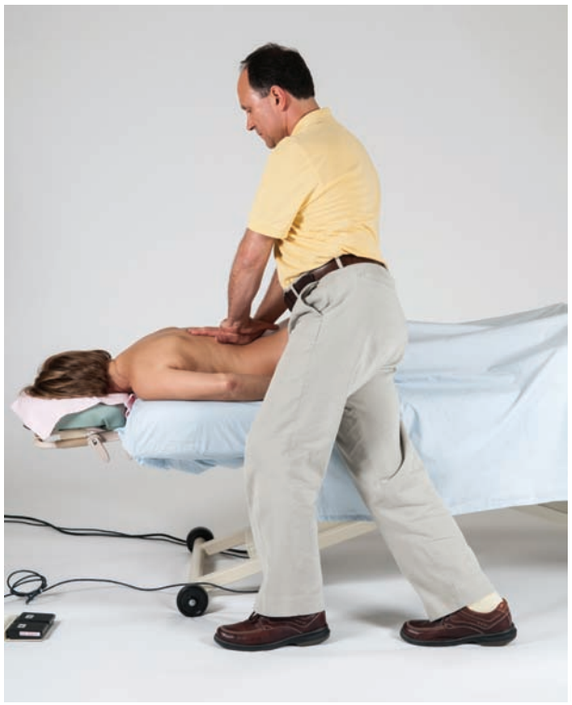
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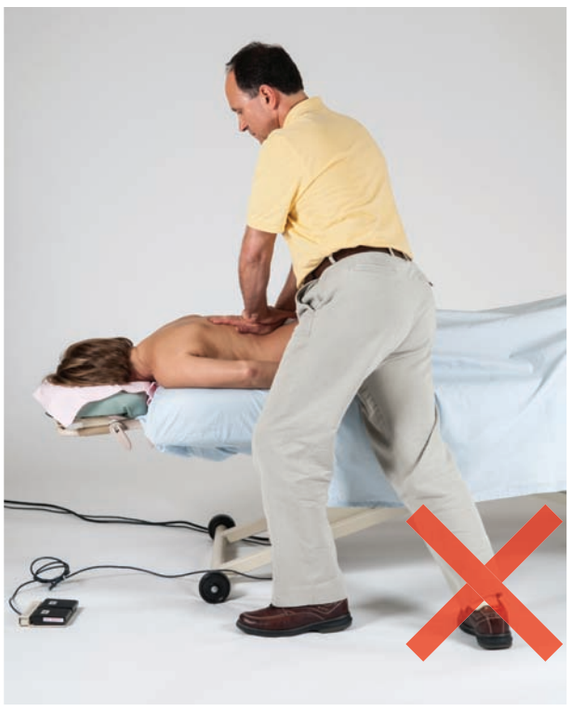
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Figure 4-7 Positioning the feet. **(A)** When working across the client's body, the feet should be pointed across the client's body. **(B)** When working longitudinally up the client's body, the feet should be in a sagittal plane stance, pointed up the client's body. Note that the stance is not too wide, and the rear foot is oriented in the sagittal plane. **(C)** The rear foot should not be oriented perpendicular to the front foot.

is being done across the client's back or pelvis, then the feet should be oriented transversely across the table (Fig. 4-7A). If the stroke is being done up along the client's pelvis and back, then the feet should be oriented longitudinally up along the length of the table (Fig. 4-7B). In effect, the feet should point in the direction of the stroke that is being performed. It is also important to place the feet in a sagittal plane stance, with one foot forward and the other foot in back (as seen in Fig. 4-7B). This provides a stable base when working and also allows for a transfer of weight from the rear foot to the front foot if a stroke is being performed. Also, make sure that the feet are not too far apart. A wide stance may feel more stable but creates a static

position that makes it difficult to transfer weight from one foot to the other. With a narrower stance, it is easier to shift the center of weight of the body from one foot to the other as a stroke is done. Further, it is better to orient the foot in back approximately parallel with the front foot so that the powerful sagittal plane musculature of the rear lower extremity is in line with the stroke and can be used to add to the force of the stroke. Placing the rear foot transversely is a common error and should be avoided because it does not orient the sagittal plane musculature in line with the stroke (Fig. 4-7C).

When working up the client's back from inferior to superior, it is important to orient the core of the body so that it is in line with the stroke, in other words, facing the head end of the table. It is also important to position the trunk as close to being over the client's body as possible. This can be especially challenging if the table is wide. Without climbing on the table, there are two ways to facilitate this.

One way is to begin by standing next to the table, facing the head end (Fig. 4-8A). Now take the outer foot (the one that is farther from the table) and place it behind the inner foot (the one that is closer to the table). This will naturally lean the thighs against the table and place the pelvis over the table so that your trunk is closer to the middle of the table and facing the head of the table in line with your stroke (Fig. 4-8B). If any adjustment of the orientation of the core of your body is necessary, this adjustment should be done by rotating the pelvis at the hip joints and not by rotating the spinal joints. *Note*: This position should be avoided if you have genu valgum of the knee joint in front.

The other way is to begin by again standing next to the table, facing the head end (see Fig. 4-8A). This time, place the outer foot in front of the inner foot (Fig. 4-8C). Now adduct the thigh of the inner foot by moving your inner foot away from the table, allowing your thigh to rest against the side of the table (be sure that there are no hard or sharp projections where you are leaning against the side of the table). This will place your trunk over the table, oriented toward the head of the table, in line with your stroke. As with the previous method just described, if any adjustment of the orientation of the trunk is necessary, this adjustment should be done by rotating the pelvis at the hip joints and not by rotating the spinal joints.

4.4 Choosing the Treatment Contact

When working on the low back of the prone client, there are many **treatment contacts** that can be used to contact the client. From small to large, these contacts range from finger or thumb pad; to palm or ulnar side of the hand, also known as the "**knife-edge**" contact; to fist; and to elbow or forearm (Fig. 4-9). The advantage of smaller contacts is that they allow for more precision both when assessing the client's soft tissues and when working the tissues. The disadvantage is that smaller contacts are less able to deliver deep pressure and are more prone to injury when deeper pressure is being employed. Larger contacts are less precise for assessment and treatment but can better deliver deeper pressure without injury.

Figure 4-8 Positioning the feet to place the core over the client. **(A)** Begin with both feet parallel to the table. **(B)** By placing the "outer foot" behind the "inner foot," the core naturally positions over the table. **(C)** Alternately, the core can be positioned over the table by placing the "outer foot" in front of the "inner foot" and then adducting the thigh of the inner foot by moving the foot away from the table.

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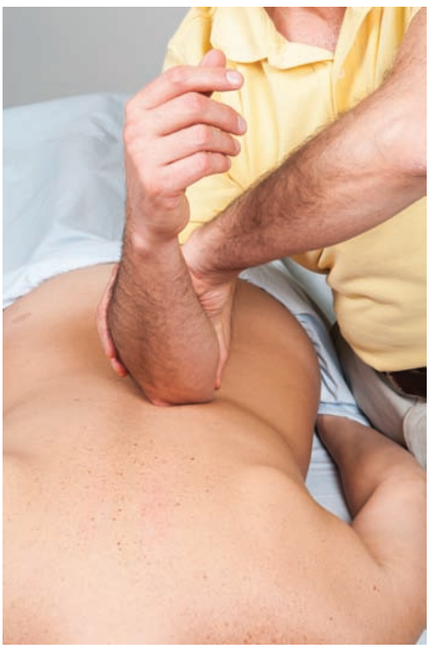
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Figure 4-9 Treatment contacts. **(A)** Thumb pad. **(B)** Finger pads. **(C)** Palm. **(D)** "Knife-edge" (ulnar side of hand). **(E)** Fist. **(F)** Elbow. **(G)** Forearm.

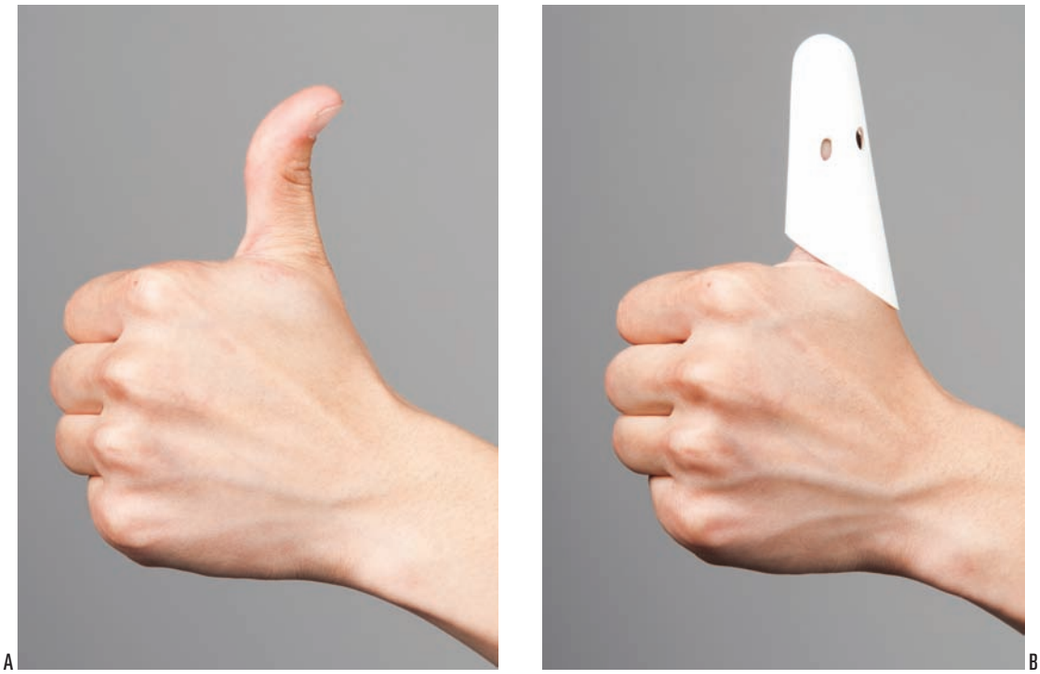


Figure 4-10 Interphalangeal joint of the thumb. **(A)** Hyperextension of the interphalangeal joint of the thumb. **(B)** A brace can be worn to support the thumb's interphalangeal joint. (Reproduced with permission from Muscolino JE. *Advanced Treatment Techniques for the Manual Therapist: Neck*. Baltimore, MD: Lippincott Williams & Wilkins; 2013.)

When thumbs or fingers are used, it is important to contact the client with the pads and not the tips of your thumb or fingers. Applying pressure with the tips of your thumb or fingers will likely feel uncomfortable for the client, especially when you are working deep. To best access the client's tissues with your fingers, you need to change the angulation of the shoulder, elbow, and wrist joints so that the pads naturally meet the client's body. To best access the client's tissues with your thumbs, you slightly extend the thumbs so the pads naturally meet the client's body. However, it is important to not extend the thumb too far or the joints of the thumb will become unstacked and excessive torque will be placed through them. A problem that some therapists have is a hyperextendable interphalangeal joint of the thumb (Fig. 4-10A). If your thumb is mildly hyperextendable, you may be able to do this work with your thumb. There are also supports available that can be worn on the thumb to prevent the interphalangeal joint from collapsing into hyperextension (Fig. 4-10B). But if your thumb is extremely mobile into hyperextension, you may need to employ another contact when doing deep tissue work into the client.

When using the palm as a contact, it is extremely important that the pressure that is exerted into the client is exerted through the base of the palm (heel of the hand), in other words, through the carpal region. If the palm is placed flat on the client and the pressure is exerted through the metacarpals or the fingers, it will usually result in torque being placed into the wrist joint. Figure 4-11 illustrates this concept. In Figure 4-11A, the wrist joint is shown in extension to emphasize that the contact pressure into the client should be at the carpal region. Of course, when actually working on the client, so as not to fatigue the extensors musculature of the forearm, the hand should be relaxed and resting on the client as seen in Figure 4-11B.

Working on the prone client with the palm contact usually requires some bend in the elbow joints so that the wrist joints are not excessively extended. When you lean in with your core to apply pressure into the client, it is extremely important that you stabilize your elbow joint and not allow it to bend any further. The purpose of using your core to lean in is to transfer body weight force through your arm, forearm, and treatment hand contact, and then into the client. If you allow your elbow joint to bend further, even a small amount, you will lose some or all of that core force (Fig. 4-11C, D). This is a common body mechanics error that frustrates many therapists who cannot understand why they are leaning in with their core but the client is still not feeling appreciable pressure.

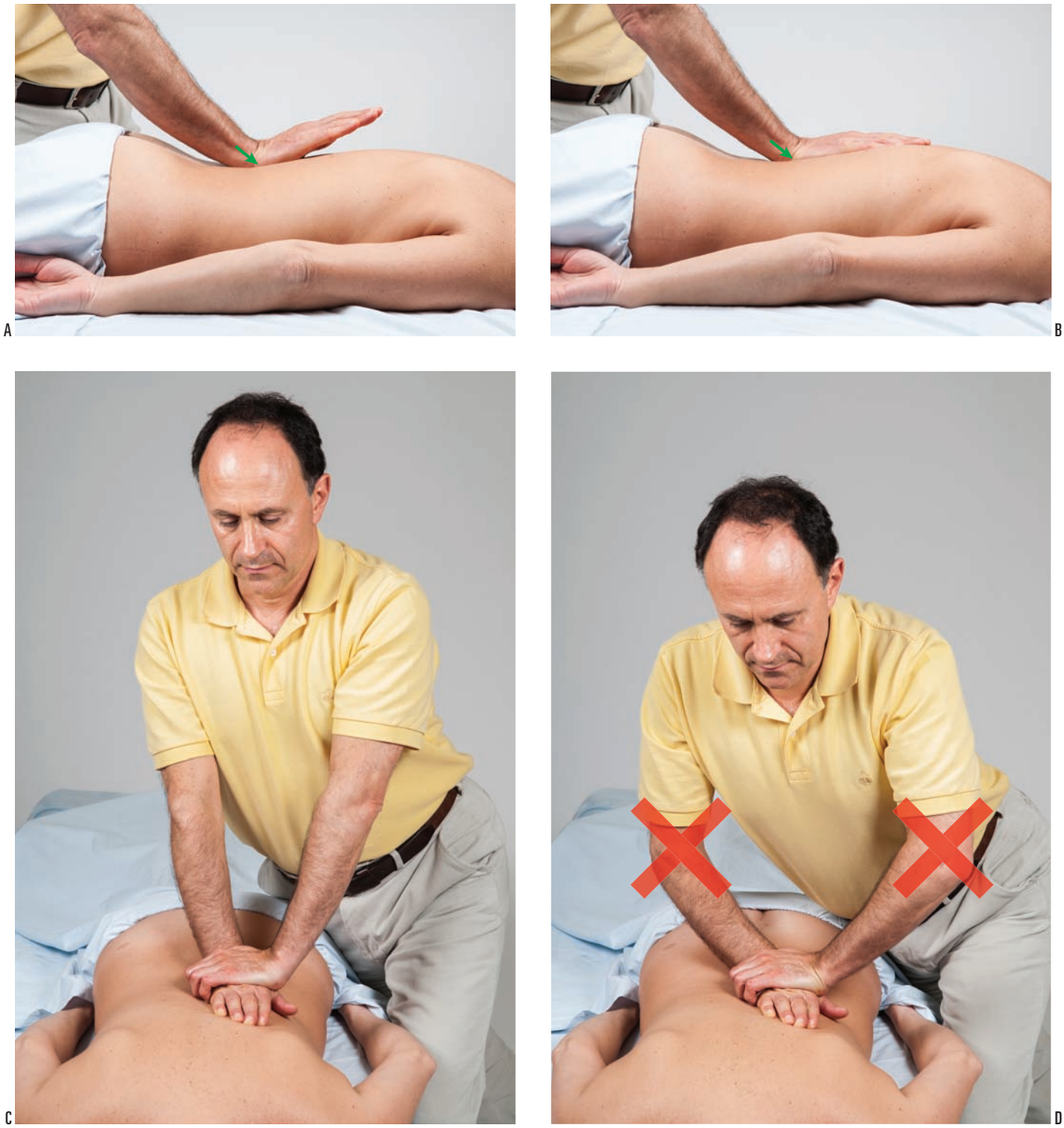


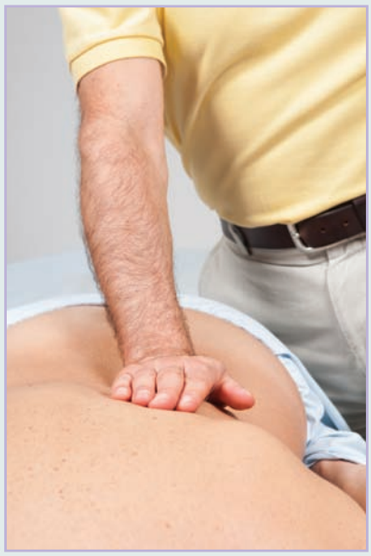
Figure 4-11 Palm treatment contact. **(A)** The palm contact is shown with the hand extended at the wrist joint to illustrate that the pressure should enter the client through the base of the palm. **(B)** When actually working on a client with the palm contact, the hand should be relaxed and resting on the client. **(C, D)** When using core body weight to press into the client with a palm contact, it is important to not let the elbow joints bend further as pressure is applied.

4.3 THERAPIST TIP

Transitioning from Palm to Knife-Edge and from Elbow to Forearm

Instead of viewing the palm and knife-edge (ulnar side of hand) as two separate contacts, they can be viewed as the two opposing ends of a continuous spectrum of width, with the palm being the widest and the knife-edge being the narrowest. When working on the client's tissues, if a wide contact is desired, such as when working on the lumbar paraspinal musculature, the palm is best. As you work up the client's back and the paraspinal musculature gradually narrows, it is advantageous to commensurately narrow your contact by gradually supinating the forearm of the contact hand. Supinating the forearm will change the contact surface from being a full flat palm **(Fig. A)** to being the hypothenar eminence of the hand **(Fig. B)**; if the forearm is further supinated, the knife-edge contact will be attained **(Fig. C)**. Depending on the width of the tissue being worked, the appropriate contact from the full flat palm to the knife-edge can be chosen.

Similarly, the elbow and forearm contacts can be viewed as opposing ends of a continuous spectrum. When more pointed pressure is desired, the olecranon process of the elbow can be used **(Fig. D)**. If a slightly wider contact is desired, the elbow joint can be partially extended so that you are contacting the client with the elbow and proximal forearm **(Fig. E)**; if you further extend the elbow joint, you will be contacting the client with the full flat forearm, which is the widest contact **(Fig. F)**.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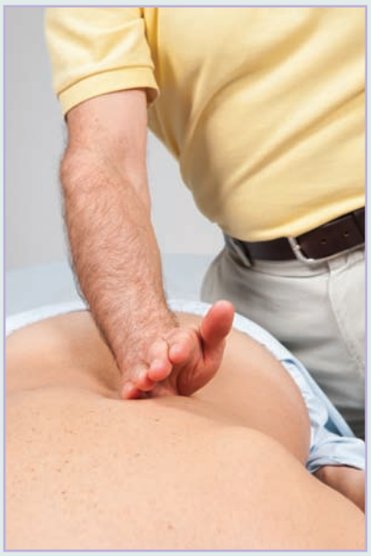
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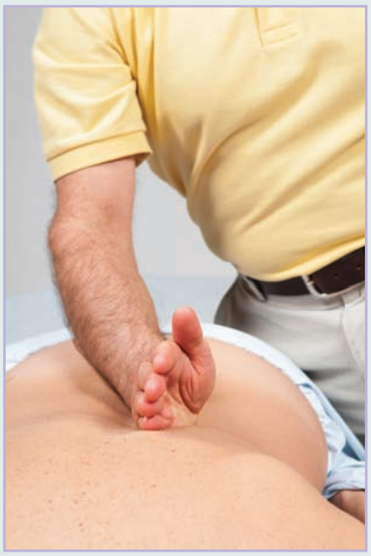
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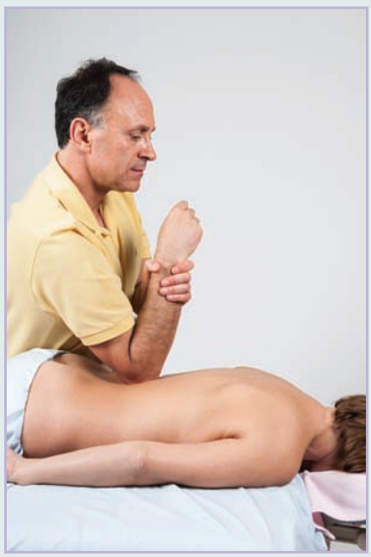
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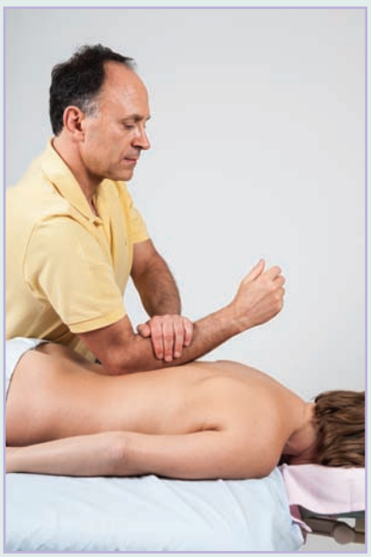
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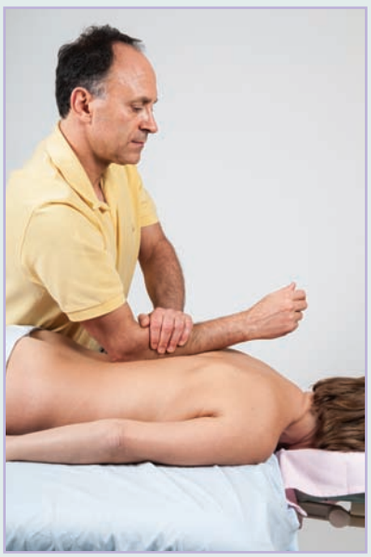
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4.4 THERAPIST TIP

Alternating Contacts

Even perfect body mechanics cannot eliminate all physical stress to your body when doing massage. Ideal body mechanics merely minimize the stress. For this reason, when doing massage, it is wise to alternate which contact you use during a session. Given the mass of musculature in the low back and pelvis, it is wise to use larger contacts as much as possible. A good strategy is to begin with smaller contacts such as thumb or finger pads to assess and begin treatment of the lumbar region or pelvis and then switch to a larger contact such as the palm or elbow to deliver deeper pressure.

4.5 Bracing/Supporting Your Treatment Contact

When employing deep pressure, it is extremely important to brace and support the treatment contact that meets the client. This both protects the joints and musculature of the treatment contact as well as allows for the brace hand to contribute to the generation of pressure, thereby increasing the depth of pressure. Bracing the contact means that the two hands must work together instead of each contacting the client separately. Less area of the client's body will be covered this way, but stronger and more efficient pressure will be created at the area that is being worked, which is more important when deep work is needed.

When bracing the contact, the precise location of the brace on the contact is extremely important. The brace should be placed on the contact directly over where the pressure is being exerted into the client. This is where the brace should be to effectively add to the pressure; it is also where the contact will be physically stressed and needs the bracing support to protect it from injury. For example, if a thumb contact is being used, the bracing should be over the distal phalanx of the contact thumb as seen in Figure 4-12A. When the thumb pad presses into the client, the client's body pushes back into the therapist's thumb, tending to hyperextend the thumb at the interphalangeal joint. Placing the brace thumb over the proximal phalanx of the contact thumb or next to the contact thumb as seen in Figures 4-12B and 4-12C will not effectively add to the pressure and will not protect the interphalangeal joint from hyperextension and eventual injury. Although it is common to use the thumb of the other hand as the brace to support the thumb contact, it is not the only body part that can be used as a brace. Any body part that can exert pressure on the distal phalanx of the contact thumb can be used as a brace (see Fig. 4-3). What is important is that the location where pressure is exerted into the client by the contact is braced and supported.

Similar to bracing the thumb pad contact, bracing the finger pads contact should be done over the distal phalanges of the fingers that are contacting the client, usually the index, middle, and ring fingers (see Fig. 4-9B). Finger pads of the other hand work well to brace the finger pads contact.

Proper bracing of the palm contact is extremely important. Because pressure when using the palm contact is exerted through the base of the palm (carpal region), the

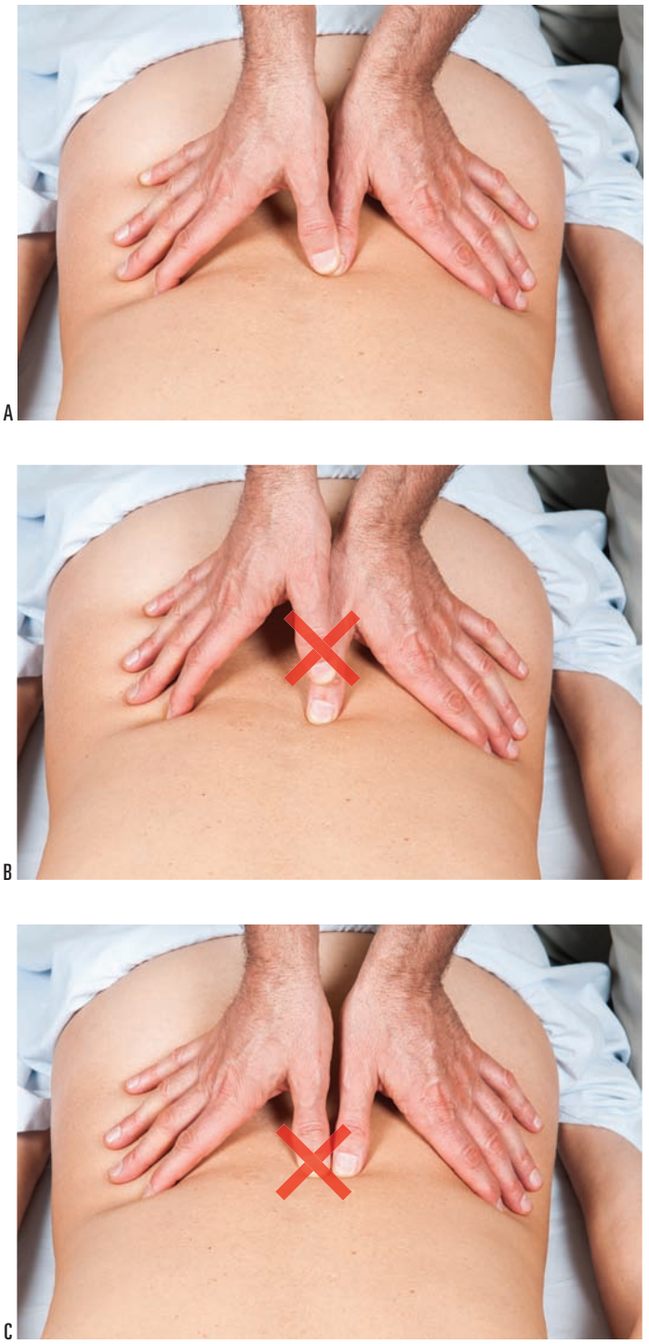


Figure 4-12 Bracing/supporting the thumb pad contact. **(A)** The thumb pad of the other hand braces directly on the distal phalanx of the treatment contact thumb. **(B, C)** Bracing on the proximal phalanx or directly adjacent to the distal phalanx of the treatment contact thumb is not an effective brace.

bracing needs to be placed over the carpal region of the contact hand. Unfortunately, therapists often incorrectly place the brace too far distal on the hand. A common brace for the palm contact is to use the other palm. When using this brace, be sure to place the carpal region of the brace hand directly over the carpal region of the contact hand. In Figure 4-13A, both hands are being held in extension at the wrist joint to clearly illustrate that the pressure from the brace hand is being exerted directly over the carpal contact on the client. Of course, when actually working on a client, it is important to let the hands relax as seen in Figure 4-13B so that the extensor musculature of the forearms is not fatigued.

Another brace for the palm contact that is not used as often but offers a unique advantage over the palm brace is

Figure 4-13 Bracing the palm treatment contact. The palm of the other hand is shown as the brace in **A** and **B**. In **A**, both hands are shown extended at the wrist joint to illustrate that the pressure of the brace should be through the carpal region of the palm contact. When actually working on the client, the hands should be relaxed as seen in **B**. The thumb web of the other hand is shown as the brace in **C** and **D**. In **C**, both hands are shown lifted to illustrate that the pressure of the brace should be through the carpal region of the palm treatment contact. When actually working on the client, the hands should be relaxed as seen in **D**.

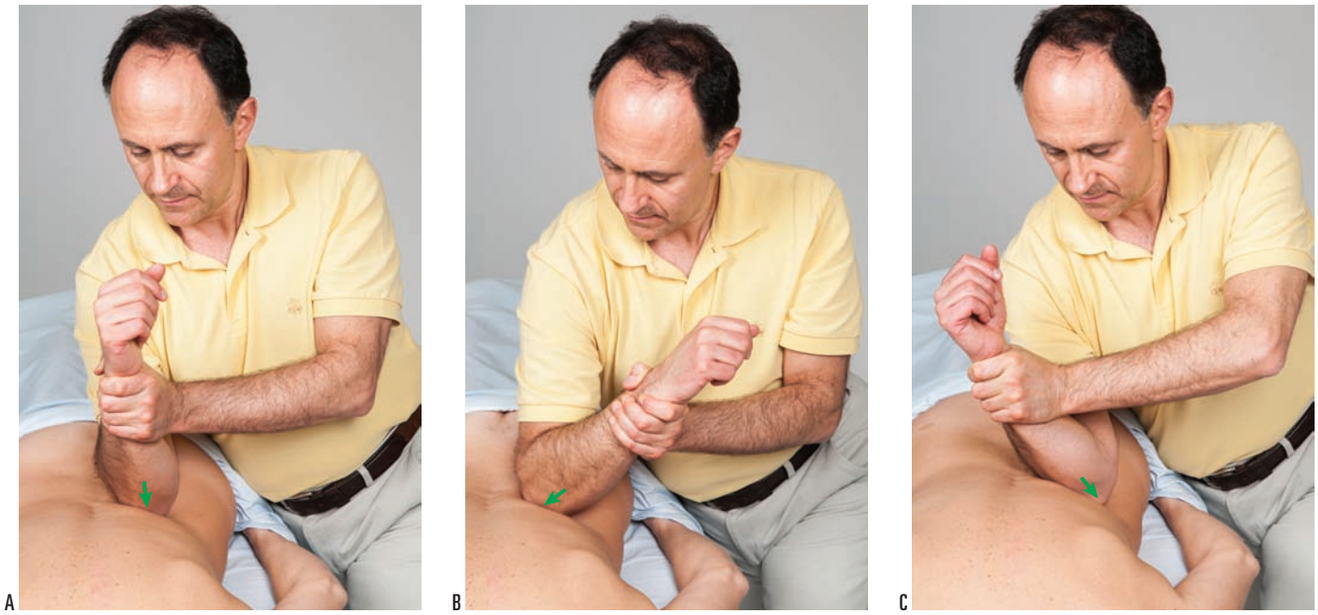


Figure 4-14 Bracing the elbow contact. Bracing the elbow treatment contact by holding onto the distal forearm allows pivoting of the elbow, which can change the angulation of pressure into the client.

the thumb web. Similar to the illustration of the palm brace, Figure 4-13C illustrates the thumb web brace position with the hands lifted away from the client so that the exact placement and pressure can be easily seen; when working on the client, be sure to let the hands relax as seen in Figure 4-13D. The advantage of the thumb web brace is that it allows for an easy transition when changing from a full flat palm contact to the knife-edge (ulnar side of hand) contact (see Figs. B and C in Therapist Tip 4.3). As the forearm supinates to transition from the full flat palm contact to the knife-edge contact, the thumb web brace can be easily altered to compensate. This allows for the pressure of the brace to always be directly over the contact on the client. The palm brace may work well when the contact palm is flat against the client but is difficult to use when the contact transitions to the hypothenar eminence or the knife-edge.

When using a closed fist to contact the client, the wrist joint can be braced and stabilized with the contact hand (see Fig. 4-9E). Even larger and more powerful than the fist contact are the elbow and forearm contacts. Even though the elbow and forearm contacts are the largest and most efficient for producing deep pressure, use of these contacts can be physically stressful on the shoulder girdle musculature on the contact side because this musculature must function to stabilize the shoulder girdle as pressure is exerted into the client. Bracing that is done by the other side of the body can help to relieve the contact-side shoulder girdle musculature from having to work so hard. Bracing the elbow contact can be done by pressing down on the anterior surface of the elbow joint (see Fig. 4-9F) or by holding onto the distal forearm (Fig. 4-14A). Bracing and pressing down on the anterior elbow region is very effective at adding pressure into the client. Additional pressure can also be exerted when grasping the distal forearm; however, this brace position is especially effective at pivoting the forearm at the elbow joint so that the angulation of pressure into the client can be varied (Fig. 4-14B, C). When working with the forearm contact, bracing is accomplished by holding onto and pressing down onto the forearm (see Fig. 4-9G).

4.6 Stacking the Upper Extremity Joints

Stacked joints are aligned in a straight line; in other words, the joints are extended as in anatomic position. This allows for the force from your core to travel through your upper extremity and into the client with little or no loss of strength. When working on the prone client's low back and pelvis with the thumb or finger pads as the contact, your elbow, wrist, and thumb/finger joints should be stacked (Fig. 4-15A, B). When using the fist, the elbow and wrist joints should be stacked (Fig. 4-15C). The palm contact can be problematic because if the elbow joints are fully stacked/extended, the wrist joints will be extended to nearly 90 degrees (Fig. 4-15D). This can increase torque and perhaps lead to wrist injury. For this reason, it is advisable to slightly bend the elbow joints to protect the wrist joints (Fig. 4-15E). This will require more muscular effort because the triceps brachii musculature will be required to isometrically contract when exerting pressure; but triceps effort is preferable to potential wrist injury.

Figure 4-15 Stacking the upper extremity joints when working on the client **(A–C)**. Upper extremity joints stacked with the thumb pad, finger pads, and fist treatment contacts, respectively. **(D)** If the elbow joints are fully extended/stacked when employing the palm contact, the wrist joints may be excessively torqued and injured. **(E)** Partially bending the elbow joints allows the wrist joints to be in a safer posture.

4.7 Aligning Your Core with the Stroke

Now that you have positioned the client on the table, adjusted where and how you are standing, braced your contact, and stacked your joints, it is important to make sure that your core is behind and in line with your stroke. This is accomplished by laterally rotating your arms at the glenohumeral joints so that your elbows are positioned in front of your core (Fig. 4-16A). Keeping the elbows in is an important aspect of strong and efficient body mechanics that allows you to work from the core. It is not necessary for the elbows to be all the way at the midline of the body, but they should be within the width of your shoulders. If the thumb or finger pads are being used as the contact, then the (upper) arms can be placed against the core/trunk. This will place the elbows just inside (and usually slightly above) your anterior superior iliac spine (ASIS) (Fig. 4-16B).

A

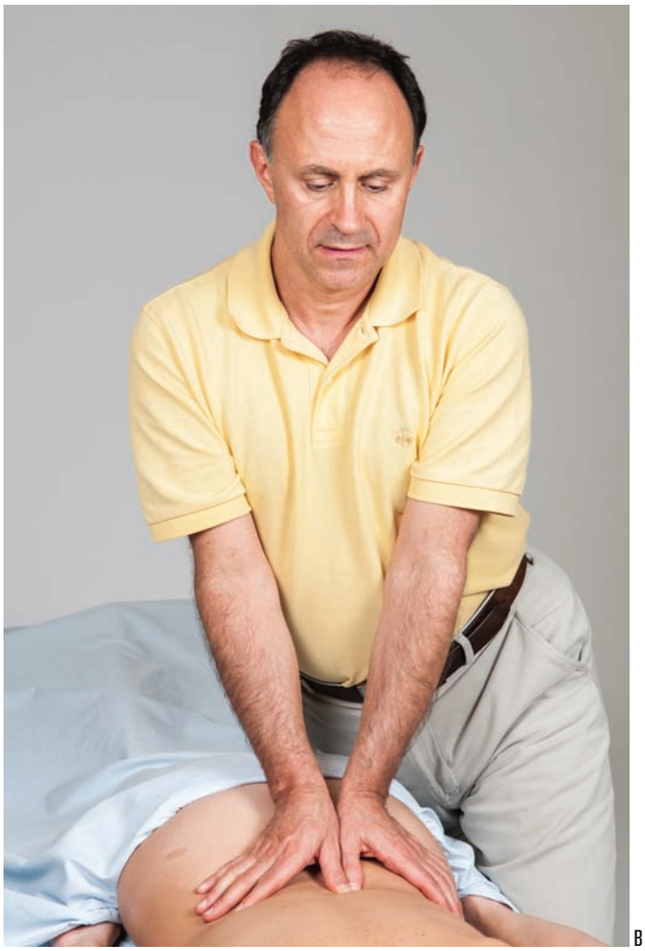

B

Figure 4-16 Place your upper extremities in front of your core. **(A)** Laterally rotating the arms at the glenohumeral joints helps to keep your elbows in front of your core. **(B)** The (upper) arms can be placed against the core for further support.

As stated, bringing the elbow in and placing the (upper) arm against the core can be extremely efficient for originating power from the core and transferring core strength through the forearm into the client. However, the elbow only needs to be far enough in to be against your core. Do not exaggerate this position and bring the elbow too far in toward the center of your body (see accompanying figure). Doing this would place an outward (valgus) torque force at the medial side of your elbow joint and might result in stress and damage to your flexor musculature common belly/tendon at the medial epicondyle of the humerus, resulting in "golfer's elbow," also known as medial epicondylitis or medial epicondylosis.

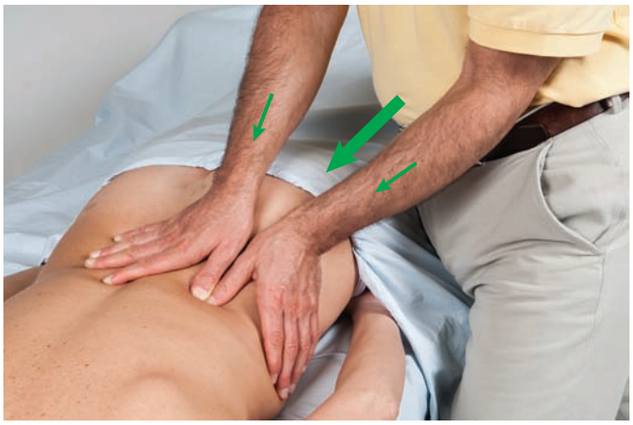


Figure 4-17 Generation of force from the core. Movement of the treatment contact should originate from the core of the therapist's body. The orientation of the core can be visualized by imagining a line that emanates from your belly button.

When performing the stroke, make sure that whatever motion you create with your core is transferred directly into your upper extremity. In this manner, your core and upper extremity should be one fixed unit so that for each millimeter your core moves, your upper extremity moves the exact same amount, and your hand presses into the client. To make sure that your core is in line with the stroke, you can visually draw a line in the direction that your belly button points and compare it with the line of your stroke, which travels through your forearm (Fig. 4-17). With your core in line with the stroke, it is possible to generate the force of the stroke by using your body weight and larger muscles of the core instead of the smaller muscles of the thumb, hand, forearm, or even shoulder.

4.8 Applying Pressure Perpendicularly

Maximal pressure is achieved if the angle of your force into the client is perpendicular to the contour of the region being worked. To apply this concept of working perpendicularly, the client's back and pelvis can be divided into separate regions based on the curve of the region and therefore where the contour of each region is oriented. Because these regions are all on the posterior side of the body, they are all oriented posteriorly. Therefore, it is important to place as much of your core (posteriorly) above the client as possible so that you are working vertically down (from posterior to anterior) into the client. However, it is important to also determine whether the contour of the region you are working is oriented purely posteriorly, posteriorly and superiorly, or posteriorly and inferiorly. The orientation for each of these regions has been shown in Figure 4-18. In each case, the contour has been outlined, and an arrow that is perpendicular to that contour has also been drawn in. These arrows represent the perpendicular application of force you need to work the client most efficiently.

Figure 4-18 Contours of the client's back and pelvis regions. The contours of the posterior surface of the client's body, and perpendicular lines to these contours illustrating ideal lines of force, have been drawn.

The upper thoracic and lumbosacral regions are oriented posteriorly and superiorly; therefore, working these regions perpendicularly is best accomplished not only by placing your core above (posterior to) the client but also standing slightly superior to the region (Figs. 4-19A, E). The thoracolumbar and lower gluteal regions are oriented posteriorly and inferiorly; therefore, working these regions perpendicularly is best accomplished by placing your core above (posterior to) the client and standing slightly inferior to the region (Figs. 4-19C, G). The midthoracic, midlumbar, and midgluteal regions are oriented purely posteriorly; therefore, working these regions perpendicularly is best accomplished by standing directly above the region to be worked (Figs. 4-19B, D, F).

If the client is prone and you are working more laterally on the body, then the contour of the region being worked is oriented more laterally. This means that the contour of the region being worked is oriented more vertically, so you need to approach the region with your force oriented more horizontally.

4.9 Dropping Down with Your Core

As stated earlier, force can be generated in two ways: by taking advantage of body weight via the force of gravity or by using muscle contraction. Because gravity is free and takes no effort, it should always be utilized as much as possible. Gravity only goes down, so to take advantage of it, you need to position your body above the client. You can then use your body weight by dropping down into the client. To position your body above the client, the table needs to be very low. The lower the table, the more of your body that you can position above the client, and therefore the more body weight you can use. With your core positioned above the client and in line with your stroke, you can generate deep pressure by dropping down into the client. This is accomplished by dorsiflexing the ankle joints and flexing the knee and hip joints (Fig. 4-20).

4.10 Using Larger Muscles

Dropping down and leaning into the posterior surface of the client with your core primarily involves using your body weight. However, it is often necessary to also contract

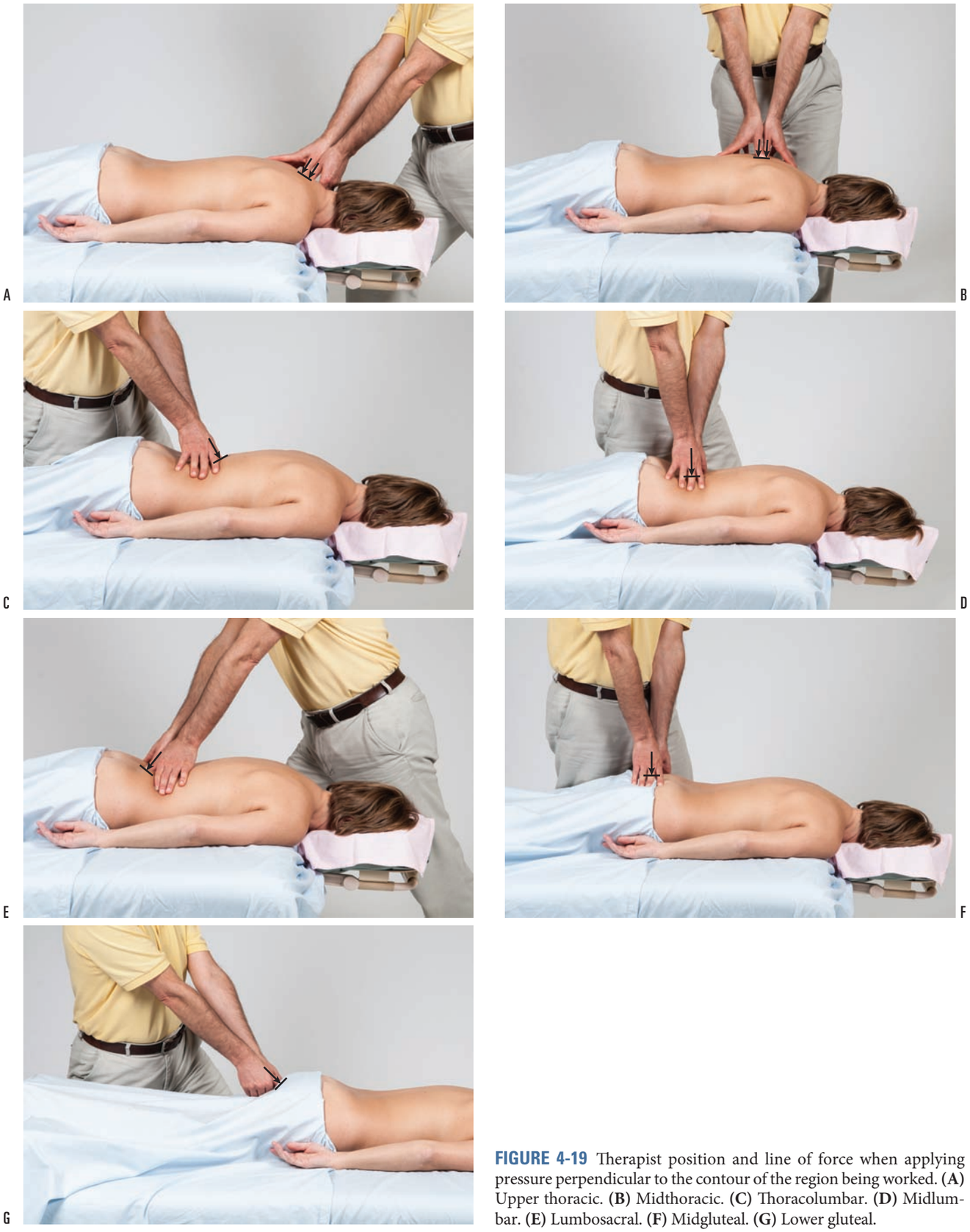
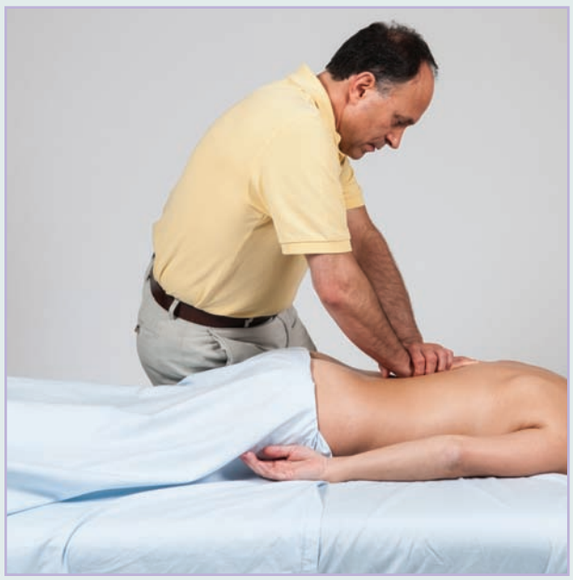


FIGURE 4-19 Therapist position and line of force when applying pressure perpendicular to the contour of the region being worked. **(A)** Upper thoracic. **(B)** Midthoracic. **(C)** Thoracolumbar. **(D)** Midlumbar. **(E)** Lumbosacral. **(F)** Midgluteal. **(G)** Lower gluteal.

4.5 THERAPIST TIP

The Posture of the Back

When standing and working over the client, there are three possible postures of the back: **stooped back**, **inclined back**, and **vertical back**. A stooped posture **(Fig. A)** is the worst of the three postures because it places the spine in an unstable open-packed position and the back is imbalanced anteriorly, requiring posterior extensor musculature to have to isometrically contract to keep the therapist from falling anteriorly. The inclined posture **(Fig. B)** is better than the stooped posture because the spine is extended and in a more stable closed-packed position; however, the back is still imbalanced anteriorly, requiring isometric contraction of the extensor musculature. The best posture of the back is the vertical posture **(Fig. C)**. The spine is extended and in a stable closed-packed position, and it is balanced over the trunk, minimizing the need for spinal extensor musculature to contract. Whenever possible, the therapist should strive to maintain a vertical back posture.



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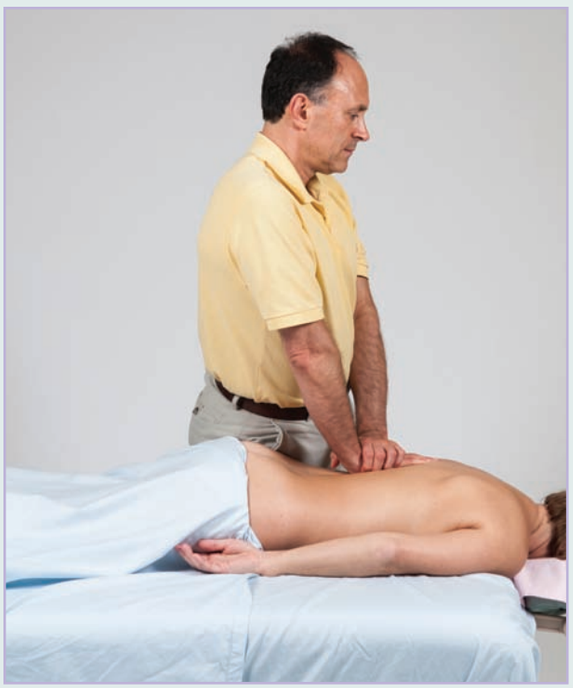
B



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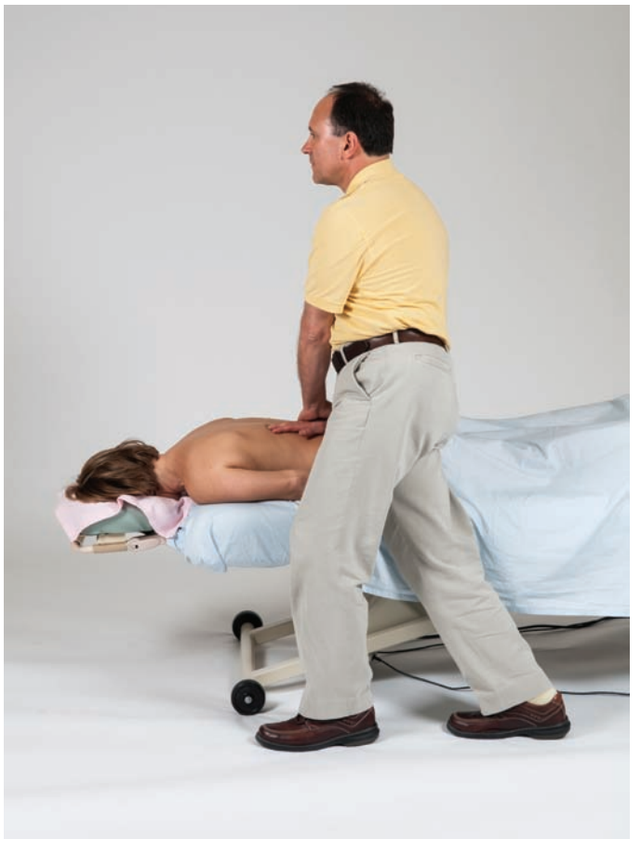

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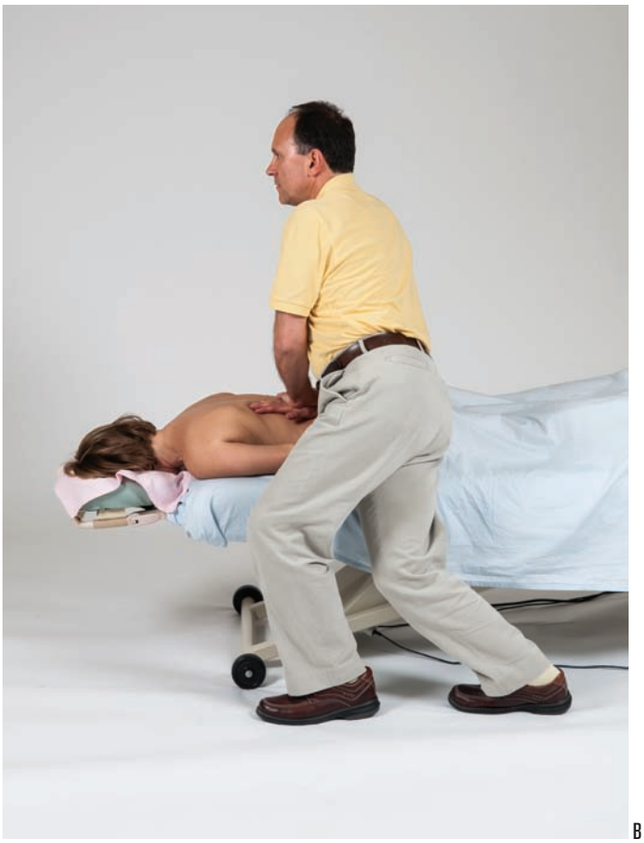


B

Figure 4-20 Dropping down into the client with body weight. Core body weight is transferred into the client by dorsiflexing the ankle joints and flexing the knee and hip joints. **(A)** Starting position. **(B)** End position.

4.6 THERAPIST TIP

Using Body Weight

An excellent demonstration of the force that can be generated by using body weight is to lean down onto a bathroom weight scale that is placed on a table that is positioned as various heights. Do not try to exert any force with muscle contraction; simply relax and lean into the scale with your body weight and notice the force that you generate at each height (see accompanying figures). In **Figure A**, the top of the table is at the height of the therapist's knee; in **Figure B**, it is at the height of the therapist's midthigh. The lower the table is positioned, the greater is your force, with no muscular effort.

A

B

4.7 THERAPIST TIP

Letting the Shoulder Girdles Rise

When the table height is too high, it is common for the therapist to have to contract musculature to elevate the shoulder girdles when working on the client. This is considered to be poor posture because it stresses the body by requiring scapular elevation musculature such as the upper trapezius and levator scapulae to overwork by isometrically contracting. For this reason, a general rule of body mechanics is that the shoulder girdles should be relaxed and down. However, there are times when it is fine to have the shoulder girdles elevated. If you are working with deep pressure down into the client with the table adequately low, as you press into the client, the client's body presses back up into your contacts, causing your shoulder girdles to passively rise. In these cases, it is less effortful/stressful for your body to simply let the shoulder girdles rise than to isometrically contract scapular depression musculature to hold them down. The essence of good posture is minimizing stress to the tissues. Having the shoulder girdles relaxed and up is less stressful than contracting to hold them down.

muscles to add to the pressure generated from body weight. When choosing which muscles to contract and use, less effort is expended if you work with the larger, stronger proximal muscles instead of the smaller distal ones. In ascending order of size and strength, the muscles of the upper extremity and axial body that can be used are the muscles of the thumb/fingers, wrist joint, elbow and radioulnar joints, glenohumeral joint, shoulder girdle, and finally the muscles of the core, which comprise the trunk and pelvis. Choosing the larger proximal muscles of your core will decrease fatigue and the possibility of injury.

4.11 Pushing Off with the Lower Extremity

If the surface contour of the client that you are working is oriented somewhat laterally (e.g., the quadratus lumborum or lateral paraspinal musculature), then you need to approach the client more horizontally. A horizontal line of force does not allow for the use of body weight, so muscle contraction is necessary. Less effort is exerted for the same pressure if larger muscles are used. When working somewhat horizontally, it is wise to take advantage of the large musculature of the lower extremity. To do this, the feet should be in a sagittal plane stance, with the rear foot oriented somewhat parallel with the front foot. This allows for the best use of large musculature oriented in the sagittal plane. (If the rear foot is turned outward, as therapists often do, the sagittal plane musculature will not be in line with the stroke, and power will be lost.) Now use the lower extremity in back to push off the floor and into the client. Many therapists are excellent at using the plantarflexor muscles of the ankle joint but neglect to take advantage of the large musculature of the knee and hip joints. To use these massive muscles, it is important to first assume a somewhat crouched position by flexing the knee and hip joints. Then when you push off into the client by plantarflexing the ankle joint, you simultaneously extend the knee joint with the quadriceps femoris musculature and extend the hip joint with gluteal musculature and hamstrings. To make sure that you do not rise up as you push off, it is necessary to simultaneously dorsiflex the ankle joint and flex the knee and hip joints of the lower extremity that is in front. This allows you to push off forward and also slightly downward into the client (Fig. 4-21).

4.8 THERAPIST TIP

Pushing a Box

A common error in body mechanics when pushing off with the lower extremity in back is for the therapist to rise up as he pushes off. This is counterproductive to generating pressure into the client because rising upward would move the core of your body away from the client. Your client is in front of you and usually a bit lower. Therefore, it is important to learn to push off with the lower extremity in back and push forward and somewhat downward.

To help get the hang of this motion, it can be useful to picture yourself pushing a large box that is on the floor. When you prepare to push the box, you intuitively crouch down and dorsiflex the ankle joint and flex the knee and hip joints of the lower extremity in back. Then as you push the box, you naturally plantarflex the ankle joint and extend the knee and hip joints in back as you dorsiflex the ankle joint and flex the knee and hip joints in front. As you push the box forward, you would not rise upward. Rather, you would keep the pelvis more level. Practice this when standing; once it feels natural, try to reproduce this motion when working on a client. If any alteration is made, actually drop your pelvis as you push forward so that you push forward and downward into the client.

4.12 Engaging the Tissues

Deep tissue work requires that you engage the client's tissues. This means that you press in until you feel resistance to your pressure. Once resistance is felt, further pressure then needs to be applied for therapeutic deep tissue work to be done. It is important to stay within your client's tolerance and to increase your pressure slowly. For deep tissue work to be successful, however, it is necessary to apply sufficient force for your pressure to translate to the deep tissue layers.

Figure 4-21 Generating pressure into the client by pushing off with the lower extremity in back. **(A)** Starting position. **(B)** Pushing off involves plantarflexing the ankle joint, extending the knee joint, and extending the hip joint.

4.9 THERAPIST TIP

Depth of Work

The depth of deep tissue work should always be within the client's range of tolerance. It is never beneficial to force deep pressure on a client or to work beyond the client's tolerance. If this is done, the client may tighten the musculature that you are working on either in response to the pain or in anticipation of pain. Given that one of the principle purposes of massage is to reduce muscle tone, the purpose of the deep pressure is defeated the moment the client tightens up the target muscles being worked on. Further, deep pressure should never be performed in a sudden or abrupt manner. Rather, the client should always be warmed up first with lighter and then moderate depth massage before introducing deep pressure. Even then, it is important to apply deep pressure by slowly and smoothly sinking into the client's musculature. When the client is properly prepared and the deep work is performed appropriately, clients are often comfortable with very strong pressure.

4.13 Focusing the Client's Breathing

It can often be helpful to have the client focus on his or her breathing as the work is done. Ask the client to take in a full breath; as the client relaxes and exhales, slowly begin to sink into the client's tissues. If very deep work is needed, this procedure may be repeated two or three times before the full depth of the pressure is reached.

4.14 Transitioning from Sustained Compression to Short Deep Stroking Massage

All of the guidelines presented thus far are meant to perfect your body mechanics when applying sustained compression into any one spot on the client. This in no way is meant to advocate sustained compression as the treatment technique of choice. It is simply easier to learn how to optimize your body mechanics by focusing on one area of the client at a time. To transition from sustained pressure in one static location to **deep stroking massage**, in which your pressure is moved from one point to another, and maintain proper body mechanics while doing this, it is necessary to glide your treatment contact from the initial point of contact to the adjacent

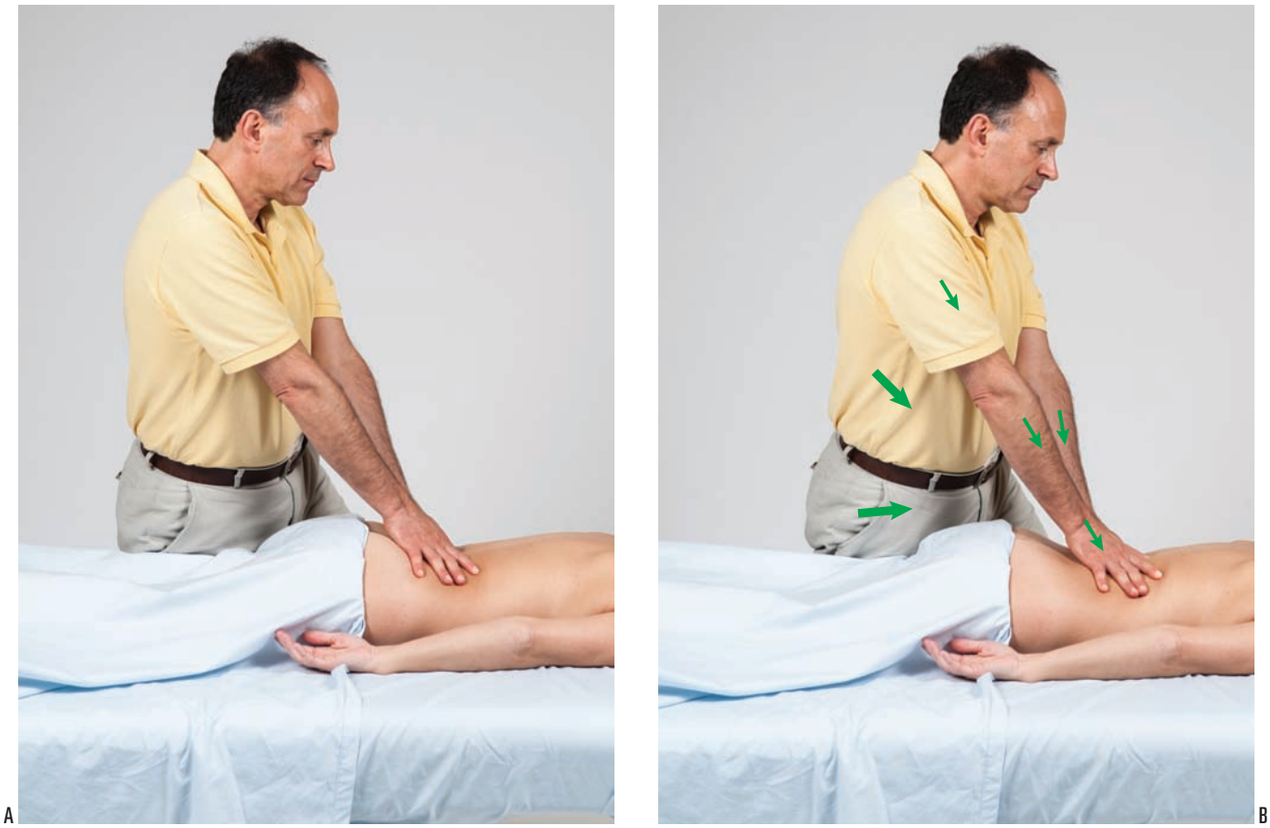


Figure 4-22 Transitioning from static compression to a short stroke. **(A)** Starting position. **(B)** Movement of the stroke should originate from the core.

region. This motion should not come from moving your contact (e.g., your thumb or fingers) but must originate from your core or lower extremities. With stacked joints, this core motion will translate into motion of your treatment contact along the client (Fig. 4-22A, B). However, it is important to keep these strokes short because the farther you reach from your initial point of contact, the more difficult it is to maintain proper body mechanics. Short, deep strokes between 1 and 6 inches in length allow you to preserve optimal body mechanics.

4.1 PRACTICAL APPLICATION

Treating Myofascial Trigger Points

A **trigger point (TrP)** is a small focal area of tenderness that can refer pain or other symptoms to a distant site. When a TrP occurs in muscular tissue, it involves a small area of contraction that is tender and can refer; this is called a **myofascial TrP**, or, in lay terms, a *muscle knot*. Bodywork treatment for TrPs has classically been done with techniques known as **ischemic compression** and **sustained compression**. In ischemic and sustained compression, pressure is applied directly to the TrP and is held for a sustained period of time, usually 10 seconds or more (generally, greater pressure is applied with ischemic compression than sustained compression). However, in recent years, many authorities on TrPs (including Simons and Travell in *Myofascial Pain and Dysfunction: The Trigger Point Manual*, 2nd ed. *Vol 1: Upper Half of Body* [Lippincott Williams & Wilkins, 1999] and Davies in *The Trigger Point Therapy Workbook: Your Self-treatment Guide for Pain Relief* [New Harbinger Publications, 2004]) have advocated deep stroking massage instead of sustained pressure techniques. Not only is deep stroking usually more comfortable for the client and easier on your thumbs, it seems to do a better job of increasing local arterial circulation, which is needed to truly heal a TrP. Strokes need to be only approximately an inch or two in length and are usually repeated 30 to 60 times in 1 minute. Pressure should be deep, but because the pressure is not constantly held on the TrP, it is usually better tolerated by the client. If you have not yet tried deep stroking massage for the treatment of TrPs, give this approach a try and see how your results compare with those of sustained compression techniques.

Figure 4-23 Body mechanics for a long stroke. **(A)** Ideal body mechanics at the beginning of a long stroke. **(B)** If the feet remain planted in the same position as a long stroke is performed, body mechanics will suffer by the end of the stroke.

4.15 Transitioning to Long, Deep Strokes

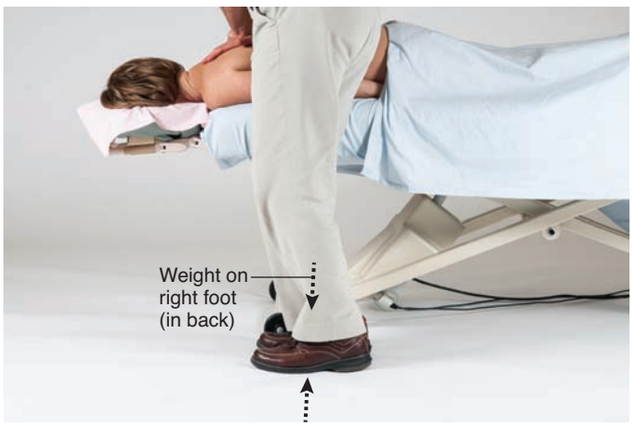
Good body mechanics are performed by positioning your body as close to the region being worked as possible. This allows you to place your core over the area where pressure is being applied so that body weight can be used (Fig. 4-23A). However, if ideal body positioning and mechanics are used to contact the client at one point on her body and then you remain with your feet planted in the same spot as a long stroke is performed, it is inevitable that your body mechanics will suffer by the end of the stroke. Your trunk will no longer be vertical and positioned over the client's body, you will not have the ability to efficiently generate strength, and you will be in an imbalanced position that requires isometric contraction by back musculature to keep you from falling (Fig. 4-23B). For these reasons, whenever you want to perform a long, deep stroke up the client's back, it is necessary to move your feet as the stroke is performed.

Illustrating this on the client's left side, you begin the stroke with a sagittal stance and your weight balanced over the right (rear) foot (Fig. 4-24A). As you gradually move up the client's back with the stroke, you gradually transfer your weight onto your left (front) foot (Fig. 4-24B). You now reposition your right foot to be next to the left foot and then shift your weight onto the right foot (Fig. 4-24C). You can now reposition your left foot to be farther in front (Fig. 4-24D). As you continue to gradually move up the client's back with the stroke, you repeat this process, again gradually shifting your weight from the right (rear) foot onto the left (front) foot. If you perform a very long stroke from the client's lumbosacral spine to the top of the thoracic spine, this protocol will usually need to be done approximately two to three times. This protocol allows your core to always be over the region being worked so that you can always take advantage of body weight.

When you reach the top of the client's trunk, if you want to complete the stroke without an interruption in the application of deep pressure, you need to make sure that your core is superior to the client's trunk (just lateral to the face cradle) and you drop/lean backward with your body weight against the top of the client's back/shoulder (see Fig. 4-24D). Whereas for the entire length of the stroke, you were leaning your core body weight forward and down onto the front foot, at the end, you need to lean your core body weight backward and down onto the rear foot. This allows for the stroke to be completed without having to reorient your body 180 degrees around to face the foot end of the table to press onto the top

A

B



C

D

Figure 4-24 Ideal body mechanics during a long stroke involve moving the feet and shifting the balance of the body's weight as the stroke is performed. **(A)** At beginning of stroke, the therapist's body weight is balanced over the right (rear) foot. **(B)** Weight is shifted to the left (front) foot. **(C)** Right foot is repositioned to be next to the left foot, and body weight is shifted to the right foot. **(D)** Left foot is repositioned to be farther in front, and body weight is shifted onto the left foot.

of the client's back/shoulder. The more you practice gracefully transferring your body weight from foot to foot as you move your feet up the table, the smoother you can perform one long, deep stroke up the client's back.

4.16 Posture of the Neck and Head

The neck and head do not contribute to the generation of pressure, so their posture should be whatever is most comfortable and least stressful. A common postural pattern that is stressful for the body is to flex the head and upper neck forward to watch the stroke that is being performed (Fig. 4-25A). This should be avoided as much as possible. It is rarely necessary to watch your strokes. And this posture places your head in an imbalanced posture over thin air in front of your trunk, requiring posterior cervical extensor musculature to isometrically contract to hold this posture and prevent your head from falling into flexion until the chin hits the chest. The healthiest posture for the head and neck is to have the head balanced over the vertical trunk so that neck musculature does not have to contract to hold the head in position (Fig. 4-25B).

However, whenever the trunk is not vertical, for example, if it is inclined forward because you are reaching forward to perform a longer stroke, then this posture is not possible. In these cases, it is likely better to relax the head and neck and let the head rest in flexion with the chin at or near the chest (Fig. 4-25C). This affords the opportunity to close the eyes and visualize the structures that are being worked beneath the skin. *Note*: The only disadvantage to letting the head and neck drop into flexion is if this posture is habitually assumed, the fascial tissues of the posterior neck will gradually lengthen, resulting in less passive tension force to hold up the head and neck. In the long run, this could require greater work on the part of the extensor musculature of the neck.

4.10 THERAPIST TIP

Choosing the Right Lubricant

When strokes are performed, to glide along the client's skin without abrading it, a lubricant is needed. Choosing the right lubricant is very important, especially for deep tissue massage. A lubricant allows the therapist to **slide**/glide along the client's skin. However, a lubricant must also provide some **drag** or friction that helps you press down into the client's tissues. Otherwise, the skin will be too slippery, causing you to slide along the surface of the skin without being able to generate pressure into the client's tissues. Each lubricant has a balance of slide and drag. For deep tissue work, it is important to choose a lubricant that offers more drag than slide. Generally, water-based lotions are better than oils for deep tissue work.

The amount of lubricant used is also very important. Too much lubricant increases the slide along the skin, making it difficult to generate pressure down into the tissues. Many therapists have difficulty generating deep pressure not because of a lack of strength but rather because they use too much lubricant. As a general rule, the least amount of lubricant needed to not abrade the client's skin is the amount that should be used.

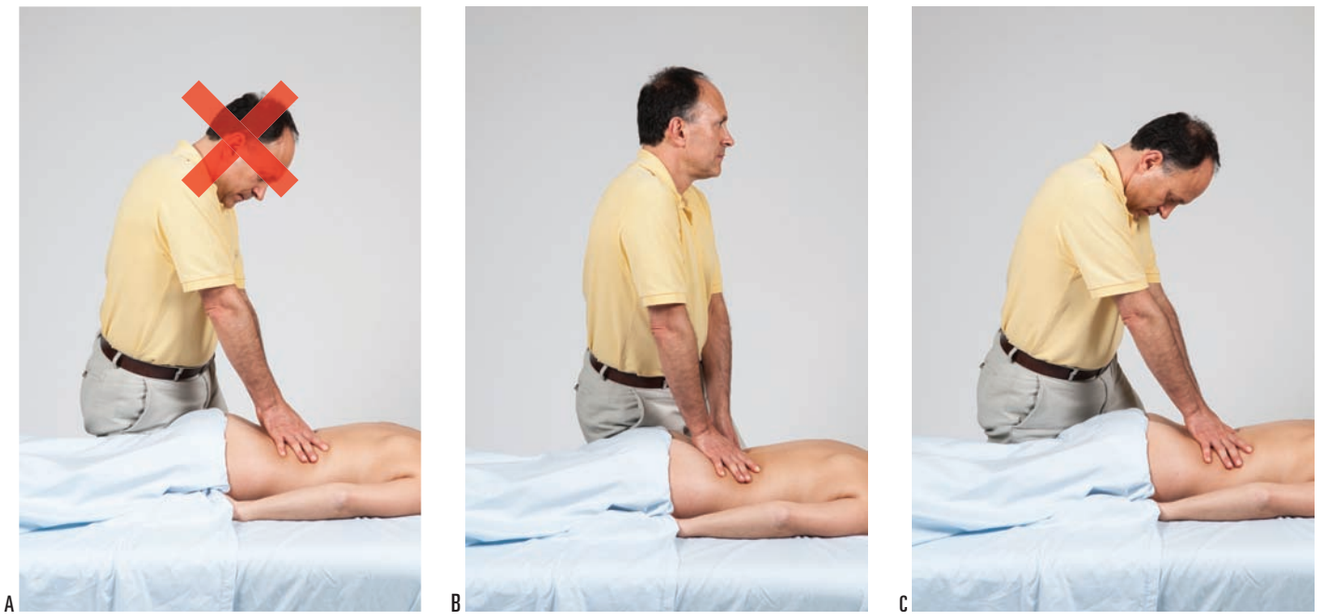


Figure 4-25 Posture of the head and neck. **(A)** Flexing the head and neck to watch the stroke imbalances the head anteriorly, requiring isometric contraction of the posterior cervical extensor musculature. **(B)** Balanced posture of the head over the vertical trunk. **(C)** Relaxing the head and neck into flexion when working with the trunk inclined.

ROUTINES

DEEP TISSUE WORK ROUTINES

There is more than one way to approach working the low back and pelvis. You may choose to do spot work based on your client's needs, or you may choose to perform deep work to the entire region as part of your massage that covers more of the client's body. In either case, you must make sure to always segue into deep tissue work by first working lightly to moderately to prepare the client for the deeper pressure. When performing deep work, remember always to sink slowly into the client's musculature.

The five routines that follow demonstrate body mechanics for deep tissue work to the low back and posterior pelvis (gluteal region). There is no rule as to where to begin when working these regions. The order of the five routines presented here begins at the lumbosacral and lumbar regions, continues up into the thoracic region, and then concludes with the gluteal region.

The order of these routines is an excellent approach, but if you like, you can alter the order of the routines. Also, if desired, once the five routines have been done, a few longer strokes can be done to connect the gluteal, lumbar, and thoracic regions (see "15. Transitioning to Long, Deep Strokes"). The five routines show work to the left side of the low back and pelvis. The right side can be worked in the identical manner by standing on the other side of the table and reversing the roles of your hands.

4.11 THERAPIST TIP

Client Communication

The best measure of the appropriateness of the depth of your pressure should always be the response of the client's tissues to the pressure that you are employing. You should be able to feel this with the finger pads or other treatment contact. In this regard, massage is a two-way street: You are not only exerting pressure into the client, you are also constantly monitoring the response of your client to the pressure. It is also extremely valuable to verbally check in with your client about the depth of the pressure when doing the massage. Even if you feel confident about the depth of pressure given the response from the client's tissues, it is important to communicate directly with the client in a way that shows that you are aware of his or her desires and needs. This can help the client feel at ease and relax, which is especially important when doing deeper work. When asking the client about the pressure, you should not simply ask, "How is the pressure?" This question places your client in the position of having to criticize your massage, which many clients may not feel comfortable doing. As a result, the response is often "Fine," whether it is or not. A better way to phrase the question is, "Would you like more pressure or less pressure?" Now you are specifically inviting the client to ask for a change in what you are doing, and the client has to go out of the way to say that it is fine as is. This phrasing is more likely to elicit an honest and accurate response and to create a massage that the client enjoys and from which the client benefits.

BODY MECHANICS FOR DEEP TISSUE WORK ROUTINES

The following body mechanics for deep tissue work routines are presented in this chapter:

- Routine 4-1—medial low back—paraspinal musculature
- Routine 4-2—lateral low back—quadratus lumborum
- Routine 4-3—middle and upper back—paraspinal musculature
- Routine 4-4—posterior pelvis—gluteal region
- Routine 4-5—lateral pelvis—abductor musculature

Note: For each of the five routines, a specific treatment contact and bracing position has been shown. Other options are possible (see Figs. 4-9 and 4-12 through 4-14).

ROUTINE 4-1: MEDIAL LOW BACK—PARASPINAL MUSCULATURE

Starting Position:

- Have the client prone, if possible, positioned to the left side of the table. Place a bolster under the client's ankles.
- You are standing at the left side of the table, close to the client and adjacent to the client's pelvis (Fig. 4-26A).

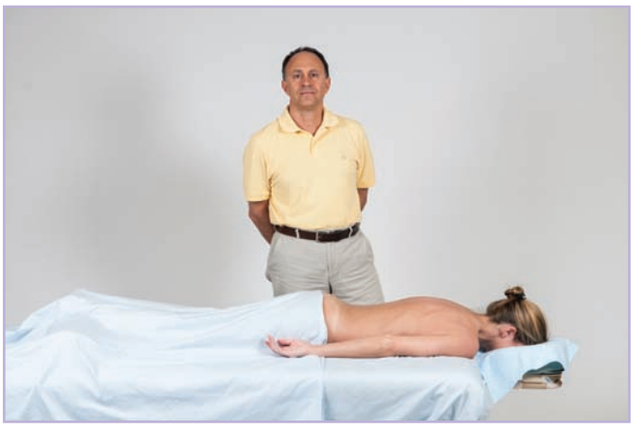


Figure 4-26A

Step 1: Place Contact on the Client's Musculature:

- Your right palm is the treatment contact, and it is placed on the left side of the client's low back, over the dorsal surface of the sacrum.
- Make sure that your forearm is oriented as close as possible perpendicular to the contour of the client's body where you have made contact. Because of the contour of the sacrum at this level, the forearm of the brace/support left hand is actually better aligned to press perpendicularly into the client here (Fig. 4-26B).
- Also, be sure that your core is aligned with your stroke; your belly button should be pointed in line with (or extremely close to and parallel with) the line of your forearm.
- *Note*: Other contacts besides the palm are possible (see Fig. 4-9).

Step 2: Brace/Support the Contact:

- The thumb web of your left hand is the brace that supports palm contact of the right hand (see Fig. 4-26B).
- Your elbows are in front of your body so that you can use your core body weight behind your contact when pressing into the client.
- *Note*: The palm of the left hand can be used as a brace instead of the thumb web (see Fig. 4-13).

Figure 4-26B

Step 3: Apply Pressure:

- Slowly press with your palm into the client's musculature over the dorsum of the sacrum, directly lateral to the midline, by shifting your body weight from your right (rear) foot to your left (front) foot.
- This pressure is supplemented by pressure from your left brace hand.
- It is important to slowly sink into the client's tissues and to apply the pressure as close as possible perpendicular to the contour of the client's body that you are working.
- Continue shifting your weight forward, translating this motion into a deep stroke along the client's lumbar paraspinal musculature, close to the spinous processes, from inferior to superior, for a length of approximately 1 to 6 inches (Fig. 4-27A).
- The movement for the stroke should originate from your lower extremities and core.

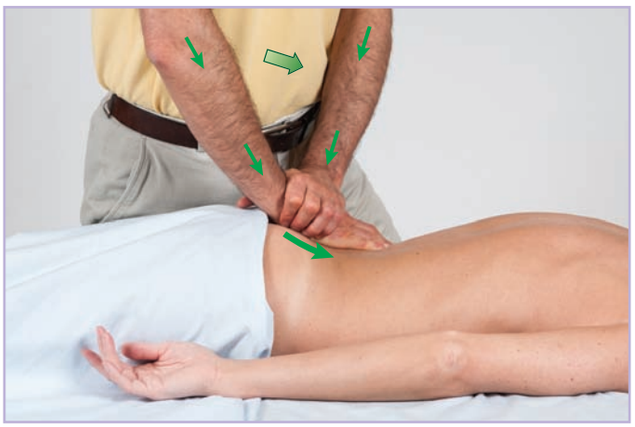


Figure 4-27A

Further Repetitions:

- Repeat this stroke in the same location another two to three times.
- Now move slightly superiorly to the midlumbar to upper lumbar region and perform approximately three to four deep strokes in a similar manner here (Fig. 4-27B).

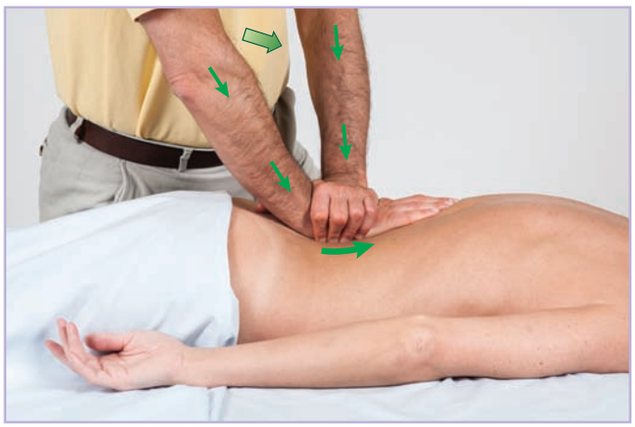


Figure 4-27B

- Repeat further sets of three to four strokes, slightly more laterally on the paraspinal musculature, both in the lumbosacral region and then again in the midlumbar to upper lumbar region (Fig. 4-27C), until the lateral border of the paraspinal musculature has been reached.
- Beginning back at the dorsum of the sacrum again, repeat this entire protocol, this time increasing the depth of pressure.

Figure 4-27C

4.2 PRACTICAL APPLICATION

Icing to Increase Depth of Pressure

You never want deep tissue work to be painful and cause the client to tighten in response. However, there are times when the client's musculature is very tender, not allowing you to work sufficiently deep to affect the desired change and improvement. In these cases, it can be helpful to ice an area to numb it so that you can work deeper than you otherwise would have been able to, without causing pain to the client. Sometimes, it also can be beneficial to ice after deep tissue work to decrease the likelihood of post-treatment pain and/or swelling. (*Note*: For more on ice application, see Chapter 11, available online at thePoint.lww.com.)

ROUTINE 4-2: LATERAL LOW BACK—QUADRATUS LUMBORUM

Starting Position:

- Have the client prone, if possible, positioned to the left side of the table. Place a bolster under the client's ankles.
- You are standing at the left side of the table, close to the client and adjacent to the client's lumbar spine, facing across the client (Fig. 4-28A).

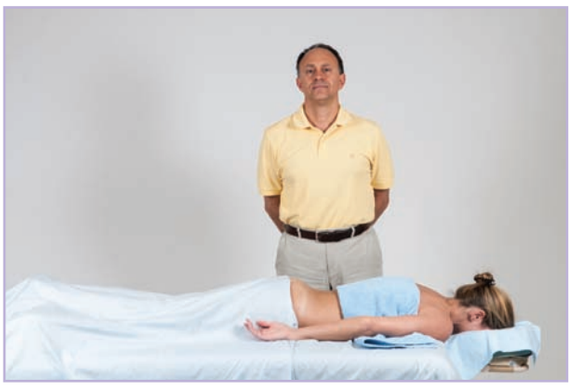


Figure 4-28A

Step 1: Place Contact on the Client's Musculature:

- Your left thumb pad is the treatment contact, and it is placed on the left side of the client's low back over the quadratus lumborum, immediately lateral to the lateral border of the paraspinal (erector spinae) musculature.
- *Note*: To find the lateral border of the erector spinae, ask the client to extend the trunk and look and feel for the contour and borders of the erector spinae to become prominent (Fig. 4-28B).
- Make sure that your forearm and thumb are oriented perpendicularly to the contour of the client's body where you have made contact (Fig. 4-28C).
- Also, be sure that your core is aligned with your stroke; your belly button should be pointed in line with (or extremely close to and parallel with) the line of your forearm.

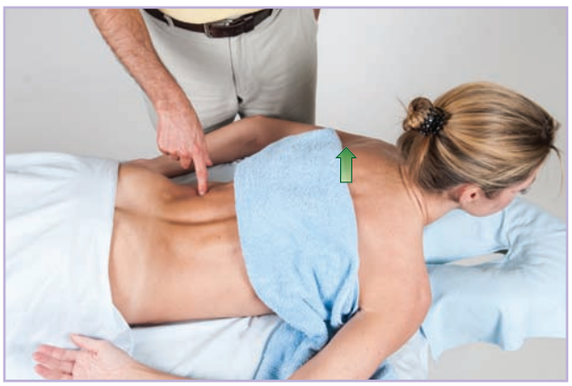


Figure 4-28B

Figure 4-28C

Step 2: Brace/Support the Contact:

- Your right thumb is the brace that supports the thumb pad contact of the left hand (see Fig. 4-28C).
- Your elbows are in front of your body so that you can use your core body weight behind your contact when pressing into the client.

Step 3: Apply Pressure:

- Slowly press into the client's quadratus lumborum (lateral and deep to the erector spinae) with your thumb pad by shifting your body weight from your right (rear) foot to your left (front) foot.
- This pressure is supplemented by pressure from your right brace hand.
- It is important to slowly sink into the client's tissues.
- Press in a medial direction to access the transverse process attachment fibers (Fig. 4-29). Press medial and superior for the 12th rib fibers; press medial and inferior for the iliac crest fibers.
- The movement for the stroke should originate from your lower extremities and core.

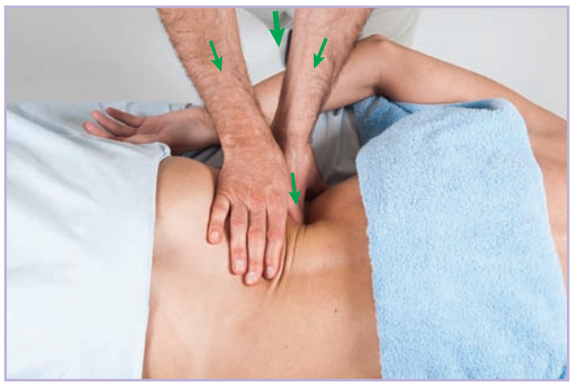


Figure 4-29

4.3 PRACTICAL APPLICATION

Working the Quadratus Lumborum Side-Lying

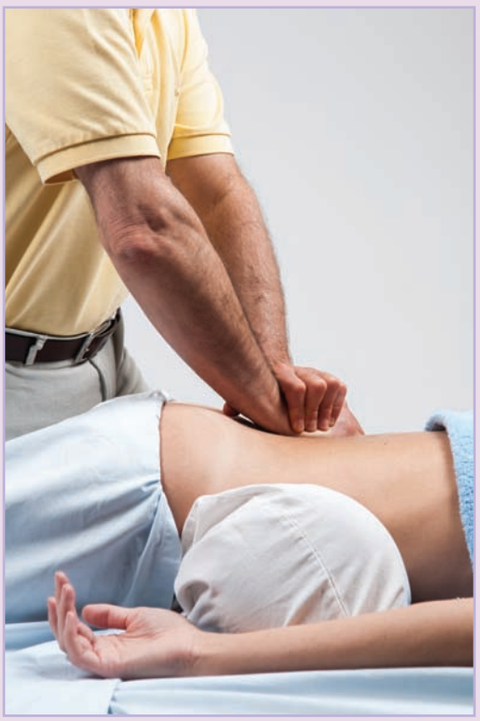
Because of the location of the quadratus lumborum deep to the erector spinae, pressure into this muscle must be directed from lateral to medial. For this reason, side-lying is an excellent position to access this muscle; it also allows for body weight to be used. The client should be as close to the side of the table, positioned either side-lying or side-lying and slightly rotated away from you (toward a prone position), with a small roll between the knees. Place your treatment contact immediately lateral to the erector spinae. Now slowly sink into the quadratus lumborum (see accompanying figure).

4.4 PRACTICAL APPLICATION

Perform Deep Tissue Work on Stretch

Most of the treatment routines in this chapter demonstrate deep tissue work to the back, with the client's spine in a neutral position with respect to flexion or lateral flexion. However, it can also be valuable to work the musculature while on stretch. The advantage to working a muscle on stretch is that it intensifies work into the more superficial musculature. The advantage to working a muscle that is shortened is that it slackens the more superficial musculature, allowing greater access to deeper musculature.

The accompanying figures demonstrate working the lumbar musculature on stretch. In **Figure A**, the prone client's low back is flexed by placing a bolster under the anterior abdominal wall. In **Figure B**, the side-lying client's low back is laterally flexed by placing a bolster under the lateral abdominal wall. In **Figure C**, the side-lying client's low back is laterally flexed by dropping the lower extremity off the side of the table.



A

B

C

ROUTINE 4-3: MIDDLE AND UPPER BACK—PARASPINAL MUSCULATURE

Starting Position:

- Have the client prone, if possible, positioned to the left side of the table. Place a bolster under the client's ankles.
- You are standing at the left side of the table, close to the client and adjacent to the client's lumbar spine (Fig. 4-30).

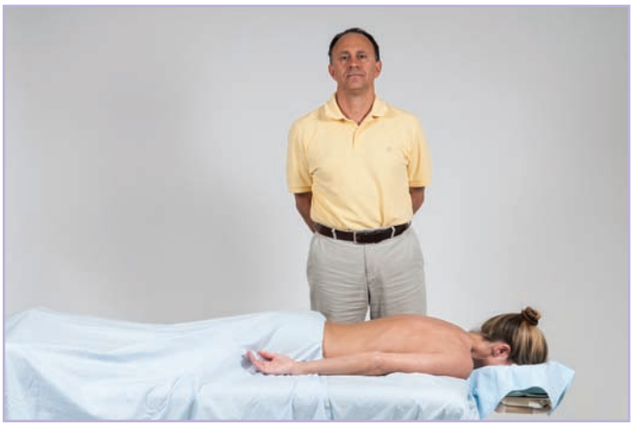


Figure 4-30

Step 1: Place Contact on the Client's Musculature:

- Your right thumb pad is the treatment contact, and it is placed on the left side of the client's lower thoracic spine on the paraspinal musculature.
- Make sure that your forearm and thumb are oriented perpendicularly to the contour of the client's body where you have made contact (Fig. 4-31A).
- Also, be sure that your core is aligned with your stroke; your belly button should be pointed in line with (or extremely close to and parallel with) the line of your forearm.
- *Note*: Other contacts besides the thumb pad are possible (see Fig. 4-9).

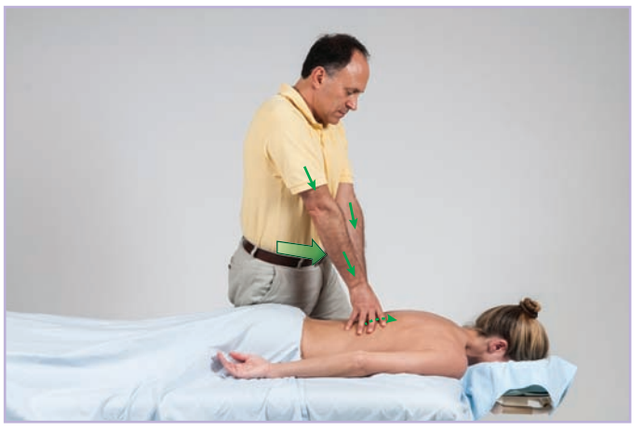


Figure 4-31A

Step 2: Brace/Support the Contact:

- The thumb pad of your left hand is the brace that supports the thumb pad contact of the right hand.
- Your elbows are in front of your body so that you can use your core body weight behind your contact when pressing into the client.
- *Note*: The palm of the left hand can be used as a brace instead of the thumb pad (see Fig. 4-12).

Step 3: Apply Pressure:

- Slowly press with your thumb pad into the client's musculature, directly lateral to the spinous processes, by shifting your body weight from your right (rear) foot to your left (front) foot.
- This pressure is supplemented by pressure from your left brace hand.
- It is important to slowly sink into the client's tissues and to apply the pressure as close as possible perpendicular to the contour of the client's body that you are working.
- Continue shifting your weight forward, translating this motion into a deep stroke along the client's thoracic paraspinal musculature, close to the spinous processes, from inferior to superior, for a length of approximately 1 to 6 inches (see Fig. 4-31A).
- The movement for the stroke should originate from your lower extremities and core.

Further Repetitions:

- Repeat this stroke in the same location another two to three times.
- Now move slightly superiorly to the upper thoracic region and perform approximately three to four deep strokes in a similar manner here (Fig. 4-31B).
- Repeat further sets of three to four strokes, slightly more laterally on the paraspinal musculature, both in the lower thoracic region and then again in the upper thoracic region (Fig. 4-31C), until the medial border of the scapula has been reached.
- Beginning back at the lower thoracic region again, repeat this entire protocol, this time increasing the depth of pressure.

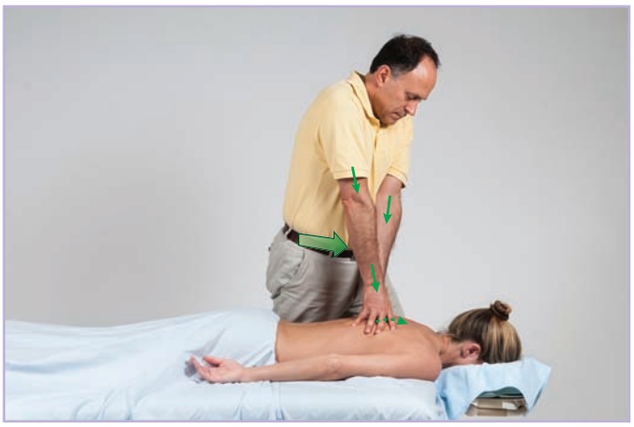


Figure 4-31B

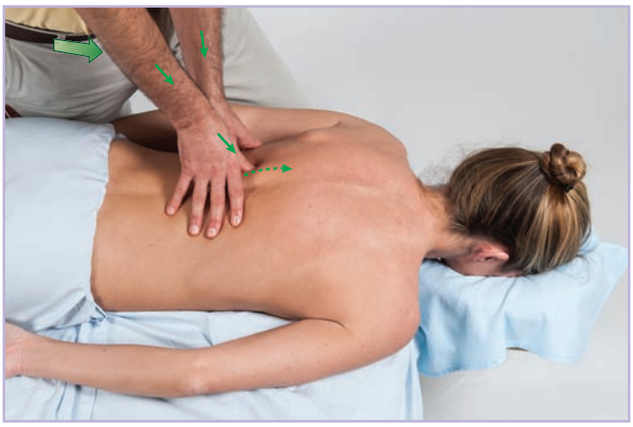


Figure 4-31C

4.5 PRACTICAL APPLICATION

Use the Corner of the Table

When working the thoracic spine, it can be advantageous to work from superior to inferior (instead of inferior to superior) because the therapist can position himself closer to the client's trunk by standing at the head end of the table.

As previously stated, when working from the head of the table, it is unwise to stand above the face cradle because this distances the therapist from the client, making it more difficult to employ efficient body mechanics (see Fig. 4-6D). It is better to choose which side you want to work and then straddle the corner on that side at the head end of the table. This allows you to stand much closer to the client, facilitating positioning the core over the client for more efficient use of body weight.

ROUTINE 4-4: POSTERIOR PELVIS—GLUTEAL REGION

Starting Position:

- Have the client prone, if possible, positioned to the left side of the table. Place a bolster under the client's ankles.
- You are standing at the left side of the table, close to the client and adjacent to the client's pelvis (Fig. 4-32A).

Step 1: Place Contact on the Client's Musculature:

- Your right elbow is the treatment contact, and it is placed on the left side of the client's posterior pelvis over the gluteus maximus, immediately lateral to the apex of the sacrum.
- Make sure that your arm is oriented as close as possible to perpendicular to the contour of the client's body where you have made contact (Fig. 4-32B).
- Make sure that your core body weight is directly above the client.
- *Note*: Other contacts besides the elbow are possible (see Fig. 4-9).

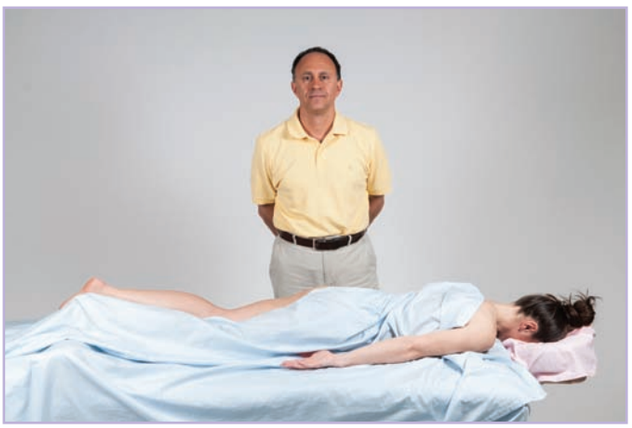


Figure 4-32A

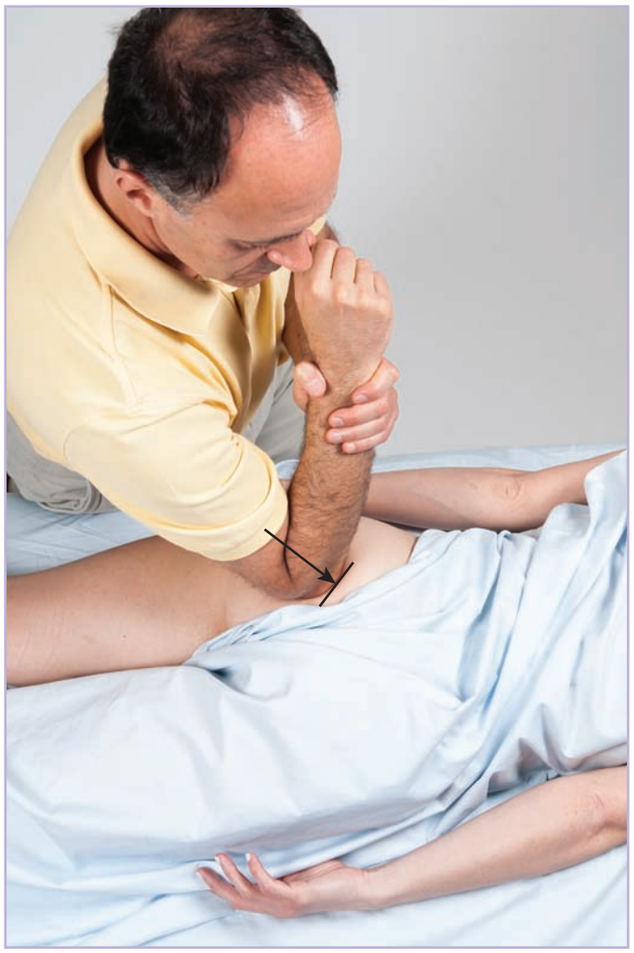


Figure 4-32B

Step 2: Brace/Support the Contact:

- Use your left hand to brace the right upper extremity by grasping the distal forearm (see Fig. 4-32B).
- Your elbows are in front of your body so that you can use your core body weight behind your contact when pressing into the client.
- *Note*: The elbow can also be braced by placing the left hand over the anterior elbow region (see Fig. 4-9F).

Step 3: Apply Pressure:

- Slowly press with your elbow into the client's gluteal and deep lateral rotator musculature, directly lateral to the sacrum, by dropping down with your body weight into the client.
- This pressure is supplemented by pressure from your left brace hand.
- It is important to slowly sink into the client's tissues and to apply the pressure as close as possible perpendicular to the contour of the client's body that you are working.
- Continue dropping your weight down, translating this motion into a deep stroke into the gluteal and deep lateral rotator musculature adjacent to the client's sacrum; at the posterior superior iliac spine (PSIS), curve the stroke to then follow along the crest of the ilium (Fig. 4-33A).
- The movement for the stroke should originate from your core.

Figure 4-33A

Further Repetitions:

- Repeat this stroke in the same location another two to three times.
- Repeat another set of three to four strokes, beginning slightly farther lateral from the apex of the sacrum and tracing a path that is parallel with the first stroke (Fig. 4-33B).
- Continue performing sets of parallel strokes, each set successively farther from the sacrum and iliac crest, until the entire buttock has been treated and the greater trochanter

Figure 4-33B

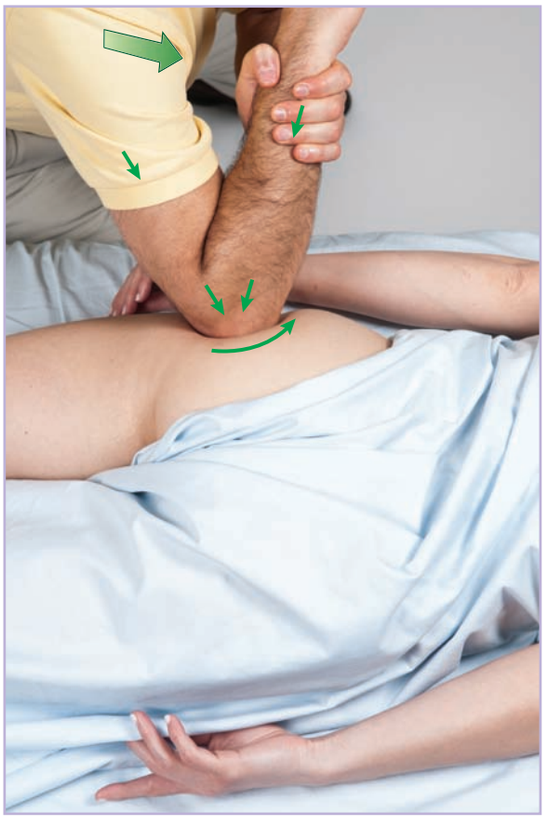


Figure 4-33C

has been reached. The last stroke should begin between the ischial tuberosity and the greater trochanter and should work into the musculature and attachments on the greater trochanter (Fig. 4-33C).

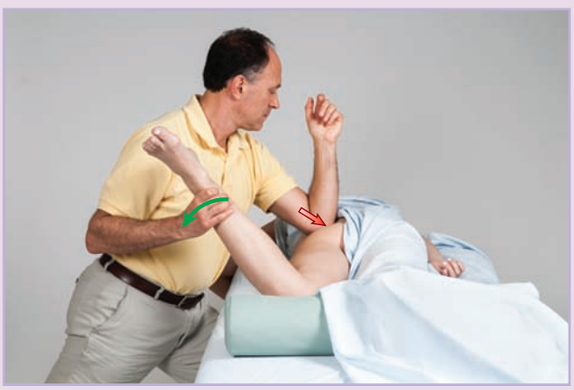
- Beginning back just lateral to the sacrum again, repeat this entire protocol, this time increasing the depth of pressure.

When applying deep pressure to the gluteal region, be aware that the sciatic nerve exits from the internal pelvis into the buttock close to the sacrum, usually just inferior to the piriformis. It then runs inferiorly/distally between the ischial tuberosity and the greater trochanter.

4.6 PRACTICAL APPLICATION

Pin and Stretch the Piriformis

Pin and stretch is an excellent technique to both increase pressure on the target muscle and to focus the stretch to a particular aspect of the target muscle. It is particularly effective for treating the piriformis. Place an elbow on the gluteal musculature over the piriformis as the pin, and stretch the piriformis by medially rotating the thigh at the hip joint (see accompanying figure). This technique might be contraindicated if the client has an unhealthy knee joint. Using the leg as a lever to move the hip joint places a torque into the knee.



ROUTINE 4-5: LATERAL PELVIS—ABDUCTOR MUSCULATURE

Starting Position:

- Have the client side-lying facing away from you, as close to the side of the table as possible, with a roll placed between the knees.
- You are standing at the side of the table, close to the client and adjacent to the client's pelvis (Fig. 4-34A).

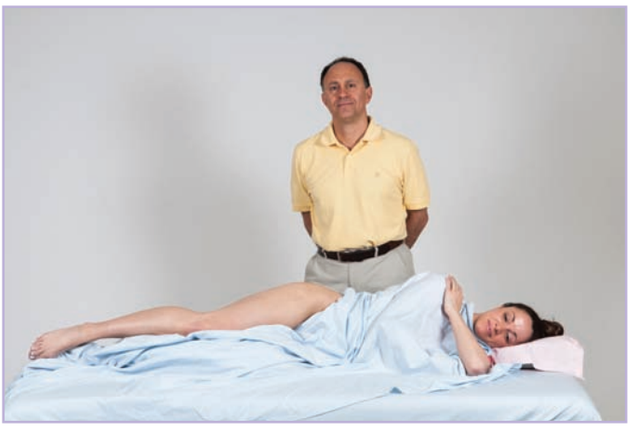


Figure 4-34A

Step 1: Place Contact on the Client's Musculature:

- Your right forearm is the treatment contact, and it is placed on the lateral side of the client's right gluteus medius, immediately distal/inferior to the center of the iliac crest.
- Make sure that your arm is oriented perpendicularly to the contour of the client's body where you have made contact (Fig. 4-34B).
- Make sure that your core body weight is directly above the client.
- *Note*: Other contacts besides the forearm are possible (see Fig. 4-9).

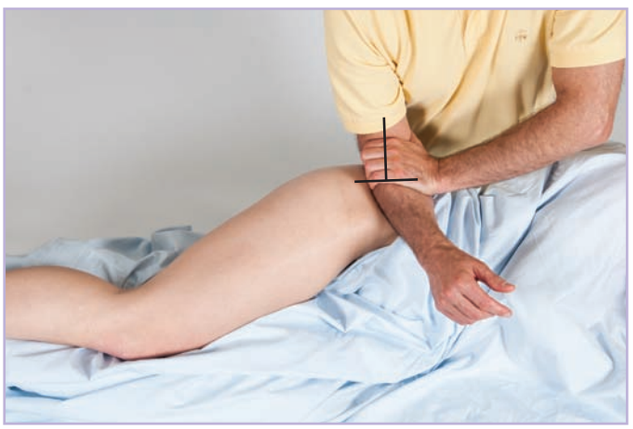


Figure 4-34B

Step 2: Brace/Support the Contact:

- Use your left hand to brace the right upper extremity by grasping the proximal right forearm (see Fig. 4-34B).
- Your elbows are in front of your body so that you can use your core body weight behind your contact when pressing into the client.

Step 3: Apply Pressure:

- Slowly press with your forearm into the client's musculature, just distal/inferior to the iliac crest, by dropping down with your core body weight.
- This pressure is supplemented by pressure from your left brace hand.
- It is important to slowly sink into the client's tissues and to apply the pressure as close as possible perpendicular to the contour of the client's body that you are working.
- Shift your weight from your left (rear) foot onto your right (front) foot, translating this motion into a deep stroke along the client's abductor musculature between the iliac crest and the greater trochanter of the femur, from proximal to distal (superior to inferior), for a length of approximately 1 to 6 inches (Fig. 4-35A).
- The movement for the stroke should originate from your lower extremities and core.

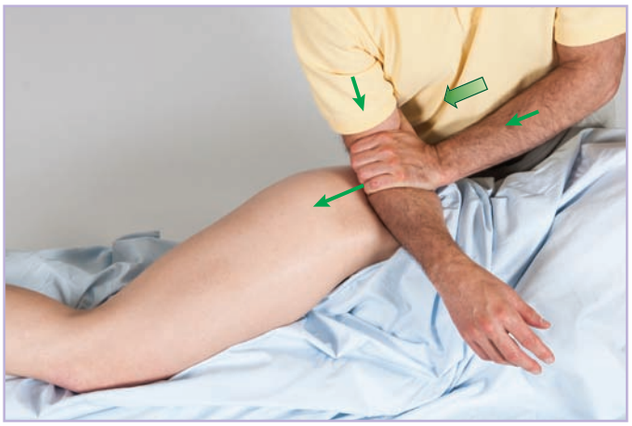


Figure 4-35A

Further Repetitions:

- Repeat this stroke in the same location another two to three times.
- Now move to the anterolateral pelvis and perform approximately three to four deep strokes in a similar manner here (Fig. 4-35B).
- Now move to the posterolateral pelvis and perform approximately three to four deep strokes in a similar manner here (Fig. 4-35C).
- Beginning back at the middle of the lateral pelvis just distal/inferior to the iliac crest again, repeat this entire protocol, this time increasing the depth of pressure.

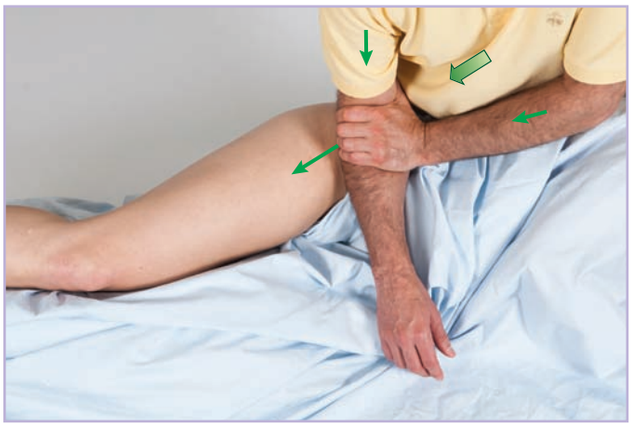


Figure 4-35B

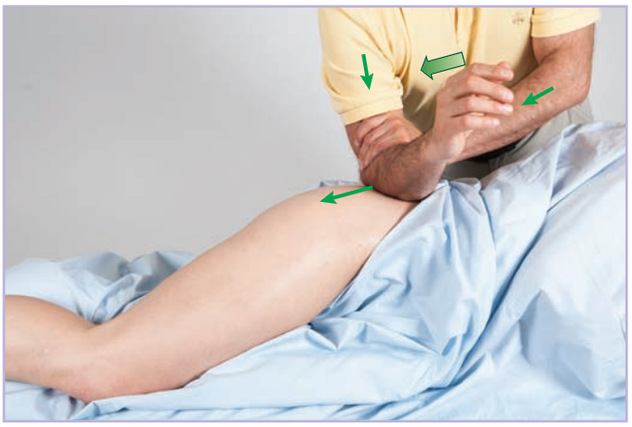


Figure 4-35C

4.7 PRACTICAL APPLICATION

The Iliotibial Band

When working the abductor musculature of the lateral pelvis with the client side-lying, it is an excellent opportunity to continue working distally onto the iliotibial band in the lateral thigh **(Fig. A)**. Given the fascial continuity of these regions (the iliotibial band can be looked at as the distal tendinous attachments of the tensor fasciae latae and the gluteus maximus), it is wise to work these regions together. If desired, these regions can also be worked on stretch with the client's thigh adducted off the side of the table **(Fig. B)**.

A

B

CHAPTER SUMMARY

This chapter has presented the body mechanics for performing deep tissue work into the musculature of the client's low back and pelvis with the least effort possible. When deep work is indicated, proper body mechanics not only facilitate effective work for the client but also accomplish it with less physical stress on the therapist's body. Working deep is a matter of positioning the core of the body in line with the force of the stroke. With the treatment contact braced, the elbow positioned in front of the body, and the upper extremity joints stacked, dropping down with core body weight and/or pushing off with the lower extremities translates pressure through the contact and into the client. In effect, the therapist can work smart instead of working hard.

CASE STUDY

DAN

History and Physical Assessment

A new client, Dan Canaan, age 53 years, comes to your office complaining of right buttock pain, with occasional tingling into his right thigh. He tells you that he has had nearly constant dull pain in his right buttock for a number of weeks, with no improvement. The thigh tingling is sporadic, occurring approximately once or twice a day, also with no signs of improvement.

You perform a thorough client history. During the history, Dan reports that the pain began shortly after a swing dance competition in which he forcefully threw his right leg out during a dance sequence. At the end of the motion, he felt an immediate twinge of pain in the right buttock. He reports that his discomfort is centered in the middle and lower buttock on the right side. When the tingling occurs, it is located in the posterior thigh, traveling as far as the midthigh (halfway down toward the knee). Dan describes the pain as a fairly constant 3 on a scale of 0 to 10. He cannot discern any postures or motions that aggravate the problem; it is a constant low-grade discomfort/pain. He does not notice any limitation of motion of his low back or lower extremity.

Dan has a history of a lumbar disc problem with left lower extremity referral of pain due to a herniated disc at the L4-L5 level diagnosed on magnetic resonance imaging (MRI) examination approximately 5 years before. After the lumbar disc diagnosis, Dan began a program of Pilates to strengthen his core and has not had a reoccurrence of that problem since. He is an office manager and works at a computer for much of the day. He is also an avid golfer and reports no pain or discomfort when golfing.

Dan first went to an orthopedist who performed a short physical examination and diagnosed Dan's problem as an exacerbation of the disc condition and recommended a cortisone shot. Because Dan has heard that cortisone can have unhealthy side effects, he has come to you to see if you can help him first.

Your assessment shows no range of motion restrictions of his low back or of his thighs at the hip joints. Both active and passive straight leg raise tests and slump test are negative, as are Valsalva maneuver and cough test. Nachlas', Yeoman's, and the medley of sacroiliac joint tests are also negative.

Upon palpatory examination, you find mild tightness in his lumbar paraspinal musculature as well as his superomedial gluteus maximus and his upper gluteus medius bilaterally. The piriformis on the right side is moderately tight, with a TrP present near the greater trochanter attachment. However, pressure upon it does not elicit referral of pain beyond the local area. As you palpate more inferiorly, you find a marked TrP in his right quadratus femoris muscle, immediately lateral to the ischial tuberosity. Pressure to this TrP does result in mild tingling into his proximal posterior thigh. Further, Dan reports that the locations of these two TrPs are where he has been experiencing the pain and discomfort. Due to the presence of the tight piriformis and quadratus femoris, you decide to perform a stretch assessment to the deep lateral rotator musculature (i.e., the piriformis and quadratus femoris). This stretch shows a restriction on the right side, with slight tingling into his proximal right thigh.

Think-It-Through Questions:

1. Should deep tissue massage be included in your treatment plan for Dan? If so, why? If not, why not?
2. If deep tissue massage would be of value, is it safe to use with him? If yes, how do you know?
3. If deep tissue massage is done, which specific muscles or muscle groups should be worked? Why did you choose the ones you did?

Answers to these Think-It-Through Questions and the Treatment Strategy employed for this client are available online at thePoint.lww.com/MuscolinoLowBack

CHAPTER 5

Massaging the Anterior Abdomen and Pelvis

CHAPTER OUTLINE

Introduction 134
Overview of Technique 135
Performing the Technique 138
Abdominal Massage Routines 140
Chapter Summary 158
Case Study 159

OBJECTIVES

After completing this chapter, the student should be able to:

1. Explain why assessing and massaging the anterior abdomen is important.
2. Describe in steps an overview of the usual protocol for massaging the anterior abdomen.
3. Describe the usual breathing protocol for the client when massaging the abdomen.
4. State the positions in which the client can be placed when working the abdominal wall.
5. Explain why massaging the anterior abdomen must be performed with caution.
6. Describe the specific caution and contraindication sites of the abdomen and proximal thigh.
7. Explain why placing a roll under the client's knees is beneficial when working into the anterior abdominal wall.
8. Explain how the lateral border of the rectus abdominis can be used as a landmark for locating other muscles of the abdomen.
9. Define each key term in this chapter and explain its relationship to abdominal massage.
10. Perform massage to the abdomen for each of the muscles presented in this chapter.

KEY TERMS

abdomen
abdominal aorta
appendix
femoral neurovascular bundle
pin and stretch
visceral bodywork

INTRODUCTION

The **abdomen** is the region of the lower trunk that is inferior to the thorax (which contains the thoracic vertebrae and rib cage) and superior to the pelvis. The lumbar spine is located within the abdomen. The abdomen encircles the entire trunk anteriorly, laterally on each side, and posteriorly. What is often referred to as the *abdomen* in lay terms is actually the anterior abdomen. The anterior wall of the abdomen is composed of four muscles on each side: the rectus abdominis (RA), external abdominal oblique, internal abdominal oblique, and the transversus abdominis (TA). Even though the psoas major is accessed through the anterior abdominal wall, it sits against the spine and next to the quadratus lumborum and is actually a muscle of the posterior abdominal wall. The diaphragm is also accessed through the anterior abdominal wall but is a muscular partition between the thoracic and abdominopelvic cavities.

Massage to the anterior abdomen merits a separate chapter in this book because many massage therapists do not feel comfortable working therapeutically in this region. The musculature of the posterior trunk, primarily composed of the paraspinal musculature, receives most of the attention, whereas working into the anterior abdominal wall is often glossed over at best. Three reasons may explain this. First, the anterior abdominal wall muscles are not thick layers of musculature like the posterior trunk musculature. Second, the muscles of the anterior abdominal wall are less used posturally to support the trunk than are the posterior trunk muscles, and therefore do not become symptomatic as often. Third, the abdomen has a number of sensitive and fragile

Note: In the Technique and Self-Care chapters of this book (Chapters 4 to 12), green arrows indicate movement, red arrows indicate stabilization, and black arrows indicate a position that is statically held.

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structures that may cause the therapist to fear venturing into this region. When work is done here, it is often incomplete or so light as to not be therapeutic; this is especially true if the therapist is attempting to access the belly of the psoas major.

Although the anterior abdominal wall musculature will rarely necessitate the depth of pressure used when treating the posterior trunk, it is important to apply enough pressure to properly engage the tissues and work therapeutically. If the psoas major abdominal belly is the target muscle being worked, deep pressure is needed because the muscle is located so deep from the anterior perspective.

This tendency to undertreat the abdomen from the anterior perspective is unfortunate because work in this region is often indicated and needed. This is especially true of the psoas major, a muscle that is crucially important to spinal health. Further, the recent emphasis on core stabilization exercise has increased the incidence of anterior abdominal wall tightness because of the posture in which the trunk is held when doing core strengthening exercises. For this reason, this book dedicates an entire chapter to treatment options for working into the abdomen and pelvis from the anterior perspective.

BOX 5.1

Abdominal Massage Routines

The following abdominal massage routines are presented in this chapter:

- Routine 5-1—RA
- Routine 5-2—anterolateral abdominal wall (abdominal obliques and TA)
- Routine 5-3—psoas major proximal (abdominal) belly
- Routine 5-4—iliacus proximal (pelvic) belly
- Routine 5-5—iliopsoas distal (femoral) belly/tendon
- Routine 5-6—diaphragm

5.1 THERAPIST TIP

Communication with Client

It is important to pay extra attention to communicating with the client when working the anterior abdominal region. On a physical level, it can be very sensitive. On an emotional level, clients often hold a lot of emotional tension in this region, especially the psoas major. The anterior abdominal area may also have special vulnerability for clients who have gastrointestinal problems. For male and female clients, draping the lower abdomen must be done with modesty given the proximity to the genitalia. For female clients, special attention to modesty must be paid when draping so that the upper abdomen can be exposed while also keeping the breasts covered. Before beginning anterior abdominal work, explain what you will be doing and remind the client to let you know if he or she feels uncomfortable and wants you to discontinue the treatment. Then, begin the work slowly and carefully, checking in every few minutes to make sure the client is comfortable.

BOX 5.2

Strengthening the Anterior Abdominal Wall

Strengthening the anterior abdominal wall is extremely important for a number of reasons. The anterior abdominal wall musculature creates a force of posterior tilt of the pelvis, which is important to prevent the tendency toward excessive anterior tilt due to tight low back extensor and hip flexor muscles. A strong anterior abdominal wall is also a part of core stabilization, increasingly understood to be important both to protect the health of the spine and also to increase the strength of the musculature across the hip joint. When exercises are done to strengthen the anterior abdominal wall, there is a tendency for the strengthened muscles to become tighter. For this reason, strengthening exercises should always be accompanied by stretching exercises. It is important to pay special attention to assessing the anterior abdominal wall and psoas major musculature in clients who do core stabilization (e.g., Pilates) work.

OVERVIEW OF TECHNIQUE

Working the anterior abdomen is not difficult if you are comfortable with locating the muscles that you will be working and if you are aware of the precautions that are necessary as a result of the structures located nearby. The best assurance that your work will be safe and effective is for you to become as familiar as possible with the anatomy of the region. Therefore, before treating the anterior abdomen, it is recommended that you review the anatomy of the region, presented in Chapter 1.

As a quick review for the technique descriptions that follow, the muscles of the abdomen and pelvis that can be worked from the anterior perspective can be divided into the following six muscle/muscle group protocols:

1. Anteromedial abdominal wall (RA)
2. Anterolateral abdominal wall (abdominal obliques and TA)
3. Psoas major proximal (abdominal) belly
4. Iliacus proximal (pelvic) belly
5. Iliopsoas distal (femoral) belly/tendon
6. Diaphragm

The three steps involved in each of the routines for abdominal massage in this chapter are (1) starting position,

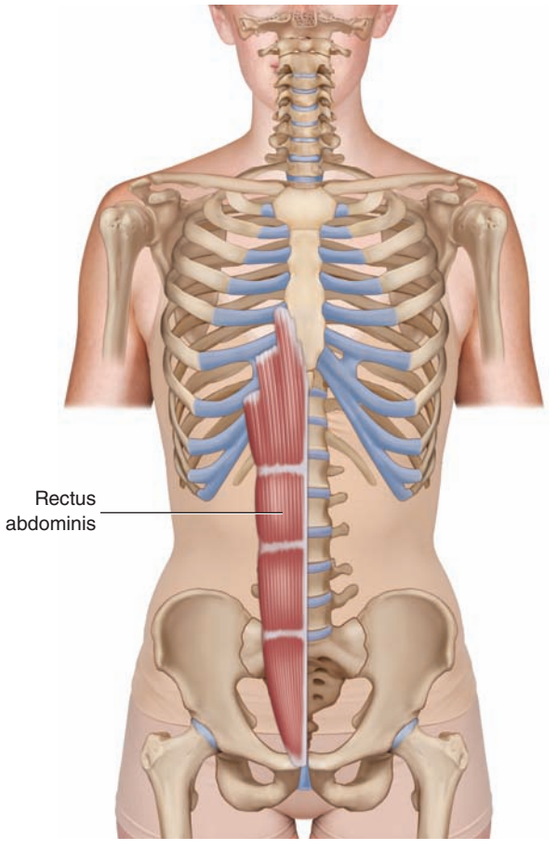


Figure 5-1 Anterior view of the right RA.

(2) locate target musculature, and (3) perform technique. The following is an overview of anterior abdominal massage presented using the right anteromedial abdominal wall (RA) as the target muscle being worked (Fig. 5-1).

Starting Position:

- The client is supine with a roll under the knees.
- You are standing at the right side of the table (Fig. 5-2).

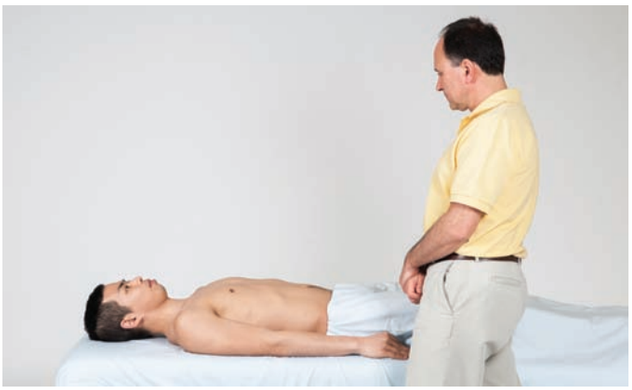


Figure 5-2 Starting position.

5.1 PRACTICAL APPLICATION

Place a Roll under the Client's Knees

The routines in this chapter demonstrate work into the anterior abdomen with a roll (bolster) under the client's knees. Placing a roll under the knees allows the hip joints to be placed in passive flexion, slackening the hip flexor musculature and allowing the pelvis to relax into posterior tilt. Because the RA and abdominal obliques are posterior tilters of the pelvis, this allows the anterior abdominal wall to relax and slacken, allowing better access into the anterior abdominal wall itself as well as the deeper psoas major, iliacus, and diaphragm. For this reason, whenever working into the anterior abdomen, it is a good idea to place a roll under the client's knees (see accompanying figure). As a rule, the larger the roll, the more the anterior abdominal wall will be slackened and relaxed.

Step 1: Locate Target Musculature:

- To locate the right RA, ask the client to do a small range-of-motion curl-up exercise, being sure to perform this motion entirely from the trunk (not the hip joints), by flexing the spinal column. The RA will contract.
- If the client is thin and in good shape, the RA will become visible; look for the characteristic boxes of the muscle. If the RA is not visible, feel for its contraction and palpate the muscle from the rib cage to the pubic bone and from the midline of the body to the RA's lateral border (Fig. 5-3).

Step 2: Perform Technique:

- Now that the right RA has been located, have the client relax and rest on the table.
- Your right hand is the treatment hand that will work the RA; place your finger pads on the right RA.
- Your left hand is the brace hand that supports the left hand.
- Massage the right RA. Depending on the musculature being worked, the type of stroke employed can vary.

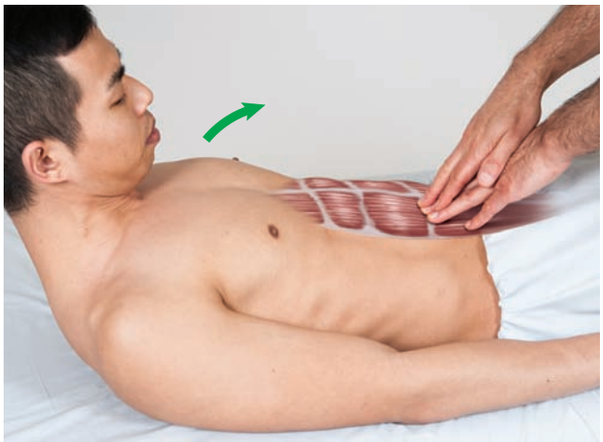


Figure 5-3 Locating the target musculature: the RA.

- An effective method for working the RA is to perform longitudinal strokes from superior to inferior, followed by cross-fiber strokes (Fig. 5-4). When performing cross-fiber strokes, either hand can be used as the treatment/contact hand and the brace hand.

A

B

Figure 5-4 Performing the technique. **(A)** Longitudinal strokes on the right RA with finger pad contact. **(B)** Cross-fiber strokes across the right RA.

5.2 PRACTICAL APPLICATION

Palpate with the Ulnar Side of the Hand

When palpating toward the pubic bone attachment of the RA, it is important to not overshoot and contact the client's genitalia. Because of this fear, many therapists avoid working the lower portion of the RA. This is unfortunate because it is important to work the entire muscle. An effective method to palpate and safely find the pubic bone attachment of the RA is to use the ulnar side of the hand. Start superiorly on the muscle and gradually make your way inferiorly, pressing with your hand at approximately a 45-degree angle inferiorly and posteriorly (see accompanying figure).

- Work the muscle from the rib cage attachment to the pubic bone attachment.
- *Note*: An open fist contact is also very effective when working the RA (Fig. 5-5).

Figure 5-5 An alternate contact to work the RA is the open fist.

PERFORMING THE TECHNIQUE

When working the anterior abdomen, it is important to keep in mind at all times the guidelines that follow. Each point addresses a specific aspect of working this region. Understanding and applying these guidelines will aid in safely and effectively treating the anterior abdomen.

5.1 Lateral Border of Rectus Abdominis as Landmark

It is important that the precise borders of the target muscle being massaged are located. This requires excellent palpatory assessment skills. Although this chapter outlines the specific palpation protocol for each muscle routine, it is worth noting that locating the lateral border of the RA is especially important because it can be used as a landmark for locating and working the muscles of the anterolateral abdominal wall (the external and internal abdominal obliques and TA) and the psoas major muscle (Fig. 5-6).

5.2 Gradually Increase the Pressure

Because the anterior abdominal wall can be very sensitive, it is important to warm up the region before using any appreciable pressure. Be sure to perform at least a few strokes longitudinally as well as cross fiber with gentle pressure before increasing the pressure.

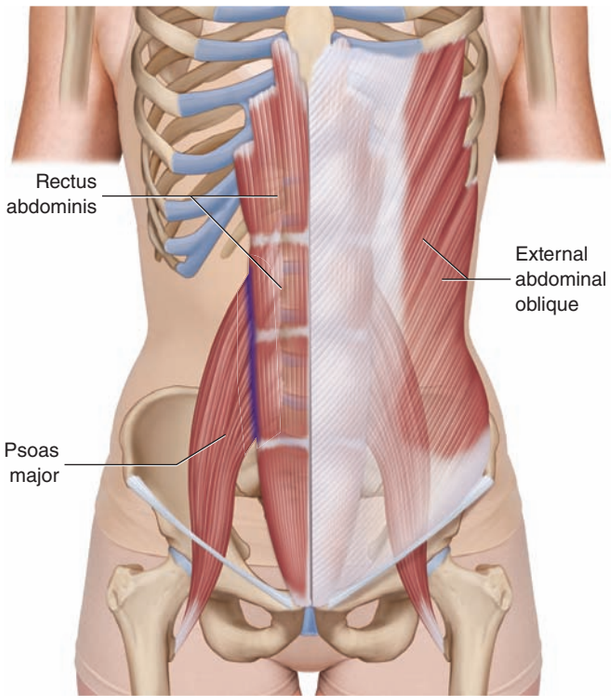


Figure 5-6 The RA muscle as a landmark (anterior view). The lateral border of the RA can be used as a landmark for locating other muscles of the region. The anterolateral abdominal wall muscles (abdominal obliques and TA) are directly lateral to the RA, and accessing the psoas major is best accomplished by sinking into the client's abdomen directly lateral to the lateral border of the RA.

5.3 Use Finger Pads

Finger pads are an excellent treatment contact for the anterior abdomen because they are extremely sensitive. As a rule, the pads of the index, middle, and ring fingers should be used (Fig. 5-7).

5.4 Direction and Number of Strokes

Strokes may be applied longitudinally along the length of the fibers and/or transversely across the direction of the fibers, as there is no one correct or required direction to the strokes used for the muscles of the abdomen. Longitudinal strokes tend to work better when working myofascial trigger points, whereas transverse strokes tend to work better for breaking up fascial adhesions. Mixing the two is recommended. However, it is always best to let the client's needs determine what type of strokes you apply.

The number of strokes applied to the target muscle typically ranges from 3 to 10. As with direction of stroke, it is best to determine the number of strokes based on the client's specific needs.

5.5 Breathing Protocol

There is no single breathing protocol that must be used when working the anterior abdomen. Typically, because the abdomen usually rises when breathing in, it is best to access the region when the client is breathing out and the belly falls. However, because strong exhalation would engage the abdominal wall musculature, it is important to have the client breathe in a quiet and relaxed manner. Because the anterior abdomen is a sensitive region, it can be helpful to

Figure 5-7 Treatment hand contact. Finger pads of the index, middle, and ring fingers provide a sensitive and effective contact for the treatment hand.

have the client focus on the breathing by asking him or her to first inhale, and then exhale as you slowly sink into and work the tissues. This protocol helps the client relax so that he or she allows you to more effectively sink into the musculature of the region. When working the psoas major, because the muscle is so deep, instead of trying to access the muscle on the first exhalation, sink in only part of the way. Now ask the client to take in another breath and sink in farther on the second exhalation. Depending on how relaxed or tight the client is, the psoas major can usually be accessed and worked on the second or third exhalation.

5.6 Proper Draping

Because the musculature of the anterior abdominal wall attaches inferiorly all the way to the pubic bone, proper draping that not only allows full access to the musculature but also preserves the client's modesty is important (Fig. 5-8). A general rule of soft tissue manipulation is that tissue being worked should be visible to the therapist. For the health and safety of the client and therapist, the therapist's hands should not work tissue that is covered and out of sight. Because this requires the draping to be pulled quite low, it is a good idea to first explain to the client what you will be doing and obtain verbal consent before continuing.

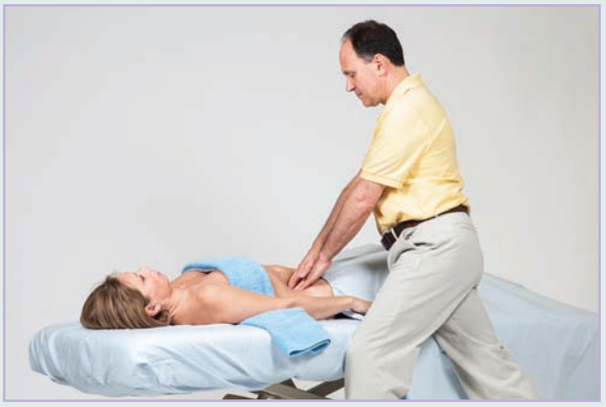
Because abdominal wall musculature attaches superiorly all the way onto the rib cage, visual access of abdominal wall musculature that also preserves client modesty regarding breast tissue must also be considered for the female client. An effective draping method for the breasts is to use a large bath-sized towel that is folded and laid across the client (see Fig. 5-8). Place the towel over the sheet and then carefully remove the sheet from under the towel while making sure that the towel remains securely in place. For extra security, the client can place her arms over the towel at the sides of her body as seen in Figure 5-8. As with draping inferiorly, it is a good idea to explain to the client in advance what you will be doing and first obtain verbal consent.

Figure 5-8 Draping for anterior abdominal wall work. It is important to allow full access to musculature being worked while preserving client modesty.

5.2 THERAPIST TIP

Proper Body Mechanics

The musculature of the anterior abdominal wall rarely requires very deep pressure, so proper body mechanics are not as critically important here as they are elsewhere in the body. However, given the depth of the psoas major, deep pressure is usually required to reach and work effectively this muscle. Regardless of the depth of work, it is optimal to maintain proper body mechanics because they increase the efficiency of your work, decrease the risk of physical stress and injury to your body, and reinforce good habits. Remember to position the core of your body behind and in line with your stroke, checking your alignment by visually drawing a line straight out from your belly button and comparing it with the line of your stroke that travels through your forearm (see accompanying figure). For more detail on using your core and employing proper body mechanics, see Chapter 4.



ROUTINES

ABDOMINAL MASSAGE ROUTINES

The routines that follow demonstrate soft tissue massage to the musculature of the abdomen. We begin with the RA; we then use the RA as a landmark to locate and work first the external and internal abdominal obliques and the TA muscle in the anterolateral abdomen. We then demonstrate how to work the proximal (abdominal) belly of the psoas major, the proximal (pelvic) belly of the iliacus, and then the distal common belly/tendon of the iliopsoas in the proximal thigh. The last routine that is demonstrated is working the diaphragm. In each case, massage of the right side is shown. To massage the left-sided musculature, stand to the left side of the table and reverse the treatment and support hands. Individual illustrations and precise attachment and action information for these muscles are given in Chapter 1.

ROUTINE 5-1: RECTUS ABDOMINIS

The RA attaches from the pubic bone inferiorly to the rib cage superiorly. Massage to the right RA was shown in the "Overview of Technique" section at the beginning of this chapter (see Figs. 5-1 through 5-5). For the left RA, work instead from the left side of the table and reverse treatment and support hands.

5.3 PRACTICAL APPLICATION

The Effects of Pregnancy on Anterior Abdominal Wall Muscles

As the gravid uterus grows, it moves from a position within the pelvic cavity into the abdominal cavity. At 38 weeks' gestation, the fundus, or the top of the uterus, is inferior to the xiphoid process, inhibiting diaphragm function. To accommodate this growth, the abdominal muscles stretch, often weakening, losing tone, and separating. This separation, called *diastasis recti*, is also encouraged by the release of the hormone relaxin, which softens all the connective tissue in the expectant mother's body to allow for fetal growth and to widen her pelvis for childbirth **(Fig. A)**. Since the linea alba is a sheath of connective tissue that separates the right- and left-sided rectus muscles, it also loses its tensile ability and stretches, and trigger points are often created at the attachments of the rectus.

Consequently, this muscular adaptation of pregnancy often leads to lumbar instability, muscle pain and weakness, longer labors, and possibly hernias during postpartum recovery. The loss of abdominal structural integrity also contributes to an exaggerated anterior pelvic tilt, which adds to the lumbar compression and lower back tightness of pregnancy. Massage, although relaxing and soothing, cannot correct the diastasis recti or the structural weakness of the abdominal core. What does help to reduce the size of the diastasis (measured by the number of fingers that fit

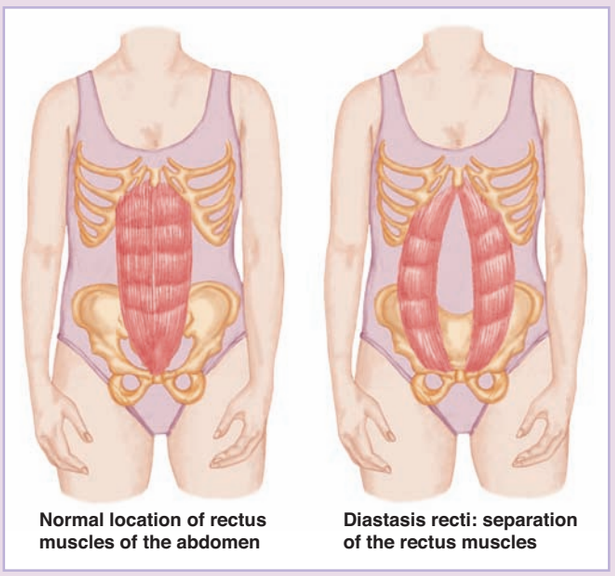


Figure A (Reprinted with permission from McKinney ES, James SR, Murray SS, et al. Maternal-Child Nursing. 3rd ed. St. Louis, MO: Mosby; 2009.)

continued

5.3 PRACTICAL APPLICATION *(continued)*

into the space between the sides of the rectus and the depth of the connected tissue) are Tupler Technique exercises that target the deepest abdominal muscle, the TA.

The TA is known as the "girdle" of the body. During pregnancy, a strong TA can support the heavy uterus, minimize the diastasis recti, stabilize the lower spine, reduce back pain, and facilitate labor. Weakness in the TA results in a protruding abdominal wall, a more pronounced separation of the recti, lower back instability and pain, and muscular imbalance. Examining the common attachments of the overlying abdominal muscles (obliques and rectus), it can be seen that contracting the TA pulls the linea alba inward, thereby making the diastasis smaller. Any exercise that puts forward pressure on the weakened connective tissue (i.e., crunches, leg lifts) or that rotates the torso should be avoided until long after the diastasis is healed, if they are done at all.

Manual Therapy Techniques:
The abdominal massage that is provided during pregnancy (after client permission) should be light, slow and rhythmical, clockwise, and an effleurage stroke performed with open hands. Care must be taken to avoid further lateral pulling on the linea alba. In late pregnancy, however, as preparation for birth, techniques that release myofascial restrictions in the abdominal area can be provided. Starting toward the end of the second trimester, myofascial stretching helps maintain pelvic and fascial fluidity and suppleness for the months that follow.

Care must be taken to keep the direction of the stretch horizontal (elongating) but lateral to the uterus—never on it. A pregnant woman's rib cage expands 2 to 3 inches anteriorly and laterally, allowing the baby to grow. However, this expansion can create myofascial restrictions and intercostal tightness. These restrictions can be relieved with gentle finger pad myofascial release and appropriate stretching. This also facilitates diaphragm function and allows the pregnant client to breathe deeper.

Postural shifting in later pregnancy creates hyperextension, causing stretching of most of the muscles in the front of the body, and tightness and compression in muscles of the posterior body. This also includes stretching to the iliopsoas. If the abdominal muscles are weakened, as in pregnancy and diastasis recti, your client may experience lower back instability and pain when walking or lifting her legs because these motions require contraction of the hip flexors (i.e., iliopsoas).

Figure B (Reprinted with permission from Stillerman E. Prenatal Massage: A Textbook of Pregnancy, Labor, and Postpartum Bodywork. St. Louis, MO: Mosby; 2008.)

During pregnancy, psoas balancing can be performed through several noninvasive techniques. For instance, client-initiated posterior pelvic tilts shorten the overstretched iliopsoas. This can also be performed by the massage therapist with the client in a side-lying position: one hand softly covers the client's sacrum, and the other hand cups her anterior superior iliac spine (ASIS). The movement is a gentle stretch with the sacral hand pulling toward the client's feet and the ASIS hand pulling in a posterior direction. Hold the stretch for several seconds and release slowly.

Positional release shortens the iliopsoas: the client is supine with her hip and knee joints bent, she is supported by bolsters or pillows under her lower extremities and trunk so she is not lying flat on her back, and her cervical spine is supported **(Fig. B)**. She remains in this position for 15 to 20 minutes.

Rocking in a chair also helps to balance the iliopsoas by affecting proprioception. Another noninvasive technique to balance the iliopsoas comes from Zero Balancing (it is also a part of Native American prenatal care.) Lift the supine client's lower extremity and place the foot on your clavicle. Support her lower extremity under her knee to prevent knee joint hyperextension. Your other hand grabs slightly above her same-side wrist. Following the client's breath, push inward on her foot with your shoulder and pull her upper extremity toward you as she exhales; release on the inhalation. Repeat this for a total of three times before changing sides. This movement, like rocking, affects the proprioceptors and releases the muscle.

Elaine Stillerman, LMT

ROUTINE 5-2: ANTEROLATERAL ABDOMINAL WALL (ABDOMINAL OBLIQUES AND TRANSVERSUS ABDOMINIS)

The three muscles of the anterolateral abdominal wall on each side are the external abdominal oblique, internal abdominal oblique, and the TA. Even though these muscles are thought of as being anterior, as a group, they attach via the thoracolumbar fascia all the way into the transverse processes of the lumbar spine (see Fig. 1-16B). Superiorly, they attach as far as the 5th rib; inferiorly, they attach onto the pubic bone (Fig. 5-9).

Starting Position:

- The client is supine.
- You are standing at the right side of the table, facing diagonally toward the foot end of the table (Fig. 5-10).
- Your right hand is the treatment hand that contacts the client.
- Your left hand is the support hand that braces the contact hand.
- *Note*: The treatment and support hands can be reversed.

Step 1: Locate Target Musculature:

- The anterolateral abdominal muscles are located by using the RA as a landmark.
- Begin by locating the RA as explained in the "Overview of Technique" section (see Figs. 5-1 through 5-5), then find the lateral border of the RA (Fig. 5-11).
- Now drop immediately off the lateral border of the RA (laterally) and you will be on the anterolateral abdominal wall muscles (see Fig. 5-11).

Step 2: Performing the Technique:

- It is important to use the flat surface of the finger pads and not the fingertips, which could be uncomfortable for the client.
- Apply mild to moderate pressure, starting over the lateral rib cage and running inferiorly and medially toward the RA along the length of the fibers of the external abdominal oblique from superolateral to inferomedial (Fig. 5-12A).

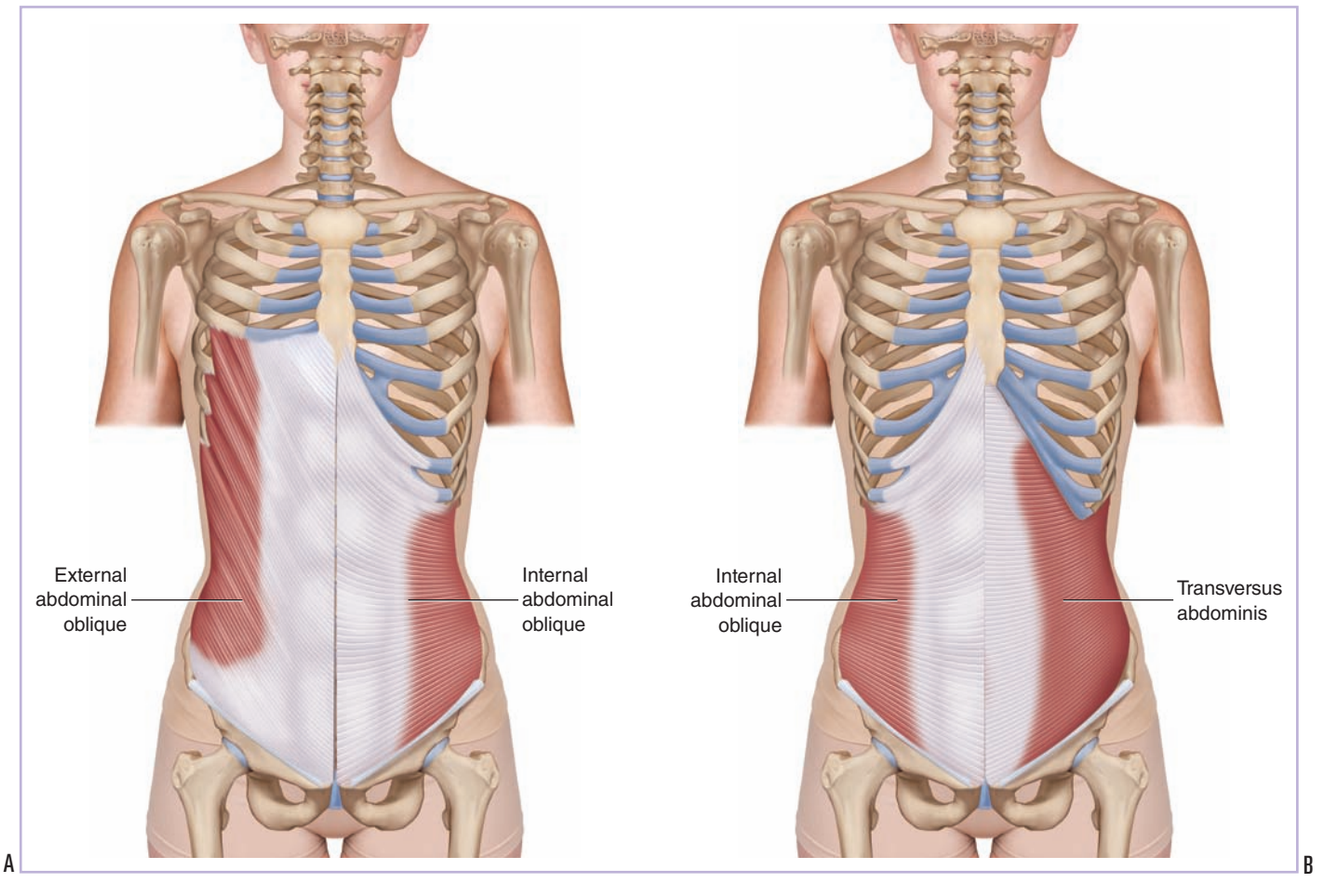


Figure 5-9 Anterior view of the muscles of the anterolateral abdominal wall. **(A)** Superficial view. The external abdominal oblique is shown on the client's right side. The internal abdominal oblique is shown on the client's left side. **(B)** Deeper view. The internal abdominal oblique is shown on the client's right side. The TA is shown on the client's left side.

Figure 5-10

Figure 5-11

Note: Strokes begin over the rib cage wall because the external abdominal oblique attaches as far superiorly as the 5th rib.

- Repeat this stroke starting slightly more inferiorly each time until the entire width of the anterolateral abdominal wall and lower rib cage has been covered.
- These strokes work longitudinally along the external abdominal oblique and cross fiber over the internal abdominal oblique (and diagonally across the TA).
- Now change your orientation to face diagonally toward the head end of the table and work in the opposite direction, from inferolateral to superomedial (Fig. 5-12B).
- Repeat this stroke until the entire width of the anterolateral abdominal wall and lower rib cage has been covered.
- These strokes work longitudinally along the internal abdominal oblique and cross fiber over the external abdominal oblique (and diagonally across the TA).

Figure 5-12A

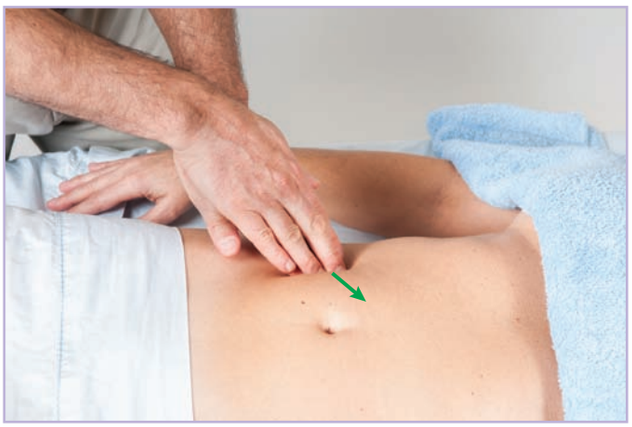


Figure 5-12B

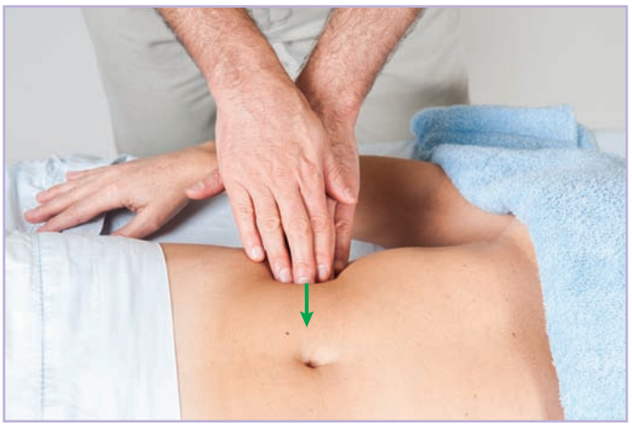


Figure 5-12C

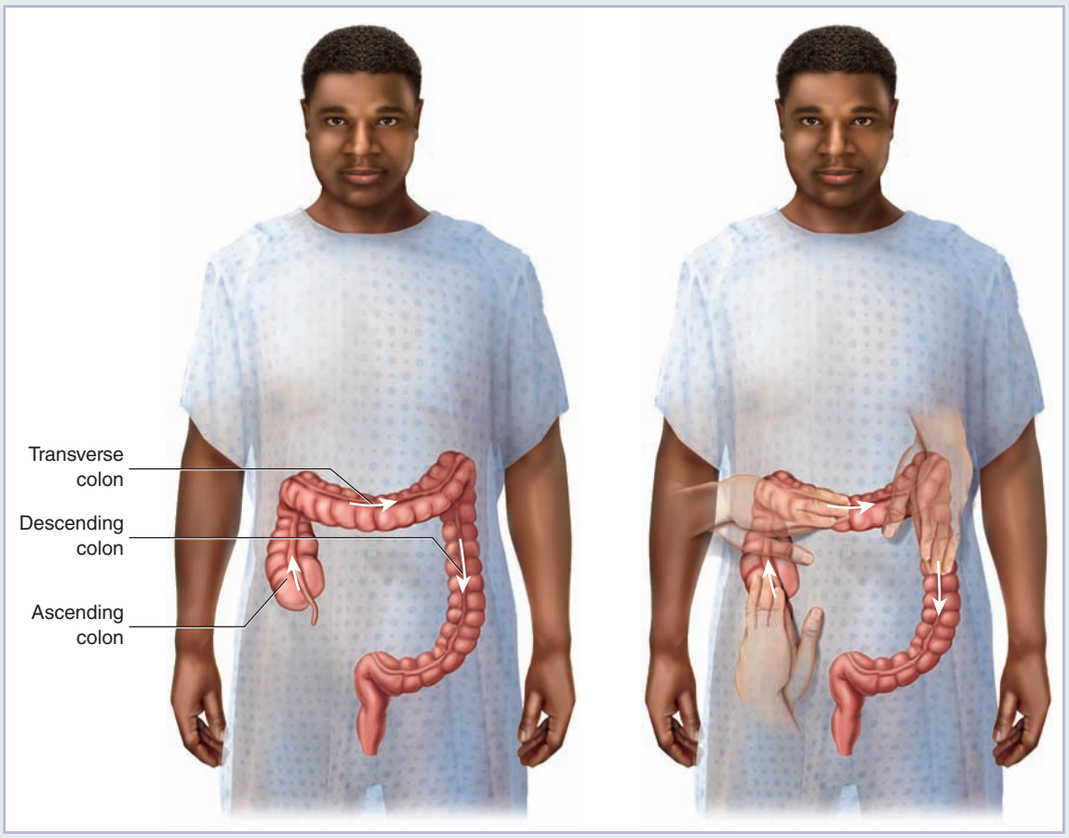
Figure 5-12D

- Now change your orientation to face across the table and work transversely across the anterolateral abdominal wall from lateral to medial (until you reach the lateral border of the RA) (Fig. 5-12C).
- Repeat this stroke until the entire width of the anterolateral abdominal wall has been covered.
- These strokes work longitudinally along the TA (and diagonally across the abdominal obliques).
- Now change your orientation to face toward the head end of the table and work from inferior to superior (until the rib cage is reached) (Fig. 5-12D).
- Repeat this stroke until the entire width of the anterolateral abdominal wall has been covered.
- These strokes work cross fiber over the TA (and diagonally across the abdominal obliques).
- *Note*: It is important to work the entire abdominal wall, including the inguinal ligament at the junction with the thigh. The inguinal ligament is actually a thickening and folding of the fibrous aponeuroses of the abdominal obliques. However, if work is done distal to the inguinal ligament, caution should be used to avoid compressing the femoral artery, vein, and nerve (see Femoral Neurovascular Bundle Precaution on page 154).

5.3 THERAPIST TIP

Digestive Flow

The strokes described in Routine 5-2 for the anterolateral abdominal wall are designed to work longitudinally along and cross fiber across each of the individual muscles of the anterolateral abdominal wall. However, an excellent protocol for the anterior abdominal wall, especially if moderate or deeper pressure is employed, is to work in the physiologic direction of the bowel (colon/large intestine). Bowel flow travels from the lower right abdomen up the right side of the abdomen in the ascending colon, across the upper abdomen in the transverse colon, and then down the left side of the abdomen in the descending colon **(Fig. A)**. Pressure along the bowel and in the direction of the flow may aid in movement of the bowel contents. This is usually done in three distinct strokes. Begin by working down the descending colon on the client's left side with superior to inferior, vertically oriented strokes. Now work across the transverse colon from right to left. And then finish by working up the ascending colon on the client's right side with inferior to superior, vertically oriented strokes **(Fig. B)**. This order is followed to first clear the descending colon before promoting movement of contents into it from the transverse colon, and the transverse colon is cleared before moving contents into from the ascending colon. In other words, work and clear distally before working proximally.

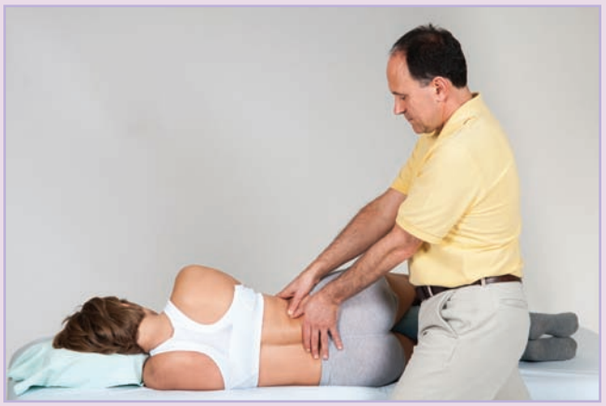


A B

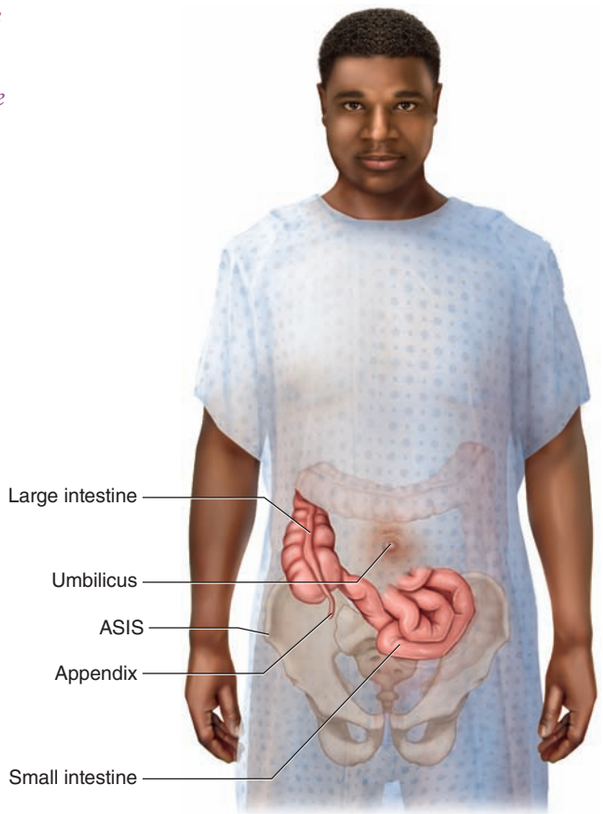
5.4 PRACTICAL APPLICATION

Side-Lying Position

Routine 5-2 describes the abdominal obliques and TA muscles as anterolateral. The term anterolateral is used to emphasize that these muscles are located lateral to the RA, which is located anteromedially. However, this term can be misleading because the obliques and TA are not confined to the anterolateral abdomen; they are also located in the lateral abdominal wall and the posterolateral abdominal wall. Indeed, the internal abdominal oblique and the TA attach all the way posteriorly into the transverse processes of the lumbar spine via their attachment into the thoracolumbar fascia; therefore, their posterior fibers could be considered to be low back musculature (see Figs. 1-26 and 1-27). For this reason, side-lying posture can be an excellent posture to use when working the entirety of these muscles (see accompanying figure).



As shown in the figure at right, the **appendix** *is located in the lower abdomen on the right side, approximately halfway between the posterior superior iliac spine (PSIS) and the umbilicus. The appendix is a small extension of the cecum of the large intestine. Exercise caution to avoid working with excessively deep pressure directly on and injuring the appendix.*



ROUTINE 5-3: PSOAS MAJOR PROXIMAL (ABDOMINAL) BELLY

View the video "Psoas Major Abdominal Belly Palpation" online on thePoint.lww.com

The psoas major muscle is rarely assessed or worked. This is unfortunate because this muscle is functionally important as a postural stabilizer of the lumbar spine and often becomes tight due to the principle of adaptive shortening because it is a hip flexor muscle and so much time is spent seated with the hip joints flexed. The psoas major attaches proximally on the anterolateral spine from the levels of T12-L5, and distally onto the lesser trochanter of the femur (Fig. 5-13).

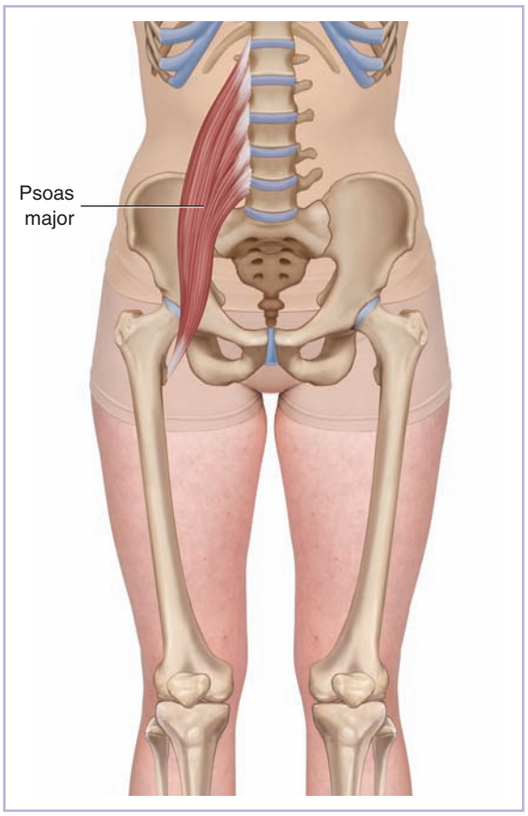


Figure 5-13 The right psoas major.

Starting Position:

- The client is supine with one large roll or a number of smaller rolls under the knees. This relaxes the hip flexor musculature so that the pelvis can drop into posterior tilt, relaxing and slackening the anterior abdominal wall.
- You are standing at the right side of the table (Fig. 5-14).
- The finger pads of your left hand are the treatment contact, and the finger pads of your right hand are the support that braces the left hand treatment contact. *Note*: This could be reversed; the right hand could be the treatment hand and the left hand the support (Fig. 5-15A).

Figure 5-14

5.4 THERAPIST TIP

Placing a Roll under the Bottom Fitted Sheet

A roll is placed under the client's knees to flex the hip joints so the pelvis relaxes into posterior tilt, relaxing and slackening the anterior abdominal wall. If you do not have a large roll or a number of smaller rolls, then you can help the client be relaxed in a position of flexion at the hip joints by placing a roll under the bottom fitted sheet immediately distal to the client's feet. The friction against the table combined with the tension of the fitted sheet are usually sufficient to hold the roll in place, thereby holding the client's feet in position so that the hip joints remain flexed.

Step 1: Locate Target Musculature:

- Begin by locating the RA as explained in the "Overview of Technique" section (see Figs. 5-1 through 5-5), then find the lateral border of the RA.
- After locating the lateral border of the RA, drop immediately off it (laterally) (see Fig. 5-15A).
- To access and palpate directly on the psoas major, ask the client to take in a breath; as the client gently exhales, slowly sink in toward the spine by pressing into the anterior abdomen in a posterior and slightly medial direction (Fig. 5-15B). Do not try to reach all the way to the psoas major; it is better to take your time to arrive at the muscle.

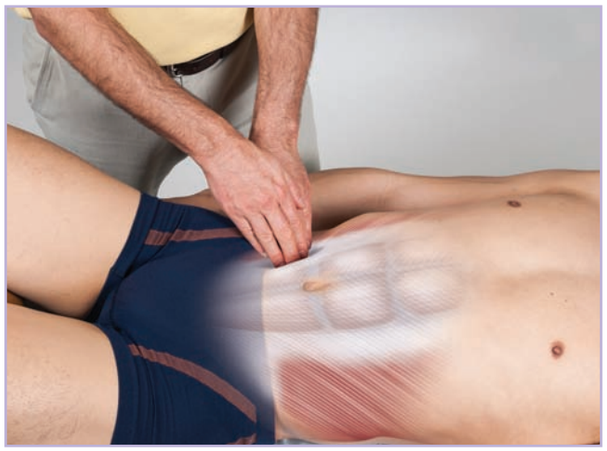


Figure 5-15A

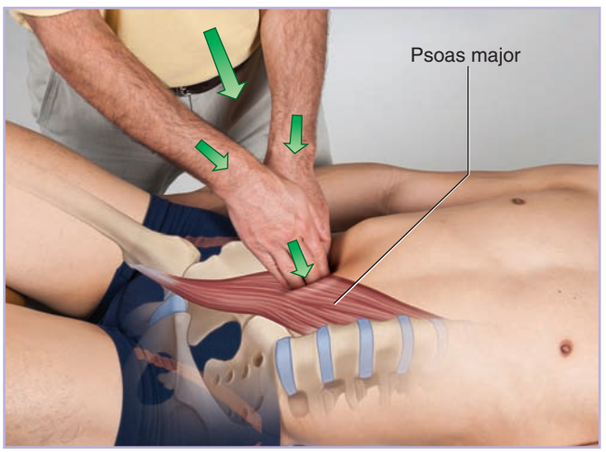


Figure 5-15B

- Ask the client to take in another breath, and as the client exhales again, reach in farther toward the psoas major on the anterolateral bodies and transverse processes of the spine. If necessary, repeat this process a third time to reach in all the way to the muscle. The psoas major can usually be reached on the second or third exhale. Because the psoas major is located deep against the posterior abdominal wall, is rarely worked, and the intestines are located between the therapist's fingers and the psoas major, clients are often sensitive and feel vulnerable here, so pressure should be applied very slowly and gradually.
- Because the psoas major lies directly against the spine, it is usually easy to know when it has been reached because you will feel the firmness of the anterior bodies of the spine deep to them. If you do not feel the firmness of the spine deep to the muscle, you are probably not on the psoas major.
- To confirm that you are on the psoas major, have the client try to gently flex the thigh at the hip joint against the resistance of gravity (Fig. 5-15C). This will cause the psoas major to contract, and you will feel it engage. *Note*: Be sure to ask for only a very small thigh flexion range of motion; a large range of motion will engage the anterior abdominal wall to stabilize the pelvis from anteriorly tilting. If the anterior abdominal wall engages, it will become difficult to palpate through it to reach the psoas major.

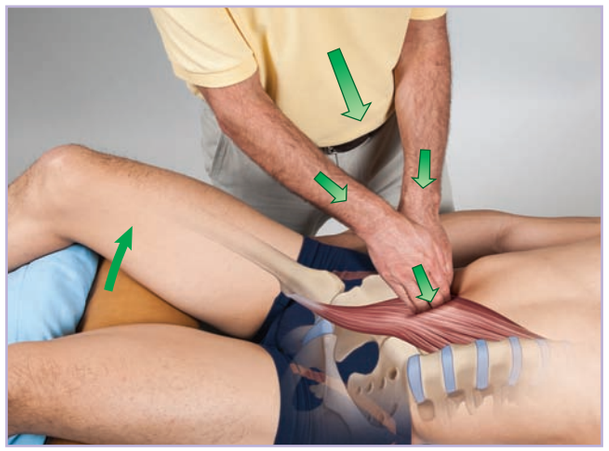


Figure 5-15C

Step 2: Perform the Technique:

- Once you are sure of your placement on the abdominal belly of the psoas major, you can work it by performing short longitudinal strokes running vertically along the musculature with mild to moderate pressure (Fig. 5-16). Strumming transversely across the musculature can also be performed. Circular strokes are also very effective.
- The psoas major attaches along the entire lumbar spine, so once one level has been worked, continue to work the musculature in a similar fashion superiorly as far as possible and then inferiorly as far as possible. As you work inferiorly, keep in mind that the psoas major gradually becomes more superficial, lying closer to the anterior abdominal wall.
- Once the muscle has been worked with mild to moderate pressure, if it is within the client's tolerance, deeper pressure can be used.

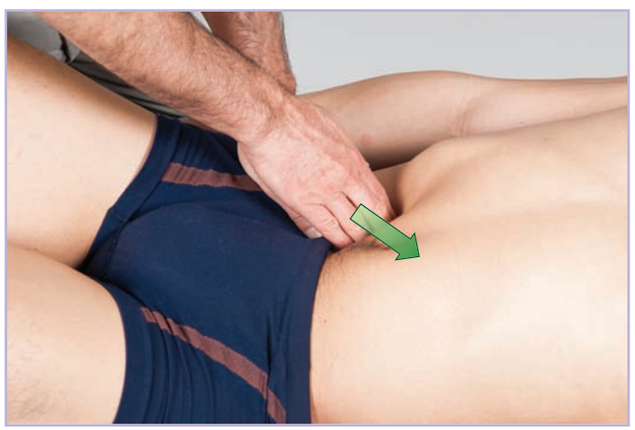


Figure 5-16

*The **abdominal aorta** is located along the midline of the body, over the anterior aspect of the bodies of the lumbar vertebrae, medial to the abdominal belly of the psoas major (see Fig. 1-45A). When sinking into the client's abdomen to assess and treat the psoas major, it is important to aim for the anterolateral aspect of the spine. If the pulse of the aorta is felt, you are too far medial and need to readjust the direction that you are sinking in to be slightly more lateral. Always feel for the pulse of the aorta before exerting deep pressure into the psoas major.*

Because pressure must be exerted through the abdominal contents to reach the psoas major, it is important to make sure that the client will be comfortable. If the client has any type of intestinal condition, has just eaten, or needs to void the bladder, working into the psoas major can be uncomfortable.

5.5 PRACTICAL APPLICATION

Alternate Positions for the Psoas Major

Working the psoas major with the client supine is probably the most common position in which this muscle is worked, perhaps because the client is so often in this position. However, side-lying and seated positions are good alternatives. The advantage of side-lying position is that if the client is overweight and has a large abdomen, it falls away from your palpating fingers, making it easier to access the psoas major. Preferable to pure side-lying position is ¾ side-lying position in which the client is approximately half-way between side-lying and supine. The advantage of this position is that the therapist can better use body weight to drop down into the psoas major **(Fig. A)**. When working the psoas major with the client side-lying or ¾ side-lying, it is important to have his hip and knee joints flexed so that the anterior abdominal wall is relaxed and slackened. To confirm that you are on the psoas major, ask the client to perform a small flexion range of motion of the thigh at the hip joint.

Seated position can also be very effective for working the psoas major because it allows the client to slightly flex the trunk to relax and slacken the anterior abdominal wall. Another advantage is that the abdomen also tends to fall out of way in seated position. To confirm that you are on the psoas major, ask the client to perform a very small hip flexion range of motion by lifting the foot slightly off the floor **(Fig. B)**. Regardless of the position (supine, side-lying, or seated), be sure to direct your pressure posteriorly and medially toward the anterolateral spine.

A

B

5.5 THERAPIST TIP

First Work the Anterior Abdominal Wall

Most clients do not have a tight anterior abdominal wall. However, for the occasional client who does, it is important to first work and loosen the musculature of the anterolateral abdominal wall with moist heat and soft tissue manipulation before attempting to work the psoas major. Otherwise, it will be difficult to penetrate through the abdominal wall to reach the psoas major.

ROUTINE 5-4: ILIACUS PROXIMAL (PELVIC) BELLY

Like the psoas major, the iliacus muscle is also rarely assessed and worked. This is unfortunate because like the psoas major, this muscle often becomes tight due to the principle of adaptive shortening (because it is a hip flexor muscle and so much time is spent seated with the hip joints flexed). The iliacus attaches proximally on the internal (medial) surface of the ilium and distally onto the lesser trochanter of the femur (Fig. 5-17).

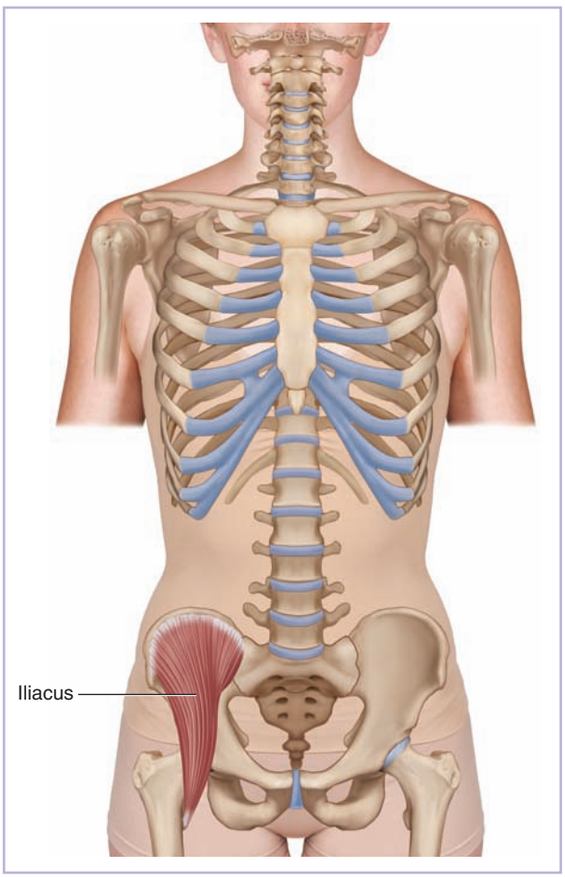


Figure 5-17 The right iliacus.

Starting Position:

- The client is supine with one large roll or a number of smaller rolls under the knees. This relaxes the hip flexor musculature so that the pelvis can drop into posterior tilt, relaxing and slackening the anterior abdominal wall.
- You are standing at the right side of the table (Fig. 5-18).
- The finger pads of your right hand will be the treatment contact, and the finger pads of your left hand will be the support that braces the right hand treatment contact. *Note*: This could be reversed; the left hand could be the treatment hand and the right hand the support.

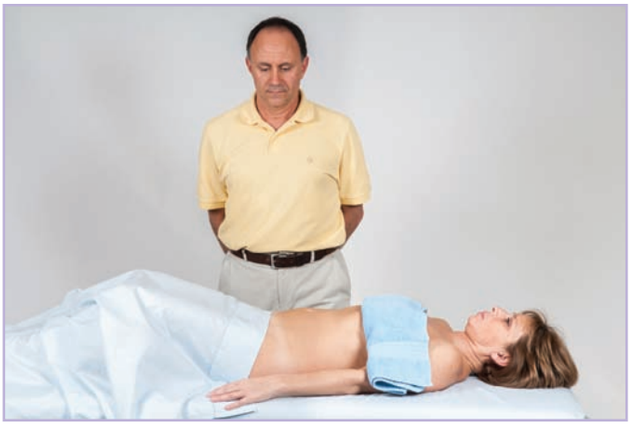


Figure 5-18

Step 1: Locate Target Musculature:

- First, find the ASIS.
- Then drop medial to the ASIS with your finger pads curled around the ilium (Fig. 5-19A).

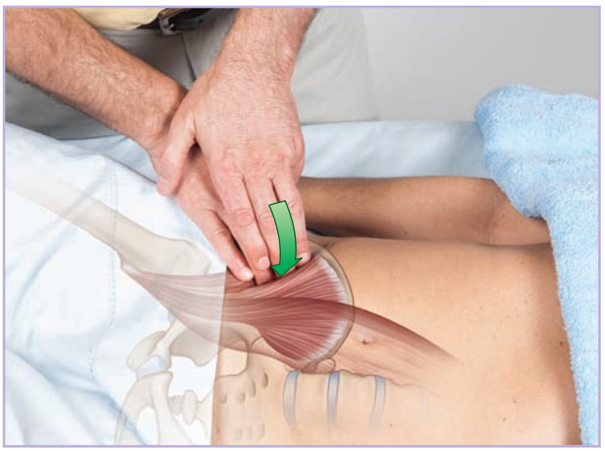


Figure 5-19A

- To access and palpate directly on the iliacus, ask the client to take in a breath; as the client gently exhales, slowly sink in by curling your finger pads toward the internal (medial) surface of the ilium (Fig. 5-19B).

Figure 5-19B

- To confirm that you are on the iliacus, have the client try to gently flex the thigh at the hip joint against the resistance of gravity (Fig. 5-19C). This will cause the iliacus to contract and you will feel it engage. *Note*: Be sure to ask for only a very small thigh flexion range of motion; a large range of motion will engage the anterior abdominal wall to stabilize the pelvis from anteriorly tilting. If the anterior abdominal wall engages, it will become difficult to palpate through it to reach the iliacus.

Figure 5-19C

5.6 THERAPIST TIP

Ticklish Clients

Many clients are ticklish when the abdominopelvic and thigh regions are worked. Ticklishness is often a reaction to feeling that personal space is being invaded. It can be helpful to ask the ticklish client to place a hand over your palpating/treatment hand (see figure). This gives the client the sense that he or she is in control of this space and consequently often diminishes sensitivity.

Step 2: Perform the Technique:

- The iliacus can be worked by performing short longitudinal strokes running vertically along the musculature with moderate to deep pressure (Fig. 5-20A). Strumming transversely across the musculature can also be performed (Fig. 5-20B).
- The iliacus attaches along the entire internal (medial) surface of the ilium. However, most of it is out of reach and cannot be accessed. Access as much of this muscle as possible by continuing to work the musculature in a similar fashion as far superiorly and inferiorly along the ilium as possible and as far medially as possible.

Figure 5-20A

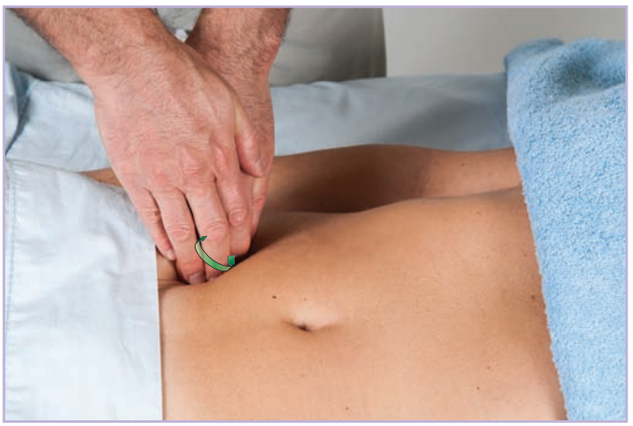


Figure 5-20B

ROUTINE 5-5: ILIOPSOAS DISTAL (FEMORAL) BELLY/TENDON

View the video "Psoas Major Femoral Belly Palpation" online on thePoint.lww.com

The psoas major and iliacus are separate muscles proximally in the abdominopelvic cavity. However, when they pass deep to the inguinal ligament to enter the thigh, their distal bellies gradually blend into one another, and they attach together and form one common tendon that attaches onto the lesser trochanter of the femur. For this reason, they are often grouped together as one muscle, the iliopsoas (Fig. 5-21).

The iliopsoas is the major flexor of the thigh at the hip joint. Because of the amount of time spent seated with the thighs flexed, the iliopsoas is shortened and often tightens up due to the principle of adaptive shortening. It is generally wise to work a muscle in its entirety from attachment to attachment. Therefore, if the proximal bellies of the iliopsoas (psoas major and iliacus) are worked, the distal belly/tendon in the proximal thigh should also be worked. Routines 5-3 and 5-4 showed protocols for working the proximal bellies of the psoas major and iliacus in the abdominopelvic cavity. This routine shows a protocol for working the distal iliopsoas in the proximal thigh.

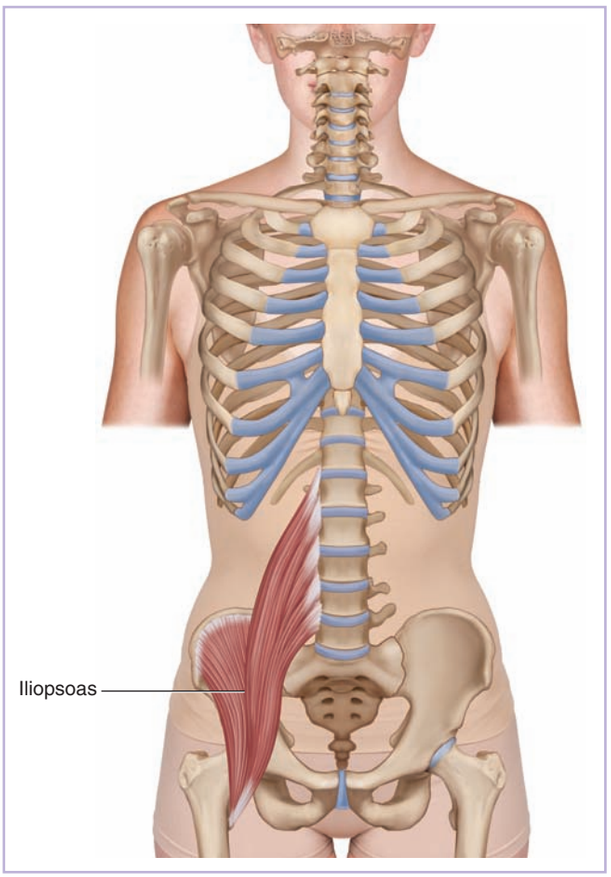


Figure 5-21 The right iliopsoas. The iliopsoas is composed of the psoas major and the iliacus.

Starting Position:

- The client is supine with one large roll or a number of smaller rolls under the knees. This relaxes the hip flexor musculature, allowing better access and deeper work into the iliopsoas.
- You are standing at the right side of the table (Fig. 5-22).
- The finger pads of your left hand will be the treatment contact, and the finger pads of your right hand will be the support that braces the left hand treatment contact. *Note*: This could be reversed; the right hand could be the treatment hand and the left hand the support.

Figure 5-22

Step 1: Locate Target Musculature:

- First, find the ASIS. Then drop off it immediately distal and slightly medially; you should be on the sartorius (Fig. 5-23A).

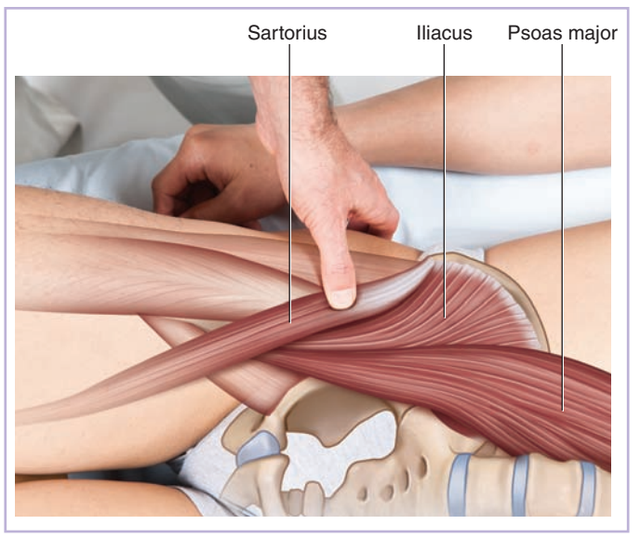


Figure 5-23A

- To confirm that you are on the sartorius, ask the client to laterally rotate the thigh at the hip joint and then flex it. The sartorius will engage, and its contraction can be felt (Fig. 5-23B).

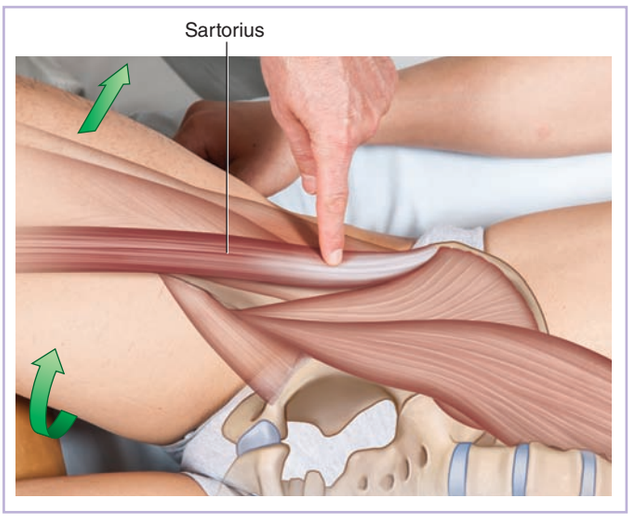


Figure 5-23B

- Once located, drop just off the sartorius medially onto the iliopsoas distal belly/tendon. Strum horizontally across the belly/tendon and feel for its width. The iliacus fibers are more lateral within the common belly/tendon, and the psoas major fibers are more medial (Fig. 5-23C).

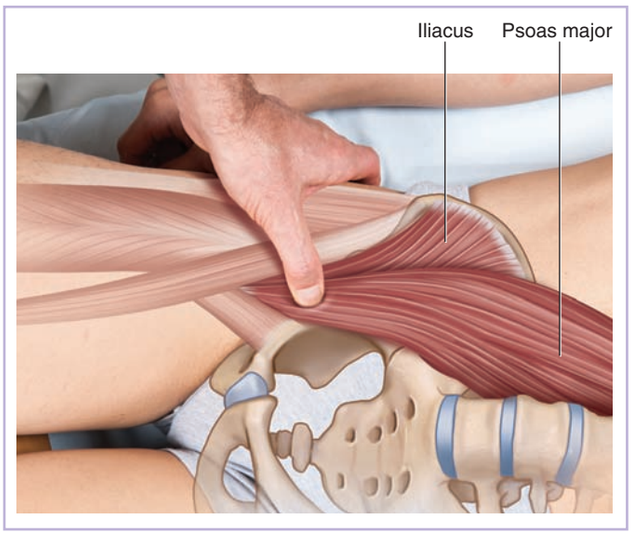


Figure 5-23C

- You can confirm that you are on the psoas major fibers by asking the client to perform a gentle, small flexion range of motion of the trunk at the spinal joints, in other words, a curl-up. *Note*: This will engage the psoas major fibers but not the iliacus fibers (Fig. 5-23D).

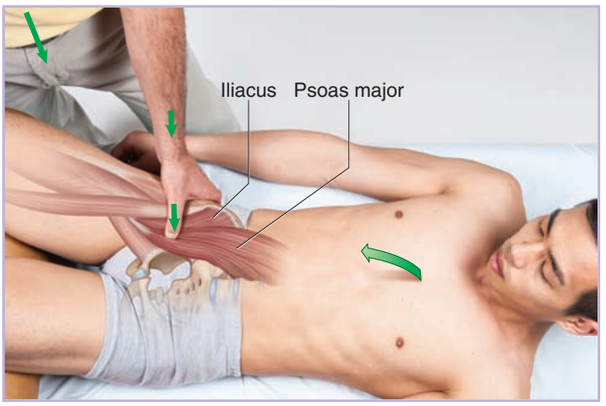
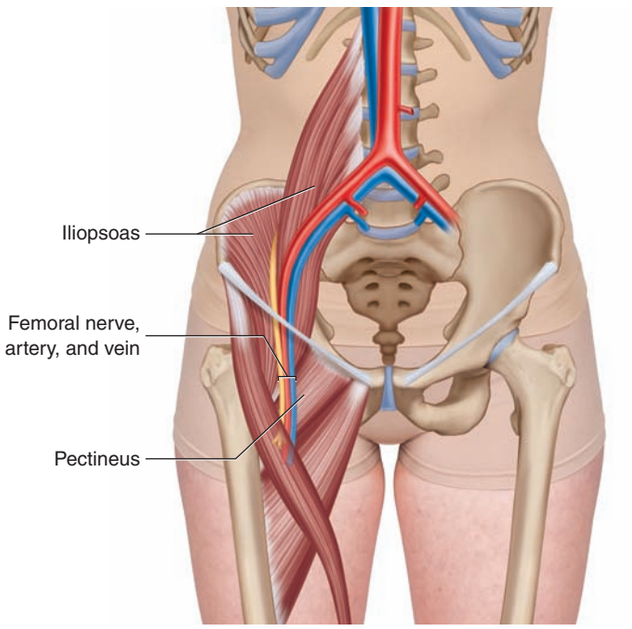


Figure 5-23D

Femoral Neurovascular Bundle

Caution must be exercised when working the distal belly/tendon of the iliopsoas in the proximal thigh because of the presence of the **femoral neurovascular bundle**, *composed of the femoral nerve, artery, and vein in the femoral triangle. These structures usually overlie the iliopsoas and pectineus muscles (see accompanying figure). Before applying any deep pressure in the area, feel for the pulse of the femoral artery. If a pulse is felt, either slightly move your palpating/treatment finger pads or, if possible, try to reach deep to the artery and slightly displace it medially and continue working where you are. Also, be aware that if pressure is placed on the femoral nerve, the client might experience pain, likely a shooting pain, into the anterior thigh. If this occurs, as with the artery, either slightly move your palpating/treatment finger pads or, if possible, slightly displace the nerve and continue working where you are.*



Step 2: Perform the Technique:

- The distal belly/tendon of the iliopsoas can be worked by performing short longitudinal strokes running vertically from superior to inferior along the musculature with moderate to deep pressure (Fig. 5-24A). Strumming transversely across the musculature can also be performed (Fig. 5-24B).

Figure 5-24A

Figure 5-24B

5.7 THERAPIST TIP

Fibrous Adhesions in the Inguinal Region

The region of the proximal thigh near the inguinal ligament often accumulates a lot of fibrous adhesions. For this reason, moderate to deep pressure work in this region can be very beneficial to free up and loosen the area.

- When working the iliopsoas in the proximal thigh, it is important to try to access the belly/tendon as far distally toward the lesser trochanter as possible. Depending on the client, this may be very challenging. To facilitate accessing the iliopsoas distally, you can passively support the client's thigh in successively more flexion by grasping under their knee as you reach toward the lesser trochanter attachment (Fig. 5-24C). If it is difficult to support the weight of the client's thigh, then place your right foot on the table and rest their (lower) leg on your thigh.

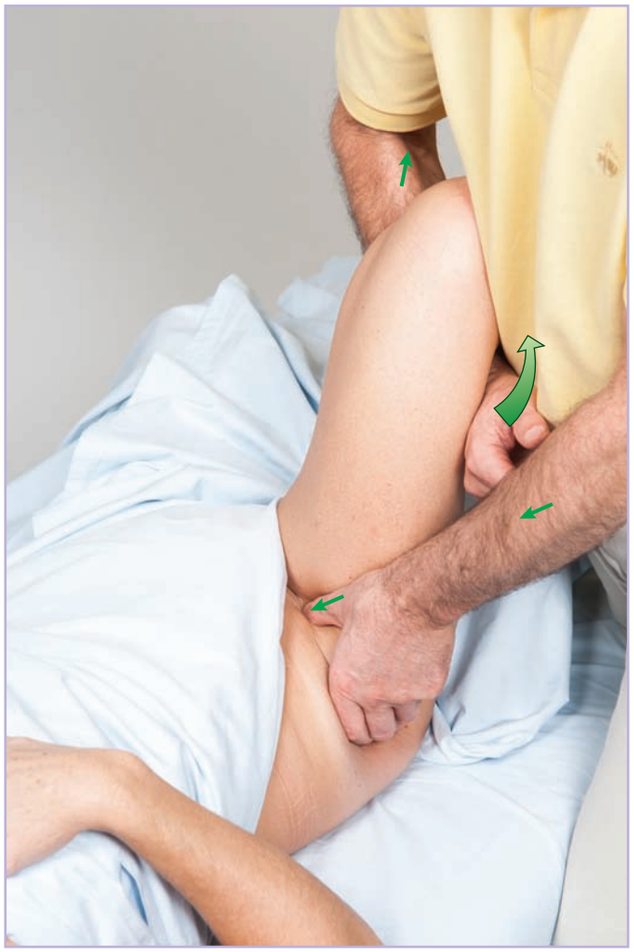


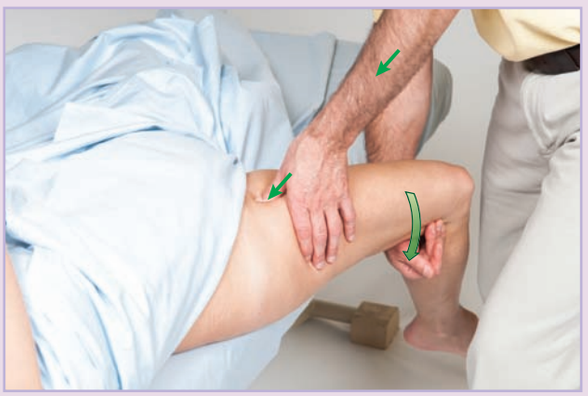
Figure 5-24C

5.6 PRACTICAL APPLICATION

Pin and Stretch the Iliopsoas

Pin and stretch is an extremely effective technique that combines sustained deep pressure with stretching and allows the stretch to be applied to a more specific, focused aspect of the muscle. To perform pin and stretch to the distal belly/tendon of the iliopsoas in the proximal thigh, position the client as close to the side of the table as possible. Support the client's lower extremity up and off the side of the table **(Fig. A)**, place your thumb pad treatment contact (finger pads could also be used) onto the iliopsoas with firm pressure to apply the pin, and then lower the client's thigh into extension off the side of the table **(Fig. B)**. It is important to maintain the pressure of the thumb pad pin as the stretch is applied. The stretch can be held statically for a short period of time (approximately 1 to 3 seconds) or for longer (5 seconds or more). Now ask the client to remain relaxed and passive as you bring the thigh back up into flexion toward anatomic position. Usually, three to four repetitions are done. This protocol can then be repeated using a different pin location point on the iliopsoas.

A



B

ROUTINE 5-6: DIAPHRAGM

Most of the diaphragm cannot be reached for soft tissue work; however, the relatively small part of it that is accessible can sometimes greatly help clients who experience shortness of breath. The diaphragm attaches to the internal surfaces of the sternum and lower six ribs circumferentially around the rib cage as well as to the bodies of L1-L3 (Fig. 5-25).

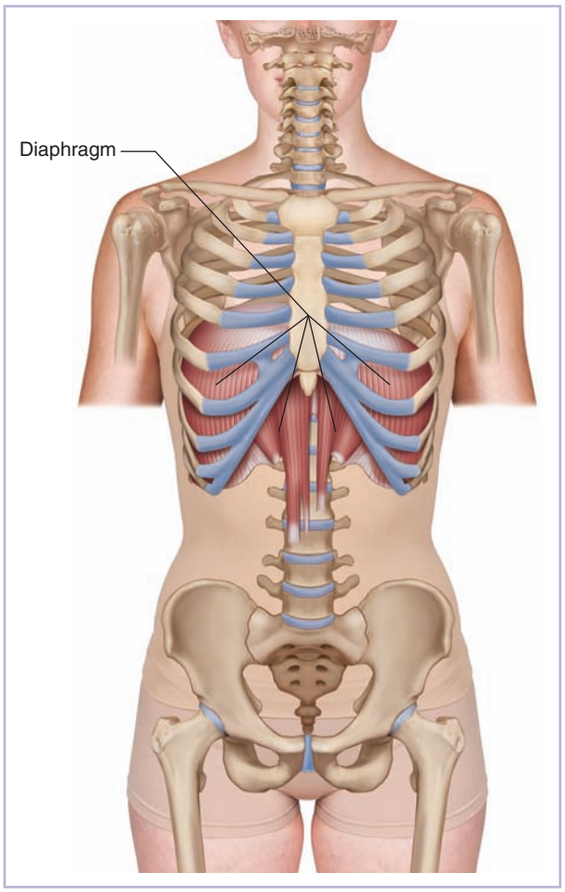


Figure 5-25 The diaphragm.

Starting Position:

- The client is supine with a large roll under the knees. This relaxes the hip flexor musculature so that the pelvis can drop into posterior tilt, relaxing and slackening the anterior abdominal wall.
- You are standing at the right side of the table (Fig. 5-26).
- The finger pads of your right hand will be the treatment contact. If possible, use the finger pads of your left hand as the support that braces the right hand treatment contact.

Figure 5-26

Step 1: Locate Target Musculature:

- After finding the inferior border of the rib cage wall, curl your finger pads around the inferior margin of rib cage with the pads of your fingers oriented toward the internal surface of the ribs (Fig. 5-27A).

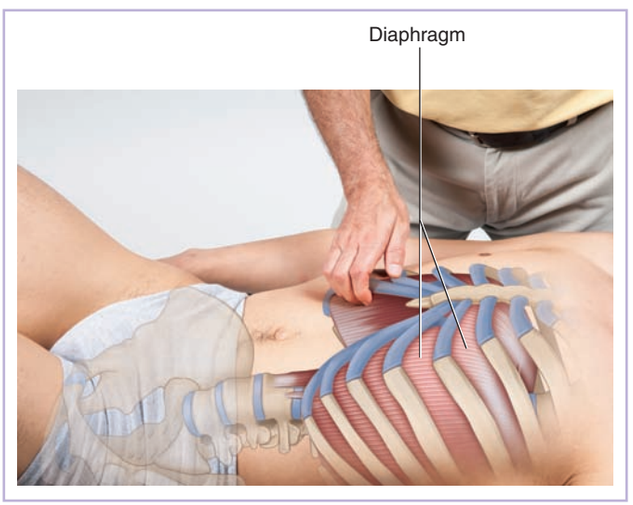


Figure 5-27A

- Ask the client to take in a breath; as the client gently exhales, slowly sink in by curling your finger pads toward the internal surface of the rib cage (Fig. 5-27B).

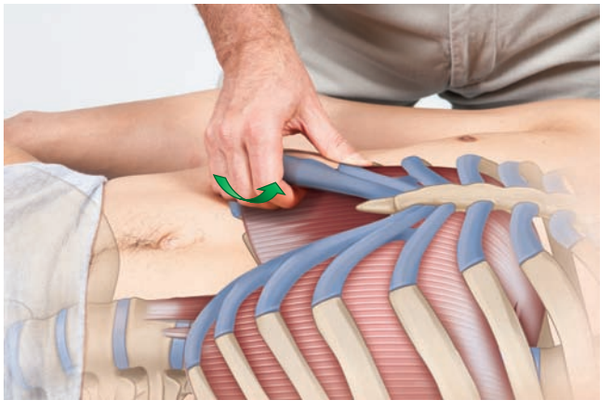


Figure 5-27B

Step 2: Perform the Technique:

- The diaphragm can be worked by performing short transverse strokes across the musculature with moderate to deep pressure, trapping it against the internal surface of the rib cage.
- The diaphragm attaches 360 degrees around the entire circumference of the internal surface of the lower rib cage wall (and sternum). Access as much of this muscle as possible by continuing to work the musculature in a similar fashion as far anteriorly toward the midline as possible and then as far posteriorly as possible.

5.8 THERAPIST TIP

Breathing and the Diaphragm

Shortness of breath is usually caused by weakness or deficiency of the heart and vessels of the cardiovascular system, not the pulmonary system (lungs and breathing). However, with age, the pulmonary system can become a limiting factor toward circulating healthy oxygenated blood throughout the body. For this reason, working the diaphragm in elderly clients can often have a beneficial effect on their health. Working the diaphragm is also often beneficial for clients with chronic respiratory conditions (chronic obstructive pulmonary disorders [COPD]) such as emphysema and asthma.

5.7 PRACTICAL APPLICATION

Visceral Massage

Visceral bodywork (visceral massage) refers to working with restrictions in the organs of the thoracic and abdominal cavities. Jean-Pierre Barral, a French osteopath, developed a curriculum called "Visceral Manipulation" that addresses the "mobility" and "motility" of visceral organs and related structures. Mobility refers to the ability of an organ to move relative to the structures around it. Motility refers to the subtle rhythmic motion of an organ that is presumably left over from its movement into position during embryonic development. Work done with mobility is easily felt by the client and can be visibly seen by an observer, whereas motility requires a subtle, almost energetic touch. Both interventions can have a profound impact on the whole system. Barral also works with the cardiovascular structures within and around the visceral organs, as they are structurally and functionally interwoven. Bruno Chikly, also a French osteopath, works with the lymphatics of the viscera. His curriculum is called "Lymph Drainage Therapy."

One of the fundamentals of doing any kind of visceral bodywork is knowing the location of visceral structures. Barral's first admonition to Visceral Manipulation students is, "Know your anatomy." Even though there are as many variations in the *exact* location and shape of specific organs as there are people, a strong understanding of anatomic structure is indispensable. The stomach, for example, probably has the largest amount of variation due to the effects of genetic, congenital, dietary, and age-related influences. It also changes shape and vertical location based simply on how much food is in it. Regardless of these differences, however, it still *feels* like a stomach. It has a stomach's shape, and it has a stomach's texture. It feels texturally very different from a liver or kidney due to the fact that it is hollow while the other two organs are very dense.

It is important to be aware of the way that the "essential" organs are protected by compensations in other body

continued

5.7 PRACTICAL APPLICATION *(continued)*

systems. If one's internal temperature drops, for example, the autonomic nervous system will direct blood flow away from the extremities and toward the internal organs. In other words, the hands and feet will be sacrificed to protect the liver, kidneys, lungs, and so forth. Similarly, there can be fascial strain through a visceral organ due to adhesions or other fascial restrictions within and around the organ. This strain will be compensated for by "folding" the fascial web around the restriction in order to minimize its effect on the organ. Due to the continuity of the fascial web, this means that the whole body's fascial structure will be limited in its expression. These limitations may be as small as a slight reduction in range of motion of a glenohumeral joint or as large as an easily seen and progressively worsening scoliosis. The musculature will likely be involved as the central nervous system inhibits individual muscles in order to limit muscle-induced strain on the organs.

All of these compensations can affect the fascial web because of the restrictions they initiate. Symptoms may appear far away from the original problem, making it difficult to know where or how to start dealing with them. Deducing that a pain in the foot is due to a restriction around the spleen is a Holmesian feat. To deal with this difficulty, Barral uses a technique called "listening" in which the practitioner feels for areas of restriction, that is, where the body folds around a visceral structure. This allows the practitioner to treat visceral causes rather than simply trying to address symptoms. The belief is that only by addressing *core* issues can those that are the result of compensations be truly "cured."

Although some organs or parts of organs are held within fairly strict fascial boundaries, others can slide around within a lubricated cavity. The lungs, for instance, could not function correctly within the pleural cavity if they were adhered to the lining of the ribs, diaphragm, and mediastinum, or if the lobes were adhered to each other. To prevent this, a serous (fluid producing) membrane maintains a steady supply of watery fluid to allow opposing surfaces to glide easily across each other, similar to what happens between two pieces of wet glass. This effect can also be seen inside the pericardium with the heart and in the peritoneal cavity with the stomach, liver, most of the small intestine, and part of the large intestine. If the slippery quality is diminished by disease or surgical adhesions, there can be symptoms such as pain, structural limitation, and organ dysfunction. One of the goals of visceral manipulation is to mobilize the restricted structures so that the normal slippery relationship can be restored.

Some of the organs of the abdomen are outside the peritoneal cavity. This includes the kidneys, spleen, parts of the duodenum and large intestine, and pelvic organs such as the bladder, rectum, uterus, and prostate. Because of their positions behind and below the peritoneum (retroperitoneal), they have no serous covering. They do, however, still need to be able to move within the abdomen the same way that muscles need to be able to change shape within the arms, legs, and so forth. Also, all organs, slippery or not, have ligamentous and fascial relationships to each other, the sternum, the spine, and the diaphragm as well as their respective cavities (pleural, etc.). These connections often require attention the same way that one might address ligamentous restrictions within and around a joint. The lungs, for instance, have suspensory fascia that connects them to the scalenes, cervical spine, and even to the hyoid bone. Due to these fascial relationships, dysfunction in any of the structures of the neck can be directly attributable to pleural restrictions.

Visceral bodywork is necessarily gentle and painless, although it may feel strange and uncomfortable at times. Clients generally are not used to having their internal organs manipulated. It is, however, often profound and long lasting in its effects. That said, it is imperative that a therapist gets appropriate training before performing any visceral bodywork. There are cautions and contraindications to be understood and techniques to be learned in order to fully appreciate the value of this underutilized modality.

Michael Houstle, LMT, Manual Therapist

CHAPTER SUMMARY

Working into the anterior abdominal wall musculature, as well as accessing the psoas major, iliacus, and diaphragm through the anterior abdominal wall, can be very powerful and beneficial to the client. However, it is often skipped during treatment sessions by manual therapists. Although massaging this region requires more caution than massaging the posterior low back, it can be performed safely and effectively if the therapist understands the anatomy of the abdomen and takes the time to practice these techniques. Very deep pressure is rarely appropriate here (except perhaps when working the abdominal belly of the psoas major), but firm, moderate pressure can be carefully and safely applied. For therapists who have not routinely worked the anterior abdomen, the information in this chapter will facilitate including these techniques in their treatment repertoire.

CASE STUDY

VERA

History and Physical Assessment

Vera Brasilia, age 48 years, comes to your office complaining of an acute right-sided low back pain. She has been experiencing this pain for 4 days now. She went to her internist who ordered radiographs (x-rays), which were negative for any osseous pathologic condition, and prescribed analgesic prescription medication (pain killers). The medication lessens the severity of the pain but makes it difficult for her to function during the day because it clouds her ability to think, so she is only taking it at night before going to bed. She is concerned because the condition does not seem to be improving.

She states that her pain began after she was moving boxes in the basement; she felt a twinge when bending forward with a box in her hands. She woke up the next morning with moderate pain that increased in intensity as the day went on. She states that the pain is now constant and severe, with sharp twinges whenever she moves. On a scale of 0 to 10, where 0 represents no pain and 10 represents the worst pain that she can imagine, Vera states that her pain ranges from 4 to 9, with the pain at 4 when she is lying down and at 8 to 9 when she first awakens and when she is standing or sitting for longer than 5 to 10 minutes. She describes the pain as feeling very deep, and that her "spine feel very fragile." Further, she is also experiencing pain into her right-sided anterior abdominal wall. She states that she does not have any intestinal conditions. There is no referral of pain into the lower extremity. Hot showers help temporarily to decrease the intensity of the pain.

History reveals that she has experienced low back tightness in the past but has never had overt pain. She has never been involved in an automobile accident and has never had any major physical trauma to her low back. Her job primarily requires seated posture at a desk, with work at a computer. She exercises four to five times per week, doing a combination of cardiovascular exercise, Pilates, and yoga.

Your physical exam reveals a decrease in all six cardinal plane ranges of lumbar spinal motion as well as an increase in pain on these movements. Flexion, extension, and left lateral flexion are most restricted and painful. Bilateral active straight leg raise is positive for local right lumbar pain only. Passive straight leg raise is negative bilaterally. Cough test and Valsalva maneuver are negative (for a review of assessment procedures, see Chapter 3). No orthopedic assessment test creates any lower extremity referral. Nachlas' and Yeoman's tests, as well as the medley of sacroiliac joint tests, are negative for low back pain.

Upon palpation, her erector spinae and quadratus lumborum are moderately tight, but pressure into them does not yield the deep pain that Vera has been experiencing nor does it increase the anterior abdominal wall pain. The musculature of her lower right anterior abdominal wall where she has been experiencing pain, and indeed her entire anterior abdominal wall, is neither tight nor tender to pressure. Her right-sided iliacus is only mildly to moderately tight but also does not reproduce the pain that she has been experiencing. However, deeper palpation of the abdominal belly of the psoas major on the right reveals myofascial trigger points that are extremely painful. Further, Vera states that applying pressure into them increases both the low back and the anterior abdominal wall pain that she has been experiencing.

Think-It-Through Questions:

1. Should abdominal massage be included in your treatment plan for Vera? If so, why? If not, why not?
2. If abdominal massage would be of value, is it safe to use with her? If yes, how do you know?
3. If abdominal massage is performed, which specific routines should be done? And why did you choose the ones you did?

Answers to these Think-It-Through Questions and the Treatment Strategy employed for this client are available online at thePoint.lww.com/MuscolinoLowBack

CHAPTER 6

Multiplane Stretching

CHAPTER OUTLINE

Introduction 160
Mechanism 161
Overview of Technique 163
Performing the Technique 166
Multiplane Stretching Routines 169
Chapter Summary 205
Case Study 205

OBJECTIVES

After completing this chapter, the student should be able to:

1. Explain why multiplane stretching is so named.
2. Explain why multiplane stretching is effective.
3. Compare and contrast static and dynamic stretching.
4. Explain how multiplane stretching of a muscle can be reasoned out instead of memorized.
5. Describe how to use your core when stretching the client.
6. Explain the mechanism of multiplane stretching by describing the steps employed in it.
7. Explain why stretching should never be performed too quickly or pushed too far.
8. Describe the roles of the treatment hand and the stabilization hand.
9. Describe the usual breathing protocol for the client during the multiplane stretching technique.
10. Explain how another muscle can be slackened to make the stretch of the target muscle more effective.
11. Define each key term in this chapter and explain its relationship to multiplane stretching.
12. Perform the multiplane stretching technique for each of the muscles and muscle groups presented in this chapter.

KEY TERMS

assisted stretching
classic stretching
creep
dynamic stretching
functional group of muscles
line of tension
multi-cardinal plane stretch
multijoint stretching
multiplane stretching
muscle spindle reflex
presetting the rotation
stabilization hand
static stretching
stretch reflex
stretching
stretching hand
target muscle
target tissue
"the shortest rope"
treatment hand
unassisted stretching

INTRODUCTION

For a joint motion to occur in one direction, soft tissues located on the other side of the joint must lengthen. If any of these soft tissues are tight and resist lengthening, they will restrict proper range of motion of the joint, resulting in loss of joint mobility. These soft tissues may be muscles, ligaments, joint capsules, other fascial planes of tissue, and even skin. Therapeutically, tight soft tissues can be efficiently treated with **stretching**, a treatment modality whose purpose is to lengthen tight/taut tissues.

When stretching of the lumbar spine (LSp) and pelvis is performed, it can be carried out by moving the client's body within one cardinal plane or across multiple cardinal planes (for a review of the planes, see Chapter 1). For example, if the client's trunk is moved forward into flexion, the stretch occurs within one cardinal plane: the sagittal plane. If instead the client's trunk is moved forward into flexion and to the side into either right or left lateral flexion, the stretch occurs within an oblique plane that is across two cardinal planes: sagittal and frontal. Whenever a stretch occurs across two or all three cardinal planes, it is called **multiplane stretching**. The

Note: In the Technique and Self-Care chapters of this book (Chapters 4 to 12), green arrows indicate movement, red arrows indicate stabilization, and black arrows indicate a position that is statically held.

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advantage of multiplane stretching is that it allows for more specific and more effective stretching of a target muscle.

BOX 6.1

Multiplane Stretching Routines

This chapter presents the following multiplane stretch routines:

- Section 1: lumbar spine (LSp) multiplane stretches:
  - Routine 6-1—LSp erector spinae group
  - Routine 6-2—LSp transversospinalis group
  - Routine 6-3—LSp quadratus lumborum
  - Routine 6-4—LSp anterior abdominal wall
- Section 2: hip joint/pelvis multiplane stretches:
  - Routine 6-5—hip abductors
  - Routine 6-6—hip adductors
  - Routine 6-7—hip flexors
  - Routine 6-8—hip extensors: hamstrings
  - Routine 6-9—hip extensors: gluteals
  - Routine 6-10—hip deep lateral rotators

MECHANISM

The essential mechanism of a stretch is simple. When a body part is moved in one direction, it creates a **line of tension** that stretches the muscles (and other soft tissues) located on the other side of the joint. For example, if the trunk is moved anteriorly, the posterior tissues are stretched. Therefore, the direction of motion of a stretch determines which muscles are stretched. Realizing this makes stretching a muscle easy: You simply do the opposite of its action (i.e., you do the antagonistic action to its mover action). For example, if a muscle is a flexor of the trunk, you stretch it by extending the trunk; if it is a right rotator of the trunk, you stretch it by doing left rotation. Stretches of muscles do not need to be memorized. Rather, they can be reasoned out if you know the actions of the muscles that are being stretched.

Stretching Functional Groups

Most therapists stretch their clients' low backs by moving the trunk within a single cardinal plane, such as forward into flexion or backward into extension in the sagittal plane, by flexing laterally to the right or left in the frontal plane or by rotating to the right or left in the transverse plane. As discussed, the target muscles that are stretched are the antagonists of whatever motion you do.

However, moving the client into a cardinal plane motion does not stretch only one specific target muscle; instead, it places a stretching force on an entire functional group of muscles. A **functional group of muscles** comprises muscles that can all perform the same joint motion. For example, if you stretch the client's trunk anteriorly into flexion in the sagittal plane, a stretching force is placed on the entire functional group of trunk extensors. Similarly, stretching the client into right lateral flexion places a stretching force on the entire functional group of left lateral flexors. Although stretching the client in a single cardinal plane might be very effective at stretching an entire functional group of muscles, it is not necessarily effective at isolating the stretch to a specific target muscle within that group. To accomplish this, you need to perform multiplane stretching.

BOX 6.2

Classic Static Stretching Versus Dynamic Stretching

Classic stretching, whether unassisted or assisted, involves movement of a client's body part into a position that elongates the target tissue. Once brought to this position, the client's body part is held statically in that position of stretch for a period of time. The usual recommended period to hold such a stretch ranges from 10 to 30 seconds, although sometimes 2 minutes or more is recommended. Three repetitions are usually done. Because the position of stretch is held statically, this type of stretching is called **static stretching**. The characteristic of soft tissue known as **creep** states that soft tissue will deform based on a sustained force that is placed on it. Therefore, the sustained position of stretch that is held with static stretching efficiently deforms; in other words, stretches/lengthens the target tissue.

Recently, many sources have advocated changing the protocol of stretching from being static in nature to being more dynamic. **Dynamic stretching** is usually performed by the client actively moving the body part to the position of stretch by using the muscles of that body part. Then, instead of statically holding the body part in the position of stretch for a sustained period of time, the client either immediately returns the body part back to the starting position or holds the position of stretch for 1 to 3 seconds at most. By making each stretching repetition only a few seconds long, it is possible for the client to perform more repetitions, usually 8 to 10 or more. The advantages claimed for dynamic stretching are that it not only more effectively stretches the target tissues but that it also warms the tissues, increases blood circulation to the region, lubricates the joints, improves neural control of the motions being performed, and strengthens the muscles being used to bring the body part to the position of stretch. Dynamic stretching is fast becoming the stretching method of choice as recommended by many sources. Because of its other benefits, it is especially recommended as the stretching method that should be done as a warm-up immediately before engaging in any type of strengthening exercise. However, advocates of classic static stretching maintain that to truly change the tension level of a taut soft tissue via the principle of creep, a sustained stretch is necessary.

BOX 6.3

Stretching Terms

When a client stretches soft tissues, the stretching may be assisted or unassisted. **Unassisted stretching** is done when the client moves her own tissues into a position of stretch **(Fig. A)**. **Assisted stretching** occurs when the therapist helps the client to move the body into the position of stretch **(Fig. B)**. The therapist's hand that actually moves the client into the stretch is called the **treatment hand** or **stretching hand**. The other hand is often used to stabilize the rest of the client's body and is called the **stabilization hand**.

The tissue that is to be stretched is termed the **target tissue**. If a muscle is being stretched, it is called the **target muscle**. Although it is important to stretch all taut soft tissues (and all soft tissues are potentially being stretched whenever a stretch is being done), this chapter focuses its consideration and discussion on stretching of muscles.

A

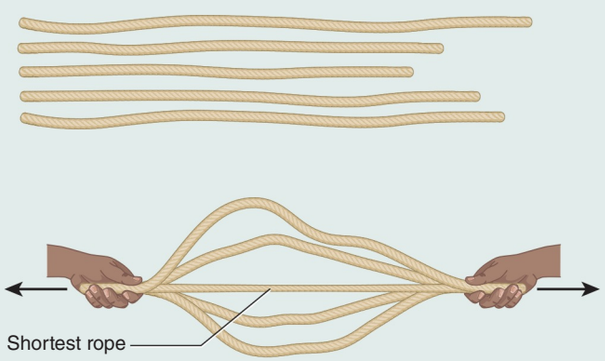
B

6.1 THERAPIST TIP

"The Shortest Rope"

It is important to note that when a stretch is placed on a functional group of muscles, it is extremely unlikely that all the muscles within that group will actually be stretched. A stretching force will be placed on all of them, but they will not all end up being lengthened and pulled taut. In reality, only the shortest (likely the tightest) muscle of the entire group will be lengthened because it will stop the stretching force from increasing to the point where it might cause a stretch of the other muscles. The only way that more than one muscle will end up being stretched when a functional group is stretched is if two or more of the muscles are equally short (tight) and therefore experience the stretch at the same time.

Michael Houstle, a longtime educator in the field of manual therapy describes this phenomenon as **"the shortest rope."** If you are holding the ends of several ropes of differing lengths and you pull simultaneously on all these ropes, will they all be pulled taut? No. Only the shortest rope will actually be stretched. This is analogous to stretching a functional group of muscles. Only the *shortest*, in other words, the *tightest* muscle, will actually be stretched. This is another reason that multiplane stretching is so important. With multiplane stretching, you set up the stretching routine so that your target muscle is the shortest rope.



Multiplane Stretching

Multiplane stretching involves stretching a client's target muscle not in only one cardinal plane but across two or perhaps all three cardinal planes. By involving more than one cardinal plane motion of the target muscle, a more specific and effective stretch can be attained because the target muscle can be lengthened to its maximum extent. For example, if the target muscle is the right erector spinae group, single plane stretching might be accomplished by bringing the client's trunk into flexion in the sagittal plane because the right erector spinae group is an extensor. Or, the client's trunk might be brought into left lateral flexion in the frontal plane because the right erector spinae group is a right lateral flexor. Although either of these single cardinal plane stretches might succeed in stretching the right erector spinae group to some degree, a more effective stretch can be accomplished by moving the client's trunk into a combination of flexion in the sagittal plane and left lateral flexion in the frontal plane because this stretches the right erector spinae group across both planes.

A multiplane stretch of the right erector spinae group that combines the sagittal and frontal plane component actions is more efficient than either the single plane stretch into flexion by itself or left lateral flexion by itself. However, an even more effective stretch would be to consider the transverse plane component action of the right erector spinae group as well. The right erector spinae group, being an ipsilateral rotator, does right rotation of the trunk in the transverse plane. Therefore, to maximize the efficiency of the stretch, the client's trunk should be moved into a combination of flexion, left lateral flexion, and left rotation. Doing the opposite of all three of the right erector spinae group's component cardinal plane actions will achieve the maximum stretch.

BOX 6.4

Multi-Cardinal Plane Stretching

It should be noted that stretching the client's low back into two (or all three) cardinal planes is actually motion in a single plane; it is simply motion within a single oblique plane (that has components of multiple cardinal planes). When you say that a stretch is a multiplane stretch, you are really saying that it is a **multi-cardinal plane stretch**. All multiplane stretches presented in this chapter involve motion across multiple cardinal planes, but motion only within one oblique plane. For this reason, multiplane stretching might be better termed multi-cardinal plane stretching.

6.2 THERAPIST TIP

What about the Third Cardinal Plane Action?

Even when a target muscle can be stretched effectively within one plane, if its other plane actions are not at least taken into consideration, the effectiveness of the stretch might be compromised. The right erector spinae group will act as the example again. The right erector spinae group can often be stretched thoroughly by only considering the sagittal and frontal plane components and stretching the client into flexion and left lateral flexion. That being the case, is it truly necessary to add in the transverse plane component to the stretch as well? Perhaps not. However, if you are not at least mindful of the fact that the right erector spinae group has a transverse plane joint action, it might be possible to overlook the rotation of the client's trunk and thereby lose the effectiveness of the stretch. For example, if you let the client right rotate while stretching into flexion and left lateral flexion, the right erector spinae group will be slackened by the right rotation (because it is a right rotator) and the effectiveness of the stretch will be somewhat lost. For this reason, even if you do not intend to stretch the target muscle in all three planes, it is important at least to consider all three cardinal plane components of motion/stretch of the target muscle to make sure that you do not allow it to slacken in one of them.

OVERVIEW OF TECHNIQUE

The overview of multiplane stretching technique is straightforward. Once you determine what target muscle you want to stretch, simply move the client into the joint actions that are opposite the target muscle's joint actions—in other words, move it into its antagonist actions.

The following is an overview of multiplane stretching using the right erector spinae group as the target muscle being stretched. This overview describes assisted multiplane stretching in which the client is stretched with the assistance of a therapist. However, it is often possible for a client to perform unassisted multiplane stretching without the assistance of a therapist. For more on unassisted multiplane stretching, see Chapter 11 (available online at thePoint.lww.com).

Multiplane Stretching of the Right Erector Spinae Group

Starting Position:

- The client is supine and lying toward the right side of the table. The client flexes both thighs at the hip joints and legs at the knee joints.
- You are standing at the right side of the table.
- Both hands act as treatment hands and are placed on the client's distal posterior thighs.
- No stabilization hand is needed in this protocol. The client's body weight acts to stabilize the upper trunk.
- Keeping your elbows tucked in front of your body enables you to use your core body weight behind your hands when pressing on the client with your treatment hands (Fig. 6-1).

Figure 6-1 Starting position to stretch the right erector spinae group. Note that the therapist's elbows are tucked in to align the core behind the forearms and hands.

- An alternative starting position is commonly used:
  - Position your body on the table. Hold the client's distal posterior thighs as before but place the client's feet on your right clavicle (Fig. 6-2). The advantage to this position is that it is even easier to use your core body weight, so your shoulder musculature does not have to work as hard.

Stretching the Client:

- Simultaneously stretch the client's pelvis and lower trunk up into posterior tilt and flexion away from the table and left lateral flexion and a small amount of left rotation toward the opposite side of the body until you meet tissue resistance (Fig. 6-3). (*Note*: These actions were chosen because they are the opposite actions of the mover actions of the right erector spinae group. For more on this, see Box 6.5.)
- Add a little more pressure to increase the intensity of the stretch.

6.3 THERAPIST TIP

Body Mechanics and Stretching

Like other manual therapies, stretching is a physical endeavor and can be hard work. In fact, when the client is much larger or much taller than the therapist, stretching can be much more physically taxing than soft tissue manipulation because the client's body parts need to be moved, lifted, and stabilized. For this reason, good body mechanics are essential (see Chapter 4 for the principles of body mechanics).

The first tenet of good body mechanics is to work from the core; this involves keeping the elbows in front of the body. It may seem uncomfortable at first to tuck your elbows in front of your body. However, with a little practice, this position will become comfortable. It is well worth the effort because the advantage of this position is that you can use your core weight and strength to press into and stretch the client and to stabilize the client's trunk and/or pelvis instead of overtaxing the musculature of your glenohumeral joints. For overweight and large-breasted female therapists, if it is difficult to tuck your elbows in front of your body, the closer you can place them to being in front of your core, the better. If you find that it is difficult to get both of your elbows in front, then focus on getting the one in front that requires the most effort. With some clients, this may be the treatment hand; with other clients, it may be the stabilization hand. Consciously laterally rotating your arms at the glenohumeral joints helps you to keep your elbows in. Once you have practiced this position for a little while, it will come naturally.

Skipping using your hands entirely and having the client contact you directly on your trunk (as seen in Fig. 6-2) allows for an even more efficient use of your core because all that you need to do to generate the force of the stretch is to lean in.

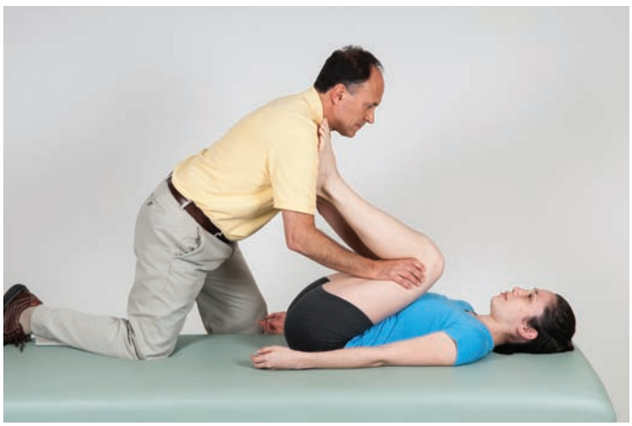


Figure 6-2 Alternate position to stretch the right erector spinae group.

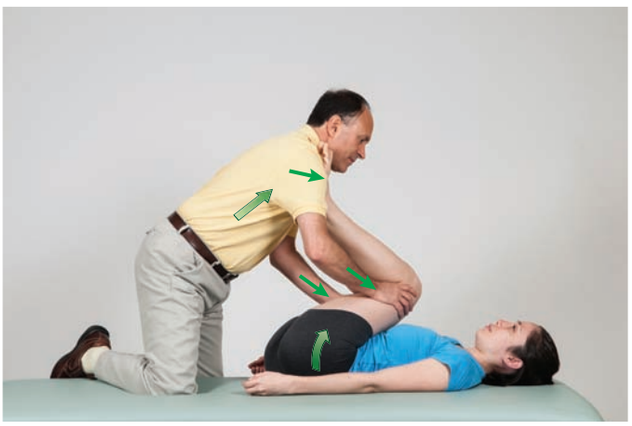


Figure 6-3 The right erector spinae group is stretched into flexion, left lateral flexion, and left rotation.

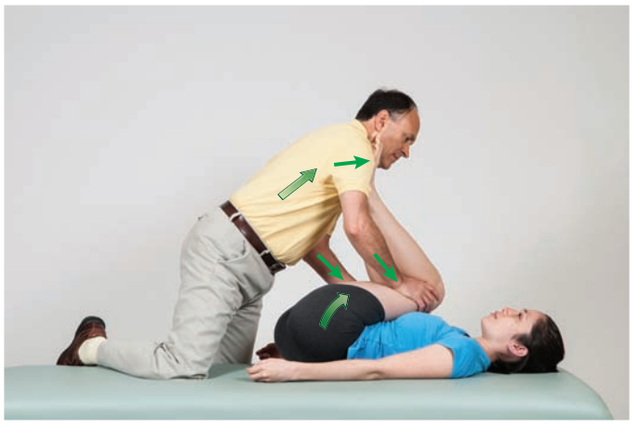


Figure 6-4 With successive repetitions, the right erector spinae musculature can be stretched farther.

- Hold the position of the stretch anywhere between 3 and 30 seconds.
- After the repetition is done, return the client to the starting position and have the client relax for a few seconds.

Further Repetitions:

- The number of repetitions performed is usually determined by how long you hold the stretch for each individual repetition.
- If you hold each repetition for 10 to 20 seconds or longer, three repetitions typically are done.
- If you hold each stretch for less time (e.g., 2 to 3 seconds), then it is typical to perform more repetitions, often as many as 10 or more.
- As with all clinical orthopedic manual therapy, the response of the client's tissues should be the final determinant for exactly how you carry out the stretching protocol.
- Each successive repetition should increase the degree of stretch of the client's muscles (Fig. 6-4).
- Repeat for the other side; Figure 6-5 illustrates stretching of the left-sided erector spinae group.

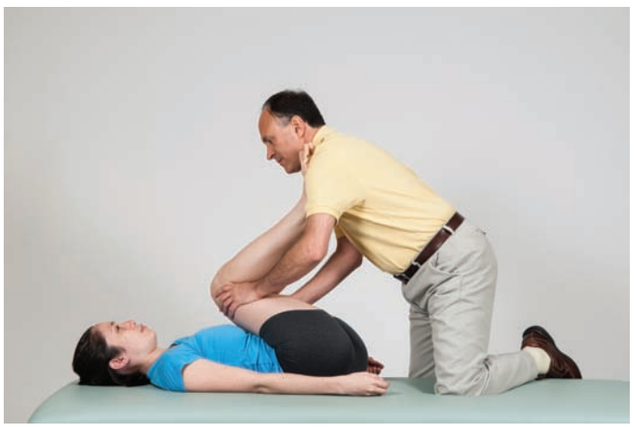


Figure 6-5 The left erector spinae group is stretched.

6.1 PRACTICAL APPLICATION

Alternative Position for Stretching the Low Back

In this section, the erector spinae group was stretched with the client supine and the pelvis and lower trunk moved up toward a stabilized upper trunk. However, the erector spinae and other low back musculature can also be stretched in the opposite direction; that is, moving the (upper) thoracolumbar trunk down toward the (stabilized) pelvis. To stretch the right erector spinae group in this manner, have the client seated at the end of the table (or on a bench or chair) with her feet flat on the floor for stability. Stand behind the client and to her left side. Both hands are used as treatment hands; no stabilization hand is needed because the pelvis is stabilized by body weight and contact with the table as well as the feet being planted on the floor. Your treatment hands can both be placed on the right side of the client's back. Alternately, you can place your right hand on the right side of the client's back while your left hand supports the client's left shoulder/upper trunk (see accompanying figure). Bring the client down into flexion, to the left into left lateral flexion, and rotated into left rotation. These seated stretches are excellent to recommend to the client for self-care (for more on client self-care, see Chapter 11, available online at thePoint.lww.com). *Note*: This stretch can also be done with the client seated on the floor, but if her hamstrings are tight, it makes it difficult to perform the stretch.

BOX 6.5

Reverse Actions

The low back can be stretched two ways. One way is to stabilize the pelvis and move the upper trunk toward the stabilized pelvis. The second way is to stabilize the upper trunk and move the pelvis and lower trunk toward the stabilized upper trunk. Figuring out what actions to perform to stretch the low back when moving the upper trunk toward the stabilized pelvis is straightforward. For example, to stretch the right erector spinae group, because its actions are extension, right lateral flexion, and right rotation, you stretch it by moving the client's upper trunk into flexion, left lateral flexion, and left rotation. However, it can be a bit challenging to figure out how to stretch the low back when moving the pelvis and lower trunk toward the stabilized upper trunk because you need to create the reverse actions of the actions you did when moving the upper trunk. Reverse actions in the sagittal and frontal planes are the same: namely, flexion and left lateral flexion. However, the transverse plane reverse action is different. Whereas you would have performed left rotation of the upper trunk to stretch the right erector spinae group musculature, you need to perform right rotation of the pelvis and lower trunk. (For more on this, see Table 1-3 in Chapter 1.)

PERFORMING THE TECHNIQUE

When performing multiplane stretching, it is important to keep the following guidelines in mind. Each point addresses a specific aspect of the multiplane stretching technique. Understanding and applying these guidelines will help you perform multiplane stretches more effectively.

6.1 Stretch: Slow and Easy

When stretching the client's target musculature, whether it is the first repetition or the last, it is extremely important that you perform the stretch slowly and never force it. If a target muscle is stretched too fast or too far, the **muscle spindle reflex** (also known as the **stretch reflex**) may be triggered. The muscle spindle reflex is a neurologic reflex whose function is protective. When a muscle is stretched either too fast or too far, the muscle spindle reflex directs that muscle to contract in order to prevent it from possibly being overstretched and torn. This will cause a spasm of the target muscle, defeating the purpose of the stretch. Therefore, stretching should always be performed slowly and within the client's comfort zone. It is important to emphasize that when you begin to feel the client's target tissues offering resistance to your stretch, you should add only a small amount of additional pressure to the stretch. Because you will be performing a number of repetitions, increasing the stretch by a small increment with each repetition will allow for a more effective stretch by the end of the stretching protocol.

6.2 Treatment Hand

As with all stretching techniques, it is important that you place the treatment hand in a comfortable manner for the client. To do this, offer as broad a contact with your hand as possible so that the pressure of your hand against the client is distributed as evenly as possible (Fig. 6-6). Try to avoid pincering in with your fingertips.

Figure 6-6 Treatment hand. Use a broad contact with your hand for client comfort.

6.3 Stabilization Hand

As a general rule with each stretching routine, both the treatment hand and stabilization hand are needed. However, when stretching the client's LSp by bringing the client's lower body up toward the upper body, the body weight and contact of the client's trunk against the table provide sufficient stabilization of the upper body so no stabilization hand is needed. For this reason, no stabilization hand was shown in the "Overview of Technique" section for the erector spinae group.

However, in Section 2 of the stretching routines, where multiplane stretches of the hip joint are demonstrated, a stabilization hand will usually be needed to hold down the pelvis. In these cases, the position of your stabilization hand is critical. Unless it is properly positioned, the client's pelvis will often move and lift off the table, slackening the target muscle and losing the effectiveness of the stretch across the hip joint, and, in some instances, causing an unhealthy torque (rotary force) to be placed into the LSp. Like the treatment hand, placement of your stabilization hand should also be comfortable for the client and offer as broad a contact as possible.

6.4 Breathing

When performing multiplane stretching, it is customary for the client to inhale before each repetition and then slowly exhale as you move them into the stretch.

6.5 Direction of Stretch

The direction in which a multiplane stretch is carried out is critically important to the technique's effectiveness. Indeed, the entire purpose of a multiplane stretch is to determine the ideal direction in which to move the client so as to achieve the optimal stretch of the target muscle across all three planes. Because a multiplane stretch is performed by doing the opposite (antagonist) actions of the target muscle, being able to reason out and perform multiplane stretching is dependent on a solid knowledge of all of the actions of the target muscle.

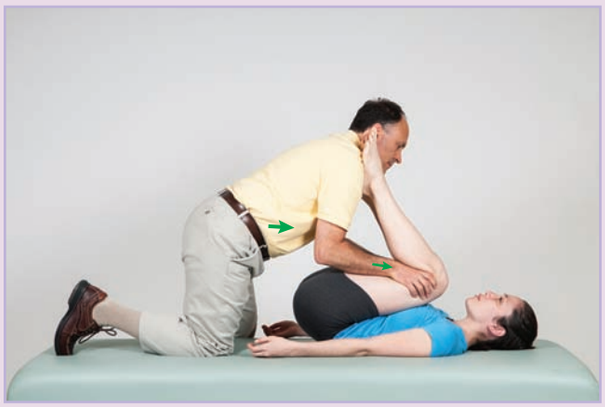
6.6 Length of Time and Repetitions

There is controversy regarding how long to hold a stretch. Classic static stretching advocates anywhere from 10 seconds to 2 minutes or more; usually three repetitions

6.2 PRACTICAL APPLICATION

Keep the Stretch in the Lumbar Spine

No stabilization hand was needed when stretching the erector spinae with the client supine because the client's upper trunk is stabilized by body weight and contact with the table. However, the exact direction in which you press the client's pelvis and lower trunk can make a big difference to what aspect of the client's spine is stabilized and therefore where the stretch is experienced. If your pressure on the client's thighs is oriented too horizontally (parallel with the table) in the cephalad/cranial direction, the client's entire LSp will lift off the table, and the tension will move into the thoracic spine, resulting in a loss of much of the stretch to the LSp **(Fig. A)**. To prevent this, it is necessary to press the client's thighs more downward into her chest **(Fig. B)**. However, if this is done excessively, the client may experience discomfort or pain in the anterior hip joint region (groin). Optimal is to press as little into the client's chest as possible (i.e., as much horizontally parallel to the table in the cephalad/cranial direction as possible) and still keep part or all of the client's LSp down on the table. The ideal balance between these two directions will vary from client to client.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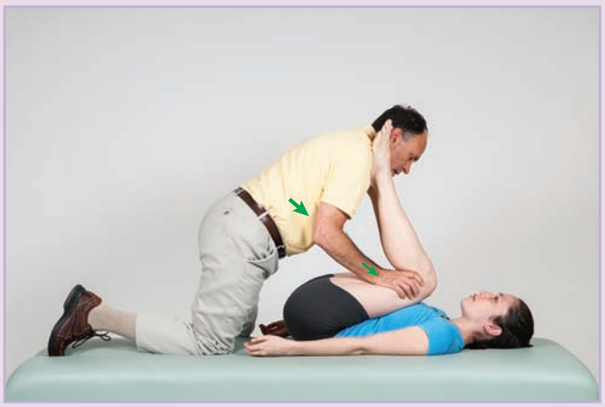
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are done. Recently, advocates of dynamic stretching have recommended shorter times to hold the stretch, between 1 and 3 seconds but a greater number of repetitions (between 8 and 10 or more). What works best for one client will likely not work best for another. Try both methods and see what is most effective for each client. Many therapists like to use a combination of the two methods wherein they perform a number of shorter-held repetitions and then finish with a longer-held repetition.

6.7 Lumbar Spine and Rotation

When performing a multiplane stretch in all three planes of the LSp, keep in mind that there is not very much rotation possible in the LSp. On average, there is only approximately one degree of rotation possible at each lumbar segmental joint level in each direction (see Chapter 1 for ranges of motion). Therefore, the rotation component of a multiplane stretch for the LSp will be the least important aspect of the direction of the stretch.

6.8 Electric Lift Table

When stretching the low back and pelvis/hip joint, the value of an electric lift table cannot be overstated. Stretching can be much more physically demanding than soft tissue manipulation, especially if the differential in size between the therapist and client is large. If the therapist is small and/or short or the client is large and/or tall, stretching can be challenging. For good body mechanics, it is extremely important for the table height to be appropriate. For many of the stretching routines presented in this chapter, such as the stretch of the LSp erector spinae or hip adductor or hamstring groups, the table needs to be low so that the therapist can use his or her core body weight. For other routines, such as the hip flexor or hip abductor groups, the table must be high enough so that the client's stretch is not obstructed by his or her foot hitting the floor. Therefore, to be able to perform multiple stretching routines to the LSp and pelvis/hip joint, the therapist must be able to change the height of the table, and having the client continually get off and back on the table while the height is adjusted manually is not logistically feasible. For these reasons, an electric lift table is essential for clinical orthopedic work.

6.9 Be Creative

There is a science to stretching: Move the client's body part into the joint actions that are the opposite of the joint actions of the target muscle. But there is also an art to stretching. It is important to be creative when stretching the client, altering the direction of the stretching force based on where you feel tension in the client's tissues. Each different line of stretch that you create will optimally stretch different fibers of the muscles and soft tissues that you are treating. As long as you are not forcing the body into positions that are not within the ranges of motion of the joint being stretched and as long as you are mindful of the cautions and contraindications, there is no such thing as a bad stretch. Play with the stretching angles. Feel for the response of the client's tissues. Be therapeutic. Be creative. Have fun.

ROUTINES

MULTIPLANE STRETCHING ROUTINES

The routines that follow demonstrate multiplane stretching for the major muscles and muscle groups of the LSp and also for the major muscles and muscle groups of the pelvis that cross the hip joint.

SECTION 1: LUMBAR SPINE MULTIPLANE STRETCHES

Stretching the lumbar spine (LSp) can be performed in more than one position. The client can be lying down; in which case, the upper trunk is stabilized while the pelvis and lower trunk are moved to create the stretch. Alternately, the client can be seated; in which case, the pelvis is stabilized while the upper (thoracolumbar) trunk is moved to create the stretch.

As a general rule, stabilization of the part of the body that is not moving is accomplished by the client's body weight and contact with the table. As a result, there is often no need for one of the therapist's hands to be used to stabilize the client.

BOX 6.6

Lumbar Spine Multiplane Stretches

This section provides four LSp multiplane stretching routines.

- Routine 6-1—LSp erector spinae group
- Routine 6-2—LSp transversospinalis group
- Routine 6-3—LSp quadratus lumborum
- Routine 6-4—LSp anterior abdominal wall

6.4 THERAPIST TIP

Transitioning to the Thoracic Spine

The focus of this book is on the low back, in other words, the LSp and pelvis. However, it can be extremely valuable to stretch the thoracic spine as well. Each of the stretches presented here for the LSp can be transitioned to become an efficient stretch of the thoracic spine if the movement and/or stabilization are changed so that the line of tension of the stretch enters and is focused on the thoracic region.

ROUTINE 6-1: LUMBAR SPINE ERECTOR SPINAE GROUP

Figure 6-7 shows the erector spinae muscle group. The erector spinae group is composed of three subgroups: the iliocostalis, longissimus, and spinalis. Multiplane stretching of the erector spinae group is performed by simultaneously stretching the client's pelvis and lower LSp into posterior tilt and flexion in the sagittal plane (the pelvis into posterior tilt and the LSp into flexion), lateral flexion to the opposite side in the frontal plane, and contralateral rotation in the transverse plane. Therefore, the right erector spinae is stretched with posterior tilt and flexion, left lateral flexion, and left rotation. The left erector spinae is stretched with posterior tilt and flexion, right lateral flexion, and right rotation. Multiplane stretching of the right- and left-sided lumbar erector spinae musculature was demonstrated in the "Overview of Technique" section, Figures 6-1 through 6-5.

As a group, the erector spinae extends, laterally flexes, and ipsilaterally rotates the trunk at the spinal joints. It also anteriorly tilts and contralaterally rotates the pelvis and elevates the same-side pelvis at the lumbosacral joint.

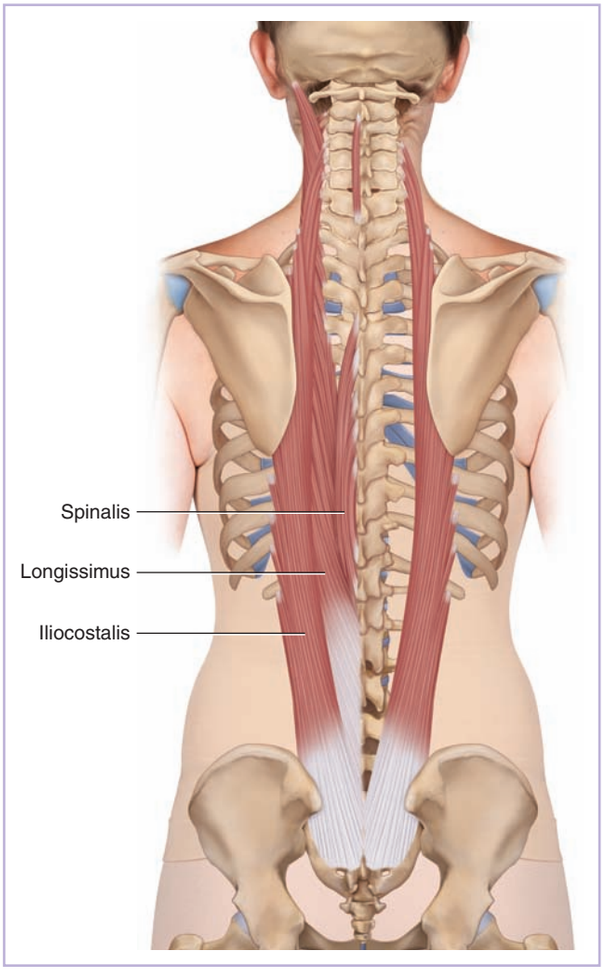


Figure 6-7 Posterior view of the erector spinae group. All three subgroups are shown on the left side; only the iliocostalis is shown on the right side.

ROUTINE 6-2: LUMBAR SPINE TRANSVERSOSPINALIS GROUP

Figure 6-8 shows the transversospinalis group. The transversospinalis group is composed of three subgroups: the semispinalis, multifidus, and rotatores. The semispinalis does not attach into the LSp. Stretching the transversospinalis group is extremely similar to stretching the erector spinae group in that flexion and opposite-side lateral flexion are performed. The difference is that the transversospinalis musculature does contralateral rotation so it is stretched with ipsilateral rotation (whereas the erector spinae does ipsilateral rotation so it is stretched with contralateral rotation). Following are two methods for stretching the transversospinalis group: The first is with the client supine; the second is with the client seated.

As a group, the transversospinalis extends, laterally flexes, and contralaterally rotates the trunk at the spinal joints. It also anteriorly tilts and ipsilaterally rotates the pelvis and elevates the same-side pelvis at the lumbosacral joint.

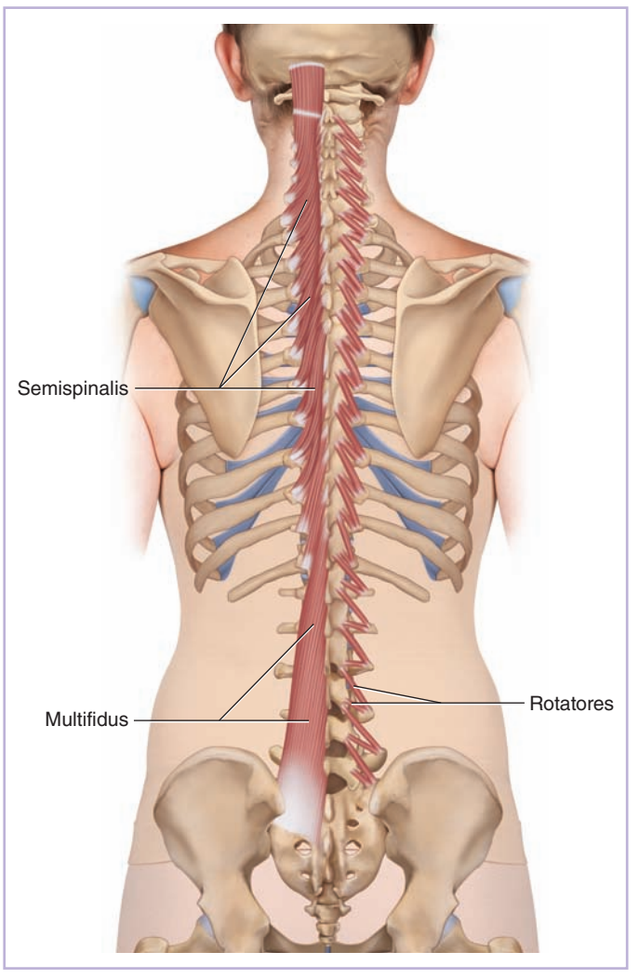


Figure 6-8 Posterior view of the transversospinalis group. The multifidus and semispinalis are shown on the left side, and the rotatores are shown on the right side.

Multiplane Stretching of the Right Transversospinalis Group: Stretch #1

- The client is supine.
- You are standing to the side of the client.
- Stretch the client's pelvis and LSp into posterior tilt and flexion, lateral flexion to the opposite (left) side, and ipsilateral (right) rotation.
- The client's upper trunk is stabilized by body weight and contact with the table.
- Therefore, the right transversospinalis group is stretched with posterior tilt and flexion, left lateral flexion, and right rotation (left rotation of the pelvis and lower LSp, which is equivalent to right rotation of the upper spine) (Fig. 6-9A).

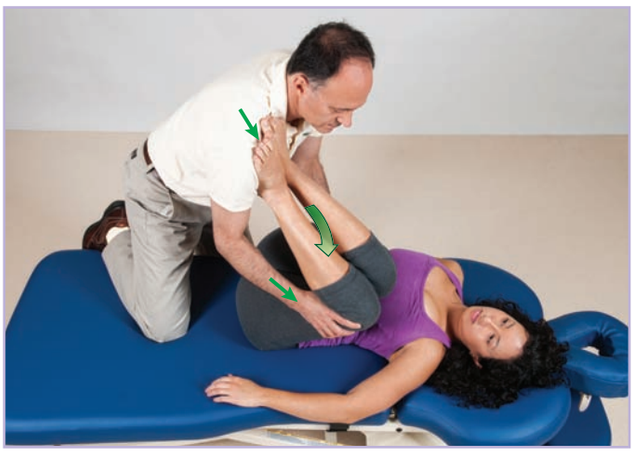


Figure 6-9A

- The left transversospinalis group is stretched with posterior tilt and flexion, right lateral flexion, and left rotation (right rotation of the pelvis and lower LSp, which is equivalent to left rotation of the upper spine) (Fig. 6-9B).

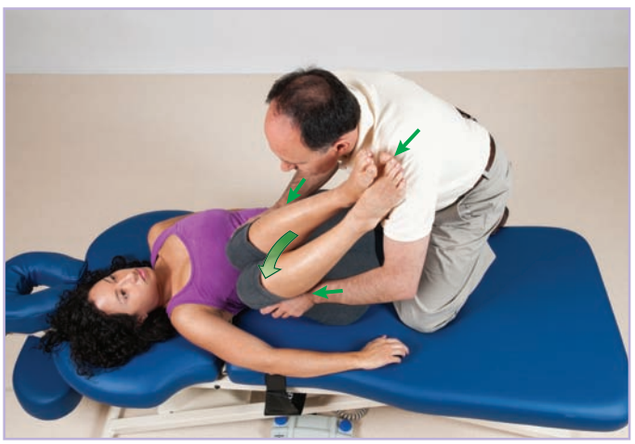


Figure 6-9B

Multiplane Stretching of the Right Transversospinalis Group: Stretch #2

- Have the client seated.
- Stand behind and to the side of the client.
- Bring the client's (upper) thoracolumbar trunk down toward her lower trunk and pelvis.
- The client's upper trunk is stretched into flexion, opposite-side (left) lateral flexion, and ipsilateral (right) rotation.
- Therefore, the right transversospinalis group is stretched with flexion, left lateral flexion, and right rotation (Fig. 6-10A).
- Stretch the left transversospinalis group with flexion, right lateral flexion, and left rotation (Fig. 6-10B).

Whenever stretching the LSp with the client seated, it is important to have the client's feet flat on the floor not only for stabilization for the stretch but also to prevent the client from possibly falling.

Figure 6-10A

Figure 6-10B

ROUTINE 6-3: LUMBAR SPINE QUADRATUS LUMBORUM

Figure 6-11 shows the quadratus lumborum. Following are two methods for stretching the quadratus lumborum. The first method is performed with the client seated; the second method is performed with the client side-lying.

The quadratus lumborum elevates the same-side pelvis and anteriorly tilts the pelvis at the lumbosacral joint and extends and laterally flexes the trunk at the spinal joints. It also depresses the 12th rib at the costovertebral joint.

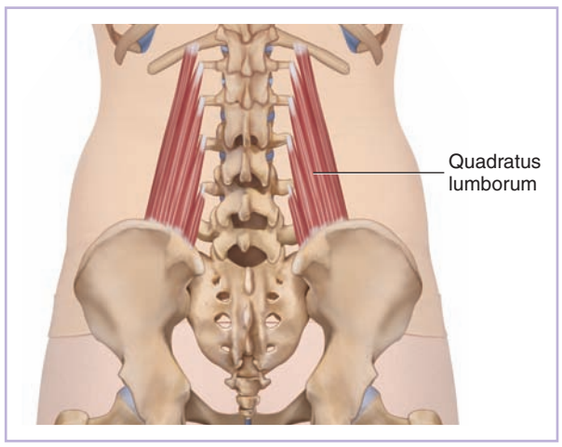


FIGURE 6-11 Posterior view of the right and left quadratus lumborum muscles.

Multiplane Stretching of the Right Quadratus Lumborum: Stretch #1

- Stretching the quadratus lumborum is similar to stretching the erector spinae and transversospinalis musculature in that flexion and opposite-side lateral flexion are performed. However, for the quadratus lumborum, the lateral flexion frontal plane component is more important than the flexion sagittal plane component, and no transverse plane rotation component needs to be added in.
- Have the client seated at the end of the table with her feet flat on the floor.
- Stand behind and to the left side of the client.
- Stretch the client into left lateral flexion and flexion; the lateral flexion component should be greater than the flexion component.
- Therefore, the right quadratus lumborum is stretched with left lateral flexion and flexion (Fig. 6-12A).
- The left quadratus lumborum is stretched with right lateral flexion and flexion (Fig. 6-12B).

Multiplane Stretching of the Right Quadratus Lumborum: Stretch #2

- An alternate position to stretch the quadratus lumborum is to have the client in side-lying position, oriented diagonally on the table so that her thigh that is away from the table can be dropped off the backside of the table without its path obstructed by the table.
- When the thigh drops into adduction, the pelvis on that side will be pulled into depression, stretching the quadratus lumborum on that side. You can press the thigh further into adduction to increase the stretch.

Figure 6-12A

Figure 6-12B

- The client's rib cage is stabilized with your other hand; be careful to spread out the stabilization pressure across the rib cage with a cushion.
- Therefore, to stretch the right quadratus lumborum, have the client side-lying on the left and stretch the client's right thigh into adduction and right-side pelvis into depression (Fig. 6-13A).

Figure 6-13A

- To stretch the left quadratus lumborum, have the client side-lying on the right and stretch the client's left thigh into adduction and left-side pelvis into depression (Fig. 6-13B).
- *Note*: Technically, this is not a multiplane stretch because the stretch is only in the frontal plane.

Figure 6-13B

ROUTINE 6-4: LUMBAR SPINE ANTERIOR ABDOMINAL WALL

The anterior abdominal wall is composed of four muscles: the rectus abdominis (RA), external abdominal oblique (EAO), internal abdominal oblique (IAO), and transversus abdominis (TA). The muscles of the anterior abdominal wall are shown in Figure 6-14.

Clients do not often present with an excessively tight anterior abdominal wall. However, when they do, it is important to know how to stretch the region. Stretching the anterior abdominal wall involves having the client prone and moving her into extension. Whenever the client's spine is brought into extension, be sure that this position is comfortable and healthy for the client's spine.

Following are five stretching protocols for the anterior abdominal wall. The first three stretches involve the therapist having to climb up onto the table and either hover over or sit on the client and lift the client's upper body into extension. This brings up a number of issues.

1. Professional modesty. Both you and the client must be comfortable with these boundaries.
2. Therapist agility. You must be agile enough to be able to climb onto the table.
3. Safety. The table must be secure enough to support the combined weight of you and the client.

The fourth stretch avoids the therapist having to climb onto the table; instead, the therapist stands at the head of the table and lifts the client's upper body into extension. The fifth stretch demonstrated has the therapist using the client's thigh to bring the client's lower spine into extension as well as opposite-side lateral flexion and ipsilateral rotation.

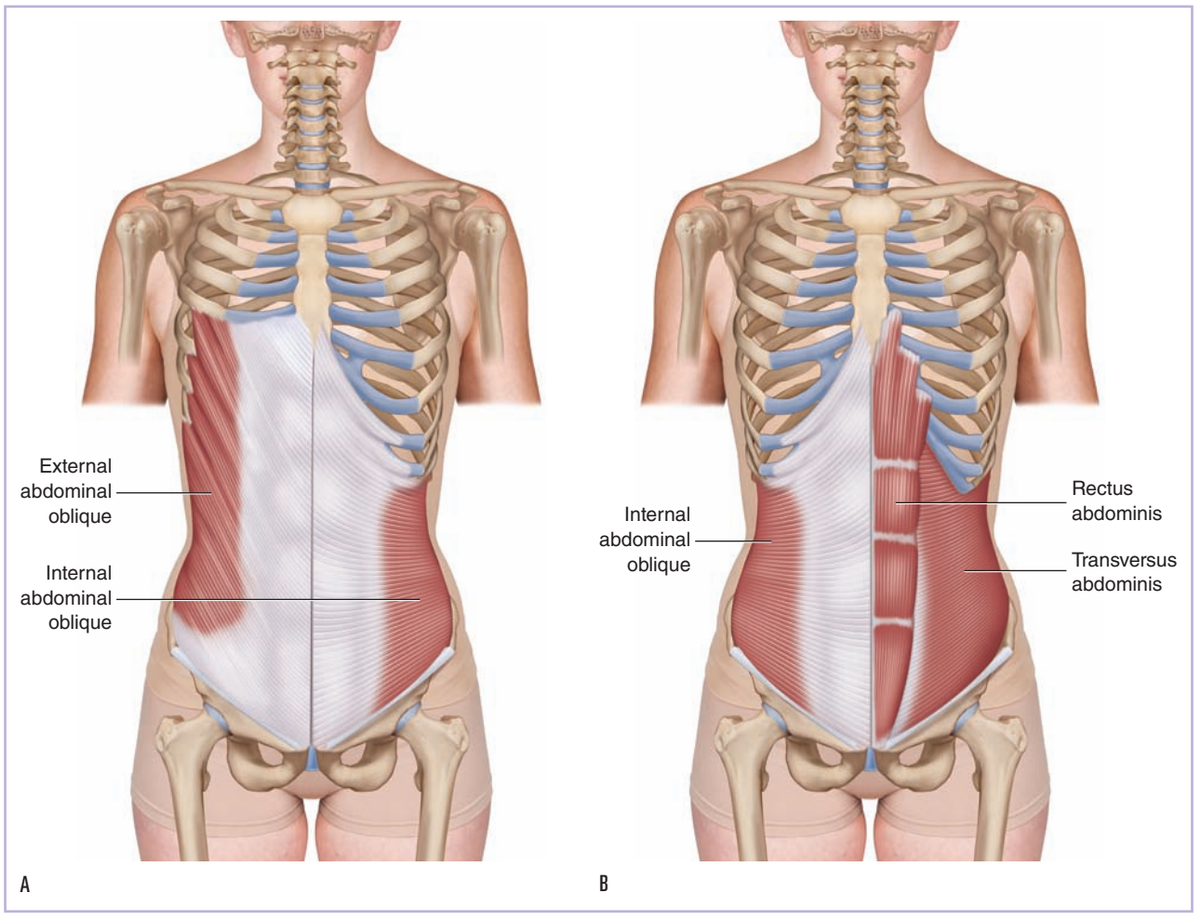


Figure 6-14 The anterior abdominal wall. **(A)** Superficial view. The EAO is shown on the client's right side; the IAO is shown on the client's left side. **(B)** Deeper view. The IAO is shown on the client's right side; the RA and TA are shown on the client's left side.

The RA flexes and laterally flexes the trunk at the spinal joints and posteriorly tilts the pelvis at the lumbosacral joint. It also compresses the abdominal contents.

The EAO flexes, laterally flexes, and contralaterally rotates the trunk at the spinal joints. It also posteriorly tilts and ipsilaterally rotates the pelvis and elevates the same-side pelvis at the lumbosacral joint. It also compresses the abdominal contents.

The IAO flexes, laterally flexes, and ipsilaterally rotates the trunk at the spinal joints. It also posteriorly tilts and contralaterally rotates the pelvis and elevates the same-side pelvis at the lumbosacral joint. It also compresses the abdominal contents.

The TA compresses the abdominal contents.

Multiplane Stretching of the Anterior Abdominal Wall: Stretch #1

- Have the client prone with her hands clasped together on the back of her head.
- Climb onto the table and position yourself on the client's buttocks (using a cushion between you and the client can increase both comfort and modesty); grasp the client's arms.
- Stretch the client into extension by leaning back with your body weight (Fig. 6-15A). This stretch is a uniplanar stretch in the sagittal plane.

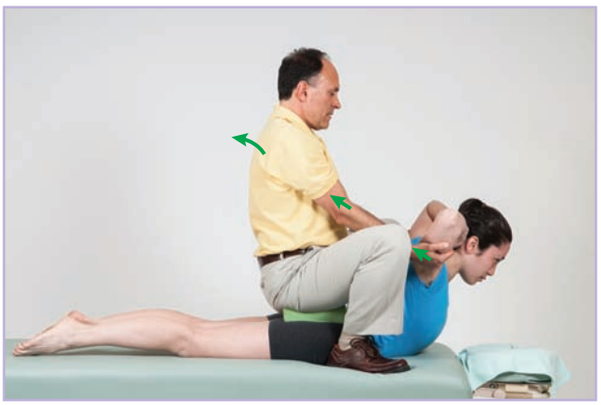


Figure 6-15A

- The client's pelvis is stabilized by your body weight on the buttocks.
- Now add in a frontal plane component by extending and right laterally flexing the client's spine (Fig. 6-15B). This is now a multiplane stretch that preferentially stretches the left side anterior abdominal wall muscles.

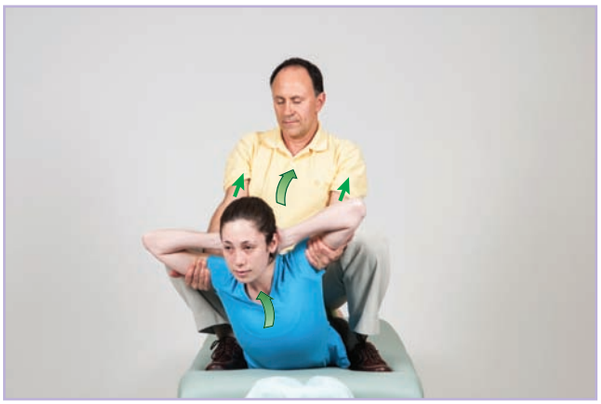


Figure 6-15B

- If right rotation in the transverse plane is added to the extension and right lateral flexion, the stretch becomes focused on the left-sided IAO (Fig. 6-15C).

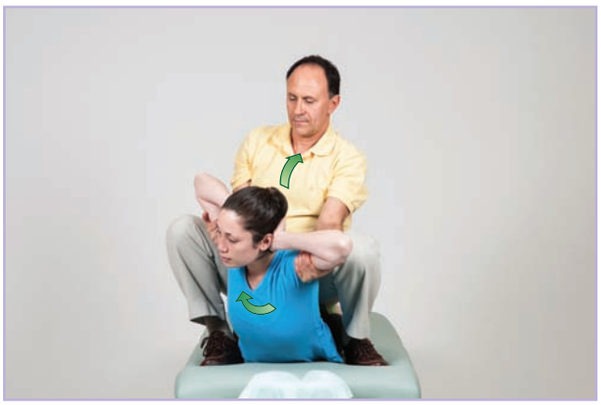


Figure 6-15C

- If left rotation in the transverse plane is added to the extension and right lateral flexion, the stretch becomes focused on the left-sided EAO (Fig. 6-15D).

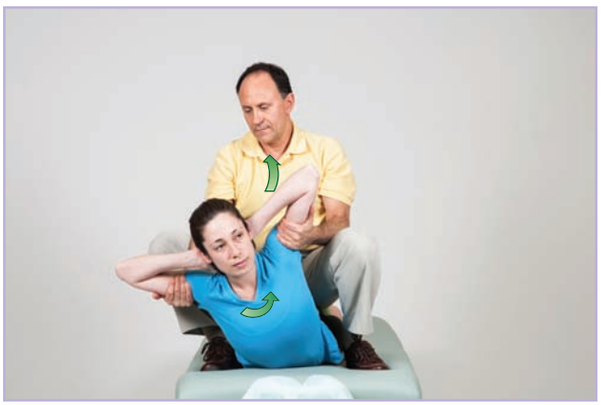


Figure 6-15D

- Now repeat for the other side combining left lateral flexion with extension. If desired, rotation to the right or to the left can be combined with the left lateral flexion. Figure 6-15E demonstrates extension with left lateral flexion and left rotation.

Figure 6-15E

- Focusing the stretch to the TA is challenging because of the horizontal direction of its fibers. The best position to stretch the TA unilaterally or bilaterally is slight extension with rotation to one side and then the other (Fig. 6-15F,G).

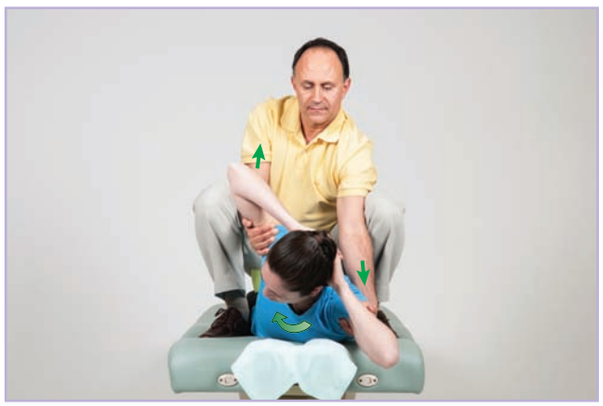


Figure 6-15F

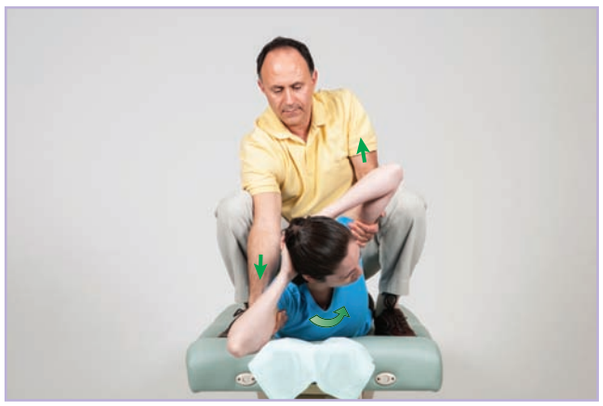


Figure 6-15G

Caution must be exercised when performing these stretches for the anterior abdominal wall.

- *Bringing the client's LSp into extension approximates the facet joints and narrows the intervertebral foramina and is therefore contraindicated if the client has facet syndrome or a space-occupying lesion, such as pathologic disc or a large bone spur.*
- *The client's glenohumeral joints must be healthy enough to reach behind him or her and have a stretching force placed through them.*
- *Positioning your body weight on the client's buttocks is important. If you sit too far superiorly on the pelvis, it can push it excessively into anterior tilt, increasing the client's lumbar lordosis. If you sit too far inferiorly, the pelvis will not be adequately stabilized.*

Multiplane Stretching of the Anterior Abdominal Wall: Stretch #2

- With the client prone, have the client arms extended behind her. You grasp her arms and she grasps your arms as you lean back with core body weight (Fig. 6-16A).
- Similar to stretch #1, this stretch can also be transitioned into a multiplane stretch by adding lateral flexion and/or rotation to either side (Fig. 6-16B).

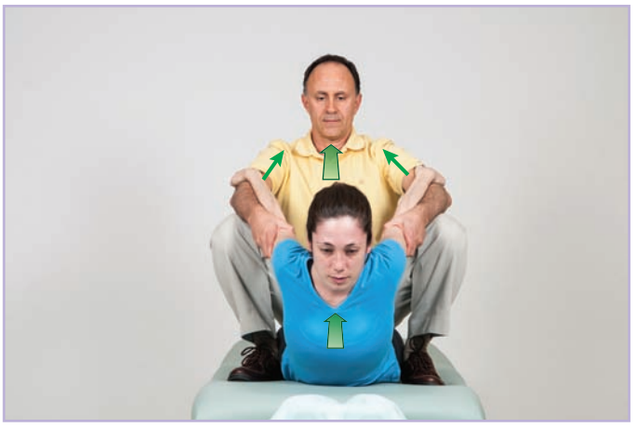


Figure 6-16A

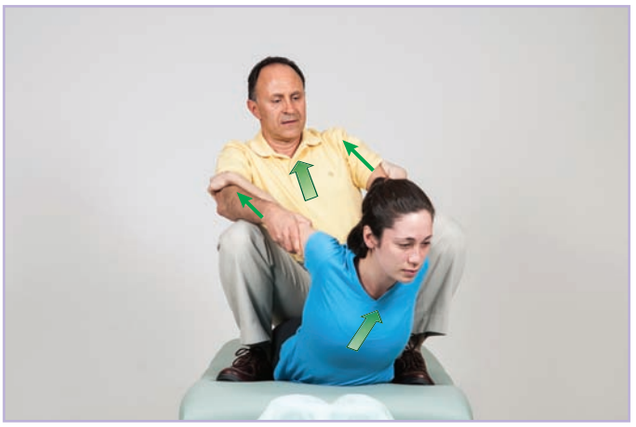


Figure 6-16B

Multiplane Stretching of the Anterior Abdominal Wall: Stretch #3

- The client is prone with her knee joints flexed to 90 degrees, and her arms extended behind her. You sit on her feet and grasp her arms, and she grasps your arms as you lean back with core body weight (Fig. 6-17A).

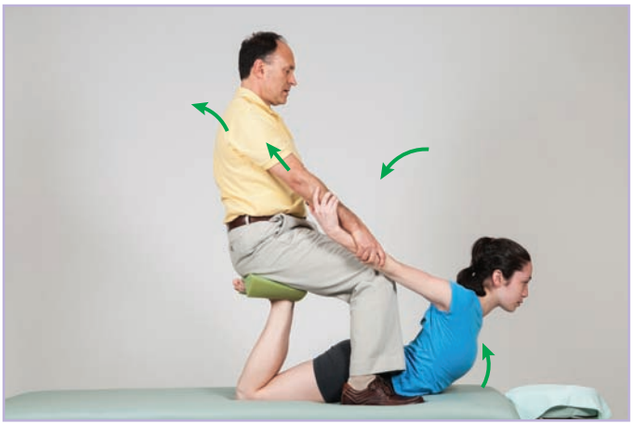


Figure 6-17A

- Similar to stretches #1 and #2, this stretch can also be transitioned into a multiplane stretch by adding lateral flexion and/or rotation to either side (Fig. 6-17B).

Figure 6-17B

Multiplane Stretching of the Anterior Abdominal Wall: Stretch #4

- Have the client prone with her hands placed on the back of her head.
- You stand at the head of the table; grasping her elbows, lift her upper body into extension.
- No stabilization hand is used. The client's pelvis is stabilized by body weight and contact with the table.
- The client can relax her head and neck into flexion with gravity if desired (Fig. 6-18A). However, if the client lifts her head and neck into extension, the tension force of the stretch into the anterior abdominal wall will be increased (Fig. 6-18B).

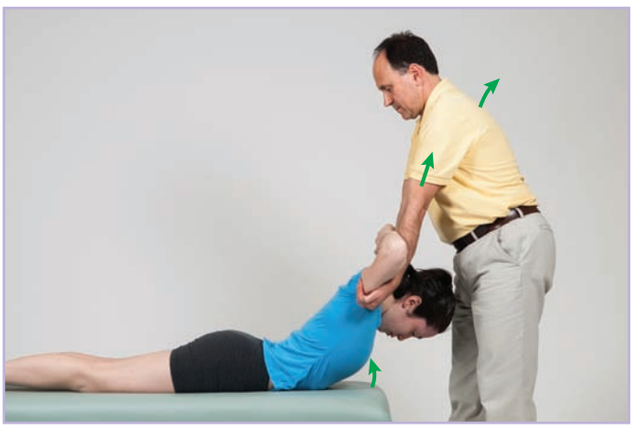


Figure 6-18A

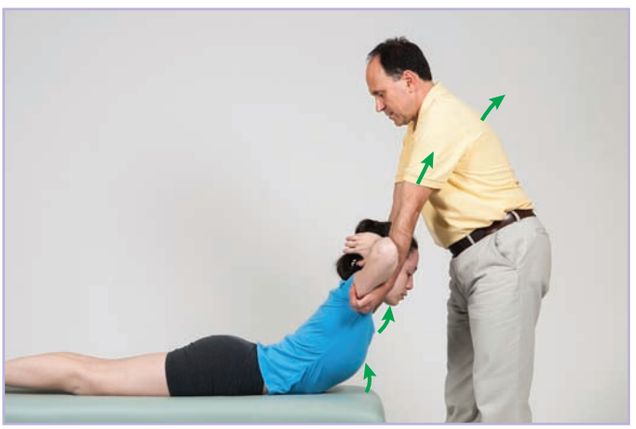


Figure 6-18B

- This stretch can be transitioned into a multiplane stretch by adding in a component of lateral flexion and/or rotation (Fig. 6-18C).

Figure 6-18C

Multiplane Stretching of the Anterior Abdominal Wall: Stretch #5

- Following is the protocol for stretching the left side anterior abdominal wall.
- Have the client prone.
- Standing at the right side of the table, use your left hand to grasp under the client's distal left thigh and pull on the thigh and bring the client's pelvis and lower trunk into anterior tilt and extension, right lateral flexion, and left rotation (Fig. 6-19A).

Figure 6-19A

- Your right hand is the stabilization hand and holds down the client's upper trunk.
- This protocol stretches the left side anterior abdominal wall, but because of the left rotation of the pelvis and lower LSp, it preferentially stretches the left IAO.
- Now repeat this stretch for the other side (Fig. 6-19B).

Figure 6-19B

SECTION 2: HIP JOINT/PELVIS MULTIPLANE STRETCHES

Including stretches of the muscles of the hip joint in a book on the low back and pelvis is done for two reasons. First, the bellies of many of the muscles that cross the hip joint are located in the pelvis. Second, all muscles of the hip joint exert their pull on the pelvis as well as the thigh. Therefore, if hip joint musculature becomes tight, it can and usually will affect the posture of the pelvis, which will then affect the posture of the LSp. Therefore, knowing how to stretch the hip joint is essential to the health of the low back.

Therapist-assisted stretching of the hip joint can be performed with the client in many positions. Depending on the musculature being stretched, the client will be prone, supine, or side-lying. As a rule, the client's thigh will be moved relative to the stabilized pelvis. For this to be adequately and safely done, the therapist's stabilization contact must firmly, but comfortably, hold down the pelvis and prevent it from moving. If the pelvis is allowed to move, the line of tension of the stretch will move into the LSp, resulting in a loss of the stretch to the hip joint and perhaps an unhealthy torqueing of the LSp.

Bony landmarks of the pelvic bone are used to stabilize the pelvis. Anteriorly, the anterior superior iliac spine (ASIS) is used; posteriorly, the posterior superior iliac spine (PSIS), or perhaps the ischial tuberosity is used; and laterally, the iliac crest is used. To broaden and make the stabilization hand more comfortable to the client, a cushion should be used.

Each of the routines presented will start with a uniplanar stretch of an entire functional group of musculature. Transitioning this stretch to a multiplane stretch will then be shown, indicating which specific muscles within the functional group are targeted with each additional plane of stretch.

6.3 PRACTICAL APPLICATION

How to Stabilize the Pelvis

Placement of the stabilization hand on the client's pelvis and the proper direction of your stabilization hand's pressure can be reasoned by understanding how the treatment stretch force on her thigh would move the pelvis if it were not stabilized. In whichever direction the pelvis would move, you need to exert stabilization pressure in the opposite direction. In other words, if the pelvis would depress, then your pressure must be toward elevation **(Fig. A)**; if it were to rotate to the left, then your pressure must be toward right rotation **(Fig. B)**, and so forth. Instead of the hand, there are times when using the forearm to stabilize the client's pelvis is preferred (see Fig. A). The advantages of using the forearm are that it is a larger, more powerful contact and that it broadens out the stabilization pressure on the client. However, be sure that the ridge (medial border) of the ulna is not digging into the client; pronating the forearm exposes the soft anterior surface of the forearm to contact the client.

A

B

continued

6.3 PRACTICAL APPLICATION *(continued)*

An alternative to using your hand or forearm to stabilize the client's pelvis is to use a strap or seat belt that wraps around the table and holds down the client's pelvis. Some type of cushioning is needed to spread out the compression stabilization force so that it is comfortable for the client **(Fig. C, D)**. The advantage of this method of stabilization is that it frees your upper extremity/hand. The disadvantage is that it can take a couple of minutes to set up the strap/belt, so unless you will be using it for at least a few stretches, it might not be worth the time.

C

D

BOX 6.7

Hip Joint/Pelvis Multiplane Stretches

This section provides six hip joint multiplane stretching routines.

- Routine 6-5—hip abductors
- Routine 6-6—hip adductors
- Routine 6-7—hip flexors
- Routine 6-8—hip extensors: hamstrings
- Routine 6-9—hip extensors: gluteals
- Routine 6-10—hip deep lateral rotators

- *If the client reports any discomfort in the LSp during a stretch of the hip joint, most likely you are not adequately stabilizing his or her pelvis. In that case, go back to the starting position of the stretching protocol and increase your stabilization pressure on the pelvis (making sure it is still comfortable to the client) before rebeginning the stretch.*
- *Caution must also be exercised for clients with pathologic conditions of the hip joint such as degenerative joint disease (also known as osteoarthritis). Exercise special caution with clients who have had hip replacements, especially when stretching the hip joint toward flexion, adduction, and/or medial rotation.*
- *Also, because most of the hip joint stretches require the client to be positioned far to the side of the table, it is important to reassure the client before the stretch begins that he or she will not fall off the table. To be sure that the client cannot fall off the table, have a strong and stable lower body posture with pressure of your lower extremity against the table so that the client would have to fall through you to fall off the table.*
- *Moving the client's thigh relative to the stabilized pelvis can often be accomplished with contact on the client's thigh or leg. Contacting the leg often offers greater leverage for the stretch; however, it also places physical stress through the client's knee joint. If the client has an unhealthy knee joint, avoid contacting the client's leg during the stretching procedures; instead, be sure to place your contact on the client's thigh.*

ROUTINE 6-5: HIP ABDUCTORS

Figure 6-20 shows the abductor musculature of the hip joint. The abductors of the hip joint are the gluteus medius and minimus, upper fibers of the gluteus maximus, tensor fasciae latae (TFL), and sartorius. Abductors of the hip joint cross the hip joint laterally with a vertical direction to their fibers. Following are two methods for stretching the abductor group: The first method is with the client side-lying; the second is with the client supine.

Hip abductors do abduction of the thigh at the hip joint. They also depress the same-side pelvis at the hip joint. These actions occur within the frontal plane. The more anteriorly located hip abductors also flex the thigh and anteriorly tilt the pelvis at the hip joint in the sagittal plane and medially rotate the thigh (and ipsilaterally rotate the pelvis) at the hip joint in the transverse plane. The more posteriorly located hip abductors also extend the thigh and posteriorly tilt the pelvis at the hip joint in the sagittal plane and laterally rotate the thigh (and contralaterally rotate the pelvis) at the hip joint in the transverse plane.

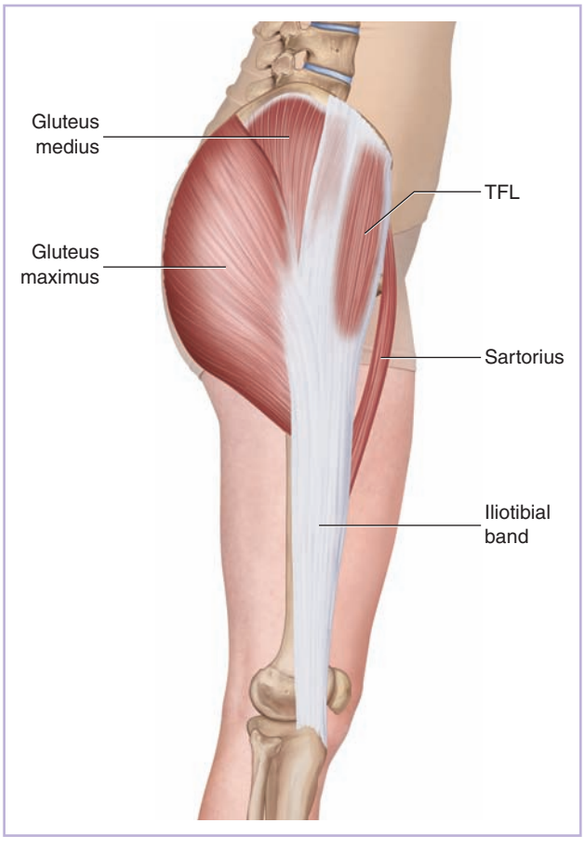


Figure 6-20 Lateral view of the hip joint abductor musculature of the right pelvis and thigh. The gluteus minimus is not seen.

Multiplane Stretching of the Right Hip Joint Abductor Musculature: Stretch #1

- Have the client side-lying on her left side with her bottom as close to the near (your) side of the table as possible and her left shoulder as far to the opposite side of the table as possible. This positions the client diagonally on the table so that her right thigh can be dropped off the side of the table into adduction without its path being obstructed by the table (Fig. 6-21A).

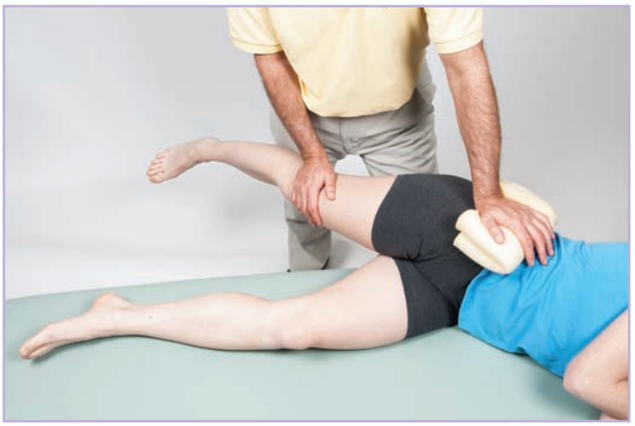


Figure 6-21A

- Stand behind the client.
- Your right hand is the treatment hand and is placed on the lateral surface of the client's distal right thigh.
- Your left hand is the stabilization hand and is placed on the client's iliac crest. It is important to press on the pelvis in a cephalad/cranial direction; that is, pressing toward elevation of pelvis on that side (to prevent it from depressing during the stretch).
- Stretch the client's right thigh down into adduction off the side of the table by dropping down with your core body weight (Fig. 6-21B).

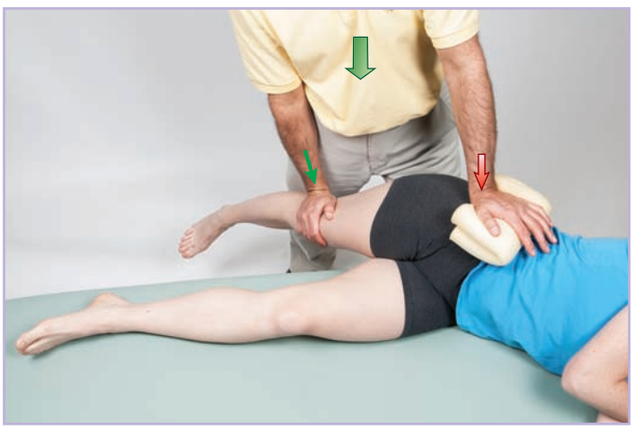


Figure 6-21B

6.4 PRACTICAL APPLICATION

Where to Position Your Core

Having your core body weight behind your line of force is the most efficient way to work and a guideline of good body mechanics. However, when performing most stretching routines, there are two lines of force: the line of force of your treatment hand and the line of force of your stabilization hand. So behind which one do you position your core? The answer is wherever the greater effort is needed. This can vary based on the body part being stretched and from client to client but is often behind the stabilization hand. For most hip joint stretches, more effort is needed to stabilize the client's pelvis than to move the client's thigh into the position of the stretch.

- This stretch is essentially uniplanar in the frontal plane. Because the thigh is dropped off the backside of the table, there is a small sagittal plane component of thigh extension, which would slightly and preferentially stretch the anteriorly located abductor musculature that also does flexion.
- To further transition this stretch to be multiplanar, the following additions can be made to the stretching protocol.
  - If the client's thigh is brought into more extension as it is adducted, the stretch for the anterior abductor musculature will be increased (Fig. 6-21C). These muscles are the TFL, sartorius, and the anterior fibers of the gluteus medius and minimus.

Figure 6-21C

  - If the client's thigh is brought into lateral rotation as it is adducted, the stretch will focus more on the abductor musculature that also does medial rotation (Fig. 6-21D). These muscles are the TFL and the anterior fibers of the gluteus medius and minimus.

Figure 6-21D

  - Similarly, if the client's thigh is brought into medial rotation as it is adducted, the stretch will focus more on the abductor musculature that also does lateral rotation (Fig. 6-21E). These muscles are the sartorius, gluteus maximus, and the posterior fibers of the gluteus medius and minimus.

Figure 6-21E

  - It is also possible to combine either rotation (lateral or medial) with extension.
- *Note*: When the stretching routine is completed, be sure to ask the client to completely relax the thigh as you passively return it to the table.
- After performing the appropriate stretches as indicated for the right side, switch to the left side of the client's body and perform these stretches there.

Multiplane Stretching of the Right Hip Joint Abductor Musculature: Stretch #2

- Have the client supine. To stretch the right-sided abductors, cross the client's left leg over the right leg.
- Stand to the left side of the client and grasp the distal right leg. Placing a small towel/cushion between the dorsal surface of your hand and their left leg can add to client comfort.
- Stabilize the left side of the client's pelvis and pull the right thigh into adduction (Fig. 6-22A).

Figure 6-22A

- The more challenging body mechanics aspect of this stretch is usually the stabilization, so be sure that your right elbow is in so that your core is in line with your right hand/forearm.
- A possible alternate stabilization for the pelvis is shown in Figure 6-22B.

Figure 6-22B

- If the client is tall and you cannot reach her distal leg, a towel can be used to extend your reach (Fig. 6-22C).

Figure 6-22C

- Repeat for the other side (Fig. 6-22D).

Figure 6-22D

6.5 THERAPIST TIP

Presetting the Rotation

When performing multiplane stretching that involves rotation in the transverse plane, it is often easier to incorporate the rotation component of the stretch by presetting it. **Presetting the rotation** means that you place the client's thigh into the rotation position before you perform the stretch. Using stretch #1 of the abductor group as an example, while the client is still in the starting position, before you begin the actual stretch itself, place the client's thigh into medial or lateral rotation, then stretch the client into adduction, being mindful to keep the client's thigh in the position of rotation as much as possible as you perform the stretch.

ROUTINE 6-6: HIP ADDUCTORS

Figure 6-23 shows the adductor musculature of the hip joint. The muscles of the adductor group are the adductors longus, brevis and magnus, and the pectineus and gracilis. The quadratus femoris and the lower fibers of the gluteus maximus also do adduction of the thigh at the hip joint. Adductors of the hip joint cross the hip joint medially, below the center of the joint. The first stretch of this routine does start with a multiplane stretch; the client's thigh is both abducted and laterally rotated, optimally stretching the muscles of the adductor group because they do adduction and medial rotation. The degree of flexion or extension can vary to optimally stretch different aspects of the adductor group. The second stretch of this routine is performed with the thigh abducted and laterally rotated, but the knee joint extended so that the gracilis (which is also a flexor of the knee joint) is preferentially stretched.

As a group, the adductor group muscles adduct, flex, and medially rotate the thigh at the hip joint and anteriorly tilt and ipsilaterally rotate (and elevate the same-side) pelvis at the hip joint. The adductor magnus extends the thigh and posteriorly tilts the pelvis at the hip joint. The gracilis can flex the leg (and/or thigh) at the knee joint.

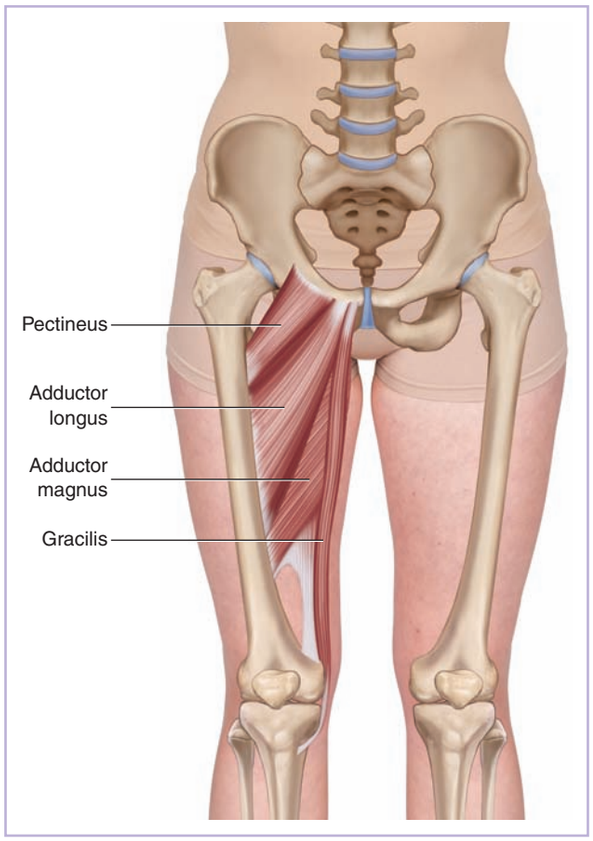


Figure 6-23 Anterior view of the muscles of the adductor group of the right pelvis and thigh. The adductor brevis is not seen.

Multiplane Stretching of the Right Hip Joint Adductor Musculature: Stretch #1

- Have the client supine toward the right side of the table. His right hip joint is abducted and laterally rotated at the hip joint, his right leg is flexed at the knee joint, and his right foot is placed on your left ASIS (Fig. 6-24A). (*Note*: If the client's adductor musculature is tight, it is likely that he will need to also flex the right thigh at the hip joint to attain this position.)

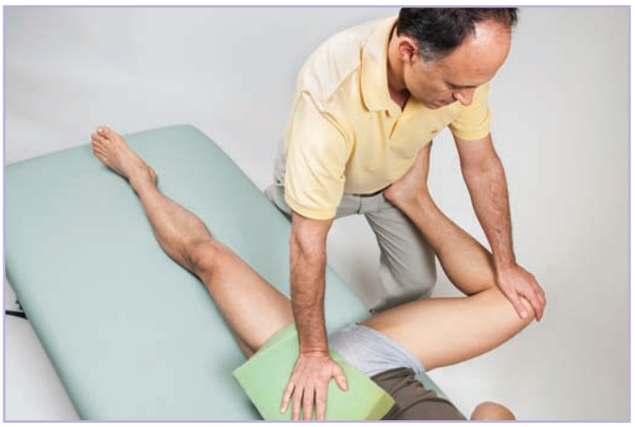


Figure 6-24A

- Stand to the side of the client. Your left hand is the treatment hand and is placed on the medial side of the client's right knee. Your left side pelvis (ASIS) is also a treatment contact and is placed against the client's right foot.
- Your right hand is the stabilization hand and is placed on the client's left ASIS. *Note*: A cushion is used to spread out and soften the contact pressure on the client.
- First, press downward toward the floor on the client's right knee by dropping with your core body weight. This motion is horizontal abduction (also known as horizontal extension) of the thigh at the hip joint and, because of the position of the client's thigh, stretches the more anteriorly placed fibers of the adductor group. During this stretch, the pelvis will tend to rotate to the right, so your stabilization pressure must be oriented toward left rotation (Fig. 6-24B).

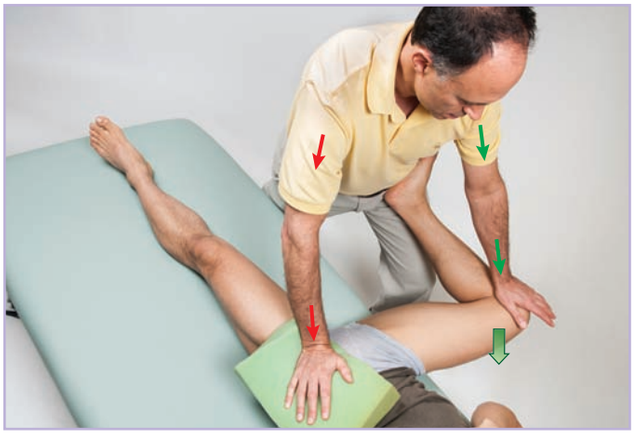


Figure 6-24B

- Now lean in with your pelvis against the client's foot, further stretching the client's thigh into abduction. Because of the position of the client's thigh, this focuses the stretch to the more posteriorly oriented fibers of the adductor group. During this stretch, the pelvis will tend to depress on the left side (and elevate on the right side), so your stabilization pressure must be oriented toward elevation of the left side of the pelvis (Fig. 6-24C).

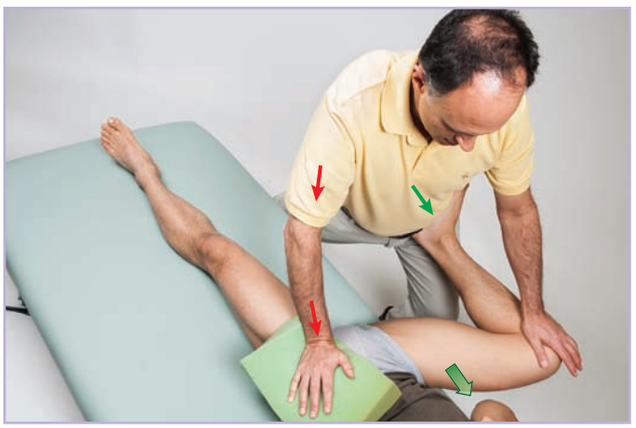


Figure 6-24C

- Now combine these two stretching motions by dropping down on the medial knee and also leaning in and pressing against the client's foot. Be sure to stabilize the client's left-side pelvis toward both left rotation and elevation simultaneously (Fig. 6-24D).

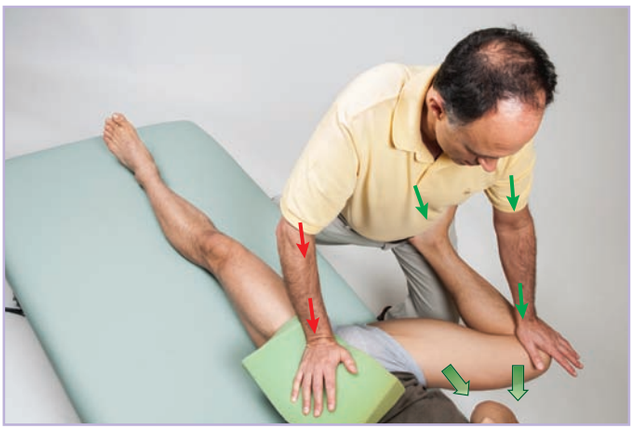


Figure 6-24D

- To focus the stretch on the gracilis, you have to also consider the knee joint because the gracilis crosses this joint, too. The gracilis is a flexor of the knee joint, so to stretch the gracilis, the client's knee joint must be extended as you abduct and laterally rotate the thigh at the hip joint (Fig. 6-24E).

Figure 6-24E

- After performing the appropriate stretches as indicated for the right side, switch to the left side of the client's body and perform these stretches there (Fig. 6-24F).

Figure 6-24F

Multiplane Stretching of the Right Hip Joint Adductor Musculature: Stretch #2

- Have the client supine toward the right side of the table. His right thigh is abducted and laterally rotated at the hip joint, and his right leg is extended at the knee joint.
- Stand to the side of the client, facing the head end of the table. Your left hand is the treatment hand and grasps his right leg, pulling his thigh into abduction.
- Your pelvis is the stabilization contact and is placed against the side of the client's pelvis. Your right hand assists in stabilization by contacting the client's opposite (left) side upper trunk/shoulder girdle. *Note*: A cushion can be used to spread out and soften the contact pressure of your hand's contact on the client.
- Now lean forward with your body weight, bringing the client's right thigh farther into abduction as you continue to stabilize his pelvis and trunk (Fig. 6-25).
- *Note*: Because the knee joint is extended, this adductor stretch primarily focuses on the gracilis.

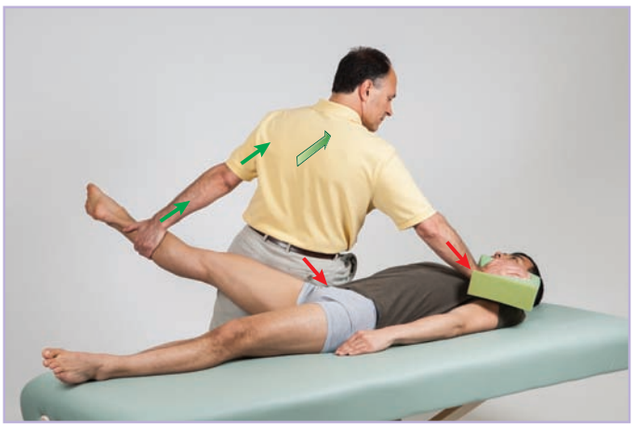


Figure 6-25

ROUTINE 6-7: HIP FLEXORS

Figure 6-26 shows the flexor musculature of the hip joint. Flexors of the hip all cross the hip joint anteriorly with a vertical direction to their fibers. The flexors of the hip joint are (from lateral to medial) the anterior fibers of the gluteus medius and minimus, TFL, rectus femoris, sartorius, iliacus, psoas major, pectineus, adductor longus and brevis, and gracilis. Following are six methods for stretching the hip flexor group. The first two methods are performed with the client supine. The next three methods have the client side-lying, and the last method has the client prone. Each position and method of stretch has unique advantages and disadvantages.

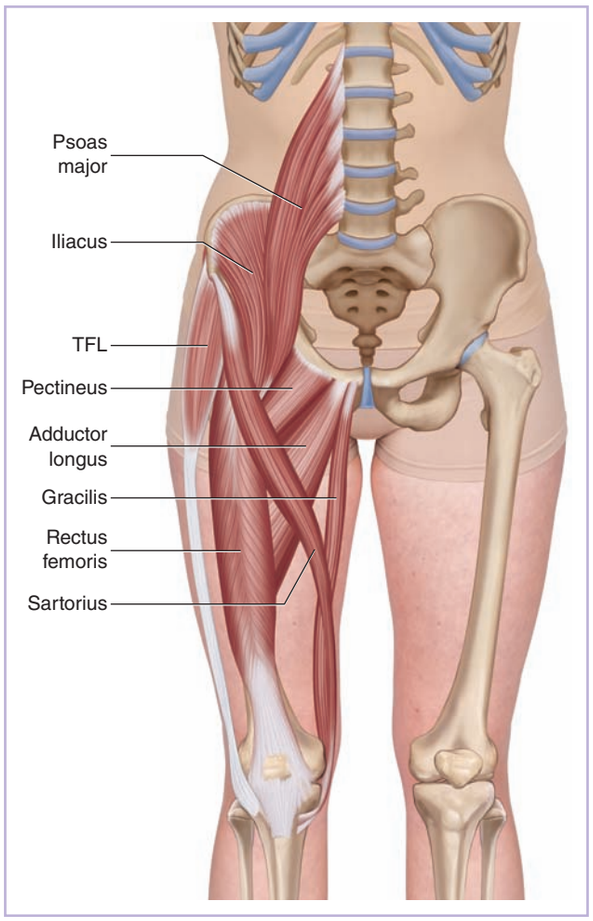


Figure 6-26 Anterior view of the hip joint flexor musculature of the right pelvis and thigh. *Note*: Not all muscles are seen.

As a functional group, the flexors all flex the thigh at the hip joint and anteriorly tilt the pelvis at the hip joint. The more laterally located hip flexors (gluteus medius and minimus, TFL, and sartorius) also abduct the thigh or depress the same-side pelvis at the hip joint. The more medially located hip flexors (adductor group muscles) also adduct the thigh and elevate the same-side pelvis at the hip joint. The sartorius, psoas major, and iliacus can also laterally rotate the thigh (and contralaterally rotate the pelvis) at the hip joint. The anterior fibers of gluteus medius and minimus, TFL, and adductor group can also medially rotate the thigh (and ipsilaterally rotate the pelvis) at the hip joint.

Multiplane Stretching of the Right Hip Joint Flexor Musculature: Stretch #1

- Have the client supine as far to the right side of the table as possible.
- Stand to the right side of the client. Your right hand is the treatment hand and is initially placed on the posterior surface of the client's distal right thigh.
- Your left hand is the stabilization hand and is placed on the client's left ASIS. *Note*: A cushion is used to spread out and soften the contact pressure on the client (Fig. 6-27A).

Figure 6-27A

- *Note*: The client needs to be positioned far enough to the right side so that his right thigh can be slightly abducted off the table and then dropped down into extension without the table obstructing its path. The table must also be set high enough so that the excursion of the client's thigh is not blocked by his foot hitting the floor.
- Switch the placement of your right hand to be on the anterior surface of the client's distal right thigh and gently press the client's right thigh farther downward into extension (toward the floor) by dropping with your core body weight. During this stretch, the pelvis will tend to anteriorly tilt and rotate to the right, so your stabilization pressure must be oriented toward posterior tilt and left rotation (Fig. 6-27B).

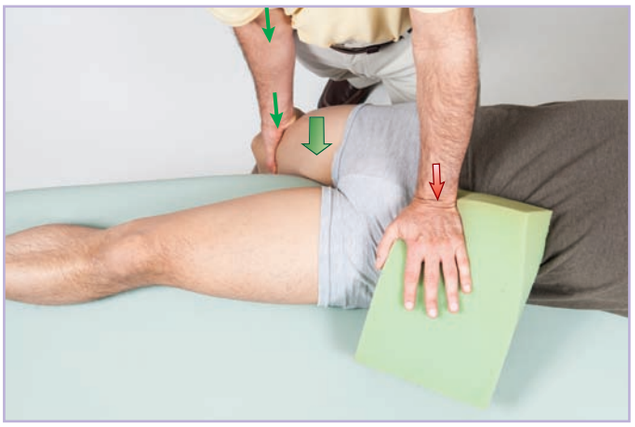


Figure 6-27B

- This stretch can be transitioned to be multiplanar by adding in abduction or adduction in the frontal plane or medial rotation or lateral rotation in the transverse plane.
- Abduction increases the stretch to the more medially located flexors (Fig. 6-27C). Adduction increases the stretch to the more laterally located flexors.

Figure 6-27C

- Lateral rotation increases the stretch to the flexors that do medial rotation (Fig. 6-27D).
- Medial rotation increases the stretch to the flexors that do lateral rotation.
- These frontal and transverse plane components can be combined to focus the stretch more specifically.
- *Note*: When the stretching routine is completed, be sure to ask the client to completely relax the thigh as you passively return it to the table.

Figure 6-27D

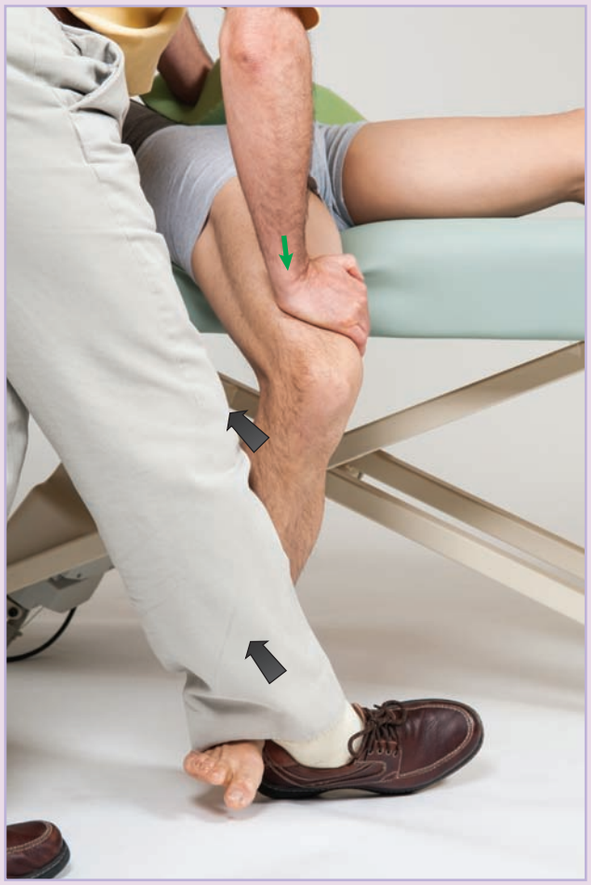
- After performing the appropriate stretches as indicated for the right side, switch to the left side of the client's body and perform these stretches there (Fig. 6-27E).
- The advantage to this stretch is that the client is often in a supine position, so setting up this stretch is easy to do. The disadvantage is that it places a torque into the sacroiliac joints, so it may be contraindicated for clients with an unhealthy sacroiliac joint.

Figure 6-27E

6.5 PRACTICAL APPLICATION

Multijoint Stretching

This chapter discusses the idea that a target muscle can be optimally stretched if you consider all of the planes of its actions to figure out the most effective stretch. Considering all the planes of a target muscle is called *multiplane stretching*. However, this concept can be expanded. When a muscle crosses more than one joint, if you want to optimally stretch it, you need to consider its actions across all the joints that it crosses; this might be called **multijoint stretching**. An excellent example is the rectus femoris of the quadriceps femoris group. It crosses and flexes the hip joint and also crosses and extends the knee joint. Therefore, to optimally stretch it, you need to consider both joints, extending the thigh at the hip joint and flexing the leg at the knee joint, to lengthen the muscle across both joints **(Fig. A)**. You can also use this information and reasoning to figure out how to eliminate a muscle from a stretching routine so that other muscles in the functional group are more efficiently stretched. Use the rectus femoris again as your example. It is often one of the tighter hip flexors and therefore commonly limits the extension stretch of the hip joint, preventing other hip flexors from being adequately stretched. To slacken and stop the rectus femoris from limiting the stretch, make sure that the client's knee joint is extended **(Fig. B)**.


A

B

Multiplane Stretching of the Right Hip Joint Flexor Musculature: Stretch #2

Following are the directions for stretching the right-sided hip flexor group at the end of the table:

- Ask the client to stand facing away from the end of the table, place his tailbone (coccyx) at the top of the table, and lean back onto the table to lie supine hugging his left thigh into his chest.
- You stand facing the client at the end of the table, placing your right hand on his distal posterior left thigh to assist in stabilizing his pelvis and your left hand on his anterior right thigh.
- To perform the stretch, gently drop down with body weight, pushing his right thigh into extension (Fig. 6-28A).

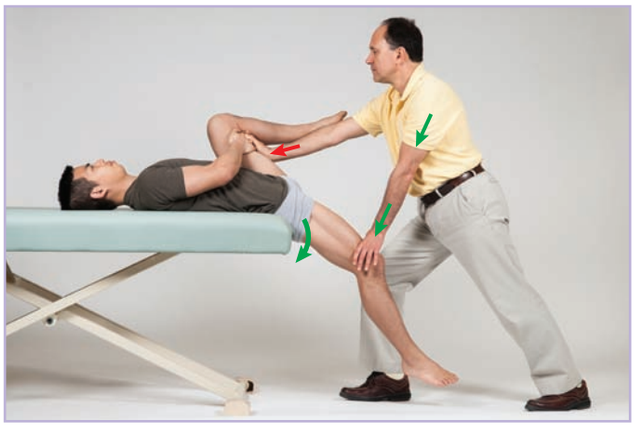


Figure 6-28A

- An alternative stabilization position is to place his left foot on your clavicle (Fig. 6-28B).

Figure 6-28B

- The stretch can be focused toward specific muscles in the hip flexor group by adding in adduction or abduction and/or medial or lateral rotation to the extension (abduction and lateral rotation are shown in Fig. 6-28C).

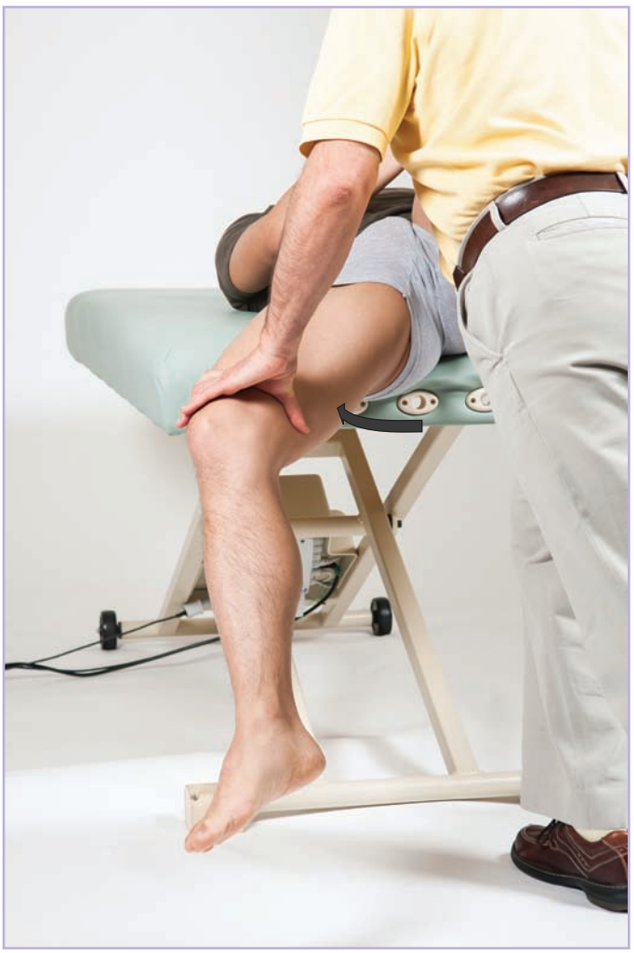


Figure 6-28C

- Now perform this stretch for the client's left side.
- This is a powerful stretch for the hip flexor region. Its disadvantage is that draping is challenging, so it might be best to perform this stretch at the end of the session after the client has dressed.

It is healthier for the client's knee joint if the knee is hugged into the chest with pressure against the posterior distal thigh (see Fig. 6-28A) instead of the proximal anterior leg as is often done.

Multiplane Stretching of the Right Hip Joint Flexor Musculature: Stretch #3

- To stretch the client side-lying, have the client side-lying as close to the side of the table as possible, facing away from you.
- Use your right hand to bring the client's right thigh back into extension as your left hand stabilizes his pelvis (Fig. 6-29A).

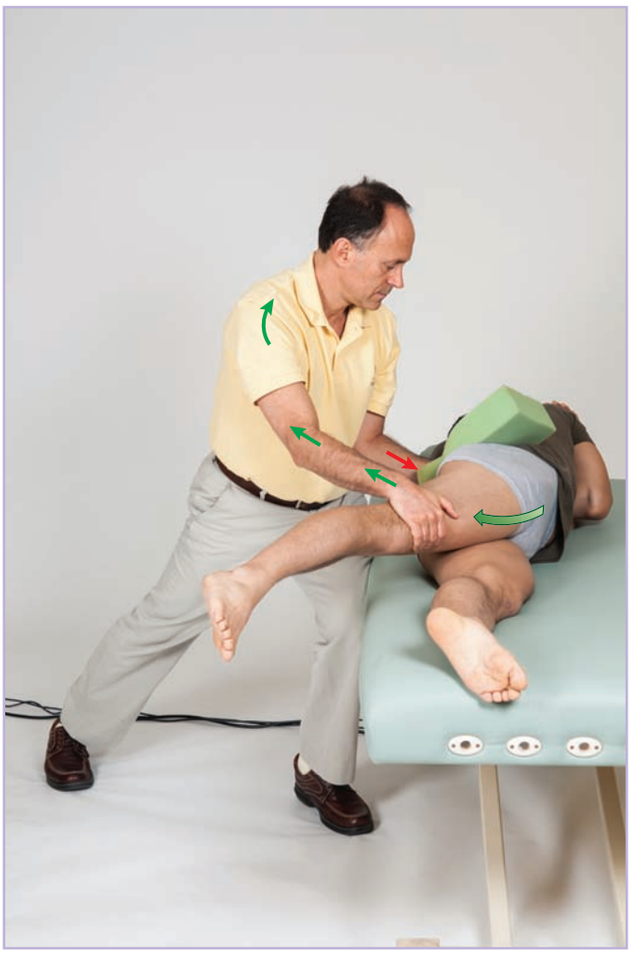


Figure 6-29A

- Now perform this stretch method for the client's left side.
- The disadvantage to this method is that if the client is heavy, it can be difficult to lift and support his thigh. Also, stabilization of his pelvis can be challenging; an alternative stabilization is shown in Figure 6-29B. The advantage to this side-lying method is that it can be done with the table low, whereas the supine methods required the table to be higher.

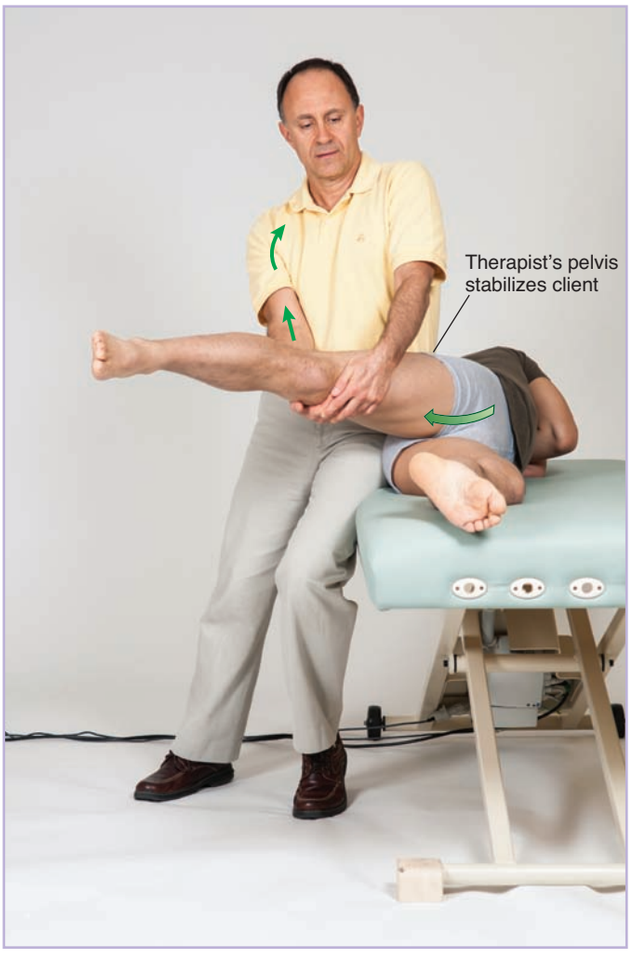


Figure 6-29B

Multiplane Stretching of the Right Hip Joint Flexor Musculature: Stretch #4

- An alternative position for the therapist with the client side-lying method is to position yourself between the client's distal thighs, facing toward their head.
- You then use your left thigh and pelvis to push the client's right thigh into extension as you stabilize his pelvis by contacting his right PSIS with both hands, pulling anteriorly on it as you lean back with body weight (Fig. 6-30).
- After performing for one side, repeat for the other side.
- The advantage of this side-lying method compared to the first is that it saves you from having to lift the weight of his thigh. But stabilizing the pelvis can be challenging, and the positioning of you and the client can be an issue regarding modesty.

Figure 6-30

Multiplane Stretching of the Right Hip Joint Flexor Musculature: Stretch #5

- Yet another alternative position for the therapist with the client side-lying method is to stand facing away from the client's lower extremities. Use your left hand to stretch the client's thigh into extension; your pelvis/trunk stabilizes the client's pelvis, and your right hand stabilizes the client's upper body (Fig. 6-31A).

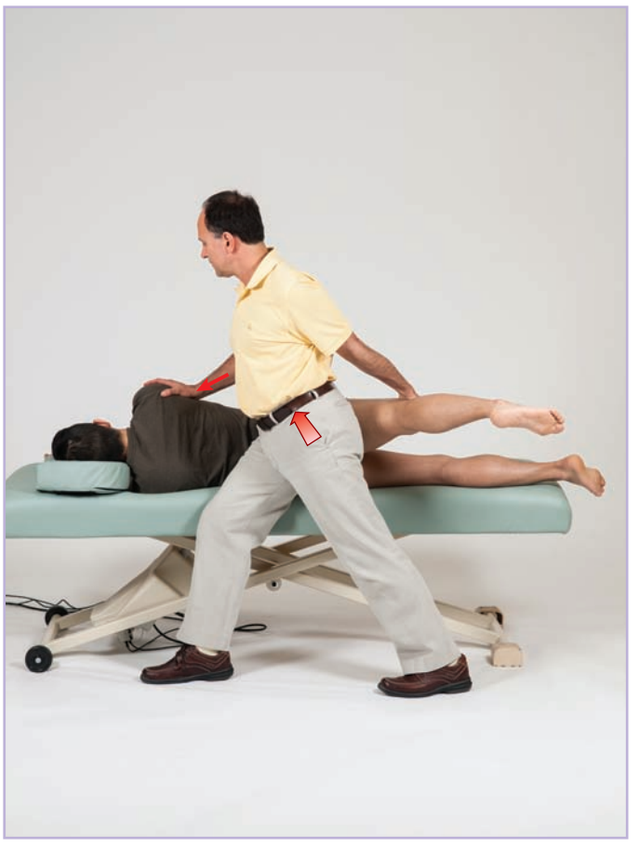


Figure 6-31A

- If you grasp the client's leg to move his thigh into extension, his knee joint will be flexed and his rectus femoris will be preferentially stretched (Fig. 6-31B). If you can reach to grasp his thigh instead, then the knee joint can be held in extension as the stretch is done so that other flexors of the hip joint will be preferentially stretched (see Fig. 6-31A).

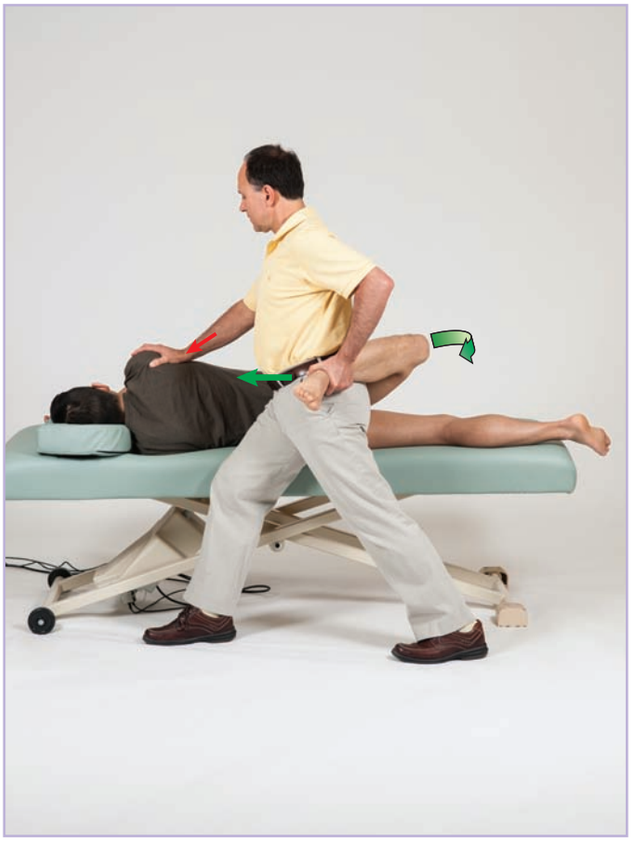


Figure 6-31B

- The actual stretch is accomplished by leaning forward with body weight to pull the client's thigh into extension as you continue to lean against and stabilize his pelvis (see Fig. 6-31B).
- After performing for one side, repeat for the other side.
- The advantage of this side-lying method compared is that stabilizing the pelvis is easier. You also do not have to support the weight of the lower extremity. The disadvantage is that it is more challenging to keep the knee joint in extension.

Multiplane Stretching of the Right Hip Joint Flexor Musculature: Stretch #6

- Probably the most powerful method to stretch the client's hip flexor group is to have the client prone, with you sitting on his buttocks (a cushion can be placed between you and the client both for comfort and modesty).
- Interlace your fingers and lift his thigh up into extension by using body weight to lean back (Fig. 6-32A).

Figure 6-32A

- This stretch can be easily transitioned into a multiplane stretch by adding in a component of abduction/adduction and/or rotation (Fig. 6-32B).

Figure 6-32B

- The advantage of this position is that the client's pelvis is well stabilized. The disadvantages are that the therapist must be agile enough to climb on the table, the table must be strong enough to support the weight, and modesty can be an issue.

When stretching the client's hip flexors with the client prone and the therapist sitting on the client's buttocks to stabilize the pelvis, it is important not to place your weight on the LSp. Also, do not place your weight on the superior aspect of the pelvis because this might cause excessive anterior tilt of the pelvis and increase the client's lumbar lordosis. Placing your weight toward the inferior aspect of the sacrum will better stabilize the pelvis against the pull of the tight hip flexors as they are stretched. But be careful to not place your weight on the coccyx because injury to the sacrococcygeal ligament of the coccyx itself might occur.

ROUTINE 6-8: HIP EXTENSORS: HAMSTRINGS

View the video "Multiplane Stretching of the Hamstring Group" online on thePoint.lww.com

Figure 6-33 shows the muscles of the hamstring group. The hamstring group is composed of the semitendinosus and semimembranosus medially and the long and short heads of the biceps femoris laterally. The hamstrings cross the hip and knee joints posteriorly with a vertical direction to their fibers. Because the hamstrings cross the hip joint posteriorly, they do hip extension. Therefore, the hip joint must be flexed for them to be stretched. Because the hamstrings cross the knee joint posteriorly, they also do knee flexion so the knee joint must be extended for them to be stretched.

*As a group, the hamstrings extend the thigh and posteriorly tilt the pelvis at the hip joint. They also flex the leg (and/or thigh) at the knee joint. (**Note**: The short head of the biceps femoris does not cross the hip joint and therefore has no action at that joint.)*

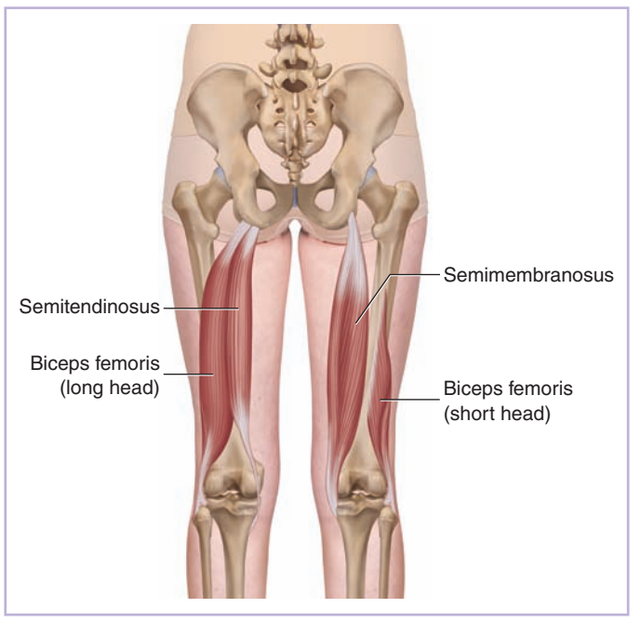


Figure 6-33 Posterior view of the hamstring group. The semitendinosus and long head of biceps femoris are shown in the superficial view on the left; the semimembranosus and short head of biceps femoris are shown in the deep view on the right.

Multiplane Stretching of the Right Hamstring Group

- Have the client supine toward the right side of the table.
- Position yourself at the right side of the table. Place the client's right leg on your right shoulder. Position your hands on the client's distal anterior right thigh to help keep the knee joint extended.
- Your right leg is the stabilization contact and is placed on the client's left anterior thigh (Fig. 6-34A). *Note*: Stretching the client's right hamstrings into extension will cause a posterior tilt tension force on the client's pelvis, pulling the pelvis into posterior tilt, which will cause the left thigh to lift from the table. Your right leg holds down the client's left thigh, preventing this from occurring.

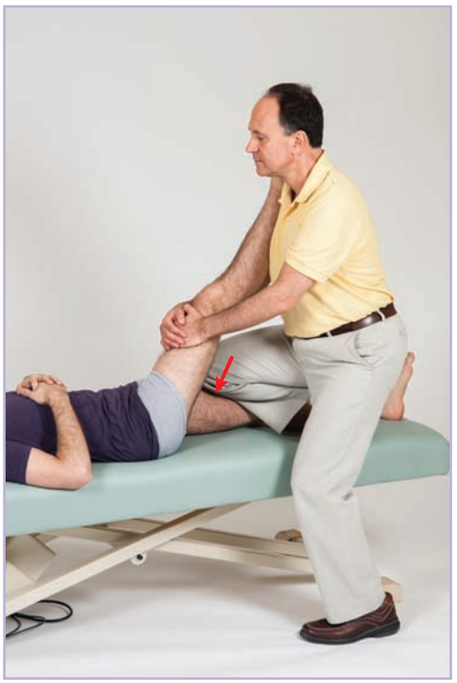


Figure 6-34A

- Using core body weight, gently lean into the client, pressing his right thigh farther into flexion (Fig. 6-34B). Make sure that his right knee joint remains fully extended (without being hyperextended).
- This stretch can be transitioned to be multiplanar by adding in abduction or adduction of the thigh in the frontal plane or medial rotation or lateral rotation in the transverse plane.
- Abduction increases the stretch to the more medially located hamstrings (Fig. 6-34C).

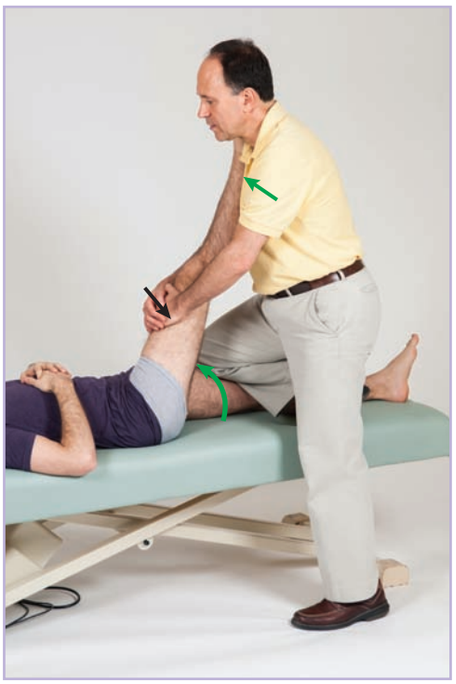


Figure 6-34B

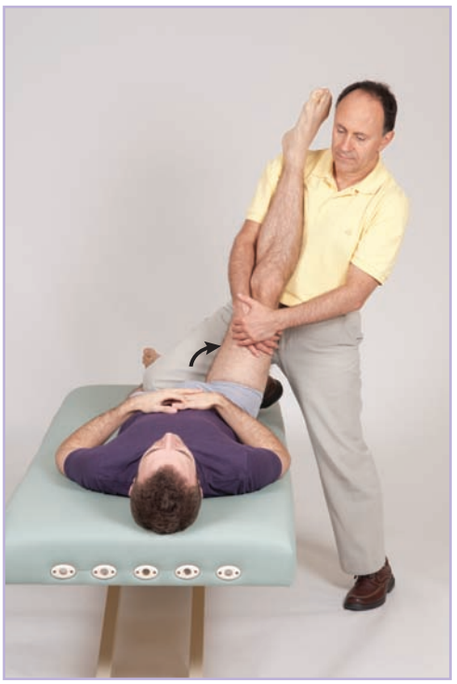


Figure 6-34C

- Adduction increases the stretch to the more laterally located hamstrings (Fig. 6-34D).

Figure 6-34D

- Medial rotation increases the stretch to the hamstrings that do lateral rotation.
- Lateral rotation increases the stretch to the hamstrings that do medial rotation.
- Frontal and transverse plane components can be combined to focus the stretch more specifically toward certain fibers.
- After performing the appropriate stretches as indicated for the right side, switch to the left side of the client's body and perform these stretches there (Fig. 6-34E).

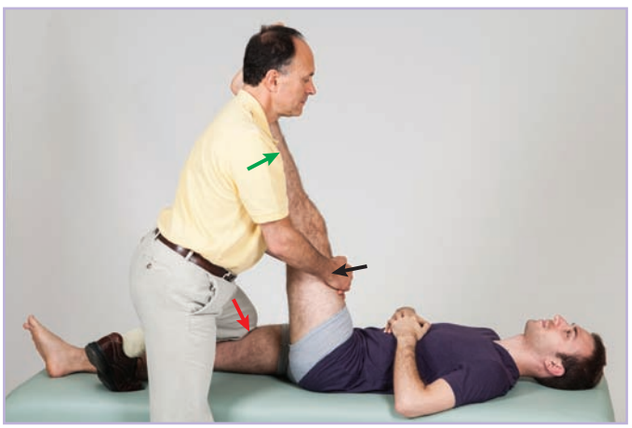
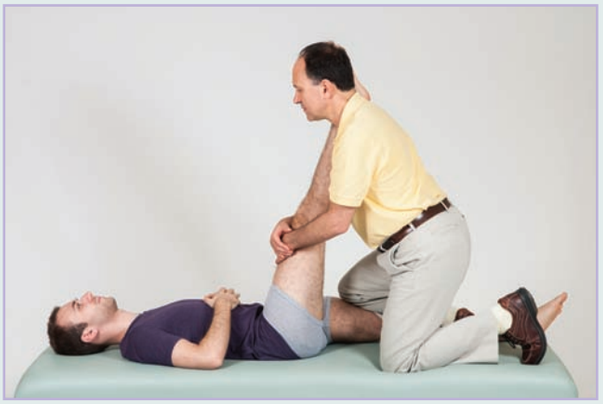


Figure 6-34E

6.6 THERAPIST TIP

Align the Core

Best practice body mechanics is to have the core in line with the force being generated. To facilitate this, the therapist can position himself on the table instead of standing at the side of the table. Be sure that the table can support the weight of you and the client.



When stretching the client's hamstrings, it is important that the knee joint is not allowed to flex or the stretch will be lost. However, be sure not to push on the client's leg so forcefully that you cause the knee joint to hyperextend.

ROUTINE 6-9: HIP EXTENSORS: GLUTEALS

Extensors of the hip joint comprise the hamstrings, gluteal muscles (gluteus maximus and posterior fibers of the gluteus medius and minimus), and the adductor magnus. Stretching the hamstrings was shown in Routine 6-8. The gluteals and adductor magnus are being given a separate routine because they do not cross the knee joint, whereas the hamstrings do. Focusing the stretch on the gluteal and adductor magnus muscles is accomplished by slackening the hamstrings; this is accomplished by flexing the client's knee joint. The stretch routine used for the gluteals is often known as the *knee-to-chest stretch*. Figure 6-35 shows the gluteal muscles and the adductor magnus.

The gluteus maximus extends, laterally rotates, abducts (upper fibers), and adducts (lower fibers) the thigh at the hip joint. It also posteriorly tilts and contralaterally rotates the pelvis at the hip joint.

The entire gluteus medius and minimus abduct the thigh at the hip joint and depress the same-side pelvis at the hip joint. The anterior fibers also flex and medially rotate the thigh and anteriorly tilt and ipsilaterally rotate the pelvis at the hip joint; the posterior fibers also extend and laterally rotate the thigh and posteriorly tilt and contralaterally rotate the pelvis at the hip joint.

The adductor magnus extends the thigh and posteriorly tilts the pelvis at the hip joint.

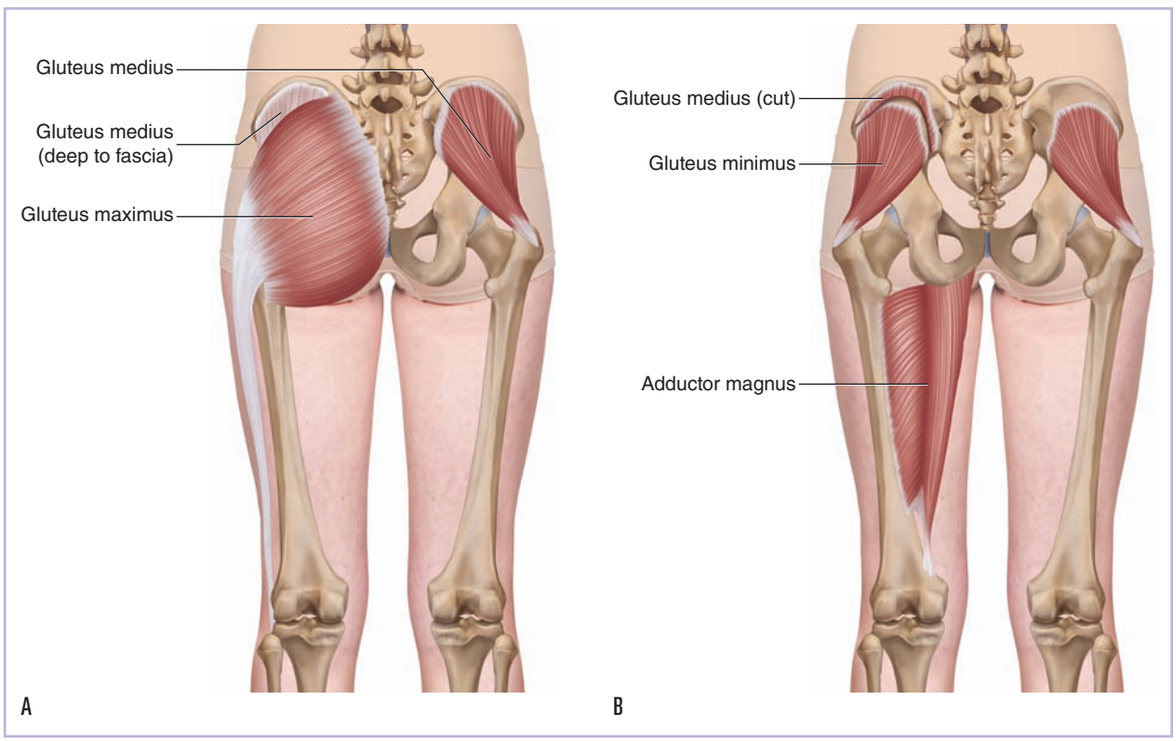


Figure 6-35 Posterior view of the gluteal muscles and the adductor magnus. **(A)** Gluteus maximus and gluteus medius. **(B)** Gluteus minimus and adductor magnus.

Multiplane Stretching of the Right Gluteal Group

- Have the client supine toward the right side of the table.
- Position yourself at the right side of the table.
- Bring the client's right hip and knee joints into flexion and grasp the client's distal posterior right thigh with both hands. *Note*: As with similar positioned stretches, an alternate position is to place the client's right foot on your clavicle.
- Your right leg or right hand is the stabilization contact and is placed on the client's left anterior thigh to stabilize her pelvis (Fig. 6-36A).

Figure 6-36A

- Using core body weight, gently lean into the client, bringing her knee to her chest by pressing her right thigh farther into flexion (Fig. 6-36B).

Figure 6-36B

- This stretch can be transitioned to be multiplanar by adding in abduction or adduction in the frontal plane or medial rotation or lateral rotation in the transverse plane.
- Abduction increases the stretch to the more medially located fibers (Fig. 6-36C).

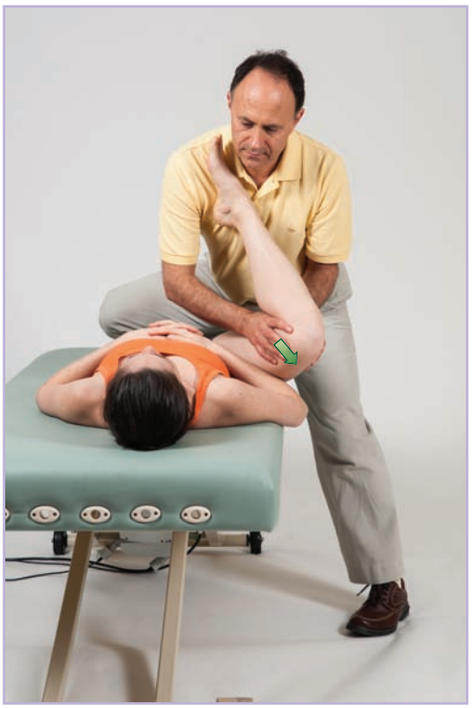


Figure 6-36C

- Adduction increases the stretch to the more laterally located fibers (Fig. 6-36D).

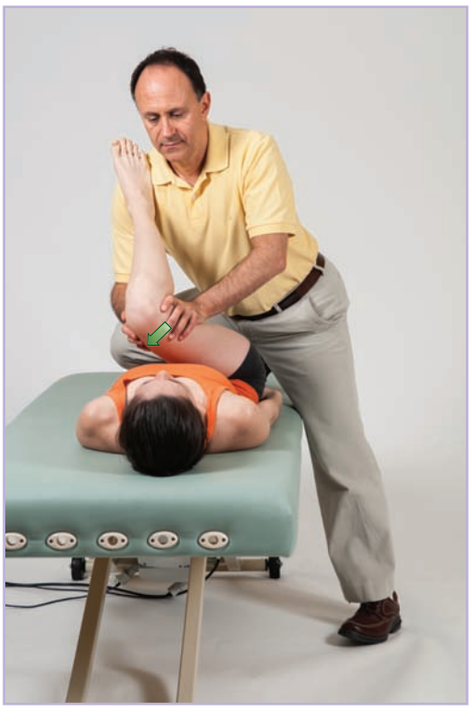


Figure 6-36D

- If medial rotation is added, it increases the stretch to the gluteal muscles.
- If lateral rotation is added, it decreases the stretch to the gluteal muscles, thereby allowing a better stretch of the adductor magnus.
- Frontal and transverse plane components can be combined to focus the stretch more specifically toward certain fibers. Figure 6-36E demonstrates flexion combined with adduction and medial rotation. This position preferentially stretches the upper fibers of the gluteus maximus.

Figure 6-36E

- *Note*: If knee-to-chest stretch is performed and transitioned into a multiplanar stretch by adding in adduction, lateral rotation, or both, it begins to target the deep lateral rotator group of the hip joint (see Routine 6-10).
- After performing the appropriate stretches as indicated for the right side, switch to the left side of the client's body and perform these stretches there. Figure 6-36F demonstrates the initial stretch to the gluteal group performed on the client's left side.

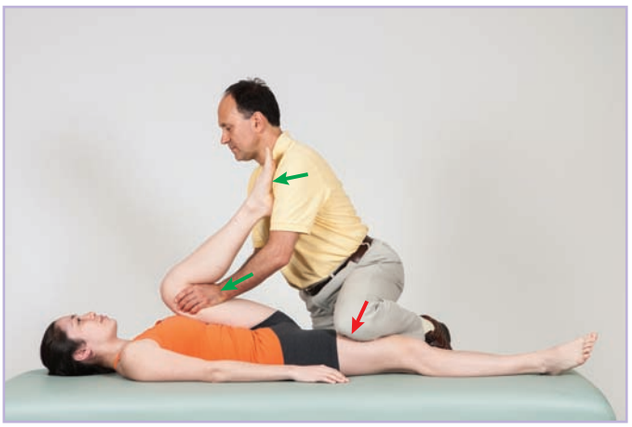


Figure 6-36F

6.7 THERAPIST TIP

Stretching the Hip Joint Ligaments

This chapter concerns itself primarily with stretching musculature. But, as stated previously, stretches create a line of tension that lengthens all soft tissues. As a whole, the ligament complex of the hip joint is pulled taut with extension as well as medial rotation and abduction. Therefore, if you do a multiplane stretch of the hip joint into these motions, you will be placing a stretch into the ligament complex. If the hip joints' ability to move into these ranges of motion is limited because the ligaments of the joint are taut, this stretch could be a very beneficial toward restoring healthy range of motion.

ROUTINE 6-10: HIP DEEP LATERAL ROTATORS

The deep lateral rotator group of the hip joint is composed of the piriformis, superior and inferior gemelli, obturator internus and externus, and the quadratus femoris (Fig. 6-37). This group is located on the posterior side of the pelvis, crossing the hip joint with a horizontal direction to their fibers to attach to the femur.

You can generalize and say that the gluteal musculature runs primarily vertically, and for that reason, it is oriented differently from the fiber direction of the deep lateral rotators; therefore, a separate stretching routine is presented here. However, they really are not that different; rather, there is a gradual transition in fiber direction from the gluteals to the deep lateral rotators (see the relationship of the posterior fibers of the gluteus medius and the piriformis; Fig. 1-16). This is evidenced by the fact that, as mentioned previously, the knee-to-chest stretch for the gluteals easily transitions into a stretch for the deep lateral rotators (see Fig. 6-36).

Following are two routines for stretching the right-sided deep lateral rotator group using horizontal adduction of the thigh and the Figure 4 stretch.

As a group, the deep lateral rotators laterally rotate the thigh at the hip joint and contralaterally rotate the pelvis at the hip joint. If the thigh is first flexed to 90 degrees, the deep lateral rotators can horizontally abduct (horizontally extend) the thigh at the hip joint. ***Note****: If the thigh is first flexed (approximately 60 degrees of more), the piriformis changes to become a medial rotator of the thigh at the hip joint instead of a lateral rotator.*

Stretch #1: Horizontal Adduction

- Have the client supine toward the left side of the table.
- Position yourself at the left side of the table.
- Bring the client's right hip and knee joints into flexion and then horizontally adduct the right thigh at the hip joint and trap the client's right knee between your trunk and right arm, in other words, under your right axillary region.
- No stabilization hand is necessary; the client's body weight and contact with the table stabilizes his pelvis.
- Using core body weight, gently lean into the client, bringing his thigh down and across his chest, farther into horizontal adduction (Fig. 6-38A). Be sure that the client's pelvis remains stabilized down onto the table.
- It is beneficial to purposely vary the exact degree of flexion versus horizontal adduction of the client's thigh to catch as many angles as possible between a pure flexion knee-to-chest stretch and a pure horizontal adduction stretch across the client's body (Fig. 6-38B, C). Each different angle will preferentially stretch different directions of fibers of the deep lateral rotator group and musculature of the posterior buttock in general.
- After performing the appropriate stretches as indicated for the right side, switch to the left side of the client's body and perform these stretches there (Fig. 6-38D).

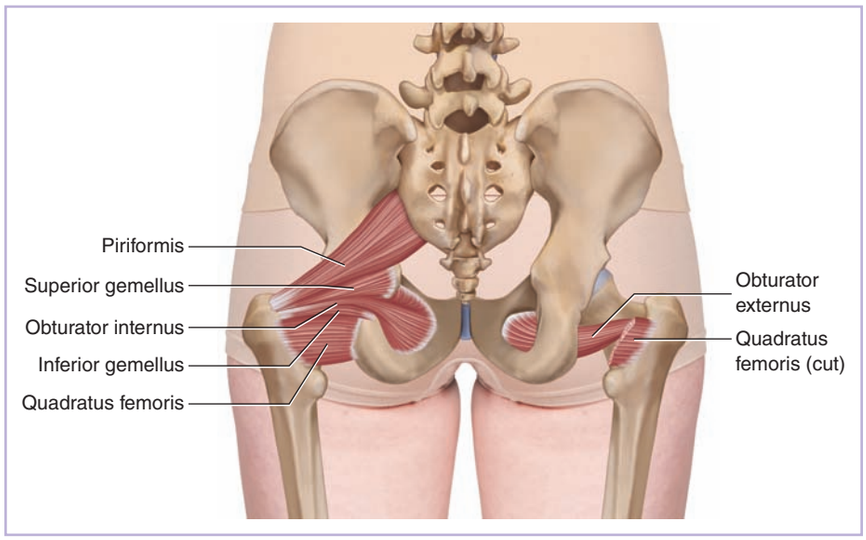


Figure 6-37 Posterior view of the muscles of the deep lateral rotator group.

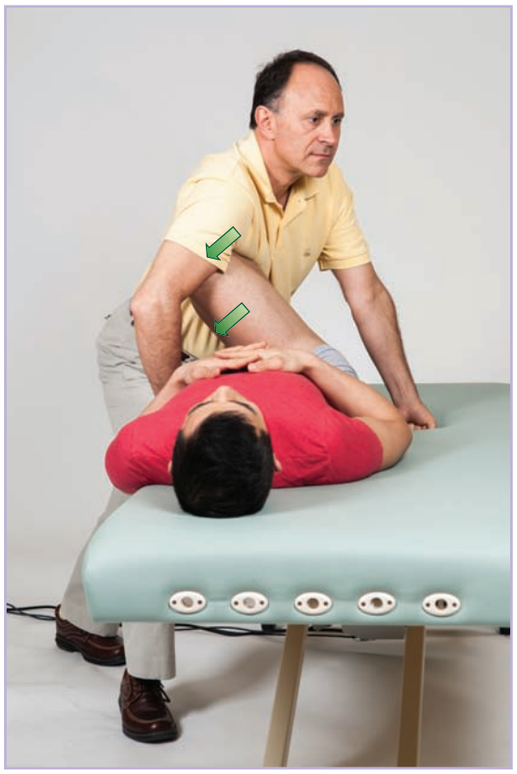


Figure 6-38A

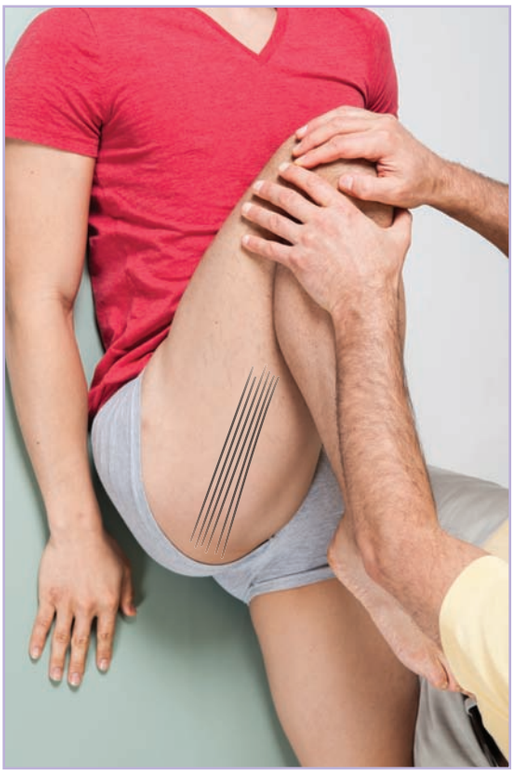


Figure 6-38B

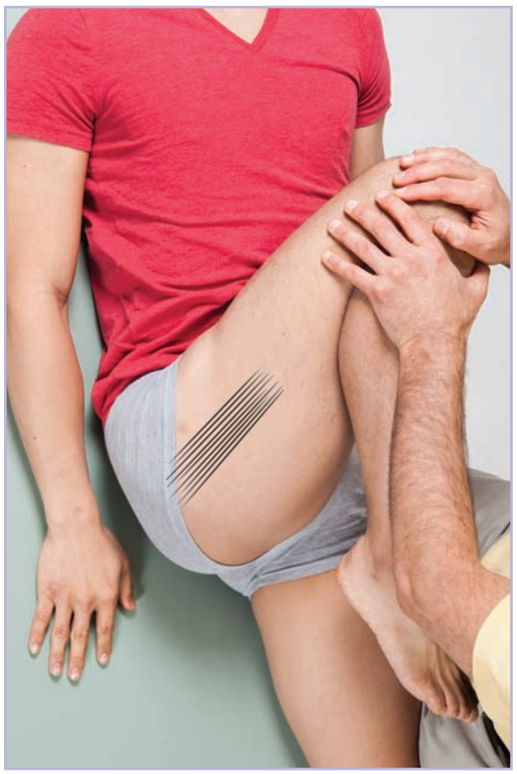


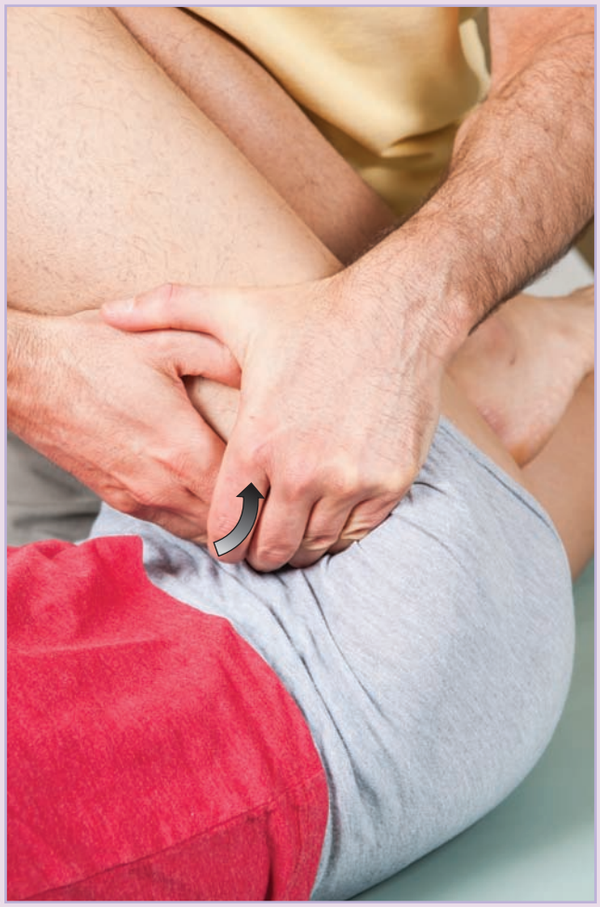
Figure 6-38C

Figure 6-38D

6.6 PRACTICAL APPLICATION

Deep Lateral Rotator Stretch and Groin Pain

The direction that you move the client's thigh during the deep lateral rotator horizontal adduction stretch is extremely important. If the direction is too horizontal (parallel with the table), the client's pelvis will no longer be stabilized and will lift from the table, causing the stretch to travel into the LSp and be lost to the target musculature of the pelvis. However, if you press the client's thigh too downward, it may compress the anterior hip joint region (groin) and cause discomfort or pain for the client. The ideal direction to press the thigh is as downward into the chest as possible without causing pain, or conversely, it could be looked at as being as horizontal as possible without allowing the pelvis to lift from the table. The exact degree of this ideal direction will vary from client to client. If it is impossible to find an angle that both stabilizes the client's pelvis and keeps the client pain-free, then you can use your hands to grasp the client's proximal femur and soft tissue of the proximal thigh and traction the thigh away from the pelvis **(Fig. A)**. This often removes the pinching discomfort/pain that clients experience. If the client is being instructed to do this stretch as part of self-care, then it can be beneficial to place a small cushion or towel in the crease of the pelvis/thigh to make space in this area to decrease the pinching discomfort/pain **(Fig. B)**.



A

B

As previously mentioned, placing pressure through an unhealthy knee joint can be difficult and painful for the client. However, the stretch can be modified to obviate pressure to the knee joint by instead placing and resting the client's leg on your shoulder.

Stretch #2: Figure 4

- Have the client supine toward the right side of the table.
- Position yourself at the right side of the table.
- Flex and laterally rotate the client's right hip joint and flex his right knee joint and place his distal right leg on his flexed left thigh. This forms the Figure 4 position for which the stretch is named.
- Both of your hands are treatment hands. Place your left hand on the posterior surface of his distal right thigh, and place your right hand on the posterior surface of his distal left thigh (Fig. 6-39A).

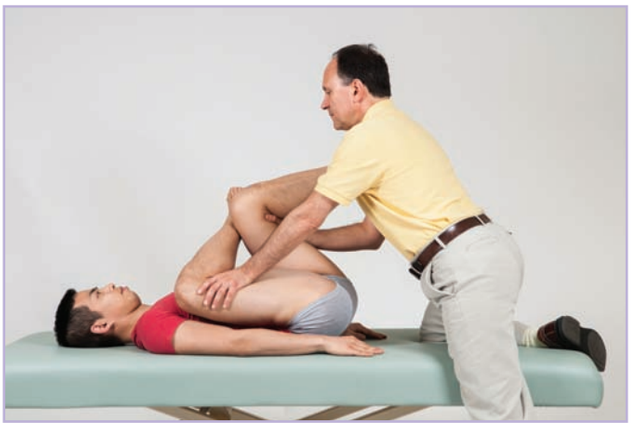


Figure 6-39A

- No stabilization hand is necessary; the client's body weight and contact with the table stabilize his pelvis.
- Using core body weight, gently lean forward into the client, pressing equally with both hands and bringing his laterally rotated right thigh farther into flexion, in other words, down toward his chest (Fig. 6-39B). Be sure that the direction of your pressure is such that the client's pelvis remains stabilized down onto the table.

Figure 6-39B

- After performing the appropriate stretches as indicated for the right side, switch to the left side of the client's body and perform these stretches there (Fig. 6-39C).

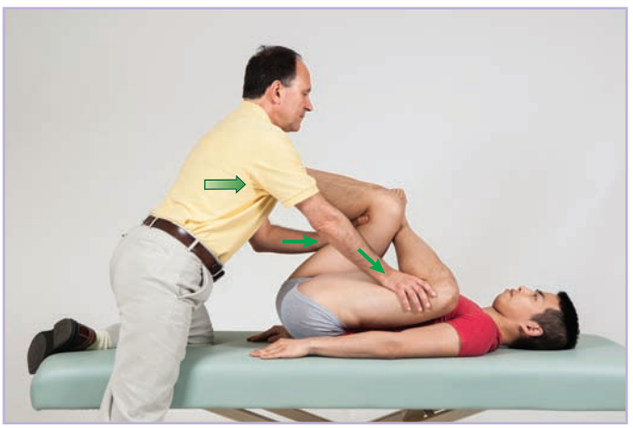


Figure 6-39C

CHAPTER SUMMARY

Stretching is an invaluable treatment tool when working with clients who have tight muscles and other taut soft tissues. However, a typical stretch often creates a line of tension that spreads across an entire functional group of muscles. Multiplane stretching is a technique that allows the therapist to focus a stretch specifically on the desired target muscle. It also optimizes the effectiveness of the stretch of the target muscle by stretching it across all its planes of action. Performing multiplane stretching for a target muscle is easy and straightforward because it involves simply stretching the client's LSp or pelvis into the opposite action of each and every one of the mover actions of the target muscle being stretched.

CASE STUDY

FELIX

History and Physical Assessment

A new client, Felix Madison, age 53 years, comes to your office complaining of pain and stiffness in his right hip and tightness across his low back. He tells you that he has been experiencing pain and stiffness for 3 weeks. Because he is a nurse, his hip and low back pain has made it difficult to work. He was referred to you by his fitness trainer because the trainer heard that you are skilled at working with low back problems and stretching techniques.

You perform a thorough client history, which reveals that he has had multiple low back sports injuries when he was younger and played lacrosse in high school. Since high school, he has had occasional episodes of hip tightness and pain as well as low back tightness, but these episodes have never lasted more than a few days. His present episode is more intense and is not going away. It began during a vacation in which he was walking many hours each day.

Felix has seen his massage therapist twice now. In the past, massage has always helped to loosen his hip and low back and eliminate the pain and stiffness, but this time, the relief has only been temporary. Felix also has a regular stretching routine that he does whenever his low back and hip act up. These stretches also usually help, but this time they have not. At this point, his current episode of stiffness and pain has not improved, and he is very discouraged.

Postural examination shows that Felix has a mildly excessive anterior tilt of his pelvis with a concomitantly increased lumbar lordosis. Your LSp range of motion assessment shows that left lateral flexion is decreased by 10 degrees, and flexion is decreased by 15 degrees. His right hip joint range of motion assessment shows that extension and adduction are decreased on the right side compared to the left side and also cause mild pain in the front of his right hip. Manual resistance to right hip joint flexion and abduction reproduces the characteristic pain that he has been experiencing in the front of the right hip. You perform active and passive straight leg raise, Nachlas', and Yeoman's tests and ask the client to perform the cough test and Valsalva maneuver, all of which produce negative results (for a review of assessment procedures, see Chapter 3).

Palpatory examination reveals that his hip flexors on the right side are all mildly tight, but his TFL is markedly tight and is the source of his anterior hip pain. His adductors and hamstrings are fine. In the low back, his erector spinae musculature is moderately tight, with his right side tighter than the left side. The gluteal musculature, deep lateral rotators, and quadratus lumborum muscles bilaterally are all within normal limits of tone.

At the end of the examination, you ask him to show you the stretches that he has been doing. He demonstrates single knee-to-chest and double knee-to-chest for his low back and a lunge stretch for his hip flexors as well as stretches for his hamstrings and quadriceps femoris. You note that when he shows you the lunge stretch, his right thigh is abducted as he performs the stretch.

Think-It-Through Questions:

1. Should you include a multiplane stretching technique in your treatment plan for Felix? Why, or why not?
2. If multiplane stretching would be of value, is it safe to use with him? If yes, how do you know?
3. If you do perform multiplane stretching, which specific stretching routines should you do? Why?

Answers to these Think-It-Through Questions and the Treatment Strategy employed for this client are available online at thePoint.lww.com/MuscolinoLowBack

CHAPTER 7

Contract Relax Stretching

CHAPTER OUTLINE

Introduction 206
Mechanism 206
Overview of Technique 208
Performing the Technique 212
Contract Relax Routines 214
Chapter Summary 263
Case Study 263

OBJECTIVES

After completing this chapter, the student should be able to:

1. Explain why contract relax (CR) stretching is also known as proprioceptive neuromuscular facilitation stretching and/or postisometric relaxation stretching.
2. Describe the mechanism of CR stretching.
3. Describe in steps an overview of the usual protocol for carrying out the CR stretching technique.
4. Describe the roles of the treatment hand and the stabilization hand.
5. Explain why the client may perform either an isometric or concentric contraction during a CR stretch.
6. Describe the usual breathing protocol for the client during the CR stretching technique.
7. Explain why stretching should never be performed too fast or too far.
8. Define each key term in this chapter and explain its relationship to the CR stretching technique.
9. Perform the CR stretching technique for each of the muscle groups presented in this chapter.

KEY TERMS

assisted CR stretching
contract relax (CR) stretching
Golgi tendon organ (GTO) reflex
lengthened active insufficiency
muscle spindle reflex
postisometric relaxation (PIR) stretching
preset the rotation
proprioceptive neuromuscular facilitation (PNF) stretching
resistance hand
stabilization hand
stretch reflex
stretching hand
treatment hand
unassisted CR stretching

INTRODUCTION

Contract relax (CR) stretching is a stretching technique in which the client first *contracts* and then *relaxes* the target muscle to be stretched, hence the name. CR stretching has classically been stated to utilize the proprioceptive neurologic reflex known as the **Golgi tendon organ (GTO) reflex** (also addressed in Chapter 9) to facilitate the stretch of the target muscle. For this reason, it is also known as **proprioceptive neuromuscular facilitation (PNF) stretching**. It is also known as **postisometric relaxation (PIR) stretching** because the client usually performs an isometric contraction of the target muscle, followed by relaxation. Because CR stretching involves a neurologic reflex to facilitate the stretch, it is considered to be an advanced form of stretching; in addition, it is usually more effective than standard mechanical stretching alone. The beauty of CR stretching is that once a therapist is familiar and comfortable with the mechanism that underlies it, almost any stretch can be converted into a CR stretch. CR stretching is especially useful for clients whose problem is chronic and stubborn and does not respond well to standard stretching.

Note: In the Technique and Self-Care chapters of this book (Chapters 4 to 12), green arrows indicate movement, red arrows indicate stabilization, and black arrows indicate a position that is statically held.

MECHANISM

The classically proposed physiologic mechanism that underlies CR stretching is the GTO reflex, which is a protective reflex that prevents a muscle's tendon from being torn. CR stretching is a technique that allows the therapist to make use of this reflex to facilitate stretching clients.

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When a muscle is contracted, the GTO reflex sends inhibitory signals to the muscle, causing it to relax. This is why the first step in the CR stretch procedure is usually to have the client isometrically contract the target muscle against the therapist's resistance. The client typically holds the isometric contraction against resistance for approximately 5 to 8 seconds. When the client relaxes the target muscle, the therapist can passively move the client's body part farther because the GTO reflex has inhibited the target muscle. This allows for a greater stretch of the target muscle than would otherwise be possible. This procedure is usually repeated three to four times. *Note*: It should be mentioned that there is controversy whether the GTO reflex is the operative mechanism of CR stretching.

CR stretching is usually performed with the client isometrically contracting the target muscle because this creates maximal tension in the muscle to trigger the GTO reflex. However, the client can concentrically contract the target muscle instead. Both methods are effective. The choice of whether to have the client perform the contraction isometrically or concentrically is best based on the client's comfort (this book consistently demonstrates it as an isometric contraction). *Note*: Your hand that resists the client's contraction and performs the stretch of the client is known as the **treatment hand**; it is also known as the

BOX 7.1

Contract Relax Routines

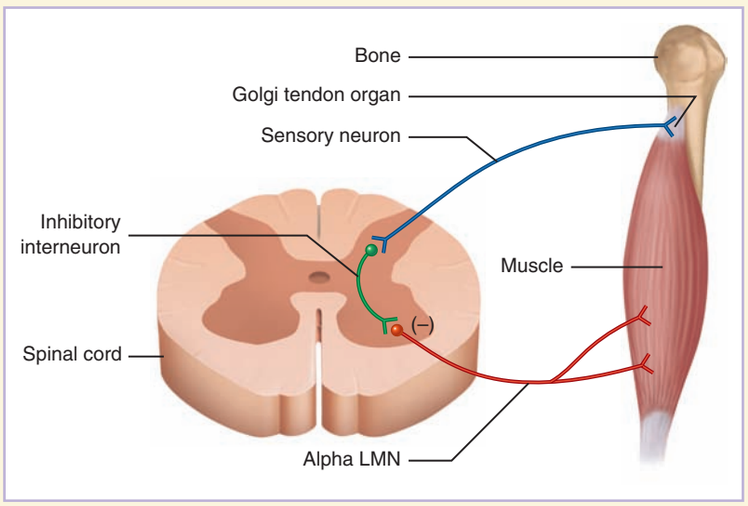
The following CR stretching routines are presented in this chapter:

- Section 1: lumbar spine (LSp) contract relax stretches:
  - Routine 7-1—LSp extensors
  - Routine 7-2—LSp flexors
  - Routine 7-3—LSp right lateral flexors
  - Routine 7-4—LSp left lateral flexors
  - Routine 7-5—LSp right rotators—seated
  - Routine 7-6—LSp left rotators—seated
- Section 2: hip joint/pelvis contract relax stretches:
  - Routine 7-7—hip abductors
  - Routine 7-8—hip adductors
  - Routine 7-9—hip flexors
  - Routine 7-10—hip extensors: hamstrings
  - Routine 7-11—hip extensors: gluteals
  - Routine 7-12—hip deep lateral rotators
  - Routine 7-13—hip medial rotators

BOX 7.2

Golgi Tendon Organ Reflex

The GTO reflex is a proprioceptive neurologic reflex that protects the tendons of a muscle from tearing. The force of the contraction of the muscle belly is transmitted to its bony attachments by pulling on its tendons. If this contraction is too great, the pulling force may tear the tendon. The GTO reflex works to prevent this by monitoring the tension (stretch) within a tendon. If the stretch is too great, the GTO reflex sends a signal into the spinal cord via a sensory neuron, which synapses with an interneuron that inhibits the (alpha) lower motor neurons (LMNs) that control that muscle. Inhibition of a muscle's LMNs results in relaxation of the muscle, thereby relieving the force on its tendon (see accompanying figure). Therapists can take advantage of the GTO reflex through CR stretching by asking the client to begin by contracting the target muscle. If the contraction is sufficiently strong, it triggers the GTO reflex so that the target muscle is inhibited and relaxed. The target muscle can then be stretched farther than it otherwise would have been.



stretching hand or **resistance hand**. Your other hand is used as a **stabilization hand** to stabilize the client's pelvis and/or trunk.

OVERVIEW OF TECHNIQUE

If the GTO reflex is the scientific principle that underlies CR stretching, then the manner in which it is carried out is its art. The following is an overview of the CR stretching technique using the right hamstring muscle group as the target muscle group being stretched. The following overview of the CR stretching technique protocol describes **assisted CR stretching** in which the client is stretched with the assistance of a therapist. However, it is often possible for a client to perform **unassisted CR stretching** without the assistance of a therapist. For more on unassisted CR stretching, refer to Chapter 11 (available online at thePoint.lww.com).

7.1 THERAPIST TIP

Communication with the Client

Because CR stretching involves a number of steps and utilizes a specific breathing pattern, it is best to practice it before working with clients. The first time you perform CR stretching on a client who has never done it before, it can also be helpful to start by giving the client a brief overview of how CR stretching is done. Explain that the client will need to press against your resistance and then relax as you perform the stretch. Tell the client approximately how long to press against your resistance and how many repetitions there will be. Describe the breathing protocol as well. This will allow the client to give informed verbal consent before you begin the technique and also will make it easier to carry out the CR protocol once you begin.

Starting Position:

- The client is supine and positioned as far to the right side of the table as possible; you are standing at the right side of the table.
- The client's right thigh is flexed at the hip joint with her right leg extended at the knee joint; her right leg is placed on your right shoulder.
- Both of your hands are treatment hands and are placed on the anterior surface of the client's distal right thigh.
- Your right knee is the stabilization contact and is placed on the anterior surface of the client's left thigh.
- Note that your elbows are tucked in front of your body so that you can use your core body weight behind your forearms and hands when pressing on the client with your treatment hands (Fig. 7-1).

Alternative Positions:

Four alternative positions are commonly used.

- The first is to instead place only one treatment hand (usually the left hand) on the anterior surface of the client's distal right thigh; the other (right) treatment hand is placed on the posterior surface of the client's right leg. This assists in keeping the client's knee joint extended during the stretch (Fig. 7-2A).
- The second is to use your right hand instead of your right knee to stabilize her left thigh/pelvis (Fig. 7-2B).
- A third position is to place your right hand on the plantar surface of the client's right foot. This is done to increase the client's stretch by dorsiflexing the foot at the ankle joint (Fig. 7-2C). Dorsiflexing the foot will stretch the gastrocnemius musculature, which, via its myofascial attachment into the hamstrings, will increase the tension and therefore the stretch to the hamstrings.

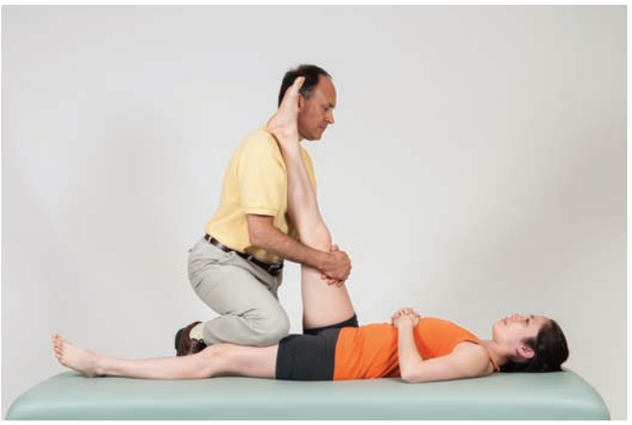


Figure 7-1 Starting position for CR stretching of the right hamstring muscle group. Note that the therapist's elbows are tucked in.

7.2 THERAPIST TIP

Stabilizing the Client's Pelvis

When stretching musculature that crosses the client's hip joint, the thigh is moved and the pelvis must be stabilized because if the pelvis is allowed to move, the line of tension of the stretch will extend into the LSp, and the stretch across the hip joint will be lost. To stabilize the pelvis, the direction of the stabilization pressure must be opposite of how the pelvis would have moved (had it not been stabilized). When stretching the right hamstrings, as they are lengthened and pulled taut, they will exert a pull on the right side of the pelvis toward posterior tilt; this will pull the right pelvic bone and indeed the entire pelvis into posterior tilt. Therefore, to stabilize and prevent posterior tilt of the pelvis, you would need to exert a force toward anterior tilt. The problem is that with the client supine, there is no easy way to contact the pelvis to accomplish this. What can be done instead is indirectly stabilize the pelvis from posteriorly tilting by contacting the client's left thigh. Had the pelvis posteriorly tilted, the client's left thigh would have lifted off the table. By placing your knee on the client's left anterior thigh, you hold the left thigh down, which prevents the pelvis from posteriorly tilting. Therefore, the pelvis is stabilized.

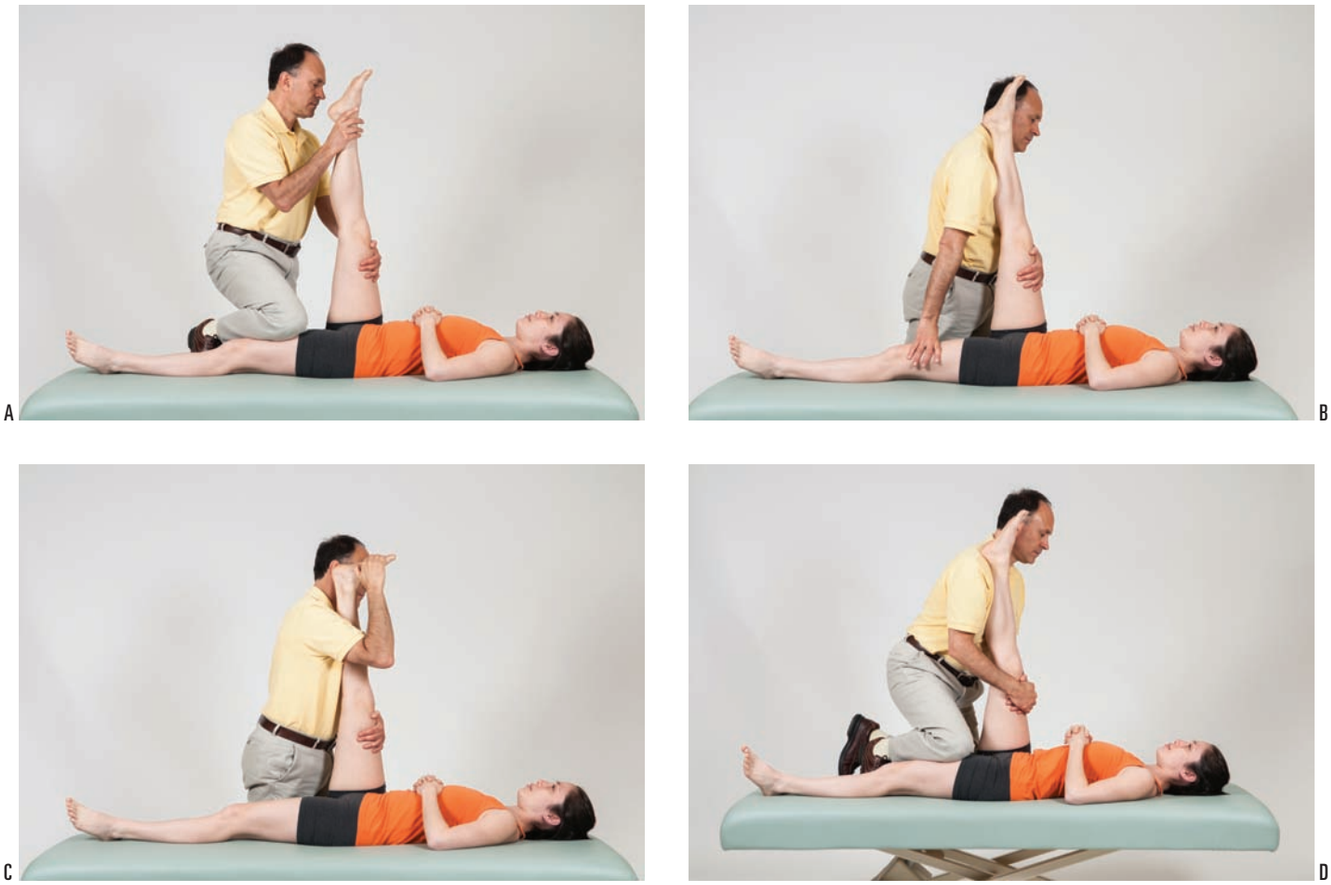


Figure 7-2 **(A–D)** Alternative starting positions.

- The fourth position is to actually climb up onto the table so that you can position your trunk/core directly in line with the force that the client will be creating. Using your core in this manner is the most efficient position for body mechanics. If this position is used, it is better to have the client supine toward the middle of the table instead of the side; this gives you more room to comfortably position your body on the table. Of course, before climbing on the table, be sure that the table can support the weight of both you and the client (Fig. 7-2D).

If when stretching the hamstrings, the client's knee joint flexes, the hamstrings will slacken, and the tension of the stretch will be lost. For this reason, the client's knee joint must remain extended during the entire stretch. However, it is important to not allow or force the client's knee joint to hyperextend.

7.3 THERAPIST TIP

Using Your Core

It may seem uncomfortable at first to tuck your elbows in front of your body. However, with a little practice, this position will become comfortable. It is well worth it because the advantage of this position is that you can use your core strength to resist the client's contraction and to stabilize the client instead of overtaxing the musculature of your shoulder. For overweight therapists and large-breasted female therapists, if it is difficult to tuck your elbows in front of your body, the closer you can place them to being in front of your core, the better. If you find that it is difficult to get both of your elbows in front, then focus on getting the one in front that requires the most effort. With some clients, this may be the treatment hand; with other clients, it may be the stabilization hand. Consciously laterally rotating your arms at the glenohumeral joints helps you to keep your elbows in. Once you have practiced this position for a little while, it will come naturally.

Placing the client's leg against your shoulder directly engages your core in the performance of this stretch and allows for even greater strength and efficiency of body mechanics.

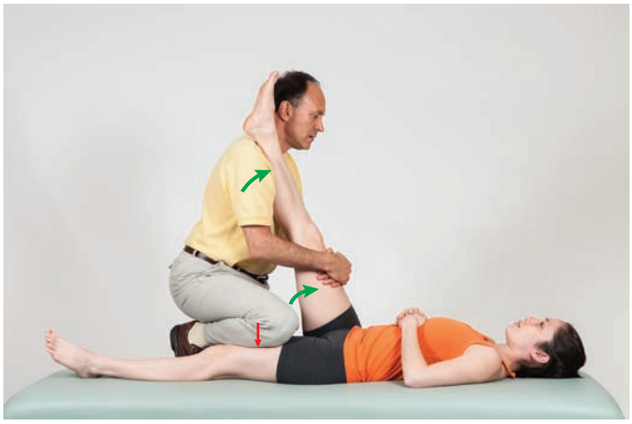


Figure 7-3 Initial stretch of the client's right thigh into flexion at the hip joint by the therapist. Note that the client's right knee remains extended.

Initial Client Stretch:

- Gently stretch the client's target (right hamstring) musculature by moving the client's thigh into flexion until you meet tissue resistance. *Note*: Make sure that the client's knee joint stays extended.
- This begins the stretch of the target hamstring muscles (Fig. 7-3).
- Note that your right knee acts as the stabilization contact, holding down and stabilizing the client's left thigh. Stabilizing the left thigh acts to stabilize the pelvis

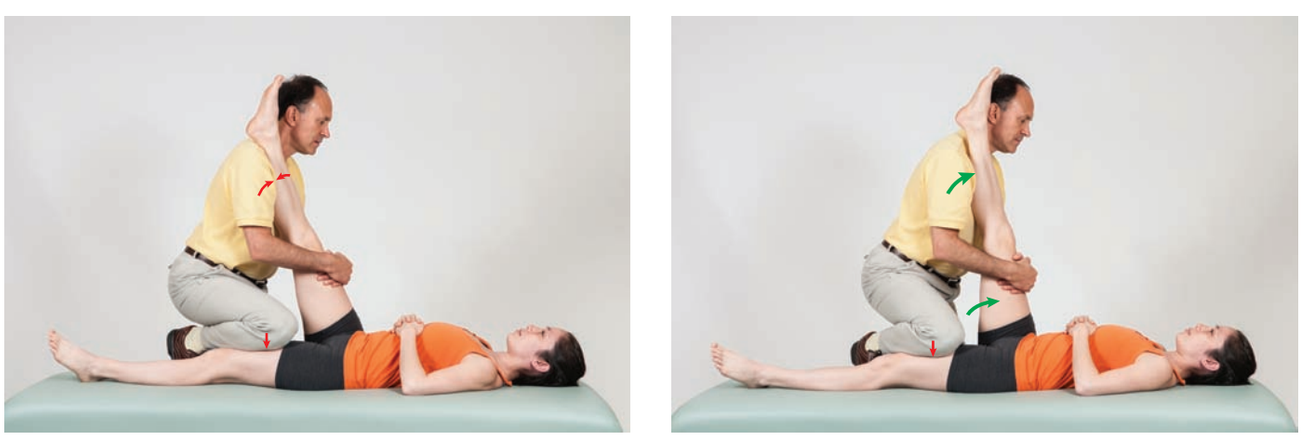
First Repetition, Step 1: Client Contraction:

- In this position of stretch of the target muscles, ask the client to inhale and then gently isometrically contract the target muscles for approximately 5 to 8 seconds against the resistance of your treatment hands (and/or shoulder). The client should be attempting to press the thigh down into extension toward the table against your resistance and also press the leg toward flexion down against the resistance of your shoulder.
- This engages the GTO reflex, which inhibits and therefore relaxes the target muscles.
- In this example, the client isometrically contracts the right hamstring muscle group, attempting to return the right lower extremity back to anatomic position (Fig. 7-4A).
- The breathing protocol for every repetition is to have the client either hold the breath or exhale when contracting against your resistance.

7.4 THERAPIST TIP

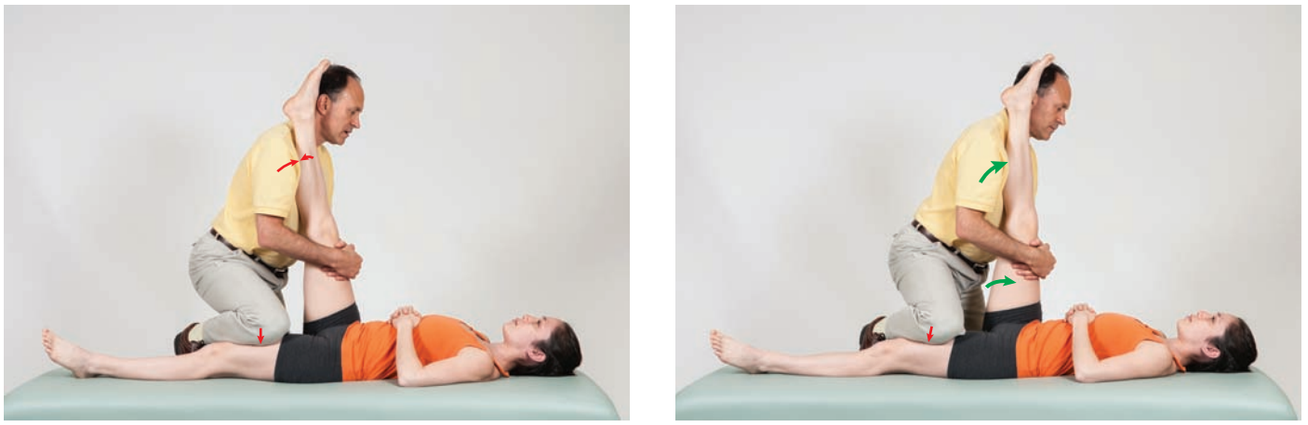
Counting Down

While the client is contracting for 5 to 8 seconds, some therapists like to encourage the client to keep contracting by gently repeating something like *resist* or *keep contracting*. Other therapists like to count down as the client contracts. This can be done by asking the client to contract and then gently counting out loud starting with the number of seconds that you want the client to contract for. For example, you might say *contract, 7, 6, 5, 4, 3, 2, 1, relax*. Or you may begin with words to encourage the client's contraction and then complete the time with the remainder of the countdown, such as *resist . . . that's it . . . keep contracting . . . 3, 2, 1, relax*. The advantage to counting down is that the client knows how long he or she will have to continue contracting.



A B

Figure 7-4 First repetition. **(A)** Step 1: Isometric contraction of the client's right hamstring musculature against the resistance of the therapist. **(B)** Step 2: After contracting, the client relaxes and is stretched farther into flexion by the therapist.



A B

Figure 7-5 Second repetition. **(A)** Step 1: Contraction by the client. **(B)** Step 2: Further stretch of the client.

First Repetition, Step 2: Postcontraction Stretch:

- The client relaxes, and you passively stretch the target muscle group farther until you feel tissue resistance.
- Hold this position of stretch for approximately 1 to 3 seconds.
- Because of the GTO reflex, the target muscle group will be better stretched than would have been possible otherwise.
- In this example, the client's right thigh is moved farther into flexion (Fig. 7-4B).

Second Repetition:

- Beginning from the position of stretch attained at the end of the first repetition, perform a second repetition by repeating steps 1 and 2 (Fig. 7-5).
- This time, the client's isometric contraction (again held for approximately 5 to 8 seconds) can be moderately strong.
- When the client relaxes, gently increase the stretch of the client's target musculature by moving the right thigh farther into flexion until you meet tissue resistance.

Third Repetition:

- Beginning from the position of stretch attained at the end of the second repetition, perform a third repetition by repeating steps 1 and 2 (Fig. 7-6).
- This time, the client's isometric contraction (again held for approximately 5 to 8 seconds) can be as strong as is comfortable for the client.
- When the client relaxes, gently increase the stretch of the client's target musculature by moving the right thigh farther into flexion until you meet tissue resistance.
- *Note*: If desired, a fourth repetition could be performed, following the same steps.
- Once the final position of stretch is reached at the end of the last CR repetition, many therapists like to hold this position of stretch for a longer period, often 10 to 20 seconds or more.
- *Note*: It is extremely important that the client's right knee joint is never allowed to move into flexion during this entire routine. If this occurs, hamstring tension will be lost and they will not be stretched as well.

A B

Figure 7-6 Third repetition. **(A)** Step 1: Contraction by the client. **(B)** Step 2: Further stretch of the client. Note the increased range of motion attained compared to the first two repetitions.

PERFORMING THE TECHNIQUE

When performing CR stretching, it is important to keep the following in mind: Each point addresses a specific aspect of the CR stretching technique. Understanding and applying the following guidelines will help you perform CR stretches more effectively.

7.1 Contraction: Increase Gradually

The goal for each successive CR stretch repetition is to build on the previous one so that the degree of stretch achieved gradually increases. This can be achieved by increasing the degree of the client's strength of contraction gradually. For example, if you ask the client to perform three repetitions, do the following:

- For the first repetition, ask the client to contract gently as you offer mild resistance.
- For the second repetition, ask the client to contract with moderate strength against your resistance.
- For the third (and perhaps fourth) repetition, ask the client to contract the target muscle as forcefully as is comfortable.

However, you should never ask the client to contract more forcefully than he or she is comfortable. The strength of the client's contraction against your resistance is not as important as performing the stretching protocol comfortably and smoothly.

*If the client contracts too forcefully or too suddenly, a pulled or torn muscle is possible. It may be helpful to tell the client, "Contract more forcefully, build up to it slowly so you don't hurt yourself, but contract as hard as you **comfortably** can."*

7.2 Resistance: Your Role

When you offer resistance as the client contracts isometrically, remember that it is not a contest between you and the client. It is your role to meet the client's resistance, not exceed it. Thus, you must equal whatever force the client generates so that the contraction of the client's target muscle is isometric. When you tell the client to relax, it is also important that you immediately ease off your pressure so that the client's body is not suddenly pushed into the stretch.

7.3 Position: Monitor the Client

Although it is customary to begin the resistance of each successive repetition from wherever the stretch of the previous repetition ended, it is not necessary. Sometimes, if the client's target muscle is greatly stretched and elongated, it can be difficult or uncomfortable for the client to contract the target muscle from that position. The principle of **lengthened active insufficiency** explains this difficulty. Lengthened active insufficiency is when a lengthened muscle contracts and the strength of its contraction is weakened because fewer actin–myosin crossbridges can be formed in the sarcomeres of its stretched muscle fibers than when the sarcomeres are at resting length. Asking a client to contract against your resistance under these circumstances might actually reduce the effectiveness of the GTO reflex and minimize the benefit of the stretch. It is often better to bring the client's thigh back to a more neutral (closer to anatomic) position to begin the client's contraction for the next repetition.

Even when you begin a new repetition with the client's thigh in the position of stretch attained in the previous repetition, if you allow the client to perform a concentric contraction instead of an isometric one, then the position of stretch attained in the previous repetition will be lessened or lost. Although this might not seem desirable, it is perfectly fine. The point of the CR stretching technique is that the client contracts the target musculature, thereby initiating the GTO reflex to inhibit and relax the target musculature so that it can then be stretched effectively. Whatever position facilitates the client being able to comfortably contract the target musculature is efficient for CR stretching. For the sake of consistency, each of the CR stretches demonstrated in this book shows each successive repetition beginning from the ending position of the previous repetition's stretch. When using this technique in your practice, this aspect of the stretch should be applied in the manner that is most comfortable and effective for your client.

7.5 THERAPIST TIP

Bracing Your Core

If you find that the client is contracting so forcefully that you feel overpowered, perhaps because you are small and the client is large, you can usually remedy this by focusing on bringing your elbow in front of your core. This positions your body weight behind your forearm and hand. If this is still insufficient, try placing a foot behind you on the floor in the line of force so that you can engage your lower extremity muscles to brace your core. When possible, climb on the table to more directly place your core in the line of force of the stretch.

7.4 Stretch: Slow and Easy

When stretching the client's target musculature, whether at the beginning of the technique or at the end of each of the repetitions, it is extremely important to perform the stretch slowly and never force it. If a target muscle is stretched too fast or too far, the **muscle spindle reflex**, also known as the **stretch reflex** may be triggered, causing a spasm of the target muscle, defeating the purpose of the stretch (for more on the muscle spindle reflex, see Chapter 2). Therefore, stretching should always be performed slowly and within the comfort zone of the client. It is important to emphasize that when you begin to feel the client's target tissues offering resistance to your stretch, stop increasing the stretch. Because three to four repetitions are performed, gaining a small incrementally increased stretch at each repetition will allow for a good degree of stretch at the end of the CR stretching technique.

7.5 Hand Placement: Treatment and Stabilization Hands

When performing CR stretching technique, it is important to place the treatment hand in a comfortable manner for the client. To do this, offer as broad a contact with your hand as possible so that the pressure of your hand against the client's body is distributed as evenly as possible when the client contracts. This is especially true if the stabilization contact is against a prominent bony landmark such as the anterior superior iliac spine (ASIS) or iliac crest of the pelvis (see Routines 7-7, 7-8, and 7-9).

The position of the stabilization contact is also critical. Without proper positioning, the client's pelvis will often move in such a manner as to lose the stretch of the target hip joint musculature. Placement of your stabilization hand should also be comfortable for the client and offer as broad a contact as possible.

The placement of the treatment and stabilization hands may place your wrist joints in an extended position. For the health of your wrists, your point of contact through which pressure is transmitted into the client should be the heel of your hand (the carpal region). If you direct the pressure through your palm or fingers, you will hyperextend and likely injure your wrist. Given how vulnerable the wrist joint can be, proper biomechanical positioning of the hand/wrist is crucially important.

7.6 Breathing

When performing CR stretching, it is customary for the client to inhale deeply before contracting isometrically in step 1 of the technique. During the isometric contraction, the client can either hold the breath or exhale. If the client holds the breath while contracting isometrically, then the client should exhale it when you perform the stretch in step 2. If the client exhales during the isometric contraction, then the client should continue to exhale when you perform the stretch in step 2 (if the client does not have sufficient breath to continuously breathe out while contracting and then being stretched, you can pause after the contraction for a second or two so that the client can take in another breath, which is then exhaled while being stretched). Either way, the client must then inhale again just before the beginning of the isometric contraction of the next repetition. It is generally considered better for the client to exhale instead of holding in the breath when contracting isometrically in step 2 because continuous breathing ensures better circulation of oxygenated blood to the tissues. *Note*: If CR stretching is combined with agonist contract (AC) stretching to perform contract relax agonist contract (CRAC) stretching (see Chapter 9), the client must hold the breath during the CR aspect of the protocol when isometrically contracting.

7.6 THERAPIST TIP

Choosing the Breathing Protocol

Given that there are two choices for how the client can breathe during the CR stretch technique, how do you decide which one to have the client do? Generally, it is considered best to have the client breathe out when pressing against your resistance. However, if you anticipate also performing CRAC stretching with that client, whether it is during that treatment session or in the future, then it may be best to instruct the client to hold his or her breath when resisting you. Otherwise, the client will need to relearn the breathing pattern for the CR component of CRAC stretching. Following one breathing pattern for CR stretching and another pattern for the CR component of CRAC stretching might be confusing.

7.7 Direction of Resistance

You can offer resistance either in a cardinal plane or in an oblique plane. The three cardinal planes are the sagittal, frontal, and transverse planes; an oblique plane is any plane that is not perfectly sagittal, frontal, or transverse (in other words, it has a component of two or three cardinal planes). Figure 1-8 in Chapter 1 provides a review of planes. When the client performs an oblique plane contraction, it is usually a "diagonal" motion that combines flexion or extension in the sagittal plane with either abduction or adduction of the thigh or right or left lateral flexion of the trunk in the frontal plane. Transverse plane rotation is usually not coupled with motion in another plane when doing CR stretching. It can be confusing to the client to ask him or her to rotate in the transverse plane while moving in another cardinal plane or oblique plane. It can also be difficult for you to resist transverse plane rotation because the twisting motion is harder to resist with your hand. In addition, if the rotation motion is not well resisted, it will pull on the client's skin in an uncomfortable way. Therefore, whenever rotation is involved with a multiplane stretch, it is best to **preset the rotation** during the starting position. This way, the client does not have to try to isometrically contract toward rotation in addition to the sagittal and/or frontal plane directions.

Adding transverse plane rotation into oblique plane stretches when performing CR stretching with your clients requires practice. It is best to practice the CR stretching routines presented in this chapter before adding in multiplane rotation components.

7.8 Electric Lift Table

As discussed in Chapter 6, when stretching the low back and pelvis/hip joint, the value of an electric lift table for optimal body mechanics cannot be overstated. Some routines require the table to be low and others require it to be high. For this reason, having an electric lift table so that table height can be easily adjusted is essential for clinical orthopedic work.

ROUTINES

CONTRACT RELAX ROUTINES

The routines that follow demonstrate 13 different applications of CR stretching to the LSp and to the muscle groups of the pelvis that cross the hip joint. They are organized according to the functional groups of muscles being stretched. The routine for the hamstring hip joint extensors has already been shown in the "Overview of Technique" section. For all the other routines, the following steps are explained and illustrated: starting position, initial client stretch, first repetition, and second repetition. An explanation is then given on how to perform the third and possibly fourth repetitions.

Because many of these stretches are identical or similar in positioning to stretches presented in Chapter 6, the reader is recommended to consult first that chapter for additional information, including alternate positioning and cautions, before reading and practicing the stretches presented in this chapter.

7.1 PRACTICAL APPLICATION

Lumbar Spine and Pelvis/Hip Joint Contract Relax Multiplane Stretching Routines

This chapter explains how to perform the CR stretching technique and then presents this technique applied to each of the major functional groups of muscles of the LSp and pelvis/hip joint. However, the CR technique can be applied to any stretch, including the multiplane stretches presented in Chapter 6. A number of multiplane stretches for the CR routines of this chapter are presented in Practical Application boxes that follow the CR stretching routine steps. Keep in mind that any stretch, including multiplane stretches, can be done with the CR protocol. All that is necessary to transition a stretch into a CR stretch is to add in client contraction against your resistance and then the postcontraction stretching.

SECTION 1: LUMBAR SPINE CONTRACT RELAX STRETCHES

CR stretches of the LSp can be performed in two ways. One way is to stabilize the client's pelvis and move his or her upper trunk downward toward the pelvis. This method begins the stretch of the LSp superiorly, and as the stretching force is increased and the LSp is increasingly moved downward, the stretch moves into the lower LSp. The second way is to stabilize the client's upper trunk and move his or her pelvis and lower LSp upward toward the thoracic trunk. This method begins the stretch of the LSp inferiorly, and as the stretching force is increased and the pelvis and lower spine are increasingly moved upward, the stretch moves into the upper LSp.

The following CR stretching routines for the LSp are presented in this chapter:

- Routine 7-1—LSp extensors
- Routine 7-2—LSp flexors
- Routine 7-3—LSp right lateral flexors
- Routine 7-4—LSp left lateral flexors
- Routine 7-5—LSp right rotators—seated
- Routine 7-6 —LSp left rotators—seated

7.7 THERAPIST TIP

Transitioning to the Thoracic Spine

Every one of the stretches presented for the LSp can be transitioned to become a stretch of the thoracic spine if the movement and/or stabilization are changed so that the line of tension of the stretch enters the thoracic region.

ROUTINE 7-1: LUMBAR SPINE EXTENSORS

Figure 7-7 shows the functional group of muscles that extend the LSp. These muscles are located on the posterior side of the trunk in the lumbar region. The CR stretching routine presented here is essentially the double knee-to-chest stretch that is presented in Chapter 11 (Self-Care Routine 11-6; available online at thePoint.lww.com), with the CR stretching protocol added.

The Lumbar Spine Extensor Functional Group
This functional group comprises the following muscles bilaterally:
Erector spinae group
Transversospinalis group
Quadratus lumborum

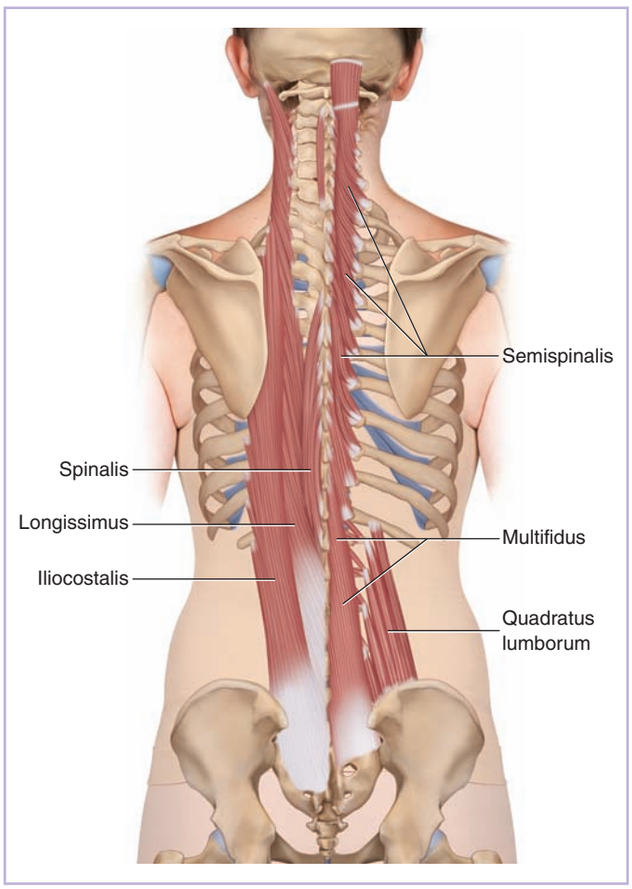


Figure 7-7

Starting Position:

- The client is supine with his hip and knee joints flexed. If you are standing on the right side of the table (as shown in Fig. 7-8A), his feet are on your right clavicle. Your left foot is on the floor; your right lower extremity is positioned on the table to be in line with the force of the stroke.

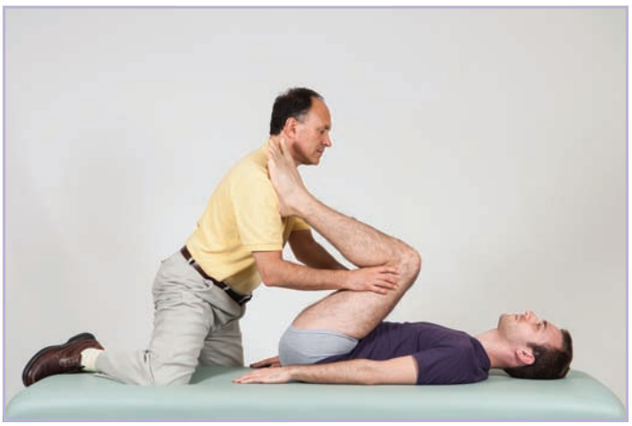


Figure 7-8A

- *Note*: This stretching routine could also be performed from the other (left) side of the table. Simply reverse the positioning of your lower extremities and on which clavicle the client places his feet.
- Both of your hands are treatment hands and are placed on the distal posterior surface of the client's thighs.
- The client's upper trunk is stabilized by body weight and contact with the table. (*Note*: The upper trunk is also stabilized by the direction in which you push on the client's thighs when performing the stretch; see Practical Application Box 6.2 in Chapter 6).
- An alternative position is to not have his feet placed on your clavicle (Fig. 7-8B).

Figure 7-8B

Initial Client Stretch:

- Begin by gently stretching the client's target (lumbar extensor) musculature by moving the client's pelvis and trunk into posterior tilt and flexion (the pelvis moves into posterior tilt, and the LSp moves into flexion) until you meet tissue resistance, beginning the stretch of the target lumbar extensor muscles (Fig. 7-9).
- When you are supporting and holding the client's thighs, it is important for you to have a gentle and broad grasp that is comfortable for the client.

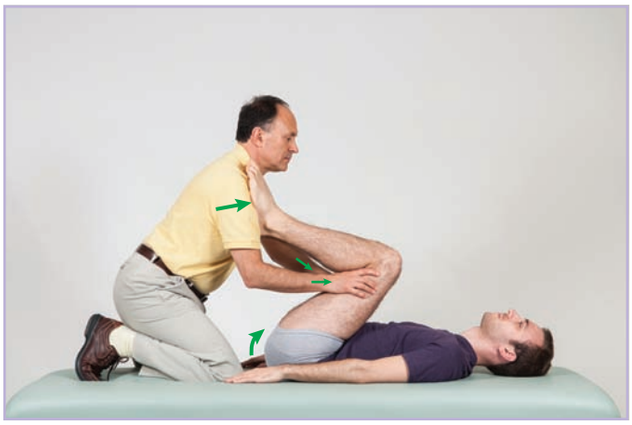


Figure 7-9

First Repetition: Client Contraction:

- With the client in the initial stretch position, ask the client to perform a gentle isometric contraction of the target muscles for approximately 5 to 8 seconds (in an attempt to extend the trunk back down toward the table) against your resistance (Fig. 7-10A).

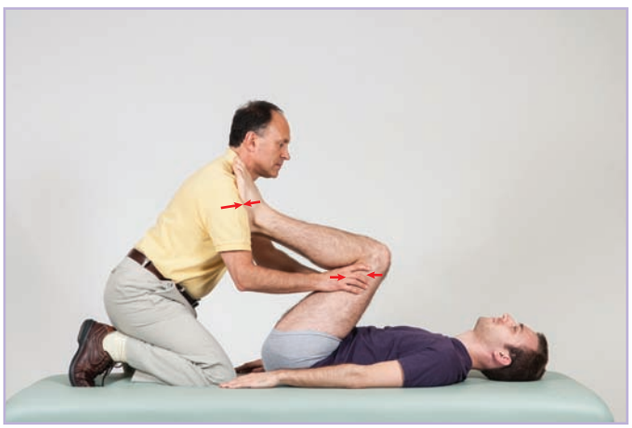


Figure 7-10A

- Ask the client to relax.
- Note that the breathing protocol for every repetition is to have the client either hold the breath or exhale when contracting against your resistance.

First Repetition: Postcontraction Stretch:

- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the client's trunk farther into flexion until you meet tissue resistance (Fig. 7-10B).

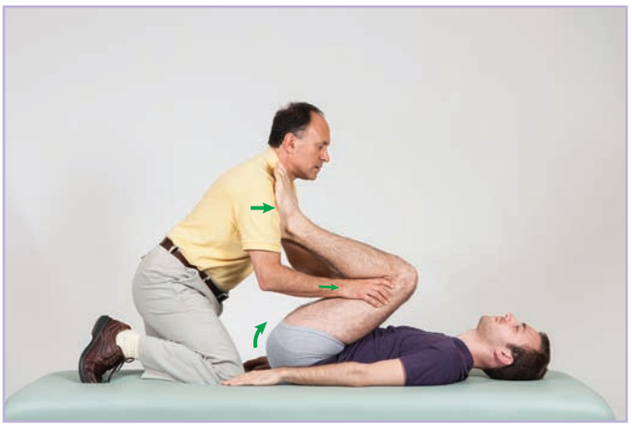


Figure 7-10B

- Hold this position of stretch for approximately 1 to 3 seconds.
- *Note*: To maintain stabilization of the client's trunk on the table, be sure to not press the client's thighs too horizontally and parallel with table because this would cause his trunk to excessively lift from the table, moving the stretch into the thoracic stretch, thereby losing the stretch in the lumbar region. It is important to press his thighs somewhat downward toward his chest.

Second Repetition: Client Contraction:

- Beginning from the position of stretch reached at the end of the first repetition, have the client again contract the target musculature isometrically for approximately 5 to 8 seconds against your resistance (Fig. 7-11A).
- This time, ask the client to contract against your resistance with moderate force.

Figure 7-11A

Second Repetition: Postcontraction Stretch:

- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the trunk farther into flexion until you meet tissue resistance (Fig. 7-11B).
- Hold this position of stretch for approximately 1 to 3 seconds.

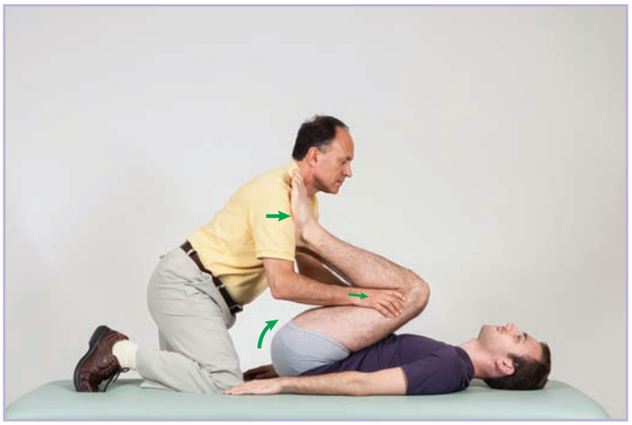


Figure 7-11B

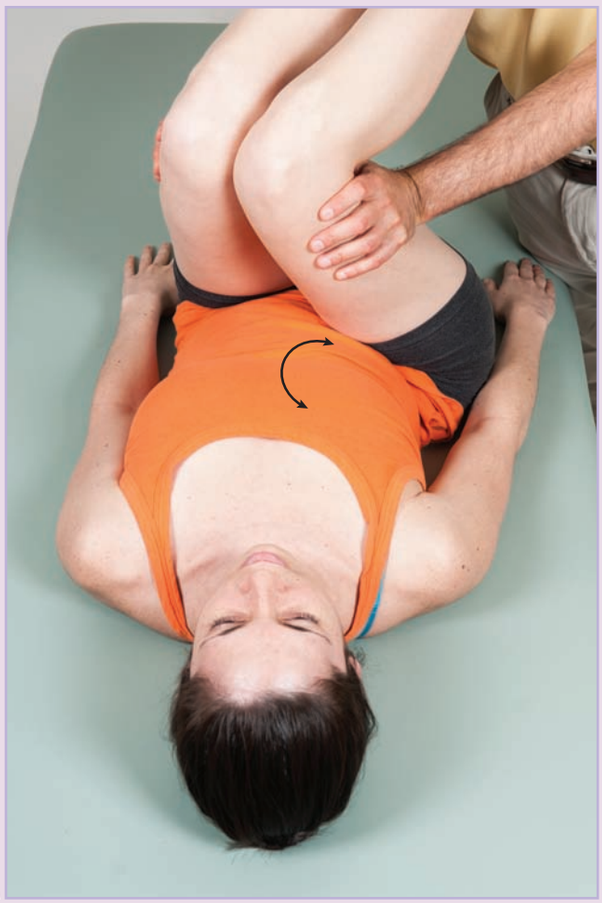
Third Repetition:

- Beginning from the position of stretch reached at the end of the second repetition, have the client again contract the target musculature isometrically for approximately 5 to 8 seconds against your resistance, this time with as much force as is comfortable for the client.
- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the trunk farther into flexion until you meet tissue resistance.
- If desired, a fourth repetition can be done.
- Hold the position of stretch of the last repetition for approximately 10 seconds or more.

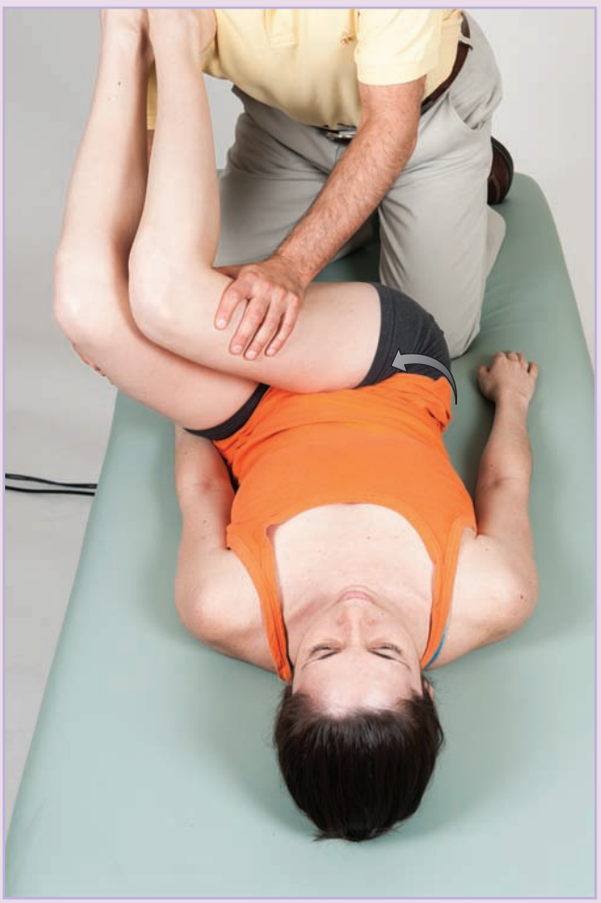
7.2 PRACTICAL APPLICATION

Transitioning to Multiplane Contract Relax Stretching: Lumbar Spine Extensor Functional Group

Transitioning the CR stretching protocol for the LSp extensor functional group into a multiplane stretch that incorporates other planes of motion can be easily done by altering the direction of the movement of the client's pelvis and LSp. **Figure A** demonstrates frontal plane LSp right left lateral flexion being added into the sagittal plane lumbar flexion. This increases the stretch to the left-side extensor functional group muscles that also do left lateral flexion. **Figure B** demonstrates transverse plane left rotation of the pelvis and lower LSp (equivalent to right rotation of the upper LSp) being added into the sagittal plane lumbar flexion. This increases the stretch to the LSp extensors that are also left rotators (right-sided transversospinalis and left-sided erector spinae musculature). Of course, both frontal and transverse plane components can be added to the sagittal plane flexion when performing a CR multiplane stretch of the LSp extensor functional group.



A



B

ROUTINE 7-2: LUMBAR SPINE FLEXORS

Figure 7-12 shows the functional group of muscles that flex the LSp. These muscles are often described as muscles of the anterior abdominal wall and are located on the anterior side of the trunk in the lumbar region. The following CR stretch involves the therapist climbing onto the table. For more on stretching the LSp flexor group, including alternative positioning, see Routine 6-4.

The Lumbar Spine Flexor Functional Group
This functional group comprises the following muscles bilaterally:
Rectus abdominis
External abdominal oblique
Internal abdominal oblique
Psoas major
Psoas minor

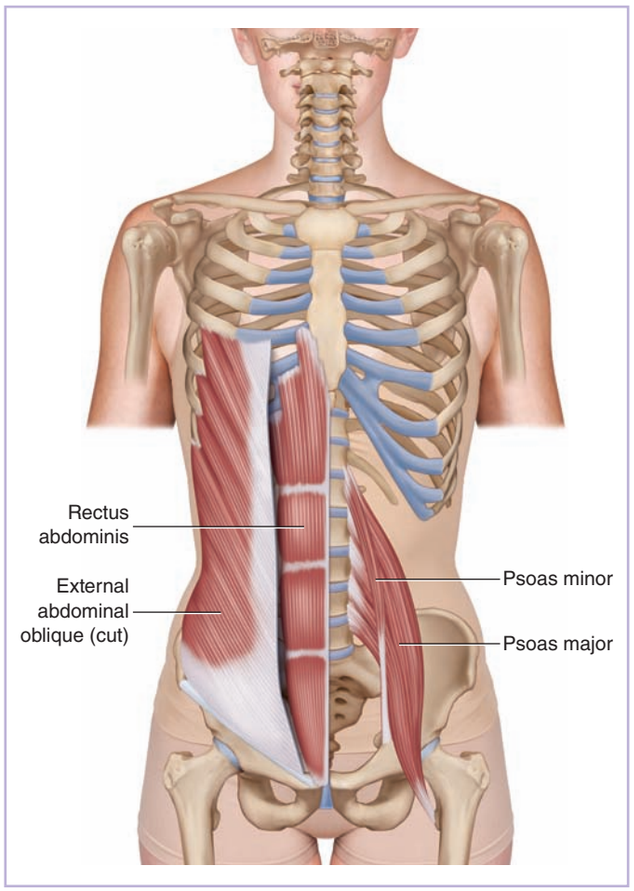


Figure 7-12 *Note*: The internal abdominal oblique is not seen.

Starting Position:

- The client is prone with his hands clasped behind his head. You are seated on the client's buttocks and grasping the client's arms. Note the placement of the cushion for client and therapist modesty and comfort (Fig. 7-13A).

Figure 7-13A

- Both of your hands are treatment hands.
- The client's pelvis is stabilized by your body weight.
- An alternative position that does not involve sitting on the client's buttocks is shown in Figure 7-13B.

Figure 7-13B

Caution must be exercised when performing these stretches for the anterior abdominal wall.

- *Bringing the client's LSp into extension approximates the facet joints and decreases the size of the intervertebral foramina and is therefore contraindicated if the client has facet syndrome or a space-occupying lesion, such as pathologic disc or a large bone spur.*
- *The client's glenohumeral joints must be healthy enough to reach behind him or her and have a stretching force placed through them.*
- *Positioning your body weight on the client's buttocks in this routine is important. If you sit too far superiorly on the pelvis, it can push it into anterior tilt, increasing the client's lumbar lordosis. If you sit too far inferiorly, the pelvis will not be adequately stabilized.*

Initial Client Stretch:

- Begin by gently stretching the client's target (lumbar flexor) musculature by moving the client's trunk into extension by leaning back with core body weight until you meet tissue resistance, beginning the stretch of the target lumbar flexor muscles (Fig. 7-14).

Figure 7-14

- When you are supporting and holding the client's arms, it is important for you to have a gentle and broad grasp that is comfortable for the client.
- The client has the choice of allowing the head and neck to relax into flexion or to extend the head and neck as the stretch is done. The advantage of relaxing into flexion is that it is less stressful for the posterior extensor musculature of the neck. The advantage of extending is that it can add to the effectiveness of the stretch of the anterior abdominal wall via fascial pull through the anterior thoracic region.

First Repetition: Client Contraction:

- With the client in the initial stretch position, ask the client to perform a gentle isometric contraction of the target muscles for approximately 5 to 8 seconds (in an attempt to flex the trunk back down toward the table) against your resistance (Fig. 7-15A).

Figure 7-15A

- Ask the client to relax.
- Note that the breathing protocol for every repetition is to have the client either hold the breath or exhale when contracting against your resistance.

First Repetition: Postcontraction Stretch:

- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the client's trunk farther into extension until you meet tissue resistance (Fig. 7-15B).
- Hold this position of stretch for approximately 1 to 3 seconds.

Figure 7-15B

Second Repetition: Client contraction:

- Beginning from the position of stretch reached at the end of the first repetition, have the client again contract the target musculature isometrically for approximately 5 to 8 seconds against your resistance (Fig. 7-16A).
- This time, ask the client to contract against your resistance with moderate force.

Figure 7-16A

Second Repetition: Postcontraction Stretch:

- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the trunk farther into extension until you meet tissue resistance (Fig. 7-16B).
- Hold this position of stretch for approximately 1 to 3 seconds.

Figure 7-16B

Third Repetition:

- Beginning from the position of stretch reached at the end of the second repetition, have the client again contract the target musculature isometrically for approximately 5 to 8 seconds against your resistance, this time, with as much force as is comfortable for the client.
- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the trunk farther into extension until you meet tissue resistance.
- If desired, a fourth repetition can be done.
- Hold the position of stretch of the last repetition for approximately 10 seconds or more.

7.3 PRACTICAL APPLICATION

Transitioning to Multiplane Contract Relax Stretching: Lumbar Spine Flexor Functional Group

Transitioning the CR stretching protocol for the LSp (anterior abdominal wall) flexor functional group into a multiplane stretch that incorporates other planes of motion can also be easily done by altering the direction of the movement of the client's LSp. **Figure A** demonstrates frontal plane LSp right lateral flexion being added into the sagittal plane lumbar extension. This increases the stretch to the left-sided flexor functional group muscles that also do left lateral flexion (left-sided external and internal abdominal obliques). **Figure B** demonstrates frontal plane right lateral flexion and transverse plane right rotation being added into the sagittal plane lumbar extension. This focuses the stretch specifically to the left-sided left internal abdominal oblique muscle (because it does left lateral flexion and left rotation).

A

B

ROUTINE 7-3: LUMBAR SPINE RIGHT LATERAL FLEXORS

Figure 7-17 shows the functional group of muscles that right laterally flexes the LSp. These muscles are located on the right side of the trunk in the lumbar region.

The Lumbar Spine Right Lateral Flexor Functional Group
This functional group comprises the following right-sided muscles:
Erector spinae group
Transversospinalis group
Quadratus lumborum
Rectus abdominis
External abdominal oblique
Internal abdominal oblique
Psoas major
Psoas minor

Starting Position:

- Have the client side-lying on her left side with her bottom as close to the near (your) side of the table as possible and her left shoulder as far to the opposite side of the table as possible. This positions the client diagonally on the table so that her right thigh can be dropped off the side of the table into adduction without its path being obstructed by the table.
- Stand behind the client.
- Your right hand is the treatment hand and is placed on the lateral surface of the client's distal right thigh.
- Your left hand is the stabilization hand and is placed on the client's rib cage. It is important to press on the rib cage in a cephalad/cranial direction. Note placement of a cushion to spread out the stabilization force on the rib cage (Fig. 7-18).
- Bring the client's right thigh down into adduction off the side of the table. As the client's thigh adducts, the client's right-side pelvis will drop down into depression, thereby stretching the right lateral flexor musculature of the trunk.

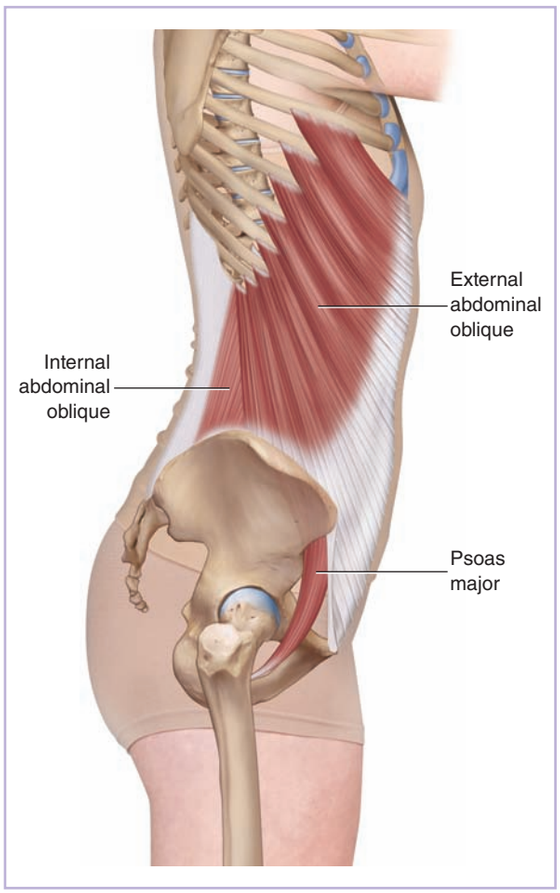


Figure 7-17 *Note*: Not all muscles are seen.

Figure 7-18

- *It is extremely important to use a cushion to spread out the stabilization force on the client's rib cage. Too much pressure on one of the client's ribs could cause it to "release/pop" at its costospinal joints, possibly spraining the ligaments of the joint.*
- *This stretch requires the client to be positioned far to the side of the table, so it is important to reassure the client before the stretch begins that he or she will not fall off the table. To be sure that he or she cannot fall off the table, it can be helpful to have a strong and stable lower body posture with pressure of your lower extremity against the table so that the client would have to fall through you to fall off the table.*

Initial Client Stretch:

- Begin by gently stretching the client's target (lumbar right lateral flexor) musculature by moving the client's thigh and pelvis down toward the floor by dropping down with your core body weight until you meet tissue resistance, beginning the stretch of the target lumbar right lateral flexor muscles (Fig. 7-19).

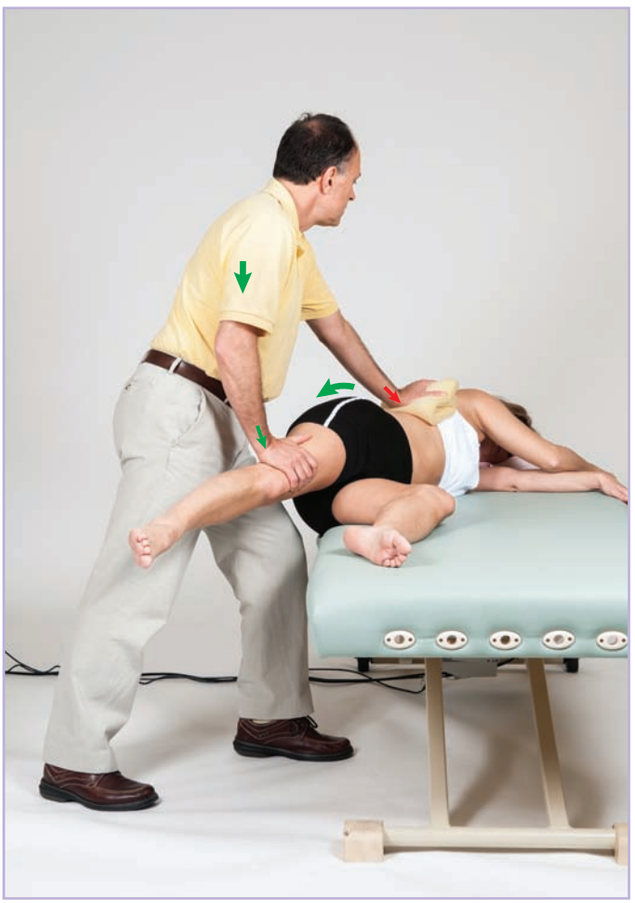


Figure 7-19

First Repetition: Client Contraction:

- With the client in the initial stretch position, ask the client to perform a gentle isometric contraction of the target muscles for approximately 5 to 8 seconds (in an attempt to abduct the thigh back up toward the table and elevate the pelvis) against your resistance (Fig. 7-20A). It can be helpful to cue the client to engage her right lateral flexor lumbar musculature during the contraction; this can be done by touching her lateral lumbar musculature and asking her to contract from there.

Figure 7-20A

- Ask the client to relax.
- Note that the breathing protocol for every repetition is to have the client either hold the breath or exhale when contracting against your resistance.

The client must attempt to isometrically contract upward against both your resistance and gravity. Therefore, it is important to ask for only a gentle contraction on the part of the client. This is especially true if the client's thigh and pelvis are stretched far toward the floor and therefore biomechanically weaker and less able to contract with much force. Further, because gravity is assisting your stretching force, it is important that you use extra caution when adding to the force of the postcontraction stretch.

***Note**: When the stretching routine is completed, be sure to ask the client to completely relax the thigh as you passively return it to the table.*

First Repetition: Postcontraction Stretch:

- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the client's thigh farther toward the floor, further depressing the pelvis, until you meet tissue resistance (Fig. 7-20B).
- Hold this position of stretch for approximately 1 to 3 seconds.

Figure 7-20B

Second Repetition: Client Contraction:

- Beginning from the position of stretch reached at the end of the first repetition, have the client again contract the target musculature isometrically for approximately 5 to 8 seconds against your resistance (Fig. 7-21A).
- This time, ask the client to contract against your resistance with moderate force, if it is comfortable for the client.

Second Repetition: Postcontraction Stretch:

- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the thigh and pelvis farther down into the stretch until you meet tissue resistance (Fig. 7-21B).
- Hold this position of stretch for approximately 1 to 3 seconds.

Figure 7-21A

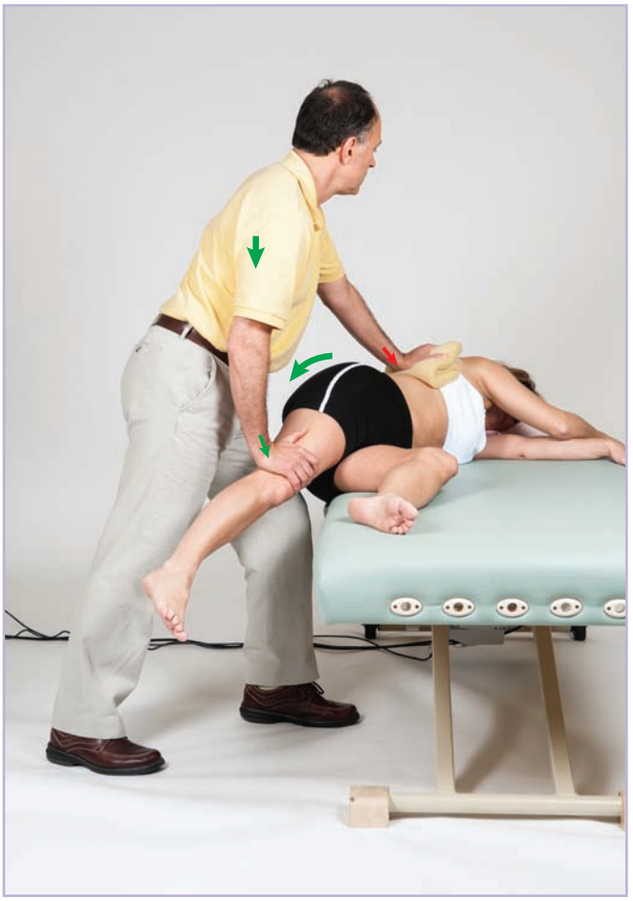


Figure 7-21B

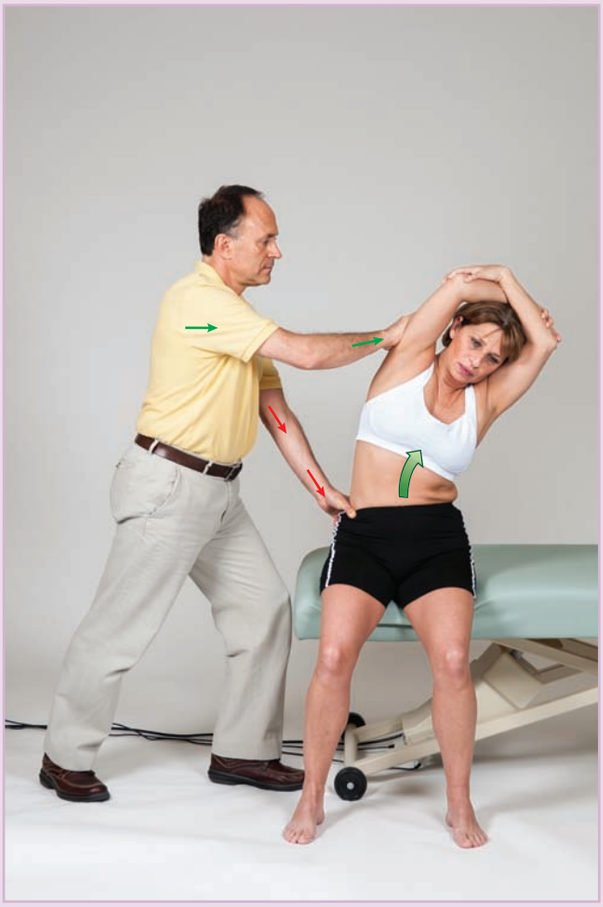
Third Repetition:

- Beginning from the position of stretch reached at the end of the second repetition, have the client again contract the target musculature isometrically for approximately 5 to 8 seconds against your resistance, this time, with as much force as is comfortable for the client.
- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the thigh and pelvis farther into the stretch until you meet tissue resistance.
- If desired, a fourth repetition can be done.
- Hold the position of stretch of the last repetition for approximately 10 seconds or more.
- When the stretching routine is complete, ask the client to completely relax the thigh as you passively return it to the table.

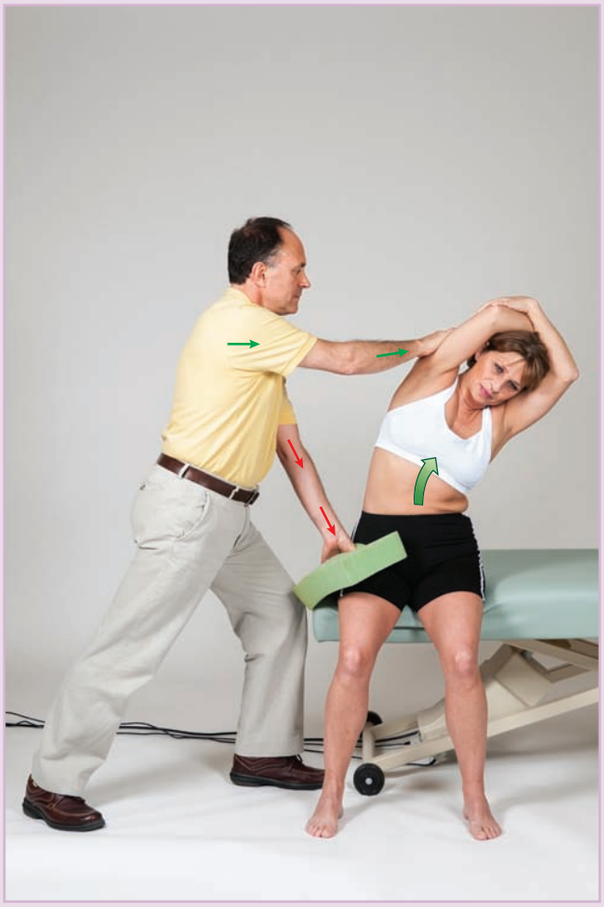
7.4 PRACTICAL APPLICATION

Contract Relax Stretching of the Lumbar Spine Right Lateral Flexors with the Client Seated

It is also possible to perform CR stretching of the LSp right lateral flexor musculature with the client seated at the end of the table. For this option, you would be standing to the right side of the client. Your right hand is the treatment hand and is placed on right side of the client's trunk. Your left hand is the stabilization hand and functions to stabilize the client's pelvis. It is placed across the top of the client's right iliac crest **(Fig. A)**; if it is not possible to grasp the client's iliac crest, the stabilization hand can be placed on the proximal anterior surface of the client's right thigh **(Fig. B)**. In either case, your stabilization hand contact should be broad in contact so it is both firm and comfortable for the client; if desired, a cushion can be used. The advantage of the seated position is that the client's hip joint is not involved with the stretch. The disadvantage is that it can be challenging to adequately stabilize the client's pelvis and to control the motion of the client's trunk.



A



B

ROUTINE 7-4: LUMBAR SPINE LEFT LATERAL FLEXORS

Figure 7-22 shows the functional group of muscles that left laterally flex the LSp. These muscles are located on the left side of the trunk in the lumbar region. To use CR stretching to stretch this functional group of muscles, follow the directions given in Figures 7-18 through 7-21 to stretch the right lateral flexor group but switch for the left side of the body.

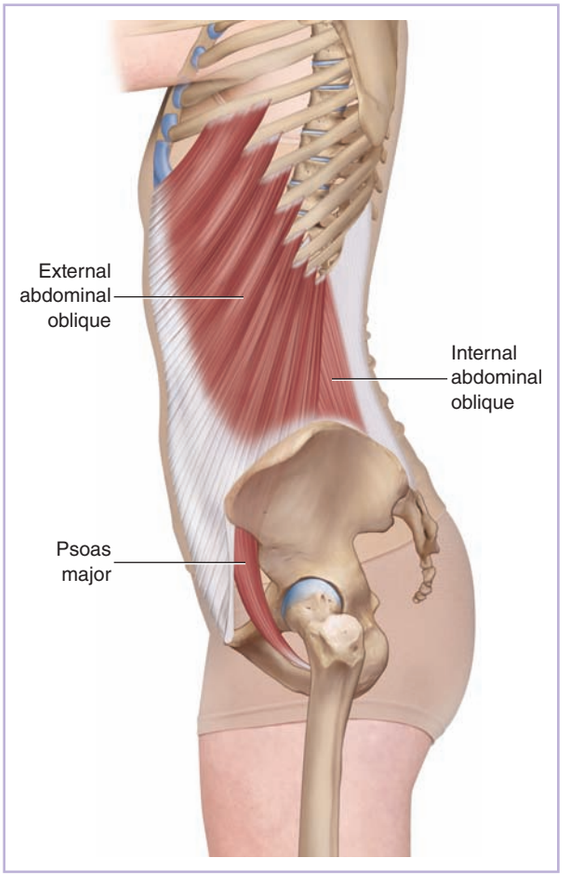


Figure 7-22 *Note*: Not all muscles are seen.

ROUTINE 7-5: LUMBAR SPINE RIGHT ROTATORS—SEATED

Figure 7-23 shows the functional group of muscles that right rotate the LSp. These muscles are located both anteriorly and posteriorly and on both the right and left sides of the trunk in the lumbar region.

The Lumbar Spine Right Rotator Functional Group
This functional group comprises the following muscles:
Left transversospinalis group
Right erector spinae group
Left external abdominal oblique
Right internal abdominal oblique

Starting Position:

- Have the client seated at the right end of the table with her arms crossed so that her hands are on the opposite shoulders, but her arms should be adducted at the glenohumeral joints so that her elbows meet at the center of the body.
- Stand to the right side of the client.
- Your right hand is the treatment hand and is placed on the client's elbows.

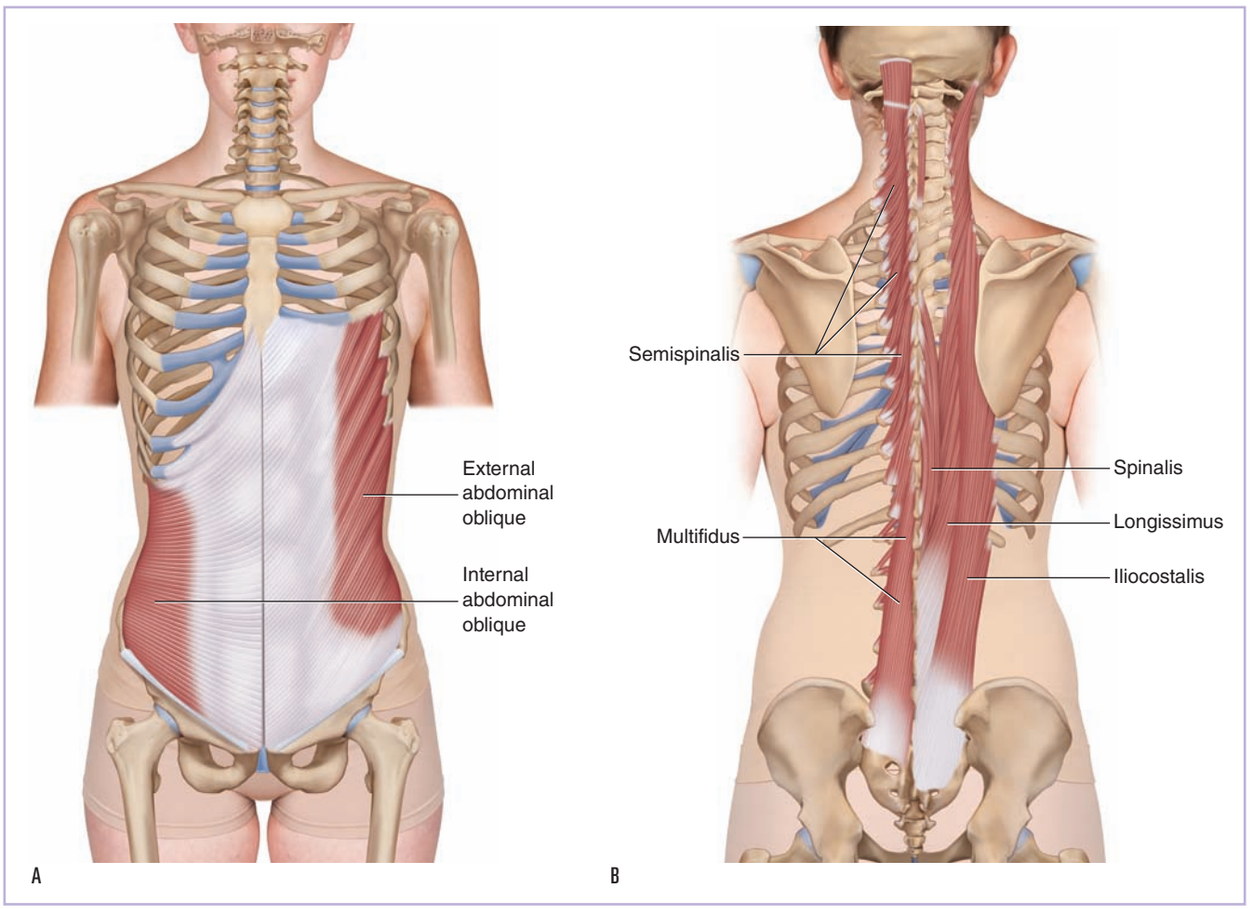


Figure 7-23 **(A)** Anterior view. **(B)** Posterior view.

- Your left hand is the stabilization hand and functions to stabilize the client's pelvis. It is placed across the top of the client's right iliac crest (Fig. 7-24); if it is not possible to grasp the client's iliac crest, the stabilization hand can be placed on the proximal anterior surface of the client's right thigh; if desired, a cushion can be used for comfort to broaden the stabilization contact as described in Practical Application Box 7.4.

Initial Client Stretch:

- Begin by gently stretching the client's target (lumbar right rotator) musculature by moving the client's trunk into left rotation until you meet tissue resistance, beginning the stretch of the target lumbar right rotator muscles (Fig. 7-25).

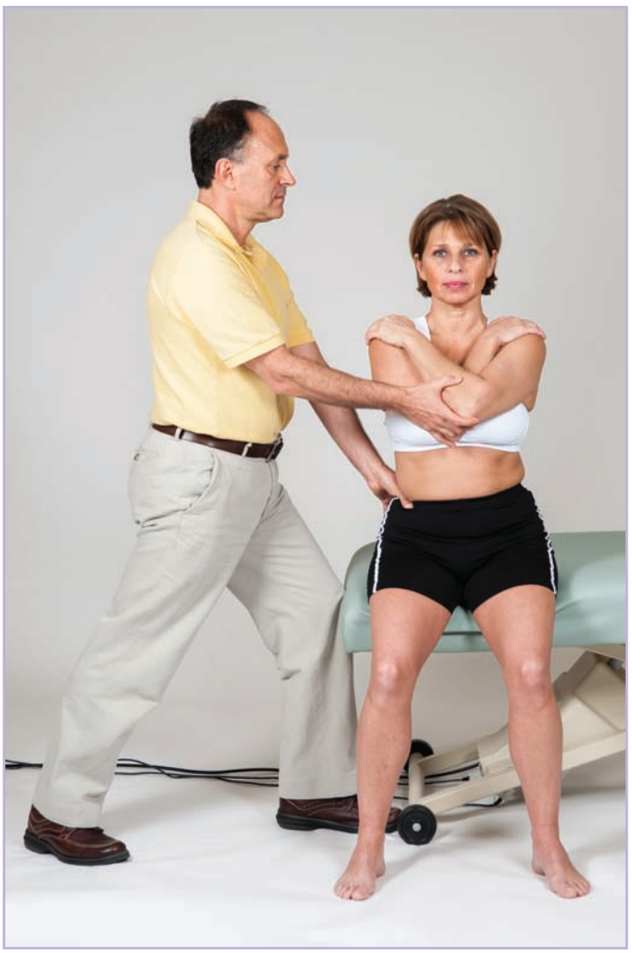


Figure 7-24

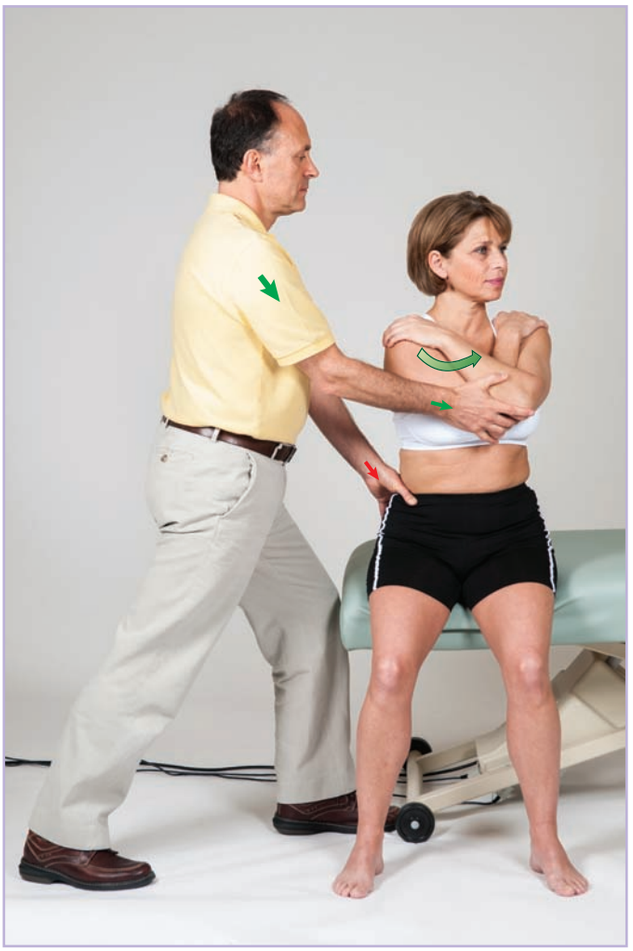


Figure 7-25

First Repetition: Client Contraction:

- With the client in the initial stretch position, ask the client to perform a gentle isometric contraction of the target muscles for approximately 5 to 8 seconds (in an attempt to right rotate the trunk against your resistance) (Fig. 7-26A).

First Repetition: Postcontraction Stretch:

- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the client's trunk farther into left rotation until you meet tissue resistance (Fig. 7-26B).
- Hold this position of stretch for approximately 1 to 3 seconds.

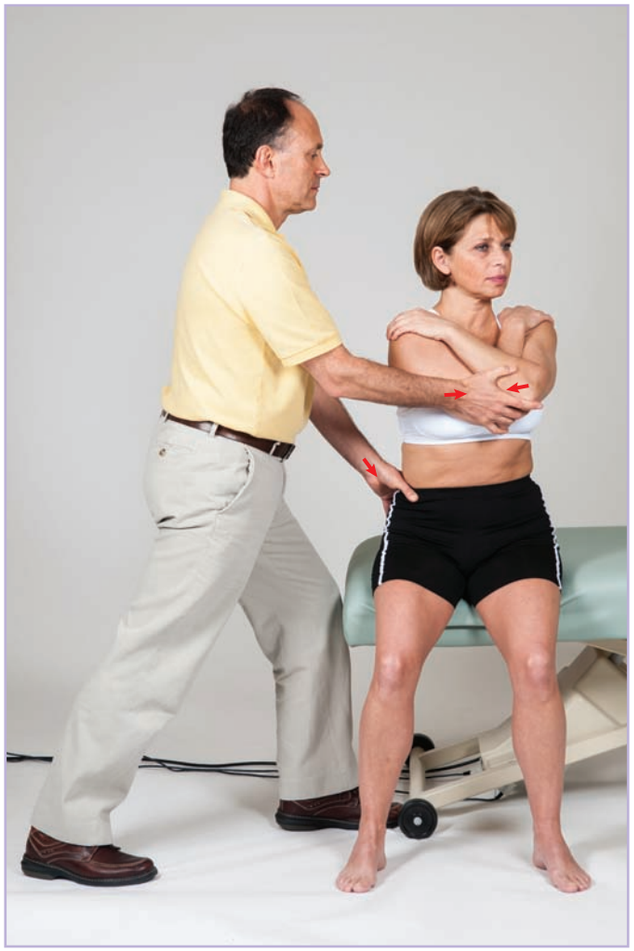


Figure 7-26A

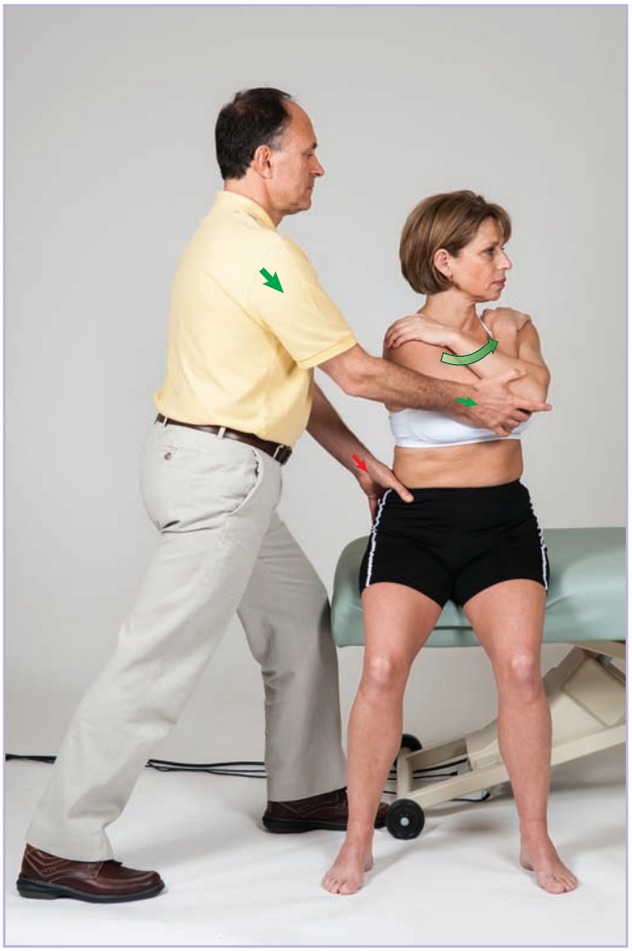


Figure 7-26B

- It can be helpful to cue the client to engage this motion from her lumbar musculature and not her thoracic musculature; this can be done by touching her lumbar (low back and anterior abdominal wall) musculature and asking her to contract from there.
- Ask the client to relax.
- Note that the breathing protocol for every repetition is to have the client either hold the breath or exhale when contracting against your resistance.

Second Repetition: Client Contraction:

- Beginning from the position of stretch reached at the end of the first repetition, have the client again contract the target musculature isometrically for approximately 5 to 8 seconds against your resistance (Fig. 7-27A).
- This time, ask the client to contract against your resistance with moderate force, if it is comfortable for the client.

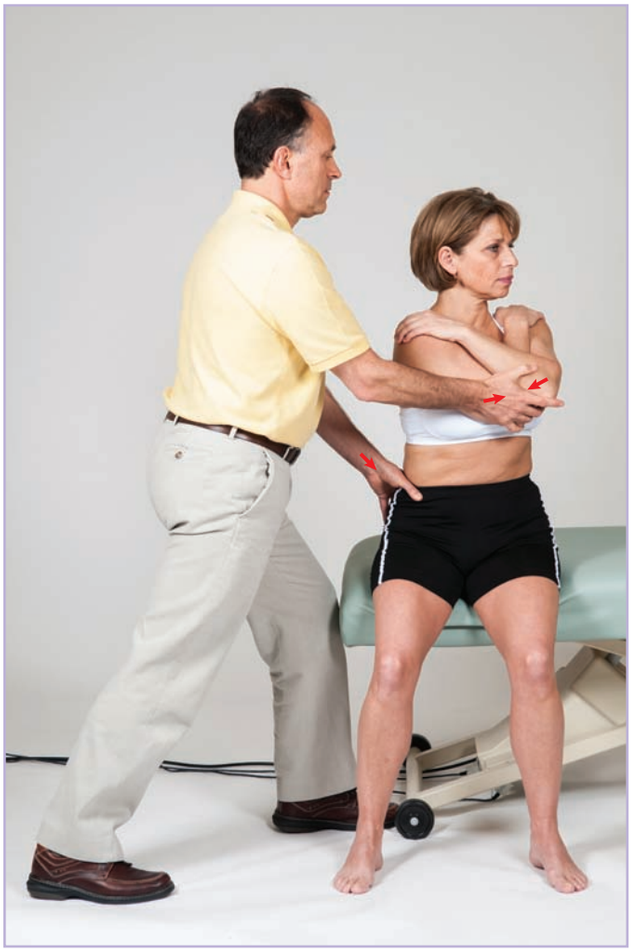


Figure 7-27A

Second Repetition: Postcontraction Stretch:

- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the trunk farther into left rotation until you meet tissue resistance (Fig. 7-27B).
- Hold this position of stretch for approximately 1 to 3 seconds.

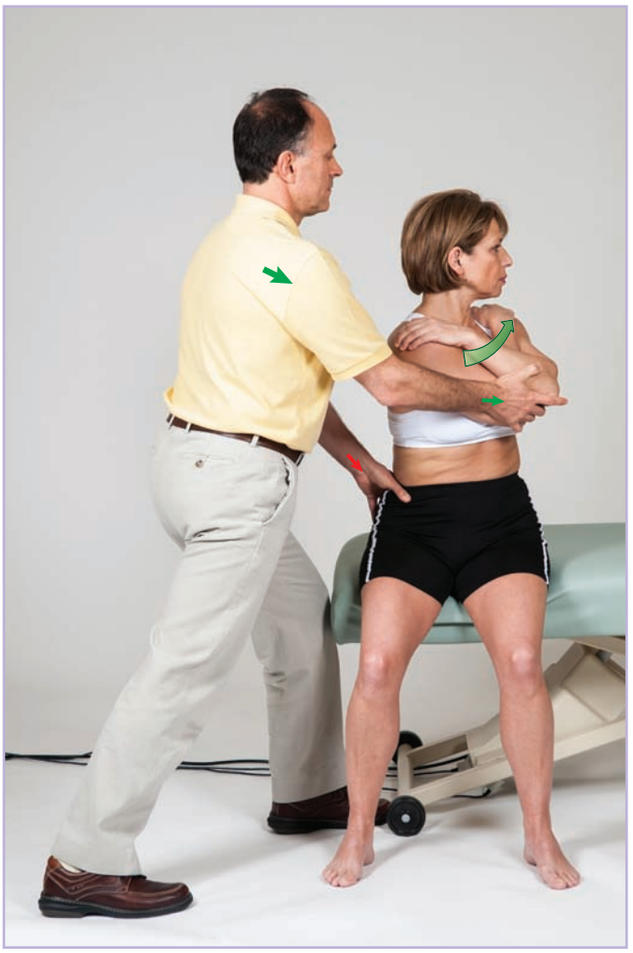


Figure 7-27B

Third Repetition:

- Beginning from the position of stretch reached at the end of the second repetition, have the client again contract the target musculature isometrically for approximately 5 to 8 seconds against your resistance, this time, with as much force as is comfortable for the client.
- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the trunk farther into left rotation until you meet tissue resistance.
- If desired, a fourth repetition can be done.
- Hold the position of stretch of the last repetition for approximately 10 seconds or more.

ROUTINE 7-6: LUMBAR SPINE LEFT ROTATORS—SEATED

Figure 7-28 shows the functional group of muscles that left rotate the LSp. These muscles are located both anteriorly and posteriorly and on both the left and right sides of the trunk in the lumbar region. To use CR stretching to stretch this functional group of muscles, follow the directions given in Figures 7-24 through 7-27 to stretch the right rotator group but switch for the left side of the body.

The Lumbar Spine Left Rotator Functional Group
This functional group comprises the following muscles:
Right transversospinalis group
Left erector spinae group
Right external abdominal oblique
Left internal abdominal oblique

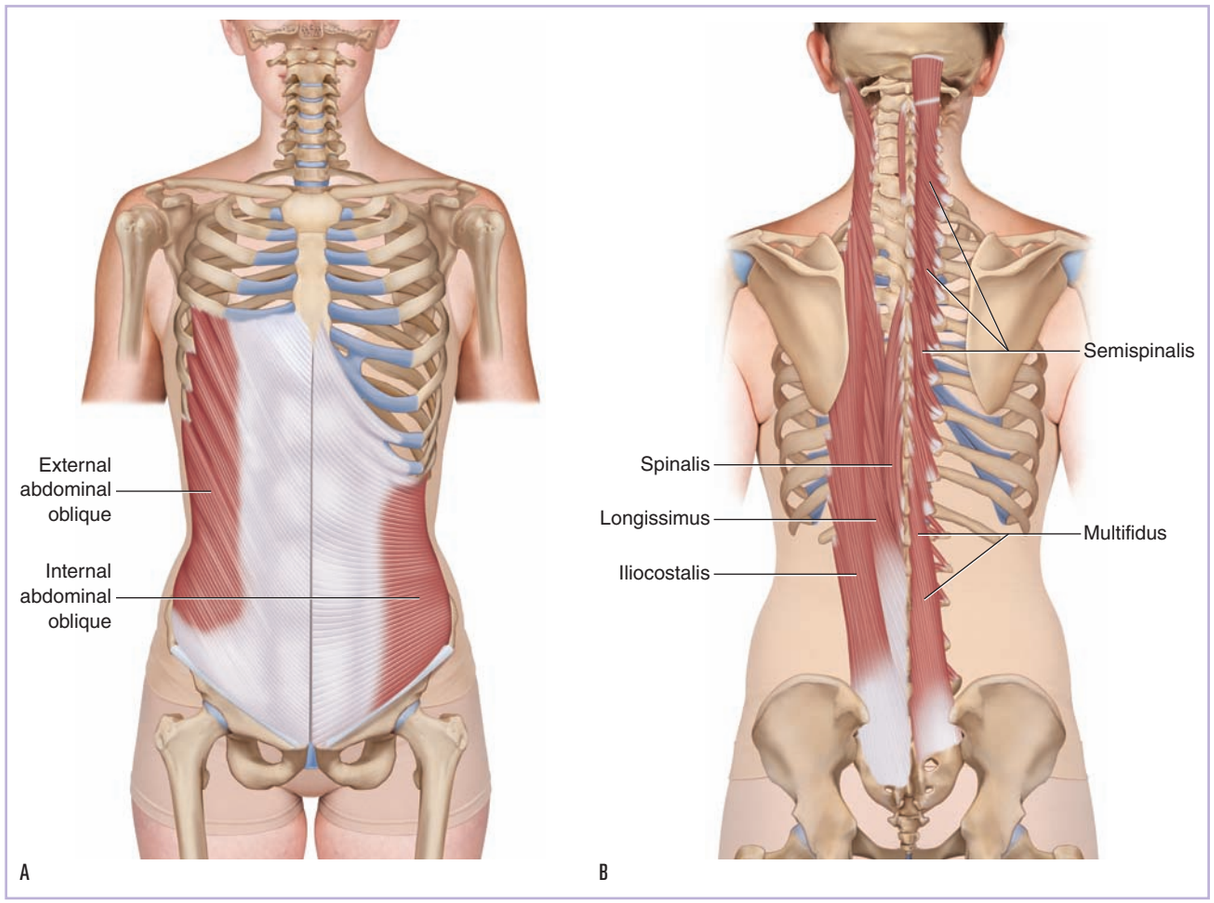


Figure 7-28 **(A)** Anterior view. **(B)** Posterior view.

SECTION 2: HIP JOINT/PELVIS CONTRACT RELAX STRETCHES

As a rule, CR stretches to the muscles of the pelvis that cross the hip joint are performed by stabilizing the client's pelvis and moving his or her thigh to create the stretch. For the stretch to be effective, it is extremely important that the pelvis is well stabilized. Otherwise, the stretching force will enter the LSp. This will not only dissipate the stretching force at the hip joint causing it to lose its effectiveness but it might also place a torque force into the LSp that can cause pain or injury.

The following CR stretching routines for muscles of the pelvis that cross the hip joint are presented in this chapter:

- Routine 7-7—hip abductors
- Routine 7-8—hip adductors
- Routine 7-9—hip flexors
- Routine 7-10—hip extensors: hamstrings
- Routine 7-11—hip extensors: gluteals
- Routine 7-12—hip deep lateral rotators
- Routine 7-13—hip medial rotators

ROUTINE 7-7: HIP ABDUCTORS

Figure 7-29 shows the functional group of muscles that abduct the right thigh at the hip joint. These muscles are located on the lateral side of the pelvis and thigh, crossing the hip joint between them. The CR stretching routine presented here for the hip abductor functional group is similar to the CR stretching routine presented for the lateral flexor functional group of the LSp (see Routines 7-3 and 7-4). The difference is that the pelvis (instead of the rib cage) is stabilized when performing this CR stretch for the hip joint. Following is the CR stretching routine shown for the hip abductor functional group on the right side of the body.

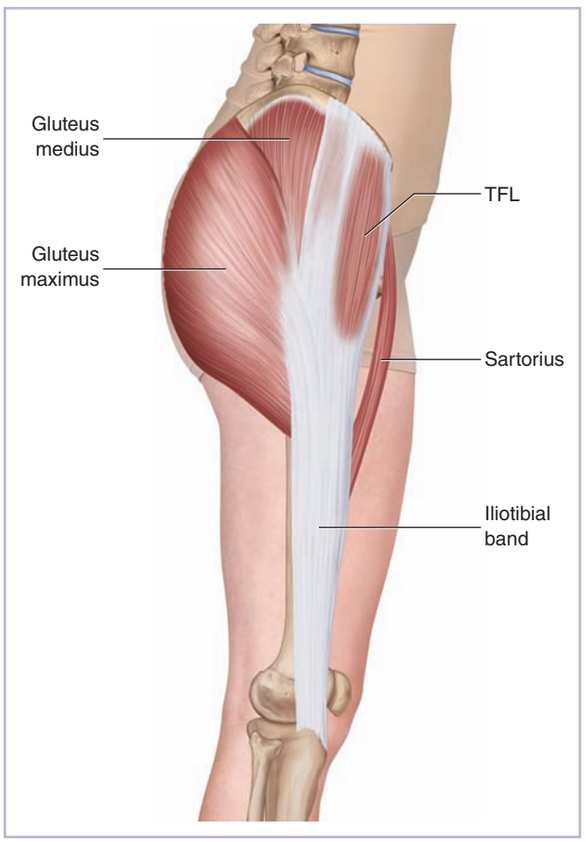


Figure 7-29 *Note*: The gluteus minimus is not seen.

The Pelvis/Hip Joint Abductor Functional Group
This functional group comprises the following muscles:
Gluteus medius
Gluteus minimus
Gluteus maximus (upper fibers)
Tensor fasciae latae (TFL)
Sartorius

Starting Position:

- Have the client side-lying on her left side with her bottom as close to the back of the table (where you are standing) as possible and her left shoulder as far to the opposite side of the table as possible. This positions the client diagonally on the table so that her right thigh can be dropped off the back side of the table into adduction without its path being obstructed by the table.
- Stand behind the client.
- Your right hand is the treatment hand and is placed on the lateral surface of the client's distal right thigh.
- Your left hand is the stabilization hand and is placed on the client's pelvis, just inferior to the iliac crest. It is important to press on the iliac crest with your force directed toward elevation of the pelvis on that side. Otherwise, the right-side pelvic bone will depress and the stretch at the hip joint will be lost. Note placement of a cushion to spread out the stabilization force on the iliac crest (Fig. 7-30).
- Bring the client's right thigh down into adduction off the side of the table. As the client's thigh adducts, be sure to stabilize the pelvis by preventing it from depressing.

Figure 7-30

This stretch requires the client to be positioned far to the side of the table so it is important to reassure the client before the stretch begins that he or she will not fall off the table. To be sure that he or she cannot fall off the table, have a strong and stable lower body posture with pressure of your lower extremity against the table so that the client would have to fall through you to fall off the table.

Initial Client Stretch:

- Begin by gently stretching the client's target (hip abductor) musculature by moving the client's thigh down toward the floor into adduction by dropping down with your core body weight until you meet tissue resistance, beginning the stretch of the target hip abductor muscles (Fig. 7-31).

Figure 7-31

First Repetition: Client Contraction:

- With the client in the initial stretch position, ask the client to perform a gentle isometric contraction of the target muscles for approximately 5 to 8 seconds (in an attempt to abduct the thigh back up toward the table) against your resistance (Fig. 7-32A).
- Ask the client to relax.
- Note that the breathing protocol for every repetition is to have the client either hold the breath or exhale when contracting against your resistance.

Figure 7-32A

- *The client must attempt to isometrically contract upward against both your resistance and gravity. Therefore, it is important to ask for only a gentle contraction on the part of the client. This is especially true if the client's thigh is stretched far toward the floor and therefore biomechanically weaker and less able to contract with much force.*
- *Further, because gravity is assisting your stretching force, it is important that you use extra caution when adding to the force of the postcontraction stretch.*
- *Caution should always be employed with stretches of the hip joint with clients who have hip replacements and or marked degenerative changes to the hip joint. Extra caution should be employed with stretches into adduction and medial rotation.*
- ***Note**: When the stretching routine is completed, be sure to ask the client to completely relax the thigh as you passively return it to the table.*

First Repetition: Postcontraction Stretch:

- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the client's thigh farther into adduction toward the floor until you meet tissue resistance (Fig. 7-32B).
- Hold this position of stretch for approximately 1 to 3 seconds.

Figure 7-32B

Second Repetition: Client Contraction:

- Beginning from the position of stretch reached at the end of the first repetition, have the client again contract the target musculature isometrically for approximately 5 to 8 seconds against your resistance (Fig. 7-33A).
- This time, ask the client to contract against your resistance with moderate force, if it is comfortable for the client.

Second Repetition: Postcontraction Stretch:

- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the thigh farther into adduction until you meet tissue resistance (Fig. 7-33B).
- Hold this position of stretch for approximately 1 to 3 seconds.

Figure 7-33A

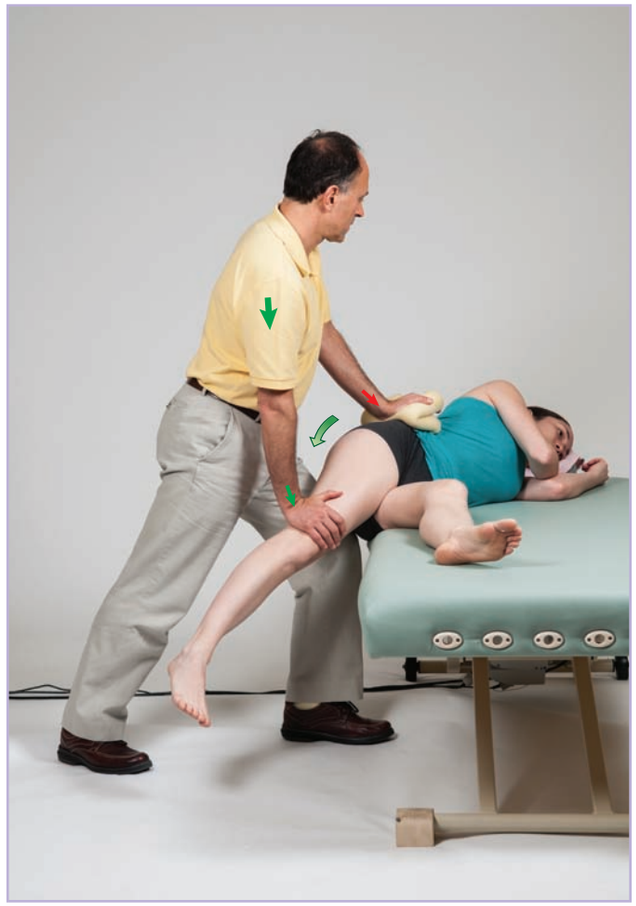


Figure 7-33B

Third Repetition:

- Beginning from the position of stretch reached at the end of the second repetition, have the client again contract the target musculature isometrically for approximately 5 to 8 seconds against your resistance, this time with as much force as is comfortable for the client.
- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the thigh farther into adduction until you meet tissue resistance.
- If desired, a fourth repetition can be done.
- Hold the position of stretch of the last repetition for approximately 10 seconds or more.
- When the stretching routine is complete, ask the client to completely relax the thigh as you passively return it to the table.

Left-Side Abductor Group:

- Repeat for the pelvis/hip joint abductor functional group on the left side of the body (Fig. 7-34).

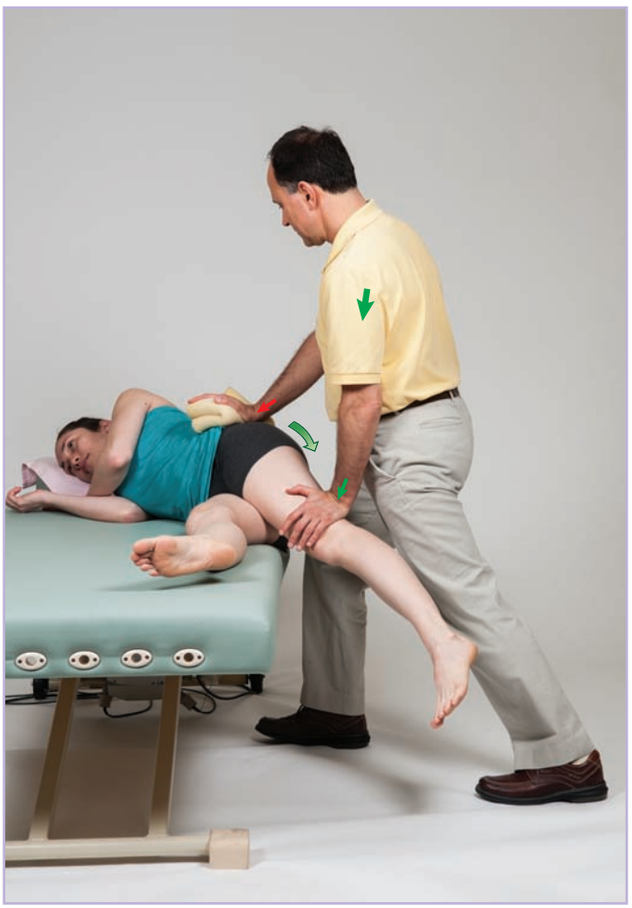
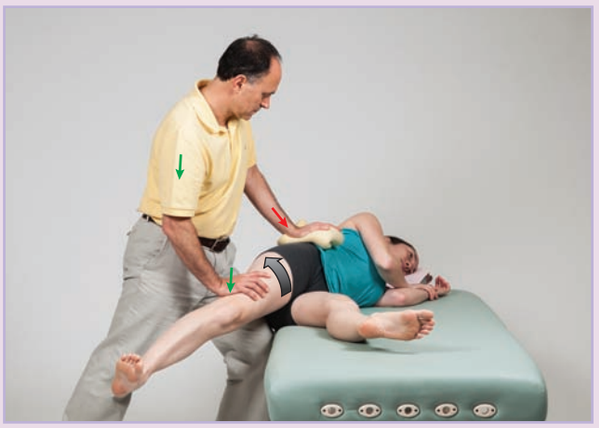


Figure 7-34

7.5 PRACTICAL APPLICATION

Transitioning to Multiplane Contract Relax Stretching: Hip Joint Abductor Functional Group

Transitioning the CR stretching protocol for the hip joint abductor functional group into a multiplane stretch that incorporates another plane of motion can be done by altering the position and/or direction of movement of the client's thigh. The accompanying figure demonstrates transverse plane lateral rotation added into the frontal plane adduction of the thigh; this is accomplished by presetting the lateral rotation of the thigh and then stretching it down into adduction. This multiplane stretch focuses the stretch toward the abductor musculature that also does medial rotation, such as the TFL and anterior fibers of the gluteus medius and minimus. Differing degrees of sagittal plane flexion/extension can also be combined with the frontal plane stretch into adduction.



ROUTINE 7-8: HIP ADDUCTORS

Figure 7-35 shows the functional group of muscles that adduct the right thigh at the hip joint. These muscles are located on the medial side of the pelvis and thigh, crossing the hip joint between them. As with all stretches for hip joint musculature, it is extremely important that the pelvis is completely stabilized. Following is the CR stretching routine shown for the hip adductor functional group on the right side of the body.

The Pelvis/Hip Joint Adductor Functional Group
This functional group comprises the following muscles: Pectineus
Adductor longus
Adductor brevis
Gracilis
Adductor magnus
Gluteus maximus (lower fibers)
Quadratus femoris

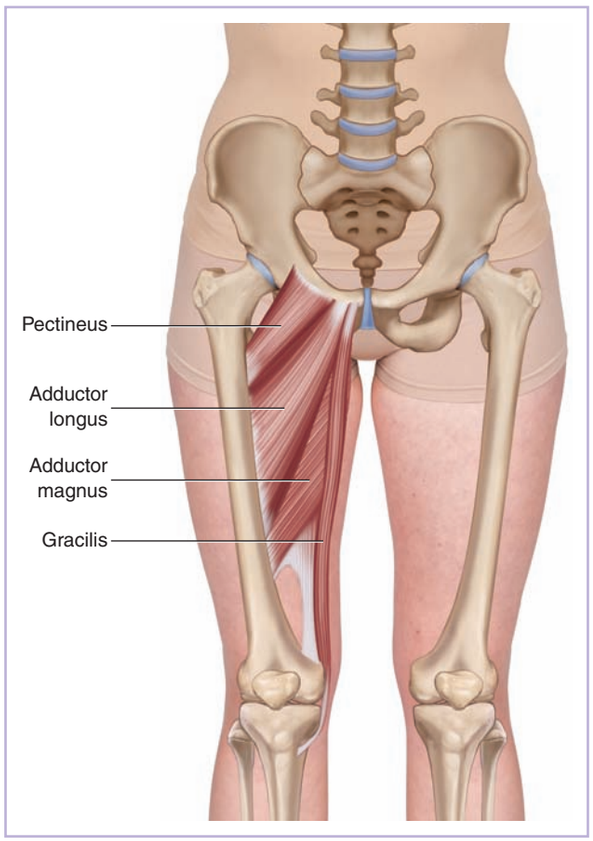


Figure 7-35 *Note*: Not all muscles are seen.

Starting Position:

- Have the client supine toward the right side of the table. Her right hip joint is abducted and laterally rotated at the hip joint, and her right leg is flexed at the knee joint; her right foot is placed on your left ASIS (Fig. 7-36). (*Note*: If the client's adductor musculature is tight, it is likely that she will need to also flex the right thigh at the hip joint to attain this position.)

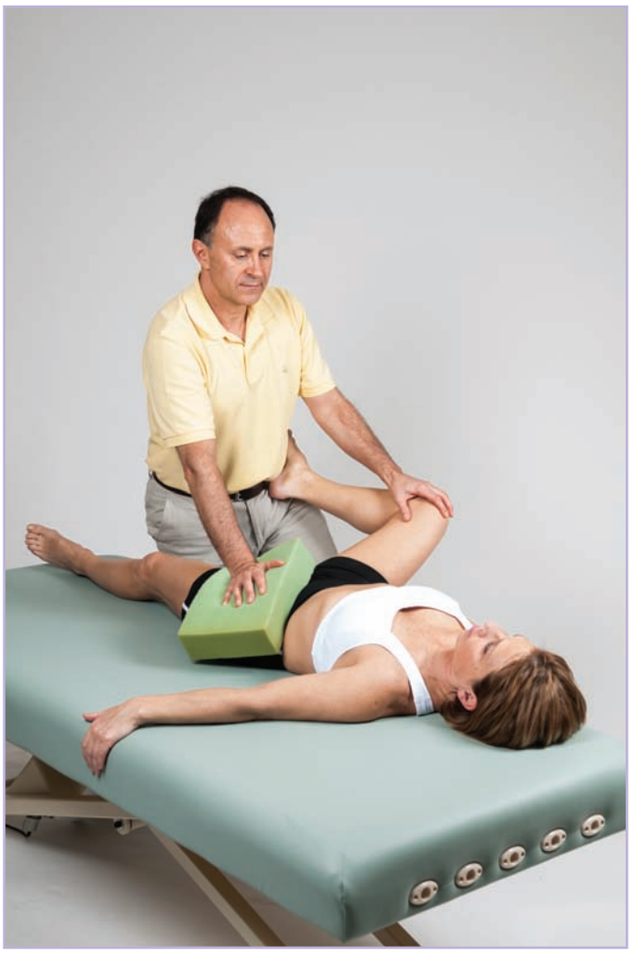


Figure 7-36

- Stand to the side of the client.
- Your left hand is the treatment hand and is placed on the medial side of the client's distal right thigh. Your left side pelvis is also a treatment contact and is placed against the client's right foot.
- Your right hand is the stabilization hand and is placed on the client's left ASIS. *Note*: A cushion is used to spread out and soften the contact pressure on the client.

Initial Client Stretch:

- First, press downward toward the floor on the client's right distal thigh by dropping with your core body weight. This motion is horizontal abduction (also known as horizontal extension) of the thigh at the hip joint and, because of the position of the client's thigh, stretches the more anteriorly placed fibers of the adductor group. During this stretch, the pelvis will tend to rotate to the right, so your stabilization pressure must be oriented toward left rotation (Fig. 7-37A).

Figure 7-37A

- Now lean in with your pelvis against the client's foot, further stretching the client's thigh into abduction. Because of the position of the client's thigh, this focuses the stretch to the more posteriorly oriented fibers of the adductor group. During this stretch, the pelvis will tend to depress on the left side (and elevate on the right side), so your stabilization pressure must be oriented toward elevation of the left side of the pelvis (Fig. 7-37B).

Figure 7-37B

First Repetition: Client Contraction:

- With the client in the initial stretch position, ask the client to perform a gentle isometric contraction of the target muscles for approximately 5 to 8 seconds by pressing her thigh up against the resistance of your hand (Fig. 7-38A).
- Ask the client to relax.
- Note that the breathing protocol for every repetition is to have the client either hold the breath or exhale when contracting against your resistance.

Figure 7-38A

The client must attempt to isometrically contract upward against both your resistance and gravity. Therefore, it is important to ask for only a gentle contraction on the part of the client. Further, because gravity is assisting your stretching force, it is important that you use extra caution when adding to the force of the postcontraction stretch.

First Repetition: Postcontraction Stretch:

- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the client's thigh farther into horizontal abduction (horizontal extension) down toward the floor until you meet tissue resistance (Fig. 7-38B).
- Hold this position of stretch for approximately 1 to 3 seconds.

Figure 7-38B

Second Repetition: Client Contraction:

- Beginning from the position of stretch reached at the end of the first repetition, now have the client contract the target musculature isometrically for approximately 5 to 8 seconds, this time, gently pressing her foot against the resistance of your pelvis (Fig. 7-39A).

Figure 7-39A

Second Repetition: Postcontraction Stretch:

- As soon as the client relaxes, increase the stretch of the client's target musculature by gently leaning in with your pelvis and moving the client's thigh farther into abduction until you meet tissue resistance (Fig. 7-39B).
- Hold this position of stretch for approximately 1 to 3 seconds.

Figure 7-39B

Third Repetition:

- Beginning from the position of stretch reached at the end of the second repetition, have the client again contract the target musculature isometrically for approximately 5 to 8 seconds, this time, pressing both her thigh against the resistance of your hand and her foot against the resistance of your pelvis (Fig. 7-40). The client can isometrically contract with moderate force this time.
- As soon as the client relaxes, gently increase the stretch of the client's target musculature by using your left hand to move the client's thigh farther into horizontal abduction and leaning in with your pelvis to further abduct her thigh until you meet tissue resistance.

Figure 7-40

Fourth Repetition:

- Beginning from the position of stretch reached at the end of the third repetition, have the client again contract the target musculature isometrically for approximately 5 to 8 seconds, pressing against the resistance of both your hand and your pelvis, this time, with as much force as is comfortable for the client.
- As soon as the client relaxes, gently increase the stretch of the client's target musculature by again using your left hand to move the client's thigh farther into horizontal abduction and leaning in with your pelvis to further abduct her thigh until you meet tissue resistance.
- If desired, a fifth repetition can be done. *Note*: An extra repetition is usually done with this routine because there are two different aspects of the client's adductor musculature that are being stretched.
- Hold the position of stretch of the last repetition for approximately 10 seconds or more.
- When the stretching routine is complete, ask the client to completely relax the thigh as you passively return it to anatomic position on the table.

Left-Side Adductor Group:

- Repeat for the pelvis/hip joint adductor functional group on the left side of the body (Fig. 7-41).

Figure 7-41

ROUTINE 7-9: HIP FLEXORS

Figure 7-42 shows the functional group of muscles that flex the right thigh at the hip joint. These muscles are located on the anterior side of the pelvis and thigh, crossing the hip joint between them. With all CR stretches to the hip joint, it is important to stabilize the pelvis. With this stretch, it is especially important because if the pelvis is not well stabilized, it will anteriorly tilt, causing increased lordosis of the LSp. Following is the CR stretching routine shown for the hip flexor functional group on the right side of the body.

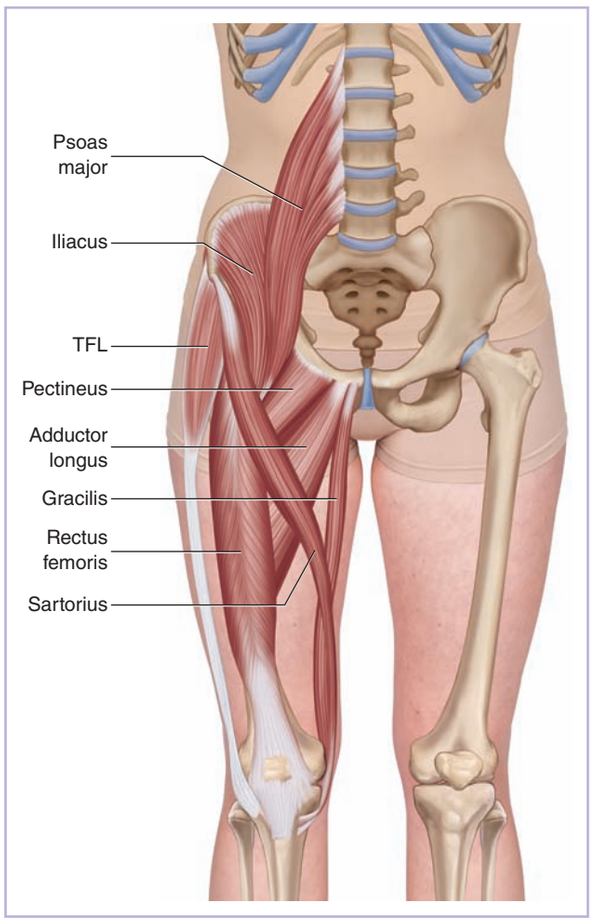


Figure 7-42 *Note*: Not all muscles are seen.

The Pelvis/Hip Joint Flexor Functional Group
This functional group comprises the following muscles:
Gluteus medius (anterior fibers)
Gluteus minimus (anterior fibers)
TFL
Rectus femoris
Sartorius
Iliacus
Psoas major
Pectineus
Adductor longus
Adductor brevis
Gracilis

7.8 THERAPIST TIP

Gaenslen's Test

The position of this stretching routine not only places a stretching tension force into the flexor musculature of the hip joint but also places a force into the same-side (and possibly the opposite-side) sacroiliac joint. In fact, this position is also known as Gaenslen's test and is used to assess the sacroiliac joint. For more on assessment tests, see Chapter 3.

Starting Position:

- Have the client supine as far to the right side of the table as possible.
- Stand to the right side of the client.
- Your right hand is the treatment hand and will be placed on the anterior surface of the client's distal right thigh. Initially, to bring her thigh over and off the side of the table, your right hand will need to be under (on the posterior side of the thigh).
- Your left hand is the stabilization hand and is placed on the client's left ASIS. *Note*: A cushion is used to spread out and soften the contact pressure on the client (Fig. 7-43).

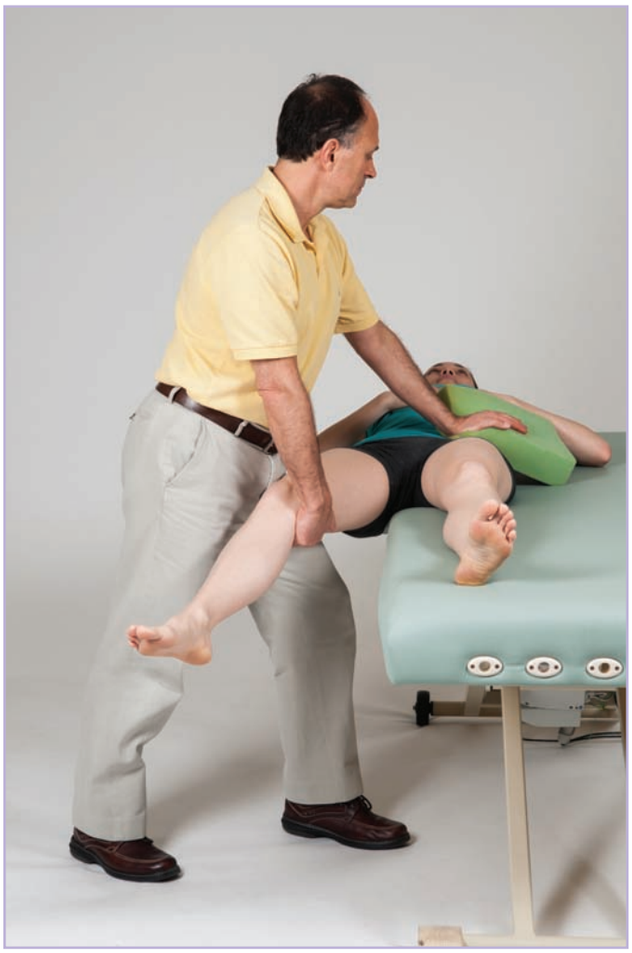


Figure 7-43

- *Note*: The client needs to be positioned far enough to the right side so that her right thigh can be slightly abducted off the table and then dropped down into extension without the table obstructing its path. The table must also be set high enough so that the excursion of the client's thigh is not blocked by her foot hitting the floor.
- Gently press the client's right thigh farther downward into extension (toward the floor) by dropping with your core body weight. During this stretch, the pelvis will tend to anteriorly tilt and rotate to the right, so your stabilization pressure must be oriented toward posterior tilt and left rotation.

Stabilization of the pelvis is extremely important with the hip flexor stretch. If the pelvis is not well stabilized, the pelvis will be pulled into anterior tilt, causing the LSp's lordosis to increase. This will cause the facet joints to approximate (jam) into each other and also narrow the intervertebral foramina. If the client experiences pain or discomfort during this stretching routine, start over and make sure that your stabilization is correct. If the client still experiences pain, discontinue the stretch; it is likely that the stretch is placing excessive stress into the same-side sacroiliac joint.

Initial Client Stretch:

- Begin by gently stretching the client's target (hip flexor) musculature by moving the client's thigh down toward the floor into extension until you meet tissue resistance, beginning the stretch of the target hip flexor muscles (Fig. 7-44).

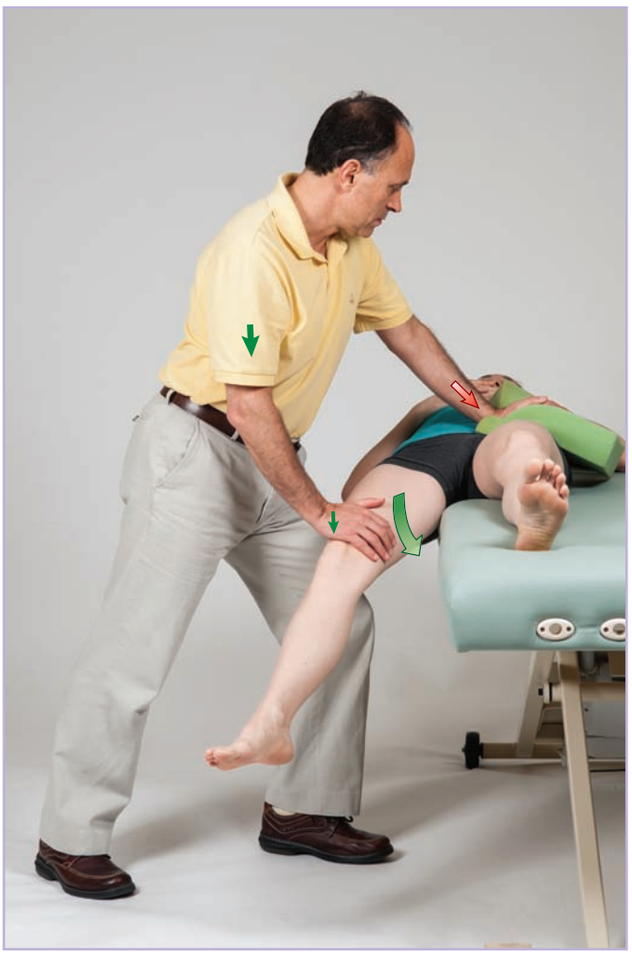


Figure 7-44

First Repetition: Client Contraction:

- With the client in the initial stretch position, ask the client to perform a gentle isometric contraction of the target muscles for approximately 5 to 8 seconds (in an attempt to flex the thigh back up toward the table) against your resistance (Fig. 7-45A).
- Ask the client to relax.
- Note that the breathing protocol for every repetition is to have the client either hold the breath or exhale when contracting against your resistance.

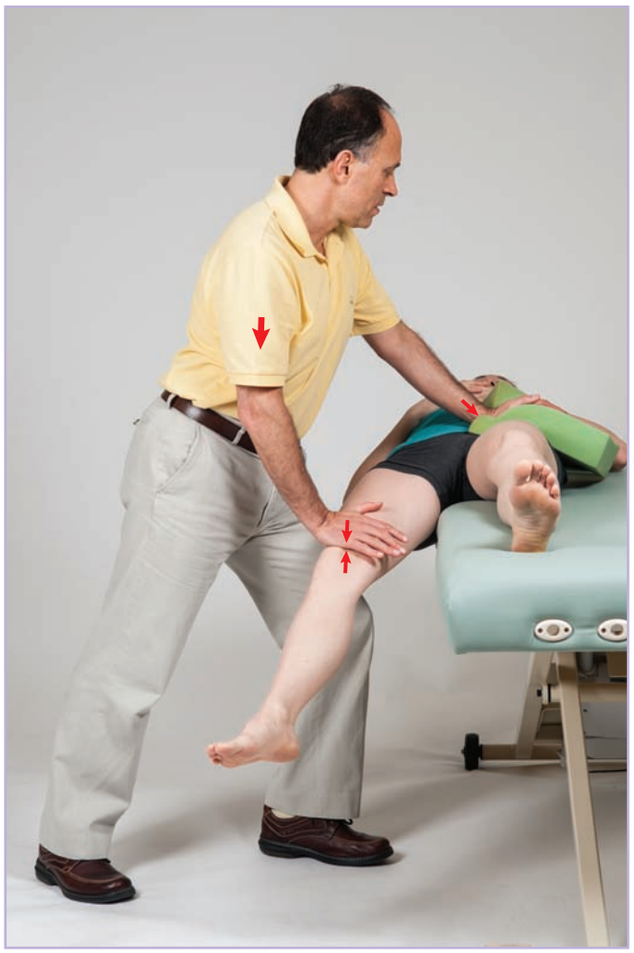


Figure 7-45A

The client must attempt to isometrically contract upward against both your resistance and gravity. Therefore, it is important to ask for only a gentle contraction on the part of the client. This is especially true if the client's thigh is stretched far toward the floor into extension and therefore biomechanically weaker and less able to contract with much force. Further, because gravity is assisting your stretching force, it is important that you use extra caution when adding to the force of the postcontraction stretch.

***Note**: When the stretching routine is completed, be sure to ask the client to completely relax the thigh as you passively return it to the table.*

First Repetition: Postcontraction Stretch:

- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the client's thigh farther into extension toward the floor until you meet tissue resistance (Fig. 7-45B).
- Hold this position of stretch for approximately 1 to 3 seconds.

Figure 7-45B

Second Repetition: Client Contraction:

- Beginning from the position of stretch reached at the end of the first repetition, have the client again contract the target musculature isometrically for approximately 5 to 8 seconds against your resistance (Fig. 7-46A).
- This time, ask the client to contract against your resistance with moderate force, if it is comfortable for the client.

Second Repetition: Postcontraction Stretch:

- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the thigh farther into extension until you meet tissue resistance (Fig. 7-46B).
- Hold this position of stretch for approximately 1 to 3 seconds.

Figure 7-46A

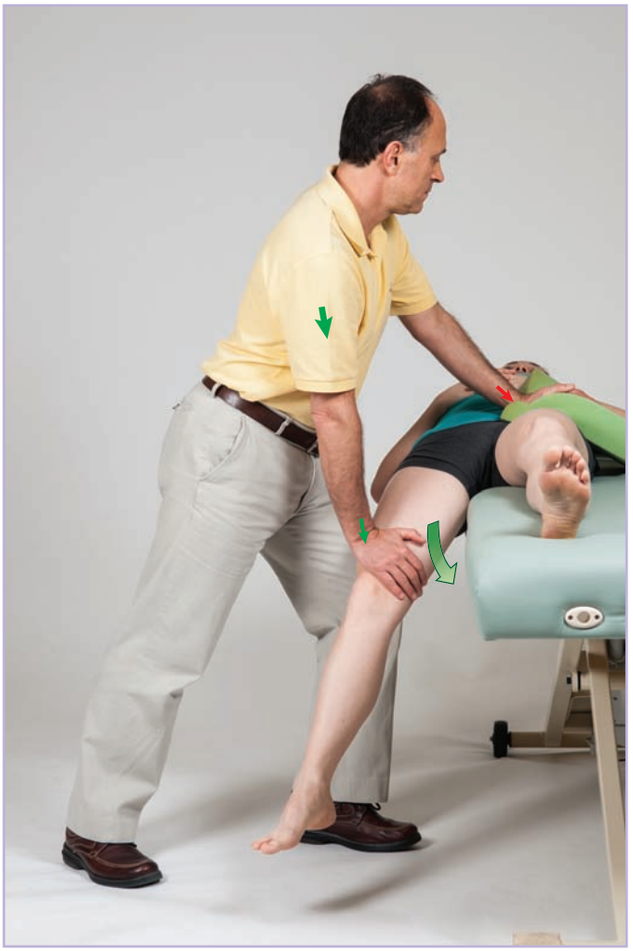


Figure 7-46B

Third Repetition:

- Beginning from the position of stretch reached at the end of the second repetition, have the client again contract the target musculature isometrically for approximately 5 to 8 seconds against your resistance, again with moderate force if it is comfortable for the client.
- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the thigh farther into extension until you meet tissue resistance.
- If desired, a fourth repetition can be done.
- Hold the position of stretch of the last repetition for approximately 10 seconds or more.
- When the stretching routine is complete, ask the client to completely relax the thigh as you passively return it to the table.

Left-Side Flexor Group:

- Repeat for the pelvis/hip joint flexor functional group on the left side of the body (Fig. 7-47).

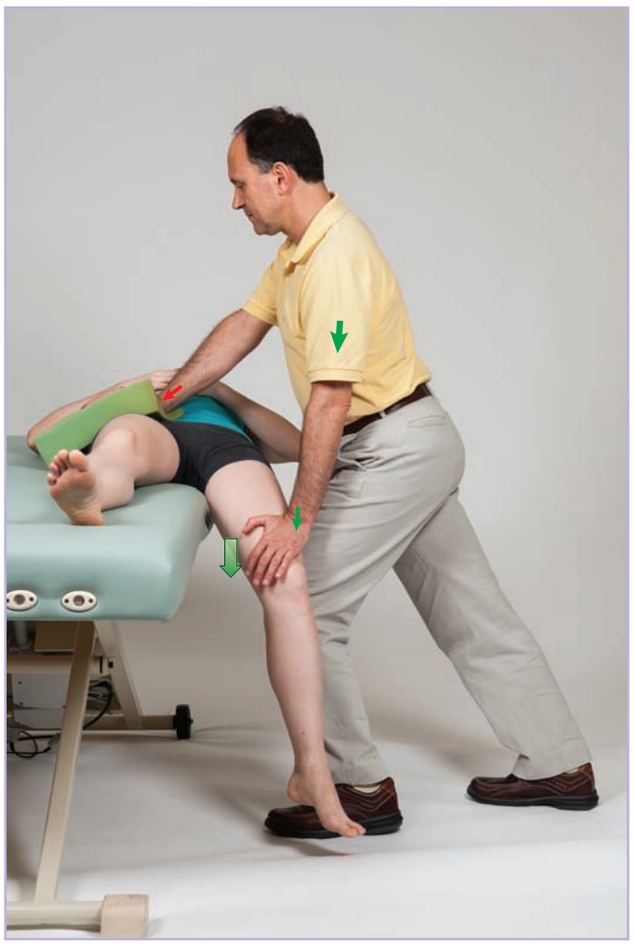


Figure 7-47

7.6 PRACTICAL APPLICATION

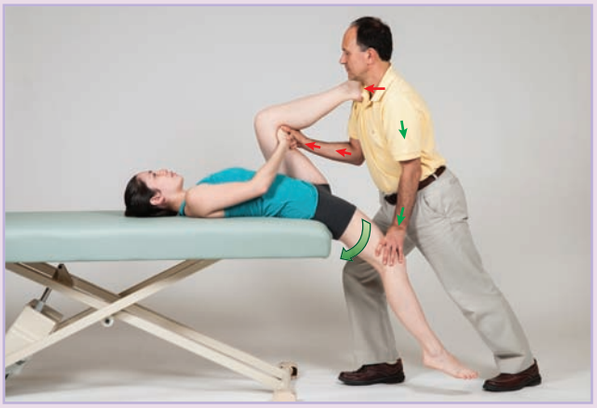
Transitioning to Multiplane Contract Relax Stretching: Hip Joint Flexor Functional Group

Transitioning the CR stretching protocol for the hip joint flexor functional group into a multiplane stretch that incorporates other planes of motion can be done by altering the position and/or direction of movement of the client's thigh. The accompanying figure demonstrates frontal plane abduction and transverse plane lateral rotation added into the sagittal plane extension of the thigh. This focuses the stretch toward the flexors that are also adductors and medial rotators, such as the pectineus and adductors longus and brevis. This is accomplished by presetting the abduction and lateral rotation of the thigh and then stretching it down into extension. This stretch can also be considered a multijoint stretch if the knee joint is involved. If the client's leg at the knee joint is flexed while the thigh is extended at the hip joint, multiple joints are involved, and the stretch is focused toward the rectus femoris muscle.

7.7 PRACTICAL APPLICATION

Contract Relax Stretching of the Hip Flexors at the End of the Table

It is also possible to perform CR stretching of the hip flexor functional group with the client at the end of the table. Following is the protocol for the hip flexor group on the right side of the body. Ask the client to stand facing away from the end of the table, place her tailbone (coccyx) at the top of the table, and lean back onto the table to lie supine, hugging her left thigh into her chest. You stand facing the client at the end of the table, placing your right hand on her distal posterior left thigh to assist in stabilizing her body; her left foot can be placed on your right clavicle to further assist stabilization. Your left hand is placed on her distal anterior right thigh. To perform the stretch, gently drop down with body weight, pushing her right thigh into extension. The CR protocol of client isometric contraction and postcontraction stretch would then be performed from this position. Similar to the side of table hip flexor stretch, use caution because the client must contract against both your resistance and gravity. This protocol can then be repeated for the client's left side.



ROUTINE 7-10: HIP EXTENSORS: HAMSTRINGS

View the video "Contract Relax Stretching of the Hamstring Group" online on thePoint.lww.com

Figure 7-48 shows the hamstring muscles on the right side. They are located in the posterior thigh, crossing from the pelvis to the proximal leg. The hamstrings are hip extensor muscles because they cross the hip joint posteriorly with a vertical orientation to their fibers. However, unlike the gluteal muscles, which also cross the hip joint posteriorly with somewhat of a vertical orientation to their fibers, the hamstrings also cross the knee joint posteriorly; therefore, they also flex the knee joint. This is important to know when stretching them. CR stretching routine of the hamstring group was demonstrated in the "Overview of Technique" section, Figures 7-1 through 7-6.

The Hamstring Group
This group comprises the following muscles:
Biceps femoris
Semitendinosus
Semimembranosus

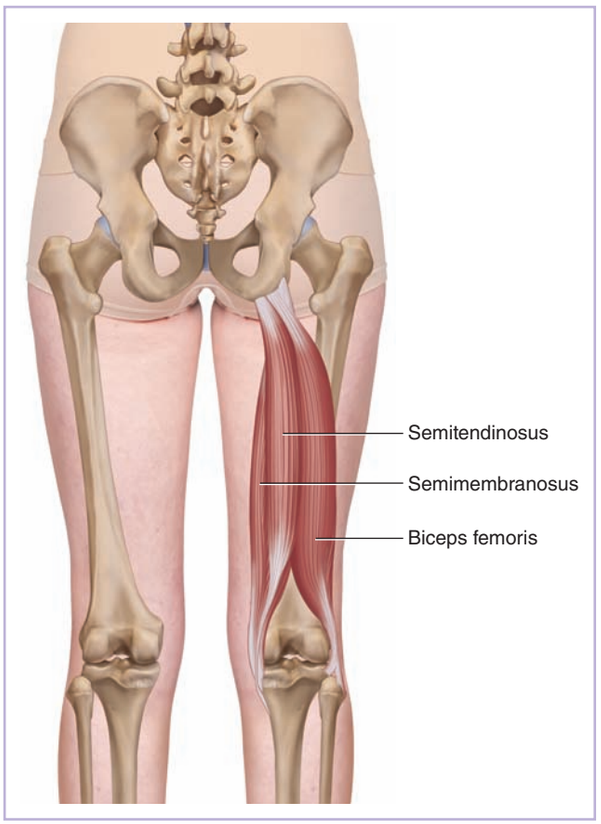


Figure 7-48

7.8 PRACTICAL APPLICATION

Transitioning to Multiplane Contract Relax Stretching: Hip Joint Extensor—Hamstring Group

Transitioning the CR stretching protocol for the hamstring group into a multiplane stretch that incorporates other planes of motion can be done by altering the position and/or direction of movement of the client's thigh. The accompanying figure demonstrates frontal plane adduction and transverse plane lateral rotation added into the sagittal plane flexion of the thigh; this is accomplished by presetting the lateral rotation of the thigh and then stretching it into flexion and adduction. As discussed with other multiplane CR stretches, multiplane stretching can involve motion in all three cardinal planes, so both frontal and transverse plane motion can be added to the sagittal plane flexion of the thigh. Each cardinal plane component that is involved focuses the stretch toward specific aspects of the hamstring musculature. *Note*: Whenever stretching the hamstring group across the hip joint, whether it is purely into sagittal plane flexion or a multiplane stretch that involves other planes of motion, the knee joint must be kept extension.

ROUTINE 7-11: HIP EXTENSORS: GLUTEALS

Figure 7-49 shows the functional group of gluteal muscles on the right side of the body. These muscles are located in the posterior pelvis in the buttock region and cross the hip joint between the pelvis and thigh. The gluteal muscles are extensors of the hip joint as are the hamstrings (see Routine 7-10). The difference is that the hamstrings cross the knee joint posteriorly, whereas the gluteals do not cross the knee joint. So to most efficiently stretch the gluteals, the knee joint is flexed to slacken and knock the hamstrings out of the stretch.

Following is the CR stretching routine shown for the gluteal group on the right side of the body. *Note*: The gluteus medius and minimus also have middle and anterior fibers that are located laterally and anteriorly in the pelvis/thigh region. These fibers are stretched with Routines 7-7 and 7-9, respectively. Routine 7-11 presented here stretches the posterior fibers of the gluteal group.

The Gluteal Group
This functional group comprises the following muscles:
Gluteus maximus
Gluteus medius
Gluteus minimus

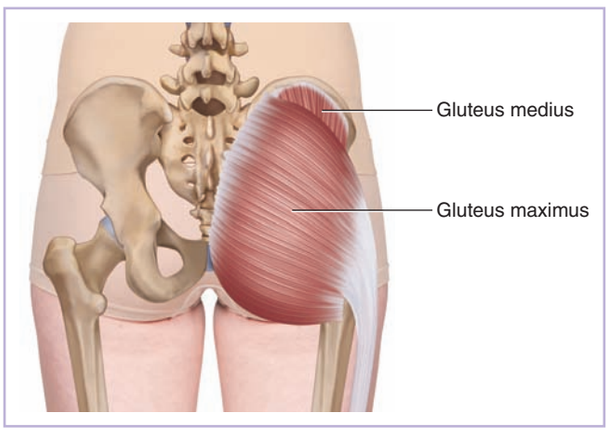


Figure 7-49 *Note*: The gluteus minimus is not seen.

Starting Position:

- Have the client supine toward the right side of the table with her right hip and knee joints in flexion.
- Position yourself at the right side of the table.
- Both of your hands are treatment hands, grasping the client's distal posterior right thigh.
- Your right leg/knee is the stabilization contact and is placed on the client's left anterior thigh to stabilize her pelvis (Fig. 7-50A).

Figure 7-50A

- An alternate position to contact the client's right lower extremity is to place the client's right foot on your right clavicle (Fig. 7-50B).

Figure 7-50B

Initial Client Stretch:

- Begin by gently stretching the client's target (gluteal) musculature by moving the client's thigh toward her chest into flexion until you meet tissue resistance, beginning the stretch of the target gluteal muscles (Fig. 7-51).

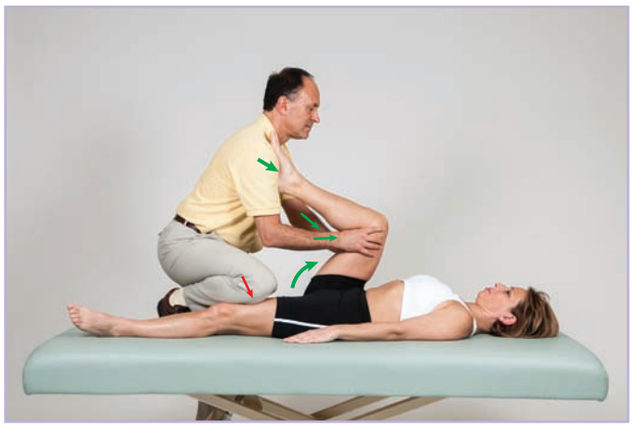


Figure 7-51

7.9 PRACTICAL APPLICATION

Protecting the Knee Joint

Pressing the knee toward the chest can be uncomfortable for the client if she has an unhealthy knee joint. However, if you perform this stretch with the knee joint fully extended, the hamstrings will be pulled taut and not allow the stretch to be experienced by the gluteal muscles. For clients with an unhealthy knee joint, allow the knee to partially extend. If needed, to further remove stress from the knee joint, the client's leg can even be supported on your shoulder.

First Repetition: Client Contraction:

- With the client in the initial stretch position, ask the client to perform a gentle isometric contraction of the target muscles for approximately 5 to 8 seconds (in an attempt to extend the thigh back down toward the table) against your resistance (Fig. 7-52A).

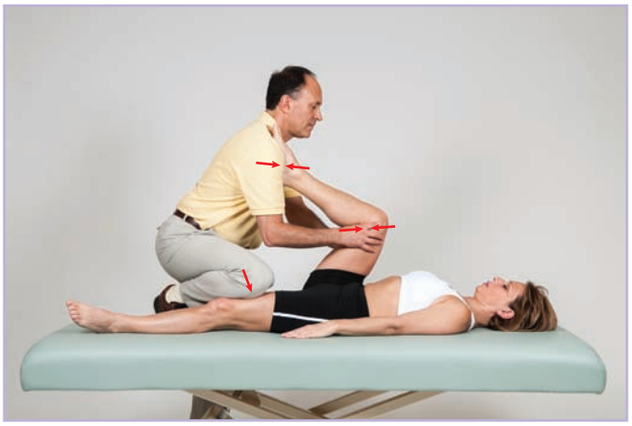


Figure 7-52A

- Ask the client to relax.
- Note that the breathing protocol for every repetition is to have the client either hold the breath or exhale when contracting against your resistance.

First Repetition: Postcontraction Stretch:

- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the client's thigh farther into flexion toward her chest until you meet tissue resistance (Fig. 7-52B).
- Hold this position of stretch for approximately 1 to 3 seconds.

Figure 7-52B

Second Repetition: Client Contraction:

- Beginning from the position of stretch reached at the end of the first repetition, have the client again contract the target musculature isometrically for approximately 5 to 8 seconds against your resistance (Fig. 7-53A).
- This time, ask the client to contract against your resistance with moderate force, if it is comfortable for the client.

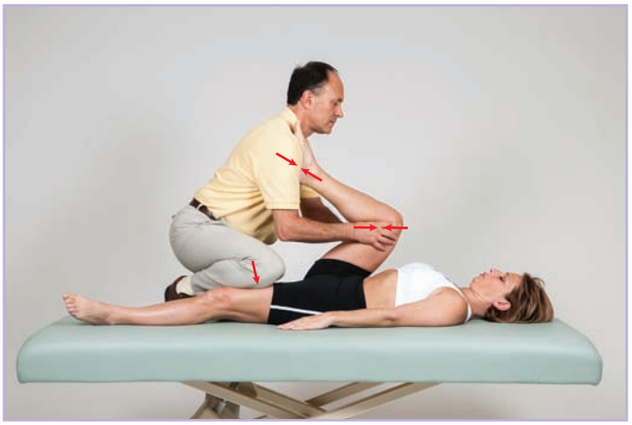


Figure 7-53A

Second Repetition: Postcontraction Stretch:

- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the thigh farther into flexion toward her chest until you meet tissue resistance (Fig. 7-53B).
- Hold this position of stretch for approximately 1 to 3 seconds.

Figure 7-53B

Third Repetition:

- Beginning from the position of stretch reached at the end of the second repetition, have the client again contract the target musculature isometrically for approximately 5 to 8 seconds against your resistance, this time, with as much force as is comfortable for the client.
- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the thigh farther into flexion toward her chest until you meet tissue resistance.
- If desired, a fourth repetition can be done.
- Hold the position of stretch of the last repetition for approximately 10 seconds or more.

Left-Side Gluteal Group:

- Repeat for the gluteal group on the left side of the body (Fig. 7-54).

Figure 7-54

ROUTINE 7-12: HIP DEEP LATERAL ROTATORS

Figure 7-55 shows the functional group of deep lateral rotator muscles on the right side of the body. These muscles are located in the posterior pelvis in the buttock region, deep to the gluteus maximus, and cross the hip joint between the pelvis and thigh. *Note*: The posterior capsular ligament of the hip joint (ischiofemoral ligament) is stretched with medial rotation, as are the deep lateral rotator muscles. Therefore, the stretching protocol presented here for the deep lateral rotators is also very effective at stretching and loosening a taut posterior hip joint capsule. Following is the CR stretching routine shown for the deep lateral rotator group on the right side of the body.

The Deep Lateral Rotator Group
This functional group comprises the following muscles:
Piriformis
Superior gemellus
Obturator internus
Inferior gemellus
Obturator externus
Quadratus femoris

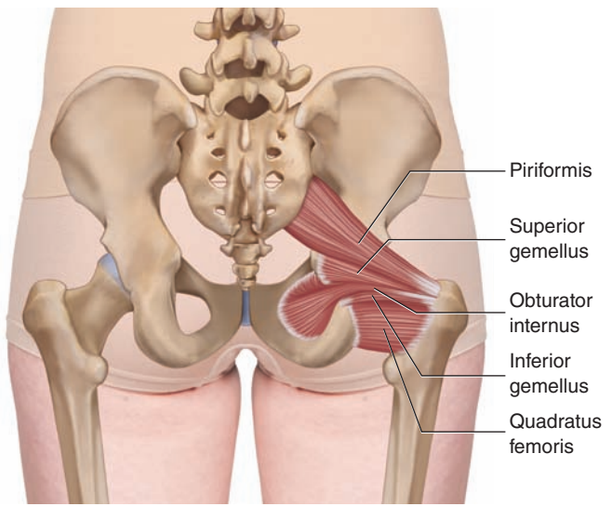


Figure 7-55 *Note*: The obturator externus is not seen.

Starting Position:

- Have the client supine toward the left side of the table.
- Position yourself at the left side of the table.
- Flex the client's right hip and knee joints into flexion and then horizontally adduct the right thigh at the hip joint and trap the client's right knee between your trunk and right arm, in other words, under your right axillary region.
- No stabilization hand is necessary; the client's body weight and contact with the table, as well as the direction that you move her thigh, stabilize her pelvis (Fig. 7-56).
- Using core body weight, gently lean into the client, bringing her thigh down and across her chest, farther into horizontal adduction. Be sure that the client's pelvis remains stabilized down onto the table.

Figure 7-56

7.10 PRACTICAL APPLICATION

Deep Lateral Rotator Stretch and Groin Pain

The direction that you move the client's thigh during CR stretching of the deep lateral rotator group is extremely important. If the direction is too horizontal (parallel with the table), the client's pelvis will no longer be stabilized and will lift from the table, causing the stretch to travel into the LSp and be lost to the target musculature of the pelvis. However, if you press the client's thigh too downward into their body, it may compress the anterior hip joint region (groin) and cause discomfort or pain for the client. The ideal balance between these two directions will vary from client to client. If it is not possible to find an angle that both stabilizes the client's pelvis and keeps the client pain-free, then you can use your hands to grasp the client's proximal femur and soft tissue of the proximal thigh and traction the thigh away from the pelvis (see figure in Practical Application Box 6.6). This often removes the pinching discomfort/pain that some clients experience.

Initial Client Stretch:

- Begin by gently stretching the client's target (deep lateral rotator) musculature by moving the client's thigh down and across her chest into horizontal adduction (horizontal flexion) until you meet tissue resistance, beginning the stretch of the target deep lateral rotator muscles (Fig. 7-57).

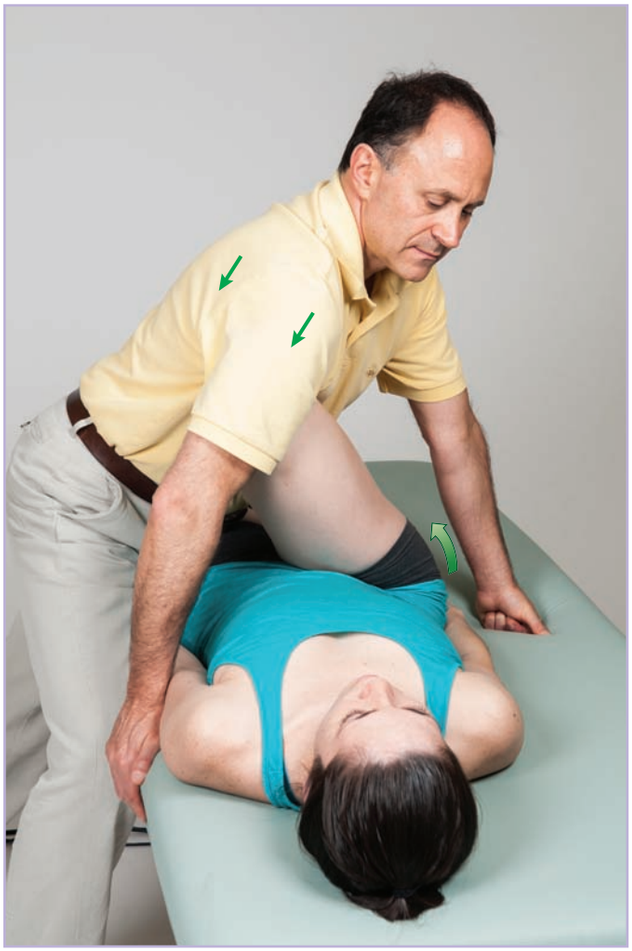


Figure 7-57

First Repetition: Client Contraction:

- With the client in the initial stretch position, ask the client to perform a gentle isometric contraction of the target muscles for approximately 5 to 8 seconds (in an attempt to horizontally abduct the thigh back across her body) against your resistance (Fig. 7-58A).
- Ask the client to relax.
- Note that the breathing protocol for every repetition is to have the client either hold the breath or exhale when contracting against your resistance.

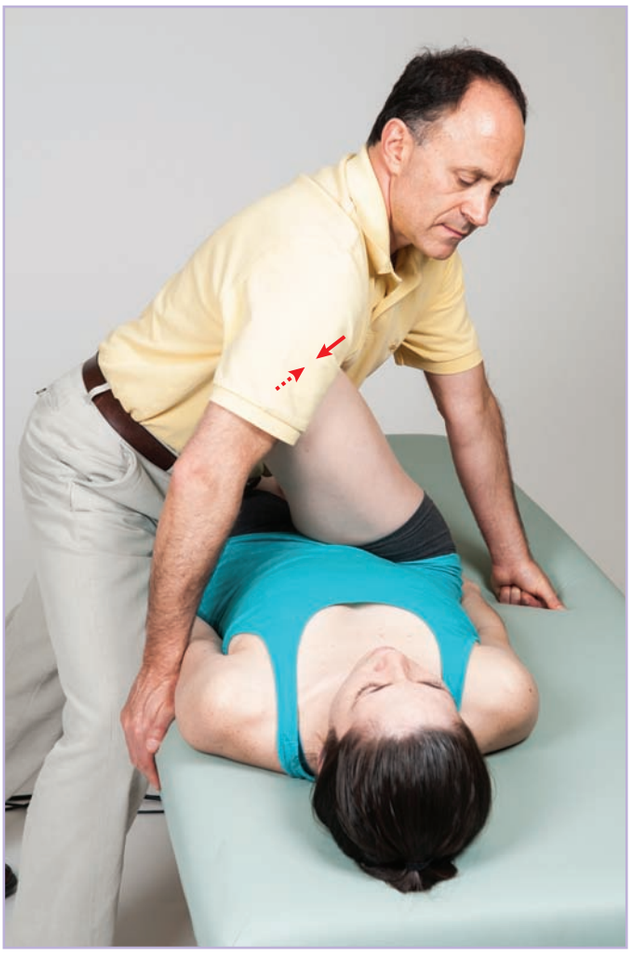


Figure 7-58A

First Repetition: Postcontraction Stretch:

- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the client's thigh farther into horizontal adduction across her body and toward her chest until you meet tissue resistance (Fig. 7-58B).
- Hold this position of stretch for approximately 1 to 3 seconds.

Second Repetition: Client Contraction:

- Beginning from the position of stretch reached at the end of the first repetition, have the client again contract the target musculature isometrically for approximately 5 to 8 seconds against your resistance (Fig. 7-59A).
- This time, ask the client to contract against your resistance with moderate force, if it is comfortable for the client.

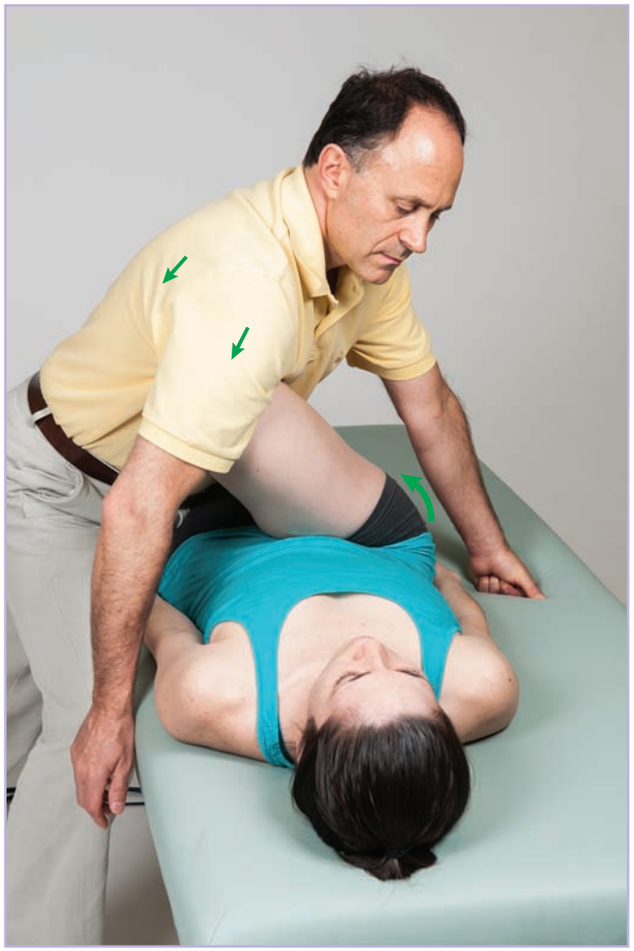


Figure 7-58B

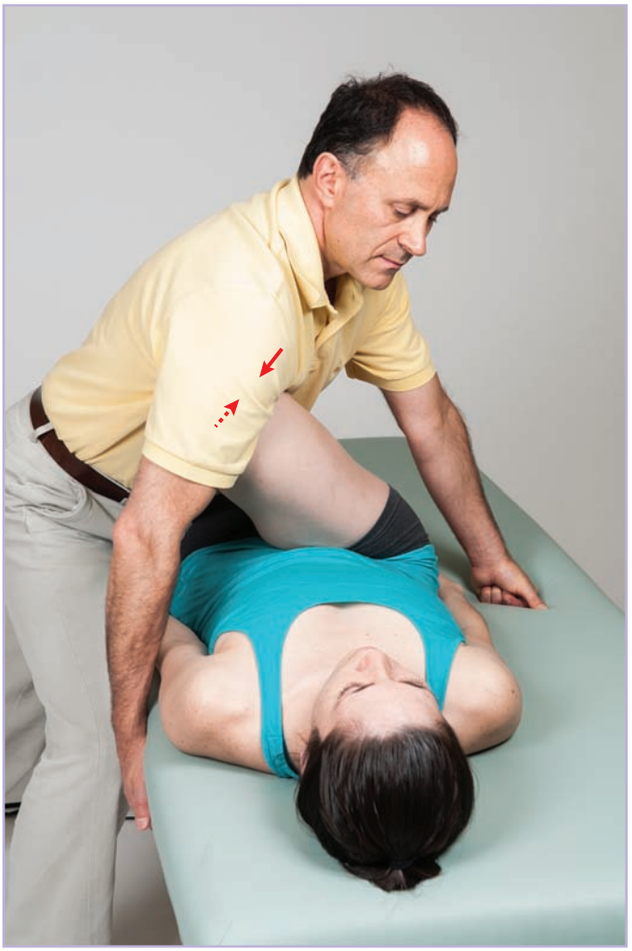


Figure 7-59A

Second Repetition: Postcontraction Stretch:

- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the thigh farther across her body and toward her chest into horizontal adduction until you meet tissue resistance (Fig. 7-59B).
- Hold this position of stretch for approximately 1 to 3 seconds.

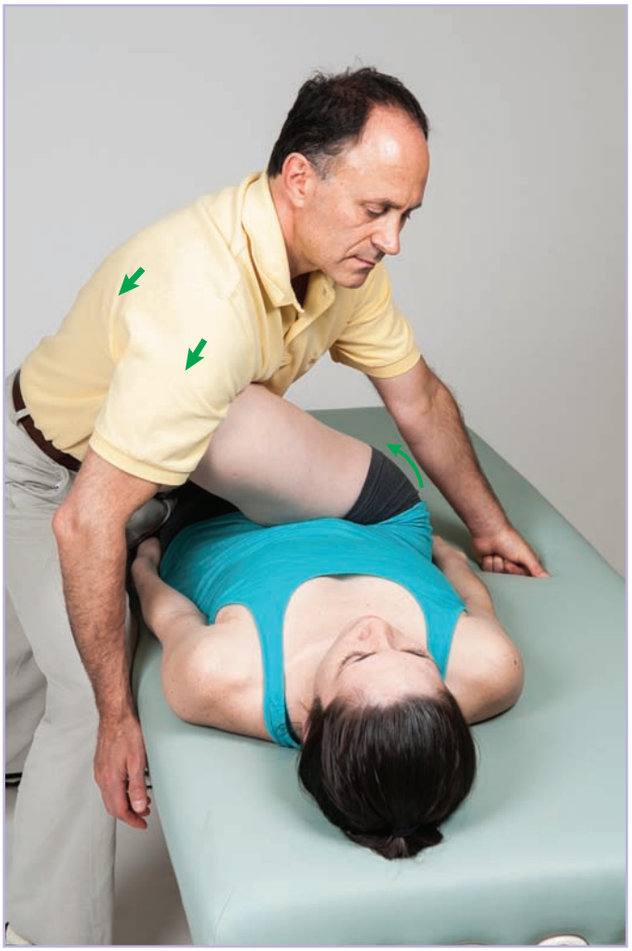


Figure 7-59B

Third Repetition:

- Beginning from the position of stretch reached at the end of the second repetition, have the client again contract the target musculature isometrically for approximately 5 to 8 seconds against your resistance, this time, with as much force as is comfortable for the client.
- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the thigh farther across her body and toward her chest into horizontal adduction until you meet tissue resistance.
- If desired, a fourth repetition can be done.
- Hold the position of stretch of the last repetition for approximately 10 seconds or more.

Left-Side Deep Lateral Rotator Group:

- Repeat for the deep lateral rotator group on the left side of the body (Fig. 7-60).

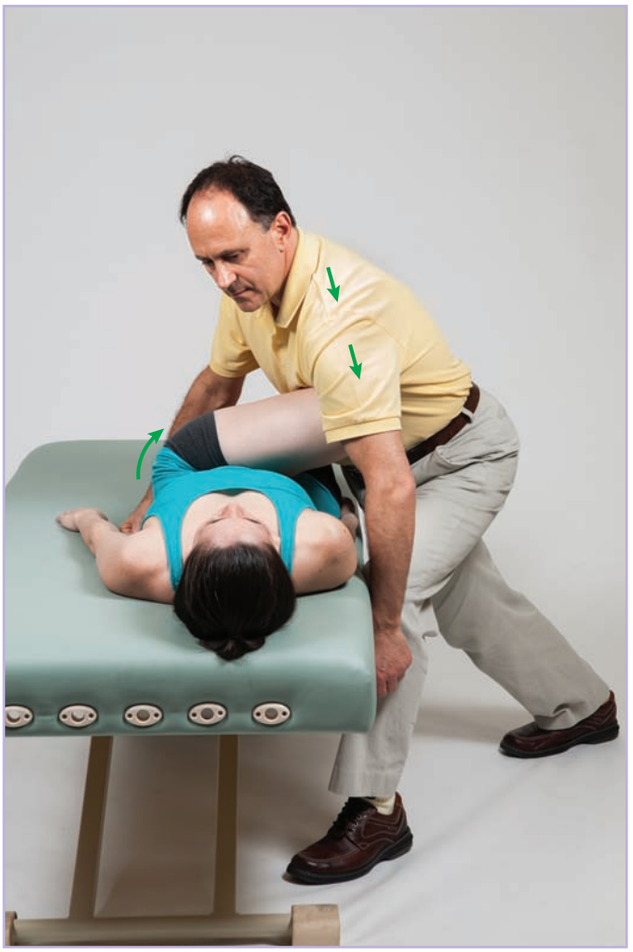


Figure 7-60

7.11 PRACTICAL APPLICATION

Contract Relax Stretching of the Deep Lateral Rotators Using the "Figure 4" Stretch

It is also possible to perform CR stretching of the deep lateral rotator functional group using the Figure 4 stretch (see Routine 6-10 in Chapter 6 for more details on this stretch). Following is the protocol for this stretch on the right side of the body.

Have the client supine toward the right side of the table and position yourself at the right side of the table. Alternately, the client can lie at the center of the table, and you can climb onto the table to be centered at the midline of the client. Flex and laterally rotate the client's right hip joint, flex her right knee joint, and place her distal right leg on her flexed left thigh (forming the Figure 4 position for which the stretch is named). Both of your hands are treatment hands: Place your left hand on the posterolateral surface of her distal right thigh and place your right hand on the posterior surface of her distal left thigh. No stabilization hand is necessary; the client's body weight and contact with the table, as well as the direction that you press, stabilize her pelvis. Using core body weight, gently lean forward into the client, pressing equally with both hands and bringing her laterally rotated right thigh farther into flexion, in other words, down toward her chest **(Fig. A)**. Be sure that the direction of your pressure is such that the client's pelvis remains stabilized down onto the table.

The CR protocol of client isometric contraction and postcontraction stretch would then be performed from this position. When the client contracts, be sure that her contraction is of the target muscles in the right posterior buttock against the resistance of your left hand; in other words, she should not be pressing against your right hand contact that is on her left posterior thigh. If desired, this protocol can be performed without the involvement of the client's left thigh, in which case, you would place both treatment hands on the client's right lower extremity **(Fig. B)**. This protocol can then be repeated for the client's left side.

A

B

ROUTINE 7-13: HIP MEDIAL ROTATORS

Figure 7-61 shows the functional group of medial rotator muscles on the right side of the body. These muscles are located in the anterior pelvis and cross the hip joint between the pelvis and thigh. Following is the CR stretching routine shown for the medial rotator group on the right side of the body.

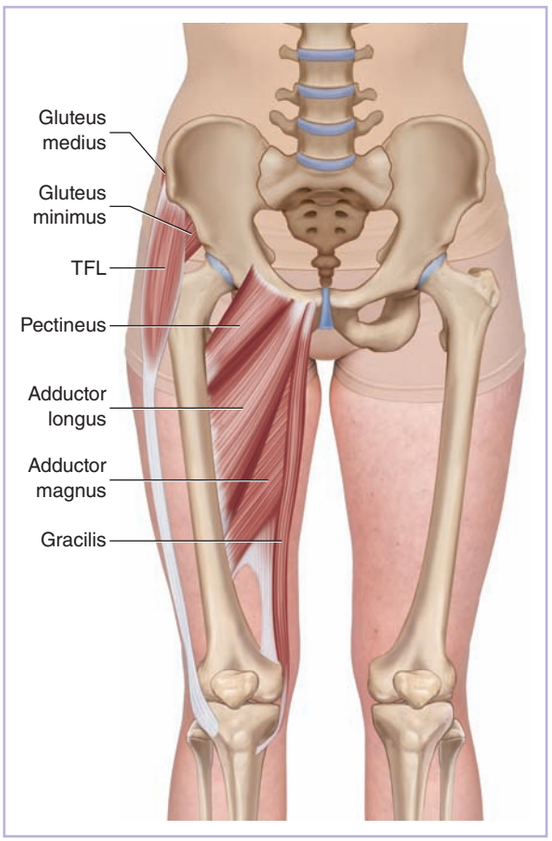


Figure 7-61 *Note*: The adductor brevis is not seen.

The Medial Rotator Group
This functional group comprises the following muscles:
TFL
Gluteus medius (anterior fibers)
Gluteus minimus (anterior fibers)
Pectineus
Adductor longus
Adductor brevis
Gracilis
Adductor magnus

Starting Position:

- Have the client prone toward the right side of the table.
- Position yourself at the right side of the table.
- Flex the client's right knee joint to 90 degrees.
- Your left hand is the treatment hand and is placed on the distal lateral surface of the client's right leg.
- Your right hand is the stabilization hand and is placed over the client's right posterior superior iliac spine (PSIS) (Fig. 7-62).

Figure 7-62

Initial Client Stretch:

- Begin by gently stretching the client's target (hip joint medial rotator) musculature by moving the client's leg medially toward the opposite side of his body until you meet tissue resistance, beginning the stretch of the target medial rotator muscles (Fig. 7-63).

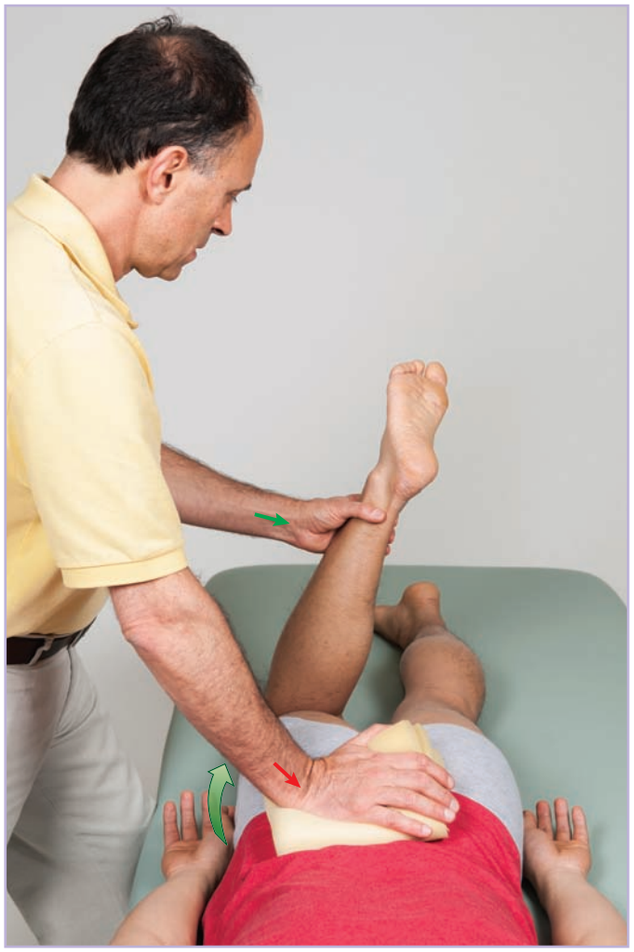


Figure 7-63

7.9 THERAPIST TIP

Lateral Rotation of the Thigh

Moving the client's leg medially toward the other side of the body might seem counterintuitive to create lateral rotation of the thigh at the hip joint. However, rotations are named for the orientation of the anterior surface of a body part. When the flexed leg is moved medially toward the other side of the body, the anterior surface of the thigh will be seen to orient laterally; therefore, this motion causes lateral rotation of the thigh at the hip joint and stretches the medial rotators of the thigh at the hip joint.

Using the client's leg to create lateral rotation of the hip joint to stretch the medial rotators means that force will be placed through his or her knee joint. If the client's knee joint is unhealthy and this stretch causes pain or discomfort, this stretching protocol is contraindicated.

First Repetition: Client Contraction:

- With the client in the initial stretch position, ask the client to perform a gentle isometric contraction of the target muscles for approximately 5 to 8 seconds against your resistance. This contraction involves trying to medially rotate his thigh at the hip joint by bringing his right leg laterally toward the right side of his body (Fig. 7-64A).
- Ask the client to relax.
- Note that the breathing protocol for every repetition is to have the client either hold the breath or exhale when contracting against your resistance.

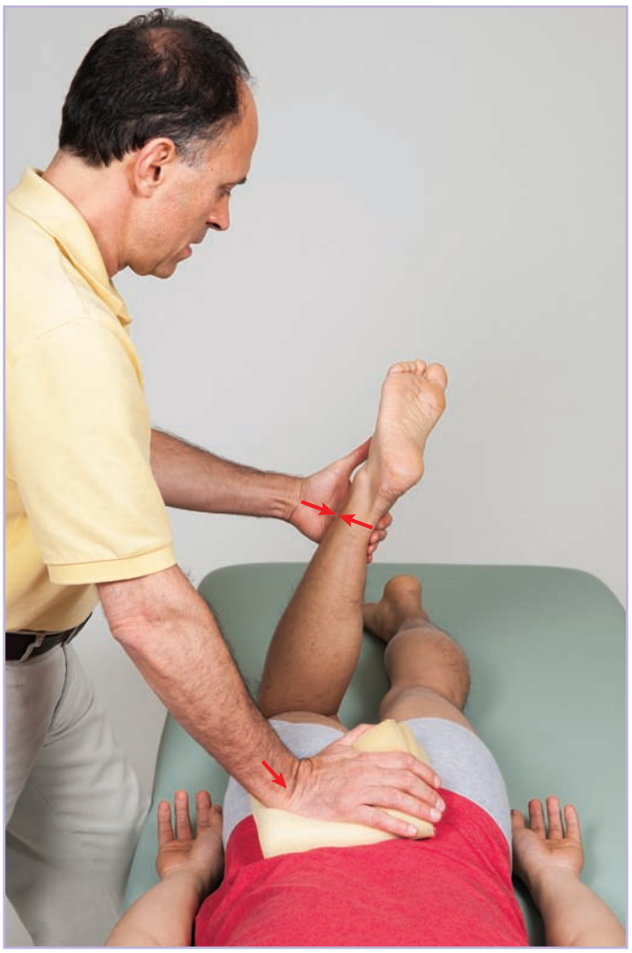


Figure 7-64A

First Repetition: Postcontraction Stretch:

- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the client's thigh farther into lateral rotation by moving his leg farther medially until you meet tissue resistance (Fig. 7-64B).
- Hold this position of stretch for approximately 1 to 3 seconds.

Second Repetition: Client Contraction:

- Beginning from the position of stretch reached at the end of the first repetition, have the client again contract the target musculature isometrically for approximately 5 to 8 seconds against your resistance (Fig. 7-65A).
- This time, ask the client to contract against your resistance with moderate force, if it is comfortable for the client.

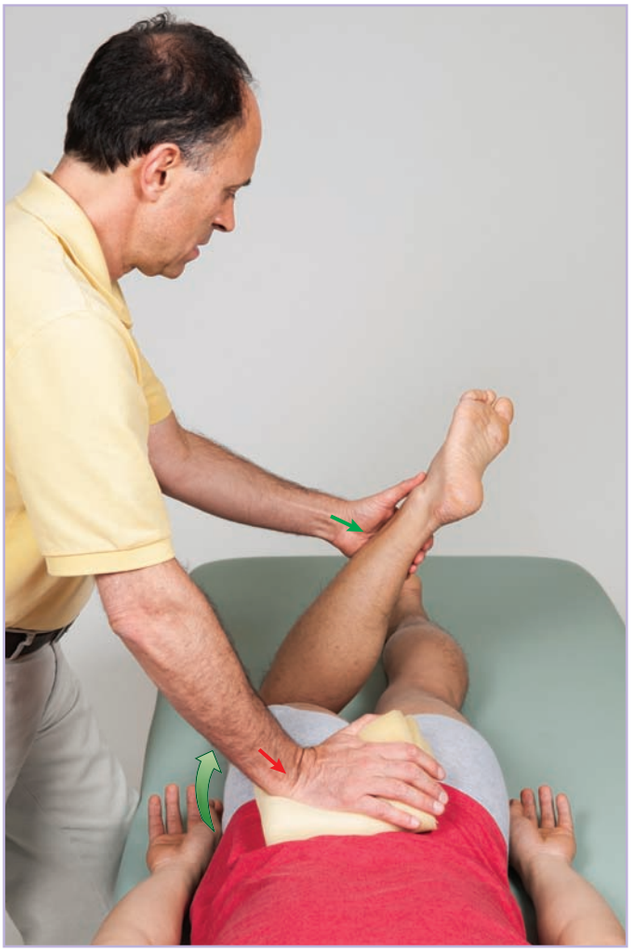


Figure 7-64B

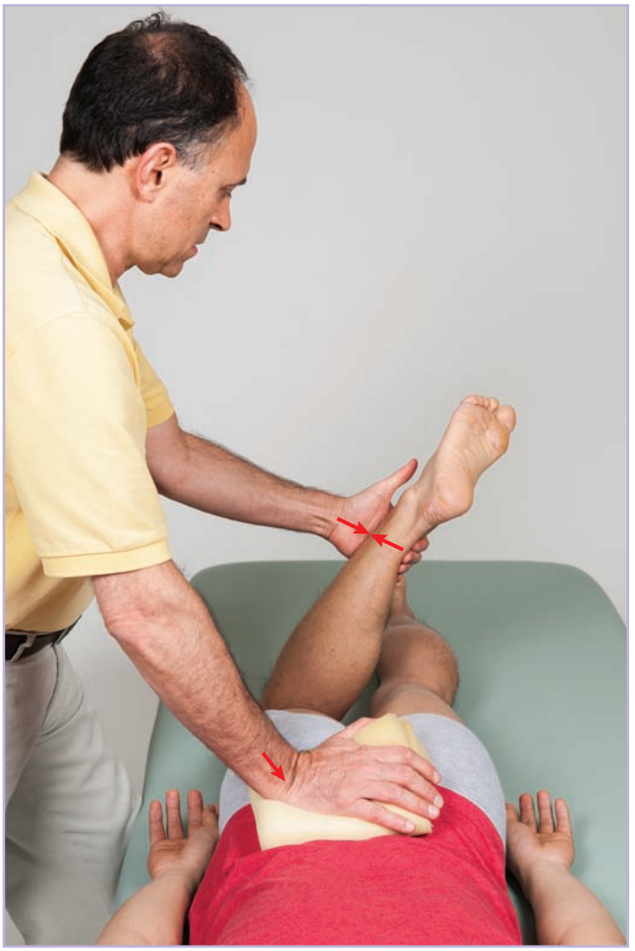


Figure 7-65A

Second Repetition: Postcontraction Stretch:

- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the thigh farther into lateral rotation by moving the leg farther medially until you meet tissue resistance (Fig. 7-65B).
- Hold this position of stretch for approximately 1 to 3 seconds.

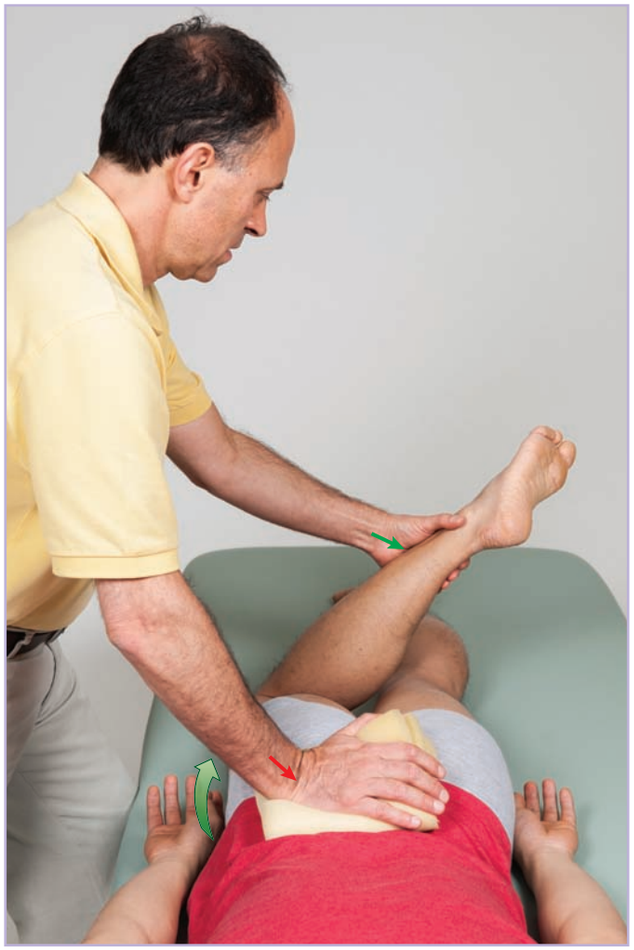


Figure 7-65B

Third Repetition:

- Beginning from the position of stretch reached at the end of the second repetition, have the client again contract the target musculature isometrically for approximately 5 to 8 seconds against your resistance, this time, with as much force as is comfortable for the client.
- As soon as the client relaxes, gently increase the stretch of the client's target musculature by moving the thigh farther into lateral rotation by moving his leg farther medially until you meet tissue resistance.
- If desired, a fourth repetition can be done.
- Hold the position of stretch of the last repetition for approximately 10 seconds or more.

Left-Side Medial Rotator Group:

- Repeat for the medial rotator group on the left side of the body (Fig. 7-66).

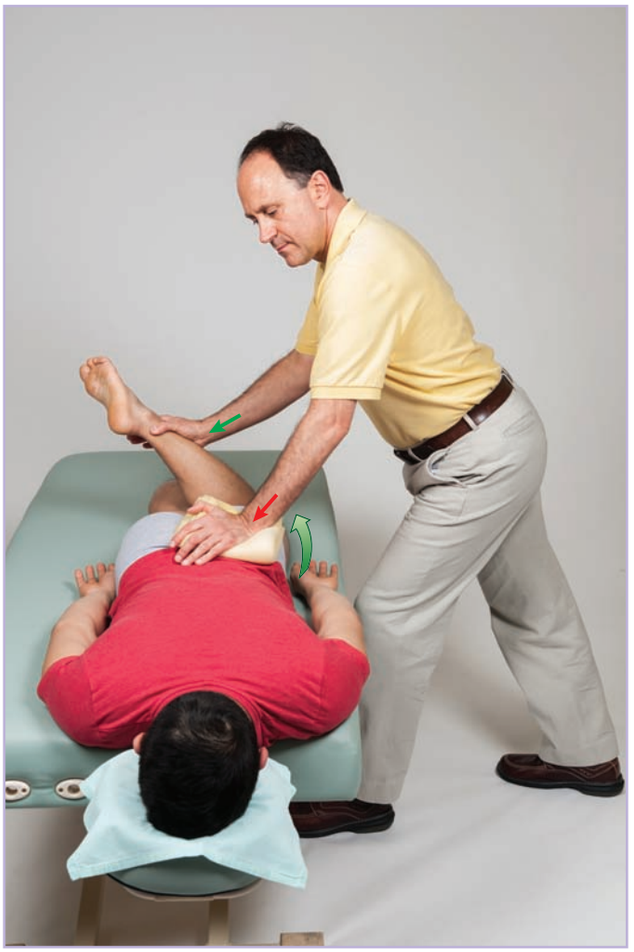


Figure 7-66

7.10 THERAPIST TIP

When Should You Use Contract Relax Stretching?

CR stretching technique is an advanced technique that can and should be employed whenever a client does not respond well to "standard" mechanical stretching techniques. Of course, it is not necessary to wait until a client stops responding to regular stretching to decide to use CR stretching. It can be incorporated into the standard care for a client. However, CR stretching does tend to require more time to perform, so you may want to be selective about when and for which areas of the client's body you use it. Another consideration is that CR stretching requires active participation on the client's part. If a client expects to come to a session and remain passive, CR stretching may not be an appropriate choice. Or, you may need to educate the client about his or her possible role during a treatment session.

A question that is often asked is, "Which advanced neural inhibition technique is the better stretching technique, CR or AC?" Although proponents of each technique may state that their method is superior to the other, the same is true here as for all treatment techniques: Each one works well for a particular subset of the client population, and neither is inherently better than the other—nor is either technique inherently superior for stretching any particular muscle or muscle group of the body. Which method a therapist chooses should be based on how well it works for each particular client, how well the client enjoys the particular technique, and/or which technique the therapist finds biomechanically easier to employ for that particular muscle/muscle group.

Having said this, because the AC technique does require more active motion on the part of the client, it is likely the better technique with regard to warming up the client's body because local fluid circulation (blood, lymph, and synovial joint fluid) would be increased. AC technique's dynamic movements would also better enforce neural patterns of movement. On the other hand, although both CR and AC stretching require the client's active participation and effort, AC stretching does tend to require more participation and effort, so for the client who is looking for a passive treatment session, CR technique might be preferred over AC technique. Also, it is generally easier to transition a stretch to CR technique than AC technique because regardless of the client position, the therapist can add the resistance needed for the CR technique, whereas AC technique usually requires the client to contract and move the body part either up against gravity or at least parallel with gravity. Therefore, the client position in relation to gravity matters with AC stretching but does not for CR stretching.

For CRAC stretching (see Chapter 9), a case probably could be made that it is more effective than either CR or AC stretching alone because it combines the effectiveness of both techniques. However, it does take twice as much time to perform, and spending more time stretching one muscle means that there is less time left to work on other areas of the client's body. Ultimately, the choice of technique is a clinical decision that will depend on the unique circumstances of each individual scenario.

7.11 THERAPIST TIP

Client Awareness of Motion

Many clients become accustomed to the limited ranges of motion of their body and learn to compensate by moving other parts of their body instead. Once a client learns this compensation pattern, it often continues in everyday life even if the client's LSp and pelvic/hip joint ranges of motion are restored through massage and stretching. Perhaps it is because the client fears that the pain will return, or perhaps, it is simply out of habit. Either way, if a client does not move the LSp and pelvis/hip joint through the increased ranges of motion created with massage and stretching, the client will lose those ranges of motion because the muscles will tighten again, and adhesions will once again build up in the tissues. As a result, the client will revert to the original limited movement pattern. For this reason, it is extremely important that a client continues to move his or her body through whatever ranges of motion are increased with treatment.

To facilitate this, it can be extremely useful at the end of a treatment session to bring the client's conscious awareness to the increased ranges of motion. This can be done in two steps. First, passively bring the client's LSp and pelvis/hip joint through the improved ranges of motion, verbally pointing out to him or her the increased motion. Second, ask the client to move the region actively through the increased ranges of motion unassisted, again as you verbally point out the improvement. Once consciously aware of the improved movements that his or her body can achieve, the client is more likely to continue moving through the restored ranges of motion. Using and moving his or her body will help to maintain its mobility, thereby increasing the likelihood that the client's condition will improve.

CHAPTER SUMMARY

CR stretching is an advanced stretching technique that can often provide the key to helping clients with tight muscles and fascial adhesions. Although the exact manner in which the technique is performed can vary, it is most commonly carried out in the following manner:

- After the client is prestretched, the client contracts the target muscle isometrically to trigger the GTO reflex, which allows the therapist to stretch the target muscle farther afterward.
- The client usually holds the isometric contraction for 5 to 8 seconds; three to four repetitions are typically done.
- The client may either hold the breath or exhale when performing the isometric contraction.

Essentially, any stretch can be carried out using the CR technique. As with all stretching, CR stretching is most effective when the client's tissues have been warmed up first.

CASE STUDY

NATASHA

History and Physical Assessment

A new client, Natasha Rivera, age 24 years, comes to your office complaining of low back pain and tightness. She tells you that she was moving boxes at home the day before, and when she bent down to pick up one of the boxes, her low back went into spasm. She indicates that the pain is located bilaterally in her lumbar region but slightly more intense on the right side. There is no pain into her lower extremities. On a scale of 0 to 10, she reports that the pain is 4 to 5 when she is lying down, 6 when she stands, 7 when she sits, and a 9 if she tries to move. The client history reveals no previous incidence of low back pain or trauma in her past.

Because Natasha is so acute, you abbreviate your physical exam and eliminate range of motion assessment so as to not aggravate her condition. You perform active and passive straight leg raise tests as well as cough and Valsalva to rule out a space-occupying lesion and to determine if the injury is a strain or sprain. Active straight leg raise is positive for local lumbar pain bilaterally at approximately 45 degrees of thigh flexion. Passive straight leg raise, cough test, and Valsalva maneuver are all negative (for a review of assessment procedures, see Chapter 3). Palpation assessment reveals marked spasming of her entire lumbar paraspinal (erector spinae and transversospinalis) musculature bilaterally, with the tightness greatest on the right side, at the midlumbar region. The tone of all other trunk and pelvis musculature is within normal limits.

Think-It-Through Questions:

1. Should an advanced stretching technique such as CR stretching be included in your treatment plan for Natasha? If so, why? If not, why not?
2. If CR stretching would be of value, is it safe to use with her? If yes, how do you know? If not, why not?
3. If CR stretching is done, which specific stretching routines should be done? Why did you choose the ones you did?

Answers to these Think-It-Through Questions and the Treatment Strategy employed for this client are available online at thePoint.lww.com/MuscolinoLowBack

CHAPTER 8

Agonist Contract Stretching

CHAPTER OUTLINE

Introduction 264
Mechanism 265
Overview of Technique 265
Performing the Technique 268
Agonist Contract Routines 271
Chapter Summary 311
Case Study 312

OBJECTIVES

After completing the chapter, the student should be able to:

1. Describe the mechanism of agonist contract (AC) stretching.
2. Describe in steps an overview of the usual protocol for carrying out the AC stretching technique.
3. Describe the roles of the treatment hand and the stabilization hand.
4. Describe the usual breathing protocol for the client during the AC stretching technique.
5. Describe the added benefits to the AC stretching technique of being a form of dynamic stretching.
6. Explain why stretching should never be performed too fast or too far.
7. Define each key term in the chapter and explain its relationship to the AC stretching technique.
8. Perform the AC stretching technique for each of the 13 groups of muscles presented in the chapter.

KEY TERMS

active isolated stretching (AIS)
agonist contract (AC) stretching
assisted AC stretching
creep
dynamic stretching
muscle spindle reflex
reciprocal inhibition (RI)
stabilization hand
stretch reflex
stretching hand
treatment hand
unassisted AC stretching

INTRODUCTION

Agonist contract (AC) stretching is another advanced stretching technique that involves a neurologic reflex to relax the target muscle that is to be stretched. Whereas contract relax (CR) stretching (covered in Chapter 7) has classically been stated as utilizing the neurologic reflex known as the *Golgi tendon organ reflex*, AC stretching utilizes the neurologic reflex known as **reciprocal inhibition (RI)**.

Note: In the Technique and Self-Care chapters of this book (Chapters 4 to 12), green arrows indicate movement, red arrows indicate stabilization, and black arrows indicate a position that is statically held.

BOX 8.1

Agonist Contract Routines

The following AC stretching routines are presented in the chapter:

- Section 1: lumbar spine (LSp) agonist contract routines:
  - Routine 8-1—LSp extensors
  - Routine 8-2—LSp flexors
  - Routine 8-3—LSp right lateral flexors
  - Routine 8-4—LSp left lateral flexors
  - Routine 8-5—LSp right rotators
  - Routine 8-6—LSp left rotators
- Section 2: hip joint/pelvis agonist contract routines:
  - Routine 8-7—hip abductors
  - Routine 8-8—hip adductors
  - Routine 8-9—hip flexors
  - Routine 8-10—hip extensors: hamstrings
  - Routine 8-11—hip extensors: gluteals
  - Routine 8-12—hip deep lateral rotators
  - Routine 8-13—hip medial rotators

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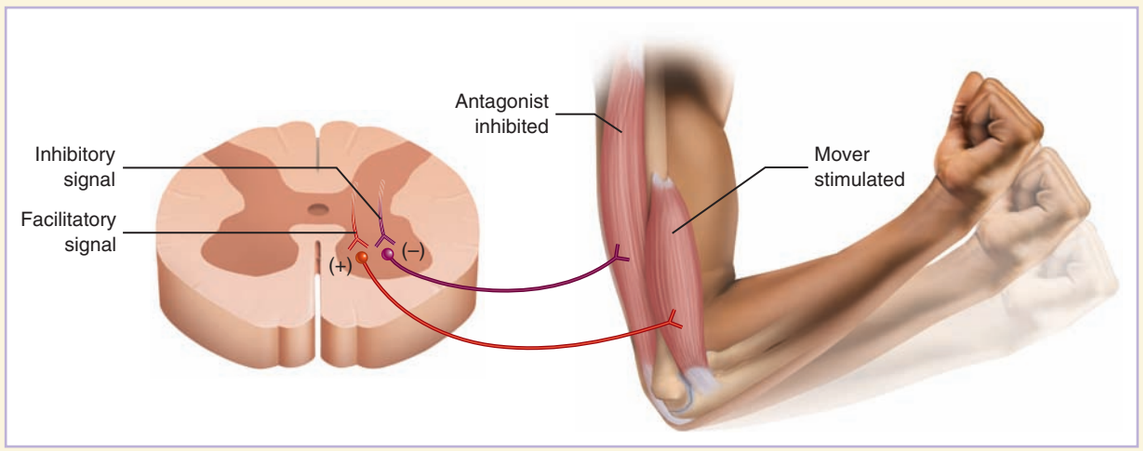
BOX 8.2

Reciprocal Inhibition Reflex

The RI reflex is a proprioceptive neurologic reflex that inhibits (relaxes) the muscles that have the antagonistic action to the joint action that is occurring. For a mover muscle to contract and shorten and cause a joint action to occur, the antagonist muscles must lengthen; for the antagonist muscles to lengthen, they need to be relaxed. Therefore, whenever the nervous system calls for a joint action to occur, it sends facilitory signals to the motor neurons that control the movers, causing them to contract, at the same time that it sends inhibitory signals to the motor neurons that control the antagonists, causing them to relax (see accompanying figure).

RI is an important reflex for the manual therapist to understand because it allows the therapist to perform a deeper stretch with the client than would have been possible otherwise. The therapist asks the client to actively contract a functional group of muscles, and the active contraction results in the inhibition/relaxation of the functional muscle group's antagonists. These relaxed antagonists are the target muscles to be stretched. Once they are relaxed, the therapist can take advantage of the RI reflex to perform an increased stretch.



MECHANISM

AC stretching works by having the client perform active concentric contraction of agonist musculature hence the name of the stretching technique. Contracting the agonist musculature that creates a joint action triggers the neurologic reflex known as *reciprocal inhibition*, which relaxes (inhibits) the antagonists of that joint action. This allows the therapist to perform more effective stretching of the antagonist muscles. With AC stretching, the target muscles to be relaxed and stretched are the antagonists of the joint action that the client is actively creating.

When the client begins the AC stretch protocol by actively moving the body part in one direction, the stretch of the target muscles on the opposite side of the joint has already begun because the joint movement lengthens them. At the same time, the target muscles are being relaxed by the RI reflex, which allows them to then be stretched farther by the therapist. This is done by passively moving the client's body part farther in the same direction that the client has already moved it. It is customary to hold the stretch for 1 to 2 seconds and then repeat the procedure approximately 8 to 10 times. AC stretching is the basis for the stretching technique known as **active isolated stretching (AIS)**, which was developed by Aaron Mattes.

Note that, as explained in earlier chapters, the hand that performs the stretch on the client is known as the **treatment hand** or **stretching hand**, while the other hand that stabilizes the client's pelvis or trunk is the **stabilization hand**.

OVERVIEW OF TECHNIQUE

If the neurologic reflex of RI is the science of AC stretching, then the art of AC stretching lies in how the protocol is carried out. The following is an overview of the AC stretching technique protocol using the right hamstring muscle group as the target muscles being stretched. The overview describes **assisted AC stretching**, in which the client is stretched with the assistance of a therapist. However, it is often possible for a client to perform **unassisted AC stretching** without a therapist. For more on unassisted AC stretching, please see Chapter 11 (available online at thePoint.lww.com).

8.1 THERAPIST TIP

Communicating with the Client

As with CR stretching, AC stretching involves a number of steps and utilizes a specific breathing pattern. For these reasons, it is best to practice it before using it with clients. For clients who have never done AC stretching, it is also helpful to give a brief overview of the protocol before performing it. Explain that the client will need first to actively move the body part you are working on, and then relax as you move/stretch the body farther and then bring it back to the starting position. You should also describe the breathing protocol and let the client know approximately how many repetitions you will perform. This will allow the client to give you informed verbal consent before beginning the technique and also help the client to carry out the AC protocol more easily once you begin.

Starting Position:

- The client is supine and positioned as far to the right side of the table as possible; you are standing at the right side of the table (Fig. 8-1).
- When the client begins the AC protocol, he will flex his right thigh at the hip joint, so it is important to not lean over the table or you might be hit by the movement of the client's thigh. Having said that, it is important to be close so that you can immediately lean in to both stretch the client's thigh and stabilize the client's pelvis.

Step 1: Client Contraction and Stretch:

- Have the client perform active concentric contraction of the flexors of the right thigh at the hip joint, bringing the thigh into flexion as far as is comfortably possible; it is important that the client maintains his knee joint in full extension.

Figure 8-1 Starting position for AC stretching of the right hamstring group.

Figure 8-2 Step 1: Client contraction and stretch. Therapist steps in quickly to stabilize the pelvis and to be in position for Step 2, to further stretch the client.

- As the client begins to flex the right thigh up into the air, you need to lean in and position yourself to stabilize the client's pelvis by placing your right hand on the distal anterior surface of the client's left thigh (Fig. 8-2). It is important to make sure that the client's pelvis is stabilized before the client reaches the end of thigh flexion; otherwise, the pelvis will move into posterior tilt, and the stretch of the right hamstrings will be lessened.
- An alternate contact to stabilize the client's pelvis is to use your right knee (Fig. 8-3).
- It is also important to lean in quickly so that you can make sure that the client's right knee joint remains extended and also to be in position to further stretch the client during the next step of the routine.
- The client flexing the right thigh begins the stretch of the target muscles (the hamstrings) and also engages the RI reflex, relaxing the target muscles that are antagonistic to the joint action.
- The breathing protocol for this step is to have the client exhale while actively moving the thigh.

Figure 8-3 Alternate stabilization contact.

If the client contracts too forcefully or too suddenly, a pulled or torn muscle is possible.

Advise the client to initiate the muscle contraction in a smooth and gradual manner. Further, when maintaining the client's knee joint in extension, be sure to not force the client's knee joint into hyperextension.

8.2 THERAPIST TIP

Stabilizing the Client's Pelvis

As discussed in Chapter 7, when stretching musculature that crosses the client's hip joint, the thigh is moved and the pelvis must be stabilized. To stabilize the pelvis, the direction of the stabilization pressure must be opposite of how the pelvis would have moved. Stretching the right hamstrings would pull the pelvis into posterior tilt, which would cause the client's left thigh to lift from the table. Therefore, you stabilize the client's pelvis by placing your stabilization contact (right hand or right knee) on the anterior surface of his left thigh.

Step 2: Further Stretch of Client:

- From the position achieved at the end of step 1, the client relaxes while you passively move the client's thigh farther into flexion (maintaining the client's knee joint in extension), causing an even greater stretch of the right hamstring (target) muscles (Fig. 8-4).
- Hold the position of stretch for approximately 1 to 2 seconds.
- Your stabilization contact continues to hold down the client's left thigh so that his pelvis does not posteriorly tilt during the stretch.
- The breathing protocol for the client for this step is to finish exhaling.

8.3 THERAPIST TIP

Using Your Core

The advantages of working with the elbows tucked into the core have already been discussed in Chapters 4, 6, and 7. Although the position may seem uncomfortable at first, the effort is well worthwhile because it permits you to use your core strength for both your stabilization and treatment hands. For overweight therapists and large-breasted female therapists, if it is difficult to tuck the elbows in front of your body, the closer to the front of your core you can place them, the better. If you find that it is difficult to get both of your elbows in front, then focus on getting in front the one that will be exerting the most effort. With some clients and some stretches, this may be the treatment hand; with other clients, it may be the stabilization hand. Consciously laterally rotating your arms at the glenohumeral joints helps you to keep your elbows in. Once you have practiced the position for a little while, it will come naturally.

Step 3: Passively Return the Client to Starting Position:

- The client remains relaxed as you support and move the thigh passively back to the starting position (Fig. 8-5).
- The breathing protocol for this step is for the client to inhale in order to be ready to begin exhaling for the next repetition.

Further Repetitions:

- Repeat steps 1, 2, and 3 until you have performed a total of approximately 8 to 10 repetitions.
- With each successive repetition, you can add slightly more pressure to the stretch.
- At the end of the last repetition, you may choose to hold the stretch for a longer period, 5 to 20 seconds or more.

Figure 8-4 Step 2: Further stretch of client.

Figure 8-5 Passively return client to starting position.

8.1 PRACTICAL APPLICATION

Multiplane Stretching of the Hamstrings

The AC stretching protocol for the hamstring group can be transitioned to become a multiplane stretch by simply adding in a transverse plane rotation component or a frontal plane abduction/adduction component, or both. Each additional transverse or frontal plane component will focus the stretch toward specific fibers of the hamstring musculature. For more on multiplane stretching, see Chapter 6. The accompanying figure demonstrates the position of the stretch at the end of step 1 if the client flexes, abducts, and laterally rotates the thigh instead of performing pure flexion. ***Note**: Caution should be exercised when stretching the client's thigh into flexion and adduction and/or medial rotation, especially for clients who have had a hip replacement.*

PERFORMING THE TECHNIQUE

When performing AC stretching, it is important to keep the following guidelines in mind. Each point addresses a specific aspect of the AC stretching technique. Understanding and applying these guidelines will aid in more effectively performing AC stretches.

8.1 Client Positioning

Any musculature can be stretched with the AC stretching technique. However, the client is usually positioned such that his or her contraction in step 1 is upward against gravity or at least horizontal and therefore gravity neutral. If the client's motion in step 1 of the protocol is downward, gravity will likely create the motion instead of the "agonist" musculature contracting to create it; if the agonist musculature does not contract, then the RI reflex will not be engaged, and the AC technique will not be successful. For this reason, it can be more challenging to transition a stretch to the AC technique than the CR technique. Gravity, and therefore client positioning, is irrelevant with the CR technique because the therapist provides the resistance for the client's contraction, whereas AC stretching requires the consideration of gravity, so most AC protocols position the client so that the contraction and motion are up against gravity.

8.2 Starting Position: Return to Neutral Starting Position

When AC stretching is done for the right hamstrings, the starting position of the client's thigh for each repetition is neutral anatomic position. With some AC stretching routines, it is possible to start a successive repetition from a position in which the client's body part (thigh, pelvis, or low back) is not fully back to neutral anatomic position. What is important is that there is a range of motion through which the client can move the body part. This concept is true for all AC stretches.

8.4 THERAPIST TIP

Starting Position

Unlike CR stretching (see Chapter 7), each successive repetition of AC stretching does not start from the position of stretch attained with the previous repetition. Instead, the client is returned back to the same or approximately the same starting position for every repetition.

8.3 Client Contraction: Concentric and Active

With AC stretching, it is crucially important that it is the client's own muscle effort that concentrically contracts and actively moves the body part through the range of motion. While your hand may be on the client's body part to further the stretch at the end of the client's active movement, you must be sure to not actually move the client passively. It can be very helpful for your hand to guide the direction of the client's motion, but if the client is moved passively and does not actually contract the agonist musculature, the RI reflex will not be engaged.

8.4 Protocol: Make It Dynamic

AC stretching tends to be performed in a very dynamic manner, with the stretch held statically for only 1 to 2 seconds during each repetition. It should take no more than 3 to 5 seconds total to complete an entire repetition of the client's actively moving, being further stretched, and then having the thigh (or pelvis/low back) moved back to the starting position. Keeping each repetition short allows for a greater number of repetitions to be performed.

8.5 THERAPIST TIP

Hold the Last Repetition

The principle known as **creep** accounts for the fact that stretched tissues adapt to their newly stretched length better if held for a sustained period. You can take advantage of this when stretching a client. At the end of the last repetition of the AC stretching protocol for a target muscle or muscle group, you may want to hold the position of the stretch for a longer period, perhaps 5 to 20 seconds or more.

8.5 Dynamic Stretching: Benefits

AC stretching offers advantages beyond those of regular passive stretching, thanks to the dynamic nature of the stretch. **Dynamic stretching** involves the client concentrically contracting the musculature of the region and actively moving the joint through a range of motion, with less time spent in a static position. Consequently, local blood circulation to the region is increased, which offers the benefit of bringing needed nutrients to the local tissues as well as draining the waste products of metabolism away from them. Joint movement also helps to lubricate and nourish the joint by promoting greater secretion and movement of the synovial joint fluid as well as by decreasing the formation of adhesions in the fascial planes of the tissues surrounding the joint. It also reinforces neural pathways of motion. Further, the client's active concentric contraction of the agonists of the joint action strengthens these muscles.

8.6 Intensity of Stretch: Increase Gradually

It is crucially important that the intensity of the stretch increases gradually from one repetition to the next. Each repetition should add only a few ounces of pressure, with the client brought only slightly farther into a position of stretch of the target musculature than was achieved with the previous repetition. Stretching a target muscle too fast or too far can trigger the **muscle spindle reflex**, also known as the **stretch reflex**, a neurologic reflex that is protective in nature. The muscle spindle reflex prevents a muscle from being overstretched and possibly torn by ordering it to contract. This will cause a spasm of the target muscle, defeating the purpose of the stretch. Therefore, stretching should always be performed slowly and within the comfort zone of the client. It is important to emphasize that when you begin to feel the client's target tissues offering resistance to your stretch, you should add only a very small additional stretching force. Because there are so many repetitions (8 to 10), the cumulative effect of the AC stretching technique results in a great stretch of the target musculature.

8.7 Hand Placement: Treatment Hand

When performing the AC stretching technique, it is important that the placement of your treatment hand is comfortable for the client. To achieve this, offer as broad a contact with your hand as possible so that its pressure against the client is distributed as evenly as possible.

8.8 Hand Placement: Stabilization Hand

The position of your stabilization hand (or other stabilization contact) is also crucial. Without it, the client's pelvis and/or trunk would often move in such a manner as to lose the stretch of the target musculature. As with your treatment hand, placement of your stabilization hand should also be comfortable for the client and offer as broad a contact as possible. When performing AC stretching of the hamstring group, it is necessary to remove the stabilization contact with each repetition to get out of the way and make room for the client's thigh to move. However, even when it is not necessary for you to remove the stabilization hand for this reason,

it is still usually necessary to remove the stabilization hand from its stabilization position to assist the treatment hand in supporting and returning the client's body part back to the starting position (step 3) for the next repetition.

The placement of the treatment and stabilization hands often requires your wrist joint to be extended. For the health of your wrists, your point of contact through which pressure is transmitted into the client should be the heel of your hand (the carpal region). If you direct the pressure through your palm or fingers, you may hyperextend and injure your wrist. Given how vulnerable the wrist joint can be, proper biomechanical positioning of the hand/wrist is crucially important.

8.9 Breathing

The usual breathing protocol for AC stretching is to have the client exhale while actively moving the body part. A mnemonic device that can help you remember the breathing protocol is "*e*xhale on *e*xertion" because both begin with the letter "e." Having the client exhale when actively contracting the agonist muscles to create the joint action also works very well logistically when AC stretching is combined with the CR stretching technique to perform contract relax agonist contract (CRAC) stretching (see Chapter 9).

The client usually completes the exhalation as the target musculature is relaxed and you stretch it; the client then inhales as you return the client to the starting position for the next repetition. If the client has already completed the exhalation while contracting and moving, the client can begin the inhalation when relaxing and being further stretched and then complete the inhalation while being returned to the starting position for the next repetition. What is most important is that the client has completed inhaling once you return him or her to the starting position in order to be ready to exhale again during the exertion and movement of the next repetition. If you find that the client has not exhaled completely when a repetition is finished, perhaps the client is inhaling too deeply. The inhalation at the beginning of each repetition should not be too deep.

It often takes a little while for the client to become accustomed to the AC stretching breathing protocol. However, once the client is comfortable and familiar with the breathing protocol, the repetitions proceed smoothly.

8.10 Flow of Repetitions

As mentioned previously, an entire repetition, consisting of client movement, further stretch, and return to the starting position to be ready to begin the next repetition, should take only 3 to 5 seconds. The means that a set of 10 repetitions can be accomplished in less than 1 minute. To help ensure that an AC repetition is performed within a time frame of 3 to 5 seconds, it is important to begin each successive repetition immediately at the conclusion of the previous repetition. This is a point at which time is often wasted. As soon as you return a client back to the starting position at the end of a repetition, the client should learn to begin his or her active movement immediately for the next repetition without your having to repeat the instruction every time.

8.6 THERAPIST TIP

Pace Yourself

Accomplishing an AC repetition within the recommended 3 to 5 seconds can be difficult for the therapist and/or client who are first learning and practicing the technique. As a result, therapists and clients often feel rushed when AC stretching is first introduced. Although AC stretching is usually performed at a moderate pace, it should never feel rushed to the therapist or the client. Having a sense of urgency is likely to cause anxiety and result in the client's tightening up, which is counterproductive to effective stretching. As you are first learning the technique, take a little more time if needed to perform each repetition until you have gained a sense of proficiency.

8.11 Direction of Stretch

When AC stretching is performed, the client's motion can be carried out in a cardinal plane or in an oblique plane. The three cardinal planes are the sagittal, frontal, and transverse planes. An oblique plane is any plane that is not perfectly sagittal, frontal, or transverse; in other words, it has a component of two or three cardinal planes (see Fig. 1-8 in Chapter 1 for a review of planes). This chapter presents cardinal plane AC stretches in the routines, with numerous multiplane/oblique AC stretches discussed and demonstrated in Practical Application boxes.

8.12 Electric Lift Table

As discussed in Chapters 6 and 7, when stretching the low back and pelvis/hip joint, the value of an electric lift table for optimal body mechanics cannot be overstated. Most AC routines for the low back and pelvis/hip joint require the table to be low. If the table was higher for the performance of other manual therapy techniques, having an electric lift table so that table height can be easily adjusted for AC stretching is essential for efficient clinical orthopedic work.

ROUTINES

AGONIST CONTRACT ROUTINES

The routines that follow demonstrate 13 different applications of AC stretching to the low back and pelvis/hip joint. They are organized according to the functional groups of muscles being stretched. The routine for the hamstring hip joint extensors has already been shown in the "Overview of Technique" section. For all the other routines, the following steps are explained and illustrated: client contraction and stretch, further stretch of client, and passively return client to starting position. An explanation is then given on how to perform further repetitions.

8.2 PRACTICAL APPLICATION

Agonist Contract Multiplane Stretching Routines

The chapter explains how to perform the AC stretching technique and then presents the technique applied to each of the major functional groups of muscles of the LSp and pelvis/hip joint. However, the AC technique can be applied to any stretch, including the multiplane stretches presented in Chapter 6. A number of multiplane stretches for the AC routines of this chapter are presented in Practical Application boxes that follow the AC stretching routine steps. However, it should be kept in mind that just as with CR stretching, any musculature, including musculature that needs to be stretched across multiple planes (multiplane stretching), can be stretched with the AC technique. What is required to transition a stretch to the AC stretching technique is to consider the relationship with gravity so that the agonist musculature contracts when the motion in step 1 is done and then to add in the protocol steps involved with the AC technique.

SECTION 1: LUMBAR SPINE AGONIST CONTRACT ROUTINES

AC stretches of the LSp can be performed in two ways. One method is to stabilize the client's pelvis and move the upper trunk downward toward the pelvis, thereby stretching the LSp. This method begins the stretch of the LSp superiorly, and as the stretching force is increased and the LSp is increasingly moved downward, the stretch moves into the lower LSp. The second method is to stabilize the client's upper trunk and move the pelvis and lower LSp upward toward the thoracic trunk. This method begins the stretch of the LSp inferiorly, and as the stretching force is increased and the pelvis and lower spine are increasingly moved upward, the stretch moves into the upper LSp.

The following AC stretching routines for the LSp are presented in this chapter:

- Routine 8-1—LSp extensors
- Routine 8-2—LSp flexors
- Routine 8-3—LSp right lateral flexors
- Routine 8-4—LSp left lateral flexors
- Routine 8-5—LSp right rotators
- Routine 8-6—LSp left rotators

8.7 THERAPIST TIP

Stretching the Thoracic Spine

Some of the lumbar AC stretching routines presented in this chapter spread their line of tension into the thoracic spine and therefore also stretch this region. These tend to be the stretches that move the upper trunk down toward the lower trunk and pelvis. Even if a lumbar AC stretching routine does not necessarily stretch the thoracic spine, it can be transitioned to do this by altering the movement and/or stabilization so that the line of tension of the stretch enters the thoracic region. These tend to be the stretches that move the thigh, pelvis, and lower LSp up toward the upper LSp. If the upper LSp is allowed to leave the table, the stretching force will move up into the thoracic region.

ROUTINE 8-1: LUMBAR SPINE EXTENSORS

Figure 8-6 shows the functional group of muscles that extend the LSp. These muscles are located on the posterior side of the trunk in the lumbar region. The AC stretching routine presented here is essentially the double knee-to-chest stretch that is presented in Chapter 11 (Self-Care Routine 11-6; available online at thePoint.lww.com), with the AC stretching protocol added.

The Lumbar Spine Extensor Functional Group
This functional group comprises the following muscles bilaterally:
Erector spinae group
Transversospinalis group
Quadratus lumborum

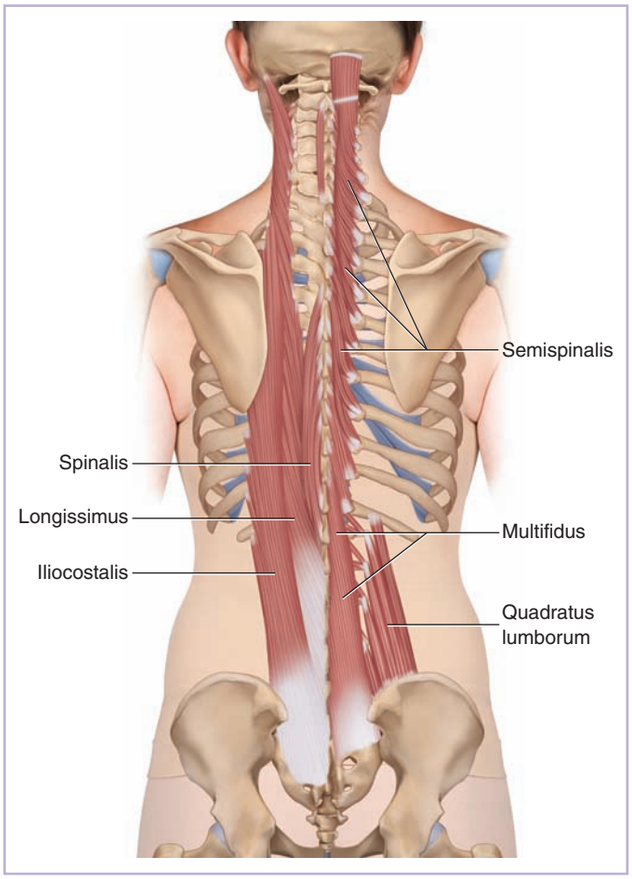


Figure 8-6

Starting Position:

- The client is supine toward the right side of the table with the hip and knee joints flexed. You are standing on the right side of the table (Fig. 8-7A).

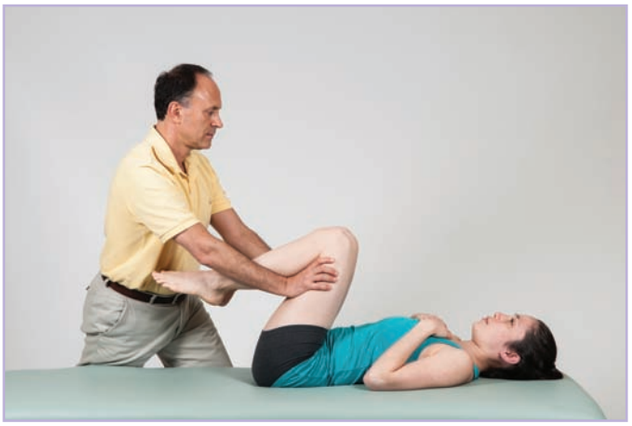


Figure 8-7A

- *Note*: The stretching routine could also be performed from the other (left) side of the table. Simply reverse the positioning of your lower extremities.
- Both of your hands are treatment hands and are placed on the distal posterior surface of the client's thighs.
- The client's upper trunk is stabilized by body weight and contact with the table. *Note*: The client's upper trunk is also stabilized by the direction that you push on her thighs when performing the stretch.
- An alternative position is for you to have your left foot on the floor, and your right lower extremity positioned on the table to be in line with the force of the stroke. The client can also place her feet on your clavicle (Fig. 8-7B).

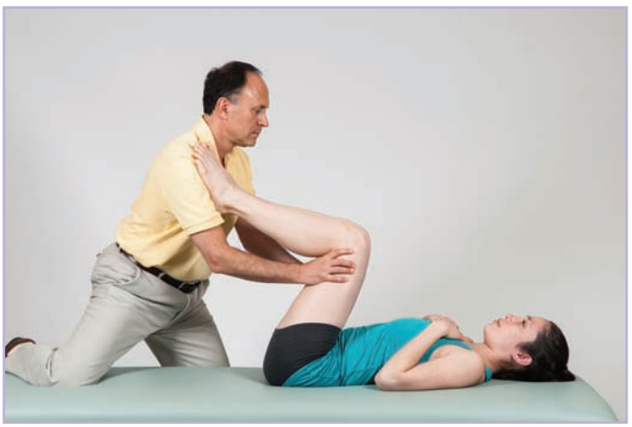


Figure 8-7B

Step 1: Client Contraction and Stretch:

- Begin by asking the client to actively bring her knees toward her chest (move the pelvis into posterior tilt and the LSp into flexion) as far as is comfortable.
- This begins the stretch of the lumbar extensor muscles (target muscle group) (Fig. 8-8A).

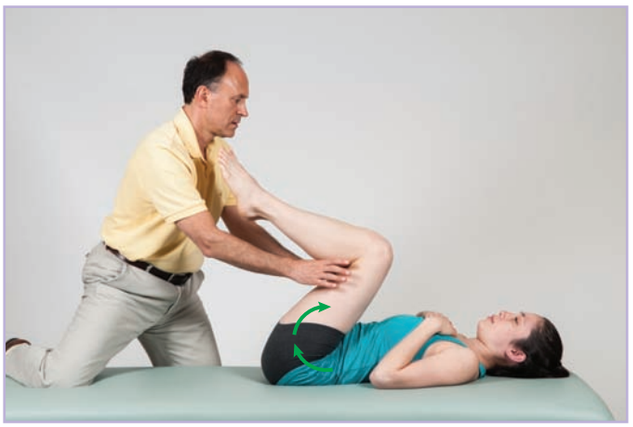


Figure 8-8A

Step 2: Further Stretch of Client:

- Once the position of stretch at the end of step 1 is reached, the client relaxes, and you further stretch the client's target extensor musculature by gently moving the client's pelvis and trunk farther into flexion until you meet tissue resistance (Fig. 8-8B).

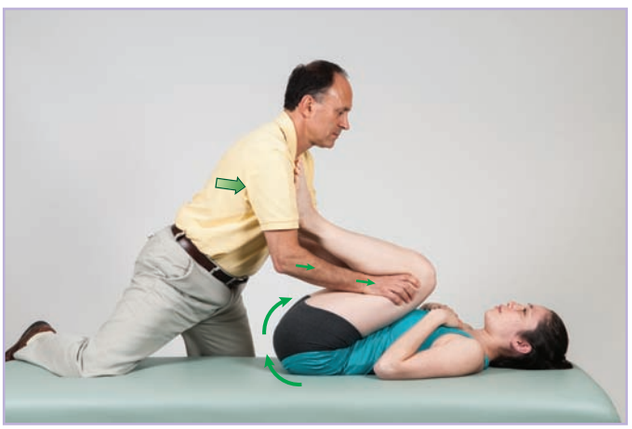


Figure 8-8B

- Hold the position of stretch for 1 to 2 seconds.
- *Note*: To maintain stabilization of the client's trunk on the table, be sure to not press the client's thighs too horizontally (parallel with table) because that would cause her trunk to excessively lift from the table, moving the stretch into the thoracic region, thereby losing the stretch in the lumbar region. It is important to press her thighs somewhat downward toward her chest.

Step 3: Passively Return Client to Starting Position:

- Once you have completed step 2, the client remains relaxed as you support and passively bring her trunk and pelvis back to the starting position.
- When you are bringing the trunk and pelvis back down to the table, it is important that you support the client comfortably but securely so that the client feels safe enough to relax her body weight into your hands, allowing you to move the client passively (Fig. 8-8C).

Figure 8-8C

Further Repetitions:

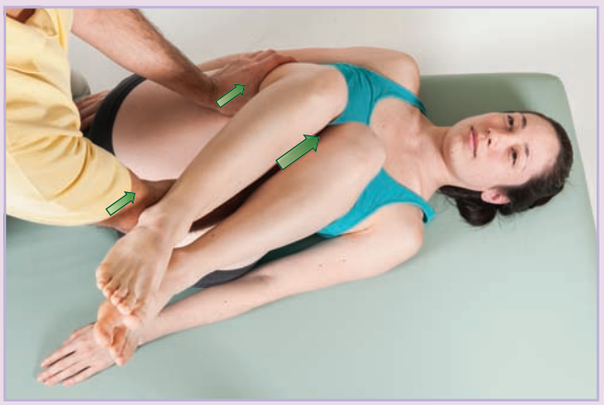
- Repeat this procedure for each repetition.
- With each successive repetition, you can add slightly more pressure to the stretch.
- At the end of the last repetition (usually 8 to 10 repetitions are done), you may choose to hold the position of stretch for a longer period, 5 to 20 seconds or more.
- Note that the breathing protocol is for the client to exhale when concentrically contracting.
- The client continues exhaling as the target musculature is relaxed and you stretch it, and then inhales as you return the client to the starting position for the next repetition.

8.3 PRACTICAL APPLICATION

Multiplane Stretching of the Lumbar Spine Extensors

The AC stretching protocol for the LSp extensors can be transitioned into a multiplane stretch. Instead of having the client bring her knees directly up toward the chest (perfectly in the sagittal plane), ask the client to bring her knees up toward the chest and deviate toward one side of the body. This will add rotation of the pelvis and lower LSp to the same side as the knees were deviated (which is rotation of the upper LSp to the opposite side of the body). This could then be performed in the other direction as well. To add lateral flexion to the stretch, simply begin the client's supine starting position with the client's LSp laterally flexed to one side **(Fig. A)**. Have the client maintain that lateral flexion as the knees are brought up to the chest **(Fig. B)**.

A



B

ROUTINE 8-2: LUMBAR SPINE FLEXORS

Figure 8-9 shows the functional group of muscles that flex the LSp. These muscles are often described as muscles of the anterior abdominal wall and are located on the anterior side of the trunk in the lumbar region. Although it is not often necessary to stretch the client's anterior abdominal wall, when it is indicated, it is important to know how to effectively accomplish this. The following AC stretch involves the therapist climbing onto the table. For more on stretching the LSp flexor group, including alternative positioning, see Routine 6-4. *Note*: Using the client's upper body to stretch the LSp into extension will also stretch the thoracic spine into extension as well.

The Lumbar Spine Flexor Functional Group
This functional group comprises the following muscles bilaterally:
Rectus abdominis
External abdominal oblique
Internal abdominal oblique
Psoas major
Psoas minor

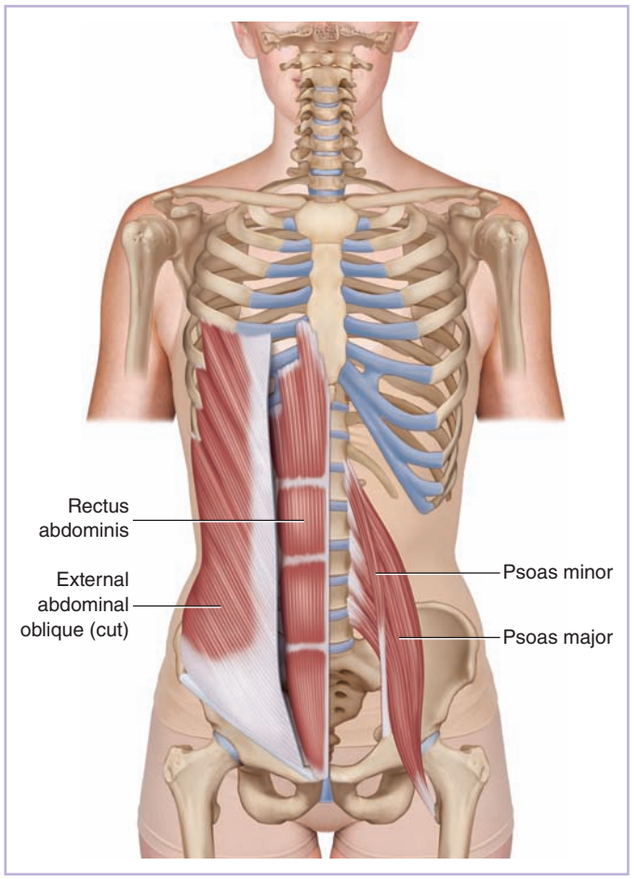


Figure 8-9 *Note*: The internal abdominal oblique is not seen.

Starting Position:

- The client is prone with her hands clasped behind her head. You are seated on the client's buttocks. Note the placement of the cushion for client and therapist modesty and comfort (Fig. 8-10).

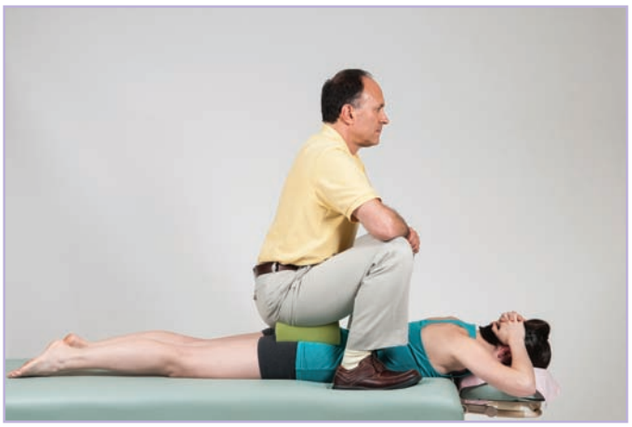


Figure 8-10

- Both of your hands are treatment hands.
- The client's pelvis is stabilized by your body weight.
- Alternative positions that do not involve sitting on the client's buttocks are shown in Chapter 6, Figures 6-18 and 6-19.

Caution must be exercised when performing these stretches for the anterior abdominal wall.

- *Bringing the client's LSp into extension approximates the facet joints and narrows the intervertebral foramina and is therefore contraindicated if the client has facet syndrome or a space-occupying lesion, such as pathologic disc or a large bone spur.*
- *The client's glenohumeral joints must be healthy enough to reach behind him or her and have a pulling force placed through them.*
- *How you position your body weight on the client's buttocks is important. If you sit too far superiorly on the pelvis, it can push it into anterior tilt, increasing the client's lumbar lordosis. If you sit too far inferiorly, the pelvis will not be securely stabilized.*

Step 1: Client Contraction and Stretch:

- Begin by asking the client to actively bring her trunk up into the air (move the trunk into extension) as far as is comfortable.
- This begins the stretch of the lumbar flexor muscles (target muscle group) (Fig. 8-11A).

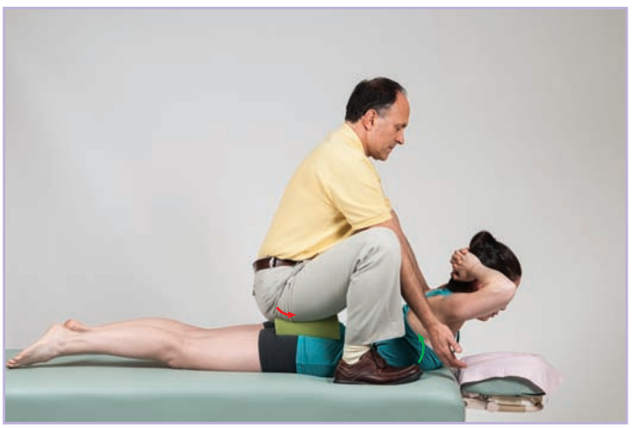


Figure 8-11A

Step 2: Further Stretch of Client:

- Once the position of stretch at the end of step 1 is reached, the client relaxes, and you further stretch the client's target flexor musculature by gently pulling up on the client's arms, bringing the trunk farther into extension until you meet tissue resistance (Fig. 8-11B).
- Hold the position of stretch for 1 to 2 seconds.

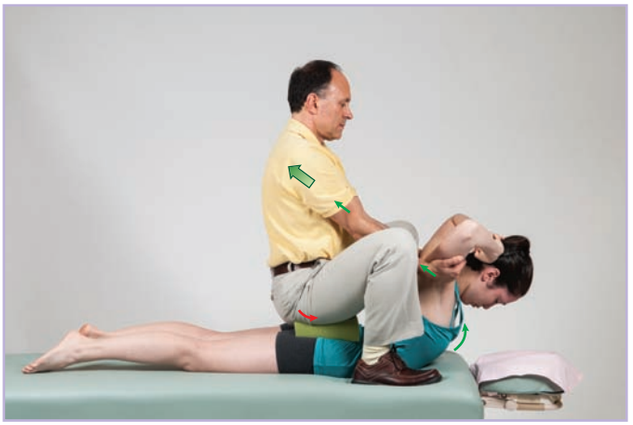


Figure 8-11B

8.8 THERAPIST TIP

Lean Back with Your Core

For better body mechanics, when stretching the client's trunk into extension, be sure to do this by leaning back with your core body weight instead of using your upper extremity musculature.

Step 3: Passively Return Client to Starting Position:

- Once you have completed step 2, the client remains relaxed as you support and passively bring her trunk back down onto the table to the starting position.
- When you are bringing the trunk back down to the table, it is important that you support the client comfortably but securely so that the client feels safe enough to relax her body weight into your hands, allowing you to move the client passively (Fig. 8-11C).

Figure 8-11C

Further Repetitions:

- Repeat this procedure for each repetition.
- With each successive repetition, you can add slightly more pressure to the stretch.
- At the end of the last repetition (usually 8 to 10 repetitions are done), you may choose to hold the position of stretch for a longer period, 5 to 20 seconds or more.
- Note that the breathing protocol is for the client to exhale when concentrically contracting.
- The client continues exhaling as the target musculature is relaxed and you stretch it, and then inhales as you return the client to the starting position for the next repetition.

8.4 PRACTICAL APPLICATION

Multiplane Stretching of the Lumbar Spine Flexors

The AC stretching protocol for the LSp flexors can be transitioned into a multiplane stretch. Instead of having the client lift her trunk directly up in the sagittal plane, ask the client to lift up to one side. Depending on how the client is instructed to move, a frontal plane lateral flexion component to one side can be added, a transverse plane rotation component can be added, or both frontal and transverse plane components can be added (see figure). This could then be performed for movement into the other lateral flexion. ***Note**: Caution should always be exercised when rotating and/or extending the client's LSp.*

ROUTINE 8-3: LUMBAR SPINE RIGHT LATERAL FLEXORS

Figure 8-12 shows the functional group of muscles that right laterally flex the LSp. These muscles are located on the right side of the trunk in the lumbar region.

The Lumbar Spine Right Lateral Flexor Functional Group
This functional group comprises the following right-sided muscles:
Erector spinae group
Transversospinalis group
Quadratus lumborum
Rectus abdominis
External abdominal oblique
Internal abdominal oblique
Psoas major
Psoas minor

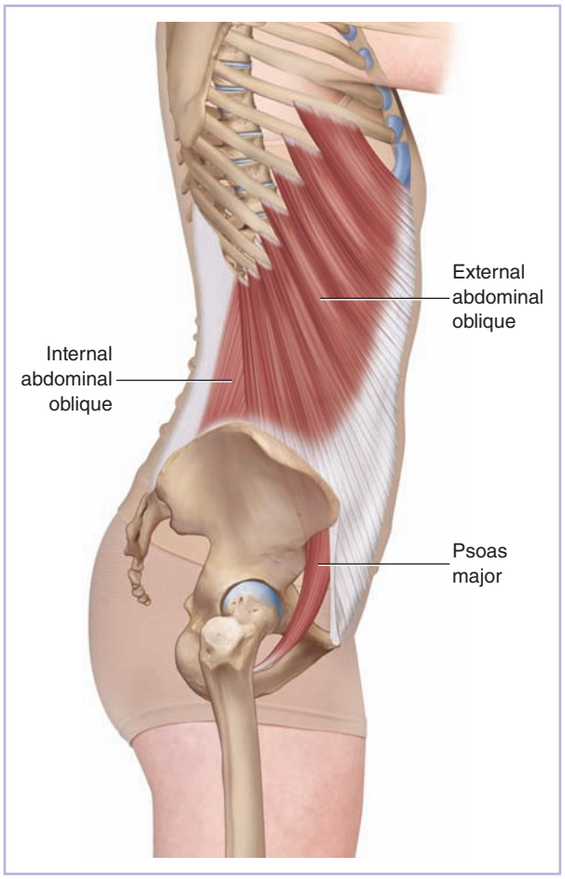


Figure 8-12 *Note*: Not all muscles are seen.

Starting Position:

- Have the client seated at the right end of the table with her arms crossed so that her hands are on the opposite shoulders.
- Stand to the right side of the client.
- Your left hand is the treatment hand and will be placed on the client's right upper trunk.
- Your right hand is the stabilization hand and functions to stabilize the client's pelvis. It is placed across the top of the client's right iliac crest or on the anterior surface of the client's proximal right thigh; if desired, a cushion can be used for comfort to broaden the pressure of the stabilization contact (Fig. 8-13).

Figure 8-13

Step 1: Client Contraction and Stretch:

- Begin by asking the client to actively side bend her trunk down to the left (move the trunk into left lateral flexion) as far as is comfortable. To focus this stretch to the LSp, the client should try to initiate the movement from the low back and not the upper back.
- *Note*: It is important that the client actively contracts her left lateral flexors to move her trunk down to the left; she should not relax and let gravity move her.
- This begins the stretch of the lumbar right lateral flexor muscles (target muscle group) (Fig. 8-14A).

Figure 8-14A

Step 2: Further Stretch of Client:

- Once the position of stretch at the end of step 1 is reached, the client relaxes, and you further stretch the client's target right lateral flexor musculature by gently pushing the client farther into left lateral flexion until you meet tissue resistance (Fig. 8-14B).
- Hold the position of stretch for 1 to 2 seconds.

Figure 8-14B

Step 3: Passively Return Client to Starting Position:

- Once you have completed step 2, the client remains relaxed as you support and passively bring her trunk back up to the starting position (Fig. 8-14C).

Figure 8-14C

Further Repetitions:

- Repeat this procedure for each repetition.
- With each successive repetition, you can add slightly more pressure to the stretch.
- At the end of the last repetition (usually 8 to 10 repetitions are done), you may choose to hold the position of stretch for a longer period, 5 to 20 seconds or more.
- Note that the breathing protocol is for the client to exhale when concentrically contracting.
- The client continues exhaling as the target musculature is relaxed and you stretch it, and then inhales as you return the client to the starting position for the next repetition.

8.5 PRACTICAL APPLICATION

Broaden the Stretch to the Thoracic Spine

If you want to broaden the stretch to include the thoracic spine, instead of having the client cross the arms, it is beneficial to have the client place the right arm over her head. When furthering her stretch, contact her right arm instead of her upper trunk.

ROUTINE 8-4: LUMBAR SPINE LEFT LATERAL FLEXORS

Figure 8-15 shows the functional group of muscles that left laterally flexes the LSp. These muscles are located on the left side of the trunk in the lumbar region. To use AC stretching to stretch this functional group of muscles, follow the directions given in Figures 8-13 through 8-14 to stretch the right lateral flexor group but switch for the left side of the body.

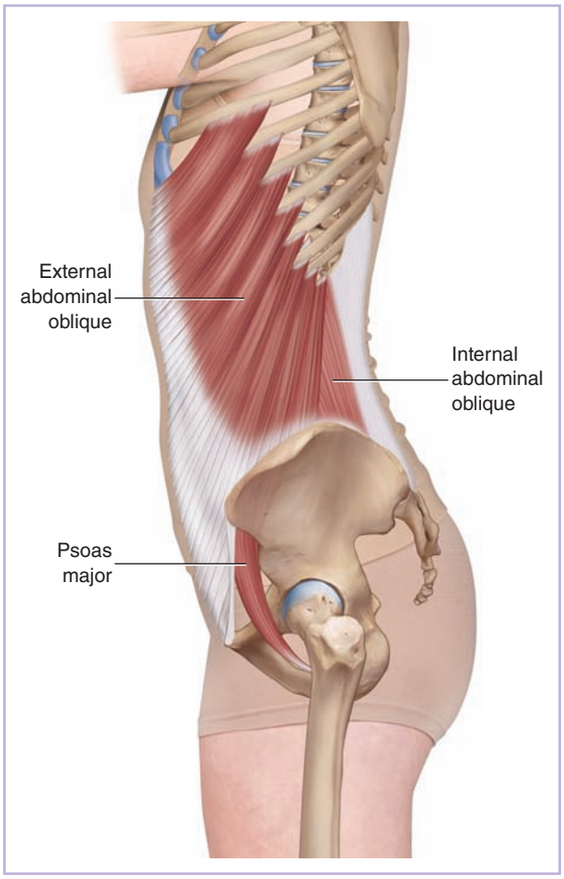


Figure 8-15 *Note*: Not all muscles are seen.

ROUTINE 8-5: LUMBAR SPINE RIGHT ROTATORS

Figure 8-16 shows the functional group of muscles that right rotate the LSp. These muscles are located both anteriorly and posteriorly and on both the right and left sides of the trunk in the lumbar region.

The Lumbar Spine Right Rotator Functional Group
This functional group comprises the following muscles:
Left transversospinalis group
Right erector spinae group
Left external abdominal oblique
Right internal abdominal oblique

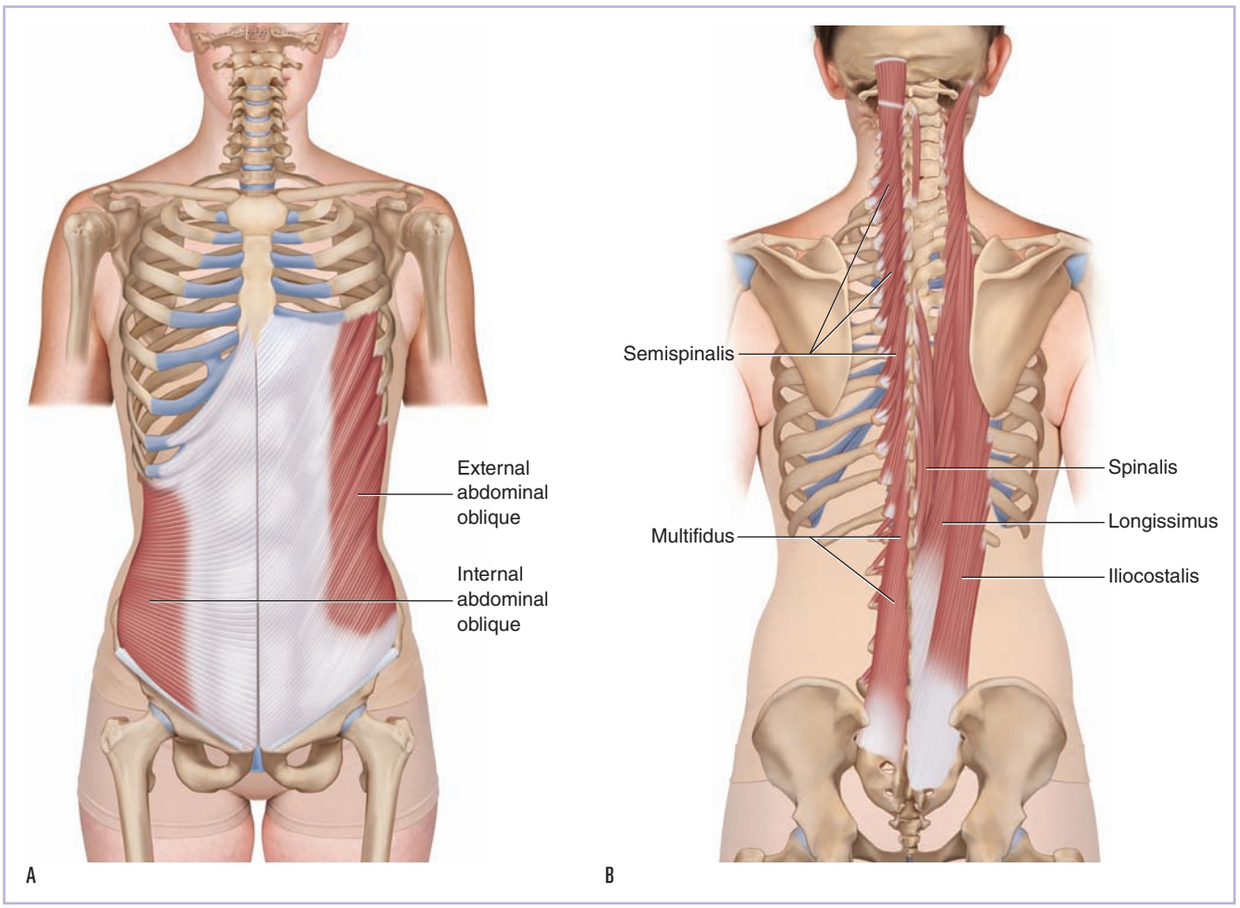


Figure 8-16 **(A)** Anterior view. **(B)** Posterior view.

Starting Position:

- Have the client seated at the right end of the table with her arms crossed so that her hands are on the opposite shoulders, but her arms should be adducted at the glenohumeral joints so that her elbows meet at the center of the body.
- Stand to the right side of the client.
- Your right hand is the treatment hand and will be placed on the client's elbows.
- Your left hand is the stabilization hand and functions to stabilize the client's pelvis. It is placed across the top of the client's right iliac crest or, as with the lateral flexion routines, it can be placed on the anterior surface of the client's proximal right thigh; if desired, a cushion can be used for comfort to broaden the pressure of the stabilization contact (Fig. 8-17).

Figure 8-17

Step 1: Client Contraction and Stretch:

- Begin by asking the client to actively rotate her trunk to the left as far as is comfortable. To focus this stretch to the LSp, the client should try to initiate the movement from the low back and not the upper back.
- This begins the stretch of the lumbar right rotator muscles (target muscle group) (Fig. 8-18A).

Figure 8-18A

Step 2: Further Stretch of Client:

- Once the position of stretch at the end of step 1 is reached, the client relaxes, and you further stretch the client's target right rotator musculature by gently pushing the client farther into left rotation until you meet tissue resistance (Fig. 8-18B).
- Hold the position of stretch for 1 to 2 seconds.

Figure 8-18B

Step 3: Passively Return Client to Starting Position:

- Once you have completed step 2, the client remains relaxed as you support and passively bring her trunk back to the starting position (Fig. 8-18C).

Figure 8-18C

Further Repetitions:

- Repeat this procedure for each repetition.
- With each successive repetition, you can add slightly more pressure to the stretch.
- At the end of the last repetition (usually 8 to 10 repetitions are done), you may choose to hold the position of stretch for a longer period, 5 to 20 seconds or more.
- Note that the breathing protocol is for the client to exhale when concentrically contracting.
- The client continues exhaling as the target musculature is relaxed and you stretch it, and then inhales as you return the client to the starting position for the next repetition.

ROUTINE 8-6: LUMBAR SPINE LEFT ROTATORS

Figure 8-19 shows the functional group of muscles that left rotate the LSp. These muscles are located anteriorly and posteriorly and on both the left and right sides of the trunk in the lumbar region. To use AC stretching to stretch this functional group of muscles, follow the directions given in Figures 8-17 through 8-18 to stretch the right rotator group but switch for the left side of the body.

The Lumbar Spine Left Rotator Functional Group
This functional group comprises the following muscles:
Right transversospinalis group
Left erector spinae group
Right external abdominal oblique
Left internal abdominal oblique

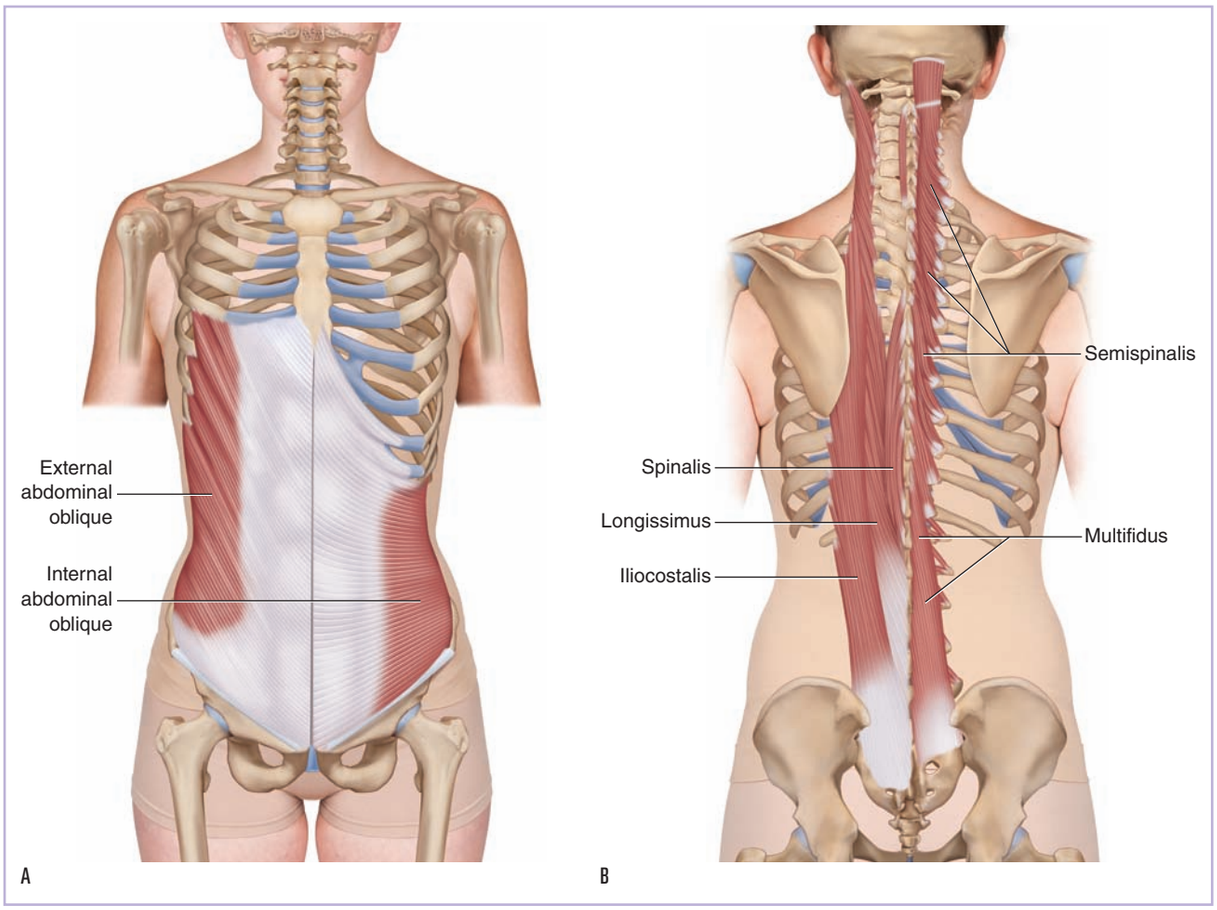
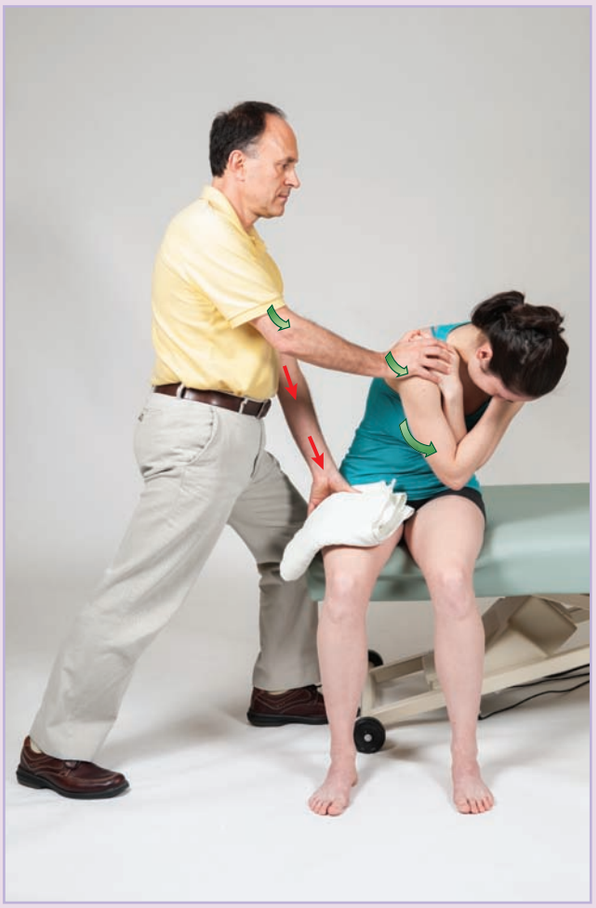


Figure 8-19 (**A**) Anterior view. (**B**) Posterior view.

8.6 PRACTICAL APPLICATION

Multiplane Stretching of the Lumbar Spine Rotators

The AC stretching protocol for the LSp rotators can be transitioned into a multiplane stretch. For a stretch of the right rotators, instead of having the client only left rotate her LSp, ask her to also flex forward in the sagittal plane as she rotates **(Fig. A)** or laterally flex to the left in the frontal plane as she rotates as seen in **Figure B** (lateral flexion to the right could be done instead of left lateral flexion). Because these additional motions are aided by gravity, it is important to ask the client to actively engage musculature when performing these oblique plane motions. As usual for the AC protocol, once the client has relaxed, stretch the client farther into the range of motion being performed. These same multiplane stretches can be done for the left rotators of the LSp.



A

B

SECTION 2: HIP JOINT/PELVIS AGONIST CONTRACT ROUTINES

As a rule, AC stretches to the muscles of the pelvis that cross the hip joint are performed by stabilizing the client's pelvis and moving his or her thigh to create the stretch. For the stretch to be effective, it is extremely important that the pelvis is securely stabilized. Otherwise, the stretching force will enter the LSp. This will not only dissipate the stretching force at the hip joint causing it to lose its effectiveness but might also place a torque (rotary force) into the LSp that can cause pain or injury.

The following AC stretching routines for muscles of the pelvis that cross the hip joint are presented in the chapter:

- Routine 8-7—hip abductors
- Routine 8-8—hip adductors
- Routine 8-9—hip flexors
- Routine 8-10—hip extensors: hamstrings
- Routine 8-11—hip extensors: gluteals
- Routine 8-12—hip deep lateral rotators
- Routine 8-13—hip medial rotators

For most stretches of the client's hip joint musculature presented in this chapter, the leg is shown as the contact for the therapist's stretching/treatment hand. Contacting the leg increases the leverage force, making it easier for the therapist to move the client's thigh to create the stretch. However, if the client's knee joint is unhealthy, the contact should be moved from the leg to the thigh itself so that no force is placed through the knee joint. This can make the performance of the stretch more logistically challenging, especially if the therapist is small and the client is large, but is necessary to preserve the health of the client's knee.

ROUTINE 8-7: HIP ABDUCTORS

Figure 8-20 shows the functional group of muscles that abduct the right thigh at the hip joint. These muscles are located on the lateral side of the pelvis and thigh, crossing the hip joint between them. As with all stretches for hip joint musculature, it is extremely important that the pelvis is securely stabilized. Following is the AC stretching routine shown for the hip abductor functional group on the right side of the body.

The Pelvis/Hip Joint Abductor Functional Group
This functional group comprises the following muscles:
Gluteus medius
Gluteus minimus
Gluteus maximus (upper fibers)
Tensor fasciae latae (TFL)
Sartorius

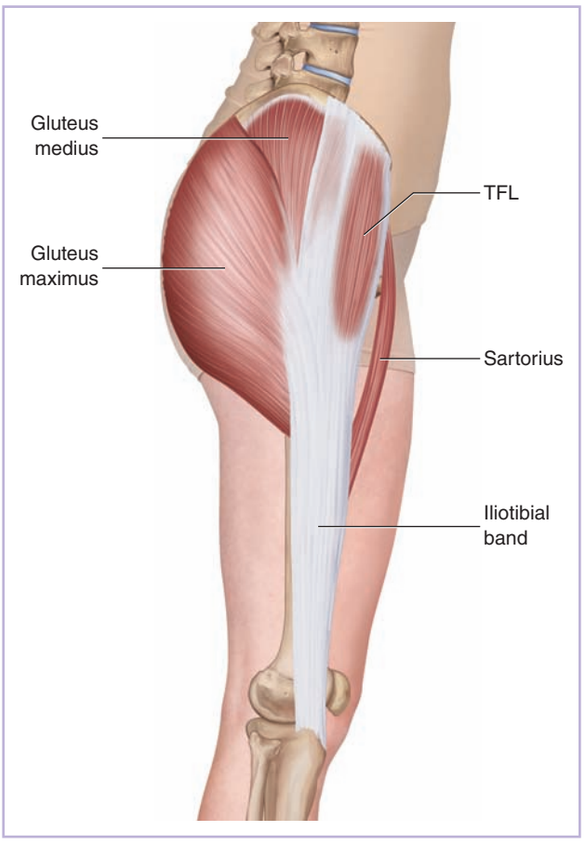


Figure 8-20 *Note*: The gluteus minimus is not seen.

Starting Position:

- Have the client supine toward the left side of the table. Her right thigh is slightly medially rotated at the hip joint, and her right leg is extended at the knee joint. Her left thigh is also slightly medially rotated at the hip joint.
- Stand to the left side of the client.
- Your left hand is the treatment hand and will be placed on the lateral side of the client's right leg.
- Your right hand is the stabilization hand and functions to stabilize the client's pelvis. It is placed on the client's left thigh; holding the client's left thigh in medial rotation improves the pelvic stabilization. A cushion can be used for client comfort (Fig. 8-21).

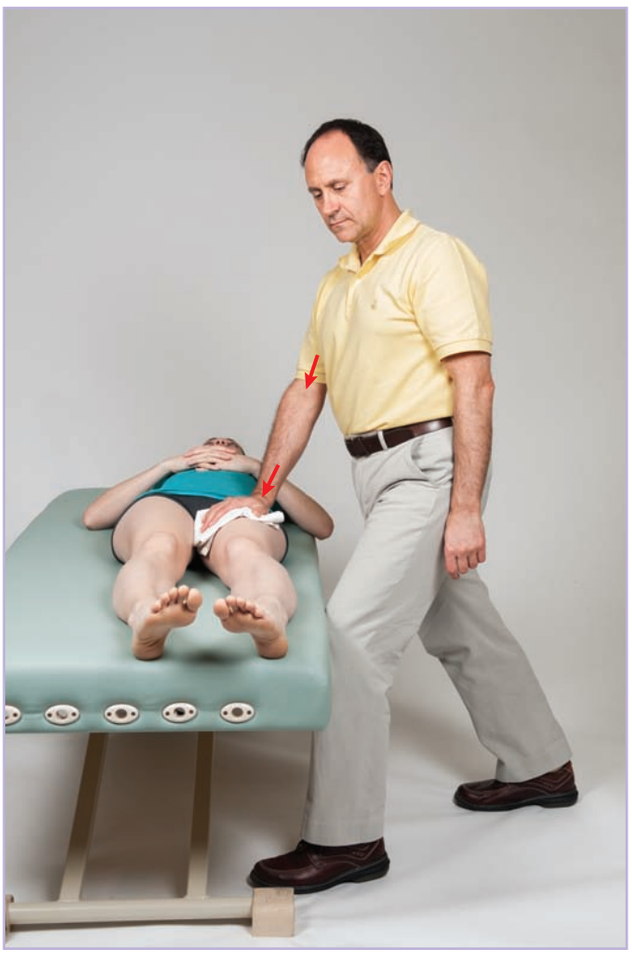


Figure 8-21

8.7 PRACTICAL APPLICATION

Stabilizing the Pelvis

One of the biggest challenges to performing AC stretching of the musculature of the client's hip joint is securely stabilizing the client's pelvis. One extremely efficient way to stabilize the client's pelvis is to use a strap or seat belt that is wrapped around the table and on his or her pelvis, with a cushion used to broaden the pressure for client comfort. See Practical Application Box 6.3.

Step 1: Client Contraction and Stretch:

- Begin by asking the client to actively adduct and slightly flex her right thigh across her body as far as is comfortable.
- This begins the stretch of the right abductor muscles (target muscle group) (Fig. 8-22A).

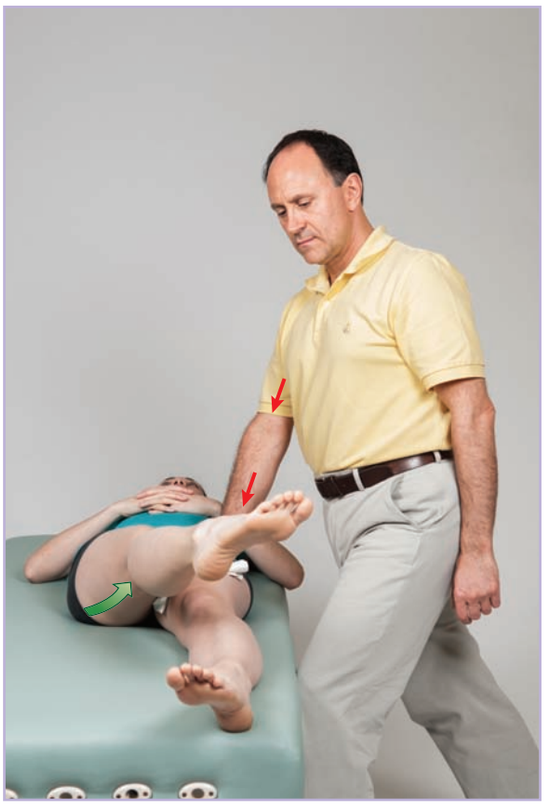


Figure 8-22A

Step 2: Further Stretch of Client:

- Once the position of stretch at the end of step 1 is reached, the client relaxes, and you further stretch the client's target abductor musculature by gently pulling the client farther into adduction until you meet tissue resistance (Fig. 8-22B).
- Hold the position of stretch for 1 to 2 seconds.

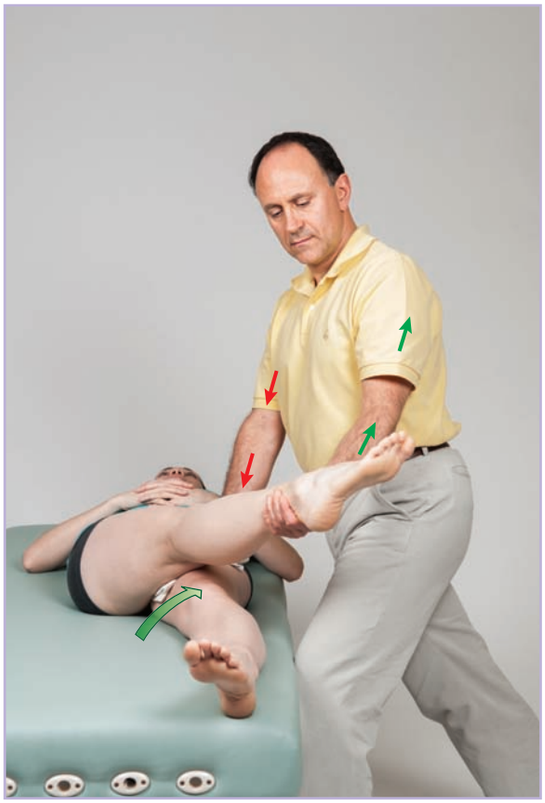


Figure 8-22B

Step 3: Passively Return Client to Starting Position:

- Once you have completed step 2, the client remains relaxed as you support and passively bring her thigh back to the starting position (Fig. 8-22C).

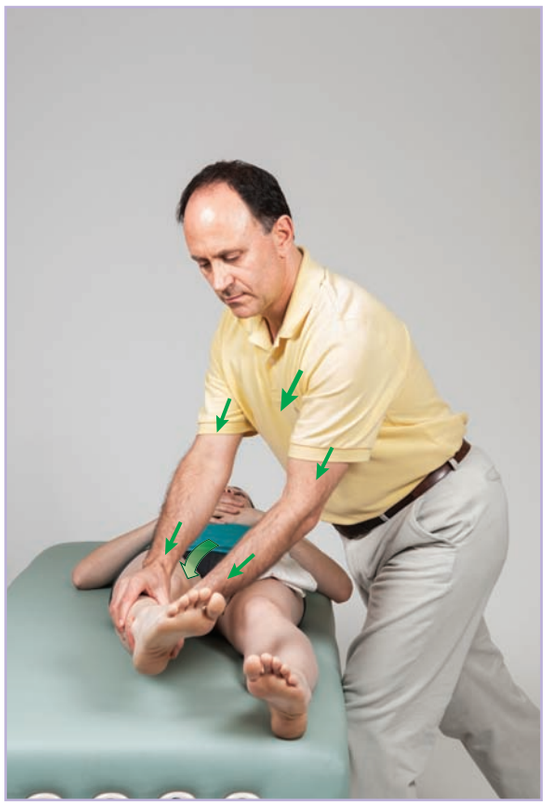


Figure 8-22C

Caution should always be employed with stretches of the hip joint with clients who have hip replacements and/or marked degenerative changes to the hip joint. Extra caution should be employed with stretches into adduction and medial rotation.

Further Repetitions:

- Repeat this procedure for each repetition.
- With each successive repetition, you can add slightly more pressure to the stretch.
- At the end of the last repetition (usually 8 to 10 repetitions are done), you may choose to hold the position of stretch for a longer period, 5 to 20 seconds or more.
- Note that the breathing protocol is for the client to exhale when concentrically contracting.
- The client continues exhaling as the target musculature is relaxed and you stretch it, and then inhales as you return the client to the starting position for the next repetition.
- *Note*: Because the stretch involves flexion of the thigh anteriorly in front of the body, it preferentially stretches the abductors that are also extensors located posteriorly, such as posterior fibers of the gluteus medius and minimus and upper fibers of the gluteus maximus. Medial rotation of the thigh was added because these abductor and extensor muscles are also lateral rotators. Given the multiple planes of movement, this stretching routine is a multiplane stretch.

Left-Side Abductor Group:

- Repeat for the pelvis/hip joint abductor functional group on the left side of the body (Fig. 8-23).

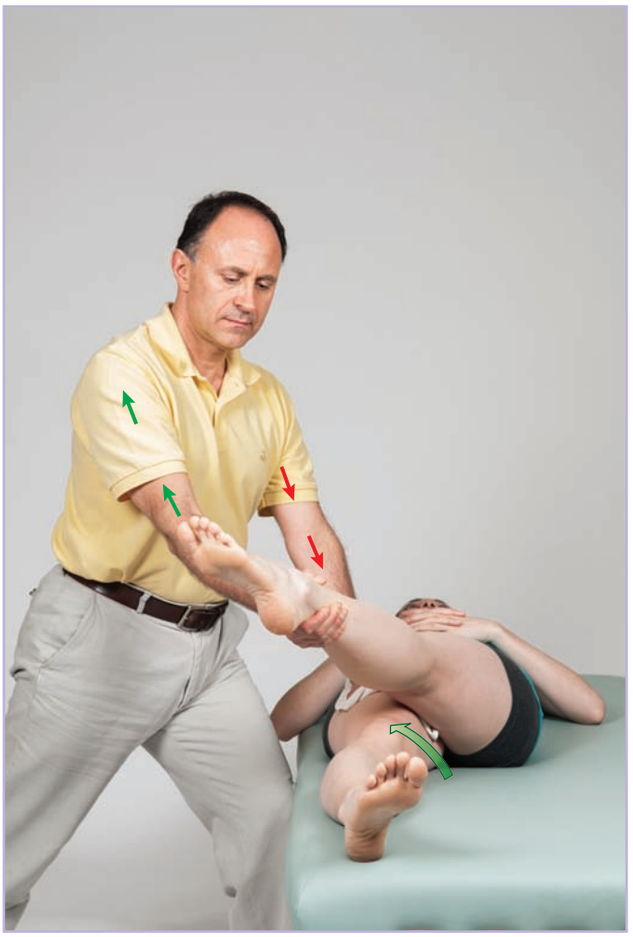


Figure 8-23

8.8 PRACTICAL APPLICATION

Alternate Position for Agonist Contract Stretching of the Hip Abductors

AC stretching of the functional group of hip abductors can also be performed with the client side-lying. Following are the steps to perform the AC stretch for the client's right abductor group:

- Have the client side-lying on her left side with her bottom as close to the back of the table as possible and her left shoulder as far to the opposite side of the table as possible. This positions the client diagonally on the table so that her right thigh can be dropped off the back side of the table into adduction without its path being obstructed by the table.
- Stand behind the client.
- Your right hand is the treatment hand and will be placed on the lateral surface of the client's distal right thigh.
- Your left hand is the stabilization hand and is placed on the client's pelvis just inferior to the iliac crest. It is important to press on the iliac crest with your force directed upward toward elevation of the pelvis on that side. Otherwise, the right-side pelvic bone will depress, and the stretch at the hip joint will be lost. Note placement of a cushion to broaden the pressure of the stabilization force on the iliac crest **(Fig. A)**.
- Now ask the client to actively adduct her right thigh down toward the floor. Because gravity aids the movement, it is important to emphasize to the client that adductor muscular effort must be used to move her thigh **(Fig. B)**.
- At the end of the range of motion, the client relaxes, and you further stretch the abductors by pushing the client's thigh farther into adduction toward the floor **(Fig. C)**.
- You then passively bring the client's thigh back to the starting position for further repetitions.

continued

8.8 PRACTICAL APPLICATION *(continued)*

- The breathing protocol follows the usual pattern for AC stretching.
- Because the stretch involves extension of the thigh posteriorly behind the body, it preferentially stretches the abductors that are also flexors located anteriorly. Given that most of these anteriorly placed abductors are also medial rotators, if the client's thigh can be held in lateral rotation during the protocol, it will increase the effectiveness of the stretch.
- *Note*: The stretch is essentially identical to the stretch shown for CR stretching of the abductor musculature in Chapter 7 (see Routine 7-7).

A

B

C

ROUTINE 8-8: HIP ADDUCTORS

Figure 8-24 shows the functional group of muscles that adduct the right thigh at the hip joint. These muscles are located on the medial side of the pelvis and thigh, crossing the hip joint between them. As with all stretches for hip joint musculature, it is extremely important that the pelvis is securely stabilized. Following is the AC stretching routine shown for the hip adductor functional group on the right side of the body.

The Pelvis/Hip Joint Adductor Functional Group
This functional group comprises the following muscles:
Pectineus
Adductor longus
Adductor brevis
Gracilis
Adductor magnus
Gluteus maximus (lower fibers)
Quadratus femoris

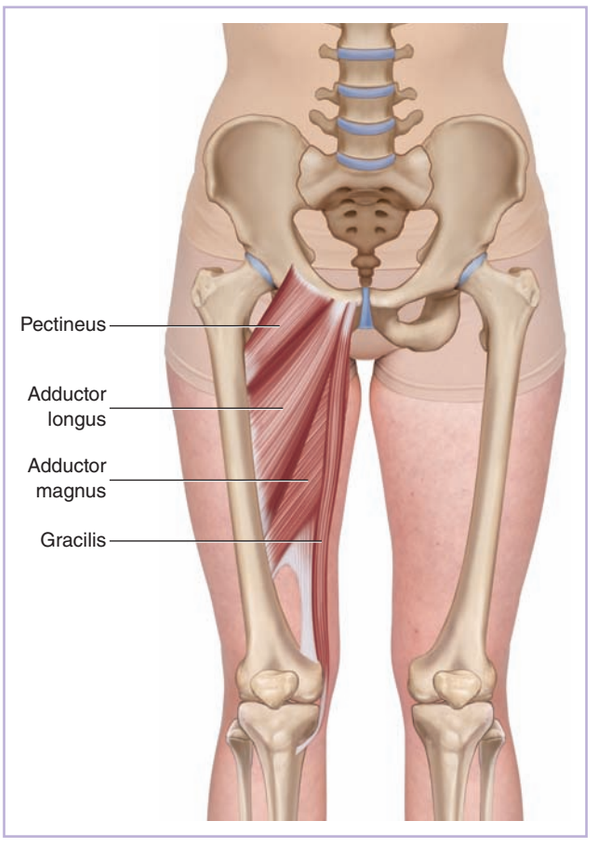


Figure 8-24 *Note*: Not all muscles are seen.

Starting Position:

- Have the client supine toward the right side of the table.
- Stand to the right side of the client (Fig. 8-25).
- Your right hand is the treatment hand and will be placed on the medial side of the client's distal right leg.
- Your left hand is the stabilization hand and functions to stabilize the client's pelvis and other (left) thigh. It will be placed on the client's anteromedial left thigh.

Figure 8-25

Step 1: Client Contraction and Stretch:

- Begin by asking the client to actively abduct his right thigh as far as is comfortable.
- This begins the stretch of the right adductor muscles (target muscle group) (Fig. 8-26A).

Figure 8-26A

Step 2: Further Stretch of Client:

- Once the position of stretch at the end of step 1 is reached, the client relaxes, and you further stretch the client's target adductor musculature by gently pulling the client's thigh farther into abduction until you meet tissue resistance (Fig. 8-26B).
- Hold the position of stretch for 1 to 2 seconds.

Figure 8-26B

Step 3: Passively Return Client to Starting Position:

- Once you have completed step 2, the client remains relaxed as you support and passively bring his thigh back to the starting position (Fig. 8-26C).

Figure 8-26C

Further Repetitions:

- Repeat this procedure for each repetition.
- With each successive repetition, you can add slightly more pressure to the stretch.
- At the end of the last repetition (usually 8 to 10 repetitions are done), you may choose to hold the position of stretch for a longer period, 5 to 20 seconds or more.
- Note that the breathing protocol is for the client to exhale when concentrically contracting.
- The client continues exhaling as the target musculature is relaxed and you stretch it, and then inhales as you return the client to the starting position for the next repetition.

Left-Side Adductor Group:

- Repeat for the pelvis/hip joint adductor functional group on the left side of the body (Fig. 8-27).

Figure 8-27

8.9 PRACTICAL APPLICATION

Multiplane Stretching of the Hip Joint Adductors

The AC stretching protocol for the adductors of the hip joint can be transitioned into a multiplane stretch. Following are AC multiplane stretches of the adductors on the right side: Instead of having the client only abduct his thigh, ask him to abduct and flex or to abduct and extend; because extension of the thigh is downward with gravity, be sure to instruct him to actively create this motion with muscular contraction. Adding thigh flexion would focus the stretch on the posterior adductor musculature fibers; adding thigh extension would focus the stretch on the anterior adductor musculature fibers. Lateral rotation can also be added to increase the stretch for the adductors. If the knee joint is extended, the gracilis will be maximally stretched because it is knee joint flexor; if the knee joint is bent, the gracilis will be knocked out of the stretch, perhaps allowing other adductor muscles to be maximally stretched. The accompanying figure shows flexion and lateral rotation in addition to abduction.

ROUTINE 8-9: HIP FLEXORS

Figure 8-28 shows the functional group of muscles that flex the right thigh at the hip joint. These muscles are located on the anterior side of the pelvis and thigh, crossing the hip joint between them. With all AC stretches to the hip joint, it is important to stabilize the pelvis. With this stretch, it is especially important because if the pelvis is not securely stabilized, it will anteriorly tilt, causing increased lordosis of the LSp. Following is the AC stretching routine shown for the hip flexor functional group on the right side of the body with the client prone. *Note*: Alternate positions to perform stretching of the hip flexor group (side-lying and prone with the therapist seated on the client) are shown in Routine 6-7 in Chapter 6. These stretches can be easily transitioned to AC stretching by adding the protocol steps for AC stretching.

The Pelvis/Hip Joint Flexor Functional Group
This functional group comprises the following muscles:
Gluteus medius (anterior fibers)
Gluteus minimus (anterior fibers)
TFL
Rectus femoris
Sartorius
Iliacus
Psoas major
Pectineus
Adductor longus
Adductor brevis
Gracilis

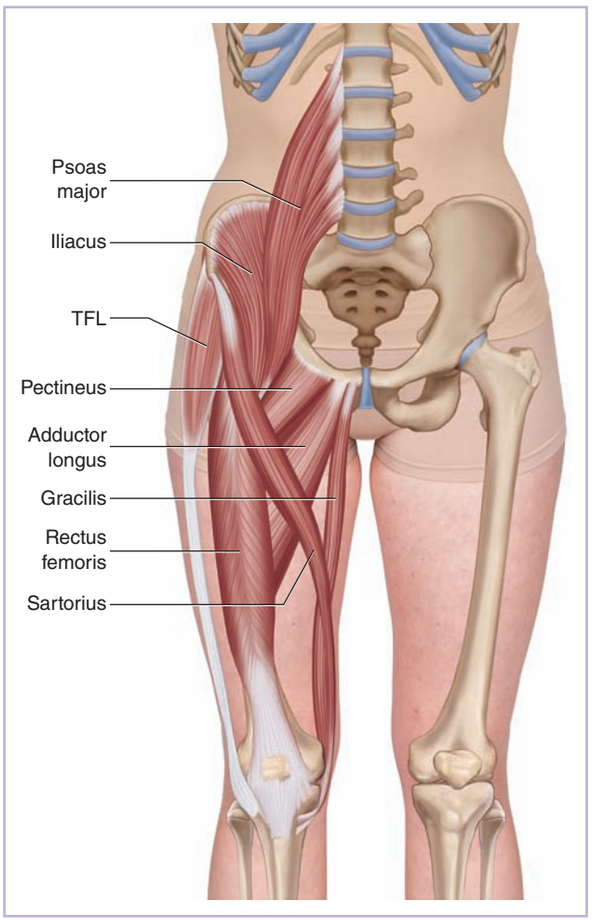


Figure 8-28 *Note*: Not all muscles are seen.

Starting Position:

- Have the client prone toward the right side of the table.
- Stand to the right side of the client (Fig. 8-29).
- Your left hand is the treatment hand and will be placed on the anterior side of the client's right thigh.
- Your right hand is the stabilization hand and functions to stabilize the client's pelvis. It will be placed on the client's right posterior superior iliac spine (PSIS).

Figure 8-29

Step 1: Client Contraction and Stretch:

- Begin by asking the client to actively extend his right thigh as far as is comfortable.
- This begins the stretch of the right flexor muscles (target muscle group) (Fig. 8-30A).

Figure 8-30A

Step 2: Further Stretch of Client:

- Once the position of stretch at the end of step 1 is reached, the client relaxes, and you further stretch the client's target flexor musculature by gently pulling the client's thigh farther into extension until you meet tissue resistance (Fig. 8-30B).
- Hold the position of stretch for 1 to 2 seconds.

Figure 8-30B

Step 3: Passively Return Client to Starting Position:

- Once you have completed step 2, the client remains relaxed as you support and passively bring his thigh back to the starting position (Fig. 8-30C).

Figure 8-30C

Further Repetitions:

- Repeat this procedure for each repetition.
- With each successive repetition, you can add slightly more pressure to the stretch.
- At the end of the last repetition (usually 8 to10 repetitions are done), you may choose to hold the position of stretch for a longer period, 5 to 20 seconds or more.
- Note that the breathing protocol is for the client to exhale when concentrically contracting.
- The client continues exhaling as the target musculature is relaxed and you stretch it, and then inhales as you return the client to the starting position for the next repetition.

Left-Side Flexor Group:

- Repeat for the pelvis/hip joint flexor functional group on the left side of the body (Fig. 8-31).

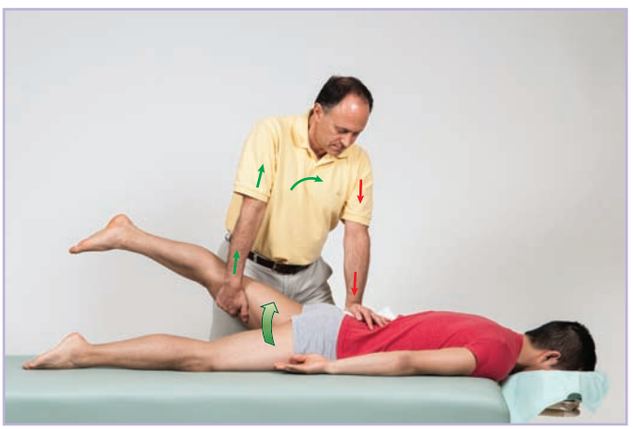


Figure 8-31

8.10 PRACTICAL APPLICATION

Multiplane Stretching of the Flexors of the Hip Joint

The AC stretching protocol for the flexors of the hip joint can be transitioned into a multiplane stretch. Following are AC multiplane stretches of the flexors on the right side: Instead of having the client to perform pure extension of his thigh in the sagittal plane, transverse plane medial rotation or lateral rotation and/or frontal plane adduction or abduction can be added. Given that the thigh will be moved in a different plane, the direction of the stabilization pressure on the client's PSIS might need to be slightly changed; it is important when extending the client's thigh to make sure that the pelvis is securely stabilized to prevent increased lumbar lordosis. Any combination of transverse plane and frontal plane components can be performed. **Figures A and B** demonstrate medial rotation and adduction being added to the sagittal plane extension motion of the thigh. In Figure A, the client actively moves the thigh to initiate the stretch and trigger the RI reflex. In Figure B, the therapist adds to the stretch once the client has relaxed. **Figure C** demonstrates adding flexion to the client's knee joint. This becomes a multijoint stretch and will maximally stretch the client's rectus femoris. If you want to knock out the rectus femoris so that the stretch can be focused on other muscles of the flexor functional group, make sure that the client's knee joint remains extended.

A

B

C

ROUTINE 8-10: HIP EXTENSORS: HAMSTRINGS

View the video "Agonist Contract Stretching of the Hamstring Group" online on thePoint.lww.com

Figure 8-32 shows the hamstring muscles on the right side. They are located in the posterior thigh, crossing from the pelvis to the proximal leg. The hamstrings are hip extensor muscles because they cross the hip joint posteriorly with a vertical orientation to their fibers. However, unlike the gluteal muscles, which also cross the hip joint posteriorly with somewhat of a vertical orientation to their fibers, the hamstrings also cross the knee joint posteriorly; therefore, they also flex the knee joint. This is important to know when stretching them. AC stretching routine of the hamstring group was demonstrated in the "Overview of Technique" section, Figures 8-1 through 8-5.

The Hamstring Group
The group comprises the following muscles:
Biceps femoris
Semitendinosus
Semimembranosus

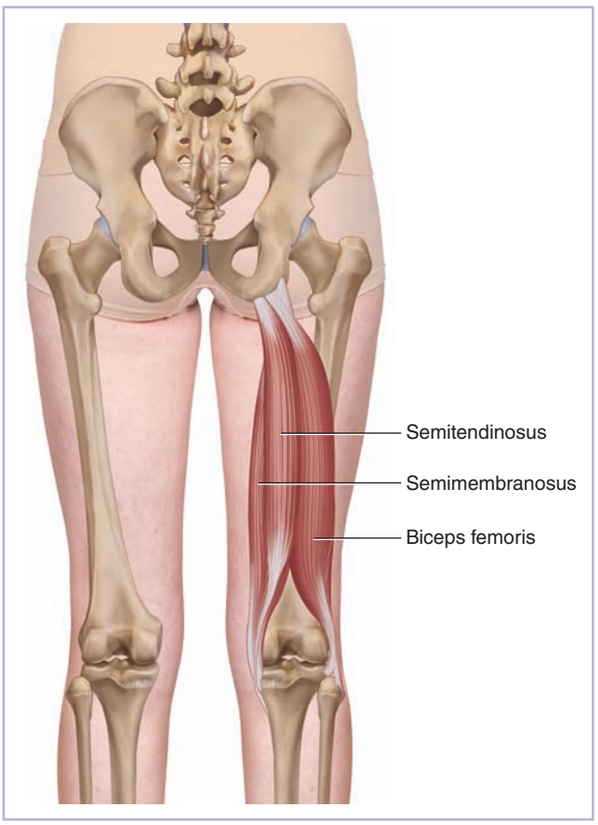


Figure 8-32

ROUTINE 8-11: HIP EXTENSORS: GLUTEALS

Figure 8-33 shows the functional group of gluteal muscles on the right side of the body. These muscles are located in the posterior pelvis in the buttock region and cross the hip joint between the pelvis and thigh. The gluteal muscles are extensors of the hip joint as are the hamstrings (see Routine 8-10). The difference is that the hamstrings cross the knee joint posteriorly, whereas the gluteals do not cross the knee joint. So to most efficiently stretch the gluteals, the knee joint is flexed to slacken and knock the hamstrings out of the stretch.

Following is the AC stretching routine shown for the gluteal group on the right side of the body. *Note*: The gluteus medius and minimus also have middle and anterior fibers that are located laterally and anteriorly in the pelvis/thigh region. These fibers are stretched with Routines 8-7 and 8-9, respectively. Routine 8-11 presented here stretches the posterior fibers of the gluteal group.

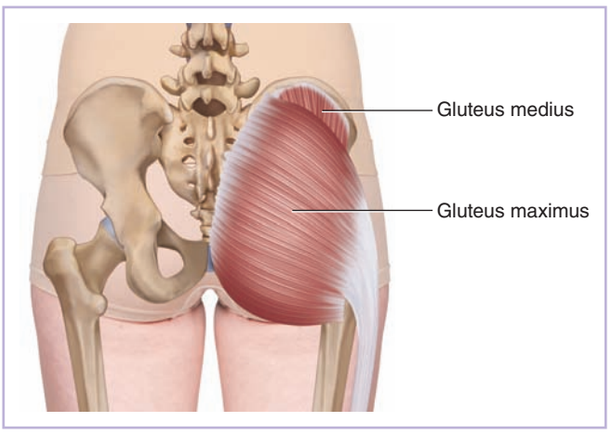


Figure 8-33 *Note*: The gluteus minimus is not seen.

The Gluteal Group
This functional group comprises the following muscles:
Gluteus maximus
Gluteus medius
Gluteus minimus

Starting Position:

- Have the client supine toward the right side of the table.
- Stand to the right side of the client (Fig. 8-34).
- Have the client flex his right thigh at the hip joint and flex his right leg at the knee joint; his right foot will be flat on the table.
- Your left hand is the treatment hand and will be placed on the posterior side of the client's right thigh.
- Your right hand is the stabilization hand and functions to stabilize the client's pelvis. It will be placed on the anterior surface of the client's left thigh.
- An alternate stabilization contact is to use your right knee on the anterior surface of the client's left thigh (see Fig. 8-3).

Step 1: Client Contraction and Stretch:

- Begin by asking the client to actively bring his right knee to his chest (flex his right thigh at the hip joint and leg at the knee joint) as far as is comfortable.
- This begins the stretch of the right gluteal muscles (target muscle group) (Fig. 8-35A).

Figure 8-34

Figure 8-35A

Step 2: Further Stretch of Client:

- Once the position of stretch at the end of step 1 is reached, the client relaxes, and you further stretch the client's target gluteal musculature by gently pushing the client's thigh farther into flexion until you meet tissue resistance (Fig. 8-35B).
- Hold the position of stretch for 1 to 2 seconds.

Figure 8-35B

Step 3: Passively Return Client to Starting Position:

- Once you have completed step 2, the client remains relaxed as you support and passively bring his thigh back to the starting position (Fig. 8-35C).

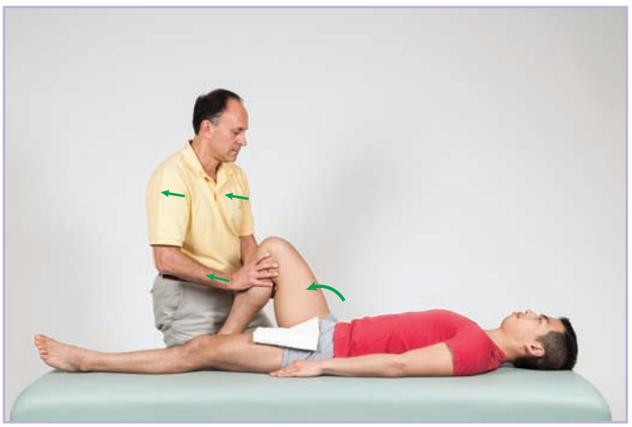


Figure 8-35C

- Instead of returning the client all the way to the initial starting position, the client can be returned part of the way (Fig. 8-35D). The advantage to this is that you do not have to step away completely and remove your treatment and stabilization hands before beginning the next repetition. What is important is that the client still has enough room to concentrically contract and bring the knee to the chest so that the RI reflex will be triggered to inhibit the gluteal musculature.

Figure 8-35D

Further Repetitions:

- Repeat this procedure for each repetition.
- With each successive repetition, you can add slightly more pressure to the stretch.
- At the end of the last repetition (usually 8 to 10 repetitions are done), you may choose to hold the position of stretch for a longer period, 5 to 20 seconds or more.
- Note that the breathing protocol is for the client to exhale when concentrically contracting.
- The client continues exhaling as the target musculature is relaxed and you stretch it, and then inhales as you return the client to the starting position for the next repetition.
- *Note*: As discussed in Chapter 6, if the client is asked to bring the knee up to the chest and over to the opposite of the body, making this a multiplane stretch, it begins to resemble the stretch for the deep lateral rotators. Routine 8-12 demonstrates the AC stretching technique for the deep lateral rotator group.

Left-Side Gluteal Group:

- Repeat for the pelvis/hip joint gluteal group on the left side of the body (Fig. 8-36).

Figure 8-36

ROUTINE 8-12: HIP DEEP LATERAL ROTATORS

Figure 8-37 shows the functional group of deep lateral rotator muscles on the right side of the body. These muscles are located in the posterior pelvis in the buttock region, deep to the gluteus maximus, and cross the hip joint between the pelvis and thigh. *Note*: The posterior capsular ligament of the hip joint (ischiofemoral ligament) is stretched with medial rotation, as are the deep lateral rotator muscles. Therefore, the stretching protocol presented here for the deep lateral rotators is also very effective at stretching and loosening a taut posterior hip joint capsule. Following is the AC stretching routine shown for the deep lateral rotator group on the right side of the body.

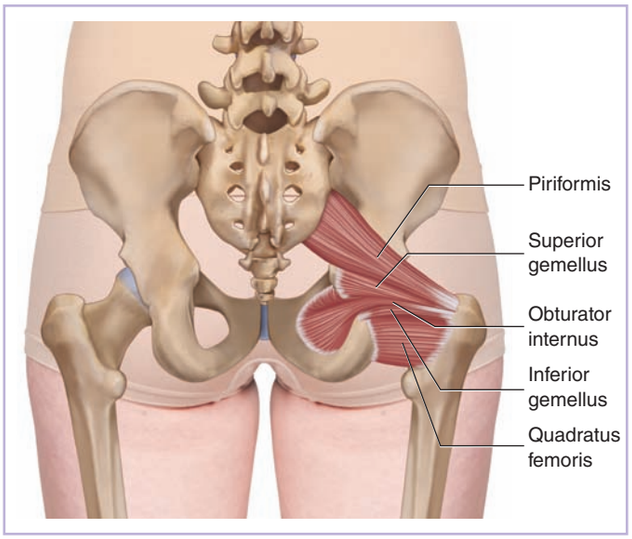


Figure 8-37 *Note*: The obturator externus is not seen.

The Deep Lateral Rotator Group
This functional group comprises the following muscles:
Piriformis
Superior gemellus
Obturator internus
Inferior gemellus
Obturator externus
Quadratus femoris

Starting Position:

- Have the client prone with her right leg flexed at the knee joint.
- Stand to the right side of the table (Fig. 8-38).
- Your left hand is the treatment hand and will grasp around the medial side of the client's distal right leg.
- Your right hand is the stabilization hand and functions to stabilize the client's pelvis. It is placed on the client's left PSIS.

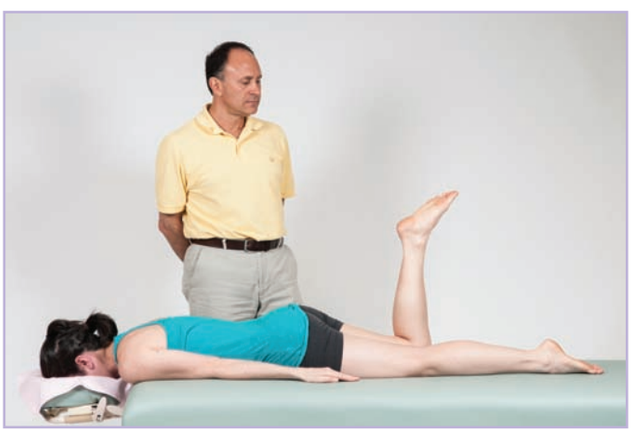


Figure 8-38

Step 1: Client Contraction and Stretch:

- Begin by asking the client to actively bring her right foot outward by medially rotating her right thigh at the hip joint as far as is comfortable.
- This begins the stretch of the right deep lateral rotator muscles (target muscle group) (Fig. 8-39A).

Figure 8-39A

Step 2: Further Stretch of Client:

- Once the position of stretch at the end of step 1 is reached, the client relaxes, and you further stretch the client's target deep lateral rotator musculature by gently pushing the distal end of the client's leg farther laterally, increasing the medial rotation of her thigh at the hip joint, until you meet tissue resistance (Fig. 8-39B).
- Hold the position of stretch for 1 to 2 seconds.

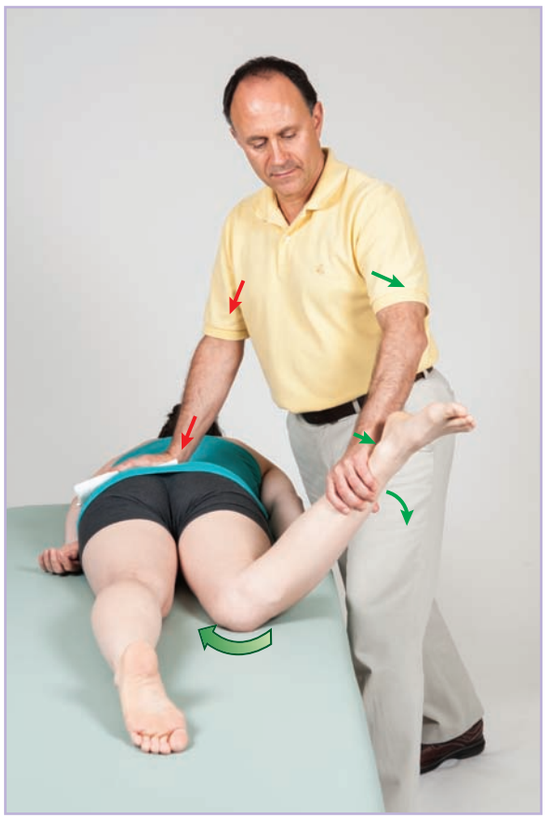


Figure 8-39B

By using the client's leg as a lever to medially rotate the thigh at the hip joint, a torque (rotary force) is placed through the client's knee. If the client has an unhealthy knee, this stretch is contraindicated, and the supine AC deep lateral rotator stretch in Practical Application Box 8.11 should be performed instead.

Step 3: Passively Return Client to Starting Position:

- Once you have completed step 2, the client remains relaxed as you support and passively bring her lower extremity back to the starting position (Fig. 8-39C).

Figure 8-39C

Further Repetitions:

- Repeat this procedure for each repetition.
- With each successive repetition, you can add slightly more pressure to the stretch.
- At the end of the last repetition (usually 8 to 10 repetitions are done), you may choose to hold the position of stretch for a longer period, 5 to 20 seconds or more.
- Note that the breathing protocol is for the client to exhale when concentrically contracting.
- The client continues exhaling as the target musculature is relaxed and you stretch it, and then inhales as you return the client to the starting position for the next repetition.

Left-Side Deep Lateral Rotator Group:

- Repeat for the pelvis/hip joint deep lateral rotator group on the left side of the body (Fig. 8-40).

Figure 8-40

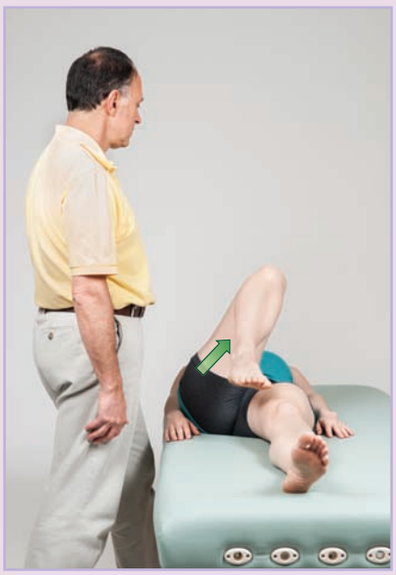
8.11 PRACTICAL APPLICATION

Alternate Agonist Contract Stretch for the Deep Lateral Rotator Group

The deep lateral rotator group can also be stretched with the client lying supine with the hip and knee joints flexed.

If the client has an unhealthy knee joint, then her leg should not be used as a lever to create the medial rotation force to stretch the deep lateral rotators. Following is an alternative AC stretch for the deep lateral rotators that does not involve the client's knee joint. This stretch is demonstrated and explained for the client's right side.

- Have the client supine with her right hip and knee joints flexed and her foot flat on the table. You stand to her right side.
- Begin by asking the client to actively bring her right knee up and across her body toward the opposite shoulder by further flexing and horizontally adducting her thigh at the hip joint **(Fig. A)**. This begins the stretch of the deep lateral rotators and triggers the RI reflex to inhibit and relax them.
- Now ask the client to relax and you increase the stretch of the client's deep lateral rotators by gently pushing her knee further toward her opposite shoulder **(Fig. B)**.
- After holding the position for 1 to 2 seconds, passively bring the client's thigh back to the starting position **(Fig. C)**.
- Repeat for a total of 8 to 10 repetitions.
- *Note*: It is helpful to purposely change the angle that you ask the client to bring the thigh up and across her body. After bringing the knee toward the opposite shoulder, instruct the client to change the angle to be more across the body, in other words, less flexion and more horizontal adduction. Each different angle within the quadrant between straight up toward the chest and directly horizontally across her body will preferentially stretch different fibers of the deep lateral rotator group.



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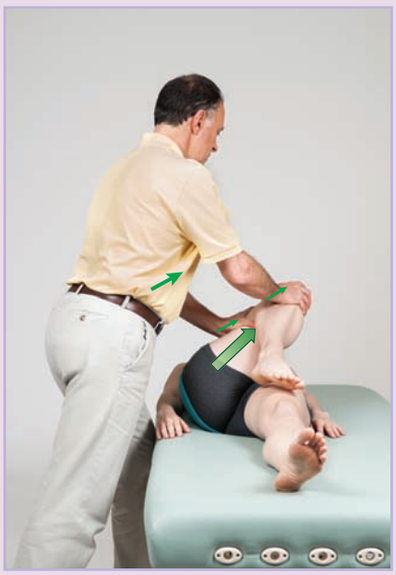

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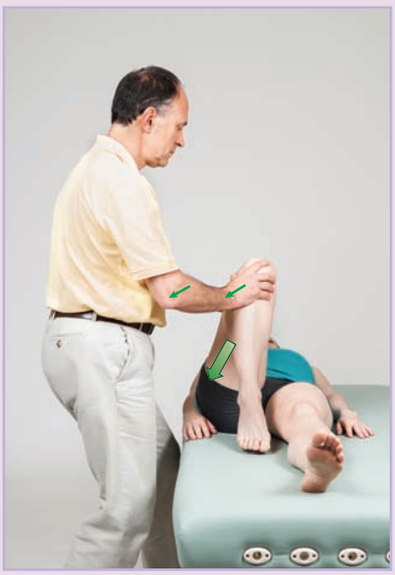


C

ROUTINE 8-13: HIP MEDIAL ROTATORS

Figure 8-41 shows the functional group of medial rotator muscles on the right side of the body. These muscles are located in the anterior pelvis and cross the hip joint between the pelvis and thigh. Following is the AC stretching routine shown for the medial rotator group on the right side of the body.

The Medial Rotator Group
This functional group comprises the following muscles: TFL
Gluteus medius (anterior fibers)
Gluteus minimus (anterior fibers)
Pectineus
Adductor longus
Adductor brevis
Gracilis
Adductor magnus

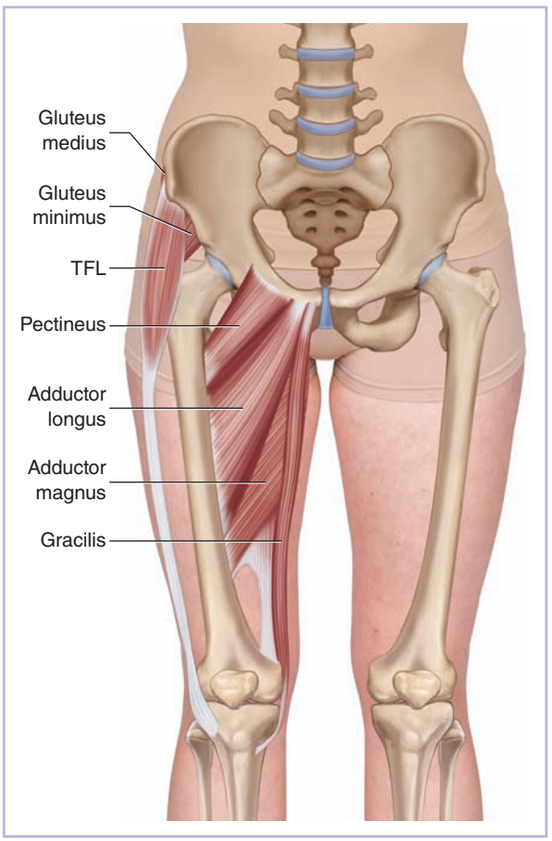


Figure 8-41 *Note*: The adductor brevis is not seen.

Starting Position:

- Have the client prone with her right leg flexed at the knee joint.
- Stand on the (opposite) left side of the table (Fig. 8-42).
- Your left hand is the treatment hand and will grasp around the posterior side of the client's distal right leg.
- Your right hand is the stabilization hand and functions to stabilize the client's pelvis. It will be placed on the client's right PSIS.

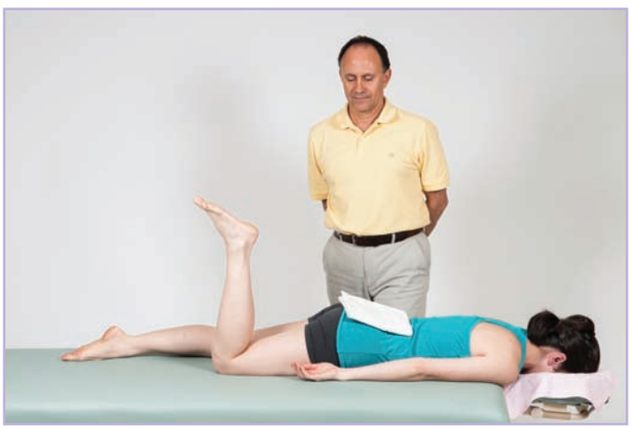


Figure 8-42

Step 1: Client Contraction and Stretch:

- Begin by asking the client to actively bring her right foot inward by laterally rotating her right thigh at the hip joint as far as is comfortable.
- This begins the stretch of the right medial rotator muscles (target muscle group) (Fig. 8-43A).

Figure 8-43A

Step 2: Further Stretch of Client:

- Once the position of stretch at the end of step 1 is reached, the client relaxes, and you further stretch the client's target medial rotator musculature by gently pushing the distal end of the client's leg farther medially, increasing the lateral rotation of her thigh at the hip joint, until you meet tissue resistance (Fig. 8-43B).
- Hold the position of stretch for 1 to 2 seconds.

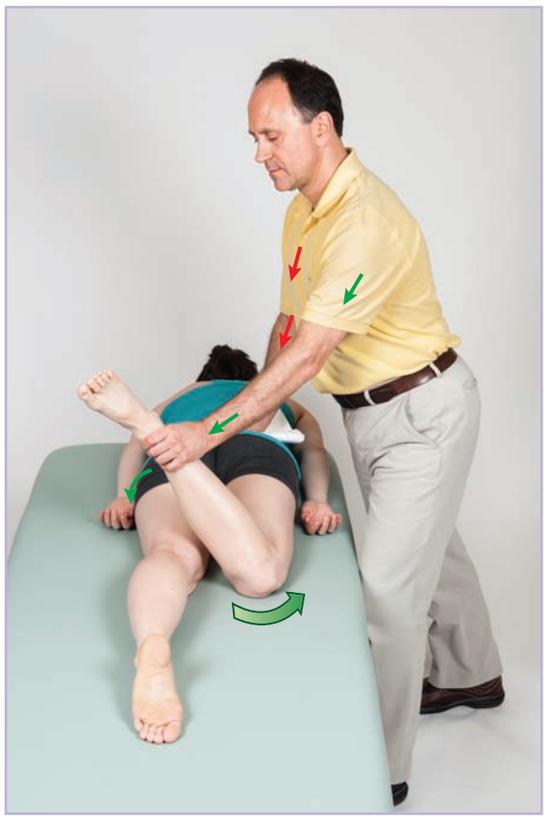


Figure 8-43B

By using the client's leg as a lever to medially rotate the thigh at the hip joint, a torque (rotary force) is placed through the client's knee. If the client has an unhealthy knee, the stretch is contraindicated and the AC medial rotator stretch in Practical Application Box 8.12 should be performed instead.

Step 3: Passively Return Client to Starting Position:

- Once you have completed step 2, the client remains relaxed as you support and passively bring her lower extremity back to the starting position (Fig. 8-43C).

Figure 8-43C

Further Repetitions:

- Repeat this procedure for each repetition.
- With each successive repetition, you can add slightly more pressure to the stretch.
- At the end of the last repetition (usually 8 to 10 repetitions are done), you may choose to hold the position of stretch for a longer period, 5 to 20 seconds or more.
- Note that the breathing protocol is for the client to exhale when concentrically contracting.
- The client continues exhaling as the target musculature is relaxed and you stretch it, and then inhales as you return the client to the starting position for the next repetition.

Left-Side Medial Rotator Group:

- Repeat for the pelvis/hip joint medial rotator group on the left side of the body (Fig. 8-44).

Figure 8-44

8.12 PRACTICAL APPLICATION

Alternate Agonist Contract Stretch for the Medial Rotator Group

Having the client supine is an excellent alternative position to stretch her medial rotator functional group. The advantage of this position is that it allows the therapist to primarily use the client's thigh instead of her leg to further the stretch. This minimizes the involvement of the client's knee joint, which is important if the client's knee is unhealthy. The supine stretch is demonstrated and explained for the client's right side.

- Have the client supine toward the right side of the table with her thigh flexed at the hip joint and her knee flexed at the knee joint. Stand to the right of the client.
- Have the client initiate the AC stretching protocol by laterally rotating the thigh at the hip joint **(Fig. A)**.
- Then ask the client to relax and you quickly step in, grasping the client's right thigh with your left forearm and placing your right hand on the distal lateral surface of her right leg. Now increase the stretch of the medial rotator musculature by stretching the client's thigh farther into lateral rotation **(Fig. B)**. It is important that the majority of your stretching force is applied to the client's thigh with your forearm and not to her leg with your hand.
- Then passively return the client to the starting position for the next repetition.

A

B

8.13 PRACTICAL APPLICATION

Agonist Contract Stretching of Both Functional Groups within a Plane in One Routine

It is not always necessary to perform AC stretching for only one functional group at a time. In fact, it can be more efficient and beneficial to perform AC stretching for both functional muscle groups within a plane—thereby stretching two target groups of muscles during the same procedure. To do this, it is necessary that both functional group actions can be performed with the same client position and that you can position yourself to be able to efficiently participate in both stretching protocols with regard to your body mechanics. An example of this is stretching the client's right hip joint musculature into medial rotation and lateral rotation during the same procedure.

When stretching the client's right hip joint into medial rotation, the lateral rotation group (the first target muscle group) is stretched; when stretching the client's right hip joint into lateral rotation, the medial rotation group (the second target muscle group) is stretched. This procedure begins similarly no matter the side to which the rotation stretch begins. The following example is shown on the client's right side and is based on starting the stretch for the lateral rotators.

Starting Position:

- Have the client supine toward the right side of the table with her thigh flexed at the hip joint and her leg flexed at the knee joint. Stand to the right of the client.

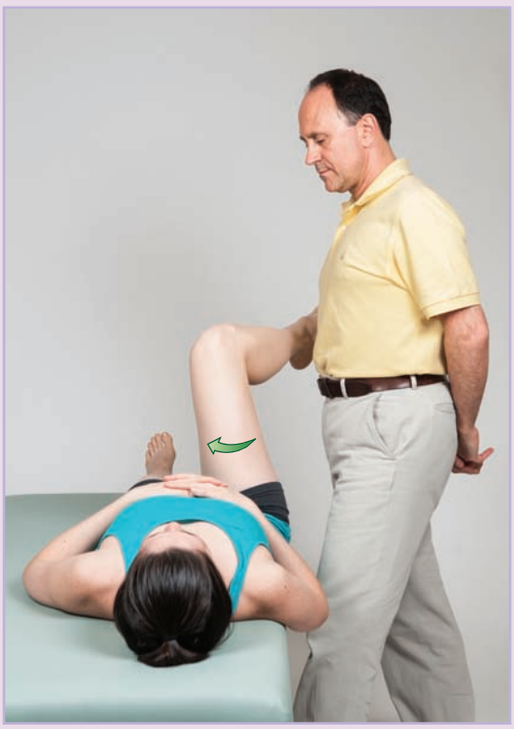
First Repetition: Client Contraction and Stretch of Target Muscle Group #1:

- Begin by asking the client to actively move the thigh into medial rotation at the hip joint as far as is comfortable **(Fig. A)**.
- This begins the stretch of the target lateral rotator muscles (target muscle group #1).

Further Stretch of Client:

- When the position of stretch is reached at the end of the first repetition, the client relaxes, and you further stretch the client's target lateral rotator musculature by gently moving the client's thigh farther into medial rotation until you meet tissue resistance **(Fig. B)**.
- Hold the position of stretch for 1 to 2 seconds.

continued



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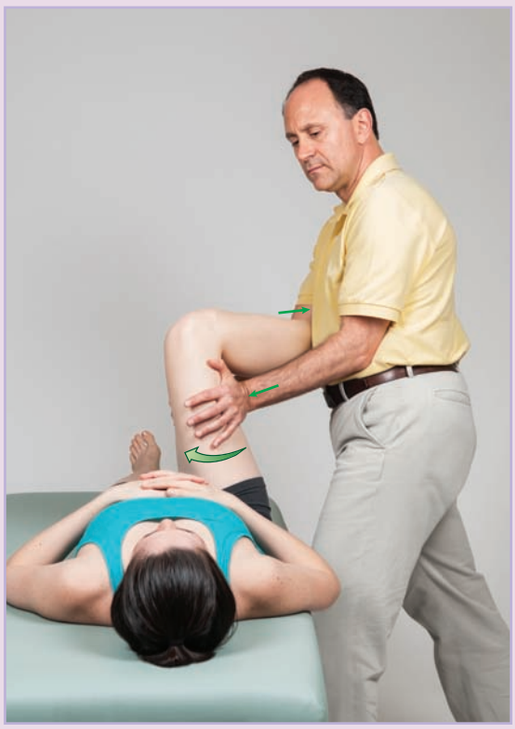

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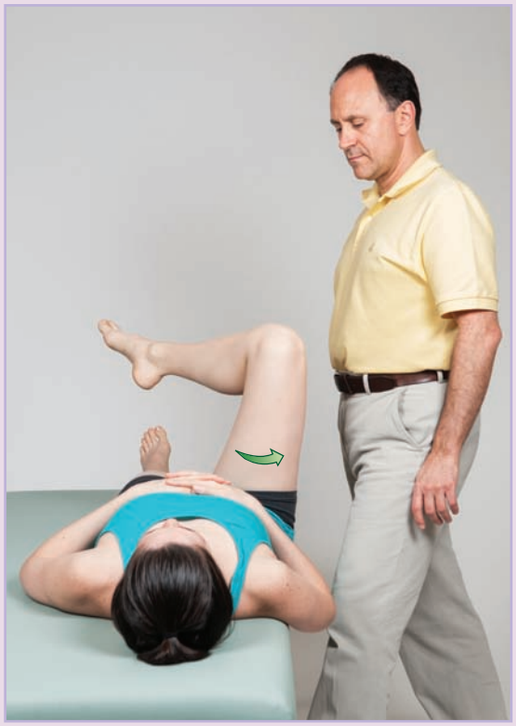
8.13 PRACTICAL APPLICATION *(continued)*



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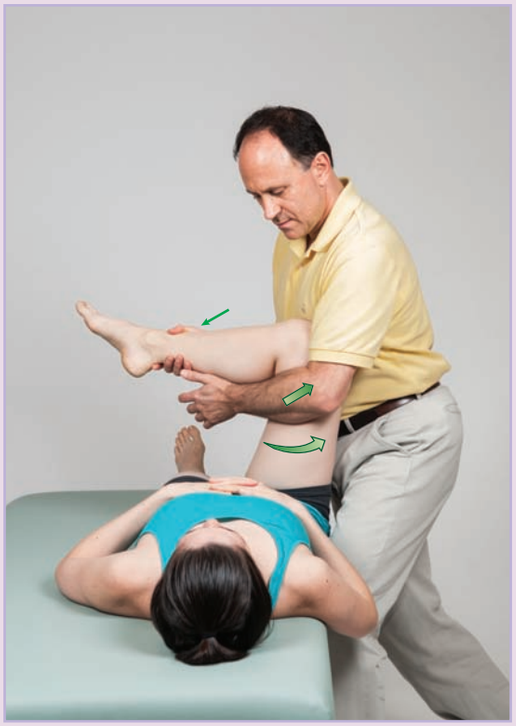

D

- Client body weight and contact with the table is usually sufficient to stabilize the client's pelvis and trunk during the stretch.

Client Contraction and Stretch of Target Muscle Group #2:

- At this point, instead of bringing the client back to the starting position for the next repetition, ask the client to actively move the thigh all the way into lateral rotation as far as is comfortable, beginning the stretch of the target medial rotator muscles (target muscle group #2) **(Fig. C)**.

Further Stretch of Client:

- Once this position of stretch is reached, the client relaxes, and you further stretch the client's target medial rotator musculature by gently moving the client's thigh farther into lateral rotation until you meet tissue resistance **(Fig. D)**.
- Hold the position of stretch for 1 to 2 seconds.
- This completes one repetition in which both groups of hip joint rotation musculature (both target muscle groups) have been stretched.

Further Repetitions:

- All further repetitions are carried out in the same manner as the first repetition, except that the starting position is different. The starting position for the first repetition was neutral anatomic position. However, the starting position for the second and all successive repetitions is with the client stretched into lateral rotation. Therefore, the client begins the second and all successive repetitions by moving the thigh from the position of lateral rotation all the way to medial rotation.
- Note that the breathing protocol is for the client to exhale when concentrically contracting.
- The client completes the exhalation and inhales as the target musculature is relaxed and you stretch it. Because there is no step in which you return the client to the initial starting position, the client must also inhale while being stretched. For this reason, when performing AC stretching technique for both functional groups within a plane in one routine, the client's inhalation should not be too deep.

8.9 THERAPIST TIP

When Should You Use Agonist Contract Stretching?

The AC stretching technique is an advanced technique that can and should be employed whenever a client does not respond well to standard stretching techniques. Although it is not necessary to wait until a client stops responding to regular stretching to use AC stretching, there are several factors to take into consideration when deciding whether it is appropriate to use this technique.

First, because AC stretching does tend to require more time to carry out, it makes sense to choose carefully when and for which areas of the client's body it is used. Another consideration is that AC stretching requires the client's active participation. If a client expects to come to a session and remain passive while you work his or her muscles, AC stretching may not be appropriate. Alternatively, you may need to educate the client about his or her possible role during a treatment session.

A question that is often asked is, "Which advanced neural inhibition technique is the better stretching technique, CR or AC?" Although each technique has its proponents, each technique works well for a particular subset of the client population, and neither is inherently better than the other for stretching any particular muscle or muscle group. Which method you choose should be based on how well it works for each particular client, how well the client enjoys the particular technique, and/or which technique you find biomechanically easier to employ for that particular muscle/muscle group.

Because the AC technique does require more active motion on the part of the client, it is likely the better technique with regard to warming up the client's body because local fluid circulation (blood, lymph, and synovial joint fluid) would be increased. AC technique's movements would also better enforce neural patterns of movement. On the other hand, because AC technique requires more active client participation and effort than CR, CR technique might be preferred over AC for the client looking for a more passive treatment session. Also, it is generally easier to transition a stretch to CR technique than AC technique because regardless of the client position, the therapist can add the resistance needed for the CR technique, whereas AC technique usually requires the client to contract and move the body part either up against gravity or at least parallel with gravity. Therefore, the client position in relation to gravity matters with AC stretching but does not for CR stretching.

A case probably could be made that CRAC stretching (see Chapter 9) is more effective at stretching target musculature than either CR or AC stretching alone because it combines the effectiveness of both techniques. However, it does take twice as long to perform, and spending more time stretching one muscle means that there is less time left to work on other areas of the client's body. Ultimately, which technique is chosen is a clinical decision that will depend on the unique circumstances of each scenario.

CHAPTER SUMMARY

AC stretching is an advanced stretching technique that can often provide the key to helping clients with tight muscles. Although the exact manner in which the technique is performed can vary, it is most commonly carried out as described in the following summary:

- The client first actively moves into a position that stretches the target muscle group, which both begins the stretch of the target musculature and initiates the RI reflex that inhibits/relaxes the target musculature.
- The client then relaxes, and the therapist takes advantage of the RI reflex to stretch the client's target musculature farther than would have been possible otherwise.
- The therapist completes the technique by passively bringing the client back to the starting position for the beginning of the next repetition.
- The most important aspect of the breathing protocol is for the client to exhale when actively contracting.
- An entire repetition usually takes approximately 3 to 5 seconds; 8 to 10 repetitions are typically done.

Essentially, any stretch can be carried out using the AC technique. As with all stretching, AC stretching is most effective when performed after the client's tissues are first warmed up.

CASE STUDY

HYESUN

History and Physical Assessment

A new client, Hyesun Alexander, age 42 years, comes to your office complaining of low back pain and stiffness. She tells you that the symptoms began 1 week ago after she spent a long time standing and bending over, working on a project for work. She says that other than an occasional mild tightness in her low back, she has never experienced any low back problems before now. She tried stretching on her own, but it only seemed to make the pain worse. After 3 days, she saw her medical doctor, who sent her for radiography. The radiographs were negative for fracture and dislocation, and she was released with a recommendation to use over-the-counter analgesics as needed. She then went to a massage therapist that a friend recommended, but she felt that the massage was very light and not effective at relieving her pain.

In addition to strong dull pain with prolonged sitting (more than 20 minutes) and prolonged standing (more than 30 minutes), she is having difficulty sleeping because she cannot find a comfortable position. Her pain level (on a scale of 0 to 10, in which 0 is no pain and 10 is the worst pain that she can imagine) is 4 when lying down, 5 to 6 with prolonged standing, and 7 to 8 with prolonged sitting, including driving. Bending forward or to either side causes immediate sharp pain at a level of 9. She normally works out five times a week, employing a combination of aerobic training and weights, but has not been able to work out since the pain began. She points to her lumbar region on both sides of the spine as the source of her pain. She reports no pain down either lower extremity. She has come to you because she has heard that you do effective clinical orthopedic manual therapy.

Your assessment shows that low back flexion is decreased to 5 degrees and that both right and left lateral flexions are decreased to 10 degrees. All other ranges of motion are within normal limits. The results of your assessments are also negative for cough test and Valsalva maneuver (for a review of assessment procedures, see Chapter 3). Active straight leg raise causes immediate pain bilaterally in her lumbar region. Passive straight leg raise causes no pain but is tight and pulls bilaterally in her lumbar region. Nachlas' and Yeoman's tests are negative. Palpation of Hyesun's lumbar region reveals extremely tight paraspinal musculature (erector spinae and transversospinalis) bilaterally as well as a tight and tender quadratus lumborum bilaterally. Gluteal musculature is mildly to moderately tight, but when palpating this region, Hyesun reports no pain or discomfort.

Think-It-Through Questions:

1. Should an advanced stretching technique such as AC stretching be included in your treatment plan for Hyesun? If so, why? If not, why not?
2. If AC stretching would be of value, is it safe to use with her? If yes, how do you know? If not, why not?
3. If AC stretching is done, which specific stretching routines should be done? Why did you choose the ones you did?

Answers to these Think-It-Through Questions and the Treatment Strategy employed for the client are available online at thePoint.lww.com/MuscolinoLowBack

CHAPTER 9

Contract Relax Agonist Contract Stretching

CHAPTER OUTLINE

Introduction 313
Mechanism 314
Overview of Technique 314
Performing the Technique 316
Contract Relax Agonist Contract Routines 320
Chapter Summary 335
Case Study 336

OBJECTIVES

After completing this chapter, the student should be able to:

1. Describe the mechanism of contract relax agonist contract (CRAC) stretching.
2. Describe in steps an overview of the usual protocol for carrying out the CRAC stretching technique.
3. Describe the roles of the treatment hand and the stabilization hand.
4. Describe the usual breathing protocol for the client during the CRAC stretching technique.
5. Explain why stretching should never be performed too fast or too far.
6. Define each key term in this chapter and explain its relationship to the CRAC stretching technique.
7. Perform the CRAC stretching technique for each of the functional groups of muscles of the lumbar spine and pelvis/hip joint.

KEY TERMS

agonist contract (AC) stretching
contract relax agonist contract (CRAC) stretching
contract relax (CR) stretching
creep
Golgi tendon organ reflex
muscle spindle reflex
reciprocal inhibition
resistance hand
stabilization hand
stretching hand
treatment hand

INTRODUCTION

Contract relax agonist contract (CRAC) stretching is an advanced stretching technique that is performed by combining **contract relax (CR) stretching** (see Chapter 7) with **agonist contract (AC) stretching** (see Chapter 8). CRAC stretching is not difficult for the therapist to perform once the CR and AC stretching techniques have each been mastered. It requires only a small additional step to synthesize these two techniques into the CRAC stretching technique. As the acronym itself indicates, the therapist simply performs the techniques sequentially, beginning with CR stretching and immediately following with AC stretching. As with any hands-on method, practice is the key to a comfortable, smooth, and efficient application. Even though performing CRAC stretching requires more time than does either of the two techniques alone, it might prove to be the only technique that is effective for some difficult cases in which the client's target musculature is resistant to relaxing and stretching. In these cases, the extra time spent will be well worth it.

Note: In the Technique and Self-Care chapters of this book (Chapters 4 to 12), green arrows indicate movement, red arrows indicate stabilization, and black arrows indicate a position that is statically held.

BOX 9.1

Contract Relax Agonist Contract Routines

The following CRAC stretching routines are presented in the chapter:

- Section 1: lumbar spine (LSp):
  - Routine 9-1—LSp extensors
  - Routine 9-2—LSp right rotators
- Section 2: hip joint/pelvis:
  - Routine 9-3—hip flexors
  - Routine 9-4—hip extensors: hamstrings (in the "Overview of Technique" section)
  - Routine 9-5—hip deep lateral rotators

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MECHANISM

The proposed mechanism of CRAC stretching is a combination of the mechanism for CR stretching, which is classically stated as the **Golgi tendon organ reflex**, and the mechanism for AC stretching, which is **reciprocal inhibition** (RI). Chapter 7's Box 7.2 presents the Golgi tendon organ reflex in more detail, and Chapter 8's Box 8.2 focuses on RI.

The Golgi tendon organ reflex of CR stretching and the RI reflex of AC stretching each work to inhibit musculature from contracting (in other words, to relax it). Both of these reflexes can be utilized in CRAC stretching to relax and stretch the target muscle. It stands to reason that if both of these stretching techniques are employed together when stretching a client's target muscle, that muscle's relaxation will be increased, allowing for an even greater stretch than would have been possible with either technique alone.

It is important to note that, as with CR and AC stretching, the therapist's hand that resists the client's contraction and performs the stretch is known as the **treatment hand** or the **stretching hand**; it is also known as the **resistance hand**. The therapist's other hand is known as the **stabilization hand** and is used to stabilize the client's pelvis or trunk.

9.1 THERAPIST TIP

Learn the Contract Relax Agonist Contract Stretching Technique before Using It with Clients

CRAC stretching is not difficult to perform, but it does involve a number of steps and can be confusing at first to learn and use with clients. For this reason, it is helpful first to learn and master working with the CR and AC stretching techniques independently as well as the combined CRAC technique before attempting to learn and apply the CRAC stretching technique with clients.

OVERVIEW OF TECHNIQUE

View the video "Contract Relax Agonist Contract Stretching of the Hamstring Group" online on thePoint.lww.com

The artful performance of CRAC stretching involves a seamless integration of the CR and AC stretching techniques. For this reason, it is strongly recommended that Chapters 7 and 8, which discuss CR and AC stretching individually, be read and practiced before attempting CRAC stretching.

The following is an overview of the CRAC stretching technique using the right hamstring muscle group as the target muscle group being stretched.

Starting Position:

- The client is supine and positioned as far to the right side of the table as possible; you are standing at the right side of the table (Fig. 9-1).

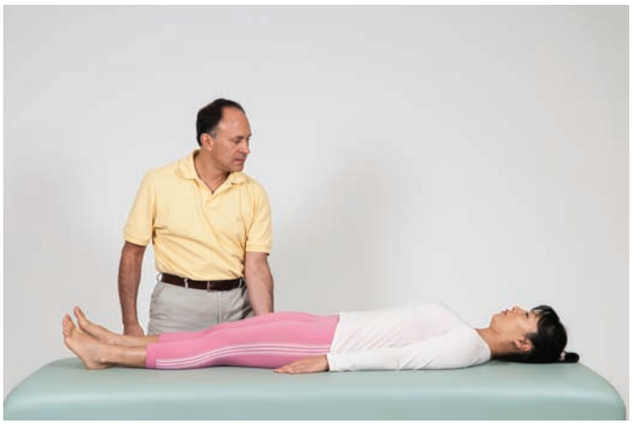


Figure 9-1 Starting position for CRAC stretching of the right hamstring group.

Step 1: Client Isometric Contraction:

- Begin by asking the client to gently contract the target right hamstring musculature in an attempt to extend the thigh at the hip joint and the leg at the knee joint down against the table. If you would like, you can place your left hand under the client's thigh or leg to monitor that she is pressing in the correct manner and direction (Fig. 9-2).
- The client's body weight and contact with the table provides stabilization of the pelvis for this step of the protocol.
- Have the client hold this isometric contraction for approximately 5 to 8 seconds and then ask the client to relax.
- This aspect of the CRAC stretch is the CR protocol, engaging the Golgi tendon organ reflex to inhibit and relax the target right hamstring musculature.
- *Note*: It is identical to the CR protocol explained in Chapter 7, except that CR stretching usually begins from a position in which the target musculature is first stretched (i.e., the thigh is already flexed).

9.2 THERAPIST TIP

Communicate with the Client

For clients who have never experienced the CRAC stretching technique, it can be helpful first to give them a brief overview of how you will perform the technique. Let the client know that he or she will need to press against your resistance in one direction, then move his or her body (thigh, pelvis, and/or low back) in the opposite direction, and then relax as you perform the stretch. In addition, inform the client about how long to press against your resistance, how many repetitions there will be, and what the breathing protocol is to be. This will allow the client to give you informed verbal consent before beginning the technique and also will help the client carry out the CRAC protocol more easily once you begin.

Figure 9-2 Step 1: Isometric contraction of the client's right hamstring musculature against the resistance of the table.

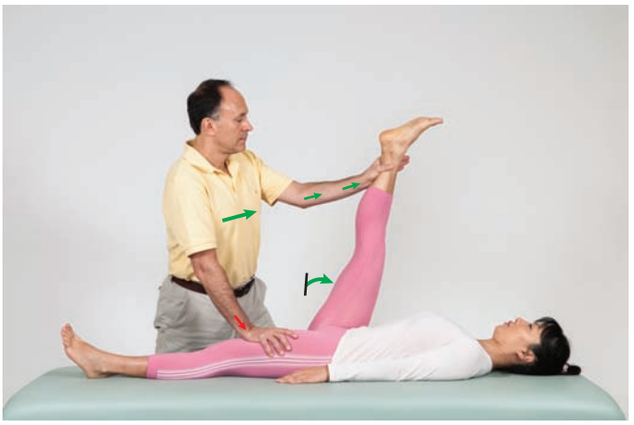


Figure 9-4 Step 3: The client relaxes and is stretched further by the therapist.

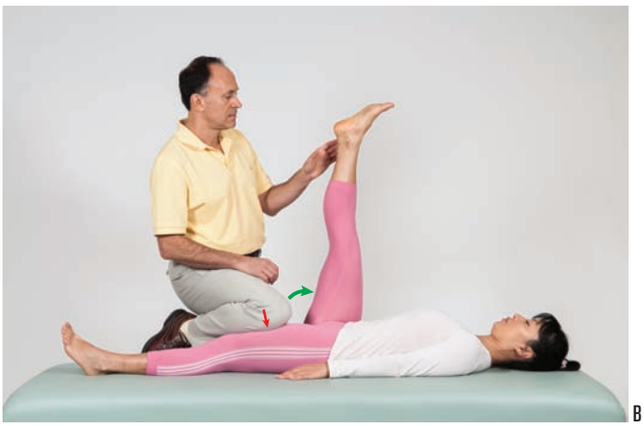
Step 2: Client Concentric Contraction and Stretch:

- As soon as the client relaxes, have the client perform active concentric contraction of the flexors of the right thigh at the hip joint, bringing the thigh into flexion as far as is comfortably possible; it is important that the client maintains her knee joint in full extension.
- As the client begins to flex her right thigh up into the air, you need to lean in and position yourself to stabilize the client's pelvis with your right hand by pressing on the client's anterior left thigh (Fig. 9-3A). It is important to make sure that the client's pelvis is stabilized before the client reaches the end of her flexion motion; otherwise, her pelvis will move into posterior tilt and the stretch of the right hamstrings will not be optimal. An alternate position to stabilize the client's pelvis is to use your right knee (Fig. 9-3B).
- It is also important to lean in quickly so that you can make sure that the client's knee joint remains extended and also to be in position to further stretch the client during the next step of the routine.
- This step adds in the AC protocol, beginning the stretch of the target right hamstring musculature and engaging the RI reflex to further inhibit and relax the target musculature.
- *Note*: This step differs from the usual CR stretching protocol, in which the client relaxes and the therapist stretches the client's target musculature by passively moving the client's thigh into flexion.

Step 3: Client Relaxation and Further Stretch:

- Continuing with the AC protocol, once the client has actively moved the thigh into flexion, the client relaxes, and you now increase the stretch of the client's target right hamstring musculature by gently and passively moving the client's thigh farther into flexion until you meet tissue resistance (Fig. 9-4).
- Hold this position of stretch for 1 to 2 seconds.

A



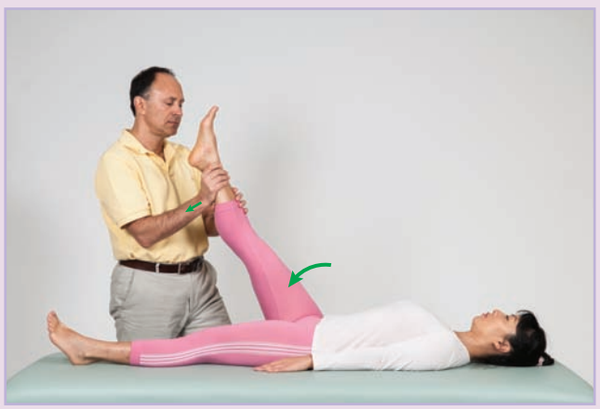
B

Figure 9-3 Step 2: Client actively moves into flexion of the right thigh at the hip joint. **(A)** Stabilization of the client's pelvis with the right hand. **(B)** Alternate stabilization contact: the right knee.

9.1 PRACTICAL APPLICATION

Return Only Part Way in Step 4

It is typical for stretching routines that include the AC stretching protocol to return the client all the way back to anatomic position for the beginning of the next repetition. When stretching the hamstrings, this requires the therapist to continually step away so that the thigh can be lowered back to the table, only to have to step back in to further stretch the client's thigh and stabilize her pelvis in the next repetition. However, it is not necessary to return the client all the way to the table; the client can be returned only part way. What is important is that the client is returned far enough so that there is a range of motion of flexion through which she can actively move her thigh so that the RI reflex is initiated. When performing CRAC stretching for the hamstring group, it is much more practical during step 4 to return the client only part way so that you can remain in one position during the entire stretching protocol. **Figures A and B** demonstrate the end and beginning positions of the stretching routine when the client is returned only part way.



A

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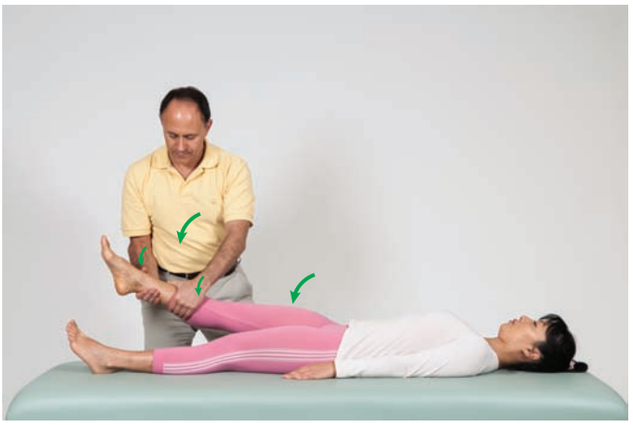


Figure 9-5 Step 4: The client's thigh is passively returned to the starting position.

Step 4: Passively Return Client to Starting Position:

- After holding the client's right thigh in this stretch position as indicated, support and passively bring the thigh back to the starting position for the next repetition (Fig. 9-5).

Further Repetitions:

- Repeat this CRAC protocol for additional repetitions as needed.
- The number of repetitions typically performed varies from 3 to 10.

PERFORMING THE TECHNIQUE

When performing CRAC stretching, it is important to keep the following guidelines in mind. Each point addresses a specific aspect of the CRAC stretching technique. Understanding and applying them consistently will enhance the effectiveness of this technique.

9.1 Position: Select an Appropriate Starting Position

There is no single correct starting position for the client. It is typical to ask the client to begin in neutral anatomic position. However, the client's body part can be returned only part way toward that position—in other words, for this example with the hamstrings, to a position of partial flexion of the thigh. What is most important is that (1) the client is in a position in step 1 that is comfortable when contracting his or her musculature isometrically during the CR phase of the protocol and that (2) the client has a range of motion in step 2 to move (the thigh into flexion in this example) during the AC phase of the protocol. The client's range of motion in step 2 is important because the RI reflex is engaged only if the client concentrically contracts and moves his or her body.

9.3 THERAPIST TIP

Start from the Correct Position

CRAC stretching is similar to AC stretching in that all repetitions begin from approximately the same starting position. CRAC stretching differs from CR stretching, which usually begins each successive repetition from the position of stretch attained during the previous repetition.

9.2 Resistance: Your Role

When you offer resistance as the client isometrically contracts in step 1 during the CR phase of the protocol, keep in mind that it is not a contest between you and the client. It is your role to meet the client's resistance, not to exceed it. Thus, to ensure that the client's contraction of the target muscle is isometric, you must equal whatever force the client generates. Also, as soon as you ask the client to relax, it is important that you immediately ease off your pressure so that the client's body is not suddenly pushed into the stretch.

9.3 Client Concentric Contraction: Instruct the Client to Move Actively

When performing CRAC stretching, it is crucial during the AC phase of the protocol in step 2 that the client concentrically contracts and actively moves through the range of motion without your assistance. Although your hand may be on the client's body part to increase the stretch at the end of the client's active movement, you must be sure to not actually move the client passively. It can be helpful for your hand to guide the direction of the client's motion, but if the client is passively moved and does not actually contract the agonist musculature, the RI reflex will not be engaged.

9.4 Repetition Time: Keep It Dynamic

Like AC stretching, CRAC stretching tends to be performed in a dynamic manner, with the stretch held statically in step 3 for only 1 to 2 seconds. However, because of the isometric contraction required in step 1, a repetition of CRAC stretching will last longer than an AC repetition. Typically, a CRAC repetition lasts approximately 8 to15 seconds.

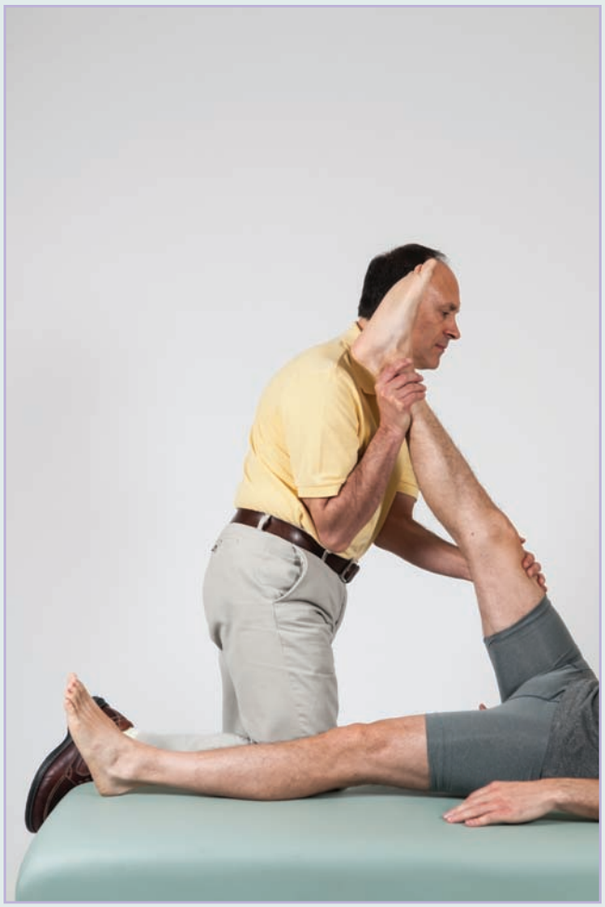
9.5 Stretch: Slow and Easy

When stretching the client's target musculature, it is extremely important that the stretch is performed slowly and is never forced. If a target muscle is stretched too fast or too far, the **muscle spindle reflex** may be triggered. The muscle spindle reflex is a protective reflex that tightens a muscle to prevent overstretching and possible muscle tearing. This will cause a spasm of the target muscle, defeating the purpose of the stretch. Stretching should always be done slowly and within the comfort zone of the client. When you first meet tissue resistance, add only a small additional stretch to the client's tissues. Because a number of repetitions are performed, gaining a small incrementally increased stretch at

9.4 THERAPIST TIP

Use Your Core

When performing CRAC stretching, there may be times when a client contracts so forcefully that you feel overpowered. Using the larger muscles of your core can help to remedy this. To align your body weight behind your forearms and hands, bring your elbows in front of your core by laterally rotating the arms at the glenohumeral joints and placing your elbows inside (or close to) your anterior superior iliac spines. If you cannot bring your elbows in front of your body, bring them in as far as possible. If this is still insufficient, try either placing a foot behind you on the floor or place your knee on the table so you can engage your lower extremity muscles to brace your core (see accompanying figure).



each repetition will allow for an excellent degree of stretch at the end of the CRAC stretching technique protocol.

9.6 Number of Repetitions

The number of repetitions performed for CRAC stretching varies. Because CR stretching usually involves 3 to 4 repetitions and AC stretching usually involves 8 to 10 repetitions, some therapists treat CRAC stretching like an add-on to CR stretching and perform 3 to 4 CRAC repetitions. Other therapists treat it more like an add-on to AC stretching and perform 8 to 10 CRAC repetitions. As with all clinical work, the response of the client's tissues is the best guideline for applying the CRAC technique.

9.7 Contraction: Increase Gradually

The goal for each successive CRAC stretch repetition is to build on the previous one so that the degree of stretch achieved gradually increases. For the CR portion, in which the client contracts against your resistance, the strength of the client's contraction can increase gradually from the beginning of the set of repetitions to the end. To accomplish this, instruct the client to press against your resistance gently during the first repetitions and then gradually increase the strength of his or her contraction in successive repetitions until the client is pressing as hard as is comfortably possible by the last repetitions.

If the client contracts too forcefully or too suddenly, a pulled or torn muscle is possible. It may be helpful during the final or last few repetitions to tell the client, "Contract as hard as you **comfortably** *can without hurting yourself."*

9.5 THERAPIST TIP

Hold the Last Repetition

According to the principle known as **creep**, stretched tissues adapt to their newly stretched length more effectively if the stretch is held for a sustained period. For this reason, when you reach the end of the last repetition of the CRAC stretching protocol for a target muscle or muscle group, you may decide to hold the position of the stretch for a longer than usual period, perhaps 10 to 20 seconds or more.

9.8 Hand Placement: Treatment Hand

When performing the CRAC stretching technique, it is important that you place your treatment hand in a comfortable manner for the client. To do this, try to offer a broad contact so that the pressure against the client is distributed as evenly as possible.

9.9 Hand Placement: Stabilization Hand

The position of your stabilization hand (or other stabilization contact) is also crucial. Without it, the client's pelvis and/or trunk would often move in such a manner as to lose the stretch of the target musculature. As with your treatment hand, placement of your stabilization hand should also be comfortable for the client and offer as broad a contact as possible. When performing CRAC stretching of the hamstring group, it is usually necessary to remove the stabilization contact with each repetition to get out of the way and make room for the client's thigh to move. However, even when it is not necessary for you to remove the stabilization contact for this reason, it is still usually necessary to remove the stabilization contact from its stabilization position to assist the treatment hand in supporting and returning the client's body part back to the starting position (step 4) for the next repetition.

The placement of the treatment and stabilization hands often requires your wrist joint to be extended. For the health of your wrists, your point of contact through which pressure is transmitted into the client should be the heel of your hand (the carpal region). If you direct the pressure through your palm or fingers, you may hyperextend and injure your wrist. Given how vulnerable the wrist joint can be, proper biomechanical positioning of the hand/wrist is crucially important.

9.10 Breathing

The usual breathing protocol for CRAC stretching is to have the client hold the breath in step 1 when performing isometric contraction during the CR phase of the protocol. In step 2, the client exhales when actively moving into the stretch

9.6 THERAPIST TIP

Explain the Breathing Protocol to the Client

Chapter 7's discussion of the CR stretching technique stated that when the client isometrically contracts against your resistance, the client can either hold the breath or exhale. However, when performing CR as part of CRAC stretching, the client must hold the breath during this step because the client needs to exhale during the AC portion of the stretch.

Because this breathing protocol is a bit complicated, it often takes a while for the client to become accustomed to it. To help facilitate a smooth performance of the CRAC technique, start by talking the client through when to inhale, when to hold the breath, and when to exhale. Have the client practice this breathing protocol for as many repetitions as is necessary. Once the client is comfortable with and has mastered the breathing protocol, CRAC repetitions proceed smoothly and efficiently.

at the beginning of the AC phase of the protocol. During step 3, the client usually continues exhaling as he or she is relaxed and you further the stretch. In step 4, the client must inhale as you passively return the client's body part back to the starting position so that the client is ready to hold his or her breath for step 1 of the next repetition.

9.11 Direction of Stretch

As with CR or AC stretching, when CRAC stretching is performed, the client can carry out the motion in a cardinal plane or in an oblique plane that combines any two or all three cardinal planes. The precise directions that you choose for the stretches should be determined by the restrictions that you feel when you assess the client's ranges of motion.

9.12 Electric Lift Table

As discussed in Chapters 6, 7, and 8, when stretching the low back and pelvis/hip joint, the value of an electric lift table for optimal body mechanics cannot be overstated. Most CRAC routines for the LSp and pelvis/hip joint require the table to be low. If the table was higher for the performance of other manual therapy techniques, having an electric lift table so that table height can be easily adjusted for CRAC stretching is essential for efficient clinical orthopedic work.

ROUTINES

CONTRACT RELAX AGONIST CONTRACT ROUTINES

Chapters 7 and 8 provided a thorough application of the individual CR and AC stretches of the neck. This chapter covers five examples to clarify the flow of combining CR and AC stretching into the CRAC stretching technique. CRAC stretching for the hamstring group was shown in "Overview of Technique" section. Four additional examples follow here in the "Contract Relax Agonist Contract Routines" section. You can then apply this flow to perform CRAC stretching for the other functional muscle groups of the LSp and pelvis/hip joint.

9.2 PRACTICAL APPLICATION

Contract Relax Agonist Contract Multiplane Stretching Routines

This chapter explains how to perform the CRAC stretching technique and then presents the technique applied to a few of the major functional groups of muscles of the LSp and pelvis/hip joint. However, the CRAC technique can be applied to any stretch, including the multiplane stretches presented in Chapter 6. A couple of multiplane stretches for the CRAC routines of this chapter are presented in Practical Application boxes that follow the CRAC stretching routine steps. However, it should be kept in mind that just as with CR and AC stretching, any musculature, including musculature that needs to be stretched across multiple planes (multiplane stretching), can be stretched with the CRAC technique. What is required to transition a stretch to the CRAC stretching technique is to consider the relationship with gravity so that the agonist musculature concentrically contracts when the motion in step 2 is done and then to add in the protocol steps involved with the CRAC technique.

SECTION 1: LUMBAR SPINE CONTRACT RELAX AGONIST CONTRACT ROUTINES

As with CR and AC stretching, CRAC stretches of the LSp can be performed in two ways. One method is to stabilize the client's pelvis and move his or her upper trunk downward toward the pelvis, thereby stretching the LSp. This method begins the stretch of the LSp superiorly, and as the stretching force is increased and the LSp is increasingly moved downward, the stretch moves into the lower LSp. The second method is to stabilize the client's upper trunk and move his or her pelvis and lower LSp upward toward the thoracic trunk. This method begins the stretch of the LSp inferiorly, and as the stretching force is increased and the pelvis and lower spine are increasingly moved upward, the stretch moves into the upper LSp.

The following CRAC stretching routines for the LSp are presented in this chapter:

- Routine 9-1—LSp extensors
- Routine 9-2—LSp right rotators

9.7 THERAPIST TIP

Stretching the Thoracic Spine

CRAC stretches that move the upper trunk down toward the lower trunk and pelvis tend to stretch the thoracic spine as well as the LSp. However, any LSp stretch can be transitioned to also stretch the thoracic spine by altering either the movement and/or stabilization of the client's body so that the line of tension of the stretch enters the thoracic region.

ROUTINE 9-1: LUMBAR SPINE EXTENSORS

Figure 9-6 shows the functional group of muscles that extend the LSp. These muscles are located on the posterior side of the trunk in the lumbar region. The CRAC stretching routine presented here is essentially the double knee-to-chest stretch that is presented in Chapter 11 (Self-Care Routine 11-6; available online at thePoint.lww.com), with the CRAC stretching protocol added.

The Lumbar Spine Extensor Functional Group
This functional group comprises the following muscles bilaterally:
Erector spinae group
Transversospinalis group
Quadratus lumborum

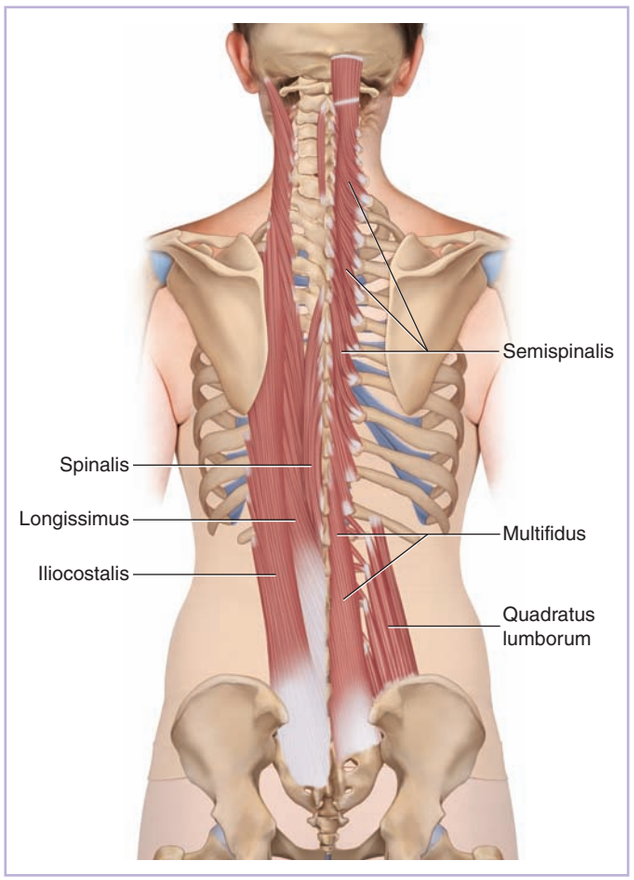


Figure 9-6

Starting Position:

- The client is supine toward one side of the table with his hip and knee joints flexed. You are standing on the right side of the table. Your left foot is on the floor; your right lower extremity is positioned on the table so that your core is in line with the force of the stroke.
- *Note*: The stretching routine could also be performed from the other (left) side of the table. Simply reverse the positioning of your lower extremities.
- Both of your hands are treatment hands and are placed on the distal posterior surface of the client's thighs.
- The client can place his feet on your clavicle as seen in Figure 9-7.
- The client's upper trunk is stabilized by body weight and contact with the table as well as the direction that you push on his thighs when performing the stretch in step 3).

Figure 9-7

Step 1: Client Isometric Contraction:

- Ask the client to perform a gentle isometric contraction of the target muscles for approximately 5 to 8 seconds (in an attempt to extend the lower trunk back down toward the table) against your resistance (Fig. 9-8A).

Figure 9-8A

- Ask the client to relax.
- This phase of the CRAC stretch is the CR protocol.
- Please note that the breathing protocol for every repetition is to have the client hold the breath when contracting against your resistance.

Step 2: Client Concentric Contraction and Stretch:

- As soon as the client relaxes, ask him to concentrically contract the LSp flexor musculature to actively bring his knees toward his chest (move the pelvis into posterior tilt and the LSp into flexion) as far as is comfortable (Fig. 9-8B).

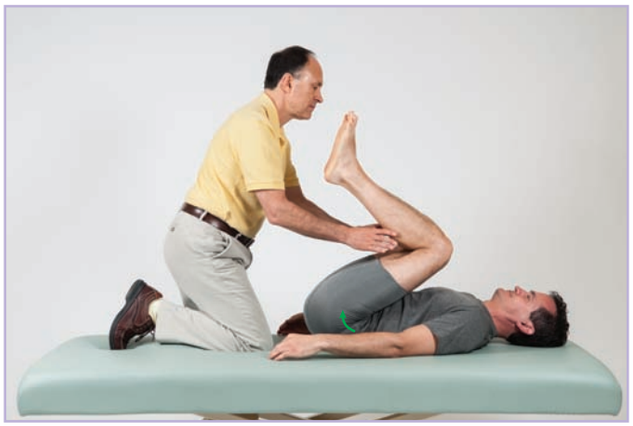


Figure 9-8B

- This differs from CR stretching technique, in which the client would relax, and you would stretch the client's target musculature by passively moving the client's trunk into flexion.
- This stage of CRAC stretching begins the AC protocol.

Step 3: Client Relaxation and Further Stretch:

- Once the client has finished actively moving into flexion, the client relaxes.
- As soon as the client relaxes, you now increase the stretch of the client's target LSp extensor musculature by gently and passively moving the client's LSp farther into flexion until you meet tissue resistance (Fig. 9-8C).
- Hold the client in this position of stretch for 1 to 2 seconds.

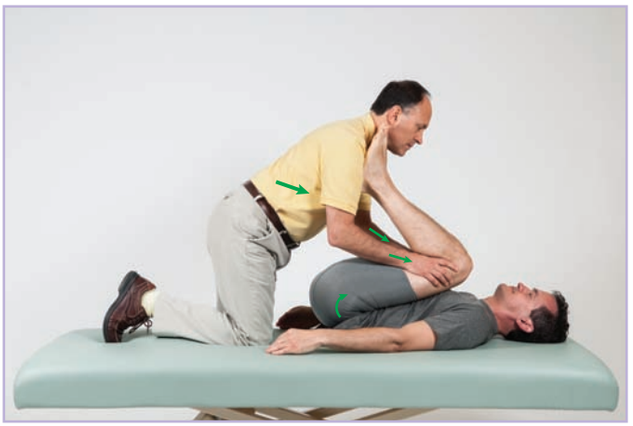


Figure 9-8C

Step 4: Passively Return Client to Starting Position:

- Support the client's trunk as you passively bring the client back to the starting position for the next repetition.
- Use both of your hands to support and move the client's body back to starting position (Fig. 9-8D).

Figure 9-8D

Further Repetitions:

- This CRAC protocol can be repeated for a total of 3 to 10 repetitions.
- Once the final position of stretch is reached at the end of the last CRAC repetition, many therapists like to hold this position of stretch for a longer period, often 10 to 20 seconds or more.

9.3 PRACTICAL APPLICATION

Multiplane Stretching of the Lumbar Spine Extensors

The CRAC stretching protocol for the LSp extensors can be transitioned into a multiplane stretch. For example, during step 1 of the protocol, instead of having the client contract the target muscles against your resistance directly down toward the table (perfectly in the sagittal plane), ask the client to press down toward extension and also to one side **(Fig. A)**. Then during step 2, instead of directing him to actively bring his knees directly up toward the chest (again, perfectly in the sagittal plane), ask him to bring his knees up toward the chest and deviate toward the other side of the body **(Fig. B)**. This protocol can then be repeated for the other side of the body.

A

B

ROUTINE 9-2: LUMBAR SPINE RIGHT ROTATORS

Figure 9-9 shows the functional group of muscles that right rotate the LSp. These muscles are located both anteriorly and posteriorly and on both the right and left sides of the trunk in the lumbar region.

The Lumbar Spine Right Rotator Functional Group
This functional group comprises the following muscles:
Left transversospinalis group
Right erector spinae group
Left external abdominal oblique
Right internal abdominal oblique

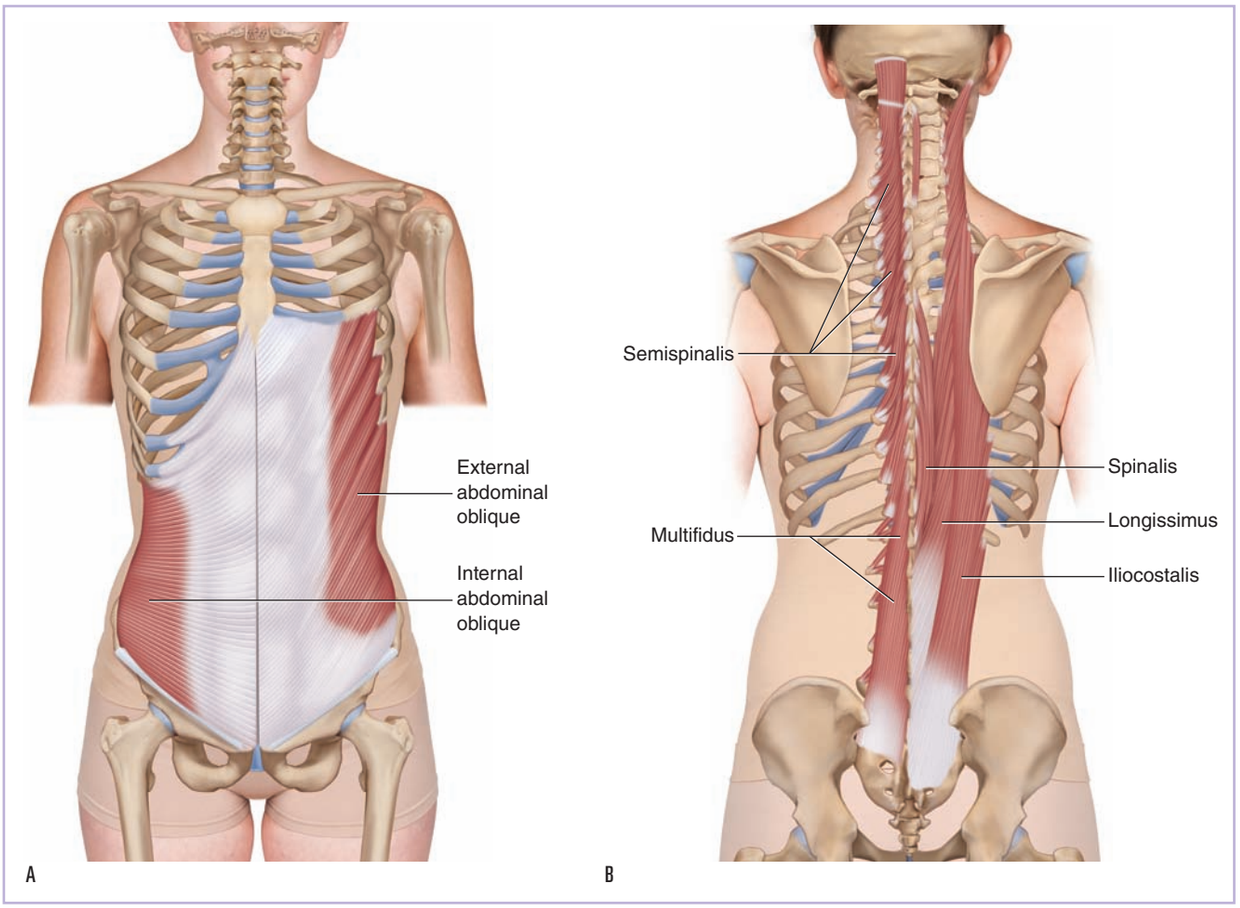


Figure 9-9 **(A)** Anterior view. **(B)** Posterior view.

Starting Position:

- Have the client seated at the right end of the table with her arms crossed so that her hands are on the opposite shoulders, but her arms should be adducted at the glenohumeral joints so that her elbows meet at the center of the body.
- Stand to the right side of the client.
- Your right hand is the treatment hand and is placed on the client's elbows.
- Your left hand is the stabilization hand and functions to stabilize the client's pelvis. It is placed across the top of the client's right iliac crest; if it is not possible to grasp the client's iliac crest, the stabilization hand can be placed on the proximal anterior surface of the client's right thigh; if desired, a cushion can be used for comfort to broaden the stabilization contact (Fig. 9-10).

Figure 9-10

Figure 9-11A

Step 1: Client Isometric Contraction:

- Ask the client to perform a gentle isometric contraction of the target muscles for approximately 5 to 8 seconds (in an attempt to rotate the LSp to the right) against your resistance (Fig. 9-11A).
- Ask the client to relax.
- This phase of the CRAC stretch is the CR protocol.
- Please note that the breathing protocol for every repetition is to have the client hold the breath when contracting against your resistance.

Step 2: Client Concentric Contraction and Stretch:

- As soon as the client relaxes, ask her to concentrically contract the lumbar left rotator musculature to actively rotate her LSp to the left as far as is comfortable (Fig. 9-11B).
- This differs from CR stretching technique, in which the client would relax, and you would stretch the client's target musculature by passively moving the client's trunk into left rotation.
- This stage of CRAC stretching begins the AC protocol.

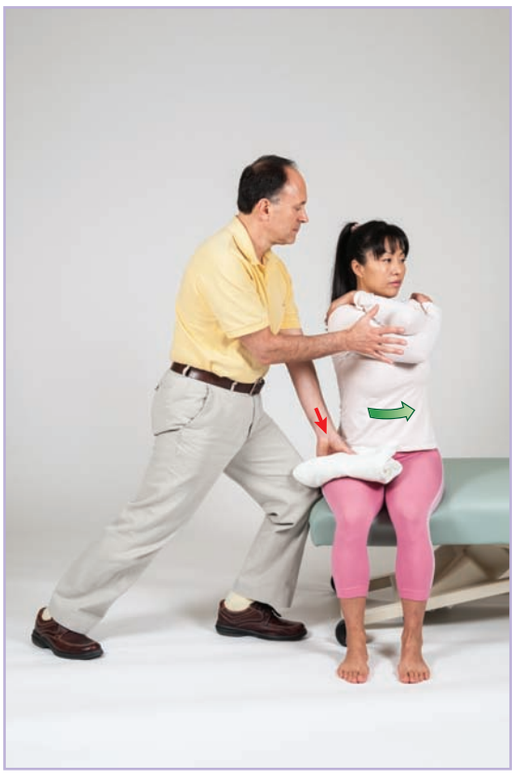


Figure 9-11B

Step 3: Client Relaxation and Further Stretch:

- Once the client has finished actively moving into left rotation, the client relaxes.
- As soon as the client relaxes, you now increase the stretch of the client's target LSp right rotator musculature by gently and passively moving the client's LSp farther into left rotation until you meet tissue resistance (Fig. 9-11C).
- Hold the client in this position of stretch for 1 to 2 seconds.

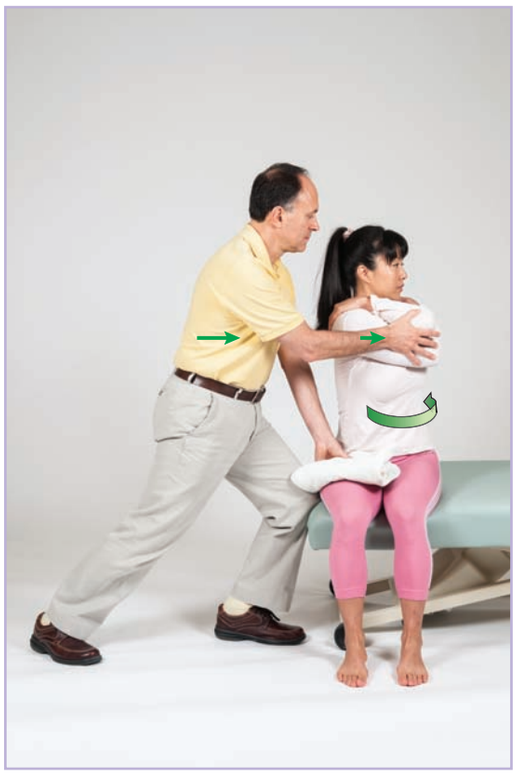


Figure 9-11C

Step 4: Passively Return Client to Starting Position:

- Support the client's trunk as you passively bring the client back to the starting position for the next repetition.
- Use both of your hands to support and move the client's body back to starting position (Fig. 9-11D).

Figure 9-11D

Further Repetitions:

- This CRAC protocol can be repeated for a total of 3 to 10 repetitions.
- Once the final position of stretch is reached at the end of the last CRAC repetition, many therapists like to hold this position of stretch for a longer period, often 10 to 20 seconds or more.

Lumbar Spine Left Rotators:

- *Note*: To use CRAC stretching to stretch the LSp left rotator functional group of muscles, follow the directions given in Figures 9-10 through 9-11 to stretch the right rotator group but switch for the left side of the body.

SECTION 2: HIP JOINT/PELVIS CONTRACT RELAX AGONIST CONTRACT ROUTINES

As a rule, CRAC stretches to the muscles of the pelvis that cross the hip joint are performed by stabilizing the client's pelvis and moving his or her thigh to create the stretch. For the stretch to be effective, it is extremely important that the pelvis is securely stabilized. Otherwise, the stretching force will enter the LSp. This will not only dissipate the stretching force at the hip joint causing it to lose its effectiveness but might also place a torque (rotary force) into the LSp that can cause pain or injury.

The following CRAC stretching routines for muscles of the pelvis that cross the hip joint are presented in the chapter:

- Routine 9-3—hip flexors
- Routine 9-4—hip extensors: hamstrings (in the "Overview of Technique" section)
- Routine 9-5—hip deep lateral rotators

For many stretches of the client's hip joint musculature presented in this book, the leg is shown as the contact for the therapist's stretching/treatment hand. Contacting the leg increases the leverage force, making it easier for the therapist to move the client's thigh to create the stretch. However, if the client's knee joint is unhealthy, the contact should be moved from the leg to the thigh itself so that no force is placed through the knee joint. This can make the performance of the stretch more logistically challenging, especially if the therapist is small and the client is large but is necessary to protect the client's knee from injury.

ROUTINE 9-3: HIP FLEXORS

Figure 9-12 shows the functional group of muscles that flex the right thigh at the hip joint. These muscles are located on the anterior side of the pelvis and thigh, crossing the hip joint between them. With all CRAC stretches to the hip joint, it is important to stabilize the pelvis. With this stretch, it is especially important because if the pelvis is not securely stabilized, it will anteriorly tilt, causing increased lordosis of the LSp. Following is the CRAC stretching routine shown for the hip flexor functional group on the right side of the body with the client prone. *Note*: Alternate positions to perform stretching of the hip flexor group (prone with the therapist seated on the client and side-lying) are shown in Routine 6-7 in Chapter 6. These stretches can be easily transitioned to CRAC stretching by adding the protocol steps for CRAC stretching.

The Pelvis/Hip Joint Flexor Functional Group
This functional group comprises the following muscles:
Gluteus medius (anterior fibers)
Gluteus minimus (anterior fibers)
Tensor fasciae latae
Rectus femoris
Sartorius
Iliacus
Psoas major
Pectineus
Adductor longus
Adductor brevis
Gracilis

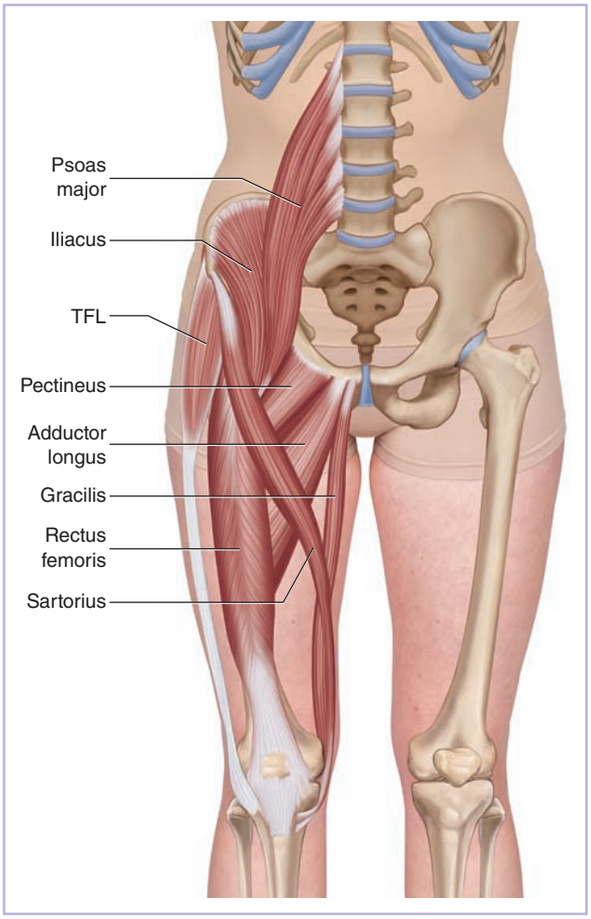


Figure 9-12 *Note*: Not all muscles are seen.

Starting Position:

- Have the client prone toward the right side of the table.
- Stand to the right side of the client.
- Your left hand is the treatment hand and is placed under (on the anterior surface of) the client's right thigh.
- Your right hand is the stabilization hand and functions to stabilize the client's pelvis. It is placed on the client's right posterior superior iliac spine (PSIS) (Fig. 9-13).

Figure 9-13

Step 1: Client Isometric Contraction:

- Ask the client to perform a gentle isometric contraction of the target muscles for approximately 5 to 8 seconds in an attempt to flex the thigh at the hip joint down against the resistance of the table. Your left hand under the client's thigh monitors that she is pressing in the correct manner and direction (Fig. 9-14A).

Figure 9-14A

- Ask the client to relax.
- This phase of the CRAC stretch is the CR protocol.
- Please note that the breathing protocol for every repetition is to have the client hold the breath when contracting against your resistance.

Step 2: Client Concentric Contraction and Stretch:

- As soon as the client relaxes, ask her to concentrically contract the extensors of the right thigh at the hip joint to actively extend the right thigh as far as is comfortable (Fig. 9-14B).

Figure 9-14B

- This differs from CR stretching technique, in which the client would relax, and you would stretch the client's target musculature by passively moving the client's thigh into extension.
- This stage of CRAC stretching begins the AC protocol.

Step 3: Client Relaxation and Further Stretch:

- Once the client has finished actively moving into extension, the client relaxes.
- As soon as the client relaxes, you now increase the stretch of the client's target right hip flexor musculature by gently and passively moving the client's right thigh farther into extension until you meet tissue resistance (Fig. 9-14C).
- Hold the client in this position of stretch for 1 to 2 seconds.

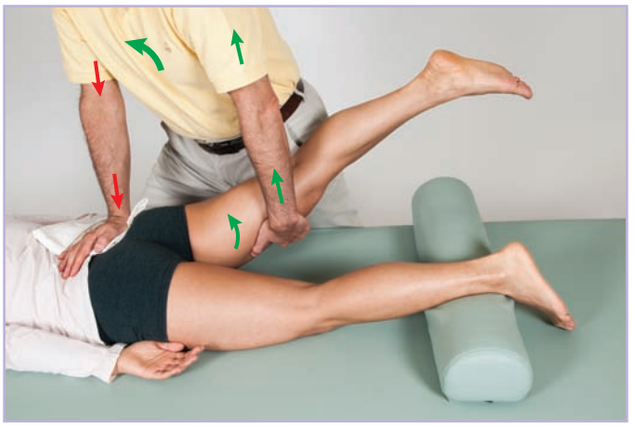


Figure 9-14C

Step 4: Passively Return Client to Starting Position:

- Support the client's trunk as you passively bring the client back to the starting position for the next repetition.
- Use one or both of your hands to support and move the client's thigh back to starting position (Fig. 9-14D).

Figure 9-14D

Further Repetitions:

- This CRAC protocol can be repeated for a total of 3 to 10 repetitions.
- Once the final position of stretch is reached at the end of the last CRAC repetition, many therapists like to hold this position of stretch for a longer period, often 10 to 20 seconds or more.

Left-Side Flexor Group:

- Repeat for the pelvis/hip joint flexor functional group on the left side of the body (Fig. 9-15).

Figure 9-15

9.4 PRACTICAL APPLICATION

Multiplane Stretching of the Hip Joint Flexors

The CRAC stretching protocol for the flexors of the hip joint can be transitioned into a multiplane stretch. For example, during step 1 of the protocol, instead of having the client contract the target (hip flexor) muscles and press her thigh against your resistance directly down toward the table (perfectly in the sagittal plane), ask the client to press down toward flexion and toward abduction **(Fig. A)**. Then during step 2, instead of directing her to actively bring her thigh directly up in the air (again, perfectly in the sagittal plane), ask her to bring her thigh up and deviate medially toward adduction **(Fig. B)**. This will focus the stretch toward the flexors that are also abductors located anterolaterally in the thigh (e.g., TFL). This could be done instead for flexors that are also adductors by deviating up toward abduction. To add in transverse plane rotation, have the client preset the thigh in rotation before beginning the routine and then maintain the rotation during the routine. Figure B demonstrates medial rotation in addition to extension and adduction. Figure C demonstrates the addition of lateral rotation.

A

B

C

ROUTINE 9-4: HIP EXTENSORS: HAMSTRINGS

View the video "Contract Relax Agonist Contract Stretching of the Hamstring Group" online on thePoint.lww.com

Figure 9-16 shows the hamstring muscles on the right side. They are located in the posterior thigh, crossing from the pelvis to the proximal leg. The hamstrings are hip extensor muscles because they cross the hip joint posteriorly with a vertical orientation to their fibers. However, unlike the gluteal muscles, which also cross the hip joint posteriorly with somewhat of a vertical orientation to their fibers, the hamstrings also cross the knee joint posteriorly; therefore, they also flex the knee joint. This is important to know when stretching them. CRAC stretching routine of the hamstring group was demonstrated in the "Overview of Technique" section, Figures 9-1 through 9-5.

The Hamstring Group
This group comprises the following muscles:
Biceps femoris
Semitendinosus
Semimembranosus

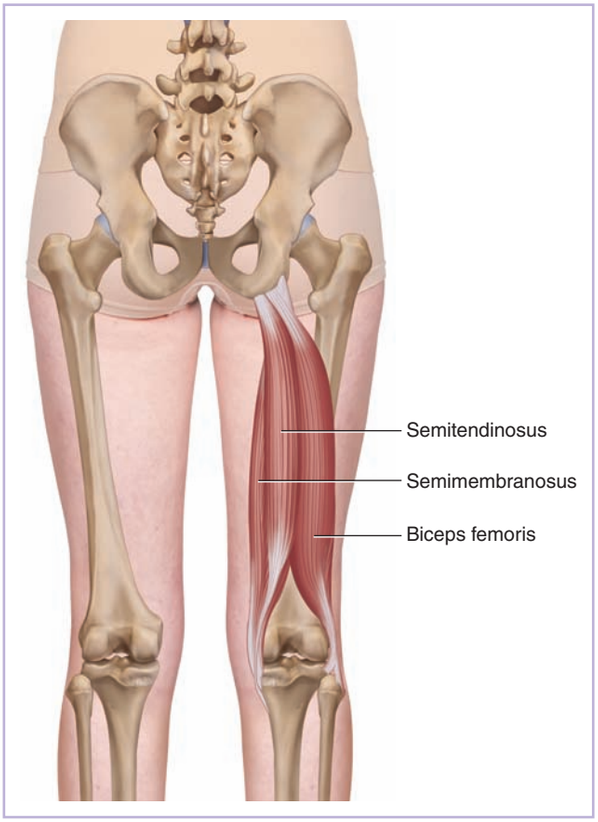


Figure 9-16

ROUTINE 9-5: HIP DEEP LATERAL ROTATORS

Figure 9-17 shows the functional group of deep lateral rotator muscles of the hip joint on the right side of the body. These muscles are located in the posterior pelvis in the buttock region, deep to the gluteus maximus, and cross the hip joint between the pelvis and thigh. *Note*: The posterior capsular ligament of the hip joint (ischiofemoral ligament) is stretched with medial rotation, as are the deep lateral rotator muscles. Therefore, the stretching protocol presented here for the deep lateral rotators is also very effective at stretching and loosening a taut posterior hip joint capsule. Following is the CRAC stretching routine shown for the deep lateral rotator group on the right side of the body.

Starting Position:

- Have the client supine toward the right side of the table.
- Position yourself at the right side of the table.
- Flex the client's right hip and knee joints and place his right foot flat on the table.
- Both of your hands will be treatment hands and can be placed against the lateral surface of the client's distal right thigh (Fig. 9-18).
- No stabilization hand is necessary; the client's body weight and contact with the table, as well as the direction that you move his thigh, stabilize his pelvis.

The Deep Lateral Rotator Group
This functional group comprises the following muscles:
Piriformis
Superior gemellus
Obturator internus
Inferior gemellus
Obturator externus
Quadratus femoris

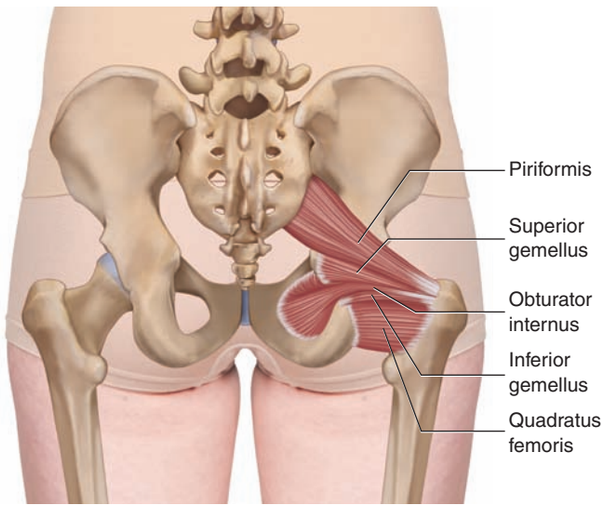


Figure 9-17 *Note*: The obturator externus is not seen.

Figure 9-18

Step 1: Client Isometric Contraction:

- Ask the client to perform a gentle isometric contraction of the target muscles for approximately 5 to 8 seconds in an attempt to horizontally abduct the thigh at the hip joint against your resistance (Fig. 9-19A).

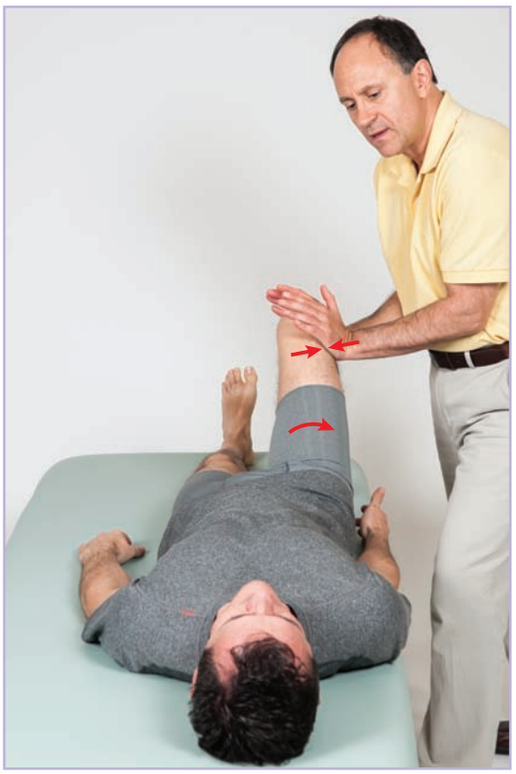


Figure 9-19A

- Ask the client to relax.
- This phase of the CRAC stretch is the CR protocol.
- Please note that the breathing protocol for every repetition is to have the client hold the breath when contracting against your resistance.

Step 2: Client Concentric Contraction and Stretch:

- As soon as the client relaxes, ask him to concentrically contract the horizontal adductors of the right thigh at the hip joint to actively bring his right thigh up and across his body (horizontally adduct) as far as is comfortable (Fig. 9-19B).

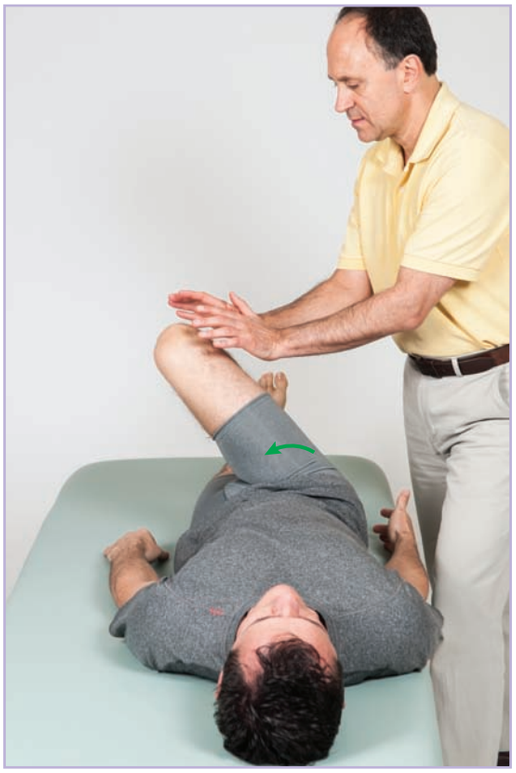


Figure 9-19B

- This differs from CR stretching technique, in which the client would relax, and you would stretch the client's target musculature by passively moving the client's thigh into horizontal adduction.
- This stage of CRAC stretching begins the AC protocol.

Step 3: Client Relaxation and Further Stretch:

- Once the client has finished actively moving into horizontal adduction, the client relaxes.
- As soon as the client relaxes, you now increase the stretch of the client's target right hip deep lateral rotator musculature by gently and passively moving the client's right thigh farther into horizontal adduction until you meet tissue resistance (Fig. 9-19C).
- Hold the client in this position of stretch for 1 to 2 seconds.

Figure 9-19C

Step 4: Passively Return Client to Starting Position:

- Support the client's thigh as you passively bring the client back to the starting position for the next repetition.
- Use both of your hands to support and move the client's thigh back to starting position (Fig. 9-19D). Alternately, the client's thigh does not have to be brought all the way back to starting position, but instead, it can be brought part way back toward the starting position. What is important is that there is a horizontal adduction range of motion possible for the client.

Figure 9-19D

Further Repetitions:

- This CRAC protocol can be repeated for a total of 3 to 10 repetitions.
- Once the final position of stretch is reached at the end of the last CRAC repetition, many therapists like to hold this position of stretch for a longer period, often 10 to 20 seconds or more.

Left-Side Deep Lateral Rotator Group:

- Repeat for the pelvis/hip joint deep lateral rotator functional group on the left side of the body (Fig. 9-20). As seen in the figure, you can place your knee on the table for added stabilization.

Figure 9-20

9.8 THERAPIST TIP

Use Discernment When Deciding Whether to Use Contract Relax Agonist Contract Stretching

Advanced stretches are often the best treatment option when a client presents with a tighter-than-usual low back/hip joint or has a history of not responding to standard stretching techniques. Both CR and AC stretching employ a neurologic reflex that facilitates the stretch by inhibiting and relaxing the client's tight musculature. Because CRAC stretching combines the neurologic reflexes of CR and AC stretching, it is likely the most powerful stretching option and therefore would be the stretching technique of choice for clients with the most chronic and stubborn conditions, especially those clients who have not responded to CR or AC stretching performed separately.

However, CRAC stretching is more time consuming to perform than either CR or AC stretching done alone, and spending more time stretching one muscle group means less time to work on other muscle groups in other areas of the client's body. Ultimately, the choice of stretching technique in each scenario is a clinical decision that rests on the unique circumstances with which the client presents.

CHAPTER SUMMARY

CRAC stretching is an advanced neural inhibition stretching technique that combines the CR stretching technique with the AC stretching technique. Because it does combine these two techniques, its protocol can take some practice to master. It is strongly recommended to first learn and master the CR and AC techniques independently and then apply that knowledge (with minor modifications) to perform the CRAC technique. Because CRAC combines the effect of the CR and AC techniques, it can often help clients with tight muscles when other stretching techniques have not succeeded. As with all stretching, CRAC stretching is most effective when the client's tissues have been warmed up first.

9.9 THERAPIST TIP

Determine the Proper Frequency of Care

Determining the proper frequency of care is extremely important. Many manual therapists feel uncomfortable asking a client to come in more than once a week. However, examples from physical therapy, chiropractic, and athletic training all demonstrate that rehabilitation work is most efficient when treatments are performed two to three times per week. Clinical massage and other manual therapies are no different. When you are performing true clinical rehabilitation work, once-weekly visits are often not only insufficient to help the clients but are also, in fact, a disservice to them.

Each bodywork treatment continues the healing process that was gained in the previous treatment session. However, with each day that passes after a treatment, the client's body reverts more to its initial pattern of tightness, and the healing gained in the previous treatment is increasingly lost. A good analogy is that each treatment brings the client one step forward, but if a full week passes before the next treatment, the client falls back three-quarters of a step, if not the entire step, causing the same ground to be covered repeatedly in future sessions. The result is a waste of the client's time and money.

The maximum benefit is gained when treatments are spaced no more than 2 to 4 days apart. In this manner, each treatment moves the client a step forward, and only a half-step or less is lost if the next treatment occurs within a couple of days. This timing allows for a speedier healing process for the client and actually saves time and money in the long run.

CASE STUDY

LESLIE

History and Physical Assessment

A new client, Leslie Weber, age 55 years, comes to your office complaining of a stiff low back. She tells you that over the years, she has noticed a gradual stiffening of her low back, although she has experienced no accompanying pain. She says she thinks that the increasing stiffness is probably the result of a combination of factors, including poor posture when doing desk work and working at her computer, sleeping on her stomach, and a long history of strenuous working out (Zumba and working out with weights) without commensurate stretching. She states that she has had no previous major physical traumas, operations, or major pathologic conditions of her low back. Other than an occasional "tight low back," she has never noticed any problems.

Leslie further reports that she has already tried deep tissue massage therapy once a week for the past 6 weeks and that she has also been working with a fitness trainer specifically for stretching once a week for over a month now. She says that although she has experienced some improvement with the massage and stretching at the gym, she does not feel that they have helped her sufficiently to regain her lost motion. She says she also saw her medical physician, who ordered radiography of her LSp. The physician told her that the radiographs were negative for fracture and dislocation and that they showed only mild lumbar degenerative joint disease (osteoarthritis).

Your assessment exam finds that on active and passive range of motion examination, each lateral flexion motion is decreased by 20 degrees, flexion is decreased by 25 degrees, and extension is decreased by 10 degrees. Assessment also shows negative cough test and Valsalva maneuver as well as negative active and passive straight leg raise tests for lower extremity referral. (For a review of assessment procedures, see Chapter 3.) Palpation exam reveals uniform tightness of her lumbar and lower thoracic paraspinal musculature bilaterally as well as bilateral tightness of her quadratus lumborum and psoas major. Her deep lateral rotator musculature of the hip joint is also tight bilaterally.

Think-It-Through Questions:

1. Should an advanced stretching technique such as CRAC stretching be included in your treatment plan for Leslie? If so, why? If not, why not?
2. If CRAC stretching would be of value, is it safe to use with her? If yes, how do you know? If not, why not?
3. If CRAC stretching is done, which specific stretching routines should be done and why did you choose the ones you did?

Answers to these Think-It-Through Questions and the Treatment Strategy employed for this client are available online at thePoint.lww.com/MuscolinoLowBack

CHAPTER 10 Joint Mobilization

CHAPTER OUTLINE

Introduction 337
Mechanism 338
Overview of Technique 339
Performing the Technique 343
Joint Mobilization Routines 349
Chapter Summary 375
Case Study 376

OBJECTIVES

After completing this chapter, the student should be able to:

1. Describe the similarity between joint mobilization and stretching.
2. Describe the relationship between joint mobilization and pin and stretch.
3. Explain how joint mobilization differs from other forms of stretching.
4. Describe the relationship between joint hypomobilities and hypermobilities.
5. Describe the roles of the treatment hand, stabilization hand, and support hand.
6. Describe in steps an overview of the usual protocol for carrying out a joint mobilization of the sacroiliac and lumbar spinal (LSp) joints.
7. Describe the relationship between joint mobilization and passive range of motion and joint play.
8. Explain why thrusting should never be done when performing joint mobilization.
9. State conditions that contraindicate joint mobilization of the sacroiliac and LSp joints.
10. Define each key term in this chapter and explain its relationship to joint mobilization technique.
11. Perform joint mobilization technique for each of the routines presented in this chapter.
12. Describe and perform two methods of joint play distraction (traction).

KEY TERMS

active range of motion
adjustment
axial distraction
distraction
hypermobile
hypomobile
joint mobilization
joint play
joint release
manual traction
mobilization grading
motion palpation
passive range of motion
pin and stretch
"pocket to pocket"
segmental joint level
stabilization hand
support hand
towel traction
traction
treatment hand

INTRODUCTION

Among the advanced techniques that are available to manual therapists, none is more underutilized than joint mobilization. In treatment sessions, most massage therapists employ massage strokes, many use hydrotherapy (e.g., hot/cold), and many stretch their clients, but very few use joint mobilization. This is unfortunate because, of all the advanced treatment techniques, none is more powerful and has more potential therapeutic benefit than joint mobilization. However, any therapy that has the power to heal also has the power to cause harm if not employed judiciously and with skill. Joint mobilization is such a skill. Ideally, this chapter should be consulted along with attendance at a hands-on joint mobilization workshop. But even without attendance at a hands-on workshop, this chapter, along with careful study and practice, provides a solid beginning foundation on how to perform this technique.

Note: In the Technique and Self-Care chapters of this book (Chapters 4 to 12), green arrows indicate movement, red arrows indicate stabilization, and black arrows indicate a position that is statically held.

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BOX 10.1

Joint Mobilization Routines

This chapter presents the following joint mobilization routines:

- Section 1: sacroiliac joint (SIJ) mobilization routines:
  - Routine 10-1—SIJ prone: posterior superior iliac spine (PSIS) compression
  - Routine 10-2—SIJ prone: sacrum compression
  - Routine 10-3—SIJ side-lying: compression
  - Routine 10-4—SIJ supine: compression
  - Routine 10-5—SIJ supine: single knee to chest
  - Routine 10-6—SIJ supine: horizontal adduction
  - Routine 10-7—SIJ side-lying: horizontal adduction
- Section 2: lumbar spine (LSp) joint mobilization routines:
  - Routine 10-8—LSp prone: extension compression
  - Routine 10-9—LSp prone: lateral flexion and rotation
  - Routine 10-10—LSp prone: flexion distraction
  - Routine 10-11—LSp seated: mobilizations
  - Routine 10-12—LSp side-lying: horizontal adduction
  - Routine 10-13—LSp supine: towel traction/distraction
  - Routine 10-14—LSp supine: manual traction/distraction

MECHANISM

The mechanism of **joint mobilization** of the SIJ and LSp joints is simple. One bone is stabilized while the adjacent bone is mobilized by moving it in relation to the stabilized bone. This mobilization causes a stretch of the soft tissues located between these two bones. In essence, joint mobilization is a very precise form of stretching. It is stretching that is aimed at loosening taut intrinsic soft tissues at a **segmental joint level**. These tissues include joint capsules, ligaments, and short deep intrinsic muscles. A segmental joint level is a specific joint level; for example, the L4-L5 segmental joint level refers to the spinal disc and facet joints between L4 and L5, and the SIJ refers to the joint between the sacrum and ilium (for a review of the anatomy of the LSp and SIJ, please see Chapter 1). More specifically, a joint mobilization is aimed at a **hypomobile** segmental joint level, in other words, a joint level whose range of motion is decreased.

Joint mobilization is performed within a range of motion called **joint play**—that is, the small range of motion that is possible beyond the end of passive range of motion (Fig. 10-1). **Active range of motion** is defined as the range of motion of a joint that can be performed by the contraction of the muscles of that joint. **Passive range of motion** is defined as the range of motion of the joint that can be produced by a force other than the contraction of the muscles of that joint (passive range of motion is often performed by a therapist). In a healthy joint, passive range of motion is slightly greater than active range of motion. Joint mobilization technique is performed within the range of joint play.

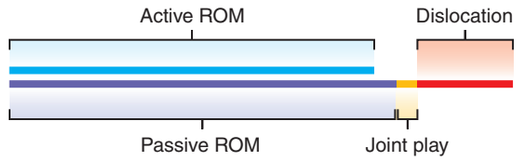


Figure 10-1 Illustration of the relationship of a joint's active range of motion, passive range of motion, and joint play. *ROM*, range of motion.

The range of motion within joint play is extremely small so the amount of stretch that you apply during a joint mobilization to a client's SIJ and LSp joints needs to be extremely small. This motion is barely measurable, literally a fraction of an inch (a quarter inch or less), and is only enough to slightly stretch the client's tissues that are located deeply around the joint. As with any stretching technique, joint mobilization should never be forced and should not be painful for the client. Because joint mobilization technique is performed within the range of motion called joint play, the technique is often called *joint play*.

Comparison of Joint Mobilization and Stretching

Joint mobilization is similar to stretching techniques; when a joint is moved in one direction, the soft tissues on the other side of the joint are stretched. These tissues are the antagonist musculature, ligaments and joint capsule fibers, and other fascial tissues. However, unlike all other stretching techniques, instead of stretching the entire low back and pelvis, and thus the larger, longer soft tissues that span the entire lumbosacral spine and posterior pelvis, joint mobilization focuses the stretch on the smaller intrinsic muscles of the spine (e.g., rotatores, intertransversarii) and the smaller ligaments and joint capsules of the segmental joint level being stretched.

All stretching techniques discussed thus far in this book involve stretching the entire LSp and pelvis. In other words, the line of tension of the stretch is spread across all the LSp joints from T12 to the sacrum and the pelvis from the lumbosacral spine to the lower extremity. The problem with this is that a client's low back may have full range of motion even if one or more segmental levels are hypomobile. For example, the L3-L4 segmental joint level can have decreased motion into right lateral flexion, yet the LSp as a whole may still exhibit full right lateral flexion. Another example might be that the left SIJ has decreased range of motion, but the joints of the pelvis as a whole exhibit may still exhibit full range of motion. This is because other lumbar and pelvic joints compensate by becoming **hypermobile** and therefore move more than normal. In the case of the lumbar example, if the low back joints above L3 and below L4 increase their flexibility in right lateral flexion, they can fully compensate for the right lateral flexion motion that is lost between L3 and L4. In the pelvic example, if the right SIJ increases its motion, it can fully compensate for the motion that is lost at the left SIJ. When the client's lumbar or pelvic range of motion is assessed, it will exhibit full motion, even though

10.1 THERAPIST TIP

Importance of Segmental Joint Hypomobilities

The following question might be asked: If the LSp and pelvis have full range of motion, why do you care if there are hypermobilities compensating for hypomobilities? After all, if the low back can move as far as is needed in each direction, is it not fully functional?

The answer is yes, but this full range of motion comes at a price. In time, the excessive motion of the compensating hypermobile joints can lead to their overuse and irritation. This can cause pain, which then triggers the pain-spasm-pain cycle to cause protective spasming of the musculature of those joints. This spasming then causes further pain, resulting in a vicious cycle. The muscular spasming that occurs also causes restriction of motion at those segmental joint levels, changing the hypermobilities into hypomobilities. Overuse of a hypermobile segment can also cause irritation and swelling, which can result in the influx of fibroblasts, which lay down scar tissue adhesions, further transitioning the hypermobility to a hypomobility. As a result, there will be even more hypomobile segmental joint levels in the low back, requiring even greater hypermobility compensation of the remaining joints. In time, these remaining hypermobilities will likely also become hypomobilities. This is a classic domino effect pattern that occurs in the spine as compensatory hypermobilities become hypomobilities and the region of hypomobility spreads. This explains how large spinal regions can become locked up and hypomobile.

When a client has just one or two low back joint hypomobilities and the adjacent hypermobile joints "successfully" compensate, the client often is unaware of the problem and does not seek care. Regions of hypomobility usually become apparent only when they become so large that the adjacent joints are no longer capable of compensating sufficiently. As a result, the gross range of motion of the low back finally diminishes. This is usually the point at which the client realizes that there is a problem, whereas in reality, the condition likely has been progressing for months, if not years. Treatment success is more linked with the length of time (chronicity) that the client has had a condition than any other one factor. Therefore, it is important to locate these segmental hypomobilities as soon as possible before they are long-standing and before they spread. Joint mobilization assessment and treatment is the ideal technique to accomplish this.

one or more of its segmental joint levels are restricted and in need of stretching/mobilizing.

In this manner, hypomobilities create corresponding hypermobilities. Once formed, hypermobilities enable the persistence of hypomobilities. However, if enough hypomobile levels are present, their decreased motion might contribute to an overall decrease in gross range of the motion of the LSp or pelvis. But even this condition can be difficult to resolve with standard or advanced stretching, because if you stretch the client's low back in an attempt to lengthen and loosen these hypomobilities, the hypermobilities may "absorb" the stretch by becoming even more hypermobile. Thus, this stretch may result in a restoration of gross range of the motion, even though the underlying hypomobilities are still present. In cases such as these, which are quite common, all standard and advanced stretching techniques are usually ineffective at increasing the flexibility of these hypomobile joints. In fact, these techniques may actually be detrimental because they cause or perpetuate the hypermobile joint compensations.

Joint mobilization is the only treatment technique available to manual therapists that can address and resolve a segmental joint hypomobility. If, for example, the L3-L4 joint is decreased in right lateral flexion, joint mobilization can apply the localized force needed to address this very specific loss of motion at this specific joint level. As with regular stretching, the force used in joint mobilization is a tension force, but instead of producing a line of tension across a large swath of tissue (such as the entire LSp), this force is localized and applied to only one segmental joint level of the low back or pelvis. In this sense, joint mobilization can be considered a very specific and focused stretching technique.

OVERVIEW OF TECHNIQUE

The following is an overview of joint mobilization technique using seated joint mobilization technique for the L2-L3 segmental level as the hypomobile joint that needs to be mobilized into left lateral flexion. In this example, because the client has a restriction in left lateral flexion at the L2-L3 joint level, you can assume that the L2 vertebra is not left laterally flexing freely on the L3 vertebra. To resolve this problem, it will be necessary to apply a force that moves L2 into left lateral flexion on L3 while L3 remains stable, thereby stretching whatever taut tissues between them are restricting this frontal plane motion. This is accomplished by using one hand to stabilize L3 while the other hand moves L2 on L3.

As with regular stretching, the **treatment hand** applies the stretching or mobilization force, and the **stabilization hand** prevents the adjacent body part from moving. Placing the hands in this manner focuses the stretch on the appropriate joint level and keeps it from being lost on other levels of the low back. In this case, the therapist's right (lower) hand is the stabilization hand that is stabilizing the client's L3 vertebra. The therapist's left (upper) hand is the treatment hand that moves the entire upper body and L2 into left lateral flexion on top of the stabilized L3.

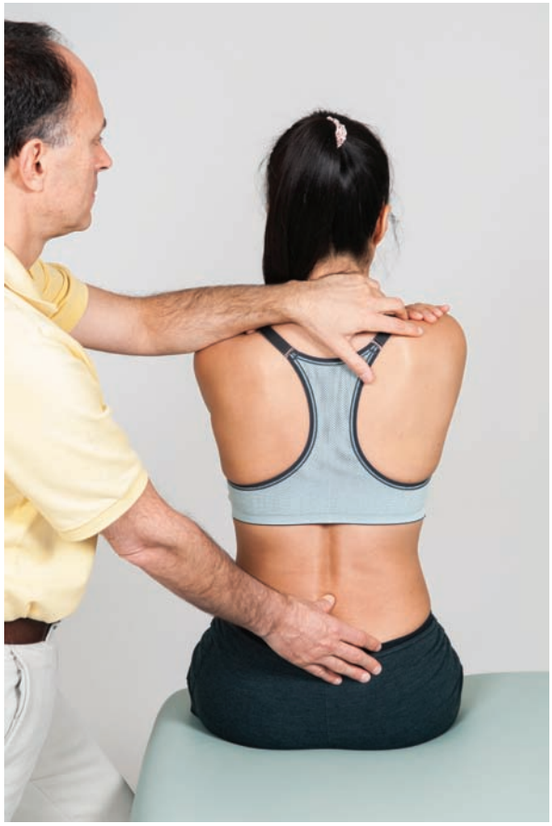


Figure 10-2 Starting position for L2-L3 left lateral flexion joint mobilization.

Starting Position:

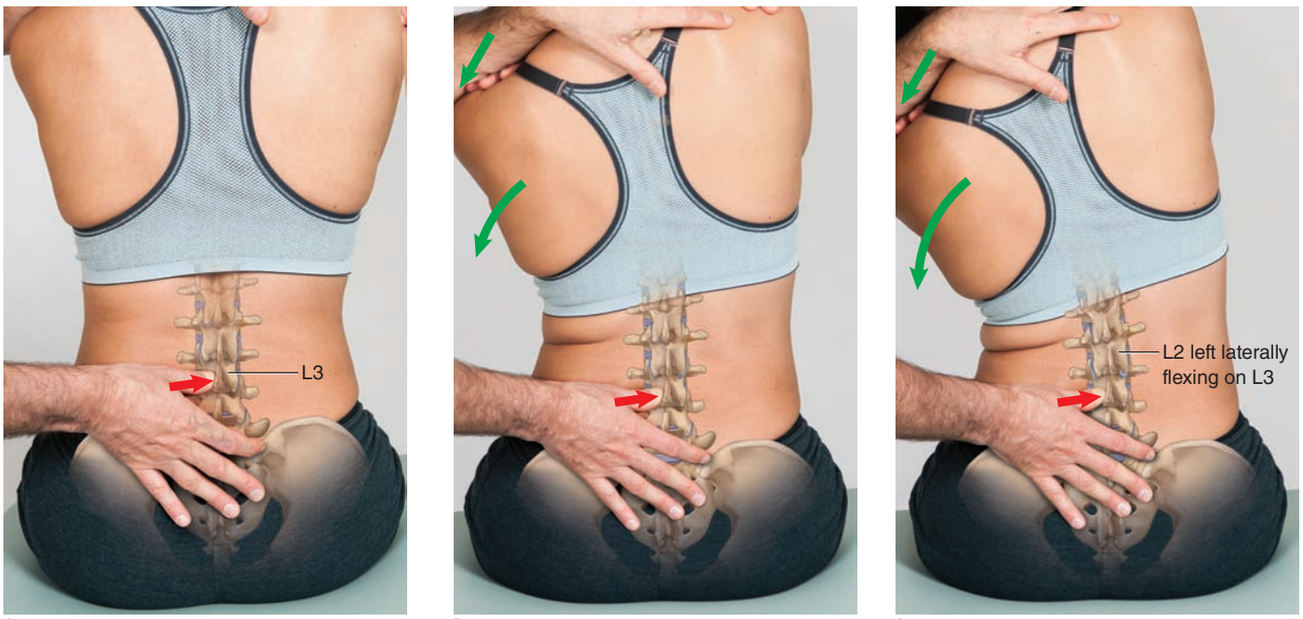
- The client is seated, with her hands comfortably crossed to her opposite shoulders and her arms resting on her chest. You are standing (or seated) behind the client, slightly to the left side.
- Your right hand will be the lower stabilization hand, and your left hand will be the upper treatment hand.
- Note that your elbows are tucked in front of your body as much as possible so that you can use your core body weight behind your forearms and hands when pressing on the client with your treatment and stabilization hands.
- Use your left hand to hold across the top of the client's shoulders/trunk (Fig. 10-2).

Step 1: Stabilize Lower Bone:

- Stabilize/pin L3 by placing the thumb pad of your right hand against the left side of the spinous process (SP) of L3 (Fig. 10-3A).

Step 2: Bring Joint to Tension:

- After securely stabilizing L3 with your right hand, use your left hand to gently but firmly move the client's trunk into left lateral flexion on the L3 vertebra until you reach tissue tension at the end of passive range of motion (Fig. 10-3B).
- *Note*: It is extremely important that your right hand keep L3 stabilized so that it does not move at all.



A B C

Figure 10-3 L2-L3 left lateral flexion joint mobilization steps. **(A)** Step 1, stabilizing L3. **(B)** Step 2, moving L2 into left lateral flexion until tissue tension is felt. **(C)** Step 3, joint mobilization is performed by gently increasing L2's left lateral flexion on L3.

Step 3: Perform Joint Mobilization:

- As soon as you reach the end of passive range of motion, perform the actual left lateral flexion joint mobilization of L2 on L3 by gently applying slightly more force to the client's trunk with your left hand (Fig. 10-3C). *Note*: When you move the client's trunk with your left hand, you are moving L2 and the entire trunk that is above it.
- Hold for only a fraction of a second and then release.

Further Repetitions:

- Once the joint mobilization has been performed at one level, apply it at all the other levels of the LSp so that all LSp joints are mobilized into left lateral flexion.
- This joint mobilization of the entire LSp may then be repeated for a total of two or three times, with concentration at the segmental joint levels that are least mobile.

10.1 PRACTICAL APPLICATION

Transitioning Seated Lumbar Spine Lateral Flexion Mobilization to Rotation and Extension Mobilizations

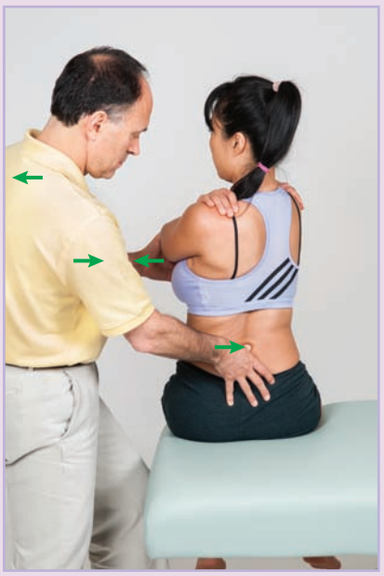
The seated LSp lateral flexion mobilization technique can be modified to mobilize the LSp into rotation or extension.

If rotation mobilization is performed, the client's arms should be crossed so that her hands are on the opposite shoulders, but her arms should be adducted at the glenohumeral joints so that her elbows meet at the center of the body. For left rotation, stand behind and to the client's left side and grasp her elbows with your left hand and place the thumb of your right hand on the left side of the SP at the desired level of the LSp. Rotate the client's upper body into left rotation until the end of passive range of motion is reached. To perform the mobilization, both hands act as treatment hands: The left hand gently brings the client's spine farther into left rotation as the thumb of the right hand pushes the SP farther to the right (when the SP moves to the right, the anterior surface of the vertebral body orients to the left; therefore, this motion is defined as left rotation) **(Figs. A and B)**. The vertebrae that are below the contacted vertebra are stabilized by body weight. Repeat on the other side of the client for right rotation mobilization, switching the placement of your hands.

To perform extension mobilization, the client holds her arms flexed to 90 degrees at the glenohumeral joint and each hand holds the opposite-side elbow. Stand behind and to the left side of the client and grasp her forearms with your left hand and place your contact over the midline (center) of the SP at the desired level of the LSp **(Fig. C)**. Using both hands, bring the client into extension until the end of passive range of motion is reached. To perform the mobilization, both hands act as treatment hands: The left hand gently brings the client's spine farther into extension as your right hand contact pushes the vertebra farther into extension (Fig. C). The vertebrae below the contacted vertebra are stabilized by body weight.

Your contact on the client's SP can be the middle phalanx of your index finger supported by your thumb

continued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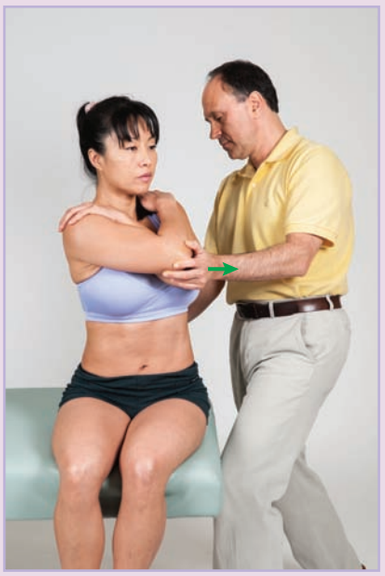
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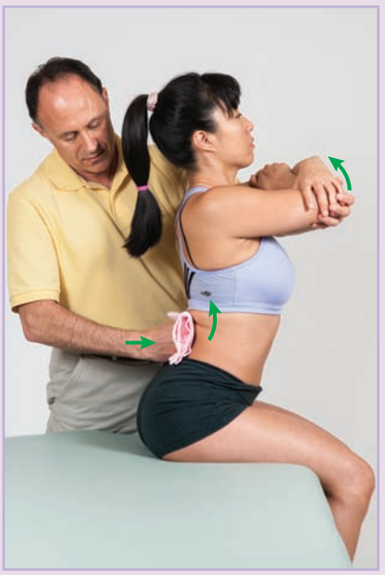
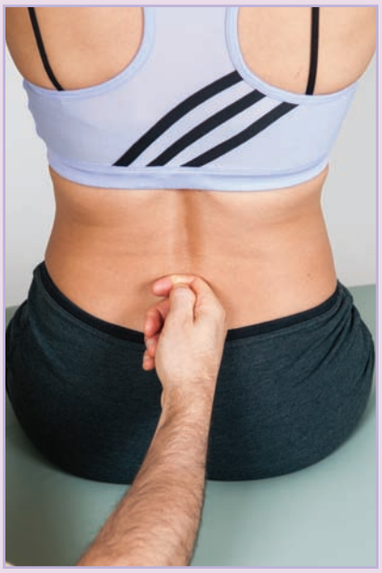

C

10.1 PRACTICAL APPLICATION *(continued)*

(Fig. D). Alternately, you can use your fist **(Fig. E)**. This is a stronger contact for the therapist. It is also less pokey because it broadens out the mobilization force across several vertebrae; however, for this reason, it is also less precise. With either contact, for client and therapist comfort, a small cushion can be placed between the therapist's contact and the client's spine. A folded towel also works well (see Fig. C). *Note*: This mobilization could have been performed with the therapist standing on the other side of the client using the right hand to support the client's forearms in front and the left hand as the vertebral contact hand.



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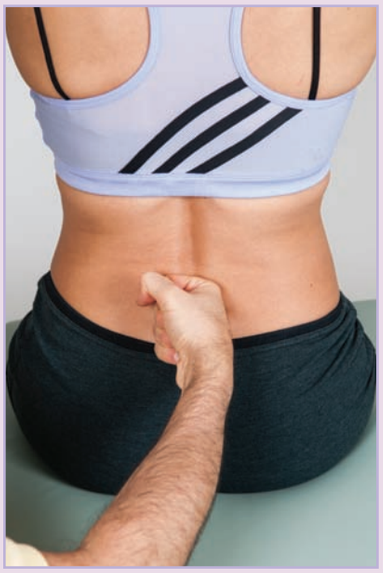


E

10.2 THERAPIST TIP

Apply the Technique Even If the Spinal Level Cannot Be Discerned

Sometimes, it is difficult to distinguish exactly which vertebral level of the LSp you are on. The most important thing is that you apply the joint mobilization technique to each hypomobile segmental level of the LSp, even if you cannot name with certainty exactly which segmental joint you are on at any given time. With continued experience, learning to distinguish and name each segmental level of the LSp will become easier.

BOX 10.2

Joint Mobilization and the Pin-and-Stretch Technique

Joint mobilization is not only a type of stretching but also a form of the **pin-and-stretch** technique. A pin and stretch is done by pinning, or stabilizing, one point and then stretching the soft tissues relative to that pinned point. In the example given in the "Overview of Technique" section, when the stabilization hand stabilizes the third lumbar vertebra, it is pinning L3. Then, when the trunk above L3 is moved relative to L3, the tension of the stretch is directed to the L2-L3 joint level. In effect, the *pin-point accuracy* of LSp joint mobilization occurs because one vertebral level is pinned, directing the stretch specifically to the joint adjacent to that vertebra. Generally, the lower vertebra is pinned, and the stretch is applied to the joint above.

PERFORMING THE TECHNIQUE

10.1 Stabilization Hand: Your Contact

Because joint mobilization technique is so specific, your choice of contact points on the client is crucial. This is especially true of your lower stabilization hand. Figure 10-4 shows three choices for the stabilization hand's contact on the client. One contact is the thumb pad, another is the pads of the index and middle fingers, and the third is the pisiform of the hypothenar eminence of the hand.

Each choice confers specific advantages:

- Use of the thumb pad is generally the most efficient because it is larger and stronger than the pad of the index and middle fingers but smaller than the hypothenar eminence to better fit against the vertebral SP (Fig. 10-4A). The disadvantage of the thumb pad contact is that some therapists have an interphalangeal joint of the thumb that tends to collapse into hyperextension when pressure is applied against it; excessive use of the thumb can aggravate this condition.
- Use of the finger pads tends to be the most specific and easiest to fit against the vertebral SP; however, the fingers have less strength than the thumb pad or hypothenar eminence and may also feel pokey to the client (Fig. 10-4B).
- Use of pisiform of the hypothenar eminence is the largest and strongest contact; however, because it is the largest contact, it is often hard to fit it against the SP (Fig. 10-4C).

As long as the goal of stabilization is achieved, you can use any contact that works and is comfortable for you and the client.

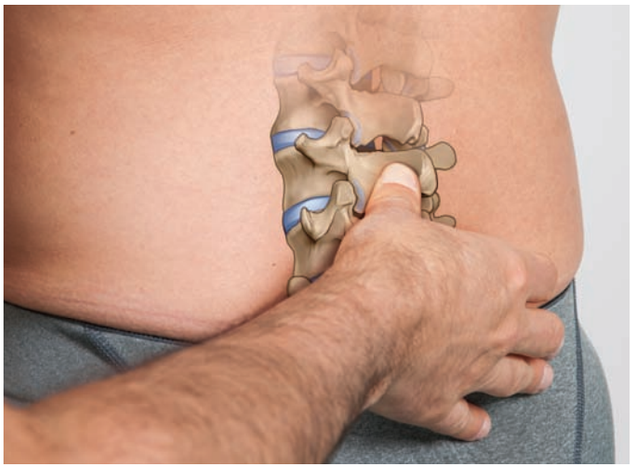


Figure 10-5 The SP is the client contact for the stabilization hand.

10.2 Stabilization Hand: Client Contact

Also important is the precise contact location on the client's LSp for your stabilization hand. Contact must be made against the SP because this is the only lumbar vertebral landmark that is easily accessible and pressure can be applied against (Fig. 10-5). If it is possible to reach deeper into the client's tissues and spread this contact over the lamina, this should be done. The more of the SP and perhaps lamina that can be contacted, the more powerful the stabilization is and the more comfortable it is for the client.

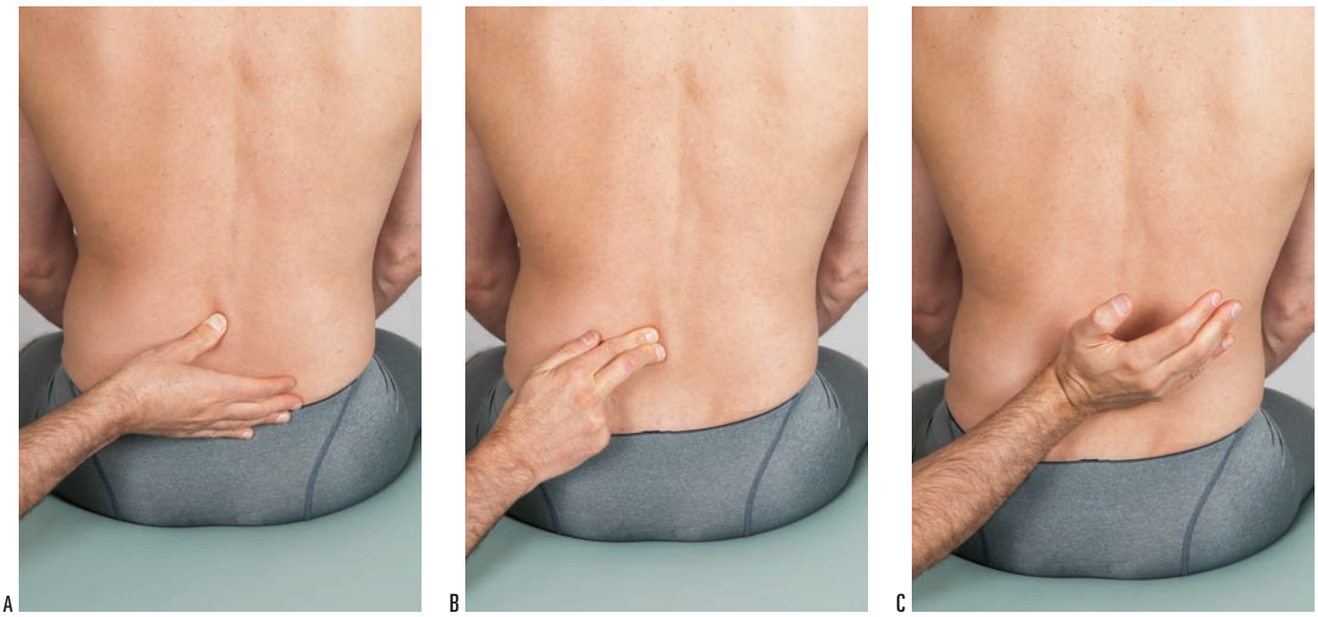


Figure 10-4 Stabilization hand contacts. **(A)** Thumb pad. **(B)** Finger pads. **(C)** Hypothenar eminence.

10.3 THERAPIST TIP

Locating the Spinous Process Contact

The SPs are located midline. Begin by locating the SPs in the posterior midline of the LSp with your thumb pad. Because of the lordotic curve of the LSp, this can be challenging for some of the vertebral levels; find whatever vertebral SP is easiest to find. Now drop laterally off the tip of the SP toward the side of the body to which you are standing/seated and press in against the side of the SP. Reach in as far deep against the SP toward the lamina as you can so that your contact is as firm as possible (see Fig. 10-5). Be sure to not move too far laterally off the SP and onto the laminar groove musculature. For a review of the anatomy of the LSp, see Chapter 1.

10.4 THERAPIST TIP

Holding the Client's Trunk

Your hold of the client's trunk must be gentle but firm and secure so that the client relaxes and allows you to support and move the trunk. To ensure the client's comfort, make sure that your contact is broad, holding the client's trunk with as much of the forearm and palmar (anterior) surface of your fingers and palm as possible (see Fig. 10-6). It is important to minimize curling your fingers to contact the client's trunk with your fingertips because this can feel pokey and uncomfortable to the client.

10.3 Treatment Hand: Your Contact

The placement of your upper treatment hand that moves the client's trunk does not need to be placed as specifically as the lower stabilization hand. However, the upper hand is the hand that has to support and move the client's trunk, so having a gentle but firm and secure contact on the client is important (Fig. 10-6). A client who does not feel comfortable and does not sense that you are holding the trunk securely will not relax and let you perform the joint mobilization.

10.4 Treatment Hand: Client Contact

The upper treatment hand needs to hold onto the client's trunk above the stabilization hand. The role of the treatment hand is to move L2 on L3. Because it is not possible to precisely contact L2 to move it on L3, the entire trunk is held at the shoulders/upper thoracic region. When the treatment hand moves the client's trunk into left lateral flexion, the entire thoracic spine and any and all lumbar vertebrae that are above the stabilization pin (L3 as shown in this section) are moved relative to L3. This focuses the stretch/mobilization to the L2-L3 segmental joint level.

Figure 10-6 Positioning the treatment hand. The position of the treatment hand is placed on the top of the client's shoulders/upper thoracic region.

10.5 Using Both Hands in Concert

When first practicing joint mobilization, the easiest way is to keep the lower stabilization hand fixed and only use the upper treatment hand to move the client's trunk as previously described. However, the roles can be reversed; after tension in the joint is attained, the upper hand can be used as a stabilization hand to keep the trunk/upper vertebrae fixed as the lower hand moves the vertebra that is contacted below. Figure 10-7A shows the position attained in step 2 of the joint mobilization protocol in which the client's trunk has been brought to tension. Figure 10-7B shows the upper hand creating the joint mobilization force as usually done and described thus far in this chapter. Figure 10-7C shows the lower hand being used to create the joint mobilization force instead of the upper hand. Stabilizing the upper vertebra and moving the lower one offers another method of performing joint mobilization of the LSp. Whether the upper vertebra is moved relative to the lower one, or the lower vertebra is moved relative to the upper one, mobilization of the joint between them is accomplished.

In fact, as you become more comfortable and experienced performing joint mobilization, you can increase your proficiency by learning to move both hands in concert to apply the stretch of the mobilization. As the upper hand applies a gentle force to stretch the upper vertebra on the lower one, the lower hand applies a gentle force in the opposite direction to move the lower vertebra relative to the upper one (Fig. 10-7D). In this manner, both hands act as treatment hands, and the degree of mobilization of the segmental level between the two vertebrae is increased. Using the hands in concert as treatment hands greatly adds to the smoothness and proficiency of the joint mobilization technique. Becoming skilled at using both hands in concert, like any other technique skill, involves careful practice.

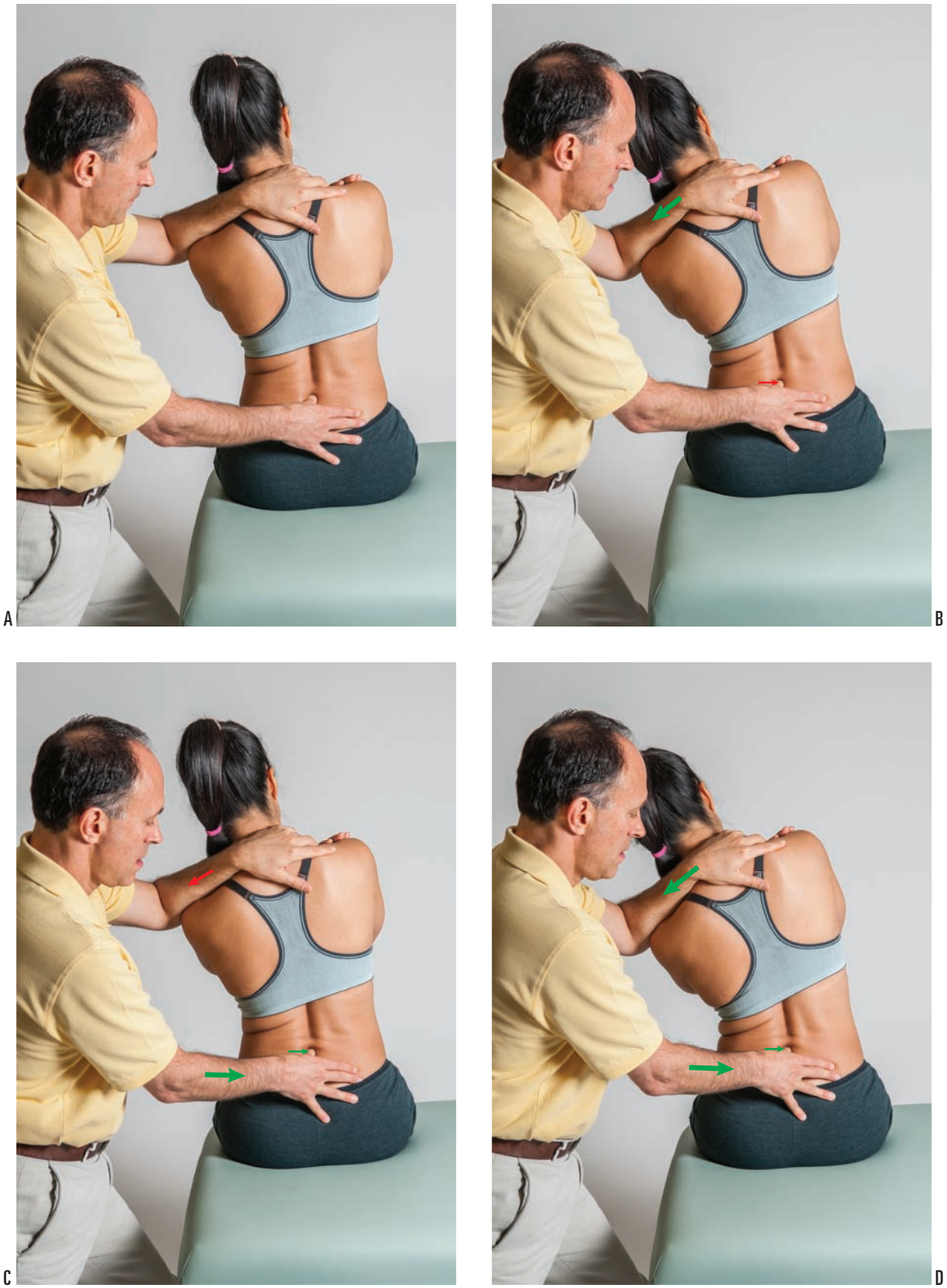


Figure 10-7 Using the stabilization hand to treat. **(A)** The client's trunk (and specifically the joint to be mobilized) has been brought to tension. **(B)** The lower vertebra is stabilized while the upper vertebra is mobilized (moved to the left) above it. **(C)** The upper vertebra is stabilized while the lower vertebra is mobilized (moved to the right) under it. **(D)** Both hands can administer the joint mobilization force simultaneously. The upper hand moves the upper vertebra to the left while the lower hand moves the lower vertebra to the right.

It is critical that you study the joint mobilization technique carefully and understand it before attempting to use it on your clients. Any technique that has the power to help also has the power to do harm, and joint mobilization is an extremely powerful technique. Joint mobilization, when applied inappropriately, can cause serious harm to the client. Inappropriate application of joint mobilization technique includes applying joint mobilization to a condition for which its use is indicated but executing the technique incorrectly—for example, performing it too forcefully. It also includes applying joint mobilization to a condition for which it is contraindicated, usually a space-occupying lesion such as a pathologic disc or advanced degenerative joint disease (see Chapter 3 for assessment of pathologic conditions). If you have any doubt about whether it is appropriate to use joint mobilization for a particular client, be sure first to obtain written permission from the client's chiropractic or medical physician.

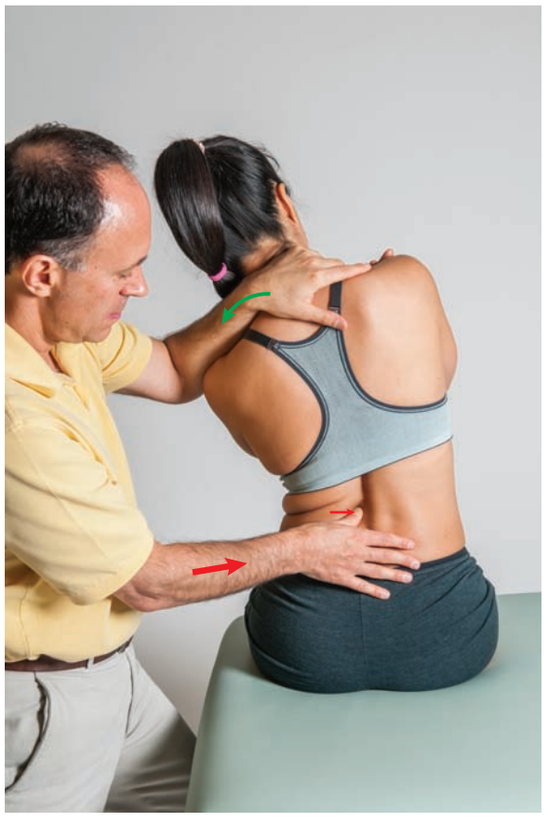
10.6 Bring the Joint to Tension First

Before you perform the actual stretch of the joint mobilization, you must first bring the joint that is to be mobilized to tissue tension at the end of its passive range of motion. This is done by first stabilizing the lower vertebra with your stabilization hand and then using your treatment hand to move the trunk on the fixed vertebra until you reach the end of passive range of motion. The amount of motion necessary to reach this point varies depending on the region of the LSp that is being mobilized. Mobilizing the lower LSp requires more motion on the part of the treatment hand than does mobilizing the upper LSp. Note the difference in the upper treatment hand's motion by comparing Figures 10-8A and 10-8B. Joint mobilization can be performed only when the end of passive range of motion is first reached.

As the treatment hand moves the client through a greater range of motion, it becomes even more important for the lower stabilization hand to stabilize the vertebra securely. For this reason, it can be more challenging for you to mobilize the client's lower LSp than the client's upper LSp.

10.7 Degree of Stretch/Mobilization

The degree of stretch of an LSp joint mobilization is critically important. Joint mobilization is performed within the range of motion called joint play. Because the range of motion within joint play is so small, the amount of stretch that you apply during a joint mobilization to the client's LSp or SIJs needs to be extremely small. This motion is barely mea-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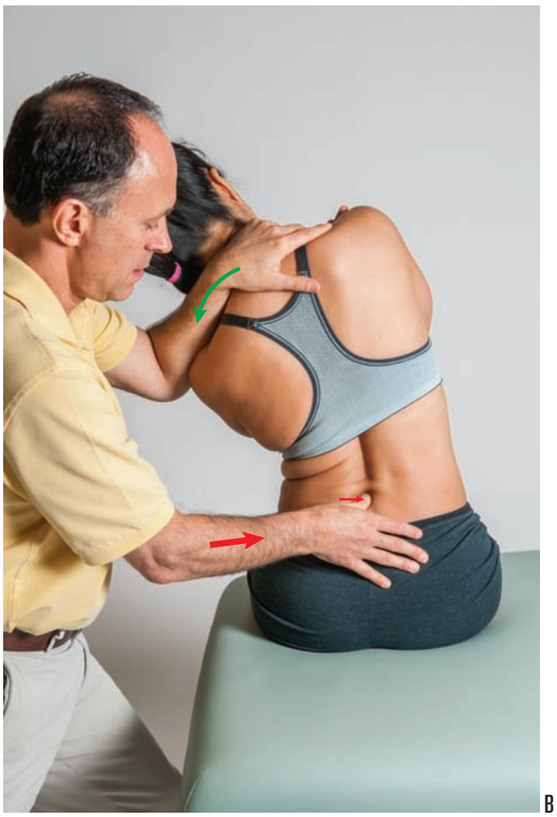
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Figure 10-8 Bringing the joint to tension. Bringing the joint to tension requires less or more movement of the client's trunk depending on the level of joint mobilization. **(A)** Mobilization of the upper LSp requires less movement of the client's trunk. **(B)** Mobilization of the lower LSp requires more movement of the client's trunk.

10.5 THERAPIST TIP

Learning Joint Mobilization of the Low Back and Pelvis

When first learning joint mobilization of the LSp, learning to mobilize the lower LSp is the most challenging because the SP of L5 can be difficult to locate and contact, and the treatment hand has a larger range of motion excursion, requiring more skill to control. Learning to mobilize the middle of the LSp might also be challenging because the lordotic curve causes the SPs to be farther from reach. Therefore, mobilization of the upper LSp is usually the easiest region to learn and master. The routines for joint mobilization of the LSp in this chapter are presented by starting at the upper LSp and then working inferiorly to the lower LSp. However, when first learning and practicing this technique, it is best to begin wherever you can most easily perform this technique. If it is at the upper LSp, then begin there and work your way downward. If it is at the lower LSp, then begin there and work upward. If it is at the middle of the LSp, then begin there and work upward and downward as you please. Once you have become proficient with this technique, it is more efficient to begin at one end of the LSp and work your way methodically toward the other end.

surable, literally a fraction of an inch (a quarter inch or less), and is only enough to slightly stretch the client's tissues that are located deeply around the joint. As with any stretching technique, joint mobilization should never be forced and should not be painful for the client.

Keep in mind that the goal of joint mobilization is to mobilize hypomobile joints. There is no reason to apply joint mobilization to hypermobile joints. In fact, as a rule, it is contraindicated to mobilize hypermobile joints because it will likely increase the degree of hypermobility.

10.8 Length of Time of Stretch/Mobilization

It is also important that you hold the mobilization stretch of the client's LSp or SIJ in joint play for only a very short time, as holding for a sustained period can be very uncomfortable for the client. Proper joint mobilization technique involves bringing the client's joint into the range of joint play for a second or less and then releasing the joint; this can then be repeated approximately three to five times. As with any stretching technique, joint mobilization should not be forced and should be experienced by the client as a comfortable stretch; it should never cause the client pain.

10.9 Applying the Force

Joint mobilization technique is performed by bringing the client's joint to the end of passive range of motion and then gently applying an even and steady force that further stretches the joint in the desired direction of motion. It cannot be emphasized too strongly that the force applied to perform a joint mobilization is gentle yet firm, even, and steady. It can be helpful to think of application of force as being gentle oscillations. Joint mobilization does not involve any type of fast or sudden thrust. A fast thrust within the realm of joint play is defined as a *chiropractic* or *osteopathic adjustment* and cannot be performed legally by most manual therapists.

10.6 THERAPIST TIP

Never Thrust

Two types of manipulations are possible within the range of motion that is termed joint play. If the force that stretches the soft tissues of the joint is applied in a slow, steady manner, it is defined as joint mobilization. A joint mobilization is often described as being a low-velocity manipulation. If, however, the force that stretches the tissue is applied in a fast thrusting manner, it is defined as a chiropractic/osteopathic **adjustment**. An adjustment is often described as being a high-velocity manipulation. Adjustments cannot be performed legally by massage therapists and most other manual therapists. For this reason, it is extremely important when doing a joint mobilization that no thrust is applied to the client's tissues.

As with any joint stretch, a **joint release** (a popping sound) occasionally may occur. This is not defined as an adjustment any more than it would be if it had occurred during a regular stretch of that joint. However, when performing joint mobilization, it should not be your intent to apply a fast thrust within the realm of joint play for the purpose of creating a joint release.

10.10 Breathing

There is no specific breathing protocol that must be used for joint mobilization. Most typically, the client is asked to breathe out and relax as the mobilization stretch is applied. However, what is most important is that the client should continue to breathe in a comfortable and relaxed manner.

10.11 Repetitions

When performing joint mobilization to the LSp, it is possible to choose to mobilize just one segmental level and then repeat the mobilization at that level a number of times. This is often done in sets of three to five oscillations. However, it is more common to mobilize the entire LSp, one segmental joint level at a time, before repeating the joint mobilization at any one joint level.

Most often, the therapist begins at either the top of the LSp at the T12-L1 joint and works down to the bottom of the LSp or begins at the bottom of the LSp at the L5-S1 joint and works up to the top of the LSp. Regardless of the direc-

BOX 10.3

Joint Mobilization/Manipulation Grades

Some sources define the term joint mobilization more generically to describe all motions of a joint. One classification of joint **mobilization grading** divides joint motion/mobilization into five grades.

- Grade I: slow, small-amplitude movement performed at the beginning of a joint's range of active/passive motion
- Grade II: slow, large-amplitude movement performed through the joint's active range of motion
- Grade III: slow, large-amplitude movement performed to the limit of the joint's passive range of motion
- Grade IV: slow, small-amplitude movement performed at the limit of a joint's passive range of motion and into resistance (joint play)
- Grade V: fast, small-amplitude movement performed at the limit of a joint's passive range of motion and into resistance (joint play)

In this grading system, Grade II is the active range of motion that a client can create at a joint. Grade III is a typical passive stretch that is performed by a therapist on a client or a passive self-stretch performed by a client (see Chapters 6 to 9 and Chapter 11, available online at thePoint.lww.com). Grade IV is joint mobilization as the term is used in this text. Grade V is a chiropractic/osteopathic high-velocity (fast thrust) manipulation that is not within the scope of practice for most manual therapists.

tion, once the entire LSp has been mobilized (i.e., all of the hypomobile joints of the LSp have been mobilized), this process can now be repeated a second and third time. In other words, instead of performing three to five repetitions at one joint level before moving on, it is more common to perform one joint mobilization repetition for the entire LSp. Then, if desired, a second repetition for the entire LSp and/or even a third repetition for the entire LSp can be done. Most often, two or three repetitions of joint mobilization of the entire LSp are done. After the LSp has been mobilized in this manner, further joint mobilizations can be repeated at the most restricted levels as needed. As with all treatment techniques, the needs of the client and the response of the tissue are the best factors to use when determining how to apply joint mobilization technique.

10.12 Determining the Need for Joint Mobilization

Determining the need for the stretching techniques presented in Chapters 6 to 9 is accomplished by assessing the low back's gross passive range of motion in each direction. Determining the need for joint mobilization technique is accomplished by assessing the specific joint play range of motion at each segmental joint level. This is done via the assessment technique known as **motion palpation**. Motion palpation assessment is performed in the same manner as joint mobilization treatment is. One bone of the client's joint is stabilized/pinned, and the other bone is moved until tension is reached. The motion palpation assessment is then done by gently introducing a slightly increased motion at that joint level, feeling for the end-feel of motion in joint play.

A healthy joint's end-feel has a springy bounce to it. An unhealthy hypomobile joint has an end-feel that is restricted and feels like you are pushing against a hard block. An unhealthy hypermobile joint is excessive in motion and has a soft doughy/mushy feel to it. If an unhealthy restricted end-feel is found, that joint is in need of mobilization. If a healthy end-feel is present, joint mobilization may be performed at that level to proactively maintain the functional health of the joint. However, if a hypermobile joint is assessed, joint mobilization is contraindicated at that level.

It should be noted that joint mobilization treatment technique is simply an extension of motion palpation assessment technique. They are performed in an identical manner except that motion palpation is done to assess the motion that is present, and joint mobilization is done to maintain or increase that motion. When assessing and treating the client's low back, it is common to do motion palpation at a joint level and, if it is restricted, to simply add a little more force to perform the mobilization. Hence, motion palpation flows into joint mobilization.

10.13 Scope of Practice

Before adding joint mobilization to your practice, it is important to be sure that it is within the scope of practice of your profession. If there is any doubt about the ethical or legal application of joint mobilization within your profession, please check with your local, state, or provincial licensing body; your certifying body; and/or your professional organization.

ROUTINES

JOINT MOBILIZATION ROUTINES

As with regular and advanced stretching techniques, joint mobilizations can be done in axial cardinal plane ranges of motion. It is also possible to do multiplane joint mobilizations by combining two or more of these cardinal plane motions into an oblique plane motion. Anterior- to posterior-directed joint mobilization of the LSp into flexion usually is not done because it would require contacting and pressing on the client's anterior abdomen, which would be uncomfortable for the client.

Additionally, joint mobilizations can be done for nonaxial ranges of motion, including axial distraction, also known as distraction or traction. Nonaxial compression joint mobilization usually is not performed because it does not stretch any soft tissue and therefore does not increase mobility, which is the reason for performing joint mobilization.

Motion within the spine, both axial and nonaxial, at any particular segmental joint level is determined by the plane of the facets at that level. This must be taken into account when performing joint mobilization. Generally, the planes of the lumbar facets are sagittally oriented; therefore, lumbar motion is most free in the sagittal plane, in other words, flexion and extension. However, the facet plane of the L5-S1 joint is more frontal plane in orientation; therefore, its lateral flexion motions would theoretically be freer. When performing joint mobilization technique, it is important to palpate and feel the facet plane motion at that segmental joint level and work by mobilizing this plane of motion (see Chapter 1 for more information about the facet joint planes and range of motion of the lumbar and thoracic spine).

SECTION 1: SACROILIAC JOINT MOBILIZATION ROUTINES

View the video "Introduction to Joint Mobilization of the Sacroiliac Joint" online on thePoint.lww.com

SIJ mobilization introduces motion into the SIJ. The motion that is introduced can vary depending on which bone is mobilized and in what direction. The treatment hand contact can mobilize the ilium with the sacrum stabilized, or the sacrum can be mobilized with the ilium stabilized. Further, the contact location on the sacrum or ilium can vary, as can the direction of the mobilization force. Because very little musculature crosses directly from one bone of the SIJ to the other, musculature is not the primary target of SIJ mobilization. In all cases, the primary soft tissue target of SIJ mobilization is the ligament complex that connects the two bones.

Following are seven SIJ mobilization routines:

- Routine 10-1—SIJ prone: PSIS compression
- Routine 10-2—SIJ prone: sacrum compression
- Routine 10-3—SIJ side-lying: compression
- Routine 10-4—SIJ supine: compression
- Routine 10-5—SIJ supine: single knee to chest
- Routine 10-6—SIJ supine: horizontal adduction
- Routine 10-7—SIJ side-lying: horizontal adduction

ROUTINE 10-1: SACROILIAC JOINT PRONE: POSTERIOR SUPERIOR ILIAC SPINE COMPRESSION

View the video "Joint Mobilization of the Sacroiliac Joint" online on thePoint.lww.com

As the name of the routine implies, SIJ prone PSIS compression mobilization is performed with the client lying face down and the contact mobilization force applied to the PSIS of the ilium. The direction of the mobilization force can vary from anteriorly (down toward the table/floor) and superiorly, to anteriorly and laterally, to anteriorly and inferiorly.

The following are the steps to perform prone PSIS compression mobilization of the left SIJ:

- The client is prone, and you are standing at the left side of the table.
- Place your right hand on the client's left PSIS, with the PSIS positioned in the groove between the thenar and hypothenar eminences (the intereminential groove).
- Support your right hand with the thumb web of your left hand.
- The sacrum is stabilized by body weight, so no stabilization contact is needed.
- Gently lean in with body weight, adding compression force to the PSIS anteriorly and superiorly until you reach tissue tension at the end of passive range of motion.
- Now gently stretch the SIJ into its joint play by leaning in further with body weight, adding a small increased compression force on the PSIS. This will involve a very small excursion of anterior tilt of the ilium on that side (Fig. 10-9A).
- Hold for only a fraction of a second and then release.
- This joint mobilization of the SIJ may then be repeated for a total of three to five times.
- Now repeat the mobilization routine, this time leaning in on the PSIS anteriorly and laterally, mobilizing the ilium by gapping it laterally away from the sacrum (Fig. 10-9B). Repeat for a total of three to five times. *Note*: This mobilization motion causes internal (medial) rotation of the ilium on that side and results in gapping of the posterior aspect of the SIJ.

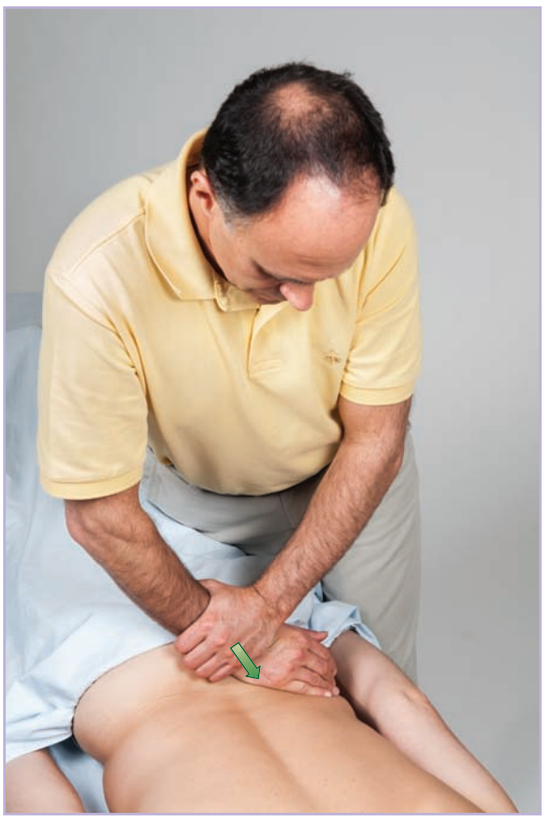


Figure 10-9A

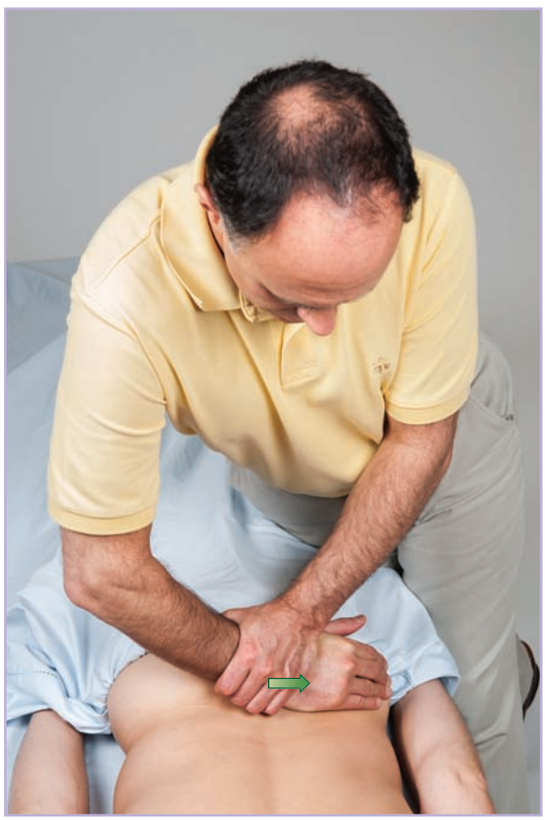


Figure 10-9B

- If desired, the routine can be repeated again, this time pressing anteriorly and inferiorly, mobilizing the ilium toward posterior tilt. If this orientation of pressure is used, it is helpful to first place a pillow under the client's abdomen. It is also easier for the therapist to stand adjacent to the client's upper back facing toward the client's feet, and to use the left hand as the contact hand (Fig. 10-9C).
- Repeat for the other side SIJ, switching contact and support hands and which side of the table you are standing on.
- Repeat these routines as needed with concentration at the SIJ motions that are restricted.

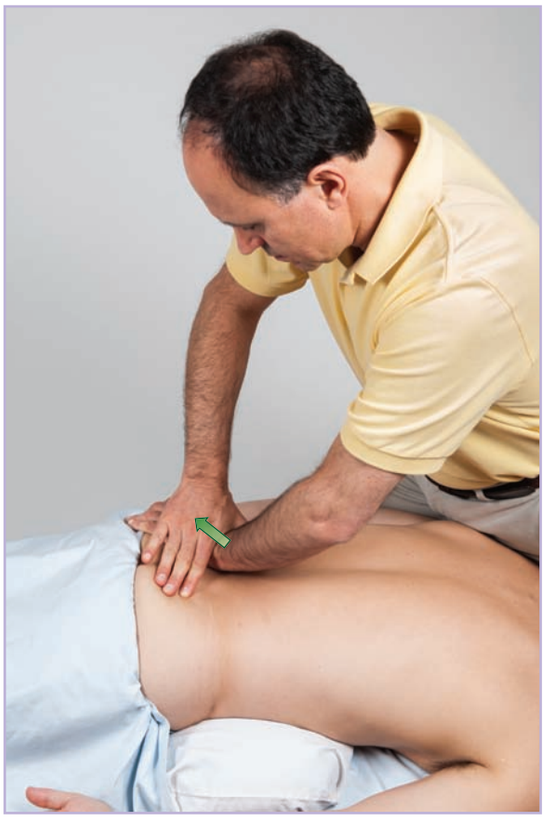


Figure 10-9C

10.7 THERAPIST TIP

Support Hand

Most joint mobilizations in the body involve the use of a treatment hand and a stabilization hand. However, joint mobilizations of the LSp and pelvis often do not require a stabilization hand because the client's body weight does a good job of stabilizing the other bone of the joint. When this is the case, this frees up the therapist's other hand to act as a **support hand** to brace/support the treatment hand. Given how much force is sometimes needed to mobilize a lumbar or SIJ, having the help of a support hand is good body mechanics.

10.2 PRACTICAL APPLICATION

Prone Posterior Superior Iliac Spine Compression with Thigh Extension

Prone PSIS compression of the SIJ into anterior tilt can be augmented with passive thigh extension. Place one hand on the PSIS (positioned in the intereminential groove between your thenar and hypothenar eminences) and your other hand on the client's anterior distal thigh. Now, as you lean in with your body weight, mobilizing the PSIS anteriorly and superiorly toward anterior tilt, augment this motion of the ilium by simultaneously extending the client's thigh. Once tissue tension has been reached, lean in further with body weight, mobilizing the ilium into anterior tilt. Via femoropelvic rhythm, thigh extension couples with anterior tilt of the ilium, adding to the mobilization force. This technique is powerful and should be performed with caution.

ROUTINE 10-2: SACROILIAC JOINT PRONE: SACRUM COMPRESSION

View the video "Joint Mobilization of the Sacroiliac Joint" online on thePoint.lww.com

This routine is carried out similarly to the SIJ prone PSIS compression, except that the sacrum is contacted and mobilized instead of the PSIS of the ilium. The contact on the sacrum can be superior at its base or inferior at its apex. As with the PSIS compression, the direction of mobilization force can vary. If the base of the sacrum is contacted, it can be contacted at its midline and mobilized anteriorly and superiorly, or it can be contacted toward one side and mobilized anteriorly, superiorly, and laterally to that side. If the apex of the sacrum is contacted, it is mobilized anteriorly and inferiorly.

The following are the steps to perform prone sacrum compression mobilization of the SIJ:

- The client is prone, and you are standing at the left side of the table.
- Place the ulnar side of your left hand on the midline of the client's sacral base.
- Your right hand is placed under, on the anterior surface of the client's left thigh (as described in Practical Application 10.2).
- Gently lean in with body weight as you pull up on the client's thigh, adding compression force to the sacral base anteriorly and superiorly until you reach tissue tension at the end of passive range of motion.
- Now gently stretch the SIJ into its joint play by leaning in further with body weight, adding a small increased compression force on the sacrum. This will involve a very small excursion of anterior tilt (nutation) of the sacrum on that side (Fig. 10-10A).

Figure 10-10A

- Hold for only a fraction of a second and then release.
- This joint mobilization of the SIJ may then be repeated for a total of two to three times.
- Alternately, one side of the sacral base can be contacted instead. If this is done, place the ulnar side of your right hand on the left side of the client's sacral base (immediately medial to the left PSIS).
- Support your right hand with the thumb web of your left hand.
- The ilium is stabilized by body weight, so no stabilization hand is needed.
- Gently lean in with body weight, adding compression force to the left side of the sacral base anteriorly, superiorly, and laterally until you reach tissue tension at the end of passive range of motion.
- Now gently stretch the SIJ into its joint play by leaning in further with body weight, adding a small increased compression force on the sacrum. This will involve a very small excursion of anterior tilt (nutation) of the sacrum on that side.
- This would then be repeated for the other (right) side of the sacral base.
- Now repeat the mobilization routine, this time, pressing anteriorly and inferiorly on the middle of the sacral apex, mobilizing the sacrum toward posterior tilt (counternutation). If this orientation of pressure is used, it is helpful to first place a pillow under the client's abdomen. It is also easier for the therapist to change orientation to face the client's feet and use the left hand as the contact hand (Fig. 10-10B).

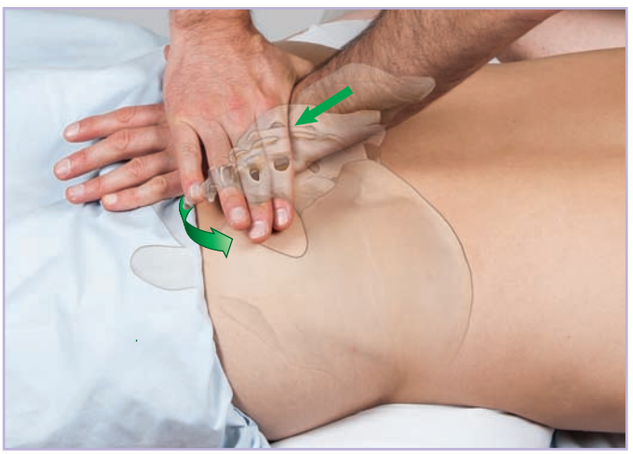


Figure 10-10B

- Repeat for the other side SIJ, switching contact and support hands and which side of the table you are standing on.
- Repeat these routines as needed with concentration at the SIJ motions that are restricted.

When contacting the sacral apex, be sure not to contact the client too inferiorly. If pressure is placed on the coccyx instead of the sacrum, a sprain of the sacrococcygeal ligament or fracture of the coccyx could occur.

ROUTINE 10-3: SACROILIAC JOINT SIDE-LYING: COMPRESSION

Similar to prone compression, the SIJ can be mobilized with the client side-lying with pressure placed on the client's iliac crest. Although this pressure will transmit through to both SIJs, the upper SIJ (the one away from the table) is primarily mobilized. For this reason, the routine is usually repeated with the client lying on the other side.

The following are the steps to perform side-lying compression mobilization of the SIJ:

- The client is side-lying on the right side, and you are standing at the side of the table, behind the client.
- Place your left hand on the client's iliac crest.
- Support your left hand with the thumb web of your right hand.
- The sacrum is stabilized by body weight, so no stabilization hand is needed.
- Gently lean in with body weight, adding compression force to the iliac crest directly medially (down toward the table/floor) until you reach tissue tension at the end of passive range of motion.
- Now gently stretch the SIJ into its joint play by leaning in further with body weight, adding a small increased compression force on the iliac crest (Fig. 10-11A). *Note*: This mobilization motion causes internal rotation of the ilium on that side and results in gapping of the posterior aspect of the SIJ.

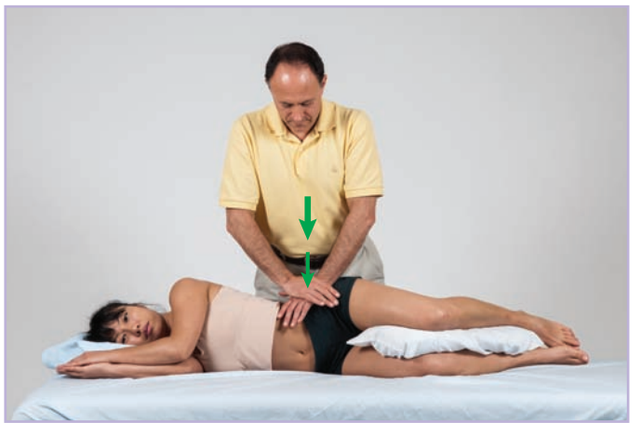


Figure 10-11A

- Hold for only a fraction of a second and then release.
- This joint mobilization of the SIJ may then be repeated for a total of three to five times.
- Now repeat the mobilization routine, this time with the client lying on the other (left) side (Fig. 10-11B). Repeat for a total of two to three times.
- Repeat these routines as needed with concentration at the SIJ(s) that is/are restricted.

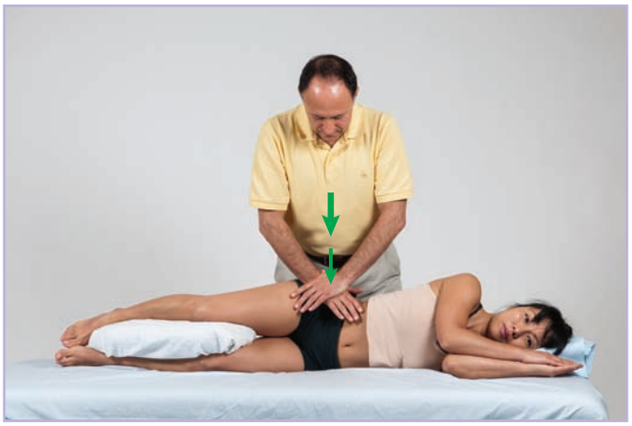


Figure 10-11B

ROUTINE 10-4: SACROILIAC JOINT SUPINE: COMPRESSION

Similar to prone and side-lying compressions, the SIJ can be mobilized with the client lying supine. In this position, pressure is placed bilaterally on the client's anterior superior iliac spines (ASISs), so both SIJs are mobilized at the same time.

The following are the steps to perform supine compression mobilization of the SIJ:

- The client is supine, and you are standing at either side of the table.
- Cross your arms, placing one hand on the client's right ASIS and your other hand on the client's left ASIS.
- The sacrum is stabilized from moving to either side by the pressure of your treatment hand on the other side ASIS.
- Gently lean in with body weight, adding compression force to the ASISs posteriorly (down toward the table/floor) and slightly laterally until you reach tissue tension at the end of passive range of motion.
- Now gently stretch the SIJs into their joint play by leaning in further with body weight, adding a small increased force on the ASISs (Fig. 10-12). *Note*: This mobilization motion causes external rotation of the ilium on each side and results in gapping of the anterior aspect of the SIJs.
- Hold for only a fraction of a second and then release.
- This joint mobilization of the SIJs may then be repeated for a total of three to five times.
- Repeat this routines as needed.

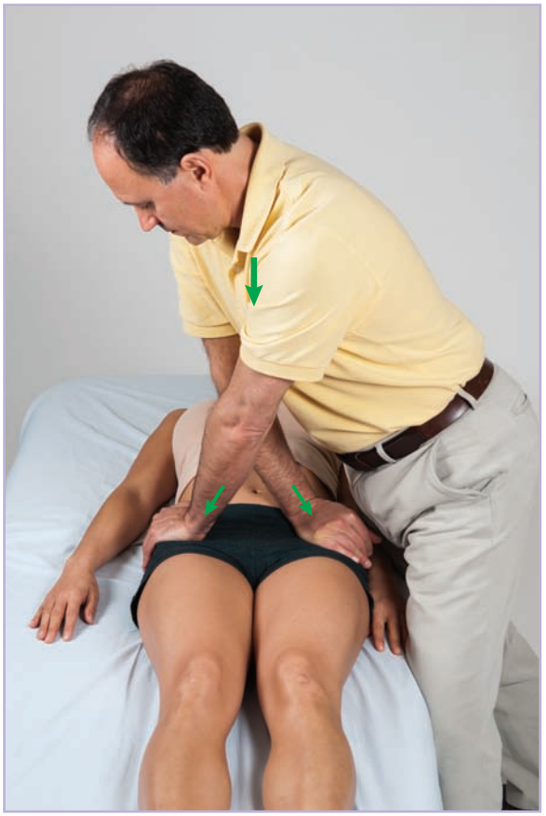


Figure 10-12

ROUTINE 10-5: SACROILIAC JOINT SUPINE: SINGLE KNEE TO CHEST

The SIJ can also be mobilized with the client supine by flexing the client's thigh and bringing the knee up to his chest. Via femoropelvic rhythm, thigh flexion couples with posterior tilt of the ilium on that side, so bringing the knee to the chest posteriorly tilts the same-side (ipsilateral) ilium. Because the pelvis remains on the table, the other (contralateral) ilium remains stable. When the ipsilateral ilium moves into the posterior tilt and the contralateral ilium remains stable, motion is introduced into the SIJs. This motion will be introduced first into the ipsilateral SIJ. As the ipsilateral ilium continues to posteriorly tilt and reaches the end range of its motion, the sacrum will move with it, and motion will then be introduced into the contralateral SIJ. Therefore, supine single knee to chest routine primarily mobilizes the same-side SIJ but can also mobilize the SIJ on the other side of the body. It is usual to perform this mobilization bilaterally to optimally mobilize both SIJs.

The following are the steps to perform supine single knee to chest mobilization of the right SIJ:

- The client is supine, and you are standing at the right side of the table.
- Flex the client's right hip and knee joints. Pressing on the posterior surface of the distal thigh, bring the client's knee/thigh toward his chest.
- For maximal stabilization of the sacrum, place your right knee on the anterior surface of the client's left thigh. Stabilizing his left thigh stabilizes his left ilium, which helps to stabilize his sacrum.
- Gently lean in with body weight, pressing the right thigh into flexion toward his chest until you reach tissue tension at the end of passive range of motion.
- Now gently stretch the right SIJ into its joint play by leaning in further with body weight, adding a small increased force on the posterior thigh (Fig. 10-13A). This will involve a very small excursion of posterior tilt of the ilium on that side.

- Hold for only a fraction of a second and then release.
- This joint mobilization of the SIJ may then be repeated for a total of three to five times.
- Repeat for the other side SIJ, switching which side of the table you are standing on (Fig. 10-13B).
- Repeat these routines as needed.

Figure 10-13A

Figure 10-13B

10.3 PRACTICAL APPLICATION

Place Client's Foot on Your Clavicle and Watch the Orientation of the Stretch

An excellent alternative position for the therapist to perform supine single knee to chest mobilization is to place the client's foot on your clavicle. Body mechanics wise, this allows you to use your core to lean in and press the client's thigh into flexion against the chest. However, this position should not be used if the client's knee is unhealthy. To further improve body mechanics, position yourself on the table so that your core is in line with the client's lower extremity **(Fig. A)**. Of course, do not climb onto the table if there is any doubt as to the table's ability to support both your weight and that of the client.

It is also important to pay attention to the orientation of the stretching force that you apply to the client's thigh. If you are not stabilizing the client's opposite-side thigh with your knee, and you press horizontally (parallel with the table) in the cephalad (cranial) direction instead of down toward his chest, the client's pelvis will lift from the table and the mobilization to the SIJ will be lost because the opposite-side ilium and the sacrum will no longer be stabilized **(Fig. B)**. It is important to also not compress the client's thigh too much into his chest because the client might experience discomfort or pain in the anterior hip joint region (groin). Optimal is to press as little into his chest as possible (i.e., as much horizontally parallel to the table in the cephalad/cranial direction as possible) and still keep his pelvis down on the table (see Fig. A). The balance between these two directions will vary from client to client.

A

B

ROUTINE 10-6: SACROILIAC JOINT SUPINE: HORIZONTAL ADDUCTION

Similar to the single knee to chest mobilization, the SIJ can be mobilized by bringing the client's thigh into flexion and then across his body into horizontal adduction. Horizontal adduction adds a component of internal rotation of the ilium (to the posterior tilt of the ilium created by the thigh flexion), gapping the posterior aspect of the SIJ. Thus far, this routine is identical to the horizontal adduction stretch routine shown in Chapter 6 (see Routine 6-10, stretch #1), which stretches the lateral rotation musculature of the posterior buttock (and also stretches/mobilizes the SIJ). To augment the SIJ mobilization for this routine, you can use your hand to contact and add mobilization force to the PSIS of the ilium.

The following are the steps to perform supine horizontal adduction mobilization of the left SIJ:

- The client is supine, and you are standing at the (opposite) right side of the table.
- Flex the client's left hip and knee joints and then bring the client's thigh into horizontal adduction across his body by trapping the client's knee between your left arm and trunk.
- Curl the finger pads of your right hand around the medial side of the client's left PSIS.
- The sacrum is stabilized by body weight, so no stabilization hand is needed.
- Gently lean in with body weight, pressing the client's left thigh into horizontal adduction across his chest (and somewhat down into his chest to prevent the pelvis from lifting from the table) until you reach tissue tension at the end of passive range of motion.
- Now gently stretch the left SIJ into its joint play by leaning in further with body weight, adding a small increased force on the posterior thigh, while you simultaneously add a mobilization force to the PSIS with the finger pads of your right hand, gapping it away from the sacrum (Fig. 10-14A). *Note*: This mobilization motion causes posterior tilt of the ilium; it also causes internal rotation of the ilium on that side, resulting in gapping of the posterior aspect of the SIJ.
- Hold for only a fraction of a second and then release.

Figure 10-14A

- If the client experiences discomfort/pain at the anterior hip joint region, your hands can be used to traction the anterior proximal thigh away from the pelvis as the mobilization is performed (Fig. 10-14B). This often relieves the client's discomfort/pain. However, using the right hand to help traction the thigh means that it cannot be used to contact the PSIS and augment the mobilization. If the thigh can be tractioned with just the left hand, then the right hand can maintain the joint mobilization force on the PSIS.

Figure 10-14B

- This joint mobilization of the SIJ may then be repeated for a total of three to five times.
- Repeat for the other side SIJ, switching which side of the table you are standing on (Fig. 10-14C).
- Repeat these routines as needed.

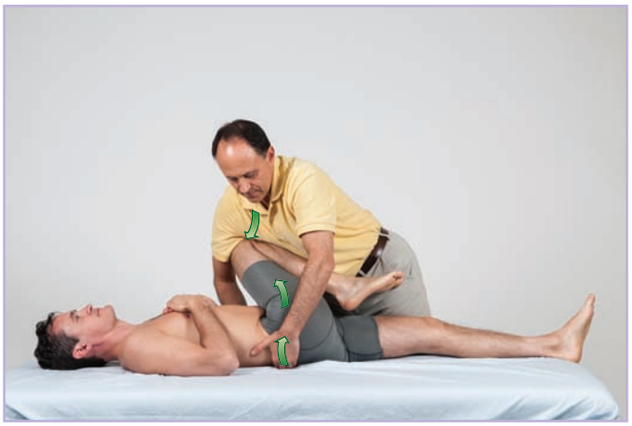


Figure 10-14C

10.4 PRACTICAL APPLICATION

Alternative Therapist Position

An alternative position for the therapist is to stand on the same side of the table as the thigh that is being horizontally adducted and pushing the thigh from that side (see accompanying figure). This position is easier to learn at first but has two disadvantages. It does not easily allow for a hand to be used to contact the PSIS to add to the mobilization force on the ilium. Also, if the client experiences discomfort/pain at the anterior hip region (see Practical Application Box 6.6), it does not as easily allow for a hand to be used to traction the anterior proximal thigh to relieve the discomfort/pain.

ROUTINE 10-7: SACROILIAC JOINT SIDE-LYING: HORIZONTAL ADDUCTION

Side-lying horizontal adduction is the most powerful mobilization of the SIJ. The therapist uses core body weight to bring the thigh into horizontal adduction while adding to the mobilization force by contacting the PSIS of the ilium. This gaps the SIJ by internally rotating the ilium.

The following are the steps to perform side-lying horizontal adduction mobilization of the left SIJ:

- The client is side-lying, and you are standing at the side of the table where the client is facing (Fig. 10-15A).

Figure 10-15A

10.8 THERAPIST TIP

How Close to the Side of the Table Do You Position the Client?

Knowing exactly how close to the side of the table the client should lie for side-lying mobilization comes with experience. Exactly where the client should be positioned will vary based on the size of the client and his or her flexibility. If the client is too far from the side, his or her thigh will hit the table as you horizontally adduct it; if the client is too close, you might not be able to control the client's body weight when performing the mobilization and the client might fall to the floor. If you start the procedure and realize that the client is too far or too close to the side, start over and reposition the client appropriately.

- Bring the client onto the back of her right shoulder by gently pulling on the right arm (Fig. 10-15B).
  - Now place her right hand on the side of the upper trunk (Fig. 10-15C).
  - Let the client's other hand drape down off the side of the table (Fig. 10-15D).

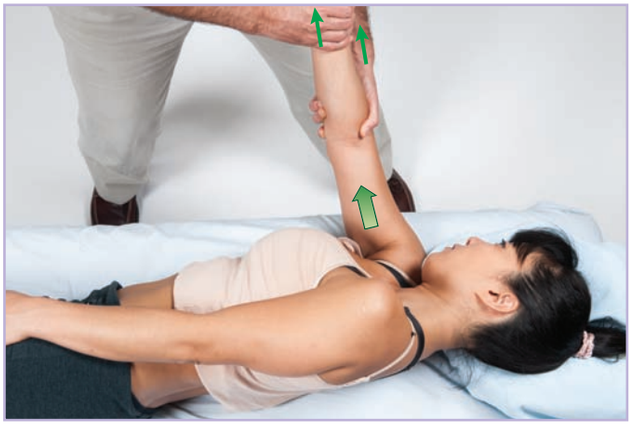


Figure 10-15B

Figure 10-15C

Figure 10-15D

- Rotate the client's pelvis so that it is stacked, meaning that the PSISs are oriented in a vertical line (Fig. 10-15E). *Note*: Sometimes, especially for flexible clients, it is helpful to have the start position of the client's pelvis such that it is unstacked with the upper PSIS (the one away from the table) rotated back away from you. This way, when you perform the mobilization, the client ends up in a stacked position of the pelvis.

Figure 10-15E

- Stabilize the client's upper body by placing your left hand on the client's right hand and pushing superiorly on her hand/trunk (Fig. 10-15F).

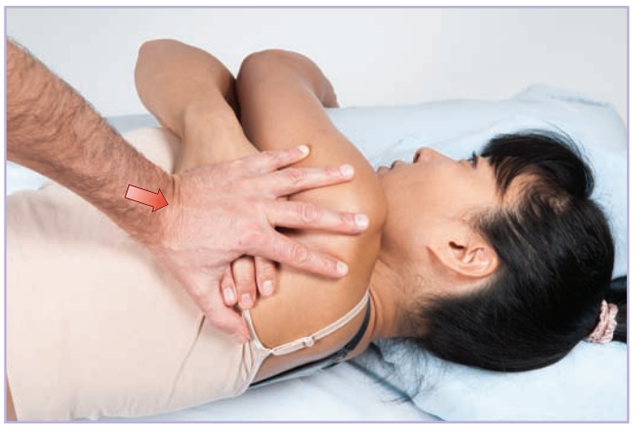


Figure 10-15F

- Locate the client's left PSIS and place your finger pads on the medial side of it over the left SIJ (Fig. 10-15G).
- Flex the client's left hip and knee joints using your right thigh until tension is felt with the finger pads of your right hand at the client's left SIJ (Fig. 10-15H).

Figure 10-15G

Figure 10-15H

- Now climb up onto the anterolateral surface of the client's left thigh with the anterolateral surface of your right thigh (Fig. 10-15I).
  - This will require you to lift your right foot from the floor.
  - This step is often called **"pocket to pocket"** because you can think of bringing your pocket to the client's pocket (pockets are located anterolateral on each thigh).
  - It is important to maintain tension at the client's left SIJ by maintaining her hip joint flexion. This is accomplished by keeping friction against her leg and thigh as you climb up, bringing pocket to pocket.
  - *Note*: This is the most challenging step of this mobilization technique. Therefore, when first learning this protocol, it might be easier to perform the pocket to pocket step by doing it in three stages. Instead of trying to reach all the way to the client's "pocket" in one maneuver, achieve that position in multiple, perhaps three, steps. The first time, move up her thigh approximately ⅓ of the way and then bring your right foot back down to the floor until you are comfortably bal-

Figure 10-15I

anced and bearing weight on it. Repeat this again, moving farther up the client's thigh, and then return your right foot to the floor. Then perform it one more time, this time reaching all the way to the client's pocket.

- Now reorient your right hand so that the thenar eminence is on the medial side of the client's PSIS (Fig. 10-15J).

Figure 10-15J

- Slowly bring your body weight down on the client's left thigh, horizontally adducting it and stretching the client's SIJ, maintaining contact and pressure as you lower your right foot back to the floor and until you are comfortably able to balance and bear weight on your right foot (Fig. 10-15K).

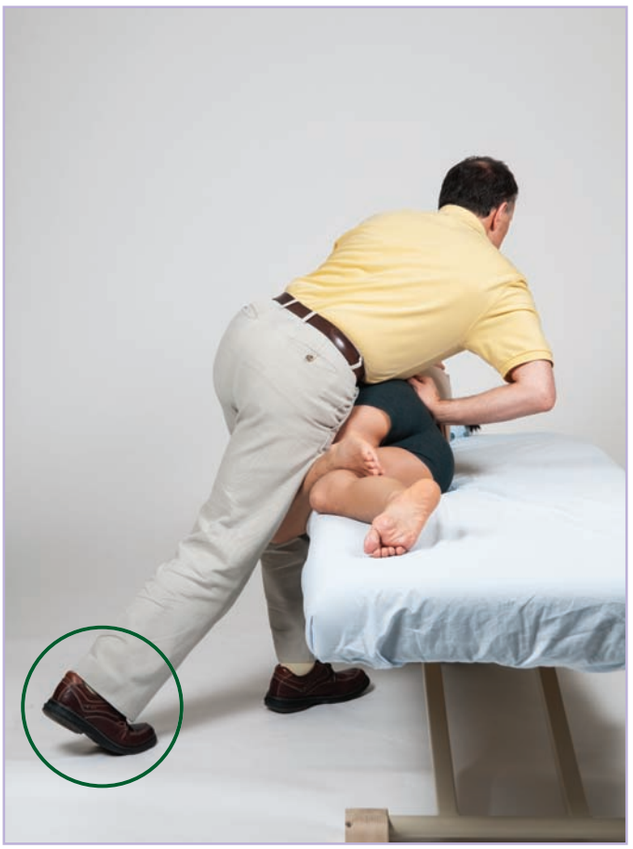


Figure 10-15K

- It is important to maintain the tension at the left SIJ by maintaining the flexion of the client's thigh.
- This motion can be facilitated by pressing on the medial side of the client's PSIS with your right hand.
- Once you have completed bringing the client into this position, your sternum (i.e., the body weight of your upper trunk) should be on the posterior side of the client (Fig. 10-15L).
- You should also have your body stable against the side of the table so that the client cannot fall off the table.

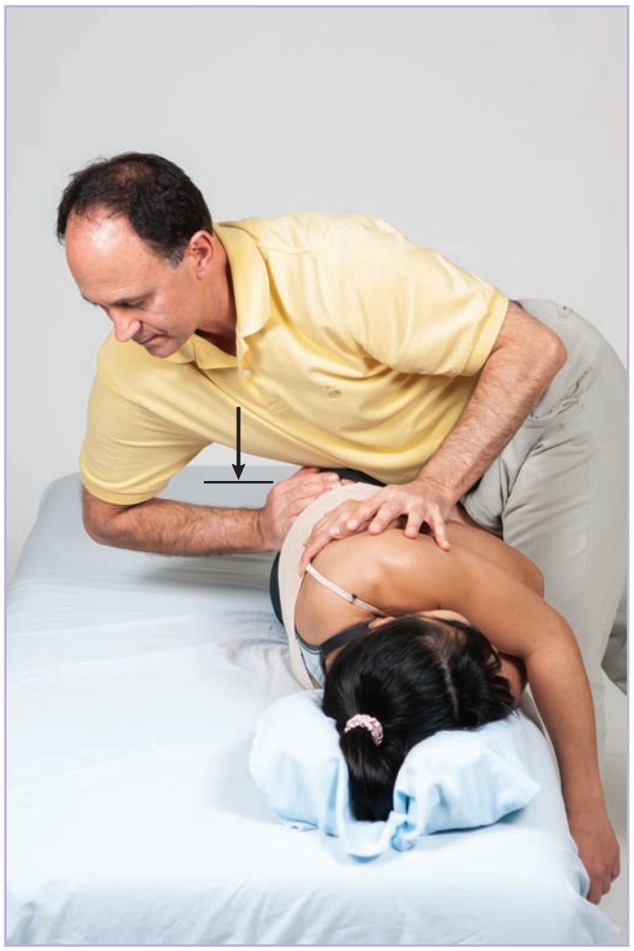


Figure 10-15L

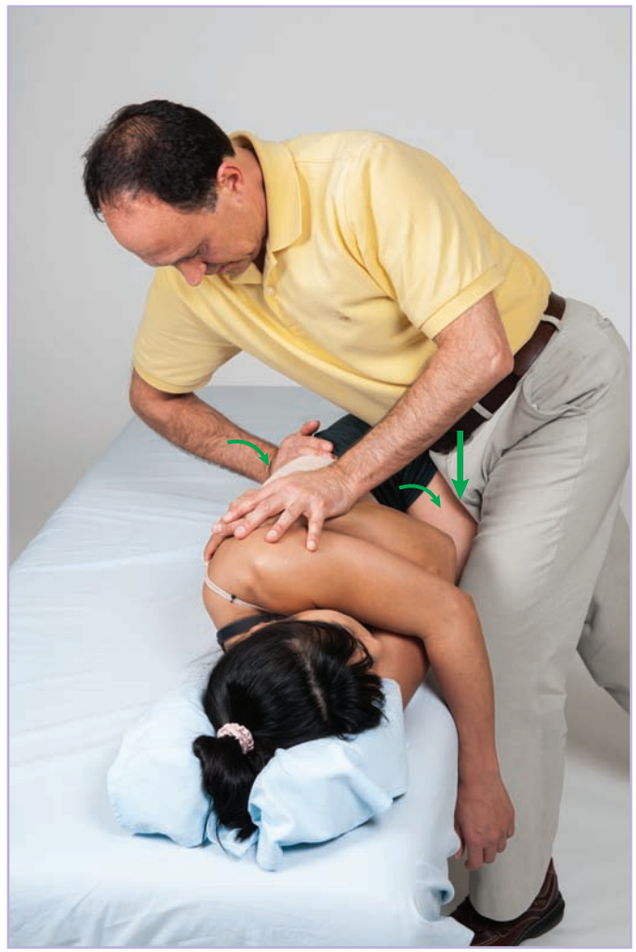


Figure 10-15M

- The opposite side ilium and sacrum are stabilized by body weight against the table, so no stabilization hand is needed for this purpose.
- Gently drop down against the client's left thigh with your right thigh and body weight, pressing the client's left thigh further into horizontal adduction until you reach tissue tension at the end of passive range of motion (Fig. 10-15M).
  - It is important that you leave enough room between your thigh and the table for the client's left thigh to further horizontally adduct down toward the floor.
- Now gently stretch the left SIJ into its joint play by leaning in further with body weight, adding a small increased force on the thigh, while you simultaneously add a mobilization force to the left PSIS with the thenar eminence of your right hand, gapping it away from the sacrum (Fig. 10-15N).
  - *Note*: Flexion of the thigh causes posterior tilt of the ilium; horizontal adduction causes internal rotation of the ilium on that side, causing gapping of the posterior aspect of the SIJ.
- Hold for only a fraction of a second and then release.
- This joint mobilization of the SIJ may then be repeated for a total of three to five times.
- Repeat for the other side SIJ, switching contact and stabilization hands and which side of the table you are standing on (Fig. 10-15O).
- Repeat these routines as needed.

Note: An alternative position for the client's left hand is to place it on her right hand as seen in Figure 10-15P instead of draping it over the side of the table as seen in Figure 10-15D. The advantage of this positioning is that it is easier to stabilize the client's upper body. The disadvantage is that it is easier to torque the client's spine if you press posteriorly on her hands/trunk.

If you use this alternative hand positioning, be sure to not torque the client's spine. Torqueing the LSp can cause injury to the client.

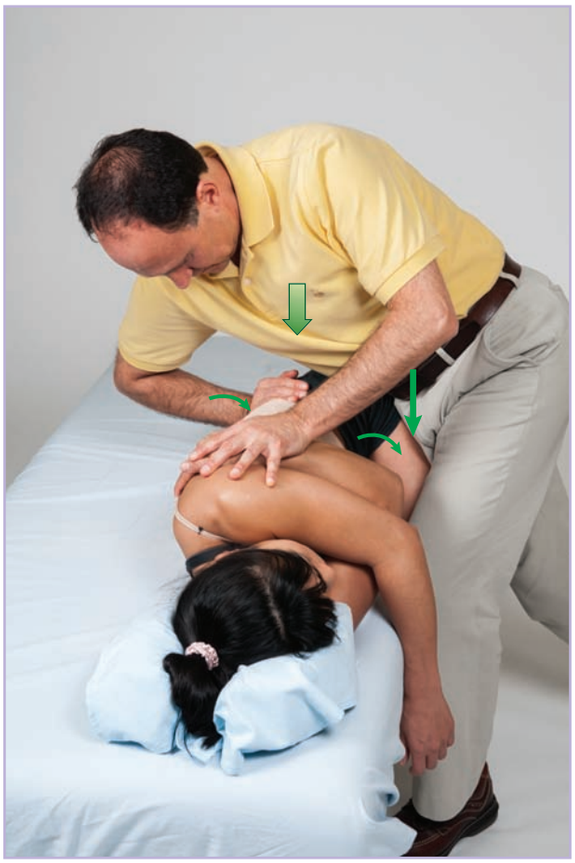


Figure 10-15N

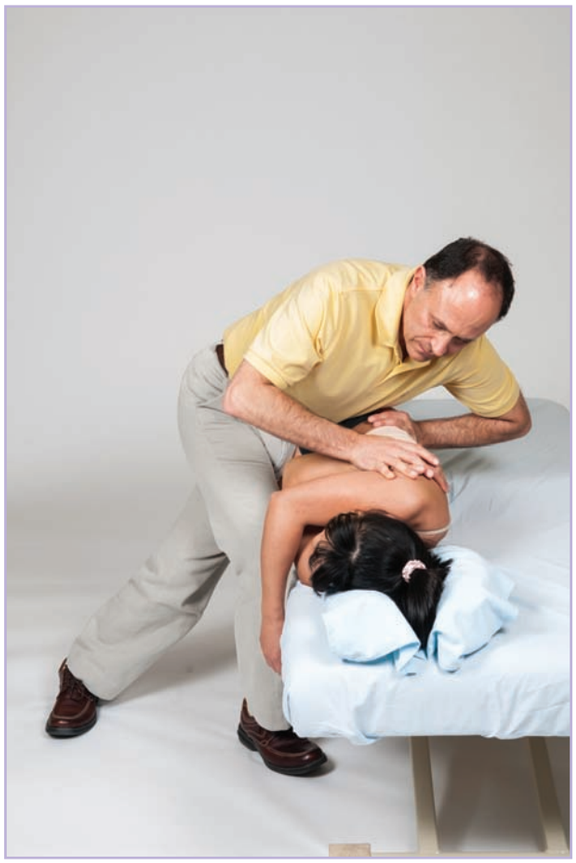


Figure 10-15O

Caution must be exercised with the side-lying horizontal adduction mobilization routine for the SIJ (and LSp; see Practical Application Box 10.6) because it is so powerful.

- *Side-lying horizontal adductions mobilization should not be performed if the client has a space-occupying lesion of the LSp (e.g., pathologic lumbar disc or bone spur).*
- *As with all joint mobilizations, never add a fast thrust when applying the stretch mobilization.*
- *It is also important to make sure that the client's spine is torqued/twisted as little as possible. This is accomplished by making sure that the stabilization hand on the upper trunk is pushing superiorly toward the client's head and not posteriorly. This is especially important if the alternative hand position is used (see Fig. 10-15P).*
- *If the apex of the sacrum is contacted (see Practical Application Box 10.5), be sure not to contact the client too inferiorly. If pressure is placed on the coccyx instead of the sacrum, a sprain of the sacrococcygeal ligament or fracture of the coccyx could occur.*
- *This is also the most challenging mobilization routine to learn and become proficient with. It is strongly recommended that you view the video on the DVD that accompanies this book, and if possible, attend an in-person low back joint mobilization workshop. It is also recommended that you practice this routine many times before employing it with clients.*

Figure 10-15P

10.5 PRACTICAL APPLICATION

Variations of the Sacroiliac Joint Side-Lying Horizontal Adduction Sacroiliac Joint Mobilization

There are variations on how the side-lying mobilization of the SIJ with horizontal adduction of the client's thigh can be performed.

With the PSIS contact, instead of pressing the client's PSIS directly anteriorly, which maximizes the internal rotation of the ilium and gaps the posterior aspect of the joint, the thenar eminence contact on the PSIS can press anteriorly and inferiorly to increase the posterior tilt motion of the ilium **(Fig. A)**. It is also possible to press anteriorly and superiorly on the PSIS to add anterior tilt to the gapping of the SIJ **(Fig. B)**. However, if this is done, it is important to lessen the flexion of the client's thigh (the reason for the thigh flexion was to cause posterior tilt of the ilium).

It is also possible to contact the sacrum instead of the PSIS with the thenar eminence of the contact hand. If this is done, the direction of the mobilization force can vary depending on what aspect of the sacrum is contacted. If the sacral base is contacted, the thenar eminence of the contact hand should be placed on the side of the base that is away from the table to mobilize the SIJ that is on that side of the client's body (the one that is away from the table) **(Fig. C)**. The direction of the mobilization stretch is directed anteriorly, superiorly, and laterally (this is similar to the prone sacral mobilization seen in Fig. 10-10A in Routine 10-2). This mobilization will cause anterior tilt (nutation) of the sacrum as well as a nonaxial glide of the sacrum relative to the ilium. If the sacral apex is contacted, the direction of the mobilization stretch would be primarily anterior and inferior to create posterior tilt (counternutation) of the sacrum relative to the ilium **(Fig. D)** (this is similar to the prone sacral mobilization seen in Fig. 10-10B in Routine 10-2).

A

B

C

D

10.6 PRACTICAL APPLICATION

Transitioning Side-Lying Horizontal Adduction Mobilization from the Sacroiliac Joint to the Lumbar Spinal Joints

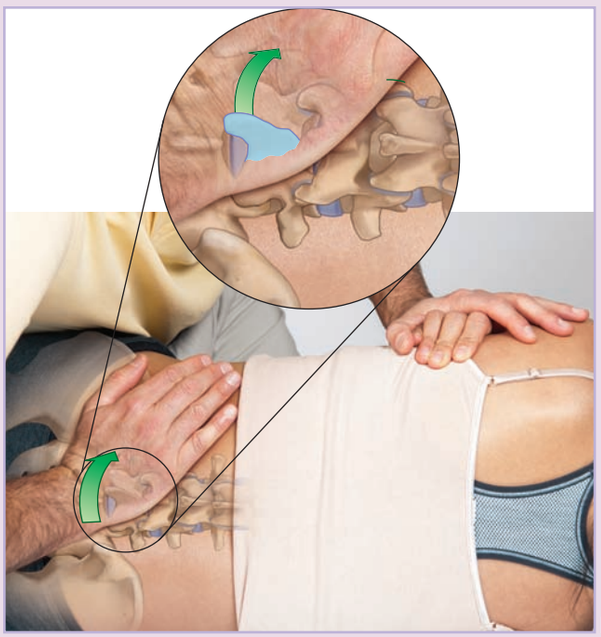
The side-lying horizontal adduction joint mobilization for the SIJ can be easily transitioned to be a mobilization of the LSp instead. Only two modifications are needed.

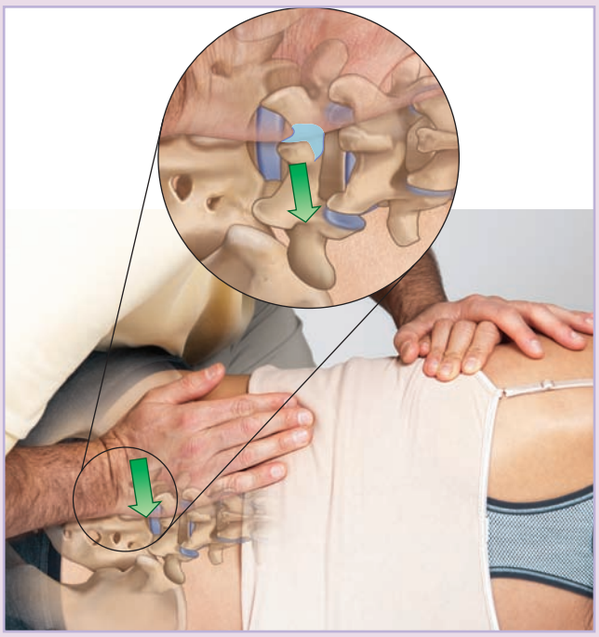
The first modification is that the client's thigh needs to be brought into more flexion so that tension is created in the LSp **(Fig. A)**; joint mobilization can only be done if the joint is first brought to tension. Via femoropelvic rhythm, thigh flexion causes posterior tilt of the ilium on that side, causing tension at the SIJ on that side. Increasing thigh flexion causes so much tension at the SIJ that the sacrum must now move (into posterior tilt/counternutation) with the ilium. As the sacrum moves, tension is created at the lumbosacral (L5-S1) joint. If the thigh is brought further into flexion, this tension moves up the LSp, allowing for effective joint mobilization at these lumbar joints.

The second modification is the placement of the contact treatment hand. Instead of contacting the PSIS of the ilium, the LSp must be contacted. Rotation mobilization is performed by contacting the vertebral SP on the side that is closer to the table. In other words, if the client is lying on the right side, the right side of the SP is contacted; the mobilization stretch force is added up against the SP, rotating the SP toward the left, resulting in right rotation of the vertebra (rotation is named for the direction that the anterior surface of the body orients) **(Fig. B)**. For lateral flexion mobilization, contact the SP/lamina on the side that is away from the table. In other words, when the client is lying on the right, the mobilization force is added against the left side SP/lamina and is directed down toward the table (anteriorly and medially) **(Fig. C)**.

As with side-lying SIJ horizontal adduction, side-lying mobilization for the LSp should then be performed for the other side, switching contact and support hands and which side of the table you are standing on.

A


B


C

SECTION 2: LUMBAR SPINE JOINT MOBILIZATION ROUTINES

LSp mobilization introduces motion into the lumbar vertebrae. The motion that is introduced can vary depending on which lumbar vertebra is mobilized and in what direction. The most common contact for the mobilization hand is the SP because that is the easiest vertebral landmark to locate and access. However, contact against the lamina or mammillary/transverse processes is also sometimes done. Because of the lordotic curve of the LSp, it can sometimes be challenging to contact vertebral landmarks for LSp mobilization. The challenge is increased if the client has very well developed paraspinal musculature.

Depending on the position of the client, the use of a stabilization hand for LSp mobilization may or may not be necessary. Often, the client's body weight provides adequate stabilization. The goal of LSp mobilization is to stretch/mobilize the facet joint capsules, ligaments, and intrinsic muscles of the region.

Notes:

1. Seated mobilization routine was shown in the "Overview of Technique" section and Therapist Tip Box 10.2 that followed immediately thereafter. For this mobilization, please see Figures 10-2 and 10-3 and Therapist Tip Box 10.2.
2. Further, the most powerful mobilization for the LSp is side-lying horizontal adduction, which is a variant of the side-lying horizontal adduction mobilization for the SIJ (Routine 10-7), and transitioning this routine from the SIJ to the LSp was addressed in Practical Application Box 10.6. Please refer to Routine 10-7 and Practical Application Box 10.6 for the side-lying horizontal adduction LSp mobilization routine.

Seven LSp mobilization routines are presented in this chapter.

- Routine 10-8—LSp prone: extension compression
- Routine 10-9—LSp prone: lateral flexion and rotation
- Routine 10-10—LSp prone: flexion distraction
- Routine 10-11—LSp seated: mobilizations
- Routine 10-12—LSp side-lying: horizontal adduction
- Routine 10-13—LSp supine: towel traction/distraction
- Routine 10-14—LSp supine: manual traction/distraction

As a rule, lumbar joint mobilizations should not be done at the level of or nearby the level of segmental joints that have a space-occupying lesion, such as a pathologic disc or bone spur. Further, compression mobilizations are contraindicated in clients who have spondylolisthesis or osteoporosis. If there is any doubt as to the safety of lumbar joint mobilization, consult first with the client's chiropractic or medical physician. Joint mobilizations should never involve any type of fast thrust.

ROUTINE 10-8: LUMBAR SPINE PRONE: EXTENSION COMPRESSION

As with prone SIJ compression mobilization, prone compression mobilization of the LSp can also be performed. The direction of the mobilization force is posterior to anterior (down toward the table/floor) and mobilizes the lumbar vertebra(e) into extension.

The following are the steps to perform prone extension compression mobilization of the LSp:

- The client is prone, and you are standing at the left side of the table.
- Place your right hand on the client's LSp, with the SP of the vertebra you are mobilizing positioned in the intereminential groove of the hand.
- Support your right hand with the thumb web of your left hand. *Note*: The "support" left hand does not just support the contact hand. It can also function to add to the force of the mobilization by adding downward pressure through the contact hand into the client.
- Body weight stabilizes adjacent vertebrae, so no stabilization hand is needed.
- Gently lean in with body weight, adding compression force anteriorly until you reach tissue tension at the end of passive range of motion.
- Now gently stretch the lumbar vertebra into its joint play by leaning in further with body weight, adding a small increased compression force on the SP. This will involve a very small excursion of extension of that vertebra relative to the adjacent vertebrae (Fig. 10-16).

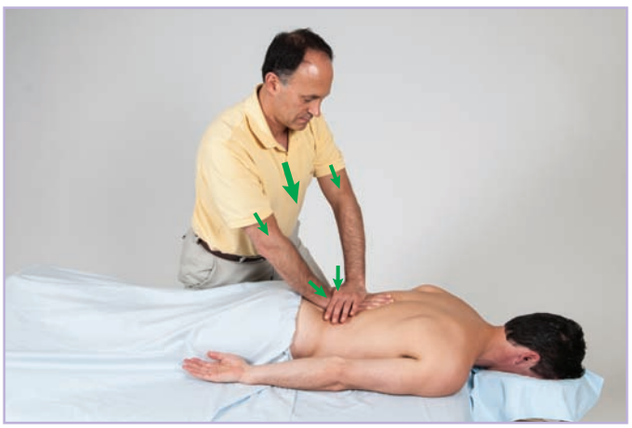


Figure 10-16

- Hold for only a fraction of a second and then release.
- This lumbar vertebral joint mobilization may then be repeated for a total of three to five times.
- Once the joint mobilization has been performed at one level, apply it at all the other levels of the LSp so that all LSp joints are mobilized into extension.
- Repeat these routines as needed with concentration at the lumbar vertebrae that are restricted.
- *Note*: This mobilization technique can be performed with the therapist standing on either side of the table. If you choose to stand at the other (right) side of the table, switch treatment and support hands.

10.7 PRACTICAL APPLICATION

Regaining the Lumbar Lordotic Curve

Prone compression of the LSp is indicated and beneficial to help regain the proper lumbar lordotic curve in clients who have a hypolordotic lumbar curve or a kyphotic (reverse) lumbar curve. Loss of the healthy normal lordosis often occurs in clients who stand or sit in excessive posterior pelvic tilt, causing the LSp to be kyphotic.

10.9 THERAPIST TIP

Lumbar Spine Prone Extension Compression

When performing prone extension compression mobilization to the LSp, the direction of the mobilization force does not have to be directly posterior to anterior. Depending on the degree of the client's lumbar lordotic curve and the level of the LSp that you are mobilizing, it can be beneficial to add a superior or inferior component to the mobilization stretch. In the upper LSp, it is usually preferable to press anteriorly and slightly superiorly to better match the orientation of the facets due to the lumbar curve at that level **(Fig. A)**. In the lower LSp, it is usually preferable to press anteriorly and slightly inferiorly to better match the orientation of the facets due to the lumbar curve at that level **(Fig. B)**. At the mid-LSp, pressure should usually be applied directly anteriorly because it is the middle of the lumbar curve.

A

B

ROUTINE 10-9: LUMBAR SPINE PRONE: LATERAL FLEXION AND ROTATION

Routine 10-8 demonstrated posterior to anterior lumbar compression mobilization to create extension. An effective variation on this mobilization routine is to alter the vertebral contact and direction of the stretch mobilization force to introduce lateral flexion and/or rotation of the vertebra instead of extension.

Joint mobilization into lateral flexion stretches opposite-sided lateral flexor musculature, especially the smaller, deeper intrinsic muscles of the joint, and the ligamentous and joint capsular tissue on the other side of the joint being mobilized. Joint mobilization into rotation to one side stretches musculature that causes rotation to the other side as well as ligamentous and joint capsular tissue.

The following are the steps to perform prone (left) lateral flexion and (right) rotation mobilizations to the left side of the client's LSp:

- The client is prone, and you are standing at the left side of the table.
- For lateral flexion mobilization, place the ulnar side of your right hand on the client's LSp against the left side of the SP/lamina of the vertebrae you are mobilizing; this contact can be localized and made more specific by contacting and placing your pressure through the pisiform of your contact hand. Your pressure will be directed anteriorly toward the table/floor as well as laterally toward the other (right) side of the client's body (Fig. 10-17A). This will create left lateral flexion mobilization of the LSp.

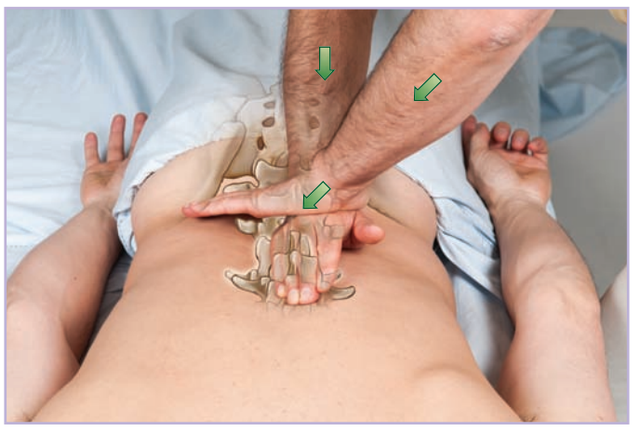


Figure 10-17A

- For rotation mobilization, place the ulnar side (or more specific contact of the pisiform) of your right hand on the client's LSp directly lateral to (to the left side of) the SP over the mammillary and transverse processes of the vertebrae you are mobilizing. Your pressure will be directly anterior (toward the table/floor) (Fig. 10-17B). This will create right rotation mobilization of the LSp (the SPs will rotate to the left, but the anterior bodies, for which rotation is named, will rotate to the right).

Figure 10-17B

- *Note*: For both mobilizations, because your hand contact is a fairly large and broad, it is usually not possible to isolate just one segmental vertebral level. Instead, two or three vertebrae are mobilized together.
- Support your right contact hand with the thumb web of your left hand.
- Body weight stabilizes adjacent vertebrae, so no stabilization hand is needed.
- Gently lean in with body weight, adding compression force in the appropriate direction until you reach tissue tension at the end of passive range of motion.
- Now gently stretch the lumbar vertebra into its joint play by leaning in further with body weight, adding a small increased compression force on the vertebrae.
- Hold for only a fraction of a second and then release.
- This lumbar vertebral joint mobilization may then be repeated for a total of three to five times.
- Once the joint mobilization has been performed at one level, apply it at all the other levels of the LSp so that all LSp joints are mobilized.
- Repeat for the other side, switching contact and support hands and which side of the table you are standing on.

- Figure 10-18A illustrates (right) lateral flexion mobilization for the right side of the body. Figure 10-18B demonstrates the ulnar side contact for (left) rotation mobilization applied to the right side of the body.
- Repeat these routines as needed with concentration at the lumbar vertebrae that are restricted.

Figure 10-18A

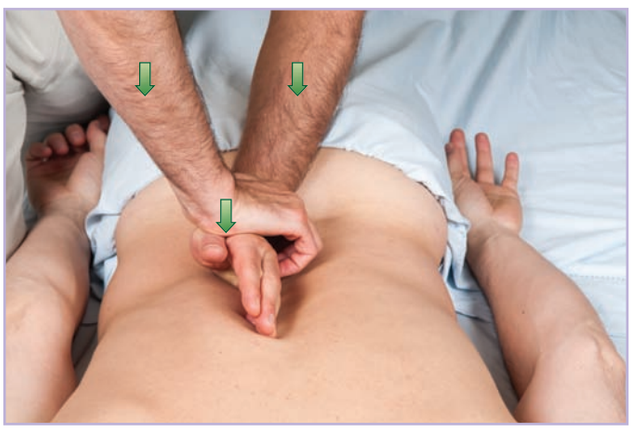
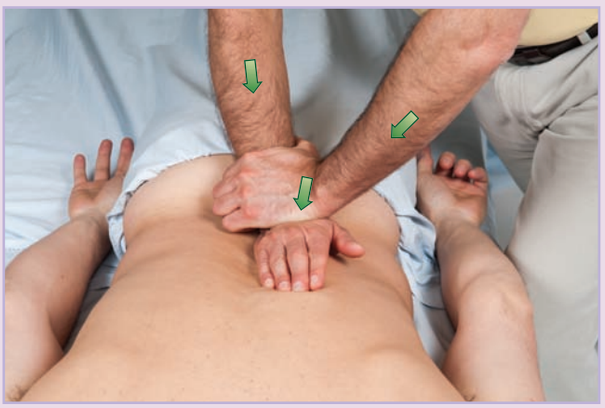


Figure 10-18B

10.8 PRACTICAL APPLICATION

Multiplane Prone Joint Mobilization into Extension and Lateral Flexion

Joint mobilization of the LSp can be performed in an oblique plane, in other words, across two or more cardinal planes. An effective oblique plane lumbar mobilization is to combine extension with lateral flexion. To perform this mobilization, set up as if you are doing a lateral flexion mobilization, contacting the client to one side of the SP. Now alter your stretch mobilization force so that it is more anterior in direction, introducing extension in addition to the lateral flexion motion (see accompanying figure). This can be performed on both sides.



ROUTINE 10-10: LUMBAR SPINE PRONE: FLEXION DISTRACTION

Routines 10-8 and 10-9 demonstrated how to mobilize the LSp into extension, lateral flexion, and rotation. Mobilizing the LSp into flexion is more challenging because an effective contact for the stabilization hand would have to be located anteriorly on the spine; this is not possible because you cannot easily contact the anterior aspect of the spine through the anterior abdominal wall. It is also more challenging for the treatment hand contact that creates the mobilization force to push on a lumbar vertebra in the direction of flexion. For these reasons, it is not possible to create a strong flexion mobilization force. However, for clients whose LSp is greatly restricted into flexion, even small flexion mobilizations can be very beneficial.

Mobilizing the LSp into flexion can be done with prone flexion distraction mobilization technique. This mobilization is similar to SIJ prone sacrum compression with the mobilization force applied to the sacral apex, mobilizing it toward posterior tilt (counternutation) (see Figure 10-10B). However, to create a flexion mobilization of the LSp, a lumbar vertebra must also be contacted. This routine is described as flexion *distraction* because in addition to the flexion, there is also a small element of axial distraction. Axial distraction is also known as traction and is described in more detail in Routine 10-13.

The following are the steps to perform prone flexion distraction mobilization of the LSp:

- The client is prone with a pillow under his abdomen, and you are standing at the left side of the table.
- Place your treatment (right) hand on the client's LSp, with the SP of the vertebra you are mobilizing positioned in the intereminential groove of the hand.
- Place your stabilization (left) hand on the middle of the apex of the sacrum. Be careful to not contact so far inferiorly that you are on the coccyx instead. Pressure on the coccyx could cause injury to the sacrococcygeal ligament and/or the coccyx itself.
- Gently lean in with body weight, pressing in a superior direction on the lumbar SP with your right hand as your left hand presses inferiorly on the sacral apex, until you reach tissue tension at the end of passive range of motion.
- Now gently stretch the lumbar vertebra into its joint play by leaning in further with body weight, adding a small increased force on the SP, as you slightly increase the force on the apex of the sacrum. This will involve a very small excursion of flexion of that vertebra relative to the adjacent vertebrae; it also creates a slight distraction/traction of the mobilized vertebra (as well as a slight distraction/traction of the entire LSp) (Fig. 10-19).
- Hold for only a fraction of a second and then release.
- This lumbar vertebral joint mobilization may then be repeated for a total of three to five times.
- Once the joint mobilization has been performed at one level, apply it at all the other levels of the LSp so that all LSp joints are mobilized into flexion and distraction.
- Repeat these routines as needed with concentration at the lumbar vertebrae that are restricted.
- *Note*: This routine can be performed from the other side of the table instead; simply switch treatment and stabilization hands.

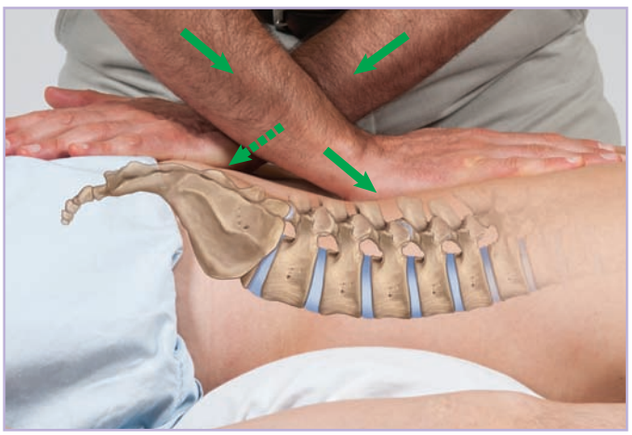


Figure 10-19

ROUTINE 10-11: LUMBAR SPINE SEATED: MOBILIZATIONS

Joint mobilization into left lateral flexion stretches right lateral flexor musculature, especially the smaller, deeper intrinsic muscles of the joint, and the ligamentous and joint capsular tissue on the right side of the joint being mobilized. Joint mobilization into left lateral flexion was demonstrated in the "Overview of Technique" section, Figures 10-2 and 10-3.

To perform right lateral flexion joint mobilization of the LSp, follow the directions given for left lateral flexion but switch for the right side of the body (Fig. 10-20). Joint mobilization into right lateral flexion stretches left lateral flexor musculature, especially the smaller, deeper intrinsic muscles of the joint, and the ligamentous and joint capsular tissue on the left side of the joint being mobilized.

To perform seated rotation mobilizations and seated extension mobilization for the LSp, follow the directions given in Practical Application Box 10.1.

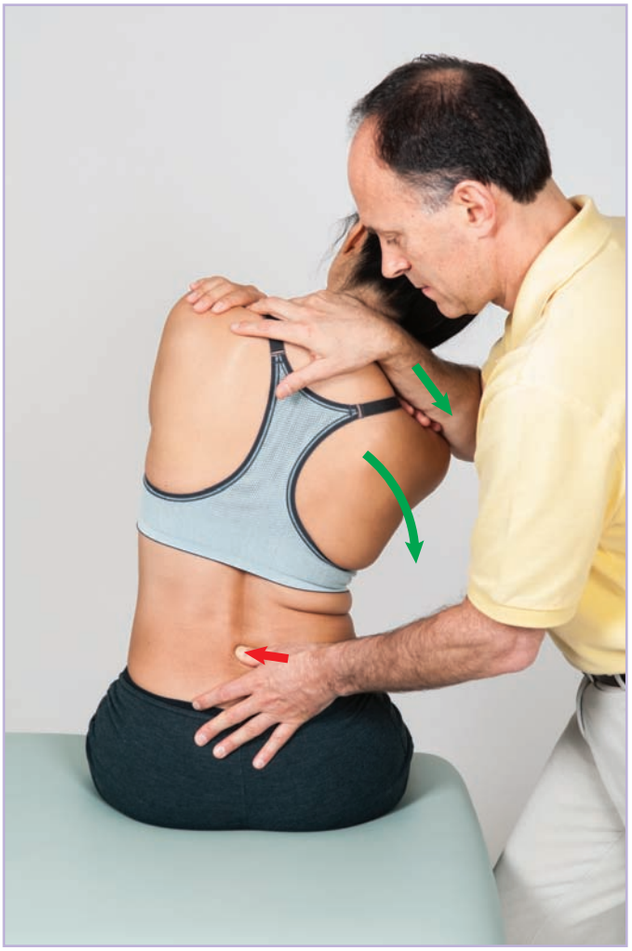


Figure 10-20

ROUTINE 10-12: LUMBAR SPINE SIDE-LYING: HORIZONTAL ADDUCTION

LSp side-lying horizontal adduction is the most powerful mobilization for the LSp and is a variant of the side-lying horizontal adduction mobilization for the SIJ (Routine 10-7). Transitioning from the SIJ to the LSp in side-lying position was addressed in Practical Application Box 10.6. Please refer to Routine 10-7 and Practical Application Box 10.6 for this LSp mobilization.

ROUTINE 10-13: LUMBAR SPINE SUPINE: TOWEL TRACTION/DISTRACTION

Distraction mobilization of the spine, also known as **axial distraction**, is usually called **traction**. In the LSp, it usually involves an inferior glide of a vertebra relative to the vertebra that is above it. Distraction lengthens and stretches all of the tissues that run vertically in the spine at the level(s) of distraction. When performed by hand, it is also called **manual traction**. When performed with the aid of a towel, it can be called **towel traction**. Towel traction of the LSp is demonstrated in this routine; manual distraction/traction of the LSp is shown in Routine 10-14.

The following are the steps to perform distraction/traction joint mobilization of the LSp using a towel:

- The client is supine with a towel or king-sized pillowcase wrapped around the distal legs as seen in Figure 10-21A. Place the towel over the distal anterior legs. Wrap the two sides of the towel back under and up through to the medial side of the legs, superior to the part of the towel that is lying anteriorly across the legs. The ends of the towel are now draped distally toward the feet.

Figure 10-21A

- You are standing at the foot end of the table, in a sagittal plane stance with your body weight balanced on your forward foot (Fig. 10-21B).

Figure 10-21B

- Gently and gradually begin pulling on the towel directly inferiorly/distally (parallel with the table) as you slowly shift your weight back onto your rear foot (Fig. 10-21C). Continue pulling until you feel tissue tension.

Figure 10-21C

- Once tension is reached, perform the mobilization by gently leaning further back, increasing the traction force. This will cause a distraction force that tractions the pelvis away from the LSp, and sequentially as tension is increased, tractions each lumbar vertebra inferiorly away from the vertebra superior to it (Fig. 10-21D).
- Hold for a second or so and then release.

Figure 10-21D

- With this distraction technique, the weight of the client's upper body will provide overall stabilization for the rest of the body, but it may not provide sufficient stabilization. If the client's body begins to slip on the table, the client can be asked to hold onto the upper table with his hands for further stabilization (Fig. 10-21E). Having flannel sheets or another similar fabric can help to stabilize the client's upper body by adding friction to minimize his sliding.

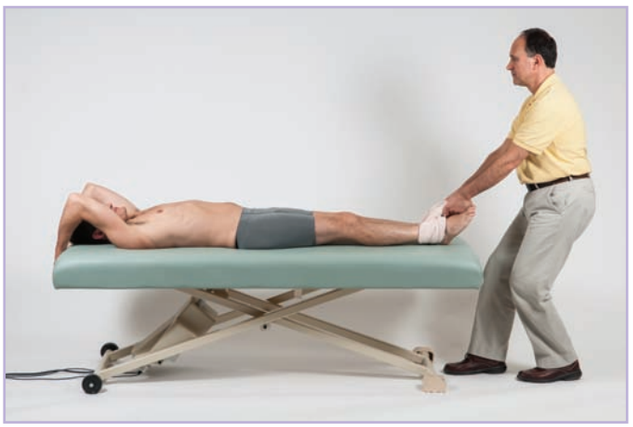


Figure 10-21E

- Depending on how tight the client is, some of the traction force might travel farther up the spine to the thoracic and perhaps even the cervical spine. The tighter the client, the higher up the spine the traction will be felt. One way to focus the traction to the LSp is to stabilize the thoracic spine with a strap or seat belt. If this is done, for client comfort, it is important to place padding between the restraining belt and the client (Fig. 10-21F).

Figure 10-21F

- This mobilization technique can be repeated for a total of three to five times.
- In time, the position of traction stretch can be held for longer, perhaps 5 to 10 seconds or more.
- To increase the traction tension on one side of the client's back, the client's legs can be brought to the other side (Fig. 10-21G). For body mechanics and balance, the therapist's feet position should be shifted toward more of a frontal plane stance.

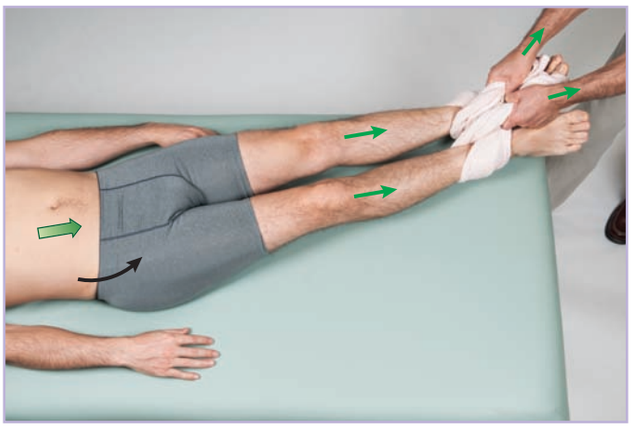


Figure 10-21G

10.9 PRACTICAL APPLICATION

Towel Distraction/Traction

Towel traction can be an extremely effective form of LSp joint mobilization distraction, and most clients enjoy it. However, choosing the proper towel is important. If the towel is too thick or too plush, it is difficult to grab the client's skin and difficult to hold on to. The optimal towel is a well-used, somewhat threadbare bath-sized towel (approximately 40 × 24 inches [100 × 60 cm]). A king-sized flannel pillowcase also works well. But if the fabric of the towel or pillowcase is too thin, the contact can be too narrow and feel uncomfortable to the client.

It is also important to emphasize that the direction of your pull should be as horizontal and parallel with the table as possible. Do not lift the client's feet up as you pull.

When using a towel on the legs to traction the client's spine, the traction force transfers through the client's knee, hip, and SIJs before the traction is felt in the LSp. If the client has a pathologic hip, knee, or SIJ, this mobilization technique might be contraindicated. If any of these joints are hypermobile/unstable, this technique is contraindicated. On the other hand, if the hip or SIJ is hypomobile/restricted, this traction technique might actually be indicated for these joints as well as the LSp joints.

ROUTINE 10-14: LUMBAR SPINE SUPINE: MANUAL TRACTION/DISTRACTION

Manual traction/distraction joint mobilization of the LSp can also be effectively performed. In fact, the manual traction technique routine presented here is generally more effective than towel traction technique placed at the legs (Routine 10-13). Because the thigh is used as the lever to pull and traction the LSp, the knee joints are spared involvement. However, the hip and SIJs are still involved (see the caution regarding possible contraindications for this routine if these joints are unhealthy).

The following are the steps to perform manual distraction/traction joint mobilization of the LSp using the client's right thigh:

- The client is supine with her left lower extremity straight on the table, her right hip and knee joints flexed, and her right foot flat on the table.
- You are sitting toward the foot end of the table, on the client's right side. Your right (lower) leg and foot are under the client's right knee; your left thigh and knee joints are flexed, and your left foot is placed on the top of the table, to the right side of the client. The fingers of your hands are interlaced, and you are grasping the anterior proximal right thigh of the client (Fig. 10-22A). It is important to be as proximal on the client's thigh as possible. *Note*: The therapist can choose to either wear or not wear his or her shoes when on the table. If shoes are not worn, be sure to check that health codes allow this. Also, it can be difficult to grab with traction with stocking feet.

Figure 10-22A

- Gently and gradually begin pulling on the client's right thigh as you slowly shift your weight back on the table. Press onto the table with your left foot to help stabilize your body as you lean back (Fig. 10-22B). The direction of your pull on the client's thigh should be as horizontal and parallel with the table as possible. Continue pulling until you feel tissue tension.

Figure 10-22B

- Once tension is reached, perform the mobilization by gently leaning further back, increasing the traction force. This will cause a distraction force that tractions the pelvis away from the LSp and, sequentially as tension is increased, tractions each lumbar vertebra inferiorly away from the vertebra superior to it (Fig. 10-22C).

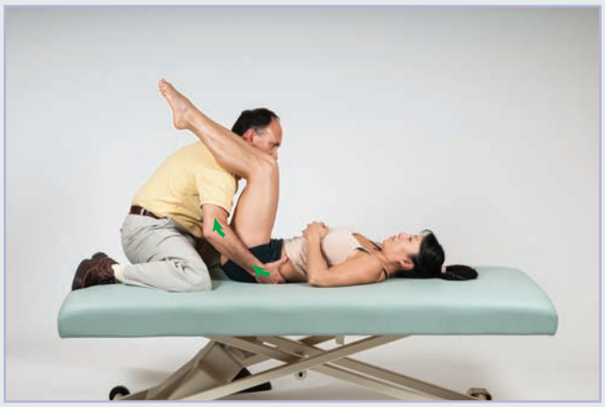
Figure 10-22C

- Hold for a second or so and then release.
- As with the towel traction routine, the weight of the client's upper body will provide overall stabilization for the rest of the body. If the client's body begins to slip on the table, the client can be asked to hold onto the upper table with her hands for further stabilization (see Fig. 10-21E). Having flannel sheets or another similar fabric can help to stabilize the client's upper body by adding friction to minimize her sliding. And as with the previous routine, a strap or seat belt can be used to better stabilize the client's upper body (see Fig. 10-21F).
- This mobilization technique can be repeated for a total of three to five times. In time, the position of traction stretch can be held for longer, perhaps 5 to 10 seconds or more.

10.10 THERAPIST TIP

Manual Lumbar Traction Mobilization

Using the client's thigh to traction the LSp has the advantage of skipping the knee joints and not involving them in the technique. If an unhealthy or painful hip joint of the client precludes using that thigh to traction the spine, simply sit on the other side of the client and use the client's other thigh instead, assuming it is healthy. It is also possible to traction the client's LSp by contacting directly on the client's pelvis, thereby skipping the hip joints altogether, as seen in the accompanying figure. This can also be performed with the client lying at the end of the table so that the therapist can stand at the end of the table for a better base of support.



CHAPTER SUMMARY

Joint mobilization is a valuable advanced technique in the therapist's array of treatment options. In essence, it is a very specific form of pin and stretch in which the therapist pins (stabilizes) one vertebra while moving (mobilizing/stretching) the adjacent vertebra. For clients with segmental hypomobility (a soft tissue restriction that is limited to one or a few spinal joint levels of the LSp), joint mobilization is often the only treatment technique that is effective at loosening the taut tissues. It is especially effective for stretching the smaller, deeper intrinsic muscles and the ligaments and joint capsules of the joint being mobilized. As with any stretching technique, joint mobilization is usually most effective when performed after the client's tissues are first warmed up, whether through massage, heat, or physical activity. Although it is important to practice and hone your skills with all new treatment techniques before using them with your clients, because joint mobilization of the LSp is such a powerful technique, particular care needs to be paid to practicing this technique before incorporating it into your treatment regimen.

CASE STUDY

ALICIA

History and Physical Assessment

A new client, Alicia Alexander, age 32 years, comes to your office complaining of low back pain and stiffness. She describes the pain as a 5 to 7 on a scale of 0 to 10. She tells you that her condition has been progressing for about a year and that she believes it is a result of the increased time she has been spent sitting. She first noticed the discomfort late last year after an 8-hour car ride back from vacation. Since then, she has had many deadlines at work that require her to spend a lot of time seated at the computer; she is a graphic artist.

You perform a thorough client history, which reveals no trauma. She reports that her discomfort is localized to the lower left side of her low back. There is no referral into either of the lower extremities. She tells you that she has seen a massage therapist once a week for the past 4 weeks, with treatment consisting of heat, deep tissue work, as well as standard and contract relax stretching, but that the pain and tightness have only improved slightly. She has also been walking more, hoping that it would help to loosen her low back; it seems to help for a couple of hours but then the discomfort and pain return. She describes the discomfort/pain as a deep dull ache and stiffness.

You perform the passive and active straight leg raise, and you ask her to perform the cough and slump tests and the Valsalva maneuver, the results of which are all negative. Your assessment shows that her LSp gross ranges of motion are all normal, although she describes feeling slightly stiff when moving into flexion and right lateral flexion. Upon palpation, you find a mild to moderate muscle spasming in the left low back/pelvis region, specifically at the left lumbosacral paraspinal muscles, the superomedial fibers of the left gluteus maximus, and the left piriformis. When you ask her to indicate where her pain and tightness are located, she points to the medial side of the left PSIS. Upon joint play/motion palpation of the LSp and SIJs, all joints are moving well except that you find a marked hypomobility in her left SIJ. (For a review of assessment procedures, see Chapter 3.)

Think-It-Through Questions:

1. Should an advanced technique such as joint mobilization be included in your treatment plan for Alicia? Why, or why not?
2. Is joint mobilization safe to use with Alicia? If yes, how do you make that determination?
3. If you do joint mobilization, which specific joint mobilization routines should you use? How and why would you choose those particular routines?

Answers to these Think-It-Through Questions and the Treatment Strategy employed for this client are available online at thePoint.lww.com/MuscolinoLowBack

PART THREE

Self-Care for the Client and Therapist

CHAPTER 11 Self-Care for the Client

CHAPTER OUTLINE

Introduction	378
Hydrotherapy	378
Stretching	384
Postural Advice	398
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OBJECTIVES

After completing this chapter, the student should be able to:

1. Explain the importance of client self-care.
2. Describe the balance scale analogy for client self-care.
3. Describe the indications for and mechanisms of cold, heat, and contrast hydrotherapy.
4. Explain the importance of hydrotherapy for client self-care.
5. Describe to a client how to perform self-care cold, heat, and contrast hydrotherapy routines.
6. Describe the advantage to the therapist of using cold hydrotherapy in conjunction with deep tissue work.
7. Describe and perform cold hydrotherapy using a CryoCup and ice pack massage.
8. Explain the importance of stretching for client self-care.
9. Describe to a client how to perform the stretching routines presented in this chapter.
10. Describe to the client how to incorporate contract relax (CR), agonist contract (AC), and contract relax agonist contract (CRAC) stretching protocols into self-care stretches.
11. Explain the importance of posture to client self-care and describe the most common postures that may be stressful to the low back and pelvis that are presented in this chapter and how to avoid them.
12. Define the key terms of this chapter.

KEY TERMS

anterior line (hip flexor) stretches
balance scale analogy
chair low back stretch
client self-care
cold hydrotherapy
contrast hydrotherapy
counterirritant theory
CryoCup
cryotherapy
double knee-to-chest stretch
Figure 4 stretch
gate theory
heat hydrotherapy
hydrotherapy
ice pack massage
knee-to-chest stretch
knee-to-opposite-shoulder stretch
lateral line (hip abductor) stretch
lumbar spine lateral stretch
lumbar spine-extension medley
medial line (hip adductor) stretch
pain-spasm-pain cycle
posterior line-horizontal (hip lateral rotator/piriformis) stretches
posterior line-vertical (hip extensor/hamstring) stretch
RICE

INTRODUCTION

The goal of all therapists who work clinically is to become highly skilled, advancing their knowledge base and learning as many techniques as possible to help their clients. However, even the best therapist can have difficulty resolving the client's condition if the client does not become engaged in the care. Even if a client assertively seeks treatment and comes in three times a week for an hour session each time, there are another 165 hours in the week that the client is not in the therapist's care. If during this time the client is engaging in unhealthy postures and activities that aggravate the problem, it is very difficult for the therapist's 3 hours of care to reverse the problem. For this reason, the self-care advice that the therapist gives clients is critically important to the success of the care plan. The three major components of **client self-care** are hydrotherapy, stretching, and learning and using proper postures.

BOX 11.1

Self-Care Routines

The following self-care routines are presented in this chapter:

- Hydrotherapy:
  - Routine 11-1—cold hydrotherapy
  - Routine 11-2—heat hydrotherapy
  - Routine 11-3—contrast hydrotherapy
- Lumbar spine stretches:
  - Routine 11-4—chair low back stretch
  - Routine 11-5—knee-to-chest stretch
  - Routine 11-6—double knee-to-chest stretch
  - Routine 11-7—double knee-to-chest stretch with contract relax (CR) protocol
  - Routine 11-8—double knee-to-chest stretch with agonist contract (AC) protocol
  - Routine 11-9—double knee-to-chest stretch with contract relax agonist contract (CRAC) protocol
  - Routine 11-10—lumbar spine-extension medley
  - Routine 11-11—lumbar spine lateral stretch
- Pelvis/hip joint medley of stretches:
  - Routine 11-12—anterior line (hip flexor) stretches
  - Routine 11-13—lateral line (hip abductor) stretch
  - Routine 11-14—medial line (hip adductor) stretch
  - Routine 11-15—posterior line-vertical (hip extensor/hamstring) stretch
  - Routine 11-16—posterior line-horizontal (hip lateral rotator/piriformis) stretches

Note: In the Technique and Self-Care chapters of this book (Chapters 4 to 12), green arrows indicate movement, red arrows indicate stabilization, and black arrows indicate a position that is statically held.

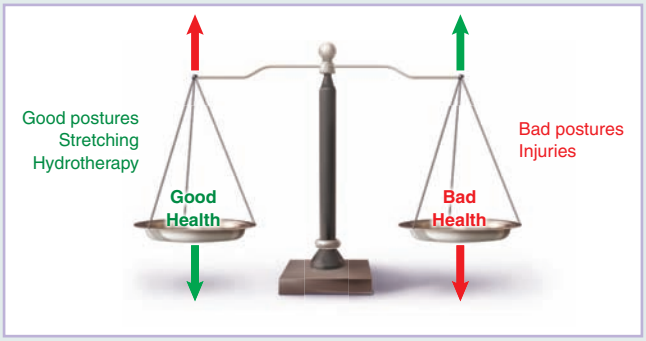
11.1 THERAPIST TIP

Balance Scale Analogy

Simple analogies are often extremely helpful when counseling a client regarding the importance of home self-care. One effective analogy that can be used is to an old-fashioned balancing scale for measuring weight. With the **balance scale analogy**, good health and feeling better are represented by one side and occur if the scale is tipped in that direction. Bad health and pain/discomfort are represented by the other side and continue or worsen if that side tips down (see accompanying figure).

In this analogy, the client can improve if more good things are done to tip that side down, if fewer bad things are done so that the other side lightens up and raises (and therefore, the good side tips down), or both. It is important to explain to the client that your treatments add weight to the good side but that the client can help his or her healing with the things he or she does at work and home by adding more good things to the good side and by no longer doing the bad things that would tip the scale the other way.

This chapter presents hydrotherapy and stretching that the client can perform to tip the scale toward good health. It also presents information about poor postures that the client should avoid so that the client can prevent additional stresses to the low back and pelvis and thereby also tip the scale toward the side of good health. It is always helpful to point out to clients that the more they do to help themselves, the less you will have to do to help them and the sooner they will get better.



A thorough coverage of client self-care merits an entire book. The purpose of this chapter is to present a few basic, intermediate, and advanced home self-care approaches that you can incorporate into your clients' treatment regimens.

HYDROTHERAPY

One of the easiest types of self-care that clients can perform to facilitate their recovery is hydrotherapy. The term **hydrotherapy** literally means "treating with water" ("hydro" means

"water"). Treating with water is advantageous because water is an excellent medium for conveying temperature. Heated water can efficiently transfer heat to the client; water in the form of ice is excellent at transferring cold. However, the term *hydrotherapy* is sometimes expanded to include almost any form of heat or cold therapy, even if water is not involved; examples include electric heating pads and chemical gel ice packs.

Hot and cold hydrotherapy treatments are powerful tools. Although almost every textbook and journal article states rules and guidelines for the application of hot and cold, it often seems that they contradict each other. Instead of memorizing cookbook rules about when and how to use these modalities, it is best to simply understand what the underlying physiologic mechanism of each one is. Understanding what heat and/or cold does physiologically makes it possible to decide how to best apply them to meet the needs of each specific client.

Cold Hydrotherapy

The use of **cold hydrotherapy**, also known as **cryotherapy**, has two major physiologic benefits. Cold numbs sensory receptors, resulting in the elimination of pain. Cold also causes local vasoconstriction, thereby helping to decrease swelling/inflammation in the region where it is applied.

The first major reason to use cold is that it is an anesthetic agent that can decrease pain. This is important because pain can trigger the **pain-spasm-pain cycle**. In this cycle, pain triggers muscular spasming to splint and protect the region from overuse. This spasming then produces further pain, which perpetuates the cycle. Therefore, decreasing pain might lessen some of the reflexive muscular spasming. Thus, even if the use of cold does not directly treat and help improve the underlying mechanism of the client's condition, the fact that it decreases pain can help to decrease the reflexive muscle spasming that accompanies almost every musculoskeletal condition.

Decreasing muscle spasming can then help many other aspects of musculoskeletal conditions. For example, decreased muscle spasming allows for greater joint range of motion, thereby allowing for increased movement, which in turn increases local blood circulation and allows for better stretching of the soft tissues. Decreasing muscle spasming in the low back and pelvis also reduces the compression load on the joints of the low back, which can be beneficial if the client is experiencing a lumbar disc bulge or herniation, a facet joint irritation, or a sacroiliac joint condition. And, of course, muscle spasming itself may cause pain from the tension of the tight muscles' pulling force. For all these reasons, cold can be used as an anesthetic agent and can be used at any stage of a musculoskeletal problem, whether it is acute or chronic.

The second reason to use cold is to decrease swelling that might be present in the tissues. It is important to realize that swelling is not always visible on the outside of the client's body. Sometimes, the swelling is either mild in degree or is located in deeper tissue layers. In these cases, if it cannot be seen, the therapist needs to feel for it by palpating the region gently and carefully. In some cases, the swelling might be so deep that it cannot even be palpated. In these cases, it is important to listen to how the client describes the discomfort. Pain is present in almost every musculoskeletal condition. However, when a client states that an area is *tender* to the touch, swelling is often present. Using cold to decrease swelling can be desirable for a number of reasons:

- Swelling causes pressure on sensory nerves, leading to increased pain, which can then trigger the pain-spasm-pain cycle.
- Swelling also draws to the area tissue factors that chemically irritate pain endings.
- The physical presence of the swelling can obstruct movement in the region, resulting in decreased range of motion, allowing muscles to tighten and adhesions to form in the soft tissues.
- Swelling brings in fibroblasts, cells that form collagen adhesions. If allowed to remain in an area, these cells will lay down excessive adhesions, further decreasing range of motion.
- Excessive swelling can close off local veins, lymph vessels, and arteries, actually resulting in decreased circulation in the area. If venous and lymphatic flow is obstructed, waste products of metabolism are not removed from the area, resulting in an accumulation in the tissues. These waste products can then lead to irritation of the local sensory nerves, leading to further pain. If arterial flow is obstructed, oxygen and other nutrients cannot be brought into the area, resulting in ischemia. Ischemia can then result in the formation of myofascial trigger points as well as inhibit the healing process of injured tissues.

11.1 PRACTICAL APPLICATION

Using Cold for Deep Tissue Work Therapy

Therapists may choose to use cold during a treatment session to numb a region of the client's body so that they can work deeper than otherwise would have been possible. If deep tissue work would benefit the client but the discomfort/pain would prevent the client from tolerating it, then cold can be applied to the area to make it possible. Of course, if the client is now numb in the region being worked, he or she loses the ability to give feedback regarding your pressure. For this reason, it is imperative that you judge the depth of your pressure so as not to injure the client. If very deep pressure is used, it may be advisable to also use cold therapy afterward to prevent swelling in response to the deep work.

ROUTINES

ROUTINE 11-1: COLD HYDROTHERAPY

Methods and Application of Cold Hydrotherapy

The easiest way for a client to use cold hydrotherapy (cryotherapy) is with a reusable gel ice pack that is kept in the freezer. When needed, it can be placed on the affected region. To prevent possible frostbite to the skin, it is usually advisable to place a paper towel or thin cloth towel between the ice pack and the skin. However, the material used should not be so thick as to prevent the cold from penetrating it. It is usually best to leave the ice pack on just long enough for the area to become numb but not longer. In the low back and pelvis, this is approximately 8 to 15 minutes, depending on how cold the ice pack is. If the area is so hot and swollen that the cold pack never succeeds in numbing the area, then the ice pack should be removed once it has warmed up. *Note*: If the client does not have a flexible gel ice pack, a bag of frozen peas often works quite well in the meantime and can be used until the client has the time to buy a gel pack.

When recommending the use of cold hydrotherapy to a client, it is important to emphasize that the client should check the underlying skin frequently to be sure that it does not become frostbitten. Because cold causes decreased sensation, the client may not be able to sense if damage is being done. Therefore, the client should check the skin by palpating with the fingers under the ice pack every minute or so. Once the skin is numb, the ice pack should be removed. Extra caution should be exercised if the client has a sensory neuropathy or another condition that alters the ability to sense cold because such conditions alter the ability to sense numbness.

Guidelines for Cold Hydrotherapy

The vasoconstrictive effects of cold therapy make it ideal to use for clients who have an acute condition characterized by tissue swelling. Physical injury (whether from a single trauma or chronic overuse) is a frequent cause of tissue swelling, and ice is part of the **RICE** protocol (*r*est, *i*ce, *c*ompression, *e*levation) that is often recommended during the acute stage of the injury. It is helpful to understand some general guidelines about the length and frequency of use of cold therapy.

There is a great deal of confusion regarding the length of time duration that cold should be applied after an injury. Some texts state that cold should be used during the first 24 hours after an injury; others recommend using cold during the first 48 hours, whereas still others recommend using it during the first 72 hours. Which is correct? If the purpose of using cold is to decrease inflammation resulting from the injury, then cold should be used for as long as the swelling is present, whether that is 24 hours, 72 hours, 6 weeks, or 6 months! (*Note*: It is not unusual for some sprains, especially ankle sprains, to remain slightly swollen for many months.) Whenever a technique is applied, it should always be done in accordance with the physiologic mechanism of the treatment technique and the specific needs of the client's condition, not a memorized cook book regimen.

Regarding frequency of use, the general rule is that if cryotherapy is indicated, then the more often it is performed, the better. When a condition is acute and/or severe, recommend that the client use cryotherapy at least three times a day. When doing multiple cryotherapy applications in 1 day, the guideline is to let the area return to body temperature before repeating the application.

11.2 PRACTICAL APPLICATION

Ice Application by the Therapist

Therapists can apply cold treatment in a number of ways. One way is to simply rub an ice cube along the client's skin. The main problem with this method is that holding an ice cube directly is uncomfortable for the therapist's hand. The meltwater that drips down the client's sides can also be uncomfortable for the client and requires placement of toweling to absorb the water. One alternative is to use a paper cup that has been filled with water and frozen. You can peel back the paper to expose the ice and rub it on the client. This keeps your fingers from direct contact with the ice. As the ice melts, the paper cup can be further peeled back to continually expose the ice for use on the client. Another alternative is to use a plastic **CryoCup** (http:// www.cryocup.com; Cryo Therapy Inc., Monticello, MN) to hold the ice (see accompanying figures). This also keeps your fingers from direct contact with the ice but does not require the continual peeling of paper. With paper cups and the CryoCup, towels are still needed to absorb the meltwater.

Although actual ice is the most powerful form of cryotherapy, the use of an **ice pack massage** circumvents the problem of meltwater dripped on the client's body. An ice pack massage is performed by rubbing a flexible gel ice pack on the client's skin. A lubricant is required to allow the ice pack to glide on the client's skin. Because water-based lubricants will freeze and harden, it is necessary to use an oil or gel lubricant. It is also possible to mix an oil or other lubricant that does not easily freeze with the water-based lubricant. One advantage to ice pack massage is that a topical analgesic balm such as Mineral Ice (http:// www.bms.com; Bristol-Myers Squibb, Princeton, NJ) or Biofreeze (http:// www.hygeniccorp.com; The Hygenic Corporation, Akron, OH) can be mixed in with the lubricant. This gives the advantage of the cold with the sensory benefits of the analgesic lotion.

A

B

The use of a CryoCup. **(A)** The CryoCup is filled close to the top with water and placed in a freezer to create ice. **(B)** The bottom part of the CryoCup is removed and the top part is used as a handle for the ice application.

11.2 THERAPIST TIP

Topical Analgesic Balms

Topical analgesic balms can be rubbed on the skin to decrease pain. These balms often state that they create a heating or cooling effect, but this should not be misinterpreted to mean that they actually change circulation (via vasoconstriction or vasodilation) to the musculature of the underlying area. Any cooling or heating sensation the client experiences is usually the result of the balm's effects on the skin's surface.

Most topical balms work through a mechanism called the **counterirritant theory**. By irritating the skin, the balm helps to block the transmission of pain fibers from that region, thereby decreasing pain. The counterirritant theory is one mechanism of a larger concept called the **gate theory**. The gate theory explains that pain in a region can be blocked by other sensations coming from that same region, such as movement, pressure, and irritation to the skin. However, even if a topical balm does not treat the actual cause of the client's condition, it can help to interrupt the pain-spasm-pain cycle by blocking pain, and this effect is beneficial if it reduces compensatory muscle spasming.

Topical balms are generally safe to use, although excessive application can be toxic and dangerous to the body. Because most topical balms work by the same counterirritant theory, clients should feel free to use whichever one they like.

Heat Hydrotherapy

The use of **heat hydrotherapy** has three major physiologic benefits:

1. Heat is a central nervous system depressant, which promotes muscular relaxation. This is heat's major advantage when used as a relaxing agent. If the central nervous system is relaxed, the baseline contractile tone of the musculature will likely be lessened, resulting in a relaxation of tight muscles. This can help improve the health of the region for all of the reasons already discussed.
2. Heat causes local vasodilation, which brings more blood to the region where it is applied. Arterial blood brings in needed nutrients not only for the normal metabolism of the cells of the region but also to help heal injured tissues in the region.
3. Heat helps to soften and release the fascial tissues of the body. These include the muscular fascia (endomysia, perimysia, epimysia, tendons, and aponeuroses) as well as the ligaments, ligamentous joint capsules, and other fascial membranes. Therefore, heat is ideal to apply before stretching the client.

11.3 THERAPIST TIP

Stretching after Heat

Tissues usually respond best to being stretched when they are warmed up first, and applying heat is an ideal way to prepare the body for stretching. Perhaps the major clinical advantage of heat is that it promotes the relaxed muscle tone and softened fascial tissues that make stretching extremely effective. It should be noted that there are some methods of applying cold and then stretching the region, most notably the spray and stretch technique often used with trigger point treatment; however, these techniques are usually performed by a skilled therapist or physician. Regarding advice for the client to stretch at home, stretching after cold application is usually unproductive at best and very risky because the client is unable to sense if the tissue is being overstretched and torn.

ROUTINE 11-2: HEAT HYDROTHERAPY

Methods and Application of Heat Hydrotherapy

When using heat for self-care, the client has many choices for how to apply it, including a hot shower or bath, hot wet towels, microwavable bead packs, or an electric heating pad. If the client owns or has access to a whirlpool, steam room, or sauna, these are also effective options. Even physical exercise can be used to heat body tissues, especially if the exercise is aerobic and warms the body, causing sweating. Some of these options are easier to manage than others. Microwavable packs and electric heating pads are easy and convenient to use. Both dry and moist electric heating pads serve to warm the tissues, but moist heat is generally superior to dry heat. A shower is often the preferred method of applying moist heat to the low back and pelvis (or any region of the body). It is easy to do, and because the water actually hits the client's skin, a shower gives a slight stimulating massage in addition to applying heat.

Guidelines for Heat Hydrotherapy

Unlike cold therapy, whose application time is fairly regimented (apply until numb), heat therapy application time can vary much more. The appropriate length of time for applying heat ranges from 5 to 20 minutes, depending on the temperature of the heat application and client comfort and preference. Whereas cold therapy poses the danger of frostbite to the tissues, heat is generally safer, although there is a danger of burning the skin if a hot pack or shower is too hot. It is important to remind the client to monitor the temperature of whatever heat application method is used. One other factor that should be considered with heat therapy is that if it is applied for too long, it may inflame the area.

Regarding frequency of use, the general rule is that if heat is indicated, then the more often it is performed, the better. When a condition is marked or severe in degree, recommend that the client use heat therapy at least three times a day. As with cold therapy, when doing multiple heat applications in 1 day, the guideline is to let the area return to body temperature before repeating the application. As previously stated, when using heat for tight muscles and/or other soft tissues, stretching should follow.

As a general rule, heat should not be applied to a swollen area. Because heat produces vasodilation, this would only cause a further influx of blood, thereby increasing the swelling. Also, as with cold application, heat must be prudently applied with clients who have altered sensation, given their inability to judge whether the heat is burning the skin. If the client does have altered sensation, ask the client to check the temperature of the heated skin every minute or so.

Contrast Hydrotherapy: Alternating Cold and Heat Treatments

Even though cold and heat applications may seem to be opposite treatment approaches, using both is often the most efficient hydrotherapy choice. Alternating cold and heat hydrotherapy is called **contrast hydrotherapy**. Most musculoskeletal conditions involve a combination of muscular spasming and tissue swelling. The swelling indicates cold as the treatment of choice, and the muscular spasming indicates heat as the treatment of choice. Therefore, any condition that presents with both spasming and swelling may benefit from contrast hydrotherapy.

ROUTINE 11-3: CONTRAST HYDROTHERAPY

Methods and Application of Contrast Hydrotherapy

When working with contrast hydrotherapy, any of the methods discussed for cold hydrotherapy and heat hydrotherapy can be used. It is customary to apply the cold therapy first, followed by the heat therapy. The cold first numbs the area, interrupting the pain-spasm-pain cycle, and causes a vasoconstriction; this is followed by vasodilation caused by the heat. The overall effect of alternating cold and heat is that of a circulation pump, pushing old blood out to remove waste products and drawing new blood in to bring in nutrients. Ending with heat also results in relaxation and softening of the tissues, thereby providing the perfect springboard to follow with stretching.

Guidelines for Contrast Hydrotherapy

As a rule, if only swelling is present, the ideal home care advice for the client is to use only cold. If only muscle spasming is present, the ideal home advice is to use only moist heat followed by stretching. (One amendment to this rule is that cold can always be used for its numbing effect.)

If both swelling and spasming are present, the ideal treatment is contrast hydrotherapy. In this case, if the muscle spasming is the major factor, the ideal home advice for the client is to use ice, followed by moist heat, followed by stretching. If swelling is the major factor, the ideal home advice is to use ice, followed by moist heat, followed by stretching, followed by ice again. (Cold is always used until numb; heat therapy time ranges from 5 to 20 minutes.)

Whenever recommending the application of heat after cold, instruct your clients to be especially careful. If the cold application has numbed the area, then the clients might not be aware if they are burning their skin with the application of heat. It is helpful to have the clients also apply the heat to the adjacent skin that was not treated with cold so they can judge if the temperature is too hot. For example, if a hot shower is the heat application, instruct them to let the water hit the adjacent skin that has not had cold therapy applied.

STRETCHING

Along with hydrotherapy, stretching is a critically important self-care tool for the client and should be recommended for most clients, except those who are in an acute stage of a condition that contraindicates stretching. Stretching is safest and most effective and powerful after heat is applied first to warm and soften the tissues.

Five common low back stretches that might be recommended for a client's self-care regimen are the chair low back stretch (Routine 11-4), the knee-to-chest stretch (Routine 11-5), the double knee-to-chest (Routines 11-6 through 11-9), the lumbar spine-extension medley (Routine 11-10), and the lumbar spine lateral stretch.

There is a medley of five common hip joint stretches for the pelvis that might be recommended for a client's self-care regimen. This medley of stretches includes one stretch for each of the anterior, lateral, and medial lines and two stretches for the posterior line. The anterior line stretch is for the hip flexors (Routine 11-12), the lateral line stretch is for the abductors (Routine 11-13), the medial line stretch is for the adductors (Routine 11-14), and the two posterior line stretches are for the hamstrings (running vertically) (Routine 11-15) and the lateral rotators (running horizontally) (Routine 11-16). Although these stretches can be done in any order, it is usually best to perform the posterior horizontal line stretch for the lateral rotators after the other stretches have been performed.

In general, these and any other stretches may be carried out using the classic static stretching protocol in which the client performs approximately three repetitions, holding each repetition for a prolonged period, usually between 10 and 60 seconds. Alternatively, they may also be carried out in a dynamic fashion, in which a greater number of repetitions are performed, usually between 8 and 10, but each repetition is held for a shorter period, usually between 1 and 3 seconds. An excellent protocol that combines these two approaches is to first perform a number of dynamic short-held stretches and then finish with one static long-held stretch.

An explanation of how the client can perform the double knee-to-chest stretch utilizing the CR, AC, and CRAC stretching protocols appears in Routines 11-7 through 11-9. In the following treatment session or two after stretches have been recommended, it is also a good idea to ask the client to demonstrate the stretches so that you can be sure the client is performing them correctly.

Many additional low back and pelvis stretches can also be recommended for the client; for a thorough explanation and demonstration of them, see Chapters 6 through 9. Although the photos in these chapters show the therapist performing the stretch on the client, most of the stretches can be modified for a client's self-care regimen.

BOX 11.2

Stretching Protocols

- Lumbar spine stretches:
  - Routine 11-4—chair low back stretch
  - Routine 11-5—knee-to-chest stretch
  - Routine 11-6—double knee-to-chest stretch
  - Routine 11-7—double knee-to-chest with CR protocol
  - Routine 11-8—double knee-to-chest with AC protocol
  - Routine 11-9—double knee-to-chest with CRAC protocol
  - Routine 11-10—lumbar spine-extension medley
  - Routine 11-11—lumbar spine lateral stretch
- Pelvis/hip joint medley of stretches:
  - Routine 11-12—anterior line (hip flexor) stretches
  - Routine 11-13—lateral line (hip abductor) stretch
  - Routine 11-14—medial line (hip adductor) stretch
  - Routine 11-15—posterior line-vertical (hip extensor/hamstring) stretch
  - Routine 11-16—posterior line-horizontal (hip lateral rotator/piriformis) stretches

11.4 THERAPIST TIP

Limit the Number of Stretches You Recommend

Take care not to overwhelm the client with self-care stretches and recommendations. Some clients will follow your advice if you recommend just one or two stretches but will become overwhelmed and do none of them if you recommend more. When considering how much home advice to give your clients, assess how engaged and willing they are to participate in self-care. It is often a good idea to start them off with the most important stretch or two for their condition. If at the next session you find that they were motivated and did what you advised, then you might add another stretch or two. Incrementally adding in this manner often gives the client time to absorb your advice and become comfortable with the stretches. The skill with which you educate and encourage your clients influences their desire to be involved in their own self-care.

ROUTINE 11-4: CHAIR LOW BACK STRETCH

View the video "Chair Low Back Stretch" online on thePoint.lww.com

Most low back conditions involve tightness of the posterior extensor musculature of the lumbar spine. A simple and effective stretch for this functional group is the **chair low back stretch**. The following are the steps to perform this stretch for the bilateral lumbar extensor musculature as well as how to focus the stretch unilaterally to one side.

Starting Position:

- The client is seated with the thighs abducted at the hip joints and hands resting on the anterior thighs.

Performing the Stretch:

- The client slowly and carefully flexes the trunk at the spinal joints (and anteriorly tilts the pelvis at the hip joints), bringing his hands toward the floor until tissue tension in the low back is reached (Fig. 11-1A).
- As the client flexes forward, the forearms can be pressed against the thighs to slow and control their descent. When returning back to the starting position, it should be recommended to the client to use the forearms to press against the thighs to help.
- The length of time that this stretch position is held and the number of repetitions performed depend on whether the stretch is being done statically or dynamically.

Repeat with Lateral Flexion:

- The entire protocol is repeated, this time, with the client's low back flexed and laterally flexed to the right side, bringing his hands toward the little toe of the right foot (Fig. 11-1B). This focuses the stretch on the lumbar extensor musculature on the left side of the body.

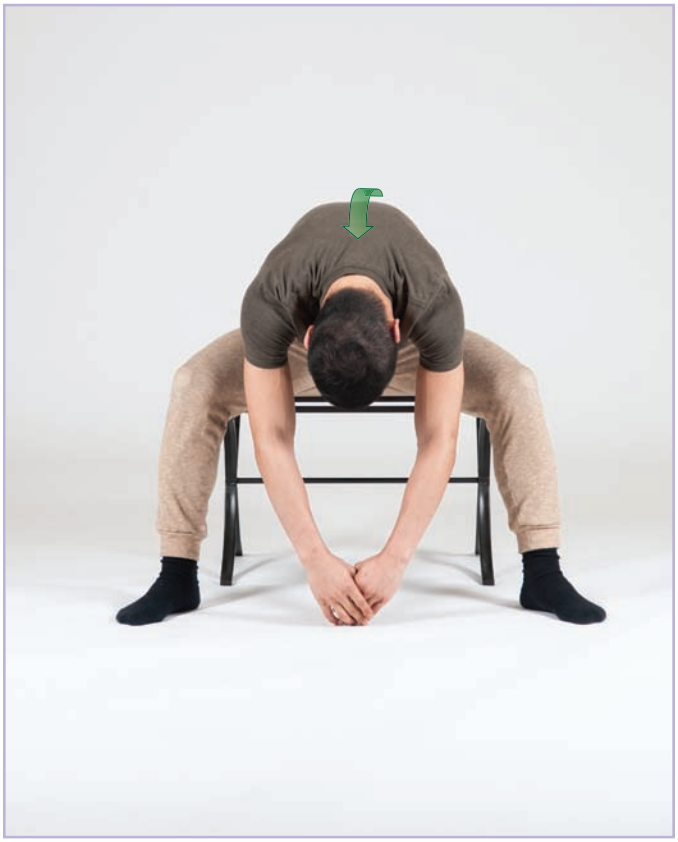


Figure 11-1A

Figure 11-1B

- The entire protocol is then repeated again, this time, with flexion and left lateral flexion toward the little toe of the left foot; this focuses the stretch on the right-sided lumbar extensor musculature (Fig. 11-1C).
- When performing the chair low back stretch to one side, the degree of lateral flexion can vary. The closer to flexion, the more the midline fibers of the posterior musculature are stretched. The closer to lateral flexion, the more the lateral fibers of the posterior musculature on the opposite side of the body are stretched. It is helpful to instruct clients to experiment with the angle of the stretch between flexion and lateral flexion until they find the angle that feels best for their tight musculature. It is also helpful to instruct the client to occasionally vary the angle on purpose so that more of the posterior musculature fibers are stretched.
- The client can also be asked to gently add in rotation to one side and then rotation to the other side. This can be done for the midline chair low back stretch as well as the chair low back stretch performed with lateral flexion to the sides of the body.

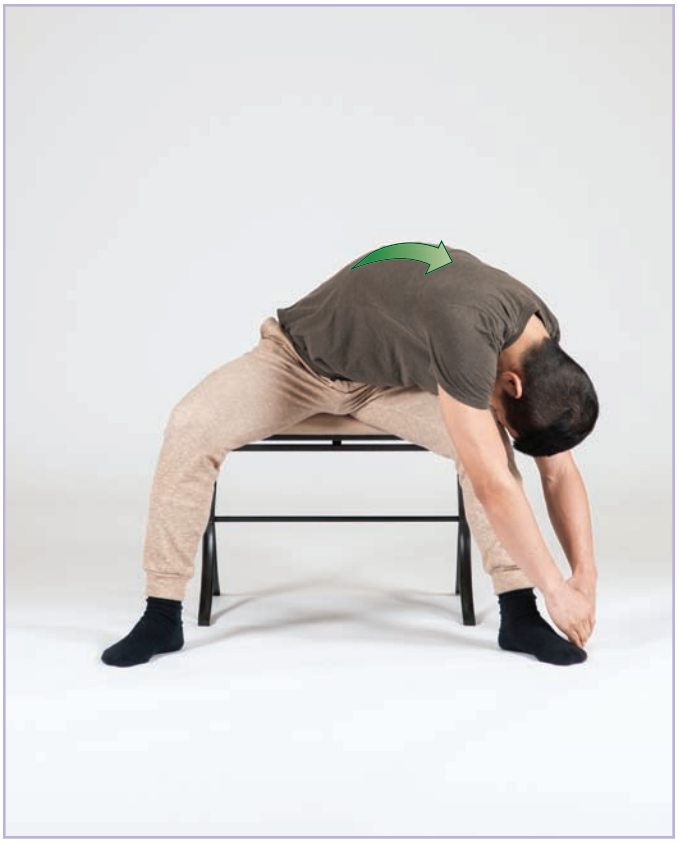


Figure 11-1C

ROUTINE 11-5: KNEE-TO-CHEST STRETCH

View the video "Knee to Chest and Double Knee to Chest Stretches" online on thePoint.lww.com

The (single) **knee-to-chest stretch** stretches the posterior gluteal musculature as well as the lumbar musculature. The more that the opposite-side thigh and pelvis stay down on the table, the more the stretch is focused to gluteal musculature; if the opposite-side thigh is allowed to lift from the table and the pelvis is allowed to posteriorly tilt, the stretch moves into the posterior lumbar musculature.

Starting Position:

- The client is lying supine.
- The client bends his hip and knee joints on one side and places his hands on the posterior distal thigh on that side. *Note*: It is common to see people grasp the anterior proximal leg instead; this causes unneeded compression to the knee joint. Grasping the posterior distal thigh accomplishes the same stretch to the low back without compression to the knee joint.

Performing the Stretch:

- Using his hands, the client pulls the knee straight up toward the chest until tension is reached (Fig. 11-2).
- The stretching protocol is repeated for the other side lower extremity.
- The length of time that this stretch position is held and the number of repetitions performed depend on whether the stretch is being done statically or dynamically.

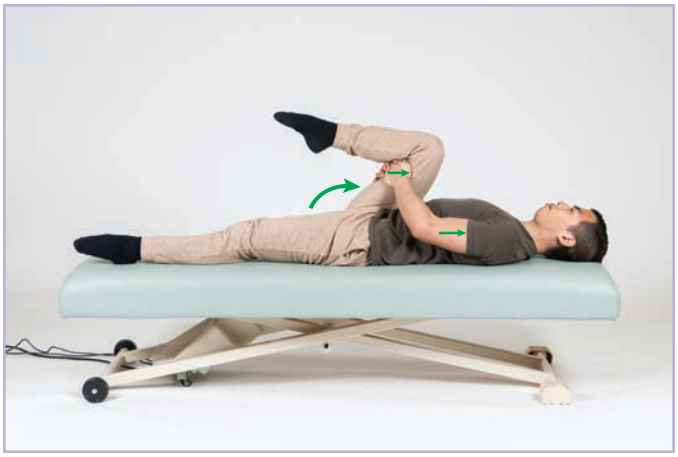


Figure 11-2

ROUTINE 11-6: DOUBLE KNEE-TO-CHEST STRETCH

View the video "Knee to Chest and Double Knee to Chest Stretches" online on thePoint.lww.com

The **double knee-to-chest stretch** stretches the posterior gluteal musculature but is primarily aimed at stretching the posterior extensor musculature of the lumbar spine. By bringing both knees up, the pelvis posteriorly tilts, which decreases the lumbar lordotic curve, stretching the lumbar extensors. As the position of the stretch is deepened, the pelvis rolls more into posterior tilt, leaving the table, and the stretch moves up the lumbar spine.

Starting Position:

- The client is lying supine.
- The client bends his hip and knee joints on both sides and places his hands on the posterior distal thighs.

Performing the Stretch:

- Using both hands, the client pulls the knees straight up toward the chest until tension in the low back is reached. The more that the pelvis lifts from the table, the more the line of tension of the stretch moves up the lumbar spine (Fig. 11-3A).
- The length of time that this stretch position is held and the number of repetitions performed depend on whether the stretch is being done statically or dynamically.
- As with the chair low back stretch in which lateral flexion was added, lateral flexion to each side can be added to the double knee-to-chest stretch (Fig. 11-3B). The client can also perform a circumduction motion (Fig. 11-3C). If this is recommended, be sure to tell the client to perform the circumduction circles slowly.

Figure 11-3B

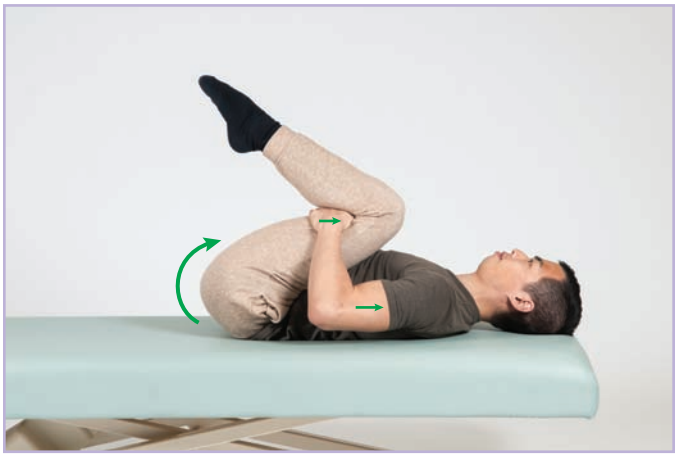


Figure 11-3A

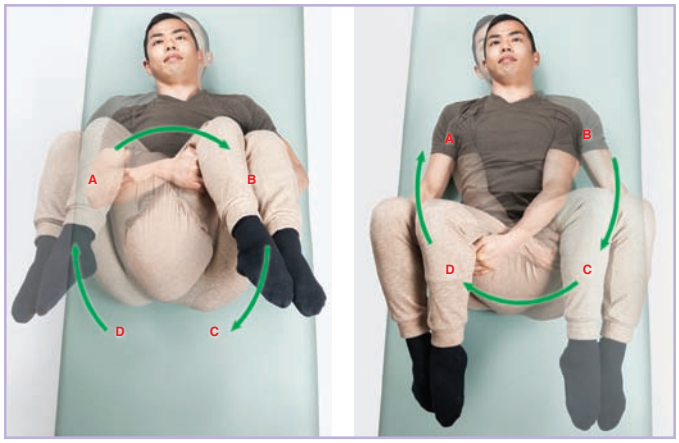


Figure 11-3C

ROUTINE 11-7: DOUBLE KNEE-TO-CHEST STRETCH WITH CONTRACT RELAX PROTOCOL

The client can perform the double knee-to-chest stretch using the CR stretching protocol. For more information on how to perform CR stretching, see Chapter 7. The following are the steps for the client to do CR stretching with the double knee-to-chest stretch.

Starting Position:

- The client is lying supine.
- The client bends his hip and knee joints on both sides and places his hands on the posterior distal thighs.

Step 1: Initial Stretch:

- The client now pulls with both hands and stretches the low back by pulling both knees toward the chest until tension in the low back is felt (Fig. 11-4A).
- It is usually optimal to breath out during this step.

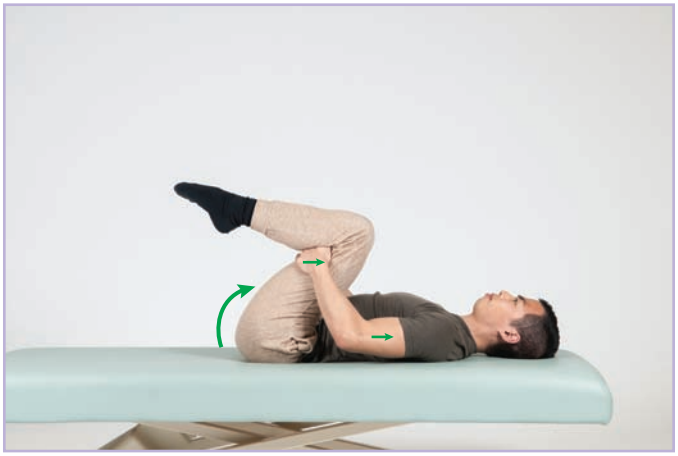


Figure 11-4A

Step 2: Client Contraction:

- The client inhales and then either holds or exhales the breath while isometrically contracting the target musculature against the resistance of his hands, trying to bring the pelvis and thighs back down to the table (Fig. 11-4B).
- The client should contract the target musculature in this manner for a count of 5 to 8 seconds.

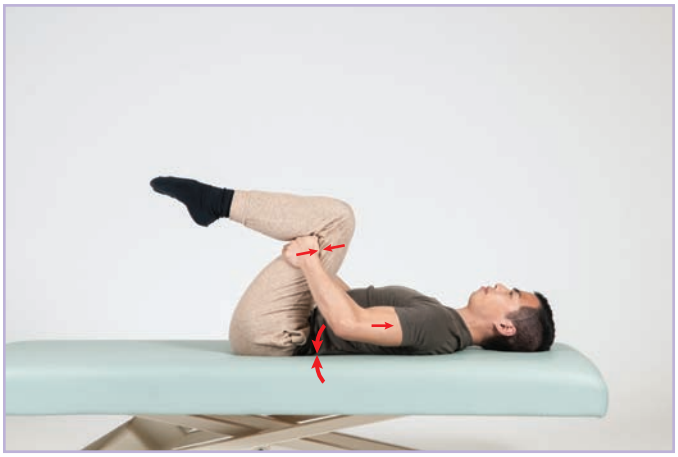


Figure 11-4B

Step 3: Postcontraction Stretch:

- The client relaxes and breathes normally and then uses both hands to further stretch the knees toward the chest until tension in the low back is reached (Fig. 11-4C).
- Have the client hold this position of stretch for approximately 1 to 3 seconds.
- It is usually optimal to breath out during this step. If the client exhaled during step 2, the exhale can be completed during this step, or the client can take in another breath and then exhale that breath while stretching the low back further in this step.

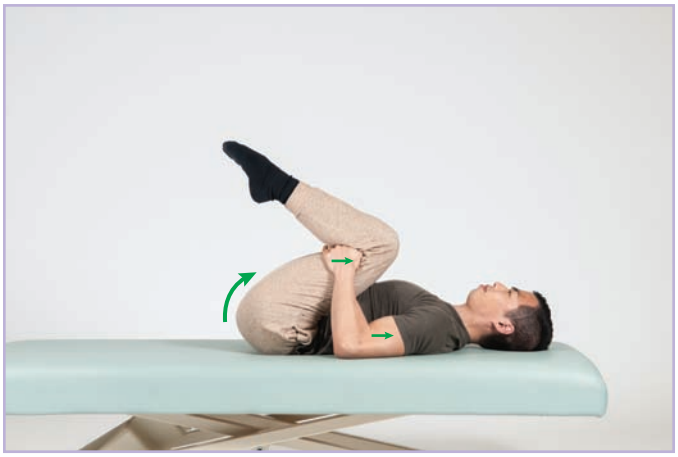


Figure 11-4C

Further Repetitions:

- Beginning from the position reached at the end of step 3, the client repeats steps 2 and 3 for a total of three or four repetitions.
- During the last repetition, the client can hold the position of stretch attained in step 2 for a longer period of time, perhaps 10 to 20 seconds or longer.

ROUTINE 11-8: DOUBLE KNEE-TO-CHEST STRETCH WITH AGONIST CONTRACT PROTOCOL

The client can also perform the double knee-to-chest stretch using the AC stretching protocol. For more information on how to perform AC stretching, see Chapter 8. The following are the steps for the client to do AC stretching with the double knee-to-chest stretch.

Starting Position:

- The client is supine (Fig. 11-5A).

Figure 11-5A

Step 1: Client Contraction and Stretch:

- The client inhales and then exhales while actively contracting and bringing the knees up toward the chest using the musculature of the anterior abdominal wall to posteriorly tilt the pelvis and the flexor muscles of the hip joint (Fig. 11-5B).

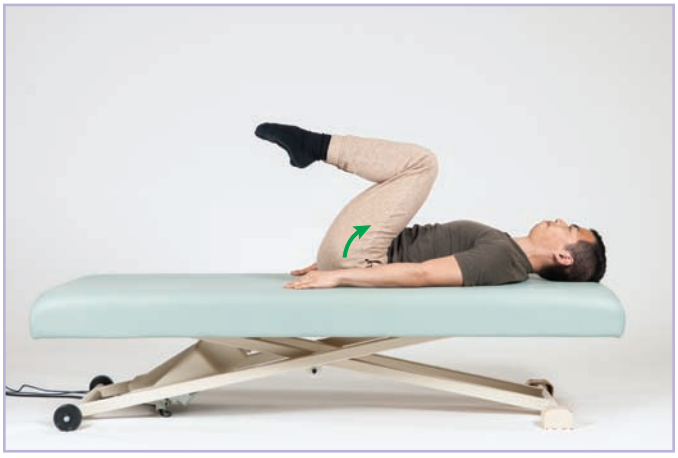


Figure 11-5B

Step 2: Further Stretch:

- The client relaxes and uses the hands to pull the knees farther in the same direction, increasing the stretch (Fig. 11-5C).
- This stretch is held usually for 1 to 2 seconds.
- The client usually completes the exhale during this step.

Figure 11-5C

Step 3: Return to Starting Position:

- The client inhales while returning to the starting position with the thighs and legs resting on the table. Alternately, the client can instead return his feet flat on the table with his hips and knees bent (Fig. 11-5D). Successive repetitions can be done from this position instead of the original starting position.
- If desired, the client can use his hands to help ease the thighs down.

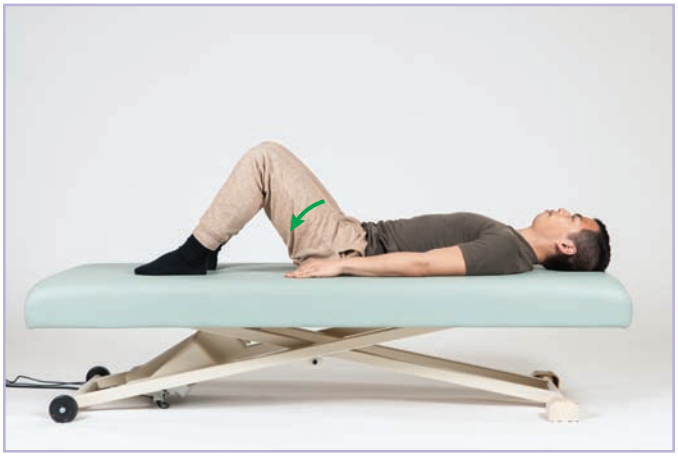


Figure 11-5D

Further Repetitions:

- Beginning from the starting position, the client repeats steps 1 through 3 for a total of approximately 8 to 10 repetitions.
- During the last repetition, the client can hold the position of stretch attained in step 2 for a longer period of time, perhaps 10 to 20 seconds or longer.

ROUTINE 11-9: DOUBLE KNEE-TO-CHEST STRETCH WITH CONTRACT RELAX AGONIST CONTRACT PROTOCOL

The client can also perform the double knee-to-chest stretch using the CRAC stretching protocol. For more information on how to perform CRAC stretching, see Chapter 9. The following are the steps for the client to do CRAC stretching with the double knee-to-chest stretch.

Starting Position:
- The client is supine.
- The client bends his hip and knee joints on both sides and places his hands on the posterior distal thighs (Fig. 11-6A).

Figure 11-6A

Step 1: Client Isometric Contraction:
- The client inhales and then holds his breath while isometrically contracting the target musculature against the resistance of his hands, trying to bring the pelvis and thighs back down to the table (Fig. 11-6B).
- The client should contract the target musculature in this manner for a count of 5 to 8 seconds.

Figure 11-6B

Step 2: Client Concentric Contraction and Initial Stretch:
- The client exhales while actively contracting and bringing the knees up toward the chest using the musculature of the anterior abdominal wall and pelvis/hip joint (Fig. 11-6C).

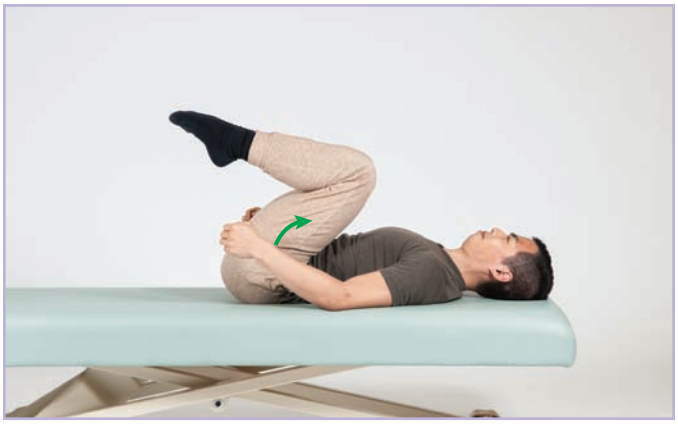


Figure 11-6C

Step 3: Further Stretch:
- The client relaxes and uses the hands to pull the knees farther in the same direction, increasing the stretch (Fig. 11-6D).
- This stretch is held usually for 1 to 2 seconds.
- The client usually completes the exhale during this step.

Figure 11-6D

Step 4: Return to Starting Position:
- The client inhales while returning to the starting position (with the hands still placed on the posterior distal thighs).
- If desired, the client can use the hands to help ease the thighs back down to the starting position.

Further Repetitions:
- Beginning from the starting position with the hands holding the thighs, the client repeats steps 1 through 4 for a total of approximately 3 to 10 repetitions.
- During the last repetition, the client can hold the position of stretch attained in step 3 for a longer period, perhaps 10 to 20 seconds or longer.

ROUTINE 11-10: LUMBAR SPINE-EXTENSION MEDLEY

Whereas the single knee-to-chest and double knee-to-chest are flexion stretches of the lumbar spine and pelvis, the lumbar spine-extension medley brings the lumbar spine into extension. Many clients who do not respond to flexion exercises respond well to extension exercises. Extension exercises are indicated for clients who have pathologic lumbar discs because the position of extension drives the nucleus pulposus anteriorly away from the posterior annular fibers, where bulges and herniations are usually located. However, extension can be challenging for the client's spine at first, so it is recommended that these exercises are introduced very slowly and carefully.

The **lumbar spine-extension medley** is composed of a series of four positions of increasing lumbar spine-extension that the client performs in the prone position. The first extension position is to lie prone with a pillow under the anterior abdominal wall (Fig. 11-7A). The second position is to lie prone without the pillow (Fig. 11-7B). The third position is to push up on the forearms (Fig. 11-7C). And the fourth position is to push up on the hands (Fig. 11-7D). The client should not progress from one position to the next unless he can do so without any increased symptoms. Some clients require several days or weeks to progress to the fourth stretch position; other clients are able to perform the fourth stretch position on the first day. Progressing through these stretch positions should not be rushed. If the client ever experiences an increase in lower extremity referral, instruct the client to discontinue these stretches immediately.

The first and second stretch positions are simply held statically; instruct the client to lie in the position for up to 60 seconds. As with other stretches, the third and fourth stretch positions can be performed statically or dynamically and is typically performed for approximately 1 minute. Clients have the choice of performing approximately three repetitions, each one held for 10 to 20 seconds (statically), or perhaps 10 to 20 repetitions, each one held for only 3 seconds or so (dynamically).

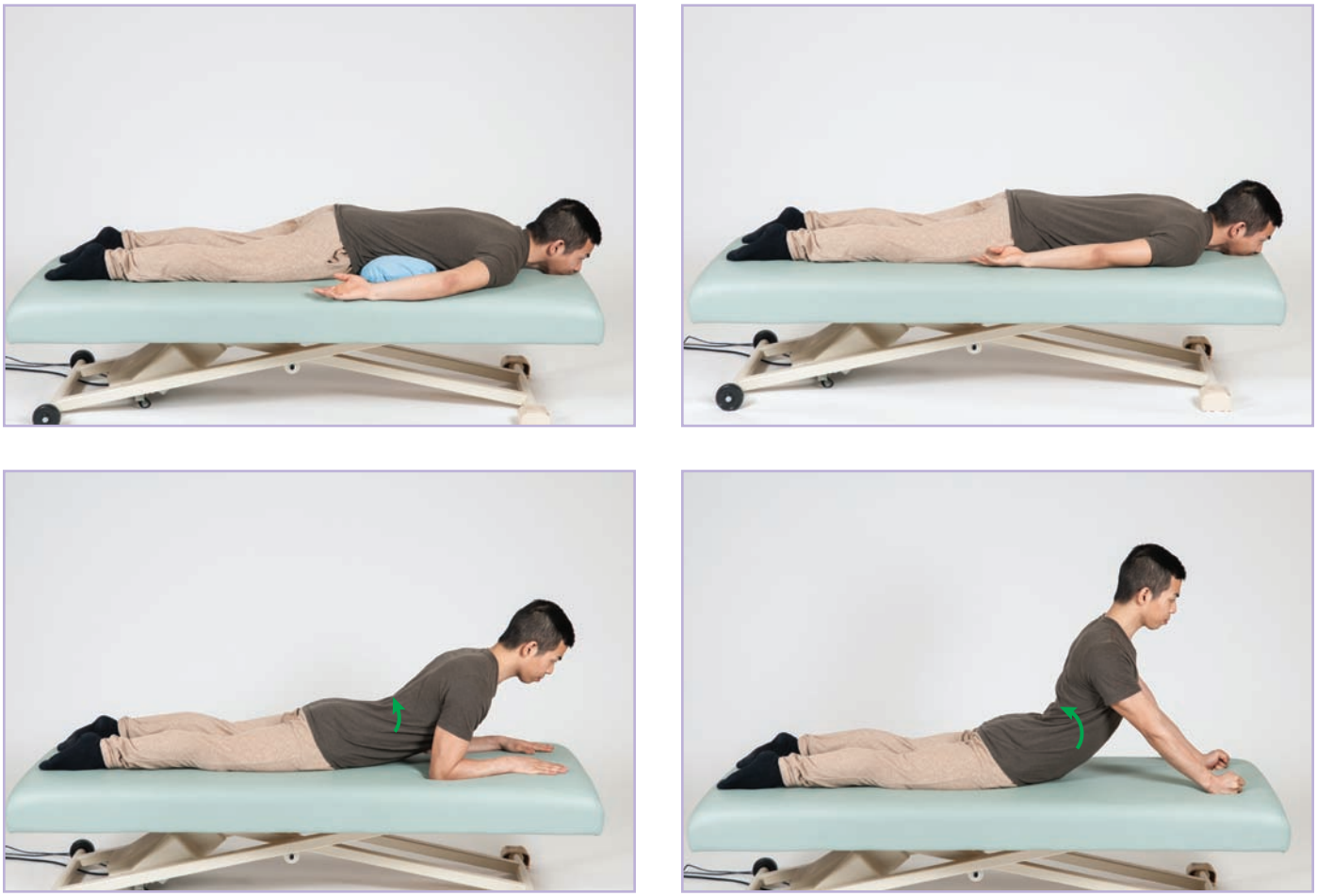


Figure 11-7

ROUTINE 11-11: LUMBAR SPINE LATERAL STRETCH

The **lumbar spine lateral stretch** is important because it targets the frontal plane oriented musculature of the low back, specifically the quadratus lumborum and lateral fibers of the erector spinae.

Starting Position:

- The client is standing with the right foot in back and adducted to the other side of the body. Having a wall or other stable object nearby for balance is helpful.

Performing the Stretch:

- The client raises his right arm over his head and moves into left lateral flexion, reaching with his arm and trunk to the left as far as comfortably possible (Fig. 11-8).
- The stretching protocol is repeated for the other (left) side of the body.
- The length of time that this stretch position is held and the number of repetitions performed depend on whether the stretch is being done statically or dynamically.

Figure 11-8

ROUTINES 11-12 THROUGH 11-16: HIP JOINT MEDLEY OF STRETCHES

It is extremely important for the client to stretch the musculature of the hip joint because this musculature determines the posture of the pelvis, and pelvic posture determines spinal posture. Tight hip joint musculature also decreases range of motion of the thigh at the hip joint. Stretches of the hip joint can be divided into anterior, lateral, medial, posterior line-vertical, and posterior line-horizontal stretches.

ROUTINE 11-12: ANTERIOR LINE (HIP FLEXOR) STRETCHES

The **anterior line (hip flexor) stretches** are important because when hip flexor muscles are tight, they exert their tension by pulling the pelvis into anterior tilt, which then increases the lordotic curve of the lumbar spine, placing more pressure on the facet joints and narrowing the intervertebral foramina. Tight hip flexors also limit extension of the hip joint, which can shorten the stride when walking.

Starting Position:

- The client is standing with the left foot forward and right foot in back.

Performing the Stretch:

- The client slowly lunges forward, leaning his weight onto the left foot. This causes the right hip joint to move into extension, stretching the right hip flexors (Fig. 11-9A).
- If the ankle joint plantarflexion musculature in the right posterior leg (e.g., gastrocnemius and soleus) is tight and therefore limits the client's ability to stretch the hip flexors, then the client can let the right heel leave the floor as seen in Figure 11-9A (this moves the ankle joint into plantarflexion, thereby slackening these muscles).
- The stretching protocol is repeated for the other (left) side lower extremity.
- The entire stretching protocol is then repeated with the knee joint in back flexed (Fig. 11-9B) for both the right and left sides. This focuses the stretch to the rectus femoris of the quadriceps femoris group.
- The length of time that this stretch position is held and the number of repetitions performed depend on whether the stretch is being done statically or dynamically.

Figure 11-9A

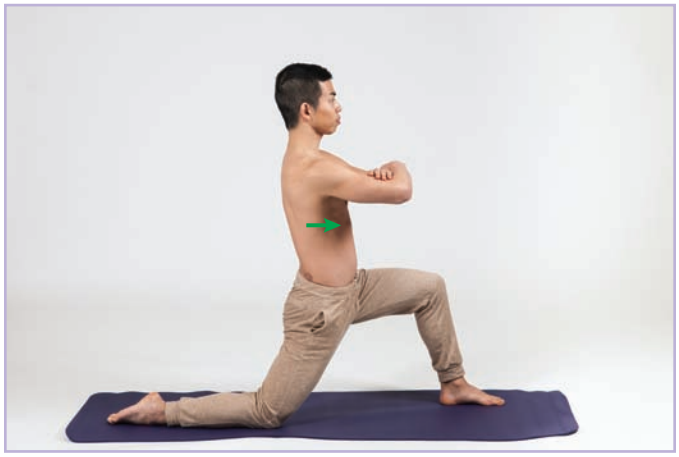


Figure 11-9B

When stretching the hip flexors, the client should make sure that his or her knee of the foot in front does not move anterior to his or her foot because this will cause a shearing force to be placed on the knee joint. If this occurs, the client should reposition with a wider stance with his or her front foot farther forward.

ROUTINE 11-13: LATERAL LINE (HIP ABDUCTOR) STRETCH

The **lateral line (hip abductor) stretch** is important because when hip abductor muscles are tight, they exert their tension by pulling the same-side pelvis into depression, which then causes a scoliotic curve to compensate. Tight hip abductors also limit adduction of the hip joint.

Starting Position:

- The client is standing with the right foot in back and adducted to the other side of the body. Having a wall or other stable object nearby for balance is helpful.

Performing the Stretch:

- The client slowly drops his weight down to the right side, keeping his trunk vertical. This causes the right hip joint to move into adduction, stretching the right hip abductors (Fig. 11-10).
- The stretching protocol is repeated for the other (left) side lower extremity.
- The length of time that this stretch position is held and the number of repetitions performed depend on whether the stretch is being done statically or dynamically.

When performing the lateral line hip abductor stretch, advise the client to not place too much weight on the foot in back.

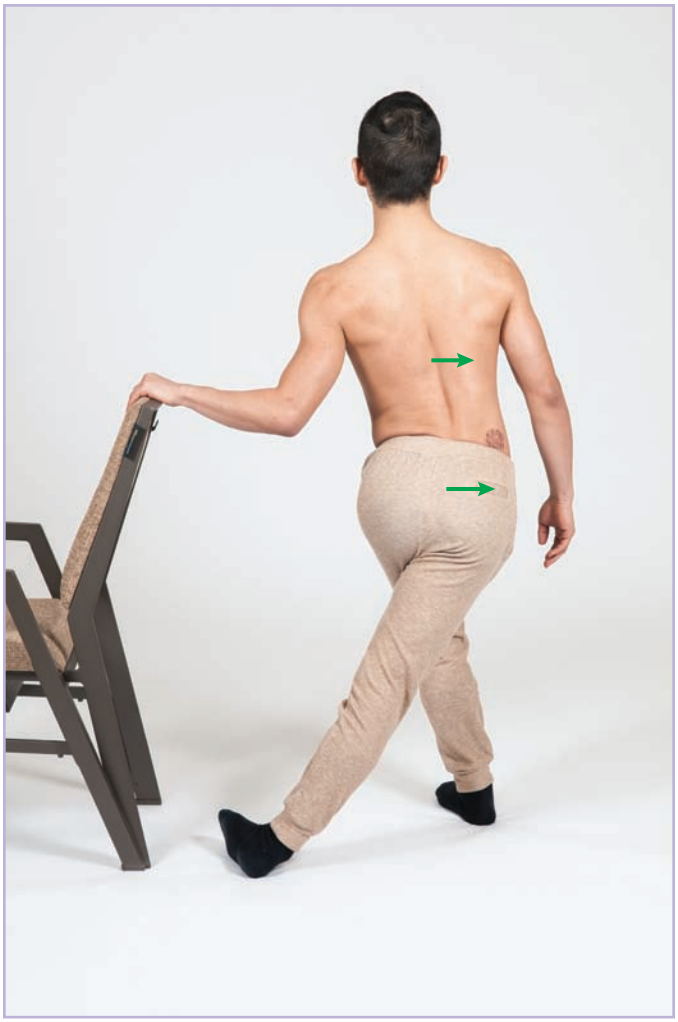


Figure 11-10

ROUTINE 11-14: MEDIAL LINE (HIP ADDUCTOR) STRETCH

The **medial line (hip adductor) stretch** is important because when the adductor muscles are tight, they exert their tension by pulling the same-side pelvis into elevation, which can then cause a scoliotic curve to compensate. When these muscles are tight, they also limit abduction at the hip joint. Because most of the adductor muscles also do flexion and medial rotation at the hip joint, when these muscles are tight, they can also limit extension and lateral rotation of the thigh at the hip joint. Limiting extension can also shorten the stride when walking.

Starting Position:

- The client is seated with both thighs abducted, knees flexed, feet together in front of the body, and his hands on his knees.

Performing the Stretch:

- The client uses his hands to gently push his distal thighs laterally and down. This causes the hip joints to move into abduction, stretching the hip adductors (Fig. 11-11).
- The length of time that this stretch position is held and the number of repetitions performed depend on whether the stretch is being done statically or dynamically.

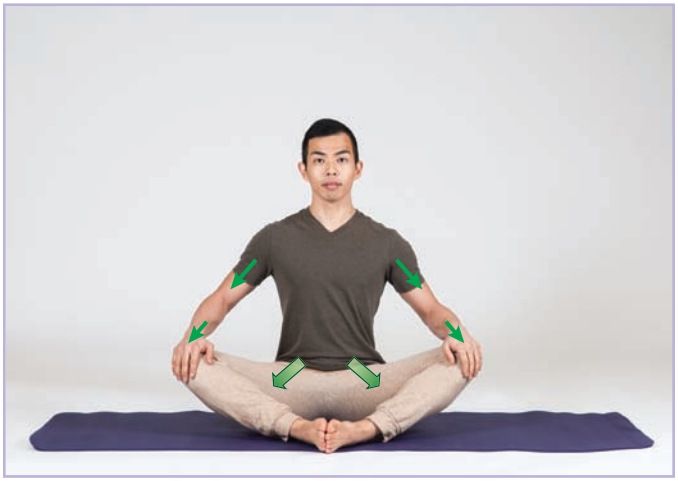


Figure 11-11

ROUTINE 11-15: POSTERIOR LINE-VERTICAL (HIP EXTENSOR/HAMSTRING) STRETCH

The **posterior line-vertical (hip extensor/hamstring) stretch** is important because when the hamstrings are tight, they exert their tension by pulling the pelvis into posterior tilt, which then decreases the lordotic curve of the lumbar spine. Via a myofascial continuity with the sacrotuberous ligament, they also exert their pull onto the sacrum, thereby decreasing motion of the sacroiliac joint. Tight hip extensors also limit flexion of the hip joint, which can shorten the stride when walking.

Starting Position:

- The client is seated with the right lower extremity straight in front of him and his left thigh flexed and abducted and his left knee joint flexed.

Performing the Stretch:

- The client slowly reaches forward, anteriorly tilting the pelvis at the hip joints (and flexing the trunk at the spinal joints). Anterior tilt of the pelvis stretches the hamstrings because they are posterior pelvic tilters (Fig. 11-12).
- The stretching protocol is repeated for the other (left) side lower extremity.
- The length of time that this stretch position is held and the number of repetitions performed depend on whether the stretch is being done statically or dynamically.

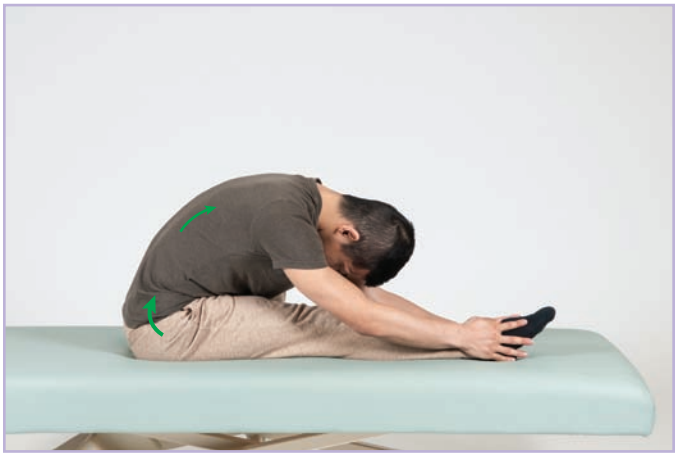


Figure 11-12

ROUTINE 11-16: POSTERIOR LINE-HORIZONTAL (HIP LATERAL ROTATOR/PIRIFORMIS) STRETCHES

The **posterior line-horizontal (hip lateral rotator/piriformis) stretches** are important because when the lateral rotators are tight, they exert their tension by pulling the pelvis into opposite-side rotation, which can then cause the pelvis to be torqued. This may likely cause a torque/rotational compensation in the spine. Further, when the piriformis is tight, it can limit mobility of the sacrum at the sacroiliac joint. Tight lateral rotators also limit medial rotation of the thigh at the hip joint. There are two excellent stretching protocols for the posterior line-horizontal hip lateral rotator stretch. The first is known as **knee-to-opposite-shoulder stretch** (named in contrast to knee-to-chest stretch). The second one is called the **Figure 4 stretch**.

Knee-to-Opposite-Shoulder Stretch

Starting Position:

- The client is supine with his right hip and knee joints flexed.
- His hands are placed on the outside of the distal lateral right thigh.

Performing the Stretch:

- The client uses his hands to bring his right thigh across his body toward his opposite-side shoulder (Fig. 11-13A).

Figure 11-13A

If the client's knee joint is unhealthy, advise the client to avoid contacting the (lower) leg and instead be sure to contact the lateral thigh. This avoids compression to the knee joint.

- If the client experiences pain in the anterior hip joint region (the groin), advise the client to place a small rolled up towel between his thigh and trunk (Fig. 11-13B).

Figure 11-13B

- The stretching protocol is repeated for the other (left) side lower extremity.
- The length of time that this stretch position is held and the number of repetitions performed depend on whether the stretch is being done statically or dynamically.

Note: The exact direction in which the thigh is pulled does not always need to be perfectly toward the opposite shoulder. In fact, if the client changes the line of pull of the stretch, it will stretch different fibers in the posterior buttock. It is helpful to instruct clients to experiment with the angle of the stretch between straight up toward their chest and directly across toward the opposite side of the body until they find the angle that feels best for their tight musculature. It is also helpful to instruct the client to occasionally vary the angle on purpose so that more of the posterior buttock musculature fibers are stretched.

Figure 4 Stretch

Starting Position:

- The client is supine with his right hip joint flexed and laterally rotated and right knee joint flexed. His right ankle is placed on the distal anterior surface of the left thigh (the hip and knee joints of the left lower extremity are flexed and the left foot is flat on the table).
- His hands are placed on the posterior distal surface of the left thigh.

Performing the Stretch:

- The client uses his hands to pull his left thigh up toward his chest. Moving his left thigh pulls his right thigh up, stretching the lateral rotator musculature of the right hip joint (Fig. 11-13C).
- The stretching protocol is repeated for the other (left) side lower extremity.
- The length of time that this stretch position is held and the number of repetitions performed depend on whether the stretch is being done statically or dynamically.

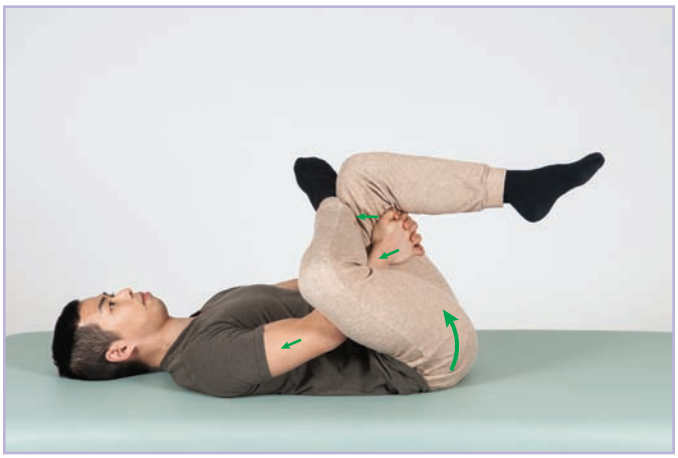


Figure 11-13C

The Figure 4 stretch places a torque through the client's knee joint. This stretch should be avoided if the client's knee is unhealthy.

11.5 THERAPIST TIP

Pinch in Front with the Knee-to-Opposite-Shoulder Stretch

When performing the posterior line-horizontal knee-to-opposite-shoulder stretch for the lateral rotators of the hip joint, it is common for the client to feel a pinch in the front of the thigh near or deep to the inguinal ligament. Unfortunately, this pinch can become strong and painful and often stops the stretch from being performed. There are a number of possible reasons for this pinch. It might be due to tautness of the capsular fibers of the hip joint. To remedy this, it can be helpful for the client to first "open" the hip joint by laterally rotating the thigh and tractioning it from the acetabulum by pulling the thigh upward toward the ceiling and then performing the stretch. It might also be due to impingement of the head of the femur on the rim of the acetabulum, perhaps due to degenerative (osteoarthritic) bone spur formation. Having the client tractioning the thigh from the acetabulum is helpful in also remedying this. It might be due to tight hip flexor muscles that also do abduction that are being stretched, specifically the tensor fasciae latae and the sartorius. To help remedy this, it is helpful for the client to first stretch the anterior line hip flexors and lateral line hip abductors before doing the posterior line-horizontal stretch (as a rule, the posterior line-horizontal stretch should always be done last, just as the order has been presented here). And, most likely, it is due to compression of the anteriorly located hip flexor musculature, commonly the iliopsoas, but possibly any of the hip flexors (as well as other anteriorly located soft tissues). To help remedy this, it is often necessary for a therapist to use digital pressure to traction the compressed soft tissue as well as add to the tractioning of the thigh from the acetabulum. Unfortunately, the client alone cannot easily do this. Instead, it can be helpful to place a small rolled-up towel between the thigh and trunk as seen in Figure 11-13B. If a client cannot perform the knee-to-opposite-shoulder stretch without feeling the pinch in front, then the Figure 4 stretch might be a better alternative.

POSTURAL ADVICE

In addition to ice, heat, and stretching, it is critical for the therapist to give postural advice to clients with low back and pelvis problems. Although many factors can contribute to a problem in this region, the repeated microtraumas of poor posture are often a major factor. Even if poor posture has not caused the client's condition, it will certainly perpetuate the problem and impede the healing process. Five of the most common postures that affect the low back and pelvis are as follows:

1. Stoop-bending/leaning-forward posture
2. Carrying a heavy weight
3. Prolonged sitting
4. Prolonged standing
5. Bad sleeping posture

Stoop-Bending/Leaning-Forward Posture

One of the most common postural problems of the low back is stoop bending, in other words, leaning forward into spinal flexion. When you bend forward to work in front of yourself, the center of weight of your trunk is no longer balanced over the pelvis. When this occurs, gravity would cause the trunk to fall into full flexion until you fall down, except for the counterforce created by the lumbar extensor muscles. These muscles work to maintain this imbalanced posture of flexion through prolonged isometric contraction. Such prolonged contraction will fatigue them, resulting in spasming and all the sequelae that follow from tight, spasmed muscles. Further, spending prolonged time in trunk flexion will gradually stretch and lengthen the fascial tissues (thoracolumbar fascia, ligaments, joint capsules) on the posterior side. This will decrease stability of the spine, requiring the musculature to work even harder. And when the trunk is in flexion, the lumbar musculature will be lengthened and less able to generate contractile force and therefore less able to stabilize the spine in the imbalanced flexion posture of bending/leaning forward.

It is important to advise the client to avoid this posture as much as possible, despite the fact that many common tasks and activities encourage this imbalanced flexion position. Examples include bending forward to shovel snow, make a bed, take care of a child, lift an object, read a book or tablet in the lap, or work in a garden (Fig. 11-14A). Advise the client to keep the spine as vertical as possible instead of bending down to perform these and similar tasks. This minimizes the stress to the client's extensor musculature. For example, when tending to a baby, try to work with the baby on a bed as you kneel; when reading a book/tablet, bring it up to eye level; and when gardening, try sitting on the ground and working directly in front of yourself as much as possible (Fig. 11-14B).

When you do need to bend down, it is better for the spine if you bend with your knees, as well as your hip and ankle joints, and keep your spine straight and vertical (Fig. 11-14C). The one disadvantage to bending with the knees is that it does place more stress on the knee joints.

Figure 11-14 Bending and working. **(A)** Stoop bending (leaning forward) while gardening places the center of weight of the trunk over thin air. This requires contraction of the posterior extensor musculature of the spine to hold the person in this imbalanced position. **(B)** Sitting on the ground while gardening allows the spine to remain vertical so that the center of weight of the trunk is balanced over the pelvis. **(C)** Bending with the hip, knee, and ankle joints allows for the spine to remain vertical and therefore the center of weight of the trunk to be balanced over the pelvis.

Carrying a Heavy Weight

Carrying a heavy weight is physically stressful for the low back because it increases weight-bearing stress through the spinal joints. Any weight that is held in the hands or carried in a bag or backpack, etc., must eventually be transferred to the ground through the joints of the spine and lower extremities. Weight-bearing stress increases the compression load on the joint surfaces and can increase the progression of degenerative joint disease (osteoarthritis) (Fig. 11-15A). For this reason, jobs or hobbies that involve repetitive carrying of weight will, over time, be physically stressful for the lumbar spine, sacroiliac, and all lower extremity joints.

When weight is carried, another consideration is where it is carried. Weight carried in front of the body transfers the center of weight of the body (plus weight being carried) anteriorly, increasing the contractile force necessary by the low back extensor musculature. Whenever carrying weight in front of the body, it is important to hold the weight as close to the core of the body as possible. The farther from the body that the weight is carried, the greater leverage force it will have, increasing the contractile force needed by the posterior extensor musculature (Fig. 11-15B).

If a weight is carried in one hand at the side of the body, because this shifts the center of weight of the body laterally to the side where the weight is being carried, lateral flexion musculature on the other side must contract to balance the body. If possible, it is better to split the weight into two loads and carry one half in each hand. The healthiest way for the spine to carry a weight is to carry it in a backpack, especially a backpack that has a belt across the hips that transfers much of the weight to the pelvis.

11.6 THERAPIST TIP

Being Overweight

If the client is overweight, it is similar to carrying an external weight; the force of the client's body weight must travel through the joints of the body to reach the ground. This can lead to degenerative changes in those joints. If the extra body weight is being carried in the upper body, the force will travel through the spine and sacroiliac joints as well as the joints of the lower extremity. Further, if the overweight client has a large belly, his or her center of weight shifts anteriorly, increasing the workload on the posterior extensor musculature of the spine. To compensate, obese people often lean their upper body backward into extension to shift body weight posteriorly, counterbalancing the large abdomen. Extension of the spine shifts weight bearing from the intervertebral disc joints toward the facet joints, leading to increased stress forces and degeneration of these joints as well as narrowing of the intervertebral foramina. Many clients realize the risk to the health of their heart from being overweight/obese but do not realize that the extra weight they are carrying is also harmful to the joints of their low back (and lower extremities). For this reason, it is recommended to counsel obese clients to lose weight if they want to reduce their low back pain syndromes.

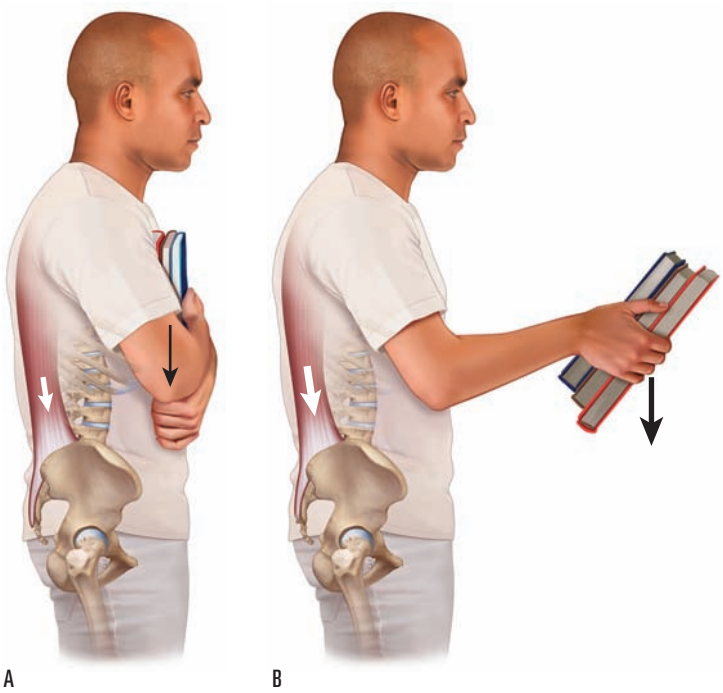


Figure 11-15 Carrying a weight. **(A)** The weight of an object that is carried is transferred to the ground through the spinal joints. **(B)** The farther from the body that the weight is held, the greater leverage force it has, requiring greater contraction by spinal extensor musculature.

Prolonged Sitting

Sitting might be relaxing for the joints of the lower extremity, but it is not for the spinal and sacroiliac joints. When seated, the trunk is vertical; therefore, these joints are still weight bearing and under compression of the weight above (Fig. 11-16). In fact, studies have shown that compression forces through the disc joints are greater for sitting than they are for standing if the sitting is done without a lumbar support. As a result, clients who spend long periods of time sitting, such as white collar desk workers, often experience lower back pain. Sitting and driving a car or truck is even worse because every time the vehicle hits a bump or a pot hole, the force travels up through the person's spinal joints. For clients whose jobs require sitting, it is important to recommend that as often as possible, they get up and walk around for a few minutes. The specific posture in which a client sits is also very important. The client should either sit straight up or lean back against the back of the chair; if the client leans forward, spinal extensor musculature must contract to hold the trunk from falling into flexion. It is also important to sit evenly and not lean to one side or the other; sitting in a crooked posture will asymmetrically load and physically stress the joints of the spine. Further, when armrests are available, they should be used. Armrests not only support the arms, thereby decreasing work for the shoulder musculature, but also decrease weight bearing through the spinal joints because the weight of the arms is transferred into the armrests instead of through the spinal and sacroiliac joints. If possible, another alternative is to sit in a reclining chair. The farther back the chair is

11.7 THERAPIST TIP

Crossing the Legs

Many clients have the habit of sitting with their legs crossed (see accompanying figures). This results in lateral rotation of the thigh at the hip joint and depending on how they cross their legs, adduction **(Fig. A)**, or abduction **(Fig. B)** of the thigh as well. Beyond the continual asymmetric posture for the hip joint itself, lateral rotation of the thigh at the hip joint causes an increased torque and compression force into the sacroiliac joint on that side. The crossed-leg position that also involves hip joint abduction increases the force into the sacroiliac joint. It is best to advise the client to avoid sitting with the legs crossed. If the client insists on sitting this way, advise him or her to continually change which side leg crosses over so that the forces are more equally distributed.

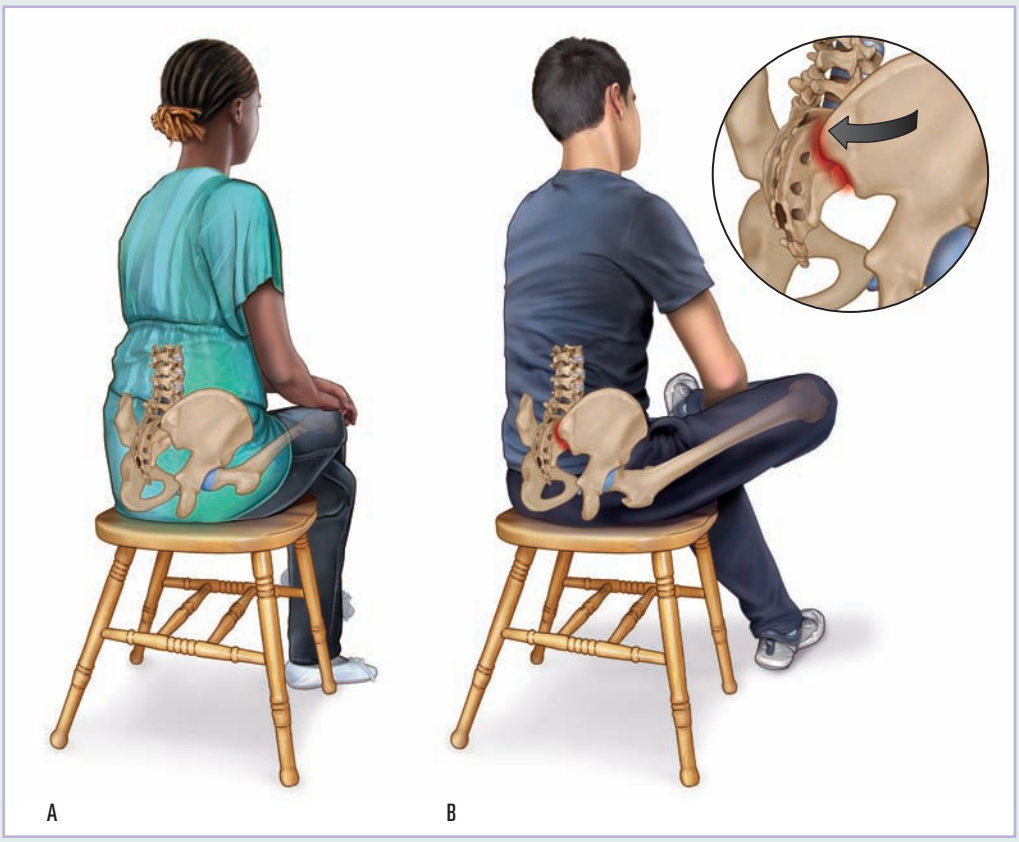


Figure A shows the cross-legged position with adduction; **Figure B** shows it with abduction.

Figure 11-16 Sitting causes a strong weight-bearing compression force through the spine.

reclined, the less weight-bearing compression force travels through the spinal and sacroiliac joints.

Prolonged Standing

Similar to prolonged sitting, prolonged standing is also difficult for the spinal and sacroiliac joints because they, in this position, are weight bearing. It is important to advise the client to break up prolonged periods of standing by walking around or, if possible, lying down. It is also important to advise the client to avoid the habit of shifting more weight onto one leg than the other. Shifting weight to one leg increases compression forces on the lower extremity joints on that side of the body. It also requires the gluteus medius on that side to increase its contraction to stabilize the pelvis and trunk. This will further compress and load the hip joint on that side of the body (Fig. 11-17). As compensation, people who stand on one leg often laterally flex their trunk to that side. This allows the gluteus medius to relax; however, it asymmetrically loads the spine.

Bad Sleeping Posture

It is critically important to address the posture of the client when sleeping. If a client sleeps between 6 and 8 hours per night, then by the time the client reaches the age of 80 years, he or she has spent 20 to 25 years or more sleeping! If a client's sleep posture is unhealthy for the low back, it will have a profound adverse effect over time.

Sleeping on the stomach is simply unhealthy for the low back (as well as the neck). Stomach sleeping allows the lumbar spine to collapse toward the bed and increase its lordosis. This increases compression on the facet joints and narrow the intervertebral foramina of the spine (Fig. 11-18A). It also causes some muscles to adaptively shorten and will most likely overstretch and aggravate others, perhaps initiating the muscle spindle reflex and causing them to tighten. If a client insists on sleeping on the stomach, advise him or her to place a small pillow under the abdomen to support the lumbar spine (Fig. 11-18B).

Figure 11-17 When standing on one leg, the center of the weight of the body is imbalanced to the other side. This requires the gluteus medius on the standing-leg side to contract to stabilize the pelvis.

It is generally better to sleep either on the back or side. However, if the client sleeps on the side, the "upper" thigh can fall into adduction, flexion, and medial rotation toward the "lower" thigh and bed. This would place a torque on the pelvis, thereby aggravating the sacroiliac joints and perhaps the joints of the lumbar spine as well (Fig. 11-18C). For this reason, it is a good idea to place a pillow between the knees to support the upper thigh (Fig. 11-18D).

When sleeping on the back, if the hip flexors are tight, they can exert their pull on the pelvis, causing it to anteriorly tilt, which would then increase the lumbar lordosis (Fig. 11-18E). To prevent this, a small roll or pillow can be placed under the knees. This slackens and relaxes the hip flexor musculature, relieving tension on the pelvis and spine. Some clients also find relief when sleeping on their back by placing a small pillow directly under the lumbar spine to support the lordotic curve (Fig. 11-18F).

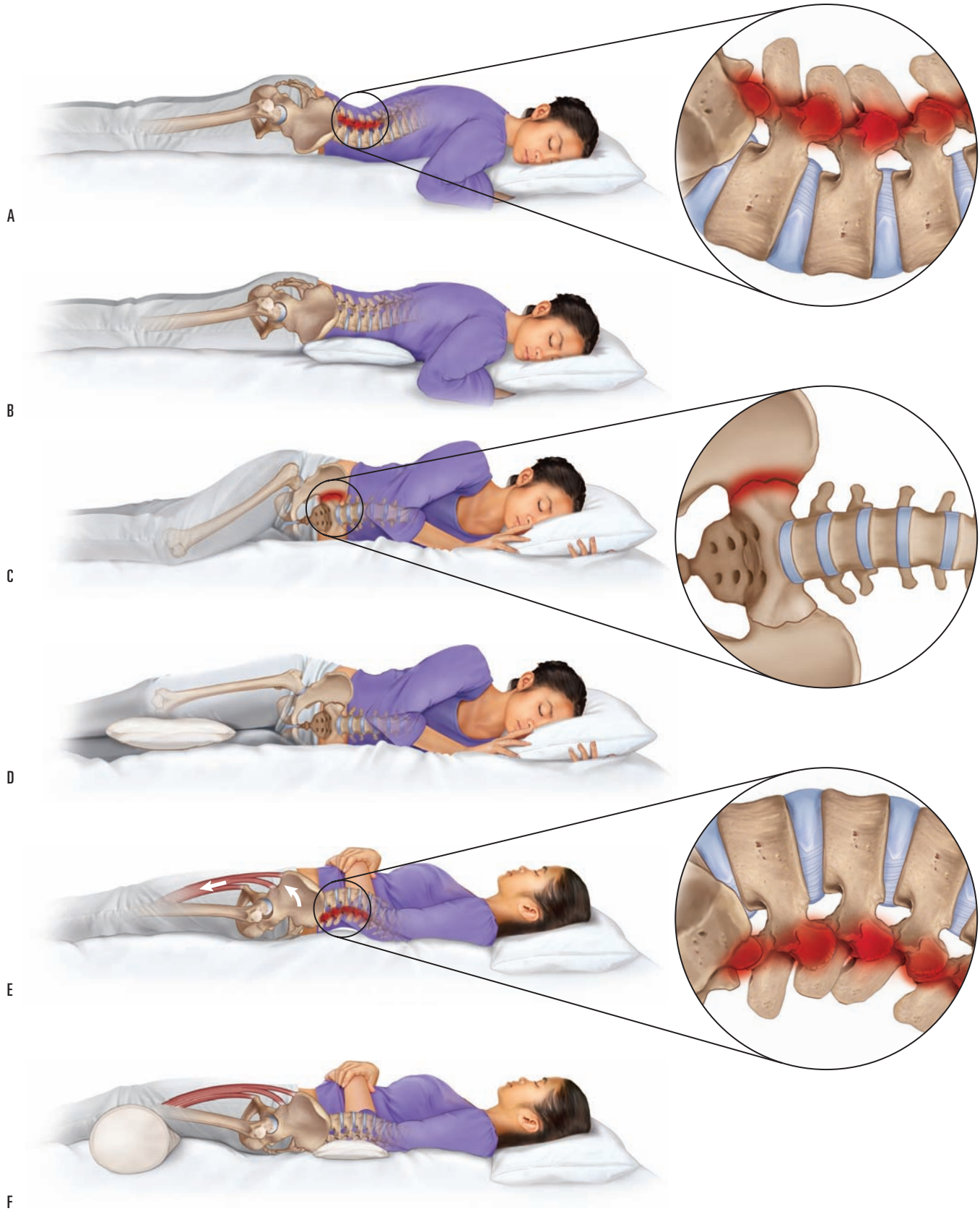


Figure 11-18 Sleeping postures. **(A)** Sleeping on the stomach allows the lumbar curve to collapse into increased lordosis. **(B)** Placing a small pillow under the abdomen can support the lumbar curve. **(C)** Sleeping on the side often causes the "upper" thigh to fall toward the other thigh and bed, placing a torque into the sacroiliac joint. **(D)** Placing a pillow between the thighs supports the upper thigh. **(E)** When sleeping on the back, tight hip flexor musculature can anteriorly tilt the pelvis, thereby increasing the lumbar lordosis. **(F)** Placing a roll under the knees relieves the tension from the hip flexor musculature.

CHAPTER SUMMARY

Developing the client self-care treatment plan should be a collaborative effort between the therapist and the client. The therapist's role is twofold: to help educate the client about what they do in their life at home, work, and in their hobbies/activities that facilitates healing and to help the client become aware of what perpetuates problems and impedes progress. Hydrotherapy and stretching are two of the three major keys to client self-care; proper posture is the third. This chapter presents guidelines for cold, heat, and contrast hydrotherapy; presents several effective low back, sacroiliac joint, and hip joint stretches for self-care; and describes some of the most common postures that stress a client's low back. When the therapist and client work together as a team, not only is the likelihood of treatment success practically guaranteed but the client will also improve more quickly and with fewer treatment sessions.

CASE STUDY

VAUGHN

History and Physical Assessment

An established client, Vaughn Archer, age 40 years, comes to your office with an acute episode of a stiff, painful low back. You have treated him for previous similar episodes. He tells you that his low back feels locked up and that he cannot move it in any direction without marked pain. Because you have not seen Vaughn for several months, you spend a few moments updating his history before beginning with treatment. He tells you that he is supposed to leave in 4 days on a 1-week business trip to Europe, and he has been doing a lot of yard work and housecleaning the last few days to try to get everything taken care of at his house before leaving. He believes that all the bending and lifting has aggravated his low back condition. He tells you that he woke up this morning with a severely stiff low back that is painful when he tries to move it. There was no precipitating traumatic event involved, and there is no referral into the lower extremities. All the pain is confined to his low back and upper pelvis bilaterally but worse on the right side. He is very concerned because he does not want to have to cancel the trip, but the way his low back feels right now, he fears that he will not be able to tolerate the long plane ride and carrying luggage. He is hoping that you can help improve his low back so that he can feel good enough to leave for his trip.

Your assessment shows that his low back ranges of motion are all markedly decreased and painful when he attempts them. Even though his previous episodes have always been a result of muscular spasming and have never involved a pathologic disc or degenerative joint disease, you still perform orthopedic tests for these conditions. The results of straight leg raise, cough test, and Valsalva maneuver are all negative for referral into the lower extremity. (For a review of assessment procedures, see Chapter 3.) Active straight leg raise causes pain in the right low back, but passive straight leg raise does not. His lumbar paraspinal musculature is moderately spasmed on the left side and markedly spasmed on the right side. The musculature of his pelvis is mildly to moderately tight bilaterally; worst are the hip flexors bilaterally and the piriformis on the right side.

Think-It-Through Questions:

1. Is home self-care indicated as a part of your treatment plan for Vaughn? If so, why? If not, why not?
2. If home self-care would be of value, is it safe to use with him? If yes, how do you know? If not, why not?
3. If you recommend self-care, what are your specific recommendations? And why did you choose the ones you did?

Answers to these Think-It-Through Questions and the Treatment Strategy employed for this client are available online at thePoint.lww.com/MuscolinoLowBack

CHAPTER 12 Self-Care for the Therapist

Principal Author ■ Brett M. Carr Contributing Author ■ Joseph E. Muscolino

CHAPTER OUTLINE

Introduction 404
Mechanism: Motor Control 405
Overview and Performing the Technique 406
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Chapter Summary 425
Case Study 426

OBJECTIVES

After completing this chapter, the student should be able to:

1. Explain why self-care stabilization exercises are important for the therapist and client.
2. Describe the relationship between proprioception and postural stabilization.
3. Describe proper posture of the lumbar spine and pelvis.
4. Describe the two major components of motor control.
5. Explain why destabilizing postures and labile surfaces are used in stabilization exercises.
6. Give examples of destabilizing postures of the body and destabilizing surfaces used in stabilization exercises.
7. Describe the lower crossed syndrome.
8. Define each key term in this chapter and explain its relationship to stabilization exercise.
9. Perform the stabilization exercises presented in this chapter.

KEY TERMS

cervical brace
core
dead bug track
destabilizing body position
destabilizing forces
destabilizing surface
extension exercises
kinesthetic awareness
labile surface
lower crossed syndrome
lumbosacral instability
lumbopelvic relationship
motor control
neutral lumbar spine
neutral pelvis
perturbation
Pilates
powerhouse
prone plank
proprioception
quadruped track
rocker boards
sacral base angle
sensorimotor exercises
side bridge
stabilization strengthening exercises
supine bridging track
The Art of Contrology
wobble boards

INTRODUCTION

A text on manual therapy techniques for the low back and pelvis would be incomplete without a chapter on stabilization strengthening of the lumbosacral spine. Keeping the low back musculature strong, loose, and flexible is essential to long-term health of the spine, as is maintaining proper low back posture. For this reason, stabilization exercises should be a part of regular self-care. This chapter presents stabilization exercises for you, the therapist, to perform as part of your own self-care program. These exercises help to strengthen and stabilize your low back so that you can stay strong and healthy and be able to continue working as a manual therapist. If it is within the scope of your license or certification to recommend strengthening/stabilization exercises to clients, you can also recommend these exercises to your clients for their self-care.

Note: In the Technique and Self-Care chapters of this book (Chapters 4 to 12), green arrows indicate movement, red arrows indicate stabilization, and black arrows indicate a position that is statically held.

BOX 12.1

Self-Care Exercise Routines

The following self-care stabilization routines are presented in the chapter:

- Section 1: stabilization strengthening:
  - Routine 12-1—prone plank
  - Routine 12-2—side bridge
  - Routine 12-3—supine bridging track
  - Routine 12-4—quadruped track
  - Routine 12-5—dead bug track
- Section 2: stabilization sensorimotor:
  - Routine 12-6—single-leg stance on floor
  - Routine 12-7—double-leg stance on rocker board
  - Routine 12-8—single-leg stance on rocker board
  - Routine 12-9—double-leg stance on wobble board
  - Routine 12-10—single-leg stance on wobble board
  - Routine 12-11—quadruped-track sensorimotor exercise

BOX 12.2

Stabilization of the Spine

In addition to the requirement that the muscles of the trunk and pelvis be flexible and pliable, they must also be able to support the entirety of the spine through a full range of motion under diverse and demanding conditions. Stabilization of the spine when standing in an erect posture might be easy enough for the physically healthy individual. However, the simple act of bending forward to pick an object up off of the ground, lift a child, or move boxes places far different demands on the human structure. For these activities to take place, the muscles must meet several simultaneous demands. There must be enough muscular strength to lift the object in question; this is perhaps the best understood of the demands. However, what is often underappreciated is the muscular strength that is necessary to stabilize the spine during these activities.

Strength stabilization for the lumbar spine highlights the endurance aspect, demanding the ability to either hold a static position for an extended period of time (e.g., being bent forward at the sink while washing dishes) or the ability to repeat an action numerous times without fatiguing. In this regard, the process of strength stabilization differs from other types of strength training in that it has less to do with creating movement than it does with preventing movement. In effect, the focus of strength stabilization is isometric contraction of the deeper intrinsic musculature. These exercises might seem relatively simple but do not underestimate how challenging they can be.

MECHANISM: MOTOR CONTROL

Historically, manual therapists have concentrated on identifying stiffness/decreased motion in the muscles and fascia of the body or lack of motion in the joints. As a result, there is an emphasis on relaxing and lengthening muscles, loosening and lengthening fascia, and loosening joint tissues. This approach would be sufficient if human pathologic anatomy and physiology existed only in a state of contracture or if all clinical conditions were the result only of hypertonicity and lack of motion. However, lumbar spine research has found that this is not the case. Instead, many pathologic conditions are associated with some form of motor control problems.

The concept of **motor control** includes both muscle strength and proprioception. Although it might seem logical to blame pathologic conditions on weakness of the low back musculature, that explanation would be incomplete. When it comes to the lumbar spine, and in fact to the body in general, research has shown that strength alone is not enough. It is just as important to be able to accurately sense the body's position in space and its movement through space. This is defined as **proprioception** and is also referred to as **kinesthetic awareness**. Proprioceptive signals must be processed and integrated for there to be a coordinated execution of motor signals to the musculature of the body.

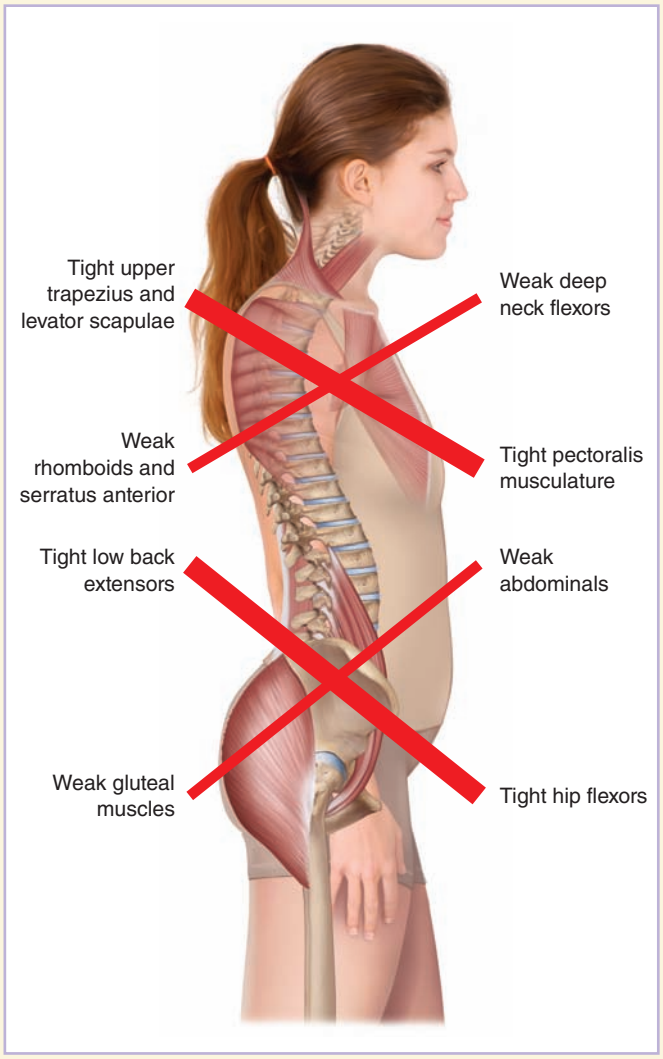
By combining muscular strength and proprioception, it is possible to maintain proper positioning of the lumbar spine and pelvis despite all of the forces working on the body. Such forces may be either external or internal. External forces include gravity, a sudden destabilizing force such as stepping incorrectly off a curb, or being bumped or hit by another person or object. Internal forces are created whenever muscles within the low back contract, creating pulling forces that may disrupt the postural balance of the lumbar spine and pelvis. The ability to maintain the lumbar spine and pelvis in a stable position despite these forces is essential because it ensures balance and the posture of the entire body.

Given that motor control includes both strength and proprioception, lumbar spine stabilization exercises can focus on improving either one or both of these factors. Stabilization exercises that focus primarily on increasing proprioceptive sensation and integration are termed **sensorimotor exercises**. Stabilization exercises that focus primarily on increasing the strength of local lumbar musculature can simply be termed **stabilization strengthening exercises**. Most stabilization exercises challenge and improve both of these aspects of motor control and therefore fall into both categories.

BOX 12.3

Lower Syndrome

Lumbar instability is exacerbated by a prolonged sitting posture. Vladimir Janda of the Czech Republic has described the typical pattern of muscular imbalance that develops as the **lower crossed syndrome**, which involves a characteristic postural distortion pattern of rounded back, slouched posture, and an excessive lumbar lordosis. The term *crossed* refers to the characteristic cross (X) that describes the relationship between the tight (shortened and overly facilitated) muscles in front and back and the weak (lengthened and overly inhibited) muscles in front and back (see accompanying figure). The word *lower* distinguishes this syndrome from the upper crossed syndrome that occurs at the cervicothoracic region (also demonstrated in the accompanying figure). Manual therapists recognize the lower crossed syndrome as a common pattern of muscle imbalance in the lower half of the body, with weakness of both the lumbar and pelvic stabilizers as well as shortening of other muscles. The weak lumbar stabilizers are the lumbar spine flexors: the rectus abdominis and internal and external abdominal obliques (and transversus abdominis). The weak pelvic stabilizers are the gluteus maximus, medius, and minimus muscles. The tight muscles are the low back extensors of the lumbar spine and the flexors of the hip joint.



OVERVIEW AND PERFORMING THE TECHNIQUE

The purpose of low back stabilization exercises is twofold: to strengthen the stabilization musculature needed for proper posture and to train the nervous system to learn and maintain proper posture while the body performs all of its various activities. When performing all of the stabilization exercises described in this chapter, it is imperative to keep the lumbosacral spine in proper posture. Posture should be considered in all three cardinal planes, but the sagittal plane posture is the one that is often most critically important.

- Proper sagittal plane posture of the lumbosacral spine involves keeping the lumbar spine and pelvis (lumbosacral spine) in what is called neutral position, in other words, **neutral lumbar spine** and **neutral pelvis**. Because the sacrum is the base for the lumbar spine, it is the posture of the sacrum and therefore the pelvis that determines the posture of the lumbar spine. Therefore, creating proper lumbar/lumbosacral spine posture is accomplished by creating proper posture of the pelvis.
- There is some debate about what qualifies as ideal neutral posture of the pelvis in the sagittal plane. One way to describe neutral pelvic posture is to have the pubic tubercle and the anterior superior iliac spine (ASIS) aligned vertically. So, if you are standing, a line drawn along these bony landmarks would be vertical (Fig. 12-1A), and if you are supine, a line drawn along these bony landmarks would be horizontal (Fig. 12-1B). This method can be problematic because sometimes, it is hard to visualize these landmarks.

Figure 12-1 Determining neutral lumbar spine and pelvis. **(A)** When standing, a line drawn along the pubic tubercle and ASIS is vertical. **(B)** When supine, the same line is horizontal.

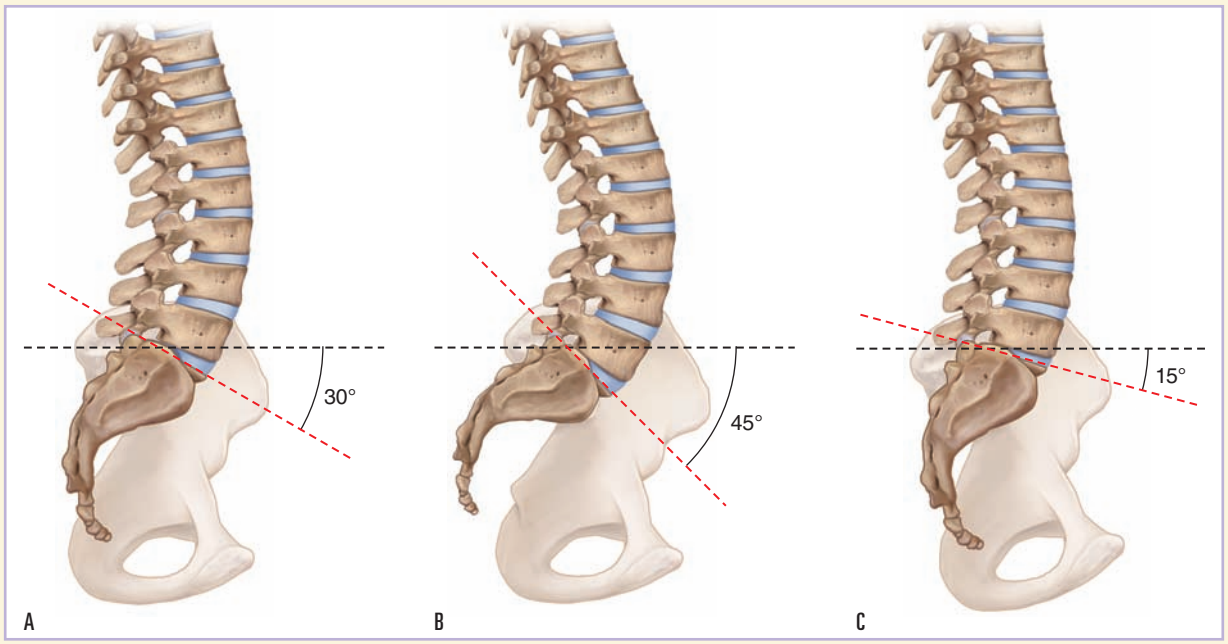
- Another way that some sources describe neutral posture is that it is the position that is midway between anterior tilt and posterior tilt such that the region is under the least passive strain and the motions are freest. However, if a person's pelvic posture is chronically excessive in anterior or posterior tilt, the tissues likely adapt to this excessive posture, so he or she might feel strain if he or she tries to correct/improve the posture. For this reason, this method can also be problematic.
- If your pelvic tilt is excessive, do not try to suddenly force it into the perfect ideal neutral posture too quickly. Instead, look to gradually transition from your posture toward the ideal posture over a period of weeks or months.
- *Note*: When performing these exercises, it is imperative to also keep the neck, shoulder girdle, and upper back in proper posture. For the neck, proper posture entails tucking the chin to prevent hyperextension of the upper cervical spine and retracting the head and lower cervical spine to hold/bring the neck over the trunk. For the upper back/shoulder girdle region, proper posture entails pinching the shoulder blades back into retraction so that the shoulders do not round forward, and bringing the upper thoracic spine back into extension to prevent the upper back from slumping forward (Fig. 12-2).
- The goal of each exercise is to learn to maintain these proper postures for a prolonged period. Generally, it is recommended to work up to holding the posture for 1 minute or more. Performing three repetitions is usually recommended.

Figure 12-2 Healthy cervicothoracic stabilization (cervical brace) posture. (Reproduced with permission from Muscolino JE. *Advanced Treatment Techniques for the Manual Therapist: Neck*. Baltimore, MD: Lippincott Williams & Wilkins; 2013.)

BOX 12.4

Sacral Base Angle

The most accurate way to actually measure the degree of anterior/posterior tilt of the pelvis in the sagittal plane is to look at the **sacral base angle** on a radiograph (x-ray). The sacral base angle is created by a line drawn along the sacral base intersecting with a horizontal line. Neutral pelvis (and therefore neutral lumbar spine) is usually said to occur when the sacral base angle is approximately 30 degrees **(Fig. A)**. If, for example, the pelvis is excessively anteriorly tilted such that the sacral base angle is 45 degrees, the lumbar lordosis increases **(Fig. B)**. On the other hand, if the pelvis is excessively posteriorly tilted such that the sacral base angle is 15 degrees, the lumbar lordosis is seen to decrease **(Fig. C)**.



SELF-CARE STABILIZATION EXERCISES

The material presented in this chapter includes 11 self-care stabilization exercises divided into two groups: strengthening exercises and sensorimotor exercises. The strengthening exercises are focused primarily on improving muscular endurance strength, whereas the sensorimotor exercises are focused primarily on improving proprioception. However, as explained previously, strengthening exercises have a sensorimotor component, and sensorimotor exercises have a strengthening component.

Many of the lumbar strength stabilization exercises are arranged in "tracks" of progressively more difficult exercises. By definition, the earlier exercises in each track are easier, and the later ones in each track are more challenging. It is important to not proceed to more challenging exercises in any given track until the previous exercise is mastered. Otherwise, instead of preventing injuries, these exercises might cause one!

BOX 12.5

Traditional Strength Training of the Lumbar Spine

Most of the self-care stabilization strengthening exercises presented in this chapter are geared toward endurance, not brute/gross strength. However, there are times when the lumbar spine is subjected to forces of greater magnitude and therefore needs greater strength to be able to respond to these stresses. This can occur while playing sports, during a fall, or even as a result of the trauma from a motor vehicle accident. Although such events happen infrequently, it is important for the body to be conditioned to meet these challenges. Strong muscles are less easily injured; therefore, the conditioning achieved with traditional strength training can be a valuable addition to the self-care program for your low back. These traditional exercises include ranges of motion of the low back against gravity and exercises that add external resistance.

Range of motion exercises for the low back against gravity can be performed in four different positions: prone, supine, and lying on each side. From the prone position, the trunk should be extended away from the floor; these are known as **extension exercises** **(Fig. A)**. From the supine position, the trunk should be curled up (flexed) away from the floor; these are known as sit-ups, curl-ups, or crunches **(Fig. B)**. In each side-lying position, the trunk should be laterally flexed away from the floor **(Fig. C)**. In all cases, these exercises should be gradually introduced and very slowly incrementally added to an exercise program; this is especially true of the prone extension and side-lying lateral flexion exercises.

Note: In addition to self-care treatment exercises, these movements can also be used as assessment tools to determine muscular strength. If a motion can be easily achieved, then the musculature of that motion is strong and stable. If there is difficulty achieving one of these motions, then the musculature of that motion is weak and likely needs functional strength training.

It is not within the scope of this book to discuss in detail how to perform lumbar spinal strengthening with added external resistance (e.g., machines, free weights, tubing, and bands). The following is critical: Maintaining proper form during these exercises is more important than the amount of resistance that is added. In other words, the quality of the posture is more important than the quantity of the resistance.

A

B

C

BOX 12.6

Pelvic Tilts

Pelvic tilts are very simple range of motion exercises for the pelvis and lumbar spine that can be performed in a seated or supine position. They help loosen the low back muscles as well as teach the therapist how the pelvis moves. Pelvic tilts are easier to learn while in the reclining position, so it is best to begin there. If you have low back pain, this is also a way to try to increase your pain-free range of motion.

- Posterior tilt: Press your low back flat against the floor by tightening your abdominal and gluteal muscles **(Fig. A)**. It can be helpful to place your hand under the small of your low back and feel for your low back to press down against your hand.
- Anterior tilt: Now arch your low back, contracting the lumbar extensor paraspinal musculature until the low back is raised off the floor; the upper back and buttocks should remain on the floor **(Fig. B)**.
- Repeat for a total of approximately three repetitions.
- If you have a chronically tight low back, the posterior tilt exercise should be emphasized.

A

B

ROUTINES

SECTION 1: STABILIZATION STRENGTHENING

The muscles of the lumbosacral region must be able to maintain the low back and pelvis in the proper position for extended periods of time. This requires endurance, so the exercises included here for lumbosacral stabilization training only ask you to maintain proper posture of the low back as you oppose the force of gravity acting on the weight of your body. Movements of the trunk up against gravity and the addition of weights are not usually necessary for stabilization strengthening of the lumbar spine. Simply maintaining proper posture while resisting the force of gravity will build the muscles of this region sufficiently. Thus, the exercises that follow can be performed at home, without expensive machines.

Performing these strengthening exercises as a part of self-care can help to prevent problems such as weakness and fatigue of the lumbosacral musculature, as well as poor core kinesthetic awareness, which are often associated with low back problems.

A **lumbopelvic relationship** exists in the body, with most of the muscles that attach to the lumbar spine also attaching to the pelvis. Consider the number of people who experience a combination of lumbar spine and pelvic/buttock pain, with the central focus of pain located over the lumbosacral and sacroiliac joints. Therefore, an adequate self-care program for the lumbar spine also must address the proprioceptive positioning of the pelvis, the endurance of the muscles of the pelvis, and these muscles' ability to withstand any significant destabilizing forces. Because the posture of the pelvis is largely determined by the musculature that crosses the hip joint, it is also imperative to address the strength and flexibility of this musculature as well. Any instability of the lumbosacral musculature can be termed **lumbosacral instability**. The following are examples of lumbosacral strengthening stabilization exercises. These exercises are presented in order from least challenging to most challenging.

BOX 12.7

The Powerhouse

The center of mass of your body is located at approximately S2 (the second sacral segmental level). For this reason, the lumbosacral spine is effectively the **core** of the body. In Pilates, the core is known as the **powerhouse** because you generate maximal strength from your core. Indeed, body mechanics discussed in Chapter 4 focuses on the concept of generating force from your core. Although appreciation of the importance of strengthening the core is now widely accepted, Joseph Pilates advocated this well over a half century ago as the central theme of his method of body conditioning, **The Art of Contrology**, now known simply as **Pilates**.

ROUTINE 12-1: PRONE PLANK

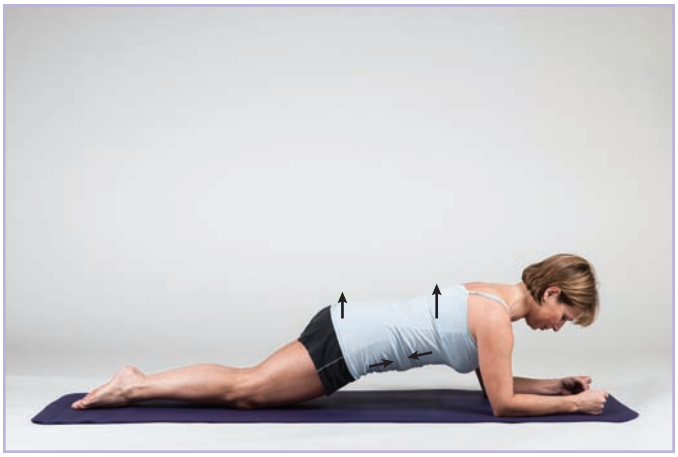
The **prone plank** is a well-known stabilization exercise that strengthens the anterior abdominal wall. Following are two variations. The first one is performed by balancing on the knees and elbows/forearms; this is the less challenging of the two variations. Once this variation is mastered, you can move on to the second one in which the body is balanced on the toes and the elbows/forearms. *Note*: The term *plank* refers to keeping the body straight like a plank of wood.

First Variation: On Knees:

- Lying prone, prop yourself up on your elbows like you are reading in bed.
- Bend your knees slightly (flexing the thighs at the knee joints) and raise your pelvis off the floor. You should now be resting only on your elbows and knees, with your hips and torso suspended between them. Your body should be almost straight as a board, with the rear end raised slightly (Fig. 12-3A).
- Hold this posture for 10 seconds and then slowly lower to the floor.
- Three repetitions are usually performed.
- Build to longer hold times, perhaps 60 seconds or more.
- *Note*: If your pelvis begins to dip, then stop.

Second Variation: On Toes:

- Lying prone, prop yourself up on your elbows as in the first variation. Now, with your knee joints extended, rise up on your toes and elbows. Your body should be almost straight as a board, with the rear end raised slightly (Fig. 12-3B).
- Hold this posture for 10 seconds and then slowly lower to the floor.
- Three repetitions are usually performed.
- Build to longer hold times, perhaps 60 seconds or more.
- *Note*: If your pelvis begins to dip, then stop.



A

B

Figure 12-3 Prone plank. **(A)** Variation one: on knees. **(B)** Variation two: on toes.

ROUTINE 12-2: SIDE BRIDGE

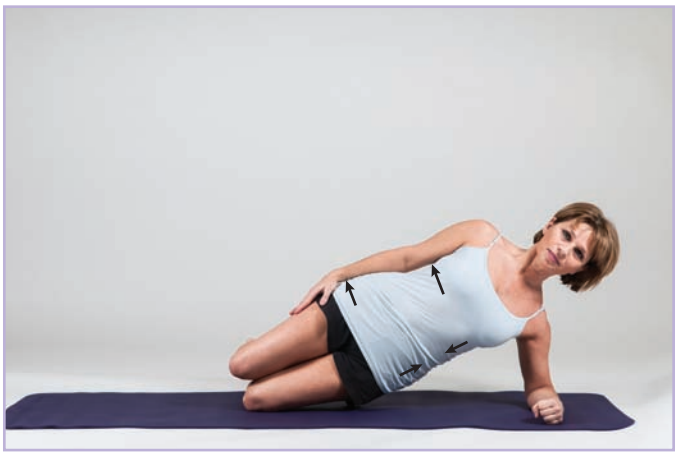
The **side bridge** is similar to the prone plank exercise except, as its name implies, it is performed in the side-lying position instead of prone. The side bridge strengthens the lateral abdominal wall that is closer to the floor. Once performed on one side, the side bridge exercise should be performed on the other side. As with the prone plank, there are two variations. The first one should be mastered before moving on to the second, more challenging variation. *Note*: The term *bridge* refers to raising the body up like a bridge that spans from one support to the other.

First Variation: On Knee:

- Lying on your side with your knee joints flexed 90 degrees, prop yourself up on your elbow, keeping your elbow directly below your shoulder. Make sure that your shoulders, hips, and knees are stacked in a straight line.
- Raise your pelvis off the floor so that your spine is straight. Your whole body should now be suspended between your elbow and the lateral side of your downside knee (Fig. 12-4A).
- Hold this posture for 10 seconds and then slowly lower to the floor.
- Three repetitions are usually performed.
- Build to longer hold times, perhaps 60 seconds or more.
- Repeat for the other side.
- *Note*: If you cannot hold the form and your spine begins to collapse (laterally flex) toward the floor, then stop.

Second Variation: On Foot:

- Position yourself as in the first variation but keep your knee joints extended. Make sure that your shoulders, hips, knees, and ankles are stacked in a straight line.
- Raise your pelvis off the floor. Your whole body should now be suspended between your elbow and the lateral edge of your downside foot, with your spine straight (Fig. 12-4B).
- Hold this posture for 10 seconds and then slowly lower to the floor.
- Three repetitions are usually performed.
- Build to longer hold times, perhaps 60 seconds or more.
- Repeat for the other side.
- *Note*: If you cannot hold the form and your spine begins to collapse toward the floor, then stop.



A

B

Figure 12-4 Side bridge on the left side. **(A)** Variation one: on knee. **(B)** Variation two: on foot.

ROUTINE 12-3: SUPINE BRIDGING TRACK

The **supine bridging track** exercises follow a path (*track*) that progressively moves from less to more complicated and challenging exercises. They are a progression of five variations performed in the supine position that strengthen the posterior abdominal wall (lumbar extensors, e.g., paraspinal and quadratus lumborum musculature) and extensors of the hip joint (posterior gluteal musculature and hamstrings). As with other stabilization exercises, each variation should be mastered before progressing to the next. Each variation not only can be performed in a neutral lumbar spine position but may also be performed with a posterior pelvic tilt to avoid excessive lumbar extension while bridging up. *Note*: When performing supine bridges, keep your shoulder girdles retracted against the floor; it is also helpful to press your palms down against the floor.

First Variation: Bridging:

- Begin by lying supine with your hip and knee joints bent and feet flat on the ground (Fig. 12-5A).
- Adding posterior tilt of your pelvis so that your low back flattens against the floor can be done but only if it is pain-free and comfortable (Fig. 12-5B). If posterior tilt is not added, this exercise should be performed in a neutral spine position.
- Raise the pelvis straight up off the floor; be sure to maintain the posture of the lumbar spine and not arch the back (Fig. 12-5C). Many people tend to raise the pelvis too far when bridging, so feel free to limit the height to which you elevate it.
- Hold this posture for 10 seconds and then slowly lower to the floor.
- Three repetitions are usually performed.
- Build to longer hold times, perhaps 60 seconds or more.
- Repeat for the other side.
- *Note*: If you cannot hold the form and your spine begins to collapse toward the floor, then stop.

Second Variation: Bridging with Heel Raises:

- The second variation adds an element of destabilization, which adds to the stabilization effort required. After bridging up, one heel is raised so that only the ball of that foot is on the floor. The other foot remains flat on the floor (Fig. 12-5D).

Figure 12-5 Supine bridging track. **(A)** Starting position. **(B)** Pelvic posterior tilt added (the arms have been abducted so that the spine can be seen). **(C)** Supine bridging by raising pelvis. **(D)** Bridging with heel raises. *(continued)*

- Then the raised heel is slowly lowered to the floor, after which the opposite heel is raised.
- The heels are alternately raised and lowered, one at a time.
- Perform this exercise for 10 seconds.
- Three repetitions are usually performed.
- Build to longer times, perhaps 60 seconds or more.
- The emphasis of this exercise is on the pelvis. During the foot and ankle movement, the pelvis should remain immobile/stable.
- *Note*: If you find it difficult to stabilize your pelvis during this exercise, it can be helpful to place your fingertips on your ASISs. This gives an additional tactile clue to the position of your pelvis in space.

Third Variation: Bridging with Foot Raises:

- The third variation adds further destabilization. After bridging up, raise one entire foot approximately 1 inch off the ground. This adds a significantly greater destabilization force, so it is much more likely that the pelvis will shift with this motion (Fig. 12-5E).
- Any rocking or dropping of the pelvis indicates instability and necessitates either returning to the prior variation or lessening the number of repetitions until you can achieve pelvic stabilization without loss of posture.
- As with variation number two, perform this exercise for 10 seconds; three repetitions are usually performed. Build to longer times for each repetition, perhaps 60 seconds or more.

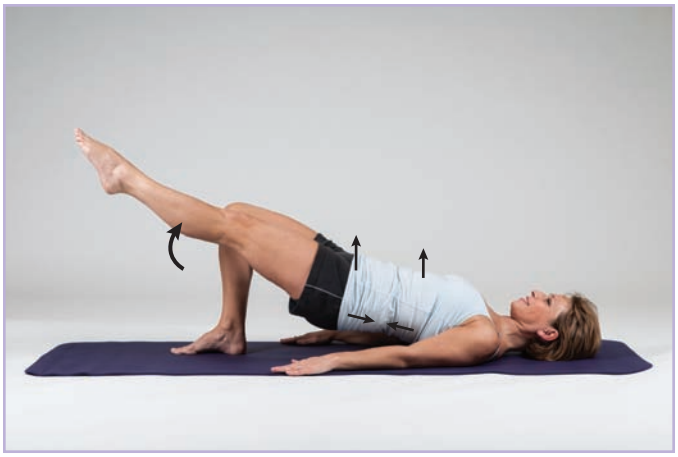
Fourth Variation: Bridging with Foot Raises and "Kick" Added:

- The fourth variation is identical to the third variation except that the challenge is increased by adding a "kick" to the foot raise. After each foot is raised, extend the leg at the knee joint to straighten the lower extremity, and then hold this position (Fig. 12-5F). Then bend the knee joint back to 90 degrees, returning the lower extremity to the starting position. Repeat with the other side.
- Discontinue if proper pelvic stabilization posture cannot be maintained.
- As with previous variations, perform this exercise for 10 seconds; three repetitions are usually performed. As you strengthen, build to longer times for each repetition, perhaps 60 seconds or more.

Fifth Variation: Single-Leg Bridges:

- This is the most challenging of the supine bridging variations and begins with the end position of variation number four (see Fig. 12-5F).
- Now raise and lower your pelvis while keeping the thighs parallel and hold this position (Fig. 12-5G).
- At all times, the pelvis should remain stable, level, and under control. This should not be painful or uncomfortable, except for the effort required to perform the exercise.
- As with previous variations, perform this exercise for 10 seconds; three repetitions are usually performed. As you strengthen, build to longer times for each repetition, perhaps 60 seconds or more.

E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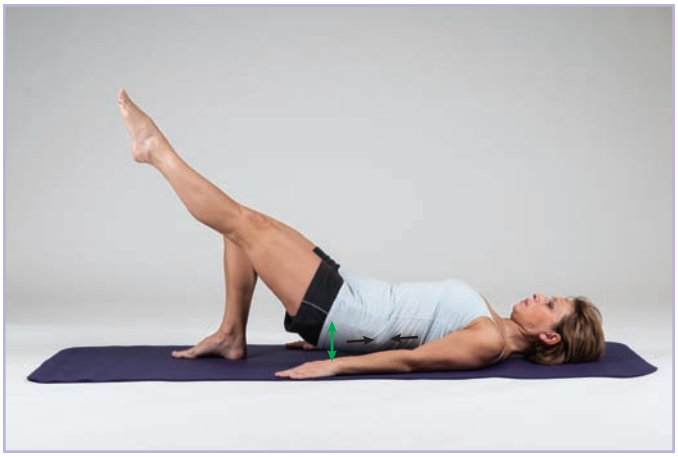
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Figure 12-5 *(continued)* **(E)** Bridging with foot raises. **(F)** Bridging with foot raises and "kick" added. **(G)** Single-leg bridges.

ROUTINE 12-4: QUADRUPED TRACK

The **quadruped track** is a series of exercises performed on all fours (*quadruped*) that progressively moves from less to more complicated and challenging exercises. The exercises place the spine in a horizontal, non–weight-bearing position, thus limiting weight-bearing loads on the spine. Quadruped-track exercises are often used as the starting point for cervical stabilization; the term *cervical brace* is used to describe quadruped exercises performed for cervical stabilization. However, quadruped-track exercises also actively engage the anterior abdominal wall and hip extensor musculature. The focus during these exercises is to maintain neutral posture of the lumbar spine and pelvis. This involves pulling the umbilicus in and slightly up toward the spine in a simple drawing-in maneuver (without changing the angle of the bony pelvis and spine).

Note: Once the exercises in this position have been mastered, resistance can be added to increase the stress to the desired tissues. Labile surfaces may also be used to increase the proprioceptive input as shown later in this chapter (Routine 12-11), thus stimulating the sensorimotor system.

First Variation: Quadruped Arm Raises:

- Get onto your hands and knees. Assume the cervical brace position and maintain the lumbar spine in neutral position.
- Once the position is stable, elevate one arm into flexion until it is parallel with the floor while maintaining stability (Fig. 12-6A).
- Hold for 5 to 10 seconds.
- Repeat with the opposite arm.
- Perform three repetitions for each side.
- As you strengthen, build to longer times for each repetition, perhaps 60 seconds or more.

Second Variation: Quadruped Leg Raises:

- Assume the quadruped track cervical brace position with the lumbar spine in neutral position.
- Once the position is stable, extend one lower extremity (thigh at the hip joint and leg at the knee joint) until it is parallel with the floor while maintaining stability (Fig. 12-6B).
- Hold for 5 to 10 seconds.
- Repeat with the opposite lower extremity.
- Perform three repetitions for each side.
- As you strengthen, build to longer times for each repetition, perhaps 60 seconds or more.

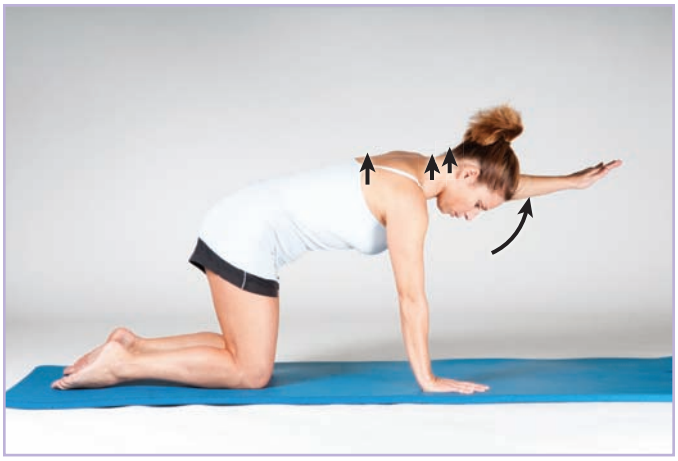
Third Variation: Cross-Crawl (Alternating Arms and Legs):

- The third quadruped track variation is a combination of the first two variations.
- Assume the quadruped track cervical brace position with the lumbar spine in neutral position.
- Once the position is stable, elevate one arm into flexion and the opposite leg (lower extremity) into extension until they are parallel with the floor while maintaining stability (Fig. 12-6C).
- Hold for 5 to 10 seconds.
- Repeat with the opposite arm and leg.
- Perform three repetitions for each side.
- As you strengthen, build to longer times for each repetition, perhaps 60 seconds or more.

BOX 12.8

Cervical Brace

The quadruped-track exercises function to increase stabilization of the neck as well as the low back. The term **cervical brace** is used to describe the posture of the neck and upper trunk that should be maintained during quadruped-track exercises. To attain the cervical brace position, you need to push the interscapular region up toward the ceiling and tuck the chin and retract the head and lower cervical spine until tension is felt along the posterior cervical musculature. Care should be taken to prevent any exaggerated cervical spine extension or flexion.



A

B

C

Figure 12-6 Quadruped-track exercises. **(A)** Exercises performed with the upper extremity. **(B)** Exercises performed with the lower extremity. **(C)** Cross-crawl position performed with an upper extremity and the opposite-side lower extremity. (Reproduced with permission from Muscolino JE. *Advanced Treatment Techniques for the Manual Therapist: Neck*. Baltimore, MD: Lippincott Williams & Wilkins; 2013.)

ROUTINE 12-5: DEAD BUG TRACK

The **dead bug track** is a series of exercises that build lumbosacral stability by strengthening the anterior abdominal wall muscles. It is named after the appearance of a dead bug, in other words, on its back with its legs up in the air. As with the other track exercises, it progresses from less to more challenging. The initial variation is a statically held position; further variations increase destabilization forces by adding in motions of the extremities as you maintain a stabilized position of the lumbar spine and pelvis. Pelvic posterior tilt is the key aspect of the exercise and should be maintained throughout the track.

First Variation: Dead Bug Position:

- Lie supine, flattening your back against the floor by posteriorly tilting your pelvis.
- Raise (flex) the thighs at the hip joints 90 degrees (until they are perpendicular to the ground), with the legs flexed at the knee joints to 90 degrees (parallel to the ground).
- Now raise (flex) your arms at the glenohumeral joints straight up, so that they are pointing to the ceiling and parallel to your thighs (Fig. 12-7A).
- Hold this posture for 10 seconds and then slowly lower your arms and legs to the floor.
- Three repetitions are usually performed.
- Build to longer hold times, perhaps 60 seconds or more.

Second Variation: Dead Bug with Arm Movements:

- Begin the second variation in the position of the first variation of the dead bug exercise (see Fig. 12-7A).
- Now further flex one arm until it is flexed 180 degrees and flat on the floor by the side of your head (Fig. 12-7B).
- Hold this posture for approximately 1 second and then return the arm to the starting position.
- Repeat this motion with the opposite arm.
- Continue alternating arms, performing this exercise for 10 seconds.
- Three sets of repetitions are usually performed.
- Build to longer times for each set, perhaps 60 seconds or more.
- *Note*: A slightly more challenging version of this variation is to move the arms simultaneously, in other words, as you lower one arm, raise the other.

Third Variation: Dead Bug with Leg Movements:

- Begin the third variation in the position of the first variation of the dead bug exercise (see Fig. 12-7A).
- Now "kick" one leg out by extending it at the knee joint until the lower extremity is straight and pointed toward the ceiling (Fig. 12-7C).
- Hold this posture for approximately 1 second and then return the leg to the starting position.
- Repeat this motion with the opposite leg.
- Continue alternating legs, performing this exercise for 10 seconds.
- Three sets of repetitions are usually performed.
- Build to longer times for each set, perhaps 60 seconds or more.
- *Note*: A more challenging version of this variation is to partially lower (extend) the opposite thigh at the hip joint as the knee joint is extended, so that the opposite thigh no longer points toward the ceiling (Fig. 12-7D). The closer the lower extremity approaches to the floor, the more challenging this exercise is for lumbosacral stabilization. Remember, what is most important is not the leg motion but the ability to maintain posterior tilt lumbosacral stabilization during the motion. If you cannot maintain posterior pelvic tilt, lessen the thigh extension of this version of the variation.
- *Additional note*: As with the second variation with arm movements, this variation can also be made more challenging by moving the legs simultaneously; in other words, as you lower one lower extremity, raise the other. Be sure to master the static position before trying simultaneous motion of both lower extremities.

Fourth Variation: Dead Bug with Arm and Leg Movements:

- The fourth dead bug variation is a combination of variations 2 and 3 above.
- Begin in the position of the first variation of the dead bug exercise (see Fig. 12-7A).
- Raise one arm over your head (as in the second variation shown in Fig. 12-7B) while you "kick" the opposite leg (as in the third variation shown in Figs. 12-7C and 12-7D) (Fig. 12-7E).
- Hold this posture for approximately 1 second. Then return both extremities to their starting position.
- Repeat with the opposite arm and leg.
- Perform this exercise for 10 seconds.
- Three sets of repetitions are usually performed.
- Build to longer times for each set, perhaps 60 seconds or more.

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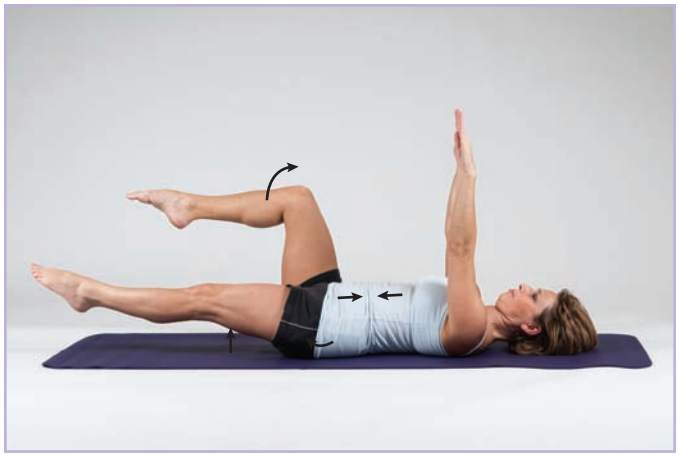
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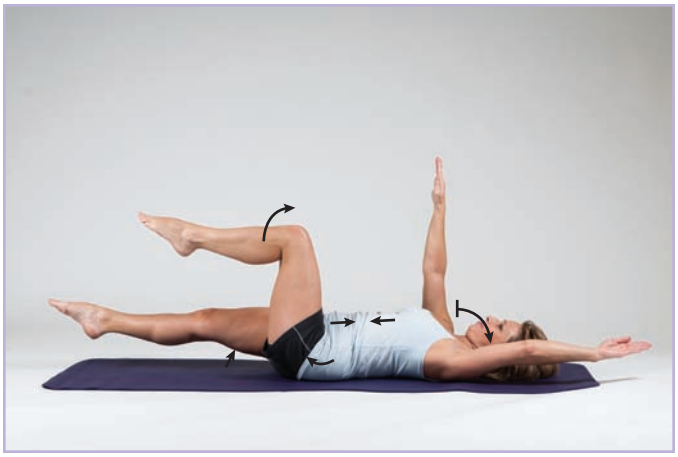
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Figure 12-7 Dead bug track exercises. **(A)** First variation: dead bug position. **(B)** Second variation: dead bug with arm movements. **(C, D)** Third variation: dead bug with leg (lower extremity) movements. **(E)** Fourth variation: dead bug with arm and leg movements.

SECTION 2: STABILIZATION SENSORIMOTOR

Sensorimotor exercises involve maintaining the pelvis and lumbar spine (as well as the head and neck) in their proper position and then introducing **destabilizing forces** into the body. This requires the stabilization musculature to work harder to maintain stabilization or to restabilize the body, thereby strengthening and improving neuromuscular pathways.

Destabilizing forces can be introduced in two ways: One method is to stand on one foot, which is a **destabilizing body position**. The other method is to stand on a **labile surface**, which is a **destabilizing surface** because it is movable. Most people have had the experience of standing on a boat while it is moving. It is more difficult to maintain proper posture when on a boat because the surface itself is moving. Fortunately, it is not necessary to stand on a boat to do sensorimotor training, although it might be fun. Instead, it is possible to use tools that provide a moving labile surface, such as rocker boards and wobble boards. **Rocker boards**, as their name implies, rock back and forth with their rocking motion confined to a single plane of motion. **Wobble boards** allow for motion (wobbling) in all directions/planes (although the potential motion is greatest in the sagittal and frontal planes and least in the transverse plane), so they are less stable and therefore more challenging than rocker boards. Of course, a destabilizing body position can be combined with a destabilizing surface, such as standing on one foot while on a rocker or wobble board, to increase the challenge to the neuromuscular stabilization pathways.

When performing these exercises, one way to increase the challenge of maintaining proper stabilization posture is to have an additional destabilizing force introduced—for example, have someone gently push you while you are performing the exercise. This added destabilizing force is called a **perturbation**. The level of challenge can be increased as the ability to maintain stability increases.

The following are examples of lumbar spine sensorimotor stabilization exercises. As with the stabilization strengthening exercises, these exercises are presented in order from most stable (least challenging) to least stable (most challenging). As with all exercise regimens, it is important to gradually increase the challenge to your body, successfully mastering the less challenging exercises before attempting the more challenging ones.

Note: As with the stabilization strengthening activities presented in this chapter, it is also important to maintain proper stabilization of the head, neck, and upper back (see Fig. 12-2).

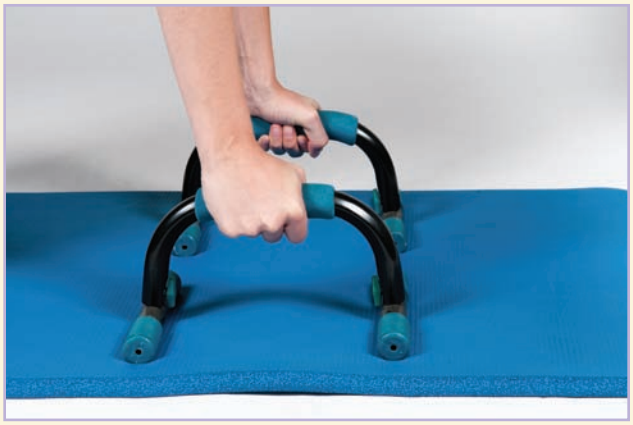
BOX 12.9

Sensorimotor Exercises on a Gym Ball

Gym balls can also be used in a variety of ways to stimulate the sensorimotor system and engage the stabilizing musculature. Although they are commonplace now in most gyms, they are actually a piece of rehabilitation equipment meant for advanced exercises that require significant lumbosacral (and cervicocranial) stabilization ability before use. One way to use a ball is to incorporate it into quadruped-track exercises. Place the lower extremities on the ball while holding the arms in a push-up position **(Fig. A)**. Once stability is achieved in this position, arm movements can be added, including, if desired, push-ups. As with all stabilization exercises, be sure to maintain proper spinal posture while performing the exercise. *Note*: Placing the hands in the typical push-up position in which the hands are fully extended is uncomfortable for many people and may be injurious to the wrist joints. Two alternatives that place the wrist joints in neutral anatomic position are to support yourself on fists **(Fig. B)** or to use push-up handles **(Fig. C)**.

A

B



C

(A) Position for sensorimotor exercise on gym ball. **(B, C)** Alternate hand positions. ([A] Adapted with permission from, and [B, C] reproduced with permission from Muscolino JE. *Advanced Treatment Techniques for the Manual Therapist: Neck*. Baltimore, MD: Lippincott Williams & Wilkins; 2013.)

ROUTINE 12-6: SINGLE-LEG STANCE ON FLOOR

The simplest sensorimotor activity to begin with is the single-leg stance on floor.

- It employs a destabilizing posture, standing on one foot, that is performed on a stable surface, the floor.
- Maintain proper posture in the upright standing position (Fig. 12-8), gradually working toward holding this posture for at least 1 minute per leg.
- Repeat for a total of three repetitions or extend the time.
- As you progress and become more stable, you can increase the challenge by having perturbations added.
- If working with clients, it is important to spot them to ensure they don't fall, especially if perturbations are added.

Figure 12-8 Single-leg stance on floor. Standing on one foot is a destabilizing position sensorimotor stabilization exercise that challenges the proprioceptive system. (Reproduced with permission from Muscolino JE. *Advanced Treatment Techniques for the Manual Therapist: Neck*. Baltimore, MD: Lippincott Williams & Wilkins; 2013.)

ROUTINE 12-7: DOUBLE-LEG STANCE ON ROCKER BOARD

The next most challenging exercise is the double-leg stance on rocker board.

- Stand on both feet (a stabilizing posture) on the platform of a rocker board (a destabilizing surface).
- A rocker board is designed to move/rock in one plane. The unstable surface makes it more challenging to maintain a stable posture than when performing the single-leg stance on the floor, even though the weight is on both feet.
- Remember that it is critical to maintain proper posture during the exercise (Fig. 12-9A).
- Strive to hold this posture with the board rocking in the sagittal plane, front and back, for 1 minute.
- Three repetitions are usually performed.
- As stability increases, the rocker board can be oriented to rock/move laterally in the frontal plane, and finally in an oblique plane (between sagittal and frontal planes).
- As you progress and become more stable, you can increase the challenge by having perturbations added.
- If working with clients, it is important to spot them, especially as they mount and dismount the board and if perturbations are added.

Because stabilization exercises, by definition, destabilize your posture, there is a danger of falling. Therefore, it is important to perform these exercises in a safe environment, perhaps with a soft couch or wall nearby that can be used to regain balance if there is a possibility of falling. This is especially true when first stepping onto (mounting) the board, when stepping off (dismounting) the board, and if perturbations are added. If administering or monitoring stabilization exercises with a client, offer assistance or spotting if the client loses balance, especially with mounting, dismounting, and when perturbations are added.

12.1 THERAPIST TIP

Perturbations

When performing any sensorimotor stabilization exercise, it is possible to increase the challenge/difficulty of the exercise by adding a perturbation (small push) to the body. The perturbation is usually done at the level of the pelvis (if a rocker board is being used, the perturbation is administered in the plane of the direction of the rocker board). The perturbation provokes an increase in stabilizing muscular contraction. When performing these sensorimotor exercises for your self-care, if you can enlist the aid of someone to add perturbations, the proprioceptive challenge to your body will be increased. If you are using these exercises to work with a client, consider adding perturbations as the client becomes more advanced in his or her training.

ROUTINE 12-8: SINGLE-LEG STANCE ON ROCKER BOARD

The single-leg stance on rocker board is similar to the double-leg stance exercise, except the activity is done in a single-leg stance position. This may be quite difficult at first.

- Stand on one foot (a destabilizing posture) on the rocker board (a destabilizing surface).
- Focus on keeping the weight of the foot centered over the rocker board.
- As with the double-leg stance on the rocker board, strive to hold proper posture, with the board rocking front and back in the sagittal plane for 1 minute (Fig. 12-9B).
- Three repetitions are usually performed.
- As stability is attained in the sagittal plane, the rocker board can be oriented to rock/move laterally in the frontal plane, and finally in an oblique plane.
- As you progress and become more stable, you can increase the challenge by having perturbations added.
- If working with clients, it is important to spot them, especially as they mount and dismount the board and if perturbations are added.

Figure 12-9 Rocker board sensorimotor stabilization exercises. A rocker board is a destabilizing (labile) surface that can rock in one plane. **(A)** Double-leg stance on rocker board. **(B)** Single-leg stance on rocker board. (Reproduced with permission from Muscolino JE. *Advanced Treatment Techniques for the Manual Therapist: Neck*. Baltimore, MD: Lippincott Williams & Wilkins; 2013.)

ROUTINE 12-9: DOUBLE-LEG STANCE ON WOBBLE BOARD

The double-leg stance on wobble board is similar to the double-leg stance on the rocker board, except that the wobble board is inherently more unstable than the rocker board because it is able to move/wobble in all planes.

- Stand on both feet (a stabilizing posture) on the platform of a wobble board (a destabilizing surface) (Fig. 12-10A).
- Given how unstable a wobble board is, be especially careful when mounting and dismounting the board.
- Strive to hold proper posture for 1 minute.
- Three repetitions are usually performed.
- Perturbations can be added as proficiency is reached.
- If working with clients, it is important to spot them, especially as they mount and dismount the board and if perturbations are added.

ROUTINE 12-10: SINGLE-LEG STANCE ON A WOBBLE BOARD

The single-leg stance on a wobble board is one of the most difficult stabilizing exercises because it involves a destabilizing posture on a destabilizing surface. As a result, when done properly, it can do the most to challenge and improve proprioceptive stabilization to the spine.

- Stand on one foot on the wobble board (Fig. 12-10B).
- Given its difficulty, it is especially important to have a wall nearby when mounting and dismounting the board.
- Work up to holding proper posture for 1 minute.
- Three repetitions are usually performed.
- As with all sensorimotor exercises, once proficiency is reached, perturbations can be added.
- If working with clients, it is important to spot them, especially as they mount and dismount the board and if perturbations are added.

A B

Figure 12-10 Wobble board sensorimotor stabilization exercise. A wobble board is a destabilizing (labile) surface that can wobble in all planes. **(A)** Double-leg stance on wobble board. **(B)** Single-leg stance on wobble board. ([**A**] Reproduced with permission from Muscolino JE. *Advanced Treatment Techniques for the Manual Therapist: Neck*. Baltimore, MD: Lippincott Williams & Wilkins; 2013.)

ROUTINE 12-11: QUADRUPED-TRACK SENSORIMOTOR EXERCISE

Quadruped-track sensorimotor exercises use foam rollers as the labile surface.

- Begin with two rollers placed parallel to each other, perpendicular to the long axis of the body (Fig. 12-11A). This challenges balance in the sagittal plane.
- Place both knees on one roller and both hands on the second roller.
- As with most all stabilization exercises, be sure to pull the umbilicus in and slightly up toward the spine, holding a slight posture of posterior pelvic tilt.
- *Note*: For proper posture of the rest of the body, tuck the chin and retract the head and lower neck and push the interscapular region superiorly toward the ceiling.
- Hold this posture for 10 to 20 seconds, gradually working up to 1 minute.
- Three repetitions are usually performed.
- As stability increases, the foam roller position can be changed to be parallel to the long axis of the body; this challenges posture in the frontal plane (Fig. 12-11B).
- Once each position is mastered, an external load, such as a textbook, can be added by placing it on your low back.

A

B

Figure 12-11 Quadruped-track sensorimotor stabilization exercise. Two foam rollers are used as the destabilizing (labile) surface. **(A)** Foam rollers are oriented perpendicular to the long axis of the body. **(B)** Foam rollers are oriented parallel with the long axis of the body. (Reproduced with permission from Muscolino JE. *Advanced Treatment Techniques for the Manual Therapist: Neck*. Baltimore, MD: Lippincott Williams & Wilkins; 2013.)

CHAPTER SUMMARY

With manual therapy's emphasis on stretching and loosening tight muscles and other taut soft tissues, it is easy to overlook the importance of strengthening the musculature for spinal stabilization. However, the best way to support musculoskeletal health is to achieve a balance of loose, flexible soft tissues along with musculature that is strong and able to provide stabilization to the joints. A competent lumbosacral spinal stabilization regimen incorporates sensorimotor training for the neural proprioceptive system as well as strengthening exercises for the musculature. Working with destabilizing postures and performing these exercises on destabilizing (labile) surfaces provides the challenge to the neuromuscular stabilization pathways that is necessary for this to occur.

Given the tremendous physicality of manual therapy, therapists should practice self-care, just as they recommend self-care to their clients. Incorporating spinal stabilization exercises into the self-care regimen is a wise choice. For therapists who are licensed or certified to recommend and administer strengthening exercises, weaving these exercises into client treatment is also an excellent decision.

Atlas of Forensic Pathology

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CHAPTER 1

Thanatology

Thanatology, (from Greek thanatos, "death") the description or study of death and is concerned with the notion of death as the branch of science that deals with death in all its aspects.

The following changes are seen after death is classified as:

1. **Immediate Changes (Somatic death)**
2. **Early Changes (Cellular death)**
   a. **Skin changes**
      The blood circulation to the skin is stopped resulting in pallor and loss of elasticity.
   b. **Eye changes**
      An early change in eye seen as opacity of cornea and flaccidity of eyeball due to loss of intra-ocular tension, which progressively comes down to zero in about 2 hours.
   c. **Algor mortis (Postmortem cooling)**
      Is a progressive loss of heat due to; conduction, convection and radiation after death resulting in cooling of body.
   d. **Livor mortis (Postmortem lividity)**
      A passive pooling imparts reddish-purple or bluish discoloration of skin in dependent parts of the dead body is called as livor mortis with "contact flattening" on pressure areas of the body.
   e. **Rigor mortis (Postmortem rigidity)**
      A state of stiffening of muscles after death due to physiochemical process due to ATP is progressively and irreversibly destroyed by dephosphorylating and deamination leading to accumulation of lactates and phosphates in the muscles.

Conditions simulating Rigor Mortis

Heat stiffening: Temperature > 65°C
Cold stiffening: Temperature < 3.5°C
Gas stiffening: After putrefaction sets in.

Cadaveric Spasm/Instantaneous Rigor

In cases of sudden death from excitement, fear, severe pain, exhaustion etc. muscles that were contracted during life become stiff and rigid immediately after death without passing through stage of primary flaccidity due to which exact attitude of person at the time of death is preserved usually limited to single group of muscles frequently involving hands as seen here. This condition is known as Cadaveric Spasm or Instantaneous Rigor or Cataleptic Rigidity of the body.

3. Late Changes (Decomposition)

a. **Putrefaction:** Early sign of decomposition is greenish discoloration on right iliac fossa due to hemolysis of red blood cells and the liberated hemoglobin is converted into sulfmethemoglobin by hydrogen sulfide gas may be seen around 12–18 hours after death.

b. Saponification (Adipocere)
c. **Mummification**
} Modified form of Putrefaction

Skeletonization is the removal of tissues from the bones or skeleton, it may be ***complete***; where all soft tissues are removed and ***partial,*** where only a few portions of the bones are exposed.

Artefacts

It may be regarded as any change caused or feature introduced in the natural state of the body that is likely to be misinterpreted at autopsy. These injuries may be produced by aquatic bites, ants and scavengers, etc.

Postmortem artefacts are due to any changes caused or features introduced in a body after death.

It is duty of medicolegal expert to differentiate artefacts from that of injuries thereby preventing false interpretation of finding and misleading of investigation.

Types of Artefacts

A. Resuscitation artefacts
B. Agonal artefacts
C. Postmortem artefacts due to:
   a. Improper handling of the body
   b. Postmortem changes
   c. Refrigeration in cold chamber
   d. Decomposition
   e. Animal and insect bites
   f. Autopsy surgeon induced
   g. Embalming
   h. Exhumation.

Forensic Entomology (Entomology of Cadaver)

Entomology: Study of insects.
Forensic entomology: Use of insect knowledge in the investigation of crime, used in estimation of time since death or postmortem interval (PMI).
Principle: As the insects arrive on the body soon after death, estimating age of insects can help in estimation of postmortem interval (PMI).
Based on: 1. Directly from the life cycle
2. Waves of succession! Time of arrival of different species.

Stages of life cycle
Egg→Larvae→Pupa→Adult

Figure 1 Tache Noire; an early postmortem change seen in eyes

Figure 2 Tache Noire seen in the outer angle of left eye

Figure 3 Clouding and haziness of cornea seen in both eyes

Figure 4 Sunken eyeballs and corneal opacity in both eyes

Figure 5 Postmortem lividity on the back

Figure 6 Postmortem lividity with contact flattening on the back

Figure 7 Entire body in rigor indicating the posture of the body after death

Figure 8 Cadaveric spasm in the upper limbs; driver holding the steering wheel at the time of death

Figure 9 Instantaneous rigor of hand in a case of drowning

Figure 10 Heat stiffening of the body

Figure 11 Gas stiffening of the body

Figure 12 Greenish discoloration on the right iliac fossa and inguinal region

Figure 13 Greenish dicoloration of abdominal flanks

Marbling of skin in various parts of the body, due to invasion of microorganisms and formation of sulfmethemoglobin and thereby staining the blood vessels and then being prominent giving a marbled appearance to the skin may be seen around 24–36 hours after death **(Figs 14 to 19)**.

Figure 14 Marbling seen in right upper arm and right chest wall

Figure 15 Marbling seen in axilla and right shoulder

Figure 16 Marbling seen on upper part of the body

Figure 17 Marbling seen on left thigh

Figure 18 Marbling seen in left upper thigh and groin region

Figure 19 Marbling seen on the entire back

Autolysis of cells due to hydrolytic enzymes after death is observed as collection of fluids in between dermis and epidermis called ***postmortem blisters***. Loosening of epidermis from the underlying dermis is called ***skin slippage*** **(Figs 20 to 26)**.

Figure 20 Postmortem blisters seen on left hand and left chest wall

Figure 21 Postmortem blisters on left thigh and leg

Figure 22 Postmortem blister with skin slippage

Figure 23 Postmortem blisters, skin slippage and erect nipples (gas stiffening)

Figure 24 Postmortem blisters and skin slippage seen on the forearm and hand

Figure 25 Postmortem skin peeling (slippage)

Figure 26 Postmortem degloving of palm

The putrefactive changes are seen with the advancement of postmortem interval such as; ***color changes, bloating of face, protrusion of eye and tongue, distention of abdomen, and postmortem purging.*** In males, ***scrotal swelling*** may be observed. During late decomposition process, foul smelling gases are liberated which are collected in the intestine in around 12–18 hours after death **(Figs 27 to 37)**.

Figure 27 Bloated face with protruded eyeballs and tongue

Figure 28 Bloated face, liquefaction of eyeballs and postmortem purge

Figure 29 Reddish brown discoloration of the body with disfigured face

Figure 30 Gas stiffening and reddish brown discoloration of the body (crime scene)

Figure 31 Disfigured face with protrusion of the tongue

Figure 32 Protruded eyeballs and tongue

Figure 33 Reddish brown color changes

Figure 34 Distended scrotum with reddish brown color changes of the body

Figure 35 Decomposition showing scrotal swelling and skin slippage over abdomen in infant

Figure 36 Protrusion of intestines on opening the abdominal cavity

Figure 37 Protrusion of intestines on opening the abdominal cavity (autopsy conducted at the crime scene)

Figure 38 Loosening of scalp hair after death

Figure 39 Postmortem prolapse of rectum

Figure 40 Intact, discolored and collapsed dura suggestive of underlying liquefied brain

Figure 41 Liquefied discolored brain on removal of the dura

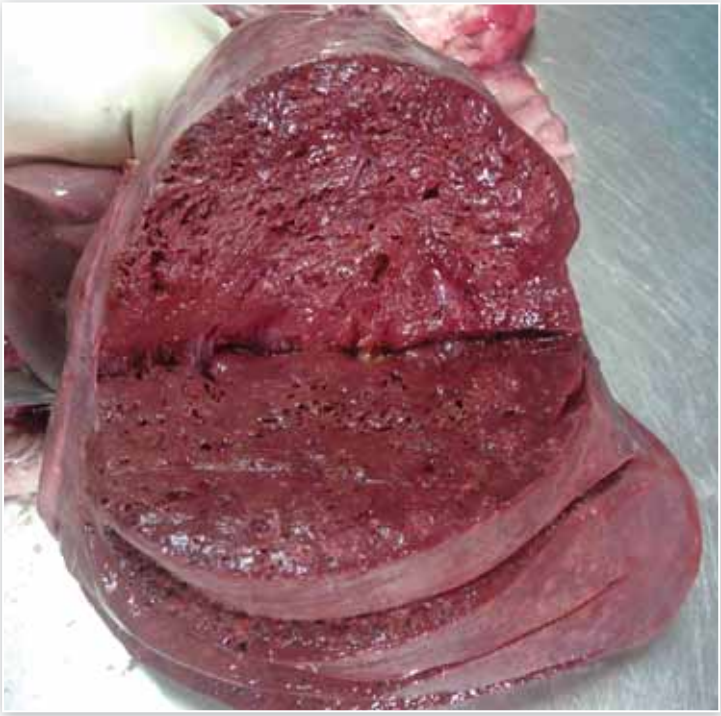

Figure 42 Foamy changes in the liver on cut section

Figure 43 White clusters of eggs on the skin

Figure 44 Clusters of maggots over the body

Figure 45 Maggots of varying sizes on the body

Figure 46 Adipocere formation of the body

Figure 47 Adipocere with maggots

Figure 48 Adipocere over the abdomen and thigh with maggots

Figure 49 Partial skeletonization of the body

Figure 50 Complete skeletonization of the body

Figure 51 Artefact caused by aquatic animal

Figure 52 Artefacts on the back of hand caused by aquatic animal bites

Figure 53 Artefact animal bite on the scrotum

Figure 54 Postmortem aquatic animal bite and degloving seen in right hand

Figure 55 Postmortem rodent bite with nibbled margins

Figure 56 Artefact with nibbled margins caused by rodent bite

Figure 57 Enucleation of right eyeball due to rodent bite with nibbled margins

Figure 58 Artefacts around the mouth and forehead

Figure 59 Artefact of female external genitalia (animal bite)

Figure 60 Artefact on the inner aspect of the thigh

Figure 61 Postmortem loss of foot by aquatic animals (a case of drowning)

Figure 62 Postmortem animal bites around the mouth and nostrils

Figure 63 Mummified body

CHAPTER 2

Mechanical Injuries

Trauma, injury, hurt and wound may appear similar but they differ in medical and legal context. Section 44 of Indian Penal Code (IPC) defines injury as "any harm whatever illegally caused to a person in body, mind, reputation and property". Section 319 of IPC defines hurt as "whoever causes bodily pain, disease or infirmity to any other person, is said to cause hurt". As per WHO, trauma is an insult to the state of wellbeing, which can be physical or mental. Medicolegally wound can be defined as any lesion external or internal caused by violence with or without loss of continuity of skin.

Mechanical injuries can be defined as "Damage to any part of the body due to application of mechanical force".

CLASSIFICATION OF MECHANICAL INJURIES

Mechanical injuries can be classified based on the nature of force applied as:

1. **Injuries due to blunt force trauma**
   - **A. Abrasions**: Loss of superficial layers of skin or mucous membrane. They can be classified based on manner of causation as:
     - a. Pressure abrasion
     - b. Graze abrasion
     - c. Imprint/impact/patterned abrasion
     - d. Scratch/Linear abrasion.
   - **B. Contusions/bruises**: Extravascular collection of blood due to damage of blood vessels without loss of continuity of skin.
   - **C. Lacerations**: Rupture or tear of skin or deeper tissues. They can be classified based on manner of causation as:
     - a. Split/Incised looking laceration
     - b. Stretch laceration
     - c. Avulsed/grind laceration
     - d. Tear laceration
     - e. Cut laceration.
   - **D. Fractures**: Breakage of bone due to direct or indirect forces. They can be classified as:
     - a. Linear fracture
     - b. Comminuted fracture
     - c. Penetrating fracture.

2. Injuries due to sharp force trauma

A. Incised wound/cut/slash/slice: Clean cut separation of skin and/or deeper tissues caused by sharp cutting weapon without contusion and crushing of margins. Here length is the largest dimension.

B. Chop wound: Clean cut separation of skin and/or deeper tissues caused by sharp cutting weapon without contusion and crushing of margins. It is usually caused by heavy sharp cutting weapons.

C. Stab wound/puncture: Piercing wounds caused by sharp pointed objects. Margins may be clean cut or contused depending on weapon. They appear like incised wound but here depth is the largest dimension. They can be classified as:

a. Penetrating wound: Only entry wound present but no exit.

b. Perforating wound: Both entry and exit wounds present.

Pressure abrasions over elbow, knees, leg, thigh and back. These abrasions are seen commonly in cases of road traffic accident and fall signifying the site of impact **(Figs 1 to 5)**.

Figure 1 Pressure abrasions over right elbow

Figure 2 Pressure abrasion over knee

Figure 3 Reddish brown pressure abrasions over the back

Figure 4 Reddish pressure abrasions over the leg

Figure 5 Multiple pressure abrasions on thigh

Abrasions in different stages of healing over leg, knee and elbow. Abrasions heal with scab formation, different color changes and stages of scab formation can tell about the time since injury **(Figs 6 to 9)**.

Figure 6 Abrasions with reddish brown scab over leg and foot

Figure 7 Partially healed abrasions with reddish brown scab

Figure 8 Partially healed abrasions with scab fallen off

Figure 9 Partially healed abrasion

After death, abrasions are caused if the body is subjected to friction, or attacked by creatures like ants, aquatic animals, etc. They need to be differentiated from antemortem injuries by the absence of color changes and vital reaction **(Figs 10 to 13)**.

Figure 10 Ant bite marks on the front of trunk

Figure 11 Ant bite marks

Figure 12 Postmortem graze abrasions

Figure 13 Postmortem abrasions on the wrist

Figure 14 Pressure abrasion on the neck caused due to sustained pressure by ligature material

Figure 15 Deeply grooved imprint abrasion (ligature mark) on the neck

Figure 16 Tyre tread imprint abrasion over right upper limb

Figure 17 Multiple linear abrasions with a tear laceration on the side of trunk

Figure 18 Graze abrasions over side of face and forehead

Figure 19 Graze abrasions over right thigh along with laceration over upper part of leg

Graze abrasions are usually seen in cases of road traffic accidents when body slides over the rough surface. Grazes help to comment on the direction of impact. They are more prominent near origin of impact and gradually fades out towards the end. Brush burns are extreme forms of grazes, formed due to generation of heat resulting from severe friction between the body and rough surface **(Figs 20 to 26)**.

Figure 20 Graze abrasions over back

Figure 21 Graze abrasions over front of abdomen directed below upwards

Figure 22 Brush burns on outer aspect of thigh

Figure 23 Brush Burns on abdomen

Figure 24 Brush burns over back of neck

Figure 25 Brush burns over back

Figure 26 Contused grazed abrasion on the side of trunk

Figure 27 Partially healed abrasions over forehead

Figure 28 Abrasions over forehead, cheek, nose and shoulder

Figure 29 Multiple abrasions with tear laceration of the trunk

Figure 30 Multiple pressure abrasions over the shin

Figure 31 Abrasions with superficial lacerations over cheek

Figure 32 Contused abrasions on side of trunk

Figure 33 Multiple abrasions on outer aspect of knee

Figure 34 Multiple linear contusions over trunk

Figure 35 Contusions over left arm

Figure 36 Contusion on the side of trunk

Figure 37 Contusion at the back of neck and shoulder

Figure 38 Contusion incised to show the extravasation of blood

Figure 39 Scrotal hematoma

Figure 40 Scrotum dissected to show underlying hematoma

Figure 41 Contusion of scrotum and testis

Figure 42 Bilateral black eyes (spectacle hematoma) caused due to extravasation of blood in periorbital space

Figure 43 Black eye with sub-conjunctival hemorrhage

Figure 44 Postmortem lesions caused by aquatic animal bite

Figure 45 A partially healed infected wound of leg

Figure 46 Healed scar (hesitation cuts)

Figure 47 Cut throat injury

Defense cuts are inflicted when a person tries to ward off an attack, thus are commonly located on hands, forearms, etc. as these are the parts of body mostly used for defense. However, they can be seen on other parts as back, legs also depending upon the relative position of victim and assailant **(Figs 48 to 50)**.

Figure 48 Incised wound (Defense cut) over left palm

Figure 49 Incised wound (Defense cut) at the back of left hand

Figure 50 Incised wound (Defense cut) over finger

Incised wounds are caused by sharp weapons like knife, blade sword, etc. and have clear cut margins with clean cut underlying tissues, vessels and nerves **(Figs 51 to 56)**.

Figure 51 Multiple incised wounds over right lower limb

Figure 52 Incised wounds over left lower limb

Figure 53 Incised wound over forearm

Figure 54 Incised wounds over leg

Figure 55 Incised wounds over right thigh and knee

Figure 56 Incised wound over forearm

Chop wounds are caused by heavy sharp weapons like axe, sword, etc. Here margins are clean cut and contused with cutting and crushing of underlying muscles, bones, vessels and nerves **(Figs 57 to 64)**.

Figure 57 Chop wounds over shin

Figure 58 Chop wound showing clean cut margins

Figure 59 Chop wound at the back of left shoulder

Figure 60 Multiple chop wounds of head

Figure 61 Chop wound of left upper limb

Figure 62 Chop wounds of left upper limb with partial amputation at wrist

Figure 63 Chop wound at the back of left hand with beveling of underlying bone

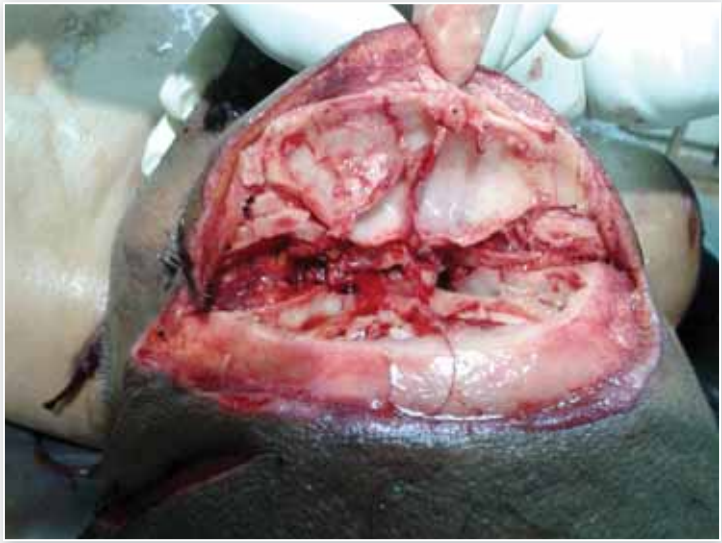

Figure 64 Chop wound of skull

Stab wounds are caused due to sharp or blunt penetrating weapon like knife, ice pick, sword, etc. Appearance is usually similar to incised wound but here depth is larger dimension as compared to length whereas in incised wounds length is more as compared to depth **(Figs 65 to 70)**.

Figure 65 Stab wound in pubic region with adjoining contusion

Figure 66 Stab wound over thigh

Figure 67 Stab wound over neck

Figure 68 Stab wound over the back

Figure 69 Multiple stab wounds over back

Figure 70 Stab wound of forearm with underlying tissue damage

Figure 71 Demonstration of perforating stab wound of forearm

Figure 72 Stab wound with irregular margins

Figure 73 Stab wound of abdomen with protrusion of loops of intestine

Figure 74 Stab wound of abdomen with evisceration

Figure 75 Stab wound of lower back with protrusion of mesentery

Figure 76 Incised wound with multiple superficial lacerations

Figure 77 Stretch lacerations of abdominal wall

Figure 78 Avulsed laceration of pinna

Figure 79 Laceration of pinna with contused margins

Figure 80 Multiple lacerations over forehead

Figure 81 Avulsed laceration of forearm

Figure 82 Stretch laceration of groin

Figure 83 Laceration of right axilla and graze abrasion of right arm

Figure 84 Avulsed laceration of left thigh

Figure 85 Incised looking laceration over shin

Figure 86 Laceration of forearm with bridging of tissue

Figure 87 Laceration of neck showing bridging of tissues

Figure 88 Split laceration on right side of head

Figure 89 Bilateral stretch laceration due to run over by heavy vehicle

Figure 90 Avulsed laceration of right thigh and perineum along with stretch lacerations of left thigh

Figure 91 Flaying injury of the left lower limb

Figure 92 Avulsed laceration with degloving of male external genitalia

Figure 93 Avulsed laceration of left leg

Figure 94 Laceration of right groin along with contusion of right thigh and avulsion of left thigh

Figure 95 Avulsed laceration (flaying) of scalp.

Figure 96 Complete transection and crush injury to lower limbs in railway accident

CHAPTER 3

Thermal Injuries

Thermal injuries are caused by exposure to excessive heat/cold. In tropical climate, generalized effects of high temperatures may be seen in form of heat cramps, heat prostration, or heat hyperpyrexia. Localized effects of heat may be observed in form of burns resulting from dry heat and scalds occurring as a result of moist heat. Similarly, extreme degree of cold can cause hypothermia or a frost bite, trench foot and immersion foot locally.

Injuries caused due to the localized effects of heat are classified based on the extent of damage to the skin and underlying tissues. A few of these classifications include Dupuytren's classification, Hebra's classification, Wilson's classification, and Modern classification. The effects and outcome of burns depend on various factors such as the degree of heat, duration of exposure, extent and parts of the body involved, and age and sex of the individual. Death in cases of fatal burns may be immediate, early or delayed. The immediate cause of death may be neurogenic shock, suffocation or secondary injuries while septicemia remains the most common cause of delayed death in thermal burns.

Burns produced by flame cause singeing of hairs, and blackening of skin. Blister formation and skin slippage are other associated features. Pus and slough formation is a delayed change that is often related with septicemia as the cause of death. The pressure areas are known to escape the effects of heat. Identification features such as tattoo marks are retained even when superficial layer is damaged in burns.

Figure 1 A charred body found in an open area

Figure 2 Burnt areas with evidence of blackening, peeling and reddening of skin

Figure 3 Burns involving the face and chest

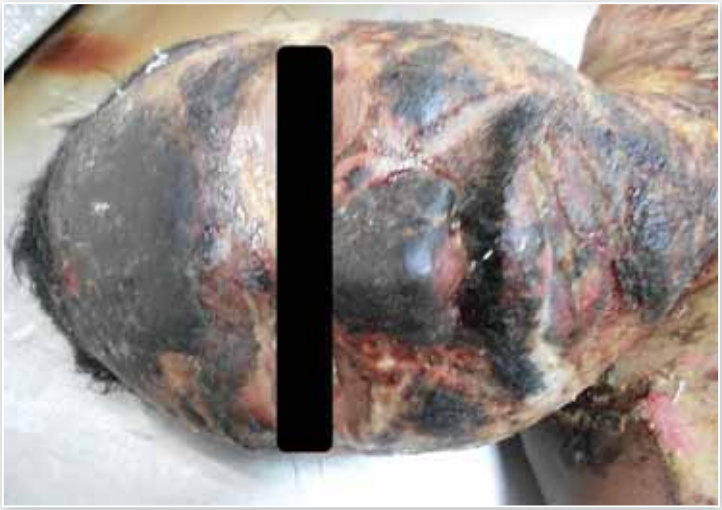

Figure 4 Burns involving the face with singeing of facial hair

Figure 5 Blackening of face, singeing of scalp and facial hair with soot deposition over teeth

Figure 6 Singeing of scalp hair

Figure 7 Demarcation (erythema) between healthy and burnt area

Figure 8 Blackening of skin with blister formation over trunk and spared areas over chest

Figure 9 Blackening and peeling of skin in burns

Figure 10 Reddening and peeling of the skin at the back

Figure 11 Burn areas with red line of demarcation

Figure 12 Intact tattoo marks in burn areas

Figure 13 Retained tattoo mark over forearm in superficial burns

Figure 14 Peeling of the skin of hands with underlying erythema

Figure 15 Peeling of the skin of sole in burns

Figure 16 Deep burns with greenish yellow discoloration

Figure 17 Infected areas over back in burns

Figure 18 Pus and slough formation over infected areas in burns

Figure 19 Burn areas showing pus and slough formation with partial healing

Figure 20 Burn areas with pus and slough formation

Figure 21 Infected burn areas over lower limbs

Figure 22 Granulation tissue and evidence of scarring

Figure 23 Granulation tissue over the face, chest and upper limbs

Figure 24 Granulation tissue over the face and upper chest with infected areas

Figure 25 Granulation tissue over the face

Figure 26 Dried parchmentized burn areas with partial healing

Figure 27 Healed areas in burns showing scarring

Figure 28 Spared areas in burns corresponding to the straps of underclothing

Figure 29 Spared areas in burns corresponding to the undergarments

Figure 30 Singeing of scalp and facial hair in extensive burns involving face

Figure 31 Charring of face in an extensively burnt body

Figure 32 Extensively charred body with pugilistic attitude

Figure 33 Boxer's attitude in a charred body of a child

Figure 34 Extensive burns with heat splits and flexion attitude

Figure 35 Multiple heat ruptures over the lower limbs

Figure 36 Heat lacerations over the inner aspect of lower limb

Figure 37 Extensively charred body with protrusion of intestines

Figure 38 Horizontal pale area over the neck in burn injuries resembling strangulation mark

Figure 39 Soot particles in trachea in antemortem burns

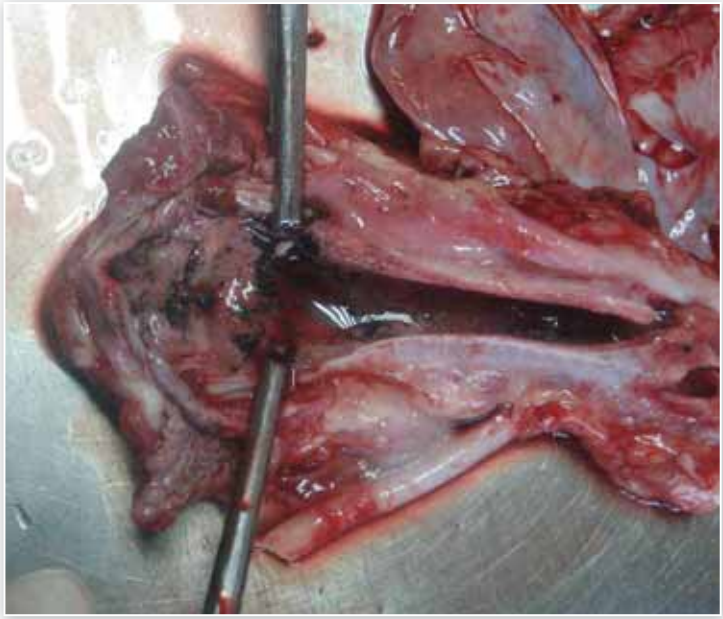

Figure 40 Airways showing soot particles and petechial hemorrhages in antemortem burns

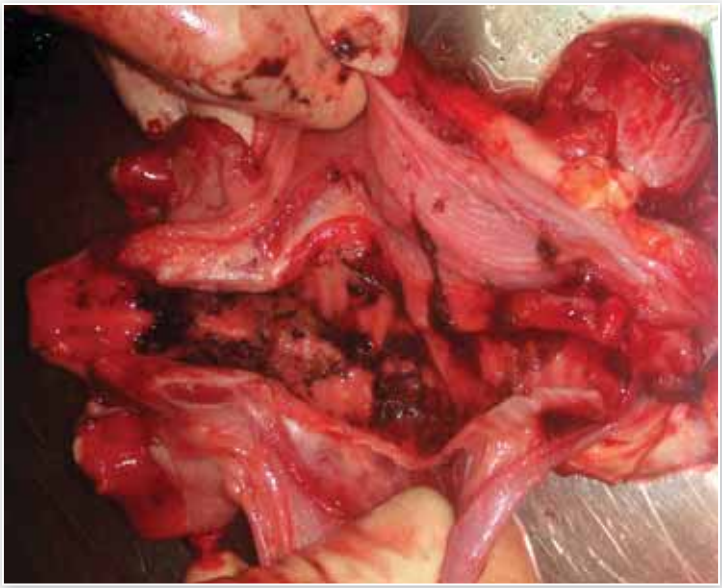

Figure 41 Soot particles in trachea

Figure 42 Congested gastric mucosa and presence of soot particles in the stomach

CHAPTER 4

Electrical Injuries

Electrical injuries are caused due to the contact of human body with electric current. Consequently the electric current passes through the body causing deleterious effects. The specific diagnostic sign of electrocution is the electric mark or the Joule burn. This usually appear as crater, round to oval in shape and sometimes associated with charring. Sometimes the mark may have a pattern similar to the shape of the conductor. High tension electric currents may be associated with burns and charring of the involved body parts. Exit marks vary in shapes and sizes and are similar to entry wounds in appearance. In fatal cases, death usually occurs from cardiac arrhythmias. Manner of death in most cases of electrocution is accidental. Rare cases of suicidal electrocution have also been reported in literature.

Figure 1 Electrical entry mark over the little finger

Figure 2 Entry marks in high tension electric current

Figure 3 Multiple burns in high tension electric current

Figure 4 Multiple electric exit wounds on the plantar aspect of foot

CHAPTER 5

Firearm Injuries

Fire arms are classified as rifled and smooth-bored weapons.

Appearance of the injuries sustained by the firearms depends primarily on the type of weapon used, nature of ammunition and the range of firing.

Injuries caused by firearms are characterized by *Entry* and *Exit* wounds. In injuries caused by rifled firearms, the entry wound is usually smaller than the size of the bullet causing it and is characterized by inverted edges and presence of abrasion and grease collar around the wound. Burning, blackening and tattooing may also be present around the wound and on clothes. Exit wound is larger in size and is characterized by everted margins. Wounds produced by shotguns are not frequently associated with exit wounds. Entry wounds on the internal organs show similar characteristics as the external entry wound with absence of burning, blackening and tattooing.

Figure 1 Entry wound with an abrasion collar over the thigh caused by rifled firearm

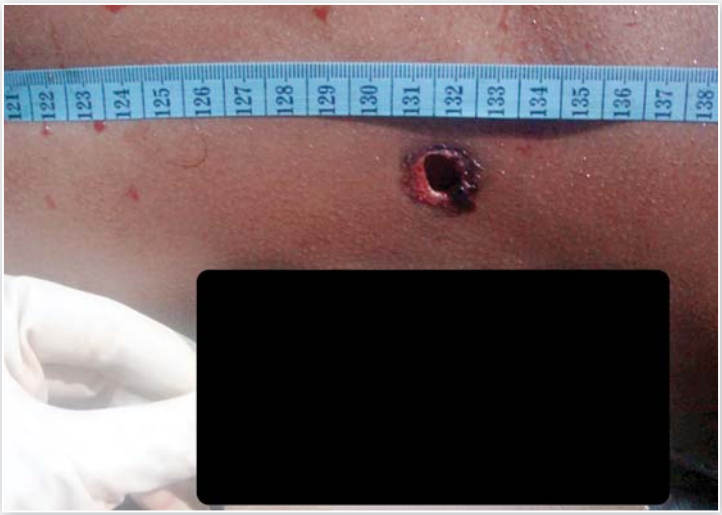

Figure 2 Rifled firearm entry wound with abrasion, contusion and grease collar

Figure 3 Multiple rifled firearm entry wounds over chest with bullet graze over inner aspect of left arm

Figure 4 Rifled firearm entry wound depicting the direction of firing

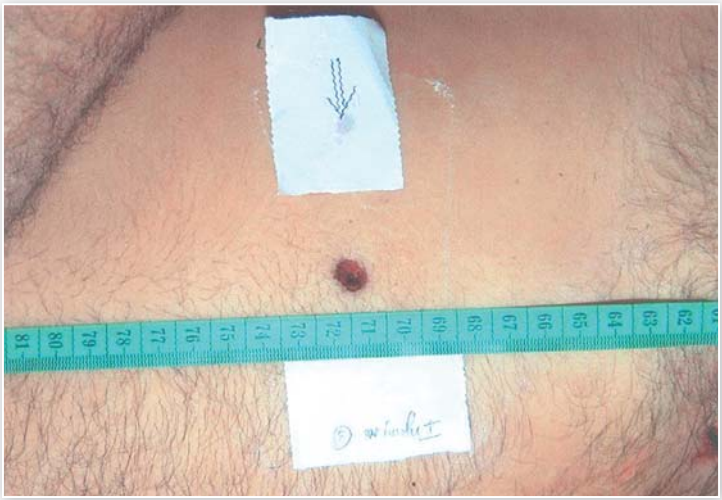

Figure 5 Rifled firearm entry wound

Figure 6 Rifled firearm exit wound on the inner aspect of left arm

Figure 7 Rifled firearm entry wound (outer aspect of upper chest) and exit wound (left abdominal flank)

Figure 8 Multiple rifled firearm entry wounds

Figure 9 Rifled firearm exit wound over the right side of back

Figure 10 Exit wound caused by rifled firearm

Figure 11 Entry wounds on the back of chest

Figure 12 Exit wound with protrusion of tissues in a rifled firearm injury

Figure 13 Multiple exit wounds over back of trunk

Figure 14 Bullet graze over buttocks

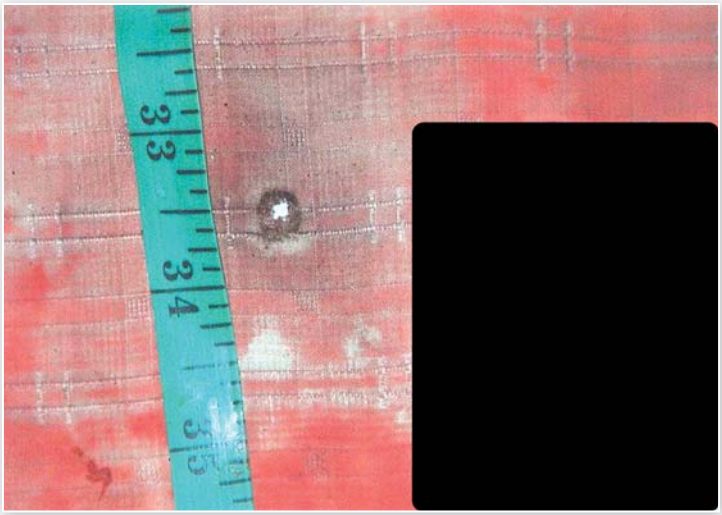

Figure 15 Clothing showing bullet entry and surrounding areas of blackening

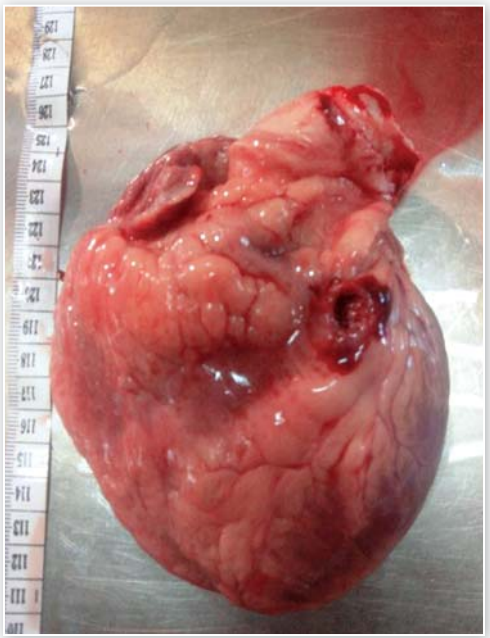

Figure 16 Rifled firearm entry wound with contused margins over the heart

CHAPTER 6

Regional Injuries

REGIONAL INJURIES

Injuries and death due to trauma are inescapable from the modern way of life. Injuries to the head are very frequent secondary to traffic accidents, assaults and falls.

- **Closed head injury:** In a traumatic episode, if the dura remains intact, it is called closed head injury irrespective of whether the skull is fractured or not.
- **Open head injury:** In a traumatic episode, if the dura is lacerated or torn, it is called an open head injury as it is open to possible infection.

Scalp

A contusion over the scalp, well covered with hair, is better appreciated by palpation than inspection. An effusion of blood over the forehead may gravitate (Indirect trauma) down to the loose tissue causing black eyes. Injuries to scalp predispose the victim to intracranial infections through diploic veins.

Skull

The adult skull is a remarkably strong structure. It is not resilient and tends to fracture if subjected to undue stress. The varieties of fractures seen in medicolegal autopsies are—fissure, stellate, depressed, elevated, gutter comminuted and ring fracture. The fracture may involve the vault or base or both. The base of the skull is relatively weak, by virtue of its irregular shape and several foramina passing through it and is therefore the most common site of skull fractures. In all medicolegal autopsies, the dura should be stripped from the vault and the base so that the fractures can be better appreciated.

Brain Injuries

Brain injuries are classified according to the main effect of trauma as:

1. Acceleration/deceleration injuries are—Diffuse neuronal injuries, diffuse axonal injuries and subdural hematomas.
2. Impact injuries are—Cerebral concussion, cerebral contusions, cerebral lacerations and intracranial hemorrhages (epidural, subdural, subarachnoid and intracerebral hemorrhages).

Trauma to the Heart

According to Mortiz, the common sites of traumatic rupture of heart are—right atrium, left ventricle, right ventricle, left atrium, interventricular septum and valves. In traumatic rupture, the heart is generally ruptured on the right side and towards its base.

Trauma to the Liver

It is susceptible to injury because of its large size, central location and relative friability. The rupture usually involves the right lobe, the convex surface and the inferior border. Death is due to hemorrhage.

Trauma to the Spleen

Its susceptibility to injury is due to weakness of its supporting tissues, thinness of capsule and extreme friability of pulp. The rupture usually involves the concave surface. Death is due to profuse hemorrhage.

Figure 1 Bilateral black eye (Spectacle hematoma)

Figure 2 Crushed head with protrusion of brain substance at the scene of vehicular accident

Figure 3 Extensive subscalpal hematoma

Figure 4 Subscalpal contusion with split laceration

Figure 5 Horizontally placed fissure fracture involving vault of the skull

Figure 6 Diastatic (Sutural) fracture involving coronal suture

Depressed comminuted fracture: This is also known as complex fracture. The bone is fractured into fragments due to heavy blunt impact or violent fall. This is as a result of multiple adjacent fissured fractures **(Figs 7 to 9)**.

Figure 7 Depressed displaced comminuted fracture of the vault of the skull

Figure 8 Depressed comminuted fracture of the vault with overriding of cranial bones

Figure 9 Depressed comminuted fracture over frontal bone

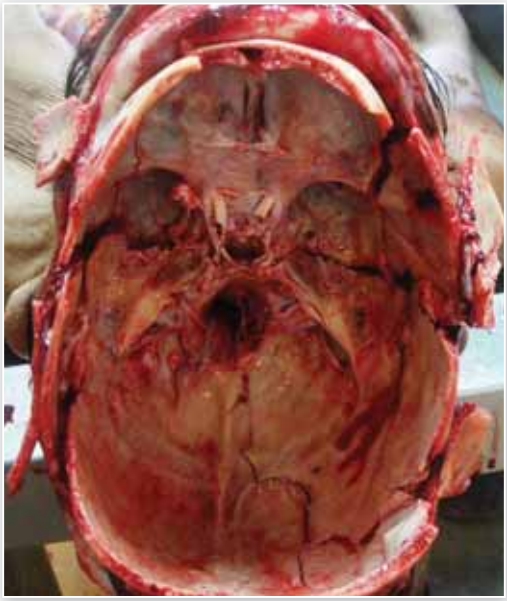

Figure 10 Hinge fracture involving the middle cranial fossa

Figure 11 Ring fracture encircling foramen magnum

Figure 12 Multiple circular burr hole (Craniotomy wound) over left frontoparietal region

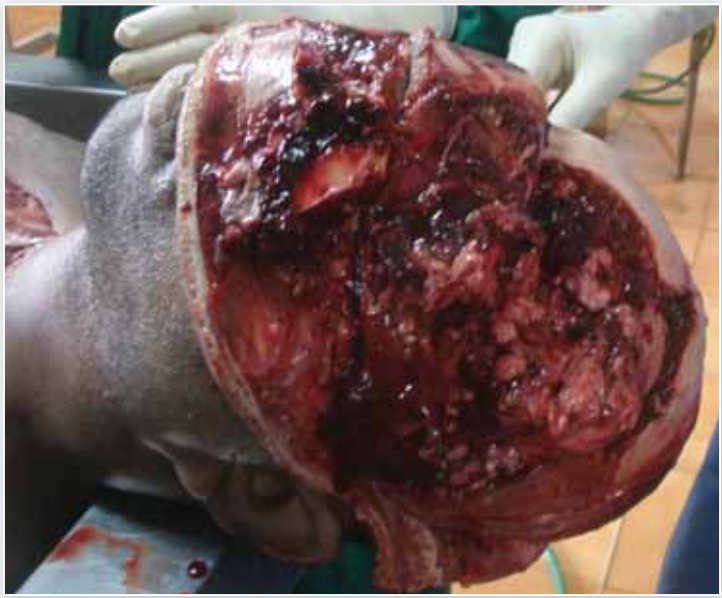

Figure 13 Liquefaction of brain matter following surgical intervention

Figure 14 Liquefactive necrosis of brain with adherent blood clots and missed skull fragments

Figure 15 Depressed fracture (Signature fracture) involving outer table of the skull

Figure 16 Obliquely placed fissure fracture involving vault of skull

Burst fracture: When the force of impact over the skull is great, the broken pieces of bone get displaced **(Figs 17 to 20)**.

Figure 17 Burst fracture of the skull with displaced skull fragments

Figure 18 Burst fracture of the skull involving coronal and sagittal sutures

Figure 19 Burst fracture involving anterior and middle cranial fossa

Figure 20 Burst fracture involving vault and base of cranium

Figure 21 Linear fracture extending to coronal suture (Diastatic fracture)

Figure 22 Protrusion of fractured skull fragment through scalp in a run over accident

Figure 23 Excavation of left eye ball and root of nose

Pontine hemorrhage is a type of intracranial hemorrhage where bleeding occurs in the pontine region which could be spontaneous or traumatic **(Figs 24 to 26)**.

Figure 24 Pontine hemorrhage

Figure 25 Multiple pinpoint pontine hemorrhages

Figure 26 Localized pontine hemorrhage

Figure 27 Multiple pinpoint petechial hemorrhages over white matter suggestive of cerebral hypoxia

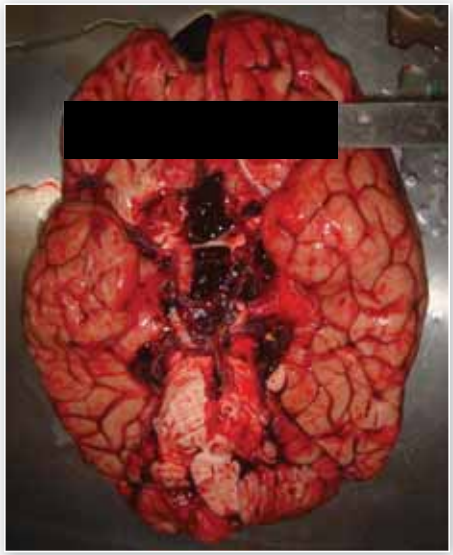

Figure 28 Spontaneous subarachnoid hemorrhage secondary to rupture of congenital berry aneurysm

Cut section of the brain showing lacerated, contused, necrosed thalamus and basal ganglia with intraventricular hematoma **(Figs 29 to 31)**.

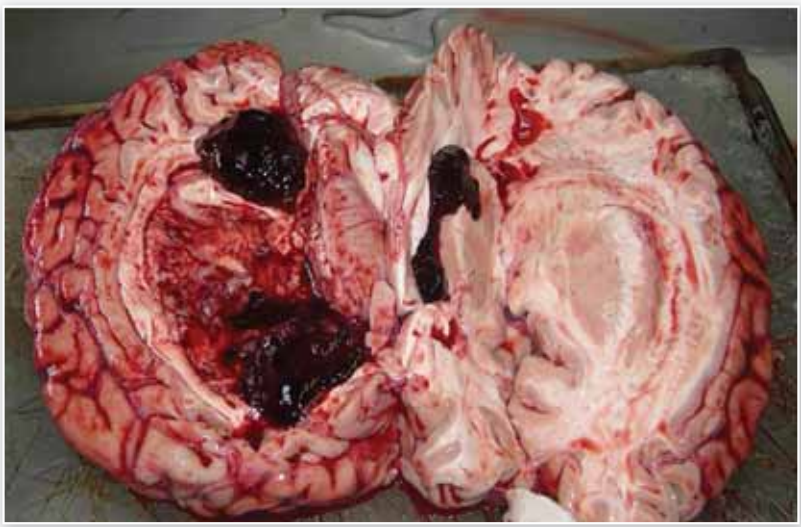

Figure 29 Lacerated, contused and necrosed basal ganglia and thalamus

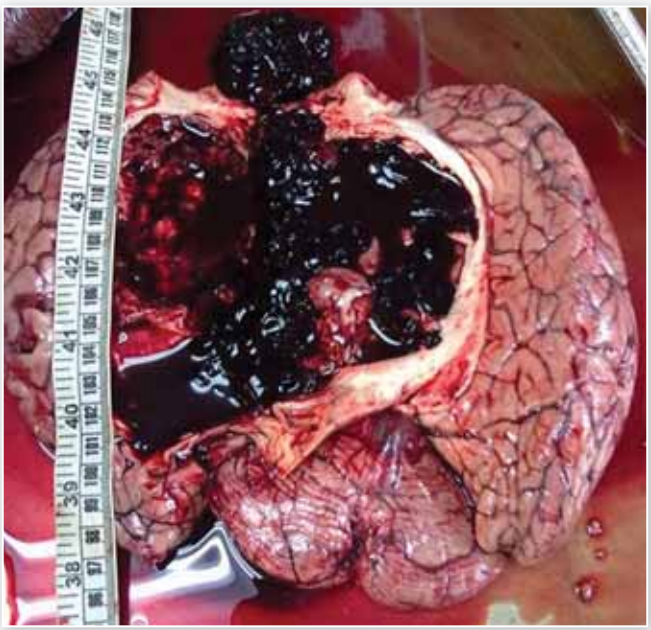

Figure 30 Intraventricular blood clot

Figure 31 Formalin fixed brain with intracerebral clot and necrosed basal ganglia

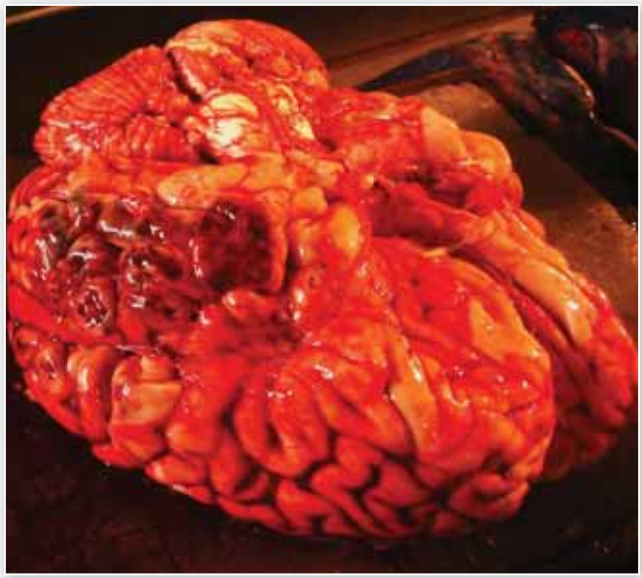

Figure 32 Left temporal lobe contusions with subarachnoid hemorrhage

Multiple pinpoint capillary hemorrhages involving the brain substance: The spontaneous intracerebral hemorrhage is usually seen in internal capsule, basal ganglia, cerebellum, pons, etc. The most common cause is cerebral arteriosclerosis complicated by hypertension. Traumatic hemorrhage is often petechial in nature. It will be often associated with evidence of other injuries such as fracture of skull and contusion of brain **(Figs 33 and 34)**.

Figure 33 Petechial hemorrhages over internal capsule

Figure 34 Multiple pinpoint hemorrhages involving cerebellar substance

Extradural hemorrhage occurs outside the dura mater and the clots formed exert pressure over the brain. The source of bleeding is mainly from the meningeal vessels and are often associated with skull fractures **(Figs 35 to 37)**.

Figure 35 Right extradural and left subdural hematoma

Figure 36 Midline extradural clot

Figure 37 Left frontal extradural hematoma

Subdural hemorrhage occurs between dura and arachnoid mater. It usually appears as a diffuse blood film or clot. The source of bleeding are the dural sinuses, communicating veins, etc. Extensive subdural hematoma can cause death due to cerebral compression **(Figs 38 to 41)**.

Figure 38 Right sided subdural hematoma

Figure 39 Subdural hematoma extruding out from the cut dura

Figure 40 Right sided subdural hematoma and diffuse subarachnoid hemorrhage

Figure 41 Subdural hematoma with compressed ipsilateral cerebral hemisphere

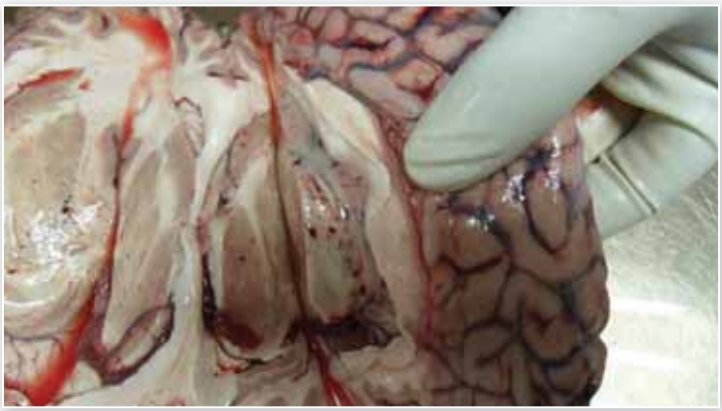

Figure 42 Petechial hemorrhages involving basal ganglia

Figure 43 Gross flattening of left side of the face with protruded brain mater due to run over by a heavy vehicle

Figure 44 Burst fracture of the skull secondary to traumatic crush injury with loss of brain substance

Figure 45 Diffuse contusions over front of chest on reflection of skin

Figure 46 Fracture-dislocation of cervical vertebra (C3–C4)

Figure 47 Missing cervical segment (C3–C6) secondary to crush injury to neck in a railway mishap

During fall from height, when the person lands on both feet or buttock the force will be transmitted to the leg bones, hip, vertebral column and to the skull, resulting in fracture-dislocation of vertebral column **(Figs 48 and 49)**.

Figure 48 Fracture-dislocation of thoracolumbar vertebra

Figure 49 Curvature deformity of thoracic vertebra secondary to fracture-dislocation

Blunt impacts to abdomen need not always produce external injuries, as the abdomen is yielding and the force will be dissipated internally injuring the internal organs **(Figs 50 to 54)**.

Figure 50 Ruptured liver with hemoperitoneum

Figure 51 Rupture of anterior and superior surface of right lobe of liver

Figure 52 Transparenchymal lacerations of right lobe of liver

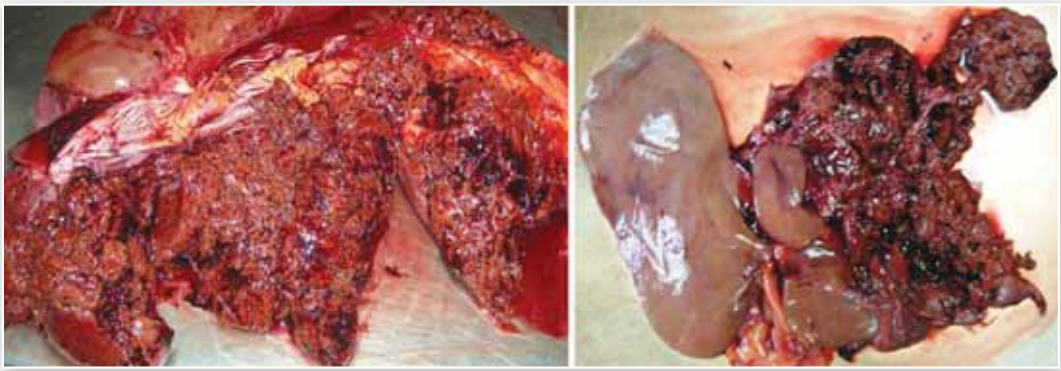

Figure 53 Rupture of liver in a run over accident

Figure 54 Subcapsular and Transparenchymal laceration of liver

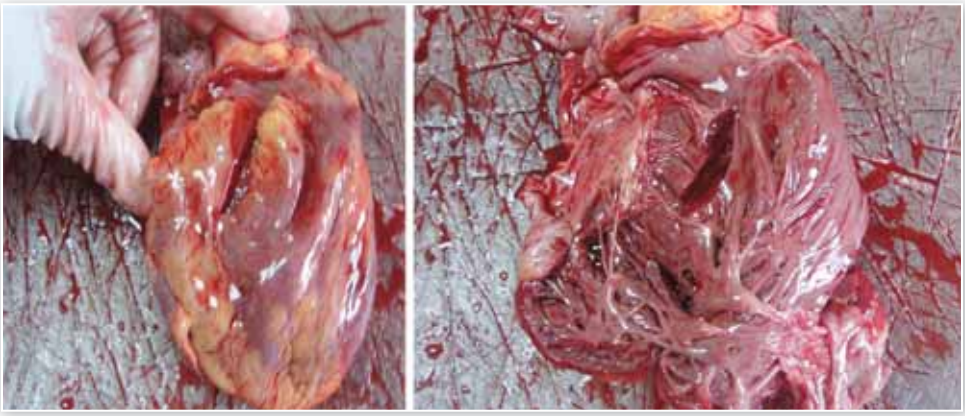

Figure 55 Stab injury over right ventricle due to light pointed sharp weapon

Blunt impacts to the chest can cause abrasions, contusions and lacerations to the chest wall, fractures of the ribs and sternum, contusions and laceration of the lung and heart **(Figs 56 to 62)**.

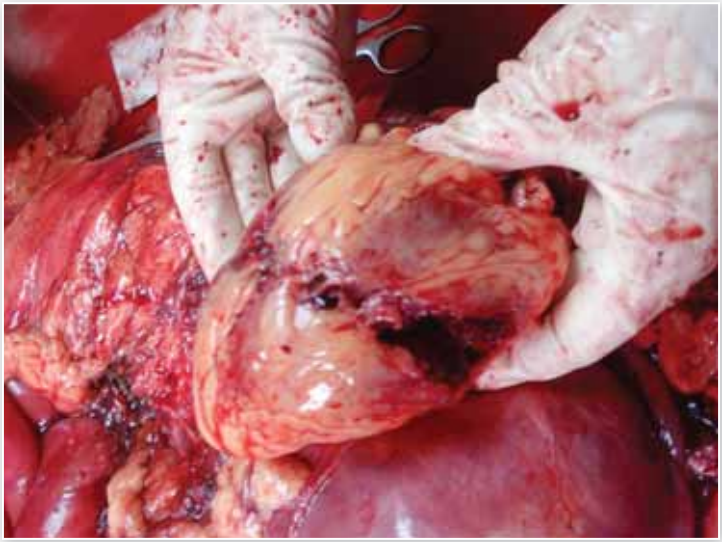

Figure 56 Laceration of left ventricle secondary to bullet injury

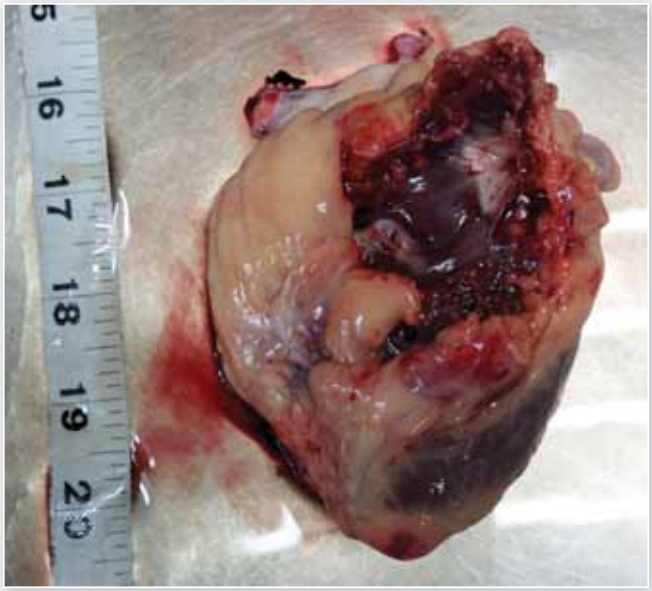

Figure 57 Laceration of left auricle

Figure 58 Laceration of right and left auricle with epicardial contusions

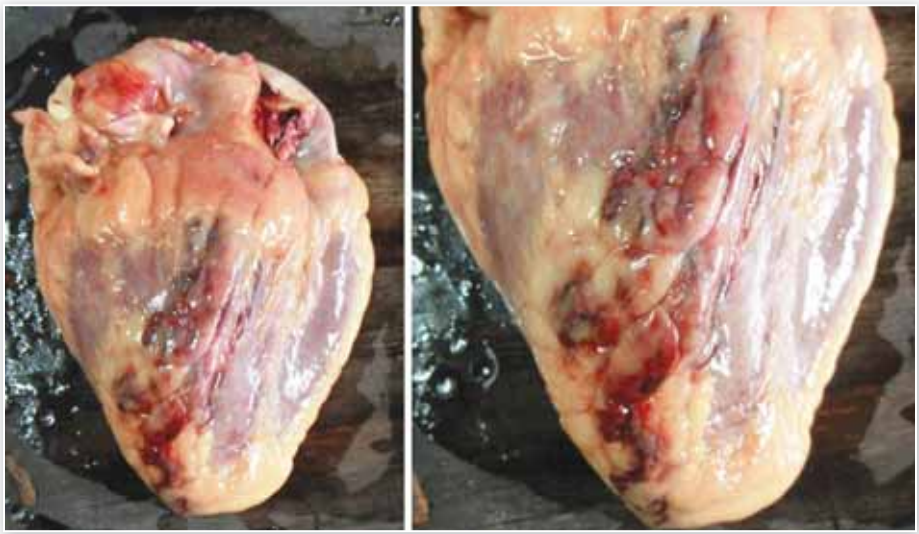

Figure 59 Contusion of apex of left ventricle following blunt force impact over the chest

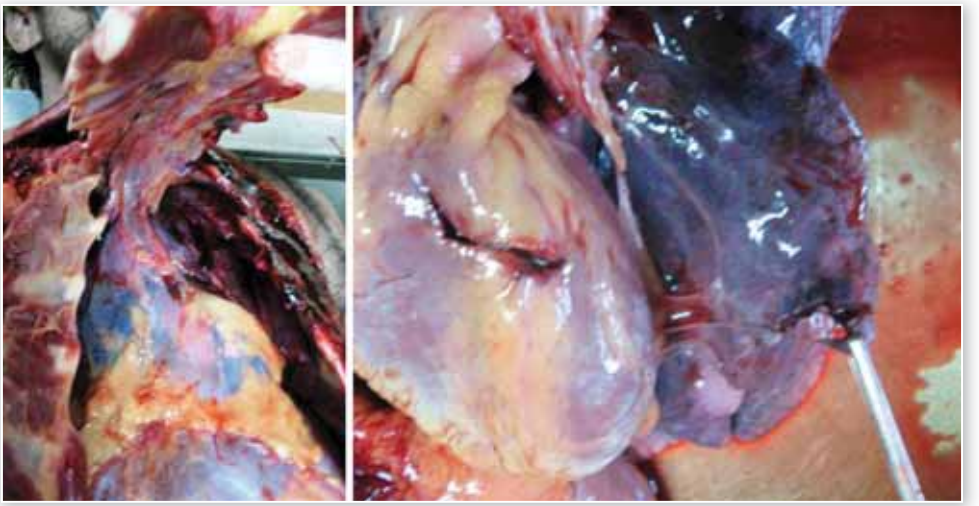

Figure 60 Stab injury to heart and left lung

Figure 61 Demonstration of hemopericardium by opening the pericardial sac

Figure 62 Laceration of right ventricle

Figure 63 Multiple lacerations of abdominal aorta associated with para-aortic contusion in a road traffic accident

Figure 64 Dissection of intercostal muscles for demonstration of fractured ribs

Figure 65 Stab injury over the left side of chest with fracture of 4th rib

Figure 66 Retroperitoneal hematoma and hemoperitoneum secondary to blunt force impact over lower trunk

Figure 67 Dissection of the scrotal sac demonstrating hematoma secondary to blunt force trauma

CHAPTER 7

Transportation Injuries

7a ROAD TRAFFIC ACCIDENTS

Pedestrian Injuries

Three pattern of injuries are seen:

1. **Primary impact injuries** by the vehicle striking the victim.
2. **Secondary impact injuries** due to the victim falling over the offending vehicle after the primary impact.
3. **Secondary injuries** due to the victim falling on the ground or any other object.

Bumper Fracture

Fracture of the tibia and fibula of one or both legs resulting from the impact caused by the projecting part of any vehicle.

Degloving Injuries

When a limb is run over by the wheel of a vehicle, the skin and subcutaneous fat may be dragged away from the deeper muscles with or without any break in the continuity of the skin, resulting in degloving injuries.

Pattern of Injuries to the Driver and Occupants of a Motor Vehicle

In motors car accidents, the injuries may vary depending on the position of the occupants. The unrestrained driver in frontal impact injuries can sustain lacerations to liver, lungs, heart and aorta due to steering wheel impact. The driver can sustain "Whiplash injuries" due to sudden hyperflexion followed by rebound hyperextension of the neck. The unrestrained front seat occupant and the driver are commonly ejected out of the windscreen [Ejection crash injuries] sustaining fractures of the skull and cerebral injuries. In forceful deceleration impact, the unrestrained rear seat occupants are either projected forwards or ejected out from the windscreen sustaining head injuries.

Dicing injuries (sparrow feet lacerations): Multiple punctate lacerations of the face are produced due to shattering of the windscreen glass into multiple small fragments with relatively blunt edges. They are relatively superficial **(Figs 1 to 3)**.

Figure 1 Multiple superficial lacerations over front of face due to windshield impact

Figure 2 Dicing injuries over lower half of right face and front of neck

Figure 3 Sparrow feet superficial lacerations due to windshield glass impact

Figure 4 Fracture-deformity of both legs

Figure 5 Crush- avulsed laceration secondary to run over by a heavy vehicle

Figure 6 Crush- fracture of lower end of left leg

Figure 7 Cut fracture exposing fractured ends of radius and ulna

7b RAILWAY MISHAPS

Railway injuries are commonly accidental or suicidal, rarely homicidal in nature. The bodies recovered from the railway mishap is always a big dilemma to the autopsy surgeon as to differentiate between antemortem and postmortem injuries, since the death is instantaneous in run over cases and the vital reaction will be minimal. The victim will be hit by a speeding train while crossing or walking along the railway line or jumping in front of it. During the impact, the victim will be thrown forward and sometimes run over. In such cases, the injuries sustained will be of a dismembering nature. It may be difficult to give any opinion if the body is decomposed or badly crushed and mutilated.

Figure 1 Crime scene of a railway mishap—a case of suicidal decapitation

Figure 2 Complete transection of the body at the mid-thoracic level

Figure 3 Complete transection of the body at the mid-thoracic level exposing crushed/greased muscles and underlying transected vertebral column

Figure 4 Amputation of the limb in railway mishap with degloving injury

Figure 5 Decapitation in a case of railway runover accident

Figure 6 Traumatic crushed hand with exposed underlying multiple fracture of carpal bones

Figure 7 Decapitation injury associated with gross flattening of the chest surface

Figure 8 Traumatic burst fracture of the skull with loss of brain matter

Figure 9 Traumatic crush injury involving head, face and upper half of chest

Figure 10 Penetrating injury of the chest due to impact by the projecting part of the railway engine

Figure 11 Traumatic amputation of the limb

Figure 12 Traumatic crush fracture of head and face

Figure 13 Traumatic crush amputation of lower limb involving knee joint

Figure 14 Crush fracture of the skull exposing the remnants of dura and brain matter

7c AIRCRAFT MISHAPS

Aircraft injuries can occur during the take-off, mid-air flight period, or landing. Injuries sustained in aircraft mishaps may vary accordingly. The injuries can be of acceleration-deceleration type, or smoke inhalation, and burn injuries. Bodies may be extensively burnt and charred if the aircraft catches fire. The primary aim of autopsy in such cases is to establish the identity of the charred remains.

Figure 1 Extensively charred human remains in an aircraft disaster

Figure 2 Charred body with multiple postmortem splits

Figure 3 Dismembered charred remains of a child

Figure 4 Extensively charred body in pugilistic attitude with multiple postmortem lacerations

Figure 5 Charred body with postmortem skull fracturs and cooked brain

Figure 6 Postmortem splits due to extensive burns

CHAPTER 8

Mechanical Asphyxia

Asphyxia in common parlance means 'lack of oxygen', but etymologically it means 'absence of pulse'.

Mechanical asphyxia results from any mechanical impediment to the airways or restriction of thoracoabdominal movements. Mechanical asphyxia can be classified into different types based upon the causative agent and location of the obstruction or restriction of entry of the air into the respiratory tract as:

- Pressure upon the exterior of the neck structures: Hanging, strangulation, mugging, etc.
- Obstruction of external air passages: Smothering and gagging
- Obstruction of internal air passages: Choking
- Restriction of respiratory movements of the thorax: Traumatic asphyxia, postural asphyxia
- Submersion deaths.

In complete hanging, the entire body weight acts as the constricting force around the neck, whereas in partial/incomplete hanging only a part of the body weight acts as a constricting force, as some part of the body is in contact with floor or any other object in standing, sitting, kneeling and reclining positions. In typical hanging, the knot of the ligature material will be located at the nape of the neck whereas in atypical hanging the knot will be located anywhere around the neck other than the nape **(Figs 1 to 10)**.

Figure 1 Complete typical hanging with the knot located on the nape of neck

Figure 2 Incomplete atypical hanging with the knot located on the right side of neck

Figures 3A and B (A) Incomplete atypical hanging with the feet touching the ground and the knot located on the right side of neck, (B) Close-up view showing the position of knot

Figure 4 Incomplete atypical hanging with the right upper limb resting on a cot and the knot located on the nape of neck

Figure 5 Incomplete atypical hanging with the left foot resting on a chair and the knot located on the right side of neck

Figure 6 A case of incomplete hanging from a shower faucet with early signs of decomposition

Figure 7 A case of incomplete hanging with evidence of postmortem blisters and purging

Figure 8 A case of incomplete atypical hanging with the knot on the right side of neck and the feet resting on the table

Figure 9 A case of incomplete atypical hanging with multiple loops around the neck

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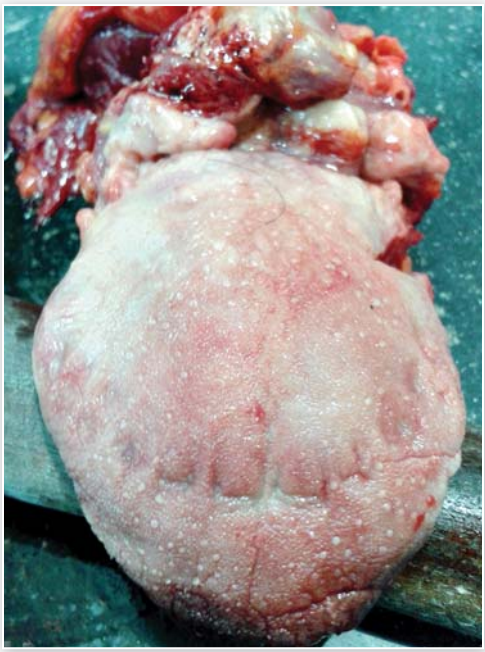

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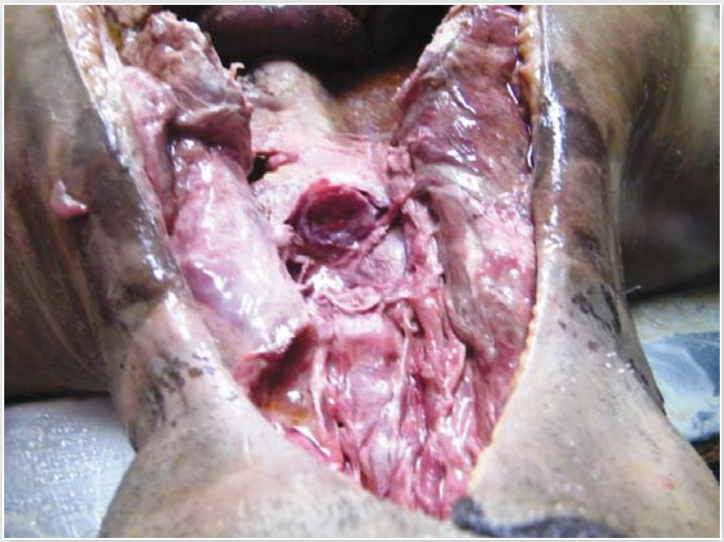

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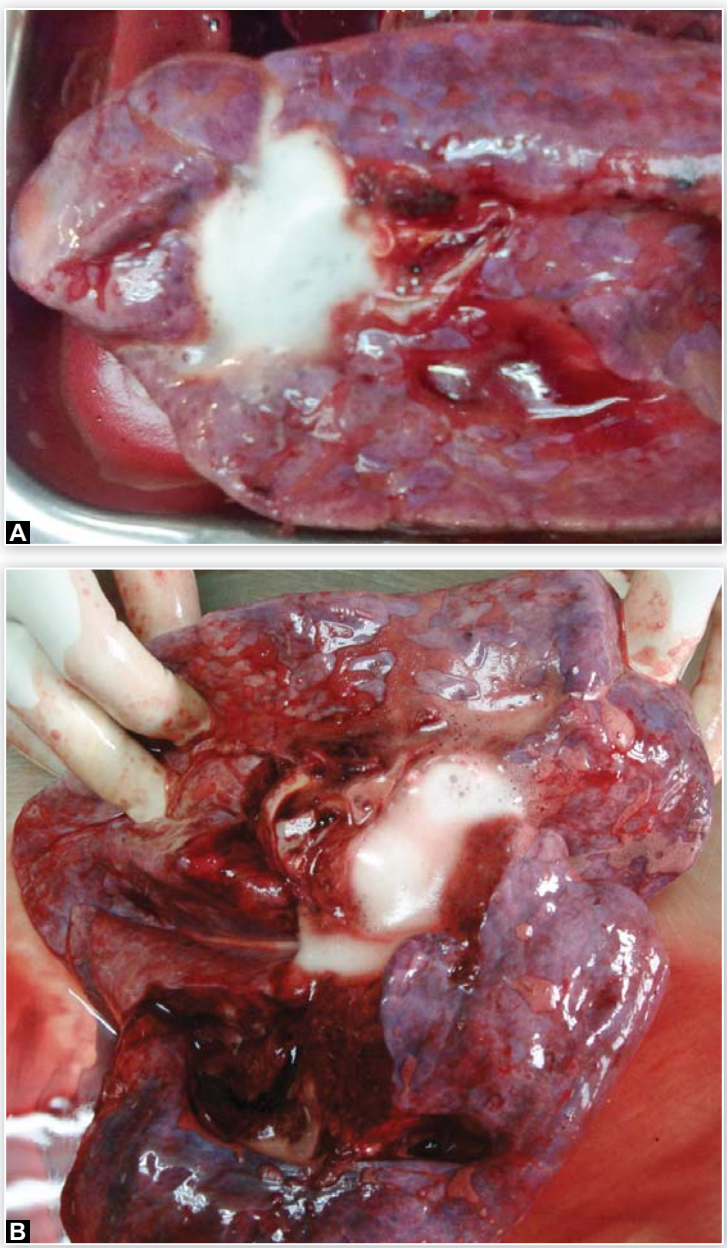

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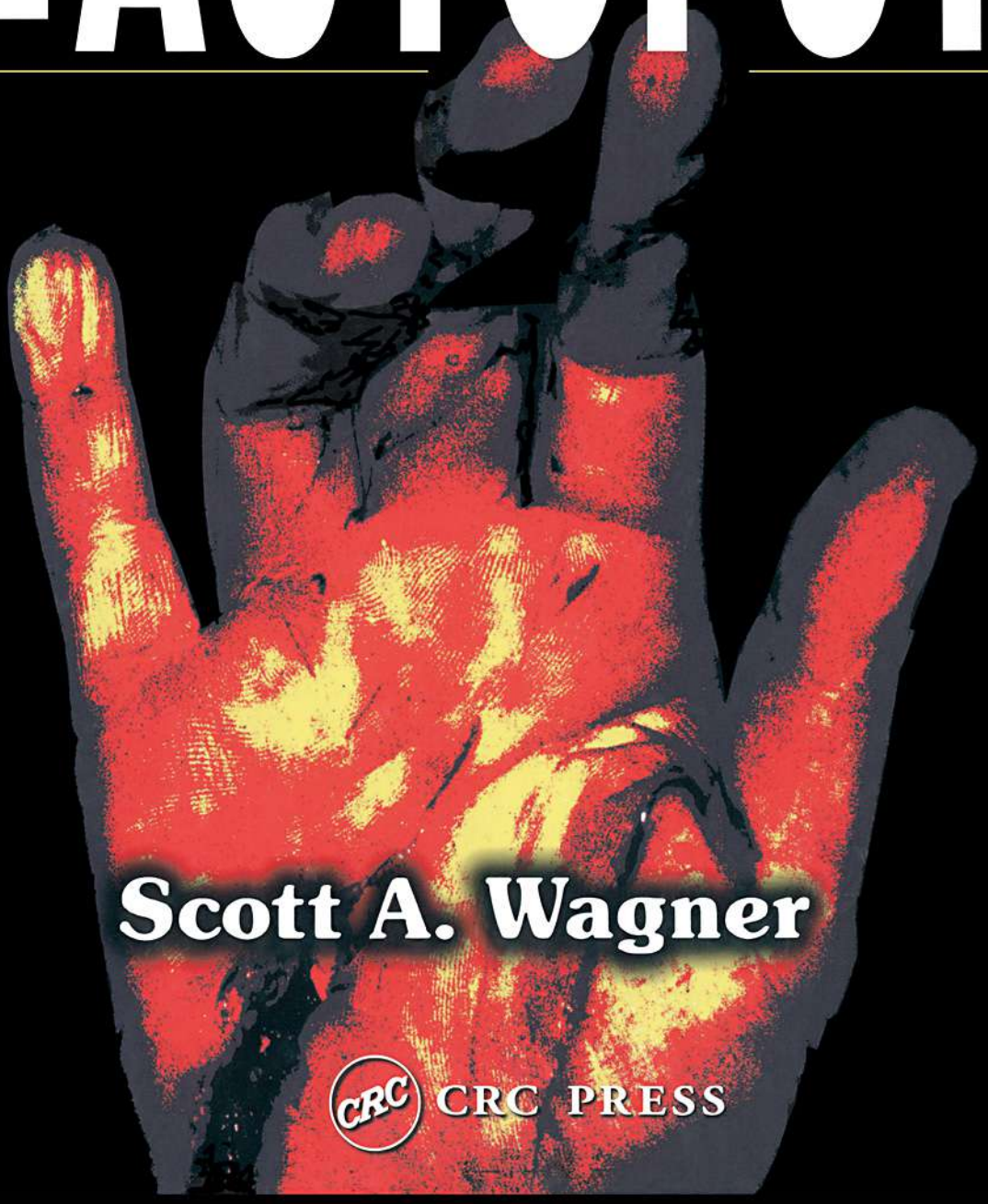

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1 Approach to the Autopsy: Purpose and Philosophy

"To the living we owe respect, but to the dead we owe only the truth."

Voltaire

WHAT IS AN AUTOPSY?

The autopsy answers the final question: Why did life pass from a specific human body? It is a question we have all asked when a loved one, friend, coworker, or even a public figure dies. The more untimely the death, the more tragic it seems, so many more questions arise. A wife asks why her healthy husband suddenly collapses and is unresponsive. Coworkers are puzzled as they watch a young bricklayer cry out in pain and fall to his death from a great height. An entire country wants to know how its president was assassinated. The autopsy serves to answer these and many other questions.

The autopsy is a complete evaluation of an individual's death and the circumstances surrounding that death. It includes a full examination of the body, and the autopsy has been called "the ultimate physical examination." This examination includes:

- A complete evaluation of the medical history and the events leading to death
- The collection and documentation of trace evidence on and around the body
- The photographing and cataloging of injuries
- A detailed external examination from head to toe
- An internal examination, including the dissection of organs and tissues
- A microscopic examination of organs and tissues
- Laboratory and toxicologic examinations of body tissues and fluids
- A written report detailing the pertinent findings, negative findings, and conclusions, including the cause and manner of death

A common misconception is to think of the autopsy as simply a dissection of organs. Yes, the autopsy involves dissecting organs, but it is a much more comprehensive study of a person's death. The dissection portion of the autopsy is only a part of the complete examination a pathologist performs. More than a simple medical procedure, the autopsy is a comprehensive consultation with the pathologist and part of a complete death investigation. Your family doctor takes the same approach. For example, you may go to your doctor because you are tired all the time and want to find out why. You know your doctor will listen to your heart and lungs, but you want him to do more because your sluggishness might not be caused by a heart or lung problem. You want the doctor to use any means available to find out why you are so tired. He might have to perform blood tests or x-rays or take a detailed history from you. The pathologist approaches the autopsy in the same fashion, finding all the medical facts, whether they lie in the medical history, dissection, or toxicology results. The facts obtained in the study of the problem are used to form opinions. The key opinions are usually the cause and manner of death.

The body of the deceased is treated with the same respect the pathologist would show his or her own loved ones. Except in unusual circumstances, the autopsy does not alter any viewable portions of the body. Only rarely are visitors to the funeral service able to recognize that an autopsy has been performed. One misconception is that the body is mutilated during an autopsy. This book will show that the autopsy is a precisely performed examination and dissection.

TYPES OF AUTOPSIES: HOSPITAL AND MEDICAL–LEGAL

There are two types of autopsies: hospital and medical–legal. Hospital autopsies are performed on inpatients of hospitals, upon the requests of families. Physicians cannot order these autopsies without permits signed by the next of kin. Autopsy permits often grant physicians permission to study only those body parts that might help answer a specific medical question or determine the mechanism of death. Most hospital autopsies are done in teaching hospitals, where the examinations are often quite detailed and are performed for institutional research and the education of medical residents.

Hospital autopsies are less common today than in the past for a number of reasons. The approximate $1500 to $2000 cost is not covered by Medicare or private insurers, so the expense is borne by the hospital or family. Hospital regulatory agencies no longer require autopsy quotas for accreditation, and more hospital deaths have come under the purview of the coroner and medical examiner systems.

Previously, physicians eagerly sought autopsies to gauge the quality of medical care and to gain medical knowledge. In today's legal climate, some physicians fear an autopsy might elicit facts that could be used in lawsuits against them. In the author's experience, the reverse is true — an autopsy generally demonstrates that the patient died of causes unrelated to the standard of care. Not performing an autopsy in this situation can lead to the worst assumptions, i.e., that poor medical care caused the death and that this substandard care is being covered up.

Medical–legal autopsies are performed at the behest of the medical examiner or coroner, who is required to investigate all suspicious and unnatural deaths (see the section "Unnatural Deaths"). In most states a board-certified pathologist must perform these autopsies. The aim of medical–legal autopsies is to obtain the cause and manner of death (see the following bulleted lists). Because medical–legal autopsies are comprehensive examinations that include a study of the central nervous system, they exceed hospital autopsies in scope. As medical science is increasingly able to prolong the lives of victims of severe trauma, more and more hospital deaths are coming under the jurisdiction of the coroner or medical examiner. Victims who, in past times, would have died at the scene or in the emergency room now either recover or die after a long hospital course. Since such traumatic deaths are considered unnatural, these cases fall under medical–legal jurisdiction.

The different aims of hospital and medical–legal autopsies are illustrated in the following example. A 92-year-old woman with significant cardiac disease falls down her steps and suffers a hip fracture. While convalescing in the hospital, she dies suddenly, 3 days after her accident and admission.

A hospital autopsy would focus on answering these medical questions:

- Did she suffer a myocardial infarction or a pulmonary embolus (mechanism of death)?
- If her hospital care had been different (e.g., if anticoagulants had been given more aggressively), could her death have been prevented?
- If she was given a new anticoagulant under a research protocol, was this new drug effective? (This involves evaluating new drug protocols.)

The medical–legal investigation and autopsy would focus on:

- The injury (cause of death).
- The hip fracture.
- How the injury occurred (manner of death): Did she trip (accident), or did she have a myocardial infarction before falling down the steps (natural)? If she were pushed down the steps, the manner of death would be homicide.

If it was shown that this woman slipped and fell down the steps, sustained a hip fracture, and developed blood clots that embolized to the lung after 3 days of hospitalization, the death certificate would read as follows — Cause of Death: pulmonary embolus due to fracture of the hip; Manner of Death: accident.

When pathologists are asked to do an autopsy, they use any means available or known to them to answer the questions posed by the death investigation. A major part of this examination is the autopsy procedure itself. This book will show that the autopsy is a complex and comprehensive investigation into the causes and circumstances of death. The investigation of death and the autopsy can take the pathologist into virtually any field of medicine, engineering, science, law, law enforcement, and many other disciplines.

WHAT IS THE PURPOSE OF THE AUTOPSY?

The fundamental function of the jurisdictional authority investigating the death, i.e., the medical examiner or the coroner, is also the basic purpose of the autopsy: to establish the cause and manner of death. An autopsy is done mainly to complete a death certificate and to register the vital statistics. The cause of death is the disease or injury that sets into motion the chain of events leading to the death. The manner of death is a classification system for deaths (natural, homicide, suicide, accident, and undetermined). A treating physician, coroner, medical examiner, or health officer can certify death without an autopsy. Autopsies are expensive, so the jurisdictional authority in charge of the investigation must be selective about choosing cases for autopsy. A coroner, medical examiner, judge, and in many areas the public health officer can order an autopsy without the consent of next of kin.

Autopsies are usually not required when the patient has been under the regular treatment of a physician for a potentially terminal illness, and in such cases the treating physician can certify the death. However, when a person dies suddenly, unexpectedly, or under suspicious circumstances, even while under documented treatment of a physician, an autopsy is usually required. Listed below are cases that nearly always require an autopsy. As one can see, virtually any death can come under medical–legal jurisdiction.

CASES THAT USUALLY REQUIRE AN AUTOPSY

These include the following:

- Homicides
- Suicides
- Accidents that occur on the job

- Drivers in single-car accidents (could be a suicide)
- Sudden, unexpected deaths of children
- Deaths of pilots in aircraft crashes
- Natural diseases that might impact the community (e.g., meningitis)
- Fire deaths
- Accidents caused by the negligence or reckless behavior of others
- Deaths of persons in custody of the State or other agency
- Accidents that occur without a witness
- Accidents in which natural disease is a factor
- Sudden, unexpected deaths of apparently healthy persons (usually younger than 75 years)
- Deaths in which the manner of death is not readily apparent
- Deaths in which litigation is reasonably expected
- Hospital deaths in which the quality of care is an issue
- All suspicious deaths

Natural Deaths

When a disease, a syndrome, or a combination of diseases is the primary cause of death, the manner of death is categorized as natural. Investigating natural deaths is significant to the coroner and medical examiner for at least two reasons. First, infectious diseases such as meningitis, human immunodeficiency virus (HIV), or hepatitis can be discovered and those who had contact with the deceased can be evaluated and treated. Second, inherited diseases can be diagnosed, so living and future descendants of the deceased may be helped if they have correctable medical conditions.

Natural is the most common manner of death. Apparent accidental deaths are often natural deaths, such as in cases when the driver of a vehicle suddenly swerves off the road and is found dead after only a minor crash. Myocardial infarction is a common cause of death in this situation. Finding a natural disease by autopsy in this situation is important for a number of reasons. First, the cause of the automobile crash is needed for accident reconstruction purposes. Second, life insurance policies often pay double indemnity if the manner of death is an accident. Third, alcohol and substance abuse are ruled out as causes of the crash. In the investigation of sudden, unexpected death, most individuals also are found to have died of natural causes, usually cardiac in nature.

Some deaths, such as from cirrhosis of the liver, are classified as natural, even if the cause is chronic alcoholism and even though the person willingly drinks alcohol and knows cirrhosis can result. This classification is done both by convention and presumably because the alcohol-induced cirrhosis develops over 10, 20, or more years. If a smoker with severe emphysema continues to smoke and dies from respiratory failure, this death would also be classified as natural. But if a person takes arsenic chronically, that death would be classified as a suicide.

Victims of homicides also have natural diseases. These diseases can accelerate death in some cases. In fact, an elderly man with severe heart disease might not survive the same gunshot wound that a young, healthy person would. Blood loss from a leg wound would be easily tolerated by a healthy 20-year-old, but an elderly man with cardiac disease might not survive the stress on his cardiovascular system and could develop a myocardial infarction. Since pathologists make no assumptions, we treat the cases of the elderly man and the younger man equally, and the manner of death is homicide in both. We do not blame or hold the victim accountable for his existing cardiovascular disease. The gunshot wound set into motion a chain of events that resulted in death. Even though the cardiac disease contributed to the death, the cause of death is the gunshot wound.

Unnatural Deaths

Autopsies are necessary in most unnatural deaths including homicides, suicides, accidents, and those deaths in which the manner of death cannot be classified with the available information (often termed undetermined, unclassified, or could not be determined). Unnatural death is not a manner of death, per se. In an unnatural death, even though the cause and manner of death might appear obvious at the scene, an autopsy is usually performed. In an accident, finding the cause of the accident is essential, and an autopsy is often a large part of that investigation. In an apparent suicide, *intent* to kill oneself must be demonstrated. In a homicide, evidence must be collected and injuries must be documented. Autopsies are always performed in homicides or apparent homicides.

Homicides

A homicide is the killing of another human being, either by commission or omission. Murder, manslaughter, and reckless homicide are legal terms referring to the degree of action in the homicide. Certifying a case's manner of death as homicide does not mean the perpetrator committed murder or will even face legal charges. Shootings and stabbings are the obvious homicides, but a policeman shooting a school sniper is an example of "justifiable" or "police action" homicide. A common question is, "Why, in the case of a witnessed homicide involving a single gunshot wound to the head, is an autopsy necessary?" Here are but a few reasons for an autopsy in such a case:

- To confirm the cause and manner of death; that which appears as "obviously" true to a layperson occasionally proves to be false upon examination by an expert
- To provide photographic evidence for court proceedings
- To obtain the bullet and match it to a purported gun
- To track a bullet through the body, e.g., the bullet might not have entered the brain, and the person was strangled instead by a second perpetrator
- To obtain trace evidence
- To obtain independent confirmation of statements because witnesses might die or change statements
- To obtain specimens from the deceased for toxicology studies
- To gather medical data for expert medical testimony
- To allow the forensic pathologist to explain direct observations, such as injuries, to the court and thereby act as a witness for the deceased
- To correlate the injuries and other observations on the body and the evidence with witness statements
- To generate a report for the defense and its experts to review
- Because the court and the jury expect that such an exam should take place, i.e., performing a complete autopsy in homicide cases is a legal and medical standard in the U.S.

For the above reasons and others, it is the duty of the forensic pathologist to conduct a full medical–legal autopsy so that no reasonable investigative question remains unanswered. A thorough job must be done even though the cause of death might seem obvious.

Suicides

Suicide is the independent, willful taking of one's own life. A suicide usually requires an autopsy. One good reason for an autopsy is to rule out a possible homicide that has been made to look like a suicide. A frequent theme in movies, television shows, and books, this unlikely possibility can seem like a real explanation to friends and relatives, who may find the suicide of a loved one to be a devastatingly emotional event. These well-meaning people can cling to alternative theories to explain the death, such as homicide or an unusual accident. The religious implications of suicide are so powerful in some faiths that families might never agree with the ruling of suicide. Families and friends have been known to remove important evidence from the scene, presumably to prevent the conclusion that the death is a suicide.

A common theme in all suicides is the intent to kill oneself. Demonstrating this intent can be difficult. Scene investigation involves a search for evidence of this intent, such as a rope constructed for hanging, the wired trigger of a gun, or a suicide note.

Accidents

Accidents also typically require autopsies. A fatal accident that happens on the job should have a full investigation, including an autopsy. Deaths at the workplace are usually investigated by the Occupational Safety and Health Adminstration (OSHA). Insurance companies might require an autopsy before paying benefits. In the death of a law enforcement officer on duty, an autopsy is an absolute requirement for the investigation and for the family to receive certain death benefits. An accident involving alcohol or drugs has criminal implications and should receive a full investigation, including an autopsy. Accidents resulting from negligence should also be investigated.

Occasionally, accidents can appear to be suicides, such as in autoerotic asphyxia. In this accidental form of death, the victim uses a ligature to enhance sexual arousal. The ligature compresses the jugular veins, stopping venous return to the heart and cutting off oxygen to the brain. If the victim slips or becomes unconscious, death can ensue within minutes, due to asphyxia. Also, intoxicated people can accidentally ingest an overdose or a lethal combination of drugs. Ultimately, it can be difficult to determine if the intent was suicide in such cases.

THE AUTOPSY: ASSEMBLING A PUZZLE

The essence of the autopsy involves working backward from one undeniable fact: a death has occurred. Forensic pathologists look back in time to the point when a disease or injury set into motion a chain of events that were ultimately, and tragically, fatal. An old axiom in forensic pathology is "one takes the victim as one finds him." This simply means that the pathologist starts at the beginning of the death investigation, with a deceased victim, and makes no other assumptions. Facts are determined based on the examination of the specific victim, with his or her unique set of circumstances, medical conditions, and injuries.

Forensic pathologists do not work in a vacuum, however. While collecting information from various sources, they interact with crime scene investigators and law enforcement, review statements of witnesses, examine the scene, and follow leads that the scene provides. Analysis of this information sets the foundation for the autopsy procedure and the final opinions of the pathologist including the cause and manner of death.

A comprehensive medical–legal autopsy has three phases:

1. Premorgue analysis
2. Morgue analysis, or the autopsy per se
3. Postmorgue analysis

Premorgue analysis involves assessing the facts of the death scene (including environmental conditions), witness statements, and the known circumstances surrounding the death. Morgue analysis includes examination of the body and the associated trace evidence. Postmorgue analysis occurs over the ensuing weeks to months and includes analysis of microscopic slides of tissues sampled during the autopsy procedure. Toxicologic, microbiologic culture, chemical, and other laboratory results are also reviewed in this phase and special forensic tests such as DNA identification are performed. Often, additional investigative information is acquired during this time period.

The facts obtained from all three phases of analysis are assembled like the pieces of a puzzle to form a picture of the person just before death. The forensic pathologist views this picture of assembled facts to render an opinion, most importantly the cause and manner of death. The pertinent assembled facts and opinions are included in a written autopsy report. Occasionally, pieces of the puzzle are missing. In such cases, the forensic pathologist must use his or her experience and training to fill in the missing pieces and render an opinion.

Since an opinion is formed by the facts at hand, if the facts change, so can the opinion. For example, initially a gross autopsy in a case of sudden, unexpected death might show severe coronary disease. Days later, when the toxicology analysis is reported and high levels of multiple drugs are found, the cause of death must be changed to multiple drug toxicity. Thus, the opinion given by the pathologist is based only on the known facts. If the facts are insufficient, the pathologist may have no opinion, and the cause and manner of death are ruled to be undetermined.

WHAT IS A FORENSIC PATHOLOGIST?

In the U.S., a forensic pathologist is a physician (M.D. or D.O.) who is board certified in pathology and forensic pathology. Board-certified pathologists have studied 4 to 5 years after medical school and have passed a board certification exam. Most forensic pathologists are board certified by the American Board of Pathology. Today, all forensic pathologists must take an additional fellowship year to study forensic pathology before sitting for the exam. For those of you who aspire toward a career in forensic pathology, that is 4 years of medical school, 4 to 5 years of residency, and an additional year of fellowship before you can begin the practice of forensic pathology.

A pathologist is a physician who specializes in the study of the laboratory diagnosis of diseases. For example, if your aunt had a breast biopsy for cancer, that biopsy was read under the microscope and the diagnosis was made by a pathologist. If you had a cholesterol analysis, a pathologist supervised that test and might have interpreted the result for your family doctor.

Forensic pathologists work in several settings. Most work for county, state, or federal governments in medical examiner jurisdictions. Medical examiners are often, but not always, forensic pathologists who are either appointed or elected to their positions. In some jurisdictions, coroners are legally compelled to perform the death investigations. Coroners are usually elected and may or may not be forensic pathologists, pathologists, or even physicians. The background and training of coroners across the country varies greatly. Nonpathologist coroners commonly include physicians, nurses, and funeral directors; they may have extensive backgrounds and experience, or no training or qualifications at all. The quality of these elected coroners, as with all elected officials, can vary from highly competent and experienced to inexperienced. In most states, these nonpathologist coroners must employ a pathologist to perform the autopsy portion of the death investigation. These pathologists are generally contracted to do the autopsy. This book will not explore the merits or problems with the death investigation system in the U.S. See the references for sources on that topic. In any event, the majority of autopsies in the U.S. are performed by either a pathologist or a forensic pathologist.

Courtroom testimony is an important facet of forensic pathology. The pathologist who has performed an autopsy on a homicide victim will undoubtedly receive a subpoena to testify in court. In such cases, the forensic pathologist is an expert witness. An expert witness is much different than a fact witness. A fact witness, for example, testifies about what he or she observed and gives the date and time this observation. Fact witnesses are not allowed to give opinions. Expert witnesses are allowed to give opinions to the court and to explain their answers. The pathologist must be qualified as an expert by the court. As an expert witness, a pathologist should be honest, speak loudly, and answer the questions the attorneys ask. The pathologist should remember that the goal is to explain his or her opinion to the jury, not to take sides or try to help the prosecutor or the defense. The pathologist is, in a sense, the "witness for the truth," or a witness for the deceased.

2 Circumstantial and Medical History

IDENTIFY THE PROBLEM AND "CHIEF COMPLAINT"

Doctors are trained to focus on the major problems or chief complaints that patients present. A chief complaint is the main reason a patient visits a doctor, and the patient wants the complaint investigated and cured. Shortness of breath and chest pains are common chief complaints. To investigate a complaint, a physician takes the patient's medical history, performs a physical exam, orders tests, and arrives at a final diagnosis. At this point, the chief complaint can be treated and solved.

In medical–legal death investigations, forensic pathologists focus on specific problems in much the same way. For example, consider the case of a person found with a gunshot wound to the neck. The major problem or chief complaint raised by detectives is, "Does this case represent a homicide or suicide?" Initially, direct examination of the wound might suggest a contact gunshot wound (Figure 2.1), supporting the theory of suicide. Yet, before the cause and manner of death can be opined, the forensic pathologist must gather and integrate information from the scene, the detectives, and the other investigators (similar to a doctor taking a patient's medical history). In addition, a complete physical exam (autopsy) and lab testing (of toxicology and microscopic slides) must be performed. The "doctor–patient" relationship has begun.

In order to address the complaint (diagnose the cause and manner of death), the pathologist must start by obtaining detailed facts about the circumstances surrounding the death. This information is known as the circumstantial history. The pathologist will talk to detectives to find out what witnesses, such as friends, family, or bystanders, saw or knew about the deceased and how he or she died. Detectives might discover that the deceased was under treatment for depression and had attempted suicide previously. The scene might reveal other facts consistent with a self-inflicted wound, such as the gun remaining in the hands of the deceased. A suicide note might be present. Soot and injuries from the gun mechanism might be on the hands and fingers (Figure 2.2). The pathologist uses this background information, history, and the examination of the body to render an opinion (final diagnosis) about the cause and manner of death. In this case, the history, scene investigation, and examination of the body allow the forensic pathologist to render the diagnosis — Cause of Death: gunshot wound; Manner of Death: suicide.

IDENTIFICATION OF THE BODY

Proper identification is essential for many reasons. For one, the death certificate is a legal document required for burial and obtaining death benefits. Also, since a death certificate is required to prosecute an offender in murder and related crimes, the identification must withstand a legal challenge. Correct identification is essential in homicide investigations for another reason: incorrectly identifying homicide victims can bring undue anguish to the victims' loved ones.

The highest order of identification is scientific, including DNA and fingerprint analysis. Dental identification is highly reliable as well. These and other means of body identification are described in the following.

Direct Identification by Family Members

Direct identification of the body by family members is not always reliable. Uneasy relatives might not take a good look at the body while in the morgue and may sheepishly agree to the identification. Family members simply may not recognize the body, as people look different dead, compared with the way they appeared when alive. The investigator commonly uses a photograph of the deceased to make an identification and also notes if the individual was found in familiar surroundings, such as his or her house or car. Although viewing the face in the morgue is a common method of identification, pathologists find it much more effective to have a friend or family member view a photograph or video of the deceased's body. People tend to be more comfortable looking at a photograph in an office than at a body in the morgue. They are also less likely to take a cursory glance of the face and make an erroneous identification.

Personal Features

Personal features serve to back up the identification. The deceased might have deformities, scars, tattoos, or piercings. Unusual dental appliances can be useful as well (Figure 2.3). Hair length, color, and style; eye color; height; weight; clothing; and personal effects are commonly used to make an identification. Personal effects found in the pockets, for example, can help confirm an identification (Figure 2.4).

Objects in the Body

Many people have metallic or other objects in their bodies that can be seen on radiographs. If comparison films are available, these objects can be useful in establishing identification. The more unique an object is, the more it facilitates a convincing identification. For example, bodies commonly contain a few staples around the appendix; but chest wires from open heart surgery are rarer and can establish identity more effectively, especially if the number of wires and their configuration match an individual's medical records (Figure 2.5). Large orthopedic rods in the back, particularly if the serial numbers on the rods are confirmed in the patient's medical records, can also be used to make a reasonable identification (Figure 2.6).

Higher-Order Identification

Higher-order identification is often needed when the deceased's appearance is altered in some way, such as from fire, decomposition, a mass-transit accident, and the like.

Fingerprints

Fingerprints are commonly used for identification, but finger ridges might be decomposed or burned away in the scenarios mentioned. Many of us have fingerprints on file somewhere; soldiers, veterans, law enforcement officials, gun permit holders, and those who have been arrested commonly have fingerprints on file. The Automated Federal Identification System is a nationwide computerized network that recently has made fingerprint identification easier and faster. The problem, of course, is that the unidentified individual's prints must be in the system.

It is essential to obtain fingerprints in homicides for several reasons. First, the identification must stand up to a legal challenge (Figure 2.7A, Figure 2.7B). Also, especially if the deceased's prints are not on file, the known prints of the deceased must be compared to those found at the scene. The scene prints could be from the victim or from the perpetrator. Failure to take the victim's prints leaves at least two unknowns: the victim and at least one perpetrator.

Dental Identification

Dental identification is the next step of identification if ridged skin on the fingers is gone or if the person does not have prints on file. The investigator must search for any dental records of the deceased. This is sometimes difficult, especially if the deceased had not seen a dentist in a while (or ever). Also, teeth might have fallen out over time or been extracted. Postmortem x-rays (Figure 2.8) or findings from direct examination of the teeth are compared with dental films (Figure 2.9) or other records (Figure 2.10) of the deceased created during his or her lifetime. These comparisons are made by a forensic odontologist, a dentist specializing in making identifications for medical–legal purposes.

Deoxyribonucleic Acid

Deoxyribonucleic acid (DNA) is a unique molecular fingerprint that can identify an individual with a certainty estimated at one in the billions. DNA is a powerful tool if used correctly and proper procedure is followed. The sample must be collected so that there is no question of contamination. In decomposed bodies, bone marrow from teeth, ribs, or vertebrae often, but not always, yields useable DNA. There must be other DNA to compare it with, either from the deceased, a sibling, a child, or another relative. DNA or fingerprints from the deceased can be obtained from personal items, such as a hairbrush.

INVESTIGATIVE QUESTIONS

The investigation of death begins a process of answering key pertinent questions. These are questions asked by the state, courts, law enforcement, doctors, families, society, and many others. Questions not answered in the initial investigation might be answered by the autopsy. The autopsy, or evidence collected at the autopsy, usually spurs further investigation. Some questions are easily answered, some are difficult to answer, and at times some go unanswered.

Basic Demographic Questions

The following demographic information is collected:

- Full name
- Date of birth
- Social security number
- Sex
- Date of birth
- Address

Question of Occupation

It is important to know the occupation of the deceased before death, particularly in accidental deaths; for example, if an apparently electrocuted man was a certified electrician or a weekend repairman (Figure 2.11).

Question of Medical History

Knowing the medical history of the deceased is essential not only in natural deaths, but in all manners of death. Apparent accidents could be determined to be natural if disease was the cause of death, for example. Family members, friends, caretakers, and doctors are often most

helpful in providing medical information. Examining medications at the residence is helpful, particularly when no other information is available. Since most deaths are natural, coroners' and medical examiners' offices spend a lot of time gathering medical information. Medical records provide a wealth of information in many death investigations (Figure 2.12).

Question of Medications

Medications are often the key to finding the cause of death. Many diseases can be lethal when the patient stops taking medication. Epilepsy, diabetes mellitus, and unstable angina are common conditions that can become quickly fatal if one does not take medication properly. Conversely, medication overdoses (accidental or intentional) are also common causes of death. At the beginning of the investigation it is helpful to obtain all medication vials, check the dates prescriptions were filled, and then determine if the number of pills missing matches the prescription instructions (Figure 2.13).

Question of Mental Health History

Psychiatric history should be actively sought. Previous suicide attempts, a history of severe mental illness, and medications might explain suicidal or bizarre behavior. For example, schizophrenics who do not take their antipsychotic medications can become overtly psychotic and exhibit dangerous, even fatal behavior.

Question of Illicit Drug Use

Drug use and drug-seeking behavior place individuals at high risk for violent death. A history of abuse of a specific drug helps direct autopsy toxicology. Cocaine, for example, has a short half-life in the blood, but traces can be found in bile for a longer time. A special bile cocaine test can be ordered if cocaine use is suspected.

Question of Ethanol Use

As the reader probably knows, a large proportion of cases that fall under the purview of the coroner or medical examiner involve a history of ethanol use. Acute alcohol toxicity is death from drinking excessive alcohol in one sitting (the blood alcohol concentration is greater than 0.40% or as low as 0.25 to 0.30% if the individual survived as comatose for some period; see Di Maio and Di Maio, 1989). Chronic alcoholism causes cirrhosis of the liver, and death often results from bleeding esophageal varices or other medical complications. In chronic alcoholics, a halt in the intake of alcohol can cause delirium tremens, seizure, and death. Alcohol intoxication decreases judgment, reaction time, and other mentation; it also diminishes motor skills. These effects of alcohol are often a factor in all types of deaths — homicide, suicide, accident, or natural.

Question of History with Law Enforcement or Incarceration

Law enforcement officials will usually provide this history to the pathologist, if the information is available. Past incarceration for drug charges, for example, can be helpful. Previous incarceration means that fingerprints and photographs are available, which are useful in confirming the identification. Outstanding arrest warrants might help explain a suicide.

Other Investigative Questions

Through the investigation and the subsequent autopsy, the goal is always to answer the numerous other questions that arise, including the following:

- What was the date and time of death?
- What was the location of death?
- When and where was the deceased last seen alive?
- When and where was the deceased injured?
- What was the location and position of the body at death?
- How was the deceased injured and killed?
- What killed the deceased?
- Who killed the deceased?

At times, the questions are only partially answered.

FIGURE 2.1 Hard contact entrance gunshot wound. The patterned abrasion at 10 o'clock and the red abrasion ring around the wound were produced by the gun barrel and sight contacting the skin when the gun was fired. Around the wound is heavy soot, the black material. The finding of a hard contact wound on the chest of this individual supports the theory of suicide.

FIGURE 2.2 Gun-induced laceration and soot deposition on the hand. The mechanism of the pistol produced a laceration of the hand. Soot was also deposited on the hand and fingers. These findings indicate that the gun was in the hand of the victim and supports the theory of suicide.

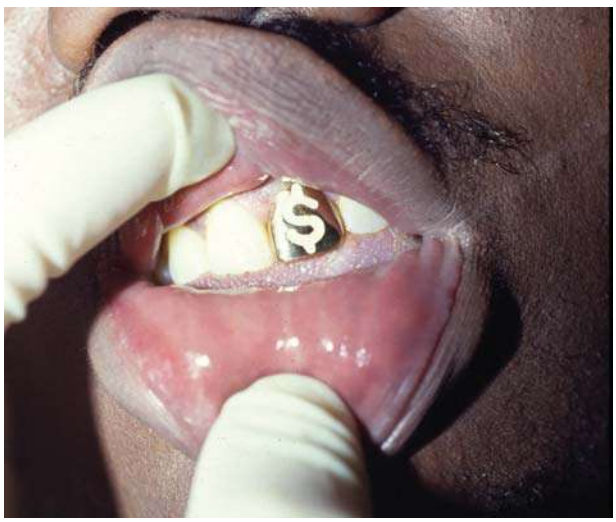


FIGURE 2.3 Dental cap. Unique dental appliances are often useful in helping confirm the victim's identity.

FIGURE 2.4 Keys found in victim's pocket. Personal effects that are unique can help confirm identity. These keys were marked with a unique serial number, registered to the individual (numbers were sanitized).

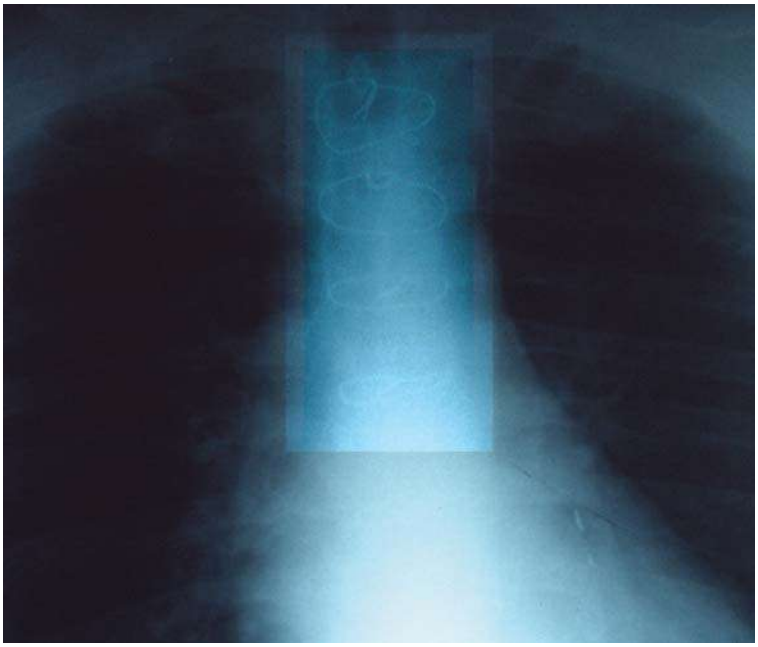


FIGURE 2.5 Radiograph of surgical sternal wires. Surgical wires and devices, when somewhat unique, can aid in identification when old comparison films are available.

FIGURE 2.6 Radiograph of spinal rods. Unique surgical appliances are useful in making an identification. Radiographs of the body can be made for comparison. Also, serial numbers on the devices can be compared with previous medical records.

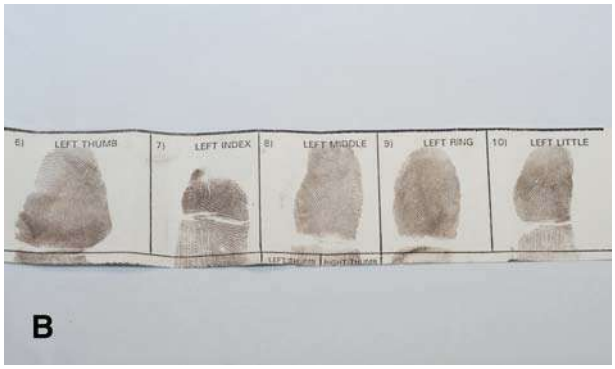


FIGURE 2.7 (A), (B) Postmortem fingerprints. It is essential that experienced technicians obtain postmortem fingerprints in all homicides or potential homicides.

FIGURE 2.8 Skull radiograph with dental amalgam. A lateral skull film, as shown, or multi-angle "panorex" films can be compared to premortem films. Such a comparison and identification are the exclusive purview of the forensic odontologist.

FIGURE 2.9 Premortem dental radiographs. Premortem radiographs obtained from the dentist of the purported victim are compared with autopsy dental radiographs.

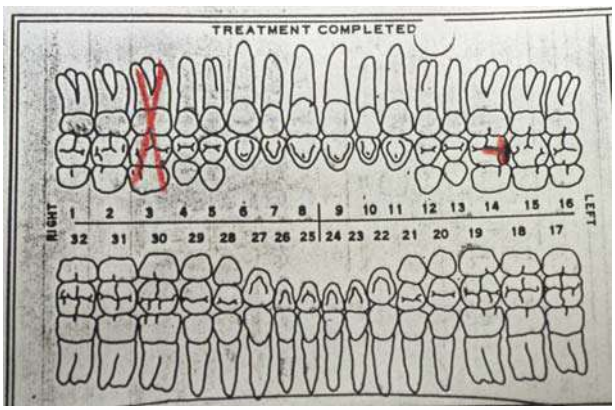


FIGURE 2.10 Premortem dental charts. Premortem dental charts can be compared with the teeth at autopsy to make an identification.

FIGURE 2.11 Electrical injury, fingertip. The point of entry or exit of electrical current traveling through the body is often burned. A history of an electrician working on electrical equipment can prompt a search for such an injury. The sole of the foot is another common site of electrical injury.

FIGURE 2.12 Medical records. The time spent studying medical records is not wasted. One learns a great deal about the deceased and his or her medical problems. Medications, allergies, previous surgery, social history, and other "pearls" are there to direct the investigator or the pathologist in finding the cause of death.

FIGURE 2.13 Medications at a death scene. The prescription medications at a death scene can tell a story of an individual's medical history. Diltiazem and medications to lower high blood pressure indicate hypertension and ischemic heart disease. Theophylline and other related respiratory medications suggest chronic obstructive lung (pulmonary) disease (COLD or COPD); a recently filled broad-spectrum antibiotic indicates a recent infection.

3 External Examination: The Preliminary Examination

SUITING UP: UNIVERSAL PRECAUTIONS

Protection of the pathologist, autopsy assistants, investigators, and medical personnel at the autopsy is not just a good idea — it is required by Occupational Safety and Health Administration (OSHA) regulations. The required methods of protection are called universal precautions. To perform an autopsy, the pathologist and the assistant wear hats, masks, gowns, shoe covers, mesh gloves, and latex gloves (Figure 3.1). Some facilities use vacuum-assisted saws to gather bone dust from skull and rib sawing. All cases are treated as potentially infectious from bloodborne pathogens. Although pathologists handle those cases known to be infectious with care, they must not be casual about the routine case that can harbor a latent hepatitis virus or human immunodeficiency virus (HIV), for example. All cases need to be treated as potentially infectious.

OPENING THE BODY BAG

Once everyone is properly suited up for protection from bloodborne pathogens, the body bag may be opened. Identification tags are placed on the body and the bag at the scene. Tags placed on the outsides of bags can be lost, so tagging the body directly is essential. The body is placed in a clean plastic body bag (Figure 3.2). Some pathologists recommend that the body be wrapped in a clean white sheet, since trace evidence can be lost in the large body bag. This sheet is carefully examined at the autopsy.

The hands of the deceased are also bagged (preferably with paper bags) at the scene in suspicious deaths. Trace evidence has a higher chance of being on the hands, presumably because the victim grabs or contacts the perpetrator in some way that transfers trace evidence, such as hair, skin, or grass, to the victim's hands (Figure 3.3). In practice, successful retrieval of useful trace evidence from the bagged hands is not very common. However, the one case of many that yields a DNA match or fiber match makes bagging the hands in every case worthwhile. Also, bagging the hands is usually expected by juries and courts. If the hands are not bagged, defense attorneys can use this omission to cast doubt on the thoroughness of the entire death investigation.

CLOTHING AND VALUABLES

The clothing of the deceased is also evidence and may contain additional trace evidence. To protect all evidence from contamination or loss, and for practical reasons, the clothing is not removed in the uncontrolled environment of the scene. An exception to this rule is made in rare cases when moisture could alter a substance on the clothing; for example, condensation may form in the body bag when the body is placed in a cooler.

The clothing can be quite helpful in a death investigation, since it is intimately associated with the body. For example, the range of fire in a gunshot wound is often determined from a shirt the victim was wearing when shot. Unburned particles from the weapon will tattoo the bare skin. If clothing intervenes between the weapon and the skin, the majority of the unburned particles form a pattern on the clothing, with very few particles going through the clothing to the skin (Figure 3.4). This clothing can be analyzed by a forensic scientist, who can estimate the range of fire of the weapon and the width and configuration of the pattern correlated to the distance of the shirt from the weapon. With rare exception, clothing should not be altered, removed, or cut at the scene, and it should not be cut at all in a homicide case. Clothing can contain unusual evidence (Figure 3.5), and therefore should be carefully removed in a controlled environment.

To save the life of an individual, clothing is often cut, altered, or removed at the scene of a violent death by first responders, such as paramedics. Removing the clothing is part of the routine examination of the patient, especially a victim of trauma. If the body is removed from the scene and taken to the hospital, the body is often fully undressed, possibly irreversibly altering, losing, or contaminating any trace evidence. Hospital personnel must save the clothing so that the death investigation agency can retrieve it. Even if cut, removed clothing can be valuable in determining gunshot distance, for example. First responders to the medical emergency must be careful not to destroy evidence when suspicion of violent death or injury exists. Obvious bullet holes or other significant evidence on clothing should not be cut or altered if possible. Figure 3.6 shows a cut in the middle of a garment made by first responders who appropriately avoided the gunshot wounds.

BODY STORAGE

The body must be stored in a secure cooler, preferably under lock and key (Figure 3.7). Only a limited number of individuals should have the key. A complete log sheet of the body arrival time and all encounters with the body should be maintained indefinitely. This log should include all valuables found on or with the body. Any personal item that is not considered to be evidence should be logged, described, and retained for the family. Items that appear to have no value to the investigator might have value to the family, so care of these items is recommended. Once lost, cheap trinkets can become "expensive jewelry" (Figure 3.8). Valuables can also become evidence. The watch in Figure 3.9 was broken by a golf club used to attack the victim. It was thought to have been broken at the time of the assault, a rare occurrence that makes the watch a valuable piece of evidence.

TRACE EVIDENCE

For the purpose of the autopsy, trace evidence is any visible or invisible substance, material, or object that is present on, in, or around the body and has potential value as evidence. Obvious trace evidence that might be lost in transport can be collected at the scene. Common objects collected at the scene include hair, small fibers, or paint flakes that could easily be lost. Since scene lighting is often poor and the setting inappropriate, trace evidence is best taken at the autopsy suite (Figure 3.10). One method of preparing the body for transport is to drape a clean sheet over the body and then place it in a clean body bag.

FOUR SIGNS OF DEATH

Rigor Mortis

Rigor mortis is the temporary stiffening of muscles after death. The muscle proteins actin and myosin lock together, making the muscles stiff. This process is an irreversible chemical reaction. Immediately after death, the muscles become limp or flaccid. Generally within 30 minutes to 1 hour, the muscles begin to stiffen. Rigor mortis starts in all muscles at the same time. However, because muscle groups vary widely in size and mass, rigor mortis is noticed in the smaller muscles first, namely the jaw and the fingers. Within 3 hours, rigor mortis is noticed in nearly all muscles. Full rigor mortis, the peak stiffness of all muscles, can take up to 10 to 12 hours to develop in an average-sized adult at a temperature of about 70˚F (Figure 3.11). Rigor continues for 24 to 36 hours until decomposition starts to loosen the muscles.

Environmental conditions greatly influence the rate of rigor mortis onset. Warm temperatures accelerate rigor, while coldness retards it. Decedents with high body temperature or fever at death show accelerated rigor. In fact, vigorous exercise, emotional rage, and some drug toxicities such as with cocaine abuse are associated with fast or nearly instant rigor mortis.

Once the muscle is stiffened, it will remain so until the rigor mortis is broken by manipulation of the muscle or until decomposition occurs. Breaking the rigor is most commonly demonstrated by straightening the arm or leg of the body.

Observing rigor mortis can be useful if a body has been moved after death. For example, a decedent who was killed in a sitting position, left in that position for 3 hours, and then moved will retain the stiffened sitting position. Also, rigor mortis can be used along with the other signs of death to estimate the time of death.

Algor Mortis

Algor mortis is the cooling of body temperature after death. During life, our metabolism holds the core body temperature constant at about 98.6˚F. Death and the loss of metabolism allow the body to eventually assume the temperature of the environment. Therefore, if the outside temperature is 110˚F, the body temperature will increase. In forensic pathology, it is generally accepted that at the standard temperature of 70˚F between about 2 and 12 hours after death, the body cools at a rate of 1.5 degrees per hour. After about 12 hours, the body temperature equals that of room temperature. It is more difficult to predict the time of death at the scene, however, because these ideal conditions are not always present.

Core temperature can be taken rectally or by inserting a probe-type thermometer into the liver. These practices require full-time death investigators, not often available in small jurisdictions. In many jurisdictions, an experienced investigator can evaluate the body for warmth to the touch, a method often more practical at a busy crime scene (because the body usually is dressed and the body wall is not punctured to reach the liver). Conditions in the field are rarely those of standard temperature and humidity. Factors such as air temperature, clothing, body mass, and premortem hyperthermia or hypothermia can alter the rate of cooling. If the environment is warmer than the premortem body temperature, the core temperature can increase.

Livor Mortis

Livor mortis is the gravity-dependent settling of blood into the blood vessels and soft tissues after death. When blood is no longer pumped by the force of the heart, it follows the force of gravity and pools in the dependent areas of the body. Vascular tone is lost after death as well, causing the blood to leach out of the small vascular channels and into the surrounding tissues. Since most decedents are

placed in a supine position (on their backs), the livor mortis settles in the posterior surface of the body (Figure 3.12). Areas that touch the autopsy table show a clearing of the livor. Generally, livor mortis first becomes visible between 20 and 30 minutes after death; it can shift or be cleared for about 8 to 12 hours. These times can vary widely. Since livor is observed visually as blood in the tissues, anemic individuals or those who have died from severe hemorrhage may have little or no livor. In dark-skinned individuals, livor mortis can be difficult to see. In such cases, internal organs such as the lungs can be used to assess livor.

Livor mortis that is not "fixed" can be cleared with manual pressure (Figure 3.13A, Figure 3.13B). Any object resting against the downward portion of the body can form a pattern in the livor mortis (Figure 3.14). If a body is moved before the livor is fixed, the livor can shift, forming a second pattern. Two livor patterns on a body can be useful in predicting the movement of a body after livor mortis has formed (Figure 3.15A, Figure 3.15B).

"Fixed" livor mortis cannot be cleared with manual pressure. Between about 10 and 24 hours after death, the blood stains the tissues and is increasingly difficult to clear. Livor can shift after 10 hours, but this shifting is more difficult to see. A body found in water often has no livor mortis pattern since the body was in a zero-gravity situation and was moving and tumbling frequently.

Decomposition

Decomposition is the late advancement of postmortem tissue breakdown. Once released by dying cells, enzymes begin the autolysis process, causing mostly a liquefaction of the tissues. Bacteria, mostly from a nonsterile area of the body like the gastrointestinal tract, multiply rapidly, producing gas and further consuming the devitalized tissue.

Early in decomposition, the skin becomes a discolored purplish-green and might blister and "slip" (Figure 3.16). Blood in the vessels stains the soft tissues (Figure 3.17), creating what is referred to as "venous marbling." The hair begins to slip as well. Discolored tissues begin to swell due to the formation of gas produced by bacteria in the tissue. The odor from this gas is putrid and unmistakable. The discolored tissues can be mistaken for injuries by the untrained eye (Figure 3.18). This "gas bloating" can be quite remarkable when a body found in water is removed (Figure 3.19).

Decomposition is very dependent on environmental conditions. Bodies that are frozen can be preserved for a long time. Because cold temperatures preserve tissues, bodies are stored in the morgue cooler at about 38 to 42°F, and decomposition can be slowed for days to weeks. Warm temperatures hasten decomposition, as does high humidity. Hot, dry conditions cause mummification, or the drying out of tissues (Figure 3.20).

Insects, carnivores, and other invaders can speed up the decomposition process. Forensic entomology is the study of insects as they relate to death investigation. For example, fly larvae can be obtained at the death scene, identified, and reared in incubators. The postmortem interval (time of death) can be estimated based on the fixed-time growth cycles of the fly larvae (Figure 3.21).

FOCUS ON WHAT IS NOT OBVIOUS

The external examination of the deceased is a focused head-to-toe examination of the body. This exam is similar to a physical exam one might get from a physician. All parts of the body are examined, from the hair on top of the head to the toenails. The pathologist spends as much time on the external exam as on the internal exam and is always looking for trace evidence on the skin and clothing and in wounds or orifices of the body. The logical tendency would be to focus first on the obvious gunshot wound or gaping laceration, but the pathologist focuses on the other areas of the body first and then on the obvious injury. Most pathologists use a systematic examination process to make a detailed survey of all systems, being careful not to overlook any area of the body (Figure 3.22).

When examining an organ, a tissue, or a region of the body, the pathologist looks for:

- Traumatic injuries, both old and new
- Natural disease processes, such as tumors or atherosclerosis
- Congenital defects or deformities
- Toxicologic, thermal (burns), and chemical injuries
- Trace evidence
- Infectious disease processes
- Anything abnormal, unusual, or unexpected

DOCUMENTING TRAUMATIC INJURIES: DIAGRAMS AND DESCRIPTIONS

Documenting injuries is one of the principal goals of the forensic autopsy. The body is assessed from head to toe. The injury is examined from the outside of the body to the inside and is photographed, measured, diagrammed, and described. The autopsy records must accurately depict an injury, both in a written, descriptive manner and in visual form. Diagrams and sketches are generally drawn when notes are taken; however, since most pathologists are not artists, photography is the professional standard in documenting significant injuries (Figure 3.23). It is essential that the significant injuries are well documented, both by descriptions in the report and by photography. Because another expert will likely review the pathologist's documentations in court, the forensic pathologist has an ethical

duty to accurately document his or her observations. Failure to document can also cause potential difficulties in court, since defendants are legally allowed to examine the evidence against them.

RADIOLOGY AND IMAGING

In the autopsy suite, radiographs are primarily used in routine cases to:

- Evaluate gunshot wounds to locate and enumerate bullets, bullet fragments, and other metallic objects (Figure 3.24, Figure 3.25).
- Examine stab wounds or puncture wounds. Occasionally a portion of a knife, scissor, or other sharp metallic object will break off when bone is struck (Figure 3.26, Figure 3.27).
- Identify the deceased. Jaw radiographs are compared with dental records of the purported victim. Unique metallic implants, such as rods in the back, can aid identification (Figure 3.28).
- Investigate possible child or elder abuse by looking for subtle or healed fractures (Figure 3.29).
- Find evidence in unusual deaths, such as those from explosions or plane crashes (Figure 3.30).
- Examine severely charred or decomposed remains for hidden objects like bullets and clues to identification (Figure 3.31, Figure 3.32).
- Document characteristic fractures, such as a "nightstick fracture" of the forearm, a classic blunt force injury sustained as the victim holds up his or her arm to block a nightstick attack (Figure 3.33, Figure 3.34, Figure 3.35).

The autopsy is much more sensitive than the radiograph in exposing fractures of certain areas, such as the skull, ribs, or hyoid bone, because the bone is directly visualized during autopsy. When viewed during autopsy, hemorrhage resulting from a fracture enhances the visibility of the fracture (Figure 3.35). The radiograph is simply a tool to supplement the autopsy. Radiographs and other methods of imaging have many more uses in forensic pathology; see the references for further information.

PHOTOGRAPHY AND VIDEO AS DOCUMENTATION TOOLS

As mentioned, in addition to describing findings in a detailed written report, the pathologist must visually document pertinent injuries in cases of medical–legal significance. Over the last several decades, 35-mm photography of key injuries like gunshot wounds has been the gold standard documentation tool. Today, digital photography is accepted by many courts. Generally, to be accepted by the courts, the photographs must be true and accurate representations of what was seen during the autopsy examination.

In homicide cases, pictures are taken of nearly every step of the autopsy, from opening the bag to documenting the last injury. Injuries are photographed both before and after the wounds are cleaned. It is crucial to clean the wounds to remove blood or debris. Only then can the true configurations of the wounds be revealed (Figure 3.36, Figure 3.37). Also, the wounds must be clearly demonstrated for another pathologist-expert to review. A jury will probably view the photographs, and a key job of the pathologist is to explain injuries to the jury. Pictures that display the injuries poorly do not aid in this communication. Bloody, unclear, or unnecessarily grotesque photographs will probably not be admitted into evidence by the court.

Although commonly used in crime scene investigations, videotapes of the autopsy have not been used widely in the past, mainly because of the poor resolution of VHS and other common videotaping systems. High-resolution digital video shows much better detail. Still pictures of good quality can be produced from the footage, and the quality will continue to improve as high-definition digital video becomes widely available. Three CCD (charge-coupled device) high-quality video is a useful documentation tool in complex cases with many injuries (Figure 3.38). The cameras are light, inexpensive, and do not require special lighting. Many of the images in this book are three CCD video still photographs (e.g., Figure 3.1). If video of a forensic autopsy is taken, shots of evidence and injuries should be of the same type as those taken with a 35-mm camera, but should also include multiple perspectives. Shots from many different angles are very useful to the viewer when there are many or complex injuries. Videotape of the entire autopsy, however, is not a useful tool, in the author's experience.

SCARS, TATTOOS, AND OTHER UNIQUE MARKS

The skin bears many marks, some unique and some not. These marks can tell us a great deal about an individual. A scar in the middle of the chest (Figure 3.39) can indicate a patient with severe coronary artery disease that required cardiac bypass grafting. A scar in the midline abdomen may indicate previous exploratory surgery (Figure 3.40A and Figure 3.40B). Specific finger, leg, arm, or other deformities can help identify an individual (Figure 3.41). Unique tattoos or those in a certain location or combination can also be helpful in identification (Figure 3.42).

ARTIFACTS OF MEDICAL INTERVENTION

Medical devices can give the pathologist an idea about resuscitative or interventional procedures that have been performed on the deceased. Although these devices can move or become dislodged during transport of the body, they should be left in place by the nursing staff and others who are responsible for preparing the body. Incisions made for chest tubes, for example, could be misinterpreted as stab wounds once the tubes are removed (Figure 3.43). Needle puncture sites from intravenous (IV) therapy can be difficult to differentiate from IV drug abuse sites or fresh "tracks" (Figure 3.44). Therefore, the pathologist must review the medical record and compare it with what is found on the body.

Sometimes medical devices reveal information about the impacts of resuscitation attempts that is not written in medical records. These medical devices and their impacts on a body may affect the findings of an autopsy. For example, central intravascular lines can be responsible for vascular tears and pneumothorax; endotracheal tubes can be placed in the esophagus, causing tears; feeding tubes can become dislodged, causing serious or fatal injury (Figure 3.45).

The role of the pathologist is to document the location of a medical device. If the placement or performance of the device had negatively affected the deceased while he or she was a patient, the pathologist should report this fact to the trauma or nursing service in the interest of improving future quality of patient care.

Common medical therapeutic or diagnostic devices and related problems can include:

- IV lines — placement can cause an artifact of hemorrhage
- Electrocardiogram (ECG) pads — can cover wounds
- Cricothyroidotomy — done to produce an emergency airway; causes problems when performed improperly (Figure 3.46)
- Surgery — done emergently to save the life, but bullet and stab wounds might be altered
- Bandages — might cover key wounds (Figure 3.47)
- Sutures — must be removed to show wound configurations (Figure 3.48A, Figure 3.48B)
- Arterial and large venous lines — because of their size, more likely to cause complications like hemorrhage than small venous lines
- Defibrillators — can cause burns on the chest and be mistaken for premortem burns

FIGURE 3.1 Universal precautions. Proper protection of the pathologist and all assistants from infectious diseases is essential. Eye protection, mouth and nose protection, double and cut-resistant gloves, a waterproof barrier, and a long-sleeve gown keep potential infectious agents away from the prosectors (those who cut) of the autopsy.

FIGURE 3.2 Opening the body bag. The body is placed in a clean, white body bag. Some wrap the body in a clean white sheet to help contain potential trace evidence.

FIGURE 3.3 Trace evidence on bagged hands. The hands are bagged in all homicides. This allows more careful examination of trace evidence at the autopsy. This individual has a "death grip" on some trace evidence.

FIGURE 3.4 Gunshot hole in a shirt. The presence of an intervening object, such as clothing, between the gun barrel and skin can alter the soot pattern on the skin. Dark soot can be seen on and around the gunshot hole. Although it is not the duty of the forensic pathologist to issue a report on examination of clothing, the clothing should be surveyed to better understand the wound on the body.

FIGURE 3.5 Bullet in a sweater. Some articles of clothing can trap bullets. For this reason, the clothing should be x-rayed and carefully searched, so as not to lose a bullet or other trace evidence.

FIGURE 3.6 Cut shirt with gunshot holes. Ideally, clothing should not be cut in a homicide or potential homicide. If the clothing must be cut to aid in rapid resuscitation, cuts should be made to avoid the gunshot holes in the shirt, as shown in this figure.

FIGURE 3.7 Lockable cooler. Bodies should be kept in a lockable cooler, and a registry of all valuables should be maintained. All activity in and out of the cooler should be logged. Cooler temperature is kept between about 38 and 42°F.

FIGURE 3.8 Rings on the fingers. All valuables and personal effects, no matter how insignificant, must be catalogued and returned to the family.

FIGURE 3.9 Broken watch. Valuables can become evidence, such as this watch that was broken during an assault. The victim (and the watch) received many blunt force injuries, a few of which were from a golf club.

FIGURE 3.10 Trace evidence on the buttocks. In sexual assaults, trace evidence might be as fine as a single hair, as seen on the buttock here. This small, fine evidence can be lost during transfer of the body and is one exception to not taking evidence from the body at the scene. Pubic hair from the body can be analyzed with the suspect's, as was done in this case, producing an identification match.

FIGURE 3.11 Rigor mortis. Rigor mortis is the temporary stiffening of muscles after death. The stiffening is often quite strong. The legs shown here are stiff enough to support their own weight when hanging completely off the table.

FIGURE 3.12 Livor mortis. The distribution of livor mortis is a function of gravity. The purplish-red areas depict livor mortis. The pale areas are "cleared" where the body contacted the table.

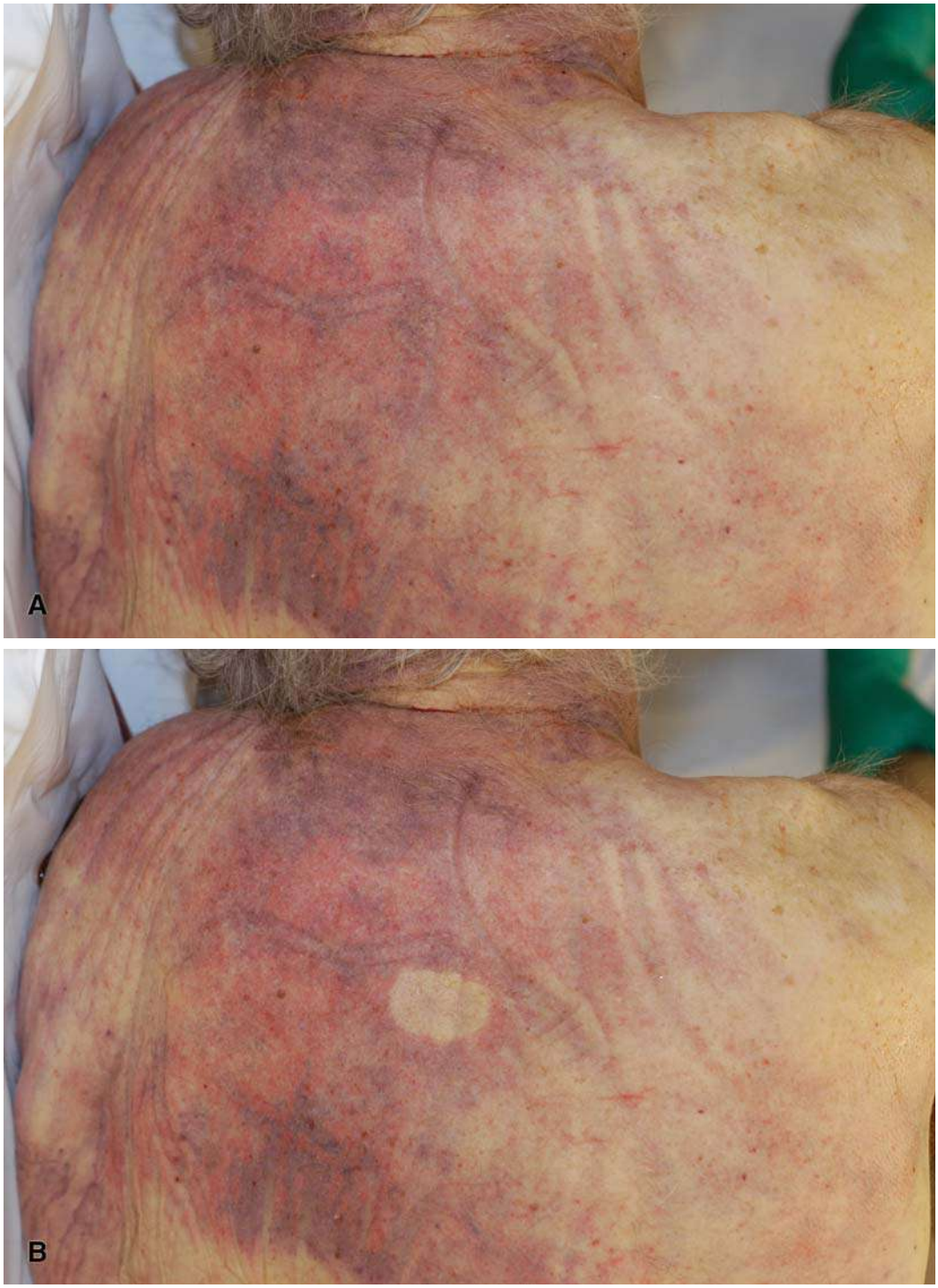


FIGURE 3.13 Pressure clearing of livor mortis. (A) Livor mortis can be seen on the back, on which the recently deceased victim was lying. (**B**) The pathologist has checked for pressure clearing of the livor mortis by pressing a finger on the back. The livor mortis has cleared.

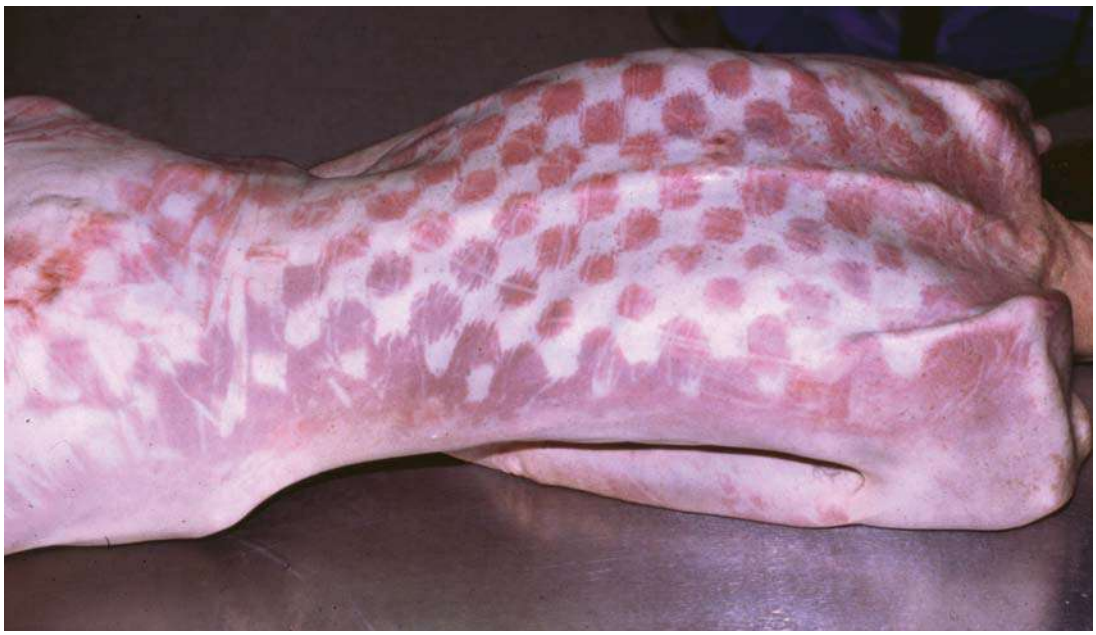


FIGURE 3.14 Patterned livor mortis. Since livor mortis can be cleared with pressure, objects pressing against the skin when livor forms can cause a pattern. This individual was lying on an "egg crate" foam mattress. The foam tips of the mattress touched the skin and cleared the livor, while the cups of the mattress allowed the livor to form.

FIGURE 3.15 (A), (B) Two livor mortis patterns. This individual was found dead in a prone position (face down). As is commonly done, the body was turned over so that the individual was lying on the back. Generally livor mortis can still shift, as shown, about 12 hours after death. In suspicious deaths, two livor mortis patterns at the scene indicate moving of the body, or even that there are two crime scenes.

FIGURE 3.16 Decomposition: Skin marbling, blistering, and venous marbling. These signs of decomposition, depending on environmental conditions, generally begin to appear about 24 to 36 hours after death. A putrid odor usually accompanies these signs of decomposition.

FIGURE 3.17 Decomposition: Venous marbling and discoloration of tissues. As blood in the blood vessels begins to hemolyze and decompose, the red-purple pigments stain the tissues, at times in the pattern of a blood vessel.

FIGURE 3.18 Decomposition: Discoloration and swelling of tissues of the face, mimicking blunt force injury. Postmortem production of gas by bacteria causes swelling and discoloration of tissues. To the untrained eye, these signs can resemble blunt force injuries. In this case, scene investigators were suspicious that this individual was killed by blunt force injuries of the head, so the hands were bagged and the case was handled as a homicide. The cause of death was natural.

FIGURE 3.19 Decomposition: Extreme tissue discoloration and gas formation in a body removed from water. Bodies removed from water show excessive gas production and tissue discoloration owing to explosive bacterial gas production. The gas causes the bodies to bloat excessively, which can cause an explosion in the abdomen.

FIGURE 3.20 Mummification. Hot and dry conditions with low humidity can dry out tissues, causing a dark, leathery appearance. Desert climates as well as the heated indoors (non-humidified) can create conditions in which mummification can occur. This individual was killed in a house in the winter in which the heat was turned up maximally, presumably to speed up decomposition.

FIGURE 3.21 Decomposition: Fly larvae. These larvae speed up decomposition by consuming soft tissue. The larvae will greatly diminish and then leave when all the soft tissue has been consumed.

FIGURE 3.22 Examination of the mouth. The pathologist must perform a detailed and systematic exam of the entire body, being careful not to overlook any body system. During the external exam, the focus is taken off the obvious injury.

FIGURE 3.23 Documentation by photography. Photographing injuries is an essential part of the autopsy.

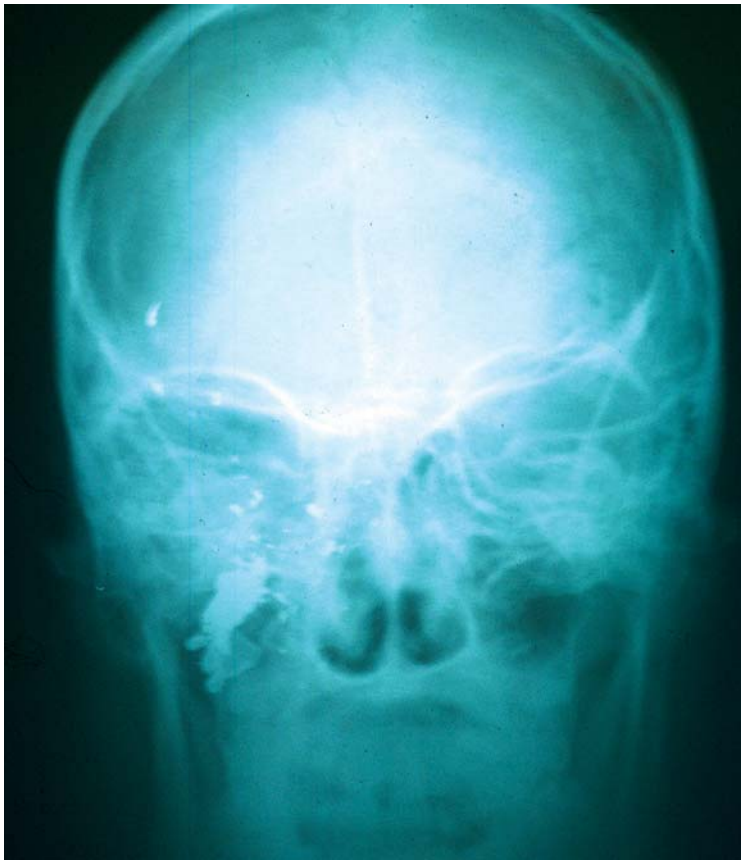


FIGURE 3.24 Radiograph of a skull with a fragmented bullet. On the left side of the figure, just below the eye, is a fragmented bullet. X-rays are most helpful in locating bullets for removal (see Figure 3.25).

FIGURE 3.25 Bullet on removal. This bullet is seen on x-ray in Figure 3.24. Upon removal, bullets are photographed and placed in a unique evidence box for later identification. Some pathologists mark bullets, being careful not to alter any unique markings that the firearms examiner will need to perform firearms examinations.

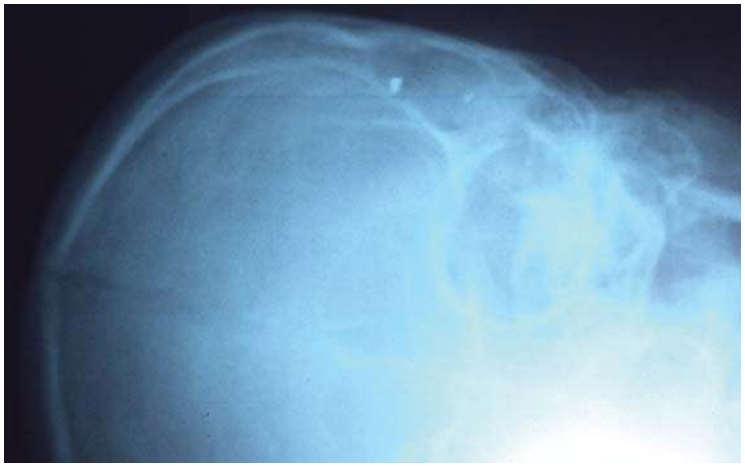


FIGURE 3.26 Scissor fragment in a skull. Radiographs are used for more than just examining gunshot wounds. In this x-ray of a stabbing victim, a small metallic fragment can be seen in the middle of the figure, with a white dot near the top. This victim was stabbed with a scissor, part of which broke off in the skull. The small fragment was removed at the autopsy (see Figure 3.27). Knife tips can also break off when hitting bone. The broken fragment can be matched to a purported weapon.

FIGURE 3.27 Metallic fragment removed at autopsy. This is the removed scissor fragment, as described in Figure 3.26.

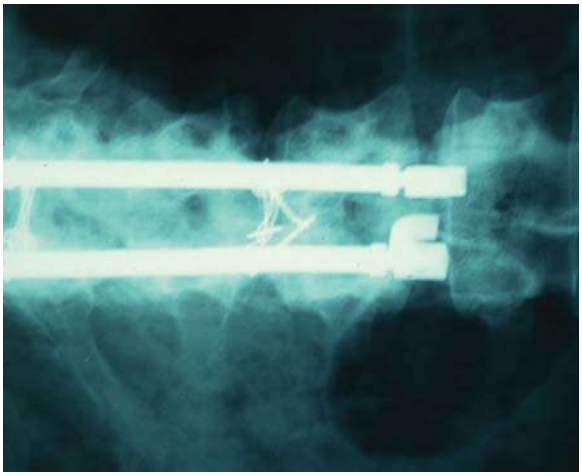


FIGURE 3.28 Radiograph of spinal rods. Unique prosthetic devices in the body are useful in making an identification.

FIGURE 3.29 Fractured clavicle on radiograph. Full-body radiographs are taken in cases of suspected child abuse. This fractured clavicle (just left of the white circular dot left by the electrocardiograph pads) was unexpected, being found in a child who also had suffered an abusive skull fracture.

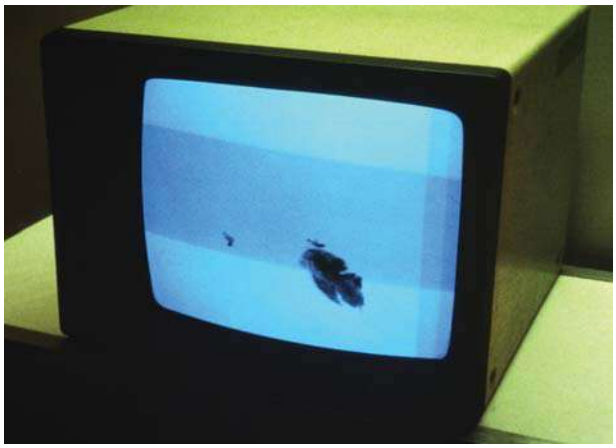


FIGURE 3.30 Screening remains from a mass disaster. Large bomb-scanning units or airport scanners have been used to screen the large quantity of remains found in mass disasters, such as plane crashes.

FIGURE 3.31 Charred remains. This figure depicts the torso and head of an individual with extreme thermal burns and charring. The yellow material at the top of the figure is the brain. Since the individual was obviously burned beyond recognition, dental identification was performed.

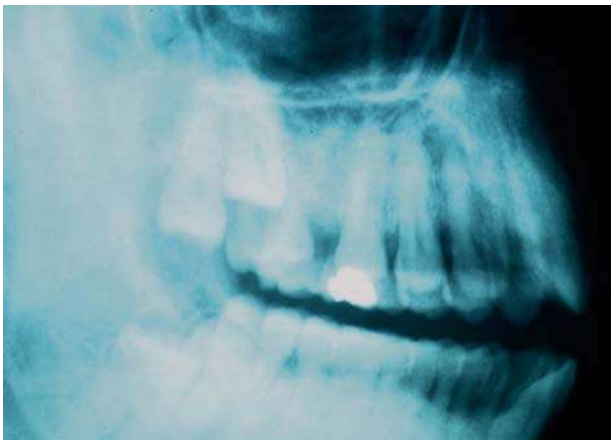


FIGURE 3.32 Skull film with dental filling. Comparison of postmortem radiographs with premortem dental records can be used to make an identification at the hands of a forensic odontologist.

FIGURE 3.33 Forearm fracture. External exam of this forearm reveals a somewhat obvious deformity. The question is which bone is fractured — the radius, the ulna, or both? The x-ray is seen in Figure 3.34.

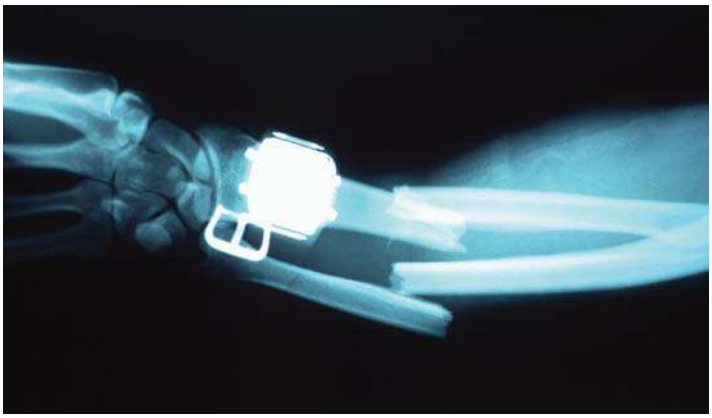


FIGURE 3.34 Radiograph of forearm fracture (see Figure 3.33). The x-ray shows a fracture-dislocation of the left forearm. This injury (also referred to as a "nightstick fracture") was most likely caused by a baseball bat when the victim used his arm to shield the blows. The victim also suffered a fatal skull fracture, most likely from the baseball bat.

FIGURE 3.35 Incision of left forearm fracture (see Figure 3.33, Figure 3.34). Incision into the fracture reveals acute hemorrhage. This confirms that the fracture was premortem. Viewing fractures directly at autopsy, especially in the skull, is more sensitive than viewing them in x-rays.

FIGURE 3.36 Stab wounds of chest. When the body is first examined, blood covers the injuries. Blood spatter and drainage patterns are important to document and study, so these are photographed. The body must then be cleaned so the wounds can be studied.

FIGURE 3.37 Stab wounds of chest after washing away the blood (see Figure 3.36). The stab wound configurations can be seen clearly now that the blood has been cleaned away from the chest and trunk.

FIGURE 3.38 Digital video documentation. Documentation of injuries and other pertinent findings by digital video allows viewing of the subject from many different angles. Three CCD and the high-definition digital video now available have sufficient resolution to derive high-quality still pictures from the footage.

FIGURE 3.39 Midline chest scar. This scar suggests to the pathologist that this person has had cardiac surgery. Especially since the wound appears to be fairly recent, this finding will direct the pathologist to inquire more about the medical history. Also, the pathologist will look internally at the chest for coronary artery disease, cardiac valve disease, and other cardiac disorders.

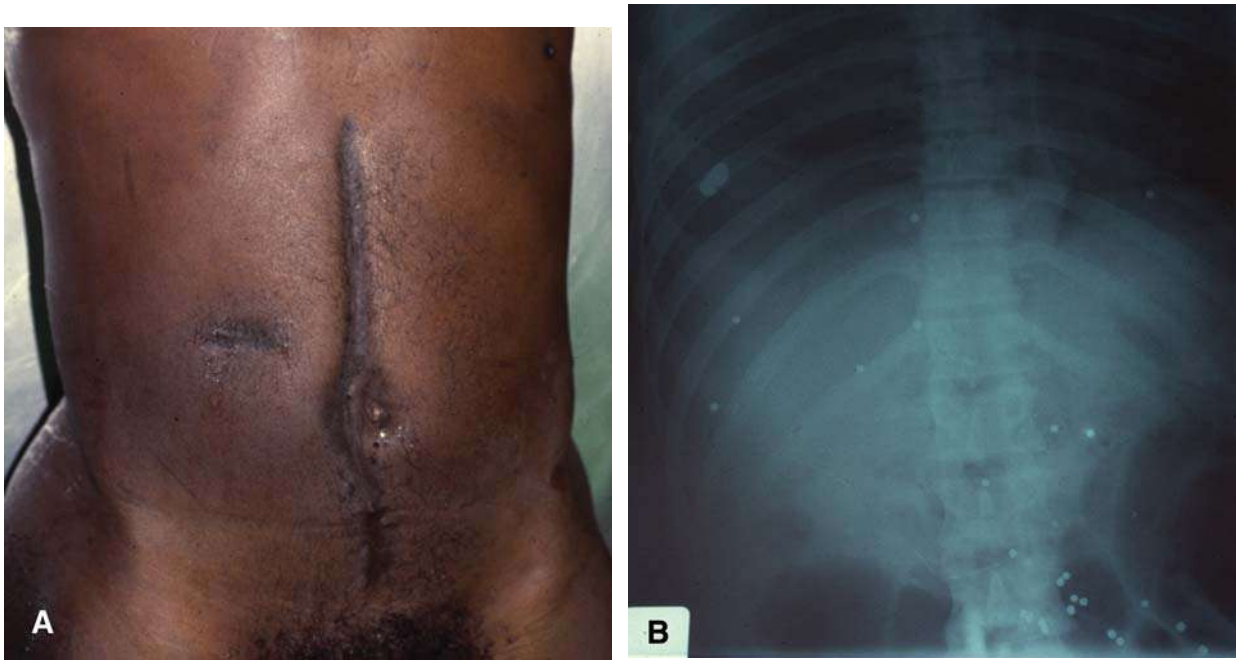


FIGURE 3.40 (A) Midline abdominal scar. The presence of this long, midline abdominal scar indicates previous abdominal exploratory surgery. The deceased was the victim of homicide by a handgun. **(B) Reason for the previous emergency surgery.** In addition to the bullet in the upper left rib cage area, multiple buckshots can be seen in the lower half of the figure. The deceased had been shot by shotgun in a previous assassination attempt.

FIGURE 3.41 Hand deformity. Limb and body deformities are useful in identifying an individual and also speak to the medical history.

FIGURE 3.42 Unique tattoo. Unique tattoos, along with tattoo location on the body, can be helpful in identification. Descriptions of tattoos, for example, are available in arrest records.

FIGURE 3.43 Chest tube. The location of chest tubes should be documented in the record and by photography. Once removed, the chest tube incision can look very much like a stab wound.

FIGURE 3.44 IV drug abuse site. The forearms and legs must be carefully examined for signs of IV drug abuse. These sites can look very much like therapeutic IV sites. In such cases, examining medical records or questioning treating personnel can be helpful. Cutting into the site should reveal acute hemorrhage and foreign material microscopically.

FIGURE 3.45 Gastric tube dislocated from the stomach. Medical devices can become accidentally dislodged and, if not soon discovered, can cause severe, sometimes fatal complications. This individual developed fatal peritonitis because the gastric tube had been dislodged, probably for several days. Medical personnel had continued to put feedings in the tube during this period of time.

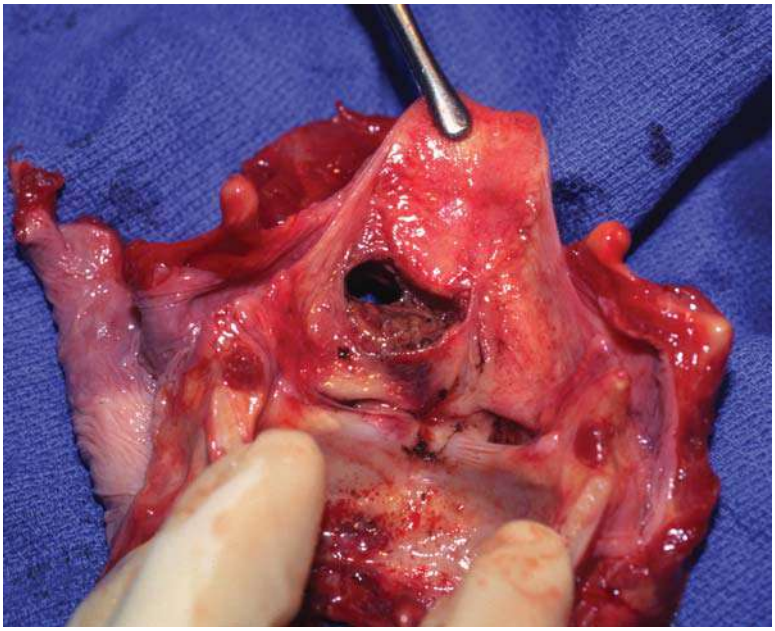


FIGURE 3.46 Misplaced cricothyroidotomy. When a patient in the field has respiratory failure and cannot be successfully bagged or intubated, an emergency cricothyroidotomy must be performed. The cricothyroid membrane is below the thyroid cartilage, or "Adam's apple." Improperly placed cricothyroidotomies can save the life, but can also cause vocal cord damage or other problems, if the patient survives.

FIGURE 3.47 Medical treatment devices. After the placement of each device is documented, the devices are removed. All bandages must be removed to expose all wounds. In the confusion of resuscitation, key gunshot wounds might be covered with a simple bandage.

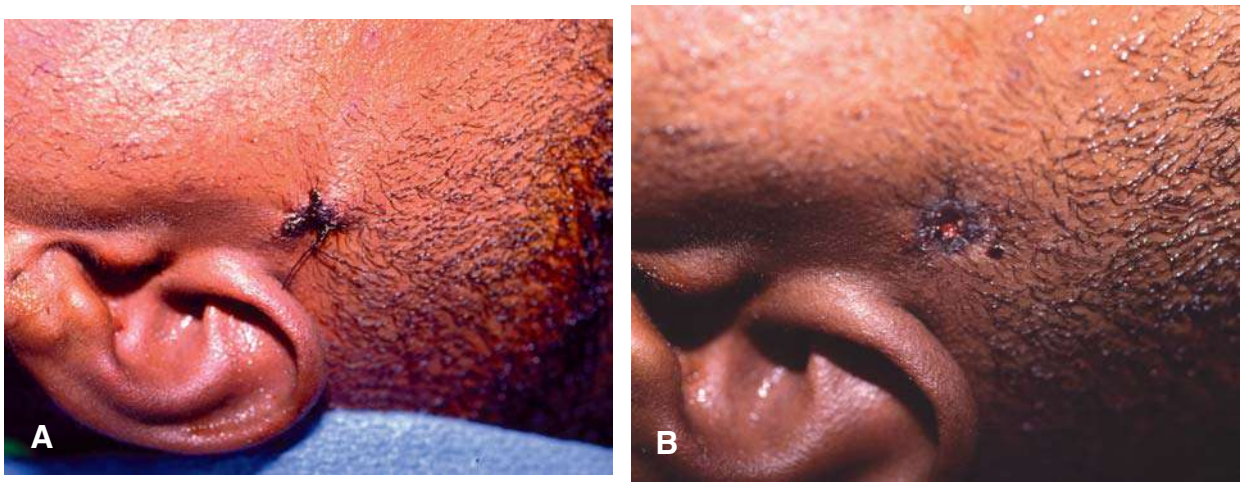


FIGURE 3.48 (A) Sutured gunshot wound. This gunshot wound was quickly sutured, obviously to stop the profuse bleeding during resuscitation. **(B) Contact gunshot wound.** The wound is easily recognized as a contact gunshot wound. If any significant healing had occurred, the wound would have been more difficult to examine.

4 External Examination: Specific Injuries

FORENSIC INJURIES AND DEFINITIONS

In the discipline of forensic pathology, injuries must be described precisely. The words used to describe these injuries have exact meanings. For example, a laceration is the tearing or splitting of tissue by blunt force. An autopsy report describing a laceration brings a visual picture of the injury to any forensic pathologist because of the descriptive language used. Also, many injury descriptions are based on the object causing the injury. For instance, a laceration is caused by a blunt object. The forensic pathologist who sees a large laceration in a homicidal head injury can therefore tell the police to look for a blunt object, not a knife (Figure 4.1A, Figure 4.1B). Described below are some common injuries, with illustrations. See the "References and Suggested Reading" section for more in-depth studies of forensic injuries.

Blunt Force Injuries

Laceration

A laceration is the tearing or splitting of skin by a blunt force object carrying force. Lacerations show at least three characteristics (Figure 4.2):

1. Undermined margins
2. Tissue bridging
3. Abraded margins

Lacerations can be straight or jagged in shape. A common error is to call a straight laceration a cut. A cut is really an incised wound, which is a sharp force injury, i.e., the tissue is cut, not torn (as described in the section "Sharp Force Injuries"). The laceration in Figure 4.3 is classified as such because it has undermined margins, tissue bridging, and marginal abrasions. The laceration is straight because the victim fell against the sharp edge of a table during a seizure.

Abrasion

An abrasion is the denuding of skin or tissue caused by a blunt or rough object. An abrasion is commonly known as a "scrape." There are four major types of abrasions:

1. A usual abrasion or scrape is due to an object contacting skin or tissue parallel to its surface (Figure 4.4A).
2. A sliding abrasion is more linear than a usual abrasion and is caused when movement or sliding is involved. The abrasion lines show the direction of sliding (Figure 4.4B).
3. A pressure abrasion is due to a heavy or forcefully projected blunt object contacting or compressing skin or soft tissue in a perpendicular fashion (Figure 4.5).
4. A pattern abrasion is the combination of usual and pressure-type abrasions, usually forming a pattern reminiscent of the blunt object that forcefully contacted the skin (Figure 4.6).

Lacerations and abrasions are often seen together in blunt force injuries. Occasionally, the objects causing these injuries leave behind pattern abrasions (Figure 4.7A, Figure 4.7B).

Contusion

A contusion, commonly known as a bruise, is a hemorrhage into skin or tissues caused by a blunt force tearing blood vessels. The leaking blood discolors the tissues. This purplish-red or dark-red hemorrhage can usually be seen by the naked eye. Contusions can also show patterns when the object producing the blunt force has a complex surface, such as an automobile bumper (Figure 4.8).

Multiple contusions and abrasions can be seen in the neck and base of the jaw in manual strangulation (Figure 4.9).

Avulsion

An avulsion is the tearing away of skin and/or tissue, usually as a result of blunt force. An avulsion can have characteristics of contusions, lacerations, and even sharp force injuries if the avulsing object has a sharp edge. Avulsions are important to recognize because a portion of skin or tissue is likely present at the scene or on the weapon. Avulsion injuries are characteristic of high-speed (and therefore high-energy) transportation crashes, such as airplane crashes (Figure 4.10).

Sharp Force Injuries

Sharp force injuries are caused by a sharp object cutting the skin or tissue. "Cutting" is a key distinction from blunt force injuries, which tear tissues. Therefore, when one refers to a cut, he or she is talking about a sharp force injury. There are two major types of sharp force injuries, stab wounds and incised wounds.

Stab Wounds

Stab wounds are generally deeper than they are long. They can be caused by knives or other sharp objects. Since stab wounds can cut deep arteries and veins and organs with large vessels, the mechanism of death in these cases is often hemorrhage (Figure 4.11).

Incised Wounds

Incised wounds are generally longer than they are deep. For example, classic incised wounds are hesitation cuts, seen in suicides or suicide attempts (Figure 4.12). In hesitation cuts, the victim tries to cut the blood vessels of the wrist, but lacks the knowledge of anatomy to make an incision in the proper spot. The victim stops cutting because these wrist cuts are painful. Then the victim gathers more nerve and cuts deeper, usually into superficial tendons, not the more distant blood vessels. Often, the victim gives up this method of suicide and either seeks medical care or resorts to another method of suicide.

Defense Wounds

Defense wounds (cuts) are special types of incised wounds received when victims attempt to defend themselves from knife attacks (Figure 4.13). Characteristically, the wounds are seen on the hands, wrists, and forearms. Defense wounds can also be stab wounds. The term "defense wound" does not necessarily rule out the recipient, or "victim," as the aggressor.

Puncture Wounds

Puncture wounds are special sharp force wounds that are much deeper than they are wide. These wounds are round or punctuate (pointlike), being caused by such objects as ice picks and nails (Figure 4.14).

Chopping Wounds

Chopping wounds are caused by objects with a sharp edge and substantial weight, such as an ax or a machete. In these injuries, cutting and tearing are seen. Bones can be broken, especially in the case of an ax (Figure 4.15A, Figure 4.15B).

Gunshot Wounds

Gunshot wounds are usually produced from four main types of weapons in North America: revolver, pistol, rifle, and shotgun. The revolver, pistol, and rifle produce a single entrance wound under normal circumstances. The shotgun can produce a single entrance wound if a slug is the type of round used or multiple entrance wounds if buckshot is fired (Figure 4.16).

In the study of gunshot wounds, as in every other aspect of forensic pathology, the pathologist is part of a team. The pathologist is responsible for describing the wounds on the body, collecting bullets or bullet fragments, and performing other duties. Based on the examination of these wounds, the pathologist is asked to render an opinion on the range of fire. The presence or absence of gunpowder stippling patterns is described, and patterns are measured by the pathologist. The firearms examiner compares these measurements and descriptions with test patterns produced by firing the purported gun. The information gathered by comparing known patterns at known distances with the unknown pattern on the body allows the range of fire to be estimated.

The pathologist is responsible for removing the bullets, which are handled as evidence. The firearms examiner compares test-fired bullets from the purported gun to those found at the autopsy. The pathologist must be careful not to damage the bullets on removal. Bullet removal is best documented by photographing and/or marking the bullets and placing them into a unique, labeled container.

Gunshot wounds are studied by forensic pathologists to determine entrance and exit wounds. From this examination, pathologists can assist in determining the following:

- Direction of fire
- Range of fire
- Type of weapon
- Position of victim at the shooting scene, e.g., behind a door
- Direction of the bullet traveling through the body and the organs involved

These listed findings are often helpful to investigators reconstructing the shooting event. The study of gunshot wounds and their classification takes extensive training. Gunshot wounds should be officially classified only by a forensic pathologist.

There are four qualitative range-of-fire determinations a forensic pathologist makes:

- *Hard contact gunshot wound:* The barrel of the gun is held tightly against the skin. Unburned material from the gun barrel, or soot, is deposited down into the wound. The gases produced from firing the round cannot escape, so they dissect down into the wound, sometimes tearing the tissues. An imprint or "stamp" of the muzzle can often be seen (Figure 4.17A, Figure 4.17B). The exit wound is more irregular in shape and sometimes stellate (star-shaped; Figure 4.17C). This is a typical wound caused by a .22-caliber rifle (Figure 4.17A).
- *Contact gunshot wound:* The barrel of the gun is held loosely to the skin or is very near the skin. Heavy soot is seen around the wound (Figure 4.18). Contact wounds and hard contact wounds are the only gunshot wounds that allow the pathologist to opine the distance of the gun barrel from the wound.
- *Intermediate-range wound:* The gun barrel is held from a few inches to about 2 to 3 feet from the wound. Unburned gunpowder and other material tattoo the skin in a pattern called "stippling" (Figure 4.19).
- *Undetermined- or distant-range gunshot wound:* No powder or stippling pattern is seen; therefore, the wound cannot be classified (Figure 4.20).

If an intervening target is between the gun barrel and the skin, the aforementioned patterns can be altered. This is why it is important for the pathologist to report only what is seen on the body. The approximate distance of the fire can be estimated only by a firearms expert (except for contact wounds) by firing the purported gun with similar ammunition at various ranges. The test patterns are compared to the stippling pattern measured by the pathologist.

The configuration of the wound and the pattern (or absence) of gunpowder residue are examined. The path the bullet takes through the body is determined. The trail the bullet leaves behind is assessed. For example, when a bullet travels through the skull, it leaves behind a bevel or wedge, much like a BB gunshot of a windshield (Figure 4.21). Inward beveling tells the pathologist that he or she is looking at an entrance wound of the skull.

FIGURE 4.1 (A), (B) Lacerations of the scalp. Lacerations are often erroneously called cuts. When the skin contacts a blunt object or surface with a sufficient force, the skin is torn or ripped. This tearing produces distinct configurations in the wound. Cutting the skin with a sharp object produces clean margins.

FIGURE 4.2 Laceration of the scalp with marginal abrasion. Blunt force striking the skin with sufficient force tears the skin, resulting in tissue bridging, undermined margins, and a marginal abrasion.

FIGURE 4.3 Laceration of the forehead. This laceration may look like a cut because it is straight. Careful observation, however, reveals tissue bridging, undermined margins, and marginal abrasion.

FIGURE 4.4 (A) Usual abrasions. Abrasions are patterns in the skin caused by blunt objects denuding the skin. This victim of a motor vehicle crash shows usual abrasions on the knees, commonly known as "scrapes." **(B) Sliding abrasions.** This victim was thrown out of a moving vehicle. The long axis of the abrasions shows the direction in which the body moved across the pavement.

FIGURE 4.5 Pressure abrasion. The shoulder shows a yellow indentation below a purplish thermal burn. This victim's shoulder was wedged in a roller mechanism. The sheer force crushed the shoulder. The pressure flattened and thinned the skin so that the fat beneath shows through. The mechanism was also hot and produced the thermal burn on the upper part of the shoulder.

FIGURE 4.6 Patterned abrasion. This individual struck a solid object in his vehicle at a high rate of speed, causing this patterned abrasion of the leg. Automotive aficionados will recognize the pattern as that of a a brake pedal made by General Motors. The study of patterned abrasions can be useful because they can leave an outline of the object that caused the injury.

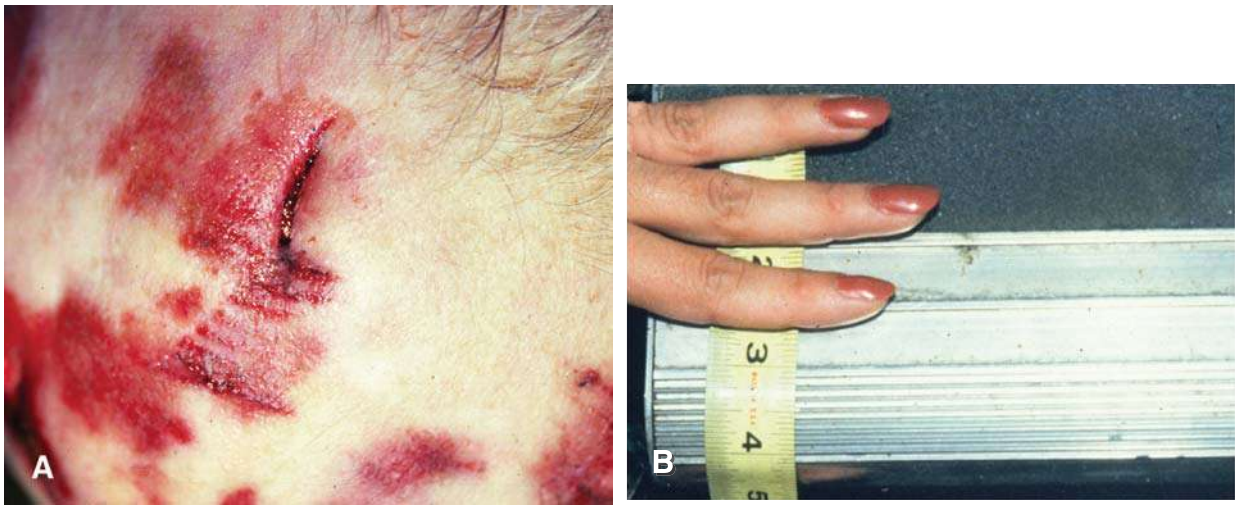


FIGURE 4.7 (A) Patterned abrasions with a flanking contusion. Objects with complex surfaces often cause complex injuries. Regular, periodic, linear abrasions can be seen below the central laceration. **(B) Truck floorboard.** One probable explanation for these patterned abrasions and laceration is that the head was propelled against this truck floorboard found at the scene, since the ridges of the floorboard match up to the abrasions seen in the injury.

FIGURE 4.8 Patterned bumper contusions. This individual was killed by being struck with an automobile multiple times. This figure shows two linear contusions of the knee, caused by the bumper striking the victim while walking. The height of these injuries can be measured from the ground and compared to the vehicle. Also, the configurations of the contusions can be compared to the bumper of the vehicle. Other tests can be performed on the vehicle, such as inspecting it for blood and tissue.

FIGURE 4.9 Contusions of the neck. This individual was the victim of manual strangulation. Multiple contusions (and a few abrasions) are seen, especially at the midline of the neck and the base of the jaw.

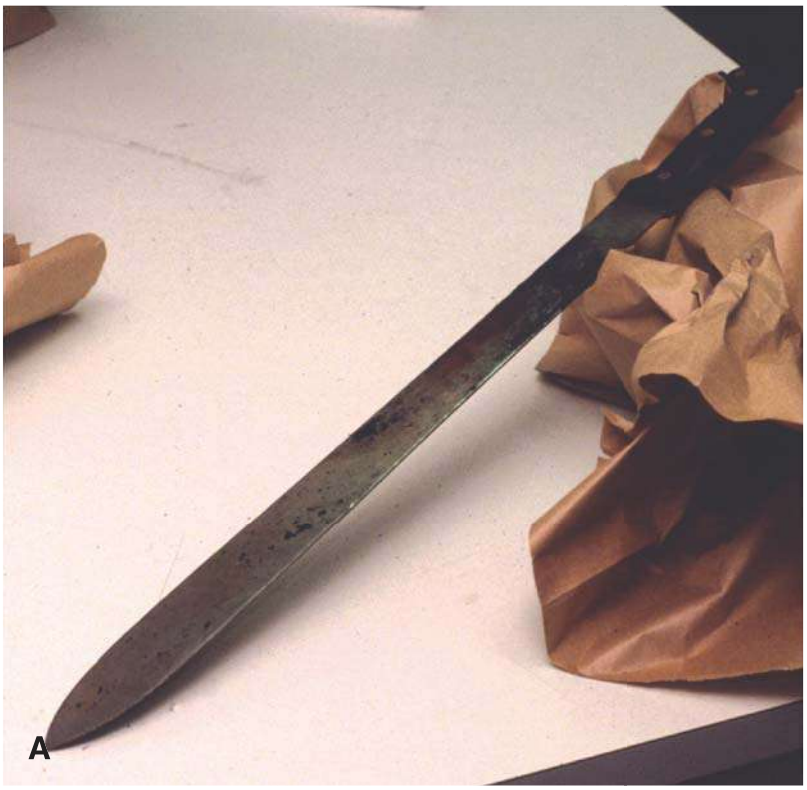
FIGURE 4.10 Avulsion of the foot. Airplane crashes impart tremendous force to tissues, causing shearing and shredding of the entire body. Intact body parts can be difficult to find in high-speed airplane crashes.

FIGURE 4.11 Stab wound with hilt mark. Stab wounds are deeper than they are long. This stab wound demonstrates that the full length of the knife was thrust into the body. The abrasion on the wound and the radial marks surrounding the wound were caused by the hilt, or end, of the knife. The two outside abrasions were caused by the finger guards of the knife. These characteristic marks could be used to exclude or include unknown knives in an investigation.

FIGURE 4.12 Incised wounds of the wrist (hesitation cuts). Incised wounds are longer than they are deep. These characteristic incised wounds of the wrist, seen in suicide attempts, are also called hesitation cuts.

FIGURE 4.13 Incised wounds of the hand (defense cuts). Defense cuts are special types of incised wounds encountered when victims have attempted to fight off knife attacks. The deep cuts seen here tell us the story of the violence inherent in the attack and the determination of the victim to prevent the attack.

FIGURE 4.14 Puncture wounds of the chest. The victim was killed with an ice pick. The multiple stab wounds are located around the heart. The purposeful placement of the ice pick wounds around the heart display the determination of the perpetrator, i.e., these are not randomly placed puncture wounds.



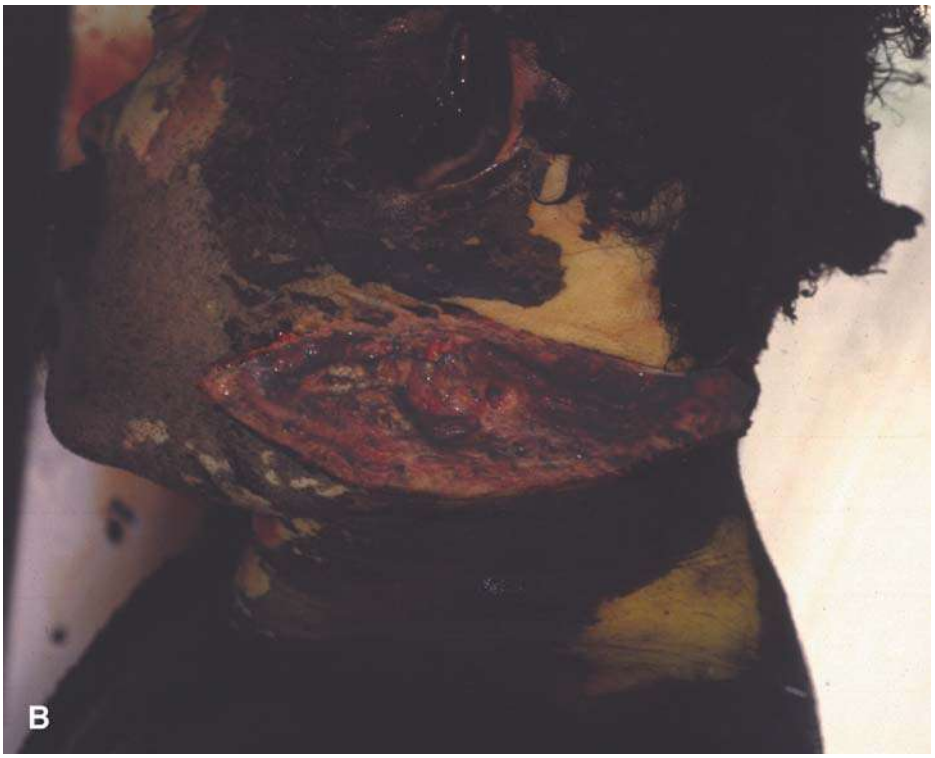


FIGURE 4.15 (A) Machete. Axes, swords, machetes, and other such weapons have sharp edges and weight. These weapons can cut, tear, and break bones. **(B) Sharp force wound.** These cuts are often long and deep. After being cut with the machete, this victim was set afire, which caused the dark, charred skin.

FIGURE 4.16 Shotgun wound. Shotgun shells contain multiple small "BBs," called shot. As the shot comes out of the barrel of the gun, it stays together for several feet, and then starts to separate. As individual shot break up and hit the skin, characteristic individual satellite shot injuries can be seen around the main hole.

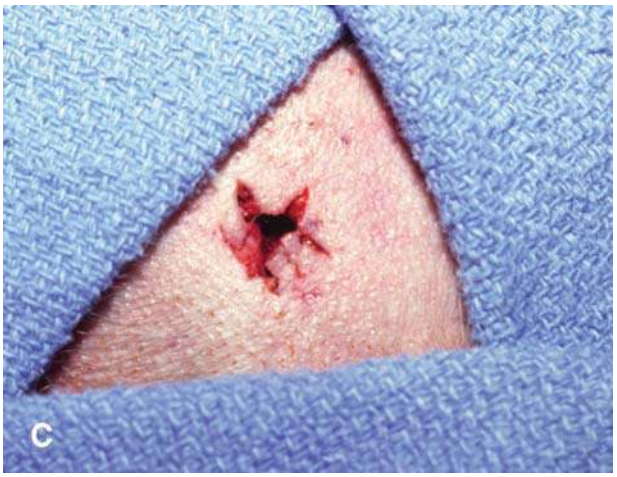


FIGURE 4.17 (A) .22-caliber rifle. This rifle was held tightly above the skin by the victim and caused a suicidal gunshot wound. **(B) Hard contact entrance wound**. Dark soot can be seen in the center of the wound. The circular abrasion surrounding the wound was caused by the round muzzle and is often called a "muzzle abrasion." This injury is referred to as a hard contact wound since all the soot is inside the wound. **(C) Exit wound.** The exit wound is stellate in configuration. No soot or abrasion can be seen around it.

FIGURE 4.18 Loose contact wound. The gun muzzle held slightly away from the skin causes the black soot to go both in and around the wound.

FIGURE 4.19 Intermediate-range gunshot wound. This refers to any gunshot wound with stippling (small dots surrounding the wound). Unburned portions of gunpowder tattoo the skin. The stippling must be measured in all directions. The firearms examiner can then fire test patterns with the same gun and ammunition at known distances. These patterns can be compared to the unknown pattern on the body, and the distance can be estimated.

FIGURE 4.20 Undetermined-range gunshot wound. This gunshot wound has no surrounding soot or stippling; therefore, the range cannot be determined.

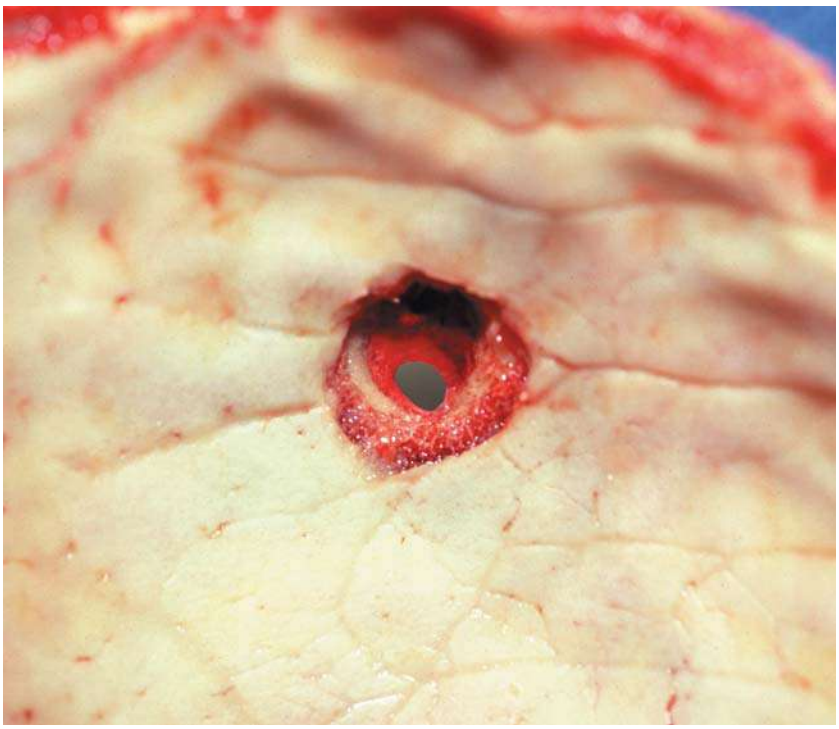


FIGURE 4.21 Entrance wound of the skull. The bullet path began behind the page and moved toward the reader. The bullet cored out a wedge of bone in front of it as it traveled. The pointed end of the wedge occurred at the point of entry, and the base was produced as the bullet exited the skull.

5 External Examination: Specific Body Areas

OVERALL "GESTALT"

After the body has been undressed and carefully cleaned, the pathologist steps back from the body and looks at the overall position or shape of the body (habitus). Is the body symmetrical? Is there morbid obesity, or is the frame extremely thin (indicative of cachexia)? Is there an overall deformity? For example, is the body in a fetal position? Is there something amiss or out of place? This is also a good time for the pathologist to reflect on what has been done to this point and what is about to be done.

SKIN

The skin is technically an organ per se. It is the organ that is most carefully assessed during the external examination. The skin acts as an outward sentinel or "red flag" for deep injuries or diseases within the body. The skin of the individual in Figure 5.1A shows a brown pigmentation in the axilla ("armpit"), a condition known as *acanthosis nigricans*. Also on the trunk are multiple brown, greasy-looking benign moles, known as seborrheic keratoses (Figure 5.1A, Figure 5.1B). Observation of this number of lesions alerts the pathologist to look for an internal cancer, usually of the gastrointestinal tract. In fact, this unfortunate individual had carcinoma of the colon (Figure 5.1C).

HAIR

Hair color is noted for identification. Hair roots can be used for DNA identification; at least 100 hairs must be pulled, not cut. Hair can contain trace evidence or gross evidence, such as the knife used to murder this individual (Figure 5.2A, Figure 5.2B). Toxicologic analysis of hair is useful for diagnosing chronic drug use or poisoning.

SCALP

An injury of the scalp is often the sentinel to deeper injuries, like skull fractures, brain contusions, and hematomas. Hair can cover injuries, particularly those that do not bleed, so a careful examination must be undertaken. Small-caliber gunshot wounds are notoriously difficult to find in thick hair. Scalp injuries on the back of the head can be easily overlooked (Figure 5.3). In order to see a scalp wound and photograph it properly, the hair around the wound is carefully shaved (Figure 5.4). The wound in Figure 5.3 is a laceration with an abrasion of the margin. The skull below this area in the same individual revealed a fracture in the back of the head, or occipital bone (Figure 5.5). The opposite part of the brain, or frontal lobe, shows contusions, indicating that the person fell backward and was not struck in the head. Figure 5.6 shows that this is a contrecoup injury (also see Chapter 9).

FACE

The face is dissected only in rare cases, e.g., to retrieve a bullet or other evidence. Every attempt should be made not to cut or alter the face, both out of respect for the individual and in consideration of viewing at the funeral service.

Facial injuries can be important in determining who was driving when multiple individuals, usually unbelted, die in a motor vehicle crash. Identifying the driver can be important if the vehicle was operated unlawfully, e.g., the driver was under the influence of alcohol. Automotive side glass is tempered, not laminated like the windshield. When it breaks, automotive side glass shatters into many small cubes that tend to cause small cubic cuts and abrasions on the face. Hence, the driver tends to have side glass injuries on the left side of the face. These injuries, as always, do not prove who was the driver or passenger and must be looked at in the context of the entire case (Figure 5.7).

EYES

The eye (iris) color is recorded, and the eyes are examined for hemorrhage. Small punctuate (pointlike) hemorrhages in the conjunctiva (white part of the eye) often suggest an asphyxial cause of death (Figure 5.8). Yellow conjunctiva (jaundice) might indicate liver disease or hemolysis, a disorder of many different causes in which the blood cells are broken apart in the body. The soft tissues around the eye (orbit) are very vascular. Blunt force to the area can easily cause contusion (a "black eye"), relative to many other areas of the body. Orbital soft tissue hemorrhage can also be seen in skull fractures involving the base of the frontal bone, in particular (Figure 5.9). This point illus-

trates the aim of the external exam: the outward hemorrhage directs the pathologist to look inward for a cause.

NOSE

The nasal cartilage can be fractured in traumatic injuries; therefore, palpation and increased range of motion can indicate fracture. Drug residues can be seen in the nares. The chronic snorting of drugs can damage the nasal mucosa.

MOUTH

The mouth can be tightly clenched due to rigor mortis. In such cases it is difficult to open. Examination of the mouth after rigor is released is much easier. The teeth are examined, and visible teeth are catalogued (Figure 5.10A). Unusual teeth or dental appliances can be used to make an identification. Dental caries (cavities) are noted. Drug residue may be seen, such as in cases of drug abuse or overdose. In sexual assault cases, oral examination and swabs are taken to look for spermatozoa. In suffocation and strangulation cases, there are often injuries in the mouth (Figure 5.10B). These injuries can occur when the perpetrator forcibly holds the mouth closed.

NECK

The skin of the anterior neck is examined for contusions or abrasions that might suggest manual or ligature strangulation (Figure 5.11A). The thyroid gland is palpated in the lower lateral neck (Figure 5.11B). The neck is manually examined for tumor masses and enlarged lymph nodes (Figure 5.11C). The neck's range of motion is checked. A highly flexible range of motion is abnormal during rigor mortis and reminds the pathologist to look for a fracture during internal examination.

CHEST

The chest is examined for symmetry and size (Figure 5.12A). Patients with emphysema and other chronic diseases often have an expanded, or "barrel," chest. Crepitus, or a crackling sound, indicates subcutaneous air from a pneumothorax. Rib fractures can be palpated as well. In severe chest injuries, such as from a high-speed motor vehicle crash, the chest can appear collapsed (Figure 5.12B).

BREASTS

The skin and nipple are observed for masses and ulcerations. The breast is palpated for masses and tumors (Figure 5.13A). The axilla, or armpit, is examined for enlarged lymph nodes. Breast cancers commonly spread to these axillary lymph nodes (Figure 5.13B, Figure 5.13C).

ABDOMEN

The abdomen is visually examined for distention, or bloating. Victims who have had cardiopulmonary resuscitation often have distention in the epigastric area. This is a result of air going into the stomach. The abdomen can also become distended (Figure 5.14A) due to hemorrhage or ascites (Figure 5.14B). Ascites is the accumulation of fluid in the abdomen, occurring in conditions like cirrhosis of the liver. Distention can also be seen due to bowel rupture and extensive inflammation, alerting the pathologist to take microbiologic cultures when opening the abdomen.

The abdomen is a common place for scars. The pathologist should search for scars including gallbladder, appendectomy, and other surgical scars. The presence or absence of scars can be used to make an identification.

EXTREMITIES, HANDS, FINGERS, NAILS

The pathologist must focus on the extremities, hands, fingers, and nails. These areas are easily forgotten, probably because their examination rarely elicits the cause of death. However, these areas are often rich in trace evidence and in clues to the cause and manner of death. For example, the extremities bear the brunt of knife attacks. Victims often grab the knife and hold their hands in a defensive position to ward off the attack. These wounds are often referred to as defense wounds (Figure 5.15A). The hands, nails, and fingers can carry trace evidence from a weapon or a perpetrator, such as wood fragments, hair, and skin. For this reason, the hands must be carefully examined and the fingernails scraped. Careful examination could show a portion of a missing nail. The death scene could then be searched for this torn nail fragment (Figure 5.15B).

Clues to natural disease processes can be seen in the hands and fingers. In Figure 5.15C, splinter hemorrhages in the fingernail beds are an outer sign of vegetations on the aortic valve, a condition called bacterial endocarditis. In this condition, bacteria-laden thrombi break off the valve and travel in the arterial system to the ends of the fingers and, more ominously, to the brain (Figure 5.15D), causing an abscess.

BACK

Since bodies are not easy to turn over, examination of the back is sometimes overlooked. In order to prevent this, the back is examined ritualistically at the same point in every autopsy. The back is a large area covering the back of the chest, the back of the abdomen, and even the posterior portions of the neck and abdomen. If many or key injuries are seen while the body is in the supine position, the body is carefully turned prone (face down) for documentation and examination of these injuries. Occasionally, the anterior, or front portion, of the body

is free of injuries, while the back contains a serious injury (Figure 5.16A, Figure 5.16B).

GENITALIA

The male genitalia are assessed for evidence of circumcision. This observation can be helpful in identification. The testes are assessed for tumors. Rarely, an undescended testis is noted. Injuries, such as abrasions or bite marks, can be seen in a sexual assault. If the penis has been traumatically severed, the resultant blood loss can be fatal.

The female genitalia are examined for tumors or developmental anomalies. In unnatural deaths, the female genitalia are examined for injuries from sexual assault. The sexual assault protocol includes an initial external examination for trace evidence such as hair. The vaginal area and rectum are examined for injuries (Figure 5.17A). The vagina, rectum, and surrounding areas are swabbed for semen or other secretions. The underpants and clothing are collected. The author has found commercially available sexual assault kits to be convenient since they contain more than enough material to do the examination (Figure 5.17B).

RECTUM/ANUS

Like the genitalia, the anus of both sexes is examined for sexual assault. Tumors and ulcerations are common findings in this region. In the bedridden, the sacral region, buttocks, and lateral ankles should be examined for pressure sores. The presence of such injuries might indicate elder abuse. Inflammatory bowel diseases, such as Crohn's disease, can be seen from inspecting the anus (Figure 5.18).

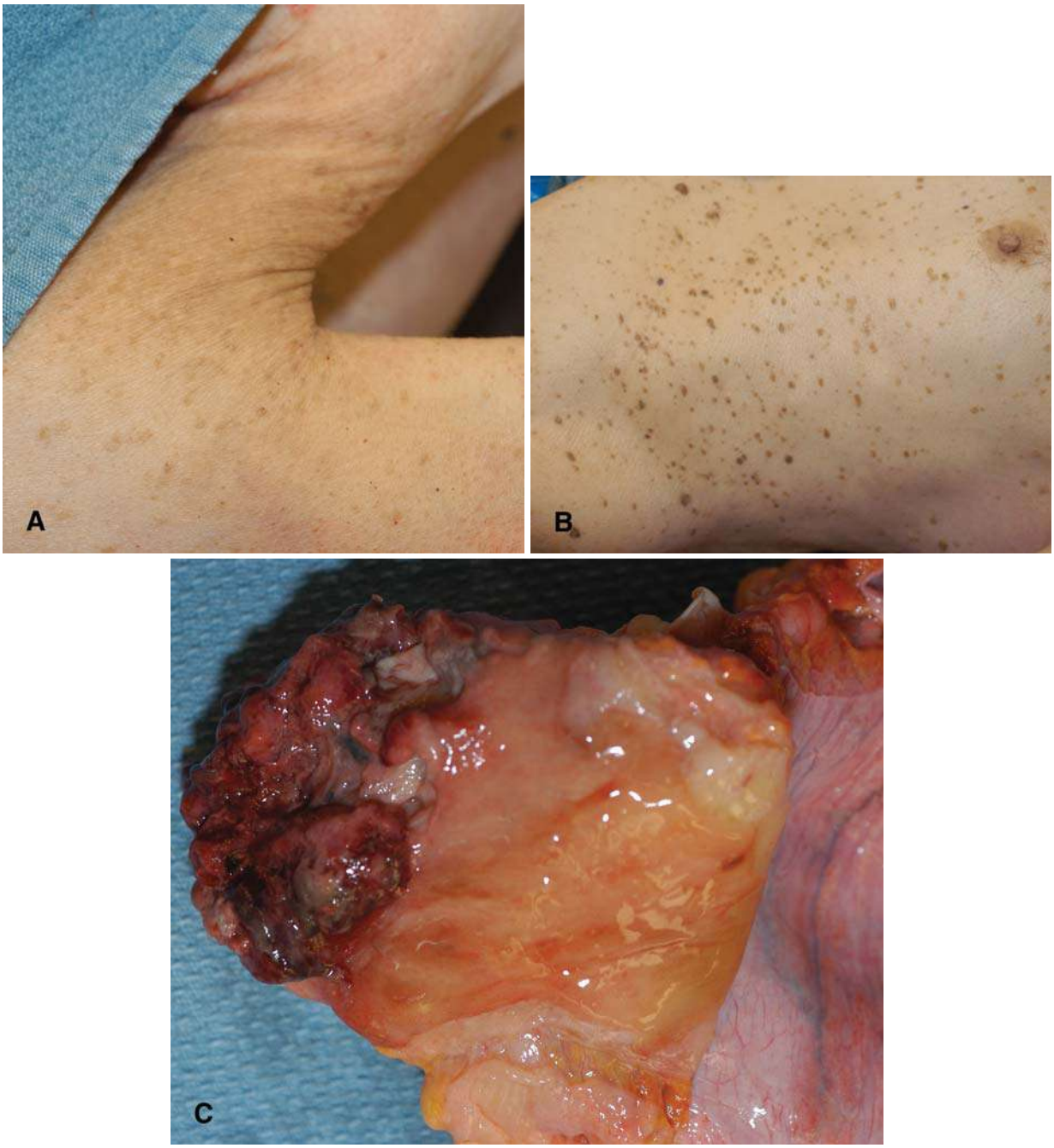


FIGURE 5.1 (A) *Acanthosis nigricans*. (B) Seborrheic keratoses. (C) Carcinoma of the colon. Dark pigmentation of the skin and multiple "greasy" keratoses on the body alert the pathologist to look internally for a visceral cancer. In the rectal-sigmoid colon of this patient, a carcinoma was found.

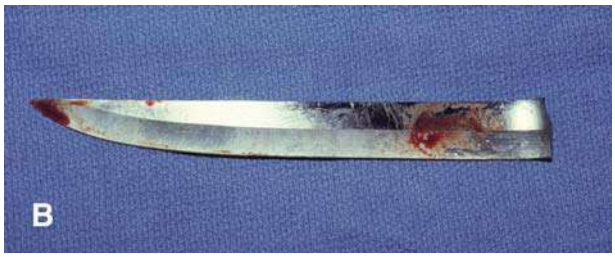


FIGURE 5.2 Broken knife found in the hair. (A) The hair must be carefully examined for evidence. **(B)** The murder weapon, a broken kitchen knife, was found in the hair of this victim.

FIGURE 5.3 Laceration of the scalp. The blood has been washed out of the hair, exposing what appears to be a laceration. One cannot be sure until the hair around the wound is shaved and the wound more closely examined (see Figure 5.4).

FIGURE 5.4 Close-up of laceration of the scalp. The hair around the wound has been shaved and the wound more carefully cleaned. One can see marginal abrasion, undermined margins, and tissue bridging. These findings, now clearly seen, demonstrate a laceration.

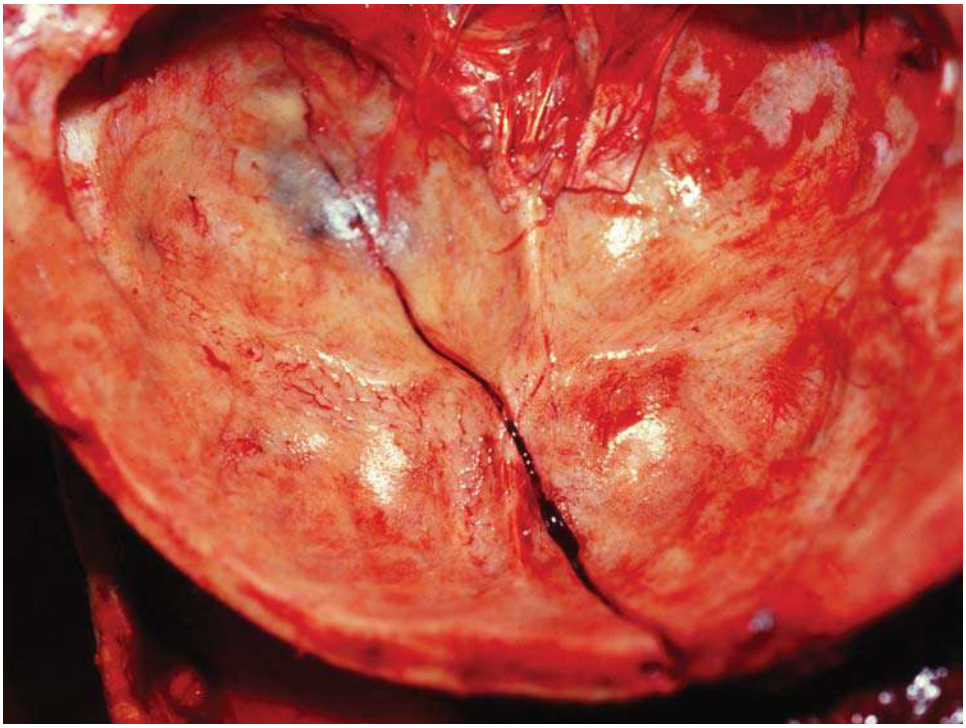


FIGURE 5.5 Fracture of the occipital bone of the skull. This fracture was discovered below the laceration shown in Figure 5.3 and Figure 5.4. One must conclude that this is a blunt force injury. The question remains: Was this person struck with a blunt force object, or was there a fall (see Figure 5.6)?

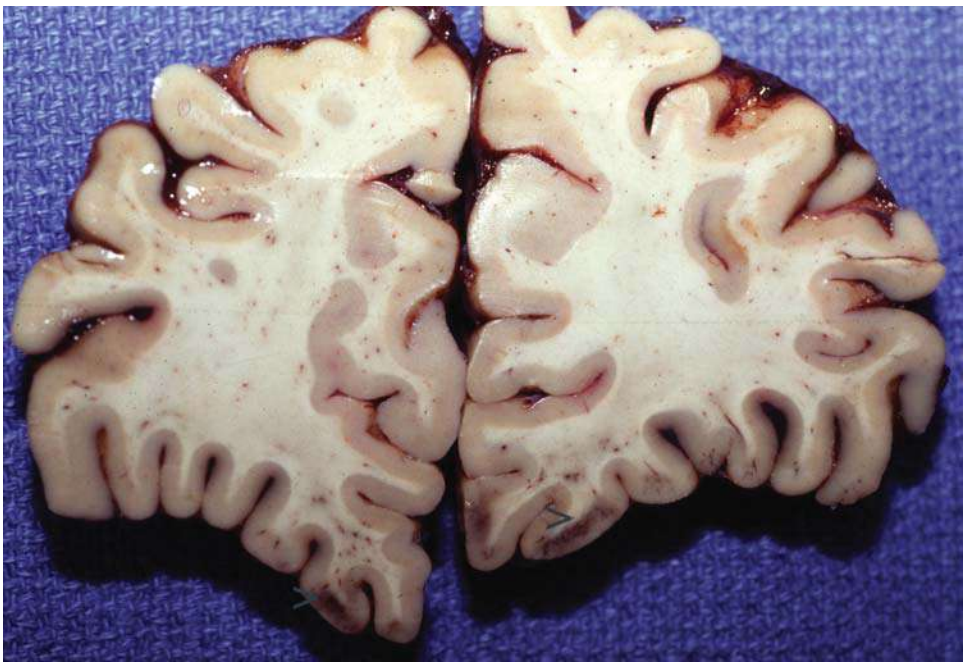


FIGURE 5.6 Contrecoup injury in the frontal lobe. Contusion hemorrhages can be seen at the arrows, near the bottom of the specimen. Their position indicates a contrecoup injury, meaning the victim fell backward, striking and fracturing the occipital bone. The brain is moveable inside the skull; when the skull is impacted, the moving brain can slap against the frontal skull base, producing contusion hemorrhages such as these.

FIGURE 5.7 Side glass abrasions/lacerations. The face exam can be helpful in determining the driver in a motor vehicle crash. Since side glass is tempered, not laminated like windshield glass, it breaks up into small cubes upon impact, dicing the face. Often, but not always, injuries on the left side of the face indicate the driver, and those on the right side of the face indicate a passenger.

FIGURE 5.8 Conjunctival petechiae. Small pointlike hemorrhages in the conjunctiva, or clear membrane of the eye, are often seen in asphyxial deaths. These petechiae are due to hemorrhage of small vessels in the conjunctiva, caused by the increased vascular pressure associated with asphyxia.

FIGURE 5.9 Orbital ecchymoses or "raccoon eyes." The darkening of the soft tissue around the eyes is due to blood accumulating in these soft tissues. This finding alerts the pathologist to search for fractures in the base of the skull, most likely the frontal bone or orbital roofs.

FIGURE 5.10 Examination of the mouth. (A) The mouth and teeth are examined for injuries and foreign material. The mouth is difficult to open in most autopsies because the jaw muscles are tightly clenched due to rigor mortis. **(B)** The upper lip shows contusion and abrasion in a victim who was strangled and suffocated. This injury was produced by external pressure on the mouth.

FIGURE 5.11 (A) Neck abrasions and contusions in strangulation. Multiple abrasions and contusions of the anterior neck are usually seen in strangulation injuries. Also, searching for internal injuries of the neck is essential to opine that these injuries are due to strangulation. **(B), (C) Examination of the neck.** The neck is palpated for masses, enlarged lymph nodes, and thyroid abnormalities. Tracheal deviation can indicate air in the chest or neck (pneumothorax and pneumomediastinum).

FIGURE 5.12 Examination of the chest. (A) The chest is examined for injuries, like rib fractures or crepitus due to air in the soft tissues. **(B)** The chest is flattened due to fracture of all the ribs anteriorly during a high-speed crash in excess of 100 mph; the airbag failed and the chest wall was crushed upon impact.

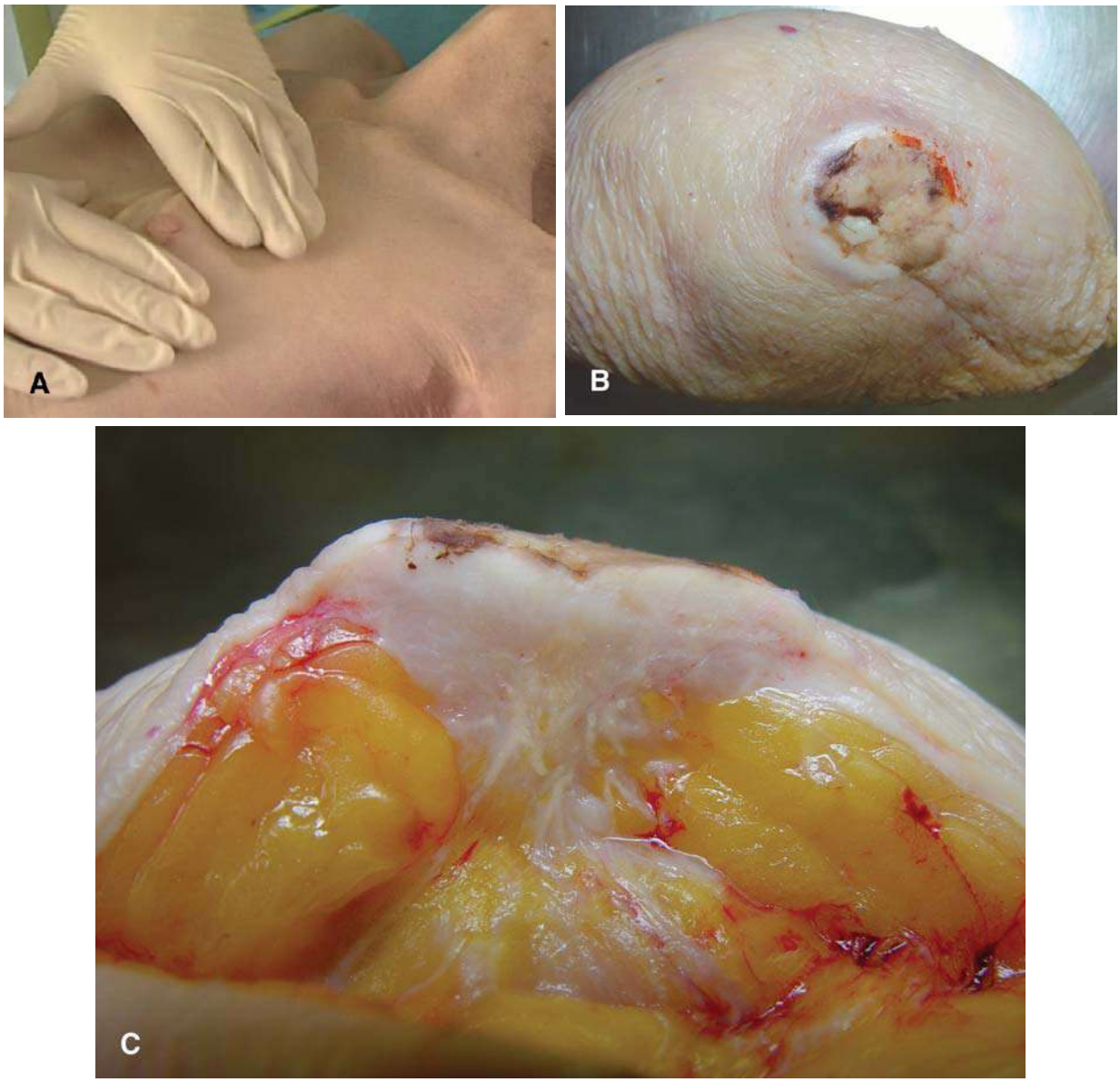


FIGURE 5.13 Breast exam and breast carcinoma. (A) The breasts are examined visually and by palpation for tumors and other deformities. **(B), (C)** These surgical specimens show a large, ulcerating tumor of the nipple. The cut section demonstrates a white tumor in the midline infiltrating the surrounding fat.

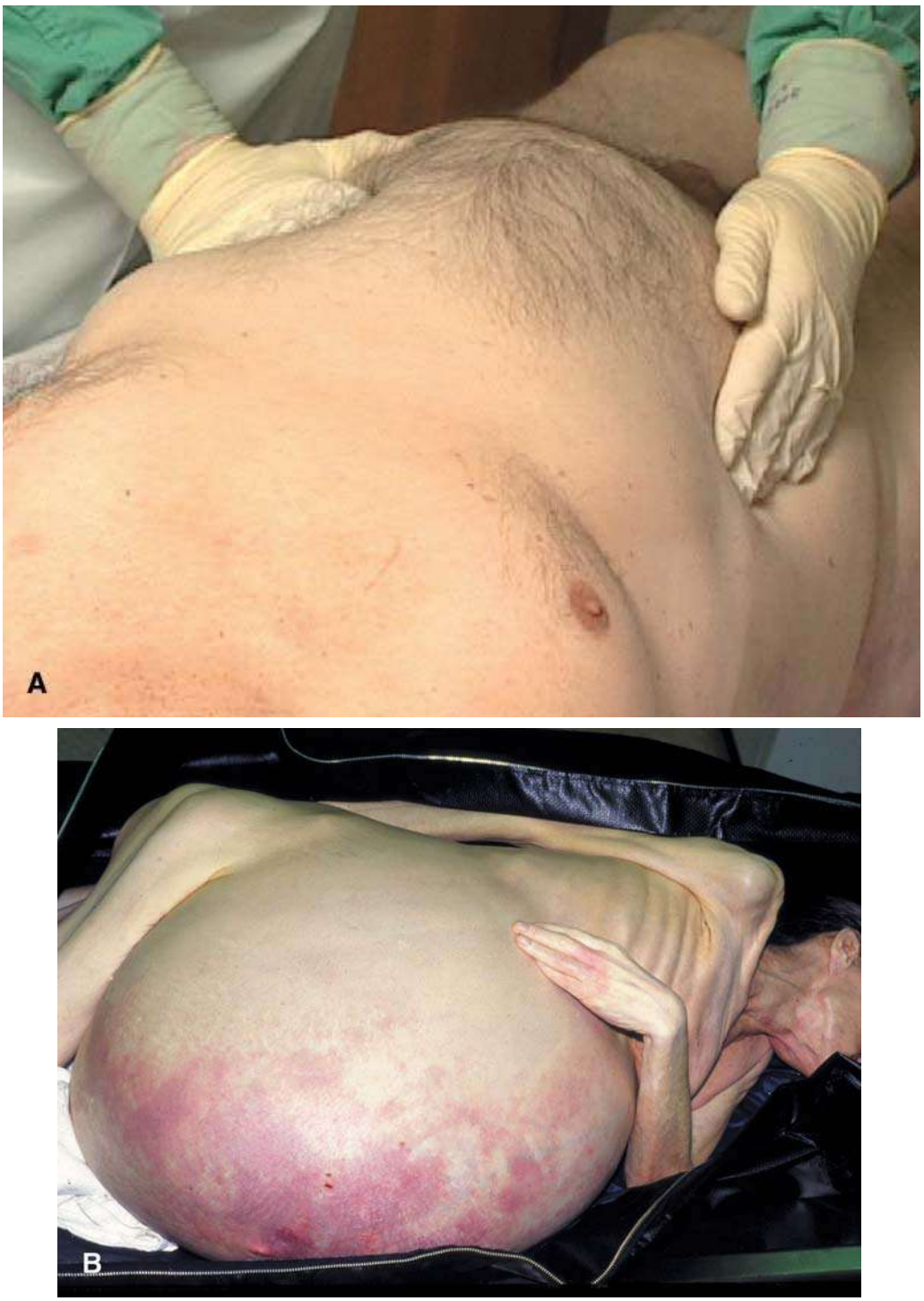


FIGURE 5.14 Abdominal examination. (A) The abdomen is visually examined for distention and other abnormalities. The abdomen is palpated for solid masses and enlargement of the spleen and liver. **(B)** The patient died from carcinoma of the ovary. The extremely distended abdomen is the result of excessive fluid in the abdominal cavity.

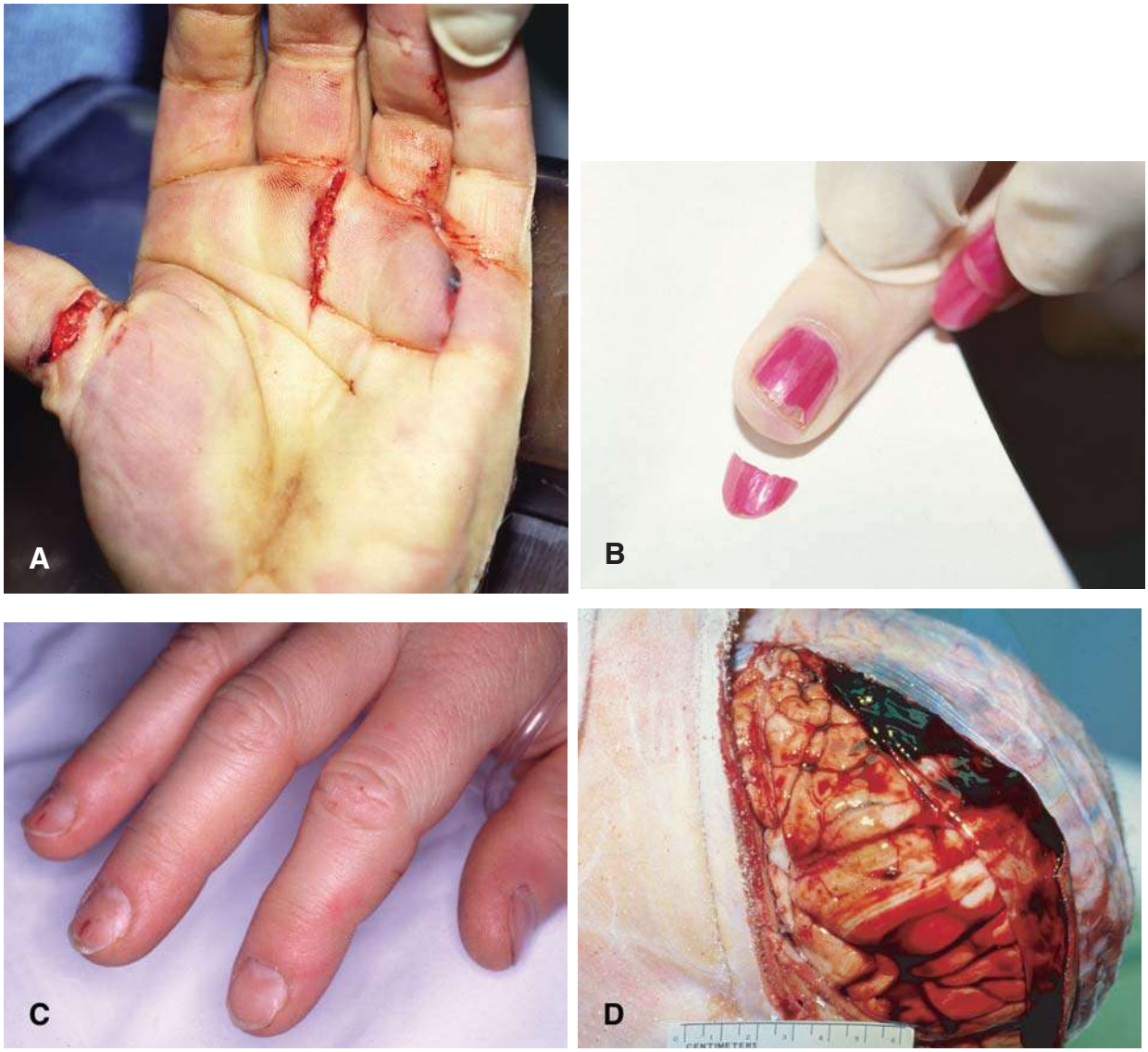


FIGURE 5.15 Examination of the hands and fingers. Examination of the hands is useful in both forensic and medical cases. The hands usually must be opened for examination, since rigor mortis often causes them to clench. **(A)** This figure shows defense cuts on the palmar surface of the hand, wounds obtained from defending against a knife attack. **(B)** The image depicts a finger and broken nail from a homicide victim. The broken nail was found at a second crime scene, where the victim was most likely assaulted. Finding and matching this missing nail implicated a suspect in this strangulation homicide. **(C)** The splinter hemorrhages in the middle and ring finger nail beds are signs of bacterial endocarditis and vegetations on the mitral or aortic heart valves. In this condition, small bacteria-laden emboli are disseminated throughout the arterial system into the nail beds, kidneys, and brain. **(D)** The brain shows hemorrhage from septic infarct, abcess, and stroke.

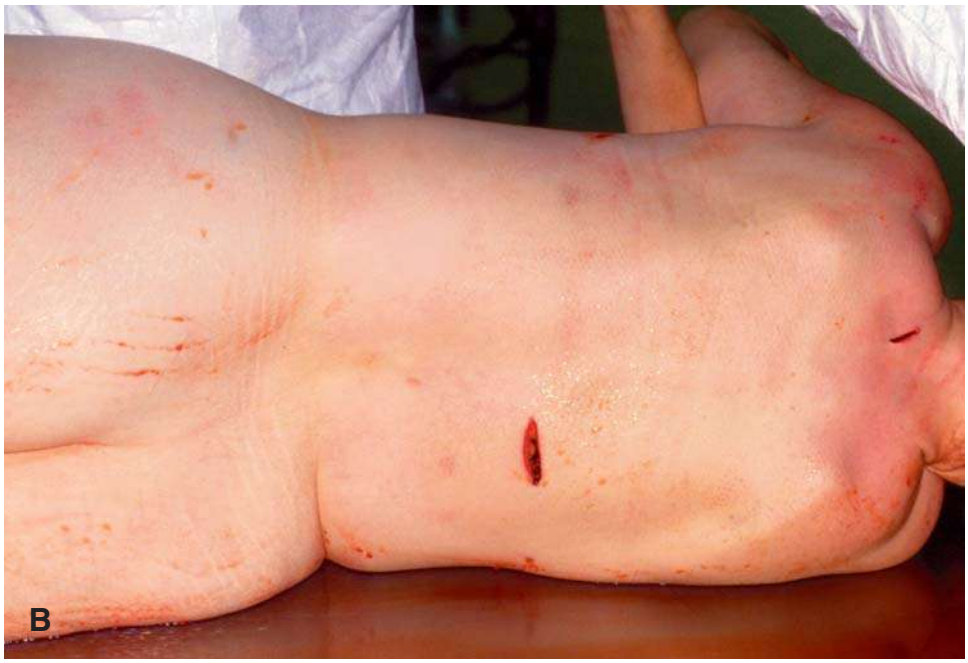


FIGURE 5.16 (A), (B) Stabs wounds found upon examination of the back. Bodies are difficult to turn over, so there is a natural tendency to forget to look at the back. Autopsy protocols are designed so that the back exam is not overlooked; in the case depicted, one would miss at least two stab wounds.

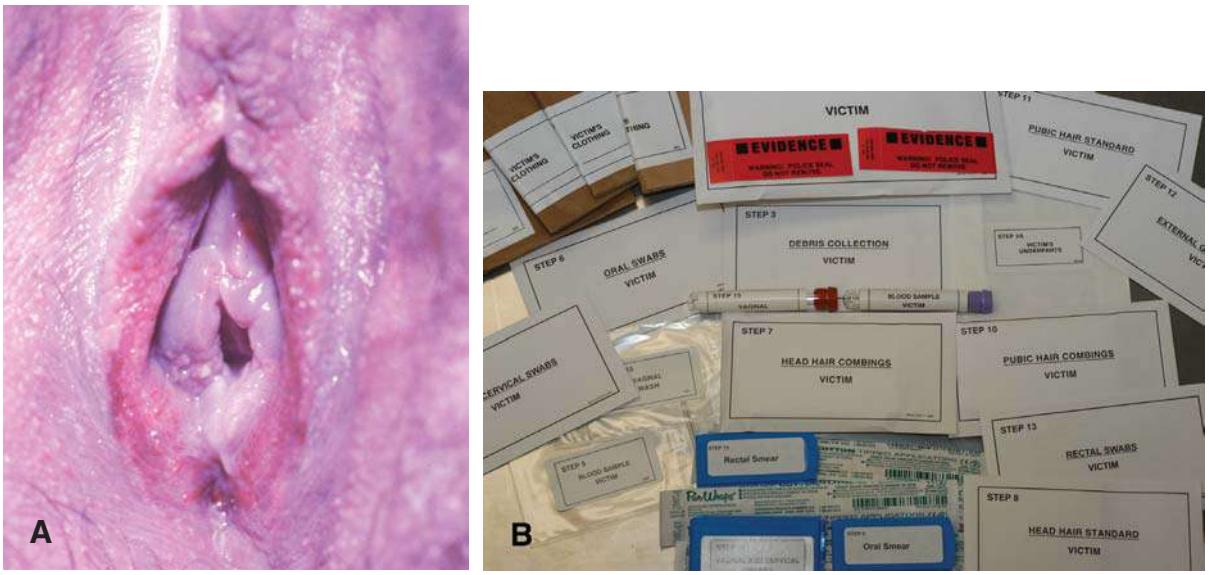


FIGURE 5.17 (A) Abrasions found upon vaginal examination. Examination for sexual assault is essential in suspicious deaths. Excessive abrasion, laceration, or contusion of the genitalia usually indicates assault. The labia here show a great deal of abrasion. **(B) Sexual assault kit.** A full sexual assault kit was obtained during this case, further confirming the assault. The victim was strangled to death during the assault.

FIGURE 5.18 Inflammatory bowel disease found upon anal examination. The anus is examined for assault and for medical conditions. The injury depicted shows multiple ulcerations and fistulae caused by inflammatory bowel disease, most likely Crohn's disease. Inflammatory bowel disease causes ulcerations in the bowel wall and mucosa. If untreated, this disease can cause peritonitis and death.

6 Internal Examination: Opening of Body Cavities and Initial Assessment

As has been shown, the external exam provides clues about what the pathologist can expect to find inside the body. During the internal exam, these leads are investigated. As with any investigation, some findings are completely unexpected. This means that the pathologist must examine all tissues carefully and objectively. Going into an autopsy with preconceived notions about potential findings can cause the pathologist to overlook the unexpected. For this reason, each internal exam includes, at minimum, an examination of the following:

- Heart, including coronary arteries and heart valves
- Chest cavity and mediastinum
- Lungs and lung hilum
- Liver and gallbladder
- Spleen
- Stomach and esophagus
- Small and large intestines
- Bowel mesentery
- Peritoneal cavity
- Body walls
- Aorta and its branches
- Kidneys and adrenal glands
- Bladder
- Prostate
- Uterus and ovaries
- Neck organs, including larynx and thyroid gland
- Vertebral column
- Skull
- Brain and its coverings

This is a general list. Special cases or circumstances might require a more focused study of a specific tissue or organ system.

During the internal exam, the pathologist looks continuously for injuries and diseases with every cut of the knife. All of the senses, except taste, are used. Tumors are often hard and can be palpated with the fingers. Hemorrhage can be seen in tissues that have deep, traumatic contusions. A smell of bitter almonds might indicate cyanide poisoning. Delicate crackles heard in the chest and mediastinal tissues indicate air in the tissues, or pneumothorax. The dissection is a careful, stepwise examination of the tissues and organs, usually performed in the same way so that nothing is forgotten. Most pathologists use their own routine protocols for dissection for this reason.

The reader should follow the figures page by page to experience the actual steps that are taken during the autopsy dissection.

DISSECTION OF THE SKIN AND OPENING OF THE CHEST AND ABDOMEN

FIGURE 6.1 Placing the body on blocks. The shoulder region of the body is placed on rubber blocks. This freely exposes the neck. Also, the shoulders naturally spread apart in this position.

FIGURE 6.2 (A)–(C) Initial "Y" incision. The body is opened with a Y-shaped incision extending from one shoulder to the other. The yellow subcutaneous fat is exposed.

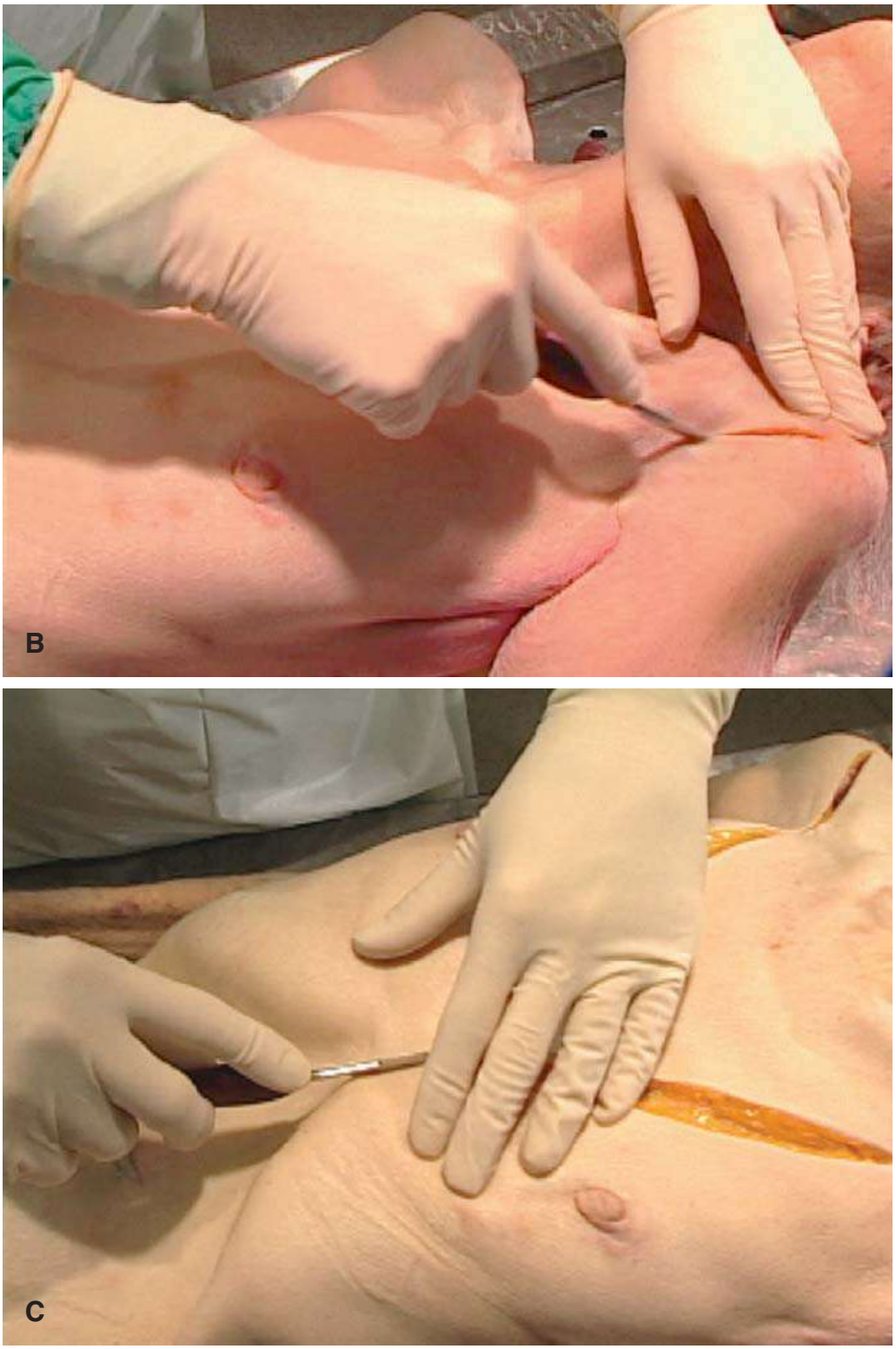


FIGURE 6.2 (CONTINUED) Initial "Y" incision. The body is opened with a Y-shaped incision extending from one shoulder to the other. The yellow subcutaneous fat is exposed.

FIGURE 6.3 Midline incision. The incision is extended to the midline abdomen, down to the midline of the pubic bone (pubic symphysis).

FIGURE 6.4 (A)–(C) Dissection of chest skin and soft tissue. The skin and subcutaneous tissue are dissected back to expose the underlying muscle and bone. The natural yellow color of the subcutaneous fat can be seen here. The soft tissue at the base of the neck can be seen in Figure 6.4C.

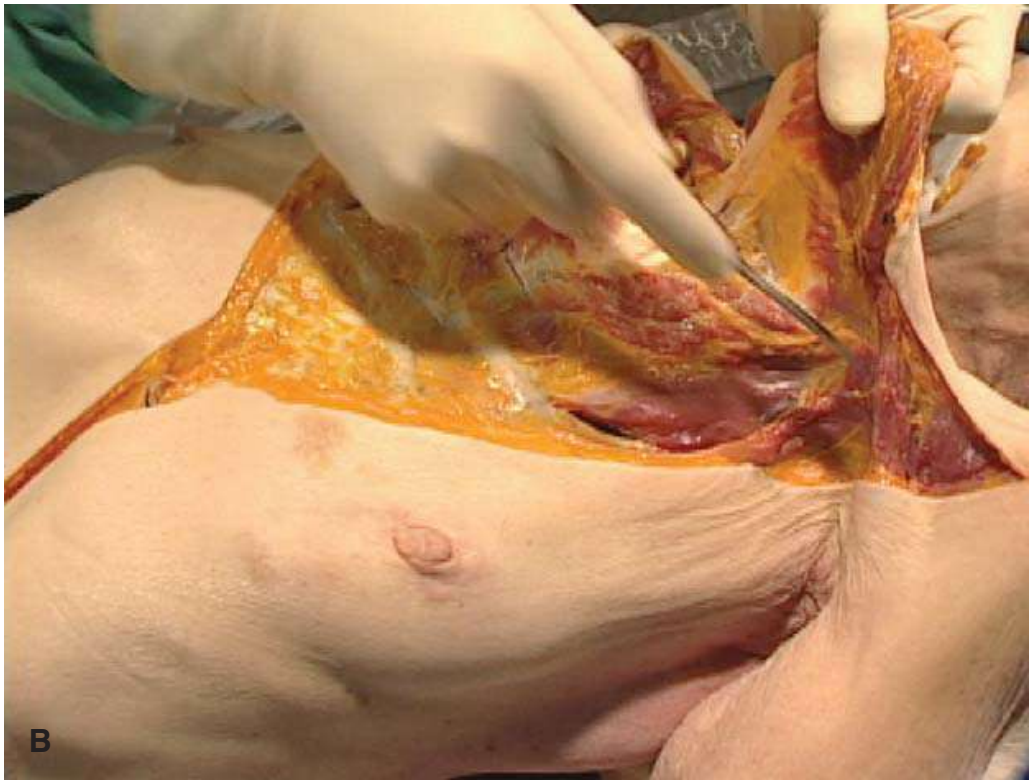


FIGURE 6.4 (CONTINUED) (A)–(C) Dissection of chest skin and soft tissue. The skin and subcutaneous tissue are dissected back to expose the underlying muscle and bone. The natural yellow color of the subcutaneous fat can be seen here. The soft tissue at the base of the neck can be seen in Figure 6.4C.

FIGURE 6.5 CPR fracture of the ribs. The pathologist is constantly looking for injuries. This minimal focal hemorrhage is a result of rib fracture due to cardiopulmonary resuscitation. Fracture of these ribs during life would yield extensive, not focal, hemorrhage.

FIGURE 6.6 (A)–(C) Opening of the abdominal cavity. The abdomen is opened, exposing the underlying viscera. The pathologist is constantly looking for fluid, hemorrhage, or signs of inflammation in the abdominal cavity.

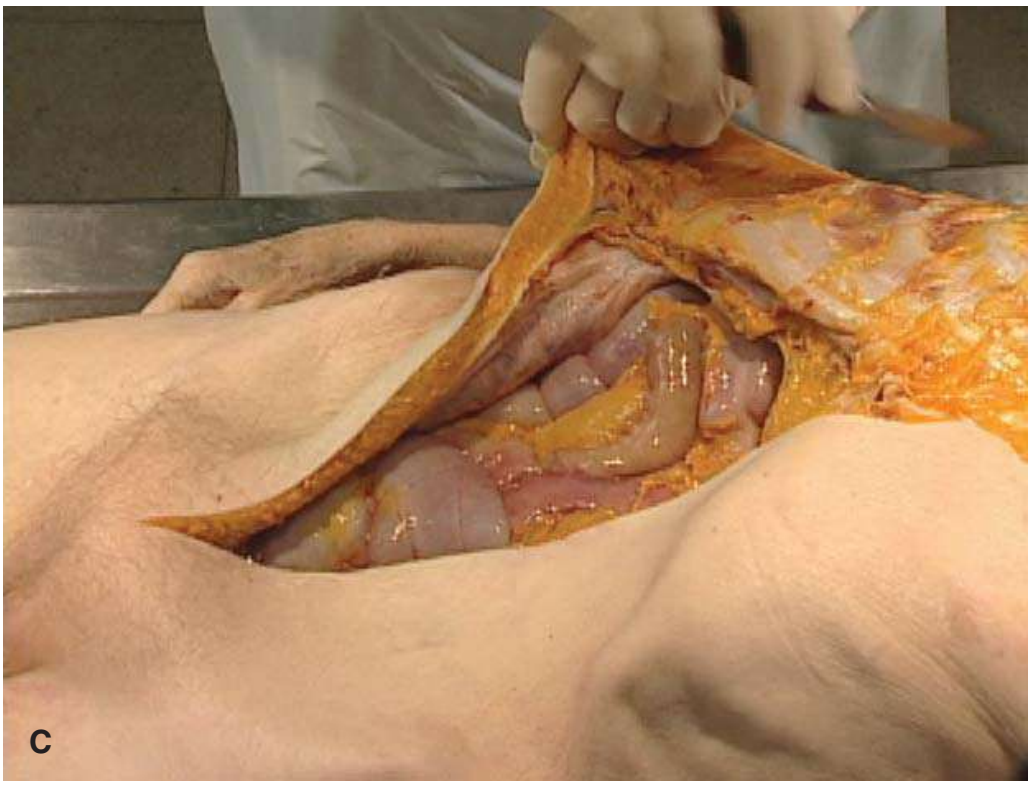


FIGURE 6.6 (CONTINUED) (A)–(C) Opening of the abdominal cavity. The abdomen is opened, exposing the underlying viscera. The pathologist is constantly looking for fluid, hemorrhage, or signs of inflammation in the abdominal cavity.

FIGURE 6.7 Pus in the abdomen. This figure shows yellowish pus, a sign of peritonitis. Microbiologic cultures can be taken to diagnose the source of infection. Also, the abdomen will be searched for an anatomical source of this fluid, such as a perforated stomach ulcer.

FIGURE 6.8 Marking the ribs. The ribs are marked for sawing.

FIGURE 6.9 Sternoclavicular joint cut. The sternoclavicular joint is often cut because the thick joint can be difficult to saw.

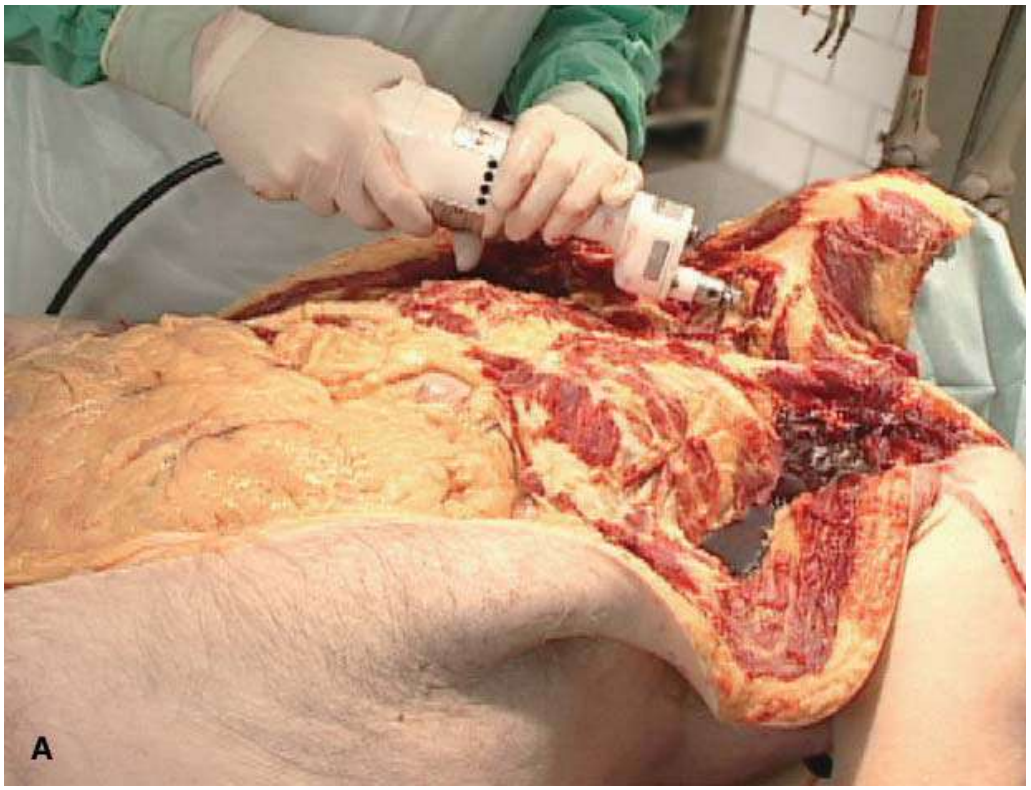
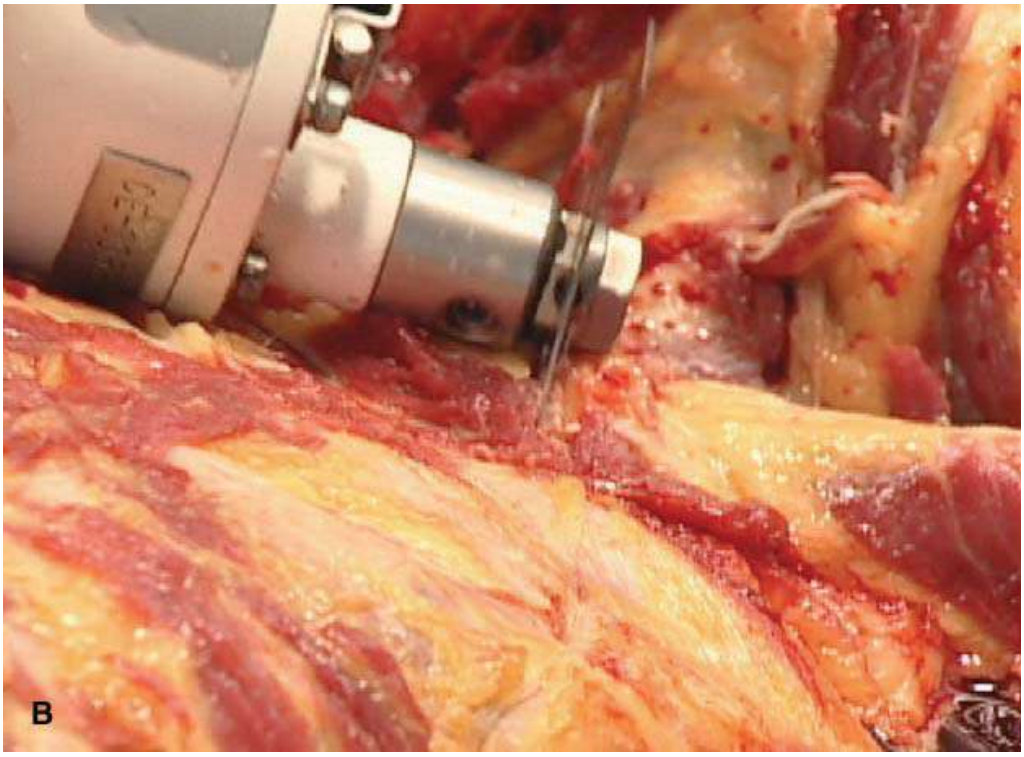


FIGURE 6.10 (A)–(C) Opening of the ribs with a bone saw. The ribs are sawed and opened with wide arcs to facilitate access to the chest organs and tissues.



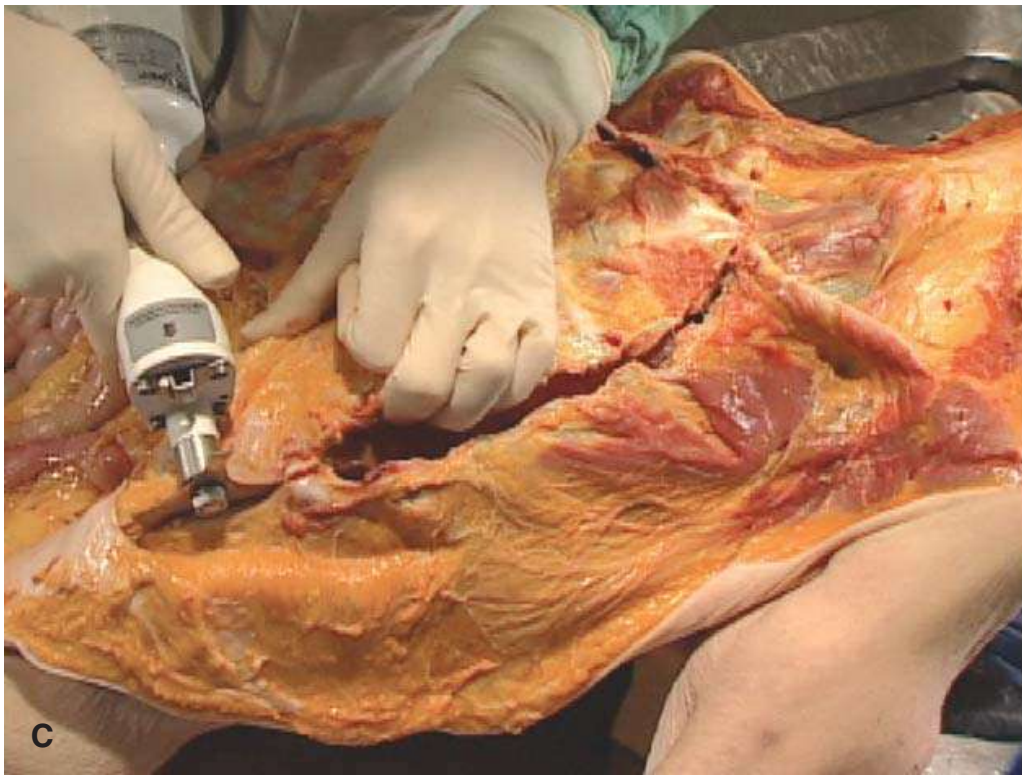


FIGURE 6.10 (CONTINUED) (A)–(C) Opening of the ribs with a bone saw. The ribs are sawed and opened with wide arcs to facilitate access to the chest organs and tissues.

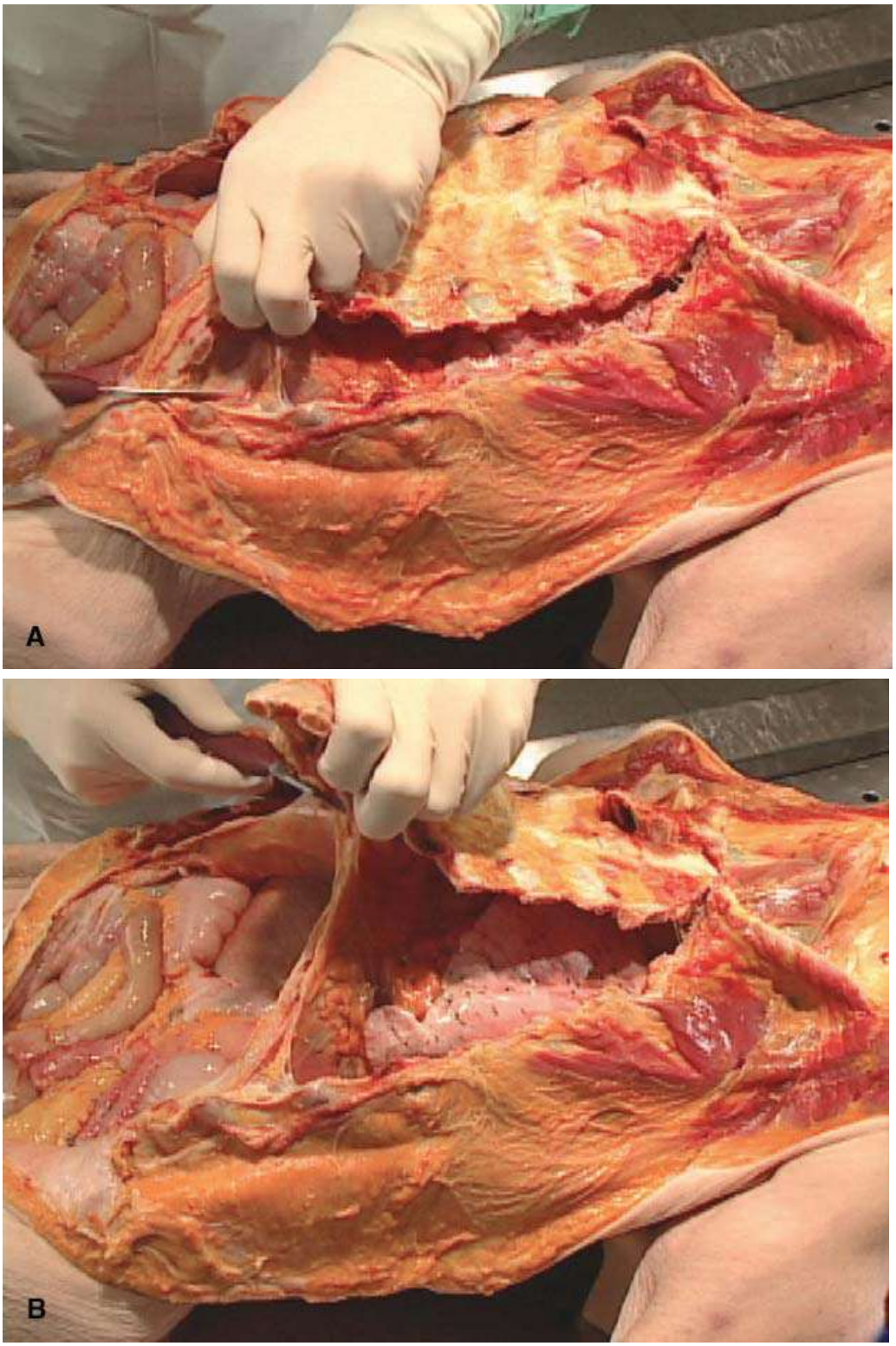


FIGURE 6.11 (A)–(D) Removing the "chest plate." The anterior diaphragm, uncut soft tissue, and soft tissue of the mediastinum are cut as the chest plate, or sternum, and ribs are lifted off.

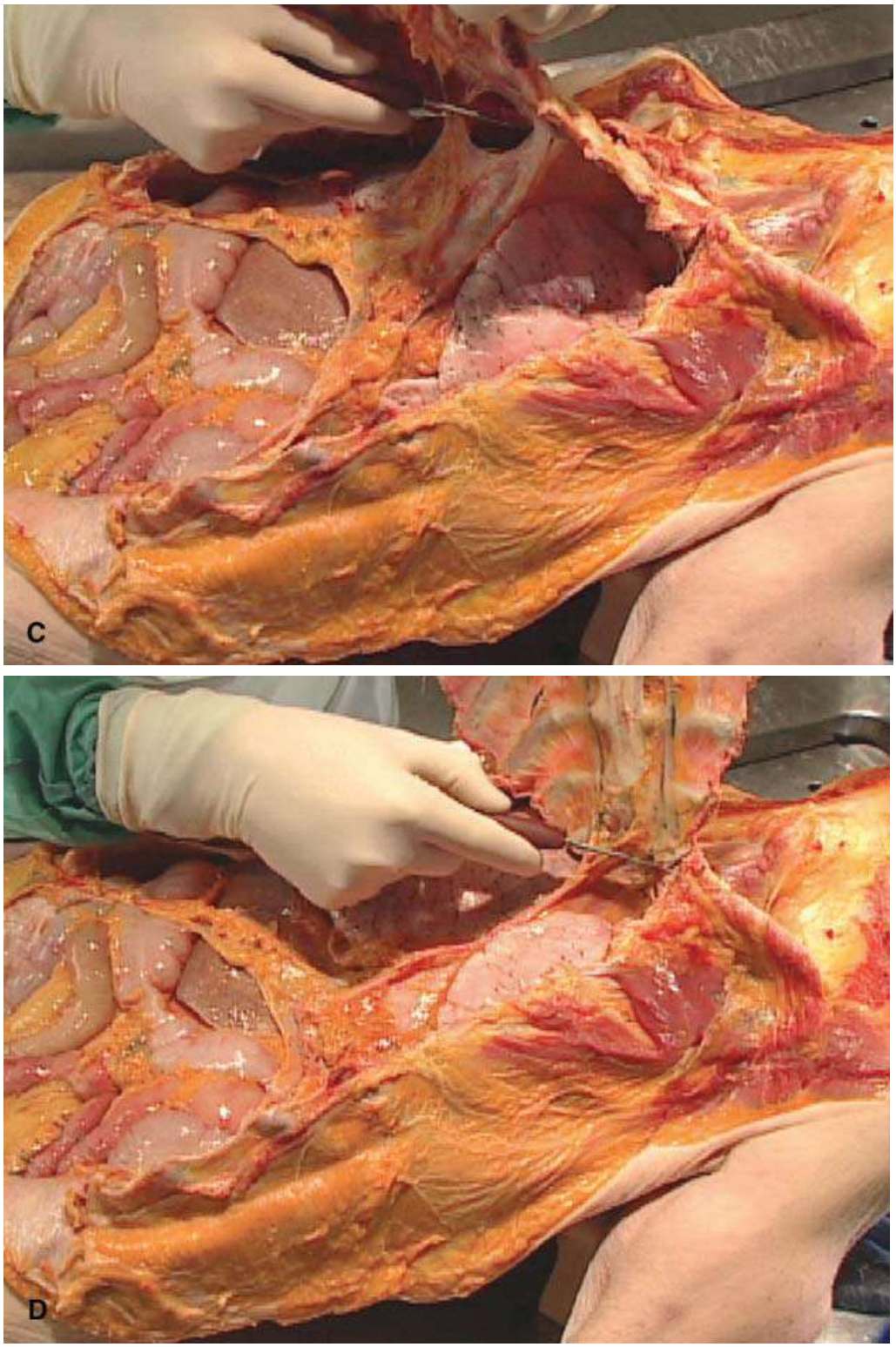


FIGURE 6.11 (CONTINUED) (A)–(D) Removing the "chest plate." The anterior diaphragm, uncut soft tissue, and soft tissue of the mediastinum are cut as the chest plate, or sternum, and ribs are lifted off.

SURVEY OF CHEST TISSUES AND ORGANS

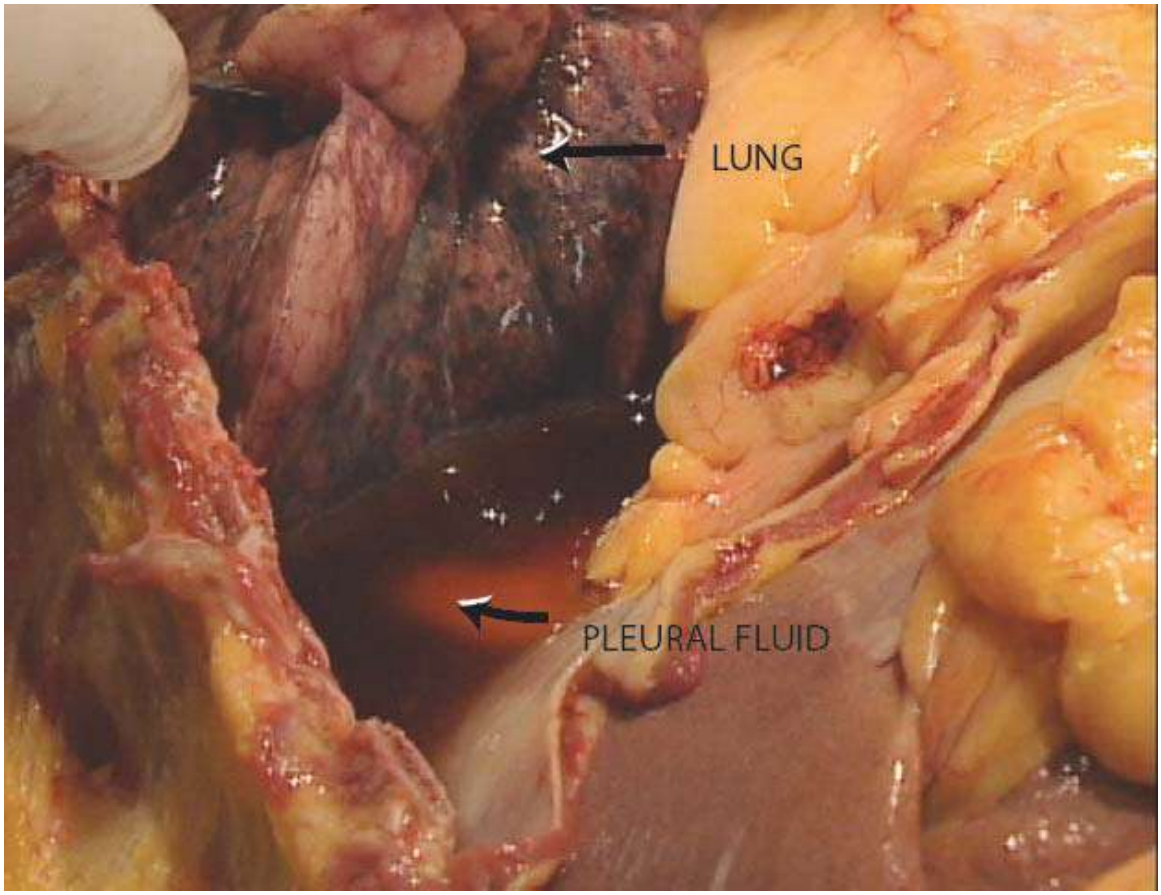


FIGURE 6.12 Fluid in the pleural cavity. Just as the sawed ribs are lifted up, inspection of this right chest cavity reveals serous fluid. The chest fluid here is the result of congestive heart failure. This failure of the heart as a pump results in fluid backing up in the lungs and chest. All fluids encountered are measured or closely estimated.

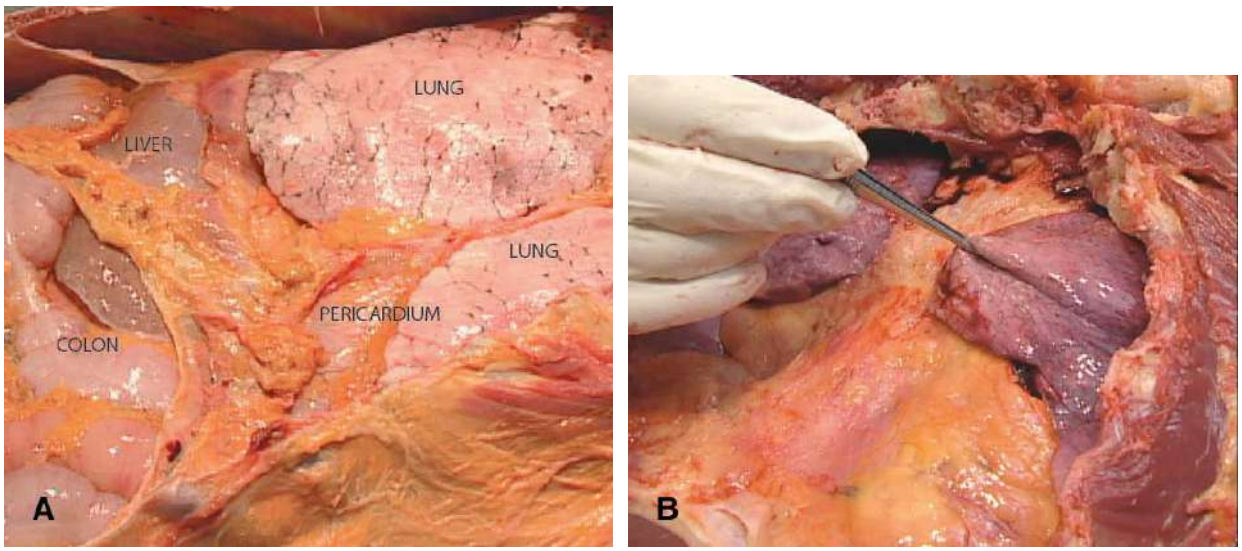


FIGURE 6.13 Survey of the lungs. (A) After the chest plate is removed, the lungs are examined *in situ*. The lungs here are situated normally in the chest. **(B)** The lung is held by the forceps.

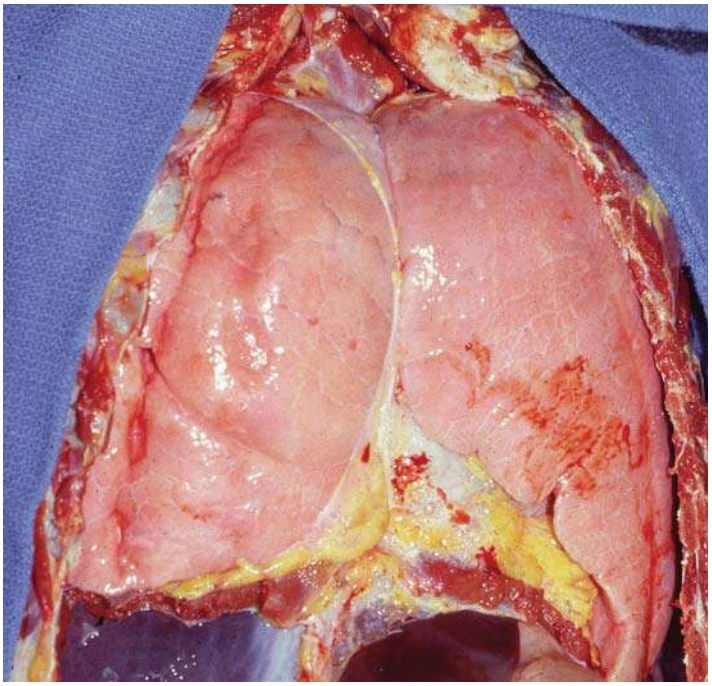


FIGURE 6.14 Hyperinflated asthmatic lungs. The lungs here show hyperinflation due to trapping of air. This patient died of a sudden asthma attack (*status asthmaticus*), during which bronchial spasm and mucous plugging hamper breathing, causing air to be trapped.

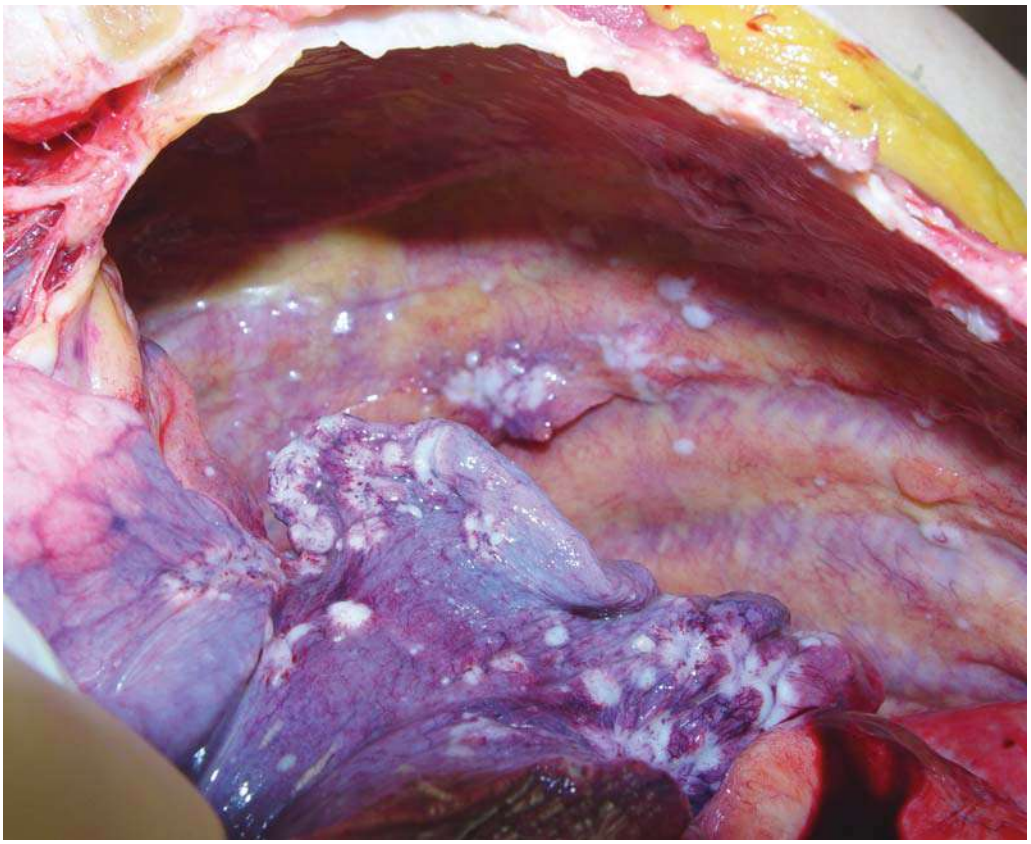


FIGURE 6.15 Metastatic carcinoma of the lung. Multiple white nodules on the lung pleura (covering) are from a carcinoma of the lung that has spread from the primary site (metastasized).

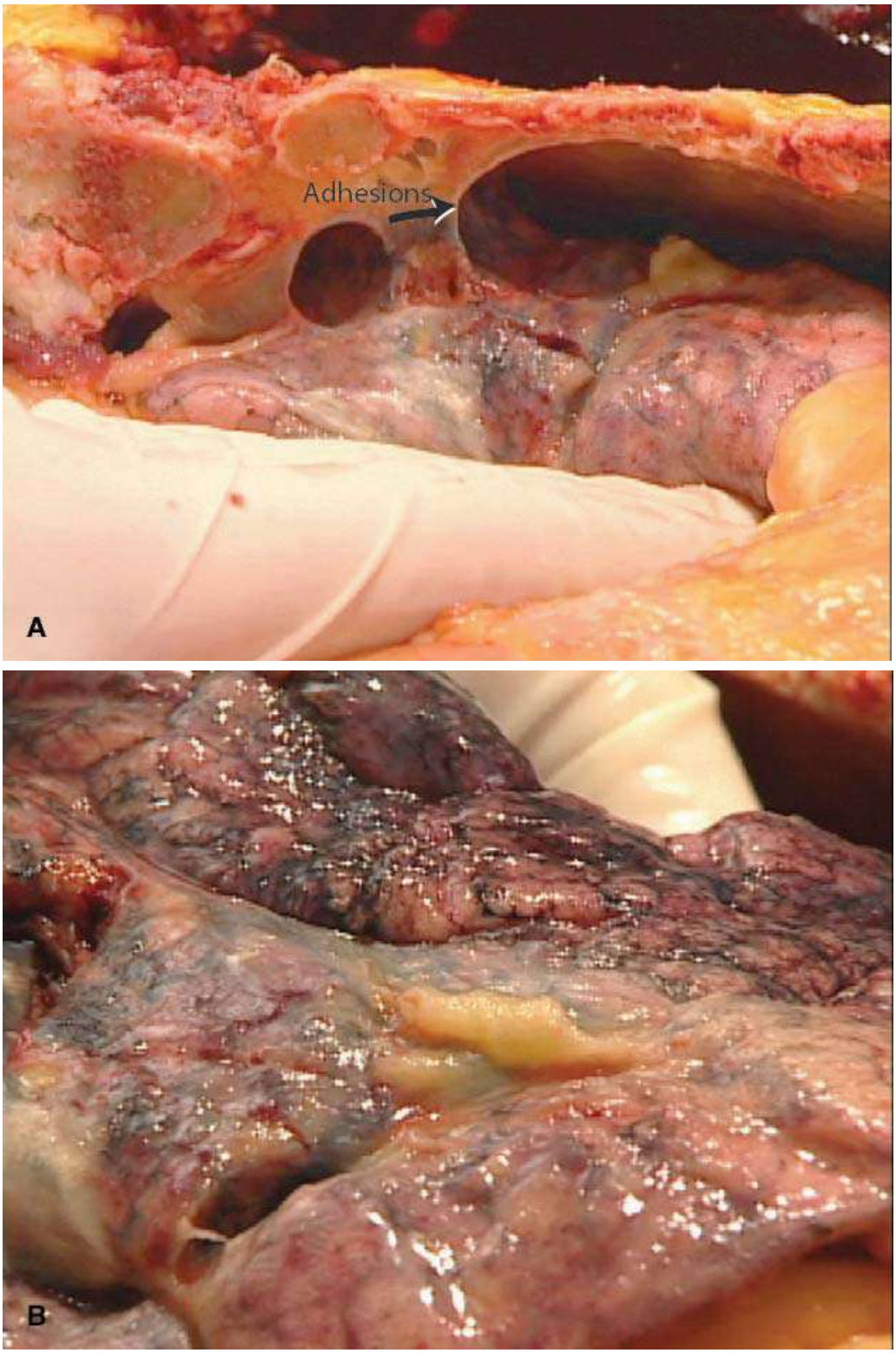


FIGURE 6.16 Lung and pleural adhesions. (A) Adhesions can be seen just below the cut ribs. **(B)** The covering of the lung, or pleura, shows a yellow exudate (center) also, suggesting an inflammation of the lung and pleura, such as pneumonia.

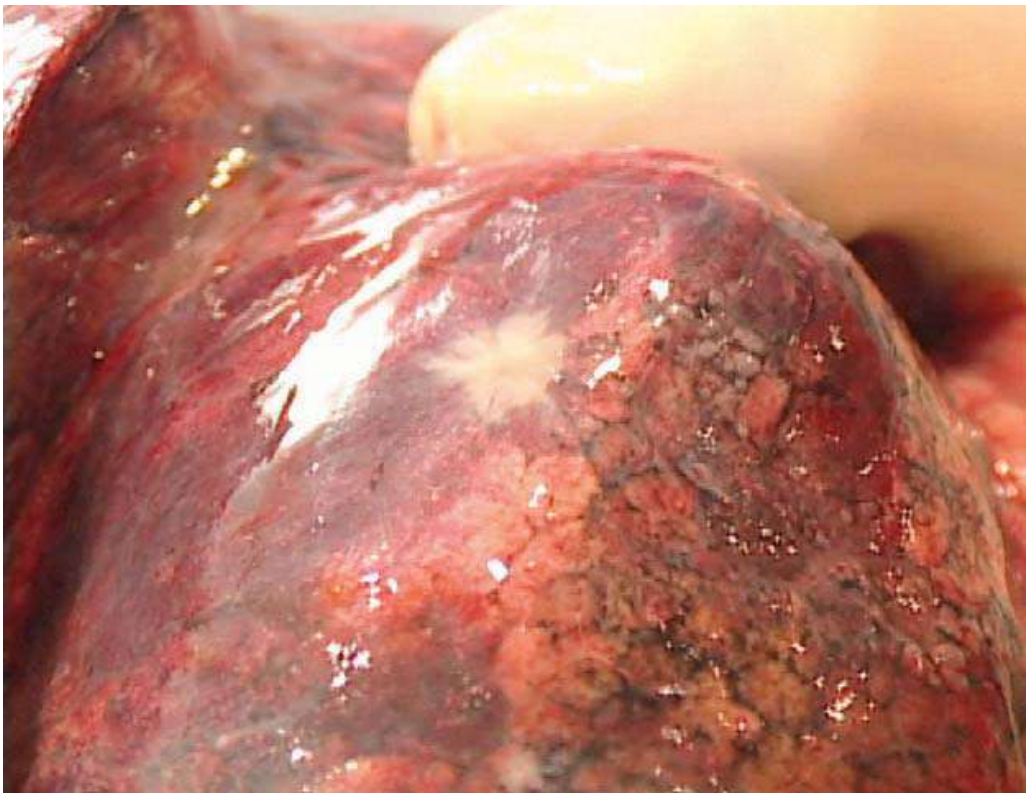


FIGURE 6.17 Pleural scar of the lung. Initial exam of this lung shows a whitish scar on the pleura. This is likely a healed focus of inflammation.

FIGURE 6.18 Palpation of mass in the left lung. The pathologist uses the sense of touch to feel for masses. Tumors are commonly firm to the touch. The pathologist is palpating a tumor between the thumb and forefinger. This tumor will be dissected later in the organ exam (see Figure 8.37).

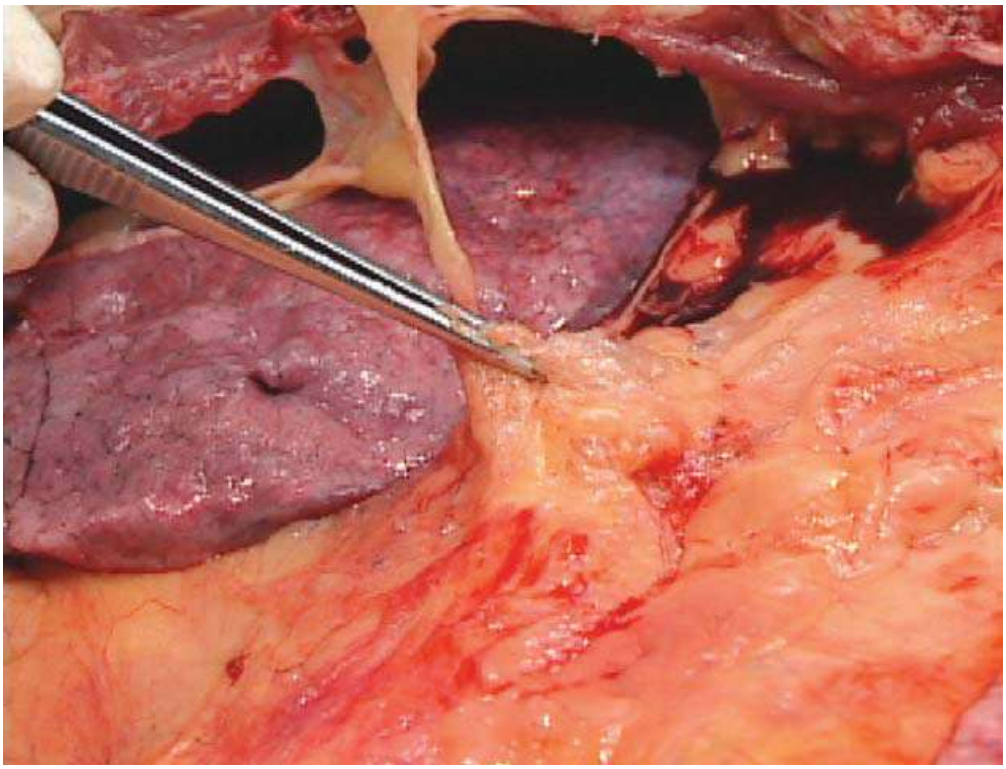


FIGURE 6.19 Pericardial air bubbles. Small "bubbles" in the tissue, as seen here between the forceps, indicate dissection of air from the lung into the chest cavity and surrounding soft tissue of the chest (pneumothorax). The cause of pneumothorax in this figure is a rib fracture from cardiopulmonary resuscitation.

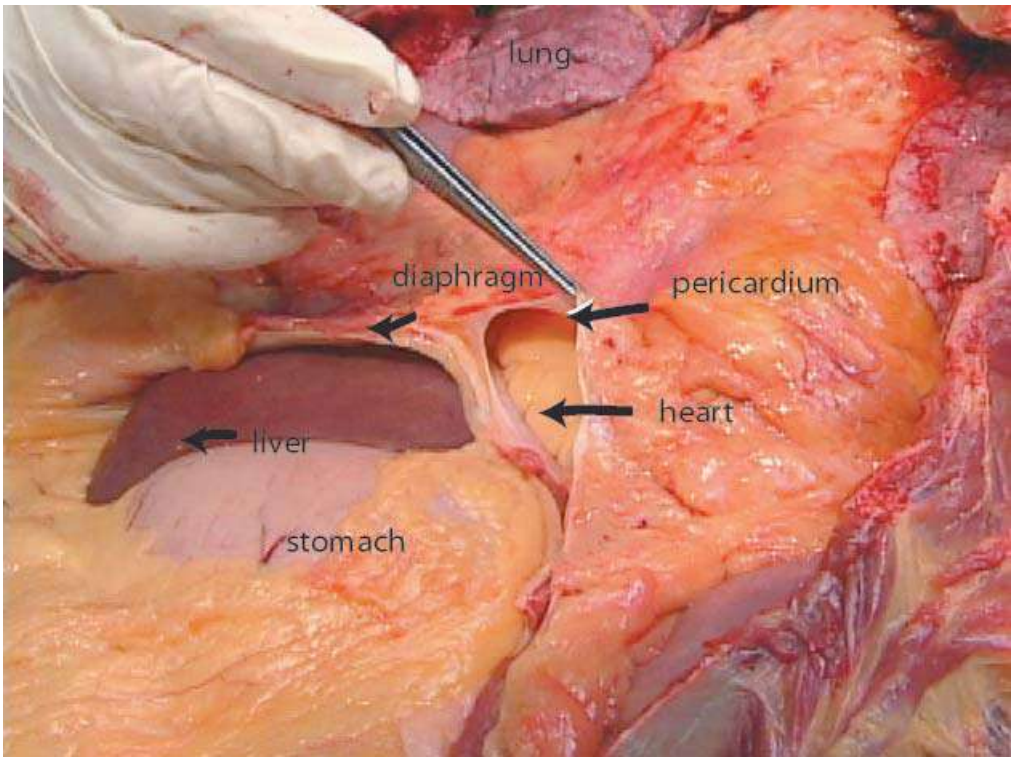


FIGURE 6.20 Pericardium displayed. The pericardium (heart lining) has been opened and is lifted up by the forceps. The heart is contained within. The fat-covered tip of the heart can be seen. The liver is dark brown, just below, resting on the stomach.

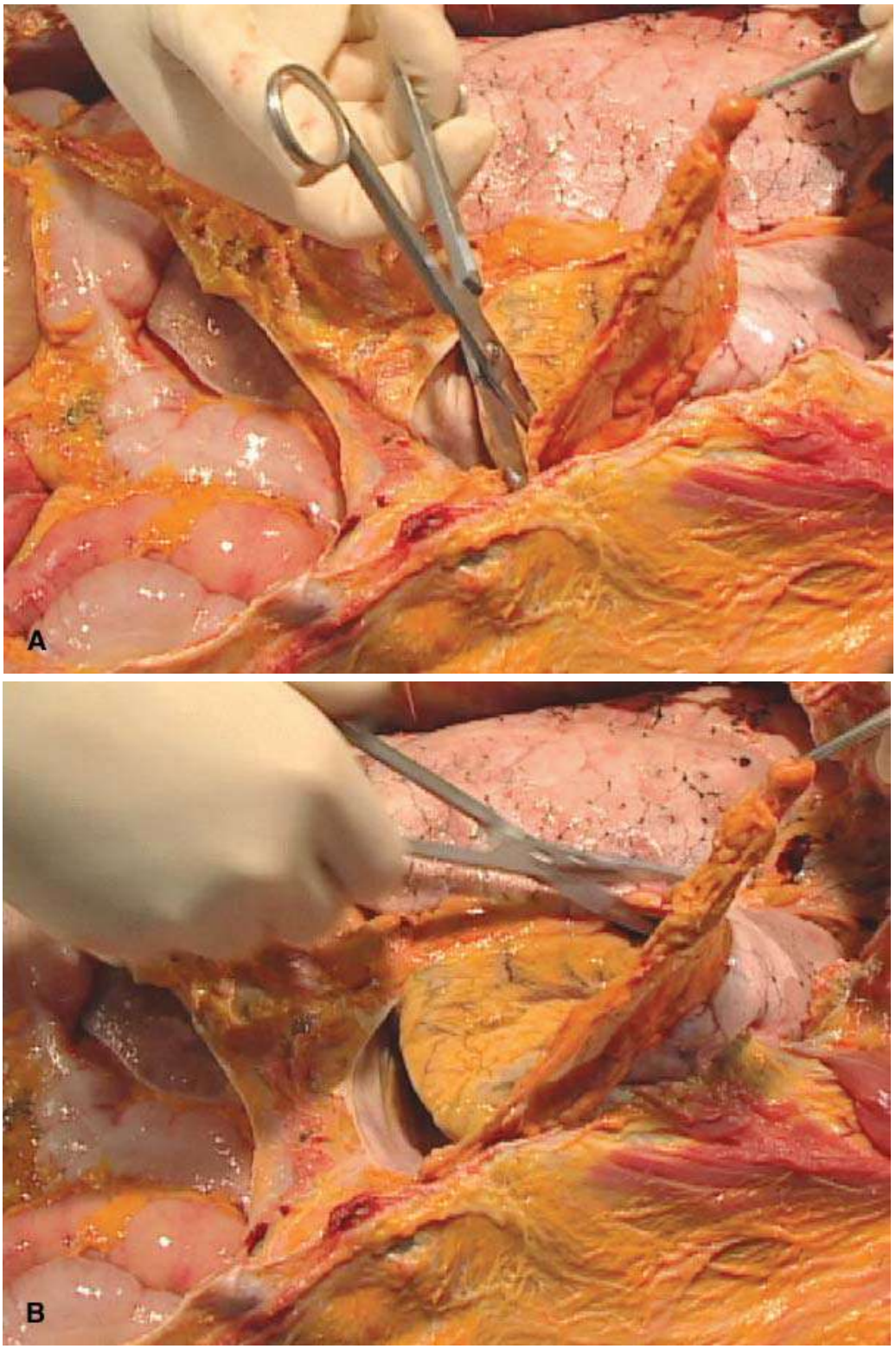


FIGURE 6.21 (A), (B) Opening of the pericardium. The pericardium is opened to look for fluid and inflammation.

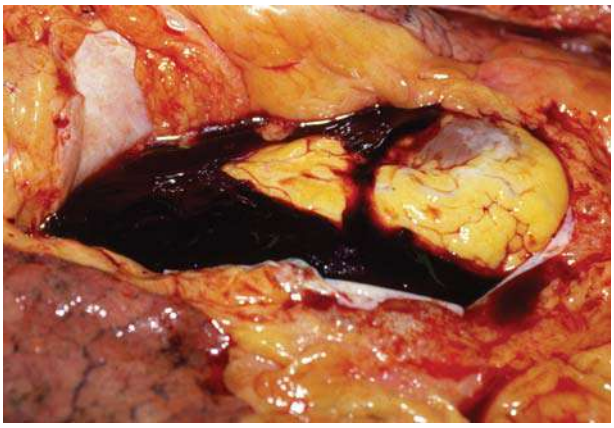


FIGURE 6.22 Hemopericaridum. Blood can be seen filling the pericardium. This patient had suffered a myocardial infarction about 5 days previously. The infarcted (dead) heart tissue burst open, allowing for hemopericardium. The blood in the pericardium interferes with the contraction of the heart (cardiac tamponade) and can cause cardiac arrest.

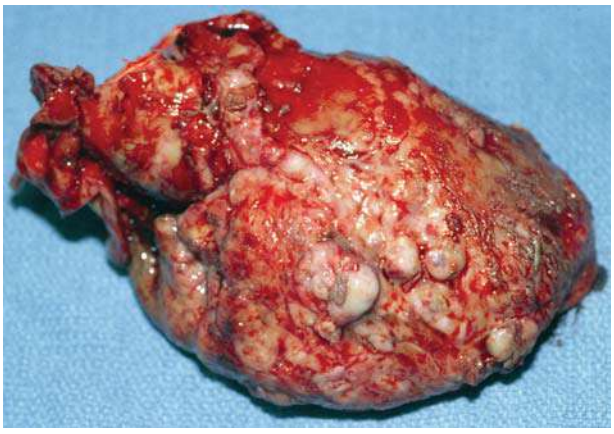


FIGURE 6.23 Metastatic carcinoma of the heart. The epicardium (outer surface of the heart) is covered with metastatic tumor nodules. The diagnosis of carcinoma will be confirmed by microscopic exam (see Figure 10.6).

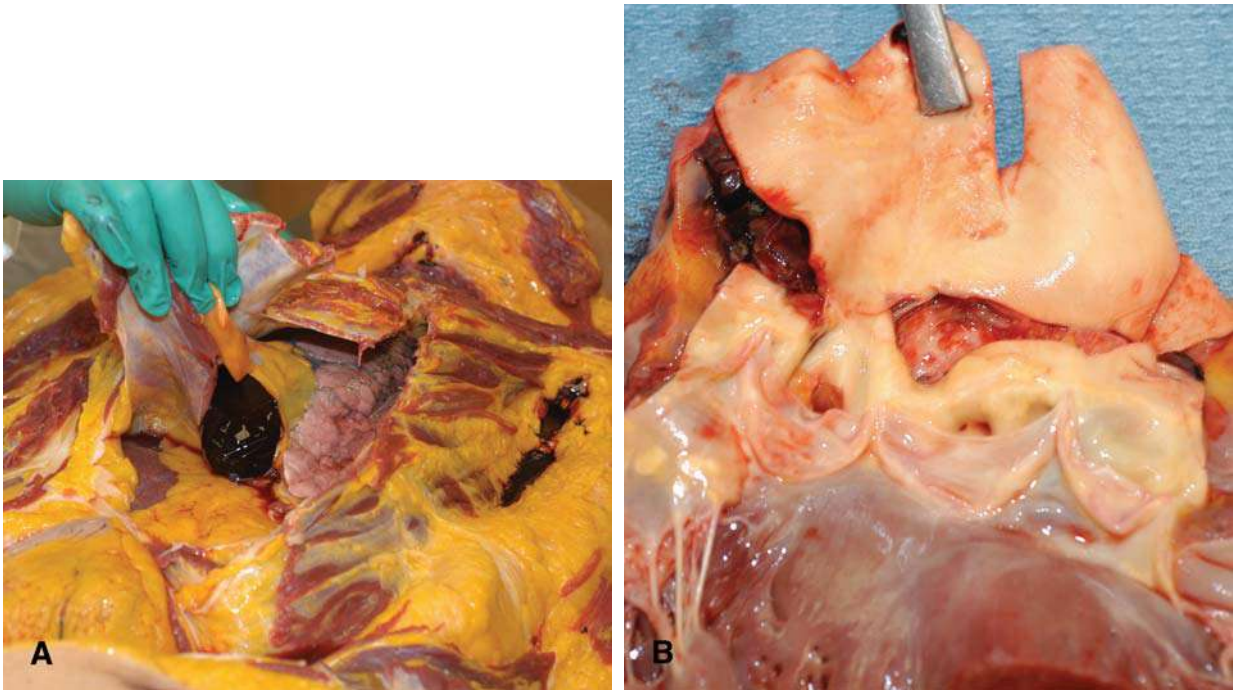


FIGURE 6.24 (A) Hemopericardium. A large, about 200-cc hemopericardium is seen. **(B) Aortic laceration.** Once the clot is evacuated and the heart removed, the source of the blood is found to be an aortic dissection near the aortic valve. Since this part of the aorta is within the pericardial sac, the blood is found here.

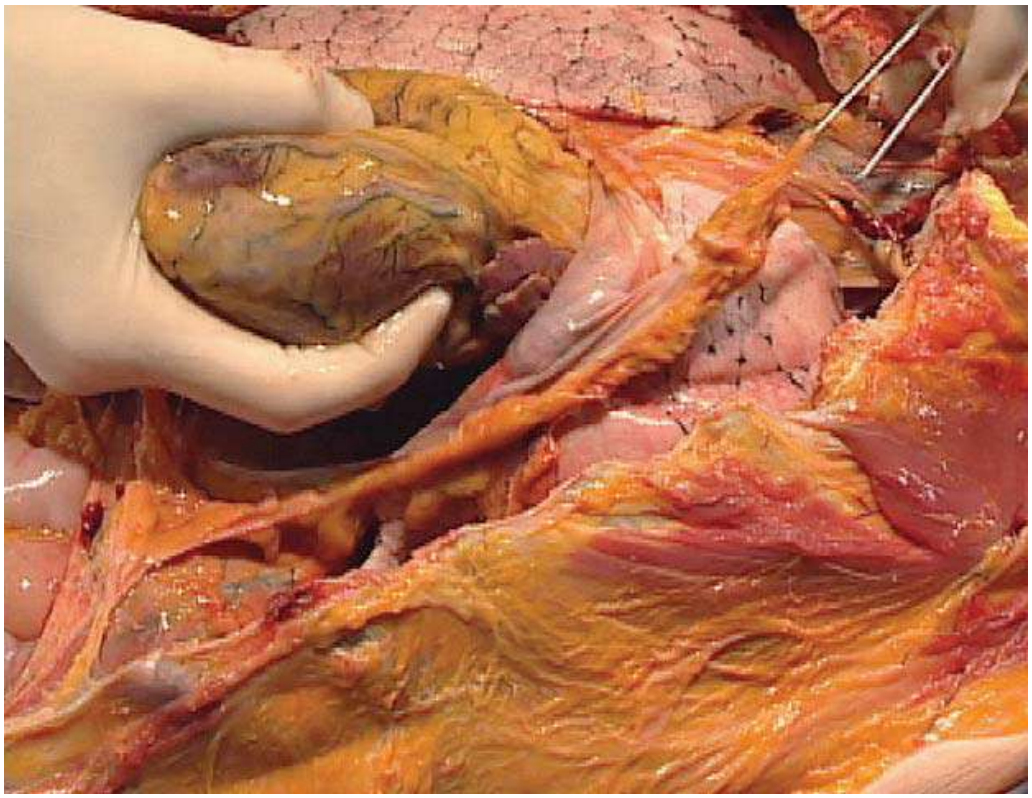


FIGURE 6.25 Palpation and examination of the heart *in situ*. The heart is palpated and visually examined *in situ*. Soft areas in the heart may indicate infarction. A diffusely soft heart might indicate myocarditis.

SURVEY OF ABDOMINAL ORGANS

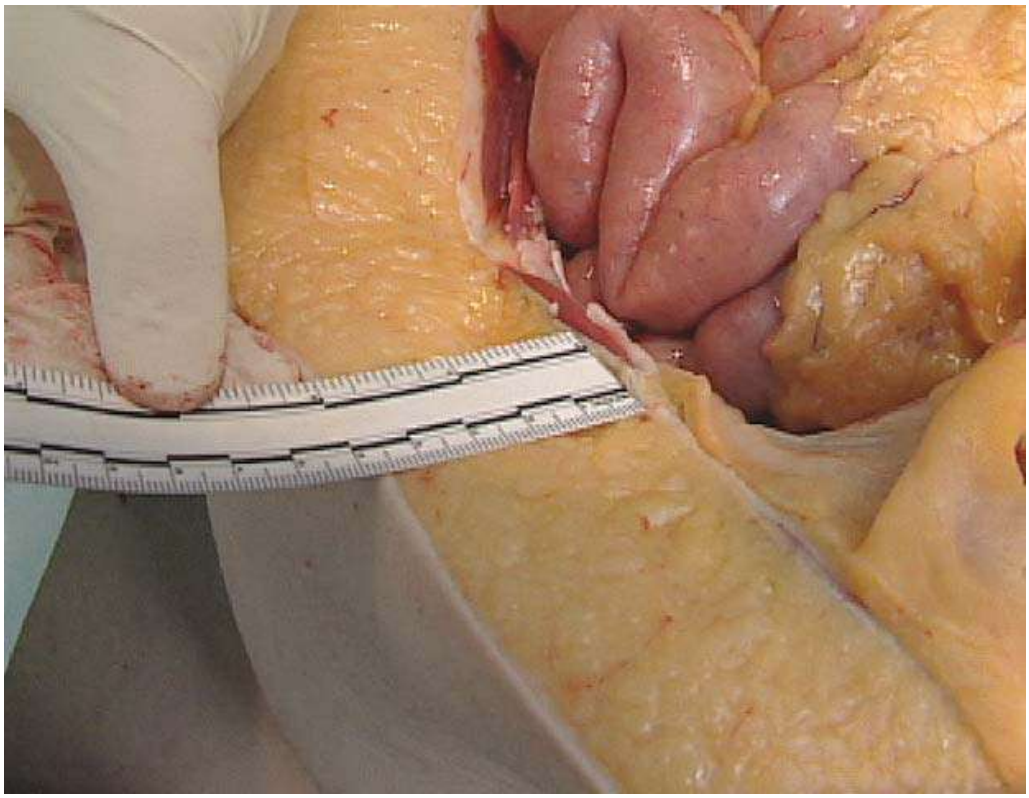


FIGURE 6.26 Abdominal panniculus. The abdominal panniculus (fat pad) is measured and recorded. The panniculus is greatly thickened in obesity and razor-thin in malnutrition.

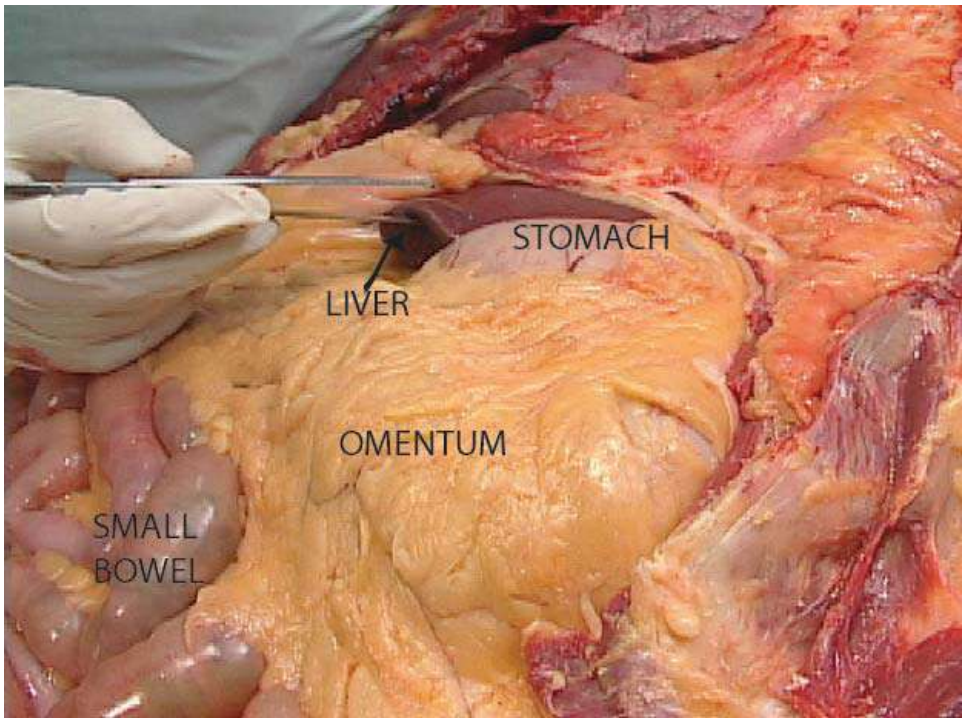


FIGURE 6.27 Upper abdominal organs. The liver is lifted up with the forceps as it rests on the stomach. The omentum (protective fat layer) is seen below the stomach, partially covering the bowel.

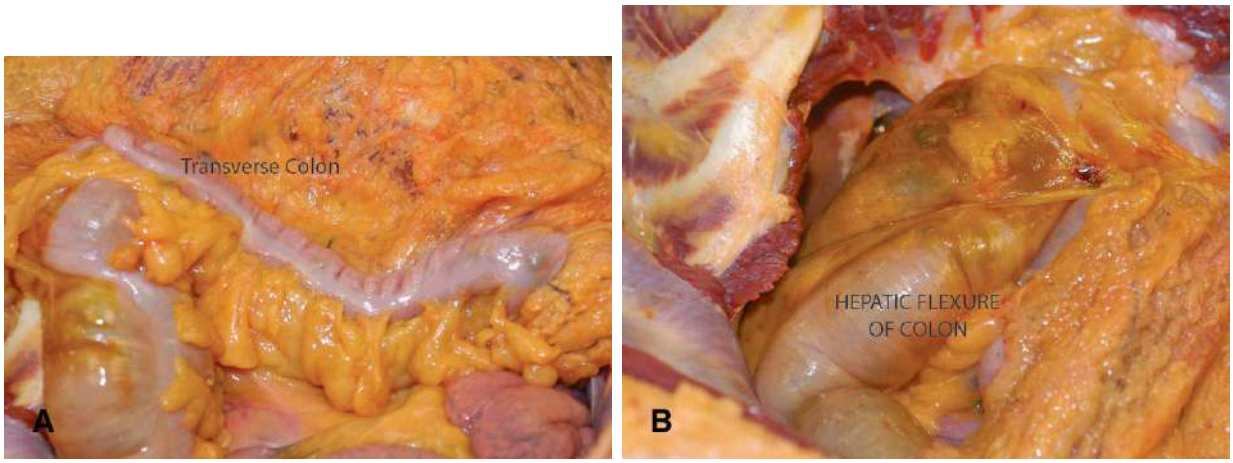


FIGURE 6.28 Omentum and colon. (A) If the omentum is reflected back, the transverse colon is exposed. **(B)** The hepatic flexure of the colon can be seen just below the rib cage. This is the point where the ascending colon turns into the transverse colon at the liver.

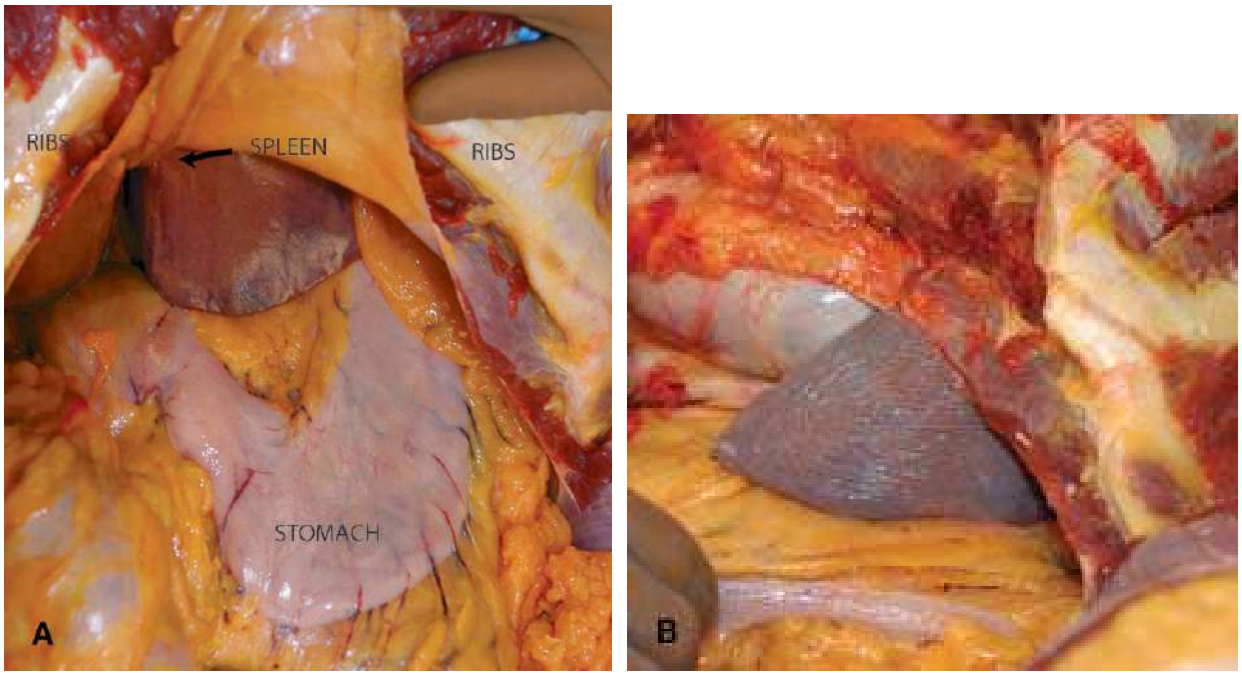


FIGURE 6.29 Spleen *in situ*. (A) The dark brown spleen can be seen in the upper part of the picture just above the stomach. This spleen is free of laceration. Laceration is common in severe blunt trauma to the abdomen. **(B)** The spleen is in the middle of the picture, and the whitish descending colon is at the bottom of the figure. Anatomically, the spleen is located in the left upper quadrant of the abdomen under the rib cage.

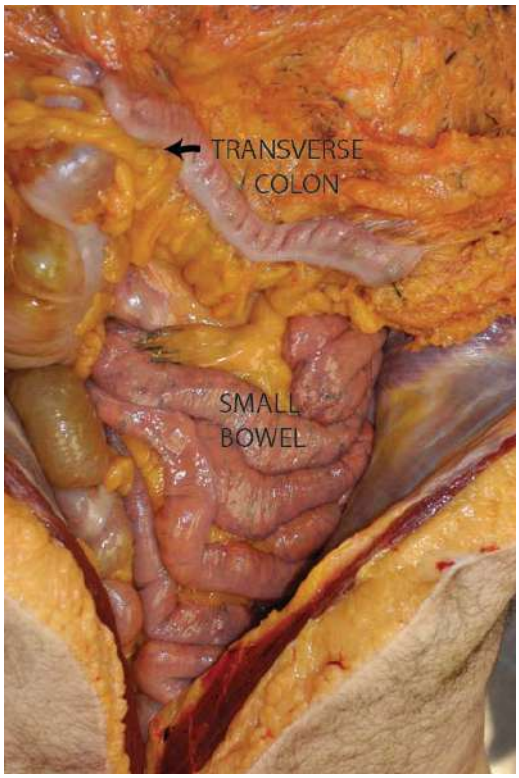


FIGURE 6.30 Transverse colon and small bowel *in situ*. The normal bowel is in the proper location, extending transversely across the abdomen. The transverse colon is surrounded by connective fat at the top of the figure, and the small bowel is bunched together in a zigzag fashion on the bottom.

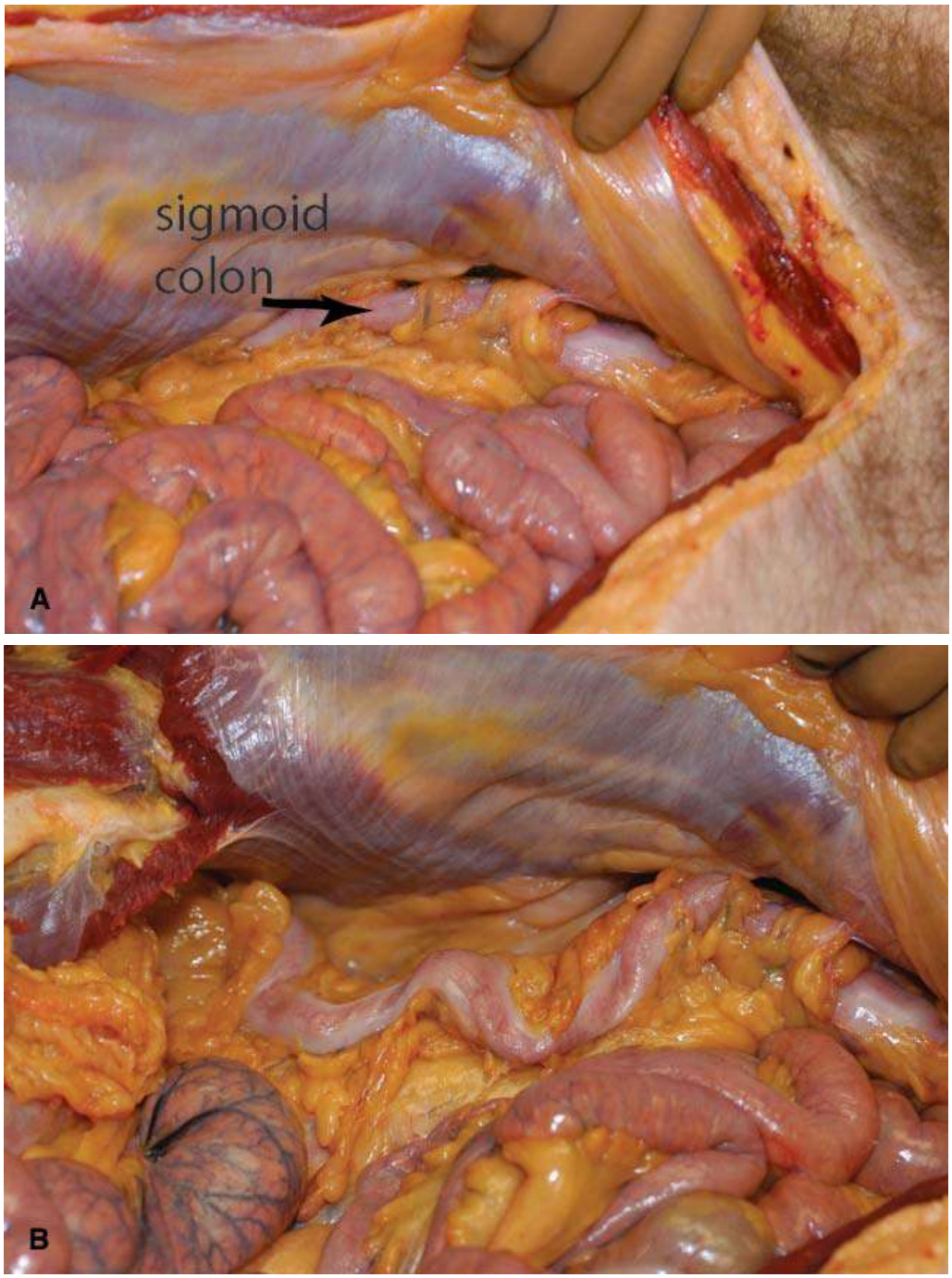


FIGURE 6.31 Sigmoid colon. (A) The whitish sigmoid colon is behind the reflected abdominal wall, amid the small bowel in the foreground. **(B)** The bowel is pulled out slightly, exposing its course.

FIGURE 6.32 Inflammation of the abdomen and bowel. Survey of the bowel in this case reveals a whitish-yellow (fibrinopurulent) exudate, indicating an ongoing (subacute) infection of the abdominal cavity. Notice how reddened (erythematous) the bowel appears. This erythema indicates inflammation.

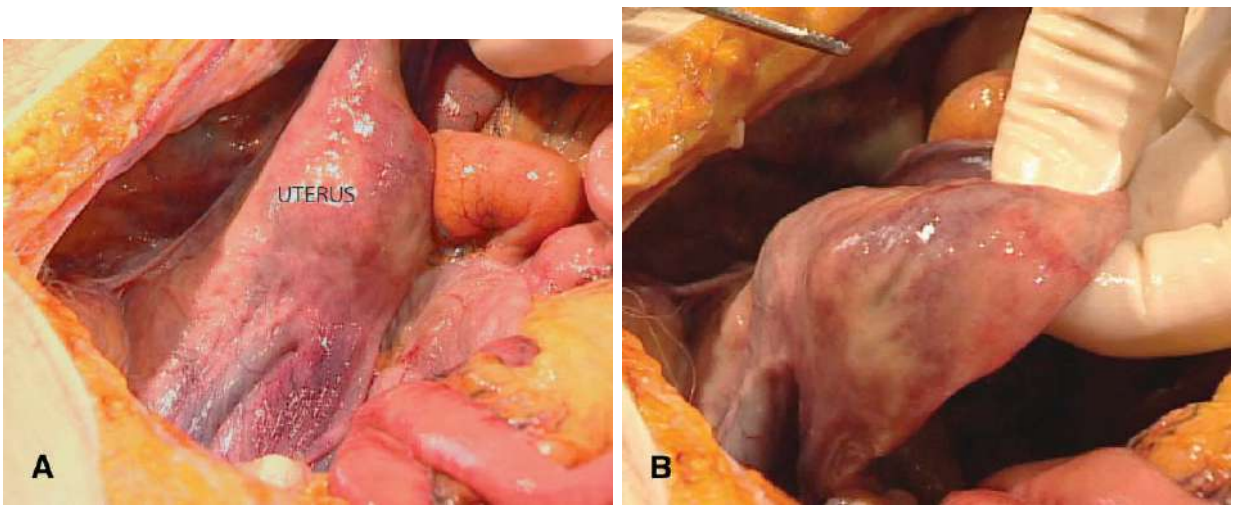


FIGURE 6.33 Uterus *in situ*. (A) The uterus is in the midline of the pelvis. **(B)** No lesions are seen as it is examined *in situ*.

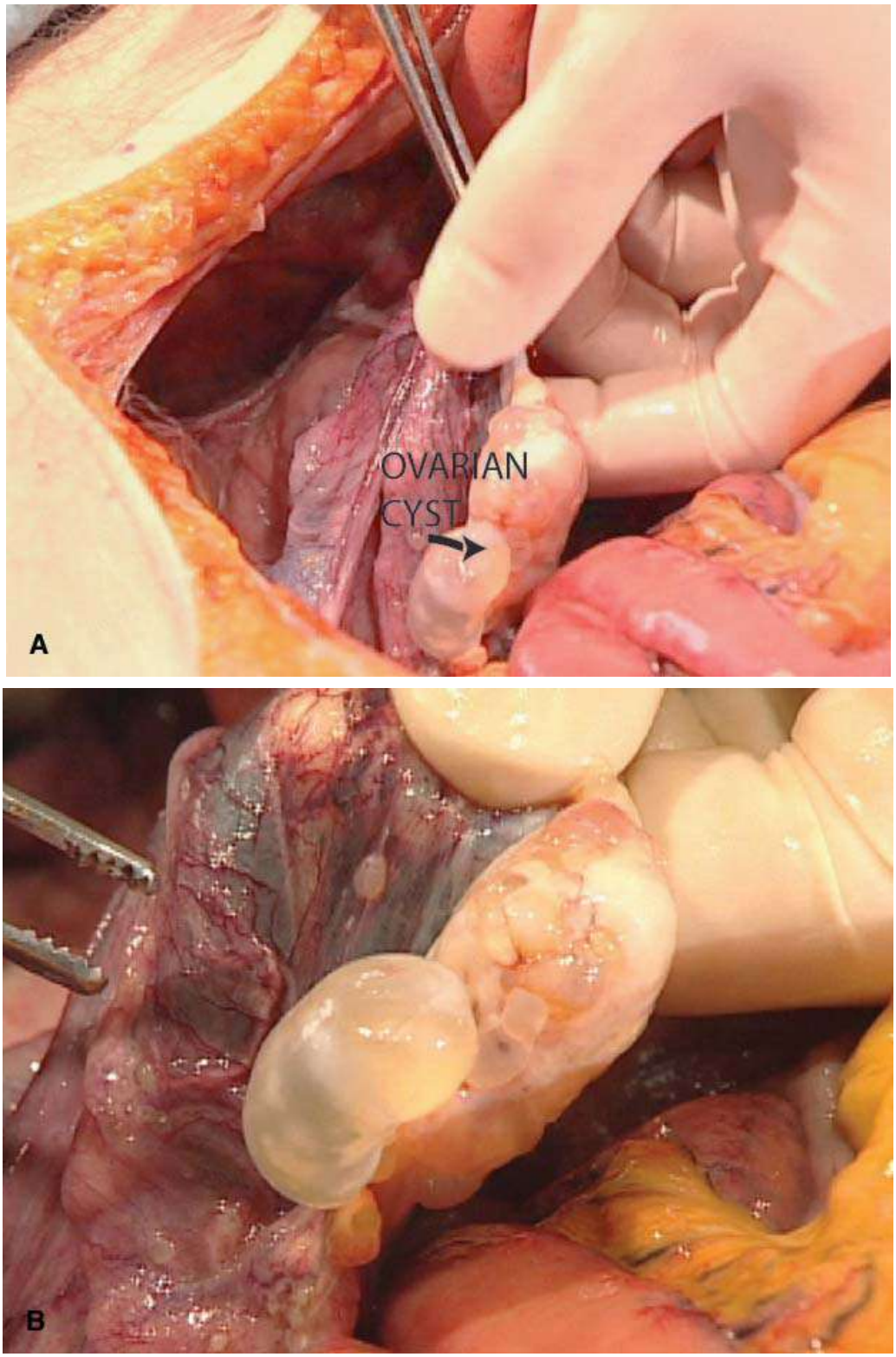


FIGURE 6.34 Small ovarian cyst. (A) A small ovarian cyst can be seen on this left ovary. **(B)** It is better seen when pulled out.

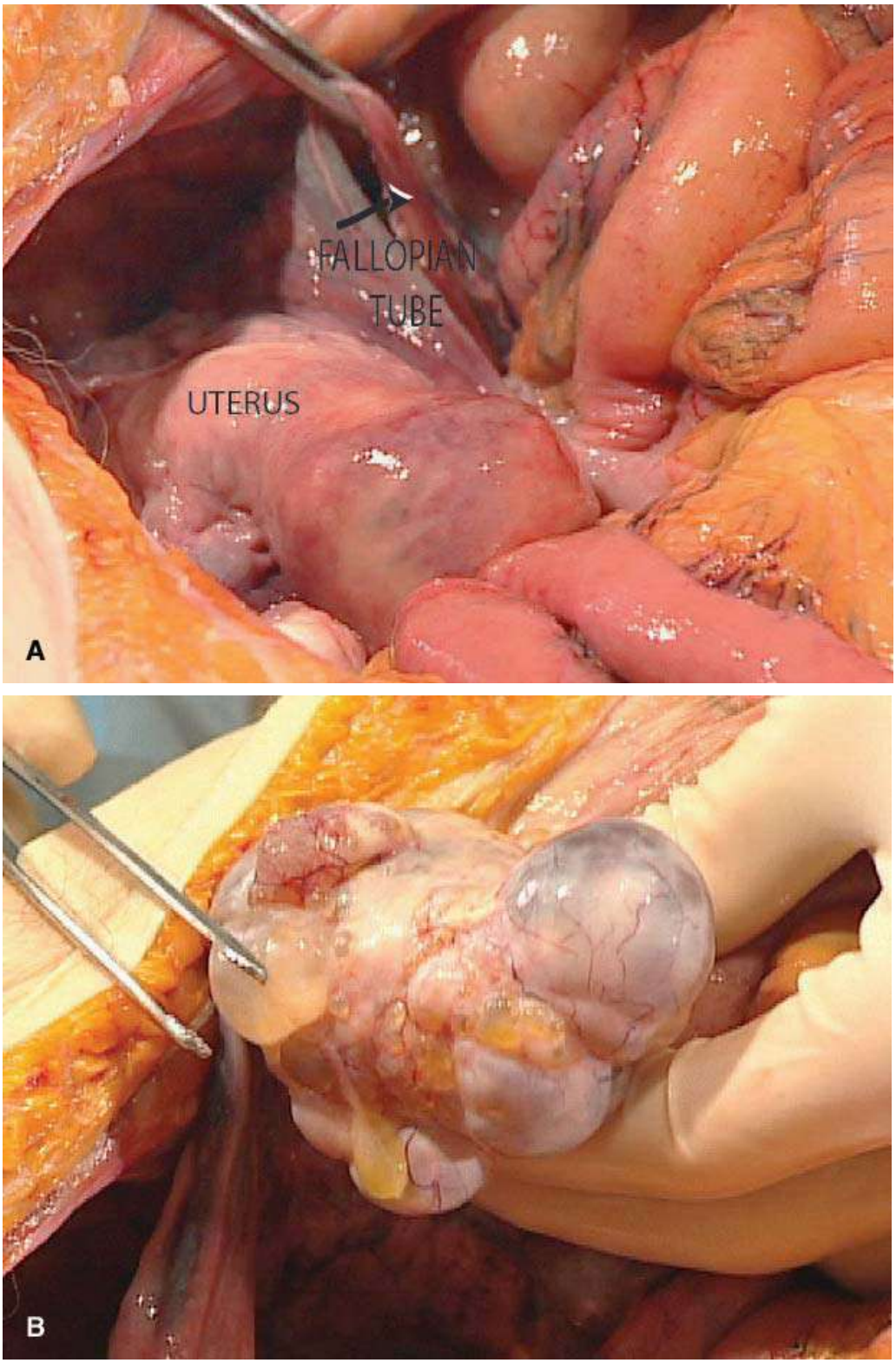


FIGURE 6.35 (A), (B) Large ovarian cyst. Pulling on the left fallopian tube reveals a much larger cyst of the right ovary.

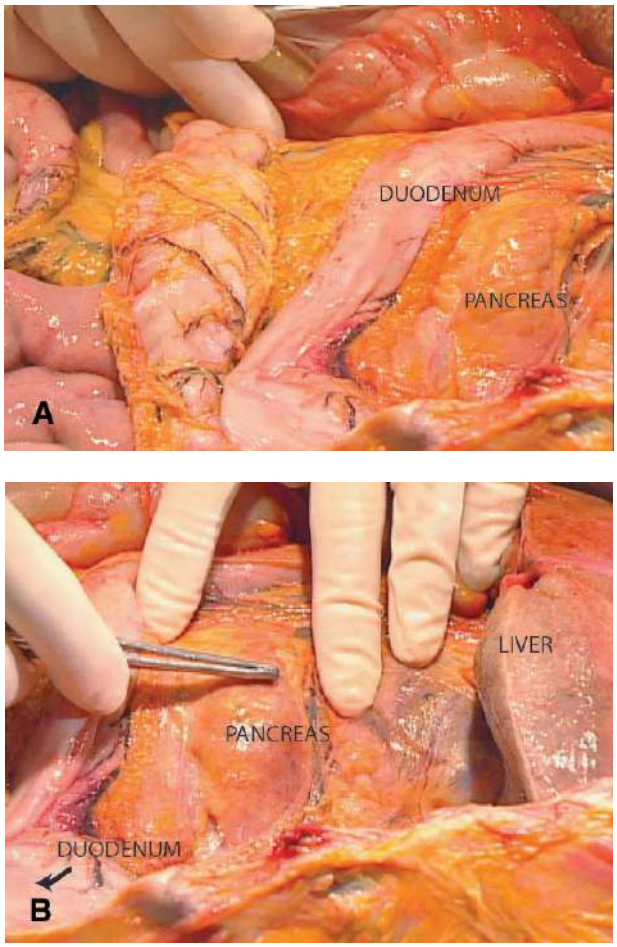


FIGURE 6.36 Pancreas and duodenum. (A) The duodenum is the L-shaped segment of the small bowel, cradling the pancreas to the immediate right. **(B)** The pancreas is pointed out by the forceps tip.

COLLECTING BLOOD, URINE, BILE, AND VITREOUS SPECIMENS FOR TOXICOLOGY

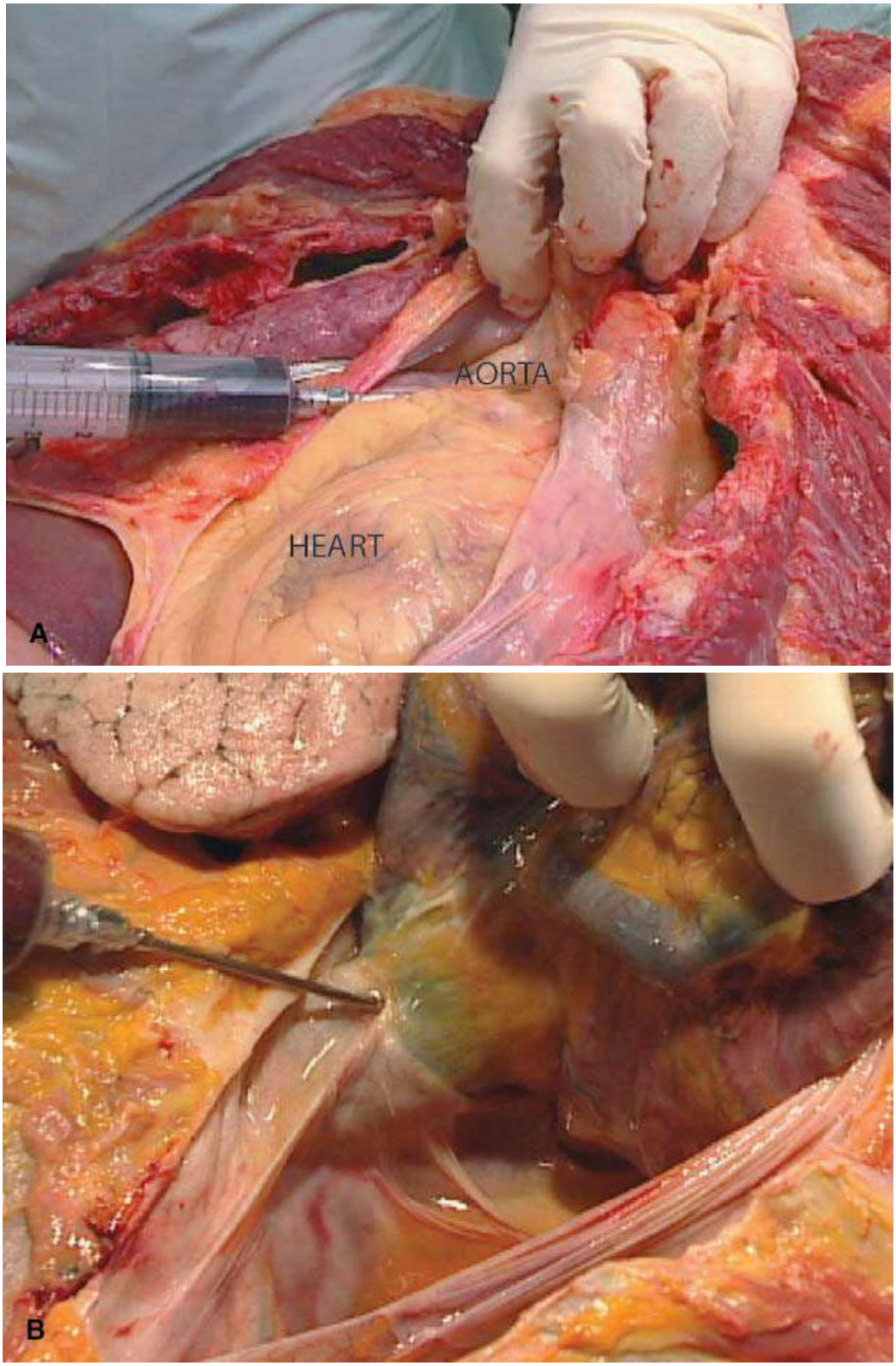


FIGURE 6.37 (A) Taking blood from the aorta. Routinely, blood is removed from the aorta. **(B) Taking blood from the inferior vena cava.** Blood screening is usually preferable when the concentration of a specific drug must be known, e.g., alcohol or carbon monoxide.

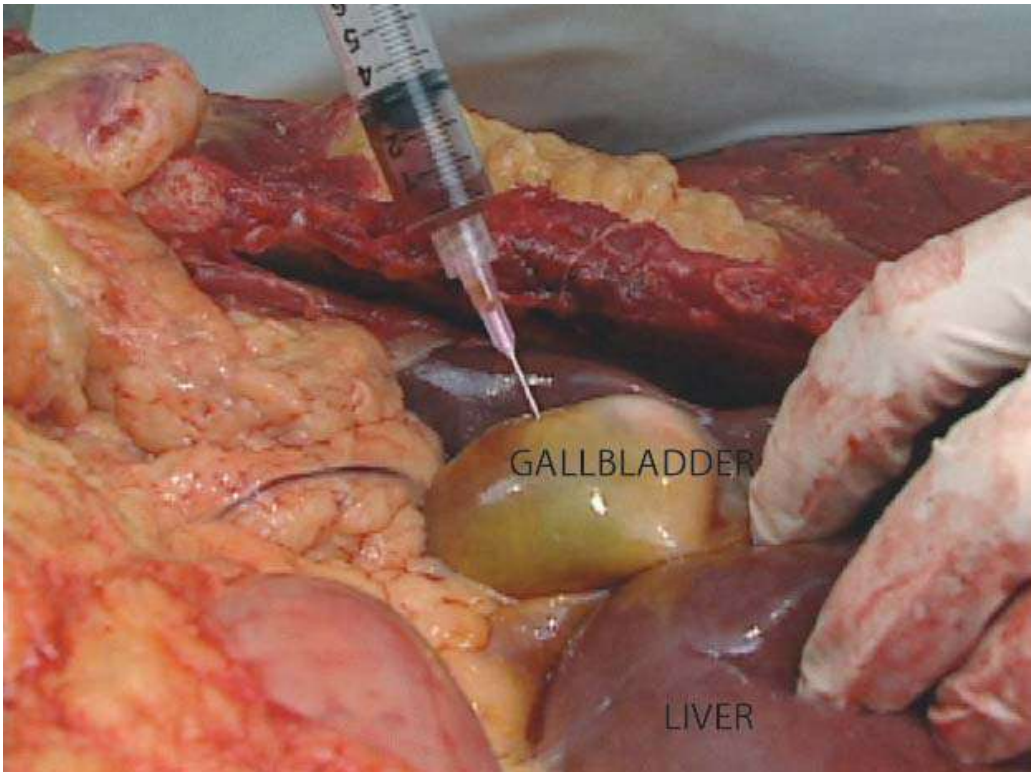


FIGURE 6.38 Obtaining bile from the gallbladder. Cocaine and other narcotics concentrate in the bile. Because cocaine has a short half-life in the blood, testing bile can confirm the presence of cocaine in cases where cocaine abuse is suspected and blood levels are negative.

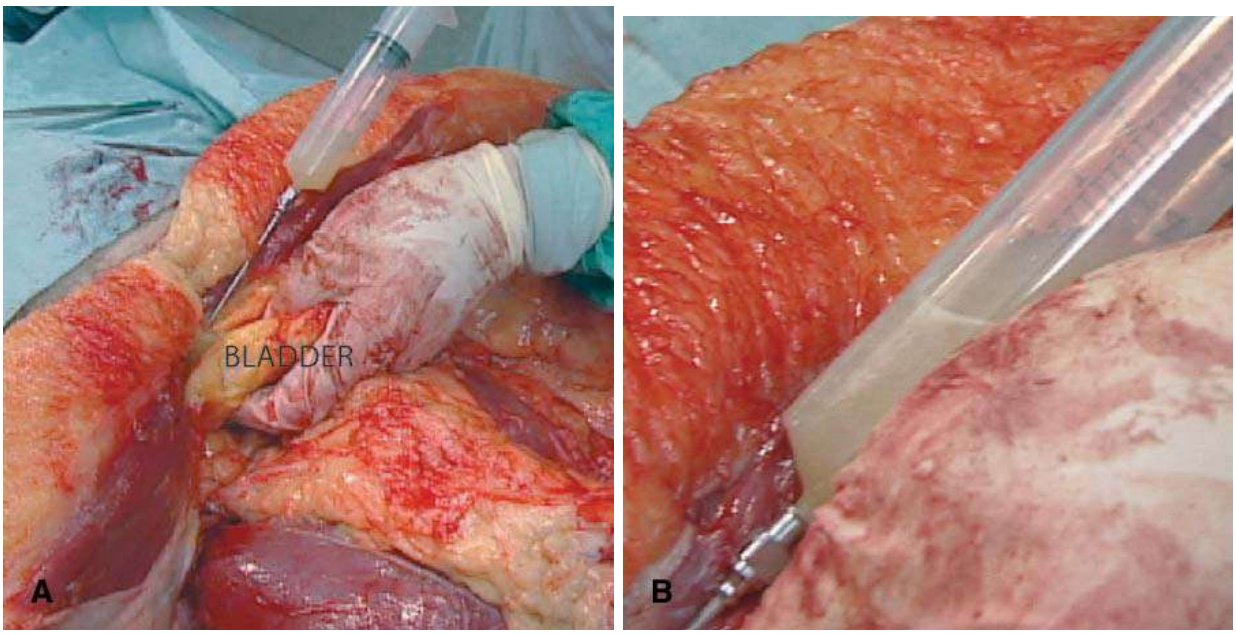


FIGURE 6.39 (A), (B) Removing urine from the bladder. At least 7 cc of blood is preferred when screening for most drugs, toxins, and poisons. Urine is the preferred body fluid when screening for the most commonly abused drugs. When testing for the presence of some drugs and toxins, tissues such as brain, muscle, fat, hair, liver, kidney, bone, and nails are preferred. For example, arsenic is best found in the hair and nails.

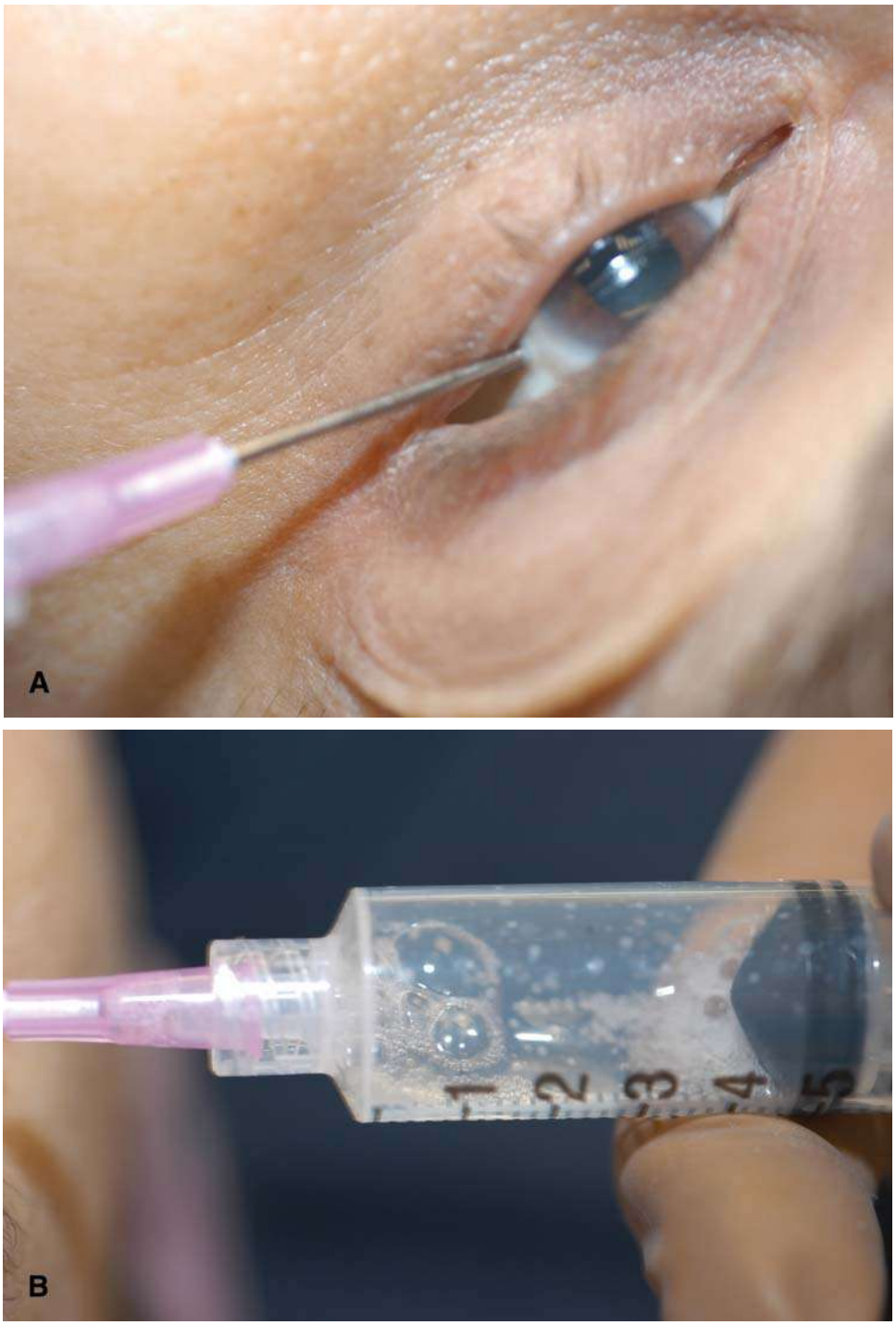


FIGURE 6.40 (A), (B) Obtaining vitreous humor from the eye. Vitreous humor, or clear liquid fluid in the eye, is obtained routinely. Since the vitreous humor tends to concentrate drugs and other analytes, testing is useful in a number of cases. For example, blood glucose is not reliable postmortem. A very high postmortem vitreous glucose can aid in the diagnosis of diabetic hyperglycemia (high blood sugar).

7 Organ and Tissue Removal

In the Virchow autopsy method, the organs are removed one after another in an organized and logical fashion, i.e., the neck organs are removed after the viscera to negate the artifactual appearance of hemorrhage often produced by congestion. Other organ removal methods include the Gohn, Letulle, or modified Rokitansky methods, in which the organs are removed *en bloc* (all together). This type of removal allows the internal viscera to be examined while they are still connected together. Some pathologists always remove organs *en bloc*. The author has found the Gohn method useful when examining infants with multiple cardiac and other birth defects. There is no right or wrong method of dissection; the aim is simply to perform a complete autopsy and to provide a detailed description of that autopsy.

HEART EXCISION

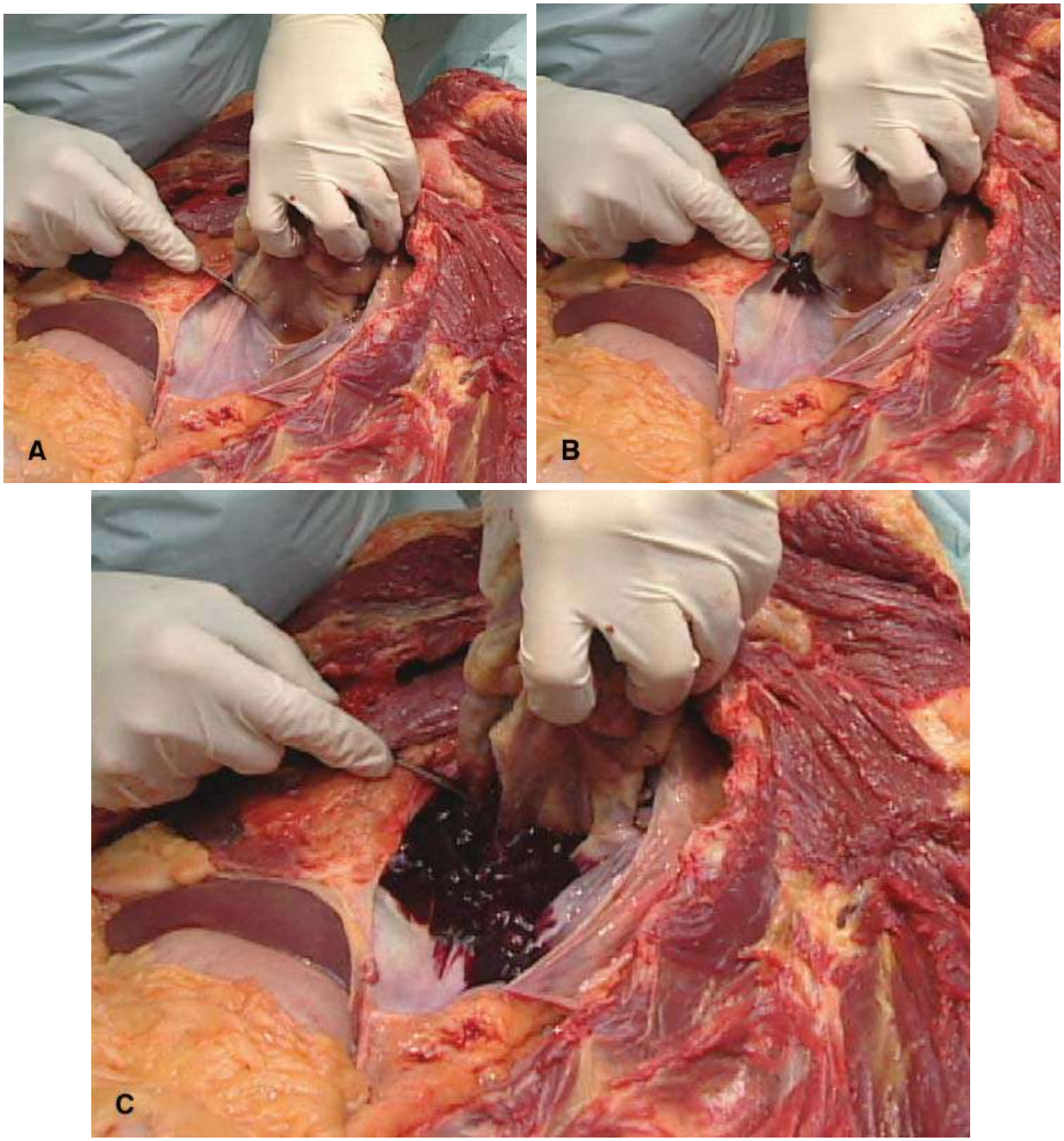


FIGURE 7.1 (A)–(C) Heart removal, cutting the inferior vena cava. The inferior vena cava is cut, as are the pulmonary veins, pulmonary arteries, and aorta. The heart is held in the left hand in these figures. Blood flows from the cut vessels if the blood is not clotted, decomposed, or mostly absent from the body. In cases of severe hemorrhage, there is a notable absence of blood at this moment of the autopsy.

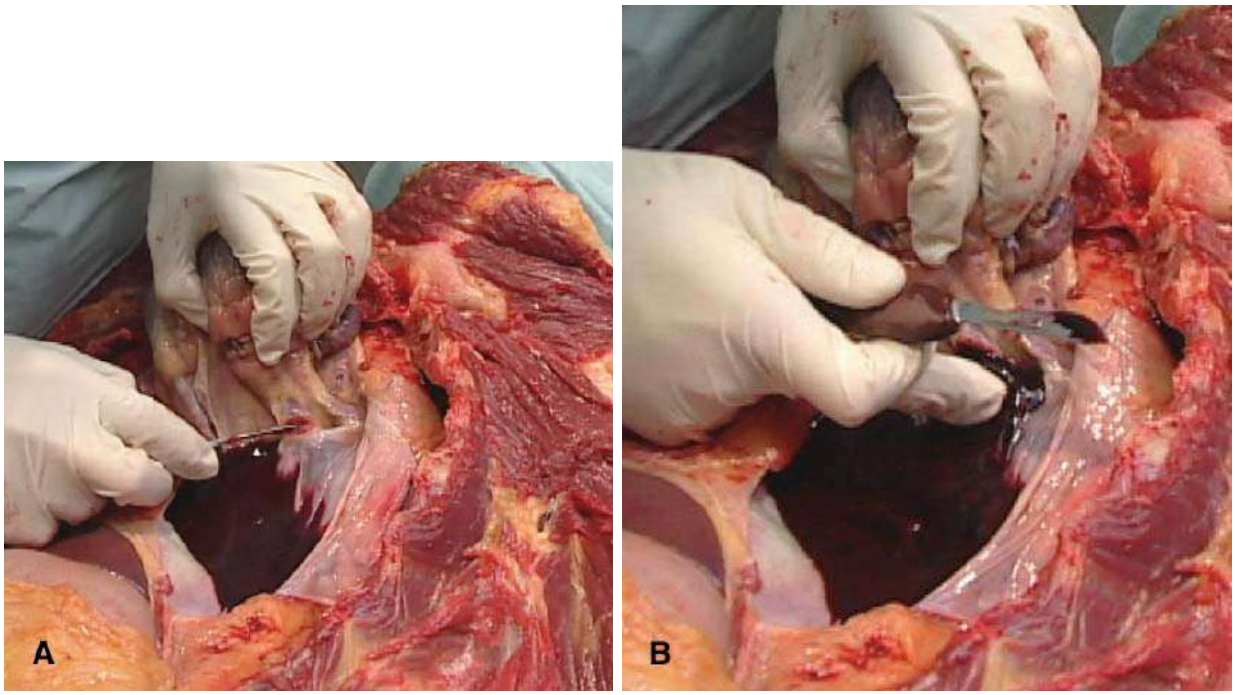


FIGURE 7.2 (A) Cutting the pulmonary artery. The left pulmonary artery is cut as is the left pulmonary vein. **(B) Checking for pulmonary embolus.** The pulmonary artery is checked for a clot (thromboembolus).

FIGURE 7.3 Pulmonary embolus. The long blood clot depicted was taken from the inferior vena cava. A large pulmonary embolus is seen in the pulmonary artery as well. These clots (emboli) can move up from the lower leg veins, or less commonly, from the pelvis or upper arm veins to the right heart, and then out to the pulmonary arteries. If these thromboemboli are large enough, they can cause immediate cardiac arrest.

FIGURE 7.4 (A), (B) Weighing the heart. The heart, like all organs, is weighed. Increased weight of the heart can indicate hypertensive heart disease or numerous other conditions that cause heart failure, like cardiomyopathy. The heart is a specialized muscle that increases in size and weight as more work is required of it. High blood pressure causes the heart to increase in weight and thickness because of the increased pressure the heart must maintain. The average heart weighs about 350 g in a 190-lb man. A hypertensive heart might weigh more than 500 g. This particular heart weighs about 620 g, due to hypertensive heart disease.

LUNG EXCISION

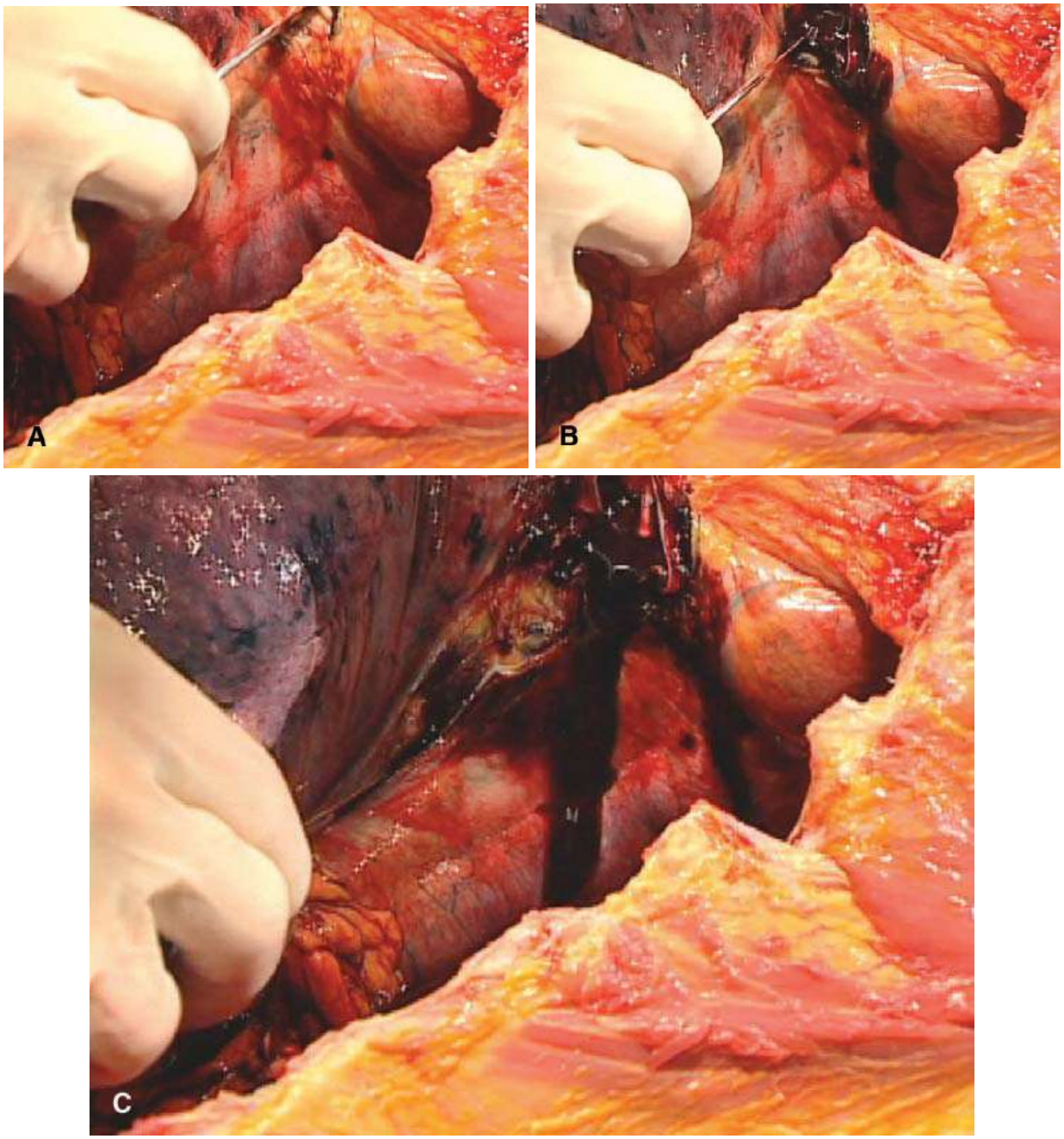
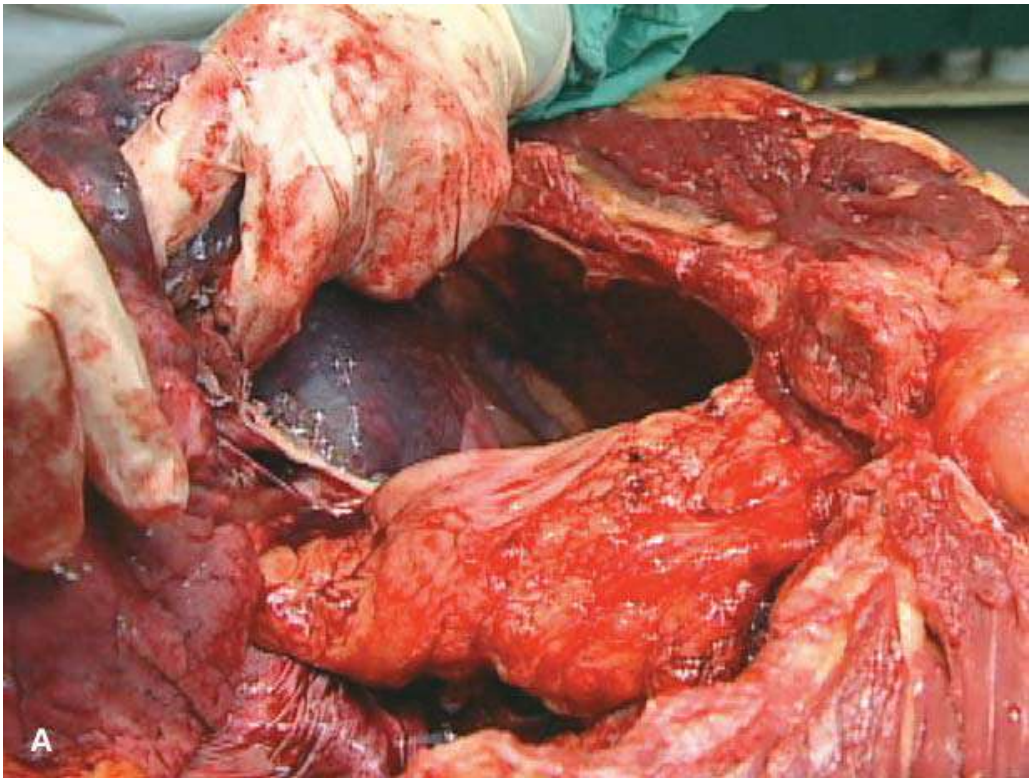
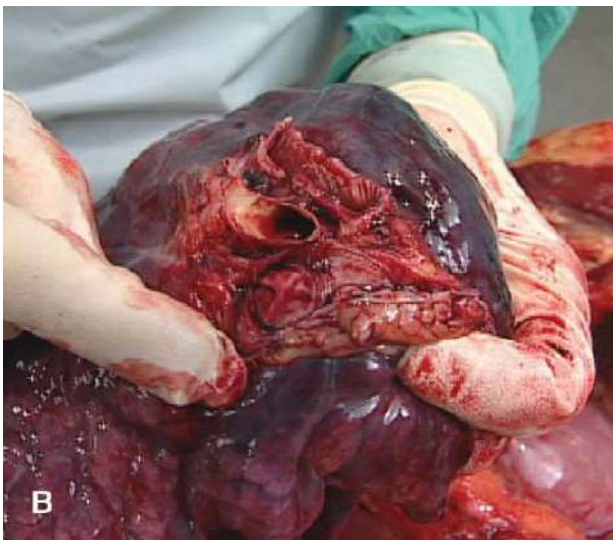


FIGURE 7.5 (A)–(C) Excision of the lungs. The lungs are removed at the hilum, or center of attachment.





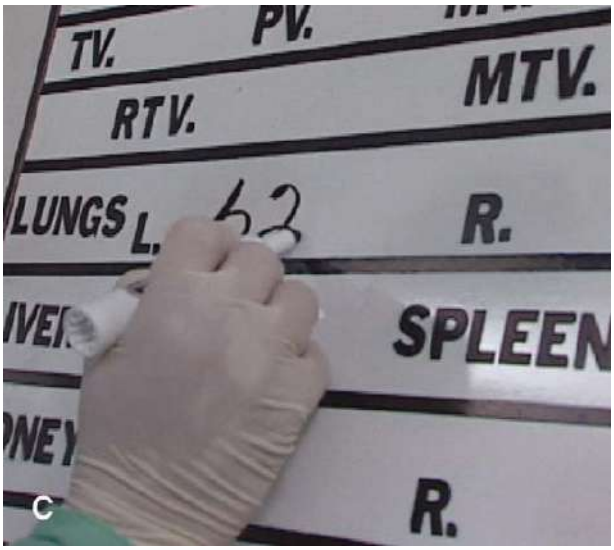


FIGURE 7.6 (A)–(C) Exam of the hilum. As this right lung is removed, the hilum is quickly examined for tumors or infection. The lung is weighed. Heavy lungs are commonly seen in pneumonia and heart failure (associated with pulmonary edema).

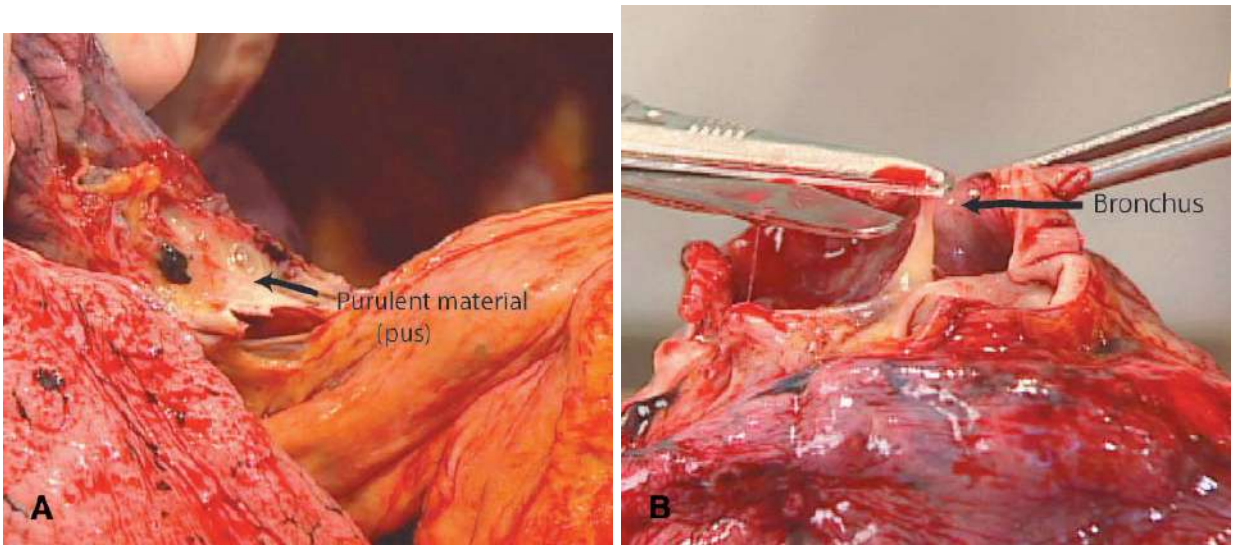


FIGURE 7.7 Bronchial pneumonia. (A) Examination of this hilum shows pus in the bronchus bubbling through the bronchial artery. **(B)** The pus an be seen at the tip of the scissor. The pus is a sign of bronchopneumonia.

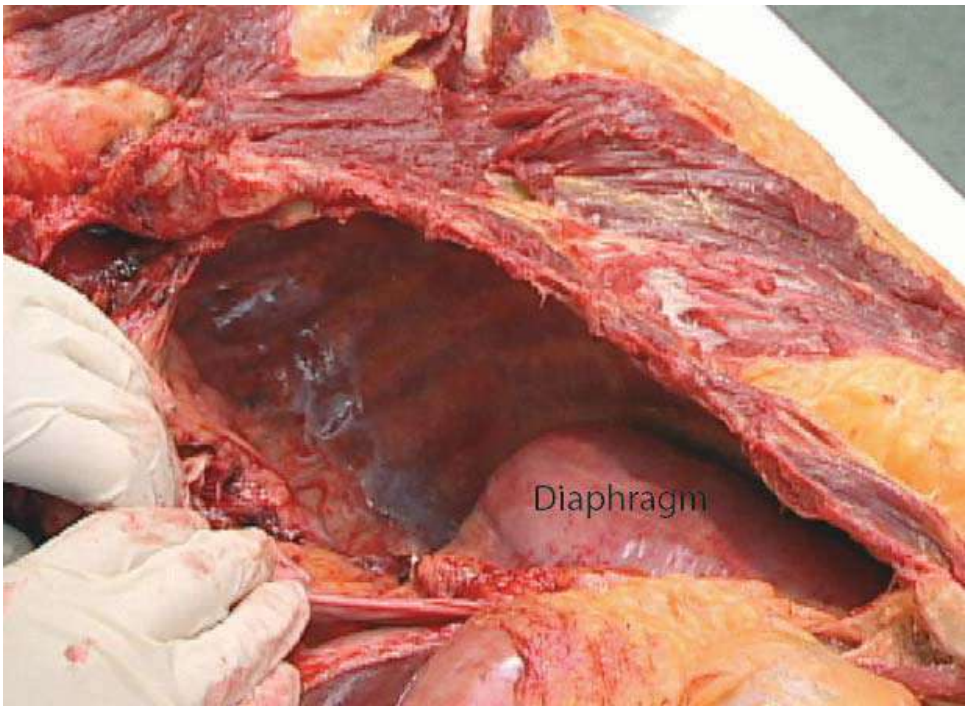


FIGURE 7.8 Chest cavity exam. The chest cavity and ribs are examined for tumors, rib fractures, and contusions, among other conditions. The diaphragm is the dome-shaped structure in the lower center of the picture.

LIVER EXCISION

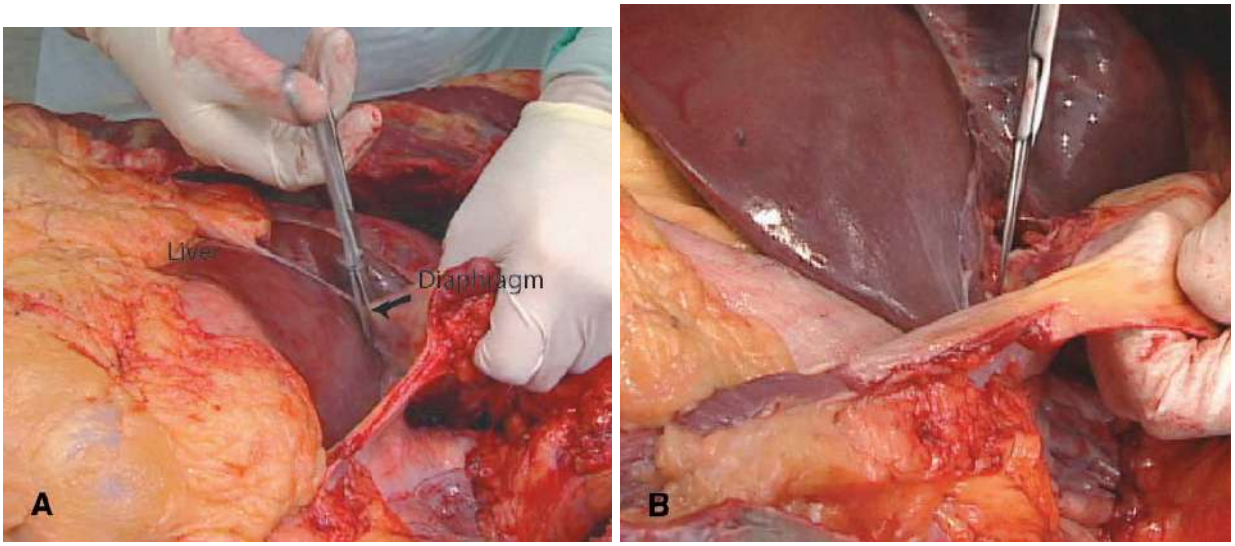


FIGURE 7.9 (A), (B) Freeing the liver from the diaphragm. The liver is freed from the diaphragm, ligaments, and other attachments.

FIGURE 7.10 Liver and gallbladder. The gallbladder is seen *in situ*. The diaphragm has been cut away and the liver is turned up toward the head. The gallbladder is removed with the liver.

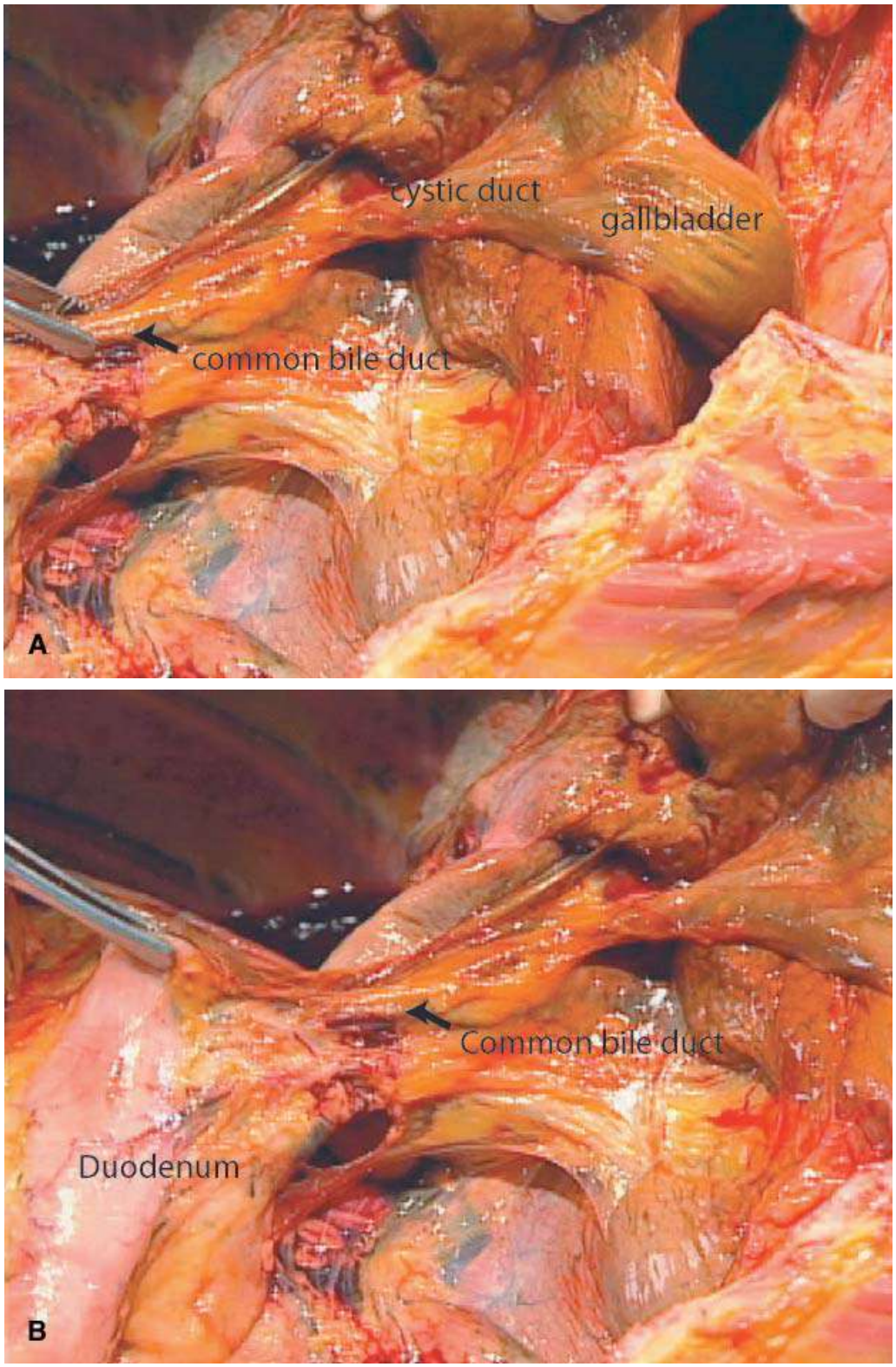


FIGURE 7.11 (A)–(D) Common bile duct and duodenum. The common bile duct is displayed as it empties bile into the duodenum. In Figure 7.11B, the duodenum is held up by the forceps. The common duct is cut and examined for stones also. Gallstones or other stones can plug up the duct, preventing bile from draining from the liver, and resulting in jaundice in the patient.

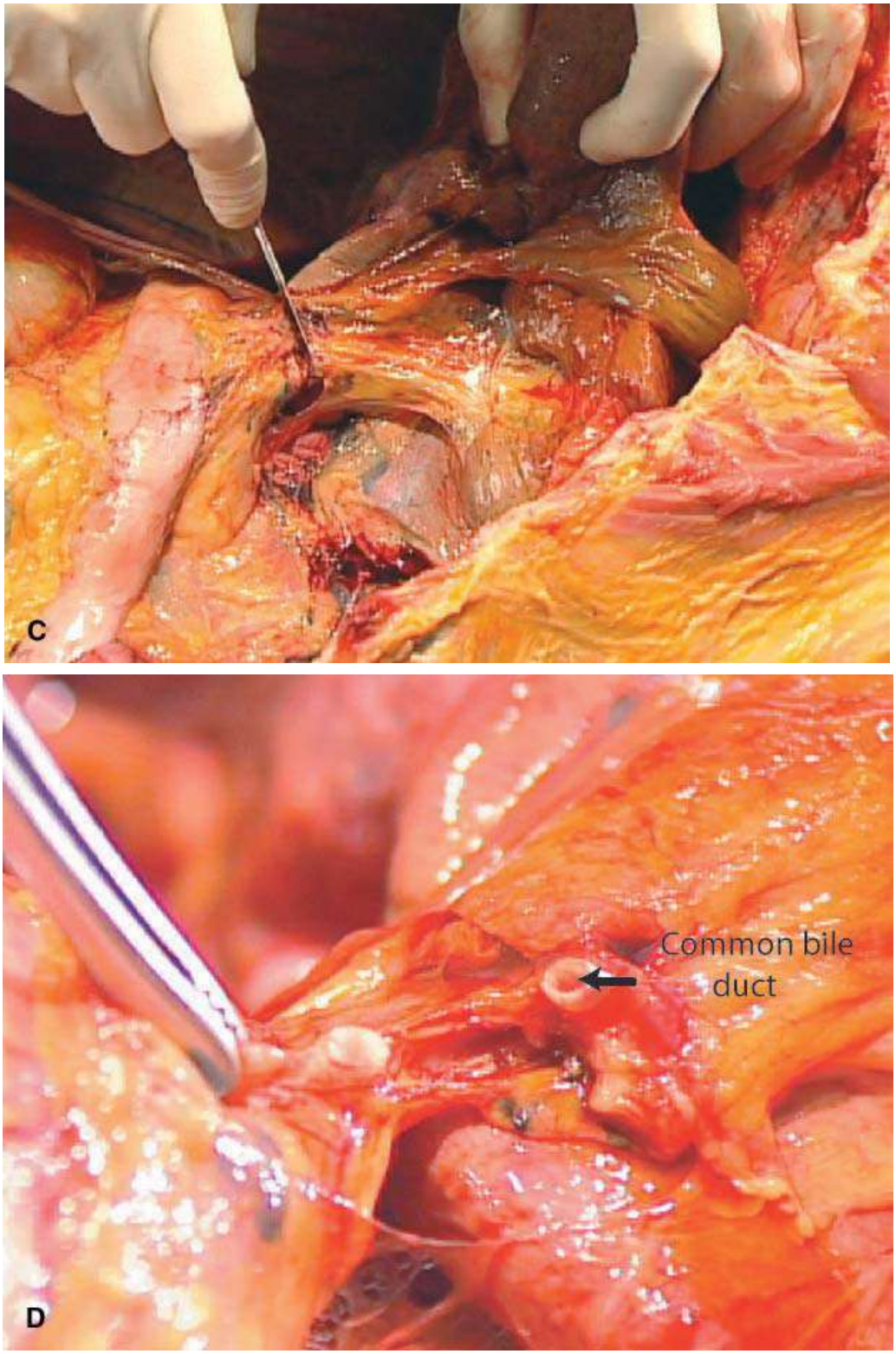


FIGURE 7.11 (CONTINUED) (A)–(D) Common bile duct and duodenum. The common bile duct is displayed as it empties bile into the duodenum. In Figure 7.11B, the duodenum is held up by the forceps. The common duct is cut and examined for stones also. Gallstones or other stones can plug up the duct, preventing bile from draining from the liver, and resulting in jaundice in the patient.

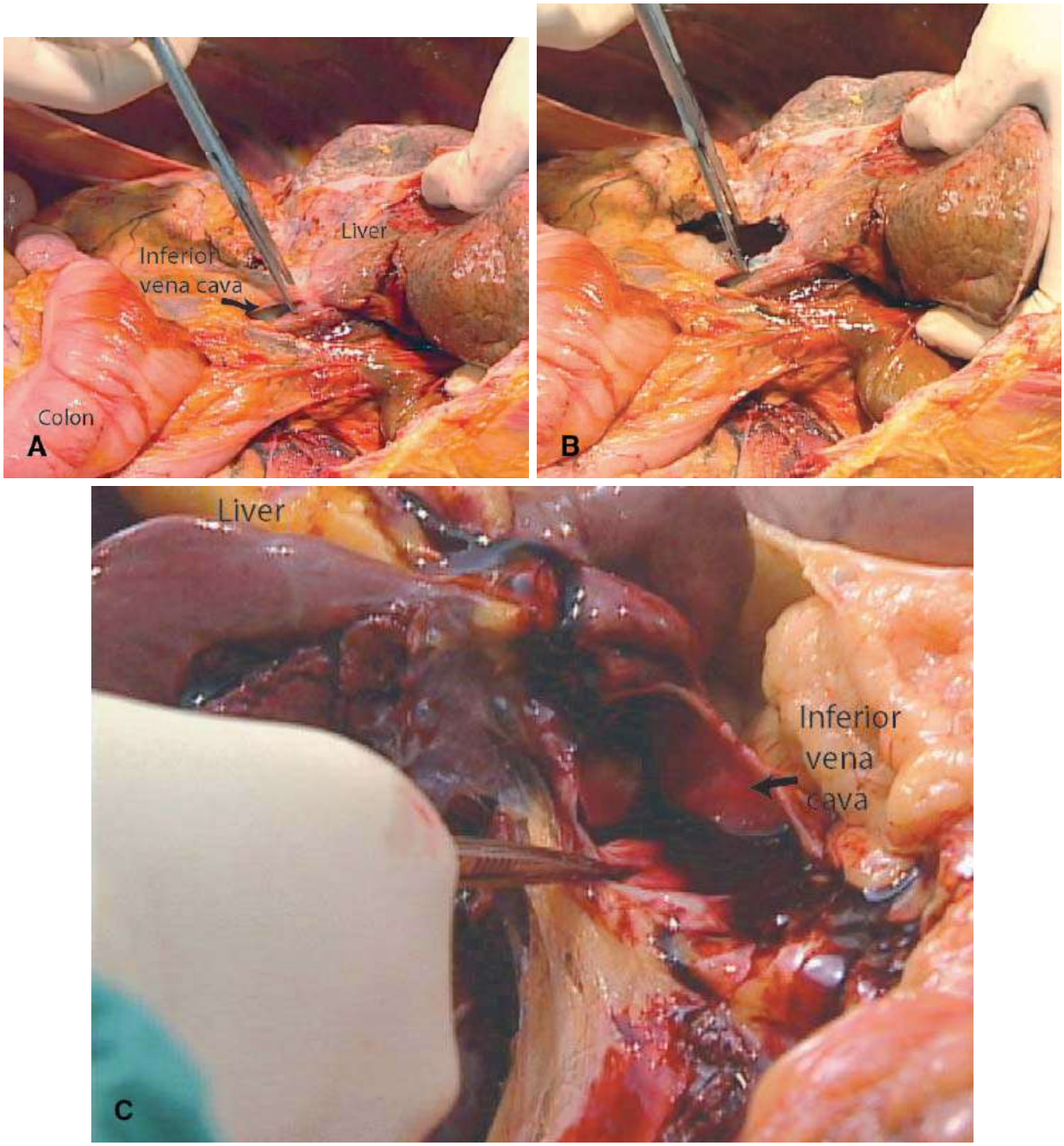


FIGURE 7.12 Cutting the inferior vena cava. (A), (B) The inferior vena cava is cut as it enters the dorsal surface of the liver. **(C)** This figure shows the large diameter of the inferior vena cava when opened.

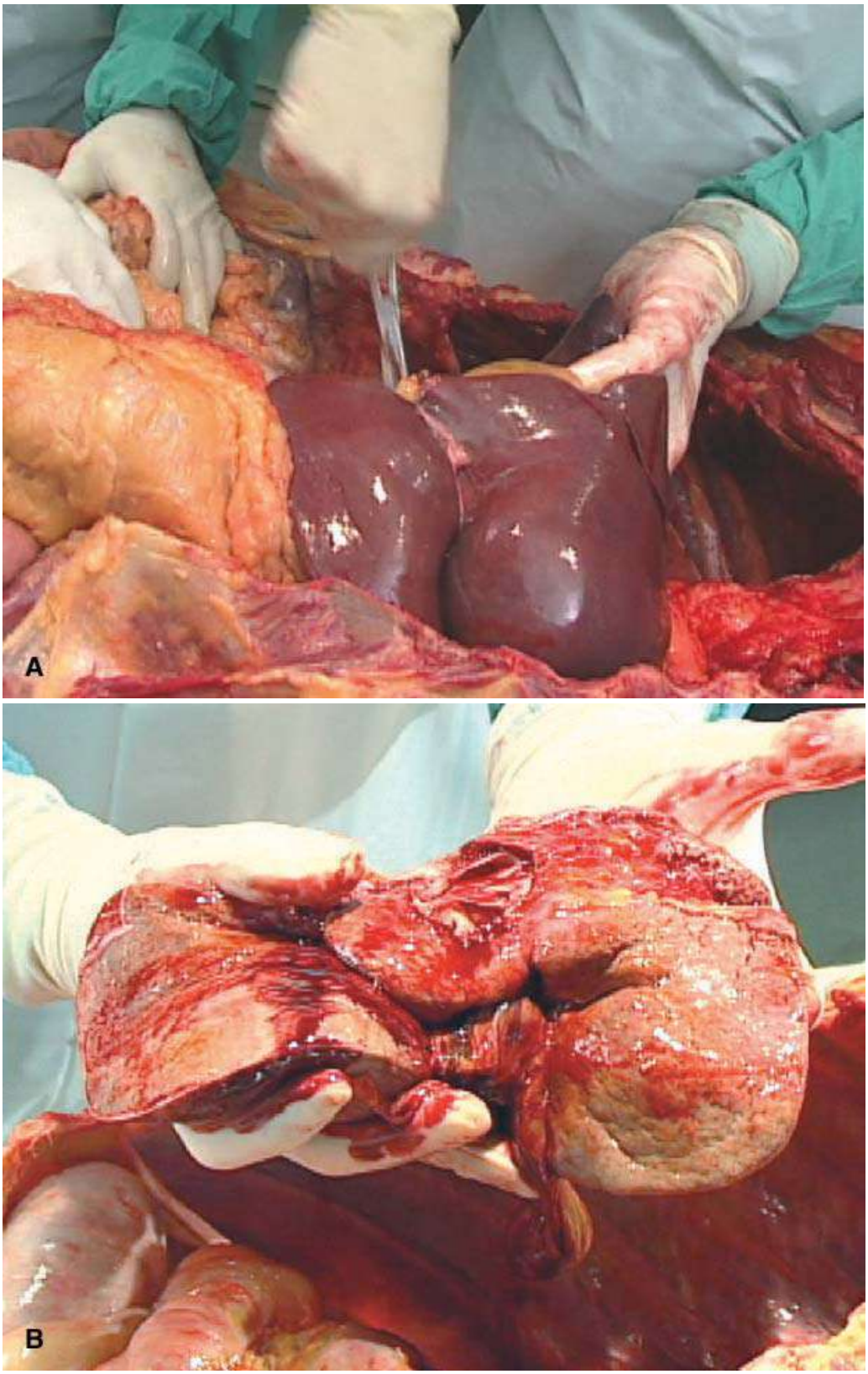


FIGURE 7.13 (A), (B) Removing the liver. Once the liver is completely cut away, it is lifted out of the body for weighing. Those who see the liver for the first time are astonished at its size and weight. The average liver weighs about 1930 g, or about 4.5 lb, in a 170-lb man.

SPLEEN EXCISION

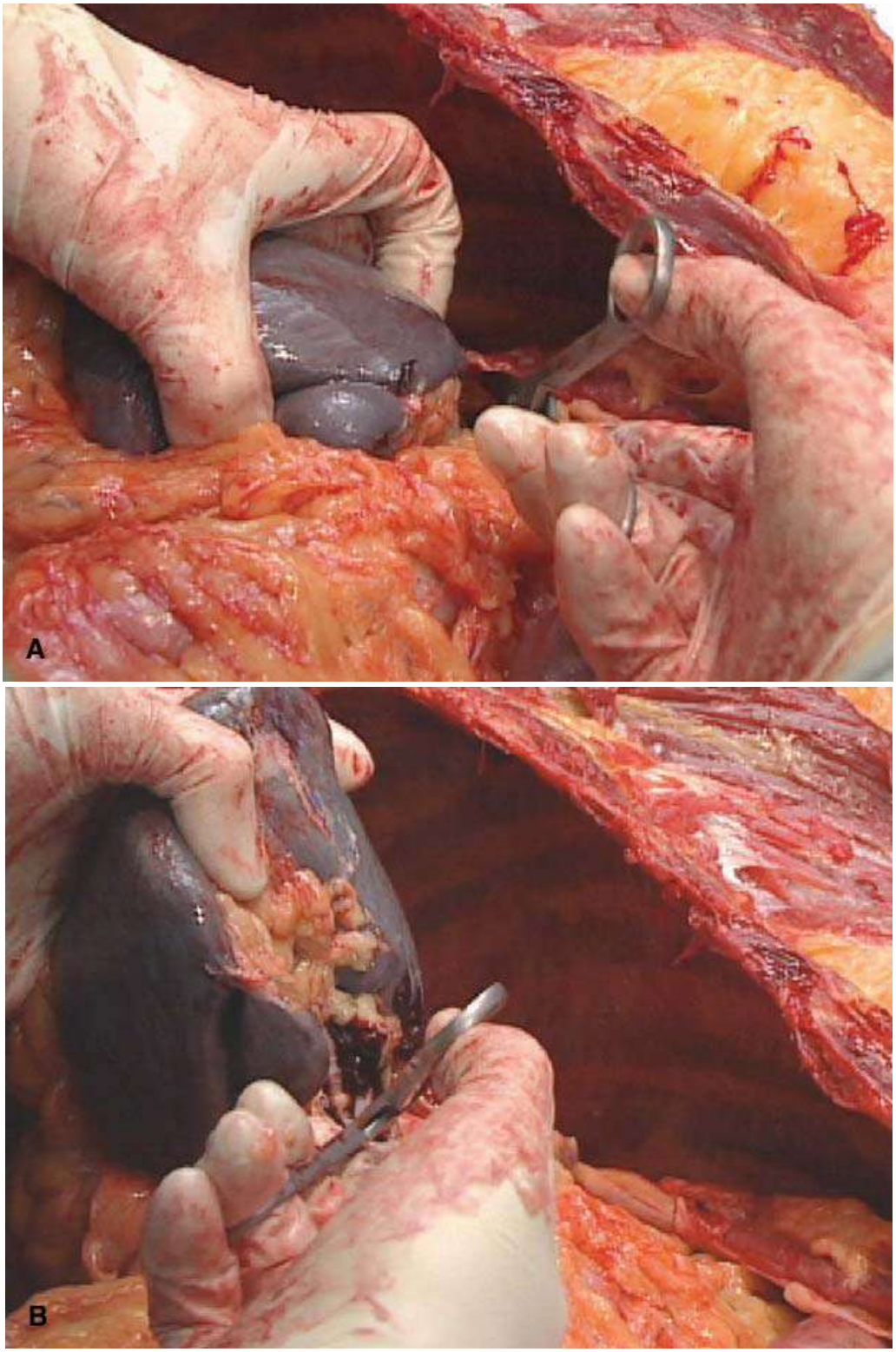


FIGURE 7.14 (A), (B) Removing the spleen. The spleen is removed by cutting the vessels away from the hilum, checking carefully for lacerations because the capsule (covering) of the spleen can be easily torn on removal.

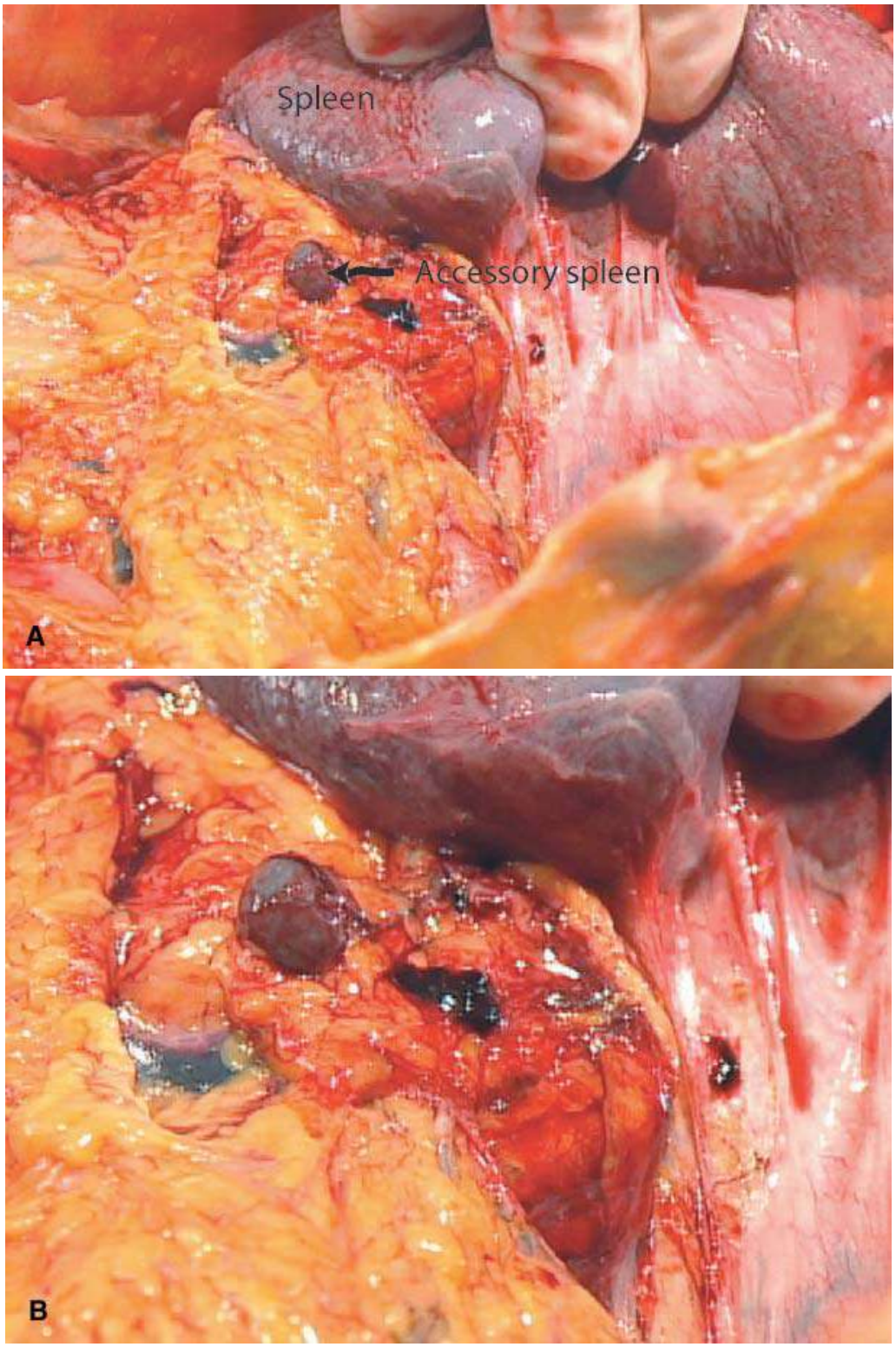


FIGURE 7.15 (A), (B) Accessory spleen. Adjacent to this spleen is a small accessory spleen. Accessory spleens can become quite large if the main spleen is removed. This can be problematic in a condition called hypersplenism, in which the spleen pathologically destroys red blood cells. The accessory spleen, if not removed, can enlarge and cause the hypersplenism to return.

SMALL AND LARGE BOWEL EXCISION

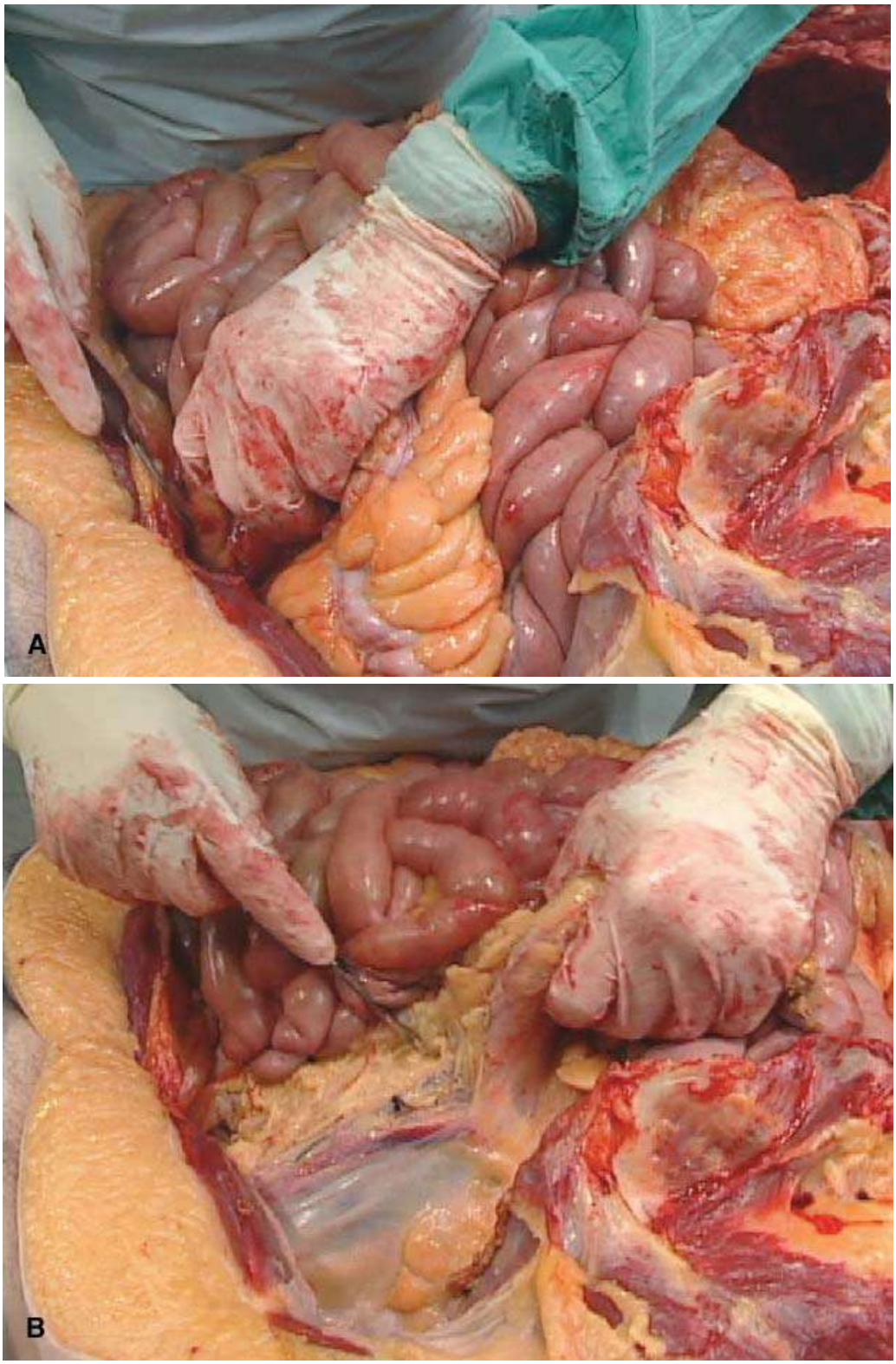


FIGURE 7.16 (A), (B) Bowel excision. In this removal method, the excision starts at the rectum and progresses upward toward the sigmoid colon in the left part of the abdomen.

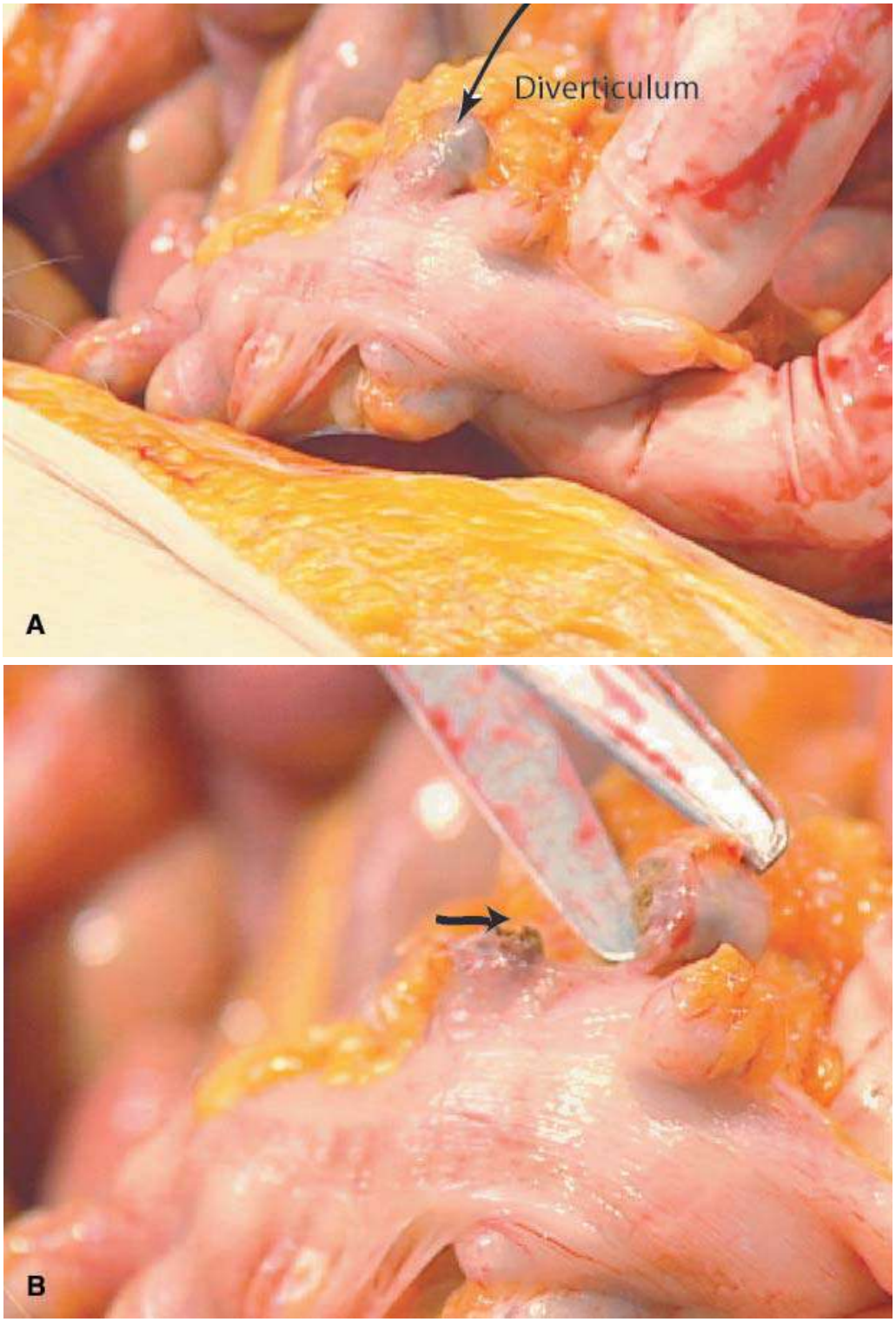


FIGURE 7.17 Diverticuli of the sigmoid colon. (A) The sigmoid colon is prone to forming diverticuli, often seen in middle-aged to older patients. In this condition, the mucosa herniates through weak points in the muscular colon wall. **(B)** Fecal matter, seen on cutting (see arrow), can plug up these diverticuli and cause inflammation (diverticulitis).

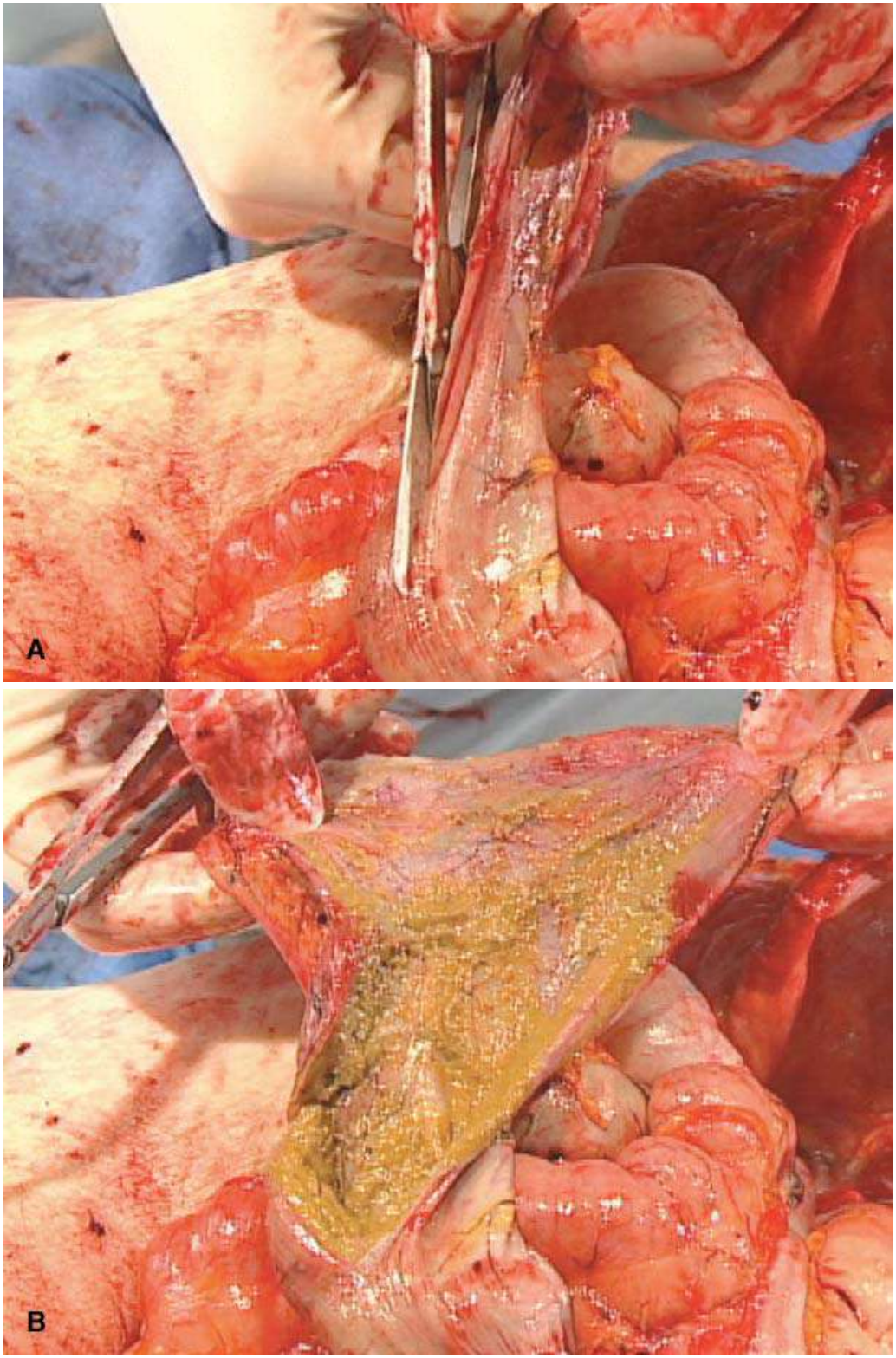


FIGURE 7.18 (A), (B) Opening or "running" the bowel. The bowel is opened completely and examined for tumors, diverticuli, and other lesions.

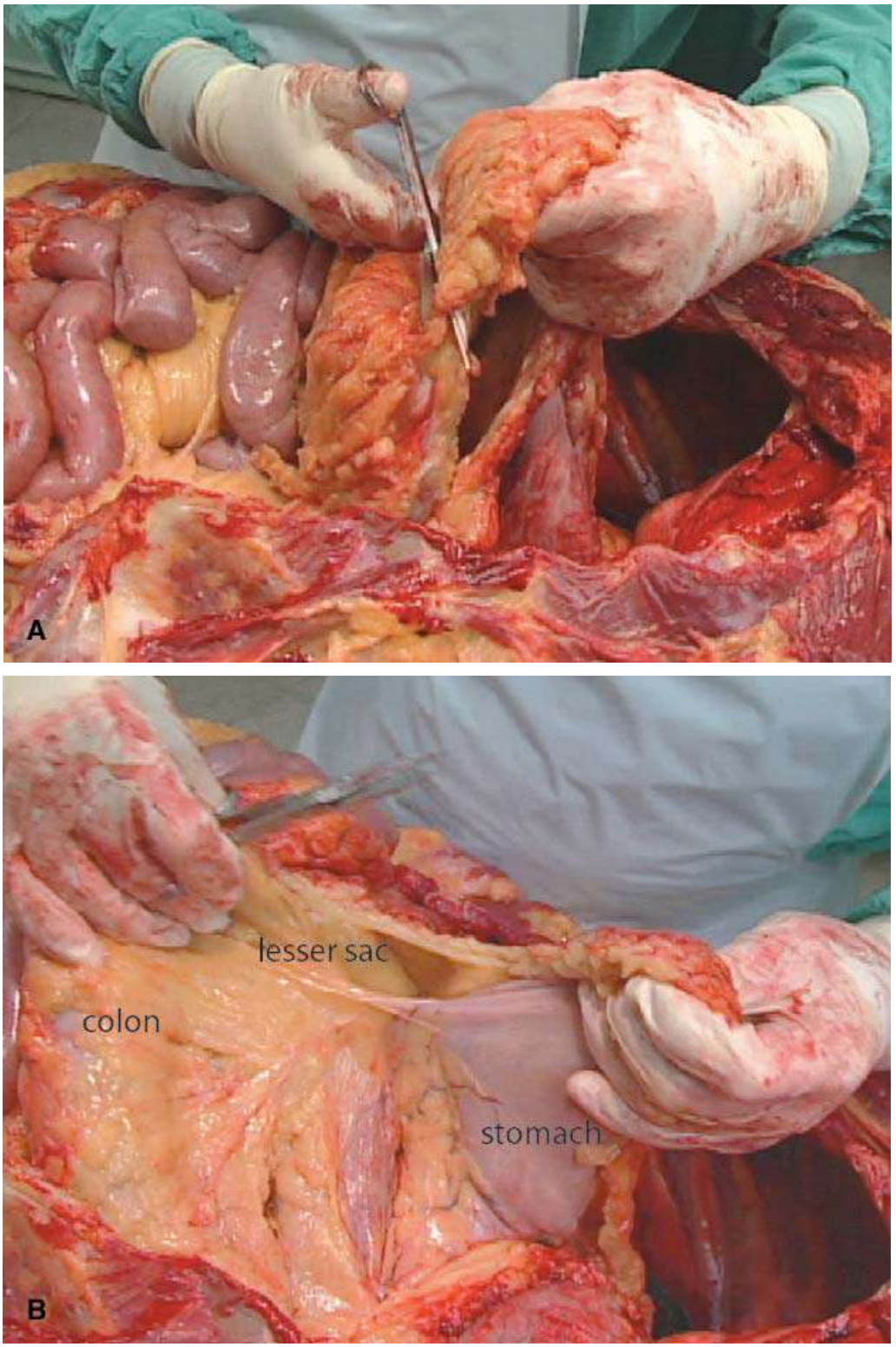
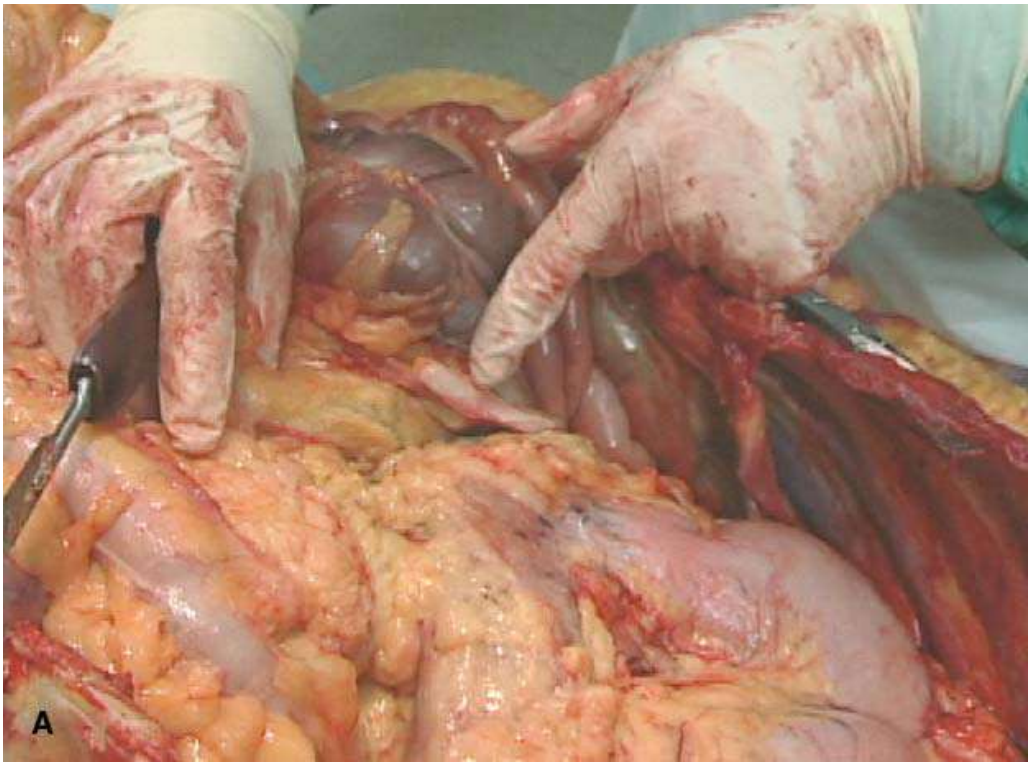


FIGURE 7.19 (A), (B) Cutting the gastrocolic ligament. The gastrocolic ligament, between the stomach and transverse colon, is cut, opening the lesser sac.



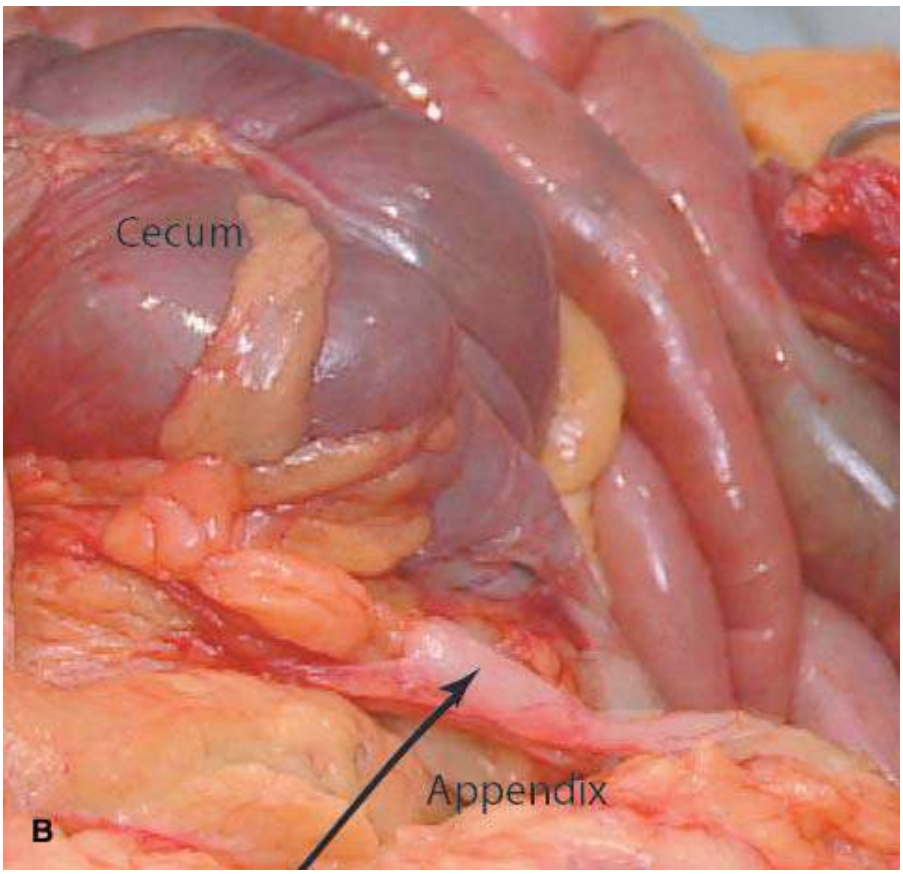


FIGURE 7.20 (A), (B) Cecum and appendix. The cecum and the adjacent appendix are seen in the right lower quadrant of the abdomen, just below the finger. There is no evidence of inflammation (appendicitis). The presence or absence of an appendix and accompanying scar can be helpful in identification.

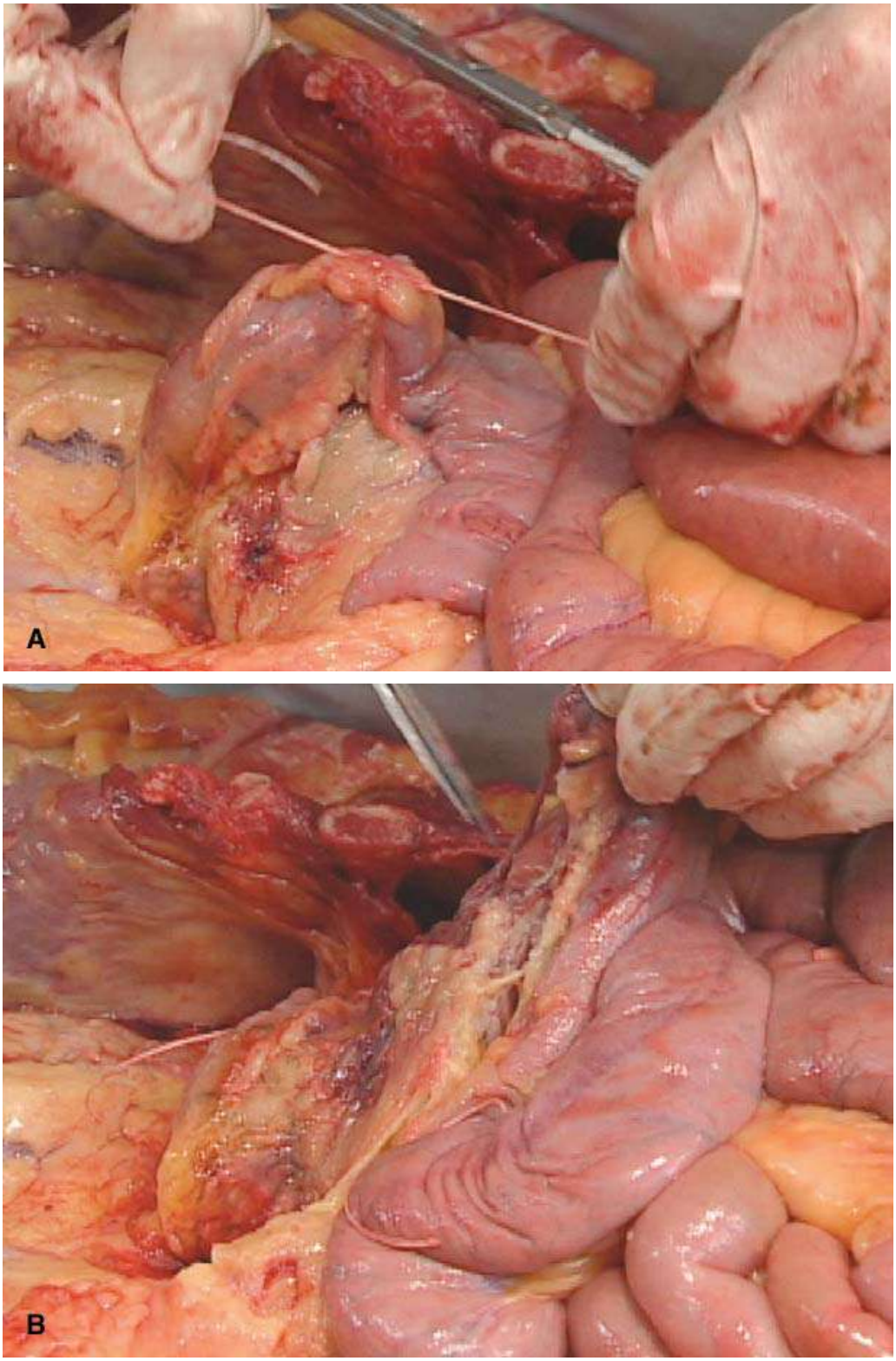


FIGURE 7.21 (A), (B) Tying and cutting of the duodenum. The duodenum is tied. This is done to prevent gastric contents from leaking out when the duodenum is cut for removal.

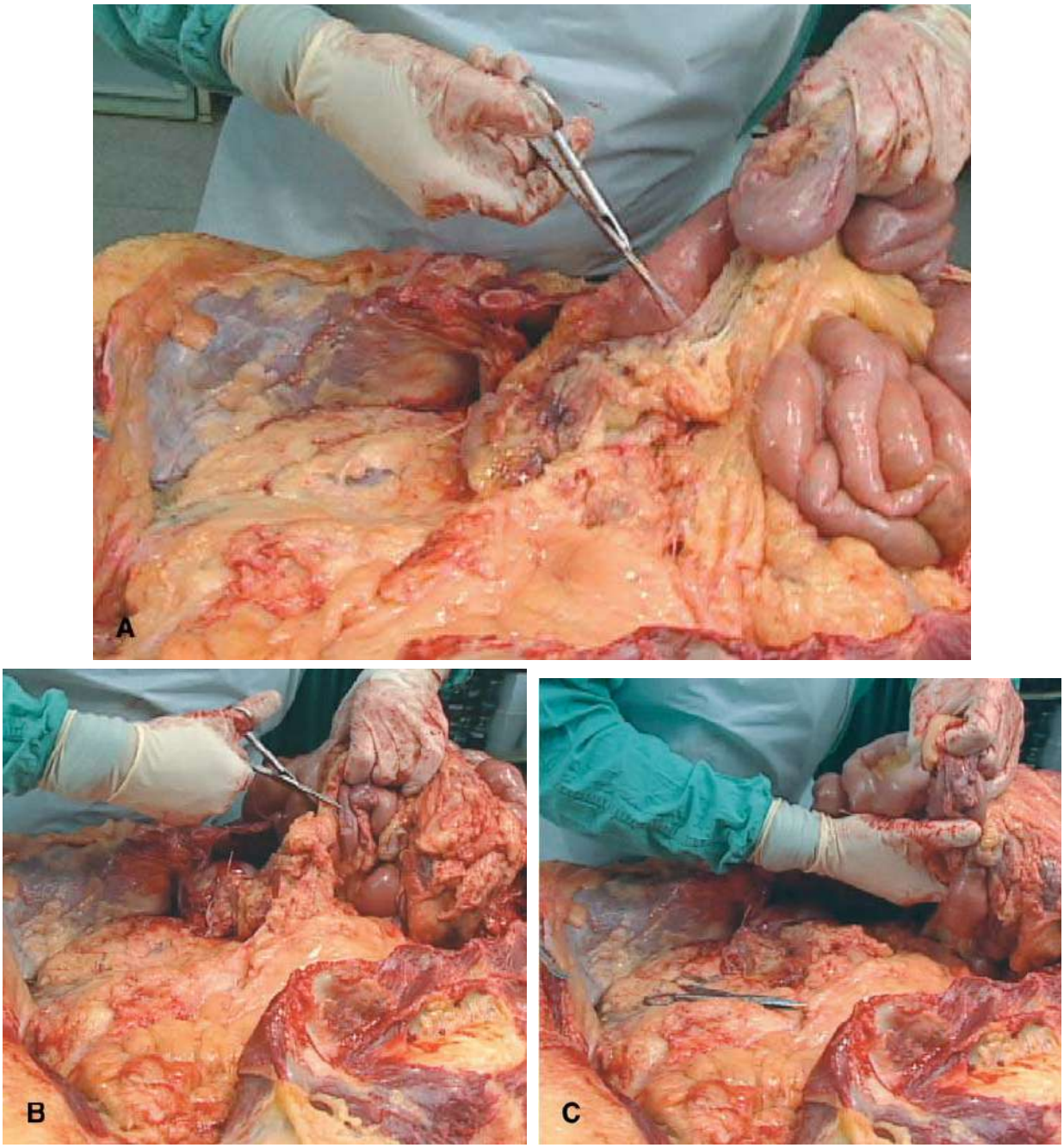


FIGURE 7.22 (A)–(C) Removal of the small and large bowels. The large and small bowels are removed as the mesentery is cut. Traction is applied to the bowels as the soft tissue is cut.

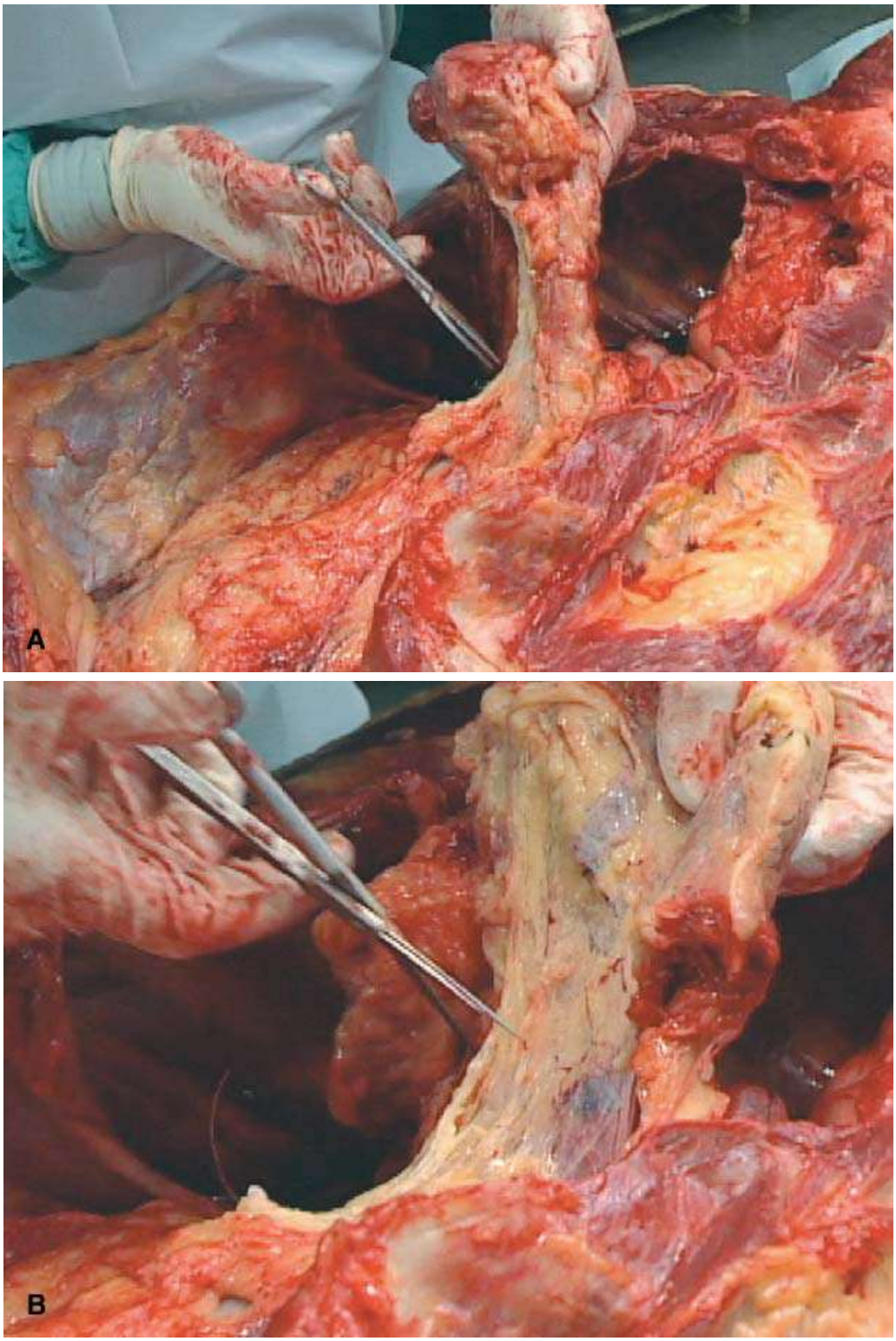


FIGURE 7.23 (A), (B) Excising the pancreas and duodenum. The pancreas and duodenum are held in the left hand, as the soft tissue is cut by the right hand.

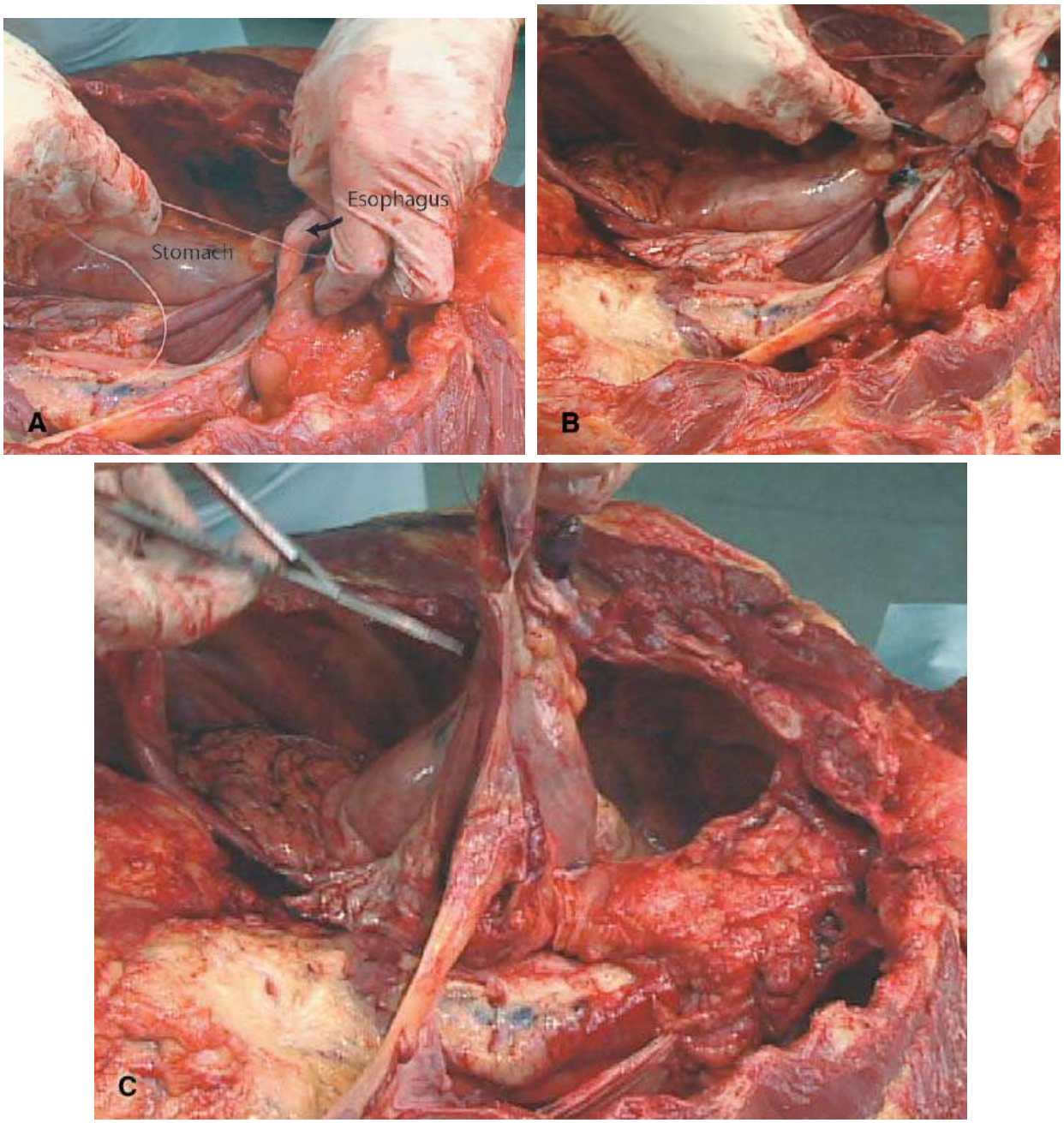


FIGURE 7.24 (A)–(C) Removing the esophagus and stomach. The esophagus is tied to prevent loss of gastric contents while the stomach is cut and removed.

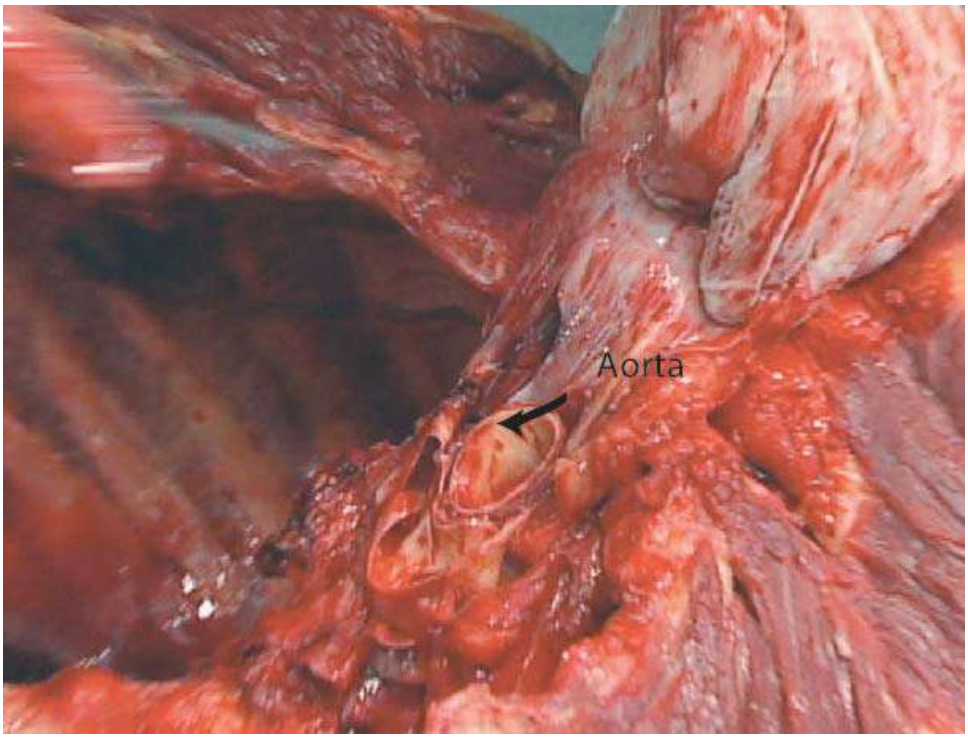


FIGURE 7.25 Mediastinum exam. The mediastinum is examined for tumors and a thymus. The thymus is usually small after about age 25. Lung tumors and other malignancies, such as lymphomas, often spread or "metastasize" to the mediastinum. The aorta is seen in the center.

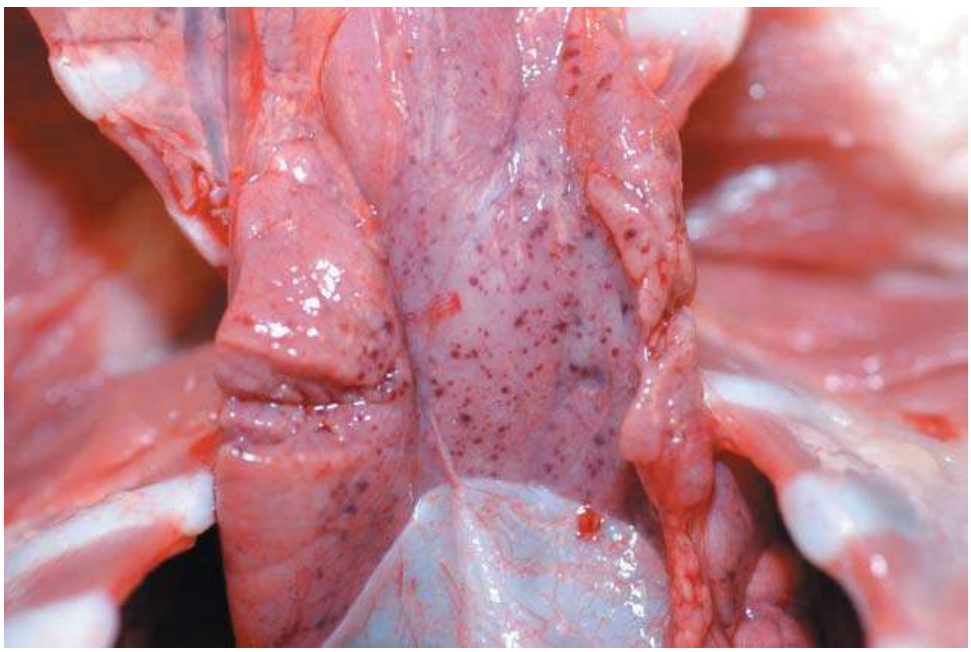


FIGURE 7.26 Thymus with petechiae. This thymus from a sudden infant death syndrome (SIDS) case shows multiple petechiae. The cause of SIDS is essentially unknown. Many cases are thought to be asphyxial deaths.

ADRENAL GLAND AND KIDNEY REMOVAL

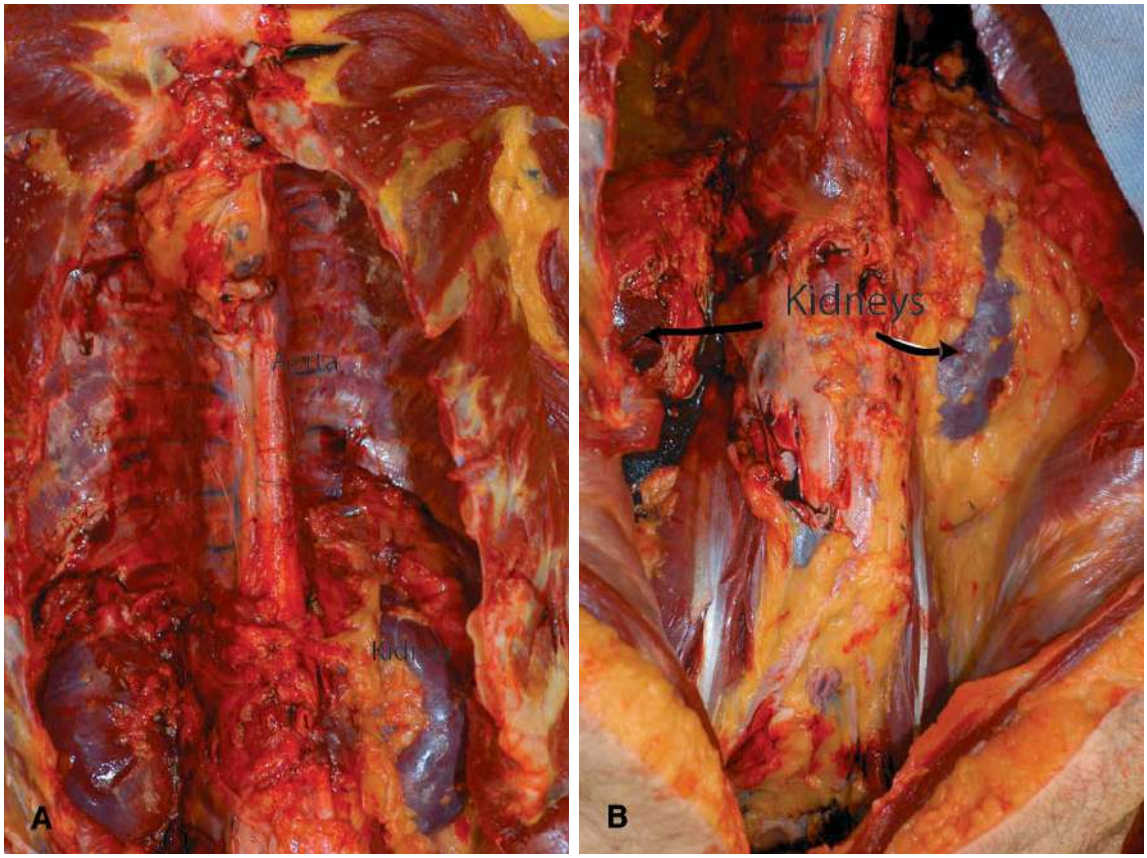


FIGURE 7.27 (A)–(C) Kidneys *in situ*. The brown kidneys can be seen within the renal fat pad (see arrows). The kidneys are slowly exposed, showing their locations in the body cavity.

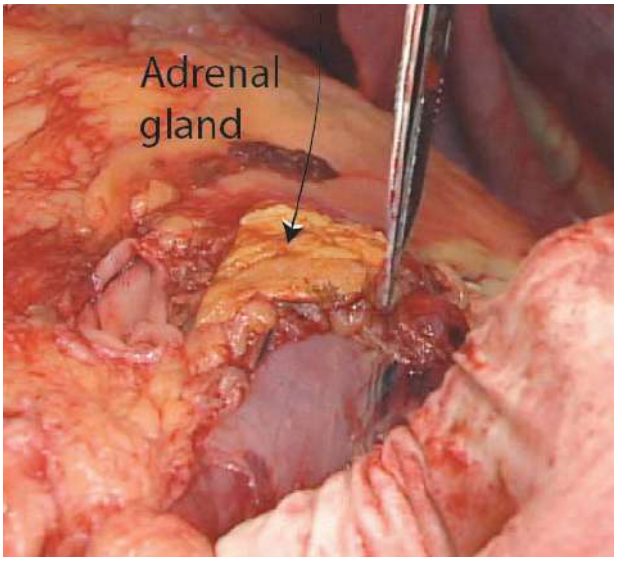


FIGURE 7.28 Adrenal gland *in situ*. The adrenal gland is to the left of the scissor, and the kidney is hidden below, under the renal fat pad.

FIGURE 7.29 Adrenal cortical adenoma. The adrenal gland is cut here. The bright yellow cortex contains an adenoma, or nodule. These nodules can be associated with hypertension.

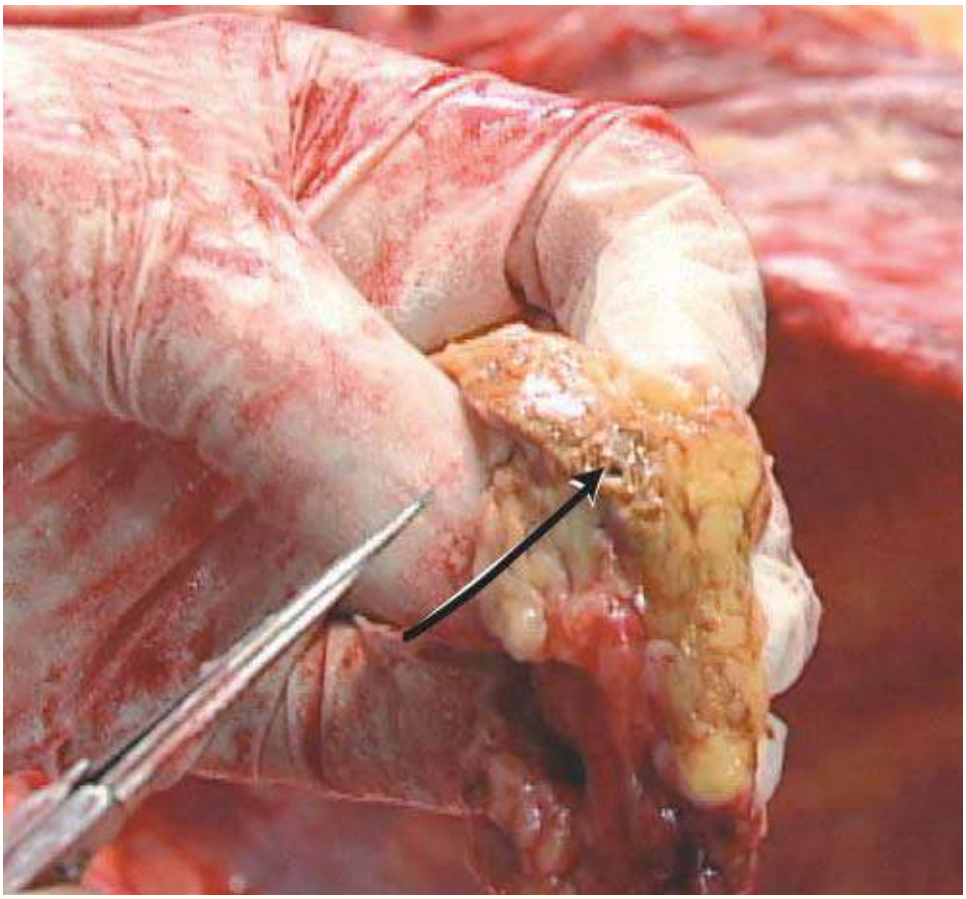


FIGURE 7.30 Adrenal gland autolysis. The adrenal gland here shows autolysis of the cortex. The adrenal gland is one of the first tissues to autolyze visibly after death.

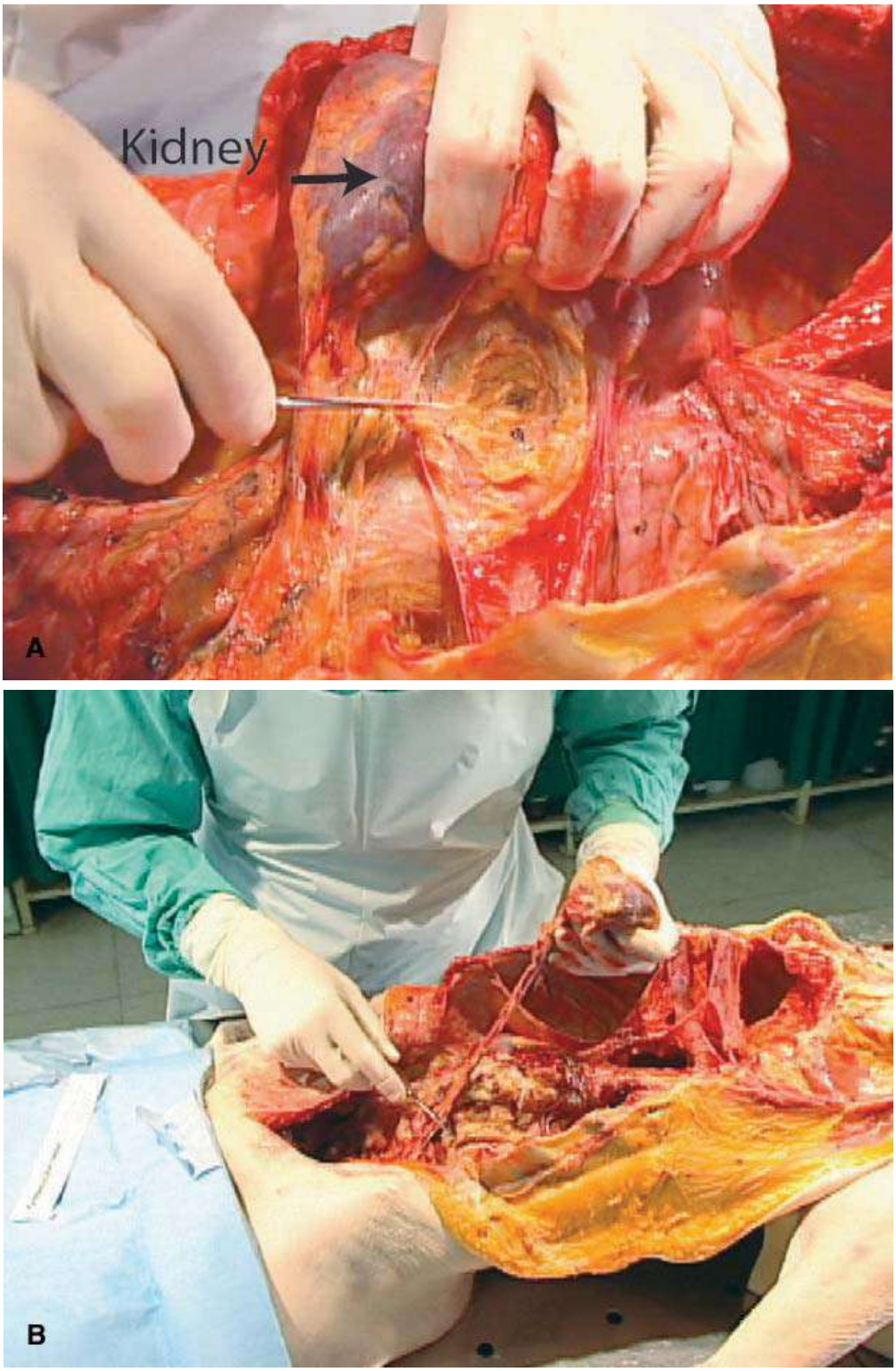


FIGURE 7.31 (A) Removal of the kidney. The kidney is removed along with the ureter. **(B) Removal of the ureter.** The kidney is in the left hand, and the ureter is being cut.

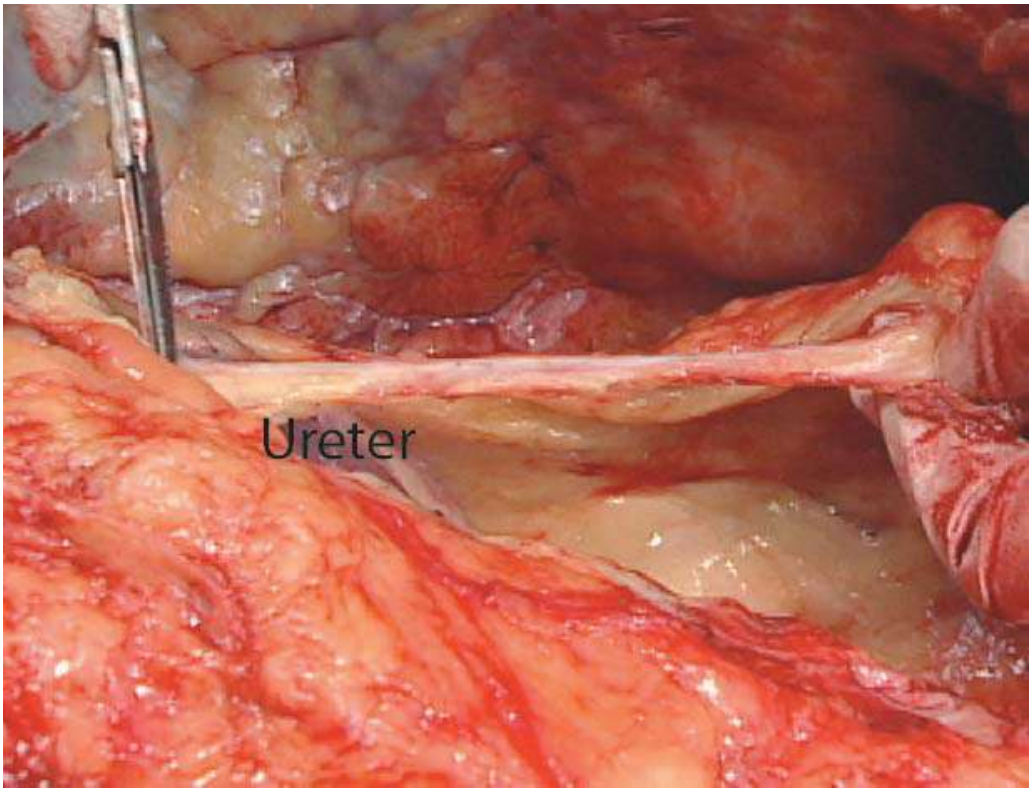


FIGURE 7.32 Ureter. The ureters are identified as they extend downward to the bladder. The ureters can contain tumors or stones (kidney stones).

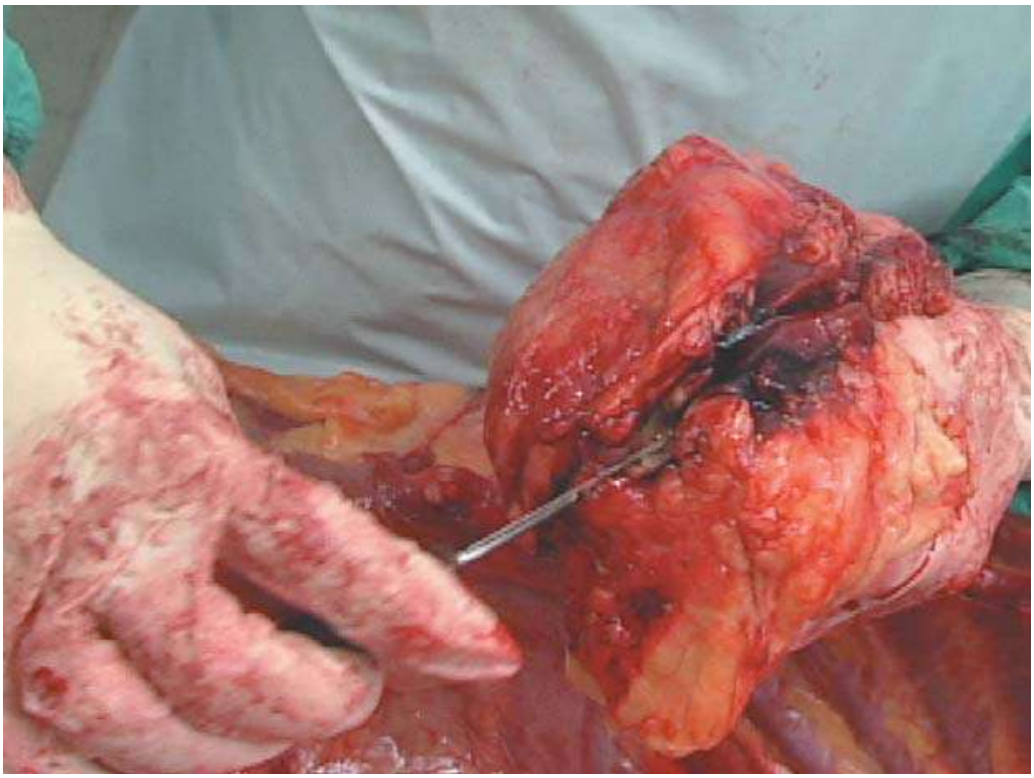


FIGURE 7.33 Perirenal fat. The kidney is shown as the renal fat pad that surrounds the kidney is cut.

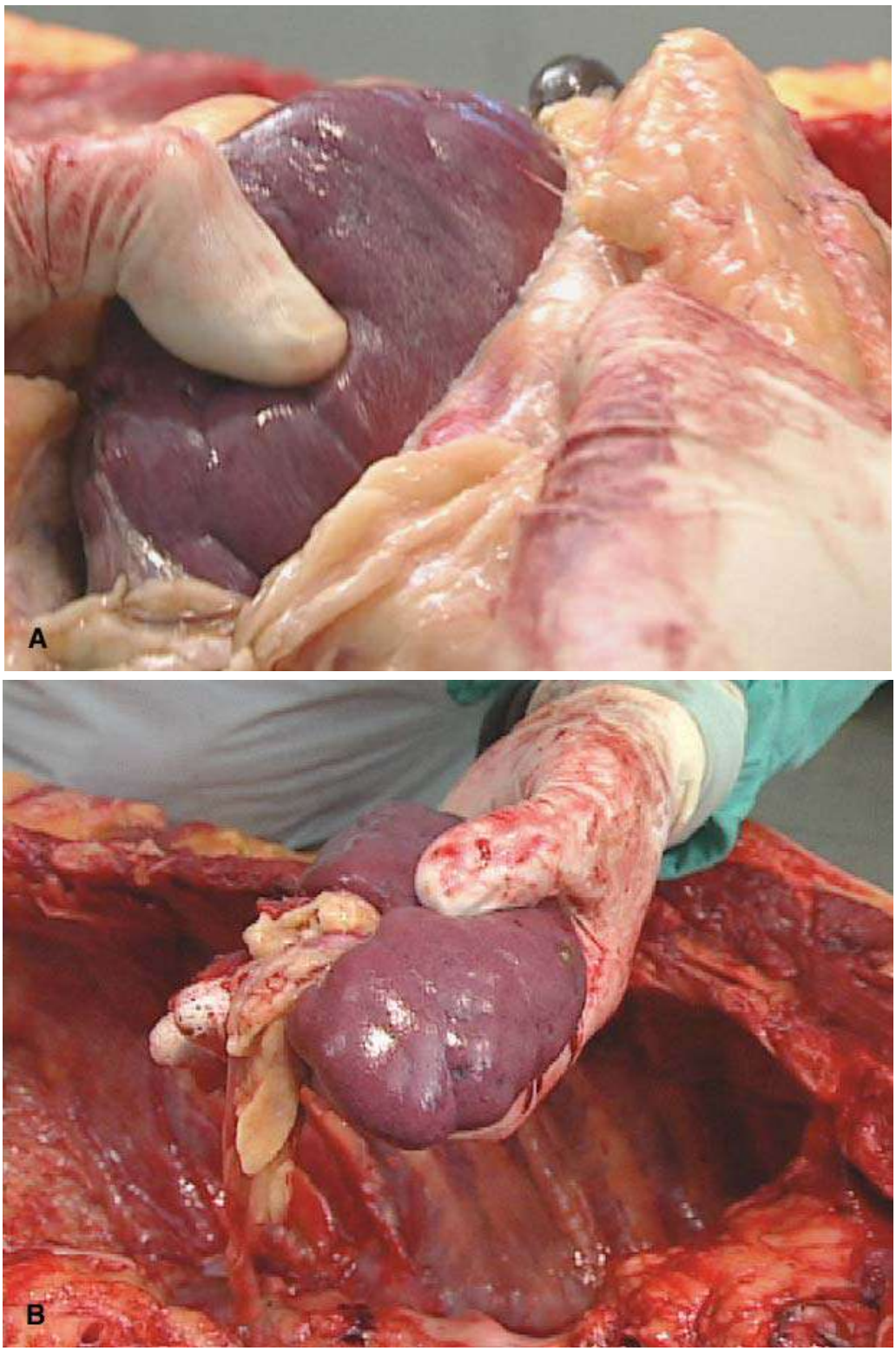
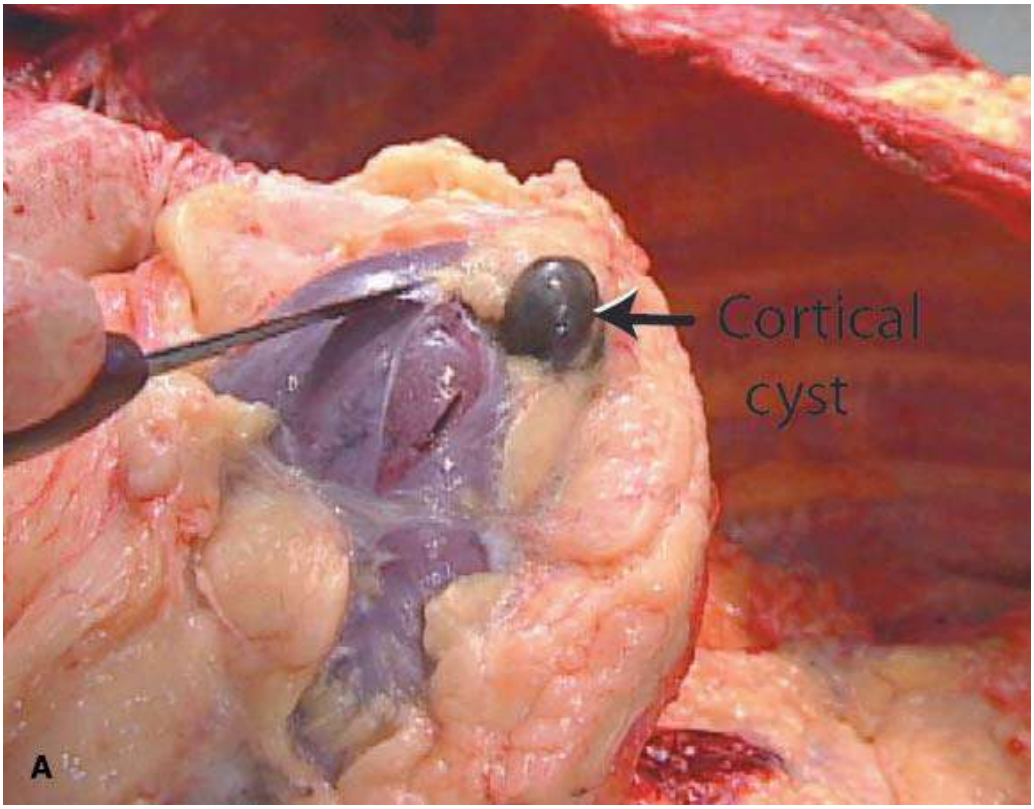
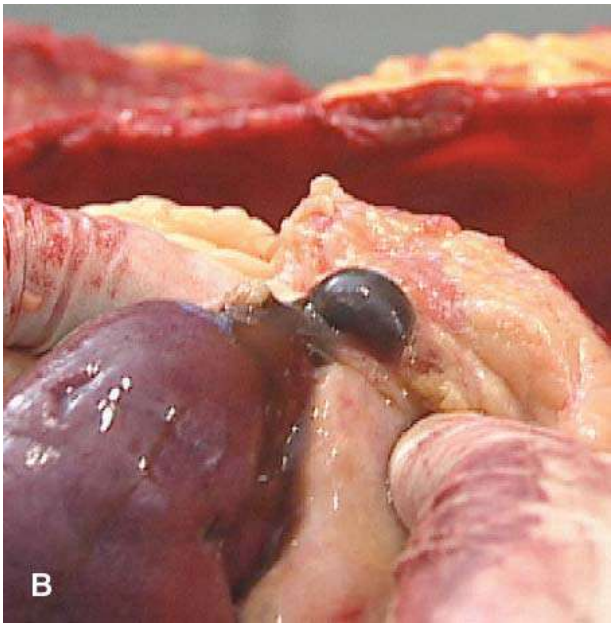


FIGURE 7.34 (A), (B) Removing perirenal fat. The renal fat pad is stripped away, revealing the kidney beneath.





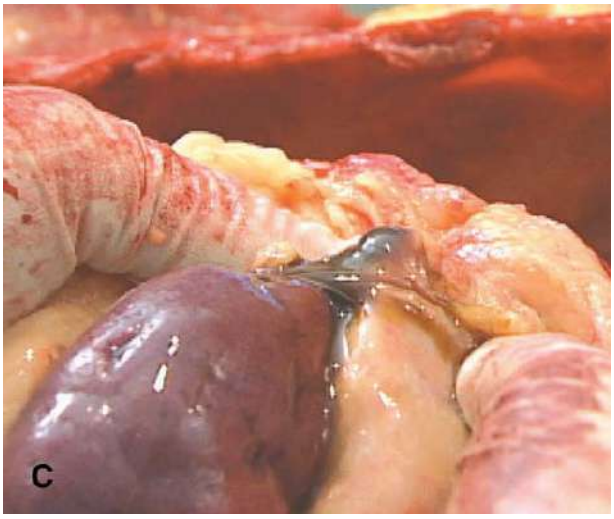


FIGURE 7.35 (A)–(C) Renal cortical cyst. After removing the renal fat pad, a cyst is uncovered in the cortex (outer layer) of the kidney. Often, these cysts are very thin and rupture easily upon removal, as happened in this case.

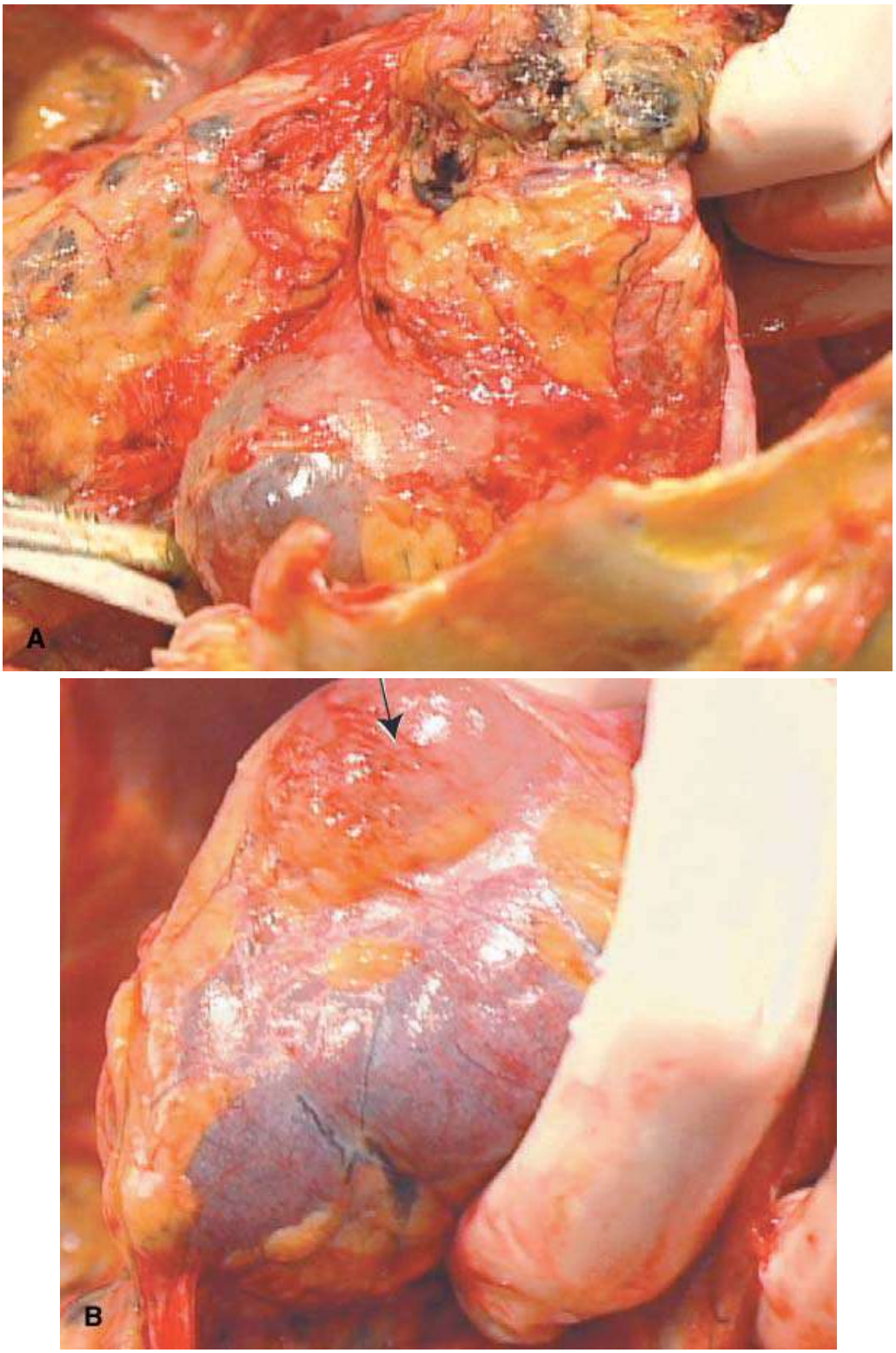


FIGURE 7.36 (A), (B) Renal cortical cyst, large. This cyst (see arrow) is very large and thick-walled, staying intact upon removal. This cyst will be opened during the individual organ examination.

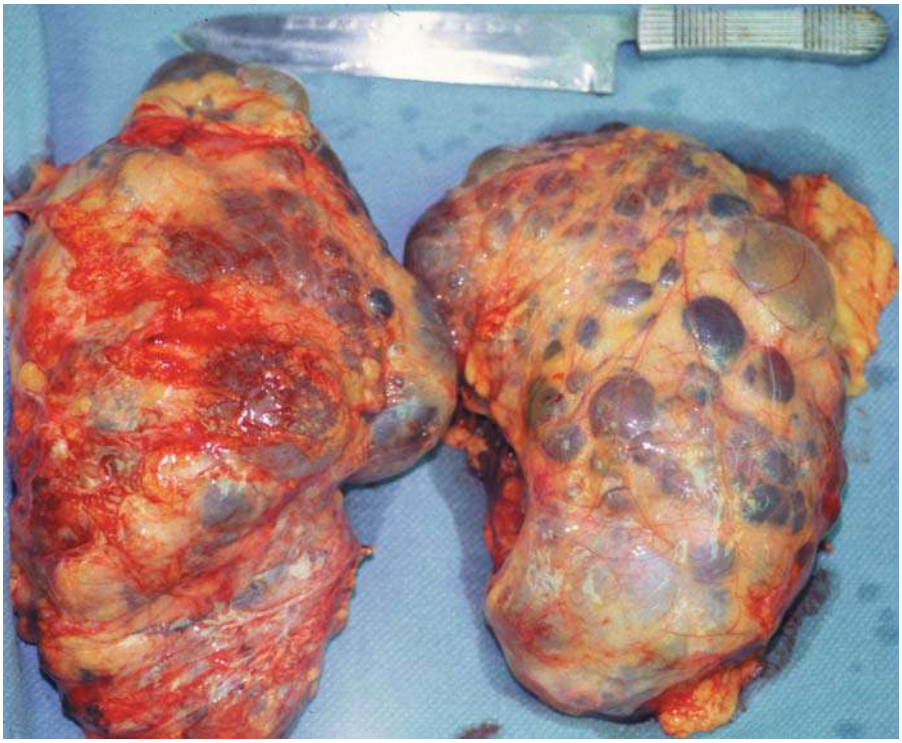


FIGURE 7.37 Polycystic kidneys. Rarely, the entire kidney is replaced with cysts in a condition called polycystic kidney disease. These patients experience renal failure in their thirties and forties. The knife in the picture is about 1 ft long, so these kidneys are over twice the normal size.

FIGURE 7.38 Renal cell carcinoma. Large tumors can be encountered upon removing the kidneys. This yellowish, rounded tumor is a renal cell carcinoma, a common malignant tumor of the kidney.

AORTA EXAMINATION

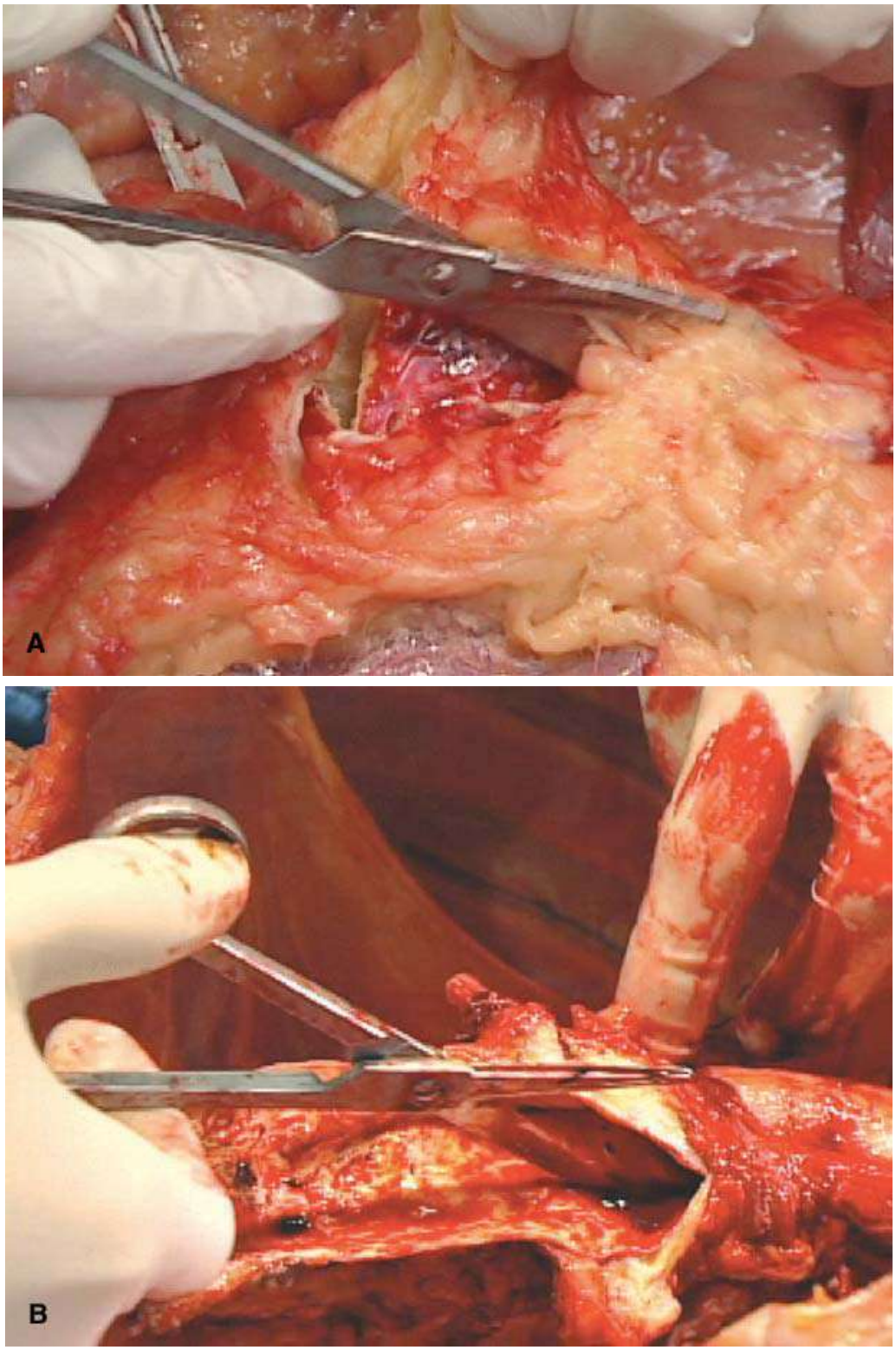
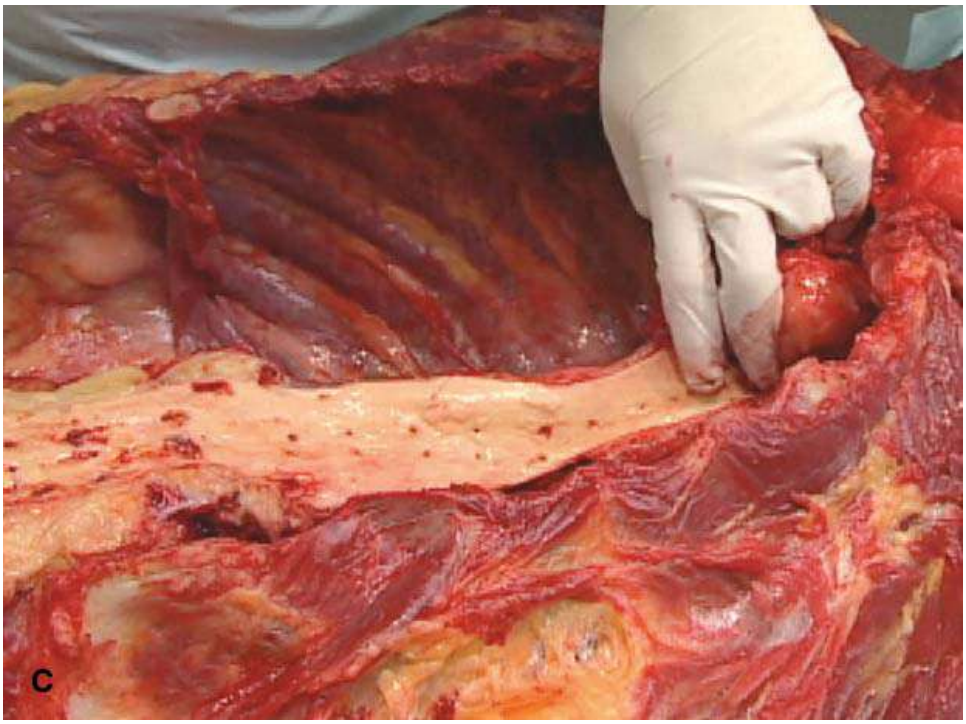


FIGURE 7.39 Opening the aorta. (A)–(C) The aorta is opened from the iliac bifurcation up to the ascending aorta. **(D)** The abdominal aortic anatomy is displayed.



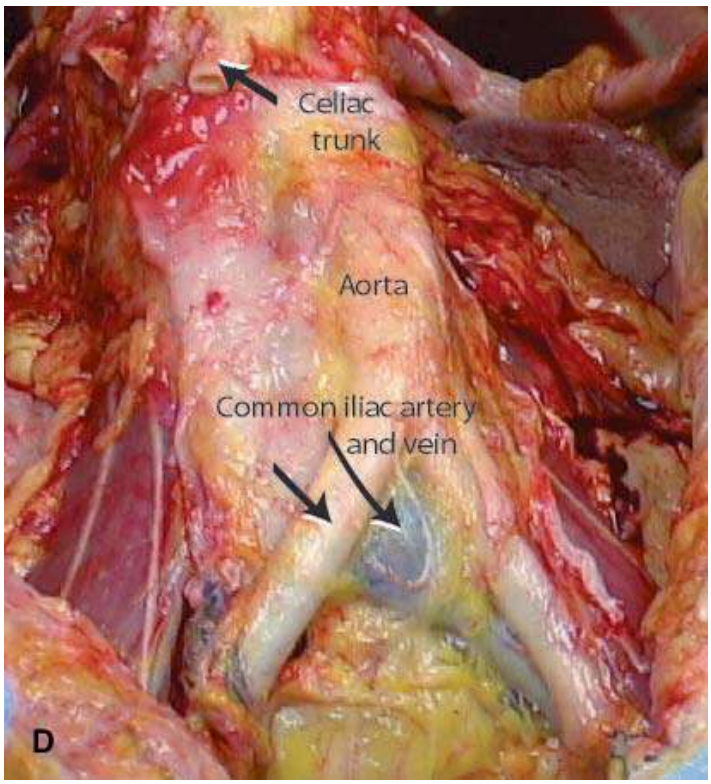


FIGURE 7.39 (CONTINUED) Opening the aorta. (A)–(C) The aorta is opened from the iliac bifurcation up to the ascending aorta. **(D)** The abdominal aortic anatomy is displayed.

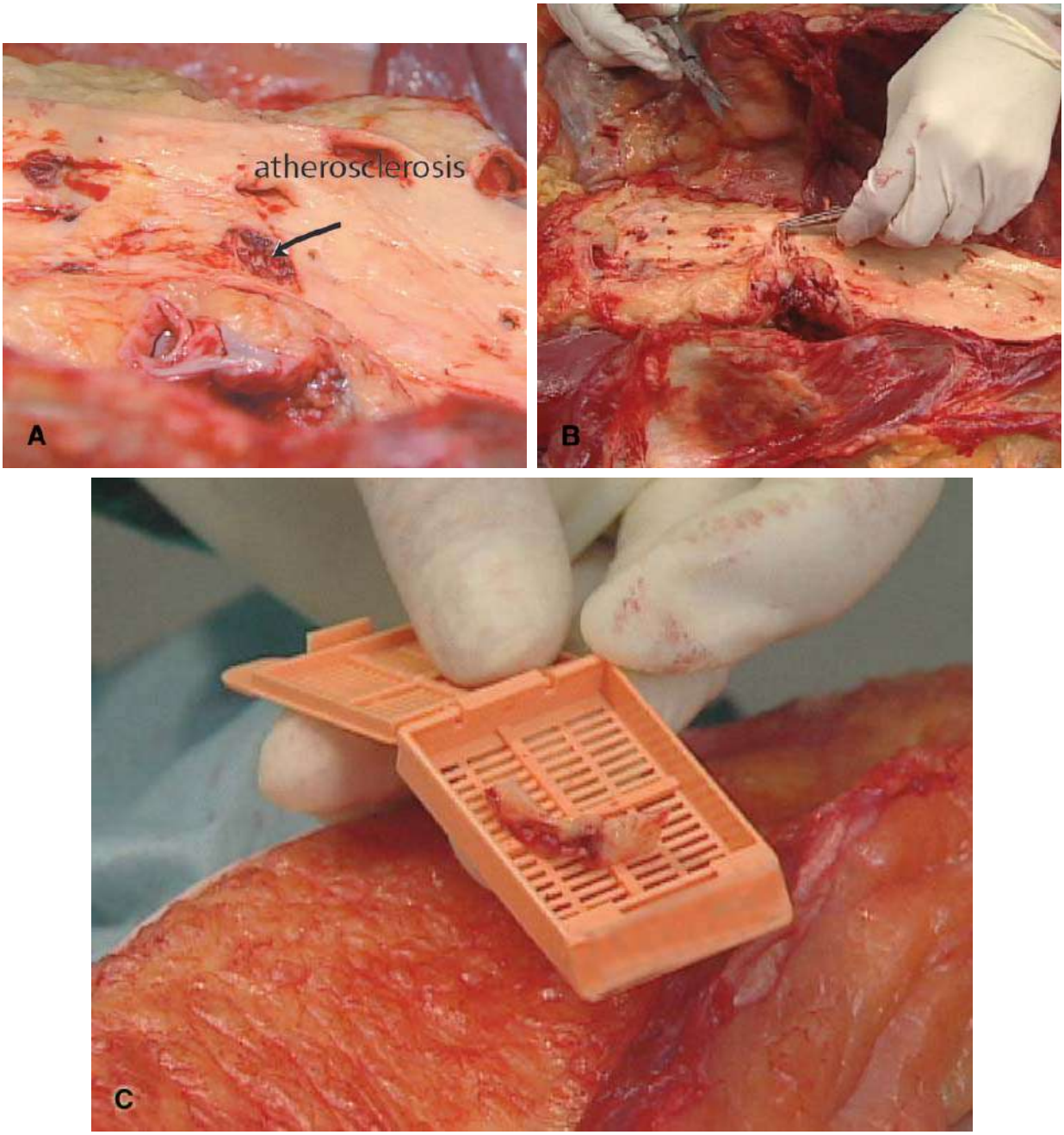


FIGURE 7.40 Aortic atherosclerosis. (A), (B) An atherosclerotic ulcer is seen in the middle of the image. **(C)** A section of this plaque is submitted in a histology cassette so it can be processed to a glass slide and reviewed under the microscope.

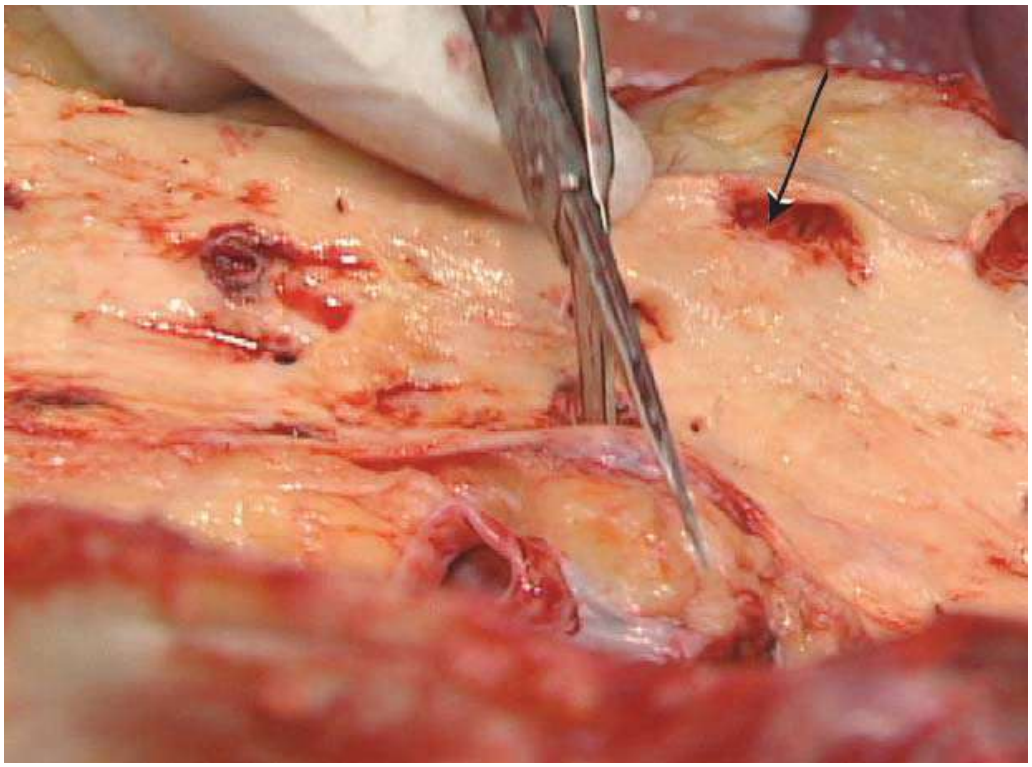


FIGURE 7.41 Renal artery. The scissor is in the renal artery. This artery is opened to check for stenosis of the artery, one of the clinical causes of hypertension. The other renal artery is indicated by the arrow.

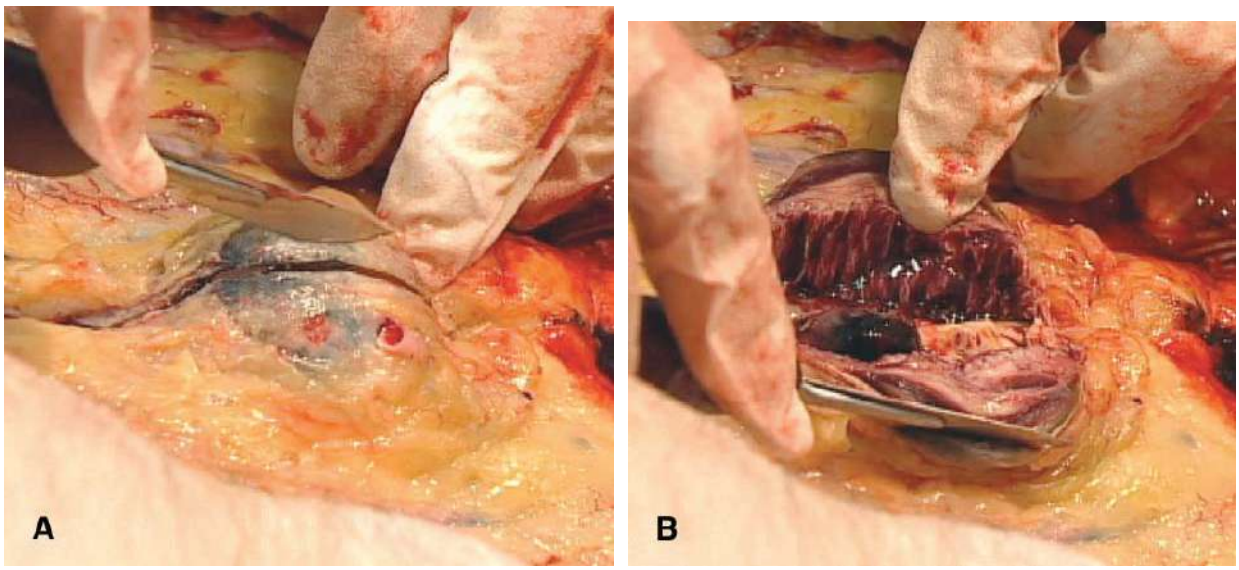


FIGURE 7.42 Abdominal aortic aneurism. (A) The scalpel points to a bluish-purple knob in the region of the abdominal aorta, partially obscured by retroperitoneal fat. **(B)** The aneurism is incised to reveal the thick aneurismal wall.

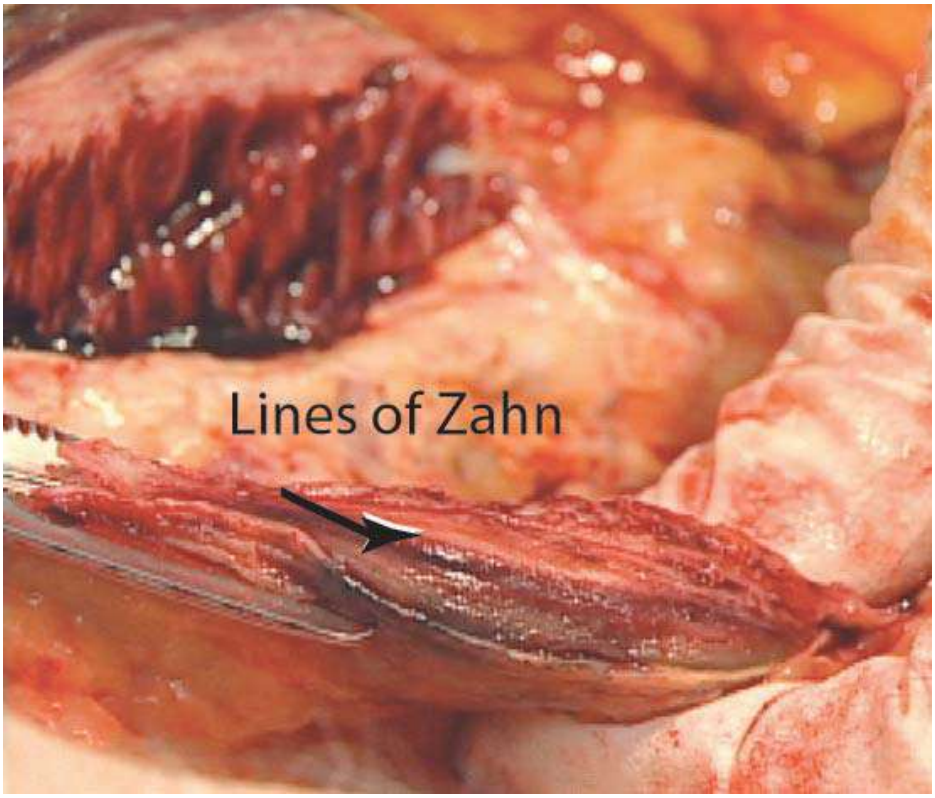


FIGURE 7.43 Aortic aneurism wall, showing lines of Zahn. An aneurism is an outpouching of a blood vessel wall, in this case caused by atherosclerosis. The aneurism is exposed, and the wall is cut open to reveal a thick, layered wall. The alternating light and dark lines demark layers of white blood cells (light) and red blood cells, fibrin, and platelets (dark).

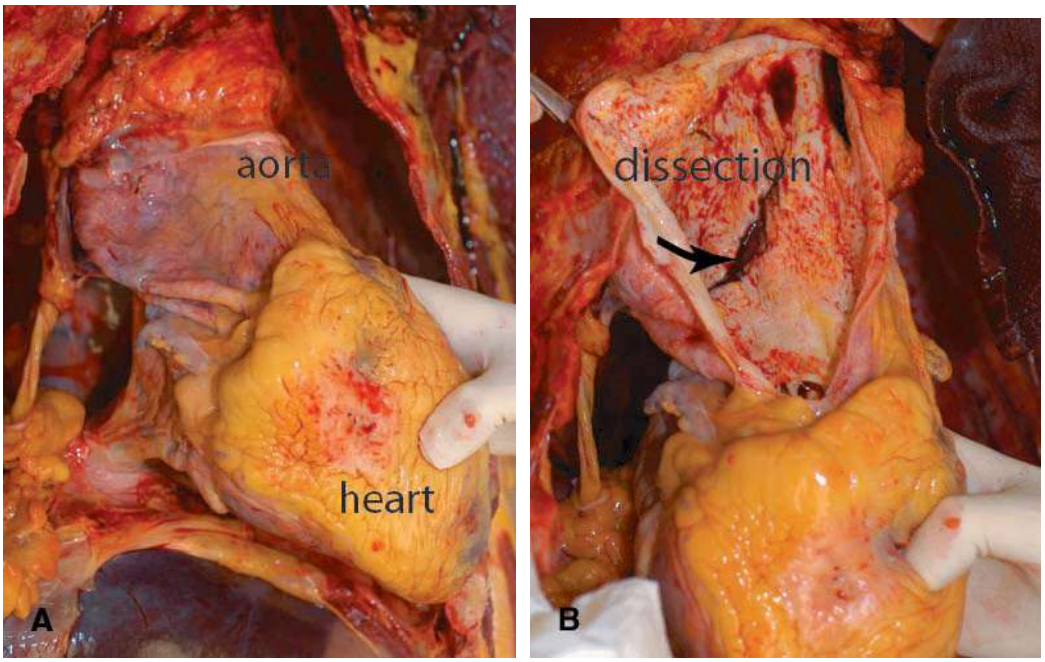


FIGURE 7.44 (A) Ascending aortic aneurism. Another type of aneurism is seen near the heart, involving the aortic root. The broad structure shown by the arrow is the aorta. This individual was suspected to have Marfan's syndrome, a connective tissue disease associated with the weakening of blood vessel walls. **(B) Aortic dissection.** This figure shows the opened aorta, which contains a large tear. The thin aneurism can tear spontaneously, allowing blood to dissect outside the aorta, resulting in an aortic dissection.

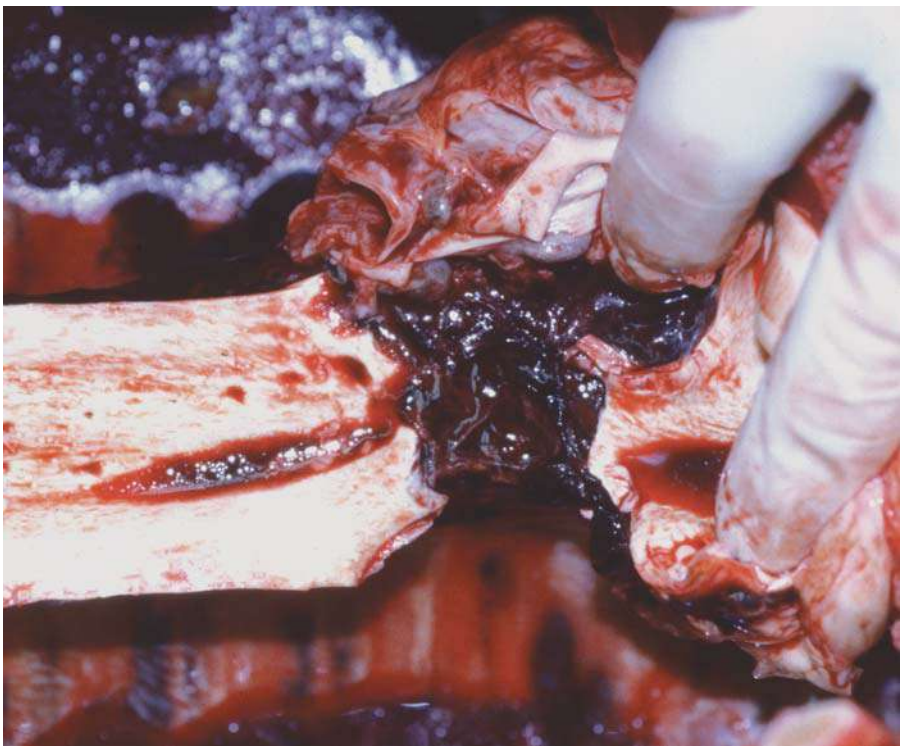


FIGURE 7.45 Laceration of the aorta. In a severe trauma, such as one caused by a motor vehicle crash, the aorta can be lacerated or completely transected as seen here.

UTERUS REMOVAL

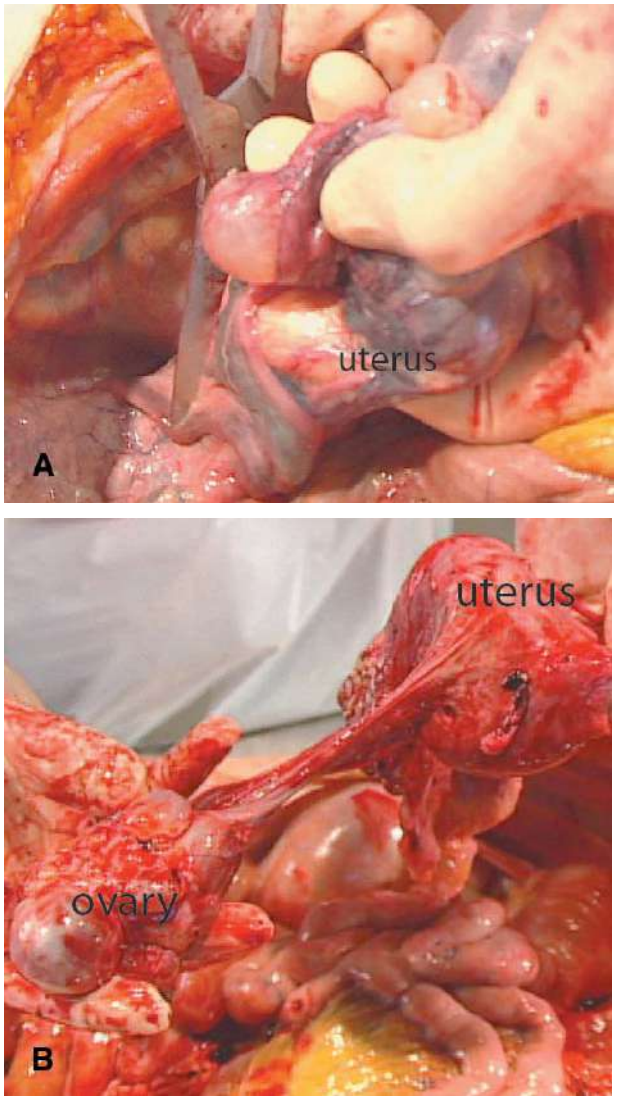


FIGURE 7.46 Removal of the uterus and ovaries. (A) The uterus is excised from the lower pelvis and is removed separately from or with the bladder. The uterus is displayed with two attached ovarian cysts. **(B)** A large cyst can be seen on the left side of the figure (also see Figure 6.35A, Figure 6.35B). Upon removal of these and other organs, the natural appearance of the tissues is often partially obscured by blood. This blood can easily be washed off, as is done when the tissues are examined in the individual organ examination portion of the autopsy.

BLADDER REMOVAL

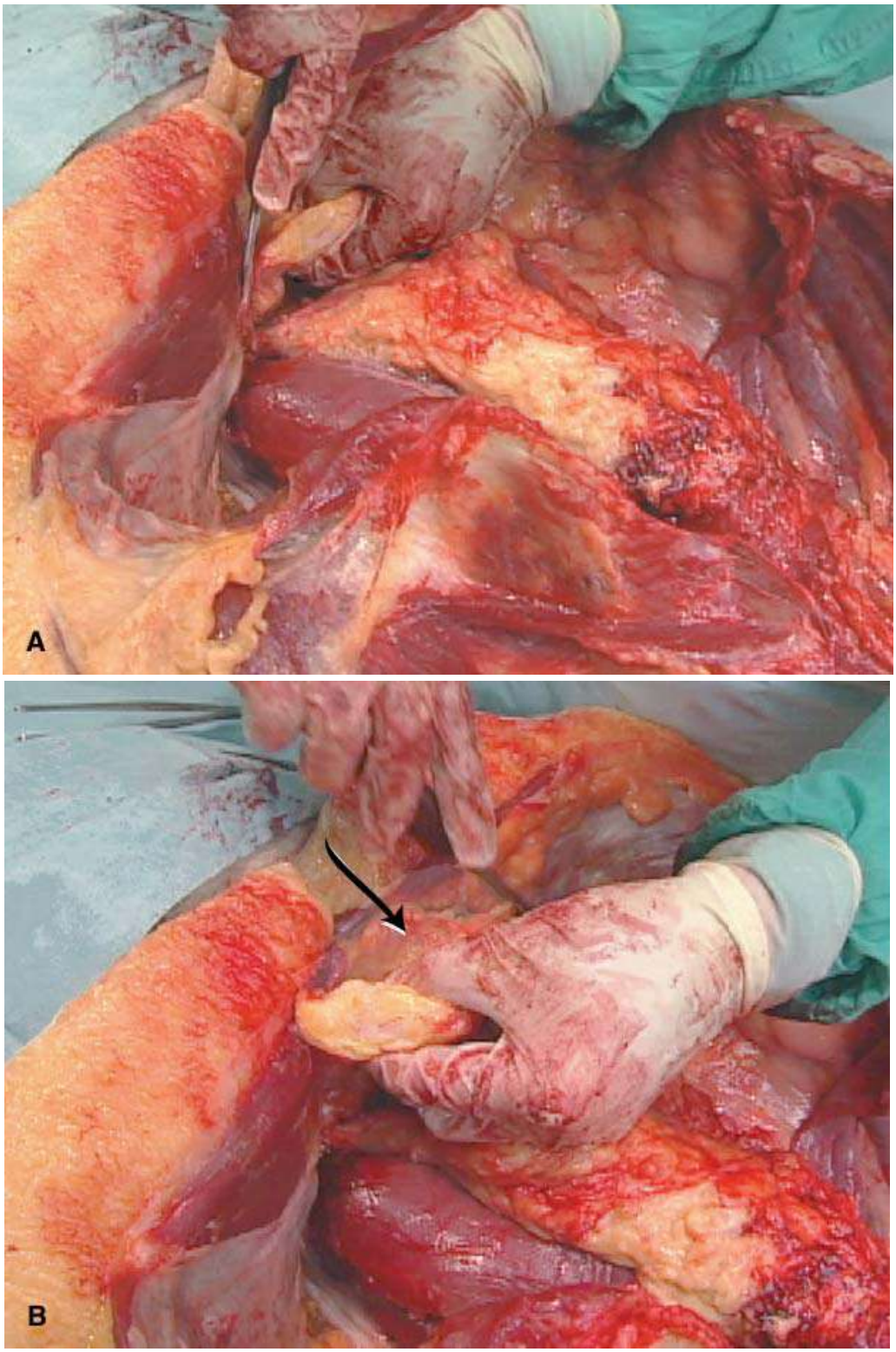


FIGURE 7.47 (A)–(D) Removal of the bladder. The pathologist dissects the bladder from the lower pelvis in the male, being careful to include the prostate gland. The bladder is held in the left hand (see arrows). The pathologist must be careful not to empty urine from the bladder. If only a small amount of urine is present at the initial aspiration for toxicology, a small amount of additional urine can often be obtained by carefully opening the bladder.

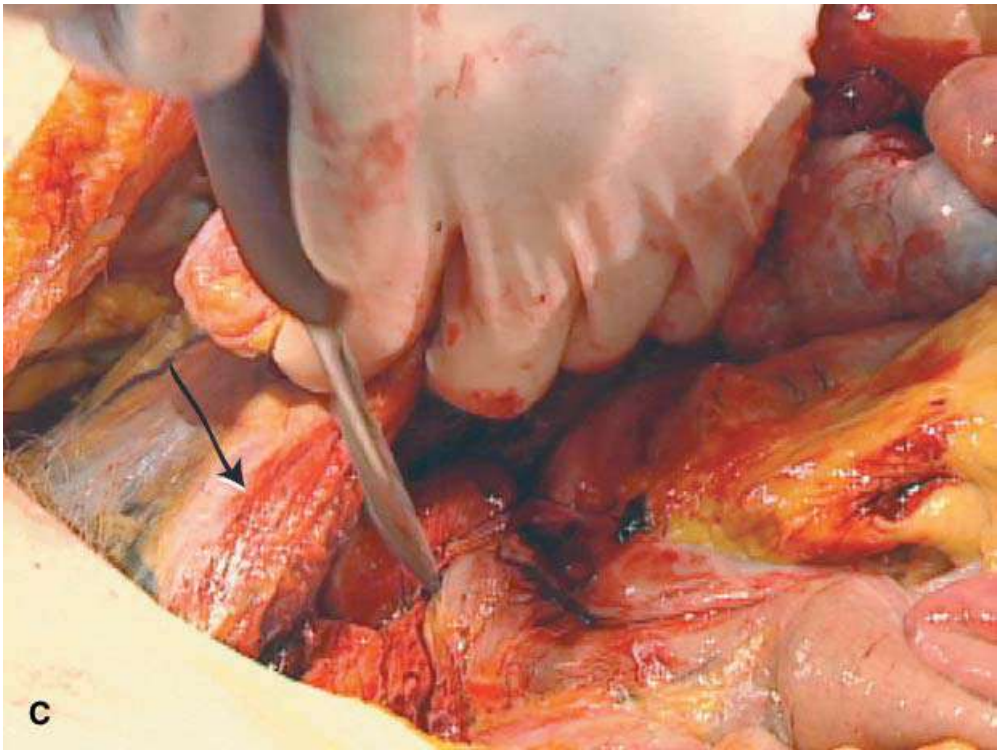


FIGURE 7.47 (CONTINUED) (A)–(D) Removal of the bladder. The pathologist dissects the bladder from the lower pelvis in the male, being careful to include the prostate gland. The bladder is held in the left hand (see arrows). The pathologist must be careful not to empty urine from the bladder. If only a small amount of urine is present at the initial aspiration for toxicology, a small amount of additional urine can often be obtained by carefully opening the bladder.

NECK DISSECTION

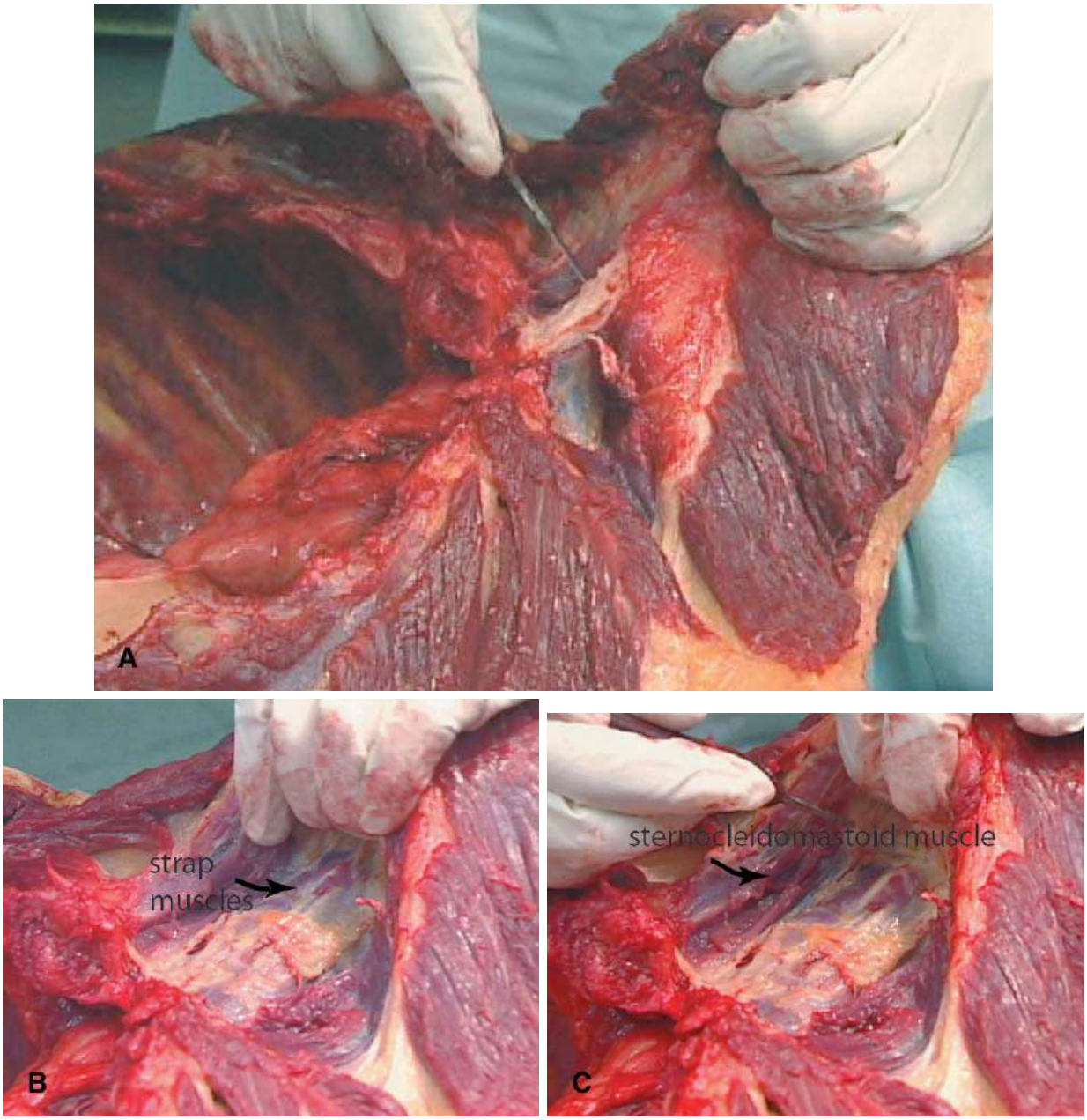


FIGURE 7.48 (A)–(C) Neck dissection, exposing muscles. The neck is dissected after the viscera have been removed. While applying traction to the upper chest skin and soft tissue flap, the "strap" muscle group (midline) and sternocleidomastoid (lateral) are revealed during careful dissection. The main focus of the dissection is to look for hemorrhage. If hemorrhage is discovered at any step, the dissection is photographed as it progresses. Suspected strangulation cases are imparted an even more detailed dissection than depicted here.

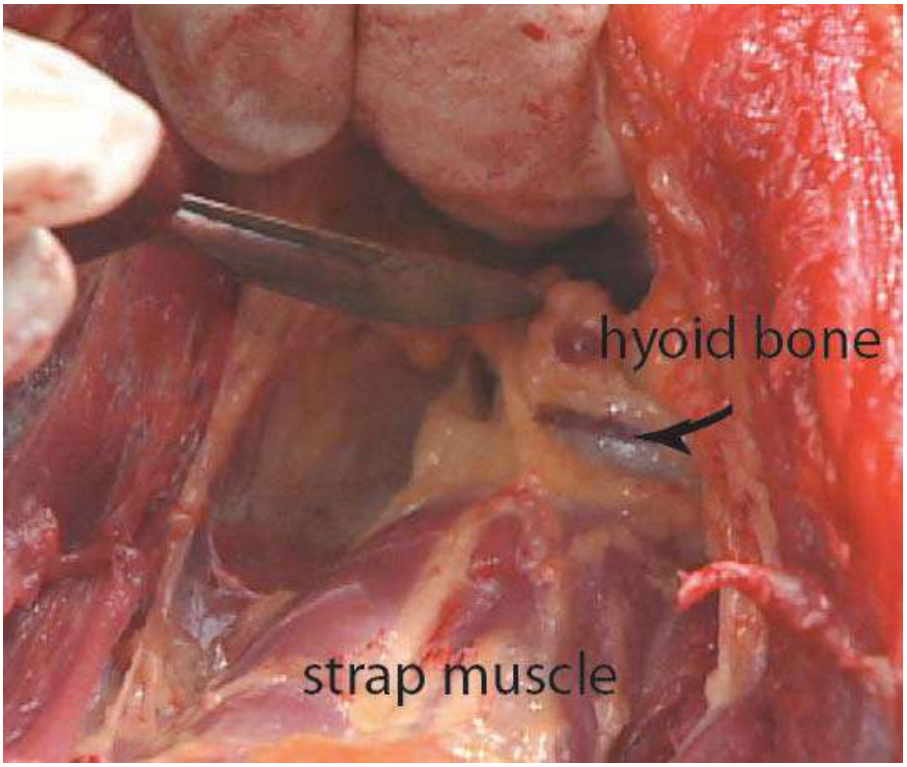


FIGURE 7.49 Neck dissection, cutting above the hyoid bone. The dissection is carried up high into the neck, and a cut is made in the muscle above the hyoid bone, a horseshoe-shaped bone that can be broken during strangulation. The tongue is removed with the other neck organs in certain cases, such as strangulation, or when the tongue needs to be examined directly. Some pathologists remove the tongue in all autopsies. The forensic autopsy is incomplete without at least the complete removal of the hyoid bone with the neck organs.

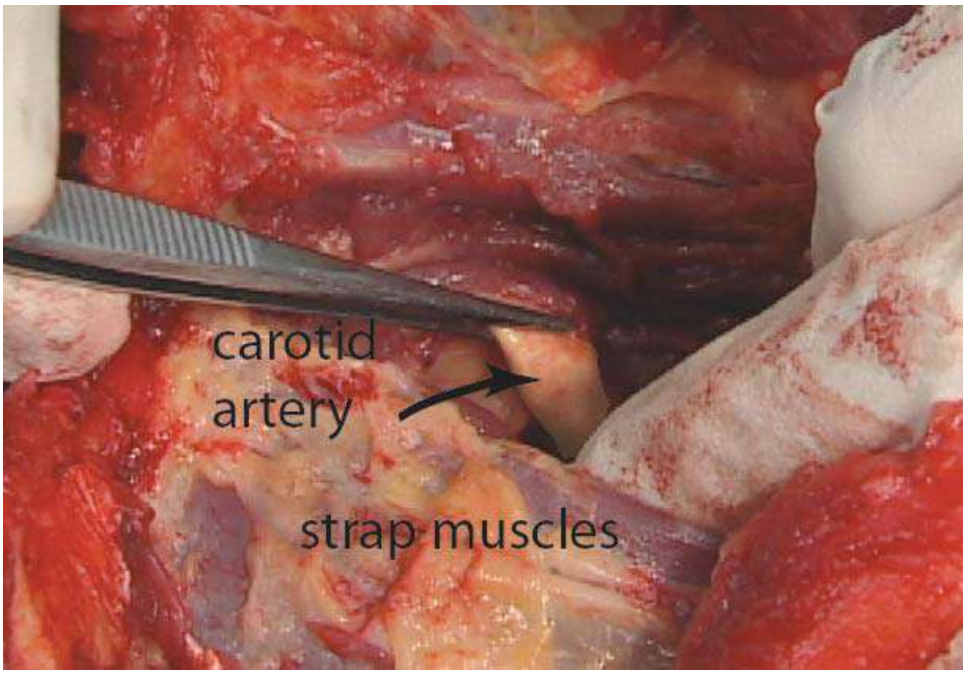


FIGURE 7.50 Neck dissection, exposing the carotid artery. The lateral soft tissue of the neck is cut away, revealing the carotid artery.

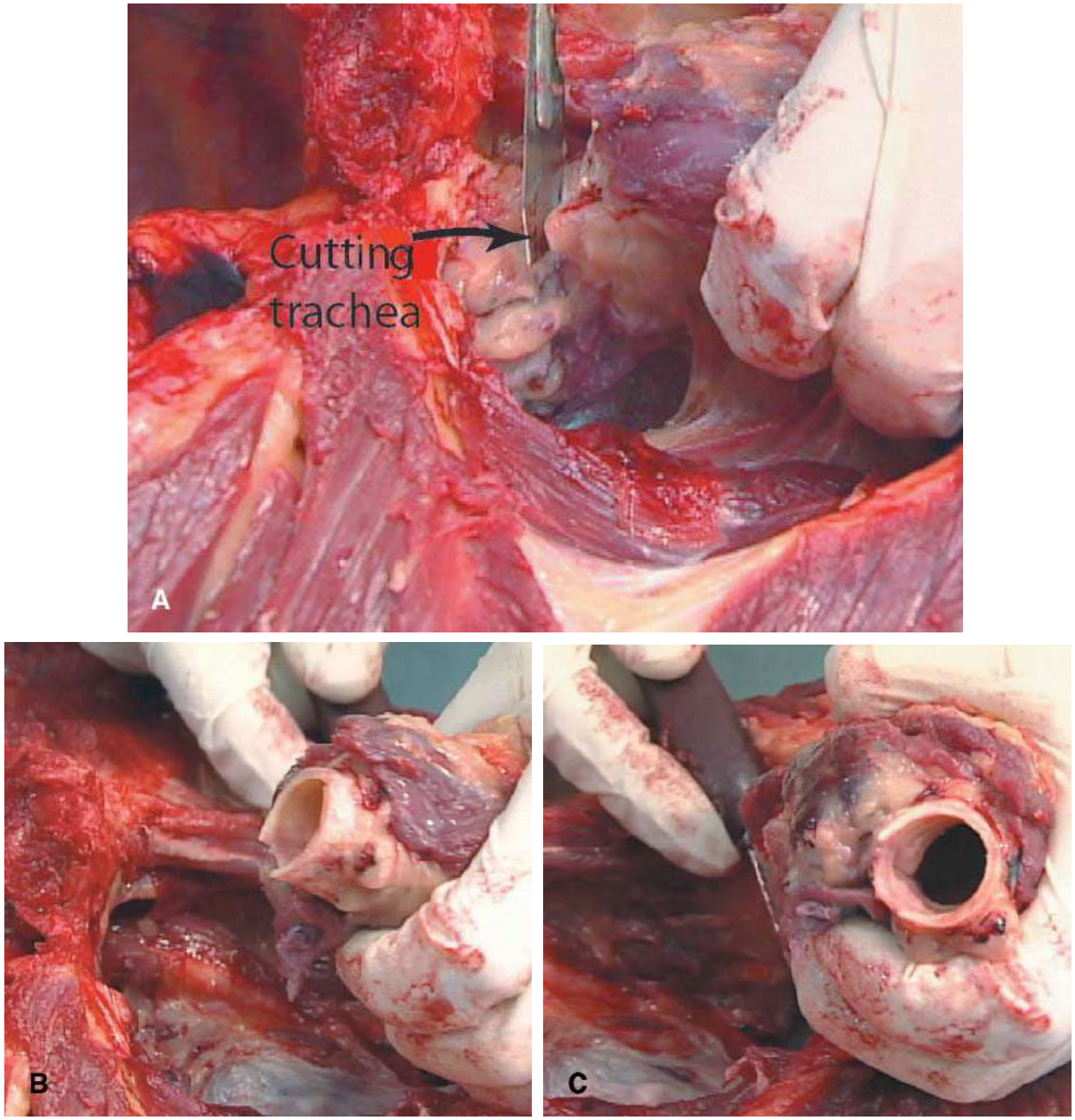


FIGURE 7.51 (A)–(C) Neck dissection, cutting the trachea. The trachea and esophagus are cut, while traction is placed with the left hand. The pathologist is careful to cut away the tissue without cutting the carotid arteries, since the embalmer uses the carotid arteries to embalm the head. Cutting the carotids makes them difficult for the embalmer to find.

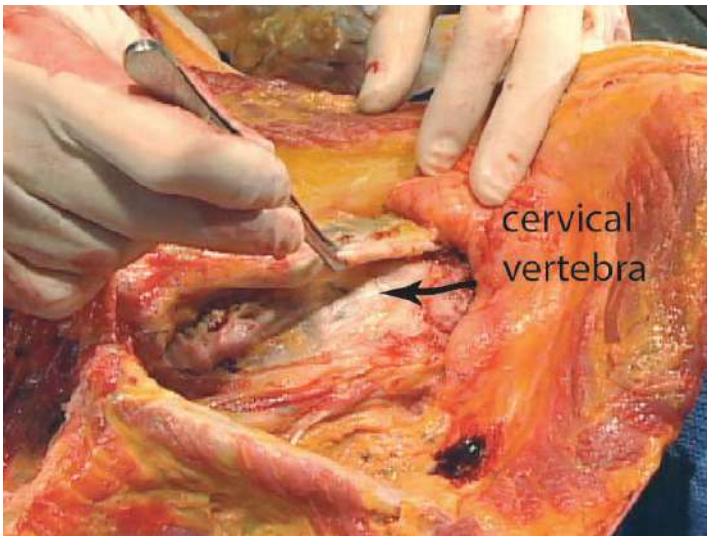


FIGURE 7.52 Carotid artery relationships. The carotid artery is shown by the forceps. The neck organs have been removed. The cervical vertebrae are just below the artery. Significant hemorrhage or fracture of the cervical vertebrae can be seen at this stage of the dissection (see Figure 7.53).

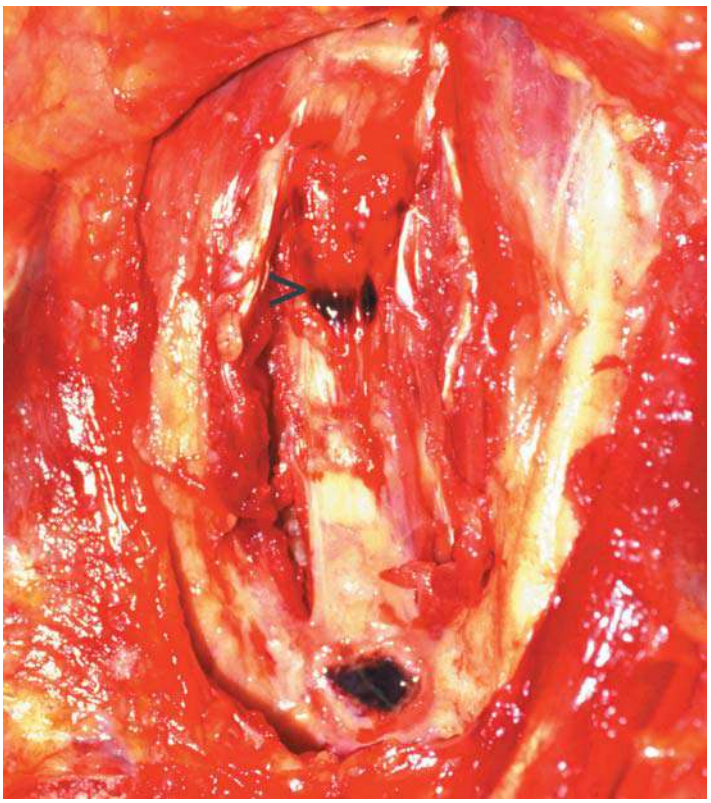


FIGURE 7.53 Cervical vertebra fracture. Removal of the neck shows hemorrhage due to the fracture of a vertebral body in the neck (see arrow). This victim suffered this and other blunt force injuries while being murdered. Fracture of the cervical vertebrae often results in swelling and hemorrhage of the spinal cord. The higher the injury is on the spinal cord, the more severe the effect on the victim. Damage of the spinal cord at levels 3, 4, and 5 can cause paralysis of the diaphragm, for example, resulting in respiratory failure. An x-ray can be helpful if obvious fracture or hemorrhage is not seen during examination.

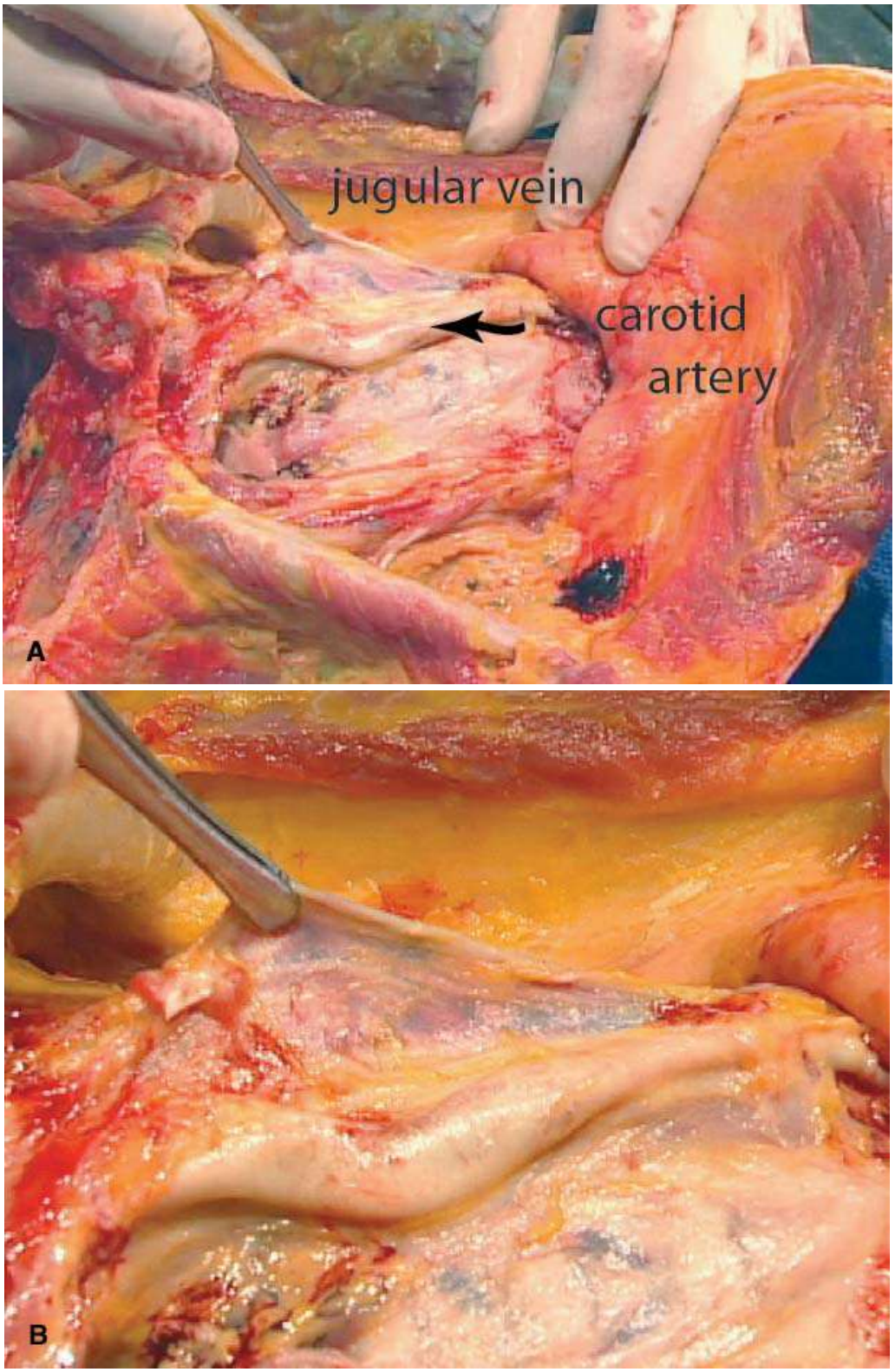


FIGURE 7.54 (A), (B) Jugular vein relationships. The jugular vein is the collapsed, thin-walled vein displayed by the forceps. The jugular veins are easily compressed by choking, classic ligature hanging, or strangulation. The compressed jugular veins significantly limit venous return of blood from the veins of the head and neck to the heart. Blood is pumped into the brain, but cannot return to the heart. The result is hypoxia of the brain, unconsciousness, and death.

FIGURE 7.55 Hanging by ligature. This victim of a suicidal hanging was suspended by the depicted rope. The impression left by the ligature, or ligature furrow, shows that the ligature compressed the area of the jugular vein, not the trachea; still, death by asphyxia resulted.

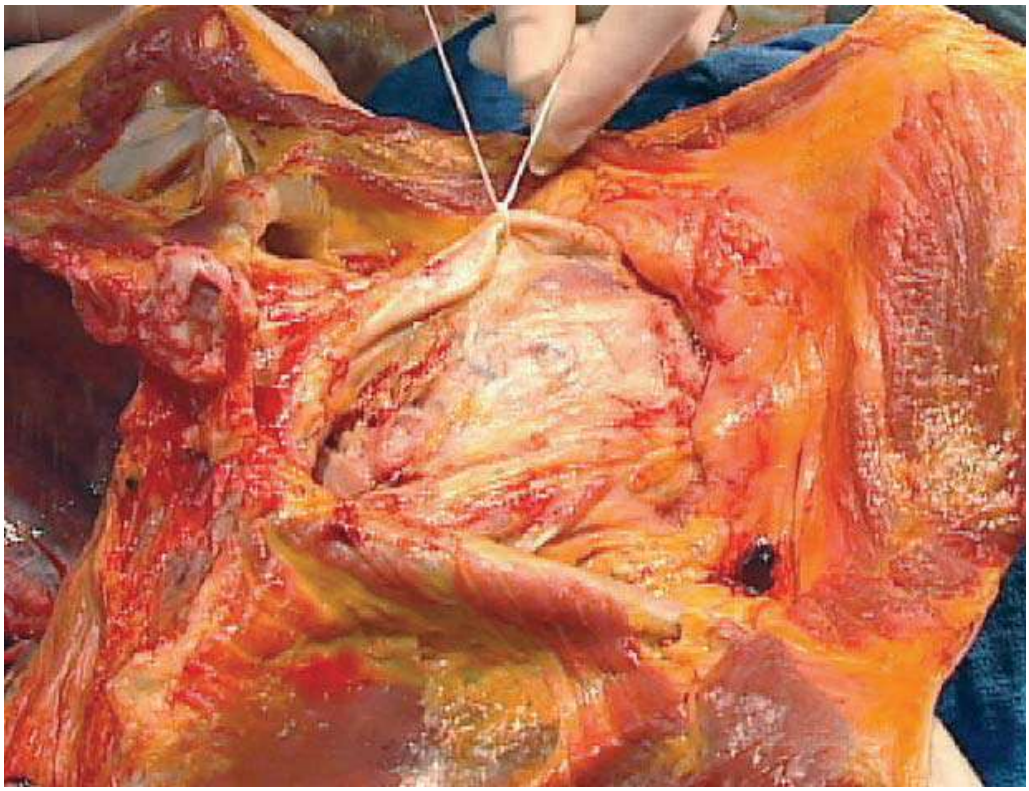


FIGURE 7.56 Carotid tie. The carotid is tied to help the embalmer find the vessels for injection of tissue preservatives.

8 Individual Organ Examination

Generally, the pathologist examines each organ and tissue from the outside to the inside: first observing its "gross" or macroscopic appearance, then dissecting it, and finally studying its microscopic features. The objectives are to:

- Examine and observe the diseases or injuries of each organ or tissue in a systematic, complete fashion.
- Make diagnoses and form opinions about the etiologies of the diseases or injuries. This is done by examining the gross organ on the day of the autopsy and then looking at microscopic sections of the organ or tissue at a later date (see Chapter 10).
- Describe the diseases, disorders, or injuries, and make a record of these observations. This allows other experts to review the report and to draw independent conclusions about the data provided.
- Document pertinent diseases or injuries using photography or other media.
- Preserve pertinent tissues either in a fixative or paraffin, so that additional studies can be performed later. For example, hemorrhagic soft tissue of the neck is often retained in strangulation cases.

HEART

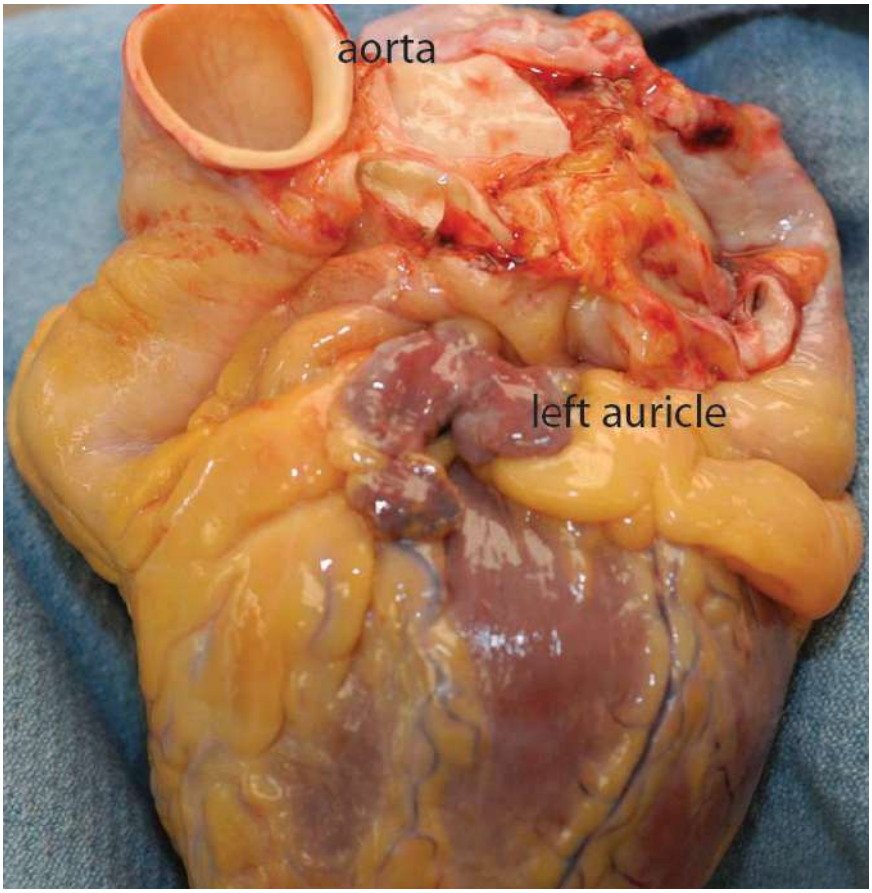


FIGURE 8.1 Anterior view of the heart. The normal heart is viewed after its removal, showing the open aorta and smaller auricle, or "ear," of the left atrium.

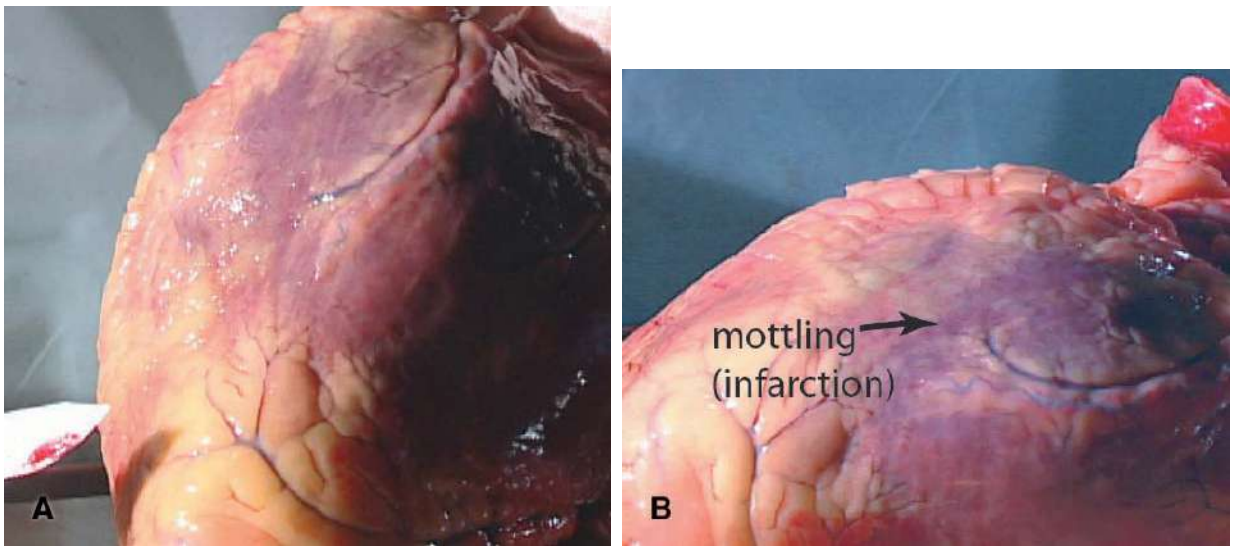


FIGURE 8.2 (A), (B) Mottling, due to myocardial infarction. The outside of the heart, or epicardium, is examined revealing a discoloration or mottling as shown by the arrow (also see Figure 8.17A and Figure 8.17B).

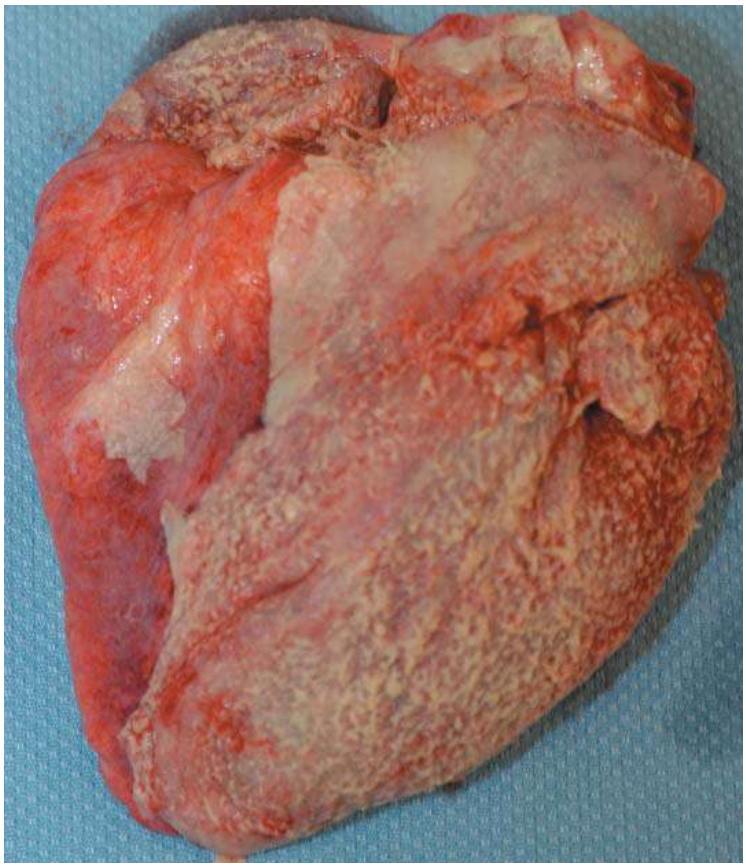


FIGURE 8.3 Pericarditis. Bacterial inflammation of the heart leaves a "crust," or exudate, often referred to as "bread and butter" pericarditis.

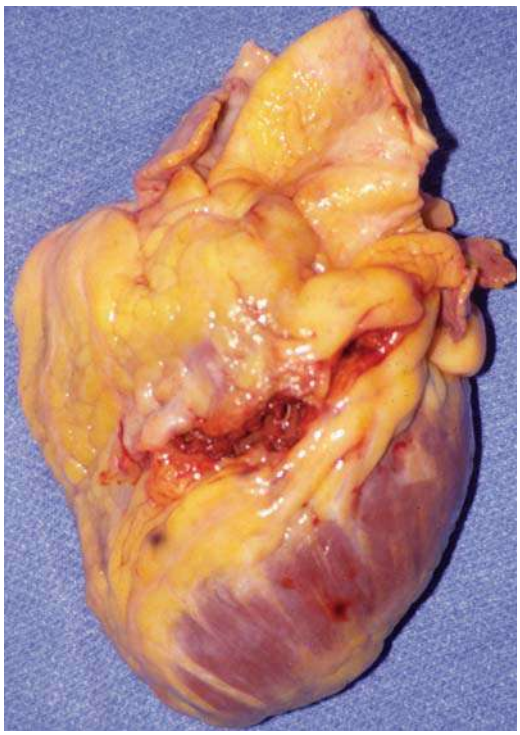
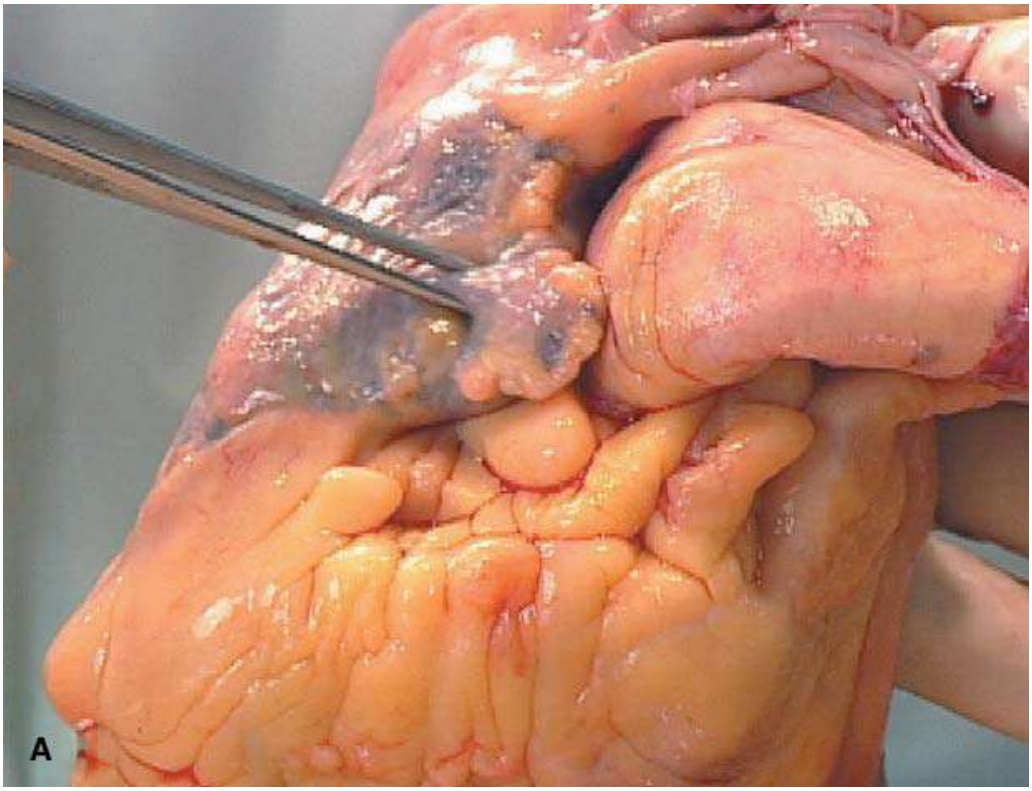


FIGURE 8.4 Cardiac laceration. A severe blunt trauma to the chest, such as that occurring in a high-speed motor vehicle crash, can cause cardiac laceration.



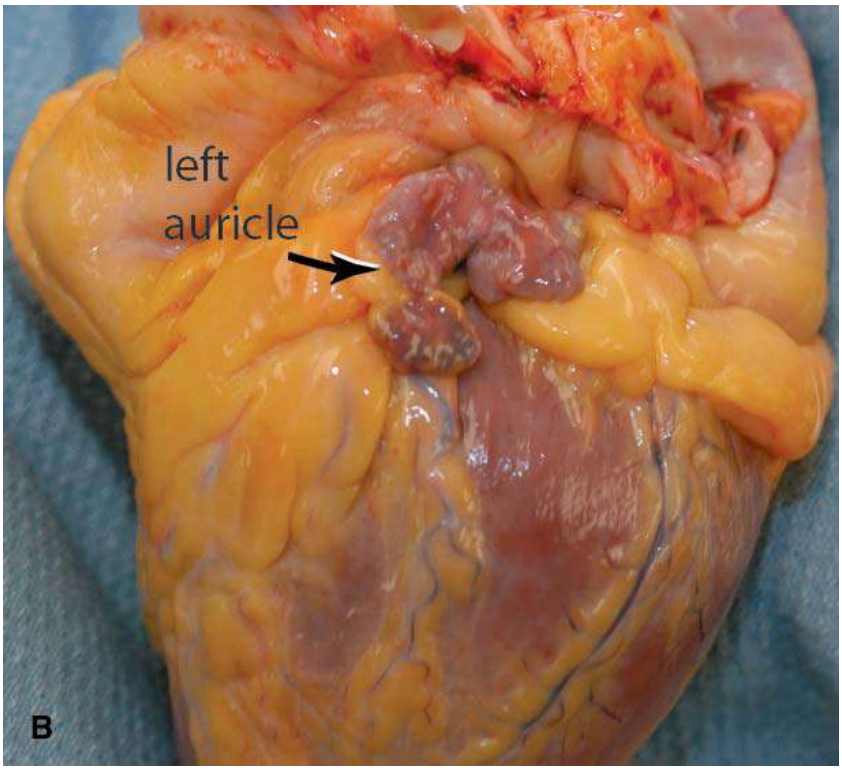


FIGURE 8.5 (A) Right auricle. The heart has two auricles, or "ears," a right and a left. The right auricle is shown by the forceps. **(B) Front view of the heart.** The left auricle is shown by the arrow. When the coronary artery anatomy is normal, the right main coronary artery can be found by lifting up the right auricle of the right atrium. The left main coronary is found under the left auricle.

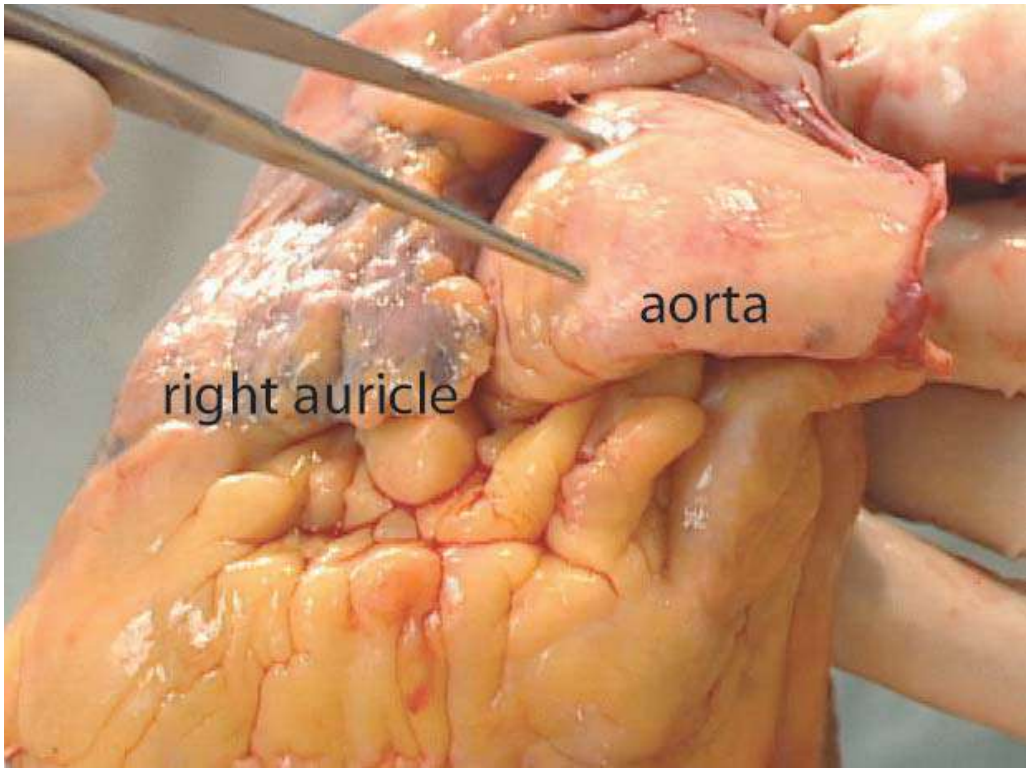


FIGURE 8.6 Aorta and right atrial auricle. The aorta is the curved structure indicated by the forceps.

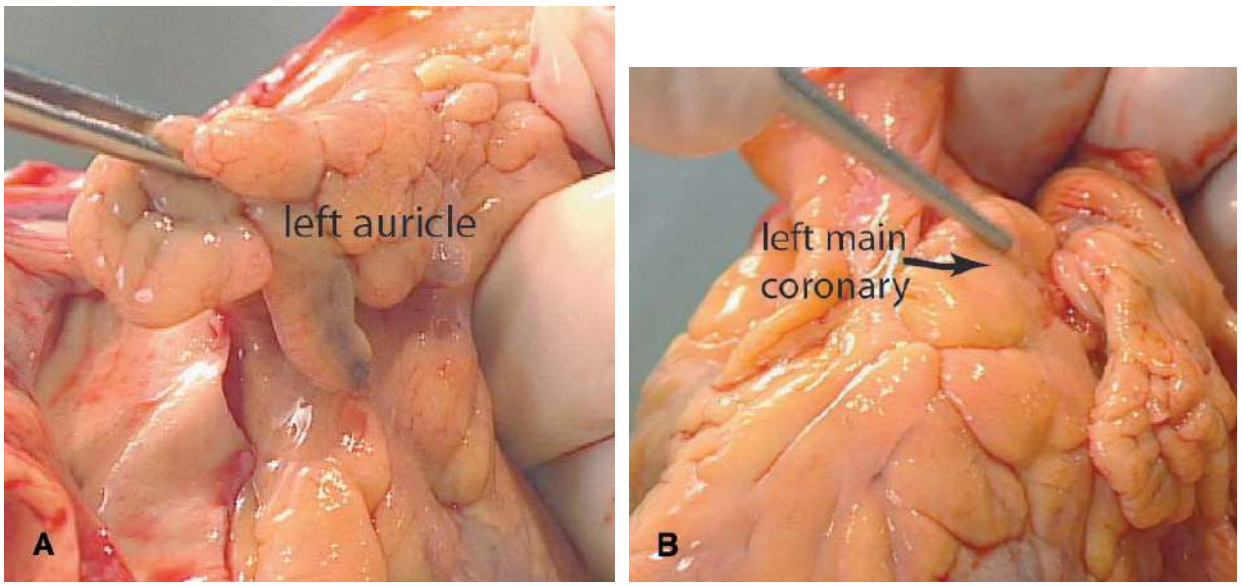


FIGURE 8.7 (A) Left auricle. The left auricle is held up by the forceps. The left auricle is somewhat smaller than the right. **(B) Left main coronary artery relationships.** The left main coronary artery runs beneath the auricle, generally the area indicated by the forceps.

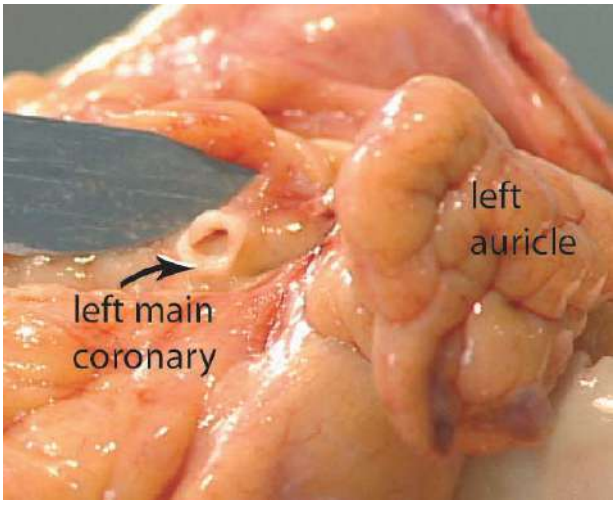


FIGURE 8.8 Cutting the left main coronary artery. The left auricle is lifted and cuts are made into the left main coronary artery and the left anterior descending branch of this artery. In this method, cuts are made to the artery in order to look for atherosclerotic plaque, thrombi (blood clots), or aneurisms (ballooning of the vessel wall).

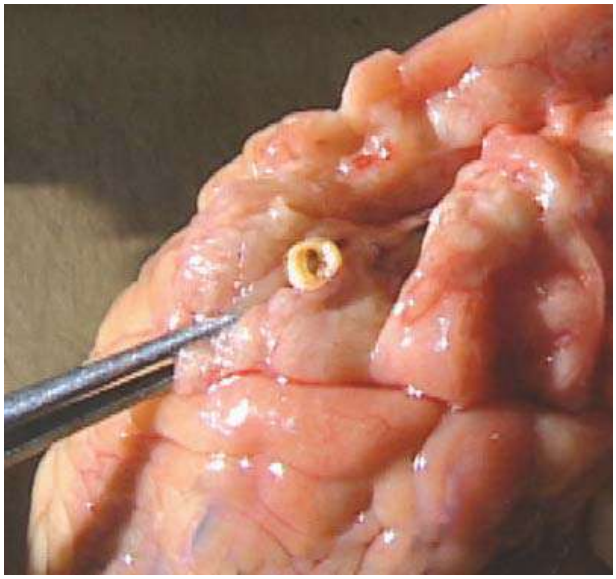


FIGURE 8.9 Left coronary artery thrombosis. This cut of the left main coronary artery shows nearly complete occlusive atherosclerosis. A small, dark thrombus occludes the lumen (seen near the tip of the forceps). Occlusion of the artery results in loss of blood flow to the region of the left ventricle of the heart that the artery supplies. Lack of blood flow results in lack of oxygen (hypoxia) to the tissues. If the thrombus or blocking plaque continues to occlude the vessel wall, the lack of oxygen results in cell death. Widespread cell death in the heart results in myocardial infarction, commonly known as a heart attack.

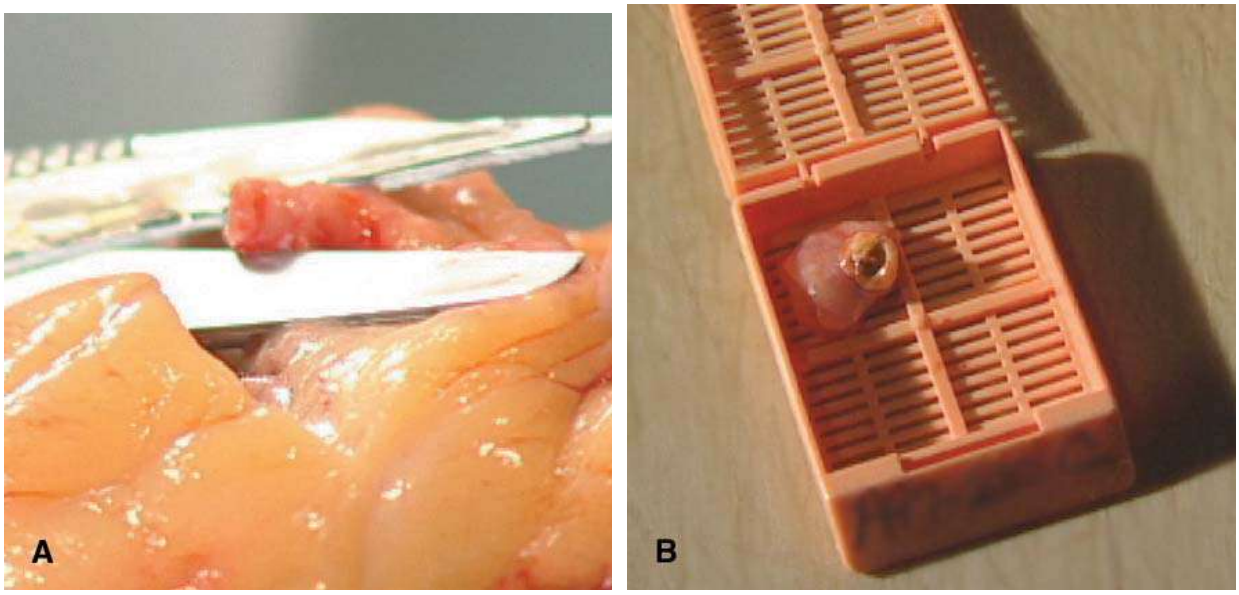


FIGURE 8.10 (A) Cutting a coronary artery. This artery is difficult to cut because it is affected with atherosclerosis. **(B) Placing the section for microscopic examination.** A section of the artery is cut and placed in a histology cassette. The tissue will be processed, cut into thin sections, placed on glass slides, and stained for review under the microscope (see Figure 10.3A). In the center of the specimen is a dark-colored thrombus.

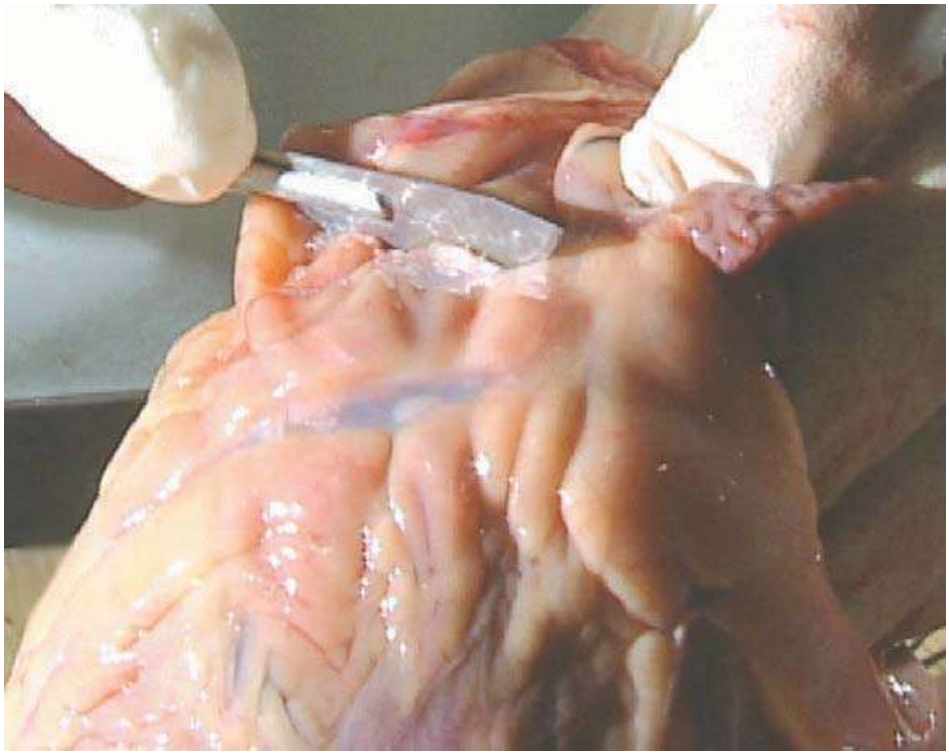


FIGURE 8.11 Cutting the left anterior descending coronary artery. A series of cuts are made along the entire length of the left anterior descending branch of the left coronary artery, usually the largest coronary artery of the heart. The artery must be examined from its origin, called the coronary ostium, so as not to overlook a focal thrombus or coronary disease.

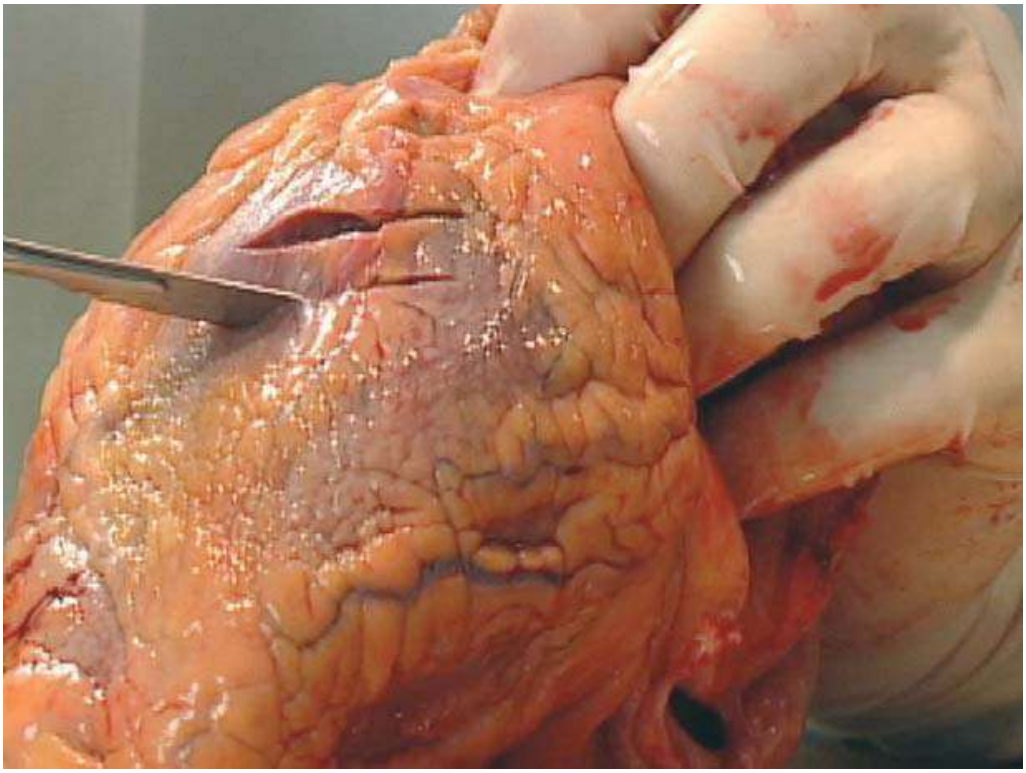


FIGURE 8.12 Cutting the first diagonal branch of the left coronary artery. Smaller left coronary artery branches are also examined.

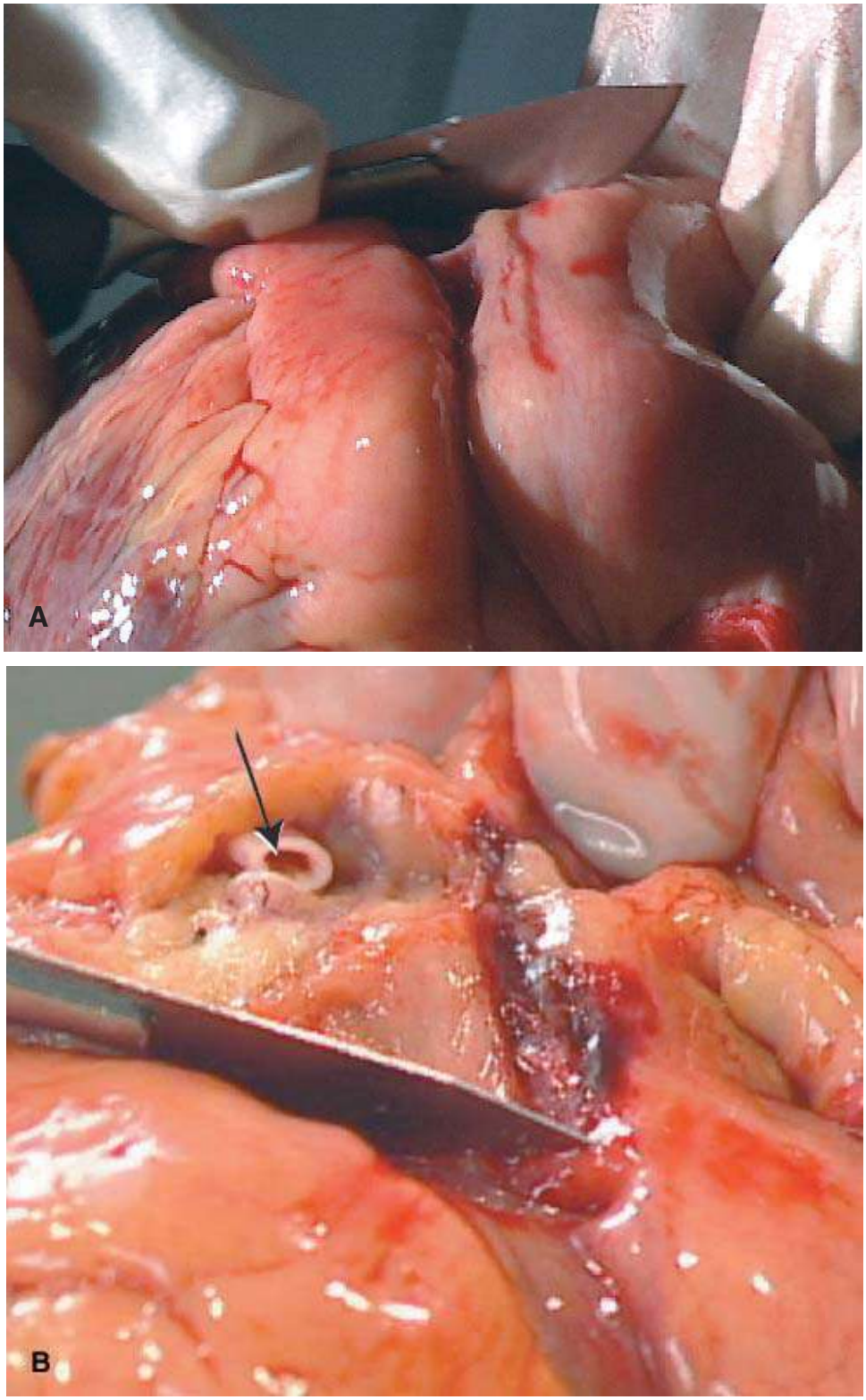


FIGURE 8.13 Cutting the circumflex coronary artery. (A) The circumflex artery usually branches off the left main coronary artery. More rarely, it can originate from the aorta. The circumflex artery turns sharply left, running above the upper margin of the left ventricle of the heart. **(B)** The cut artery is shown by the arrow.

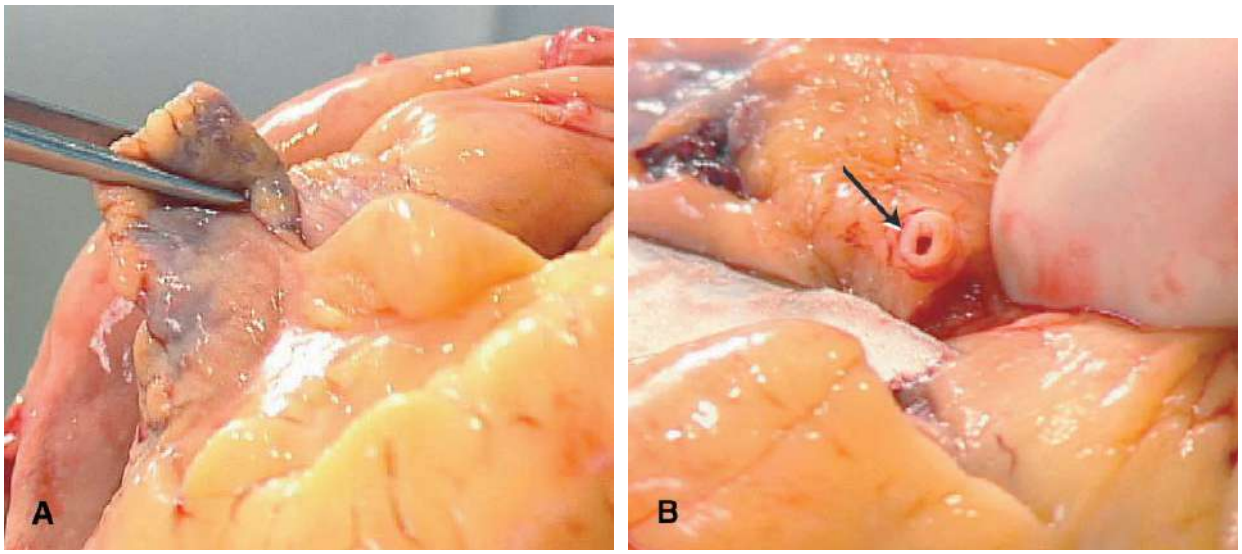


FIGURE 8.14 Cutting the right coronary artery. (A) The right auricle is shown by the forceps. **(B)** As the cut is made, a mostly patent right coronary artery cross section is visible (see arrow). This artery is larger than the circumflex artery in most people because it supplies the posterior septum (back of the heart).

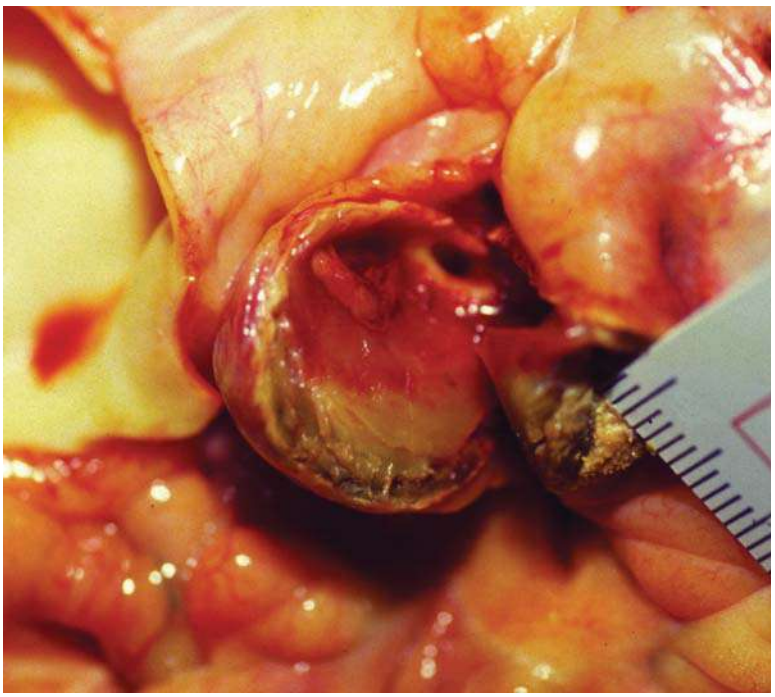


FIGURE 8.15 Coronary artery aneurism with atherothrombotic occlusion. The cross section of this coronary artery shows a dilated (aneurismal) artery filled with atherosclerotic plaque and thrombus. This person was the victim of a motor vehicle crash, and the heart disease was not related to the crash. This case illustrates that even with severe coronary artery disease, many people can function relatively normally. The scale shown is in centimeters.

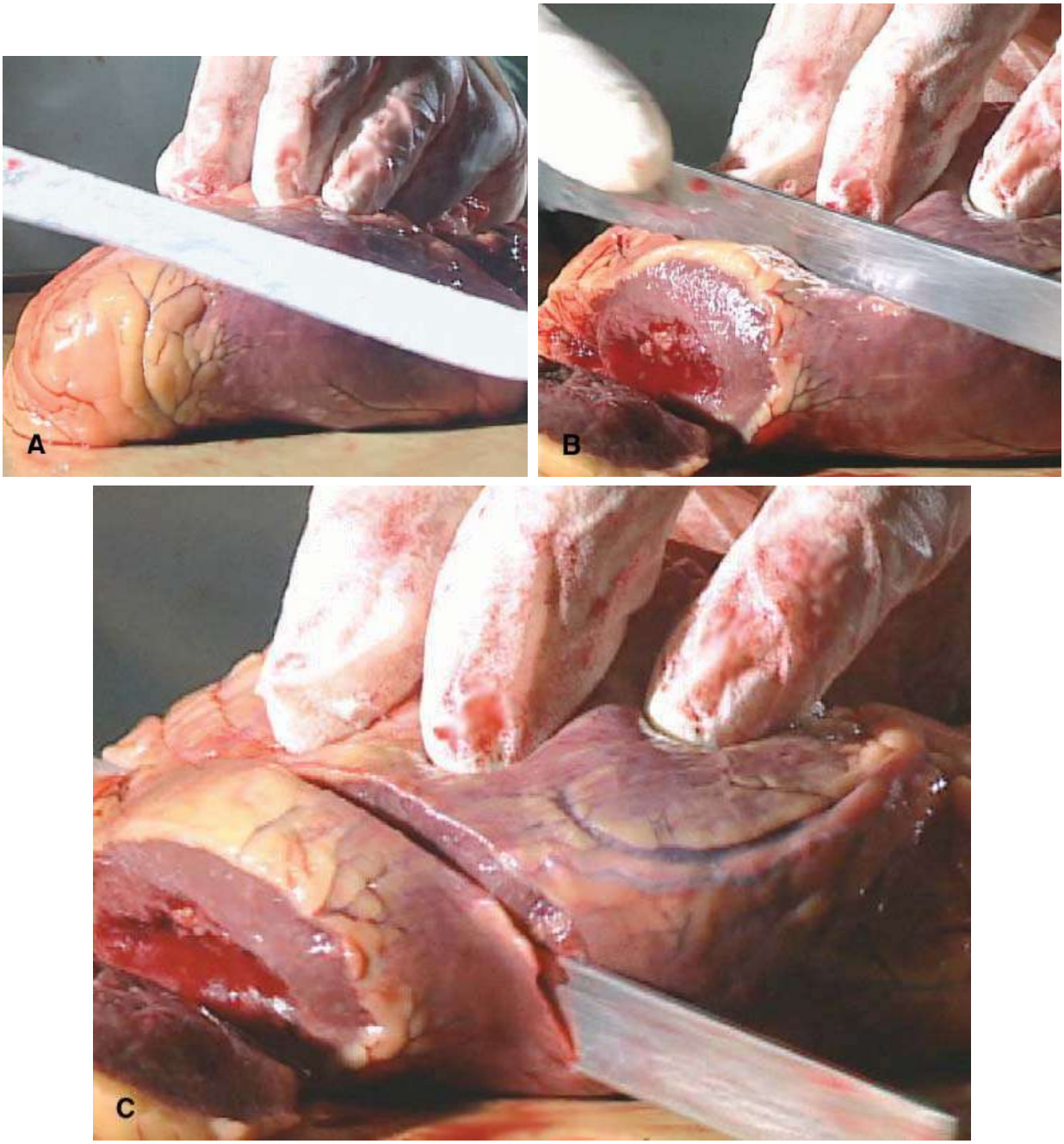


FIGURE 8.16 (A)–(C) "Breadloafing" the ventricles of the heart. The heart can be opened in many different ways. For example, the heart is cut in the direction of blood flow when developmental abnormalities are seen. Since myocardial infarction is suspected in this heart, cuts will be made in the ventricles perpendicular to the long axis of the heart, referred to as "breadloafing."

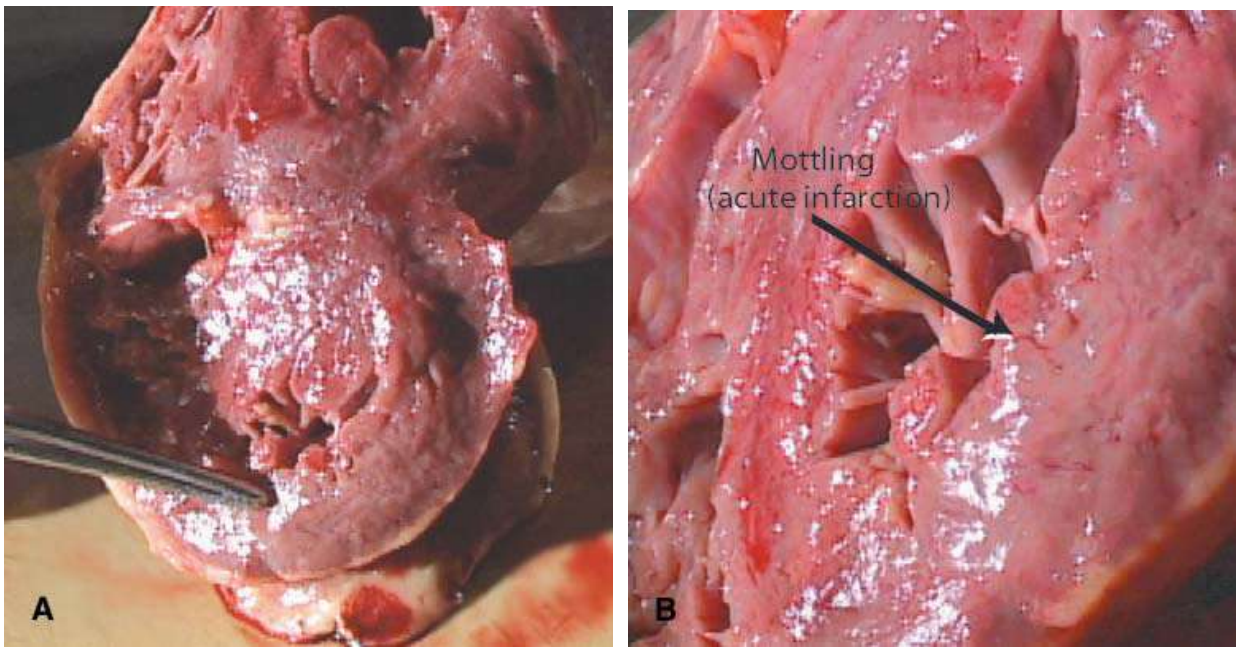


FIGURE 8.17 Mottling of cut myocardium due to acute myocardial infarction. This myocardial section shows mottling in the lateral left ventricular wall, suggesting early myocardial infarction. Infarction will be confirmed by examining tissue sections with the microscope (also see Figure 8.2A, Figure 8.2B, Figure 10.2A, and Figure 10.2B).

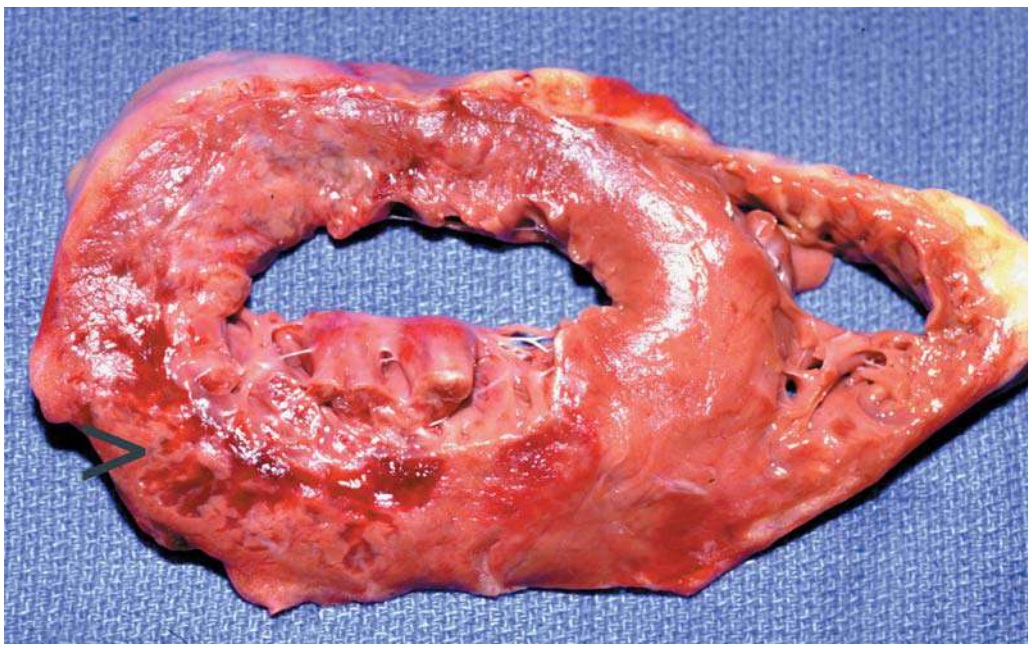


FIGURE 8.18 Acute myocardial infarction. Marked mottling can be seen on the anterior left ventricular wall, at the bottom of the figure.

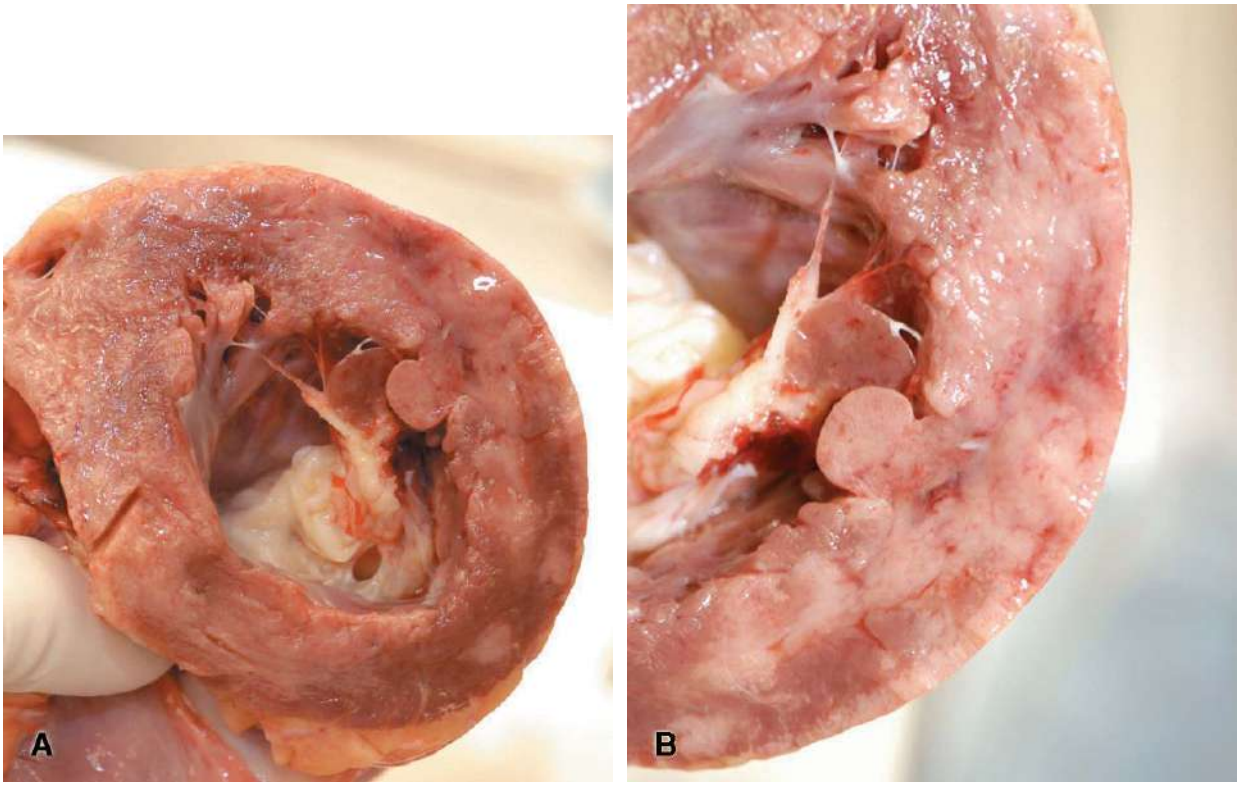


FIGURE 8.19 (A), (B) Myocarditis. The cross section of this heart shows blotches and streaks of white myocarditis throughout the normal brown myocardium. This patient had severe myocarditis, resulting in heart failure and death. The causes of myocarditis can be bacterial (Lyme disease), fungal, viral (Coxsackie B virus is common), and drug reactions. The cause of myocarditis is not found in many cases (see Figure 10.4A and Figure 10.4B for microscopics).

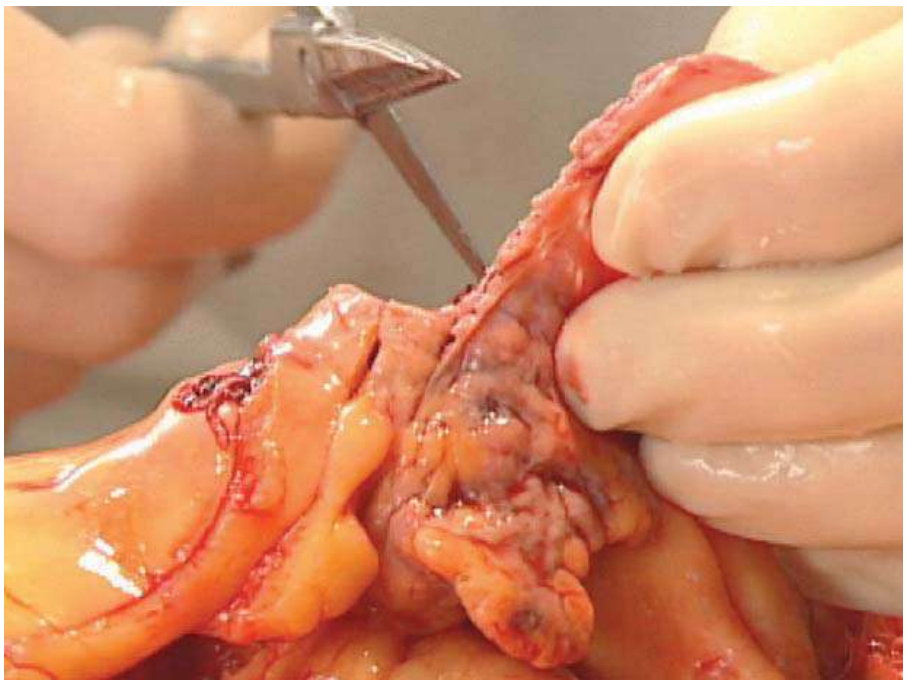


FIGURE 8.20 Opening the right atrium. Now that the right and left ventricles have been cut, the atria and the heart valves are opened in the direction of blood flow. Venous blood with low oxygenation is returned from the body and enters the right atrium. Blood is then pumped through the tricuspid valve to the right ventricle. From the right ventricle, blood is pumped through the pulmonic valve to the lungs for oxygenation. Oxygenated blood is returned to the heart via the pulmonic veins and enters the left atrium. Then, through the mitral valve, blood is pumped into the left ventricle. Finally, blood is pumped from the left ventricle through the aortic valve and into the aorta and systemic circulation, carrying oxygen to the tissues of the body.

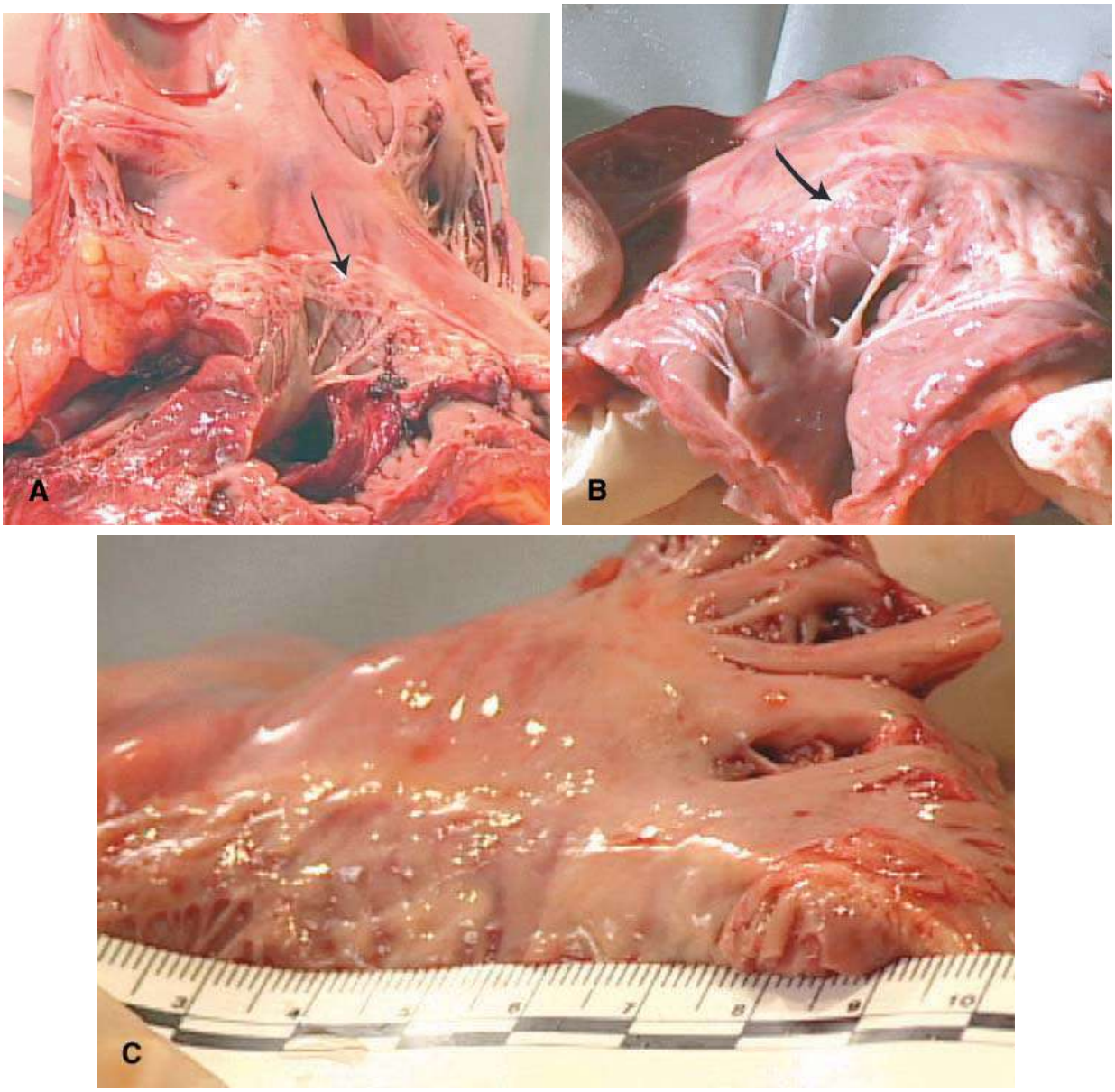


FIGURE 8.21 Right atrium and tricuspid exam. (A), (B) The right atrium is opened (see tops of figures), exposing the tricuspid valve, shown by the arrows. **(C)** The valve circumference is measured. Enlarged hearts, especially in right heart failure, can have large, incompetent valves.

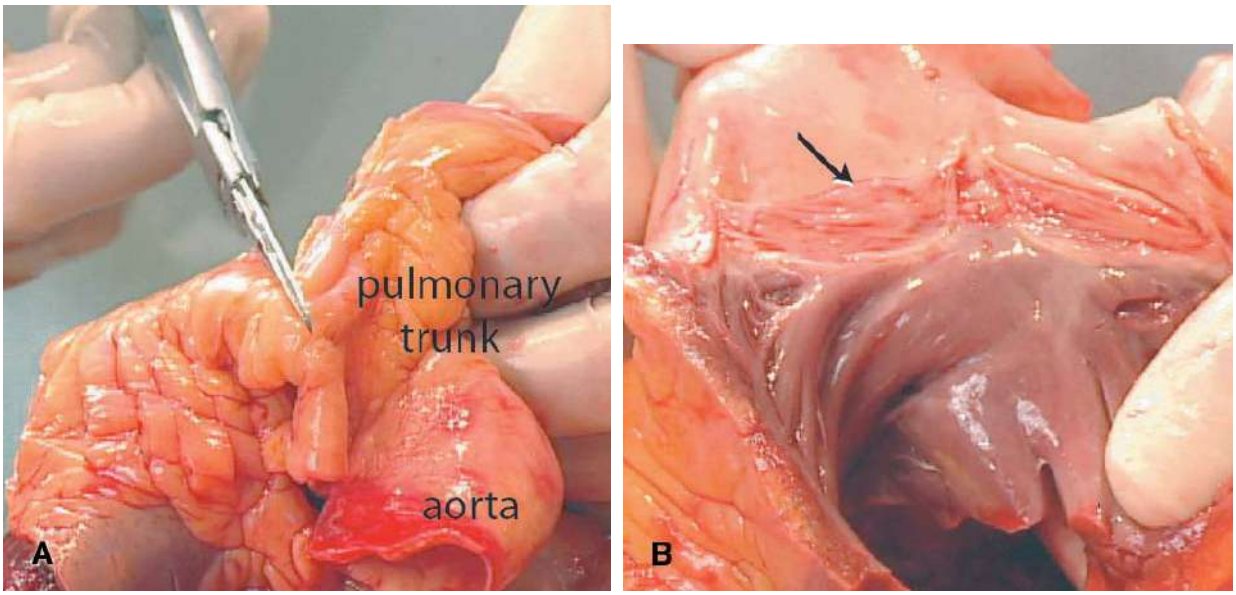


FIGURE 8.22 (A), (B) Opening and examining the pulmonic valve. The pulmonary trunk is opened to reveal a valve with three cusps. The pathologist checks carefully for thrombi (blood clots) or vegetations.

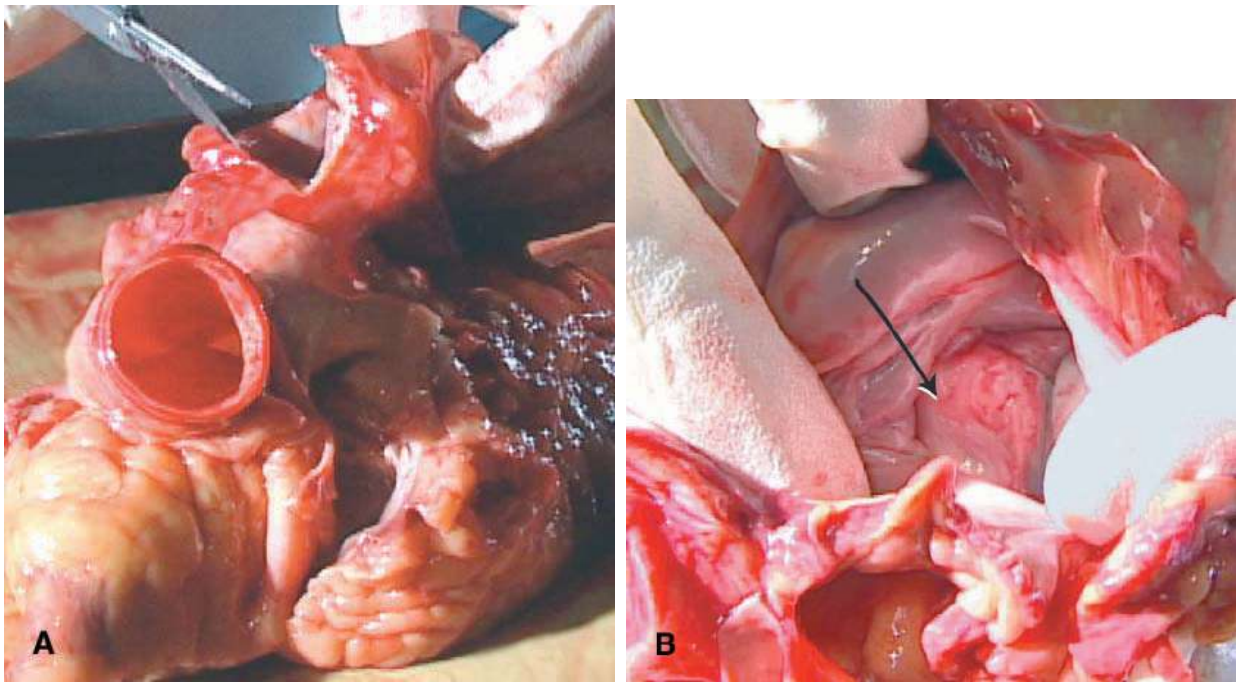


FIGURE 8.23 (A), (B) Opening the left atrium and exposing the mitral valve. The left atrium is opened to expose the mitral valve (see arrow).

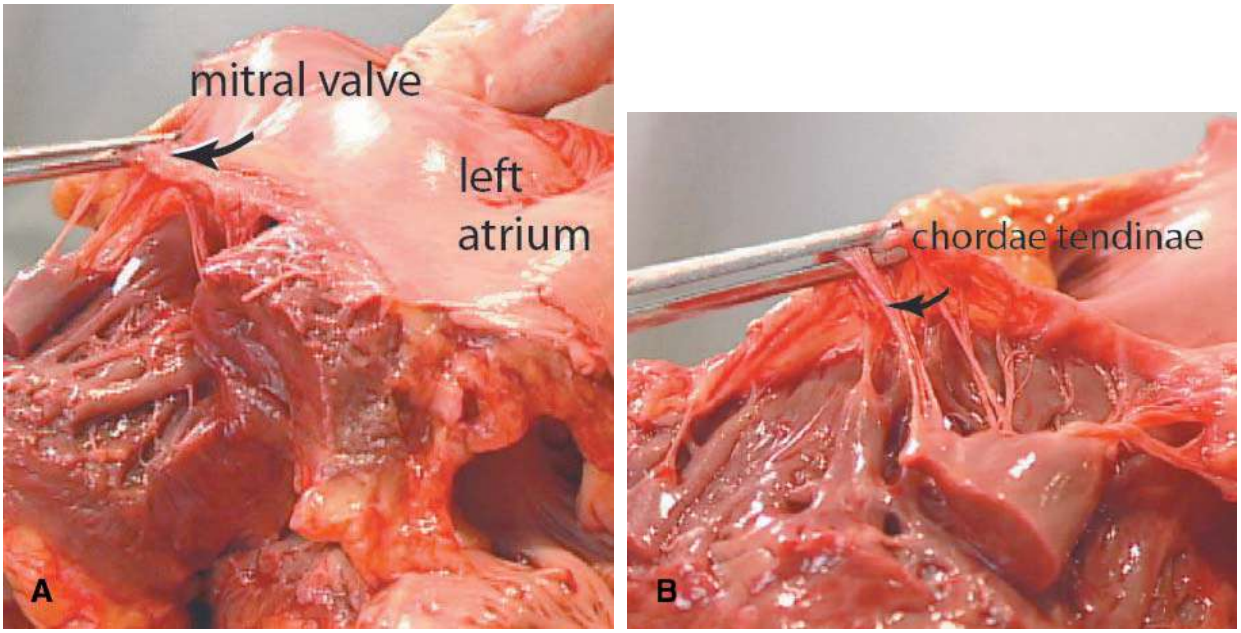


FIGURE 8.24 (A), (B) Mitral valve opening and examination. The mitral valve is opened. The thick, tendon-like structures that tether the valve are called chordae tendinae. The mitral valve has two leaflets, anterior and posterior.

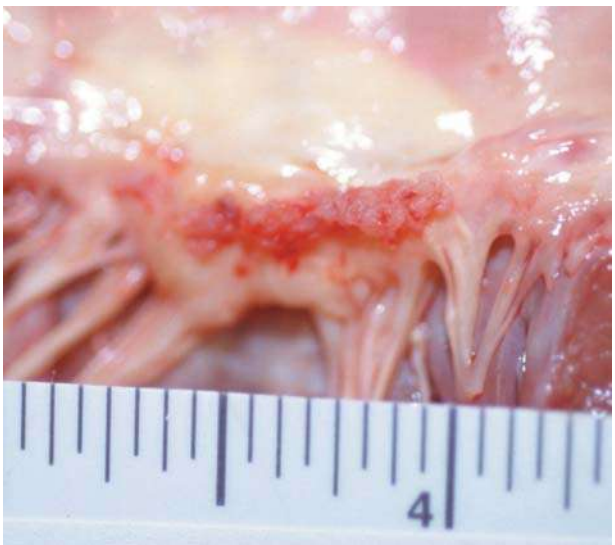


FIGURE 8.25 Mitral valve vegetations. The mitral valve edge is examined for vegetations. These are deposits of fibrin, clots, and bacteria in some cases that stick to the free edge of the valve leaflets. These vegetations can break loose, move into systemic circulation, and travel to organs and tissues, causing abscess (infection) in the brain, for example (see Figure 5.15C and Figure 5.15D).

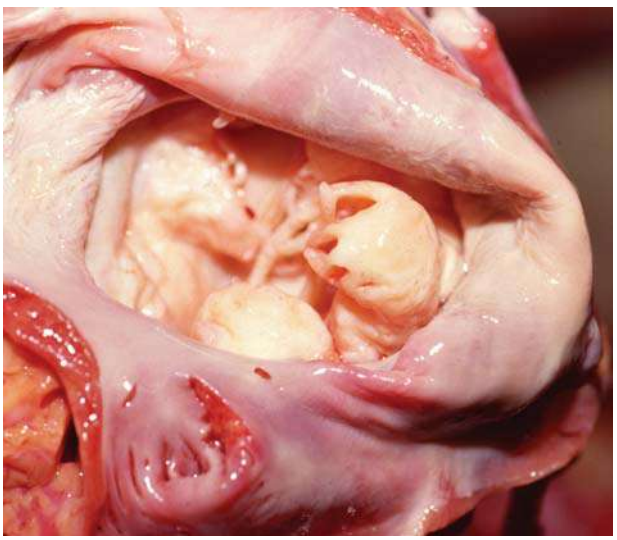
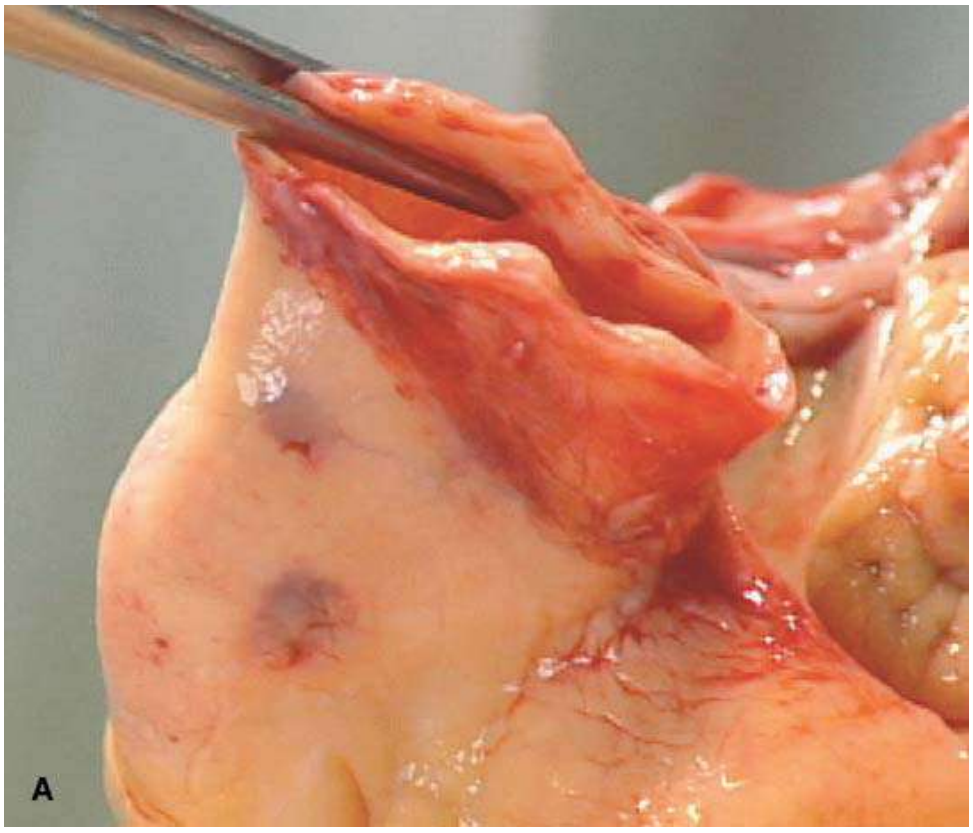


FIGURE 8.26 Floppy mitral valve. These valve leaflets are floppy, i.e., they are redundant and project upward when viewed from the open left atrium. This abnormal valve can cause a murmur, a condition associated with sudden cardiac death.



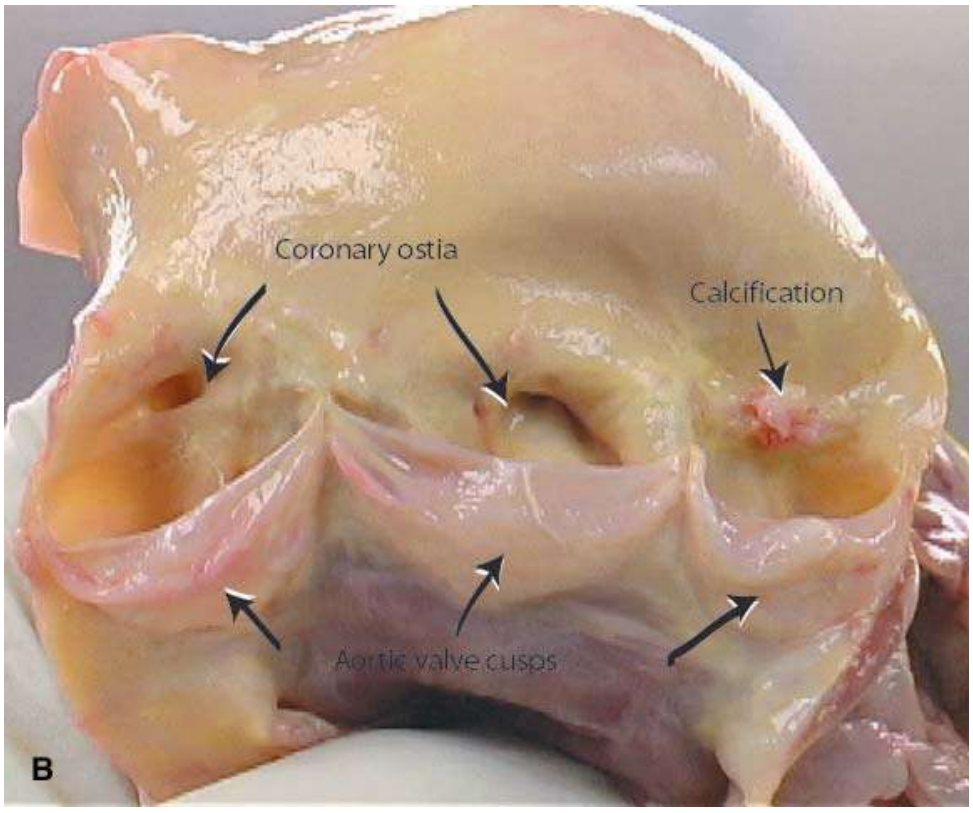


FIGURE 8.27 Opened aortic valve. (A) The aortic valve is opened to display three cusps. A common disorder in this region is calcification, which can cause bacteria or blood clots to form there. These bacteria or clots can travel or embolize throughout the body. **(B)** The coronary ostia, as depicted by the arrows, are the origins of the coronary arteries. The ostia are carefully examined because they are prone to occlusion by atherosclerotic plaque. The ostia should be "sighted," or looked through, to be sure no occlusion exists.

LUNG

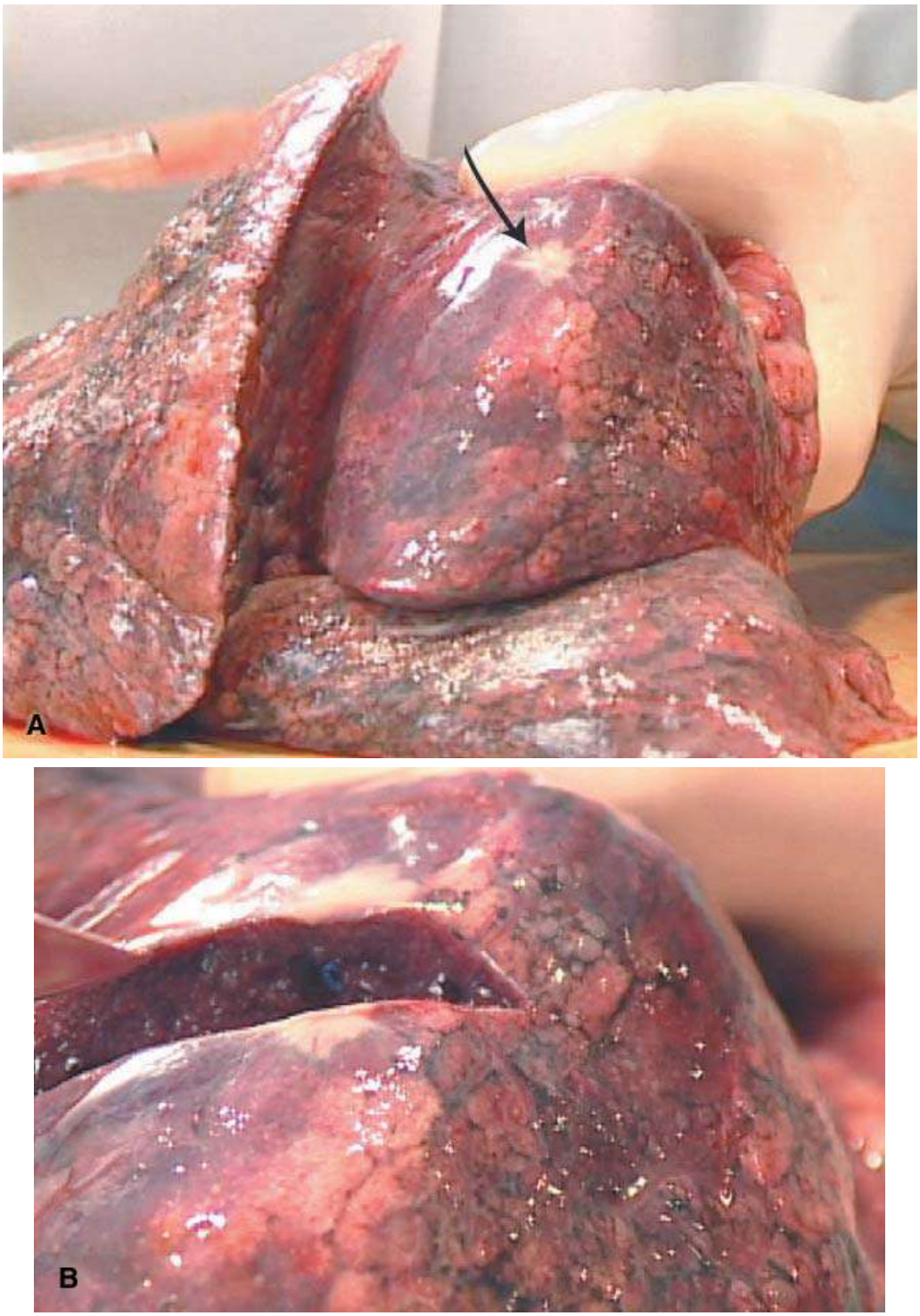


FIGURE 8.28 Lung examination and scar. (A) Examination of the pleura, or outer covering of the lung, reveals a whitish stellate scar (see arrow). **(B)** Upon closer examination and incision, it appears to be a thin surface scar, probably the result of a healed injury or infection of the area.

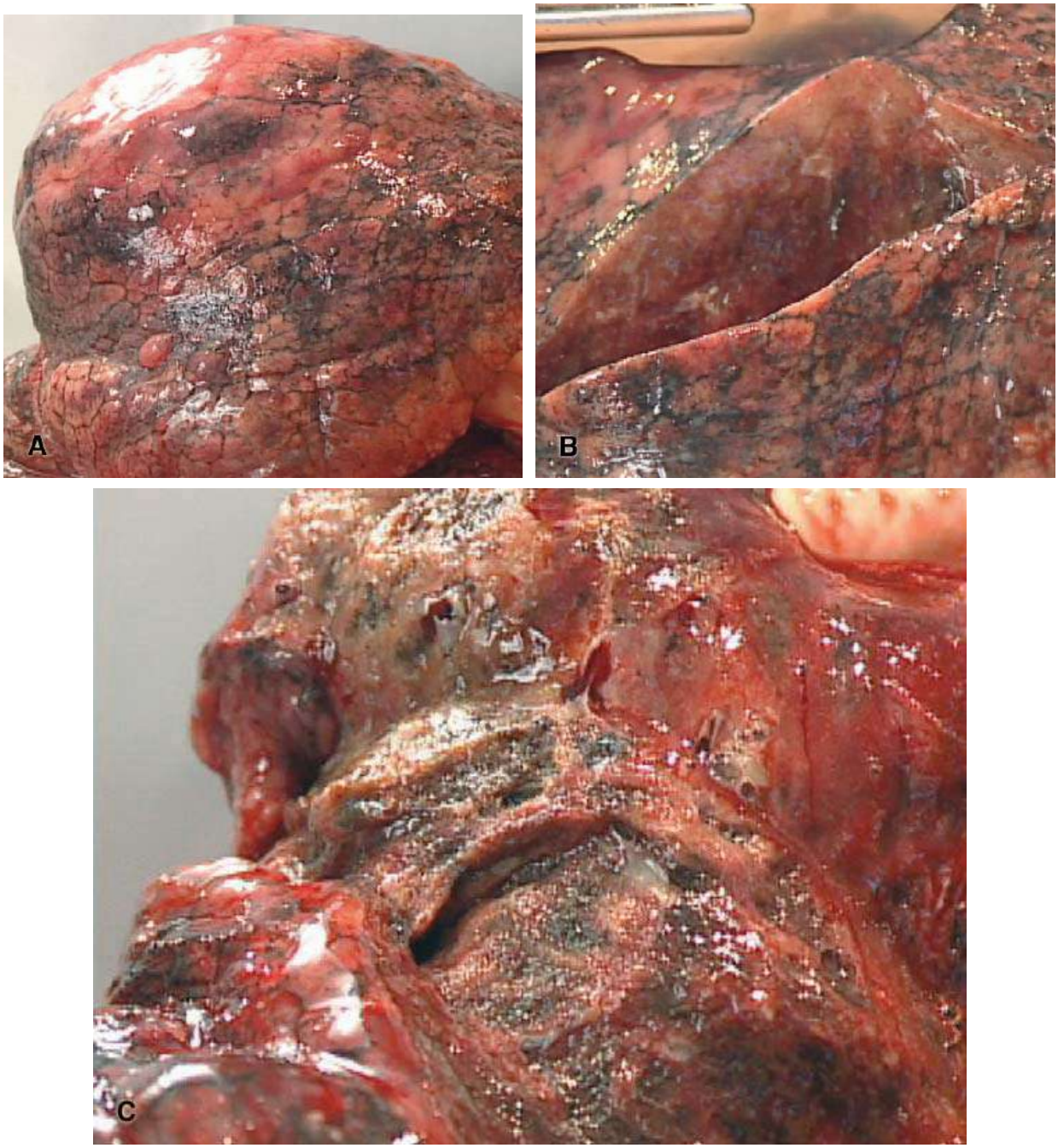


FIGURE 8.29 (A)–(C) Anthracosis of the lung. The black material peppering the pleura of the lung is referred to as anthracosis. This material is comprised mostly of inhaled carbon material. The incised lung shows that the black material permeates the lung. Tobacco smoke is a common cause of anthracosis, and smokers' lungs tend to be laden with anthracotic material. However, people can inhale carbon due to other activities, and there are many other causes of anthracosis. Coal miners and coal furnace workers, for example, can develop anthracosis.

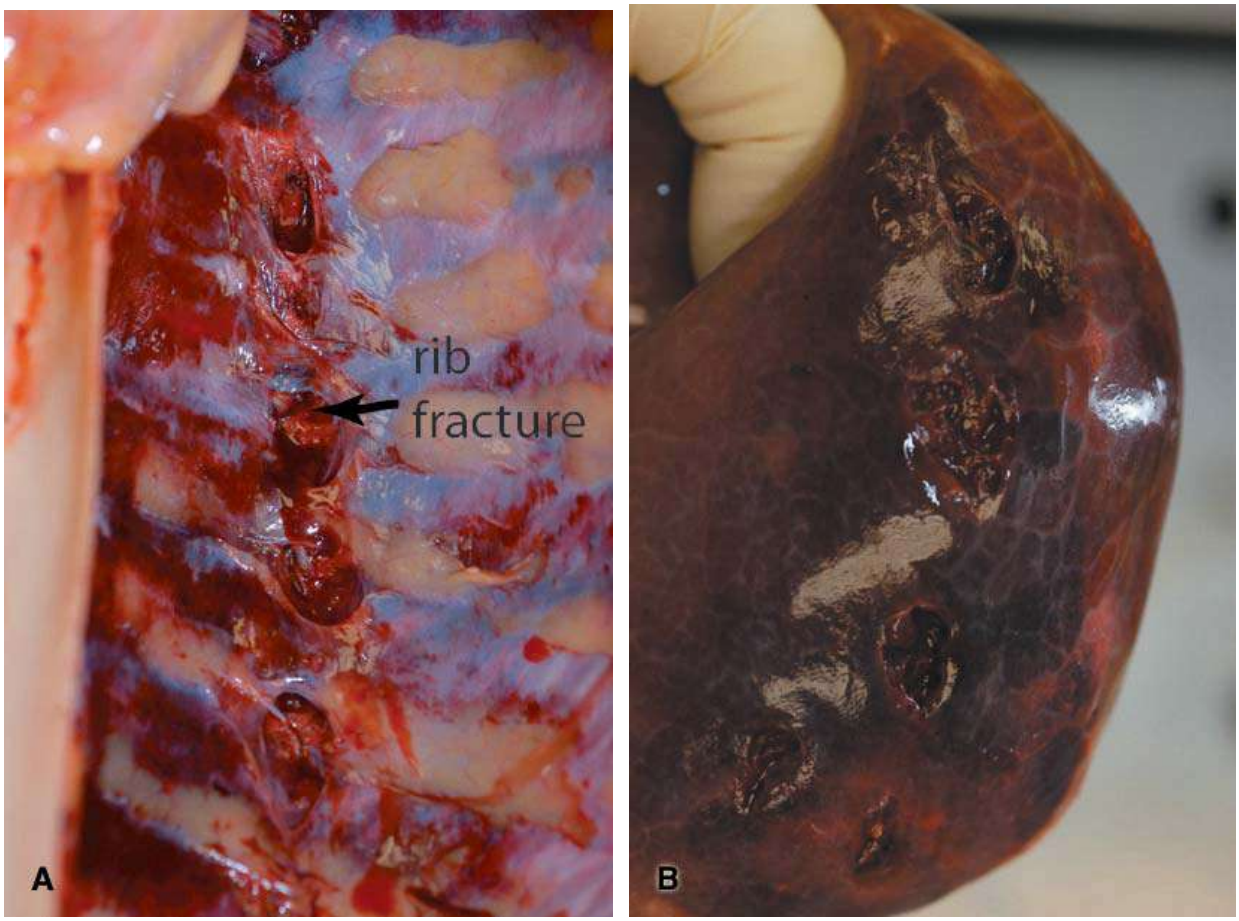


FIGURE 8.30 Rib fractures and corresponding lung lacerations. (A) The chest, ribs, and underlying lungs are susceptible to significant blunt trauma, such as that experienced in a motor vehicle crash. **(B)** The rib fractures in Figure 8.30A are responsible for these regular, periodic lacerations of the lung.

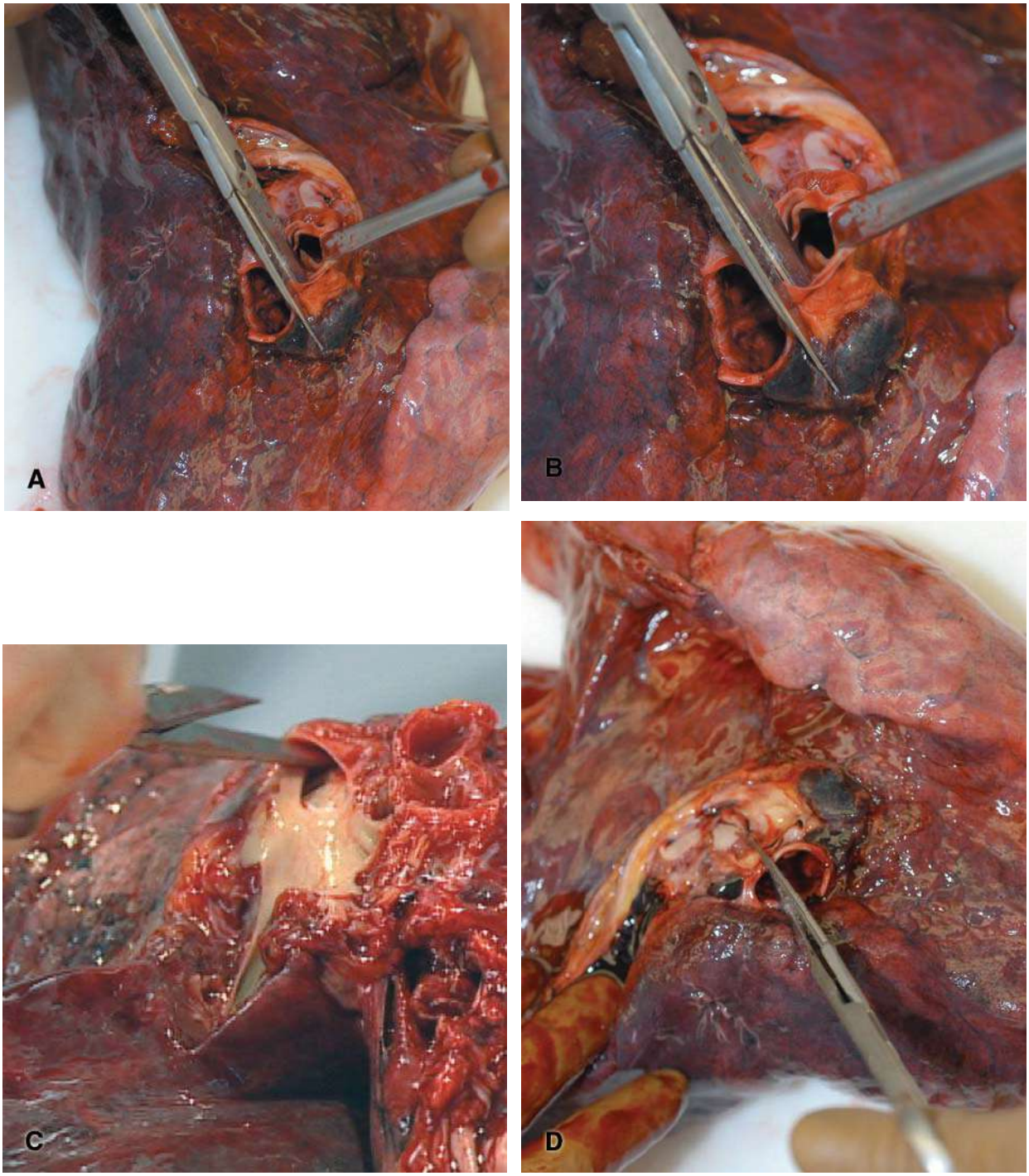


FIGURE 8.31 (A)–(D) Dissection of the pulmonary arteries. Starting at the hilum, or attachment point of the lung, the main bronchi are opened to look for inflammation and tumors, among other things (Figure 8.31D). The pulmonary arteries and branches are opened to search for emboli. The lymph nodes at the hilum can be examined at this time as well.

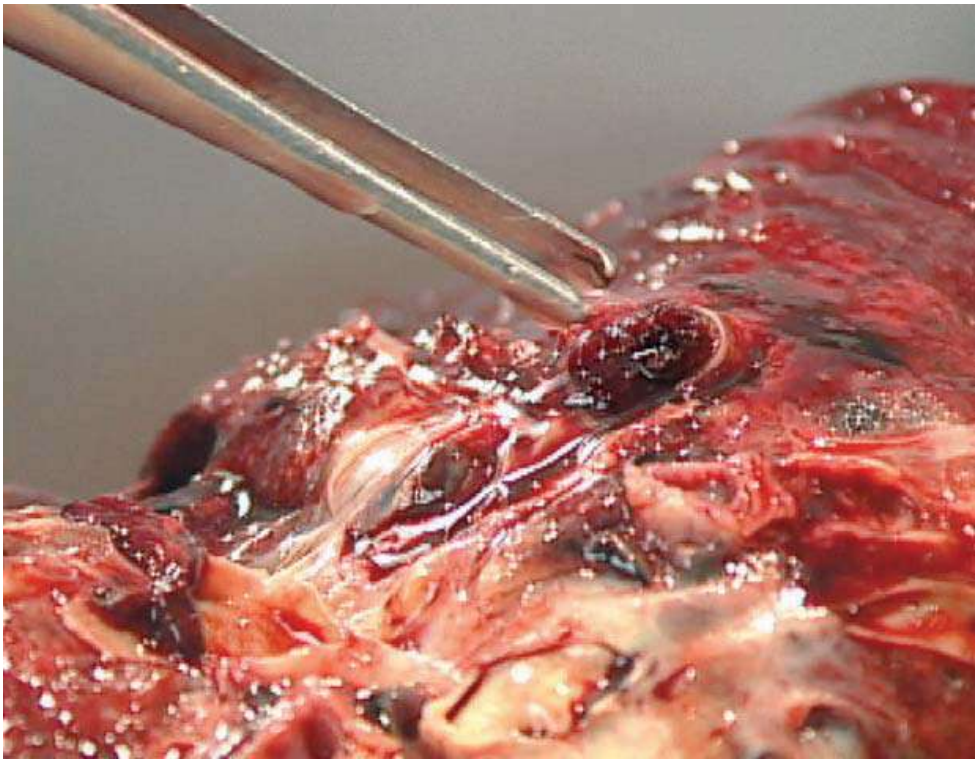


FIGURE 8.32 Large pulmonary embolus *in situ*. Dissection of this lung revealed a large thromboembolus (blood clot) in the pulmonary artery branch. These clots usually migrate or "embolize" from the lower extremities where, through the venous system, they become wedged in the large pulmonary arteries or the smaller branches, depending on the size. If large enough, these thromboemboli can cause immediate cardiac standstill and sudden death. Smaller thromboemboli cause chest pain and an infarction of a small segment of lung. Pulmonary embolus is the most common cause of death in the hospitalized patient.

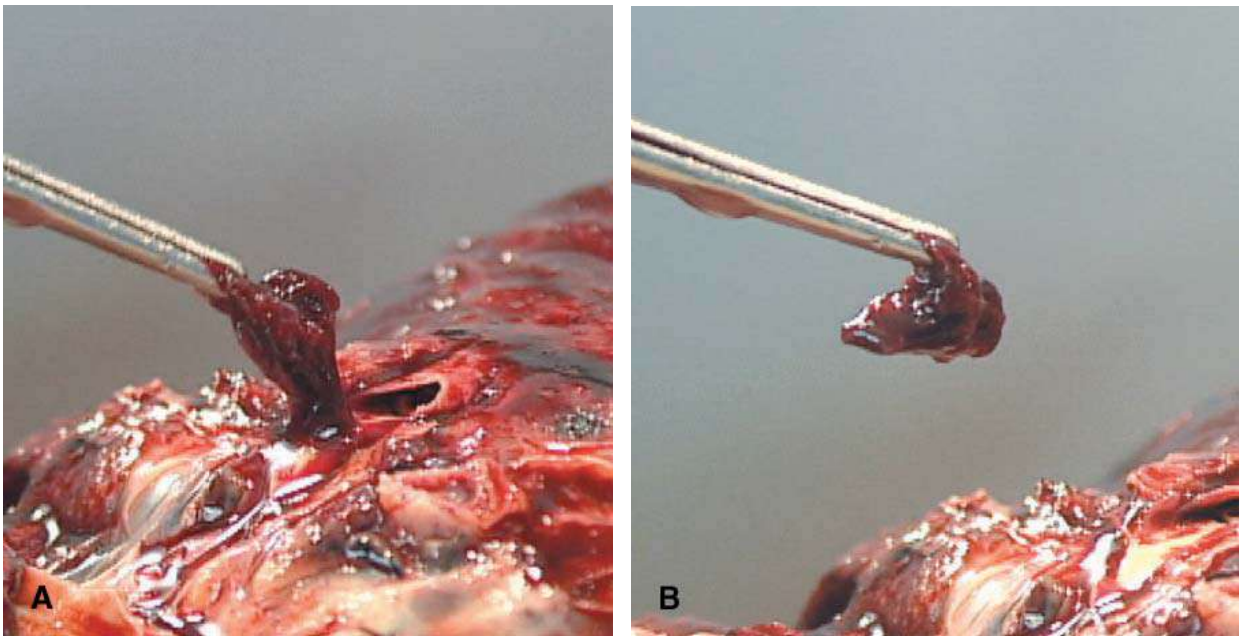


FIGURE 8.33 (A), (B) Large thromboembolus removed. If thromboemboli are gently tugged on, their true morphology can be determined. As this clot is removed it is slightly adherent to the vessel wall, forming a cast of the vessel. Thromboemboli must be distinguished from postmortem clots, which are common throughout the vascular system after death.

FIGURE 8.34 Pulmonary infarction. This lung shows a broad, dark-purple area of infarction (top and middle of the figure), which stands out from the pink parenchyma of the overall lung. Pulmonary infarction is the result of a clot large enough to cause tissue necrosis of the lung.

FIGURE 8.35 Postmortem blood clot. This stringy postmortem clot is being pulled out of a blood vessel. It does not form a cast of the vessel like premortem clots do. Postmortem blood clots are a mixture of two separate areas: a purple, soft, "currant jelly" area with a yellow, harder, "chicken fat" area. It is important for the pathologist to recognize the difference between a premortem thromboembolus and a postmortem blood clot. These two clots can look very similar. If the postmortem clot is mistaken for a premortem clot, the cause of death could be determined erroneously as pulmonary thromboembolus.

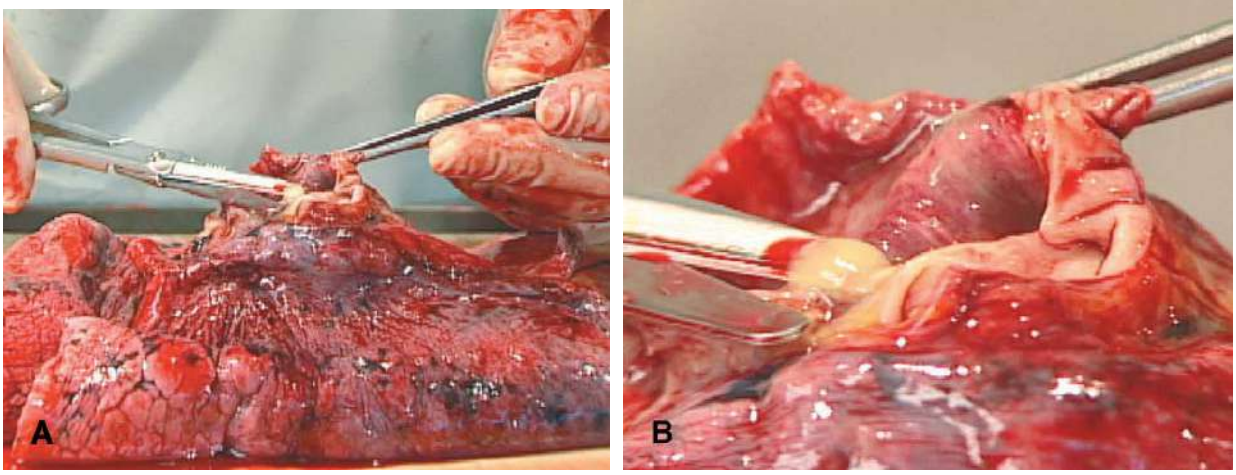


FIGURE 8.36 Bronchial inflammation. (A) Upon dissecting this bronchus from the hilum, or center of attachment of the lung, a yellow mucoid substance is noted at the tip of the scissors. **(B)** The bronchus is erythematous (red), and pus can be seen on the scissor. These findings suggest bronchitis or bronchopneumonia.

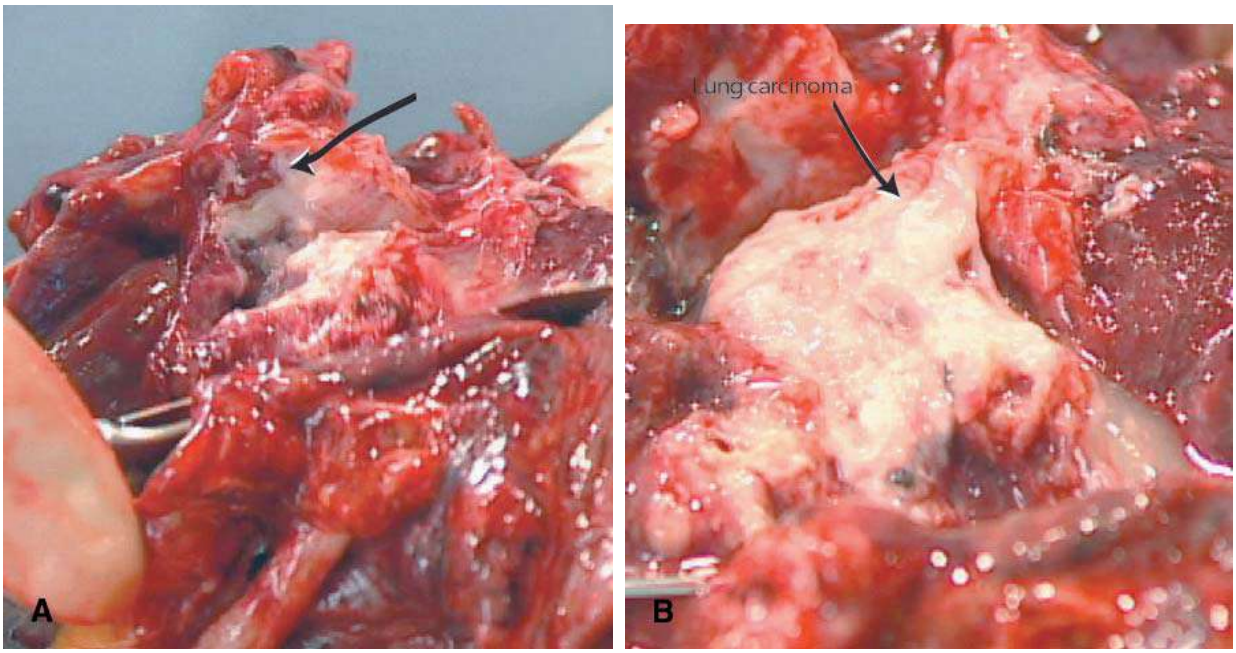


FIGURE 8.37 (A), (B) Carcinoma in the lung hilum. Bronchial dissection at the hilum reveals a whitish tumor, as displayed by the arrows. Cancers grow quickly and tend to outgrow their blood supplies, causing tissue death, or necrosis. This tumor will be sectioned for microscopic examination to determine the type of tumor or cancer.

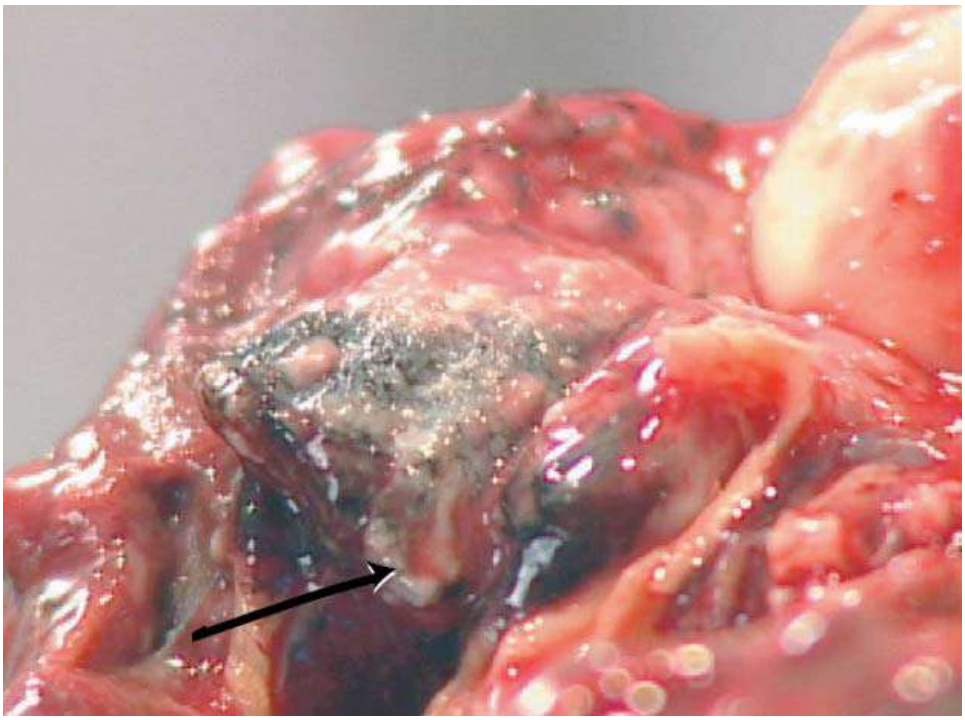


FIGURE 8.38 Cancer in an anthracotic lymph node. The tumor displayed has metastasized (spread) to the hilar lymph nodes, which are abundant in the hilum of the lung. Anthracosis (black pigment, likely from smoking in this case) is also seen in the lymph node. This tumor, after microscopic review, was determined to be a squamous cell carcinoma, which is found almost exclusively in smokers.

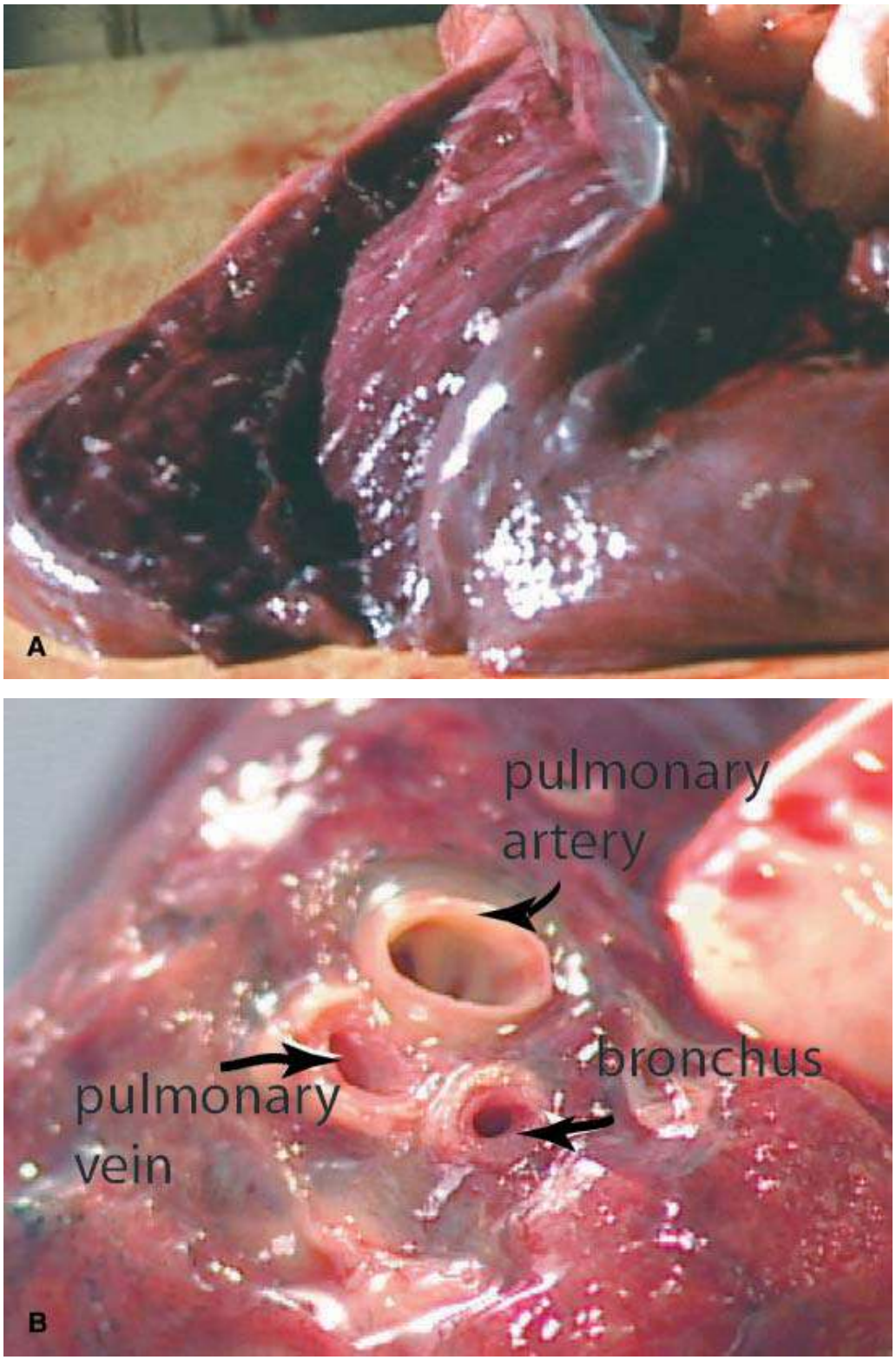


FIGURE 8.39 Sectioning of the lung. (A) The lung is serially sectioned, revealing the lung parenchyma. **(B)** The figure shows a normal pulmonary artery vein and a bronchus.

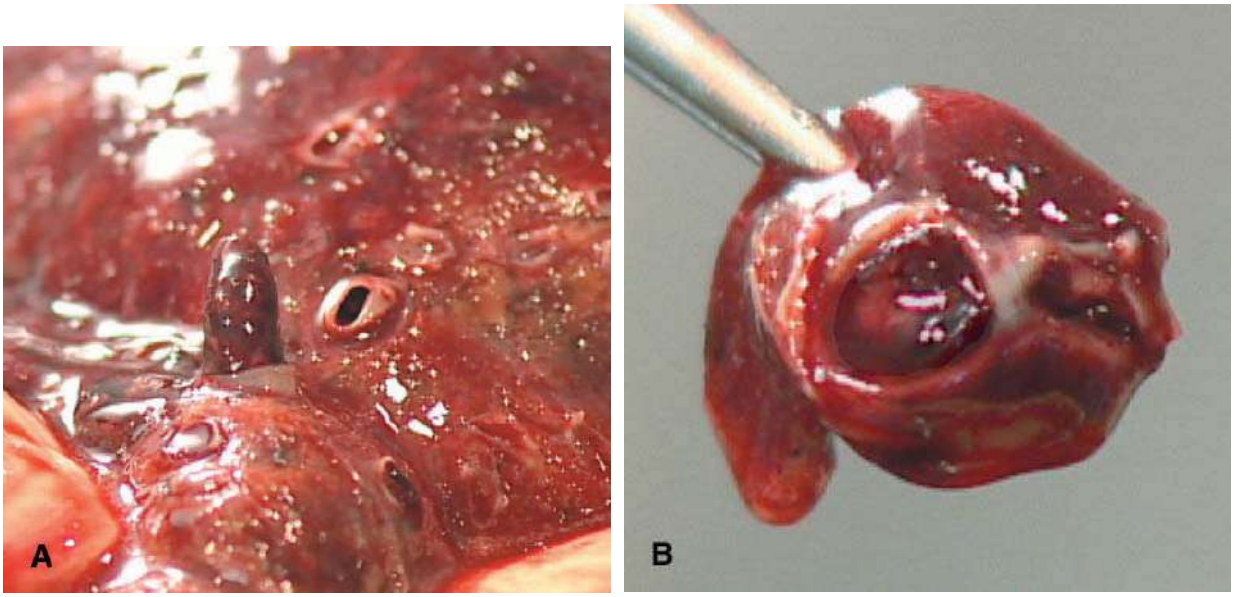


FIGURE 8.40 Small pulmonary emboli. (A) Further sectioning of this lung shows pulmonary emboli in the smaller pulmonary vessels. These emboli protrude from the vessel wall when cut, as opposed to postmortem clots, which are stringier. **(B)** This adherent clot from the center of the vessel will be submitted for microscopic examination to provide further proof that the clot is premortem.

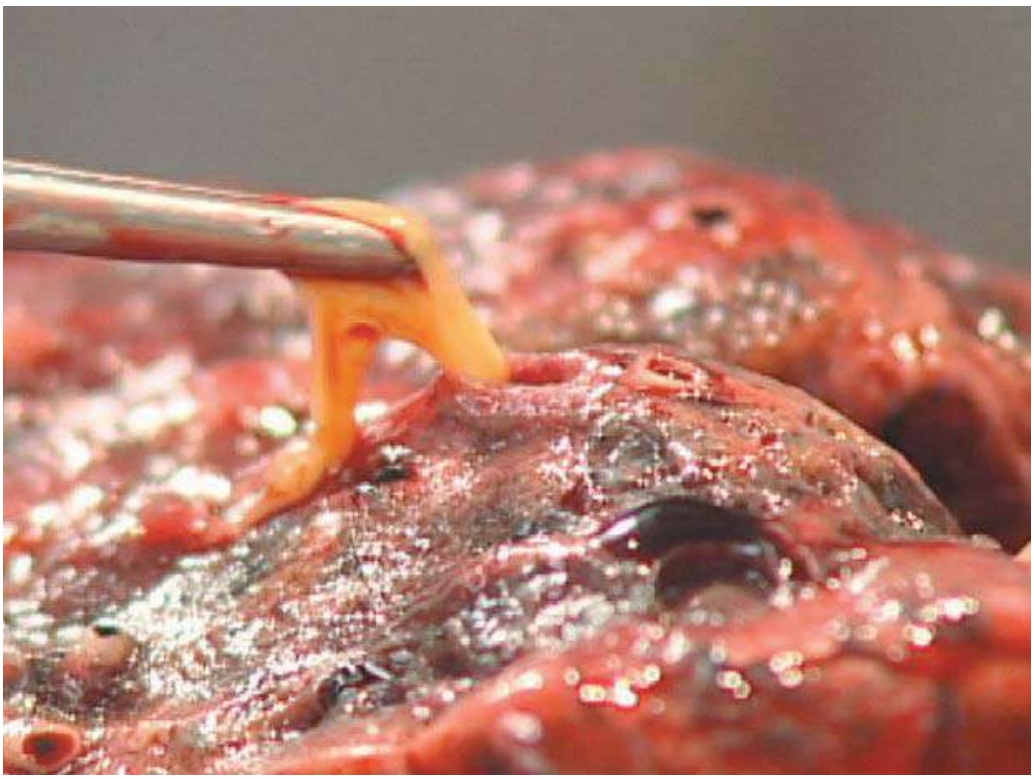


FIGURE 8.41 Purulent material in the smaller bronchus. Further sectioning of this lung shows yellowish, mucoid pus in the bronchi, indicating bronchopneumonia.

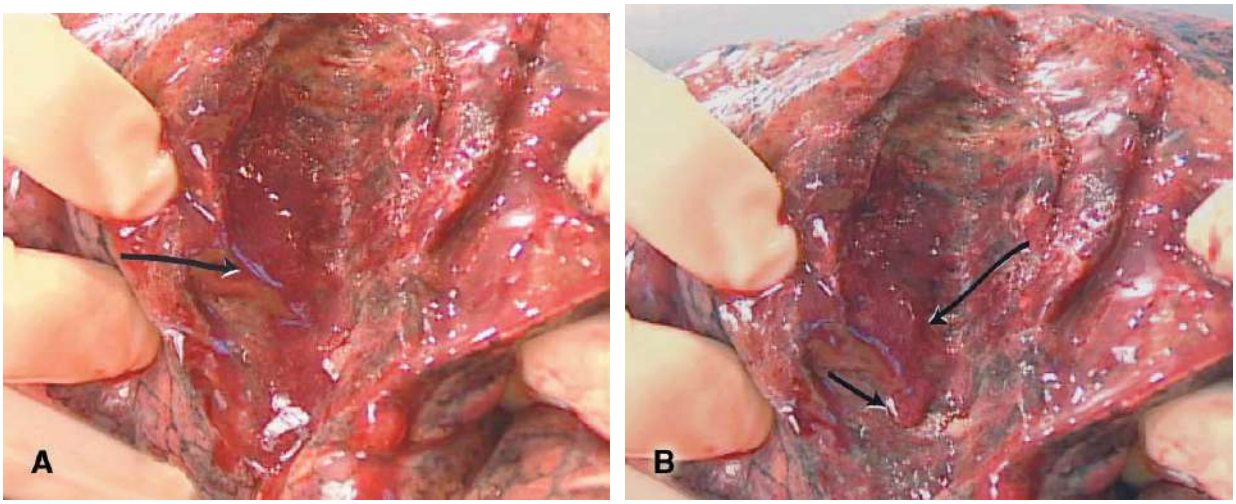


FIGURE 8.42 (A), (B) Pulmonary congestion. Fluid freely flows or cascades from the cut section of lung, indicating congestion (see arrows). The congested lung weighs up to twice the normal average weight of about 400 g. The normal lung is soft and puffy, still containing air even at autopsy. This lung has a boggy, full feeling. The capillaries, large blood vessels, and tissues are filled with fluid. Lung congestion is a nonspecific finding and generally results from a slow stoppage of the heart.

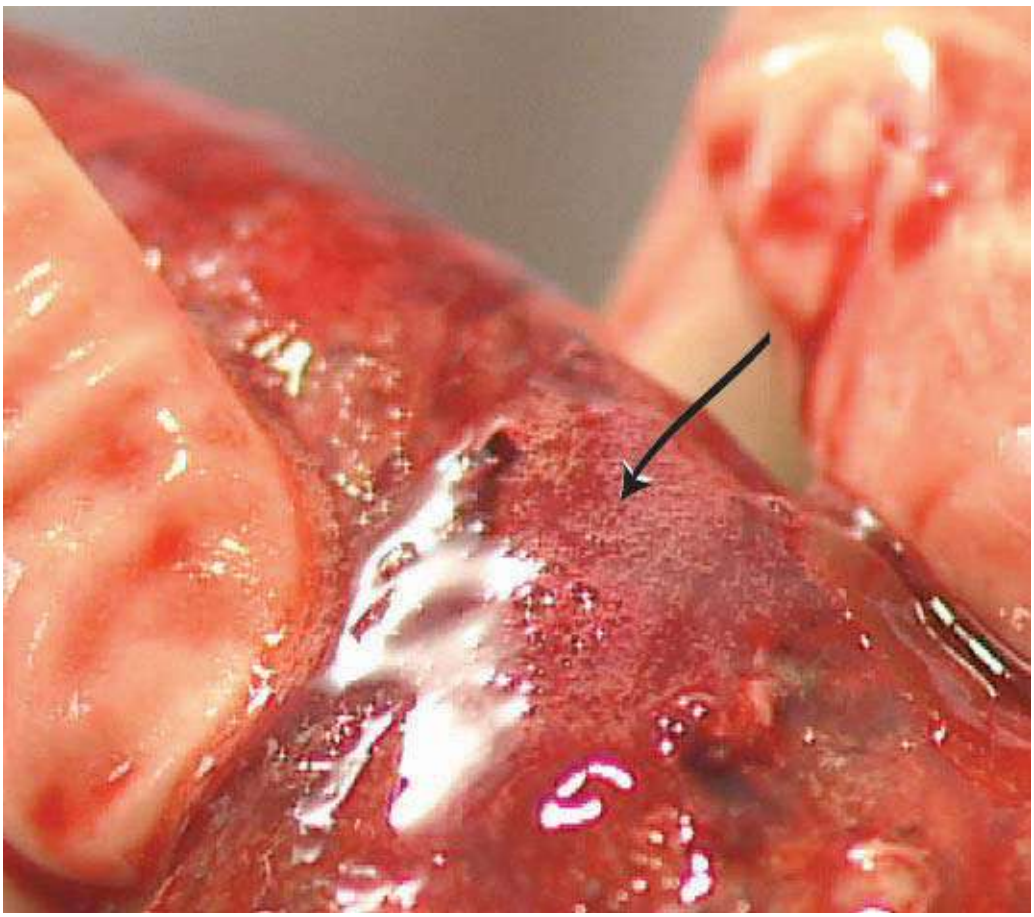


FIGURE 8.43 Pulmonary edema fluid. This lung section shows edema fluid characterized by fluid exuding from the air-filled spaces, producing bubbles (see arrows). Common causes of pulmonary edema include heart failure, drug overdose, and central nervous system pathology. Fluid engorges the vascular system and exudes into the air spaces, where it mixes with air to form a foamy, bloody fluid (see Figure 10.7 for a microscopic view).

NECK ORGANS: EPIGLOTTIS, VOCAL CORDS, TRACHEA, THYROID, CARTILAGE, STRAP MUSCLES, HYOID BONE

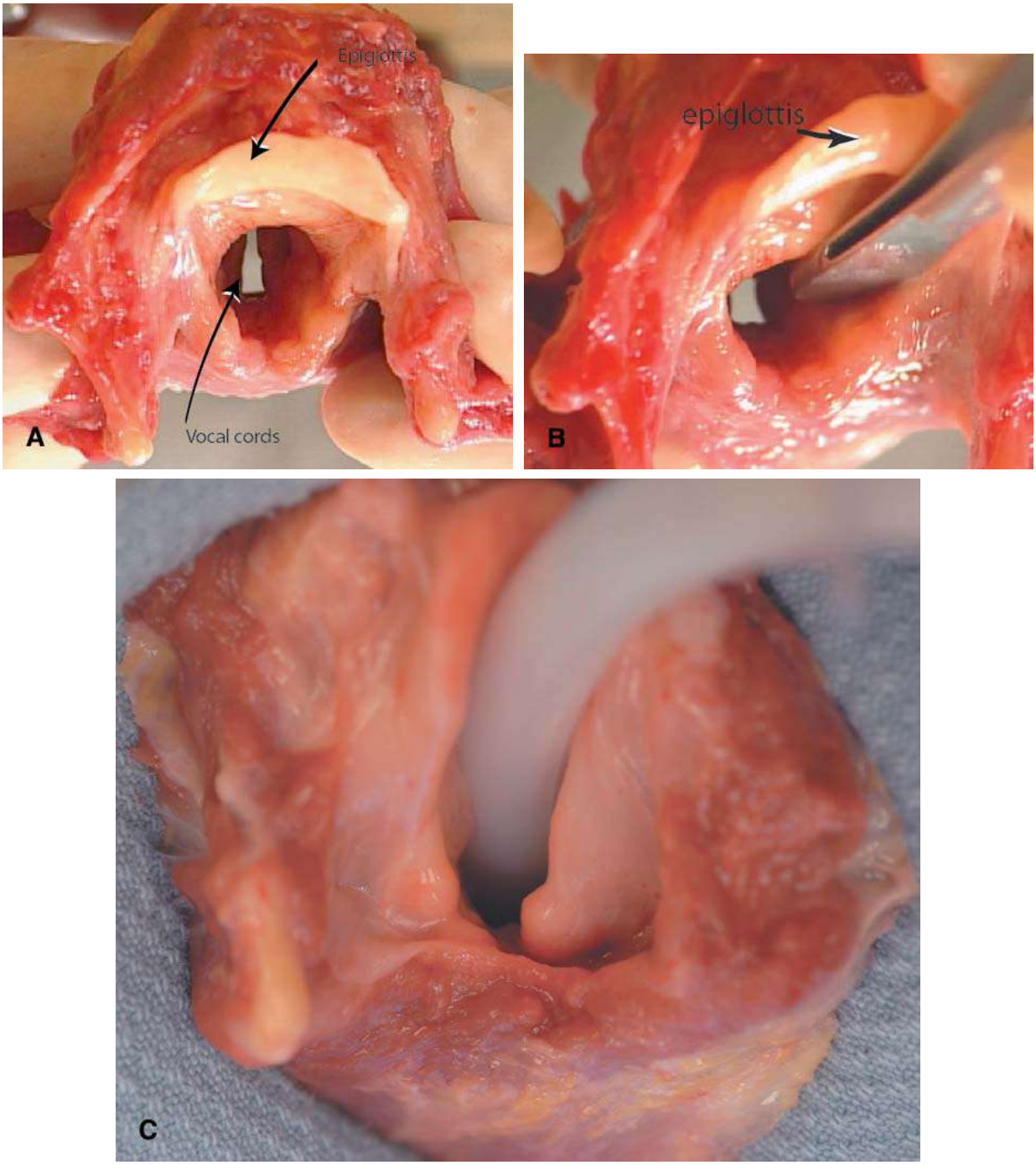
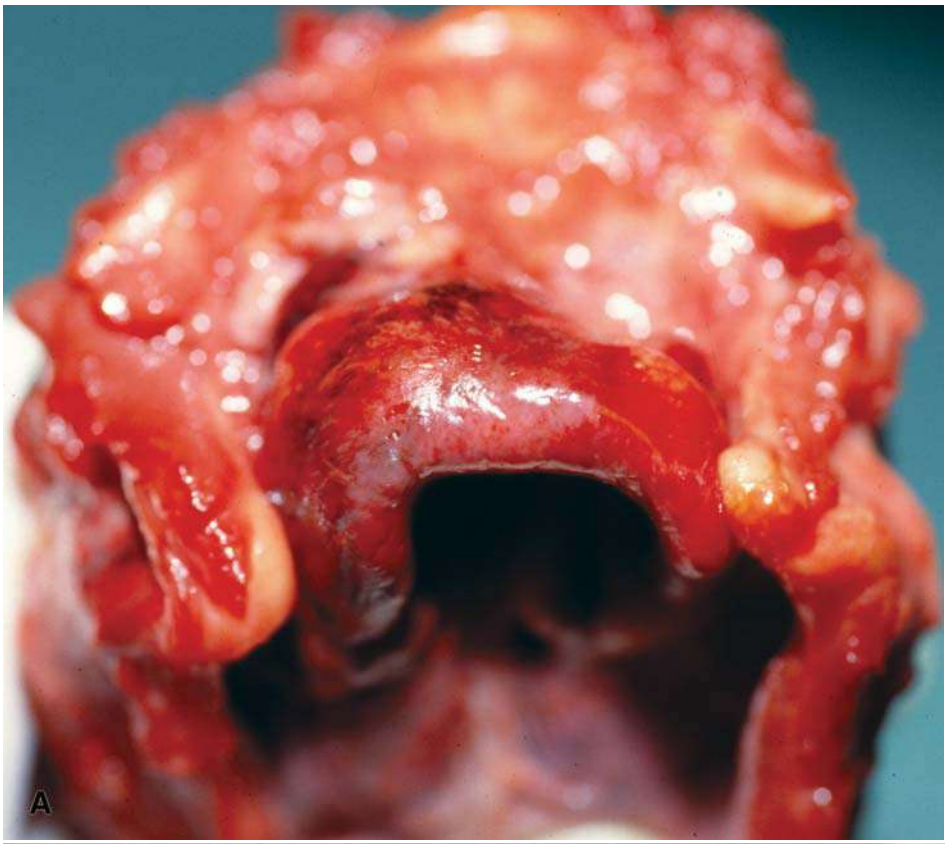


FIGURE 8.44 The epiglottis and vocal cords as seen during intubation. (A) Note the triangular opening in the middle of the pictures. The vocal cords border this opening. **(B)** The forceps trace the path where the endotracheal tube is placed during intubation. The epiglottis is pushed slightly upward out of the way as the device is inserted between the vocal cords. **(C)** The figure shows the relationship of the trachea and the endotracheal tube.



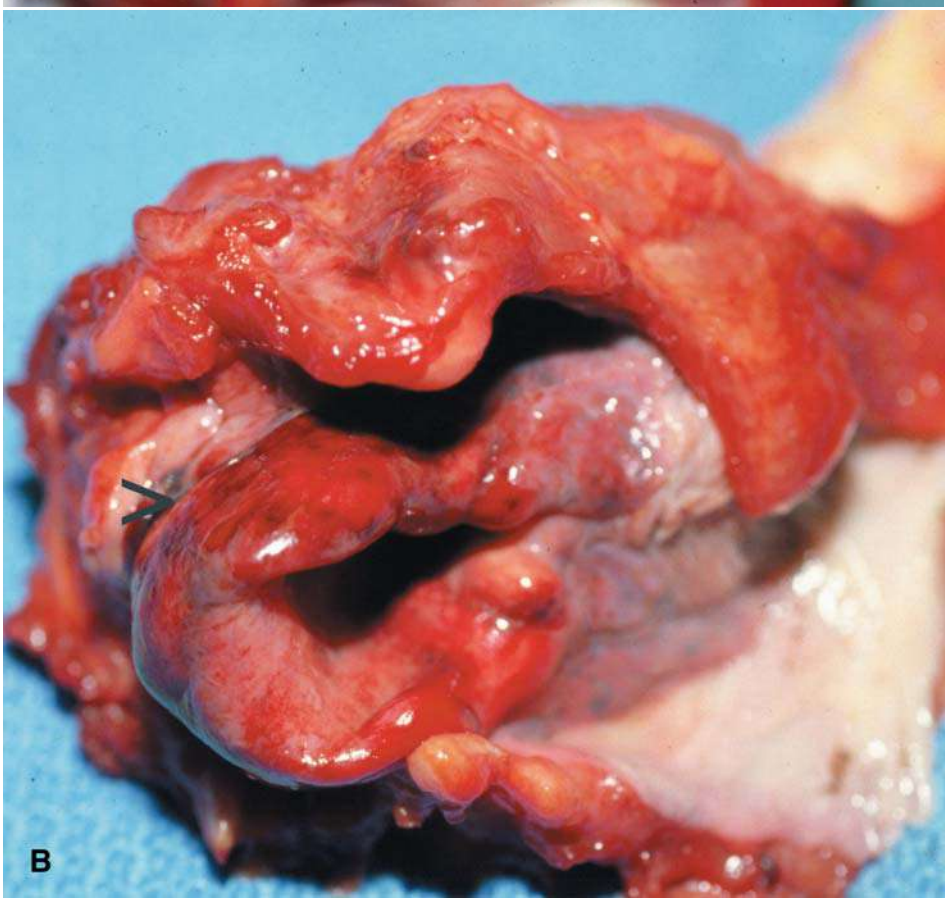


FIGURE 8.45 (A), (B) Epiglottitis. Edema and swelling of the epiglottis can cause occlusion of the airway and death. The rounded, meaty-red, swollen epiglottis shown here was the result of group B S*treptococcus* infection. The victim had trouble breathing and died suddenly after having a severe sore throat for several days.

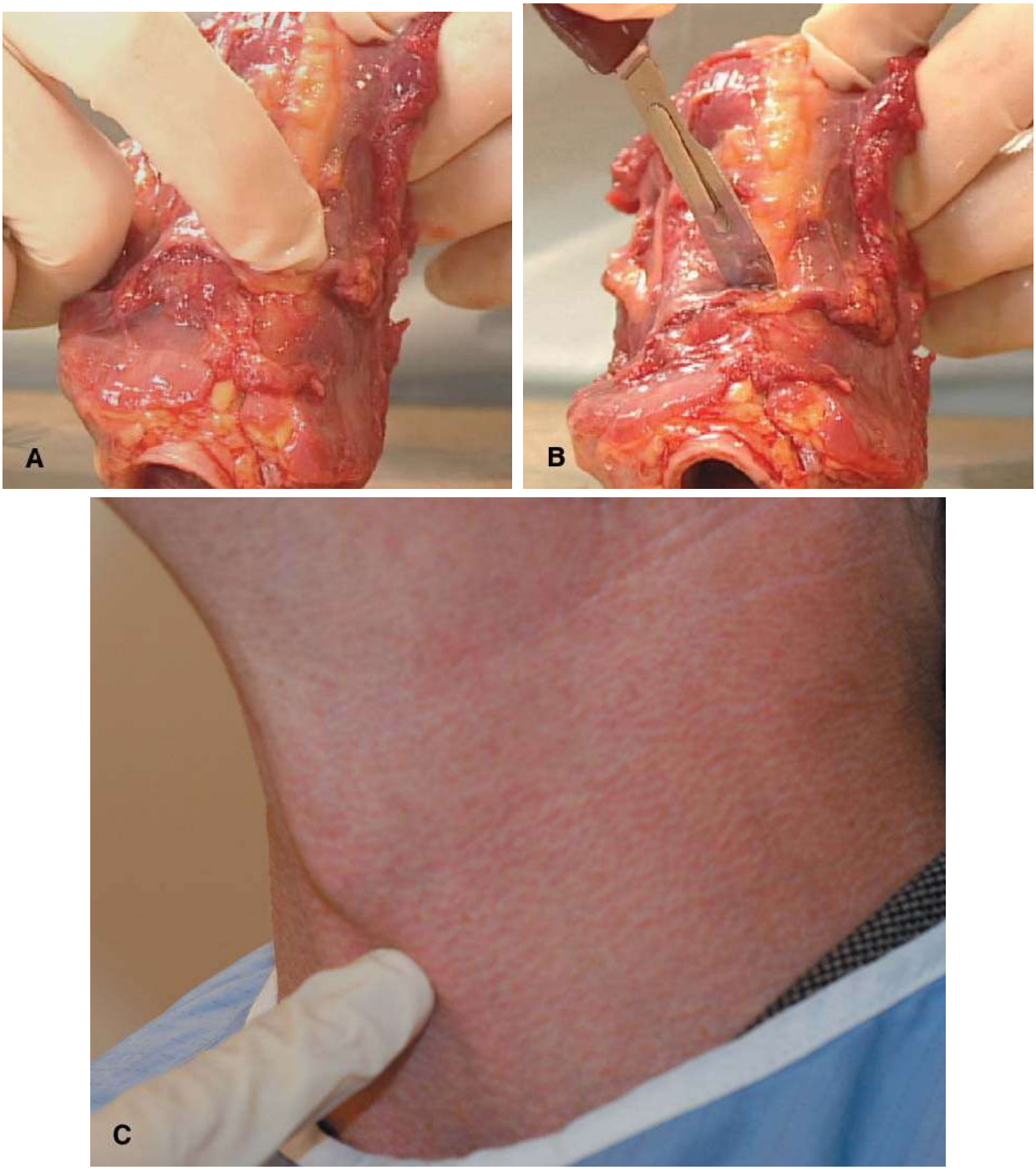


FIGURE 8.46 (A), (B) Cricothyroid membrane. (C) Cricothyroidotomy. To perform a cricothyroidotomy, the cricothyroid membrane, just below the thyroid cartilage, is palpated. One can feel this membrane as a break or cleft a little less than a finger's breadth below the "Adam's apple." Emergency cricothyroidotomies are done by physicians or trained emergency medical personnel when an airway cannot be established, such as with severe, traumatic facial injuries.

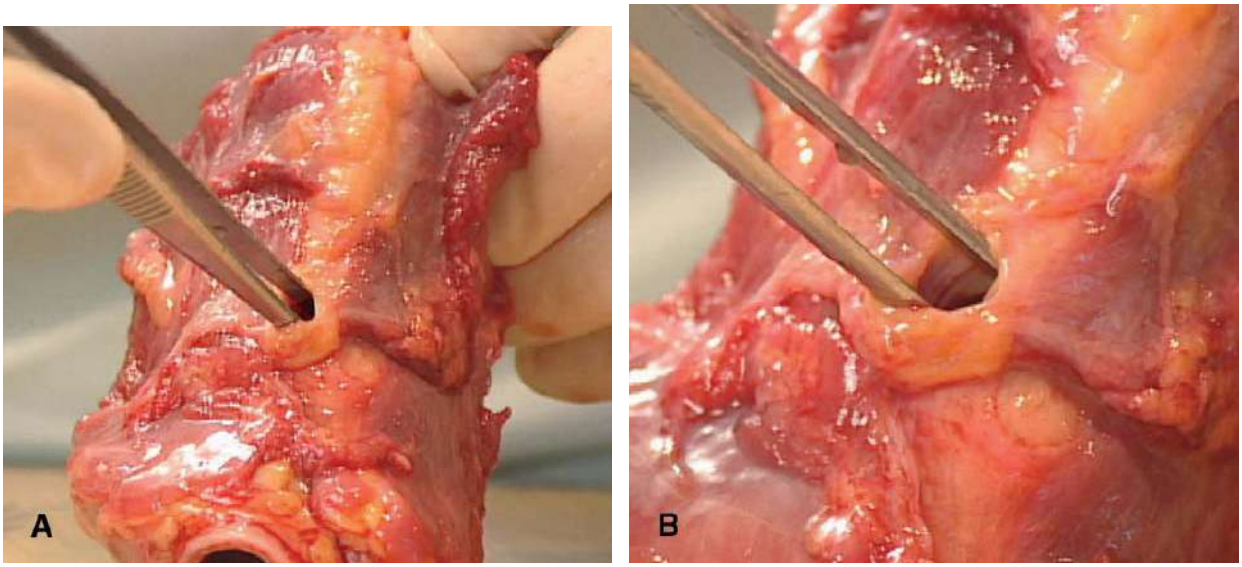


FIGURE 8.47 (A), (B) Opening the cricothyroidotomy. The opening is made and then must be kept open for ventilation of the patient.

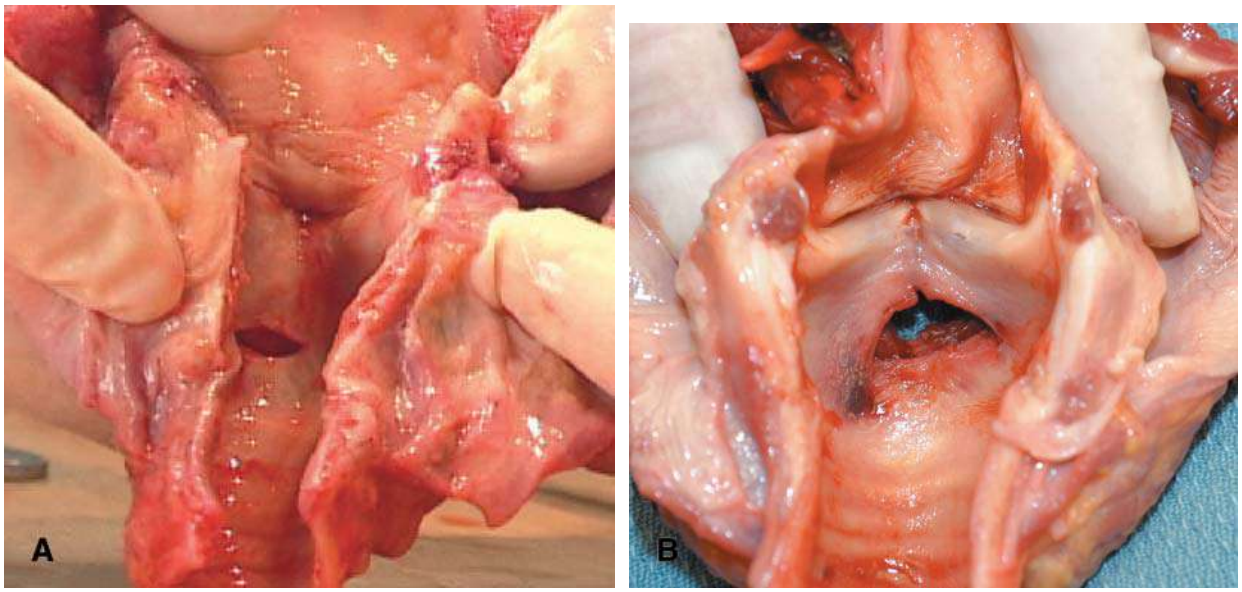


FIGURE 8.48 (A) Internal cricothyroidotomy site. The site of the cricothyroidotomy is seen well below the vocal cords. **(B) Proper cricothyroidotomy.** The figure shows an actual cricothyroidotomy properly performed in the field. The cut is below the vocal cords.

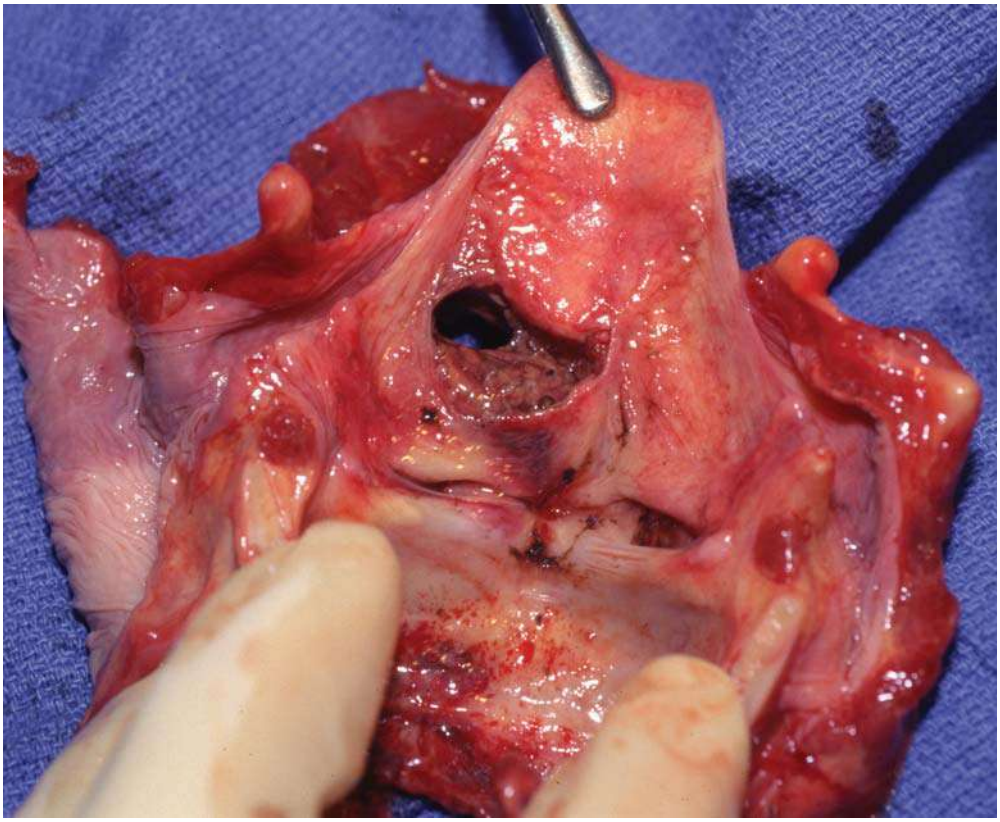


FIGURE 8.49 Improper cricothyroidotomy. This attempted cricothyroidotomy, performed in the field, was placed above the vocal cord, erroneously. Vocal cord damage might have resulted if the patient had survived.

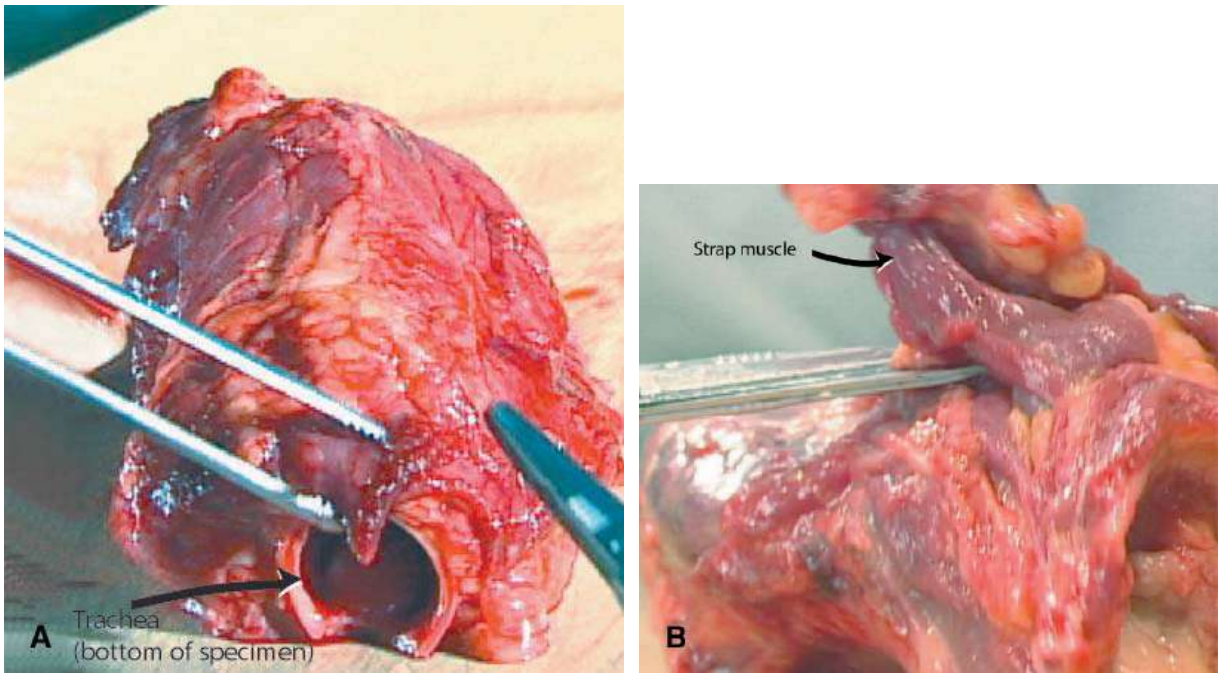
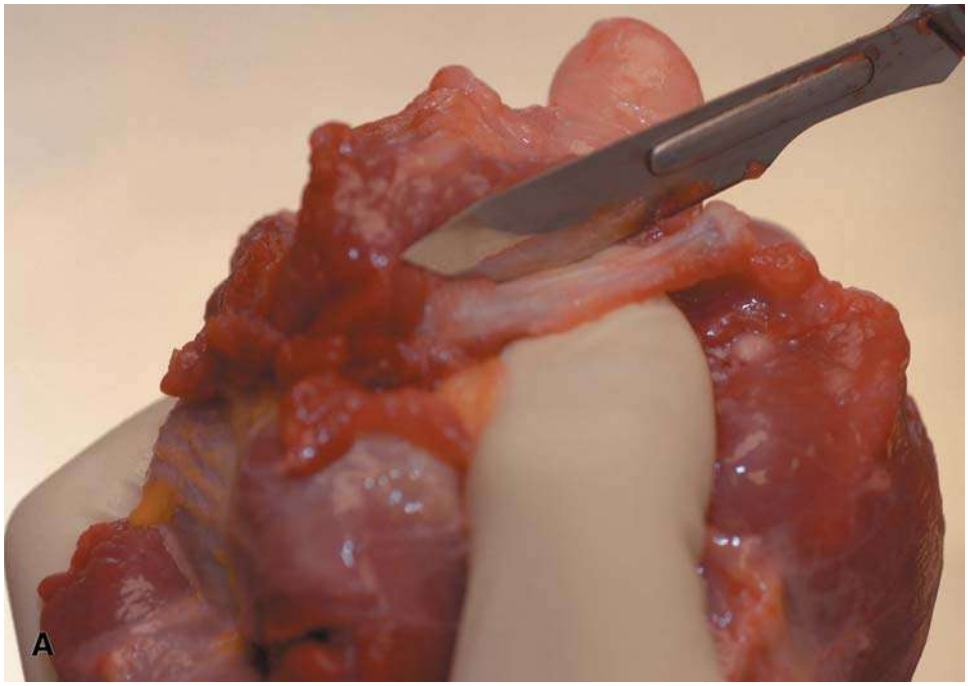


FIGURE 8.50 (A), (B) Strap muscle dissection. The strap muscles are in the anterior midline of the removed neck organs and are dissected away. During dissection, the pathologist is looking for hemorrhage.



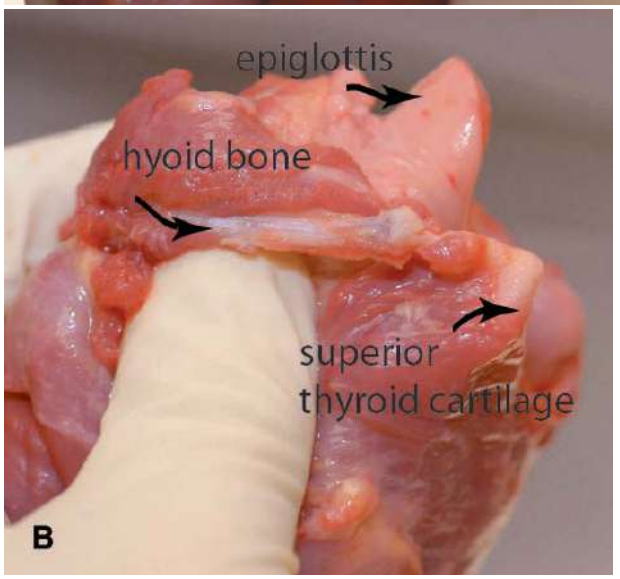


FIGURE 8.51 Examination of the hyoid bone for injury. (A) The hyoid bone is "cut down on," exposing the periosteum. Fractures of the hyoid bone or hemorrhage of soft tissue around the hyoid bone can be seen in strangulation. **(B)** The superior thyroid cartilage extends upward from the thyroid cartilage and can also show surrounding hemorrhage or fracture in strangulation.

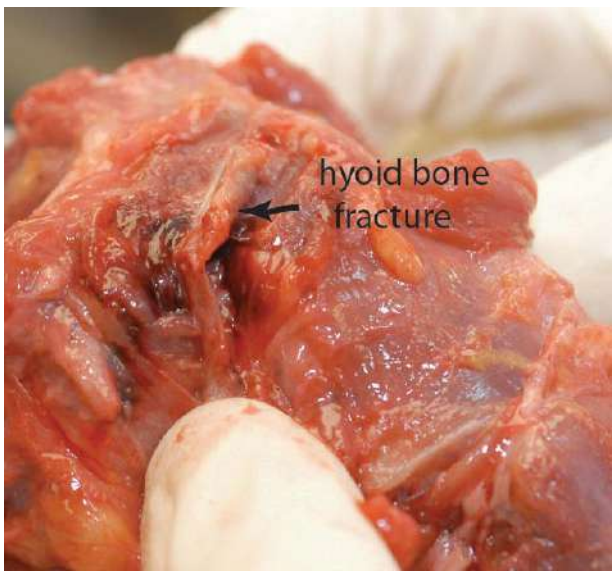


FIGURE 8.52 Hyoid bone fracture in strangulation. The hyoid bone is fractured, and hemorrhage surrounds this fracture.

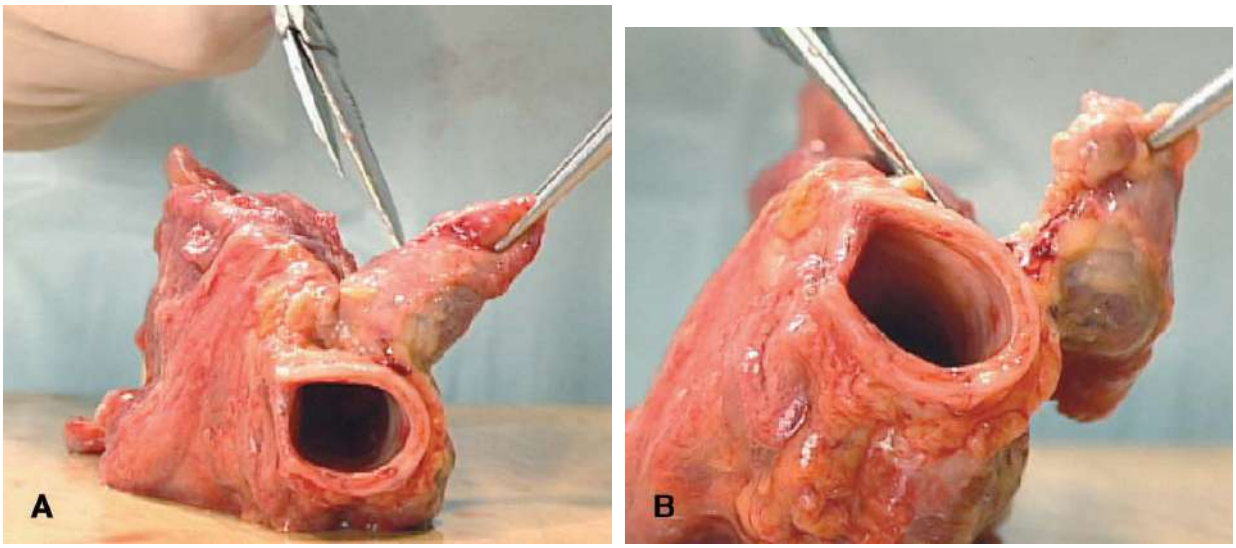


FIGURE 8.53 (A), (B) Dissecting away the thyroid. The thyroid gland is dissected away from the neck to look for hemorrhage or tumors.

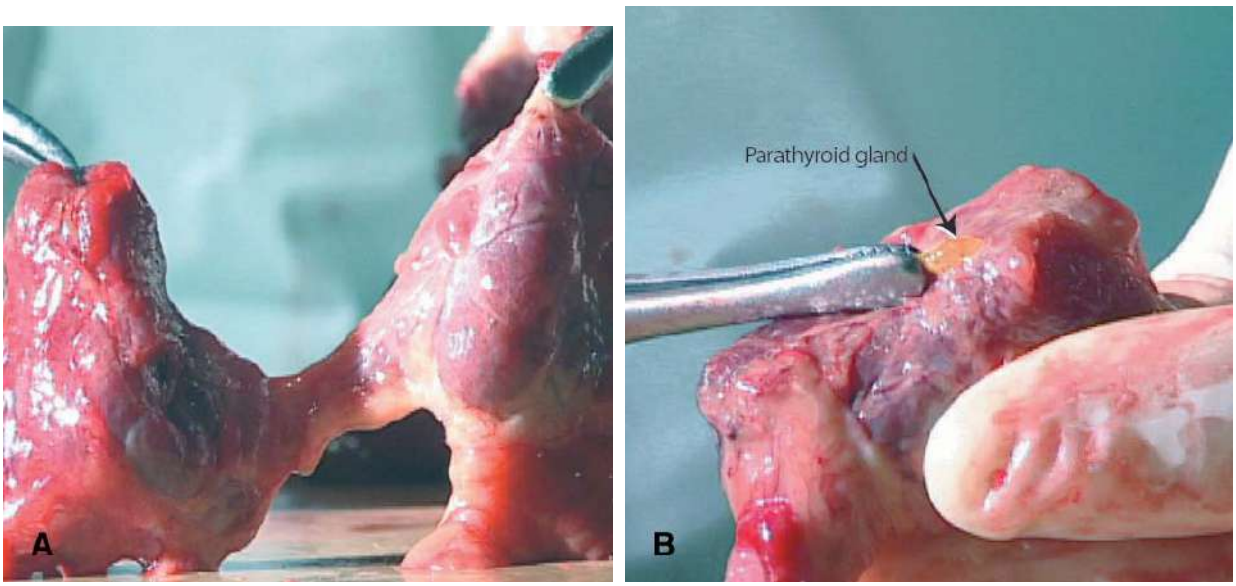


FIGURE 8.54 Examination of the thyroid and parathyroid glands. (A) The thyroid is held up to reveal two lobes and the connecting isthmus. **(B)** The small, round, yellow parathyroid gland can be seen just to the right of the forceps tip. The parathyroid gland mainly controls calcium levels in the body through a hormone called calcitonin.

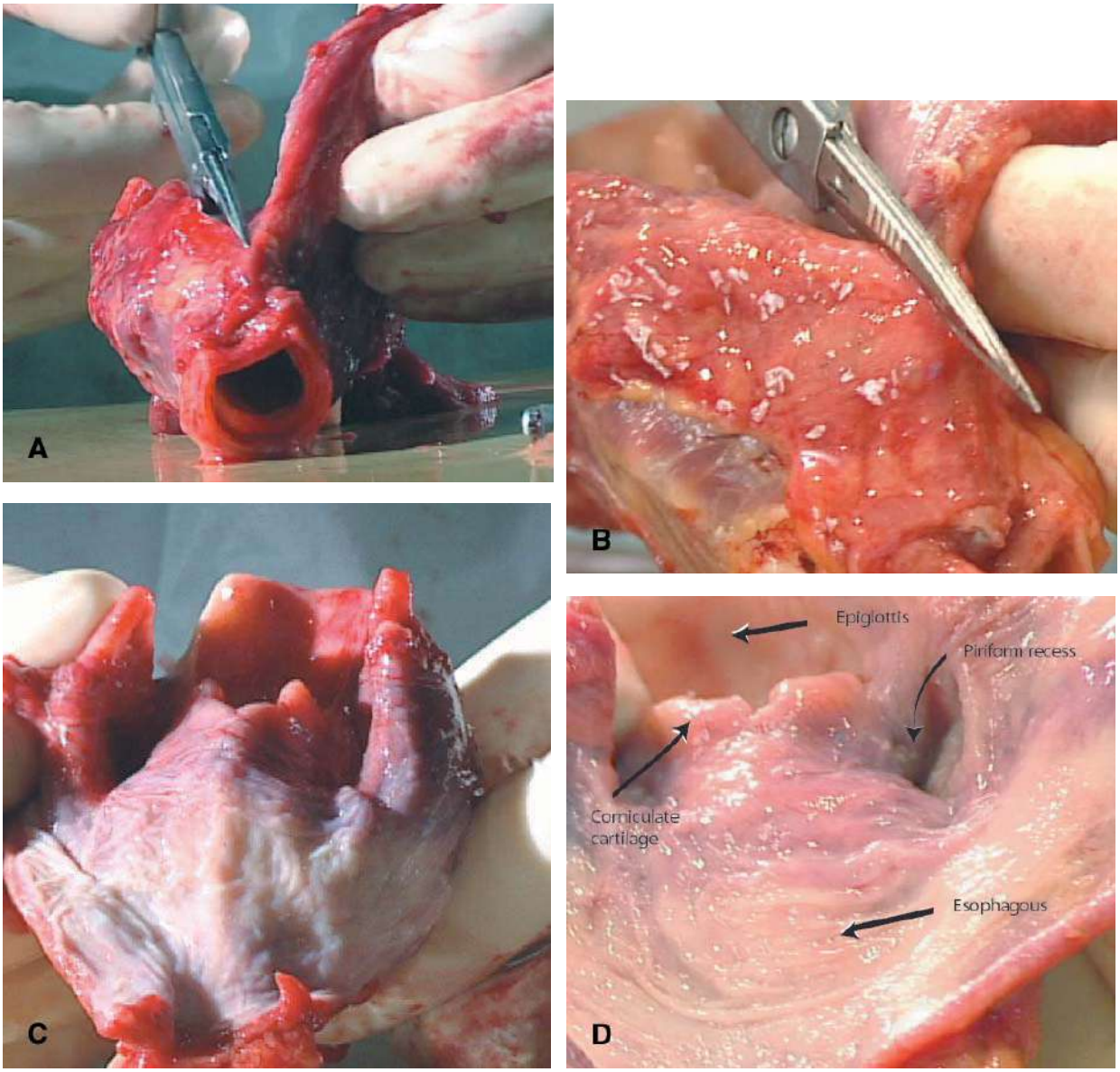
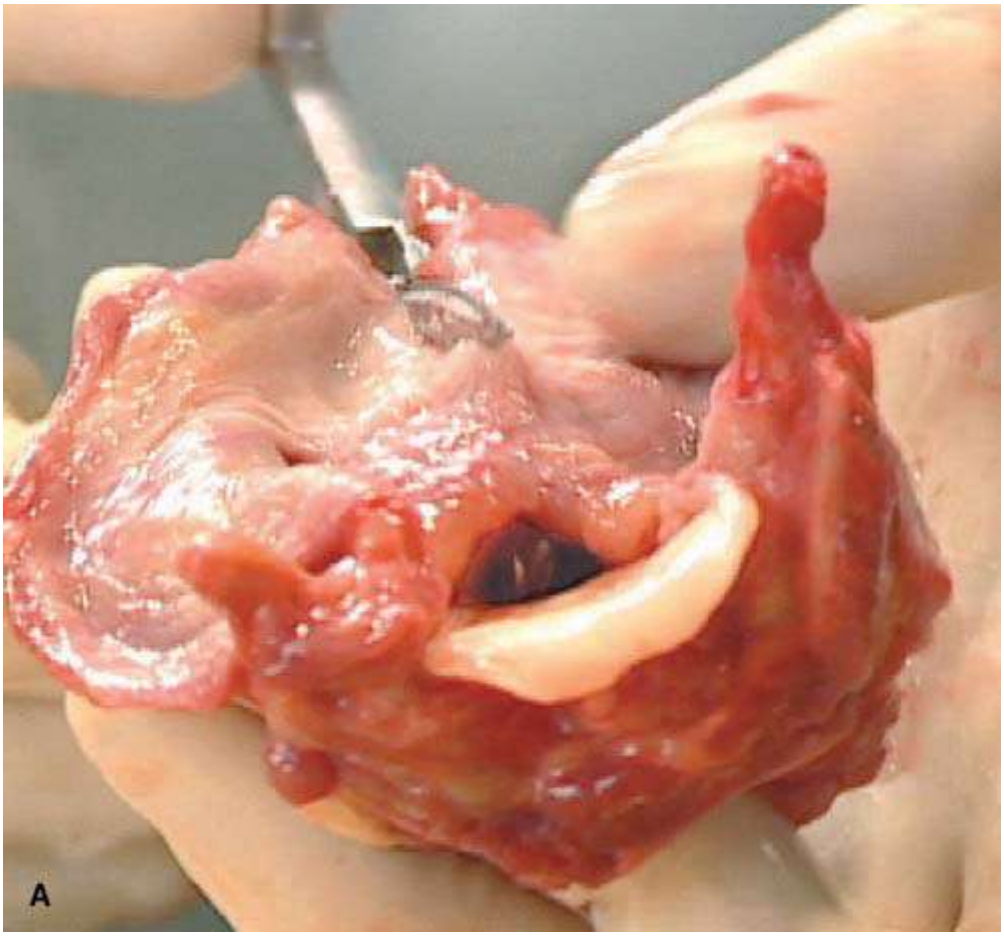


FIGURE 8.55 (A)–(D) Opening the esophagus. The neck specimen is turned around and the proximal portion of the esophagus is opened to reveal the smooth, white-pink mucosa. Foreign bodies can lodge at the origin of the esophagus and close off the trachea, resulting in asphyxia.



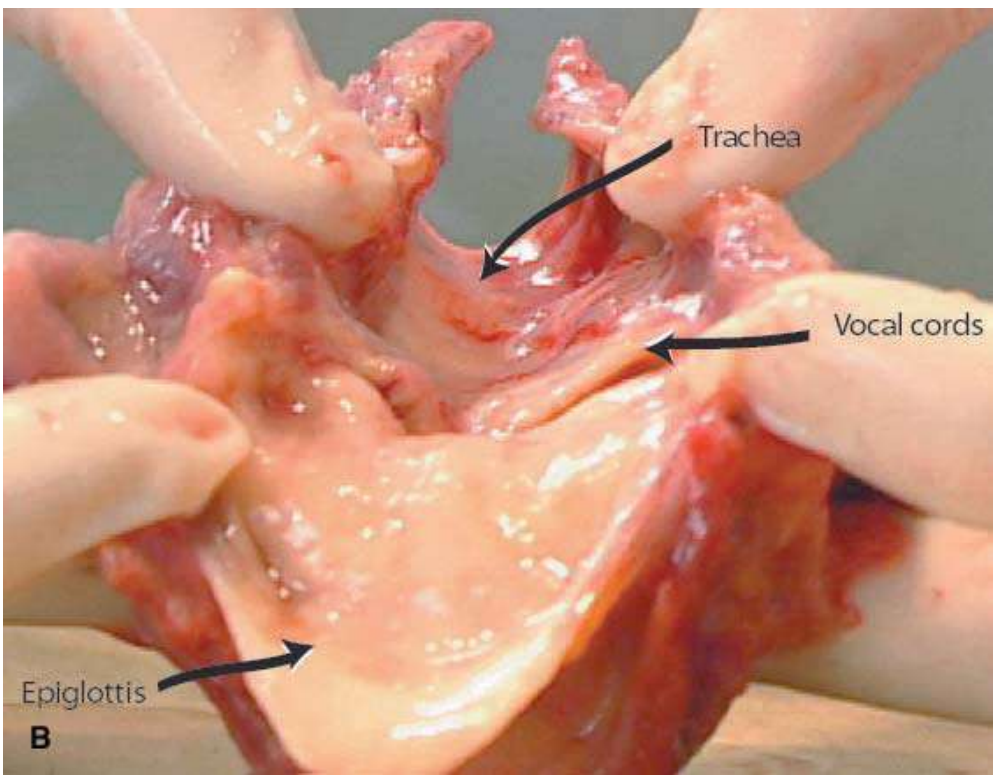
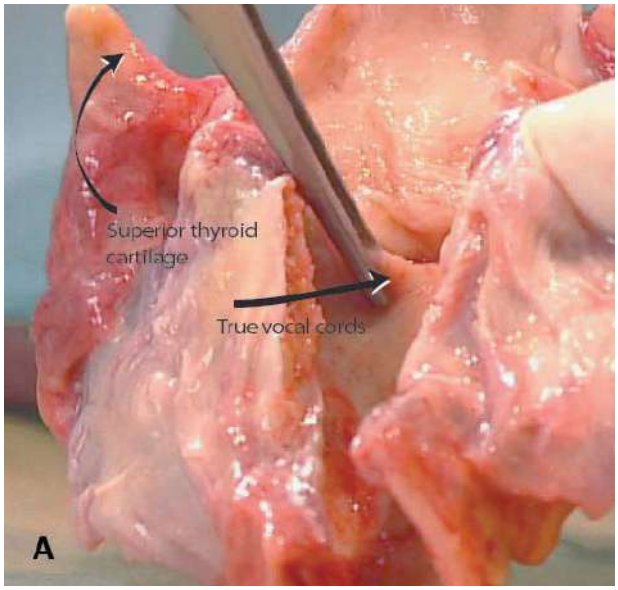


FIGURE 8.56 Opening the trachea. (A) The trachea is opened from the posterior aspect (back), where the anterior-lateral cartilaginous rings give way to soft tissue. **(B)** The trachea is opened to examine the vocal cords and mucosa.



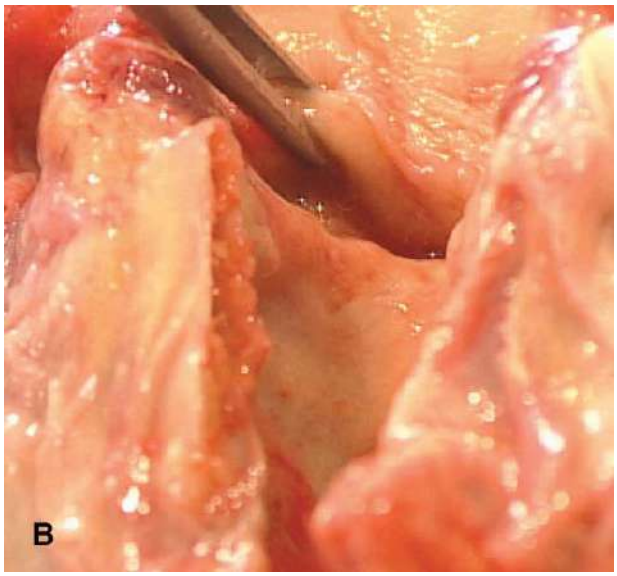
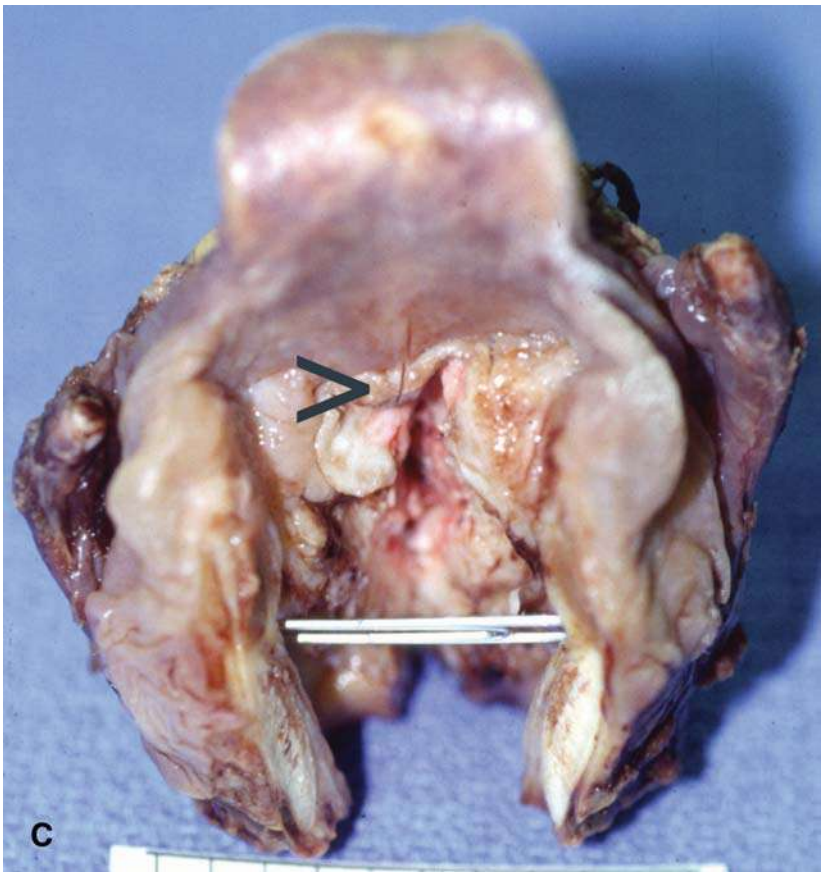


FIGURE 8.57 (A), (B) True and false vocal cords. The forceps are holding the true vocal cords, which are just below the false vocal cords, held by the forceps in the second figure. **(C) Squamous cell carcinoma.** The vocal cords are sites for squamous cell carcinoma (see arrow), especially in smokers, and polyps in those who abuse their voices.



LIVER

FIGURE 8.58 Normal liver. The liver is much larger than most autopsy neophytes realize. The liver depicted is about 25 cm (over 10 in.) wide. The average liver weighs about 1930 g (4.25 lb) in a 77-kg (170-lb) man. The liver performs many functions and is essential for life. Important functions of the liver include production of bile, production of blood coagulation proteins, breakdown of drugs and toxins, filtration of blood, and metabolism of fat proteins and carbohydrates.

FIGURE 8.59 Examination of the liver capsule. The capsule of the liver is examined. The liver is dome-shaped, owing to its position in the body just under the right diaphragm. This liver shows chronic passive congestion (see Figure 8.63).

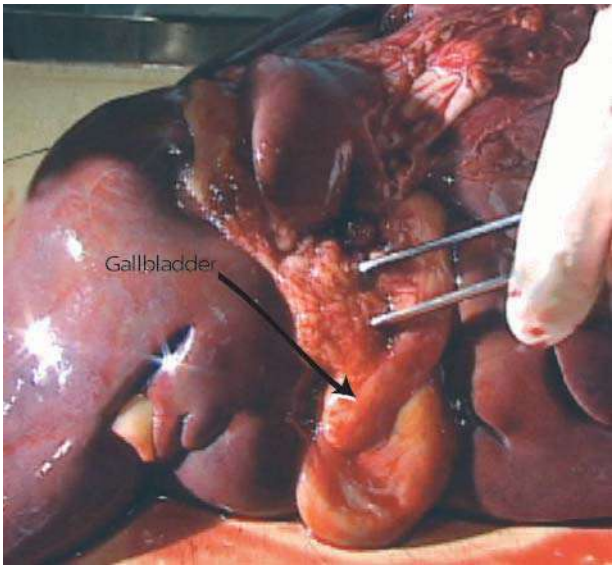


FIGURE 8.60 Porta hepatis examination. The liver is turned over to reveal the posterior–inferior side. The gallbladder can be seen below the forceps. The forceps is in the region of the porta hepatis, an area containing lymph nodes.

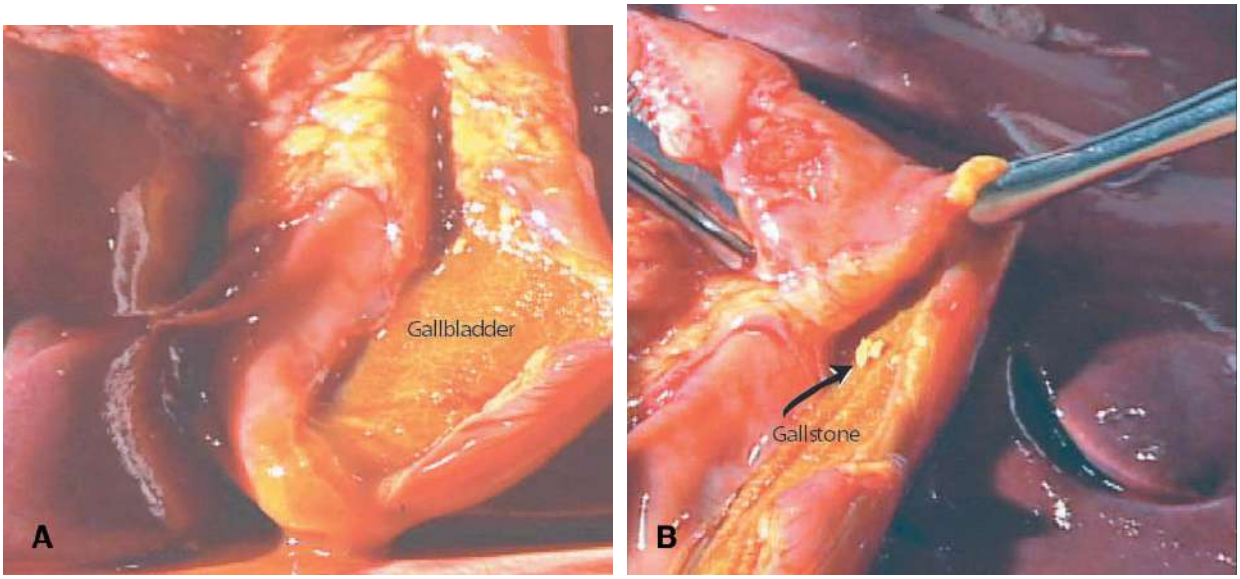


FIGURE 8.61 (A) Gallbladder. The gallbladder contains bile. **(B) Gallstones.** A closer examination of the opened gallbladder reveals greenish-yellow gallstones.

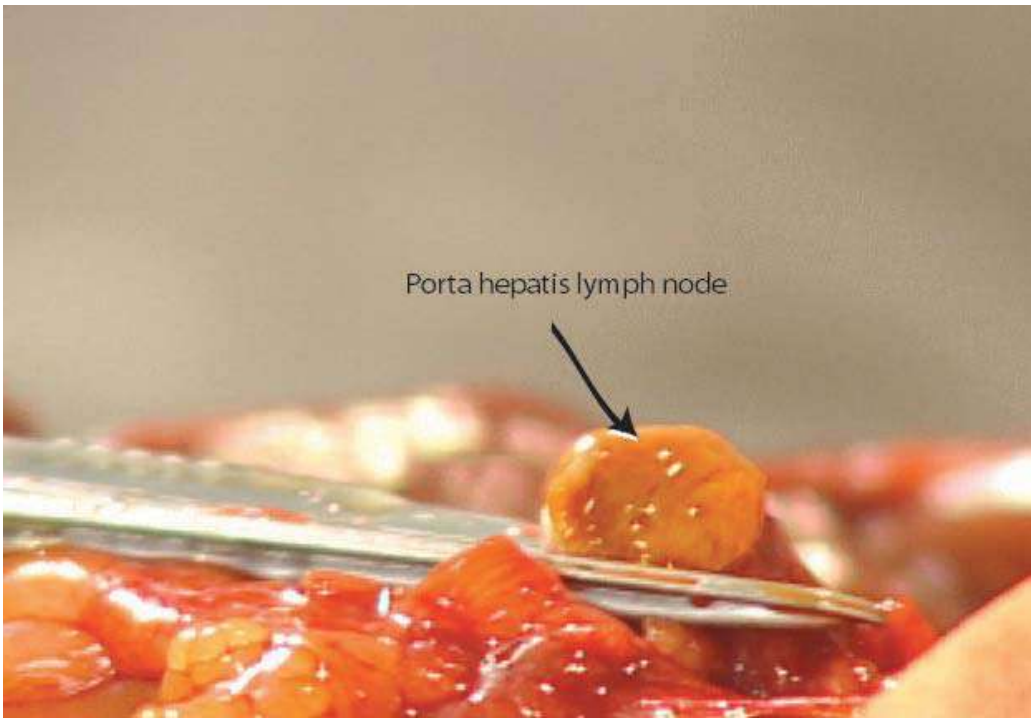


FIGURE 8.62 Porta hepatis lymph node. Examination of the porta hepatis reveals a large lymph node. These lymph nodes can contain metastatic cancers or granulomas, chronic reactive inflammations in drug addicts who inject drugs into their lower extremities.

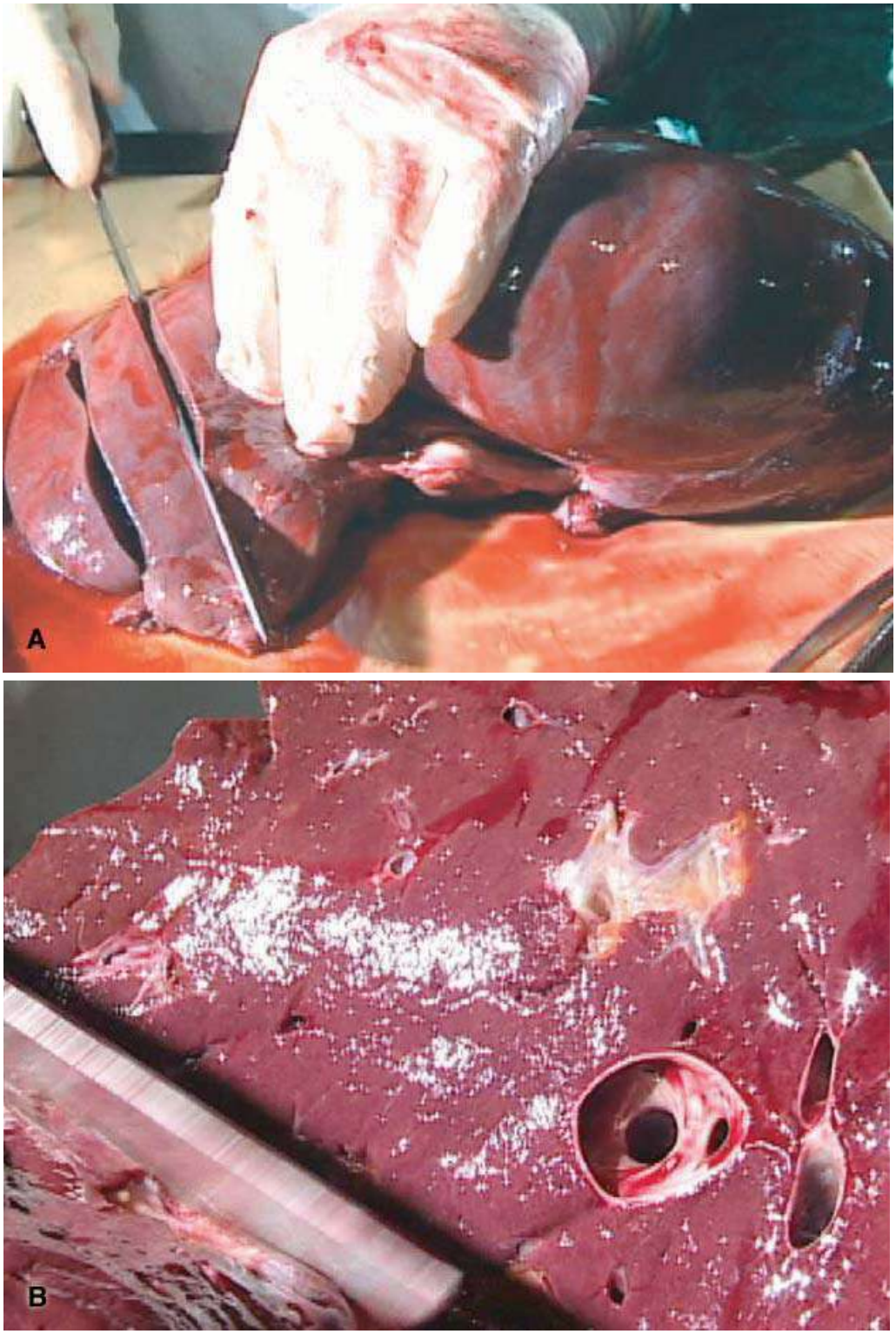
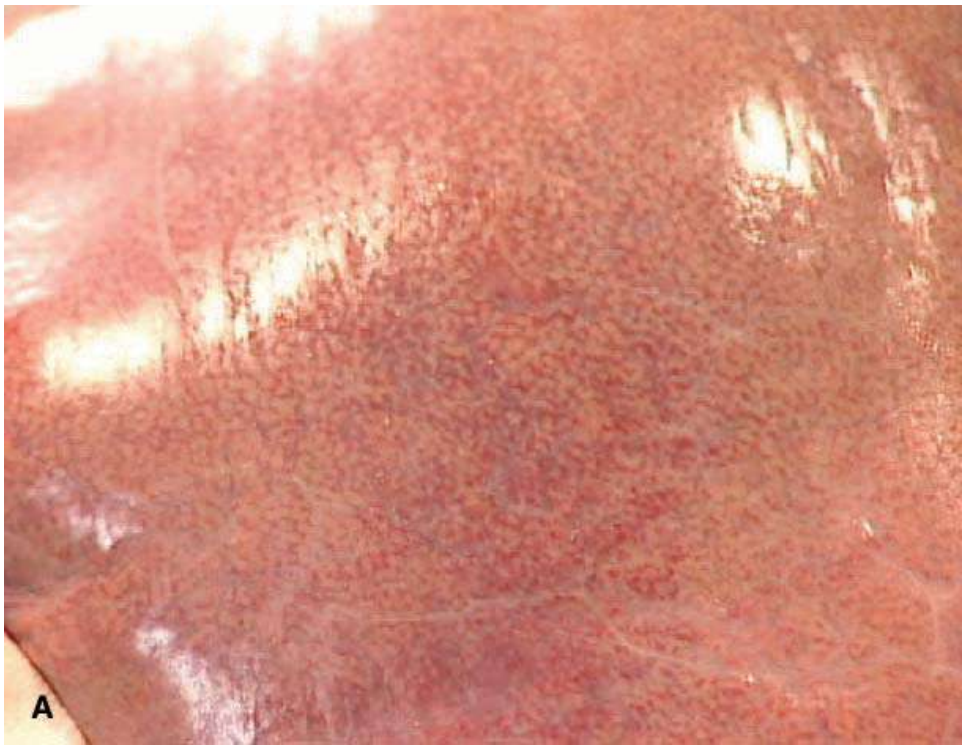


FIGURE 8.63 Sectioning the liver. (A) The liver is serially sectioned, continuously inspected, and felt for tumors and other abnormalities. **(B)** A cut section shows a normal liver, which is a brown color. The large cavernous veins seen in the right lower part of the image are characteristic of the normal liver.



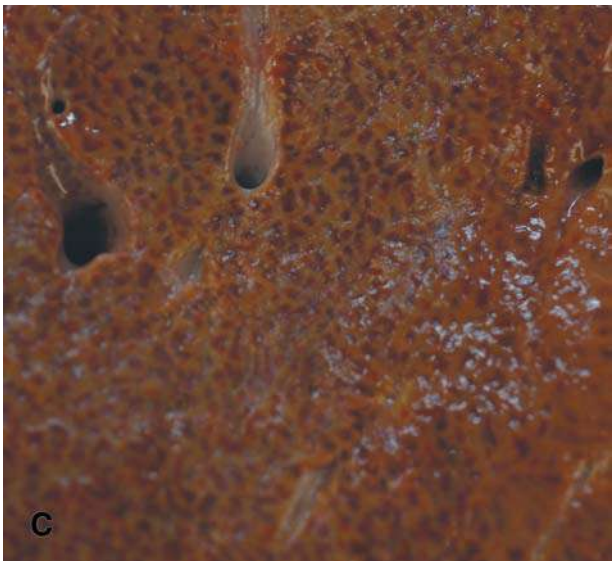


FIGURE 8.64 (A)–(C) Chronic passive congestion of the liver. A close-up of the liver shows chronic passive congestion of the liver, characterized by alternating light and dark contrasted areas. This appearance has been called "nutmeg liver," since the cut liver resembles a cut nutmeg. Gross descriptions in pathology occasionally reference food, drinks, and other common objects. The aim of gross descriptions is to communicate observations plainly. The gross appearance reflects the microscopic appearance. The dark areas are largely blood that has pooled around the central vein, or "draining area" of blood through the liver.

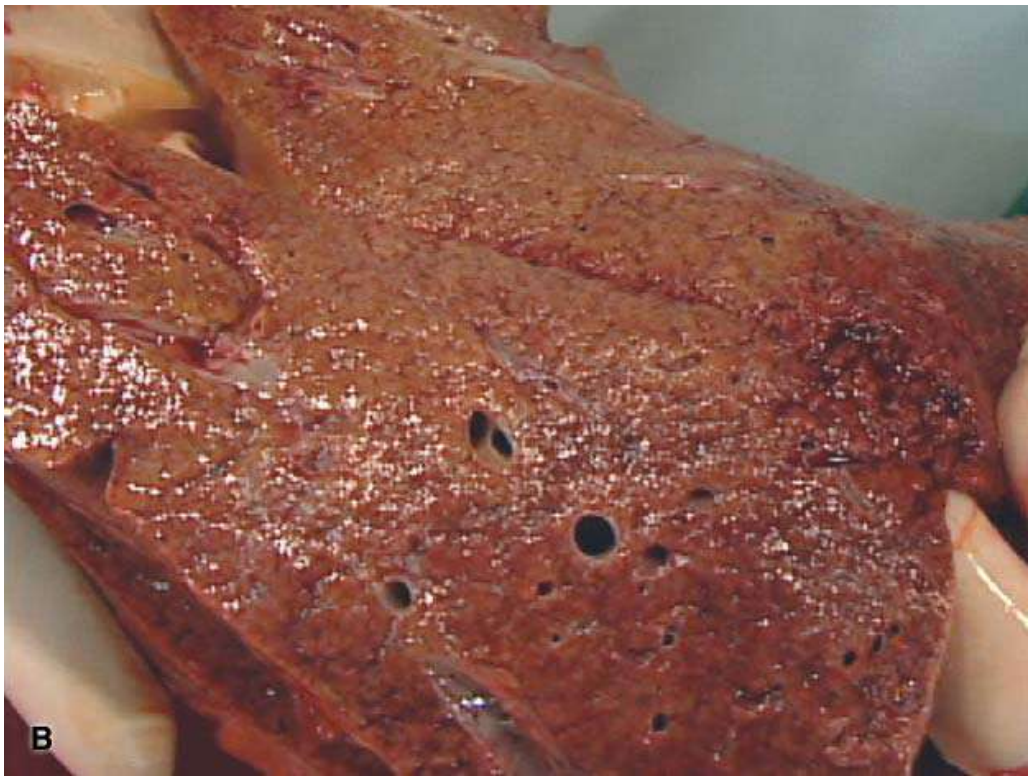


FIGURE 8.65 (A), (B) Cirrhosis of the liver. Cirrhosis is a scarring of the liver. It is the way the liver reacts to an injury. The injury can be from alcohol abuse, an acetaminophen overdose, or chronic ischemia due to heart failure. In cirrhosis, the liver becomes very hard so that blood cannot flow normally through it. This causes the blood to back up elsewhere in the body, such as in the esophagus (causing esophageal varices). Also, the liver begins to fail due to a lack of cells to perform work, such as making clotting factors. As a result, the patient is prone to spontaneous bleeding. A common problem for the cirrhotic patient is the rupture of dilated veins around the esophagus, and clotting is less likely to occur due to liver cell loss. When advanced, this condition is irreversible and very commonly fatal.

SPLEEN

FIGURE 8.66 Spleen capsule examination. The spleen is the largest collection of lymph tissue in the body. In addition to recycling aged red blood cells, the spleen helps the body fight some infections, like the encapsulated bacterium *Streptococcus pneumoniae*. The spleen is examined on the outer surface for lacerations or tumors. The capsule of the spleen is very thin and easily torn with trauma. Because a major function of the adult spleen is to recycle red blood cells, the spleen is vascular. Laceration of the spleen can cause extensive internal hemorrhage.

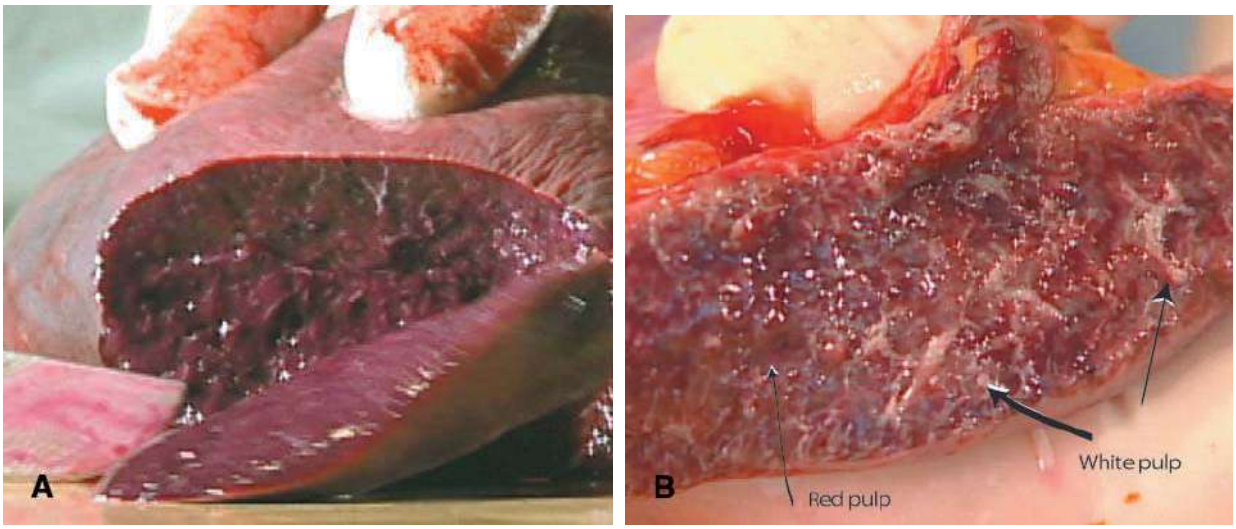
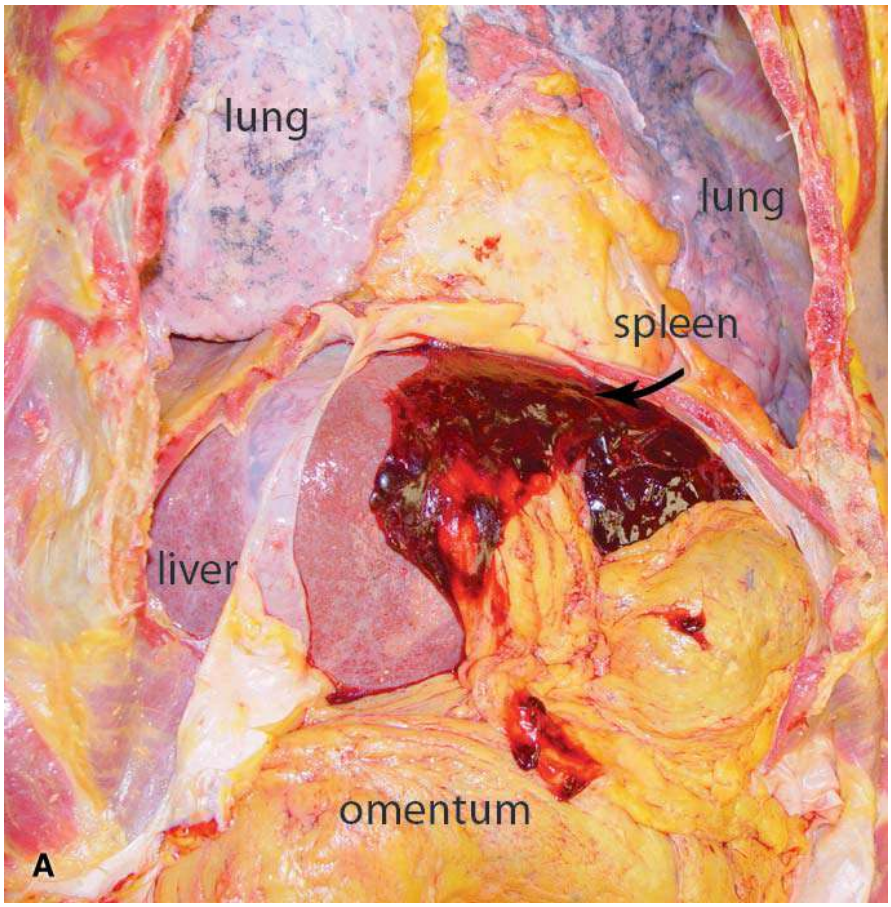


FIGURE 8.67 (A), (B) Spleen sectioning. On sectioning the spleen, one can see the aptly-named red pulp. The white dots are the white pulp. Red cells pool in the sinusoids of the red pulp. The capsule of the spleen is very thin, making it susceptible to rupture easily with trauma.



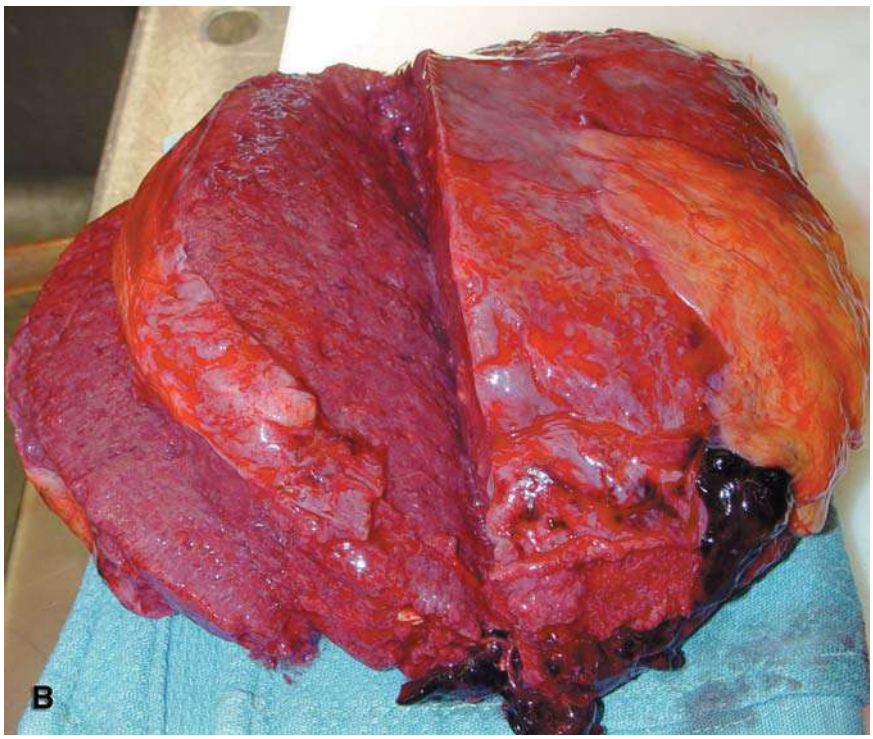


FIGURE 8.68 Ruptured spleen. (A) A hematoma can be seen in this patient who fell down the steps at home. The source of the hemorrhage is seen in the left upper quadrant of the abdomen. The spleen has a lacerated capsule with an attached hematoma. **(B)** The spleen is enlarged (over 600 g; normal is about 120 g), making it more susceptible to traumatic or even spontaneous rupture.

URINARY TRACT: KIDNEYS, BLADDER, URETER, PROSTATE

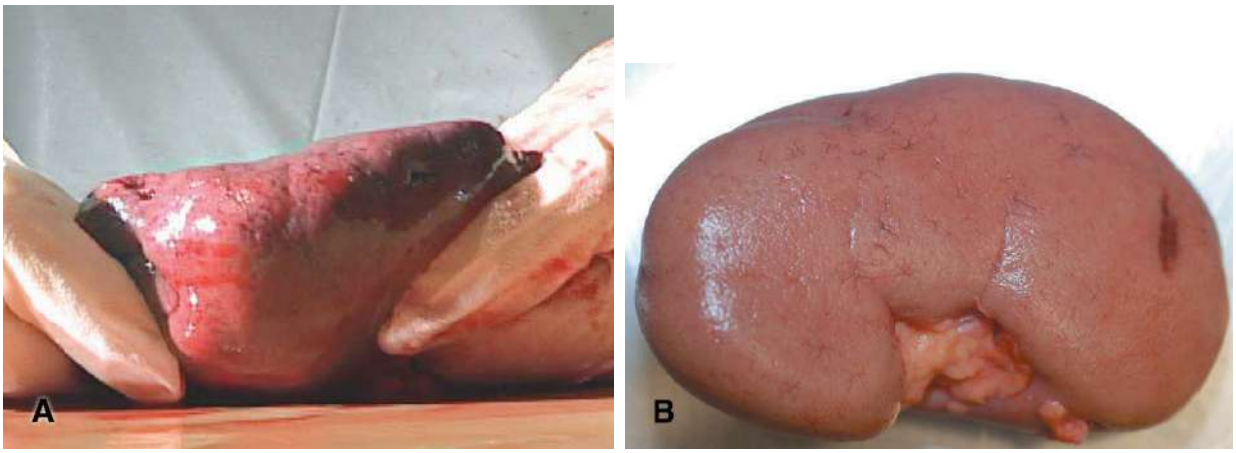


FIGURE 8.69 Left and right kidneys. (A) The pathologist is holding a normal left kidney, which has a delta or triangular shape. This shape is thought to result from the spleen molding the superior pole of the kidney. **(B)** The normal right kidney is bean-shaped and should have a smooth outer covering, or cortex. The main functions of the kidneys are to help regulate blood pH and blood pressure, filter blood, and remove excess salts, water, and products of protein metabolism. The waste product of these processes is, of course, urine.

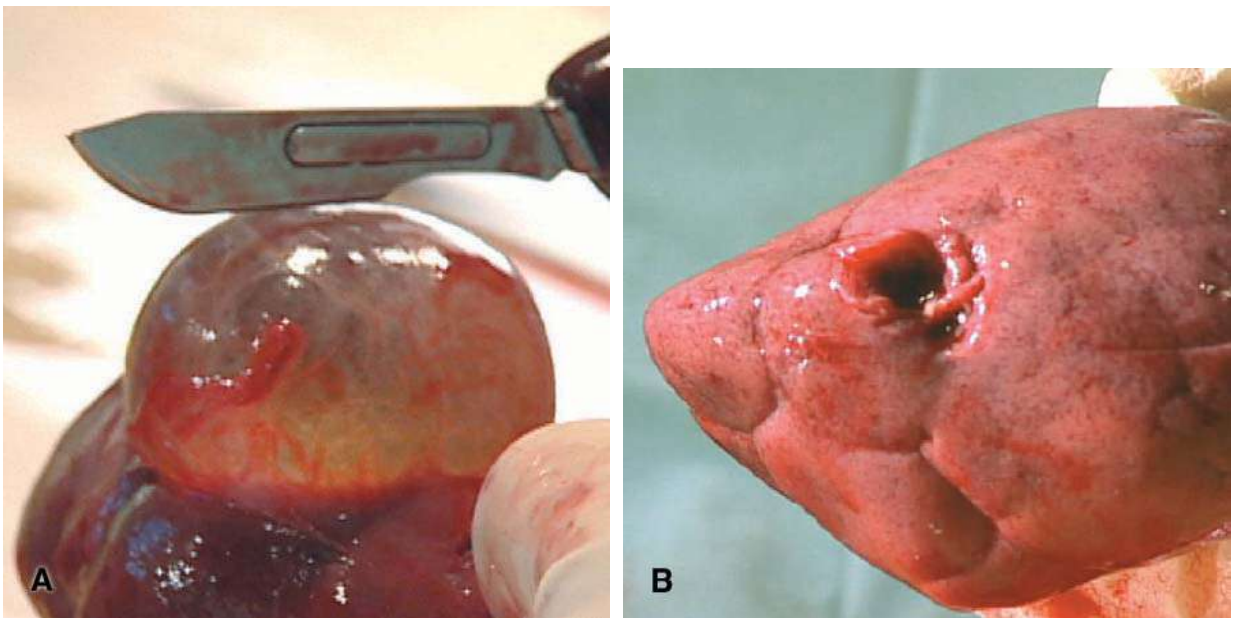


FIGURE 8.70 Cortical cyst of the kidney. (A) The cortex of this kidney has a large fluid-filled cyst. **(B)** This crater represents a cyst that burst open upon removal.

FIGURE 8.71 Renal arteriolosclerosis. This kidney has a pitted, granular surface. This condition is called arteriolosclerosis; it is a result of hypertension, which causes local ischemic changes in the small vessels near the outer surface, or cortex. Part of the outside of the kidney scars, while adjacent tissue survives, causing pitting of the surface (see Figure 10.19).

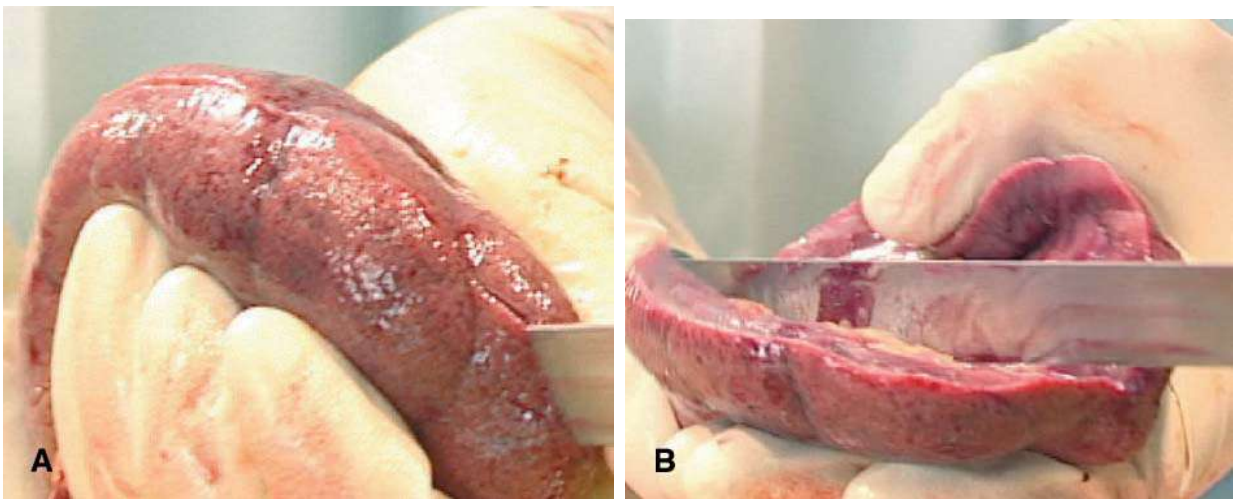
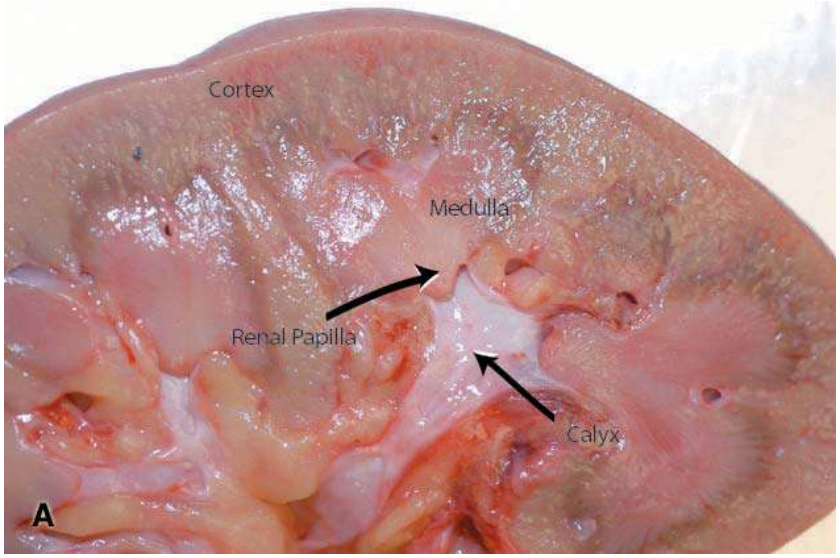


FIGURE 8.72 Dissection of the kidney. (A) The kidney is cut along the long axis, or "bivalved." **(B)** This type of cut allows a central view of the cortex (blood-filtering glomeruli), medulla (tubules), and calyces (urine-draining portions) of the kidney.



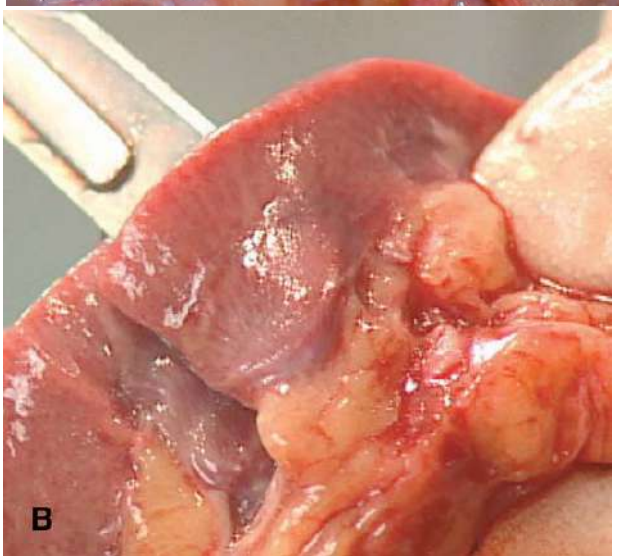


FIGURE 8.73 Cross section of the kidney. (A) The blood is filtered through the glomeruli, largely present in the cortex. In conditions such as diabetes and hypertension, these glomeruli can become sclerosed (scarred), and if significant numbers of glomeruli are sclerosed, renal failure can result. The medulla and papillary tip largely contain tubules, which drain the urine. Inflammation of this area is called pyelonephritis. **(B)** A section is taken of the outer cortex, medulla, and papillary tip for microscopic review.

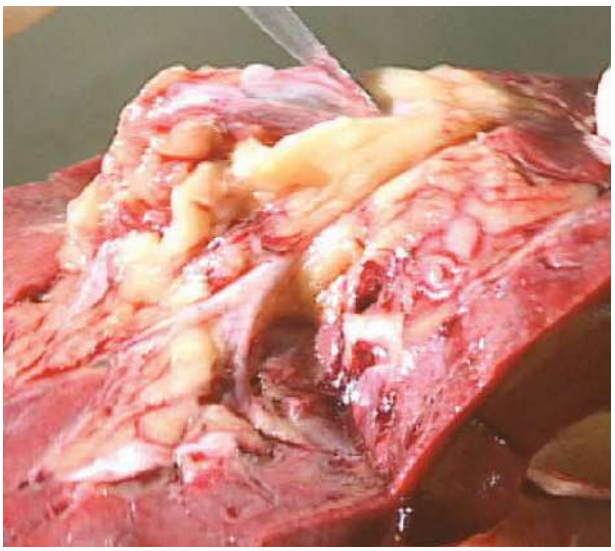


FIGURE 8.74 Opening the calyces. The papillary tips drain into a calyx, which, in turn, drains into the renal pelvis and then the ureter. The renal pelvis and calyces are opened. Tumors or stones can be found there.

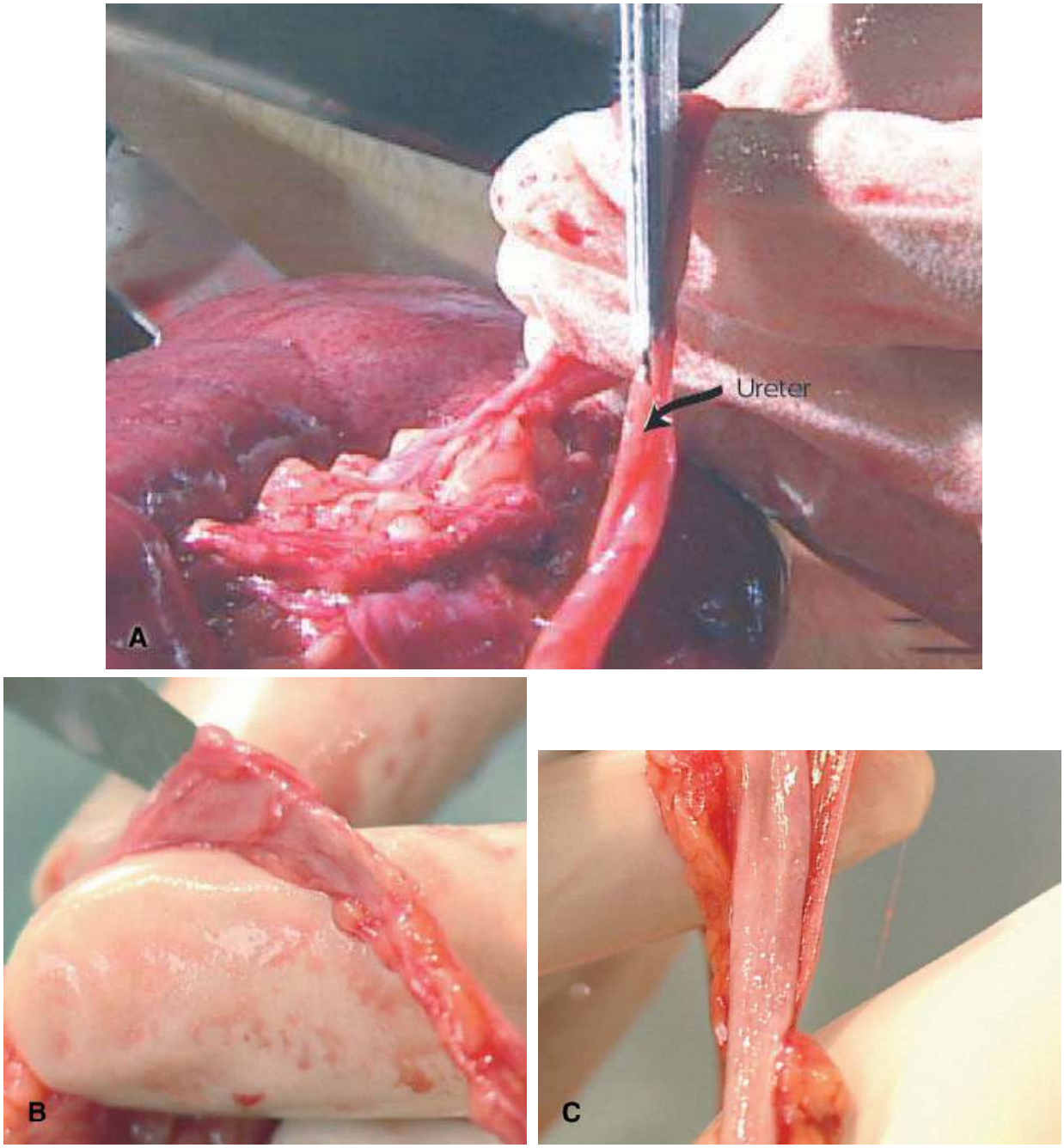


FIGURE 8.75 (A)–(C) Opening the ureter. The ureter is opened to look for stones, tumors, or inflammation.

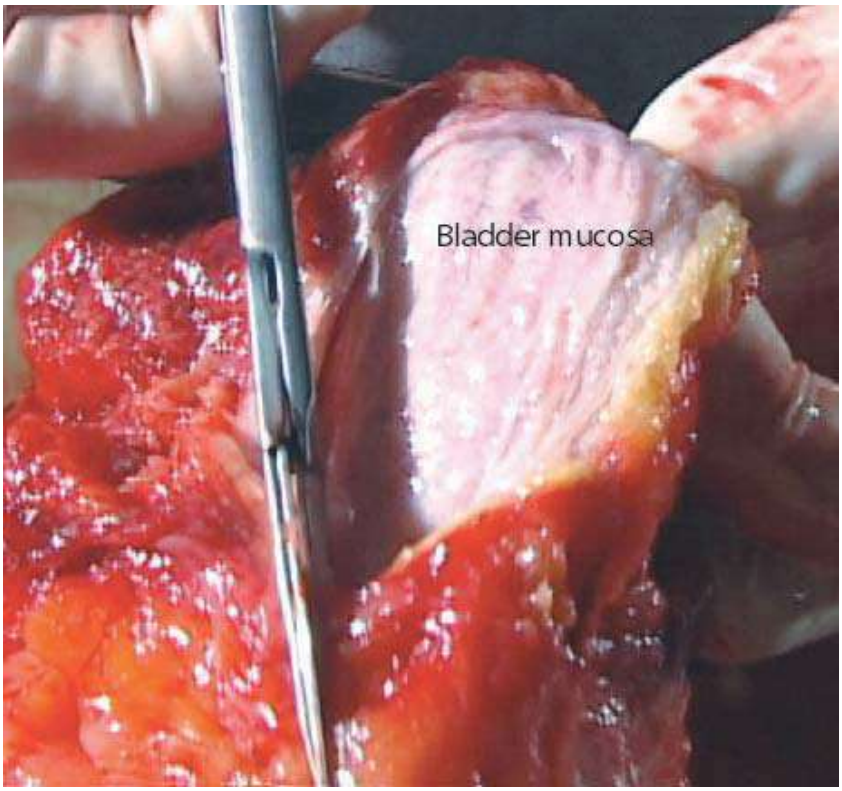


FIGURE 8.76 Opening the bladder. The dome of the bladder is opened, exposing the pink mucosa below. The urine has been removed.

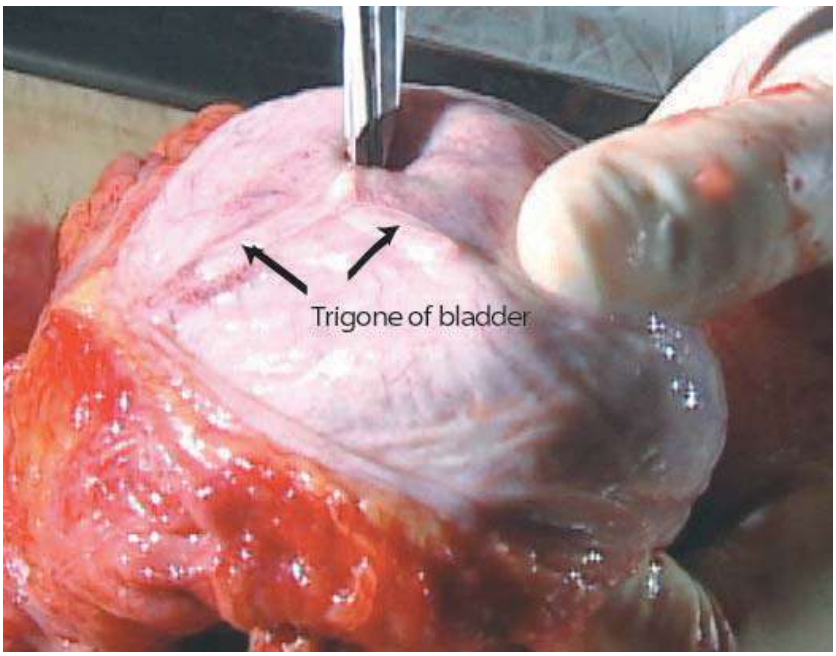


FIGURE 8.77 Bladder trigone. The scissors are in the urethra of the bladder. Note the triangular area, the trigone, just in front of the urethra (see arrows). The ureters empty into the bladder at the ends of the trigone.

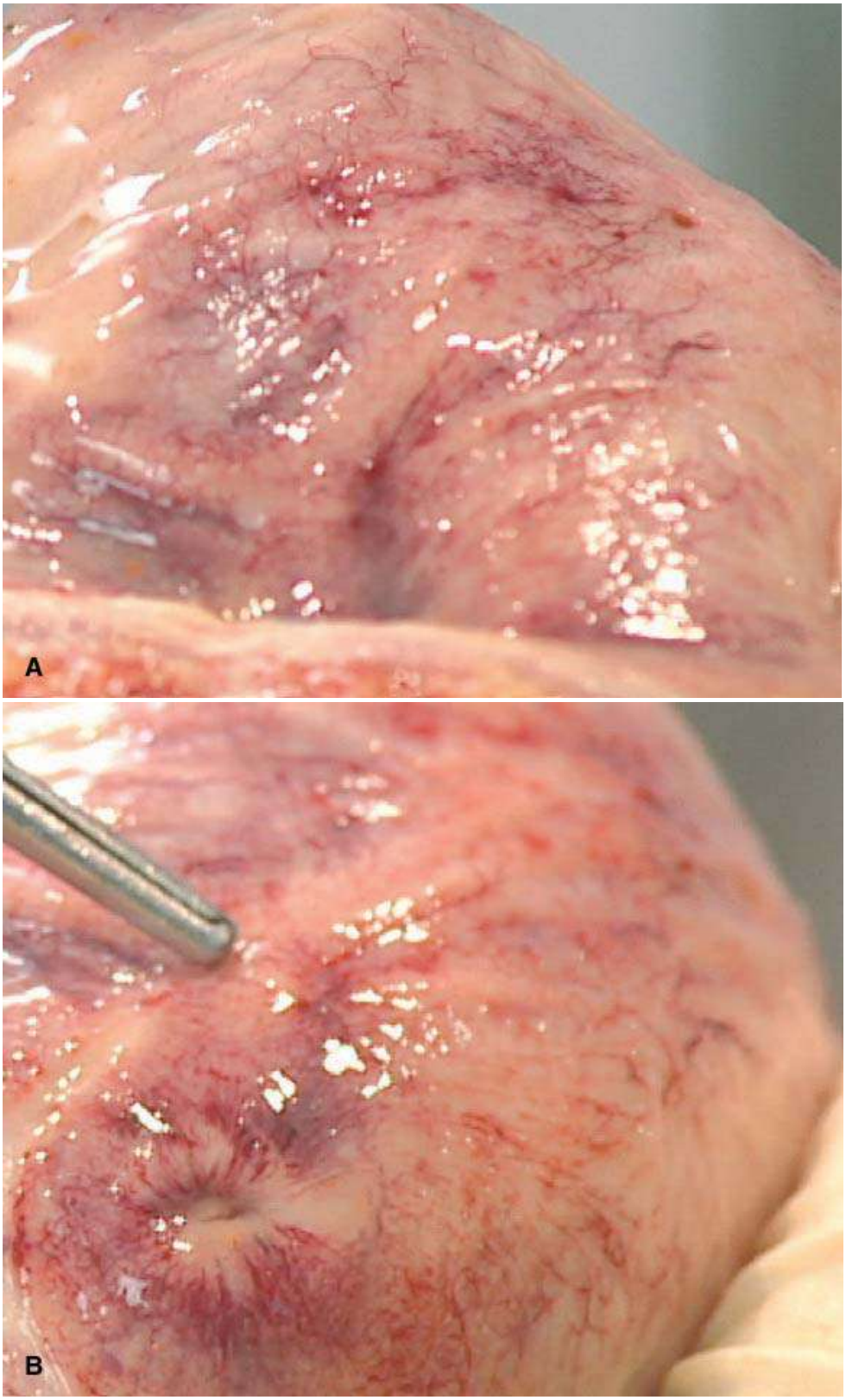


FIGURE 8.78 Bladder erythema and urethral opening. (A) This close-up of the bladder shows reddened mucosa, and multiple small blood vessels are prominent. This erythema can indicate inflammation. **(B)** The inflammation is particularly prominent near the urethral opening.

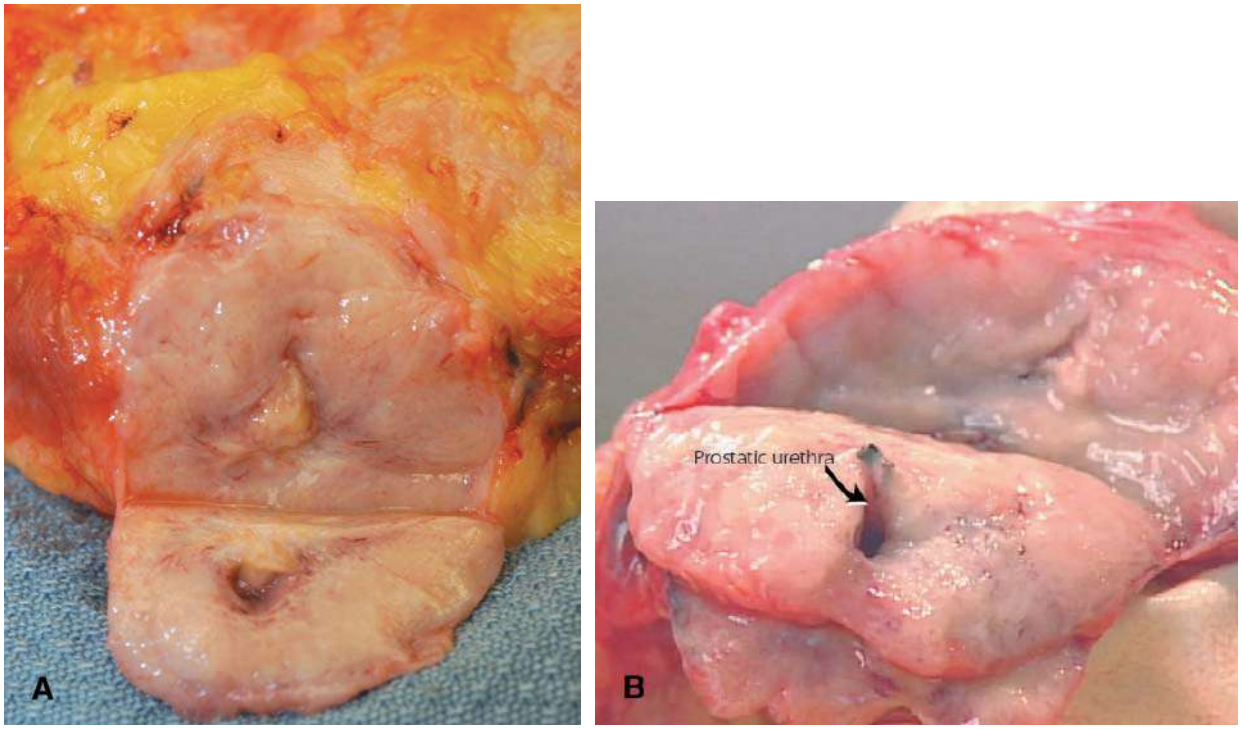


FIGURE 8.79 Prostate sectioning. (A) The base of the prostate is attached to the bladder. The prostate is serially sectioned. **(B)** The opening in the cut prostate is the portion of the urethra that courses through the prostate, or the prostatic urethra. The pathologist searches for carcinoma and inflammation.

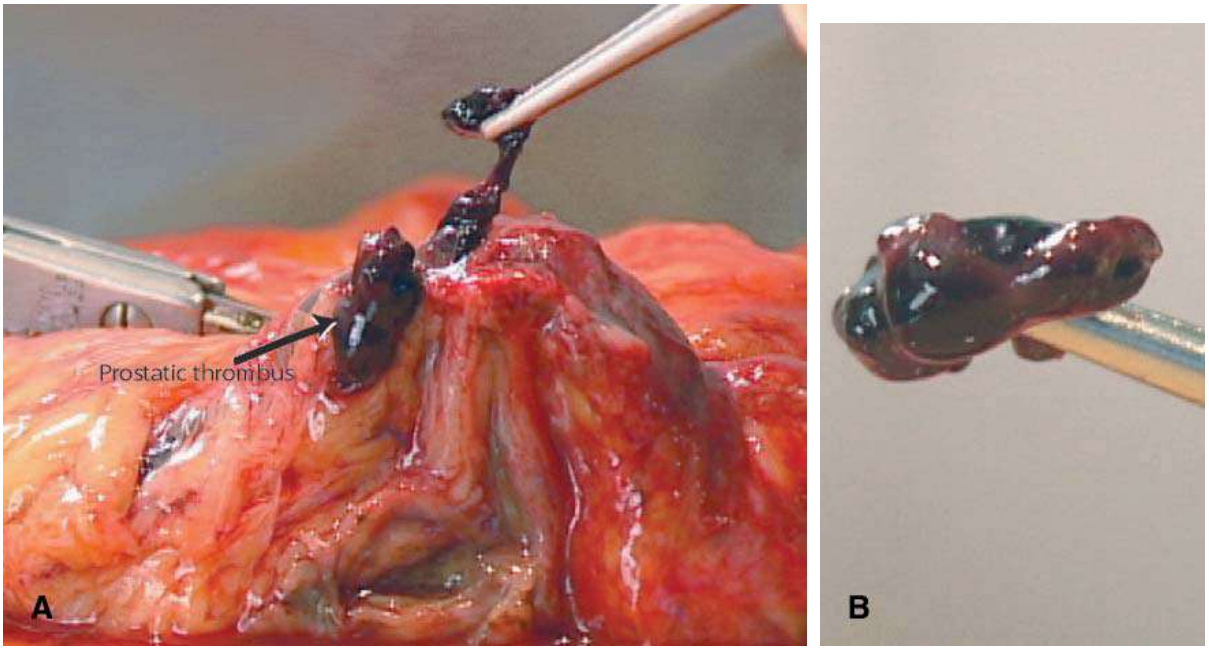


FIGURE 8.80 (A), (B) Prostatic thrombi. This prostate has a few thrombi which, when pulled out, retain their shapes. These are like premortem thrombi. This patient had lung cancer. Patients with many cancers are susceptible to thrombosis.

ESOPHAGUS AND STOMACH

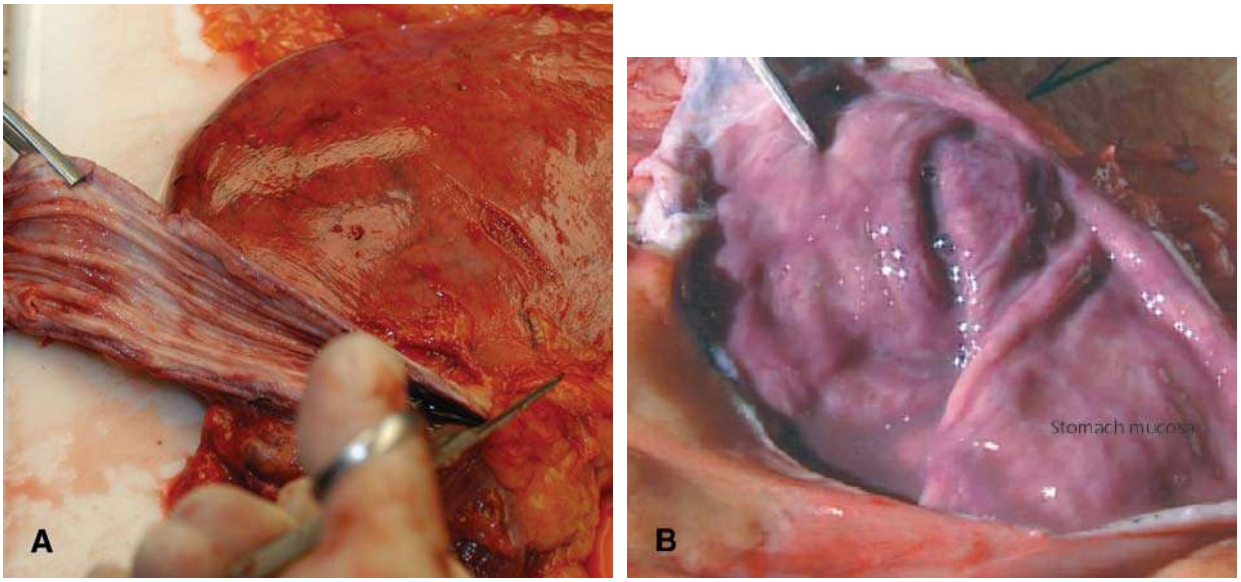


FIGURE 8.81 (A), (B) Opening of the esophagus and stomach. The esophagus is opened with the scissors to expose the stomach mucosa.

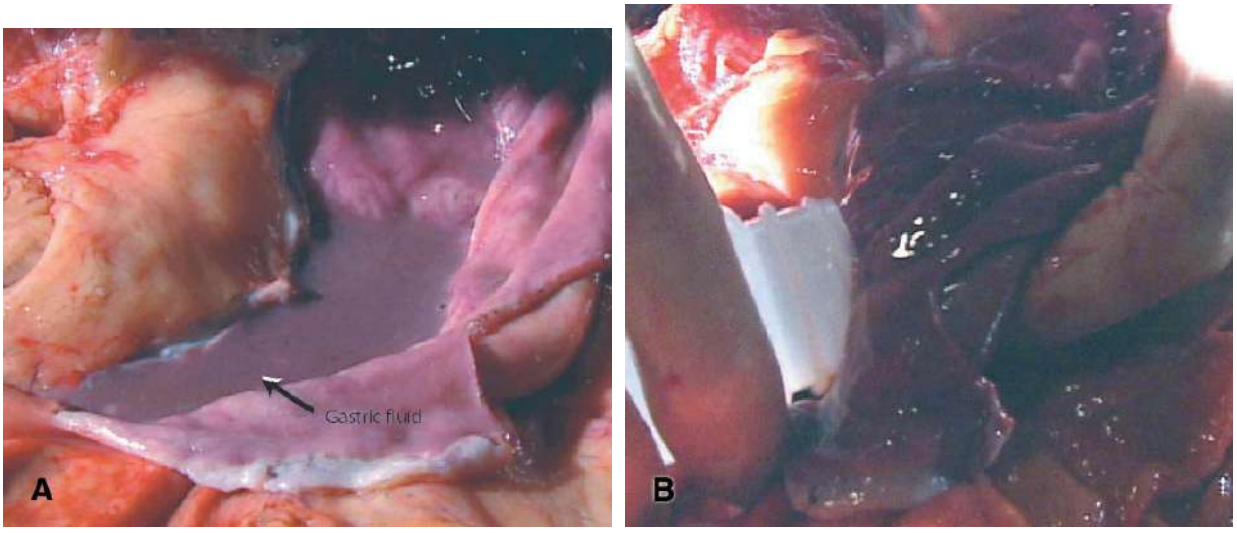


FIGURE 8.82 (A), (B) Obtaining gastric fluid. Gastric fluid is taken for analysis in a clean plastic container.

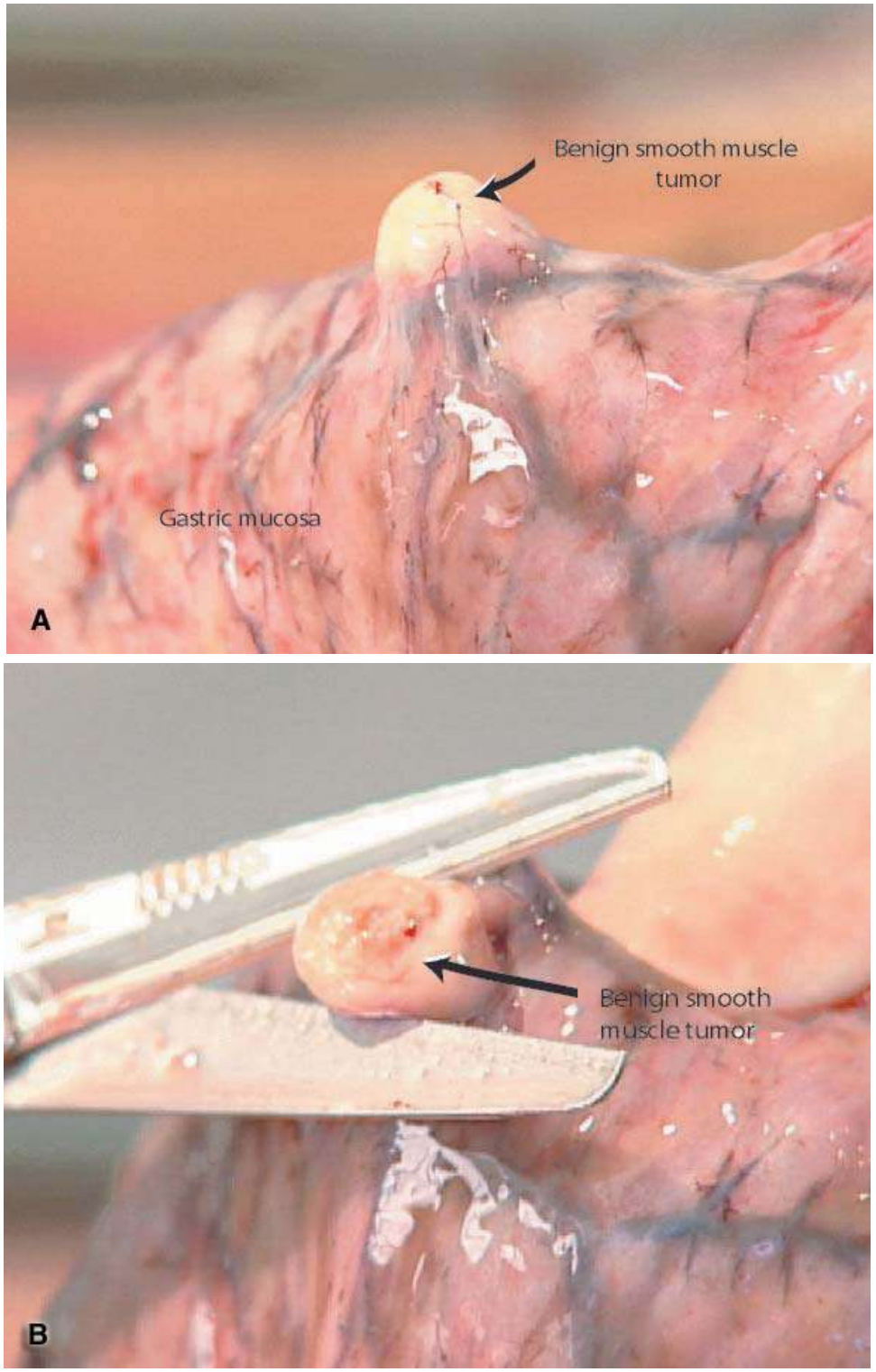


FIGURE 8.83 Benign stromal tumor of the stomach. (A) This nodule is seen in the mucosa. **(B)** Cutting the nodule shows that it is round and firm. This lesion is a benign gastrointestinal stromal tumor of smooth muscle origin.

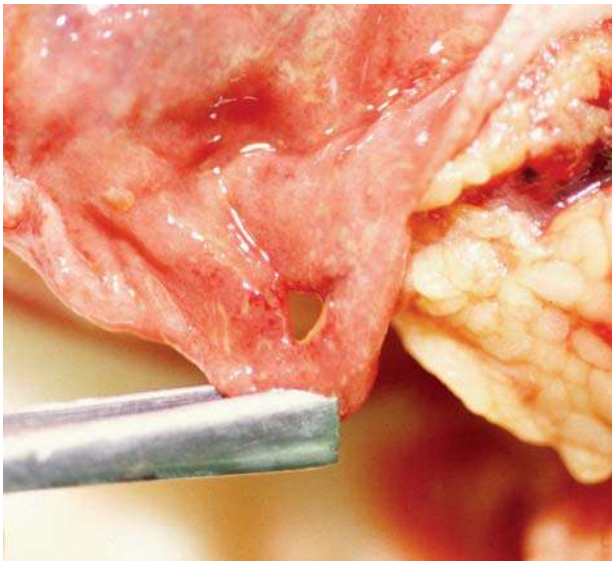
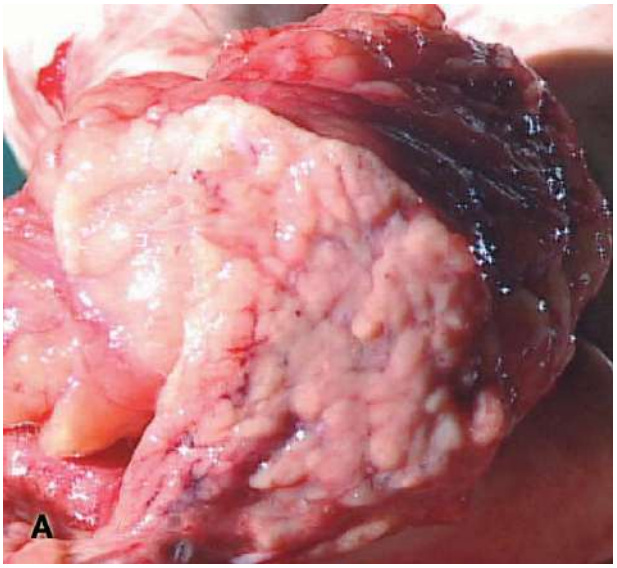


FIGURE 8.84 Perforated gastric ulcer. A gastric ulcer can be seen above the forceps. The ulcer has gone through the mucosa, muscular wall, and serosa (outer covering). The stomach contents then leaked into the peritoneal cavity, causing severe inflammation and infection (peritonitis). Prompt surgical repair of the stomach might have prevented the death.



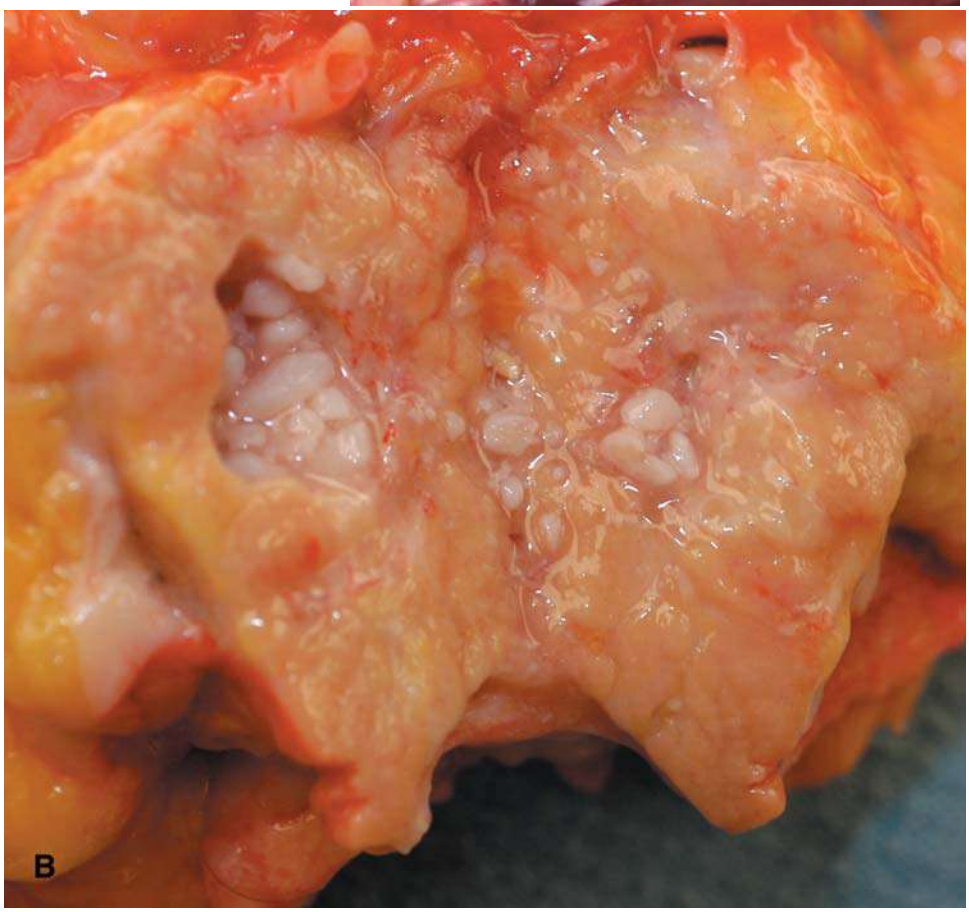


FIGURE 8.85 (A) Pancreas. The pancreas is sectioned to display the normal lobular appearance. The pancreas secretes enzymes used in digestion into the gastrointestinal tract and releases insulin, glucagon, and somatostatin into the blood. **(B) Chronic pancreatitis.** Pancreatitis is a condition commonly associated with alcohol abuse. In acute pancreatitis, the pancreas becomes inflamed and digestive enzymes can be released into the tissues, causing hemorrhage that sometimes results in shock or death. The figure depicts a hard, chronically inflamed pancreas with the formation of an inflammatory pseudocyst and calcification, as seen just left of center.

UTERUS AND OVARIES

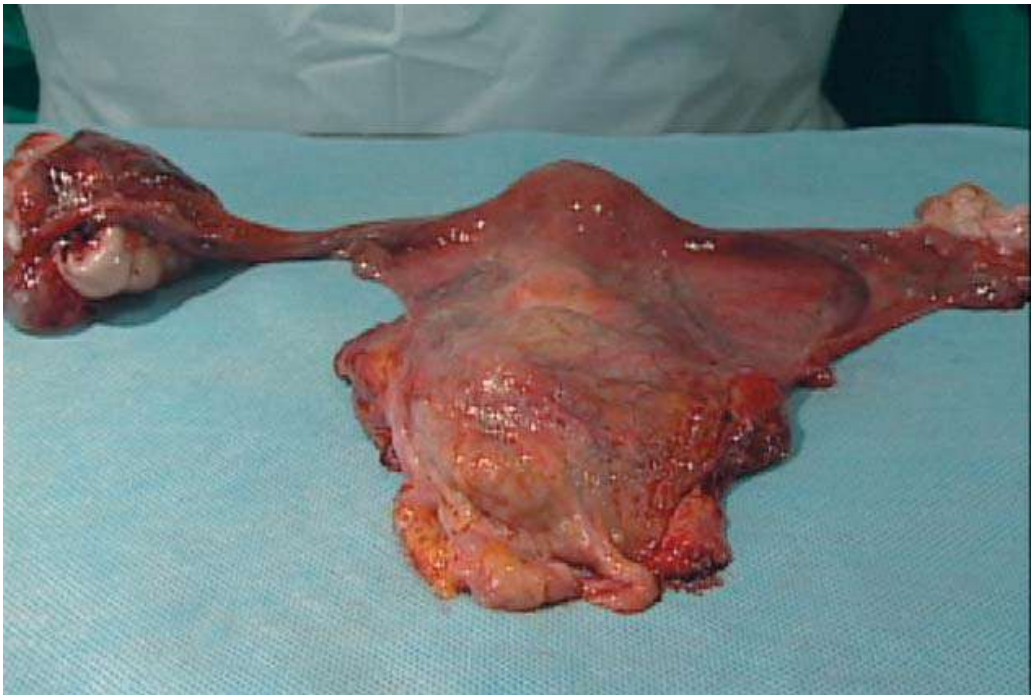


FIGURE 8.86 Uterus with ovaries and fallopian tubes. The uterus, ovaries, and fallopian tubes are displayed. Note the large ovary in the left corner of the figure (also seen in Figure 6.35A, Figure 6.35B, and Figure 7.46B).

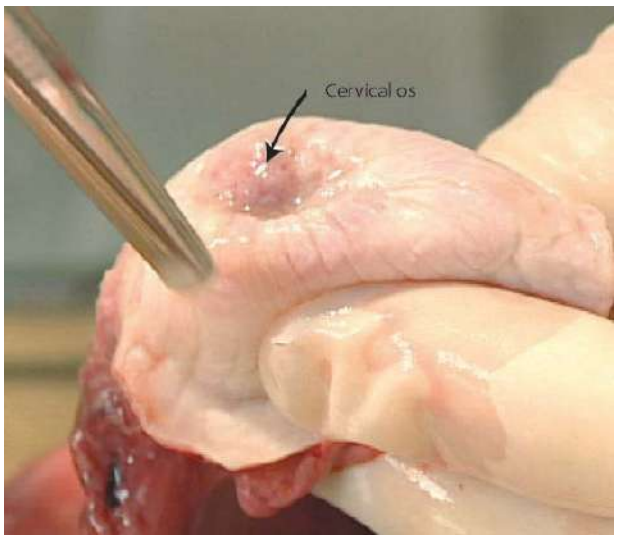


FIGURE 8.87 Cervix uteri. The cervix is displayed with the cervical opening or "os" in the center. This is the site where cervical dysplasia and carcinoma can occur.

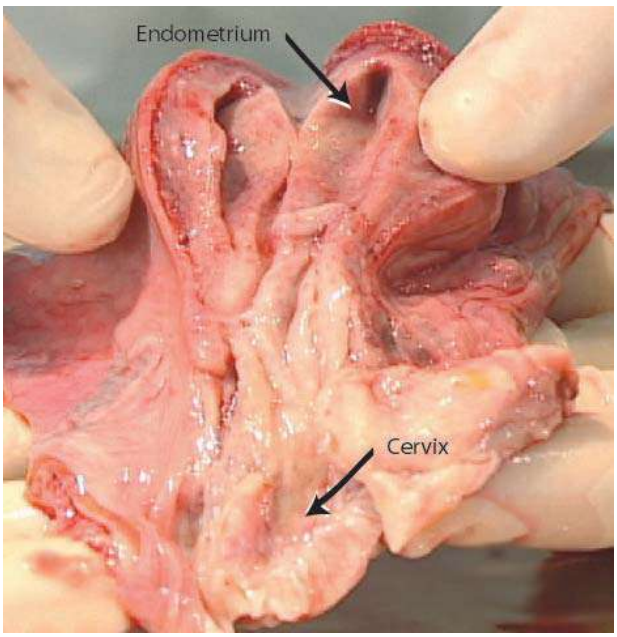


FIGURE 8.88 Uterus opened. The uterus is opened, exposing the endometrium. The endometrial cavity is examined for tumors. Presence or absence of pregnancy is noted. Samples can be taken from deceased fetal tissue to determine paternity.

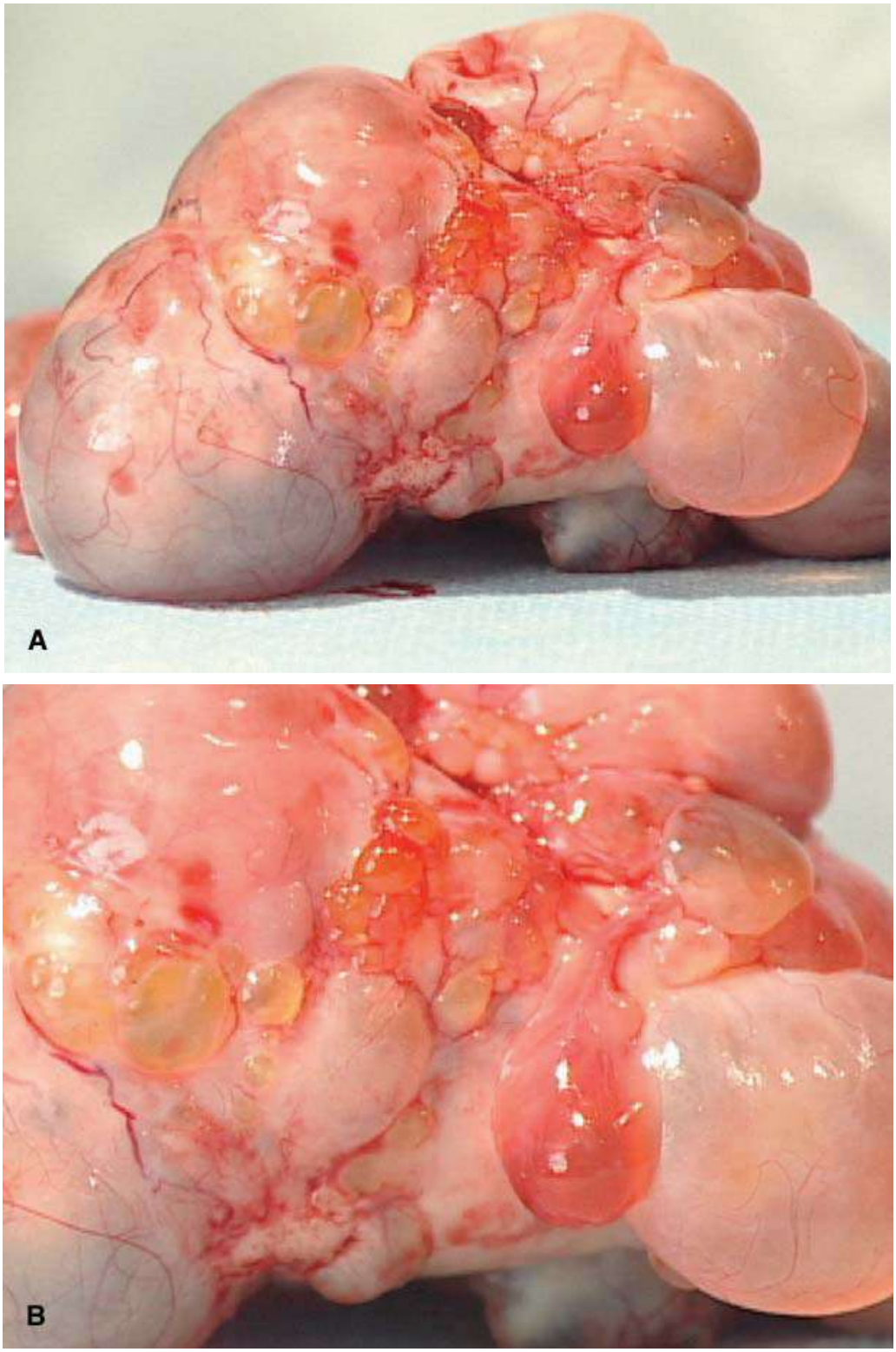


FIGURE 8.89 Ovarian serous cystadenoma. (A) This large cyst is about 8.0 cm (over 3 in.) in diameter and was likely to have caused pelvic pain and discomfort during life. **(B)** A close-up shows it to be a complex cyst with multiple smaller cysts attached to the larger cyst wall.

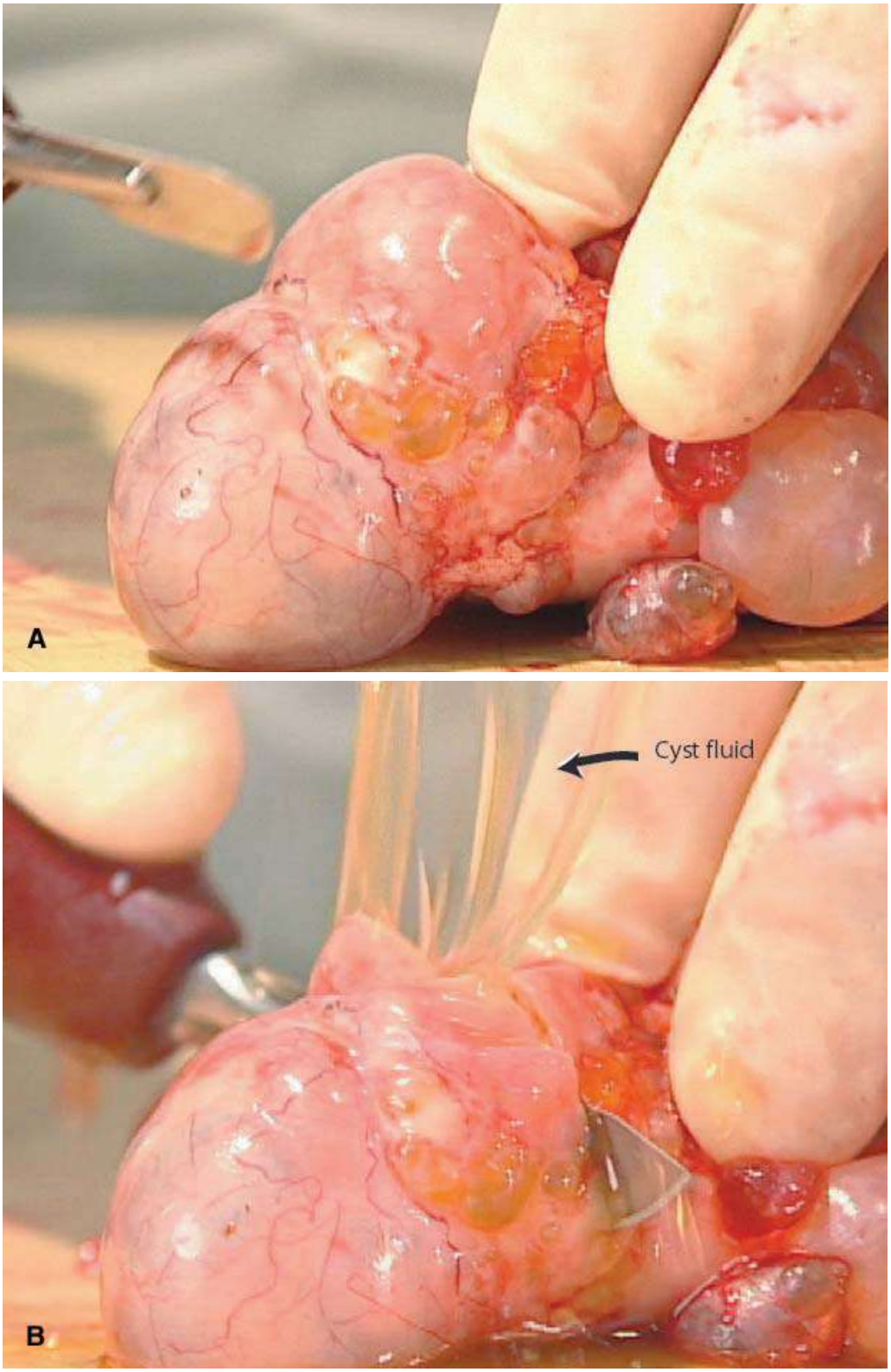


FIGURE 8.90 Dissecting ovarian serous cystadenoma. (A) The complex cyst has a smooth wall, although cavernous and complex. **(B)** When this cyst is cut, a yellow-colored fluid exudes from within. This fluid is under pressure and can squirt bystanders in the face (remember universal precautions). Microscopically, this cyst proved to be a serous cystadenoma, a benign tumor.

9 Examination of the Head, Skull, Brain, and Spinal Cord

All medical–legal examinations require the examination of the head, skull, and brain. This includes careful examination of the scalp, skull, and dura mater, the fibrous membrane that tethers the brain in place. Since the brain is the supreme organ system, giving orders to the rest of the body, no examination is complete without assessment of the brain and its coverings. At times this question is raised: "Why does the head need to be examined when the cause of death is obvious?" Aside from the reasons given in Chapter 2 for performing an autopsy when the cause of death is "obvious," additional reasons for examining the head are listed below:

- The scalp and hair can hide contusions and other injuries. Examining the scalp from the bottom side can make these injuries evident.
- Postmortem skull x-rays do not show small fractures.
- In the author's experience, computerized axial tomography (CAT) scans performed on the injured person can miss up to 10 cc of subdural blood.
- Unexpected tumors, old injuries, inflammation (e.g., meningitis), strokes, or other conditions are often found.
- A common injury seen in forensic pathology practice is the subdural hematoma. Often, the mechanism of sustaining a subdural hematoma is falling on a hard surface. Small blood vessels between the dural layer and the brain (bridging vessels) are severed, causing bleeding and hematoma. The brain must be examined for this injury.

SCALP EXAMINATION AND EXCISION OF THE BRAIN

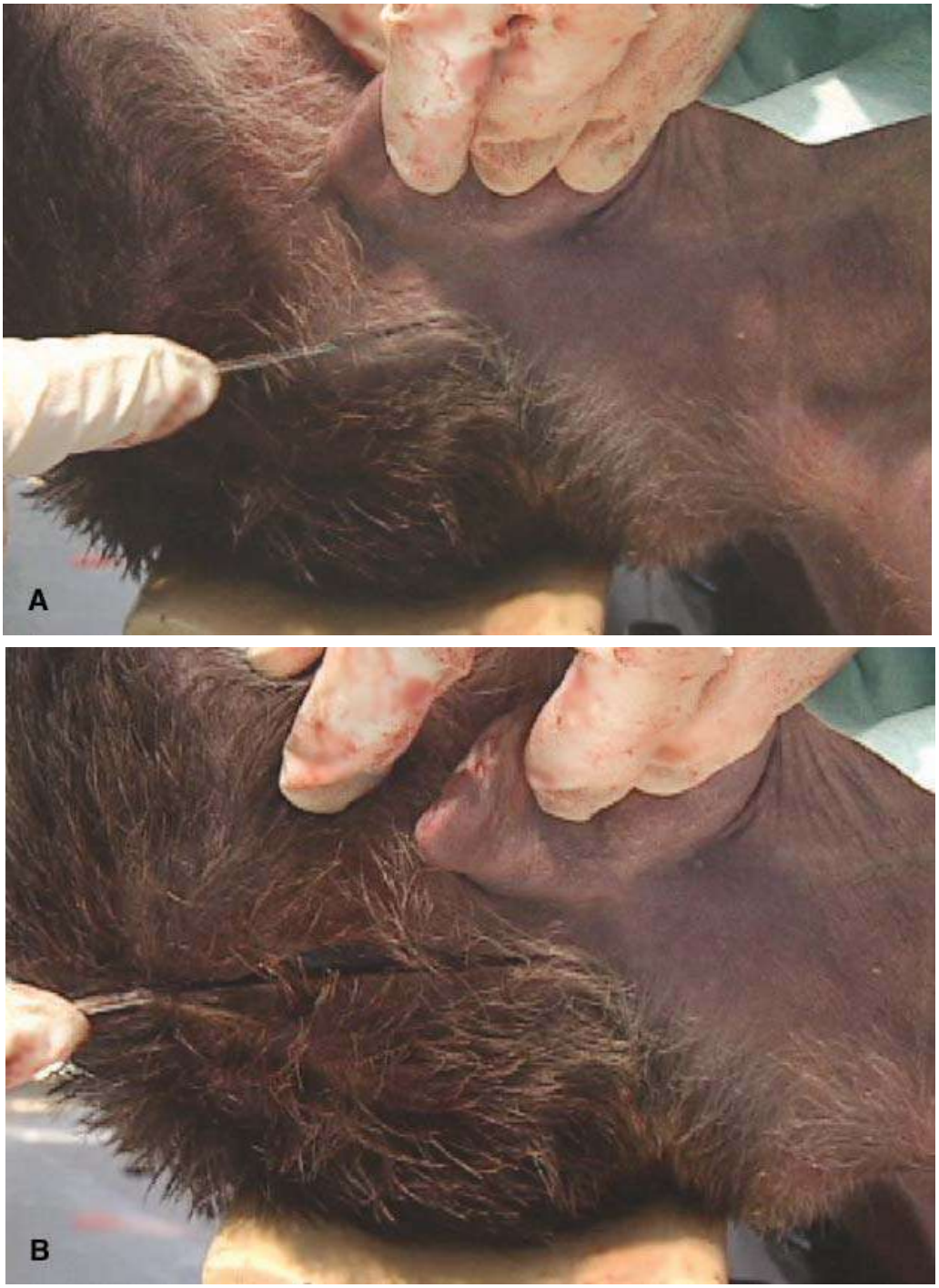


FIGURE 9.1 (A), (B) Incising the scalp. The scalp skin, subcutaneous tissue, and galea aponeurotica (thick fibrous layer) are cut down to the bone. The cut is started behind the ear, extended around the vertex (top of the head), and completed behind the other ear.

FIGURE 9.2 (A)–(C) Lifting the scalp and galea aponeurotica. The galeal layer is peeled from the periosteum of the bone.

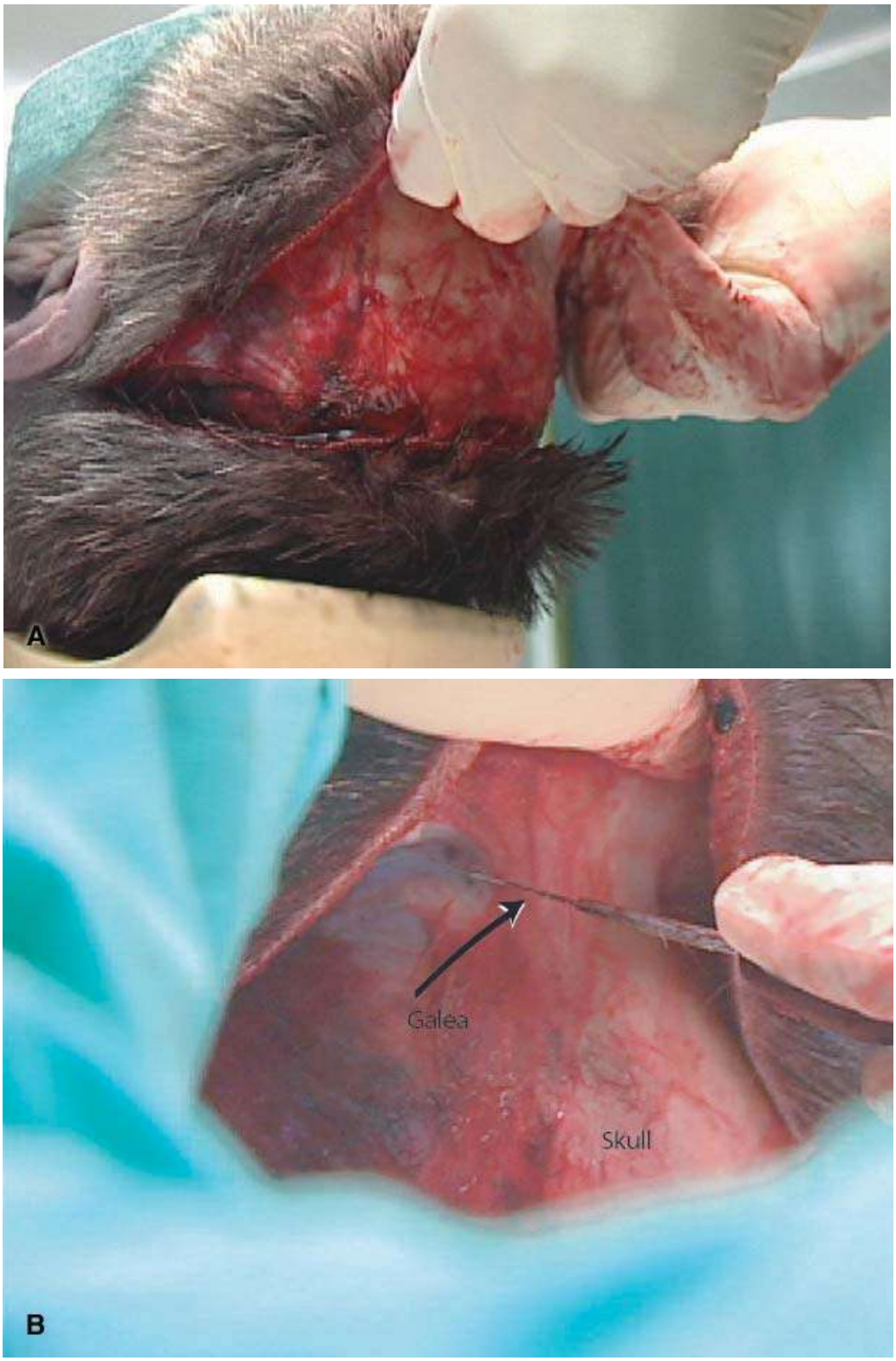


FIGURE 9.3 (A), (B) Reflecting the scalp back. Once the scalp is reflected back, a scalpel is used to dissect the attached fibrous soft tissue.

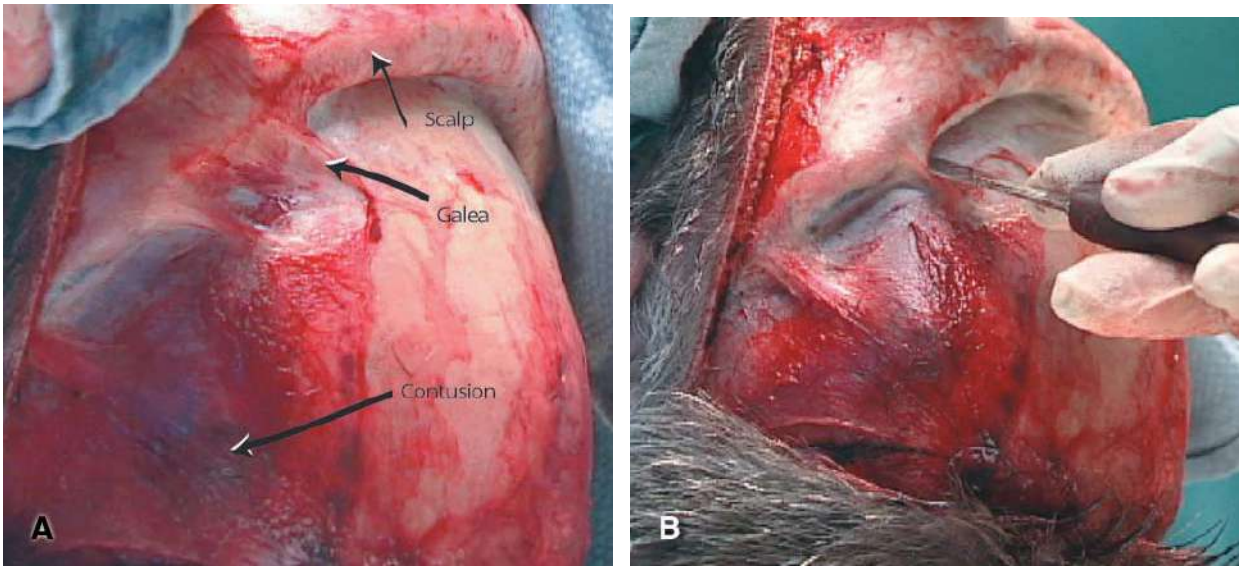


FIGURE 9.4 Scalp hemorrhage. (A) The scalp is reflected back as the remaining strands of soft tissue are cut. As the scalp is reflected back, a contusion is seen as a darkened area just below the scalpel. **(B)** The involved soft tissue is cut showing the underlying contusion hemorrhage.

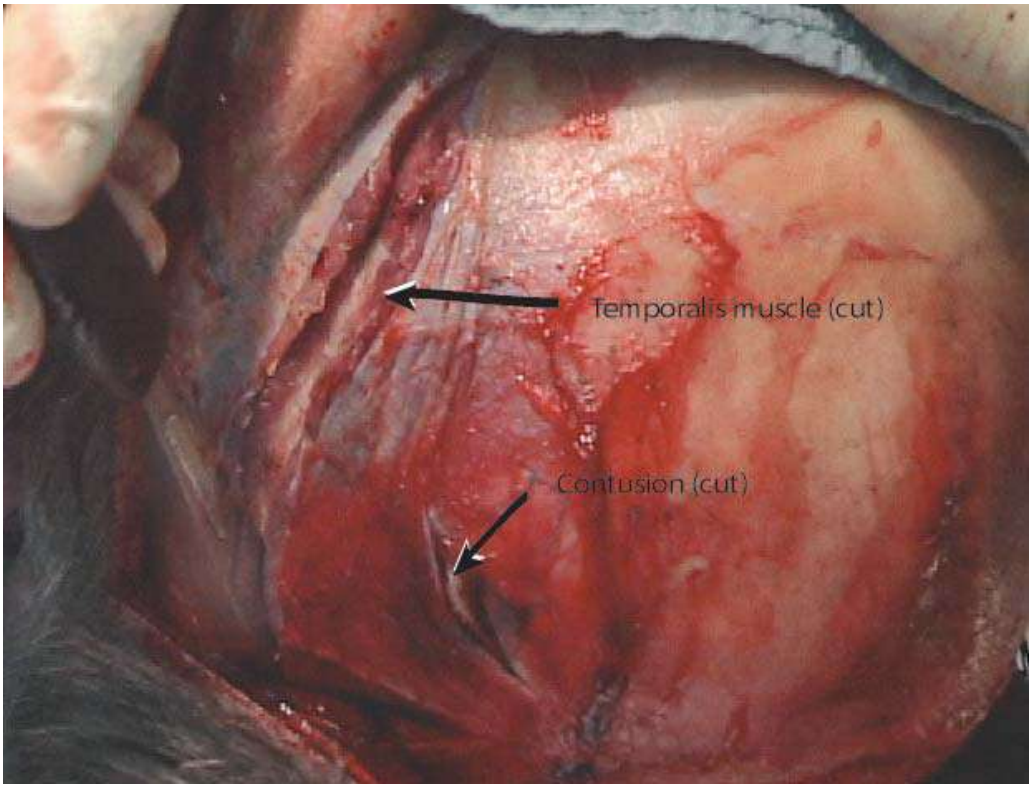


FIGURE 9.5 Cutting the temporalis muscle. The temporalis muscle is cut to prepare the skull for sawing. The saw blade does not cut soft tissue efficiently. A small contusion is seen at the arrow. This individual fell and then became unresponsive, having suffered a myocardial infarction.

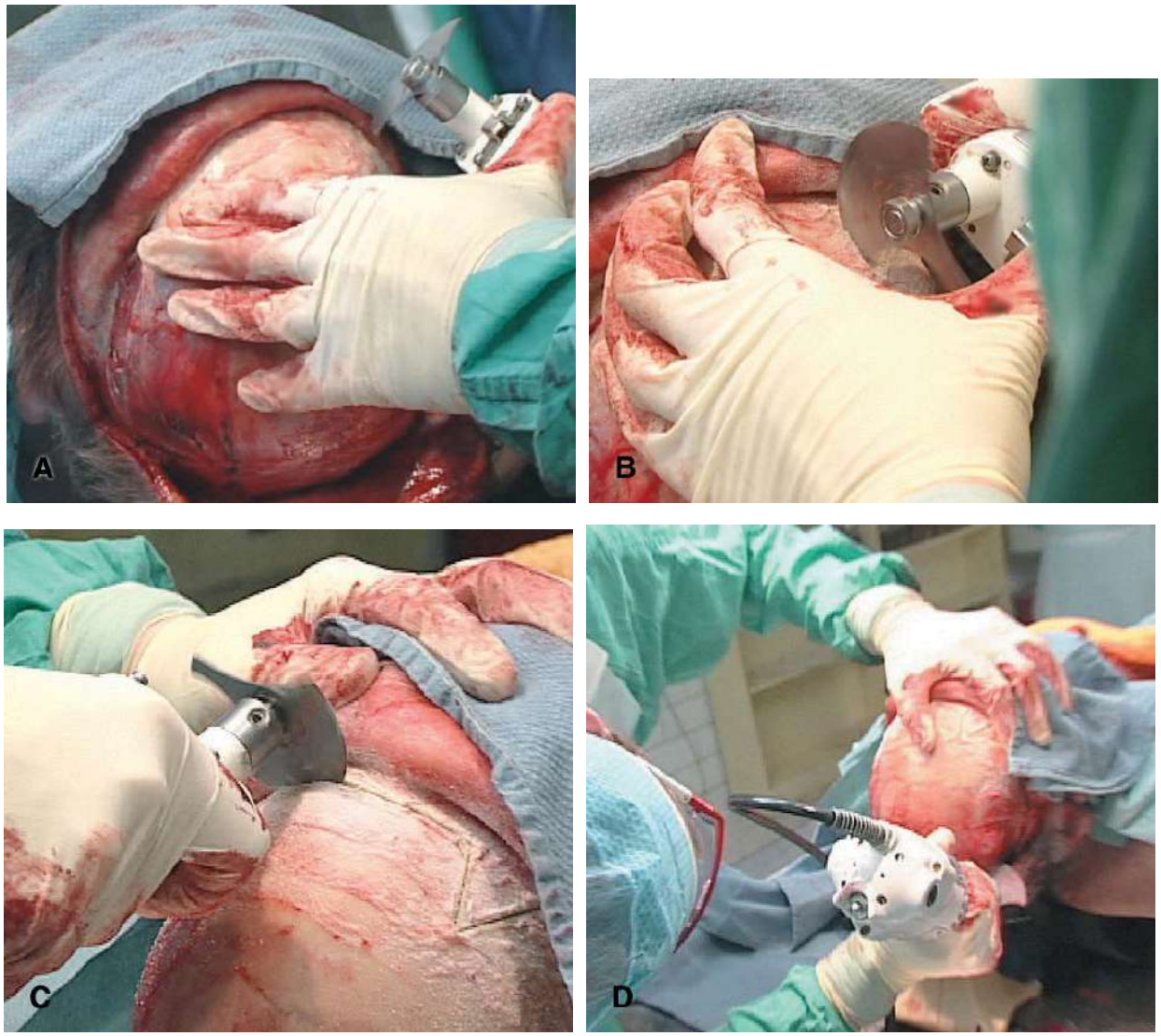


FIGURE 9.6 (A)–(D) Sawing the skull. The skull is sawed circumferentially. Care is taken not to saw too deeply, which could alter the brain surface.

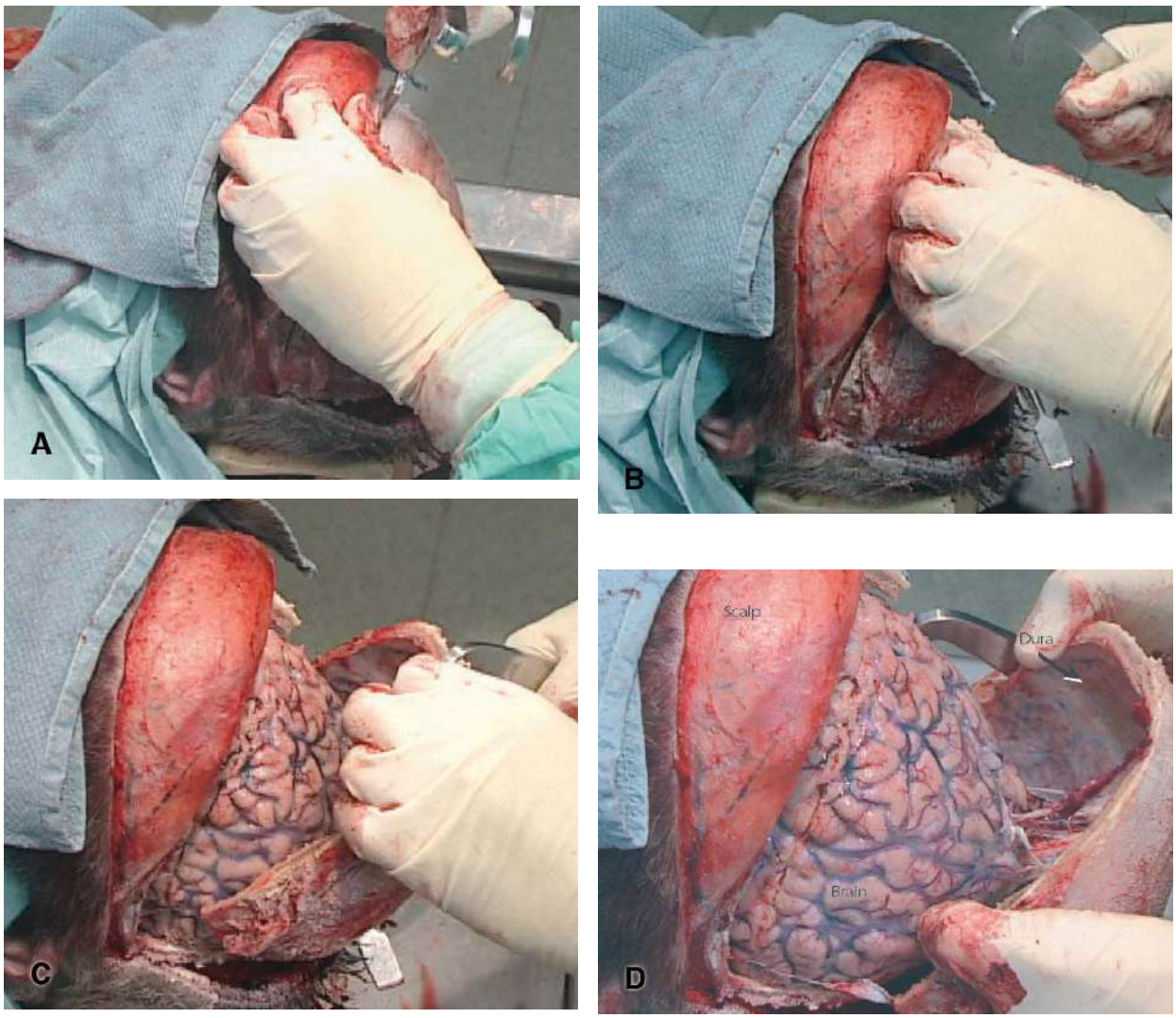


FIGURE 9.7 Opening the skull. (A)–(C) The opened portion of the skull (calvarium) is detached from the base. The pathologist is careful to look for hemorrhage above (epidural) or below (subdural) the dura mater. **(D)** The dura mater is the tough grey membrane outlined by the arrow.

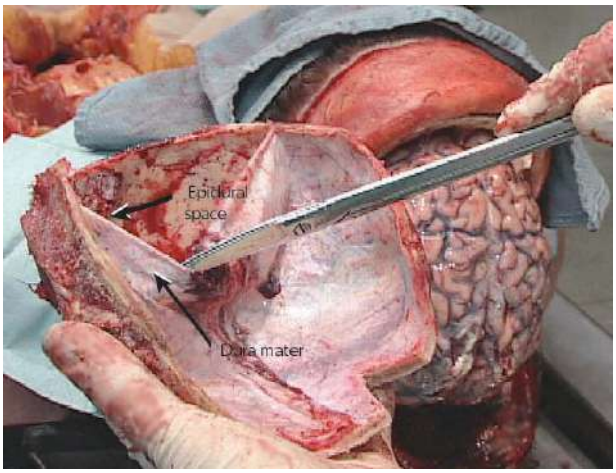
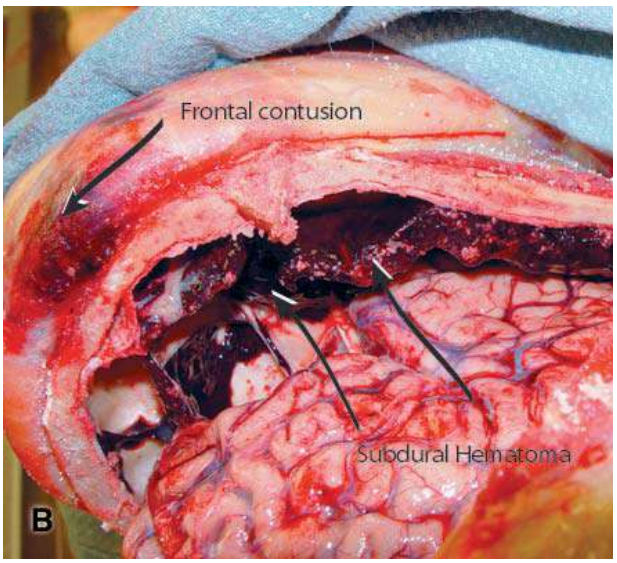
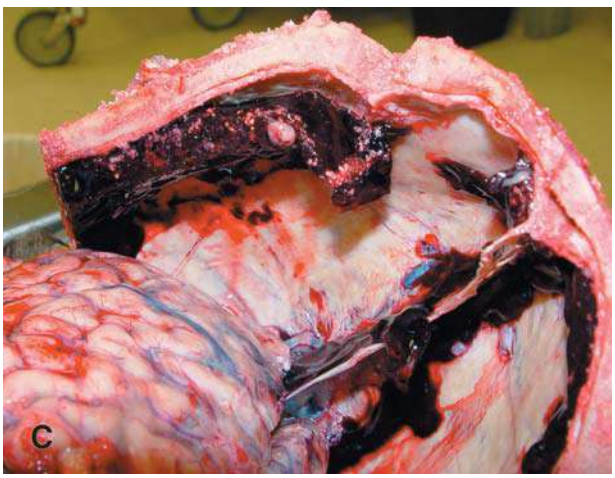


FIGURE 9.8 Examination of the dura. The top portion of the skull (calvarium) is examined here. The grey membrane is the dura mater. The dura mater has been partially stripped away from the skull. The tip of the scissors is in the epidural ("above the dura") region. The subdural space is the region below the dura.

FIGURE 9.9 (A)–(C) Subdural hematoma. A large hematoma can be seen between the brain and the dura, shown by the arrows. The pressure of the hematoma can affect the function of the brain, resulting in coma and death. This hematoma was produced by the deceased falling and striking his forehead. The small veins bridging the dura and the brain were torn during the fall, resulting in hemorrhage.





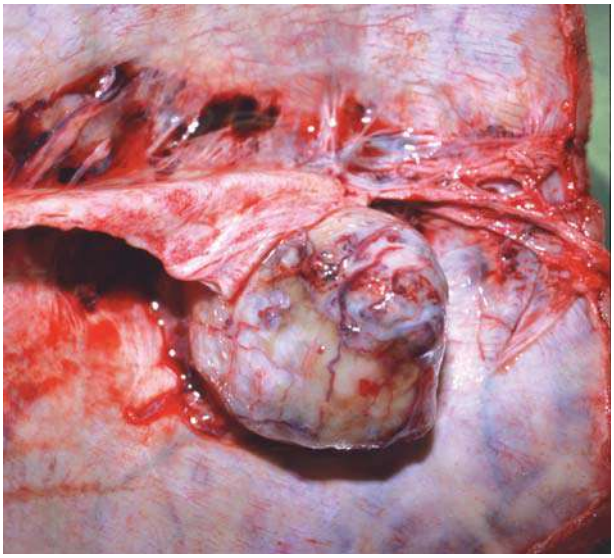
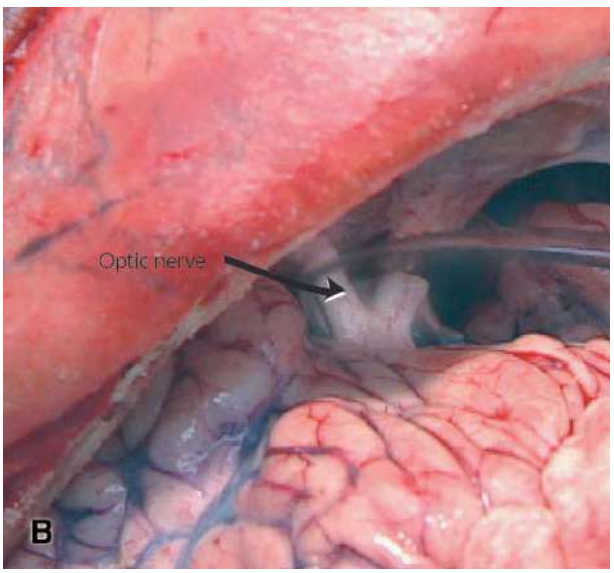
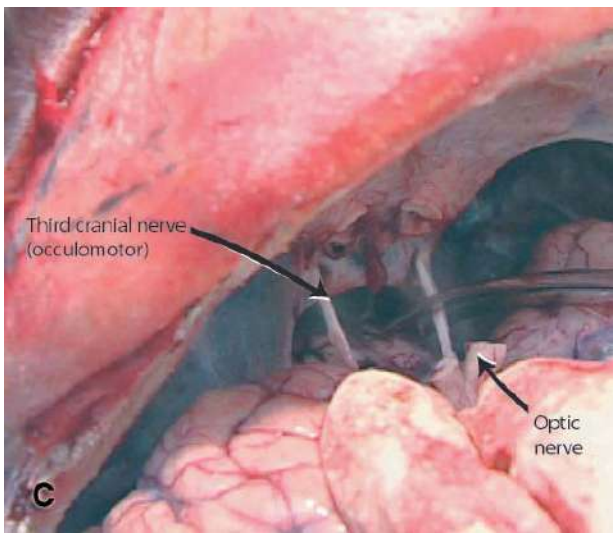


FIGURE 9.10 Meningioma. Tumors can be attached to the dura. The large, golf ball-sized tumor seen here is a benign tumor called a meningioma. Even though benign, the tumor occupies space in the closed area of the brain. As a result, the tumor can press on vital parts of the brain, causing symptoms related to these areas of the brain. Many of these tumors do not cause symptoms and are found incidentally at the autopsy.

FIGURE 9.11 Brain *in situ*. **(A)** The frontal lobe is just below the scissors. **(B)** The frontal lobe is pulled back to expose the optic nerves. **(C)** The optic nerves are cut, exposing smaller nerves, the third cranial nerves (oculomotor), which are also cut.





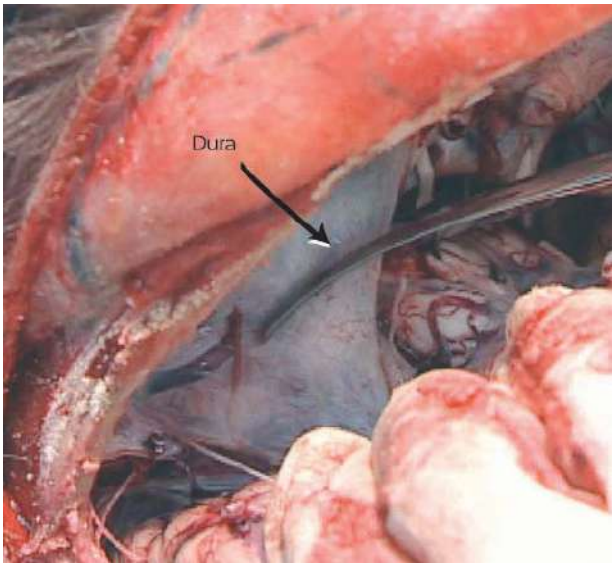


FIGURE 9.12 Cutting the tentorium cerebelli. The dural membrane covering the cerebellum is cut to reveal the cerebellum below. The cerebellum is an area of the brain dealing with coordination of muscles and balance.

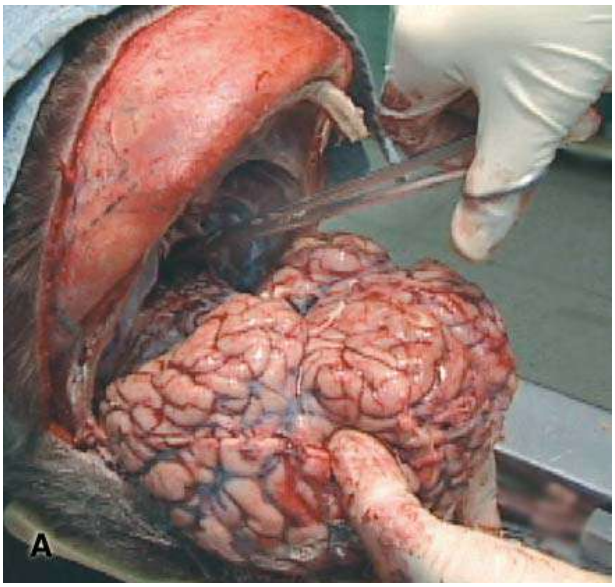
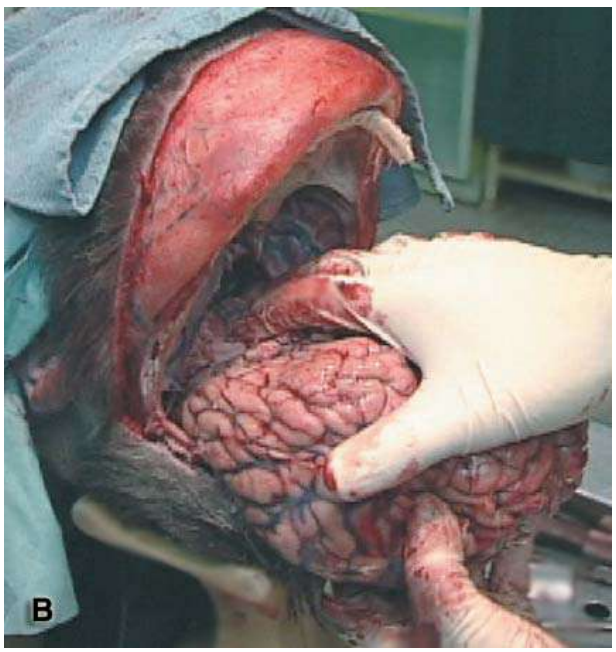
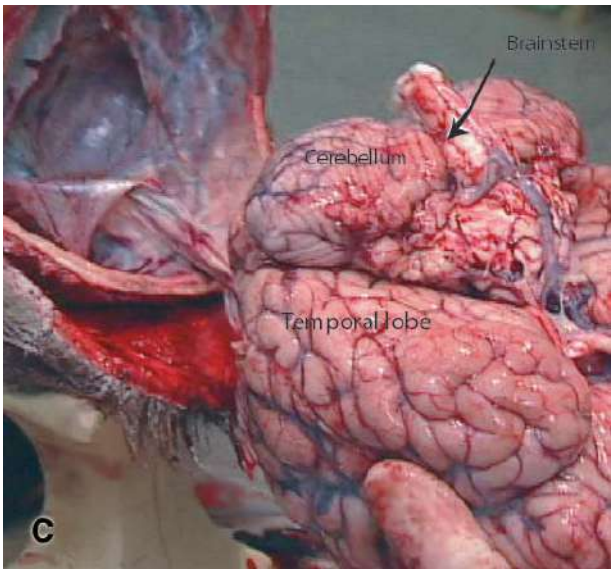


FIGURE 9.13 (A)–(C) Removing the brain. The brainstem is cut and the brain is removed.





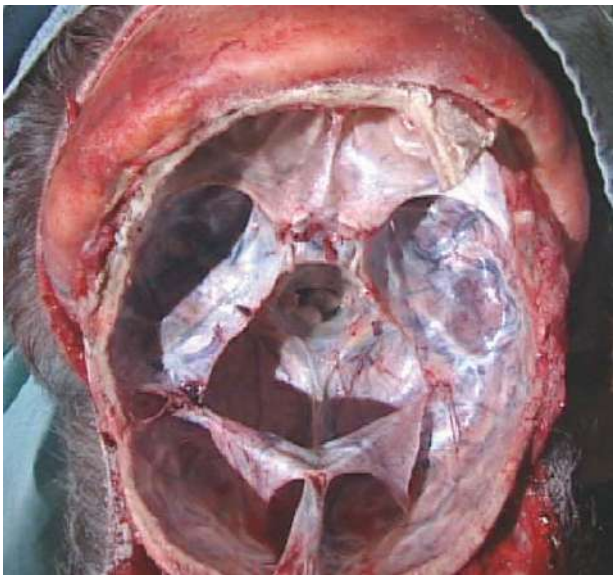


FIGURE 9.14 Base of the skull. The skull is seen with the dura attached. The dura is then peeled off to check the base of the skull for fractures. Direct examination of the base of the skull for fractures is often more effective than radiographs.

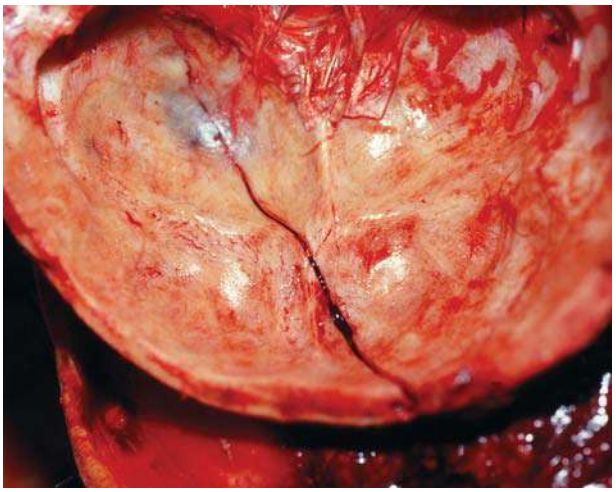


FIGURE 9.15 Fracture of the skull, occipital bone. The dura has been pulled from the base of the skull, revealing a fracture. This victim slipped, fell backward, and struck the head, suffering this fracture, subdural hemorrhage, brain swelling, and then death.

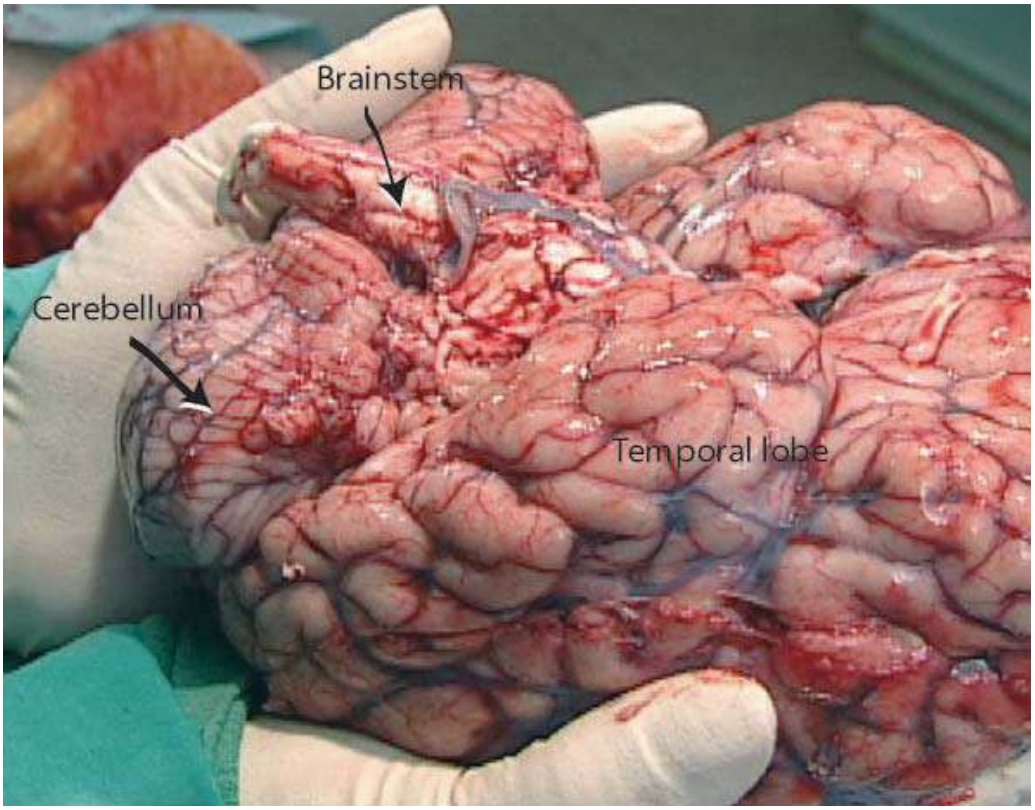


FIGURE 9.16 Brain upon removal. The exterior of the brain is examined, and the brain is weighed. Brain weight is generally 1.4% of body weight, or about 1100 g (2.4 lb) in a 77-kg (170-lb) person.

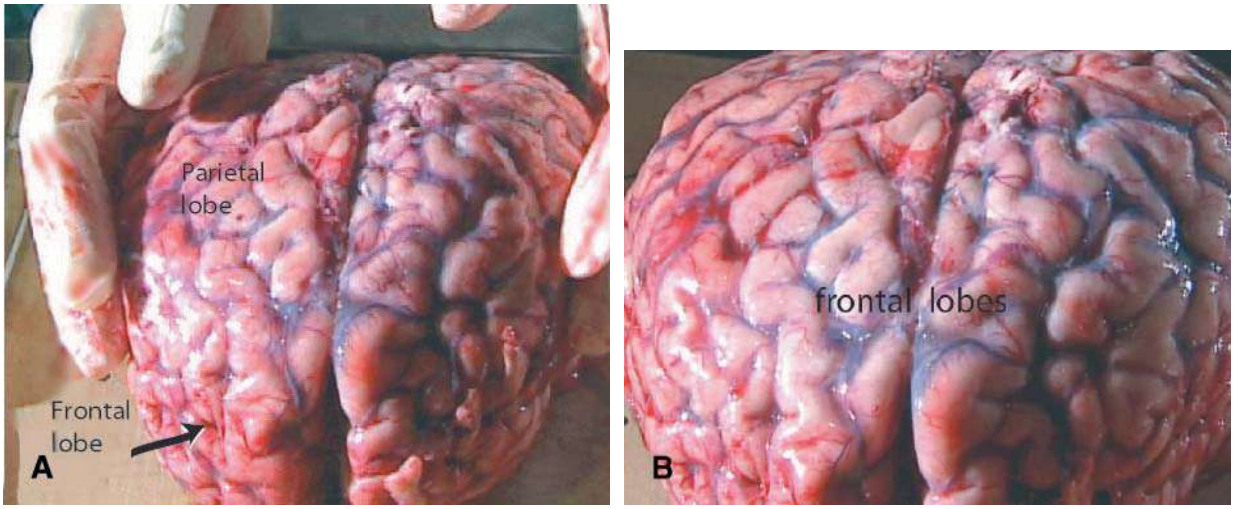


FIGURE 9.17 (A), (B) Frontal and parietal lobes of the brain. This view of the convexity of the brain shows the many convolutions of the cortex. The peaks are known as gyri and the grooves are sulci. Note the many blood vessels; the brain is very vascular.

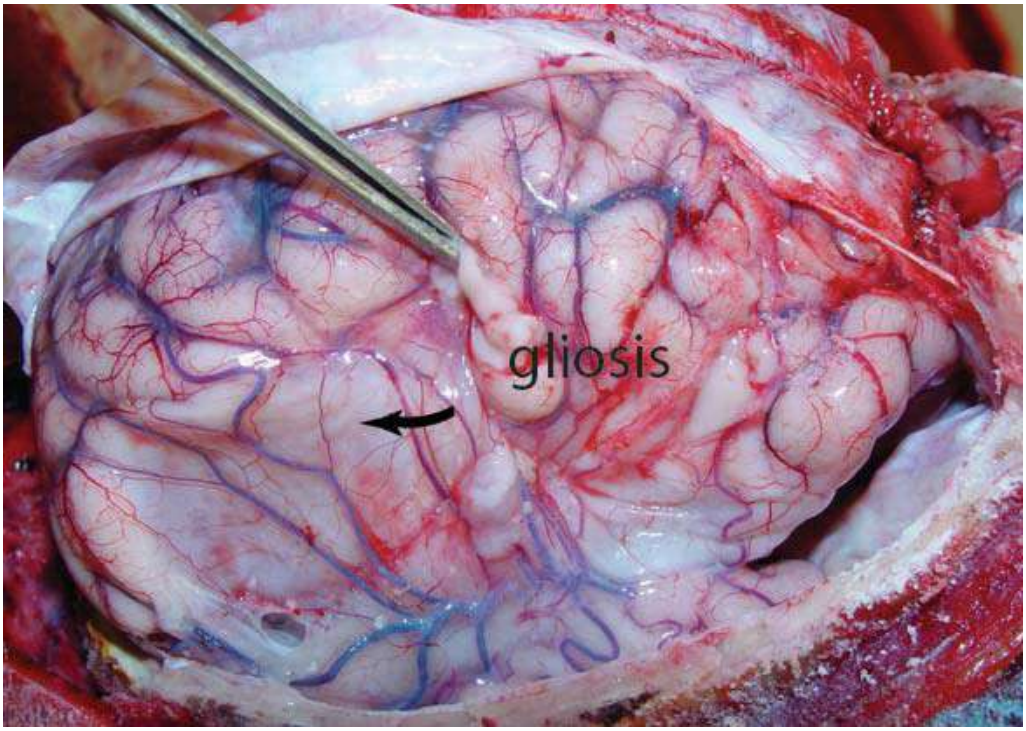


FIGURE 9.18 Gliosis. Injuries of the brain, such as scars or strokes, form a scarring called gliosis. The cortex of this brain is collapsed due to previous injury from a stroke.

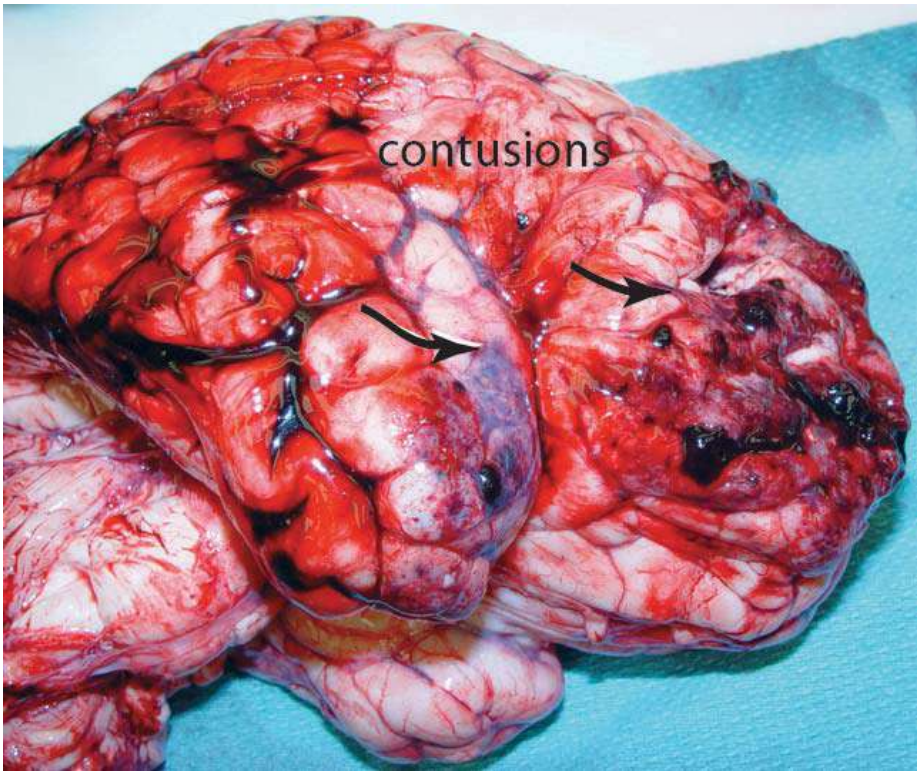


FIGURE 9.19 Contusions of the brain. The dark hemorrhagic areas of the brain display severe contusion from a motor vehicle crash. This contusion caused severe, fatal brain edema.

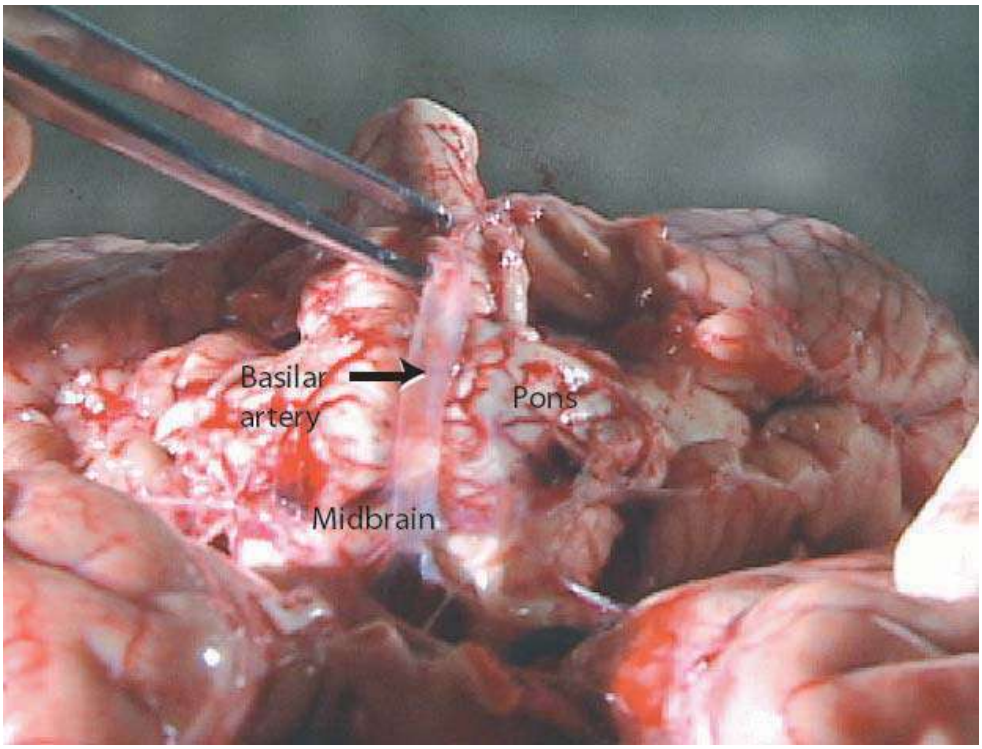


FIGURE 9.20 Vertebral basilar arteries at the brainstem. The arteries at the base of the brain are examined for atherosclerois and anomalies. Significant blockage of these arteries can cause infarction of the brain, known as a stroke. Aneurisms, or "outpouchings," of the wall (saccular or berry aneurisms) can rupture, causing serious, commonly fatal, hemorrhage.

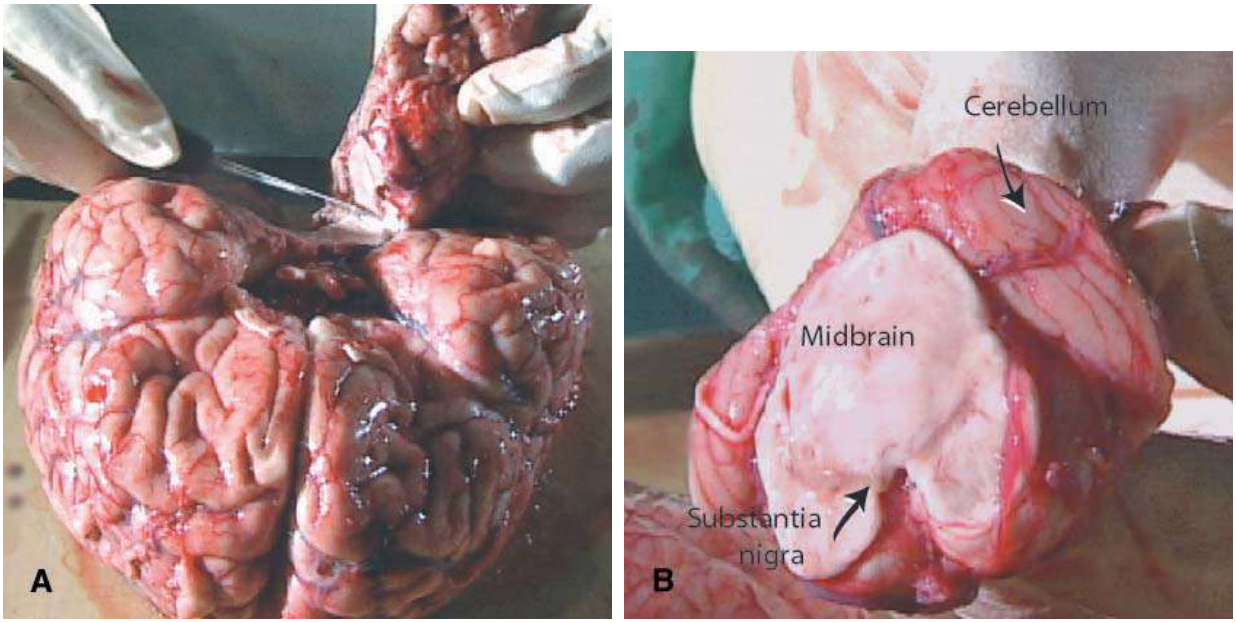


FIGURE 9.21 Examination of the midbrain. (A) The midbrain, brainstem, and cerebellum are removed. **(B)** This is a section of normal-appearing midbrain. Many vital functions are associated with this area.

FIGURE 9.22 Brainstem with hemorrhage. Hemorrhage in the midbrain, as seen here, is almost always quickly fatal.

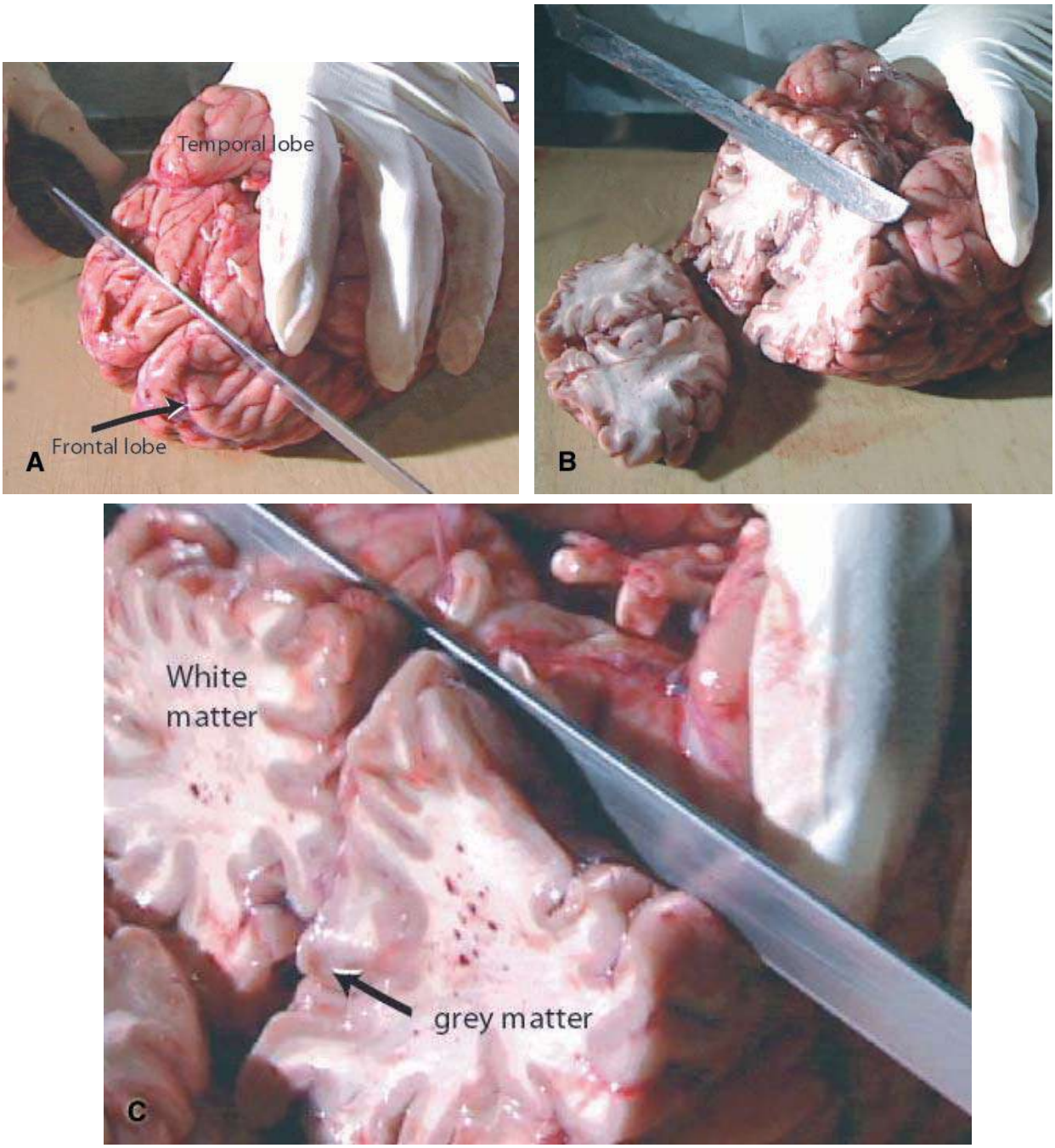
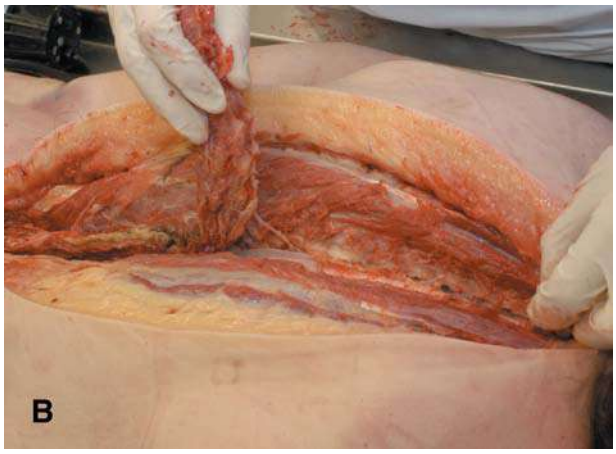
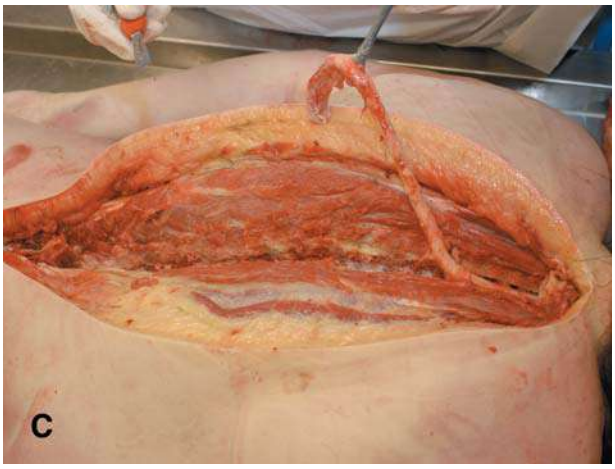


FIGURE 9.23 (A)–(C) Serial cutting of the brain. There are various methods for cutting the brain. One common method is cutting the brain perpendicular to the long axis, as shown here. The brain can be cut in the fresh state or, preferably, after fixation for about 1 month in formaldehyde. Hemorrhage and tumors are common findings.

FIGURE 9.24 Cerebral infarct. This section of brain shows hemorrhage in the white matter. This patient had a history of hypertension.

FIGURE 9.25 (A)–(C) Spinal cord examination. When spinal cord pathology or injuries are suspected, the cord is removed. The posterior method is depicted here. After exposing the spinal cord, the vertebral arches are cut up and down the spine, revealing the spinal cord below. The spinal cord is carefully removed. After removal of the spinal cord, the area is sewn together and sealed.





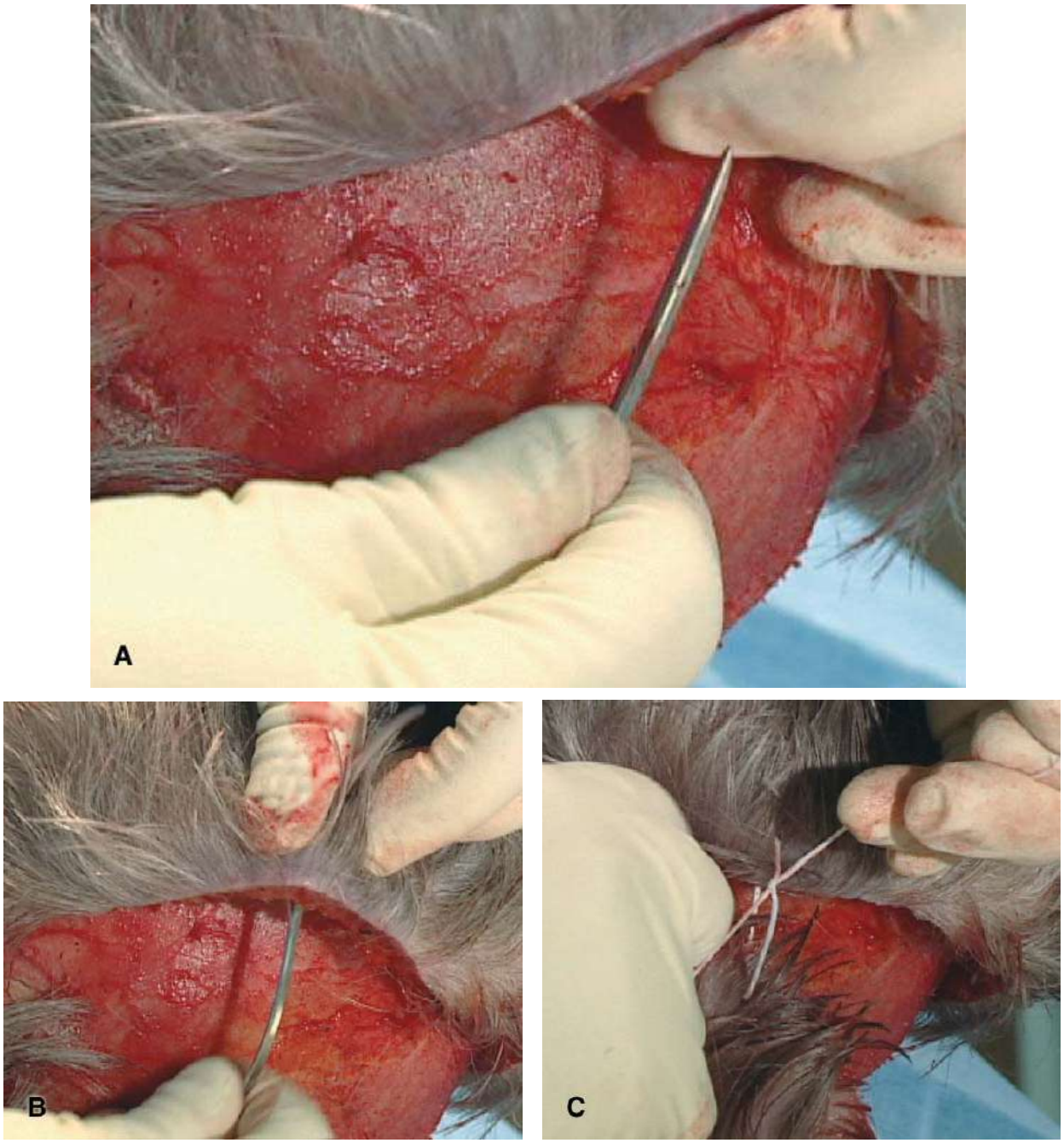


FIGURE 9.26 (A)–(C) Stitching the scalp. The skull is held together by stitching the scalp. The funeral director will tightly affix or glue the skull together. The incision will be hidden from view at the funeral.

10 Microscopic Examination

Making diagnoses using the microscope is the trade of most pathologists. If one has a breast biopsy or a tumor removed, the pathologist classifies the tumor and diagnoses the lesion as benign or malignant. The skill of making microscopic diagnoses is very useful in postmortem exams because the microscopic examination is used to support the gross findings in an autopsy.

The gross examination portion of the autopsy usually yields the cause and manner of death. That is, the pathologist normally walks away from the autopsy suite with a good idea of the major diagnoses and the cause and manner of death. For example, the pathologist does not need to look at microscopic slides to diagnose a contact gunshot wound of the head. However, he or she will take sections of the wound to confirm, microscopically, that there is heavy soot deposition in the wound. So the microscopic exam serves, in most cases, to supplement the autopsy.

In some cases, microscopic examination is pivotal in making a major diagnosis and in determining the cause and manner of death. These diagnoses include:

- Malignant tumors — lung, colon, and breast carcinomas; lymphomas
- Heart — myocarditis; myocardial infarction
- Lung — pneumonia vs. congestion, often difficult to differentiate grossly
- Liver — chronic hepatitis
- Spleen — splenitis, one sign of sepsis
- Kidneys — nephridites, leading to renal failure, e.g., lupus
- Infections — any tissue or organ; meningitis or inflammation of the coverings of the brain

The following figures are sample diagnoses of conditions and injuries that can be made by microscopic examination. These figures demonstrate how a pathologist uses the microscope to support, prove, or determine the cause or manner of death.

FIGURE 10.1 The microscope, the tool of the pathologist. Whether it is used to diagnose tumors or to study abnormal tissues seen grossly at autopsy, the microscope is the "stethoscope of the pathologist." Many findings cannot be diagnosed with the gross autopsy, and a few of these are seen in the following.

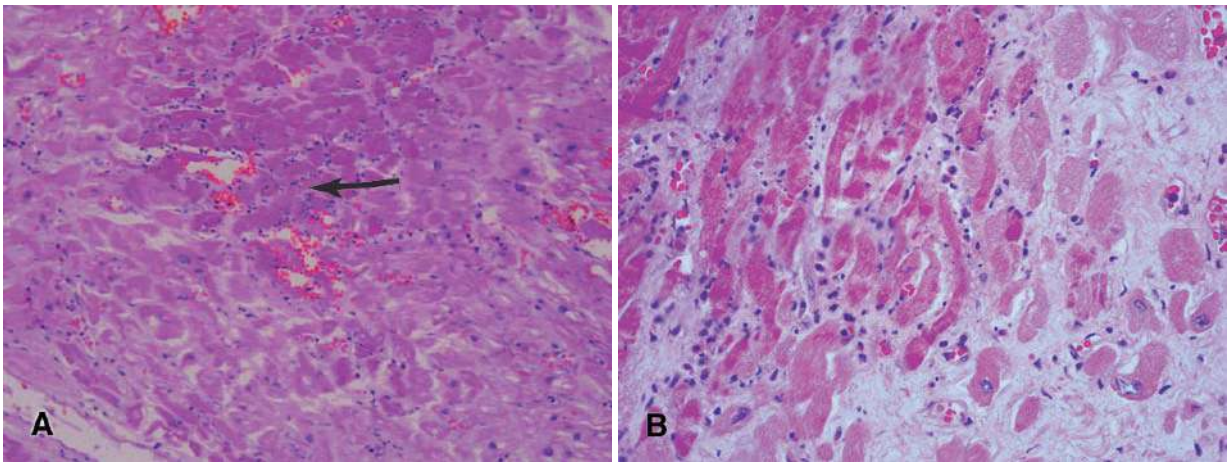


FIGURE 10.2 Acute myocardial infarction. (A) The arrow points to red, dead cardiac muscle cells. This cell death results from lack of blood flow (ischemia) as blood carries oxygen and other essential nutrients to the cells. The death of the cells invokes an inflammatory response. The small blue dots in the figure around the arrow are neutrophils, the sentinel of the acute inflammatory response. **(B)** This higher magnification shows the red serpentine fibers and the surrounding blue inflammatory cells.

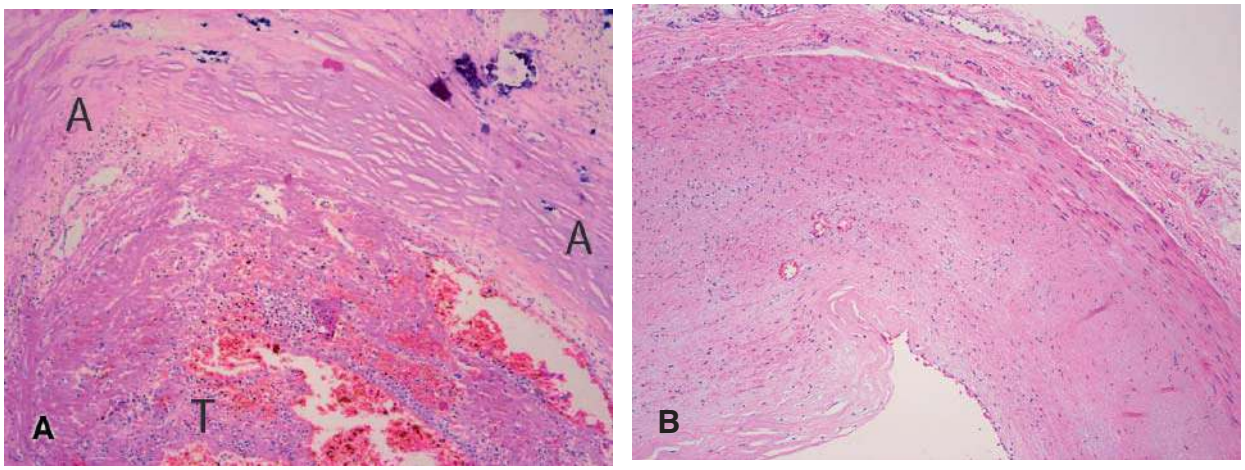


FIGURE 10.3 (A) Thrombosed (clotted) coronary. "A" is the arterial wall; "T" is the thrombus. The supply of blood to the cardiac muscle cells is carried out by the coronary arteries. Most commonly, as these arteries become clogged with atherosclerotic plaque or thrombi (clots), the myocardium dies, producing a myocardial infarction. **(B) Normal coronary.** The normal, open coronary artery is compared to the thrombosed artery.

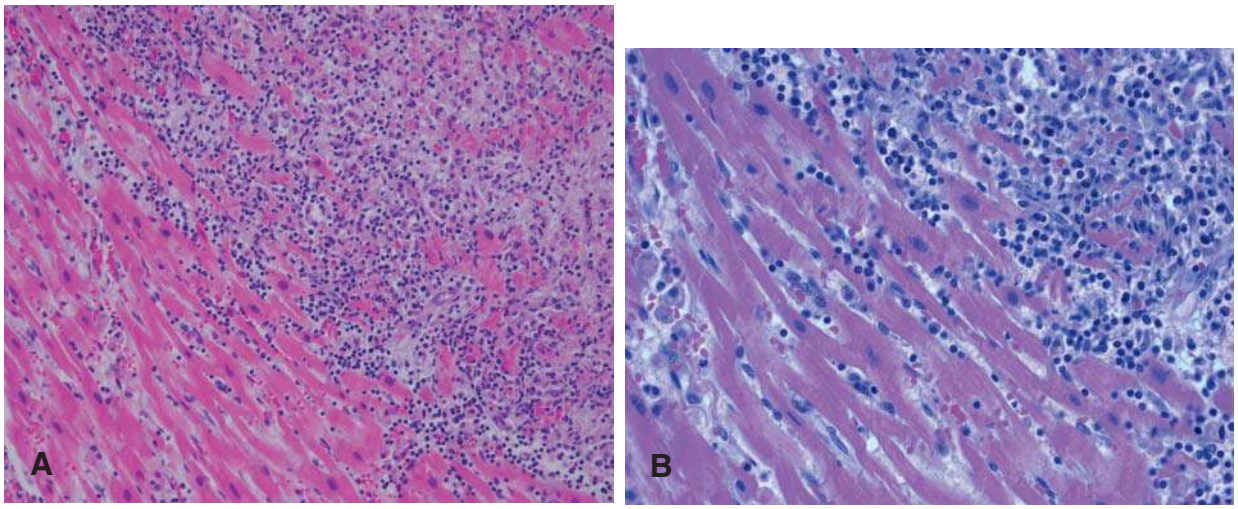


FIGURE 10.4 (A), (B) Myocarditis. These figures are microscopic examinations of the gross photos shown in Figure 8.19A and Figure 8.19B. The red myocardial fibers on the left are invaded by a diffuse lymphocytic and monocytic inflammatory response. Lymphocytes and monocytes indicate chronic inflammation. This type of inflammation most likely represents a viral origin of this myocarditis.

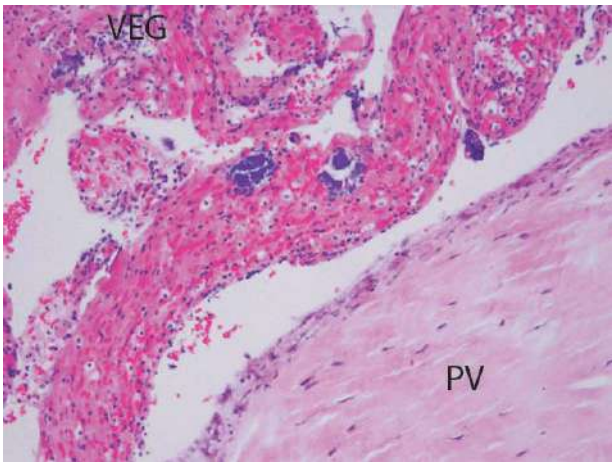


FIGURE 10.5 Vegetations of the pulmonic valve. "PV" is pulmonic valve; "VEG" is vegetation. Damaged or malformed valves can collect bacteria and thrombi (clots). These bacteria-laden clots can go to the lung, causing infection and infarction (septic emboli); in the case of the mitral and aortic valves, they can go to the brain, kidneys, and fingernails (also see Figure 5.15C and Figure 5.15D).

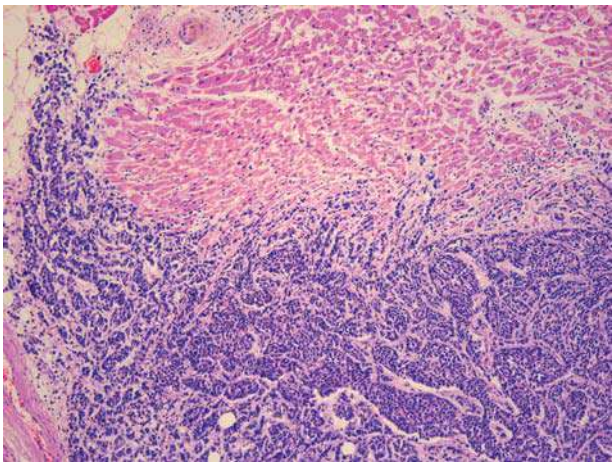


FIGURE 10.6 Carcinoma invading the heart. This patient had metastatic (spread outside the primary carcinoma) lung carcinoma. The carcinoma invaded the pericardium and then the heart (also see Figure 6.23).

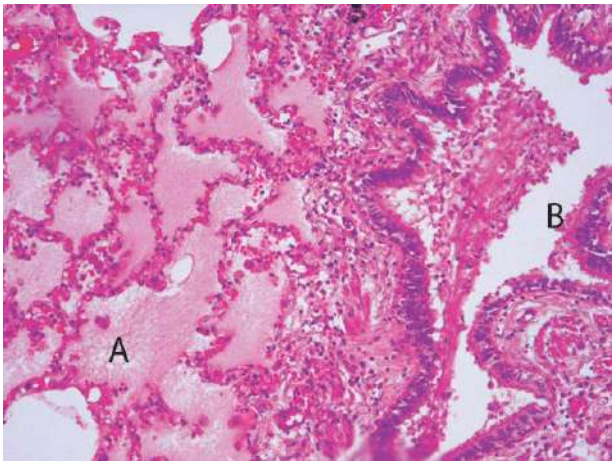


FIGURE 10.7 Pulmonary edema. "A" is alveolus; "B" is bronchus. Pink pulmonary edema is fluid in the airways, alveolus, and bronchus. This fluid comes from the rich vascular network in the lungs. If the heart does not pump properly or an excess of certain drugs is present (e.g., narcotics), fluid leaves these blood vessels and goes into the alveolar air space (also see Figure 8.43). There are many other causes of pulmonary edema. See the references for a detailed discussion.

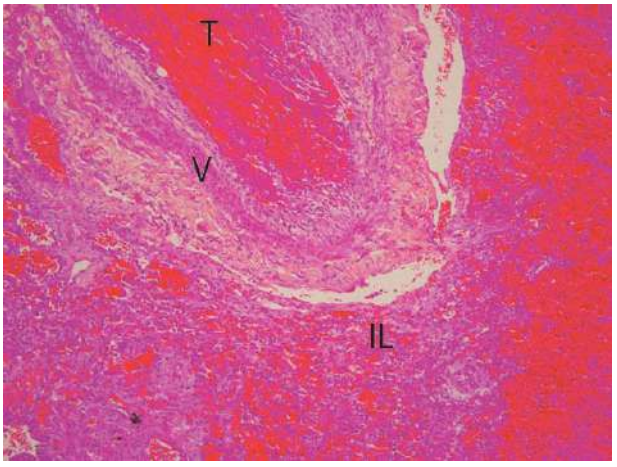


FIGURE 10.8 Pulmonary embolus with infarction. "T" is thrombus, "V" is pulmonary artery, and "IL" is infarcted lung. As with the heart, a clot stopping the blood flow causes infarction. In the lung, however, there is a dual blood supply, the bronchial arteries. Blood from these arteries pumps in, causing the bright red hemorrhage seen in the figure, called a hemorrhagic infarction.

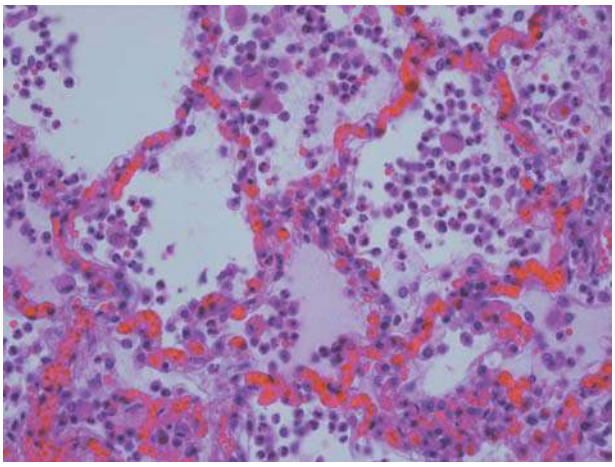
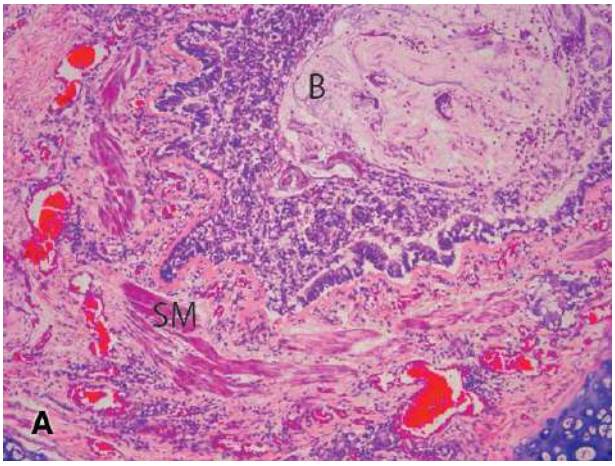


FIGURE 10.9 Lobar pneumonia. The alveolar spaces are filled with numerous inflammatory cells and other debris. This inflammatory material is usually the result of bacterial infection, and one can see how, in the alveolus, it can interfere with air exchange in the lung.



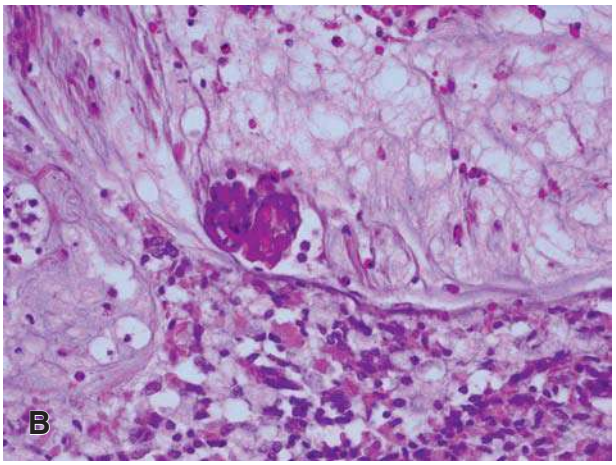


FIGURE 10.10 Asthmatic lung. (A) "SM" is smooth muscle; "B" is bronchus. In asthma, the airways are overreactive in reacting to allergins, for example. The bronchi, surrounded by smooth muscle, clamp down, decreasing air flow. Increased mucus is secreted, and the eosinophils are prominent. The result is wheezing, difficulty breathing, and in *status asthmaticus*, possible respiratory failure and death. The figure shows hypertrophied smooth muscle and mucous plugging in a patient who died of *status asthmaticus*. **(B)** Note the numerous red eosinophils, mucus, and a central red conglomerate of shed epithelial cells called Curschmann's spirals, an occasional microscopic finding in asthma.

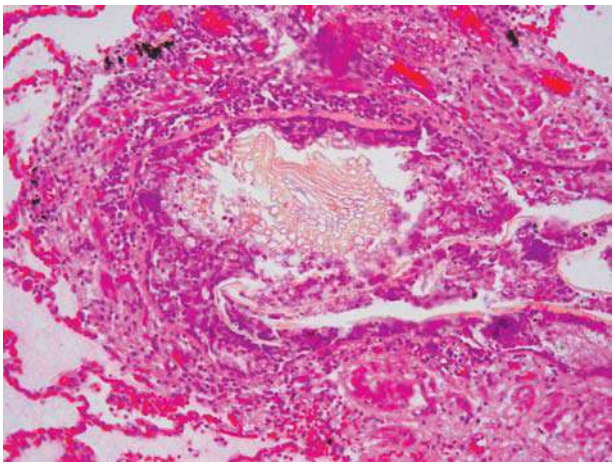


FIGURE 10.11 Plant matter in a bronchus. This unfortunate victim fell into a grain elevator. Grain is loose enough for a man to sink down into, as in quicksand. The grain surrounds the body eventually, not allowing the person to raise the chest wall to breathe. This victim was buried deep into the mountain of grain. At the same time, grain was inhaled into the mouth, causing aspiration into the lung.

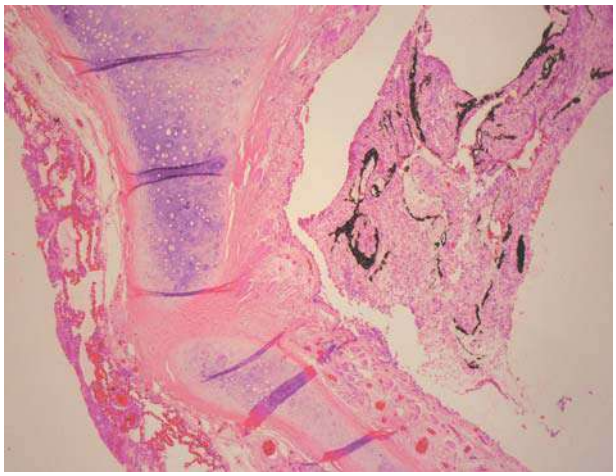


FIGURE 10.12 Soot in the trachea. In fire deaths, a great deal of soot (and hot air) can be inhaled. The figure shows black soot and mucus on the right. The trachea is seen on the left.

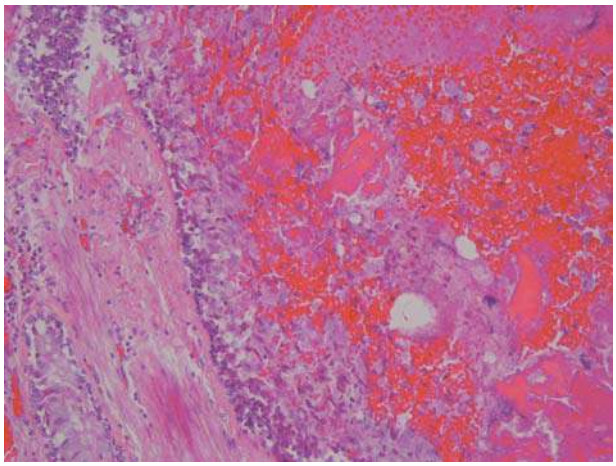


FIGURE 10.13 Aspirated blood. Many traumatic injuries of the head, face, mouth, and neck can cause blood to run into the bronchi. The blood can interfere with respiration and cause or contribute to asphyxia. Blood can be seen on the right side of the figure.

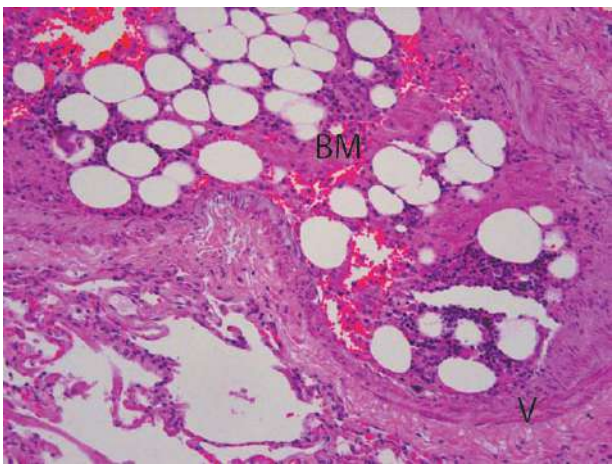


FIGURE 10.14 Bone marrow embolus in the lung. Even properly performed cardiopulmonary resuscitation (CPR) can break ribs, but only in adults (see Figure 6.5). At times, breaking of the ribs results in small bone fragments entering the bloodstream and, as in this case, stopping in the lungs. Fractures of large bones can also cause this phenomenon.

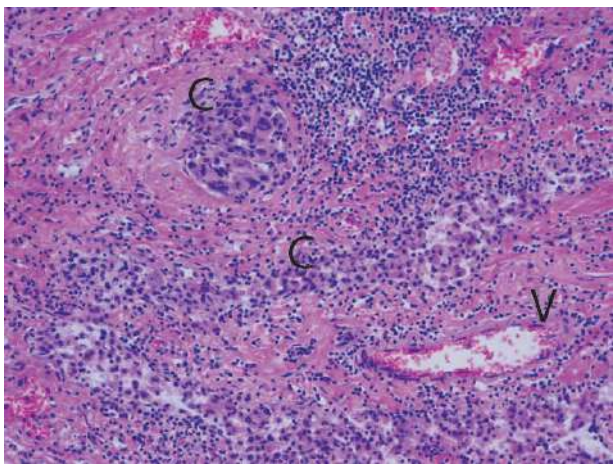


FIGURE 10.15 Invasive carcinoma of the lung. "C" is carcinoma; "V" is blood vessel. Any carcinoma, like this carcinoma of the lung, attacks the body by invading local and distant tissues. Carcinoma also invades the blood and lymph systems, as can be seen here. The large, malignant cells are highly and abnormally active, multiplying at an extreme rate and taking nutrients from the normal tissues.

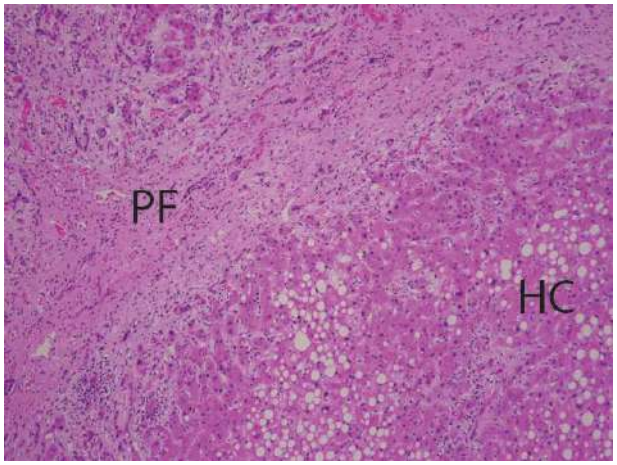


FIGURE 10.16 Cirrhosis of the liver. "PF" is portal fibrosis; "HC" are hepatocytes (liver cells). Cirrhosis is a reaction to damage to the liver. The damage can come from a virus (hepatitis), a toxic substance (ethyl alcohol), or a poison (carbon tetrachloride), among other causes. The resulting scarring or fibrosis bridges the portal areas. The end result of cirrhosis is liver failure. Clotting factors are not made; therefore, the patient is prone to bleeding. Also, since the fibrosis interferes with portal blood flow, veins around the esophagus and anus dilate and are prone to rupture.

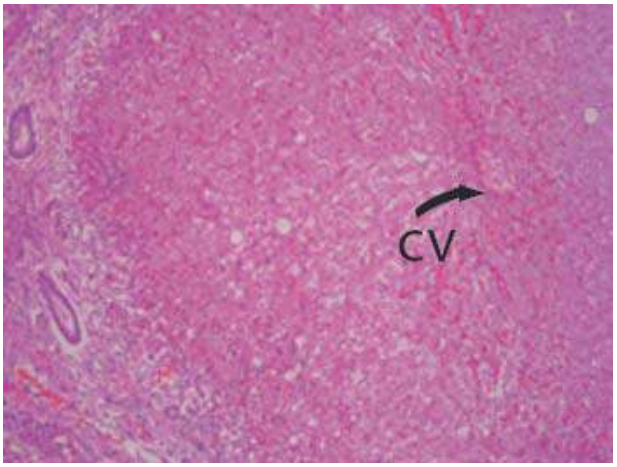


FIGURE 10.17 Central venous necrosis of the liver (shock liver). Prolonged shock can cause the part of the liver with less blood flow (central vein region) to die (necrotize). The right part of the figure demonstrates this necrosis, which causes liver failure. "CV" is central vein.

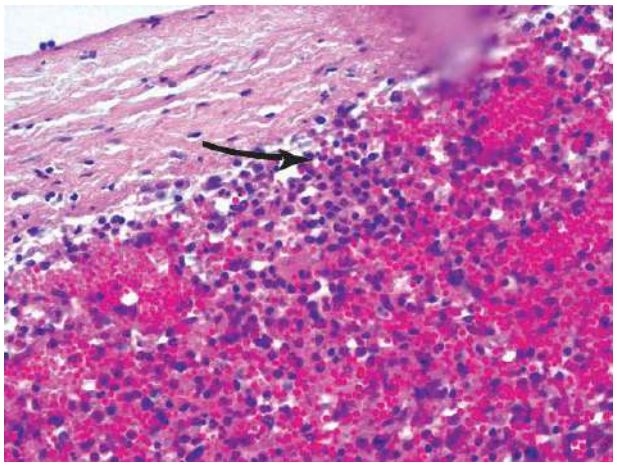


FIGURE 10.18 Splenitis. Neutrophils can be seen near the capsule (see arrow) of the spleen in this patient who died of sepsis. The red pulp is congested as well. Postmortem blood cultures and knowledge of premortem history of sepsis are the best ways to diagnose this condition. Occasionally splenitis is seen in sepsis.

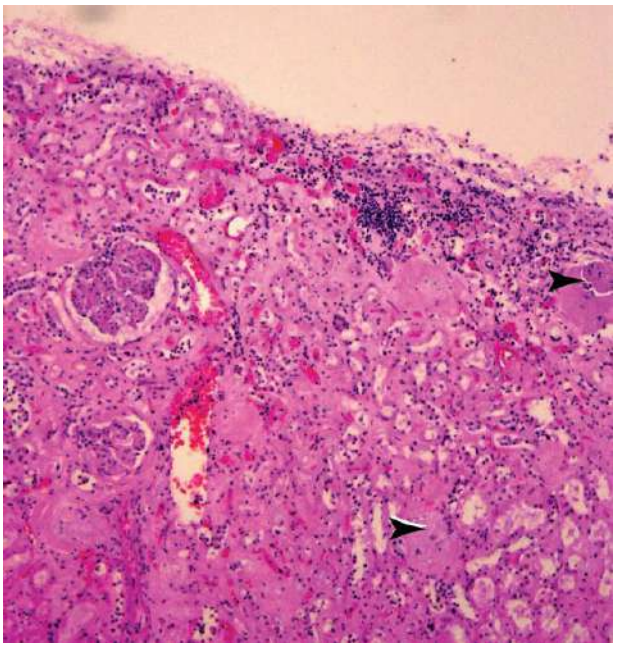


FIGURE 10.19 Renal arteriolosclerosis. The smooth outer cortex of the kidney is gone here. Hypertension has damaged the blood vessels supplying the glomerulus, causing sclerosis of the glomeruli (see arrows) and surrounding tubules and resulting in a pitting of the surface of the kidney (see Figure 8.71).

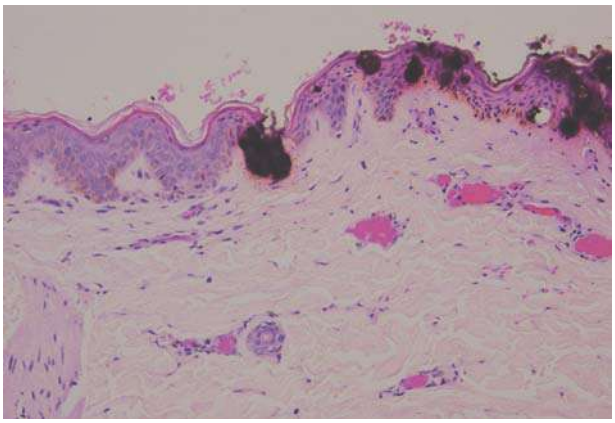


FIGURE 10.20 Soot deposited in the skin from a contact gunshot wound. Soot can be seen in the epidermis on the right side of the figure. The soot tattooed the skin because the barrel was close enough for the soot to be deposited. This microscopic section helps to substantiate the gross finding of soot on the skin in a gunshot wound (see Figure 2.1 and Figure 4.16A).

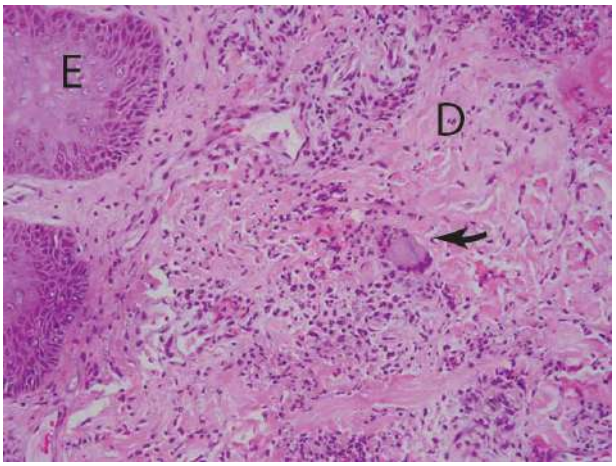


FIGURE 10.21 Skin granuloma in intravenous drug (IV) abuse. "E" is epidermis, "D" is dermis, and the arrow points at a granuloma. The chronic injection of the skin with drugs and their impurities like talc or baby powder forms a granulomatous reaction of the skin (see arrow). A bluish needlelike foreign object can be seen within the granuloma. This section helps to document the history of IV drug abuse. These granuolmas can also be seen in the lungs (see Figure 3.44).

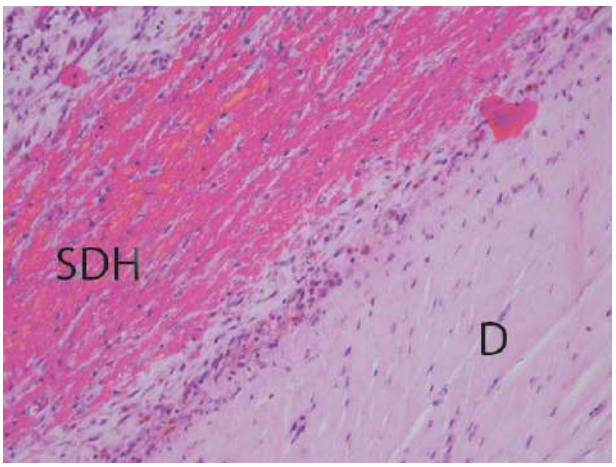


FIGURE 10.22 Chronic subdural hematoma. "D" is dura matter; "SDH" is subdural hematoma. A microscopic exam can give an idea of the age of injuries. This dating is not absolute. For example, this figure shows organized hemorrhage; therefore, the hemorrhage is at least 3 weeks old, i.e., it is not acute.

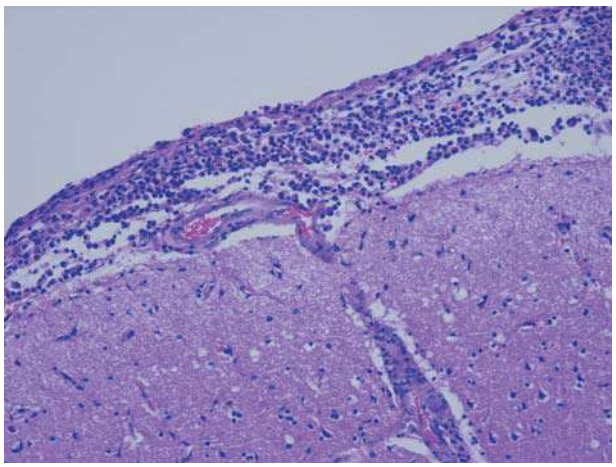


FIGURE 10.23 Meningitis. Meningitis is the inflammation of the meninges covering the brain. It can be caused by bacteria, viruses, fungi, or other sources. The result is the dark blue strip of inflammatory cells seen at the top of the figure. The specific organism that causes meningitis is best found by microbiologic culture.

11 Postmortem Laboratory Analysis of Drugs, Chemicals, and Microorganisms

The postmortem laboratory analysis of body fluids and tissues is an essential tool for the forensic pathologist. Toxicology studies are useful to help determine the cause and manner of death and to answer key investigative questions. This book has shown the power of visual gross microscopic findings in the autopsy. Drugs and chemicals, however, seldom leave characteristic or identifying visual findings at the autopsy. Even those substances that do leave visual findings, such as cyanide (causing pink livor) and carbon monoxide (causing red livor), must be confirmed and quantified. The specific drugs or chemicals found and their concentrations tell us a story about the death. The discovery of unexpected poisons can identify a perpetrator or even save a life. For example, finding a blood carbon monoxide of 50% in a person who died at home during the winter might save the life of the other occupants by implicating a faulty furnace.

The pervasive use and abuse of alcohol, cocaine, marijuana, amphetamines, and even prescription drugs in today's society necessitate determining whether these chemicals had any bearing on a death. The presence of these compounds is especially important if the death occurred on the job or as a result of a vehicle crash. Toxins and poisons in the environment, the home, and the workplace are increasingly common. The Occupational Safety and Health Administration (OSHA) investigates deaths involving toxins or poisons in the workplace. The Federal Aviation Administration and the National Transportation Safety Board require toxicology studies in many death investigations, such as those of pilots who died in airplane crashes.

Drug and alcohol analysis is part of a complete death investigation. To perform this analysis, the investigator, pathologist, and toxicologist must work together. The toxicologist heads up this team. Standard blood and urine screens are performed for commonly abused drugs and alcohol. These toxicology tests do not test for every possible drug or poison. If any drugs outside the standard screen are suspected, the toxicologist must be informed, since the method of analysis can depend on the compound suspected. In short, the investigator should say more to the toxicologist than simply, "Look for poison."

THE SCENE AND THE BODY

The search for drugs and poisons begins at the death scene. Prescription drugs should be logged and pills counted. One should be sure that the drug in the container is the same as that named on the label. Potentially fatal problems can arise when patients under therapeutic drug treatment by a physician take either less or more medication than prescribed. In accidental and suicidal overdoses, the number of pills present is much lower than it should be based on the last refill date. Patients with seizure disorders, for example, can succumb to *status epilepticus* (prolonged, violent seizure leading to respiratory arrest) if they stop taking prescribed seizure medication. As pointed out in Chapter 3, the types of medication present speak to the medical history. The medication bottles list the prescribing physician, who is a good source of further information about the victim. Pertinent hospital, clinic, and doctors' office records should be reviewed.

Alcohol is the most common drug found in medical examiners' cases. Searching the death scene for empty alcohol containers and counting these containers is the first step. In addition to searching for illicit drugs, the trappings of drug abuse (Figure 11.1) such as paraphernalia, whether the deceased was found in a known "drug house," and other observations should be noted. Often drugs, needles, and similar items can be found around or even on the body (Figure 11.2A, Figure 11.2B). In illicit drug deaths, witnesses commonly remove or dispose of the drugs. Searching arrest records can help uncover drug abuse history. Drug-oriented tattoos (Figure 11.3), clothing, and other materials can also alert the investigation team.

A well-publicized method of suicide involves tying a plastic bag over the head and taking a large amount propoxyphene, codeine, or other pain medication. These deaths can be recognized by the fact the bag is tied shut, presumably tied by the deceased (Figure 11.4). The mechanism of death in these cases is asphyxia, due to lack of oxygen in the bag, aided by the drugs acting as respiratory depressants.

Another sometimes fatal practice involves inhaling substances while placing one's head in a plastic bag. Figure 11.5A shows an adolescent who inhaled nitrous oxide from canisters, or "whippets," while his head was in a

plastic bag (Figure 11.5B, 11.5C). The bag became a low-oxygen environment when the deceased breathed. This method concentrates the gas, giving a better "high." As the nitrous oxide was released, it replaced the oxygen in the environment even further, resulting in asphyxia. Note the belt used to cinch the bag closed.

The nose and mouth should be examined for drug residues. Crack cocaine smokers can have darker than usual oral mucosa. Glue sniffers or aerosol huffers can have residue around the mouth and nose. The hands and extremities should also be examined. Figure 11.6A shows the hand of an adolescent who was suspected of sniffing glue. A search of the house uncovered this compound (Figure 11.6B), the color of which matched the residue on the hand. The antecubital fossa, legs, and feet should also be searched for intravenous drug abuse needle marks or scars (see Figure 3.44).

Some poisons and drugs have unique odors. Cyanide, for example, smells of bitter almonds. The sickenly fruity smell of ethyl alcohol at autopsy is characteristic. However, one must be cautious in interpreting the odor of alcohol. The author has found that the strength of the odor does not necessarily correlate with the blood level. Also, other compounds such as acetone can smell like alcohol. In deaths due to diabetic ketoacidosis, acetone levels are elevated.

SPECIMENS TO OBTAIN AT AUTOPSY

Blood

Blood should be saved at all autopsies. Sodium fluoride tubes (or another preservative) should be used if the blood is to be saved for any period of time because they inhibit bacterial growth. At least 20 ml of blood should be obtained. Half of this blood should also be placed into plain tubes. Blood is the specimen of choice for alcohol analysis providing the result as a percentage. For example, 0.08% is the legal limit for operating a motor vehicle in many states. Care must be taken not to use contaminated blood samples. When the stomach is ruptured from a motor vehicle crash, for example, the contents could be admixed with heart blood. When the specific level of a drug is needed, blood concentrations are measured. Drug concentrations can vary depending on the collection site. In addition to taking heart blood, femoral artery and/or subclavian samples should be taken. At least one tube should be saved for future testing. The legal defense team might want to have the specimen tested in another lab because new questions might arise over time.

Urine

Urine is the ideal specimen for drug screening. When a drug is detected during screening, the drug can be quantified in the blood. At least 10 ml should be saved, or ideally 30 to 60 ml. A common problem is that very little or no urine is present at autopsy. In such cases, bladder washings can be performed.

Vitreous Humor

About 2 to 3 ml of clear vitreous fluid can be obtained from each eye and placed in a clean tube. Vitreous fluid is useful in confirming alcohol levels when contamination of blood is suspected. Drug analysis can also be done, and sodium, chloride, glucose, and blood urea nitrogen (BUN) can be reasonably analyzed. Since vitreous glucose decreases after death, the analysis is helpful only in hyperglycemia.

Gastric Contents

The stomach is tied off at the duodenum and esophagus for removal. About 50 ml of specimen is ideal. Any pills should be saved. Gastric analysis is very helpful for establishing intent in suicidal overdose cases.

Bile

Bile is useful in cocaine and narcotic analysis. These drugs are concentrated in the bile.

Tissues and Other Specimens

Liver, kidney, brain, heart, muscle, and fat can all be used in toxicologic analysis, especially when no liquid specimens are available. Many drugs are eliminated by the liver or kidneys. These specimens are useful if the deceased has been embalmed, decomposed, or if blood is not available. The type of specimen needed for each drug is variable. Consultation with a forensic toxicologist is very helpful before performing the autopsy.

Hair, nails (preferably toenails), bone, and even maggots can be used to detect drugs or poisons. These analyses are performed to detect the drug (qualitative analysis), not to determine the quantity of drug. Hair is the best specimen for detecting arsenic poisoning. Also, hair samples can be used to detect chronic drug abuse.

Finally, all specimens are submitted to the toxicology lab with a chain of custody form. This form indicates the type of specimen, the time and date collected, and the signature of the collector. All specimens are sealed, and the date, time, and collector's initials are written on the seal. All containers are marked with a unique name and case number. A chain of custody is maintained to reasonably demonstrate to the court that the analyses results match the person from whom specimens were taken.

FIGURE 11.1 Needle and spoon. These trappings of intravenous drug abuse were found on an individual. The spoon is a "cooker" used to melt heroin into liquid form. The needle still contains the blood of the deceased, who died of a heroin overdose. The syringe can be analyzed for heroin.

FIGURE 11.2 (A) Crack cocaine, cigarette papers. These objects were found in the clothing of a homicide victim. Crack cocaine in the "rock" form shown here can be smoked from a pipe. **(B) Marijuana.** Marijuana is often rolled in cigarette papers, such as those seen in Figure 11.2A, to make marijuana cigarettes.

FIGURE 11.3 Syringe tattoo. Tattoos, clothing, jewelry, belt buckles, paraphernalia, and other personal items alert the investigator to a drug-related death.

FIGURE 11.4 Suicide by suffocation. This individual took toxic levels of pain medication, placed the bag over his head, and then tied the rope. Published suicide literature was found nearby, instructing an individual how to commit suicide in this fashion. The deceased had not been seen for a few days and was beginning to decompose.

FIGURE 11.5 (A)–(C) Nitrous oxide use causing suffocation. This individual used the depicted nitrous oxide canisters from a whipped cream dispenser to release the gas into a plastic bag. This bag was placed over his head, as shown. Note the belt, which was used to cinch the bag closed. The nitrous oxide replaces the oxygen in the bag, causing asphyxia. Nitrous oxide is a recreational drug that causes euphoria, a floating feeling, and laughter.

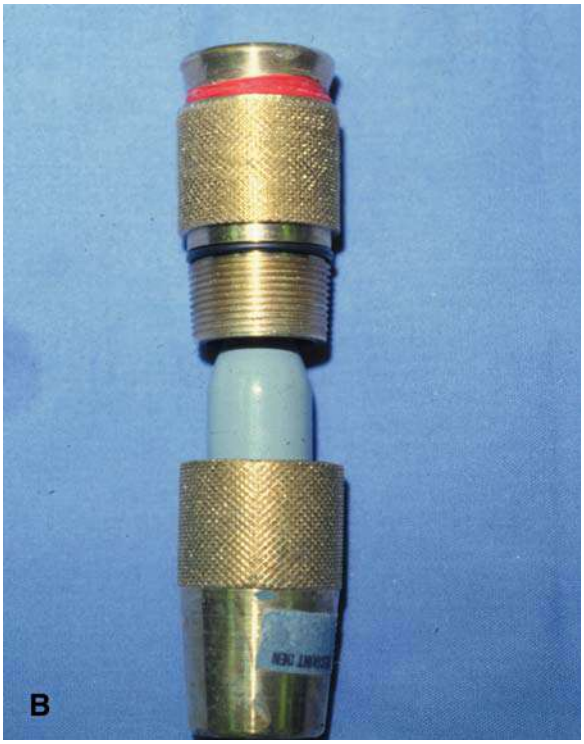


FIGURE 11.6 (A) Glue residue on the hand. This individual was found dead at his residence. He was seen sniffing glue previously. **(B) Glue container.** Search of the house revealed this glue container.

REINISCH • HOELLER • MALUSCHKA

THE SECRETS OF KYUSHO

PRESSURE POINT FIGHTING

- DISCOVER & EXPLOIT WEAK POINTS
- LEARN ABOUT EFFECTS OF STRIKING & PRESSURE TECHNIQUES

MEYER & MEYER SPORT

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Kyusho
Attack Points in Self defense and Martial Arts

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Thanks to each of you!

Stefan + Juergen + Axel

Warning

This book contains some techniques that can be dangerous and must only be practiced under the supervision of a qualified trainer or instructor. The author and the publishers cannot be held responsible for any injuries that might result.

This book has been written using exclusively the male form of the personal pronoun. Of course, for reasons of simplicity this should be understood to include the female form as well.

Stefan Reinisch, Juergen Hoeller & Axel Maluschka

Kyusho

Attack Points in Self defense and Martial Arts

Meyer & Meyer Sport

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Foreword Dr. Mehdi Mousavi

The martial arts from the Far East have enjoyed increasing popularity in the last few years. This fact is reflected in the numerous books, magazines, and other literature about Bushido that are flooding the market at the moment. However, forgetting the technical information, if you search for any works on the physical principles, anatomical physiological descriptions or even medical sports recommendations, you will be quickly disappointed. It is exactly these points, the so-called vital points, that cannot be learned without necessary knowledge of the anatomical facts and physiological regulatory mechanisms of the body. Many of these points are used as acupuncture points to cure various diseases, but several of these points can be life-threatening for the opponent. Only knowledge of these facts by the user can generate the necessary responsibility to be able to judge the situation correctly and react adequately to a possible attack.

The authors have attempted to illustrate and explain the anatomical basics of the vital points in this book through text and pictures. The way to use these points in self-defense by applying pressure on sensitive areas and their resulting effects are explained in detail. The dangers of using these vital points are based on medical factors.

The authors have succeeded for the first time in producing a medical/scientific-based work that matches the requirements of the reader from more than a technical aspect. Moreover, the book serves as a reference work for those exercising, covering how and where such pressure points can achieve best effects. Therefore, this book should be in every Budoka's library.

With long standing practice in the martial arts, I recommend the reader not underestimate the pressure points and stay in constant practice with them because only the correct precision in executing Kyusho can guarantee absolute and perfect defense. "He, who thinks he is good, stops trying to be better."

Dr. Mehdi Mousavi
Head of the Accident Surgical and Sports Accident Department of the Social Medical Center East-Donau Hospital in Vienna.
(5th Dan Jujitsu; Kawaishi Ryu)

Foreword Dr. Franz Knafl

As General Secretary of the European Jujitsu Union (E.J.J.U.) and President of Shobukai Austria, it is a pleasure for me to write the foreword to the third edition of Kyusho, which covers the sensitive points of the human body. It gives the interested reader a didactic, well-structured understanding and overview about the important pressure and vital points on the body and explains their efficiency and possible effects.

This specialized book shows many potential self-defense sequences and gives every person exercising new impulses for daily training. Simultaneously, it dispels many myths and is equally a call to cast a critical eye on this theme.

Even though the index of contents and explanations of the individual techniques cover attack points on the head, neck, torso, arms and legs, the aim is clear that the uses of Kyusho against an attacker are primarily for their use in defense.

The authors and their advisers have had much experience with the various Budo disciplines for many years. As practicing sportsmen of various far-eastern martial arts, they know well the theoretical and practical background for the precise and purposeful (according to the situation) application of Kyusho from their own practice and experience of the effects.

This textbook ideally serves to broaden the knowledge of both master and pupil. However, it cannot replace the necessary and responsible training with expert instructors and trained partners. Correct Jujitsu, Karate, Taekwondo and other martial arts demand unending and lifelong training.

Dr. Franz Knafl
8th Dan Jujitsu Kawaishi Ryu
General Secretary European Jujitsu Union
President Shobukai Austria Nippon Jujitsu Course
Head at the University Sports Institute Vienna (Universitäts-Sportinstitut Wien)

Introduction

"Five point palm-exploding heart technique" from Quentin Tarantino's film Kill Bill, Volume 2 (2004), Enter the Dragon (1973) with Bruce Lee, etc.

Whenever the subject of Asian martial arts comes up, sooner or later secretive techniques are alluded to that have been handed down only to the best students of the top masters. The legend of the "Touch of Death" could only have been created on the basis of a lack of knowledge by the average person regarding the anatomy of the human body – something that has clearly not changed much over time.

Although our knowledge about the composition of the human body has increased, in many books on the subject of martial arts, an explanation concerning the effect of various striking and pressure techniques has reduced to mentioning merely "causes pain, paralysis, death." Explanations are missing. Simply from a standpoint of personal responsibility for one's training partners (and from a legal point of view) it would be very welcome if the followers of martial arts delved more into the possible medical outcome of their actions.

The time delay of the effect of certain actions is of course part of the reason for the secretive aura of this aspect of martial arts. On the one hand, however, as every accident surgeon knows, the phenomena that symptoms arise comes a certain amount of time after the actual incident (e.g., internal injuries following a kick). On the other hand, a technique that has a delayed effect in an actual defense situation is not going to help one much. Nevertheless, such myths as these will never die simply because of the intriguing effect they have.

All defensive actions (irrespective of the individual martial art) are aimed at sensitive areas on the body (in Japanese, this is called "kyusho" – in Chinese martial arts, it is called "dim-mak") in order to make the opponent inactive as soon as possible. In the short term, the actions are mainly aimed at getting the attacker into a position where he will be vulnerable to follow-up techniques. While lever techniques are applied to the joints and can be used with appropriate, relative severity (pain or injury), the employment of the various striking, kicking pressure techniques is often not so easily controlled. The effects depend upon:

- The constitution of the opponent (it can be that delicate girls are not sensitive to the pain produced by nerve pressure techniques, while strong men collapse onto the floor as if lightning has struck them)
- Any previous injuries present
- Type of clothing being worn (e.g., a thick winter jacket)
- The precision of executing the technique
- The angle of attack
- The strength of the strike/kick/pressure
- Whether the action surprised the opponent. For example, attacks on surrounding nerves in the tense muscles are thus naturally difficult.

There are many vulnerable points on the human body. Some are called nerve points, others have an effect on the organs that are not protected by muscle tissue or bones, while in other cases there are mechanical weak points. Some of the points open the way for a follow-up action, while others end with the attack.

The effects are spread broadly and range from superficial pain or injury to death. The effects on the various points are totally different (also influenced by their accessibility) and this is why some of the listed target areas are interesting from a viewpoint of the Budo term "totality"– in a competition/fight they are of secondary importance. If, in spite of this, you have any doubts about the relevance of Kyusho in martial arts sports, you should consider that a boxer strives to hit his opponent at his vulnerable spots (chin, liver, and solar plexus). Punches to the kidneys, nape of the neck, or the genitals are, on the other hand, forbidden because they are considered as too dangerous in the framework of a sporting competition.

As a general maxim, previous effective techniques (e.g., the lever) can be complemented by using Kyusho which increases their effectiveness further. However, the enthusiasm must not be extended, in any case, so that the reliability of a technique suffers (along the lines of "For a hammer, every problem looks like a nail"). The most dangerous opponents are those who can turn the pain into aggressiveness or strength. Kyusho only makes sense when used in conjunction with other martial arts techniques.

TIP: If finding the point is somewhat difficult, it can be advantageous to look for it on your own body and feel its structure. Finding the point on a training partner's body is a little easier. Besides this, one learns very quickly to distinguish between the individual feelings of pain (for example, which nerves or muscles). To mark the target areas, the so-called "target plasters" have proved to be helpful in training.

The Results of Using Kyusho

Pain

In most cases, the opponent should be made to stop a particular action by applying pain (e.g., loosening his grip). Following this action is the opportunity to create "holes" for follow-up techniques. Sometimes pain is a side effect (e.g., the dislocation of a joint).

The International Association for the Study of Pain[1] defines pain as follows:

"Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage."

Sensory perception is transmitted by **pain receptors** (nociceptors) down special nerve pathways and the thalamus to the central nerve system and this leads to the feeling of pain.

The distribution of these receptors across the surface of the body varies according to the body region (up to 200/sq cm of skin). Furthermore, one also finds nociceptors in the muscles and the lining of the intestines; the intestines themselves, as with the brain, have no pain receptors.

Some of the Kyusho techniques have an effect on the nerves and these can lead to uncontrollable signals (such as tingling on the side of the hand with the pinky finger when the nervus ulinaris is stimulated). In addition, it can lead to a tissue lesion of the nerve, as well as the nerve sheath, caused by the mechanical effect on the nerve. Besides this experience, pressure applied to these nerves can cause local and limited circulatory disorders and with it metabolic disorders that lead to extreme pain. Rapid relief is typical once the mechanical problem is removed. One possible complication is the inflammation of the nerve (neuritis).

Pain caused by an effect is called **neuralgia** and spreads through the area supplied for each nerve (innervation area).

The more often a respective nerve is stimulated, the more sensitively it reacts to stimulation and the feeling of targeted pain is increased as a result.

Not every physical injury leads ultimately to pain. This is because of the filter processes in our central nervous system (stress reliefs or injuries resulting from a traffic accident, competition, war or during sexual intercourse are often not noticed)[2] , while on the other hand pain without physical injury can also occur (e.g., phantom pain).

Pain resulting in unconsciousness

Pain can result not only from a physical injury, but it can also lead to unconsciousness. This is called a vasovagal syncope (other causes can be anxiety, joy or other types of excitement; also called the "Boygroup-syndrome").

The cause is an overreaction in the vegetative nervous system. An enlargement of the blood vessels, so that (above all) the blood "seeps away" into the intestines and a relative lack of volume with decreased heartbeat rate occurs, caused by the decrease in venous flow back of blood to the heart. On the other hand it leads to a reduction of the heart rate up to even cardiac arrest. This results in an overall reduction of the supply of blood and/or oxygen to the brain with subsequent fainting occurring.

A vasovagal syncope resulting in death is called reflexogenic cardiac arrest. Further reasons for a death of this kind of fatal circulatory collapse (especially concerning Martial Arts) can be: the Carotid Sinus syndrome following a blow on the carotid artery in the neck, the oculocardiac reflex following a blow in the eyes, a strike or kick at the solar plexus or a kick in the testicles. To make a distinction, however, unconsciousness due to a craniocerebral trauma is quite clearly different to a vasovagal syncope!

The effects of acupuncture

Let us look at the possible effects in connection with acupuncture and their meridian points. It is in this area, however, where much controversy exists between experts in the martial arts. We will therefore try to briefly illustrate the different perspectives.

On the one hand, there is an opinion that the effects are **psychological** and **physiological** ones:

An example of this is where, in Germany, the health insurance company accepts the costs of acupuncture treatment for patients with knee and back pains. The decision made by the national health insurance company is based on studies carried out by the Charité-Universitätsmedizin Berlin on a model framework of 250,000 test subjects and 10,000 physicians (up to now the largest study on the subject of

acupuncture in Germany. According to the results of the study, the rate of success for traditional Chinese acupuncture (or TCM, traditional Chinese medicine, – "genuine" acupuncture) in the treatment of chronic back pain is not much more than that achieved using "sham" acupuncture (placebo acupuncture), where "false" points are "treated." However, both forms of acupuncture showed distinctly better success than the standard therapy.

In short, acupuncture actually does work. Where you put the needle in seems not to play a significant role.

Therefore, we come to the question on what its effectiveness is based. This is where the **placebo effect**[3] comes into play. Dr. Michael Freissmuth, University Professor on the Board of the Pharmakologischen Instituts der Medizinischen Universität (Pharmacological Institute of the Medical University) Vienna, sees this as a clear indication of the physician's "bedside manner." This is also similar to statements made by Dr. Fabricio Benedetti, a Neurobiologist in Turin, where he sees the context in which the patient is treated as being crucial. The physician's manner can work on the chemistry of the brain, such that this has a positive effect on the whole organism.[4] The placebo effect is not just simply a psychological one ("illusion"). On the contrary, concrete biological changes in the body can be measured as a result of it.

Of course, many analogies can be suggested between the "Professor" in a physician's white coat and the "Grand Master" with the black belt. Many martial arts masters even reckon that they can create a K.O. at a "distance" without touching their opponent.[5] Perhaps one may have the image of an American television preacher who jumps around through the crowd of believers and lays his hand on the next person, who sinks down to the ground as if struck by the Holy Ghost (see the "Boygroup" syndrome on the previous page). Ritual, symbols, and authority all play a major part in this area. Otherwise, why would the doctor rush about with a stethoscope around his neck? This has the same effect as the shaman with his rattle or the red/white belt of the highly qualified martial arts master: "The man/woman is an authority – I can already feel the effect!"

Just how far this trust in perceived authority can go was illustrated impressively in the classic Milgram experiment in 1961 (sadly, it has been repeated several times with the original results since then).

The behavior of the other group or training members also, however, has a strong influence on one's own behavior ("social reinforcement").

On the other hand, there are the followers of the mode of working with "ki" (or "chi"), yin and yang energy fields. However, these concepts from the Far East must also always be seen in their cultural background. Those inexperienced in the field of anatomy would describe the pain from knocking the "funny bone," or more precisely the "nervus ulnaris"(ulnar nerve), as a flow of energy. Yin and yang also have a parallel in neurology through the sympathetic and parasympathetic nerve system.[6] The reason that they specialize in the use of nerve points in martial arts, often attacking several points simultaneously or one after the other (for examples, see books by George Dillman and Michael Kelly), lies in the fact that the stimulation creates an added effect and thus increases its effectiveness.[7] The consequences arising from this are completely impressive because of the effect on the internal organs. (For the neurological background on this, we recommend reading Dr. Michael Kelly's book Death Touch: The Science Behind the Legend of Dim-Mak.

However, this is where the person training is at a disadvantage: How can you train realistically in a martial art where the main aim is to cause the opponent to become unconscious or suffer heart failure or a heart attack? The possibility of testing the effectiveness of these techniques on convicts – like the "Masters" of many years ago were reported to have done – is, thankfully now nonexistent. Also a "simple knock-out," as shown often in many courses on the subject of Kyusho/ Dim-Mak, can have lethal consequences if there are pre-existing health defects.[8] If you wish to remain on the right side of legal and ethical rules, training of this kind has to remain as just theory.[9] The practical difficulties cannot also be underestimated: The effectiveness should be much more when more nerve points are stimulated. This can be up to a combination of five techniques (does this ring a bell?) that all have to be carried out in the correct sequence and precisely located. The possibilities and reasons are, of course, fascinating but the practical relevance is questionable.

The stretch reflex

Muscle spindles are sensory receptors (so-called "proprioreceptors") within the muscle that primarily detect changes in the length of this muscle. They also protect the muscle

from overstretching. When the muscle is suddenly stretched, the so-called "stretch reflex" is activated and the muscle retracts again. The more sudden the stretching action occurs, the more muscle fibers are activated in the muscle spindles and the greater the power that counteracts against the stretching of the muscle. The so-called Golgi tendon organ, however, also contributes to this by transmitting the changes of tension in the tendons.

Example:
One nods off and the head falls forward. At the same time, the head whips back upward as a result of the sudden overstretch of the neck muscles. Another example is the knee-jerk triggered by the tiny physician's hammer.

Particularly in our case, our striking techniques are amplified by this type of reflex where they can be accompanied by circumstanced nerve pain.

Examples:

- A strike on the outside of the lower arm (for more detail see the section on this) acts on the nervus radialis, which is responsible for the movement of stretching the fingers. The stretching reflex activates those muscles that are also responsible for the movement of the fingers, which is why the hand opens or, at least, is weakened.
- A strike on the biceps (for more detail see the section on this) causes the arm to bend in accompaniment with the inertia.
- A strike at the insertion point of the sternokleido muscle (for more detail see the section on this) and the temporal bone rattles the head at least as hard as when one is hit on the bone (mastoid process).

For a better overview, it has proven best to divide the attack areas into five regions, namely those on the head, neck, torso, arms and the legs. The most easily reachable targets are on the head and about the neck – so this is why we have begun with these areas.

One note in advance: The evaluation of the applicability is usually done without taking into account legal or moral aspects.

1 Attack Points on the Head

1.1 Eyes

This concerns those targets that are protected by our instincts (like the testicles), where even a faked movement toward them (protective reflex by the hands) prompts a reaction from the attacker and often leaves the door open for follow-up actions. An illustration of this is hardly necessary.

Attack: The effect is created by pressure or a jab with the fingers, but also possible by punching.

2 Control of the elbow
The elbow is pressed in and downward toward the attacker's body.

Effects: Severe contusions of the eyeball lead to serious injuries to the inner structure of the eye: internal bleeding of the eye caused by vascular lesions; increase of the eye pressure (possibly resulting in glaucoma problems); tears in the iris (pupil is no longer circular); blurring or displacement of the lens; tears in the retina with danger of retinal detachment; swelling of the retina with reduced vision and damage to the optic nerve.

The effect of a strike or pressure on the optic nerve (nervus opticus) can have a follow through effect on the nervous system that results in a reduction in heart frequency,

unconsciousness, and/or cardiac arrest. This is also known as oculocardiac reflex or Aschner phenomenon.

When struck, it is also possible that fractures of the orbital bone structures surrounding the eyeball can occur with damage to the nerves and blood vessels (can also lead to reduced vision if the eyeball is displaced).

Gouging out the eyeball cavity (Latin: orbita) with the fingers is, however, almost as good as impossible.

Further effects can include uncontrollable flow of tears (although this can cause limited vision), pain, and eventual unconsciousness (as a result of the pain).

Indirect effects: with compression of the eyeball (Latin: bulbus), detachment of the retina can occur. The effect of this is that a person temporarily sees flickering white spots in their field of vision, which disappear after a time. In the vernacular, one speaks of "spots before their eyes" or seeing "stars" or spots "dancing" before their eyes.

Comments on use:
As far as effects being achieved with the minimum use of force and effectiveness, it concerns targets of the first order. The constitution of the other person is of no import. The move can be used as far as the arms can reach.

Variations:

1 Attack using an Ushiro jime (stranglehold in the crook of the forearm).
2 Defense using the thumbs to apply pressure on the eyes.

Variations:

1 Making contact with the attacking arm.

2 The attacker's arm serves as a conducting rail for the defending arm as it rides up it to jab the attacker's eye with the spear of the finger.

1.2 Chin/Protuberancia mentalis

The protuberancia mentalis is the three-cornered protuberance of the chin bone.

Attack: Pressure with the joint of the thumb (the tip of the thumb should be anchored to the forefinger).

1 Target mark.
2 Usage. The tip of the thumb is pressed into the point of the chin. The hand holds the back of the head.
3 Close-up.

Effects: Pain (the periosteum, or skin membrane, is very sensitive to pain)

Comments on use:
Only use as a freeing technique – further techniques should follow.

1.3 Corners of the mouth

Attack: Crooking the finger in one or both sides of the corners of the mouth and pulling outward.

1 Freeing from the scarf hold (Kesa Gatame).

Effects: Pain, ripping of the lips.

Comments on use:
Frees the hold shown reliably; possible risk of endangering one's self (teeth!).

Variation:

1 Attacking the eye as well as the corners of the mouth.

1.4 Nose bone/Root of the nose/Os nasale

Illustration – see the section on the "Skull."

The nose bone is in the front of the skull, roughly about where a pair of eyeglasses sits. The nose bone is particularly thin and project out seemingly unprotected from the face of the skull.

Attack: Strike (using the fist, hammer fist, ball of the hand, side of the hand, temple). Pressure is applied using the fore and middle fingers in a scissor grip but focused more on the cartilaginous extremities area under the nose bone.

1 Target mark. **2** Attack with the ball of the hand. **3** Attack using a hammer fist. **4** The scissor grip using the knuckles.

5 Usage. **6** From another viewpoint. **7/8** The scissor grip using the knuckles. **9** Usage.

Effects: Even light blows can cause a fracture of the nose bone and nasal cartilage. The results are extreme pain (the nervi ethmoidales posterior and anterior supply sensory information to the nasal mucous membrane and the tip of the nose), the eyes begin to water (limiting sight). If the nose bleeds, blood can flow into the pharynx and, in an extreme case, block the passage of air.

Furthermore, in a blow to the nose, the cartilaginous part of the nasal septum can slide out of its bony guide groove (subluxation). Legend says that a blow to the nose can "push" the nose bone into the brain.

Injury to the sinuses is also possible with subsequent infection. See also section on "Skull."

Comments on use:

Typical injuries suffered from a "brawl" that do not necessarily stop the attack depending on the ability to take blows. In an attack where pressure is used, a counter with the other hand is necessary (nape of the neck, chest, and lumbar part of the spine).

Examples:

1 Scissor grip on the nose combined with the back being bent over to the rear.
2 Defense against a fist attack.
3 Defensive arm moves up to take a scissor grip on the attacker's nose.
4 Scissor grip while controlling the neck.

5

6

7

8

9 Using a kick to the inside of the opponent's knee joint, the attacking arm is stretched and thus allows an arm lever to be applied.

1 Defend against the fist attack.
2 Pressure with the thumb on one side of the edge of the nose bone.
3 Close-up.
4 Control and throw.

1.5 Subnasal point

Illustration – see the section on the "Skull."

The anatomical term for the vertical channel between the upper lip and the nose is *philtrum*. At its upper extremity, it extends to meet the bridge of the nose (columella – Latin: 'small column') to form the nasolabial angle. The pain comes from the local pain receptors.

Attack: Strike or pressure with the edge of the hand/thumb.

3 Beginning of the stretch-over phase.
5 Counter hold and thrust on the thigh. Pin down the body in order to prevent escape.

8 Controlling position stretching out the attacker.

Effect: Using a strike, the more harmless results are a cut lip and teeth knocked out. It is also possible to break the upper jaw bone (maxilla) as well as dislodge the cartilaginous nasal septum out of its bony groove. With hefty strikes, the usual injury effects to the skull (see the next section on the 'Skull') are possible, as with any hit on the head. Blood and broken teeth can enter the airways and hinder breathing.

When pressure is applied, nerve pain can be felt (neuralgia) (see the statements in the Introduction).

Comments on use:
There is a danger of injuring one's self (teeth). In an attack using pressure, a counter-hold with the other hand is necessary (on the neck, chest or lumbar spine).

Additional Sequences:

1 Stretching out while at the same time pinning the defender's arm against the body.
3 Continuation of the major outer reaping throw (O-soto-gari).
6 Conclusion.

1.6 Great auricular nerve/Nervus auricularis magnus

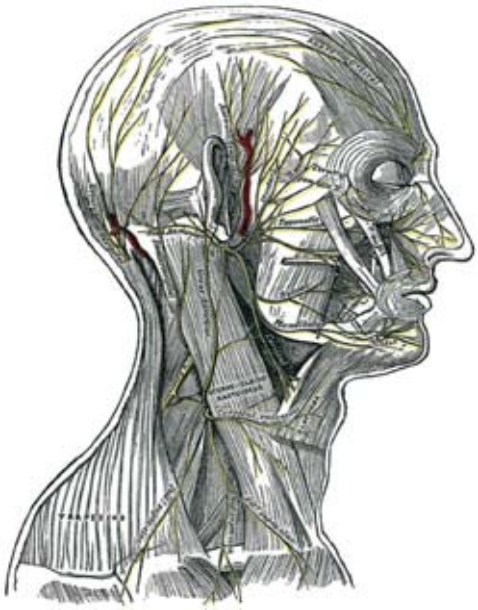


Diagram 1

Location: Behind the earlobes, at the rear of the jaw bone.

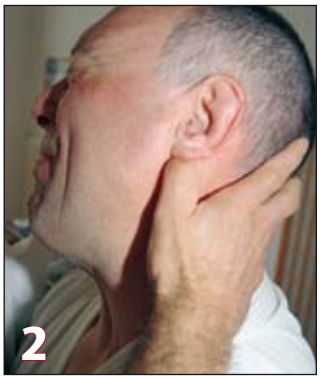
Attack: Pressure of the finger upward in the direction of the center of the skull (better control achieved when applied on one side with the palm of the other hand controlling the head.) Throw.

Tip: A rotating, boring, and rubbing pressure in the direction of the center of the head is better than constant pressure because the body adjusts less well to non-constant pain.

Target mark.

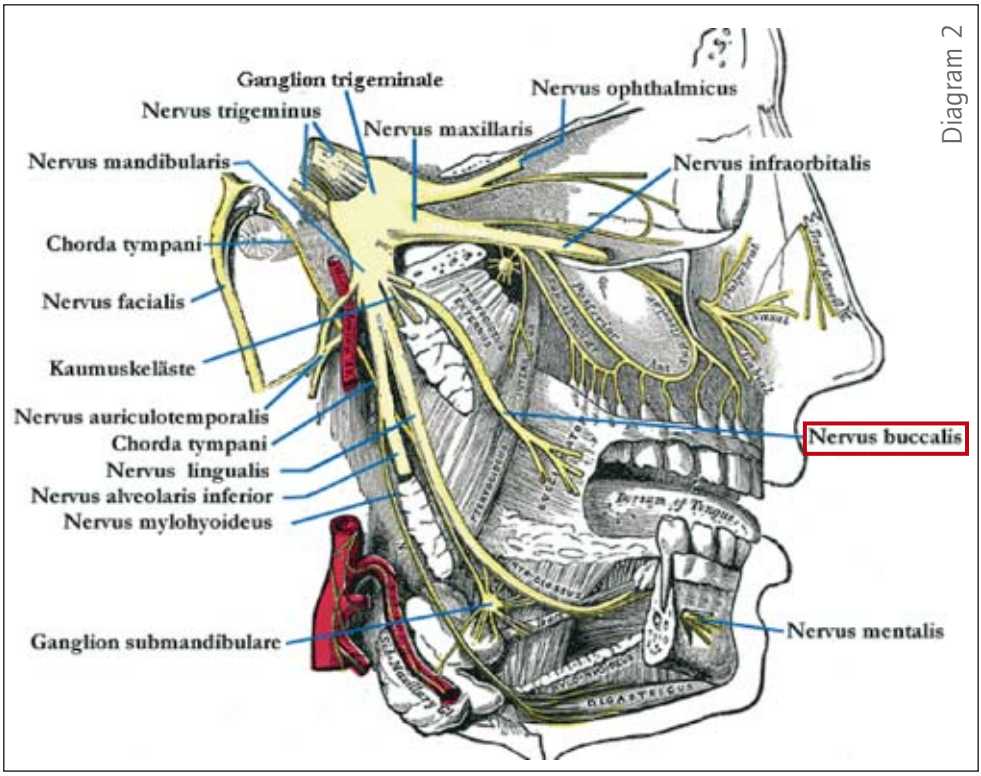
Effects: When pressure is applied, nerve pain can be felt (neuralgia) (see the statements in the Introduction).

Comments on use:
Like all nerve points, the degree of sensitivity and effectiveness is individually different.



4 Attacker is brought down to the ground.
7 Concluding technique using the ball of the hand.

1.7 Buccal (cheek) nerve/Nervus buccalis



Compare with the diagram in the section on the "Nervus frontalis."

The nervus buccalis (buccal/cheek nerve) is sensitive and supplies the mucous membranes of the cheeks as well as the gums.

Attack: Scissor grip below the cheekbone.

Effect: When pressure is applied, nerve pain can be felt (neuralgia) (see the statements in the Introduction).

1 Target mark.

Comments on use:
Like all nerve points, the degree of sensitivity is individually different.

3 The attacker is stretched out from the pain.

4 The defender dodges with his hip and turns away under the attacker who falls flat on the ground and can now be controlled.
5 Pinning him to the ground.
7 Concluding technique.

Possibilities of use when standing

1 The strike is diverted.
2 Using a scissor grip on the nervus buccalis and holding the back of the neck, the attacker is brought down to the ground with a blocking knee hook.

3 In the depicted defense position, an alternative to the scissor grip is one-sided pressure applied with the knuckle of the forefinger...
4 ...or the thumb.

A punch can also be used with the knuckles of the little and ring finger striking the nervus buccalis. Besides pain caused to the nerve, there is also the pain to the skin of the cheek bone as well as the usual results of any strike to the head.

1.8 Forehead nerve/Nervus frontalis

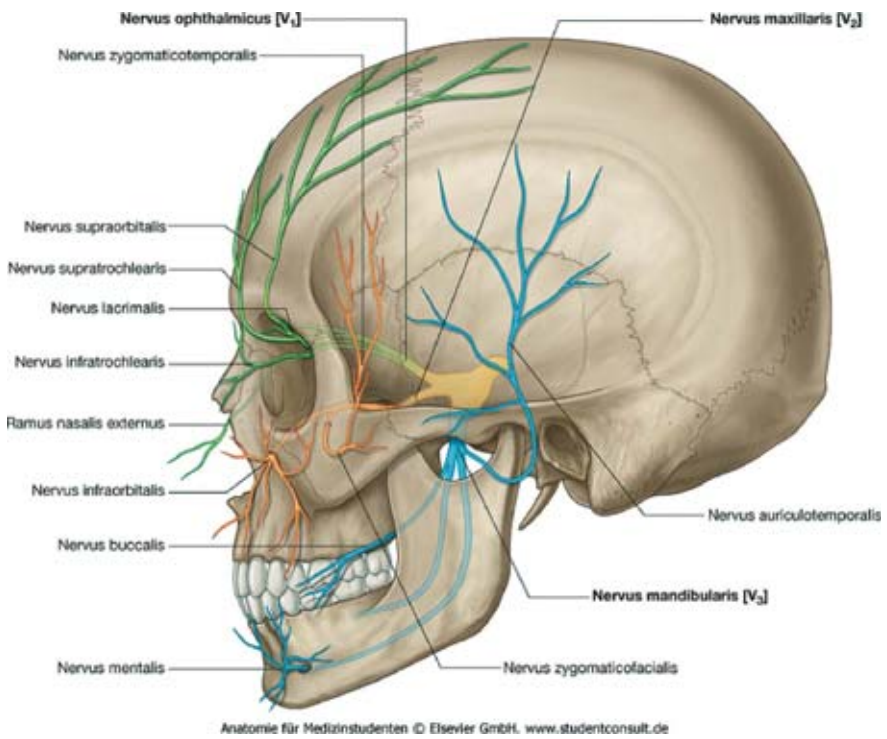


Diagram 3

The nervus frontalis (as well as the two terminal branches, nervus supraorbitalis and nervus supratrochlearis) runs along the outer eye muscles to the upper edge of the eye socket and emerges at the surface (at the start of the eyebrow or at the highest point of the eye socket – supraorbital foramen) where they are vulnerable.

Attack: Finger pressure (applied to the region of the eye socket) and strike (at the eyebrows).

Target mark.

Effects: Nerve pain (neuralgia) can be felt after pressure applied (or after a punch) (see the statements in the Introduction).

Comments on use:
Take care with eye injuries. When pressure is applied, it is necessary to place the other hand at the back of the neck, on the chest or the lumbar spine, to counterbalance.

1 The attacker grabs the lapel of the jacket and threatens with his fist.
2 The defender punches over the attacking arm to hit the nerve on the temple with the knuckles (Hiraken).

3 Close-up. **4** The attacker's elbow is pinned at the same time. **5** Close-up. **6** The attacker's head is turned away from the defender. **7** The attacker is bent over... **8** ...and brought down to the ground.

10 Kick with the knee and pin the head to the ground.

Variations:

1 Defend using counter-balancing hand on the neck. The attacker's neck is pinned down.

1 The swinging punch is deflected.
2 The striking arm is pinned, and the thumb applies pressure to the inside of the corner of the eye. Throw.

1.9 Infraorbital nerve/Nervus infraorbitalis

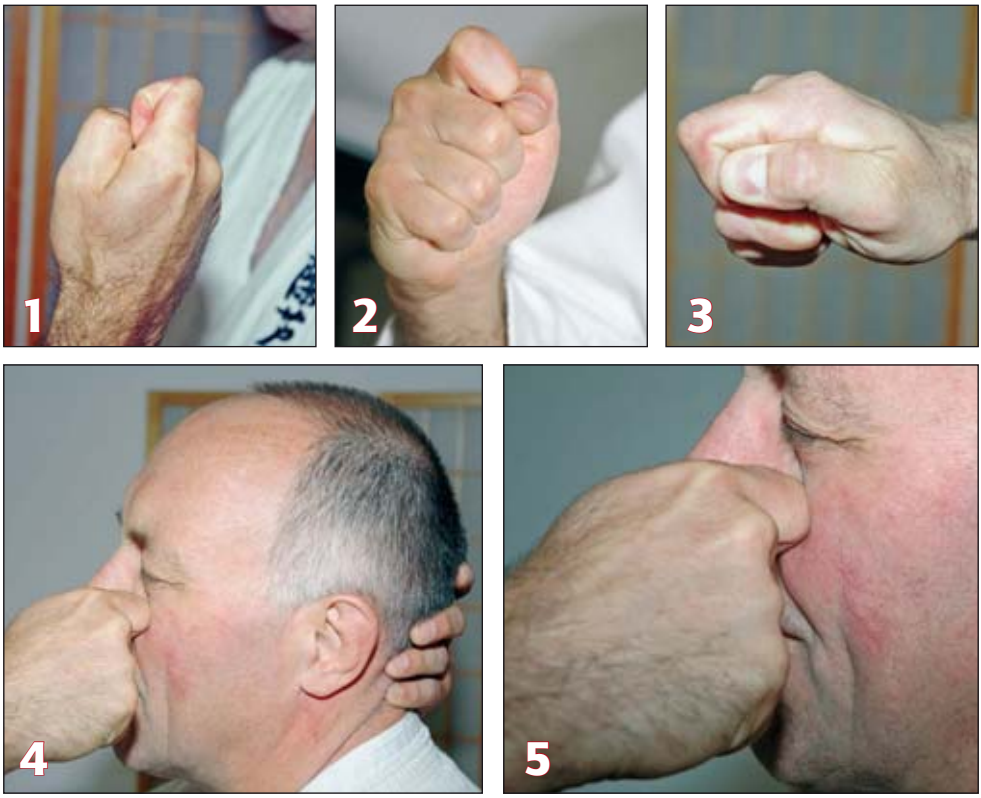
See "Nervus auricularis magnus," "Nervus frontalis," and "Nervus buccalis" illustrations. Direct continuation of the nervus maxillaris (maxillar branch) that is responsible for the sensitive innervation of the anterior skull. The nervus infraorbitalis emerges from the upper jaw about one finger-width below the eyes on the foramen infraorbitale. It can be felt in this area. After emerging from the hole, it branches out into the membranes of the skin on the whole front and upper face and transmits sensitivity to the upper lip, teeth, and gums of the upper jaw (see the section on the "Subnasal point").

Attack: Finger pressure/knuckle punch on the exit area.

Target mark.

Effects: Nerve pain (neuralgia) can be felt after pressure is applied (see the statements in the Introduction).

Comments on use:
Like all nerve points, the degree of sensitivity, as well as the effect achieved, is individually different. When punching, a precise target is necessary (best executed using the knuckle of the forefinger).



1 Position of the hand in Ipponken.
4 The effect of the attack is increased by pinning the back of the head with the free hand.
5 Close-up.

1.10 Mental nerve/Nervus mentalis

See the sections on the "Nervus frontalis" and "Nervus buccalis" for illustrations.

Terminal branch of the nervus alveolaris inferior. It emerges from the lower jaw bone at the chin (foramen mentale) and innervates the skin and membranes of the lower lip and chin.

Attack: Pressure using the knuckles (thumb), punch.

Punch:

1 The punch using the knuckles of the fingers is executed whip-like downward and serves as a shock tactic and as the beginning for further actions.

This technique opens the jaws whereby the joint is more vulnerable to injury from the follow-up punching techniques (see the section on the "Lower jaw").

Effects: Nerve pain (neuralgia) can be felt after pressure applied (see the statements in the Introduction).

Comments on use:
Like all nerve points, the degree of sensitivity, as well as the effect achieved is individually different. Usage is limited to this individual case.

Pressure using the knuckles:

1 Target mark.

2 Way of holding the hand for follow-up attacks; the other hand is anchored at the back of the neck.

Further sequence:

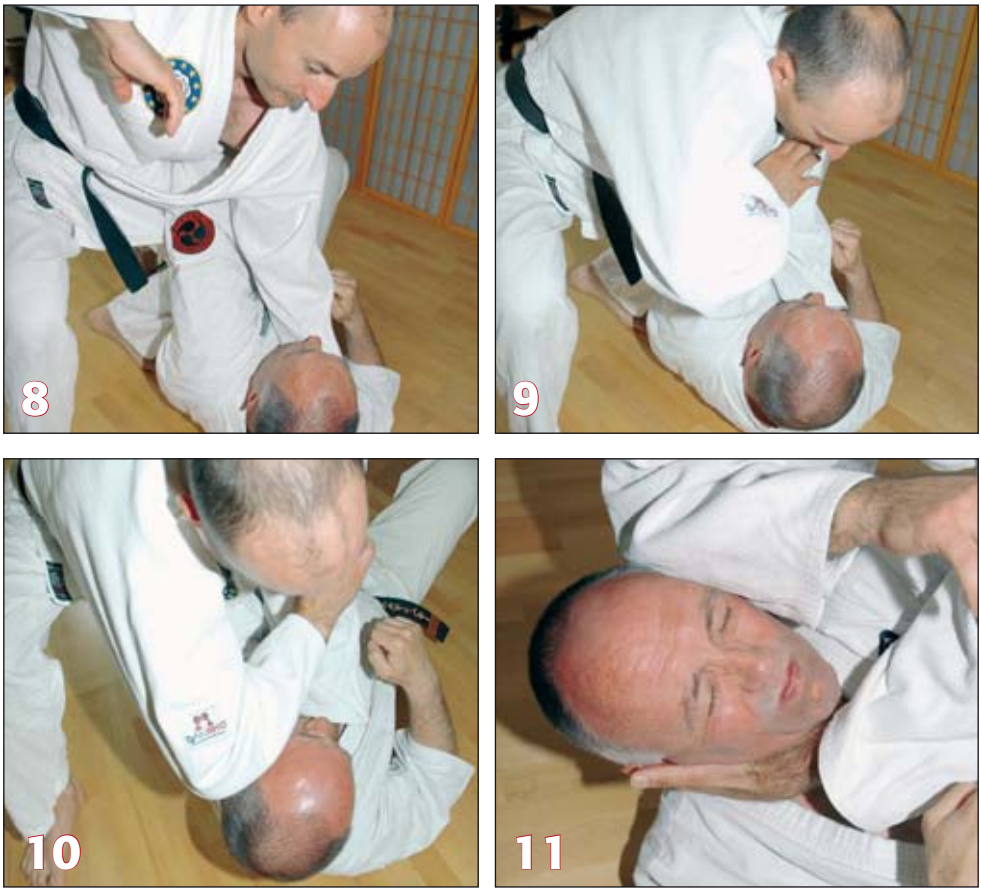
1 The attacker's strike is defended using a double block.

2 The defender's right hand slides down the line of the arm being defended toward the attacker's chin.

3 Strike.

6 Caused by pressure on the nerve, the attacker's head is turned and his body follows.

7 The attacker is brought down to the ground.



11 Concluding technique is a strike using the elbow.

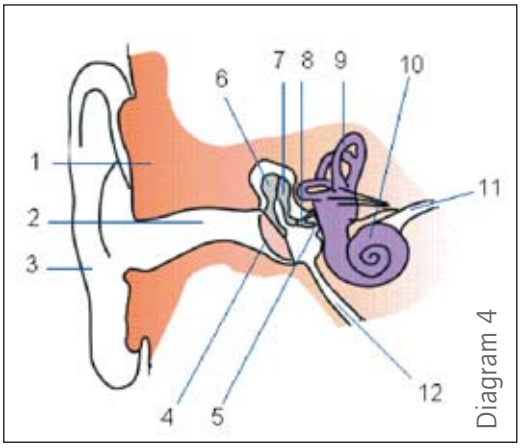
1.11 Upper lip

Attack: Scissor grip on the upper lip.

Effects: Pain caused by the effect on the musculus orbicularis oris (the circular segments of muscle around the mouth), namely the pain receptors and the infraorbital nerve (see the illustration in the sections on the "Nervus auricularis magnus" and "Nervus frontalis") that stretch through the upper jaw and innervate the teeth in the upper jaw, the gums and the upper lip. Nerve pain (neuralgia) can be felt after pressure is applied (see the statements in the Introduction).

Comments on use:
It is necessary that the other hand is used as a counter thrust (neck, chest/lumbar spine).

1.12 Ear



(1) Petrous bone (2) External auditory cavity (3) Ear flaps (4) Tympanic membrane – this is a thin membrane at the inner end of the auditory cavity, which closes it off from the middle ear (6) Malleus bone (7) Incus (8) Stape bone (stirrup) (9) Labyrinth (semicircular canals) – this is part of the inner ear and serves as the organic system for balance (10) Cochlea (11) Cochlea nerve (12) Eustachian tube

Attack: Slap with a cupped hand at the ear (possibly with both hands) (practice using it against the partner's upper arms). Stick a finger in the auditory canal.

Form the cupped hand for the slapping action.

Effects: The eardrum vibrates due to sound waves – more precisely through the change of pressure caused by the sound – and this is transmitted from the ear ossicle in the middle ear to the inner ear. The slap with the cupped hand causes compression of the air in the auditory canal so that overpressure (barotrauma) occurs.

Apart from the noise, in addition to the rapid, strong and painful pressure, the eardrum can be ruptured. A ruptured eardrum usually heals itself, however this may also need to be repaired by an operation.

The effect described, however, is accompanied by pain: Several nerve branches are involved in the innervation of the eardrum, in particular the ramus auricularis, the vagus nerve and the nervus auriculotemparalis, a branch of the nervus trigeminus. The interior of the eardrum is innervated by the branches of the network of nerves in the membranes (plexus tympanicus) of the middle ear. Merely touching the eardrum is painful and, in some cases, can cause a feeling of nausea and even unconsciousness. An acute, sharp pain is typical in a traumatic perforation of the eardrum. A sudden reduction in hearing can also occur (depending on the degree of perforation). Germs can enter the middle ear through the perforation (mainly from water) and slight bleeding can also occur.

Because the inner ear is also involved in such a strike, this can also influence one's sense of balance and additionally be the cause of dizziness (vestibular dizziness).The dizziness is often accompanied by a vegetative reaction in the body, such as nausea, vomiting, sweating, cardio acceleration, and/or collapse.

Apart from the medical effects, sticking a finger in the ear causes a large reflex action (innervated by several brain nerves).

Comments on use:
Not much strength is required to create a significant effect.

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4 Directly after slapping the ear, the thumbs are thrust into the eyes.
5 The head is turned to the side with constant pressure on the eyeball.
9 Concluding technique: Strike with the elbow.

1.13 Parotid gland/Parotis

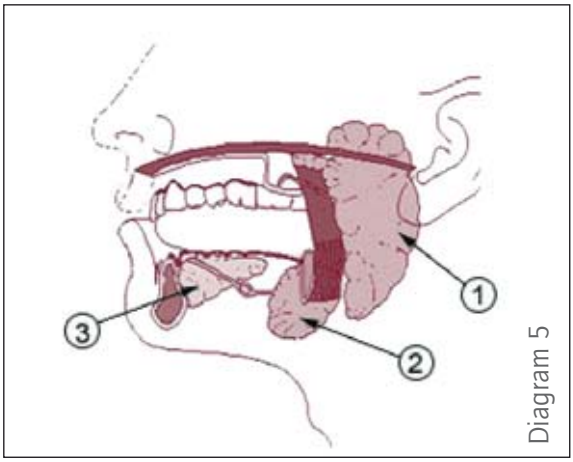

Diagram 5

1. *Glandula parotidea*
2. *Glandula submandibularis*
3. *Glandula sublingualis*

The parotid is the largest salivary gland in the oral and jaw region. In humans, it lies on both sides of the face in front of and below the ear, stretching down from the zygomatic arch to the angle of the jaw and covers the rear half of the masticatory muscle (musculus masseter). In the parotid is the so-called plexus parotideus, which is made of fibers from the nervus facialis. The sensitive innervation of the parotid comes from the nervus auriculotemporalis (see the illustration in the section on the "Nervus frontalis").

Attack: Pressure from the fingers, punch with the knuckles.

Target mark.

This is how to hold the hand for the knuckle punch. Strike with the upper side of the knuckles of the fist (Kento – 'sword fist'). The effect is increased by doing a snap movement outward from the wrist.

Effects: Muscle and nerve pain (neuralgia) can be felt after pressure is applied (see the statements in the Introduction). Besides this, the glandular tissue can be damaged. In a punch, damage to the lower jaw is also possible (for results see section on this).

Comments on use:
Like all nerve points, the degree of sensitivity and effectiveness is individually different.

8 At the end of the sequence, the opponent is thrust to the ground.

An **additional combination** where the knuckles of the fingers are used to strike (Ryuto Ken Tsuki).

1 Defense.
2 Circular counter-movement with the fingers of the knuckle.
3 Using a whip-like strike, the parotid is possibly damaged, or at least the strike causes pain.

In this sequence, the knuckle of the thumb is used to strike.

1.14 Skull

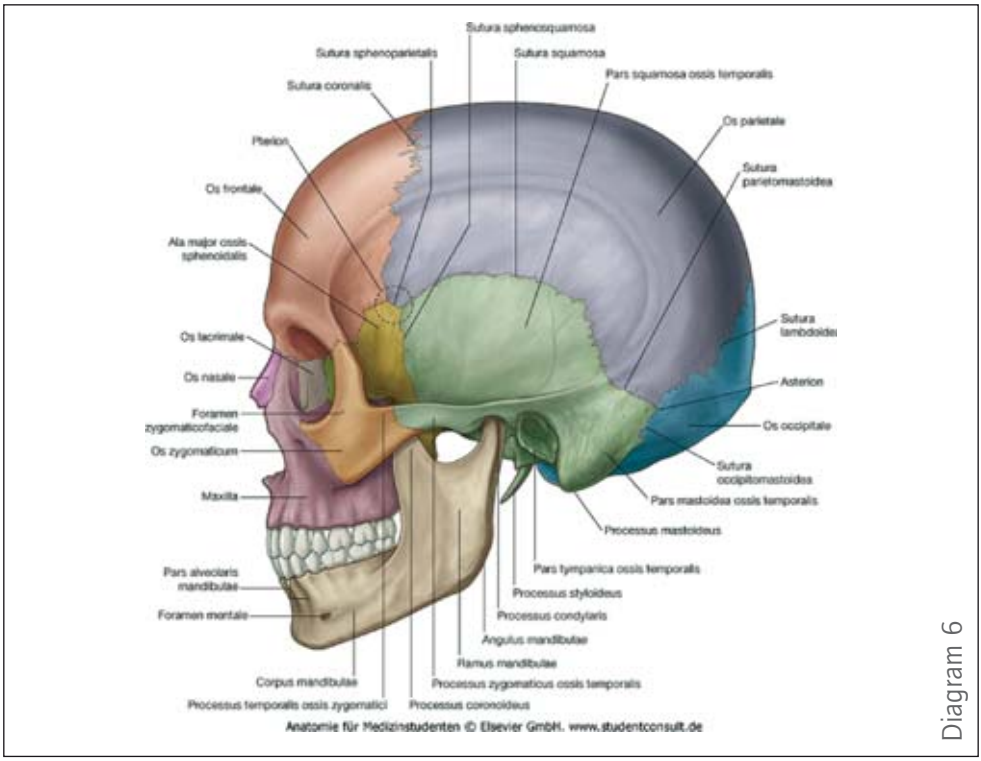

Diagram 6

Attack: Strikes (careful not to damage one's own hands), kicks (using the knee).

1 Warding off the opponent's attack.
2 Controlling the elbow and the neck.
3 The attacker is brought down onto the knee.
5 The defender continues controlling the head and using his body to block the attacker's left arm.
6 Strike with the elbow at the back of the head.

Effects: Fractured skull and traumatic brain injury.

Types of skull fracture:

Basal skull fracture: At its base, the skull is connected to the neck spine. A fracture in this region often has the result of causing damage to the nerves of the brain where these emerge from the skull at the basal area. Sometimes cerebrospinal fluid flows

from the ear or nose and is often accompanied by disorientation or unconsciousness. A typical symptom is two black eyes (bilateral orbital hematoma).

Fracture of the bones of the facial skull: This includes the region of the eye sockets, the nasal bone and the upper and lower jaw. A fracture in these areas often causes the disruption of small bones in the area of the face and considerable swelling.

A **fracture of the eye socket** can lead to disrupted vision if the eyeball is displaced. Fractures of the skull cap (cranium) are possible, for example, after a major impact with the ground.

Where there is displacement of the broken bones, or splintering of bones in the interior skull cap occurs, these can penetrate deeply into the brain.

Craniocerebral injury (traumatic brain injury, or TBI) refers to all injuries to the cranium where the brain is also involved in the injury, but not to those injuries where there are no genuine skull fractures or head wounds. Because of the danger of internal bleeding in the brain, any patient suffering a traumatic brain injury (even concussion) must be taken to hospital for observation.

There are several methods used to classify the severity of traumatic brain injury (TBI). For the purpose of this book we, the authors, have chosen to list the grades and describe them along the lines of the system used in Germany. The descriptions below do not vary much between many of the systems and should be sufficient to give the reader an overview:

Injuries are described in three grades of severity, dependent upon the length of unconsciousness, remission of symptoms and any later complications:

- Grade 1: TBI (Commotio cerebri – brain concussion): This is defined as a light brain injury (i.e., with the cerebral membrane of the brain still intact) without loss of consciousness or unconsciousness up to an hour. Condition is completely healed after approximately five days. Generally, patients complain about moments of retrograde amnesia (lapses of memory) and nausea.

- Grade 2: TBI (Contusio cerebri – cerebral contusion): Loss of consciousness up to 24 hours. Complications depend on the area of brain damage.

- Grade 3: TBI (Compressio cerebri – cerebral compression): Unconsciousness longer than 24 hours caused by compression on the brain resulting in bleeding (increase in pressure, cerebral swelling). There can be intervals of minutes to hours where symptoms are absent. The results are often a long period of coma (sometimes artificially induced), a condition similar to a coma, respiratory paralysis or even death. In such cases, therapy involves the temporary removal of a part of the cranium (several months).

  Long-lasting damage can be expected, but this is not inevitable.

The following symptoms point to a traumatic brain injury. It should be noted that some of the symptoms listed can develop well after the actual trauma.

- Disturbance of consciousness, with possible deterioration
- Headaches
- Dizziness and loss of balance
- Cross-eyed state
- Difference in pupil size (differences between sizes of both pupils)
- Nausea and vomiting
- Unconsciousness
- Lapses of memory, amnesia
- Paralysis
- Irregularity of breathing and pulse
- Shock
- Motor and sensory disorders (e.g., tingling sensation)

Here the differences in pupil size and the increase of cases of disturbance in consciousness must be taken as warning signs because these may be an indication of internal bleeding in the cranium. However, unconsciousness is not always a sign of a traumatic injury to the frontal lobes. Nevertheless, such injuries can lead to long-lasting damage (e.g., frontal lobe disorders, cognitive disorders, behavioral disorders).

Comments on use:
Quite considerable skill or strength is necessary to execute these moves. Nevertheless, the area of the head is instinctively a preferred target for unskilled fighters.

1.15 Temporal bone

The temporal bone forms the osseous part of the temples (see the illustration in the section on the "Skull"). The temples (Latin: regio temporalis) are regions on the side of the head between the eye and the ear. These areas are very sensitive to blows because the middle ear, inner ear, and brain lie beneath the bone. These areas are also sensitive to pressure due to the presence of the nervus auriculotemporalis, the nervus zygomaticus, as well as the musculus temporalis (see the illustration in the section on the "Nervus frontalis").

In addition to the results described in the previous section, with the danger of trauma on the side of the head, there is a possibility of injuring the arteria meningea media (middle meningeal artery) where arterial bleeding can occur and which, if untreated, can result in death, which is why we concentrate on covering this area. It is located halfway between the upper edge of the ear and the upper edge of the eye socket where the os frontale, os parietale, and the os sphenoidale meet (this region is called the pterion – see the illustration in the section on the "Skull"). Because the bones at this point are especially thin and the skull has a flat structure here (making it mechanically weak), a fracture is quite possible.

Attack: Punches (be careful not to damage your own hand; it is best to use the ball of the hand, a hammer strike, or the elbow), kicks.

Target mark.

Effects: Skull fractures and traumatic brain injury (unconsciousness, coma, long-lasting brain damage, death) (see more details in the section on the "Skull").

Comments on use:
See previous section.

1 The attacker's swinging punch is made ineffective by shortening the distance of reach and cover.

2 The covering arm is used as a hammer fist directly to the temple.

4 Controlling the neck and bringing back the elbow to strike.

6 The hand of the attacking arm grabs hold around the back of the neck. A 90° turn brings the defender into the starting position for a knee kick and puts the attacker off balance.

NOTE: The combination must be executed with constant forward pressure in order to be successful.

2 Ball of the hand strikes at the temple.
5 'Sandwich' – the attacker's head is between the ball of the hand and the elbow.

1.16 Forehead humps/Tubera frontalia

Center bony section of the forehead (os frontale) to the left and right above the eyebrows; see the section on the "Skull").

Attack: Strike using the knuckles (repeatedly).

Target mark.

Effects: Pain (skin membrane, or periosteum), possibly from the nervus supraorbitalis or nervus supratrochlearis). After a massive blow, a fracture of the sinus bone may occur (but not after a blow with the knuckles). After a massive blow, the concussion vibration can cause a traumatic brain injury. See the section on the "Skull" for more detail.

A strike with the ball of the hand, with a simultaneous strike with the edge of the hand at the muscle on the side of the spine of the neck, can have a strong effect, including unconsciousness due to vibration in the brain.

Comments on use:
Freeing techniques (followed by further techniques or running away).

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1 Attempt to be grabbed around the waist under the arms.

2 Use a shock technique with a knuckle strike at the bumps on the forehead.

4 Start of the neck lever.

6 The attacker's head is pinned onto the defender's shoulder.

10 The defender executes a Tai-Sabaki rotation while at the same time twisting the opponent's head around.

1.17 Lower jaw

For an illustration see the sections on the "Skull" and "Nervus frontalis."

Attack: Punch. In order to lessen the danger, use the ball of the hand (or base of the fist) or elbow.

1 The start of the attack is diverted by using a step-in movement. That is to say, the right hand makes contact with the attacking arm and changes the direction of the attack. The left hand grabs hold of the attacking arm.

3 By using a counter movement directly under the attacking arm, an uppercut punch is delivered to the chin.

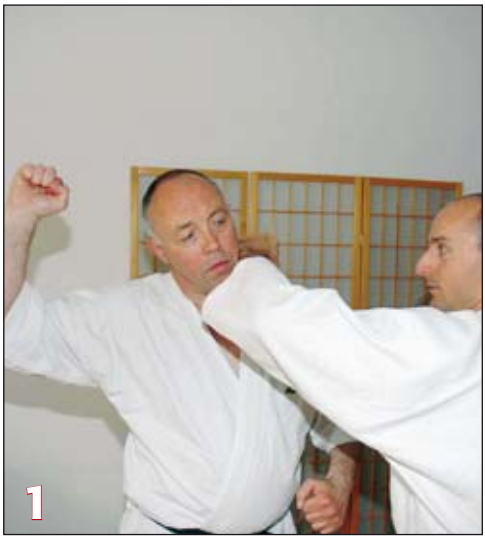
5 From another viewpoint.

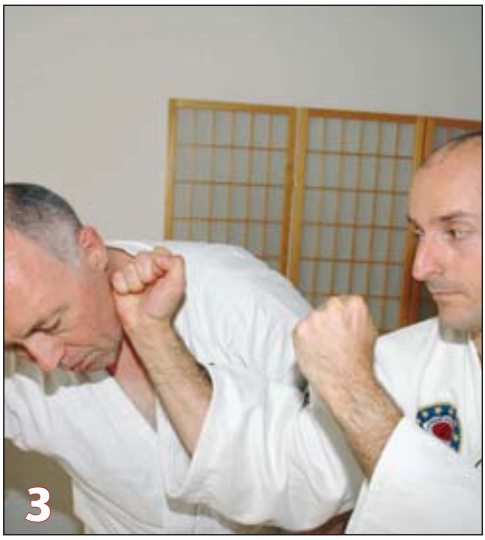
Results: Lip and tongue damage are relatively harmless results. Other injuries depend on the angle at which the blow was delivered (and of course its strength). A horizontal angle is more likely to cause a dislocation or break of the joint of the jaw (especially if the jaw is open at the time) and possibly damage to the teeth. Additionally, a lesion of the nervus auriculotemporalis (see the illustration in the section on the "Nervus frontalis") can occur with resulting paralysis or weakening of the masticatory muscle musculus temporalis. An uppercut blow can result in whiplash from the great strain on the spine of the neck as the head is pushed back (see also Chapter 2 on the Nape of the neck). This can also cause damage to the softer parts of the nape of the neck, e.g., muscles, ligaments, spinal discs, the vessel structures, and the spinal cord. Results can include dizziness, stiff neck, feeling dazed, difficulties in hearing and vision, as well as a reduction of peripheral sight. **Traumatic brain injury** is also possible (see the section on the "Skull").

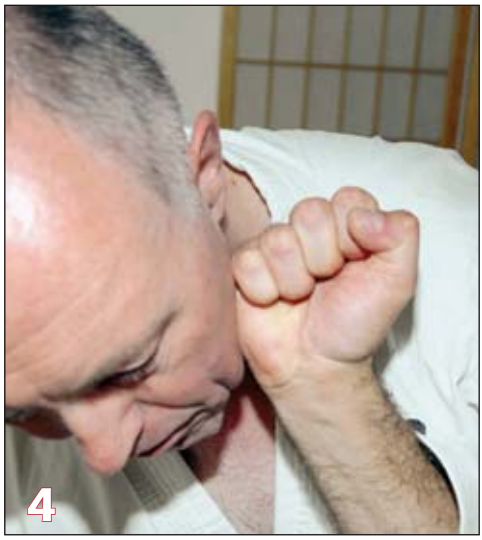
In serious breaks of the lower jaw, the floor of the mouth becomes instable with a danger of the air passages being blocked due to the position of the base of the tongue.

Partial facial paralysis is also possible, because the nervus facialis is situated forward underneath the parotid gland up to the surface at the rear edge of the lower jaw. Here it lies directly under the skin where it has little protection and thus is easily damaged by external effects.

Comments on use:
This is a classic target for professional fighters, as well as the "not-so-professional" ones; the teeth represent a considerable risk to the striking hand if unprotected.







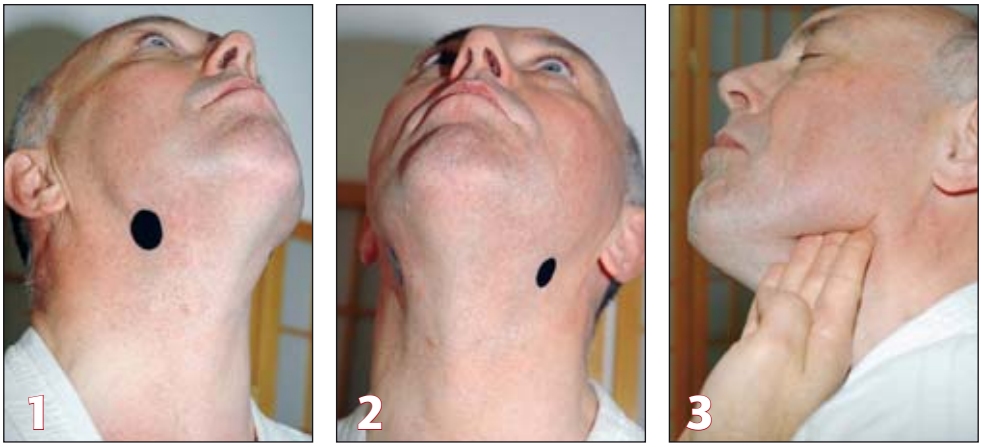
1 The defender anticipates the attack and attacks the attacker's lower jaw with a hammer fist punch.
2 The strike forces the head around...
3 .....followed up with another hammer fist punch.
4 Close-up.

1.18 Submandibular gland/Glandula submandibularis

See the illustration in the section on the "Parotid gland."

The submandibular gland can be felt – right and left – on the mandible angle of the lower jaw between the jaw bone and the musculus digastricus in the so-called submandibular triangle. The submandibular gland is innervated by the nervus facialis and nervus lingualis.

Attack: Punch/pressure using the finger tips/thumbs.



1-2 Target mark.
3 Use the fingers as a spear.

Effects: Nerve pain (neuralgia) can be felt after pressure is applied (see the statements in the Introduction). A lesion of the glandular is possible. There is also a possibility of whiplash resulting from the punch, with similar results as those described earlier.

Comments on use:
Like all nerve points, the degree of sensitivity and effectiveness is individually different.

Uses:

1 The defender anticipates the planned attack by pinning the attacking arm and using the fingers to stab the gland.
2 The attacker leans forward.
3 Close-up.
4 By steering the head, the attacker's punch lands in empty air.
5 Start of the arm lever.
6 Executing the arm lever.
8 The arm is pinned and under control.

Simultaneous use of a pull on the neck and stabbing with the fingers.

1 Controlling technique when the opponent is on the ground.
2 Close-up.

1+2 Defending one's self against being grabbed around the waist by controlling the head.
2 The defender then hooks his fingers under the attacker's lower jaw and brings him down to the ground.

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1.19 Lower lip

Attack: Using a pincer grip (with the thumb under the chin), the lower lip is pressed against the incisor teeth; biting the fingers is not possible. The nervus mentalis innervates the lower lip.

1 How to form the grip.
2 When using the grip, the lower lip is pushed up over the incisors, thus being bitten is not possible.
3 From another viewpoint.
4 Preparing for an O-Soto-Gari.

Effects: Pain (from the pain receptors of the muscles and the mucous membranes).

Comments on use:
Its practical use is clearly limited (being in a position to start the move is the most difficult part).

1.20 Sublingual gland/Glandula sublingualis

For an illustration, see the section on the "Parotid gland."

As the name indicates, the gland lies underneath the tongue – it is the smallest of the 3 pairs of major salivary glands.

Attack: Using a pincer grip (with the thumb under the chin), the forefinger and middle fingers press down on the base of the mouth. Its practical use is clearly limited.

Effects: Pain.

Comments on use:
Like all nerve points, the degree of sensitivity and effectiveness is individually different. Its practical use is clearly limited (being in a position to start the movement is the most difficult part).

1.21 Cheeks

Attack: Using a pincer grip, the flesh of the cheeks is pressed against the upper and lower rows of teeth. The nervus buccalis (see its section) innervates the cheeks.

Effects: Pain, the jaws open (dog owners know this technique).

Comments on use:
A counter hold with the hand is necessary (on the neck, chest/lumbar spine region).

1.22 Dental alveoli

The hollows or sockets in the chin bone are called alveoli and the teeth (and roots) are held in place in these. Dental alveoli are present in both the upper jaw bone and the lower jaw bone. The dental alveoli in the lower jaw bone are innervated by the nervus alveolaris, and the nervus infraorbitalis innervates the dental alveoli in the upper jaw bone.

Attack: Jab with the tips of the fingers, knuckle punch.

Target mark.

Effects: Pain.

Comments on use:
Freeing techniques (then use follow-up techniques or run away).

1 The tips of the fingers press into the dental alveoli. Counter pressure at the back of the neck.

2 Another technique: Use the middle knuckle in a punch.

1 Hiraken against the teeth alveoli with a counter hold at the back of the neck.

2 Extension of the previous technique by pressing the middle finger into the opponent's eye.

2 Attack points on the neck

2.1 Carotis/Common carotid artery

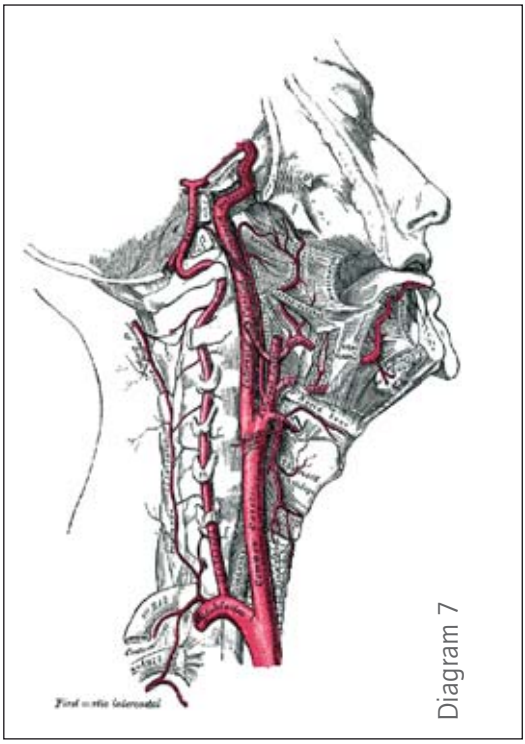

Diagram 7

The carotid artery is on the left and right hand side of the windpipe and the esophagus and is covered only by the neck side muscle and skin. In the region of the neck, one can measure the pulse easily. In the region of the larynx, it divides into the arteria carotis interna and arteria carotis externa. One of the most important points of measuring blood pressure (glomus caroticum) is at this fork in the arteries. This fork is necessary so that when there is a sudden increase of blood pressure the vessels do not break and lead to bleeding. When the blood pressure increases, the internal wall of the carotid sinus stretches, which is registered by the glomus caroticum and transmitted to the brain by the nervous system.

Attack: Strike with either the inside or outside of the hand (also in strangling attacks).

1-2 Target mark.

Effects: The heightened blood pressure stimulates the brain causing the blood vessels to enlarge immediately, specially in the veins of the stomach region – unconsciousness is possible due to the lack of blood supply to the brain. If lying horizontally, the blood flows back into the brain and one will awaken.

In addition, the heart can slow down and be weakened. There is also a lower rate of breathing, which can eventually even come to a full stop. There is a danger of heart attack.[10]

Further injuries can result from any fall.

There is also the danger that plaques can loosen on the internal sides of the carotid artery, move along through the system and cause a stroke in the brain. Such plaques as these are especially found in the fork of the common carotid artery. The danger is higher with increasing age.

As already pointed out in the Introduction, regarding the impact on Uke, one can be irresponsible and be equally juristically dubious when you see this point in the various training videos misused as "evidence" that Kyusho is effective. It can be a particularly delicate subject if there are injuries where the effects are more serious than those planned.

Comments on use:
Suitable for use as Atemi, as well as strangling techniques. In certain instances, danger exists due to the closeness to the larynx.

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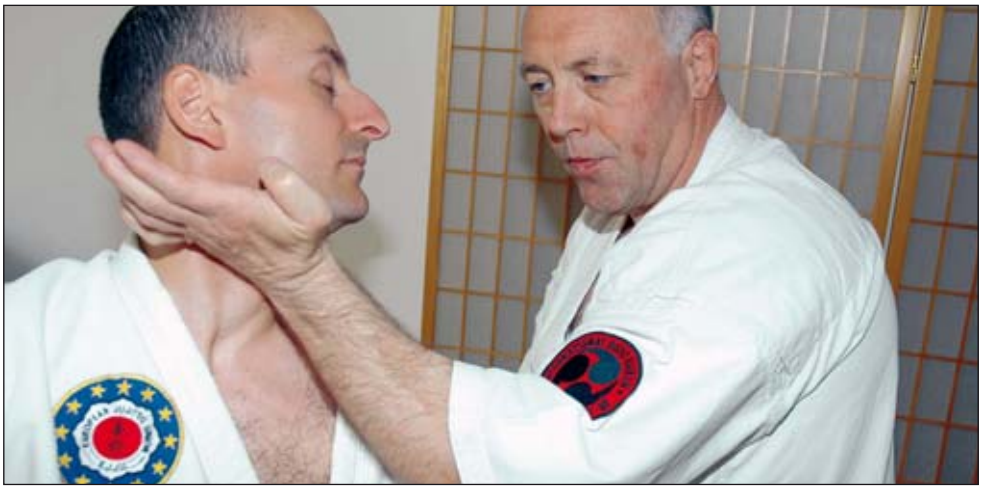
1 The opponent tries to grab hold.
2 The defender moves forward holding his arms in a wedge 'V' shape.
3 The attack is deflected to the outside.
4 The attacker slides past the outside of the defender.
5 Pincer attack using the edge of the hands at the carotid arteries.
6 Close-up.
7 In order to bolster the technique, the attacker's foot is pinned down by standing on it.
8 Close-up.
9 Continue the attack by rattling the sides of the hands against the target.

Additional sequences:

2 Attack using a straight kick with the foot.
3 The kick is swept away by the left arm.
4 The defensive action causes the attacker's kick to be extended.
5 The circular sweeping motion in the counterattack is moved to the use of the inner edge of the hand.
7 Counterattack with the inside edge of the hand and control of the elbow joint at the same time.

The strike can also be executed using the outside edge of the hand (Shuto).



2.2 Nape of the neck/Cervical spine

Consists of the seven vertebrae (C1-C7) between the head and the thoracic spine and is supported by the neck and back muscles as well as several other vertebrae.

Diagram 8

Attack: Neck lever, punch.

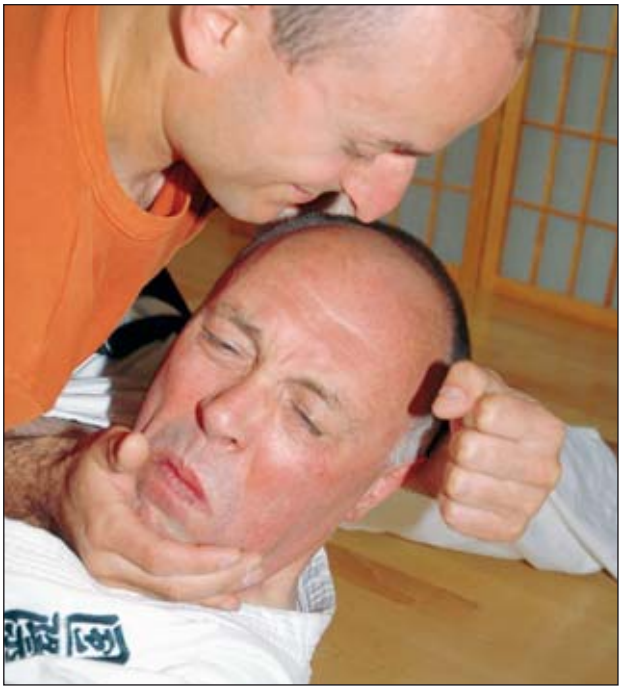
In a rotating neck lever, it is crucial that a combination of stretching the neck and the rotation of the head is applied in order to achieve the optimum effect.

1 Demonstrating the stretching of the neck.
2 Stretching the neck + rotation of the head.

Use in the standing position

1 Start of the neck lever in a standing position. Notice the beginning of twisting the head and pinning it.
2 No possibility of escape.

When used in groundwork:



Stefan is pleased with his successful lever of the neck.

Groundwork sequence:

1 The back of the opponent's head is grasped in the flat of the hands. In the clinch, the hands are folded over each other. (Careful! Never link the hands together otherwise there is the danger of breaking the fingers).
2 Stretching the neck.
3 Starting the rotation.

Attack: Strike (edge of the hand, lower arm).

1 Starting position.
2 The right-handed punch is warded off. The right hand is ready for the strike with the edge of the hand that follows.

3 Strike with the edge of the hand....
4 ..... and directly grab around the neck.
5 Inside low kick (Uchimomo-Geri). The right-hand kicking leg is quickly moved to the rear, and the opponent is brought off balance by pulling him sharply past the defender.
6 Starting position for a further attack at the neck.
7 Pulling back movement while at the same time controlling the elbow.
8 Attack using the ulna part of the lower arm (potentially fatal).

Effects: Eight branches of nerves originate on each side of the cervical spine. The upper four form the cervical plexus and innervate the neck and its muscles as well as the diaphragm. The lower four, together with the nerves of the first thoracic vertebra, form the arm plexus (plexus brachialis) and innervate the chest, back and arm muscles, as well as the skin covering them.

The vertebral arteries are found down the cervical spine and, together with the carotid artery, they ensure that the brain is supplied with blood. Lesions of the spinal marrow (caused by broken bones in the cervical spine) lead to feelings of numbness and paralysis of the legs, arms, torso and, in the case of injury in the higher section (in injuries to the spinal marrow around the region of the fourth vertebra or higher), paralysis of the diaphragm and thus breathing. Moreover, it results in a loss of control over the bladder and bowels, as well as deadening sexual functions. Whiplash is a moderate form of injury to the marrow in the cervical spine and does not damage the vertebrae. It has the typical symptoms of headache, fatigue, dizziness and nausea. Serious forms of whiplash are accompanied with instability in the passage from head to neck. These injuries are those to the ligaments or damage to the joint capsule in the head joint. Symptoms of instabilities in the passage from head to neck are:

- Dizziness
- Drowsiness
- Burning or sharp pain at the back of the head
- Problems with hearing and vision, limited peripheral vision
- Perceptual disorders, attention disorders, disorientation
- Rapid exhaustion
- Insomnia
- Feeling of weakness
- Pain and/or sensation of numbness or tingling on the facial or arm skin (paresthesia)
- Unsteady gait
- Muscle disturbances, such as cramps (spasmodic)

Comments on use:
Targets are easily reached, however the effects are dependent upon the physical constitution of the other person.

The same sequence as above, but for clarity, from another viewpoint.

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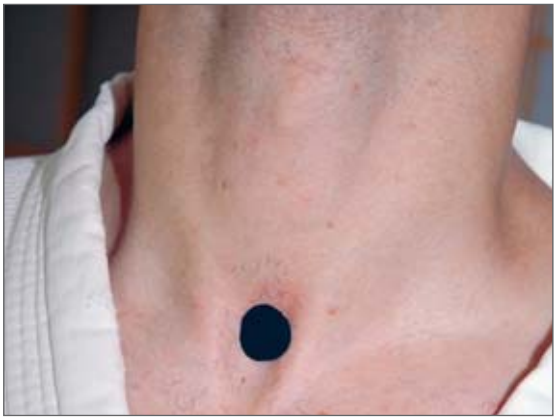
7 Take control with the right hand. Pull back the left hand for a fresh strike.

2.3 Jugular notch/Fossa jugularis

Location: Lies in a hollow between the two collarbones and bordered below by the upper edge of the breastbone.

Attack: Apply pressure or, with a jab, use the fore and middle fingers thus causing irritation of the windpipe (trachea).



Target mark.

1 This is how to hold the hand for the attack on the jugular notch.
2 Alternative way of holding the hand for delving into and behind the breastbone.
3 Pressure of the fingers is applied diagonally upward (for the best effect).

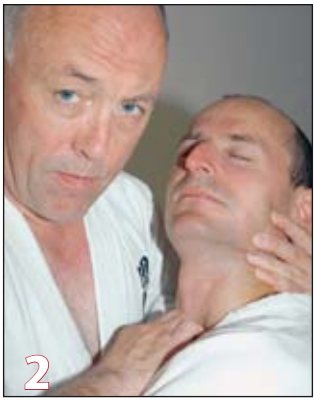
Example of its use:

1 The opponent grabs around under the arms.
2 Shock strike with the knuckles against the nervus frontalis (see earlier). The head is pushed back by this...
3 ....and allows the defender to attack the jugular notch with jabbing fingers.

Effects: Pain and irritation of the throat caused by irritation of the tiny hairs (cilia) on the inside of the windpipe. A fracture of the windpipe occurs mainly as a result of a direct break (this specifically affects older persons) of the ossified upper tracheal rings (horseshoe-shaped rings, or cartilages, enclosing the windpipe, open to the rear – see the illustration in the section on the "Larynx") (e.g., caused by a blunt blow); in cases of complete fracture, retract the stumps.

Comments on use:
In short reaches, it may be possible to bring the opponent down to the ground (to do this, the other hand must hold behind the head/neck). Used as a jabbing attack from greater range (precision is required; in certain circumstances, there is danger due to proximity of the larynx). Alternatively, use it as a freeing technique (then do a follow-up technique or run away).

Additional sequences:

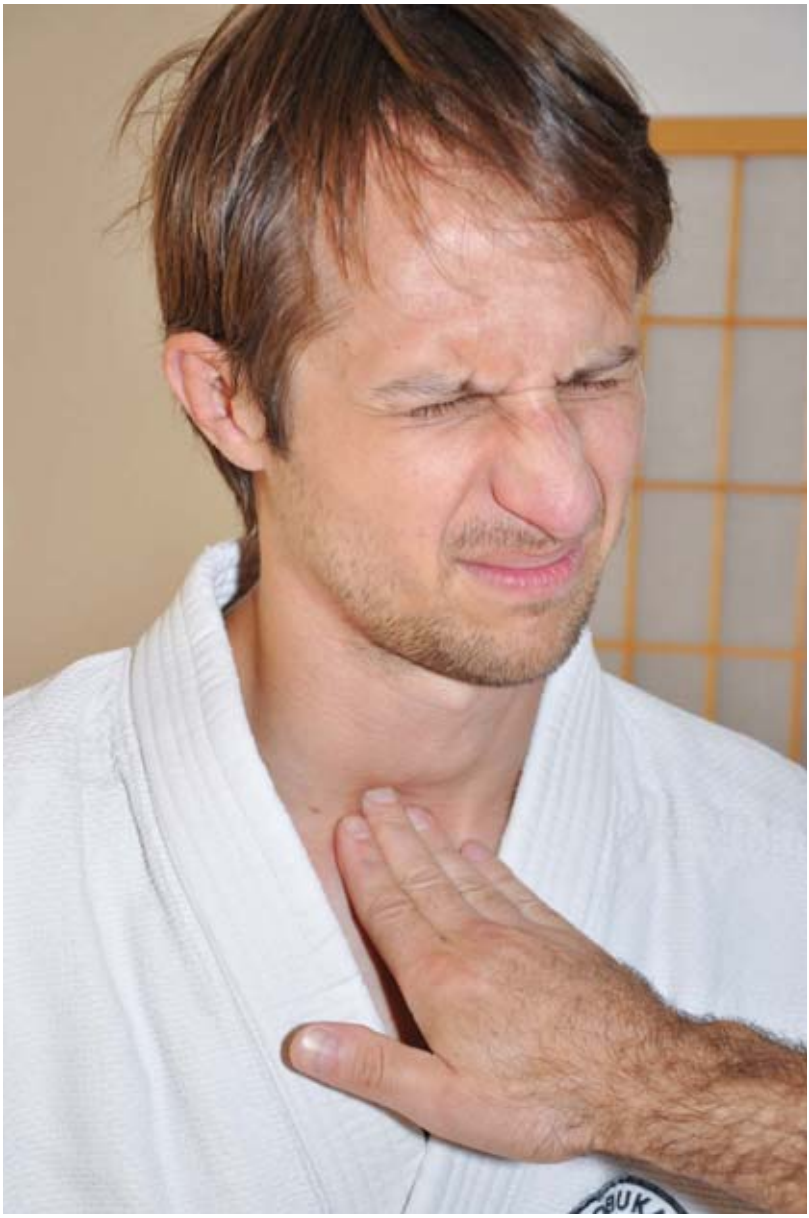


1 Shock technique (as described earlier).
2 Grip the breastbone.
4 Attacker is brought down to his knees.
6 Concluding technique using the elbow (potentially fatal).

Parts of the sequence for clarity:

1 Repeat use of the shock technique.
2 Contact is maintained with the opponent's face. The hand slips toward the throat.
4 Grabbing into the hollow.
5 Defensive strike with the tips of the fingers diagonally upward (careful of the larynx!).

The most reliable strike – upward and diagonal – is the one that uses the whole hand because one of the fingers will always find its target.



2.4 Neck side muscle/Musculus sternocleidomastoideus

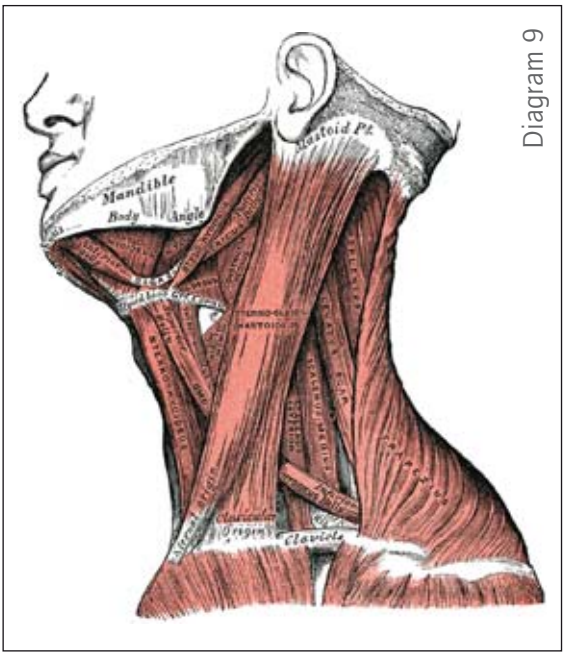


Diagram 9

Origin: Front surface of the breastbone and inside part of the collarbone.

Insertion: Processus mastoideus (mastoid process) of the temporal bone (behind the ear).

The function of this muscle is to rotate the head to the opposite side or obliquely rotate the head. It also flexes the neck. The sternocleidomastoid is innervated by the ipsilateral accessory nerve.

Attack: Pincer grip with the fingers on the center of the belly of muscle or hook the fingers into it.

Illustration of the bundle of muscles.

Effects: Muscle pain; be careful with pressure on the carotid (see its section).

Comments on use:
When at short range, the opponent can be easily steered.

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1 The punch at the ear is deflected.
2 Starting the throw.
3 O-Soto-Gari.
6 Concluding technique: jabbing into the eye.

Variation: Controlling from behind.

1 Grab hold of the muscle while controlling with the other arm.

2.5 Neck side muscle – insertion point

Insertion point of the musculus sternocleidomastoideus is at the mastoid process (processus mastoideus) of the temporal bone (behind the ear).

Attack: Strike with the outside edge of the hand, inside edge of the hand, ulna or base of the fist.

1 Attack using the lower arm (bony part: spoke bone = radius).
2 Close-up.

Effects: When contracting on the one side, the neck side muscle brings the head in the direction of the shoulder. Together with the stretch reflex (see Introduction), the head or brain is concussed and results possibly in short periods of disorientation. When a massive blow is felt, there is a possibility of injury to the cervical spine (see its section).

Comments on use:
A wide spectrum of uses is available, e.g., in support of a throw such as O-Soto-Gari or also used as a shock technique.

After blocking, grab around the body by pushing the attacker's head. Then strike using the edge of the hand against the insertion point of the neck side muscle.

Free yourself from the clinch by applying pressure to the nervus auricularis magnus, use the same hand to deliver a strike with the base of the fist against the insertion point of the neck side muscle.

2.6 Neck side muscle – insertion point hollow

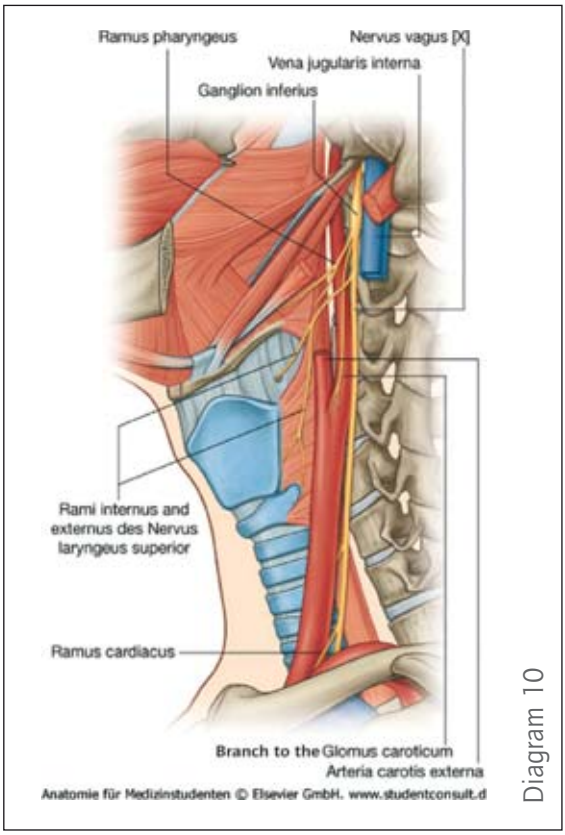


Diagram 10

The hollow formed by the left and right neck side muscles (musculus sternocleido mastoideus) between the collarbone and the start of the breastbone; just above the collarbone (see the illustration in the section for the "Neck side muscle"). "Insertion" means the site of attachment of the muscle to the bone it moves.

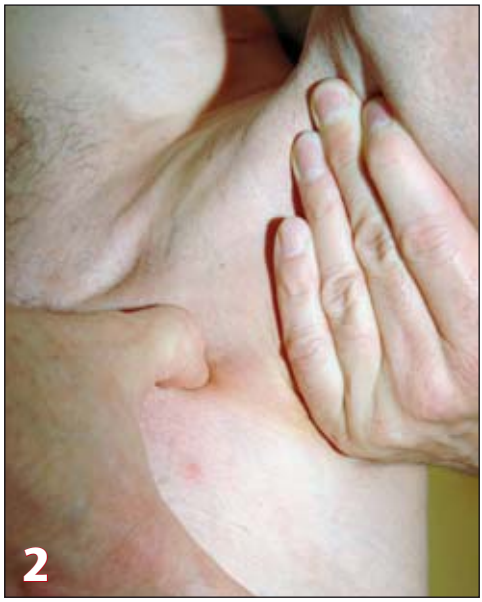
The nervus vagus runs through the neck down to the body in the same sheath as the arteria carotis communis. Here it innervates the heart, the bronchia, the digestive tract and the ureter (to reach this, the pressure must be very strong). Regardless, the effect is felt by the pain caused by pressure on the origin of the muscle.

Attack: Thumb presses diagonally downward toward the middle.

1 Target mark.
2 How the thumb should be held.

Effects: Nerve pain (neuralgia) can be felt after pressure applied (compare the statements in the Introduction). When pressure is applied on the arteria carotis communis, there is a temporary reduction of blood supply to the brain resulting in dizziness. The windpipe can also become irritated.

Comments on use:
Good technique for short range work: finding the correct spot requires practice before one can expect a high degree of success.



1 Controlling the head + attack using the thumb.
2 Close-up.
3 Elbow into the breastbone.
4 Head is pinned for the concluding technique.

2.7 Larynx

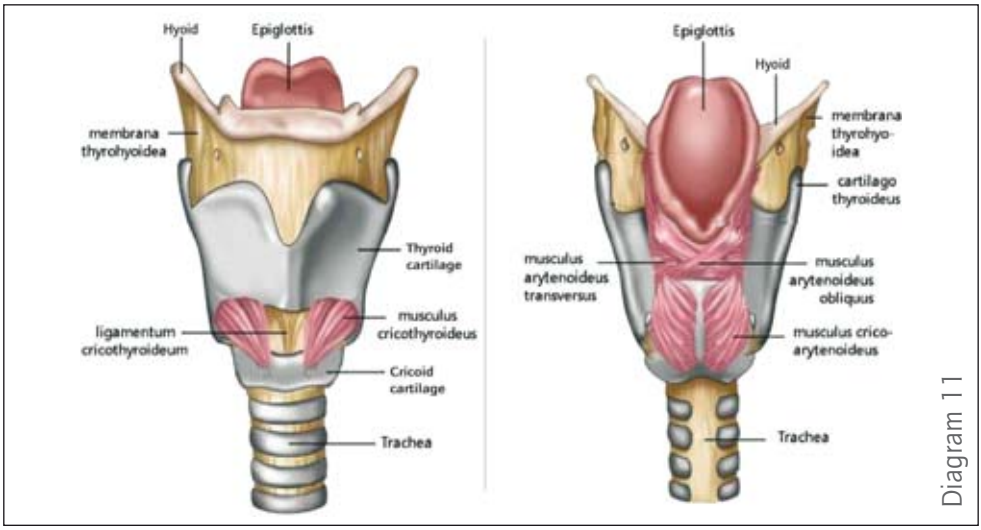


Diagram 11

This target area is very much at risk because the area has no natural protection. The larynx consists of the tongue, as well as three cartilages – the thyroid cartilage, the cricoid cartilage, and the epiglottis. In addition, there are two arytenoids cartilages. The cartilages are held together by membranes.

Attack: Strikes using the inside or outside edge of the hand, the flat of the hand, fist, knuckles or being gripped.

Target mark.

Effects: If the larynx collapses, there is an acute danger of suffocation because the airways become obstructed. Counter-measures: Tracheotomy (or coniotomy dependent upon location). There is a further possibility of a spasm of the vocal cords with closure of the glottis and possible swelling of the epiglottis. If the hyoid is broken, there will be breathing and speech problems caused by the contortion of the muscles surrounding it.

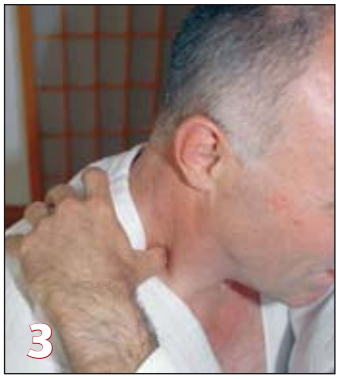
Comments on use:
Regarding effectiveness and accessibility, this target is almost on the same level as the eyes.

1 An effective weapon is to use the fork formed by the open thumb and first finger to strike or seize the throat (Japanese: "Toho"). Following a successful strike, the attack can be followed up by grabbing or squeezing the larynx.

2.8 Clavicle hollow

Attack: Thumb pressure – directed at the plexus cervicalis (cervical plexus) and the musculi scaleni (scalene muscles) (see the illustration in the section on "Neck side muscle").

Diagram 12



1 How to hold the thumb for the attack. **2** Target mark. **3** From another viewpoint. **4** The pressure of the thumb on the plexus cervicalis can be supported by using a neck lever.

Effects: Nerve pain (neuralgia) can be felt after pressure is applied (see the statements in the Introduction).

Comments on use:
Good technique for short range work; finding the correct spot requires practice before one can expect a high degree of success.

2.9 Trapezius/Musculus trapezius

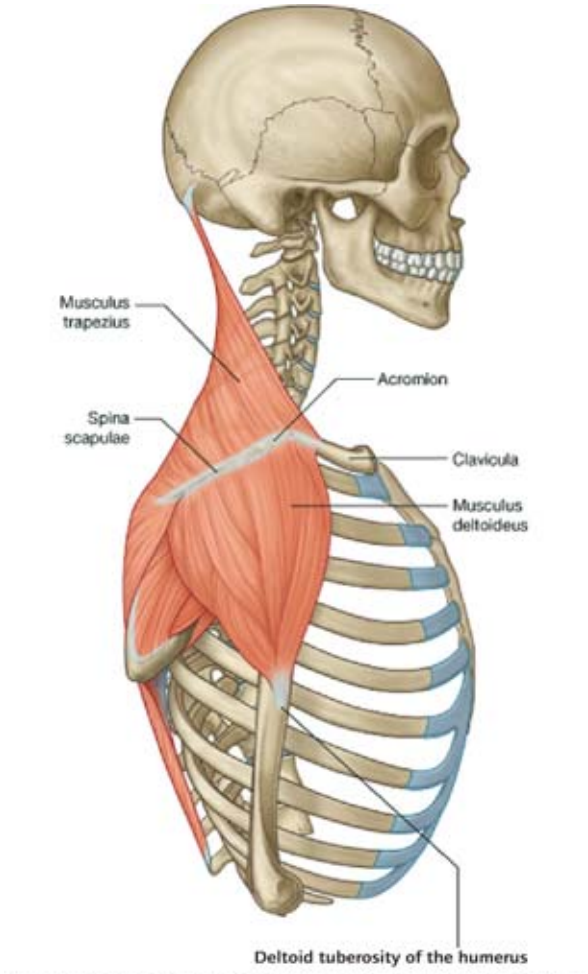


Diagram 13

Attack: Strike (with the edge of the hand, hammer fist, strike using the lower arm [ulna]) against the musculus trapezius where it connects with the neck; pincer grip on the belly of its muscle.

Target mark.

Effects: Muscle pain; together with the stretching reflex (see Introduction), the head or brain is concussed (this means that the strike is at the lower base of the skull).

For the possible effects on the trapezius muscle, see the section on the "Biceps."

Comments on use:
Whiplash is possible with the results already explained several times earlier. This is possibly a difficult target to reach in unfavorable conditions; the strike must be delivered with force.

1 Warding off the swinging punch.
2 Grab hold of the opponent's clothing while at the same time delivering a kick to the inside of the knee.
3 Pull back the arm to deliver the strike at the trapezius.

4 Execute the strike by hitting with the ulna.
5 Grab hold and control the neck.
6 Concluding technique with a knee kick.

1 Pull back the arm.
2 Strike diagonally downward with the radius.
3 Close-up.

4 The strike changes over into a hip throw (Koshi Guruma).
5 Movement to create the pivot.
7 To increase the effect of the throw, the opponent's right leg is swept away.

3 Attack points on the torso

3.1 Armpit/Axilla

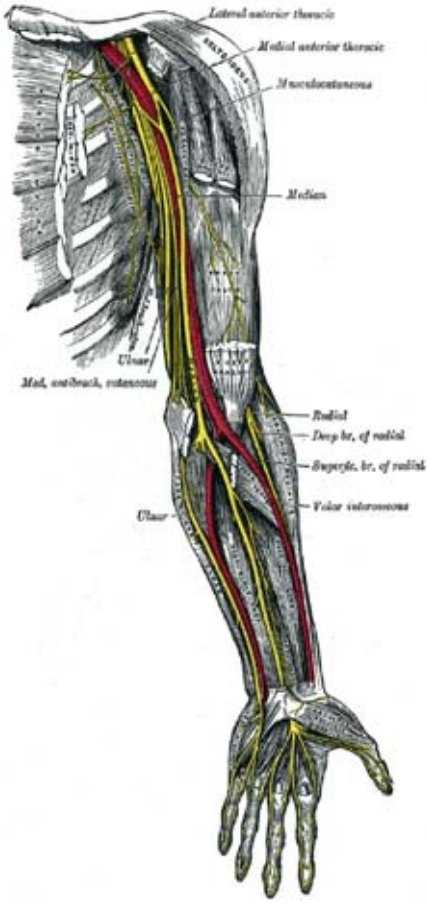


Diagram 14

The armpit is the area on the human body directly under the joint where the arm connects to the shoulder and is bordered by the chest muscle in the front, at the rear by the back muscle, and on the inside by the rib cage. It lies under the skin. The extensions of the plexus brachialis, namely the nervus medianus, nervus ulnaris, and nervus radialis can be found in the armpit. These nerves run through the whole of the upper extremities.

Attack: Kick, jab with the fingers.

Target mark.

1 The opponent is forced to guard himself by applying a lever to his arm. This makes the armpit vulnerable....
2 .....so that a kick can be delivered.
3 Close-up.

Effects: Nerve pain/neuralgia (see statements in the Introduction).

Comments on use:
Like all nerve points, the degree of sensitivity, as well as the effect achieved is individually different; the armpit is relatively seldom exposed, and moreover, as with all targets on the torso, often well protected by clothing.

3.2 Breastbone/Sternum

See also the illustration in the section on the "Ribs."

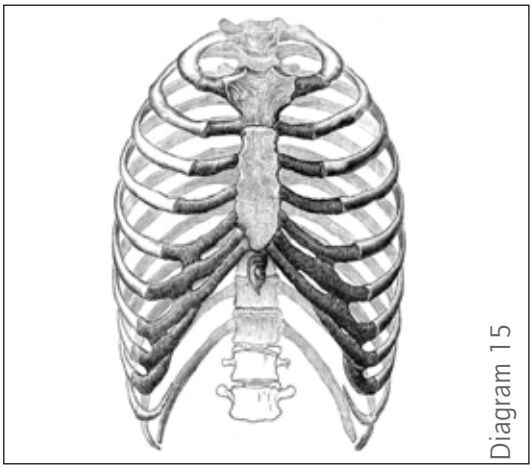


Diagram 15

Part of the rib cage (Latin: thorax).

Attack: Strike using the knuckles of the fingers, head butt, kick with the knee, base of the fist.

Target mark.

Effects: Pain, tickle cough in the throat, fracture of the bone, passing out/fainting, breathing difficulties, shock effect to the heart leading to possible cardiac arrest, death.

It is possible that it will have an effect on the heart. However, this procedure is used in heart massage where pressure is applied to the chest cage. Sometimes, in an emergency, a thump with the base of the fist is done to the chest (just left of the central line) in order to resuscitate the correct heartbeat in cases of ventricular fibrillation.

A state of "commotio cordis" (heart vibration) can be caused even with little force. A U.S. study on this[11], in which 128 cases were reviewed, reported that in most instances baseballs, footballs or other balls were involved. According to the study, there was a window of 15 milliseconds when the risk was at its greatest – the blow had to be directly above the heart.

There appears to be no particular predisposition for a state of "commotio cordis" – it can strike anyone in unfavorable conditions as described. Younger persons, however, are more at risk as they have a more elastic ribcage than older people. Only 16% of the 128 cases reviewed in the study survived.[12]

Comments on use:
The target is easily accessible; however, like all targets on the torso, the ribcage is protected by clothing (particularly for strikes using the knuckles of the fingers).

1. Punch with the fist.
2. The punch is warded off by swiping it away from the outside to inside.
3. The movement turns into a punch coming in diagonally downward.
4. Conclude with a hook to the liver.

1 Attack using a punch (Hiraken).
2 Close-up.

1 Using the head in groundwork.
2 Side view.

1 The opponent's in-swinging attack is negated by moving deliberately forward while covering the head.

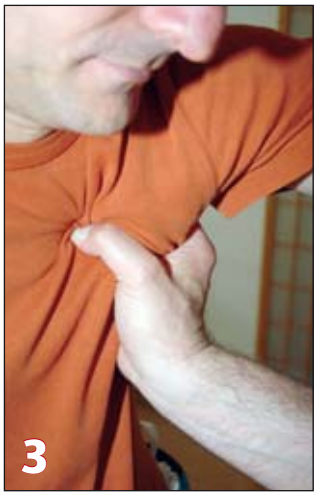
2 The harder the opponent attacks, the more the pressure is transferred to his breastbone.

1 By applying pressure with the knuckles of the fingers (a rubbing motion is also possible) and pulling the back of his head forward, the opponent is forced to lean forward – in this case into a neck lever.

3.3 Chest muscles

The "musculus pectoralis major" (large chest muscle) covers the whole of the frontal rib area. The muscle fibers overlap at the arm: The fibers that come upward join the upper arm further up than the fibers that come from the collarbone. They create an archway where the foremost limitation forms the armpit. The large chest muscle is innervated by the nervus pectoralis lateralis and the nervus pectoralis medialis.

Attack: Grip the armpit between the fingers of the hand.



1 Grab hold as a defense against the attempt to take hold of the shoulder.
2 The defense is successful by using a pincer grip with the hand to locate the chest muscle.
3 Close-up.

Effects: Pain.

Comments on use:
It is necessary to push the opponent backwards; a harmless technique.

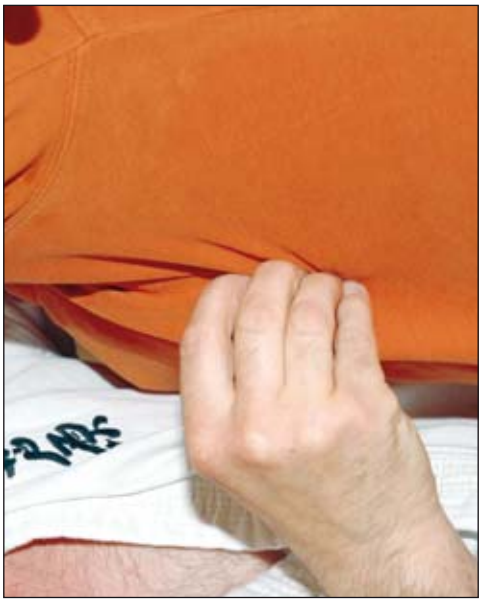
Possible difficulty when faced by thick-muscled or corpulent persons, as well as anyone wearing thick clothing.

3.4 Nipples/Mammary glands/Glandula mammaria

The vessel supply and the nerval innervation of the male nipple are similar to a smaller degree to those of the female glands.

The sensitive innervation of the mammary glands comes from the branches of the intercostal nerves (nervi intercostales) that run as medial and lateral mammary branches to their supply area.

Attack: Biting or pinching (pincer grip).



Effects: Pain.

Comments on use:
Usually well covered or protected by clothing.

3.5 Testicles

Attack: Kick (with the foot or knee), punch, grip.

Example of defense

Effects: The main sensitivity of the testicles to pain comes from the sensitive nerve fibers (branches of the nervus genitofemoralis) of the scrotum.

Because the genitals are also innervated by the parasympathetic nerve system, it can – as always, when this nerve system is involved – lead to a lowering of the blood pressure or to a slowing down of the heartbeat and breathing. Possible results of these effects are more likely to include vomiting, unconsciousness and cardiac arrest.[13]

In cases of blunt traumas, there is a danger of damaging the supplying arteries and bleeding inside the testicle pouch. Puncture of the testicle pouch can lead to inflammation of the testicles or even abscesses. Because of the open channel of the vaginal process to the abdominal cavity, peritonitis can occur.

Therefore, using significant force in this area can cause permanent infertility.

A kick in this area can cause the displacement of the testicles into the abdominal cavity, accompanied by stark pain. It is also possible that the pubic bone may be damaged (see section 3.17).

Dull pain and a small bruise can be signs of a harmless contusion of the testicles. Pronounced bruising and lots of pain, possibly accompanied by nausea, are signs of a

more serious injury. Above all, after an injury when the testicles cannot be individually felt, a visit to the urologist is necessary.

Comments on use:
This region is always instinctively protected, while follow-up actions are possible, even if the target is not hit.

1 Attempted neck lever.
2 Defend by delivering a strike with the lower arm at the testicles.

CAUTION!! Make sure that the opponent's arm around the neck is loose and controlled. This helps the attacker to avoid a situation in which the lower arm strikes the testicles. The opponent's reflex reaction tends to strengthen his grip around the neck.

3 Close-up of the strike.
4 Alternative defense: hook punch at the testicles.

1 Squeezing, twisting, and ripping the testicles is best practiced using an object such as a bunch of rolled-up socks.

1 Starting technique: Kick at the hollow at the back of the knee.
2 Kick at the testicles is executed from behind.
3 Variation: Kick with the toes.

1 A sweeping kick opens up the standing position of the attacker.
2 Start of the sweeping kick. The sweeper's standing leg is well outside the attacker's standing position in order to develop more force.
3 The λ (= distance between feet) is lengthened.
4 Using the sweeping foot, the kick is delivered directly.
5 Alternative: Kick with the other leg.

1 Inside low kick – thus lengthening the λ.
2 Hard to soft.

3.6 Liver

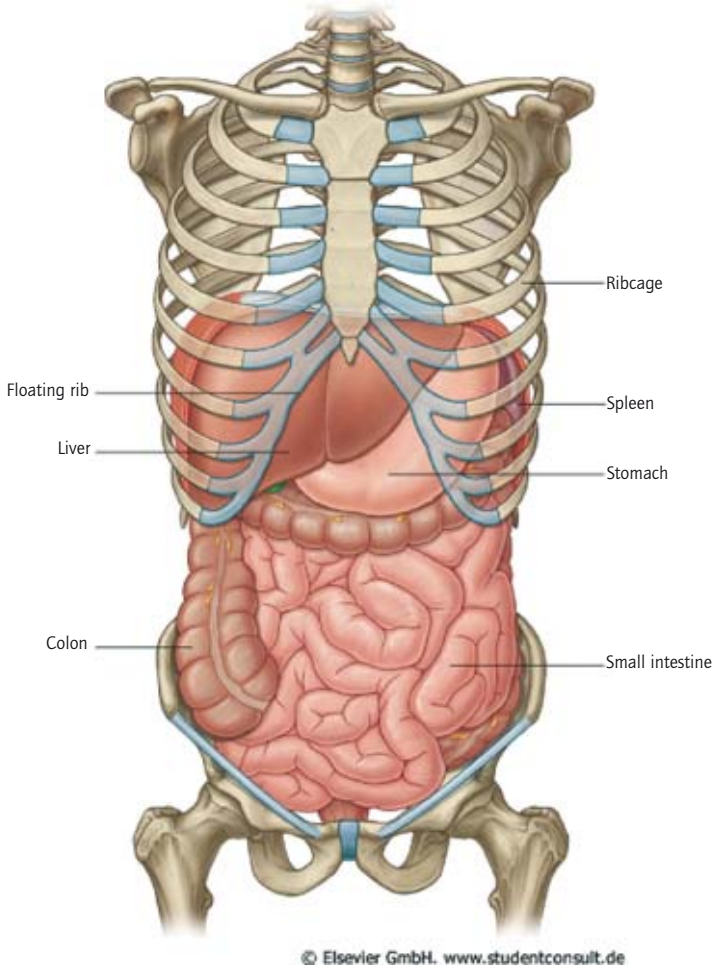


Diagram 16

The liver is located on the right side of the upper abdomen and runs down as far as the bottom right-hand floating rib. It is the central organ of the whole metabolism of the body and the largest gland. The liver is held in a membrane capsule. Only this membrane has a dense network of fine nerves capable of reporting to the brain.

Attack: Kick, punch.

Hook at the liver

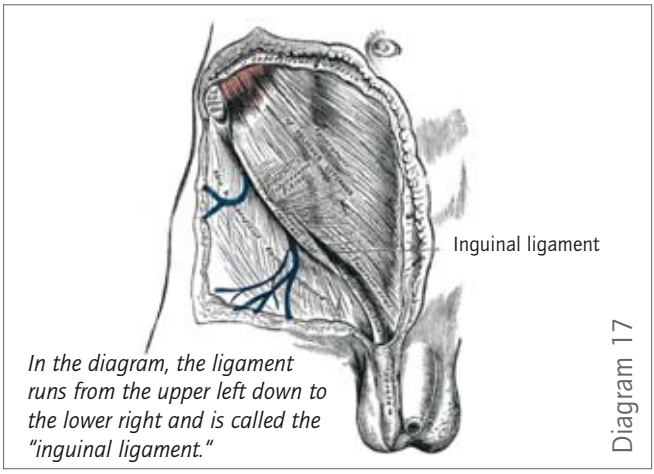
Effects: Many of the inner organs, just as it is with the liver, are supplied with large amounts of blood. If it is hit hard, there is the danger of rupturing the liver and hidden internal bleeding. Because of its "hidden" nature, internal bleeding of this sort is insidious. A blunt abdominal trauma of this type can, above all, lead to fatality caused by shock from the high loss of blood from internal bleeding. Other symptoms include pressure pain, nausea, a pallid and wan appearance (because of the shock), dizziness, and vomiting. In general, with such injuries, there is the danger of internal bleeding. This can develop over a period of several days. It is also possible that although the veins do not rupture they may be so badly damaged that when put under renewed exertion (e.g., in sport) spontaneous ruptures may occur, which in turn lead to heavy bleeding. This can also have complications and eventually lead to fatality in the worst cases.

Comments on use:
Possible difficulty when faced by thick-muscled or corpulent persons, as well as anyone wearing thick clothing.

1 The punch attack is warded off using both hands.

3 Hook at the liver. **4** Close-up. **5** Grab the arm....
6 ...and control the shoulder....
7 ...and transfer the technique over to deliver a knee kick at the liver while, at the same time, pulling with both hands.

3.7 Groin



In the diagram, the ligament runs from the upper left down to the lower right and is called the "inguinal ligament."

Diagram 17

Attack: Punch, kick, finger jab.

1 An attempted kick is countered by kicking at the groin.

3 The groin is struck. The kick at the groin must be executed diagonally (left foot against the opponent's left groin and vice versa). If you don't kick diagonally, the opponent can counter by executing a kick at the open side because the opponent's center of gravity will not be affected by the kick.

Effects: Pain, hernia rupture.

The region of the groin, particularly the inguinal canal (canalis inguinalis), is a well-known weak spot. It runs above the inguinal ligament. At this spot, a hernia can occur, which can also occur after heavy bodily strain. The contents of the abdominal cavity (peritoneum) can protrude through the abdominal wall. Pain from this can be low to heavy and convulsive. A hard lump can be felt above the groin. Ruptures are dangerous, above all when the organs of the abdominal cavity (such as the intestine) are trapped in the break. As a result of the this, the trapped intestine swells still further, and is therefore cut off from the blood supply. This is known as strangulation and can lead to necrosis of the trapped part of the organ. In addition, an ileus (obstruction of the bowels) can occur. Both situations are life-threatening and require immediate operative surgical attention. In certain cases, a resection (partial removal of an organ) is necessary.

Comments on use:
This causes a probable bending over at the hips, which opens the possibility for follow-up actions.

The groin is a good target to put the opponent off balance, especially when he has a well-padded torso.

A kick in the groin from a clinch. **IMPORTANT!** The opponent's right arm must be pinned down otherwise he can grab the attacking leg and cause the defender to fall.

1 How to hold the hands when jabbing with the fingers at the groin.
3 From another viewpoint.

3.8 Stomach

For an illustration, see the section on the "Liver."

Attack: Punch, kick.

1 Clinch situation.

2-6 Series of knee kicks at the stomach area.

Effects: Pain, perforation of the stomach.

The wall of the stomach can rupture following a blunt blow, which means its contents will empty into the abdominal cavity. Sudden severe pains accompanied by vomiting, tension in the abdominal wall, and symptoms of shock begin.

Rupture of the stomach wall must always be considered an emergency, because, if untreated, it can be fatal. The main danger of perforation of the stomach is peritonitis with subsequent blood poisoning (sepsis) caused by the escape of the stomach contents into the abdominal cavity. The danger is greater if the stomach is full.

Comments on use:
Possible difficulty when faced by thick-muscled or corpulent persons, as well as anyone wearing thick clothing.

3.9 Spleen

See the illustration in the section on the "Liver."

In humans, the spleen is a fist-sized organ that lies below the eighth and ninth rib on the left-hand side of the upper abdomen beneath the diaphragm and above the left kidney. This organ holds a large quantity of blood.

Attack: Punch, kick, knee kick.

1 Hook punch at the spleen.
2 Close-up.
3 The attacker's arm is then controlled.
4 Further attack at the spleen using the elbow.

Effects: If the ribs on the left side are injured, there is a possibility that the spleen can rupture (in some instances, appears as pain in the upper abdomen) which means it may bleed into the abdominal cavity, which of course is not visible on the outside. The spleen capsule can control the bleeding for a short period, which is why the first symptoms appear after a few days.

Hypovolemic shock of this kind (also shock from lack of blood volume) comes about by an insufficient intravascular level of blood (in the blood vessels). Results are often unconsciousness, as well as cessation of breathing and cardiac arrest. Loss of about 50% of blood is almost always fatal without medical attention.

If shock is not treated over a longer period of time, irreversible shock can set in and there is the danger of a failure of the kidneys and a fatal multiple organ failure.

Comments on use:
Possible difficulty when faced by thick-muscled or corpulent persons, as well as anyone wearing thick clothing.

1 A further example: Knee kick at the spleen.
2 Close-up.

3.10 Deltoid muscles

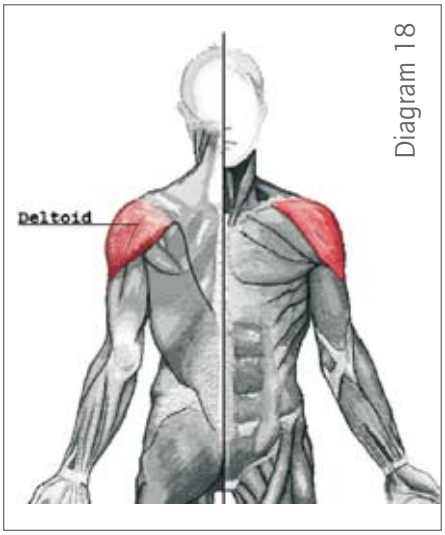


Diagram 18

See also the illustrations in the sections on the "Armpit" and "Clavicle/Collar bone."

The musculus deltoideus (deltoid) is a triangular skeletal muscle that lies over the shoulder joint like a parcel and gives it stability by pressing the head joint of the upper arm bone into its socket. Its function is in lifting the upper arm.

Attack: Punch (with the fist, elbow).

Target mark.

Effects: Damage to organs or parts of the body caused by external direct, blunt force without visible injury to the skin is known as **bruising**. This creates an edema (swelling) of the tissues and extravasation of blood from the damaged capillaries in the surrounding tissue and can appear as a bruise. Generally, pain is immediate and limits mobility. In cases of larger swellings, stiffening of the muscle can occur.

Similar events occur in contusions when the body tissue is pressed together.

In a **torn muscle fiber**, the reticular fibers are damaged and local inflammatory symptoms occur. At the same time, local reduction of tonus (state of tension in the muscles) is apparent in the damaged area. With tears in larger muscles, sometimes clear recesses or knotting of the muscles in the affected area can be seen.

Thrombosis is unlikely.

Tears of the fascia skin are hardly likely; however, compartment syndrome can be possible (swelling in the muscle with reduced blood circulation, increase of pressure and, if not treated, possible necrosis).

It is also possible to damage the arm socket and the tendons of the rotator cuff muscles, which form a collar around the whole of the shoulder.

Interference is possible also in the nervus axillaris that originates from the plexus brachialis and innervates the musculus deltoideus.

Comments on use:
The limitations in mobility can be deduced from the statements above. The effect is limited where the muscles are well-developed (fit to fight); a small impact surface increases the effect.

1 Examples of attacking strikes at the shoulder.... **2** ....with the fist....
3 ....and with the elbow.

1 The strike with the elbow at the rear of the deltoid muscle can be used to twist the opponent around.
2 This disadvantageous position is used by the defender to execute a Hadaka-Jime ("naked strangle").
3 The opponent is brought to his knees.

After successful defense, here the strike at the musculus deltoideus provides further support to turn the opponent around and throw him backwards.

3.11 Kidneys

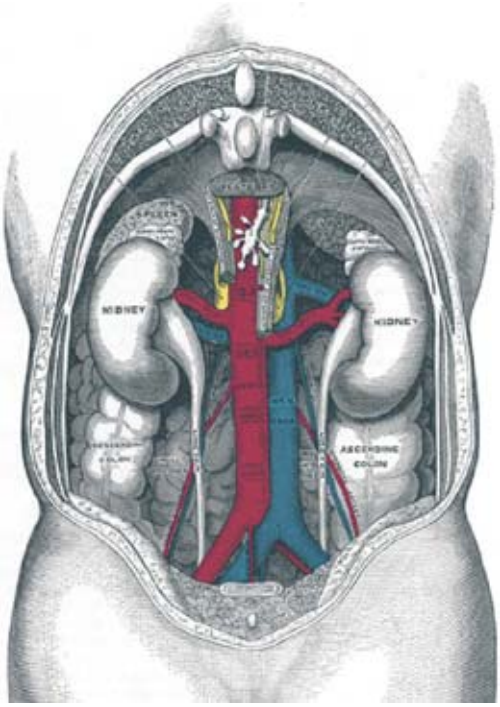


Diagram 19

Location of the kidneys. Dissected view from rear.

The functions of the kidneys are the secretion of superficial waste products produced by metabolism and toxins and washing them from the body through the urinary passage.

Every human has two kidneys that lie left and right of the spine underneath the diaphragm and are protected by a capsule of fat. They are each shaped like a bean and are about 10-12 cm long. Each of the kidneys is protected by a thin, firm capsule of connective tissue round the organ and lies, together with the adrenal glands, bedded in and cushioned in an adipose capsule. They are partially protected by the ribs above them (11th and 12th pairs of ribs).

Attack: Strike (fist, elbow), knee kick.

Target mark.

Effects: All forms of damage to the kidneys can be defined as renal trauma. Children are at greater risk due the lack of cushioning fatty tissue to take the shock.

Renal trauma can be divided into contusion or bruising, renal rupture or tear, and complete destruction of the kidney. The predominant symptoms are flank tumor, flank pain, and blood visible in the urine – the latter, however, is not necessarily related to the amount of blood in the urine. If the ureter is completely blocked by blood clots or if the stem vessels are torn off, there may be no blood in the urine at all.

Additional symptoms: Local bruising (hematoma), severe pain, possible leakage of urine from the open wound (caused by knifing or shooting).

Loss of blood from a ruptured kidney can be fatal from shock.

Comments on use:
Possible difficulty when faced by thick-muscled or corpulent persons, as well as anyone wearing thick clothing.

1 The neck lever is supported by delivering a strike with the base of the forefinger knuckle joint of the thumb side of the hand.

1 The step forward by the opponent is warded off past the body...
2 ...and then he is turned around further with a low kick.
3 The action is continued by delivering two hooks to the kidneys.
5 Changing over to control the head and bending him over backwards.
6 Conclusion: Kick with the left knee to the kidneys.

3.12 Kidney region/Skin folds

Attack: Grab the skin folds in the kidney region with both hands and squeeze.

Effects: Pain (individually different).

Comments on use:
Like all nerve points, the degree of sensitivity and effectiveness is individually different – a harmless technique.

3.13 Ribs

See also the illustration in the Section on the "Breastbone."

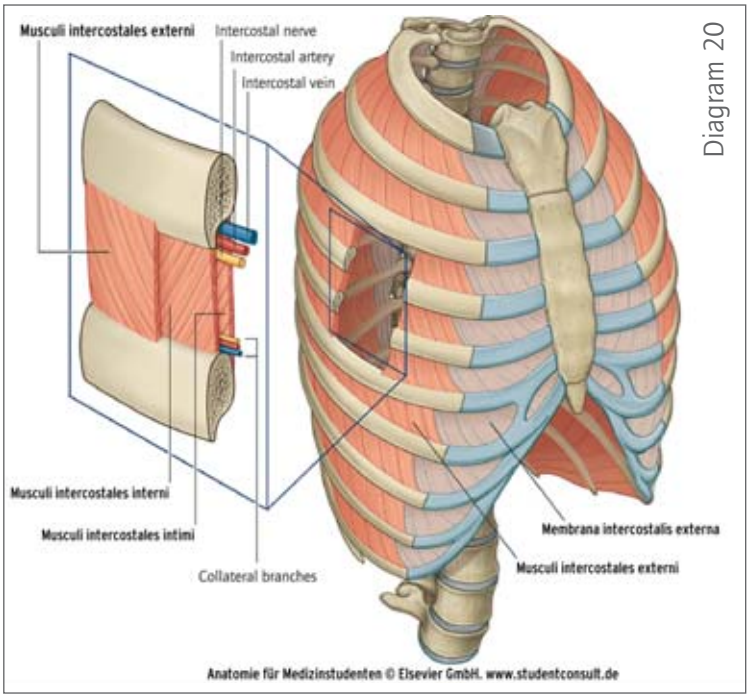


Diagram 20

The human has 12 pairs of ribs. The upper seven ribs are called sternal ribs (also called "true ribs") and these are directly connected to the breastbone (sternum) through the costal cartilage. Ribs 8-10 are called asternal ribs set at the cartilaginous ribcage, and the two lower ribs end freely in the chest muscles. Rib pairs 8-12 are defined as "false ribs." Ribs 11 and 12 are called "floating ribs" and end freely in the abdominal wall.

Attack: Strike, kick (foot, knee), body scissors – particularly aimed at the floating ribs.

1 The hook punch is blocked.
2 Controlling the neck.
3 Low kick at the short ribs using the shinbone.

Effects: Severe pain, breathing problems, bruises, breakage, internal injuries (liver, spleen, lungs, kidneys).

Due to the external effect, the function of the intercostal muscles can be affected (they raise and lower the ribs), and this hampers breathing. This may also affect the function of the diaphragm.

Generally, ribs heal well. Concerning fractures of the ribs, sometimes a pneumothorax condition occurs (air collecting in the pleural space). This affects the expansion of one or both lungs, which can be life-threatening depending on the severity. Also pulmonary contusion (can be fatal if untreated) or internal bleeding of the lungs (hematothorax) into the chest can occur. If a lung completely collapses, heart problems can result. This is because the heart is kept in place by the lungs, and in the case of a lung collapse, this function is absent. Injury to the spleen can occur when a left rib pierces it or it is ruptured independently. In fractures of the right-sided ribcage, damage to the liver can occur.

Comments on use:
Possible difficulty when faced by thick-muscled or corpulent persons, as well as anyone wearing thick-clothing.

1 The knee is lifted up to one side....
2 ....and brought onto the target with a whip-like hip movement.

3.14 Clavicle/Collarbone

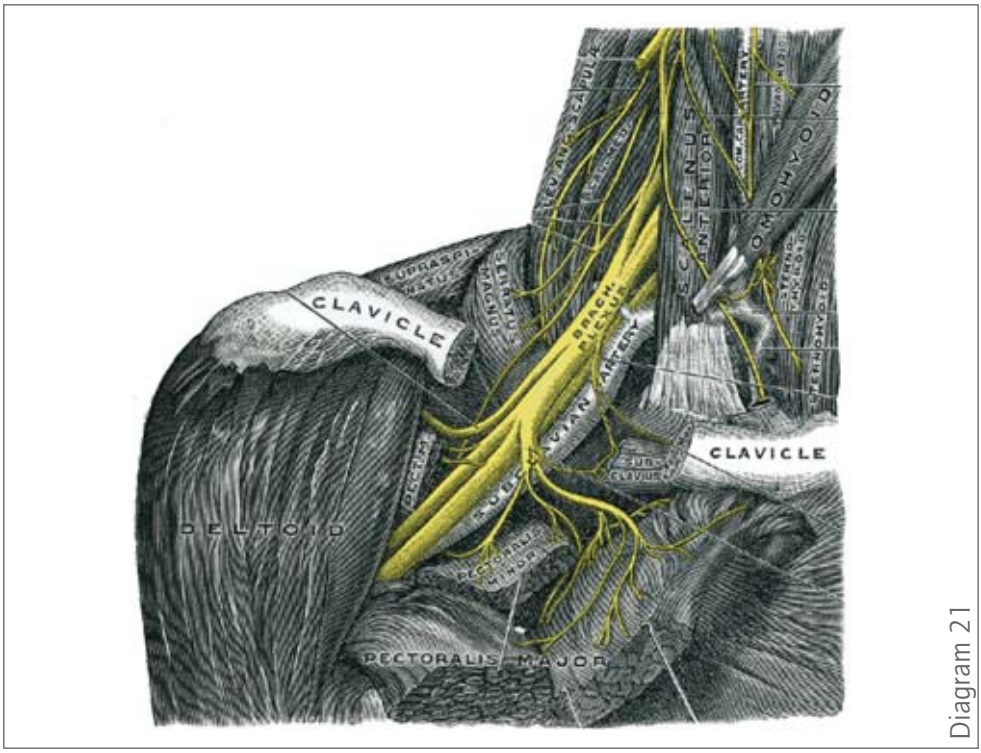


Diagram 21

Human collarbone – view from above (here the right shoulder is shown)

Diagram 22

The collarbone is an S-shaped bone and is about 12-15 cms long. The collarbone is part of the shoulder girdle. It connects the breastbone with the acromion – part of the shoulder blade.

Attack: Strike (edge of the hand, base of the fist, elbow) in the cavity of the collarbone (the curving ridge nearest the shoulder).

Target mark.

Effects: In adults, fracture of the collarbone is the second most common fracture after those of the radius. It is can be caused by a direct and (sometimes soft) blow to the collarbone. Complications include vascular damage (arteria subclavia) or nerve damage (plexus brachialis) where a large bruising is visible.

Brachialgia is the medical term for pain in the arm and is caused by mechanical rubbing or compression of the plexus brachialis. Where partial tearing (or other damage) of individual nerve fibers occur, this leads to partial immobility of the arm and the hand. The first indication of a problem is often a tingling feeling.

Where lesions of the plexus brachialis occur, complete impairment (paralysis) and sensitivity of the muscles of the upper extremities can appear.

Symptoms of a broken collarbone: Appearance of visible and palpable swelling or steps in the run of the bone, severe pain from pressure or when moved. The injured person brings his upper arm into a posture of relief and the shoulder protrudes clearly forward. The break can also cause a perforation of the lungs.

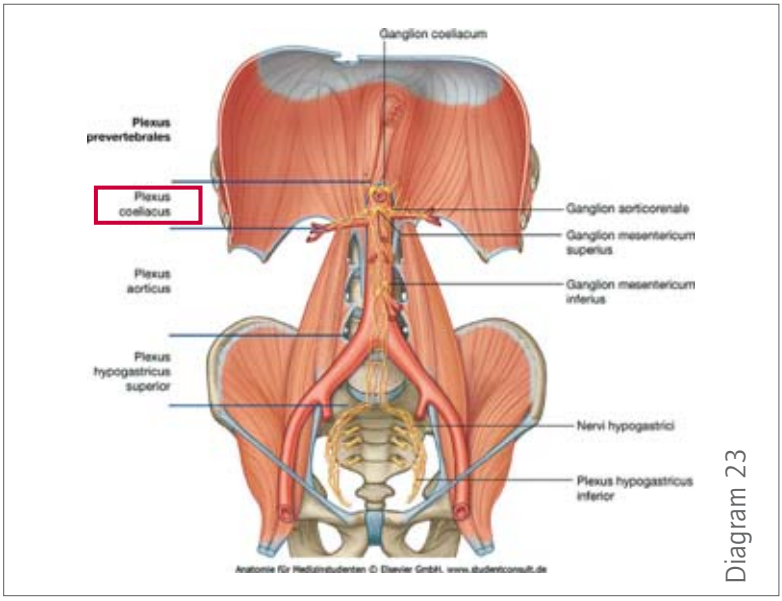
Comments on use:
The arm is rendered immobile and unusable.

Possible difficulty when faced by thick-muscled or corpulent persons, as well as anyone wearing thick-clothing.

1 Strike with the edge of the hand at the collarbone (Shuto-Sakotsu-Uchi).

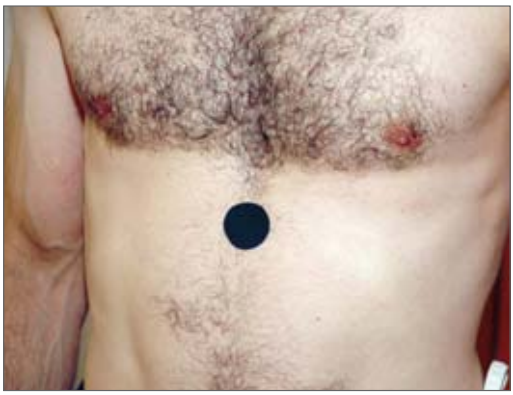
2 Strike using the forearm.

3.15 Solar plexus/Plexus coeliacus



The solar plexus (plexus coeliacus) is a network of vegetative nerves, having its origin in front of the upper abdominal aorta (and thus lying relatively well away from the surface of the stomach). It runs to the stomach and the upper digestive organs. It is located between the 12th thoracic and the first lumbar vertebra.

It is supplied by the sympathetic (thoracic sympathikus) and parasympathetic (nervus vagus) parts of the vegetative nervous system.



Attack: Hard punch/kick at a hand-sized area lying a little to the left of the center in the upper third of the line between the navel and the breastbone. The compression wave then reaches the plexus.

Target mark.

Effects:

1) The function of the plexus coeliacus is to stimulate the glands of the mucous membranes of the stomach and the upper digestive organs, as well as stimulation of the stomach muscles and the upper sections of the small intestine. However, it is also a control center: Harmful foreign particles entering the stomach, such as rotten or poisonous food, are immediately expelled – nausea and vomiting follow. Thus, the direction of the "peristaltic wave" is reversed and as a protective measure the contents of the stomach are brought up and expelled. In a reflex action, the stomach muscles are tensed in order to reach sufficient pressure to push past the valve in the esophagus.

   Heavy mechanical strain leads to the same effect, especially when it happens during inhalation because at that moment the protective stomach muscles are relaxed and an external blow, such as a leg or punching technique, can have a full effect in depth.

2) A hit on the plexus coeliacus can also lead to unconsciousness:

   An external blow can also cause a vagovasal syncope through the connection of the nervus vagus with the center for the heart rate and the heart. With a sudden, massive stimulation of the vegetative nervous system, the heart rate center in the hypothalamus overreacts and this suddenly opens the blood vessels of the intestine, the portal vein area, the liver, the kidneys and several other organs. There is a loss of blood pressure together with a short lack of blood circulation in the brain (a "blackout"), and the person collapses. Normally, this passes after a few seconds and one wakes up quickly because while lying down the blood pressure rapidly stabilizes itself.

3) Pain, difficulty in breathing.

4) It should be remembered that many of the internal organs, particularly the liver, spleen and also the kidneys, have a good circulatory flow of blood. If organs such as these are hit hard, there is a danger of rupturing the liver, spleen, the neighboring stomach (see appropriate section), or pancreatic necrosis (tissue death of the pancreas) wherein hidden internal bleeding ensues. Such internal bleeding is malicious precisely because it is invisible. This process can develop over a period of several days.

   It is also possible that although the vein does break, it will be damaged to such an extent that if it is put under strain again (e.g., in sport), a spontaneous break

accompanied by severe bleeding will occur. The bleeding can be very serious and even lead to death.

Comments on use:
Possible difficulty when faced by thick-muscled or corpulent persons, as well as anyone who is wearing thick clothing. When the person is breathing in, the effect is increased because the protective stomach muscles are relaxed.

1 Gyaku-tsuki punch at the solar plexus.

A quick punch at the solar plexus serves to break the resistance to being thrown here.

3.16 Coccyx

See the illustration in section 2.2 ("Nape of the neck").

The human coccyx is the lowest point of the sacral bone that, in turn, is at the end of the spine. The end of the spinal cord is not at the bottom of the spine (i.e., coccyx) but lies at the beginning of the lumbar part of the spine. Running downward in the direction of the coccyx are nerves (plexus coccygeus), which merely have a sensory (skin) function.

If kicked or one falls onto the coccyx, it can be dislocated, which is very painful. The injured person can hardly bear to sit because of the pain, and the healing process is long. Treatment by a physician is carried out rectally. An operation may also be necessary.

Attack: Kick with the knee (standing or lying down), kick.

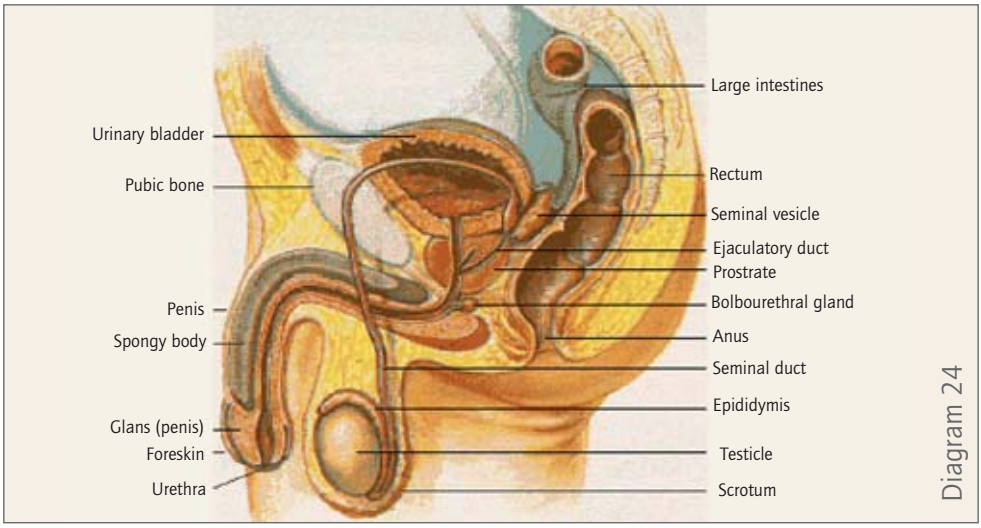
1 The punch is warded off.
2 The opponent's head is turned and pinned to one's shoulder.
3 Knee kick at the coccyx.

Effects: Pain, minor sensory disturbance.

Comments on use:
In a standing position, one must be behind the other person.

1 Bringing back the kicking leg.
2 The knee kick is on its way.
3 On target!

3.17 Lower abdomen (Bladder, Intestines, Pubic bone)



See the illustration for "Intestines" and the section on the "Liver."

Attack: Punch, kick, knee kick.

1 Defensive gesture just before an incoming attack.
2 Preparing to kick.

3 Forward kick at the lower abdomen using the heel.

Effects: Pain from impact on abdomen, internal injuries, violent bowel movement.

The urinary bladder is pushed into the abdominal cavity only when the bladder is not quite so full. When the bladder is full and suffers an external traumatic blow, it can rupture and empty its contents into the abdominal cavity (intraperitoneal rupture of the bladder). Symptoms are pain in the lower abdomen and a strong urge to urinate while simultaneously being unable to do so. A particular danger is that of peritonitis.

Rupture of the intestinal wall is only possible following a blow hitting a large surface area (e.g., traffic accident). An injury in the region of the pubic symphysis (cartilage and ligament injuries) is possible.

Comments on use:
Thick-muscled or corpulent persons are vulnerable to attacks on the pubic symphysis.

4 Attack points on the arms

4.1 Skin of the arm

Skin in the area behind the upper arm.

Attack: Pinching.

1 Grab the lapel.
2 Pick up the thin fold of skin.
3 The opponent's elbow is pinned to one's own body.

Effects: Pain – In the corium (deep inner layer of skin), there are free nerve endings (pain receptors). The thickness varies with the area of the body (up to 200 per sq cm of skin).

Comments on use:
Again, here the degree of pain and the effectiveness differ between persons; can be used as a freeing technique.

1 With an attack using a Hadaka-jime (strangulation with the bare arms), the larynx is protected in the bend of the opponent's elbow. The skin at the rear of the upper arm is pinched hard, quickly and repeatedly. This causes overstimulation of the area that can be added to by biting into the biceps.

4.2 Biceps/Musculus biceps brachii

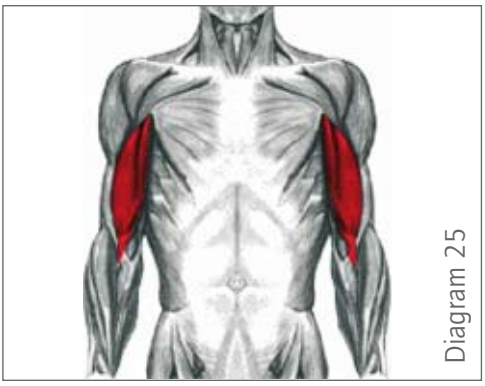


Diagram 25

Attack: Punch with the fist, side of the hand, elbow.

1 The swinging punch is blocked and, at the same time, countered by a strike at the biceps.

2 After the shock tactic on the biceps, the counterattack is continued directly using a hammer fist or strike with the ulna at the neck.

Effects: When delivered with sufficient force, a blow on the biceps is extremely painful and results in temporary loss of the mobility in the arm.

Damage to organs or parts of the body, caused by external direct, blunt force without visible injury to the skin is known as bruising. This creates an edema (swelling) of the tissues and extravasation of blood from the damaged capillaries in the surrounding

tissue, which can appear as a bruise. Generally, pain is immediate and limits mobility. In cases of larger swellings, stiffening of the muscle can occur.

Similar events occur in contusions, which is when the body tissue is pressed together.

In a torn muscle fiber, the reticular fibers are damaged and local inflammatory symptoms occur. At the same time, local reduction of tonus (state of tension in the muscles) is apparent in the damaged area. With tears in larger muscles, sometimes clear recesses or knotting of the muscles in the affected area can be seen.

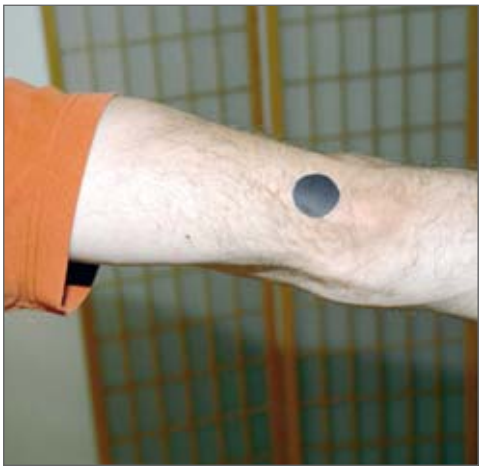
The biceps are innervated by the nervus musculocutaneus.

Thrombosis is unlikely.

Comments on use:
The strike must be well aimed and directed at the bones of the upper arm.

In this sequence, the punch is not made flat so that the knuckles can bore into the muscle.

4.3 Elbows



The elbow joint joins the bone of the upper arm (humerus) with the two bones of the lower arm – the radius and the ulna.

Attack: Strike against the outstretched elbow joint.

NOTE: When attacking the target, the elbow joint is not the tip of the elbow, but rather the hollow proximal, inward to the body from the tip of the elbow.

Effects: Joint dislocation, or luxation (Latin: luxatio), occurs when bones in a joint become displaced or misaligned. A luxation causes serious injury to the joint. The bones comprising a joint cannot carry out their function without causing extreme damage to the joint capsule. It is often combined with a fracture. When forcefully stretched out, the olecranon (tip of the elbow joint nearest the body) at the end of the ulna can break.

In such cases, damage to the nervus ulnaris ("funny bone") and the nervus radialis can occur with subsequent paralysis of the arm and/or hand. Additionally, the upper arm artery (arteria brachialis) can be damaged.

Comments on use:
Here, one notes that the transition between Kyusho and lever techniques has no clear dividing line. Well-trained muscles provide certain protection against the required overstretching.

1 The fist attack is warded off....
2 ....with a Wing-Tsun like movement (Bong-Sao).
3 The wrist is grabbed.
4 Stretch using an arm lever.

5 Bring up the arm in preparation to deliver a strike with the ulna.

6 Strike. **CAREFUL!** Damage to the elbow joint.

7 Bring opponent to the ground.

4.4 Hand

For an illustration, see the section on the "Wrist."

The hand is innervated by three nerves: nervus ulnaris, nervus medianus, and nervus radialis. The wrist joint is connected to the metacarpus, which consists of the five long metacarpal bones.

Attack: Press the tip of the thumb into the hollow between metacarpal bones 2 and 3 or 3 and 4 in the triangle between the thumb and the forefinger; strike the metacarpal area with the knuckles.

1 Reaction to the clinch: Strike using the knuckles of the fist (Nadaka-Ken) at the back of the hand. This frees one from the clinch attack and opens the possibility for follow-up techniques.

Effects: Nerve and skin pain (skin over bone surfaces) or fractures.

Comments on use:
Like all nerve points, the degree of sensitivity, as well as effect achieved, is individually different. Mostly used as a freeing technique.

1 Attempt to squeeze the hand.
2 The defender retreats to one side away from the opponent.
4 How to hold the hand.
5 Using a strike with the joint of the thumb is also possible.

1 With a little practice, it is also possible to combine the defense of a strike at the back of the hand with a hand sweeping movement.

4.5 Wrist

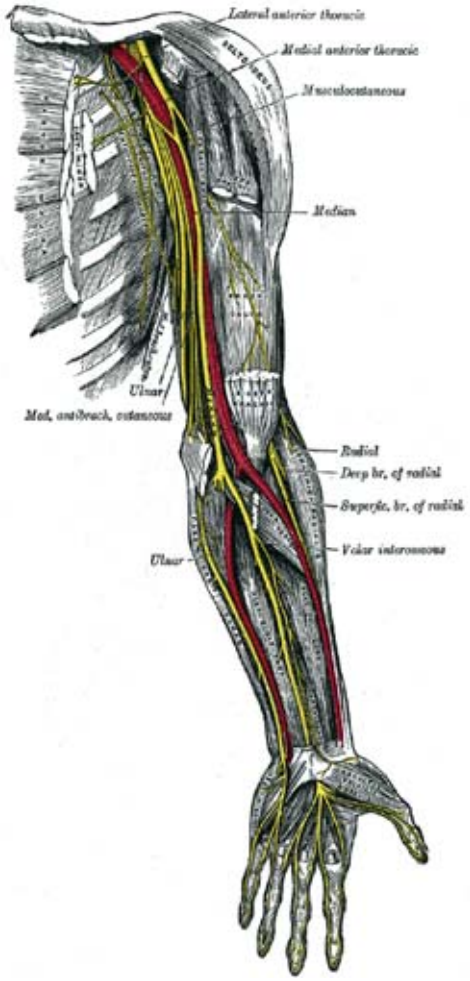


Diagram 26

The nervus medianus runs from the armpit over the inside of the upper arm and then enters the forearm on the side of the palm of the hand. The nerve lies relatively superficially above the hand.

Attack: Pressure using the tip of the thumb between the tendons on the inside of the wrist. Strike using the base of the fist or knuckles.

1 Attack: Grab wrist.
2 Counter: Strike in the direction of the face in order to obstruct attacker and to stretch his arm.
3 Free self from the grip by striking just above the wrist.

Effects: Nerve pain (neuralgia) can be felt after pressure applied (compare the statements in the Introduction). Additionally, the impact has an effect on other structures (tendons, blood vessels).

Comments on use:
Like all nerve points, the degree of sensitivity, as well as effect achieved, is individually different. Mostly used as a freeing technique.

1 The grip is countered by using a shock technique.
2 The freeing action is begun by delivering a strike at the wrist.
3 Stretch the opponent's arm while executing an obstructing action at his face.
4 Pull up the arm to strike.
5 By striking at the wrist, the opponent is turned so that his back is toward the defender.
6 Option: Use the elbow to strike downward at the wrist.

4.6 The nails

Attack: Scratch with your own nails.

Effects: Very painful scratch wounds.

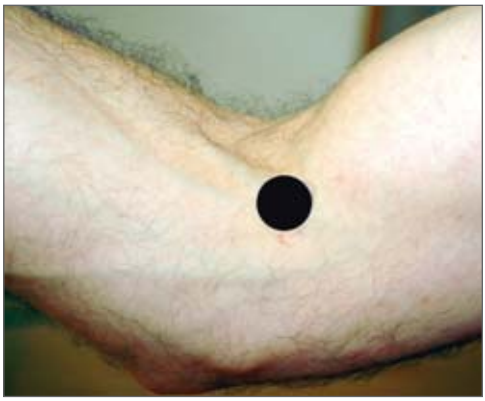
Comments on use: Use as a freeing technique; very effective.

A good example – it's about efficiency, not preciseness nor elegance.

4.7 Median nerve/Nervus medianus

For description, see section on the "Wrist."

Attack: Pincer grip with the thumb pressing at the start of the biceps tendon against the nervus medianus.



Target mark.

Direction of pressure

Effects: Nerve pain (neuralgia) can be felt after pressure applied (see the statements in the Introduction).

Comments on use:
Like all nerve points, the degree of sensitivity, as well as effect achieved, is individually different. Well-trained muscles and clothing also provide protection.

1 The grip on the lapel is countered directly by striking toward the face with the ball of the hand.

2 The attacking arm is brought under control and the pressure on the median nerve is applied.

3 Close-up.

4 The opponent is brought off balance using a Kanetsu-Geri kick (side-kick against the opponent's knee).

4.8 Radial nerve/Nervus radialis

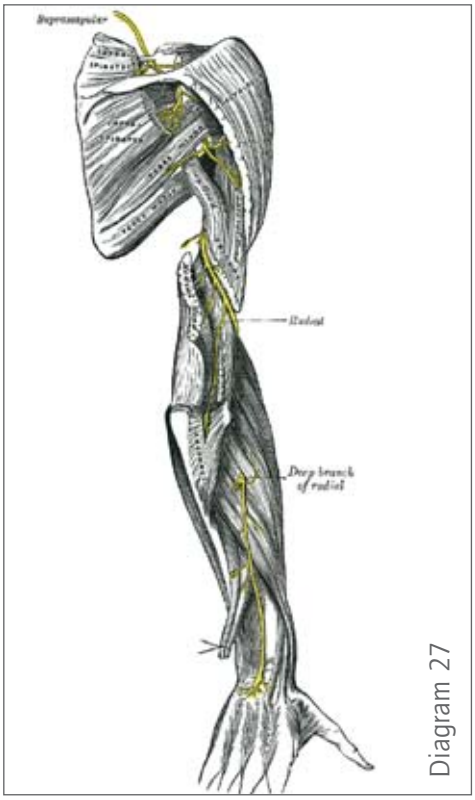


Diagram 27

View from rear.

The nervus radialis (radial nerve) is a nerve of the plexus brachialis group. It innervates the extensor muscles of the elbow joint, wrist joint, and finger joints, as well as the area of skin on the rear side of the upper arm, the underside of the lower arm, and the back of the hand.

It runs down the middle of the upper arm between the heads of the triceps (musculus triceps brachii), twists around, lies directly over the bone of the upper arm, and then moves outward over the elbow. It emerges through the supinator muscle – the muscle responsible for the outward twisting movement of the hand and lower arm.

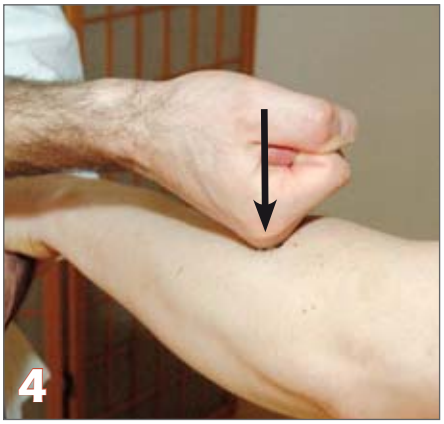
Attack:
Upper arm: Punch or pressure with the shinbone.

Lower arm: Strike (ulna, hammer fist punch) or applying pressure with the thumb (pincer grip) in the upper third or pincer grip of the brachioradial muscle (see the illustration for the "Wrist") just below the crook of the arm.

Target mark.

Effects: Nerve pain (neuralgia) can be felt after pressure applied (compare the statements in the Introduction).
When the nervus radialis is affected, the wrist and finger extensors can be paralyzed, and the fingers and wrist are bent backwards. If the damage is further up, there can also be a paralysis of the triceps, and the elbow joint cannot be stretched out straight. Simultaneously, there will be a loss of sensitivity in the area.

Comments on use:
Like all nerve points, the degree of sensitivity, as well as effect achieved, is individually different. Finding the right spot (especially when applying pressure) requires a lot of practice.

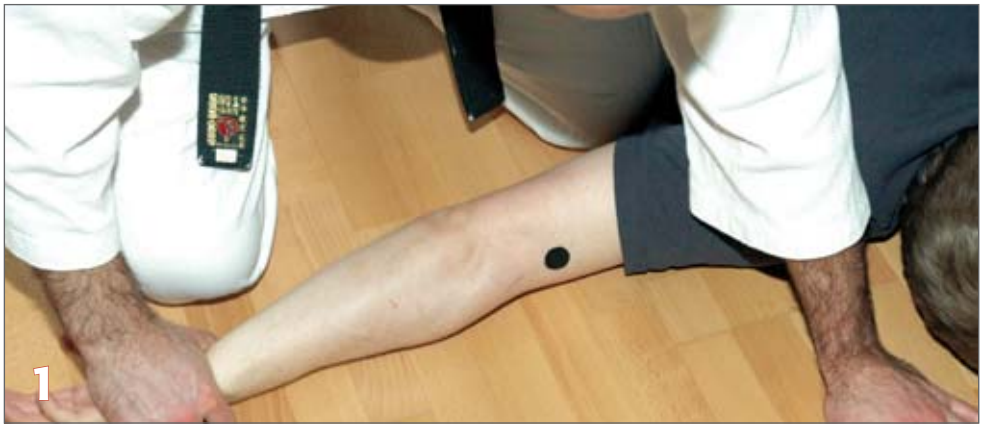


1 The attack is warded off using the back of the hand.
2 After grabbing the wrist, the arm is pulled back for a counter strike.
3 Strike with the edge of the hand onto the radial nerve.
4 As an alternative, the strike can be made with the knuckles of the fist.

Target mark.

The radial nerve is located in the area of the upper arm. To find it, place a cupped hand around the tip of the training partner's elbow. Stretch with the thumb onto the skin, and you have found it.

Generally speaking, one has to exert a great deal of pressure here, which is quite possible when on the ground. Here, the shinbone is sawn across the nerve – backwards and forward.



Counter to being grabbed by the lapel: Hook punch with the knuckles of the fist onto the radial nerve.

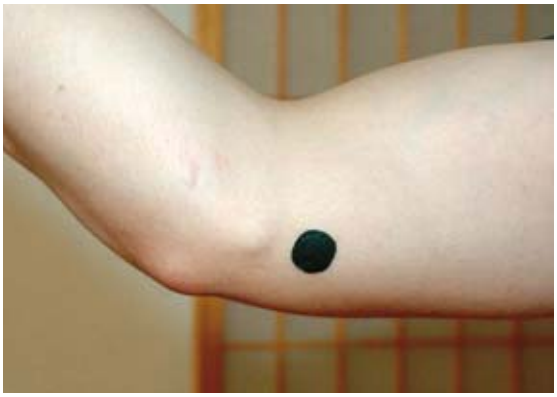
Rotate the opponent's elbow inward. By continuing the rotation, the attacker is brought to the ground.

A similar strike can be used to start a throw. Throw backwards like O-Soto-Gari.

4.9 Ulnar nerve/Nervus ulnaris

This is the nerve known as the "funny bone." If the nerve is affected, one can feel the effect right up into the little finger.

For an illustration, see the section on the "Wrist" (Page 169).



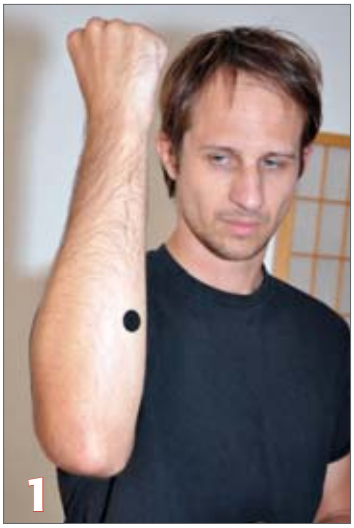
Attack: Strike with the knuckles.

Target mark on upper arm region.

Example of use:

Effects: When hit, there is a severe pain (neuralgia) felt right up to the tips of the little and ring fingers (see statements in Introduction).

Comments on use: The target area on the upper arm is very small so the angle of the strike must be precise. Otherwise, it is a good example of a Kyusho vulnerable point on the nerves. The target on the lower arm can be easily struck, particularly, just as he adopts an on-guard position.



1 Target spot on the region of the lower arm.
2 Right uppercut at the ulnar nerve on the lower arm.

4.10 Inside of the upper arm

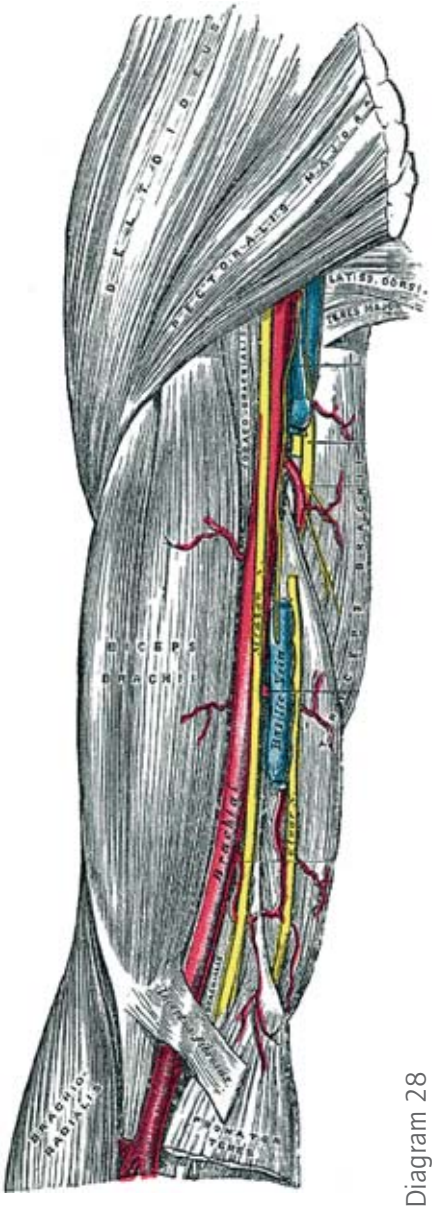


Diagram 28

The basilic vein (shown in blue in the diagram) and the upper arm artery (arteria brachialis – shown in red in the diagram) run down the groove between the extensor and the flexor muscle structure on the inside of the upper arm (sulcus bicipitalis). This artery is a continuation of the axillary artery, and it supplies the whole arm with blood. It is accompanied by nerves (shown in yellow in the diagram) running alongside, which belong to the plexus brachialis (nervus medianus and nervus ulnaris, nervus cutaneus antebrachii medialis, and nervus cutaneus brachii medialis).

Attack: Punch.

Effects: Nerve pain (neuralgia) can be felt after pressure is applied (see the statements in the Introduction).

Unlikely scenarios:

Possibility of a venous thrombosis caused by a massive blow, the result of which can be pulmonary embolism and, in certain circumstances, heart attack.

In cases of an arterial thrombosis, there is a danger of damage to the coronary vessels (heart infarction), the vessels supplying the brain (stroke), and the leg arteries. The cause of arterial thrombosis is damage or scarring of the vascular wall.

The extremity affected is usually cold and pale, the pulse can no longer be felt, and severe pain starts. The function is extremely limited.

Comments on use:
Like all nerve points, the degree of sensitivity, as well as effect achieved, is individually different. Well-trained muscles and thick clothing add protection.

In order to increase target precision, it will be advantageous to make contact with the outside of the upper arm with the other hand. The strike should be aimed at the bone of the upper arm.

1 After the shoulder has been grabbed, the defender takes hold of the attacker's upper arm firmly on the outside. **2** Short punch with the inside of the fist at the inside of the attacker's upper arm. Principle: Make a kind of sandwich. **3** Close-up. **4** Target area.

1 If the opponent holds the arm diagonally, the arm has to be rotated before delivering the punch.

4.11 Triceps - Final chord

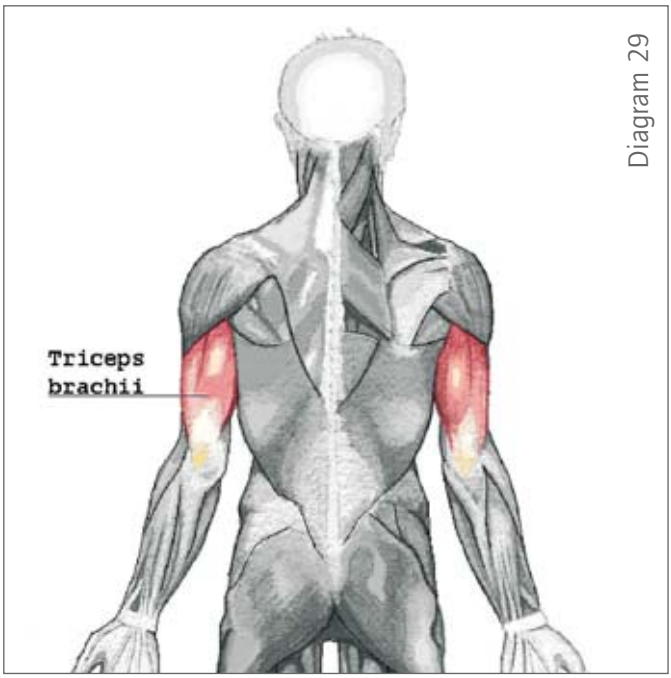


Diagram 29

The triceps is sometimes called a three-headed muscle because there are three bundles of muscles joining together at the elbow as a common final chord in the lower third of the upper arm.

Attack: Apply pressure using the shinbone or base joint of the forefinger.

1 The outstretched arm is pinned to the floor.
2 Close-up.
3 Pinned down using the shinbone. This is very painful because the whole of the body weight is pushing down on the arm. It is possible to conclude the sequence by using a hammer fist punch to the face.

Effects: Pain from pressure on the tendon, which can also involve the ulnar nerve (runs directly over the "funny bone" next to the elbow hinge joint with the bone of the upper arm – see the section the "Wrist"). Damage to these areas is indicated by numbness in the little finger, on the outside part of the ring finger, and on the ball of the little finger.

Comments on use:
Like all nerve points, the degree of sensitivity and effectiveness is individually different.

5 Attack Points on the Legs

5.1 Achilles tendon

1 Prepare to kick.
2 Execute a Yoko-Geri (side-kick) at the Achilles tendon.
3 Close-up.

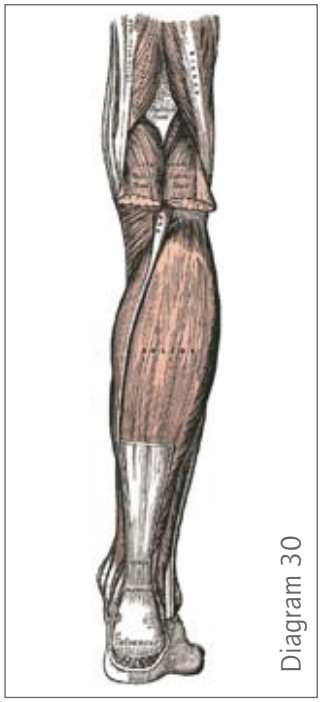


Diagram 30

Attack: Stamping kick, using the shinbone to apply pressure.

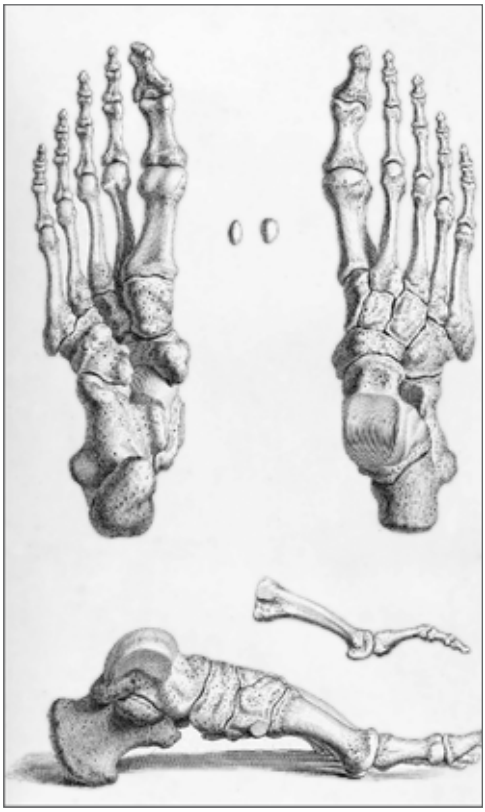
Effects: Tear, pain; when foot is balanced on toes, also ankle and foot injury.

Comments on use:
Just as with the nerve points, the degree of sensitivity and effectiveness is individually different.

1 Defensive low kick using the shinbone.
3 Grab the diagonal shoulder.
4 Inside sweep.

5 The opponent's balance is broken.
6 Concluding technique: Stamping on the Achilles heel with the foot on tiptoe...
7 ...or with the foot lying flat.

5.2 Instep

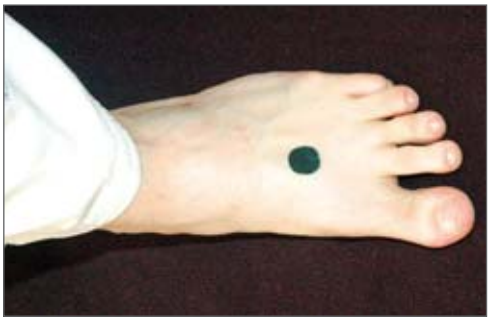


1 Clinch from behind. The leg is lifted up and rotated outward. The edge of the foot is brought down from the opponent's shinbone below the knee onto the foot.
2 The strike uses the shape of the shinbone to run down the leg onto the foot.

Attack: Stamping kick.

Effects: Breakage of the instep bones.

Comments on use:
For once, high heels would be an advantage in combat.



Target mark.

1 The nerves between the toes of the instep (medial plantar nerves) can also be targeted for various actions. Here, the opponent's foot is pinned down with pressure from the defender's big toe in the hollow between the big toe and the remainder of the instep – painful!

5.3 Skin on the inside of the thigh

Attack: Pinching.

1 Headlock attack is freed by pinching the inside of the thigh firmly.
2 Close-up.

Effects: Pain; free nerve endings (pain receptors) can be found in the dermis. Their distribution varies according to the body area (up to 200 per sq cm of skin).

Comments on use:
Like all nerve points, the degree of sensitivity, as well as effect achieved, is individually different. Thick clothing adds protection. This can be used as a freeing technique.

5.4 Knee

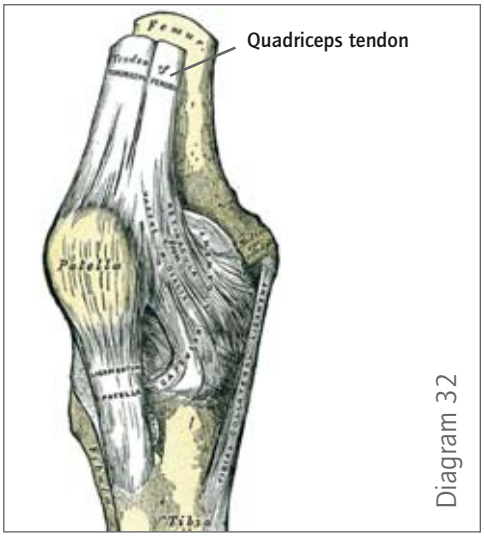


Diagram 32

Right knee viewed from front.

Attack: Kick (Yoko-Geri. Kakato-Geri, driving Mae-Geri kick at the kneecap.

2 In a direct attack at the kneecap, there is a danger of the kick slipping away because of the small size of the target.

4 By turning the foot outward (Teisoku-Geri, the sole of the foot) the target area on the opponent is made larger, which increases the precision of the kick.

Effects: Immobility, pain, shock.

The knee joint is the connection between the upper and lower leg. It is formed by the lower end of the femur, the upper end of the tibia, the patella, the collateral and cruciate ligaments, and the two menisci.

The knee joint is stabilized by a pair of cruciate ligaments running downward on the side of the joint.

The cruciate ligaments (front and back) stabilize the knee and prevent the articulating surfaces from slipping forward or backwards and inhibiting the rotation. The classic injury of the anterior cruciate ligament occurs when the knee is flexed and violent internal rotation occurs.

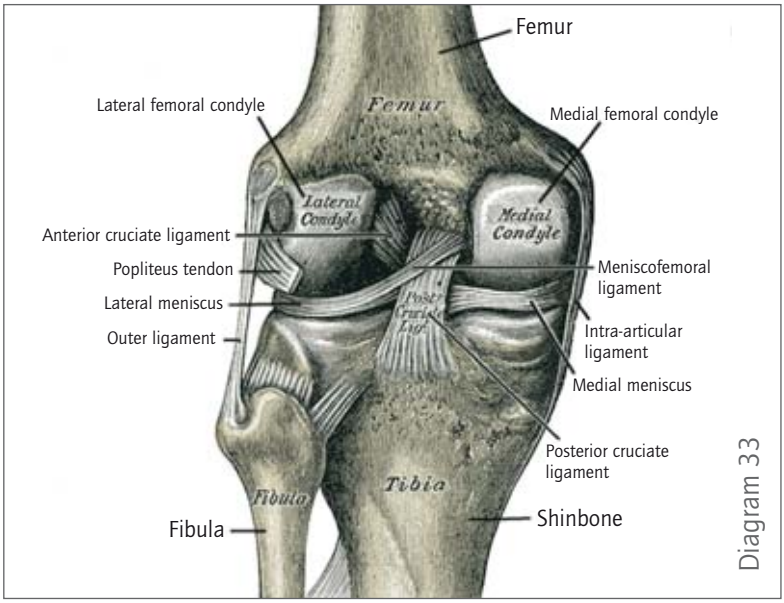
Damage to the meniscus occurs mainly when there is an intensive and rapid twist of the knee joint.

Following luxation (occurs when bones in a joint become displaced or misaligned), the knee will likely be unable to be used properly. A luxation causes serious injury to the joint. The bones comprising a joint cannot carry out their function without causing extreme damage to the joint capsule. Damage to the patella generally leaves no long-term problems and heals well when treated properly.

A kick in the hollow behind the knee can, in addition to injury to the blood vessels and the nerves in this area (especially when shoes are worn), cause a transverse fracture of the kneecap due to muscle tension. A transverse fracture of the kneecap must always be operated upon, otherwise the great strength of the quadriceps will lead to further medical complications.

When there is luxation of the patella, usually blood vessels are damaged and a bruise appears. Speedy reconstruction is important to reduce damage to the cartilage.

Isolated ruptures of the anterior cruciate ligament are rare. Often there are simultaneous injuries of the collateral ligament on the side and/or menisci. One speaks of a combination of injuries. ("Unhappy triad": cruciate ligament, collateral ligament and meniscus.)



Left knee joint (from rear)

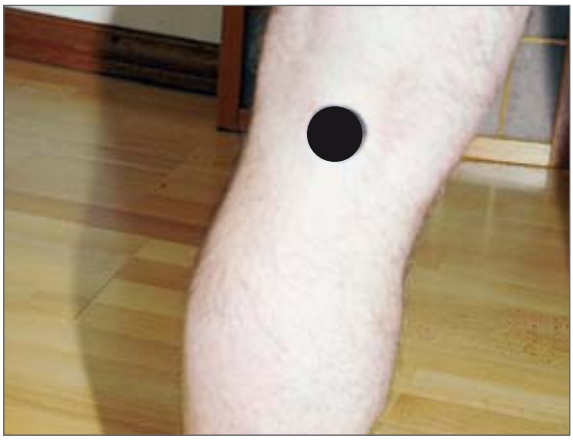
A lateral kick can lead (at best) to a painful pulled ligament coupled with restricted movement (because it is painful). If the knee is overstretched, an injury to the meniscus can occur when excessive force is involved. Additionally, there can be injuries to the collateral ligaments.

Comments on use:
Easily targeted; well-trained muscles offer a certain amount of protection.

5.5 Hollow of the knee

The tibial nerve is a continuation of the nervus ischiadicus (see its section), which runs through the "popliteal fossa;" for an illustration, see the section on the "Achilles tendon."

Attack: Kick, pressing the thumb into the hollow of the knee or popliteal fossa.



Target mark.

Effects: Nerve pain (neuralgia) can be felt after pressure is applied (see the statements in the Introduction).

Comments on use:
Like all nerve points, the degree of sensitivity, as well as effect achieved, is individually different. Thick clothing adds protection. Its use is limited.

1 Executing a Kanetsu-Geri at the hollow of the knee.
2 Close-up.

1 Low kick behind the knee.

1 Defense against a headlock: Press the thumb into the hollow of the knee.

1 Shoes can also be used to deliver a kick at the politeal fossa.

5.6 Sciatic nerve/Nervus ischiadicus

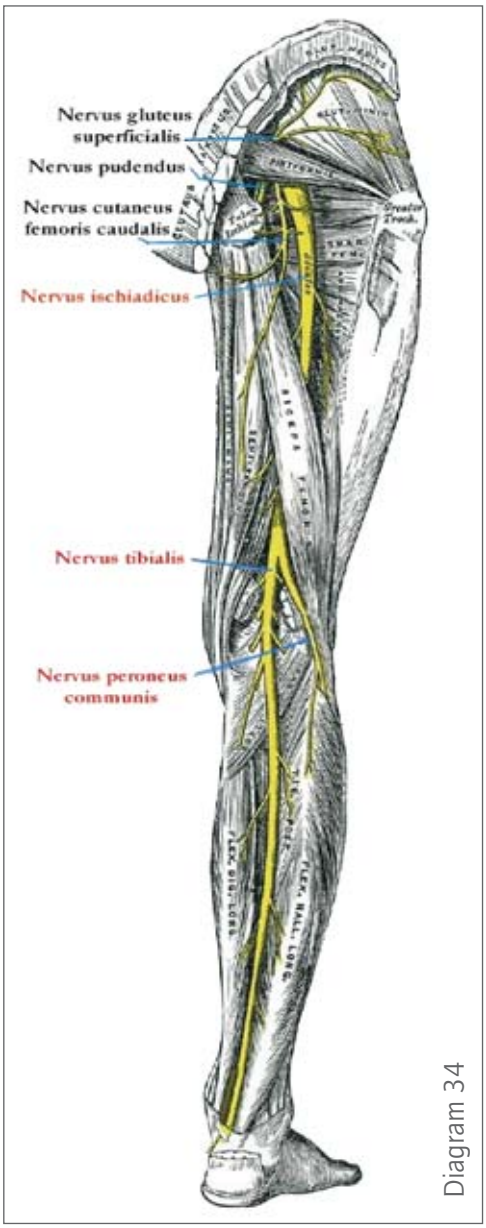


Diagram 34

The sciatic nerve runs on the extensor side of the hip joint, and then down at the back of the thigh. It is covered by the knee flexors, and then continues behind the knee where it goes through the "popliteal fossa." It is divided into the tibial nerve and the common peroneal nerve (common fibular nerve). On its way, it branches out providing the motor innervation of some of the thigh muscles.

Attack: Kick (shin, knee), best with relaxed muscles.

Effects: Paralysis of the sciatic nerve due to pressure, strain or deformation (for example by sitting on uneven surfaces or by sitting on the wallet in the back pocket), or by incorrect practice when intragluteal injections are given, causes the failure of tendons and outer rotator muscles in the thigh. Neuralgia (see the Introduction) in the sciatic nerve occurs when the nerve is stretched (strained knee, inflected hip) as a characteristic pain in the lower back and buttocks. In addition, a numbness, muscular weakness and other difficulties can be experienced when moving the leg. Typically, these symptoms only appear on one side of the body.

1 A Mae-Geri kick is warded off.
2 Subsequent low kick at the back of the thigh.
3 Knee kick at the sciatic nerve (causing a bruise on the thigh).
4 The opponent is brought to the floor.

Comments on use:
Like all nerve points, the degree of sensitivity, as well as effect achieved, is individually different. It can be used as a freeing technique. Easily targeted.

5.7 Outer side of the thigh

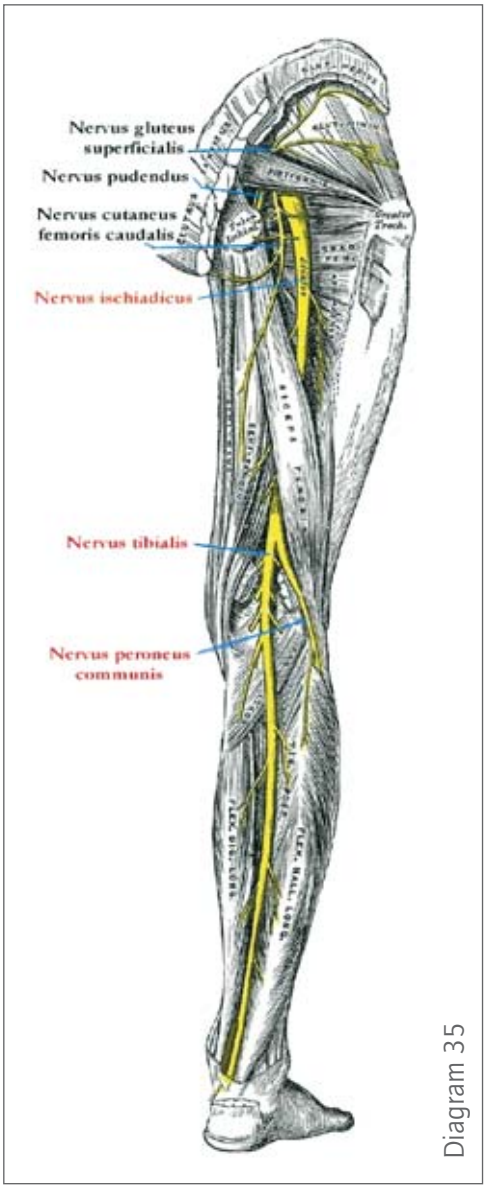


Diagram 35

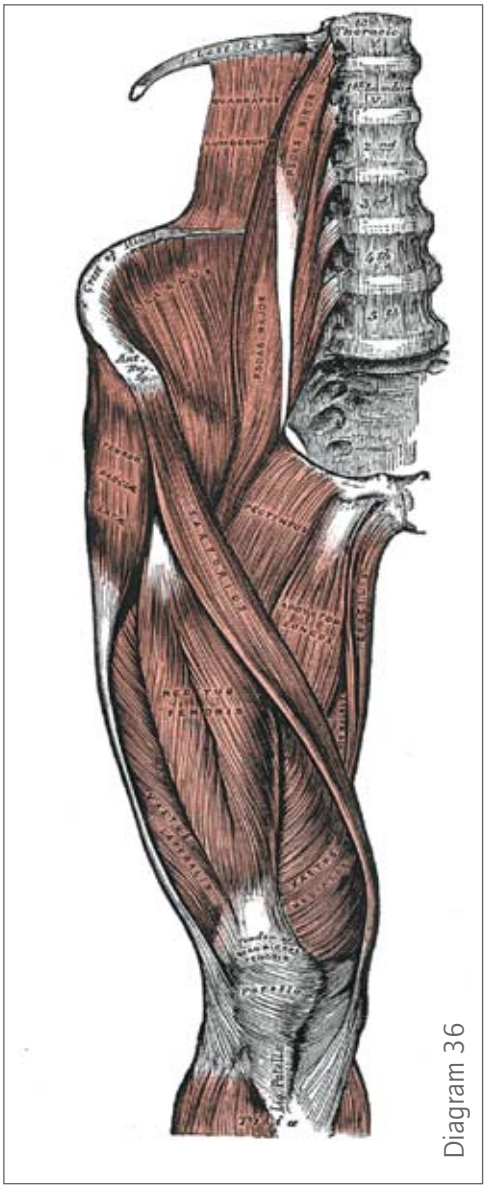


Diagram 36

See also the illustration in the section of the "Inner side of the thigh."

Attack: Kick (shin, knee).

1 Start a low kick.
2 Execute.
3 The leg is "kicked through," so to speak. The kick is followed up and performed as if one were kicking at the opponent's leg "through the air."

Effects:
Muscles: The muscles that are affected are the musculus vastus lateralis (on the outer side of the thigh) – one of the front muscles of the thigh – or the musculus tensor fasciae latae (Latin: tensor of the fascia of the thigh); the latter has the shape of a flat rectangle. The tendon is a strip-like reinforcement of the fascia latae and extends over the entire length of the thigh. This reinforcement is called also the iliotibial band.

Damage to organs or parts of the body caused by external direct, blunt force without visible injury to the skin is known as bruising. This creates an edema (swelling) of the tissues and extravasation of blood from the damaged capillaries in the surrounding tissue, which can appear as a bruise. Generally, pain is immediate and limits mobility. In cases of larger swellings, stiffening of the muscle can occur.

Similar events occur in contusions, which is when the body tissue is pressed together.

In a torn muscle fiber, the reticular fibers are damaged and local inflammatory symptoms occur. At the same time, local reduction of tonus (state of tension in the muscles) is apparent in the damaged area. With tears in larger muscles, sometimes clear recesses or knotting of the muscles in the affected area can be seen.

Thrombosis is unlikely.

Tears of the fascia skin are hardly likely; however, compartment syndrome may be possible (swelling in the muscle with reduced blood circulation, increase of pressure and, if not treated, possible necrosis).

Nerves: Injury to these is unlikely.

Affected nerves can include the femoral nerve (has an effect on the vastus lateralis muscle), the nervus gluteus superior (the "upper gluteal nerve" has an effect on the musculus tensor fasciae latae), as well as the fibularis communis/ peronaeus communis nerves (easily felt in the area of the knee joint) from the hollow in the back of the knee downward in the lower thigh. In both cases, the consequences are pain, "paralysis" of the leg and therefore instability.

1 Block the backhanded strike.
2 Pin the opponent's shoulders.

3 Knee kick with the thigh (bruise!).

Comments on use:
Like all nerve points, the degree of sensitivity, as well as effect achieved, is individually different. Well-trained muscles offer good protection. Easily targeted.

5.8 Inner side of the thigh

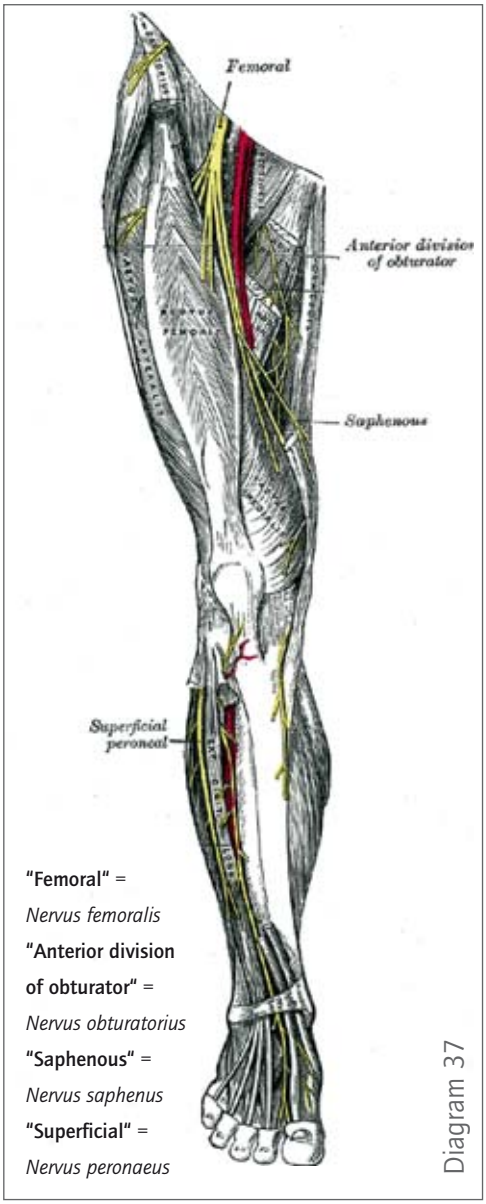


Diagram 37

In the thigh, the nervus saphenus (saphenous nerve) branches off from the nervus femoralis (femoral nerve). It lies along in front (along the inside) of the thigh artery and emerges at the surface here.

In addition, in the upper third of the thigh, one finds the nervus obturatorious that innervates the adductors of the leg.

Attack: Kick using the shinbone or knee, inside edge of the hand.

Effects:

Muscles: Damage to organs or parts of the body caused by external direct, blunt force without visible injury to the skin is known as bruising. This creates an edema (swelling) of the tissues and extravasation of blood from the damaged capillaries in the surrounding tissue and can appear as a bruise. Generally, pain is immediate and limits mobility. In cases of larger swellings, stiffening of the muscle can occur.

Similar events occur in contusions, which is when the body tissue is pressed together.

In a torn muscle fiber, the reticular fibers are damaged and local inflammatory symptoms occur. At the same time, local reduction of tonus (state of tension in the

muscles) is apparent in the damaged area. With tears in larger muscles, sometimes clear recesses or knotting of the muscles in the affected area can be seen.

It is also possible that compartment syndrome may develop (swelling in the muscle with reduced blood circulation, increase of pressure and, if not treated, possible necrosis).

Thrombosis is likely because the vena saphena (saphenous vein) can be so affected that clots of blood can find their way into the lung arteries and cause a lung embolism. Consequences include a drop in blood pressure, damage to the lungs, and collapse of the circulatory system, which is fatal.[14]

Nerves:
Due to the numerous muscles, which are innervated by the femoral nerve, severe movement disorders or loss of stability can occur; possibly inflammation (neuritis).

1 Headlock – head to head.
2 Attack at the inside of the thigh using a Haito-Uchi (inside edge of the hand). If the strike lands in the genitals instead of the inside of the thigh, there is a danger that the freeing technique has failed. The opposite happens as the attacker's reflex to the strike is to tighten his stranglehold.

Comments on use:
The degree of sensitivity, as well as effect achieved, is individually different. Not as easily targeted as the outside of the thigh.

1 The diagonal shoulder is controlled following the attack. (The defender's left hand pins the attacker's left shoulder following the attack.)

1 The attacker delivers a low kick.
2 The kick is cushioned, i.e., the force of the kick is dissipated by yielding the blocked leg.
3 Actively kicking back with the leg.

4 The opponent is forced to move his leg back.
5 Counterattack: Kinteki-Geri.
6 Alternative counterattack: Uchimomo-Geri (inside low kick at the thigh)

1 + 2 Use in groundwork – freeing from a scissor grip.

1 Additional use – pinning opponent down on the ground....

2 .....with the outside of the foot (Sokuto) or....

3 ..... with the toes or ball of the foot.

1 Wearing shoes can increase the effectiveness of its use.

5.9 Shinbone/Tibia

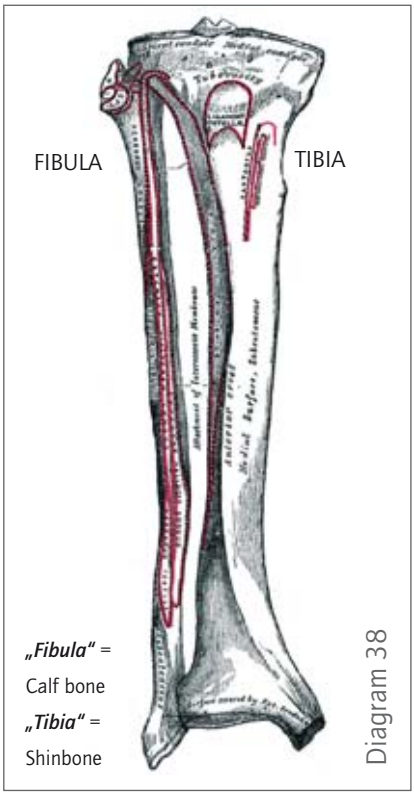


Diagram 38

Bones of the right lower leg – viewed from the front.

Attack: Kick, "sawing" with one's own shinbone.

1 From a clinch...
2 ....the opponent's shinbone is stamped down on – short and hard.
3 His leg is stretched out by this, giving space to deliver follow-up knee kicks or throws.

Effects:
Inflammation of the leg skin, break (thrombosis/embolism; pulmonary embolus, stroke).

On the face of the shaft, there is a strip of bone (crista anterior) that runs downward. This strip of bone is directly under the skin, forming the medial surface of the shaft.

The shin is surrounded by the periosteum membrane or bone skin and consists of a solid connective tissue layer that abuts the bone. The inner layer contains the nerves and blood vessels making the periosteum, in contrast to the bone itself, very sensitive to pain. When the shin is kicked, the vessels of the periosteum tear and a bruise between bone and periosteum appears. However, the sharp pain is felt for only a few minutes. By mechanical action, there may also be painful and long-lasting inflammation of the bone skin (periostitis).

Because the tibia runs just under the skin, open fractures are relatively common. There is a risk of thrombosis). In every injury of the lower limbs, there is a risk of a thrombosis (vascular blood clots). With large bone fractures, there is the risk of an embolism caused by a blockage of fat droplets. An embolism is a complete or partial obstruction in a blood vessel due to a blood clot or other foreign matter that gets stuck while traveling through the bloodstream.

Comments on use:
Good as an opening technique or as a possibility of taking the opponent off balance at short reach.

Example of "sawing" with one's own shin:

Sawing is itself not very pleasant for the defender. However, while the pressure he applies is spread over the whole of his shin, it is the same place on the attacker's tibia that is constantly being attacked.

Target mark.

The most sensitive spot on the shinbone is the area at its side and rear just above the ankle.

In the **following sequence**, this is used to double the effect.

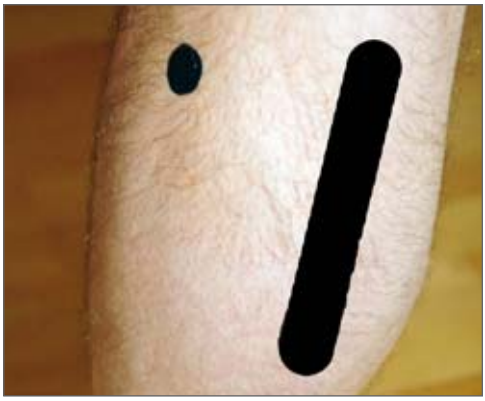
1 Even if the opponent turns on one side following the foot lever, the inside edge of the tibia can easily be used for control. Pressure is then created using the radius.

1 If the opponent is holding you from behind in a scissor grip, then the rear edge of the shinbone can be "worked on" firmly by repeatedly using the knuckles of the fist.

5.10 Calves

Compare with the illustration in the section on the "Outer side of the thigh."

Attack: Kick, pressure (edge of the foot, shinbone, thumb).



Target mark on left leg, rear side and inside of the calf

Target mark on right leg, rear side and inside of the calf

Effects: Pain caused by strike/pressure.
Rear side of the calf: Nervus tibialis, nervus suralis.
Inside of the calf: Branches of the nervus tibialis.
Outer side of the calf: Nervus peronaeus communis (= Nervus fibularis communis).

When pressure is applied, nerve pain can be felt (neuralgia) (see the statements in the Introduction). There is also a risk of thrombosis when a kick causes a traumatic injury.

Comments on use:
The degree of sensitivity, as well as effect achieved, is individually different, so a more precise approach is required to penetrate deeply when applying pressure; the strike at the heel does not require the same precision because of the larger impact achieved. Basically, it is sufficient that the calf just below the knee (inside/outer side/ rear side) is targeted, so that in addition to bringing the opponent off balance, there is also pain. In this way, the effectiveness of the leg throw is increased.

1 Clinch situation: Back kick with the heel at the outside edge of the calf.
2 The attacker tries to lift the defender up. The latter responds by lifting his heel to make a strike.

1 Scissor grip on the body from behind is freed by pressing the thumb into the inside of the calf.
2 Close-up.
3 Pain!

1 The bent knee lever that follows can be made more painful by applying additional pressure on outer side of the calf using the knuckle of the thumb.

5.11 Fibula

See the illustration in the section on the "Shinbone."

Attack: Kick using the shinbone/edge of the foot (opponent standing or in the kneeling position).

Target mark (right lower leg).

Effects: Break, not possible to put weight on the foot.

Comments on use:
Target is easily reached and effectiveness is also good.

1 The punch is warded off. **2** Grab round the elbow to control it.
4 In a rapid, semi-circular sweep, the inside of the shinbone just above the ankle is used to kick the opponent's fibula.

1 Technique used to pin the opponent to the floor.

1 The opponent's leg is pinned by the ankle.
2 Grab the hollow at the back of the opponent's knee and bend.
3 Using this action, the opponent's body is turned over.

4 Starting the twisting movement.
6 Pinning the leg onto the floor by placing your weight on the fibula with your shinbone.

6 Special Techniques

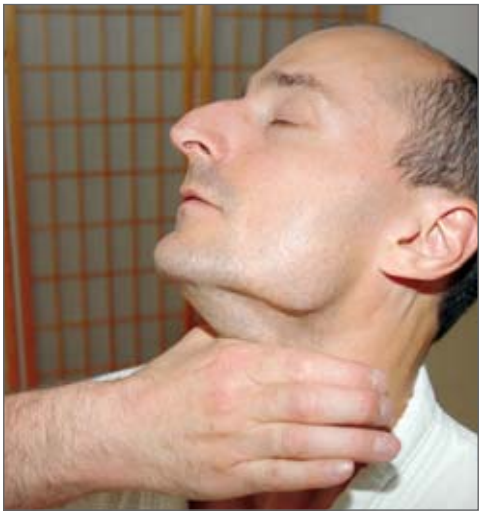
In this section, we illustrate two special techniques.

If the opponent has nothing on or is wearing little clothing, controlling him is still possible. Irrespective of how muscular the opponent is, or how little subcutaneous fatty tissue he has, the fleshy part of his skin can always be gathered up like grasping a cloth duster. **CAREFUL!** Very painful.

Gripping technique: The open hand is placed on the triceps and the fingers are pulled together in a gripping action. At a certain point, the skin can be gripped like picking up a fold in a cloth. The opponent can be controlled easily because of the pain.

The fold of skin, held between the thumb and the forefinger, can be used for a follow-up attack at the neck.

How to hold the hand.



If the opponent is wearing very thick clothing, then many of the options we have shown will be ineffective.

In this case, the maxim is:

If you cannot ignore him or beat him, then make him your friend!

Appendix

Recommended literature

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Planellas, Pau-Ramon. *Jintai Kyusho.* Barcelona, 1996.

Footnote References

1. http://www.iasp-pain.org//AM/Template.cfm?Section=Home
2. This is one of the problems of using Kyusho in a stress situation of an attack.
3. A balanced description of the placebo effect can be found in Ben Goldacre's book: Bad Science, Sept 2008.
4. Compare, for example, *Profil No 48* from 26.11.2007.
5. In our case, one has to speak of a "nocebo" effect that is often described as a negative placebo effect. This is where fears are built in the patient's mind, and he is made ill by external influences. Such persons actually then get ill or their appropriate symptoms can be observed and measured. An extreme example could be, for example, the death sentence imposed by the voodoo priest. Here it is imagined that the victim, in good faith, becomes ill with resignation and fear and then actually dies.
6. Michael Kelly's book, 2001, Page 13.
7. Throughout Michael Kelly's book, 2001.
8. Michael Kelly's book, 2001, Page 108.
9. According to an Austrian prosecutor, consent to such severe damage to health would not be legally possible and therefore disallowable. The suspect would have to reckon with criminal action.
10. Michael Kelly's book, 2001, Page 4.
11. Mark Link of Tufts New England Medical Center in Boston; see also New Scientist, August 30, 2003, pp. 38-39, under the title "Lethal Impact."
12. See also writings by Michael Kelly, 2001, p 102.
13. See Michael Kelly, 2001, p 21 et seq.
14. See Michael Kelly, 2001, p 91.

Weblinks

There are links that provide good anatomical illustrations and descriptions about Kyusho:
http://www.youtube.com/watch?v=SHtLlzw5zAE
http://www.youtube.com/watch?v=k0gjvTsftf0&feature=channel
http://www.youtube.com/watch?v=MinHtFAOOKA&feature=channel
http://www.youtube.com/watch?v=-_0PY2PtOJs&feature=channel
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Picture Acknowledgements

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Diagram 6: Illustration 8.19, p 797, Head and neck
Diagram 10: Illustration 8.163, p 948, Head and neck
Diagram 13: Illustration 7.34, p 656, Upper Extremities
Diagram 16: Illustration 4.2, p 228, Abdomen
Diagram 20: Illustration 3.27, p 131, Thorax
Diagram 23: Illustration 4.110, p 319, Abdomen

Diagram 11: www.logopaediewiki.de/wiki/Larynx

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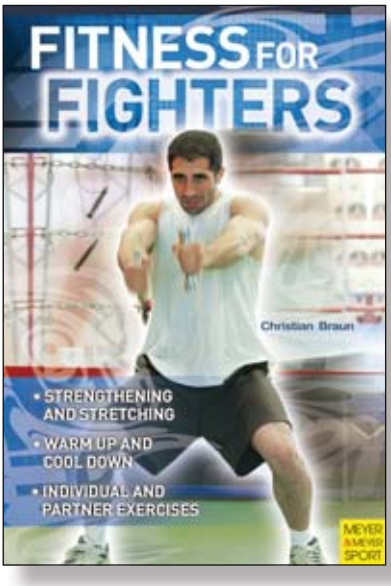

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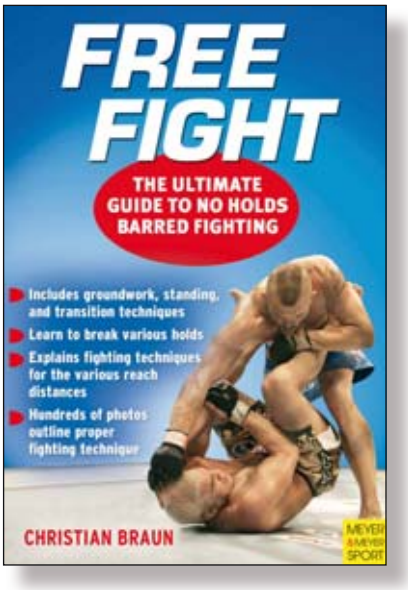

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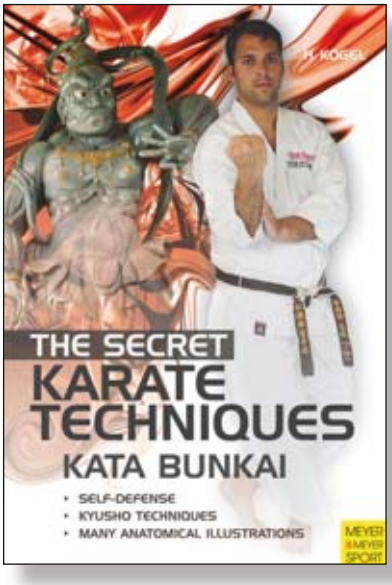

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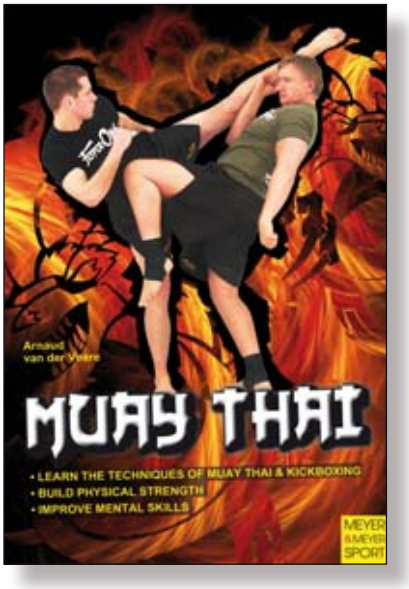

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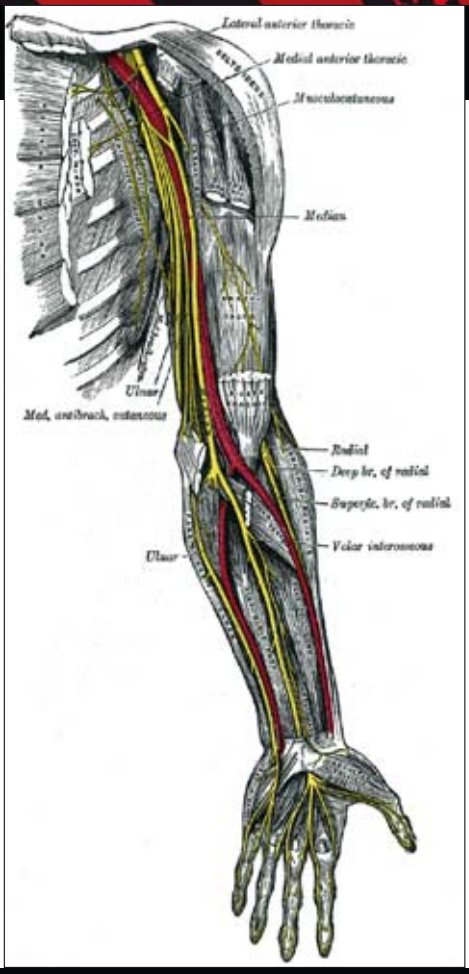

The armpit is the area on the human body directly under the joint where the arm connects to the shoulder and is bordered by the chest muscle in the front, at the rear by the back muscle, and on the inside by the rib cage. It lies under the skin. The extensions of the plexus brachialis, namely the nervus medianus, nervus ulnaris, and nervus radialis can be found in the armpit. These nerves run through the whole of the upper extremities.

Effects:
Nerve pain/neuralgia (see statements in the Introduction).

Comments on use:
Like all nerve points, the degree of sensitivity, as well as the effect achieved is individually different; the armpit is relatively seldom exposed, and moreover, as with all targets on the torso, often well protected by clothing.

ABOUT THE BOOK

All moves in martial arts and self-defense aim at finding the opponent's weak spots and using these to ultimately control and subdue him.

Although the knowledge of the human physique has increased recently, descriptions of punch and pressure techniques in most martial arts books focus only on causing "pain, paralysis, death." Exact explanations of their impact are missing or given only on a spiritual level. However, understanding the impact of one's actions should be the focal point of any martial artist with a sense of responsibility. "Kyusho" provides detailed information about attack points of the human body and the relevance of the pressure point system in martial arts. With this approach the book offers the chance for every martial artist to expand his knowledge of the human body and the effect the pressure point system has on it.

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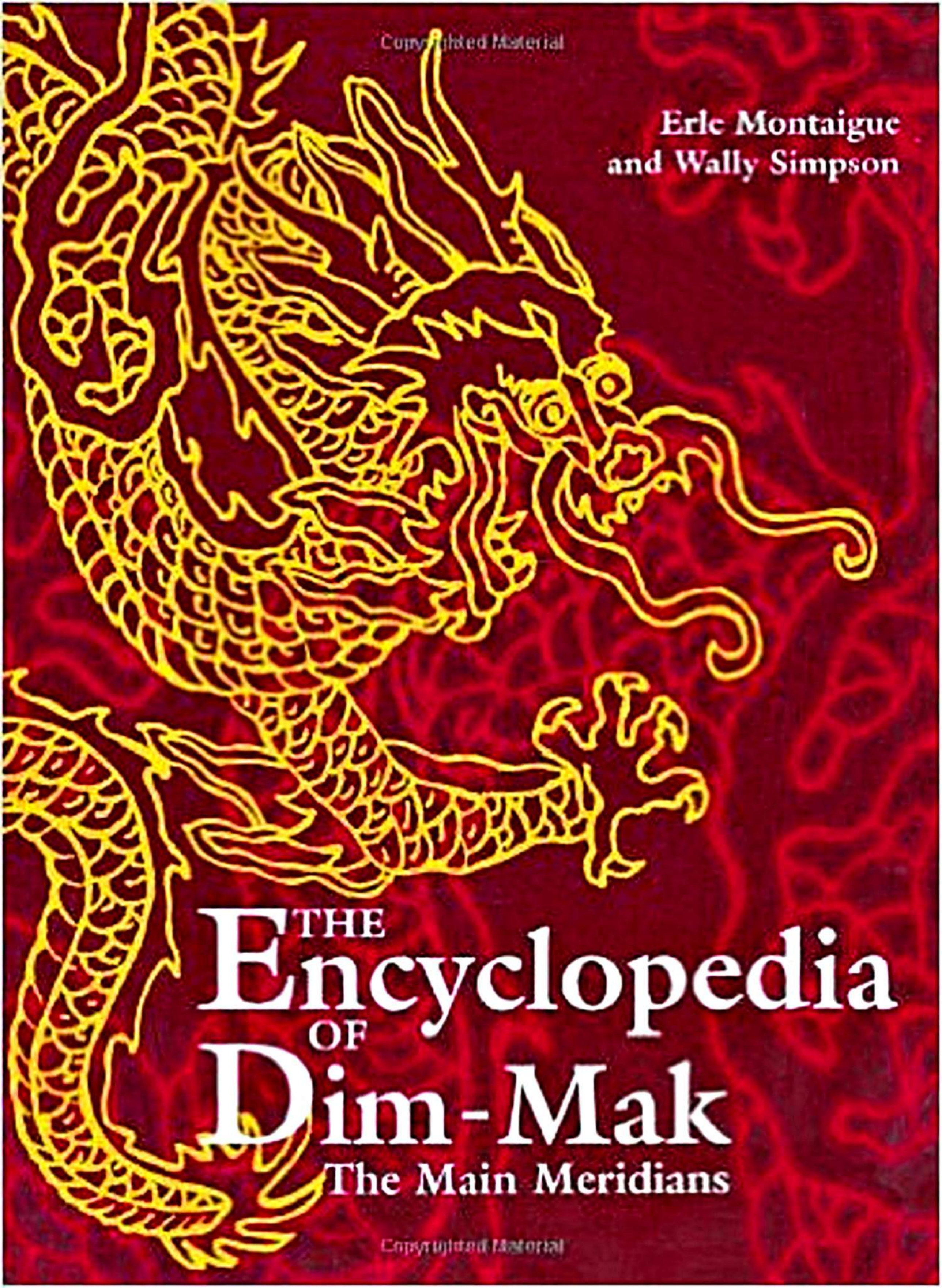

THE Encyclopedia OF Dim-Mak

The Main Meridians

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Preface

The Montaigue Encyclopedia of Dim-Mak

First and foremost, I want to issue a warning to all who read this book about the dangers of abusing their knowledge of dim-mak techniques.

There was a time when only those who had achieved an advanced level of training were given the most deadly ways of fighting—and then only after they had learned about the basic ways of healing.

In modern times we have seen certain people who have come across a minute part of dim-mak—such as the ability to cause knockout (KO) very easily by striking certain points on the body—go out and teach this openly to anyone who would pay the money. We have seen these same people giving others very high dan rankings after only a relatively short period of time. Worse, we have heard these people saying that striking to cause KO is not dangerous and that anyone can do it!

Sure, anyone *can* do it after only a few minutes of training, but *it is extremely dangerous* (especially when the person executing the strike does not know what he is doing or how to heal the result of such strikes)! We had a case here in Australia where after only one seminar, one chap was going around striking friends and relatives, even strangers, in kidney points to show how good he was at the martial arts. The recipients of these strikes were urinating blood that evening! Here is the classic example of someone who receives a limited amount of information from someone who does not know the full score himself and then goes out and applies it without knowing the dangers.

I began publishing information on dim-mak back in 1986 when I wrote my first article on basic dim-mak for the magazine *Australasian Fighting Arts*. It was my intention to introduce these deadly strikes to the general martial arts public gradually and educate people about the dangers of such strikes.

At that time, the only books on dim-mak were a couple of very basic books in Chinese, which were later translated into English and really taught nothing at all. There were also a couple of responsible teachers of the karate version of dim-mak called *tuite*, like Sensei Oyata, who was only teaching his most advanced students these methods. A few other schools in Japan, like the Shorinji Kempo school of Sensei Bando, were teaching some of the neck strikes only to their most advanced students.

Unfortunately, there were those who took the opposite tack and openly taught a few very dangerous strikes that look very impressive to the novice. Slowly but surely, some information got out and was being taught to anyone. Seeing this, I decided to fast-track the information so that people would know the dangers of these strikes.

Before I began writing about dim-mak, very few people, if any, actually used the Chinese terms for the strikes, such as Stomach 9 (St 9). They would simply call them "nerve strikes" or something similar.

Now, as a result of my writing, everyone knows that the easy knockout strike is to a point on the neck called St 9. My articles also educated people about exactly why the strikes to the neck work so well for achieving knockouts. Some martial artists knew the strikes worked, but few knew why. So, taking my own training and using the knowledge of some of the world's leading minds on cardiology, neurology, and physiology, combining modern science with ancient Chinese knowledge of the energy systems of the body, I set out to educate the martial arts public as to why the strikes worked. My goal was to tell people that even the lightest strike was dangerous!

In late 1995, with four books on dim-mak and around 110 video titles, I realized it was about time to write an encyclopedia on dim-mak—an enormous task, but an important one. Until now, martial artists have had to rely on acupuncture texts for information on the points, which was inadequate for a number of reasons. Primary among them was that acupuncture texts were not written with the martial artist in mind: they did not show the correct directions for striking, the proper techniques to get at the points, the effects of the point strikes, or the antidote points.

This book is purely for martial artists who wish to know more about dim-mak, either for hurting or for healing. It will also be of interest to acupuncturists, because it gives an added dimension to their craft that is not covered in any of the acupuncture texts.

The coauthor of this book, Wally Simpson, has been a student of mine for many years, and he is regarded in Australia as one of the foremost acupuncturists. He has had his own practice for several years and is the principal instructor of traditional Chinese medicine (TCM) for the World Taiji Boxing Association. Because he has a sound knowledge of all aspects of TCM, including the herbal area and *tui na*, or Chinese massage, and since I have only a basic knowledge of acupuncture, I asked him to contribute to this book. In every chapter there are sections for each point called "Chinese name," "Point location," and "Healing,," which Wally wrote. He also wrote the Introduction to Traditional Chinese Medicine that follows my introduction.

This is the first time in history that anyone has attempted to cover all of the major dim-mak points in the body in an encyclopaedic manner. It has been a labor of love—a mammoth task involving sleepless nights, hard work, and a lot of research, but it is worth it in the long run just to get this much-needed information out to the martial arts and general public.

The future of dim-mak is looking good. Many people are now attempting to find out more. In doing so, they enhance their own martial systems. More and more information is coming out as a result of people such as myself researching and trying out old methods to see if they really work, working with others in related areas of expertise such as acupuncture. In this way, dim-mak is being brought back from the brink of extinction so that it now has more followers than ever before in history. This has happened simply because the information is no longer secret (bar a small number of advanced methods, like the Wutan Shan system).

INTRODUCTION

I have always put forth the view that the "internal Chinese martial arts," such as taijiquan and bagwazhang, are the most deadly arts ever invented, and that these same arts, along with the practice of *qigong*, also represent the very tip of the mountain as far as self-healing and medical healing go.

And yet, looking around at what most people put forth as being representative of these arts, I wonder about this.

At one time, taijiquan, for instance, was regarded as the "supreme ultimate boxing" system of China. Now the internal arts of China look very different. We see men playing little boy's games, dressing up in funny suits that have not been worn for centuries in China, all trying to show how good they are at their art and how much better they are than everyone else. They all go to the same meetings and competitions to show their wares, they all have the same serious expressions on their faces, they all write the same articles for magazines about how these arts should be used, and they all take themselves and their arts very seriously. But not many, if any, have a clue as to the true nature of the internal martial arts.

These once-great arts rise high above the way most people practice and propagate them today. Dim-mak is one of these great internal martial arts—one that almost became extinct, having left behind only a shadow of its former glory in the form of taijiquan or t'ai chi. Once a great fighting art, taijiquan in particular took a beating when it entered the modern Western world and was adopted as part of the "New Age" movement. Only a handful of dedicated instructors persevered with trying to reveal the true nature of this art.

Now, largely because of their efforts, taijiquan is being revealed for the first time in modern history as the great fighting, self-defense, and healing art that it once was. Before this, most people only ever saw a fraction of taijiquan—i.e., the self-healing area—the slow movements we have become familiar with. Few people ever saw the real martial arts applications, and even fewer got to see the "medical" area of the art.

THE THREE AREAS OF EXCELLENCE

Like all great internal martial arts, taijiquan originally comprised three areas of excellence.

The first of these is the *self-healing* area. (Obviously, one has to be healthy in order to practice a self-defense art.) This area consists of practicing the forms and the pushing hands movements. There are slow forms, medium-paced forms, and explosive forms. In addition, there are two-person fighting sets, also for self-healing.

At its highest level, the original Yang style of taijiquan founded by Yang Lu-ch'an (which was first called *hao ch'uan* or loose boxing) becomes an explosive set of movements, or *fa-jing* shakes, causing the practitioner to look like a rag doll. (It was later, as Yang's grandson took over the school, that the form was altered, leaving only the slow movements.) In order to become healthy through movement, we must have slow, graceful movements as well as explosive, powerful movements. This gives us a complete set of movements based upon the yin and yang theory.

Part of the reason taijiquan has been bastardized as it has is that there have been so many mistranslations of the "classics" (sayings by old masters that were documented to provide a better understanding of taijiquan) handed down over the years that we just don't get their true meaning. One such mistranslation, affecting the very way that taijiquan is practiced today, can be found in the classic saying, "Move like the great river." Most people have interpreted this to mean that we move slowly and calmly as a gently flowing river. But when the Chinese talk about the "great river," they are referring to the Yellow River, which in parts is barely navigable because it is so wild and explosive. So, yes, we must perform the taijiquan forms like the great river, sometimes slow and calm flowing, sometimes explosive and dangerous.

The second area is the *martial* area—not that which is presented by most taijiquan instructors, where we block and evade, then reattack, and so on, but the extremely deadly use of dim-mak, or death-point striking. This is more than just striking to very dangerous points, it's the *way* that we strike them and the explosive method we use to attack before an attacker even has time to react to our defense. Taijiquan, when done at its original level, deserves the name "Supreme Ultimate Boxing." But when done as some sort of health dance or mystical experience, it cannot be labeled as such. No forms are practiced in the martial area, although the original forms from the self-healing area become important here in giving us timing and coordination. In the self-defense area we practice "training methods," which give us the ability to react at a reflex level, attacking the attacker rather than defending against him.

The third area of excellence achieved through training in the internal martial arts is the *medical* area. I

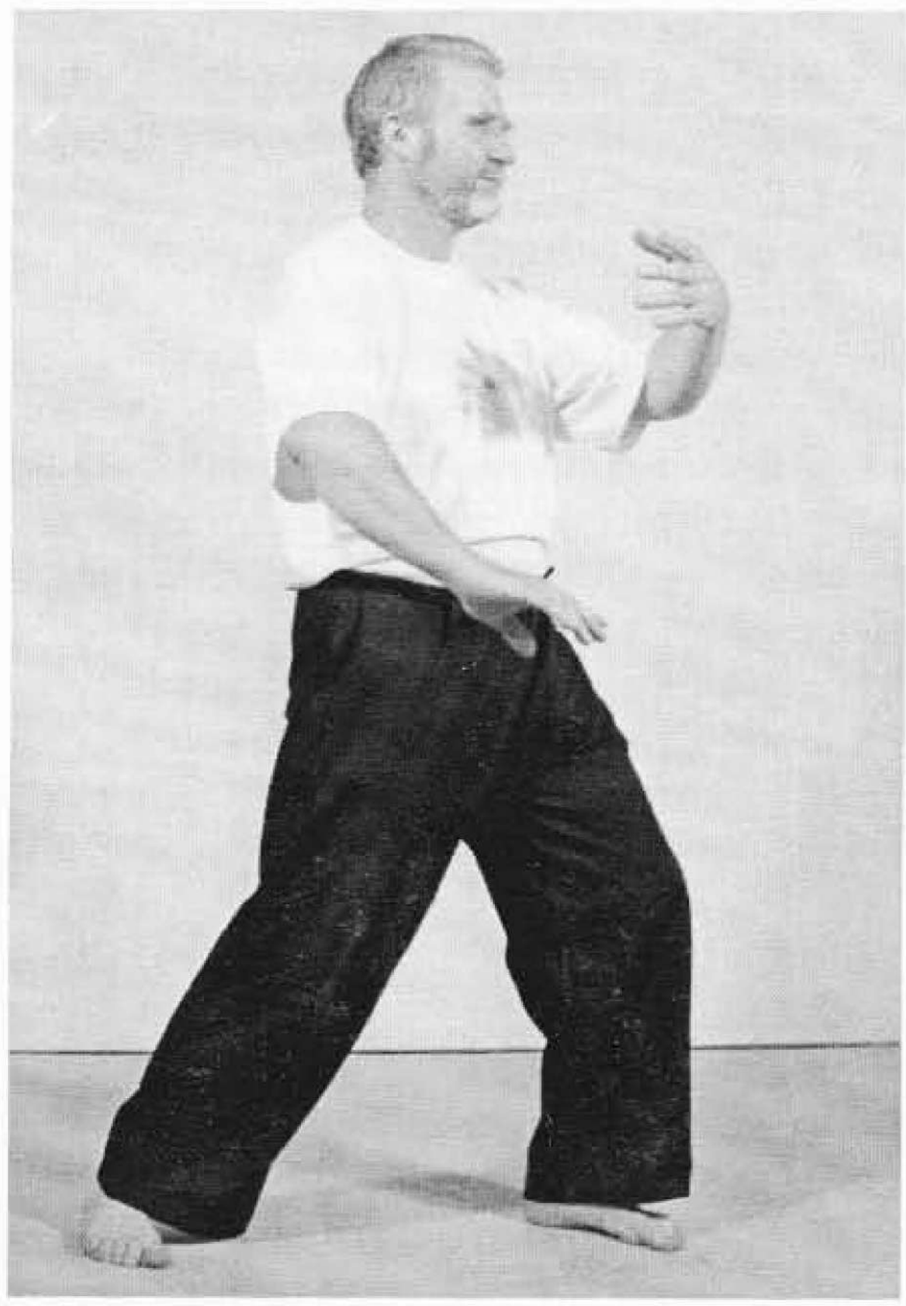


Figure 1

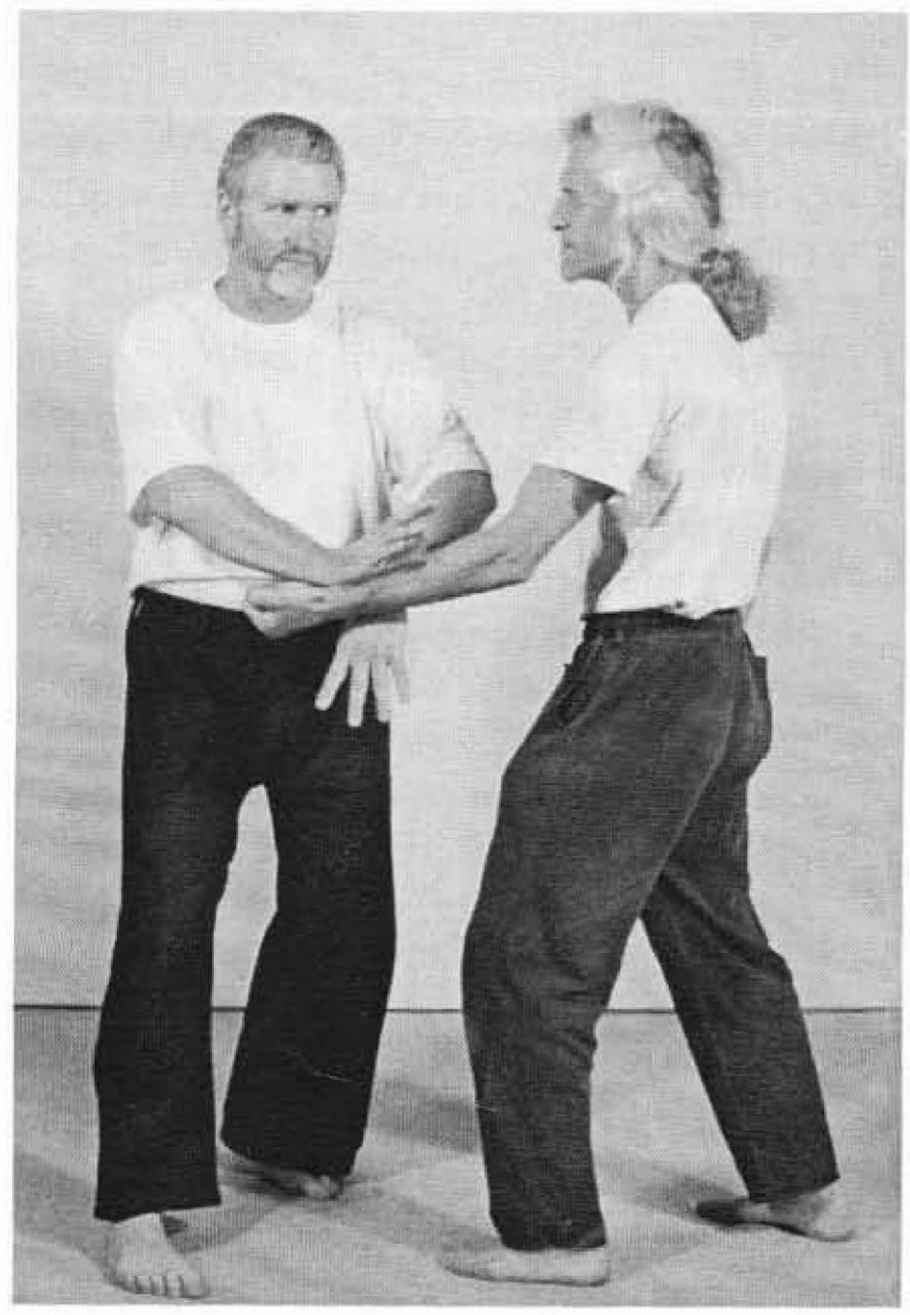


Figure 2

regard this as the highest level of one's training. When I say "medical," I mean that the practitioner of taijiquan can actually use the postures on someone to affect a healing. This is more than just giving the person a posture that will heal some ailment; it is actually *doing* something to that person. This area takes many years to master, and then some.

However, to use taijiquan for healing others all one really has to know are the self-defense applications at a dim-mak level, for two reasons. The first is that when we train in taiji at its highest martial levels, we develop an internal energy that attaches us directly to the ground via "energy (qi) roots." These roots then direct what is called "ground energy" up through our own body and into the one we are trying to heal. The second reason is that once we know the self-defense applications of dim-mak, all we have to do is use those exact same movements, only on a healing level (not at a martial level, of course, because we would kill our patient instead of healing him).

Take, for instance, the posture known as *p'eng* (fig. 1). In a self-defense application, we defend against an attack using a low block to our right side, damaging our attacker's heart/lung meridian and thus draining energy from his body (fig. 2). Then we further drain qi from the heart/lung meridian by hammering onto the wrist points of Heart 5 (Ht 5) and Lung 8 (Lu 8), using a violent grab with our right palm (fig. 3). Then we strike to his "mind point" on the side of his jaw with our left backfist, thus causing him to lose consciousness as the action of the strike causes his central nervous system to stop sending signals to his brain (fig. 4). Then, to further the damage, the left wrist attacks to Conceptor Vessel 22 (Cv 22) point, thus causing death (fig. 5).

We can use this exact method on a healing level to cure someone of low energy, listlessness, and so on, as well as to help someone who has emotional problems resulting from some childhood trauma, such as sexual or other abuse. This still involves striking the heart and lung meridians (fig. 6), but only very lightly. Then there is the light grab on the wrist, followed by the left palm scraping over the patient's left cheek and out over the head, as in Figure 7. (I am in the process of writing a book on medical taijiquan, which will show all of the applications from taiji used in this way.)

Figure 3

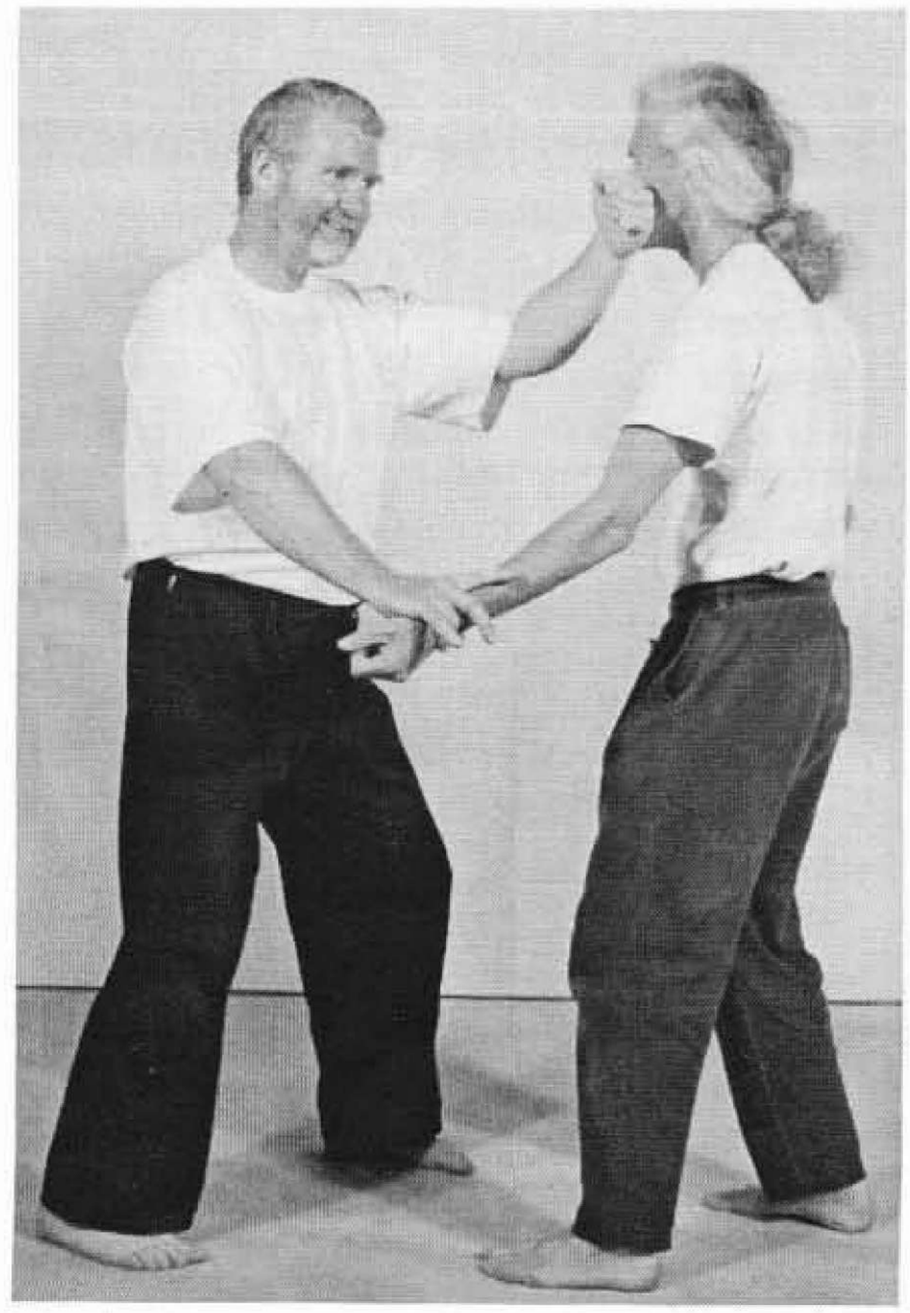


Figure 4

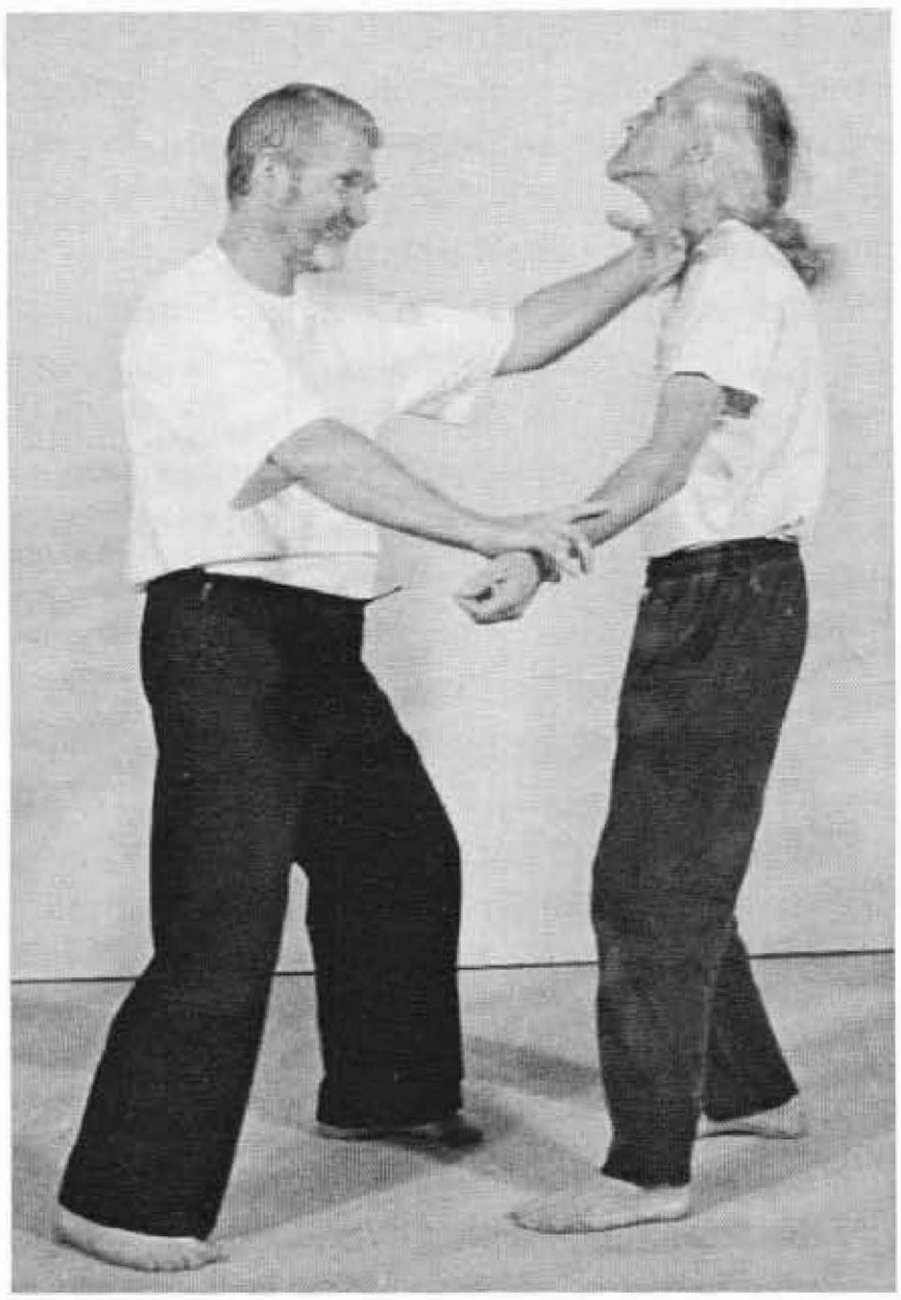


Figure 5

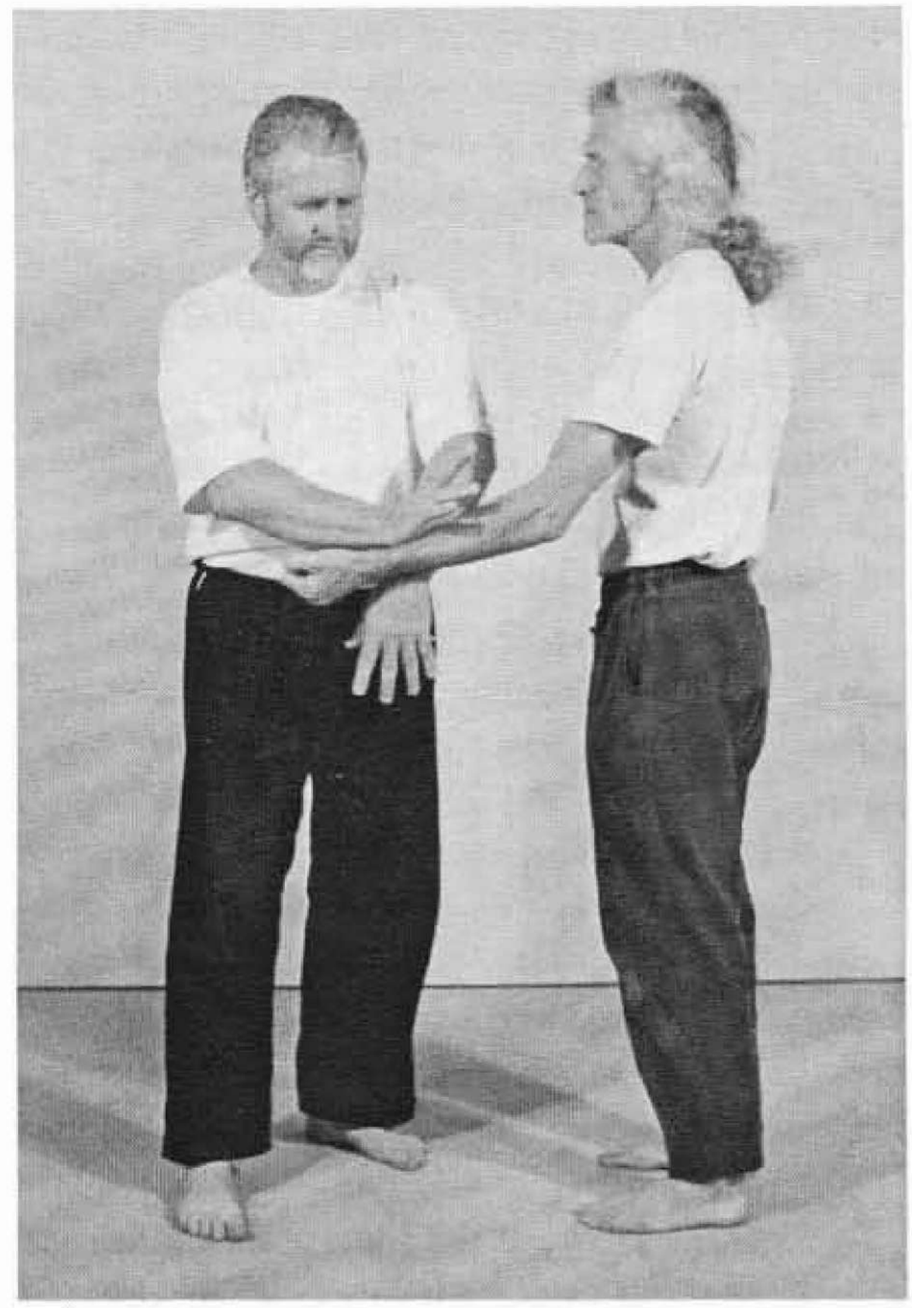


Figure 6

This is why the healing area should never be taken away from the martial area. The medical area is the highest level of one's martial arts training, but sadly, most systems nowadays have taken only the deadly part of dim-mak. They focus on the more spectacular movements and leave the healing side of their art out completely, thus lessening the greatness of this art.

I believe I am the first person in modern history to be taught this area and, more important, to document it for future generations. The Chinese didn't teach it to the various masters who took what they learned in China and invented their own systems. This was primarily because those people didn't stick around long enough to be ready to receive this information or to use it, because the qi was not at a sufficient level. In addition, the Chinese simply didn't want anyone else to have this information.

So why does a Westerner from Australia have it? The answer to that calls for a bit of background.

HISTORY OF DIM-MAK

The history of dim-mak is quite gray, but we do have *some* information on its origins.

Chang San-feng, the original founder of dim-mak, was born sometime between 1270 and 1347. Most scholars agree that 1270 is the most likely date, and based on that, one could assume that he invented dim-mak around 1300. He and two of his friends, who were acupuncturists, decided to experiment on animals and people to determine the effects of strikes to the acupuncture points. Obviously, other masters of great genius have added to our repertoire of dim-mak point strikes over the years, but it was Chang who got us all started.

Many argue that because the name "taijiquan" is not once mentioned in Chang San-feng's history, he cannot have invented it! In fact, taijiquan is only a recent name given to Chang's original point-striking system of dim-mak, which then became h'ao ch'uan, and only late last century became known as taijiquan. There is plenty of mention in Chang's history of dim-mak, and so each year tens of thousands of Chinese martial artists celebrate Chang's birthday as marking the birth of taijiquan.

Understandably, Chang became a little paranoid at having discovered such power. (Back then, it was a

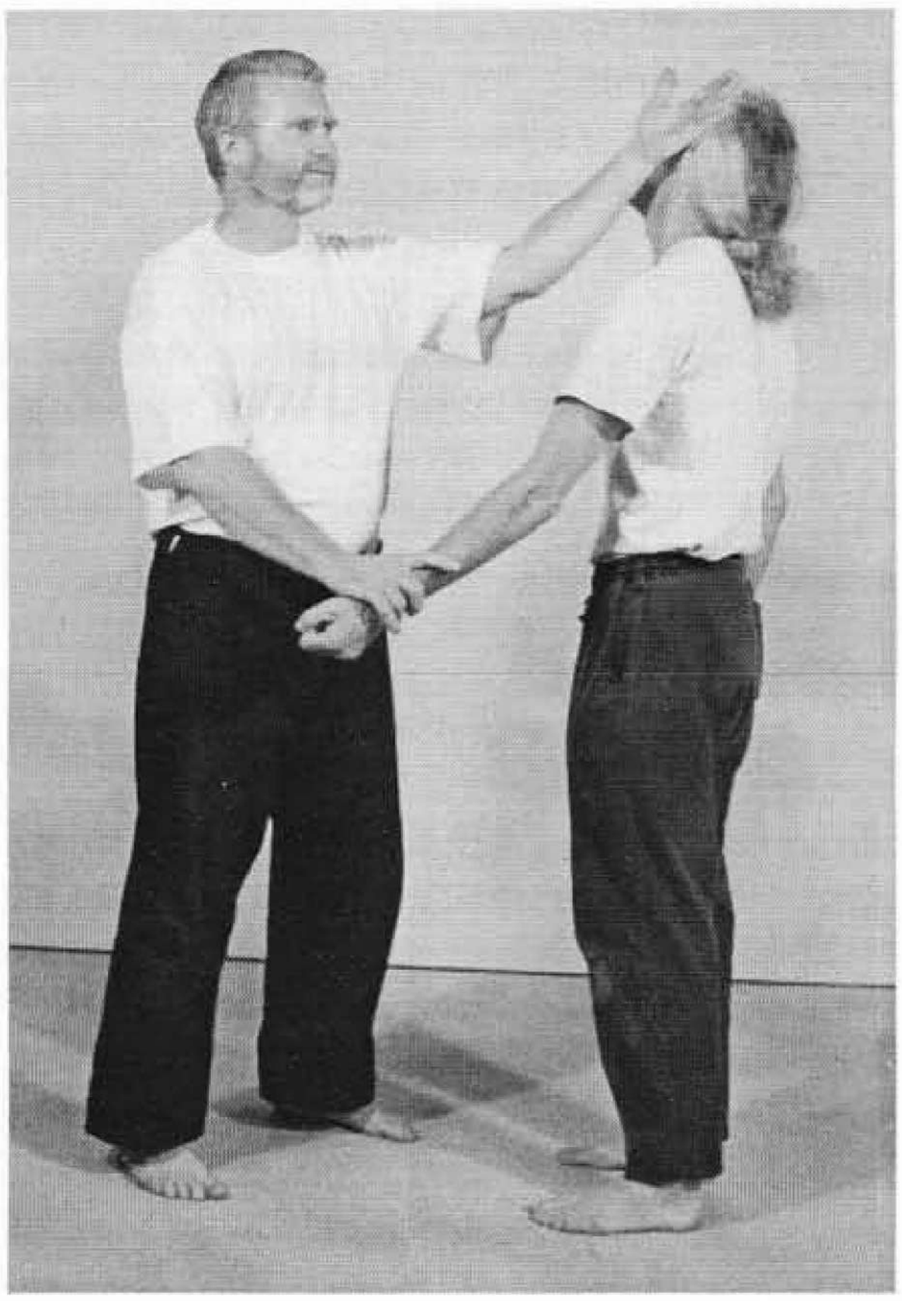


Figure 7

bit like discovering the atomic bomb, in that so much devastation could be caused by even a one-finger strike.) So he invented a way of passing on this information to his most trusted family members without revealing it to others who would try to copy what he had originated. He made up a simple set of movements, like a dance, into which he placed all of his dim-mak strikes, only telling those trusted few exactly what each movement meant. It was this set of movements that was then called h'ao ch'uan, or "loose boxing," and later taijiquan.

Human nature being what it is, students would learn the basic steps from other students and then, thinking that they had received it all, would go out and teach what they had learned. This was the death knell for h'ao ch'uan or taijiquan, for most of them would never reach the highest levels where the dim-mak and dim-mak healing were taught.

Other martial arts systems picked up on the dim-mak strikes that Chang had invented, and because they were more in line with what are known as the "hard styles," actually taught what little they knew of dim-mak openly. So nowadays a number of martial art systems have some semblance of the original dim-mak. Even the Okinawan and Japanese karate schools know a bit of dim-mak. However, it was the original Chang San-feng invention that had the ultimate sophistication and subtlety. The point strikes remain hidden in the modern taijiquan forms or katas, but not many know how to use them, or even wish to know about them. Taijiquan has become a New Age health dance that, when performed 10,000 times, supposedly leads one to enlightenment. (In order achieve this enlightenment, one must also wear a serious "taiji suit" and spout words of wisdom from the masters whenever confronted by people at parties who might be impressed with such profound knowledge.)

The history of dim-mak cannot be separated from the taijiquan lineage, and two names are synonymous with this lineage.

The first is Wang T'sung-yeuh, said to be either a student of Chang San-feng or the student of a student (it is fair to say that there was a direct lineage from Chang). Since Chang did not write anything down since he was paranoid that someone would steal his information and then use it against him, it was Wang who first recorded the exact nature of h'ao ch'uan. His treatise was then filed away and stayed that way, just gathering dust, through successive generations, until its owners did not even know what it was.

The next name is Yang Lu-ch'an. Yang rediscovered the treatise, which had somehow made it to the Chen Village of Shao-lin style martial artists where he was working. Yang did not know what it was all about until a man called Zhiang entered the village. Zhiang happened to be a direct descendant of Chang San-feng, and together he and Yang used the treatise to rediscover h'ao ch'uan. Because the Chen people were kind enough to put both men up and to work, they too enjoyed Zhiang's knowledge, changing their Shao-lin system to be more like h'ao ch'uan. Nowadays, Chen taijiquan is a very popular style, but it retains the hardness of the Shao-lin background and does not have the "soft" and "loose" internal qualities of Yang-style taijiquan. Yang style, in its time, was said to be the very pinnacle of martial arts systems. Most modern styles of taijiquan come from the Yang system invented by Yang Lu-ch'an.

From Old to Modern Taijiquan

Yang Lu-ch'an had six sons, four of whom were murdered in a bloody battle with a rival family. Yang himself preferred to commit suicide rather than be killed by these rivals. Of the two remaining sons, one, Yang Ban-hou, went slightly bonkers after witnessing all of this, and the other, Yang Kin-hou, escaped to a Buddhist monastery to recover.

My lineage comes directly from Yang Kin-hou in two lines.

The first line comes from Kin-hou's first son, Yang Shou-hou, who refused to change his father's and grandfather's system of fighting. He taught only three students, among them Chang Yiu-chun, who became my main teacher.

The second comes from the Yang Cheng-fu side. Cheng-fu, the brother of Shou-hou, changed the original system so that everyone, young and old, could enjoy the great healing benefits of taijiquan. He left out all of the leaping movements and fa-jing, or explosive energy movements. I also learned directly from Yang Sau-chung (the son of Cheng-fu) and from one of his three main disciples, Chu King-hung.

Yang Cheng-fu's system is the most popular system today, and it is said that it represents the maximum that the original could have been changed without having lost its internal essence. (Later "masters" of Yang-style taijiquan further changed the whole system, causing it to become too soft, with little or no martial arts applications, until, nowadays, nothing of its original greatness remains. Because of this association of taijiquan with some sort of health dance, I prefer to call what I teach h'ao ch'uan, which is more in keeping with Yang Lu-ch'an's original idea of a great self-defense/healing system.)

So after much begging, borrowing, and stealing (as well as buying and granting many "favors"), I was taught by some of the very best Chinese teachers, and in 1985 I became the first Westerner to be given the degree of "Master" directly from China. Following that first tour, it took nine years of correspondence before I finally had the chance to go to Wutan Shan and learn these forms of fighting and healing.

Wutan Shan is a mountain range 400 kilometers long in Hupei province. One of these mountain peaks is also called Wutan Shan, and it's here that the original Wutan Shan temple existed. Chang San-feng was said to live at this temple. Nowadays, the "keeper" of the system, Liang Shih-kan, teaches out of his humble abode in a small village at the base of this peak. He has around seven students and teaches on a dirt patch in his backyard.

In May 1995, I was the first Westerner ever invited to Wutan Shan to be taught the original Wutan Shan style of "qi disruption," which involves nine brief katas that are said to be the original forms invented by Chang San-feng. There I learned the remaining five short forms of what I believe is the original Chang San-feng system. (I already knew the first four of these, as taught to me by Chang Yiu-chun.) Normally, only two of these forms are shown to outsiders, even other Chinese. So it was only after nine years of negotiating and sending videotapes, as well as much begging, borrowing, stealing, and buying—and after having to literally defend myself against two of Liang Shih-kan's students on the first morning there—that I was taken to the back of Liang's house to learn these forms. And now that I have had time to study these forms at my own pace, I am seeing where Yang Lu-ch'an's form came from. Each of the nine short, explosive forms has a little of Yang's form in it.

REDISCOVERING THE ORIGINAL ART

It was after this experience, late in 1995, that I decided to undertake the huge task of writing the dim-mak encyclopedia, combining my knowledge of dim-mak with coauthor Wally Simpson's knowledge of acupuncture and Chinese medicine in general. The original inventor of taijiquan (or, rather, its forerunner), Chang San-feng, was an excellent martial artist in the true sense of the word, as well as a great acupuncturist and healer. Chang combined both of his talents to invent the very deadly point-striking art of dim-mak. In publishing this book, I believe that we have rediscovered what Chang San-feng originally invented. You cannot take the healing art away from the martial art; in so doing, you only get half of a great art.

Rather than listing all of the dim-mak points in alphabetical order as the typical encyclopedia would, I have organized this one by meridians.

The chapters in this volume each focus on a major meridian and show the exact location of each of the dim-mak points associated with that meridian; the effect of striking these points in all possible directions; the antidote methods, if any, to revive someone who has been struck in these points; and applications that enable one to get at the points. Where possible (and if necessary), I also talk about "set-up" points as well as other points that will enhance the effect when struck along with the major point. (Note that some of the points—for instance, the gallbladder points at the top of the head—are so close together that striking one will have the same effect as striking another one close to it. So although I cover all of the dim-mak points, some are covered in greater detail.)

There will also be a second volume dealing with things that do not fall neatly into the meridian category, such as multiple strikes. There are, of course, hundreds of multiple point strikes, and we are given the exact points, how to strike them together, and in what order to strike them to do the most damage. Rather than trying to cover these combinations in this volume, which covers the mainstream meridians, I have placed them in a second volume covering the "extraordinary meridians." Apart from the *ren mai* (conceptor vessel) and the *du mai* (governor vessel), the extra meridians are linking meridians that do not have any points of their own, but pass through and link other meridians and take their point names from those points through which they pass.

THE MAIN MERIDIANS

MERIDIAN	ABBREVIATION	COMMON POINT
Gallbladder meridian	Gb	Gb 14
Liver meridian	Liv	Liv 14
Lung meridian	Lu	Lu 1
Colon meridian	Co	Co 10
Kidney meridian	Kd	Kd 1
Bladder meridian	Bl	Bl 57
Stomach meridian	St	St 9
Spleen meridian	Sp	Sp 1
Triple heater meridian	Th	Th 17
Pericardium meridian	Pc	Pc 7
Heart meridian	Ht	Ht 1
Small intestine meridian	Si	Si 16
Conceptor vessel (meridian)	Cv	Cv 14
Governor vessel (meridian)	Gv	Gv 20

Because each meridian is believed more active at particular times of the day, which has great significance in acupuncture, most books on acupuncture begin with the lung meridian (which is most active at dawn, or between 3 and 5 A.M.) and then follow the natural progression through each meridian based upon the body's time clock. However, since this is a book on dim-mak, where time theories are not as significant, I have taken a different tack, beginning with the gallbladder meridian in Chapter 1, because it is the most important in terms of the martial aspects.

In each chapter, I will cover the points in a particular meridian, and each will be presented showing

applications in both the martial arts or dim-mak area and the healing area. I will also include all of the following information:

Chinese name: This section gives an inkling of what the point is all about and its location, although sometimes the meaning of the Chinese name is somewhat lost in the translation to English.

Location: This section gives a definite location of the point. Although the points are only the size of a pen end, striking anywhere around the point (for a distance the circumference of a large coin) will activate them. Usually, I give a larger weapon as the attacking weapon so that accuracy is not a problem. However, sometimes, there is just no way around it: some of the points require great accuracy and must be struck with smaller weapons such as a one-knuckle punch. When there is a definite anatomical location, I also give that as a more precise way of locating the points.

Connections: This section gives some idea of the damage that the strikes can do by indicating the point's connections to other meridians. It also gives an indication of the other healing benefits the point might offer.

Direction of strike: This section shows the correct direction for the strikes. Some points only have one direction, e.g., straight in. Other points have several directions of striking, each having different effects.

Damage: This section deals with the type of damage done when the points are struck. From a light to moderate strike to a heavy strike, the effect will vary significantly in most cases. Every dim-mak point has an electrical property. That is, if one is so trained, he or she can affect the qi or energy of that point sufficiently to cause an adverse (as in fighting) or positive (as in healing) effect to the body's qi system. This can either be a qi drainage point, a qi filling point, or a stopping point, as in death.

Physiological points are simply those in the vicinity of an important organ that will have the obvious effect upon that organ when they are struck. For instance, a strike to a point that is directly over the top of an important nerve or sinus in the body will cause adverse physiological things to happen to the body. This section indicates whether the point is also a physiological strike, since all points are electrical strikes. It takes only a few minutes to master the physiological strikes, such as to St 9, which activates the carotid sinus to bring down the heart rate dramatically enough to cause KO. These are the strikes that most people nowadays are well versed in. The electrical strikes, however, take a little more training and are much more sophisticated in application.

Set-up point: Most of the major points have set-up points—those that, when struck a split second before the major point is struck, will enhance the effect of the main strike. There are "utility" set-up points, those that set up most of the major points, and there are specific set-up points, those that are specific to any particular major striking point. The set-up points usually either drain energy or add to the energy, depending upon what you are trying to do. For instance, Gb 14, when struck in a downward way, causes great qi drainage, so the set-up shot to Pc 6 also has to be in an adverse qi flow direction. But if the strike to Gb 14 is in an upward direction, then the set-up strike must also be in a positive qi flow direction to add qi to the point, which sort of causes an explosion, usually in the head, like a balloon that has been pumped up to exploding point.

Antidote: Not all of the points have antidote points—points that one uses to reverse the effect of the initial strike. Some points are just so dangerous that there is no way of revival. This section tells whether there is an antidote point or not and, if so, what it is and how it must be used. Sometimes we use "utility antidotes," such as Gb 20, squeezing inward and upward into the head on both sides of the neck. These points will work in a general sense on many of the points. Sometimes the major point's strike will have its own specific antidote point to use.

Healing: This is a section in each chapter where Wally Simpson gives some of the healing benefits of each of the major points. For each point, he lists current uses and indications as well as traditional functions and indications as specified by ancient Chinese text. Often there is significant overlap. The healing section is geared mostly to the novice. For instance, Wally will provide ways that a nonacupuncturist can effect a healing for headache using finger or palm pressure. However, he will also include some point combinations aimed at the more experienced acupuncturist or student of acupuncture. In order to understand these combinations fully, one will have to be versed in acupuncture. Where multiple points are listed for treatment of a specific condition, the needles are stuck into all of the points at once and left there for a period of time, depending on how serious the condition is.

With the healing aspects of each point, finger pressure is what you should be working toward unless you are taking acupuncture lessons. The greatest therapy that anyone can give to another is to simply touch. Within us all there is the ability to heal with only our hands. Each chapter tells which points to touch to effect a healing for individual disease states. However, in most cases, where the practitioner has been practicing his or her internal martial art, the ability to simply know where the hands should go will grow with training. This growth continues until you are able to tell where a person is sick and know what remedy to give automatically. You will begin to recognize body language that will tell you exactly what is wrong with someone, and your hands will move to the correct position on the body to effect a healing.

NOTE: There is a glossary of medical references and terms at the back of the book, because many readers will not be familiar with the formal or traditional names used for the conditions mentioned under "healing."

Applications: Here I give one or two applications that can be used to get at the points. I try to keep them simple, although sometimes I include some of the more complicated methods for the sake of interest. There are obviously many applications that can be used to get at all of the points shown in this book. I will be giving one or two of the best and easiest methods to get at the points—methods that most people, regardless of experience will be able to understand and use. These come from my own martial arts systems of taijiquan, bagwazhang, dim-mak, and combat grappling. Martial arts practitioners will, of course, be able to substitute applications from their own katas or systems for mine. My ways are just a guide as to how these points should be struck.

The diagrams showing all the points in a particular meridian are located at the end of each chapter. Of course, in each chapter I will mention many points other than those of the particular meridian, but you can look those up in the chapters that cover those specific points.

Introduction to Traditional Chinese Medicine

by Wally Simpson

The first thing I discovered about massage was that if I felt good about doing it, then the person on the receiving end felt good about getting it. This was basic Swedish massage. These days I'm not sure all my clients feel good about getting massage from me, but the majority of them feel good about the results. You don't have to be a professional to give a good massage, as long you feel good about doing it.

I never felt good about doing martial arts; it always seemed a brutal, aggressive sort of thing to do. I was much more into communication with nature through surfing, bush walking, and so on, and though surfing could get a little aggressive at times, it was just the child in us demanding our birthright. (Every wave that we wanted, on our own.) It wasn't in the same league as martial arts, or so I thought. (Isn't youthful innocence amazing?)

Then, after earning a degree in Traditional Chinese Medicine (TCM), I decided that to be the complete doctor of TCM I had to teach people how to heal themselves and stay healthy via life-style (e.g., exercise, diet). Well, the Chinese did t'ai chi, and I was told that t'ai chi is not a martial art, and it didn't look all that aggressive to me. So off I went to learn this new skill. After three years of studying t'ai chi with what I thought was a reputable organization, I was introduced to one of Erle Montaigue's students, who told me that t'ai chi was a martial art and what I was doing looked nice but it wasn't t'ai chi. The concept of t'ai chi as a martial art wasn't easy for me to digest, but after my first lesson in the Yang Cheng-fu form, I knew it was far ahead of what I had been taught as t'ai chi. I guess it took the next 10 to 12 months for me to feel good about doing the small san-sou as well as the form, and it would be two years before I would meet Erle in person (though I had seen him at a couple of camps). Now, after training with Erle personally for three years, I know that it was one of the best things I have ever been fortunate enough to become involved with, and the martial stuff I was so apprehensive about has changed my life for the better in a way that I never could have imagined. It has given me a lot of confidence in myself and in my ability to defend myself and family, as well as to help others toward health and happiness. It has also improved my capacity to heal.

What Erle has given me with t'ai chi was like a seed that sprouted and is now in the process of growing into what will be a source of nourishment for myself, my family, and my many clients and friends for many, many years.

It is a great honor and a privilege to coauthor this book with Erle. The research has taken a large part of my spare time, but the information that I have unearthed (some of it rediscovered) has made it well worthwhile. I hope you gain as much out of these pages as I have. Thanks, Erle, for the opportunity once again for growth.

THE ENERGY MERIDIANS

The belief that the body is traversed by channels of energy and that this energy is the driving force behind the functions and movements of the various organs, muscles, tissue, and cells of all living creatures has been taught by many ancient cultures and has persisted from the earliest times to the present. Nowadays, modern scientists, especially physicists, are discovering through their scientific investigations that these ancient beliefs hold many more truths than was previously believed.

The Chinese called these channels of energy "meridians." In addition to the 12 main meridians covered in this volume, there are also eight extra meridians, including the Cv and Gv channels (which will be covered in the second volume of this encyclopedia), *luo* (connecting) channels, tendino muscular channels (relating to the tendons and muscles that relate to the 12 main meridians), and divergent (distinct) channels.

Over many thousands of years the Chinese discovered that these meridians could be influenced, both beneficially and adversely, at certain points along their pathways. Modern science has found that these points, when scanned with apparatuses that measure electrical charge, have a reduced capacity for conductivity. These points are like mini-vortexes of energy spiraling into our body's major energy channels. When struck in a certain way, punctured with needles, pressed, tapped, or rotated, they have a specific effect on both local muscle, tissue, and cells, and other areas enervated, traversed, or influenced by the particular meridian being dealt with by the different methods of intervention.

HEALING AND MASSAGE

Healing and massage work are very much like martial arts; you must move from your center to have real power.

When a martial artist throws a punch and uses only the power from the muscles of his or her arm, the punch lacks any real power, and its penetration will be relatively shallow. Likewise, in massage, if you are just using your arms or hands to perform different techniques, the penetration will only reach the surface muscles, and after you have done three or four one-hour massages you will find that your arms and hands are starting to feel heavy and tired. Whereas, if the movements are coming from your waist or, more specifically, *tantien*, you will find that you can massage all day, and when you go home in the evening you will feel quite invigorated. Your techniques will reach farther into the body to the deeper layers of muscles and tendons, as there is more strength and penetration with movements from the waist.

Your stance is important. I was using a horse stance, but lately I have been using the power stance from advanced push-hands. Whatever your stance, the back should be as straight as possible. Depending on the height of your table and the size of your client, the knees should also be bent. I find that using a slightly lower table is best, so that if clients are quite big and solid, you can get over the top of them without standing on tiptoes, which allows your to bring more weight to bear on the area being worked. With a thin client, the knees can be bent more to keep the back straight. Breathing should be low in the tantien and, if possible, in sync with the person receiving the massage.

You must be able to react to a large variety of variables and respond with the type of movement needed for the present circumstances in both martial art and massage. To have a set approach and be unwilling to modify that approach with different clients/conditions is to severely limit the quality of the results you will achieve. It's like knowing only one or two strikes or blocks from a martial art form: if you are good at them, then you will succeed at times; if you know the whole form and are good at it, you will succeed a lot more. So try lots of different approaches to the same types of conditions in your massage and be flexible in how to treat. Listen to your clients—not just their voices, but what the muscles and points/channels are telling you. Work from both sides of the table, just as you should do martial techniques on both sides to keep your body in balance and be capable of using both hands/legs/feet. If you work only from one side of the table with massage, you will become unbalanced (the lumbar vertebra rotate in the direction you constantly lean) and need treatment yourself.

If you work on the floor, the same principles apply. Work from both sides and bring the movements

from your tantien. To do this it is best to kneel beside the client. If you are sitting you can't move well, and you both suffer as a result.

You need to clear your mind of the chatter that normally goes on in there, and focus your attention on what you *intend* to achieve. That is not to say that you massage while spacing out, thinking, "I am going to heal this person" or "I am building yin or yang." Rather, it implies that you have a clear mind and an intention to build yin or yang and heal the individual. It's as in the martial arts—if there is no intent behind a movement, then results are poor. Without intent, there is very little chance of either a strike or a massage technique being successful. In the martial arts, we hear and read a lot about this "no mind" state, where the reptilian brain takes over and there is no conscious control over actions. Well, before that state is reached there must first be intent. A crocodile uses intent as a focus to provide the power and direction for that lunge up the river bank to grab its prey and drag it back to the water—just as you must intend to learn a martial art, or no amount of lessons can turn you into a martial artist. You must intend to help your clients, or no amount of massage will bring them relief from their symptoms.

When you are working with people in a healing capacity it, is possible to pick up negative energy from them, especially if you feel the healing is coming *from* you rather than through you. The *no mind* state mentioned above is the best way to stop that absorption of negative energy. In that state, you become a channel, and that allows energy to flow *through* you, not from you. The no mind state is what allows us to be free of attachment to the outcome. In healing, this means the client can proceed at his or her own pace with healing. It's a bit like saying, "Okay, here is a way out of this mess; I'll open the door, and you walk through when you are ready." Without attachment to the outcome, there is no draining of your energy and, as a result, little likelihood of your picking up negative energy. As martial artists, too, this lack of attachment to the outcome allows us to be ready for whatever happens, and that is a very important contribution to the final outcome.

The point Gv 20 (*baihui*), on top of the head (*sahasrara chakra* in the yogic tradition), is an entry and exit point for qi, as is Kd 1. It is said that the yang qi of heaven condenses and falls to earth to become yin qi, while the yin qi of earth evaporates to rise and become the yang qi of heaven. Mankind stands between heaven and earth and is subject to the qi of both. Yang qi of heaven enters via Gv 20 and exits via Kd 1; yin qi of earth enters via Kd 1 and exits via Gv 20. *Laogong* (Pc 8) is another point where qi can enter and exit the body. Likewise, Gv 4 (*mingmen*) is seen as the point of entry for yang qi at birth.

There are many other points for entry and exit of qi from the body, but those are the only ones I'll mention here. It is a good idea to free up those points so that when you are doing massage or healing work, the qi will flow through you without any effort on your part. The qi of heaven and earth meet in the middle at the *dai mai* (girdle or belt meridian) and can be directed out of Pc 8 to help another being or harm another being, depending on your *intent*. Doing qigong will eventually make you aware of these points, and that is the first step in freeing them up. We have these pathways open anyway, but most of us tend to isolate ourselves from them with the business of the everyday world.

So we have all this healing and martial stuff happening in the no mind state, and it is our intent that gives us direction and impetus. But intent without the ability is like sex without the partner; it mainly happens in your mind. So make sure you do the training to back what you intend to achieve. With massage, this means not only reading and learning how to locate points and what they do, but also doing lots of massage so your hands develop a feel for different conditions.

METHODS OF LOCATING POINTS

There are three methods of measuring where the points are located.

Anatomical Landmarks

The first way is to use physical landmarks such as a depression or a prominence of the bones, a joint or a muscle, the edge of the nail, a skin crease, the hairline, the area between the nipples or to the nipple, the umbilicus, the corner of the mouth or eyes, or a tendon.

Proportional Measurement

A second method is to take the different parts of the body and divide them proportionally. Each division is termed *one cun* (pronounced *tsoone*). For example, the distance from the second finger joint to the first is one cun (diagram 1). The one cun measurement will differ from a large person to a smaller person, as it is taken from anatomical parts of each individual's body.

On the head we have several measurements: from the anterior hairline to the posterior hairline is 12 cun (diagram 2); between the two mastoid processes is 9 cun, as is the distance between both St 8 points.

On the chest we usually base the measurements upon the intercostal spaces, or those between the ribs. From the axillary fold to the 11th rib is 12 cun. From the sternocostal angle to the middle of the navel is 8 cun. From the navel to the upper line of the symphysis pubis is 5 cun. Between the two nipples is 8 cun (diagram 3). Between the scapular medial line and the posterior midline is 3 cun.

On the arm, from the end of the axillary fold to the transverse cubital crease is 9 cun (diagram 4). On the forearm, the distance between the transverse cubital crease (elbow) and the carpal crease (wrist) is 12 cun (diagram 5).

On the thigh (diagram 6), the distance from the pubis to the medial epicondyle of the femur is 18 cun. From the prominence of the greater trochanter on the outside of the thigh to the center of the patella is 19 cun.

For more minute measurements, we use *fen*, which denotes one-tenth of a cun.

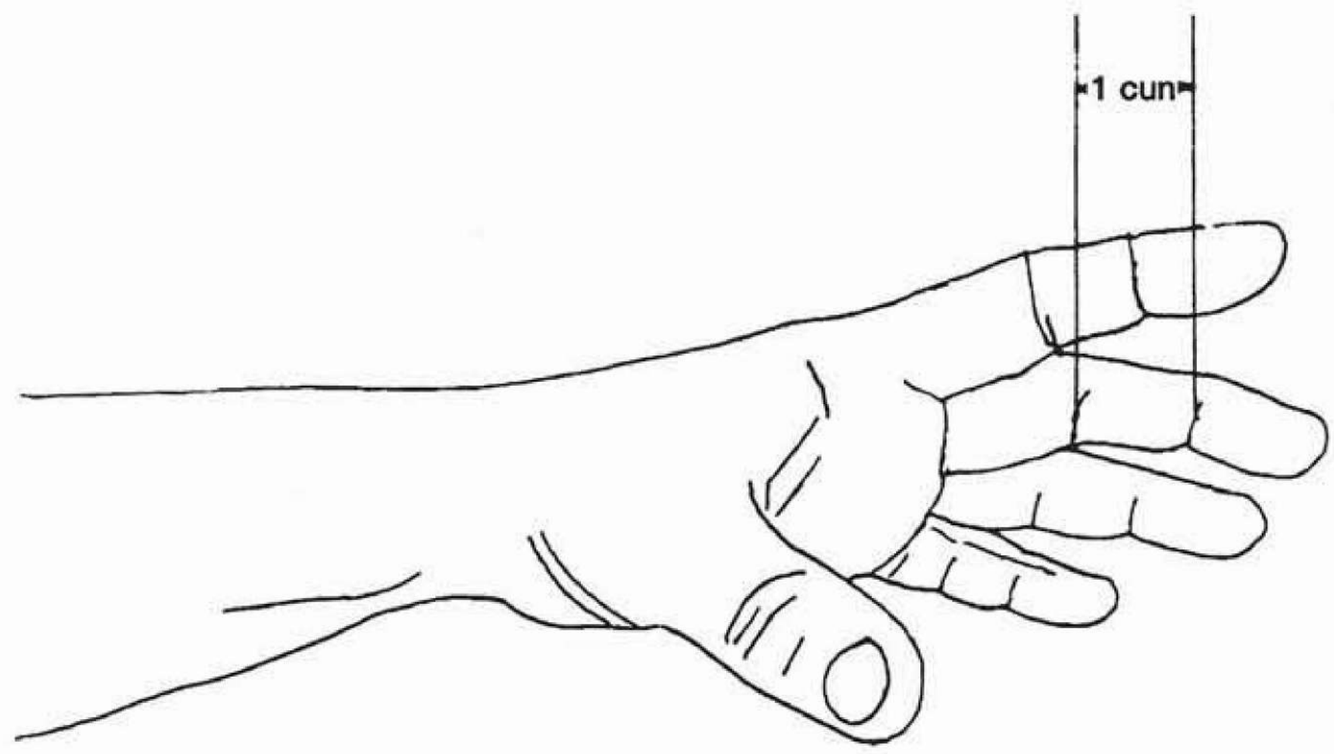


Diagram 1

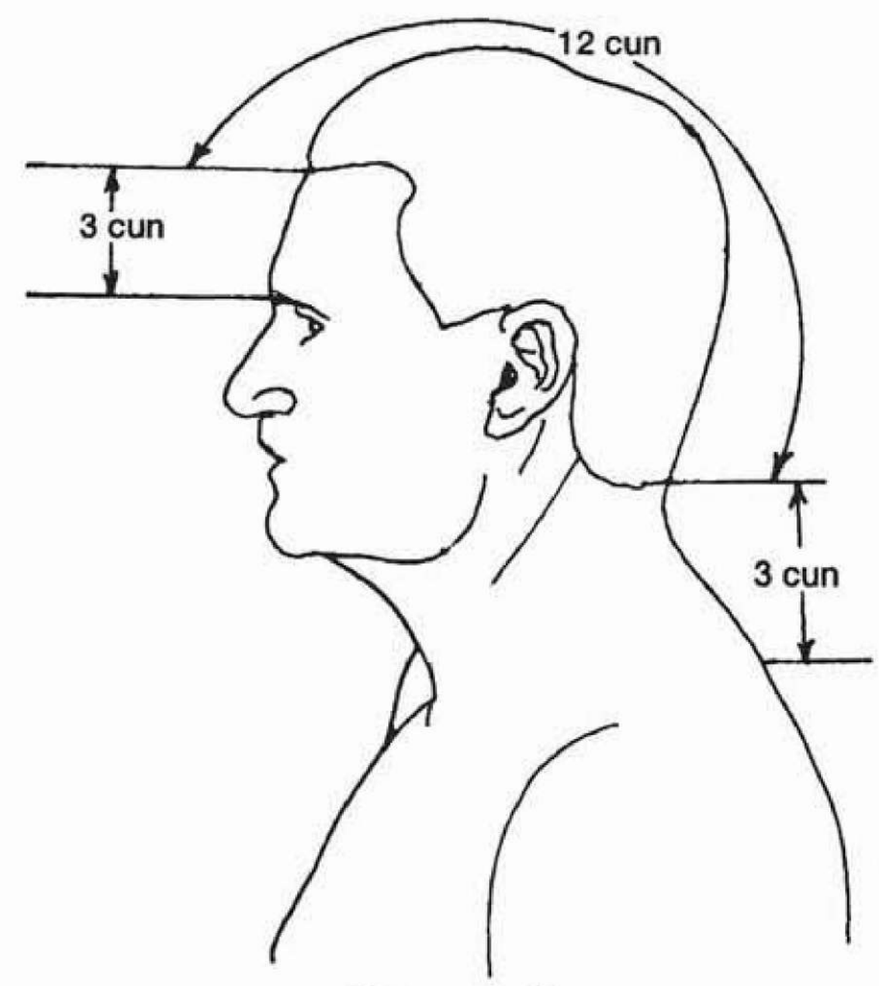


Diagram 2

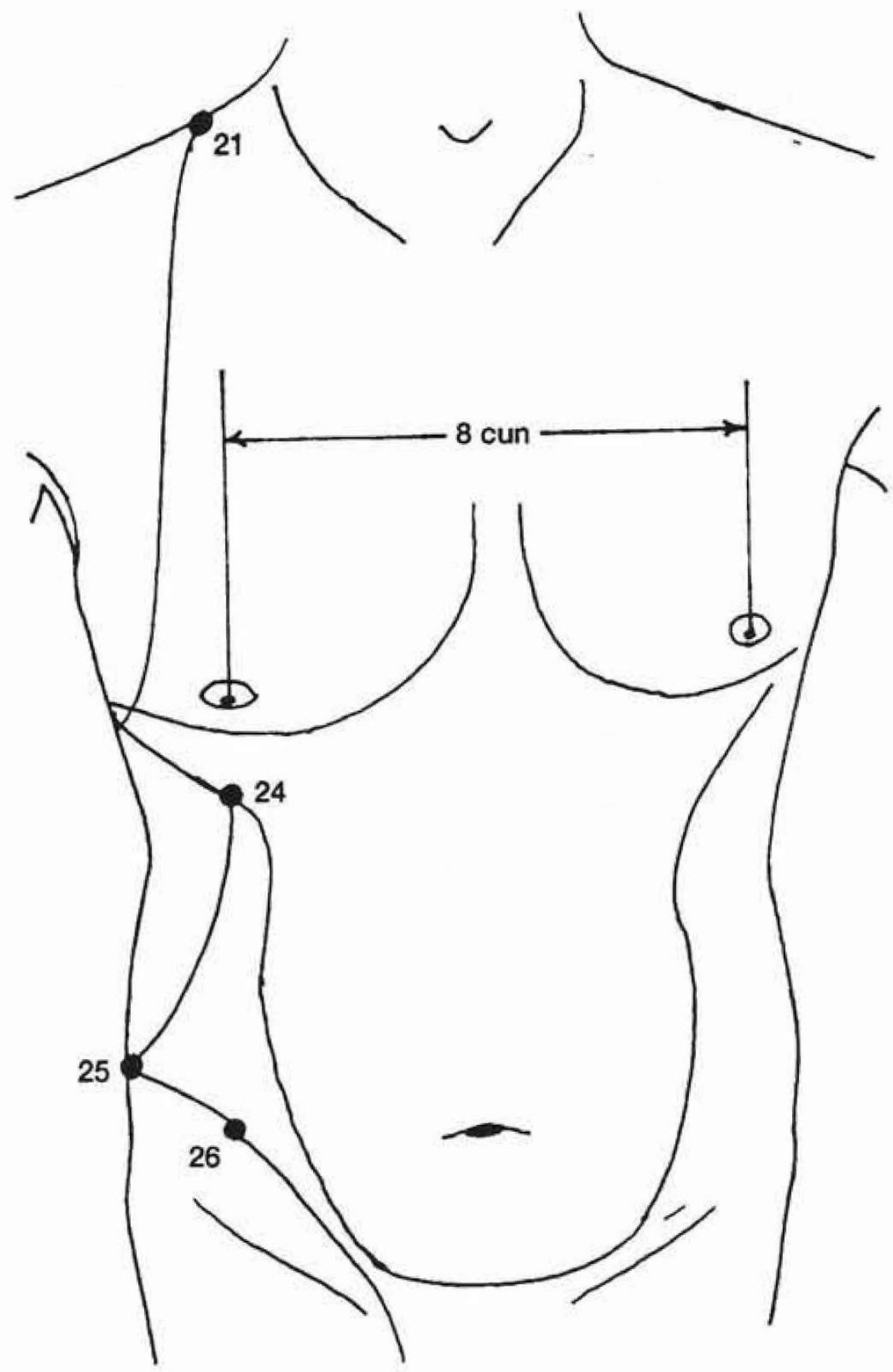


Diagram 3

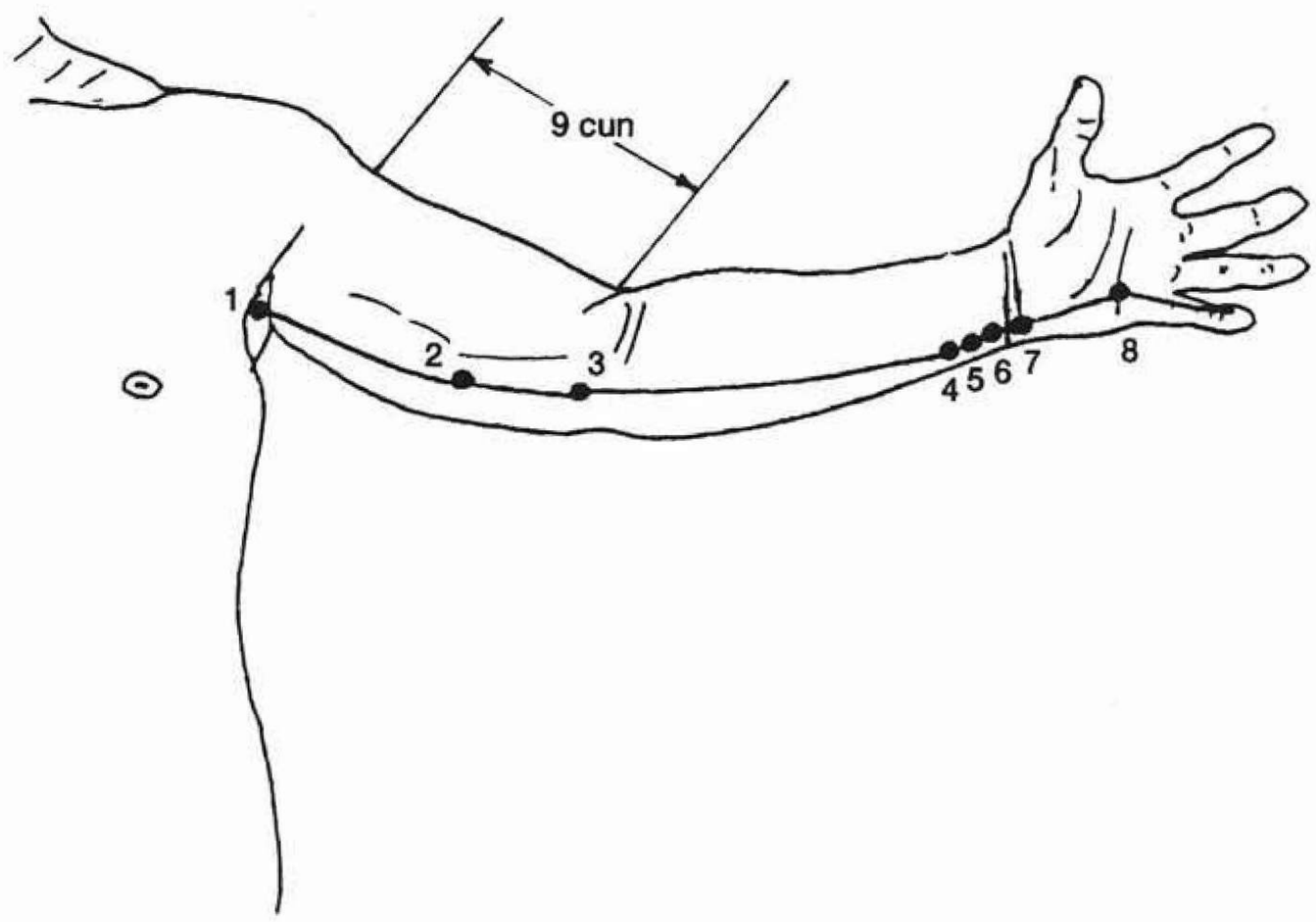


Diagram 4

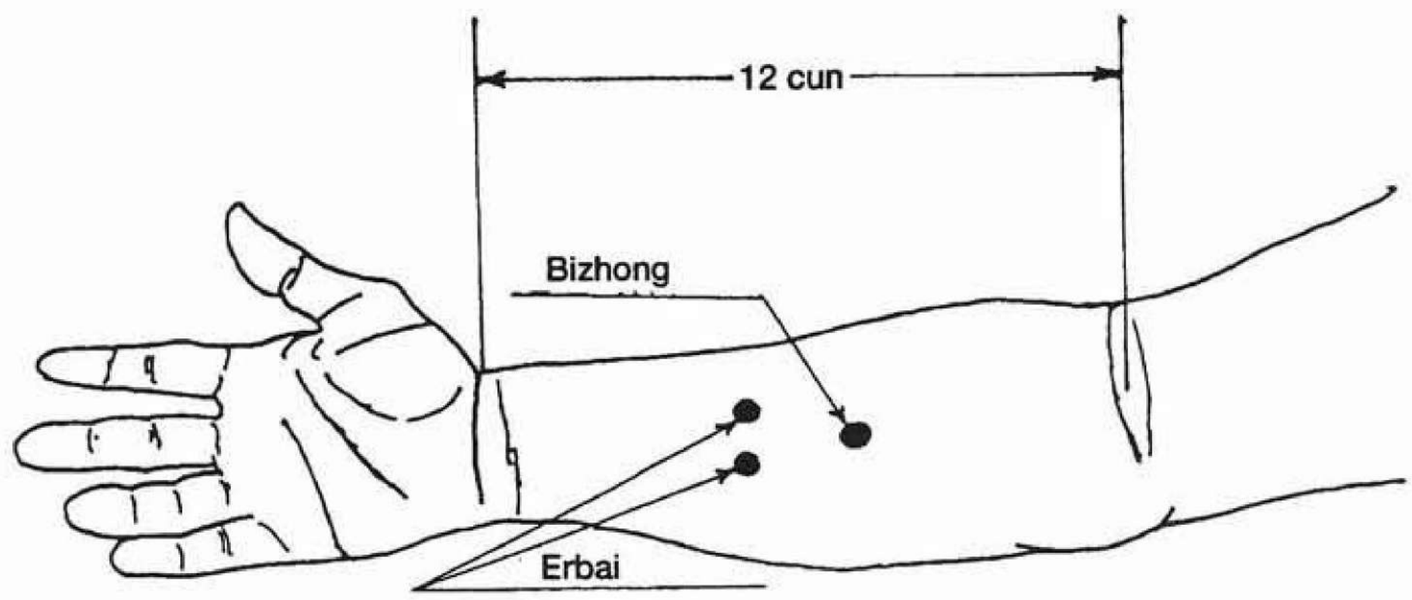


Diagram 5

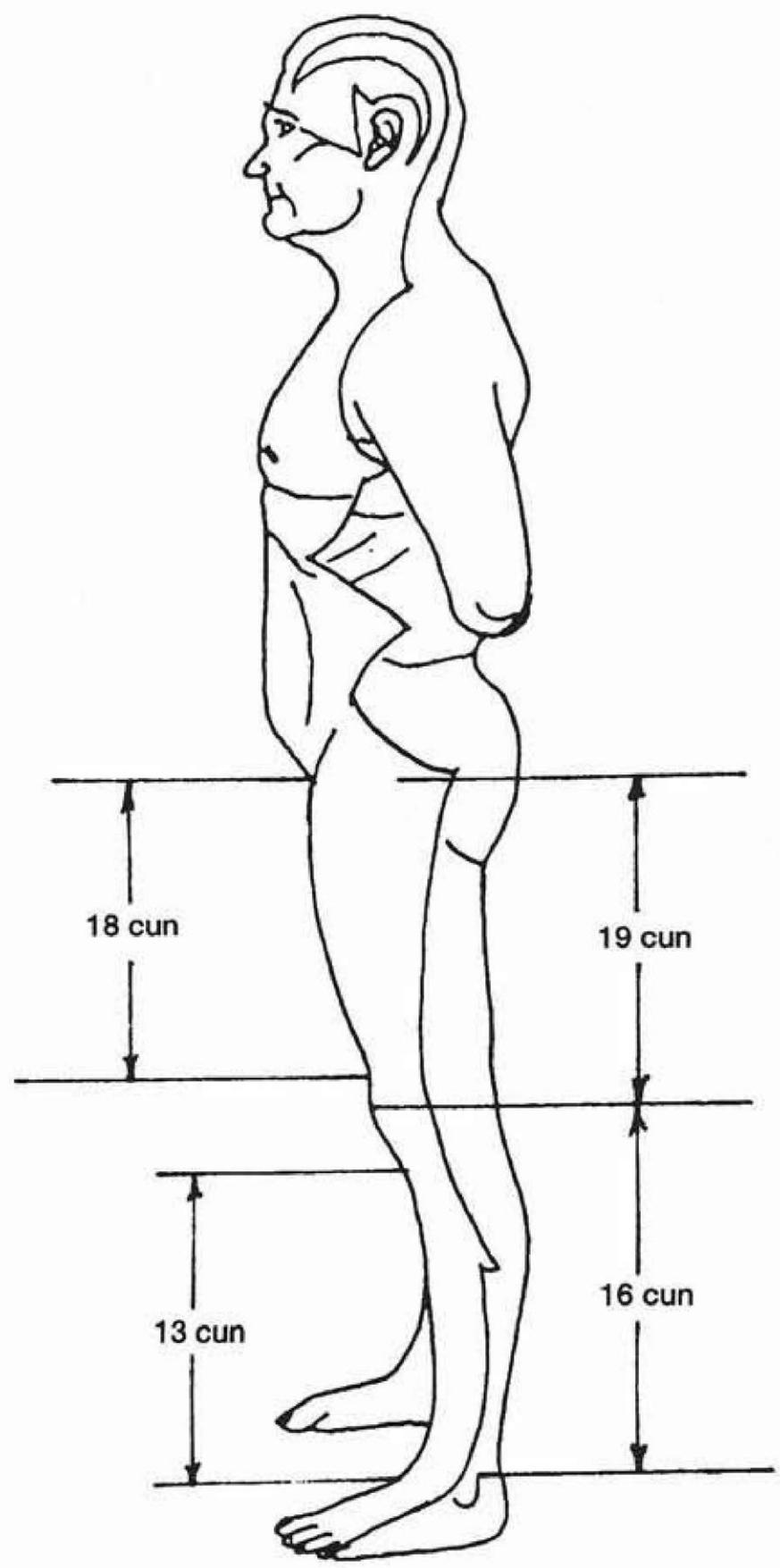


Diagram 6

Measuring with the Fingers

Finally, we use the fingers to locate the points.

When the longest finger is flexed, the distance between the two ends of the creases of the interphalangeal joints is one cun.

The width of the four fingers when they are held together is 3 cun (diagram 7). The width of the thumb is one cun. The width of the index and longest finger taken at the second joint is 1.5 cun.

You might notice a seeming inconsistency between some of the measurements and what you see in the diagrams. For instance, the measurement across the forehead, when looked at on a two-dimensional diagram (diagram 8), looks as if it is not actually 9 cun—in fact, it looks like much less. However, you have to take into consideration that this measurement goes around the forehead from St 8 to St 8. So when you take a piece of string and stretch it from St 8 to St 8, then place that length from nipple to nipple, the distance between which is 8 cun, then you will see that the forehead distance is indeed 9 cun.

Because the Chinese way of measuring depends upon the size of the patient, it is best if you have the experience to know automatically where the points are and only use the measurements as a rough guide. Most acupuncturists prefer to use the anatomical method.

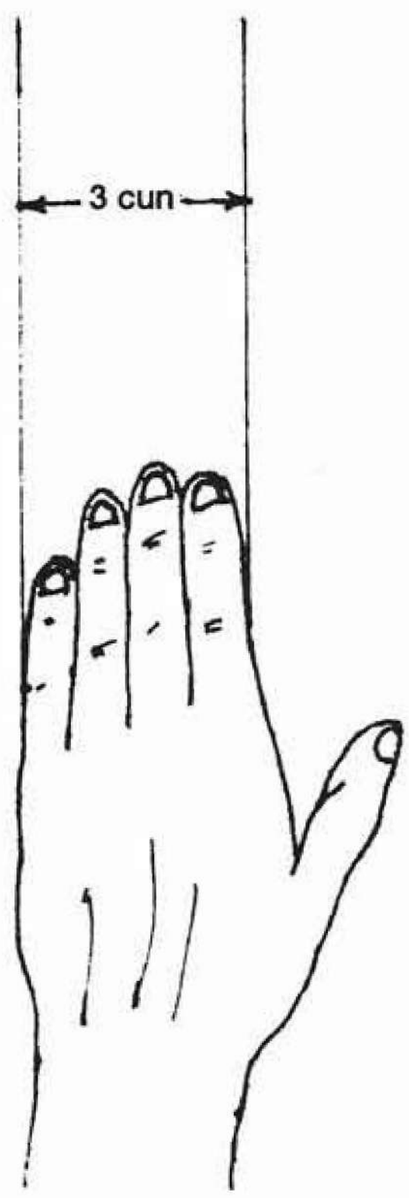


Diagram 7

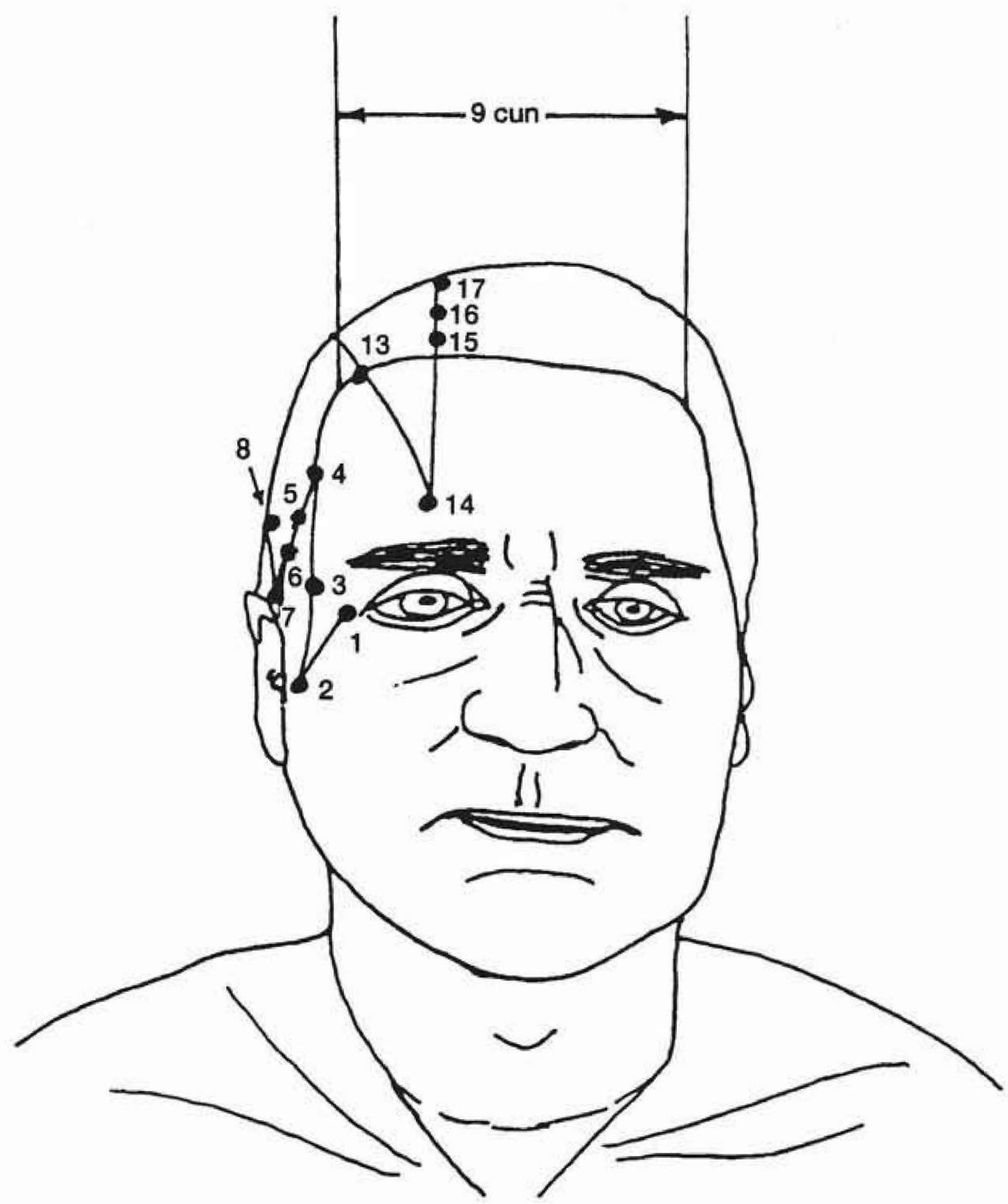


Diagram 8

STATES OF UNWELLNESS: THE UNDERLYING CAUSES

The Chinese believe that it is some type of disruption to the flow of energy that creates all states of unwellness. Thus, when looking at the cause of a disease, a TCM doctor looks at several broad classifications of conditions. These broad classifications are then further refined by consideration of the syndromes of the organs (*zhang/fu*) or channels and collaterals (*jing/lou*) involved. In the text that follows, we will take a look at those that have the most significance for our purposes in this text.

Xu (Deficient) and Shi (Excess) Conditions

Xu, or deficient, conditions are characterized by weakness, decrease in body function, listless spirit, lethargy, shortness of breath, aversion to speaking, and poor appetite. Pain are dull, vague aches that improve with massage, and you may feel coldness in the problem areas. The face and complexion may be pale, as is the body of the tongue. The tongue may also appear swollen and have scalloped sides. The pulse feels weak.

The "emptiness" (*xu*) may be of qi, *xue* (blood), yin, or yang. Yin xu causes a rapid and weak pulse, and the tongue body may appear red with no coating or a patchy coating. Patients may have a subjective feeling of heat, especially in the afternoon and evenings, or they may have hot flashes and night sweating and appear wasted. Yang xu produces a slow, weak pulse and the tongue body will be moist and may have a thick coating on its surface. Patients may feel cold or cool, even on hot days.

Xu conditions are nourished or tonified with massage that involves clockwise rotations; strong, deep, even pressure; and slow movements in the direction of the channel flow, that is, from the small numbers to the large numbers (referring to the numbers assigned to the acupuncture points along the meridian.)

Xu conditions feel empty on the surface, and as you get deeper you will find an area of consolidation. They often present themselves as flaccid muscles or a depression over the point/area, or even as a wasting of the whole muscle tissue in that region. They are generally pale and feel cooler than surrounding tissue, and the client is likely to report a lack of energy or lethargy either in the area or in general. These areas, while they may be sore and ache, like to be touched and like heat; they are less likely to cause restriction of movement than other types of conditions. Clients will probably experience them as a dull ache or a weakness. Work more slowly over these areas; start gently and move deeper fairly rapidly. While it will probably hurt, clients will report that it is a nice pain; they like to be touched, pushed, and prodded in these areas, so you can stay deeper for longer. As a result, you can generally work there until significant improvement is achieved. Heat, and in particular moxibustion, is wonderful in these types of conditions. Moxibustion is the burning of herbs. The herb mugwart is cured for a long period, made into a stick, and burned on or near acupoints or on needles. Moxa warms cold and builds qi and yang via penetration of heat energy. Moxa is very good to use on yang xu patients.

In xu conditions, where cold and lethargy are a problem, in addition to treating local points/areas with moxa, it is a good idea to use points such as Kd 3, Sp 3, St 36, Bl 23, Bl 20, Th 4, Gv 4, Cv 4, Gv 6, Gv 12, and Gb 25 to help build qi and yang in general. It is yang qi that acts as the first line of defense against pathogenic invasion, cooks the food in the stomach, and extracts the nutrient and sends it up to join with the qi from the air we breathe. Yang qi provides us with warmth and the ability to process fluids, as well as holding things in place and supplying the get up and go for our everyday activity.

Excess, or *shi*, conditions may be the result of a strong external pathogen (e.g., wind, cold, heat, dryness, damp, fire, trauma) attacking a weakened system and penetrating into the body, causing it to become full of perverse energy. These conditions may also occur due to normal body conditions and a very excessive set of circumstances, or as a result of holding onto an emotion for a long time and thus stagnating the free flow of energy (of which emotions are a part).

Shi conditions tend to be of recent onset, acute, and of short duration. Patients may be in good spirits, have a flushed face and a loud voice, and have very severe pain that feels worse with pressure and doesn't particularly like massage. Muscles may appear to be in spasm and rigid and may rebound when pressed. Other signs and symptoms will depend upon what type of fullness is presenting. For instance, heat will cause a redness of both the area involved and the tongue body. The coating on the

tongue may be thick and yellow, or black if the condition is very severe. The pulse will be rapid and strong, as is standard in shi conditions. The damaged area or the whole body may feel hot to touch, and there may be a great thirst.

Shi conditions are sedated or dispersed with massage that involves counterclockwise rotations and fast, lighter movements against the flow of the channel (i.e., from the largest numbers to the small numbers.) From my experience, I have found that some individuals with shi conditions of the muscles—where the muscle is hard as a rock and feels bloody awful when pressed—get best results from massage if they concentrate on their breathing and let the doctor work quite deeply. Concentrating on the breathing helps to deal with the pain being inflicted by the massage technique and also helps release the blockage of energy or blood (qi or xue) in the muscle.

Excess conditions feel solid or dense all the way up to the surface. The area may look raised, feel hot, and look red or darkish compared to the surrounding tissues. Normally, these are very painful conditions, causing varying amounts of restriction to movement. They do not like to be touched and may not respond to heat (this varies, depending on the type of shi condition and the duration of the condition; it is possible to get a full cold condition, which will respond well to heat). Work quickly and gently at first over these shi regions, but slowly make your movements deeper. Your client will let you know how deep you can go and for how long you can stay there. It is no good getting too deep too soon, because the client will tense excessively and grit the teeth to stop you from penetrating. This may at times be useful, as when clients become super tense and rigid from your pressure; when you stop pressing, they get a greater degree of relaxation. It can also just tense them up and not produce any relaxation at all. Your client has the final say about the depth you can reach. I find it best to work quickly over these areas and come back to them often. Use points that are on the same meridian pathway but that are located on the extremities to help drain stuck qi and blood out of tense areas (e.g., for extremely tight shoulders, treat local points and then use points like Si 3, Gb 34, Gb 41, Gb 43, Gb 44, Co 4, Bl 60, etc., as distal points).

In shi conditions where there has been a penetration of cold that has resulted in muscle spasm and pain (e.g., wind/cold penetration into the muscles and channels of the neck and shoulders), use points like Gv 14 to warm the cold and free up the channels or Gb 21 to warm the cold and send stagnant qi back down to be dispersed. For cold to have penetrated, there has either been an underlying xu condition or an exposure to extremes of cold over an extended period. So you may need to tonify xu with the above-mentioned points, as well as disperse the cold, warm the yang, and free up the channels.

Some points can sedate shi (excess) as well as tonify xu (deficient) conditions. So you need to be clear on what you are working with.

Internal and External Climatic Conditions

Other factors that influence our lives are the internal and external climatic conditions, and if we are to be successful at treating disease, then we need to be familiar with these conditions and how they interact within the body's landscape. There are six evils (*liu xie*) or pernicious influences: wind, cold, heat or fire, dryness, dampness, and summer heat. An individual with one or more of these conditions will most probably have an aversion to the particular influence involved.

Wind (*feng*) can be of internal or external origin. Wind seldom attacks the body alone; it is usually in the company of another pathogen, such as heat, cold, or dampness. Wind tends to cause symptoms to appear and disappear suddenly. It produces change and a degree of urgency in what is otherwise slow and even. Wind is a yang phenomenon associated with spring, though it can appear in any season (e.g., hay fever is a classic wind-related disease that most often appears in spring but can appear in autumn). Wind tends to affect the upper parts of the body first—skin, face, neck, sweat glands, lungs, and *taiyang* (the most exterior of the six yin and yang divisions, it includes bladder and small intestine and tends to be seen as the first stage of penetration by external pathogenic influences). Wind can cause spasms, tremors of the limbs, twitching, dizziness, tetany, symptoms such as rash or arthritis, or maybe just pain that moves from one place to another (e.g., shingles). With external wind invasion, some people may recall having been exposed to draught, while others won't. External wind invasion is characterized by its sudden onset. It is often

accompanied by fever, as the protective (*wei*) qi fights to expel the invading pathogen. This is more simultaneous chills and fever, with the symptom that predominates signaling the type of pathogen that the wind has combined with.

Internal wind is generally of a chronic nature and often involves the liver (e.g., an excess condition of the liver, such as liver fire, can create wind in the same way as a fire creates an updraft, causing symptoms such as migraine or tinnitus, while a deficient condition of, say, liver blood may create empty wind symptoms, such as itchy eyes). Internal wind may include such symptoms as dizziness, tinnitus, numbness of the limbs, tremors, convulsions, or apoplexy.

Cold (*han*) can be of internal or external origin and of an excess or deficient nature. It is a yin pathogen associated with winter in the same way as wind is associated with spring. It can appear in any season (e.g., a cool breeze in summer can generate an attack of wind cold in the body, especially if there is a preexisting condition or a weakness of defensive qi), though it will be aggravated in cold weather. The most reliable sign is that the individual feels cold—the whole or part of the body will feel cold to the touch and/or it may have a pale, frigid look, and the person will have an aversion to cold and actively seek warmth and warm clothes. Cold causes things to contract and so restricts movement and blocks the circulation of qi in the channels, causing sharp, severe cramping pain that will generally respond positively to heat. Cold from external attack will cause symptoms such as aversion to cold and acute severe cramping pain that does not like to be touched but likes heat. There may be chills and fever, with the chills predominating. The pulse will be slow and feel full and floating (it can be felt better at the superficial levels with light touch), the tongue will be pale and moist with a thin white coating (this coating may be thick if there is a lot of damp or phlegm present). There will be body aches, headache, and usually only small amounts of sweating if there is any at all (cold obstructs the pores).

Internal cold is the result of a deficient yang qi. Yang qi is hot and active, so a decline in it causes the body to become cold and slow. Internal cold is generally associated with chronic conditions or the consumption of too much raw or cold food and drink. It is generally related to the kidney or the spleen. Symptoms might include slow, weak pulse; aversion to cold; and a preference for hot drinks and warm clothes. Patients generally like to be touched and respond well to heat. The tongue is pale and moist and has a thin white or patchy coating (or it may have a thick white coating because there is no heat for digestion). Movements will be slow and weak, and there may be copious clear urine and loose stool with food in it (maybe watery stool), discharges will be white or clear and have little or no smell, and the patient may sleep curled up in a fetal position and have a lack of energy, poor digestion, and a slow, deep pulse.

Hot (*re*) or fire (*huo*) can be internal or external in origin and can be of an excess or deficient nature. It is a yang pathogen and, though associated with summer, can occur in any season. Heat is normal in the body; it is the yang aspect that creates activity and warmth for the body. As a pathogenic influence, it causes either the whole body or part of the body to feel hot and to have a red color. The hot pathogen may create irritability and agitation, the patient will dislike heat and prefer cold drinks, and there may be signs of high fever, chills and fever where heat predominates, as well as a red face and a red tongue with a yellow dry or yellow greasy coating, depending on what it combines with (e.g., dryness or damp). The pulse will be rapid; if it is an external pathogen the pulse will also be floating. There will generally be a big thirst, maybe lots of sweating, and perhaps foul-smelling urine/secretions. Urine will be yellow (check that it is not just from vitamin B intake), and the stool may be dry and constipated or loose and smelly (can be explosive). If the pathogen is excess, then it won't like touch, whereas if deficient it will like touch. There may be extravasation of blood (e.g., bloody nose, hematuria).

Heat causes things to dry out, so there can be a lack of or scanty excretions. External excess heat invasion can produce a fast/full/floating pulse, forceful/severe pains, convulsions, very hot dry symptoms, excess thirst, lots of sweat or no sweat, great irritability, and possibly delirium.

Internal heat/fire can be excess or deficient in nature. If excess, it is usually contracted from the liver. The major symptoms of the pathology of liver fire flaring include sudden outbursts of anger, red eyes, irritability, inability to keep still, and violent migraines. Most if not all excess internal heat/fire is

the result of emotional suppression or stagnation. Internal excess of liver heat may also result in heavy or irregular periods.

Internal deficient heat or fire is the result of a yin deficiency. There is not enough yin (coolness) to keep the yang (heat, fire) of the body in check, so an apparent excess of yang develops. Deficient heat symptoms include thirst but no desire to drink; red tongue with a thin yellow coating or no coating; afternoon fevers; malar flush; weak, empty, fast pulse; pain that gets better with touch; night sweats; and fear of cold. The flushing of menopause is a deficient heat condition in most cases.

Damp (*shi*) is wet, heavy, and slow. It is a yin pathogen associated with damp, cloudy weather in any season. Living and working in damp surroundings and wearing damp clothes can contribute to a damp condition. A major factor in the generation of damp conditions is the over-consumption of cold food and drink, raw food, or greasy food. Irregular eating habits will weaken the spleen's ability to transform and transport food and fluids effectively. Dampness is heavy, turbid, lingering, and can tend to move things downward, affecting the lower parts of the body first, though when combined with wind, it will affect the upper parts of the body (e.g., headache where the head feels heavy, dull, as though there is a tight band around it). Symptoms could include heavy, sore limbs; excretions and secretions that are often copious, turbid, cloudy, and sticky; eyes that feel as if they have sand in them; urine that is cloudy; stool that could be quite loose or even diarrhea; and maybe heavy vaginal discharge, fluid-filled lesions, or oozing skin eruptions.

External damp may obstruct qi, resulting in fullness in the chest or abdomen and dribbling or incomplete urination and/or defecation. It can also obstruct the qi in the channels causing heaviness, stiffness, and/or soreness and swelling in the joints. If it affects the spleen, it may interfere with the rising of pure qi (extract from food and fluids) and cause loss of appetite, indigestion, nausea, diarrhea, edema, etc. One of the best signs of damp that I come across all the time is when you feel really awful when you first get up after sleep or even just sitting or lying for a while, but start to feel better after moving around a bit. External and internal damp are distinguishable mainly by the speed of onset. External damp is acute and will be accompanied by other external signs; it can easily become internal damp. Internal damp is likely to make the individual more susceptible to external damp. Regardless of where it came from, damp is an insidious pathogen and can last a long time. Mucus or phlegm (*tan*) is a form of internal damp and is generally generated by disharmonies of the spleen and kidney. Dampness can condense when there is heat present or when it has been around for a while. Since phlegm is heavier than damp and much more viscous, so it can easily obstruct the channels, generating lumps, nodules, tumors, etc. In the lungs it causes cough with thick expectoration. In the heart it can obstruct the *shen* (spirit), resulting in muddled thought, stupor, coma-type conditions, madness, or chaotic behavior. Mucus in the channels can cause numbness; paralysis; nodules; soft, mobile tumors; and limbs that ache and feel heavy. The tongue most often has a thick, greasy coating when phlegm is present, though it may just be moist in damp conditions. The pulse is slippery in both.

Summer heat (*shu*) is an external pathogen that is the result of exposure to extreme heat. Symptoms include sudden high fever and heavy sweating; if it enters the stomach it causes nausea and vomiting. Summer heat can easily damage the qi, resulting in exhaustion. It can also damage the fluids, causing dryness. Summer heat often occurs with dampness.

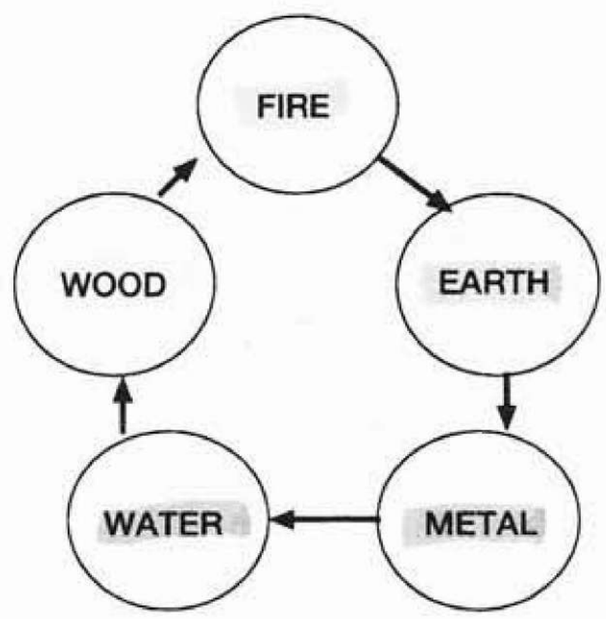
Dryness (*zao*) is associated with autumn. It is a yang phenomenon closely related to heat—heat and dryness are on a continuum, dryness toward dehydration and heat toward redness and hotness. Symptoms of dryness include dry mouth, lips, tongue, and nostrils; cracked skin; and dry, hard stool. External dryness can interfere with the descending and dispersing function of the lungs, causing symptoms such as dry cough, little or no sputum, asthma, chest pain, fever, body aches, and other external symptoms.

It is fairly unusual for these types of pathogens, especially when they are of exterior origin, to attack the body on their own. Most often they combine with wind, such as in the case of *bi* syndrome (the Chinese equivalent of arthritis), where wind/cold/damp or wind/heat/damp, etc. get together to retard the flow of qi and xue, causing pain, swelling, and restriction of movement. It is even possible to have an attack of wind/dryness in one area of the body while experiencing a wind/damp heat attack in another part.

THE 5 ELEMENT POINTS CYCLE OF CREATION OR SHENG CYCLE

The sheng/creation or nourishing cycle is where each element nourishes or creates the next cycle (element)—e.g., fire creates earth. The sequence can be rationalized as follows:

Wood creates fire (the wood is burned to create the fire).
Fire creates earth (fire expends itself, and what is left is ash which become earth).
Earth creates metal (the element metal is found by digging in the earth).
Metal creates water (by melting—solid metals melt to form a liquid). Metal also corresponds to air (in Western astrology), and air condenses to form a liquid.
Water creates wood (by nourishing growth).

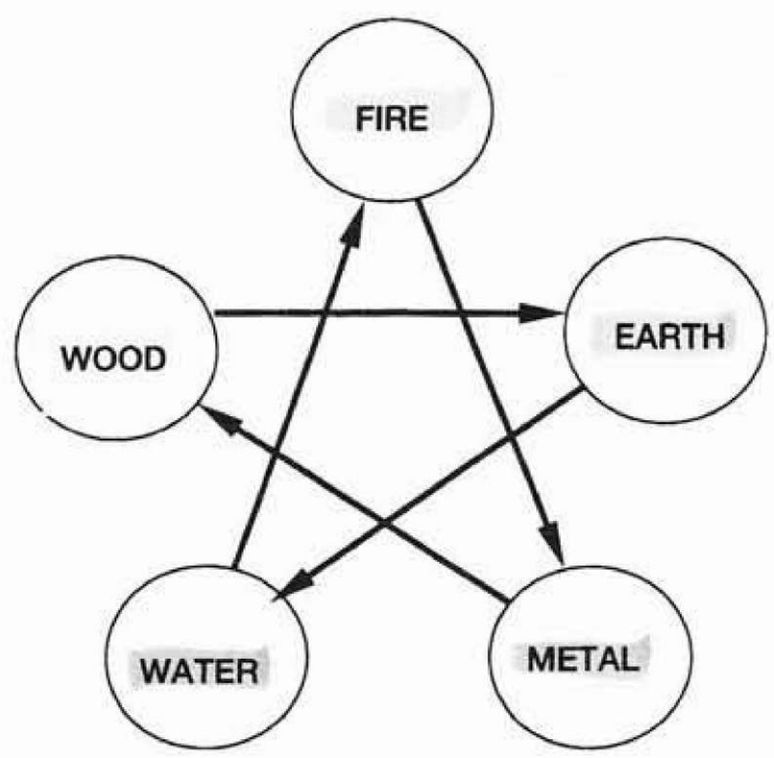


The 5 element points cycle of creation or sheng cycle.

If each element is fed and strengthened, it will feed the next element in the cycle, as a mother feeds a son or daughter; thus it is termed the cycle of creation, and it gives birth to the mother/son theory used in treating disharmonies.

The KO/inhibiting/repressive or controlling cycle is where each element inhibits or controls the element two steps ahead in the sequence. For example, wood controls earth. This is like a grandparent exerting control over a grandchild, and in TCM it is called grandmother/grandson cycle. It works as follows:

Fire controls metal (by melting it).
Metal controls wood (by cutting it).
Wood controls earth (by covering it).
Earth controls water (by damming it).



The Ko cycle.

Water controls fire (by extinguishing it).

The organ-element relationship is as follows:

ELEMENT	YANG ORGAN	YIN ORGAN
EARTH	STOMACH	SPLEEN
METAL	COLON	LUNGS
WATER	BLADDER	KIDNEYS
WOOD	GALL BLADDER	LIVER
FIRE	SMALL INTESTINE/ TRIPLE HEATER	HEART/ PERICARDIUM

The harmonious balance of the sheng and KO cycles represents the mutual support and control of the five elements. The sheng (creative) cycle ensures that there is continual growth and generation. The KO cycle ensures that there is growth within limits, that growth does not continue unchecked. Thus the two cycles represent the balance of the five elements. Both cycles are natural and positive, unless an imbalance or blockage occurs in the flow, resulting in the generation of a destructive cycle.

The sheng cycle is predominant during the day, and the KO cycle is predominant during the night. Each element has its corresponding color, smell, body organ/channel, etc. that can form the basis of diagnosis. If any concordance tends to predominate or is lacking, a practitioner will be able to diagnose which part of the sequence is disturbed and treat the energies accordingly to open the natural flows.

Another way of using this system is as follows. An inflammatory condition occurring in an organ or tissue can be seen as a fire-type symptom (feels hot, causes irritation, etc.), so using the water point to reduce this fire (inflammation) can have a dramatic and immediate effect on the inflammation. If the inflammation is not completely relieved by the water point, then add a metal point to nourish the water and increase the effect of its action.

As a martial artist, one could do a primary strike on the earth point of the pericardium channel (Pc 7), and then do the next strike on the front *mu* (alarm) point of the heart (Pc 7 and then Cv 14), in order to increase the damaging effect of the strike to the heart mu point. Thus, striking Pc 7 first increases the damage done to the heart when the Cv 14 point is struck. This is using the sheng cycle's mother/son theory, where the son is used to drain qi from the mother. The heart is the yin, or half the yin, of the fire element (pericardium is the other half). The pericardium is also seen as the protector of the heart, so damage here could increase damage to the heart.

Using an example from the KO cycle, one could strike to the metal point of the pericardium channel (Pc 5), then follow with a strike to front mu point of the liver (Liv 14). Here metal is acting to control the wood, and then further striking to a major point affecting the yin organ of the yin element adds insult to injury and results in dramatic results (perhaps liver shutdown). These are just examples of how these cycles might be used martially; there are lots of different combinations that could be used.

There is also a cycle called the reverse KO cycle (or counteracting or rebellious cycle). This is where one element rebels against its natural controller. This is an abnormal cycle and is symbolic of defiance. It may well be that at death the reverse KO cycle comes into play.

The format is as follows:

- Wood counteracts metal (by blunting it).
- Metal counteracts fire (by extinguishing it—cutting off its supply of oxygen).
- Fire counteracts water (by boiling it away if the fire is too vigorous).
- Water counteracts earth (by washing it away if the water is dammed to excess).
- Earth counteracts wood (by providing no foundation for its roots).

THE FIVE SHU POINTS

The five shu points are also called antique points, five element points, command points, and well points. They are all located below the elbows or the knees, since it is here that the energy in the channels is the most superficial, and the energy potential in the channel changes very rapidly in this region.

Thus, these points have a strong effect on the body when used either to heal or to disrupt an individual's energy patterns. These points can be used to disrupt qi flow in a channel in advance of a strike to a major knockout or death strike point, or to create a potentiality for healing by either boosting the qi in the channel or draining excess qi from the channel.

Jing Well Points

Jing well (*tsing, ting, ching*) points are wood on the yin channels and metal on the yang channels. They are located at the beginning or the end of the channel at the extremities of the fingers or toes. They are compared to the welling up of the water course. It is in the region of these points that the changeover of yin and yang qi occurs; the energy is very unstable here, so the use of these points is potentially very powerful.

These points dispel wind and heat. Bloodletting is most often applied to these points to clear heat (prick the point with a sterile needle and extract a few drops of blood). This is indicated for acute attacks of wind/heat or internal wind/heat that has caused loss of consciousness by drying the blood out of the vessels, as well as for heat in the blood that causes toxic skin conditions, bleeding nose, etc. These points also act on the muscle and divergent channels.

Ying Spring Points

Ying spring (*rong, yong, yung,* gushing) points are fire on the yin channels and water on the yang channels. These are located proximally to the jing well points, and it is here that the energy of the channel accelerates, like a spring bursting forth from the soil. They are also called acceleration-of-energy points and can be used to either increase or reduce the qi of the channel. They can be used to cool hot conditions and are usually reduced for this purpose by needling. They can be used with jing well points for draining excess qi from the channel and to treat excess in the muscle meridians. In shi conditions local points are used first, then distal points such as ying spring and/or jing well. Ying spring can also be used as good pep-up points.

Shu Stream Points

Shu stream (*yu*, transporting) points are earth on the yin channels and wood on the yang channels. These points are proximal to the ying spring points, and it is here that a pathogen that has entered a channel gets carried along, like a boat catching a stream. Their function is to eliminate pathogen energy from the channel, especially wind and damp, conditions, such as aching joints, etc. Here a reducing method is used; you can use ying spring and shu stream for this purpose (to treat arthritis that is seen as wind/damp bi syndrome in Chinese terms). On the yin channels the shu stream point is also the *yuan* source point, where the yuan qi (the physiologically active component of jing) resides and can be tapped to replenish and strengthen the vital energy of an organ or channel. Here a reinforcing method is applied.

Jing River Points

Jing river (*ching*, traversing) points are metal on the yin channels and fire on the yang channels. At these points the energy can be deviated out of the channel. They are used to treat cough and asthma (e.g., for cough from lung qi xu, you might use Kd 7 and Lu 9 or Sp 5, Lu 8, Kd 7, and Pc 5).

He Sea Points

He sea (*ho*, uniting) points are water on the yin channels and earth on the yang channels. At these points the qi penetrates deeper into the channel, passing through the internal organs, so these points can be used to stop pathogen energy from going deeper and also to regulate the associated organ. The arm 3 yang channels (Th, Si, and Co) share a more distant relationship with their internal organs than the other channels to their internal organs (*zhang/fu*), so there is an extra point for each on the leg, called a

Chapter 1

The Gallbladder Meridian

The gallbladder meridian is the second longest meridian and has the most usable points in dim-mak. Those points are relatively easy to get at and will all cause a KO when struck in the correct direction and with the correct pressure.

Most of the Gb points work fine on their own, with only the set-up point used to enhance the effect. However, when necessary, I will also include a secondary and tertiary point that can be used in conjunction with the major point to greatly enhance the effect (e.g., Pc 6, Th 12, and Lu 7 used with Gb 5).

The gallbladder stores and concentrates bile, which is used to break down animal fats taken in as food. Bile is made up of bile salts, bile pigment, and cholesterol, and it is produced in diluted form in the liver. Although the liver can secrete bile directly into the system, the diluted form is not really strong enough. So the job of the gallbladder, located on the underside of the liver, is to concentrate the bile into a more usable form.

Western medicine tells us that the gallbladder is not critical for life, but Chinese medicine tells a different story. (And knowing several people who have had their gallbladder removed, I know that it is important for the qi flow in the body and that quality of life usually diminishes after it has been removed.)

THE TCM VIEW

The gallbladder meridian is yang in nature and has a wood element in Chinese element theory. It is the other half of the wood meridian pair, with the liver meridian being the yin half.

The gallbladder is said to be the "controller of judgments." In years gone by, the meridians were likened to a human society, with each meridian having a role to play, like any normal human being within a society. The liver makes the bile, but it is the job of the gallbladder to store and judge when to release it. On another level, the gallbladder has the ability to help the individual with the capacity to confer judgment and make decisions, and so forth. Hence the old saying, "he has a lot of gall," or "he lacks gall."

So, when we attack this meridian, we are indeed attacking a most deadly meridian as it has much to do with the internal physiological workings, as well as the mental and spiritual workings of the body.

GB 1 (GALLBLADDER POINT NO. 1)

Chinese name:

Tongziliao, or bone of the eye.

Location:

.5 cun lateral to the outer edge of the canthus of the eye. (See diagram 10 at the end of this chapter.) The point is in the orbicularis muscle. The nerves in the region include the zygomaticofacial, zygomaticotemporal, and the temporal and frontal branches of the facial nerve.

Connections:

Small intestine and triple heater meridians.

Direction of strike:

This point is usually struck with a one-knuckle punch or with the tips of the fingers, moving from the rear of the head to the front, past the eye. The one-knuckle or the tips of the fingers will slice into the small hollow where the point is located at the corner of the eye.

Damage:

Struck on its own, this point will cause extreme nausea, loss of memory, and possible death. It is very dangerous, even with light strikes. Depending upon the strike used, you can of course do damage to the eyes as well.

Set-up point:

There is no specific point. However, the attacker's arm can be violently rubbed/struck from his elbow down to his wrist on the outside of his forearm. This will affect the qi, enhancing the effects of the major strike. (See the "Applications" section.)

Antidote:

Gently rub Gb 1 backward toward the ear, or press Gv 26, just under the nose (see diagram at the end of the governor vessel chapter), upward and back toward the head. If you are going to use CPR it is best to apply the antidotes first.

Healing:

For headaches, hold both Gb 1 points using your fingertips (fig. 8). For xu (deficient) conditions (see the Introduction to TCM at the beginning of the book), you can rotate your fingertips in a clockwise direction on both sides (i.e., make a circle as if the circle is moving away from you). Or for shi (excess) conditions, make a counterclockwise circle on the point.

You may also palpate the area with light pressure. When you are holding the points, the patient should feel some light pain there. Regarding the amount of pressure to use for this

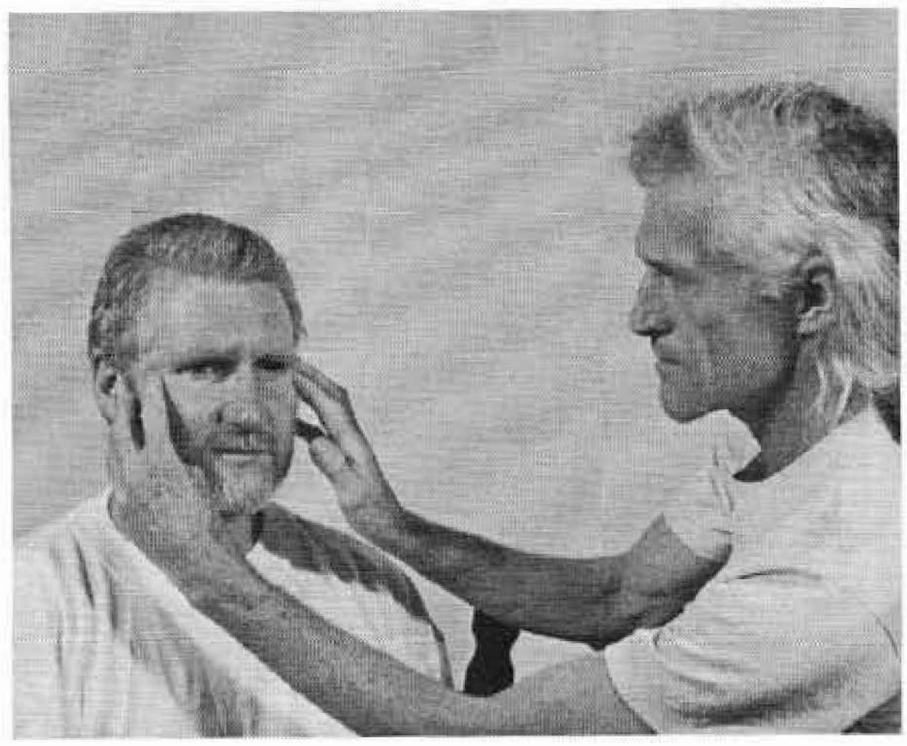


Figure 8

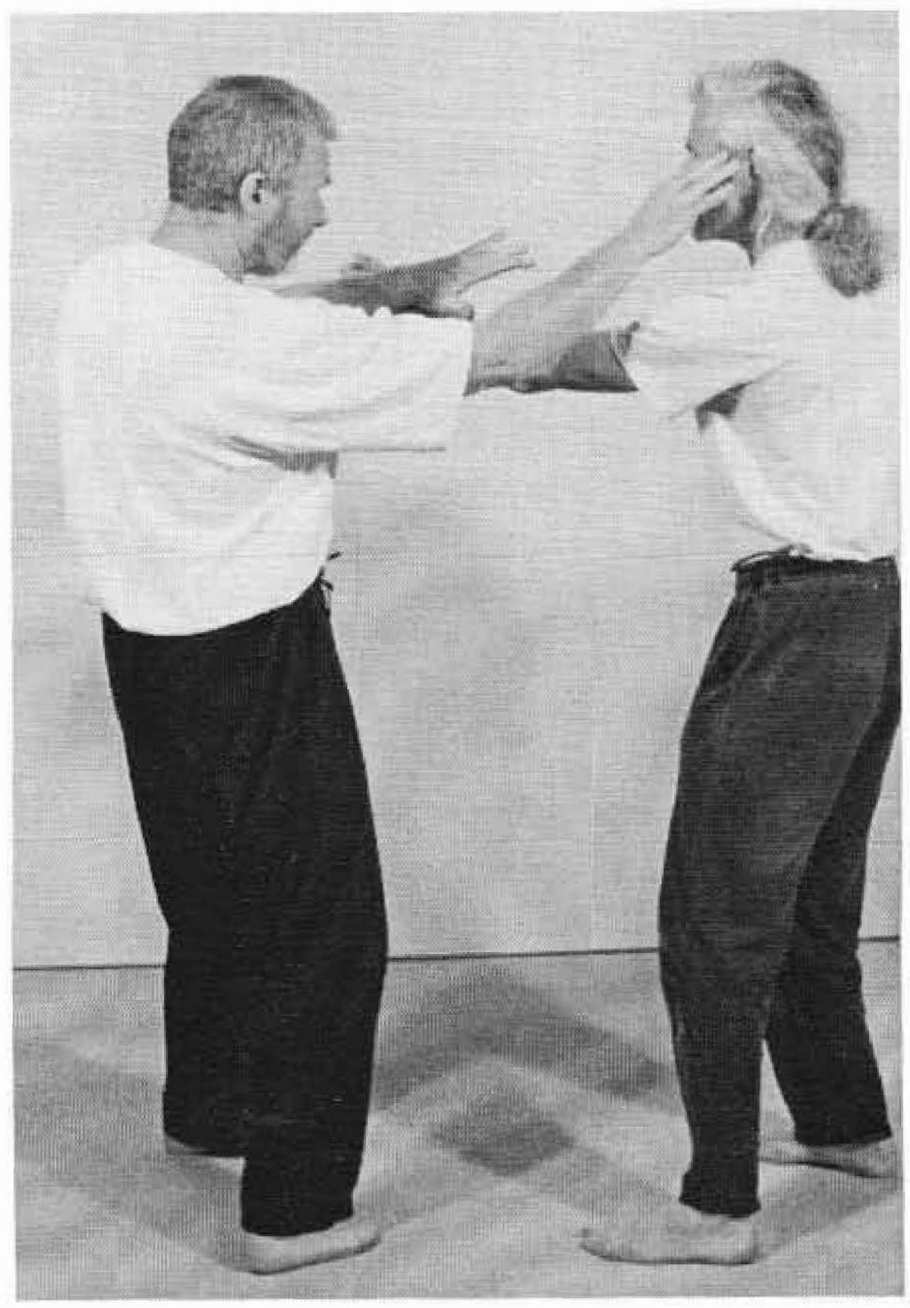


Figure 9

point, it is said that you should use as much as one can stand on the eyeball. I have found, however, that a little harder than this works better.

You can also wipe out from Gb 1 toward Gb 3, which is the temple. (See diagram at the end of this chapter for Gb 3).

This point is used for headache, ophthalmoplegia, failing vision, night blindness, atrophy of the optic nerve, redness of the eye, lacrimation, and keratitis.

Traditional uses include glaucoma, membrane over the eye, excessive tearing, and sore throat. This point is also used to eliminate "wind heat," dispel "fire" and brighten the eyes.

Gb 1 is a point of intersection of the small intestine and triple heater channels with the Gb channel. The liver and triple heater divergent channels also meet here, so it can be used to affect general qi flow throughout the body via the liver divergent channel.

Applications:

1) The opponent attacks with a left straight punch. You should swing both arms out to your right, until your left palm makes contact with his left forearm as your right fingertips slice into his Gb point. Both of your palms are moving in the correct direction, i.e., your left palm is moving down his left forearm from elbow to palm for the set-up, while your right fingers are striking from the back of his head to the front (fig. 9).
2) The opponent attacks with a right straight. You step to your left while parrying and setting up his right forearm (fig. 10). Instantly, your right one-knuckle punch moves in a clockwise direction to strike his Gb 1 point from rear to front (fig. 11).

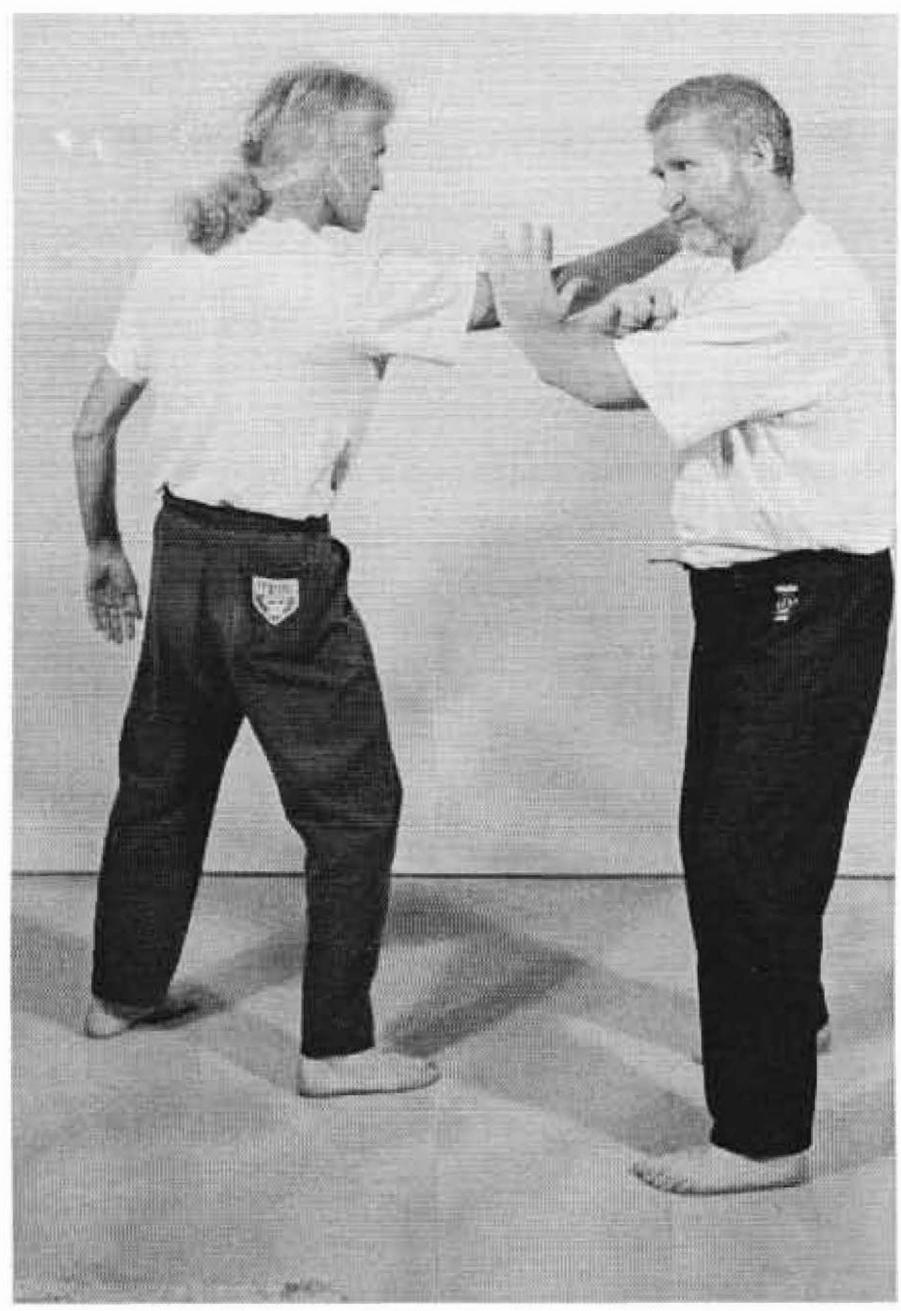


Figure 10

Figure 11

GB 2 (GALLBLADDER POINT NO. 2)

Chinese name:

Tinghui (confluence of hearing).

Location:

In front of the intertragic notch, directly below tinggong , or Si 19 (see diagram at end of small intestine chapter), at the posterior border of the condyloid process of the mandible. (This is the little "notch" on the edge of the ear, that little triangle that sticks out just above the jaw bone.) Locate the point with the mouth open. (See Diagram 1, end of this chapter).

Connections:

An internal branch to Si 19.

Direction of strike:

This point is usually struck straight in to the head. It is best suited for a one-knuckle punch or using a claw type of hand where the fingertips strike into the point. It is made more effective when Si 19 is also attacked. This can be achieved by the use of the dim-mak claw (fig. 12).

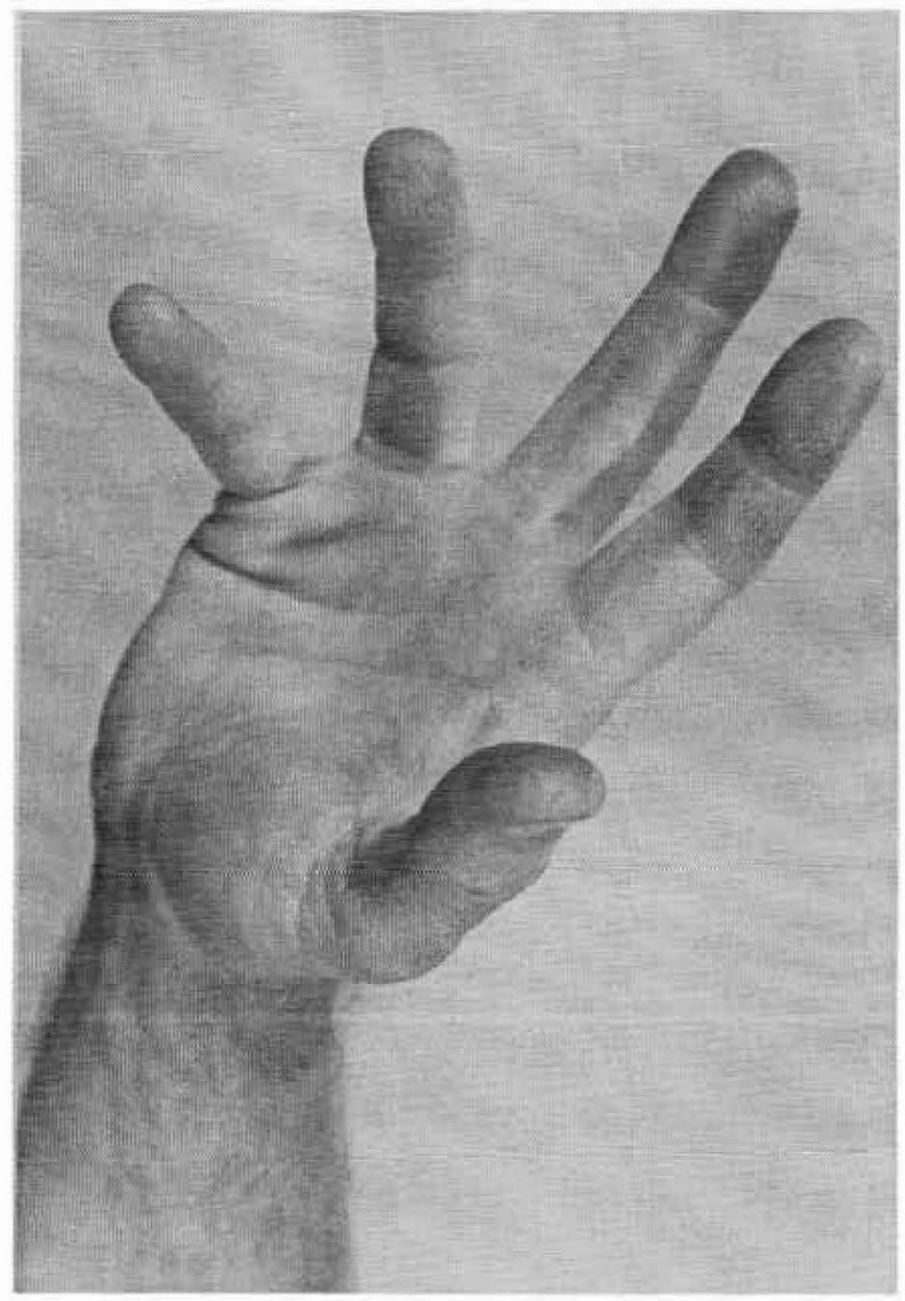


Figure 12

Damage:

Struck on its own, this point will cause extreme nausea and dizziness. Death will occur only if the point is struck really hard.

Set-up point:

Neigwan, or Pc 6 (see diagram at end of pericardium chapter) is struck straight inward just before the Gb 2 strike. (Neigwan is a utility set-up point that can be used to set up many of the major strikes.)

Antidote:

Poke up into St 3, just under the cheekbones, with the index and middle fingertips of one hand, as in Figure 13. (See the diagram at the end of the stomach chapter for the location of St 3).

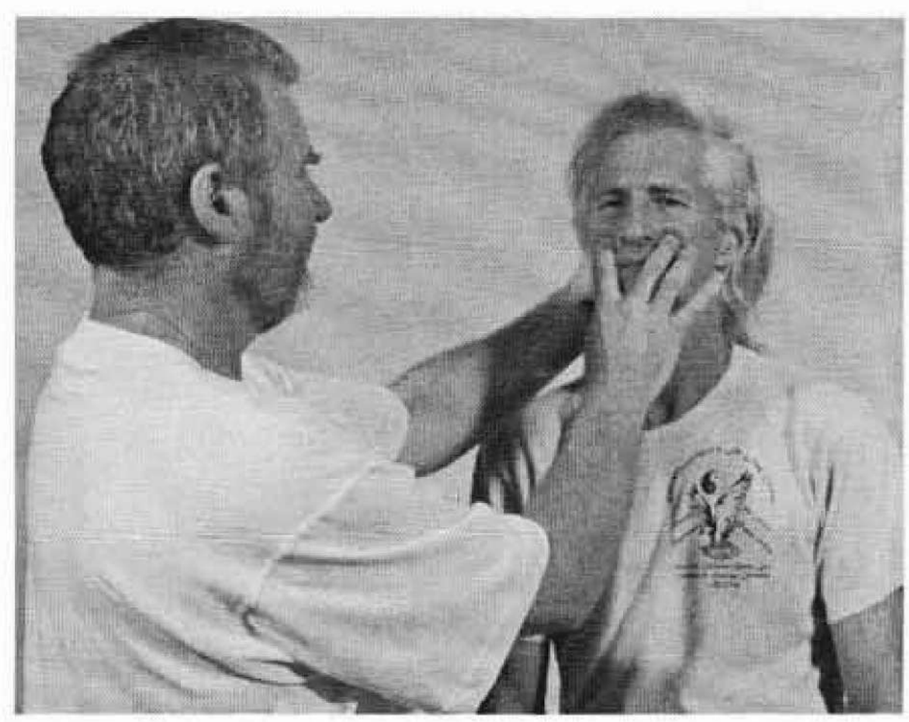


Figure 13

Healing:

Gb 2 is supplied by an anterior aural branch of the superficial temporal artery and, in the deep position, by the external carotid artery and the posterior facial vein. It is innervated by the great auricular nerve and a branch of the facial nerve.

Gb 2 is used against tinnitus (ringing in the ear), deafness, otitis media (inflammation of the middle ear), deaf mutism, toothache, and facial paralysis.

Traditional indications include mouth and eyes awry, hemiplegia (paralysis of half the body), seizure in which the body is alternately tense and limp, "madly running away" (a Chinese

term for something similar to hysteria), dislocation of jaw, swelling of parotid glands, tinnitus, deafness, and toothache.

The massage technique used is to press the points on both sides and hold them, or rotate them as for Gb 1 (clockwise or counterclockwise for either xu or shi conditions).

This point can be used along with tingmia (an extra point located at the lower anterior root of the earlobe), with chinqian, (an extra point .5 cun anterior to Gb 20), or with St 6 and St 4 for apoplectic facial paralysis.

Gb 2 can also be used along with xiaxi (Gb 43) for tinnitus and with foot qiaoyin (Gb 44) for deafness.

Applications:

1) The opponent attacks with a right hook. I will attack his right forearm with my right knife-edge palm to his neigwan point (fig. 14). My right dim-mak claw rebounds in an arc to strike the side of his face with my five fingertips. My middle finger will make contact with Gb 2, while my index finger makes contact with Si 17, my thumb contacts St 9, my ring finger contacts Si 19, and my small finger contacts Gb 1. Obviously, this is the optimal strike but requires great accuracy. Even if you are lucky to get only two of the above points, with one of them being Gb 2, this strike is devastating and will cause death from extreme qi drainage (fig. 15).
2) The opponent attacks with a right straight. My right palm takes his arm, slamming it down the forearm to set up the point (fig. 16). My left palm instantly slams downward on the forearm as well, as my right one-knuckle punch attacks to Gb 2 (fig. 17). You also could have used a palm strike with this method since you do not have to be so accurate using the palm.

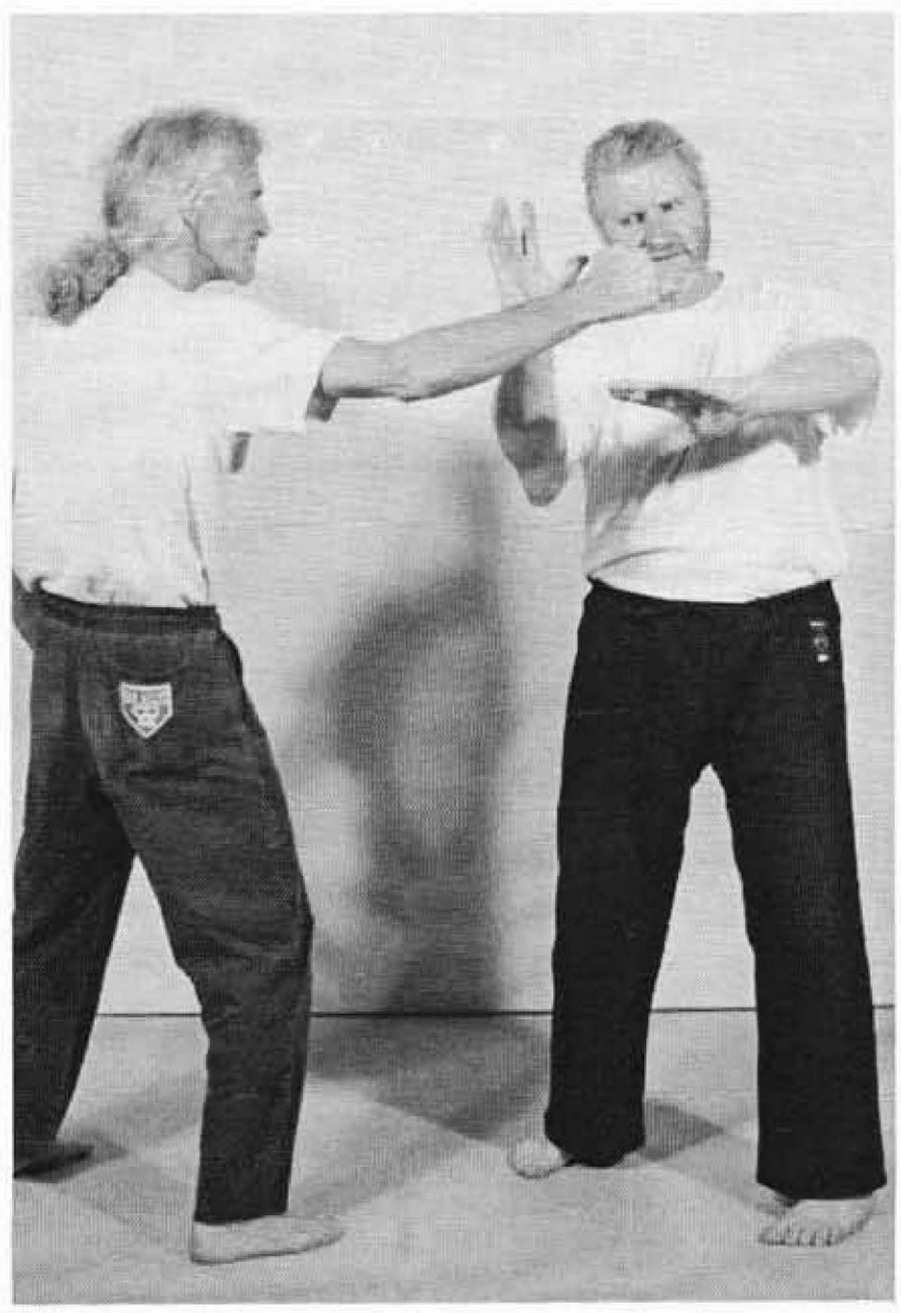


Figure 14

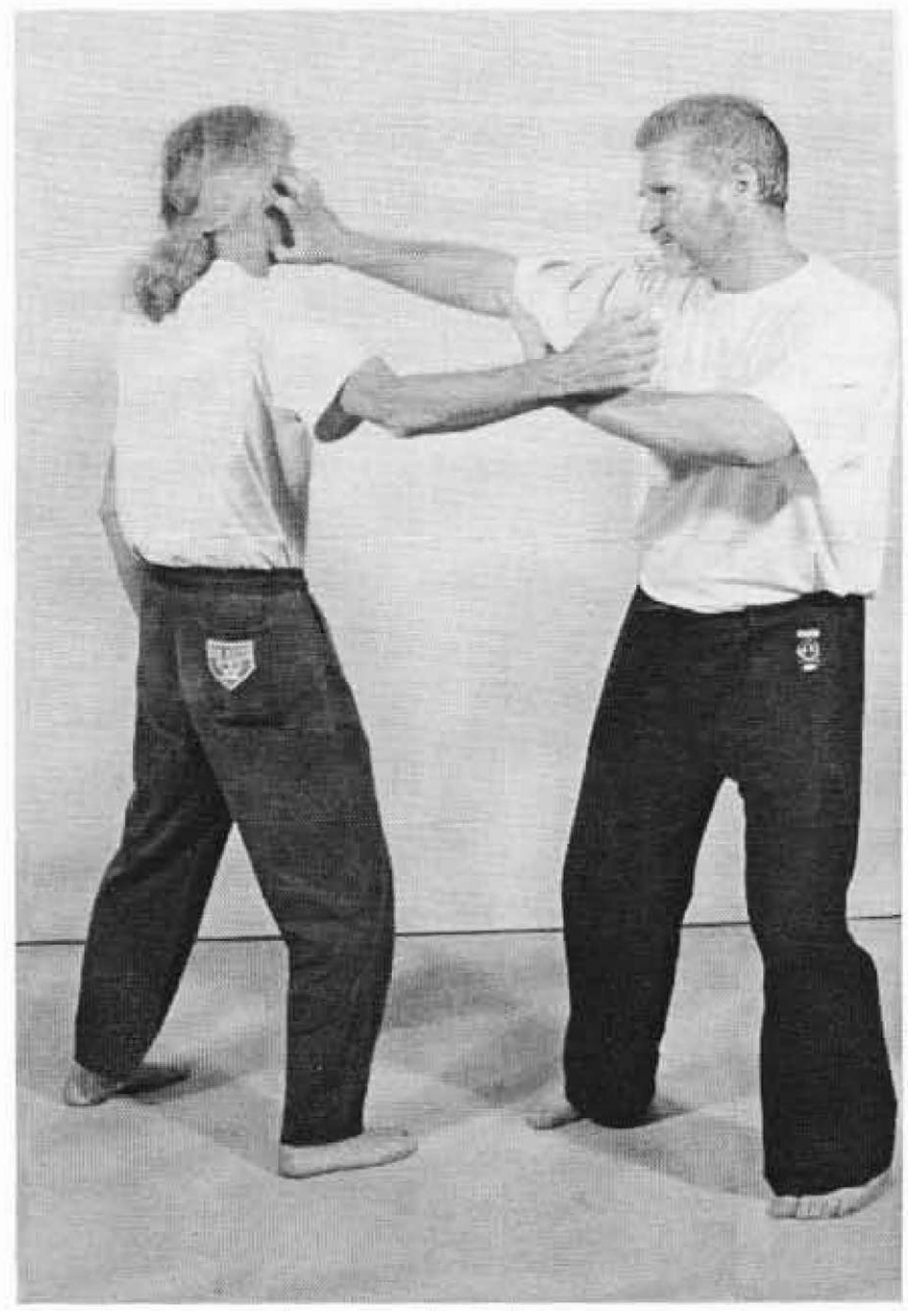


Figure 15

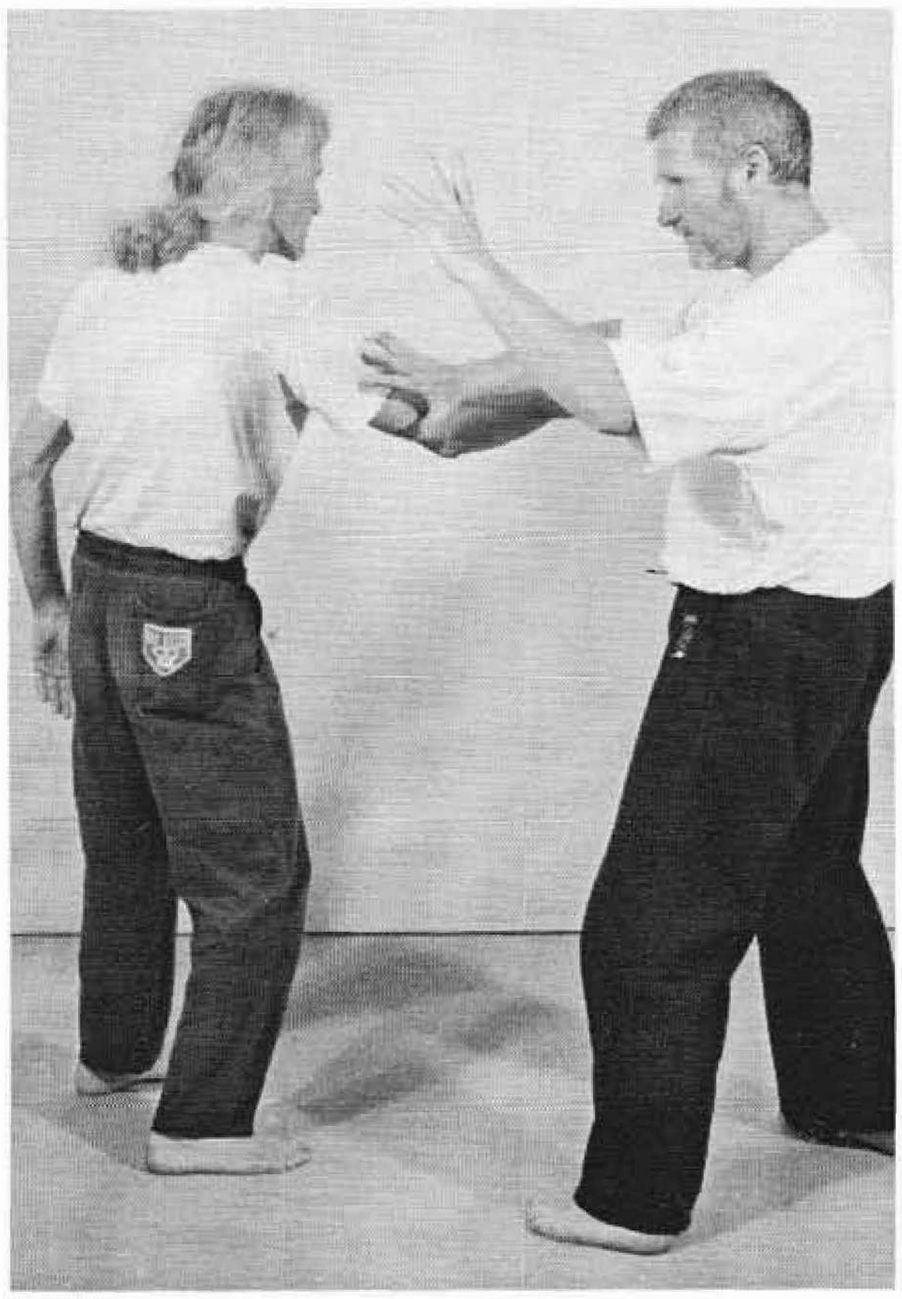


Figure 16

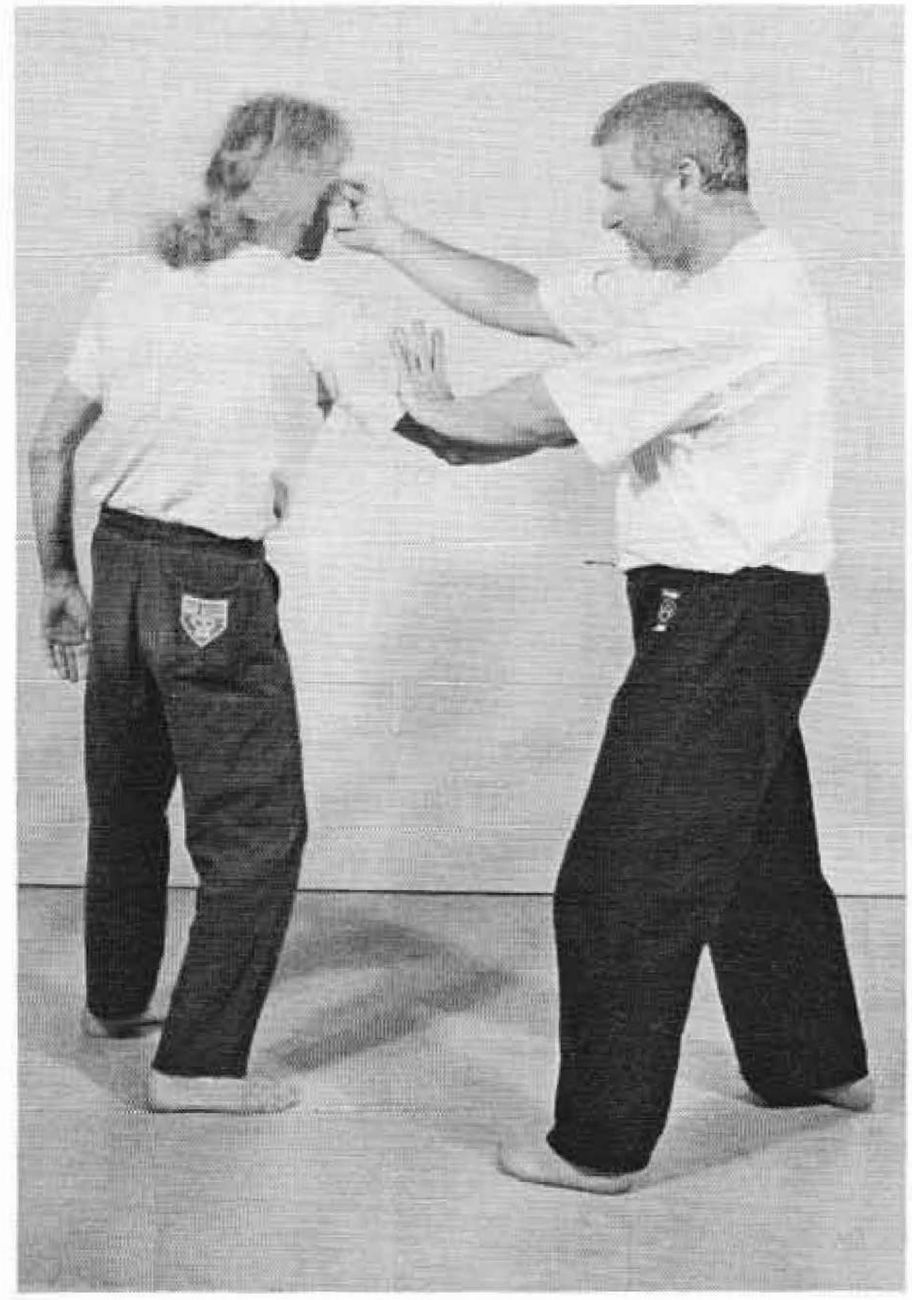


Figure 17

GB 3 (GALLBLADDER POINT NO. 3)

Chinese name:

Shangquan (guests and hosts).

Location:

This is the temple point. It is on the superior border of the zygomatic arch in the depression that can be felt in the bone.

Connections:

Stomach meridian.

Direction of strike:

Straight in to the side of the head using any weapon—in particular, the one-knuckle punch or a palm heel.

Damage:

Being the temple, this is an extremely sensitive area. A hard strike to this point will cause death, and a light or medium strike will cause KOt.

Set-up point:

The set-up point for the temple is a qi-disruptive strike. Briefly, qi disruption occurs when we upset the electrical flow (qi flow) in the body. The qi-disruptive strike must be as close to the skin without touching as possible. (We can do this without touching the attacker when we have attained a high level of training.) To cause qi disruption, the palm or palms are waved violently past certain areas of the body.

There are nine qi-disruptive methods in all. It works like this. We all have electrical channels through which electricity flows. In electrical theory, we can cause an adverse electrical current by waving a magnetic object across a conductor, as in an electrical generator. Our hands have minute magnetism, and when they are waved across certain meridians, they will cause an adverse flow of qi, thus causing the recipient to become weak or even fall down. Experiments have been done in the

United States where by simply reversing what is called "awakening energy," people have been made to either go to sleep or wake up. (The Chinese call this awakening energy, "light qi.") These experiments failed at first because the experimenters were using too high a voltage, but when they used voltages that were equivalent to the normal human body voltage (very low), the effect was attained.

The qi-disruptive set-up strike used in conjunction with Gb 3 is a violent swipe across the attacker's face from his left to right. The direction never changes, nor does the hand with which you perform the strike. We always use the left hand to do this strike. I have tested this particular set-up strike out many times on many different people, and it has not failed once (a certain level of achievement in the internal arts is necessary, though.) You have your partner place his fist onto your chest and punch as hard as he can. The punch is felt to be quite powerful, to the point of knocking the wind out of you. You take his punch again, as soon as you've done the "swipe," and there is no power there at all.

Qi disruption is a complicated area of the martial arts. I have a video series on this in which I demonstrate on all types of people, ranging from gung-fu experts to highly ranked karateka. There are "instant disruptions," where the person will recover from the strike a second or two later; there are short-term strikes, from which he will recover up to four minutes later; and there are long-term strikes, from which he will recover four days later. So we must also know the antidote to these strikes, especially the short- and long-term strikes. We do not want our friends weakened for days after (and this has happened, where people who did not know what they were doing have executed the strike on friends and caused them to become quite ill for days, not knowing the antidotes). For the Gb 3 strike, which is an instant strike, we do not need to do any antidote because the recipient will recover naturally in a second or two. Hence the need, in a real fighting situation, to strike the major point, Gb 3, a split second after the set-up strike.

Antidote:

Although there is an antidote for the set-up strike, there is no antidote point for Gb 3 because it is just too dangerous. You can try CPR and a get the person to a hospital.

Healing:

Innervated by the zygomatic branch of the facial nerve and the zygomaticofacial nerve. Irrigated by the zygomaticoorbital artery and vein.

This point is forbidden for needling. You can hold both points or rotate clockwise or counterclockwise for xu or shi conditions. You might use three fingers, one on Gb 1, the next on Gb 3, and the next on Th 21 (fig. 18).

It is used for ear problems or trigeminal neuralgia (use enough pressure to cause slight pain). You can pinch Gb 3 and St 7 for facial pain. For ear or sinus congestion, you might run a finger with light pressure from Gb 1 through Gb 3, Th 21, Si 19, and Gb 2 down the groove created by the corner of the jaw, and continuing down the sternocleidomastoid muscle, which runs down either side of the neck, to the pit of the throat.

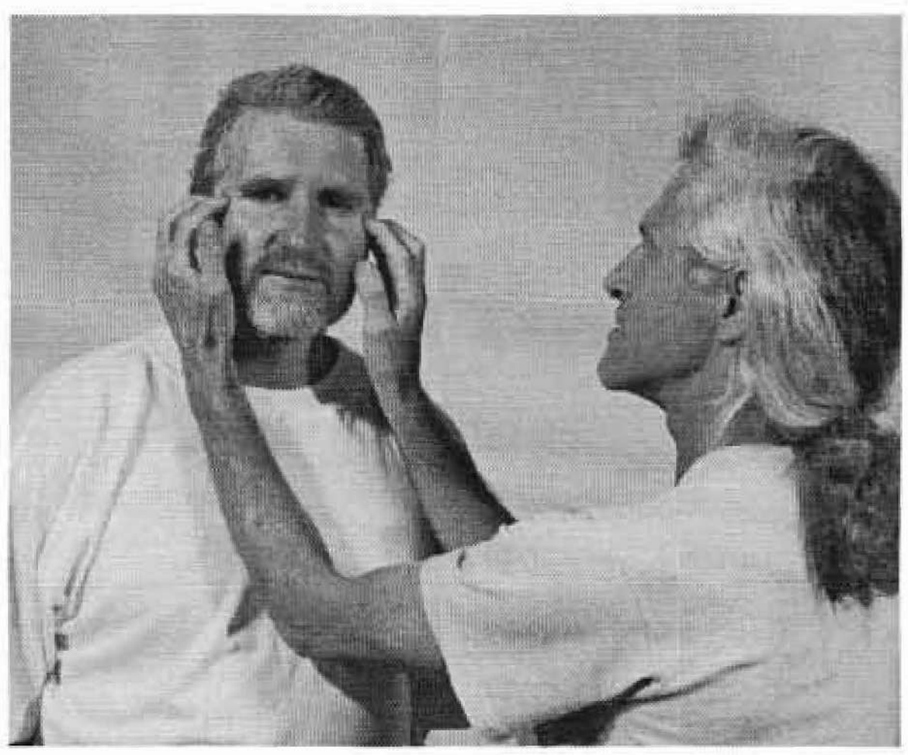


Figure 18

Applications:

1) He attacks using a right hook. You use the set-up qi-disruptive method mentioned above to swipe his face, continuing to slam his right forearm at neigwan or Pc 6. A split second later, your right one-knuckle punch makes contact with Gb 3. This is instant death, so be warned, this point is not for experimentation (fig. 19).
2) Slam his left forearm upward as he attacks with a left straight. Your right palm continues up to strike to Gb 3 (fig. 20).

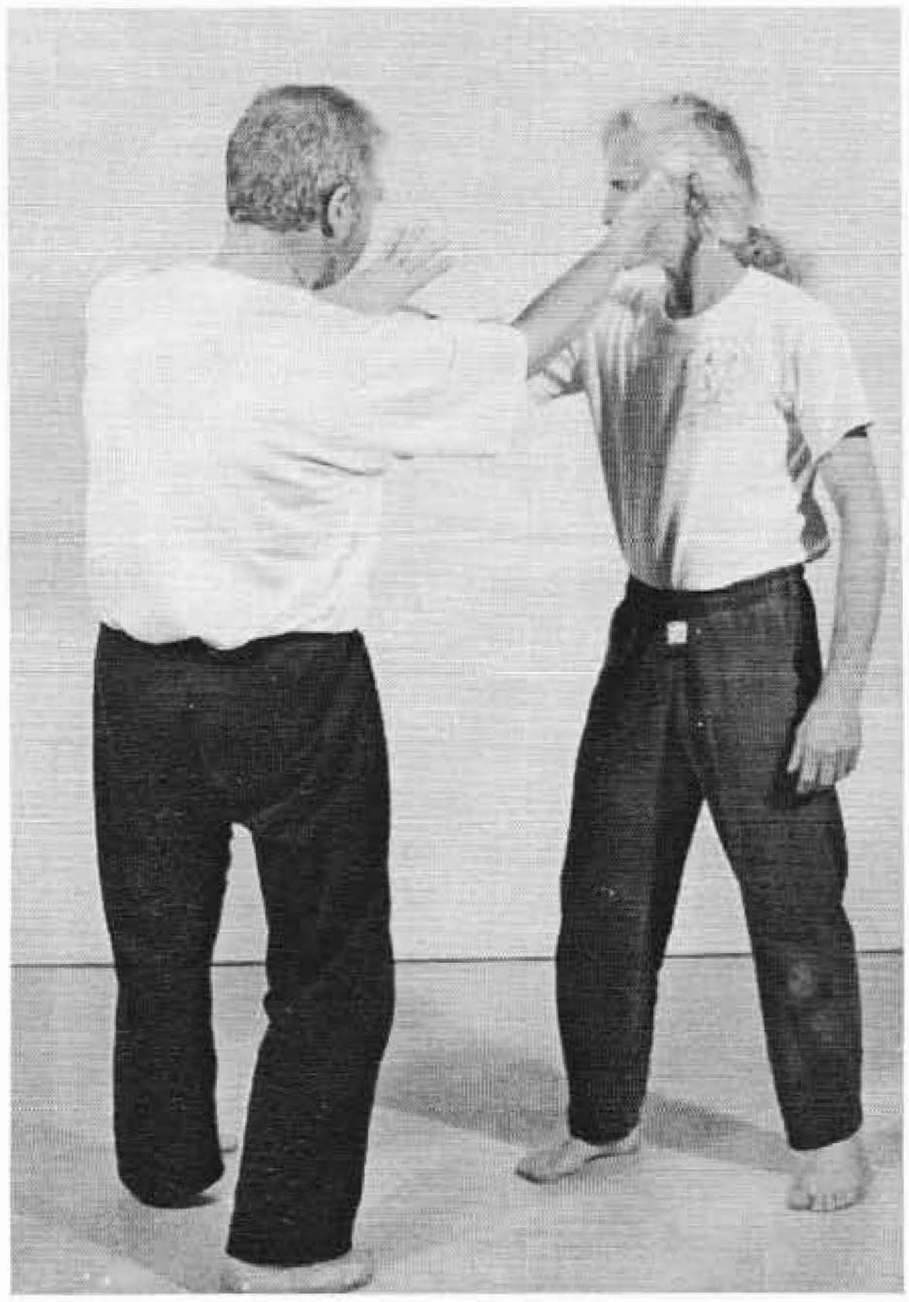


Figure 19

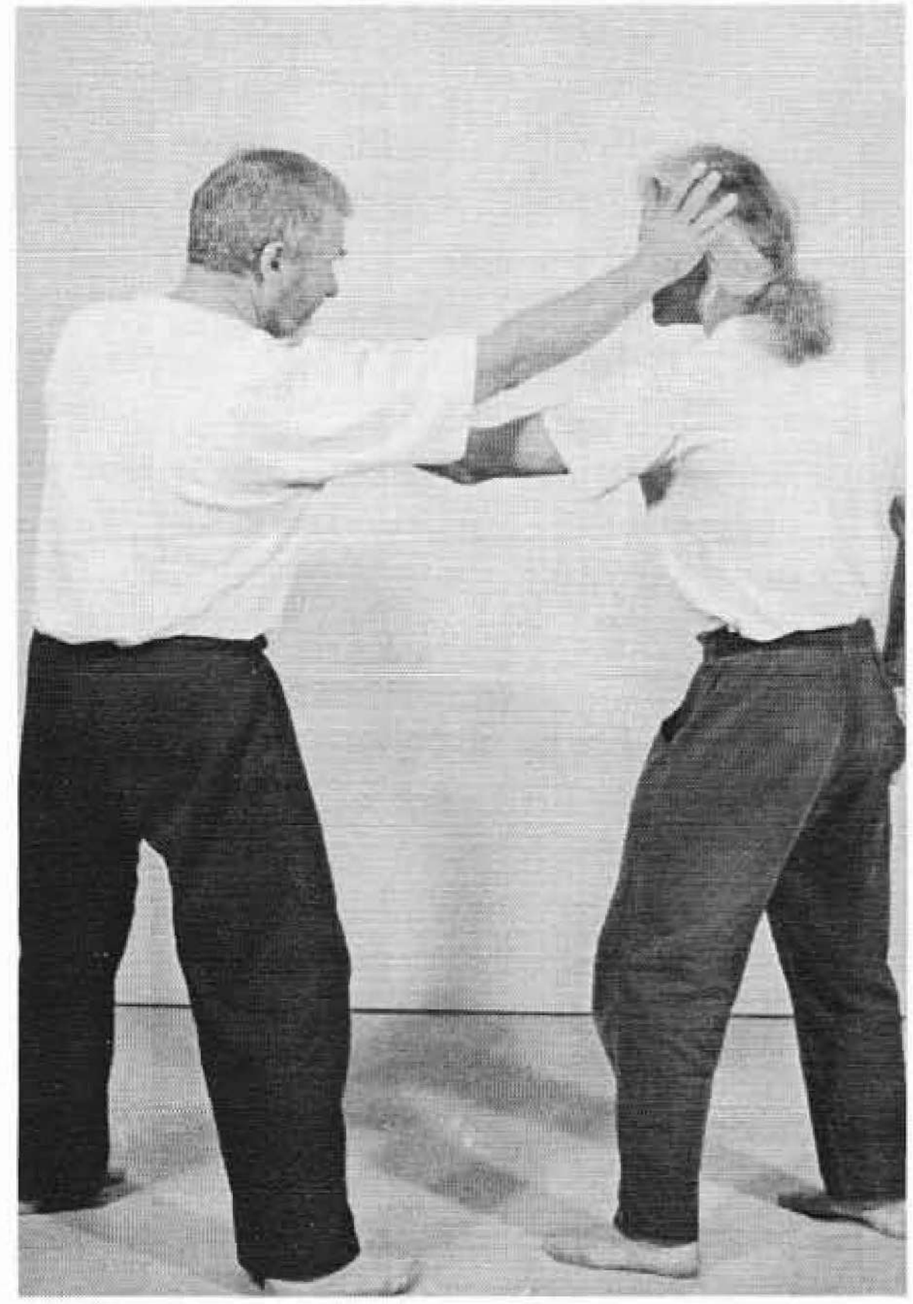


Figure 20

GB 4 (GALLBLADDER POINT NO. 4)

Chinese name:

Hanyan (satisfying jaw).

Location:

Within the hairline of the temporal region, a quarter of the distance from St 8 to Gb 7, or 1 cun below St 8. Movement can be felt at this point when chewing.

Connections:

Stomach and triple heater.

Direction of strike:

Gb 4 is struck straight inward using a palm-heel strike.

Damage:

This point, because of its location, will cause death at most and at the least extreme dizziness that causes the recipient to fall down.

Set-up point:

The set-up point for Gb 4 is neigwan, which is struck straight inward in this case.

Antidote:

Again, we use St 3 as the antidote for this point. Both St 3 points should be pressed upward into the cheekbones. You can also use Gv 20 by pressing downward onto the point to counter the drainage of qi caused by this strike.

Healing:

The region is irrigated by the parietal branches of the superficial temporal artery and vein and is innervated by its location just on the temporal branch of the auriculotemporal nerve.

Indications for use include headache (especially one-sided headache), stiff neck, blurred vision, pain at the outer canthus of the eye, tinnitus, rhinitis (inflammation of the nose), seizures, convulsions, and

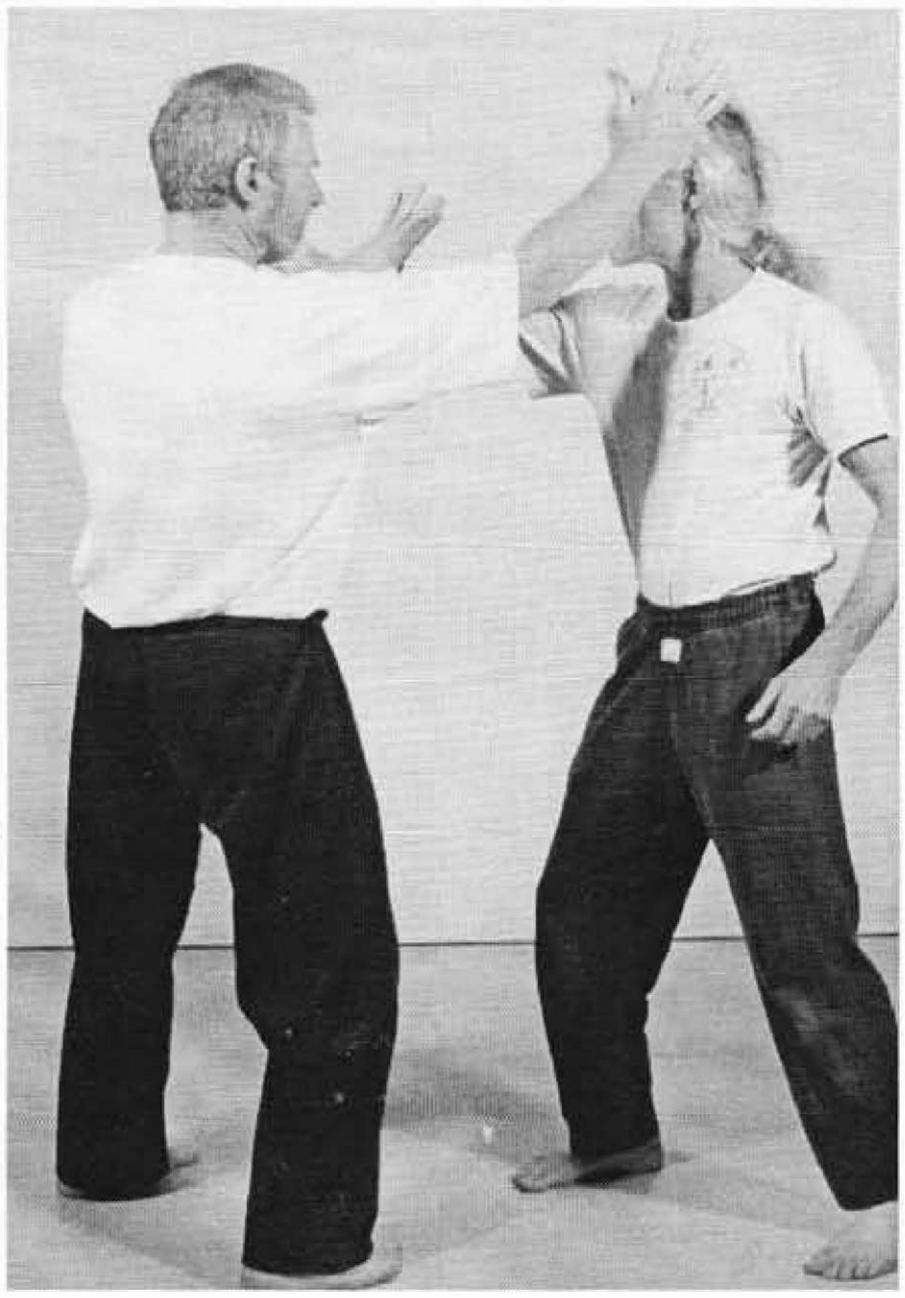


Figure 21

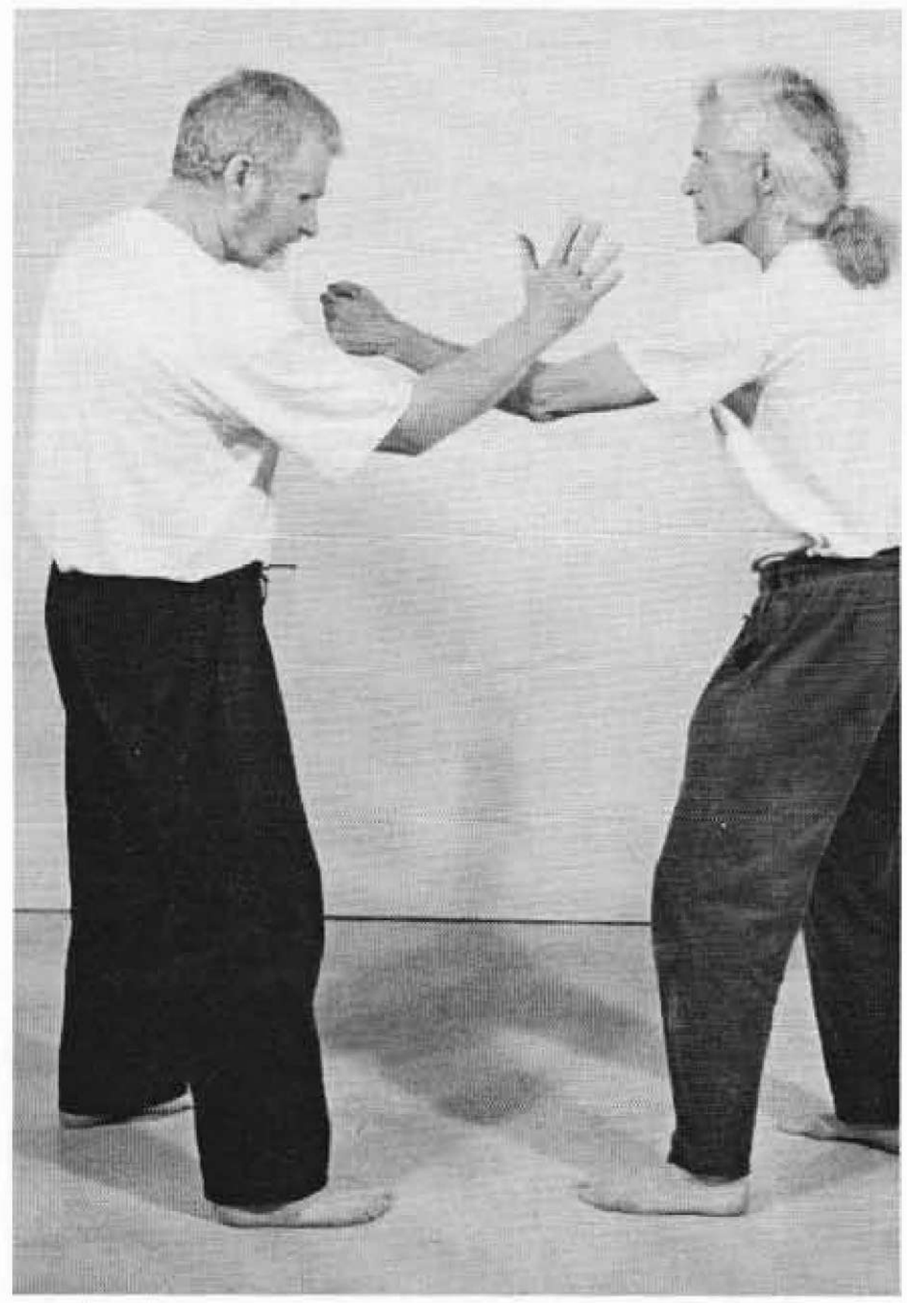


Figure 22

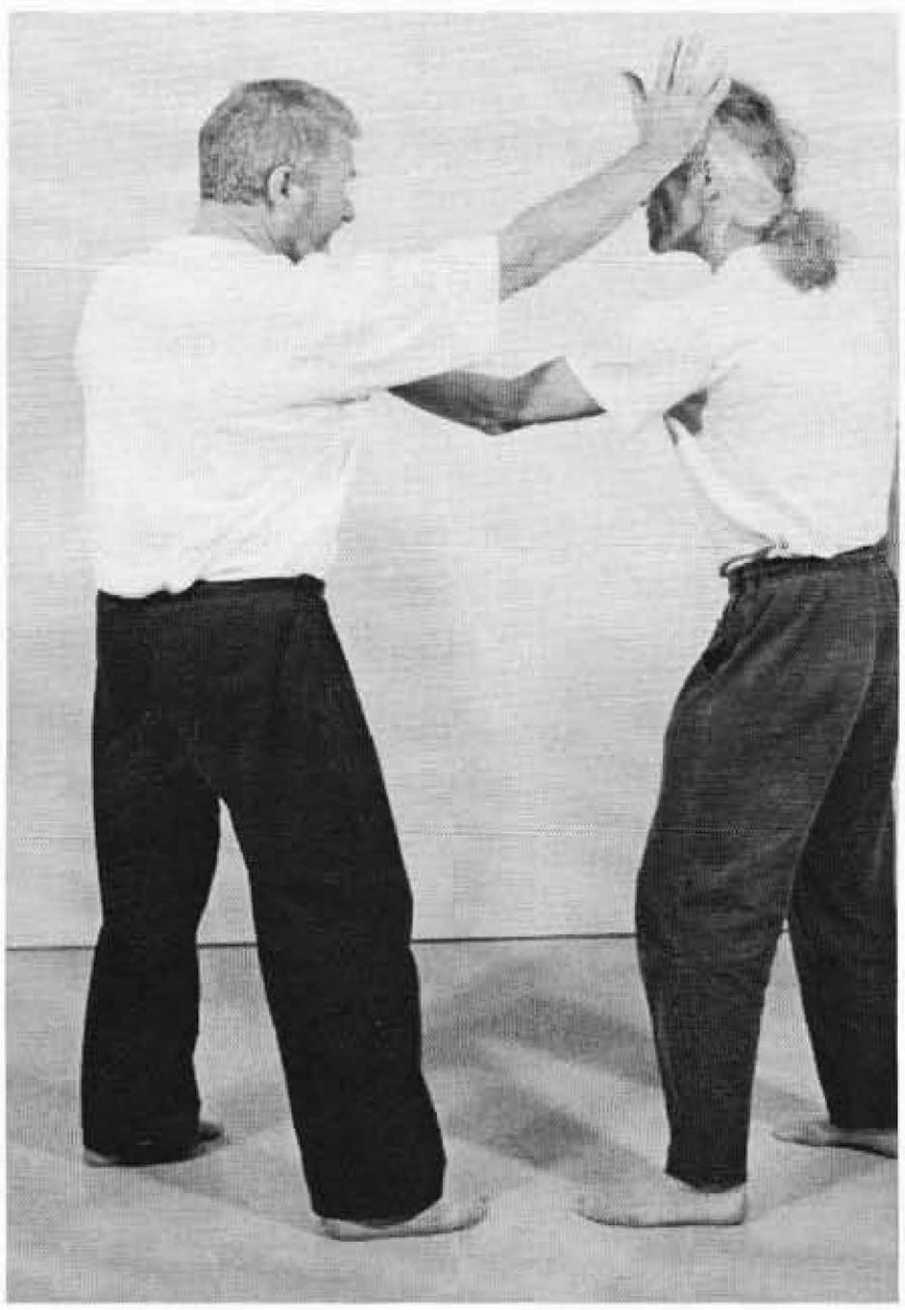


Figure 23

conjunctivitis (inflammation of the inner eyelid).

Massage using clockwise or counterclockwise rotations for xu or shi conditions respectively, e.g., headache. Straight push and hold is also very sedating for migraine.

Applications:

1) He attacks with a right hook punch. Slam his neigwan point straight inward, and a split second later strike straight in to Gb 4 using your right palm (fig. 21).
2) In response to his left straight attack, execute a "slip block" (which slips up his attacking arm, thus blocking it from attacking to the major point) with your right palm (fig. 22), which then slides up his arm to attack at the point (fig. 23).

GB 5 (GALLBLADDER POINT NO. 5)

NOTE: Gb 5, Gb 6, and Gb 7 perform much the same as Gb 4; the attacks, directions, and so on are all the same.

Chinese name:

Xuanlu (suspended head).

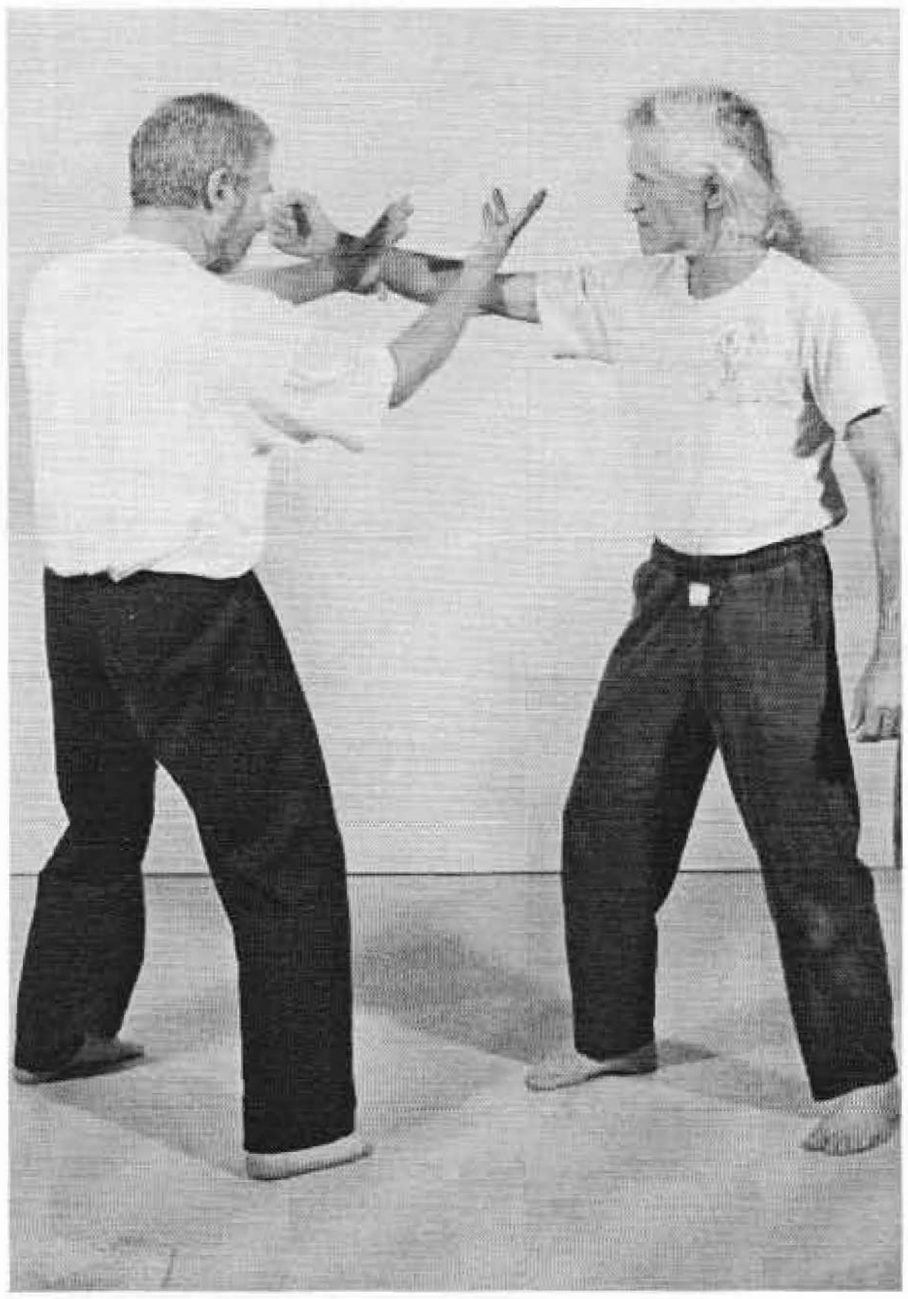


Figure 24

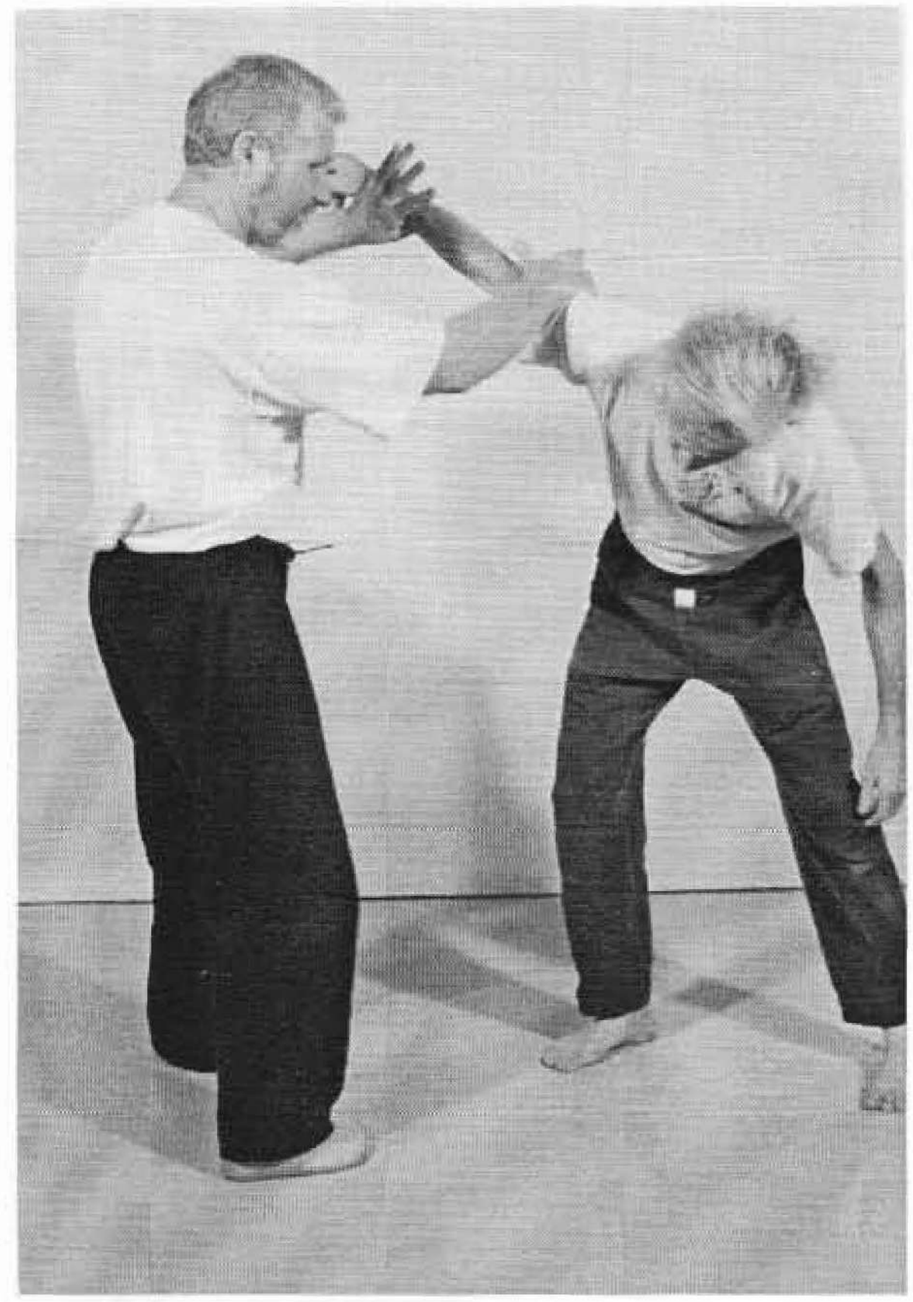


Figure 25

Location:

In the middle of the curve between St 8 and Gb 7. (St 8 is about 1.5 cun above the forward upper corner of the ear, and Gb 7 is about .25 cun above that point on the ear. If you drew a line between the two, the point would be right in the middle.)

Connections:

Stomach and triple heater.

Direction of strike:

Straight inward using either a palm-heel strike or a one-knuckle punch.

Damage:

This point does much the same damage as Gb 4; however, it is a little more effective in causing dizziness and death, depending on how hard it is struck. If Gb 4, 5, 6, and 7 are struck simultaneously, it is a devastating strike.

Set-up point:

Again, strike neigwan straight inward.

Antidote:

Use Gb 20, pressing both sides upward into the head. (This is a utility revival point.)

Healing:

This point is used to heal migraine, pain in the lateral canthus (the side of the eye socket), toothache, edema (fluid retention) of the face, and neurasthenia (a TCM term referring to a range of nervous conditions from neurosis to insomnia to lethargy.). It is forbidden to needle this point more than 3 fen obliquely.

Applications:

This group of points—Gb 4, 5, 6, and 7—is bunched so close together that all of them call for the same methods of attack as Gb 4. However, Gb 5 is also activated by attacking to Th 12 on the back of the triceps.

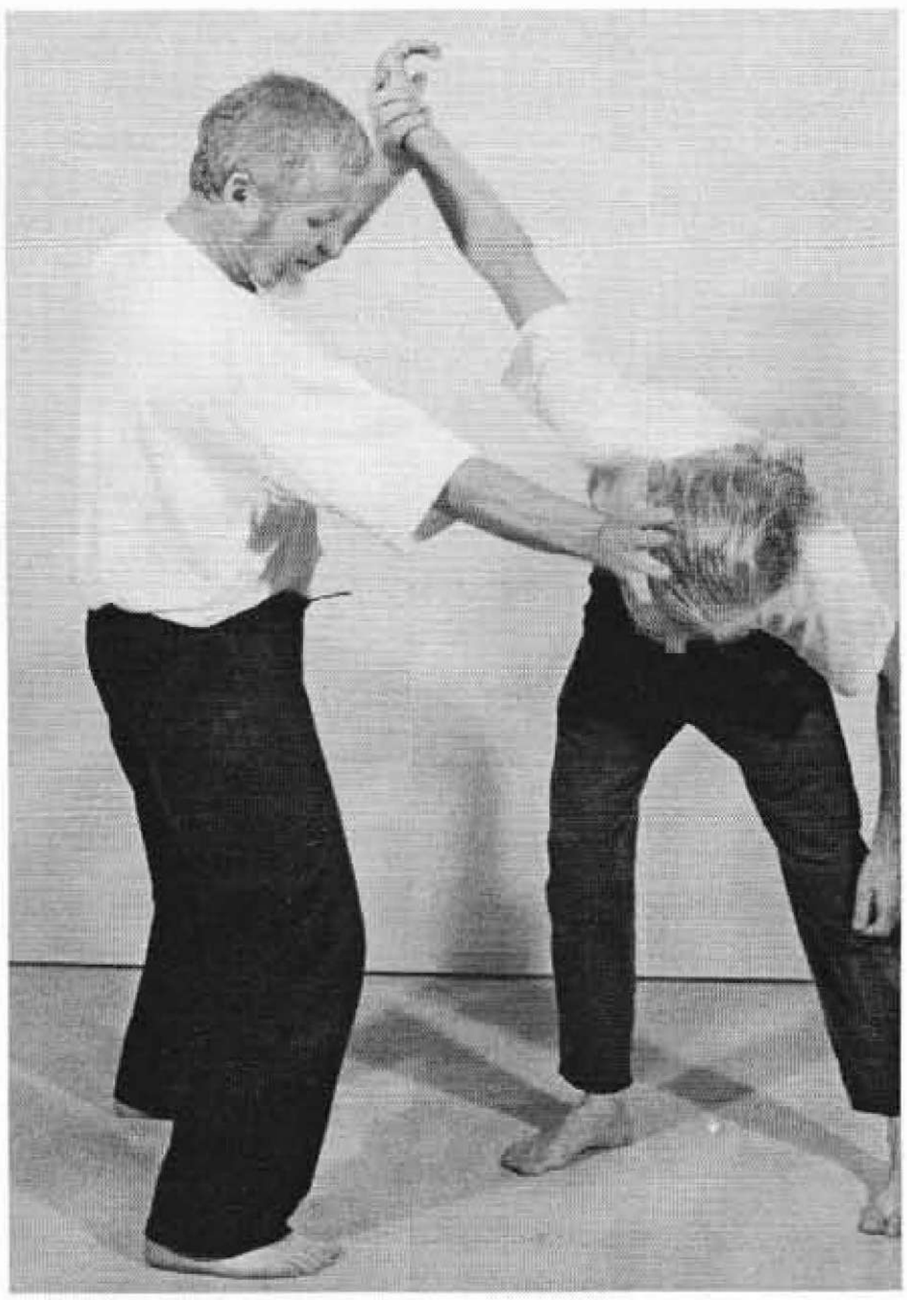


Figure 26

Figure 27

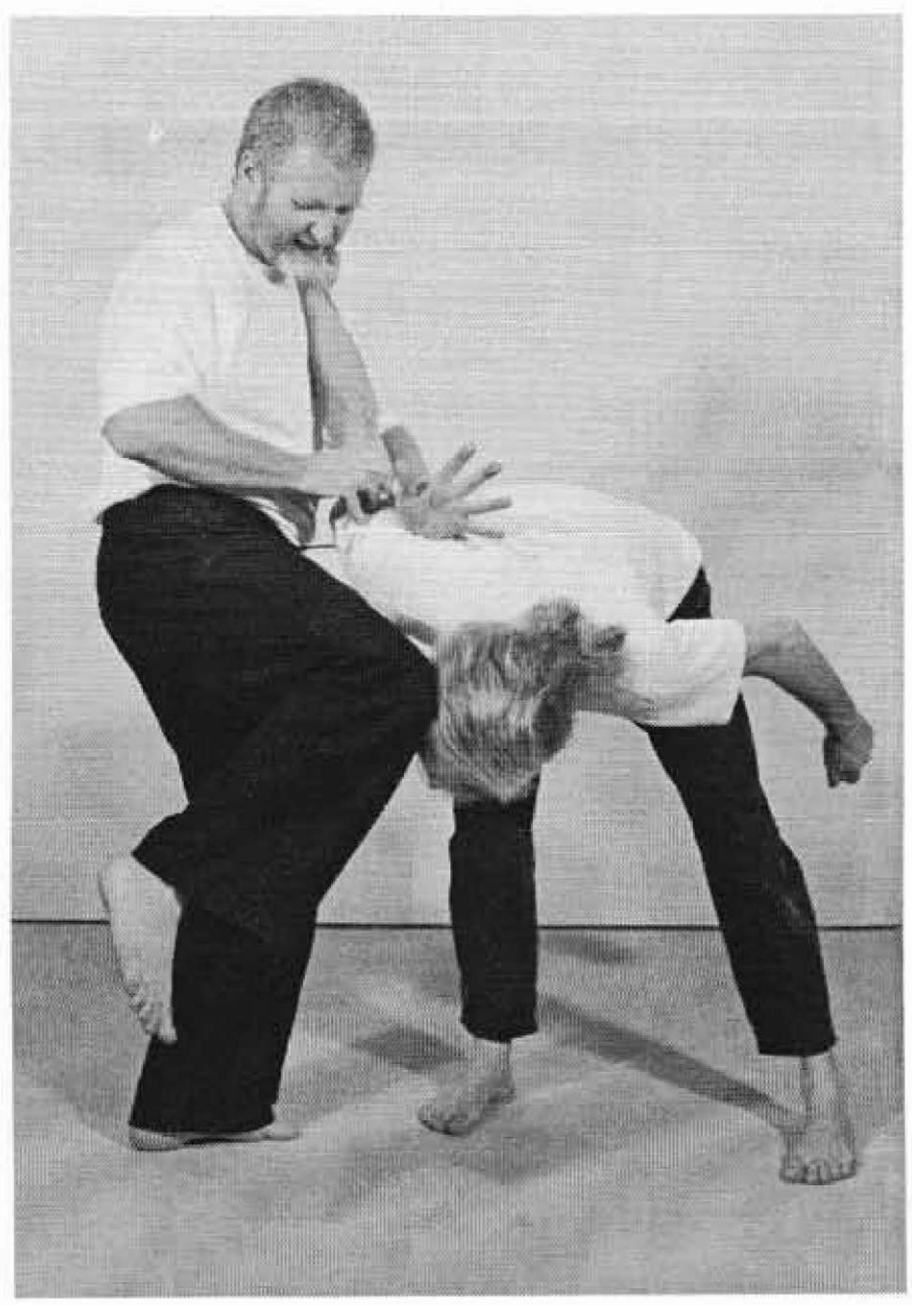


Figure 28

1) He attacks using a right straight. Slam his arm using both of your palms, striking to neigwan with your left palm and to Lu 5 (in the crease of the inside of the elbow) with your right palm (fig. 24). Lu 5 and Pc 6, when struck together, cause a great qi drainage from the "place of power" (lungs). This combination alone will cause a knockout when the strike is fairly hard. The Pc 6 strike sets up the Lu 7 shot. Your right palm immediately reaches around behind his right triceps to strike at Th 12 (just in the horseshoe formed by the triceps), while the left palm pushes away, thus causing great damage to the shoulder joint as well and causing him to move forward and down (fig. 25). Now, your right palm is free to attack to Gb 5 (or to the whole group of Gb points at that area), while your left palm keeps up the pressure on neigwan to keep up the qi drainage (fig. 26).
2) You might use a strike to St 9 to knock him out or make him weak and dizzy (fig. 27). Taking a long arm bar, you could cause him to bend forward, where your right knee is able to attack to Gb 5 or the whole group of points around that region (fig. 28).

GB 6 (GALLBLADDER POINT NO. 6)

Chinese name:

Xuanli (suspended balance).

Location:

On the hairline between Gb 5 and Gb 7.

Connections:

Small intestine.

Direction of strike:

Straight in from the side, usually with a palm-heel strike or, to be more accurate, a one-knuckle punch.

Damage:

This point is getting close to a point just above the ear that will cause a "delayed death strike." Delayed death strikes have been talked about in a mystical sense for years. However, the effects of most of these strikes are scientifically proven, as is the case with the strike to Gb 6 and other points in this region of the head. The small middle meningeal artery, which is right in this vicinity, about 3/4 inch above the ear, will burst when struck, causing blood to seep into the brain. It takes around three days to fill the brain sufficiently to cause death. NOTE: If this artery has been broken, it is diagnosed by looking at the pupils to see whether they change in size.

This area of the head also houses a lot of important brain stuff, so a strike here is not only an electrical strike, affecting the qi system of the body, but an excellent physiological strike as well.

Set-up point:

Either use neigwan or Si 8 on the posterior aspect of the elbow joint. Strike neigwan in a downward direction from his elbow down to this wrist, or strike Si 8 straight in. The Si 8 set-up works particularly well because this point has a connection to the small intestine meridian.

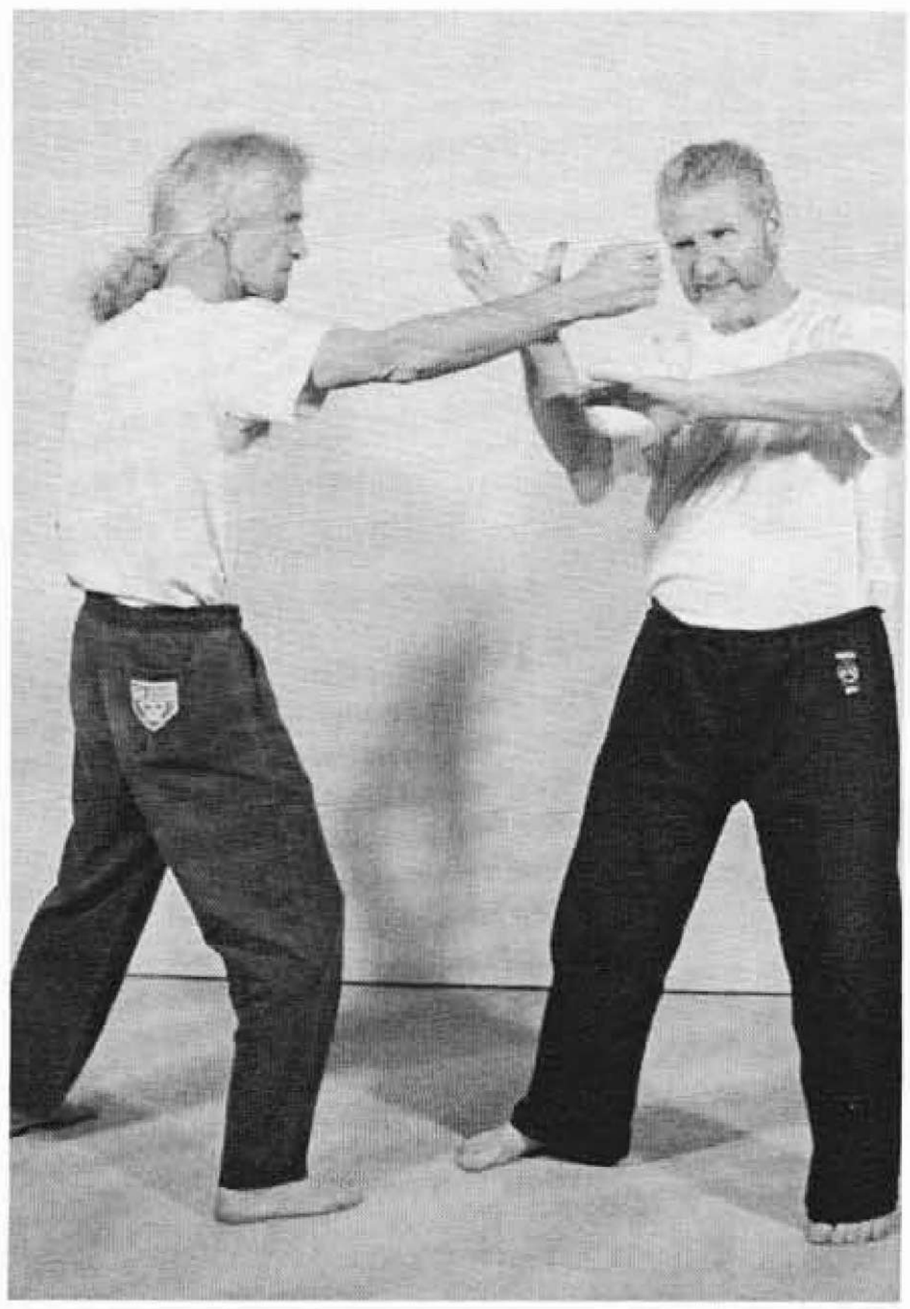


Figure 29

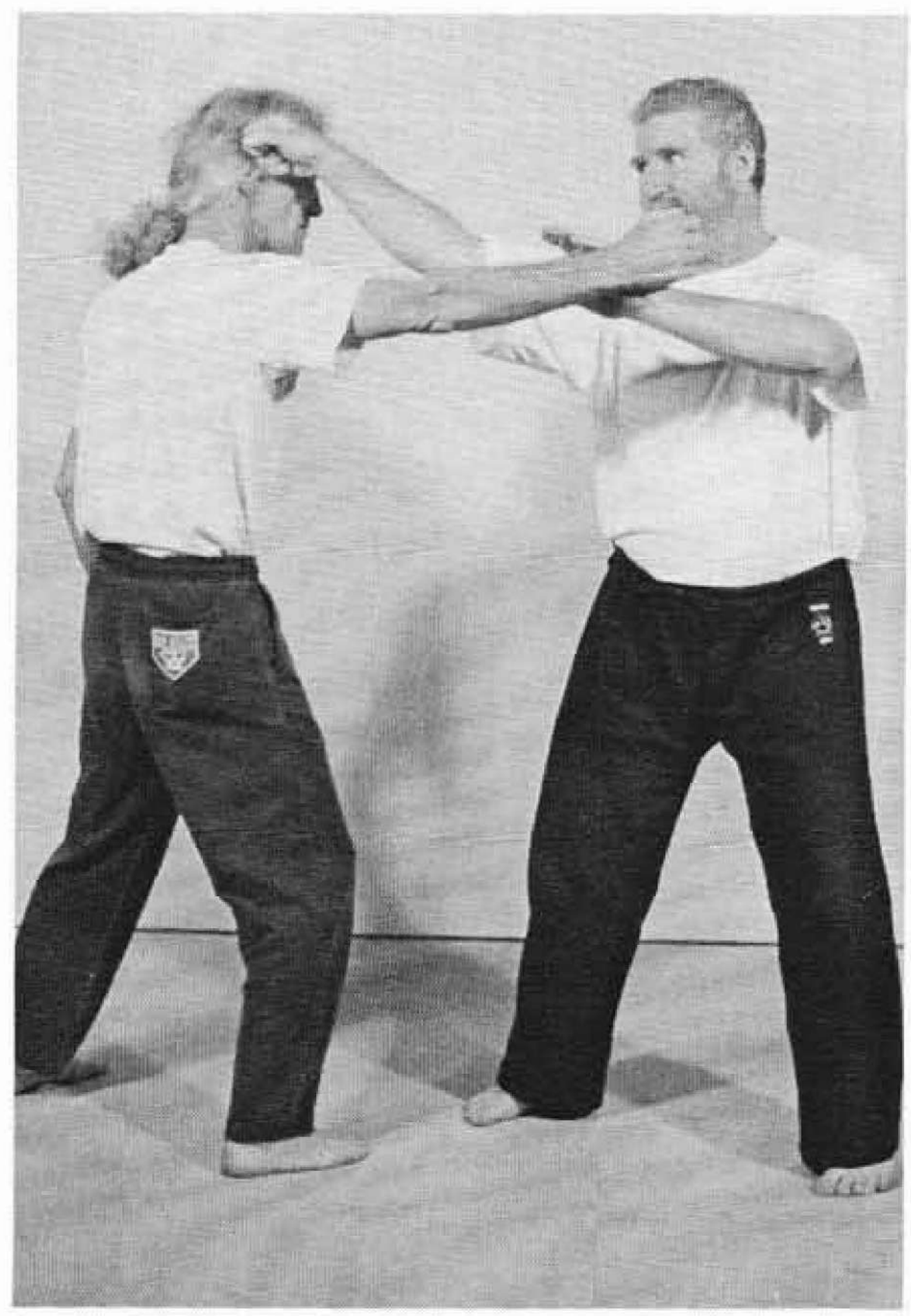


Figure 30

Figure 31

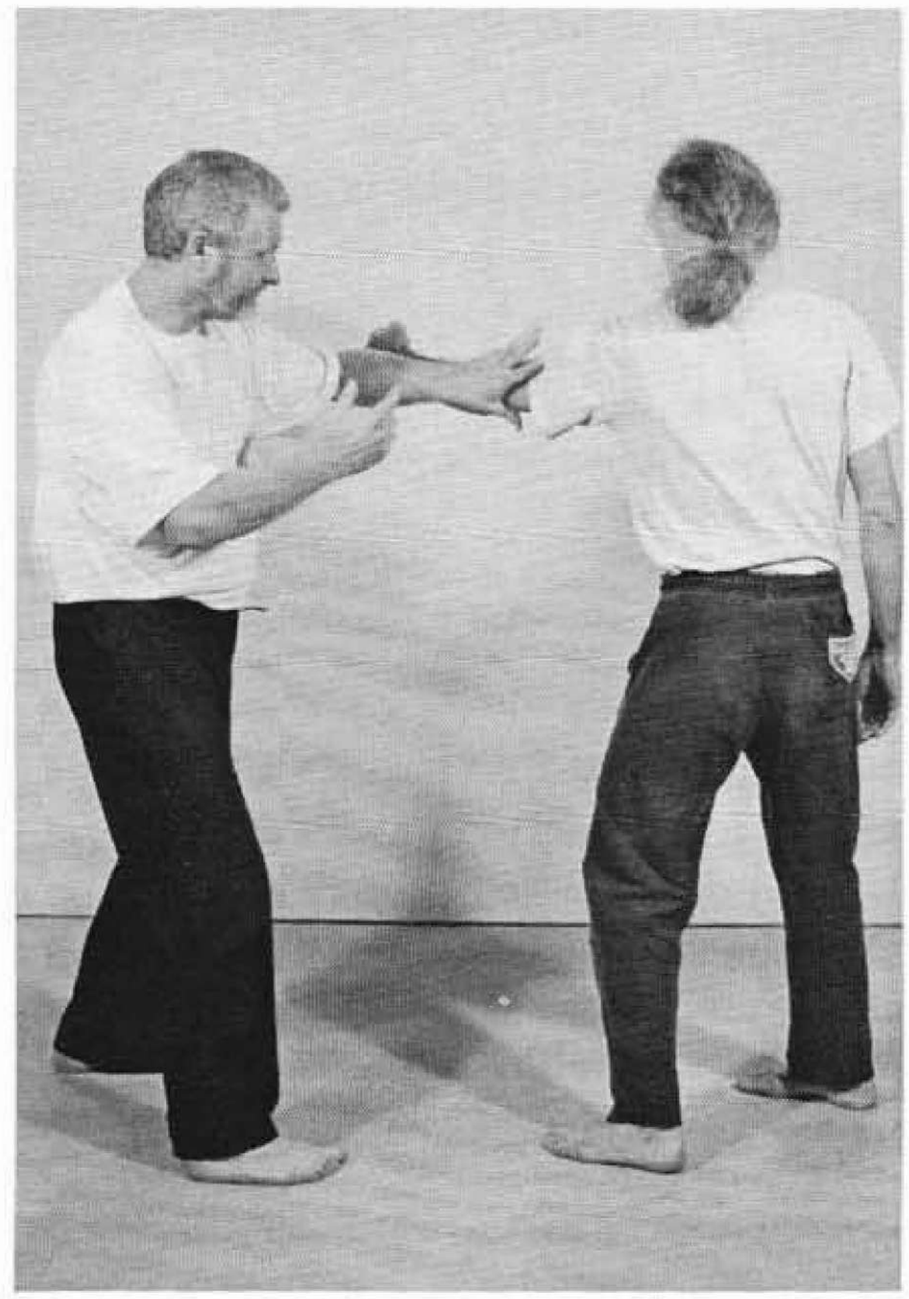


Figure 32

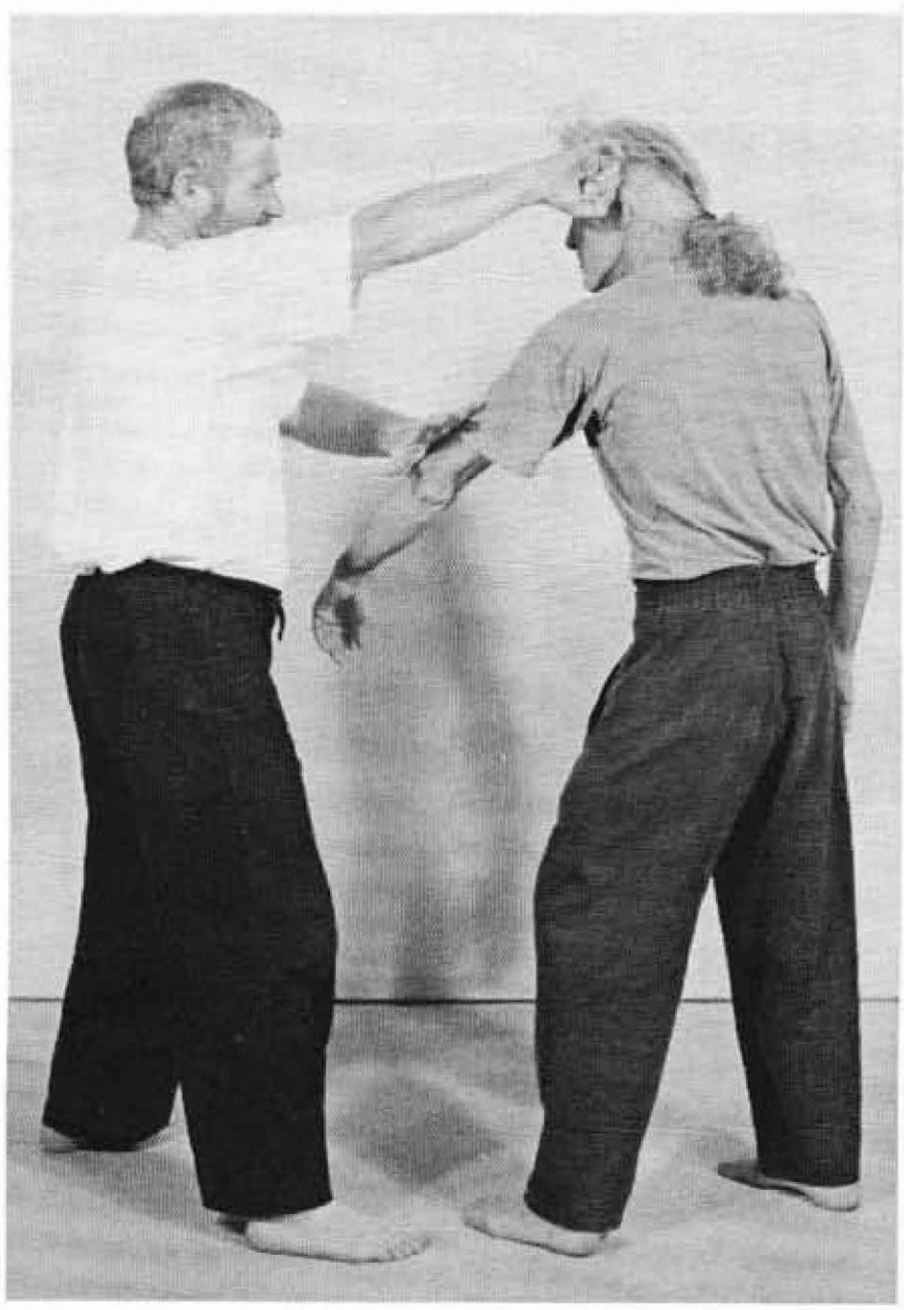


Figure 33

Antidote:

Either use Gb 20 again, or you can use Bl 10. Squeeze in from both sides of Bl 10 on the back of the neck.

Healing:

The healing indications for Gb 6 are the same as for Gb 5.

Applications:

1) Because we are getting into the area of a delayed death strike, we can use the techniques for Gb 5, or we can use what is called a percussive strike, which sends a percussive wave into the head to increase the damage.

   Take either his right hook or straight attack at his neigwan point with your right palm (fig. 29). Using the power of your waist, violently jerk your waist to your right, thus taking your right fist over to your right to attack to the point. The fist will flick upward upon impact, sending a shock wave up into the brain. The last three knuckles are the point of impact (fig. 30).

2) Take his left elbow at point Si 8 with your right palm, which will damage the energy system of the small intestine and break his

arm at the elbow (fig. 31)! Your left palm now slams down onto Si 8, controlling the arm (fig. 32). Using the power of the waist, which turns violently right then left, the right fist performs a "penetration" punch, turning over so that the thumb is underneath, and striking the point with the first two knuckles of your right fist (fig. 33).

GB 7 (GALLBLADDER POINT NO. 7)

Chinese name:

Qubin (crook of the temple).

Location:

On the hairline in front of the ear apex, one finger's width anterior to Th 20.

Connections:

Small intestine.

Direction of strike:

Straight in toward the head.

Damage:

Again, because of the location of this point, a delayed death strike may occur even with a medium-powered blow. A knockout will probably occur because of the action upon the heart through this point's connection to the small intestine. This point is extremely dangerous because of its location at the base of the brain. Other points will also be struck, such as Gb 4, 5, and 6. The damage is even greater when these points are struck at the same time using the palm strike.

Set-up point:

The set-up points for Gb 7 are the same as for Gb 5—neigwan or Si 8.

Antidote:

Either use Gb 20, punching in and upward into the head, or use Gv 20 with pressure down

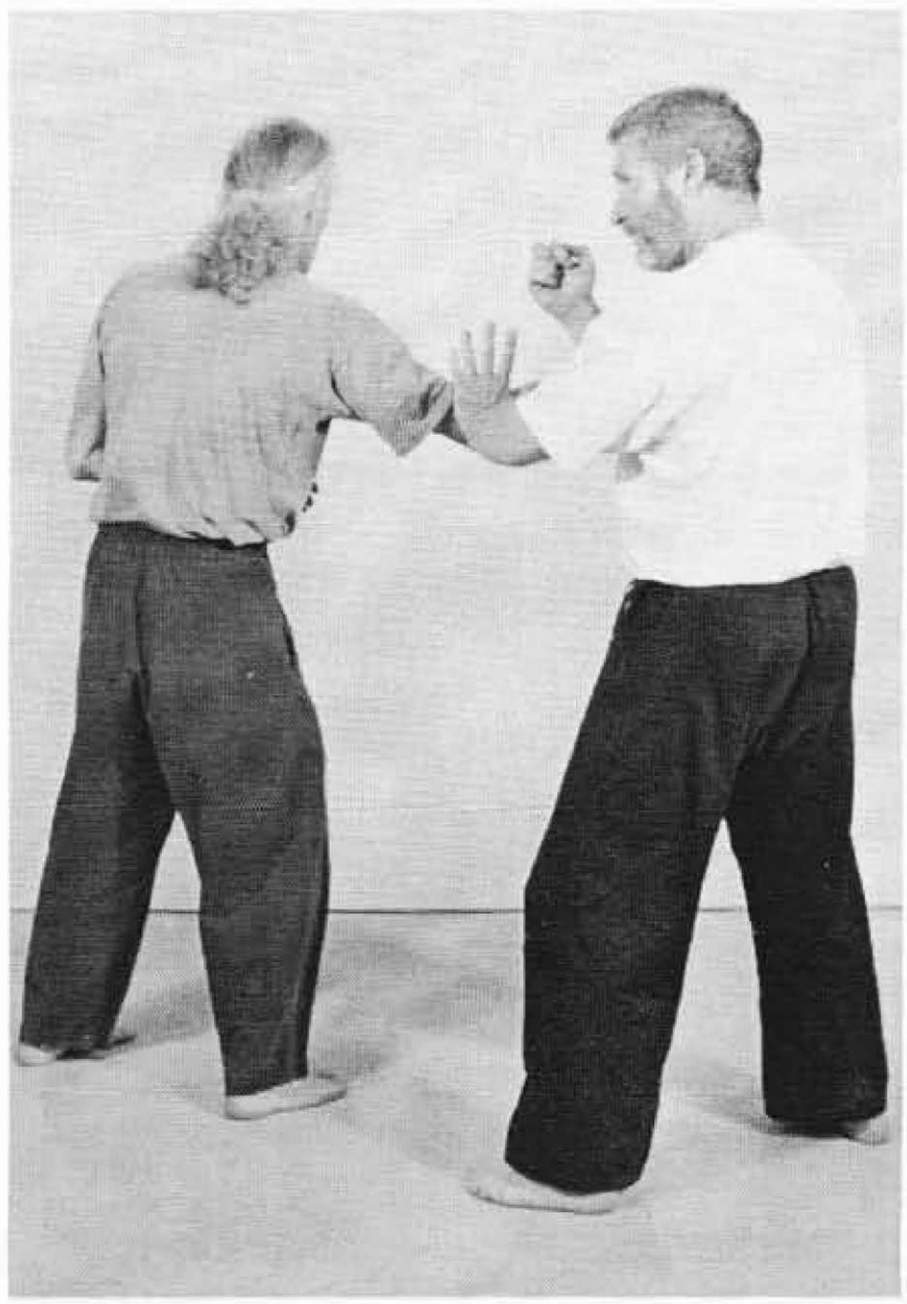


Figure 34

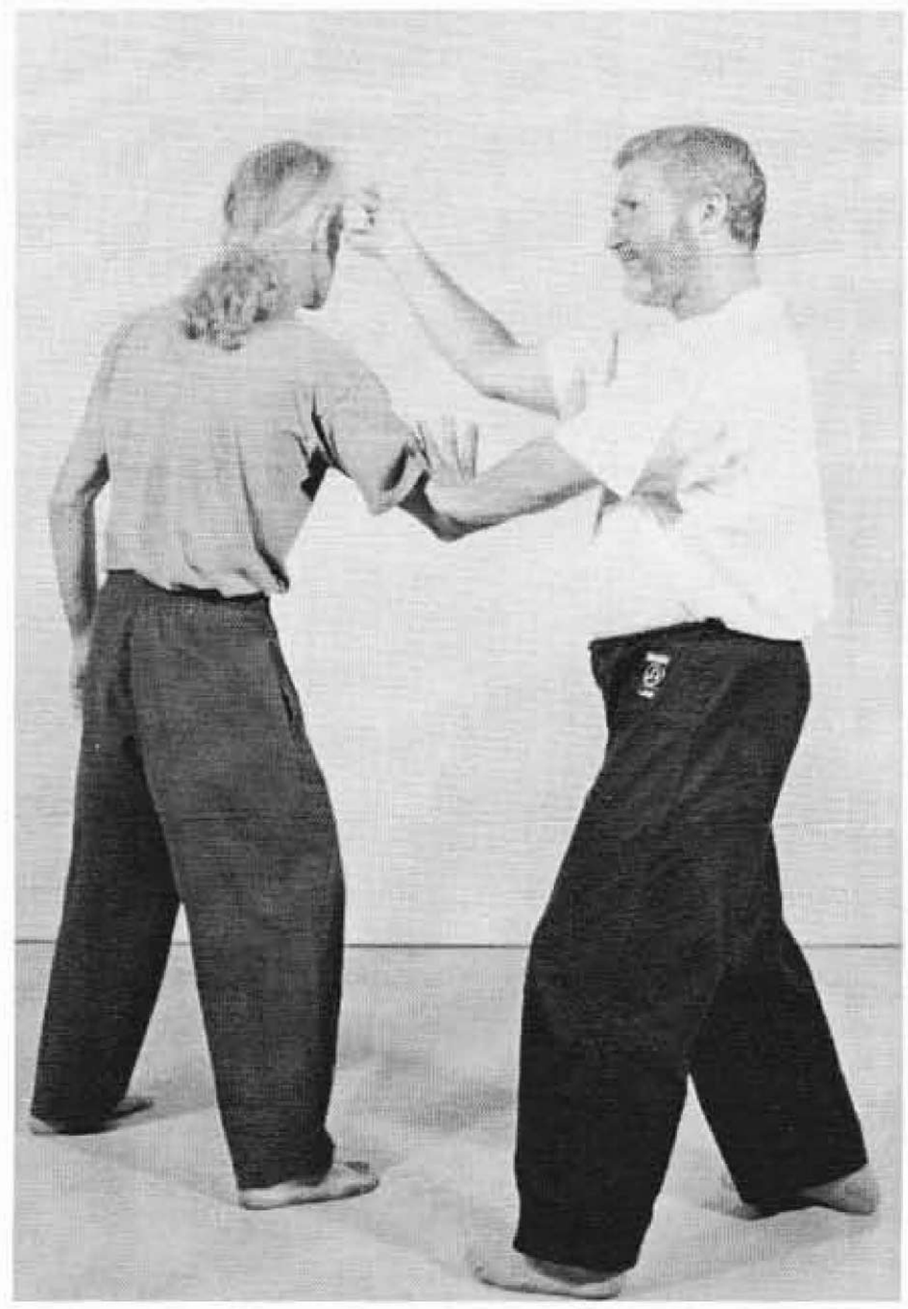


Figure 35

into the head. NOTE: The antidote may not work because of the seriousness of the location of this point.

Healing:

Used to treat migraine, trigeminal neuralgia, and spasm of the temporalis muscle.

Applications:

The applications for this point are exactly the same as for Gb 6, only the effect is slightly different if only Gb 7 is struck with no other points, using for instance a one-knuckle punch.

You could use the posture known as "arn right/left" from the original taijiquan form. He attacks with a right straight, and you parry into the outside of his right elbow, damaging the Si 8 point at the elbow. Notice that the right hand is already moving up on the inside of my left palm, ready to strike (fig. 34). My waist has turned to my left. Now, as my waist turns back to my right, my right one-knuckle punch attacks straight in to Gb 7 (fig. 35).

GB 8 (GALLBLADDER POINT NO. 8)

Chinese name:

Shuaigu (leading to valley).

Location:

Superior to the apex of the auricle, 1.5 cun within the hairline, or 1.5 cun above Th 20, which is on the head where the ear apex would touch if pressed inward.

Connections:

Bladder. There is a connection from the bladder meridian, which crosses Gv 20 and runs down to intersect with the Gb meridian at Gb 8.

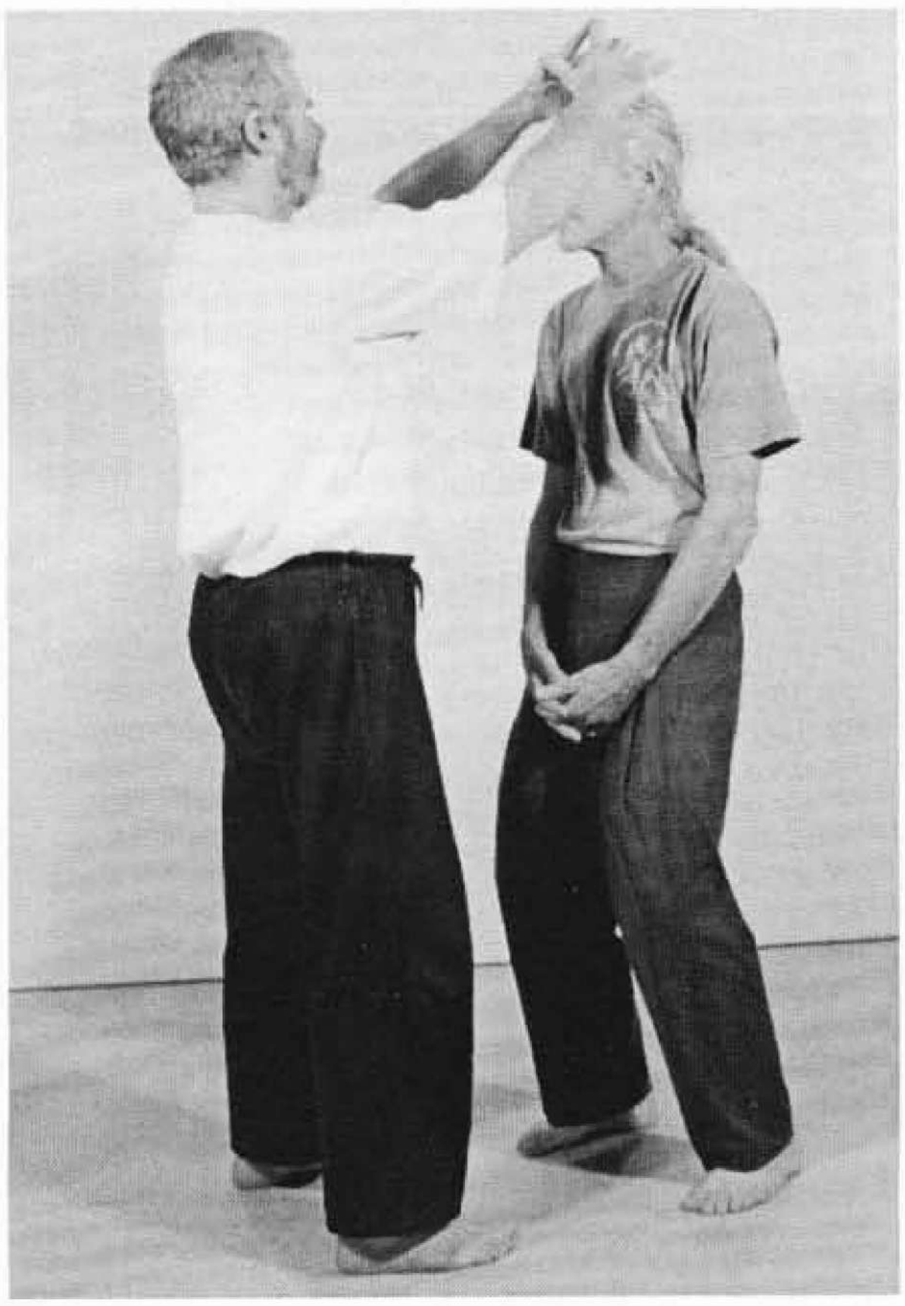


Figure 36

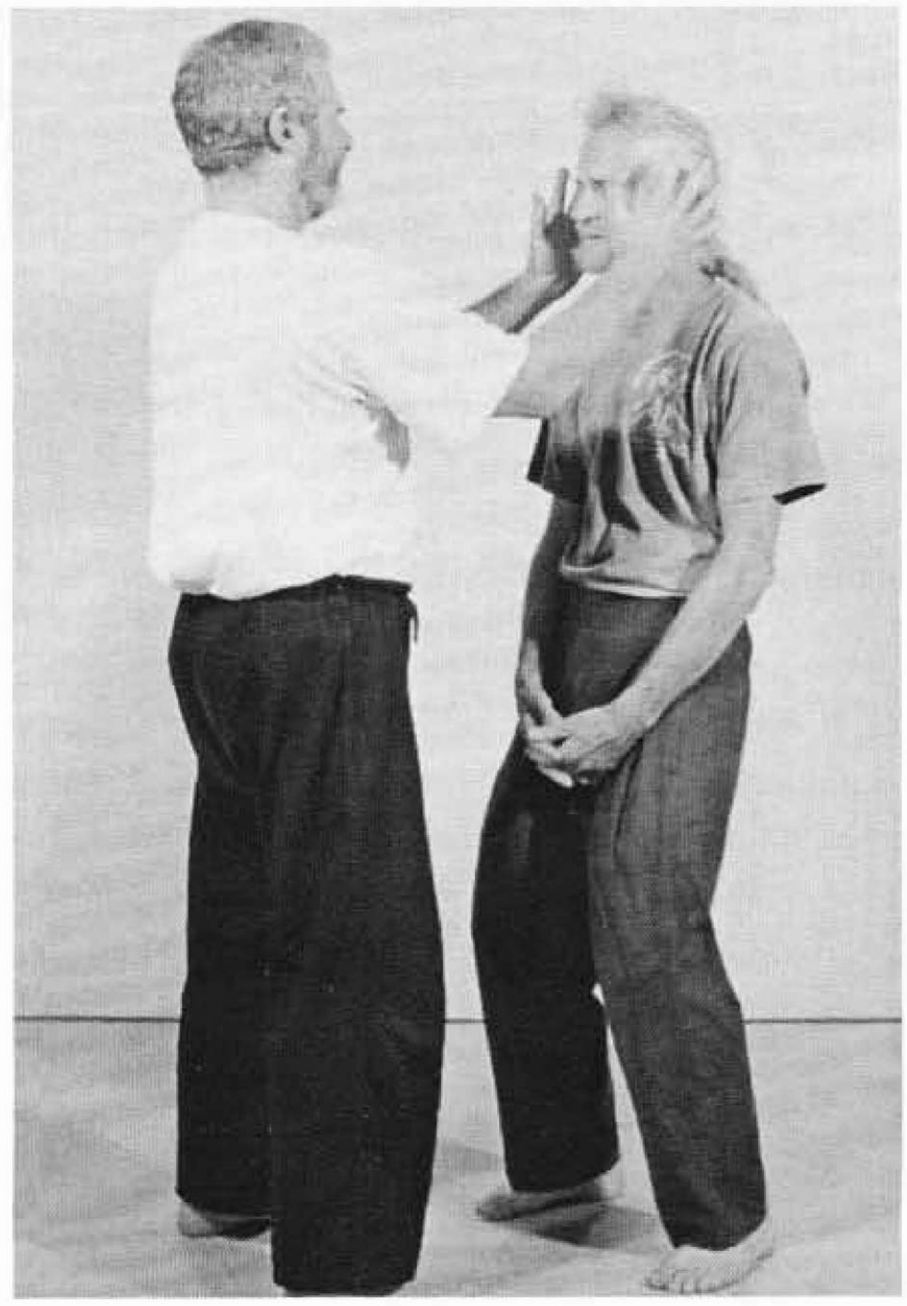


Figure 37

Direction of strike:

There is only one direction for this point: straight in to the head from the side.

Damage:

KO will occur with relatively lighter strikes; medium strikes will cause a loss of the sense of being (the person won't know where he is or even who he is). Death will occur with a very hard blow. This point is also a delayed death strike, being in close proximity to the small artery (middle meningeal artery) mentioned earlier.

Set-up point:

This point works really well with Th 12, struck straight inward, although neigwan will also work very well.

Another point that is not necessarily a set-up point per se, and which works very well with Gb 8, is the "third eye point." Called yintang, it is an extraordinary point situated right over the top of the governor vessel but not actually associated with it. It is located at the medial end of the two eyebrows. This is an "extra point" (one of those that have no actual meridian associated with them). In a healing sense, the yintang point is used to cure headache, insomnia, dizziness, vertigo, and diseases of the nasal cavity.

Antidote:

The antidote to Gb 8 is to squeeze Bl 10, at the back of the neck, inward and upward slightly. If yintang is also struck, you will have to use the qi balancing method as follows. (If, for instance, someone has had a qi-disruptive method performed on him that lasts for a few days and you wish to alleviate this situation, you should also use this method.)

Be calm and relaxed, not thinking about anything at all. (Do not think about the qi coming into your body and then going into the patient's; this will only block the healing.) Place your palms over Gv 20 (the crown) with only the thumb, forefinger, and middle finger touching (fig. 36). Inhale deeply, and then on the exhalation, run both hands in a teardrop shape around the patient's head, as close to the skin as possible without touching it, down the side of the face (fig. 37). Continue over the chin and end up at Cv 14, with the last three fingers touching (fig. 38). Hold this position for a full inhalation and exhalation, then take your palms back up to Gv 20 and begin again. You want to be certain not to rub back over the path that you followed on the way down, so take your palms out fairly far, in big arcs. Do this three times, and it should be enough to fix the strike to the third eye point. It will also help in alleviating the strike to Gb 8, depending upon what physical damage has been done.

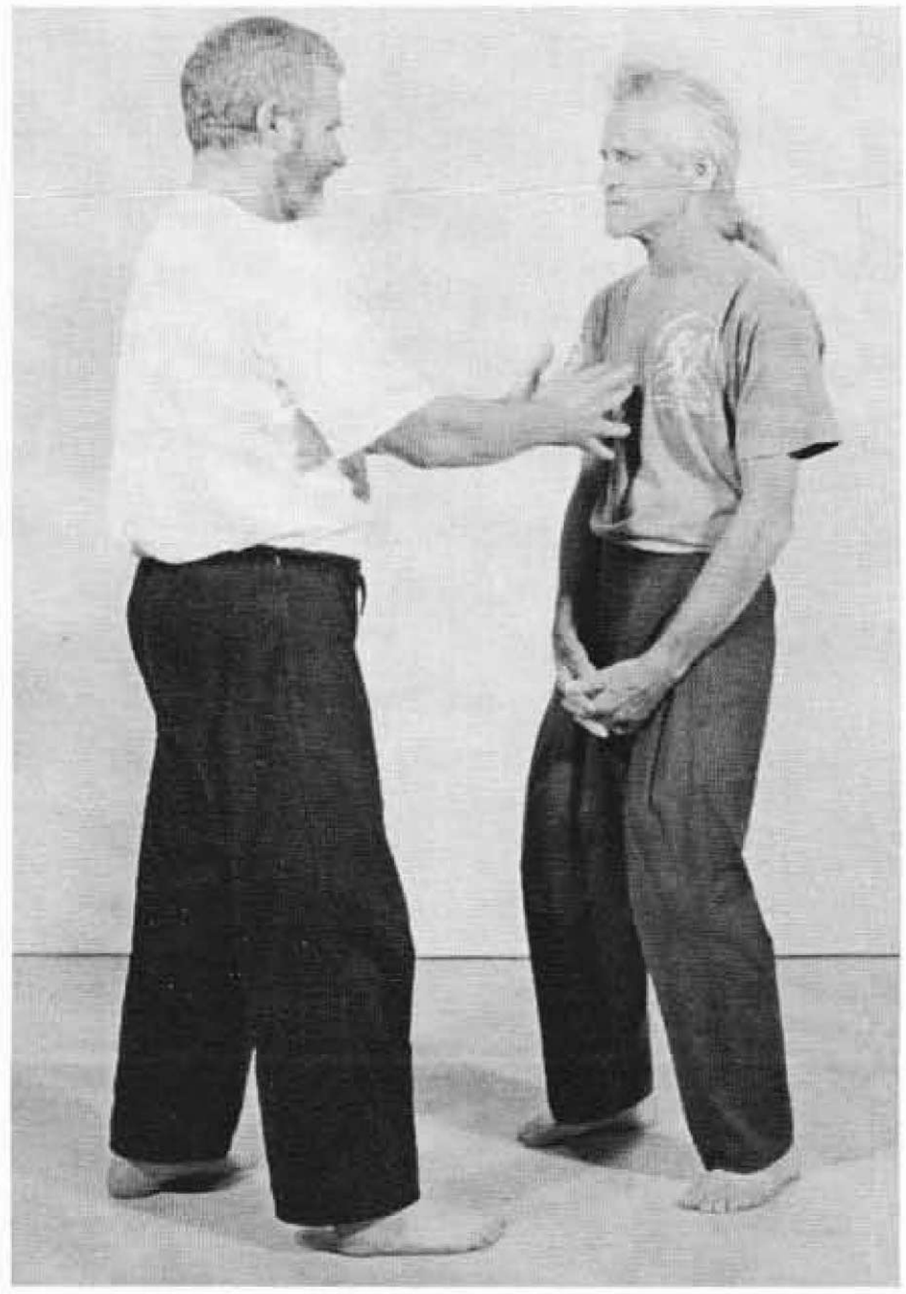


Figure 38

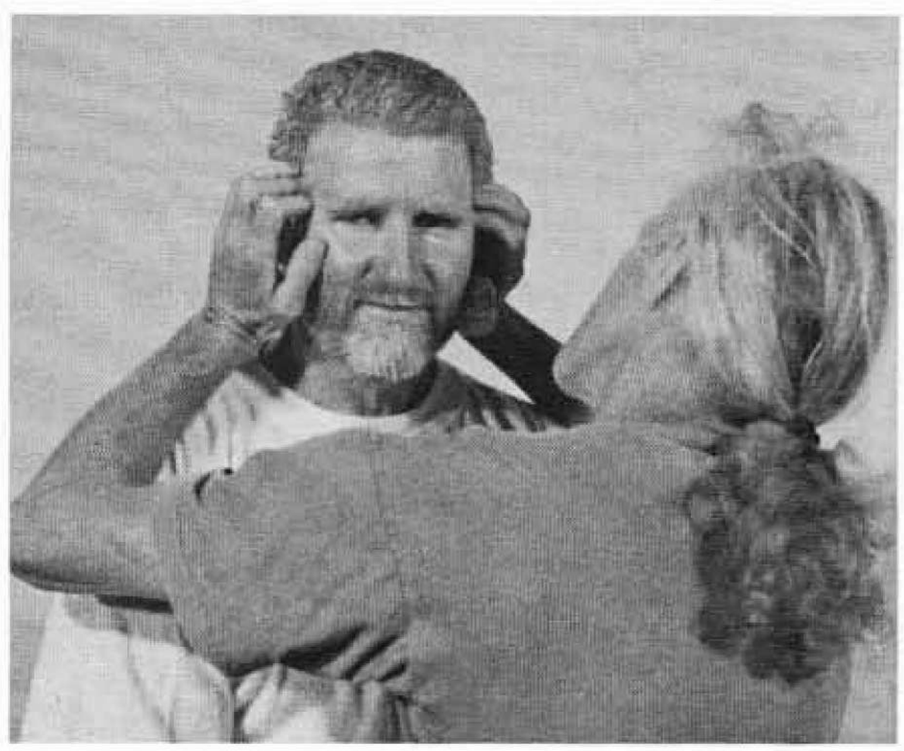


Figure 39

Healing:

Gb 8 is irrigated by the parietal branches of the

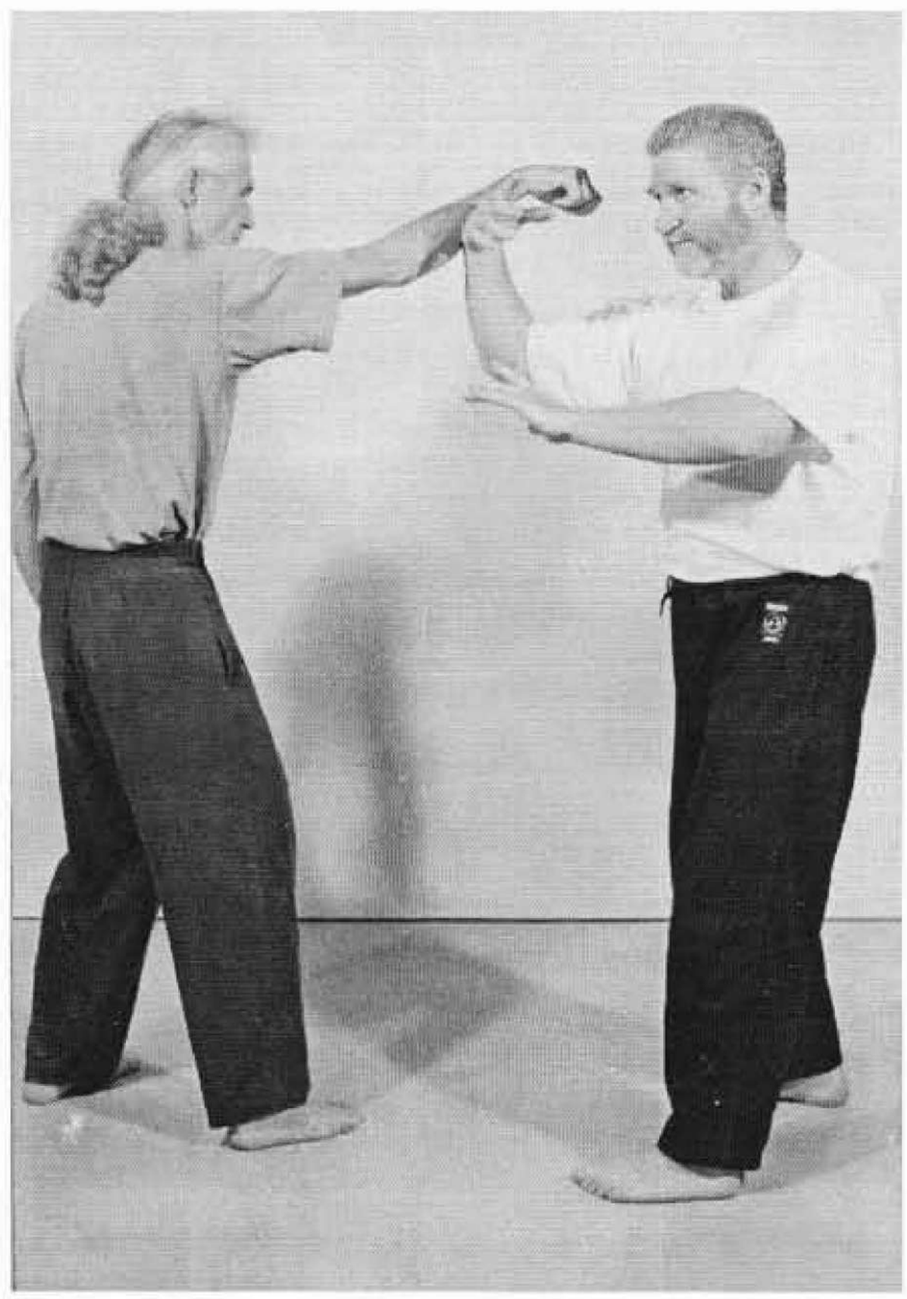


Figure 40

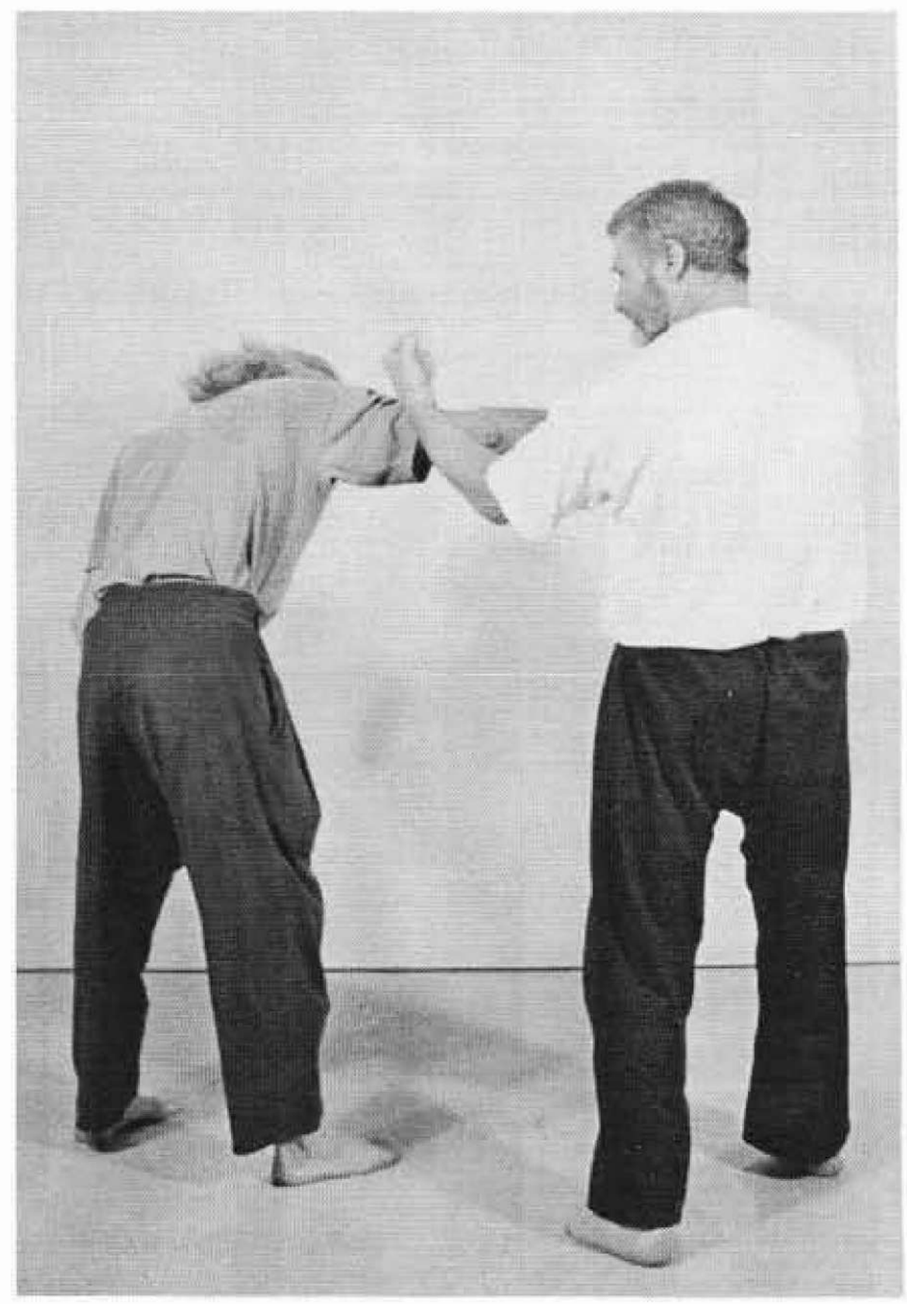


Figure 41

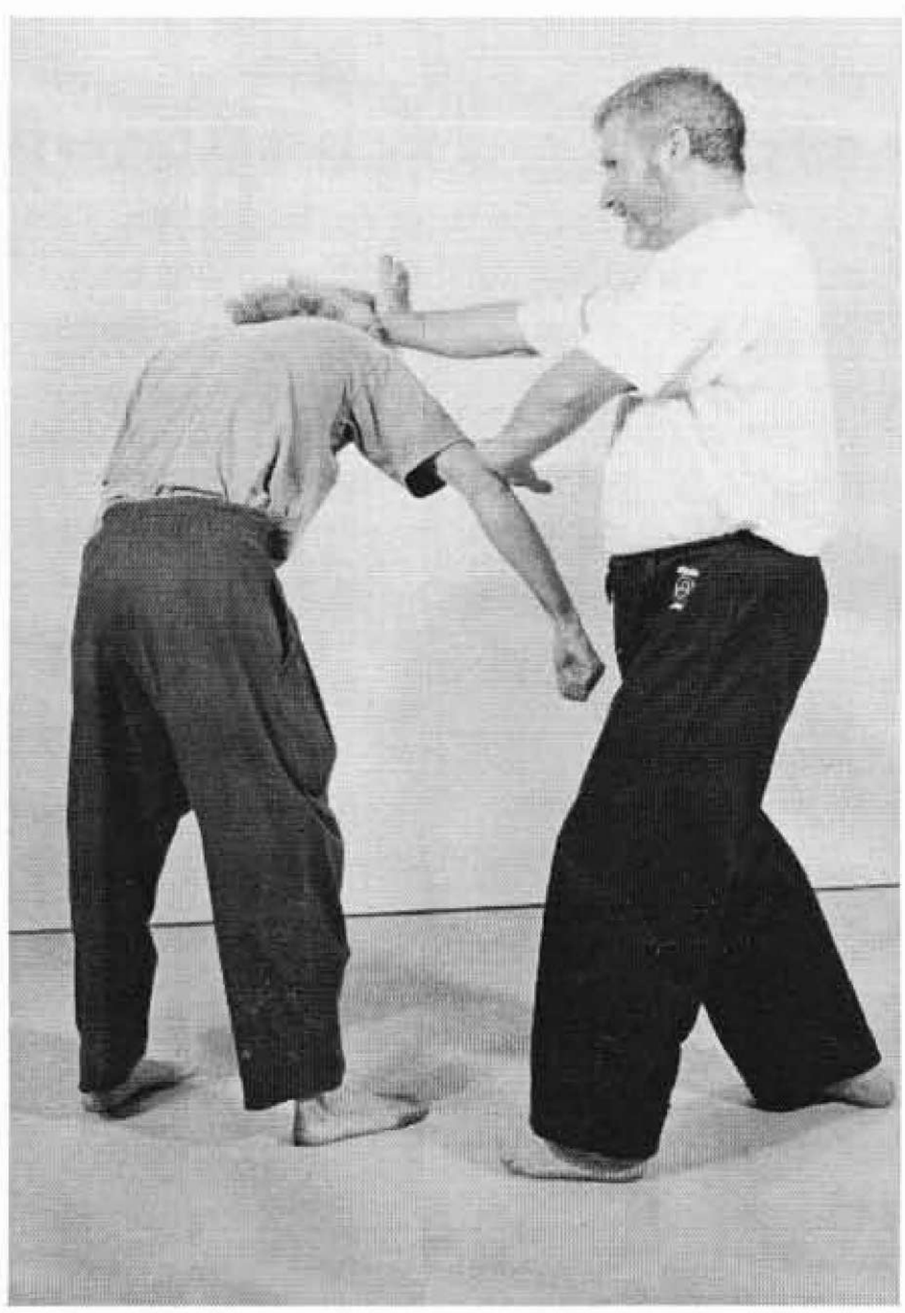


Figure 42

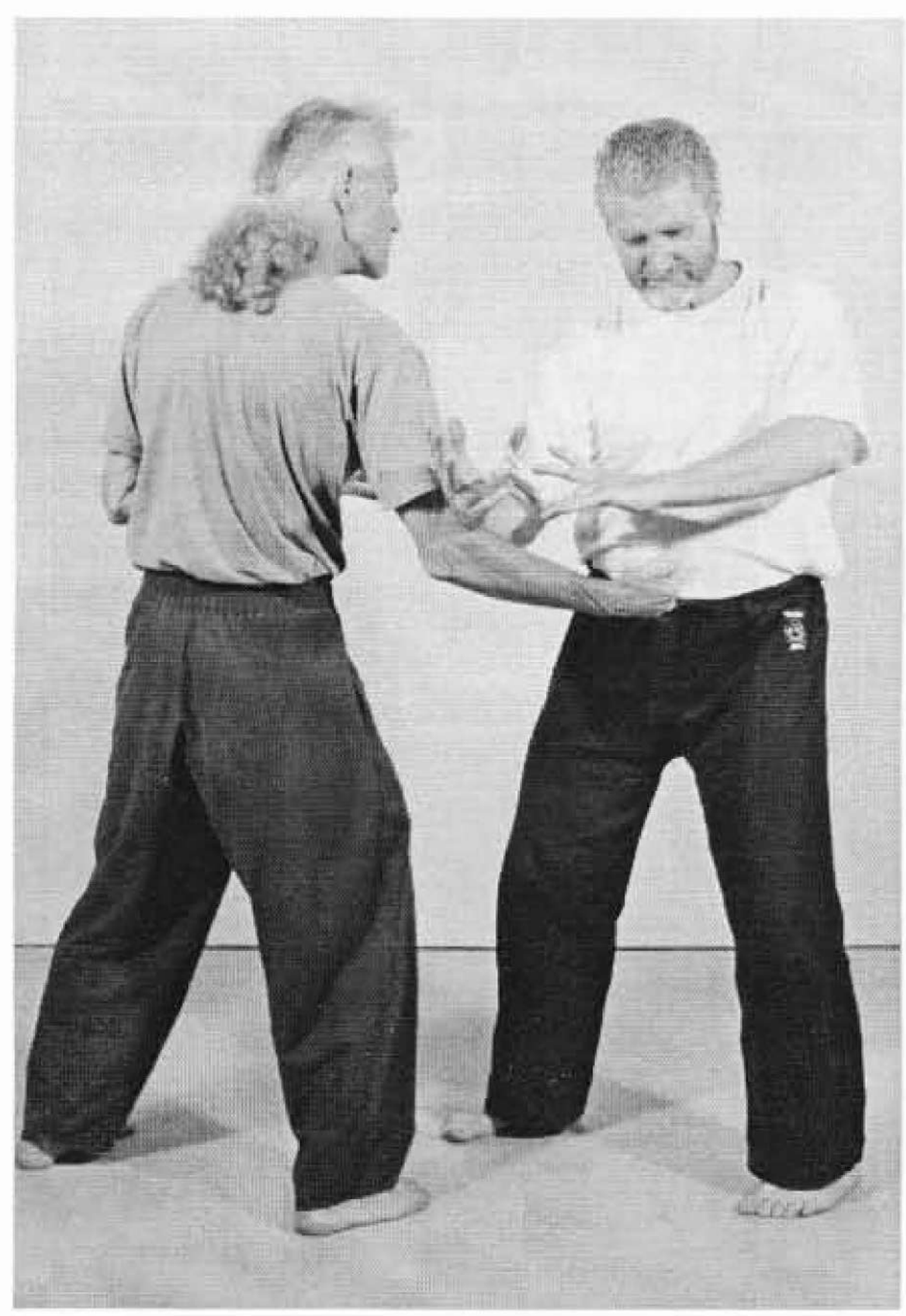


Figure 43

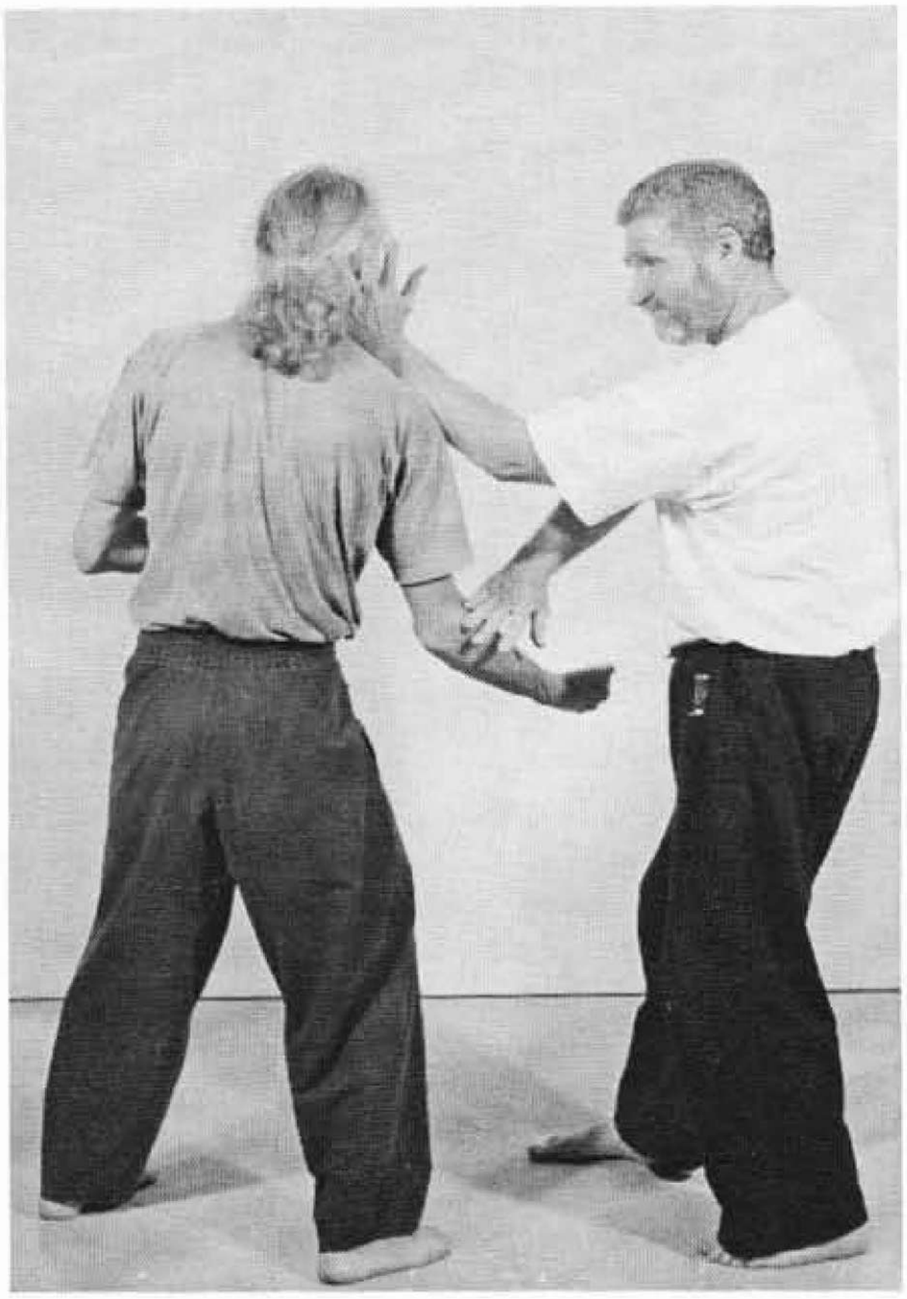


Figure 44

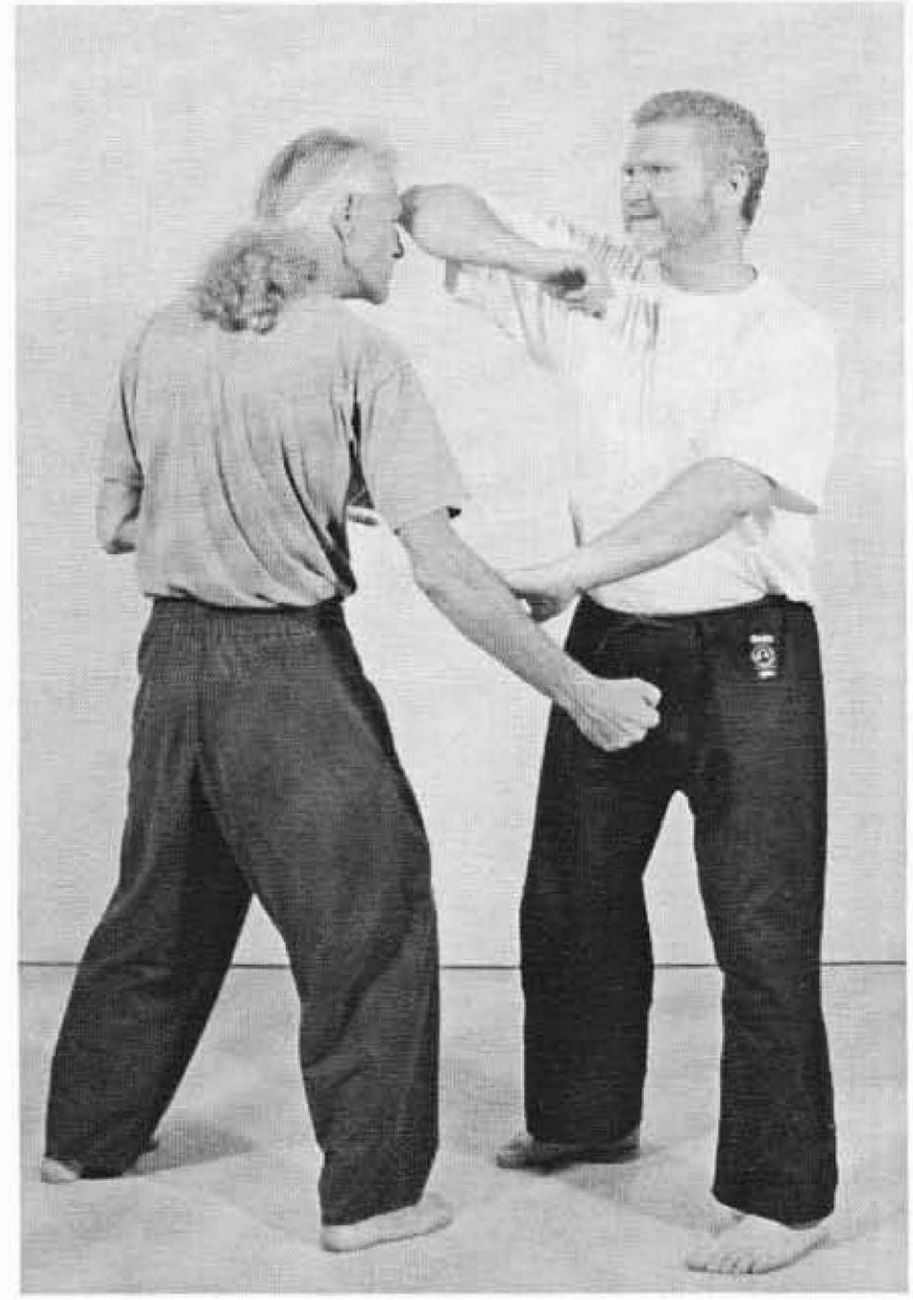


Figure 45

superficial temporal artery and vein and innervated by the anastomotic branch of the auriculotemporal nerve and the great occipital nerve.

It is used to treat migraine headache, vertigo, eye diseases, and facial neuralgia.

You could use it in conjunction with Th 9, Gb 20, Gv 20, Th 3, and *tai yang* for headaches. (Tai yang is an extraordinary or extra point, located out from the outer corner of the eye and at an angle slightly upward, about halfway between the corner of the eye and where that line meets the ear, or at the depression 1 cun behind the middle point between the lateral tip of the eyebrow and the angulus oculi lateralis, or the corner of the eye socket). This point is used alone to cure headache, migraine, common cold, trigeminal neuralgia, toothache, facioplegia (facial paralysis), and eye disease.

Press in a straight line from tai yang out and angled upward to Gb 8 (fig. 39). You can also do clockwise or counterclockwise rotations for xu or shi conditions respectively, or you might just "hold" the point and push lightly.

For the early stages of glaucoma you could combine Gb 8 with an extra point called *qiuhou*, which is at the inferior border of the orbit (eye socket), approximately one quarter of the distance from the lateral edge to the medial edge (just on the eye socket bone under the outside corner of the eye and inward slightly). Continuing the combination, add Gb 20, tai yang, Co 11, and Bl 1. Use clockwise or counterclockwise rotations for xu or shi conditions or vibrate the points (your fingers vibrate over the point).

For conjunctivitis, you could make a line (with your fingers) out and up from tai yang to Gb 8 with press-and-release action. Plus, hold Gb 20 and Co 4. You can also hold Bl 1 or do slow rotations counterclockwise. NOTE: *Be careful not to cross-infect the eyes.*

Applications:

The set-up point for Gb 8 is Th 12. So we make use of this in the martial applications.

1) He attacks with perhaps a right straight. You might use a p'eng-type blocking/striking motion straight upward into neigwan, or that general area (fig. 40). Your right palm instantly rotates over

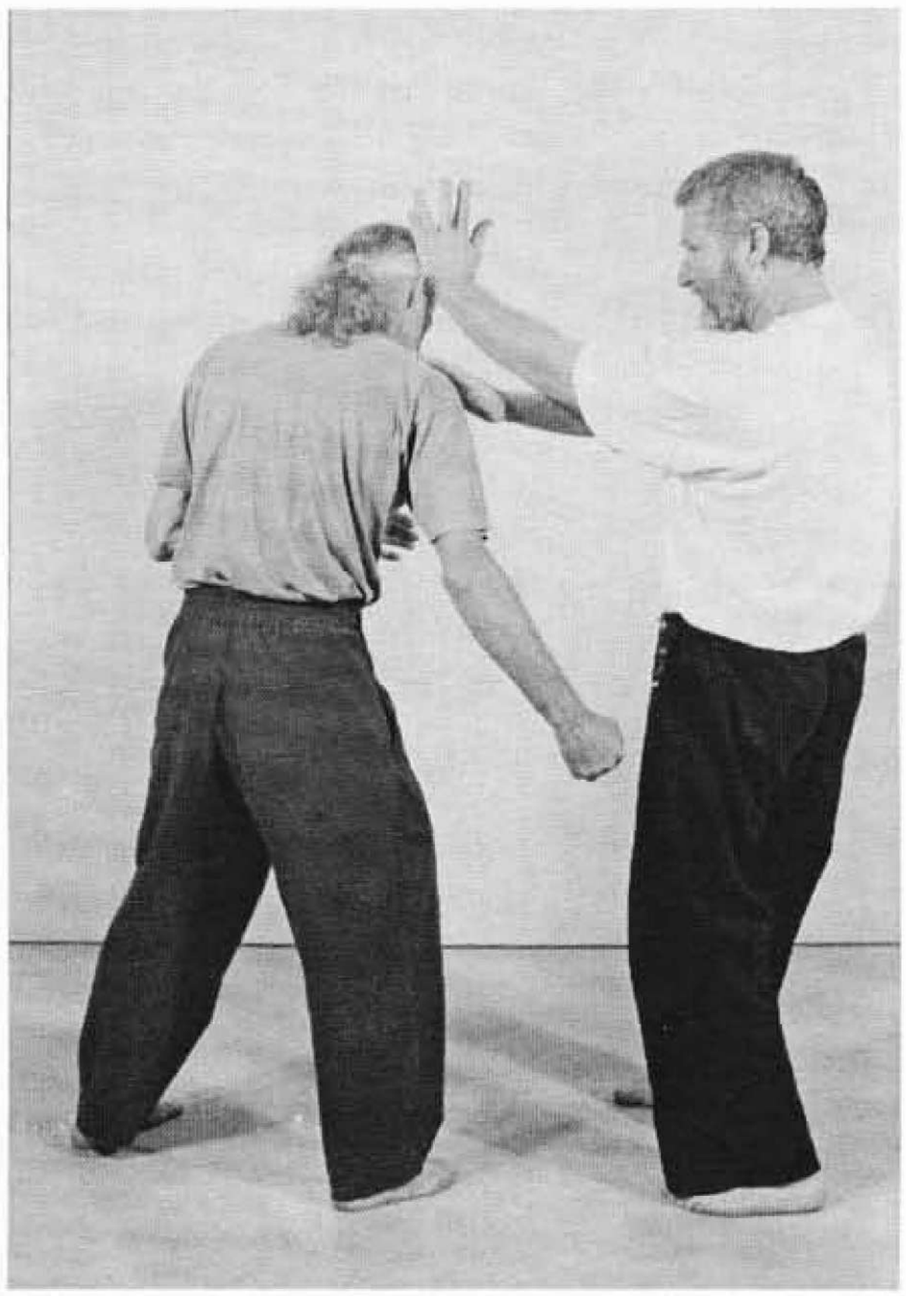


Figure 46

his right wrist to grab neigwan as your left palm strikes across Th 12 (fig. 41). Your left palm now instantly moves backward down his triceps as your right one-knuckle punch or heel palm attacks to Gb 8 (fig. 42).

2) This is a very deadly four-point application, causing instant death. He might attack using a right low hook. You will slam the inside of his right forearm with the back of your right palm, striking to Lu 5 as the set-up point. This will cause KO by itself when struck hard. In this case it is struck hard, as we use what is known in internal martial terms as a "dead hand," where the arm is totally loose and not tense at all, using the rotation of the waist to cause the "dead arm" to be thrown into the elbow crease at Lu 5 (fig. 43). The waist now loads to your right as you cock your right elbow, ready to strike, and your left palm knife edge attacks to St 9 (fig. 44). This will cause KO or death. Next, the waist swings violently to your left, causing your right elbow to strike into yintang, or the third eye point. Your left palm is also loaded, ready to strike (fig. 45). A split second later (if the timing is not right the attacker's head will move backward too far, thus making you miss with the main shot), your left palm slams into Gb 8 (fig. 46). Just using the elbow to yintang will cause death; the combination is so devastating that it causes instant death. It is known as an irretrievable dim-mak strike (meaning that even CPR or instant medical attention will not reverse its effect).

GB 9 (GALLBLADDER POINT NO. 9)

Chinese name:

Tianchong (heavenly assault).

Location:

.5 cun posterior to Gb 8, 2 cun within the hairline.

Connections:

Bladder.

Direction of strike:

You should strike this point straight in to the head using either a one-knuckle punch or a palm-heel strike.

Damage:

A strike to Gb 9 causes instant KO because of the location of the point; death could occur if it is struck hard enough. This is an energy drainage point.

Set-up point:

Neigwan is again the set-up point, although a "slice" up the outside of the forearm will also work well. Other points that work well with Gb 9 are St 15 and St 16 on the pectoral. When both points are struck just before the Gb 9 shot, the effect of the heart slowing or stopping is greater.

Antidote:

Gb 20 squeezed inward and up.

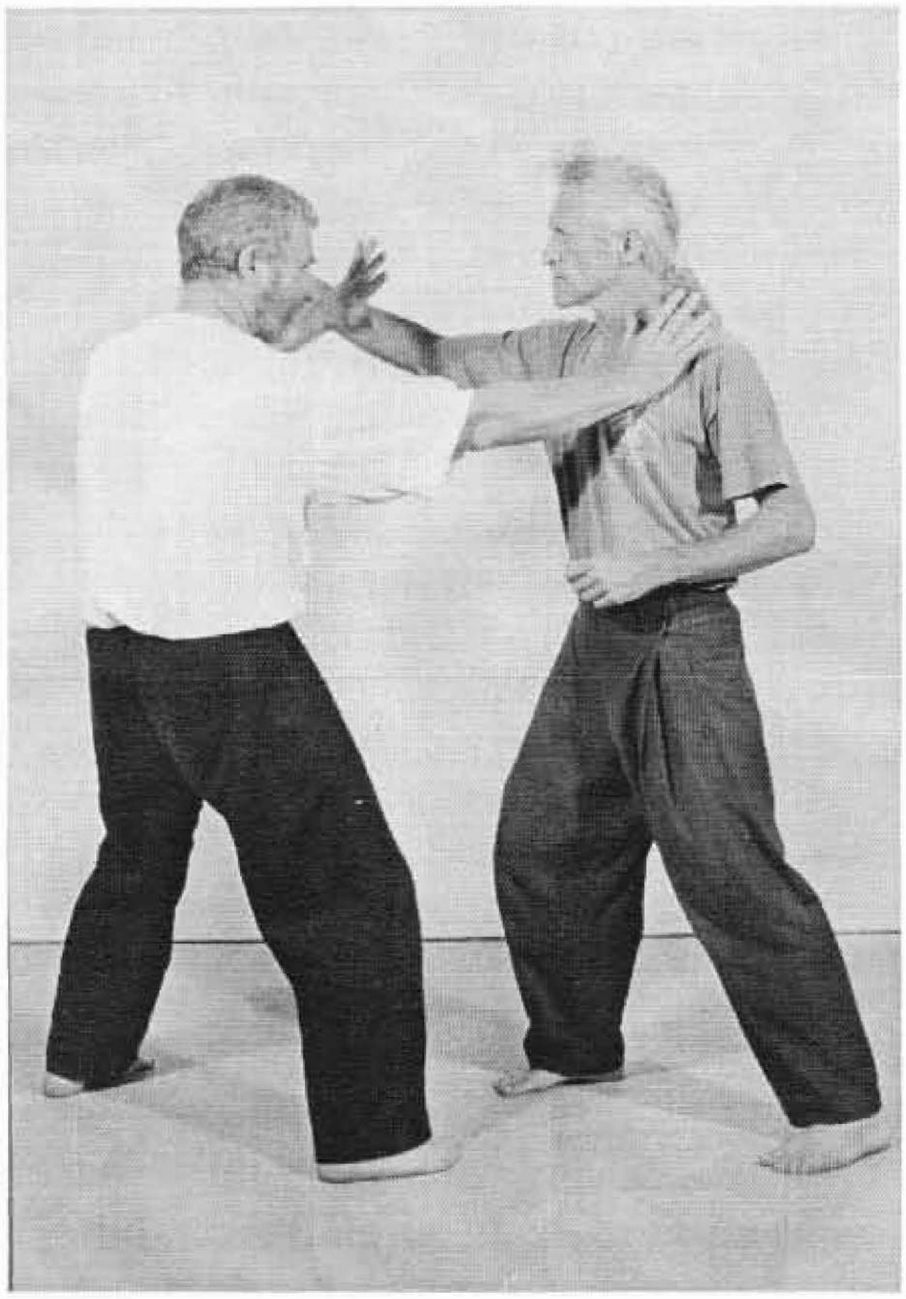


Figure 47

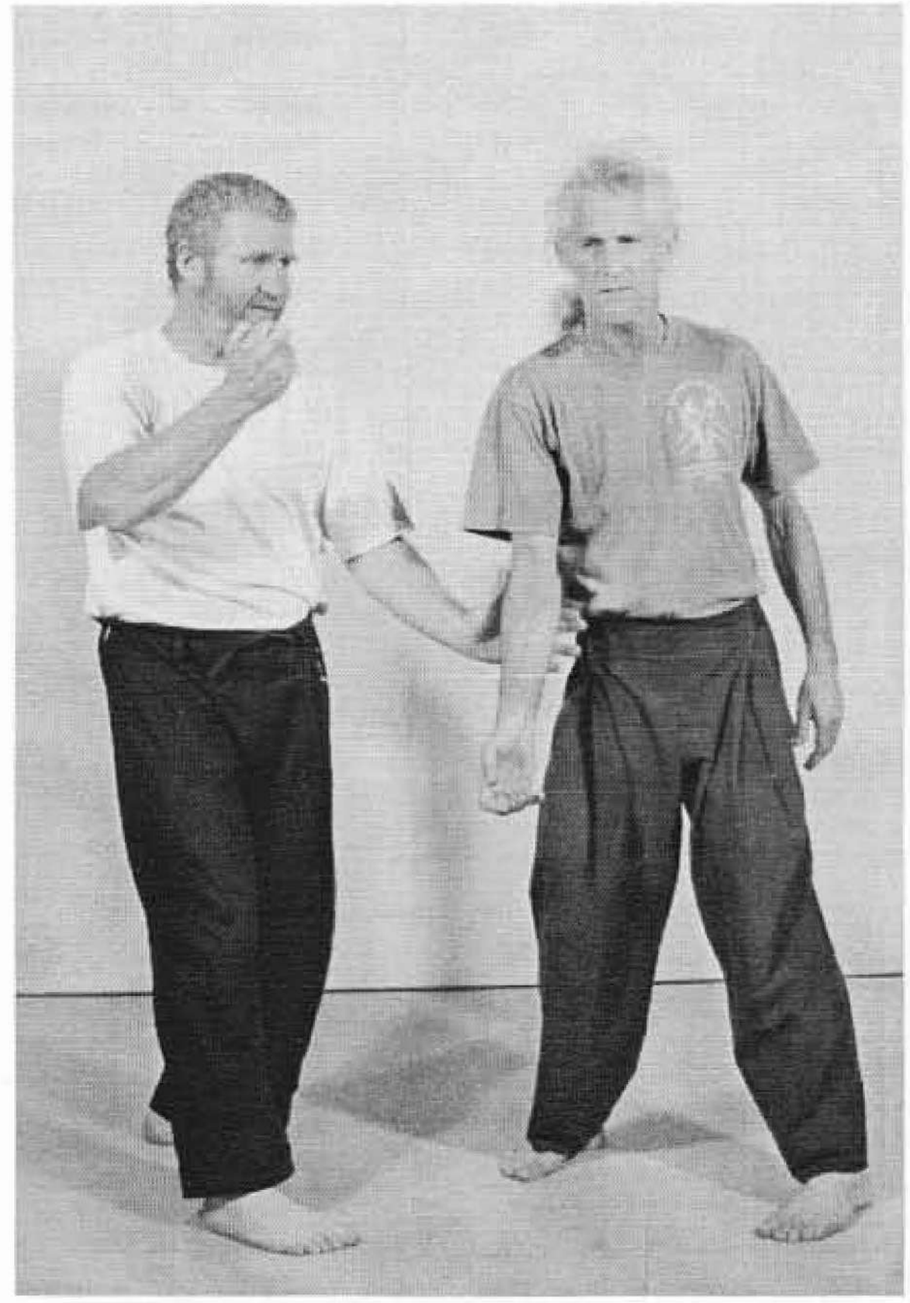


Figure 48

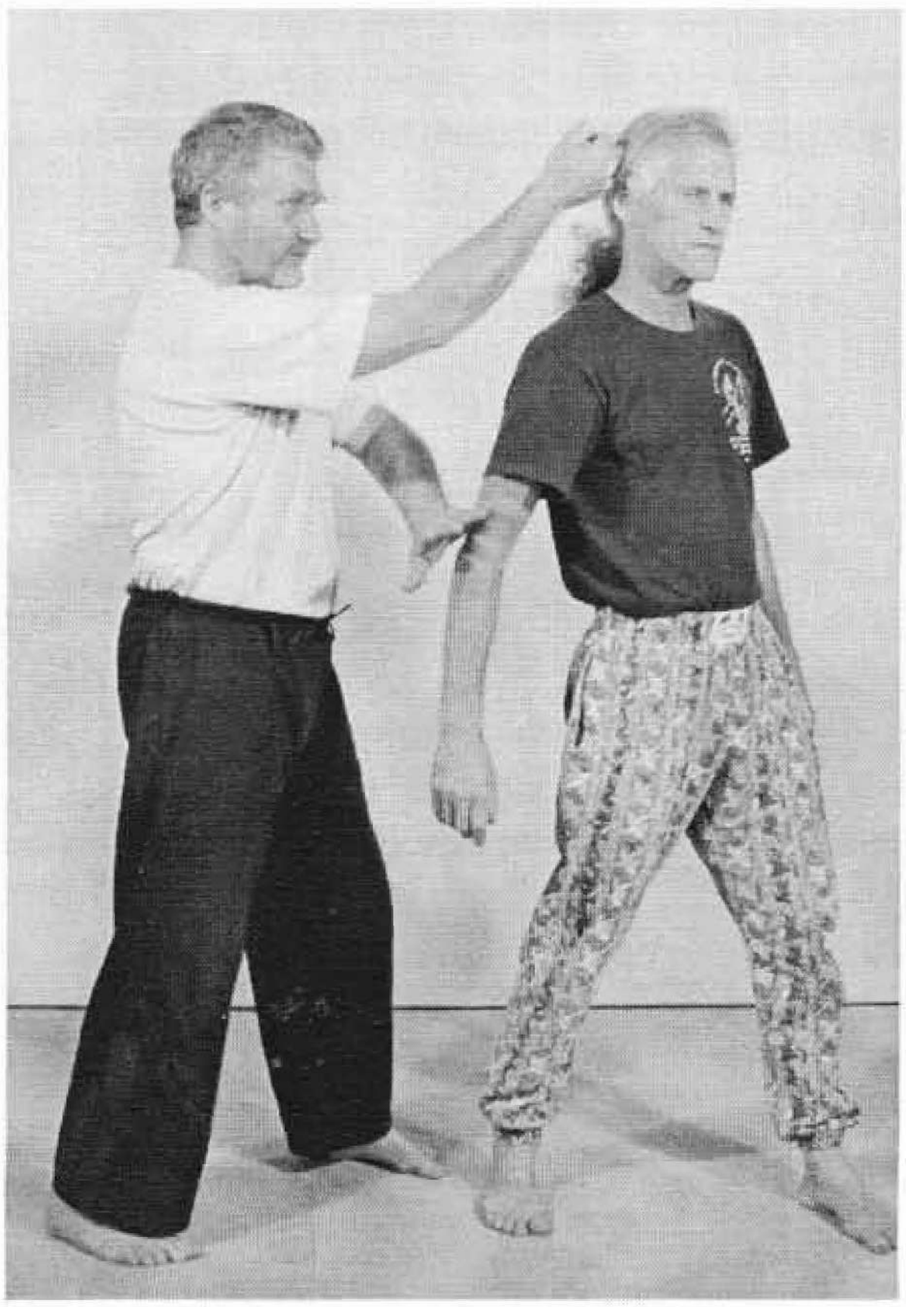


Figure 49

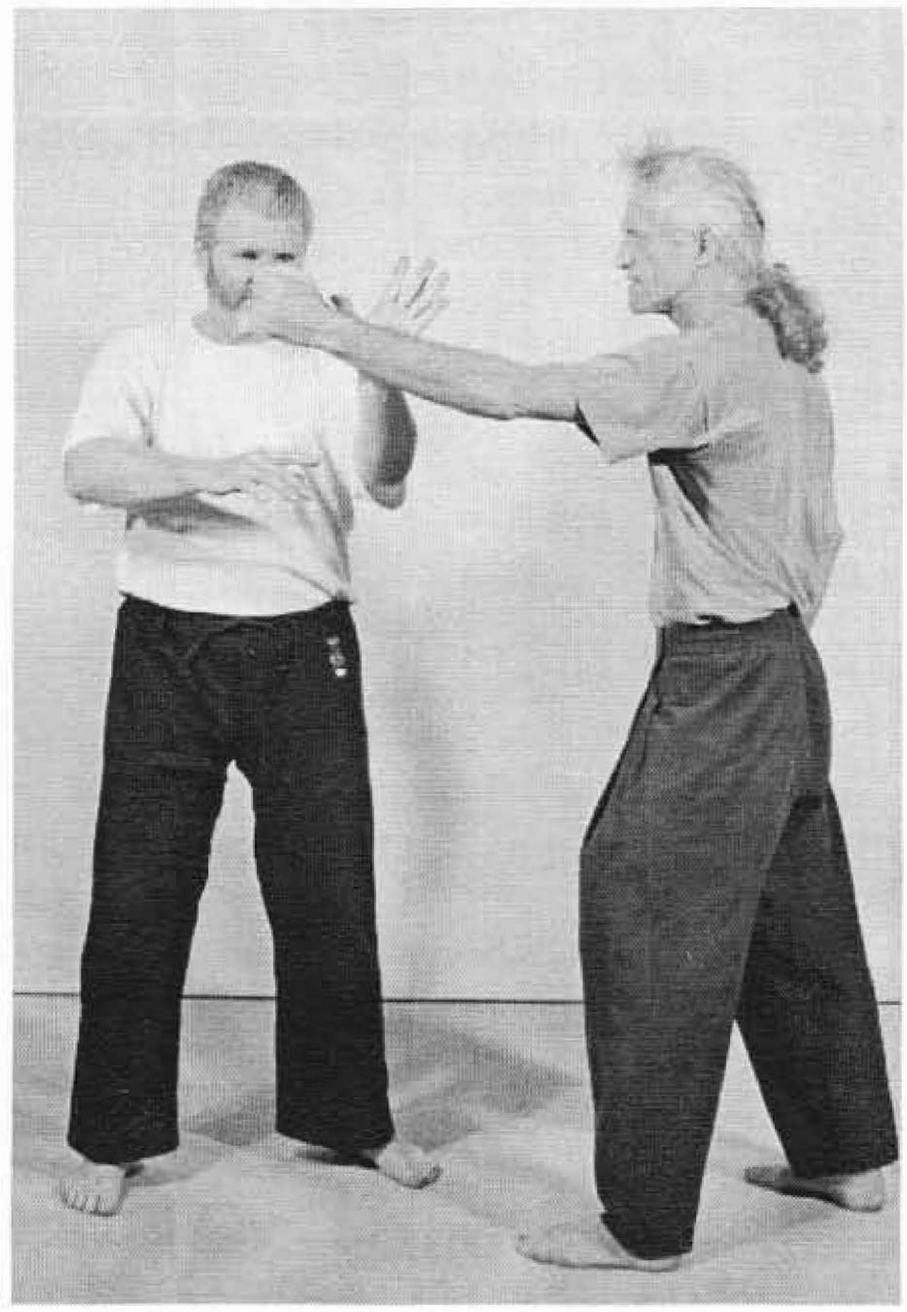


Figure 50

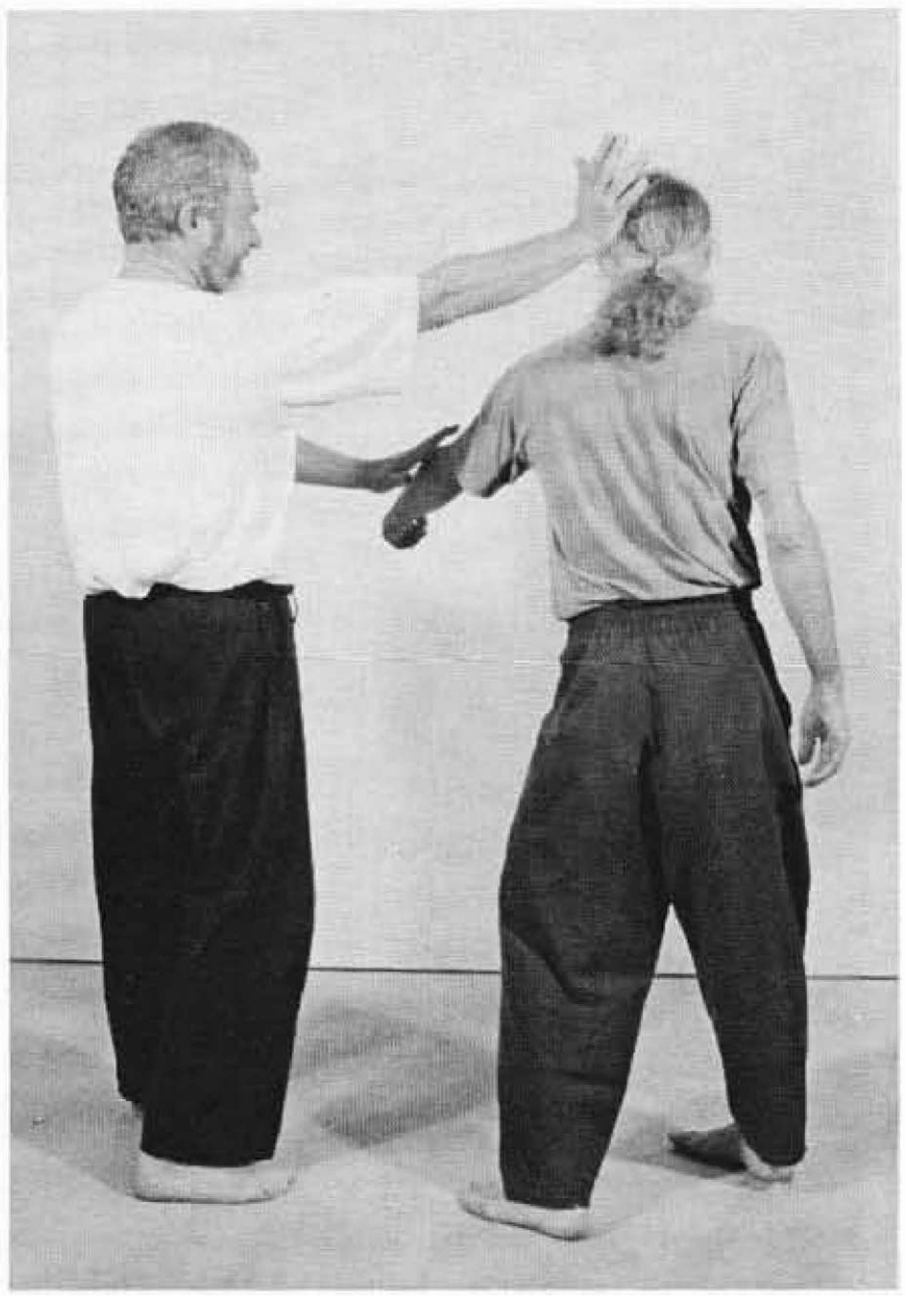


Figure 51

Healing:

Used to treat toothache, painful swelling of the gums, epilepsy, and goiter.

Applications:

1) He attacks with a right hook. Slap his neigwan point with your left knife edge as your right palm slams into St 15 and St 16 simultaneously (fig. 47). Hook your left palm over his right wrist and throw his right arm over to your right, loading your right one-knuckle punch (fig. 48). Turn your waist to your right as your right one-knuckle punch attacks to Gb 9 (fig. 49).
2) He attacks with a left straight. Slam his left neigwan with your left palm (fig. 50). Again, hook it over to your left as your right palm strikes to Gb 9 (fig. 51).

GB 10 (GALLBLADDER POINT NO. 10)

Chinese name:

Fubai (floating white).

Location:

Posterior and superior to the mastoid process, in the middle of the curved line drawn from Gb 9 to Gb 11. An easier way to find it is on a horizontal line drawn at the level of the eyes that runs toward the back of the head. The point is behind the ear on the squamosal suture, which is the joint between the parietal bone and the temporal bone of the skull.

Connections:

Bladder.

Direction of strike:

The direction is straight in, as with most of the head shots.

Damage:

Shocks the brain and affects the motor nervous system. If struck hard enough it will cause death at most and KO at least.

Set-up point:

Gv 26, just over the top lip and under the nose, with neigwan.

Antidote:

Press Gv 26 to deal with the shock that this strike can cause. If the attacker has gone white, the skin is "pasty," and he is perspiring profusely, then he is in shock. Gv 26, pressed with the tip of the thumb, is a good general point for all kinds of shock. Otherwise, the antidote is rest, if he isn't dead!

Healing:

Innervation is by the branch of the great occipital nerve. Irrigation is by the posterior auricular artery and vein.

This point is traditionally used for headache, tinnitus, deafness, and bronchitis. It is also used to treat atrophy of the leg muscles. This is a method of using a branch point to affect the root. (Root points are on the limbs and are close to the beginning and end of the channels, while the branch points are at the other end of the channel on the trunk or head.)

As Gb 10 is an intersection point with the bladder, it can be used to treat diseases involving both meridians. Gb 10 can be used with Co 4, St 44, Gb 14, and Co 3 for toothache.

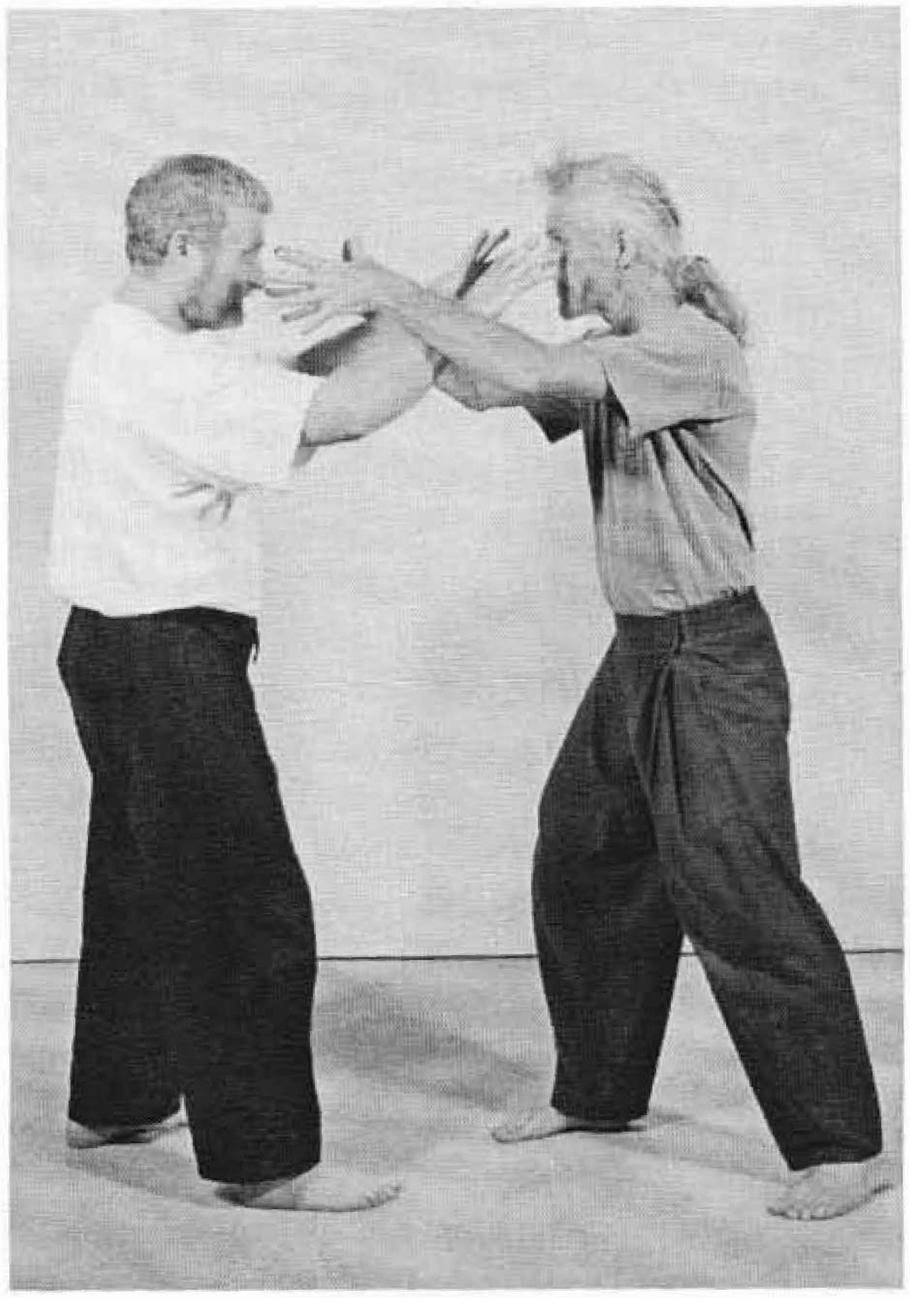


Figure 52

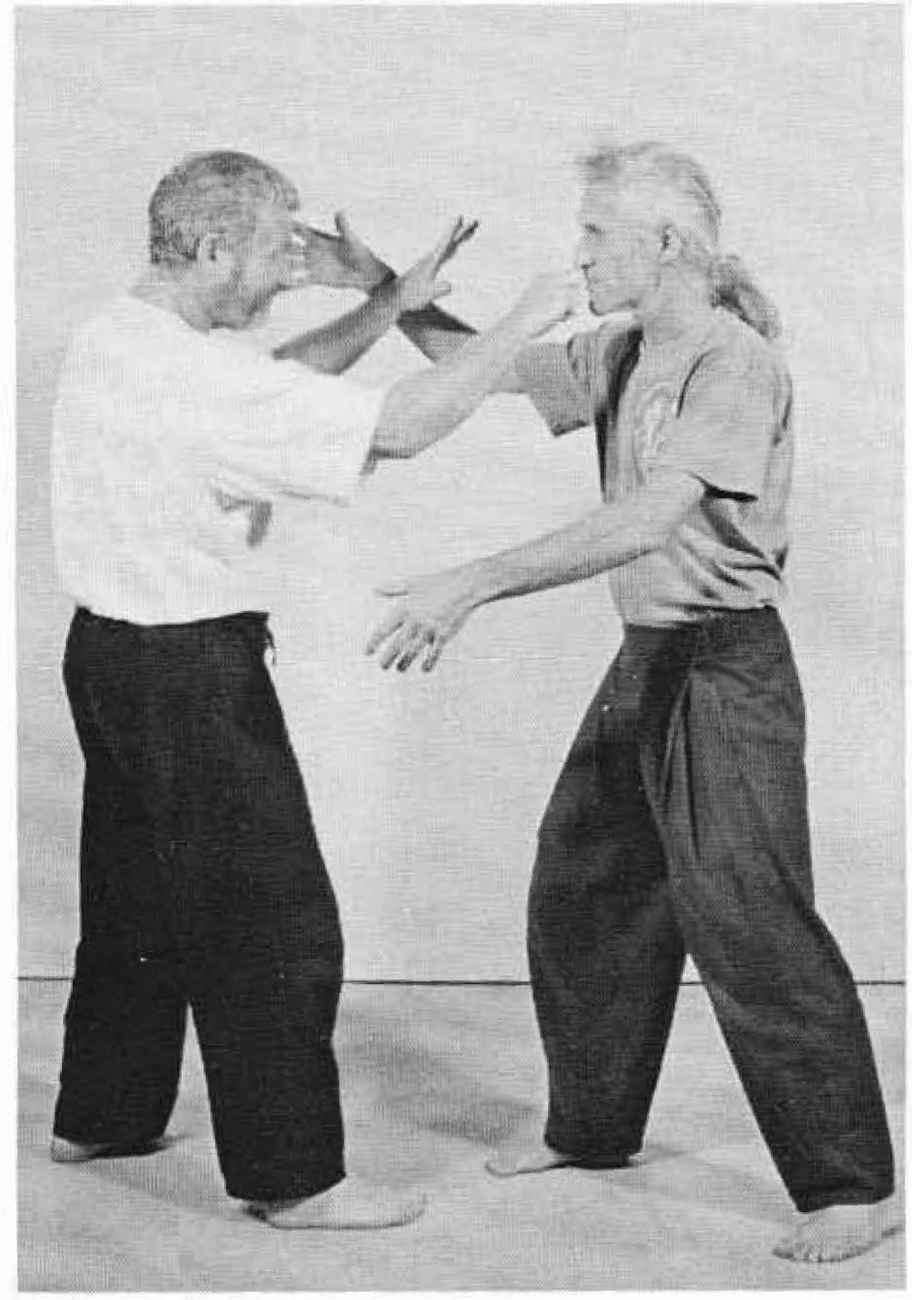


Figure 53

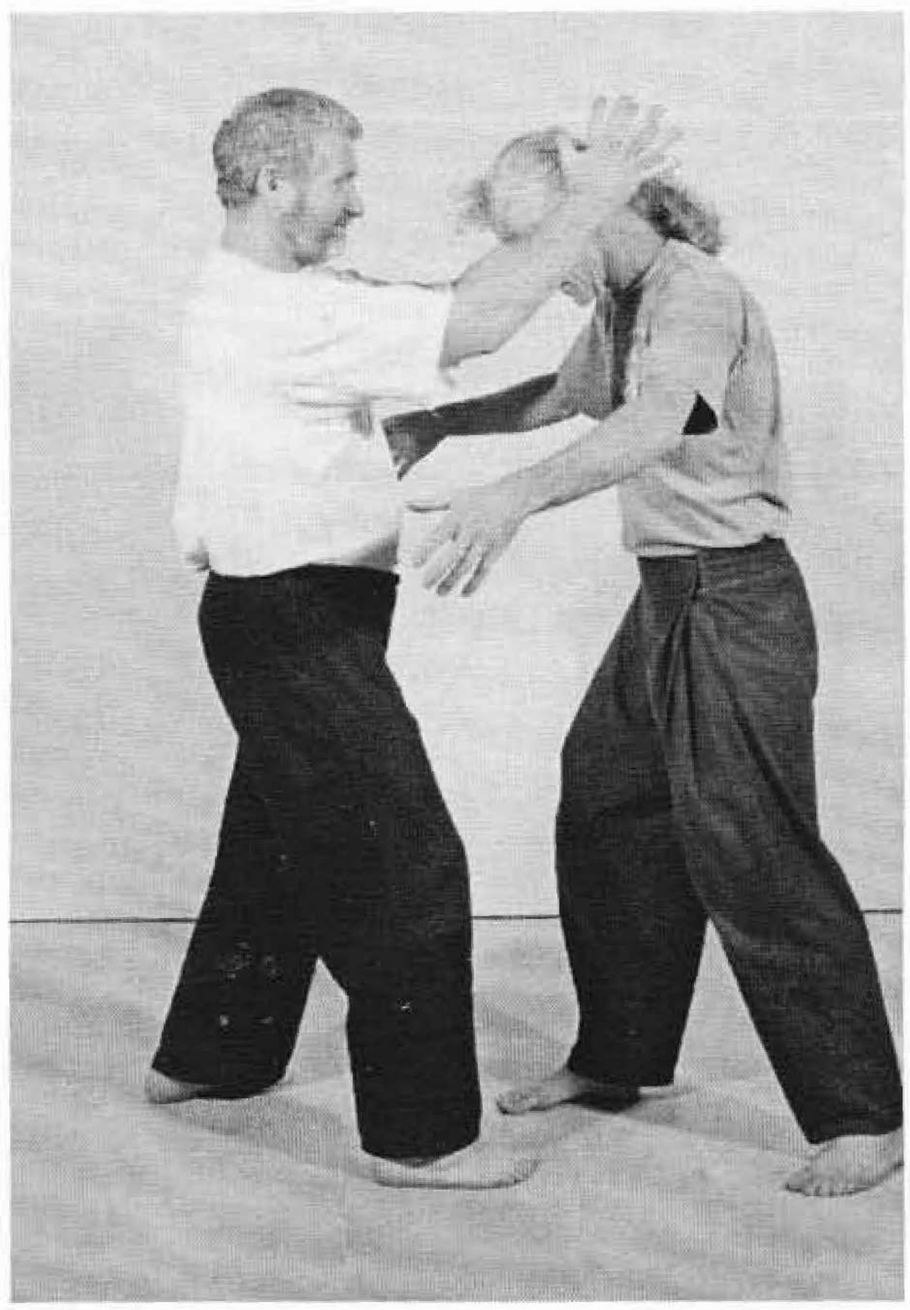


Figure 54

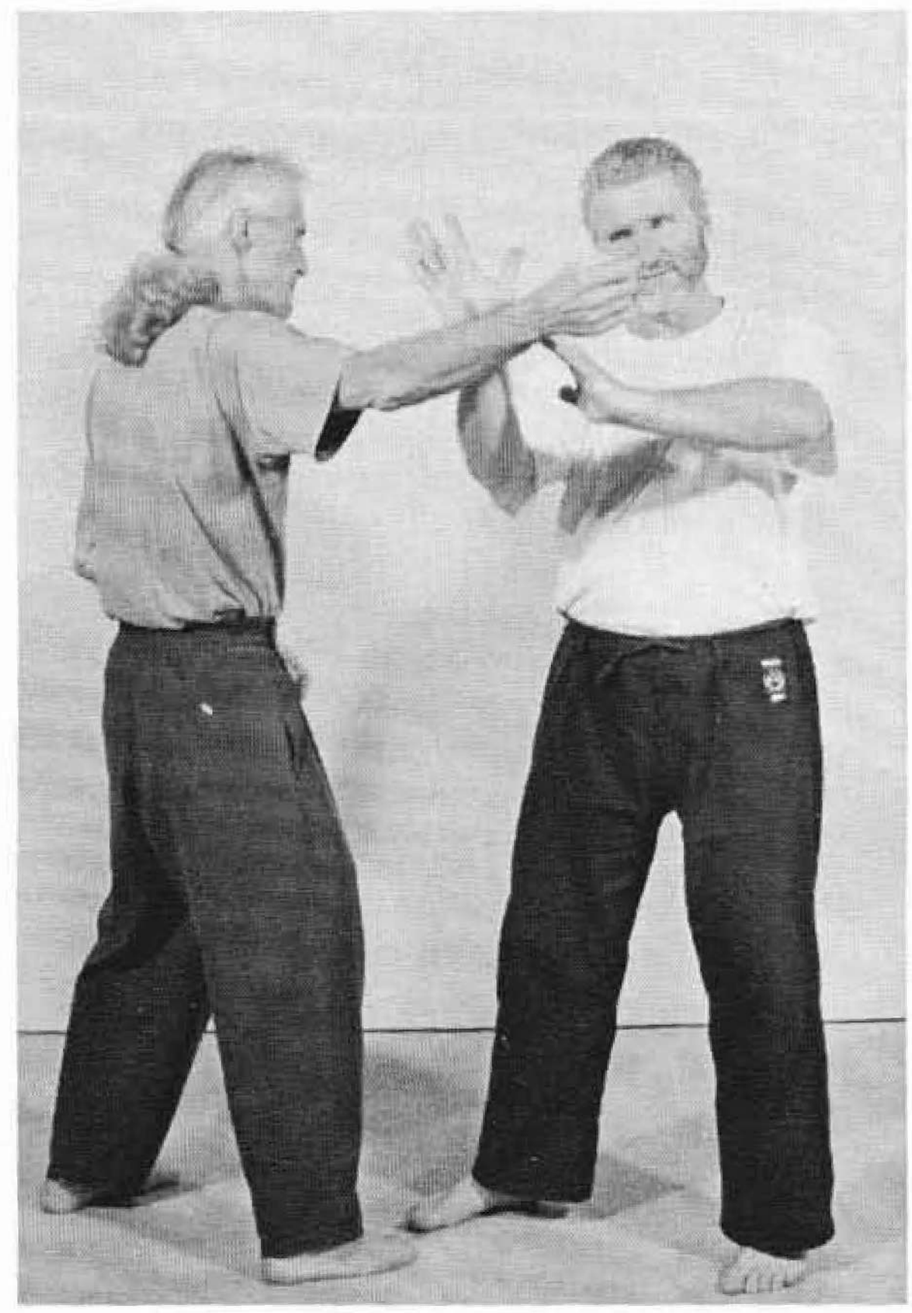


Figure 55

Figure 56

Massage might take the form of a straight press or a press with clockwise or counterclockwise rotation for xu or shi conditions respectively. You might also do fingertip percussion on this point for deafness or tinnitus. For one-sided headache, you could combine Gb 10 with tai yang, Gb 20, or Gb 12 as local points, plus Co 4, Gb 41, or Liv 3 as distal points.

Applications:

1) He might attack with any type of attack that is straight toward you, perhaps with both hands. You should strike with both palms toward his face, thus blocking his attack and, in this case, setting up the point by adding to the qi of the point by rubbing the inside of both of his forearms upward (fig. 52). Your right or left one-knuckle punch will attack to Gv 26 under the nose. This in itself could cause death at most and extreme muscle spasm of the upper body at least (fig. 53). Slam to both sides of his head with both of your open palms at Gb 10 (fig. 54).
2) Block his right attack with your right palm (fig. 55). This loads your right elbow. Twist your waist back to your right violently, thus thrusting your right elbow into the point (fig. 56).

GB 11 (GALLBLADDER POINT NO. 11)

Chinese name:

Qiaoyin (cavity of yin).

Location:

Midpoint on a line connecting Gb 10 and Gb 12. It is found in a small hollow behind the ear.

Connections:

Bladder.

Direction of strike:

Same as for Gb 10, straight inward.

Damage:

The damage is the same as for Gb 10, as it is in the same area of the head.

Set-up point:

To set up this point, you can use neigwan or, again, Gv 26, just under the nose. You can also can rub the outside of his arm violently downward several times before attacking to the point. This has the effect of turning his body to show you the point.

Antidote:

Gb 20, up and in.

Healing:

Used for pain in the neck and head, ear pain, deafness, tinnitus, bronchitis, laryngitis, pain in the chest, and goiter.

Applications:

He attacks with a right straight. We use the "willow tree" method here (a training method from

Figure 57

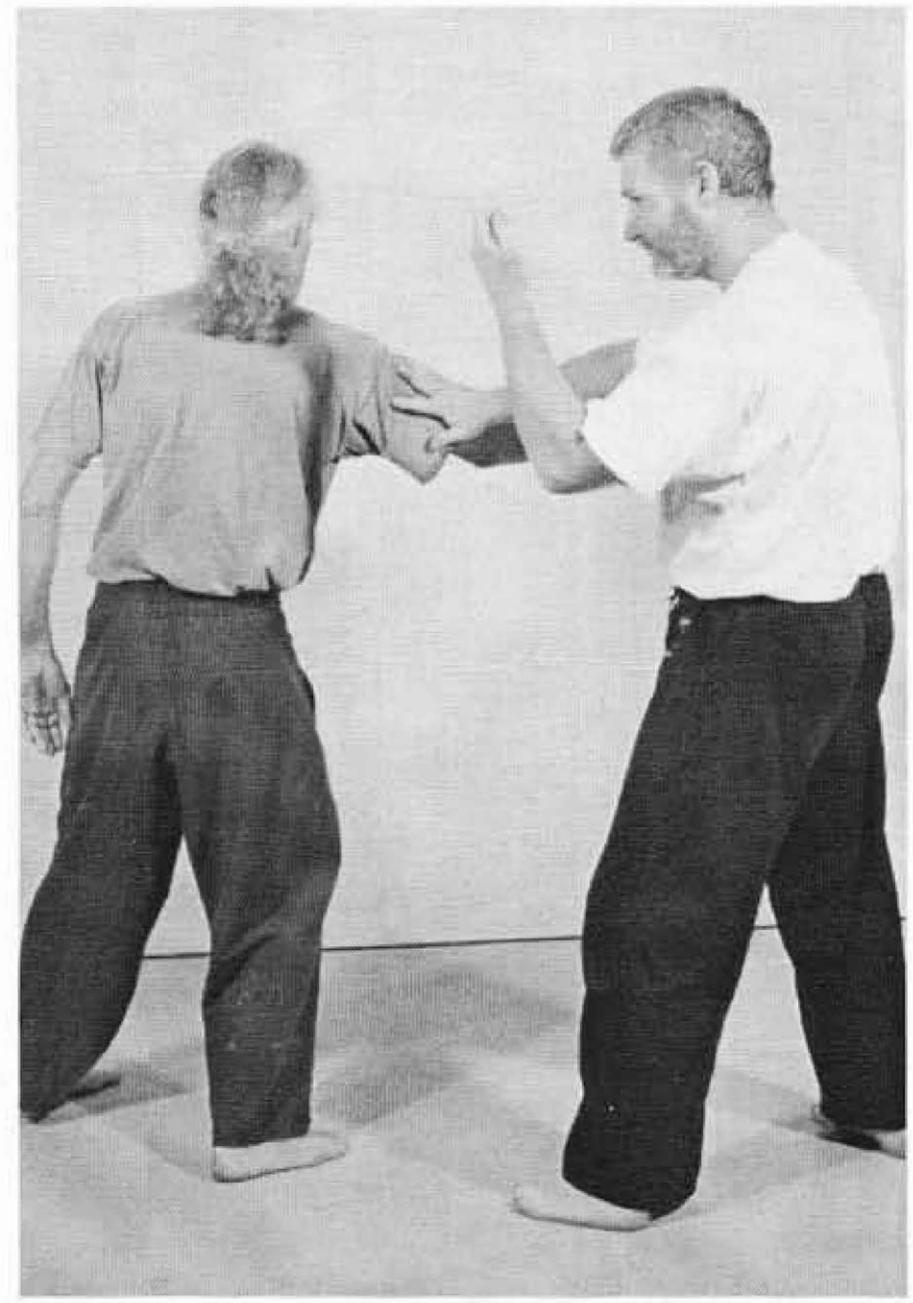


Figure 58

taijiquan). Slap his right forearm with your left palm downward as your right is about to take over this movement (fig. 57). Your right palm now takes over the sliding movement on the arm as your left palm is getting ready to strike (fig. 58). Your left palm makes contact with Gb 11, causing KO or death (fig. 59).

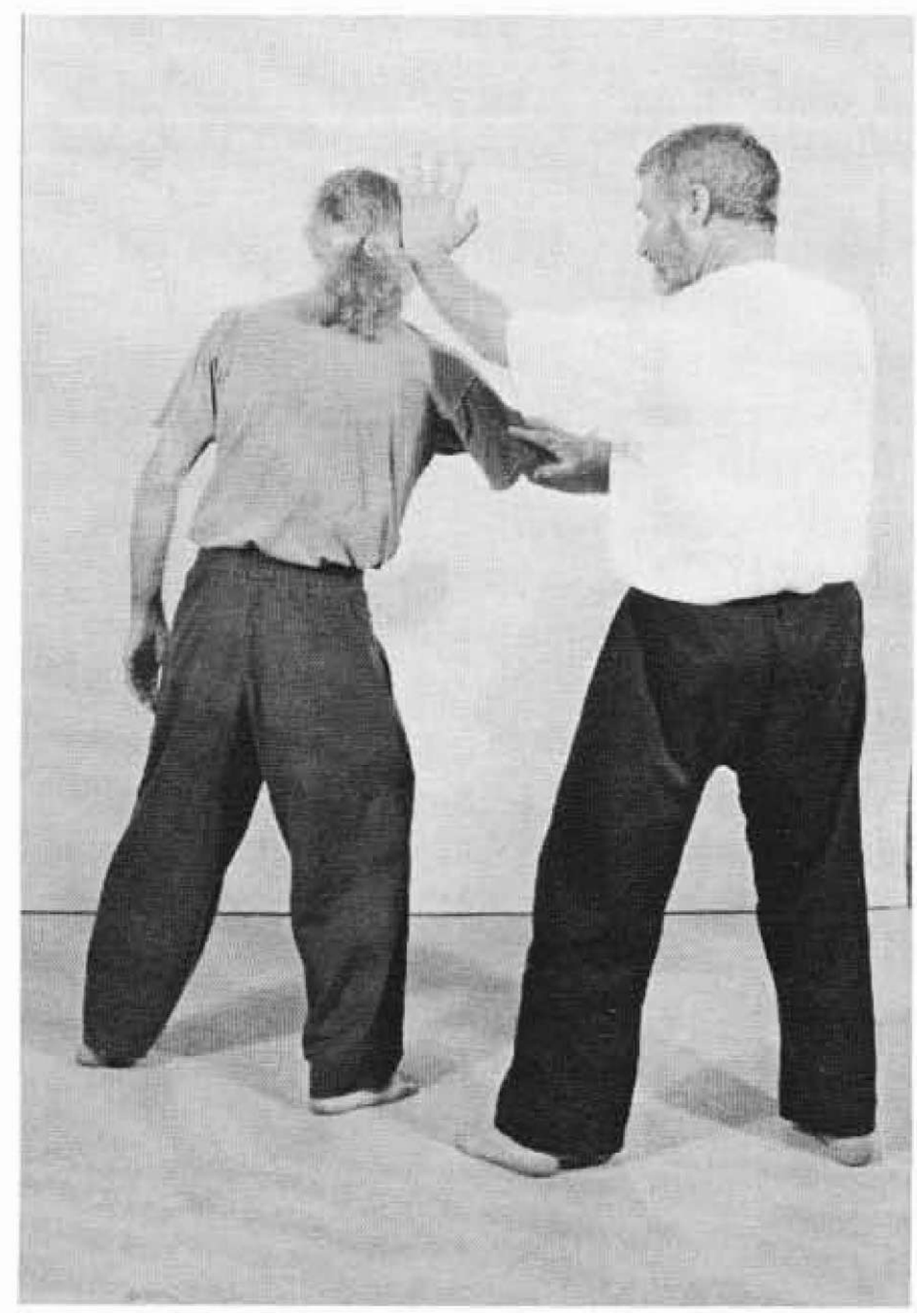


Figure 59

GB 12 (GALLBLADDER POINT NO. 12)

Chinese name:

Head wangu (finished bone).

Location:

In the depression posterior and inferior to the mastoid process, 0.7 cun below Gb 11 and level with Gv 16.

Connections:

Has a connection with bladder meridian and the governing vessel via an internal branch of the bladder meridian that passes through Gv 20 and descends to the region above the ear and connects with the gallbladder meridian at the Gb 7, Gb 8, and Gb 12 points. The tendino-muscular channel of the leg tai yang meridian has a branch that extends from the axilla over the chest upward to

the supraclavicular fossa and terminates at Gb 12. (The pathways of the tendino-muscular channels lie in the superficial regions of the body and constitute the superficial circulation of the qi. They penetrate the skin, muscles, tendons, joints, and body cavities, but not the organs. They follow similar pathways as their main meridian counterparts, and they have branches that at times cross over other channels as well as areas not traversed by their main meridian counterparts.)

Direction of strike:

Inward and slightly upward into the brain.

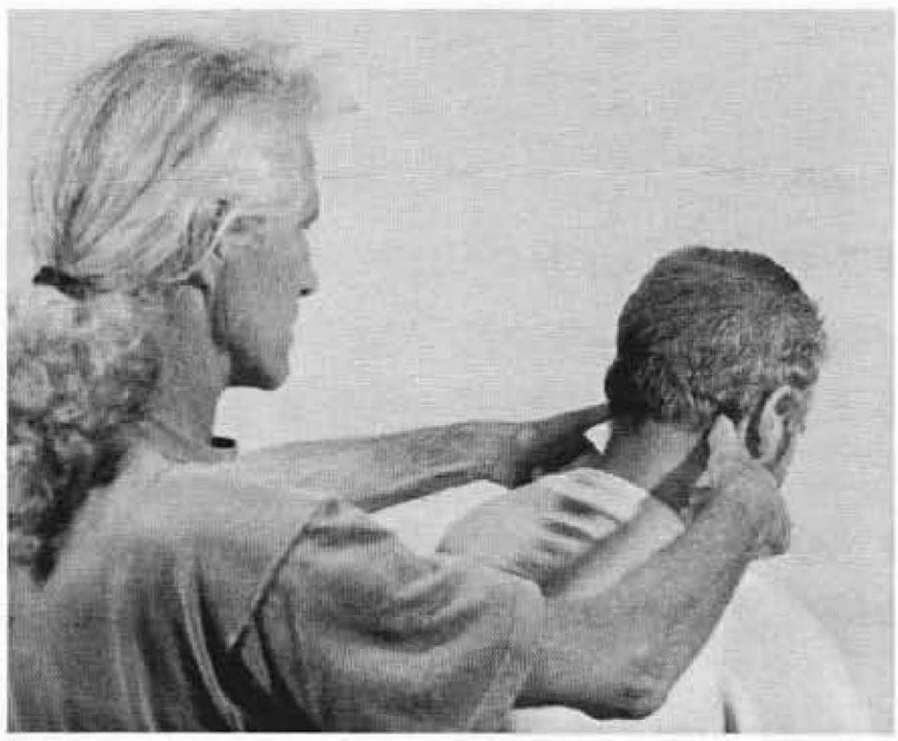


Figure 60

Damage:

A strike to Gb 12 will at least cause KO and at most death. In between these two extremes, you can cause headaches for days after the strike. It takes the qi away (drains it) from the upper body, with even a light blow causing pain and lack of energy for days. When struck upward into the head, this is one of the more dangerous points because of its anatomical location.

Set-up point:

This point has an unusual set-up point, apart from the more normal neigwan. It works particularly well with a qi-disruptive method of violently rubbing the right palm over the skull as close to the hair as possible without touching it.

Antidote:

Gv 20 pressed downward recaptures the yang, i.e., brings the qi back into the upper body.

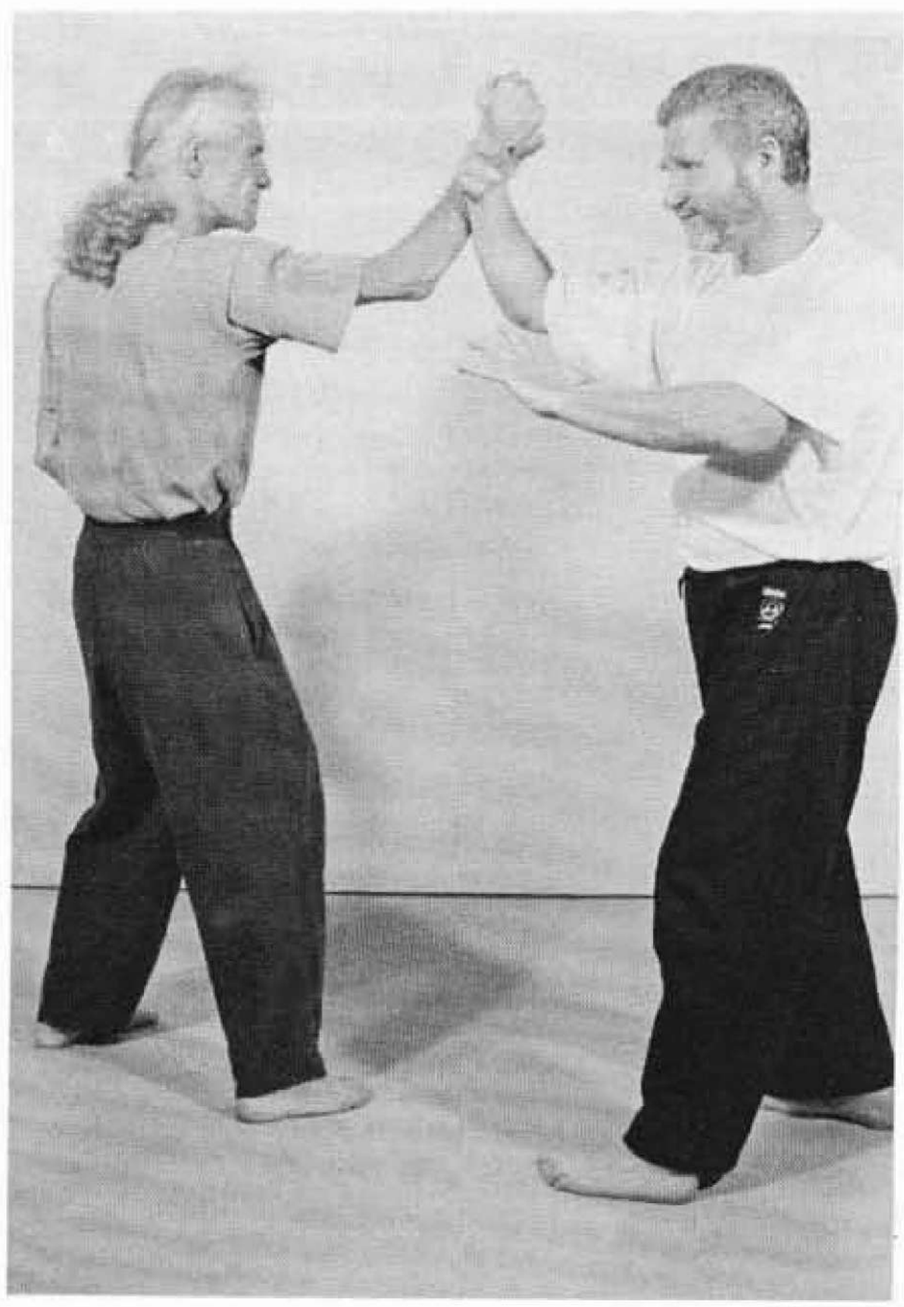


Figure 61

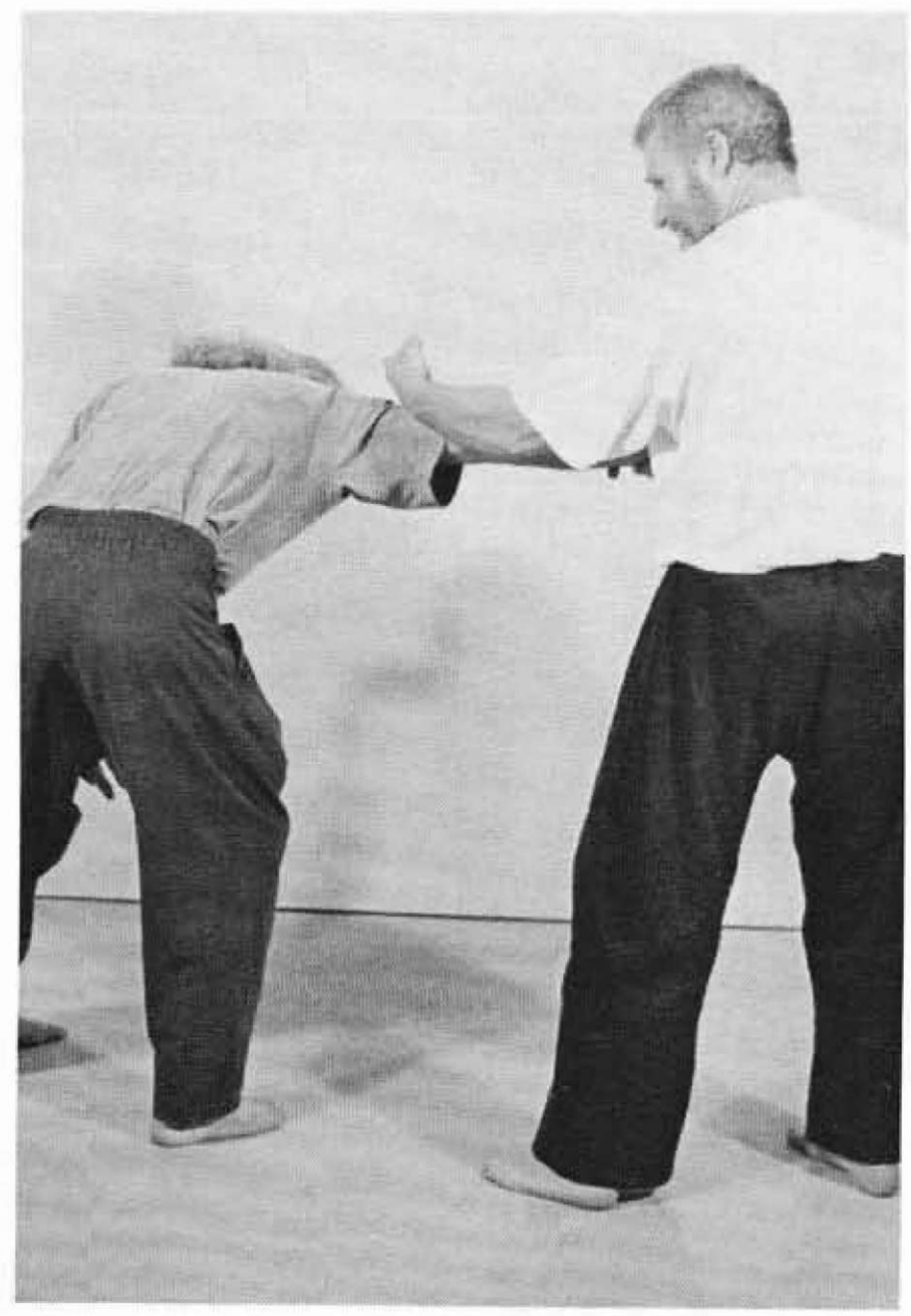


Figure 62

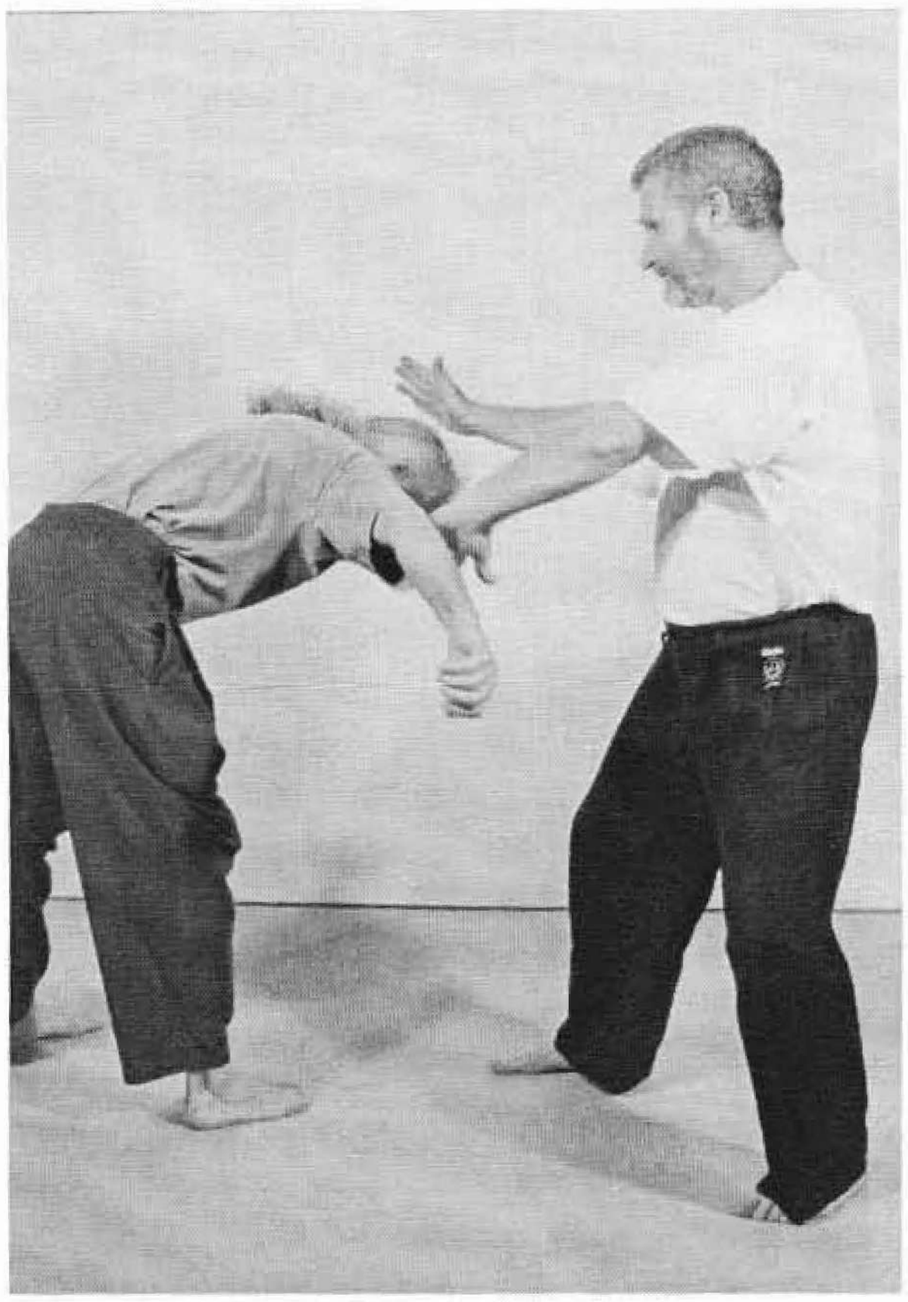


Figure 63

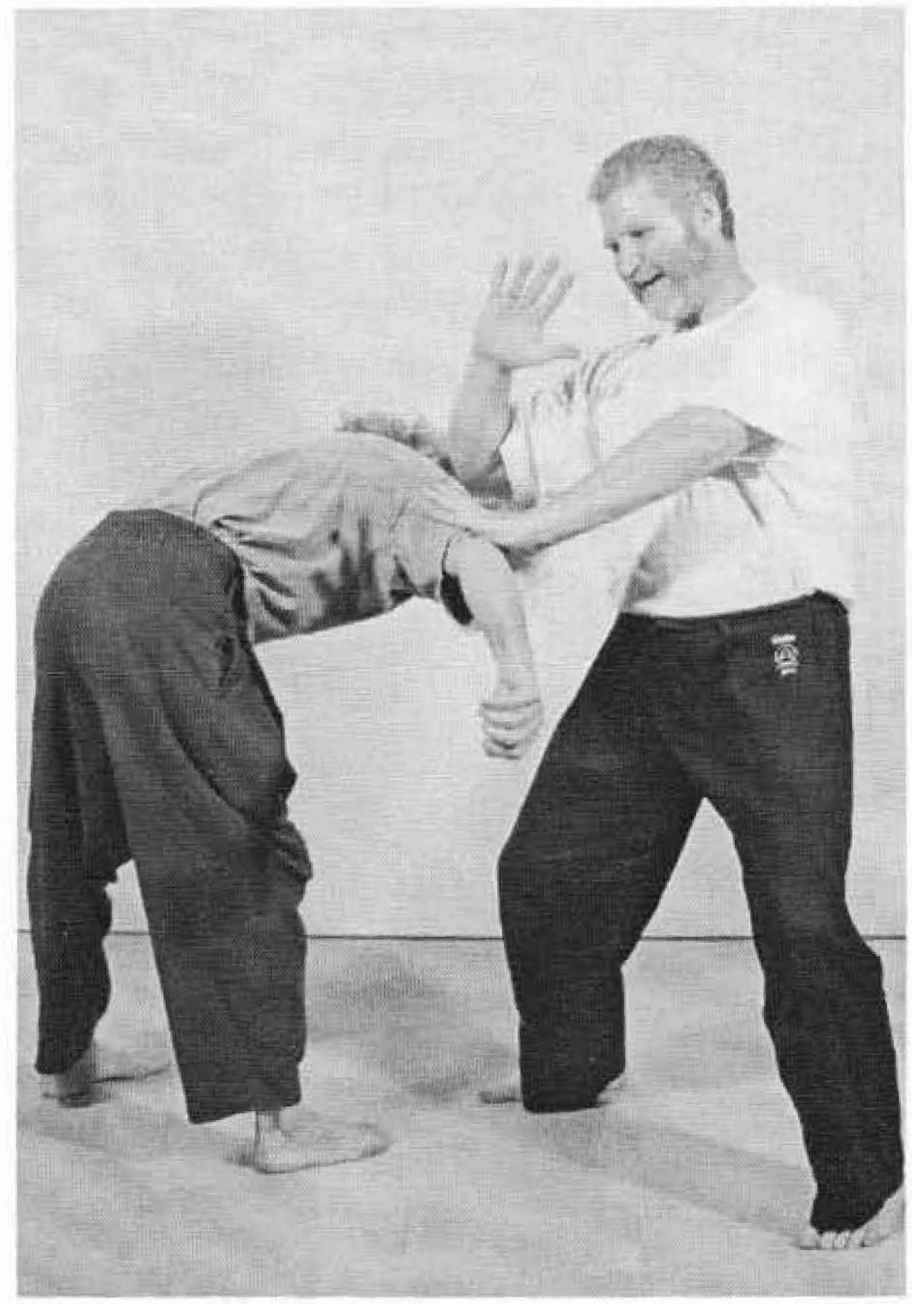


Figure 64

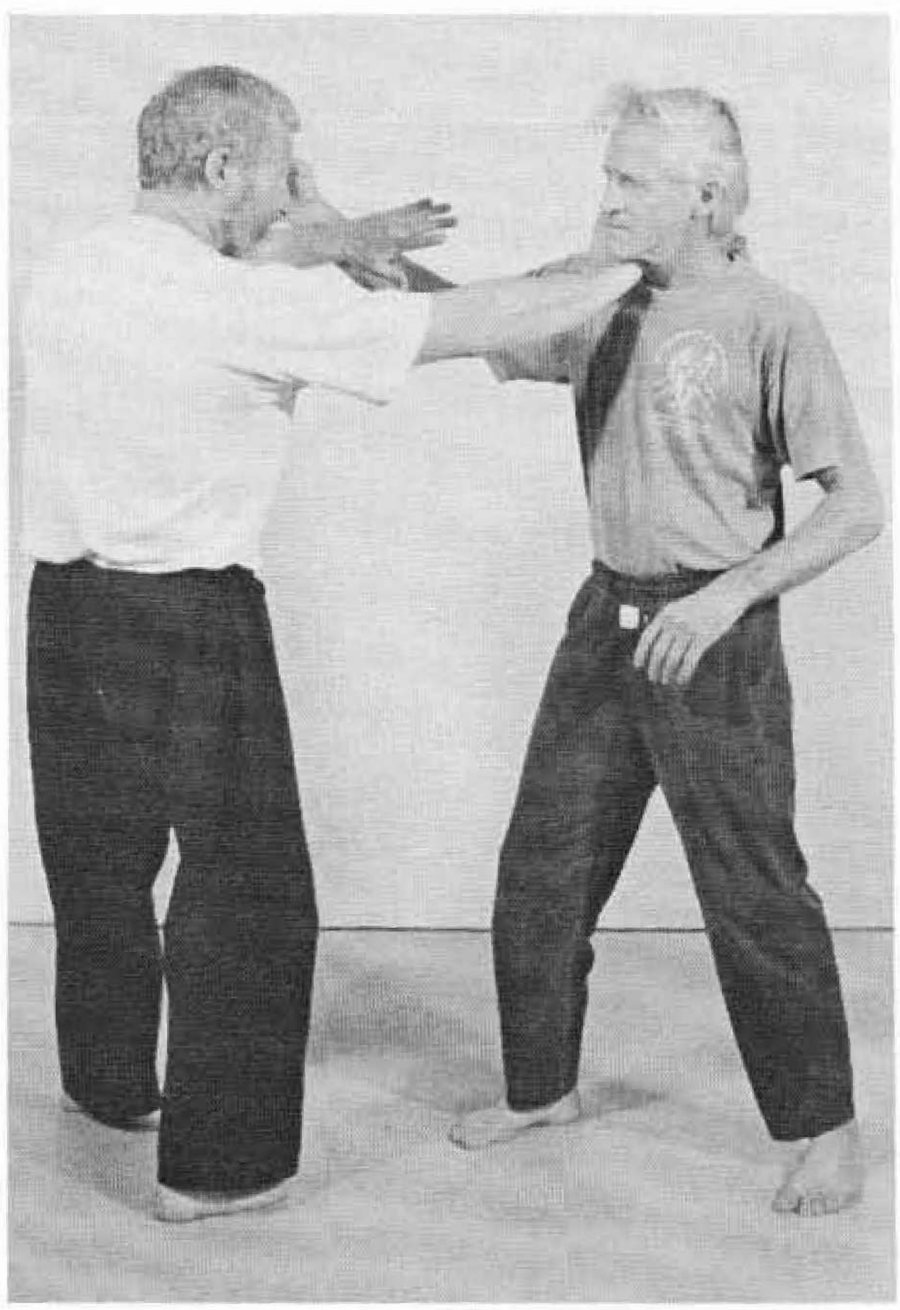


Figure 65

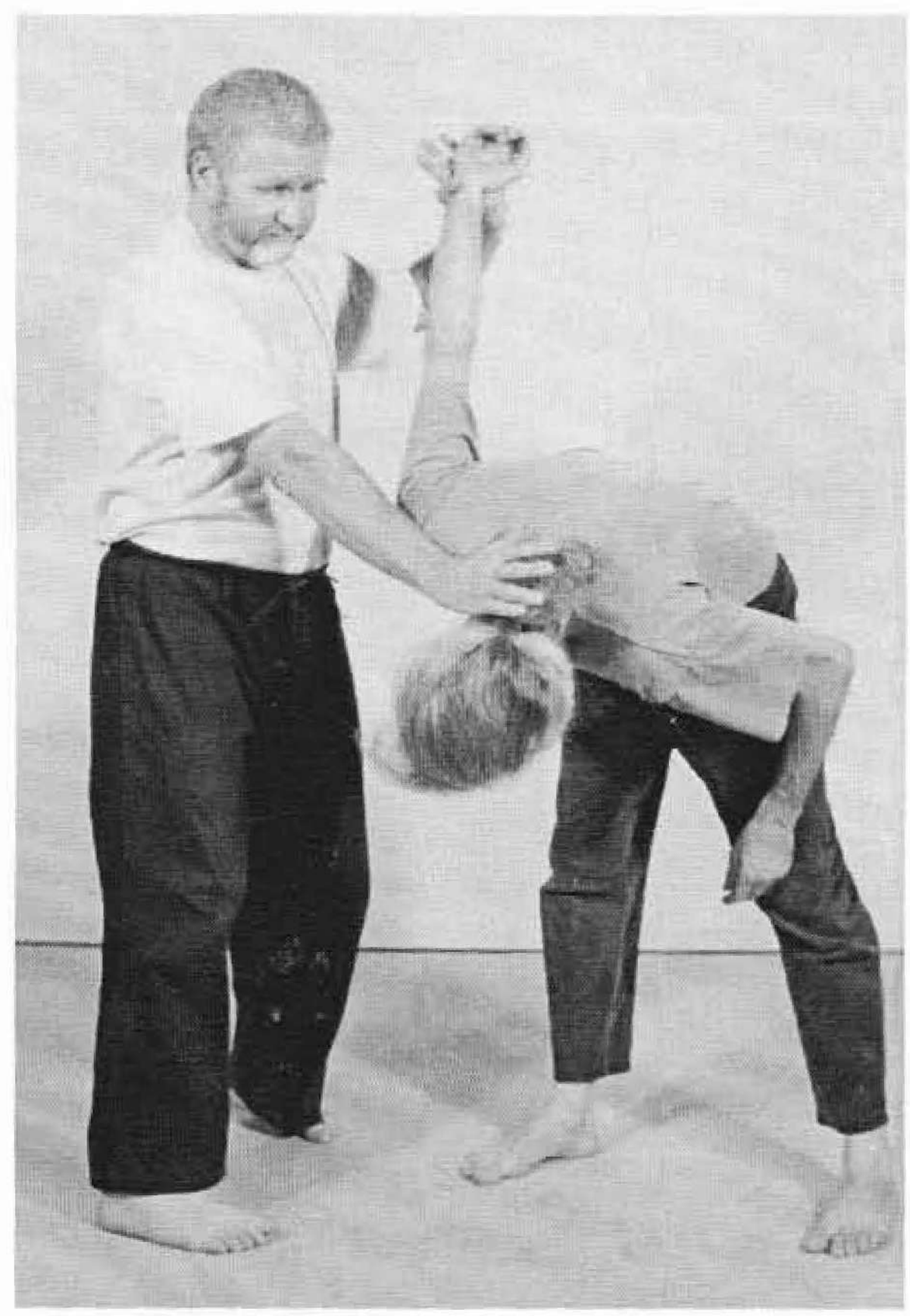


Figure 55

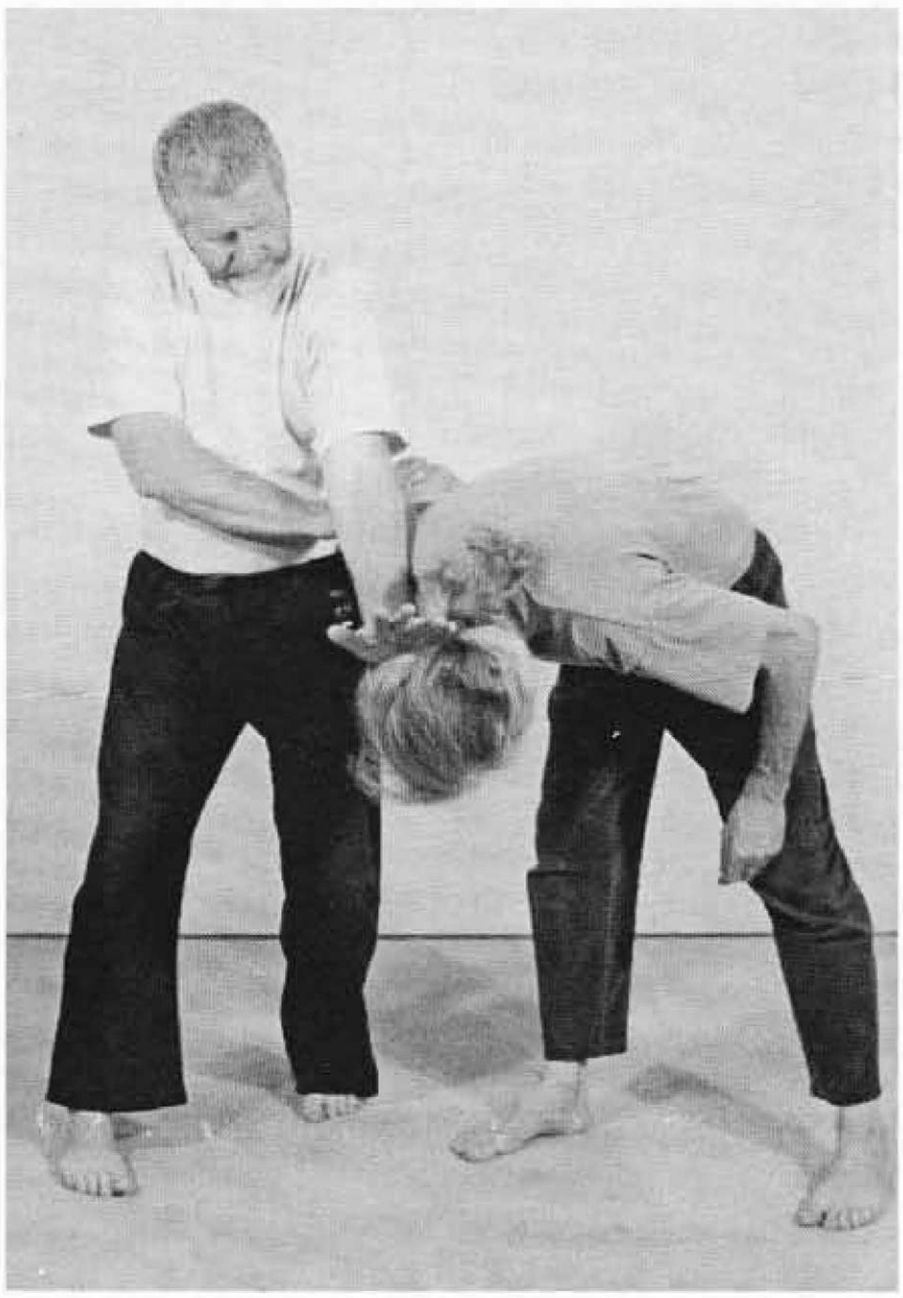


Figure 67

Healing:

Innervated by the lessor occipital nerve. Irrigated by the posterior auricular artery and vein.

Used for headache, insomnia, pain and stiffness of the neck, swelling and pain of the cheek, toothache, facial paralysis, and seizures.

You might use a straight push or clockwise or counterclockwise rotations for xu and shi conditions respectively when treating headache or a stiff, painful neck. You can also do a straight press, then pull the fingers under pressure down the neck along tight muscles to the shoulders. Or you can do a series of presses down into the muscles of the shoulders (fig. 60).

This point is generally included in occipital shiatsu, where you start at the center of the occipital region and do a series of presses out along the base of the skull and down to Gb 12.

Generally, use Liv 3, Gb 41, Gb 34, or Bl 60 as distal points with this point when treating headache or stiffness and pain in the neck.

You can try the following treatment for the mumps: Gb 12, St 6, Co 4, St 5, Th 17, Gb 20, St 36, St 8, St 7, BL 11, and Si 13.

You could also use moxa in this region for whiplash or other muscle spasm problems.

Applications:

1) He might attack with a straight right. You will use a p'eng block to defend (fig. 61). Your right palm grabs his right wrist, and your left palm slams into Th 12, just in the horseshoe created by the triceps (fig. 62). This causes him to drop forward. Step around with your right foot and flick your right palm violently over his skull, not quite touching his hair. (fig. 63). This also loads your right elbow, which now comes back with a turning of the waist to your left to strike Gb 12 with devastating results (fig. 64).
2) Take his right hook punch at neigwan with your left palm and strike him into St 9 with your right (fig. 65). Immediately grab his neck with your right palm, pulling him forward as your left palm lifts up his right arm (fig. 66). Do a swivel on your heels to turn into his head as your left palm slams into Gb 12 (fig. 67).

GB 13 GALLBLADDER POINT NO. 13)

Chinese name:

Benshen (head above the tears).

Location:

.5 cun inside the hairline and .5 cun medial to St 8, directly above the outer canthus of the eye. If you draw a line along Gb 7, 6, 5, and 4, then go another inch up toward the head, this is pretty close to Gb 13.

Connections:

Yang weimai (an extra meridian that runs from the side of the foot right up past the forehead and ends up at the back of the head. Although this meridian is quite long, it only has eight points. It is used traditionally for fever and perspiration of febrile disease, painful swelling of limps and

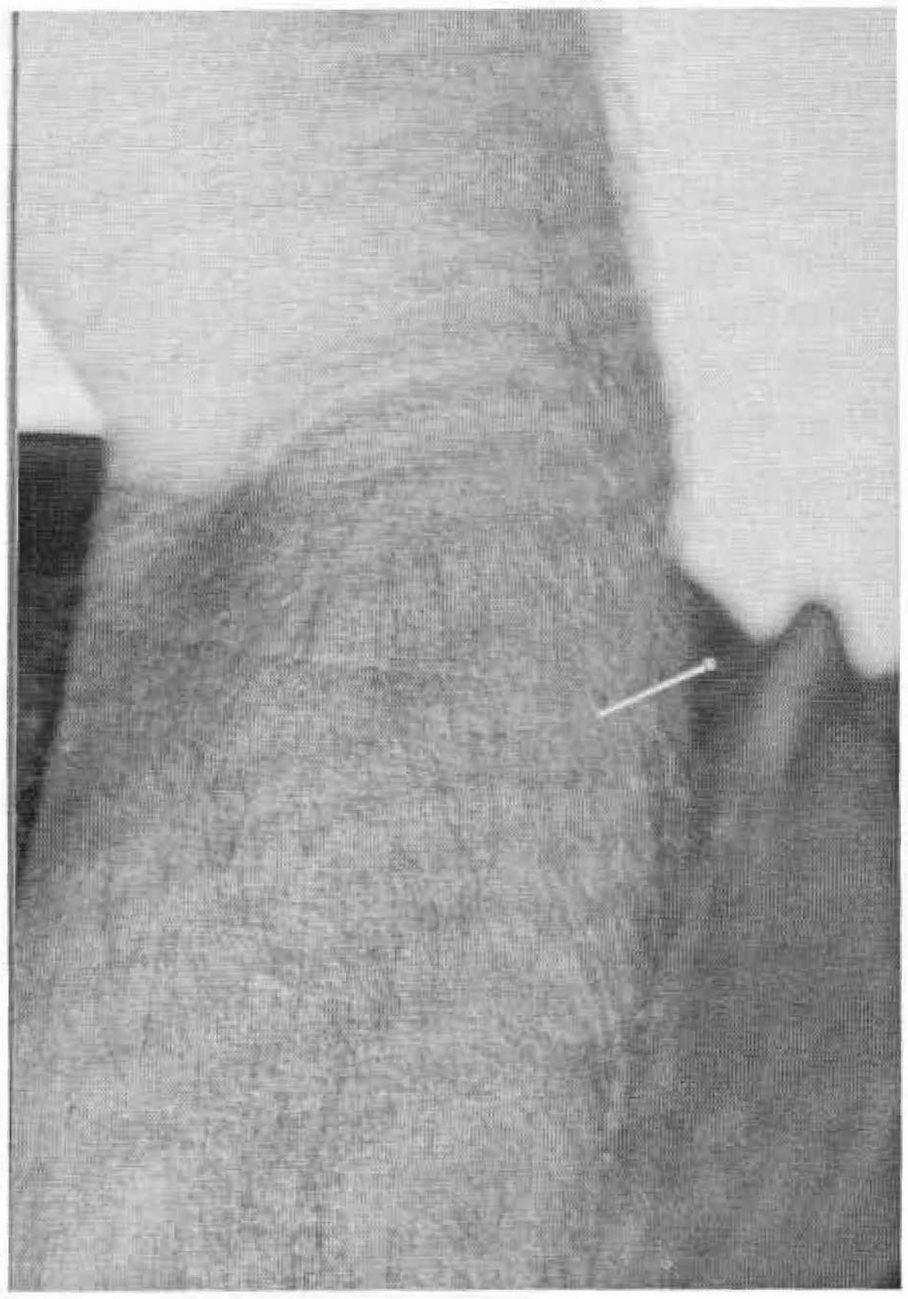


Figure 68

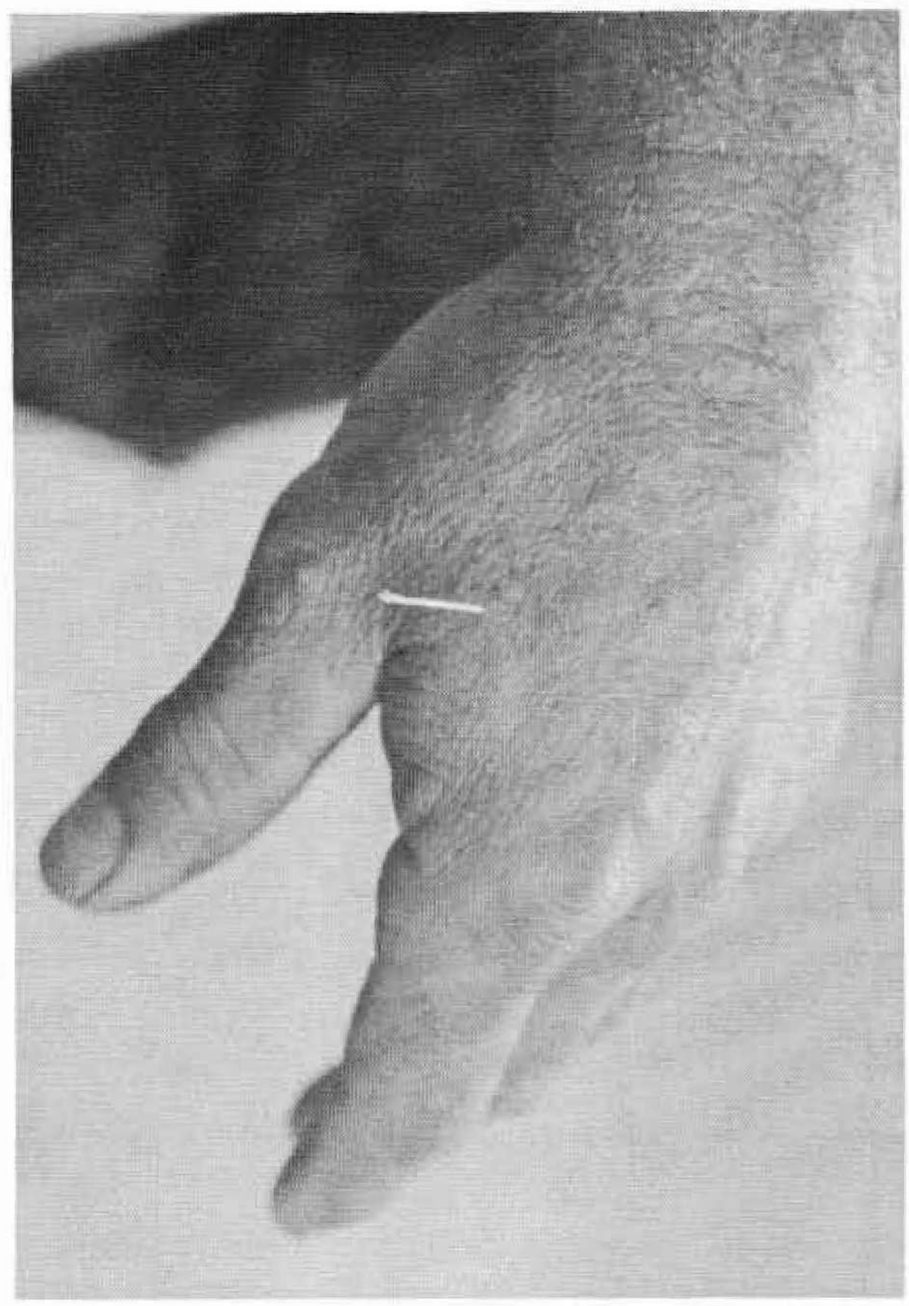


Figure 69

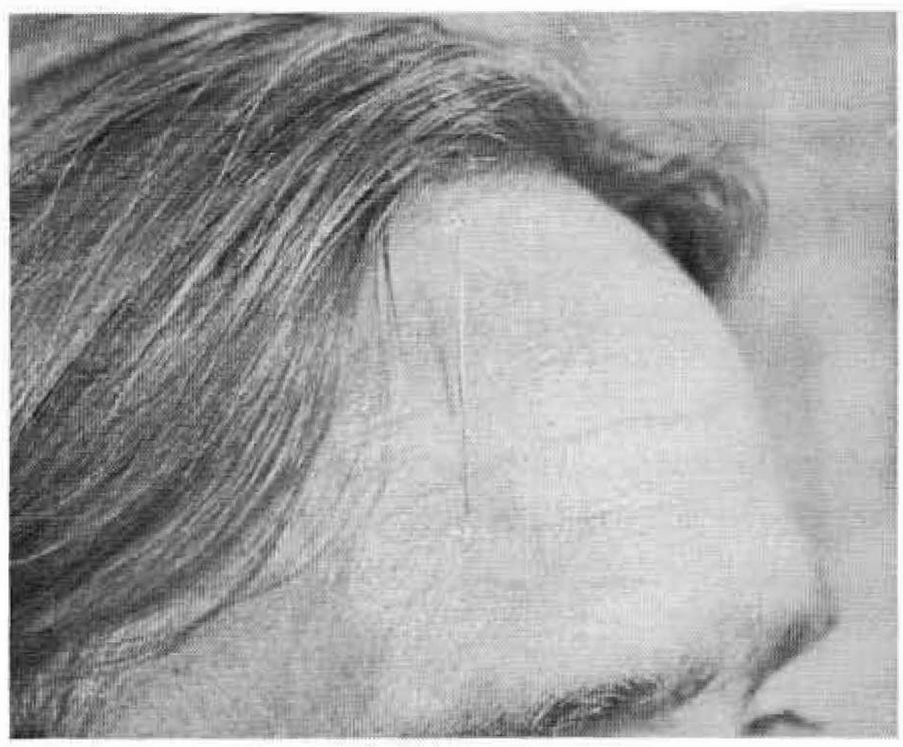


Figure 70

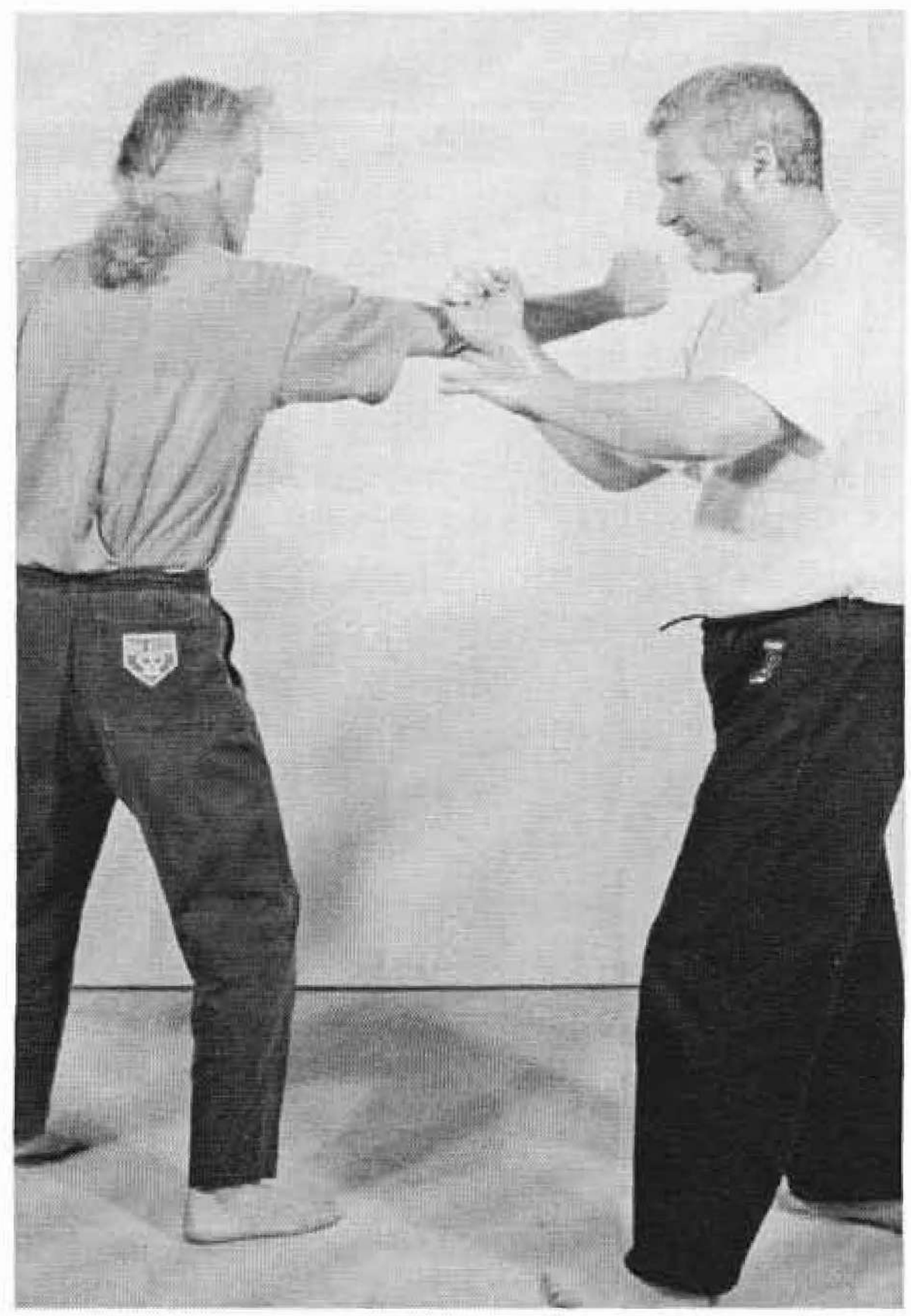


Figure 71

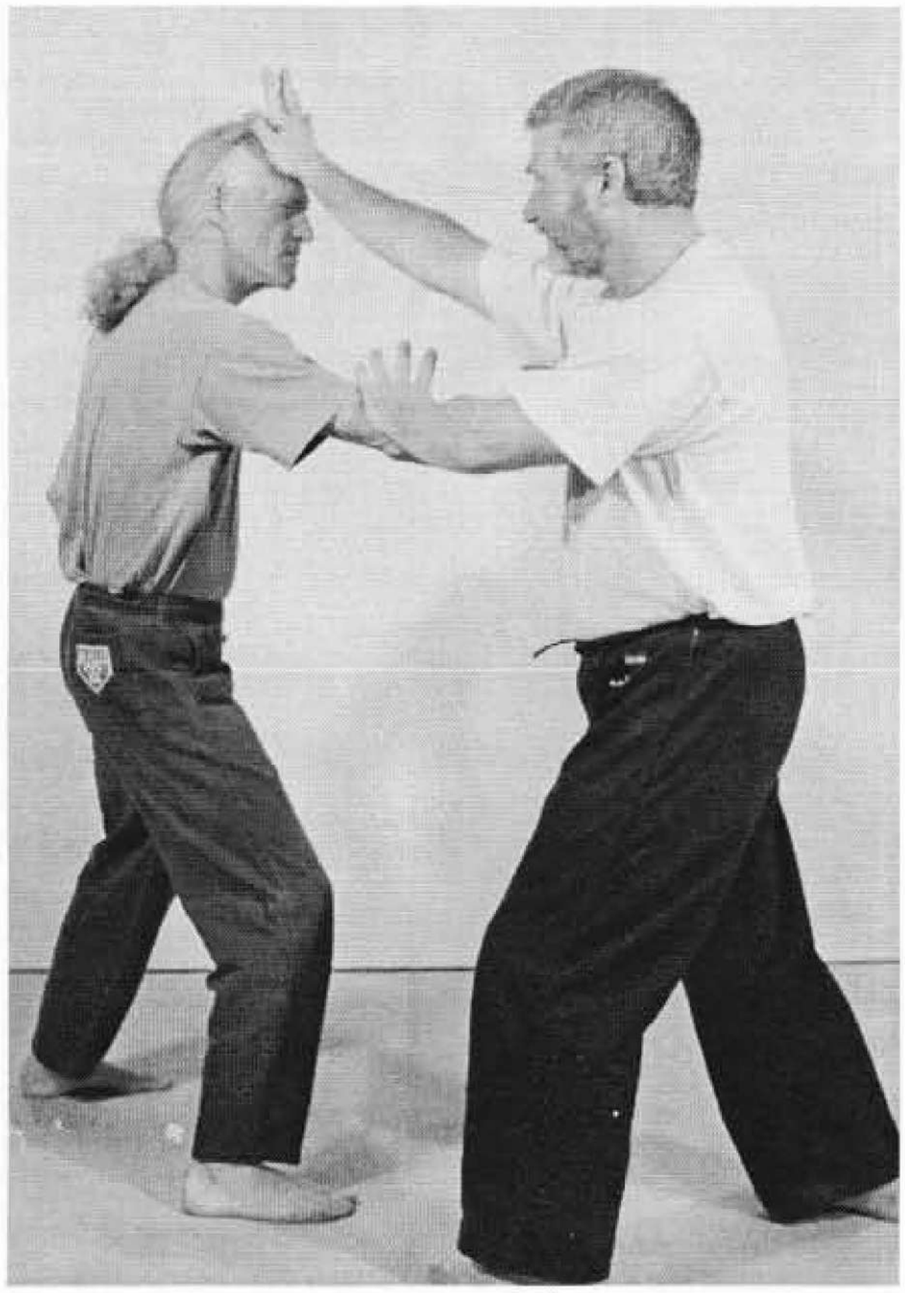


Figure 72

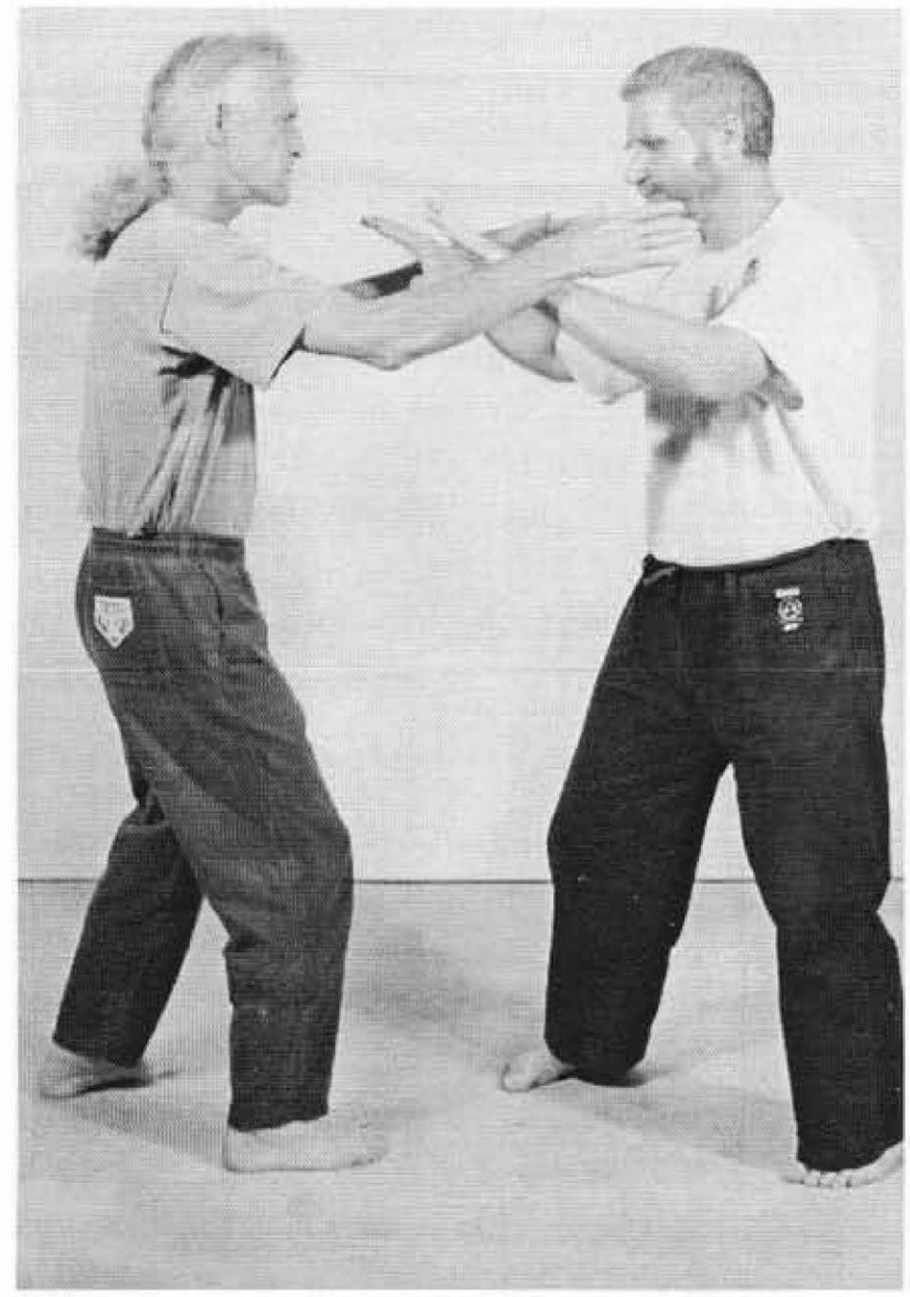


Figure 73

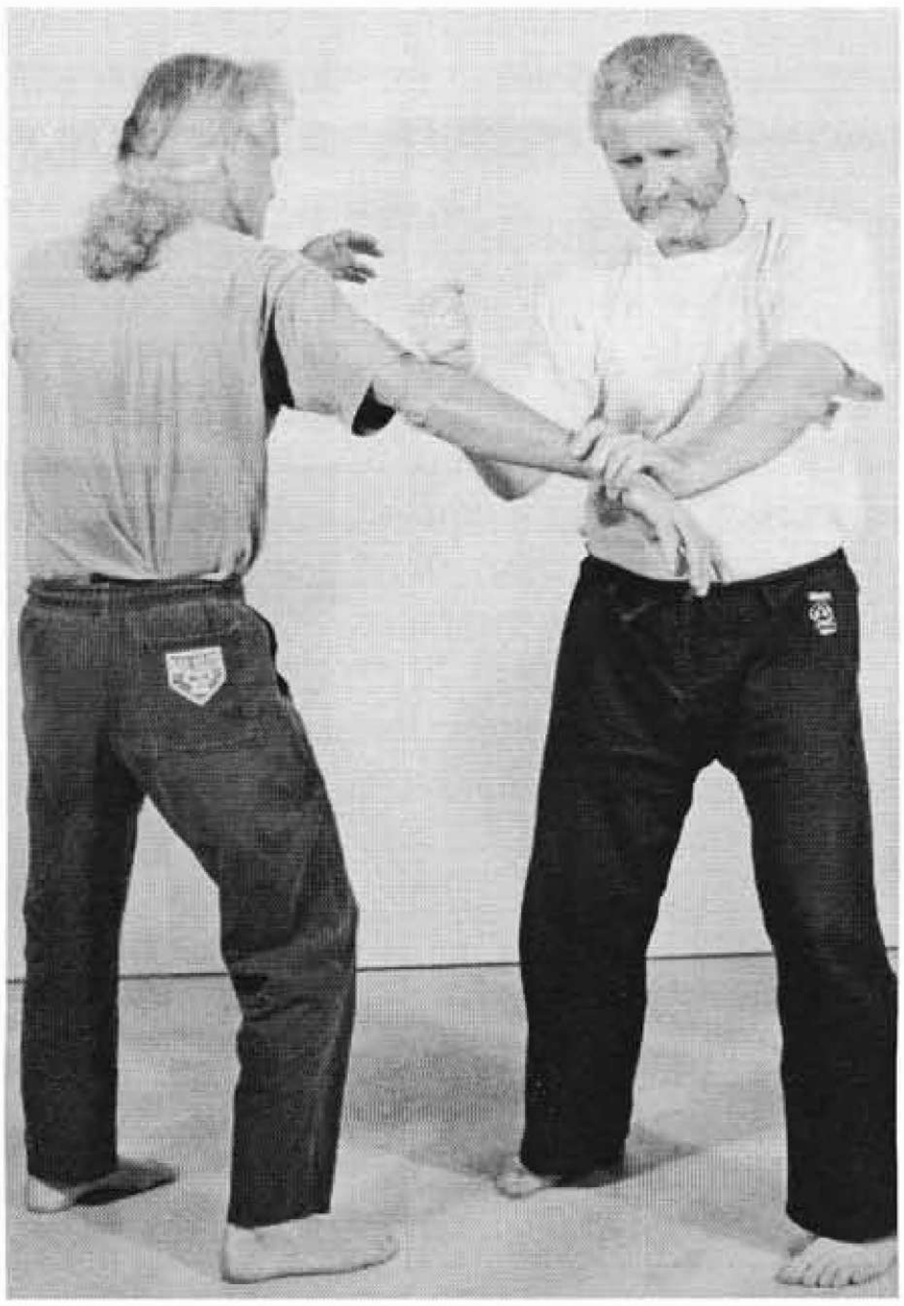


Figure 74

joints, headache and pain in the neck, hot feeling of hands and feet, numbness, pain of muscle and bone in back, hip redness, and swelling of the eyes.)

Direction of strike:

The strike to Gb 13 should be straight in toward the brain.

Damage:

Gb 13 is part of what is called the triangle strike (i.e., the three points form a triangle when joined, so we not only strike to Gb 13 but also hit Gb 14 and 15 at the same time). The combination of the colon strike with the three gallbladder strikes causes what is known as *adverse cyclic qi disruption.* This sends adverse qi (that which causes the body to disintegrate rather than to build) into the head and brain, which will cause not only immediate brain dysfunction but also delayed dysfunction that could last for years if death is not immediate.

Set-up point:

The normal way to strike Gb 13 is including the triangle. The set-up point for this triangle strike is Co 10, on the upper area of the outside of the forearm.

Antidote:

There is only one antidote for this strike. Acupuncture needles must be used because finger pressure does not work in this case. The points to needle (and please ask an acupuncture doctor about the directions, and so on, since an unqualified person could cause damage sticking needles into the wrong places for this state), are Co 10 (straight in), Co 4 (straight in). and Gb 14 (vertically toward the eye), as in Figures 68, 69, and 70.

Healing:

Used for headache, dizziness, stiffness, pain in the neck, pain in the lower chest, epilepsy, and hemiplegia.

Applications:

1) He might attack with a straight right. You slam his Co 10 point with your right backfist as your left palm is loading, ready to strike (fig. 71). Your left palm now slams into his elbow as your right palm attacks to the triangle with great force. The power used must be substantial (fig. 72).
2) He might attack with a two-handed attack. You open up both of your knife edges to attack to both of his neigwan points. (fig. 73). Twisting his right wrist (or left if you are working on the opposite side), your right hammer fist slams down onto Co 10 (fig. 74). Your left palm now flicks his right arm out to your left, loading your right elbow, which now comes back to your right to attack directly to Gb 13 (fig. 75).

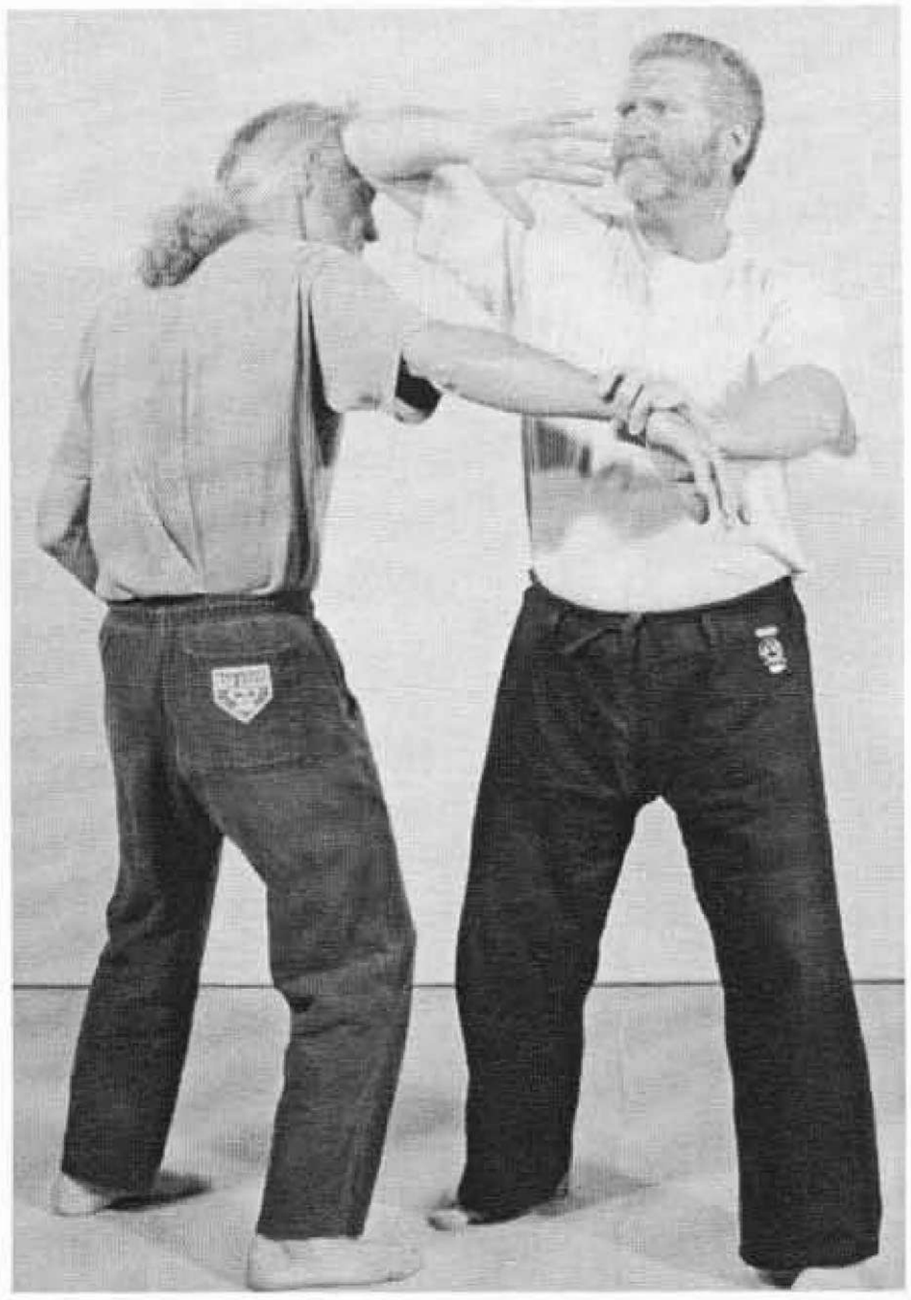


Figure 75

GB 14 (GALLBLADDER POINT NO. 14)

Chinese name:

Yangbai (yang white).

Location:

1 cun above the middle of the eyebrow on a line directly above the pupil of the eye in the depression on the superciliary ridge. It is in the frontalis muscle and is irrigated by the lateral branches of the frontal artery and vein. It is situated directly on the lateral branch of the frontal nerve.

Connections:

This point is the intersection of the stomach and yang linking channels with the gallbladder channel. The yang linking channel is one of the eight extra channels (meridians) and is also called *yang wei mai.*

Direction of strike:

Either upward, downward, or straight in.

Damage:

If this point is struck straight in, it will cause physical damage to the neck. Struck upward, it brings too much yang energy into the head and causes a state similar to sunstroke, with the effects including nausea, blackout, and even death. When struck downward, it causes KO by draining energy from the head. This point is also right over the part of the brain that makes us different from animals, so a strike to it will also affect the way we think, work, move, and so on.

Set-up point:

If you are striking straight in, neigwan is the set-up point. For striking upward, strike the outside of

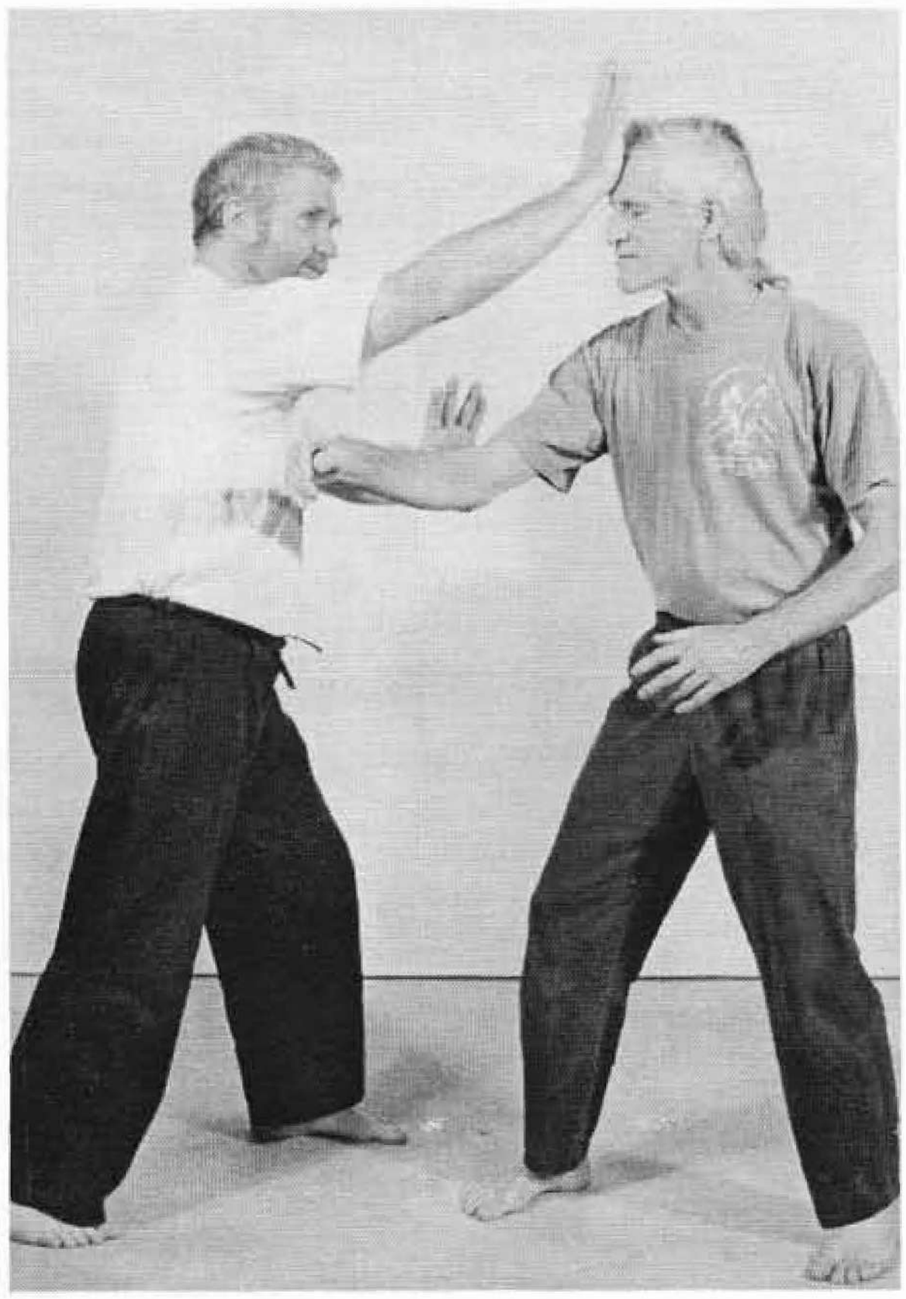


Figure 76

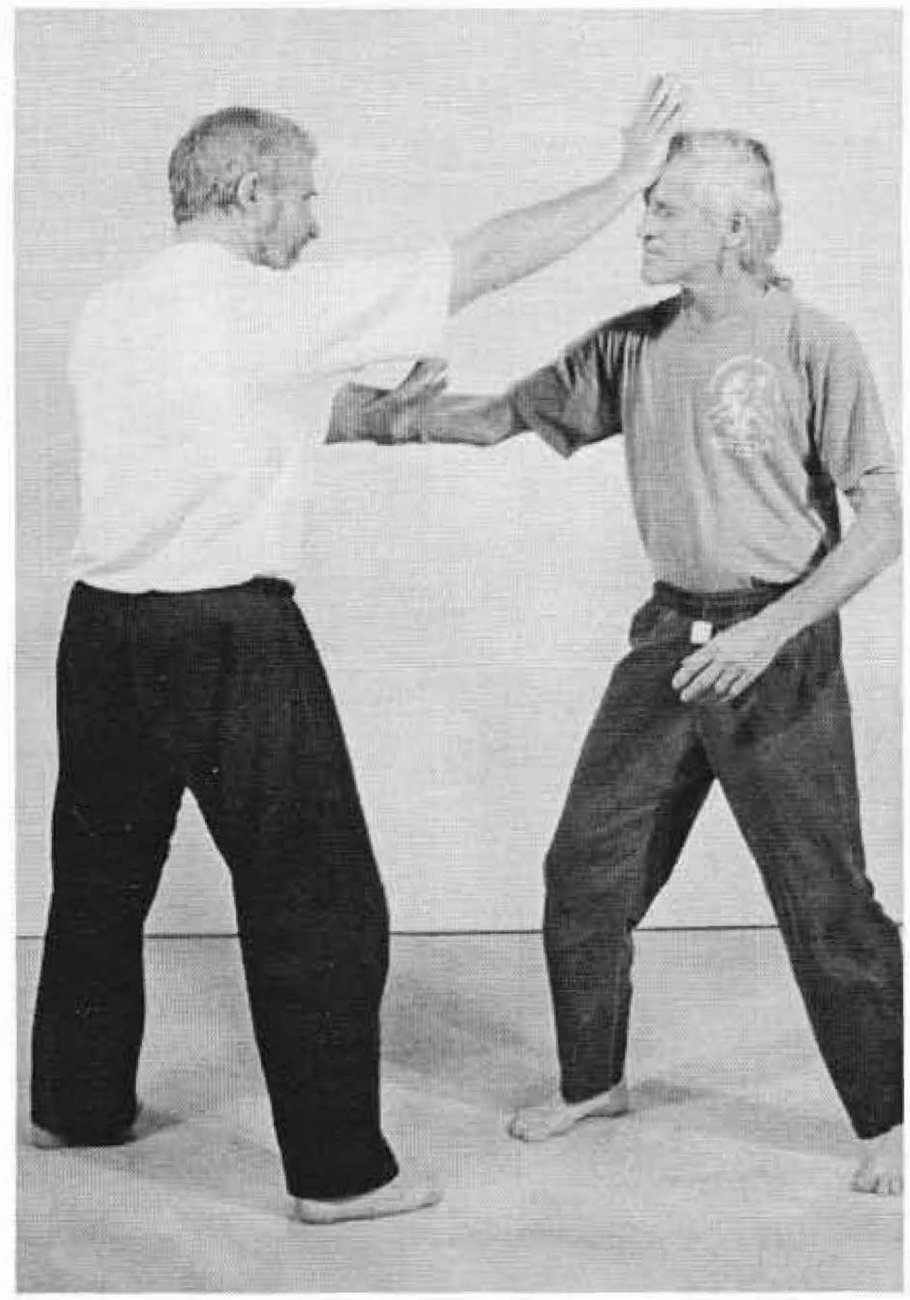


Figure 77

the forearm downward with the other hand, or strike the inside of the forearm upward from wrist to elbow. If you are striking downward to cause a qi drainage, you strike the outer forearm upward from wrist to elbow or the inside of the forearm downward from elbow to wrist.

Other points that work really well in conjunction with Gb 14 are Gb 13 and 15 (the triangle, as above).

Antidote:

If Gb 14 has been struck upward, apply pressure with both knife edges (strike downward) onto Gb 21, then slice each palm off the edges of the shoulders rapidly. This takes qi out of the head. (This is also a good remedy for sunstroke, which is basically the same condition). If Gb 14 has been struck downward, you must use Gb 20, squeezing inward and up, and also Gv 20, pressing down. If the strike was straight in and the neck is broken, see a doctor!

Healing:

Used for supraorbital neuralgia, facial paralysis, ptosis (drooping of the upper eyelid), eye disease, frontal headache, and facelifts (to maintain facial tone).

Traditional functions are to eliminate wind and to clear the vision.

It is also used for headache, sore eyes, eyelid tic, night blindness, itching eyelids, vomiting, chills, and stiff neck.

To massage, hold both points at once while the patient concentrates on breathing for frontal headache or facial tension, paralysis, and so on. You can rotate clockwise for xu (dull ache) conditions, or counterclockwise for shi (sharp, strong, painful) headache. You can also massage toward the hairline as part of a routine for facelift or wipe out toward the sides of the face for excess worry or facial tension. It is also used as part of a shiatsu facial massage where light pressure is applied first to *yu yao* (the fish's belly point, an extra point found in the middle of the eyebrow, or the fish's belly),then up to Gb 14 and on to Gb 15.

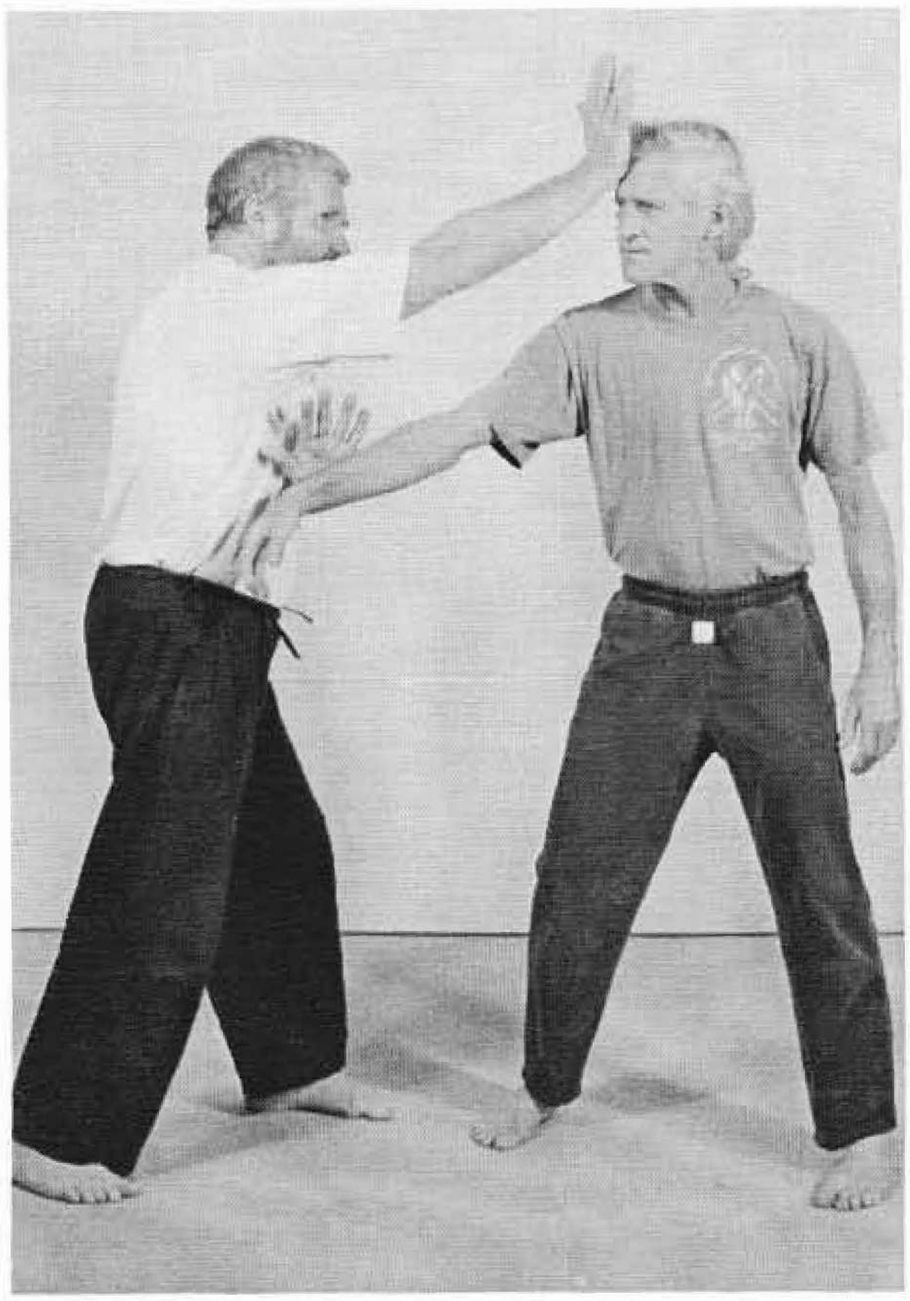


Figure 78

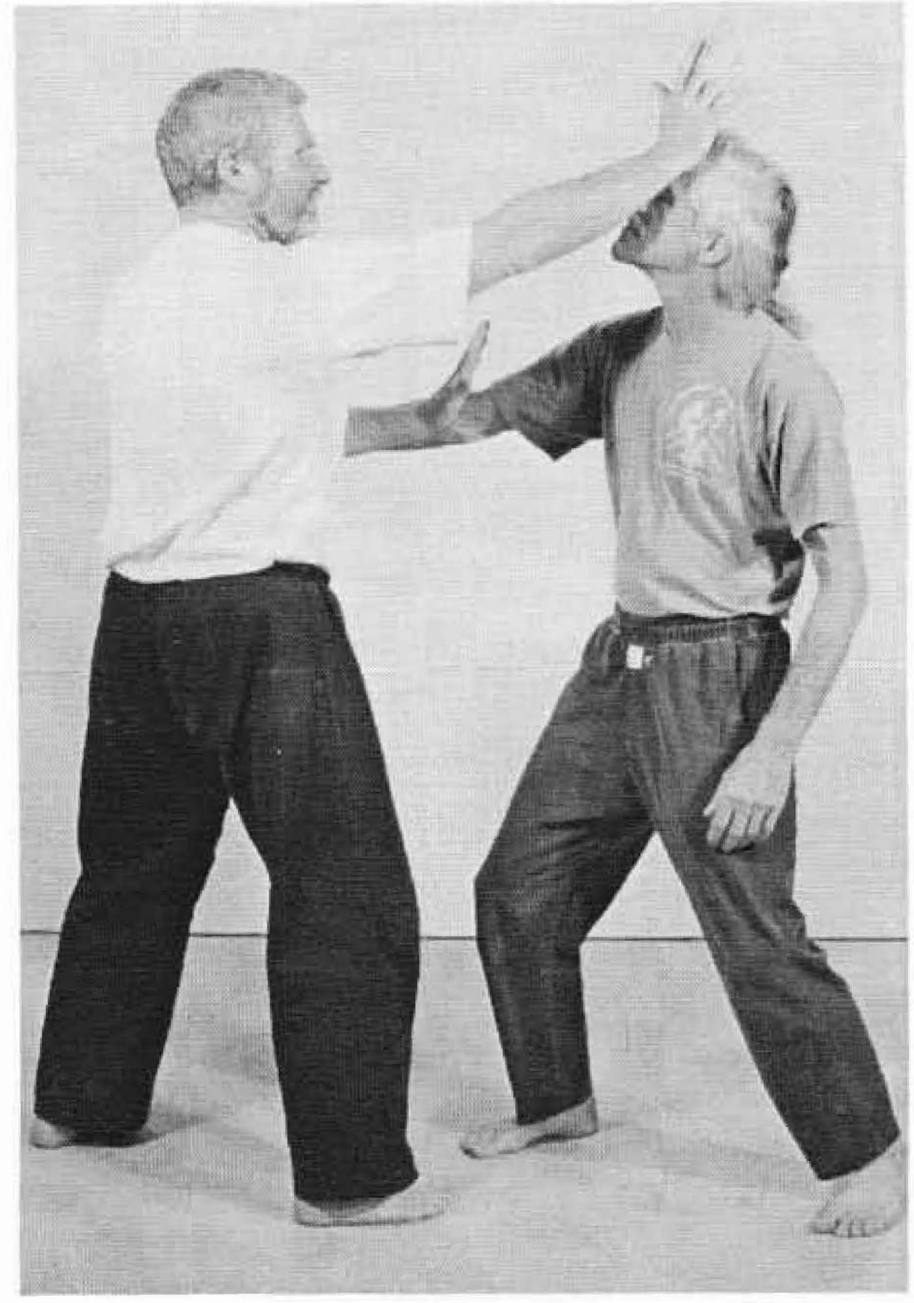


Figure 79

Applications:

Gb 14 can also be used as part of the triangle strike mentioned above. So all of those applications that were used for Gb 13 can also be used for Gb 14. However, Gb 14 has different set-up methods. I will use the right straight attack to show these, although the set-up point used will depend upon the type of attack.

1) He attacks with a straight right. My left palm strikes in an upward direction along the outside of his right forearm from wrist to elbow, just before my right palm attacks in a downward direction over Gb 14 (fig. 76). This strike drains energy from the head, causing KO.
2) He attacks with a straight right, and I attack the inside of his right forearm with my left palm sliding downward this time from elbow to wrist as my right palm strikes downward to Gb 14 (fig. 77). This also causes qi drainage from the head, resulting in KO.
3) He attacks with a right straight. This time I slice his forearm on the outside downward from elbow to wrist. My right palm strikes in an upward direction to Gb 14 (fig. 78). This adds energy to the point, resulting in excessive yang energy in the head, which causes nausea at least and KO or death at most.
4) He attacks with a straight right. I attack to the inside of his forearm in an upward direction from wrist to elbow. My right palm attacks upward to Gb 14. This results in too much yang energy to the head, causing KO, nausea, or death (fig. 79).

GB 15 (GALLBLADDER POINT NO. 15)

Chinese name:

Head lingi (base of God).

Location:

.5 cun inside the hairline and directly above the pupil when looking ahead.

Figure 80

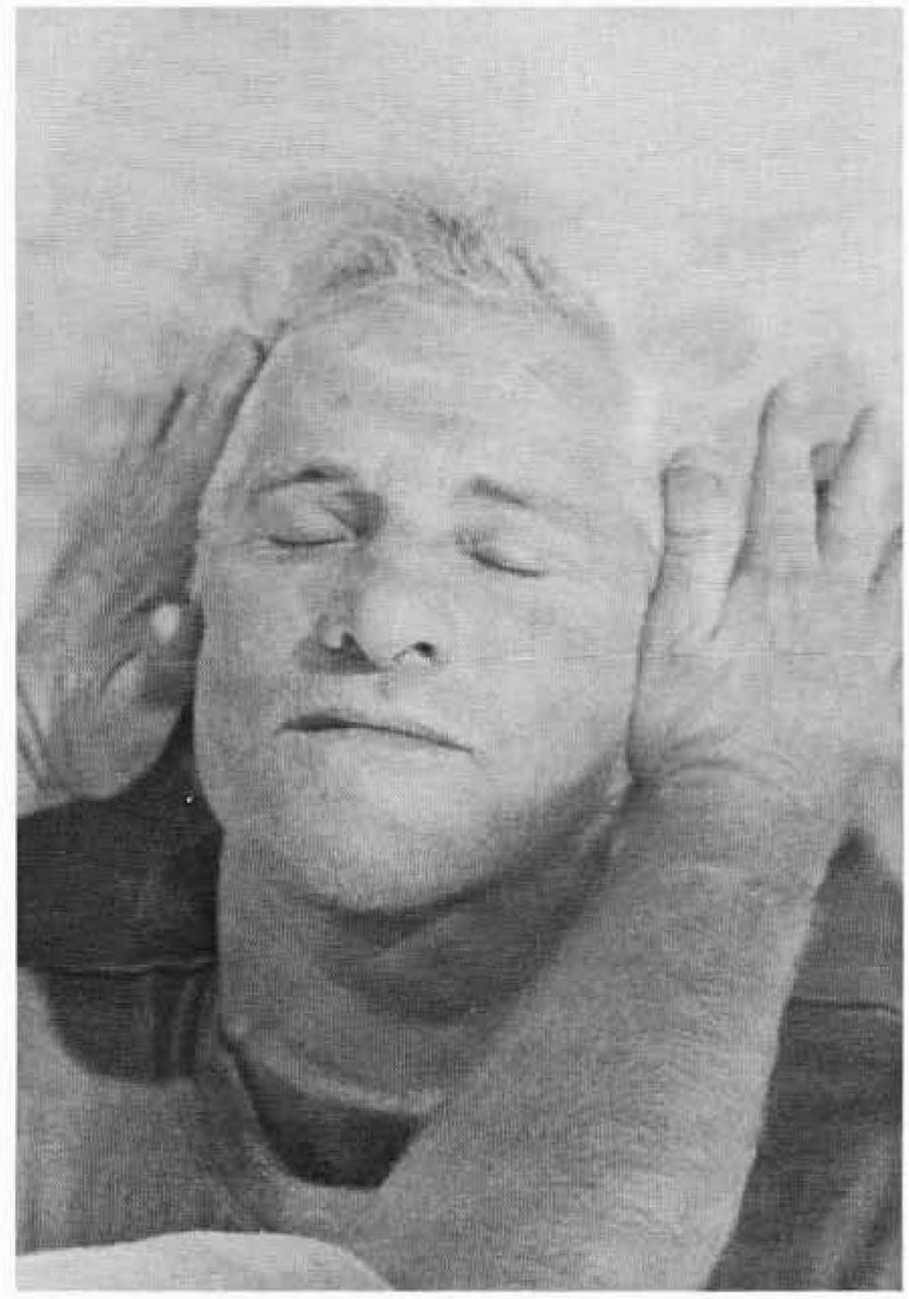


Figure 81

Connections:

Yang wei mai.

Direction of strike:

Since this point is part of the triangle of Gb 13, 14, and 15, it is usually struck along with the other two points in the triangle. However, it can be struck by itself, straight in and slightly downward.

Damage:

Causes the head to feel as if it is swelling up or being pumped up like a balloon. The recipient will not know where he is for a second or two if struck mildly, and he will be knocked out if struck heavily. Of course, any head point will kill if an external weapon is used. I am only covering empty hand methods in this book.

Set-up point:

Neigwan struck straight in to the wrist will enhance the damage done to this point. The "mind point," or *qianzheng*, is a new point and is on no particular meridian. It is found where the little bit of fat is in the hinge of the jaw when the jaw is opened. This point is struck after Gb 15, which further enhances the effect upon Gb 15. Qianzheng alone will cause KO by the action upon the central nervous system. It stops messages getting to the brain, and so the recipient falls down. Used with Gb 15, the fight is over.

Antidote:

Lie the patient down and place both of your palms over his face (fig. 80). Push downward over his face to the ground with mild pressure (fig. 81). You can also use Gb 20 as a utility revival point.

Healing:

Used for vertigo, stuffed nose, nebula, apoplexy, coma, malaria, epilepsy, and acute or chronic conjunctivitis.

Applications:

1) He attacks with straight right. Your right palm slams straight in to neigwan (Pc 6), as your left

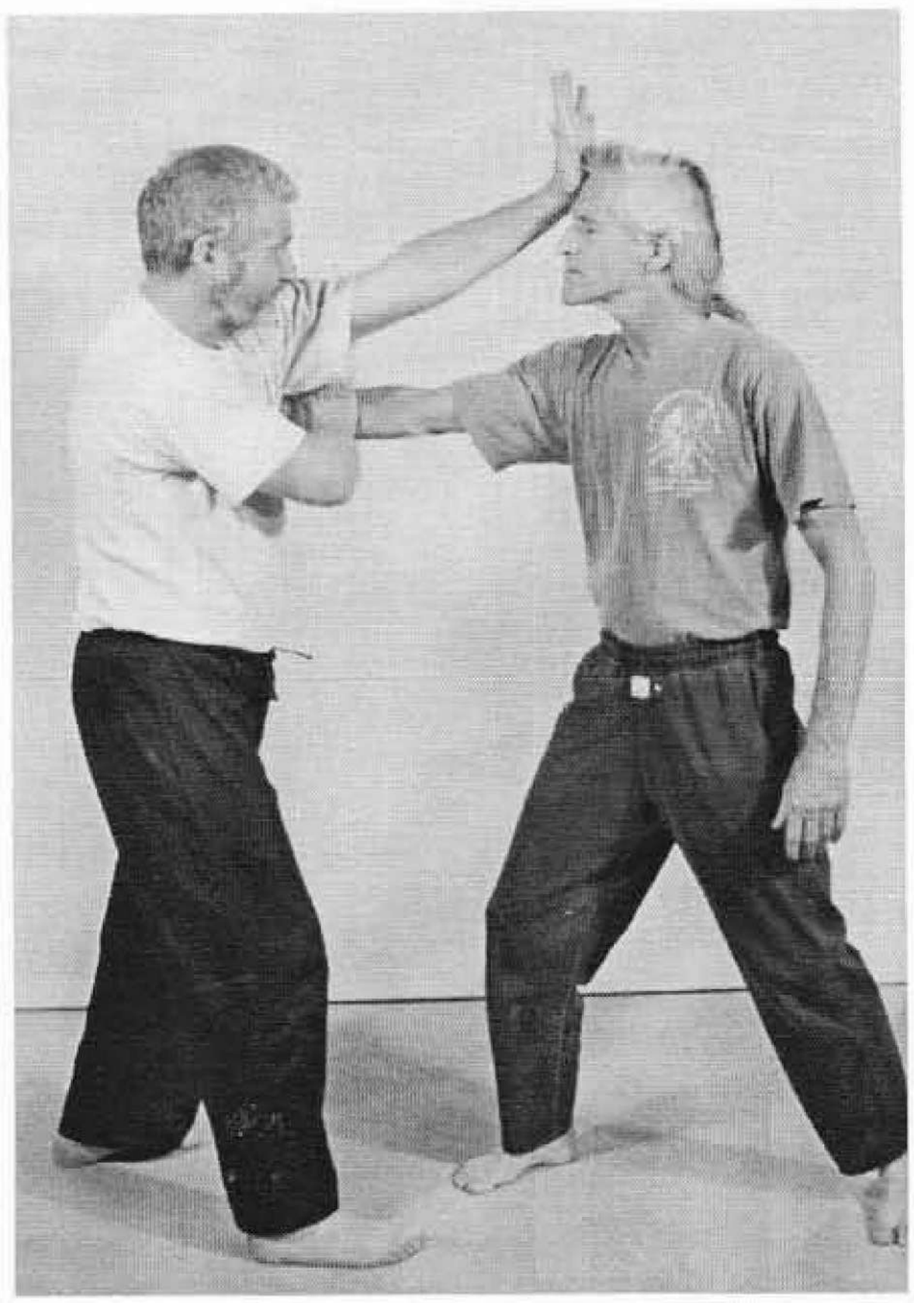


Figure 82

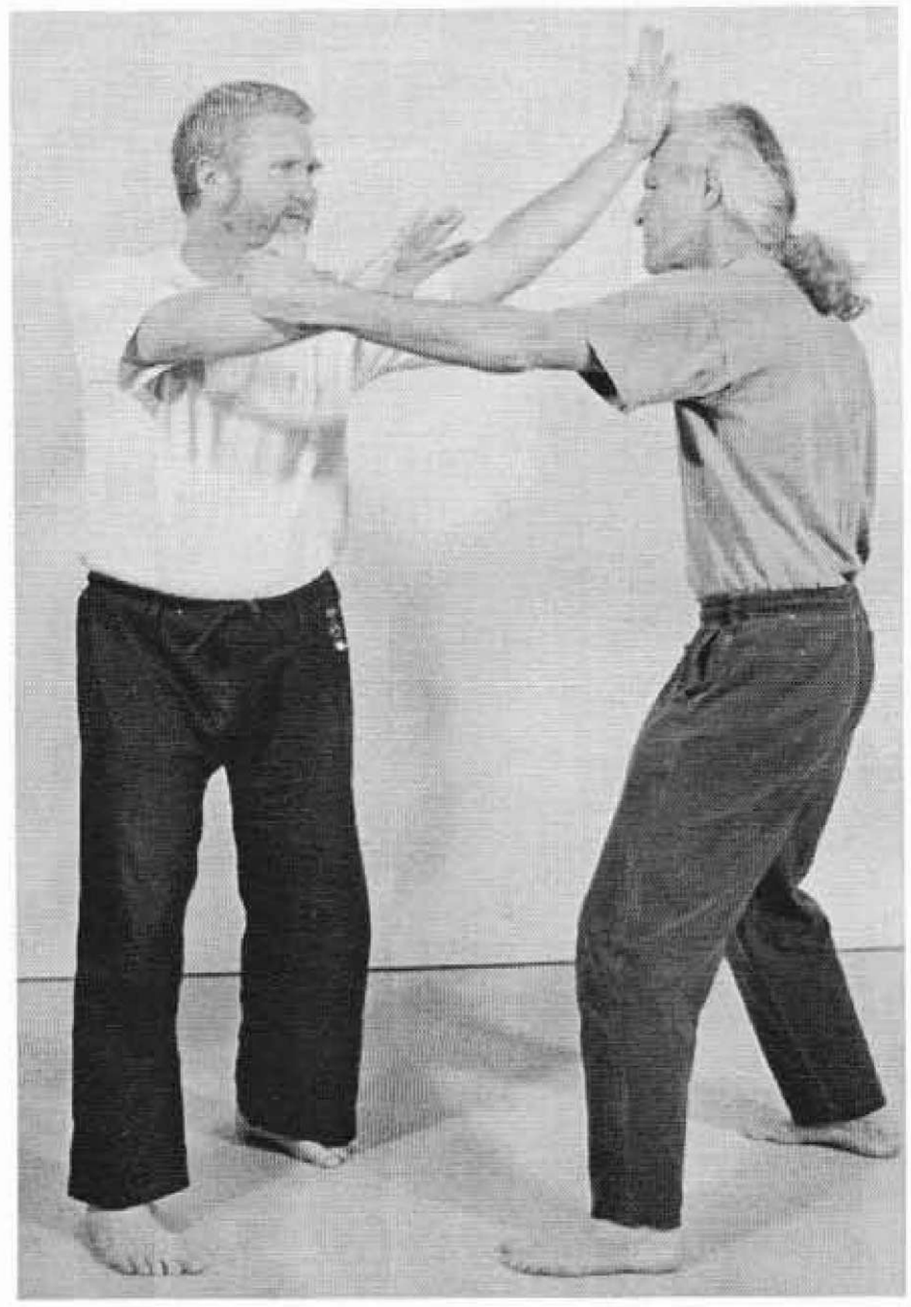


Figure 83

palm attacks to Gb 15 (fig. 82).

2) He attacks with a left hook. Your right palm attacks to neigwan as your left palm slams down onto Gb 15 (fig. 83). Your right elbow now attacks to the mind point (fig. 84).

GB 16 (GALLBLADDER POINT NO. 16)

Chinese name:

Muchuang (window of the eyes).

Location:

1 cun posterior to Gb 15 in a straight line with Gb 14 and 15.

Connections:

Yang wei mai.

Direction of strike:

The direction for this point is straight in on top of the head.

Damage:

This point is particularly nasty because of its proximity to the brain. When struck, the recipient feels immediate local pain because it is also an electrical point. (All dim-mak points are electrical points, in that they cause some damage to the energy system of the body. Some points, however,

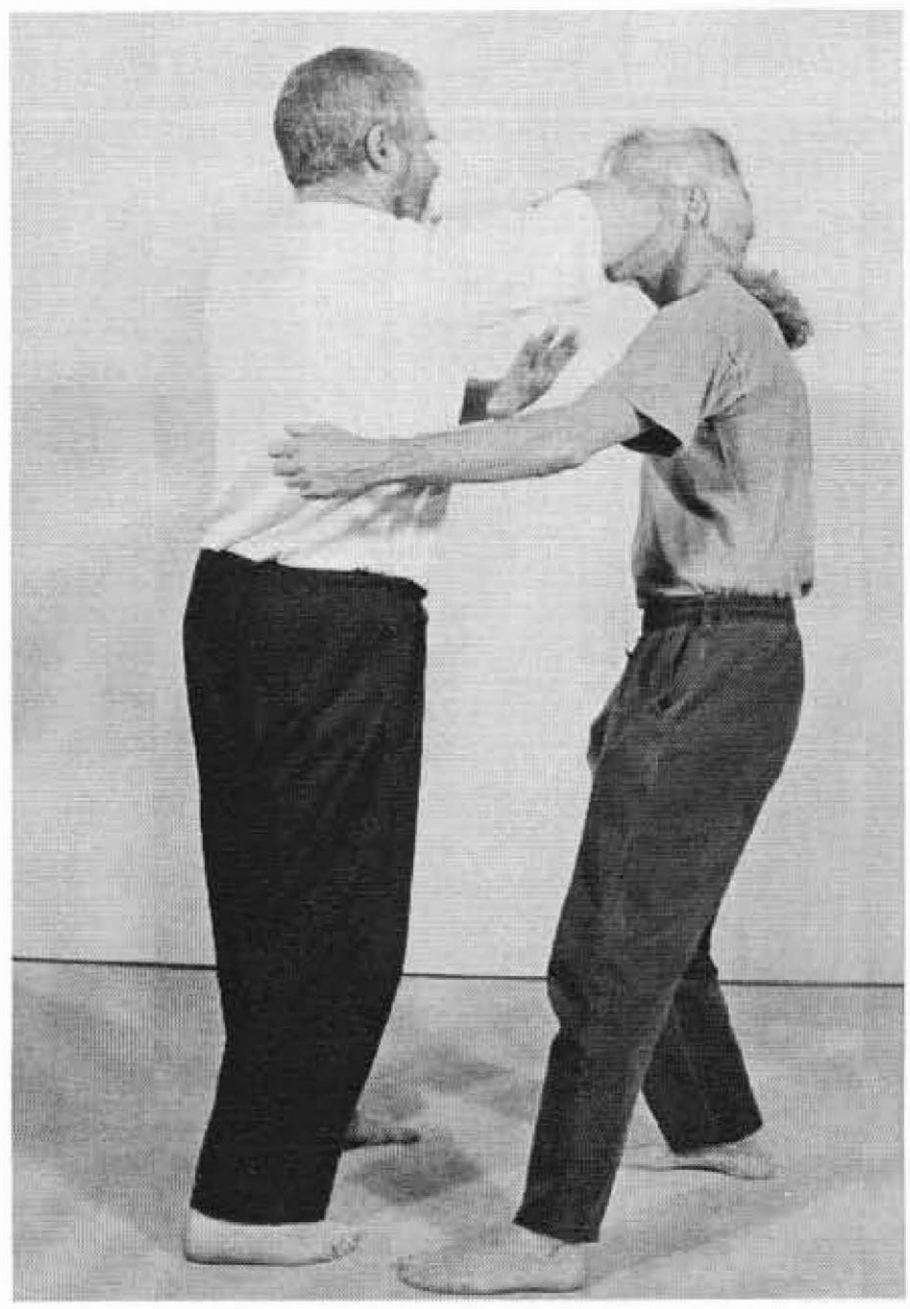


Figure 84

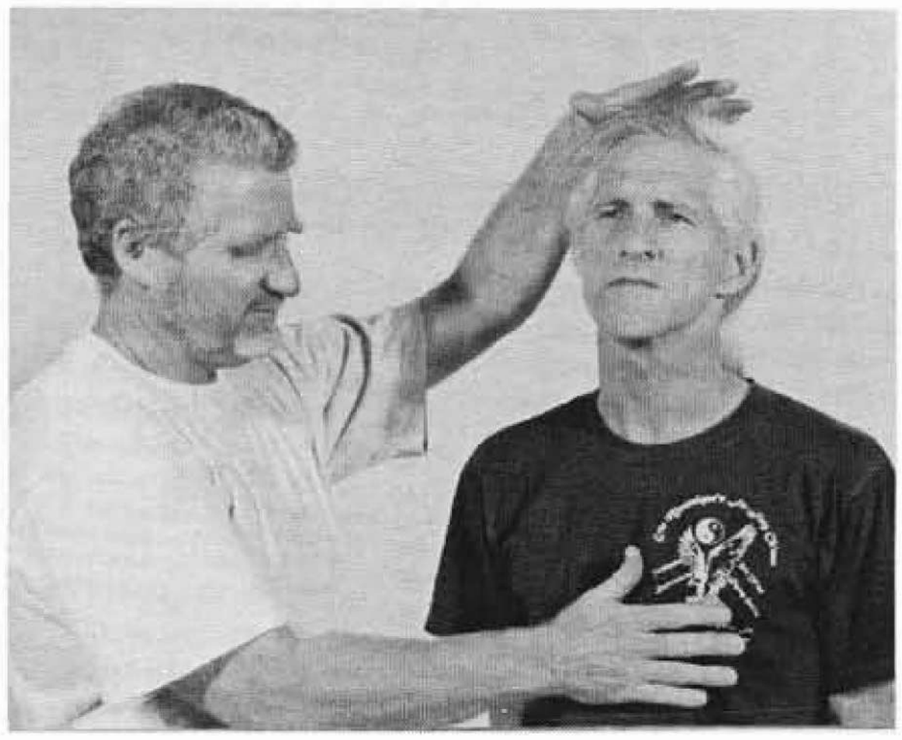


Figure 85

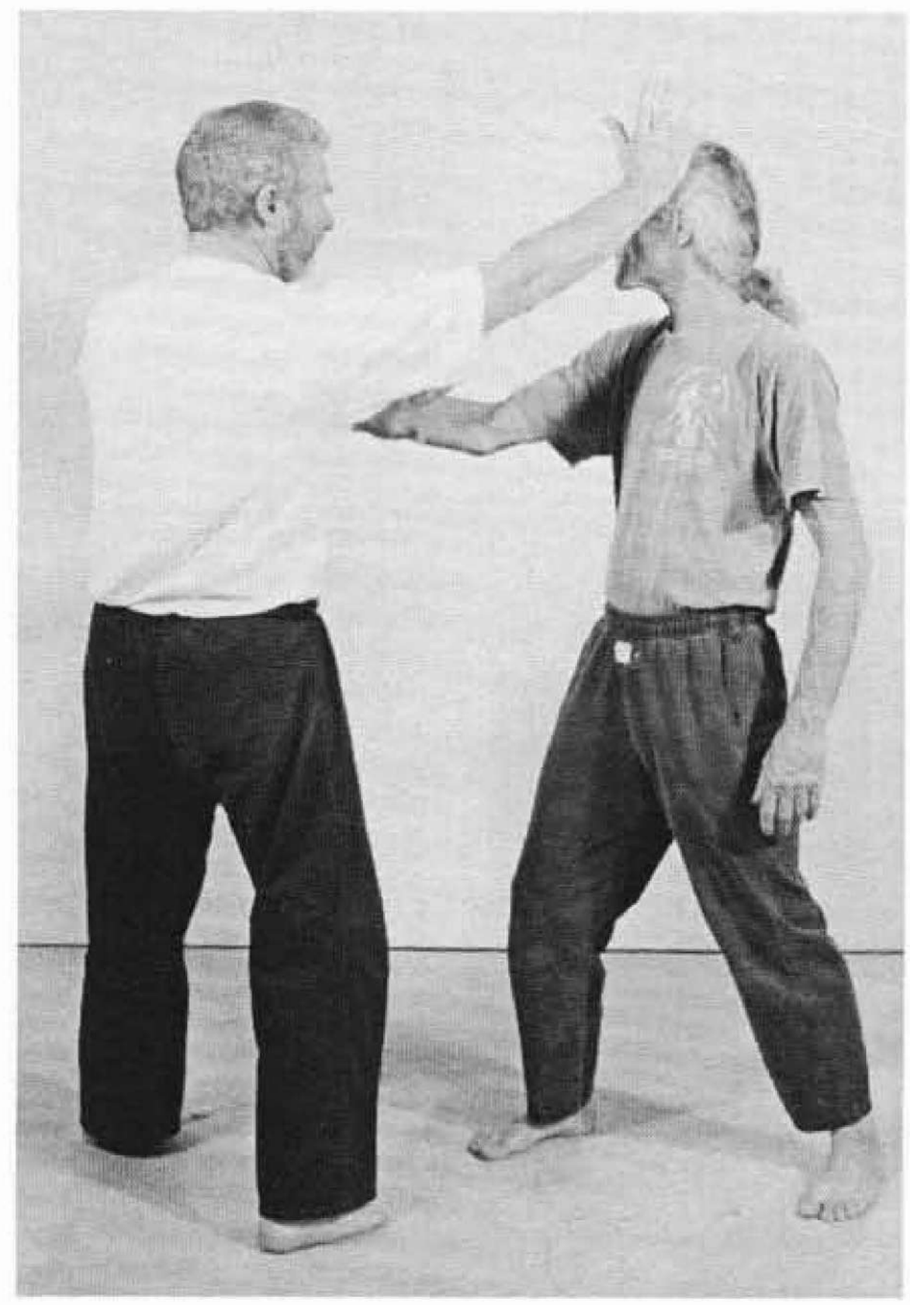


Figure 86

Figure 87

are located over or very near to physiological areas of the body that are particularly sensitive to being struck, like the brain.) The strike is done straight down into the brain, and because of the point's location, very close to the frontal coronal (the sutures formed by the knitting together of the skull plates from birth), this can cause a broken skull! This is also the area just above the hypothalamus, where, among other important things, the reflexes are developed. It is also right over where "premotor" decisions are made (e.g., "I am now going to pick up this cup."). So strikes to this area will affect the reflexes and coordination as well as the ability to simply make decisions.

This part of the cerebrum is also in charge of body movement, so a strike anywhere in this vicinity impairs the same.

Set-up point:

We use the utility set-up point of neigwan. We could also use St 9 to slow the heart just before the strike. This has a devastating effect.

Antidote:

If physical damage has been done, such as a broken skull, then medical attention is needed. If electrical damage has been done (extreme local pain, nausea, scattered mind), we use a balancing method by placing the left hand on Gv 20 and the right palm on Cv 14. As you breathe out, apply

pressure to Gv 20 and less pressure to Cv 14. On the inhalation, apply light pressure to Cv 14 and less pressure to Gv 20 (fig. 85).

NOTE: You *should not use the above antidote if physical damage to the skull has occurred!*

Healing:

Used for headache, dizziness, swelling of the head and face, conjunctivitis, toothache, and apoplexy.

Applications:

1) He attacks with a straight or hook right. You simply come straight in and block his right at neigwan with your left palm and strike straight down onto Gb 16 with your right palm. (fig. 86).
2) Strike his left neigwan as that arm attacks, and strike to St 9 with your left knife-edge palm (fig. 87). Your left palm now moves his left arm over to his right while your right palm attacks to Gb 16 (fig. 88).

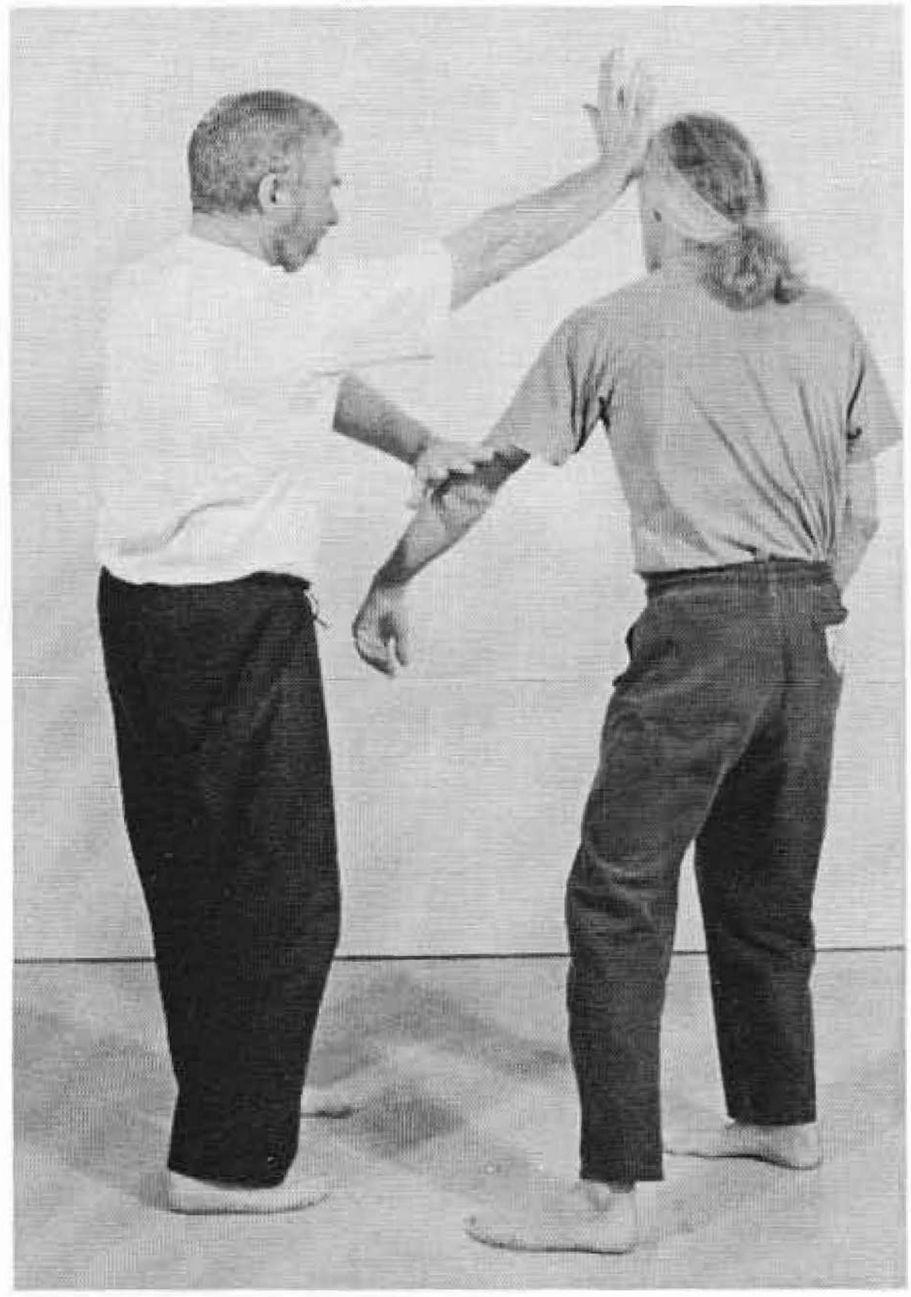


Figure 88

GB 17 (GALLBLADDER POINT NO. 17)

Chinese name:

Zhengyin (principle yin).

Location:

Keep going backward in a line parallel with the skull, 1 cun back from Gb 15.

Connections:

Yang wei mai

Direction of strike:

Straight down into the brain, usually from the side.

Damage:

Much the same as for Gb 16 because of its proximity to the brain parts. A strike to this point has a slightly greater effect upon the reflexes, as Gb 17 is closer to the part of the cerebrum that controls movement, so motor actions are damaged. There will also be local pain through the electrical part of this strike, and, if the strike is very hard, knockout as well as death.

Set-up point:

Again, this point works particularly well with St 9 and neigwan.

Antidote:

The antidote is the same as for Gb 16, using Gv 20 and Cv 14 and breathing. Again, do not use this antidote if physical damage has occurred to the skull. You could also use Gb 20 if KO has occurred.

Healing:

Used for rigidity of the neck, dizziness and vertigo, toothache, and vomiting.

Applications:

1) You could use the "willow tree method" here. He attacks with a straight right. You slam his arm on the outside of his forearm and slide down his arm with your left palm, as in Figure 89. Your right palm comes straight up and over to strike downward into Gb 17 from the side (fig. 90).
2) Your left palm attacks to his right neigwan as your cupped right palm slaps the whole side of his neck, causing a percussive shock wave to go into the whole neck area. This causes KO and is part of the "strike" that evangelists use when "dropping" people at seminars (fig. 91). Your left palm now pulls his right arm over to your right as your right palm strikes down onto Gb 17 (fig. 92).

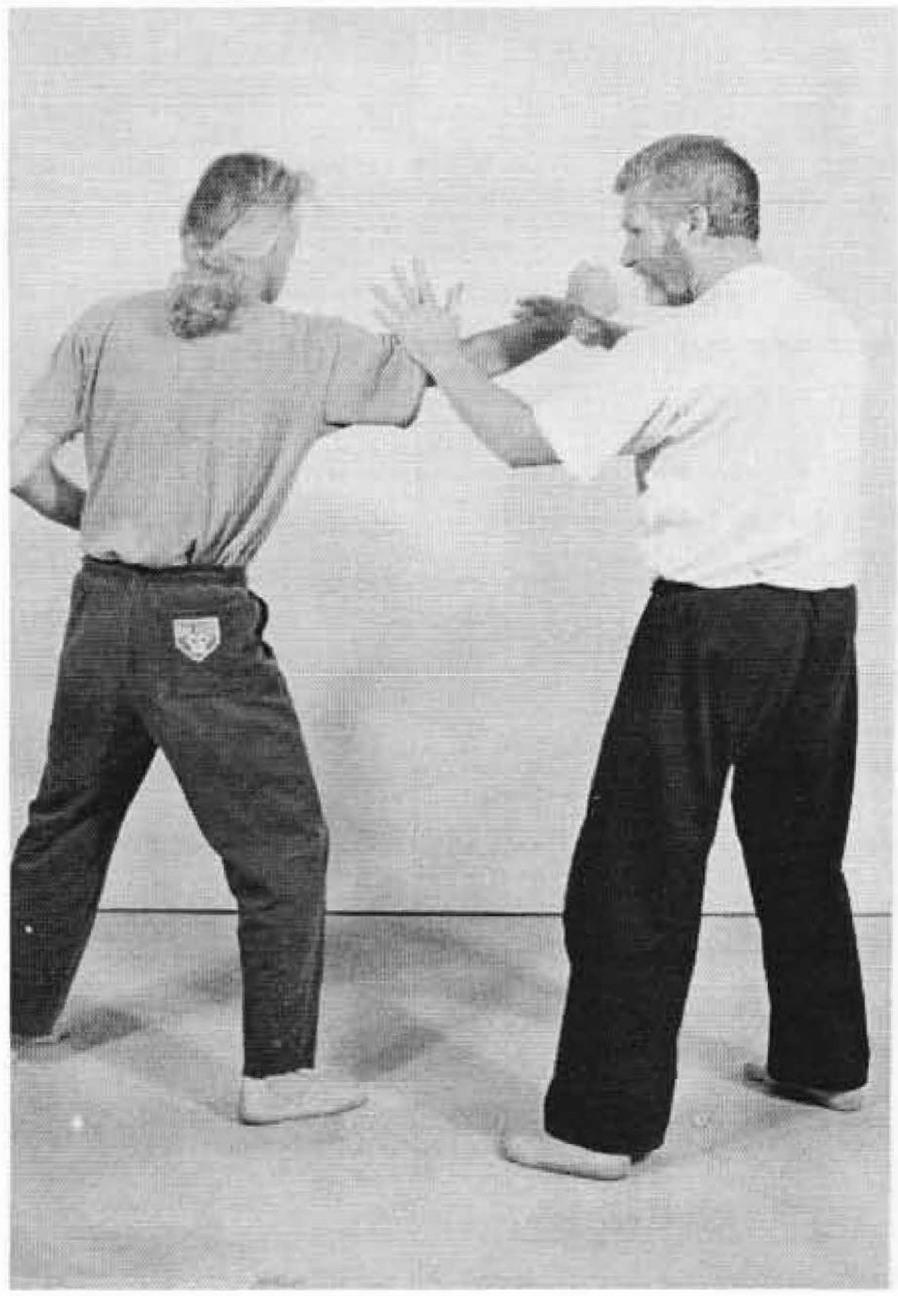


Figure 89

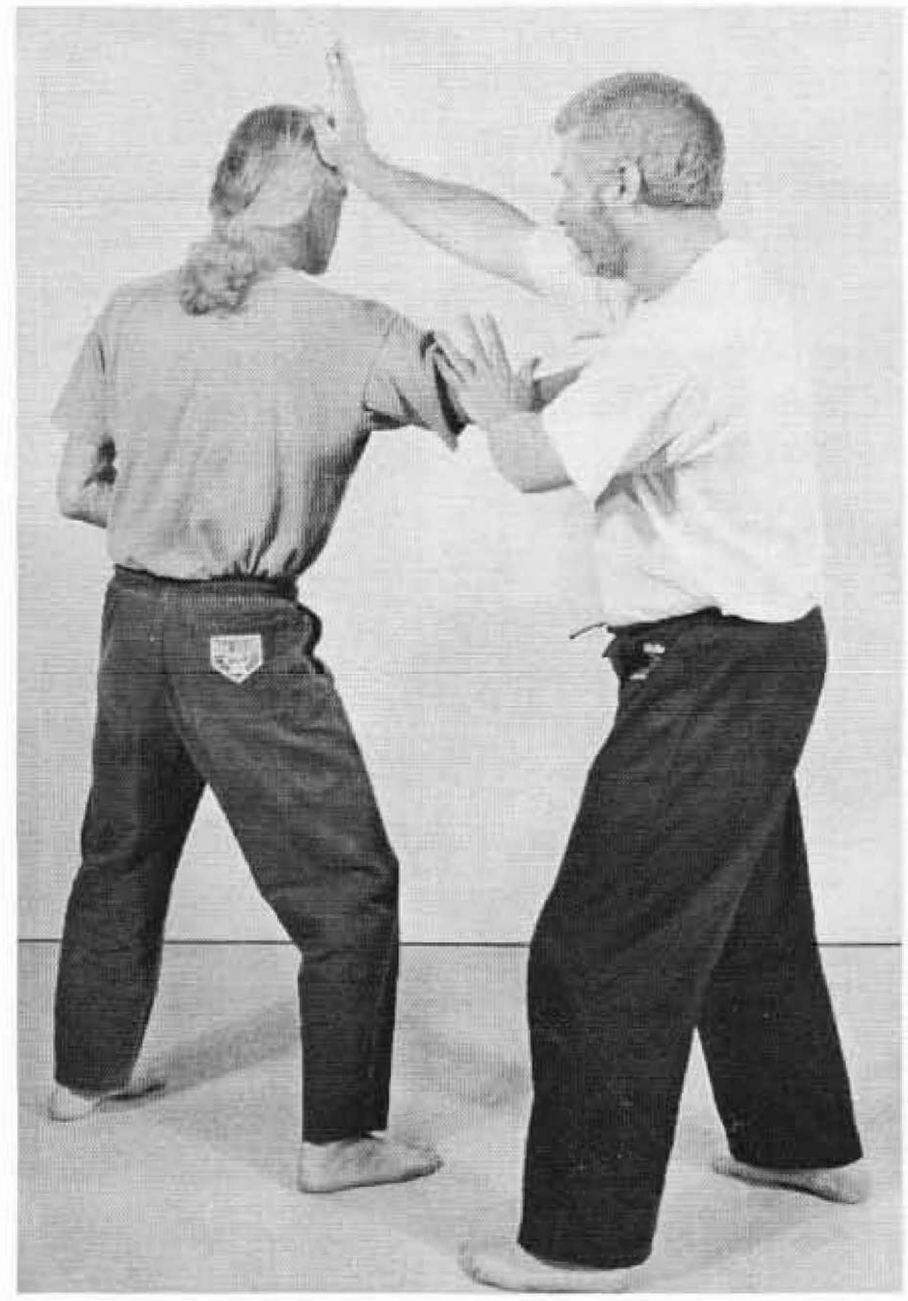


Figure 90

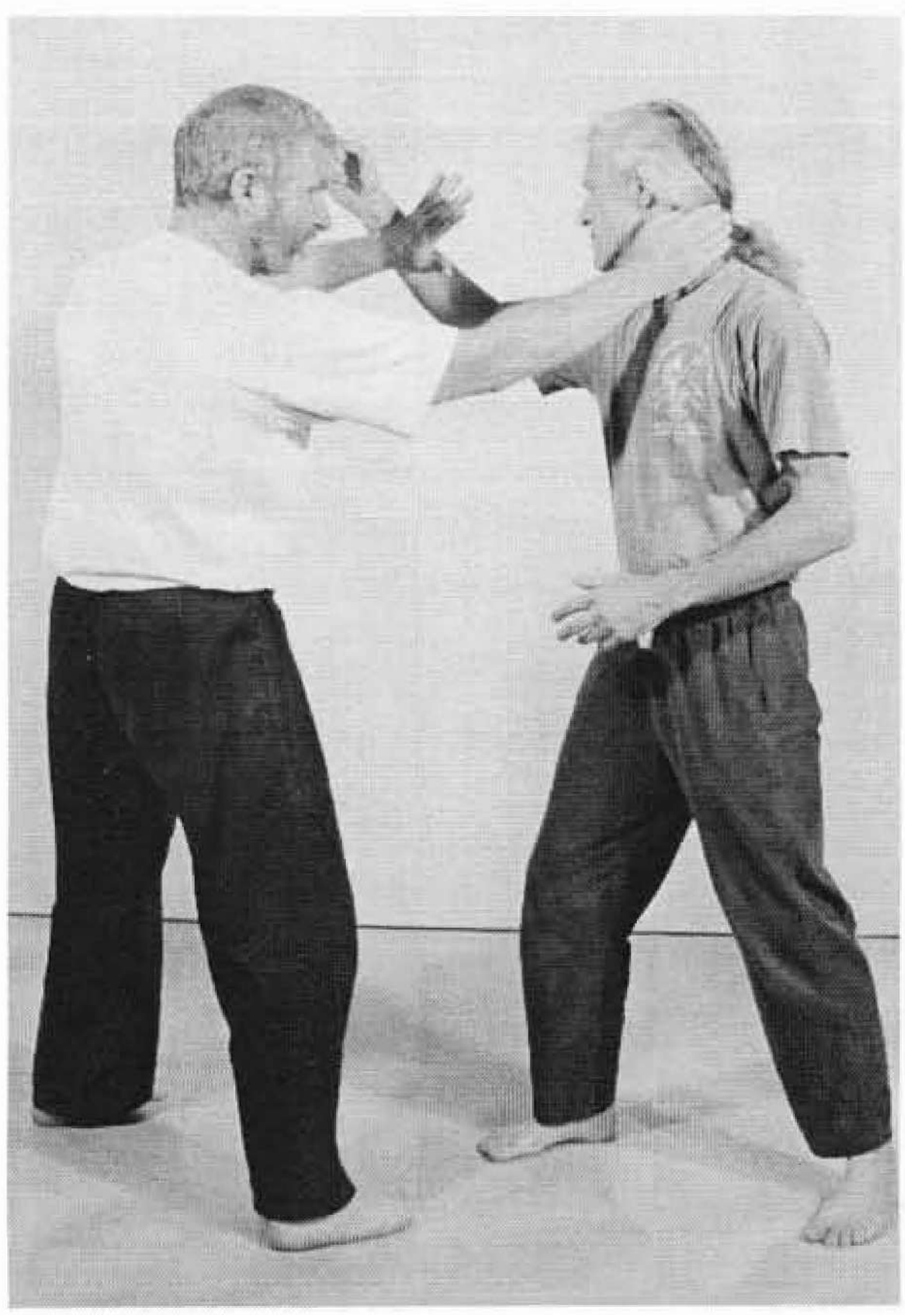


Figure 91

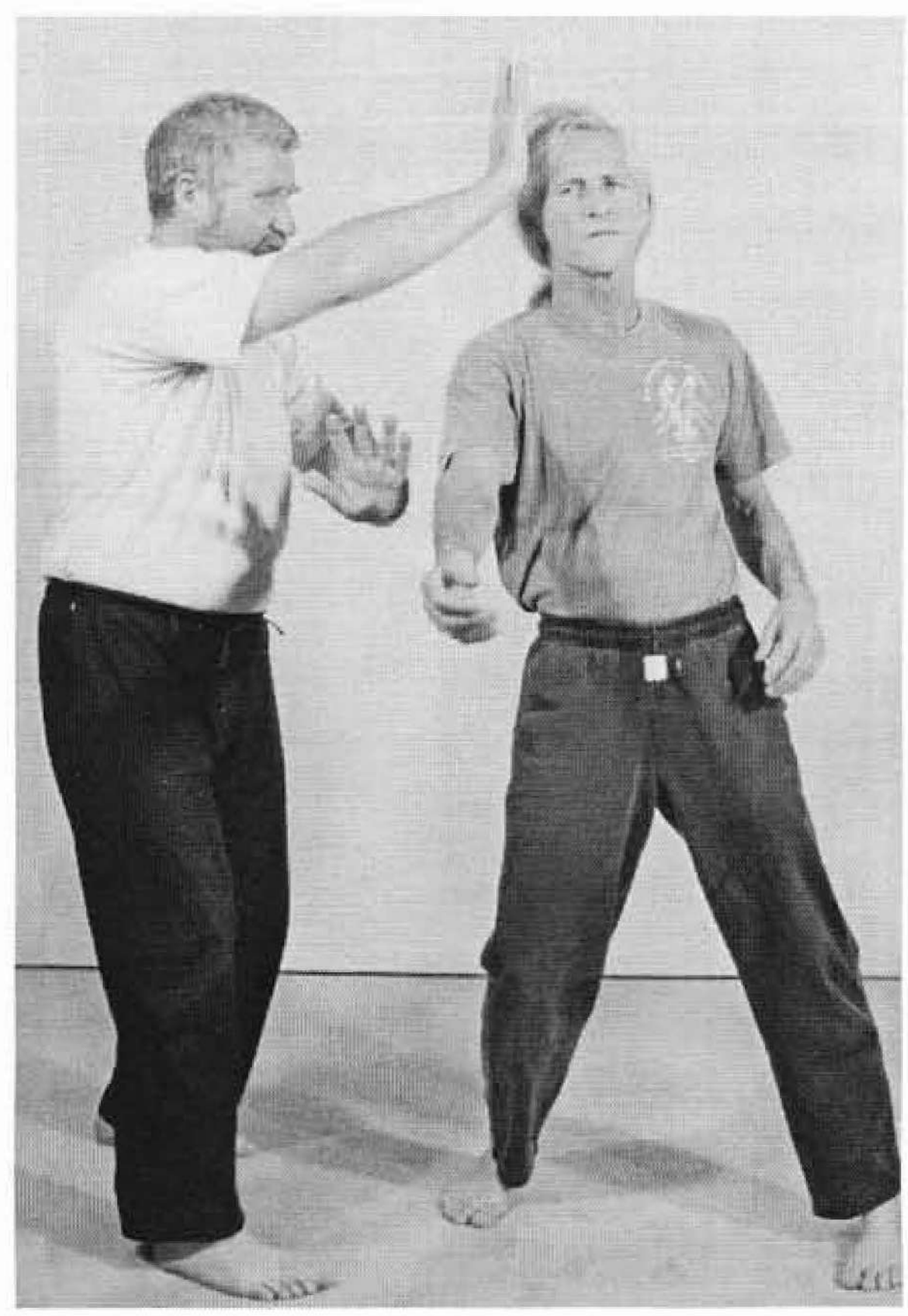


Figure 92

GB 18 (GALLBLADDER POINT NO. 18)

Chinese name:

Chengling (support the spirit).

Location:

1.5 cun posterior to Gb 17 on the line connecting Gb 15 and Gb 20. Approximately 5 cun posterior to the hairline of the forehead, or approximately 1 cun posterior and 1.2 cun lateral to Gv 20.

Connections:

The yang wei mai intersects with the Gb meridian at Gb 18.

Direction of strike:

Strike straight in and down into the head, usually with a palm-heel strike.

Damage:

Even a light blow here can cause a KO. A strike to this point scatters the qi of the upper body, causes nausea, and affects the way the *tantien* distributes the qi. (The tantien is an electrical point about 3 inches below the navel on the midline. This is where the qi comes from and is stored, and so it has great significance in the internal martial arts.) Because of the location over the side of the brain, this point will cause considerable brain dysfunction when struck hard enough.

Set-up point:

You can either use neigwan, or this point works particularly well with a neurological shutdown strike to the side of the face.

Antidote:

Use Gb 20. Squeeze in and upward into the head.

Healing:

Because of its intersection with the yang wei mai meridian, this point can be used to influence the yang wei mai in treating symptoms such as chills and fever, stiffness and pain, muscular fatigue,

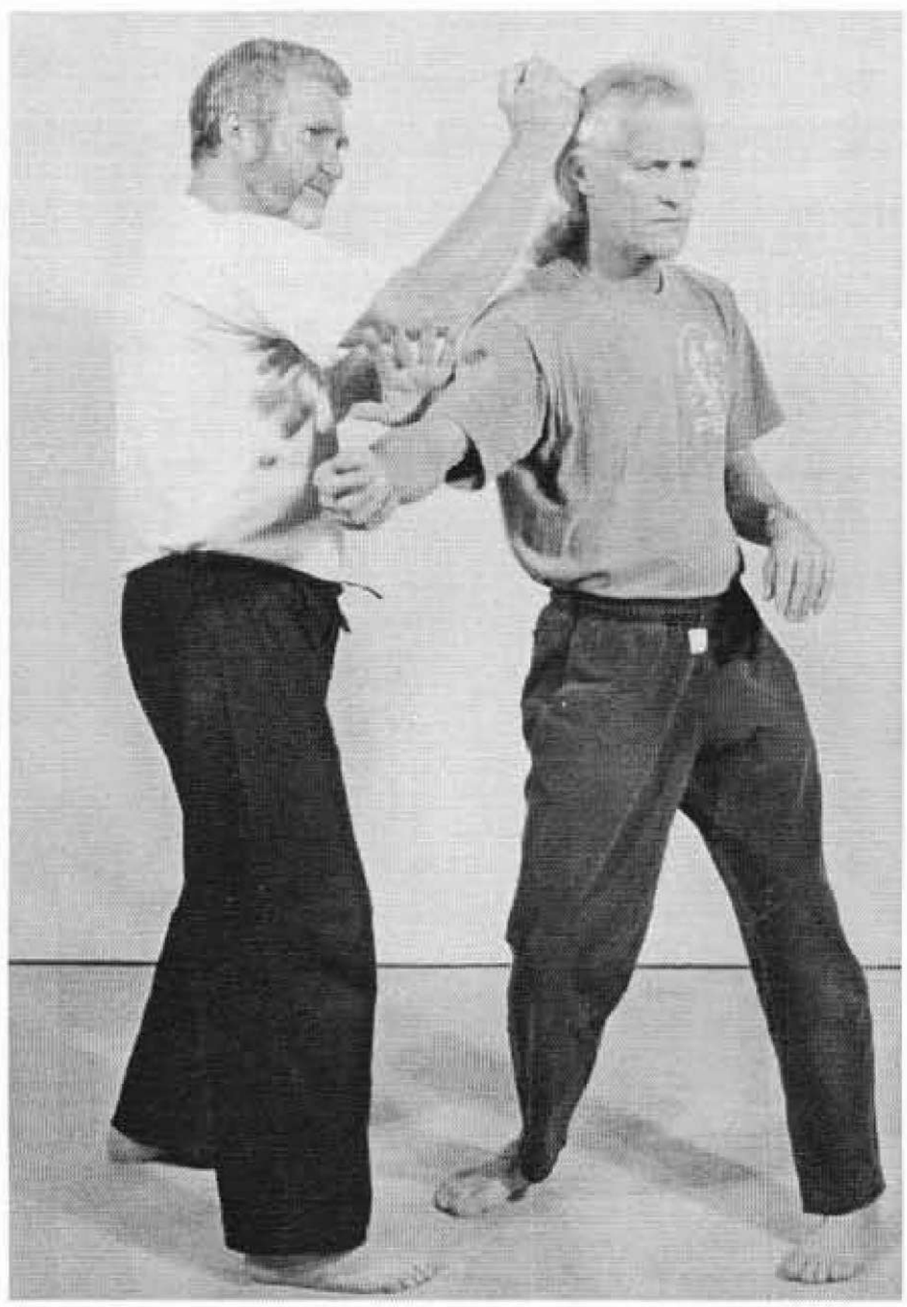


Figure 93

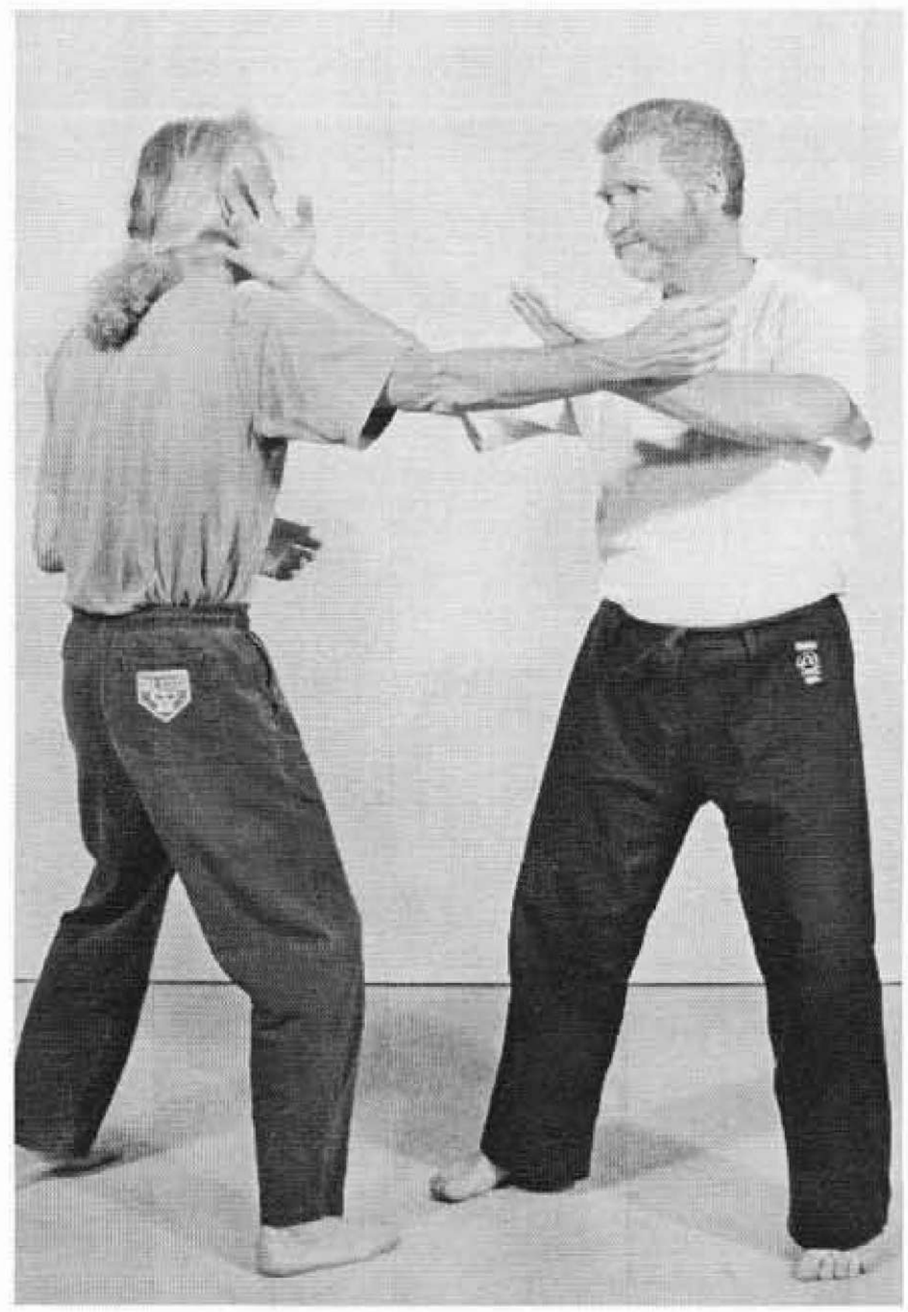


Figure 94

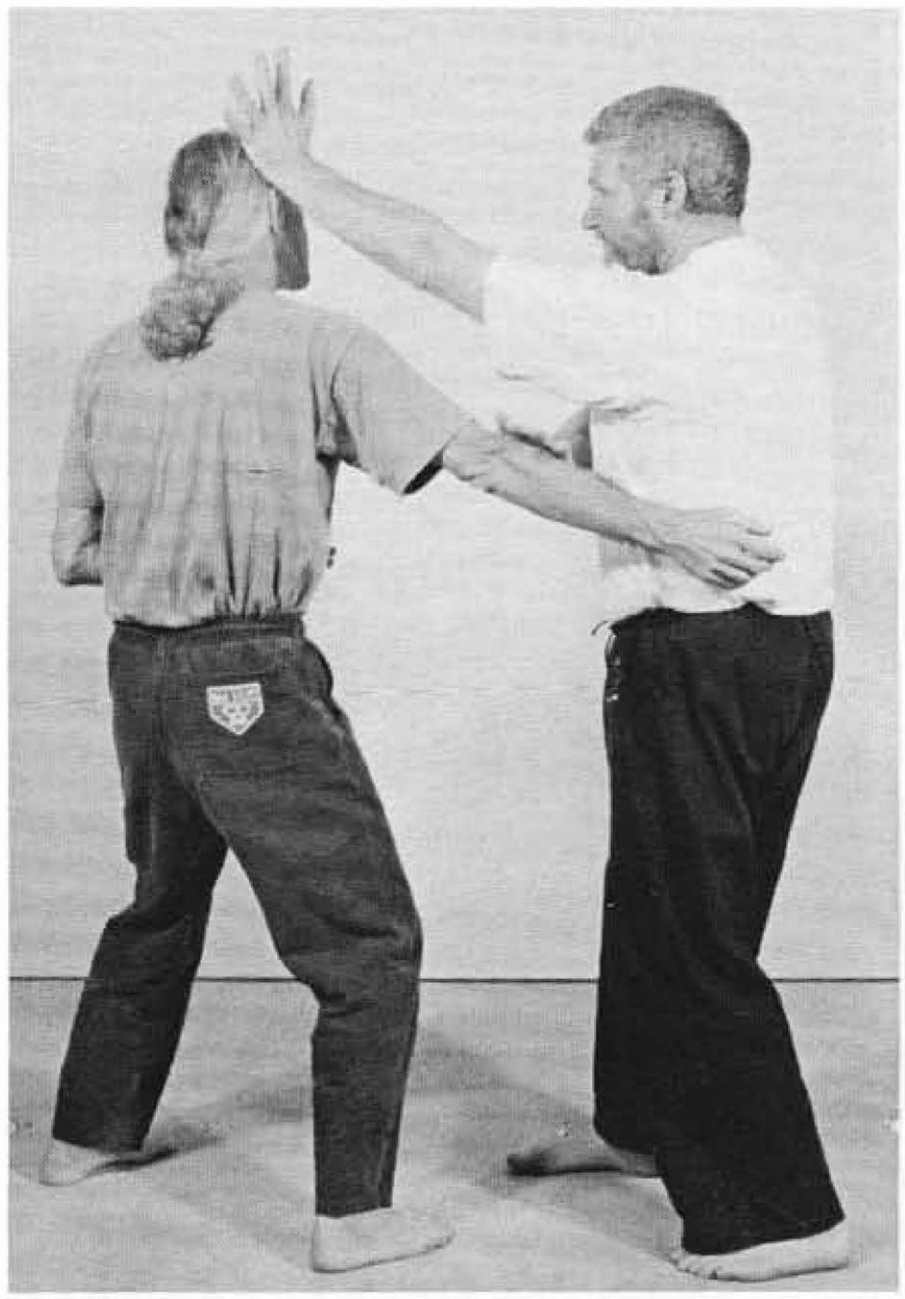


Figure 95

vertigo, and pain and distension (swelling) of the waist.

Gb 18 is innervated by the branch of the great occipital nerve and irrigated by the branches of the occipital artery and vein.

Use this point to treat headache, rhinorrhea (nasal discharge), epistaxis, (nosebleed), occluded nose, common cold, bronchitis, and eye disease.

Generally massage straight in or push or rotate clockwise or counterclockwise to treat xu or shi conditions. The headaches treated by Gb 18 are generally at the top of the head and, as such, are usually liver related, but Gb 18 can be used for headache on the side of the head also. You could use it in combination with Gb 20, Gb 12, Gb 8, Gb 21, Co 4, Liv 3, Gb 41, and Gb 34 for headache.

If treating rhinorrhea, epistaxis, occluded nose, common cold, or bronchitis, you might include points from the Co and Lu meridians. In the case of epistaxis, Sp 10 can also be used.

For eye disease, you could include Gb 1, St 1, Bl 1, Gb 41, Gb 43, and Liv 2.

Applications:

1) He could attack using a right hook, to which you could strike to neigwan with a one-knuckle punch. This will cause him to feel quite nauseated, and he'll have to sit down anyway. So you continue by slamming his right arm over to your right with your left palm and attacking to Gb 18 with a hammer fist (fig. 93).
2) Slam his right straight attack at his forearm outside with your left palm and attack to the neurological shutdown points at the side of the jaw (fig. 94). Your right palm takes over on his right arm as your left palm attacks to Gb 18 (fig. 95).

GB 19 (GALLBLADDER POINT NO. 19)

Chinese name:

Naokong (brain cavity).

Location:

Directly above Gb 20, level with Gv 17 on the lateral side of the external occipital protuberance. Or look at the back of the head just above the neck. The bit that sticks out the most, saying "hit me, hit me" is Gb 19.

Connections:

The yang wei mai intersects with the Gb meridian at this point.

Direction of strike:

Straight in to the back of the head, usually using a palm strike.

Damage:

The damage is immense with a strike to this point. The whole brain is shocked, causing KO even with lighter strikes. Many people have been able to cause a KO on students using this point. However, only irresponsible instructors would use this point to "show of," because although it is such an easy KO, it causes considerable damage long after the strike has been made.

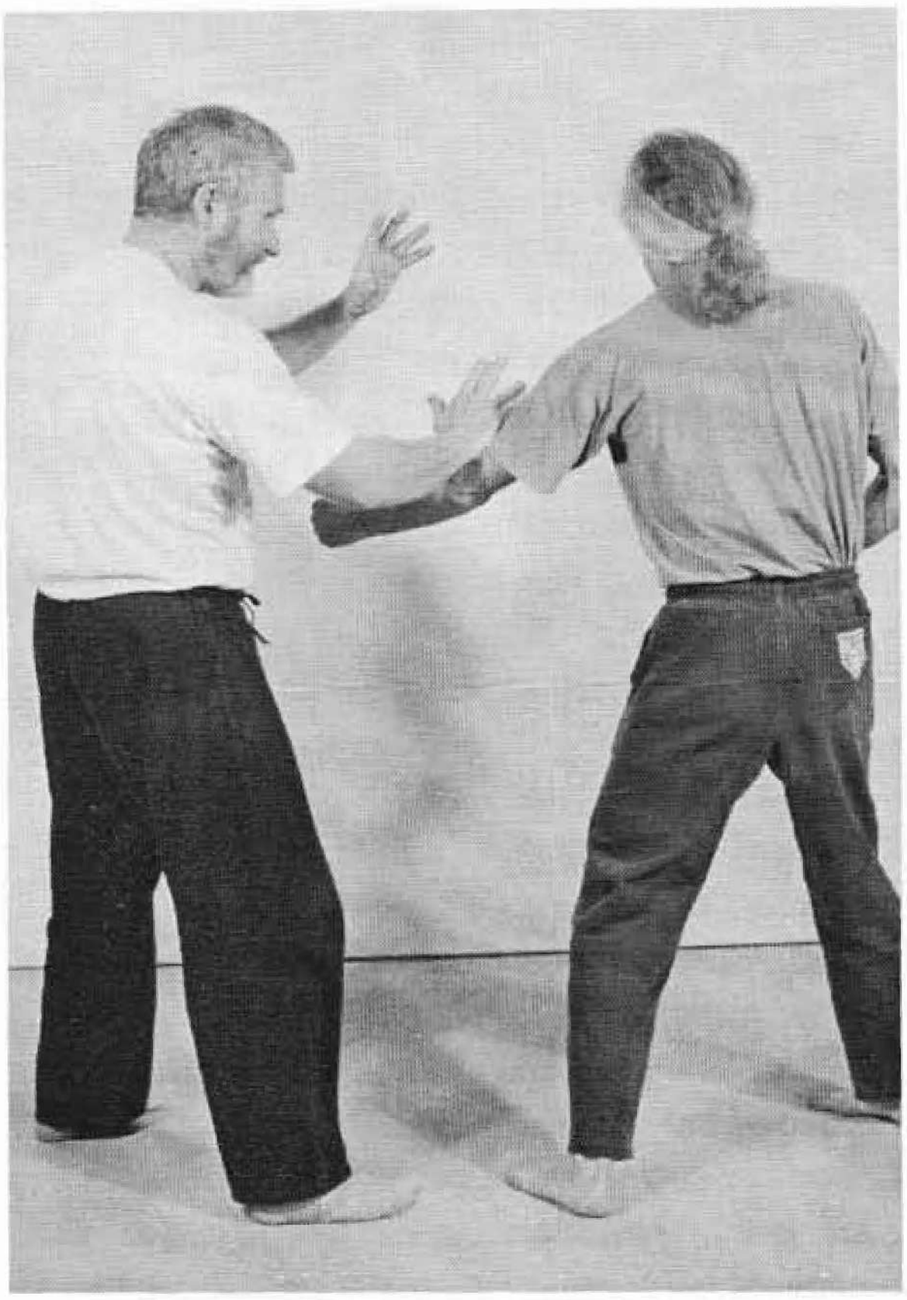


Figure 96

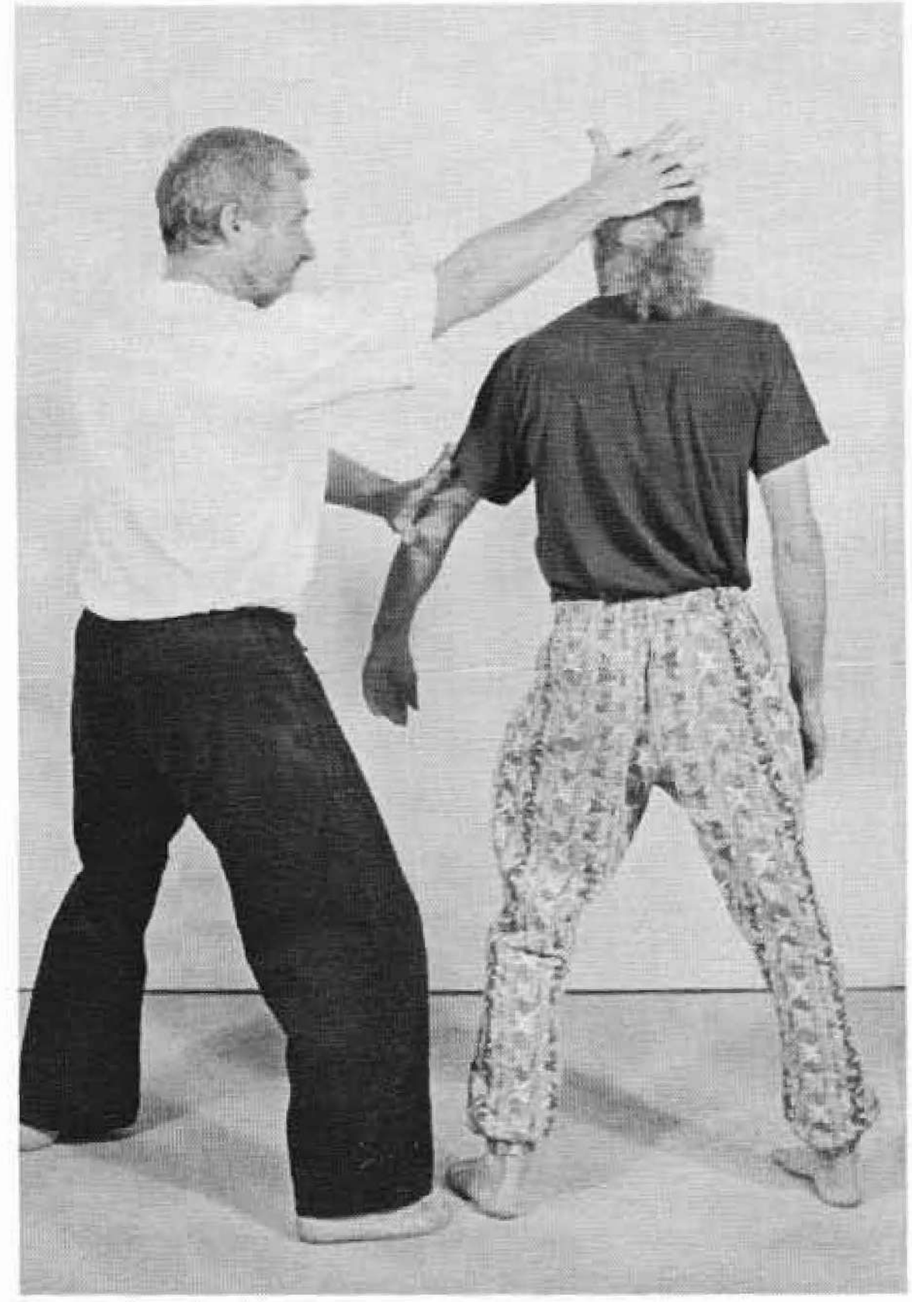


Figure 97

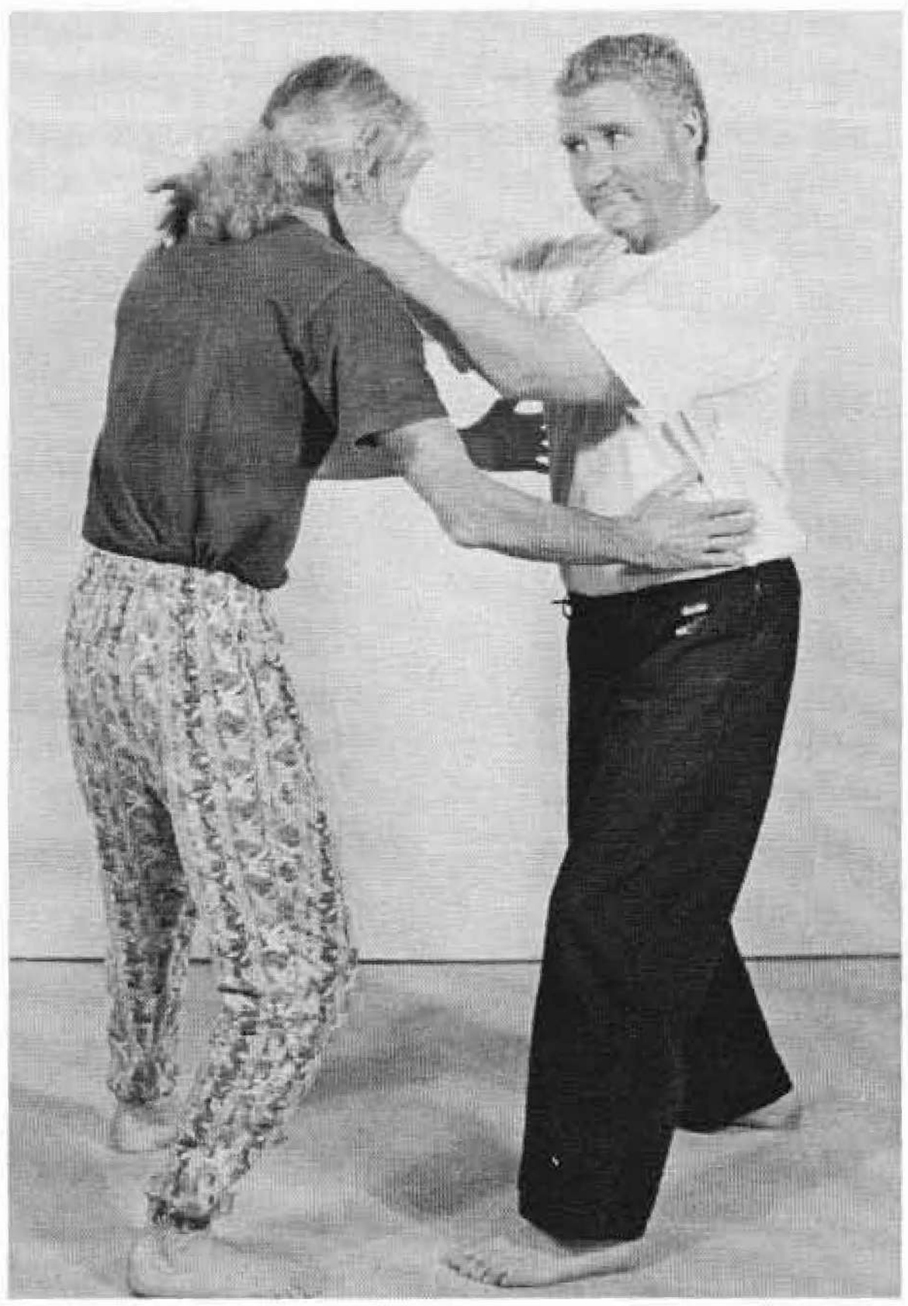


Figure 98

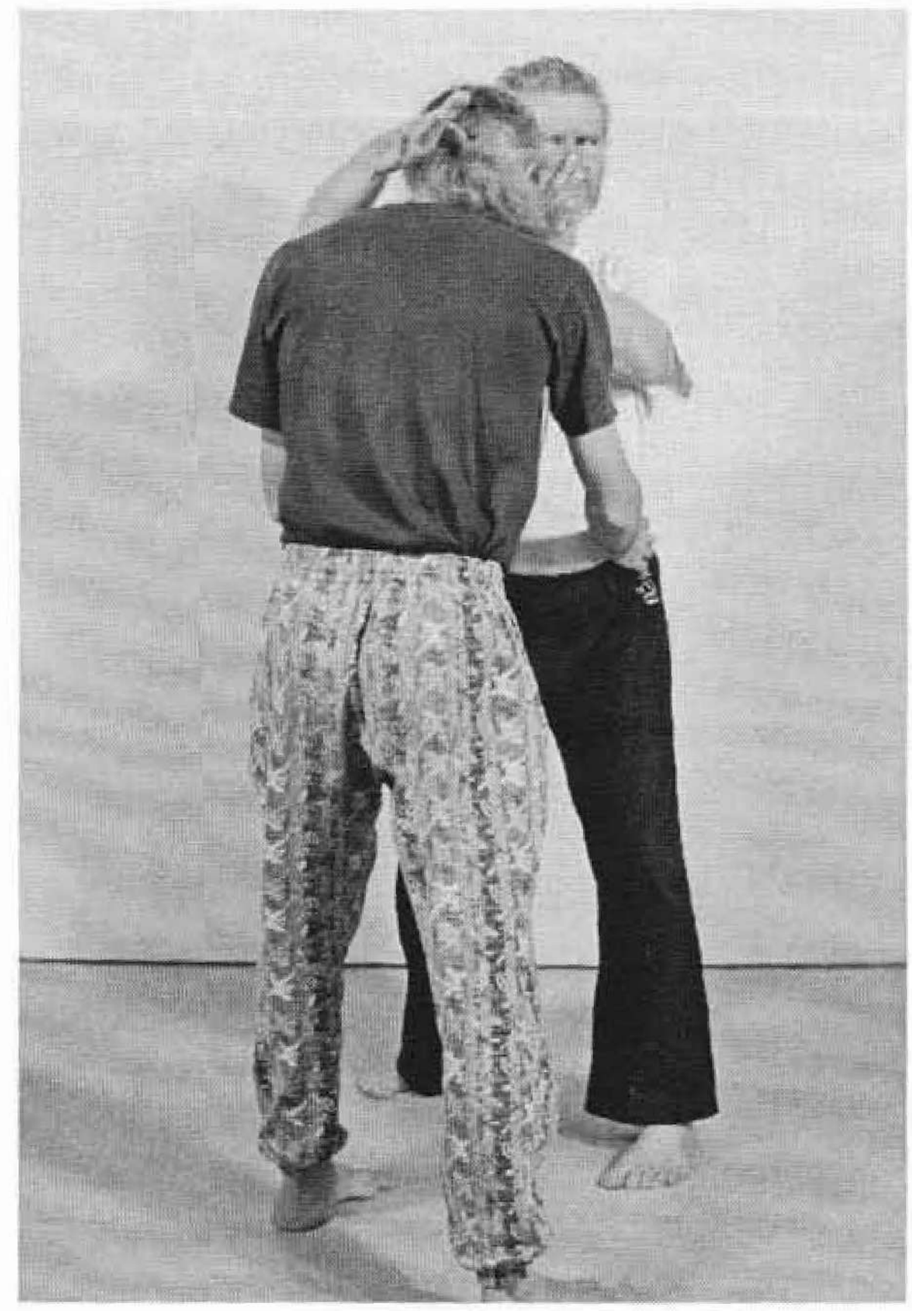


Figure 99

Set-up point:

A strike to Gb 19 needs no other point to set it up, but you could use a slice along the whole arm, from shoulder to wrist. This tends to cause a qi build-up at Gb 19, so that when struck, it sort of "bursts" like a balloon!

Antidote:

There is no antidote for this point, other than rest if the strike was not too hard and hospitalization if it was hard. This point can be struck accidentally when someone simply falls backward onto the head.

Healing:

Innervation is by the branch of the great occipital nerve. Irrigation is by the occipital artery and vein.

Used for headaches, pain and stiffness of the neck, common cold, asthma, seizures, mental illness, palpitations, and tinnitus.

It is used in conjunction with Gv 20 and Bl 10 for dizziness. Another prescription for dizziness that includes Gb 19 is as follows: Gv 24, Gv 23, Gv 22, Gv 21, Gv 19, Gv 20, Gb 19, Si 5, Sp 2, Bl 67, Bl 63, Bl 62, and St 36.

You could use moxa on this point in conjunction with Gb 20, Lu 7, Lu 9, Co 4, and St 41 for lateral or midline headaches.

Massage techniques would be either a straight push or clockwise or counterclockwise rotation for xu or shi conditions. You could use "on-and-off" pressure for headaches or a push where pressure is directed straight in and then dragged laterally.

Applications:

1) You first set up this point by slicing down his left attacking arm with the right palm (fig. 96). Then the left palm also slices down the whole arm. This has turned the attacker so that you are now in back of him so that your right palm can strike straight in to Gb 19 (fig. 97).
2) You might have "closed" with your attacker so that you are both in a grappling type of situation (fig. 98). Start with a quick shot with your left palm to the side of his jaw at the mind point and follow up immediately with the reverse hammer fist to Gb 19 to cause an instant KO. This is a lovely shot that people just don't expect from this grappling-type position (fig. 99).

GB 20 (GALLBLADDER POINT NO. 20)

Chinese name:

Fengchi (pool of wind).

Location:

In the posterior aspect of the neck, below the occipital bone, in the depression between the upper portion of the sternocleidomastoid muscle and the trapezius muscle.

Connections:

Gb 20 has connection with both the yang wei mai and the *yang chiao mai*, both extra meridians. Gb 20 is also one of the points used to access "the sea of bone marrow" (the brain) and is considered a special meeting point because it has direct connections with the Si, Bl, and Gv meridians.

Direction of strike:

Gb 20 must be struck upward into the head using a weapon that is "sharp," such as a reverse knife-edge strike.

Damage:

Again, the damage caused by striking this point in the correct direction is immense. We get not only the electrical disruption but also the physiological damage caused by Gb 20's location at the base of the brain. Even a light to medium strike upward to this point will cause a KO. Very hard strikes will result in brain damage and even death.

Set-up point:

To set up this point, we strike to Gb 1 in the corner of the eye. (See the applications to find out how to do this.)

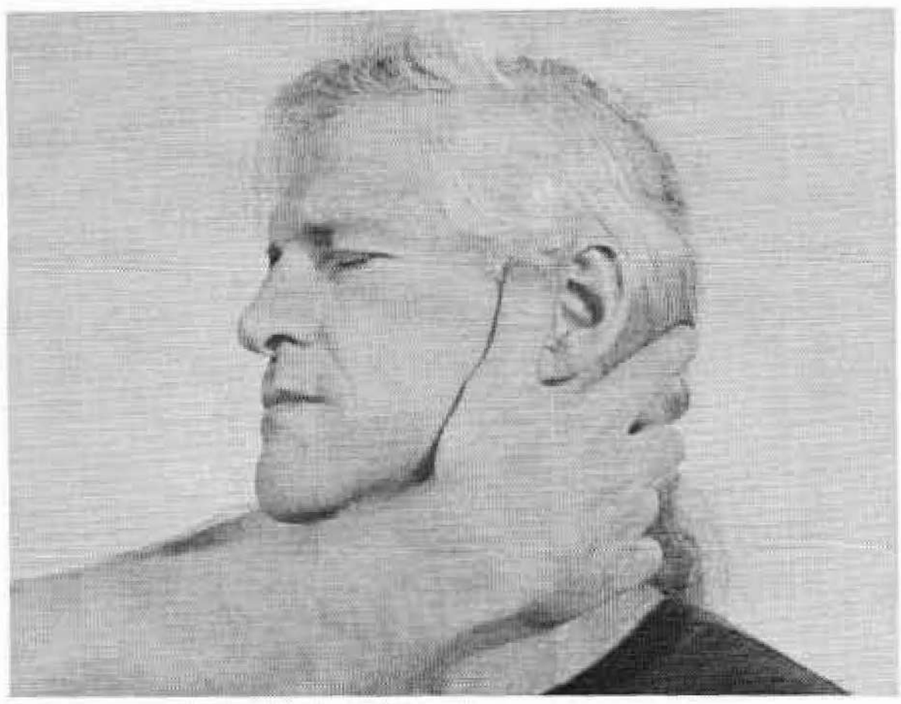


Figure 100

Figure 101

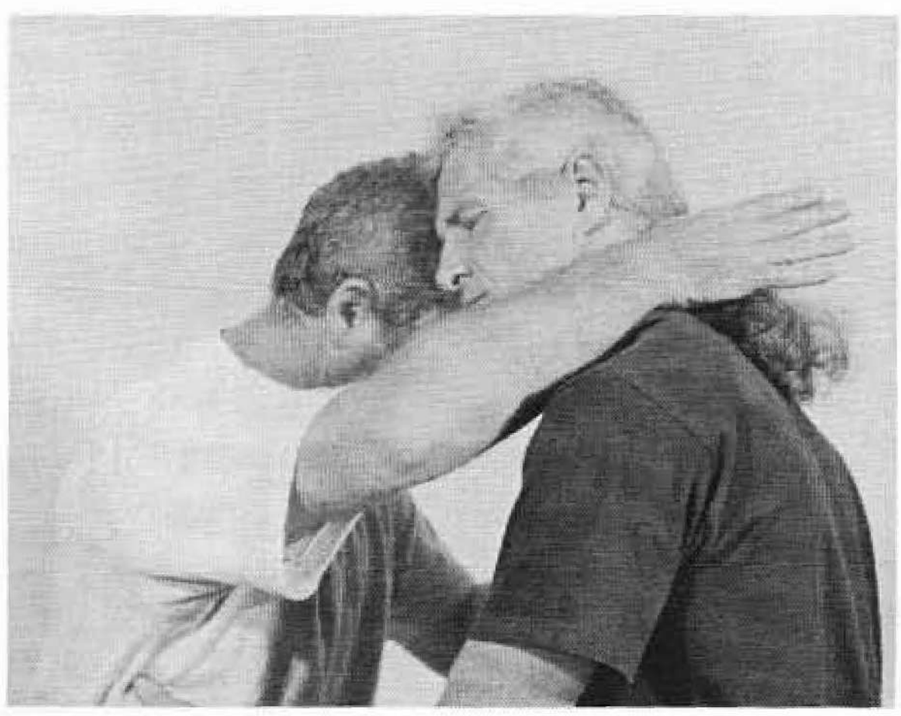


Figure 102

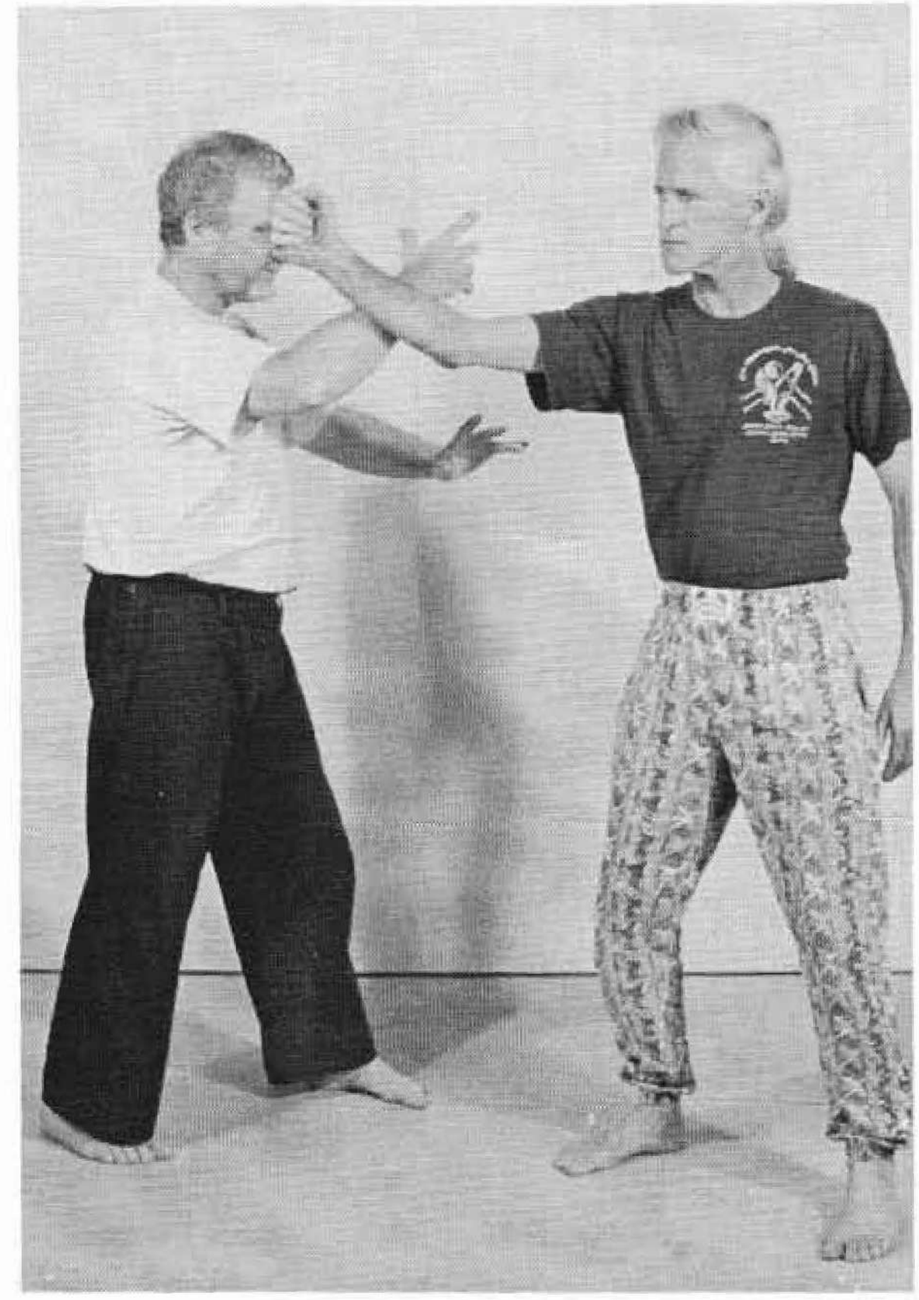


Figure 103

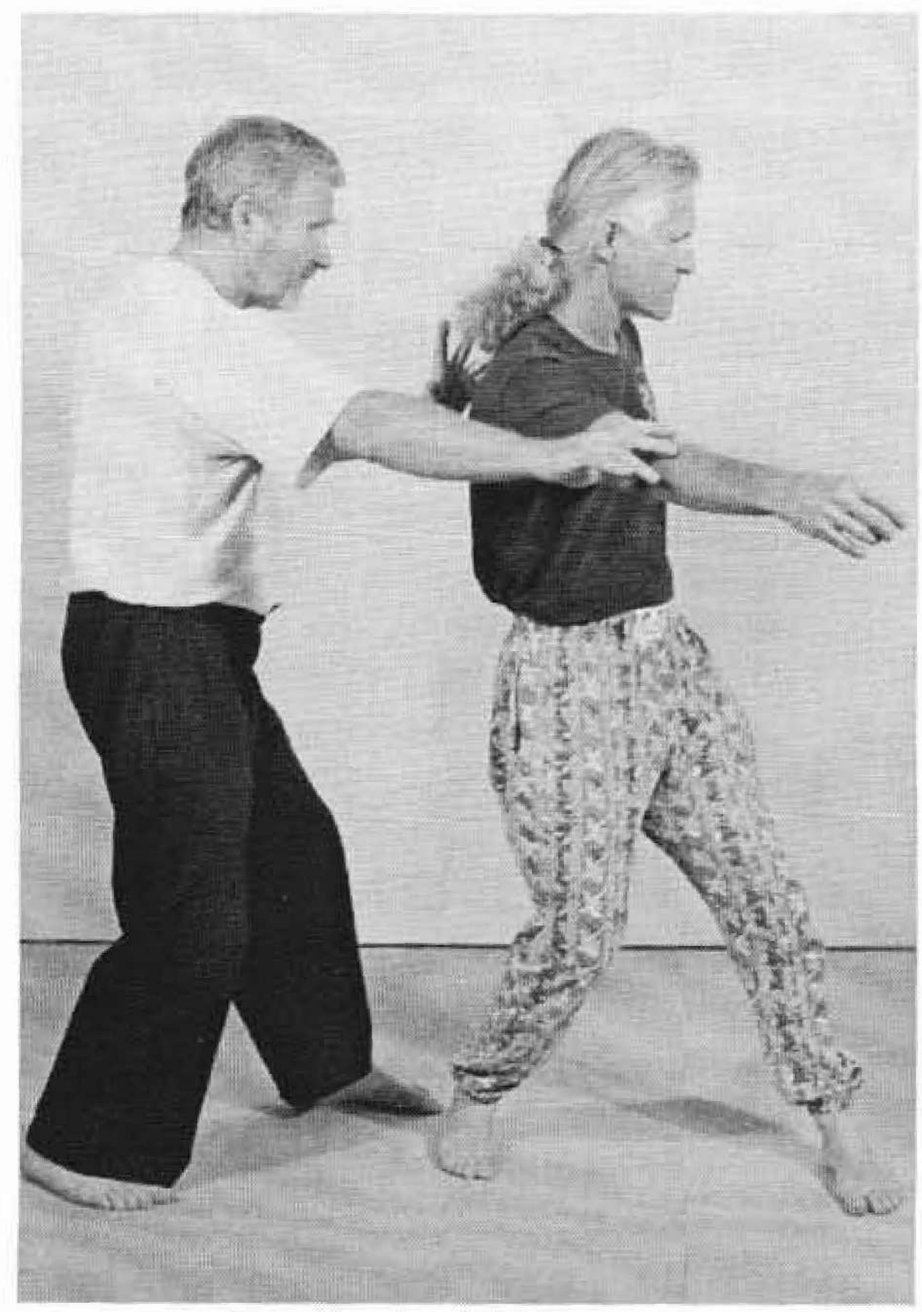


Figure 104

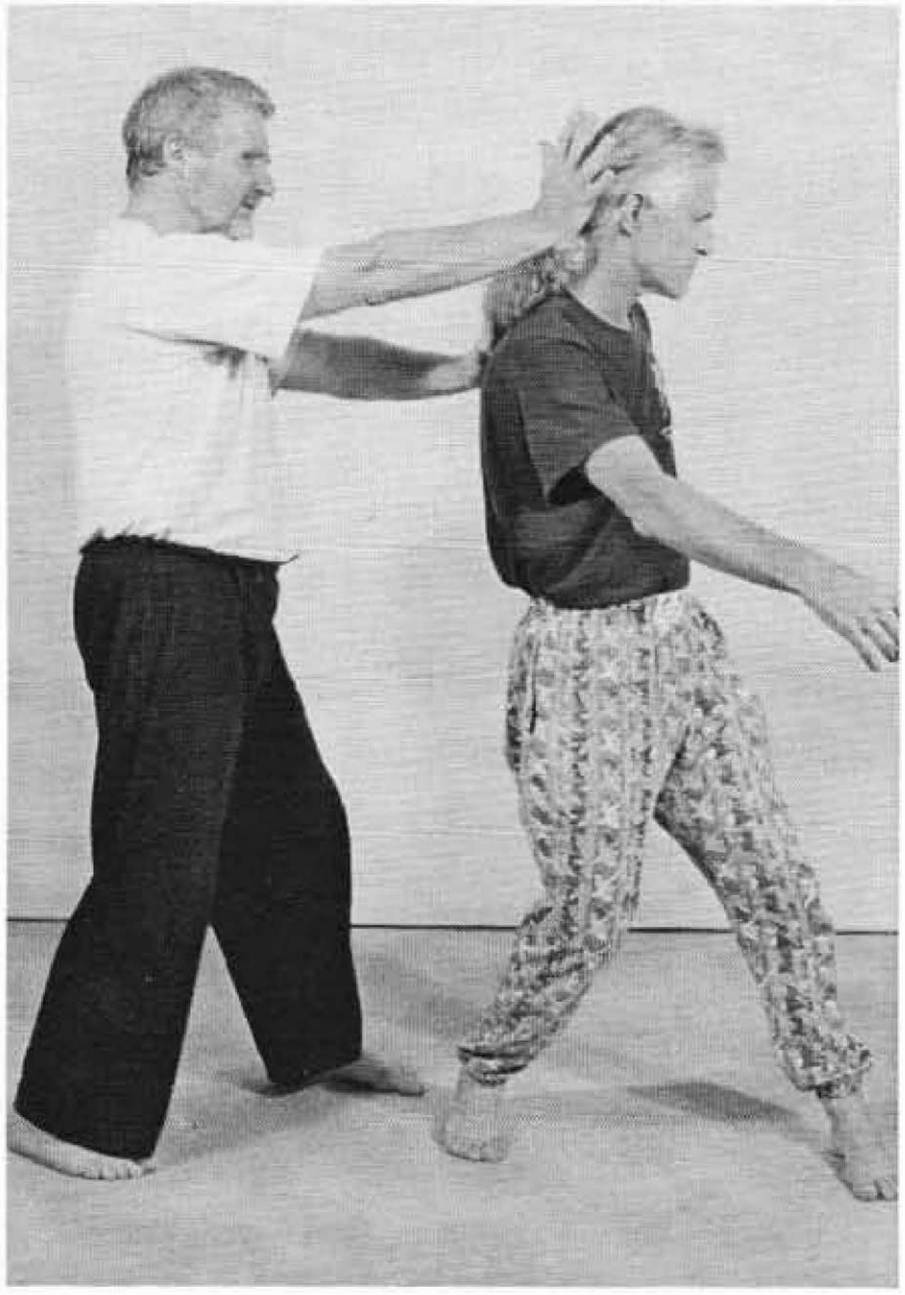


Figure 105

Antidote:

Although Gb 20 is itself a utility revival point, we cannot use it as an antidote when it is struck. We can, however, grab the back of the neck from in front—placing the thumbs just in front of the two ears so that the fingers meet behind the neck—and squeeze (fig. 100). Or you might strike downward onto Gb 21 on the highest part of the shoulders and then wipe off violently to either side off the shoulder. This will take yang qi out of the head. The upward strike adds qi to the head.

Healing:

The point is supplied by branches of the occipital artery and vein and by a branch of the lesser occipital nerve.

Used for the common cold, dizziness, headache, stiff neck, red and painful eyes, rhinitis, tinnitus, deafness, pain of the shoulder and back, and feverish diseases.

Its traditional function is the dispersal of "wind heat" conditions. Gb 20 also benefits the hearing and vision.

Traditional indications include sinusitis; red, sore eyes; deafness; tinnitus; lateral and midline headaches; occipital headaches; insomnia; common cold; tidal fever (a fever that comes and goes with the tide); swelling; or tumor of the neck.

This point can be pressed and held for headaches (rotated counterclockwise if the headache is severe or clockwise if it is dull). You can also put your fingers into Gb 20 on either side and pull them apart. You might even run a line from Gb 20 down to Gb 21 or Si 13 for stiff neck, whiplash, and so on. You can also lift the head with the fingers in Gb 20, holding it at about a 45-degree angle, while the patient concentrates on breathing and relaxing.

Applications:

1) Suppose you are in a grappling situation. You should use the set-up point of Gb 1 by striking it with the right side of your forehead, as in Figure 101. NOTE: never use the centerline of your own head in a head-butt type of attack because this will cause damage to you.) Your right hand is around the back of his neck. As soon as you have struck to Gb 1, your right reverse knife-edge palm strikes upward into Gb 20 with devastating results (fig. 102).
2) Take his right straight with a p'eng block, as in Figure 103. Immediately grab his wrist and elbow and pull him violently around so that you are now in back of him (fig. 104). Strike in an upward way to Gb 20 with your right fist (fig. 105).

GB 21 (GALLBLADDER POINT NO. 21)

Chinese name:

Jianjing (shoulder well).

Location:

Midway between Gv 14 and the acromion of the shoulder, at the highest point of the shoulder.

Connections:

Gb 21 is connected to yang wei mai and the triple heater meridian. There is a branch inside to Gv 14, Bl 10, Si 12, and back to Gb 24.

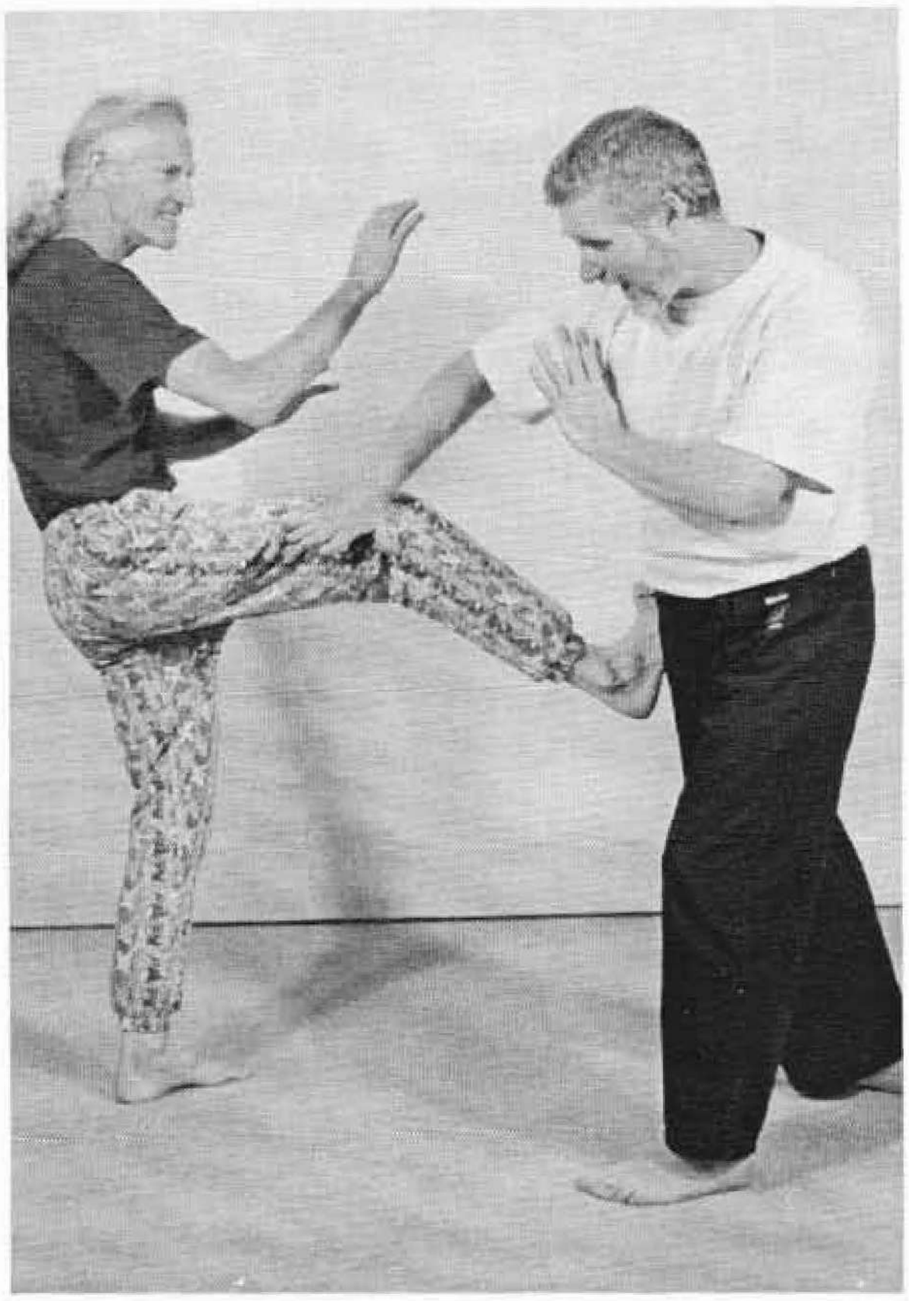


Figure 106

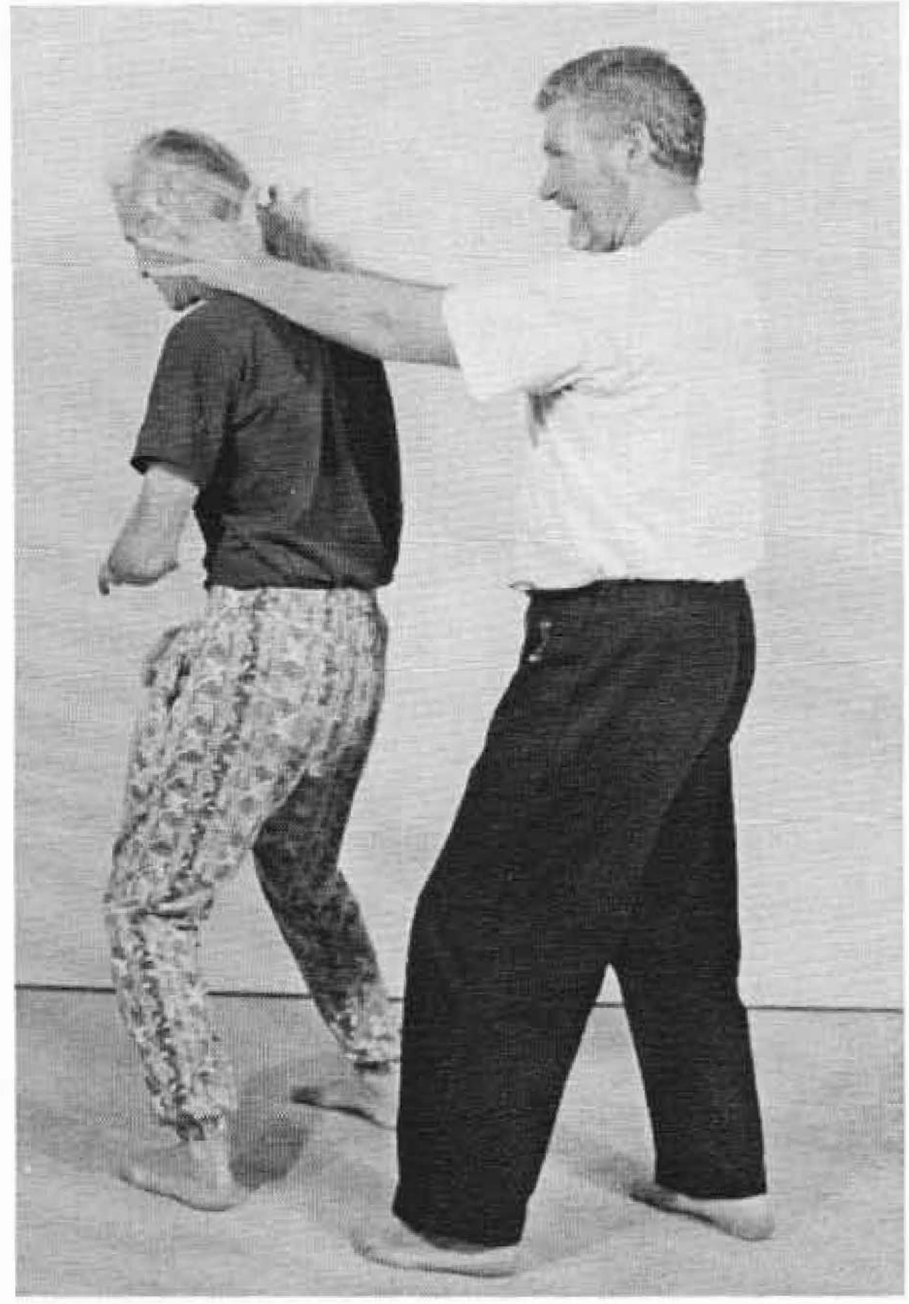


Figure 107

Direction of strike:

This point should always be struck straight down into the shoulder, usually using a knife-edge strike.

Damage:

This point is also a dim-mak healing point in that it is used to heal a strike in an upward direction to Gb 14. It drains qi from the head, and so alleviates the problem caused by the strike. (Sunstroke is also an indication of too much yang qi in the head.) So we also know how to heal this condition with a medium strike down onto Gb 21 followed by a violent swipe out over the shoulders.

However, if too much pressure is used on someone who does not have too much yang energy in the head, then it will drain too much qi from the head, causing lightheadedness at least and a KO at most (although the latter would require a fairly hard strike). Between these two extremes in possible effects of this strike is for the recipient to drop straight down to the ground. Gb 21 is also associated with the accessory nerve, which runs down the back of the neck on the right and left sides. This nerve is also well known for causing knockouts from neurological shutdown strikes to the back of the neck.

Set-up point:

Neigwan is normally used as a set-up point since it is also a traditional qi drainage point and so enhances the effect of drainage. Gb 33 can also be used to great effect when the attacker is kicking, because of its location on the ouside of the leg toward the knee.

Antidote:

Press down on Gv 20 (*bahui*) on top of the head, as this is a universal "lifting" point and tends to bring the qi back into the head and upper body.

Healing:

Innervated by the lateral branch of the supraclavicular nerve and the accessory nerve. Irrigated by the transverse cervical artery and vein.

Used for neck rigidity, pain in the shoulder and back, motor impairment of the hand and arm, mastitis, apoplexy, difficult labor, hemiplegia due to stroke, functional uterine bleeding,

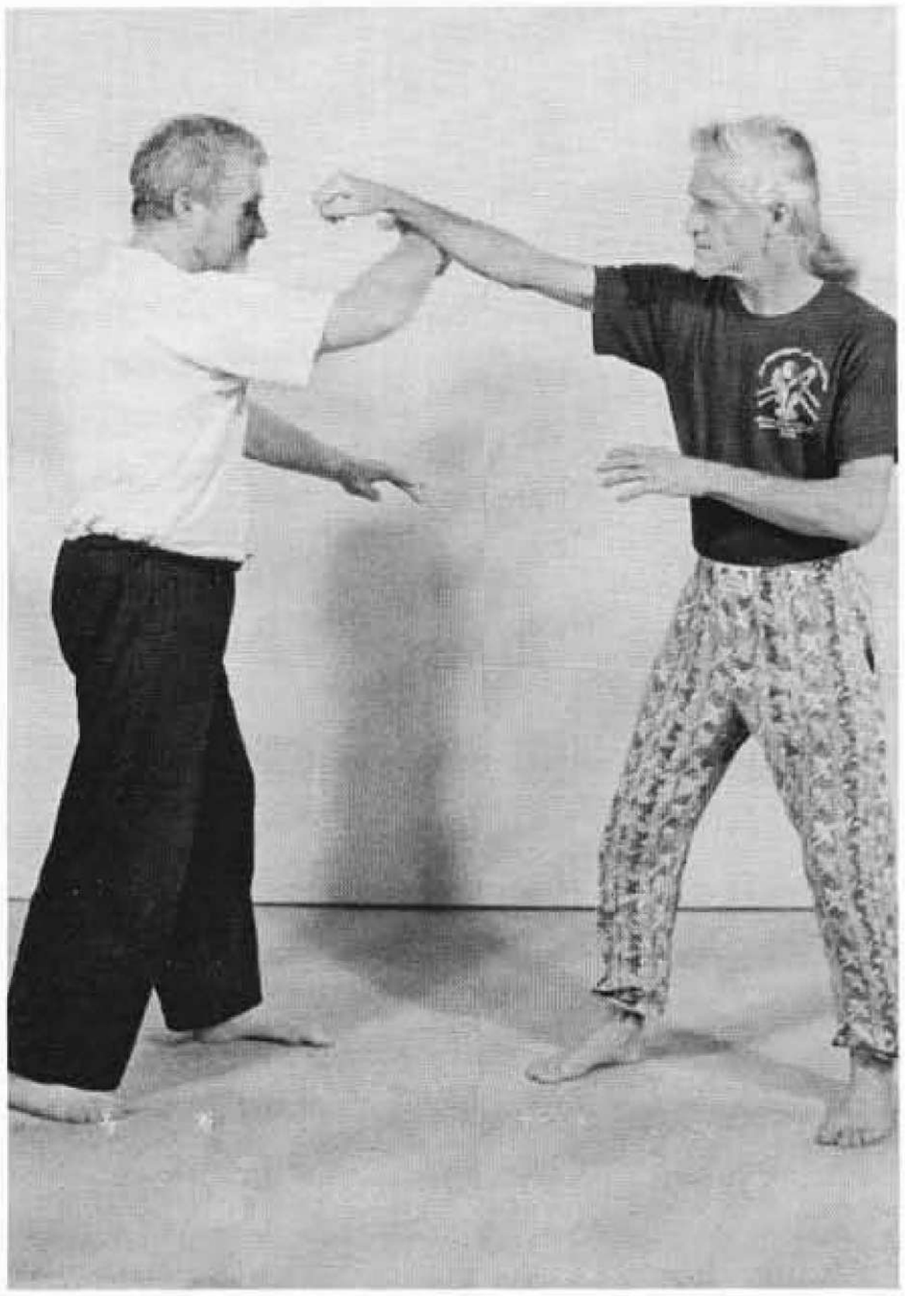


Figure 108

scrofula (tuberculosis of the lymph nodes), jaw pain and stiffness, and headache. This point sends qi downward.

Massage can be a light to medium percussion or a straight push. Kneading through this whole area can be painful but gives tremendous relief.

I usually combine this point with Bl 10, Gb 20, Th 15, Si 13, Si 14, Bl 13, Bl 43, Bl 60, Gb 34, and Si 3 for shoulder problems, neck rigidity, and impairment of the hands or arms.

For the common cold, use Gb 21 with Gb 20, Bl 10, Bl 12, Bl 43, Lu 1, Lu 5, Lu 7, Lu 9, Cu 4, St 36, Liv 3, and Cv 17.

For vertigo, combine Gb 21 with Liv 3, Gv 20, Kd 1, Gb 20, Lu 7, and St 36.

Applications:

1) He attacks with perhaps a straight right front kick. Always move in, never away. Slam the side of his knee at Gb 33 with your left palm (fig. 106). You have moved "in a V shape" to his side. This move will also turn him around. You have already loaded your right palm, and as soon as you have struck the leg, your left palm also loads and then strikes straight down onto Gb 21 on both sides using your knife edges (fig. 107).
2) Take his right straight at neigwan using a p'eng type of block (fig. 108). You are already in motion to his rear; get there quickly and strike down onto both Gb 21 points as in the previous method (fig. 107 again).

GB 22 (GALLBLADDER POINT NO. 22)

Chinese name:

Yuanye (gulf's fluids).

Location:

On the midaxillary line, 3 cun below the axilla and in the fifth intercostal space.

Connections:

Lower meeting point of the Lu and Co divergent meridians. (The tendino-muscular meridian of the Gb divides into two branches in the region of Gb 22.) It is also a meeting place with the Si and Ht meridians.

Direction of strike:

Strike straight in to the body from the side, as the point is under the arm.

Damage:

This is a particularly sensitive area, as there are lymph nodes here. It is an extreme qi drainage point, so the recipient cannot carry on after being struck even lightly in this point. If death is not instant, it will occur sometime later, because a strike here causes the heart to falter or stop instantly.

Set-up point:

Ht 1 is the set-up point for this strike.

Antidote:

Use Gb 20 if KO has occurred, or Kd 1 if the person appears to be dead or near death. Strike Kd 1 very hard straight in, or bleed this point. Kd 1 is a classical revival point, as it releases the stored qi from the tantien into the body. You can also press Co 10 and Ht 3 with the thumbs or fingers using mild pressure.

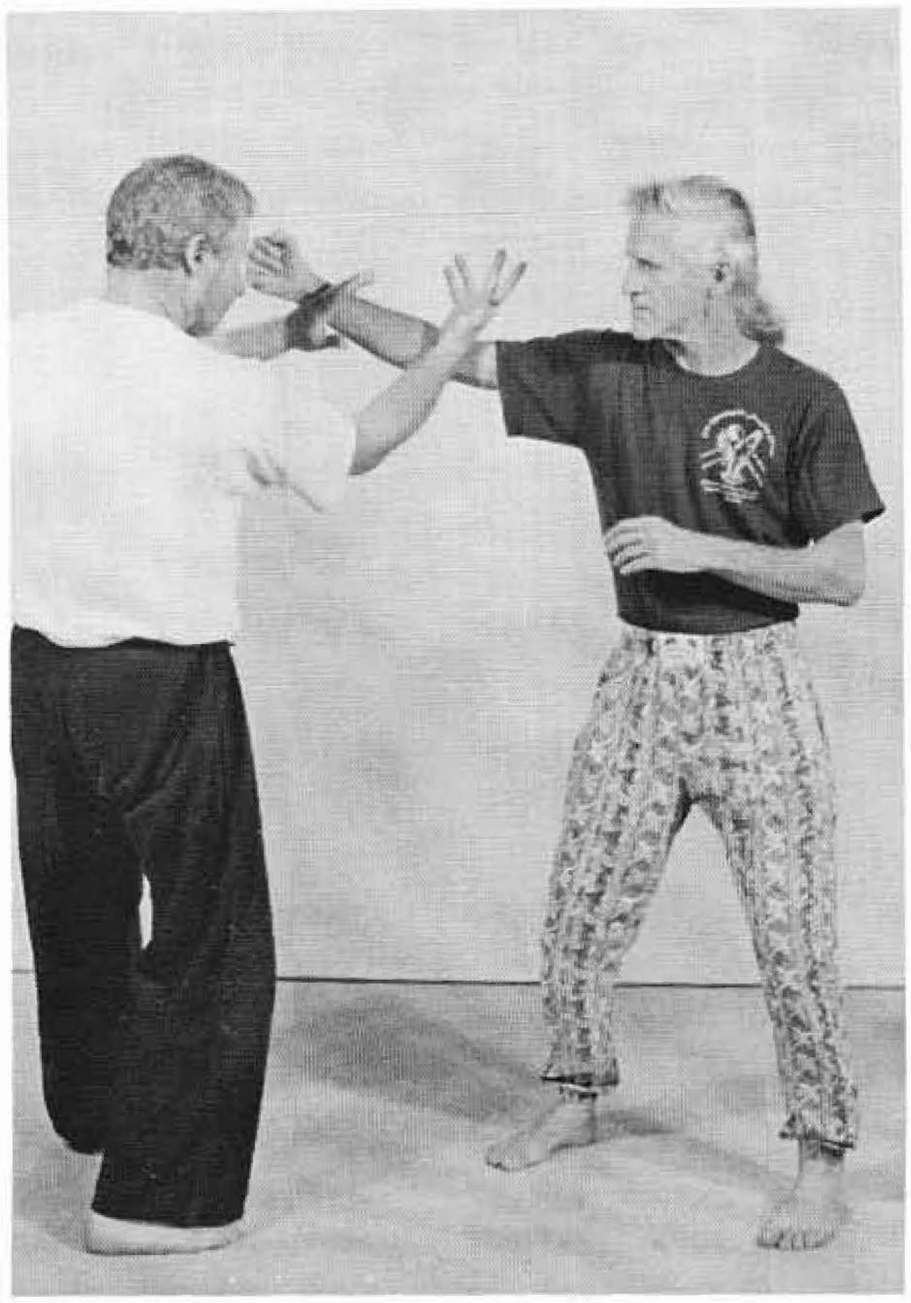


Figure 109

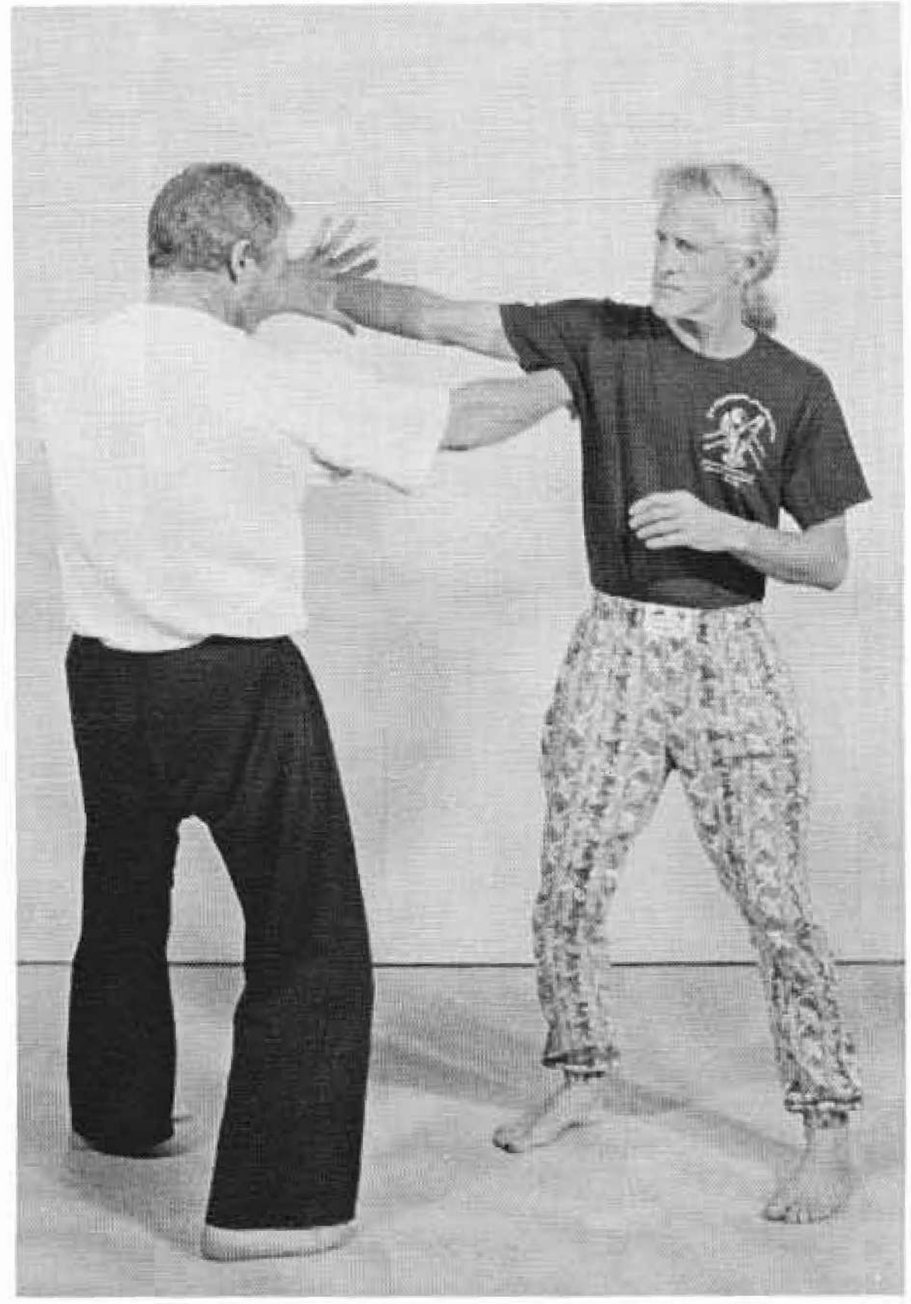


Figure 110

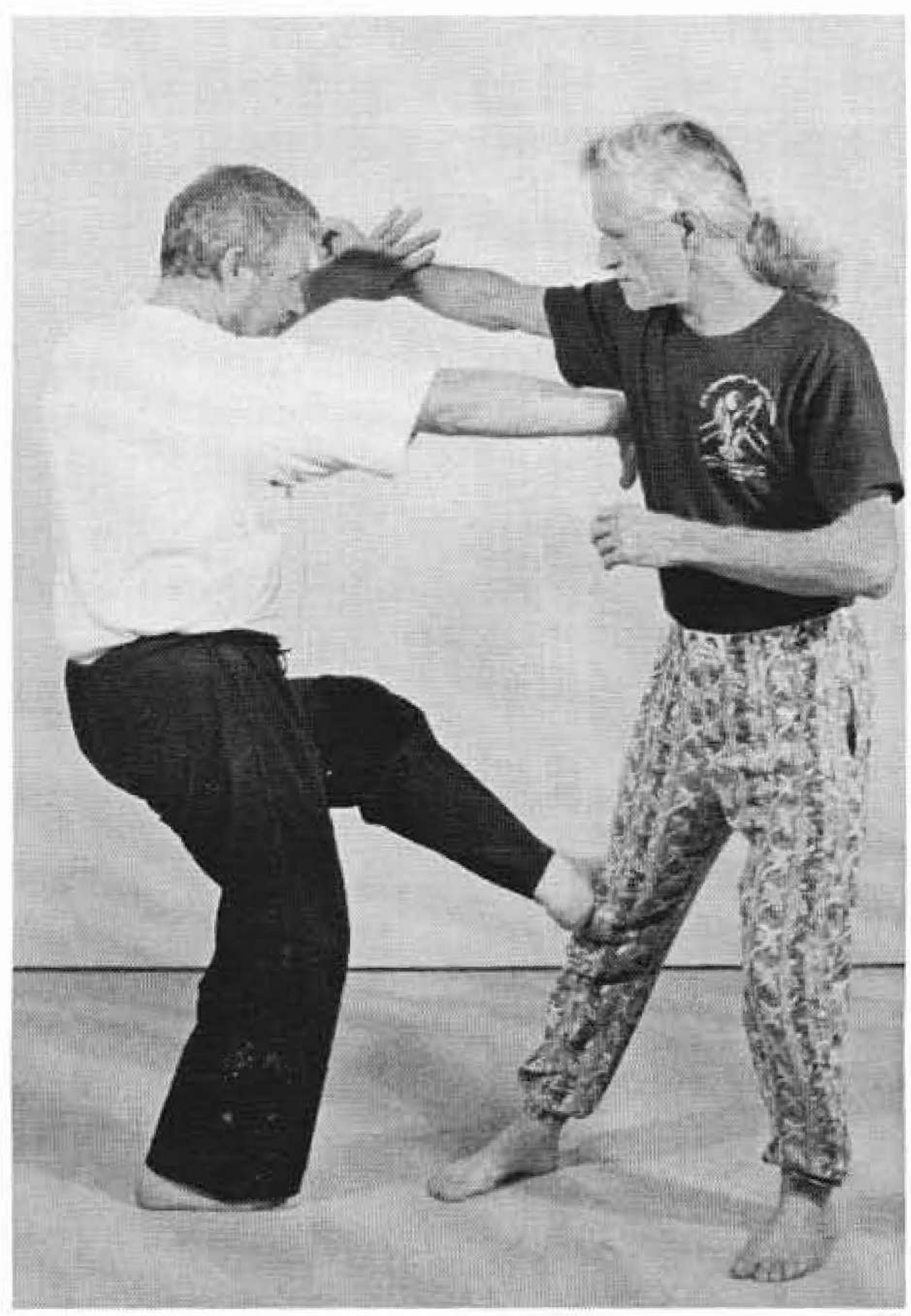


Figure 111

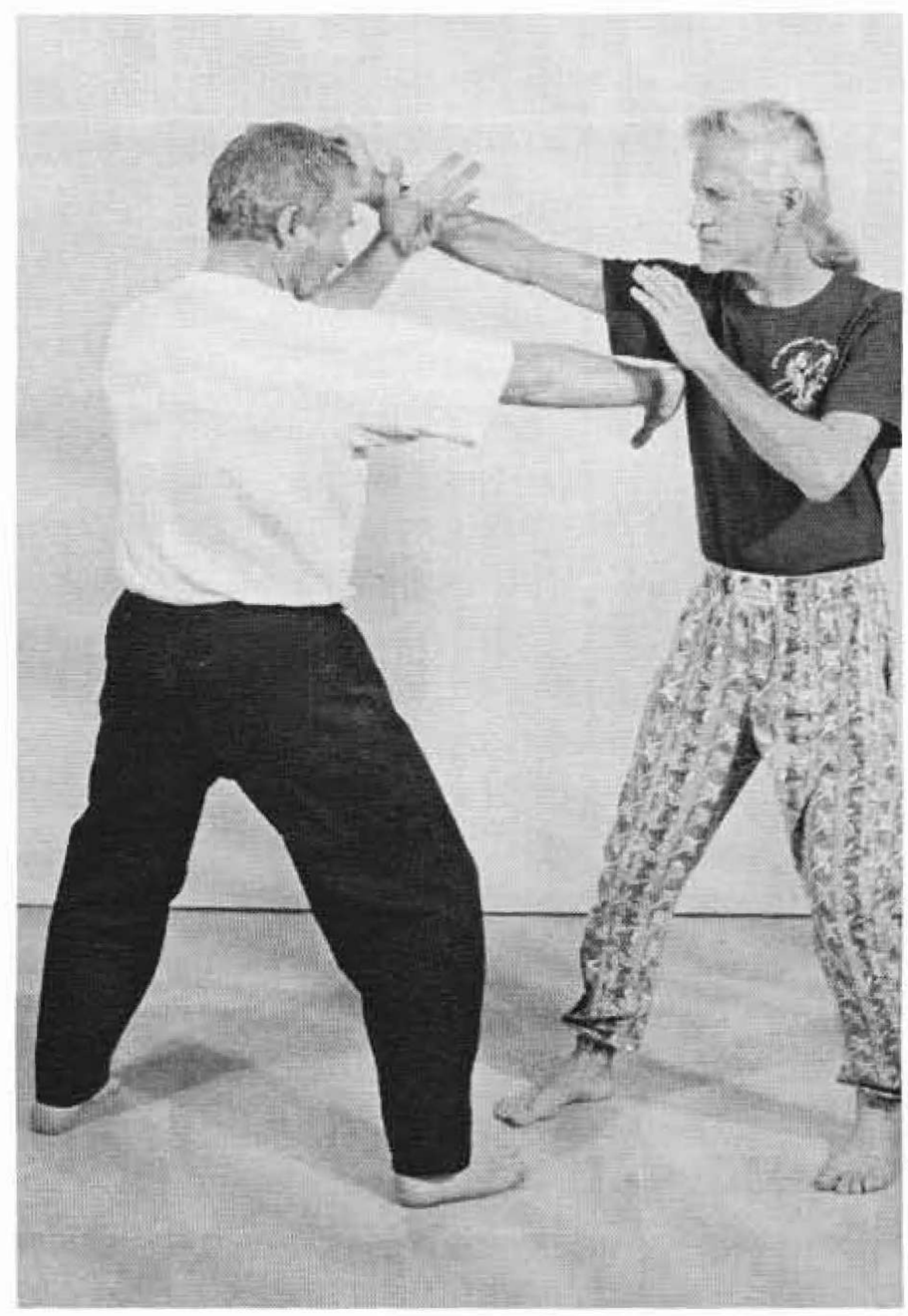


Figure 112

Healing:

This point is irrigated by the thoracoepigastric vein, the lateral thoracic artery and vein, and the fifth intercostal artery and vein. It is innervated by the lateral cutaneous branch of the fifth intercostal nerve and the branch of the long thoracic nerve.

Gb 22 is used for pain in the hypochondriac region, swelling of the axillary region, pleurisy, intercostal neuralgia, pain of the shoulder and arm, and axillary lymphadenitis (inflammation of the lymph nodes).

Massage techniques might include finger pressure on either one or both points for pleurisy or other lung-related problems or neuralgia of the intercostal region. You could also tap through this region to treat those same conditions or for pain of the shoulder and arm. You can trace from the spine along the intercostal muscle through this point for shingles or intercostal neuralgia. You can also do clockwise or counterclockwise rotations for xu or shi conditions.

Applications:

1) He might attack with a right hook low to your left side. You should slam Lu 5 in the inside crease of his elbow with your right back palm (fig. 109). This strike alone is enough to cause serious KO. Your left palm now takes his right wrist and lifts it slightly as your right reverse knife-edge attacks straight upward to Ht 1 (fig. 110). With a quick twist of your waist left and then right, your right knife edge attacks straight in to Gb 22 (fig. 111). Notice that the left foot has trapped his knee to stop further movement to your left.
2) Simply take his right straight attack with your right palm as your left palm comes up underneath to take over the block (fig. 112). Your right palm is now free to strike straight in to Gb 22.

GB 23 (GALLBLADDER POINT NO. 23)

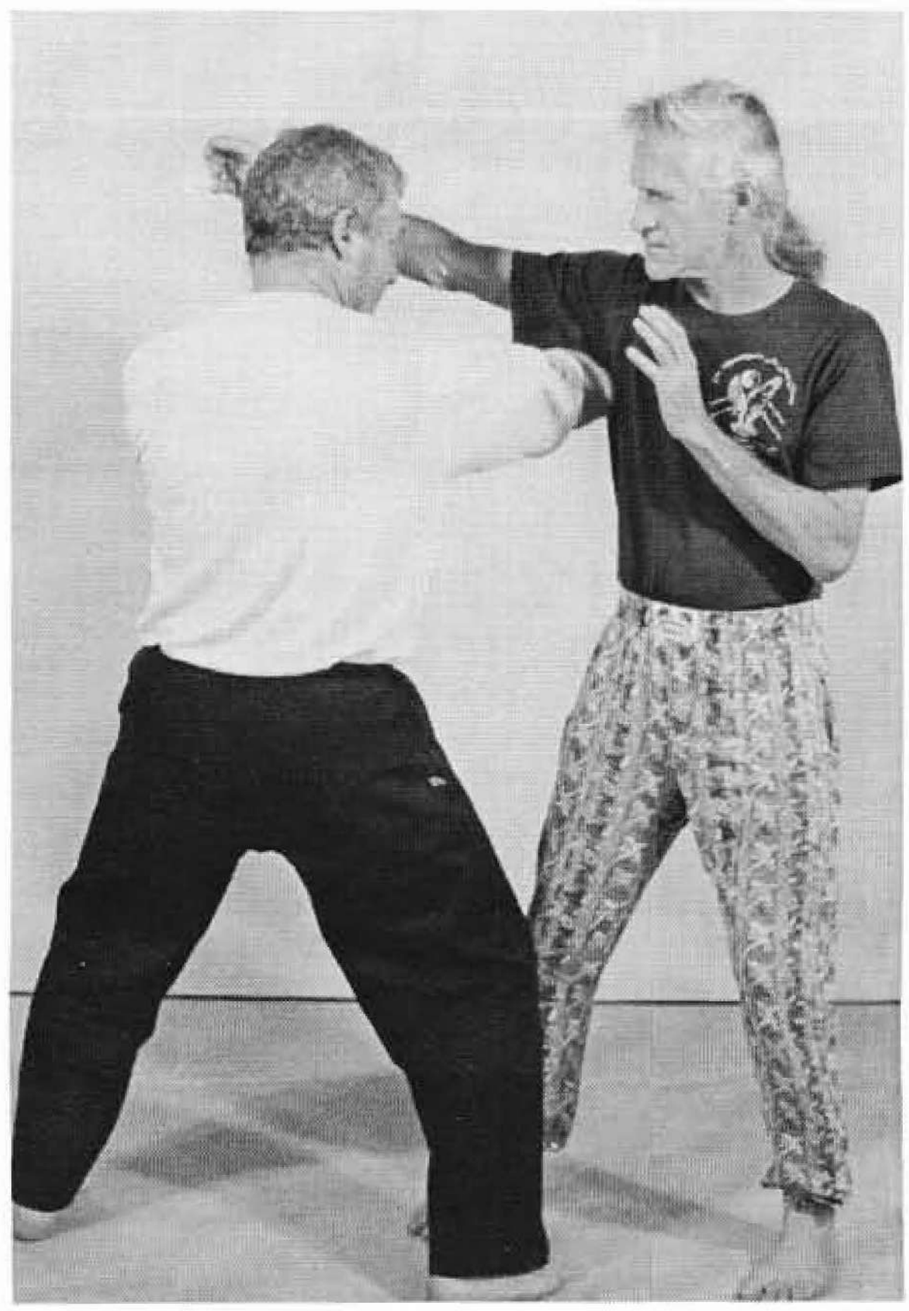


Figure 113

Chinese name:

Zhejin (flanks sinews).

Location:

1 cun anterior to Gb 22, approximately level with the nipple (on a male) in the fourth intercostal space.

Connections:

None.

Direction of strike:

The direction for Gb 23 is straight in.

Damage:

Drains qi from the body. Even a medium-power strike is enough to prevent the attacker from being able to continue. This point is disastrous when struck with Gb 22.

Set-up point:

Set up this point with Ht 1 or neigwan.

Antidote:

Press down onto Gb 20 and squeeze inward onto Bl 10.

Healing:

Used for fullness in the chest, asthma, pleurisy, vomiting, acidic belching, and intercostal neuralgia.

Applications:

1) Because this point is a little farther forward of the nipple than Gb 22, we can use the

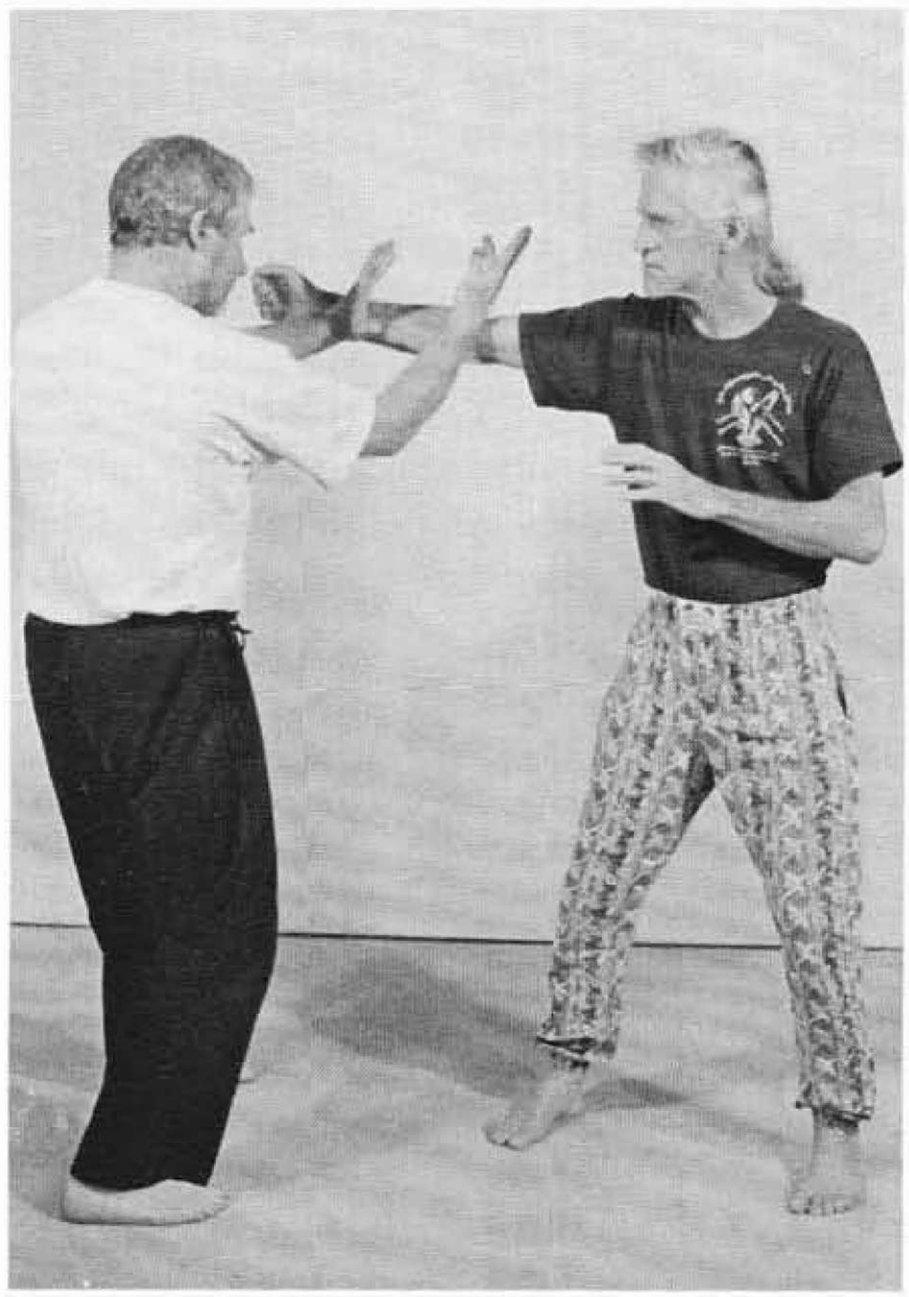


Figure 114

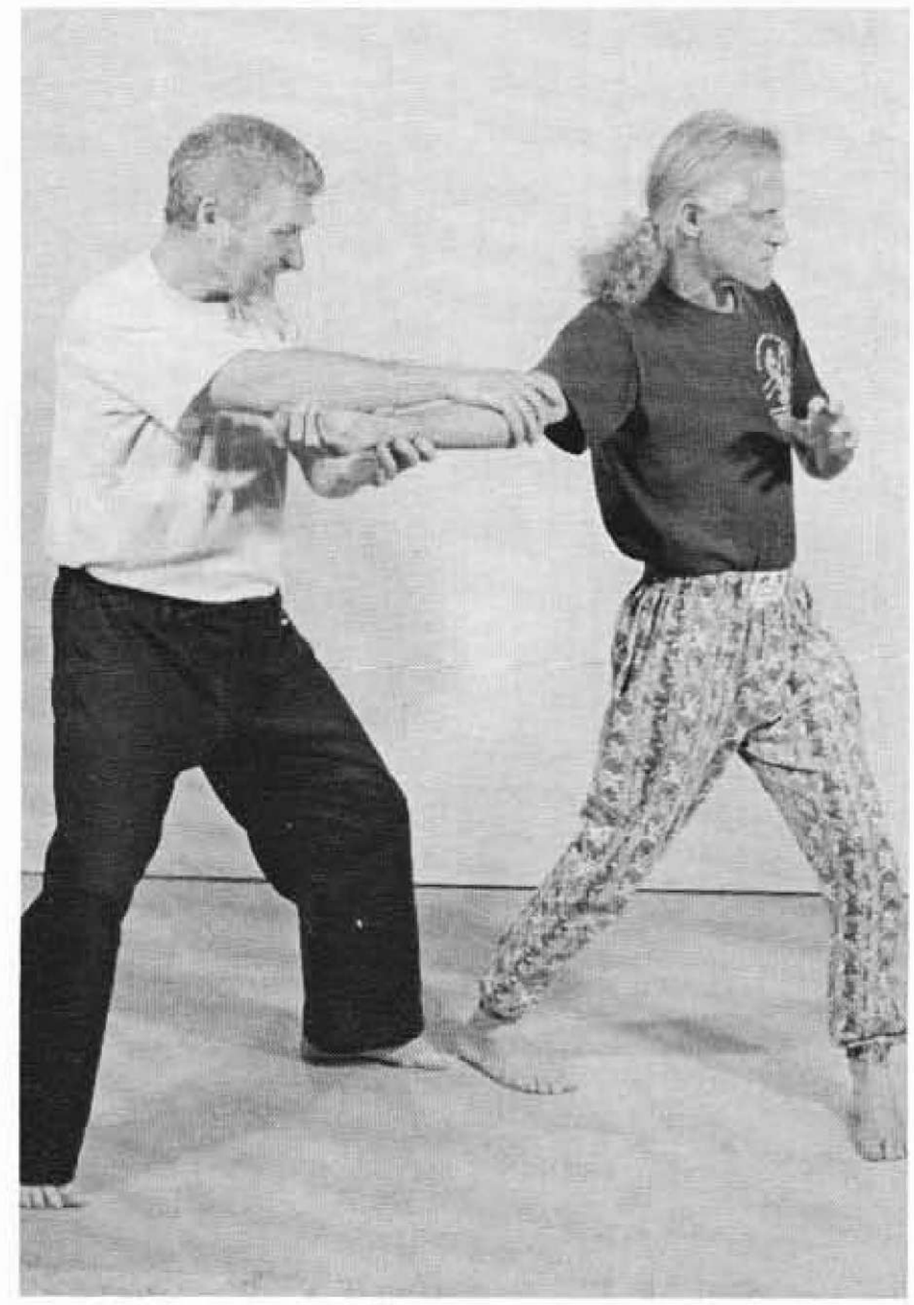


Figure 115

following method. He attacks with a straight right. Slam his neigwan point straight in with your right palm and twist your waist back to your right, bringing your right elbow straight in to the point in the correct direction (fig. 113).

2) Slam his right arm at both wrist (neigwan) and elbow crease (Lu 5), as in Figure 114. Grab his arm and violently pull him forward (fig. 115). As he is moving past you, strike to Gb 23 and Gb 22 with your right palm (fig. 116).

GB 24 (GALLBLADDER POINT NO. 24)

Chinese name:

Riyue (sun moon).

Location:

Inferior to the nipple, between the cartilages of the seventh and eighth ribs, one rib below Liv 14.

Connections:

Because the spleen channel passes through it, Gb 24 can affect the flow of qi in the Sp channel. It has a connection with yang wei mai and an internal pathway to Liv 13 and St 30 that meets back at Gb 30.

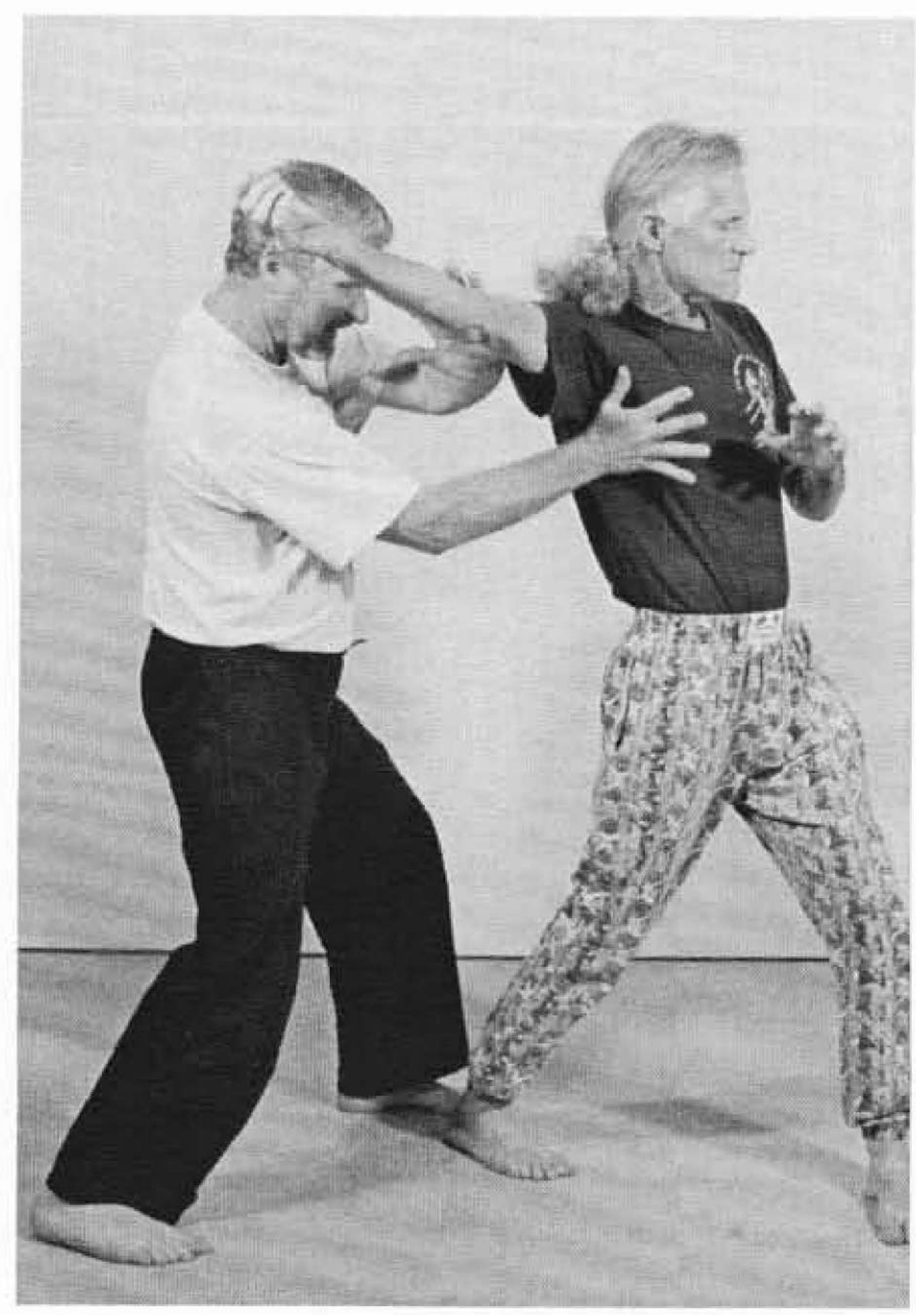


Figure 116

For acute cholecystitis, gall stones, or roundworm in the biliary tract, you could use *dannangxue*, an extra point 1.2 cun below Gb 34 (it will be tender) with Pc 6, Gb 34, Gb 24, and St 36, all on the right side. This may give some relief while you go to either an M.D. or a TCM doctor.

For headache caused by arrogant liver rising (a condition that is both excess yang and deficient yin, you could use Gb 24, Liv 14, Liv 2, Co 4, Co 11, Gb 14, Gb 20, Gb 34, and Gv 20.

Applications:

1) He attacks with a straight right. Your left fingers simultaneously block the attack and poke into St 9, causing heart failure or slowing, resulting in KO. A split second later your right palm attacks straight in to Gb 24 (fig. 117).
2) He attacks with a straight right again. You slam his neck at St 9 with your right back palm as your left palm blocks and sets up the major strike by sliding up on the inside of his right forearm (fig. 118). Your right palm now grabs around the back of his neck and pulls him forward onto your right knee, which attacks to Gb 24 (fig. 119). The combination of St 9 and Gb 24 is death.

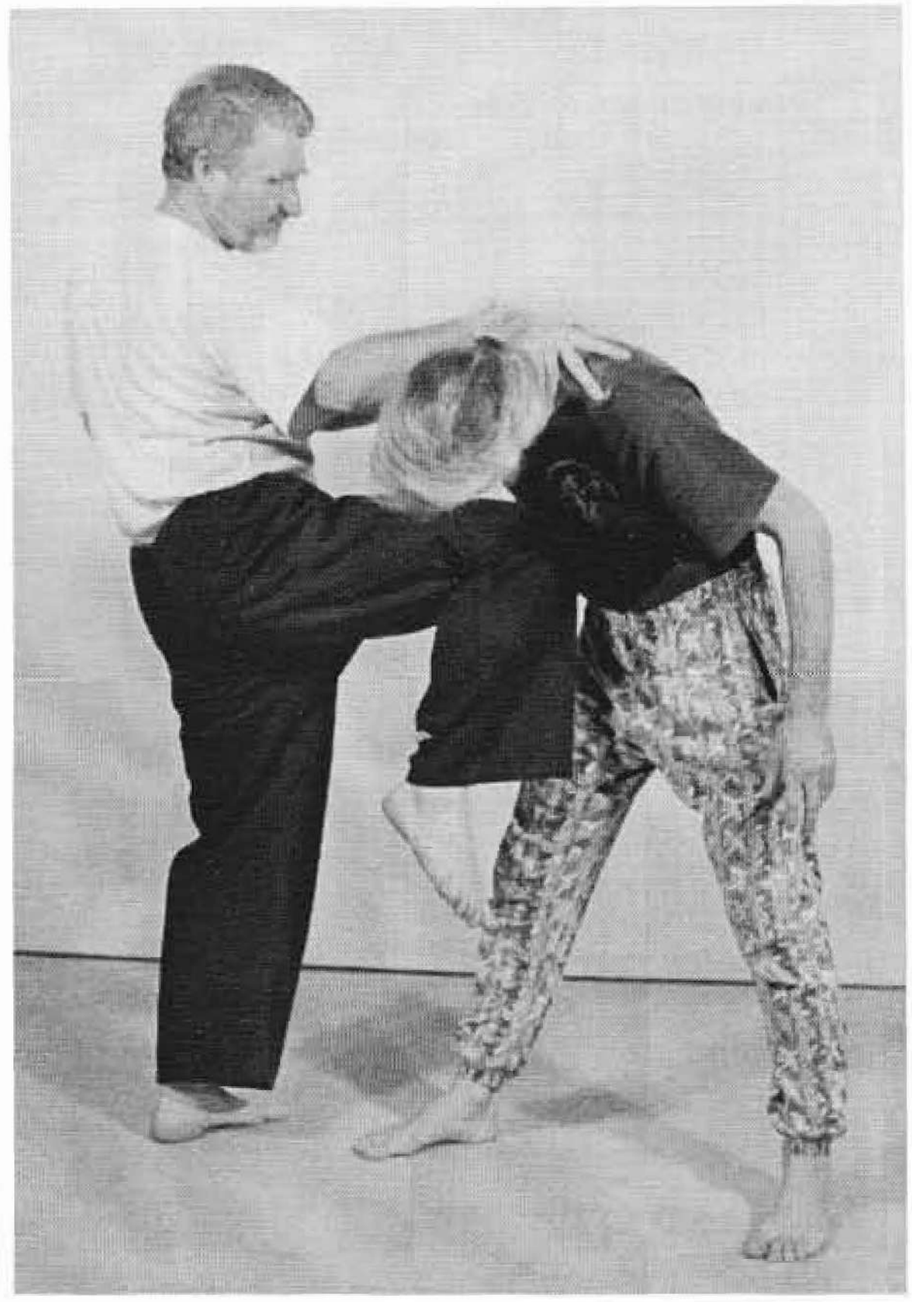


Figure 119

GB 25 (GALLBLADDER POINT NO. 25)

Chinese name:

Jingmen (door of the capital).

Location:

Located on the lateral sides of the abdomen, on the lower border of the free end of the 12th rib.

Connections:

None.

Direction of strike:

Straight in from the side of the body.

Damage:

Since this is a mu point for the kidneys, any strike here will affect the kidneys. This point in particular will cause great kidney damage wen struck from the side—more so than when the kidneys are struck from the lower back area (traditional kidney strike). From the side, the strike to Gb 25 sets up a shock wave that damages the kidneys. A hard strike will cause death through kidney failure; light to moderate strikes will cause bleeding from the penis and great pain in the kidney area. It is difficult to get an electrical reaction from this point.

Set-up point:

Any of the kidney points will work well as set-up points. They also work well along with a strike to Gb 25. So you could strike Kd 10 at the back of the knee using your foot.

Antidote:

Press Kd 1 inward with great pressure and apply pressure to Kd 10 at the same time if possible.

Healing:

Innervated by the 11th intercostal nerve. Irrigated by the 11th intercostal artery and vein.

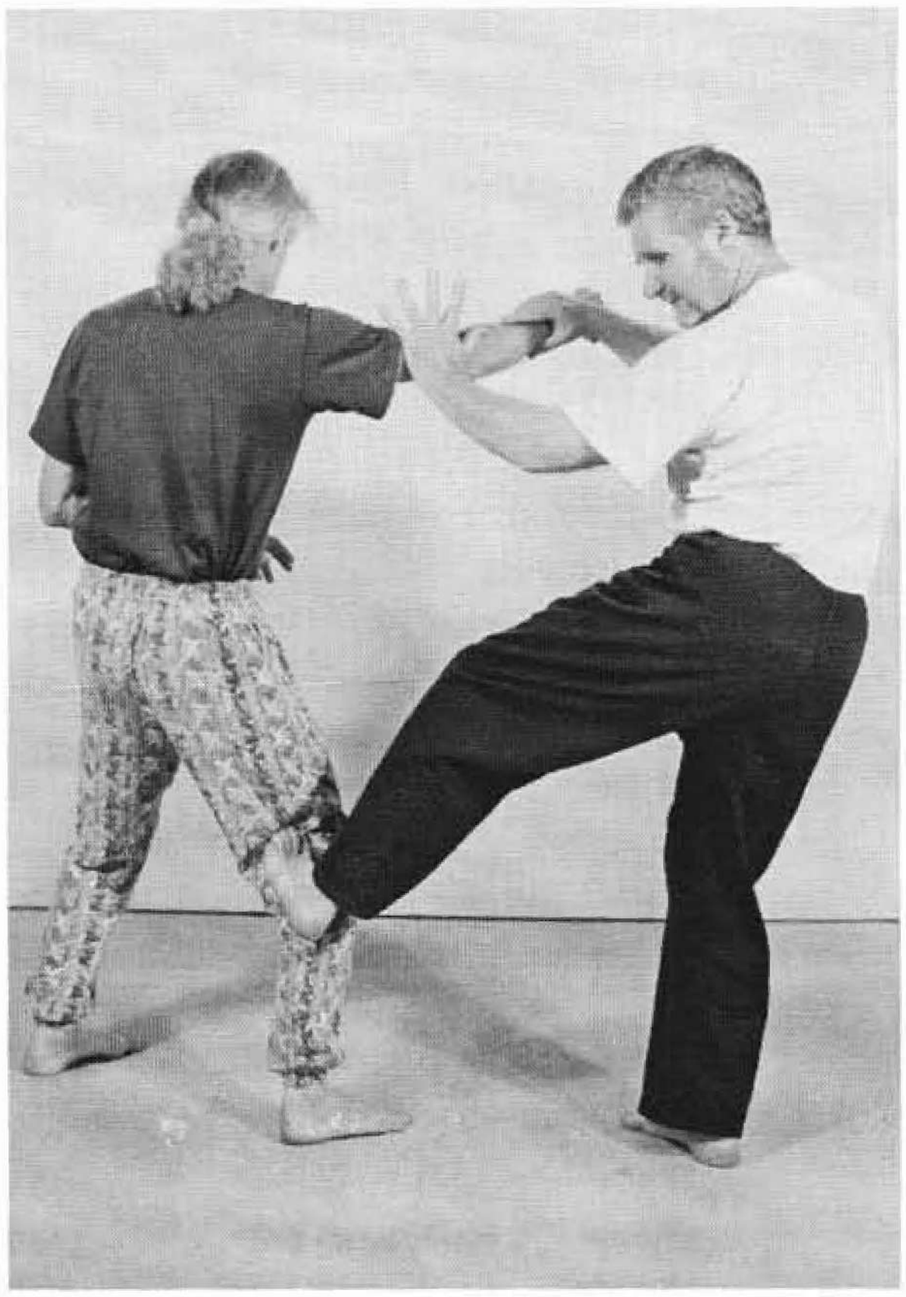


Figure 120

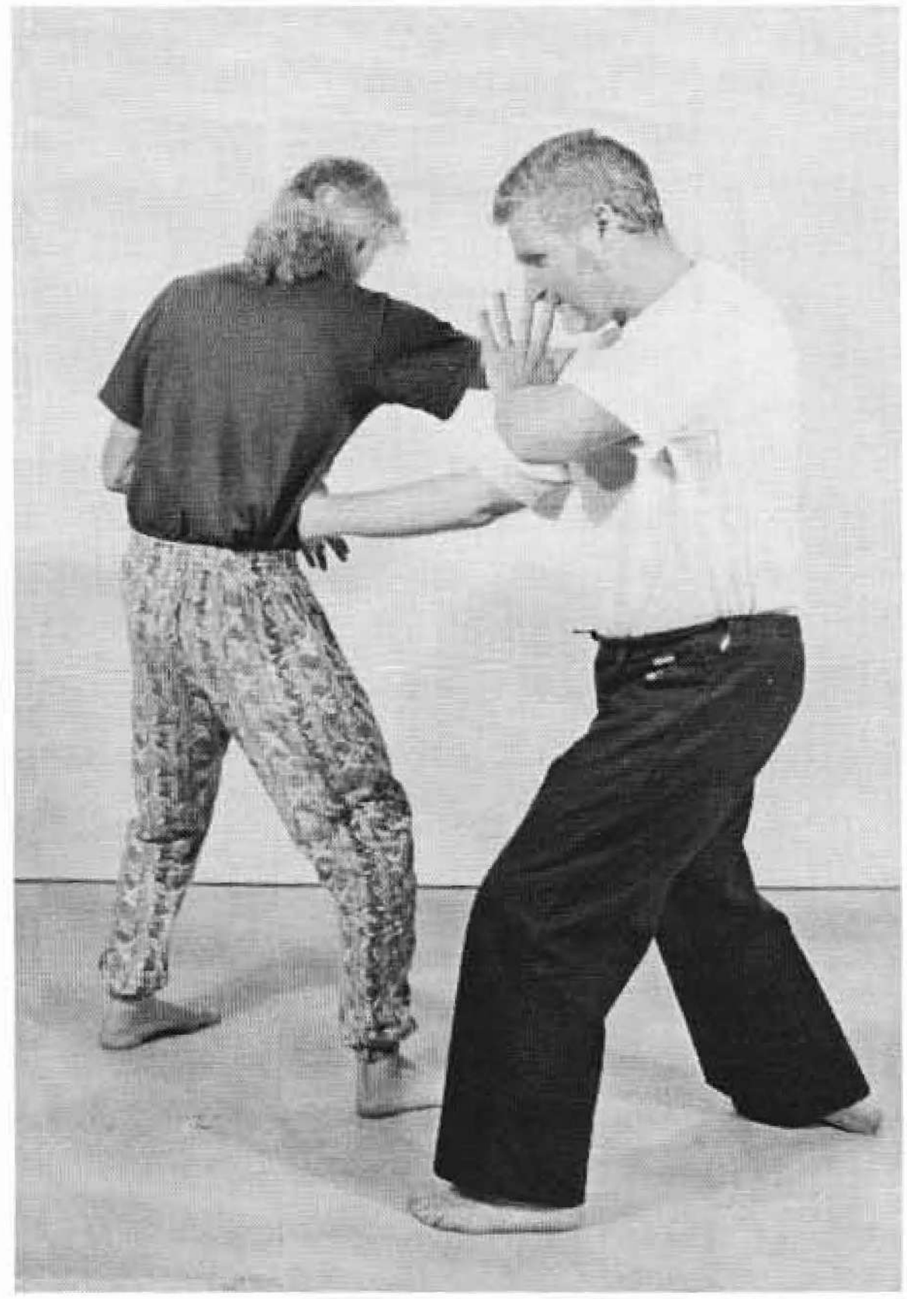


Figure 121

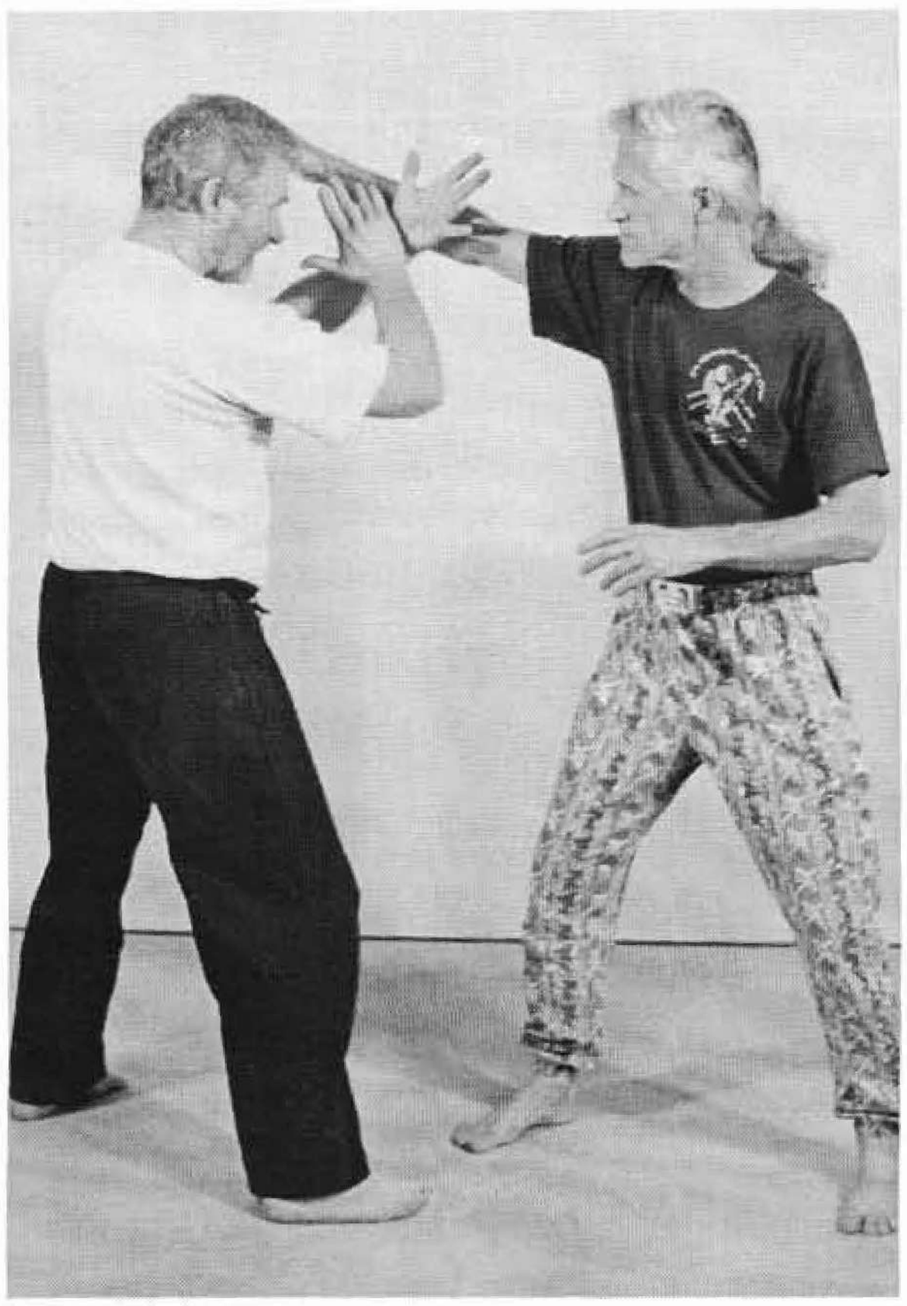


Figure 122

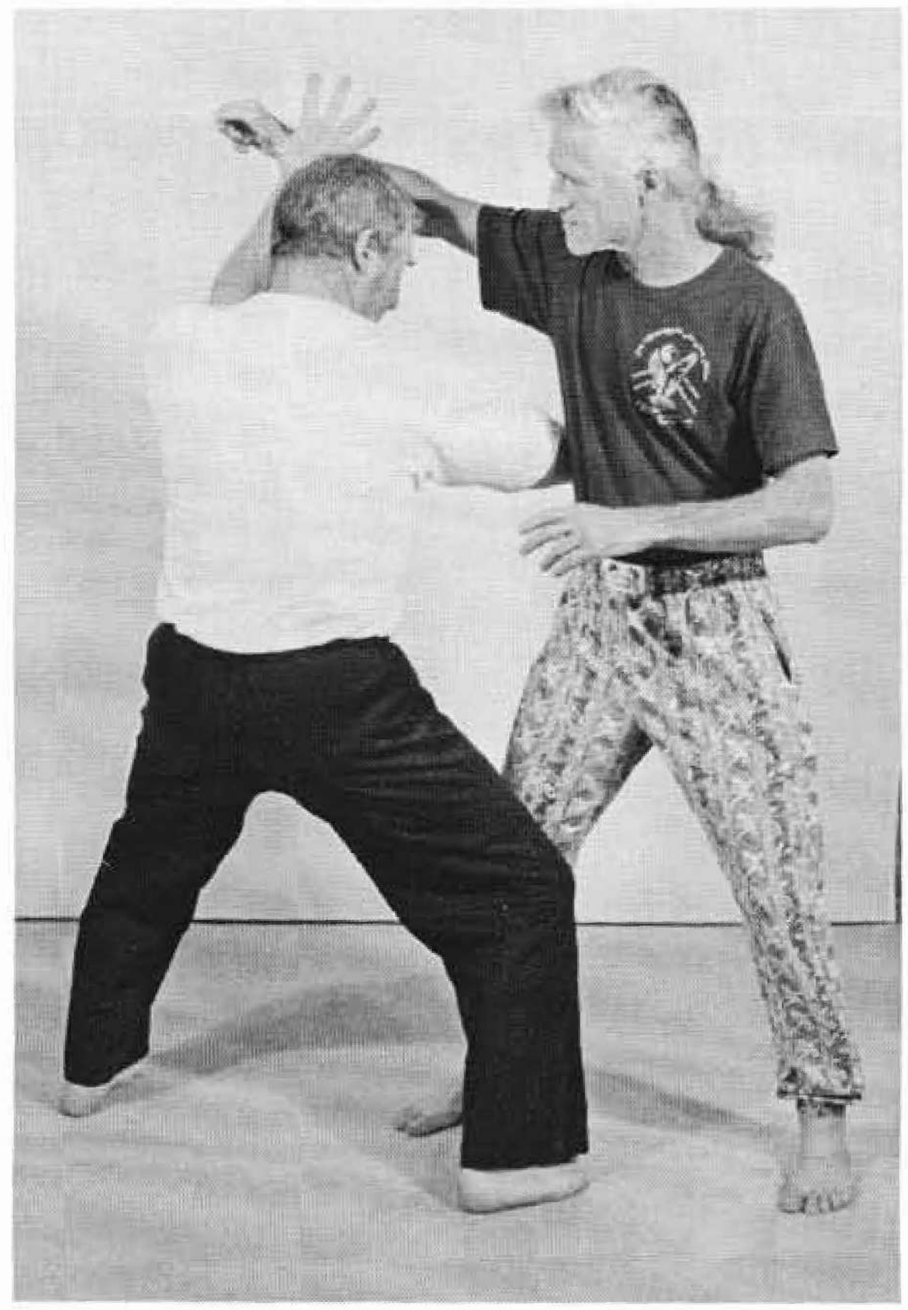


Figure 123

Used for borborygmus (intestinal rumbling), diarrhea, abdominal distension, pain in the lower back and hypochondriac region, nephritis (chronic inflammation of the kidney), pain caused by intestinal hernia, and intercostal neuralgia.

Because it is a front mu point of the kidneys, Gb 25 is used traditionally to treat all conditions of the kidneys, including spermatorrhoea (involuntary discharge of semen without ejaculation), impotence, incontinence, and so on.

Massage could include a straight push with clockwise or counterclockwise rotations for xu or shi conditions.

You could also lie the patient on his or her back with your hands under the small of the back and your middle fingers touching the space between the second and third lumbar vertebrae. Then pull your hands apart while pressing with your middle finger, guiding the hands out and around to Gb 25 then on through Gb 26, 27, and 28; abdomen *zigong* (an extra point); St 28; and Kd 13; ending at Cv 4. This is running the *dai mo* (girdle meridian).

A shorter version could start on the side of the body an inch or so back from the free end of the 12th rib and run medially, passing through Gb 25 and on to Gb 26 before pulling the hands away from the abdomen abruptly.

Another alternative is to proceed like the original dai mo run from the spine to Gb 26, then on to Sp 15, St 25, and Kd 16, and ending at Cv 8 (the umbilicus). These types of treatments will help balance yin and yang qi of the body (upper and lower aspects).

You might combine Gb 35 with Cv 12, Liv 13, St 36, and Liv 3 for borborygmus, diarrhea, abdominal distension, and so on, or with Kd 3, Sp 6, Bl 23, and Cv 3 and 4 for kidney xu problems.

Applications:

1) He attacks with an upper attack. Block it and attack to the back of his knee with your instep or ball of the foot (fig. 120). Your right palm now attacks Gb 25 as your left foot steps to the side (fig. 121).
2) He attacks with a straight right. Slam his neigwan point with your right palm as the left palm is taking over the block. (fig. 122). Step closer, as he has been "set up," and strike straight in from the side to Gb 25 with your right elbow. This is a death strike (fig. 123).

GB 26 (GALLBLADDER POINT NO. 26)

Chinese name:

Daimai (girdle vessel).

Location:

Directly below the free end of the 11th rib, where Liv 13 is located, level with the umbilicus. The point lies in the external oblique muscle and the internal oblique and transverse abdominal muscles.

Draw a line across from the navel, and where you touch the ribs, that's the point.

Connections:

Dai mai (an extra meridian that runs around the waistline).

Direction of strike:

Straight in from the side of the body.

Damage:

Causes the whole central torso to be shocked with pain in the gallbladder area; a hard enough strike will cause death, as it will cause the heart to stop.

This point is connected to the girdle meridian, which runs around the waist. This meridian, when struck, causes a disconnection between "upper and lower," so the legs don't know what the arms and torso, etc., are doing.

Set-up point:

Both neigwan points should be struck toward you, i.e., down his inner forearms directed toward the wrists.

Antidote:

Squeeze in at Gb 20.

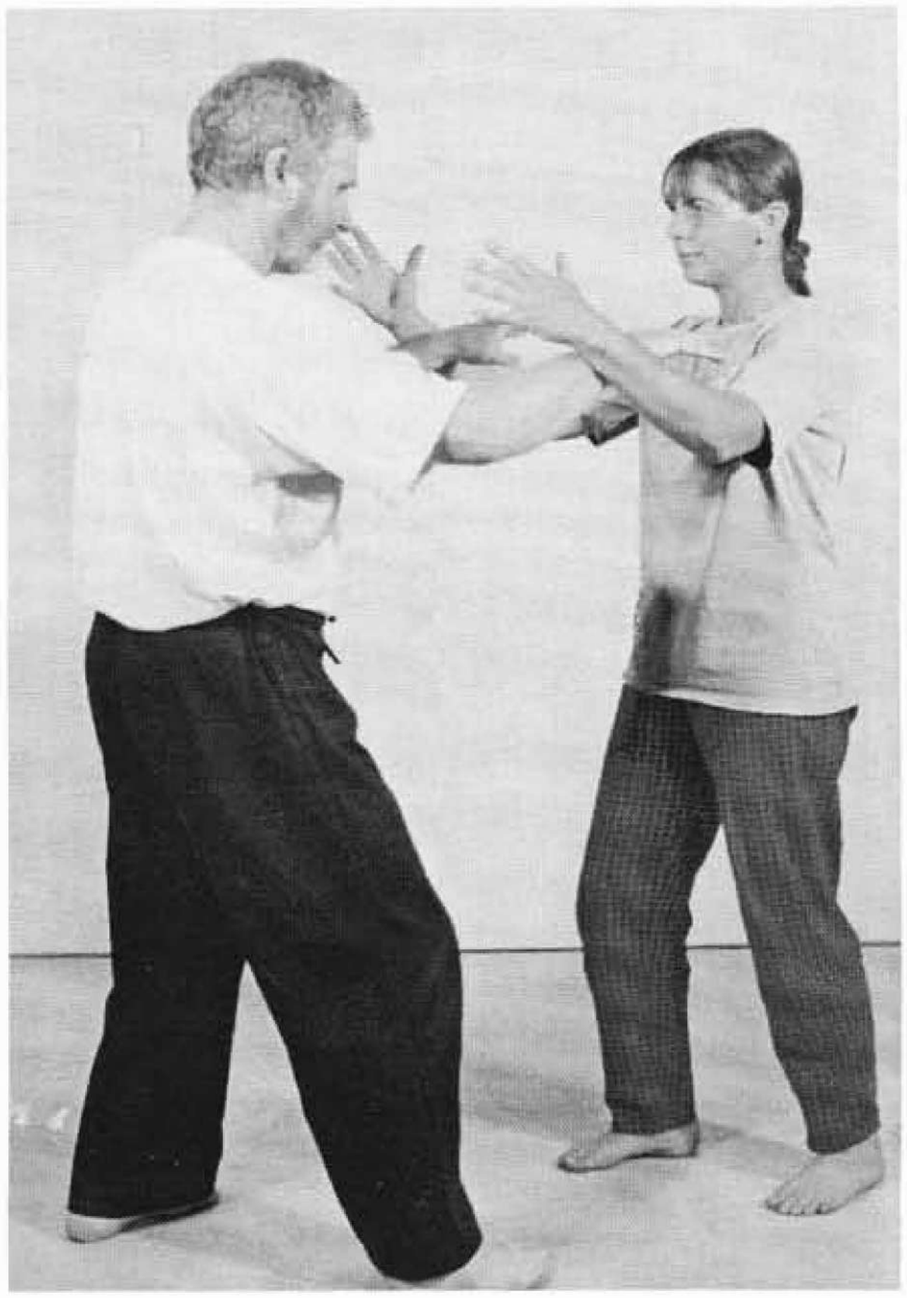


Figure 124

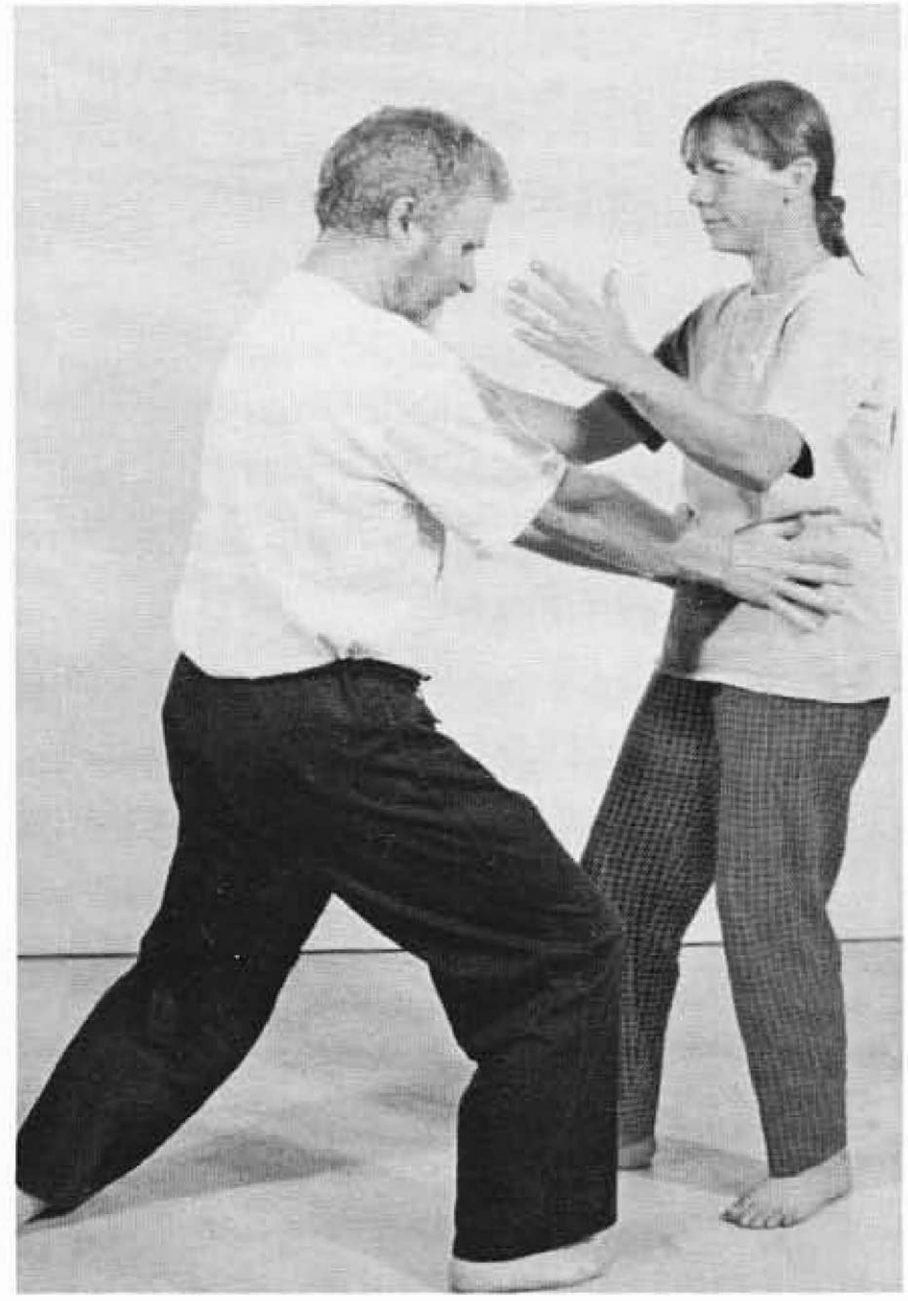


Figure 125

Figure 126

Healing:

Innervated by the subcostal nerve (the 12th intercostal nerve) and irrigated by the subcostal artery and vein (12th intercostal artery and vein).

Used for irregular menstruation, leukorrhea (abnormal vaginal discharge), hernia, pain in the lower back and hypochondriac regions, endometritis, cystitis, profuse bleeding with leukorrhea, and paraplegia due to trauma.

Traditional indications are include irregular menstruation and red and white vaginal discharge, intestinal colic, diarrhea, and convulsions.

Traditional functions: to regulate the *dai mo* (girdle vessel) and alleviate damp heat.

Massage techniques are similar to those used with Gb 25.

For enlarged thyroid, you might try combining Gb 26 with Bl 10, Gv 12 , Bl 12, Cv 23, St 9, Gv 3, and Gb 26, alternating with Gb 2O, Gv 14, Bl 11, Cv 22, St 10, Gv 4, and Th 3. NOTE: *Be careful when pressing St 9!*

You could use moxa on Gb 26, Cv 4 and Cv 6, and Bl 23 for irregular periods. For leukorrhea, you might combine Gb 26 with Sp 6, Cv 6, Cv 4, Liv 2, Sp 9, St 36, and Gv 20.

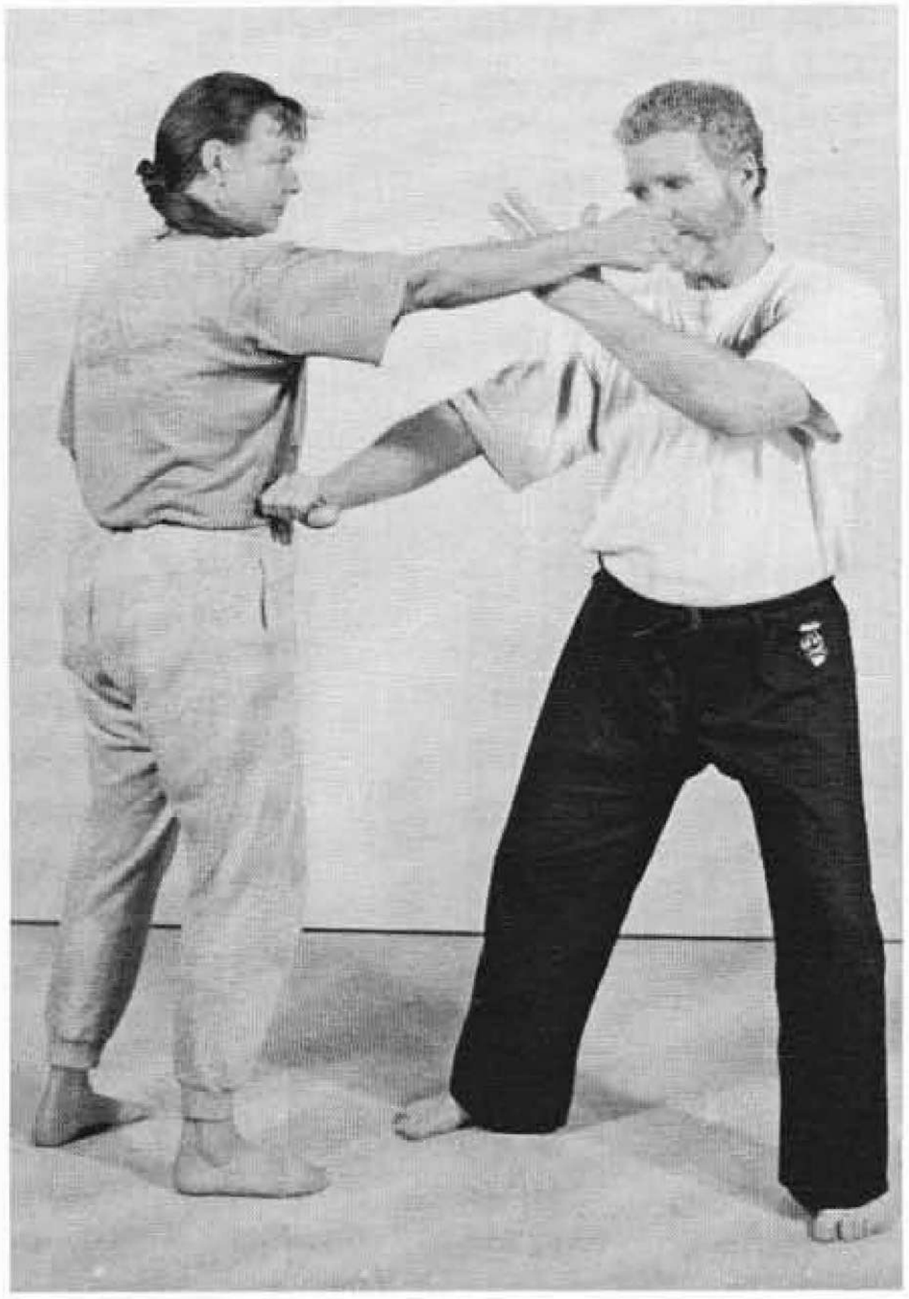


Figure 127

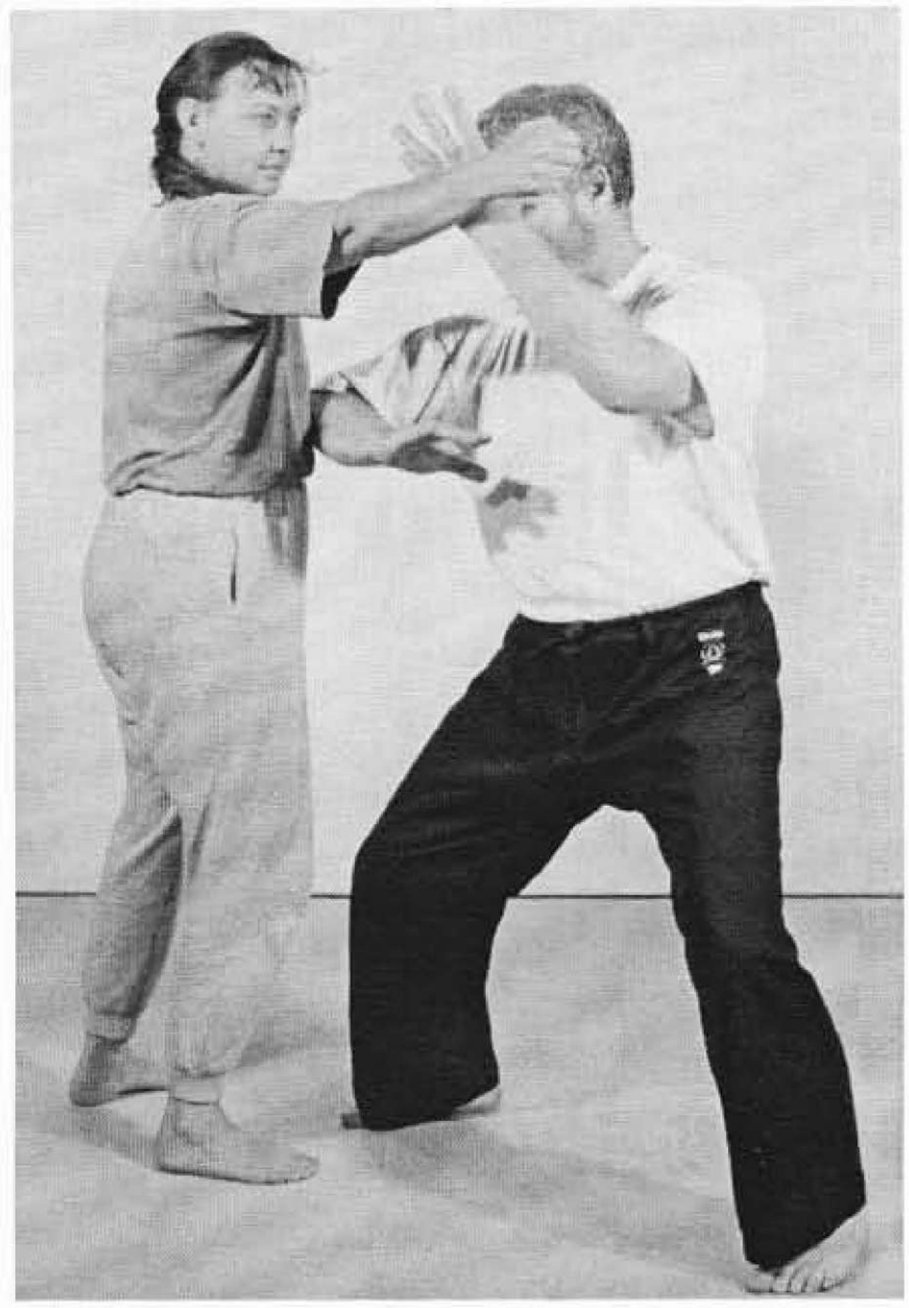


Figure 128

Applications:

1) He attacks with both hands. You should slam both of his neigwan points toward you (fig. 124). Both of your knife-edge palms strike back into both of his Gb 26 points (fig. 125).
2) He attacks with a straight right. You should move to the side, slamming his right elbow with your left palm as your right palm percusses onto Gb 26 on one side (fig. 126).
3) Other points that work well with Gb 26 are Liv 14 and Cv 14. He might attack with a straight right; you take his neigwan, slamming it with your right palm. Your left palm takes over the block as your right hammer fist smashes into Gb 26 from the side (fig. 127). Your waist instantly reloads, and your right elbow slams into either Liv 14 or Cv 14 (fig. 128).

GB 27 (GALLBLADDER POINT NO. 27)

Chinese name:

Wushu (five pivots).

Location:

In the lateral sides of the abdomen, in front of the anterior super iliac spine, 3 cun below the level of the umbilicus, approximately level with Cv 4. In the external and internal oblique muscles and the transverse abdominal muscle.

Connections:

Dai mai.

Direction of strike:

Struck straight in from the front.

Damage:

KO or damage to the kidneys. Hospitalization is necessary if the strike is hard.

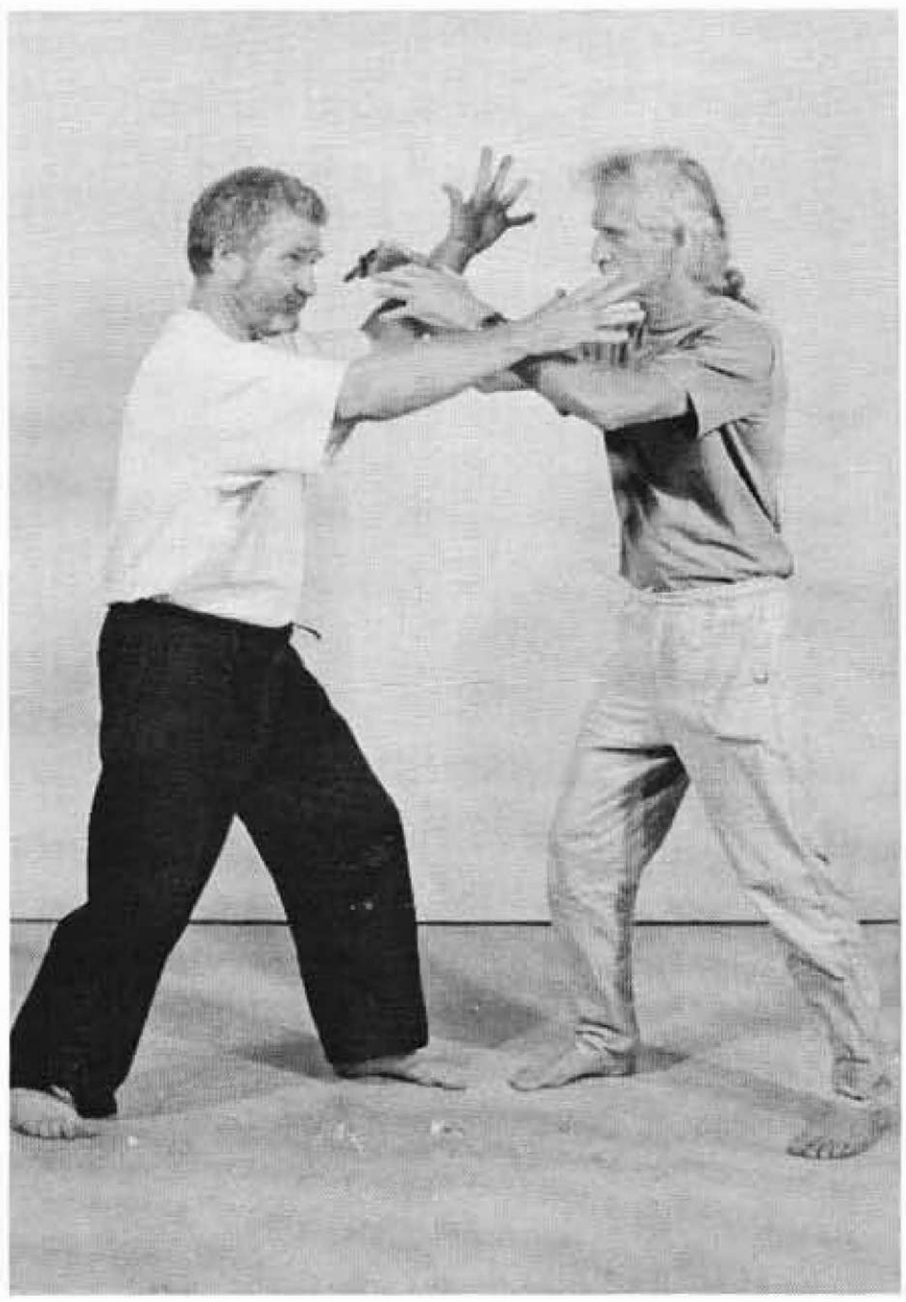


Figure 129

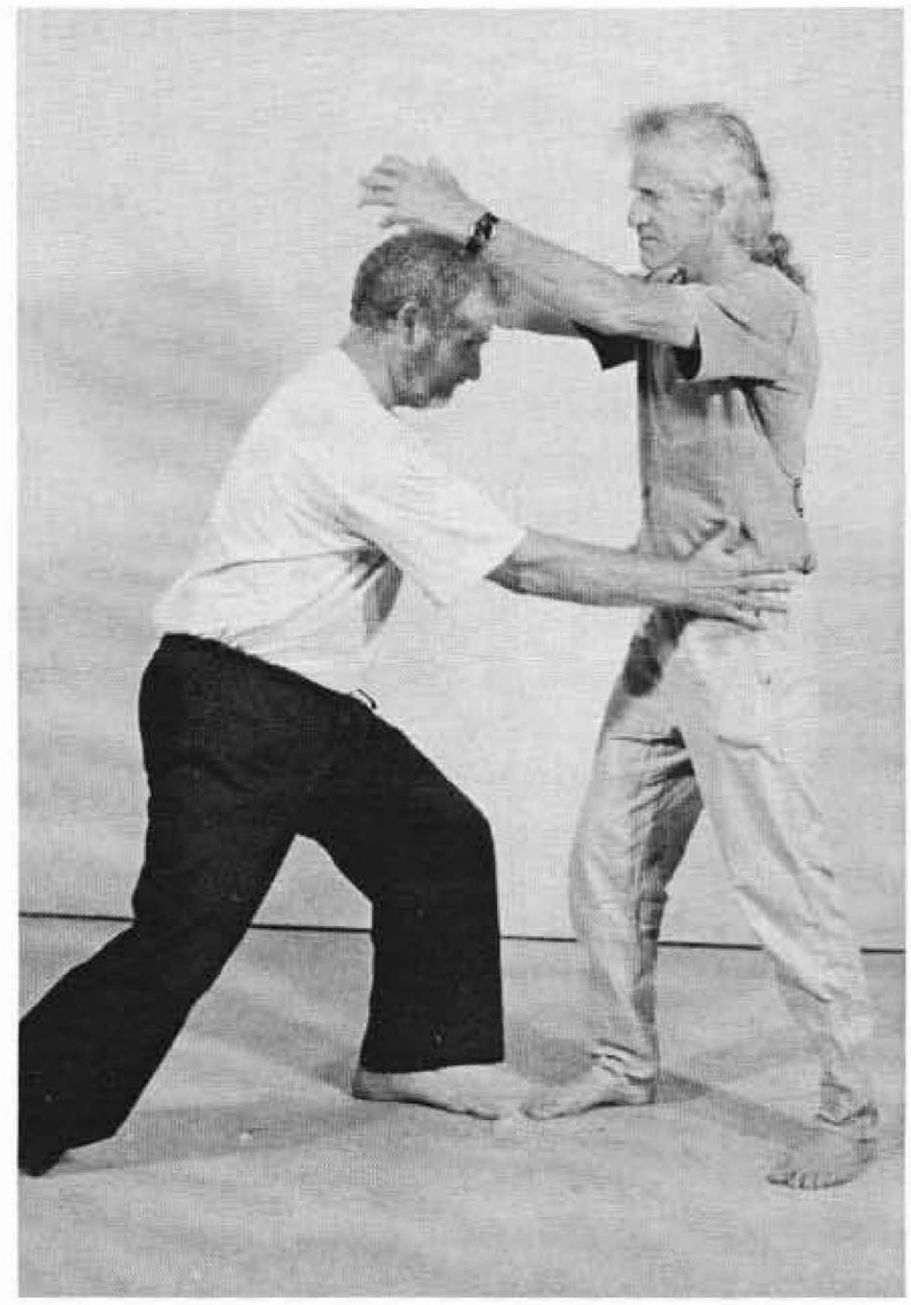


Figure 130

Set-up point:

Instead of a specific point to set up Gb 27, there is an abstract way of setting it up. We simply surprise or shock the attacker. For instance, he might be getting ready to attack, and we attack high with perhaps a yell, shocking him instantly. Then when the points are struck it will have a far greater effect.

Antidote:

Press inward hard at Kd 1.

Healing:

Innervated by the iliohypogastric nerve and irrigated by the superficial and deep circumflex iliac arteries and veins.

Used for leukorrhea, pain in lower back and hip joint, hernia, endometritis, and orchitis (inflammation of the testis).

Traditional indications include colic, vaginal discharge containing blood, lower back pain, abdominal pain, constipation, and infantile convulsions.

Massage techniques are similar to those used with Gb 25 and Gb 26. This is a great point to press for spasm of the psoas and ileopsoas muscles causing paralysis of the hip and/or pain in the lower back, groin, and extending down the front of the leg and/or inability to flex the leg without pain.

Applications:

He is about to attack. You rush forward, going high with both of your hands (fig. 129). Just before you contact his face, you go low with both palms to both of his Gb 27 points straight inward (fig. 130).

GB 28 (GALLBLADDER POINT NO. 28)

Chinese name:

Weidao (meeting path).

Location:

.5 cun anterior and inferior to the anterior iliac spine.

Connections:

This is another Gb point that intersects with the dai mai.

Direction of strike:

This point can kill when struck from the inside of the body to the outside and into the hip bone.

Damage:

Compared to the other Gb points, Gb 28 more of a physical effect upon the bladder, which can burst when the point is struck in the correct direction as described above.

Set-up point:

Liv 13 can set up Gb 28 nicely when struck straight in.

Antidote:

Kd 1.

Healing:

Enervated by the ilioinguinal nerve and irrigated by the superficial and deep circumflex iliac arteries and veins.

Used for pain in lower back and hip joints, leukorrhea, lower abdominal pain, prolapse of the uterus, endometritis, pain from intestinal hernia, chronic constipation, and adnexitis (inflammation of a gland in this region).

Massage techniques are similar to those used for Gb 25, Gb 26, and Gb 27. For prolapse of the uterus, you might press in the direction of the uterus, directing qi to the uterus, then move the

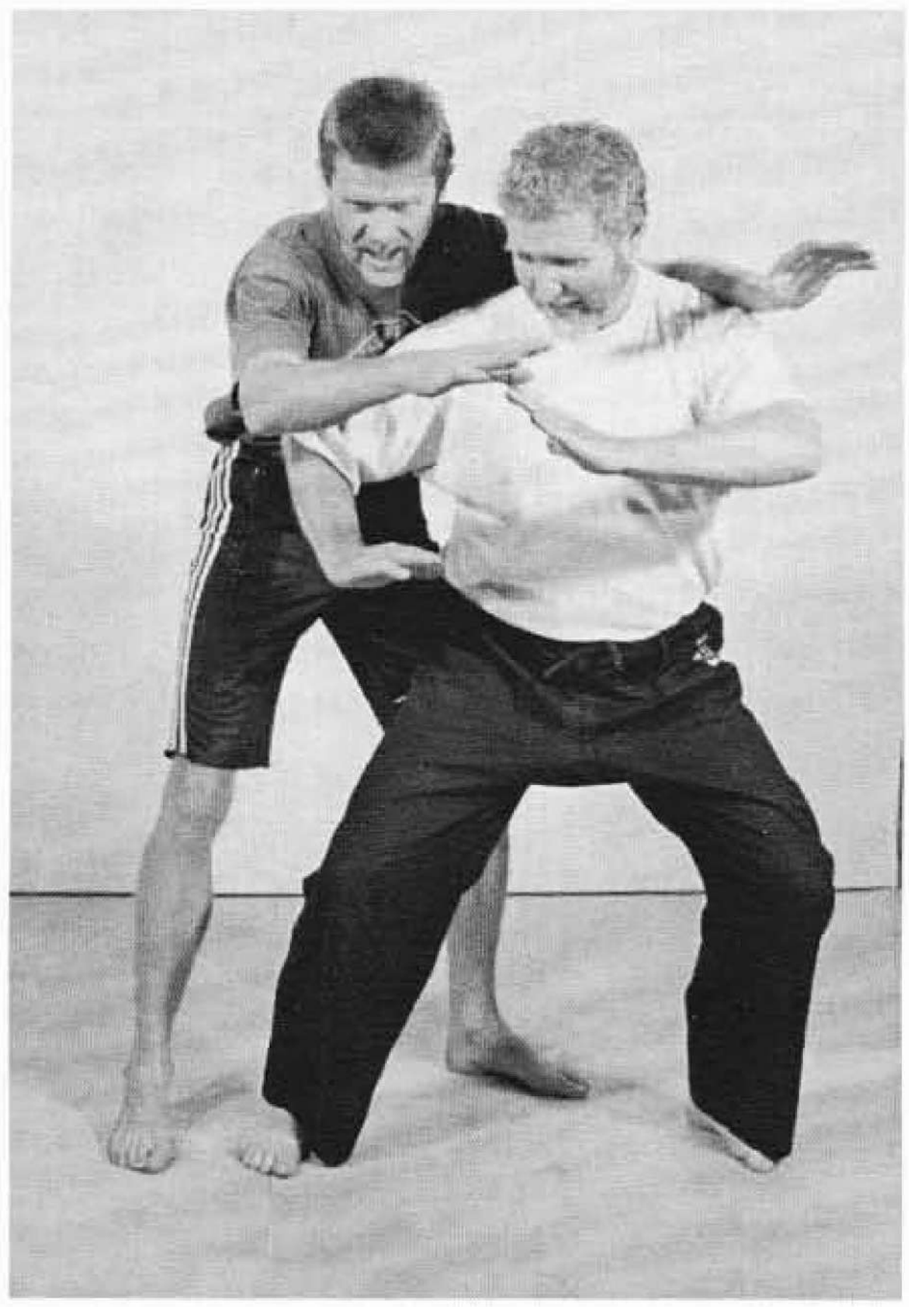


Figure 131

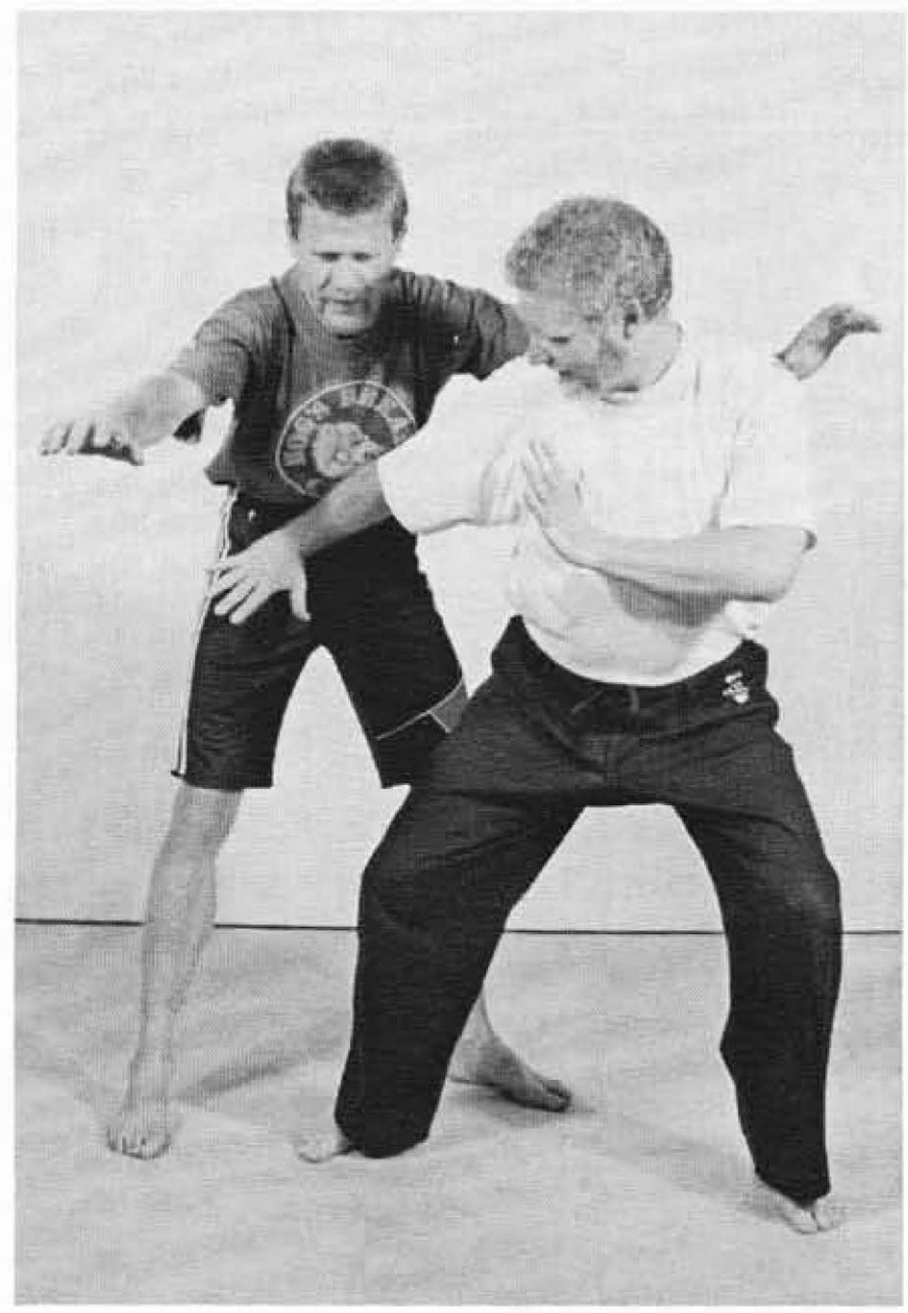


Figure 132

pressure up and away toward the anterior superior iliac spine and combine with Gv 20, Sp 6, Sp 3, and abdomen zigong, with moxa on Cv 4, Cv 6, and Cv 12

Applications:

You are grabbed from behind. You first attack to Liv 13 with your right elbow (fig. 131). Now your right or left palm slams backward in a lateral direction just above the groin and into the hip bone to Gb 28 (fig. 132).

GB 29 (GALLBLADDER POINT NO. 29)

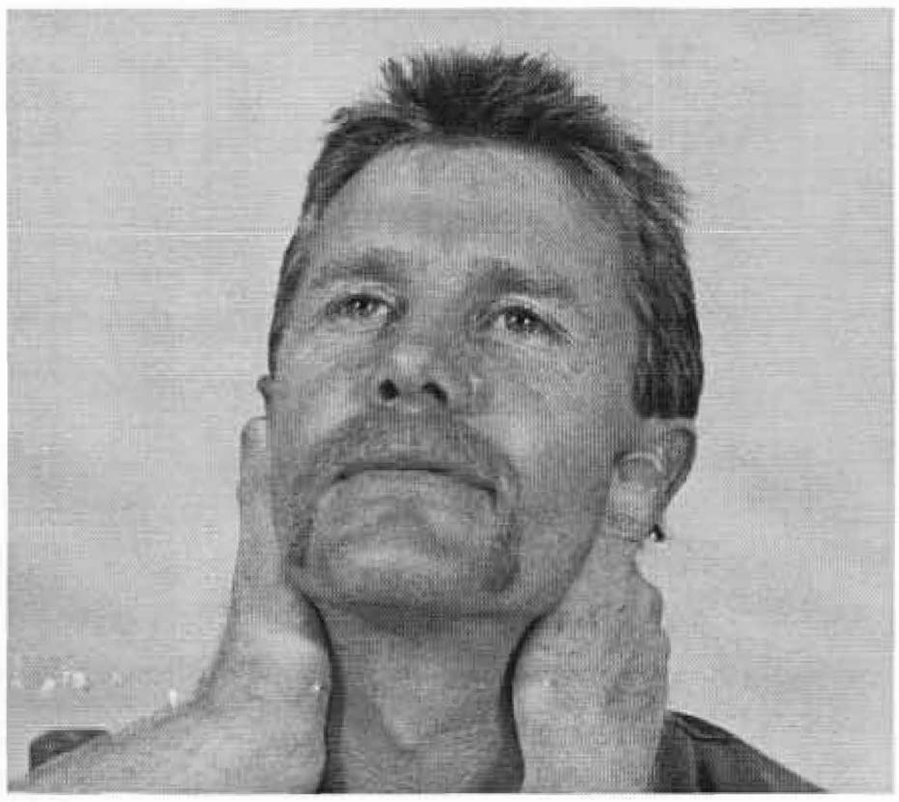


Figure 133

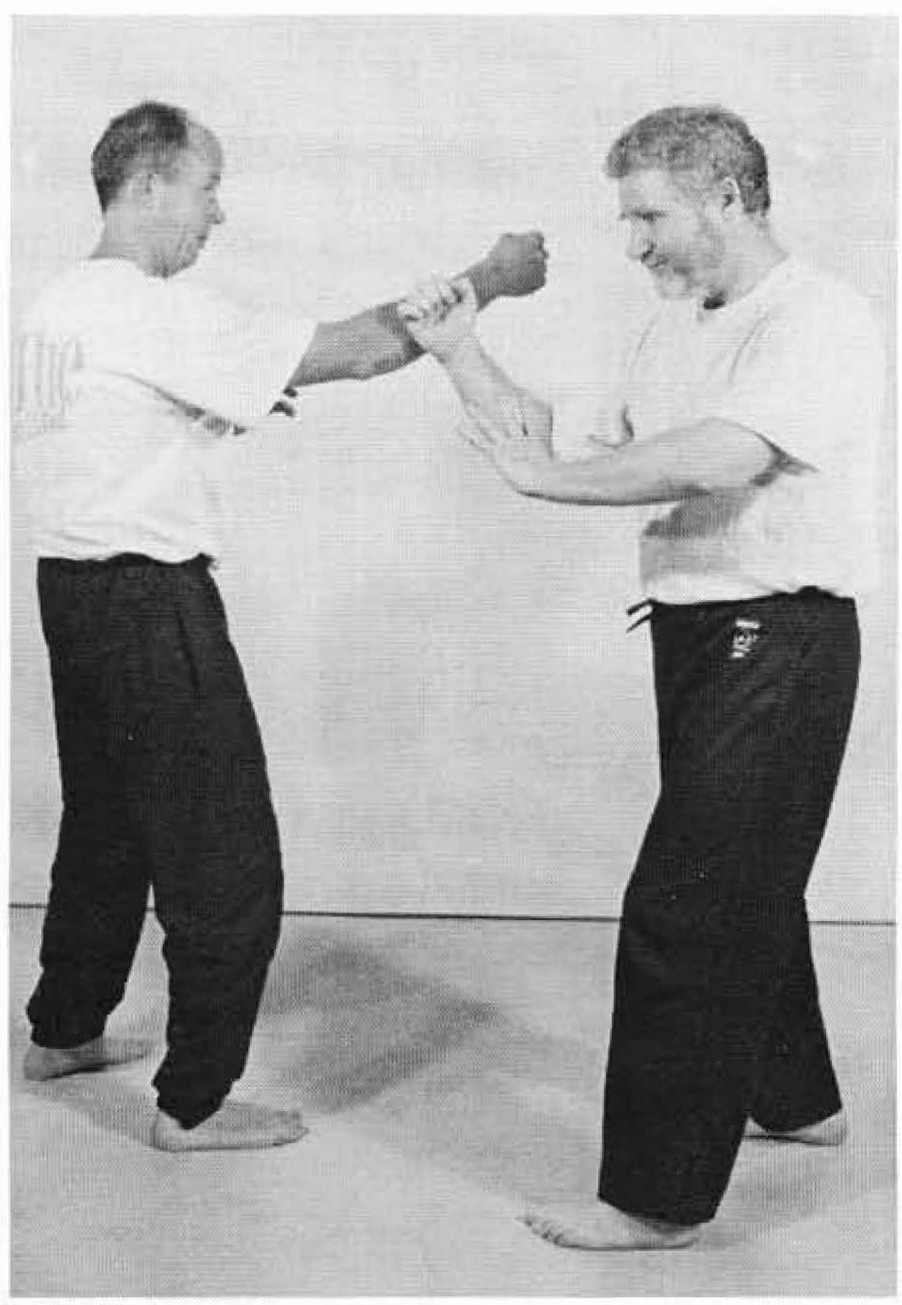


Figure 134

Chinese name:

Juliao (bone of lodging).

Location:

Midway between the anterosuperior iliac spine and the great trochanter. Locate the point with the patient lying on his or her side. Gb 29 is at the anterior margin of the tensor fascia lata and, in its deep position, in the vastus lateralis muscle.

Connections:

This is a point where the Gb meridian intersects with the *yang qiao* channel (one of the eight extra channels).

Direction of strike:

Strike this point straight in to the middle of the leg/pelvis.

Damage:

A strike to this point only will cause paralysis of the upper right side of the body. It will also cause a KO. When combined with a strike to Gb 12, a strike to Gb 29 will cause spasm in the whole upper body.

Set-up point:

Strike straight in to the middle of the biceps, cutting with a knife-edge strike. This will greatly increase the paralyzing effect.

Antidote:

Stand in front of the patient. Place your both thumbs in front of each ear. Touch your fingers together behind the neck and squeeze mildly (fig. 133).

Healing:

Innervated by the lateral femoral cutaneous nerve of the thigh. Irrigated by the branches of the superficial circumflex iliac artery and vein and the ascending branches of the lateral circumflex femoral artery and vein.

Used for pain in the back and lower extremities, paralysis, stomach ache, lower abdominal pain, orchitis, endometritis, cystitis, disease of the hip joint and surrounding soft tissue, imbalance in the length of the left and right legs, sciatic nerve impingement and pain, and

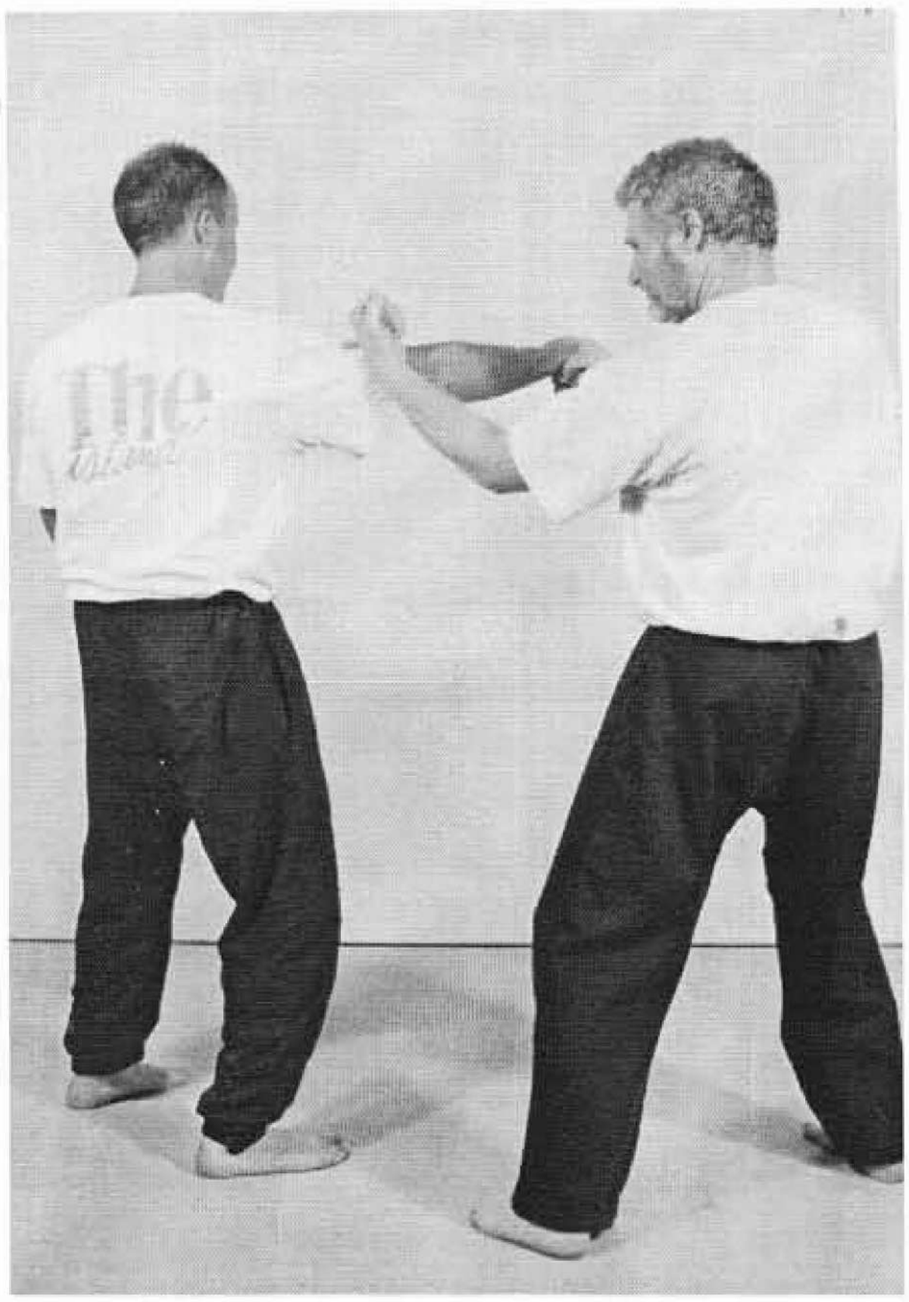


Figure 135

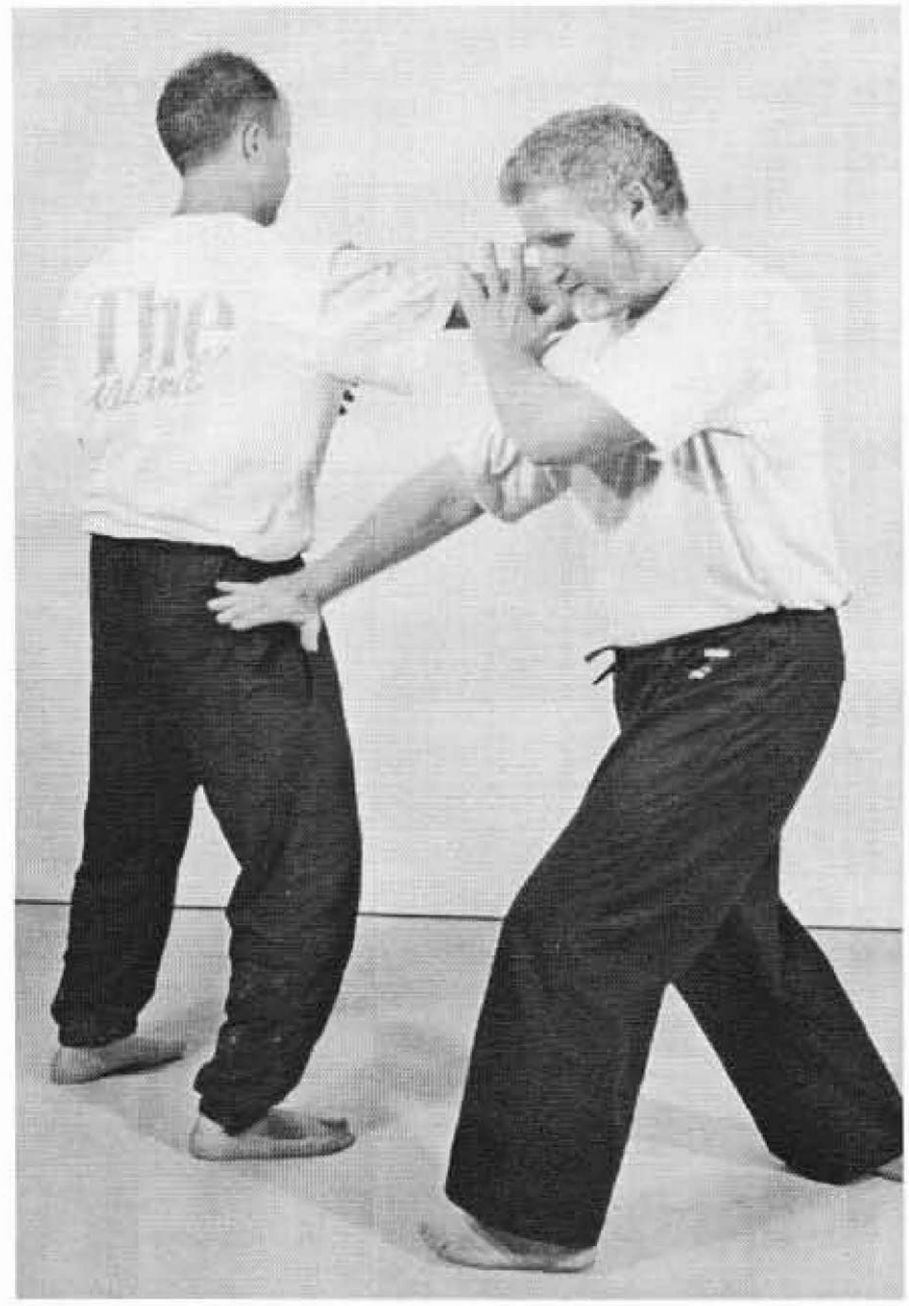


Figure 136

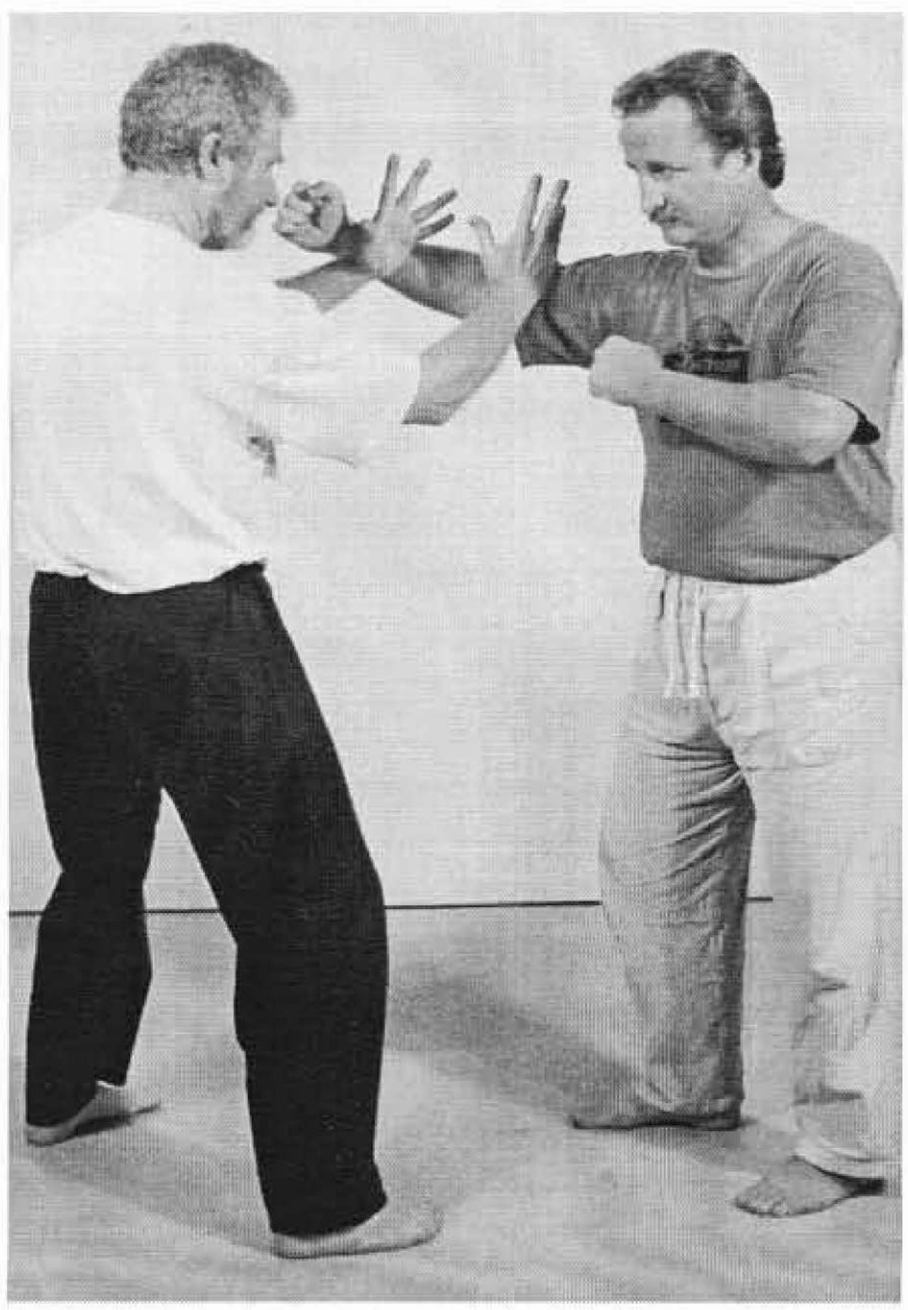


Figure 137

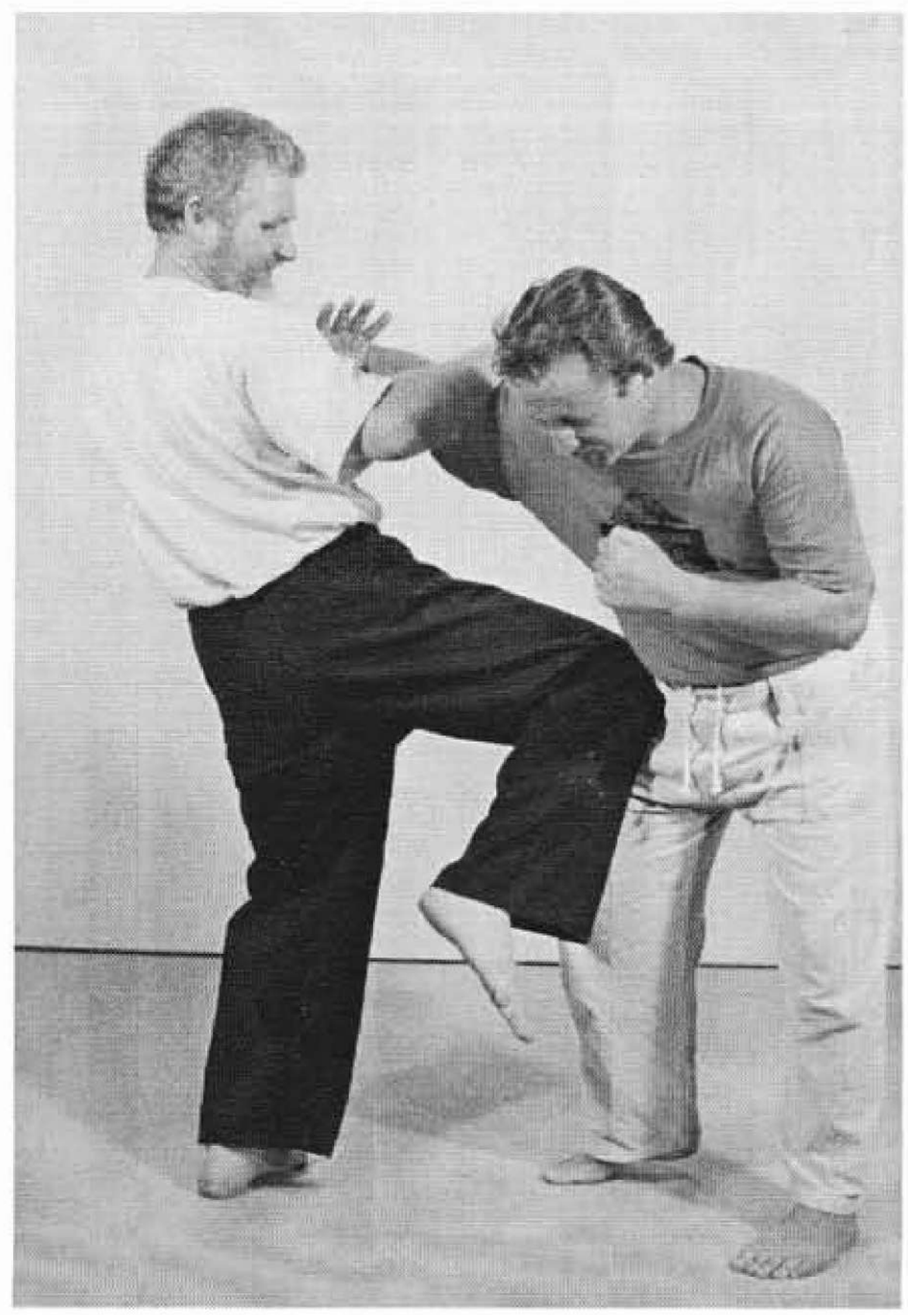


Figure 138

sexual repression with rigidity of lower back and pelvis regions.

Traditional uses include lower back pain and associated lower abdominal pain, paralysis and atrophy of the leg, and diarrhea.

To massage, use a straight press, with clockwise and counterclockwise rotation for xu or shi conditions. You can use fists or knuckles to knead this region, and you might do fingertip percussion on this point. Some people are very sensitive in this region, especially when there are problems with sexual inhibitions, muscle inflammation causing pressure on the sciatic nerve, or a left/right leg length imbalance, so you may not be able to percuss this point very heavily or for too long. It is good to do as much as the person can cope with for as long as is tolerable. You can also get into this point with your elbow, preferably with the patient on his or her side, if it is tolerable.

You could combine this point with Gb 30, Bl 25, Bl 26, Bl 54, Bl 40, and Gb 34 for sciatic pain or lower back pain. For left/right leg imbalance, you might combine it with Gb 30, Gb 34, Gb 31, Gb 32, and Gb 41. For pain associated with blood stagnation causing dysmenorrhea, you could use it with Sp 6, Cv 6, Co 4, Gb 29, Bl 18, Sp 8, Cv 2, Bl 31, Bl 32, Bl 33, and Bl 34. You can use this point with Gb 30, Gb 34, Gb 39, and Bl 25 for arthritis of the hip.

Applications:

1) He attacks with a straight right. You should slam the back of his right forearm at Th 8. This is enough to cause KO in many cases (fig. 134). Your right palm immediately grabs his right wrist and jerks it toward you while your left palm attacks to Th 12 (fig. 135). While your left palm still guards his right arm, your right palm attacks straight in to Gb 29 (fig. 136).
2) The Gb 29 point is the lowest we go using the hands. The rule is, where the hands can reach, use them. Where they cannot reach, use the legs. So anywhere below Gb 29, we usually use the legs to attack to the points. Slam his right inside arm at neigwan point with your left knife edge and the middle of the biceps with your right knife edge. You will access Ht 2 here, as well as taking the arm out through a nerve point strike to the median nerve (fig. 137). Take the back of his upper arm at point Th 12 while still holding his wrist at Lu 8 and Ht 5, and bring your knee into Gb 29 (fig. 138).

GB 30 (GALLBLADDER POINT NO. 30)

Chinese name:

Huantiao (jumping circle).

Location:

At the junction of the middle and lateral thirds of the distance between the great trochanter and the hiatus of the sacrum (Gv 2). To locate this point, lie the patient on his or her side with leg flexed. The point is in the gluteus maximus and inferior margin of the piriformus muscle.

Connections:

This is a point of intersection between the gallbladder meridian and a branch of the bladder meridian.

Direction of strike:

Straight in from the rear into the hollow of the buttock.

Damage:

This will cause a KO and leg damage, along with nausea and perhaps bladder problems—even years after the strike.

Set-up point:

Use neigwan as the set-up point for this strike. Both points are qi drainage points.

Antidote:

Have the patient lie face down and apply pressure all the way up either side of the backbone without touching the backbone. Go from the buttock area to the shoulders and back down.

Healing:

Innervated by the inferior cluneal cutaneous nerve and the inferior gluteal nerve. Deeper, it is right on the sciatic nerve. Irrigation is by the inferior gluteal artery and vein.

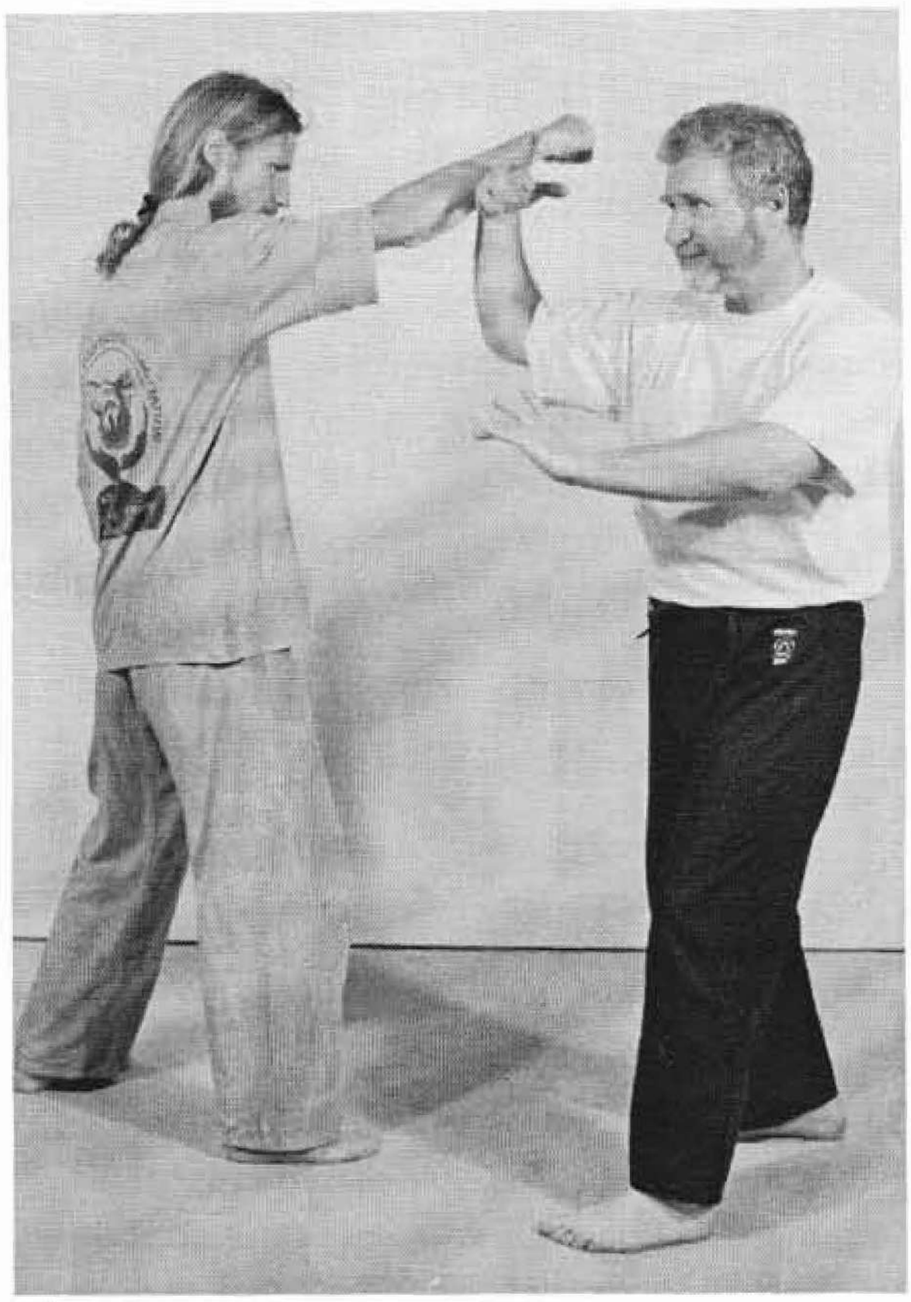


Figure 139

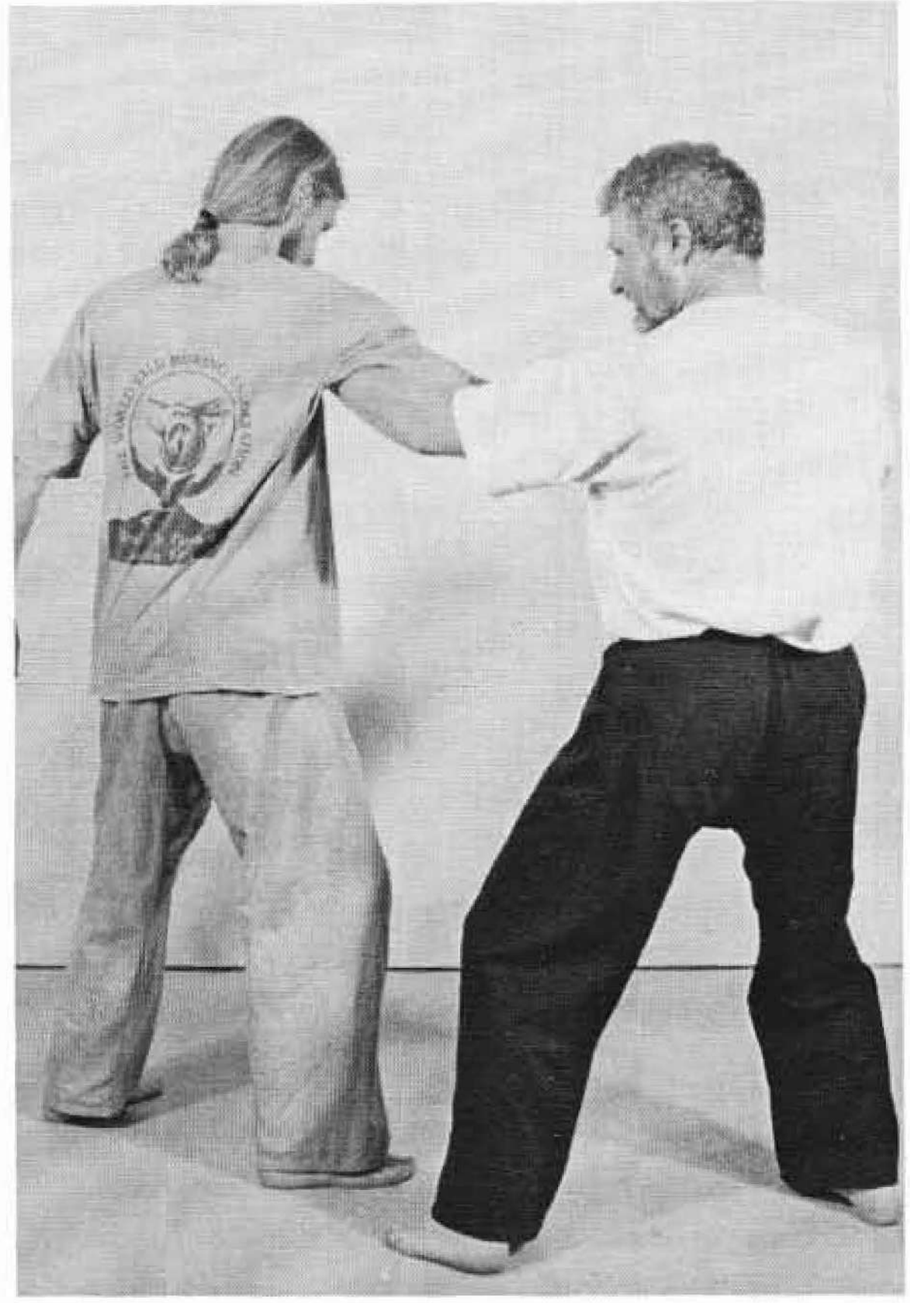


Figure 140

Used for pain in the lower back and hip region, muscular atrophy, motor impairment, pain and weakness of the low extremities, hemiplegia, sciatica, numbness and paralysis of the low extremities, and disease of the hip and surrounding tissue.

Traditional uses include the following: hemiplegia, lower back and groin pain, and "leg qi." (Leg qi is also known as edema of leg or, in Western medicine, beriberi. It is characterized initially by swelling with numbness, pain, and weakness. Spasm, atrophy, fever, palpations, and vomiting will develop if the heart is attacked. Caused by wrong eating habits, damp invasion, etc.)

To massage, use a straight push with clockwise or counterclockwise rotation for xu or shi conditions.

You could combine it with Si 3, Gb 34, Gb 41, Bl 54, Bl 40, and Bl 58 for painful legs.

For leg qi, you might try combining Gb 30 with St 32, Si 3, Sp 6, St 36, and St 40.

Combine with Gb 29, Bl 54, Bl 25, Bl 26, Bl 40, and Th 34 for lower back pain, sciatica, etc.

If the shoulders are stiff and painful, you could use Gb 30 in conjunction with Gb 21, Th 15, Si 13, Si 3, Gb 30, Gb 34, and Bl 60.

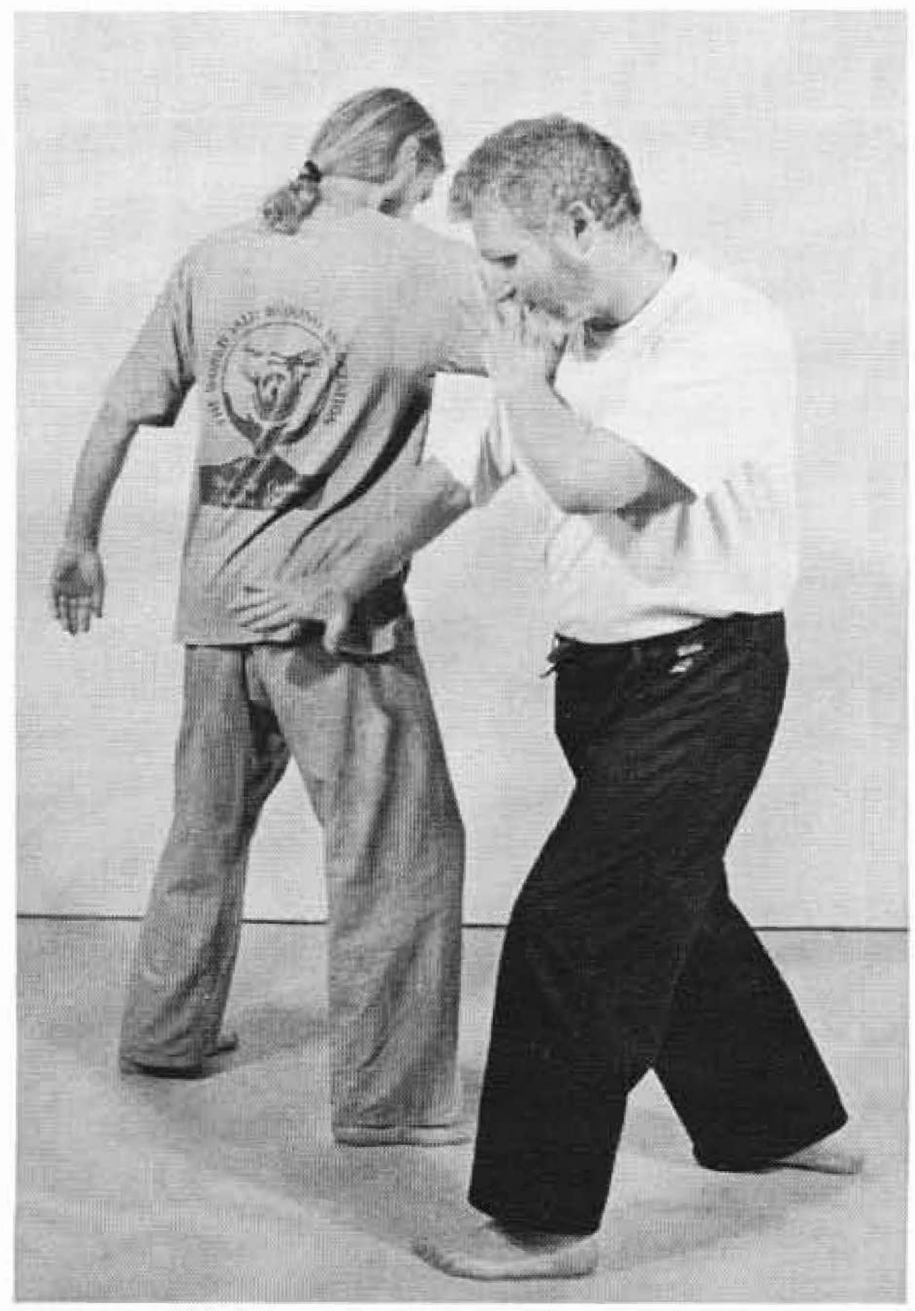


Figure 141

For rheumatoid arthritis, combine Gb 30 with Co 4, Co 11, Co 15, and St 36. If the wrist is involved, add Pc 7 and Pc 3. If the hip is involved add Gb 31, Bl 54, Gb 29, Bl 25, and Bl 40.

Traditional functions include activating the *jing luo* (all of the 12 main and the collateral channels); removing obstructions; and tonifying the back, waist, and hip joints. Often used for sciatica.

Applications:

He attacks with a right straight. You should block this with a right p'eng (fig. 139). Your left palm now attacks straight up into Ht 1 (fig. 140). Meanwhile, you are moving out to the side past the attacker. You are now in a position to slam him into his right buttock at Gb 30 with your right palm. This is probably one of the only techniques in which the hand is used to strike such a low point, since you are pretty safe in back of him (fig. 141).

GB 31 (GALLBLADDER POINT NO. 31)

Chinese name:

Fengshi (city of wind).

Location:

On the midline of the lateral aspect of the thigh, 7 cun above the transverse popliteal crease. Beneath the tensor faciae latae, in the vastus lateralis muscle.

When standing erect with the hands at the sides, the point is located where the tip of the middle finger touches the leg.

Connections:

None.

Direction of strike:

Strike straight in to the side of the thigh, usually using a ball of the foot type of attack or an instep, round type of low kick.

Damage:

This strike causes a "dead leg," wherein the leg becomes paralyzed. It can cause a KO, as well as affecting the heart by slowing it down or stopping it. In order to affect the heart, though, the strike must be accurate—executed with a small weapon such as the ball of the foot or a big toe.

Set-up point:

Neigwan is struck as the set-up point.

Antidote:

Apply pressure down the front of the thigh, especially to St 32, using the flat of the palm.

Healing:

Innervated by the lateral femoral cutaneous nerve, the muscular branch of the femoral nerve. Irrigated by the muscular branches of the lateral circumflex femoral artery and vein.

Used for hemiplegia, muscular atrophy, motor impairment, pain in the lower extremities, itching anywhere on body, pain of the lower back and leg, and neuritis of the lateral cutaneous nerve of the thigh and a muscle branch of the femoral nerve.

Traditional functions are to dispel wind, relax tendons, invigorate collaterals, and tonify the waist and knees. Much used to dispel wind of herpes zoster (shingles) and wind stroke (another term for stroke or blood clot in the brain is cerebrovascular accident [CVA]).

Traditional uses include soreness and pain in the lower back and leg; numbness and stiffness of leg and foot; hemiplegia; itching on one side of the body; headache; and red, swollen, sore eyes.

To massage, use a straight push with clockwise or counterclockwise rotations for xu or shi conditions. You can do a straight push passing through this point, beginning at Gb 29 and moving to Gb 30 and to the head of the femur and straight down the center of the thigh at 1 cun intervals, ending at Gb 33. This will help with lower back and hip problems. Percussion down the Gb meridian of leg as above can also be used.

Combine with Gb 30, Bl 54, Gb 29, Bl 57, Bl 56, Bl 25, Bl 26, Bl 40, and Gb 34 for infantile paralysis of the lower limbs or for sciatic pain. For CVA (stroke) when the legs are involved

(hemiplegia), use Gb 31 with Co 15, Co 11, Th 5, Co 4, Gb 30, Gb 31, Gb 34, and Gb 39.

For itch, combine with, Ht 7, Co 4, Co 11, Liv 2, Sp 10, and Gb 20.

Applications:

He might attack with a straight right. You might use a p'eng-type block to his right neigwan, thus setting up the point. Immediately, strike straight in to the thigh at Gb 31, using either the instep for a lesser effect or, if you are accurate enough, using the ball of the foot or a toe to kick (fig. 142).

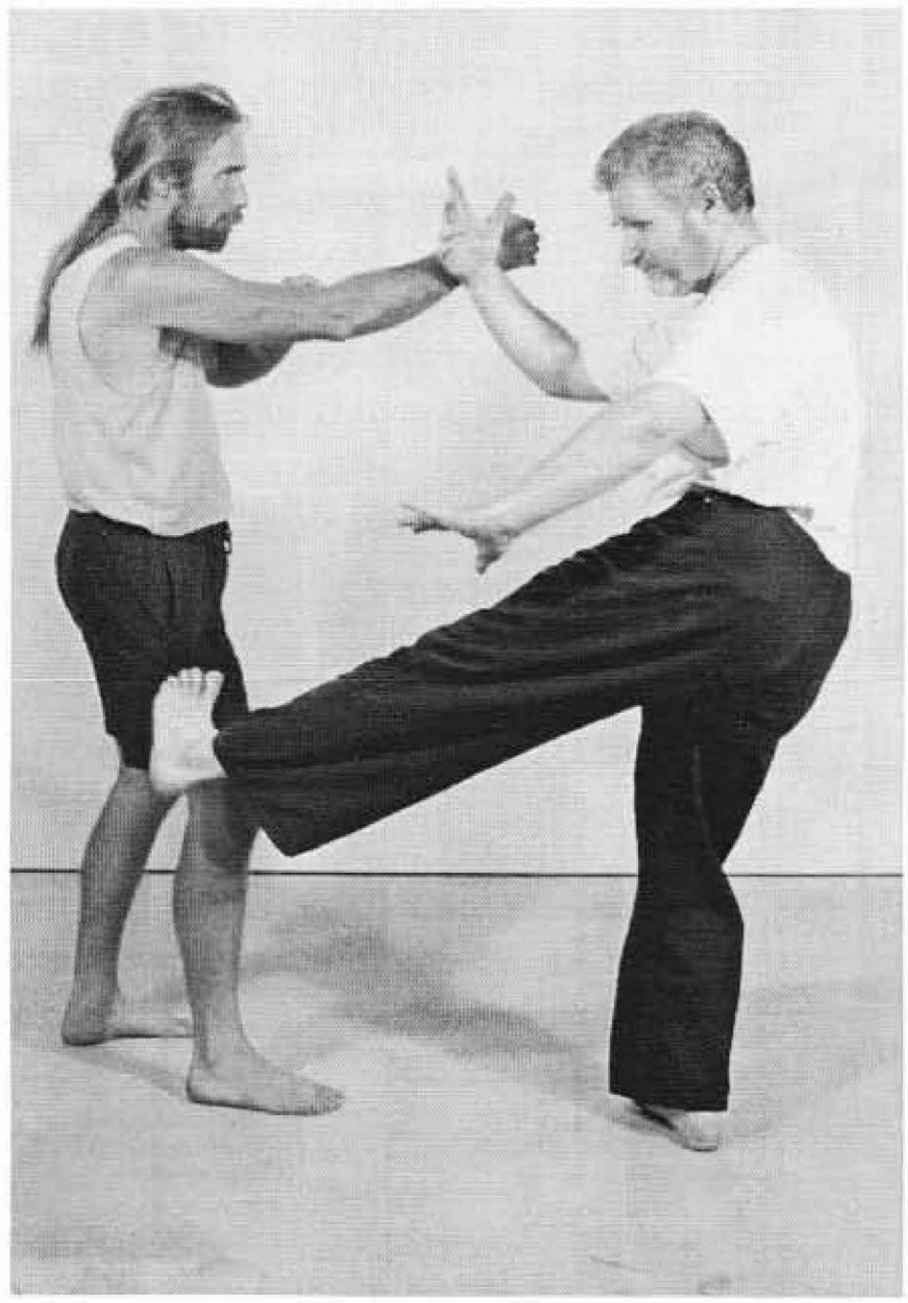


Figure 142

GB 32 (GALLBLADDER POINT NO. 32)

Chinese name:

Femur zhong (middle ditch).

Location:

In the lateral aspect of the thigh, 5 cun above the transverse popliteal crease, between the muscle vastus lateralis, 2 cun below Gb 31.

Connections:

None.

Direction of strike:

Same as for Gb 31, straight in from the side of the thigh.

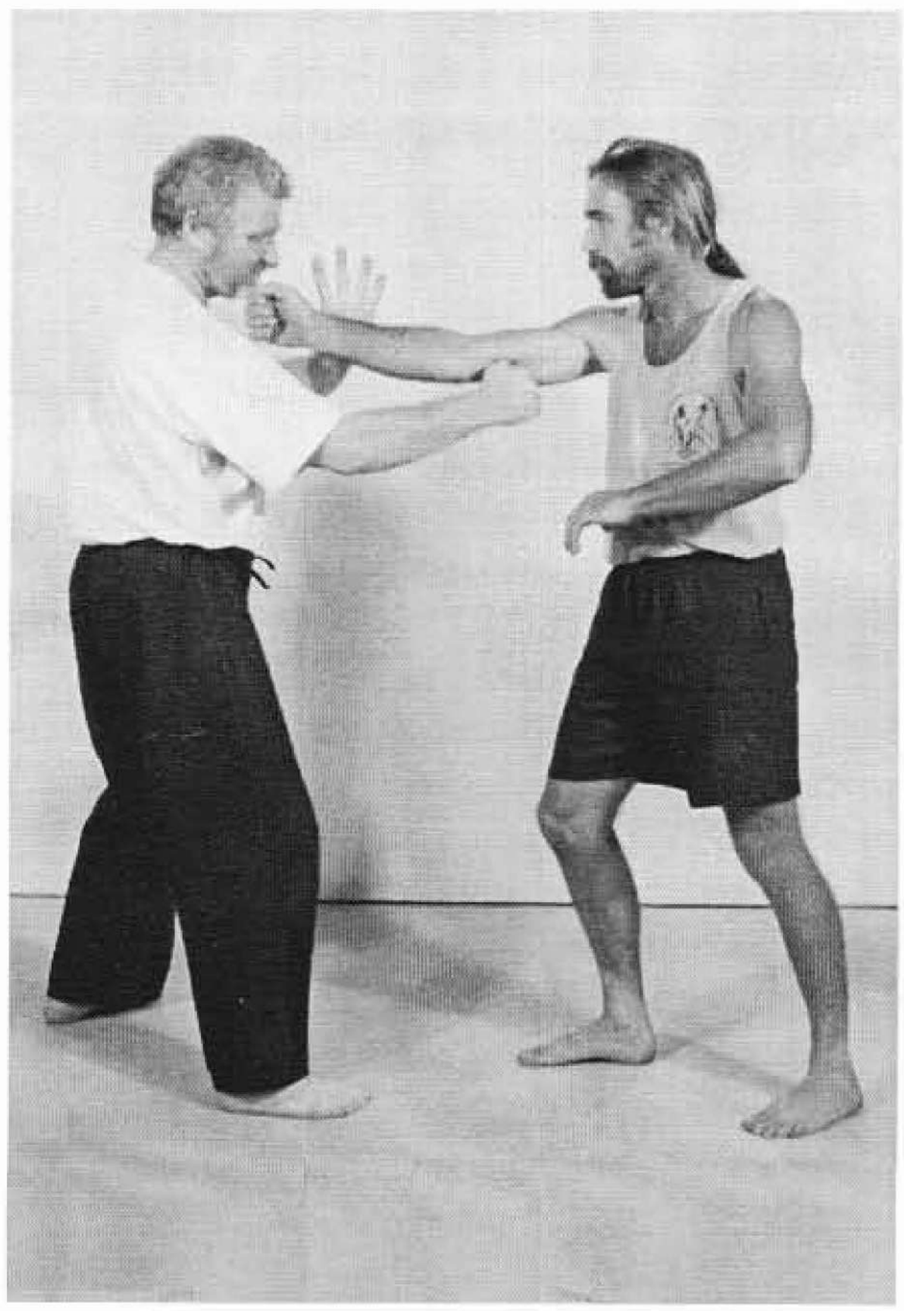


Figure 143

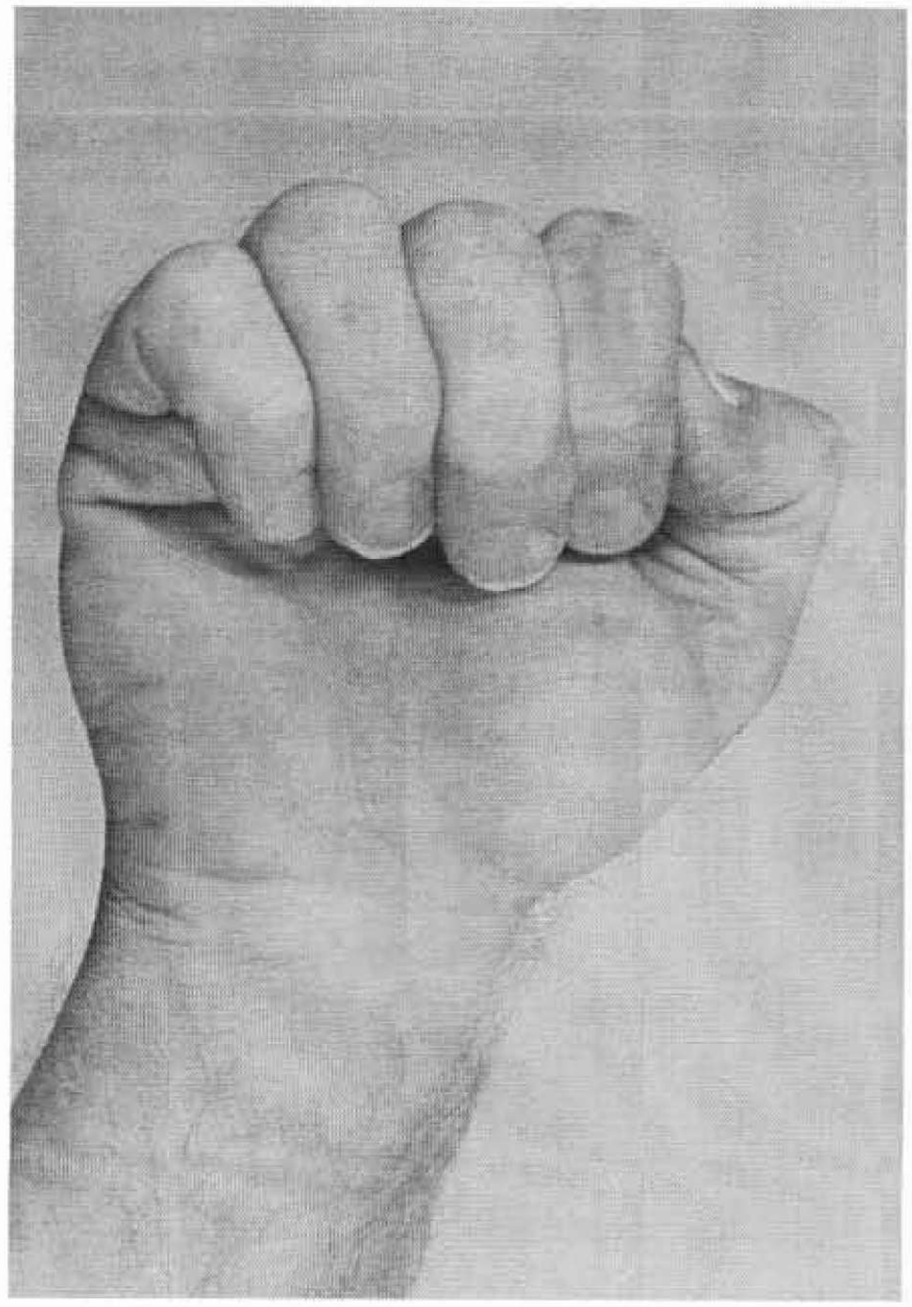


Figure 144

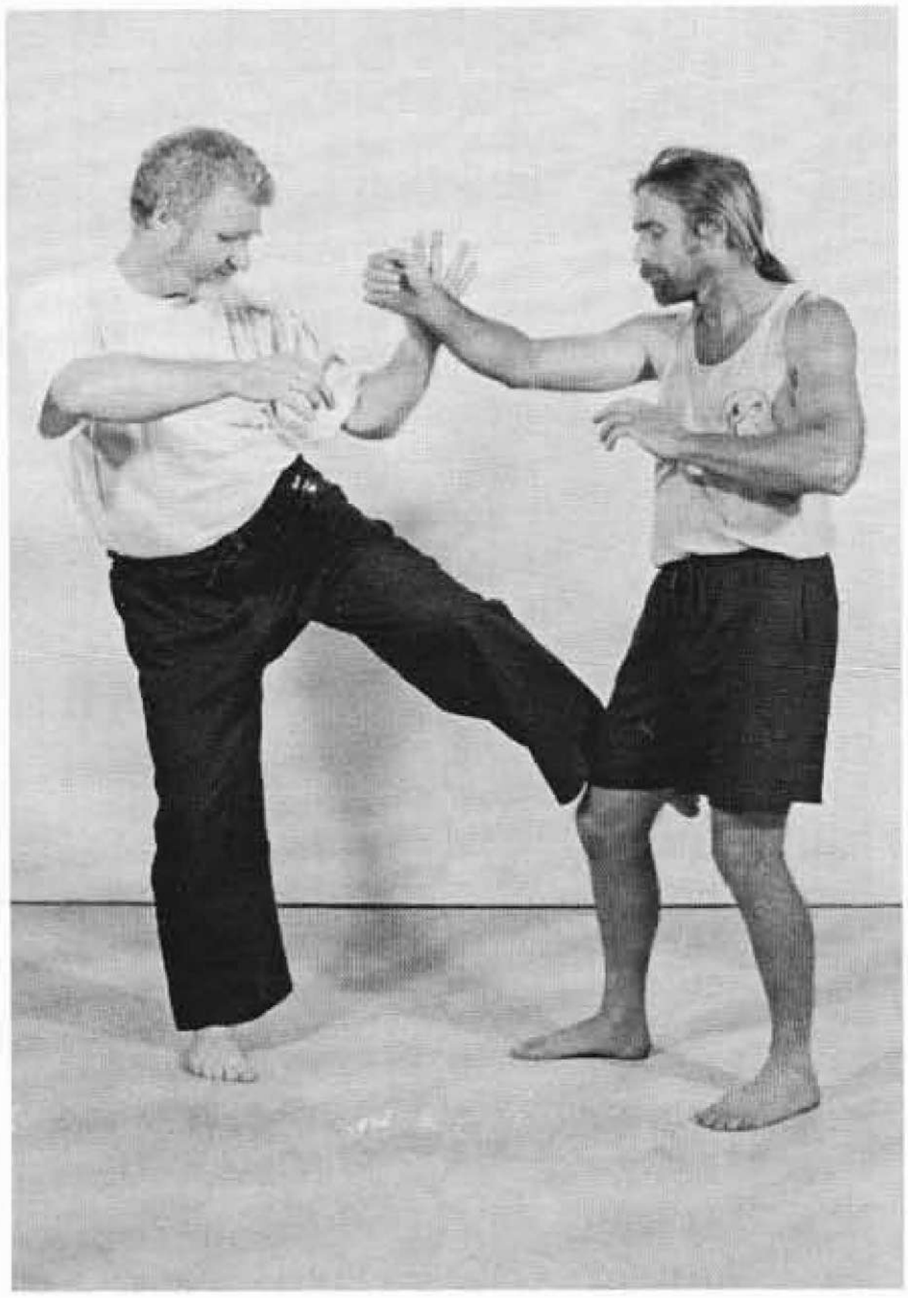


Figure 145

Damage:

Causes KO or takes out the knee on that side. Also affects the heart and causes nausea.

Set-up point:

Use neigwan as a set-up point or, as a secondary strike, Ht 3 in the elbow crease. The latter can cause death by itself since it affects the heart, often stopping it.

Antidote:

Liv 3 is pressed straight in. Liv 3 is a good antidote to all knee and upper thigh ailments.

Healing:

Innervation and irrigation are the same as for Gb 31. Used for muscular atrophy; motor impairment; numbness, pain, and weakness of the lower extremities; leg qi (beriberi); paralysis of the lower limbs; right/left leg imbalance; and sciatic neuralgia (inflammation of the sciatic nerve, also called sciatica).

Massage techniques are the same as for Gb 31.

Applications:

He might attack with a straight right. Your left palm slaps the outside of his right lower forearm as your right thumb (palm is held in the typical taijiquan fist, as in fig. 143) attacks in a line toward you to Ht 3 (fig. 144). Your left foot now attacks to Gb 32 (fig. 145).

GB 33 (GALLBLADDER POINT NO. 33)

Chinese name:

Xiyangguan (yang hinge/gate).

Location:

When the knee is flexed, the point is 3 cun above Gb 34, lateral to the knee joint in the depression between the tendons of the biceps femoris muscles and the femur. In the hollow above the lateral condyle of the femur, at the posterior aspect of the iliotibial band and the anterior aspect of biceps femoris tendon.

Connections:

None.

Direction of strike:

Again, straight in from the side of the knee, just above the patella.

Damage:

KO, plus great tendon damage around the knee (the tendons could be completely torn away from the bone). This is the ideal strike to the leg,because the tendons holding the lower leg on are torn and the recipient cannot carry on with no leg support. This strike will drain qi greatly.

Set-up point:

Th 12 is a good set-up shot for this point, as is neigwan.

Antidote:

Again, use Liv 3.

Healing:

Innervated by the terminal branch of the lateral femoral cutaneous nerve and irrigated by the superior lateral glenicular artery and vein.

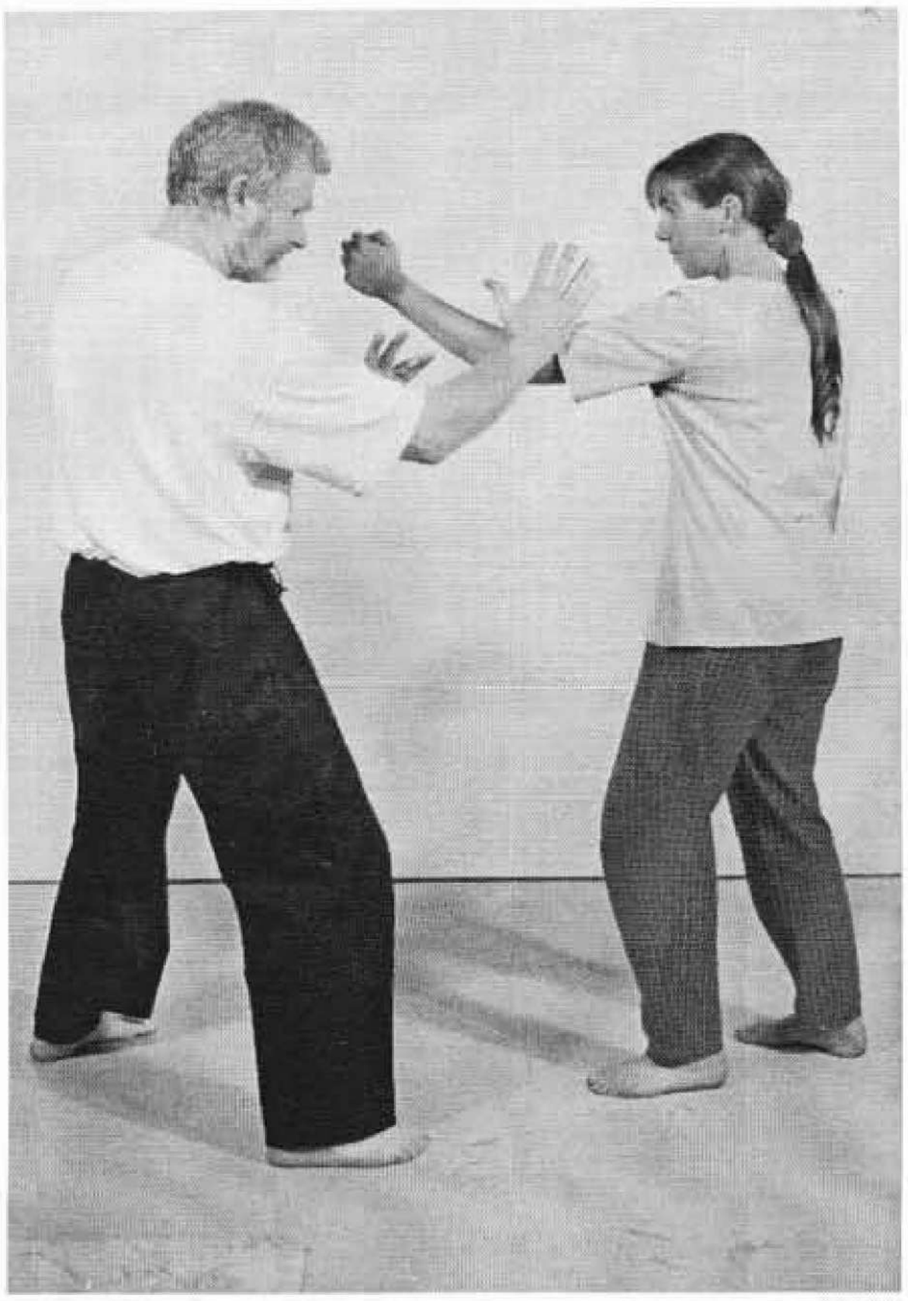


Figure 146

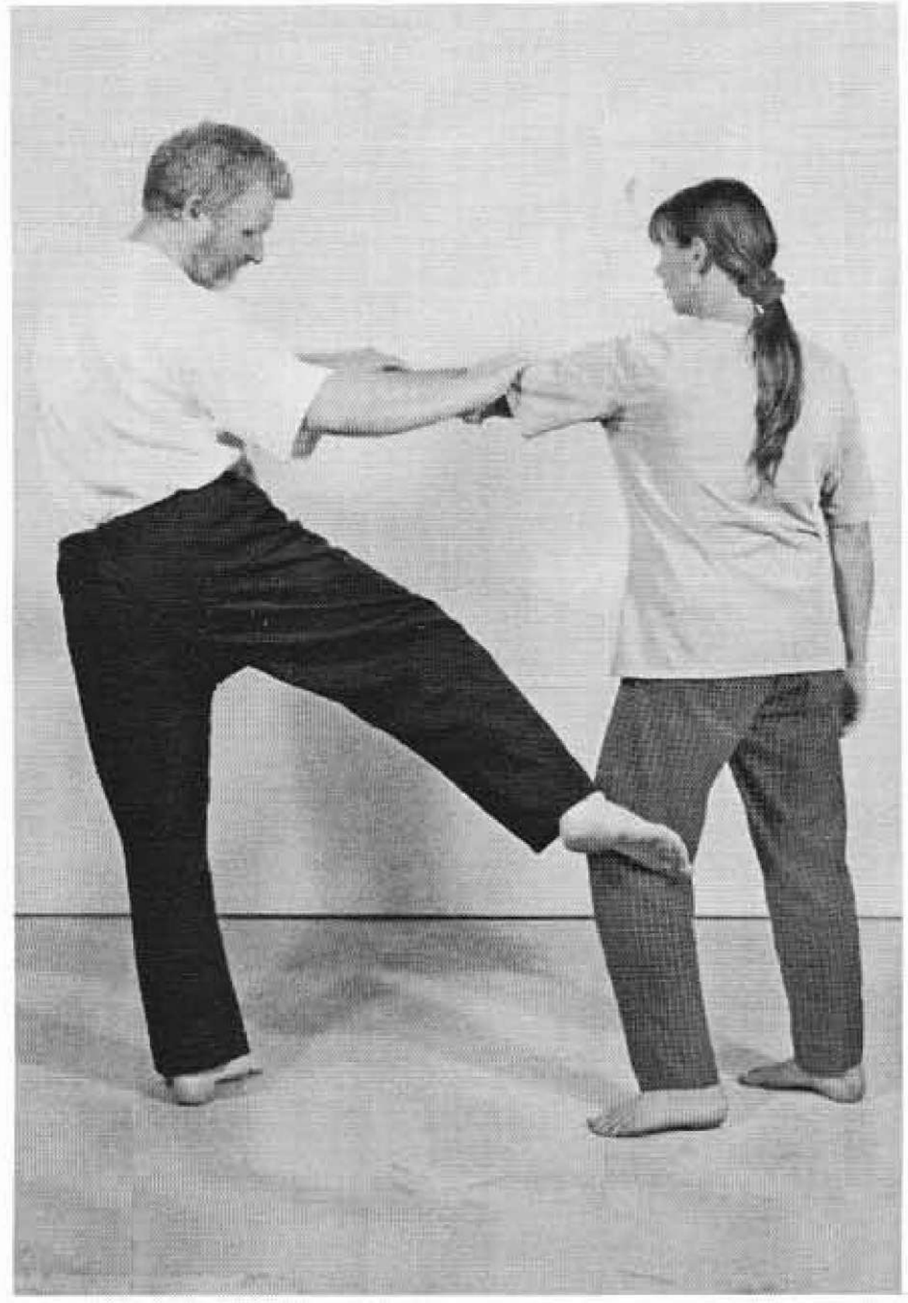


Figure 147

Used for pain and swelling of the knee, contracture of the tendons in the popliteal fossa, numbness of the leg, and paralysis of lower limbs.

Traditionally used for inability to flex or extend the knee, progressive pain and swelling of knee, and leg qi (beriberi).

Massage techniques include straight push with clockwise and counterclockwise rotation for xu or shi conditions and percussion with one or two fingers.

You might use Gb 34, Sp 6, Sp 9, Sp 10, St 36, St 34, *xi yan* (the "eyes of the knee," consisting of St 35 and the extra point, xi yan, on the opposite side of the tendon), Liv 3, and Gb 33 for pain and swelling of knee.

Applications:

He attacks with a straight left. You slam his elbow with your right palm as you step to your right side (fig. 146). Your right palm grabs the inside of his left elbow as your left palm takes his wrist. Your left foot has stepped up, and as you push your left palm, your right palm pulls violently as your right heel kicks to the side of his thigh just above the knee at Gb 33 (fig. 147).

GB 34 (GALLBLADDER POINT NO. 34)

Chinese name:

Yanglingguan (fountain of the yang mound).

Location:

In the depression anterior and inferior to the head of the fibula when the leg is flexed. Anterior to the capitulum of the fibula between peroneus longus, and the extensor digitorum longus pedis muscle.

Connections:

None.

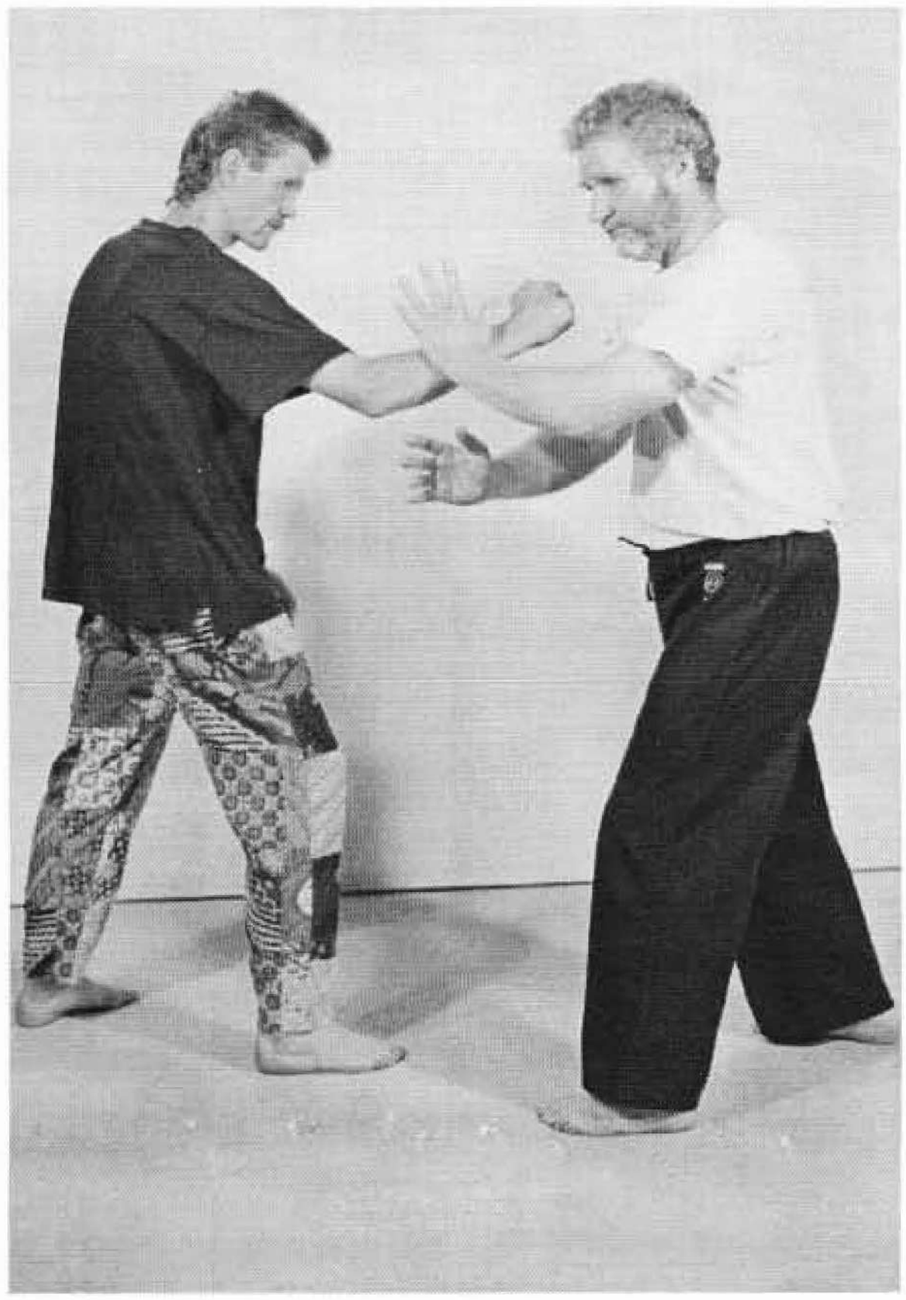


Figure 148

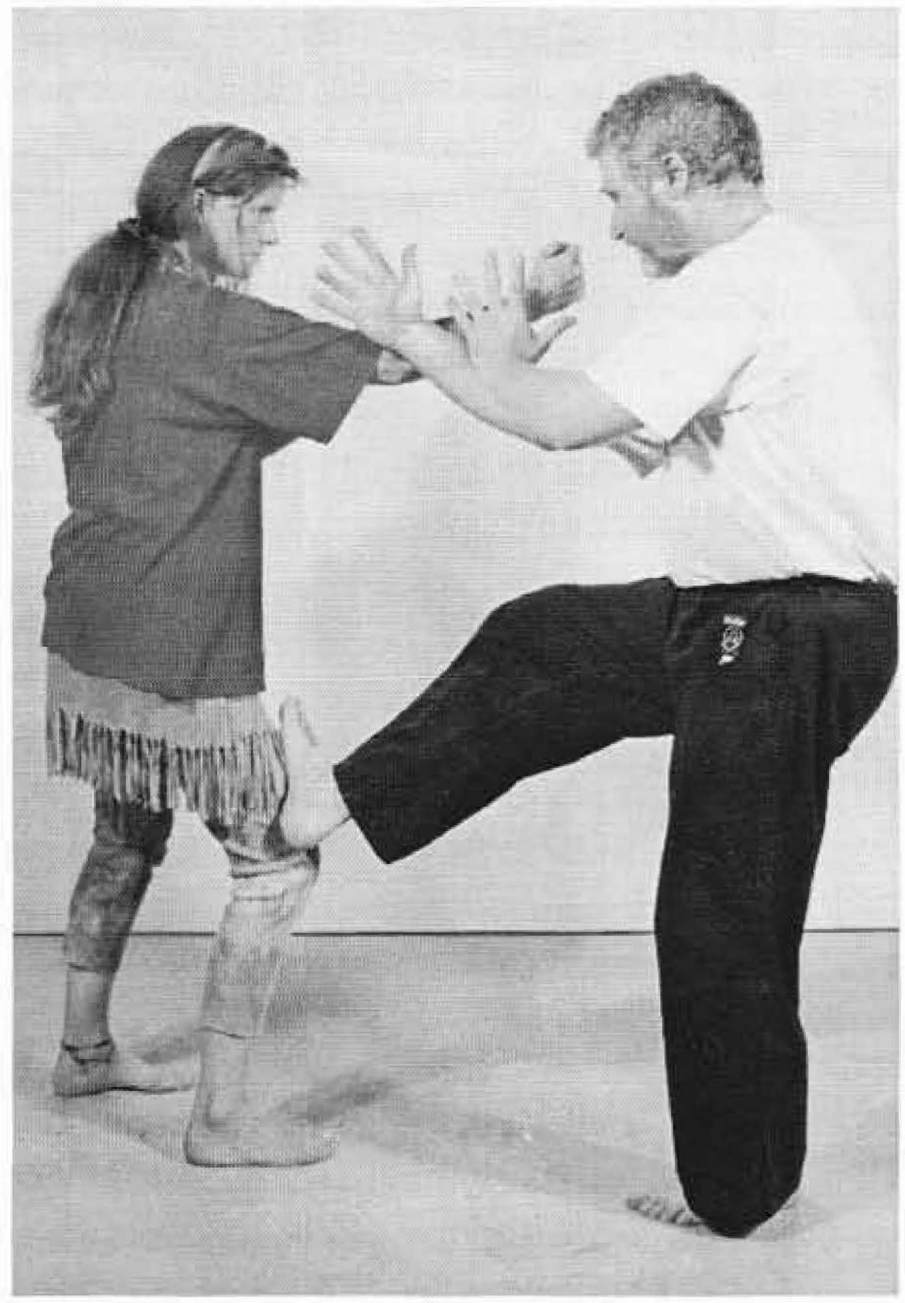


Figure 149

Direction of strike:

Kick across the knee at about a 45-degree angle from the front (refer to fig. 147 again for proper angle.)

Damage:

Aggravates the liver greatly so that hospitalization is necessary. Also causes KO and destroys the leg.

Set-up point:

Slap the outside of his forearm from his wrist to elbow (direction of strike is moving away from you). This is an ideal qi drainage set-up.

Antidote:

Hold the back of his head and press inward on both sides of his forehead at Gb 15.

Healing:

This point is found where the common peroneal nerve bifurcates into the superficial and deep peroneal nerves and is innervated by these. It is irrigated by the inferior lateral genicular artery and vein.

Gb 34 is used for hemiplegia, muscular atrophy, motor impairment and/or numbness in the hypochondriac and costal regions, bitter taste in the mouth, vomiting, hepatitis, cholecystitis, roundworm in the bile duct, hypertension, intercostal neuralgia, inflammation of the shoulder, and habitual constipation.

Traditional indications are as follows: distension of mouth, tongue, throat, face, and head; fullness in the chest and ribs; distension of the gallbladder; loss of urine (incontinence); constipation; and leg qi.

This is a he sea point (a uniting point) and an earth point of the Gb meridian and a meeting place of tendons and muscles. Its traditional functions are as follows: soothes liver/gallbladder, relieves damp heat, removes obstructions from the jing luo, activates jing luo, tonifies tendons and ligaments, eliminates phlegm/fire in the stomach, and subdues liver yang.

Massage by using a straight press and hold technique or clockwise or counterclockwise rotation for xu or shi conditions. You might do percussion on this point or press and slide down the pathway of the channel.

You can combine Gb 34 with Liv 14, Liv 4, Liv 2, Liv 3, Liv 13, Liv 8, Gb 24, Cv 12, and St 36 for hepatitis.

Use with St 25, Sp 15, Liv 3, Liv 4, St 37, and Gb 41 for constipation.

Use with Bl 25, Bl 26, Bl 54, Bl 40, Bl 58, Gb 29, Gb 30, Gb 31, Gb 32, and Gb 33 for sciatic pain.

For anterior shoulder pain, combine with Co 15, Co 14, St 38, and Gb 21, and with Th 14, Th 13, Th 15, Gb 21, Si 3, Si 9, and Si 10 for posterior shoulder pain.

For intercostal neuralgia, you could use this point with Liv 14, Gb 24, Liv 3, Gb 41, Ht 1, and *huatuojiaji* points (extra points from T 7 to T 12 associated with the thoracic vertebra).

For inflammation of the gallbladder or gall stones, use with Pc 6, *dannangxue* (a new point found 1 cun below Gb 34), St 36, and Gb 24 on the right side, plus huatuojiaji points from T8 to T9.

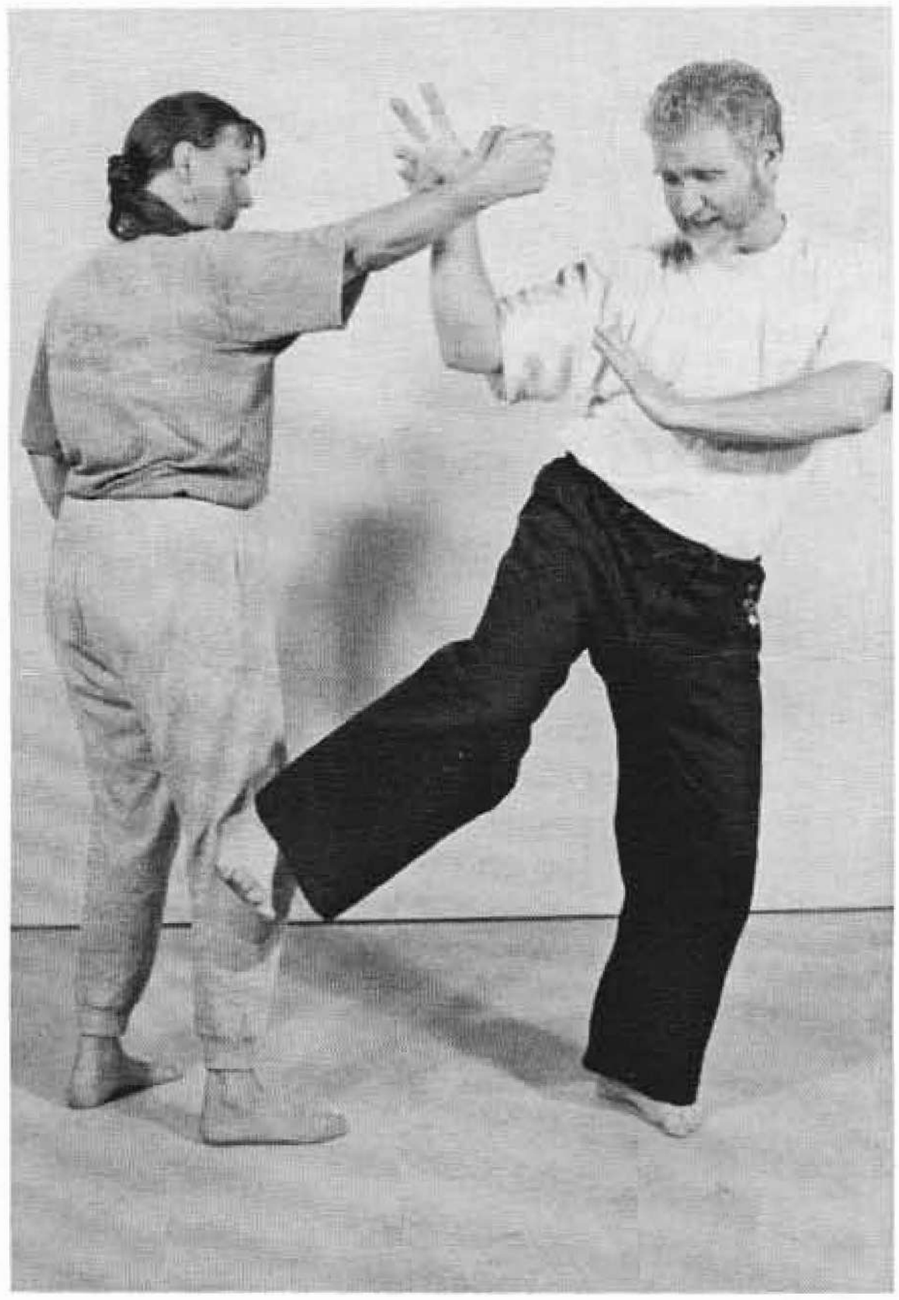


Figure 150

Applications:

1) He attacks with a straight right, and you step to your left as your left palm slams his right forearm up his arm (fig. 148). Instantly, your right palm also moves underneath your left palm and slices upward on his forearm as your right heel kicks at an angle into Gb 33 (fig. 149).
2) He attacks with a right hook. You should slam his inner forearm at neigwan and follow with a back kick to Gb 34 (fig. 150).

GB 35 (GALLBLADDER POINT NO. 35)

Chinese name:

Yangjiao (yang's intersection).

Location:

7 cun above the lateral malleolus, on the posterior border of the fibula, within the distance between the tip of the lateral malleolus and Gb 34, level with Gb 36 and Bl 58. In the lateral aspect of the leg, the distance between the tip of the lateral malleolus and the midpoint of the knee is seen as 16 cun.

Connections:

Yang wei mai.

Direction of strike:

Straight in from the side of the calf.

Damage:

This is a particularly nasty strike because its effects occur later in life due to the slow damage caused to the point. All *xie cleft* points react in this way. (A xie cleft point is an accumulation point where qi and blood converge in the channel, and it can be used to treat acute disease states because of this function.) It causes knockout when struck directly with a small weapon. Obvious leg damage is another effect, as is extreme local pain that can cause the nervous system to shut down for a period until the brain works

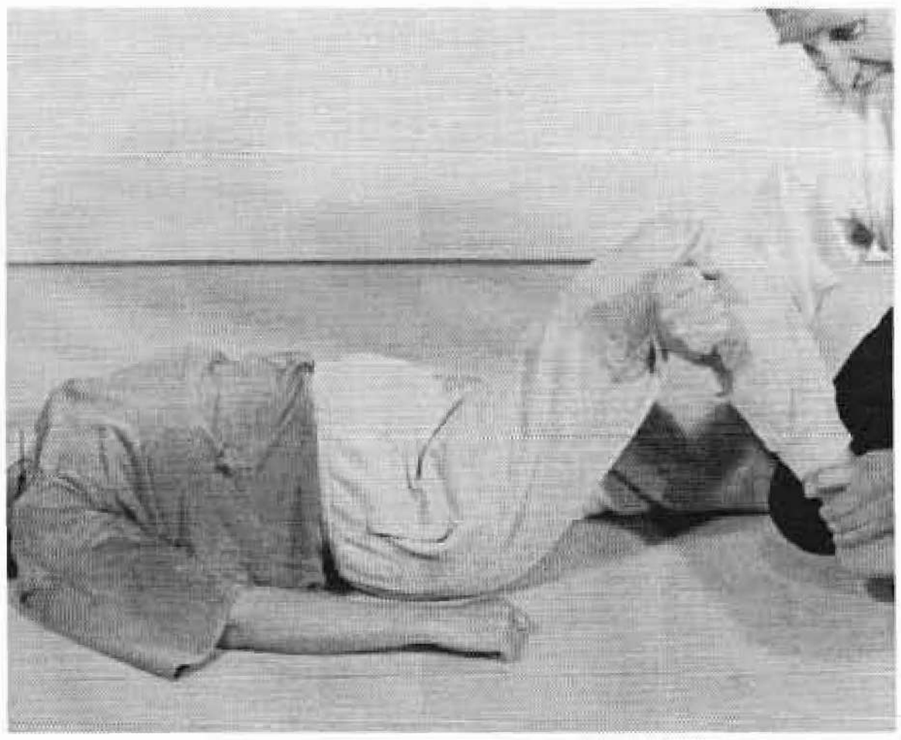


Figure 151

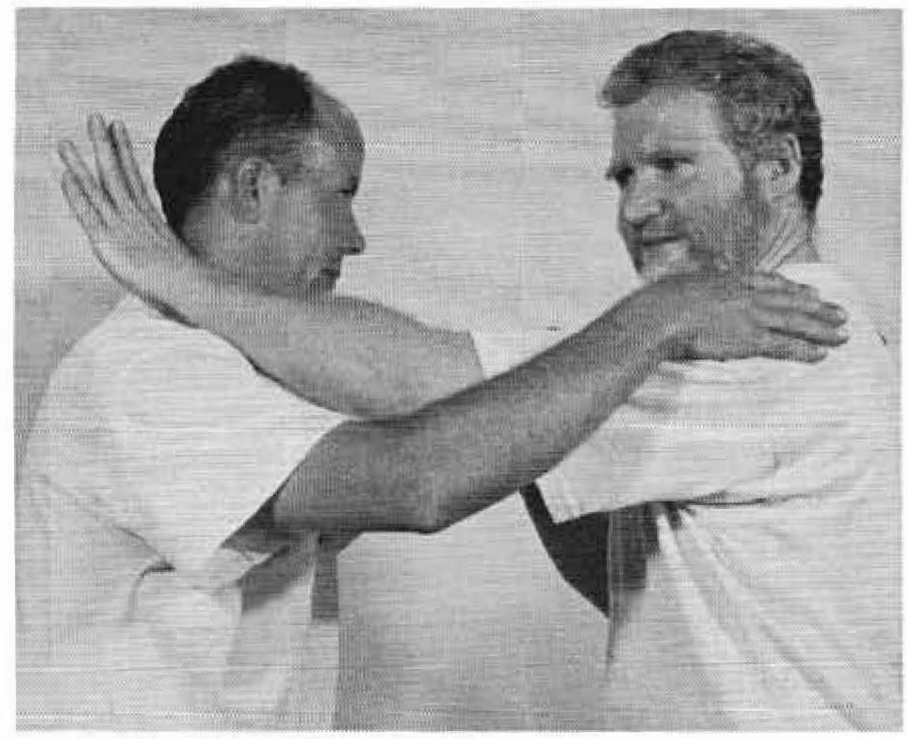


Figure 152

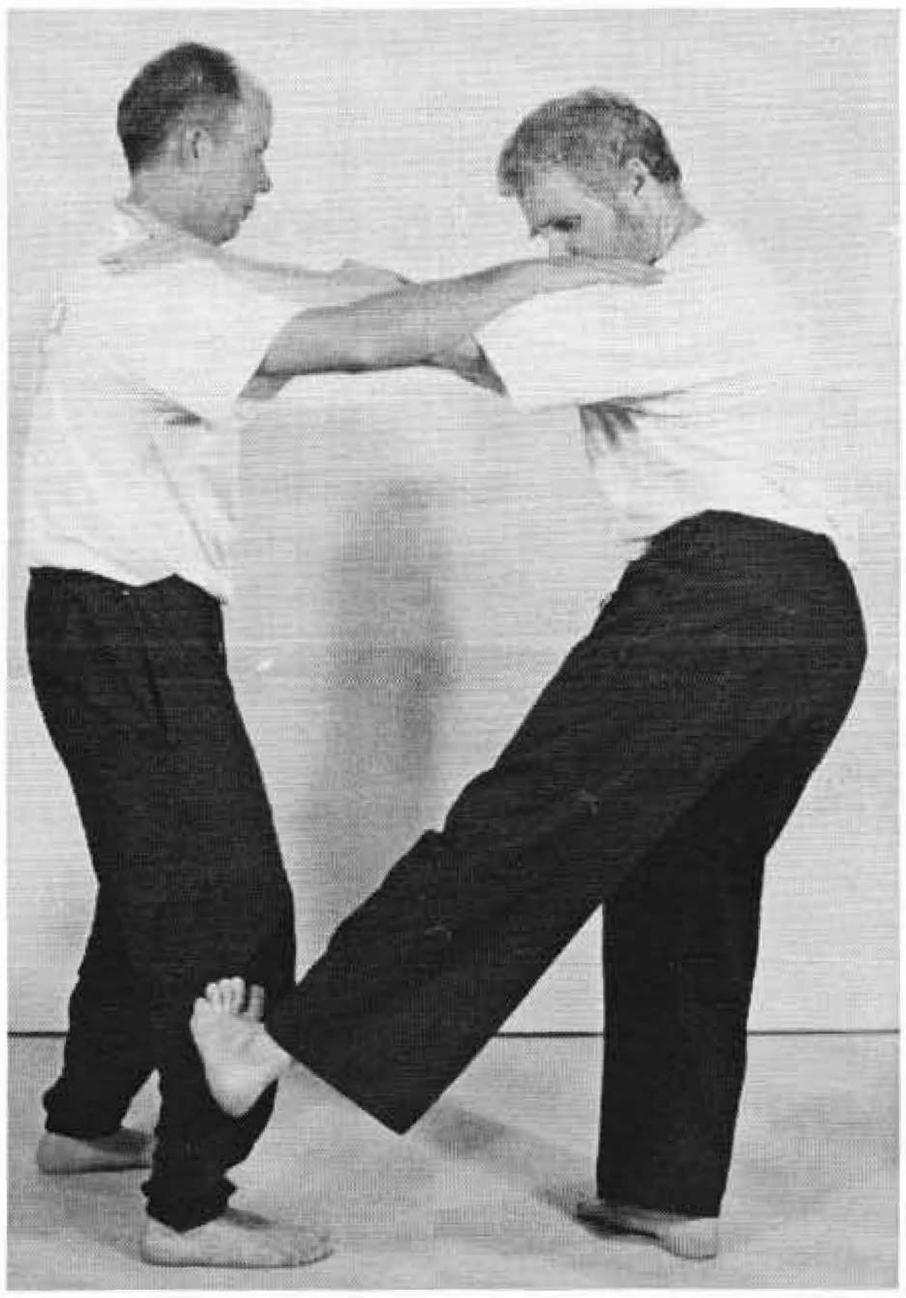


Figure 153

out what is wrong. This point can also be used as a neurological shutdown strike. (Neurological shutdown points are those that, when struck all by themselves, cause the whole nervous system to shut down, dropping the person.)

Set-up point:

A traditional set-up point for this strike is Bl 10 around the back of the neck, closer to the head.

Antidote:

With the patient lying down, pull gently on the leg at the foot. You can also place one arm under his knee and lever downward. (fig. 151).

Healing:

Innervated by the lateral sural cutaneous nerve and irrigated by the branches of the peroneal artery and vein.

Used for fullness in the chest and hypochondriac region, knee pain, muscular atrophy and weakness of the foot, pain in the lateral aspect of the leg, sciatica, and asthma.

Traditionally Gb 35 functions as a xie cleft point of the extra meridian yang wei mai.

Massage techniques might include a straight push, clockwise or counterclockwise rotation for xu or shi conditions, percussion over the point with the fingertips, or a shiatsu progression down from Gb 34 to Gb 39 (you can press with the heel of the hand down the same line). These types of procedures are best performed with the patient on his or her side or lying face down with the leg bent at the knee and the foot placed next to the opposite knee.

You can use this point with Gb 38 , Gb 31, Liv 2, Bl 60, Gb 40, Sp 6, Gb 41, Liv 3, and St 36 for numb feet caused by damp obstructing the flow of qi and blood (peripheral neuritis).

You can also use it with St 41, Gb 40, Kd 3, Bl 60, Kd 8, and Liv 4 for arthritis of the ankle.

Use with Cv 15, Si 3, Kd 1, Bl 15, St 36, Liv 3, Pc 5, Cv 13, Gb 2O, Gv 16, Gv 26, Gv 14, Gb 34, and Liv 5, for epileptic seizures.

For red or white leukorrhea, you can use Gb 35 with Cv 6, Cv 3, Bl 30, Sp 6, Sp 9, Cv 9, and Cv 4.

Applications:

In a grappling situation, you could strike to Bl 10 at the back of the neck (fig. 152). Next use a round-type kick to Gb 35 with either the instep or toe if wearing shoes (fig. 153).

GB 36 (GALLBLADDER POINT NO. 36)

Chinese name:

Waiqiu (outer mold/external region).

Location:

7 cun above the lateral malleolus on the anterior border of the fibula, or midway between Gb 34 and the lateral malleolus, in front of Gb 35 and level to it at the anterior border of the fibula.

Connections:

None.

Direction of strike:

Straight in from the side of the leg.

Damage:

This is also a xie cleft point, so it does much the same damage as Gb 35.

Set-up point:

Bladder 10 will set up Gb 36, as will neigwan.

Antidote:

If no great physical damage has occurred to the lower leg (as this point is closer to the shin), use Gb 20 as a universal revival point in the event of a KO.

Healing:

Innervated by the superficial peroneal nerve. Irrigated by the branches of the anterior tibial artery and vein.

Used for pain in the neck, chest, and hypochondriac regions; headache; hepatitis; and paralysis of the lower limbs.

Because Gb 36 is a xie cleft point of the gallbladder channel, it is traditionally used for acute injuries of the gallbladder and its channel.

Massage techniques would include straight push, clockwise and counterclockwise rotation for xu or shi conditions, percussion with fingertips over the point and/or in a progression from Gb 34 to Gb 39. You could also press along this same line with the heel of the hand (or rub) down the pathway of the Gb meridian.

For intercostal neuralgia, you might use Gb 36 with Bl 18, Liv 6, Liv 14, Gb 34, Th 6, Bl 19, Gb 24, *jiaji* points (extra points) from the fifth thoracic to the 10th thoracic vertebra, Bl 17, Sp 17, Gb 36, Liv 3, Bl 14, and Liv 13.

For headache, use it with Gb 20, Gb 14, *taiyang* (an extra point just back from Gb 1 around the temple area), Gv 20, Co 4, and St 36.

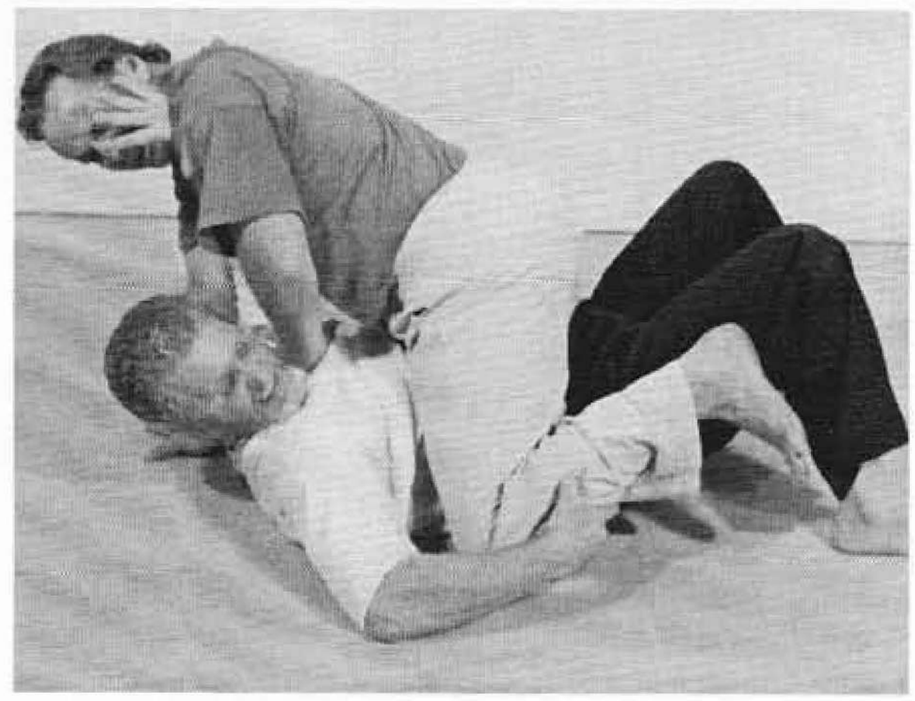


Figure 154

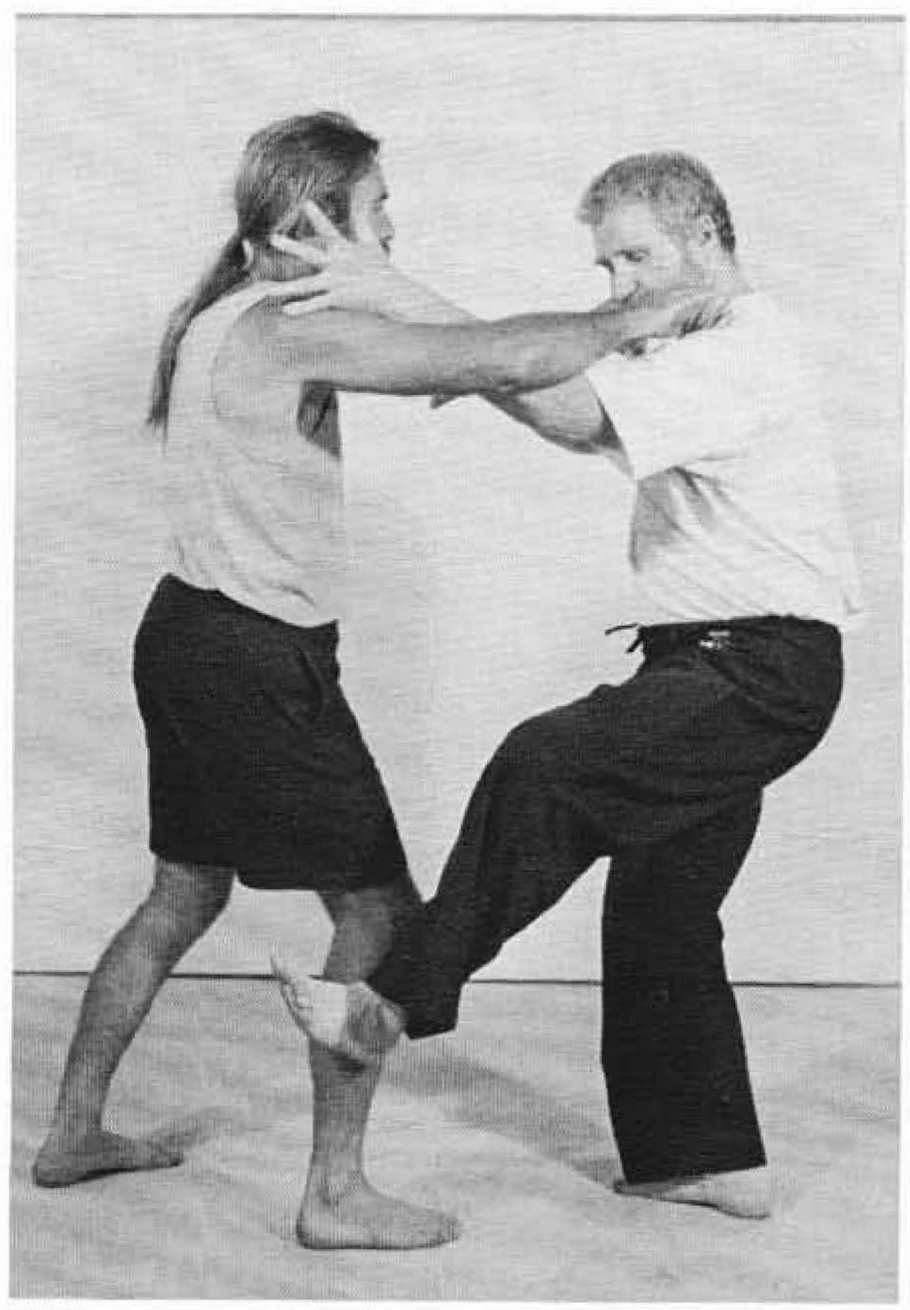


Figure 155

Applications:

1) Now that we are getting well down the leg, the applications become sparse. However, you can use Gb 36 in a grappling situation where the attacker has pinned you. Gb 36 is a good point to grab and push violently since it sends a shock right up the leg, usually causing the attacker to leap up. I used this point in my wrestling days, and it worked every time. (See fig. 154.)
2) Gb 36 can also be kicked. Should he attack with both hands, you should use both of your hands to defend and kick using the side of your shoe to Gb 36 (fig. 155).

GB 37 (GALLBLADDER POINT NO. 37)

Chinese name:

Guangming (bright light).

Location:

5 cun directly above the tip of the external malleus, at the anterior border of the fibula. Between the extensor digitorum longus pedis and peroneus brevis muscles.

Connections:

Transverse *luo* to Liv 3 and Liv 1. (A luo point or meridian is a connecting point or meridian.)

Direction of strike:

Straight in to the side of the lower shin.

Damage:

When struck very hard with a larger weapon such as the instep kick, this point will cause KO, as well as physical damage to the shin area. When the point is struck directly, it causes great local pain, as well as liver and gallbladder damage. This point is also pertinent to eye damage or healing, depending upon how it is used. Used in a martial way (usually a kick), it will cause severe eye damage slowly over several years. A quick, sharp strike using a small weapon will cause momentary blindness.

Set-up point:

You could use Liv 3 as a stomp, then rebound up with a heel kick to the point. You can also strike Liv 14 from the middle of his trunk to the outside.

Antidote:

Gb 20 for KO, or, for liver problems, treat Liv 3, either using needles or pressure.

Healing:

Innervated by the superficial peroneal nerve. Irrigated by the branches of the anterior tibial artery and vein.

The traditional function of this point is as a luo point of the gallbladder, so it might be used to balance the yin/yang aspects of an element (e.g., Gb with Liv in the element of wood). It also regulates the liver and clears the vision.

Used for pain in the knee, muscular atrophy, motor impairment and pain of the lower extremities, ophthalmoplegia, night blindness, distending pain of breast, atrophy of the optic nerve, cataract, migraine, and pain along the lateral aspect of the calf.

Traditional indications include the following: chills; fever without sweating; soreness of leg and knee; atrophy, blockage, and numbness of the leg; seizures; and pain and itching of the eye.

Massage might include straight push with clockwise or counterclockwise rotation for xu or shi conditions, and percussion with the fingertips. You can also press this point with the heel of hand, press with movement back and forth across the point, or press and slide the thumb up or down the meridian.

You could use Gb 37 with Gb 20, Liv 2, Liv 3, Liv 4, St 1, and an extra point called *qiuhou*, one-third of the distance from Gb 1 to St 1, for early stages of cataracts, blurred vision, and so on. I would use Bl 1 here as well.

Use with Co 4, St 36, St 1, and Bl 1 or with Gb 20, Bl 2, and Bl 1 for optic nerve atrophy and optic neuritis.

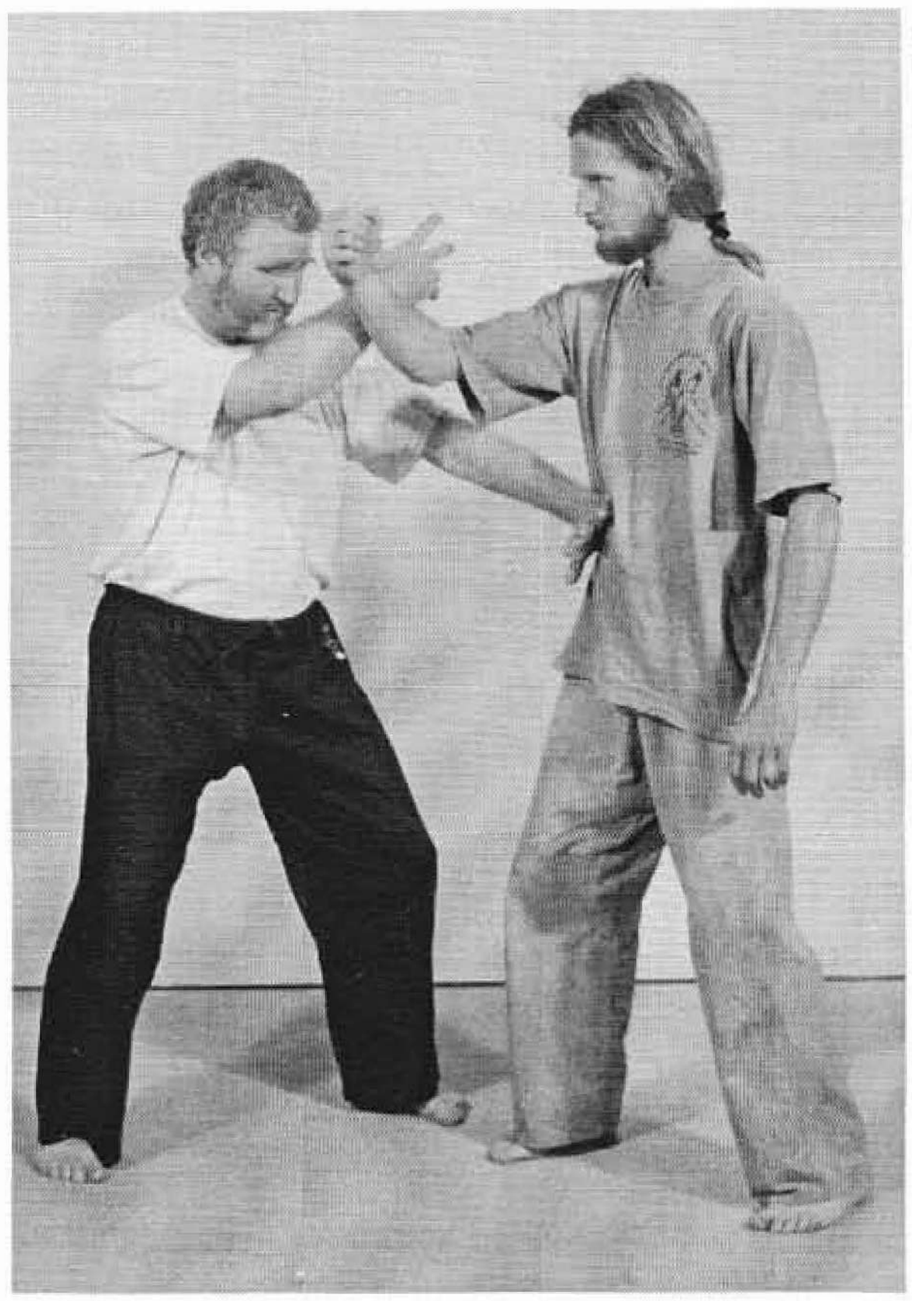


Figure 156

Figure 157

Applications:

WARNING: *Although Gb 37 may look like an ineffe*ctual *strike aside from leg damage, do not play around with it, because it could cause blindness! This point is an important eye point.*

He might attack with a straight right, so you use a p'eng/hinge method to attack and simultaneously block his attack. Your right p'eng attacks up the outside of his right arm, while your left hinge palm attacks to Liv 13 (fig. 156). Your right heel now stomps onto Liv 3. Then, using the rebound from that stomp, the right heel snaps around to hook kick to Gb 37 (fig. 157).

GB 38 (GALLBLADDER POINT NO. 38)

Chinese name:

Yangfu (yang's help) fire and jing point.

Location:

4 cun above and slightly anterior to the tip of the external malleolus (the outside ankle), on the anterior border of the fibula and the tendons of peroneus longus and brevis.

Connections:

None.

Direction of strike:

Struck down into the leg at an angle. This point doesn't have to be accurate since you kick it with the side of the foot downward into the ankle.

Damage:

KO, when struck in the correct direction, and leg damage—it can break the shin. Also, a good strike here can cause headaches for weeks.

Set-up point:

Gb 15 struck straight in.

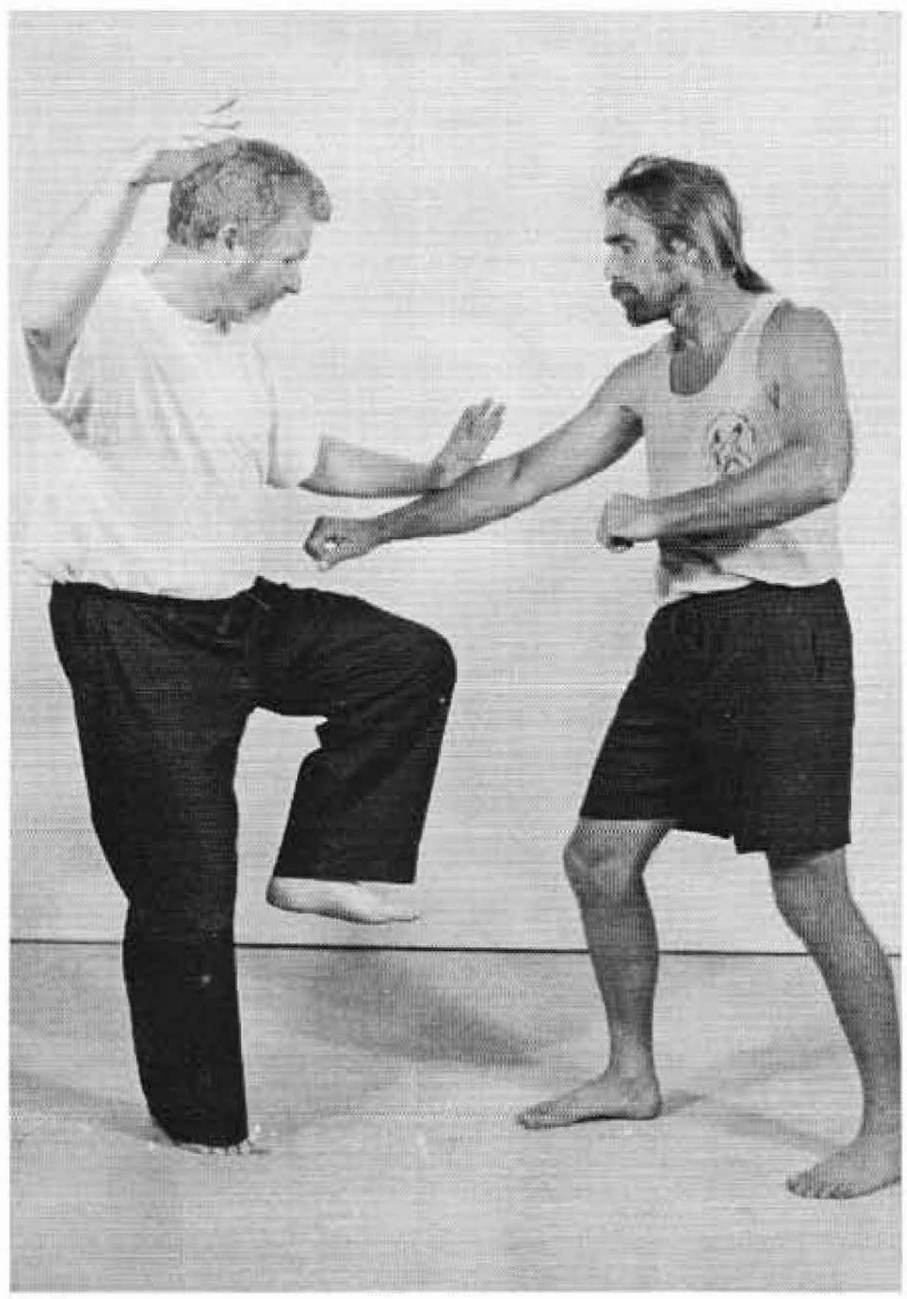


Figure 158

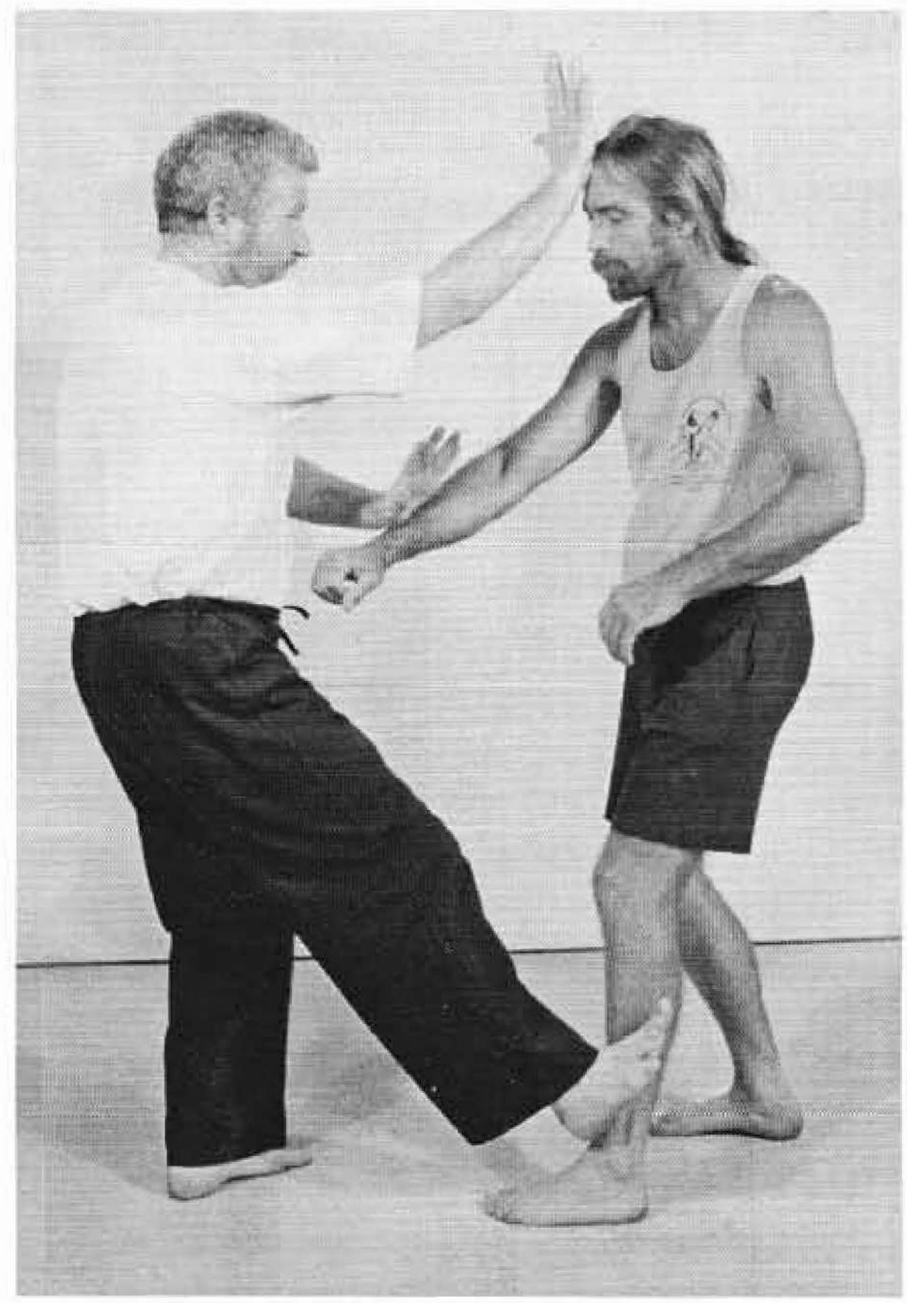


Figure 159

Antidote:

Gb 15, massaged upward gently. See a doctor if the leg is broken.

Healing:

Innervation and irrigation are the same as for Gb 37.

Used for one-sided headache; pain at the outer canthus supraclavicular fossa and axillary regions; scrofula; pain in the chest, hypochondriac region (either side of upper chest), or lateral aspects of the leg; malaria; arthritis of the knee; paralysis of lower limbs; migraine; and hemiplegia.

Traditional function is as a *jing* river (traversing) point, so it may be used to deviate pathogenic qi out of the channel. Since it is a fire point of the Gb meridian, it might be used to cool fire in the wood element with Liv 2.

Massage techniques are similar to those used with Gb 37.

Gb 38 could be used with Gb 20, Gb 1, Liv 3, Liv 2, Co 4, Gv 20, and Gb 14 for headache .

You might also use it with Gb 34, Gb 39, and Gb 41 points in the web of toes (a group of extra points called *shangbafeng*); Sp 4; Bl 65; Sp 5; and Liv 4 for arthritis of feet. For paralysis, it can be used with Co 11, Liv 4, Liv 5, Co 4, Th 3, St 36, and Bl 60.

For lower back pain, it can be used with Gb 21, Gb 30, St 33, St 36, Bl 53, Bl 54, Bl 57, Bl 60, Bl 58, Bl 40, Bl 23, Bl 65, Gv 2, and Gv 3.

Applications:

He attacks with a straight right. If you have your left foot forward, you leap into the air, bringing your left foot back as your right foot comes forward (movement from old Yang-style taijiquan, called "sleeves dancing like plumb blossoms"). As you do this, your left palm has slammed down onto his right forearm at Th 8 (fig. 158), causing him to lose energy and probably black out (or close to it). Your right palm now slams down onto Gb 15 just before the right side of your foot scrapes downward over Gb 38 (fig. 159).

GB 39 (GALLBLADDER POINT NO. 39)

Chinese name:

Xuanzhang or juegu (suspended bell).

Location:

3 cun above the tip of the lateral malleus, in the depression between the posterior border of the fibula and the tendons of peroneus longus and brevis. Just above the ankle on the outside of the leg. This is the last Gb point above the ankle.

Connections:

Connects to the three leg yang channels: the gallbladder, stomach, and bladder. Special meeting point of bone marrow.

Direction of strike:

Straight in and down into the ankle.

Damage:

This is an interesting point all by itself. It causes great damage to the brain. At a lesser level, it can make the recipient feel totally disorientated, and at a larger level, it will cause both immediate and delayed mental problems. A strike here will drain energy from the whole leg area immediately, and a few minutes later the whole body will be drained, resulting in KO or death. Do not play around with this point!

Set-up point:

Any Gb point will set up this point, so you could use points on the head, face, back of the neck, torso, and legs. Always strike the set-up point in an "adverse" qi direction (i.e., in a direction that will drain qi and not add it).

Antidote:

Massage the whole back area on both sides of the backbone and down the back of the legs. Then turn the patient over and massage down the front of the legs. See a Chinese doctor for damage to the brain.

Healing:

Innervation and irrigation are the same as for Gb 37.

Used for hemiplegia; neck rigidity; fullness of the chest; distension of the abdomen; pain in the hypochondriac region, knee, and leg; leg qi; migraine; scrofula; sciatica; and ankle pain with damage to surrounding tissue.

Traditional indications include nosebleed, throat blockage, cough, fullness in the chest and abdomen, stiff neck, hemiplegia due to stroke, leg qi, and broken bones.

Traditional functions are to dispel wind and damp, tonify bone marrow, and treat *wei* and *bi* syndromes (Chinese terms for conditions similar to arthritis, although wei syndrome is more like paralysis). It also functions as a meeting point of the marrow and an intersecting point of the three leg yang channels.

Massage techniques include straight press, clockwise or counterclockwise rotation for xu or shi, movement back and forth across the point, clasping of the leg between the thumb and forefinger and squeezing, and using as part of a shiatsu progression down the Gb meridian.

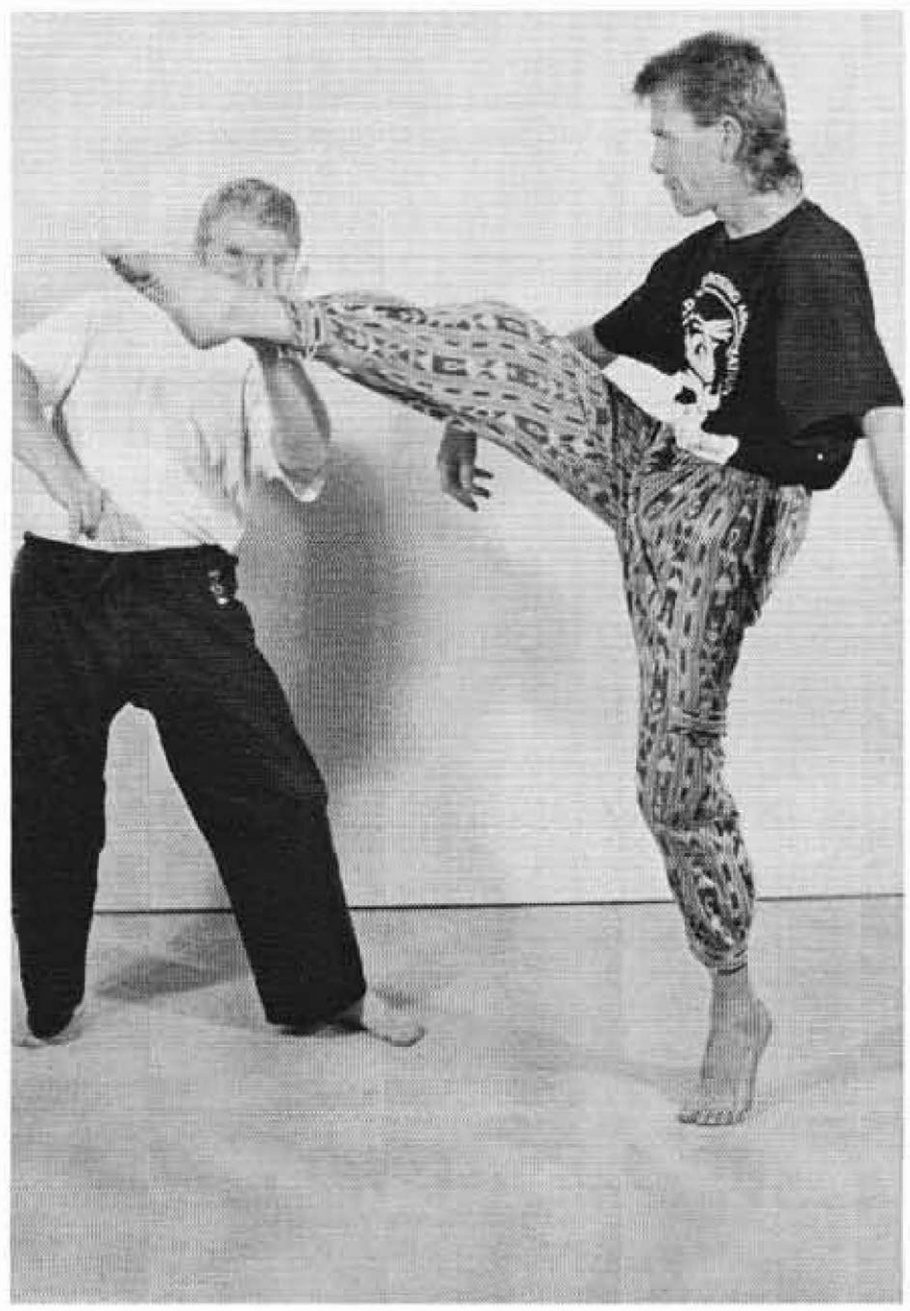


Figure 160

For acute leukemia, use this point with Bl 18, Bl 23, Bl 1, and Liv 3.

Hold Gb 34, Gb 39, and Gb 30 for paralysis of the foot.

For migraine, use it with Gb 20, Gb 15 , Gb 34, Co 4, Gv 20, *taiyang,* Gb 43, and Gb 41.

Use with Gb 11, Th 5, St 36, Th 6, Liv 13, Liv 4, Gb 34, Liv 2, Liv 6, Liv 14, Liv 3, Gb 40, Kd l, Gb 41, Gb 25, and Gb 26 for pain in the sides. related to hepatitis.

Use with Bl 11, Gb 39, Bl 23, and Kd 3, for bone fractures; adding Gv 20, Sp 3, Bl 20, and Gb 34 might treat easy displacement of vertebra, etc.

For hemiplegia with difficulty speaking, you might try Gv 20, Gb 21, Gb 31, St 6, Gb 39, and Co 11. You could also use Co 4, Co 10, Co 11, Gb 21, Gb 30, Sp 10, Gb 34, Sp 9, Liv 4, and Bl 60, with this point for hemiplegia.

Applications:

He attempts a crescent kick. You should simply strike with your left palm to Gb 39 in a downward direction (fig. 160).

GB 40 (GALLBLADDER POINT NO. 40)

Chinese name:

Qiuxu (mound of ruins or grave mold or region of the eminence).

Location:

Anterior and inferior to the lateral malleolus, in the depression on the lateral side of the tendon of extensor digitorum longus. At the origin of extensor digitorum brevis pedis. Side of the foot, forward of the ankle bone.

Connections:

Takes transverse luo from Liv 5.

Direction of strike:

Usually a stomp straight down onto the top of the foot to the side, although you can use finger pressure in a grappling situation.

Damage:

When struck really hard, this point can paralyze the whole body or just the leg being struck. It can also cause heart failure and knockout. WARNING: *Do not play around with this point just to show off; you could do irreparable damage to the energy system of the gallbladder and liver, causing disease in later life.*

Set-up point:

Combine this point with Lu 11 (tip of the thumb), and you make for a really good paralyzing strike. However, it is not easy to get at Lu 11 since it is on the tip of the thumb. So we can also use Lu 8 at the wrist, as in a wrist grab and jerk. This will drain energy from the system so that the major strike will have a far greater effect.

Antidote:

Liv 3 pressed straight in, or Gb 38 pressed straight in. (Of course, if the foot has been broken, see a doctor.)

Healing:

Innervated by the branches of the intermediate dorsal cutaneous nerve and superficial peroneal nerve. Irrigated by a branch of the lateral anterior malleolar artery.

Indications include pain in the neck/chest/hypochondriac region, swelling of the axillary region, vomiting, acid regurgitation, muscular atrophy, motor impairment, weakness and pain in the lower extremities, pain and swelling of the ankle, malaria, cholecystitis, and sciatica.

Traditional indications include rib pain, soreness of the leg from twisted muscles/tendons, or ligaments, tidal fever, distension of the lower abdomen, and colic.

Traditional functions are to promote the functions of the liver/gallbladder channels (Gb 41 is better for internal organs); invigorate the jing luo; ease the joints; treat the aftereffects of wind stroke, infantile paralysis, and wei syndrome; spread liver qi; and benefit the gallbladder. It is a *yuan* source

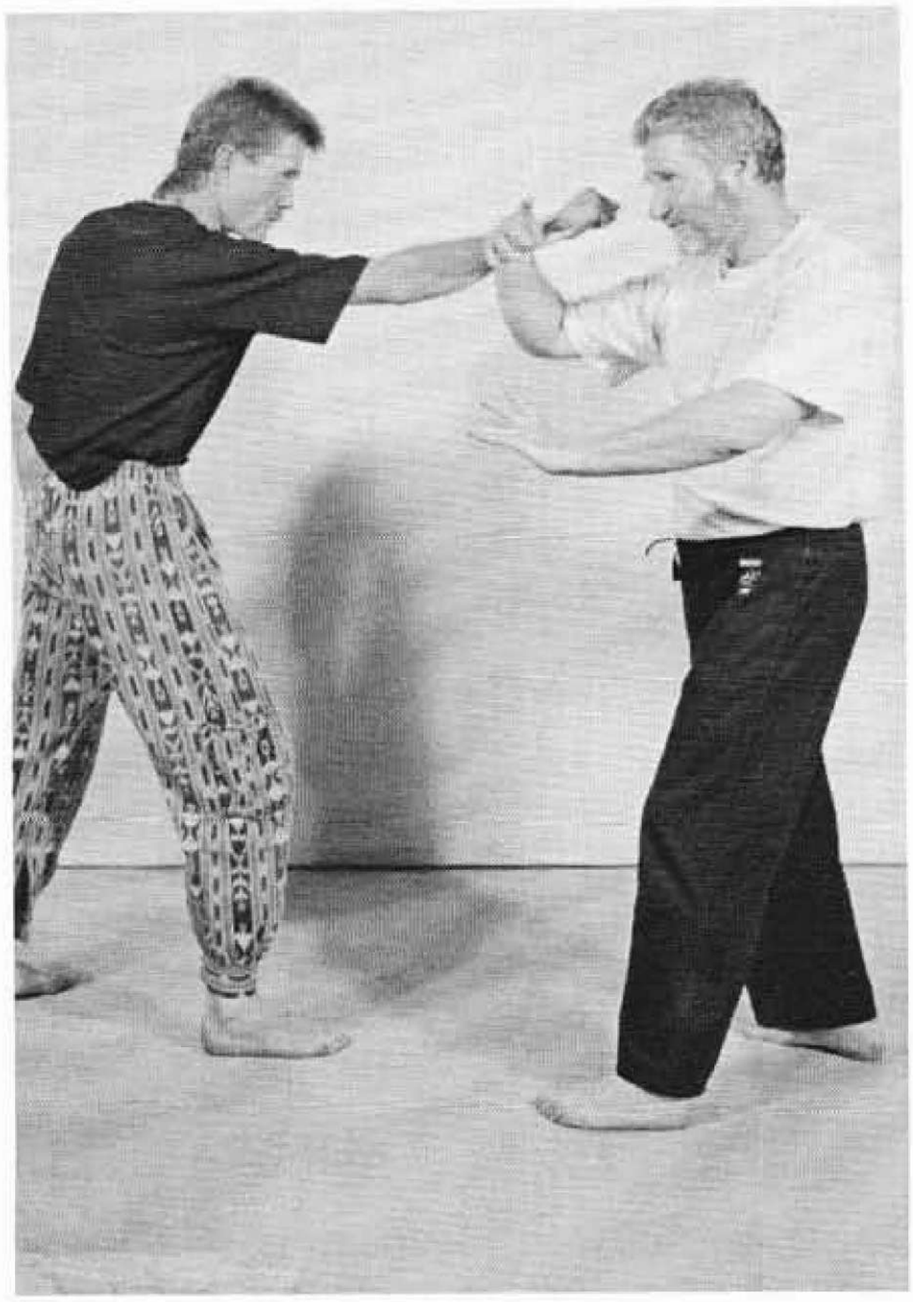


Figure 161

Figure 162

point (yuan qi is ancestral energy, so a yuan point draws upon ancestral qi), so it can tap the original qi of the organ.

Massage techniques include pressing, rotating clockwise or counterclockwise for xu or shi conditions, and percussion kneading of the point and surrounding tissue.

Applications:

He attacks with a straight right. You should use a p'eng blocking type movement (fig. 161). As your left palm controls his right elbow, your right hand immediately grabs his right thumb, twisting and bending it (fig. 162). Your right heel now stomps down onto Gb 40. The fight is over.

GB 41 (GALLBLADDER POINT NO. 41)

Chinese name:

Zulinqi or foot linqi (near tears on the foot or lying down to weep).

Location:

In the depression distal to the junction of the fourth and fifth metatarsal bones, on the lateral side of the tendon of extensor digiti minimi of the foot. About 2 inches back in a straight line from the little toe.

Connections:

None.

Direction of strike:

Straight down onto the foot.

Damage:

This point is a master point for the extra meridian called *dai mai*, or the girdle meridian that runs around the waist. So a strike to Gb 41 will have an effect on that meridian. One of the dai mai's functions is to control the communication between upper and lower, so a strike to Gb 41 not only

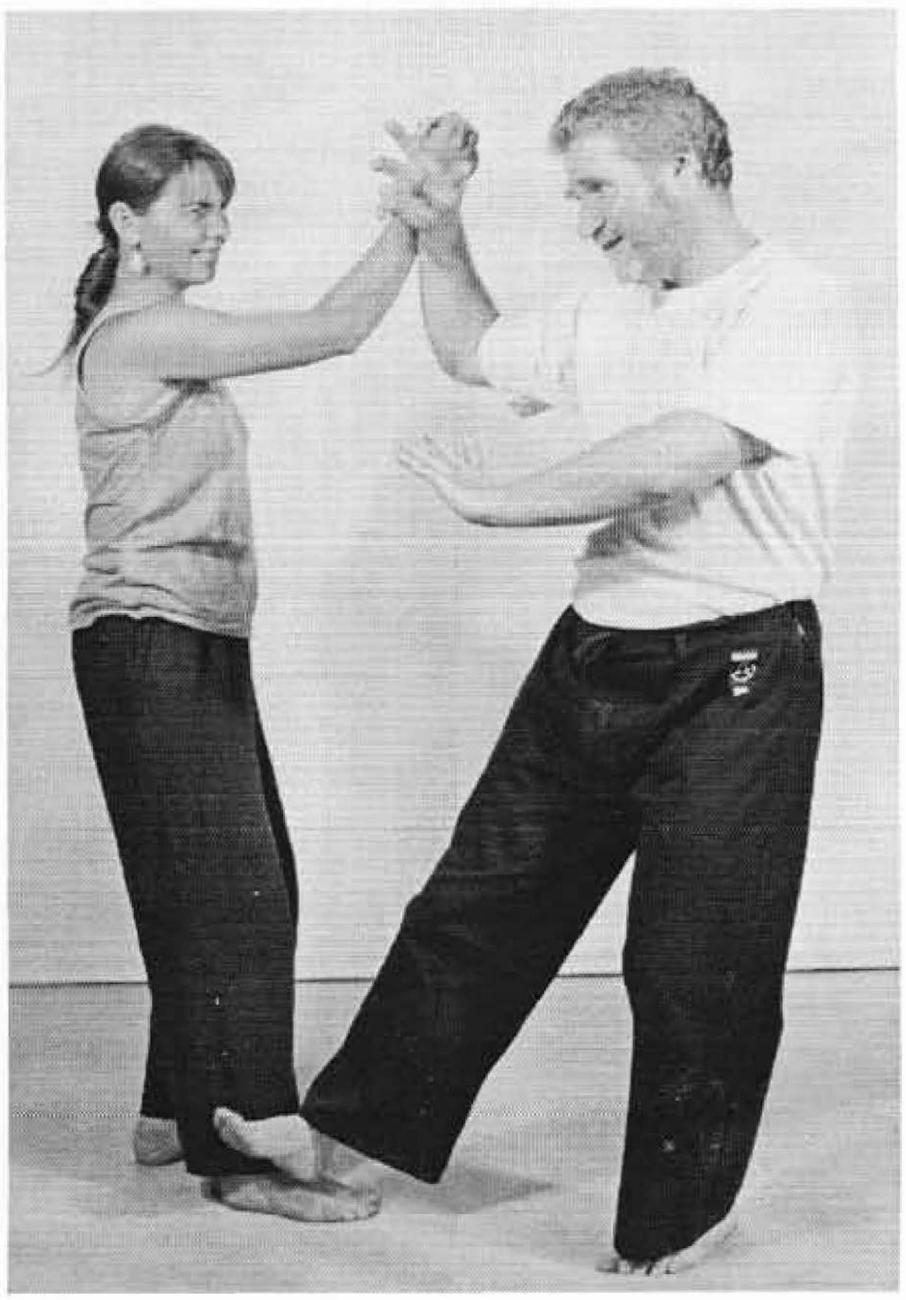


Figure 163

Figure 164

produces great local pain or a KO, it also cuts off communication between the torso and legs, resulting in great uncoordination. For these reasons, you could use this point as a set-up strike to a more deadly blow.

Set-up point:

Ht 1, struck straight up and into the axilla. Also, Sp 17, struck in from the outside of the body.

Antidote:

Liv 3 if there is not too much physical damage to the foot. Sp 21 if there is electrical damage (i.e., the coordination is shot). Press straight in on Sp 21 and/or Liv 3.

Healing:

Innervation is by the branch of the intermediate dorsal cutaneous nerve of the foot. Irrigation is by the ateriovenous network in the dorsum of the foot and the fourth dorsal metatarsal artery and vein.

Used for pain in the outer canthus, blurring of vision, pain in the costal and hypochondriac regions, pain and swelling of the dorsum of foot, distending pain in the breast, malaria, headache, vertigo, conjunctivitis, scrofula, irregular menstruation, breast abscess, and dampness and swelling of foot.

Traditional functions of this point are to promote the free and unrestrained function of liver qi, dispel damp/heat, treat the hypochondrium (hypochondriac region), regulate the dai mai, and spread and drain the liver/gallbladder. It is a wood point and *shu* stream point (transporting point) of the gallbladder meridian, a meeting point of the gallbladder and dai mai, and a master point of the dai mai.

Massage techniques include pressing and rotating clockwise or counterclockwise for xu or shi conditions

Use with Lu 1, Cv 22, Cv 17, Liv 14, Gb 24, kidney points on the chest, Bl 60, Sp 9, Ht 1, Lu 7, Lu 9, and Liv 3 for wheezing. For headache and migraine, use with Gb 2O, Gb 15, Gb 21, Co 4, St 36, Gb 34, Gb 14, yintang, taiyang, and Gv 20.

For blurring of the vision, use with Bl 1, *yuyao* (an extra point), Gb 1, St 1, and Liv 14.

For sciatic pain, use with Bl 23, Bl 30, Gb 29, Gb 30, Bl 25, Bl 26, Bl 54, Gb 34, Bl 57, Bl 31, Bl 32, Gb 39, and jiaji points from L 2 to L 5/S 1 (extra points associated with the lumbar vertebra and the sacral vertebra).

For breast pain and distension, use with Liv 14, St 15, Cv 17, Sp 18, Si 1, Pc 6, Th 10, Bl 54, Bl 17, Bl 18, Bl 19, and Gb 21.

Applications:

If you are going to use Gb 41 as a set-up point, you might take his right (or left) straight with your right p'eng-type block and then stomp onto Gb 41 (fig. 163). Follow this with a strike to Gb 3 with the right palm (fig. 164).

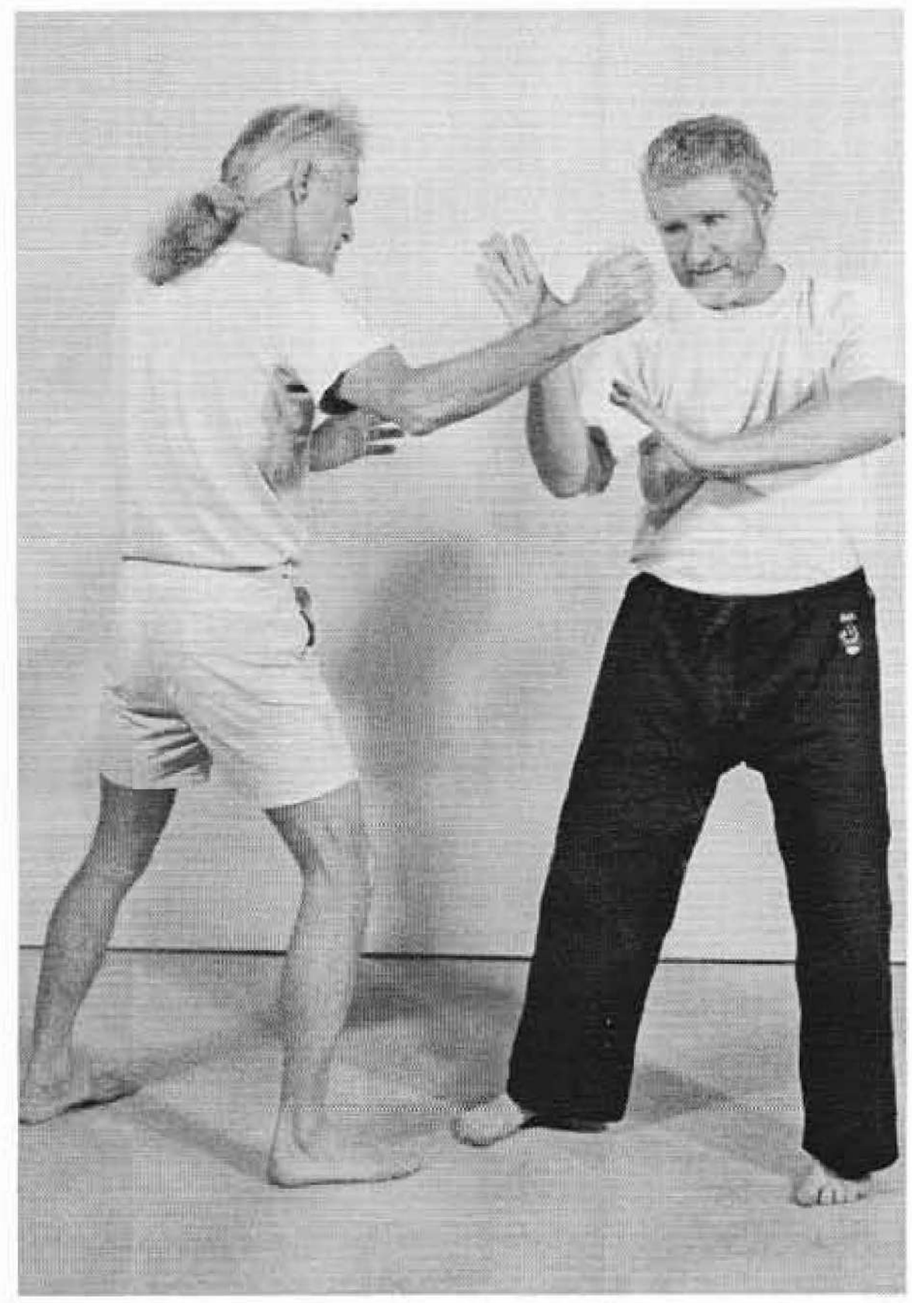


Figure 165

GB 42 (GALLBLADDER POINT NO. 42)

Chinese name:

Diwuhui (five terrestrial reunions, earth's fifth meeting).

Location:

On the foot, 0.5 cun anterior to Gb 41, in the space between the 4th and 5th metatarsals.

Connections:

None.

Direction of strike:

Straight down onto the foot.

Damage:

This point is much the same as for Gb 41, except that it can cause disorientation when struck exactly on the point using perhaps the heel.

Set-up point:

This one has an interesting set-up point in Sp 17. There seems to be a connection Gb 42 and Sp 17 because a far greater result is obtained from striking Sp 17 first. Sp 17 must always be struck from the outside of the body to the inside.

Antidote:

For local pain, rub the top of the foot down the foot to the toes gently. For qi damage or KO, press in and upward at Gb 20.

Healing:

Innervation and irrigation same as for Gb 41.

Used for red, painful eyes; swelling of the axillary region; redness and swelling of the dorsum of the foot; distending pain of the breast; tinnitus; and lower back pain.

Massage techniques include pressing and rotating clockwise or counterclockwise for xu or shi conditions.

Use with St 34, Si 1, St 15, Liv 14, and Sp 18 for swelling of the breast.

For red eyes, use with Gv 24, Gv 23, Gv 22, Gv 21, Gv 20, Gb 37, Gb 1, and Liv 2. Adding Gb 20, taiyang, Co 4, Bl 1, and Gb 8 could also help conjunctivitis.

Can be used as a root or distal point with Th 21, the branch point (locally) to treat tinnitus. (Root points can be used to stimulate qi flow through the whole channel rather than just in a local area.)

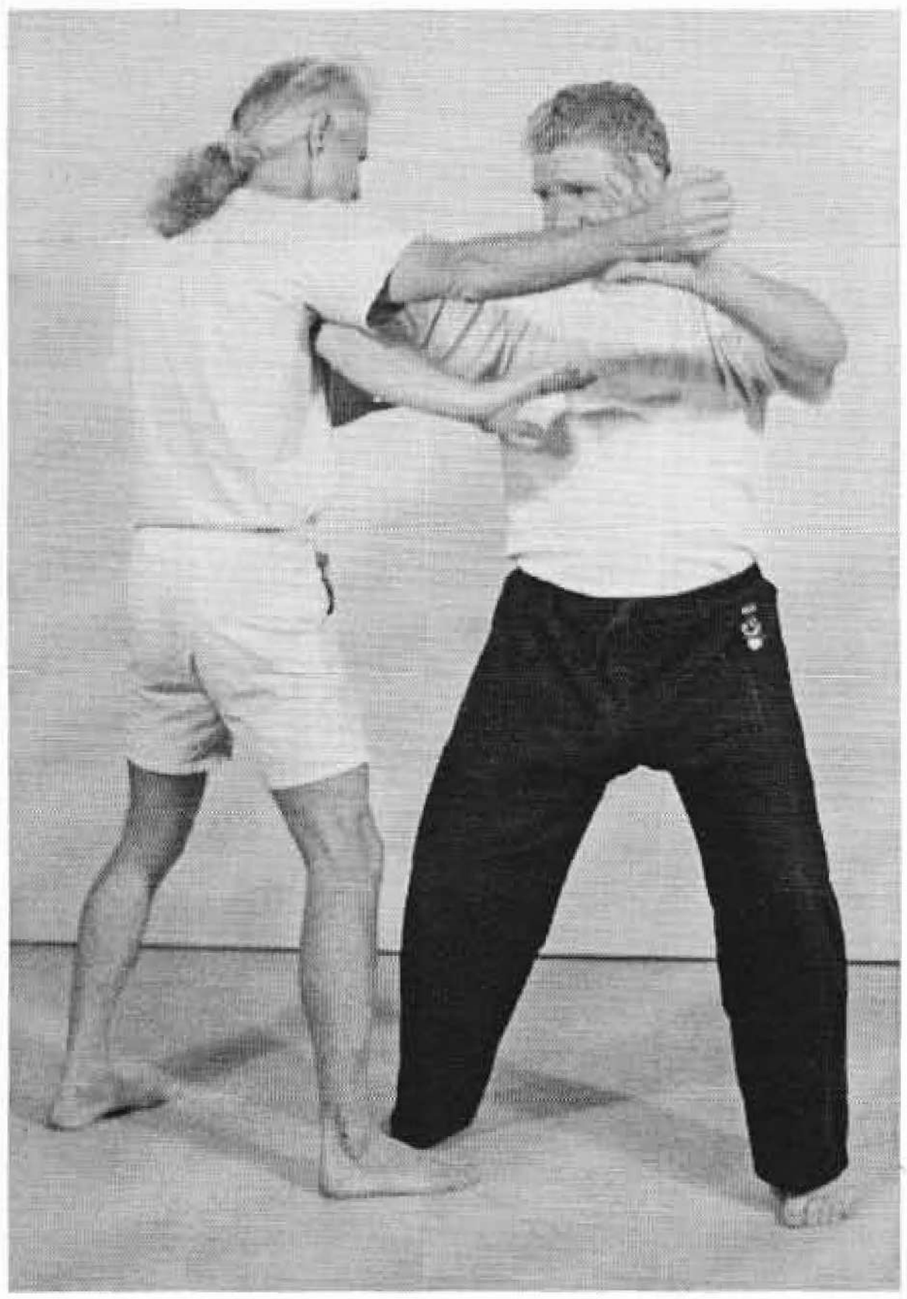


Figure 166

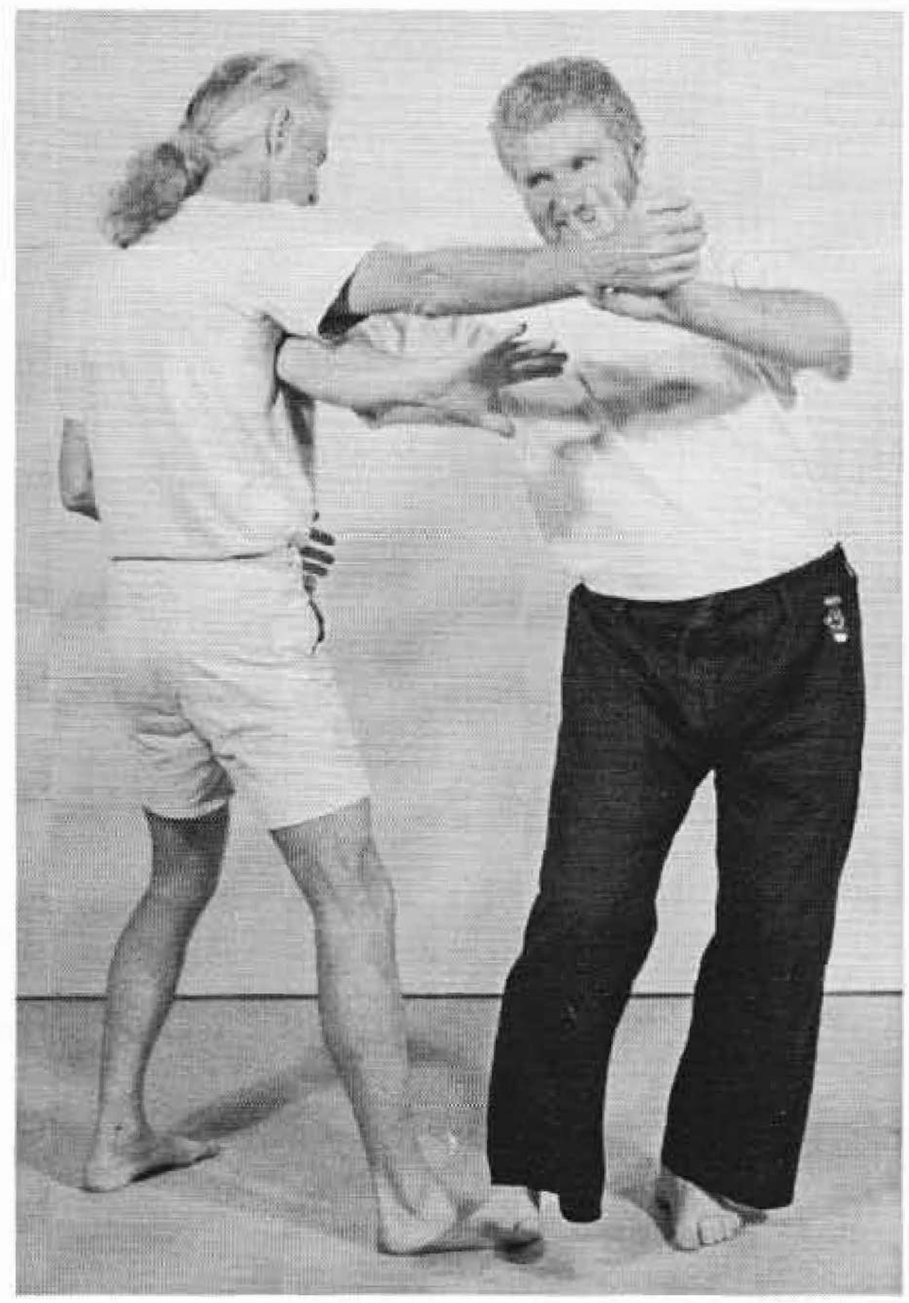


Figure 167

Applications:

Strike his right neigwan with your right palm (fig. 165). Bring your right elbow back into Sp 17 (fig. 166). After this, he will not wish to carry on with the confrontation since he will have to sit down—if he is not knocked out or dead. Now stomp down onto Gb 42 with your heel (fig. 167).

GB 43 (GALLBLADDER POINT NO. 43)

Chinese name:

Xiaxi (harmonious river).

Location:

0.5 cun behind the margin of the web of the fourth and fifth toes. On the crevice between the fourth and fifth toes.

Connections:

None.

Direction of strike:

Stomp down between the fourth and fifth toes.

Damage:

This is a water and *yong* point (stream or spring point), so it can be used to affect many other points. It produces great heating in the head, as if sunstroke has occurred, causing the person to faint. There is local pain as well.

Set-up point:

Because this point causes much the same reaction that an upward strike to Gb 14 has, Gb 14 is also the set-up point, struck upward. Other points that work very well with this point are Liv 13, near the tip of the 11th rib, and Lu 8.

Antidote:

Place pressure on Gb 21, then violently brush outward over the shoulders.

Figure 168

Figure 169

Healing:

Innervation is by the dorsal digital nerve. Irrigation is by the dorsal digital artery and vein.

Used for pain in the outer canthus; blurring of vision; tinnitus; pain in the cheek, submandibular region, and costal and hypochondriac region; febrile disease; migraine; hypertension; and intercostal neuralgia.

Traditional function is as a *ying spring* (gushing) point, so this point is used to increase qi or reduce qi flow in the Gb channel and help drain stagnant qi and blood from a trauma, such as a strike. It is normally used as a distal point for this purpose. Being a water point for the Gb meridian, it can cool heat and reduce or reinforce qi, depending how it is dealt with. It is also a root point for Gb 2 and Si 19 points.

For massage, press and hold the point, or you can do clockwise or counterclockwise rotations for xu or shi conditions.

Use with Gb 26, Liv 4, St 25, St 26, St 27, St 28, St 29, Cv 4, Cv 5, Cv 6, Cv 7, Kd 16, and Kd 27 for pain and or tightness of lower abdomen and menstrual problems.

To help relieve symptoms of the mumps, you might use it with Co 4, St 6, Co 2, Th 17, Th 5, Lu 7, Co 10, St 44, jaiji points from T1 to T4, Gb 20, Co 11, Gb 12, and Cv 14.

For migraine, use it with Gv 23, Gv 21, Si 5, Co 40, Th 1, Gv 20, Gb 20, Bl 60, and taiyang.

For breast abscess, use it with St 16, Gb 41, Kd 23, St 36, St 39, Co 8, Si 1, Lu 10, and Liv 14.

Use with Bl 1, Gb 1, St 1, and Liv 3 for blurred vision, and with Gb 2, Si 19, Th 21, and Th 2, for tinnitus.

Applications:

He might attack with both hands low. You should use both of your knife hands to strike downward onto Lu 8 points on the thumb side of the wrist. (This is a method from bagwazhang called "rooster fighting.") A split second later, you strike to Gb 43 with the ball of your foot or your heel (fig. 168).

Now, step forward as he moves back from the strike, and strike with both palms into Liv 13, using the fingers (fig. 169). This series of strikes is very dangerous because you have struck what is known as a "triangle of point," which means death and is irreparable.

GB 44 (GALLBLADDER POINT NO. 44)

Chinese name:

Foot qiaoyin (yin cavity).

Location:

Lateral side of the tip of the fourth toe, 0.1 cun proximal to the corner of the nail.

Connections:

Transverse luo to Liv 5.

Direction of strike:

Stomp on the toe.

Damage:

This is a metal and cheng point (cheng means to complete, or an extremity point; other names are jing point or well point). It has a great effect upon the muscles and tendons, and, therefore, a strike here causes great physical damage to these areas. It is a good strike for setting up a tendon or muscle strike. It causes great local pain, as well as delayed pain in the leg. It also causes extreme nausea through its action upon the liver. Gb 44 can cause KO if struck hard enough.

Set-up point:

Liv 3 is a good set-up point for Gb 44 since it enhances the effect that this strike has upon the liver, although you would have to strike (stomp) on the foot twice in order activate the set-up point. You could also use the utility set up of neigwan.

Antidote:

Rub the insides of both forearms upward from wrist to elbow.

Healing:

Innervation is by the dorsal digital nerve, and irrigation is by the arterial and venous network formed by the dorsal digital artery and vein and the plantar digital artery and vein.

Used for one-sided headache, ophthalmoplegia, deafness, pain in the hypochondriac region, dream-disturbed sleep, febrile disease, hypertension, conjunctivitis, intercostal neuralgia, asthma, and pleurisy.

Traditional functions are as a metal point of the Gb meridian and a jing well point of the Gb meridian, so it is used a lot to reduce stagnation of qi, blood, and heat. This and other jing well points are used to treat superficial problems such as trauma. Jing well points belong to the muscle meridians that flow in the superficial regions of the body; hence their effectiveness in treating the surface and superficial problems (e.g., skin problems, bruises). This point is the root (origin) of the Gb meridian.

To massage, press and hold. Another good method is to use the knuckle of the thumb on the point while clasping the bottom of the toe with the forefinger and squeezing.

Use with Gb 2, Gb 20, Th 17, Si 19, and Th 21 for tinnitus; you might add Kd 3, Bl 23, and Gb 25 to treat deafness.

For painful elbow or inability to extend the forearm, use it with St 42, Co 11, Th 15, Co 10, Co 4, Gb 21, and Gv 14.

For trauma along the pathway of the Gb meridian, you can prick this point and extract a drop of blood, or at least press and hold it till it is quite painful.

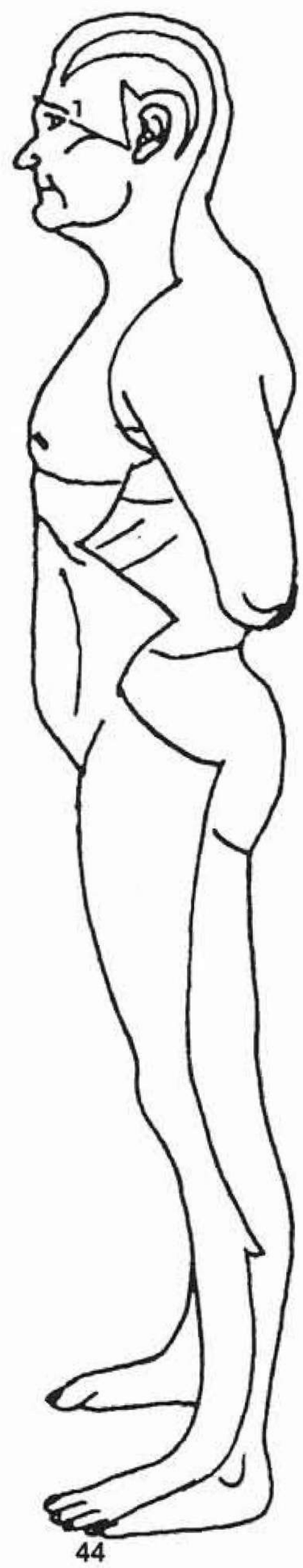
Combine with Ht 7 and Gb 21 for dream-disturbed sleep.

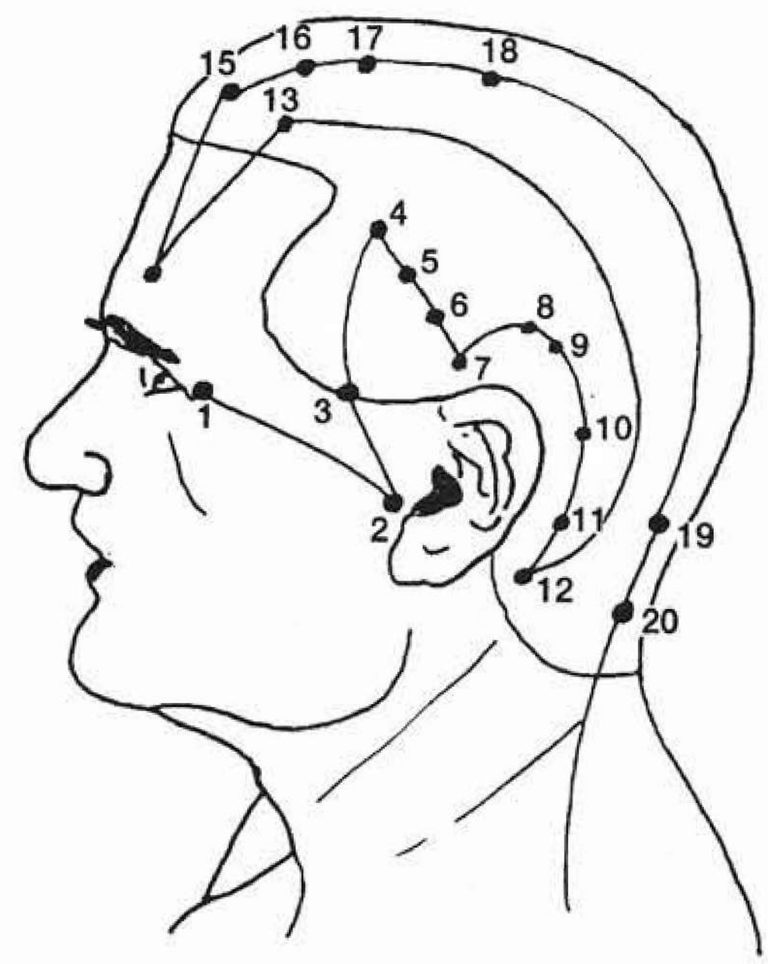
Applications:

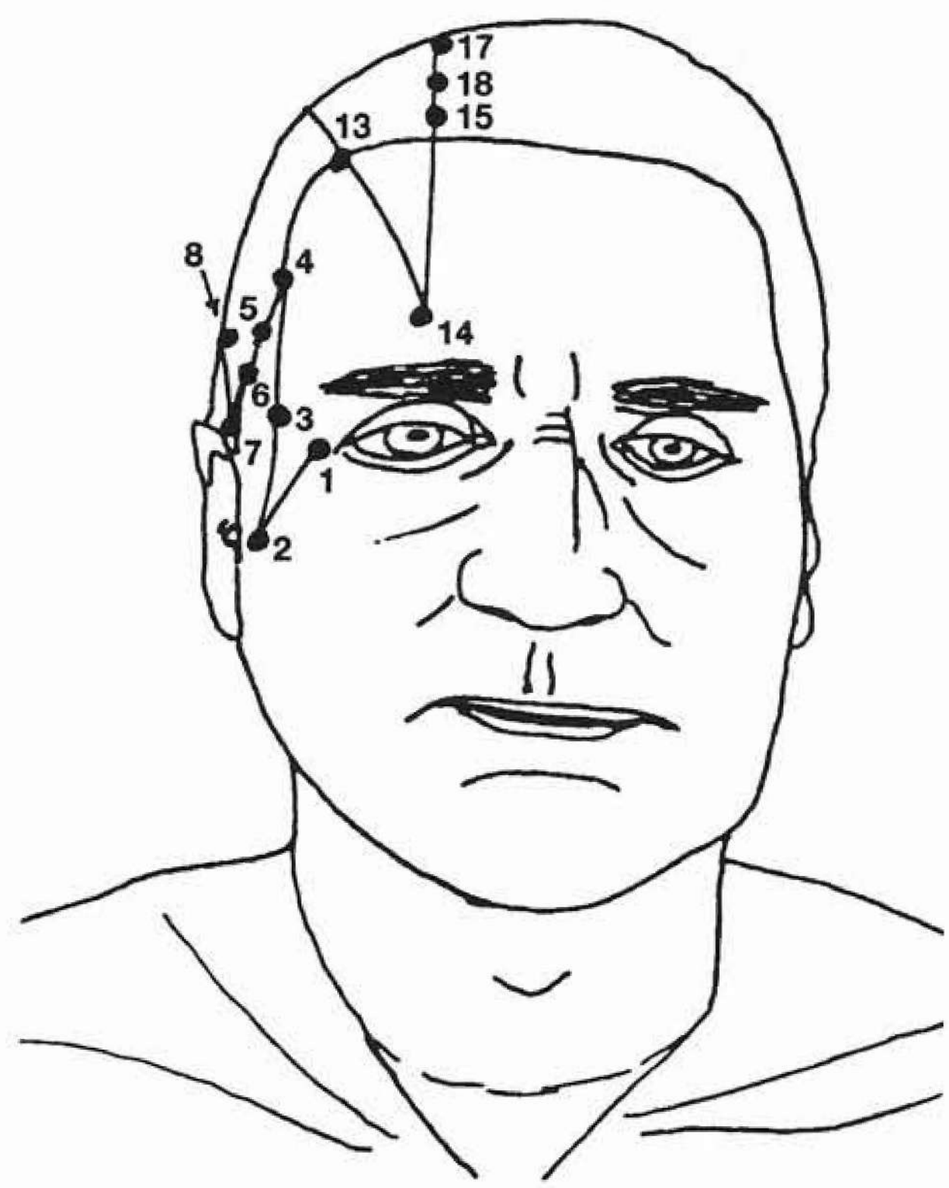
You could simply stomp onto the Gb 44 point from a grappling situation. Several stomps, in fact, would cause the attacker to become quite nauseated.

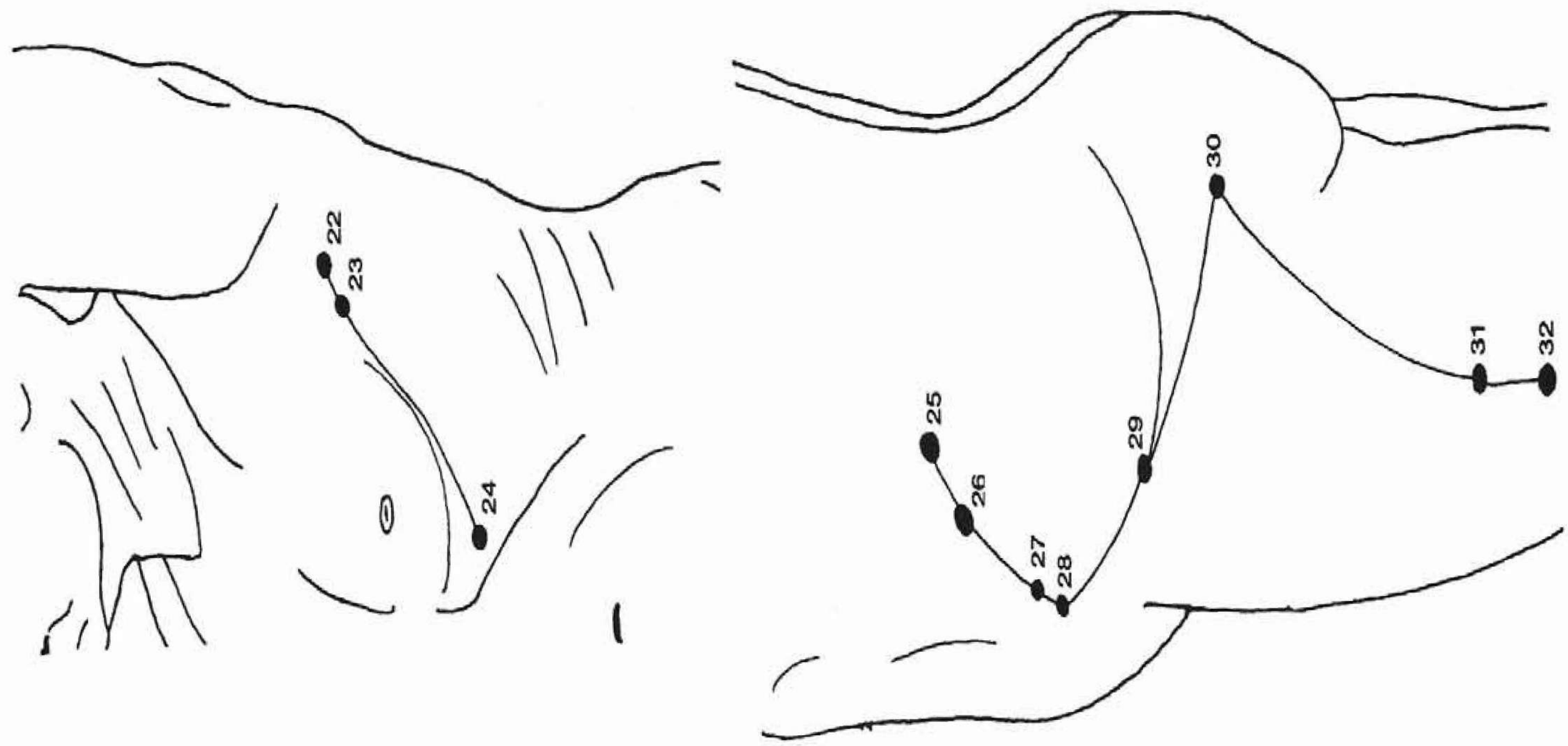
We have come to the end of the gallbladder meridian. Remember, any gallbladder point will always cause knockout from the action of the carotid sinus upon the heart. When these points are worked with

the set-up points, you will probably never need any other points. It is my advice, however, to choose only two or three of the gallbladder points, as with all of the meridians, and work with them until they become almost reflex strikes. It is not enough just to know the points and what they do; you must be able to fight, first of all.





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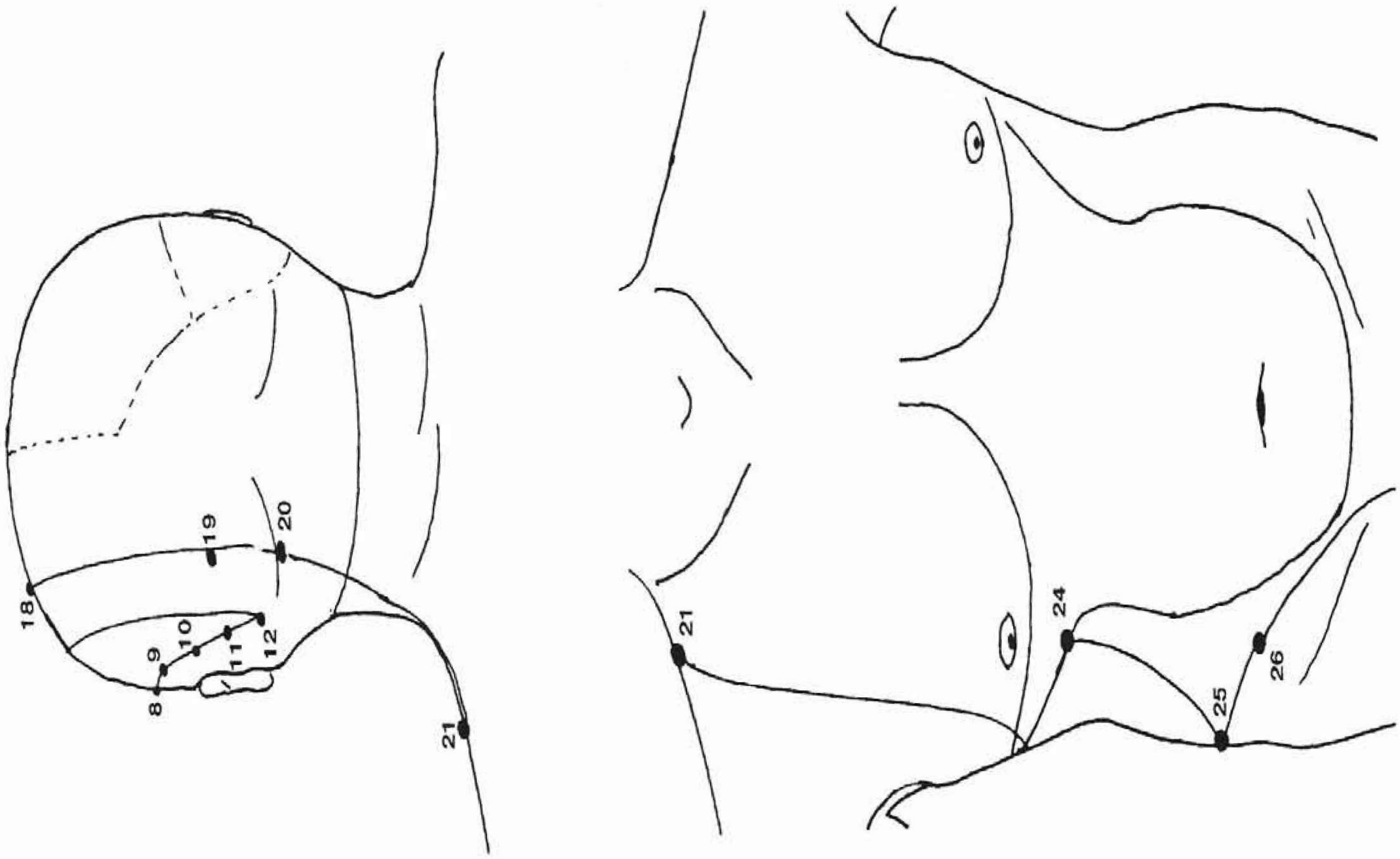
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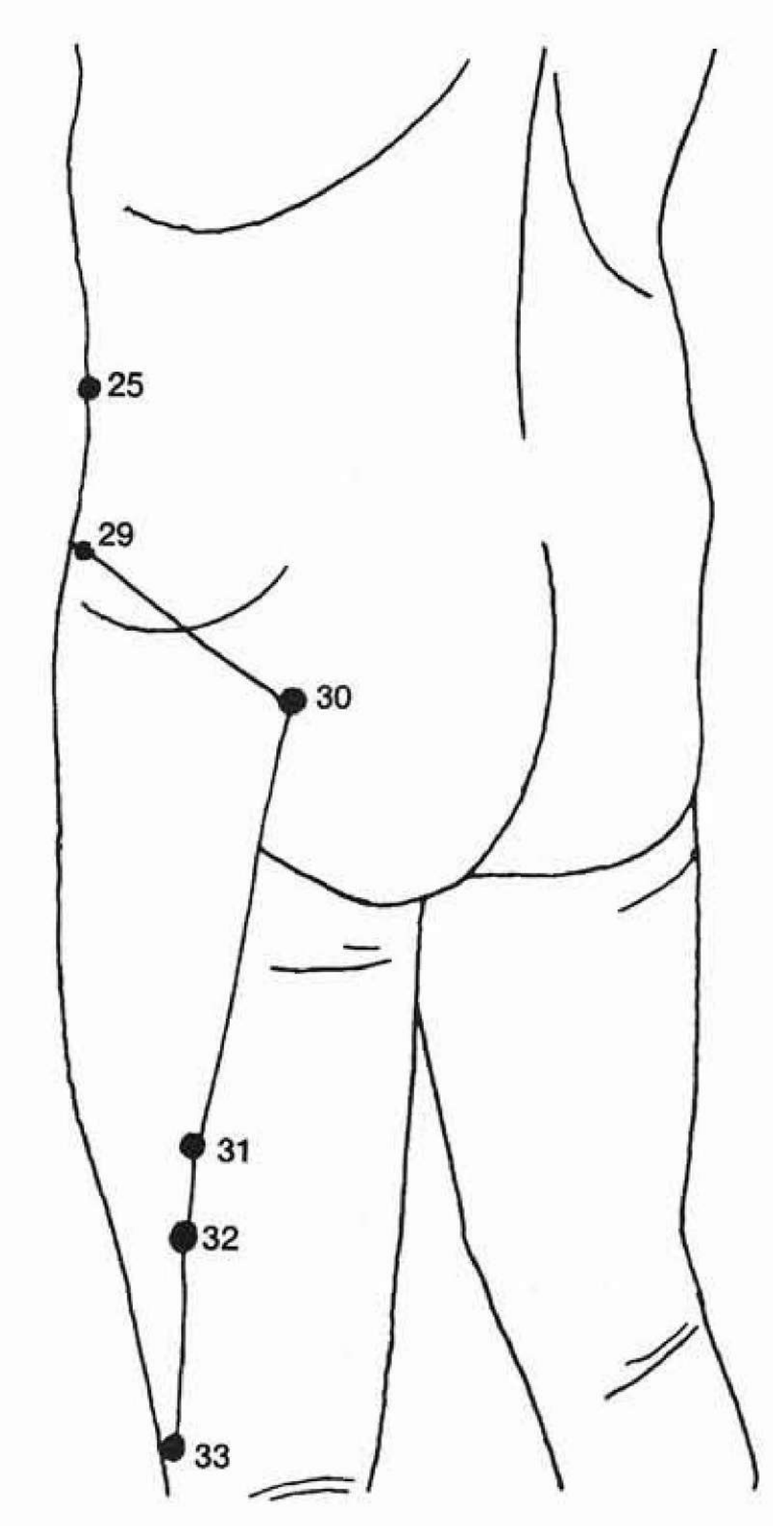
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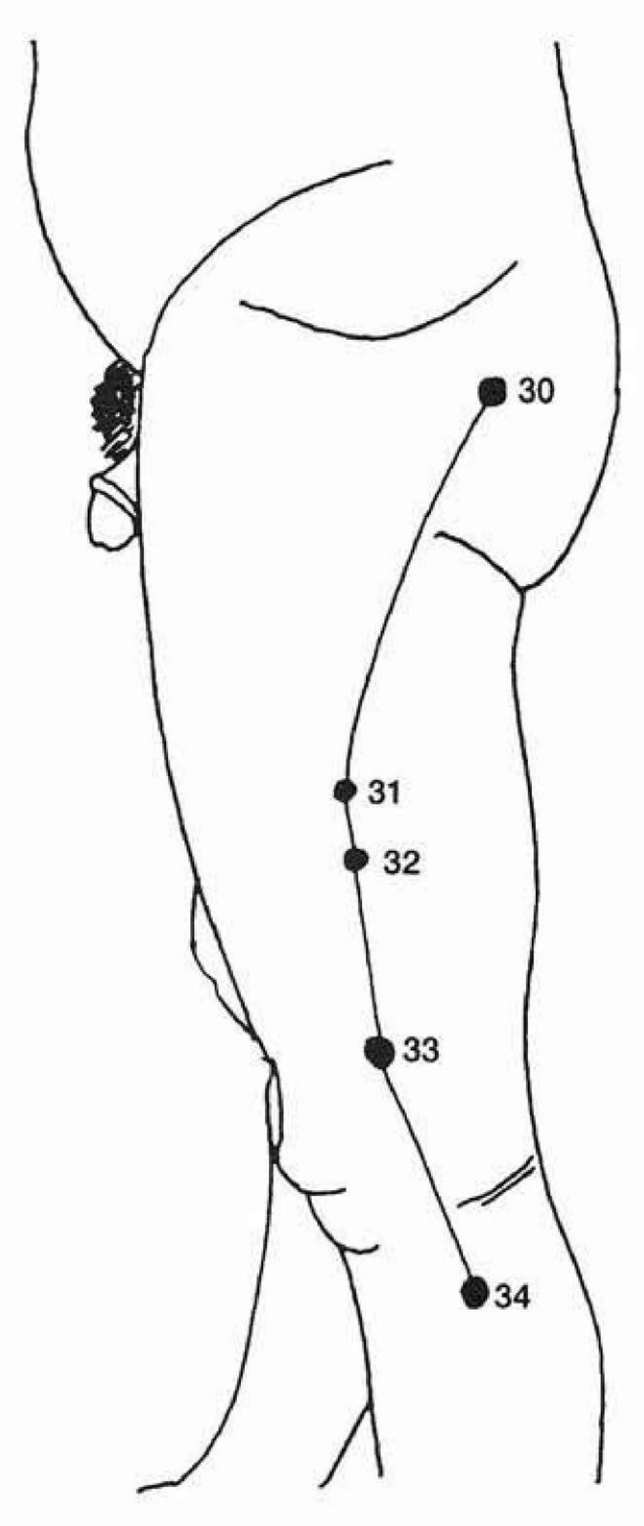
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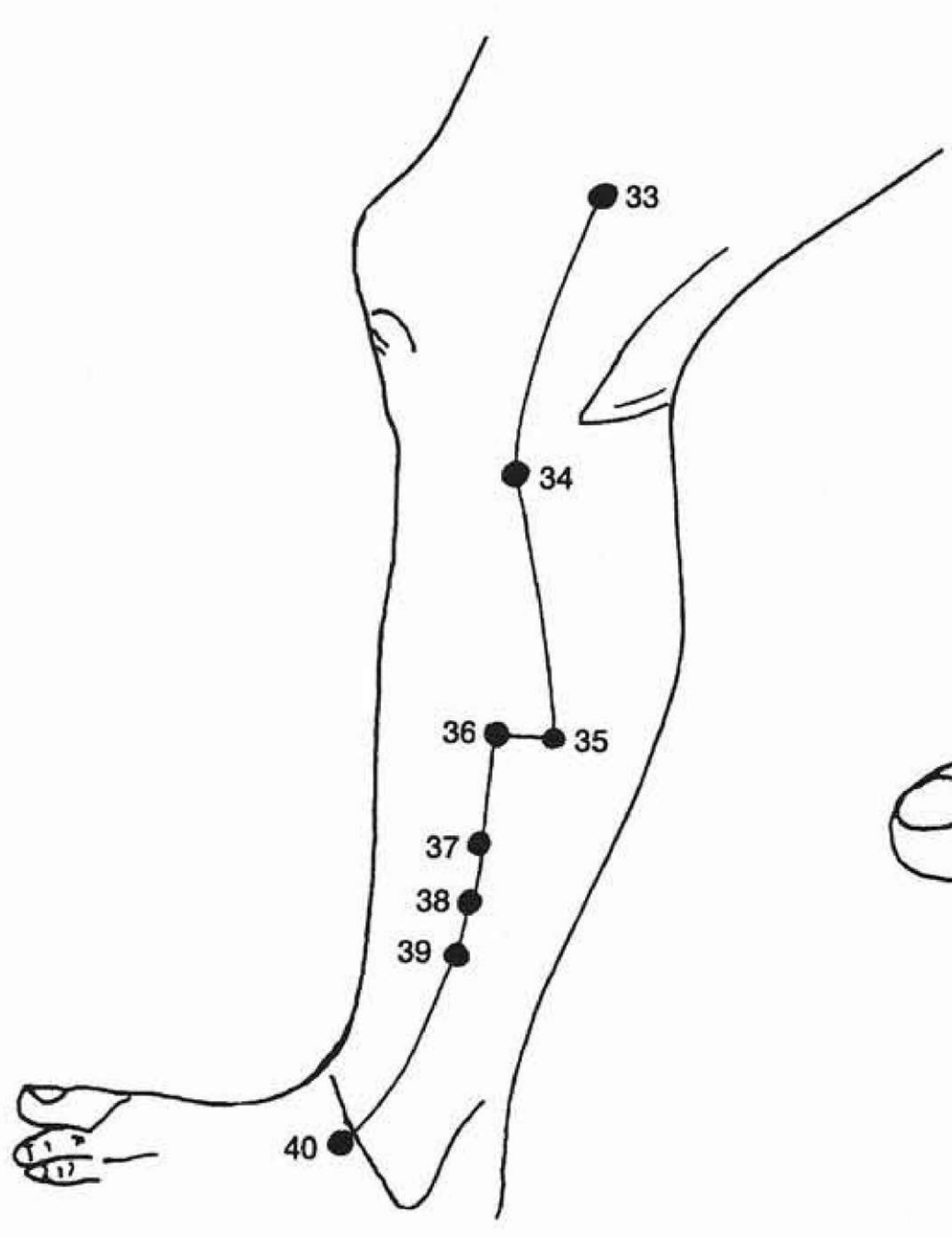
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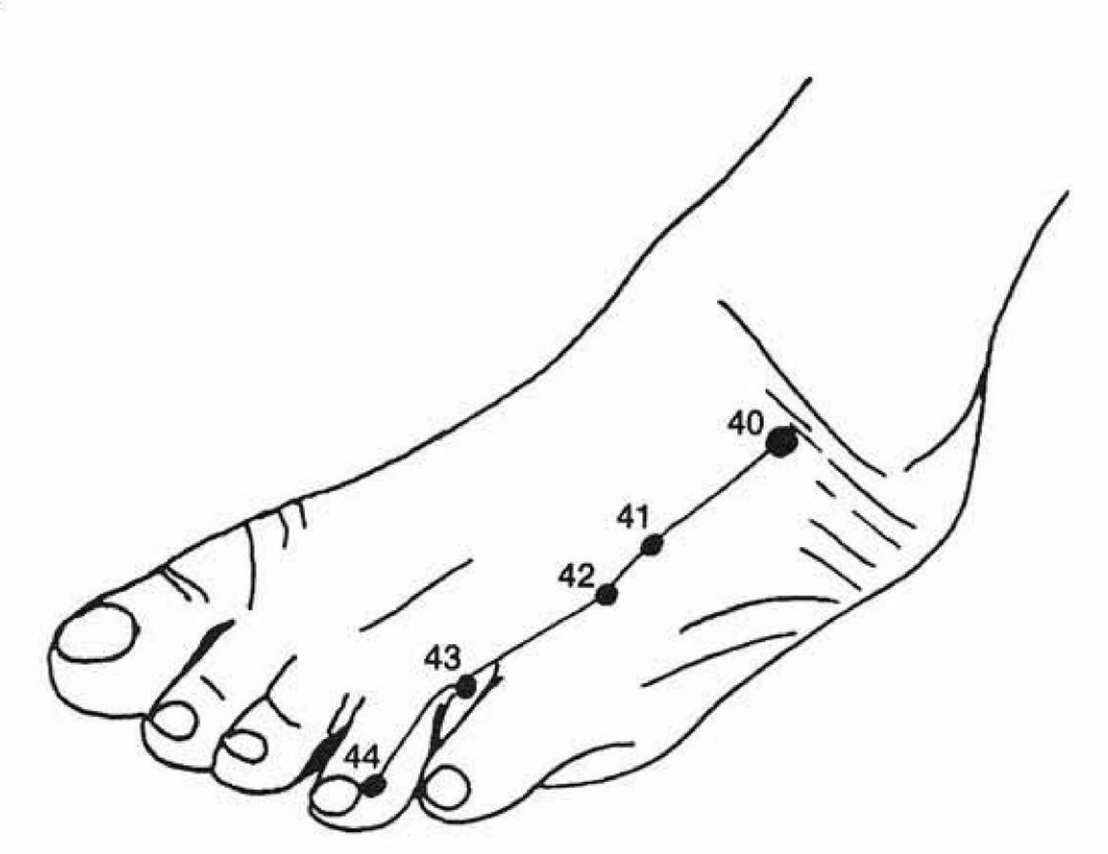
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Chapter 2

The Liver Meridian

The liver meridian is the other part of the gallbladder meridian; they are linked as a pair. When we heal someone who has perhaps a liver imbalance, it is not complete if we do not also balance the gallbladder meridian. The liver is yin in nature and has an aspect of wood for its element, as does its other half, the gallbladder. The liver is located more to the right side of the abdomen, above the duodenum. It is the largest of the body's glands and is responsible for several important functions.

The eyes are the doorway to the liver, and, indeed, what we see in the eyes tells us what is happening to the liver. The liver stores the blood and regulates and ensures the free-flowing nature of qi. It is manifest in the nails and dominates the tendons.

The liver is the controller of planning in the body society. When we are active, blood will flow from the liver to make up for this extra activity. When we are at rest, blood flows back to the liver. So the liver has an important function on the physical body.

The liver and gallbladder together are responsible for a number of functions. One of the main ones relates to digestion in the generation of digestive enzymes to be introduced into the small intestine. The liver aids in the digestion of fats by secreting bile into the duodenum. However, the liver also helps control metabolism and works with the immune system to combat rogue cells and organisms that threaten the body (in a process called *phagocytosis*). The liver also destroys red blood cells, forms urea for the excretion of nitrogenous wastes, forms fibrinogen (used in blood coagulation), stores glycogen, helps in the metabolism and storage of vitamins, and produces protective and antitoxic substances, among its many other functions.

THE TCM VIEW

In Chinese medicine, the liver has a great effect upon menstruation. If there is not enough blood in the liver, for instance, menstruation will be scanty. If there is too much blood in the liver, then menstruation will be "hot" or painful.

The blood in the liver also moistens the eyes and tendons. So blood deficiency in the liver could lead to bad vision or tendon contraction. If there is to much blood or there is heat present in the liver blood, then this will lead to a nosebleed or blood in the sputum.

If the blood is either hot (too much) or deficient (too little), this could lead to liver damage, and liver damage could lead to blood abnormality, which will eventually show up in the skin, with certain skin diseases. It is said the skin is a back-up organ for the liver.

The liver has the job of making sure that there is a clear path for the qi to flow along. If this pathway is clear, then life is good and things like emotions all work as they should, arising and dissipating, etc. But if this flow is impeded, then the emotions are the first to go awry, leading to physical symptoms associated with emotional problems (i.e., headache, stuffiness in the chest, and, in women, premenstrual tension).

As you can see, when we strike to liver points, it will have a dire effect upon not only the physical body but also the mental and emotional. Strikes to liver points can cause the person to black out instantly or to break down and cry uncontrollably, either instantly or hours after the strike. Strikes to the liver can even manifest themselves years later.

LIV 1 (LIVER POINT NO. 1)

Chinese name:

Dadun (large hill or great honesty).

Location:

On the lateral aspect of the dorsum of the big toe, 0.1 cun proximal to the corner of the nail.

Connections:

Takes transverse luo from Gb 27.

Direction of strike:

Stomp straight down onto the big toe.

Damage:

Liv 1 is a wood and cheng point. The liver is in charge of sending qi out to all areas. It also controls the defense of the body. A stomp onto the big toe not only produces great local pain, it also damages its ability to send the qi out. So, although a stomp on the toe may sound quite innocuous, it can impair health long after the stomp was done. Immediately, though, it has the power to immobilize the attacker because it is an energy drainage point. So this point would be used mainly as a set-up point.

If stomped all by itself, Liv 1 will cause nausea. Used with Liv 13, it will immediately cause great internal damage as well as qi damage, and it will cause death when Liv 13 is struck hard.

Set-up point:

The old "push on the chest" will set up Liv 1 nicely: a set-up point setting up a set-up point! So even before the fight has started, you should slam him in the chest at Cv 17, downward. This will damage his center of power (diaphragm), thus draining qi from the whole body. When Liv 1 is struck, it further enhances this effect.

Antidote:

Take the patient's forearm and rub it, using medium pressure downward on the outside of the arm and upward on the inside of the forearm. Do this on both arms. The immediate effect of a stomp to Liv 1 is nausea, and this method will treat it (fig. 170).

Healing:

Innervation is by the dorsal digital nerve derived from the deep peroneal nerve. Irrigation is by the dorsal digital artery and vein. Used for prolapse of the uterus, hernia, uterine bleeding, enuresis (incontinence), orchitis, irregular menstruation, and colic.

Traditional function: as a jing point, it is used to drain excess and treat superficial injuries. It is a wood point of the liver channel, and it is the point of origin of the liver channel, but *not* the liver channel's root.

To massage, press and hold the point. You can use the fingertip, thumb tip, or the knuckle of the thumb to press the point, while squeezing upward with the forefinger on the bottom of the big toe.

Use with Liv 14, Gb 24, Gb 25, and Liv 13 to treat pain in the flanks.

For pain and distension of the testicles, use with Cv 4, Cv 3, Cv 2, and Cv 6. You could prick the point and extract a drop of blood for trauma (e.g., from a blow to the genital region).

For urinary dysfunction, use with Cv 2, Cv 3, Cv 4, Cv 5, Ht 1, Cv 6, Bl 23, Bl 27, Bl 17, Bl 20, Pc 5, Sp 10, Kd 7, Kd 2, and Kd 3.

Use with Pc 6, Ht 7, Gv 26, Si 3, Co 4, Liv 3, Liv 11, Sp 6, Co 11, Gb 34, Gb 30, Th 21, Th 17,

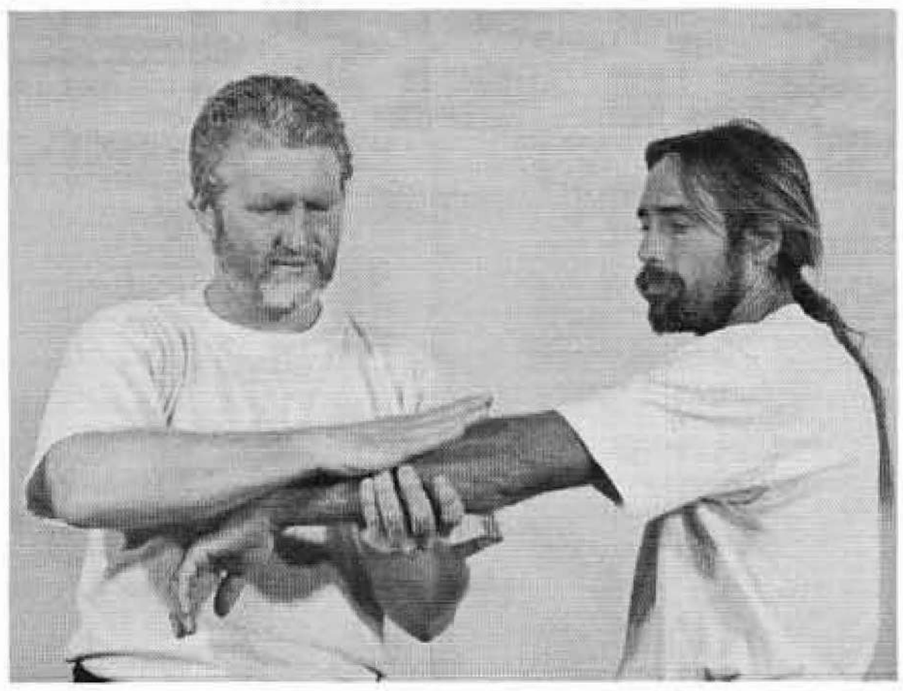


Figure 170

Kd 4, Bl 1, Gv 20, and Kd 16 for hysteria.

Use with Cv 6, Cv 4, Kd 10, Liv 3, Kd 2, Sp 6, Sp 2, St 12, Pc 6, and Bl 54 for menstrual irregularities.

Applications:

1) Slam him in the chest at Cv 17. Now stomp on his big toe, particularly the inside of the corner of the toe.
2) He comes at you with both hands low, as if to take you down. Slam both of his forearms at the wrists with both of your knife edges. This will drain qi. Take both hands and thrust them forward into Liv 13 on both sides. Then stomp onto Liv 1 (fig. 171).

LIV 2 (LIVER POINT NO. 2)

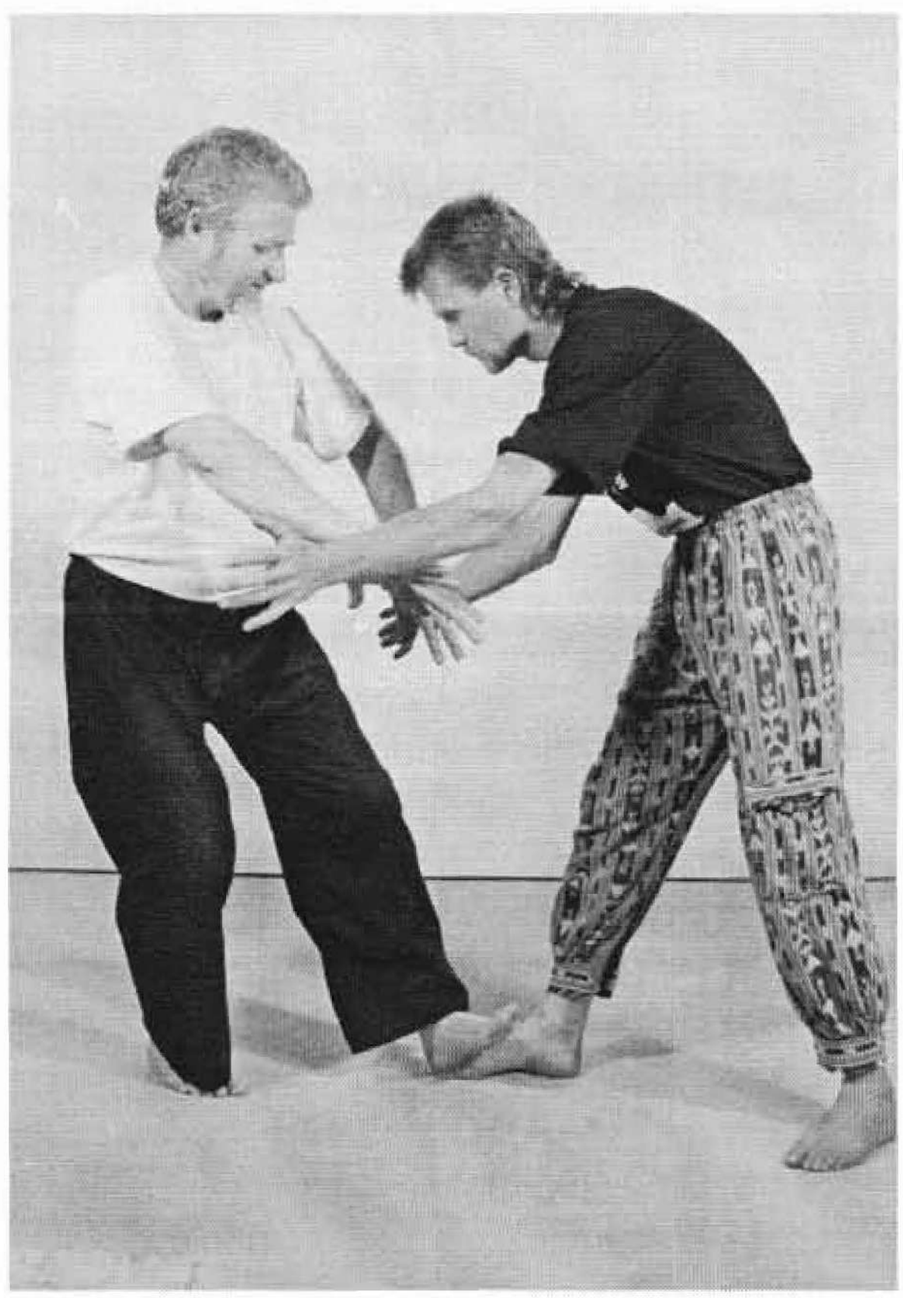


Figure 171

Chinese name:

Xingjian (active interval or walk between).

Location:

On the web between the big and second toes, slightly closer to the big toe.

Connections:

None.

Direction of strike:

Again, straight down into the foot.

Damage:

This is a fire and yong point. when used for healing, it eliminates fire and soothes the liver. When used to damage, it causes fire in the liver, thus irritating it greatly. The recipient of a strike to Liv 2 will feel very angry and will be so overwhelmed with these feelings that he will be unable to carry on with the confrontation. The strike also causes local pain and qi drainage.

Set-up point:

Same as for Liv 1.

Antidote:

Lie the patient down and massage around Liv 13 inward and out to the sides (fig. 172).

Healing:

Innervation occurs by this point's location where the medial branch of the deep peroneal nerve divides into the dorsal digital branches.

It is used for menorrhagia (abnormally profuse menstrual flow); enuresis (incontinence); retention of urine; urethralgia (pain in the urethra); hernia; deviation of the mouth; redness, swelling, and pain of the eye; pain in the hypochondriac region; headache; blurring of vision; epilepsy; convulsion; insomnia; vertigo; glaucoma; night sweating; intercostal neuralgia; orchitis; and abnormal uterine bleeding.

Traditional indications include abnormal uterine bleeding; pain in the penis; cloudy urine and urethral discharge; red, swollen eyes; rib pain; insomnia; vomiting; colic; distension in the lower abdomen; and seizures.

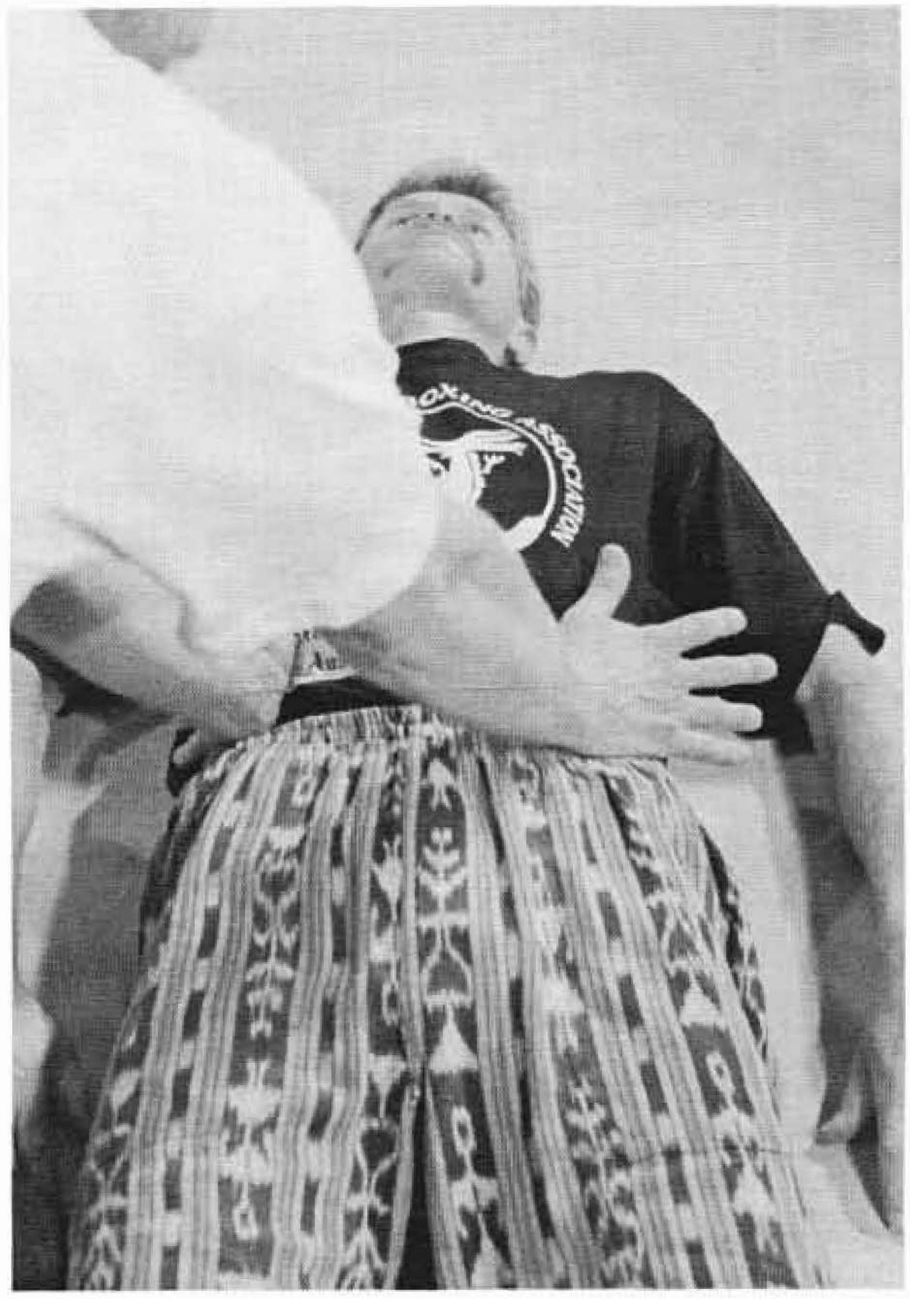


Figure 172

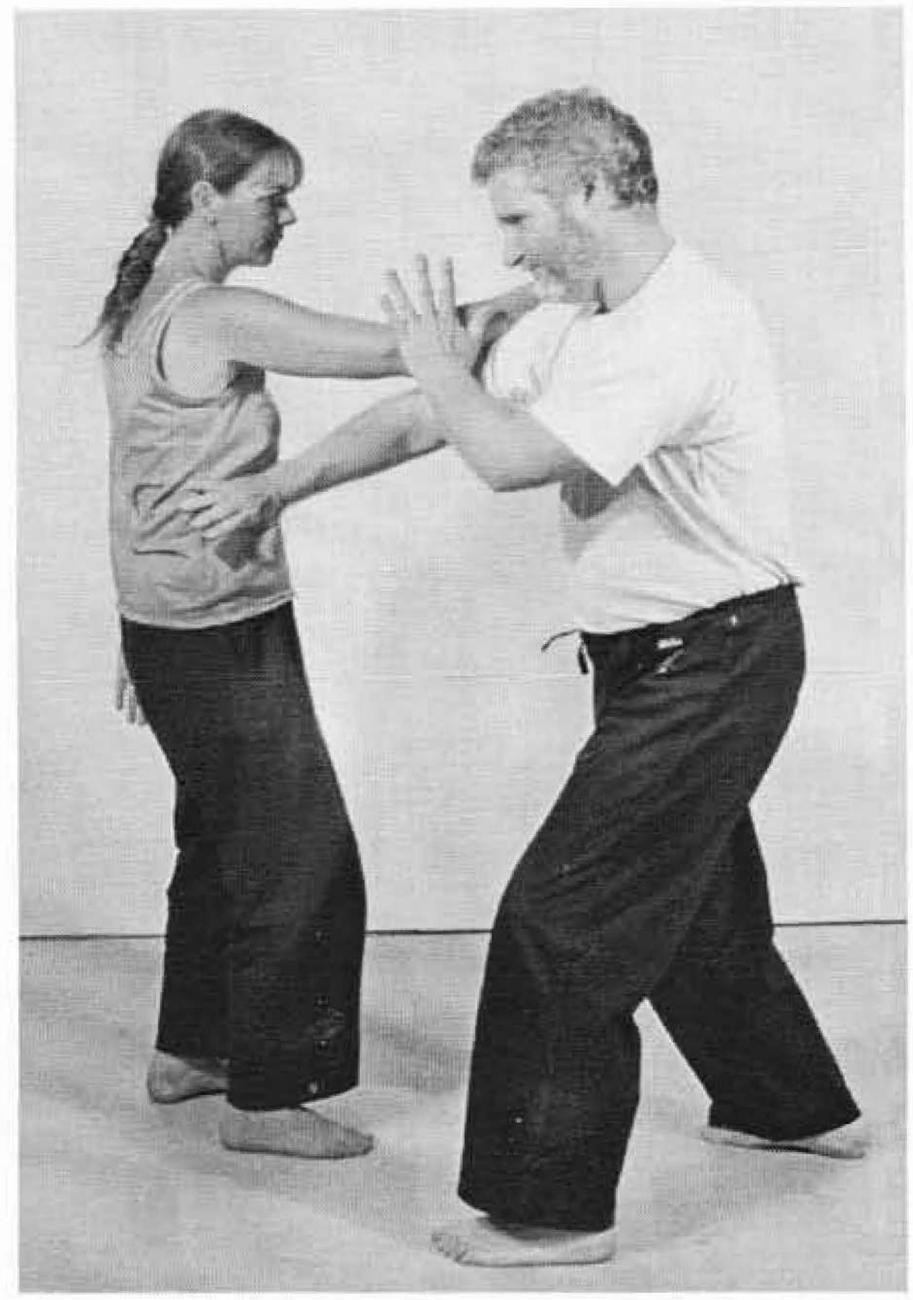


Figure 173

Traditional functions: (1) a fire point of the liver channel, used to drain fire from the liver; (2) a ying spring point, used to soothe the liver, remove stagnation of qi (not as strong as Liv 3, and clear the low heater; stronger than Liv 3 at sedating liver fire).

Massage techniques include pressing and holding the point, rotating clockwise or counterclockwise for xu or shi conditions, and tapping with the fingertips on the point.

Use Ht 5, Sp 6, Cv 4, and Cv 6 with this point for excessive uterine bleeding.

For lower back pain with difficulty moving, use Liv 2 with Gb 31, Gb 30, Gb 29, Bl 25, Bl 26, Bl 54, Bl 40, and Gb 34 for lower back pain with difficulty in moving.

Use with Bl 1, Gb 1, Th 23, St 1, Gb 14, Liv 3, and Gb 34 for red, swollen, painful eyes.

For hepatitis, use with Liv 14, Liv 8, Liv 3, Liv 4, Gb 24, Gv 14, Gv 9, Bl 18, Bl 19, Bl 20, St 36, Sp 9, and Sp 6.

For hypertension, use with Gb 20, Co 11, St 36, Liv 3, Liv 2,
Th 17, taiyang, Ht 7, Sp 6, Kd 3, Gb 34, Sp 9, St 40, Pc 6, Cv 4, and Cv 6.

For numb feet, use with Gb 38, Gb 35, Gb 39, Gb 40, Bl 60, and Kd 3.

Use with Ht 7, Gb 21, Pc 6, Gv 20, and Kd 1 for insomnia.

Use with Liv 1, Liv 14, Liv 13, Cv 12, St 36, Bl 18, Bl 11, and Bl 25 for colic.

Applications:

1) Take his right straight with your p'eng as you strike straight in to Gb 25 between the 11th and 12th rib tips. Allow your left palm to take over his right forearm as your right palm slams into Liv 13. This combination is a death strike (fig. 173). When these points have been struck, the stomp onto Liv 2 seems to concentrate the effect of the strike, and death is imminent.
2) From a grappling situation, stomp onto Liv 2. This will shock his system so much that you will be able to take him down for perhaps a "sleeper" hold (a choke hold used in grappling, wherein the neck is squeezed to stop the flow of blood to the brain, thus causing KO in as little as two seconds).

LIV 3 (LIVER POINT NO. 3)

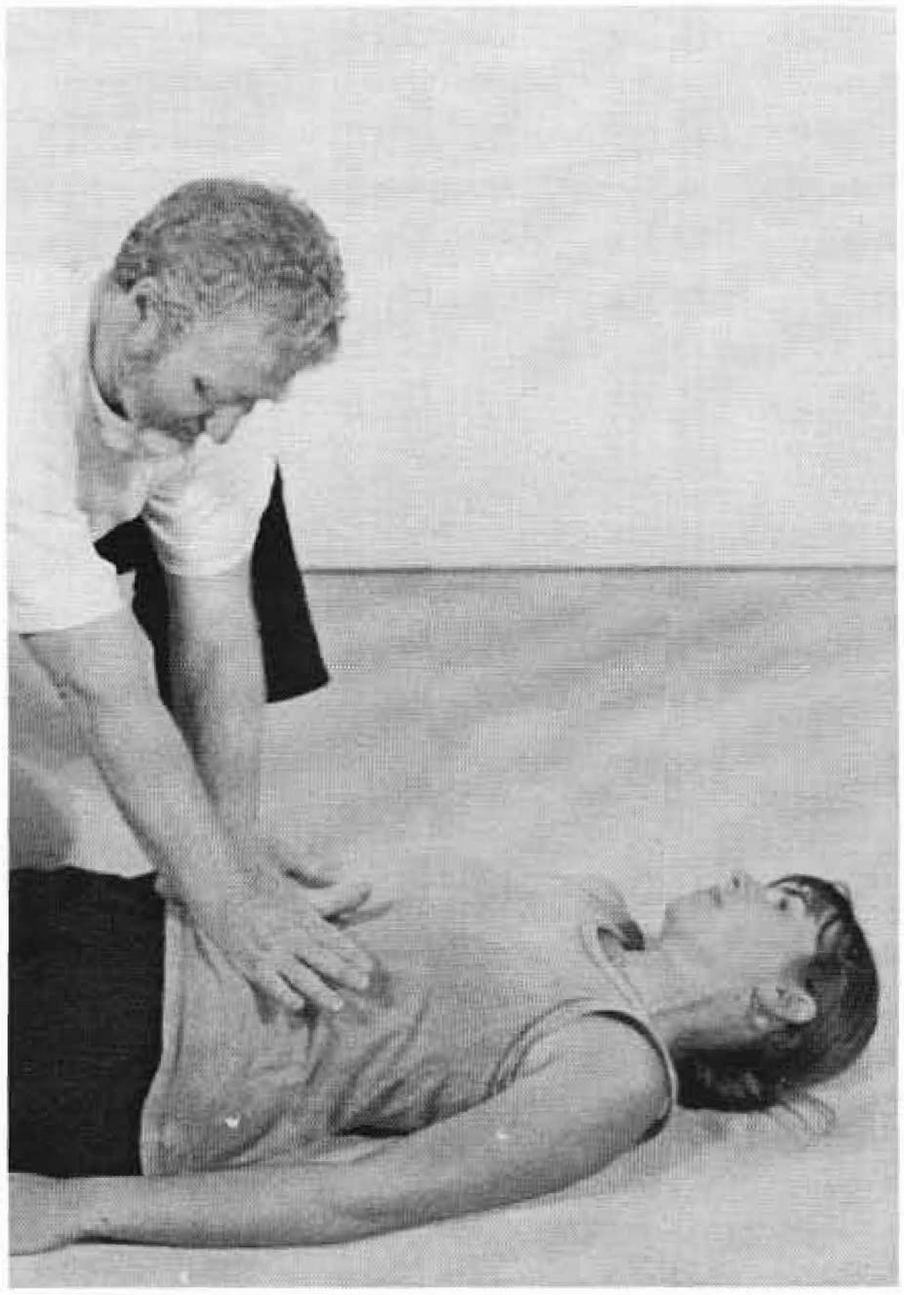


Figure 174

Chinese name:

Taichong (supreme assault or great pouring)

Location:

On the dorsum of the foot, between the ossa metatarsal 1 and 2 in the depression posterior to the metatarso-phalangae. A very sore spot just up from Liv 2 between the big and second toes, slightly toward the big toe.

Connections:

Takes transverse luo from Gb 37.

Direction of strike:

Straight down onto the point from above.

Damage:

This is an "earth, shu, and yuan point." (Again, a yuan point is one that draws upon ancestral qi. Shu means transporting; it is a collective name for the five welling stream points.) A strike right on Liv 3 will immediately immobilize the attacker. The local pain is just too much, and great qi drainage occurs. A feeling of drainage right up to the forehead is felt. This strike causes the recipient to feel totally disoriented and "out of it."

Set-up point:

Liv 3 is a particularly potent point, both in healing and damaging. We could use any of the Gb points to set up Liv 3—Gb 15 in particular. When Liv 3 is struck, you will feel "something" (a feeling, or pain) right up at Gb 15.

Antidote:

Place the patient on the ground and rub the whole abdomen area downward as he breathes out. Repeat this until the drained or nauseated feeling has gone (fig. 174).

Healing:

Used for uterine bleeding, hernia, enuresis, retention of urine, pain in the anterior aspect of the medial malleolus, fullness of the hypochondriac region, deviation of the mouth, infantile convulsions, epilepsy, headache, migraine, vertigo, insomnia, hypertension, hepatitis, mastitis, irregular menstruation, thrombocytopenia (decreasing blood platelets), and soreness of the joints in the extremities.

Traditional indications include sore throat; pain of the eyes, chest, and ribs; lower back pain, abscess of the breast, irregular menstruation, continuous sweating after childbirth, retention of urine, failing eyesight, and jaundice.

Traditional functions are to soothe the liver and gallbladder, regulate the circulation of qi and blood, work as a sedative to stop pain, and open up the channels. It is an earth point of the liver meridian, a yuan source point, and a shu stream point. To massage, press and hold, or do clockwise or counterclockwise rotations for xu or shi conditions. You can also do fingertip percussion on the point.

For headache, use Liv 3 with Gb 20 Gb 21, Gv 20, Co 4, Co 11, St 36, Gb 34, Gb 14, taiyang, yintang, Gb 1, Th 23, and Gb 11; add Liv 14, Bl 18, Bl 19, and Bl 20 for migraine.

Use with Cv 4, Cv 5, Cv 6, Cv 7, Bl 18 Bl 17, Bl 20, Sp 6. Liv 2, Sp 9, and Liv 4, for menstrual irregularity or pain. For soreness of the joints of the extremities, use it with Co 11, Co 4, St 36 Gb 34, Sp 10, and Sp 6.

Use with Gb 20, Gb 20, Th 17, Si 19, Pc 6. Cv 12, St 36, and Kd 3 for vertigo.

Applications:

1) This point can be accessed by a grab and sudden violent finger pressure, as in a grappling situation where you are able to grab the foot, when someone perhaps has pinned you face down and is trying to get a damaging leg lock on you. You must apply instant and great pressure using a thumb or other fingers. The great pain that this will inflict will at least give you time to get him off you.
2) Slam his right forearm at Lu 5, with your left palm as your right palm attacks to Gb 15. Now, stomp onto Liv 3 point with your right heel.

LIV 4 (LIVER POINT NO. 4)

Chinese name:

Zhongfeng (middle seal).

Location:

1 cun anterior to the medial malleolus, midway between Sp 5 and St 41, in the depression on the medial side of the anterior tibialis tendon. Above the tubercle of the navicular bone, medial to the anterior tibialis tendon (in a straight line from the web of the big and second toes, where the foot joins the ankle).

Connections:

None.

Direction of strike:

Into the ankle at 45 degrees, usually using a heel kick.

Damage:

This point is relatively difficult to get to; however, the effect is almost the same as that of a kick to the groin—local pain and ankle damage. This point will stop a fight if the strike is hard enough. It can also be used as a set-up strike to a groin shot or a Liv 14 shot.

Set-up point:

Lu 5 or neigwan, straight in. This will first drain energy sufficiently to enhance the attack to Liv 4.

Antidote:

For local damage, see a doctor. If qi damage is suspected—perhaps the recipient is sobbing uncontrollably or is extremely angry (well, you have just kicked him in the foot!)—apply thumb pressure down onto Lu 5 (fig. 175).

Healing:

Innervation is by a branch of the medial dorsal cutaneous nerve of the foot and the medial cutaneous nerve of the calf. Irrigation is by the dorsal venous network of the foot and the anterior malleolar artery. Used for pain in the external genitalia, seminal emission, retention of urine, hepatitis, pain of hernia, lower abdominal pain, and disease of the ankle and surrounding tissue.

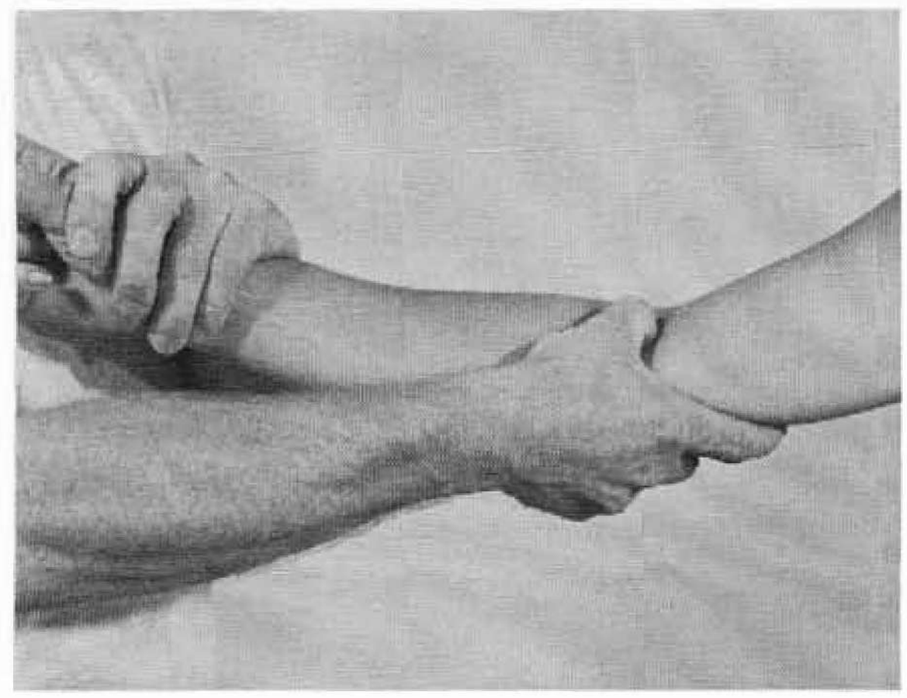


Figure 175

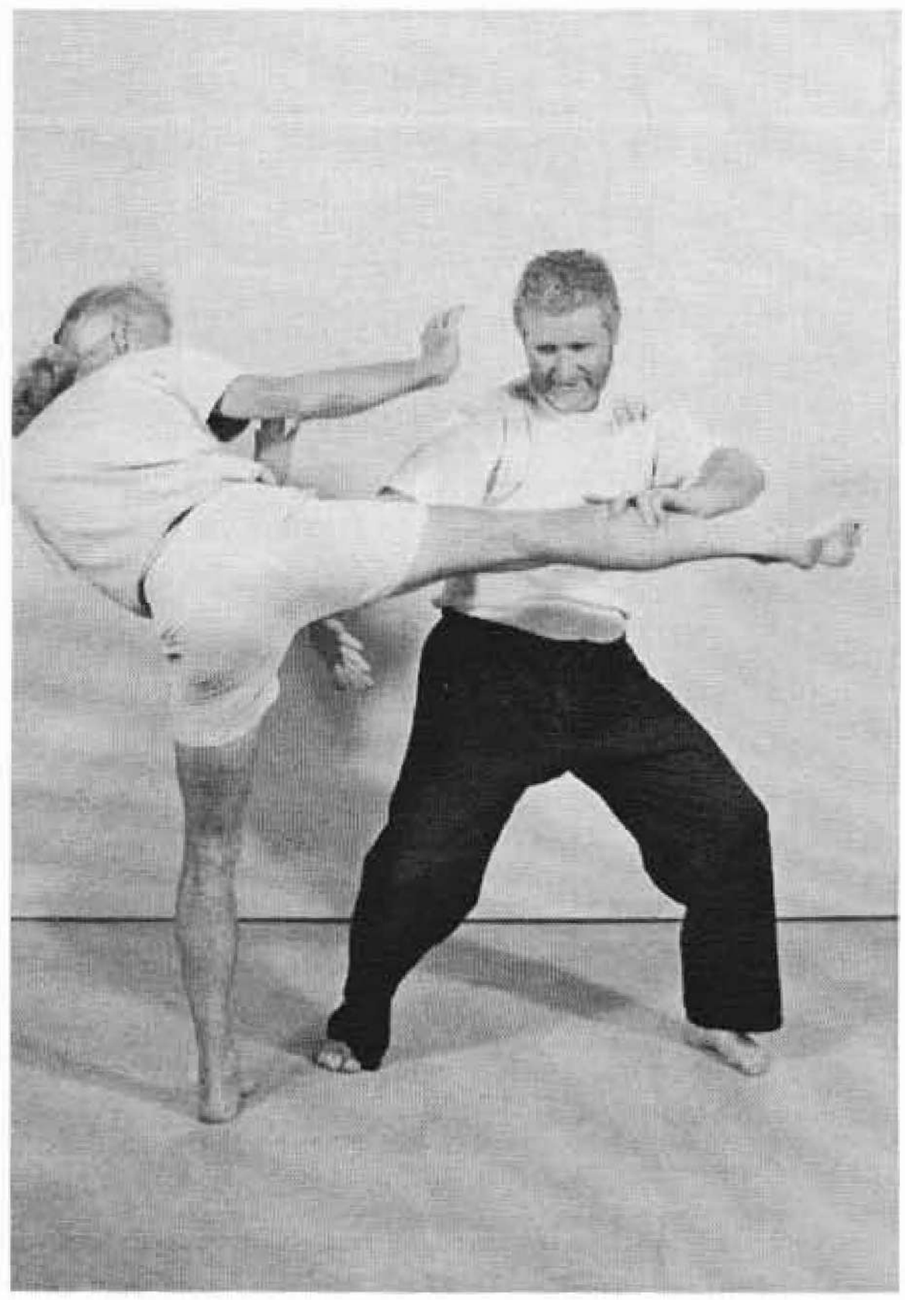


Figure 176

Traditional indications are nocturnal emissions, dripping urine, colic, jaundice with slight fever, lower back pain, and pain of the knee or ankle.

As a metal point of the liver meridian, a jing river point (traversing), and a root point of the liver channel, Liv 4's traditional functions are to spread liver qi and clear the channels.

For hepatitis, you might use Liv 4 with Bl 18, Bl 20, Liv 14, and Liv 2. For enlargement of the liver and spleen, use with Liv 13, Liv 14, Bl 20, Bl 21, Bl 18, Cv 12, St 36, and SP 4,

Use with St 36, Co 10, Bl 3, Bl , Lu 1, Cv 17, and Cv 12 to improve immunity of the body.

For goiter or thyroid problems, use it with Cv 22, Lu 2, Lu 14, Co 11, Cv 17, Gb 20, Gv 14, Si 11, Th 13, Lu 3, St 42; use moxa on all points.

For painful urination, use Lu 7, Bl 17 Bl 18, Bl 20, Bl 23, Bl 27, Cv 3, Cv 6, and Cv 4 with the point. Use these same points for retention of urine.

To help with difficult labor, use this point with Sp 12, St 30, Co 4, Sp 6, Gb 21, Bl 31, and Bl 32.

To massage, press and hold, rotate clockwise or counterclockwise for xu or shi conditions, or do fingertip percussion over the point.

Applications:

This point could be used against a kick, but I wouldn't recommend it, as you would have to make a serious error by *not* coming straight in. However, if you are caught unaware, and you have to block the roundhouse kick, for instance, you could strike the inside of the ankle using a one-knuckle punch or a heel palm. You could then do the right thing and move in quickly to enhance the Liv 4 shot and strike to the groin (fig. 176).

LIV 5 (LIVER POINT NO. 5)

Chinese name:

Tigou (worm eater's groove).

Location:

5 cun above the tip of the medial malleolus, on the medial aspect near the medial border of the tibia. One-third of the length from the tip of the malleolus to the midpoint of the knee (5 cun above the ankle bone on the inside of the lower leg).

Connections:

This is a transverse luo point to Gb 44 and Gb 40.

Direction of strike:

This point must be struck using a slicing motion or an arc down the leg.

Damage:

First, the recipient of a strike to Liv 5 will feel nausea, and then cramping of the abdomen. If the strike is hard enough, other muscles will also cramp up. It's enough to stop the fight. Liver damage will also occur later in life, so do not play around with this point!

Set-up point:

Neigwan, preferably on both forearms. (See application below.)

Antidote:

Lie the patient down and apply palm pressure downward and into the ground onto Liv 13 on both sides.

Healing:

Innervation is by the anterior branch of the saphenous nerve and is located just posterior to the great saphenous vein.

Used for irregular menstruation, dysuria (difficult or painful urination), hernia, leg pain, endometritis, retention of urine, orchitis, and sexual dysfunction.

Traditional indications include irregular menstruation; abnormal uterine bleeding; vaginal discharge; swollen, painful testicles; prolapsed uterus; impotence; difficult urination; and lower back pain.

Traditional functions, as a luo point of the liver channel, are to spread liver qi, benefit the qi,

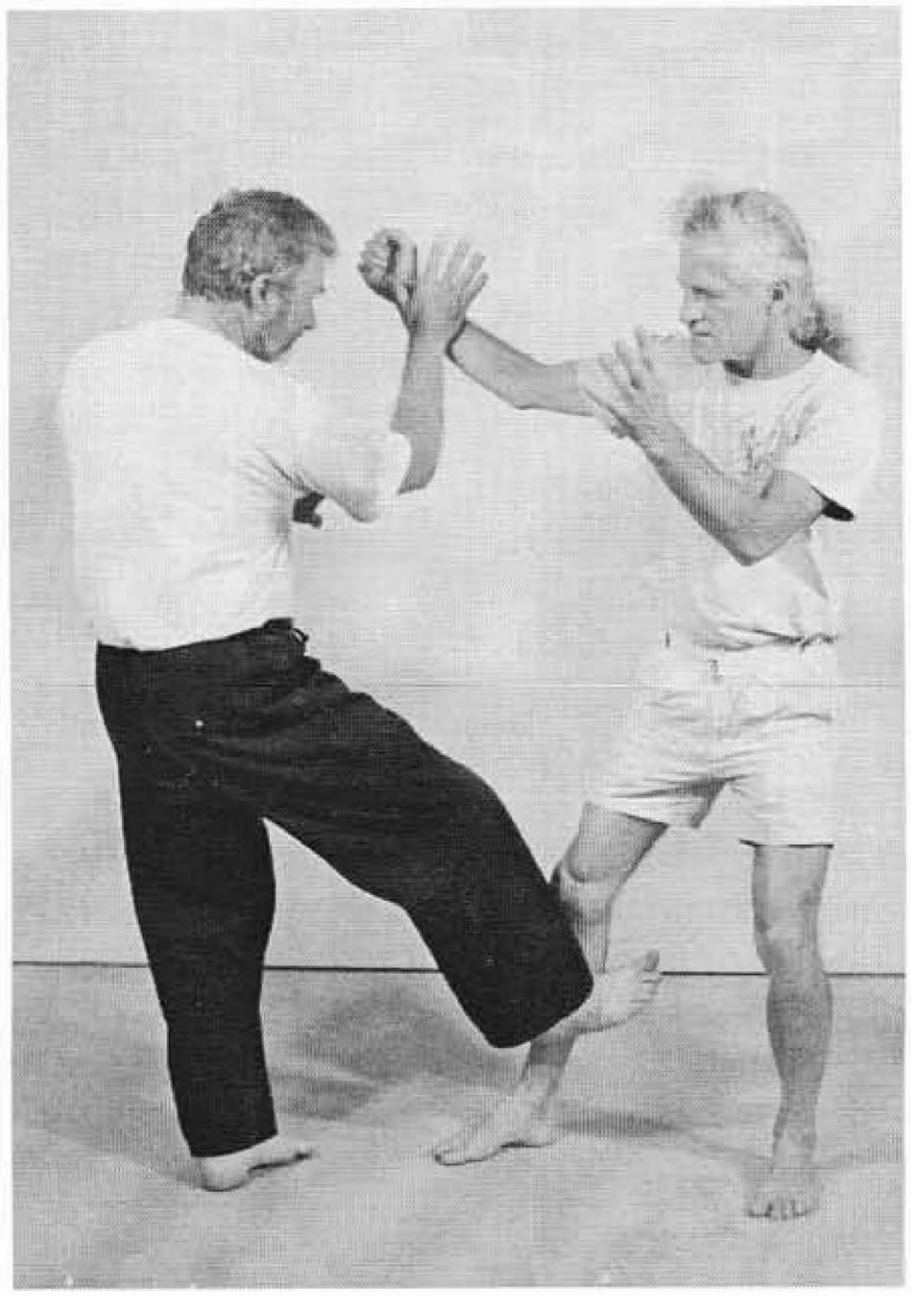


Figure 177

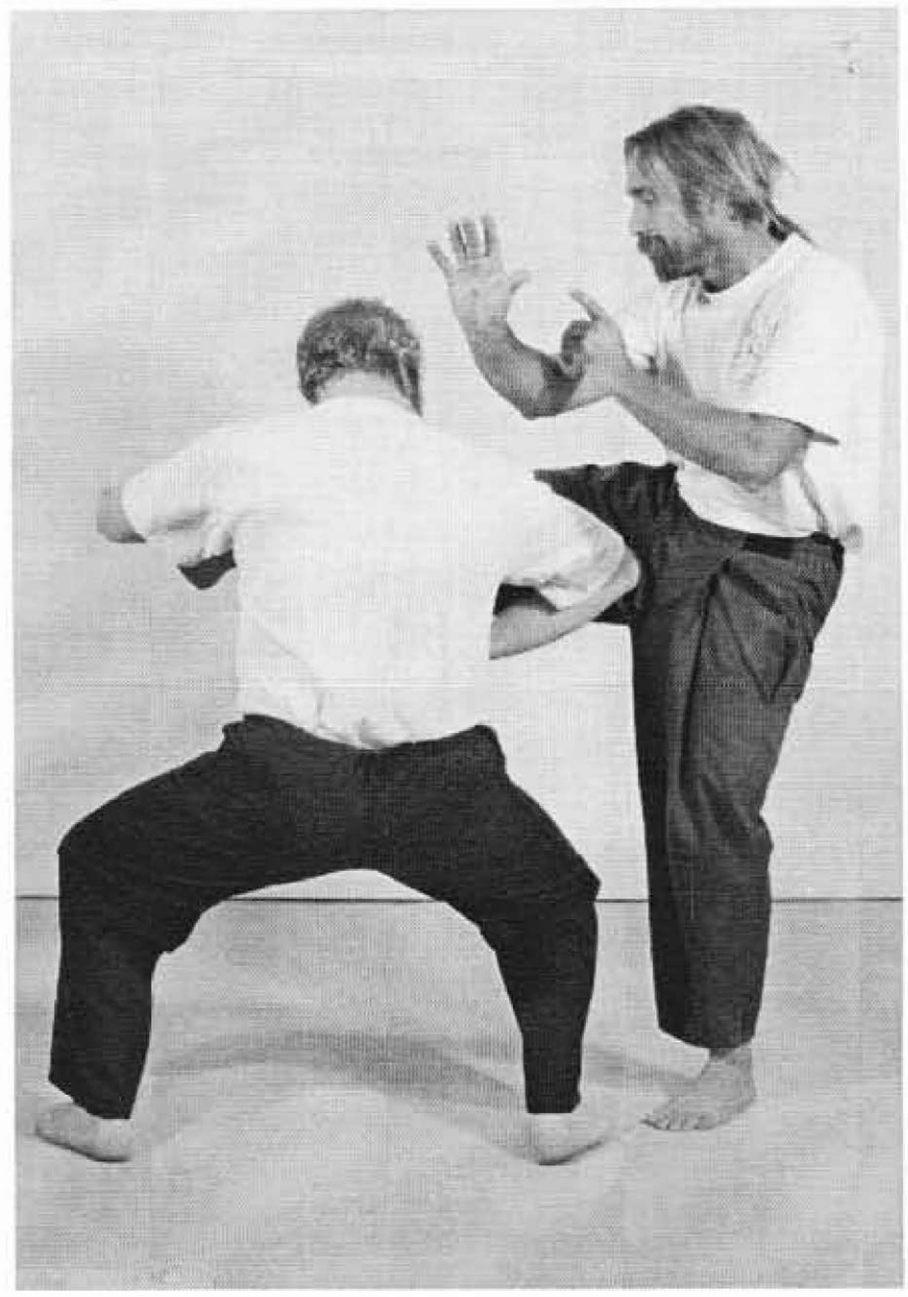


Figure 178

clear the channels, eliminate damp heat from the genitals, and, when combined with Cv 3, to reduce the fire of the liver. Because it is a luo point, Liv 5 can also treat colic, swelling of the testicles caused by xu conditions, and itching in the pubic region in shi conditions of the liver or gallbladder. Liv 5 is a connecting point to the divergent meridian of the gallbladder.

To massage, press and hold or do clockwise or counterclockwise rotations for xu or shi conditions.

Use with Liv 8, Liv 3, Cv 4, Cv 3, and Cv 6 for orchitis.

For intercostal neuralgia, use with Th 6, Gb 34, Gb 24, Liv 14, Gb 40, Liv 2, Liv 3, Bl 18, Bl 17, Liv 13, St 40, Sp 9, Pc 6, and jiaji points corresponding to the level of pain (extra point).

For CVA resulting in slurred speech, use with Pc 4, Gv 15, Ht 6, Ht 5, Pc 6, Cv 23, Kd 6, Cv 14, Kd 1, and jaiji points from T3 to T5.

For impotence, use with Cv 4, Cv 6, Bl 3, Bl 18, Bl 43, Sp 6, Ht 7, Gv 4, Kd 3, Liv 3.

For lower back pain, use with Bl 25, Bl 26, Bl 23, Bl 54, Gb 30, Bl 40, and Gb 34.

Applications:

1) A bagwazhang entering method can be used as an excellent set-up and strike when he perhaps comes in with a two-handed attack or is simply standing in an on-guard stance. Rush in and strike his right neigwan with your right palm. Instantly, while you are still moving in, strike to his Liv 5 point with your right heel. Instantly, turn your waist and strike with your right palm to his right neigwan as your right heel attacks to the Liv 5 point on his right leg. (fig. 177).
2) You can use this point for a groin shot against a kick. He perhaps strikes with a straight front kick. You strike Liv 5, slicing it downward with your right palm. Then, using the power of your waist turning, strike with your right elbow to his groin (fig. 178).

LIV 6 (LIVER POINT NO. 6)

Chinese name:

Foot zhongdu (middle metropolis).

Location:

7 cun above the medial malleolus, or 2 cun above Liv 5, on the medial aspect near the border of the tibia.

Connections:

None.

Direction of strike:

Strike inward and downward at the inside of the lower leg. This point can be accessed either with the foot or with the hand, as in the case of blocking a kick.

Damage:

This is a xie cleft point, so it is an accumulation point for qi. Striking this point will cause local pain as well as muscle spasm in the leg. Struck directly, it will cause nausea with an energy drainage. If it is struck hard enough, the recipient will have to sit down to recover. This is a good point to strike to when you just want to stop the situation and not really do that much damage.

Set-up point:

A little poke in to Liv 13 will set up this point. Perhaps you are in a grappling situation, close enough to poke Liv 13 on either side. Immediately after the poke, slice down onto the inside of his leg with the side of your shoe.

Antidote:

Hold and press neigwan down the inside of the forearm toward the fingers. This will have an immediate effect on the nausea.

Healing:

Innervation is by the branch of the saphenous nerve, and irrigation is by the great saphenous vein.

Used for uterine bleeding, hernia, acute hepatitis, and paralysis of the lower limbs.

As a xie cleft point of the liver, its traditional function is to treat acute problems of the liver and its channel (e.g., trauma to the genitals from a kick or other type of blow).

To massage, press and hold, do rotation clockwise or counterclockwise for xu or shi conditions, do fingertip percussion, or, as part of a treatment for circulation in the lower leg, you can slide finger or thumb along the edge of the tibia, passing through Kd 8, Sp 6 Liv 5, Liv 6, Sp 8, and Sp 9. For hepatitis, use with Bl 18, Bl 17, Bl 19, Bl 20, Liv 14, Liv 2, and Liv 3. (Liv 6 is the strongest point to use in acute hepatitis.)

For intercostal neuralgia, use with Th 6, Liv 5, Gb 34, Bl 18, Liv 14, Bl 19, Gb 24, and the relevant jaiji points (extra points).

For trauma to genitals or the liver channel, prick Liv 1 and get a spot of blood while just "holding" Liv 6. Use Liv 6 with Liv 5 for gout or bunions.

Applications:

You are in a closed situation. Use your elbow to poke into Liv 13. Now, using the foot opposite the elbow you used, scrape down the inside of his lower leg, covering Liv 6.

LIV 7 (LIVER POINT NO. 7)

Chinese name:

Xiguan (knee's hinge).

Location:

Posterior and inferior to the medial condyle of the tibia, in the upper portion of the medial head of the gastrocnemius muscle, 1 cun posterior to Sp 9. (In the middle of the inside of the leg, where the knee hinges.)

Connections:

None.

Direction of strike:

In from the inside of his lower leg, just below the knee and in a slightly forward direction. This is a somewhat difficult point to strike correctly because of the direction of the strike.

Damage:

There is great local pain when this point is struck correctly. The pain will rise up into the ears and cause loss of balance. This is an excellent set-up point for any major attack. It can be accessed either with the foot or by finger pressure when in a grappling situation.

Set-up point:

Use either neigwan or the mind point (an extra point on the inside of the jaw), or even St 9, to set up this point.

Antidote:

Place your palms over either side of his head and stroke them down the front of his body to the waist using mild pressure. This will stop the rising pain to the ears (fig. 179).

Healing:

Irrigation is by the posterior tibial artery, and innervation is by the branch of the medial sural cutaneous nerve and, deeper, the tibial nerve.

Used for pain in the medial aspect of the knee, strong recurrent headache, and arthritis of the knee.

Massage techniques include pressing and holding, rotating clockwise or counterclockwise for xu or shi conditions, or you can do percussion on this point.

For knee problems, use with Sp 10, Sp 9, Sp 6, Liv 8, Liv 3, St 34, St 35, St 36, Gb 34, and *xiyan* (an extra point on the patella ligament, on the side opposite of St 35).

For recurrent headache, use with Gb 20, Gb 21, Gb 14, Gb 24, Gb 34, Gv 20, Liv 2, Liv 3, Liv 4, St 36, Gb 10, Gb 8, Gb 41, Bl 18, Bl 19, Bl 17, Bl 20, Bl 25 Gv 14, and Kd 1.

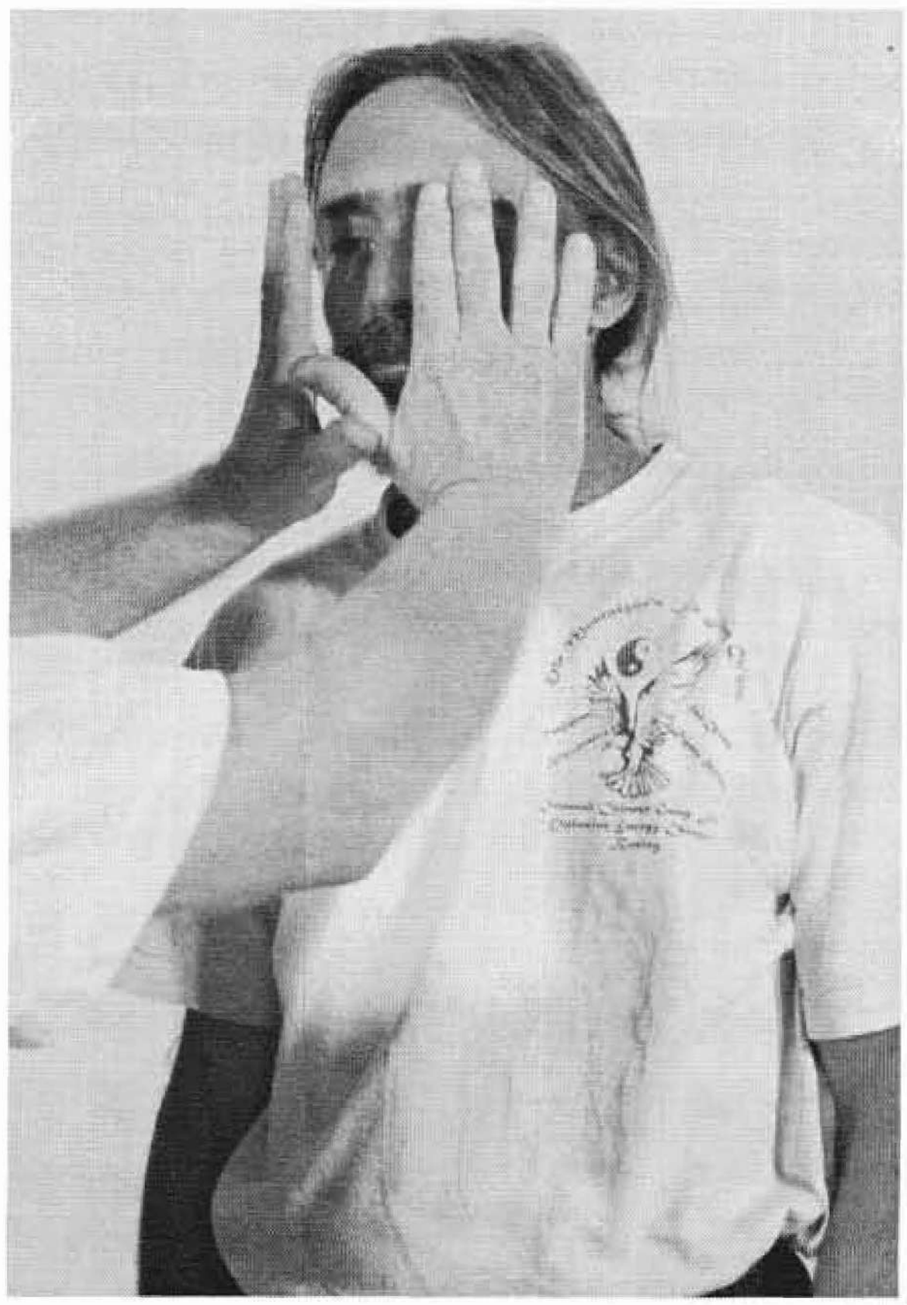


Figure 179

Figure 180

Applications:

1) In defense of his right straight reverse punch, slam his outer forearm with both hands, as in the beginning posture from the large san-sau (a training method from taiji). Use your right heel to low hook kick to Liv 7 (fig. 180).
2) If the fight has gone to the ground, you could use this point with violent finger pressure to cause him to release a grip.

LIV 8 (LIVER POINT NO. 8)

Chinese name:

Ququan (crooked spring).

Location:

On the medial side of the knee joint. When then knee is flexed, the point is above the medial end of the transverse popliteal crease, posterior to the medial condyle of the tibia, on the anterior border of the insertion of semimembranosus and semitendinosus.

Connections:

None.

Direction of strike:

Strike inward to the inside of the leg, just behind the knee.

Damage:

Liv 8 is a water point, which cools the system. Striking it will have the opposite effect of heating the system greatly. This will cause things like great nausea. It will also hinder the circulating qi in the liver channel. It will have an immediate affect upon the liver, causing it to "heat up," which will cause imbalance in the body.

Set-up point:

The liver fire point Liv 2 is used here. Stomp on the web between the big and second toe.

Antidote:

You can needle Liv 8, thus causing the fire to dissipate. Or you can stroke neigwan down the inside of the forearm.

Healing:

Innervation is by the saphenous nerve; irrigation anteriorly by the great saphenous vein. Also, the point is on the pathway of the genu suprema artery.

Used for prolapse of uterus, low abdominal pain, dysuria, pruritus vulvae (itching), mania, seminal emissions, pain in the external genitalia, pain in the knee and medial aspect of the thigh, vaginitis, prostatitis (inflammation of the prostate gland), nephritis, pain of hernia, and impotence.

Traditional indications include prolapsed uterus, itching and distension of the genitals, pain of the penis, painful and rough urination, dysentery, and knee pain.

Traditional functions: A he sea and water point (uniting point) of the liver channel. Benefits the bladder, clears and cools damp/heat, relaxes the muscle channels, clears the lower *jiao* (lower heating space), and relaxes the tendons and collaterals.

Used with Gb 27, Liv 3, Liv 4, Bl points in the sacrum, and Liv 6 for orchitis.

For pain from hernia, use with Liv 12, Sp 6, Liv 2, Liv 3, Liv 6, Gv 20, Sp 3, Bl 20, Bl 18, and St 30. (See Liv 7 for knee treatment.)

For mumps, you could use Liv 8 with Th 17, St 6, Co 4, Co 11, Lu 11, Co 1, Sp 10, Sp 6, Liv 2, and Lu 7.

For prostatitis, combine it with Sp 6, Cc 3, Cv 4, Cv 5, Cv 6, Bl 23, Bl 18, Bl 27, Liv 2, Liv 4, Bl 28, and jiaji points from T7 to L2.

For prolapse of the uterus, combine with Gv 20, St 30, Gb 28, Sp 6, Cv 6, Sp 9, Liv 3, abdomen zigong, Bl 20, Sp 3, St 36.

For impotence, use with Cv 4, Cv 6, Bl 23, Liv 3, Gb 25, Kd 3, Gv 20, Pc 6, Ht 7, St 36, Sp 6, and Sp 9.

To massage, press and hold or do rotation clockwise or counterclockwise for xu or shi conditions. Fingertip percussion is also applicable on this point.

Applications:

He attacks with a right straight. You might attack his right neigwan with your right palm, then load your waist to your right and attack to Liv 14 with your right elbow, and then use your right knee to attack to Liv 8 (fig. 181).

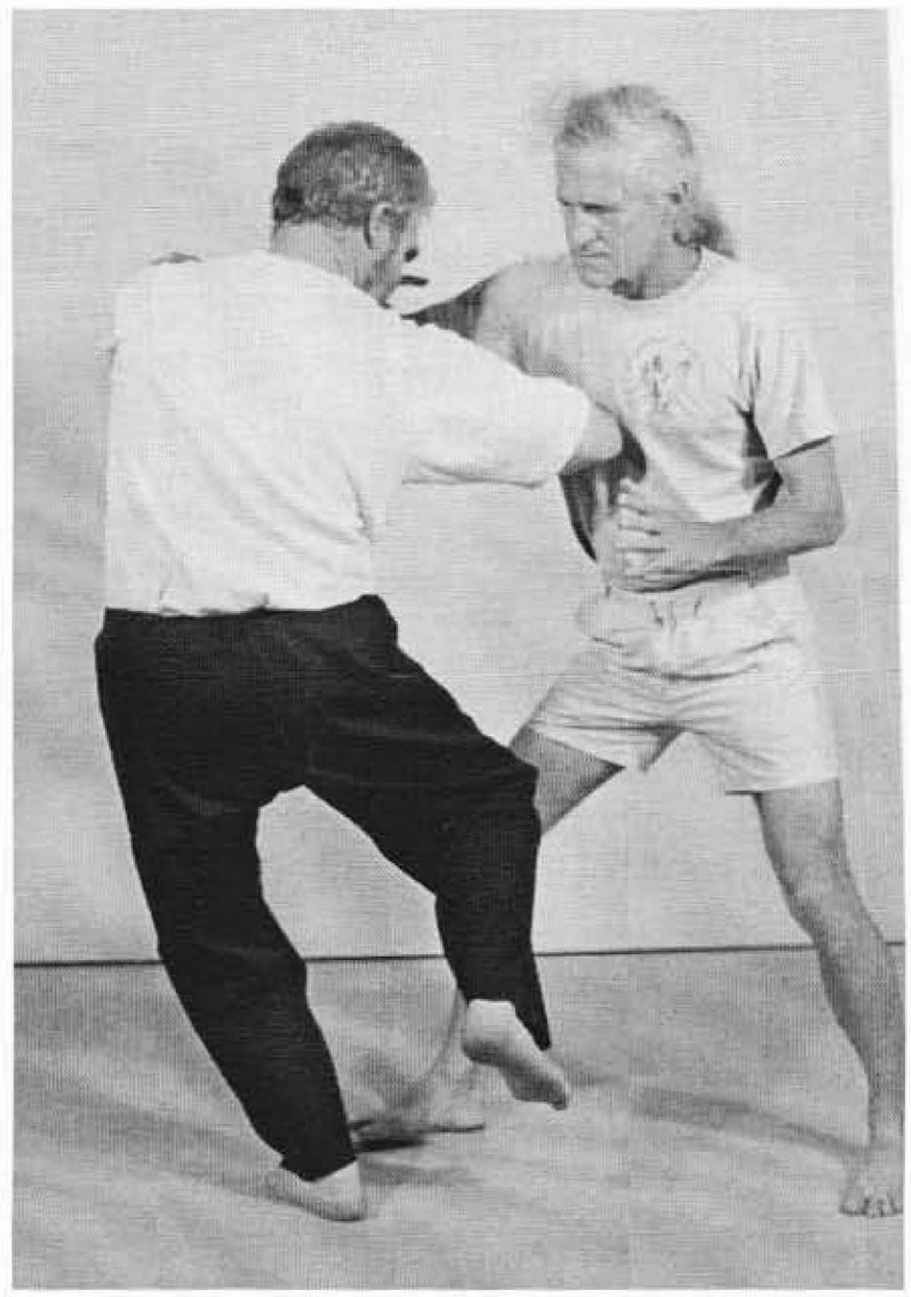


Figure 181

LIV 9 (LIVER POINT NO. 9)

Chinese name:

Yinbao (yin's wrapping).

Location:

4 cun above the medial epicondyle of the femur, between vastus medialis and sartorius.

Connections:

None.

Direction of strike:

Strike inward to the inside of the thigh.

Damage:

This is a common KO point that can be used effectively by most people with little knowledge. However, *I warn you here, do not use this point to show off; it can cause irreparable damage later in life (i.e., emotional problems). Struck hard enough, this point can kill through liver failure!*

Set-up point:

The wrist is an excellent set-up point for this strike. You can either strike the back of the wrist at Th 4 or use a wrist lock to access the point.

Antidote:

If qi damage is suspected (diagnosed by uncontrollable weeping or laughing or extreme irritability), let's face it: he *would* be irritable because you have just kicked him in the leg! Treat Gb 41 with needles or thumb pressure straight in.

Healing:

Innervation is by the anterior femoral cutaneous nerve; the point is on the pathway of the anterior branch of the obturator nerve. Irrigation is on the lateral side the femoral artery and vein (deep) and the superficial branch of the medial circumflex femoral artery.

Used for irregular menstruation, dysuria, pain in the lumbosacral region referring to the lower abdomen, enuresis, and retention of urine.

Massage techniques are to press and hold the point, do rotation clockwise or counterclockwise for xu or shi conditions, or do fingertip percussion on the point.

For irregular menstruation, use Liv 9 with Liv 3, Liv 14, Sp 6, Cv 4, Cv 6, Gb 26, Bl 18, Bl 20, Sp 10, St 27, and St 28.

Use with Bl 25, Bl 26, Bl 54, Bl 52, Gb 29, Gb 30, Bl 40, Gb 34, Gb 27, Gb 28, and Sp 12 for low back pain referring to the lower abdominal region.

Use with Cv 2, Cv 3, Cv 4, Cv 5, Cv 6, Bl 23, Bl 28, Gv 4, Bl 53, and St 38 for retention of urine and enuresis.

Applications:

I have always said that locks and holds, no matter what type, are useless if you try to use them as your

Figure 182

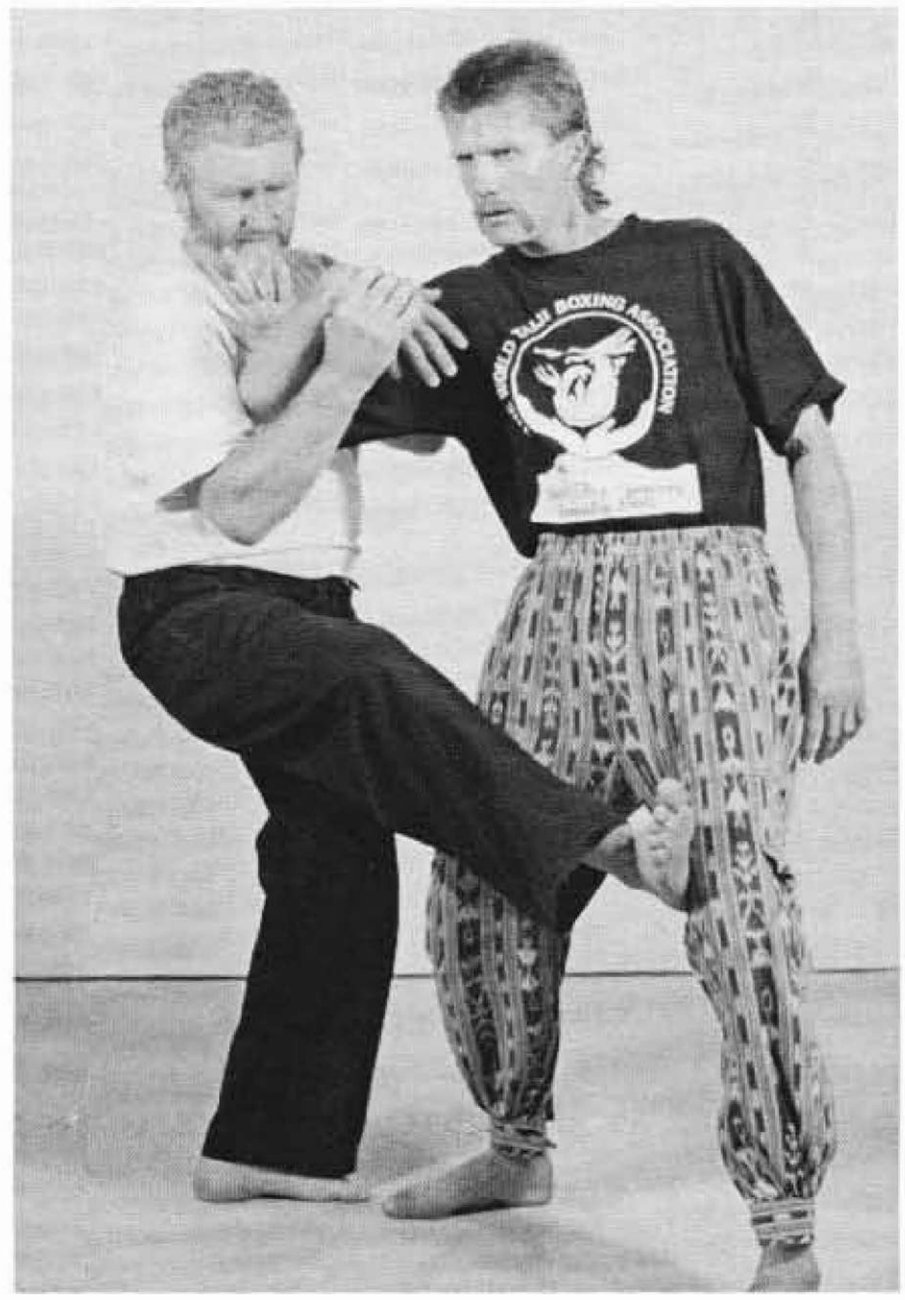


Figure 183

main application. You must stun the attacker first, then get the lock or hold on. He attacks with perhaps a straight right. You should use your right p'eng block to his neigwan, and strike him with your left palm to Gb 25. This in itself is a good knockout strike, which will also cause great kidney damage and can even cause death. Slip your right palm over his right wrist, and, using your left palm to control his right elbow, lock his wrist in a small chi-na lock (fig. 182). Be sure to lock his elbow into your right axilla; this leaves your left hand free to do other damage. It is almost impossible to escape from this hold since you just have so much leverage on the wrist, which causes great qi drainage and local pain. As soon as he moves to try to do something to you, simply increase the pressure, causing him to fall down. To complete this method, kick to Liv 9 on his left leg with your right heel (fig. 183).

LIV 10 (LIVER POINT NO. 10)

Chinese name:

Zuwuli (five measures of the foot).

Location:

3 cun below St 30, on the lateral border of abductor longus, 1 cun below Liv 11.

Connections:

None.

Direction of strike:

Slightly upward into the inside of the upper thigh, just below the groin.

Damage:

This is an excellent set-up point for one of the common KO shots. It will cause local pain and drain qi, thus putting the body into sleep mode. If struck hard enough, it could have an immediate effect upon the eyes, causing signals to be confused.

Set-up point:

Any of the liver points will also work as set-up for this point, as will any of the utility set-up points, such as neigwan.

Antidote:

Gb 35 is either needled or pressed quite hard inward, especially if eye confusion is suspected.

Healing:

Innervation is by the genito-femoral nerve and the anterior femoral cutaneous nerve; deeper, by the anterior branch of the obturator nerve. Irrigation is by the superficial branches of the medial circumflex femoral artery and vein.

Used for lower abdominal distension, retention of urine, lassitude, incontinence, eczema of the scrotum, and pain of the medial side of the thigh.

For massage, press, do clockwise or counterclockwise rotations for xu or shi conditions, do fingertip percussion over the point, or press and hold.

Use with Cv 2, Cv 3, Cv 4, Cv 5, Cv 6, Cv 9, Bl 28, Sp 6, Bl 23, Sp 9, Liv 4, Liv 3, St 36, and Gb 34, for lower abdominal distension, retention of urine, and incontinence.

Use with Liv 2, Liv 3, Liv 8, Sp 10, Ht 7, Gb 31, Bl 18, and Bl 17 for eczema of the scrotum.

Applications:

He might attack with a straight right front kick. Using a bagwazhang method, you slam the side of his calf on the outside at Gb 35. Step in with your left foot and slip your right forearm under his right leg as your left palm is lifted up ready to strike (fig. 184). Strike straight in to Liv 10 with your left palm (fig. 185). NOTE: The lifting of the leg will cause him to fall heavily onto his back.

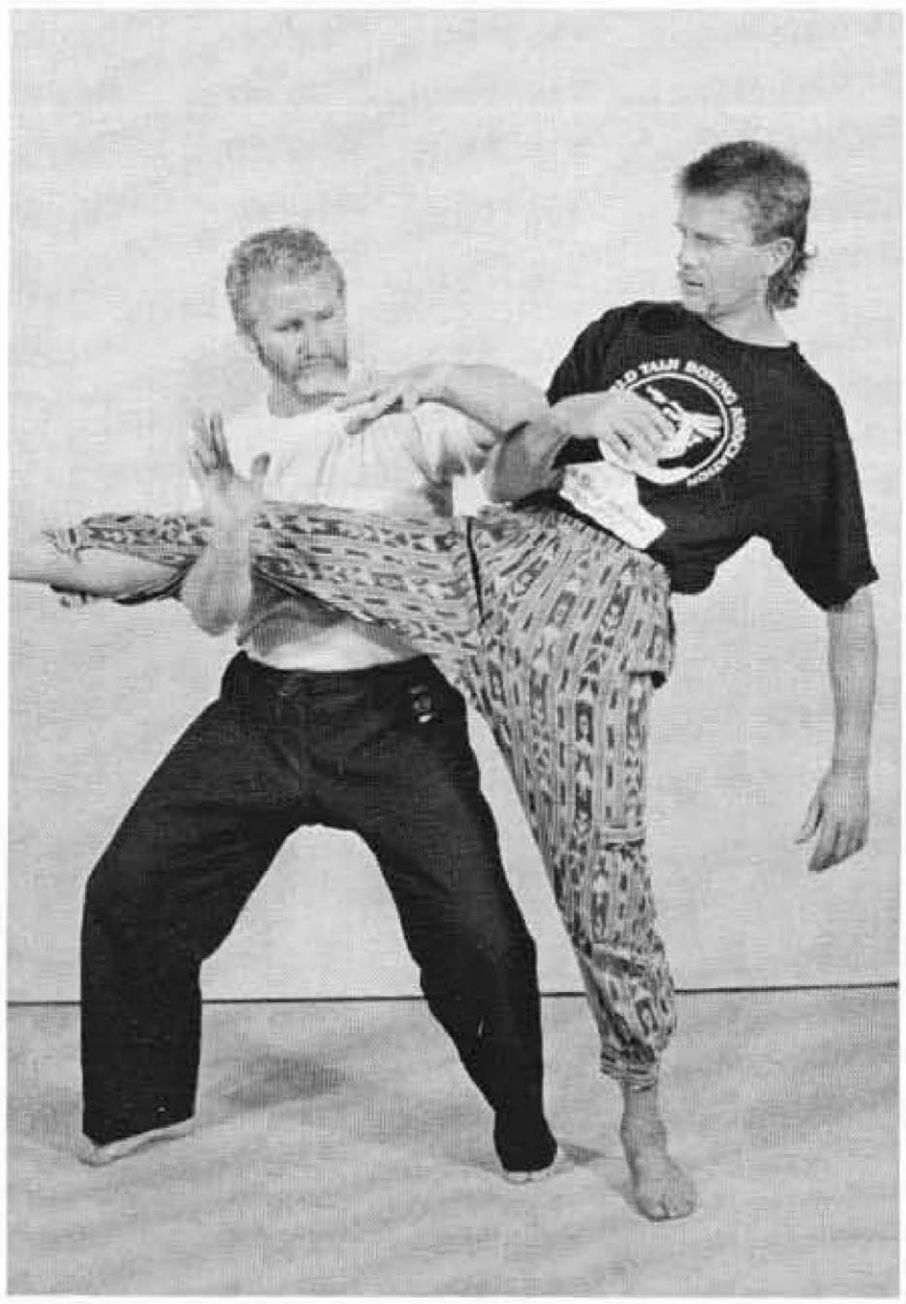


Figure 184

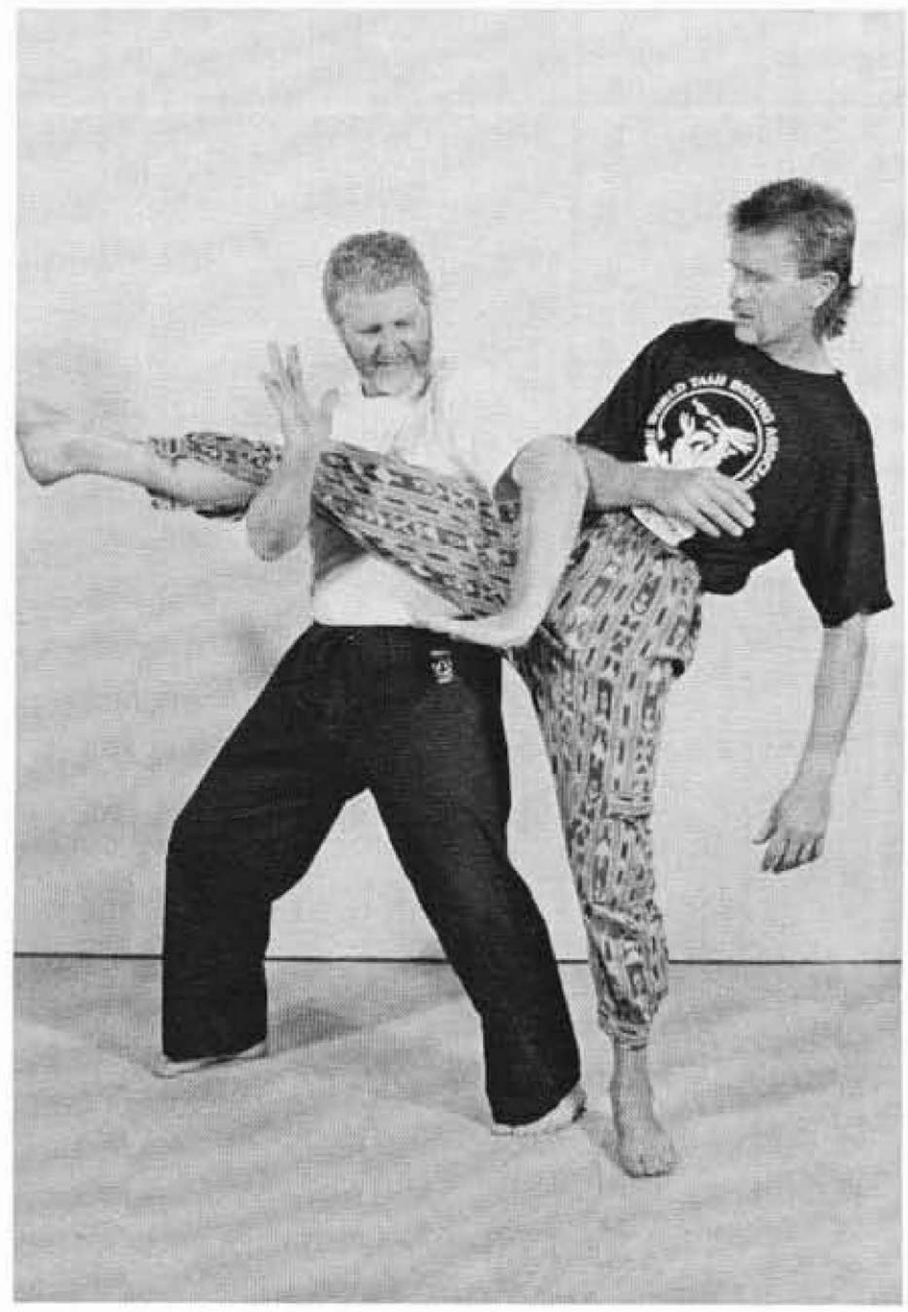


Figure 185

LIV 11 (LIVER POINT NO. 11)

Chinese name:

Yinlian (yin's modest).

Location:

2 cun below St 30, on the lateral border of abductor longus, on the medial border of the thigh.

Connections:

Channel to Sp 12 and Sp 13 reunites at Liv 12.

Direction of strike:

Straight in to the point, outward from the groin.

Damage:

This point is interesting because it also has an effect upon the spleen. A strike to Liv 11 alone will cause the legs and even the arms to become weak, and it has even been known to cause the recipient to fall down because of leg weakness. The brain will also suffer, with the recipient having scattered thoughts, etc.

Set-up point:

Sp 17 is a good set-up here. It is one of the best qi drainage points if you can get at it. I have been struck here, and I couldn't carry on. I had to sit down until the qi had risen back up again.

Antidote:

Sp 1 is pressed, squeezed, or needled.

Healing:

Innervation is by the genito-femoral nerve, by a branch of the medial femoral cutaneous nerve, and, deeper, by the anterior branch of the obturator nerve.

Used for irregular menstruation, pain of the thigh, and pain of hernia.

For massage, press and hold the point or do rotation clockwise or counterclockwise rotations for

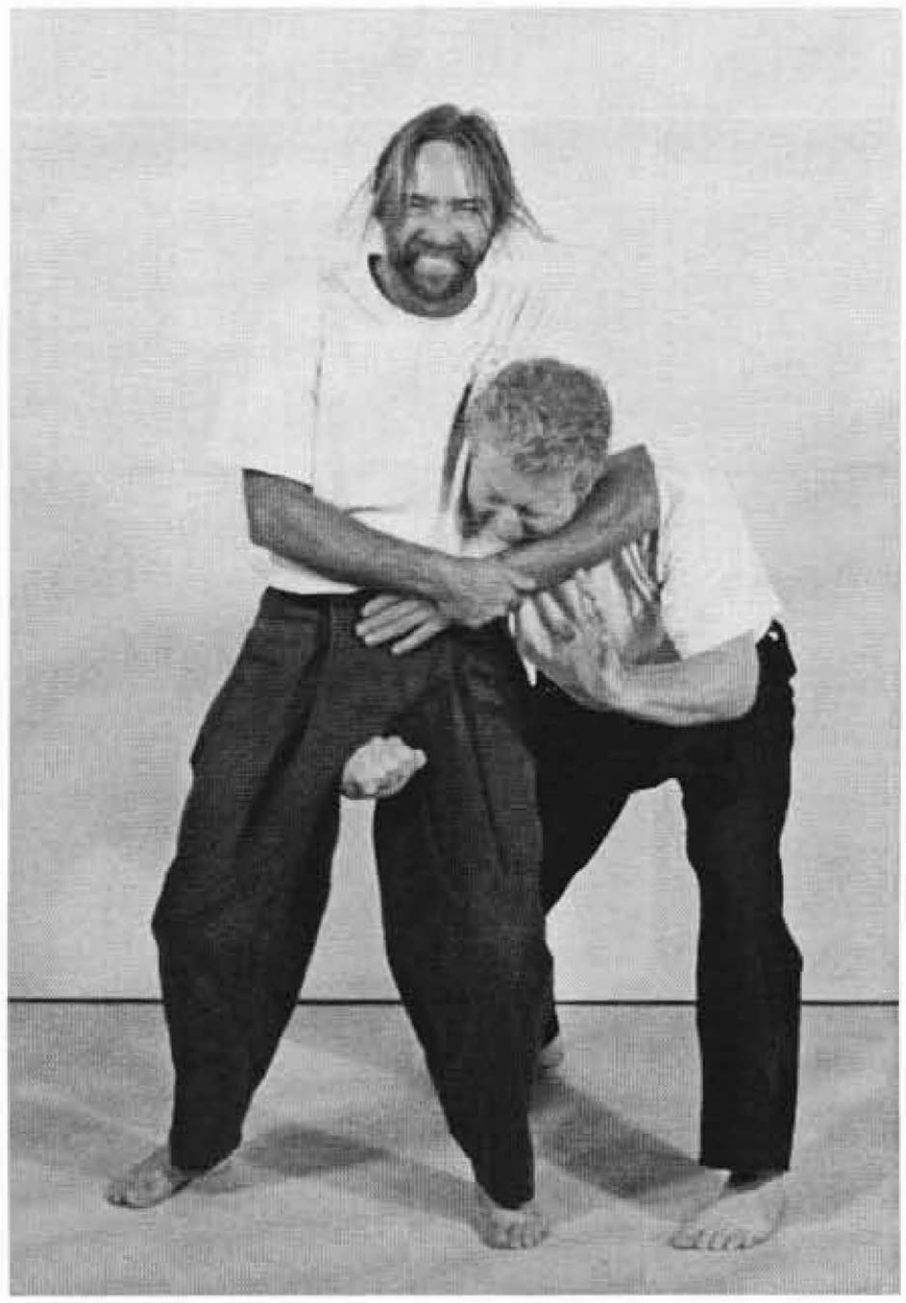


Figure 186

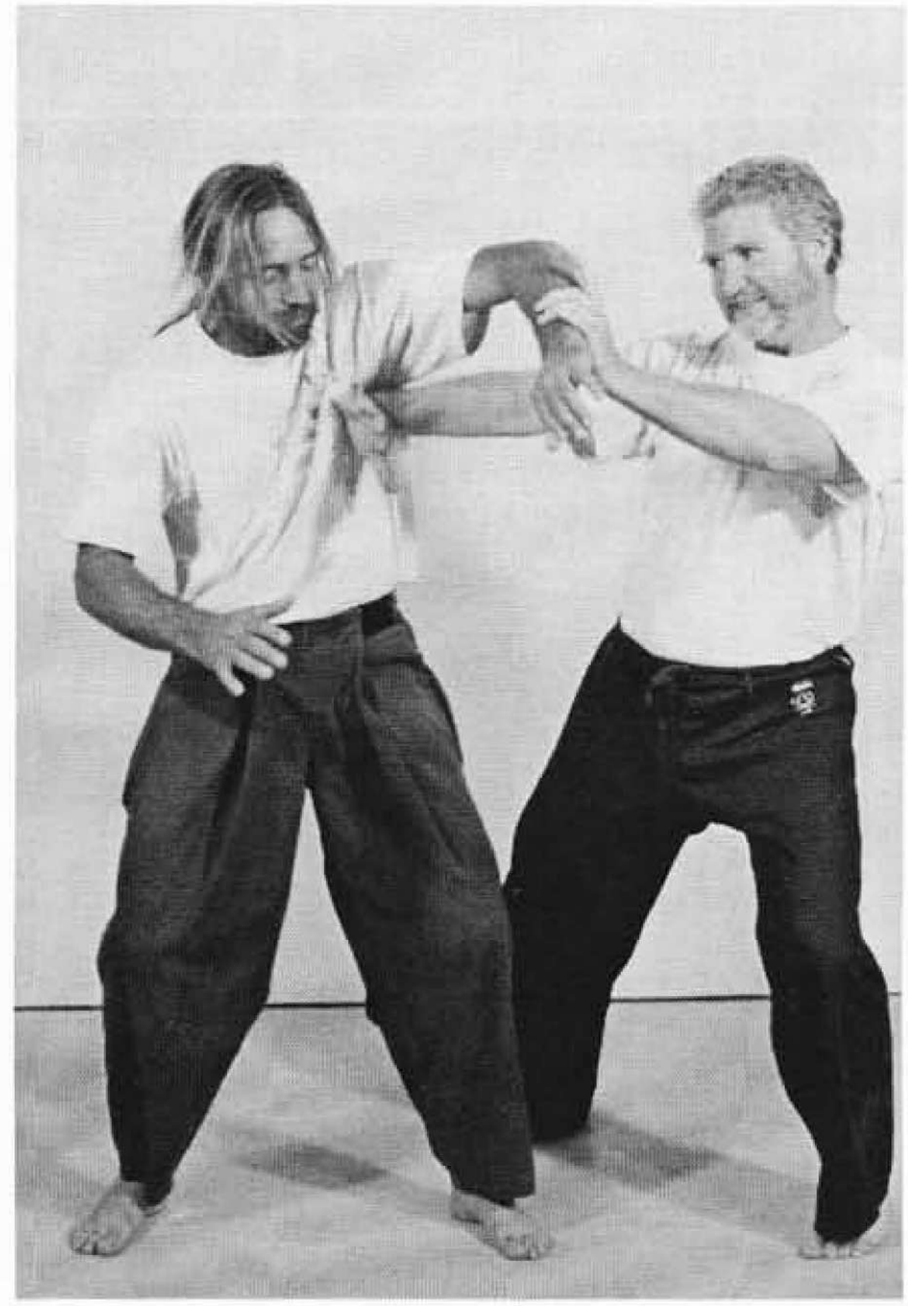


Figure 187

xu or shi conditions. You can also do fingertip percussion over this point, or press with both thumbs, releasing quickly and pulling the thumbs apart as you do.

For paraplegia associated with the femoral nerve, use jiaji points above the injury with Sp 12 with this point, as well as Bl 25, Bl 18, Gv 14, Gv 4, and Gv 20.

For irregular menstruation you can add this point to the formula shown in the Liv 9 treatments.

Applications:

You might be in the unfortunate position of a headlock. Your right (or left) fist, using the bent thumb, slams into Liv 11 through his legs (fig. 186). Now, as he loosens the grip, take your right palm around and, using the power of your waist, strike across his body to Sp 17 (fig. 187).

LIV 12 (LIVER POINT NO. 12)

Chinese name:

Jimai (urgent pulse).

Location:

Inferior and lateral to the pubic symphysis, 2.5 cun lateral to the Cv channel, at the inguinal groove lateral and inferior to St 30. (In a line lateral to the body from the top of the public bone out to the sides 2.5 cun).

Connections:

Connects to the genitals at Cv 2, Cv 3, and Cv 4, and reunites at Liv 13.

Direction of strike:

Straight in.

Damage:

This point has a strong effect upon the genitals, and when someone is struck here, it feels like a strike to the groin and is just as effective. It's easier to get to than the groin, as well. Struck hard enough,

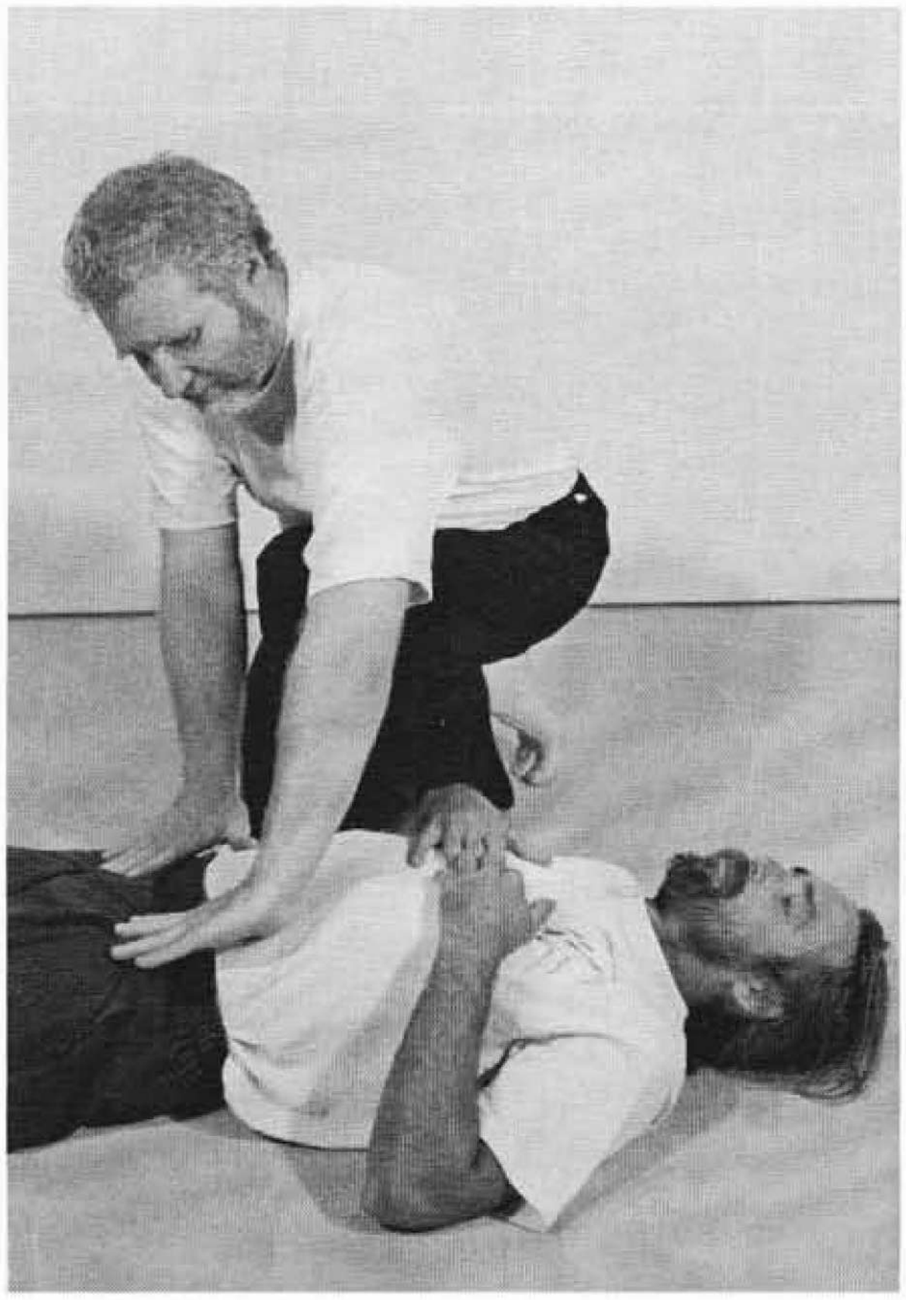


Figure 188

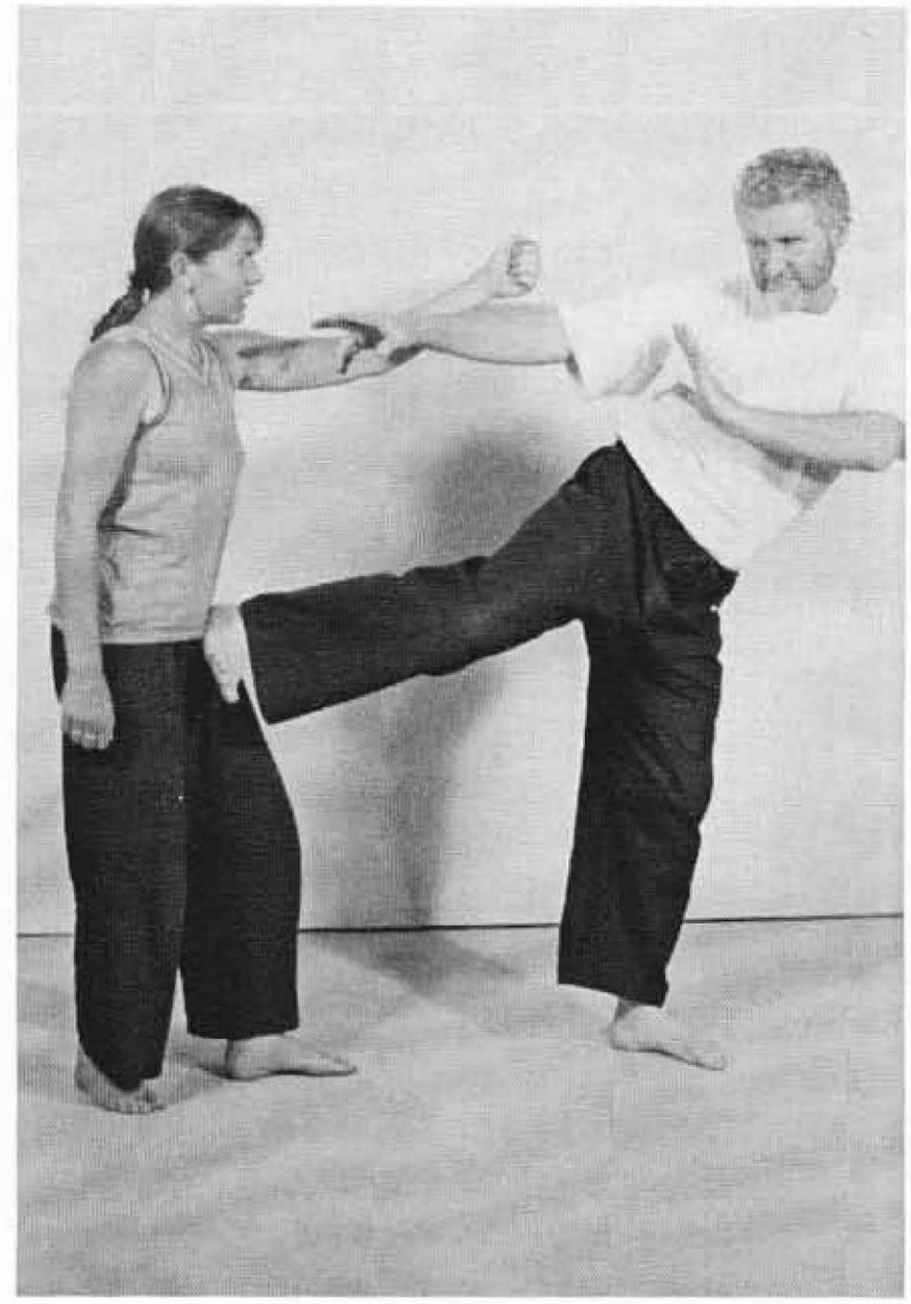


Figure 189

this point can kill. A light to medium shot will cause the genitals to bleed and do physical damage to the tendons and muscles at this area. It also has an effect upon the tantien and will cause the qi flow to the whole body to become erratic for a while. A good point to strike along with this point, although not a set-up point, is Gb 24. The effect is devastating when both are struck together.

Set-up point:

The navel (Cv 8), struck straight in, is an excellent set-up point.

Antidote:

Lie the recipient down and massage up and around the abdomen area on the opposite side of the groin from where the strike was. Repeat several times until the sick feeling has passed (fig. 188).

Healing:

Innervation is by the ileoinguinal nerve. Deeper, in the lower aspect, is the anterior branch of the obturator nerve.

Irrigation is by the branches of the external pudendal artery and vein, the pubic branches of the inferior epigastric artery and vein, and, laterally, the femoral vein.

Used for hernia, pain in the external genitalia, and prolapsed uterus.

Massage techniques are the same as for Liv 11.

Use with Liv 1, Liv 2, Liv 3, Liv 4, Liv 6, Liv 8, Cv 2, Cv 2, Cv 3, Cv 4, Cv 6, Ht 7, and Pc 6 for pain in the external genitalia.

Applications:

He attacks with a left straight. You block using a p'eng-type block onto neigwan, as your right heel kicks backward to Liv 12 (fig. 189).

LIV 13 (LIVER POINT NO. 13)

Chinese name:

Zhangmen (system's door).

Location:

On the lateral side of the abdomen, below the free end of the 11th rib. When the arm is bent at the elbow and held against the side, the point is roughly located at the tip of the elbow. This point is in the internal and external oblique muscles.

Connections:

There is an internal pathway to Liv 14, as well as to the gallbladder and dai mai meridians.

Direction of strike:

Straight in from the front. Usually, both points are struck—his left Liv 13 slightly before the right. It is not usually struck in from the sides, although I have heard of people doing this.

Damage:

Great physical damage is done here, as well as great electrical damage. This is one of the more dangerous points. I know of a case where an instructor struck a student at this point on a television show; they had to get a doctor from the audience to help the recipient, otherwise the student would have died. The spleen is easily ruptured with this strike immediately, as is the liver—thus this point's dangerous nature. It can also cause emotional disturbances later in life.

Set-up point:

No set-up point is needed here, although you could use both Lu 8 points in conjunction with this strike, causing even greater damage, since the qi would be drained greatly.

Antidote:

See a doctor because the physical damage is quite bad. For the emotional problems, treat Lu 5 with Lu 1, using light to medium pressure (although the physical damage will be more prominent immediately than the electrical).

Healing:

This point is innervated by its location slightly inferior to the 10th intercostal nerve and is irrigated by the 10th intercostal artery.

Used for vomiting, abdominal distension, diarrhea, indigestion, pain in the hypochondriac/costal and lumbar regions, enlargement of the liver and spleen, hepatitis, enteritis, and chest pain.

Traditional indications include diarrhea due to cold in the middle heater, turbid and cloudy urine, fullness in the chest and ribs, lumps and distension in the chest due to accumulation of qi, and prolonged jaundice that becomes black jaundice (yellow skin and dark facial complexion).

Liv 13 is a mu point of the spleen (alarm point), so its traditional functions include treating dysfunctions of the spleen/stomach complex (e.g., muscle wasting, anorexia, loose stool). Also, as a meeting point of the zhang (yin) organs (e.g., Liv, Ht, Kd, Sp, Lu, Pc) it can have a beneficial effect on their functions, and because it is a point where the liver and gallbladder channels intersect, it promotes the function of the liver, regulates the flow of qi and blood, relives retention of food, and helps the transformation and transportation function of the spleen.

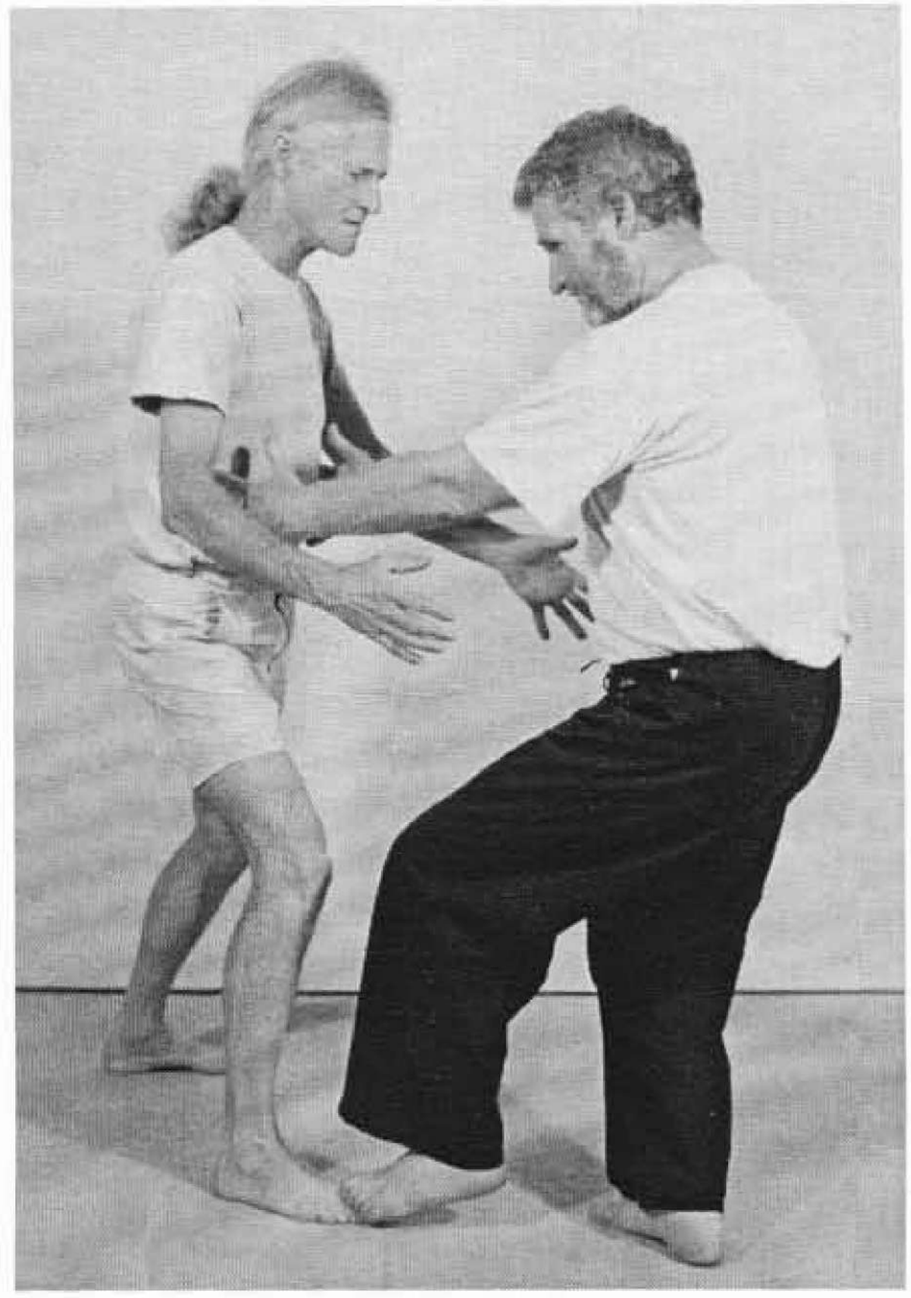


Figure 190

Massage techniques include pressing straight down on the point, rotating clockwise and counterclockwise for xu or shi conditions, and pressing and releasing quickly with both thumbs, pulling the thumbs apart as you release the pressure. You can also hold this point with good effect or use it as part of massage that runs the dai mo.

For enlargement of liver and spleen, use this point with Liv 14, Gb 24, St 21, Cv 12, Bl 18, Bl 19, Bl 20, Bl 21, Liv 3, St 36, and Liv 4.

Use with Gv 14, Gv 9, Bl 18, Bl 19, Bl 20, Gb 34, Sp 6, Sp 9, Liv 2, Liv 3, Liv 4, Liv 14, Liv 6, St 36, Th 5, Sp 4, and Gb 40 for Hepatitis.

Use with Cv 14, Cv 12, Cv 9, Cv 5, St 21, Liv 14, Gb 26, St 25, St 28, St 36, Liv 3, Bl 18, Bl 20, Bl 23, and Bl 25 for distension of the abdomen; add Sp 4, Sp 6, Sp 9, and St 40 for diarrhea.

For intercostal neuralgia use with Th 6, Liv 5, Gb 34, Liv 14, Gb 24, Gb 40, Liv 2, Liv 3, Bl 18, Bl 19, Bl 17, St 40, Sp 9, Pc 6, and jiaji points at relevant levels.

Applications:

1) He attacks with perhaps both hands low. Using a bagwazhang method, slam both of his Lu 8 points downward with both palm heels. If you can also get a toe or heel onto Liv 3 at this point, it's even better. Now step in and thrust both of your knife-edge palms into both Liv 13 points (fig. 190). Alternatively, and only if the fingers and palms have been conditioned internally, thrust the fingers of both hands into the area of Liv 13 on both sides. This will do more damage, but most people never get to use the fingers, because they do not condition them.
2) He attacks with a straight right. Your left palm parries as your right elbow immediately strikes to his right Liv 13.

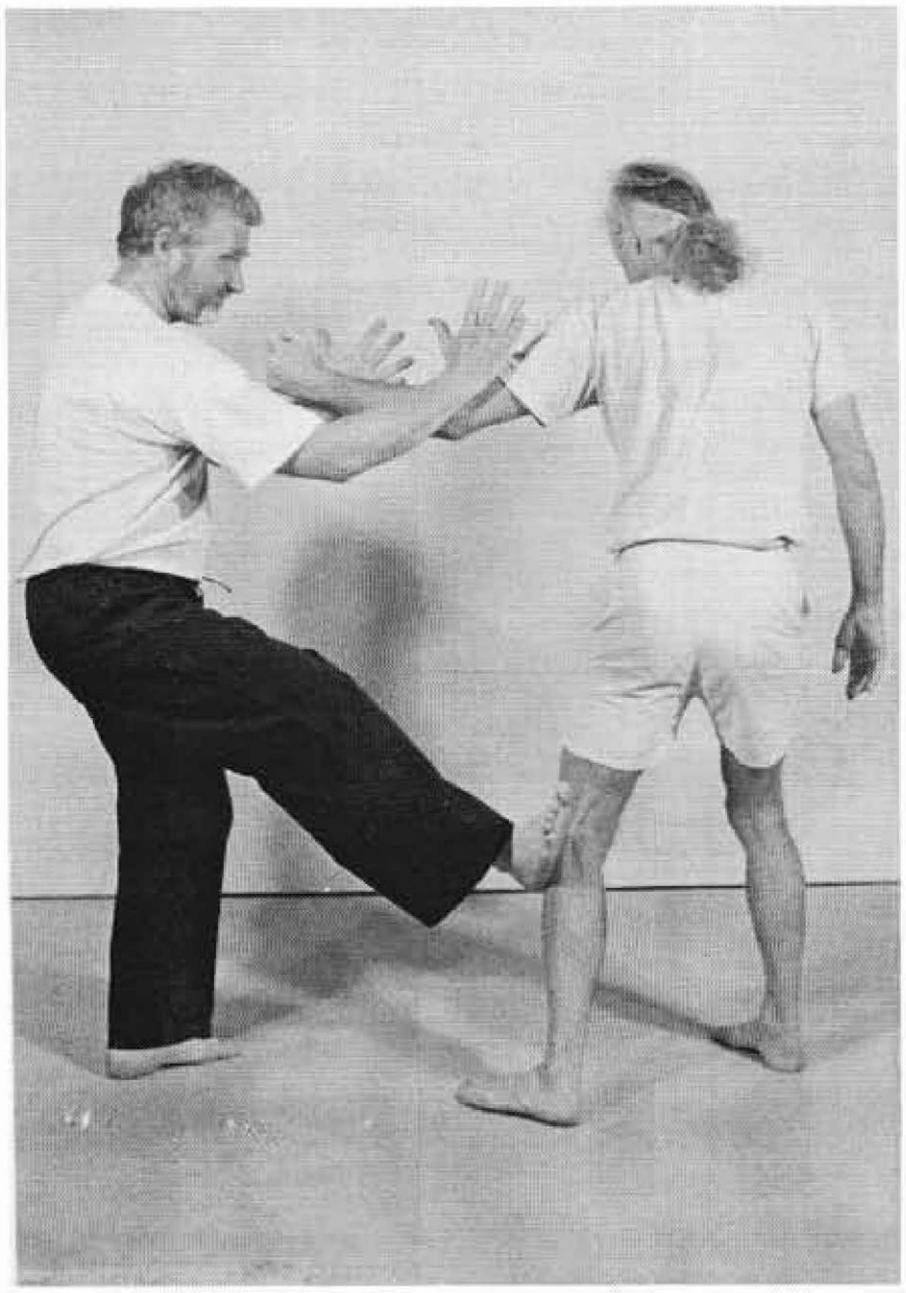


Figure 191

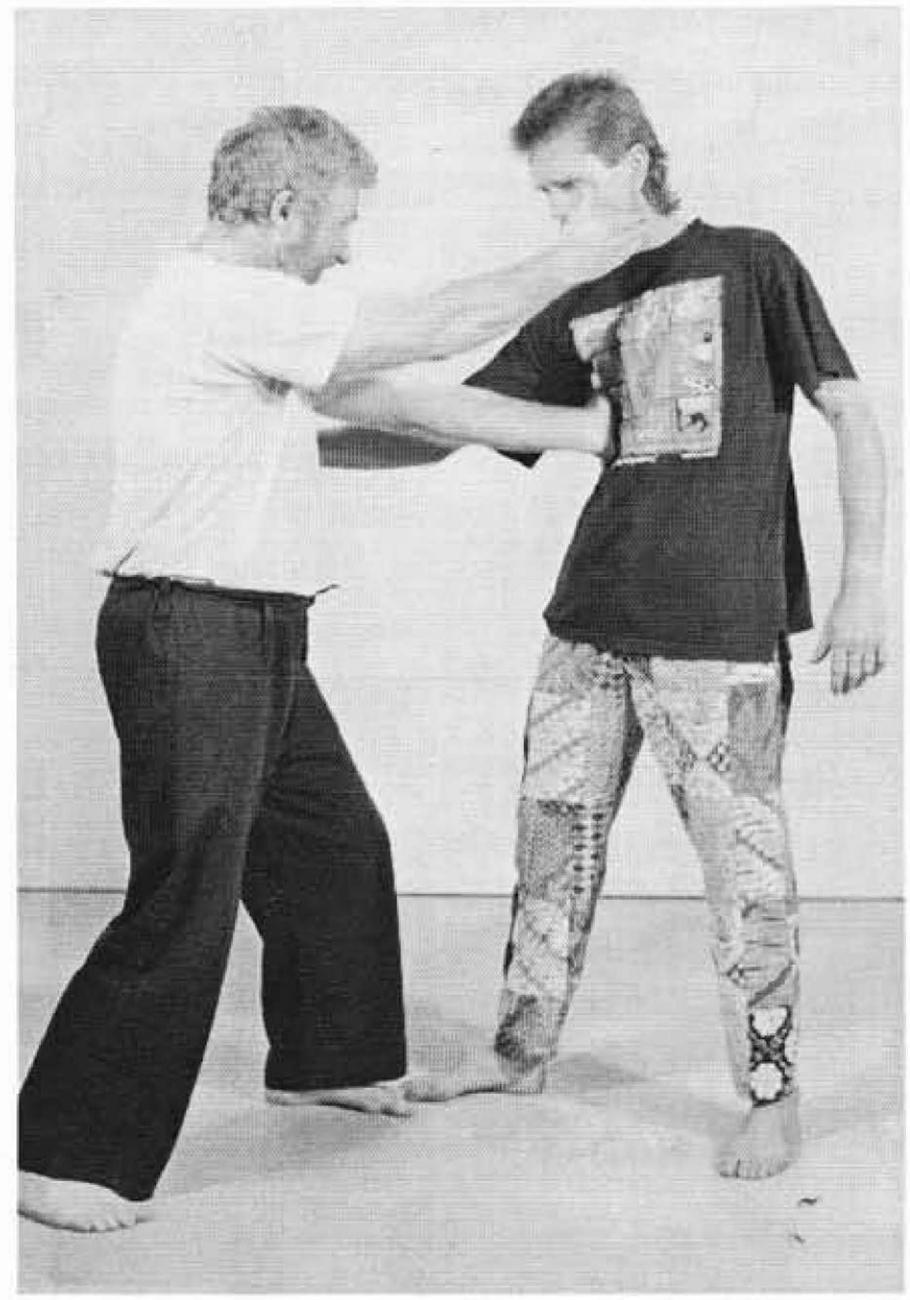


Figure 192

LIV 14 (LIVER POINT NO. 14)

Chinese name:

Qimen (expectation's door).

Location:

On the mamillary line, two ribs below the nipple, in the sixth intercostal space. This point is 6 cun above the navel and 3.5 cun lateral to Gv 14, near the medial end of the sixth intercostal space in the internal and external oblique muscles and the aponeurosis of the transverse abdominal muscle.

Connections:

Spleen channel and *yin wei mai* channel (an extra meridian). Liv 14 has an internal channel up through the head, around the mouth, and through the eyes to Gv 20.

Direction of strike:

Can be struck straight in or from outer to inner (i.e., laterally across the body).

Damage:

This point is used greatly in the martial arts because it is so deadly and relatively easy to get at. Needless to say, KO will occur when this point is struck—mainly because the recipient is dead! A strike to Liv 14 will cause mental problems, as well as heart problems (like stopping it!). It can cause the lungs to collapse. It can cause liver to stop functioning. Even a light strike here will do damage. When the strike to this point is a slice across the body from outside to inside, it will cause great emotional problems and energy drainage, as it stops the qi for a moment. Blindness can occur instantly or at some later time. Hence, this is one of the "delayed death touch points."

Set-up point:

Neigwan, or Lu 5, but both together is even better. See application below.

Antidote:

There is no antidote for this point, although you could see an acupuncturist if mental problems or

emotional problems occur. If the strike is causing blurred vision and it was a lateral strike, you could massage the point in the opposite direction of the strike.

Healing:

Innervation is by the sixth intercostal nerve, and irrigation is by the sixth intercostal artery and vein.

Used for pain in the chest and hypochondriac regions, abdominal distension, fullness in the chest, hepatitis, enlarged liver, cholecystitis, pleurisy, nervous dysfunction of the stomach, and intercostal neuralgia.

Traditional indications include distension around the ribs, chest pain, vomiting, tidal fever, enlargement of the spleen as a result of prolonged tidal fever, and failure to discharge the placenta.

Traditional functions: it is a mu point of the liver, so it can treat syndromes of both the liver and gallbladder, relieve the retention of food, and regulate the circulation of qi and blood. Also, it is a point of intersection with the yin qiao mai (one of the eight extra channels).

Massage techniques include pressing and holding the point, rotating clockwise or counterclockwise for xu or shi conditions, and fingertip percussion over the point.

Use with Bl 17, Bl 18, B 19, Gb 34, Liv 2, Liv 3, Liv 4, Gb 43, Gb 44, St 36, and jiaji points from T 7 to T 10 for intercostal neuralgia.

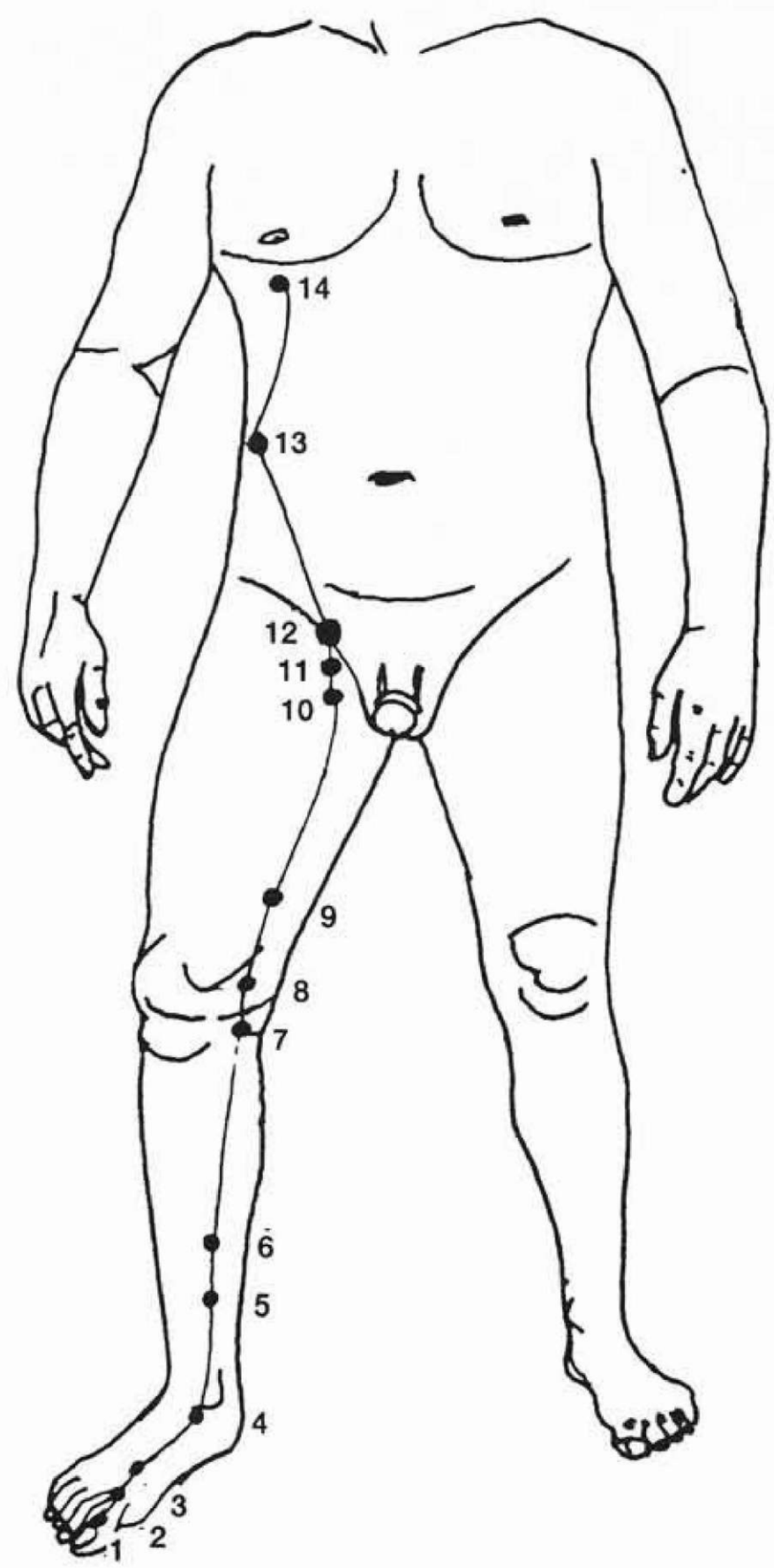
For enlarged liver and spleen, use with Gb 24, Liv 13, Bl 18, Bl 19, Bl 20, Liv 2, Liv 3, Liv 4, Gb 34, St 45, St 44, Sp 10, Sp 9, and Sp 7.

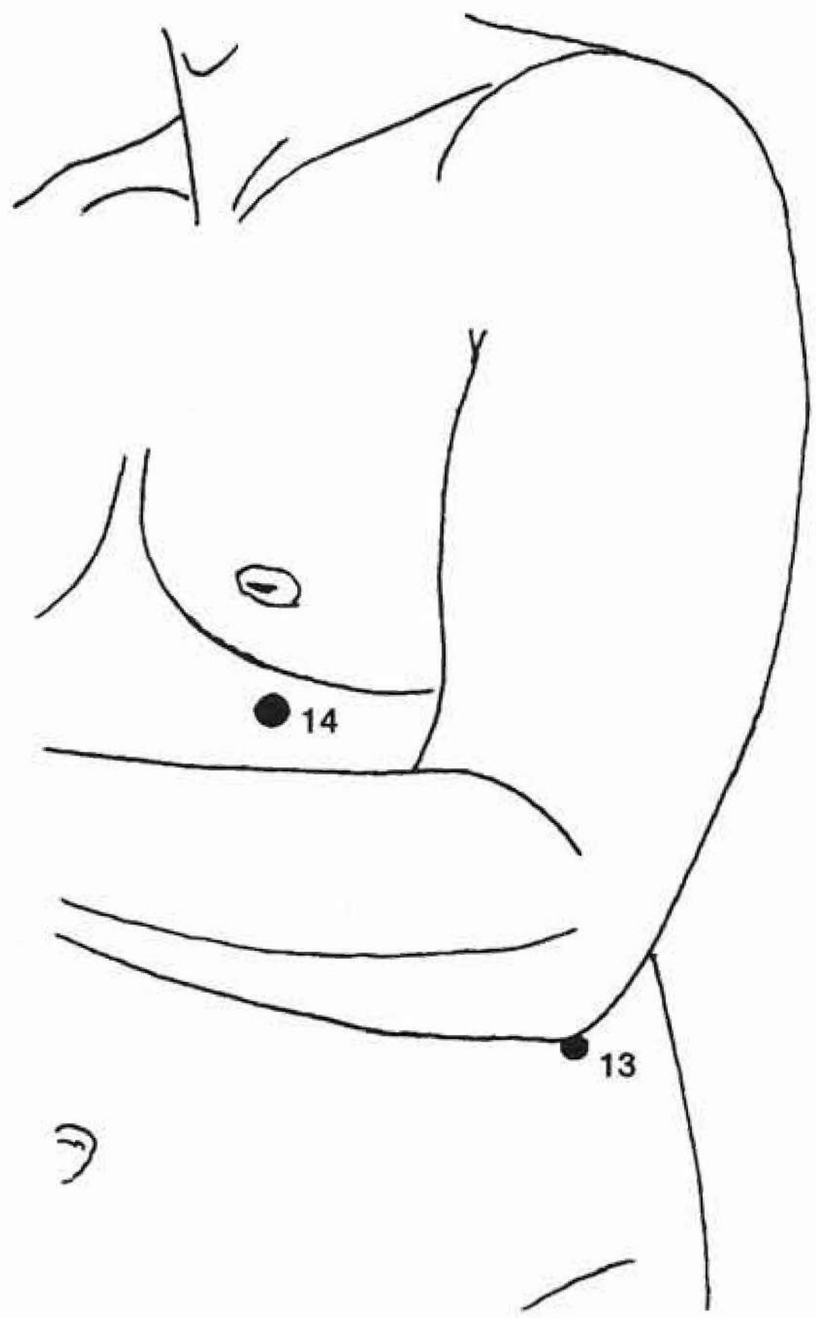
For asthma or chest congestion with difficulty breathing, use Liv 14 with Bl 13, Bl 12, Bl 43, Bl 17, Bl 18, Bl 20, Bl 23, *dingchuan* (extra point), Lu 1, Lu 5, Lu 7, Lu 9, Co 4, Co 11, St 36, and Liv 3.

Use it with Pc 6, Pc 4, Pc 8, Ht 7, Cv 17, Cv 12, Cv 4, Liv 3, and St 36, for nervousness, anxiety, and depression.

Applications:

He attacks with a straight left. You use a taijiquan method of "lift hands" to trap and damage the elbow, slamming his neigwan point with your left palm while your right palm attacks to Si 8. Your right heel has also struck in to St 36 on his left leg (fig. 191). Your right palm pushes his left arm over to your left as the palm heel of your left hand strikes in to Liv 14 and your right fingers attack to St 9 (fig. 192).

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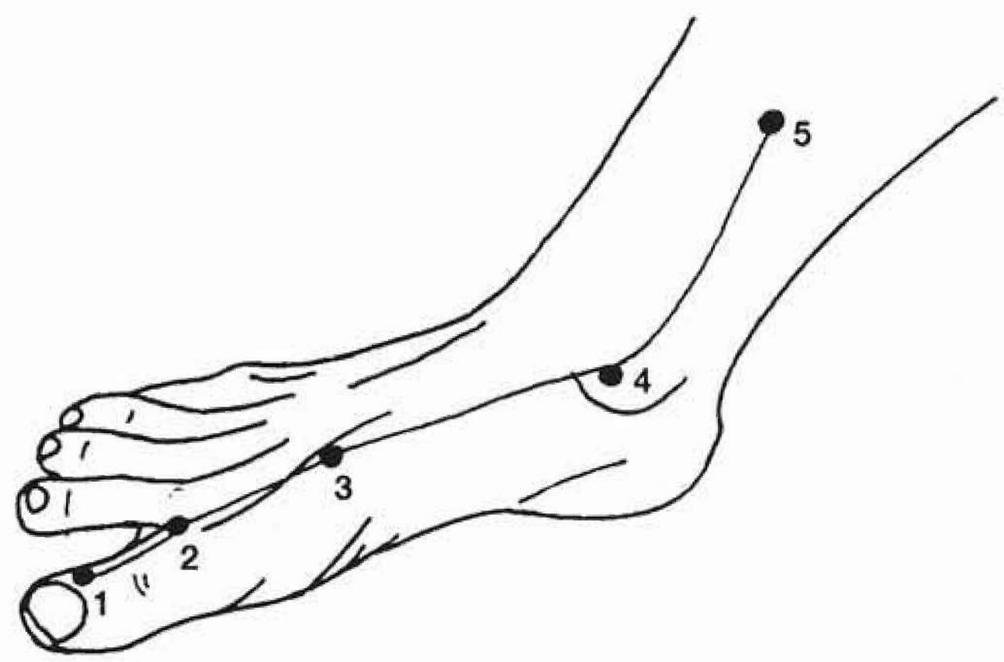
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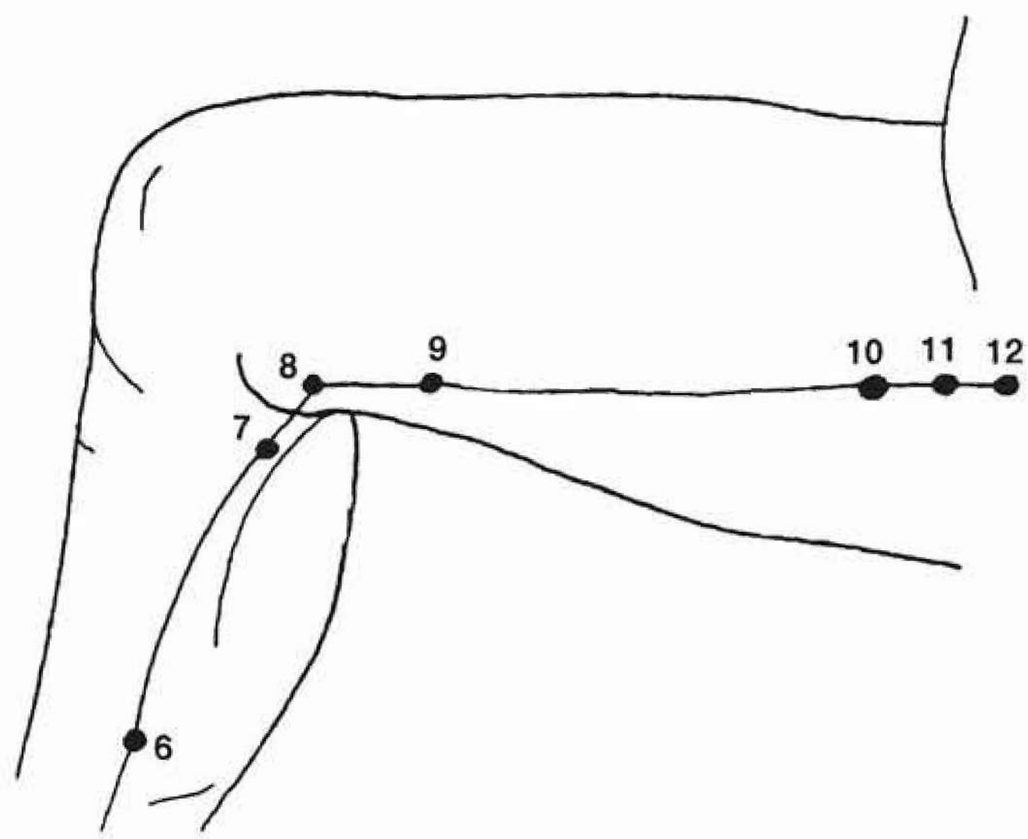
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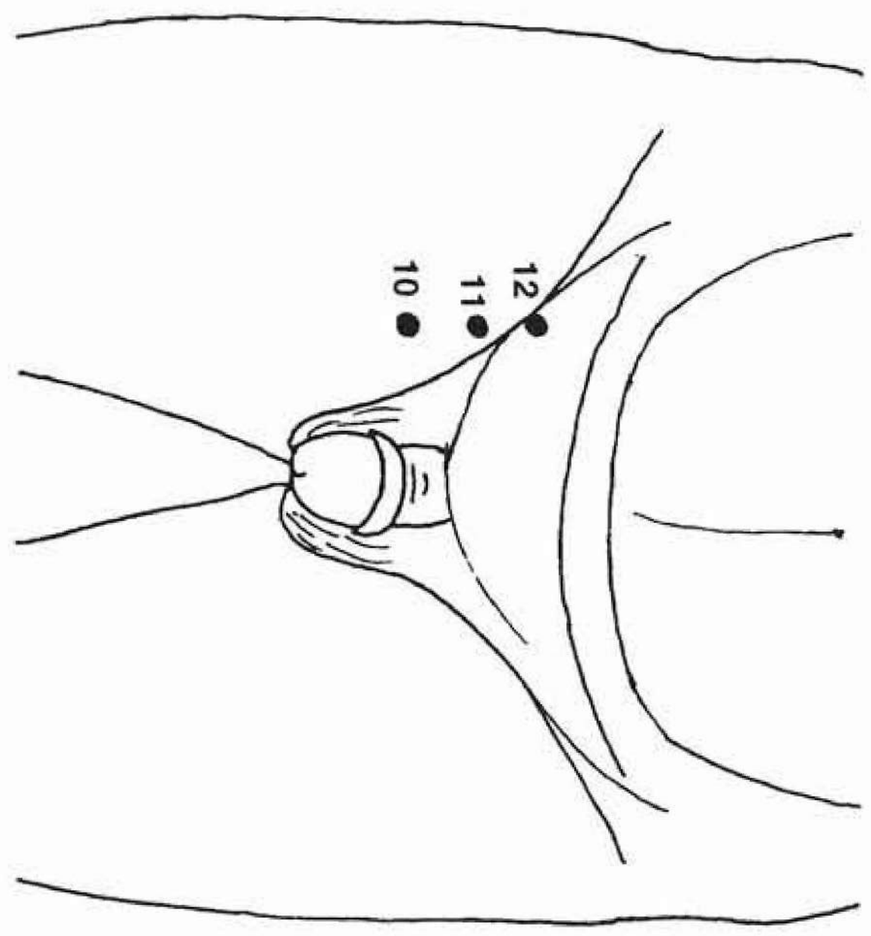
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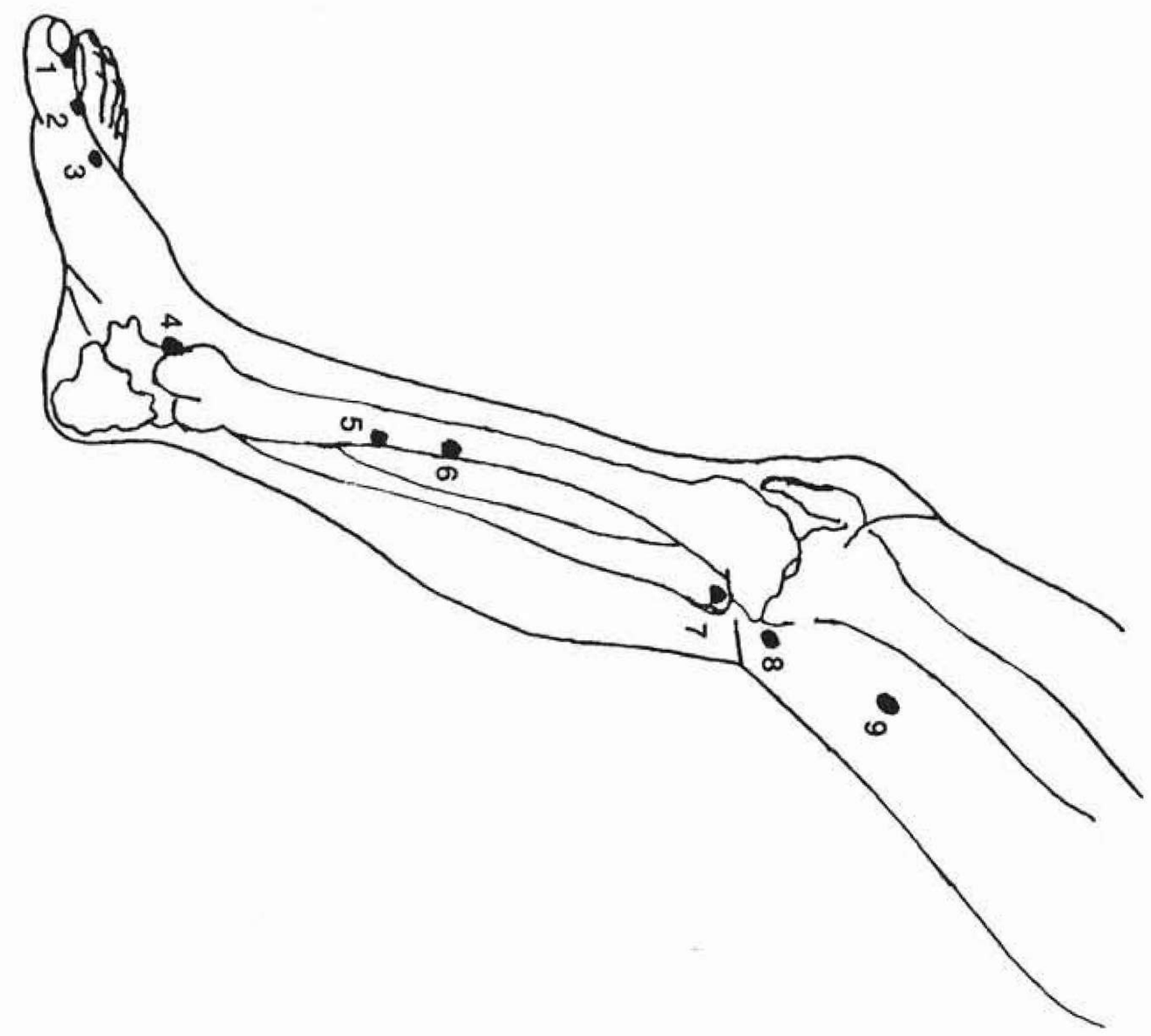
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Chapter 3

The Bladder Meridian

The Chinese element for the bladder is water. Its yin counterparts are the kidneys, and its role in the social structure is the controller of fluid storage. The function of the bladder is to receive the waste fluids and expel them from the body. The bladder sphincter is controlled by kidney qi, so micturition (urination) is accomplished with the aid of the kidneys.

THE TCM VIEW

The TCM function of the bladder is to transform qi and remove water. Qi transformation takes place when the heat of the body acts upon the fluids, evaporating them into qi. This transformed qi then controls the amount of liquid leaving the body. If the transformation of qi is impaired in some way, urination problems occur. The function of qi transformation in the bladder is helped by the *san jiao,* or triple heater meridian, particularly the lower heating space. So the bladder is closely linked with the san jiao meridian, particularly the lower jiao.

The bladder meridian is the longest meridian, with many of the points, particularly on the back, very close together. Obviously there will be times when one point will do much the same as the one closest to it.

The bladder meridian seems to have more to do with spiritual matters than the other meridians—especially the points in the back. So many of the strikes to the back also have a secondary effect of "damaging the shen" (spirit). It is my belief, however, that nothing can harm the spirit (God part), and that what these strikes will likely do is cause difficulty or block communication between body, mind, and spirit.

The points in the back of the body are particularly dangerous. And the bladder meridian has more points in the back of the torso than any other meridian since it has two pathways side by side down the back. So, accessing the bladder points in the back is relatively easy once you have accessed the back.

BL 1 (BLADDER POINT NO. 1)

Chinese name:

Jingming (eyes bright).

Location:

0.1 cun superior to the inner canthus, in the medial palpebral ligament, and, in its deep position, in the rectus medialis bulbi. Outside corner of the eye.

Connections:

Gallbladder, small intestine, stomach, *yang qiao mai* (one of the eight extra meridians), *yin qiao mai*, (one of the eight extra meridians), and triple heater, spleen, and heart divergent meridians.

Direction of strike:

Into the corner of the eye on the nose side at a slight angle toward the nose.

Damage:

This point is particularly nasty. Its immediate effect for even a light strike is nausea, then a rapid energy loss and possible loss of sight. Because of its connections to many other meridians, internal qi damage is also done to those associated organs. Struck hard, it will stop the flow of qi, resulting in death.

Because this point stimulates the *wei qi* (which protects us externally from internal attack by disease, etc.), a strike here will cause the immune system to break down, thus causing damage later by disease. The whole energy system is put out of balance by a strike to Bl 1.

Set-up point:

A set-up point is not needed for this strike because it is so potent. However, neigwan will enhance its effects by draining energy, thus making it more lethal, if that is possible.

Antidote:

There is no antidote for a hard strike to this point. However, you could try the balancing method in Chapter 1 under "Antidote" for Gb 8 (placing both palms together over the head with three fingers touching, etc.) For nausea, use finger pressure to neigwan, down the inside of the forearm.

Healing:

Superficially, innervation is by the supratrochlear and infratrochlear nerves. Deeper, it is by the branches of the oculomotor and the ophthalmic nerves down the back. Above the point is the naso-ciliary nerve. Irrigation is by the medial angular artery and vein, the supratrochlear and infratrochlear arteries and veins, and, deeper and above, by the ophthalmic artery and vein.

Used for redness, swelling, and pain of the eye; lacrimation when attacked by wind; itching of the canthus; night blindness; color blindness; acute and chronic conjunctivitis, myopia, hypermetropia, astigmatism, atrophy of the optic nerve, optic neuritis, glaucoma, early stages of cataract, and keratoleukoma.

Traditional indications include red and sore eyes, polypus (polyps) extending into the eye, excessive tearing on exposure to wind, glaucoma, opacity of cornea, and obstructive membranes inside or outside the eye.

Traditional functions are to disperse wind, cool heat, clear the vision, and open the channels.

To massage, you can press and hold the point, rotate clockwise or counterclockwise for xu or shi conditions, or do a series of press and releases. Use with taiyang, qiuhou, and yiming (another extra point), Si 1, Co 4, Liv 2, Liv 3, Gb 43, and Gb 44 for cataracts and keratoleukoma.

Use with Bl 2, yuyao, Th 23, Gb 1, St 1, qiuhou, Gb 14, Gb 20, Gb 43, Gb 44, Liv 2, Liv 3, Gv 20, Co 4, Co 11, Gb 8, and taiyang for red, sore, and swollen eyes.

For hysteria, use with Pc 6, Ht 7, Gv 26, Si 3, Co 4, Liv 3, Lu 11, Liv 1, Sp 6, Co 11, Gb 30, Gb 34, Th 21, Th 17, Th 23, Gv 20, Kd 6, Kd 4, and Kd 1.

For psychosis, use with Gv 14, Gv 26, Gv 20, Gv 15, Gb 20, Gb 34, Cv 15, Cv 14, Cv 13, Cv 12, Pc 5, Pc 8, Pc 6, Th 6, St 40, Ht 5, Ht 7, Sp 6, Cv 5, Bl 39, Bl 18, Bl 20, Lu 11, Liv 3, Liv 2, *sishencong* (an extra point), and *anmien* (an extra point).

This is a point of intersection with the small intestine, stomach, yin qiao, and yang qiao channels. The colon channel also sends a branch from Co 20 to St 1 and Bl 1. This is also a branch point for the bladder meridian.

You can combine Bl 1 and the branch of the bladder meridian with Gb 37, the root of the gallbladder meridian, to treat eye disease.

Applications:

He attacks with a straight right. Slam his neigwan with your right palm. Your left now takes over the block as your right one-knuckle punch attacks to Bl 1.

BL 2 (BLADDER POINT NO. 2)

Chinese name:

Zanzhu (gathered bamboo/drilling bamboo).

Location:

In the supraorbital notch at the medial end of the eyebrow, in the frontalis and corrugator supercilii muscles.

Connections:

None.

Direction of strike:

Slightly upward into the upper part of the eye socket near the inner edge, just above Gb 1.

Damage:

Again, this point is extremely dangerous, as it is an extreme qi drainage point. Not only physical damage to the eye area but also great qi damage will result. A light strike here will cause headaches for months. When the point is struck in an upward way, the head feels as if it is exploding,, and KO, or even death, can occur when it is struck hard. The receipient will also experience nausea.

Set-up point:

No set-up point is needed here. However, neigwan could be used because it also drains qi.

Antidote:

Neigwan, rubbing down the forearm if there is nausea. If knocked out, use Gb 20 if breathing and pulse have not stopped. Use the "heart starter" method (below) or CPR if the heart has stopped. If none of the above work, try "bleeding" Kd 1. If you do not have a sharp object to bleed Kd, 1 use a very hard one-knuckle punch up into the point. This will release the stored qi from the kidneys to help the heart start.

Heart starter: press your thumbs quite hard down into St 11 (at the end of the collarbones near

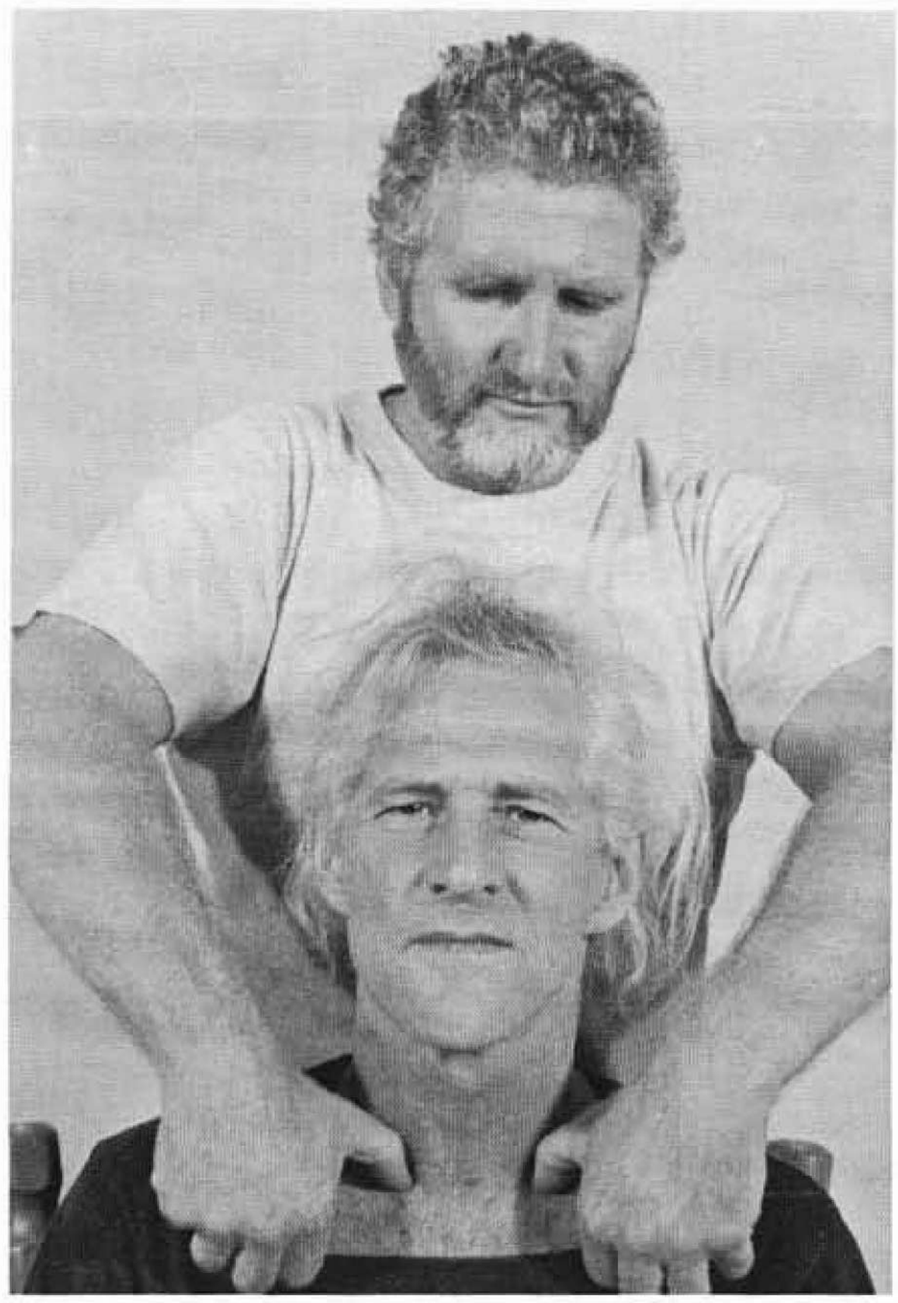


Figure 193

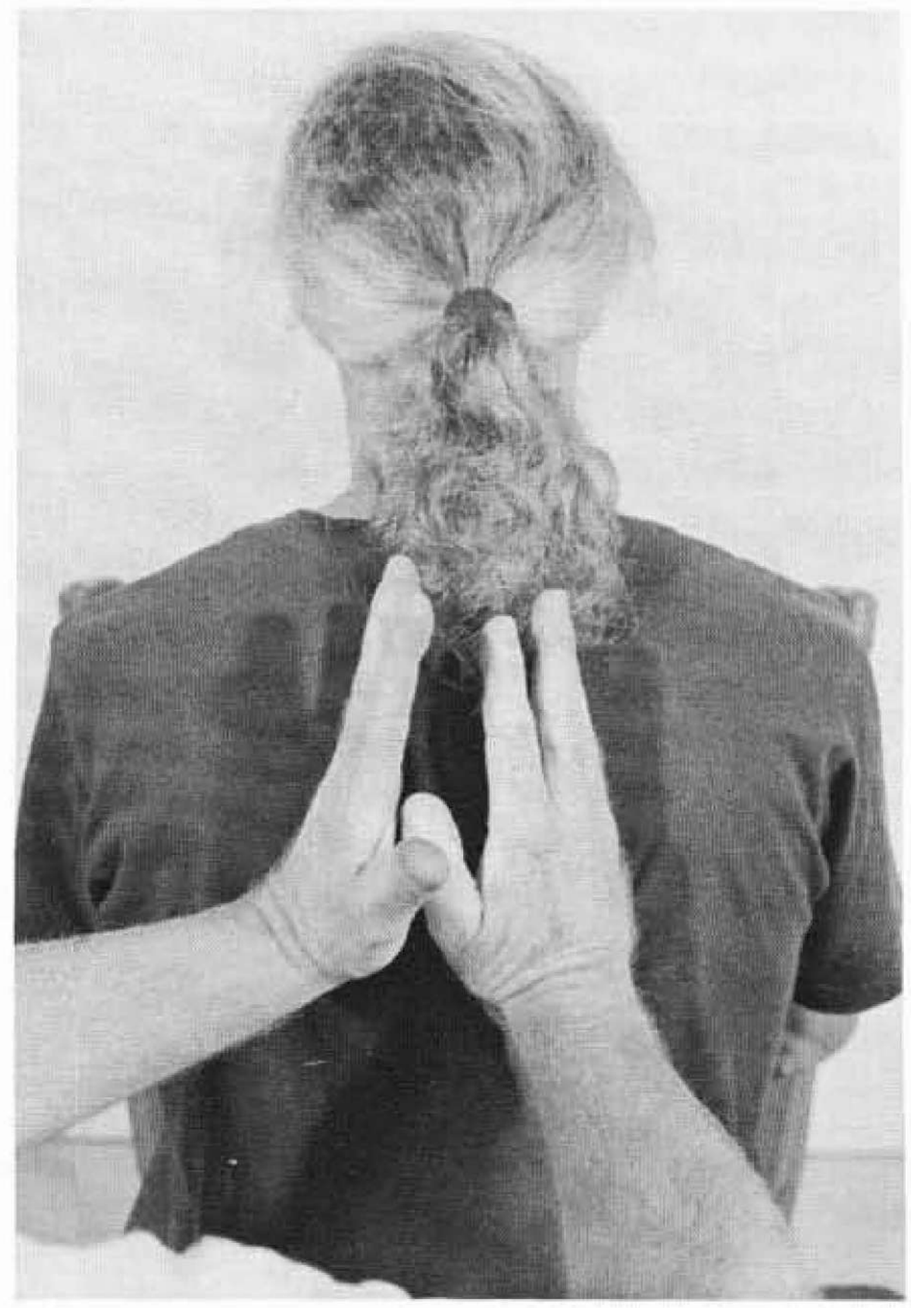


Figure 194

the neck) on both sides (fig. 193). Next, using both of your palms, strike in an arc to either side of each scapular, not touching the backbone (fig. 194).

Healing:

Used for headache; blurring and failing vision; pain in the supraorbital region; lacrimation in wind; redness, pain swelling of the eye; twitching of the eyelids; myopia; acute conjunctivitis; keratoleukoma; facial paralysis; and sinus.

Traditional indications include cold and hot headaches; headaches in the area around the eyebrows (sinus related); red, sore, swollen eyes; dizziness; excessive tearing; insanity; and infantile convulsions.

Traditional functions are to dispel wind, brighten the eyes, soothe the liver, stop pain, and invigorate the channels. Bl 2 is also a branch point for the small intestine meridian.

Massage techniques include pressing and holding the point, pressing and releasing a number of times, rotating clockwise or counterclockwise for xu or shi conditions, and pinching this point either alone or as a progression of pinches across the eyebrow.

Use with St 8, Gb 20, Gb 14, and Liv 3 for eye tic. For sinusitis, use with Co 20, Co 4, Co 11, Lu 7, Lu 5, yintang, St 36, Liv 2, Liv 3, and *bitong* (an extra point). For hyperthyroidism, use with Pc 5, Sp 6, Ht 6, Ht 7, Pc 6, Kd 7, St 2, Gb 20, and *shangtianzhu* (an extra point), *qiying* (an extra point), jiaji points from C 3 to C 5, Co 4, Liv 2, Liv 3, Liv 4, St 45, St 44, St 9, and Cv 23.

Applications:

1) You are perhaps in a grappling situation. Simply punch up into the corner of the eye socket on the top edge with a one-knuckle punch at Bl 2.
2) Take the outside of his left straight attack with your right palm, slamming it at Si 8. Use your elbow (or any other weapon) to strike up into Bl 2.

BL 3 (BLADDER POINT NO. 3)

Chinese name:

Meichong (eyebrow's pouring).

Location:

Directly above the medial end of the eyebrow, 0.5 cun within the anterior hairline, between Gv 24, and Bl 4.

Connections:

None.

Direction of strike:

Straight down into the head.

Damage:

This strike shocks the brain, causing a KO or a broken neck if the strike is hard enough. It is also an energy drainage point. Bl 3 is over the front part of the cerebrum, which pretty well controls all of the conscious physical functions of the body, so a strike here would cause loss of bodily control.

Set-up point:

Use neigwan.

Antidote:

For qi drainage, lightly press Gv 20 downward. For brain damage, see a doctor.

Healing:

Innervation and irrigation are the same as for Bl 1.

Used for headache, dizziness, epilepsy, and blocked nose.

To massage, press and hold the point, rotate clockwise or counterclockwise for xu or shi conditions, or you can do fingertip percussion on the point. You can do an on/off press on the point, with slow depression and fast release.

For headache, use with Gv 20, Gb 20, Gb 14, yintang, taiyang, Co 4, Co 11, Liv 3, Liv 4, St 36, and Gb 34.

Figure 195

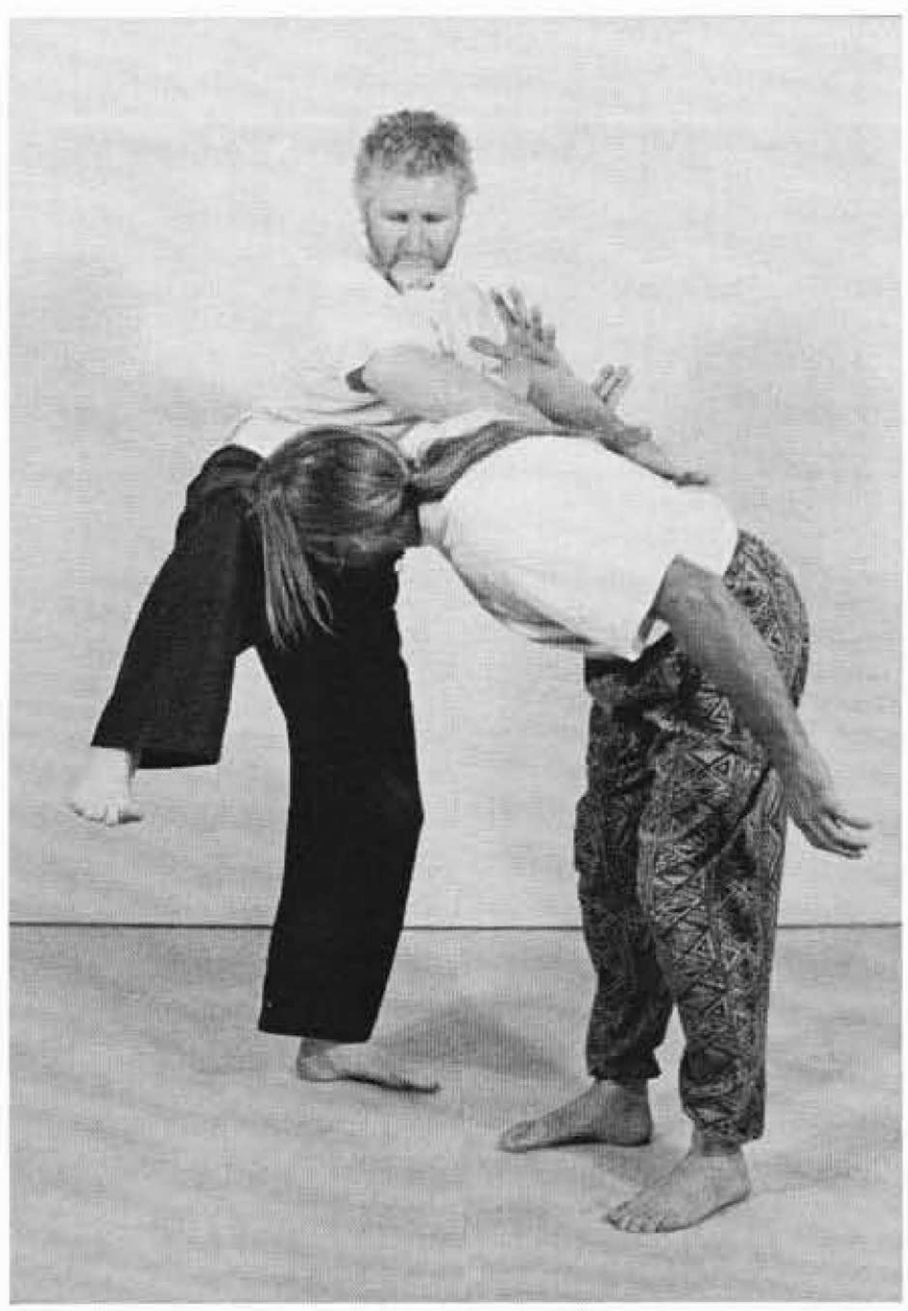


Figure 196

For sinus, use with Co 4, Co 11, Lu 7, Lu 5, Co 20, bitong, taiyang, Liv 3, St 36, and St 40.

Use with Gv 20, Gb 20, Bl 18, Bl 23, Th 17, Co 4, Liv 3, Si 19, Pc 6, Cv 2, Kd 3, Liv 14, Liv 13, and Cv 4 for vertigo.

Applications:

If he is standing in a strong on-guard stance, rush in and slam his right neigwan with your left palm and immediately strike his left neigwan with your right palm. Now, the right palm is free to slam downward onto Bl 3 (fig. 195).

BL 4 (BLADDER POINT NO. 4)

Chinese name:

Quchai (discrepancy).

Location:

1.5 cun lateral to Gv 24, at the junction of the medial third and the lateral two-thirds of the distance between Gv 24 and St 8, within the natural hairline.

Connections:

None.

Direction of strike:

Straight in to the skull.

Damage:

This point will also shock the brain. Because it does not know what is happening, it then shuts the body down. You could easily strike to Bl 4 and Bl 3 with the same strike. The blow has to be substantial since this part of the skull is well protected. Physical damage to the neck will also occur.

Set-up point:

Neigwan.

Antidote:

Use the qi balancing method, or if physical damage has occurred, such as neck problems, see a doctor.

Healing:

Innervation is by the lateral branch of the frontal nerve; irrigation is by the frontal artery and vein.

Used for frontal vertical headache, blurring of vision, ophthalmoplegia, nasal obstruction, epistaxis, and eye disease.

Massage is the same as for Bl 3.

For blurred vision, use with Bl 5, Bl 1, Si 6, Co 4, Gb 20, Liv 3.

For sinus, use with Co 20, Co 11, Co 4, Lu 5, Lu 7, Gb 20, Bl 2, Bl 7, Bl 12, Bl 13, Gv 23, St 36, St 40, Liv 3, Sp 3, and yintang.

Use with Gb 14, yintang, Gv 20, Liv 2, Liv 3, Liv 4, St 36, Co 4, Co 11, and Pc 6 for frontal headache.

Applications:

He attacks with a straight right. Slam his right neigwan with your right palm, then rebound into a neurological strike to the side of his face. Now take his right elbow with your right palm. As your left palm takes his right wrist and bends the arm, you slip your right forearm into the "4" shape to form a reverse figure 4 lock and lift your right knee into Bl 4 (fig. 196).

BL 5 (BLADDER POINT NO. 5)

Chinese name:

Wuchu (five places).

Location:

1.5 cun lateral to Gv 23, directly above Bl 4, 1 cun within the natural hairline.

The distance from the midpoint of the anterior hairline to the midpoint of the posterior hairline is measured as 12 cun. If the anterior hairline is indistinguishable, it may be measured from the glabella (the extra point yintang, between the eyebrows) by adding another 3 cun.

Connections:

None.

Direction of strike:

Straight in to the head.

Damage:

Since Bl 5 is a little farther back than Bl 4, this strike needs less force. Local pain is felt, followed by a qi drainage that moves down the body, causing nausea when it reaches the stomach. KO will result if the point is struck hard enough.

Figure 197

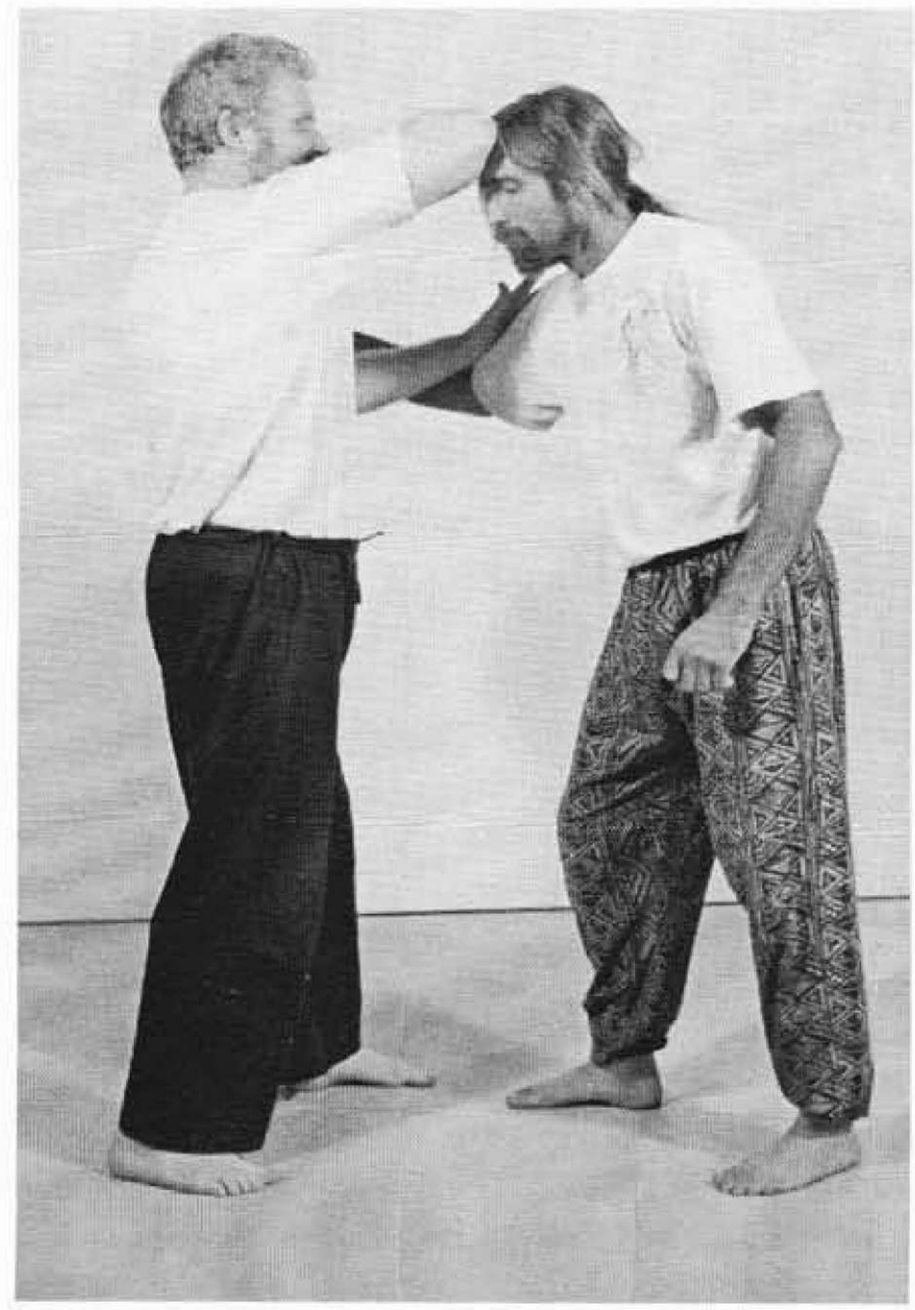


Figure 198

Set-up point:

Th 8 is a good set-up point since it will cause the brain to receive confused messages when Bl 5 is struck.

Antidote:

Treat Gb 40 either with needles or with finger pressure.

Healing:

Innervation and irrigation are the same as for Bl 4.

Used for headache, blurring of vision, epilepsy, vertigo, rhinitis, and sinusitis.

Massage as for Bl 3.

For visual problems, use with Gb 20, Bl 1, Bl 10 Gb 1, St 1, Co 4, Liv 3, Liv 2, and Bl 4.

For headache, use with Gb 20, Gv 20, yintang, Bl 6, Bl 10, Co 4, Co 11, Liv 2, Liv 3, Gb 41, Bl 66, Bl 67, and St 36.

Applications:

He attacks with a straight lunge with a knife. Using the knife defense principle of "evade, bump, and strike," you should move your center and strike (bump) to Th 8 on the outside of his forearm a little more than halfway up (fig. 197). Your left palm takes over the attack on the forearm as your right elbow strikes to Bl 5 (fig. 198). Then do something about the knife! The rule in knife defense is *never try to control or grab the arm that has the knife.* Bump it violently first, causing a shock wave to go into the brain, and in the ensuing split second when he is shocked, attack to a vital point, causing KO or death. Then take the knife.

BL 6 (BLADDER POINT NO. 6)

Chinese name:

Chengguang (support light).

Location:

1.5 cun posterior to Bl 5, 1.5 cun lateral to the Gv meridian, 2.5 cun above the natural hairline.

Connections:

None.

Direction of strike:

From front to rear of skull.

Damage:

This point is the one you bang when you are under the house fixing something and get up suddenly. The pain and qi drainage is great. You just have to sit down until the body's qi comes back to normal and the pain subsides. Bl 6 is right over the frontal fontanelle, so striking it will also cause damage to the skull structure, along with great pain and qi drainage.

Set-up point:

Co 14 is the best set-up for Bl 6. It is located down from the shoulder on the upper arm where the shoulder dips into the top of the biceps, and it is struck straight in. This point is a "receiver of qi," or an energy input point. So a strike here will prevent "ground or outer qi" from being transferred, causing great disorientation.

Antidote:

Rub Bl 6 back in the opposite direction lightly.

Healing:

Innervation is by the anastomotic branch of the lateral branch of the frontal nerve and the great occipital nerve. Irrigation is by the anastomotic network of the frontal artery and vein, the superficial temporal artery and vein, and the occipital artery and vein.

Used for headache, blurring vision, nasal obstruction, common cold, rhinitis, vertigo, and pannus (a disease of the eye).

Massage as for Bl 3.

Use with Bl 7, Bl 20, Gb 20, Co 4, Lu 7, Liv 3, and St 36 for watery nasal discharge and

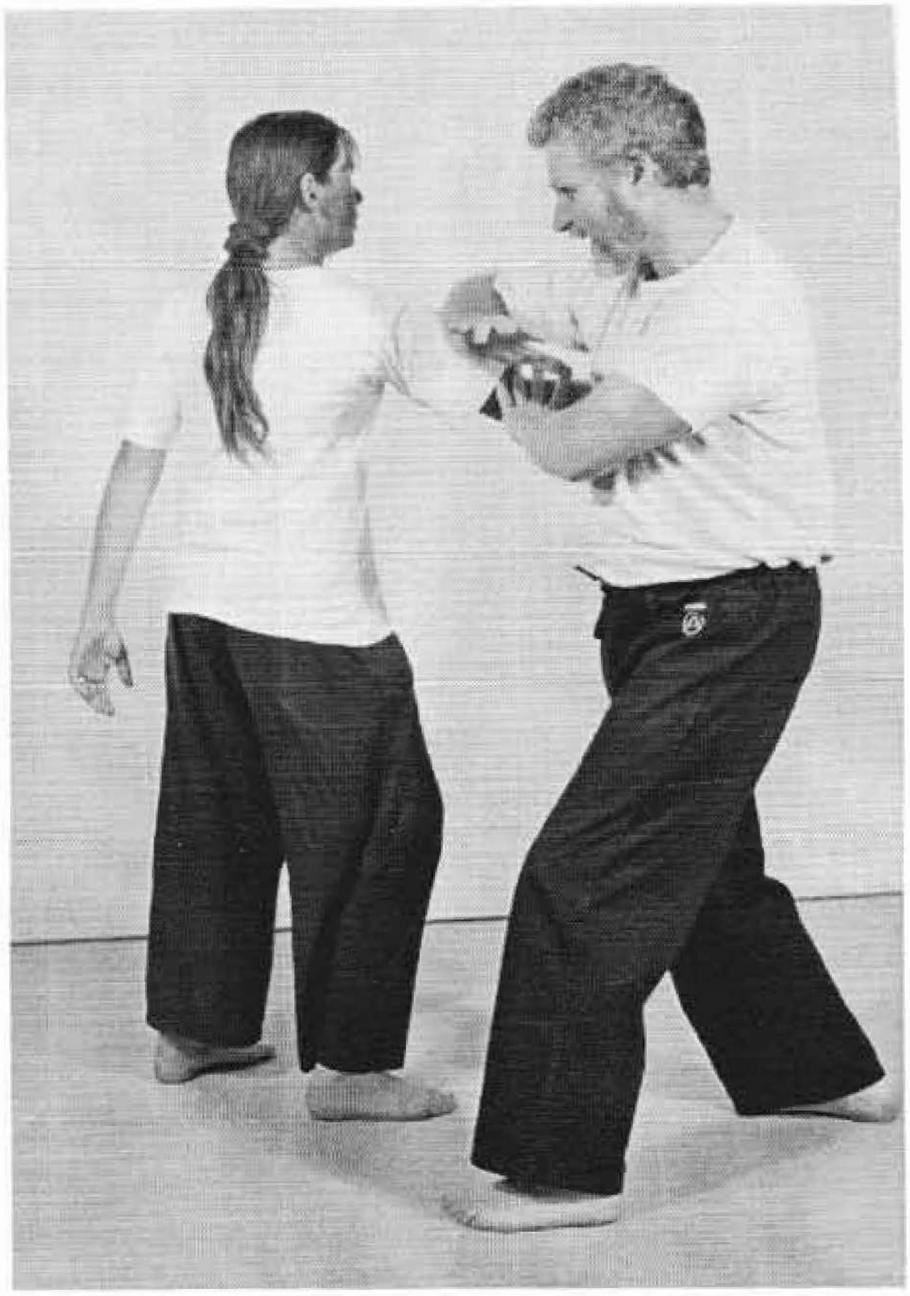


Figure 199

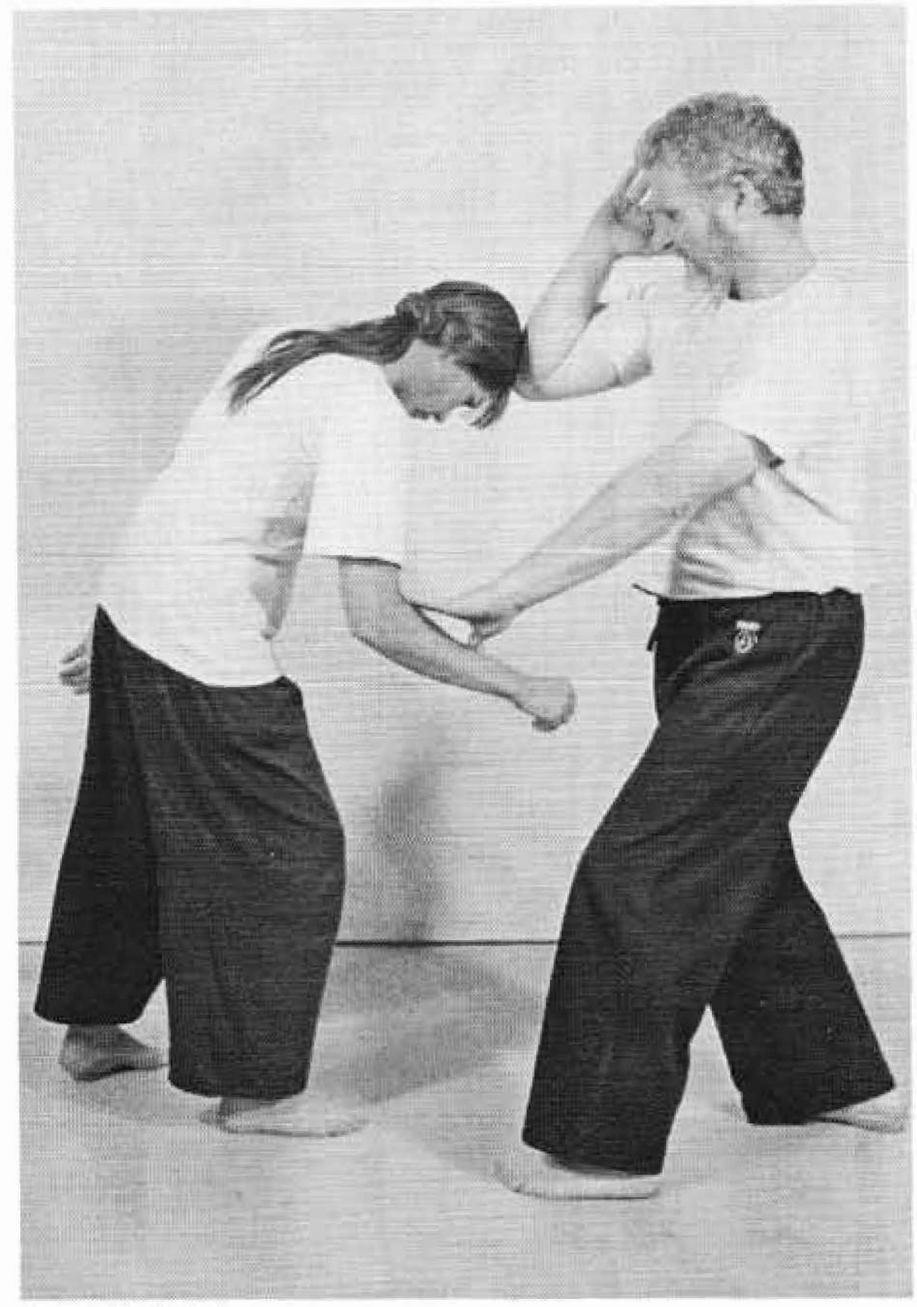


Figure 200

mouth awry.

Use With Bl 2, Bl 3, Bl 4, Bl 5, Bl 7, Bl 9, Bl 10, Co 4, Co 20, Lu 7, Lu 5, Liv 2, Liv 3, and St 36 for nasal obstruction.

For blurred vision, use with Bl 1, Bl 4, Bl 5, Liv 3, Gb 1, St 1, St 36, Gv 20, and Gb 20.

Applications:

Stepping to your left, take his right straight with your left palm at Lu 8. Slam straight in with your right elbow to Co 14 (fig. 199). This will be enough to stop the fight. Your right palm grabs his neck and pulls him forward, exposing Bl 6 and loading your right elbow again. Strike to Bl 6 upward in a front-to-rear direction with the right elbow (fig. 200).

BL 7 (BLADDER POINT NO. 7)

Chinese name:

Tongtian (reaching heaven/penetrating heaven).

Location:

Draw a line approximately from the rear of the ear up to 1.5 cun from the middle line of the skull, or 1.5 cun posterior to Bl 6. The point is 1.5 cun posterior to Bl 6 and 1.5 cun lateral to the Gv meridian. 4 cun within the hairline. It is in the galea aponeurotica, 1 cun anterior to Gv 20.

Connections:

There are branches from Bl 7 to Gv 20, Gb 8, Gb 9, Gb 10, Gb 11, and Gb 12.

Direction of strike:

Straight in to the head from the side.

Damage:

This point literally knocks you senseless when struck. If it is only a medium strike, the brain is knocked into a state of confusion for a moment. Any harder and this confusion and senselessness lasts

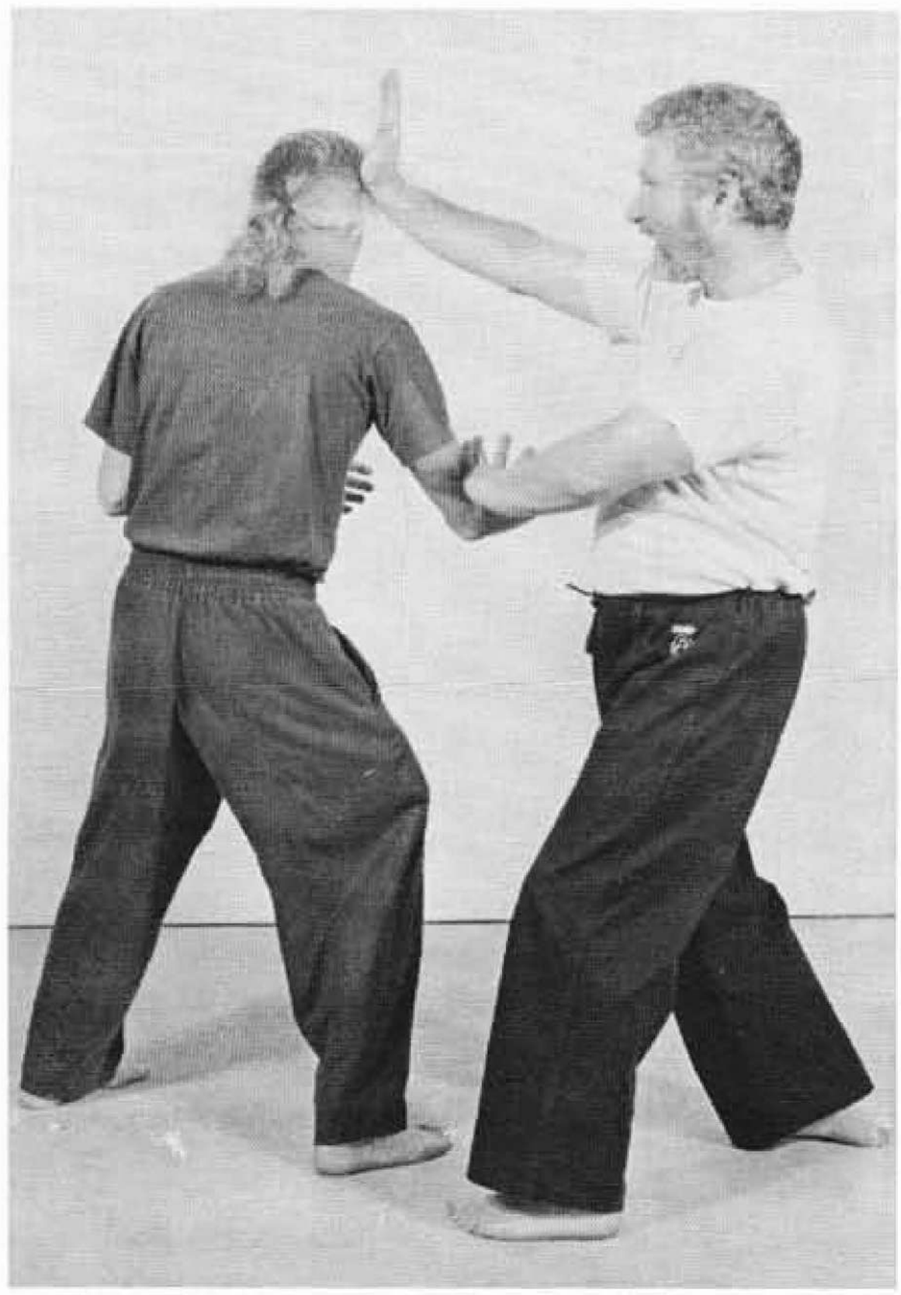


Figure 201

longer. So it can be used as a point strike by itself or as set-up point for a more potent strike.

Set-up point:

Any of the utility set-up points, such as neigwan, can be used here. Points that work particularly well with this point are St 15 and St 16, struck straight in. This combination will increase the brain confusion by the action of St 15 and 16 on the heart.

Antidote:

Rest and a visit to a doctor are the only antidotes here.

Healing:

Innervation is by a branch of the great occipital nerve. Irrigation is by the plexus at the anastomosis of the superficial temporal and occipital arteries and veins.

Used for headache, dizziness, nasal obstruction, epistaxis, and rhinorrhea (persistent runny nose).

Traditional indications include congested, runny nose; loss of sense of smell; pain and heaviness at the vortex; dizziness; awry mouth; hemiplegia, and (commonly) migraine.

Traditional function is the elimination of wind from the upper part of the body.

Massage techniques are the same as for Bl 3.

Use with Gv 23, Co 20, Co 4, Lu 7, Lu 5, bitong, yintang, Liv 3, St 36, and Sp 4 for rhinitis.

(See Bl 6 for treatment of awry mouth and watery nasal discharge.) Use with taiyang, Gb 20, Gv 20, Co 11, Liv 2, Liv 3, St 36, and Gb 34, for headache.

For chronic sinusitis, use with Co 20, Bl 2, Gb 20, Co 4, Lu 7, Liv 2, Liv 3, Bl 12, Bl 13, Bl 20, Sp 4, Bl 4, and Gv 23.

Use with Gb 20, Gv 20, Gb 21, Co 4, Co 11, taiyang, Liv 4, Liv 2, Liv 3, and St 36 for migraine.

Applications:

He attacks with a straight right. Use a p'eng type of block. The left palm takes over at Si 8, upsetting the qi system of the whole body to begin with. Then the right palm strikes to Bl 7 (fig. 201).

BL 8 (BLADDER POINT NO. 8)

Chinese name:

Luoque (decline).

Location:

On the top of the head, 1.5 cun posterior to Bl 7, 1.5 cun lateral to the Gb meridian, 5.5 cun within the hairline.

Connections:

None.

Direction of strike:

This point is struck from the side into the skull. So you would be standing at the side of the opponent and striking from his right side, for instance, to his left side into the skull.

Damage:

Great local pain with a qi drainage down the side of the body where the strike was. A hard enough

strike will cause KO. The recipient will experience nausea at least.

Set-up point:

Use neigwan with Lu 5. This will add to the drainage effect.

Antidote:

Rest. (You could also massage neigwan down the arm.)

Healing:

Innervation is by the branch of the great occipital nerve. irrigation is by the branches of the occipital artery and vein.

Used for dizziness, tinnitus, mental confusion, facial paralysis, rhinitis, goiter, and vomiting.

Massage techniques are the same as for Bl 3.

Use with Gv 20, Gb 20, Bl 2, Bl 3, Bl 5, Bl 6, Bl 7, Th 17, Si 19, St 36, Cv 12, Kd 3, Pc 6, Bl 18, Cv 6, Cv 4, Bl 23, and Kd 1 for vertigo.

For tinnitus, use with Th 17, Gb 20, Liv 2, Liv 3, Kd 3, St 40, Th 3, Si 17, Si 19, Gb 2, Si 2, Th 21, Liv 5, Gb 43, and Gb 44. For facial paralysis, use with Gb 20, Gb 4, Gb 5, Gb 6, St 5, St 6, St 8, Co 4, St 36, Liv 3, Liv 2, Liv 4, and Gb 34. Use with Pc 6, St 36, Liv 2, Liv 3, Liv 13, Liv 14, Cv 12, and Co 4 for vomiting.

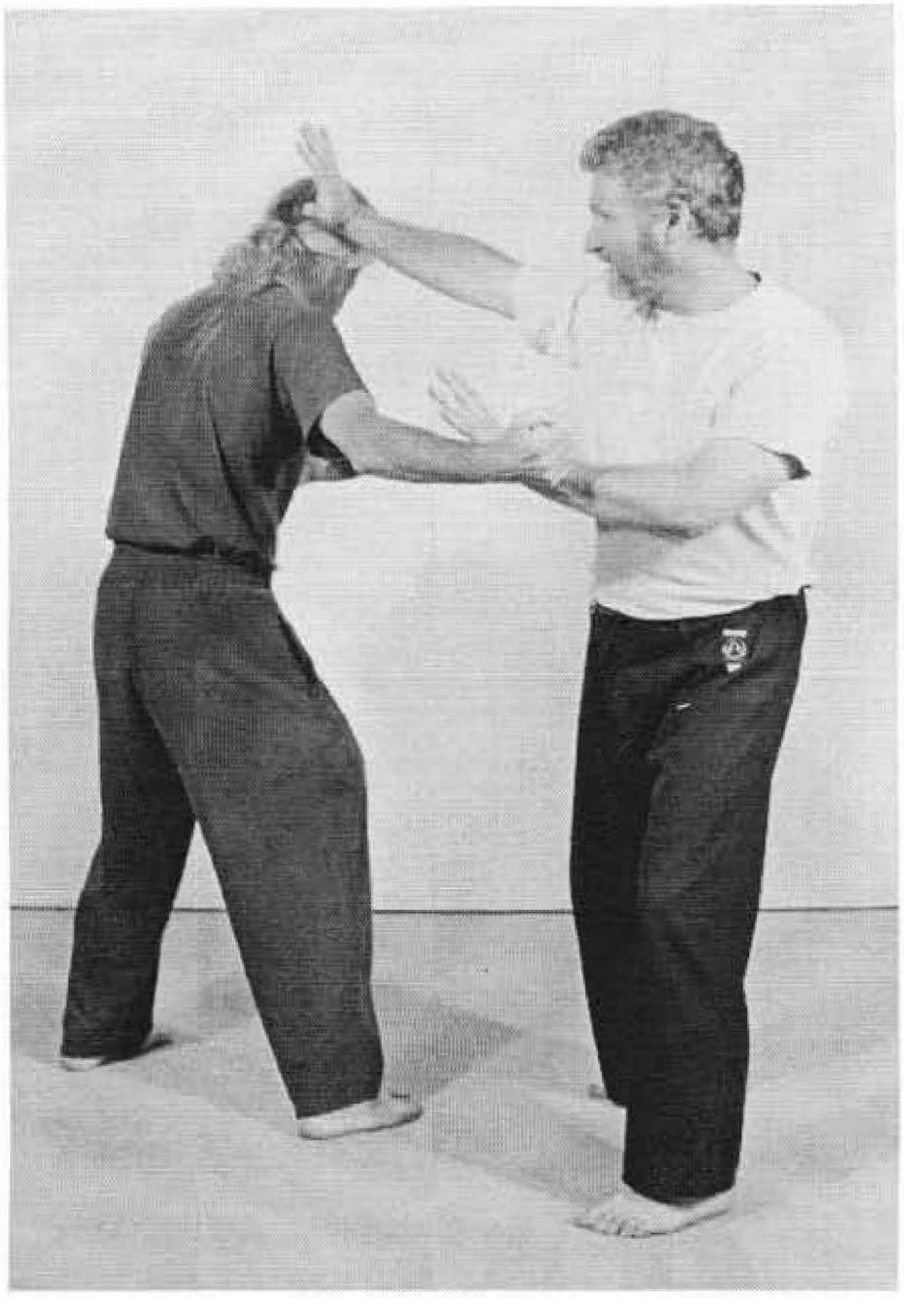


Figure 202

Applications:

For a right hook, slam his arm at neigwan and at Lu 5 using your left and right palms. You have stepped to your left slightly as your right heel palm strikes to Bl 8 (fig. 202).

BL 9 (BLADDER POINT NO. 9)

Chinese name:

Yuzhen (jade pillow).

Location:

1.3 cun lateral to Gv 17, on the lateral side of the superior border of the external occipital protuberance.

Connections:

None.

Direction of strike:

Straight in to the skull from the back of the head, slightly downward.

Damage:

At a physical level, this point works much the same as Gb 19, in that it shocks the brain, causing KO. The electrical damage is slightly different, in that an accurate strike here using a smaller weapon will cause great qi drainage from the upper chest area, causing nausea at least and heart failure at most.

Set-up point:

This point has an unusual "set up." All of the normal set-up points will work, however, if you jerk the whole arm violently on the same side as the point, thus shocking the whole upper body. This will have a most distasteful effect, in that it will cause the recipient to have instant diarrhea!

Antidote:

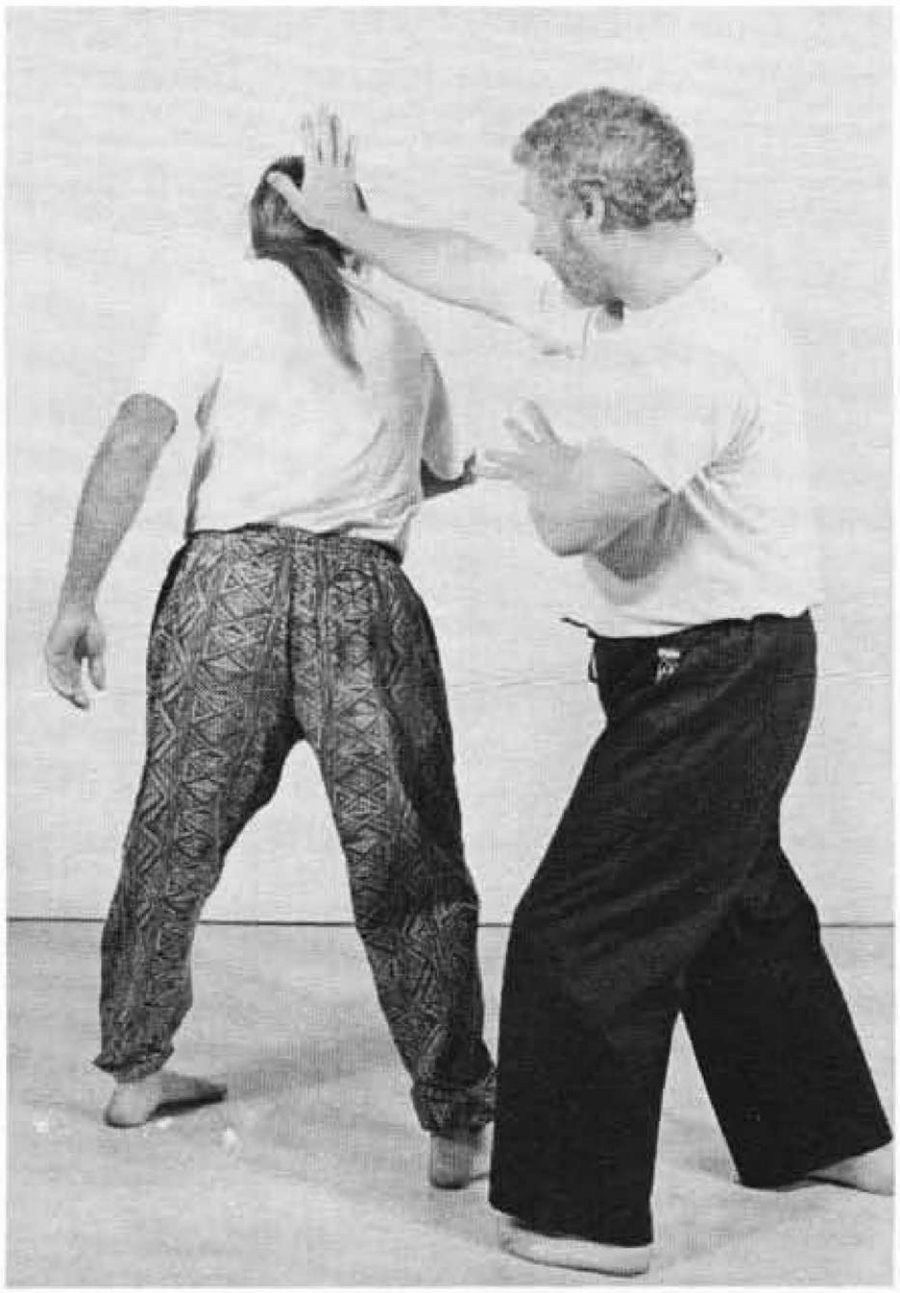


Figure 203

Neigwan, rubbed down the arm or in conjunction with Gv 20, pressed lightly downward. Or Co 12 in conjunction with a squeeze on the tip of the index finger.

Healing:

Innervation is by the branch of the great occipital nerve. Irrigation is by the occipital artery and vein.

Used for headache, ophthalmoplegia, nasal obstruction, vertigo, and myopia.

Massage techniques are the same as for Bl 3, plus pressing and pulling the point laterally.

For headache use with Bl 10, Gb 20, Gb 21, Th 15, Si 13, St 3, Bl 12, Bl 11, Bl 13, Bl 43, Bl 17, Bl 18, Bl 19, Bl 20, Bl 21, Bl 60, Bl 58, Gb 34, Liv 3, Liv 2, and Liv 4.

Use with Gb 20, Co 4, Bl 1, St 1, St 2, St 36, Liv 3, and Gb 34 for myopia.

Applications:

Block his right attack with a p'eng-type block and instantly grab his wrist and elbow with your right and left hands, respectively. Using the power of your waist, jerk his arm violently to your right, trying to wrench his arm out of the shoulder joint. This also turns him so that Bl 9 is facing you, i.e., the back of his head is now in view. Strike straight in to Bl 9 using a downward one-knuckle punch or a downward heel palm (fig. 203).

BL 10 (BLADDER POINT NO. 10)

Chinese name:

Tianzhu (heavenly pillar).

Location:

1.3 cun lateral to Gv 15, within the posterior hairline on the lateral side of the trapezium in the origin of the trapezium and, in its deep position, in the semispinalis capitis muscle.

Connections:

There is a branch to Gv 17. This point is also an upper meeting point of the kidney and bladder divergent meridian.

Direction of strike:

Straight in to the back of the neck. This is the old rabbit chop.

Damage:

WARNING: *Do not play around with this point! It is a death point.* This is a most dangerous point. When we view the old James Bond movies, he always uses the chop to the back of the neck, because the director of those films knew that this point works. It will cause a KO at least. There will also be a "disconnected" feeling because of a resultant buildup of yang qi in the head, blocking emotional energy. The recipient will also feel as though there is no air getting from the lungs to the rest of the body. Use this point with St 9 and Cv 17, and you have a very dangerous cocktail. Death will occur instantly when these three points are struck. Bl 10 will cause death all by itself, however. The three points together stop the qi from flowing.

Bl 10 is just below the medulla oblongata, which is the lowest part of the brain stem and is about

two centimeters long. (Besides being the major pathway for nerve impulses, it contains centers that regulate the heart and blood vessels, respiration, salivation, and swallowing.) The nerve fibers cross here, causing one side of the brain to receive information from the opposite side of the body. So the medulla oblongata is the control center for many vital bodily functions. The location of Bl 10 near the medulla oblongata could explain why this strike affects the breathing so much.

Set-up point:

Bl 10 doesn't need any setting up! It does fine all by itself. However, you could use St 9 and Cv 17 with this point to cause instant death. St 9 will affect the baroreceptor called "the carotid sinus," which signals to the heart to either stop or slow down because high blood pressure has been detected. Cv 17 drains energy from "the seat of power," or the diaphragm, so it will cause power to be lost all by itself.

Antidote:

If it was only a light tap to this point, perhaps use the revival method of pressing up into Gb 20 on both sides. This will bring yang qi back into the head, causing the recipient to come around. If it was a hard strike, there is not much hope of a revival. Even so, it is almost certain that the recipient will suffer brain damage, emotional damage, and physical damage for the rest of his life. He will experience continuous headaches at the very least!

Healing:

Innervation is by the great occipital nerve; irrigation is by the occipital artery and vein.

Used for headache, neck rigidity, nasal obstruction, pain in the shoulder and neck, hysteria, pharyngitis, and neurasthenia.

Traditional Indications include heavy, dizzy, and painful head; nasal congestion and swelling of the larynx; eye disease; seizures; and infantile convulsions.

Traditional functions are to dispel wind, invigorate the channels, and brighten the eyes, as well as to treat lower backache.

Massage techniques include pressing and holding the point or using clockwise or counterclockwise rotation for xu or shi conditions. You can also try pressing with the thumbs (one on each point) and then pulling the thumbs laterally for half an inch (or try the same thing except with the pull being downward for up to an inch). Finally, you can do fingertip percussion on this point.

You can combine with Si 17, Co 4, Co 11, *biantao* (an extra point), Lu 5, Lu 7, Lu 1, St 36, and Liv 2 for pharyngitis.

For chronic cough, combine with Co 11, Lu 9, Lu 5, Bl 12, Bl 13, St 36, and Liv 3.

For pain and stiffness in the neck, shoulders, and upper back, you might use it with Gb 20, Gb 21, Th 15, Si 13, Si 12, Si 3, Bl 11, Bl 12, Bl 13, Bl 17, Bl 18, Bl 58, Bl 60, and Gb 34. You can also use this type of treatment for cold wind penetration that might progress to common cold.

For occipital headache, use with Gb 20 , Gb 12, Gv 20, Gb 21, Th 15, Si 13, Si 3, Bl 17, Bl 18, Bl 19, Liv 2, and Liv 3.

Applications:

This point can be accessed with a direct strike from the rear, or, in a grappling situation, it is a wonderful point to access—one I have used on several occasions to great effect. One medium hit, and down he goes! You can use the thumb side of your palm to strike straight across Bl 10 (fig. 204).

Figure 204

NOTE: When I get to this area of the bladder meridian, I am always of two minds: should I present these points or not? I am always slightly sickened at the ferocity of strikes to the back bladder points and what they cause. So I will present these points for

the sake of interest, just so that people will know how dangerous they are and the awful damage they can do.

The back of the body holds the most dangerous points, although they are sometimes more difficult to get to than the frontal points. But when you know the methods to get at the back, you have to be really careful and be sure that you really want to inflict such damage.

BL 11 (BLADDER POINT NO. 11)

Chinese name:

Dashu (big shuttle).

Location:

1.5 cun lateral to the lower border of the spinous process of the first thoracic vertebra, about two finger breadths from the Gv meridian. Superficially, this point is located in the trapezius, rhomboid, posterior superior serratus muscles, and, in its deep position, in the longissimus muscle.

Connections:

Connection to the gallbladder .

Direction of strike:

Straight in from the back and slightly downward.

Damage:

Again, this is a deadly point, so do not play around with it! This point affects the bones and, therefore, also the kidneys. So it can be used as a set-up point for a bone strike (arm break, leg break, etc.). Immediate nausea results from the action on the kidneys, as does qi drainage. When Bl 11 is used in conjunction with St 37 and St 39, death occurs. And at some later stage, blood disorders can occur, like leukemia.

However, at this point, there is also a more bizarre effect. The recipient is cut off from the shen, or spirit. It is said in some older texts that the shen is damaged; but as I mentioned earlier, it is my belief that the shen cannot be damaged. When talking about this point, my main teacher, Chang Yiu-chun, simply said, "No God." So it is my view that we stop communication with the spirit by striking to this point, causing the recipient to go into immediate decline as a human being.

Set-up point:

Gb 25 is an excellent set-up point for Bl 11 because it's easy to get to and also sets up Bl 11 physically as it puts you in back of the opponent.

Antidote:

Either needle Kd 1 or strike it hard up into the foot.

Healing:

Innervation is by the medial cutaneous branches of the posterior rami of the first and second thoracic nerves and, deeper, their lateral cutaneous branches. Irrigation is by the medial cutaneous branches of the posterior branches of the first intercostal artery and vein.

Used for cough, fever, headache, aching of the scapula region, stiffness and rigidity of the neck, common cold, bronchitis, pneumonia, pleurisy, tuberculosis of the bones, arthritis, and numbness in the limbs.

Traditional indications include headache accompanied by chills, lower back pain, throat blockage, fullness in the chest, and shortness of breath, tidal fevers, infantile convulsions, pain and inability to bend the knee, stiffness along the spine, and general arthritis with deformity.

This point's traditional functions is as a point of intersection with the small intestine meridian, as an influential/meeting point for bones, and to treat wandering bladder.

To massage, press and hold the point; use rotation clockwise or counterclockwise for xu or shi conditions; do percussion with the fingertips or loose fists; press slowly and release quickly, rubbing laterally with the fingertips, knuckles, or the heel of the hand; rub back and forth across the point or lean on it with the elbow for a short time; and pinch this point to cause redness.

Use with Cv 17, Cv 22, Lu 1, Lu 5, Lu 7, Co 4, St 40, Liv 3, and Bl 43 for asthma.

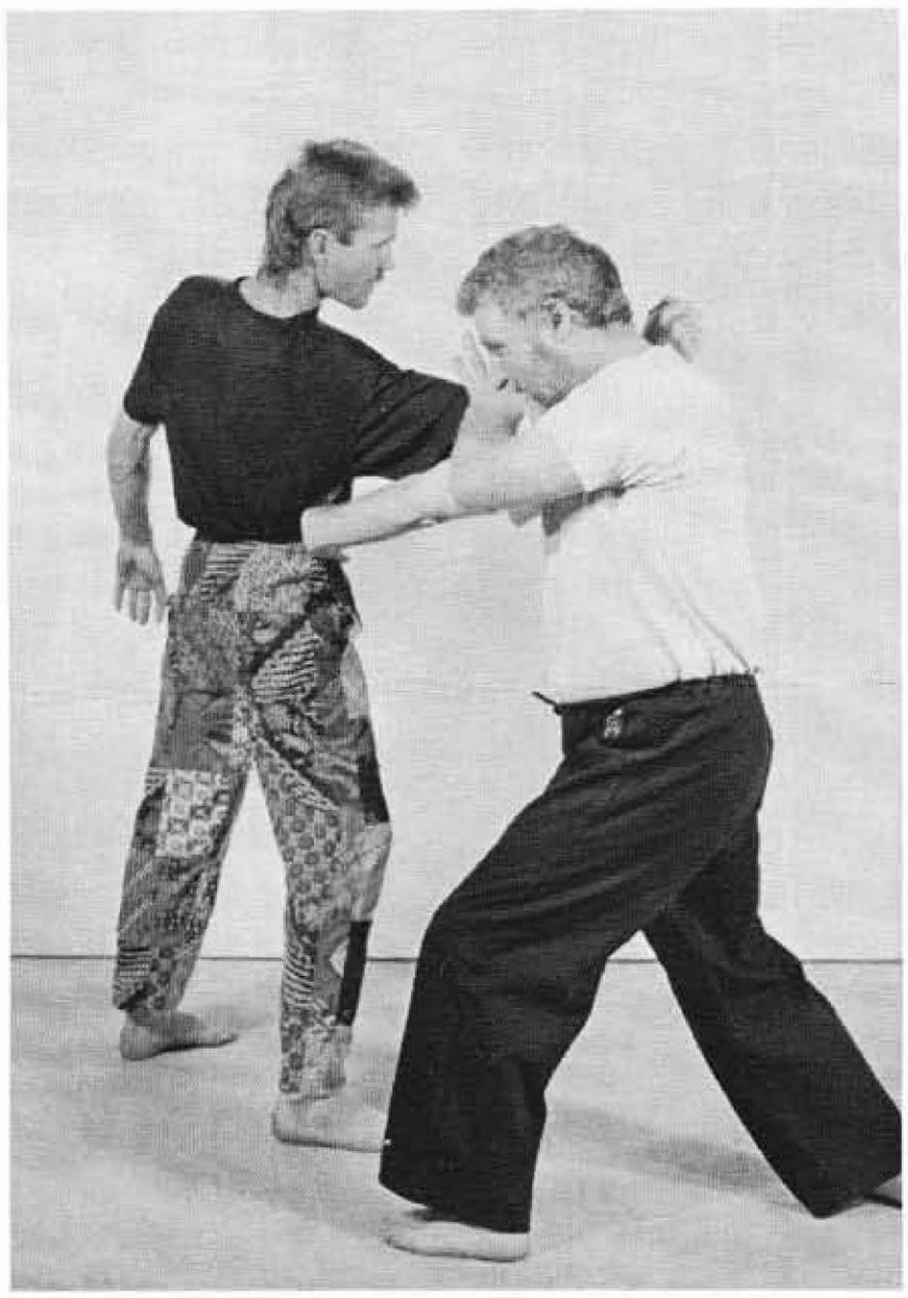


Figure 205

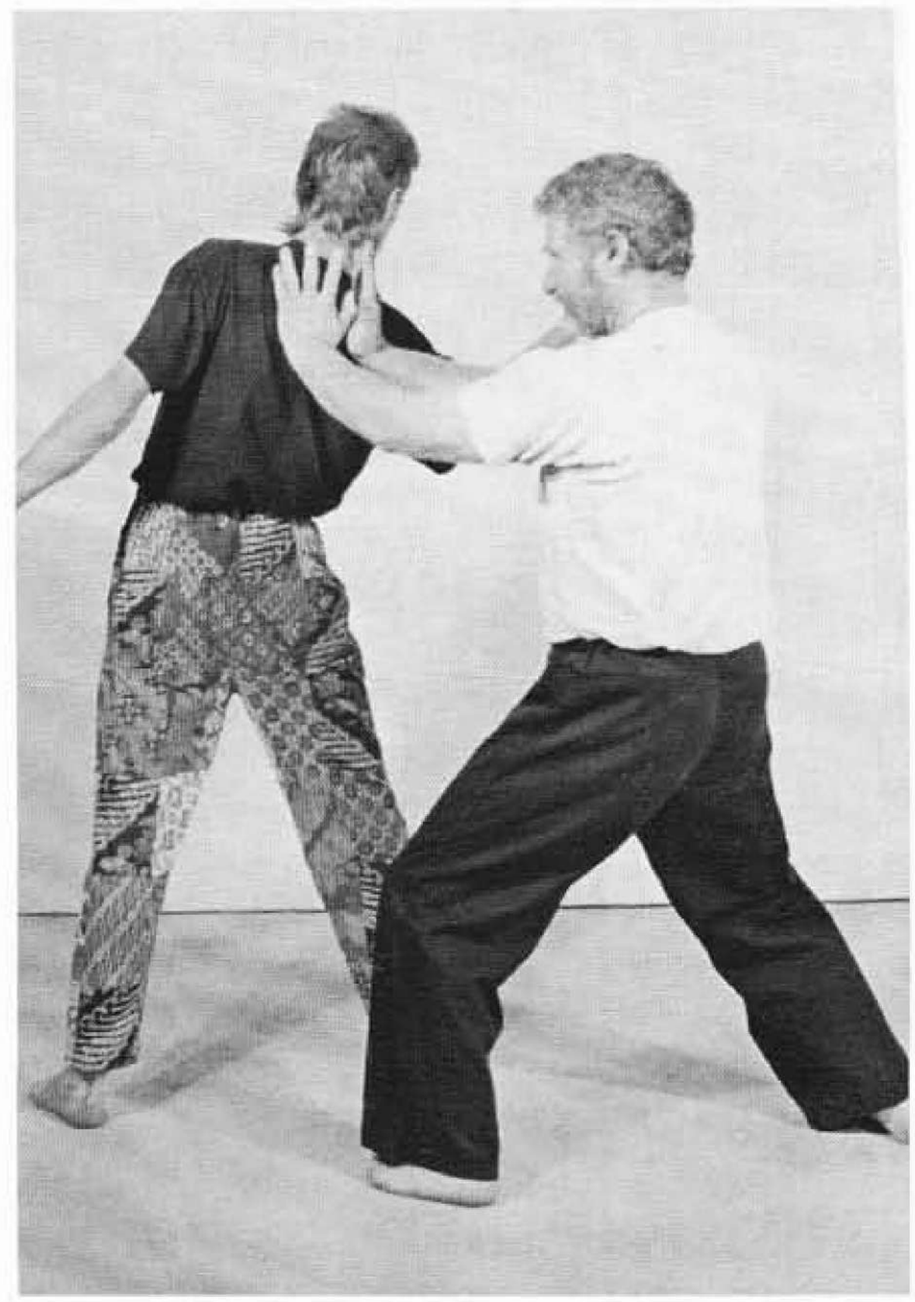


Figure 206

For pneumonia, use with Bl 12, Bl 13, Lu 1, Lu 6, Liv 14, St 36, and Liv 3.

Use with Gb 20, Bl 12, Bl 13, Lu 7, Co 4, Co 11, and Liv 3 for common cold.

For the acute stage of infantile convulsions, use with Gv 20, Gv 16, Gv 14, Gb 20, Bl 12, Gv 4, Gv 3, Co 15, Pc 6, Gb 30, St 36, Gb 34, Liv 3, Liv 2, Co 4, Co 11, and Gb 21.

For broken bones, use this point with Gb 39, Gb 34, Liv 4, Sp 10, Sp 3, St 36, and corresponding points on the other side of the body.

Applications:

1) He might attack with a straight right, so you slam the outside of his elbow with your left palm at Si 8, stepping in a "V" shape to your left. Your right palm immediately attacks to Gb 25, causing kidney damage (fig. 205). You immediately step around behind the attacker and strike straight down into both Bl 11 points (fig. 206).
2) You could also have used your right foot to kick into St 37 and St 39 points on the lower leg before you attacked to Bl 11.

BL 12 (BLADDER POINT NO. 12)

Chinese name:

Fengmen (wind's door).

Location:

1.5 cun lateral to the lower border of the spinous process of the second thoracic vertebra. In the trapezius, rhomboid, and posterior superior serratus, and in the deep position the longissimus.

Connections:

This point is connected to the governing vessel.

Direction of strike:

Straight in from the rear and slightly downward.

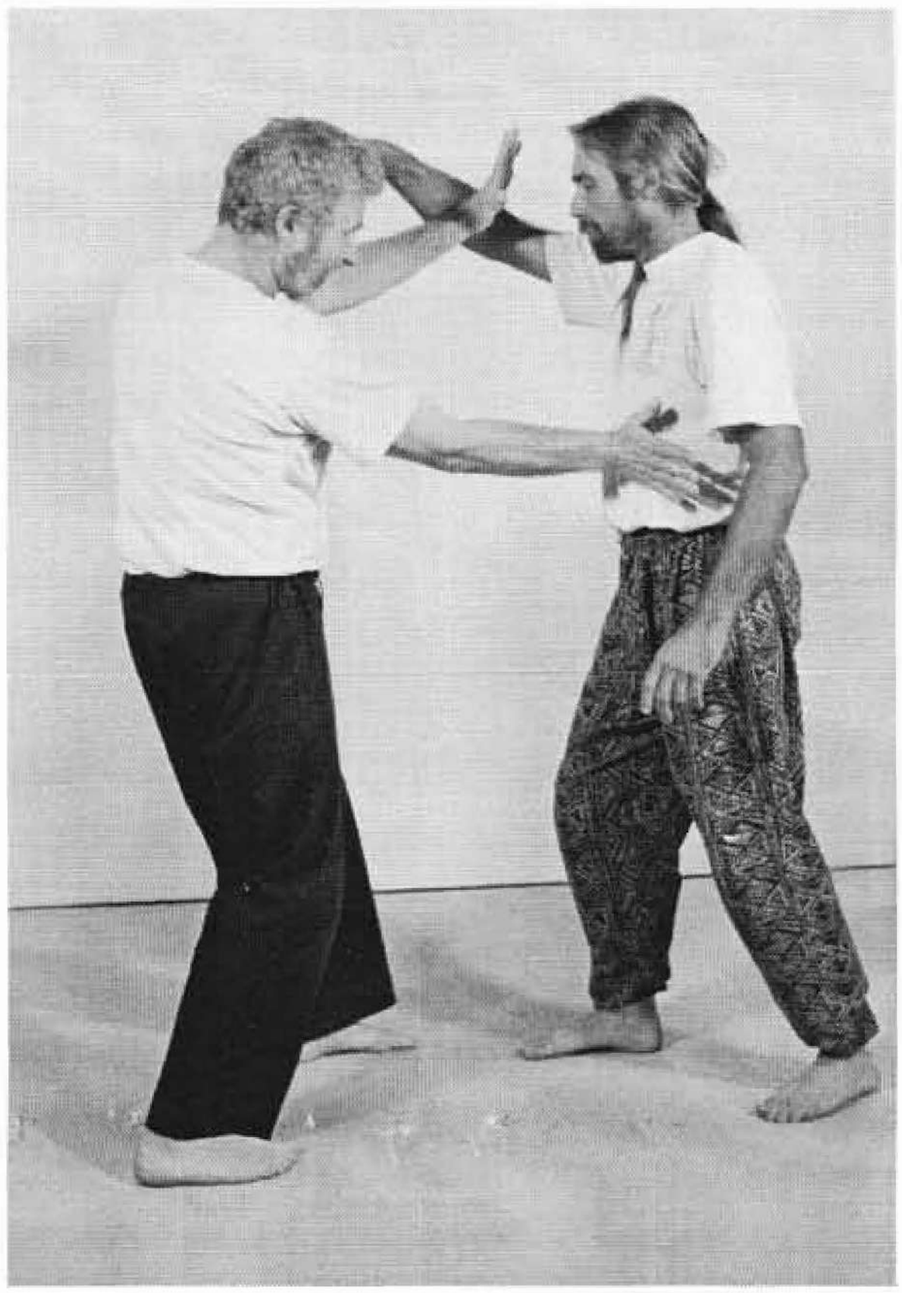


Figure 207

Damage:

Again, this point causes great damage both physically and mentally. The qi circulation is immediately impaired and can take some time to readjust. A strike here opens up the spine to external attack. The Chinese say that the spine is attacked by "wind." Again, this point will have an effect upon one's communication with the shen. The recipient will, in the long run, get colds more easily and will not be able to shake them off. Socially, he or she will change emotionally over a number of years. (I know of people who have received strikes to this area from car accidents and have changed dramatically in personality over several years.)

Set-up point:

A slicing strike to Gb 24 will set up Bl 12 nicely. The strike must be from inside to outside across his body. So if you place your palm, for instance, onto the centerline of the body and wipe it outward to the side of the body, this is the direction of the set-up.

Antidote:

For any of the bladder strikes to the back, the utility qi balancing method (Chapter 1, under Gb 8) works to heal the internal qi and mind damage. (This method is covered in the previous chapters—placing the palms over the head and running them down the face to Cv 14, and so on.) You could also place both of your index and second fingers onto Bl 10 on both sides and hold (press in lightly) for seven seconds as you instruct the patient to breathe in. It is important to "think beautiful thoughts" at this time, so that healing qi will be dragged up from the ground and into the point. As the patient exhales, lessen the pressure. Then when he begins to inhale again, reapply the pressure.

Healing:

Superficially, innervation is by the medial cutaneous branches of the posterior rami of the second and third thoracic nerves; deeper, it is by their lateral cutaneous branches. Irrigation is by the medial cutaneous branches of the posterior branches of the second intercostal artery and vein.

Used for common cold, bronchitis, pneumonia, pleurisy, asthma, urticaria (a skin condition), shoulder and neck sprain, cough, fever, and upper back and neck stiffness and pain.

Traditional indications include headache, congested nose, cough due to cold, vomiting, belching, stiff neck, and pain in the chest and back.

Traditional functions include strengthening the dispersing action of the lungs, adjusting the circulation of qi, eliminating wind, relieving exterior symptoms, and opening the lungs.

Massage techniques are the same as for Bl 11.

Use with Gb 20, Gv 14, Bl 13, Co 4, Lu 7, Lu 5, Lu 1, and Cv 17 for influenza and the common cold.

Use with Bl 13, Bl 43, *dingchuan* (an extra point), Bl 17, Bl 18, Bl 23, Cv 17, Cv 22, Lu 1, Lu 5, Lu 9, St 36, and Liv 3 for asthma and bronchitis.

For pleurisy, use with Bl 13, Bl 43, Lu 6, Cv 17, Lu 1, Lu 7, St 36, and Liv 3.

For shoulder and neck stiffness and pain, use with Gb 20, Gb 12, Gb 21, Th 15, Si 13, Si 12, Si 10, Si 9, Si 3, Bl 11, Bl 13, Bl 43, Bl 17, Bl 18, Bl 60, Gb 34, and dingchuan.

For urticaria use with Co 11, Co 4, Lu 7, Sp 10, Liv 2, and Liv 3.

Applications:

Use the same method as for Bl 11, only use the right palm to strike across his Gb 24 point (fig. 207). Then attack to Bl 12 straight in and slightly downward.

BL 13 (BLADDER POINT NO. 13)

Chinese name:

Feishu (lungs hollow).

Location:

1.5 cun lateral to the lower border of the third thoracic vertebra. This point is in the trapezius and rhomboid muscles and, in its deep position, in the longissimus muscle.

Connections:

None.

Direction of strike:

Straight in to the back.

Damage:

This is a shu point, meaning it is an associated effect point on the bladder meridian. This point is directly related to the lungs and therefore will cause the lungs to be damaged. The lungs are part of the "power" system of the body, and so a strike to this point will greatly reduce power in the recipient, who feels as if he has had the proverbial kick in the guts—gasping for air and buckling over. The kidneys are also affected, as is the flow of qi, and especially the wei qi, which protects us from external pathogenic attack. So a strike here could cause the recipient to be more susceptible to diseases.

Set-up point:

Th 8 is used to set up Bl 13. This point will affect the production of blood and wei qi.

Antidote:

Needle Th 8 (see an acupuncturist and tell him that your wei qi and blood production have been damaged). You could use finger pressure; however, you have to be careful using finger pressure to Th 8 because this is one of the only points on the arm that cannot be built up to protect against physical attack.

Healing:

Innervation is by the medial cutaneous branches of the posterior rami of the third and fourth thoracic nerves and, deeper, by their lateral branches. Irrigation is by the medial cutaneous branches of the posterior branches of the third intercostal artery and vein.

Used for cough, asthma, hemoptysis, afternoon fever, night sweating, bronchitis, pneumonia, pulmonary tuberculosis, pleurisy, spontaneous sweating, upper back spasm from wind and cold invasion, and sore neck.

Traditional indications include hot sensation in the bones (yin xu-type condition) with night sweats, spitting of blood, wheezing cough, fullness in the chest and difficulty breathing, throat blockage, insanity, convulsions, and goiter.

As a shu point of the lungs, Bl 13's traditional functions include treating all lung conditions, readjusting the circulation of lung qi, eliminating wind, dispelling heat from the lungs, and activating the dispersing function of the lungs.

Massage techniques are the same as for Bl 11.

Used with Bl 12, Bl 43, Bl 17, Cv 17, Lu 1, Lu 7, Lu 5, Lu 9, St 40, and Liv 3 for cough.

See Bl 12 for treatment of asthma, influenza, common cold, pleurisy, and shoulder and neck stiffness and pain.

Use with *yishu* (an extra point), Bl 20, Bl 17, Bl 21, Bl 23, St 36, Kd 3, Lu 11, Lu 10, Cv 12, Kd 7, Kd 5, Sp 6, Cv 4, and jiaji points T 11/12 -T12/L1, and *pirexue* (an extra point) for diabetes.

For rhinitis and sinusitis, use with yintang, Co 4, Co 11, Lu 7, Lu 5, Co 20, bitong, Gb 20, Bl 2, Bl 12, Bl 20, Cv 12, St 36, Liv 3, and Liv 2.

Applications:

A backfist strike to Th 8 against his right straight attack. This places you to the rear of the attacker for an attack to Bl 13 straight in.

BL 14 (BLADDER POINT NO. 14)

Chinese name:

Jueyinshu (absolute yin hollow).

Location:

1.5 cun lateral to the lower border of the spinous process of the fourth thoracic vertebra. In the trapezius and rhomboid muscles and, deeper, in the longissimus muscle.

Connections:

None.

Direction of strike:

Straight in to the back.

Damage:

This point has a direct relationship with the pericardium meridian. A strike here will cause the heart to be affected in the short as well as in the long term because it affects the way that the pericardium protects the heart from perverse qi. This point also has an effect upon the relationship of the mind to the "shen" or spirit, and, depending upon how hard it is struck, will upset the "humanity" of the recipient. It will also affect the kidney *jing*. (Jing is the spare meridian energy that is stored in the kidneys. We make use of this condensed form of qi in both the martial and the healing arts, and whenever we need it, as in the case of an accident where the body has been traumatized. It is this jing that can bring the heart back to life.) Anyone who has diabetes or some other disease that affects the kidneys knows what a damaging effect weak kidneys have on the body. In many ways, we can still perform when other organs are not at peak condition, but with weak kidneys, your power is shot. And a strike to this point has an instant effect upon the overall power of the body by weakening kidney jing.

Set-up point:

Either use neigwan or Kd 25 or a slap downward to Gb 14.

Antidote:

Treat Kd 1, Ht 3, and Pc 6 (neigwan) individually with thumb or finger pressure.

Healing:

Innervation is by the medial cutaneous branches of the posterior rami of the fourth and fifth thoracic nerves and, deeper, their lateral branches. Irrigation is by the medial cutaneous branches of the posterior branches of the fourth intercostal artery and vein.

Used for rheumatic heart disease, neurasthenia, intercostal neuralgia, and upper back pain and spasm.

Traditional indications include pain in the chest caused by qi accumulation in the diaphragm, vomiting from qi counterflowing, coughing, and toothache.

Bl 14 is a shu point of the pericardium (the organ and the channel), so its traditional functions are to treat problems of emotional origin and of the Pc channel.

Massage techniques are the same as for Bl 11.

Use with Bl 15, Sp 6, St 36, Bl 43, Bl 17, Bl 18, Cv 17, Cv 14, Cv 15, Cv 12, Cv 4, Gb 25, Liv 14, and Liv 3, for rheumatic heart disease.

For chest pain, use with Ht 7, Cv 17, Liv 14, Gb 24, Cv 14, Bl 17, Bl 18, Liv 3, and St 36.

Use with Bl 15, Bl 18, Bl 17, Pc 6, Ht 7, St 36, and Liv 3 for migraine.

Use with Bl 18, Bl 17, Bl 19, Liv 6, Liv 14, Gb 24, Gb 34, Th 6, jiaji points T5 to T10, Sp 17, Liv 13, Liv 2, Liv 3, Liv 4, and Gb 36 for intercostal neuralgia.

Applications:

For the most part, the bladder points on the back can be accessed using the same applications, so I will give a couple of access methods here and then leave it up to you to decide how to get at the

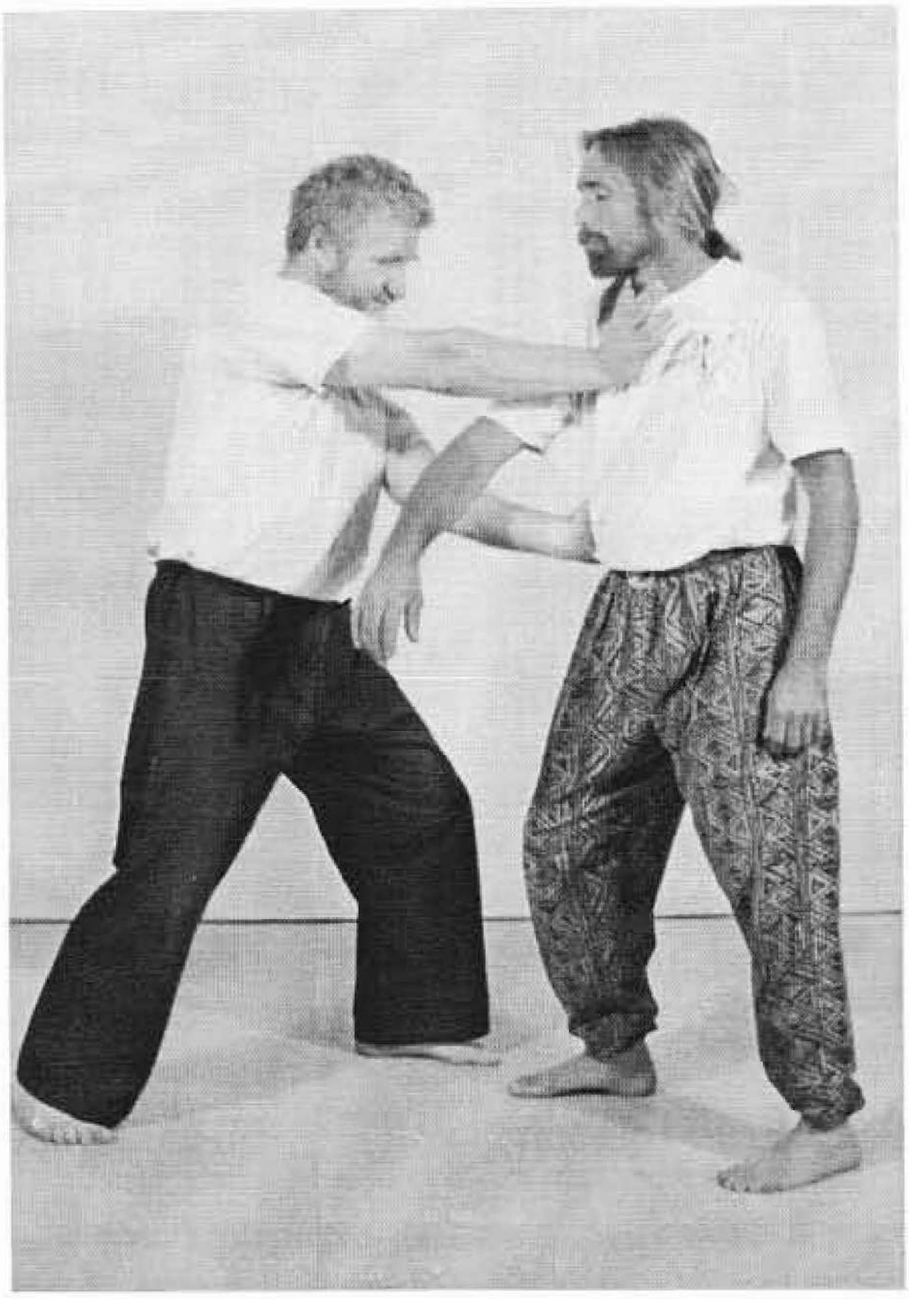


Figure 208

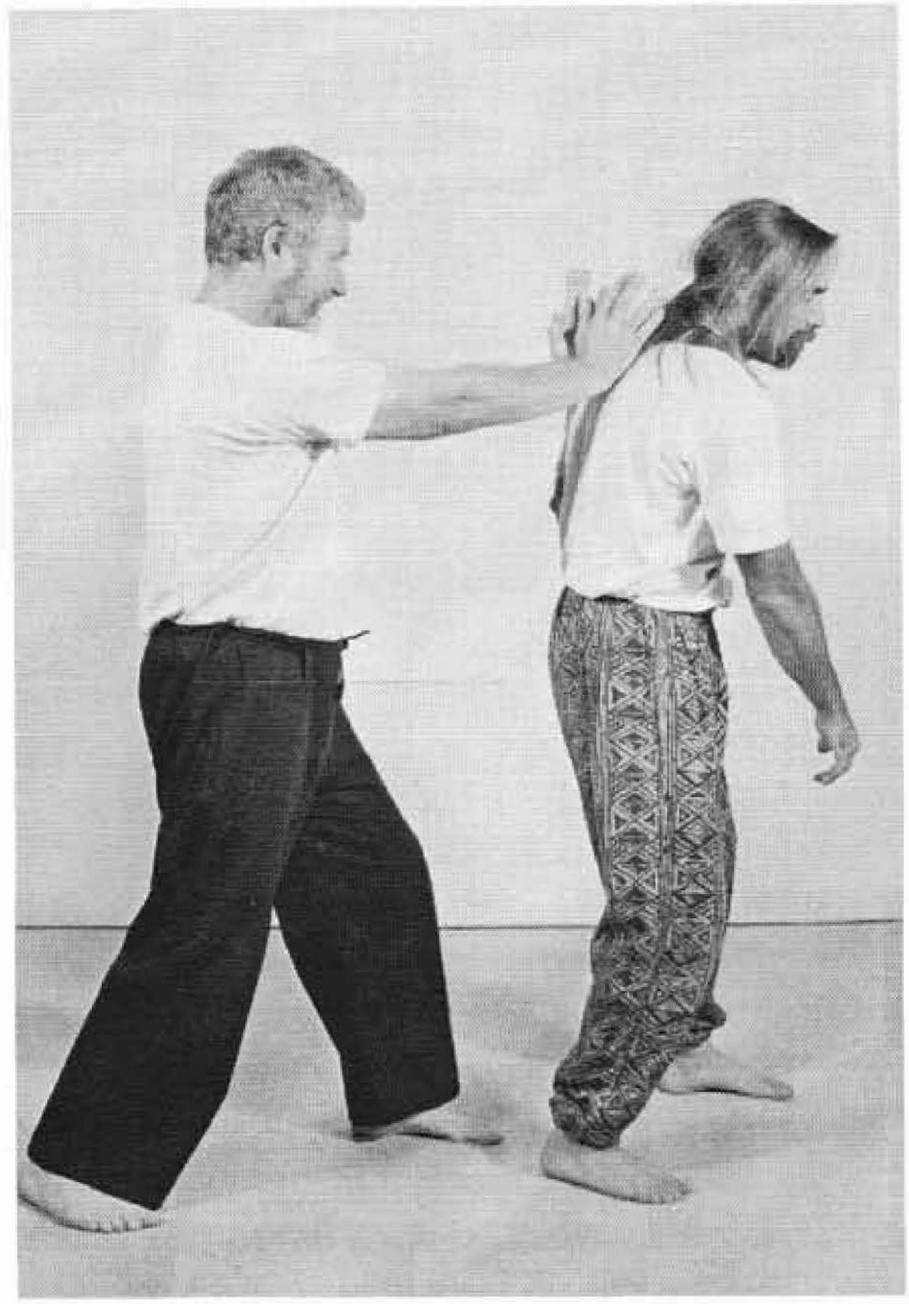


Figure 209

points. Where there is a specific set-up and application, I will make note of it. Perhaps you should also take a look at your own katas to see which applications would be good to access the back. For the most part, the back points only require a strike straight inward.

Applications to access the back area:

1) He perhaps attacks with a straight right. Block using a p'eng-type block with your right forearm and strike to Gb 25 with your left palm (fig. 208). Now, grab his right wrist and pull violently to your right, turning the attacker so that his back is now in view for a bladder point strike to Bl 14 (fig. 209).
2) He might rush at you with both hands. You block onto the inside of both wrists at neigwan, and then, grabbing both of his wrists, pull him violently around so that his back is within view (fig. 210).

BL 15 (BLADDER POINT NO. 15)

Chinese name:

Xinshu (heart's hollow).

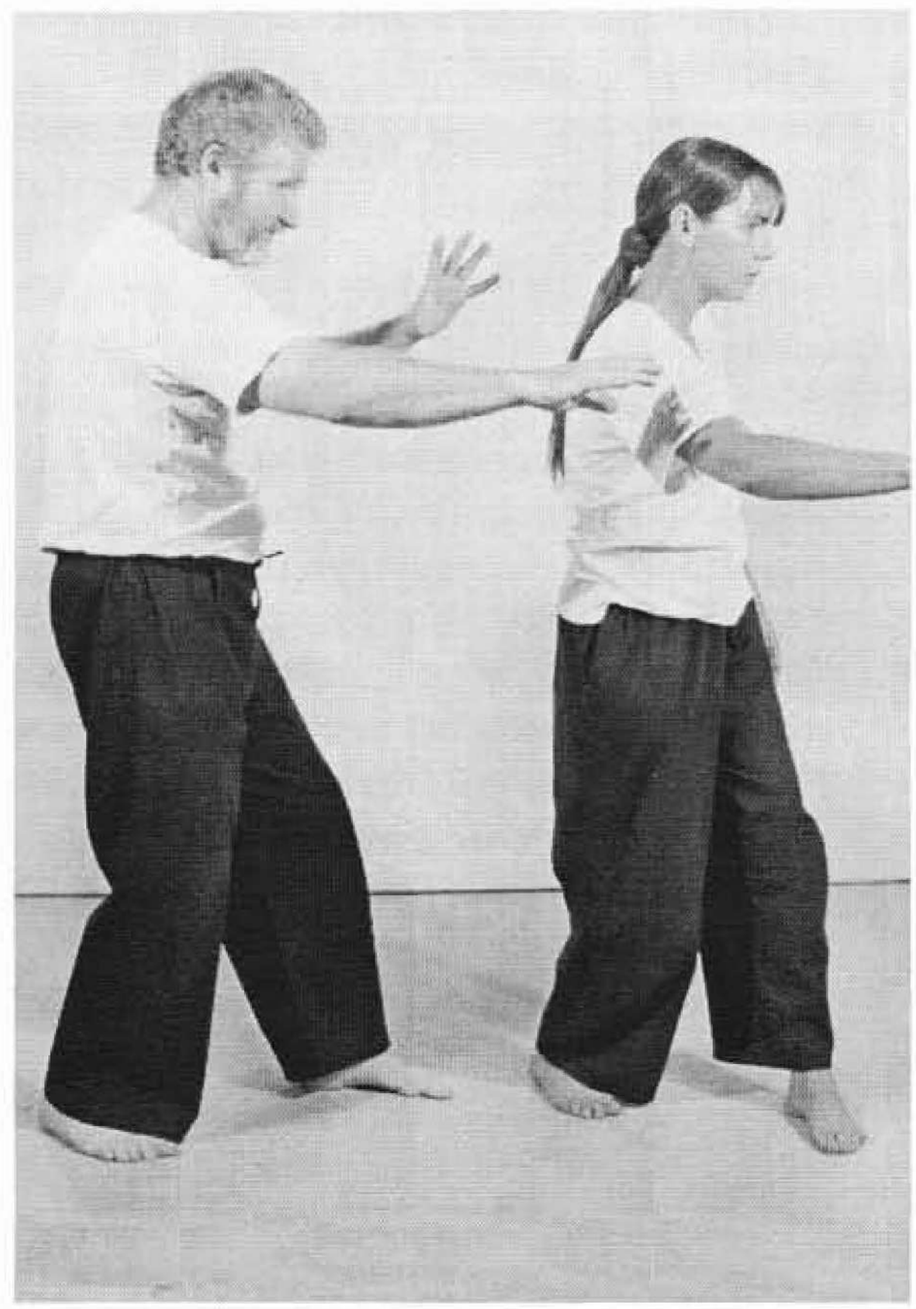


Figure 210

Figure 211

Location:

1.5 cun lateral to the lower end of the fifth thoracic vertebra. In the trapezius and rhomboid muscles and, deeper, in the longissimus muscle.

Connections:

This is a shu point of the heart.

Direction of strike:

Straight in to the back. It is much better to use a larger weapon for this point, such as a palm or palm heel.

Damage:

The heart is damaged with this strike. The immediate damage is heart failure. It will also have an effect upon the shen since the spirit is housed in the heart so it will affect social and emotional behavior and the humanity of the recipient where the shen is no longer in control. The seat of power (the lungs and the diaphragm) will also be damaged, thus immediately causing the effect of the old kick in the guts. Combine this point with any of the other back bladder points, and you have a really dangerous combination.

Set-up point:

You could use a strike to Ht 3, as this will set up the heart for the final attack. Or you could use Lu 5 because this will drain qi from the body.

Antidote:

Any method that will balance out the amount of yang and yin qi in the body will work as an antidote.

Healing:

Innervation is by the medial cutaneous branches of the posterior rami of the fifth and sixth thoracic nerves and, deeper, their lateral branches. Irrigation is by the medial cutaneous branches of the posterior branches of the fifth intercostal artery and vein.

Used for epilepsy, panic, palpitation, forgetfulness, irritability, cough, hemoptysis, neurasthenia, intercostal neuralgia, rheumatic heart disease, atrial fibrillation, tachycardia, psychosis, hysteria, and seizures.

Traditional indications include irritability and a depressed feeling in the chest and heart, chest pain, coughing, coughing blood, vomiting without eating, tidal fever, chills and fever, hot palms and soles of feet, spermatorrhea, night sweats, and absent-mindedness.

Its traditional function, as a shu point of the heart, is to tranquilize the mind and calm the heart and to invigorate the circulation of qi and blood.

Massage techniques are the same as for Bl 11.

Use with Cv 14, Pc 4, Pc 6, Ht 3, Ht 5, Ht 7, Liv 3, Liv 4, St 36, and Si 11 for angina.

Use with Bl 14, Sp 6, Pc 6, Co 4, St 36, Liv 2, and Liv 3 for rheumatic heart disease.

For pulmonary heart disease, use with Bl 17, Bl 18, Ht 7, St 40, Liv 3, Bl 20, and Sp 4.

For bronchial asthma, use with Bl 12, Bl 13, Bl 17, Bl 18, Bl 20, dingchuan, Lu 1, Lu 7, Cv 17, Kd 22, Kd 23, Kd 24, Kd 25, Kd 26, Kd 27, Liv 14, Liv 13, Gb 24, Liv 3, St 36, Co 4, and Kd 3.

Use with Pc 6, Ht 7, Bl 18, Bl 20, Bl 43, Liv 3, Co 4, Gv 20, and Kd 1 for hysteria.

Applications:

Get around the back of the opponent and strike to Bl 15 as well as to Bl 22 just up from the waistline. This combination has a particularly devastating effect since it also damages the triple heaters (fig. 211).

BL 16 (BLADDER POINT NO. 16)

Chinese name:

Dashu (governing hollow).

Location:

1.5 cun lateral to the lower border of the spinous process of the sixth thoracic vertebra. In the trapezium, latissimus dorsi, and longissimus muscles.

Connections:

Connects to Gv meridian.

Direction of strike:

Straight inward.

Damage:

Again, the communication with the shen is affected by the action upon the governing vessel. The "upper heavenly circulation" pathway, comprising the Gv and Cv meridians, plays an important role in the body's ability to communicate with the shen. So a strike here will not only cause qi drainage from the lungs, but will also affect the recipient's self-perception, emotional behavior, and social behavior. The Effects of this strike are not immediate unless the strike has been very hard. But the qi drainage will occur sometime later, causing the recipient to feel very weak. *Be warned: if this strike is done in the afternoon or early evening, it could cause death if the qi drainage occurs after midnight.*

Set-up point:

Neigwan or Th 8 will suffice here.

Antidote:

If you think that this point has been struck (e.g., accidentally during training), you must keep an eye on the recipient. If he begins to feel weak in the afternoon or early evening, you must administer the antidote immediately!

First, you must build up your own qi by doing perhaps a three-circle qigong (fig. 212). Stand for longer than 15 minutes in this position (my video *Basic Qigong* MTG 10 covers this in detail). Or you could do the power qigong as follows. (1) Stand with feet parallel and shoulder width apart, hands over your head (fig. 213). (2) Inhale as you

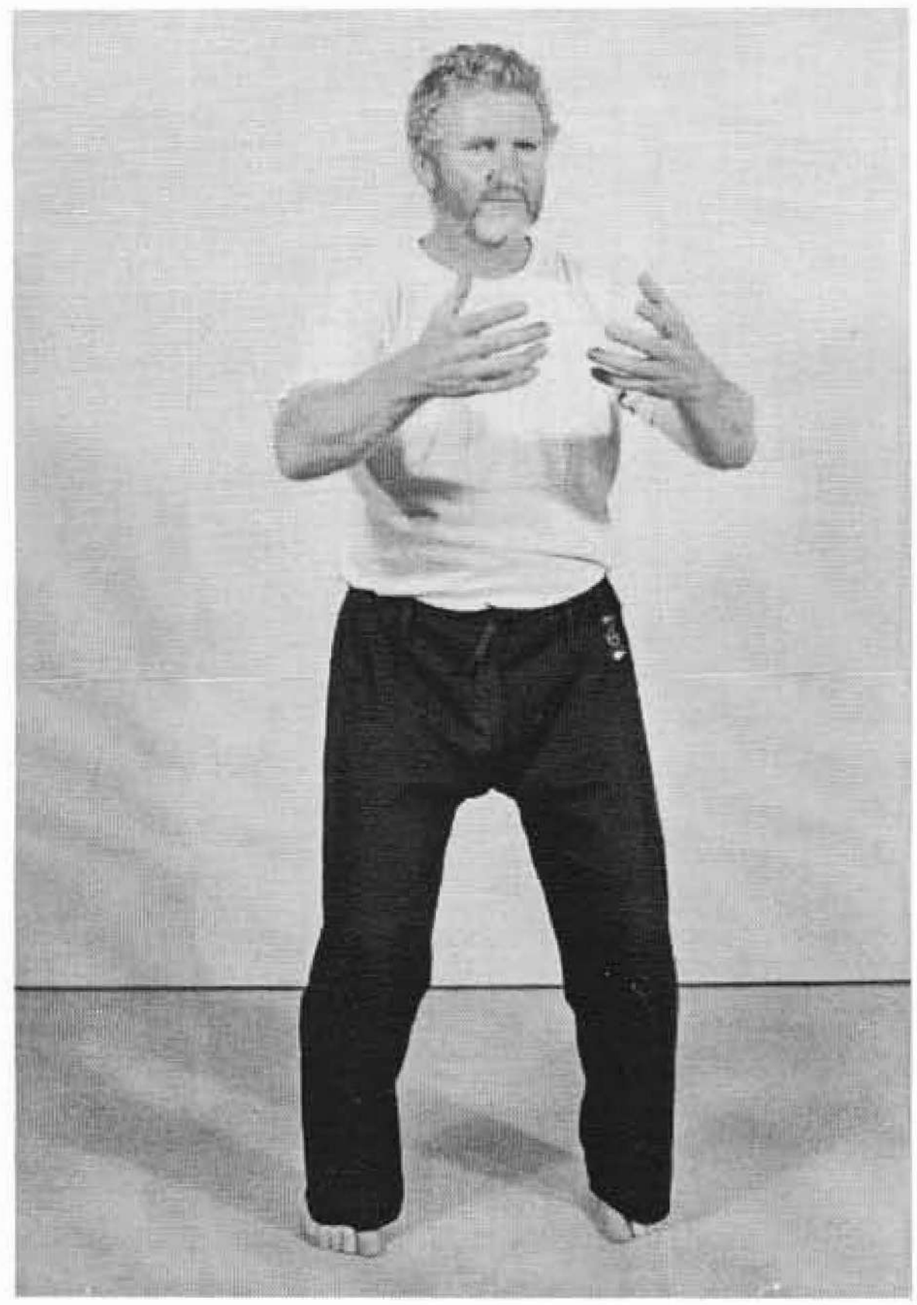


Figure 212

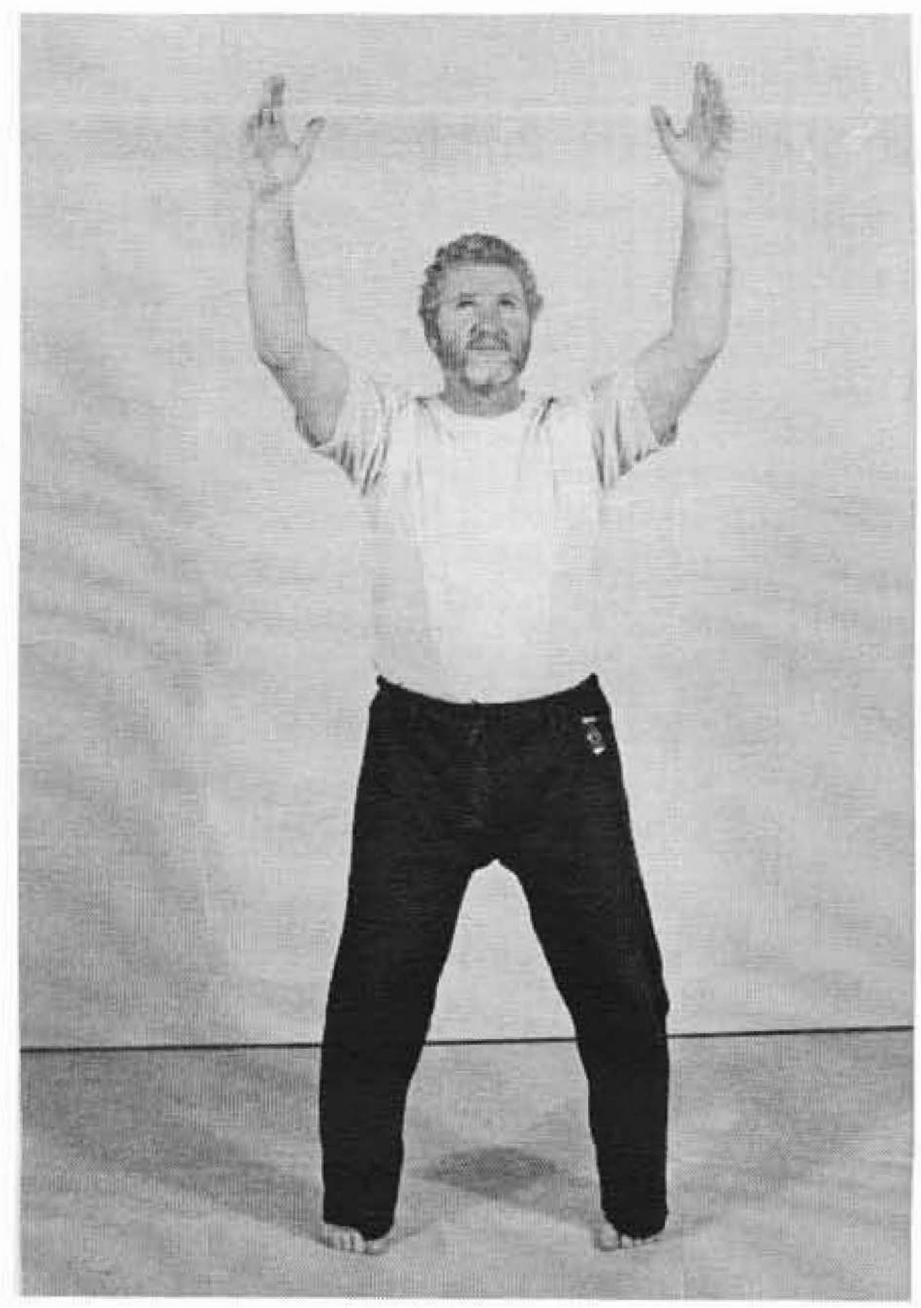


Figure 213

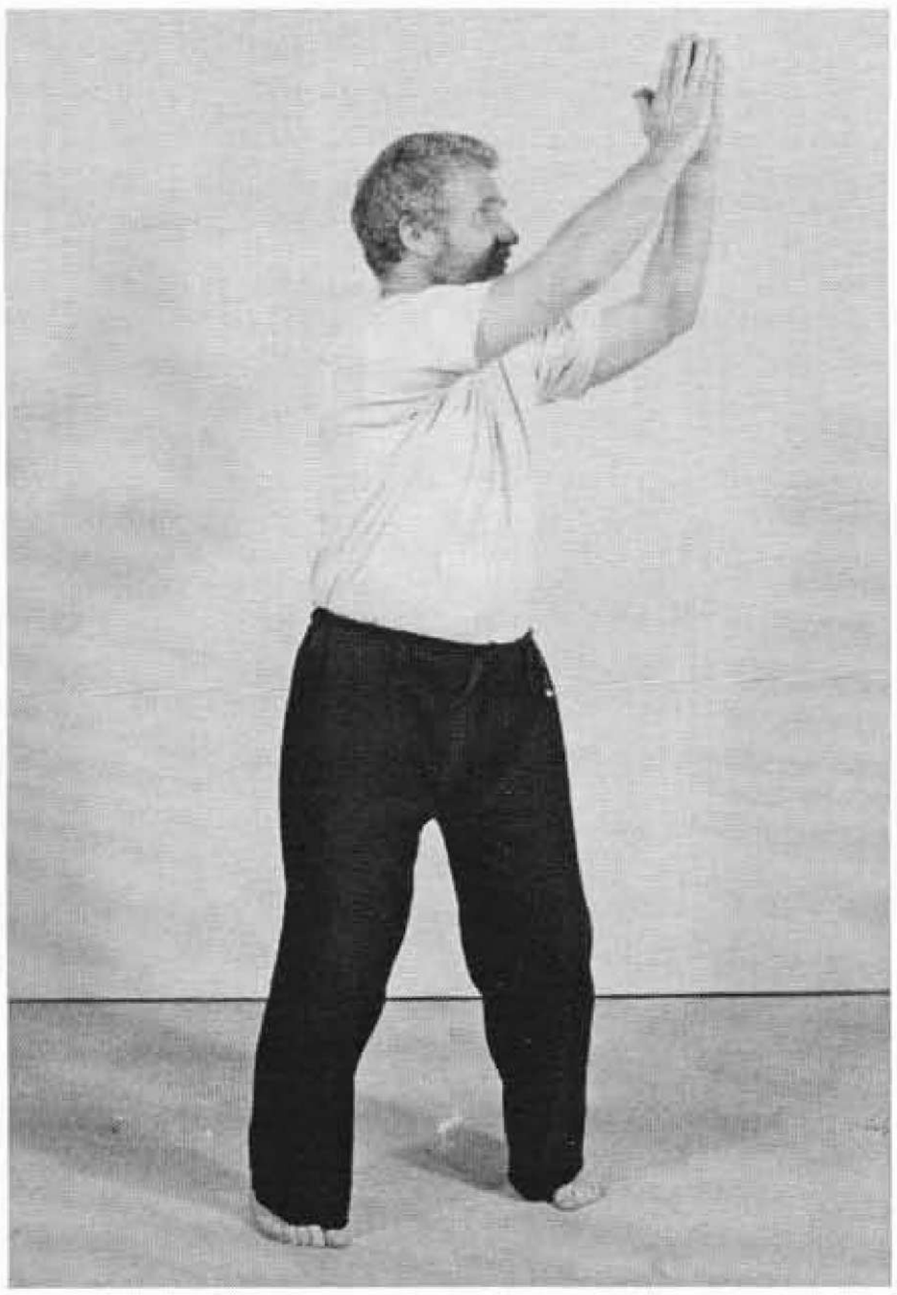


Figure 214

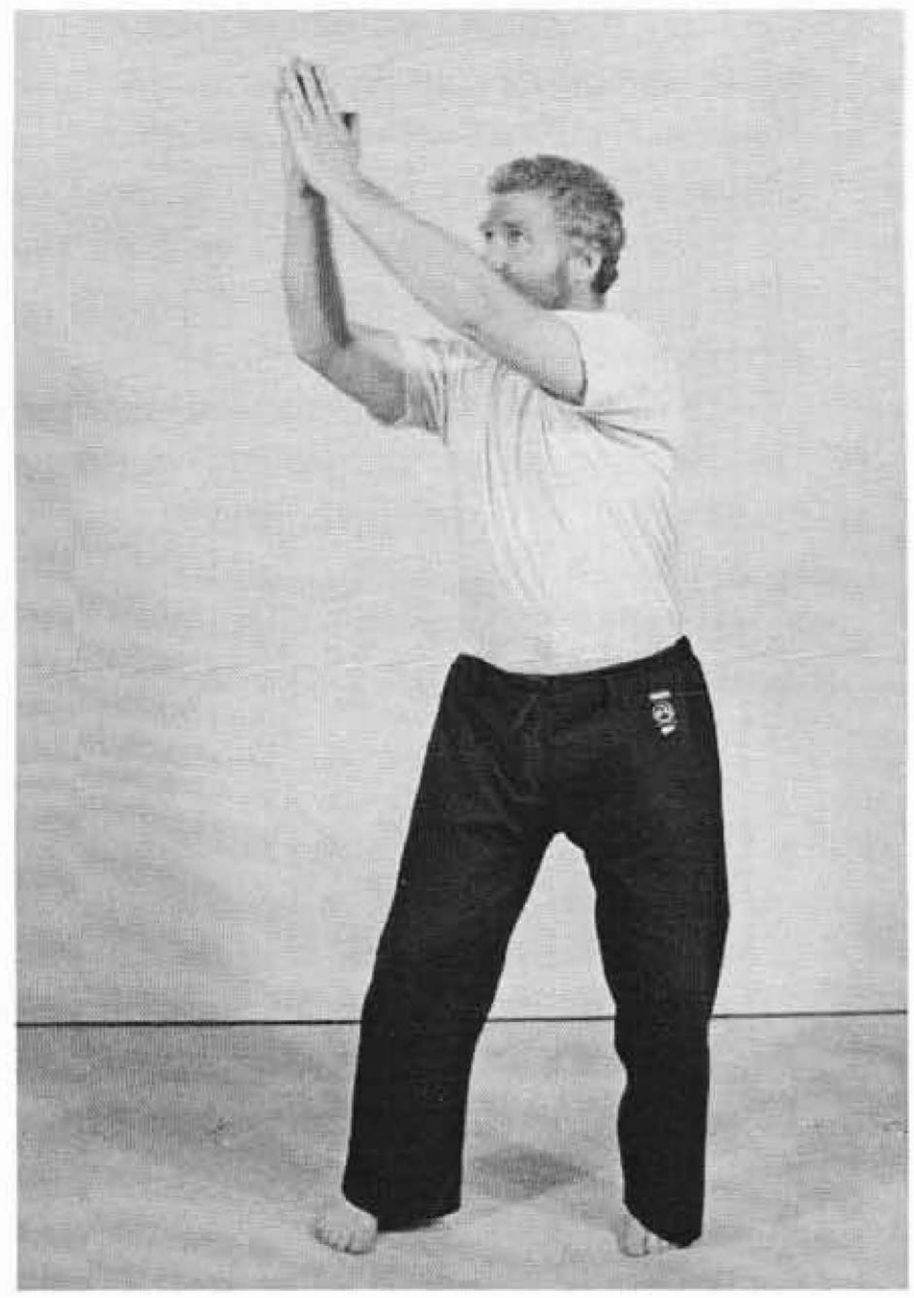


Figure 215

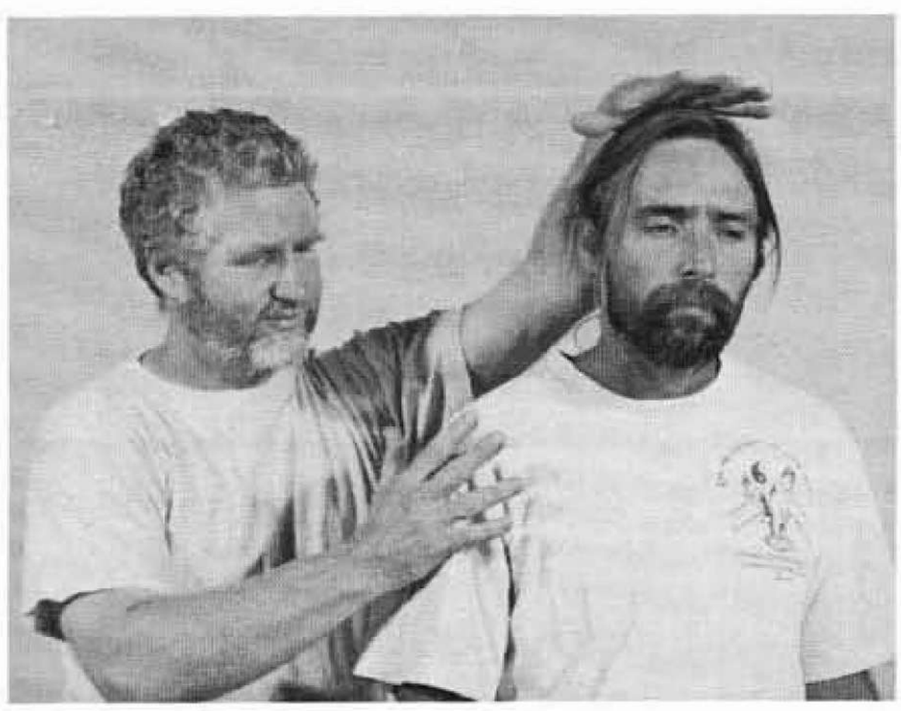


Figure 216

turn your waist, not your hips, to your left. Your eyes will follow the movement as your right palm touches your left (fig. 214). As your palms touch, exhale. (3) Now, turn your waist to your right and inhale, taking your right palm away from your left. (4) As you turn further, your left palm now reunites with your right palm, your eyes look in that direction, and you exhale (fig. 215). (5) Inhale as you turn your waist back to the front, open your palms to the position of when you began, and lower your head so that the eyes look straight ahead. (6) Breathe normally—slowly and deeply—for five minutes.

For the antidote, place your left palm onto his Gv 20 point and your right palm onto Co 14 on his "qi intake" point at the shoulder (fig. 216). Don't do anything; just stand there relaxed and the healing will happen naturally. You are only being a transmitter for ground qi. Your left palm will begin to vibrate, sometimes violently, depending upon how damaged his qi is. You will know when to stop because the vibration will begin to subside.

Healing:

Innervation is by the dorsal scapular nerve, the medial cutaneous branches of the posterior rami of the sixth and seventh thoracic nerves, and, deeper, their lateral branches.

Irrigation is by the medial posterior branches of the sixth intercostal artery and vein and the descending branch of the transverse cervical artery.

Used for cardiac pain, abdominal pain, intestinal noises, spasms of the diaphragm, mastitis alopecia (hair loss), pruritis, psoriasis, endocarditis, and pericarditis.

Traditional indications include hot and cold chest pain, abdominal pain, intestinal noises, and rebellious qi.

This is as a shu or transporting point of the Gv meridian, so its traditional function is to boost the qi in the channel or drain excess qi from the channel.

Massage techniques are the same as for Bl 11.

Use with Bl 13, Bl 17, Bl 18, Sp 10, Liv 2, Liv 3, St 36, St 25, Lu 7, Co 1, Co 2, Co 4, and Co 11 for psoriasis.

Use with Cv 17, Co 4, Co 11, Bl 17, Bl 18, Liv 14, Sp 18, St 15, Si 1, Liv 3, Liv 4, Sp 6, St 36, Pc 6, and Th 10 for mastitis.

Use with Pc 6, St 36, Sp 4, Sp 3, Liv 3, Liv 2, St 44, St 45, Cv 12, Cv 4, Cv 5, St 25, St 21, Liv 14, and Liv 13 for abdominal pain with borborygmus.

Applications:

Kd 27 works very well with this point, so in this case I will give an application. Slam his right straight with your left palm at Si 8. Stepping to your left diagonally, attack to Bl 16 with your right elbow as your right knee attacks to Gb 27 (fig. 217).

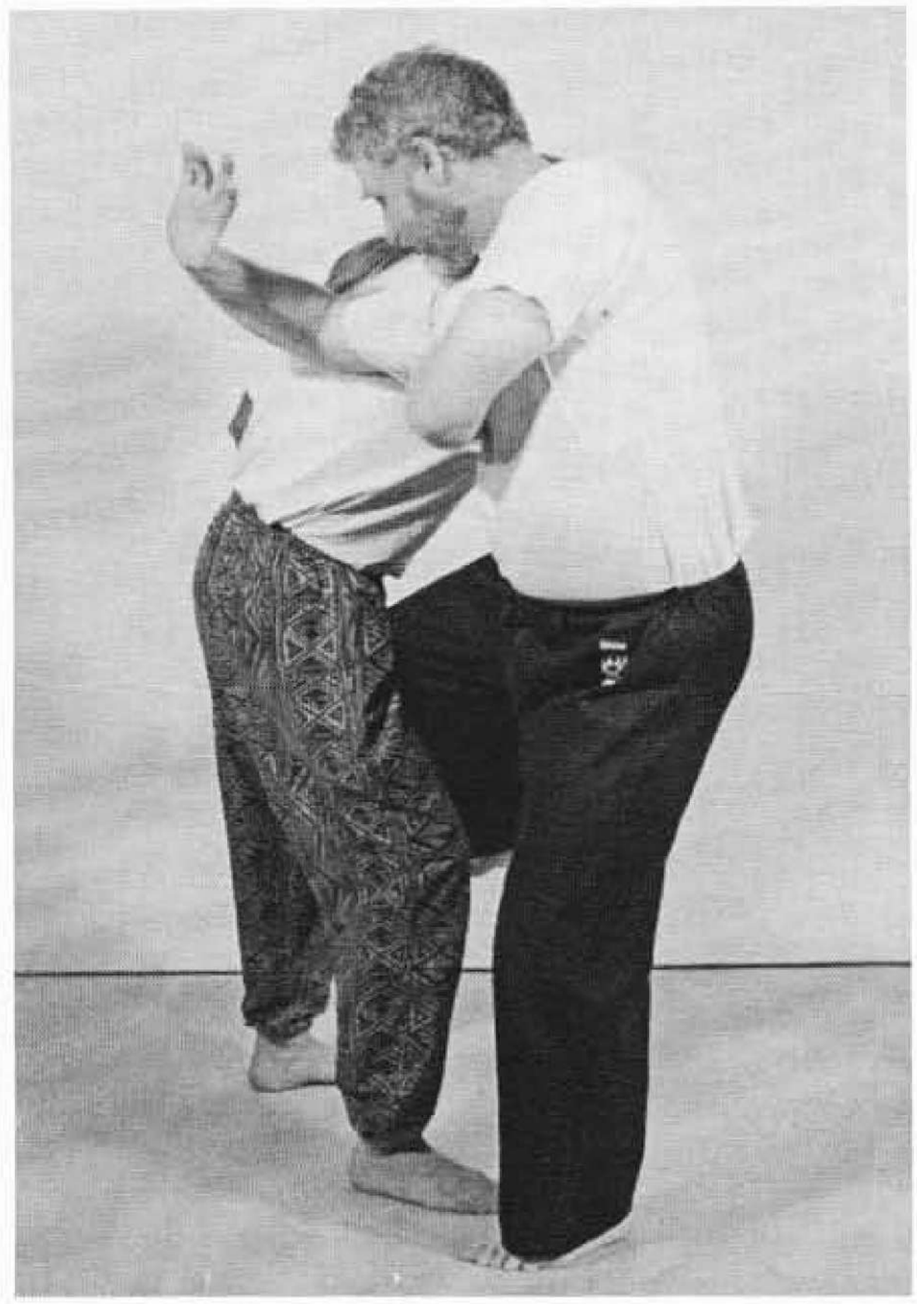


Figure 217

BL 17 (BLADDER POINT NO. 17)

Chinese name:

Geshu (diaphragm's hollow).

Location:

1.5 cun lateral to the lower border of the spinous process of the seventh thoracic vertebra. At the inferior margin of the trapezium and in the latissimus dorsi and longissimus muscles.

Connections:

None; a shu point of the diaphragm and esophagus.

Direction of strike:

Straight in and slightly downward into the back if you wish to affect the seat of power, or slightly upward if you wish to affect the upper heater and, therefore, the blood.

Damage:

The damage here is great in that it will affect the power of the body. In the case of a downward strike, immediate loss of power is felt in the legs especially, then rising up into the arms. Should the strike be upward, the person will have trouble eating and swallowing.

Set-up point:

The set-up for a downward strike should be Lu 5. The set-up point for an upward strike should be a downward strike right on top of the stomach. This works really well if the recipient has a huge belly.

Antidote:

Deep breathing is the only antidote for this strike.

Healing:

Innervation is by the medial branches of the posterior rami of the seventh and eighth thoracic nerves and, deeper, their lateral branches.

Irrigation is by the medial branches of the posterior branches of the seventh intercostal artery and vein.

Used for vomiting, hiccups, difficulty swallowing, asthma, cough, hemoptysis, afternoon fever, night sweating, anemia, chronic hemorrhagic disorders, spasm of the diaphragm, urticaria, tuberculosis of the lymph glands, and stomach cancer.

Traditional indications include chills and fever, hot sensation in the bones (a yin-deficient condition) with night sweats, coughing or spitting of blood, abdominal distension or lumps, lassitude, hyperosmia (high sensitivity to smells), and hemorrhage.

Traditional functions are to invigorate blood circulation, dispel fullness from the diaphragm, pacify the stomach, tonify weakness of whole body, and expand the chest. As a shu point for the diaphragm, it is an influential point for blood, thus its ability to transform congealed blood and generally regulate blood.

Massage techniques are the same as for Bl 11.

Use with Gv 22, Gv 17, Gv 14, St 36, Bl 18, Gb 34, and Liv 3 for spasm of the diaphragm.

For anemia, use with Gv 14, Bl 20, Bl 21, Bl 15, Sp 10, St 36, Liv 3, and Sp 3.

For cough or asthma, use with Lu 9, Lu 1, Cv 17, Lu 7, dingchuan, Gb 21, Liv 3, Bl 12, Bl 13, Bl 14, Bl 43, Bl 18, and St 36.

Use with St 11, Cv 22, Cv 12, Pc 6, Pc 8, St 36, St 44, St 25, Cv 4, and Cv 6 for hiccups.

Use with Bl 20, Bl 18, Bl 23, Bl 22, Sp 10, Sp 6, Sp 4, Sp 3, Liv 1, Cv 4, Cv 6, Liv 4, Liv 3, Liv 2, and St 36 for abnormal uterine bleeding.

Applications:

He might attack with a straight right, so you slam his Lu 5 point at the elbow with the back of your right palm. Now, pull the arm to your right violently with your right palm, thus turning his back to you as you strike straight in and down or up with your left palm.

BL 18 (BLADDER POINT NO. 18)

Chinese name:

Ganshu (liver's hollow).

Location:

1.5 cun lateral to the lower border of the spinous process of the ninth thoracic vertebra. In the latissimus dorsi muscle and between the longissimus and ilio-costalis muscles.

Connections:

None. Liver shu point.

Direction of strike:

Straight in.

Damage:

Striking to this point with a smaller weapon, such as a one-knuckle punch, will allow wood to invade earth (the exact opposite of what healing does at this point). This will cause great nausea in the stomach and intestine area. This strike can also cause momentary or permanent blindness due to the action upon the liver, as Bl 18 is a liver shu point. It also affects the gallbladder. Immediate KO occurs with this strike, as the brain thinks that the liver and gallbladder have been damaged greatly and so shuts the system down while it works out what is wrong.

Set-up point:

You could use Liv 13 or a stomp onto the web of the big and second toe at Liv 3.

Antidote:

Massage Liv 3 since this is an earth point. Or you could massage or needle Bl 18 directly (straight in with clockwise circular motions).

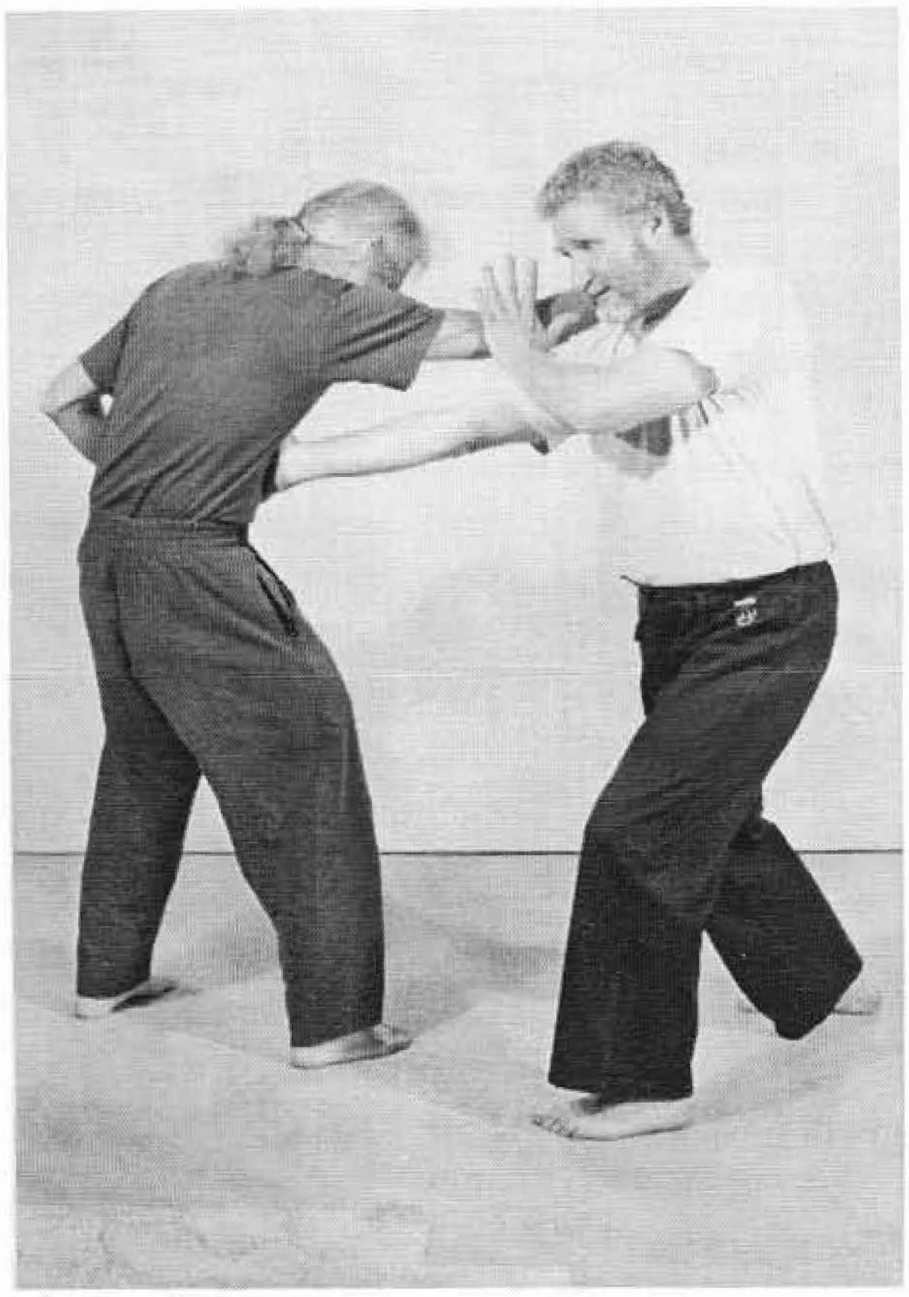


Figure 218

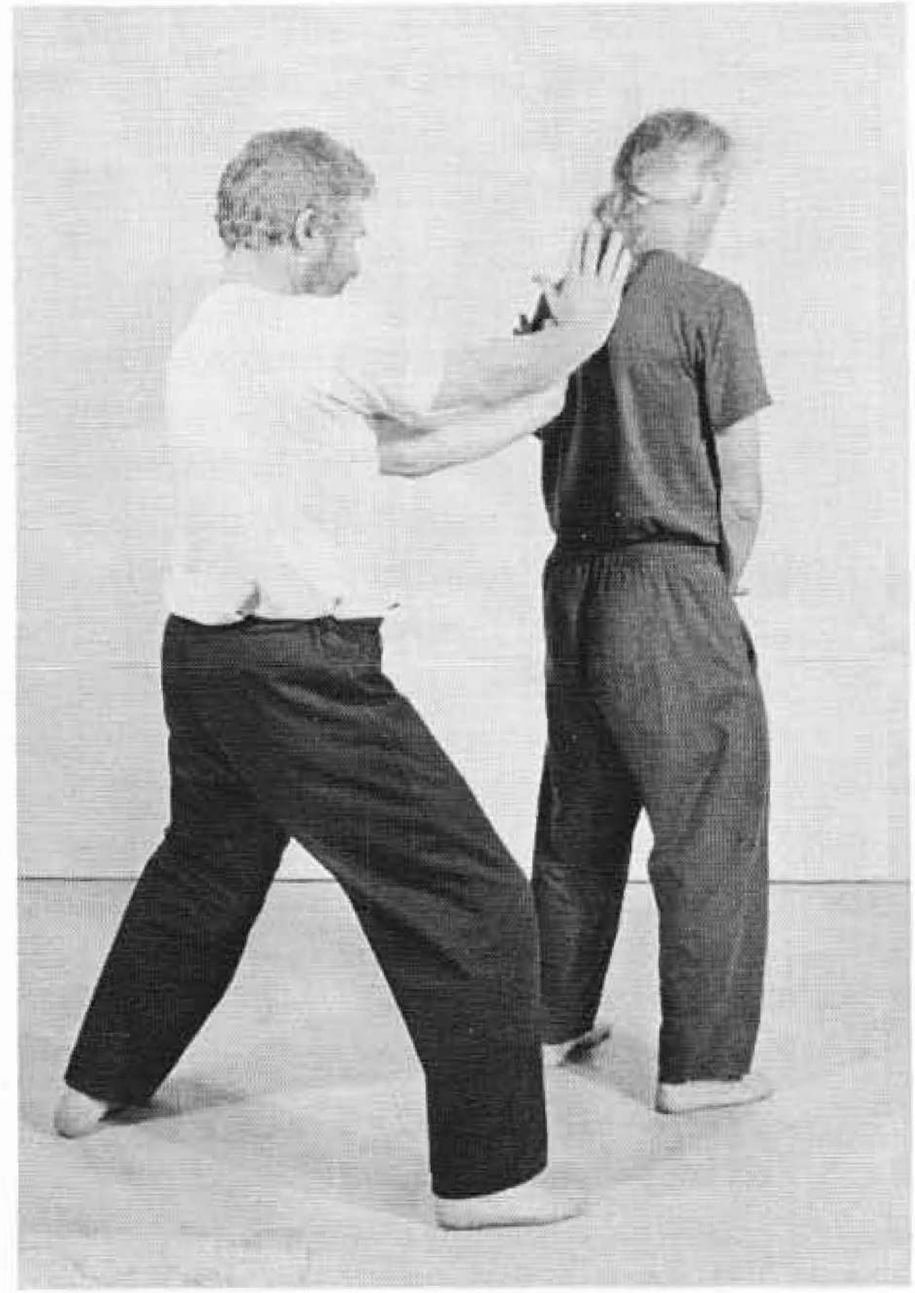


Figure 219

Healing:

Innervation is by the medial cutaneous branches of the posterior rami of the ninth and 10th thoracic nerves and, deeper, their lateral branches. Irrigation is by the medial branches of the posterior branches of the ninth intercostal artery and vein.

Used for jaundice, pain in the hypochondriac region, hematosis, epistaxis, redness of the eye, blurring vision, night blindness, pain in the back, mental confusion, epilepsy, chronic and acute hepatitis, cholecystitis, stomach disease, intercostal neuralgia, neurasthenia, and irregular menstruation.

Traditional indications include nosebleed, spitting blood, eye disease, jaundice, and pain and lumps in the chest and abdomen.

As a shu point of the liver, this point's traditional functions are to soothe the liver and gallbladder, eliminate damp heat, remove stagnation of qi, and brighten the eyes.

Massage techniques are the same as for Bl 11.

Used with Liv 2, Liv 3, Liv 4, Liv 13, Cv 12, St 36, Pc 6, and *yiming* (an extra point) for acute or chronic hepatitis.

For dulling eyes, use with Bl 1, Gv 20, St 1, Gb 1, Liv 3, Gv 4, and Gb 20.

Use with Bl 30, Bl 16, Bl 17, Bl 19, Bl 20, Liv 14, Liv 4, Liv 2, Liv 3, Sp 6, Sp 10, Gb 34, Gb 43, and Gb 44, for cirrhosis of the liver.

Use with Kd 3, Bl 23, Bl 11, Bl 17, Gb 39, Liv 2, and Liv 4 for acute leukemia.

Use with Gv 20, Gb 20, Th 17, Si 19, Liv 3, Pc 6, Cv 6, Cv 4. Kd 1, Cv 12, Kd 3, St 36, yintang, Gv 14, and Gv 16 for vertigo.

Applications:

He might again attack with a straight right. You should slam his elbow at Si 8 with your left palm as your right palm slams into Liv 13 (fig. 218). Now both of your palms are free to attack to Bl 18 and a little higher up at Bl 15 (fig. 219).

BL 19 (BLADDER POINT NO. 19)

Chinese name:

Danshu (gallbladder's hollow).

Location:

1.5 cun lateral to the lower border of the spinous process of the 10th thoracic vertebra. In the latissimus dorsi muscle, between the ilio-costalis and longissimus muscles.

Connections:

None.

Direction of strike:

Straight in.

Damage:

This point works in much the same way that Bl 17 does, only it has a greater effect upon the digestive system and so greater nausea is felt. Should you wish to stop the fight instantly, then this point will work, and a light to medium strike will not cause too much real damage. However, the nausea that is caused is enough to stop the fight. Combine it with Gb 25 or Liv 14, and the recipient is in real trouble! This point has also been known to also result in spasm in the middle of the back, causing the attacker to have to discontinue the confrontation because he is doubled up in pain.

Set-up point:

Gb 24 or Liv 14, not so much as set-up points, but as points that work well with Bl 19.

Antidote:

Thumb pressure to neigwan down the inside of the forearm, deep and covering perhaps a 2-inch distance. If Gb 25 and Liv 14 have also been attacked, then apply CPR and find a hospital, if he is not already dead.

Healing:

Innervation is by the medial cutaneous branch of the posterior rami of the 10th and 11th thoracic nerves and, deeper, their lateral branches. Irrigation is by the medial posterior branches of the 10th intercostal artery and vein.

Used for jaundice, bitter taste in the mouth, pain in the chest and hypochondriac region, pulmonary tuberculosis, afternoon fever, hepatitis, cholecystitis, gastritis, roundworm in the bile duct, tuberculosis of the lymph glands, abdominal distension, and sciatica.

Traditional indications include headache with chills, bitter taste in the mouth, dry vomiting, sore throat, distension and fullness in the abdomen and chest, pain in the flanks, yellow eyes, jaundice, hot sensation in the toes with low-grade fever (yin-deficient consumptive disease), swelling of the axillary lymph glands, and sperm in the urine (yin-deficient condition).

As a shu point of the gallbladder, its traditional functions are to eliminate heat from the liver and/or gallbladder, pacify stomach qi, dispel fullness from the diaphragm, and regulate qi.

Massage techniques are the same as for Bl 11.

Use with Liv 14, Liv 13, Cv 12, Gb 43, Gb 44, Liv 2, Liv 3, dannamgxue, Pc 6, Gb 34, Gb 24, St 36, and jiaji points T 8 and T 9 on the right side for cholecystitis.

For sciatica or low back pain, use with Bl 25, Bl 26, Bl 52, Bl 40, Gb 34, Gb 29, and Gb 30.

Use with Gb 24, Liv 14, Liv 13, Liv 3, Gb 41, Bl 20, Bl 18, Bl 17, and St 36 for distension and fullness in the chest and abdomen.

Use with Gv 20, Gb 20, Gb 21, Gb 10, Gb 14, Gb 18, Gb 34, taiyang, Gb 41, Liv 3, Liv 2, Gb 43, Gb 44, Bl 12, Bl 13, and Si 13 for headache.

Applications:

Use both palms to strike to Gb 25 and Liv 14. Grab an arm and swing him around to get at Bl 19 straight in.

BL 20 (BLADDER POINT NO. 20)

Chinese name:

Pishu (spleen hollow).

Location:

1.5 cun lateral to the lower border of the spinous process of the 11th thoracic vertebra. In the latissimus dorsi muscle, between the longissimus and ilio-costalis muscles.

Connections:

None.

Direction of strike:

Straight in.

Damage:

This is quite an amazing point to strike. It is commonly called the "vomit point" in dim-mak circles. This point attacks just about every organ in the whole body and also attacks earth (the center of the body). It will cause great nausea and vomiting by attacking the stomach and digestive organs. In addition, it will attack the liver and gallbladder and, in particular, the spleen, which causes the liver to become "hot." One of the jobs for the spleen is the transportation of qi; hence this point's ability to attack all organs. The liver becomes hot and so affects earth, which in turn damages the spleen further, and so a vicious cycle is set up. *Do not play around with this point!*

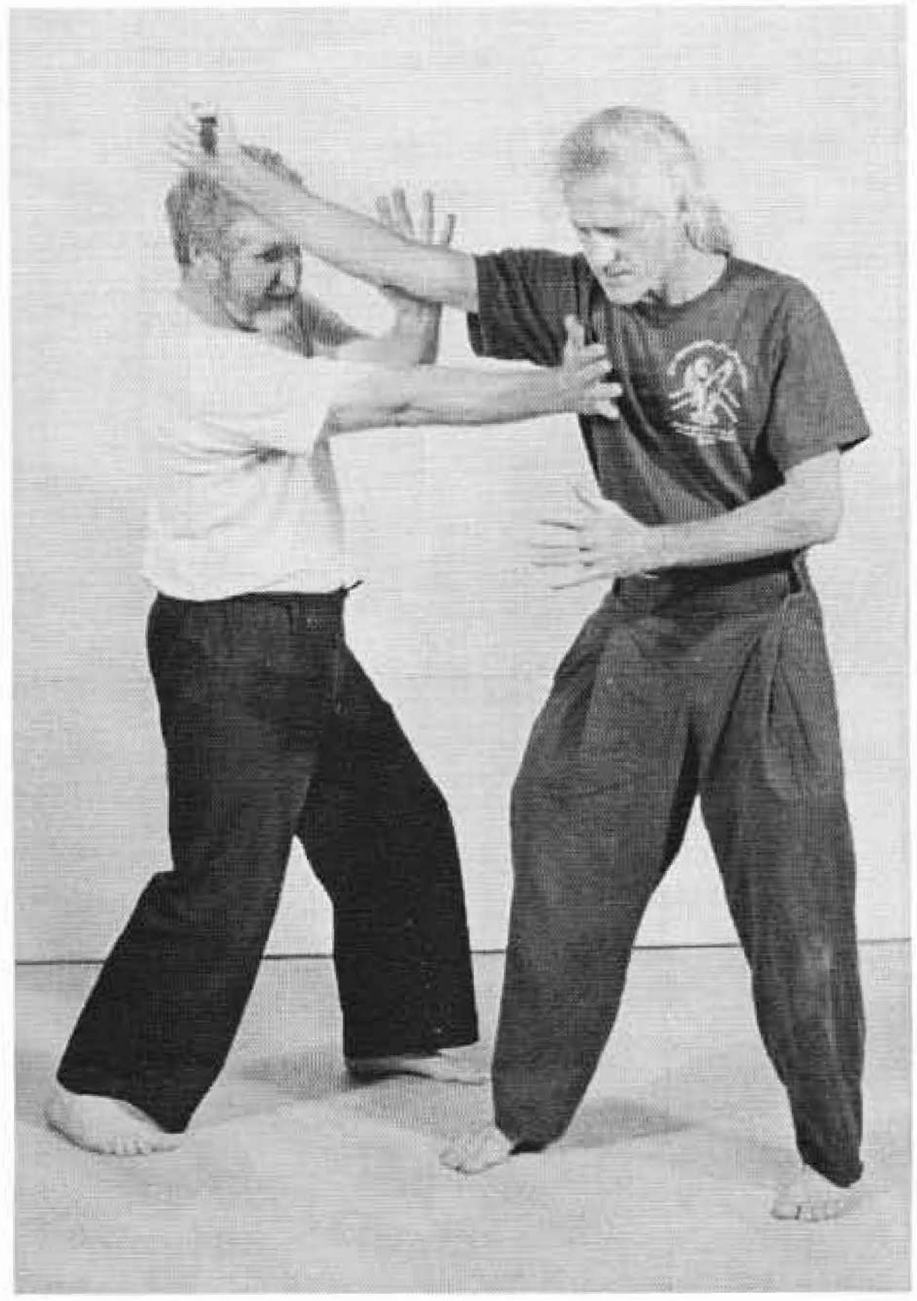


Figure 220

Set-up point:

Strike to Spleen 17 from the outside to the inside of the torso. *This combination is deadly!*

Antidote:

Have an acupuncturist work on the spleen and healing earth. Also work on the liver to get the heat out. Eat watermelon. (Watermelon is a very yin type of food, which will counter the yang. It is a common treatment for many heat-related disease states.)

Healing:

Innervation is by the medial cutaneous branches of the posterior rami of the 11th and 12th thoracic nerves and, deeper, their lateral branches. Irrigation is by the medial posterior branches of the 11th intercostal artery and vein.

Used for gastritis, ulcers, prolapsed stomach, nervous vomiting, indigestion, hepatitis, enteritis, edema, anemia, enlargement of liver and spleen, chronic hemorrhagic disease, prolapsed uterus, urticaria, weakness of the limbs, abdominal distension, jaundice, diarrhea, dysentery, indigestion, and pain in the back.

Traditional indications include constriction of the esophagus (plumb stone throat), diarrhea, dysentery, edema, abdominal distension, lumps in the chest, and jaundice.

As a shu point of the spleen, its traditional functions include regulating spleen qi, promoting the transformation and transportation function of the spleen (T&T of food and fluids), eliminating damp, pacifying the stomach, reinforcing blood, expelling water (damp/edema from spleen yang deficiency), harmonizing the blood, and nourishing qi (ying qi).

Massage techniques are the same as for Bl 11.

Use with Bl 17, Bl 23, Bl 18, Bl 13, Sp 6, Cv 12, St 36, Kd 3, Lu 11, Lu 10, Cv 4, Bl 21, yishu, pirexue, Kd 7, and Kd 5 for diabetes.

Use with Bl 18, Gv 14, Sp 1, Cv 13, Sp 10, and St 36 for nosebleeds.

For stomachache, nausea, and vomiting, use with Pc 6, St 36, Cv 12, Cv 14, Cv 11, Cv 9, Cv 4, St 44, St 43, St 4, Bl 21, Bl 18, Bl 19, Bl 17, Sp 9, Sp 4, Liv 2, Liv 3, St 40, and jiaji points from T 8 to T 12.

Use with Gv 20, Cv 12, Cv 6, Cv 4, abdomen zigong, Gb 26, Sp 6, St 36, Liv 3, St 30, Sp 9, Liv 8, and Gb 28 for prolapsed uterus.

For anorexia, use with Sp 3, Liv 3, St 36, Cv 12, Cv 4, Cv 6, Liv 14, Bl 21, Bl 17, Bl 18, Pc 6, Ht 7, and Co 4.

Use with Bl 25, Bl 22, Bl 21, Bl 19, Bl 18, Bl 17, Cv 12, Cv 4, St 25, St 40, St 36, Sp 9, Sp 4, Liv 3, Sp 15, Gb 26, Co 4, and Th 4 for diarrhea, dysentery, and abdominal distension.

Applications:

Take his right strike with your right p'eng-type block. This will open up Sp 17 for a shot. The right palm now attacks to Sp 17 (fig. 220). Your left palm is now free to attack Bl 20 straight in.

BL 21 (BLADDER POINT NO. 21)

Chinese name:

Weishu (stomach's hollow).

Location:

1.5 cun lateral to the lower border of the spinous process of the 12th thoracic vertebra. In the lumbodorsal fascia, between the longissimus and ilio-costalis muscles.

Connections:

None.

Direction of strike:

Straight in.

Damage:

Great power loss is felt when this point is struck. Again, extreme nausea is felt as well as liver damage.

Set-up point:

Use any of the gallbladder points to set up this strike.

Antidote:

Neigwan, pressed down the inside of the forearm.

Healing:

Innervation is by the medial cutaneous branch of the posterior ramus of the 12th thoracic nerve and, deeper, its lateral branch. Irrigation is by the medial posterior branches of the subcostal artery and vein.

Used for pain in the chest/hypochondriac and epigastric regions, abdominal distension, nausea, vomiting, borborygmus, indigestion, stomachache, gastritis, prolapsed stomach, ulcer, pancreatitis, hepatitis, enteritis, loss of appetite, insomnia, and pain along the spine.

Traditional indications include difficulty in swallowing, regurgitation of food, infant vomiting of milk, abdominal pain from cold conditions in the stomach, diarrhea, edema (feels like a drum to touch), and vomiting.

As a shu point of stomach, its traditional functions include adjusting stomach qi, dispelling damp, and removing obstructions and stagnation.

Massage techniques are the same as for B 11.

Use with Bl 20, Bl 18, Bl 17, Bl 19, Cv 12, Cv 10, Cv 9, St 21, St 25, St 36, St 44, St 45, and Liv 3 for chronic gastritis.

Use with Bl 20, Bl 23, Bl 24, Gv 4, Cv 12, Cv 4, Cv 6, St 36, and Sp 3 for cold obstruction of the stomach causing pain and distension. (Moxa is the best thing to use on the points for this condition.)

For pain in the chest/hypochondriac and epigastric regions, use with Bl 17, Bl 18, Bl 19, Bl 20, Bl 22, Bl 40, Cv 12, Cv 10, Cv 9, St 21, Liv 14, Liv 13, Gb 24, Gb 26, St 36, Liv 3, Sp 9, Sp 4, and Liv 4.

Use with St 36, Sp 3, Cv 12 Liv 3, Bl 20, Bl 23, Bl 18, Bl 13, Pc 6, and Gv 20 for loss of appetite.

Applications:

You could use an old grappler's trick of coming in hard and high, then going low just as the opponent tries to strike you. Take his waist and take him down, landing him on his face with you on top. Strike straight into Bl 21.

BL 22 (BLADDER POINT NO. 22)

Chinese name:

Sanjiaoshu (triple heater's hollow).

Location:

1.5 cun lateral to the lower border of the spinous process of the first lumbar vertebra. In the lumbodorsal fascia, between the longissimus and ilio-costalis muscles.

Connections:

None.

Direction of strike:

Either upward into the back or downward. Upward there will be an effect on the middle heater, and downward there will be an effect upon the lower heater.

Damage:

This is a special point for the metabolism of water. It also affects the whole triple heater—literally the whole body's qi flow. So a strike here has not only instant effects such as extreme qi drainage, but also long-term effects on functions such as body lubrication, which in turn could cause joint diseases, for instance.

Set-up point:

Use either Gb 14 downward or slam Lu 5 to enhance the drainage effect, or grab and violently twist Lu 8 with Ht 5.

Antidote:

The whole body must be rebalanced using one of the qi balancing methods. Another qi balancing method not already mentioned is the "seven stars balancing." The seven stars are the seven qi (energy) input points in the body. There is a move from the taijiquan form called "step forward to form seven stars." Many people have translated this as "to protect the seven openings," or "to attack his seven points," etc. But the real meaning of this posture is to open the body to the seven qi input points to take in external qi. At birth we are given an amount of qi that cannot be built upon from within; it must be built up by adding "external qi." At a very basic level, external qi can simply come from what we eat or drink, and the quality of those things determines the quality and

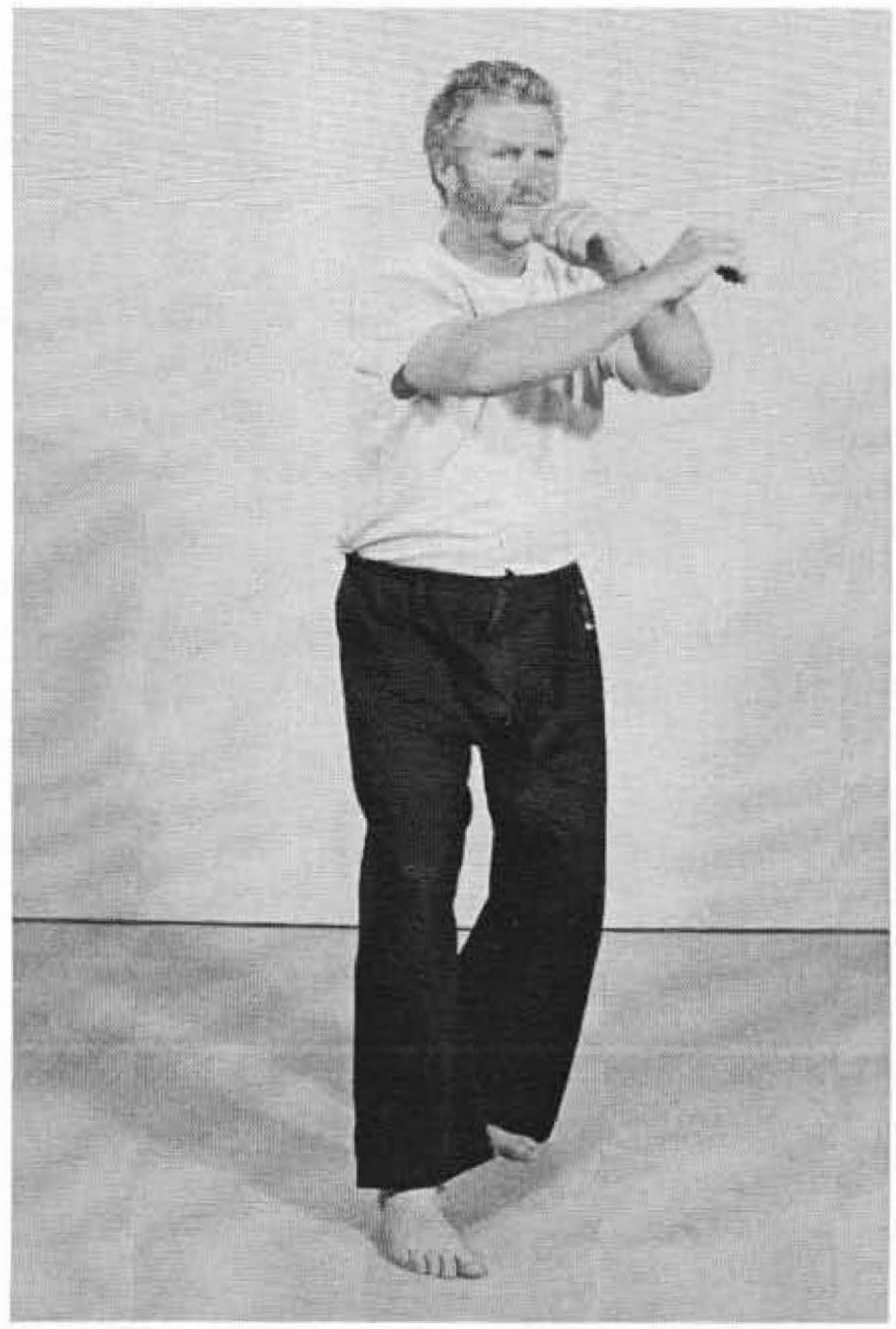


Figure 221

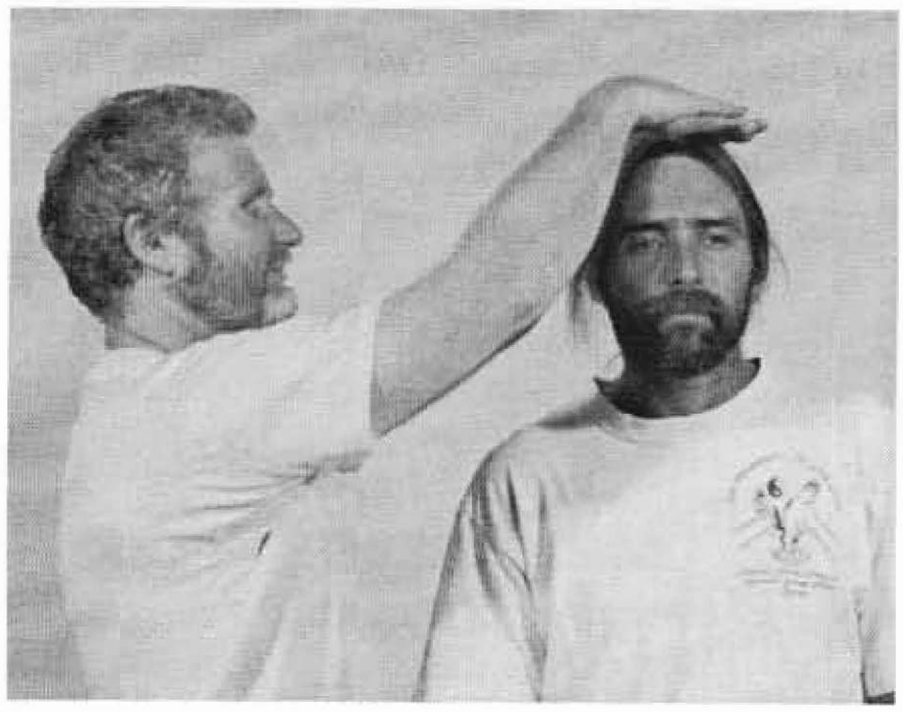


Figure 222

amount of qi taken in. However, opening up the seven qi input points through the seven stars qigong is another, more powerful way of taking in external qi (fig. 221). The seven star qi input points are Gv 20, (the crown), Si 16 on both sides of the neck, Co 14 on the shoulders, and Gb 30 at the buttocks. This makes seven points, counting the symmetrical points (Si 16, Co 14, and Gb 30). To cause a qi balance, we simply have to place our hands upon each of these points for 10 seconds and relax, doing nothing special. If you begin making funny sounds and trying to think about the energy being balanced, etc., nothing will happen. Stand in front of your patient and place both of your palms onto Gv 20. If you are male, place your right palm on top of the left, and if you are female, place your left palm on top of your right (fig. 222). For the rest of the points, simply place your left palm on the patient's right Si 16 and your right palm on the left Si 16, and so on, down the body.

Healing:

Innervation is by the lateral cutaneous branch of the posterior ramus of the 10th thoracic nerve and, deeper, by the lateral branch of the posterior ramus of the first lumbar nerve. Irrigation is by the medial posterior branches of the first lumbar artery and vein.

Used for abdominal distension, borborygmus, indigestion, vomiting, diarrhea, dysentery, edema, pain and stiffness of the lower back, gastritis, enteritis, nephritis, ascites, urinary retention, enuresis, neurasthenia, and stagnation of fluids in the abdomen.

Traditional indications include dizziness and headache, vomiting, indigestion, abdominal distension with intestinal noises, diarrhea, edema, and jaundice.

Traditional functions, as a three heater shu point, include regulating the passage of water, mostly for water movement in the lower heater; regulating the transforming function of qi; and resolving damp conditions.

Massage techniques are the same as for Bl 11. You can also vibrate this point with the fingertips, the heel of the palm, etc..

Use with Bl, 24, Bl 25, Bl 28, Cv 3, Cv 4, Cv 5, Cv 6, St 28, St 36, St 40, Sp 4, Sp 9, Sp 6, Liv 3, Bl 66, and Bl 67 for acute or chronic nephritis.

Use with Bl 40, Bl 54, Bl 53, Bl 26, Bl 25, Bl 24, Bl 23, Bl 21, Bl 20, Bl 19, Bl 18, Bl 17, and Gb 34 for lower back pain.

With Bl 25, Bl 20, Bl 23, Gv 4, Cv 4, St 25, St 28, Sp 15, St 37, Sp 4, Sp 9, Liv 2, and Liv 3, for diarrhea or dysentery.

For edema, use with Sp 6, Sp 4, Sp 9, St 40, St 36, St 28, Cv 9, Lu 7, Bl 20, Bl 28, Liv 3, Cv 12, Liv 13, and Gb 26.

Application:

Same as for Bl 21.

BL 23 (BLADDER POINT NO. 23)

Chinese name:

Shenshu (kidney's hollow).

Location:

105 cun lateral to the lower border of the spinous process of the second lumbar vertebra. In the lumbodorsal fascia, between the longissimus and ilio-costalis muscles.

Connections:

Kidney divergent.

Direction of strike:

Straight in. However, this strike works slightly better if you put a slight twist onto it (i.e., as your palm makes contact with the point, twist your right palm clockwise or your left palm counterclockwise).

Damage:

This is the shu point of the kidneys, so great kidney damage results—not as much as a strike to Gb 25, but enough to cause considerable kidney failure or blood in the urine. I have had personal

experience with a technique that I will show under "Applications" for this point called "kidney damaging method." The recipient was hospitalized because of kidney damage and blood in the urine. The damage to this point is instant, and the recipient will be unable to carry on. If it is quite a hard strike, he will fall instantly. If he does not receive medical help, the kidneys will slowly fail, causing death. *Again, be warned: this strike should not be played around with, especially after noon!*

(This point in particular will be more effective in the part of the day when yang is going yin.) Another effect of this strike, little known to most instructors, is an excessive buildup of yang energy in the upper heater, resulting in fainting and eventual death!

Set-up point:

You can use neigwan as your blocking method.

Antidote:

See a doctor, and seek out TCM help for the kidneys. You will have to have acupuncture and take Chinese herbs. There are also many "off-the-shelf" herbal remedies specifically for the kidneys.

Healing:

Innervation is by the medial cutaneous branch of the posterior ramus of the first lumbar nerve and, deeper, the lateral branch of that nerve. Irrigation is by the medial posterior branches of the second lumbar artery and vein.

Used for seminal emission, impotence, enuresis, irregular menstruation, leukorrhea, low backache, weak knees, blurring vision, tinnitus, deafness, edema, nephritis (kidney disease), nephroptosis (dropping of the kidney into the pelvis), renal colic, spermatorrhea, bronchial asthma, alopecia injury to soft tissue of the lower back, and sequelae (aftereffects) of infantile paralysis.

Traditional indications include deafness, deficient kidneys, loss of sperm, impotence, blood in the urine, edema, emaciation and thirst, seizures, tidal fever, lower back pain, and cold knees.

Traditional functions, as a shu point of the kidneys, include readjusting kidney qi, eliminating damp, strengthening the lumbar vertebrae, and benefiting the ears and eyes.

Figure 223

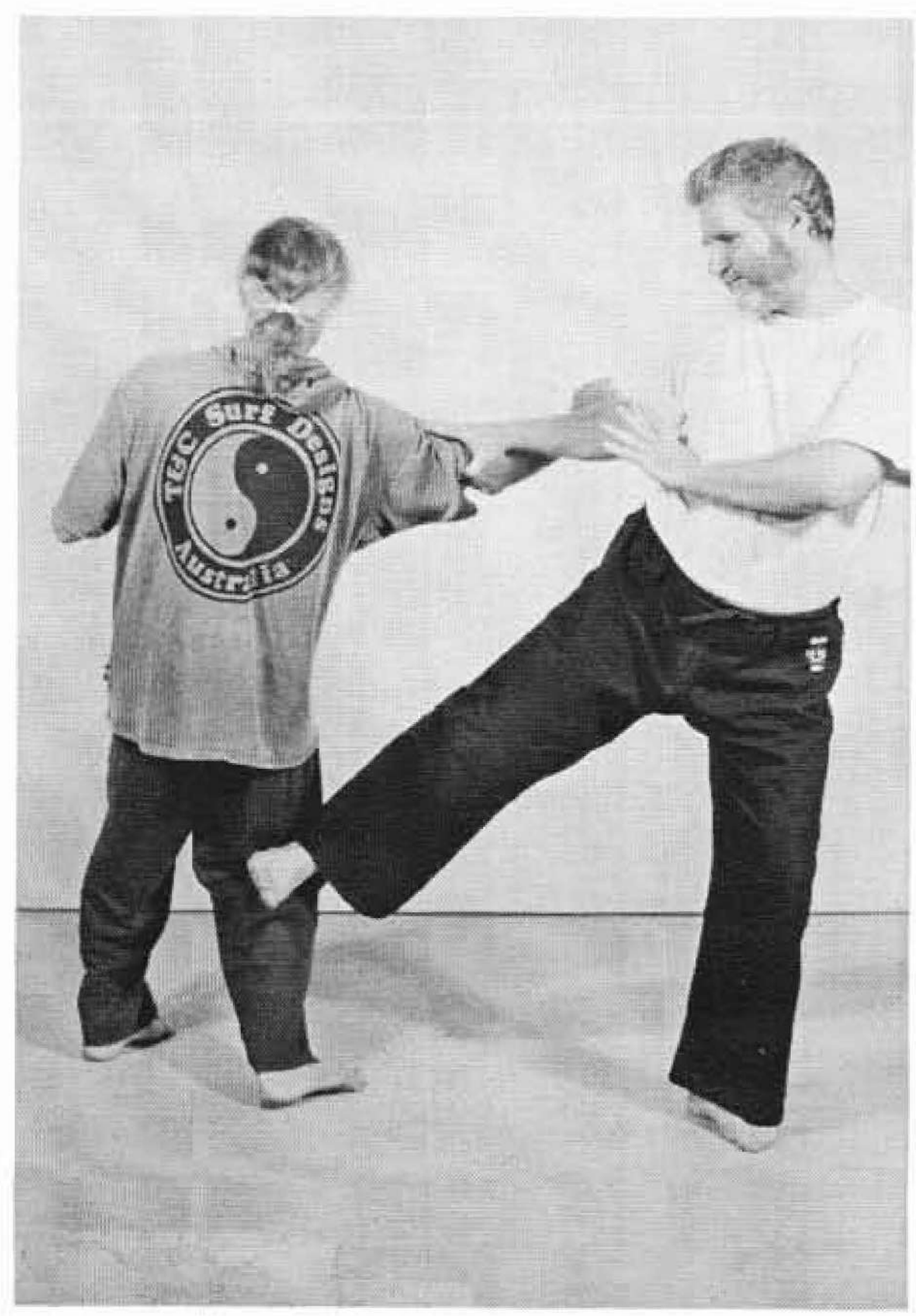


Figure 224

Massage techniques are the same as for Bl 22. Also, use this point as part of massage for the girdle meridian, or dai mo. (The patient should be in the supine position. The practitioner is positioned at the patient's side with one hand either side of the patient's waist, middle finger touching *ming men*, or Gv 4. Using some pressure, the practitioner pulls his or her hands apart and around to front of the patient's body, passing the middle finger through the points Bl 23, Gb 25, Liv 13, Gb 26, Gb 27, Gb 28, the extra point *qimen*, St 28, Kd 13, and Cv 4. Alternatively, the technique might run from Gb 26 to Sp 15, St 25, Kd 14, and Cv 8.) This type of treatment will help with overall yin and yang balance in the body, abnormal vaginal discharge, abdominal distension, and mental imbalance.

Use with Cv 3, Cv 2, Cv 4, Sp 6, Kd 7, Bl 58, Bl 35, Bl 18, abdomen zigong, Kd 2, Bl 66, and Bl 67 for nephritis.

Use with Bl 28, Cv 2, Cv 3, Sp 6, Bl 66, Bl 67, St 28, and Cv 9 for urinary tract infections.

For lower back pain and stiffness, use with Bl 18, Bl 19, Bl 20, Bl 21, Bl 22, Bl 24, Bl 25, Bl 26, Bl 54, Bl 40, Gb 29, Gb 30, and Gb 34.

For diabetes, use with Bl 20, Bl 21, Bl 13, yishu, St 36, Kd 3, Kd 7, Kd 5, Lu 11, Lu 10, Cv 12, Cv 4, Bl 17, pirexue, jiaji points T 11/12 and T 12/L 1, Sp 4, Sp 6, and Liv 3.

For bronchial asthma, use with Bl 13, Bl 12, Bl 43, Bl 18, Bl 20, Lu 1, Lu 5, Lu 7, Lu 9, Liv 14, Gb 24, Cv 17, Cv 4, Gb 25, Cv 22, dingchuan, Kd 22, Kd 23, Kd 24, Kd 25, Kd 26, Kd 27, Kd 3, Liv 3, and St 36.

Applications:

The kidney-damaging method. He attacks with a straight right, and you use a p'eng type of block straight in to neigwan using your right arm. You now kick your right foot backward and hook into Bl 23, swiveling on the ball of your left foot. The striking surface is the back of the heel (fig. 223). Now, as your right foot recovers, use it to stomp down onto Kd 10 at the back of his right knee (fig. 224). You could also use your right elbow to any number of points around the back of the head, such as Gb 12.

BL 24 (BLADDER POINT NO. 24)

Chinese name:

Qihaishu (sea of qi hollow).

Location:

1.5 cun lateral to the lower border of the spinous process of the third lumbar vertebra. In the lumbodorsal fascia, between the longissimus and ilio-costalis muscles.

Connections:

None. This point is the shu point for the "sea of energy."

Direction of strike:

This point can be struck straight in, but it will be damaged doubly if the strike is downward into the buttocks.

Damage:

The immediate damage from this strike is that the power in the legs goes, as does the power in the back. So the recipient falls down. This point does have a more sinister effect, however. I have known a number of people who have been struck in this area as a result of sports injuries, etc. The long term-effect is always the same: the lower heating space—that which is below the waistline—begins to grow, until the person is extremely overweight and has problems with heart disease as a result! The healing aspects of this point are the exact opposite—we use Bl 24 to alleviate obesity.

Set-up point:

Sp 19 is the obvious choice here because it takes power from the legs. If the left Sp 19 is struck straight in, then the right leg becomes weak, and vice-versa. You can also use finger pressure, as in a violent grab in a grappling situation.

Antidote:

Treat Kd 1 and Kd 10 either with pressure or needles.

Healing:

Innervation is by the medial cutaneous branch of the posterior ramus of the second lumbar spinal nerve and, deeper, by its lateral branch. Irrigation is by the posterior branch of the third lumbar artery and vein.

Used for lower back pain, hemorrhoids, irregular menstruation, functional uterine blooding, and paralysis of lower limbs.

Traditional indications include lower back pain, bleeding hemorrhoids.

Traditional functions include strengthening qi, regulating qi and blood, and strengthening the lower back and knees.

Massage techniques are the same as for Bl 22.

Use with Bl 23, Bl 25, Bl 26, Bl 18, Bl 54, Bl 40, Gb 34, Gb 29, Gb 30, and Bl 52 for lower back pain and stiffness.

For hemorrhoids, use with Gv 20, Bl 20, Bl 25, Gv 1, Gv 2, Sp 3, Gb 34, St 36, Cv 4, St 25, and Sp 15.

Use with Sp 1, Sp 6, Sp 3, Liv 4, Liv 2, Liv 3, Cv 4, Cv 6, St 36, Kd 15, St 27, St 28, St 29, Gv 20, Bl 18, Bl 17, and Bl 35 for irregular menstruation.

Use with Bl 22, Bl 23, Bl 46, Bl 47, Bl 25, Bl 27, Bl 26, Sp 6, Sp 9, Kd 3, Gb 34, Cv 3, Cv 4, and Gb 25 for renal colic.

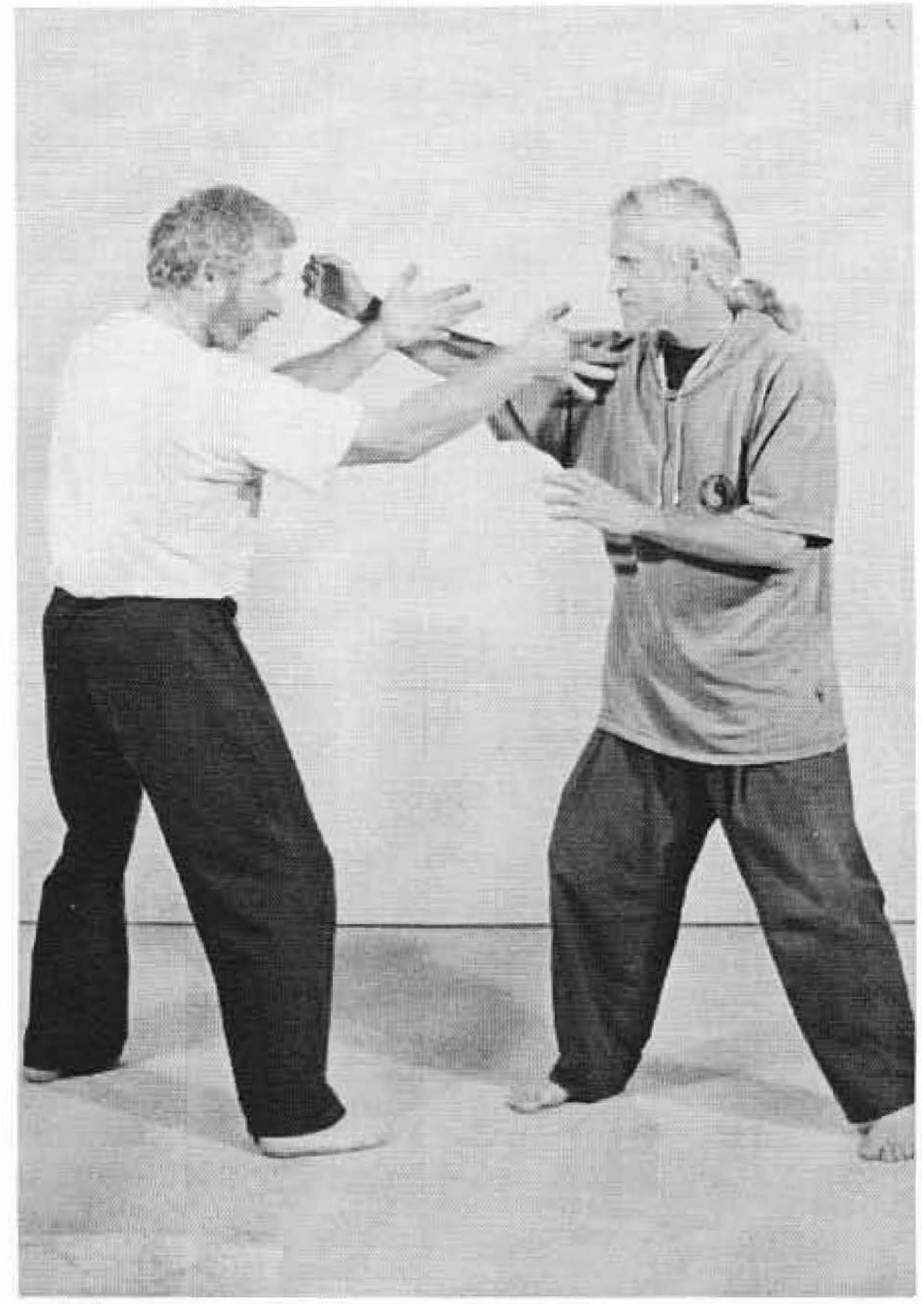


Figure 225

Applications:

He attacks with a straight right, so you block it with your right palm as your left palm takes over the block. Now your right fingers can poke into Sp 19 (fig. 225). You can now get around behind easily, since his legs have gone, and strike downward to Bl 24 over the buttocks.

BL 25 (BLADDER POINT NO. 25)

Chinese name:

Dachangshu (large intestine's hollow).

Location:

1.5 cun lateral to the lower border of the spinous process of the fourth lumbar vertebra. In the lumbodorsal fascia, between the longissimus and ilio-costalis muscles.

Connections:

Connected to the colon via yang ming.

Direction of strike:

Downward into the hip area.

Damage:

This is the shu point of the colon, and, as such, can cause great colon damage. Immediate nausea is felt, so much so that the recipient cannot carry on. Great local pain is also felt at this point, thus draining qi from the lower heater. At a later time, if this condition is not fixed, the person will go into stagnation and then into decay as a result of the colon's inability to get rid of bad qi. (It is the job of the colon not only to get rid of physical waste, but also internal qi waste.)

Set-up point:

A one-knuckle punch straight in and down to the lower abdomen at St 26 will set up this shot. This

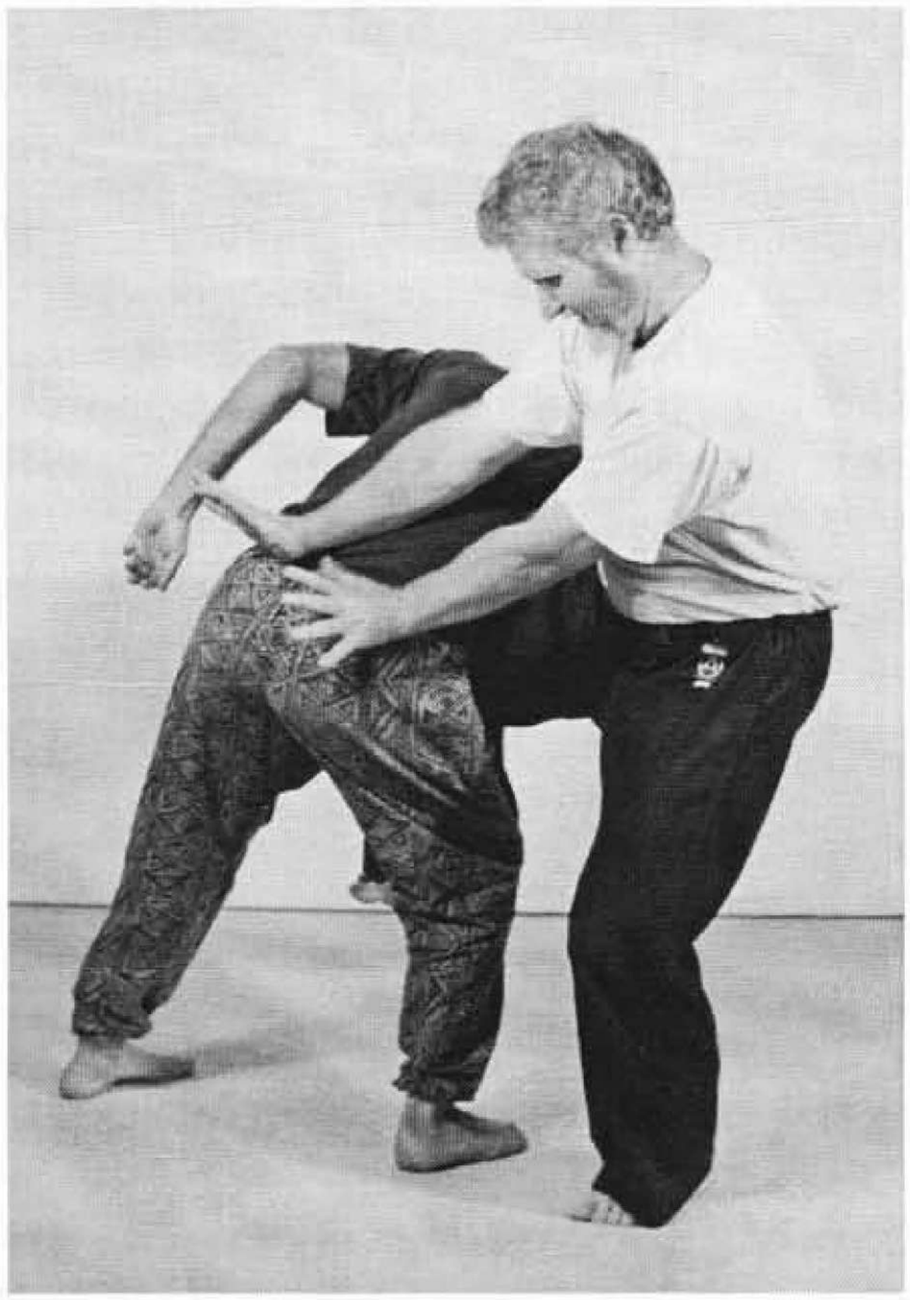


Figure 226

alone will be enough to stop the fight, but add Bl 25 and you have a most devastating method.

Antidote:

Pressure onto Co 10 with the left hand placed over Gv 20 will bring the colon back into balance.

Healing:

Innervation is by the posterior ramus of the third lumbar nerve. Irrigation is by the posterior branch of the fourth lumbar artery and vein.

Used for lower back pain and/or stiffness, pain of the sacroiliac joint, enteritis, dysentery, constipation, abdominal pain and distension, borborygmus, pain and or restriction of the shoulders when the pain is centered on Co 15.

Traditional indications include abdominal distension and intestinal noises, diarrhea, cutting pain around the navel, and difficult or painful defecation or urination.

Traditional functions, as a shu point of the large intestine, include promoting the function of that organ, invigorating the jing/luo, soothing the lower back and knees, and regulating the intestines and stomach.

Massage techniques are the same as for Bl 11. It is good to get into this point deeply with a knuckle or elbow and either do clockwise or counterclockwise rotations for xu or shi conditions or just rub back and forth across the point.

See Bl 23 for treatment of lower back pain.

Use with Co 4, Co 11, Co 14, Co 15, Gb 21, Th 15, Si 3, Si 13, Si 14, Si 9, Si 10, Si 11, Si 12, Bl 11, Bl 42, Bl 43, Bl 17, Bl 18, Gb 34, St 38, Gb 43, and Gb 44 for shoulder inflammation, pain, and loss of movement.

Use with Bl 20, Bl 23, Bl 54, Sp 4, Sp 9. St 40, St 36, St 25, St 28, Pc 6, Cv 12, Cv 4, Cv 6, Co 4, Co 11, St 37, Liv 3. Lu 5, Lu 7, and Sp 6, for loose stool or dysentery.

Use with Bl 24, Bl 23, Bl 22, Bl 21, Bl 20, Cv 12, Cv 4, Cv 6, Cv 9, St 36, St 25, St 21, St 37, Liv 13, Liv 3, Sp 3, and Sp 9 for borborgymus and abdominal distension.

Applications:

Perhaps he attacks with a right straight kick. You should move in immediately and slam the inside of his right knee with your right palm. Immediately, fold up the right arm and attack to St 26 with your right elbow. Take both hands under his right arm and, pulling him downward over your right knee, slam both palms into both Bl 25 points (fig. 226).

BL 26 (BLADDER POINT NO. 26)

Chinese name:

Guanyuanshu (hinge at the source).

Location:

1.5 cun lateral to the lower border of the spinous process of the fifth lumbar vertebra. In the sacrospinalis muscle.

Connections:

None.

Direction of strike:

Straight in to the lower back.

Damage:

This point is the "shu of the door of vital essence." It is called the "life force" point because of its action upon the *chong mai*, one of the eight extra meridians. The immediate effect of a strike to Bl 26 is lower body damage, particularly to the leg on the side that was struck. An energy drainage will occur, causing nausea. In the long term, however, this strike is a bit more dangerous because it will affect the whole qi system and, in particular, the life force system. The qi flow in the chong mai will be damaged and slowly blocked so that the qi will have to find another route. Later in life, illness will start to creep in, meaning more hospital stays, operations, etc.

Set-up point:

Gb 31 straight in to the thigh will set up Bl 26 up nicely.

Antidote:

Any of the qi balancing methods will work as an antidote to this strike. Also, you could see a Chinese doctor to help with the damage to the chong mai.

Healing:

Innervation is by the posterior ramus of the fifth spinal nerve. Irrigation is by the posterior branches of the fifth lumbar artery and vein.

Used for abdominal distension, low back pain, diarrhea, chronic enteritis, diabetes, anemia, chronic peritonitis, cystitis, and sacroiliac pain or displacement.

Traditional indications include emaciation and thirst, lower back pain, frequent or painful urination, and enuresis.

Traditional functions are to regulate the lower jiao, (heater), strengthen the lower back and knees, and transform damp stagnation.

To massage, you can press straight into the point and hold, use rotation clockwise or counterclockwise for xu or shi conditions, press and vibrate, press into the point with an elbow and hold for three or four breaths or rock to and fro so that your elbow moves back and forth over the point, or do fingertip percussion on the point and around the whole sacroiliac joint.

Treat Bl 23 using needles or finger pressure for lower back pain and stiffness.

Use with Gv 4, Bl 32, Bl 23, Bl 33, Bl 18, Bl 20, Gv 3, Cv 4, Cv 6, Sp 6, Liv 3, St 36, Sp 8, Kd 15, Kd 11, Kd 27, Cv 3, Gb 26, Liv 14, and Pc 6, for loss of periods.

Use with Bl 23, Bl 28, Bl 18, Sp 6, Cv 2, Cv 3, Cv 4, Cv 5, Cv 6, Liv 8, Liv 3, St 29, St 28, jiaji points from T 8 to L 2, abdomen zigong, Kd 11, Kd 27, and Gv 20 for prostatitis.

Applications:

He might attack with a straight right. You should block that strike with either a left palm at Si 8 or a p'eng-type block to neigwan. Bring your left knee up into Gb 31 at the side of the thigh. Place it down and bring both hands into both Bl 26 points.

BL 27 (BLADDER POINT NO. 27)

Chinese name:

Xiaochangshu (small intestine's hollow).

Location:

At the level of the first posterior sacral foramen, 1.5 cun lateral to the Gv meridian. Between the origins of the sacro-spinalis and gluteus maximus muscle.

Connections:

This is a small intestine shu point, so it is connected to the small intestine.

Direction of strike:

Straight in to the lower back.

Damage:

The damage here is immediate. Nausea and even vomiting will occur with a medium to hard strike.

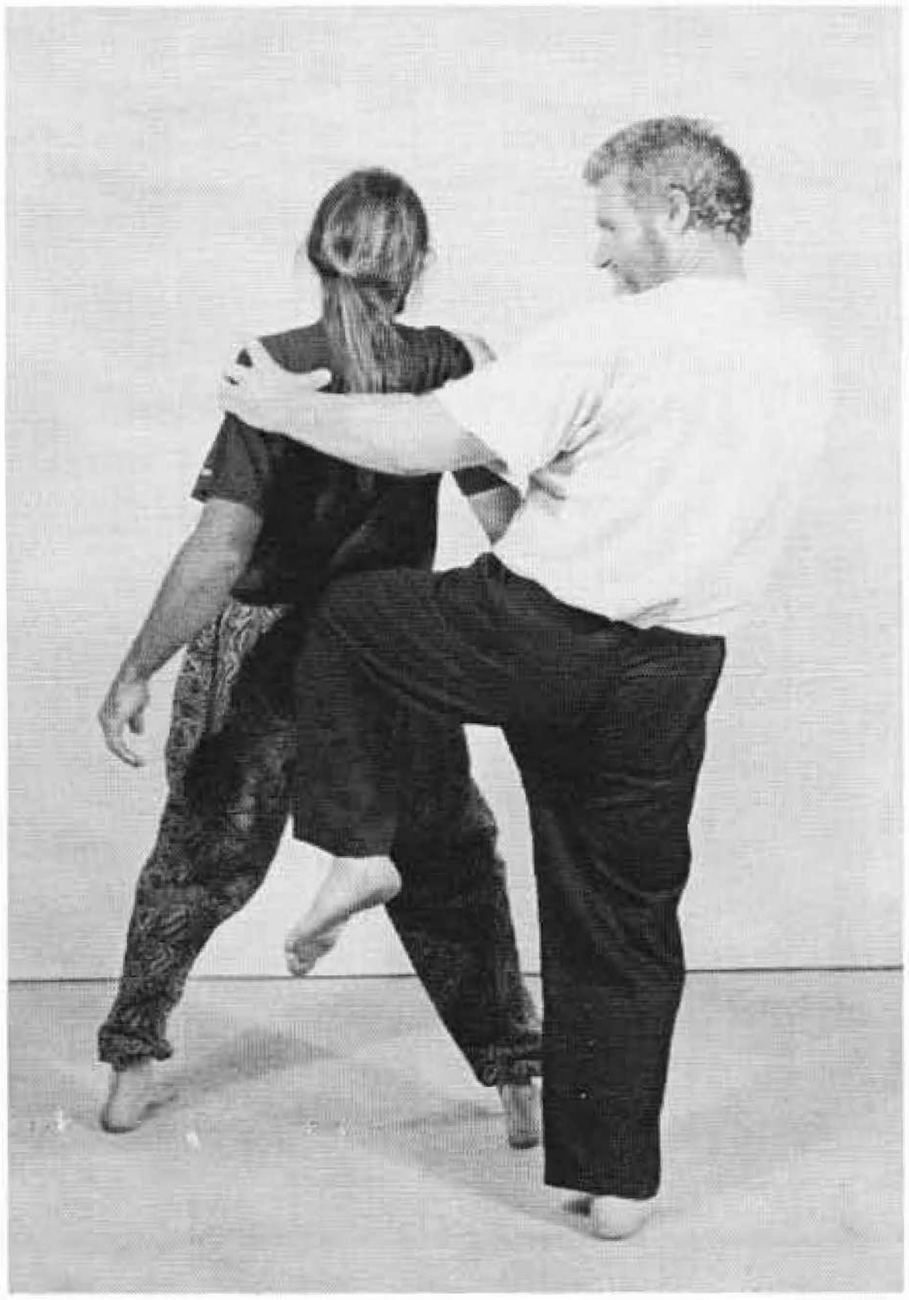


Figure 227

On a purely physical level, structural damage will also occur. In the immediate and long term, fire will rage in the heart, causing many ailments at both a physical and emotional level.

Set-up point:

Gb 14, struck upward, will enhance the fire in the heart part.

Antidote:

Eat watermelon; massage from the upper chest downward; massage neigwan.

Healing:

Innervation is by the lateral branch of the posterior ramus of the first sacral nerve. Irrigation is by the lateral posterior branch of the lateral sacral artery and vein.

Used for seminal emission, hematuria, enuresis, lower abdominal pain and distension, dysentery, constipation, enteritis, lower back pain, pain in the sacroiliac (small intestine joint), and disease of the sacroiliac joint.

Traditional indications include incontinence, blood in the urine, dark or red urine, dry mouth, emaciation and thirst, colic, and vaginal discharge.

Traditional functions, as a shu point of the small intestine, include opening and regulating the small intestine, eliminating damp, and cooling heat.

Massage techniques are the same as for Bl 26.

Use with Bl 11, Bl 17, Bl 18, Bl 20, Bl 25, Bl 26, Bl 53, Gb 34, Gb 39, Bl 40, Gb 29, and Gb 30 for small intestine joint problems.

See Bl 28 for hematuria, enuresis, incontinence, and so on.

Use with Co 4, Co 11, St 21, Sp 10, Sp 1, Liv 2, Gb 43, Gb 44, Cv 2, Cv 3, Cv 4, Si 1, Si 2, and Gv 14 for hematuria.

For colic, use with Bl 25, Bl 20, Bl 18, St 25, St 37, Cv 4, Cv 6, Cv 5, Cv 9, Co 4, Co 11, and Liv 3.

Applications:

Strike to Gb 14 upward in retaliation to his right- or left-handed attack. Spin him around and strike with your knee into Bl 27 while holding and pulling back his both shoulders (fig. 227).

BL 28 (BLADDER POINT NO. 28)

Chinese name:

Pangguangshu (bladder's hollow).

Location:

At the level of the second posterior sacral foramen, 1.5 cun lateral to the Gv meridian, in the depression between the medial border of the posterior superior iliac spine and the sacrum. The point is between the origins of the sacro-spinalis and gluteus maximus muscles.

Connections:

Shu point of the bladder.

Direction of strike:

Straight in to the lower back.

Damage:

A hard strike to this point will cause qi drainage and certain KO. At a deeper level, it will

disrupt the body's mechanism for maintaining homeostasis because of the point's direct relationship to and direct effect upon the bladder. Striking this point will block the bladder's job of eliminating waste fluids, as well as its function of eliminating perverse energy such as excess heat, damp, or cold. This will prolong colds and flu, etc.

Set-up point:

The lower abdomen is the set-up point for this strike. A strike here, particularly to Cv 4 with a larger weapon such as the calf in a kick, will cause the major strike to be devastating in the immediate term as well as long term.

Antidote:

Seek medical help, especially if Cv 4 has been struck first, because death is imminent. If you have been struck in Bl 28 only, then have an acupuncturist penetrate the point 8 to 10 fen with a needle or burn moxa (7 to 15 cones) on the point. This will disperse stagnant qi in the lower heater and clear the bladder function.

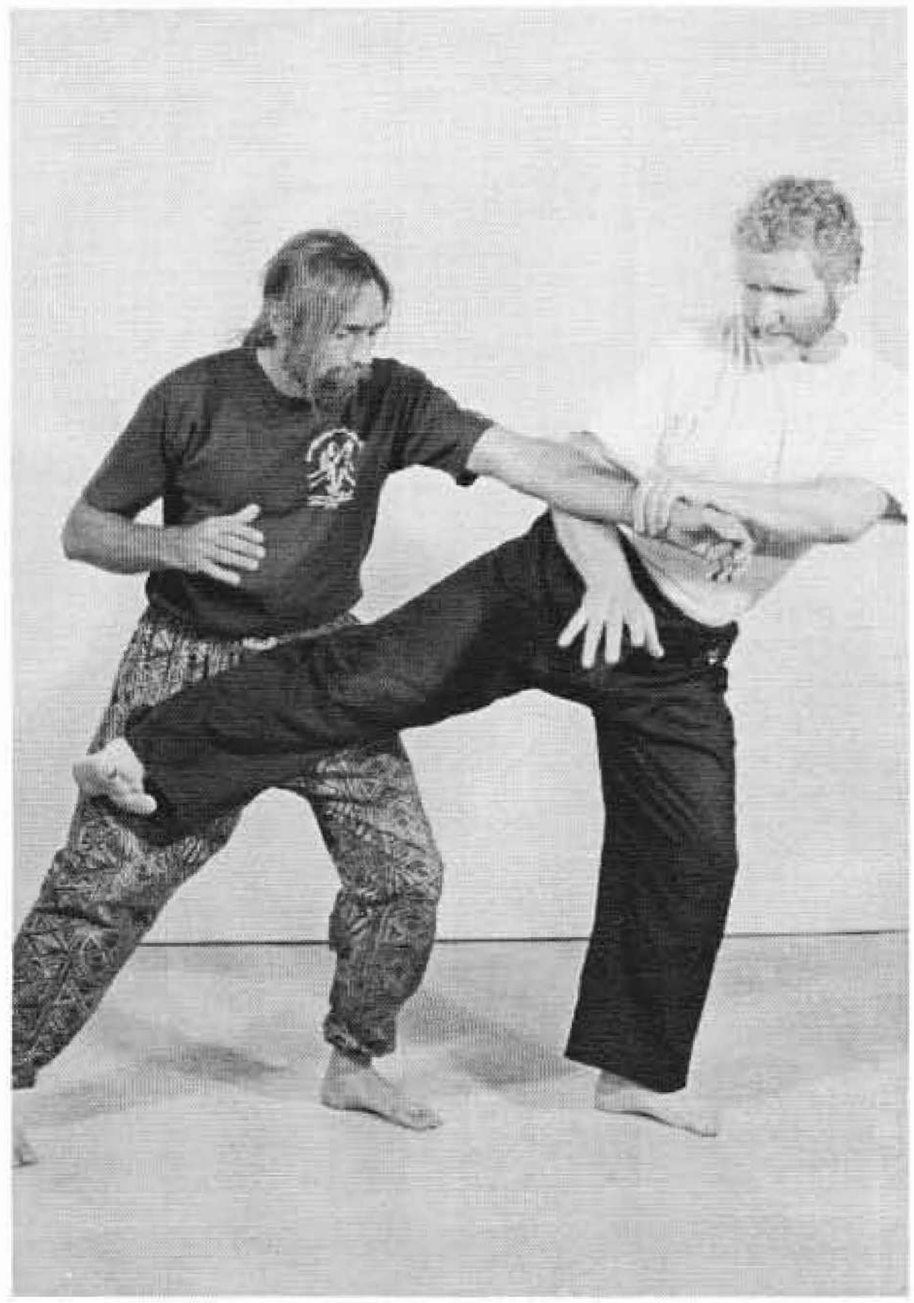


Figure 228

Healing:

Innervation is by the medial branches of the dorsal rami of the first and second sacral nerves, and a communicating branch of the first sacral nerve. Irrigation is by the lateral posterior branches of the posterior sacral artery and vein.

Used for retention of urine, enuresis, diarrhea, constipation, pain and stiffness of the lower back, sciatica, diabetes, and disease of the urinogenital system.

Traditional indications include pain in the lumbar vertebra, loss of sperm, incontinence, dark and rough-flowing urine, and swelling and pain in the genitals.

As a shu point of the bladder meridian, its traditional functions are to promote the function of bladder, disperse qi of the lower jiao, soothe the back by benefiting the lumbar vertebra.

Massage techniques are the same as for Bl 26.

Use with Bl 23, Bl 27, Bl 26, Bl 25, Sp 9, Si 6, Cv 2, Cv 3, St 28, Cv 9, Cv 5, Bl 40, Bl 66, and Bl 67 for urinary tract infection.

Use with Bl 23, Bl 26, Bl 20, Bl 18, Bl 17, Cv 3, Cv 4, Cv 6, Cv 5, Cv 9, Cv 12, St 28, St 36, Kd 3, Liv 3, Gb 43, and Gb 44 for prostatitis.

Use with Bl 25, Bl 20, Bl 23, St 25, St 37, St 36, Bl 29, Cv 4, Bl 25, Bl 26, Bl 54, Bl 40, Gb 29, Gb 30, Gb 34, Bl 23, Bl 29, and Bl 35 for lower back pain and stiffness or sciatica.

Applications:

Take his left lower strike with a two-handed block and, swiveling on the ball of your left foot, slam your right calf across his lower abdomen at Cv 4 (fig. 228). Stomp down onto his left knee, placing your foot down to the rear so you are now facing the back of the attacker, and strike straight in to Bl 28 with both palms.

BL 29 (BLADDER POINT NO. 29)

Chinese name:

Zhonglushu (mid spine hollow).

Location:

At the level of the third posterior sacral foramen, 1.5 cun lateral to the governing meridian, between the origins of the sacro-spinalis and gluteus maximus muscles.

Connections:

None. A shu point of the sacrum.

Direction of strike:

Straight in to the sacrum.

Damage:

The sacrum is the large flat bone just above the coccyx (tailbone). It has great physical as well as spiritual importance. A strike straight in will adversely affect the structure of the whole body. The legs will not work correctly, and the recipient of a hard strike will have to sit down in great pain. However, in order to maintain a normally balanced system, we must have the qi "rising up the back." This is mentioned in all of the taijiquan classic sayings. When Bl 29 is struck, it damages this function and the qi will not rise up the back. As a result, the recipient will feel very tired and out of energy, especially after midday.

Set-up point:

St 11 and Lu 1 are the points to strike to set up this point, as they both work upon the overall power of the body. You can access both points with one strike downward, striking the collarbone with a claw-type weapon and the Lu 1 point with a heel palm at the same time.

Antidote:

For the physical damage, seek medical advice or an osteopath. For the spiritual damage, you will first have to have the physical damage fixed and then work with a qigong doctor to have the "gates" opened again (the three electrical gates that control the flow of qi up the backbone) since they will have been shut tight due to this attack. You can also do your own qigong to open the gates (included in my *Advanced Qigong* MTG 16 tape).

Healing:

Innervation is by the lateral branches of the posterior ramus of the third and fourth sacral nerves. Irrigation is by the posterior branches of the lateral sacral artery and vein and the branches of the inferior gluteal artery and vein.

Used for dysentery, hernia, pain and stiffness of the lower back, enteritis, and sciatica.

As a middle of back shu point, Bl 29's traditional functions involve treating mostly backache and the lower jiao.

Massage techniques are the same as for Bl 26.

Use with St 37, St 25, Sp 15, Bl 25, Bl 13, Bl 20, Cv 4, Cv 6, Co 4, Co 11, and St 36 for dysentery.

With Bl 25, Bl 26, Bl 54, Bl 52, Bl 40, Gb 34, Gb 29, and Gb 30 for pain and stiffness of the lower back or sciatica.

Applications:

Same application as for Bl 28, only strike to St 11 and Lu 1 as the set-up.

BL 30 (BLADDER POINT NO. 30)

Chinese name:

Baihuanshu (white circle's hollow).

Location:

At the level of the fourth sacral foramen, 1.5 cun lateral to the Gv meridian. In the gluteus maximus muscle and the inferior medial margin of the sacro-tuberous ligament.

Connections:

None.

Direction of strike:

Straight in to the lower back.

Damage:

The physical damage to the coccyx is obvious with this strike. However, again we have the spiritual damage caused to the whole body as we interrupt the flow of energy up the back. The dislocated or broken coccyx will end the fight.

Set-up point:

You could use the same set-up points as for Bl 29.

Antidote:

Obviously, see a doctor because of the broken coccyx. The spiritual damage can be helped in much the same way as for Bl 29.

Healing:

Innervation is by the inferior clunial nerve. Deeper, the point is located directly on the pudendal nerve. Irrigation is by the inferior gluteal artery and vein and, deeper, the internal pudendal artery and vein.

Used for seminal emission, irregular menstruation, leukorrhea, hernia, pain in the lower back and hip joint, endometritis, anal disease, sequelae of infantile paralysis, and sciatica.

Traditional indications include acute pain in the lumbar vertebra, debility of the legs and knees, loss of sperm, excessive uterine bleeding, vaginal discharge, colic, and painful defecation or urination.

Traditional function, as a shu point of leukorrhea, is to treat red or white vaginal discharge.

Massage techniques are the same as for Bl 26.

Use with Bl 20, Gv 4, Cv 12, Cv 4, Cv 2, Cv 3, Cv 5, Cv 6, Cv 7, Gb 26, Gb 7, Sp 3, Sp 4, Sp 6, Sp 9, St 36, St 40, and Liv 3 for leukorrhea.

Use with Bl 57, Gv 1, Gv 20, Bl 20, Bl 17, St 36, Sp 3, and Liv 3 for prolapsed anus.

Use with Bl 25, Bl 26, Bl 53, Bl 54, Bl 52, Bl 40. Bl 58, and Gb 34, for arthritis of the lumbo-sacral region.

Use with Bl 25, Bl 26, Bl 23, Bl 50, Bl 51, Bl 52, Gb 29, Gb 30, Gb 34, Bl 54, Bl 40, Gb 44, Gb 43, and Gb 41 for sciatica.

Applications:

See Bl 29.

BL 31 (BLADDER POINT NO. 31)

Chinese name:

Shangliao (upper hole).

NOTE: The points Bl 31 to Bl 34 are collectively called *baliao,* meaning "eight seams."

Location:

In the first sacral foramen, roughly midway between the posterior superior iliac spine and the Gv meridian. In the sacro-spinalis and the origin of the gluteus maximus muscle.

Connections:

Connects to the gallbladder.

Direction of strike:

Straight in to the lower back.

Damage:

This point is closer to the spine than Bl 27, so it will cause considerable spine damage with a hard strike. Since it is above the sacrum, it will also cause spiritual damage.

Set-up point:

None. However, this point works well with Cv 4.

Antidote:

Qi balancing.

Healing:

Innervation occurs at the site where the posterior ramus of the first sacral nerve passes. Irrigation is by the posterior branches of the lateral sacral artery and vein.

Used for low back pain, irregular menstruation, prolapse of the uterus, leukorrhea, scanty urine, constipation, disease of the lumbo-sacral joint, sciatica, inducing labor, peritonitis, orchitis, paralysis of lower limbs, and sequelae of infantile paralysis.

Traditional functions, as a point of intersection with the Gb meridian, include regulating the lower heater and strengthening the lower back and legs.

Massage techniques are the same as for Bl 26.

Use with Bl 32, Co 4, Sp 6, Gb 21, Liv 3, and Bl 60 for induction of labor.

Use with Sp 6, St 36, Cv 4, Gv 12, Bl 23, Bl 24, Bl 25, Gb 1, Gb 6, Liv 3, and abdomen zigong for difficult menstruation. You could add this point to the formula for arthritis of lumbo-sacral region in Bl 30's treatment.

Applications:

Use the knee to strike to the point, or you could kick using the heel.

BL 32 (BLADDER POINT NO. 32)

Chinese name:

Ciliao (second bone). Part of baliao.

Location:

In the second posterior sacral foramen, about midway between the lower border of the posterior superior iliac spine and the Gv meridian. In the sacro-spinalis and the origin of the gluteus maximus muscle.

Connections:

Connection to the eight extra meridians and to Gb 30's internal pathway.

Direction of strike:

Straight in.

Damage:

This point is an interesting one. It will cause the legs to give way in the immediate term, and then the whole body will be weakened through a lack of qi. A hard strike will also cause paralysis of the muscles almost immediately. This point is also one of those that affect the communication with the shen.

Set-up point:

There is no set-up point, but you could use Sp 19 to enhance the effect on the legs.

Antidote:

Massage or needle the same point, Bl 32.

Healing:

Innervation occurs by its location on the course of the posterior ramus of the second sacral nerve. Irrigation is by the posterior branch of the lateral sacral artery and vein.

Used for lower back pain, irregular menstruation, leukorrhea, hernia, muscular atrophy, motor impairment and bi syndrome (the Chinese name for arthritic pain) of the lower extremities, induction of labor, orchitis, sciatica, sequelae of infantile paralysis, and peritonitis.

Traditional indications include nocturnal emissions, leukorrhea, and lower back pain and stiffness.

Traditional functions, as a point of intersection with the Gb meridian, include regulating the lower heater, tonifying the waist and knees, invigorating kidney qi, and removing blood stasis from uterus.

Massage techniques are the same as for Bl 26.

See Bl 31 for induction of labor.

Use with Sp 6, Bl 31, Bl 33, Bl 34, Cv 3, Cv 4, Liv 4, Liv 3, Bl 18, Bl 19, and Pc 6 for dysmenorrhea.

Use with Bl 31, Bl 33, Bl 34, Bl 35, Bl 25, Bl 26, Bl 40, Cv 12, Bl 18, Bl 19, Bl 20, Cv 9, Cv 5, St 28, Liv 2, Liv 3, Liv 4, Sp 9, and St 40 for peritonitis.

Use with Gv 1, Bl 31, Bl 33, Bl 34, Bl 25, Bl 35, Bl 20, Gv 20, St 37, Sp 3, and Liv 3 for hemorrhoids.

Applications:

You could kick using a round type of kick to his knee, which would not only turn him around but also take him down. Then you are free to attack to Bl 32 with any weapon you wish.

BL 33 (BLADDER POINT NO. 33)

Chinese name:

Zhongliao (middle hole). Part of baliao.

Location:

In the third posterior sacral foramen between Bl 29 and the Gv meridian. In the sacro-spinalis and the origin of the gluteus maximus muscle.

Connections:

None.

Direction of strike:

Straight in and slightly toward the backbone.

Damage:

The physical damage is much the same as for Bl 29; however, more spinal damage will occur with Bl 33 because it is closer to the spine, especially if the strike is aimed at a slight angle toward the backbone. The lower heater is damaged at a qi level, thus causing the elimination organs to malfunction.

Set-up point:

A quick shot to the lower abdomen around Cv 4 will suffice.

Antidote:

Perform the triple heater exercise, which will balance the energy in the whole body.

Triple heater qigong is performed as follows. (1) Stand with feet parallel and shoulder-width

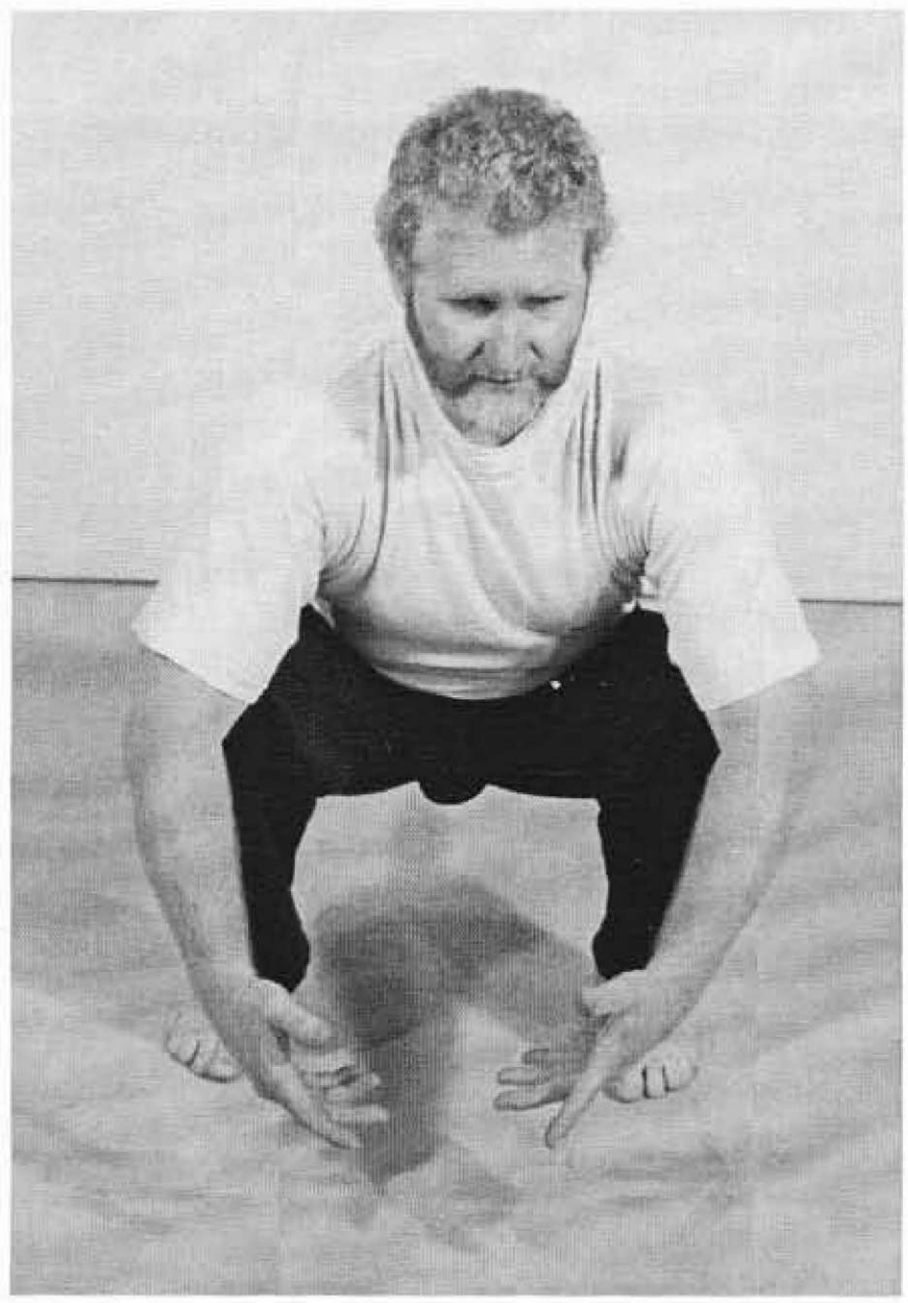


Figure 229

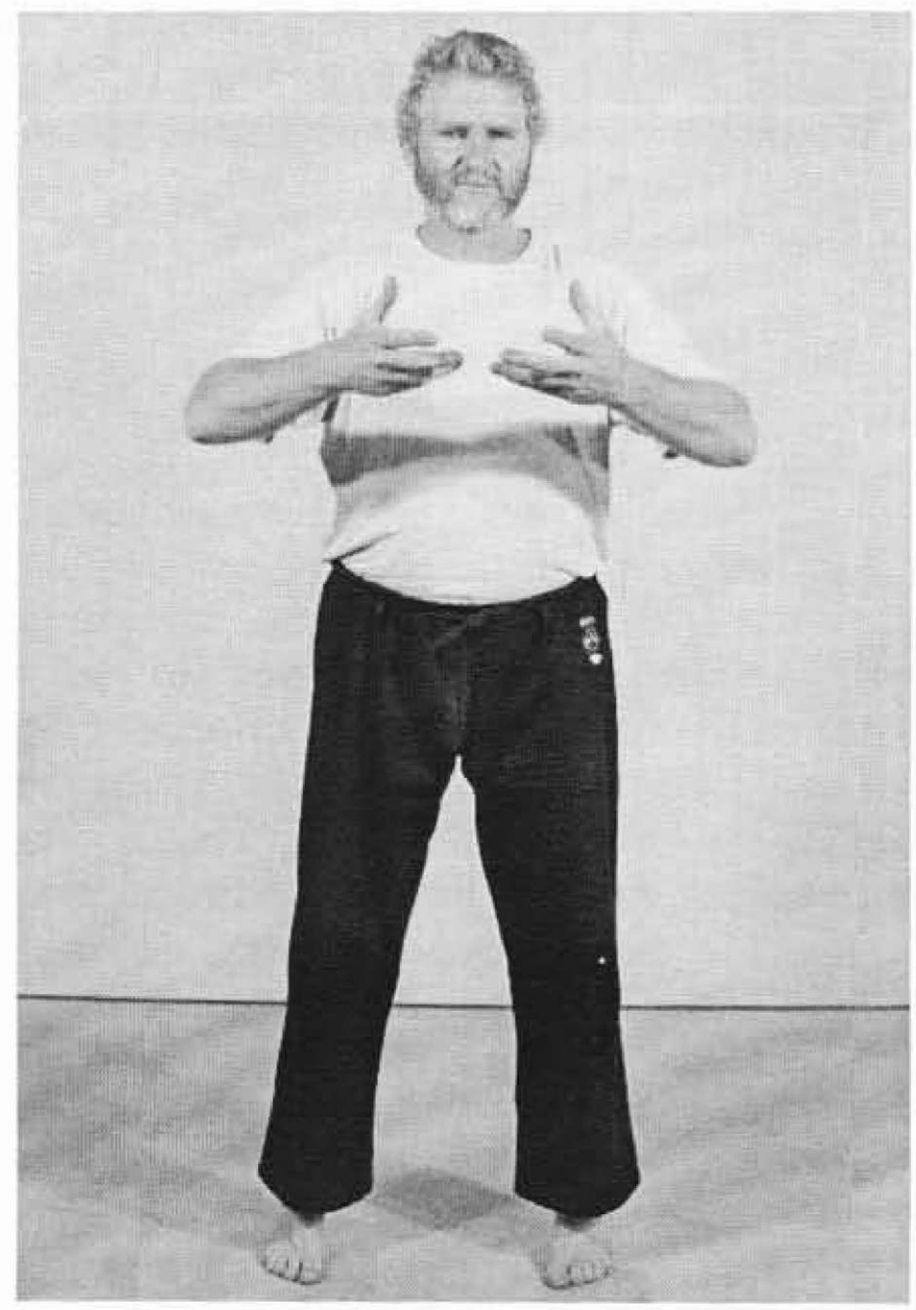


Figure 230

Used for low back pain, irregular menstruation, prolapse of the uterus, leukorrhea, scanty urine, constipation, disease of the lumbo-sacral joint, sciatica, inducing labor, peritonitis, orchitis, paralysis of lower limbs, and sequelae of infantile paralysis.

Traditional functions, as a point of intersection with the Gb meridian, include regulating the lower heater and strengthening the lower back and legs.

Massage techniques are the same as for Bl 26.

Use with Bl 32, Co 4, Sp 6, Gb 21, Liv 3, and Bl 60 for induction of labor.

Use with Sp 6, St 36, Cv 4, Gv 12, Bl 23, Bl 24, Bl 25, Gb 1, Gb 6, Liv 3, and abdomen zigong for difficult menstruation. You could add this point to the formula for arthritis of lumbo-sacral region in Bl 30's treatment.

Applications:

Use the knee to strike to the point, or you could kick using the heel.

BL 32 (BLADDER POINT NO. 32)

Chinese name:

Ciliao (second bone). Part of baliao.

Location:

In the second posterior sacral foramen, about midway between the lower border of the posterior superior iliac spine and the Gv meridian. In the sacro-spinalis and the origin of the gluteus maximus muscle.

Connections:

Connection to the eight extra meridians and to Gb 30's internal pathway.

Direction of strike:

Straight in.

Damage:

This point is an interesting one. It will cause the legs to give way in the immediate term, and then the whole body will be weakened through a lack of qi. A hard strike will also cause paralysis of the muscles almost immediately. This point is also one of those that affect the communication with the shen.

Set-up point:

There is no set-up point, but you could use Sp 19 to enhance the effect on the legs.

Antidote:

Massage or needle the same point, Bl 32.

Healing:

Innervation occurs by its location on the course of the posterior ramus of the second sacral nerve. Irrigation is by the posterior branch of the lateral sacral artery and vein.

Used for lower back pain, irregular menstruation, leukorrhea, hernia, muscular atrophy, motor impairment and bi syndrome (the Chinese name for arthritic pain) of the lower extremities, induction of labor, orchitis, sciatica, sequelae of infantile paralysis, and peritonitis.

Traditional indications include nocturnal emissions, leukorrhea, and lower back pain and stiffness.

Traditional functions, as a point of intersection with the Gb meridian, include regulating the lower heater, tonifying the waist and knees, invigorating kidney qi, and removing blood stasis from uterus.

Massage techniques are the same as for Bl 26.

See Bl 31 for induction of labor.

Use with Sp 6, Bl 31, Bl 33, Bl 34, Cv 3, Cv 4, Liv 4, Liv 3, Bl 18, Bl 19, and Pc 6 for dysmenorrhea.

Use with Bl 31, Bl 33, Bl 34, Bl 35, Bl 25, Bl 26, Bl 40, Cv 12, Bl 18, Bl 19, Bl 20, Cv 9, Cv 5, St 28, Liv 2, Liv 3, Liv 4, Sp 9, and St 40 for peritonitis.

Use with Gv 1, Bl 31, Bl 33, Bl 34, Bl 25, Bl 35, Bl 20, Gv 20, St 37, Sp 3, and Liv 3 for hemorrhoids.

Applications:

You could kick using a round type of kick to his knee, which would not only turn him around but also take him down. Then you are free to attack to Bl 32 with any weapon you wish.

BL 33 (BLADDER POINT NO. 33)

Chinese name:

Zhongliao (middle hole). Part of baliao.

Location:

In the third posterior sacral foramen between Bl 29 and the Gv meridian. In the sacro-spinalis and the origin of the gluteus maximus muscle.

Connections:

None.

Direction of strike:

Straight in and slightly toward the backbone.

Damage:

The physical damage is much the same as for Bl 29; however, more spinal damage will occur with Bl 33 because it is closer to the spine, especially if the strike is aimed at a slight angle toward the backbone. The lower heater is damaged at a qi level, thus causing the elimination organs to malfunction.

Set-up point:

A quick shot to the lower abdomen around Cv 4 will suffice.

Antidote:

Perform the triple heater exercise, which will balance the energy in the whole body.

Triple heater qigong is performed as follows. (1) Stand with feet parallel and shoulder-width

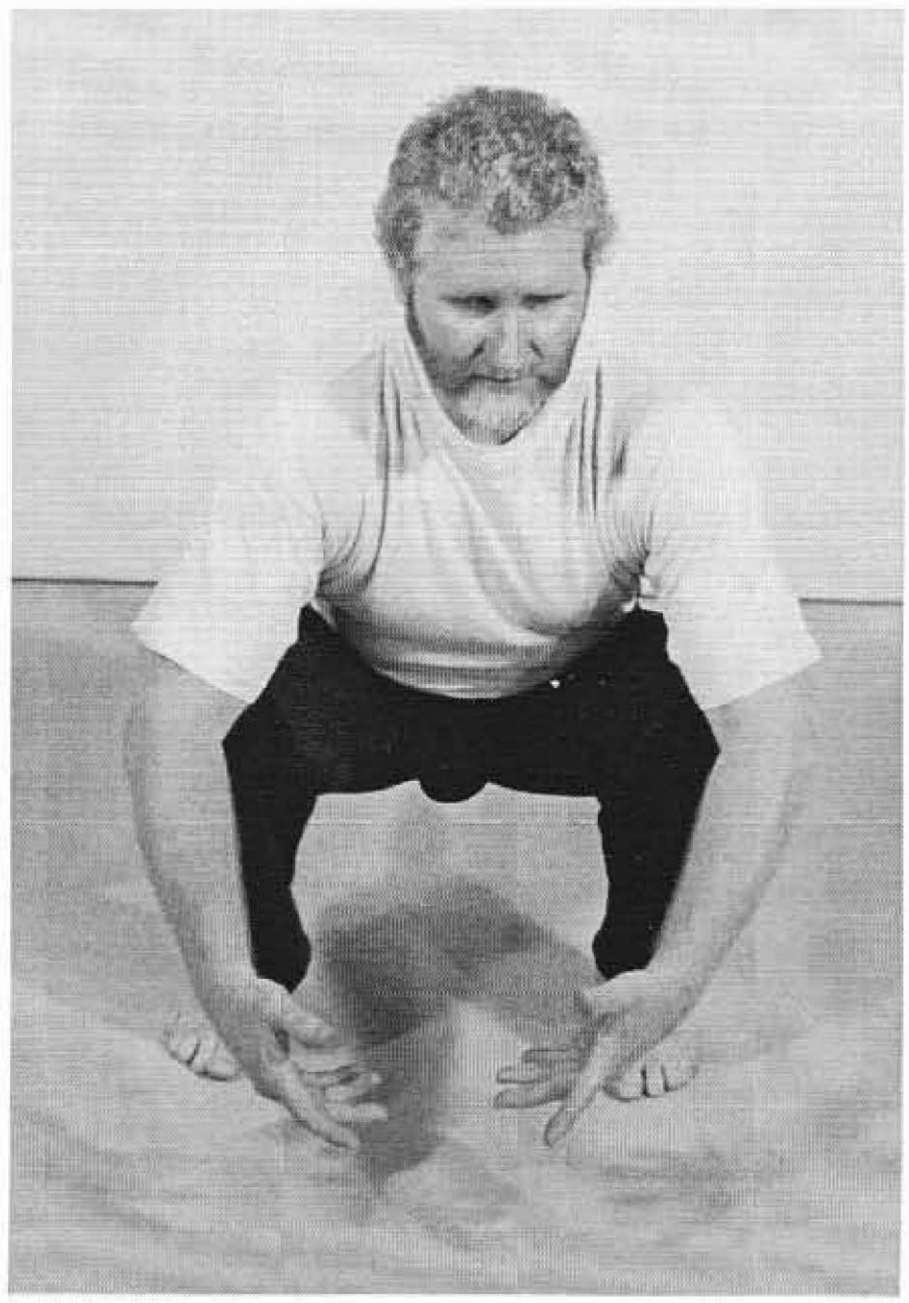


Figure 229

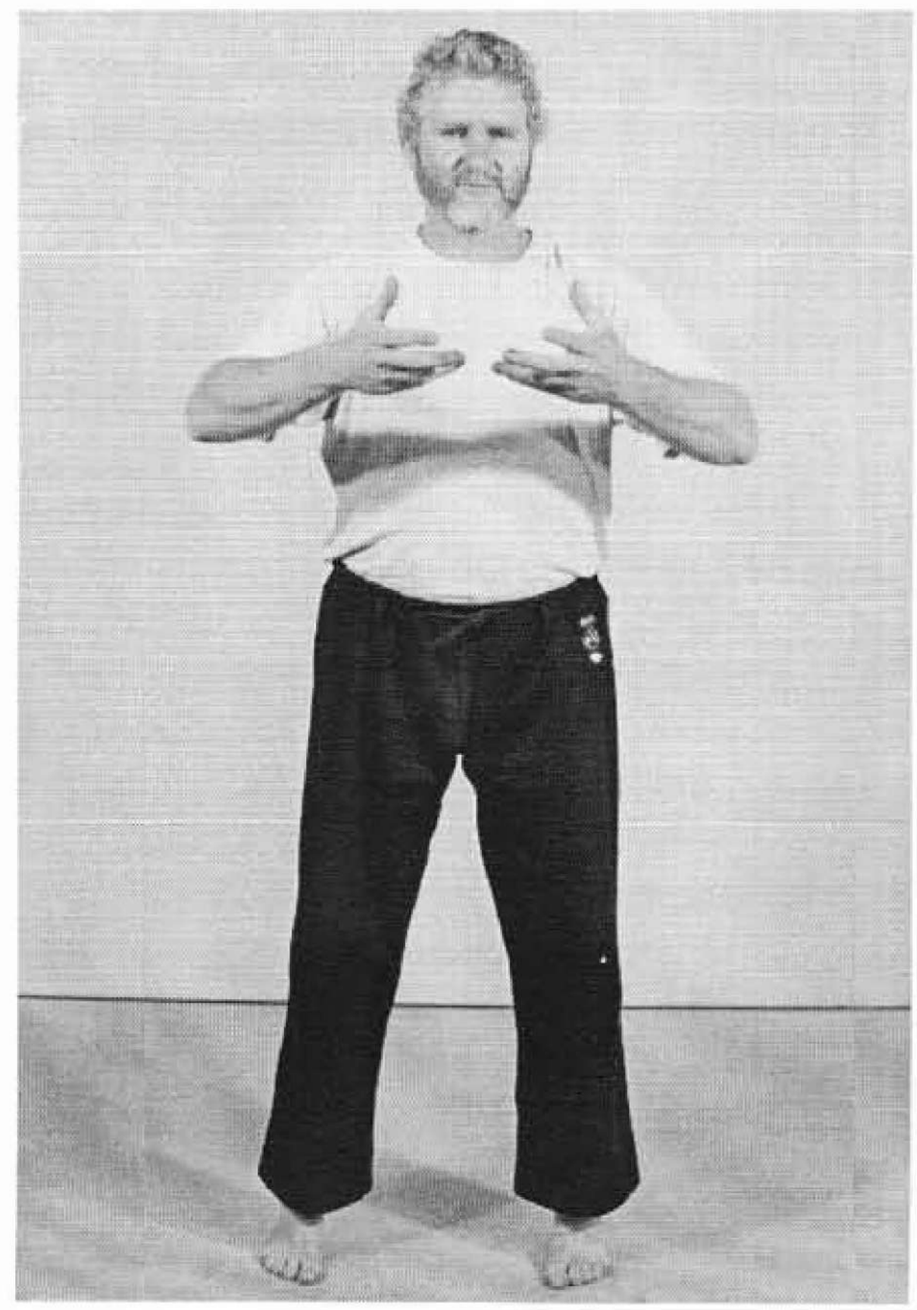


Figure 230

apart. Place your tongue up on the hard palate and breathe in and out through the nose. (2) As in Figure 229, raise both of your palms slightly and breathe in. Squat down as your both palms make like they are scooping something up. Exhale. (3) Stand up and lift your palms up to chest height as you breathe in (fig. 230). You have stood up onto your toes. (4) Turn both palms downward and press down as you lower your heels and exhale. (5) Perform this routine again two more times.

This is for the lower heater.

When you have finished the third time and you have raised up again onto your toes with your hands facing upward at chest height, (1) turn both palms outward, away from you, and push out, extending your arms until both palms are out at your sides (fig. 231). (2) Turn the palms down and push down as you lower your heels and exhale. (3) Continue to squat and scoop, performing this routine, which works upon the middle heater, two more times. (4) When you have done it a total of three times, stand up again and scoop up to chest height.

Now, for the upper heater, instead of pushing your palms outward this time, (1) roll both palms over and push up over your head (fig. 232); (2) exhale as you push both palms down by your sides and lower your heels. Continue to squat until you have performed this routine three times. (My tape MTG 10, *Teach Yourself Basic Qigong,* covers this routine in more detail.)

Healing:

Innervation occurs by its location on the course of the posterior ramus of the third sacral nerve. Irrigation is by the posterior branches of the lateral sacral artery and vein.

Used for irregular menstruation, leukorrhea, lower back pain, dysuria, constipation, disease of the lumbo-sacral joint, sciatica, peritonitis, orchitis, paralysis of the lower limbs, and sequelae of infantile paralysis.

Traditional indications include nocturnal emissions, leukorrhea, and lower back pain and stiffness.

Again, this is a point of intersection with the Gb meridian, so its traditional functions are to regulate the lower heater and strengthen the lower back and knees.

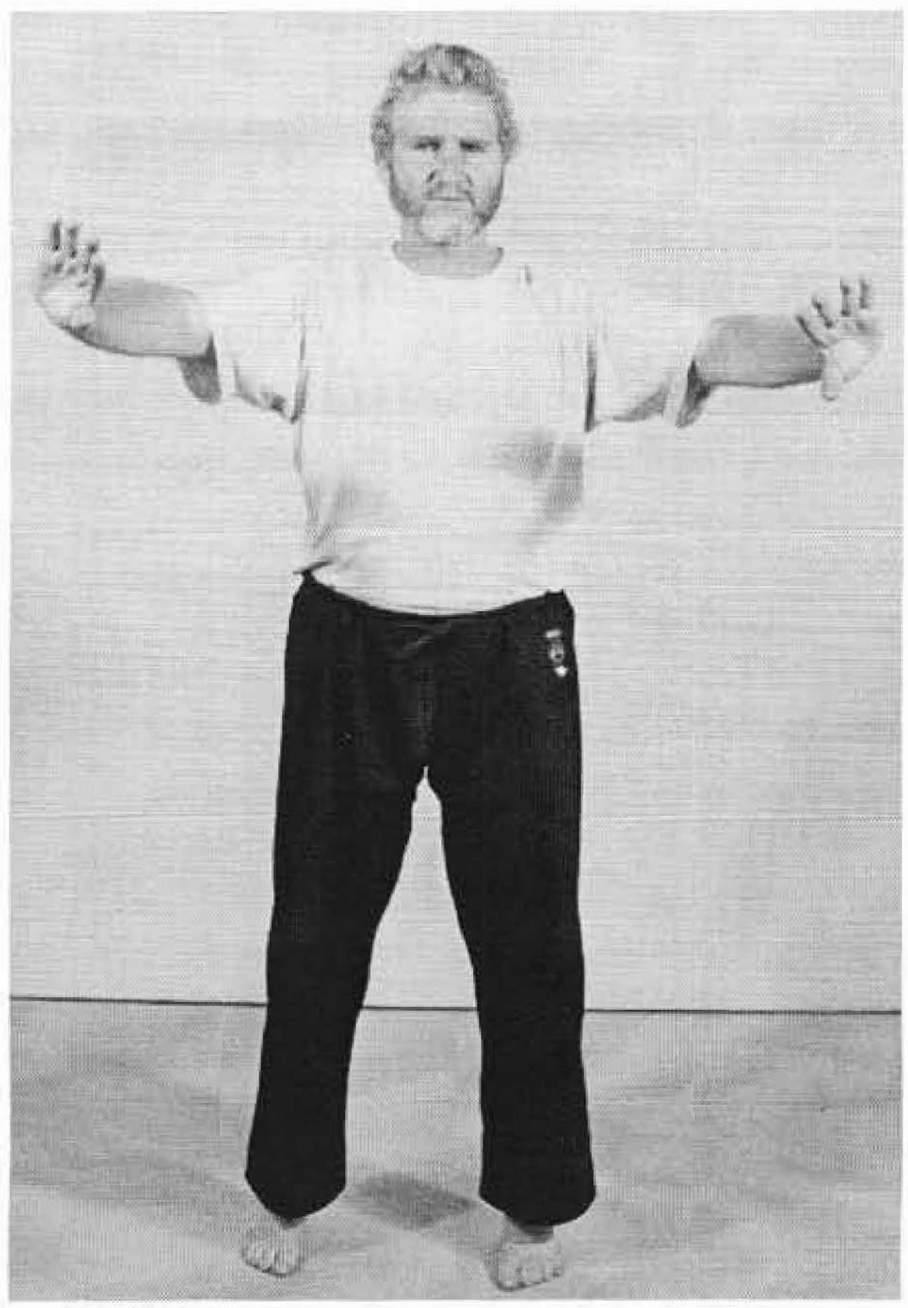


Figure 231

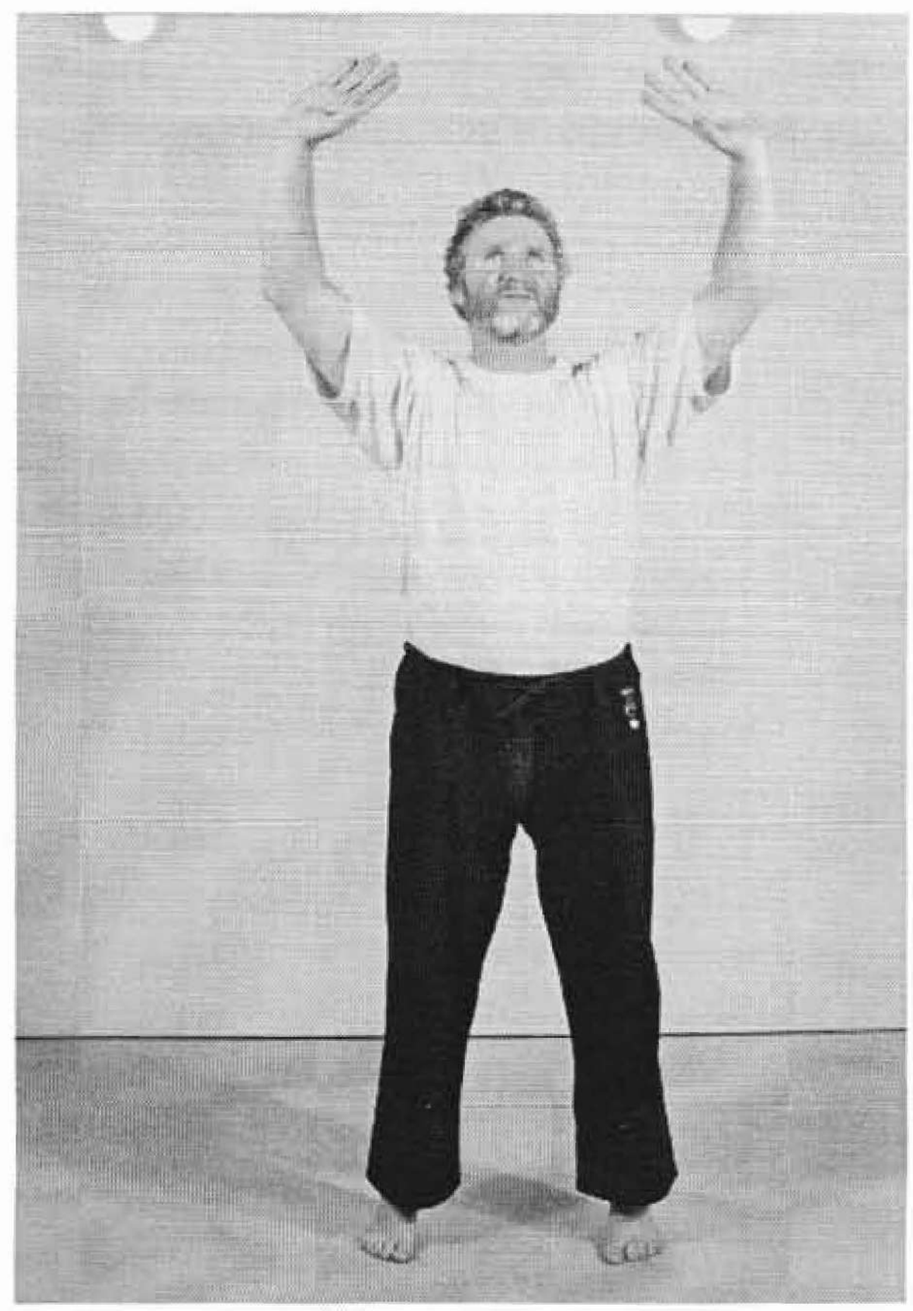


Figure 232

Massage is the same as for Bl 26.

(See Bl 32 for treatment of peritonitis, dysmenorrhea, and hemorrhoids.)

Use with Bl 31, Bl 32, Bl 34, Bl 35, Bl 25, Bl 26, Bl 54, Gb 29, Gb 30, Bl 40, and Gb 34 for lower back pain and stiffness, sciatica, and lumbo-sacral joint dysfunction.

Use with Bl 31, Bl 32, Bl 34, Bl 23, Bl 18, Cv 2, Cv 3, Cv 4, Cv 6, St 30, Liv 4, Liv 3, Liv 2, Liv 8, Liv 12, Gb 43, and Gb 44 for orchitis.

Applications:

Perhaps take his low right hook with your right palm, slamming it at Lu 5. Pull it over to your right and strike straight in to Cv 4. Then you are free to strike to Bl 33.

BL 34 (BLADDER POINT NO. 34)

Chinese name:

Xialiao (lower hole). Part of baliao.

Location:

In the fourth posterior sacral foramen between Bl 30 and the Gv meridian. In the sacro-spinalis and the origin of the gluteus maximus muscle.

Connections:

None.

Direction of strike:

Straight in.

Damage:

The damage here is the same as for Bl 33.

Set-up point:

Same as for Bl 33.

Antidote:

Same as for Bl 33.

Healing:

Innervation occurs by its location on the course of the posterior ramus of the fourth sacral nerve. Irrigation is by the branches of the inferior gluteal artery and vein.

Used for lower abdominal pain, constipation, dysuria, lower back pain, disease of the lumbo-sacral joint, sciatica, irregular menstruation, leukorrhea, peritonitis, orchitis, paralysis of lower limbs, and sequelae of infantile paralysis.

Traditional indications include leukorrhea, lower back pain and stiffness, and nocturnal emissions.

Traditional functions, as a point of intersection with the Gb meridian, are to regulate the lower heater and strengthen the lower back and knees.

Massage techniques are the same as for Bl 26.

(See other baliao points for suggestions of point combinations for different problems.)

Applications:

You could use the same technique as for Bl 33, but strike to Bl 34 instead.

BL 35 (BLADDER POINT NO. 35)

Chinese name:

Huiyang (meeting of yang).

Location:

0.5 cun lateral to the lip of the coccyx.

Connections:

None.

Direction of strike:

Straight in and slightly upward into the coccyx.

Damage:

A strike to this point causes obvious coccyx damage, which will result in elimination problems. Knockout is caused by the pain and qi drainage of having the coccyx broken. This point will also affect the "upper heavenly flow" of qi, so the "spiritual side" of the recipient will be damaged later in life.

Set-up point:

A kick to the groin in itself is not nice. This will suffice as the set-up point here.

Antidote:

For the spiritual disruption, balance the qi using one of the qi balancing methods.

Healing:

Innervation is by the coccygeal nerve, and irrigation is by the branches of the inferior gluteal artery and vein.

Used for leukorrhea, impotence, dysentery, hemafecia (blood in the stool), hemorrhoids, and pain in the lower back during menstruation.

Traditional indications include leukorrhea, impotence, loose stool, blood stagnation, and yang xu.

Traditional functions are to move blood stagnation and tonify yang.

Massage techniques include straight press and hold, clockwise or counterclockwise rotations for xu or shi conditions, and fingertip percussion. You can also get in deeper with a knuckle or elbow.

Use with Bl 23, Gv 4, Gv 14, Gv 20, Bl 20, Gb 25, Cv 4, Cv 6, Kd 3, St 36, and Cv 12 for impotence and loose stool from yang xu.

Use with Liv 4, Sp 10, Kd 13, Kd 14, Kd 15, Bl 17, and Bl 18 for blood stagnation.

Use with Bl 31, Bl 32, Bl 33, Bl 34, Bl 30, Bl 20, Bl 18, Gb 26, Gb 27, Gv 4, Cv 2, Cv 3, Cv 4, Cv 5, Cv 6, Cv 7, Cv 9, Sp 6, Sp 9, Sp 4, St 40, St 36, and Liv 3 for leukorrhea.

Applications:

You can access this point from the front with a kick up and into the groin, the ball of the foot, or a toe reaching around to the coccyx.

BL 36 (BLADDER POINT NO. 36)

Chinese name:

Chengfu (receive support).

Location:

In the middle of the transverse gluteal fold below the buttock. At the inferior margin of the gluteus maximus muscle.

Connections:

None.

Direction of strike:

Upward into the buttock.

Damage:

This point has the capacity to send huge amounts of yang energy up and into the head when struck with a smaller weapon, thus causing nausea and even KO if struck hard enough. It is not a point that is often used, as it is difficult to get to and requires a great amount of pressure.

Set-up point:

None.

Antidote:

Strike downward onto Gb 21 and rub violently down the shoulders and out.

Healing:

Innervation is by the posterior femoral cutaneous nerve superficially, and, deeper, the sciatic nerve. Irrigation is by the comitans artery and vein of the sciatic nerve.

Used for hemorrhoids, pain in the lumbar/sacral/gluteal and femoral regions, sciatica, paralysis of lower extremities, retention of urine, and constipation.

Traditional indications include pain in lower back and legs, hemorrhoids, pain in the genitals, difficulty in urination, and swelling of the coccyx.

Massage techniques include pressing and holding the point or rotating clockwise or counterclockwise for xu or shi conditions. This is a very muscular area, so if the patient's knees are flexed to 90 degrees, you can stand on point and hold on to the feet of patient for support and balance. You can also get an elbow or knuckle in there. Or you can do press and release, with the press being a gradual increase of pressure and the release being very sudden. Use two thumbs for this and draw them apart as you release. You can do fingertip or loose fist percussion over this point.

Use with Bl 52, Bl 23, Bl 25, Bl 26, Bl 54, Bl 37, Bl 38, Bl 39, Bl 40, Gb 29, Gb 30, Gb 34, Gb 41 for sciatica and lower back pain.

Use with Bl 25, Bl 26, baliao points, St 25, St 37, Liv 3, and Co 4 for constipation.

Use with Bl 37, Bl 40, Bl 66, Bl 67, and Gb 34 for hamstring corck and trauma causing blood stasis.

Applications:

You will have to get around behind the opponent, which is not too difficult. Then strike in to Bl 35 with your toe or tip of shoe. You could also use a knee; however, this will require much power, because the knee is perhaps too large a weapon for this point.

BL 37 (BLADDER POINT NO. 37)

Chinese name:

Yinmen (door of abundance).

Location:

6 cun below Bl 36 on the line joining Bl 36 to Bl 40 in the semitendinosus muscle.

Connections:

None.

Direction of strike:

Straight in to the back of the thigh.

Damage:

There is not too much damage done here other than local damage to the leg. Some people say that this strike can cause paralysis of the leg; however, I have not experienced this.

Set-up point:

None.

Antidote:

None.

Healing:

Innervation is by the posterior femoral cutaneous nerve and, deeper, the sciatic nerve. Irrigation occurs by the point's location lateral to the third perforating branch of the deep femoral artery and vein.

Used for pain in the lower back and thigh, herniated disc, sciatica, occipital headache, paralysis of lower limbs, and paralysis.

Traditional indications include lower back pain that inhibits flexion and extension, and distension on the lateral side of the thigh.

Traditional functions include regulating the flow of qi and blood in the jing/luo and treating disorders of the waist and lower limbs.

Massage techniques are the same as for Bl 36.

Use with Bl 25, Bl 26, Bl 52, Bl 54, Bl 40, Gb 34, jiaji points lateral to L4/5 L5/Sl, Bl 20, Gv 14, and Si 3 for disk problems of the lumbar vertebra.

With Bl 40, Bl 25, Bl 26, Bl 23, Bl 39, Gb 34, Gb 29, Gb 30, for inability to bend or extend the lower back.

Applications:

Perhaps a hook kick to the back of the thigh.

BL 38 (BLADDER POINT NO. 38)

Chinese name:

Fuxi (floating xi).

Location:

1 cun above Bl 39 on the medial side of the tendon of biceps femoris. Locate the point with the knee slightly flexed.

Connections:

None.

Direction of strike:

Straight in to the back of the knee.

Damage:

This point presents the possibility for considerable local and internal damage. A strike here will cause great knee and leg damage, as well as damage to the elimination organs in the form of gastric problems. I heard of one chap who was kicked right on Bl 38 and immediately went to the toilet! Apart from the Bl 38 strike, you will probably also strike to Kd 10, which will cause even greater problems.

Set-up point:

Neigwan, as well as Kd 21 just lateral to Cv 14. In this instance, both are struck straight in.

Antidote:

Apply pressure to Co 10 and Co 12 at the same time.

Healing:

Innervation is by the posterior femoral cutaneous nerve and the common peroneal nerve. Irrigation is by the superior glenicular artery and vein.

Used for numbness of the gluteal and femoral regions, contracture of the tendons in the popliteal fossa, acute gastroenteritis, cystitis, constipation, and paralysis of the lateral aspect of the lower extremities.

To massage, press and hold, rotate clockwise or counterclockwise for xu or shi conditions, do fingertip percussion, press with lateral and medial movements, and press in with both thumbs slowly and release rapidly, pulling the thumbs apart as they leave the skin.

Use with Bl 25, Bl 26, Bl 53, Bl 54, Bl 36, Bl 37, Bl 39, Bl 40, Bl 57, Bl 66, Bl 67, Gb 34, Gb 33, Gb 32, Gb 31, Gb 30, and Gb 29 for numbness of the gluteal and femoral regions, contracture of tendons in popliteal fossa, and paralysis of the lateral aspect of lower extremities.

Applications:

He might attack with a right straight. You would strike his arm with your left and right palms at Lu 5 and neigwan, respectively. Now, swiveling on the ball of your left foot, hook kick with your heel to the back of his knee at Bl 38. (fig. 233).

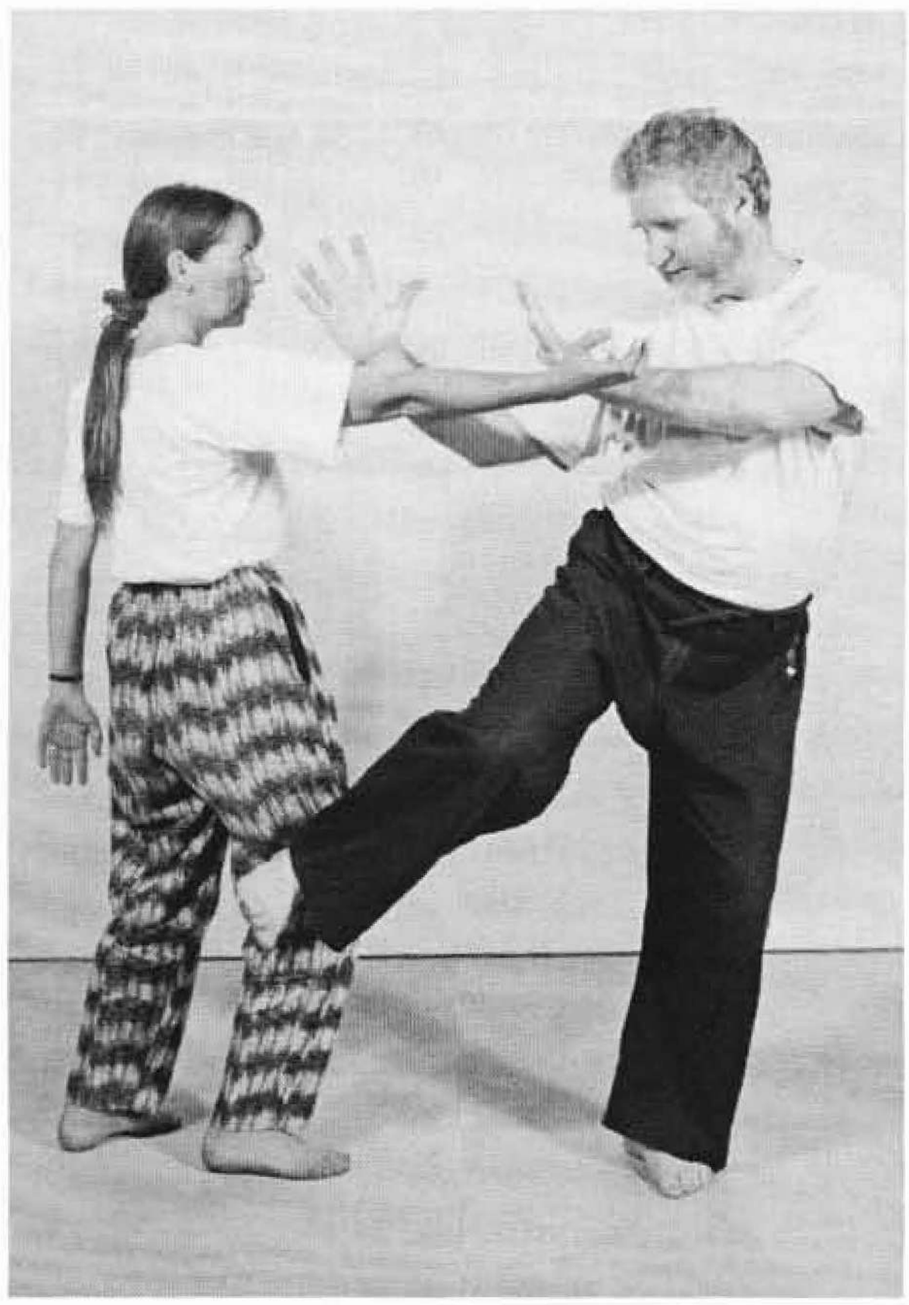


Figure 233

BL 39 (BLADDER POINT NO. 39)

Chinese name:

Weiyang (commanding yang).

Location:

When the patient is prone, this point can be found 1 cun lateral to Bl 40 on the medial border of the tendon of biceps femoris in the popliteal fossa.

Connections:

None.

Direction of strike:

Straight in to the back of the knee.

Damage:

This point is closer to the back of the knee and acts on the bladder, causing the recipient to urinate on the spot! It will cause damage to the bladder, which will require medical attention or it will get worse as the person gets older. Knee damage is obvious. Kidney damage will also occur as a result of four points being struck with this strike: Bl 38, Bl 39, Bl 40, and Kd 10. WARNING: *This combination of points can cause death through kidney failure.*

Set-up point:

Use any kidney point as the set-up strike.

Antidote:

Have an acupuncturist look at the kidneys and treat as necessary. You might have also to take Chinese herbs.

Healing:

Innervation and irrigation are the same as for Bl 38.

Used for pain and stiffness of lower back, lower abdominal distension, dysuria, cramping of the leg and foot, nephritis, cystitis, chyluria (chyle in the urine), and spasm of gastrocnemius (a muscle in the back of the leg).

Traditional indications include fullness of the chest or abdomen, lower back pain extending to the abdomen, loss or retention of urine, hemorrhoids, and constipation.

As a lower he sea point of the triple heater meridian that benefits the bladder, its traditional functions include adjusting the lower heater, regulating the passage of water, transforming water, and benefiting the bladder.

To massage, flex the leg to 90 degrees and use the same techniques as for Bl 38.

Use with Bl 23, Bl 32, Bl 28, Cv 2, Cv 3, Cv 4, Cv 5, Cv 9, St 28, Bl 33, Sp 6, Bl 22, and Sp 9 for urinary retention or incontinence.

Use with Gv 4, Gv 3, Bl 31, Bl 32, Bl 37, Bl 40, Bl 54, jiaji points from Ll to L5, Gb 30, Gb 34, St 32, St 36, and Liv 3 for paralysis of leg.

See Bl 38 for lower back pain and stiffness, cramping, or contracture.

Applications:

Same as for Bl 38.

Bl 40 (BLADDER POINT NO. 40)

Chinese name:

Weizhong (commanding middle).

Location:

Midpoint of the transverse crease of the popliteal fossa, in the fascia of the popliteal fossa between the tendons of biceps femoris and semitendinosus. Locate the point in the prone position with the knee flexed.

Connections:

Connections to the lower meeting point of the bladder and kidney divergent meridians.

Direction of strike:

Straight in to the back of the knee.

Damage:

This point is the earth point and also a *he* (gathering together) point. A strike here will cause spasm in the tendons of the whole body if struck hard enough, or local spasm if light. At some later stage, nervous disorders will become apparent. Excessive yang energy will also cause heating problems within the body. This is not a point to play around with just to see what happens! Knockout has been known to occur when it is struck. There is an immediate rush of energy to the head, and blackout is possible.

Set-up point:

A strike to neigwan will cause the disorientation and confusion for a second or two, so in that time, strike to Bl 40 with devastating results.

Antidote:

Rub the shoulders down and away with pressure on Gb 21 points.

Healing:

Innervation is by the posterior femoral cutaneous nerve and the tibial nerve. Irrigation is by the femoral popliteal vein, in its deep position medial to the point the popliteal vein, in its deepest position the popliteal artery.

Used for lower back pain, motor impairment of the hip joint, contracture of the tendons in the popliteal fossa, muscular atrophy, motor impairment and pain in lower extremities, hemiplegia, abdominal pain, vomiting, diarrhea, heat exhaustion, acute gastroenteritis, sciatica, arthritis of knee, and spasm of gastrocnemius muscle.

Traditional indications include coma due to stroke, hemiplegia, stiffness and pain of lumbar region, seizures, leprosy, tidal fever, carbuncles, twisting pain in the chest and abdomen, vomiting, diarrhea, and acute lumbago.

As a he sea point and an earth point of the bladder meridian, Bl 40's traditional functions are to drain summer heat (when bled), relax the tendons, invigorate the collaterals, strengthen the lower back and knees, and clear heat from the blood.

Massage with the knee flexed, the same way as for Bl 38.

Used with Bl 25, Bl 26, Bl 54, Gb 29, Gb 30, and Gb 34 for lower back pain or stiffness.

Use with Bl 25, Bl 26, Bl 53, Bl 54, Bl 36, Bl 37, Bl 39, Bl 57, Bl 66, Bl 67, Gb 34, Gb 33, Gb 32, Gb 31, and Gb 30 for contracture of the tendons of the popliteal fossa.

For heat exhaustion, use with Gv 14, Gv 26, Co 4, Co 11, Sp 10, Liv 2, Gb 44, and Gb 43.

Use with Cv 6, Cv 4, Cv 3, Sp 6, Liv 1, Liv 3, Kd 10, Kd 2, Kd 3, Liv 4, St 36, Pc 6, Bl 18, Bl 19, Bl 20, and Bl 23 for irregular menstruation.

Applications:

A round type of kick using the instep. Or, if you are in a grappling situation, a one-knuckle punch here will cause the attacker to let go of any hold.

BL 41 (BLADDER POINT NO. 41)

Chinese name:

Fufen (appended part).

Location:

3 cun lateral to the lower border of the spinous process of the second thoracic vertebra. This is about four finger breadths (of the individual patient) lateral to the midline of the spine.

Connections:

None.

Direction of strike:

Straight in to the back.

Damage:

This point is opposite Bl 12, so you could easily strike both Bl 12 and Bl 41. This point, along with Bl 42 and 43, is right over what is known as the "power band." This is the area of the back that when struck damages the structure of the whole upper body. A strike here will seriously drain qi from the body, causing the recipient to fall down. Great local pain is also felt because this is an "electrical point."

Set-up point:

Sp 19 is a good point to strike along with Bl 41 since it weakens the legs.

Antidote:

Hold your palms on each shoulder and lift upward, then let it drop (fig. 234).

Healing:

Innervation is by the lateral cutaneous branches of the posterior rami of the first and second thoracic nerves and, deeper, the dorsal scapular nerve.

Irrigation is by the descending branch of the transverse cervical artery and the lateral branches of the posterior branches of the intercostal artery and vein.

Used for stiffness and pain of the shoulder/upper back and neck and numbness of the elbow and arm.

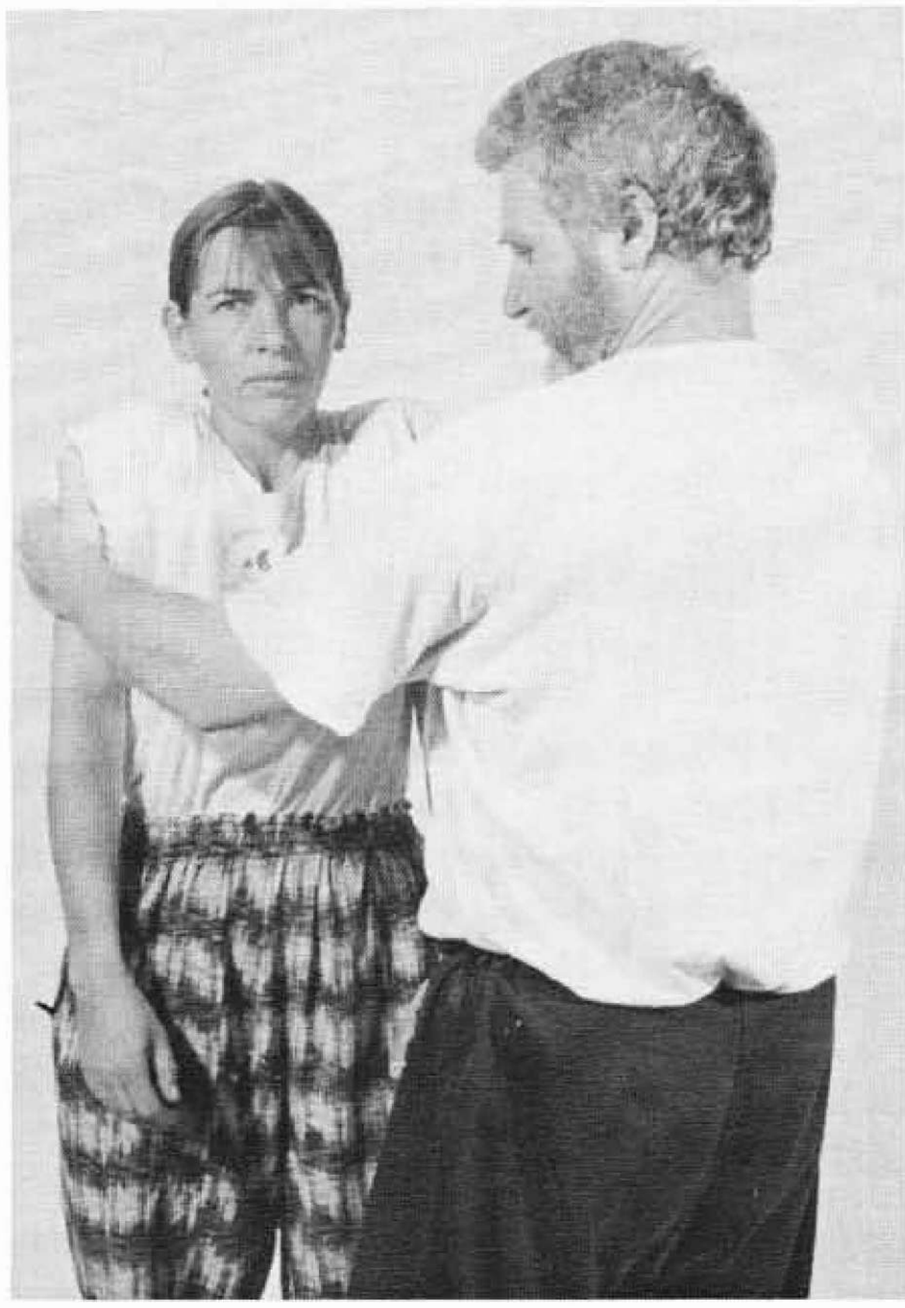


Figure 234

To massage, press straight in and hold; press and rotate clockwise or counterclockwise for xu or shi conditions; rub across the point (laterally and medially) with the fingertips, thumb, or the heel of hand; or do fingertip or loose fist percussion on the point. You can also get an elbow into this point (let your patient guide you as to how much pressure is tolerable). You'll get better access to the point if the arm is flexed behind the back. Press slowly with both thumbs and release quickly, pulling the thumbs apart.

Use with Gb 20, Gb 21, Gb 34, Th 15, Th 14, Si 3, Si 9, Si 10, Si 11, Si 12, Si 13, Si 14, Si 15, dingchuan, Bl 11, Bl 12, Bl 13, Bl 14, Bl 15, Bl 16, Bl 17, Bl 18, Bl 42, Bl 43, Bl 44, Bl 45, Bl 46, Bl 47, Bl 57, Bl 60, Bl 66, Bl 67, Si 1, Si 2, and Co 15 for pain and stiffness of the neck, shoulder, and upper back regions.

Use with Co 4, Co 7, Co 8. Co 9, Co 10, Co 11, Co 12, Co 13, Co 14, Co 15, Co 16, Si 3, Si 6, Si 7, Si 8, Si 9, St 10, Si 11, Si 12, and Si 13 for numbness, pain, and stiffness of the elbow and arm.

Applications:

You might strike straight in to Sp 19 with your right fingers as your left palm slams into his right neigwan. Flick your left palm over the top of his right forearm and swing it over to your right, thus turning him around so that his back is facing you. Strike straight in to Bl 41.

BL 42 (BLADDER POINT NO. 42)

Chinese name:

Pohu (soul's household).

Location:

3 cun lateral to the lower border of the spinous process of the third thoracic vertebra.

Used for pulmonary tuberculosis, cough, asthma, neck rigidity, pain in the shoulder and back, bronchitis, pleurisy, and atelectasis (collapsed lung).

Connections:

None.

Direction of strike:

Straight in to the back.

Damage:

This point does the same damage as Bl 41. However, more lung damage is done, thus draining more qi from the upper body. This point is also nearly parallel to the heart, so a sudden strike will also send a shock wave into the heart, thus causing it to stop either momentarily or forever!

Set-up point:

Same as for Bl 41.

Antidote:

Same as for Bl 41.

Healing:

Massage techniques are the same as for Bl 41.

See Bl 41 for treating upper back, neck, and shoulder pain and stiffness.

Use with dingchuan, Bl 12, Bl 13, Bl 43, Bl 44, Bl 45, Bl 17, Bl 18, Cv 22, Cv 17, Lu 1, Lu 2, Lu 3, Lu 4, Lu 5, Lu 6, Lu 7, Lu 8, Lu 9, St 36, Liv 3, Kd 22, Kd 23, Kd 24, Kd 25, Kd 26, and Kd 27 for cough, asthma, bronchitis, pleurisy, and so on.

Use with Gb 20, Bl 12, Bl 13, Bl 43, Bl 17, Lu 1, Lu 5, Lu 7, Co 4, Co 11, Cv 17, St 36, and Liv 3 for the common cold.

Applications:

Same as for Bl 41.

BL 43 (BLADDER POINT NO. 43)

Chinese name:

Gaohuangshu (vital's hollow).

Location:

3 cun lateral to the lower border of the spinous process of the fourth thoracic vertebra. At the end of the medial border of the spine of the scapula, in the trapezium and rhomboid muscles and, in its deep position, the ilio-costalis muscle.

Connections:

Connected to the upper heater.

Direction of strike:

Straight in to the back.

Damage:

This is the shu point of the "vital center" (that area just below the heart). A strike here will cause great weakness because it also affects the lung qi, draining it. The whole qi system is slowed down, i.e., the production of qi is slowed, thus causing the great weakness. The recipient will fall down from instant weakness.

Set-up point:

Attack to Lu 5 at the elbow.

Antidote:

You should have an acupuncturist place a slice of garlic over Bl 43 and then burn moxa over the point. You could also either massage St 36 or use moxa on it and Bl 43 together.

Healing:

Innervation is by the medial cutaneous branches of the posterior rami of the second and third thoracic nerves and, deeper, their lateral branches and the dorsoscapular nerve. In its deepest position it is innervated by the trunk of the fourth intercostal nerve. Irrigation is by the posterior branch of the fourth intercostal artery and the descending branch of the transverse cervical artery.

Used for pulmonary tuberculosis, cough, asthma, hemoptysis, night sweating, poor memory,

seminal emissions, indigestion, bronchitis, pleurisy, neurasthenia, and general weakness caused by prolonged illness, upper back spasm, and pain.

Traditional indications include consumptive deficient disease, coughing of blood, hiccups, deficient spleen and stomach, nocturnal emissions, absent-mindedness, and pain along the spine.

Traditional functions are to regulate the lung qi, strengthen deficient conditions, and calm and strengthen the shen.

Massage techniques are the same as for Bl 41, but be careful if you use an elbow.

Use with dingchuan, Bl 12, Bl 13, Bl 17, Bl 18, Bl 23, Bl 42, Bl 44, Bl 45, Gv 22, Lu 1, Lu 5, Lu 7, Co 4, Pc 6, Cv 17, Kd 22, Kd 23, Kd 24, Kd 25, Kd 26, Kd 27, Kd 3, Cv 12, St 36, and Liv 3 for asthma, bronchitis, cough, and so on. Use with St 36, Sp 3, Gv 20, Lu 1, Cv 4, Cv 6, and Liv 3 for general weakness after prolonged illness.

See Bl 41 for treatment of pain and stiffness of the upper back, neck, and shoulders.

Applications:

He might attack with a right hook. Slam his Lu 5 point with your right back palm to cause him to become extremely weak and perhaps faint. If not, then pull him around so that you can now access his Bl 43 point and strike either one or both points straight in to the back to drop him.

BL 44 (BLADDER POINT NO. 44)

Chinese name:

Shentang (spirit's hall).

Location:

3 cun lateral to the lower border of the spinous process of the fifth thoracic vertebra.

Connections:

None.

Direction of strike:

Straight in to the back.

Damage:

This point is also a weakening point. A strong strike will cause the recipient to fall downbecause it shocks the lungs.

As with many of the bladder points, this one has a dire effect upon the spirit, disconnecting the human part with the "God" part. It is most difficult for someone who has been struck here to return to being a normal, loving human being again.

Set-up point:

Lu 5 is a good set-up point.

Antidote:

The same as for Bl 43.

Healing:

Innervation is by the medial cutaneous branch of posterior rami of the fourth and fifth thoracic nerves and, deeper, their lateral branches and the dorsal scapular nerve. Irrigation is by the posterior branches of the fifth intercostal artery and vein and the descending branch of the transverse cervical artery.

Used for asthma, cough, pain, and stiffness of upper back, bronchitis, intercostal neuralgia, and heart disease.

Massage techniques are the same as for Bl 41, but again, be careful if you use an elbow.

See Bl 43 for treating asthma, bronchitis, cough, etc.

Use with Pc 6, Ht 7, Pc 3, Cv 17, Liv 14, Bl 14, Bl 15, Bl 17, Bl 18, Bl 43, Liv 3, and St 36 for heart disease.

See Bl 41 for treating pain and stiffness of the upper back and shoulders, or use Bl 44 with Liv 14, Gb 24, Gb 34, Gb 41, Liv 2, Liv 3, and jiaji points of thoracic vertebra associated with the ribs involved.

Use with Gv 20, Gb 20, anmien, Ht 7, Pc 6, Bl 43, Liv 3, Bl 65, Bl 66, Sp 3, and Kd 16 for

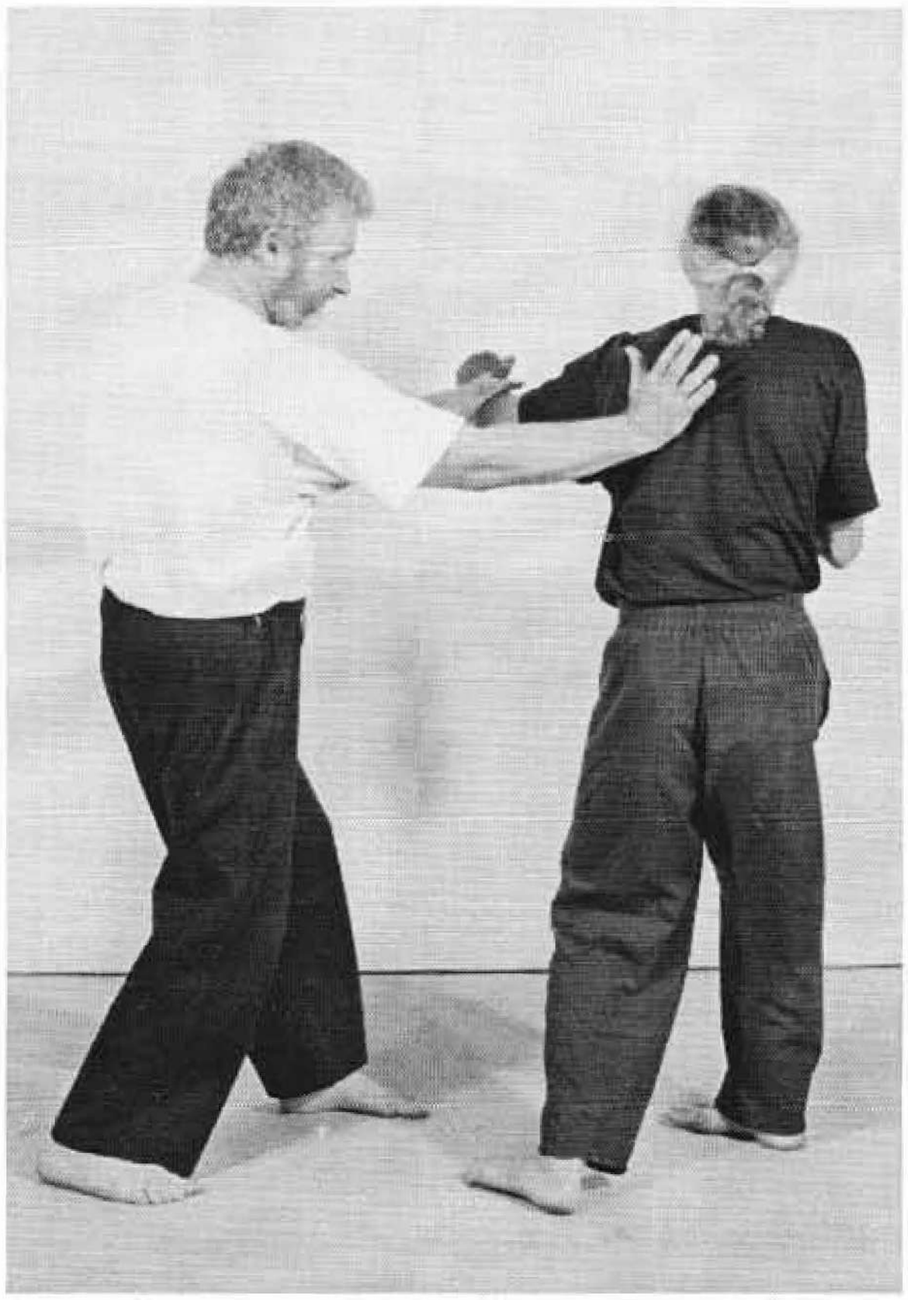


Figure 235

mental illness, neurasthenia, depression, etc.

Applications:

The same as for Bl 43.

BL 45 (BLADDER POINT NO. 45)

Chinese name:

Yixi (surprise).

Location:

3 cun lateral to the spinous process of the sixth thoracic vertebra.

Connections:

None.

Direction of strike:

Straight in to the back.

Damage:

Again, this is a weakening point. If used in conjunction with Lu 5 or Lu 8 and Ht 5, it will cause great weakness from qi drainage.

Set-up point:

Lu 5 or Lu 8 and/or Ht 5.

Antidote:

Place your hand onto Gv 20 and apply light pressure downward into the head. You could also use the same antidote as for Bl 43.

Healing:

Innervation is by the medial cutaneous branches of the posterior rami of the fifth and sixth thoracic nerves and, deeper, their lateral branches. Irrigation is by the posterior branches of the sixth intercostal artery and vein.

Used for cough, asthma, pain in the shoulder and upper back, pericarditis, malaria, intercostal neuralgia, and hiccups.

Massage techniques include pressing and holding the point; rotating clockwise or counterclockwise for xu or shi conditions; pressing slowly with the thumbs and releasing quickly, pulling thumbs apart; doing fingertip percussion or loose fist percussion on the point; and rubbing the point medially and laterally with the tips of the fingers, the thumb, or the heel of the hand.

See Bl 43 for treatment of asthma, bronchitis, cough, etc. See Bl 41 for treatment of the upper back, neck, and shoulders.

Use with Gb 34, Sp 9, Si 3, Pc 5, Pc 6, Co 4, Co 11, Lu 7, Gv 10, Th 2, Gv 13, Gv 14, Bl 12, Bl 13, Gb 20, St 36, Liv 2, and Liv 3 for malaria.

Use with Bl 14, Bl 15, Bl 43, Bl 44, Cv 17, Pc 8, Pc 9, Th 1, and Th 2 for pericarditis.

Applications:

Perhaps you have used a p'eng type of block to his straight left. You should also strike in to Kd 25 to shock the kidneys. Then violently pull his wrist with your left palm, thus attacking Ht 5 and Lu 8, draining qi from the upper body. Pull him around and strike straight in to Bl 45 (fig. 235).

BL 46 (BLADDER POINT NO. 46)

Chinese name:

Geguan (diaphragm's hinge).

Location:

3 cun lateral to the lower border of the seventh thoracic vertebra, approximately at the level of the inferior angle of the scapula.

Connections:

None.

Direction of strike:

Upward into the scapula using a palm-heel strike.

Damage:

Great damage is done to the structure of the upper body, which will not allow him to continue the fight. This strike will also affect the heart and lungs, and the diaphragm or seat of power, bringing great qi drainage. Physically, you can also damage the muscular system around this area, causing chronic instant spasm, which will drop him quickly.

Set-up point:

Any of the qi drainage points will suffice here—Lu 5, Lu 8, neigwan, or Ht 5.

Antidote:

Bring qi back into the system by applying pressure downward onto Gv 20.

Healing:

Innervation is by the medial cutaneous branches of the posterior rami of the sixth and seventh thoracic nerves and, deeper, their lateral branches. Irrigation is by the posterior branches of the seventh intercostal artery and vein.

Used for difficulty swallowing, vomiting, belching, pain and stiffness of back, gastric hemorrhage, intercostal neuralgia, and esophageal spasm caused by blockage of liver qi.

Massage techniques are the same as for Bl 45.

Use with Pc 6, Ht 7, Liv 3. Liv 14, St 36, and Kd 1 for esophageal spasm causing vomiting, belching, or difficulty in swallowing.

Use with Bl 17, Bl 18, Bl 19, Bl 20, Bl 25, Bl 40, Bl 60, and Gb 34 for middle back pain and stiffness.

Use with Bl 21, Bl 20, Bl 19, Bl 18, Bl 17, Sp 10, Sp 1, Cv 12, Co 4, Pc 6, and Gb 26 for gastric hemorrhage.

Applications:

The same as for Bl 44.

BL 47 (BLADDER POINT NO. 47)

Chinese name:

Hunmen (soul's door).

Location:

3 cun lateral to lower border of the spinous process of the ninth thoracic vertebra.

Connections:

None.

Direction of strike:

Straight in to the back with a twist either clockwise for the right side or counterclockwise for the left side.

Damage:

A strike to this point causes great lung damage. The effect will be immediate: the recipient will fall down. However, there are prolonged effects with this strike, so be warned! The recipient could have lung deficiency lasting many years, causing not only emotional damage but physical conditions such as asthma, chronic bronchitis, and so on. Severe social or behavioral problems are also inherent to this

strike because, again, it has a dire effect on the spirit or soul of the recipient. It is said of a strike to this point that the spirit is locked out and cannot return.

Set-up point:

Lu 5.

Antidote:

See an acupuncturist and have the lung deficiency looked at. For the physical damage, of course, see a doctor. For the emotional damage, you must have the lungs fixed immediately, as the longer it persists, the harder it is to fix. For the spiritual damage, you must have the door opened. An acupuncture needle is placed at Bl 46 and Bl 48, on either side of Bl 47, and at Bl 18. When the needles all begin to vibrate, this is the sign that the door has been reopened.

Healing:

Innervation is by the lateral branches of the posterior rami of the seventh and eighth thoracic nerves. Irrigation is by the posterior branches of the eighth intercostal artery and vein.

Used for pain in the chest/midback and hypochondriac regions, vomiting, diarrhea, neurasthenia, disease of the liver and gallbladder, pleurisy, and stomachache.

Massage is the same as for Bl 45.

Use with Bl 17, Bl 18, Bl 19, Bl 46, Bl 43. Bl 48, Bl 20, Bl 49, Liv 14, Liv 13, Liv 2, Liv 3, Liv 4, Liv 6, Gb 24, Gb 34, Gb 43, Bl 40, and Gb 44 for inflammation of the liver or gallbladder , pain in the chest/midback or hypochondriac regions, and stomachache.

Use with Pc 6, Bl 18, Bl 20, Cv 12, St 36, Liv 3, and Co 4 for vomiting, and add Bl 25, St 25, Sp 25, St 37, and Sp 4 for diarrhea.

Applications:

The same as for Bl 46.

BL 48 (BLADDER POINT NO. 48)

Figure 236

Chinese name:

Yanggang (yang's parameter).

Location:

3 cun lateral to the lower border of the spinous process of the 10th thoracic vertebra.

Connections:

None.

Direction of strike:

Straight in to the back. Usually struck in conjunction with Bl 49.

Damage:

A strike to this point obstructs the yang qi, causing long-lasting emotional problems, usually seen in the form of totally withdrawal. The immediate effect is that the lungs are damaged so that the recipient cannot breathe, causing him or her to fall down.

Set-up point:

Lu 5.

Antidote:

Place him in a sitting position and put his head between his knees if there is no obvious physical damage, such as broken ribs, etc.

Healing:

Innervation is by the lateral branches of the

posterior rami of the eighth and ninth thoracic nerves. Irrigation is by the posterior branches of the ninth intercostal artery and vein.

Used for borborygmus, abdominal pain, diarrhea, jaundice, hepatitis, cholecystitis, and gastritis.

Massage techniques are the same as for Bl 45.

See Bl 47 for treatment of hepatitis, cholecystitis, etc.

Use with Bl 18, Bl 19, Bl 20, Bl 21, Bl 22, Gv 12, Liv 13, St 36, Sp 3, Sp 4, Liv 3, St 25, Cv 9, Cv 4, Cv 6, and St 21 for borborygmus and abdominal pain. Add St 25, Sp 15, Gb 26, St 37, and Sp 4 for diarrhea, and for gastritis add St 45, St 44, Liv 4, Liv 2, Gb 44, and Gb 43.

Applications:

Take his right straight with your right p'eng block as you are moving straight past the attacker. Then as his Bl 48 and 49 points are in view, strike backward with a right palm heel strike (fig. 236).

BL 49 (BLADDER POINT NO. 49)

Chinese name:

Yishe (lodge of ideas).

Location:

3 cun lateral to the lower border of the spinous process of the 11th thoracic vertebra.

Connections:

None.

Direction of strike:

Straight in to the back.

Damage:

This strike has the same effect as Bl 48 on the lungs. It also has an immediate effect upon the mind, causing the recipient to become confused and unable to carry through with ideas that pop up. So, in a martial sense, he might intend to strike you but will be unable to execute the necessary body movements.

Set-up point:

Lu 5.

Antidote:

The whole body must be rebalanced using one of the qi balancing methods.

Healing:

Innervation is by the lateral branches of the posterior rami of the 10th and 11th thoracic nerves. Irrigation is by the posterior branches of the 10th intercostal artery and vein.

Used for abdominal distension, borborygmus, diarrhea, vomiting, difficulty swallowing, hepatitis, cholecystitis, and gastritis.

Massage techniques are the same as for Bl 45.

Add this point to the formula for hepatitis given under Bl 47.

Use it with Pc 6, Ht 7, Co 4, Bl 18, Bl 17, Bl 46, Liv 14, Liv 13, Liv 3, St 36, and Kd 1 for difficulty swallowing.

Use with Bl 18, Bl 17, Bl 20, Bl 19, Bl 21, Cv 12, Liv 13, Liv 3, St 21, St 25, St 36, St 37, St 40, Gb 34, Gb 26, and Pc 6 for abdominal distension, borborygmus, diarrhea, vomiting, and lethargy.

Applications:

The same as for Bl 48.

BL 50 (BLADDER POINT NO. 50)

Chinese name:

Weicang (stomach's storehouse).

Location:

3 cun lateral to the lower border of the spinous process of the 12th thoracic vertebra.

Connections:

None.

Direction of strike:

Straight in to the lower back.

Damage:

This point attacks the stomach, both physically and qi-wise. Immediately, the recipient feels a "swelling" in the head caused by yang energy rushing upward. Immediate local pain will go away, only to return some minutes later as extreme pain across the lower back. This strike affects the "earth," and so the recipient loses his grounding and will easily be knocked over.

Set-up point:

Gb 14 upward.

Antidote:

Gb 21, pressed or struck downward.

Healing:

Innervation is by the lateral branch of the posterior ramus of the 11th thoracic nerve. Irrigation is by the posterior branch of the subcostal artery and vein.

Used for abdominal distension, pain in the epigastric region and the back, stomachache, and gastritis.

Massage is the same as for Bl 51.

Use with Pc 6, Cv 12, St 36, Bl 20, Bl 21, Bl 18, Cv 14, St 21, St 25, Bl 17, Liv 13, Liv 3, and jiaji from T 8 to T 12 for stomachache, abdominal distension, and epigastric pain.

Use with Bl 17, Bl 18, Bl 19, Bl 20, Bl 21, Bl 22, Bl 46, Bl 47, Bl 48, Bl 49, Bl 51, Bl 52, Bl 40, and Gb 34 for backache.

Applications:

Same as for Bl 48.

BL 51 (BLADDER POINT NO. 51)

Chinese name:

Huangmen (vitals' door).

Location:

3 cun lateral to the lower border of the spinous process of the first lumbar vertebra.

Connections:

None.

Direction of strike:

Straight in to the lower back.

Damage:

A little lower than Bl 50, this point attacks what is called the "vital centers." If it is used in conjunction with Bl 22 it will stop the heart.

Set-up point:

Lu 5.

Antidote:

Massage the point using counterclockwise circles on the right side and clockwise circles on the left side.

Healing:

Innervation is by the lateral branch of the posterior ramus of the 12th thoracic nerve. Irrigation is by the posterior branches of the first lumbar artery and vein.

Used for pain in the epigastric region, abdominal mass, constipation, mastitis, lower back pain, and paralysis of lower limbs.

To massage, press and hold the point; do rotation clockwise or counterclockwise for xu or shi conditions; press in slowly with the thumbs and release quickly, pulling the thumbs apart; do

fingertip percussion on the point; and press with the heel of hand and rub medially and laterally.

Use with Bl 22, Bl 23, Bl 24, Bl 52, Bl 25, Bl 26, Bl 27, Sp 6, Sp 9, Kd 3, Cv 2, Cv 3, Cv 4, and Cv 5 for renal colic.

Use with Cv 14, Cv 12, Cv 9, Cv 7, Cv 6, Cv 5, Cv 4, Cv 3, St 21, St 25, St 29, Liv 3, Liv 13, Liv 14, Pc 6, Liv 4, St 36, Bl 20, Bl 21, Bl 18, and Bl 17 for epigastric pain, abdominal mass, and constipation.

Use with Bl 17, Bl 18, Bl 19, Liv 3, Liv 14, Cv 17, St 15, St 36, Sp 18, Si 1, and Sp 6 for mastitis.

Applications:

The same as for Bl 48.

BL 52 (BLADDER POINT NO. 52)

Chinese name:

Zhishi (lodge of the will).

Location:

3 cun lateral to the lower border of the spinous process of the second lumbar vertebra. In the latissimus dorsi and ilio-costalis muscles.

Connections:

None.

Direction of strike:

Straight in to the lower back.

Damage:

This strike is an interesting one because it causes physical as well as spiritual damage. When his right Bl 52 is struck, it will instantly weaken his left leg. Even a light to medium strike here will cause the leg to falter for a moment, enabling you to get in quickly for a more devastating shot. When his left Bl 52 is struck, it will damage his right leg. This is also a point for damaging the will. Whereas St 12 is the point for damaging his will to fight, this point damages the will to do anything.

Set-up point:

You could use St 12 because this will enhance the effect on the will and also drain qi from the lower body.

Antidote:

The legs will look after themselves, gaining qi in a few seconds, depending upon how hard the point is struck. The will must be worked upon, however, using acupuncture to St 12 and also to Bl 52.

Healing:

Innervation is by the lateral branch of the posterior ramus of the 12th thoracic nerve and the lateral branch of the first lumbar nerve. Irrigation is by the posterior branches of the second lumbar artery and vein.

Used for seminal emission, impotence, dysuria, edema, pain and stiffness of the lower back, nephritis, spermatorrhea, prostatis, eczema of the scrotum, painful urination, and paralysis of the lower limbs.

Traditional indications include vomiting, indigestion, incontinence, swelling and pain in the genitals, nocturnal emissions, and edema.

Massage techniques are the same as for Bl 51.

Use with Bl 53, Liv 4, Liv 8, Liv 12, Liv 1, Cv

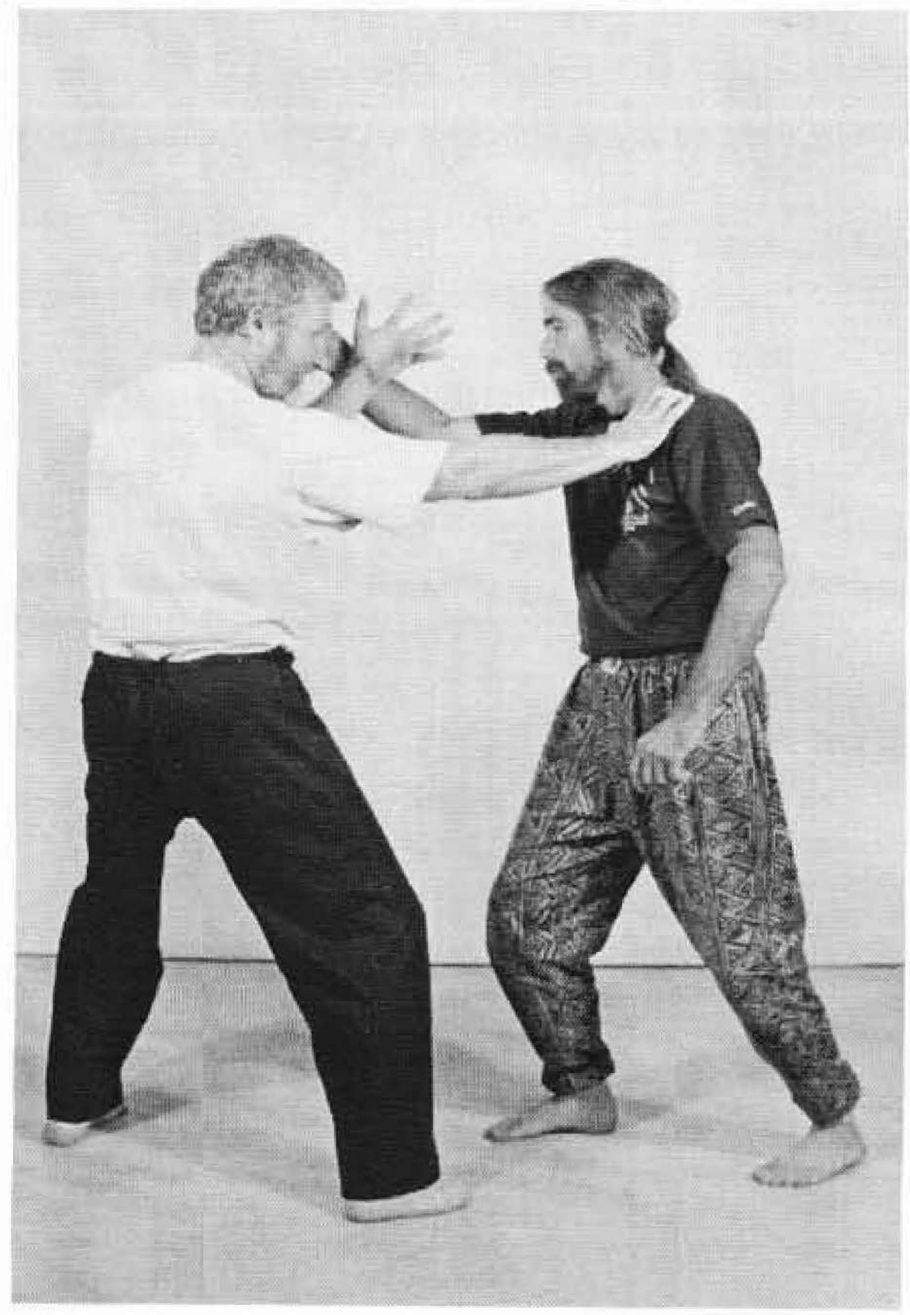


Figure 237

2, Cv 3, and Cv 4 for pain and swelling of the external genitalia. Use with Bl 23, Bl 24, Cv 4, Cv 6, Gb 25, Kd 3, and Gv 4 for seminal emissions, impotence, and spermatorrhea; add Cv 2, Cv 3, Bl 27, Bl 28, Bl 25, Bl 20, Bl 18, and Liv 3 for dysuria, nephritis, and prostatis.

Use with Bl 23, Bl 24, Bl 25, Bl 26, Bl 53, Bl 54, Bl 40, Gb 34, Gb 30, and Gb 29 for stiffness and pain of the lower back.

Applications:

1) You could block any type of straight attack at neigwan and then attack using either a hammer fist or a claw-type weapon to St 12 (fig. 237).
2) Swing him around and strike to Bl 52 with one or both of your palms.

BL 53 (BLADDER POINT NO. 53)

Chinese name:

Baohuang (placenta and vitals).

Location:

3 cun lateral to the lower border of the spinous process of the second sacral vertebra, level with Bl 32.

Connections:

None.

Direction of strike:

Straight in to the buttocks.

Damage:

This point does much the same damage as Bl 28.

Set-up point:

The same as for Bl 28.

Antidote:

The same as for Bl 28.

Healing:

Innervation is by the superior cluneal nerves and, deeper, the superior gluteal nerve. Irrigation is by the superior gluteal artery and vein.

Used for borborygmus, abdominal distension, pain in the lower back, retention of urine, sciatica, and sacroiliac pain and misalignment.

To massage, press and hold; rotate clockwise or counterclockwise for xu or shi conditions; rub with the fingertips, knuckles, or elbow medially and laterally across the point; do fingertip or loose fist percussion on the point; or press slowly and release quickly, pulling the thumbs apart.

See Bl 52 for treatment of lower back pain and stiffness. You could also use that treatment plus Bl 20, Bl 27, Bl 28, Bl 29, Bl 30, and Bl 54 for misalignment of the sacroiliac joint.

For borborygmus and abdominal distension, use with Bl 20, Bl 21, Bl 22, Bl 23, Bl 24, Bl 25, Cv 12, Cv 6, Cv 4, St 21, St 25, St 26, St 27, St 28, St 29, St 30, St 36, Liv 3, Sp 9, and Liv 13.

Use with Bl 32, Bl 28, Bl 23, Bl 39, Bl 33, Cv 2, Cv 3, Cv 4, Cv 5, Cv 6, Sp 6, St 28, and Liv 3 for urinary retention.

Applications:

The same as for Bl 28.

BL 54 (BLADDER POINT NO. 54)

Chinese name:

Zhibian (order's edge).

Location:

Directly below Bl 53, 3 cun lateral to the spinous process of the fourth sacral vertebra. In the gluteus maximus muscle and the inferior margin of the piriformis muscle.

Connections:

None.

Direction of strike:

Straight in to the lower buttocks.

Damage:

If you are able to strike to Bl 54, 30, and 34, there will be a great qi drainage, causing the recipient to fall down. This is a three-point strike, so exercise caution do not play around with this method!

Set-up point:

Neigwan.

Antidote:

Apply light to medium pressure down onto Gv 20 while placing the other palm over the tantien point near Cv 4.

Healing:

Innervation is by the inferior gluteal nerve, the posterior femoral cutaneous nerve, and, lateral to this point, the sciatic nerve. Irrigation is by the inferior gluteal artery and vein.

Used for pain in the lumbosacral region, hemorrhoids, muscular atrophy, motor impairment and pain of the lower extremities, sciatica, disease of the reproductive organs and anus, and strained muscles of buttocks.

Traditional indications include pain in the lumbosacral region, painful urination, genital pain, hemorrhoids, and difficult defecation.

Massage techniques are the same as for Bl 53.

Use with Bl 25, Bl 26, Bl 53, Bl 36, Bl 37, Bl 38, Bl 40, Gb 29, Gb 30, Gb 31, Gb 32, Gb 33, Gb 34, Gb 39, Gb 41, Gb 43, and Gb 44 for sciatica.

Use with Cv 4, Cv 6, Bl 23, Bl 17, Bl 18, Bl 24, Bl 26, Bl 31, Bl 32, Bl 33, Bl 34, Bl 35, Kd 3, Liv 3, Liv 4, Sp 6, Gv 4, and St 36 for disease of the reproductive organs.

See Bl 52 for treatment of lower back pain and stiffness.

Use with Gb 29, Gb 30, Bl 53, Bl 36, Bl 40, Gb 34, Gb 41, Gb 43, and Gb 44 for strained muscles of the buttocks.

Applications:

You could use a palm strike or a knee strike here.

BL 55 (BLADDER POINT NO. 55)

Chinese name:

Heyang (confluence of yang).

Location:

2 cun directly below Bl 40, between the medial and lateral heads of the gastrocnemius, on the line that joins Bl 40 to Bl 57.

Connections:

None.

Direction of strike:

Inward and down slightly just under the back of the knee.

Damage:

This is one of those points that doesn't look like it would do much damage. However, the damage is great. It will cause leg damage from muscle spasm in the whole lower leg, and it will also cause a yang energy surge to the brain, resulting in blackout.

Set-up point:

Lu 5.

Antidote:

Massage the lower leg, including Bl 55, downward.

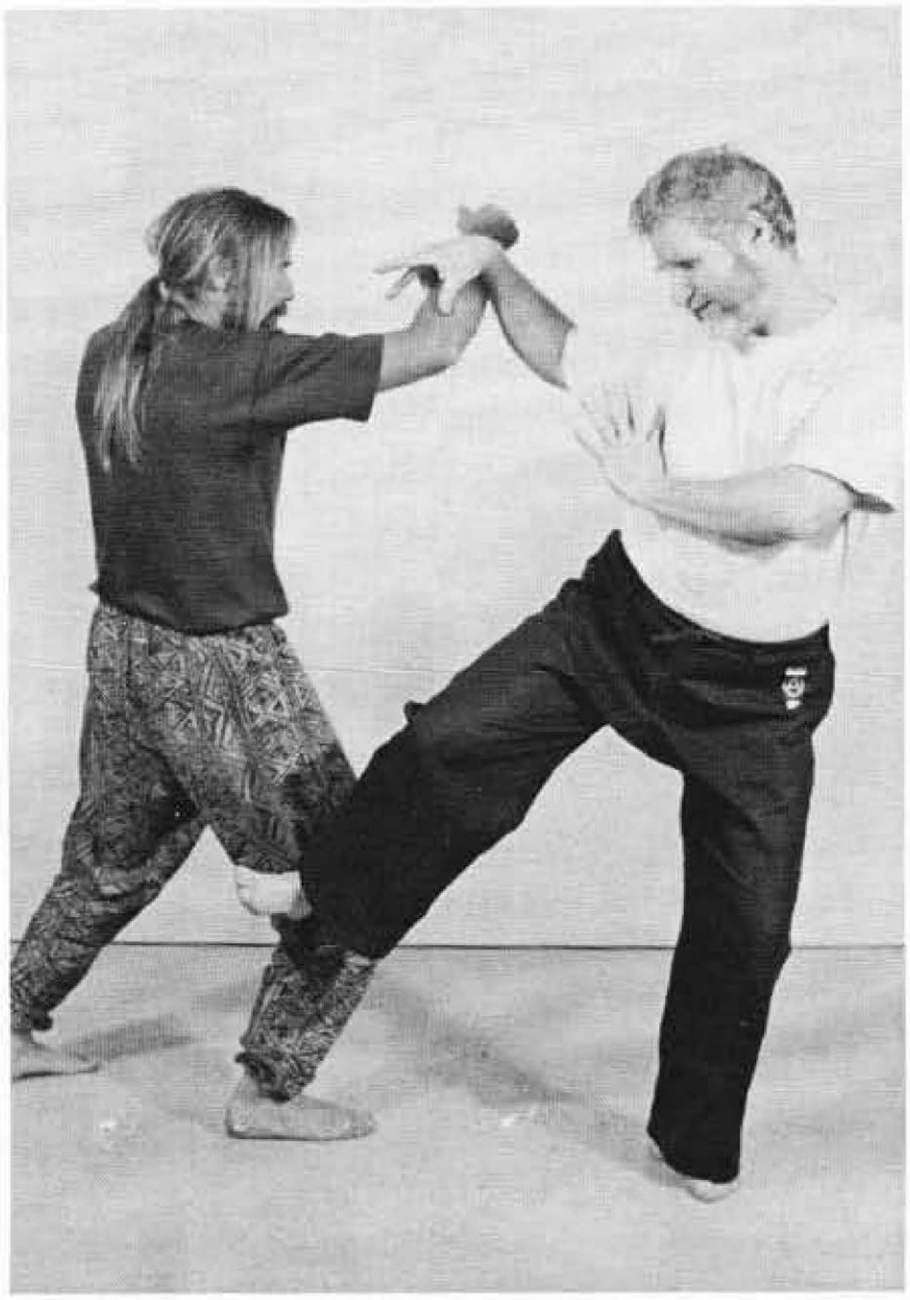


Figure 238

Healing:

Innervation is by the medial sural cutaneous nerve and, deeper, the tibial nerve. Irrigation is by the small saphenous vein and, deeper, the popliteal artery and vein.

Used for backache; aching, numbness, and paralysis of the lower extremities; abnormal uterine bleeding; and soreness from the lower back to the knee.

For massage, do a straight press and hold; rotate clockwise or counterclockwise for xu or shi conditions; press slowly with both thumbs and release quickly, pulling the thumbs apart; rub across the muscle fibers over the point; or flex the leg and do fingertip percussion on the point.

Use with Bl 25, Bl 26, Bl 53, Bl 54, Bl 36, Bl 37, Bl 38, Bl 39, Bl 40, Bl 56, Bl 57, Bl 58, Bl 60, Bl 63, Bl 65, Bl 66, Bl 67, Gb 34, Gb 35, Gb 36, Gb 37, Gb 38, Gb 39, Gb 41, and Liv 3 for backache; aching, numbness, and paralysis of the lower extremities; and soreness in lower back to knees.

Applications:

You could use a hook kick to Bl 55 with your right heel (or left) after you have blocked his right-hand attack (fig. 238).

BL 56 (BLADDER POINT NO. 56)

Chinese name:

Chengjin (support sinews).

Location:

In the center of the belly of the gastrocnemius, midway between Bl 55 and Bl 57. The gastrocnemius muscle consists of a lateral head, a medial head, and their single tendon of insertion. Each head is a thick muscular column, separated from the other by the back of the knee. As they descend, they come together. The medial head is larger and wraps around the leg more toward the front than does the lateral head. The muscular heads end at or slightly above the middle of the leg, where they attach to their tendon. The tendon descends and fuses with the tendon of the soleus, which lies just beneath it, forming the Achilles' tendon. The gastrocnemius muscle raises the heel, which lifts the body. It also assists, though minimally, in flexing the knee joint.

Connections:

None.

Direction of strike:

Straight in to the calf.

Damage:

As with all of the points on the calf, this point creates a shock to the whole system, thus making it good for getting out of holds, as in a grappling situation, etc. It can be struck with a toe kick straight in to cause great leg damage, especially to the muscles of the lower leg.

Set-up point:

Neigwan. St 9 also works very well with this point.

Antidote:

See a doctor because the damage with this point is purely physical—nerve damage and so on.

Healing:

Innervation: The medial sural cutaneous nerve and, deeper, the tibial nerve. Irrigation is by the small saphenous vein and, deeper, the posterior tibial artery and vein.

This point is used for pain in the leg, hemorrhoids, acute lower back pain, headache, and paralysis of lower limbs.

Massage techniques are the same as for Bl 55.

For headache, use with Gb 12, Gb 20, Gb 21, Th 15, Si 13, Si 3, Bl 10, Bl 11, Bl 12, Bl 13, Bl 41, Bl 42, Bl 43, Bl 17, Bl 18, Bl 19, Bl 40, Bl 55, Bl 57, Bl 58, Bl 59, Bl 60. Bl 62, Bl 63, Bl 64, Bl 65, Bl 66, Bl 67, Liv 3, Gb 34, Gb 41, Gb 43, Gb 44, Gv 20, Co 4, Co 11, Gb 14, yintang, taiyang, and Bl 1.

Use with Bl 23, Bl 25, Bl 26, Bl 52, Bl 53, Bl 54, Bl 40, Bl 55, Bl 57, Bl 58, Gb 29, Gb 30, and Gb 34 for lower backache. See Bl 57 for treatment of hemorrhoids.

Applications:

1) You could be in a grappling situation where he has pinned you. Take one arm across his neck and push into St 9 as your other hand grabs at Bl 56 and squeezes inward violently.

BL 57 (BLADDER POINT NO. 57)

Chinese name:

Chengshan (support mountain).

Location:

If patient lies prone, this point can be found by stretching the foot as if standing on tiptoe. This reveals a triangular shaped hollow in the middle of the calf, about midway between Bl 40 and the heel. The point is at the top of this triangle, at the lower border of the separation of the two bellies of the gastrocnemius muscle.

Connections:

None.

Direction of strike:

Straight in with a slight upward movement.

Damage:

This point, when struck, causes the whole leg to give way under the pressure of the body. It is a great point for when you are in a grappling situation, causing immediate pain with an "unknown factor" (i.e., the brain senses that something bad is happening but cannot quite work out what). So mixed signals go to the brain, causing the recipient to have to let go, etc. A good kick here will take out the leg and cause great lower leg damage. It can also cause anal problems later in life, causing the anus sphincter to become weakened.

Set-up point:

St 9 or neigwan work well with this point.

Antidote:

You should have the same point worked on by a good acupuncturist for the anal problems.

Healing:

Innervation and irrigation are the same as for Bl 56.

Used for lower back pain, spasm of the gastrocnemius, hemorrhoids, constipation, sciatica, paralysis of lower limbs, and prolapsed anus.

Traditional indications include sore throat, leg qi, hemorrhoids, vomiting and diarrhea, twisted muscles of the calf, and pain in lumbar spine.

Traditional functions include relaxing the tendons, invigorating the collaterals, regulating the qi in the yang organs, and treating hemorrhoids.

Massage techniques are the same as for Bl 55.

Use with Bl 20, Bl 30, Gv 1, Bl 56, Bl 35, Bl 34, Bl 33, Bl 32, Bl 30, Bl 53, Bl 54, Bl 25, Bl 26, *erbai* (an extra point), Gv 20, Sp 3, Liv 4, and St 36 for hemorrhoids, prolapsed anus.

Use with Gv 14, Co 11, Co 4, Liv 3, St 43, St 36, Pc 6, Cv 12, Sp 4, Gv 26, Bl 40, Gv 20, Pc 3, Pc 8, Kd 1, Si 3, Gb 34, Kd 7, Lu 9, Cv 6, and all the jing well points for heat exhaustion or sunstroke.

You can rub Pc 8 and up the Pc meridian to Pc 3 with alcohol or methylated spirits, then blow on the area to help cool body.

Use with Bl 25, Bl 26, Bl 52, Bl 53, Bl 54, Bl 40, Gb 29, Gb 30, and Gb 34 for lower back pain or sciatica.

Use with Bl 40, Bl 55, Bl 56, Bl 58, Bl 59, Bl 60, Bl 66, Bl 67, and Gb 34 for spasm of gastrocnemius muscle.

Applications:

Same as for Bl 56.

BL 58 (BLADDER POINT NO. 58)

Chinese name:

Feiyang (soaring flying high).

Location:

7 cun directly above Bl 60, on the posterior border of the fibula, approximately l cun inferior and lateral to Bl 57. In the gastrocnemius and soleus muscles.

Connections:

This point is a transverse *luo* (connecting point) point to Kd 3 and Kd 1 points.

Direction of strike:

Straight in to the leg from the side.

Damage:

This point is known as "the shock point" in dim-mak terms. A quick, violent grab or strike here and the recipient is shocked for a few moments while you have time to attack elsewhere. This point is great for grappling or for striking. You must, however, be fairly accurate. The leg will not work after a strike here. Also, the whole balance of yin and yang qi is upset with this strike; it can even cause temporary or permanent insanity when struck hard enough.

Set-up point:

St 9 or any of the other "shock points," such as Gb 25.

Antidote:

The same point is either needled or treated with moxa.

Healing:

Innervation is by the lateral sural cutaneous nerve of the calf. Irrigation is by the small saphenous vein and, deeper, the posterior tibial artery and vein.

Used for headache, blurring of the vision, nasal obstruction, epistaxis, lumbago, weakness of the leg, rheumatoid arthritis, nephritis, cystitis, beriberi, hemorrhoids, seizures, and lower back and leg pain.

Traditional indications include vertigo, nasal congestion, back and head pain, pain and weakness of the lower back and knees, pain in the calf, progressive painful joints, and insanity. It is much used for sciatica when the pain is on the side of the leg, as well as hemorrhoids.

Traditional functions are as a luo connecting point, so can treat back pain, headache, nasal congestion, nosebleed, and clear nasal discharge.

Massage techniques are the same as for Bl 55. These points in the calf muscle can also be treated with a straight push using the heel of the palm, while the other hand is placed on the shin and pulls up against the downward pressure of the pressing hand. The foot should be extended for this type of movement.

Use with Bl 52, Bl 23, Bl 24, Bl 25, Bl 26, Bl 53, Bl 54, Bl 40, Bl 62, Bl 63, Bl 64, Bl 64, and

Gb 34 for lower backache; add Bl 57, Bl 56, and Bl 55 for accompanying calf pain.

Use with Bl 1, Bl 65, Bl 60, Liv 3, Liv 14, St 1, Gb 1, T 23, and Kd 5 for blurring of vision.

Use with Cv 2, Cv 3, Cv 4, Cv 5, Cv 9, St 28, Bl 28, Sp 9, Kd 4, Kd 6, and Bl 23 for nephritis and cystitis.

Applications:

You could p'eng to his right straight using your right forearm, then get around behind for a toe kick straight in to the point. Or you could apply violent pressure as in a grappling situation.

BL 59 (BLADDER POINT NO. 59)

Chinese name:

Fuyang (tarsal yang).

Location:

3 cun directly above Bl 60 on the lateral aspect of the gastrocnemius muscle.

Connections:

Connection to the yang qiao mai meridian.

Direction of strike:

In from the side of the lower leg.

Damage:

This is an accumulation point (xie cleft). Apart from immediate physical damage to the lower leg, which will finish the fight, it has an effect upon the head and will cause headaches, eye damage, and a fullness of the head, resulting in blackout if struck hard.

Set-up point:

You could use Gb 31 straight in and then go straight down to Bl 59 with a double type of kick.

Antidote:

For the head type of damage, which will be longer lasting than the physical damage, see an acupuncturist.

Healing:

This point is innervated by the sural nerve and irrigated by the small saphenous vein and, deeper, the terminal branch of the peroneal artery.

Used for a heavy feeling in the head, headache, lower back pain, redness and swelling of the external malleolus, and paralysis of the lower extremities.

As a xie cleft point of the yang qiao mai and a point of intersection between the yang qiao and bladder meridians, its traditional functions include treating disease of the eye, tightness and spasm of muscles of the lateral aspect of the lower leg when those on the medial aspect are flaccid or atrophied (e.g., as in seizure or paralysis), and treating pain and stiffness of the lumbar region.

Massage techniques are the same as for Bl 58.

See Bl 57 for treatment of spasm in gastrocnemius.

Use with Gv 20, Gb 20, Gv 14, Bl 58, Bl 60, Liv 3, and Co 4 for heaviness of the head.

Use with Bl 60, Bl 61, Gb 34, Gb 40, Bl 67, Bl 66, Gb 43, Gb 44, and Gb 39 for redness, pain, and swelling of the exterior malleus.

Applications:

Same as for Bl 58.

BL 60 (BLADDER POINT NO. 60)

Chinese name:

Kunlun (Kunlun Mountains).

Location:

In the depression midway between the lateral malleolus and the Achilles' tendon, in the peroneus brevis muscle.

Connections:

None.

Direction of strike:

Usually a stomp straight down onto the ankle.

Damage:

This point is interesting because it has an effect upon the "power band" between the shoulder blades. A strike here will cause nervous disorders and an immediate weakening of the upper body. The arms just don't do what you want them to do. This is a "fire and jing" point so, traditionally, it will help balance out fire and water in the body. However, when struck using negative qi, this point will cause an imbalance in the whole body with extreme local pain, followed by an energy drainage causing the recipient to not be able to carry on with the fight.

Set-up point:

Sp 17 is an excellent point to use with this strike.

Antidote:

Massage up the length of the back of the leg with deep penetration.

Healing:

Innervation is by the sural nerve and irrigated by the lessor saphenous vein and the lateral posterior malleolar artery and vein.

Used for headache; neck rigidity; spasm and pain of upper back, neck, shoulders, and arm; blurred vision; epistaxis; pain in the heel; epilepsy in children; difficult labor; goiter; lower back pain; sciatica; paralysis of lower limbs; and disease of the ankle joint and surrounding tissue.

Traditional indications include headache and stiffness of the cervical vertebra, tidal fever, pain of lower back and buttocks, difficulty in childbirth, retained placenta, and infantile fright.

Traditional functions are to eliminate wind, remove obstructions from the collaterals, relax the tendons, and strengthen the waist As a fire point and a jing river point (transversing point) of the bladder meridian, it can cool heat and bring down fire.

To massage, use a straight press and hold, rotate the foot while pinching Bl 60 and Kd 3 together for ankle problems, press and rotate clockwise or counterclockwise for xu or shi conditions, or do percussion with one finger on this point.

Use with Gb 39, Gb 40, Gb 41, Gb 43, Gb 44, Bl 61, Bl 62, Bl 63, Bl 66, Bl 67, Gb 34, Bl 57, and Bl 58 for pain in the external malleus.

Use with Gb 20, Bl 10, Gb 21, Th 15, Si 13. Bl 11, Bl 12, Bl 13, Bl 17, Gb 34, and Si 3 for neck and shoulder spasm and stiffness, headache.

Use with Kd 3, Co 5, Pc 7, Bl 1, Si 3, Gb 1, Gb 16, Gb 43, Gb 44, Liv 2, Liv 3, Liv 14, St 1, and Th 23 for red eyes.

Applications:

A kick or stomp to the point is sufficient, or you could set it all up by attacking to Sp 17 first.

BL 61 (BLADDER POINT NO. 61)

Chinese name:

Pushen (serve and consult).

Location:

Posterior and inferior to the external malleus, directly below Bl 60 in the depression of the calcaneum at the junction of the red and white skin. Just above the heel on the outside of the foot.

Connections:

Yang qiao mai

Direction of strike:

Straight down just under the ankle on the side of the heel.

Damage:

The point is also an energy drainage point and will cause great local pain as well as qi drainage, forcing the recipient to sit down.

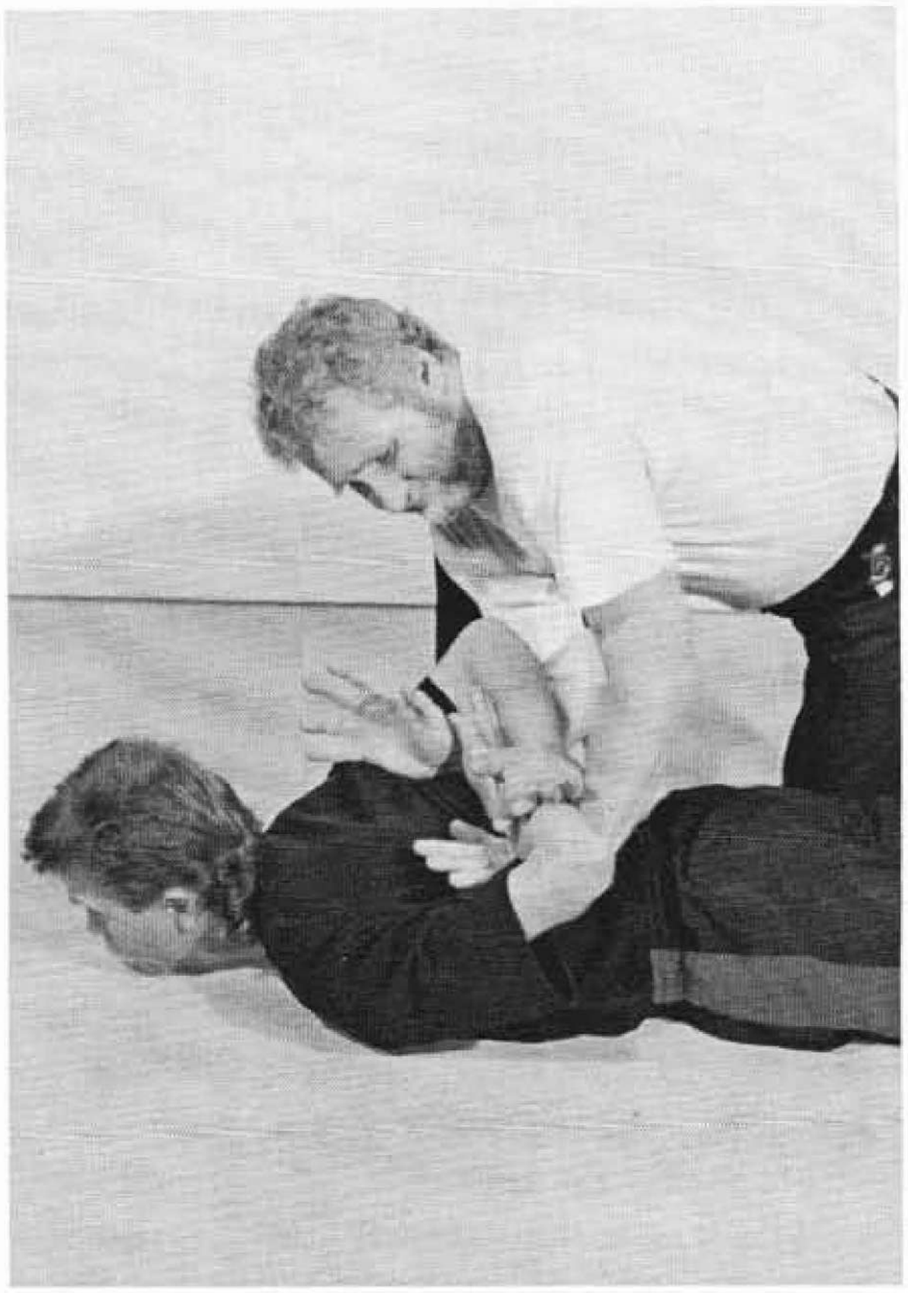


Figure 239

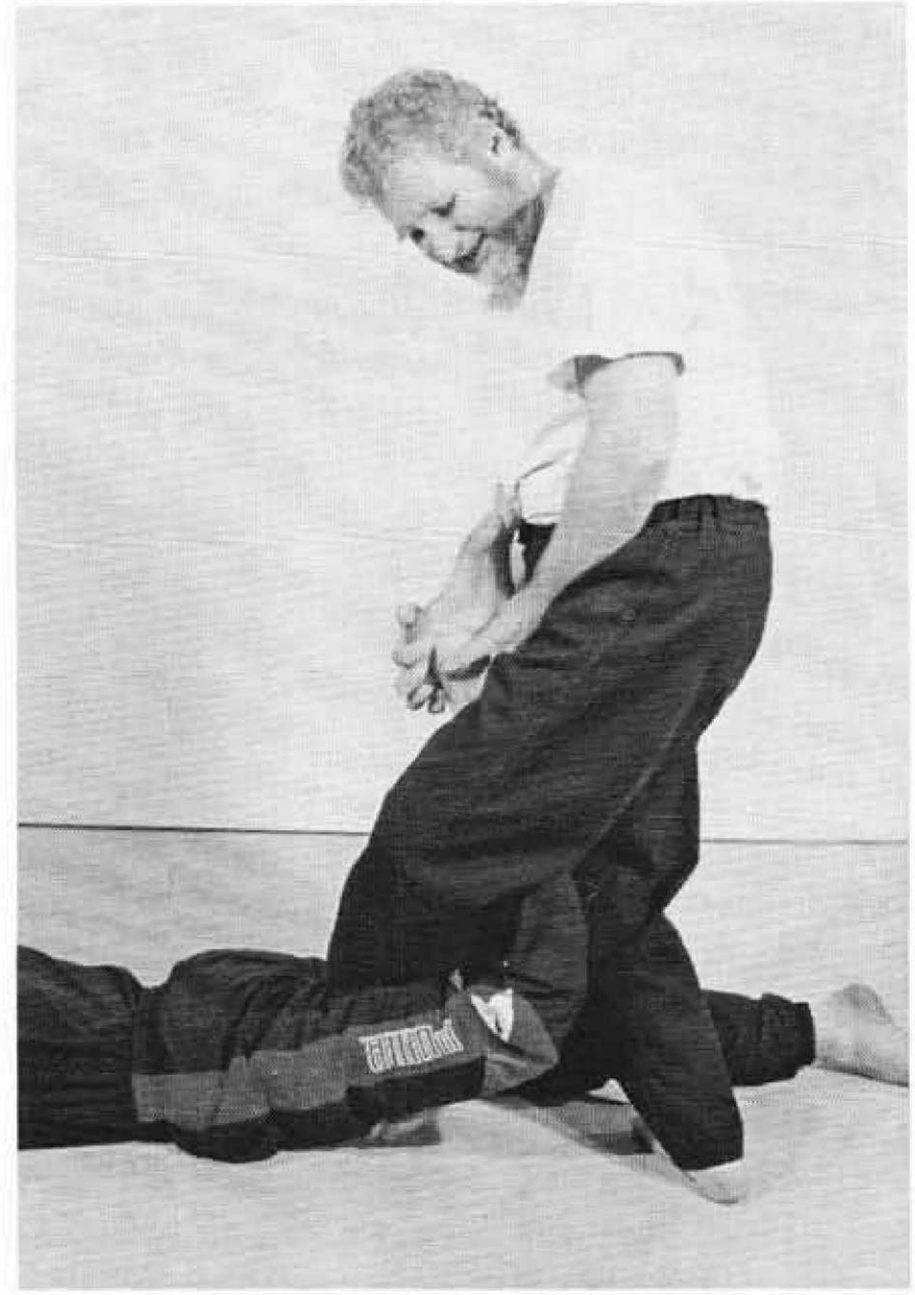


Figure 240

Set-up point:

Neigwan or Sp 17.

Antidote:

To bring the qi back, lie the patient on his belly and lock both arms around behind him in a double hammer lock. Now apply pressure upward, as if trying to apply the hammer locks (fig. 239).

Healing:

Innervation is by the external calcaneal branch of the sural nerve. Irrigation is by the external calcaneal branches of the peroneal artery and vein.

Used for lower back pain, pain in ankle and foot, paralysis of lower limbs, beriberi, and pain in the heel.

As a point of intersection with the yang qiao mai, its traditional function is to influence that channel.

To massage use a straight press with the thumb or knuckle and hold, rotate clockwise or counterclockwise for xu or shi conditions, or you can do fingertip percussion on the point. This point is also a good one to moxa for heel strike (inflammation of the bursa in this region). Use it with press and hold or rotation plus moxa in conjunction with Bl 60, Bl 59, Bl 58, Bl 57, Bl 56, Bl 55, Bl 40, Gb 34, Kd 3, Kd 4, Kd 5, Kd 6, Bl 66, and Bl 67 for heel strike or inflammation of the heel bursa, heel spur, etc.

Use with Gb 29, St 36, Sp 6, Gb 39, Sp 4, St 42, Liv 3, and Kd 6 for leg qi (edema of the leg), aka beriberi.

Applications:

If you should be the aggressor and are perhaps trying to apply some kind of leg lock, you could apply a strike to Bl 61 to lessen his resistance to the lock so that you are able to take the lock fully (fig. 240).

BL 62 (BLADDER POINT NO. 62)

Chinese name:

Shenmai (extending/expressing vessel).

Location:

In the depression at the inferior margin of the lateral malleus of the ankle.

Connections:

Yang qiao mai.

Direction of strike:

Pressure straight in just under the ankle bone and slightly forward.

Damage:

All of the foot points are very painful and, as such, drain qi, but none so much as this one. This is also one of those bladder points that acts upon the shen. So a strike by way of a stomp or kick will affect the way the recipient communicates with his spirit. It will also cause tendon and nerve damage, and it may even cause mental illness and "sleep/wakening" disorders. This is the "master point" for the yang qiao mai channel, which is the one that accelerates the yang energy. This channel will be affected adversely, causing great anger, red face, and so on, as a result of too much yang qi getting to the head. This is what will cause the mental disorders and such.

Set-up point:

A strike upward to Gb 14 will have a doubling effect for this strike.

Antidote:

Drain the yang qi from the head by pressing downward to the Gb 21 points (strike them) and then brushing off the shoulders violently.

Healing:

Innervation is by the sural nerve, and irrigation is by the external malleolar arterial network.

Used for mental confusion, epilepsy, headache, dizziness, insomnia, backache, aching of lower extremities, meningitis, Ménière's disease, psychosis, and arthritis of the ankle.

Traditional indications are lateral and midline headache, dizziness, tinnitus, palpitations, loss of speech due to stroke, hemiplegia, mouth and eyes awry, and insanity.

Traditional functions, as a confluent (master) point of the yin qiao mai, are to clear the mind, relax the tendons, invigorate the channels, and clear obstruction from the yin qiao mai. When used with Si 3 to activate yin qiao, it will treat disease of the inner canthus of eye, neck, ear, shoulder, small intestine, and bladder.

To massage, press and hold, do rotation clockwise or counterclockwise for xu or shi conditions, or do fingertip percussion.

Use with Th 17, Si 19, Th 21, Gb 2, Gb 12, Gb 20, Gb 7, Gb 8, Gb 9, Gb 10, Gb 11, Si 3, Th 3, Th 5, Th 6, anmien, Liv 3, and Kd 3 for tinnitus or Ménière's disease (you might add Gv 20 for the latter problem).

Use with Gb 20, Bl 2, Gb 1, Co 4, Liv 3, Kd 3, Sp 6, Bl 18, Bl 63, Liv 2, St 36, St 1, and the extra point *qiuhou* for early stages of glaucoma.

Use with Gv 14, Gb 20, Cv 17, Cv 15, Cv 13, Pc 5, Pc 6, Th 6, St 40, Gb 43, Gb 44, Liv 2, Liv 3, Kd 3, Pc 8, St 25, Liv 4, Co 4, Lu 7, Si 3, Ht 7, and Pc 3 for psychosis.

Applications:

Again, this point can be used in a grappling situation where you are pinned, etc. Or you could simply kick to the point to cause him to become so angry with yang head qi that a very light strike upward onto Gb 14 will cause him to fall down.

BL 63 (BLADDER POINT NO. 63)

Chinese name:

Jinmen (golden door).

Location:

Anterior and inferior to Bl 62, in the depression lateral to the cuboid bone.

Connections:

Yang wei mai.

Direction of strike:

Stomp to the side of the foot just under that big tendon running down the side of the foot to the toes.

Damage:

This is another xie cleft point. A strike here will cause mental illness, although not to the extent that Bl 62 will. It is not a good point for self-defense, since it has to be fairly accurate and doesn't cause that much local pain, relatively speaking. It also has an effect upon the wei qi, which protects the body from pathogenic attack, etc.

Set-up point:

Neigwan.

Antidote:

Needle Bl 62 or use finger pressure.

Healing:

Innervation is by the lateral dorsal cutaneous nerve of the foot and, deeper, the lateral planter nerve. Irrigation is by the lateral planter artery and vein.

Used for epilepsy, infantile convulsions, backache, pain in the external malleolus, paralysis of lower extremities, and pain at the bottom of the foot.

Traditional functions include influencing the yang wei mai channel since it begins at this point. Also, as a xie cleft point of the bladder meridian, it treats acute problems of both the channel and organ.

Massage is the same as for Bl 62.

Use with Bl 28, Bl 25, Bl 23, Cv 2, Cv 3, Cv 4, Cv 5, St 28, Sp 6, Liv 3, Bl 66, and Bl 67 for acute bladder infection.

Use with Gv 16, Gb 20, Gv 26, Gv 14, Bl 62, Kd 6, Pc 6, Pc 5, Ht 7, Ht 5, Co 4, Liv 3, Sp 6, Gb 34, Cv 14, Cv 12, St 40, Gv 24, and Sp 4 for epilepsy.

Use with Gb 34, Gb 39, Bl 60, Gb 40, Bl 62, Bl 66, Bl 67, Bl 65, Bl 57, and Bl 40 for paralysis of lower extremities.

Applications:

The same as for Bl 62.

BL 64 (BLADDER POINT NO. 64)

Chinese name:

Jinggu (capital bone).

Location:

On the lateral side of the dorsum of the foot, below the tuberosity of the fifth metatarsal bone, at the junction of the red and white skin, at the inferior margin of the lateral abductor digiti minimi pedis.

Connections:

Takes transverse luo from Kd 4.

Direction of strike:

Straight down onto the side of the foot.

Damage:

This is a *yuan* (or ancestral or source) point. It is normally used to calm the shen, but when attacked with negative qi, it will again affect the way the recipient communicates with the spirit. It will cause the recipient to feel quite weak from kidney damage.

Set-up point:

Neigwan or Lu 5.

Antidote:

Have an acupuncturist needle or use moxa or pressure on the same point on the other foot (the one that is not damaged from the stomp).

Healing:

Innervation and irrigation are the same as for Bl 63.

Used for epilepsy, headache, neck stiffness and pain, pain in the lower back and knees, myocarditis, and meningitis. Traditional indications include membrane over the eye, heaviness in the head and cold in the legs, stiff neck, palpitations, seizures, insanity, and tidal fever.

Traditional functions are to disperse wind, calm the spirit, and clear the brain. As a yuan source point of the bladder meridian, it can strongly tonify the qi of this organ.

To massage, press and hold the point, or you can use a thumb or knuckle or squeeze the point between the thumb and the fingers by clasping the whole foot, rotate clockwise or counterclockwise for xu or shi conditions, and do percussion with the fingertips or open hand using the ulnar side of the hand.

Use with Gb 29, Gb 30, Gb 31, Gb 32, Gb 33, Gb 34, Gb 35, Gb 36, Gb 7, Gb 38, Gb 39, Gb 41, Bl 25, Bl 26, Bl 53, Bl 54, Bl 37, Bl 38, Bl 39, Bl 40, Bl 57, St 40, St 41, Liv 3, St 36, Bl 60, and Ht 7 for CVA affecting the leg or for lower back pain that extends into the leg.

For neck stiffness, use with Gb 20, Bl 10, Gb 21, Th 15, Si 13, Si 3, Bl 11, Bl 12, Bl 13, Bl 17, Bl 43, Bl 18, dingchuan, Gb 39, Si 14, Gv 14, Bl 60, and Gb 34.

Applications:

None.

BL 65 (BLADDER POINT NO. 65)

Chinese name:

Shugu (restraining bone).

Location:

On the lateral side of the dorsum of the foot, posterior and inferior to the head of the fifth metatarsal bone, at the junction of the red and white skin.

Connections:

None.

Direction of strike:

Stomp straight down onto the side of the foot.

Damage:

This is a wood and shu point. A strike here will cause mental confusion, blurred vision, and, in the long run, continuous headaches. The eyes will slowly become worse. It will also have an adverse effect upon the wei qi.

Set-up point:

Gb 41, so you would stomp onto the foot twice.

Antidote:

Apply pressure to Gb 41 and Bl 65 simultaneously.

Healing:

Innervation is by the fourth common planter digital nerve and the lateral dorsal cutaneous nerve of the foot. Irrigation is by the fourth common planter digital artery and vein.

Used for headache, stiffness of the neck, malaria, seizures, mental illness, pannus that might present as blurring of vision, backache, and pain in the posterior aspect of the lower extremities.

As a shu stream point and a wood point of the bladder meridian, its traditional function is to treat damp problems, e.g., bi syndrome (arthritis).

Massage techniques are the same as for Bl 64.

Use with Gb 20, Bl 10, Gb 21, Th 15, Si 13, Si 14, Si 3, and Gb 34 for occipital headache.

Use with Pc 5, Pc 6, Co 11, Gv 13. Si 3, Gb 34, Sp 9, Co 4, Lu 7, Gb 20, and Liv 3 for malaria.

Use with Bl 25, Bl 26, Bl 53, Bl 54, Bl 40, Bl 57, Gb 29, Gb 30, and Gb 34 for lower back pain and stiffness.

Applications:

Obvious—just stomp on the foot.

BL 66 (BLADDER POINT NO. 66)

Chinese name:

Zutonggu (connecting valley of the foot).

Location:

In the depression anterior and inferior to the fifth metatarsal phalangeal joint.

Connections:

None.

Direction of strike:

Straight down onto the side of the little toe at the web.

Damage:

This is a water and yong point (spring or stream point), so it is a good set-up point. It will also cause blurred vision and headaches later.

Set-up point:

An attack to St 3 with two fingers will suffice here.

Antidote:

Same as for Bl 65.

Healing:

Innervation is by the planter digital proprial nerve and the lateral dorsal cutaneous nerve of the foot. Irrigation is by the plantar digital artery and vein.

Used for headache, neck rigidity, blurring of the vision (pannus), epistaxis, malaria, mental illness, and seizures.

As a water point and yong spring (gushing) point of the bladder meridian, its traditional function is to cool heat in either the channel or the organ. This point is often used with jing well point to shut pathogens out of the channel. It can also be used to accelerate qi in the channel, so it can be a good pep-up point.

To massage, squeeze between the thumb and the rest of the hand as you clasp the whole foot, press with the thumb or knuckle and hold, rotate clockwise or counterclockwise for xu or shi conditions, or strike the point with the fingertip or the ulnar side of the hand.

Use with Sp 5, Kd 21, Pc 6, Cv 12, St 36, and Liv 3 for predilection toward vomiting.

Use with Bl 2, Th 10, Ht 3, Ht 7, Bl 63, Sp 5, Liv 2, Bl 15, Si 3, Liv 3, Gb 34, Kd 3, and St 40 for seizures.

For back stiffness and pain, use with Bl 67, bladder points in the affected area, and Gb 34.

Applications:

Obvious.

BL 67 (BLADDER POINT NO. 67)

Chinese name:

Zhiyin (end of yin).

Location:

On the lateral side of the little toe, about 0.1 cun posterior to the lateral corner of the toenail.

Connections:

Takes transverse luo from Kd 4.

Direction of strike:

Stomp straight down onto the little toe in the nail area.

Damage:

This is a metal and cheng point and the root point of the extra meridian taiyang. It will have an adverse effect upon the muscles and tendons in the whole body and cause mental confusion as well as blurred vision. This point will have an adverse effect upon the fetus if the recipient is pregnant. It will also have an adverse effect upon the kidneys, causing weakness in the whole body.

Set-up point:

Any "wood or fire" element point is an excellent set-up point here.

Antidote:

Kd 1 pressed upward or Th 12.

Healing:

Innervation is by the planter digital proprial nerve and the lateral dorsal cutaneous nerve of the foot. Irrigation is by the network formed by the dorsal digital artery and planter digital artery.

Used for headache, nasal obstruction, epistaxis, ophthalmoplegia, feverish sensation in the sole of the foot, malposition of the fetus, difficult labor, and stroke.

Traditional indications include occipital headache, membrane and pain over the eye, nosebleed, clear nasal discharge, itching over the entire body, infantile convulsions, failure to discharge the placenta, and difficult labor.

As a jing well point and a metal point of the bladder meridian, one of its traditional functions is to control the superficial aspects of the body in order to quickly reduce shi conditions from the bladder channel and collaterals (e.g., swelling pain caused by trauma to the tendons or muscles). It would be best used in this situation as soon after the incident as is possible. It is also traditionally used to clear the mind, brighten the eyes, correct malposition of fetus, and regulate pregnancy and childbirth. Prick and bleed for trauma to the channel, but *not during pregnancy*. Probably best handled with extreme care during pregnancy.

Massage techniques are the same as for Bl 66, except that the striking method would not work on this point.

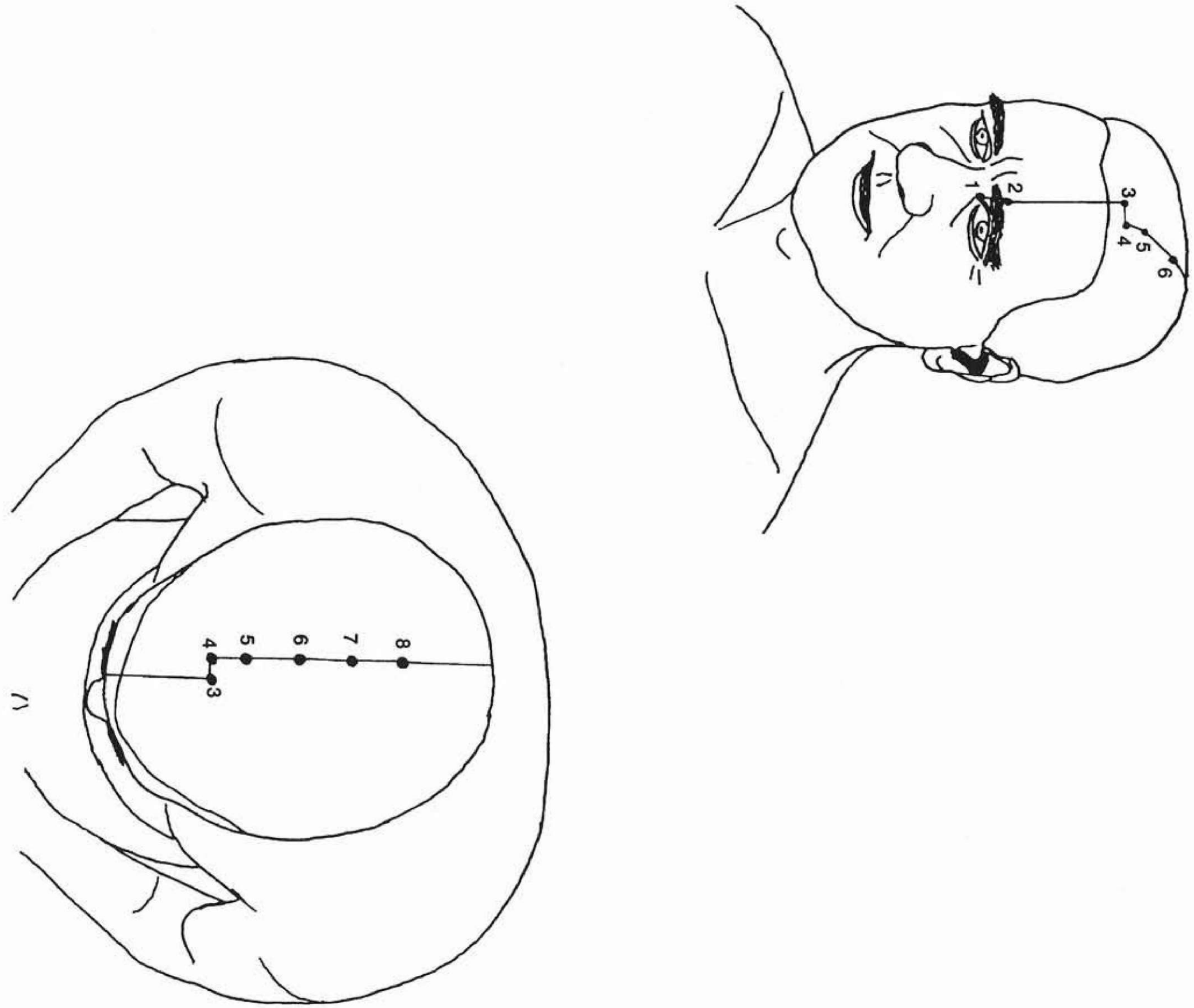
Use with Gb 10, Gb 20, Gb 21, Gv 14, *taiyang*, Bl 66, Co 4, Liv 3, Th 15, Si 13, and Si 14 for occipital headache. Use with Gb 20, Liv 3, Th 17, Si 19, Pc 6, Kd 3, Cv 12, Gb 16, Bl 8, Gv 20, Bl 62, and anmien, for head-spinning type of vertigo.

Use with Gb 21, Sp 6, Co 4, Gb 34, Bl 31, and Bl 32 for difficult labor.

Applications:

Obvious.

As you can see, the bladder points affect the shen greatly. Be careful with these points because they, more so than any of the other points, can cause long-lasting physical, mental, and spiritual damage.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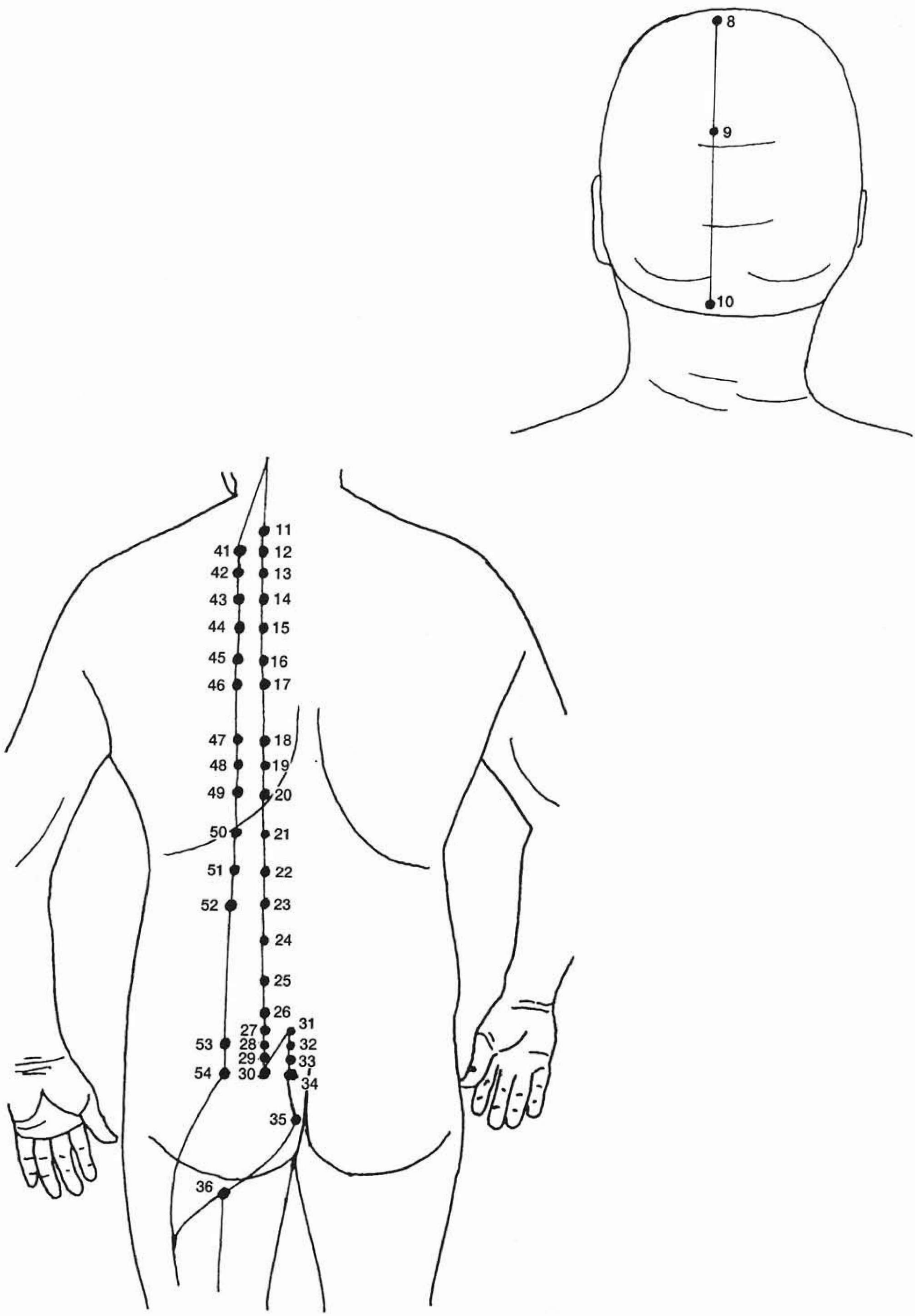
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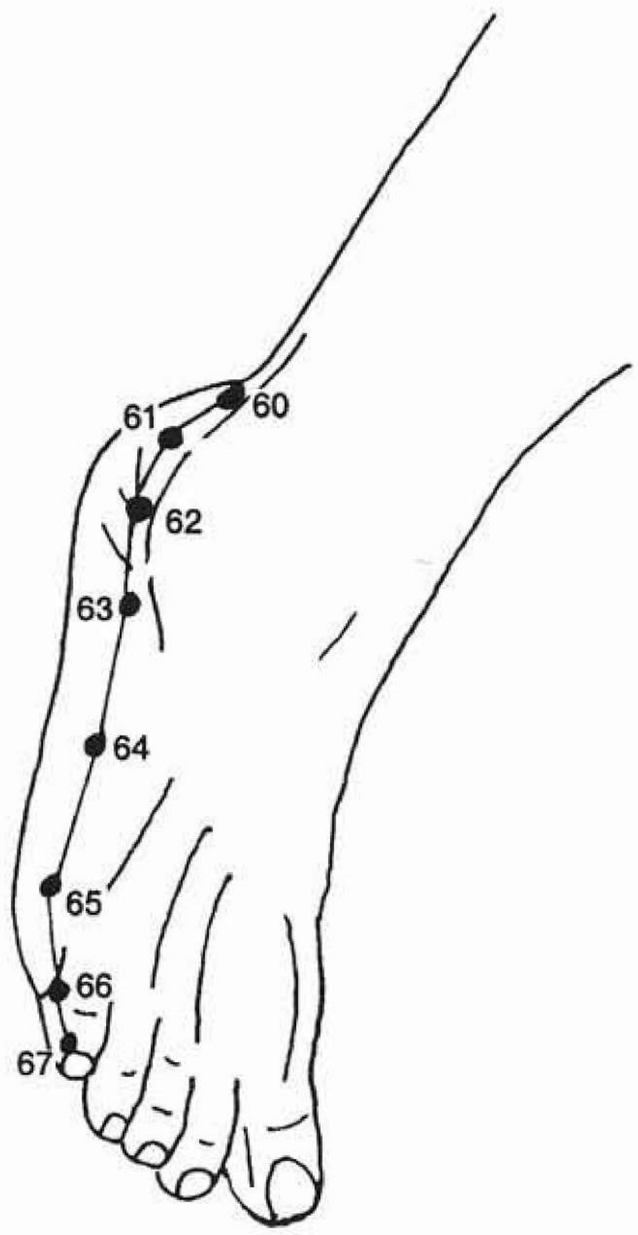
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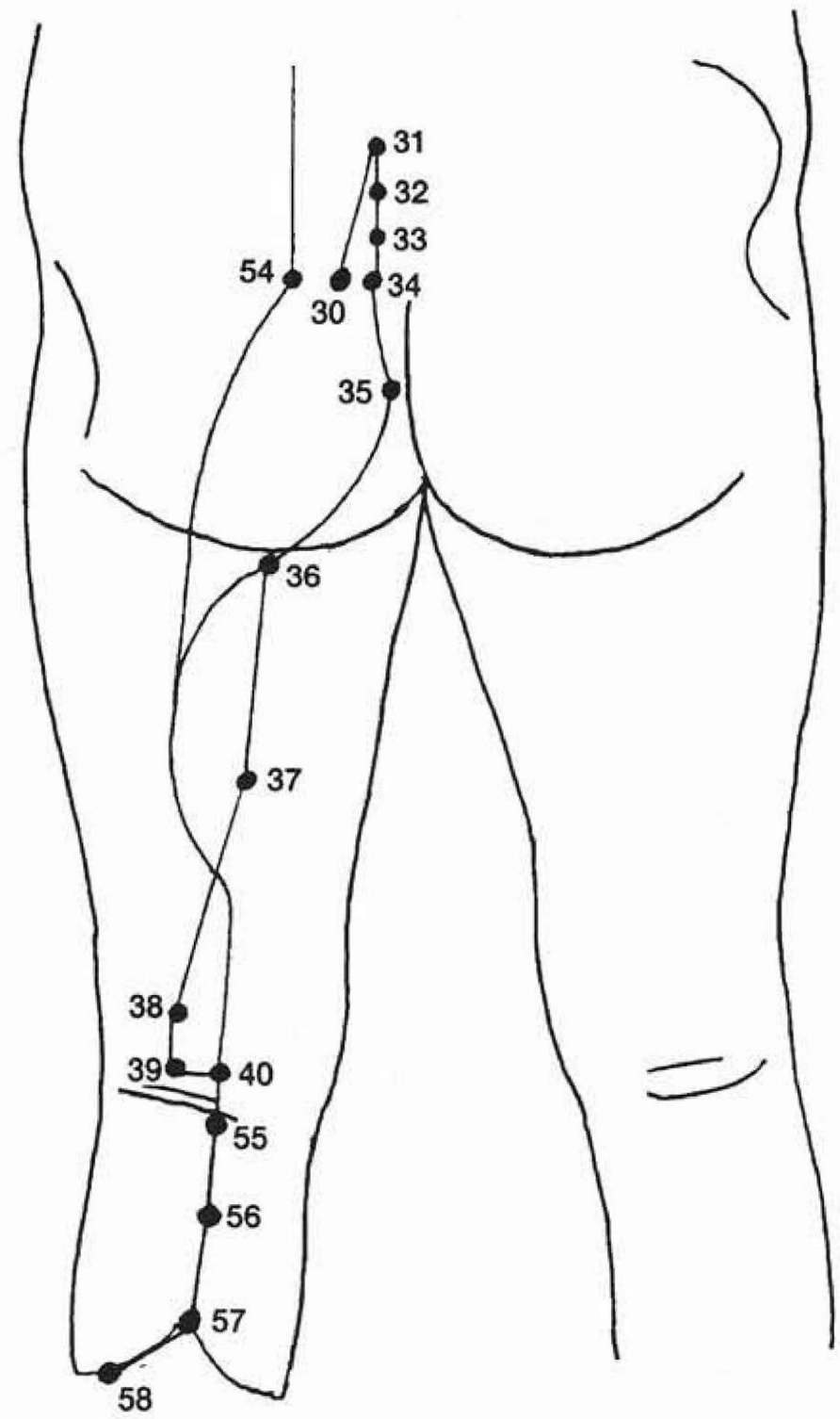
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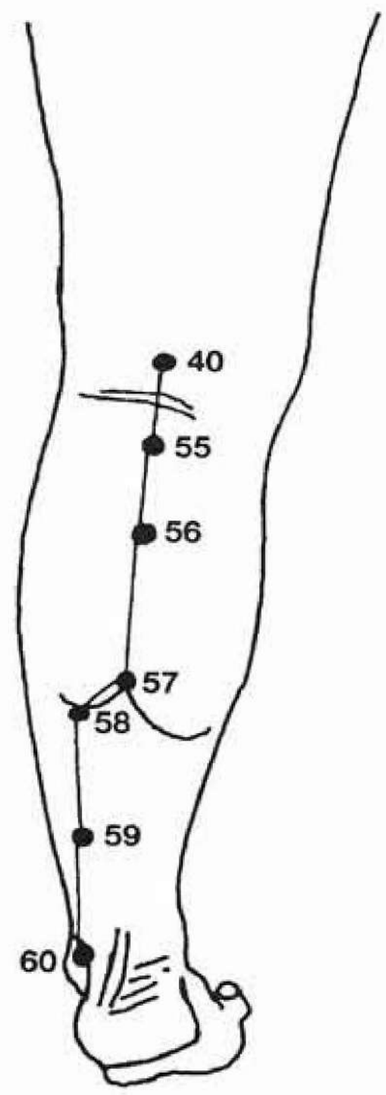
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Chapter 4

The Kidney Meridian

The kidneys are responsible for filtering toxins, wastes, ingested water, and mineral salts out of the bloodstream. Kidneys are also responsible for regulating the acidity of the blood by excreting alkaline salts when necessary.

THE TCM VIEW

The kidneys are yin organs and are the "controllers of water distribution." Their opposite yang organ is the bladder, and their element is water. According to traditional Chinese medicine, their functions are as follows:

- To store jing and dominate reproduction, growth, and development
- To produce marrow, fill up the brain, dominate the bones, and manufacture blood
- To dominate water
- To control the reception of qi
- To opens the ear

Kidneys store jing in two forms—that which was given to us at birth (prenatal jing), and the "outside" jing that we gain from things like food, water, air, sun, earth, and so on. Jing is a purified or condensed form of qi. It's a little like having a bowl of water (qi) that you can do nothing with until you apply heat, which turns the water into steam (jing), which will enable you to run a steam engine, for instance. We are given a set amount of prenatal qi at birth, and that's our lot. We are given eight "lots" of qi, but as we grow older and perhaps do the wrong things, as humans do, our stored qi is depleted. By puberty, it is said that we have depleted about two to three lots, and by very old age, we finally use up the eighth lot and die.

There are certain things that we can do to hold off this natural depletion, however, such as practicing taijiquan and meditation, eating the right foods (those that were originally given to us to eat), drinking only pure water and breathing pure air, and, most important, thinking only good or pure thoughts. Impossible, you might say. Well, yes, but we can at least get some of it right and stave off the inevitable depletion of our last lot of jing. There are some masters who also believe, as I do, that we can give a little outside jing back to the "inside" or prenatal jing by doing all of these things.

Since the kidneys control the production and use of jing, it is very important that they are well kept. In fact, it is my belief that one can sort of "get by" with other organs that are not so healthy, but you just cannot get by with unhealthy kidneys, as in the case of diabetes.

In traditional Chinese medicine, the kidneys produce "marrow." But this marrow is unlike Western medicine's idea of marrow: it is the stuff that precedes either marrow or bone and is the common matrix of both. It is also the matrix of both brain and spinal cord.

The brain and spinal cord are called the "sea of marrow" in TCM. This means that kidney jing nourishes the brain and spinal cord. This brings good memory, clear vision, and clear thinking. If we are deficient in kidney jing, then we are dull and have dizziness, blurred vision, poor memory, tinnitus, and insomnia. Other organs also have these symptoms. For instance, "heart blood deficiency" will also cause insomnia, but it is a different type of insomnia. It keeps you awake all the time, whereas the kind caused by kidney deficiency will allow you only to take naps during the night. Many people with kidney disease have to urinate many times during the night, and, of course, this keeps them awake.

The kidneys also control the bones, so if you have good, strong kidneys, then your bones, particularly in the lower back and knees, are strong and healthy. The reciprocal occurs when the kidneys are not strong and producing strong kidney jing. This is also why people with kidney diseases are weak in the knees, legs, and lower back. Sexual function is also impaired or destroyed when the kidneys are not good. (The desire is there, but the penis will not become erect no matter how hard one tries!)

The kidneys also control the ears, which are the "opening" of the kidneys. This explains why many of us become short of hearing when we are old, because kidney jing has been depleted.

To help ailing kidneys and, therefore, ailing kidney jing, one must go back as close to scratch as possible. First, stop eating. Next, eat only fruit when you wish to begin eating again. Do not eat any form of salt, and drink pure water. You will be amazed at how quickly the kidneys can recuperate, given the help they need. From then on all of the other organs that were ailing because of the poor kidneys will begin to revitalize, and a new life will begin.

The kidneys are the home of *ming men*, or the door of life. All vital functions are under the control of ming men. Ming men can be called an external function of the kidneys. Ming men is called "primary yang" or "true fire," so although the kidneys are water in nature, they also house the strongest "fire" in the body, ming men. A decline in the fire of ming men can manifest in many ways. In males, it causes a withering of yang, cold jing, and impotence. In females it causes the uterus to become cold and weak, as well as bringing on leukorrhea and/or infertility. A lessening of the fire in ming men may also impair the digestive function of the stomach and spleen, causing an inability to absorb food and, as a result, diarrhea.

KD 1 (KIDNEY POINT NO. 1)

Chinese name:

Yongquan (gushing spring).

Location:

In the depression appearing on the sole of the foot when the foot is in plantar flexion. If you divide the sole into thirds from the base of the second toe to the heel, it is approximately at the junction of the anterior and middle third. The point is between the second and third metatarsal bones in the aponeurosis of the sole. Medial to it are the tendons of the flexor digitorum pedis, longus, and brevis, and the second lubricalis pedis muscle. In its deep position, the point lies in the interossei plantares muscle.

Connections:

Takes transverse luo from Bl 58 and internal meridian pathway from Bl 67.

Direction of strike:

Kd 1 would be a good place to strike if it weren't under the foot! So we do not regard it as a dim-mak point, but as a healing point only, especially in the area of antidote and revival. Even if one were able to get at Kd 1 to strike it, the amount of pressure needed is great. This point is sometimes bled to effect a revival from death.

Damage:

Since I have never been taught that Kd 1 is a dim-mak point, I will not cover any damage that a strike here might cause. However, as an emergency point, its powers are great. It releases stored qi to the body, thus bringing about a kind of kick-start. If, for instance, a person has been struck or has been in a car accident and CPR is not working to revive him, it is probably because the trauma to the system has been so great that it has drained the body's qi, leaving none available to start the heart and respiratory functions. Kd 1 is like having an extra battery in your car when the main one has failed. You can access stored qi by applying a very hard one-knuckle punch to Kd 1 or by sticking something sharp into the point, causing it to bleed. Then go back and try the CPR. There have been instances where this method has worked in starting the heart, only to have the patient die later because the trauma was just too great. One of my students, a surgeon, has even used this method in surgery. When all efforts had failed to revive a patient, he rushed around to the patient's foot and stuck his scalpel up into Kd 1, starting the heart! He was written up in medical journals for this.

Set-up point:

None.

Antidote:

This *is* an antidote point.

Healing:

Innervation is by the second common plantar digital nerve. Irrigation is by the anastomosis of the lateral planter and anterior tibial arteries in the plantar arch.

Used for headache at the vertex, dizziness, blurring of the vision, sore throat, dryness of the tongue, aphonia (loss of voice), dysuria, dyschezia, infantile convulsion, feverish sensation in the sole of the foot, loss of consciousness, shock, heat exhaustion, insomnia, stroke, hypertension, psychosis, mental illness, seizures, and paralysis of the lower limbs.

Traditional indications include vertigo, headache at the vertex, blurred vision, swollen throat, dry tongue, nosebleed, difficult urination and defecation, diarrhea, colic, edema, infantile convulsions, insanity, hot soles of the feet, and pain at the tip of the toes.

Kd1 is a jing well point and a wood and cheng point point of the kidney meridian. Its traditional functions are to bring down qi and drain shi conditions, tonify yin, pacify fire, tranquilize the mind, calm the heart, open the sensory orifices, and render the effects of resuscitation when bled as an emergency point.

To massage, press with the fingers, thumb, and elbow and hold; rotate clockwise or counterclockwise for xu or shi conditions, or do percussion with fingertips or a loose fist. You can also lie patient prone on a soft but firm surface and stand on this point with your heels or the ball of your foot.

Use with moxibustion (the procedure of burning moxa) for insomnia, and you could also press Ht 7 (*shenmen*) on the wrist and Pc 6.

Use with Liv 3, St 36, Gb 20, Co 11, Liv 2, Ht 7, Pc 6, Th 17, Sp 6, Gb 34, Cv 4, Cv 6, St 40, Gv 14, taiyang, Bl 14, Bl 17, Bl 18, Bl 20, and Bl 23 for hypertension.

Use with Liv 3, St 36, Gv 20, Gb 20, Th 17, Pc 6, Co 4, Kd 3, Liv 14, and Liv 2 for vertigo.

Prick and bleed as an emergency point when other emergency procedures don't seem to be working, and press on Liv 3 and Gv 26 as well.

This point can be very effective for any condition where qi seems to be trapped in the upper heater.

Applications:

None.

KD 2 (KIDNEY POINT NO. 2)

Chinese name

Rangu (burning valley).

Location:

Anterior and inferior to the medial malleolus, in the depression on the lower border of the

tuberosity of the navicular bone, anterior and inferior to the joint of the navicular, in the abductor hallucis muscle.

Connections:

None.

Direction of strike:

Usually a kick in to the side of the foot. The strike is not generally done straight down on top of the point.

Damage:

This is a fire and yong point. All such stream or spring points cause great damage to the rest of the body. Apart from local pain, a strike here could cause instant diarrhea, so make sure you are in front of the recipient! Being the fire point of the water channel, it usually creates a balance of yin and yang in the system. However, a strike using adverse qi will cause the reciprocal effect, creating confusion and adverse energy states that will allow disease to enter the body. A strike here will weaken kidney yang, which will weaken the whole system.

Set-up point:

A strike to Kd 10, the water point just behind the knee, will enhance the effect of this strike. In fact, it will cause it to become very dangerous!

Antidote:

Have an acupuncturist needle Kd 3 in conjunction with Kd 2.

Healing:

Innervation is by the terminal branch of the medial crural cutaneous nerve, by the medial plantar nerve, and by a medial cutaneous branch of the saphenous nerve of the calf. Irrigation is by the branches of the medial plantar and medial tarsal arteries and veins.

Used for pruritis vulvae, prolapse of the uterus, irregular menstruation, seminal emission, hemoptysis, diarrhea, swelling and pain in the dorsum of the foot, diabetes, tetanus, pharyngitis, and cystitis.

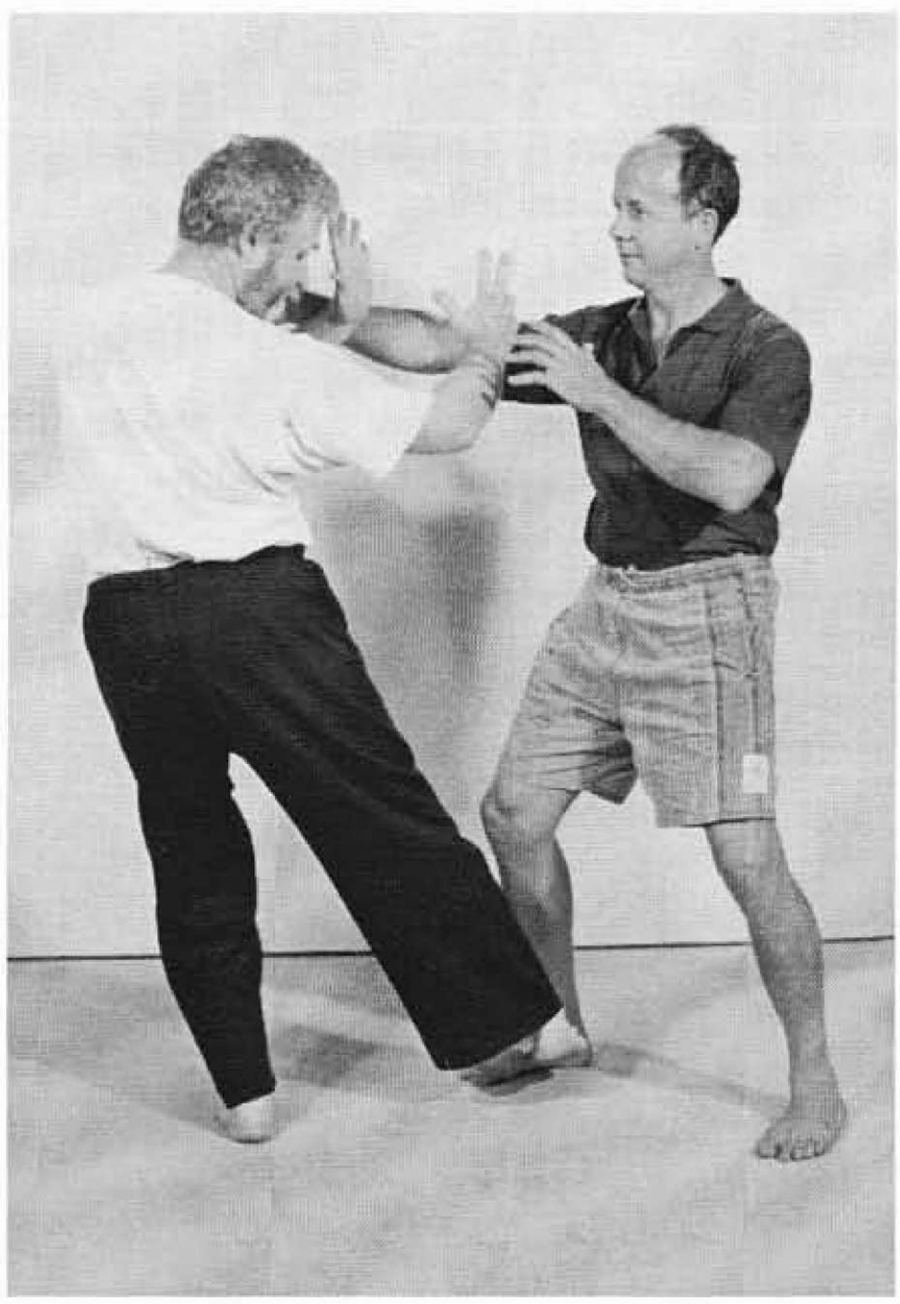


Figure 241

Traditional indications include congested throat, thirst and emaciation, jaundice, diarrhea with intestinal pain and noises, tidal fever, sterility in women, itching of the genital region, prolapsed uterus, and irregular menstruation.

As a yong spring (gushing) point and a fire point of the kidney channel, its traditional functions include reducing or tonifying qi, pacifying fire, strengthening the yin qiao mai meridian, and eliminating heat to cool the blood.

To massage, clasp hand over the dorsum of the foot and squeeze the thumb into Kd 2. You can also press straight into the point and hold, rotate clockwise or counterclockwise for xu or shi conditions, or do percussion with the fingertips or the ulnar side of the hand on the point.

Use with Kd 4, Kd 5, Kd 6, Kd 1, Bl 57, Bl 58, Liv 3, Sp 3, Sp 4, Gb 34, Bl 60, Bl 61, Bl 62, and Bl 63 for pain in the heel.

Use with Si 17, St 12, Bl 11, Bl 17, Lu 2, Lu 5, Liv 2, St 45, Co 1, Co 4, Lu 7, Co 11, Co 10, Lu 6, St 36, St 40, Gb 20, and Bl 12 for congested throat that feels blocked as a result of tonsillitis.

Use with Kd 3 Bl 23, Gv 4, Liv 3, Sp 6, Liv 5, Ht 7, CV 4, Cv 6, Gb 25, Gv 20, Si 5, and St 36 for impotence.

Use with Liv 2, Liv 3, Gb 31, Ht 7, Cv 4, Cv 6, Sp 9, Sp 6, Gb 43, and Gb 44 for itching of the genital region.

Applications:

He might attack with a straight right. You should block this using perhaps a strike to neigwan with your left palm and a strike to the middle of his biceps with your right knife edge. Immediately, your right instep kicks around behind the knee toward the inside of his leg (fig. 241). Now, withdraw that right foot and kick in from the side to Kd 2 with the toe of the right foot.

KD 3 (KIDNEY POINT NO. 3)

Chinese name:

Taixi (great creek/bigger stream).

Location:

In the depression between the medial malleolus and the tendo calcaneus, level with the tip of the medial malleolus. Above the ankle and just in from the Achilles' tendon.

Connections:

Takes transverse luo from Bl 58.

Direction of strike:

Straight in from the rear of the Achilles tendon to the inside of the foot, in toward the ankle bone. So the strike must come from the rear to the front.

Damage:

Extreme local pain, with the immediate effect of qi drainage and blackout if it is a hard strike. A hard strike here along with one to Kd 10 will cause the legs in particular to become weak. It will also weaken kidney jing and thus weaken the whole body in the long term, causing disease later in life. This strike will also damage the kidneys' function of capturing qi and storing it for emergency use.

Set-up point:

Kd 10.

Antidote:

The same point, Kd 3, on the other leg should be pressured or needled by a qualified acupuncturist. This will strengthen the zhang, or yin, and restore kidney qi and kidney yin, which will, in turn, cause all of the fluids in the body to flow correctly.

Healing:

This is one of the most frequently used healing kidney points. Innervation is by the medial crural cutaneous nerve; the point is on the course of the tibial nerve. Irrigation occurs anteriorly by the posterior tibial artery and vein.

Used for sore throat, toothache, deafness, hemoptysis, asthma, irregular menstruation, insomnia, seminal emission, impotence, frequency of micturition, pain in the lower back, nephritis, cystitis. spermatorrhea, tinnitus, alopecia, emphysema, neurasthenia, paralysis of lower limb (upturned foot), pain in the sole of the foot, and chronic laryngitis.

Traditional indications include throat blockage, toothache, asthmatic wheezing, abscessed breast, thirst and emaciation, dark urine, irregular menstruation, impotence, nocturnal emissions, lumbar vertebral pain, and constipation.

As an earth point, a shu stream point and a yuan source point of the kidney meridian, its traditional functions are to tonify kidney qi; pacify empty fire; promote the function of the uterus; strengthen the waist, back, and knees; and, most often, to strengthen the kidney function.

Massage techniques include pinching the Bl 60 and Kd 3 point (put more emphasis on Kd 3) holding and rotating the foot, pressing straight in to the point and holding, rotating clockwise or counterclockwise for xu or shi conditions, or doing fingertip percussion on this point.

Use with Liv 3, Liv 2, Si 19, Gb 2, Th 21, Gb 20, anmien, Th 17, Th 3, St 40, Bl 23, Cv 12, Sp 3, Co 4, Co 10, St 7, Gv 20, St 16, and Liv 14 for tinnitus

Use with Cv 4, Cv 6, Cv 12, Bl 23, Bl 20, Bl 18, Sp 6, Liv 3, St 36, Ht 7, Liv 5, Gv 4, Gv 20, Bl 17, and Gb 25 for impotence.

Use with Cv 22, Bl 12, Bl 13, Bl 43, Bl 17, Bl 18, Bl 20, Bl 23, dingchuan, Co 18, Lu 1, Lu 5, Lu 7, Co 4, Co 10, St 36, Liv 14, Liv 13, Liv 3, Gb 24, and Gb 25 for asthma and wheezing.

For toothache, use with Co 4, St 5, St 6, St 7, St 2, St 44, and Bl 11.

Applications:

Again, begin with a kick to the back of his knee at Kd 10, then kick down using the toe into Kd 3 (fig. 242).

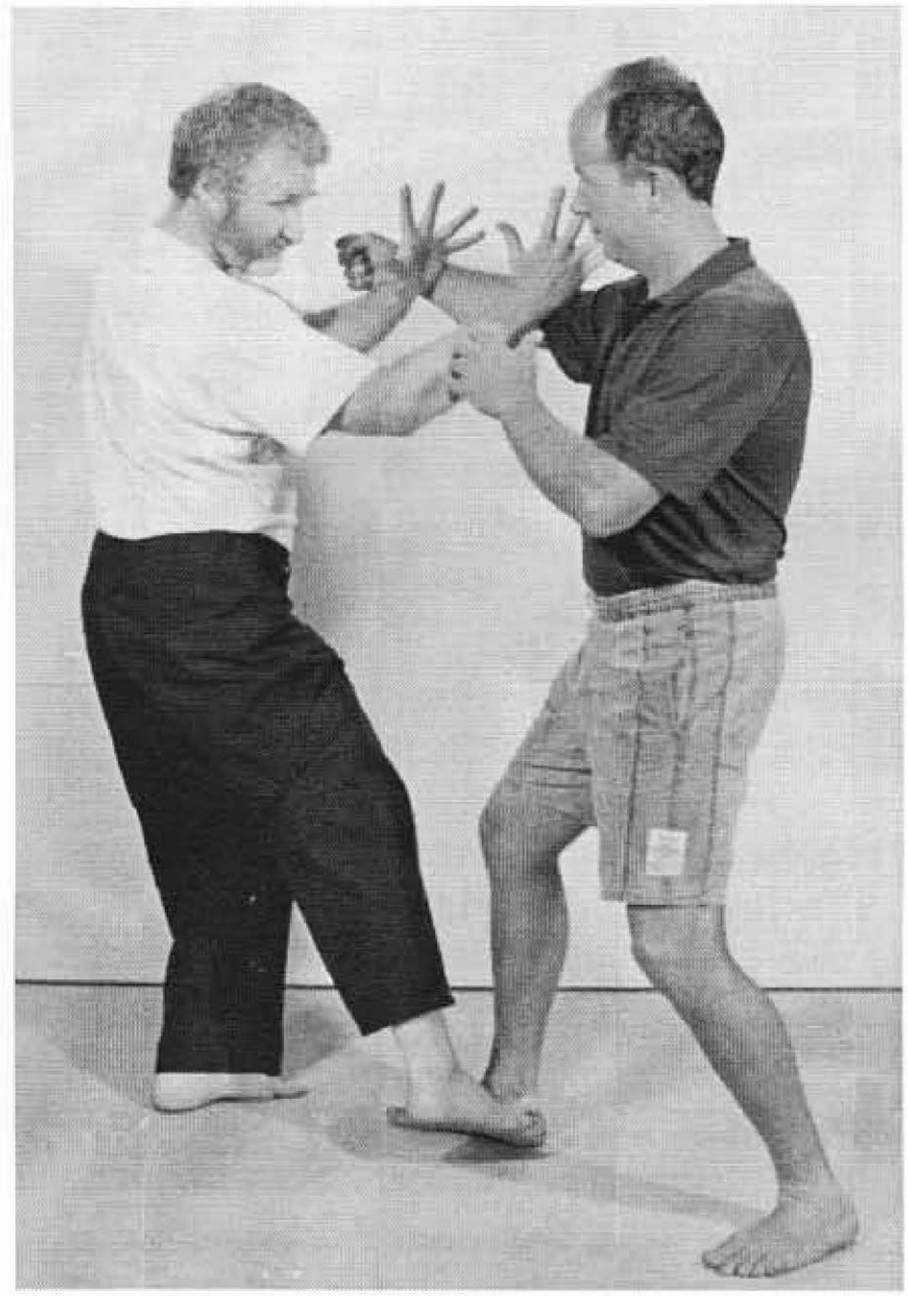


Figure 242

KD 4 (KIDNEY POINT NO. 4)

Chinese name:

Dazhong (big goblet).

Location:

Posterior and inferior to the medial malleolus, in the depression medial to the attachment of the tendo-calcaneus. Below Kd 3 and a little closer to the Achilles' tendon.

Connections:

Transverse luo to Bl 64 and Bl 67.

Direction of strike:

Same as for Bl 3.

Damage:

This point, when struck, will impede the flow of yang qi throughout the system, causing great weakness instantly. It creates a feeling of fullness to the point of exploding in the head.

Set-up point:

Neigwan.

Antidote:

Pressure to St 36 along with Kd 4 on the opposite leg.

Healing:

Innervation is by the medial crural cutaneous nerve; the point is on the pathway of the medial calcaneal ramus, derived from the tibial nerve. Irrigation is by the medial calcaneal branch of the posterior tibial artery.

Used for hemoptysis, asthma, pain and stiffness of the lumbo-sacral region, dysuria, pain in the heel, malaria, neurasthenia, hysteria, retention of urine, and soreness of the pharynx.

Traditional functions, as a luo connecting point of the kidney meridian, are to treat diseases affecting the bladder and kidney meridians.

Massage techniques are all the same as those used with Kd 3, with the exception of the pinch. In this case you would pinch Kd 4 and Bl 61, with emphasis on Kd 4.

Use with Ht 5, Liv 3, Cv 17, Cv 14, Lu 1, and Pc 8 for lack of interest in talking and excess sleeping.

See Kd 2 for treatment of pain in the heel, etc.

Use with Kd 1, Co 4, Co 11, Co 18, St 9, Lu 7, Liv 2, Liv 3, St 10, St 11, St 12, Si 16, Si 17, St 44, and St 45 for sore throat.

Use with Bl 23, Bl 25, Bl 54, Sp 10, St 36, Sp 6, Cv 2, Cv 3, Gv 4, Gv 6, St 28, Liv 2, and Liv 3 for pyelonephritis, dysuria, or retention of urine.

Applications:

Perhaps block his oncoming right attack at neigwan with your right palm as you kick to Kd 4.

KD 5 (KIDNEY POINT NO. 5)

Chinese name

Shuiquan (spring).

Location:

1 cun directly below Kd 3, in the depression anterior and superior to the medial side of the tuberosity of the calcaneum.

Connections:

None.

Direction of strike:

Same as for Kd 4

Damage:

This is a xie cleft point, so in the healing area it will clear blockages by inserting a great amount of qi into the system. However, when struck using adverse qi, this point will bring about instant qi drainage, causing the recipient to fall down. Local pain is also great with this strike.

Set-up point:

Neigwan as well as Sp 8.

Antidote:

Needle Sp 8 with Bl 5

Healing:

Innervation and irrigation are the same as for Kd 4.

Used for irregular menstruation, prolapse of uterus, pruritus vulvae, hernia, frequency of urination, epilepsy, sore throat, insomnia, amenorrhea, and myopia.

Traditional functions, as a xie cleft point, are to treat acute injury, such as acute pain of the kidneys (e.g., renal colic).

Massage techniques are the same as for Kd 4.

Use with Kd 1, Kd 2, Liv 4, and Liv 3 for acute trauma, such as a blow to the kidney region that results in blood stagnation (bruising).

Use with Liv 3, Sp 6, Bl 23, Bl 18, Bl 20, Bl 17, Sp 3, St 36, Liv 6, Sp 9, Cv 4, Cv 6, Liv 2, Gb 26, Ht 7, and Cv 12 for amenorrhea.

Use with Bl 1, St 1, Gb 1, yuyao, Gb 20, Co 4, St 2, St 36, and Liv 3 for myopia.

Use with Bl 13, Bl 20, Bl 23, St 36, Kd 3. Lu 11, Lu 10, Bl 17, Bl 21, Gv 12, Gv 4, Kd 7, yishu, pirexue, Sp 3, and Gb 26 to help supplement other types of treatment for diabetes mellitus.

Use with Gv 20, abdomen zigong, Gb 26, Cv 4, Cv 6, Cv 12, St 30, Gb 28, Sp 6, Sp 9, Liv 3, Liv 8, Bl 20, Bl 23, Bl 18, Kd 6, Sp 3, and St 29 for uterine prolapse.

Applications:

You could first attack his forward leg with a kick to Sp 8, just below the knee on the inside of his leg, then bounce that same kick down to Kd 5.

KD 6 (KIDNEY POINT NO. 6)

Chinese name:

Zhaohai (shining sea).

Location:

1 cun below the medial malleolus of the ankle, at the insertion of the abductor hallucis muscle.

Connections:

Yin qiao mai.

Direction of strike:

Straight in from the side of the ankle.

Damage:

This is a particularly painful strike, causing immediate qi drainage. Kd 6 is the master point of the

yin qiao mai and is the coupled point of the *ren mai*, or conceptor vessel, both extra meridians. It will cause mental confusion immediately. It will also cause mental illness later in life, especially if used with its set-up point! However, the strike must be right on the point.

Set-up point:

Strike yin qiao mai 7 (draw a line from Cv 22 out to where to neck joins the shoulders and then go halfway on this line, and that's the point). The strike should be an angle in to the neck. This extra point is a very dangerous strike all by itself.

Antidote:

If the set-up point was struck hard, there is no antidote. However, if only Kd 6 has been struck, then massage the inside of the leg right up to the groin with medium pressure.

Healing:

Innervation is by the medial crural cutaneous nerve and, deeper, the tibial nerve. Irrigation, posterior and inferior to the point, is by the tibial artery and vein.

Used for pharyngitis, tonsillitis, neurasthenia, seizures, psychosis, irregular menstruation, prolapsed uterus, pruritus vulvae, hernia, frequency of urination, and insomnia.

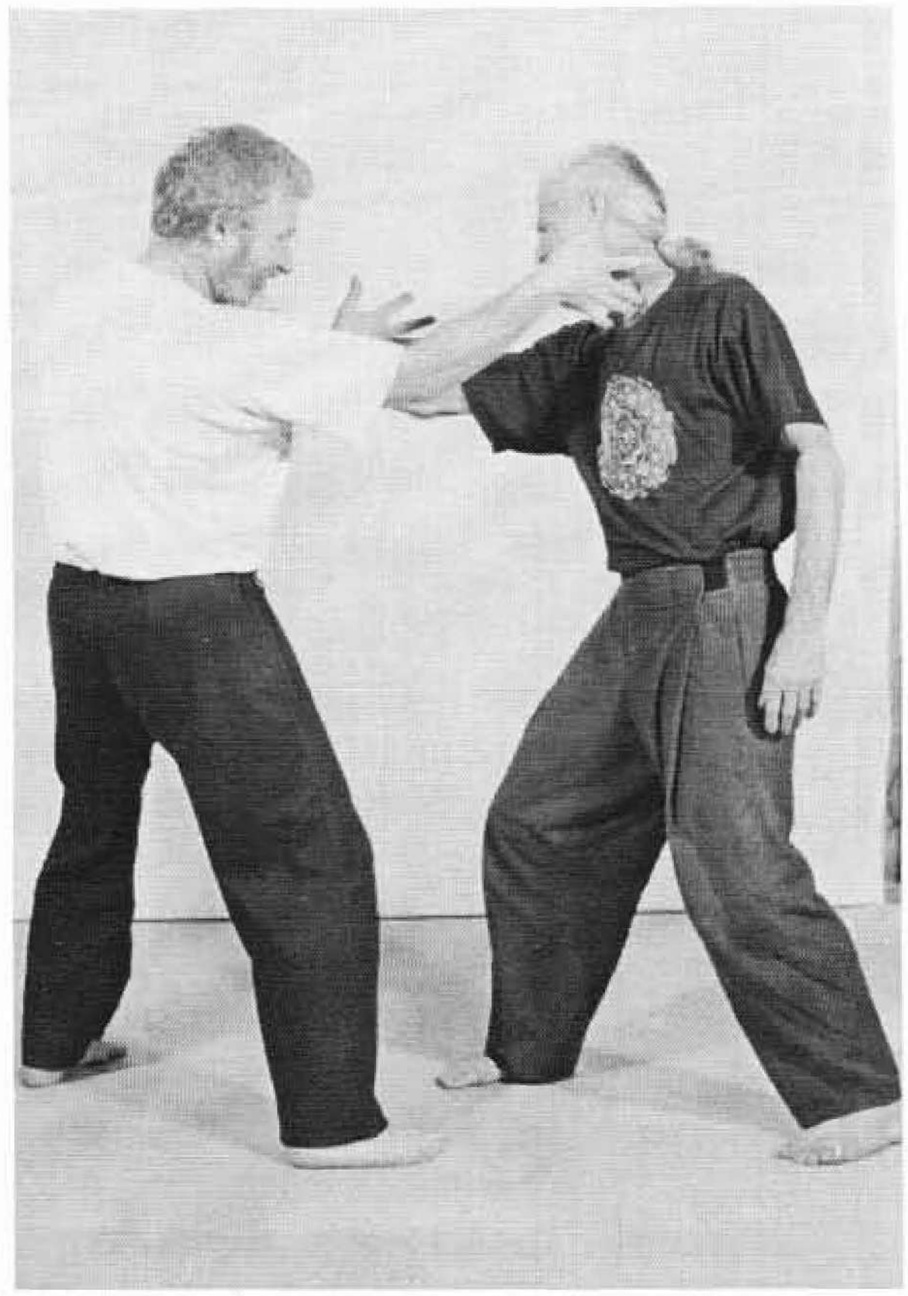


Figure 243

Traditional indications include throat blockage, dry throat, eye pain, edema, irregular menstruation, vaginal discharge, prolapsed uterus, itching in the genital region, difficult labor, hemiplegia, seizures, and insomnia.

Kd 6 is a confluent (meeting) point of yin qiao mai, so together with Lu 7, its traditional functions are to tonify yin, ease the throat, benefit the chest, tonify lung yin, eliminate heat, calm the mind, promote the function of the uterus, and remove obstructions from yin qiai mai.

Massage techniques include pressing the point straight in and holding, rotating clockwise or counterclockwise for xu or shi conditions, or doing fingertip percussion on the point.

Use with Gv 14, Pc 6, St 40, Gb 34, Liv 3, St 36, Gv 26, Gv 16, Gb 20, Gv 12, Sp 6, Gv 14, Bl 62, Pc 5, Ht 5, Co 4, and Kd 1 for seizures.

Use with Bl 10, Co 11, Si 17, Co 4, St 40, Lu 7, Lu 5, St 36, Liv 2, and biantao for pharyngitis or tonsillitis. See Kd 5 for treatment of prolapse of the uterus.

Use with Gv 3, Gv 4, Cv 6, Liv 3, Sp 6, Bl 18, Sp 10, Bl 54, Bl 23, Bl 25, Bl 17, Bl 20, Gb 26, and Sp 9 for irregular periods.

Applications:

Take his right straight with your left palm striking his arm toward you. Your right fingers will poke straight into yin qiao mai 7 (fig. 243).

KD 7 (KIDNEY POINT NO. 7)

Chinese name:

Fuliu (returning column/current).

Location:

2 cun directly above Kd 3, on the anterior border of the tendo calcaneus, posterior to the tibia. At the inferior part of the soleus muscle and in the medial part of the calcaneus.

Connections:

None.

Direction of strike:

Straight in from the inside of the lower leg.

Damage:

This is a metal and jing point. When struck, it will damage the kidneys by damaging the kidney jing. The recipient will feel an immediate rising of heat into the head from damaged kidneys, which can cause KO or extreme nausea. It will also have an effect upon the lungs and will drain energy from the body. This is one of those points that can also cause damage later in life.

Set-up point:

Ht 6 is a good set-up point since it will bring too much heat into the head.

Antidote:

Apply pressure to Ht 6 as well as Kd 7.

Healing:

Innervation is by the medial sural and the medial crural cutaneous nerves and, deeper, the tibial nerve. Irrigation occurs in the deep position, by the tibial artery and vein.

Used for diarrhea, borborygmus, edema, abdominal distension, swelling of the leg, muscular atrophy, weakness and paralysis of the foot, night sweating, spontaneous nephritis, orchitis, functional uterine bleeding (menstruation), urinary tract infections, leukorrhea, and lower back pain.

Traditional indications include edema, abdominal distension, pus and blood in the stool, urinary dysfunction, night sweats, absence of sweating, tidal fever, insanity, and pain of the lumbar vertebra.

This is a metal point and, thus, the mother point of the kidney meridian, and a jing river point. Its traditional functions are to treat cough (often), regulate the kidney qi, clear and cool damp heat, and tonify the back.

To massage, do a straight press and hold, press the point by pinching below the tendon, do clockwise or counterclockwise rotation for xu or shi conditions, or do fingertip percussion on this point.

Use with Ht 6, Lu 1, Bl 12, Bl 13, Bl 20, and Lu 7 to treat sweating-related disorders.

Use with Cv 9, Kd 9, St 36, Liv 14, Liv 13, Liv 4, Liv 3, Liv 2, Gb 24, Bl 17, Bl 18, Bl 19, Bl 20, and Bl 25 for cirrhosis of the liver.

Applications:

You might strike to his inside wrist to attack to Ht 6. You will, of course, get a number of good set-up points in this location, such as Ht 5, Lu 8, and even neigwan. Then kick to the inside of his lower leg at Kd 7.

KD 8 (KIDNEY POINT NO. 8)

Chinese name:

Jiaoxin (crossing letters).

Location:

2 cun above Kd 3, 0.5 cun anterior to Kd 7, posterior to the medial border of the tibia.

Connections:

Yin qiao mai.

Direction of strike:

Straight in to the inside of the lower leg. You will also hit Kd 7 with this strike.

Damage:

This is another kidney point that will cause mental problems as well as sleeping disorders. I know three people who have been struck at Kd 8 during kickboxing matches and have not been able to sleep for days afterward. Combine this with Kd 7 (hard not to), and you have a most devastating strike. The immediate effect will be mental confusion.

Set-up point:

Any of the wrist drainage points will suffice here.

Antidote:

Lu 1 and Lu 5 pressured together.

Healing:

Innervation is by the medial crural cutaneous nerve and, deeper, the tibial nerve. Irrigation occurs in the deep position, by the tibial artery and vein.

Used for irregular menstruation, uterine bleeding, prolapse of the uterus, diarrhea, constipation, pain and swelling of the testes, retention of urine, and pain of the medial aspect of the lower limb.

This is a point of intersection with the yin qiao mai and is the xie cleft point for the yin qiao mai, so its traditional function is to treat acute problems associated with this channel, e.g., lower abdominal pain, pain along the waist to the genitals, hernia, leukorrhea, and tightness and spasm of the muscles along the medial aspect of the lower leg with flaccidity or atrophied muscles on the lateral aspect of this region, as in cases of seizure or paralysis.

Massage as for Kd 7.

Use with St 41, Gb 40, Kd 3, Bl 60, Gb 39, Gb 35, Gb 34, Gb 41, Sp 6, and Liv 3 for arthritis of the ankle.

Use with Cv 3, Cv 4, Cv 6, St 25, St 29, St 28, Liv 3, Sp 6, and Sp 9 for lower abdominal pain.

Use with Liv 1, Liv 2, Liv 3, Liv 4, Liv 8, Cv 3, and Cv 4 for pain and swelling of the testes (you might prick and get a spot of blood out of Liv 1 if the pain and swelling are severe).

Applications:

Same as for Kd 7.

KD 9 (KIDNEY POINT NO. 9)

Chinese name:

Zhubin (house guest).

Location:

On a line drawn between Kd 3 and Kd 10, this point is located about 5 cun above Kd 3, at the lower end of the belly of the gastrocnemius, around 2 cun posterior to the medial margin of the tibia, where the gastrocnemius forms the calcaneus tendon under the soleus muscle.

Connections:

None.

Direction of strike:

Into the calf and slightly toward the front of the leg.

Damage:

This is a xie cleft point, so the qi damage is great. It will cause immense pain in the short term and mental problems in the long run. The kidneys will be damaged, and a hard enough strike will cause KO, especially if the associated set-up point is used.

Set-up point:

Bl 1, struck straight up into the head.

Antidote:

Apply pressure down onto Gv 20 to bring yang qi back into the system.

Healing:

Innervation is by the medial sural cutaneous and medial crural cutaneous nerves and, deeper, the tibial nerve. Irrigation is in the deep position by the posterior artery and vein.

Used for mental disorders, pain in the medial aspect of the leg, nephritis, cystitis, orchitis, pelvic inflammatory disease, and seizures.

Traditional indications include insanity, colic, and pain along the medial aspect of the lower leg.

The extra meridian yinwei mai starts at this point, which is also a xie cleft point for the yinwei mai, so its traditional functions include treating acute problems of the yinwei mai, tonifying the kidney qi, calming the mind, and tonifying yinwei mai to treat problems of the heart, chest, and stomach (use it with Pc 6 and Sp 4 for these latter problems).

To massage, use a straight press and hold, rotate clockwise or counterclockwise for xu or shi conditions, or do fingertip percussion on this point.

Use with Sp 2, Sp 3, Sp 4, Liv 3, and Liv 4 for pain and swelling of the big toe and associated distal metatarsal bone.

Use with Bl 23, Kd 7, Cv 3, Cv 4, Liv 3, and Bl 25 for nephritIS.

Use with Cv 3, St 29, St 28, Bl 58, Kd 7, Bl 28, and Liv 2 for urinary infections.

Use with Bl 23, Bl 28, St 29, St 28, Gv 4, Gv 3, Gv 6, Sp 6, abdomen zigong, Bl 18, Liv 3, Kd 3, and Bl 17, for prostatitis.

Applications:

1) He might attack with a straight kick. You should move in and strike to Kd 9 with either your palm heel or with a one-knuckle punch.
2) First strike to Bl 1 using a one-knuckle punch upward into the head, then use a hook kick to Kd 9.

KD 10 (KIDNEY POINT NO. 10)

Chinese name:

Yingu (yin's valley).

Location:

On the medial side of the popliteal fossa, level with Bl 40, between the tendons of semitendinosus and semimembranosus when the knee is flexed.

Connections:

A divergent meridian leaves from this point, with the main meridian going internally to Gv 1. Then a lower branch goes to Cv 4 and Cv 3, and an upper branch connects to Cv 17 and the mouth.

Direction of strike:

Straight in to the back of the knee.

Damage:

As a water and he point, this one is very dangerous. It can cause kidney failure immediately, as well as a slow decay of the kidneys. Via its connection to Cv 17, it will cause the seat of power to be attacked, resulting in an immediate KO or weakening of the body. This strike can also cause impotence immediately or later. It can be used with other kidney or bladder points to do great damage to the kidneys. It can also affect the heart as well as the dai mai, thus damaging communication between upper and lower. So this point is not one to play around with!

Set-up point:

You could use Bl 23 with a hook kick and then stomp downward onto Kd 10.

Antidote:

See a doctor if there is blood in the urine or great pain is felt around the kidney area. See an acupuncturist if you cannot sleep at all.

Healing:

Innervation is by the medial femoral cutaneous nerve. Irrigation is by the medial superior glenicular artery and vein.

Used for impotence, hernia, uterine bleeding, pain in the medial aspect of the thigh and knee, disease of the urinogenital system, and arthritis of the knee.

As a he sea and water point for the kidney meridian, its traditional functions include tonifying the kidneys, dispelling heat, regulating the lower heater, and preventing pathogens from penetrating deeper into body (you might use it with jing well and ying spring points for the latter).

To massage, press and hold, do rotation clockwise or counterclockwise for xu or shi conditions, or do fingertip percussion on this point.

Use with Bl 40, Bl 39, Bl 38, Bl 57, and Gb 34 for pain and spasm at the back of the knee.

Use with Cv 6, Cv 4, Liv 1, Liv 3, Kd 2, Sp 6, Sp 2, St 12, St 10, Ht 1, Pc 3, Bl 54, Cv 3, Bl 23, Bl 18, Sp 10, and Bl 17 for abnormal uterine bleeding or irregular menstruation.

Use with Sp 9, Cv 6, Cv 2, Cv 3, Cv 4, Pc 7, Bl 28, Bl 25, Bl 23, Bl 18, and Liv 3 for difficult urination.

Applications:

See the application for Bl 23.

KD 11 (KIDNEY POINT NO. 11)

Chinese name:

Henggu (horizontal bone).

Location:

5 cun below the umbilicus, on the superior border of the symphysis pubis, 0.5 cun lateral to Cv 2.

Connections:

Takes an internal branch from Cv 3. Also, chong mei.

Direction of strike:

Straight in just above the groin over the pubic bone to the side of centerline.

Damage:

This is the first of the kidney points to connect to chong mei, or the life force meridian. It also connects to the Cv meridian and has an effect upon the lower heater. This strike affects the kidneys, causing immediate local pain and KO, as well as kidney damage later. A strike to this area is sometimes worse than a strike directly to the groin.

Set-up point:

Kd 10 used in conjunction with Kd 11 is a dynamic strike, causing immediate damage to the lower heater.

Antidote:

Pressure to Kd 10.

Healing:

Innervation is by the branch of the iliohypogastric nerve. Irrigation is by the inferior epigastric artery and external pudendal artery.

Used for pain in the external genitalia, seminal emission, impotence, retention of urine, hernia, and urethritis.

As a point of intersection with the chong mei, its traditional functions are to treat problems such as male sexual irregularities (e.g., impotence), or female gynecological disorders. Chong mei is referred to as the sea of the 12 primary channels, so it has an influence on all of the viscera and thus connects all primary channels.

To massage, push straight into the point and hold, rotate clockwise or counterclockwise for xu or shi conditions, use a thumb or a knuckle to rub across the point, or do light fingertip percussion on the point.

Use with Cv 3, Cv 4, Cv 6, Gb 25, Bl 23, Sp 9, Sp 6, and Gv 20 for impotence, premature ejaculation, and spermatorrhea. Use with Sp 4, Pc 6, Kd 12, Kd 13, Kd 14, Kd 15, Kd 16, Kd 17, Kd 18, Kd 19, Kd 20, Kd 21, and Kd 27 to treat chong mei symptoms (e.g., deficient blood or qi

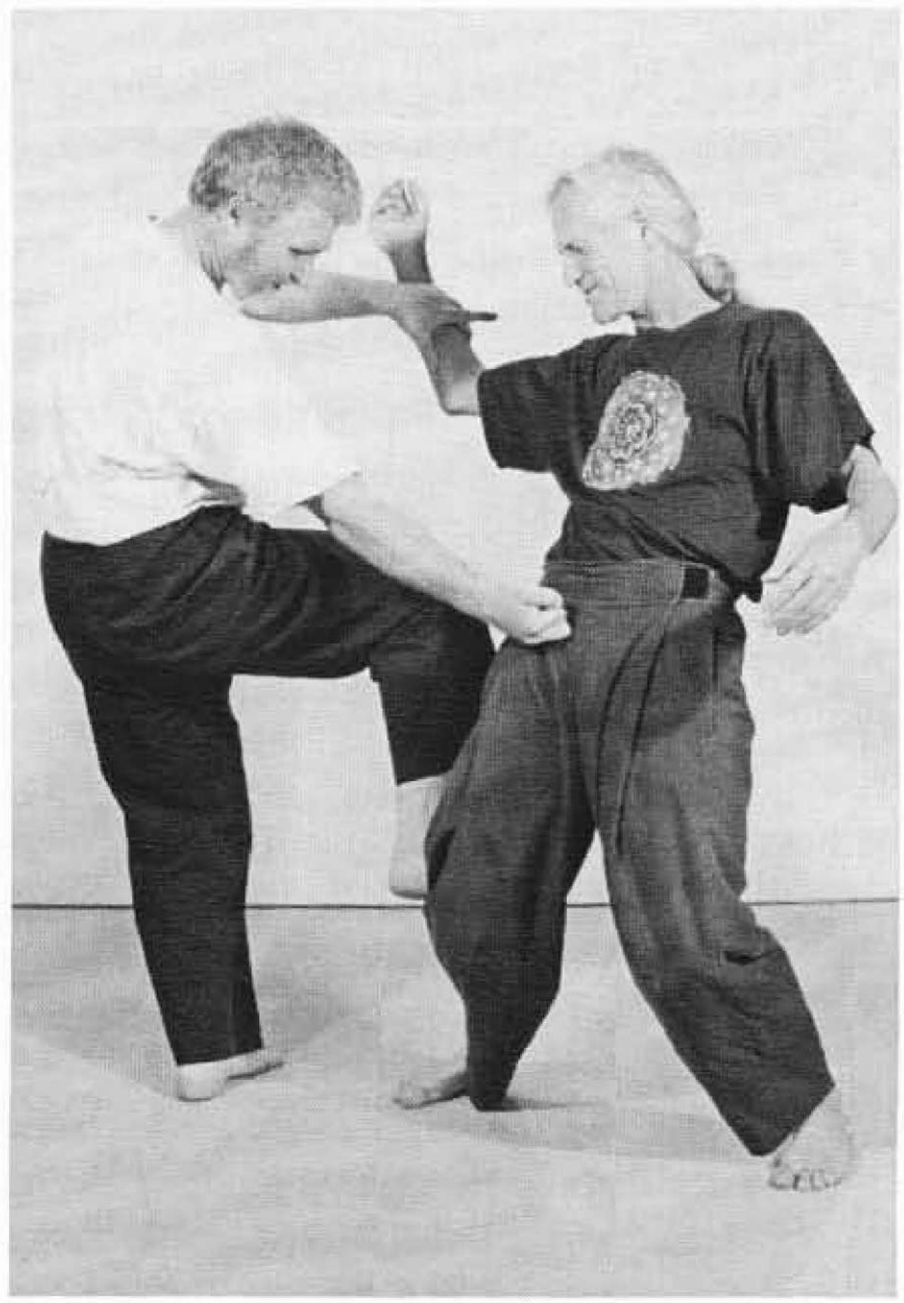


Figure 244

producing abnormal uterine bleeding, amenorrhea, impotence). You can hold Kd 11 and Kd 27 to balance the flow of qi in the kidney meridian or chest and abdomen. This will help balance the three heaters or to restore qi flow when abdominal scars are retarding its flow.

See Kd 12 for treatment of pain and swelling of the external genitalia.

Applications:

You could use the kidney damaging method mentioned earlier (Chapter 3, under Bl 23), by attacking to Bl 23 and then down to Kd 10 with the heel. As he is going down, you could strike to Kd 11 with a palm strike or one-knuckle punch (fig. 244).

KD 12 (KIDNEY POINT NO. 12)

Chinese name:

Dahe (great clarity).

Location:

4 cun below the umbilicus, 0.5 cun lateral to Cv 3.

Connections:

Chong mei.

Direction of strike:

Straight in to above the pubic bone.

Damage:

This point has an effect on the emotions and mind. The immediate effect is mental confusion caused by emotional being confusion. (This is a good time to make a follow-up strike!) A high level of qi drainage also occurs with a strike to this point, and KO will occur if it is hard enough. The emotional disorders caused by this strike will also show up physically in the form of extreme tension in the lower body, sexual problems, etc.

Set-up point:

Again, we could use Kd 10.

Antidote:

Bl 10 squeezed inward, along with Si 11 pressed inward.

Healing:

Innervation is by the branches of the subcostal nerve and the iliohypogastric nerve. Irrigation is by the muscular branches of the inferior epigastric artery and vein. Used for pain in the external genitalia, seminal emission, leukorrhea, and neuralgia of the spermatic cord.

As a point of intersection with the chong mei, its traditional functions are to influence that meridian's actions.

Massage techniques are the same as for Kd 11.

See Kd 11 for treatment of deficient qi and blood producing abnormal uterine bleeding, amenorrhea, impotence, and so on.

Use with Cv 4, Cv 6, Bl 23, Sp 6, Pc 5, Bl 52, Bl 18, Bl 20, Kd 3, Cv 3, Cv 1, Gb 25, Liv 3, St 36, Bl 15, and Gv 20 for spermatorrhea.

Use with Bl 23, Bl 28, Bl 18, Cv 4, Cv 3, Cv 6, Sp 6, Cv 20, Sp 9, Liv 3, and St 36 for prostatitis.

Use with Liv 4, Liv 8, Liv 12, Liv 1, Cv 3, St 30, and Kd 11 for pain and swelling of the external genitalia.

Use with Cv 3, Cv 4, Cv 6, Cv 9, Gb 26, Sp 9, Sp 6, St 36, Kd 13, Liv 2, Liv 3, St 29, Kd 7, abdomen zigong, Bl 23, Gv 4, and Kd 14 for leukorrhea.

Applications:

Same as for Kd 11.

KD 13 (KIDNEY POINT NO. 13)

Chinese name:
Qixue (qi's orifice).
Location:
3 cun below the umbilicus, 0.5 cun lateral to Cv 4.
Connections:
None.
Direction of strike:
Straight in to the lower abdomen.
Damage:
This point, apart from being very dangerous physically because it is in an area that offers little physical protection, also has an effect upon the life force meridian and upon the total energy of the body. A strike to this point drains qi greatly, knocking the recipient down immediately and causing long-term lack of energy, etc. A strong strike will cause KO or even death.

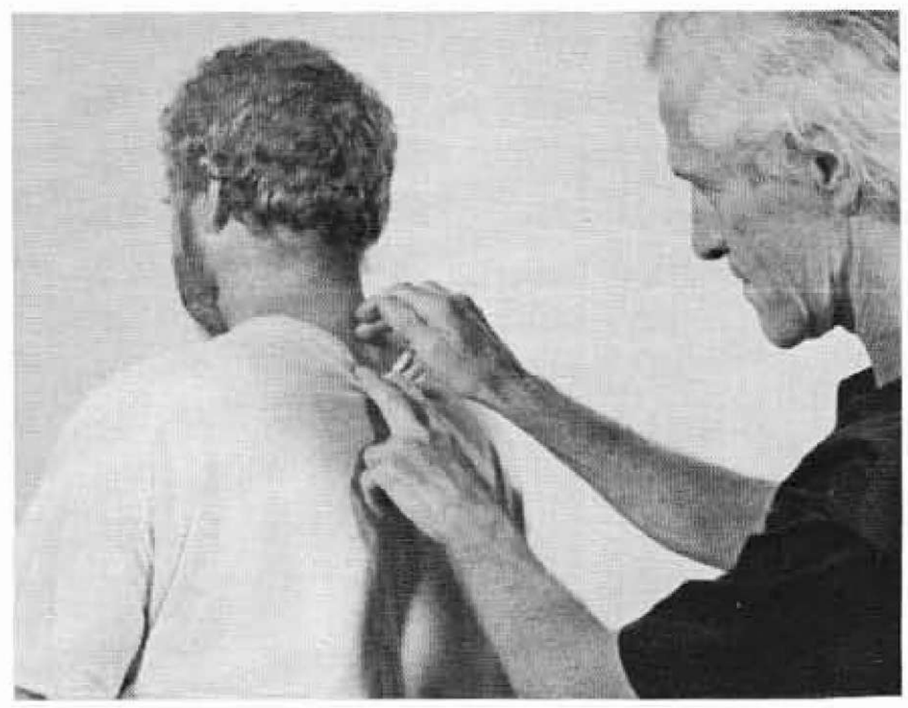


Figure 245

Set-up point:
Neigwan.
Antidote:
Tap on the back of the lower neck at that large vertebra Gv 14 (yang meeting point), using the fingers (fig. 245).
Healing:
Innervation is by the subcostal nerve. Irrigation is the same as for Kd 12.

Used for irregular menstruation, diarrhea, sterility, leukorrhea, and urinary tract infection.

As a point of intersection with the chong mei, its traditional functions are to influence that meridian's actions. Also, from the name and the location of this point, we can assume that, along with Cv 4 and perhaps ming men (Gv 4), it pertains to tantien.

Massage is the same as for Kd 11. You can also press slowly in on the point with both thumbs and quickly release as you pull the thumbs apart.

See Kd 12 for treatment of leukorrhea.

Use with Sp 6, Sp 8, Liv 3, Cv 4, Cv 6, Liv 14, Bl 18, Bl 17, Bl 23, Bl 25, and St 29 for irregular menstruation.

Use with Bl 23, Bl 28, Bl 25, Bl 32, Liv 2, Liv 8, Cv 3, St 28, Cv 2, and Sp 9 for urinary infection.

Use with Bl 23, Bl 20, Bl 18, Bl 17, Cv 4, Cv 6, Sp 6, and Liv 3 for sterility.

Applications:
You could use a back kick straight in to the lower abdomen after blocking his hand attack with your p'eng.

KD 14 (KIDNEY POINT NO. 14)

Chinese name:
Siman (four full).
Location:
2 cun below the umbilicus, 0.5 cun lateral to Cv 5.
Connections:
Chong mei.
Direction of strike:
Straight in with a slight angle toward the centerline of the lower abdomen.

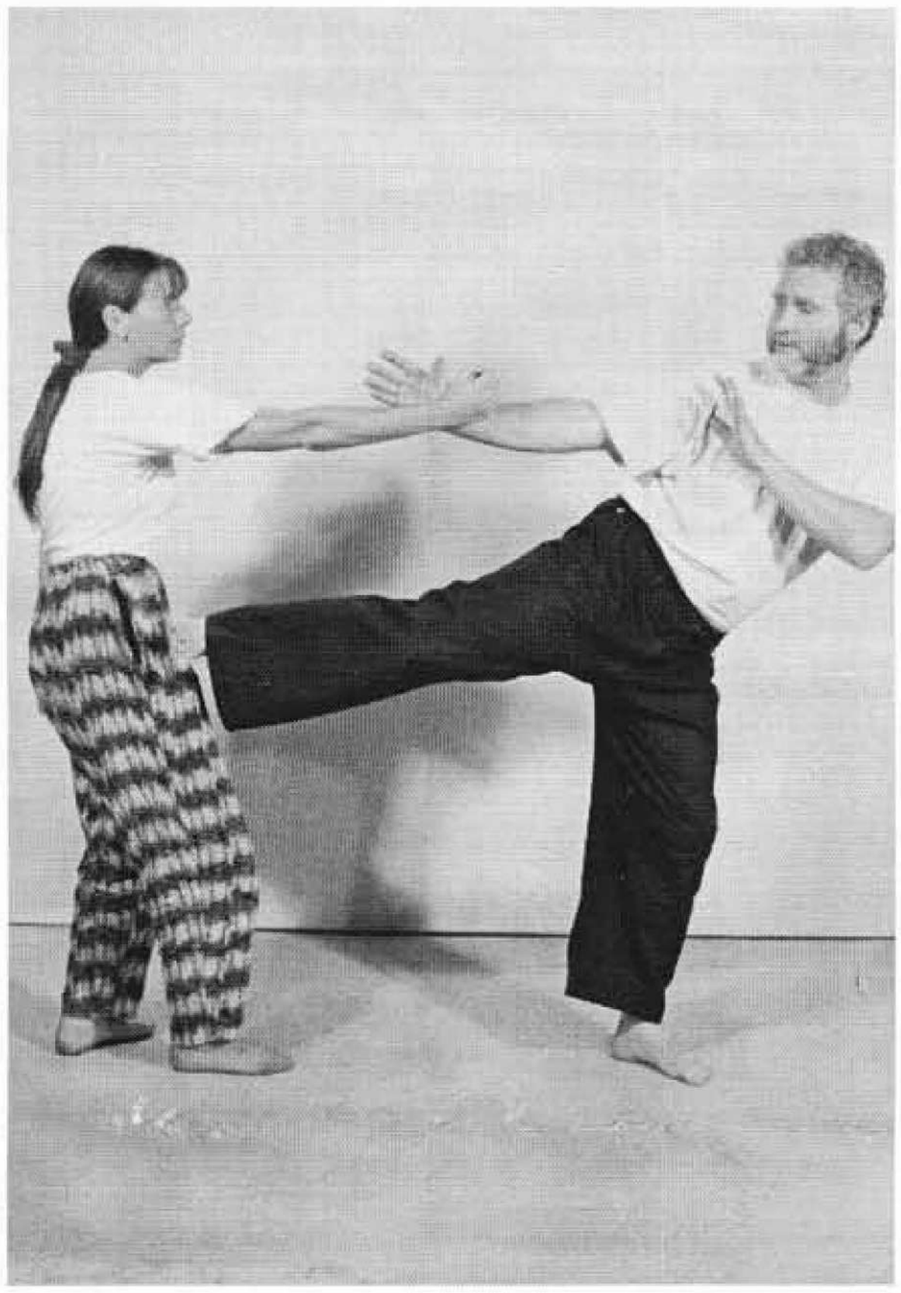


Figure 246

Damage:

The instant you are struck here, you will feel a shot of pain go straight over to the centerline. This is the tantien being attacked via the chong mei meridian. If the strike is very hard, death will occur in about four minutes after an immediate KO.

Set-up point:

Neigwan, to drag qi to Pc 6, leaving Kd 14 open to attack.

Antidote:

None, unless you have a team of paramedics on hand within four minutes!

Healing:

Innervation is by the 11th intercostal nerve. Irrigation is the same as for Kd 12.

Used for uterine bleeding, irregular menstruation, postpartum abdominal pain, diarrhea, leukorrhea, sterility, and urinary tract infection.

Traditional functions are the same as for Kd 12 and Kd 13.

Massage techniques are the same as for Kd 13.

Use with Liv 4, Liv 3, St 25, Bl 18, Bl 25, and Bl 20 for hard, painful, drumlike abdomen.

Use with Sp 6, Bl 23, Bl 18, Bl 17, Bl 60, Cv 3, Cv 4, Cv 6, Cv 7, Bl 25, Sp 10, Sp 8, Liv 8, Liv 3, Liv 4, St 30, Co 4, Pc 6, Kd 12, St 29, St 36, Sp 3, Gb 21, and Gb 34 for amenorrhea where there once was untroubled menstruation.

Use with St 37, St 25, Sp 3, Sp 4, Bl 20, Bl 23, Bl 25, and Liv 2 for diarrhea.

Applications:

1) He might attack with a straight right, and you slam his right neigwan with your right palm, swivel on the ball of your left foot, and strike to Kd 14 with your right heel (fig. 246).
2) Alternatively, you could strike to his neigwan and then use your right knee to Kd 14.

KD 15 (KIDNEY POINT NO. 15)

Chinese name:

Zhongzhu (middle flow).

Location:

1 cun below the umbilicus, 0.5 cun lateral to Cv 7.

Connections:

Chong mei

Direction of strike:

Straight in with a slight angle toward centerline.

Damage:

Again, we see this point affecting the life force meridian or chong mei. The strike will begin at Kd 15 but shoot straight across to chong mei. This strike has less of an effect upon tantien because the point is higher up and more protected by muscle. However, a good hard strike will cause a rising of qi to the whole neck area, so that the recipient feels like he has been choked!

Set-up point:

Neigwan and Lu 5. This combination will cause the brain to become confused, as qi is first drained, then added.

Antidote:

Qi balancing qigong performed by a qigong doctor.

Healing:

Innervation is by the 10th intercostal nerve. Irrigation is the same as for Kd 12.

Used for irregular menstruation, lower abdominal pain, constipation, and lower back pain.

Traditional functions are the same as for Kd 11. This point is also used during abdominal diagnosis. The point on the left, in particular, reflects the liver, and if very painful like a knife, it reflects liver blood stagnation.

Massage techniques are the same as for Kd 13, although if the point has come up as a sharp pain on the left, then use it in conjunction with Liv 4. (Use Liv 4 first, and then after the pain has diminished, use Kd 15.)

You can use this point with Pc 6, Cv 12, Sp 4, Liv 3, St 44, St 40, Gb 20, Bl 18, Bl 20, Bl 25, Bl 32, Bl 33, Bl 19, Bl 27, Bl 10, Cv 17, St 19, St 20, St 21, Gb 26, and St 36 for morning sickness, but care must be taken with the points over the abdomen during pregnancy (don't use deep pressure).

Use with Bl 25, Bl 18, Bl 53, Bl 26, St 25, Kd 16, Kd 17, Kd 18, Sp 15, St 37, Liv 3, Co 4, Liv 13, and Liv 14 for constipation.

For lower abdominal pain, use with Liv 4, Liv 3, Kd 16, Kd 14, St 25, St 26, St 28, St 29, St 30, Cv 4, Cv 3, Cv 2, Cv 5, Cv 6, Cv 7, St 36, and Sp 9.

Applications:

The same as for Kd 14.

KD 16 (KIDNEY POINT NO. 16)

Chinese name:

Huangshu (vital's hollow).

Location:

0.5 cun lateral to the center of the umbilicus.

Connections:

Chong mei.

Direction of strike:

Straight in to the side of the navel.

Damage:

This point will normally balance the fire and water (yang and yin) of the system. When struck, apart from the damage to the chong mei, it will also have a psychological effect, producing alternate joy and fear. It will also cause extreme fatigue because the brain will think that a qi drainage has occurred.

Set-up point:

Neigwan.

Antidote:

Once the physical damage has abated, the patient must perform the posture from the taiji form called lotus kick. The weight is placed upon the left foot first, while the right foot is held past the body (fig. 247). Now, use the waist to throw your right foot over to your right while both of your hands slap the instep as they move to the opposite side (fig. 248). Place your right foot down and allow your hands to do an arc left and then right so that they end up over your right knee (fig. 249). Do this 10 times on both sides, morning and evening.

Healing:

Innervation is by the 10th intercostal nerve, and irrigation is the same as for Kd 12.

Used for abdominal pain, vomiting, abdominal distension, constipation, stomach spasm, pain of hernia, enteritis, and hiccups.

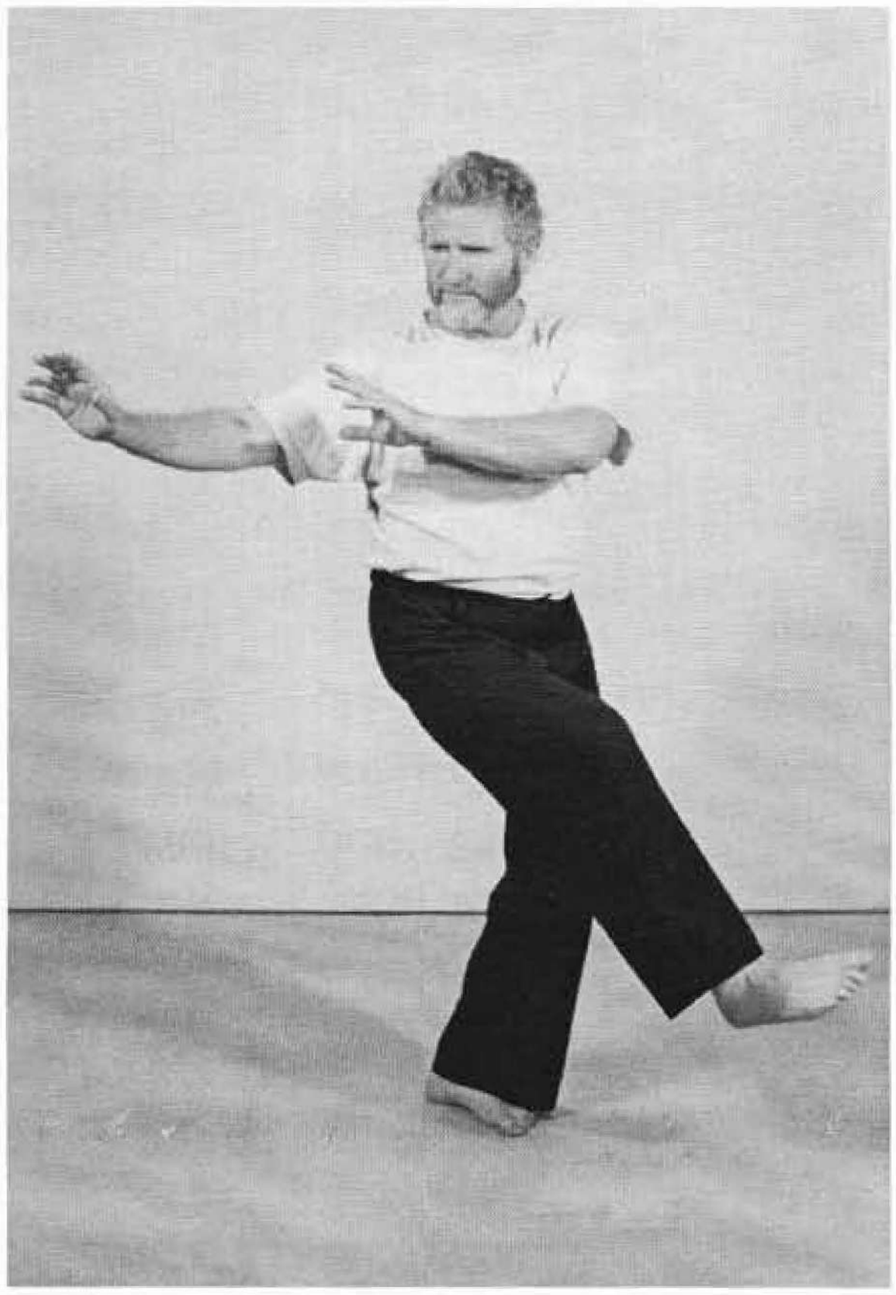


Figure 247

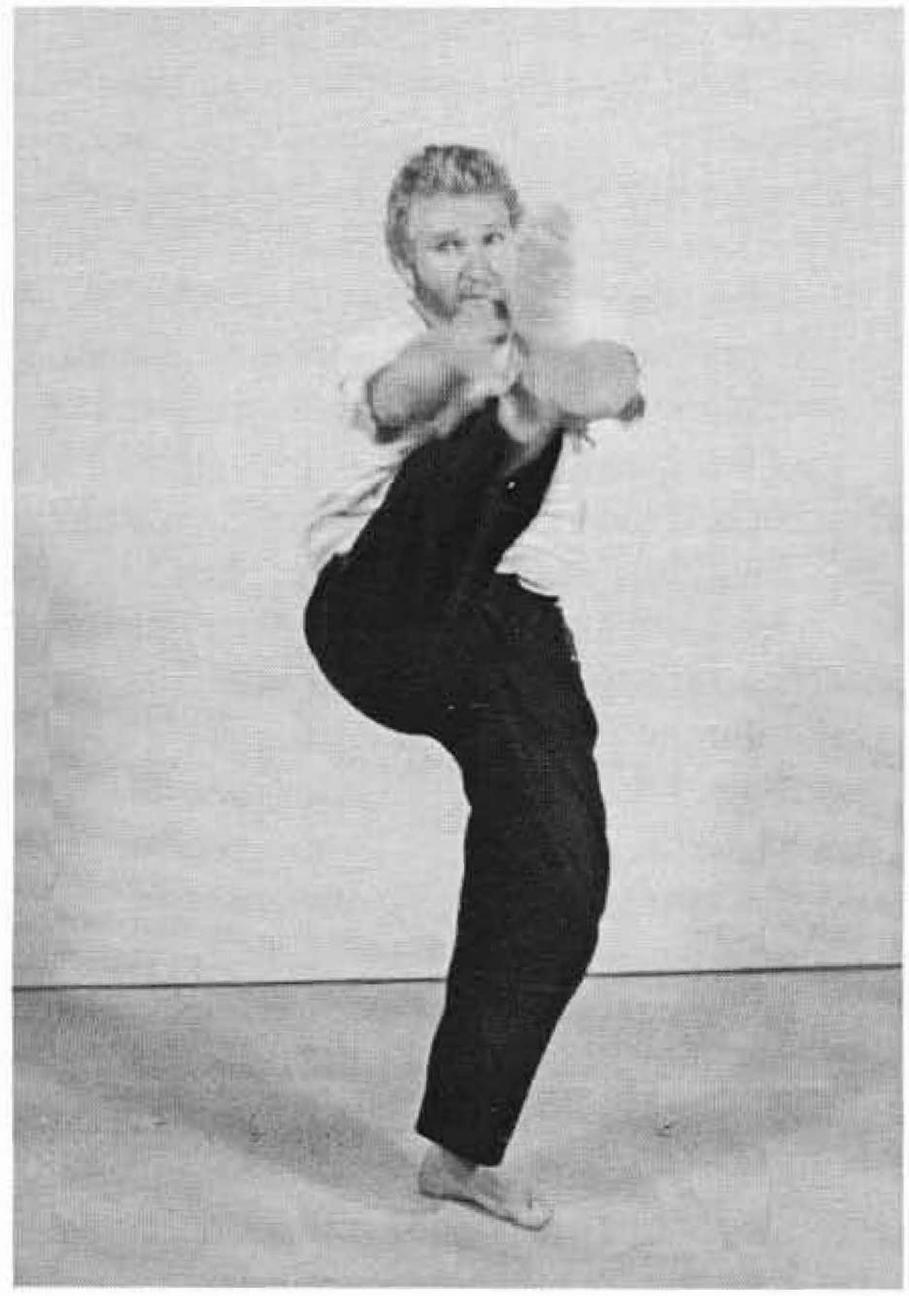


Figure 248

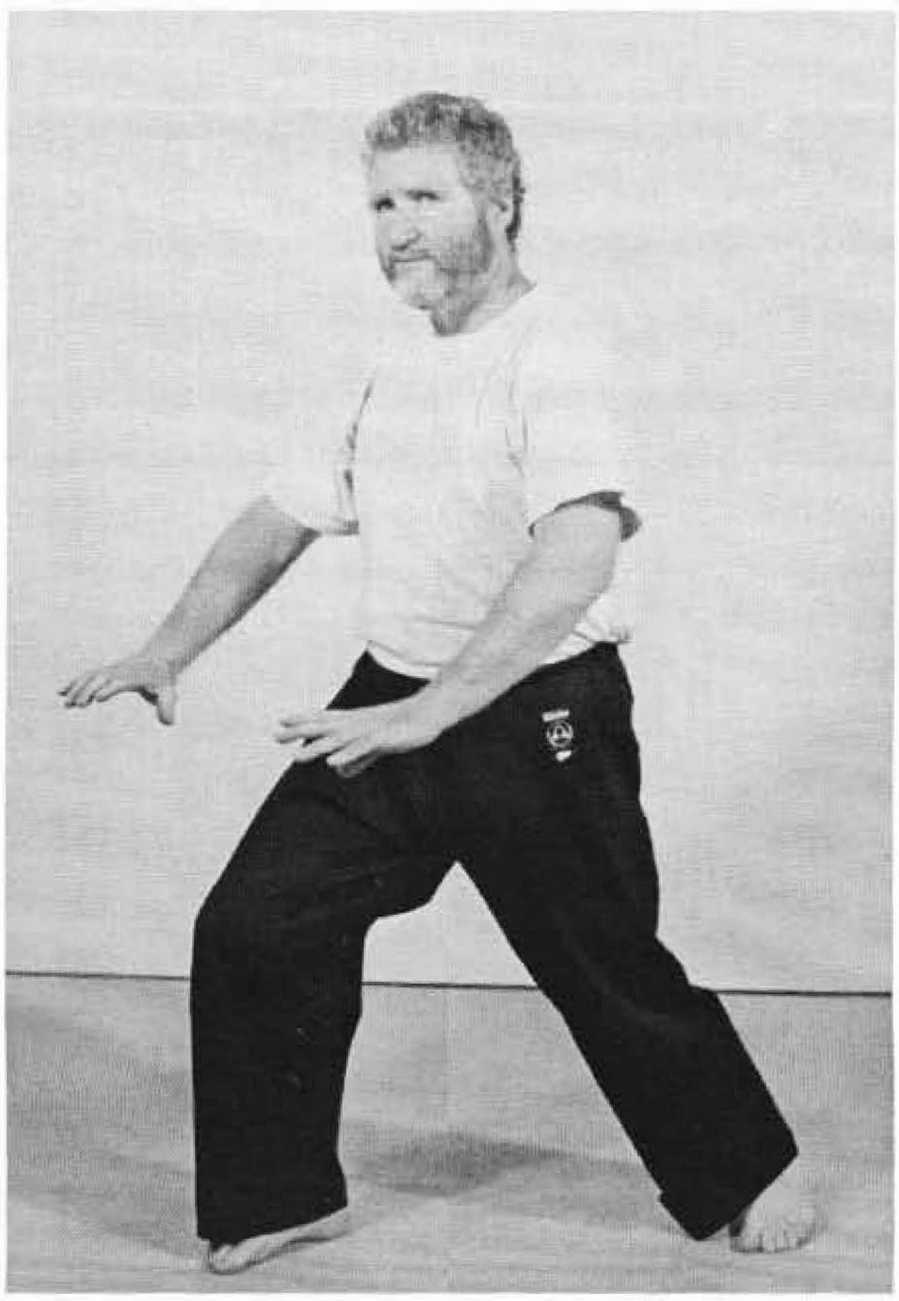


Figure 249

Traditional functions are the same as for Kd 11. This point is also part of a group of points used in demonic possession. In addition, it is used with Cv 9 during abdominal diagnosis to reflect the qi of the spleen.

Massage techniques are the same as for Kd 13. If the point is quite tender, use Sp 3, Sp 4, and St 36 first, then use Cv 12 with this point when the tenderness has subsided a little.

Use it with St 37, St 36, St 25, *lanweixue* (an extra point), Pc 6, Co 11, Sp 13, Bl 24, Bl 25, Bl 17, Liv 3, Bl 54, and Sp 10 for acute appendicitis.

Use with St 30, Liv 8, Liv 3, Liv 12, Sp 6, Kd 11, Gv 20, and Sp 3 for hernia.

Applications:

The same as for Kd 15.

KD 17 (KIDNEY POINT NO. 17)

Chinese name:

Shangqu (trade's bend).

Location:

2 cun above the umbilicus, 0.5 cun lateral to Cv 10.

Connections:

Chong mei.

Direction of strike:

Straight in to the stomach.

Damage:

Immediate KO from qi drainage and air blockage. (There are two types of choke KOs: an air cavity strike where the person is deprived of air and a blood cavity strike, and where the person is deprived of blood to the brain.) This strike shocks the whole of the stomach area, from the tantien right up the neck. If the strike is hard enough, it will cause death. It is possible, however, to build up this area to resist attacks by using "iron shirt" qigong. This is not just a muscular buildup as in "rippling abs," but a sinewy buildup, creating a sort of "barrel" of protection around the whole stomach area.

Set-up point:

St 3 straight up into the cheekbones.

Antidote:

Put the patient's head between his legs and press down onto his back for three seconds, release, then do it again.

Healing:

Innervated by the ninth intercostal nerve and irrigated by the branches of the superior and inferior epigastric arteries and veins.

Used for fullness of the abdomen, diarrhea, constipation, stomachache, colic, and peritonitis.

Massage techniques are the same as for Kd 13.

Traditional functions are the same as for Kd 11.

Use with Liv 5, St 36, St 25, Cv 12, Bl 25, Bl 20, Bl 18, Liv 3, Sp 3, Liv 13, Liv 14, St 21, Pc 6, and Co 4 for colic, stomachache, and fullness of the abdomen.

See Kd 15 to treat constipation.

Applications:

Take his right straight with your left palm, shooting it upward on the inside of his forearm as your right fingers poke upward into both St 3 points (fig. 250). Your left palm is now free to strike straight into Kd 17.

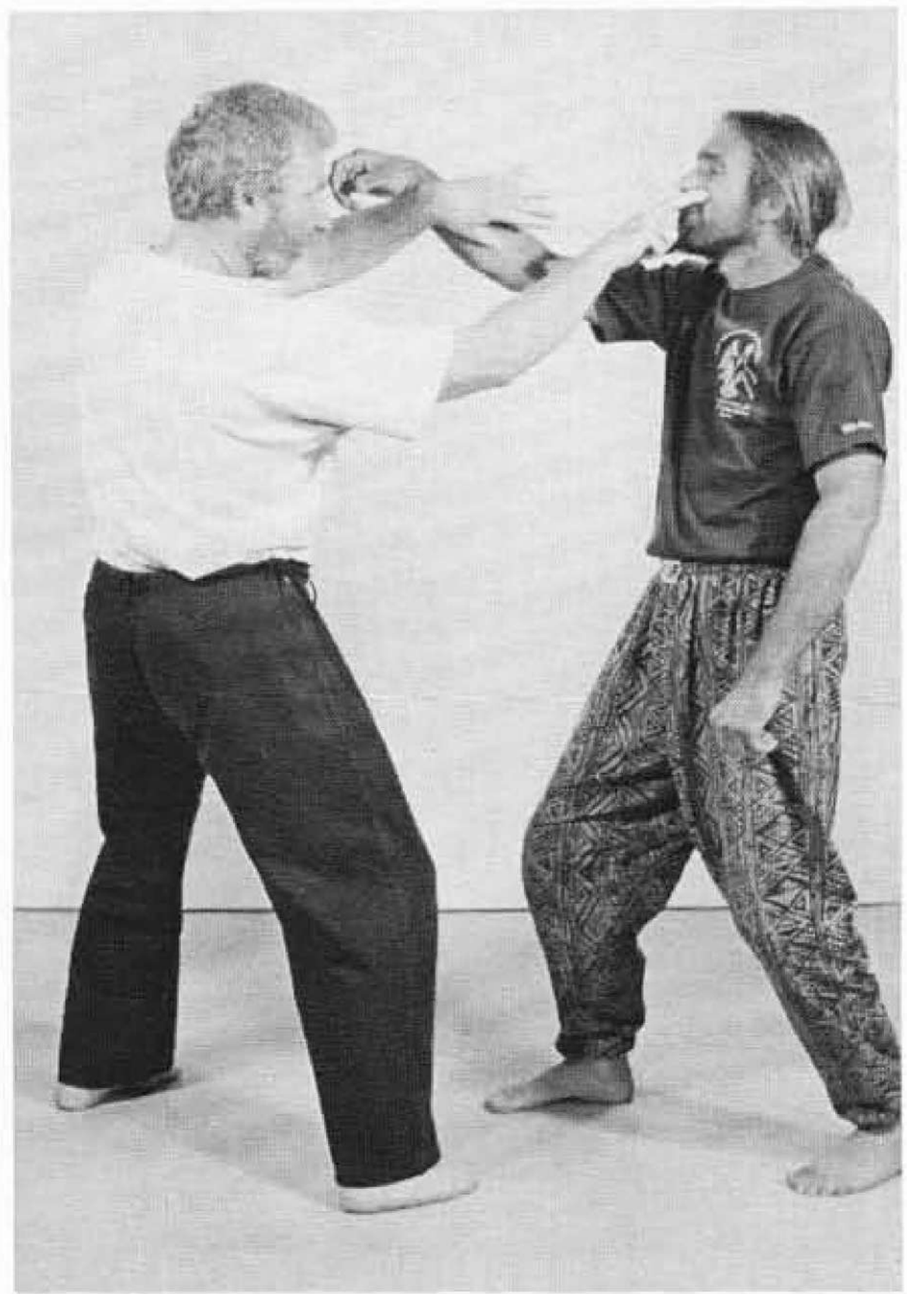


Figure 250

KD 18 (KIDNEY POINT NO. 18)

Chinese name:

Shiguan (stone hinge).

Location:

3 cun above the umbilicus, 0.5 cun lateral to Gv 11.

Connections:

Chong mei.

Direction of strike:

Straight in to the midstomach.

Damage:

Again, this point is connected to the chong mei or life force meridian, so a strike here will cause KO through the qi drainage from the seat of power, the diaphragm. It also causes an increase of yang qi to the head, which will also cause a KO the opposite way.

Set-up point:

Neigwan, or Si 8.

Antidote:

Sit the recipient of this strike down and bend him forward. If the strike has been very hard, seek medical advice!

Healing:

Innervation is by the eighth intercostal nerve. Irrigation is by the branches of the superior epigastric artery and vein.

Used for vomiting, abdominal pain, constipation, postpartum abdominal pain, stomachache, hiccups, and spasm of the esophagus. Traditional functions are the same as for Kd 11.

Massage is the same as for Kd 13.

Use with Pc 6, St 36, St 21, Sp 3, Liv 3, Cv 12, Cv 14, Liv 14, Kd 20, Kd 24, Kd 25, Kd 26, Kd 27, Kd 16, Bl 20, Bl 18, Bl 19, and Bl 21 for vomiting, nausea, etc.

Use with Sp 6, St 25, Sp 9, Liv 3, Cv 4, Cv 6, Bl 23, Bl 25, Bl 20, Bl 18, Liv 4, and Sp 10 for postpartum abdominal pain.

Applications:

You could respond either to a straight attack on the outside at Si 8, or to a hook-type punch to neigwan. Then attack with a palm strike to Kd 18.

KD 19 (KIDNEY POINT NO. 19)

Chinese name:

Yindu (yin's metropolis).

Location:

4 cun above the umbilicus, 0.5 cun lateral to Cv 12.

Connections:

Chong mei.

Direction of strike:

Straight in.

Damage:

As we get closer to the area of the solar plexus or Cv 14, the damage gets greater. So this point's damage is on the verge of being very dangerous. A strike here shocks the whole upper body, causing a KO from qi drainage and air blockage. The diaphragm is attacked, so the loss of power is great, and the fight will be finished. A strong strike here will cause death!

Set-up point:

Neigwan struck toward you is a good addition to this point because it will drain qi. You could also strike to Kd 19 and then turn and strike to Bl 23, a combination that spells death. (See "Applications.")

Antidote:

Apply CPR if the recipient is dead. Using mild pressure, rub the whole upper torso upward from navel to upper chest on the centerline.

Healing:

Innervation and irrigation are the same as for Kd 18.

Used for borborygmus, abdominal distension and pain, emphysema, pleurisy, and malaria.

Traditional functions are the same as for Kd 11. From the name and the location of the point, we could possibly assume that this point and Cv 12 form a major plexus that, in the yogic tradition, would be thought of as the spleen chakra. Spleen and lungs form the most external of the yin divisions, *tai yin*. (Theoretically, there are six divisional pairings of the main meridians; in this case, the spleen and lungs are paired. This theory, which links up an arm yin and a leg yin channel or an arm yang and a leg yang channel, comes from the book *Shang Han Lun*, compiled btween 200 B.C. and 200 A.D. These pairings are seen as pathways from pathogenic penetration to different levels of

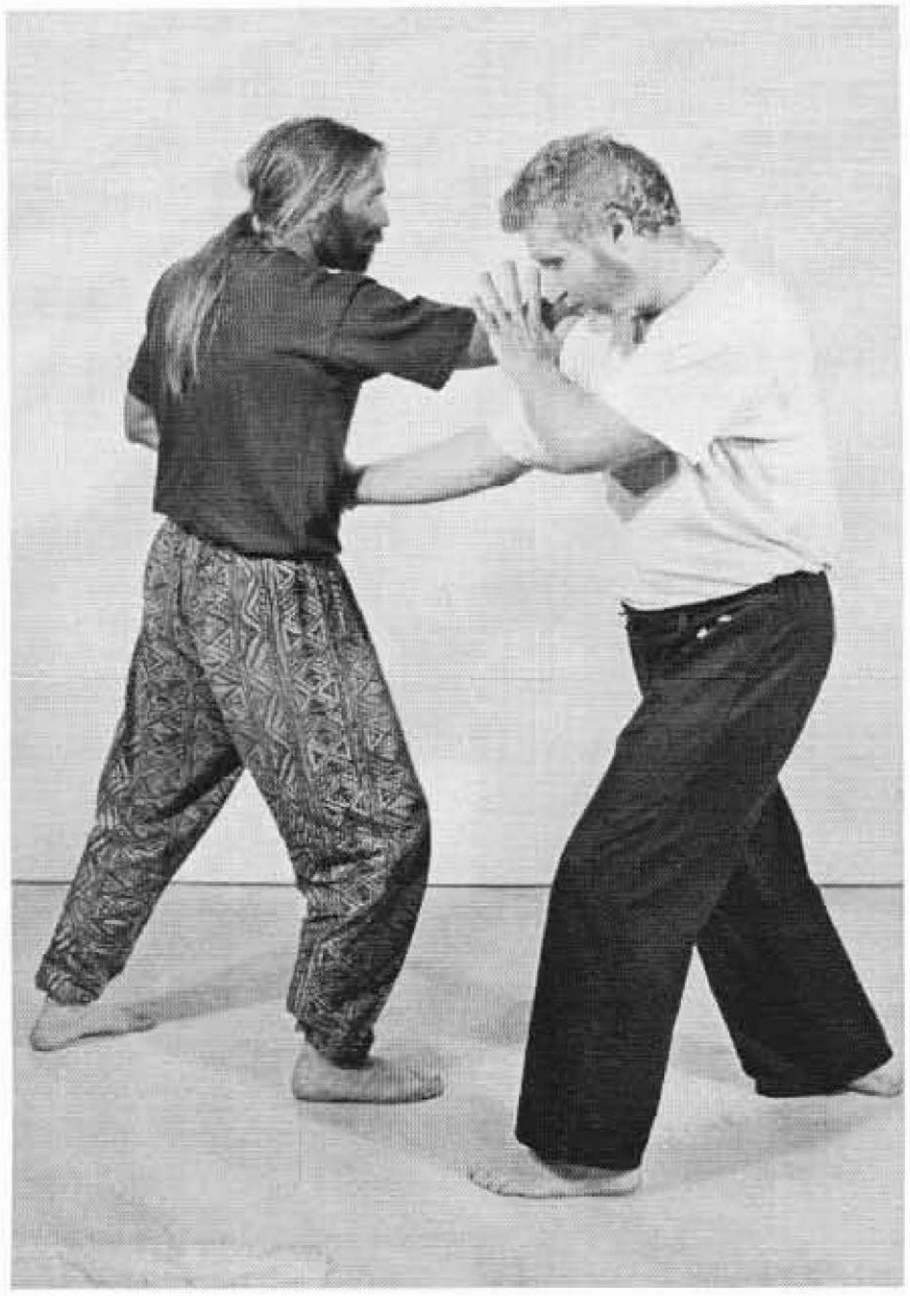


Figure 251

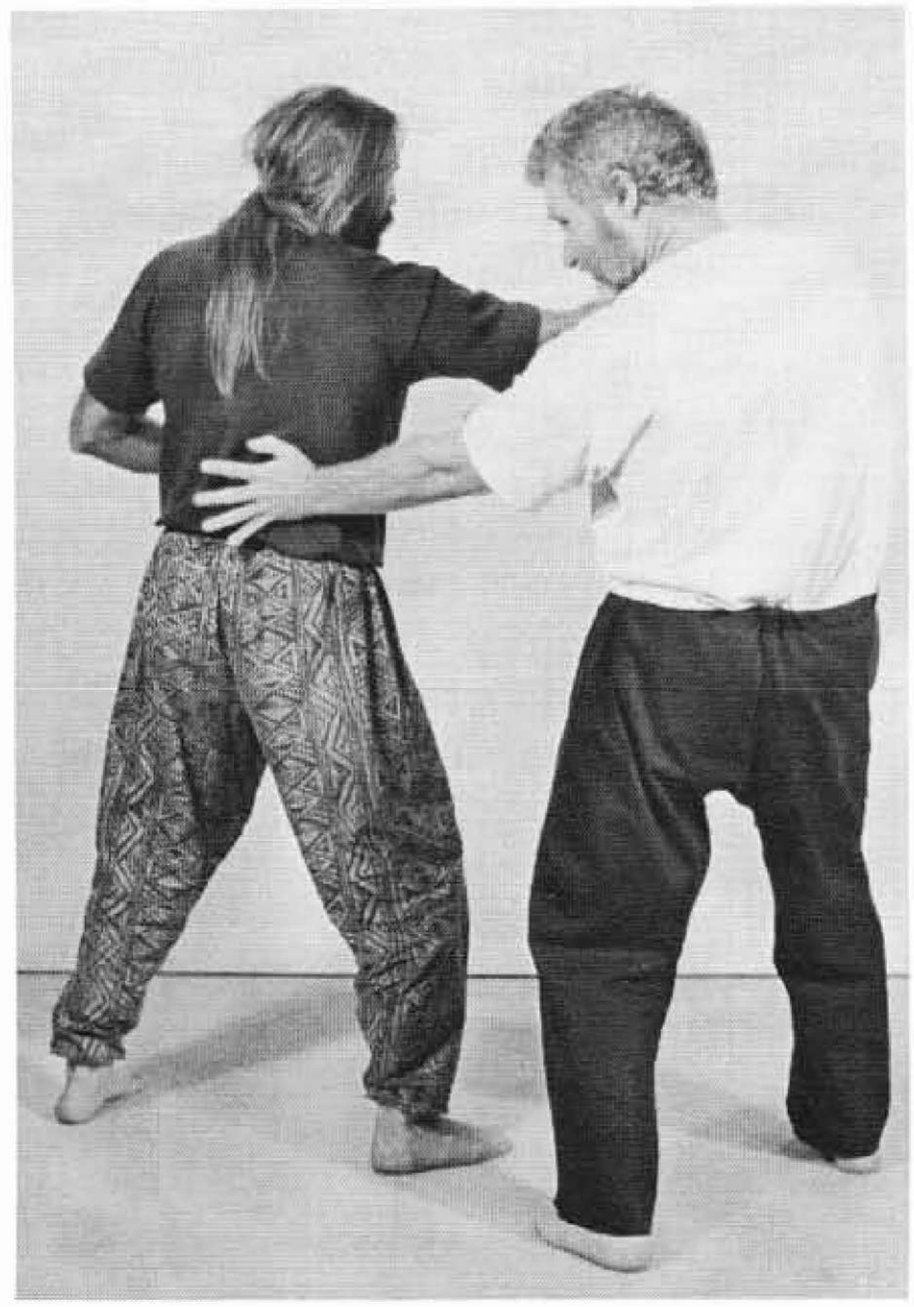


Figure 252

the body.) Spleen and lungs, together with the help of kidney yuan qi, supply the post-heaven nourishment (derived after birth) of the body as well as protective energy of the body that makes this a very important center.

Massage techniques are the same as for Kd 13.

Use with Cv 17, Cv 12, Lu 6, Lu 7, Lu 5, Lu 1, Bl 12, Bl 13, Co 4, Liv 3, and Kd 7 for emphysema or pleurisy.

Use with St 25, St 36, Sp 3, Liv 3, Liv 14, Liv 13, Cv 12, Bl 20, Bl 21, Bl 18, Bl 19, Bl 17, and Bl 25 for borborygmus and abdominal distension and pain.

Use with Gv 13, Gv 14, Gv 10, Pc 5. Pc 6, Co 11, Co 4, Si 3, Gb 34, Sp 9, Liv 3, Lu 7, and Kd 7 for malaria.

Applications:

He might attack with a right straight. You should block with your left palm and attack to Kd 19 with your right, as in Figure 251. Then, swiveling on your heels, turn and strike straight in to his kidney area at Bl 23 (fig. 252).

KD 20 (KIDNEY POINT NO. 20)

Chinese name:

Futonggu (connecting valley on the abdomen).

Location:

5 cun above the umbilicus, 0.5 cun lateral to Cv 13.

Connections:

Chong mei.

Direction of strike:

Straight in and a little toward the centerline.

Damage:

The same as for Kd 19, although there could be more damage since it is closer to Cv 14 and the solar plexus.

Set-up point:

Same as for Kd 19.

Antidote:

This point can be an irretrievable death point strike if struck hard. CPR is really the only antidote here.

Healing:

Innervation and irrigation are the same as for Kd 18.

Used for stiff neck, seizures, palpations, intercostal neuralgia, vomiting, diarrhea, abdominal pain and distension, and indigestion.

Traditional functions are the same as for Kd 11.

Massage techniques are the same as for Kd 13.

Use with Liv 14, Gb 24, Liv 2, Liv 3, Liv 5, Th 6, Gb 34, Gb 40, Bl 18, Bl 19, Bl 20, Bl 17, Bl 21, Pc 6, Sp 9, St 40, Liv 13, Kd 22, Kd 25, and jiaji points corresponding to the level of pain for intercostal neuralgia.

For palpitations, use with Pc 6, Cv 17, Liv 14, Liv 3, Bl 14, Bl 15, Bl 17, Bl 18, Ht 7, and St 36.

Use with Gv 12, Pc 6, St 36, Liv 3, Liv 13, St 21, Bl 20, Bl 18, Bl 19, and Bl 21 for vomiting, indigestion, etc.

Applications:

The same as for Kd 19.

KD 21 (KIDNEY POINT NO. 21)

Chinese name:

Youmen (secluded door/pylorus).

Location:

6 cun above the umbilicus, 0.5 cun lateral to Cv 14.

Connections:

Chong mei.

Direction of strike:

Straight in and slightly toward the midline as for Kd 20.

Damage:

This is an extremely dangerous point because it combines the shock to the life force meridian (chong mei), as well as crossing over to Cv 14, which in itself is a very dangerous point strike. There will be instant heart stoppage and resultant death, especially if the point is struck between 11 A.M. and 1 P.M.

Set-up point:

A simple slap on the face will make this strike even more dangerous since the slap acts as a neurological shutdown, leaving the whole body vulnerable. When the strike to Kd 21 is felt, the nervous system gives up, as does the heart. So we have a double whammy here, with the heart and nervous system giving up at once!

Antidote:

There is no antidote! Many a cricket player has died as a result of being struck at Kd 21 and Cv 14 at midday. Not even immediate medical attention will suffice.

Healing:

Innervation is by the seventh intercostal nerve, and irrigation is the same as for Kd 18.

Used for abdominal pain, vomiting, diarrhea, intercostal neuralgia, distended stomach, stomach spasms, and chronic gastritis.

Traditional functions are the same as for Kd 11.

Massage techniques are the same as for Kd 13.

Use with Sp 5, Bl 66, Bl 18, Bl 20, Bl 19, Cv 12, Cv 13, Cv 14, St 21, St 36, Liv 3, and Pc 6 for predilection toward vomiting.

Use with Gv 20, Sp 3, St 36, Sp 9, Cv 4, Cv 6, Cv 12, Bl 21, Bl 20, Bl 18, Bl 19, Liv 14, Liv 13, Liv 3, Cv 9, and St 25 for stomachache, distended stomach, abdominal pain, etc. Use with Cv 12, Pc 6, Sp 4, Liv 3, St 44, St 36, St 40, Cv 11, Bl 20, Bl 18, Bl 21, and Bl 19 for morning sickness during the first five months.

Applications:

Any strike to this area will do. However, the strike is made even worse if a loose waist and attacking portion are used rather than the stiffer, karate-type attack.

KD 22 (KIDNEY POINT NO. 22)

Chinese name:

Bulang (stepping corridor).

Location:

In the fifth intercostal space, 2 cun lateral to the Cv meridian, approximately level to Cv 16.

Connections:

None.

Direction of strike:

Straight in.

Damage:

Again, this point is dangerous but not to the extent of Kd 21 because much more power has to be used to shock the heart, causing it to stop.

Set-up point:

Grab and jerk the wrist violently at H 5 and Lu 8. This will drain the heart and lungs of qi, thus causing great weakness and allowing the Kd 22 strike to have a much more lethal effect.

Antidote:

Place the palms on top of the head and use light to medium pressure downward. This will bring qi back up into the body. If the heart has stopped, use CPR.

Healing:

Innervation is by the anterior cutaneous branch of the fifth intercostal nerve and, deeper, the fifth intercostal nerve. Irrigation is by the fifth intercostal artery and vein.

Used for cough, asthma, pleurisy, intercostal neuralgia, rhinitis, gastritis, and bronchitis. Massage techniques are the same as for Kd 13.

Use with Th 6, Liv 5, Gb 34, Liv 14, Gb 24, Bl 18, Bl 19, Bl 17, St 40, Sp 9, Pc 6, and jiaji points at the level of the problem.

Use with Kd 23, Kd 24, and Kd 26 for intercostal neuralgia.

Use with Cv 17, Liv 14, Sp 18, St 15, Bl 18, St 18, St 16, Ht 1, Pc 2, Bl 44, Gb 21, SI 1, St 36, Bl 40, Liv 3, Liv 13, and Sp 6 for acute mastitis.

Applications:

1) A simple block with the left palm to his straight right, while the right palm attacks straight in to Kd 22.
2) Alternatively, you could take his hook left with your right palm and jerk it violently while your other palm attacks to Kd 20.

KD 23 (KIDNEY POINT NO. 23)

Chinese name:

Shenfeng (spirit's seal).

Location:

In the fourth intercostal space, 2 cun lateral to Cv 17.

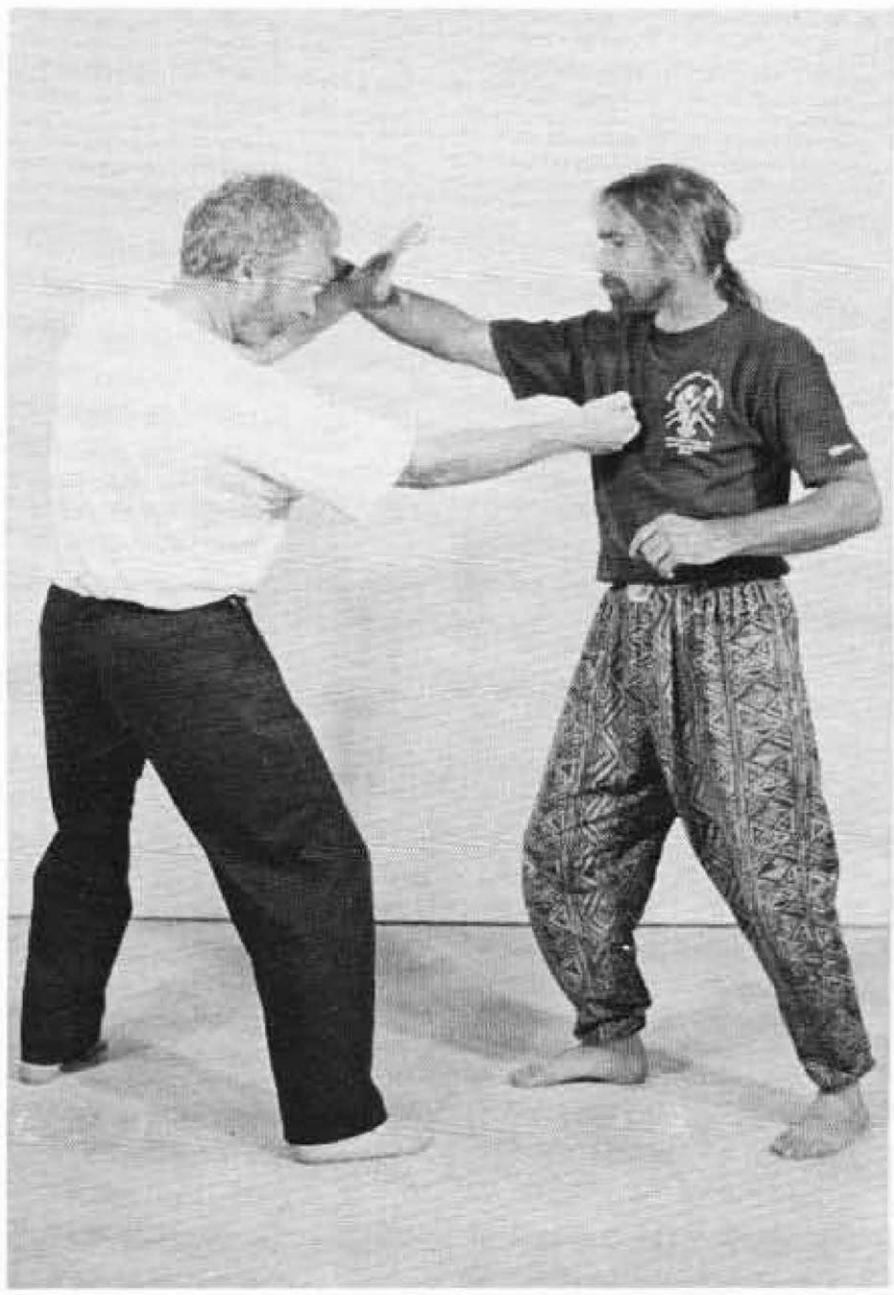


Figure 253

Connections:
None.
Direction of strike:
Straight in.
Damage:
This is one of those "spiritual points" that will damage the recipient's communication with his shen. It will also stop the heart and send a shock wave right into the upper chest area. As a result, he will be unable to carry on with the fight.
Set-up point:
Neigwan is good here, or you could use Lu 5 as an extreme qi drainage point just before the strike to Kd 23.
Antidote:
Use pressure all along both sides of the backbone, not touching the backbone, as a massage. This will reunite the patient with his spirit.
Healing:
Innervation is by the anterior cutaneous branch of the fourth intercostal nerve and, deeper, the fourth intercostal nerve.

Irrigation is by the fourth intercostal artery and vein.

Used for cough, asthma, a sensation of fullness in the chest and hypochondriac region, mastitis, pleurisy, intercostal neuralgia, and bronchitis.

From its name and its location proximal to Cv 17 (which is seen in the yogic tradition as being the region of the heart chakra), this point, in conjunction with *shendu*, or Gv 11, probably forms the energetic orb of the heart chakra traditionally.

Massage techniques are the same as for Kd 13. You can also use a loose fist to do percussion on this point.

Use this point with St 16, Gb 41, St 18, St 36, St 39, Liv 8, Sp 18, Gb 41, Sp 10, St 44, St 45, and Liv 1 for breast abscess.

Use with Lu 1, Lu 5, Lu 7, Co 4, Co 11, Cv 17, Bl 12, Bl 13, Bl 43, Bl 18, Liv 14, Liv 3, St 36, Kd 22, Kd 24, Kd 25, Kd 26, and Kd 27 for asthma, bronchitis, pleurisy, and so on.

Applications:
Use a one-knuckle right-handed attack to Kd 23 as your left hand grabs his right wrist and jerks it violently (fig. 253).

KD 24 (KIDNEY POINT NO. 24)

Chinese name:
Lingxu (spirit's ruins).
Location:
In the third intercostal space, 2 cun lateral to Cv 18.
Connections:
None.
Direction of strike:
Straight in above the pectoral with a slightly downward direction.

Damage:

This is another one of those spiritual points that will affect the communication between God and man. It will also stop the heart.

Set-up point:

Ht 3.

Antidote:

A complete qi balancing is required when the communication between God and man is affected. If the heart has stopped, use CPR.

Healing:

Innervation is by the anterior cutaneous branch of the third intercostal nerve and, deeper, the third intercostal nerve. Irrigation is by the third intercostal artery and vein.

Used for cough, asthma, pain and fullness in the chest and hypochondriac region, mastitis, intercostal neuralgia, bronchitis, and vomiting.

Massage techniques are the same as for Kd 13.

Use with Liv 14, Liv 13, Gb 24, Liv 3, Gb 34, Gb 41, Bl 17, Pc 6, Bl 18, Bl 19, Bl 20, Bl 21, Cv 12, and Cv 14 for pain and fullness of chest and hypochondriac regions.

See Kd 23 for treatment of asthma, bronchitis, and so on. See Kd 22 for treatment of intercostal neuralgia.

Applications:

Take his right straight with your left palm on the outside while your thumb knuckle (with a closed taijiquan fist) attacks his Ht 3 point toward you. Your right palm will now rebound and strike slightly downward onto Kd 24.

KD 25 (KIDNEY POINT NO. 25)

Chinese name:

Shencang (spirit's storage).

Location:

In the second intercostal space, 2 cun lateral to Cv 19.

Connections:

None.

Direction of strike:

Straight in and slightly downward into the chest.

Damage:

This point will also affect the lungs, causing immense grief and fear instantly, as well as physical weakness. For this reason, it will work well as a set-up point. It also affects the spirit, so at some later time, the communication between God and man will be disrupted, making for emotional disorders. The qi will be scattered with no direction.

Set-up point:

Lu 5. This combination is one of the best for qi drainage.

Antidote:

Rub both arms upward on the inside of the forearms and apply pressure to Gv 20.

Healing:

Innervation is by the anterior cutaneous branch of the second intercostal nerve and, deeper, the second intercostal nerve. Irrigation is by the second intercostal artery and vein.

Used for cough, asthma, chest pain, bronchitis, vomiting, and intercostal neuralgia.

Traditional indications include cough and asthma from kidney deficiency.

Massage techniques are the same as for Kd 13.

Use with St 9, Lu 1, Lu 7, Co 4, Co 10, Bl 11, Bl 12, Bl 13, Kd 7, Bl 43, Bl 17, Bl 18, and Liv 3 for severe coughing and wheezing that won't stop.

See Kd 23 for asthma, bronchitis, etc.

See Kd 22 for treatment of intercostal neuralgia.

Applications:

Strike his Lu 5 point in retaliation to his right hook. Then use that same elbow to strike downward into Kd 25.

KD 26 (KIDNEY POINT NO. 26)

Chinese name:

Yuzhong (amid elegance).

Location:

In the first intercostal space, 2 cun lateral to Cv 20.

Connections:

None.

Direction of strike:

Straight in and down.

Damage:

This point will also affect the lung qi and cause immediate qi drainage. If enough pressure is used, it will bring about a KO. The recipient feels immediately tired, to the point that he must sit down.

Set-up point:

Lu 5.

Antidote:

Same as for Kd 25.

Healing:

Innervation is by the anterior cutaneous branch of the first intercostal nerve, the medial supraclavicular nerve and, deeper, the first intercostal nerve. Irrigation is by the first intercostal artery and vein.

Used for cough, asthma, sensation of fullness in the chest and hypochondriac regions, bronchitis, vomiting, and intercostal neuralgia.

Massage techniques are the same as for Kd 13.

See Kd 22 for treatment of intercostal neuralgia.

See Kd 23 for treatment of asthma, bronchitis, fullness of the chest, etc.

Use with Gv 12, Cv 14, St 21, St 36, Liv 3, Liv 13, Pc 6, Bl 20, Bl 21, Bl 18, Bl 19, Bl 25, and Gb 41 for vomiting.

Applications:

The same as for Kd 25.

KD 27 (KIDNEY POINT NO. 27)

Chinese name:

Shufu (hollow residence).

Location:

In the depression at the lower border of the clavicle, 2 cun lateral to Cv 21.

Connections:

None.

Direction of strike:

Upward into the collarbone, usually using a one-knuckle punch.

Damage:

Great damage is done with this strike, along with qi drainage and severe local pain. KO will occur with a hard strike. An imbalance between left and right sides of the body will develop gradually, and if left untreated it will cause mental instability in later life, along with physical imbalance.

Set-up point:

Lu 5.

Antidote:

A complete qi balancing is required to stop the imbalance from getting worse.

Healing:

Innervation is by the medial supraclavicular nerve. Irrigation is by the anterior perforating branches of the internal mammary artery and vein.

Used for cough, asthma, chest pain, bronchitis, vomiting, abdominal distension.

Massage techniques are the same as for Kd 13. In addition, you can hold Kd 11 and Kd 27 as part of a balancing technique for the trunk of the body.

Use with Gv 22, Cv 17, Lu 1, Kd 7, Bl 43, Bl 12, Bl 13, Bl 14, Bl 15, Bl 17, Bl 18, Liv 3, Lu 7, Co 4, and Ht 7 for coughing and wheezing induced by rheumatic heart disease.

Use with Gb 20, Gv 14, Bl 10, Bl 13, Bl 17, Bl 43, Cv 22, Cv 13, Lu 9, St 36, Gv 12, Cv 12, Lu 8, St 40, Liv 3, and Co 10 for whooping cough.

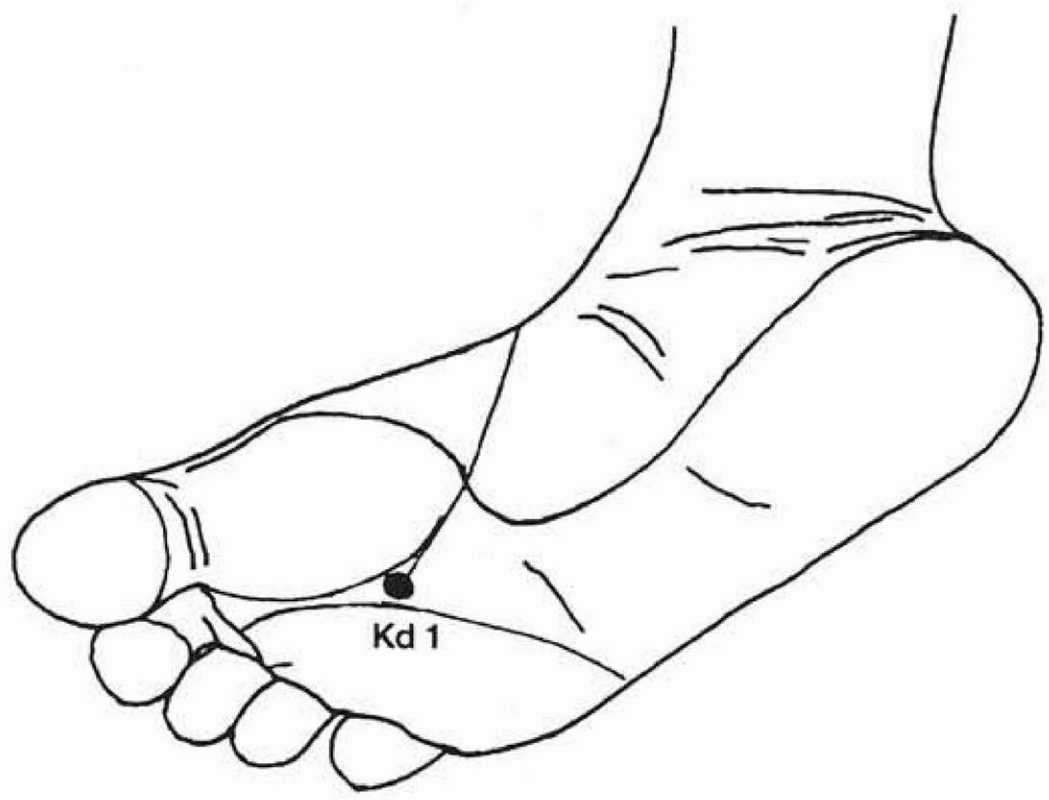
Use with Pc 6, Pc 5, Ht 8, Pc 4, Pc 3, Cv 12, Gv 6, St 25 St 36, Cv 4, St 29, Cv 9, St 28, Kd 7, Kd 5, Sp 9, Liv 13, Bl 18, Bl 13, Cv 11, Co 4, Cv 22, Bl 15, Bl 14, and Liv 14 for chronic heart failure.

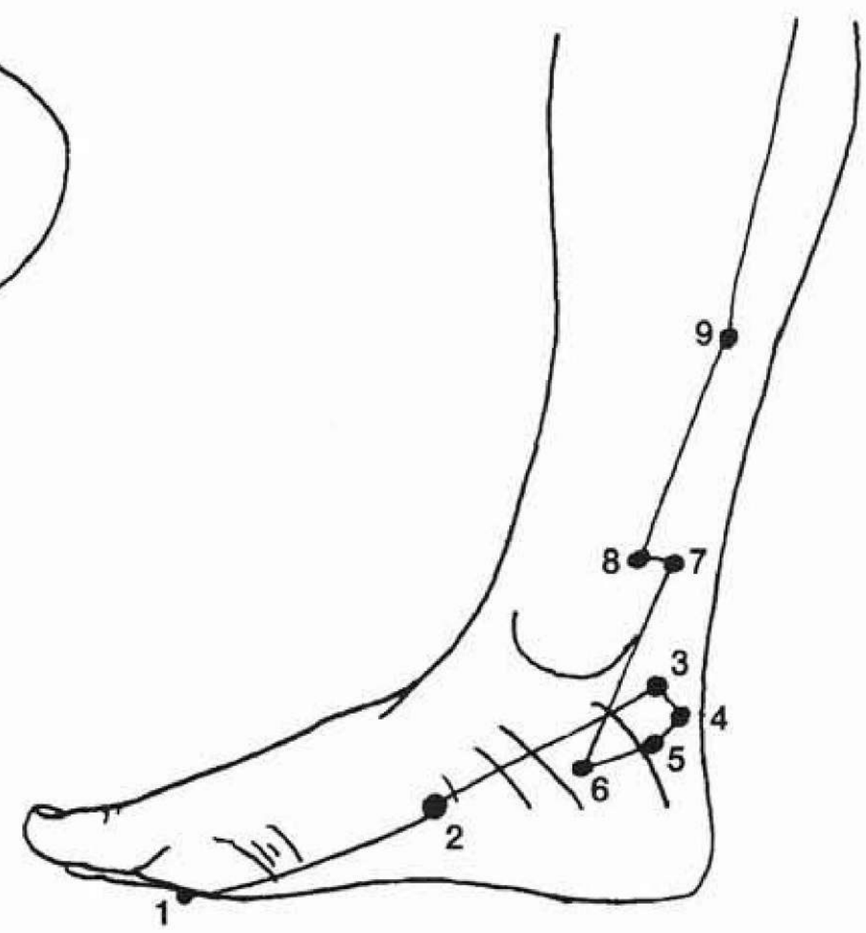
Use with Cv 17, Liv 14, Liv 3, Sp 18, St 15, St 36, Sp 6, Pc 7, Si 1, Bl 40, Bl 18, Bl 17, and Gb 21 for acute mastitis.

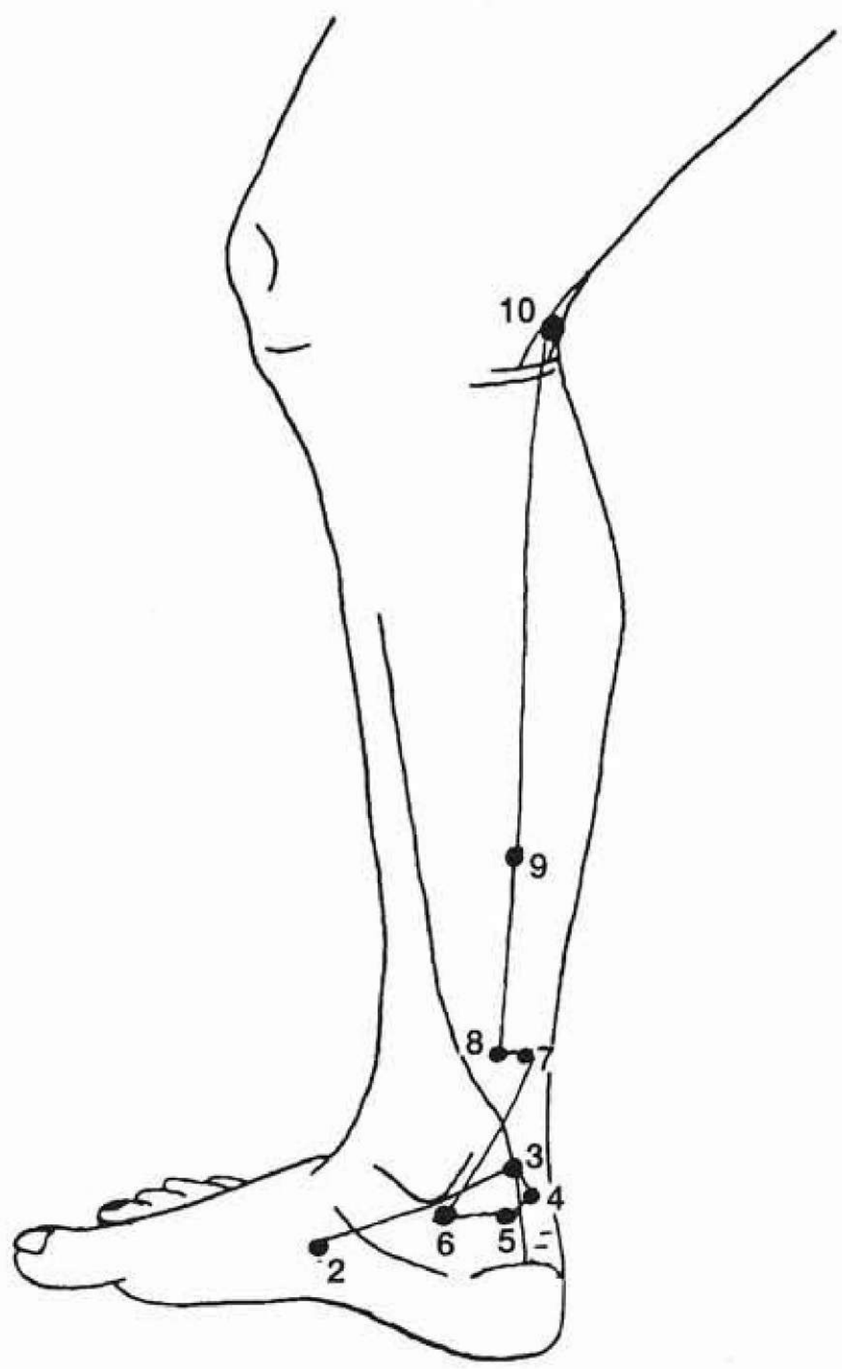
Applications:

He might attack with a hook punch. You should strike his right Lu 5 with your left knife edge, while your right one-knuckle punch attacks up into Kd 27.

This brings us to the end of the kidney meridian. The kidneys are one of the most sensitive organs in one's body, and some of the most deadly points lie along this meridian. Most of the points, however, require a degree of accuracy in order to gain the effects mentioned in this chapter.



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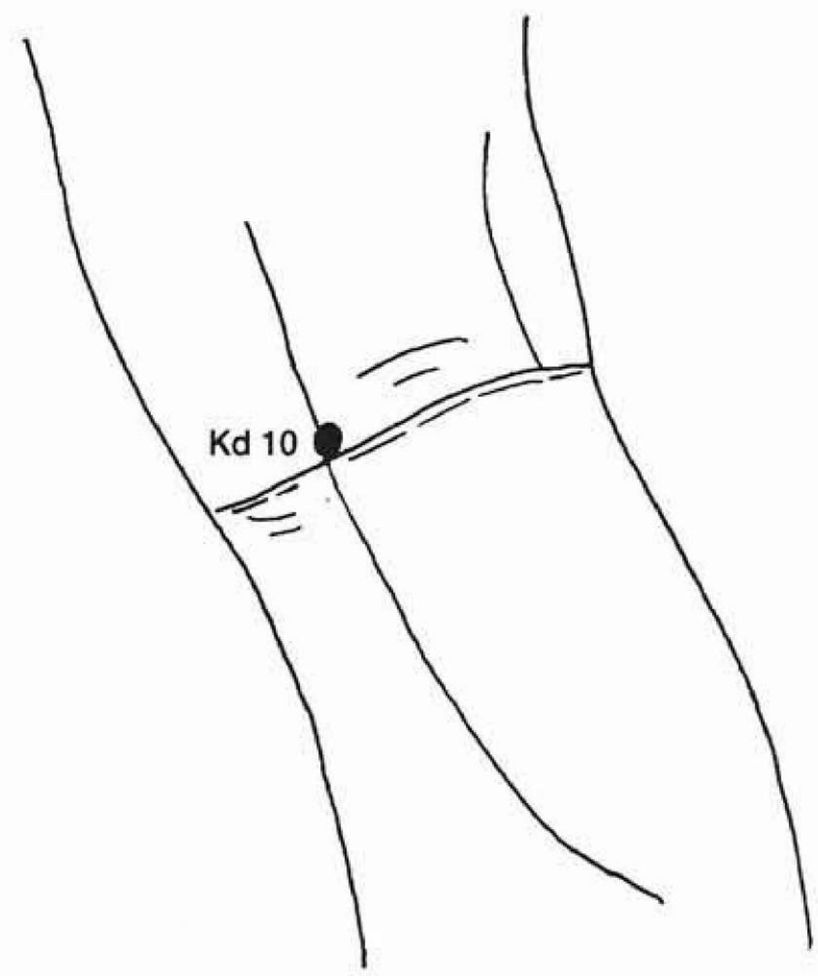
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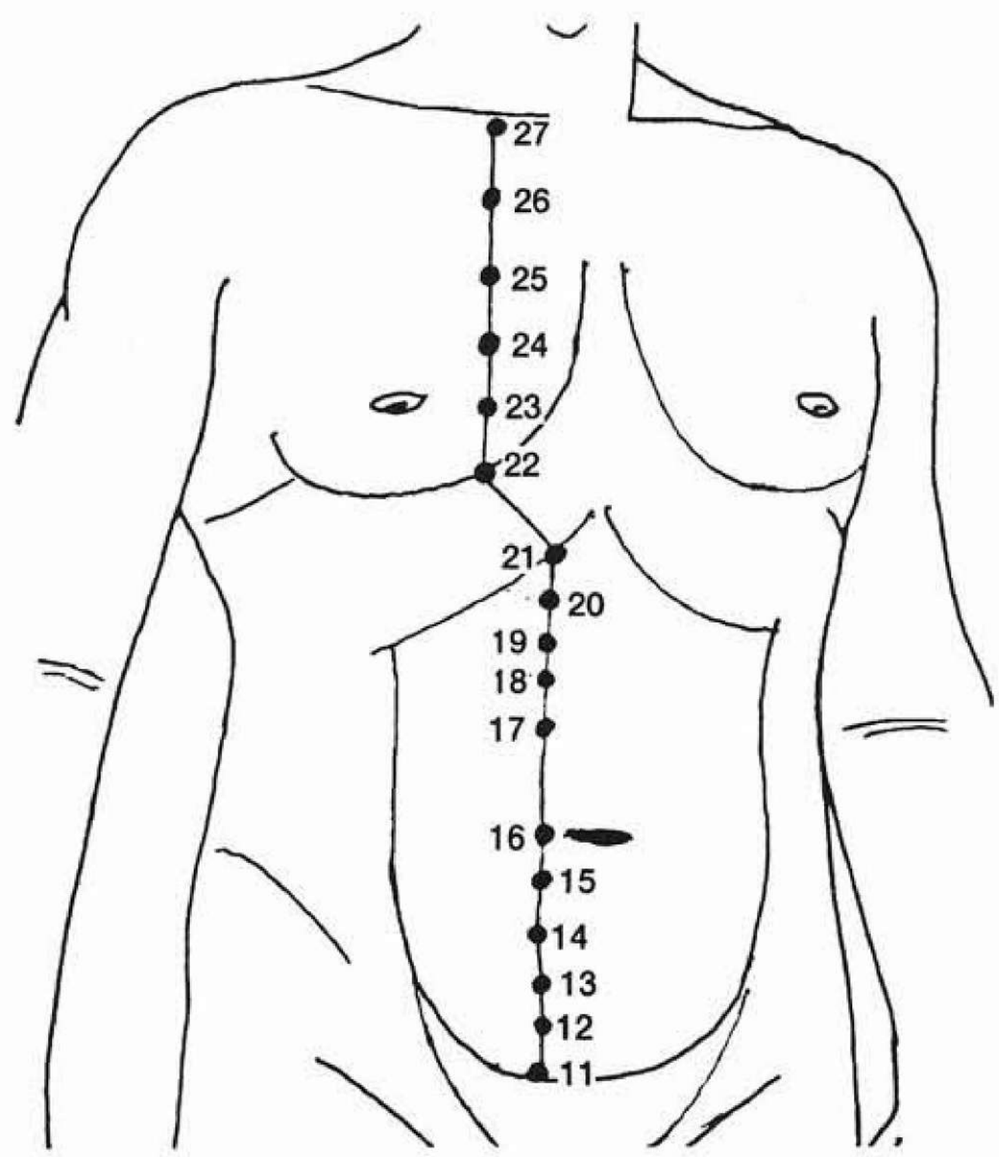
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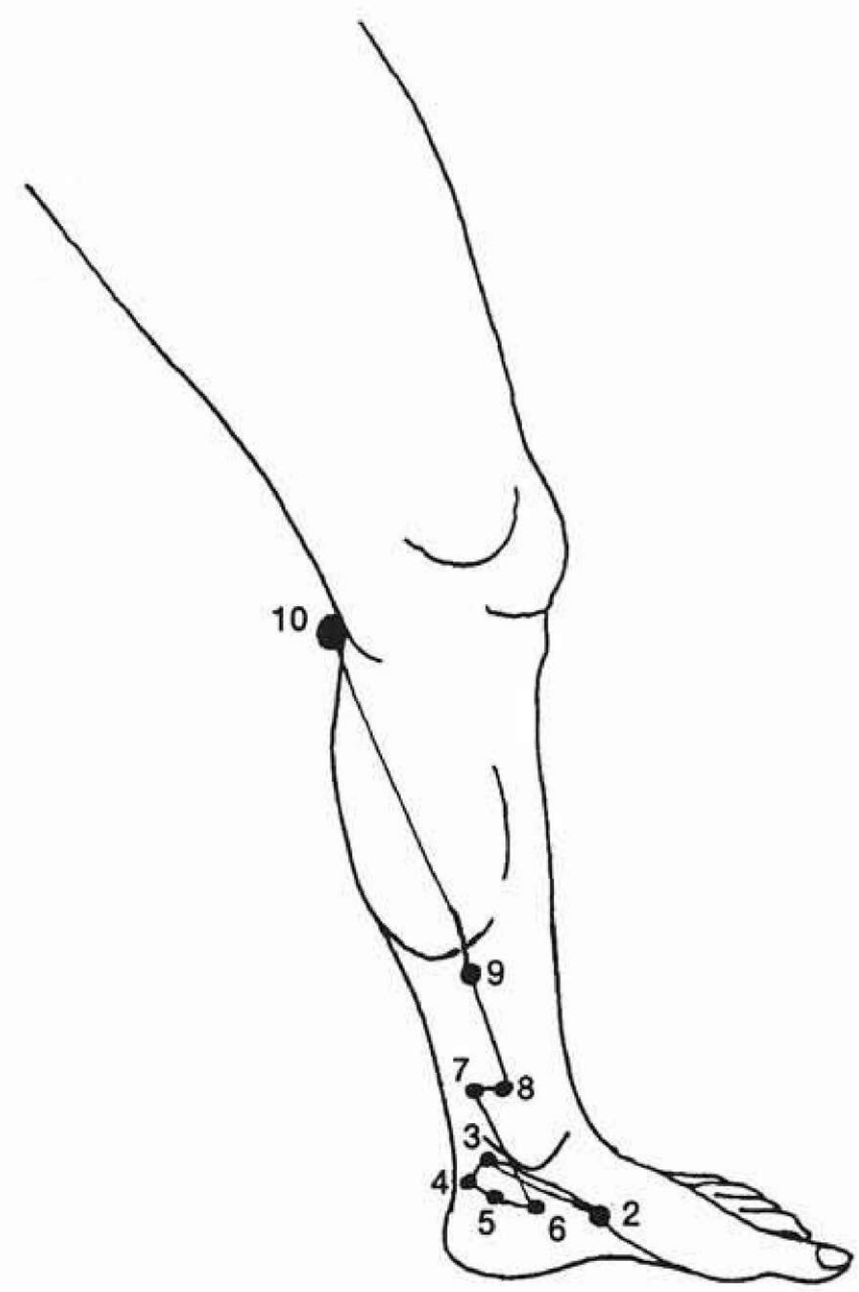
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Chapter 5

The Stomach Meridian

The stomach is a flexible bag surrounded by muscle. It lies on the left side of the abdomen, under a dome-shaped, muscular sheet called the diaphragm. Full, the stomach can contain up to 1.5 liters of food, which enters the stomach from a muscular tube called the esophagus. The food can be stored in the stomach for up to four hours. The muscles in the stomach wall contract and relax, thus mixing the food with digestive substances called enzymes. This produces a liquid called chyme, which passes into the small intestine.

The action of the stomach can be affected by many things, including the emotional state. Tests have shown that the stomach will contract when a person is feeling angry, so that no normal stomach action will take place. So the mind has the ability to stop all digestion when the person is not in a fit state to be digesting.

THE TCM VIEW

Traditionally in Chinese medicine, the stomach is a yang organ and has the Chinese element of earth. In the "social order," the stomach is in control of "ripening and rotting." The stomach also aids the spleen in its function of transporting and transforming. The spleen moves in an upward direction, while the stomach moves downward, so both balance each other out in the earth element.

The collective functions of the stomach are called "stomach qi" in TCM. After it breaks down the food, the stomach sends it down to the small intestine for further digestion, so we are told that stomach qi descends. And if the descending function of the stomach is faulty, this may cause nausea, vomiting, and other stomach disorders.

The stomach meridian runs from head to foot, so it has many points that are easily accessible for the martial arts. Basically, when a stomach point is struck, it damages the "earth" of the recipient, cutting his connection to earth and effecting a great qi drainage, causing nausea so great that the recipient has to lie down. Several points on the St meridian are above important internal organs, and so strikes to these points will cause quite dangerous things to happen within the body. The most dangerous part of the stomach meridian is in the neck area, where a number of points can cause death easily when struck in the correct direction or KO with even a light blow. St 9, for instance, is situated right over the carotid sinus, which is a nerve ending of the vagus nerve. (I will cover this point and nerve in the section on St 9.) The vagus nerve is very important to dim-mak. It is the 10th cranial nerve, branching off of the medulla

oblongata and extending upward and downward into the abdomen. An important nerve, the vagus divides into several branches that innervate vital structures in the body. These branches are the auricular, bronchial, cardiac (inferior and superior), celiac, esophageal, gastric, hepatic, laryngeal (recurrent and superior), meningeal, pharyngeal, and pyloric.

ST 1 (STOMACH POINT NO. 1)

Chinese name:

Chengqi (contain tears).

Location:

Between the eyeball and the midpoint of the infraorbital ridge. The point is above the inferior border of the orbit, in the orbicularis oculi muscle In its deep position within the orbit are the rectus inferior bulbi and the oblique inferior bulbi muscles.

Connections:

Co, Cv, Gb, upper meeting point of stomach/spleen divergent meridian. There is an internal path from Co 20 to Bl 1, then St 1.

Direction of strike:

St 1 is always struck straight in to the lower eye socket, using a small weapon such as a one-knuckle punch.

Damage:

St 1 is one of the more sensitive points and will be damaged easily by even a light blow to the area. Even a light blow is often enough to cause extreme nausea and drain qi from the upper body. A medium strike here will cause a KO, and a hard strike can cause death. This is a point that will slow the flow of *yang ming* qi (stomach and colon channels) through its connection to Co 20 and will drain the yang qi from the body in general. The liver is also affected by a strike to St 1 because not only does the liver control the eyes, but whatever happens to the eye area also has an effect upon the liver.

Set-up point:

Slam down onto Th 8, this will double the effect.

Antidote:

Neigwan rubbed upward on the inner forearm.

Healing:

Innervation is by a branch of the infraorbital nerve, the inferior branch of the oculomotor nerve, and the muscular branch of the facial nerve. Irrigation is by the branches of the infraorbital and ophthalmic arteries and veins.

Used for redness with swelling and pain of the eye, lacrimation when in wind, night blindness, facial paralysis, twitching of the eyelids, acute and chronic conjunctivitis, myopia, hypermetropia, astigmatism, convergent squint (esotropla), color blindness, glaucoma, cataracts, keratitis, retinitis pigmentosa, and inflammation or atrophy of the optic nerve.

Traditional indications include sore eyes, excessive tearing, opacity of the cornea, myopia, eyelid tic, mouth and eyes awry.

St 1 is a point of intersection with yang qiao mai, and the ren mai, colon channel, and liver

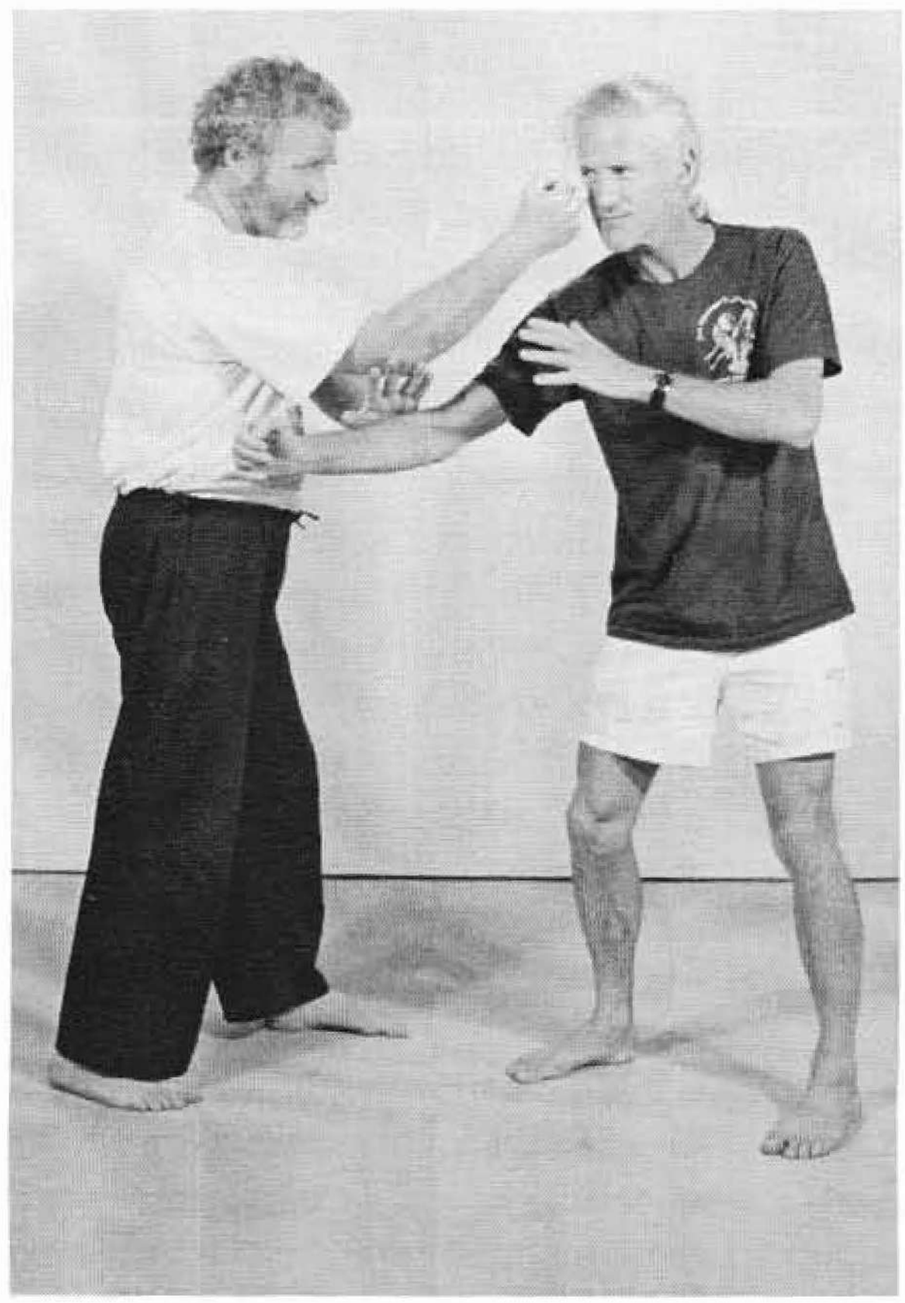


Figure 254

channel all have branches that pass through this point, so its traditional function is to influence these channels.

Massage techniques include a pushing straight and holding or clockwise or counterclockwise rotation for xu or shi conditions.

Use with Gb 20, Bl 1, *qiuhou* (an extra point), Co 4, Liv 3, Bl 18, Bl 23, St 36, Gb 37, Liv 2, Liv 14, and Gb 1 for optic neuritis or atrophy.

Use with Gb 20, Co 4, Bl 1, Gb 8, taiyang, Gb 37, St 3, Gb 1, Gb 43, Gb 44, Liv 2, Liv 3, Liv 5, and Gv 14 for conjunctivitis or red, swollen eyes.

For myopia, use with Gb 20, Co 4, Bl 1, St 36, St 2, Bl 2, Bl 4, Bl 5, Kd 5, Co 6, and Liv 3.

Applications:

Perhaps he attacks with a straight right. You will slam his forearm with your left palm as your right one-knuckle punch attacks straight in to St 1 (fig. 254).

ST 2 (STOMACH POINT NO. 2)

Chinese name:

Sibai (four whites).

Location:

Approximately 1 cun directly below St 1 in the infraorbital foramen between the orbicularis oculi and the quadratus labii superior muscles.

Connections:

None.

Direction of strike:

Downward into the cheekbone.

Damage:

Again, this point is quite sensitive and will cause considerable local pain and qi drainage, resulting in a KO and severe nerve damage. When struck, one feels a sinking sensation in the chest and then into the legs, which will become weak as a result of the downward draining qi.

Set-up point:

Same as for St 1.

Antidote:

Same as for St 1.

Healing:

Innervation is by a branch of the facial nerve, and the point is found directly on the infraorbitial nerve. Irrigation is by the branches of the facial and infraorbital artery and veins.

Used for redness and pain in the eye, facial paralysis and pain, twitching of the eyelids, allergic facial swelling, trigeminal neuralgia, keratitis, myopia, sinusitis, roundworm in the bile duct, and facial spasm.

Traditional indications are red, sore eyes, membrane over the eye, headache, dizziness, and mouth and eyes awry.

Traditional functions include eliminating wind, clearing vision and brightening the eyes, spreading liver qi, benefiting the gallbladder, relaxing the tendons, and relieving pain.

To massage, press and hold the point or do rotations clockwise or counterclockwise for xu or shi conditions. Light fingertip percussion is also good on this point.

Use with St 4, St 5, St 6, Gb 20, Liv 3, Gb 34, Co 4, St 36, Gb 14, St 44, and St 8 for facial paralysis or spasm.

For red, swollen eyes, use with Bl 1, St 1, Th 23, Gb 1, Liv 2, Liv 4, Gb 37, and Co 4.

Use with Co 4, Co 10, Co 11, Co 20, bitong, Lu 7, Liv 2, Liv 3, St 36, and Lu 5 for sinusitis.

Applications:

Same as for St 1, only use a downward one-knuckle punch. You can use the palm heel to gain access easily to both St 1 and St 2, and in this case, where both points are struck, it is best to use the downward blow and attack both points.

ST 3 (STOMACH POINT NO. 3)

Chinese name:
Juliao (great seam).
Location:
Directly below St 2 at the level of the lower border of the ala nasi, on the lateral side of the naso-labial groove. Either of the two lateral flared portions of the external nose.
Connections:
Colon meridian.
Direction of strike:
Up and into the cheekbones.
Damage:
When struck hard enough, this strike will send a shock wave up into the front of the brain, causing disorientation. It will also cause great nausea.
Set-up point:
Neigwan.
Antidote:
Rub neigwan up the inside of the forearm.
Healing:
Innervation is by the branches of the facial and infraorbital nerves. Irrigation is by the branches of the facial and infraorbital arteries and veins.

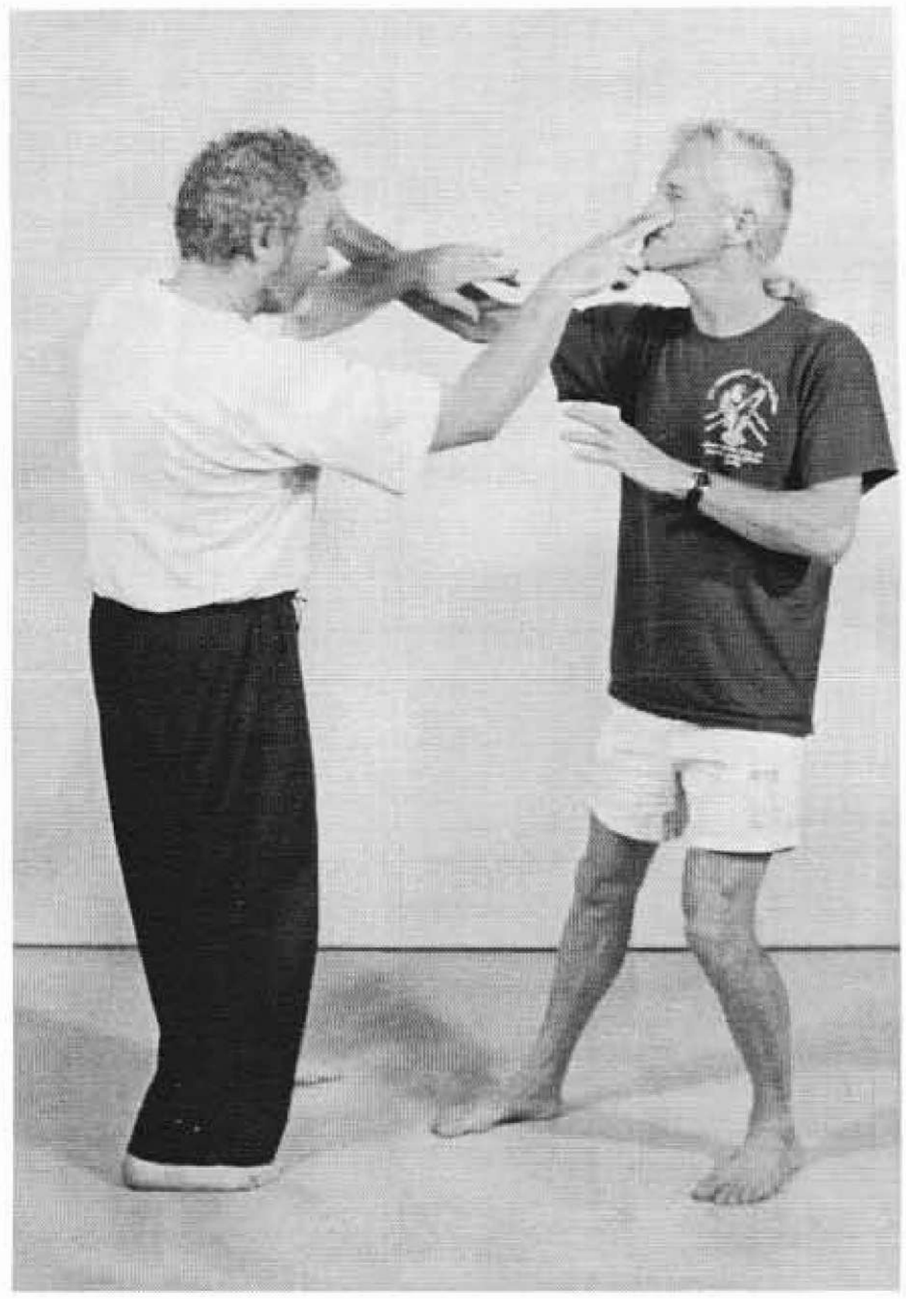


Figure 255

Used for facial paralysis, twitching of the eyelids, epistaxis, toothache, swelling of the lips and cheeks, rhinitis, and trigeminal neuralgia.

As a point of intersection with yang qiao mai, its traditional function is to influence that meridian.

Massage techniques are the same as for St 2.

Use with St 1, yuyao, Liv 3, Gb 20, St 36, and Pc 6 for twitching of the eyelids. (Bl 1, Gb 1, and Th 23 would also help.)

For facial paralysis or spasm, use with Gb 20, Gb 14, St 4, Co 4, Gv 26, St 36, St 44, Co 19, taiyang, *jiachengjiang* (an extra point), Gb 34, Liv 3, and Si 3.

Use with Co 4, St 44, St 2, St 5, and St 6 for toothache.
Applications:
Use the posture from taijiquan called "sit back ready." Block his right hook or straight with your left palm as your right one-knuckle punch strikes up into St 3 (fig. 255).

ST 4 (STOMACH POINT NO. 4)

Chinese name:
Dicang (earth granary).
Location:
Lateral to the corner of the mouth, directly below St 3, in the orbicularis oris muscle and, in its deep position, in the buccinator muscle.
Connections:
Colon.
Direction of strike:
Straight in to the corner of the mouth using a small weapon.

Damage:

Again, this strike will shock the whole system when struck hard enough, causing a KO. However, this strike must be quite accurate.

Set-up point:

Si 8.

Antidote:

Do a complete qi rebalancing.

Healing:

Superficially, innervation is by the branches of the facial and infraorbital nerves; deeper it is by the terminal blanch of the buccal nerve. Irrigation is by the facial artery and vein.

Used for facial paralysis, trigeminal neuralgia, excessive salivation, spasm of the eyelid, and deviation of the mouth.

Traditional indications include mouth and eyes awry, muteness, drooling, eye tic.

As a point of intersection with the colon channel and the yang qiao mai, this point's traditional function is in facial acupuncture to treat the medial thigh region.

Massage techniques are the same as for St 2.

Use with St 6, Co 20, Co 4, St 5, St 36, St 44, Co 19, Liv 3, Th 17, Gb 34, taiyang, and St 8 for facial paralysis.

Use with Cv 24, Co 4, St 36, Sp 3, and Liv 3 for excessive salivation.

Use with St 5, St 6, Co 4, Liv 3, Gb 20, St 3, and Si 3 for awry mouth.

Applications:

Slam the outside of his right elbow with your left palm as your right one-knuckle punch attacks to the right corner of his mouth at St 4. (Of course, you have also stepped to your left to avoid his attack.)

ST 5 (STOMACH POINT NO. 5)

Chinese name:

Daiying (big welcome, or big meeting).

Location:

Anterior to the angle of the mandible, on the anterior border of the masseter muscle, in the groovelike depression appearing when the cheek is bulged, 0.5 cun anterior to St 6.

Connections:

Gallbladder.

Direction of strike:

Straight in to the lower part of the jaw and slightly back toward the back of the head.

Damage:

Any strike to this area of the jaw will cause a KO, especially if the point is associated with the Gb meridian. Obvious jaw damage is also apparent. But the primary damage is in the shock to the brain that jaw strikes cause. (This is why the jaw is always a common target in the movies.) St 9 is a great KO point. It sends a shock wave of qi into the brain, causing dizziness at least and KO at most, not to mention a broken jaw, etc. The direction must be straight in from the side to have the greatest effect. This point also has a connection to St 9 via St 1 and St 8, which is why it is called "great meeting." So we can get a KO from both the action upon the heart via the carotid sinus at St 9 and from too much yang qi to the brain. This point is called a "big point" since it has abundant qi and blood: hence the great amount of qi going into the brain when struck.

It must also be mentioned that the stomach has vagus nerve endings entering at its base. A strike to St 9 will also have an effect upon the vagus nerve, making this point one of the better KO points.

Set-up point:

Neigwan to drain qi. You could also use Si 8 or Lu 5 for this one. All will work equally well.

Antidote:

Depending on how bad the strike was, you might have to use CPR or one of the revival methods shown earlier in this book. Note that time will usually bring the recipient around as well.

Healing:

Innervated by the facial and buccal nerves and irrigated anteriorly by the facial artery and vein.

Used for trismus (lockjaw), deviation of the mouth, swelling of the cheek, parotitis (swelling or infection of one or both saliva glands), and toothache.

A branch of the Gb meridian runs from Gb 1 down to St 5, looping back up to the infraorbital region and down again to the neck where it rejoins the main channel, so St 5's traditional functions are to influence the Gb meridian.

Massage techniques are the same as for St 2.

Use with St 6, Cv 24, Co 4, Gb 34, Liv 3, Gb 21, Si 13, and Si 3 for lockjaw.

See St 4 for treatment of awry mouth and facial paralysis.

Use with St 2, St 3, St 4, St 6, St 7, Si 18, Si 3, Co 4, Liv 3, Gb 43, Gb 44, and Gb 34 for swollen cheeks.

See St 3 for toothache.

Applications:

Bob under his right attack and cut across with your right fist over the top of his right forearm to St 5.

ST 6 (STOMACH POINT NO. 6)

Chinese name:

Jiache (jaw vehicle).

Location:

One finger breadth anterior and superior to the lower angle of the mandible, where the masseter attaches at the prominence of the muscle when the teeth are clenched.

Connections:

Gallbladder.

Direction of strike:

In to the jaw at an angle of about 45 degrees toward the backbone.

Damage:

All strikes to the tip of the jaw are dangerous. First of all, a strike to St 6 will cause an instant KO. (It is the classic KO, with every movie star from John Wayne to Sean Connery having made this strike famous.) The reason it works so well is that this point is very close to the "mind point," which will stop signals from getting to the brain from the central nervous system. A strike here will also cause concussion by way of a shock to the brain, bringing about KO, nausea, and loss of memory. A concussion is a violent jar or shock to the brain that causes an immediate change in its function and can include loss of consciousness. For a mild concussion, the signs and symptoms include temporary loss of consciousness, memory loss, and emotional instability. For a severe concussion, the signs and symptoms include prolonged unconsciousness, dilated pupils, change in breathing, disturbed vision and equilibrium, and memory loss. The extent of injury can only be determined by a physician. If the concussion is mild, the injured person may be sent home after examination, but only if a responsible person is present to stay with the injured person and watch for serious symptoms. Follow the doctor's instructions carefully if you are the responsible person, as there are several symptoms to watch for and report to the doctor. The first 24 hours after the injury are critical, but serious aftereffects can appear later. The total extent of the injury may not be apparent for 48 to 72 hours. However, complete recovery is likely with early diagnosis and treatment.

Set-up point:

You want to drain the qi before a strike to the tip of the jaw around St 6, so you could use neigwan or Lu 5 as a set-up point.

Antidote:

Use one of the main "heart starters" (pressure downward to St 11 or a very hard strike to Kd 1 at the base of the foot with a small weapon) if the heart has stopped, or use Gb 20, squeezing upward into the head.

Healing:

Innervation is by the great auricular nerve and the facial and masseteric nerves. Irrigation is by the

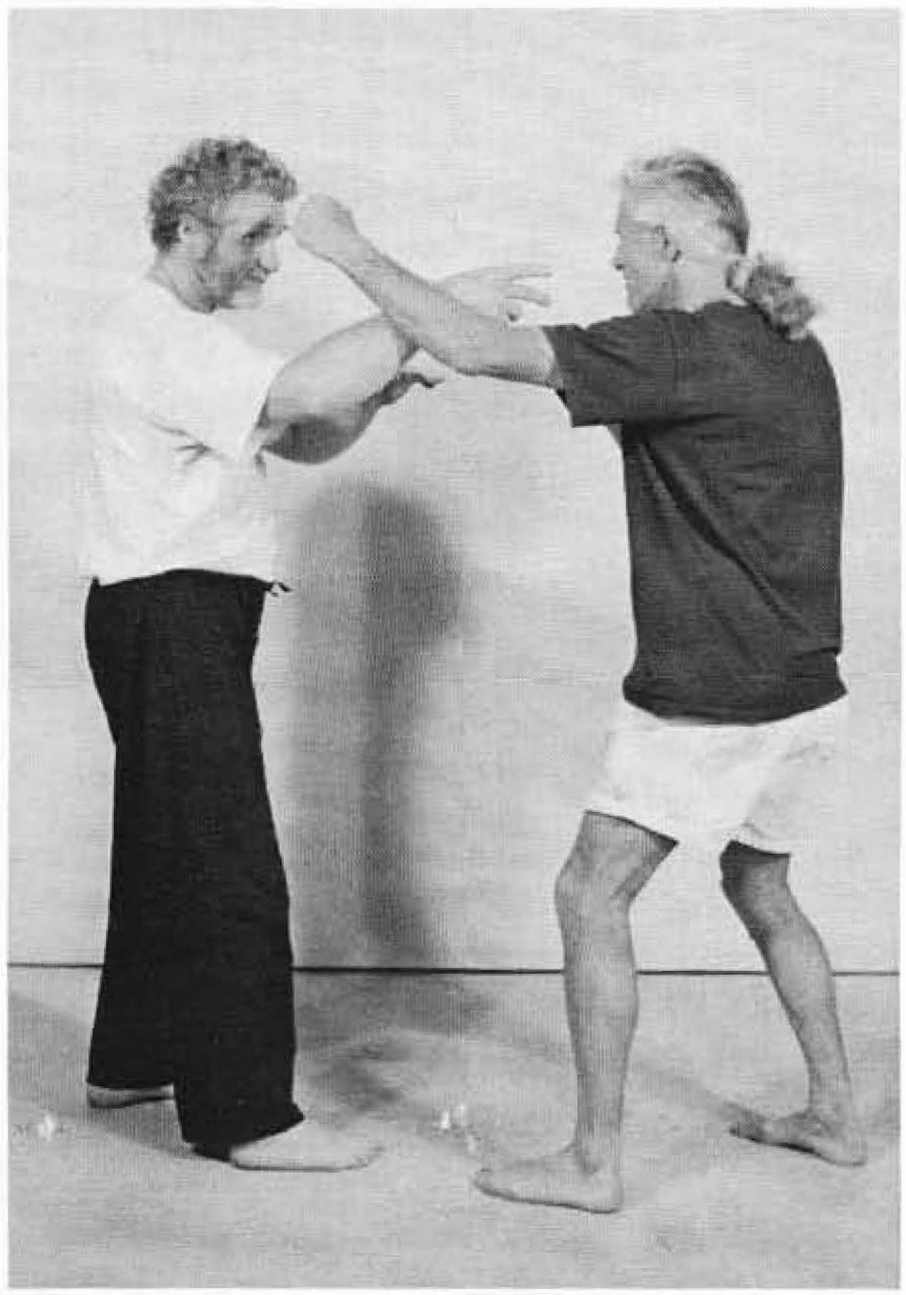


Figure 256

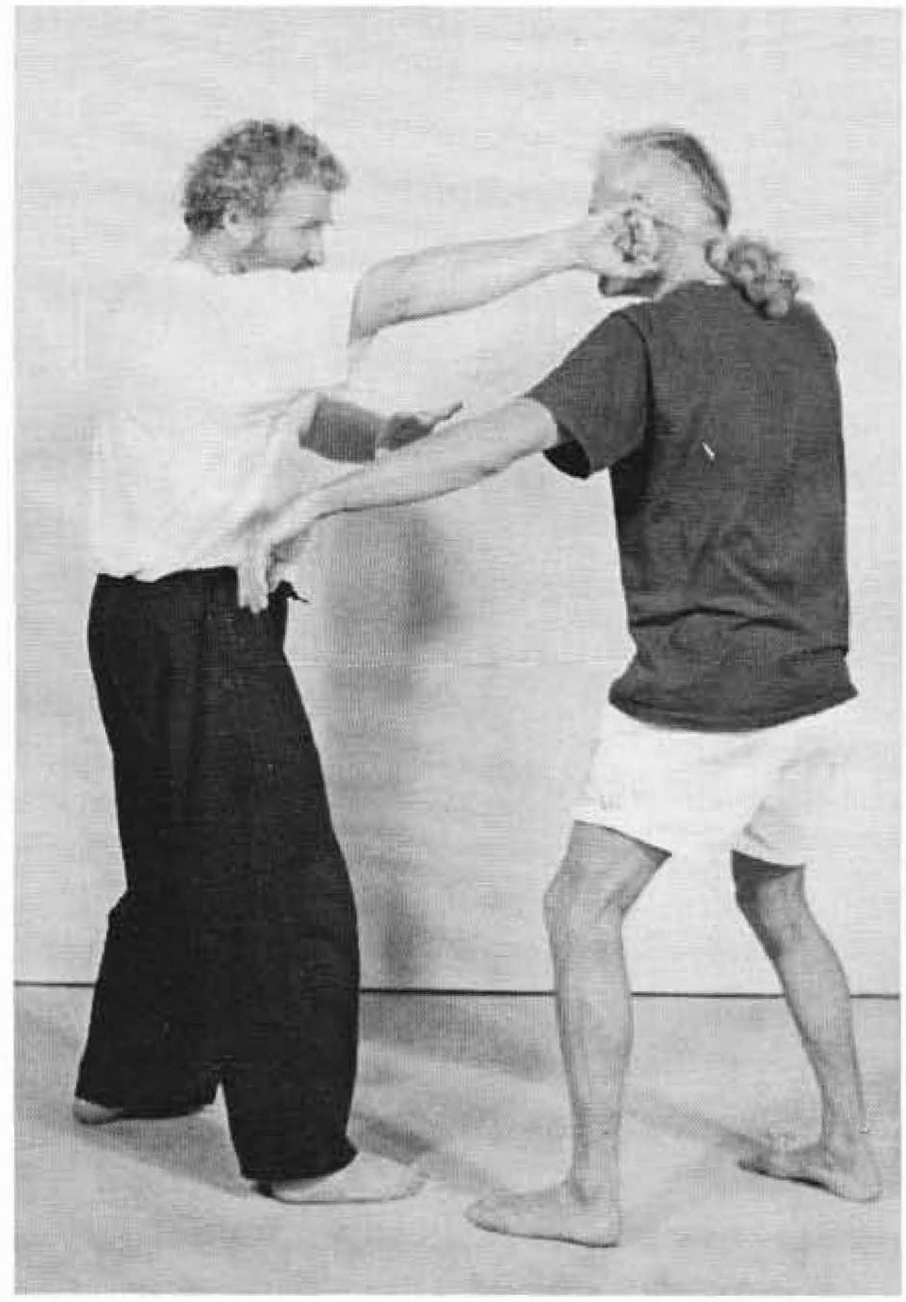


Figure 257

masseteric artery and vein. Used for facial paralysis, swelling of the cheek, toothache, trismus, pain and stiffness of the neck, mumps, and temperomanibular arthritis.

Traditional indications include toothache, locked jaw, mouth and eyes awry, stiff neck.

Traditional functions are to disperse wind, remove obstructions from jing luo, adjust circulation of qi, and clear heat from yang ming.

Massage techniques include pressing and holding the point and rotating clockwise or counterclockwise for xu or shi conditions. Also, doing fingertip percussion on this point can be useful; press slowly with both thumbs and release quickly, pulling the thumbs apart.

Use with Co 4, Gb 34, St 5, Gb 21, Liv 3, Pc 6, Ht 7, and Cv 24 for locked jaw or spasm of the masseter muscle.

Use with Th 17, Co 4, St 5, Liv 3, and Co 11 for acute parotitis.

Use with Th 17, St 4, St 2, St 5. St 7, St 8, Co 4, Gv 26, St 18, Gb 14, Liv 3, St 40, St 36, Gb 34, and Pc 6 for facial paralysis from CVA.

Applications:

1) You could open the attacker up using the penetration punch (fig. 256) and then continuing to the jaw at St 6 (fig. 257).
2) Or you could simply attack straight across in defense of his right straight, cutting over his right forearm and up to strike St 6 at a 45-degree angle.

ST 7 (STOMACH POINT NO. 7)

Chinese name:

Xiaguan (lower hinge).

Location:

In the depression at the lower border of the zygomatic arch, anterior to the condyloid process of the

mandible, located with the mouth closed. Below this point is the parotid gland and the origin of the masseter muscle.

Connections:

Point of intersection with the Gb meridian.

Direction of strike:

In at an angle of about 45 degrees just in front of the earlobe.

Damage:

Again, this point is a qi drainage point and will cause KO when struck with a smaller weapon such as a one-knuckle punch. A feeling like a tickle in the throat down the front of the same side of the neck is felt, followed by a loss of power in the legs. Ear problems are also apparent with this strike, and they can last for years.

Set-up point:

Neigwan or Lu 5. A hard strike on top of the head will also act as a very good set-up for this point.

Antidote:

Treat Co 10 with mild to heavy thumb pressure.

Healing:

Innervation is by the zygomatic branch of the facial nerve and the auriculotemporal nerve and, at its deepest position, the mandibular nerve. Superficially, irrigation is by the transverse facial artery and vein and, deeper, the maxillary artery and vein.

Used for deafness, tinnitus, otorrhea (discharge from the ear), facial paralysis, toothache, motor impairment of the jaw, trigeminal neuralgia, temporomandibular arthritis, spasm of the masseter muscle, and otitis media.

Traditional indications include toothache, tinnitus, earache, pus in the ear, deafness, dislocated jaw, and mouth and eyes awry.

Traditional functions are to eliminate pathogenic wind, invigorate the jing luo, and soothe and remove obstructions from the joints.

Massage techniques are the same as for St 6.

Use with Th 17, Th 21, Th 3, Si 19, Gb 20, Gb 41, Si 3, Gv 20, and Kd 3 for deafness.

Use with St 6, St 5, St 3, St 44, Co 4, Kd 3, and Bl 11 for toothache.

Use with Co 4, Gb 34, St 5, St 6, Gb 21, Gv 26, Liv 2, Liv 3, St 3, Gb 20, Liv 14, and Bl 18 for lockjaw.

Applications:

Same as for St 6. Or you could block his right straight with your right palm, then bring that same palm back into St 7 using a backfist strike.

ST 8 (STOMACH POINT NO. 8)

Chinese name:

Touwei (head support, head safeguard).

Location:

0.5 cun within the anterior hairline at the corner of the forehead. 4.5 cun lateral to the Gv meridian. The point is found in the galea aponeurotica on the superior margin of the temporalis muscle.

Connections:

There is an internal path from St 8 to Gv 24.

Direction of strike:

Straight down onto the side of the head, usually using a palm strike.

Damage:

Because it is a stomach point, this point will cause concussion with more nausea than any of the other head strikes. Great local pain is felt along with a qi drainage, then KO. Death can occur if this strike is hard enough.

Set-up point:

Any type of damage to the elbow on the side of the head to which you are about to strike will work well as a set-up here.

Antidote:

Apply finger pressure straight inward to Gv 24. (Or use any of the Western medicine treatments for concussion.)

Healing:

Innervation is by the branch of the auriculotemporal nerve and the temporal branch of the facial nerve. Irrigation is by the frontal branches of the superficial temporal artery and vein.

Used for headache, blurring of vision, ophthalmoplegia, lacrimation when exposed to wind, migraine headache, psychosis, and facial paralysis.

Traditional indications include sore eyes with excessive tearing, blurred vision, spasm of the eyelid, headache, dizziness, and wheezing accompanied by irritability and fullness of the chest.

As a point of intersection with the gallbladder and colon meridians and yangwei mai, its traditional functions are to dispel wind, relieve pain, and brighten the eyes.

Massage techniques are the same as for St 6.

For psychosis, use with Co 4, Pc 6, Ht 7, Si 3, Liv 3, Liv 2, Liv 4, Kd 1, Gv 14, Gb 20, Cv 13, Cv 14, Cv 15, Cv 17, Pc 5, Th 6, St 40, Bl 18, Bl 19, Bl 14, Bl 15, Bl 25, Pc 8, Sp 6, Gv 20, yintang, Co 11, and Kd 4.

Use with Lu 7, Co 4, Co 11, Gb 20, Gv 20, Liv 2, Liv 3, St 36, Cv 12, Gb 14, and Gb 21 for migraine headaches.

Use with Bl 1, Bl 2, Liv 3, St 1, St 2, St 3, St 4, Gb 14, and Gb 20 for eyelid tic.

Applications:

You could block his right straight with your right p'eng-type block and then, using your left hand upon his elbow, pull with your right palm and push with your left palm to damage the elbow before striking straight down onto St 8 with your right palm.

ST 9 (STOMACH POINT NO. 9)

Chinese name:

Renying (man's welcome).

Location:

Level with the tip of the Adam's apple, just on the course of the common carotid artery, on the anterior border of the sternocleidomastoideus muscle. In the platysma muscle, 1.5 cun lateral to the laryngeal prominence at the meeting of the anterior margin of the sternocleidomastoid and the thyroid cartilage.

Connections:

Bladder and colon.

Direction of strike:

In to the neck at an angle toward the backbone.

Damage:

St 9 is one of the major dim-mak points. It is easy to get to, and its effect is devastating, ranging from KO for a light blow to death for a heavy blow. St 9 is situated right over the carotid sinus. The carotid sinus is a baroreceptor, responsible for detecting an increase in blood pressure. When it detects this increase, it sends a signal via the vagus nerve, of which it is a part, to the vasomotor center of the brain, which initiates a vasodilatation and slowing of the heart rate to lower the blood pressure to normal.

The martial artist is concerned with a phenomenon called the *carotid sinus reflex*, the decrease of the heart rate as a reflex reaction from pressure on or within the carotid artery at the level of its bifurcation. This reflex starts in the carotid sinus, a pocket in the wall of the carotid artery at its division in the neck. Carotid sinus syndrome is a temporary loss of consciousness or a KO that sometimes accompanies convulsive seizures because of the power of the carotid sinus reflex when pressure builds up in one or both carotid sinuses (or from a strike). This syndrome can be activated artificially by striking to the area of the carotid sinus, St 9.

I have done extensive research on the carotid sinus, seeking out the most knowledgable people in the world. I wanted to know exactly why it causes a person to black out (sometimes even when only stroked in this area). Other people have knocked themselves out when they have turned their heads suddenly because of a hypersensitive carotid sinus. In striking to St 9, we fool the brain into believing that deadly high blood pressure is present. (In many cases, high blood pressure *is* present when one is struck in this area because of the carotid artery being pinched.) My research told me that this was not a point to be played around with, as many people were doing at that particular time, usually to show what good martial artists they were, purely for ego. Some people discovered that they could effect an easy KO by striking to this part of the neck; however, none knew why the KO occurred. Nor did they know the dangers of such strikes. I wrote an article about nine years ago showing the dangers of such strikes and exactly why the KO occurred. It was the first such article, I believe, that showed the medical implications of such a strike. Since then, martial artists have been a little more careful when executing these KOs. But KOs should never be done just to show off. They should only be used in a self-defense situation because the dangers are great. For instance, a recipient can die several years later from stroke caused by the gradual disintegration of the internal wall of the carotid artery (hence the "delayed death touch" phenomenon). The martial artist is able to use a very common medical procedure to his or her advantage. Many doctors will perform the procedure of tweaking the carotid sinus with the fingertips in order to bring the blood pressure down. However, this procedure should only be done if the patient is about to die from high blood pressure! It is a very dangerous procedure!

One of my students in Argentina is a master surgeon. He and his team were performing an operation on the carotid sinus to remove a tumor! However, as an example of the sensitivity of the carotid sinus, when they so much as touched the sinus, the heart rate dropped dramatically. So they were in a dilemma about how to operate without killing the patient.

St 9 also has an effect upon emotional energy and, in the long run, will cause the recipient to have a "detached" feeling of floating, a disconnection between head and body.

It is a medical fact that striking St 9 on the right side will have a greater effect than on the left side. Western medical science cannot explain this, but TCM and dim-mak can. The right side of the body is considered to be yang, while the left side which is relatively yin. When striking to St 9 point on the right side, we attack the yang side after having set up the point with a yin strike to Pc 6. This yin strike has a far greater affect on the yang side of the body because it is opposite.

First Observations of a St 9 Knockout

Here we have the first observations by doctors of a St 9 strike back in 1940 (Jokl 1941):

> In July 1940 there was an opportunity to observe for the first time a knock out caused by a strike to the right carotid sinus in a fencer. This case, which to our knowledge is the first observation of its kind, appears to be of great physiological interest. The padded tip of the blade first hit the victim beneath the right clavicle. [No particular points were struck here, but this is the area of "the power band," which, when struck, takes all power from the upper body and is in keeping with the effects of these two strikes on the fencer.]
>
> The blade subsequently bent over and the tip slipped over the clavicle, and with a sharp impact, hit the right carotid sinus [St 9] from below. The victim immediately lost control over his movements. He stumbled backward, his arms dropped, his knees bent and he fell to the ground unconscious. More than one second had elapsed between being struck and losing consciousness. He was weak for four hours afterward after regaining consciousness some 3 minutes later!

What happened to the recipient is in keeping with the St 9 strike, and most people who receive such strikes, either from irresponsible martial artists in seminars or accidentally in sports, for instance, report similar effects. (Some people are affected more or less, depending on the sensitivity of their carotid sinus.)

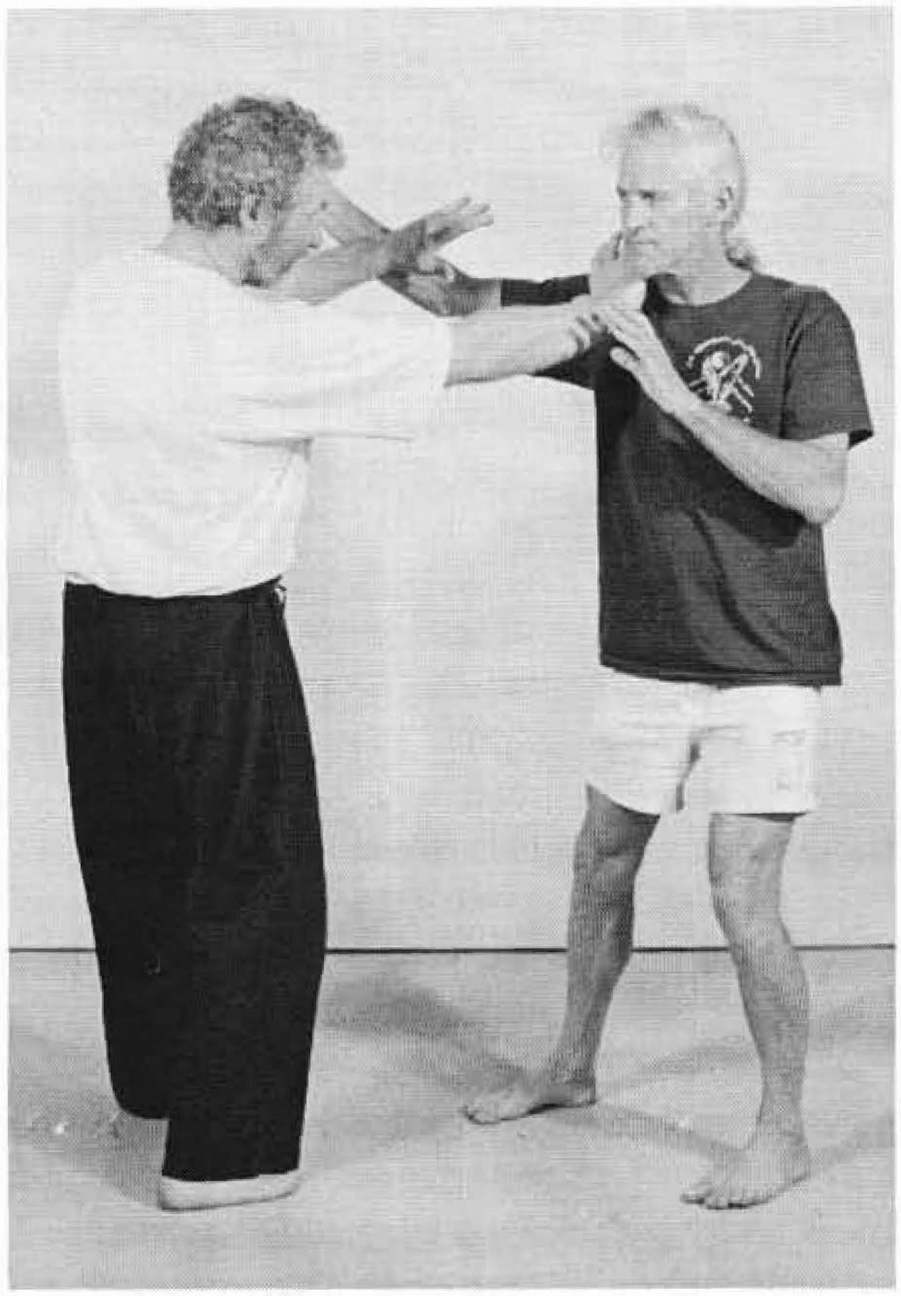


Figure 258

Set-up point:

There are really only three set-up points for St 9. The first one is neigwan, or Pc 6. I have experimented under controlled situations and have found that the St 9 shot works anywhere, anytime. However, with the set-up of neigwan, the KO is effected using much less pressure. Pc 6 must be struck either straight in or in a direction that is slightly toward you. The other set up points are Lu 8 and Ht 5. These are usually activated by grabbing the wrist and jerking violently, thus draining qi from the body.

Antidote:

The antidote to a St 9 shot is to squeeze Gb 20 (in back of the skull) upward into the head, which will bring yang qi back into the head. If the recipient has been knocked out and the heart has not recovered, then you must use CPR, of course, and, failing that, you must use one of the heart-starting methods discussed elsewhere in this book.

Healing:

Innervation occurs superficially by the cutaneous cervical nerve and the cervical branch of the facial nerve, and, deeper, by the sympathetic trunk. Laterally, it is by the descending branch of the hypoglossal nerve and the vagus nerve. Irrigation is by the superior thyroid artery, the anterior jugular vein, and, laterally, the internal jugular vein, at the bifurcation of the internal and external carotid arteries.

Used for high or low blood pressure, asthma, goiter, distension and soreness in the throat, speech impediment, dizziness, and facial flushing.

Traditional indications include swollen throat, cough, wheezing, swelling of the neck, scrofula, and delirium.

Traditional functions are to regulates the qi and blood and benefit the throat.

To massage, press and hold only one side at a time or do rotations clockwise or counterclockwise for xu or shi conditions. NOTE: *Be very careful with this point!*

Use with Si 17, Co 4, Co 11, St 36, Kd 3, Pc 6, Sp 6, Co 18, and Liv 3 for goiter.

For hypertension, use with Co 11, St 36, Pc 6, Ht 7, Liv 2, Liv 3, Sp 10, Bl 17, Bl 18, Bl 15, and Liv 14.

Use with Gv 26, Liv 3, St 36, Pc 6, Gv 25, and Gv 20 for hypotension.

Applications:

There are many ways to access St 9, so here is one of the best. He attacks with a right hook. Swivel on your heels and strike his right neigwan point in a direction that is away from him. A split second later, your right knife edge will cut into St 9 point in the correct direction, toward the backbone (fig. 258). Done correctly, this will cause death! Done lightly, it will cause KO.

ST 10 (STOMACH POINT NO. 10)

Chinese name:

Shuitu (water prominence).

Location:

At the anterior border of the sternocleidomastoideus, midway between St 9 and St 11.

Connections:

None.

Direction of strike:

Straight in to the neck from the side at an angle of about 45 degrees.

Damage:

This point had always stood in the shadow of St 9. It is, however, just as dangerous as St 9 and, when struck exactly on the point, is considered by many doctors to be even more dangerous. A hard strike here causes an immediate rush of yang qi to the head, causing KO. In addition, the face goes red and the tongue turns blue. This strike adds qi to the head; there is also an immediate shock to the head area. The recipient will fall down a split second afterward. Combined with neigwan, you have a most dangerous strike.

Set-up point:

Neigwan.

Antidote:

Strike downward onto Gb 21 on each shoulder and swipe violently outward to the shoulders.

Healing:

Innervation occurs by the cutaneous cervical nerve superficially and, deeper, by the superior cardiac nerve issued from the sympathetic nerve and the sympathetic trunk. Irrigation is by the common carotid artery.

Used for sore throat, asthma, disease of the vocal cords, and goiter.

Massage techniques are the same as for St 9. (Again, *care should be taken with this point.)*

Use with Gb 20, Gv 14, Bl 11, Cv 22, Gv 4, Th 3, Bl 10, Gv 12, Bl 12, Cv 23, St 9, Gv 3, Gb 26, Liv 2, Liv 3, Sp 6, Co 4, Co 11, Kd 7, Ht 7, Ht 6, St 2, and Pc 6 for enlarged thyroid.

Use with Co 4, Co 11, Co 18, Liv 2, and St 40 for sore throat.

Applications:

Same as for St 9.

ST 11 (STOMACH POINT NO. 11)

Chinese name:

Qishe (qi's residence).

Location:

At the superior border of the sternal extremity of the clavicle, between the sternal head and the clavicular head of the sternocleidomastoideus muscle, directly below St 9.

Connections:

Travels internally to Gv 14 from this point.

Direction of strike:

Downward into the "clavicle notch." You can access this point from above the clavicle or from under the clavicle (from on top is better).

The clavicle, or collar bone, is a long, slightly curving bone that forms the frontal (anterior) part of each shoulder (pectoral) girdle. Located just above the first rib on each side of the ribcage, clavicles attach to the sternum in the middle of the chest and, laterally, to the acromion of the scapula (forming the acromioclavicular joint).

Damage:

St 11 is called the "heart starter" because it does just that in emergency situations. However, this point

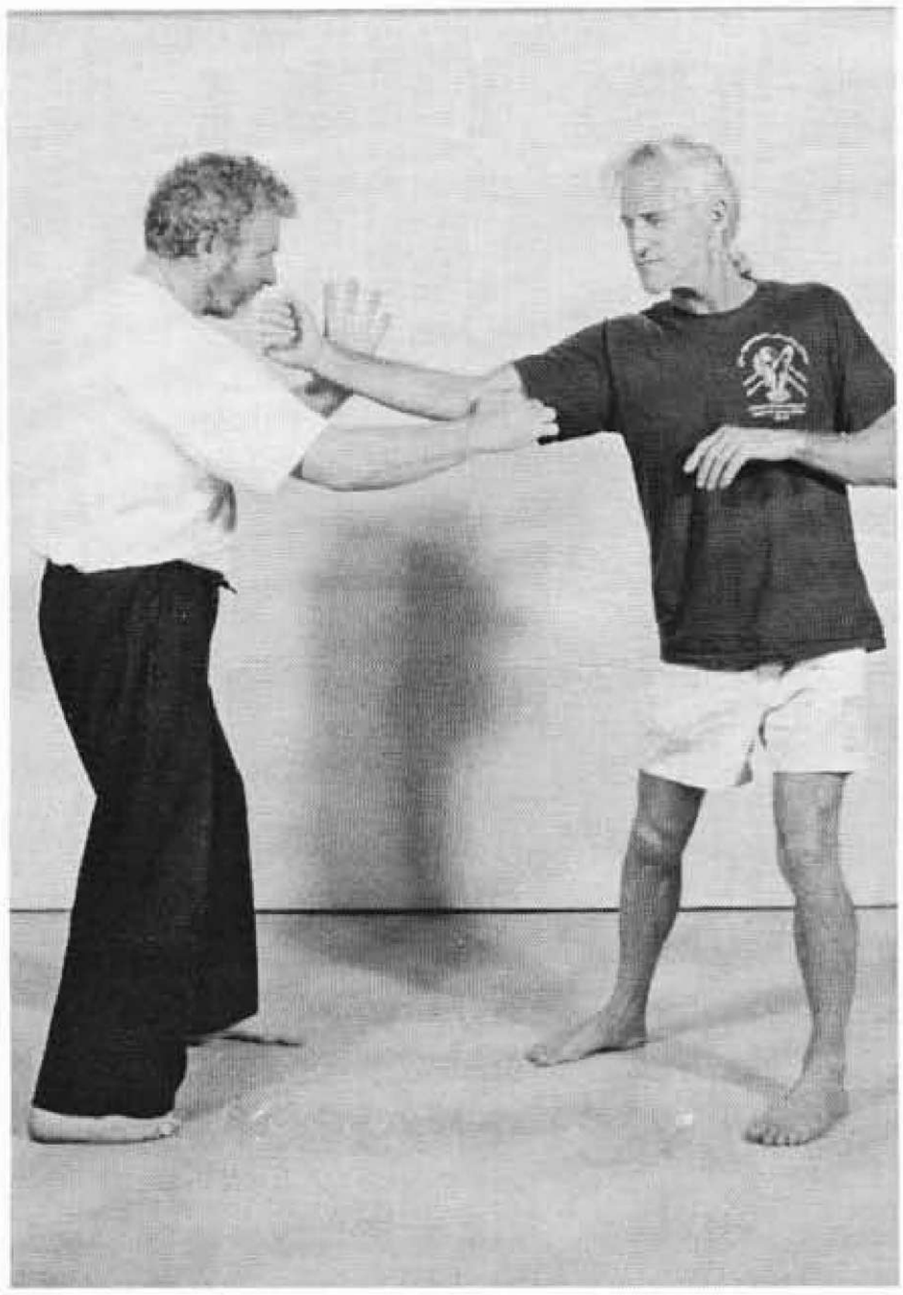


Figure 259

will change whatever state the patient was in before being struck here. So if someone is awake (as in an attacker), then this point will stop his heart. If his heart has stopped, hard thumb pressure into the collarbone at this point will sometimes be enough to start the heart again. Because a strike downward into St 11 will stop the heart, it is not a point to play around with. Combine this strike with a clockwise strike to his left pectoral and a counterclockwise strike to his right pectoral at St 15 and 16 points, and you have a very dangerous heart stopper.

Set-up point:

Use Ht 3, struck toward you, as the set-up point.

Antidote:

CPR.

Healing:

Innervation is by the medial supraclavicular nerve and the muscular branch of the ansa hypoglossi. Irrigation occurs, superficially, by the anterior jugular vein and, deeper, by the common carotid artery.

Used for sore throat, asthma, pharyngitis, goiter, and scrofula.

To massage, press and hold the point or do rotation clockwise or counterclockwise for xu or shi conditions.

Use with Co 4, qiying, Cv 22, Co 11, Gb 20, Th 3, Cv 17, Gv 14, biliao, St 10, St 9, Co 18, Cv 23, Liv 2, Liv 3, St 40, Sp 10, Bl 18, and Bl 17 for simple goiter.

For pharyngitis, use with Co 4, Co 11, Lu 5, Lu 7, Co 18, Th 17, Si 16, Cv 23, Cv 22, and Cv 17.

Applications:

You can use a hammer punch or a one-knuckle punch down onto the clavicle or a claw-type weapon that digs into the top of the clavicle at the notch. To access the set-up point, you could take his right straight with your left palm while your right thumb knuckle attacks to Ht 3 (fig. 259).

ST 12 (STOMACH POINT NO. 12)

Chinese name:

Quepen (empty basin).

Location:

In the midpoint of the supraclavicular fossa, 4 cun lateral to the Cv meridian, or in the depression at the middle of the superior border of the clavicle and directly above the nipple.

Connections:

This is where Gv 14 reunites via the internal pathway. The meridian travels internally to St 30, Th, Gb, Co, Si, Cv and Lu (divergent meridians).

Direction of strike:

Downward into the clavicle, usually using a claw type of weapon, a one-knuckle punch, or a hammer fist.

Damage:

This is an interesting point since it is used to take the will to fight away. Anyone who has been struck here will agree on this—you just cannot carry on fighting after this point has been struck because

usually the clavicle, which is quite a weak bone, will break, causing great local pain and energy drainage. Also, since it is associated with Gv 14 (meeting place of yang), it affects the communication between yin and yang in the whole body and drains yang qi. It can be used with St 11 to cause great qi loss. It can be used in a grappling situation to stop the fight or in an attacking situation where you have to block and reattack, etc.

Set-up point:

Lu 5 is a good drainage point to use with this strike, as is neigwan. Or, if the situation lends itself to a downward strike to Cv 17, then all the better.

Antidote:

Use any of the qi balancing methods mentioned in earlier chapters. (See a doctor if the clavicle is broken, of course.)

Healing:

Innervation is by the intermediate supraclavicular nerve superficially; deeper, it is by the supraclavicular portion of the brachial plexus. Irrigation is by the transverse cervical artery.

Used for cough, asthma, sore throat, pain in the supraclavicular fossa, hiccups, intercostal neuralgia, and scrofula.

Massage techniques are the same as for St 11.

Use with Si 17, Lu 11, Co 4, Co 11, Bl 11, Bl 12, Bl 17, Lu 2, Lu 5, Liv 2, St 44, St 45, Kd 1, Kd 2, Liv 3, Sp 10, Cv 22, and Cv 23 for acute tonsillitis where the throat is blocked with hot and cold sensation.

Use with Kd 7, Lu 1, Liv 3, Lu 5, Lu 9, Liv 14, Gb 21, Kd 27, Kd 11, Bl 13, Bl 43, and dingchuan for sports-induced asthma.

Applications:

You could use a triple strike here (i.e., block and attack his right hook with your right palm at Lu 5, draining qi; then use a quick elbow shot to Cv 14 followed by a right claw to St 12.

ST 13 (STOMACH POINT NO. 13)

Chinese name:

qihu (qi's household).

Location:

At the middle of the inferior border of the clavicle, on the mamillary line (4 cun lateral to the Cv meridian).

Connections:

None.

Direction of strike:

Up under the clavicle directly below St 12.

Damage:

Whereas St 12 drains qi, St 13 adds yang qi to the head, causing loss of balance to the falling down point. With most of the St points, it will also cause great nausea. This is one of those points where the qi is said to enter the meridian, so a strike here also unbalances the yin and yang energy in the whole body.

Set-up point:

Neigwan struck upward on the inside of the forearm.

Antidote:

Rub neigwan in the opposite direction or use Gb 21 pushing downward.

Healing:

Innervation is by the branches of the supraclavicular nerve and the anterior thoracic nerve. Irrigation is by the branches of the thoracoacromial artery and vein and, superiorly, the subclavicular vein.

Used for asthma, cough, fullness of the chest, bronchitis, hiccups, and intercostal neuralgia.

To massage, press and hold the point, rotate clockwise or counterclockwise for xu or shi

conditions, rub across the point, or press slowly with both thumbs and release quickly, pulling the thumbs apart. Fingertip percussion can be used on this point.

Use with Lu 1, Lu 5, Lu 7, Lu 9, Co 4, Co 10, Cv 17, Kd 7, Kd 27, Liv 14, Liv 3, St 36, Bl 12, Bl 13, Bl 17, and Bl 18 for asthma, bronchitis, cough, etc.

Applications:

Block the inside of his right forearm at Pc 6 upward with your left palm while your right one-knuckle punch attacks to St 13 upward under the clavicle.

St 14 (STOMACH POINT NO. 14)

Chinese name:

Kufang (storehouse).

Location:

In the first intercostal space, on the mamillary line, 4 cun lateral to Cv 20.

Connections:

None.

Direction of strike:

Strike slightly downward onto the top of the pectoral. Usually using a palm heel strike.

Damage:

Immediately, the recipient feels a sickly feeling in the whole chest area, quickly growing to full nausea. The strike must be fairly hard to have an effect, though.

Set-up point:

Neigwan.

Antidote:

Rub neigwan up the forearm.

Healing:

Innervation is by the branch of the anterior thoracic nerve. Irrigation is by the thoracoacrominal artery and vein and the branches of the lateral thoracic artery and vein.

Used for sensation of fullness and pain in the chest and hypochondriac region, cough, bronchitis, intercostal neuralgia.

Massage techniques are the same as for St 13.

Use with Bl 12, Bl 13, Bl 17, Bl 20, Lu 1, Lu 7, Lu 5, Cv 17, St 13, St 12, Cv 14, Lu 10, and Si 1 for bronchitis, cough, etc.

Use with Liv 2, Liv 3, jiaji points level with the region of pain, Bl 17, Bl 18, Bl 19, Bl 20, Liv 14, Gb 24, and Cv 17 for intercostal neuralgia.

Applications:

Take his right hook and strike neigwan toward you as your right palm slams downward onto the upper pectoral.

ST 15 (STOMACH POINT NO. 15)

Chinese name:

Wuyi (room screen).

Location:

In the second intercostal space, on the mamillary line, 4 cun lateral to Cv 19.

Connections:

None.

Direction of strike:

There are several directions for this strike, the most effective being a clockwise strike on his left side and a counterclockwise strike on his right side. The palm is used, and as it makes contact, twist your

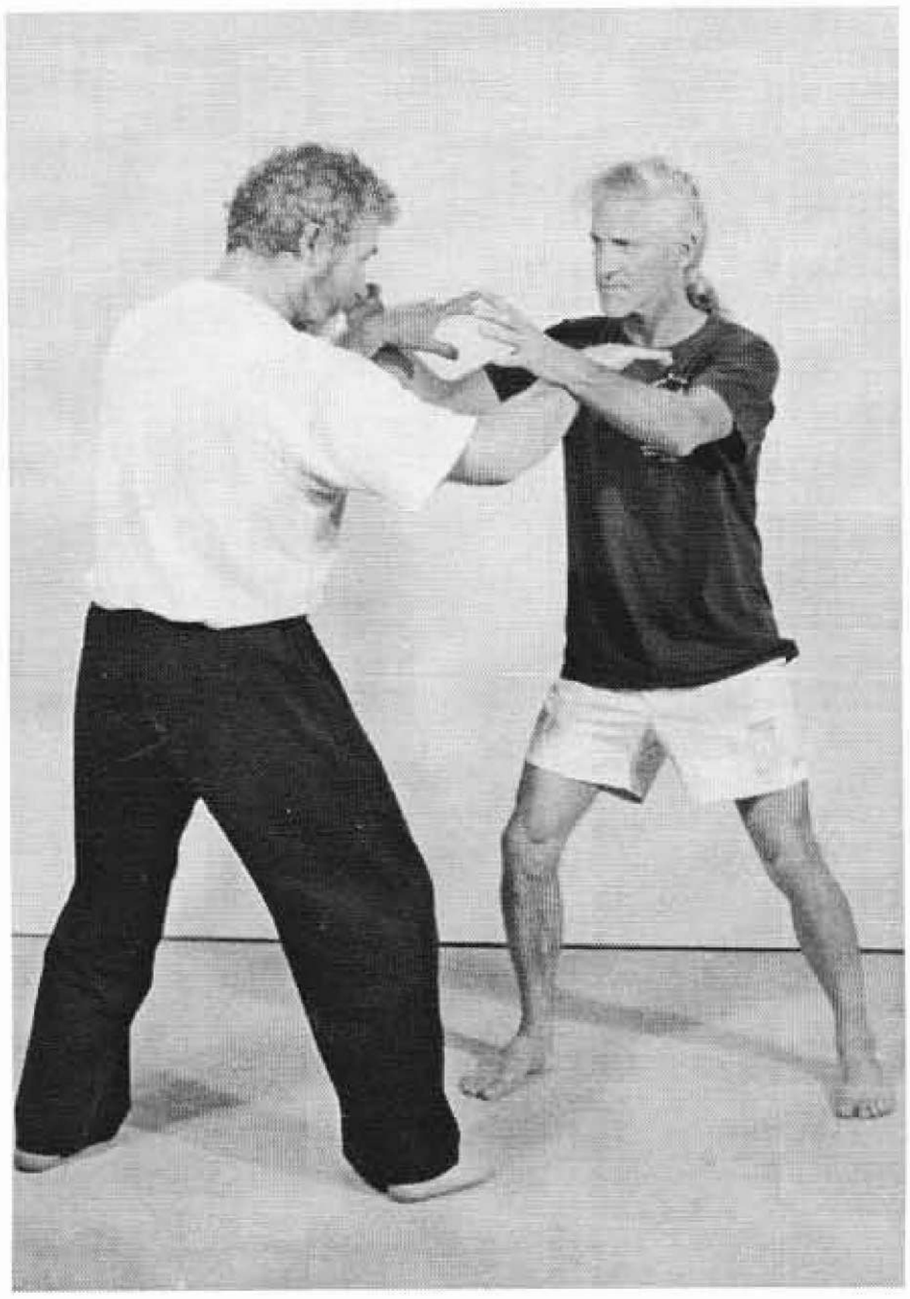


Figure 260

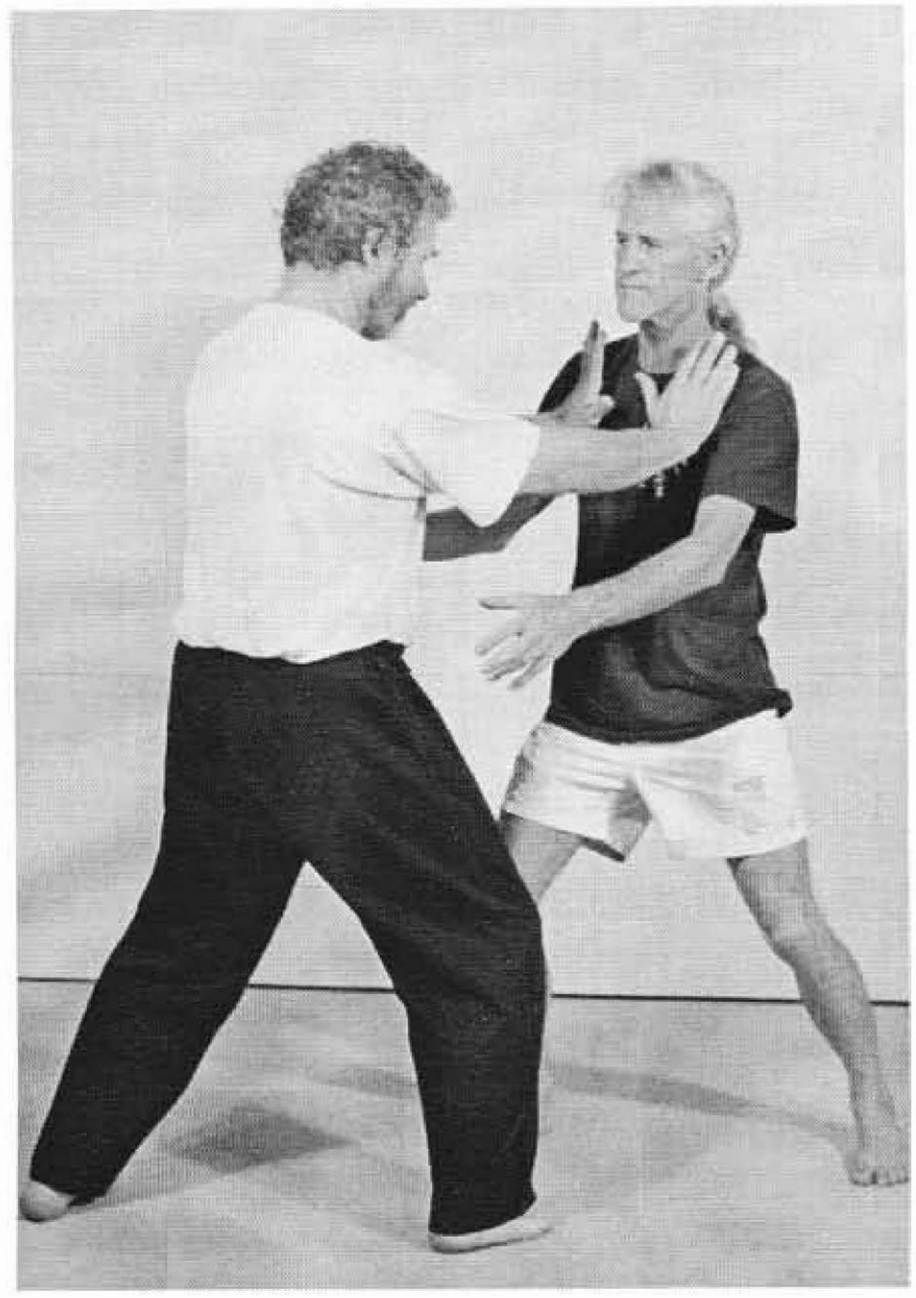


Figure 261

elbows, squeezing inward to make the circles on either pectoral. You can also strike these points straight in or with a downward action. The result is the same in stopping the heart.

Damage:

Stops the heart when struck along with and at the same time as St 16, which is just below it, so both points can be struck with the palm.

Set-up point:

Use neigwan, pulling it toward you on both sides usually, in retaliation to a two-handed attack.

Antidote:

CPR.

Healing:

Innervation occurs on the course of the branch of pectoralis major derived from the anterior thoracic nerve. Irrigation is by the same vessels as St 14.

Used for cough, asthma, fullness and pain in the chest, mastitis, bronchitis, and intercostal neuralgia. Massage techniques are the same as for St 13.

Use with Liv 14, Liv 3, St 18, Cv 17, Sp 18, St 36, and Sp 6 for mastitis. St 15 can also be used with the St 13 or St 14 treatment of asthma, bronchitis, and cough.

Applications:

He might come at you with both hands. Both of your palms open up underneath both of his forearms at both neigwans, which you strike toward you. You immediately bring both palms back in and strike to both sides at St 15 and 16 with a twisting motion (figs. 260 and 261).

ST 16 (STOMACH POINT NO. 16)

Chinese name:

Yingghuan (breast's window).

Location:

In the third intercostal space, on the mamillary line, 4 cun lateral to Cv 18.

Connections:

None.

Direction of strike:

The same as St 15.

Damage:

Same as St 15.

Set-up point:

Same as St 15.

Antidote:

Same as St 15

Healing:

Innervation is by the branch of the anterior thoracic nerve. Irrigation is by the lateral thoracic artery and vein.

Use for cough, asthma, fullness and pain of the chest, mastitis, bronchitis, and intercostal neuralgia.

Massage techniques are the same as for St 13, if the breast tissue is full at this point then only gentle pressure should be used and percussion should be avoided.

Use with Cv 17, Liv 14, Liv 3, Liv 2, St 15, Sp 18, St 36, Bl 17, Bl 18, Bl 19, Si 1, Pc 6, and Gb 21 for mastitis.

You can add this point to the formulas for asthma, bronchitis, and cough shown under St 13 and St 14.

Applications:

Same as St 15.

ST 17 (STOMACH POINT NO. 17)

Chinese name:

Ruzhong (middle of breast).

Location:

In the middle of the nipple in the fourth intercostal space.

Connections:

There [illegible] the upper heater.

[illegible] in using a smaller weapon.

Damage:

This point when struck has a devastating effect and will cause death when a medium to hard strike is used. (In acupuncture, it is only ever given as a reference; it is not to be needled, nor is moxa to be used on it.) The strike must be accurate to within a millimeter, though. Immediately there is a sensation moving up the left side of the neck (if the left nipple is struck and vice versa) and over the top of the back of the head to the other side of the forehead, followed by an extreme qi drainage resulting in KO and loss of memory. If the strike has been hard enough, it could also result in mental illness that gets worse with age. *This is not a nice point, and should never be played around with!*

Set-up point:

It needs no set-up point; however, a tap to the side of the jaw will enhance the effect.

Antidote:

See a Chinese doctor (a Western doctor will not usually know what has happened). You must tell the doctor that you have been struck in St 17 (if you are able to, or have someone else do it for you). Mention the mental disintegration, etc.

Healing:

Innervation is by the anterior and lateral cutaneous branches of the fourth intercostal nerve. Irrigation is by a branch of the right and left subclavian arteries and veins or the branches of the intercostal arteries and veins.

This point is used only for a landmark, and while some sources claim moxibustion can be used in some circumstances, and it certainly has implications in erotic massage, I would not use it in any way in my clinic other than as a landmark (there are 8 cun between the nipples).

Applications:

Strike the point straight in at the nipple. You could also use two one-knuckle punches to both sides! Place your palms on top of his forearms and slam them downward (fig. 262), then bring both one-knuckle punches back up into both St 17 points, leading slightly with your right fist (i.e., it strikes a split second before the left one).

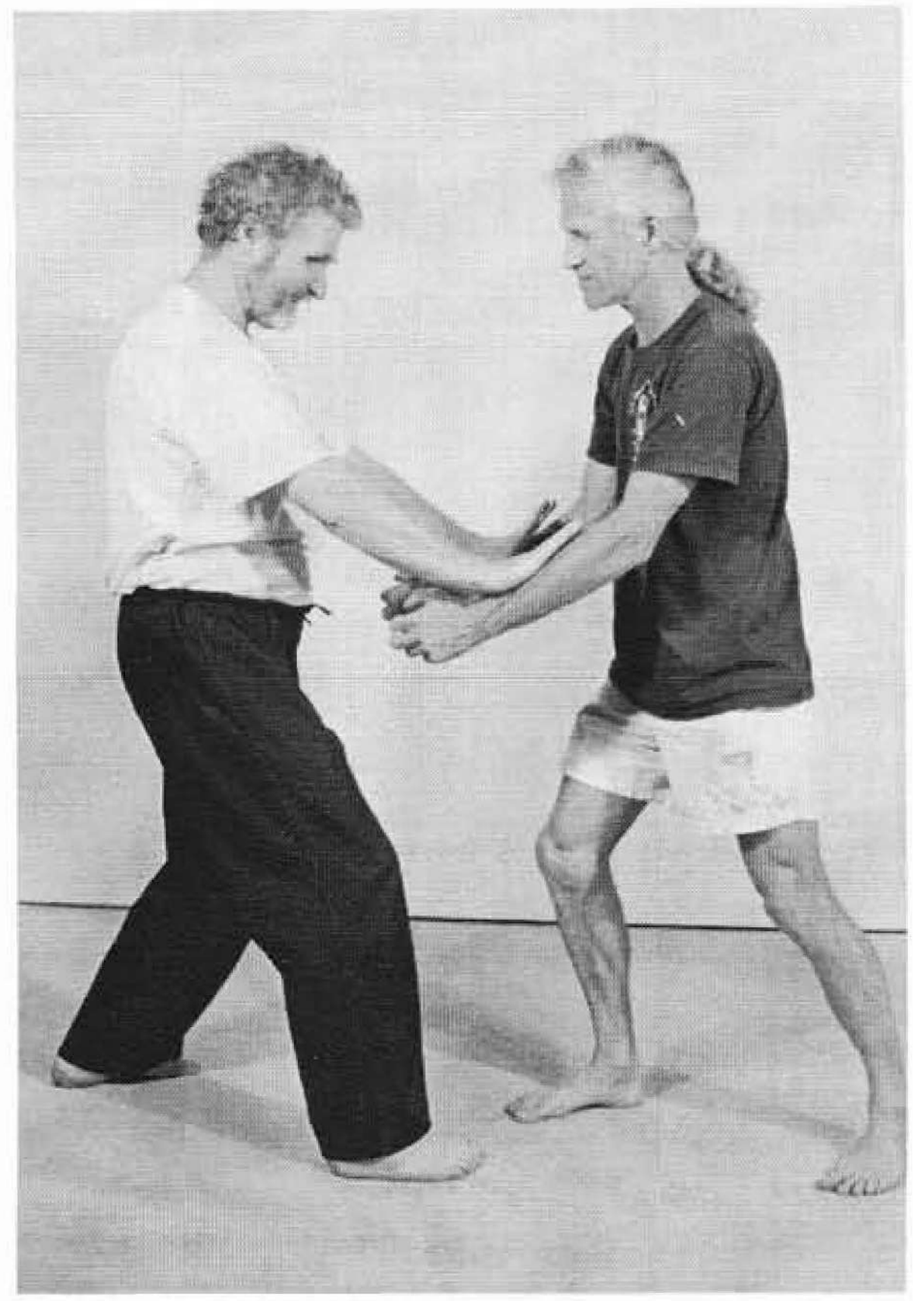


Figure 262

ST 18 (STOMACH POINT NO. 18)

Chinese name:

Rugen (breast root).

Location:

In the fifth intercostal space, directly below the nipple.

Connections:

None.

Direction of strike:

Straight in just under the nipple.

Damage:

I have read that this point is quite dangerous. However, it is my belief that those who say this are confusing this point with Liv 14. St 18 must be struck quite hard to have any effect. Those effects are headache, nausea, and, if struck on the left side, a shock directly to the heart. If you combine this strike with Liv 14, which is easy since Liv 14 lies just below St 18, then the effect is far greater in terms of qi drainage.

Set-up point:

Neigwan.

Antidote:

Rub neigwan back up the inner forearm.

Healing:

Innervation is by the branch of the fifth intercostal nerve. Irrigation is by the fifth intercostal artery and vein.

Used for cough, asthma, mastitis, deficient lactation, pain in the chest, bronchitis, and cholecystitis.

Massage techniques are the same as for St 13.

Use with Cv 17, Si 1, Bl 18, Bl 20, St 36, Liv 3, Pc 6, and Co 4 for insufficient lactation.

Also, add this point to the formula for mastitis listed under St 16.

Applications:

Same as for St 17.

ST 19 (STOMACH POINT NO. 19)

Chinese name:

Burong (uncontainable).

Location:

6 cun above the umbilicus, 2 cun lateral to Cv 14.

Connections:

None.

Direction of strike:

Straight in and slightly toward the outside of the body just under the ribcage.

Damage:

If St 18 was not too exciting, then St 19 is just the opposite. This strike attacks the seat of power, as does Cv 17, only this strike is even more damaging to the diaphragm because it strikes to the muscles that work the diaphragm, causing the recipient to feel as if he has no power at all and fall down. If this strike is hard enough it will cause death from suffocation.

Set-up point:

Neigwan combined with "the mind point."

Antidote:

Lie the patient down and apply pressure upward from the navel to the upper chest, using medium pressure. See a doctor!

Healing:

Innervation is by the branch of the seventh intercostal nerve. Irrigation is by the branches of the seventh intercostal artery and vein, the branches of the superior epigastric artery and vein.

Used for abdominal distension, vomiting, gastric pain, anorexia, gastrectasia, and intercostal neuralgia.

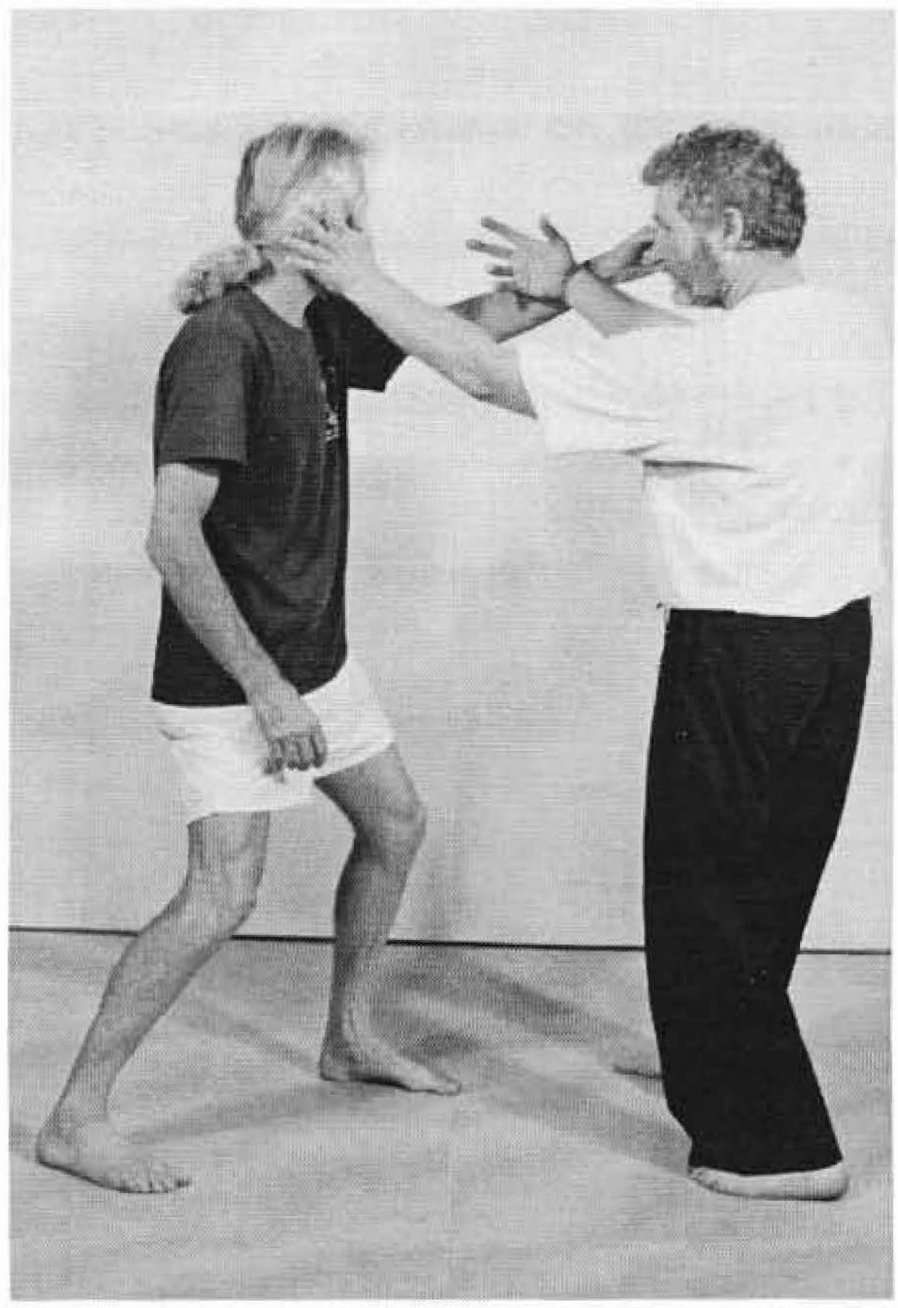


Figure 263

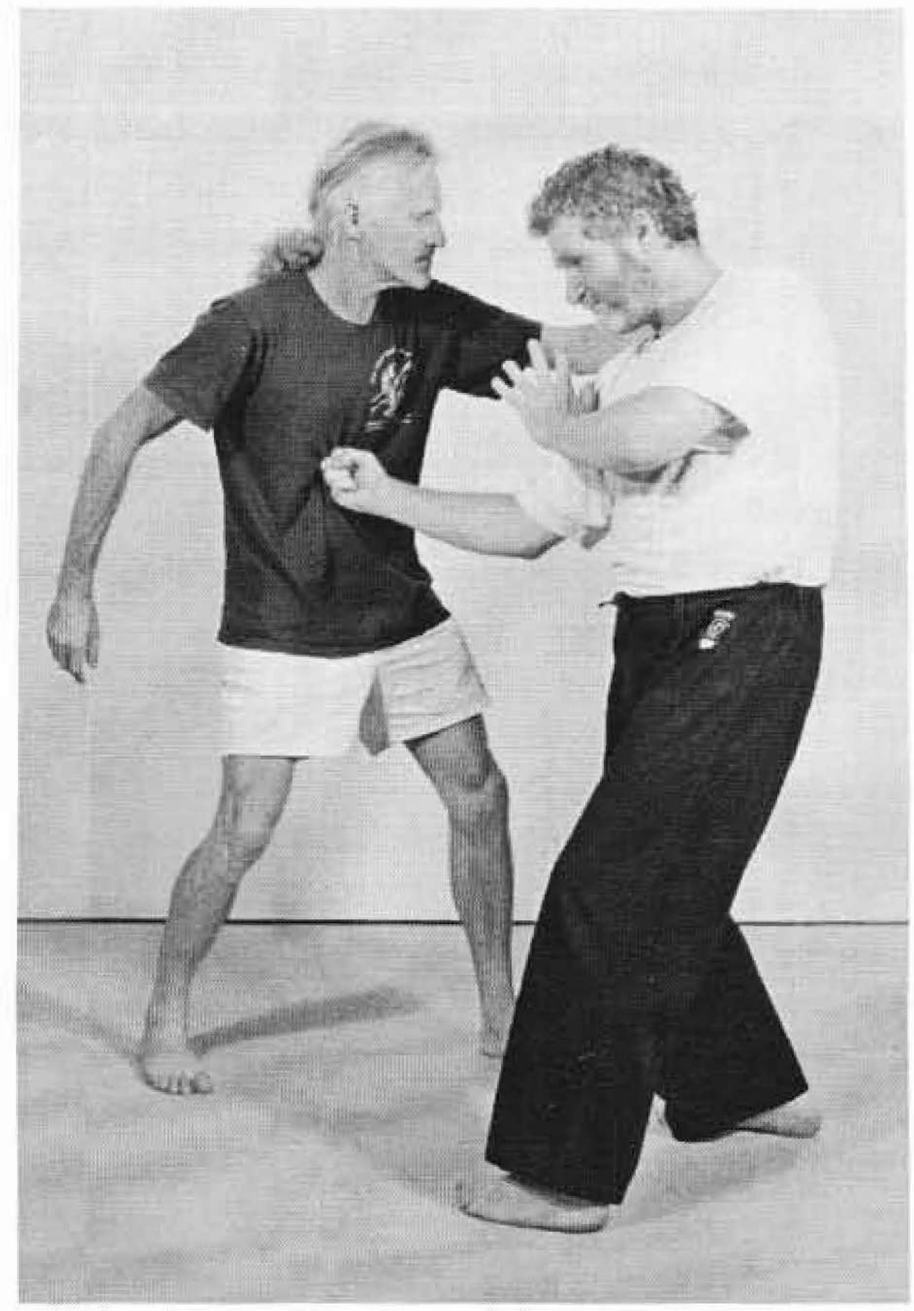


Figure 264

Massage techniques are the same as for St 13.

Use with Cv 12, Pc 6, Sp 4, Liv 3, St 44, Gb 20, Bl 18, Bl 20, Bl 25, Cv 17, Cv 16, St 20, St 21, Gb 26, and Liv 14 for morning sickness.

Use with St 36, Liv 3, Bl 20, Bl 19, Bl 18, Bl 25, Bl 23, Cv 12, Liv 13, Ht 7, Pc 6, Cv 4, Lu 1, Lu 9, St 21, and St 25 for anorexia.

Applications:

Strike his left neigwan with the back of your right palm as your left palm attacks to his right "mind point" (fig. 263). Now your right one-knuckle punch attacks to St 19 (fig. 264).

ST 20 (STOMACH POINT NO. 20)

Chinese name:

Chengman (support fullness).

Location:

5 cun above the umbilicus, 2 cun lateral to Cv 13 and 1 cun below St 19.

Connections:

None.

Direction of strike:

This strike does much the same damage as St 19, only the direction of the strike must be straight in this time.

Damage:

Attacks the seat of power, causing KO or death.

Set-up point:

Mind point.

Antidote:

Get to a hospital.

Healing:

Innervation and irrigation same as for St 19.

Used for gastric pain, abdominal distension, vomiting, anorexia, acute and chronic gastritis, intestinal noises, colic, and indigestion.

Massage techniques are the same as for St 13 with no percussion or very light percussion (better to use fingertip vibration).

For anorexia, use with St 21, St 22, plus the formula for anorexia listed under St 19.

Use with St 36, Pc 6, St 21, Liv 13, St 25, Liv 3, Cv 12, Cv 14, Cv 9, and St 37 for gastric pain, abdominal distension, and vomiting.

Applications:

Same as for St 19.

ST 21 (STOMACH POINT NO. 21)

Chinese name:

Liangmen (door of the beam).

Location:

4 cun above the umbilicus, 2 cun lateral to Cv 12.

Connections:

None.

Direction of strike:

Straight in.

Damage:

This point can be protected somewhat by the abdominal muscles; however, it is also an "electrical point," so it will have an effect regardless. It causes great local pain and qi drainage, as well as

stomach and spleen problems due to its effect upon the yang qi of those organs.

Set-up point:

No set-up point, but it can be used with St 36 to enhance the effect of pain.

Antidote:

Rub the whole lower leg downward to the foot.

Healing:

Innervation is by the branch of the eighth intercostal nerve. Irrigation is by the branches of the eighth intercostal and the superior epigastric artery and veins.

Used for gastric pain, vomiting, anorexia, loose stool, stomach ulcers, stomachache, acute and chronic gastritis, and nervous dysfunction of the stomach.

Traditional indications include pain in the stomach cavity, abdominal pain caused by accumulation of qi, colic, and prolapsed anus. Traditional functions include promoting the function of the stomach and spleen. Used a lot for epigastric pain when the pain is more lateral.

Massage techniques are the same as for St 20.

Use with Pc 6, St 36, Cv 12, Cv 14, Cv 11, Bl 21, Bl 20, Bl 19, Bl 17, Sp 6, Sp 4, St 40, St 43, St 44, Sp 9, Liv 3, Cv 4, Liv 13, St 19, St 20, St 22, St 23, and St 24 for stomachache.

Use with St 37, St 40, Sp 4, Sp 3, Sp 9, St 25, Bl 25, Bl 23, Bl 20, Cv 12, Cv 9, and St 28 for loose stool.

Use with Pc 6, Liv 14, Liv 3, Cv 12, Bl 20, Bl 21, Ht 7, and Bl 14 for nervous dysfunction of the stomach.

Applications:

You could block his right straight on the outside with your right p'eng-type block as your right heel attacks downward at St 36. Then your one-knuckle punch attacks straight in to St 21.

ST 22 (STOMACH POINT NO. 22)

Chinese name:

Guanmen (gate).

Location:

3 cun above the umbilicus, 2 cun lateral to Cv 11.

Connections:

None.

Direction of strike:

Straight in.

Damage:

This strike attacks the communication between upper and lower. So there is confusion over what the lower body is doing. A feeling of something draining from lower body is also apparent until the power to the legs has gone.

Set-up point:

Use this point with Gb 25 for a devastating effect, like death!

Antidote:

Kd 1.

Healing:

Innervation and irrigation are the same as for St 21.

Used for abdominal distension and pain, borborygmus, diarrhea, anorexia, edema, and lack of appetite.

Massage techniques are the same as for St 20.

Use with St 21, St 20, St 19, St 23, St 24, St 25, Cv 10, Cv 12, Cv 4, St 36, St 40, Sp 9, Pc 6, and Liv 3 for pain and distension of the abdomen, borborygmus, etc.

Use with Gv 20, Cv 17, Cv 12, Cv 6, Cv 4, St 36, Sp 3, Liv 13, Liv 3, St 25, St 21, Bl 20, Bl 25, Bl 18, and Bl 17 for lack of appetite.

Applications:

You could use both palms against his right attack. Then your right palm attacks from side to Gb 25, followed by your right elbow to St 22.

ST 23 (STOMACH POINT NO. 23)

Chinese name:

Taiyi (great yi).

Location:

2 cun above the umbilicus, 2 cun lateral to Cv 10.

Connections:

None.

Direction of strike:

Straight in.

Damage:

Same as for St 22. Plus there is an adverse effect upon the bladder, causing problems both immediately and in later life. The recipient is likely to urinate when struck here with a smaller weapon such as a one-knuckle punch.

Set-up point:

Any bladder point or Gb 25 can be used to set up this point.

Antidote:

Co 10 used with Ht 7 squeezed back up the forearm at the same time.

Healing:

Innervation is by the branches of the eighth and ninth intercostal nerves. Irrigation is by the branches of the eighth and ninth intercostal and the inferior epigastric arteries and veins.

Used for mental disorders, irritability, restlessness, gastric pain, indigestion, intestinal pain, hernia, and enuresis.

Massage techniques are the same as for St 20.

Use with Cv 14, Gb 20, Gv 15, Cv 14, St 40, Pc 5, Pc 6, Ht 5, Th 6, Sp 6, Gv 20, Bl 58, St 24, Liv 3, Bl 18, Bl 20, Bl 14, Bl 15, Co 4, Co 11, Pc 8, Kd 4, Kd 1, Ht 7, Gb 34, Liv 4, Liv 5, Th 17, and Bl 1 for mental disorders.

Use with Liv 14, Liv 2, Liv 3, Bl 18, Bl 17, Bl 20, Cv 12, St 36, Pc 6, Ht 7, St 25, Bl 25, and Bl 14 for restlessness and irritability.

See St 22 for treatment of gastric pain and indigestion.

Applications:

Same as for St 22.

ST 24 (STOMACH POINT NO. 24)

Chinese name:

Huaroumen (door of slippery flesh).

Location:

1 cun above the umbilicus, 2 cun lateral to Cv 9.

Connections:

None.

Direction of strike:

Straight in using a smaller weapon.

Damage:

This point is protected by the abdominal muscles; however, it will have an electrical effect that affects the colon. In other words, it will cause the recipient to defecate not too soon after the strike, but with great pain.

Set-up point:

Co 10 will enhance the effect upon the colon.

Antidote:

Co 10 squeezed inward.

Healing:

Innervation is by the branch of the ninth intercostal nerve. Irrigation is by the branches of the ninth intercostal and the inferior epigastric arteries and veins.

Used for mental disorders, vomiting, gastric pain, acute and chronic gastritis, and insanity.

Massage techniques are the same as for St 20.

See St 23 for treatment of mental disorders.

Use with St 23, St 22, St 21, St 20, St 19, Cv 14, Cv 12, Cv 9, Pc 6, St 36, Sp 9, Sp 3, Liv 3, St 25, Bl 25, Bl 20, Bl 23, Bl 21, Bl 18, and Bl 17 for gastric pain, vomiting, gastritis, etc.

Applications:

Use a right backfist against his right straight attack. Your left palm now also slams into Si 8 at his elbow as your right one-knuckle punch attacks straight in to St 24.

ST 25 (STOMACH POINT NO. 25)

Chinese name:

Tianshu (heaven's axis).

Location:

2 cun lateral to the center of the umbilicus.

Connections:

None.

Direction of strike:

Straight in at an angle that goes toward the center of the body.

Damage:

A "mu colon point," St 25 will affect the colon. It is on the border of protection and no protection (i.e., the torso is well protected by muscle, but below the navel there is relatively little protection.) A hard strike to this point can cause KO. It will also cause diarrhea on the spot. This is a point that is capable of causing emotional disorders as well as the physical symptoms that go with emotional disorders, because it upsets the communication between shen and zhang fu (solid organs), in this case between the shen and the gallbladder and triple heater. First the recipient will feel pain that will grow in a circle outward from the strike, then he will feel a great power loss.

Set-up point:

Co 10.

Antidote:

Rub the outer forearm heavily downward, with attention to Co 10.

Healing:

Innervation is by the branch of the 10th intercostal nerve. Irrigation is by the branches of the 10th intercostal and the inferior epigastric arteries and veins.

Used for abdominal pain, diarrhea, dysentery, constipation, borborygmus, abdominal distension, edema, irregular menstruation, acute and chronic gastritis or enteritis, intestinal paralysis, peritonitis, roundworm in the intestinal tract, endometritis, and lower back pain.

Traditional indications include vomiting, diarrhea, abdominal pain, constipation, vaginal discharge with blood, irregular menstruation, dripping of turbid urine, infertility, and abdominal obstruction or lumps due to accumulation of qi and blood.

As a front mu point of the colon, its traditional functions are to regulate and facilitate the functioning of the colon, regulate qi and eliminate stagnation of qi and blood, and regulate menstruation. Reflects problems with the colon when palpated.

Massage techniques are the same as for St 20.

Use with Kd 5, Liv 3, Cv 4, Cv 6, Liv 4, Bl 18, Gb 26, and Sp 6 for irregular menstruation.

Use with St 37, St 40, Sp 4, Bl 25, Bl 23, Bl 20, Gv 20, and St 21 for diarrhea, borborygmus, etc.

Use with Th 6, Pc 6, Gv 12, Bl 20, Bl 18, Bl 21, St 36, Liv 3, St 21, and Co 4 for vomiting, nausea, and loose stool.

See St 26 for other things this point can treat.

Applications:

You could slam his Co 10 point with your right backfist and use your left palm to pull his right arm out of the way as your right palm slams into St 25. Or you could use a knee to St 25 by pulling him onto your knee.

ST 26 (STOMACH POINT NO. 26)

Chinese name:

Wailing (outer tomb).

Location:

1 cun below the umbilicus, 2 cun lateral to Cv 7.

Connections:

None.

Direction of strike:

Straight in.

Damage:

This strike will cause much the same damage as St 25, as it is still right over the colon, although there will be a little more physical damage as it is further down into the lower body. A hard strike will cause blackout, as it is an intestine strike. (There are three parts of the body that will cause a knock out when struck or in pain—the gallbladder, the intestines, and the ureter.

Set-up point:

Co 10.

Antidote:

Same as for St 25.

Healing:

Innervation and irrigation are the same as for St 25. Used for abdominal pain, hernia, and painful menstruation.

Massage techniques are the same as for St 20.

Use with St 25, St 27, St 36, St 37, St 40, Liv 3, Cv 4, Cv 6, Cv 9, and Cv 12 for abdominal pain.

Use with Liv 4, Liv 3, Cv 4, Cv 6, Sp 9, Sp 6, Bl 18, Bl 19, and Bl 17 for painful menstruation.

Use with Liv 8, Liv 5, Liv 4, Liv 12, Sp 6, St 23, St 27, St 28, St 29, St 30, Liv 3, Liv 8, St 36, Cv 12, Bl 20, and Gv 20 for hernia.

Traditional function is as a diagnostic tool. When pressed in conjunction with St 25 and Kd 15 (not Kd 16), if painful on the left side, it can reflect liver disharmony. If painful on the right side when pressed along with St 25, it can reflect a lung problem. Redness and darkness, or paleness with inverted tissue may also be a reflection of heat (if the former) or cold, weakness (if the latter).

Applications:

Same as for St 25. You could also use a back or a front kick to this point as well as to St 25.

ST 27 (STOMACH POINT NO. 27)

Chinese name:

Daju (the great or big, huge).

Location:

2 cun below the umbilicus, 2 cun lateral to Cv 5.

Connections:

None.

Direction of strike:

Straight in and slightly angled toward the midline.

Damage:

In this instance, the strike will disrupt the communication between the shen and the colon/stomach. It will cause emotional problems immediately, and if not treated by an acupuncturist, it will grow into emotional problems, such as not letting go of unwanted emotions (allowing them to grow and fester!) and obsessiveness to extremes. In the immediate, it will also cause great pain and qi loss—and KO if it is hard enough.

Set-up point:

St 36 or Co 10, or both.

Antidote:

For the emotional problems, have an acupuncturist treat St 27 along with Lu 1.

Healing:

Innervation is by the 11th intercostal nerve. Irrigation is by the branches of the 11th intercostal artery and vein and, laterally, the inferior epigastric artery and vein.

Used for lower abdominal distension and pain, dysuria, hernia, seminal emission, intestinal obstruction, retention of urine, and cystitis.

Traditional indications include abdominal distention and pain, hernia, and spermatorrhea.

Massage techniques are the same as for St 20.

Traditional functions are the same as for St 26.

See St 26 for treatment of hernia.

Use with Cv 12, Cv 6, Cv 4, Cv 10, St 21, St 30, St 25, St 29, Sp 14, Sp 15, Sp 16, Gv 4, St 36, jiaji points from the eighth thoracic to the second lumbar, Liv 3, Liv 2, Bl 20, Bl 18, Bl 17, and Ht 7 for polio where abdominal muscles are paralyzed.

Use with Cv 4, Cv 3, Cv 6, St 28, St 36, Sp 6, Sp 10, Liv 3, Liv 4, Bl 18, and Bl 17 for difficult or painful menstruation.

Applications:

Same as for St 26. This point is still high enough for a palm shot.

ST 28 (STOMACH POINT NO. 28)

Chinese name:

Shuidao (water way).

Location:

3 cun below the umbilicus, 2 cun lateral to Gv 4. In the rectus abdominis muscle and its sheath.

Connections:

None.

Direction of strike:

Straight in and slightly toward the midline.

Damage:

This strike is dangerous. It will immediately cause KO through the action on the colon, causing an "explosion" in the lower heater that will grow outward to the rest of the lower abdomen. Needless to say, repeated strikes to any of the lower abdomen points can cause bowel cancers later in life! This point really shocks the whole lower heater, causing damage to the elimination system.

Set-up point:

Co 10.

Antidote:

Have an acupuncturist work on "lifting" points that will lift the colon up, since this strike usually causes a prolapsed colon.

Healing:

Innervation is by the branch of the subcostal nerve. Irrigation is by the branches of the subcostal artery and vein, and, laterally, by the inferior epigastric artery and vein.

Used for lower abdominal distension, hernia, retention of urine, nephritis, cystitis, ascites, and orchitis.

Traditional indications include distension and fullness of the lower abdomen, heat and constriction in the triple heater, lack of urine, pain leading to the genitals, and edema.

Traditional functions are to eliminate damp from the lower heater, cool damp heat, benefit the bladder, and treat damp anywhere in the body. It can also be used in abdominal diagnosis to reflect fluid retention, etc.

Massage tehcniques are the same as for St 20.

Use with Kd 6, Bl 22, Bl 23, Bl 28, Gv 4, Bl 20, Gv 2, Cv 3, Gv 5, Gv 9, Sp 9, Sp 4, Kd 7, Kd 11, St 36, Sp 11, and Sp 12 for fluid retention.

See St 27 for treatment of difficult or painful menstruation. Use with Bl 32, Bl 39, Cv 3, Sp 6, Bl 23, Bl 22, Bl 28, Bl 33, Gv 2, Cv 4, Liv 4, and Liv 3 for urinary retention or incontinence.

Applications:

Same as for St 27. Or you could get around behind the attacker using any of the grappling-type movements (see my earlier book, *How to Fight a Grappler and Win*) and then use a quick pulling movement with both arms, where the fingers of both hands dig into both St 28 points. This is often enough to cause KO.

ST 29 (STOMACH POINT NO. 28)

Chinese name:

Guilai (return).

Location:

4 cun below the umbilicus, 2 cun lateral to Cv 3, in the lateral margin of the rectus abdominis muscle, the internal oblique muscle, and the aponeurosis of the transverse abdominis muscle.

Connections:

None.

Direction of strike:

Straight in and slightly in to the midline.

Damage:

This is a special point for the genitals. It is opposite Cv 3, which is a meeting point for the three "yins." It will affect the circulation of kidney qi, which in turn will affect the power of the whole body. It will cause stagnation of qi and thus a gradual loss of health. The immediate effect is a KO by the action upon the genitals; hard enough will cause death.

Set-up point:

None.

Antidote:

See a doctor and acupuncturist. Obviously a strike to this area will cause great physical problems, which should be attended to immediately.

Healing:

Innervation is by the iliohypogastric nerve. Irrigation is by the inferior epigastric artery and vein on the lateral side.

Used for abdominal pain, hernia, amenorrhea, prolapse of the uterus, irregular menstruation, inflammation of the adnexa, endometritis, and orchitis.

Traditional indications include colic, lack of menstruation, infertility, vaginal discharge, orchitis, and dysmenorrhea.

Traditional functions are to move stagnation of blood from the uterus and move stagnant qi and blood.

Massage techniques are the same as for St 20.

Use with Gb 27, Liv 3, Cv 2, Cv 3, Cv 4, Cv 6, Liv 4, Liv 5, Liv 6, Liv 8, Gb 21, and St 30 for retraction of the testicles. Use with Gb 26, Sp 6, Liv 2, Liv 3, Sp 9, Gv 4, Gv 6, St 36, and Kd 7 for leukorrhea.

Use with Gv 4, Bl 23, Co 4, Bl 25, Sp 6, Sp 8, Sp 10, Kd 14, Gv 4, Cv 3, Cv 6, St 36, Bl 18, Bl 20, and Bl 17 for amenorrhea.

Applications:

The same as for St 28.

ST 30 (STOMACH POINT NO. 30)

Chinese name:

Qichong (pouring qi).

Location:

5 cun below the umbilicus, 2 cun lateral to Cv 2, superior to the inguinal groove on the medial side of the femoral artery. In the aponeurosis of the external and internal oblique muscles, and the lower region of the transverse abdominis muscle.

Connections:

Gb, Bl, and Cv. This is where the internal branch from St 12 reunites with the St meridian and is the lower meeting point of St/Sp divergent meridian.

Direction of strike:

Straight in and slightly toward the midline.

Damage:

This is the "sea of nourishment" point along with St 36. It is also a point of the chong mai, or life force meridian. It circulates yuan qi to the stomach and hence to earth. A strike here will lower the body's ability to fight off disease and cause a gradual overall decline of qi to the internal organs. It will also hinder the free flow of qi. (The opposite occurs when St 30 and 36 are treated in a healing way.) This strike will cause KO immediately, and death can occur when a very heavy strike is taken. Even after medical treatment, the damage continues to mount if the person is not treated by an acupuncturist as well.

Set-up point:

Lu 5 or St 36.

Antidote:

Treat the same point on the opposite side of the attack, along with St 36.

Healing:

Innervation is by the ilioinguinal nerve. Irrigation is by the branches of the superficial epigastric artery and vein and, laterally, by the inferior epigastric artery and vein.

Used for pain and swelling of the external genitalia, hernia, irregular menstruation, and diseases of the reproductive organs.

Traditional indications include pain in the penis or testicles, colic, excessive bleeding, infertility, and disorders related to childbirth.

As a point of intersection with the chong mai, it can have a strong influence on the qi and blood flow in the body. (Chong mai connects all of the kidney points on the abdomen and is in some ways is seen as the origin of all the other extra meridians.) Massage tehcniques are the same as for St 20.

Use with Gv 20, Gb 28, SP 6, Cv 6, SP 9, Liv 3, Liv 4, Liv 8, Bl 20, Bl 18, Bl 17, Kd 6, and Cv 12 for prolapsed uterus. Use with Bl 31, Bl 32, Co 4, Sp 6, Liv 4, Sp 12, and Gb 21 for difficulty in labor.

Use with Gv 2, Bl 28, Gv 1, Bl 31, Bl 34, Bl 25, Bl 26, Bl 53, Bl 54, Bl 40, and Gb 34 for lower back pain.

Applications:

Strike the point with the knee or with a palm strike, although for the most damage to occur a smaller weapon should be used, such as a one-knuckle punch.

ST 31 (STOMACH POINT NO. 31)

Chinese name:

Biguan (hip hinge or thigh gate).

Location:

Directly below the anterior superior iliac spine, in the depression on the lateral side of the sartorius muscle when the thigh is flexed, level with the perineum. Inferior and medial to the great trochanter of the femur, between the satorius and the tensor fascia lata muscles.

Connections:

None.

Direction of strike:

Straight in to the top of the thigh.

Damage:

This point is called the "leg-draining point" because that's what it does. It will greatly decrease the qi to the legs, causing the recipient to have to sit down or else fall down! This point can be used as an excellent set-up for a physical leg strike because bones will break easily when this point has been struck first.

Set-up point:

If you were using St 31 as the main strike, then you could use any of the qi drainage points, such as Lu 5 or Pc 6.

Antidote:

Apply medium pressure to St 31 on the opposite leg with the thumb. Then massage down the outside of the leg and up the inside of the leg using medium pressure.

Healing:

Innervation is by the lateral femoral cutaneous nerve. Irrigation is by branches of the lateral circumflex femoral artery and vein in the deep position.

Used for pain in the thigh, muscular atrophy, motor impairment and numbness and pain of the lower extremities, lymphadenitis of the inguinal lymph glands, arthritis of the knee, and lower back pain.

Traditional indications include atrophy or blockage of the muscles of the thigh and buttock, inhibited movement of the leg muscle due to sinew tension, lower back pain and cold knees, numbness of the leg, infantile paralysis, and the after effects of wind stroke.

Its traditional function is as a very important point for qi circulation in the legs.

Massage techniques include pressing and holding the point; rotating clockwise or counterclockwise for xu or shi conditions; pressing in slowly with both thumbs and releasing quickly, pulling the thumbs apart; doing percussion with fingertips or a loose fist; and pulling across the point.

Use with Gb 29, Gb 30, Gb 31, Gb 32, Gb 34, St 32, and St 34 for pain or numbness in the thigh.

Add St 36, Bl 20, Sp 3, and Liv 3 for leg atrophy.

Use with Bl 36, Bl 40, Gb 34, Bl 25, Bl 26, Bl 53, Bl 54, and Gb 30 for arthritis of the hip joint.

Applications:

He attacks with a straight right, and you slam his arm at Th 8 with your right backfist as your left palm strikes to Si 8 at the elbow (fig. 265). The right palm now rotates back to strike straight in to St 31 (fig. 266). It's OK to strike using the palm in this instance because of the nature of this method. Normally you would not use the palm this low.

Figure 265

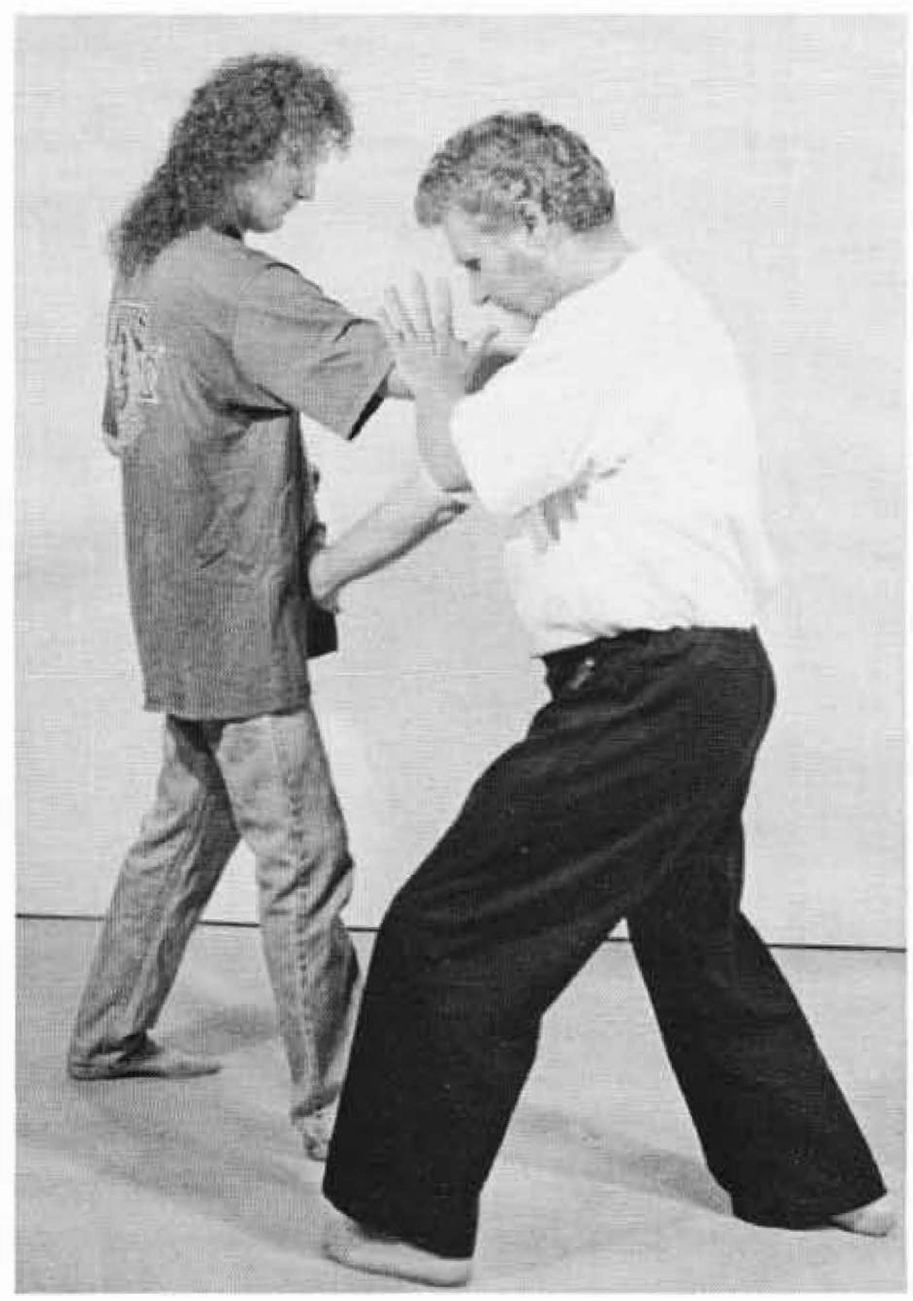


Figure 266

ST 32 (STOMACH POINT NO. 32)

Chinese name:

Futu (hidden rabbit).

Location:

6 cun above the laterosuperior border of the patella, on the line connecting the anterior superior iliac spine and the lateral border of the patella. At the lateral anterior aspect of the femur, in the middle of the belly of the rectus femoris muscle.

Connections:

None.

Direction of strike:

Straight in to the front of the thigh.

Damage:

This strike is called, in dim-mak terms, leg-paralyzing point. It can be struck with a palm straight across the thigh. Alternatively, with an implement such as a stick, the strike must be 180 degrees across the thigh (laterally, not at an angle). It paralyzes the leg and shocks the whole system, and it will cause KO when done hard enough because the brain is shocked for a moment, not knowing what has happened.

Set-up point:

Attack the lower forearm downward, away from his body (see "Applications").

Antidote:

Provided that this strike has not been too great, he will get over it given time. It is really a physiological strike that attacks the femoral nerve.

Healing:

Innervation is by the anterior and lateral femoral cutaneous nerves. Irrigation is by the lateral circumflex femoral artery and vein.

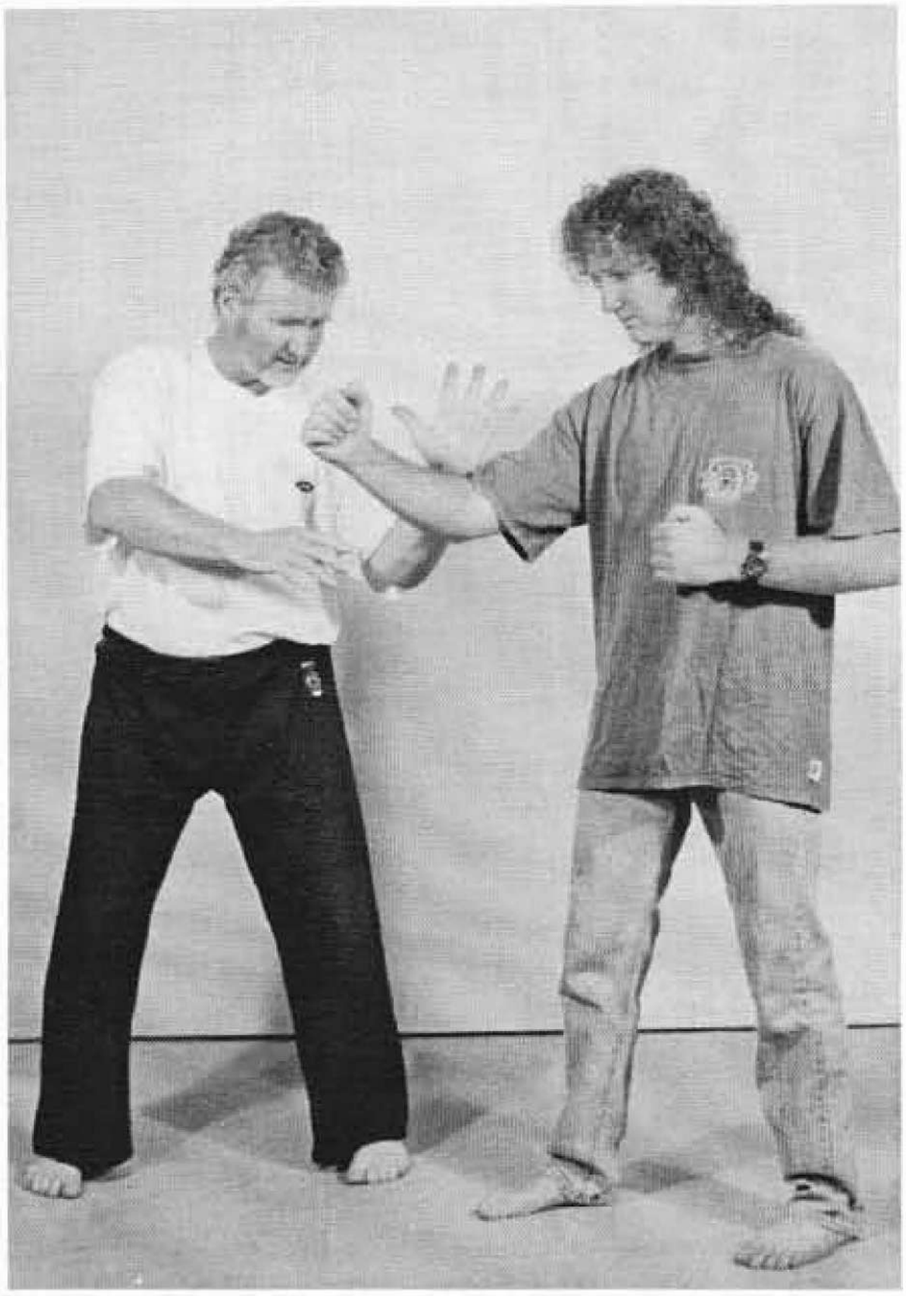


Figure 267

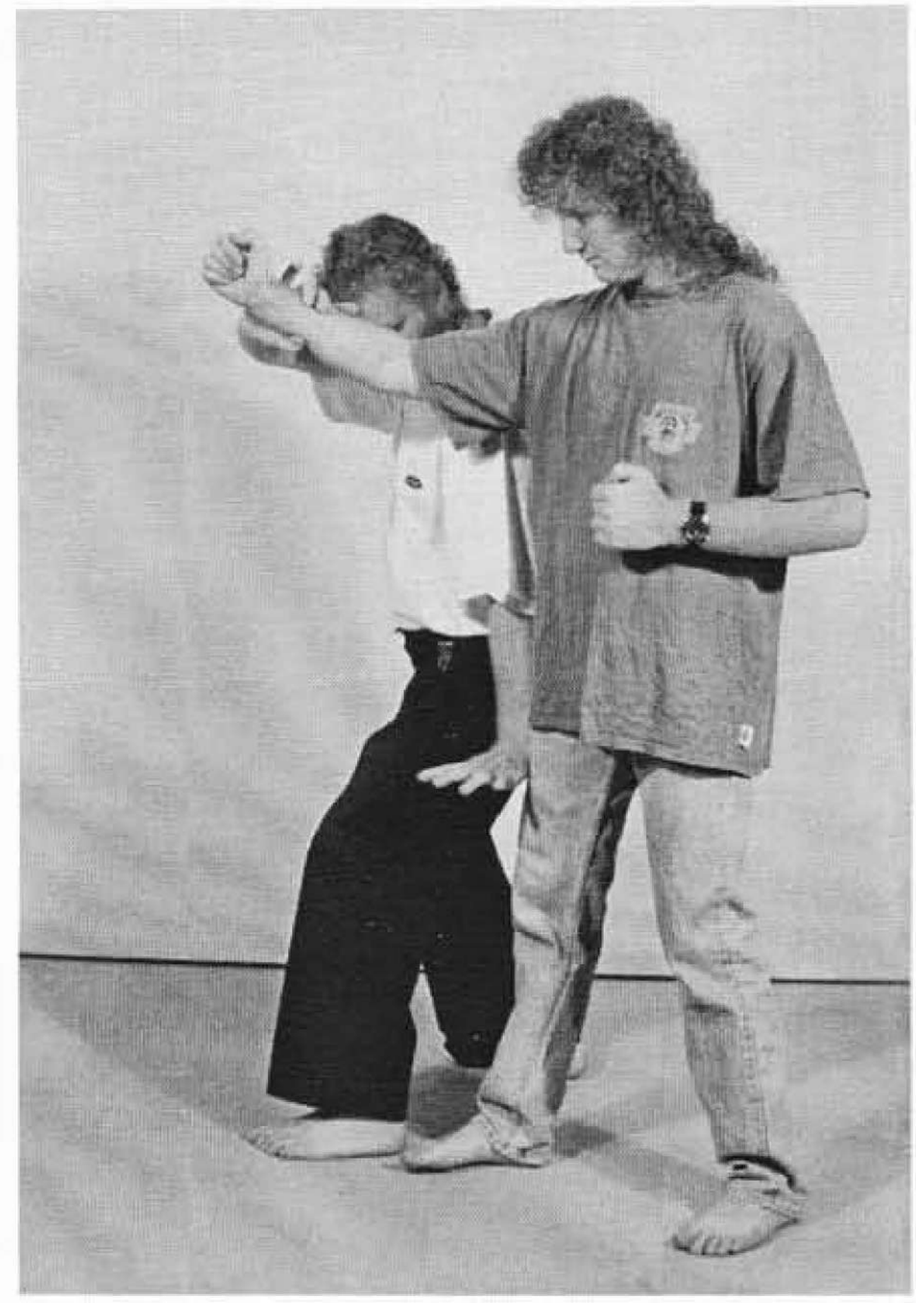


Figure 268

Used for pain in the lumbar and iliac regions, coldness of the knee, paralysis or motor impairment and pain of the lower extremities, arthritis of the knee, and urticaria.

Traditional indications include pain in the waist and groin, numbness of the lower limbs, leg qi (beriberi).

Massage techniques are the same as for St 31.

See St 31 for treatment of pain or numbness of the thigh.

Use with St 34, St 35, St 36, Gb 34, Liv 3, Gb 41, and xiyan on the medial side of the knee.

With Sp 10, Sp 9, and Sp 6 for knee problems.

Applications:

1) He attacks with a straight right. You slam his forearm downward with your left palm as you step in with your left foot, turning your foot in the same direction that the attacker is facing (fig. 267). Now, your right foot steps around to his rear so that you are now facing the same direction that he is, and your right palm takes over this block as your left palm strikes across St 32 (fig. 268).
2) Or you could simply attack straight in to St 32 in retaliation to a kick.

ST 33 (STOMACH POINT NO. 33)

Chinese name:

Yinshi (yin's market).

Location:

3 cun above the laterosuperior border of the patella, on the line connecting the anterior superior iliac spine and the lateral border of the patella.

Connections:

None.

Direction of strike:

Straight in just above the knee.

Damage:

Great local pain and subsequent qi drainage from the leg. This is also an electrical point that will send a rush of qi to the head, causing confusion and possible blackout if the strike is hard enough.

Set-up point:

Jerk the wrist violently at Ht 5 and Lu 8 just before you kick to the point.

Antidote:

Needle St 36 or use medium finger pressure.

Healing:

Innervation is by the anterior and lateral femoral cutaneous nerves. Irrigation is by the descending branch of the lateral circumflex femoral artery.

Used for numbness or soreness and motor impairment of the lower extremities and arthritis of the knee. Massage techniques are the same as for St 31.

Use with formula for knee problems under St 32, also add to formula for pain and numbness of the thigh under St 31.

Applications:

You could use a palm strike here, but it is getting a bit low for hand techniques. So use a heel kick to St 33 after taking his hand attack and jerking his wrist violently.

ST 34 (STOMACH POINT NO. 34)

Chinese name:

Liangqiu (ridge mount or beam mount).

Location:

2 cun above the laterosuperior border of the patella, between the rectus femoris and the vastus lateralis muscles of the thigh.

Connections:

None.

Direction of strike:

Straight in just above the knee.

Damage:

This is a xie cleft point (stores *zhen* or meridian qi) that normally promotes the circulation of qi to the whole body. However, when struck using adverse qi, it has the reverse affect, so power is lost through a hindrance of qi and blood. Local pain and loss of leg power is apparent immediately.

Set-up point:

Any of the qi drainage points will suffice: Lu 5, neigwan, Ht 5, and Lu 8.

Antidote:

Any of the qi balancing methods, or you could needle or press St 34 in order to right the wrong.

Healing:

Innervation is by the anterior femoral cutaneous nerve and on the pathway of the lateral femoral cutaneous nerve. Irrigation is by the descending branch of the circumflex femoral artery.

Used for pain and swelling of the knee, motor impairment of the lower extremities, gastric pain, mastitis, gastritis, and diarrhea.

Traditional indications include pain in the lower back and leg, progressive swelling and pain of the knee, and swelling and pain of the breast.

Its traditional function is as a xie cleft (accumulating) point of the stomach meridian, so it can treat acute problems of both the organ and the channel, pacify the stomach, and clear the channels. It is the best point for pain of the stomach meridian or organ.

To massage the point, press and hold; rotate clockwise or counterclockwise for xu or shi conditions; press slowly with both thumbs and release quickly, pulling the thumbs apart; or do percussion with the fingertips or a loose fist.

Use with St 35, St 36, Sp 10, Sp 9, Sp 6, Liv 3, Gb 34, and medial xiyan for knee problems.

Use with Pc 6, Gv 12, St 21, Liv 13, Bl 20, Bl 21, Bl 18, St 36, St 44, St 45, Liv 3, or Liv 2 for gastritis, stomachache, etc.

Use with Gb 42, Cv 17, Liv 14, St 15, Sp 18, Sp 6, and Liv 3 for mastitis.

Applications:

The same as for St 33.

ST 35 (STOMACH POINT NO. 35)

Chinese name:

Dubi (calf nose) or xiyan (eyes of knee).

Location:

When the knee is flexed, the point is in the depression below the patella and lateral to the patella tendon.

Connections:

None.

Direction of strike:

Straight in just under the knee below the patella.

Damage:

This point is a special point for knee problems in acupuncture. It is a trauma point. A strike here will produce local pain and knee injury, immediately followed by severe kidney qi drainage and damage, causing immediate loss of power and tiredness.

Set-up point:

Kd 10.

Antidote:

Massage Kd 5 and Kd 10.

Healing:

Innervation is by the lateral sural cutaneous nerve and the articular branch of the common peroneal nerve. Irrigation is by the arterial and venous network of the knee.

Used for pain or numbness and motor impairment of the knee and for leg qi.

Traditional indications include pain of the knee, leg qi, and paralysis of the lower limb.

Traditional functions are to invigorate qi and remove obstructions from the jing lou (channels and collaterals).

Use the following massage technique. Facing the client, clasp the leg with the knee bent and press on this point and also the medial xiyan point with the thumbs. The fingers will be grabbing the back of the knee and pressing on Bl 40, Bl 39, and Kd 10. Move the hands in a circular fashion as if reeling in or out on a fishing line. You can also just press with thumb or fingers on the point, do clockwise or counterclockwise rotations for xu or shi conditions, or do fingertip percussion.

See St 34 for treatment of knee disorders, etc.

Applications:

It's difficult to get at both the set-up point and the major point. However, if the attacker is kicking you, then you can take his leg and strike behind his knee with your on knee, followed by a strike to just below the knee with your palm.

ST 36 (STOMACH POINT NO. 36)

Chinese name:

Zusanli (three measures of the leg).

Location:

3 cun below St 35, one finger breadth from the anterior crest of the tibia between the tibialis anterior and the tendon of the extensor digitorum longus pedis.

Connections:

A branch from here to the middle toe.

Direction of strike:

In from the side of the lower leg.

Damage:

This point is a major point in acupuncture and in dim-mak. It is an earth and he point and sea of nourishment point along with St 30. A strike here will cause great weakness, which, left untreated, will slowly get worse. It will also damage the spleen. There is obvious immediate physical leg damage and pain, but it is the internal organ problems this strike causes that are the main object of the attack.

Set-up point:

St 30.

Antidote:

Treat the same point on the other leg along with St 30.

Healing:

Innervation occurs superficially by the lateral sural cutaneous nerve and the cutaneous branch of the saphenous nerve. Deeper, it is by the deep peroneal nerve. Irrigation is by the anterior tibial artery and vein.

Used for gastric pain, vomiting, abdominal distension, indigestion, borborygmus, diarrhea, constipation, dysentery, mastitis, dizziness, mental disorders, hemiplegia, beriberi, aching of the knee joint, ulcers, acute and chronic enteritis, acute pancreatitis, indigestion and other disorders of the digestive system, hemiplegia, shock, general weakness, anemia, hypertension, allergies, jaundice, seizures, asthma, enuresis, diseases of the reproductive system, and neurasthenia.

Traditional indications include abdominal pain and distension, vomiting, constipation or diarrhea, paralysis, seizures, abscessed breast, swelling of the limbs, difficult urination, pain and distension of the lower abdomen, and loss of urine.

Traditional function is as a he sea point and an earth point of the stomach meridian. It tonifies the spleen and stomach, regulates the qi and blood, strengthens weak and deficient conditions, and eliminates wind and damp.

Massage techniques include pressing and holding the point, rotating clockwise and counterclockwise for xu or shi conditions, doing fingertip percussion, and pressing slowly with both thumbs and releasing quickly, pulling the thumbs apart.

Use with Cv 12, Pc 6, Liv 3, St 21, St 25, Bl 20, Bl 18, Gv 4, and Co 4 for nausea, vomiting, abdominal distension, etc. Use with Co 4, Pc 6, Cv 12, St 25, Bl 25, Bl 32, and Liv 3 for acute intestinal obstruction.

Use with Bl 20, Bl 25, Bl 17, Bl 18, Cv 12, Liv 3, Lu 7, Lu 1, Cv 17, Gb 20, Co 11, and Co 20 for allergies.

Applications:

A heel kick just below the knee will suffice. You could perform a double kick—first to St 30 and then down to St 36.

ST 37 (STOMACH POINT N0. 37)

Chinese name:

Shangjuxu (upper void).

Location:

On the lower leg, 3 cun below St 36, in the tibialis anterior muscle.

Connections:

None.

Direction of strike:

Slightly downward onto the side of the shin, usually using a heel kick.

Damage:

This point damages the colon function. It can cause defecation immediately if struck hard enough. It will also drag too much qi into the legs, causing an imbalance in the whole system. This strike will also have an adverse effect on the flow of wei qi, so the immune system will slowly become ineffective. There is also obvious immediate pain and qi drainage.

Set-up point:

Bl 11 struck straight in to the upper back.

Antidote:

Apply pressure to the opposite St 37, as well as to Bl 11 on both sides.

Healing:

Innervation is by the lateral cutaneous nerve of the calf and the cutaneous branch of the saphenous nerve and, deeper, on the pathway of the deep peroneal nerve. Irrigation is by the anterior tibial artery and vein.

Used for abdominal pain and distension, dysentery, borborygmus, diarrhea, appendicitis, hemiplegia, beriberi, enteritis, gastritis, and hemiplegia.

Traditional indications are deficient or weak conditions of the spleen and stomach, indigestion, leg qi, sharp pain in the intestines, diarrhea, and hemiplegia.

Its traditional function is as a lower he sea point of the colon, so this is the main point to treat the organ; plus it is also used to remove damp heat, relieve fullness of the chest, regulate the intestines and stomach, and eliminate accumulations and stagnation.

Massage techniques are the same as for St 36.

Use with St 25, Bl 25, Liv 3, Sp 9, Sp 10, Co 4, Co 11, Liv 2, Sp 15, and Gb 26 for dysentery.

Use with Liv 3, St 25, Liv 4, Bl 25, Bl 26, and Bl 20 for constipation.

Use with St 36, Liv 3, Cv 12, St 25, St 21, Bl 21, Bl 20, Bl 19, Bl 18, and Bl 17 for gastritis.

Applications:

You could be in a grappling-type situation and, as such, are able to strike using a one knuckle punch into Bl 11 on the upper back. Your heel now strikes down the front of the shin into St 37. The strike to Bl 11 is usually enough to cause any grappler to let go, enabling you to get at St 37.

ST 38 (STOMACH POINT NO. 38)

Chinese name:

Tiakou (line's opening).

Location:

8 cun below St 35 and 2 cun below St 37, midway between St 35 and St 41.

Connections:

Obviously the stomach points are all connected. However, there is a special connection to St 12 from this point.

Direction of strike:

Straight in and slightly downward along the side of the shin.

Damage:

This is an interesting point. I have tested this strike and have found that it has a dire effect upon the power of the upper body, especially the shoulders. In some cases the arms would not work after this strike and had to be treated using the antidote of St 12.

Set-up point:

Any good violent jerking of the arms works really well to set up the effect of damaging the shoulders.

Antidote:

St 12, using pressure downward into the clavicle—not too much pressure, however, for this will take away the patient's will to fight.

Healing:

Innervation and irrigation are the same as for St 37.

Used for muscular atrophy, motor impairment or pain and paralysis of the leg, shoulder pain, arthritis of the knee, stomachache, and enteritis.

Traditional indications include perifocal inflammation of the shoulder.

Massage techniques are the same as for St 36.

Use with Co 15, Co 14, Co 11, Co 4, Gb 21, Th 15, Si 13, Si 12, Si 11, Si 10, Si 9, Ht 1, Th 14, Th 13, Gb 34, St 36, and St 40 for shoulder pain with inability to lift the arm.

Use with St 36, St 37, St 40, Gb 34, and Liv 3 for shin splints (inflammation of the tibialis anterior).

Applications:

You could use a claw-type action on the clavicle and then a kick down to St 38, or a hammer fist onto the clavicle, which will drain so much qi that he will have to stop the fight anyway!

ST 39 (STOMACH POINT NO. 39)

Chinese name:

Xiajuxu (lower void).

Location:

9 cun below St 35, 3 cun below St 37, one finger breadth out from the anterior crest of the tibia.

Connections:

None.

Direction of strike:

Straight in from the side of the lower leg.

Damage:

This point affects the small intestine and will also cause paralysis of the legs when struck hard. It will also have an effect upon the wei qi, causing problems with the immune system later as well.

Immediate great pain when this point is struck directly.

Set-up point:

Si 8.

Antidote:

Apply pressure to the elbow area, in particular Si 8. Treat the leg if physical damage has occurred, of course.

Healing:

Innervation is by the branches of the superior peroneal nerve and the deep peroneal nerve. Irrigation is by the anterior tibial artery and vein.

Used for lower abdominal pain, backache referring to the testis, mastitis, muscular atrophy, motor impairment or pain and paralysis of the lower extremities, acute and chronic enteritis, and hepatitis.

As a lower he sea point of the small intestine, its traditional function is to treat disease of the Si organ and channel.

Massage techniques are the same as for St 36.

Use with Bl 25, Bl 26, Bl 53, Bl 54, Sp 12, Sp 13, Gb 27, Gb 28, Gb 29, Gb 30, Bl 52, Bl 38, Bl 39, Bl 40, and Gb 34 for lower back pain referring to the testis.

See St 38 for treatment of shin splints.

Use with Cv 4, St 25, Cv 12, Bl 27, Bl 25, Bl 26, Bl 20, Liv 3, and Pc 6 for blockage of the small intestine.

Applications:

Strike at Si 8 outside of his elbow in defense of his hand attack. Then chop downward onto his shin area with your heel at St 39.

ST 40 (STOMACH POINT NO. 40)

Chinese name:

Fenglong (abundance and prosperity).

Location:

8 cun superior and anterior to the external malleolus, about 1 finger breadth posterior or lateral to St 8, between the lateral side of the extensor digitorum longus pedis and the peroneus brevis muscles.

Connections:

Transverse luo to Sp 3 and Sp 1.

Direction of strike:

In from the side of the lower leg.

Damage:

Apart from local pain and qi drainage, this point also has an effect upon the spleen. It will cause a great imbalance between stomach and spleen and so weaken the body. This is a classic point for treating epilepsy. I have not heard of any instances where a strike here causes epilepsy; however, given the nature of this point, it could.

Set-up point:

Sp 10.

Antidote:

Have an acupuncturist treat the same point, St 40, on the opposite leg. You might also treat using finger pressure to Sp 10.

Healing:

Innervation is by the superficial peroneal nerve, and irrigation is by the branches of the anterior tibial artery and vein.

Used for chest pain; asthma; excessive sputum; sore throat; muscular atrophy; motor impairment, pain, paralysis, or swelling of the lower extremities; headache; dizziness; mental disorders; epilepsy; coughing; abundant mucous; beriberi; amenorrhea; and abnormal uterine bleeding.

Traditional indications are cough with excessive sputum, fluid retention anywhere in the body, epilepsy, and mental disorders.

St 40 is a low connecting point of the stomach meridian. Its traditional functions are to transform phlegm and dampness, calm the spirit, tranquilize the mind, and eliminate phlegm fire from the stomach.

Massage techniques are the same as for St 36.

Use with Bl 13, Bl 12, Bl 17, Cv 17, and Lu 7 for cough with abundant phlegm.

Use with Gv 20, Ht 7, Gb 20, Liv 3, anmien, Kd 1, Cv 12, Bl 14, Bl 20, and Gb 21 for insomnia and vertigo.

Use with Bl 13, Bl 12, Bl 43, dingchuan, Cv 22, Lu 1, Lu 5, Lu 7, Co 4, Liv 3, Liv 14, Sp 21, Kd 22, Kd 23, Kd 24, Kd 25, Kd 26, Kd 27, Bl 17, Bl 20, Bl 18, Bl 23, and Kd 7 for asthma, bronchitis, etc.

Applications:

You could use a double kick, first to Sp 10 just above the knee on the inside of the leg, then rebound that kick down to St 40.

ST 41 (STOMACH POINT NO. 41)

Chinese name:

Jiexi (release stream).

Location:

At the junction of the dorsum of the foot and the leg, between the tendons of the extensor digitorum longus and hallucis longus, approximately at the level of the tip of the external malleolus.

Connections:

None.

Used for muscular atrophy, motor impairment or pain and paralysis of the leg, shoulder pain, arthritis of the knee, stomachache, and enteritis.

Traditional indications include perifocal inflammation of the shoulder.

Massage techniques are the same as for St 36.

Use with Co 15, Co 14, Co 11, Co 4, Gb 21, Th 15, Si 13, Si 12, Si 11, Si 10, Si 9, Ht 1, Th 14, Th 13, Gb 34, St 36, and St 40 for shoulder pain with inability to lift the arm.

Use with St 36, St 37, St 40, Gb 34, and Liv 3 for shin splints (inflammation of the tibialis anterior).

Applications:

You could use a claw-type action on the clavicle and then a kick down to St 38, or a hammer fist onto the clavicle, which will drain so much qi that he will have to stop the fight anyway!

ST 39 (STOMACH POINT NO. 39)

Chinese name:

Xiajuxu (lower void).

Location:

9 cun below St 35, 3 cun below St 37, one finger breadth out from the anterior crest of the tibia.

Connections:

None.

Direction of strike:

Straight in from the side of the lower leg.

Damage:

This point affects the small intestine and will also cause paralysis of the legs when struck hard. It will also have an effect upon the wei qi, causing problems with the immune system later as well.

Immediate great pain when this point is struck directly.

Set-up point:

Si 8.

Antidote:

Apply pressure to the elbow area, in particular Si 8. Treat the leg if physical damage has occurred, of course.

Healing:

Innervation is by the branches of the superior peroneal nerve and the deep peroneal nerve. Irrigation is by the anterior tibial artery and vein.

Used for lower abdominal pain, backache referring to the testis, mastitis, muscular atrophy, motor impairment or pain and paralysis of the lower extremities, acute and chronic enteritis, and hepatitis.

As a lower he sea point of the small intestine, its traditional function is to treat disease of the Si organ and channel.

Massage techniques are the same as for St 36.

Use with Bl 25, Bl 26, Bl 53, Bl 54, Sp 12, Sp 13, Gb 27, Gb 28, Gb 29, Gb 30, Bl 52, Bl 38, Bl 39, Bl 40, and Gb 34 for lower back pain referring to the testis.

See St 38 for treatment of shin splints.

Use with Cv 4, St 25, Cv 12, Bl 27, Bl 25, Bl 26, Bl 20, Liv 3, and Pc 6 for blockage of the small intestine.

Applications:

Strike at Si 8 outside of his elbow in defense of his hand attack. Then chop downward onto his shin area with your heel at St 39.

ST 40 (STOMACH POINT NO. 40)

Chinese name:

Fenglong (abundance and prosperity).

Location:

8 cun superior and anterior to the external malleolus, about 1 finger breadth posterior or lateral to St 8, between the lateral side of the extensor digitorum longus pedis and the peroneus brevis muscles.

Connections:

Transverse luo to Sp 3 and Sp 1.

Direction of strike:

In from the side of the lower leg.

Damage:

Apart from local pain and qi drainage, this point also has an effect upon the spleen. It will cause a great imbalance between stomach and spleen and so weaken the body. This is a classic point for treating epilepsy. I have not heard of any instances where a strike here causes epilepsy; however, given the nature of this point, it could.

Set-up point:

Sp 10.

Antidote:

Have an acupuncturist treat the same point, St 40, on the opposite leg. You might also treat using finger pressure to Sp 10.

Healing:

Innervation is by the superficial peroneal nerve, and irrigation is by the branches of the anterior tibial artery and vein.

Used for chest pain; asthma; excessive sputum; sore throat; muscular atrophy; motor impairment, pain, paralysis, or swelling of the lower extremities; headache; dizziness; mental disorders; epilepsy; coughing; abundant mucous; beriberi; amenorrhea; and abnormal uterine bleeding.

Traditional indications are cough with excessive sputum, fluid retention anywhere in the body, epilepsy, and mental disorders.

St 40 is a low connecting point of the stomach meridian. Its traditional functions are to transform phlegm and dampness, calm the spirit, tranquilize the mind, and eliminate phlegm fire from the stomach.

Massage techniques are the same as for St 36.

Use with Bl 13, Bl 12, Bl 17, Cv 17, and Lu 7 for cough with abundant phlegm.

Use with Gv 20, Ht 7, Gb 20, Liv 3, anmien, Kd 1, Cv 12, Bl 14, Bl 20, and Gb 21 for insomnia and vertigo.

Use with Bl 13, Bl 12, Bl 43, dingchuan, Cv 22, Lu 1, Lu 5, Lu 7, Co 4, Liv 3, Liv 14, Sp 21, Kd 22, Kd 23, Kd 24, Kd 25, Kd 26, Kd 27, Bl 17, Bl 20, Bl 18, Bl 23, and Kd 7 for asthma, bronchitis, etc.

Applications:

You could use a double kick, first to Sp 10 just above the knee on the inside of the leg, then rebound that kick down to St 40.

ST 41 (STOMACH POINT NO. 41)

Chinese name:

Jiexi (release stream).

Location:

At the junction of the dorsum of the foot and the leg, between the tendons of the extensor digitorum longus and hallucis longus, approximately at the level of the tip of the external malleolus.

Connections:

None.

Direction of strike:

Usually a stomp down onto the top of the foot at the place where it joins with the leg.

Damage:

This is one of those points that seem harmless enough but have a great effect upon the whole body when struck. It is a fire and jing point. This strike will affect the stomach greatly, causing extreme nausea—enough to stop the fight. It will also drain qi from the lower extremities of the body, greatly weakening the legs.

Set-up point:

A violent slap onto the forearms (either side) will suffice.

Antidote:

Finger pressure to St 31.

Healing:

Innervation is by the superficial and deep peroneal nerves. Irrigation is by the anterior tibial artery and vein.

Used for headache, nephritis, enteritis, seizures, disease of the ankle and surrounding tissue, drop foot, edema of the head and face, dizziness and vertigo, mental disorders, and motor impairment or pain and paralysis of the lower extremities.

Traditional indications are headache, vertigo, eye disease, pain in the mouth, seizures, distended abdomen, severe palpitations, and pain of the foot and ankle.

This is a jing river point and a fire point of the stomach meridian. Its traditional functions are to tonify the stomach and eliminate cold damp.

Massage techniques are the same as for St 36.

Use with Bl 23, Kd 7, SP 9, Cv 2. Cv 3, Cv 4, Bl 66, and Bl 67 for nephritis.

Use with Gb 40, Bl 60, Kd 3, Liv 4, Sp 5, and Gb 34 for problems with the ankle.

Use with Gb 14, St 8, yintang, taiyang, St 44, St 45, Co 4, Co 11, Liv 3, Liv 2, and Gb 41 for headache.

Applications:

He might attack with both hands low, and you slam both of his forearms with both of your palms using great force, then stomp down onto the top of his foot (either one) at St 41.

ST 42 (STOMACH POINT NO. 42)

Chinese name:

Chongyang (pouring yang).

Location:

Distal to St 41 at the highest point of the dorsum of the foot, in the depression between the second and third metatarsal bones and the cuneiform bone.

Connections:

There is a branch from here to Sp 1. This point also receives transverse luo from Sp 4.

Direction of strike:

Stomp straight down onto the top of the instep.

Damage:

This is an electrical as well as a physiological point. The strike will cause nerve damage with an immediate electrical shock wave rushing up the whole leg. It is also a yuan, or source point. It will cause great qi loss and enough local pain to stop anyone from attacking further.

Set-up point:

Same as for St 41.

Antidote:

Pressure St 31 as with a St 41 strike, but because this is a source point, you also need to massage the whole stomach meridian up the leg from foot to pelvis.

Healing:

Innervation occurs superficially by the medial dorsal cutaneous nerve of the foot, derived from the

superficial peroneal nerve and, deeper, the deep peroneal nerve. Irrigation is by the dorsal pedis artery and vein of the foot and the dorsal venous network of the foot.

Used for facial paralysis, muscular atrophy and motor impairment of the foot, redness and swelling of the dorsum of the foot, headache, toothache, malaria, insanity, fever, and lack of strength in the arms or legs.

As a yuan point of the stomach meridian, its traditional function is to build the yuan qi of that organ/meridian.

Use with Sp 4, St 36, Sp 9, Sp 6, St 40, Liv 3, Gb 39, Gb 29, and St 44 for leg qi.

Use with Co 4, Cv 22, Co 11, Gb 20, Th 3, Lu 2, Co 14, Liv 4, Cv 17, Gv 14, St 11, Lu 3, Th 13, St 9, and Cv 23 for goiter.

Applications:

Same as for St 41.

ST 43 (STOMACH POINT NO. 43)

Chinese name:

Xiangru (sinking valley).

Location:

In the depression distal to the junction of the second and third metatarsal bones, directly above the lateral side of the second toe.

Connections:

None.

Direction of strike:

Straight down onto the top of the foot, back from the second toe.

Damage:

This is a wood and shu point and normally promotes the free flow of qi all over the body. However, when struck using adverse qi, it will cause the reverse, resulting in such a loss of power that the recipient must sit down, as well as great local pain and qi drainage. It can even cause things like rheumatism later in life.

Set-up point:

Neigwan because of its qi drainage properties.

Antidote:

Press St 36.

Healing:

Innervation is by the medial dorsal cutaneous nerve of the foot. Irrigation is by the dorsal venous network of the foot.

Used for facial and general edema, borborygmus, abdominal pain, pain and swelling of the dorsum of the foot, conjunctivitis, and hysteria.

Traditional indications consist of general aching.

As a wood point and a shu stream point of the stomach meridian, its traditional function is to eliminate wind from the channels.

To massage, press and hold, do rotations clockwise or counterclockwise for xu or shi conditions, do fingertip percussion, or you can use your index or middle finger and vibrate this point.

Use with St 37, St 36, Co 4, Pc 6, Co 11, lanweixue, Sp 3, Bl 25, St 25, Bl 26, Bl 24, Sp 9, and Kd 16 for acute appendicitis.

Use with Pc 6, St 36, Cv 12, St 21, St 25, Liv 13, Bl 20, Bl 21, Bl 25, and Liv 3 for stomachache.

Applications:

The same as for St 41.

ST 44 (STOMACH POINT NO. 44)

Chinese name:

Netting (inner court).

Location:

Proximal to the web margin between the second and third toes, in the depression distal and lateral to the second metatarsodigital joint.

Connections:

None.

Direction of strike:

Strike down onto the web of the second toe.

Damage:

This is a water and yong point (spring or stream point). Striking this point will affect the way the qi is sent all over the body, so a strike here will cause power loss and great local pain. This strike has a strange effect in that it causes the recipient to feel as if he has been struck in the jaw. This could cause the brain to think that the jaw has been struck and cause KO. If left unchecked, this strike will cause all kinds of qi balance problems that will only get worse.

Set-up point:

Neigwan.

Antidote:

Have an acupuncturist use needles to balance the qi between water and earth.

Healing:

Innervation occurs where the lateral branch of the medial dorsal cutaneous nerve divides into two digital nerves. Irrigation is by the dorsal venous network of the foot.

Used for toothache, deviation of the mouth, epistaxis, abdominal pain or distension, diarrhea, dysentery, pain and swelling of the dorsum of the foot, febrile diseases, trigeminal neuralgia, tonsillitis, stomachache, acute and chronic enteritis, pain of intestinal hernia, and beriberi.

Traditional indications include toothache, nosebleed, eye pain, paralysis of the mouth, lockjaw, throat blockage, ringing in the ears, abdominal distension, diarrhea, red or white dysentery, blood in the urine, and wind rash.

This is a water point and a ying spring (gushing) point. Its traditional functions are to cool and drain heat from the stomach, regulate the qi, suppress pain, promote digestion, remove obstruction from the intestines, and clear and relieve fullness from the stomach.

To massage, pinch the web between the thumb and forefinger, press and hold, do rotations clockwise or counterclockwise for xu or shi conditions, or use fingertip percussion.

Use with Co 4, St 2, St 3, St 5, and St 6 for toothache.

Use with Gb 41, Cv 3, Cv 4, Cv 6, Sp 9, St 25, Liv 4, Liv 3, St 36, Bl 25, and Bl 26 for distension in the lower abdomen.

Use with St 45, Liv 2, Liv 3, Liv 4, St 25, Cv 12, St 21, Liv 13, Co 4, Co 11, St 36, Bl 20, and Bl 21 for gastritis.

Applications:

A stomp on the second toe.

ST 45 (STOMACH POINT NO. 45)

Chinese name:

Lidui (strict exchange).

Location:

On the lateral side of the second toe, about 0.1 cun posterior to the corner of the nail.

Connections:

Transverse luo from Sp 4.

Direction of strike:

Stomp on the second toe.

Damage:

This strike has some dire affects. It is a metal and cheng point and will have a great effect upon the muscles and tendons, so it can be used as a set-up point for a joint lock where the tendons and muscles are being attacked. It will cause mental confusion and has been known to cause the nose to bleed profusely.

Set-up point:

St 36.

Antidote:

Squeeze the tip of the other second toe.

Healing:

Innervation is by the dorsal digital nerve derived from the superficial peroneal nerve. Irrigation is by the arterial and venous network formed by the dorsal digital artery and vein of the foot.

Used for facial swelling, deviation of the mouth, toothache, epistaxis, distending sensation of the chest and abdomen, cold in the leg and foot, febrile disease, dream-disturbed sleep, mental confusion, ischemia of the brain, neurasthenia, tonsillitis, hepatitis, indigestion, and hysteria.

This is a jing well point and a metal point.; its traditional function is to disperse heat in yang ming.

Traditional indications include gastritis, tonsillitis, and febrile disease.

To massage, pinch the point between the knuckle of the thumb and the forefinger. You can do rotations clockwise or counterclockwise for xu or shi conditions.

Use with St 44, Liv 3, and St 34 for acute trauma to the stomach meridian.

Add to formula for toothache listed under St 44.

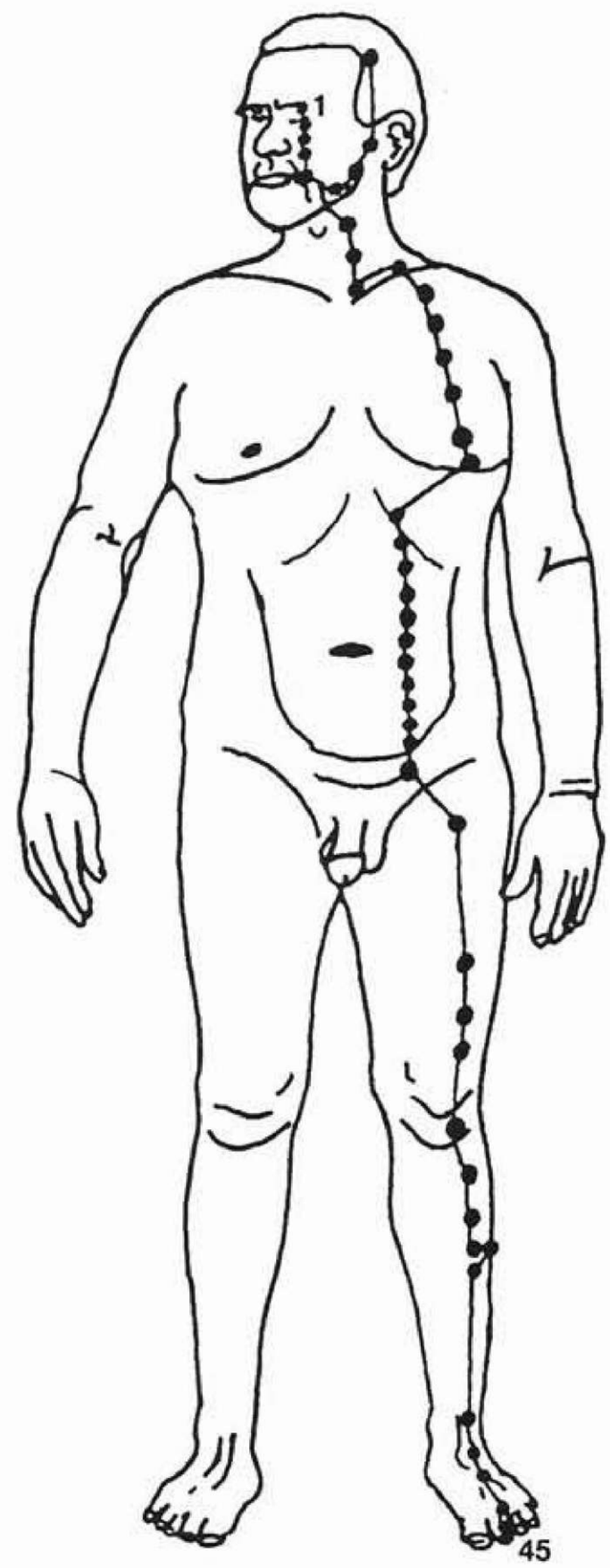
See St 44 for treatment of gastritis.

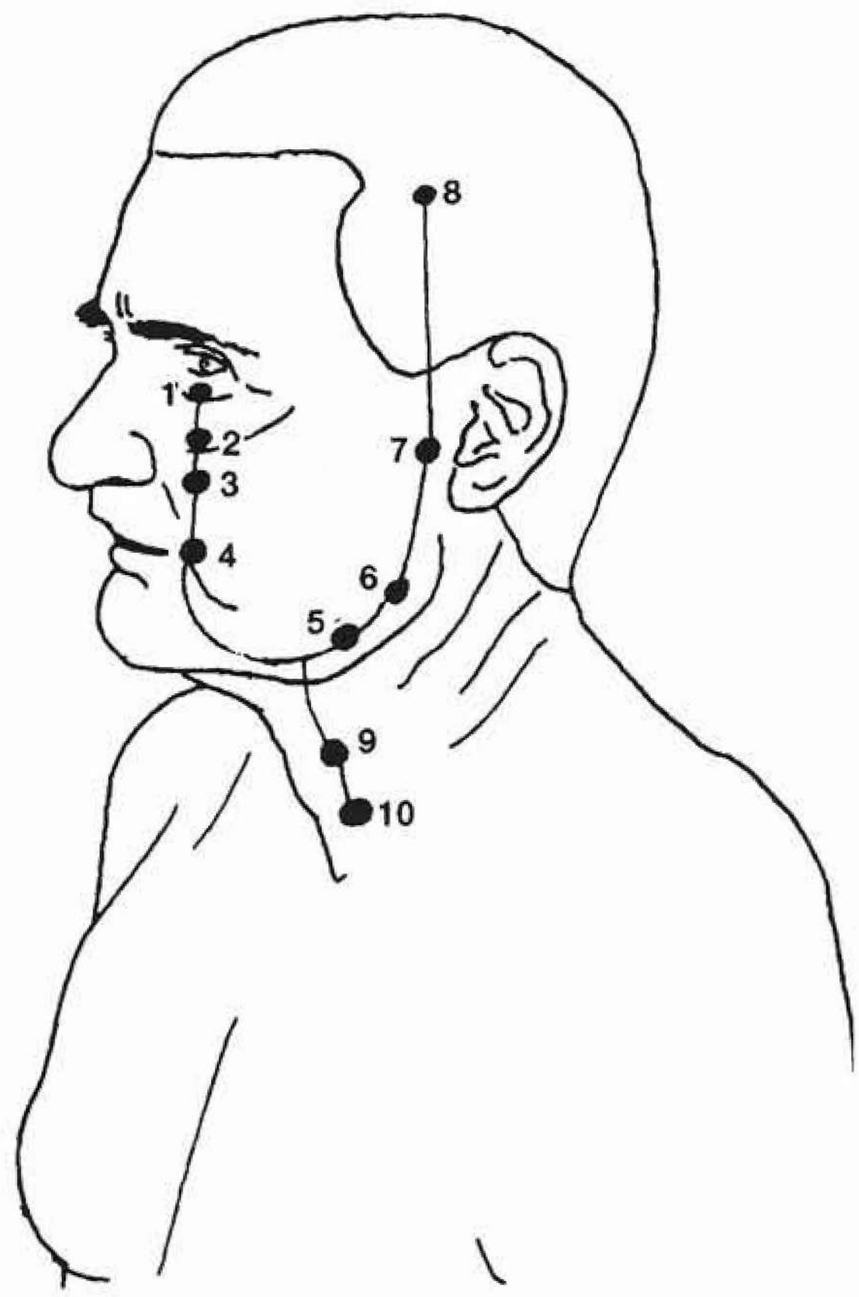
Use with Si 17, Co 4, Co 11, Lu 11, Lu 2, Lu 5, Liv 2, Kd 1, Kd 2, Bl 7, St 12, Bl 11, and St 44 for acute tonsillitis.

Applications:

The same as St 41. Or if you were using it as a set-up point strike, simply stomp on the second toe, then come in and try to get the lock.

This is the end of the stomach meridian. Obviously there are points you will strike that are close to other points on adjacent meridians, etc. With most of the stomach points, you don't have to be that accurate to make them work; and if you are not accurate, you will probably get some other point.

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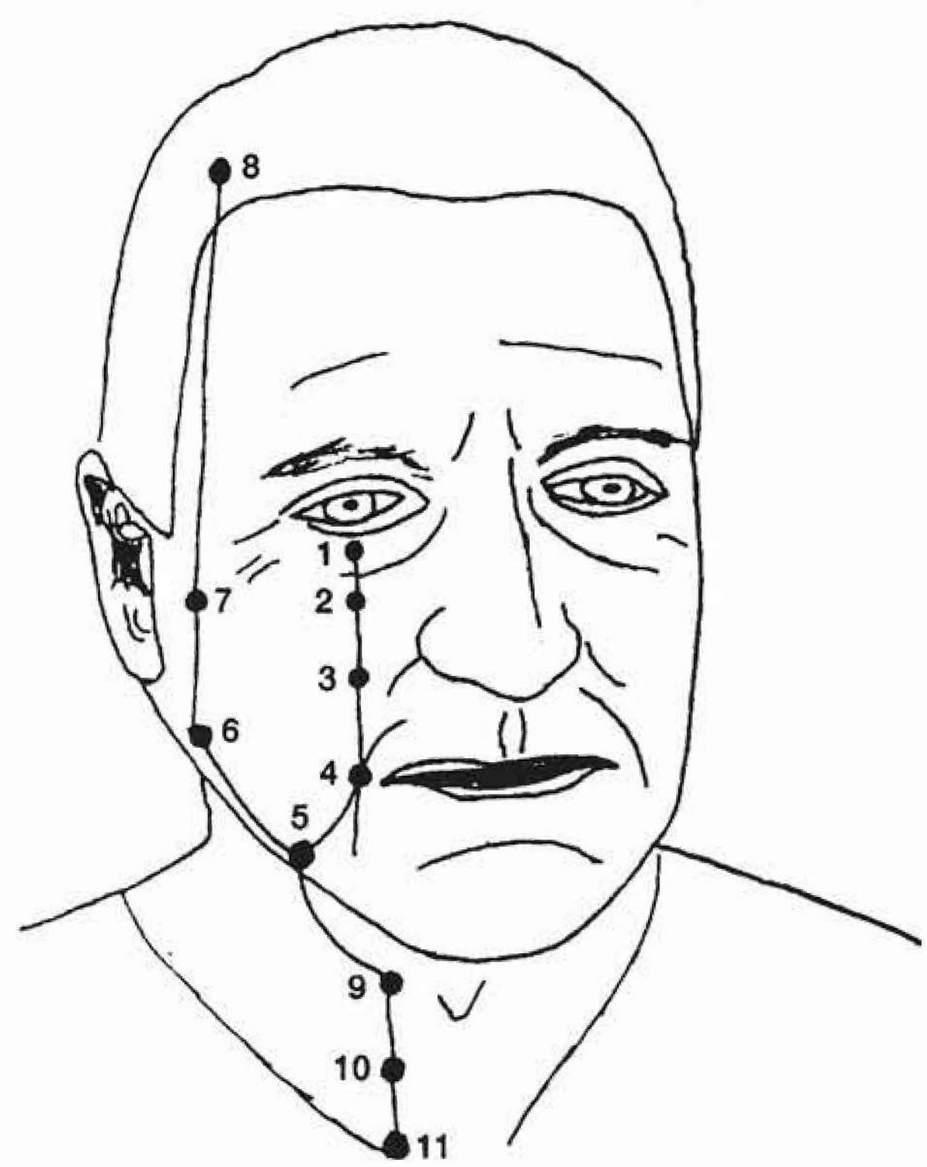
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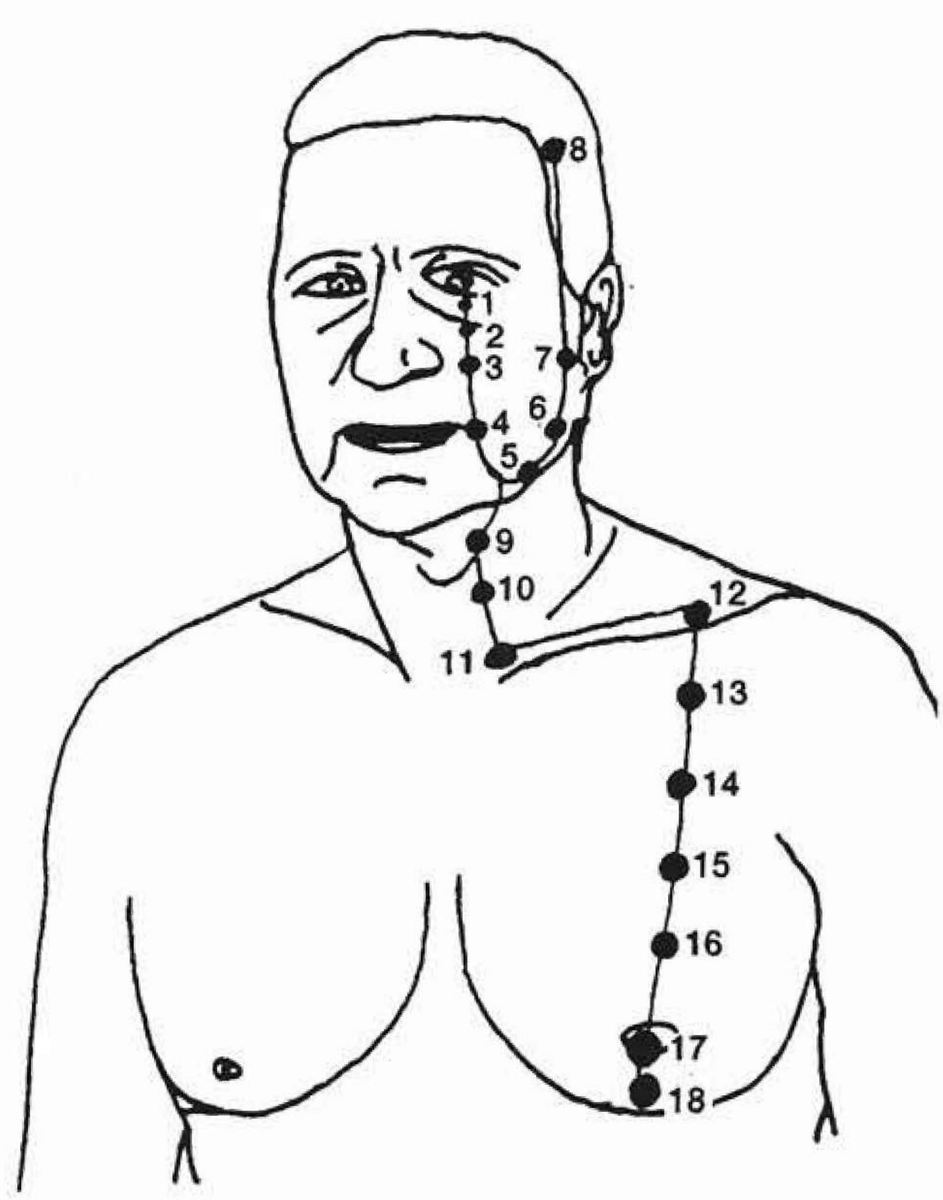
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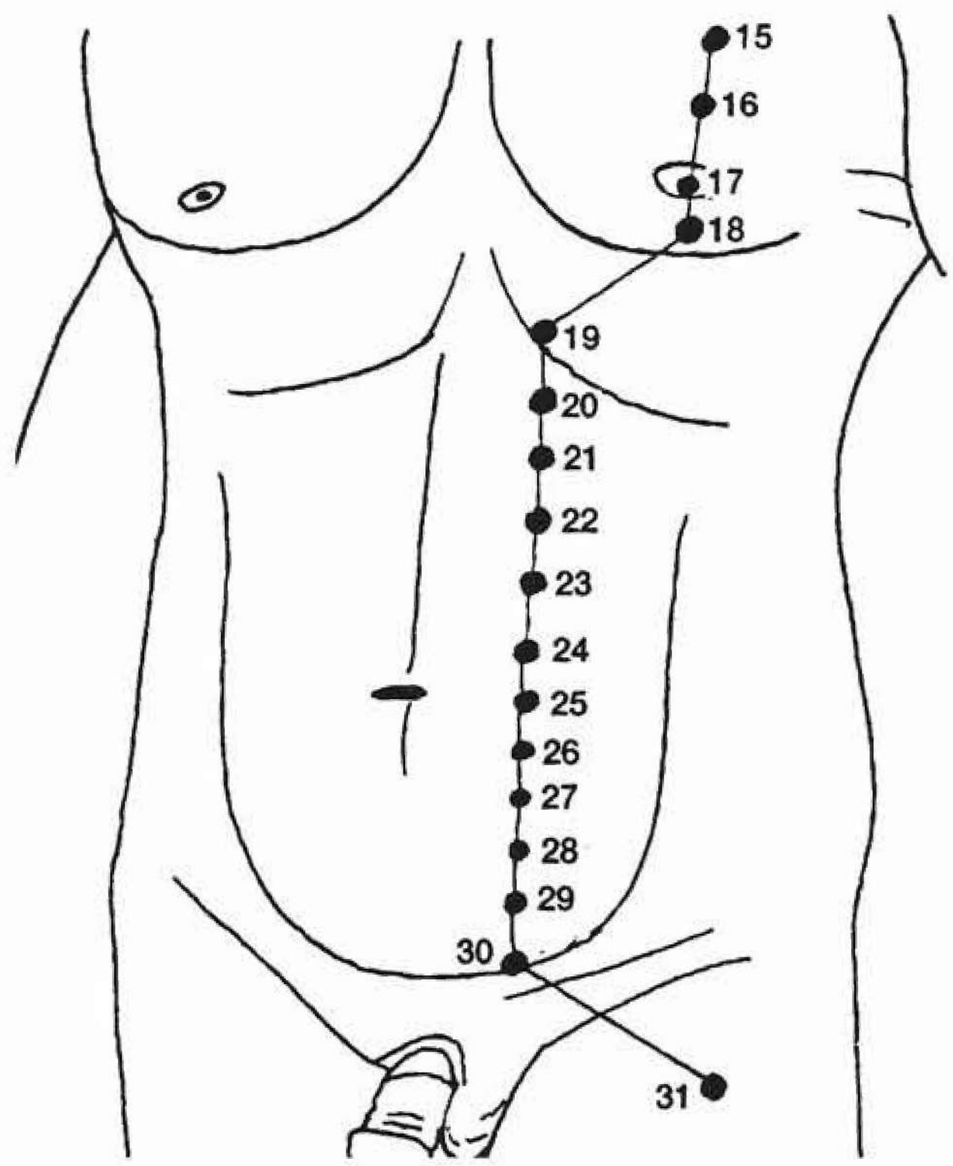
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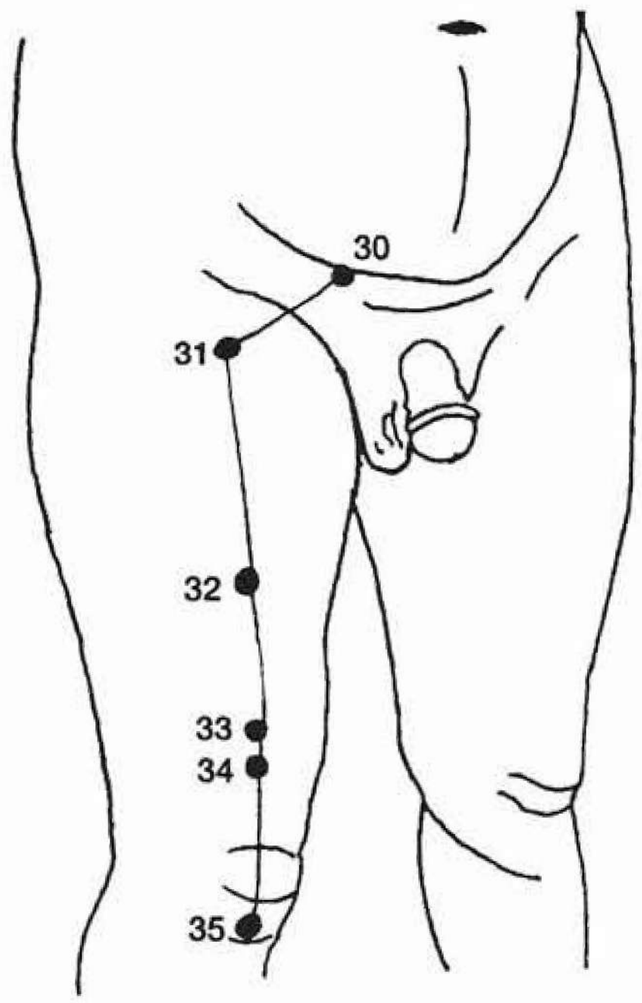
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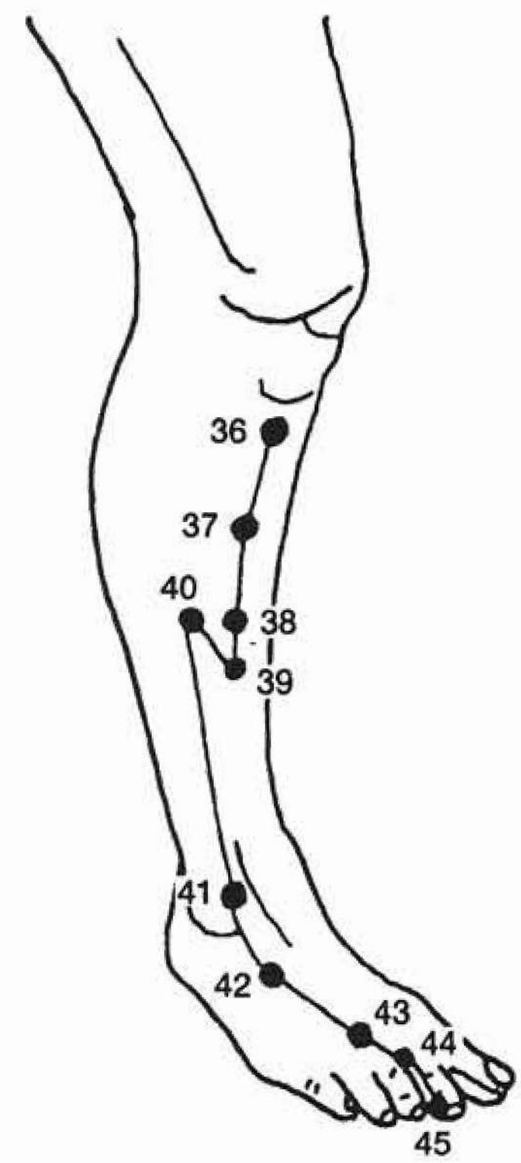
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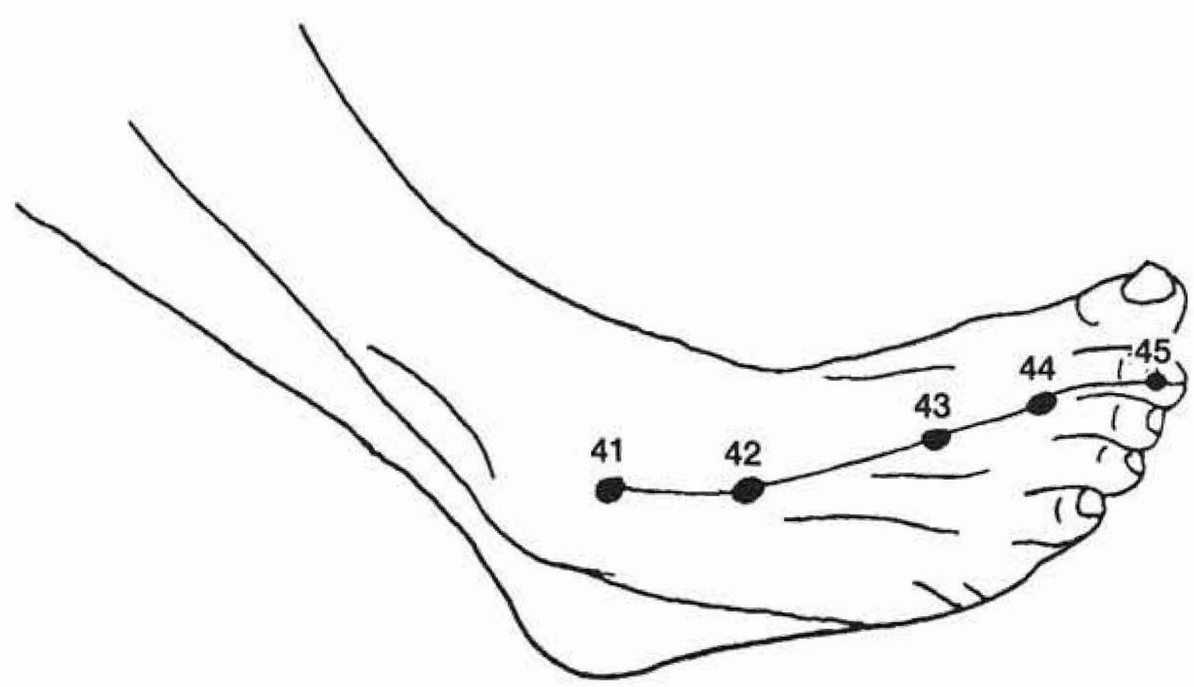
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Chapter 6

The Spleen Meridian

The spleen is the only lymphatic organ whose job it is to filter blood. It takes away used-up blood cells from the blood, changes their hemoglobin to bilirubin, and then sends their iron back into the bloodstream to be used to make other blood cells.

THE TCM VIEW

Chinese element of the spleen is earth. Its *fu* (yang) organ is the stomach, and it is traditionally the controller of transport.

The traditional functions of the spleen are as follows:

- Dominates *yun hua* (transformation and transportation)
- Controls blood (holds it in the vessels)
- Dominates the muscles and the four limbs
- Opens into the mouth and manifests in the lips
- Controls the raising of qi.

The spleen is more important in TCM than in Western medicine. In fact, most of what is attributed to the stomach and intestines in Western medicine is actually considered to be caused by the spleen in Chinese medicine.

The spleen is crucial for digestion and transportation of the products of that transformation. If the function of the spleen is normal, there will be good appetite, good digestion, normal absorption, and normal bowel movement. If it is faulty, there will be no appetite, abdominal distension, poor digestion, lack of strength, and undigested food in the stool.

The spleen also controls transportation of qi extracted from food to all of the muscles in the body, particularly those in the limbs. If its function is impaired, there will be a lack of energy (strength) in the limbs in particular and a desire to lie down and rest most of the time.

The spleen controls the transportation and transformation of fluids. If the function of the spleen is impaired, fluids may accumulate, causing dampness, and there may be edema, particularly in the lower and middle parts of the body, with a feeling of heaviness.

The spleen controls the transportation of proper distribution of essences of qi extracted from food to various organs.

The spleen holds blood within the vessels and causes it not to extravasate. In addition to regulating the liver and the pumping action of the heart, the spleen must also hold the blood, and when this function is impaired, there can be hemorrhages of any kind, (e.g., nosebleeds, blood in the sputum and feces, broken blood vessels).

Muscles and limbs depend upon essences extracted from food, and it is the job of the spleen to cause this extraction. When this function is normal, the muscles will be thick and strong, and the four limbs will be warm and energetic (and vice versa when this function is impaired).

Chewing facilitates the spleen function of transformation and transportation. When the spleen function is strong and its qi is strong, the mouth tastes better and the lips are rosy and moist. If the spleen function is impaired, there may be an abnormal taste in the mouth (flat and sticky), a lack of appetite, and the lips will be pale and dry. If the spleen has heat, the lips could be dry with a sweet taste in the mouth. If the spleen qi is deficient, the lips will be pale.

The spleen has the job of holding things in place, particularly along the midline of the body, and producing a lifting effect. This function, called raising qi, is what makes sure that the organs are in their place. When this function is impaired, there may be prolapse of kidney, uterus, bladder, colon, and anus, as well as varicose veins.

SP 1 (SPLEEN POINT NO. 1)

Chinese name:

Yinbai (hidden white).

Location:

On the medial side of the big toe, about 0.1 cun posterior to the corner of the nail.

Connections:

Transverse luo from St 40.

Direction of strike:

A stomp straight down on the big toe.

Damage:

This is a wood and cheng point and a root point of tai yin (the greater yin division of spleen and lungs). This strike has a great effect upon the muscles and tendons because it is a control point for those. It is also a control point for the divergent meridians. Spleen damage will occur immediately, with a great energy drainage. There is a downward rushing feeling when struck, followed by nausea and loss of power caused by this point's connection with the lungs by being the root point of tai yin. So it drains qi from the lungs as well as the spleen. Often used to relax problems related to menstruation, this point also controls bleeding (in healing) in the gastrointestinal tract. As a result, a strike here using adverse qi will cause any bleeding to be worse and to be harder to stop, especially bleeding from, for instance, a knife strike to the stomach area. So this point can also be used as an excellent set-up for a knife attack!

This is also one of those points that will affect the communication between heaven and earth when struck, causing great confusion between mind and body. In healing it is also used as one of the major treatments for shock. When used as a dim-mak strike, however, the reverse happens, with the symptoms of shock becoming apparent more easily, even with a light to moderate strike to the head, for instance. So, again, this is an excellent set-up point for a major strike. Sp 1's effect upon the mind causes an inability to sleep soundly. (In healing, it is used to give a restful sleep.)

A word of warning: Sp 1 should never be used either in a dim-mak way or even for healing during pregnancy because it will have an adverse effect upon the uterus. In healing, it should never be used on a patient who suffers from diabetes because it will affect the balance of insulin/sugar.

Set-up point:

Mind point at the side of the jaw.

Antidote:

The opposite point Sp 1 (on the other foot) should be pressed or squeezed quite hard. Since this point has so much damage associated with it, it is advisable to see a Chinese doctor.

Healing:

Innervation is by the anastomosis of the dorsal digital nerve, derived from the superficial peroneal nerve and the plantar digital proprial nerve. Irrigation is by the dorsal digital artery.

Used for abdominal distension, uterine bleeding, mental disorders, dream-disturbed sleep, convulsions, and bleeding of the digestive tract.

Traditional indications include continuous nosebleed, spitting of blood, abnormal uterine bleeding, blood in urine or stool, and chronic infantile convulsions. Bleed for manic depression, and use moxa for excess dreaming or startled sleep and menorrhagia.

This is a jing well point and a wood point of Sp meridian. Its traditional functions are to tonify the spleen, regulate menstruation, calm the mind, regulate the blood, and strengthen the spleen's function of holding blood.

To massage, pinch the point between the knuckle of the thumb and the forefinger and hold. You can do rotations clockwise or counterclockwise for xu or shi conditions, and this is a good point to use moxa on, as with all jing well points, as you can prick it and get a spot of blood.

Use with Cv 6, Sp 10, Sp 6, Liv 3, Liv 4, Bl 18, Bl 20, Bl 17, Bl 23, Cv 4, and Gb 26 for abnormal uterine bleeding. Use moxa on this point for abnormal uterine bleeding (plus points like Gv 20, St 36, Sp 3, Cv 12, and Bl 20).

You can prick and bleed this point for manic depression, as well as using acupressure on points Liv 3, Liv 4, Kid 16, Sp 3, Cv 12, St 40, Sp 6, Bl 10, Bl 19, Bl 17, Bl 20, Bl 25, St 25, Gb 26, Gb 20, and yintang.

Applications:

Take his right straight, using both of your palms (the right one is palm toward you and yin shaped,

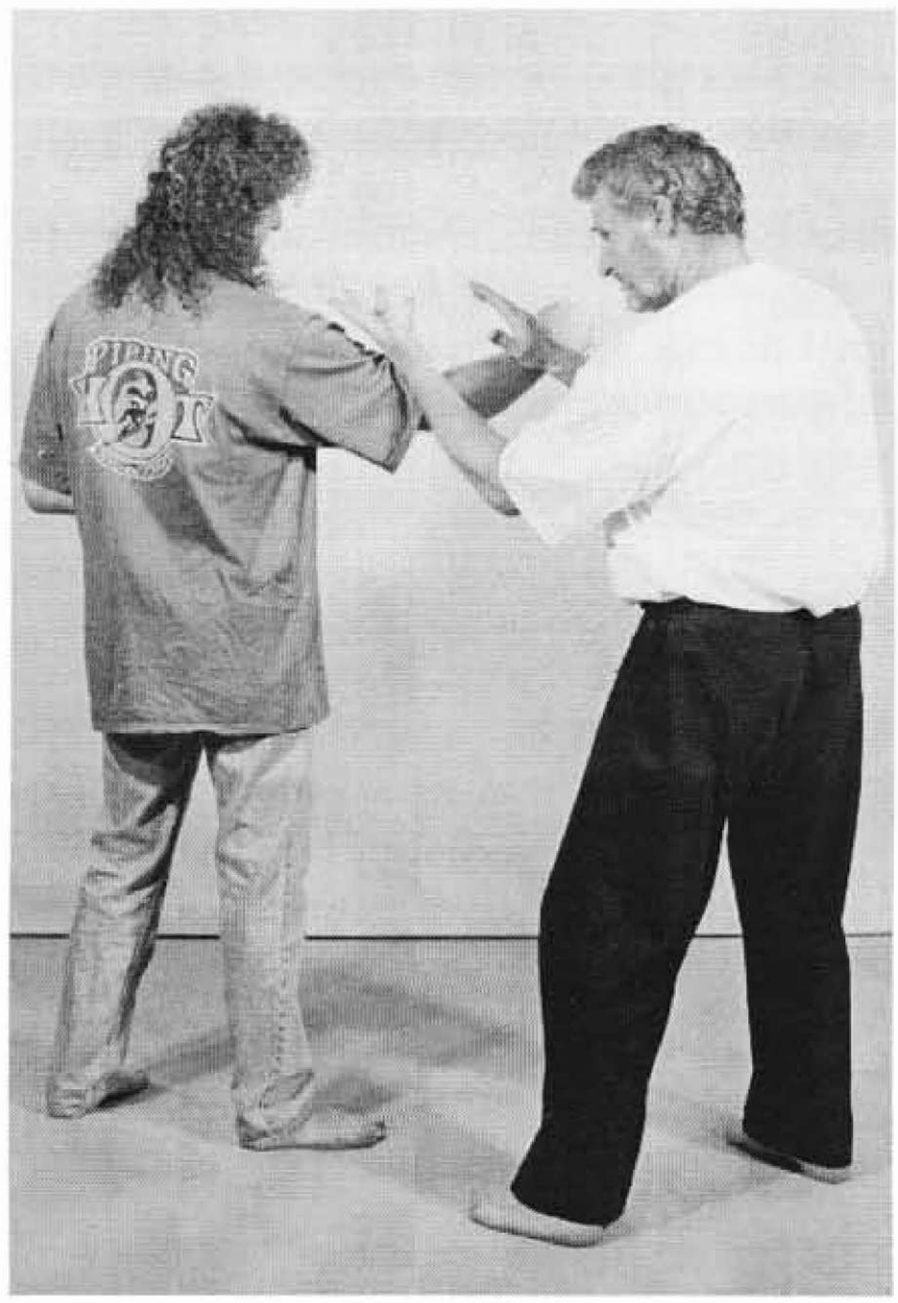


Figure 269

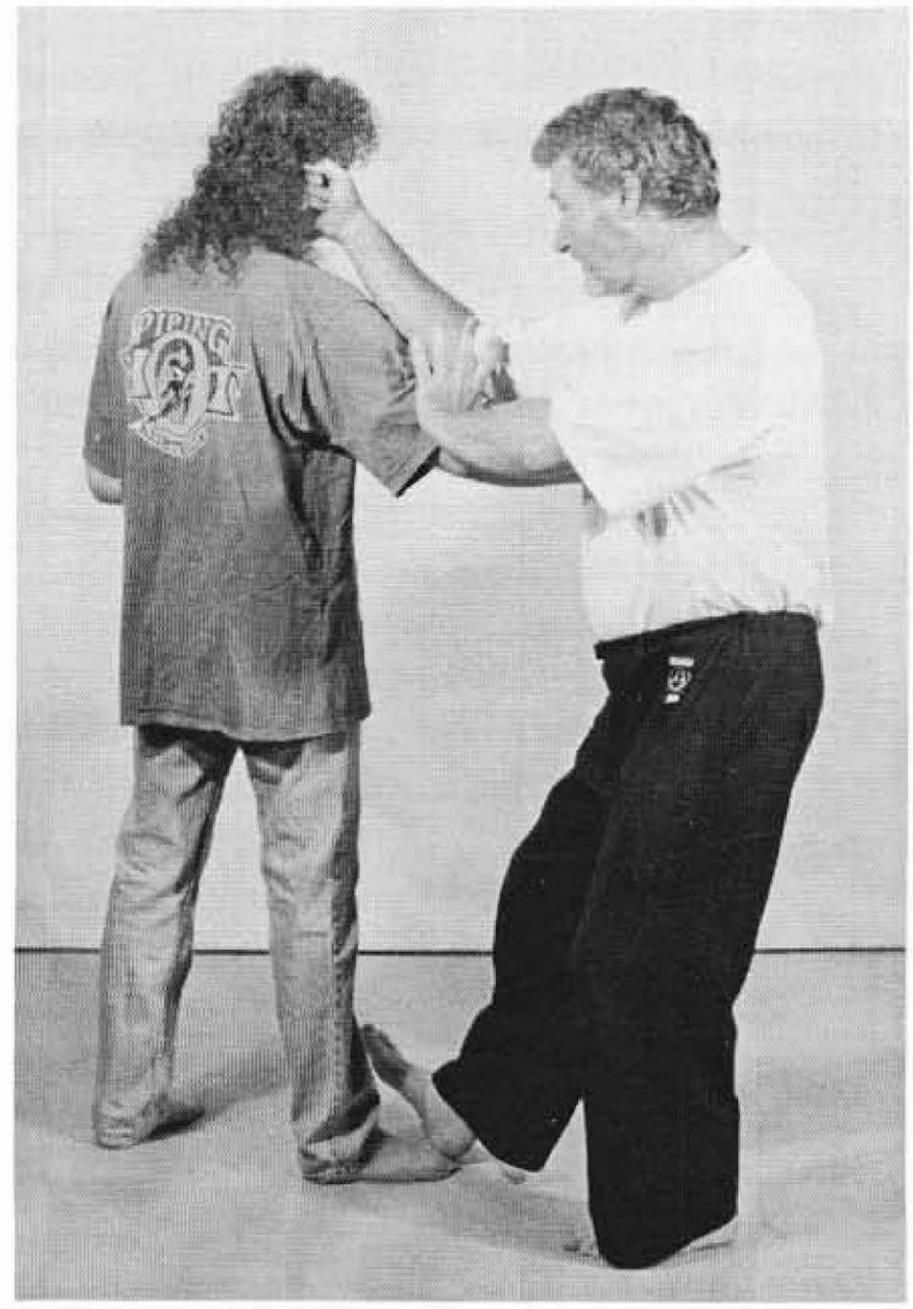


Figure 270

while left palm is facing away from you and yang shaped) (fig. 269). Now, your right palm strikes into the jaw at a 45-degree angle. Just after this, your heel will stomp down onto his right big toe, aimed slightly toward the right side or the side closest to the second toe (fig 270).

SP 2 (SPLEEN POINT NO. 2)

Chinese name:

Dadu (big metropolis).

Location:

On the medial side of the big toe, distal and inferior to the first metatarsodigital joint, at the junction of the red and white skin.

Connections:

None.

Direction of strike:

This point can be accessed either by stomping on the big toe just back from the largest part of the toe, or in a grappling type of situation where you might have access to the toes with your hands. In this case, a quick violent squeeze would be sufficient to cause the grappler to let go of any hold he might have applied.

Damage:

This is a fire and yong point and normally will strengthen the spleen. In this case where the point is used as a dim-mak strike, it will damage the spleen and weaken it, thus causing lack of power, nausea with vomiting, and a loss of memory in the long term if the condition is not treated. This strike will slow the flow of qi in the channel. It will also have an effect upon communication between heaven and earth. This point, like Sp 1, is also forbidden for healing during pregnancy.

Set-up point:

Neigwan will enhance the effects of nausea and loss of power.

Antidote:

Should someone be struck here by accident, you should treat neigwan by rubbing it up the inner arm. Then, you should treat the opposite Sp 2 by squeezing gently—but not if a woman is pregnant!

Healing:

Innervation is by the plantar digital proprial nerve derived from the medial plantar nerve. Irrigation is by the branches of the medial plantar artery and vein.

Used for abdominal distension, gastric pain, febrile disease with anhidrosis (lack of sweating in the presence of an appropriate stimulus), diarrhea, stomachache, edema of the limbs, apoplectic coma.

As a yong spring (gushing) point and a fire point of the spleen, its traditional functions are to sedate or to tonify.

To massage, press and hold the point, do rotations clockwise or counterclockwise for xu or shi conditions, or use fingertip percussion on this point.

Use with Gv 24, Gv 23, Gv 22, Gv 21, Gv 19, Gb 19, Gb 20, Si 5, Bl 67, Bl 63, Bl 62, St 36, Gv 20, Kd 1, yintang, Liv 3, Cv 12, and Sp 3 for dizziness.

Use with Cv 7, Cv 4, Cv 6, Sp 6, Bl 20, Bl 18, Sp 1, Bl 23, and Sp 10 for abnormal uterine bleeding.

Use with St 34, Cv 12, St 21, St 25, Liv 3, St 44, St 45, St 36, Bl 20, Bl 21, and Bl 25 for gastric pain.

Applications:

Should you have access to this point, as in a grappling situation, use the thumb to attack it by squeezing violently. Should you wish to attack it while standing up, strike using a heel kick to the inside side of the big toe, or you can stomp on it.

SP 3 (SPLEEN POINT NO. 3)

Chinese name:

Taibai (most white).

Location:

Proximal and inferior to the head of the first metatarsal bone, at the junction of the red and white skin.

Connections:

Transverse luo from St 40.

Direction of strike:

Straight in to the foot from inside (big toe side) of the foot. Usually attacked with a kick or with finger pressure, as in a grappling situation.

Damage:

This point will give immediate great pain resulting in qi drainage at the point, from the upper chest right down to the foot. The pain alone will be enough to cause a grappler to let go long enough for you to reattack. It is an earth, yuan, and shu point. The long-term effects are easy bruising, lack of memory, and muscle problems such as cramps, muscles becoming atrophied, etc. The immediate effect is a shock to the whole system, which in many cases can cause KO because of this shock. It can be used as a good set-up point strike for points that lie on the four sides of the torso.

Set-up point:

Th 8 is used as the set-up point strike. The shock from this strike is just being registered by the brain when the second strike to Sp 3 happens, completely confusing the brain.

Antidote:

Apply pressure to either side of the head. Just hold the palms on either side for some minutes until the pain and confusion have stopped (fig. 271). There was a chap at a gym where I was teaching once who had dropped a heavy weight onto Sp 3 and was in a state of shock. So I applied this antidote for five minutes until he was okay. (The interesting thing is that this chap, prior to this treatment could not understand mathematics at all, having had this problem all of his life. After the treatment, he could perform instant mathematics in his mind and his comprehension had increased dramatically).

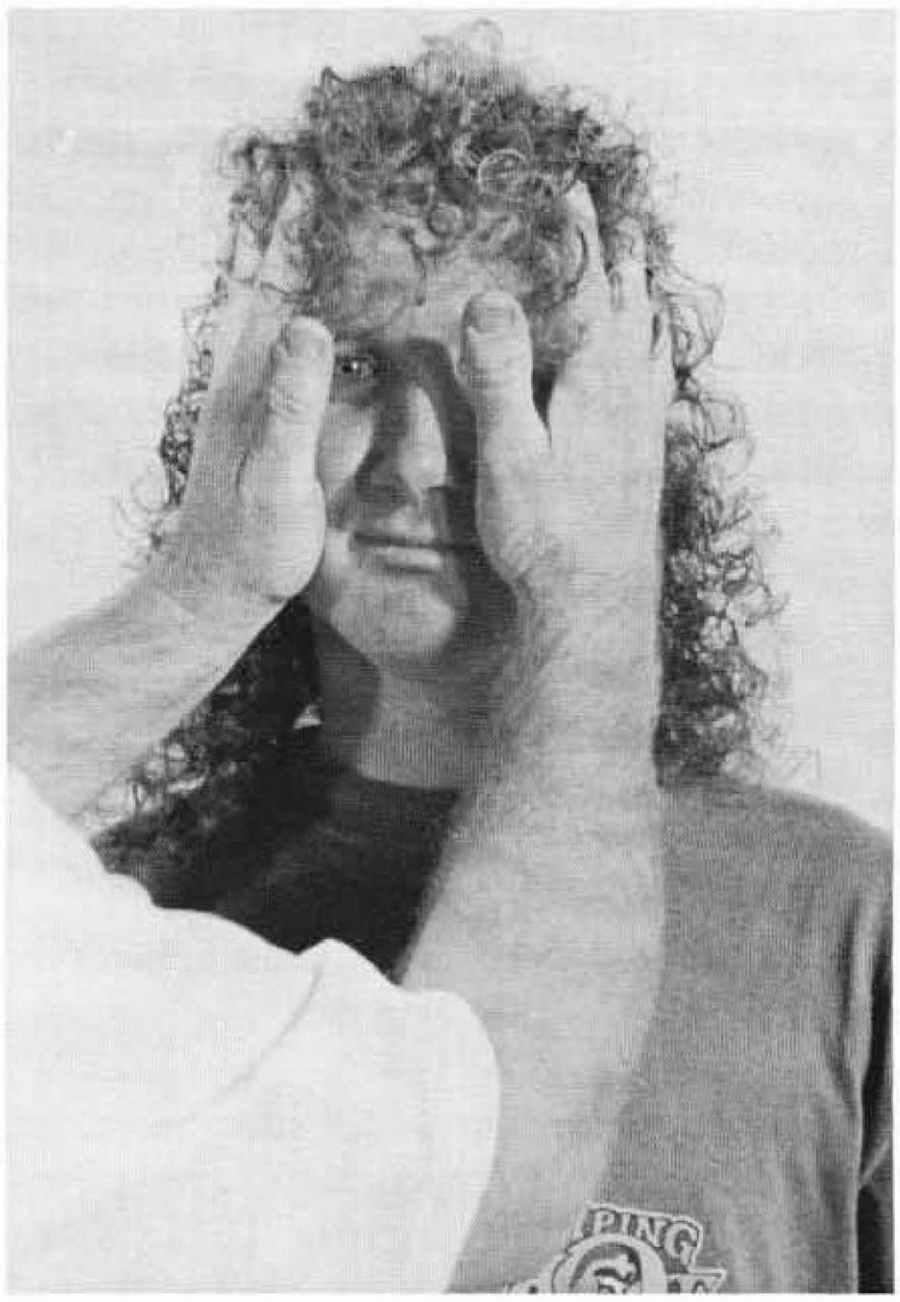


Figure 271

Healing:

Innervation is by the branches of the saphenous nerve and the superficial peroneal nerve. Irrigation is by the dorsal venous network of the foot, the medial plantar artery, and the branches of the medial tarsal artery.

Used for gastric pain, abdominal distension, sluggishness, dysentery, constipation, vomiting, diarrhea, beriberi, headache, edema, and acute gastroenteritis.

This is a shu stream (transporting) point of the spleen, an earth point, and a yuan source point of the spleen. It is the earth point of the earth organ/channel complex, so its traditional functions are to build digestion or ground someone who is off with the fairies. It eliminates both internal and external dampness and strongly tonifies the spleen.

Massage techniques are the same as for Sp 2.

You can also grab the whole foot between the thumb and forefinger with the thumb resting on Sp 3 and squeeze.

Use with St 36, Pc 6, Cv 12, Bl 20, Bl 23, Cv 4, Cv 6, and Cv 14 for vomiting, nausea, sluggishness, loose stool, and lack of energy.

Use with Bl 25, Bl 26, Bl 20, Bl 18, Bl 17, St 25, Sp 16, St 37, Liv 3, Liv 4, and Sp 6 for constipation.

Use with Pc 6, Ht 7, St 36, Liv 3, Gv 20, Kd 1, and Cv 12 to treat someone in shock (you could also add Gv 26).

Applications:

The same as for Sp 2.

SP 4 (SPLEEN POINT NO. 4)

Chinese name:

Gongsun (grandfather's grandson).

Location:

In the depression distal and inferior to the base of the first metatarsal bone, at the junction of the red and white skin or roughly 1 cun behind the joint of the big toe. At the anterior, inferior margin of the first metatarsal, in the abductor hallucis muscle.

Connections:

Transverse luo to St 42 and St 45.

Direction of strike:

In to the side of the foot, usually with finger pressure or a kick.

Damage:

This is a luo point and a master point for chong mai and a coupled point of yin wei mai. A strike here causes dizziness and immediate great local pain with associated qi drainage. This strike can cause KO and much later damage. The pain caused by this strike can last for days, cause sleepless nights, etc. I have noticed that with this strike, even analgesics will not stop the symptoms caused by the type of pain where the body scrunches up and becomes very tense. Because it is a master point of the extra meridian chong mai, it will greatly decrease one's life force. A gradual deterioration of the recipient's quality of life will become apparent, helped by the disruption of the yin and yang energies of the stomach/spleen. If the recipient is into things like yoga, qigong, taijiquan, etc., before the strike, the positive effects of this good practice will slowly diminish until he or she is finally receiving no benefit from it. One of the reasons for doing such meditations is to unite prenatal and postnatal qi, and this strike will stop this. The heart will also be damaged as a result of this strike. In fact, this point strike will have an adverse effect upon all of the organs, immediately and over a period. It is one of those points that you just shouldn't play around with.

Set-up point:

I don't know of any traditional set-up strikes particularly for this point. However, it has been my experience that a hard strike straight in to the inner forearm at neigwan will enhance the negative effects of this strike.

Antidote:

This is such a bad strike, with so many things being affected, that it is a good idea to have a Chinese doctor check you out should you be struck here. However, because of the damage done to stomach/spleen, there is a qigong that will suffice to help this area. The beginning is the same as for the previous qigong for the triple warmer meridian, which balanced out the qi in the body (see Chapter 3, under the antidote for Bl 33).

Squat down and scoop as before. When you are about to rise up onto your toes, you turn your right palm upward and your left palm downward. You have inhaled (fig. 272). Push your right palm upward until it is out of sight and your left palm downward until it is opposite your left hip (fig. 273). You have also risen up onto your toes. Hold this posture with an inhalation (also held) until you wish to lower your heels and your right palm back to the same position (on the other side of your body, of course) as your

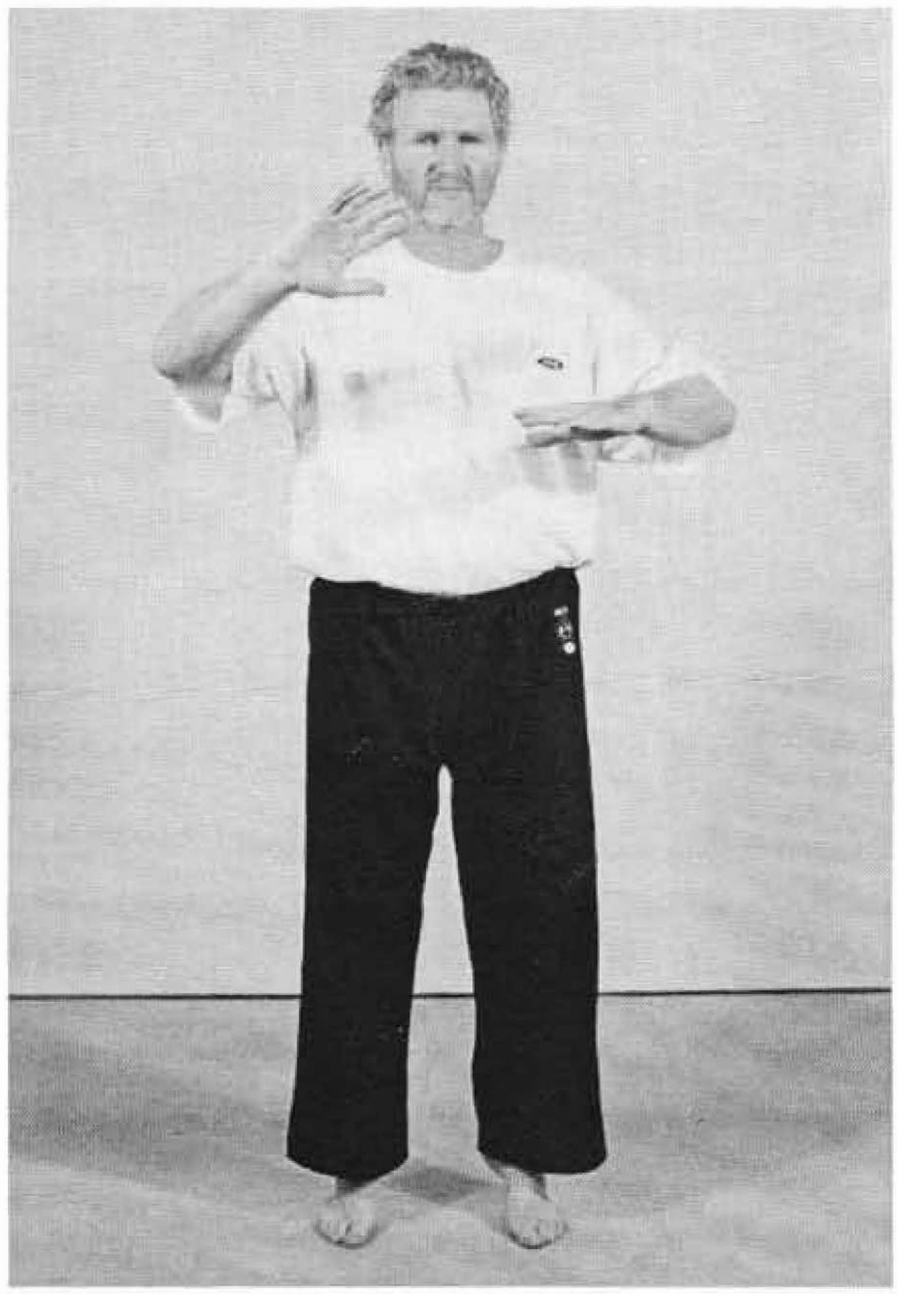


Figure 272

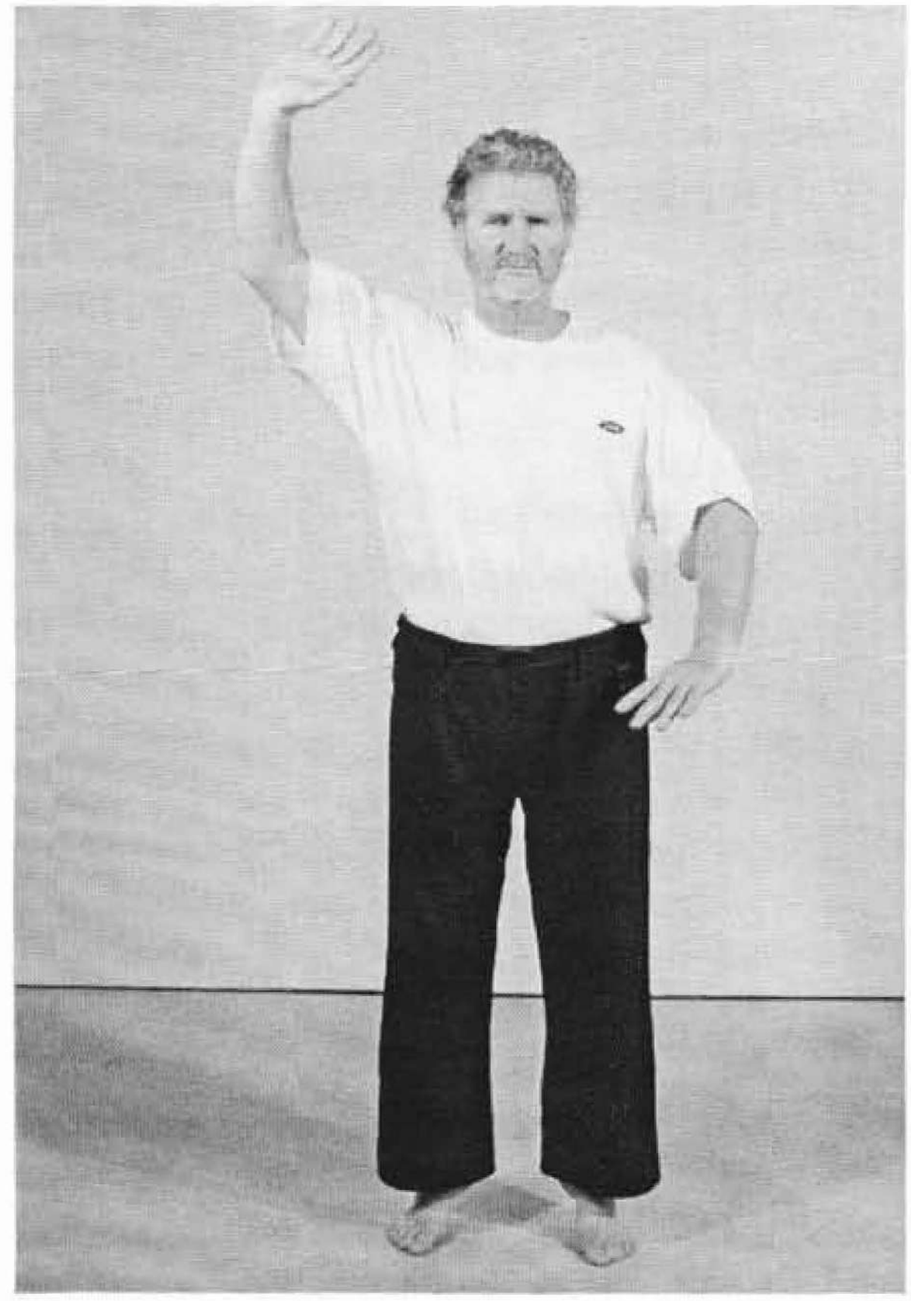


Figure 273

left palm. Exhale as you do this. Perform the whole thing on the other side (i.e., with your left palm going up and your right going down as you rise up). Altogether, do this three times on both sides.

Healing:

Innervation is by the saphenous nerve and the branch of the superficial peroneal nerve. Irrigation is by the medial tarsal artery and the dorsal venous network of the foot.

Used for gastric pain, vomiting, borborygmus, abdominal pain, diarrhea, dysentery, acute and chronic enteritis, endometritis, irregular menstruation, and foot and ankle pain.

Traditional indications include stomachache, hard intestines (like a drum) and abdominal pain, vomiting and diarrhea, tidal fever, and seizures.

Sp 4 is a luo point connecting the spleen and stomach channels. It is one of the eight confluent points (master and couple points that activate the extra meridians, e.g., Sp 4 is the master point of the chong mai, or penetrating vessel, and the couple point of the yinwei mai, while Pc 6 is the master point of the yinwei mai and the couple point of the chong mai). The chong mai and yinwei mai treat the heart, chest, and shoulder regions, so this point's traditional functions are to treat disease of the heart/chest and stomach, regulate the spleen and stomach, and invigorate the chong mai. It is better at stopping pain than Sp 3.

Massage techniques are the same as for Sp 3.

Use with St 36, Pc 6, St 34, Cv 12, Bl 20, Bl 25, Bl 21, Bl 18, Liv 13, Liv 3, St 44, and St 45, for gastric pain, diarrhea, vomiting, borborygmus, etc.

Use with Pc 6, Sp 6, Cv 7, Cv 4, Cv 3, St 25, Kd 15, Bl 25, Bl 26, Bl 18, Bl 20, Bl 23, Bl 17, Liv 4, Liv 3, Liv 13, and Liv 14 for endometritis or irregular menstruation.

Use with Sp 6, Sp 9, Sp 5, Kd 6, St 28, Cv 3, Cv 4, Cv 5, Cv 9, Bl 23, Bl 28, and St 40 for fluid retention.

Applications:

Same as for Sp 2. Or you could use a one-knuckle punch, then dig that knuckle into the point violently.

SP 5 (SPLEEN POINT NO. 5)

Chinese name:

Shangqiu (mound of commerce or merchant mound).

Location:

In the depression distal and inferior to the medial malleolus, midway between the tuberosity of the navicular bone and the tip of the medial malleolus.

Connections:

None.

Direction of strike:

Straight down on top of the ankle to the top of the foot at an angle of 45 degrees.

Damage:

This is a metal and jing point. It is a special point where the joints are concerned. So apart from the great damage that this point strike gives, it is also used as a set-up point for those other points, such as Sp 19, that will affect a joint (in the case of Sp 19, the opposite knee joint). It will cause great local pain resulting in qi drainage and power loss immediately. It will cause normally strong joints to give way immediately under mild pressure, such as in a joint lock, etc.

Set-up point:

Gb 27 works well with this point.

Antidote:

Apply pressure in the same direction on the other foot, or see an acupuncturist.

Healing:

Innervation is by the medial crural cutaneous nerve and the branch of the superficial peroneal nerve. Irrigation is by the medial tarsal artery and the great saphenous vein.

Used for borborygmus, abdominal distension, stiffness and pain of the tongue, constipation, diarrhea, pain of the foot and ankle joint, gastritis, enteritis, indigestion, beriberi, and edema.

Traditional indications include abdominal distension associated with deficient spleen, intestinal noises, diarrhea, constipation, stomachache, jaundice, breast pain, hemorrhoids, and colic. Traditional functions are to strengthen the spleen and stomach, transform damp stagnation, and as a jing river (traversing) point and metal point of the spleen, it can target joints.

Massage techniques are the same as for Sp 3.

Use with Sp 9, St 28, Bl 39, Bl 22, Bl 20, Bl 23, Cv 5, Cv 9, Kd 6, St 40, St 36, and Sp 4 for edema.

Use with Sp 9, St 25, St 44, St 45, Co 1, Co 2, Co 4, and Co 11 for chronic enteritis.

Use with St 41, Liv 4, Gb 34, Bl 60, Kd 3, and Gb 40 for foot pain.

Applications:

1) You would normally strike this point with your heel kick, which fits nicely into the area of the ankle joint on top of the foot a little to the inside of the leg.
2) You could take his right punch with your right palm and back kick straight down onto the point with your right heel.
3) Or you could avoid his attack, back kicking to Gb 27, and then, using the rebound from that kick, drop the same foot straight down onto his ankle joint.

SP 6 (SPLEEN POINT NO. 6)

Chinese name:

Sanyinjiao (three yin junction).

Location:

3 cun directly above the tip of the medial malleolus, on the posterior border of the tibia, on the line drawn from the medial malleolus to Sp 9. Between the posterior margin of the tibia and the soleus muscle and, in its deep position, in the flexor digitorum longus pedis muscle.

Connections:

Kidney and liver.

Direction of strike:

In to the lower inner side of the leg at an angle downward. Usually it would be a kick, although you could use this point in a grappling situation with violent finger pressure.

Damage:

This is the meeting point of the lower yin meridians. Immediately, great pain is felt with a dropping feeling from waist downward. (I know of an incident where a chap was kicked at this point and immediately defecated.) Great nausea is also felt immediately—so much so that the fight is over.

Set-up point:

The tip of the chin is struck as the set-up (no particular point, just punch him on the chin). It doesn't have to be hard, just enough to shock his system, as long as the Sp 6 strike comes directly after the chin strike. You can test this yourself by having a friend strike you gently on the tip of the chin, then rack his knuckles down the inside of your lower leg at Sp 6. When the set-up is done correctly, you will feel great pain even with a light blow to Sp 6, and you will be rubbing your leg for hours afterward.

Antidote:

Rub over Sp 6 on either leg upward for about 6 inches, using mild to light pressure until the effects have gone.

Healing:

Innervation occurs superficially by the medial crural cutaneous nerve and, deeper, in the posterior aspect, the tibial nerve. Irrigation is by the great saphenous vein and the posterior tibial artery and vein.

Used for borborygmus, abdominal distension, loose stool with undigested food, irregular menstruation, uterine bleeding, leukorrhea, prolapsed uterus, amenorrhea, sterility, difficult labor, seminal emission, pain of the external genitalia, hernia, dysuria, enuresis, muscular atrophy, insomnia, incontinence, hemiplegia, eczema, uticaria, neurodermatitis, neurasthenia, and motor impairment, paralysis, and pain of lower extremities,

This is a meeting point of the spleen, liver, and kidney meridians, so it can have an effect on all these channels.

Also, as a root area of the spleen meridian, its traditional functions are to reinforce the spleen to eliminate damp, promote the functions of the stomach and spleen, invigorate the circulation of qi and blood, remove obstructions from the jing-luo, strengthen the liver's free-going function, and benefit the kidneys. It is used a lot for insomnia.

Massage techniques include pressing and holding, doing rotations clockwise or counterclockwise for xu or shi conditions, pressing with both thumbs slowly and releasing quickly, pulling the thumbs apart, and doing fingertip percussion. This is a good point to use fingertip pressure and vibrate. Use with Liv 4, Liv 3, Gb 21, Bl 31, Bl 32, Co 4, and Bl 67 for difficult labor or induction of labor.

Use with Sp 10, Bl 17, Bl 35, Liv 4, Liv 3, Cv 12, Pc 6, St 36, Bl 25, St 25, Bl 15, Bl 18, Bl 20, and Liv 14 for Buerger's disease.

Use with Cv 4, Cv 6, abdomen zigong, Liv 3, Liv 4, Bl 18, Bl 23, Bl 25, Bl 26, Gb 26, Pc 6, and St 36 for menstrual irregularities.

Use with Cv 3, Cv 4, Cv 2, Cv 6, Cv 9, St 28, Bl 25, Bl 28, Bl 26, Sp 9, Liv 3, and Liv 4 for acute prostatitis.

Applications:

Take his left strike with your right palm and rebound off into his chin. Immediately "chop kick" with your right heel down, cutting into Sp 6.

SP 7 (SPLEEN POINT NO. 7)

Chinese name:
Lougu (sleeping valley).
Location:
6 cun above the tip of the medial malleolus, 3 cun above Sp 6, at the posterior margin of the tibia.
Connections:
None.
Direction of strike:
Straight in to the side of the lower leg.
Damage:
Great immediate pain and qi drainage.
Set-up point:
Neigwan.
Antidote:
Rub the leg upward at the lower leg.
Healing:
Innervation and irrigation are the same as for Sp 6.

Used for abdominal distension, borborygmus, urinary tract infection, and cold, numbness, and paralysis of the lower limbs. Massage techniques are the same as for Sp 6.

Used with Gb 30, Gb 29, Gb 34, Gb 39, Sp 6, Sp 3, St 36, St 41, Gb 38, Gb 35, Liv 2, Liv 4, Bl 60, Gv 14, Gv 12, Gv 9, Sp 9, Gb 41, and *bafing* (an extra point) for multiple neuritis where the lower limbs are involved.

Use with St 25, St 36, Cv 12, Cv 4, Cv 6, Bl 25, Bl 20, Bl 18, Liv 3, Sp 4, and St 21 for abdominal distension and borborygmus.
Applications:
The same as for Sp 6.

SP 8 (SPLEEN POINT NO. 8)

Chinese name:
Diji (earth's mechanism).
Location:
3 cun below the medial condyle of the tibia, on the line connecting Sp 9 and the medial malleolus, between the posterior margin of the tibia and the soleus muscle.
Connections:
None.
Direction of strike:
Straight in to the lower leg from the inside of the leg.
Damage:
This is a xie cleft point (accumulation point) for zhen qi (meridian qi or "real qi"). In healing, it is mainly used for uterine problems. When struck, however, it will cause an obstruction in the meridian and thus spleen problems such as stomach disorders, varicose veins, and bladder problems. A numbing of the lower leg is the immediate effect, with a full feeling around the point. Local pain is also felt. This point is often used as a set-up for a strike to the third eye point, just between the eyebrows. It is said that this combination will "explode the head" (direct translation). Needless to say, the fight is over when this combination has been used. However, one must have a certain higher level of fighting skills to use this combination.
Set-up point:
Although this point can be used as a major point strike, it is regarded as a set-up point itself and, as such, does not have a set-up point.

Antidote:

Place the left hand over the third eye point, using mild pressure downward into the forehead as the right hand applies mild pressure to Sp 8.

Healing:

Innervation is by the cutaneous branch of the saphenous nerve; deeper, the tibial is posterior to the point. Irrigation is by the great saphenous vein and the genu suprema artery. Posteriorly, it is by the tibial artery and vein.

Used for abdominal distension, edema, anorexia, dysentery, irregular menstruation, dysuria, seminal emission, dysmenorrhea, and abnormal uterine bleeding.

Traditional indications include distension of the abdomen and flanks, edema, difficult urination, irregular menstruation, colic, hemorrhoids, and nocturnal emissions.

As a xie cleft point of spleen meridian, its traditional functions are to treat acute problems of the stomach and spleen, harmonize the blood, and regulate the uterus.

Massage techniques are the same as for Sp 6.

Use with Co 4, Kd 13, Kd 15, Liv 4, Liv 3, Sp 6, Cv 4, Cv 6, Sp 10, Bl 18, Bl 17, Bl 25, Bl 23, and Sp 9 for irregular menstruation.

Use with St 25, Cv 4, Cv 6, Cv 12, Bl 20, Bl 25, Bl 18, Bl 21, St 36, Liv 3, Sp 4, and Sp 9 for abdominal distension, colic, etc.

Applications:

Here we could use one of the bagwazhang methods that makes use of both the feet and hands. As he attacks with perhaps a straight right, your right palm will slam his inner forearm at neigwan. He might attack again with his left hand, so your right palm again slams the inside of his left inner forearm at neigwan as your right heel scrapes down the inside of his right inner lower leg at Sp 8. Now you have set up this strike so your right palm attacks to the third eye point. This whole routine has only taken one second.

SP 9 (SPLEEN POINT NO. 9)

Chinese name:

Yinlingquan (fountain of yin spring).

Location:

On the lower border of the medial condyle of the tibia, in the depression between the posterior border of the tibia and the gastrocnemius in the upper part of the origin of the soleus muscle.

Connections:

None.

Direction of strike:

Straight in to the inside of the leg just below the knee.

Damage:

This is a water and he point (sea point, gathering together). There is great local pain when this point is struck right on target. It has the reverse effect of the healing, in that it will cause the body to fill up with water and, if not corrected using acupuncture or other Chinese medicine, will eventually lead to early death. This point is used also as a set-up point in the same way that Sp 8 is used. It is not such a good primary strike since it is relatively difficult to get to with much power unless you are a seasoned martial artist. A good, hard strike here will cause great nausea and is sometimes used in conjunction with Gb 34.

Set-up point:

Use Sp 19, as this will weaken the leg opposite the point, so a secondary strike to Sp 9 will cause the leg to give way easily.

Antidote:

Rub neigwan upward on the inside of the forearm.

Healing:

Innervation occurs superficially by the medial crural cutaneous nerve and, deeper, the tibial nerve.

Irrigation occurs anteriorly by the great saphenous vein and the genu suprema artery. Posteriorly, it is by the tibial artery and vein.

Used for abdominal distension, edema, jaundice, diarrhea, dysuria, incontinence, pain in the external genitalia, seminal emission, pain of the knee, ascites, retention of urine, urinary tract infection, irregular menstruation, impotence, beriberi, enteritis, and dysentery.

Traditional indications include distension of the abdomen, edema, diarrhea with undigested food, abdominal pain, retention or incontinence of urine, pain of the genitals, nocturnal emissions, and pain of the lower back and leg.

Traditional functions are to transform damp, relieve stagnation, benefit and adjust the lower jiao (burner), and eliminate damp heat from the lower jiao. It is a water point and a he sea point of the spleen meridian.

Massage techniques include pressing and holding, rotating clockwise or counterclockwise for xu or shi conditions, and doing fingertip percussion or vibration.

Use with Sp 10, Sp 6, Liv 8, St 34, St 35, St 36, Liv 3, Gb 34, and *xiyan* (an extra point) for knee problems.

Use with Cv 4, Cv 3, Cv 2, Cv 9, Sp 6, St 28, Cv 5, St 36, Bl 39, Bl 22, Bl 28, Bl 23, Kd 6, for retention of urine, ascites, incontinence of urine.

Use with Liv 4, Liv 3, Liv 14, Cv 4, Cv 6, St 25, St 36, Sp 6, Bl 25, Bl 23, Bl 20, Bl 18, Bl 17, and Sp 5 for irregular menstruation.

Applications:

Take his right straight with your right palm on the inside of his forearm as your left palm comes up underneath to take over this block, leaving your right fingers to poke straight into Sp 19. Your right heel can now attack to Sp 9, causing the leg to give way.

SP 10 (SPLEEN POINT NO. 10)

Chinese name:

Xuehai (sea of blood).

Location:

When the knee is flexed, the point is located 2 cun above the mediosuperior border of the patella, on the bulge of the medial portion of the quadriceps femoris, at the superior margin of the medial condyle of the femur, in the medial margin of the vastus medialis muscle. Another way of locating this point is to cup your right palm to the patient's left knee, with the thumb on the medial side and the other four fingers directed proximally. The point is located where the tip of your thumb rests.

Connections:

This is a point of chong mai.

Direction of strike:

Just above the knee straight in to the leg at an angle to the front of the thigh.

Damage:

This is called a shock point because it sends a shock throughout the system. The brain does not know what is happening for a second or two, which gives you time to get in with another attack. Just squeeze this point with your thumb and see what it does to you at that level. Now imagine the effect when this point is struck hard with, for instance, a heel. Sp 10 does not respond very well to a larger weapon such as an instep type of round kick. It must be a more accurate weapon, such as a heel or a fist, etc. Being a "special point" for the blood in the healing area, this strike has the reverse effect when struck, allowing the blood to become "reckless," which in turn allows pathogens to enter it.

Set-up point:

You should attack the outside of the forearm with a glancing blow back up the lower forearm.

Antidote:

Treat Sp 10 on the leg opposite the strike with squeezing pressure.

Healing:

Innervation is by the anterior femoral cutaneous nerve and the muscular branch of the femoral nerve. Irrigation is by the muscular branch of the femoral artery and vein.

Used for irregular menstruation, dysmenorrhea, amenorrhea, uterine bleeding, pain in the medial aspect of the thigh, eczema, uticaria, pruritis, neurodermatitis, and anemia.

Traditional indications are to dispel wind, dispel heat from the blood, and regulate circulation of ying (nourishing) qi and xue (blood).

Massage techniques are the same as for Sp 9.

Use with Liv 4, Liv 3, Co 4, Co 11, Sp 6, Sp 5, Sp 9, St 37, St 25, Bl 20, Bl 25, Bl 18, Bl 17, Pc 6, and Th 5 for ulcerative colitis, bloody dysentery, and irritable bowel syndrome.

Use with Co 4, Co 11, Lu 7, Lu 5, Liv 2, Liv 4, St 36, and Sp 6 for uticaria.

Applications:

You could use one of the taijiquan methods from the large san-sau. (I have covered this method in previous chapters. It is the first method from the two-person set known as large san-sau.) He attacks with a straight right, and you block using a blow that is moving upward on the outside of his forearm with your left palm. Your right palm immediately comes underneath and takes over the block and also slides up the outside of his forearm. Now your right heel attacks to his left Sp 10.

SP 11 (SPLEEN POINT NO. 11)

Chinese name:

Jimen (basket's door).

Location:

6 cun above Sp 10, at the medial aspect of the sartorius muscle on the line drawn between Sp 10 and Sp 12.

Connections:

None.

Direction of strike:

Straight in from the inside of the upper thigh.

Damage:

Struck with accuracy, this point can give much local pain and qi drainage. It will affect the way the spleen transports the qi, so power will also be affected. This point can be used as a set-up point strike for Cv 17.

Set-up point:

Neigwan struck straight in.

Antidote:

Place both palms on the top of the head at Gv 20 and apply mild pressure downward.

Healing:

Innervation is by the anterior femoral cutaneous nerve and, deeper, the saphenous nerve. Irrigation is by the great saphenous vein superficially and, deeper, on the lateral side, the femoral artery and vein.

Used for retention of urine, enuresis, pain and swelling in the inguinal region, and urethritis.

Massage techniques are the same as for Sp 9. You can also press in slowly with both thumbs and release quickly, pulling the thumbs apart. Use with Cv 2, Cv 3, Cv 4, Cv 5, Cv 9, St 28, Bl 28, Bl 25, Bl 23, Kd 6, Liv 3, and Sp 6 for urinary problems.

Use with Liv 1, Liv 2, Liv 4, Liv 6, Liv 8, Sp 12, Sp 13, Liv 11, and Liv 12 for pain and swelling in the inguinal groove.

Applications:

Use a knee or a toe strike to Sp 11 as you also block his hand attack, then rebound into a downward strike into Cv 17 with the palm heel. This will drain qi greatly from the seat of power, causing great loss of power.

SP 12 (SPLEEN POINT NO. 12)

Chinese name:

Chongmen (pouring door).

Location:

Superior to the lateral end of the inguinal groove, on the lateral side of the femoral artery, at the level of the upper border of the symphysis pubis, 3.5 cun lateral to Cv 2.

Connections:

Divergent meridian branches from this point. Receives branch of liver.

Direction of strike:

Straight in from the front of the body.

Damage:

This point is situated right over the femoral artery and can cause great internal damage to this artery. It is also near the femoral nerve and will cause the whole leg to be paralyzed. A strong kick to this region can also knock the head of the femur and ball joint right out of its socket, damaging the tendons and ligaments and causing great pain and immobilization. At some later stage in life, if not treated, this strike will prevent the body from being able to take as much qi from food, air, and water as it should and, as a result, disease and weakness are allowed to creep in.

Set-up point:

No set-up point is needed here, although any strike to the face will suffice to put the attacker off what is coming next in the kick to Sp 12.

Antidote:

Treat the same point, Sp 12, using needles .7 cun perpendicular. Or you could use finger pressure on the opposite point. This will treat the long-term effect of this strike. See a doctor if the physical damage is great.

Figure 274

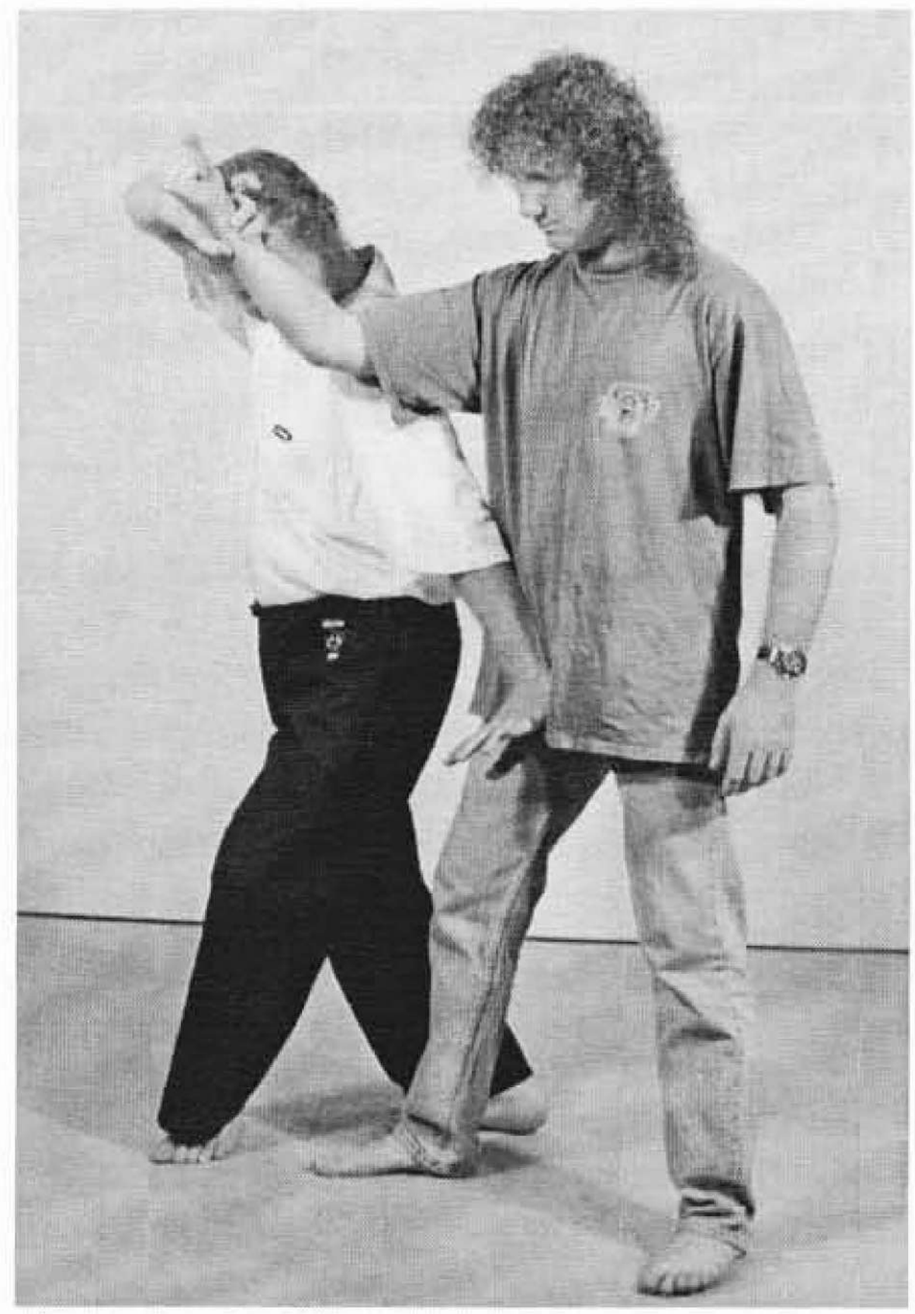


Figure 275

Healing:

Innervation occurs by the point's location just where the femoral nerve traverses. Irrigation occurs on the medial side of the femoral artery.

Used for abdominal pain, hernia, retention of urine, endometritis, and orchitis.

This is a point of intersection with the yinwei mai, so its traditional functions are to influence that meridian.

To massage, press and hold, do rotations clockwise or counterclockwise for xu or shi conditions, do fingertip vibration, or press in slowly with both thumbs and release quickly pulling the thumbs apart.

Use with jiaji points and Bl points one or two vertebra above and below the spinal injury, plus Liv 11 for paraplegia.

Use with St 37 St 25, Bl 25, Bl 24, Sp 9, Sp 6, St 3, Sp 10, lanweixue, Co 4, Co 11, Liv 3, and Liv 4, plus moxa painful regions of abdomen for chronic appendicitis.

Applications:

1) A straight back kick to the area just above the groin and to the side of the body.
2) Take his right straight with your left palm, with your left foot forward (fig. 274). Turn around in the opposite direction and allow your right foot to swing around to the rear as your right palm takes over the block and your left palm now attacks straight in to Sp 12 (fig. 275).

SP 13 (SPLEEN POINT NO. 13)

Chinese name:

Fushe (dwelling).

Location:

0.7 cun above Sp 12, 4 cun lateral to the Cv meridian.

Connections:

Liver and yin wei mai.

Direction of strike:

Straight in and slightly angled to the outer part of the body.

Damage:

This strike causes much the same damage as Sp 12. The only difference is that the point is closer to the femoral nerve, so the strike will cause considerable nerve problems, such as paralysis or nervous shutdown, if it's done hard enough.

Set-up point:

None.

Antidote:

Same as for Sp 12.

Healing:

Innervation is by the ilioinguinal nerve. Irrigation is the same as for Sp 12.

Used for abdominal pain, hernia, mass in the abdomen, inguinal lymphadenitis, adnexitis, pain in lower abdomen, and appendicitis.

This point is where the yinwei meridian, the spleen meridian, and the liver meridian converge and enter the abdomen, further connecting with the spleen, heart, and lungs; hence the name of "dwelling" or "converging house." Its traditional function is to influence these meridians.

Massage techniques are the same as for Sp 12.

Use with St 36, Kd 16, Pc 6, Co 4, Co 11, Bl 24, Bl 25, St 25, Liv 4, Liv 3, St 37, lanweixue, Bl 17, Bl 18, and Bl 53 for appendicitis.

Add to the treatment listed under Sp 11 for pain and swelling of inguinal groove.

Applications:

The same as for Sp 12.

SP 14 (SPLEEN POINT NO. 14)

Chinese name:
Fujie (abdomen's knot).
Location:
3 cun above Sp 13, 1.5 cun below Sp 15, on the lateral side of the rectus abdominis, 4 cun lateral to the Cv meridian.
Connections:
None.
Direction of strike:
Straight in.
Damage:
If you can get a strike in at this point when the recipient is not expecting it, it will have a great effect, shocking the whole body. It has been known to cause KO. The area is well protected by the external oblique muscles, however, which can be flexed to afford some kind of protection, especially if the attacker has been practicing iron shirt qigong.
Set-up point:
Sp 21 will put so much of a shock to the whole torso area that you may not even need to strike to Sp 14.
Antidote:
Internal damage can occur with this strike, especially to the colon and small intestine area, so watch out for signs of this damage (e.g., pain the lower abdomen, bleeding from the anus). Seek medical advice.
Healing:
Innervation is by the 11th intercostal nerve, and irrigation is by the 11th intercostal artery and vein.
Used for abdominal pain around the umbilical region, hernia, and diarrhea.
Massage techniques are the same as for Sp 12.
Use with St 25, St 37, Liv 4, Liv 3, Bl 25, Bl 26, Bl 20, Bl 18, Cv 5, Cv 7, Cv 9, and Kd 15 for pain around the umbilical region.
Use with Sp 4, Sp 3, St 36, St 37, Sp 6, Sp 9, St 25, St 28, Liv 13, Cv 12, Bl 20, Bl 25, Bl 23, Bl 22, and Bl 39 for diarrhea.
Applications:
He might attack with a straight right, so you would move quickly to your left, stepping with your left foot. You glance his attack with your right palm, which would then rebound into Sp 21. Your right palm now grabs around his upper back and pulls him forward onto your right knee at Sp 14.

SP 15 (SPLEEN POINT NO. 15)

Chinese name:
Daheng (big horizontal).
Location:
4 cun lateral to the center of the umbilicus, on the mammillary line, lateral to the rectus abdominis, in the external and internal oblique and the transverse abdominal muscles.
Connections:
Yin wei mai.
Direction of strike:
Straight in to the abdomen.
Damage:
Although this point strike will cause things like diarrhea and great nausea instantly, it is too well protected by the external oblique muscles, which can be built up to great proportions (especially true if the person has been practicing iron shirt). The strike has some shock value, but I would not be doing

my job in teaching people how to defend themselves if I were to tell you to strike to this area. I would not advise you to attack to this region regardless of the attacker's abdominal strength. Many other martial arts systems advocate this strike, and you will see them in tournament, especially the noncontact variety, using the reverse punch with a loud yell and much bravado, striking to this area and gaining a point for doing so. I have invited many highly ranked martial artists to strike me in this region with little or no effect, to their great surprise. Plus, the way some martial artists attack, you can see the strike coming some seconds before, giving you plenty of time to prepare the area for the shock.

Set-up point:

None.

Antidote:

If you have been struck here while you are not expecting it and are experiencing some renal problems, squeeze the tip of your index finger quite hard and massage Co 10.

Healing:

Innervation is by the 10th intercostal nerve. Irrigation is by the 10th intercostal artery and vein.

Used for dysentery, constipation, pain in lower abdomen, and diarrhea.

This is a point of intersection with the yangwei mai, and its traditional function is to treat abdominal distension.

Massage techniques are the same as for Sp 12. You can also use it when running the dai mai as an alternative pathway from Gb 26. (Normally, when you run the dai mai, you start at Gv 4 and go to Bl 23, Bl 52, Gb 25, Liv 13, Gb 26, Gb 27, Gb 28, St 28, Kd 13, and Cv 4. Here you can go from Gb 26 to Sp 15 to St 25 to Kd 16 to Cv 8.)

Use with St 25, Liv 3, Liv 4, Bl 25, St 37, Bl 26, Bl 20, and Bl 18 for constipation or diarrhea.

Use with Cv 3, Cv 4, Cv 6, Cv 7, Cv 9, Sp 6, Sp 9, Liv 3, Liv 4, St 25, Kd 15, St 26, St 27, St 28, St 29, and St 30 for lower abdominal pain.

Applications:

Do not strike to this area.

SP 16 (SPLEEN POINT NO. 16)

Chinese name:

Fuai (abdomen's sorrow).

Location:

3 cun above Sp 15, 4 cun lateral to the Cv meridian.

Connections:

Yang wei mai.

Direction of strike:

Straight in and slightly angled in toward the centerline.

Damage:

This point too can be protected. However, if the recipient is caught unaware, a strike here can have devastating results, as it is in the area of the diaphragm. This strike can cause death by suffocation at the most. It will at least force the recipient to sit down to regain his breathing.

Set-up point:

You could use neigwan to take his mind off the Sp 16 strike.

Antidote:

Apply CPR if dead. Otherwise, sit him down and push his head between his knees.

Healing:

Innervation is by the eighth intercostal nerve, and irrigation is by the eighth intercostal artery and vein.

Used for abdominal pain, indigestion, constipation, dysentery, and pain in the region of the umbilicus. It is a point of intersection with the yangwei mai, so its traditional function is to influence that channel.

Massage techniques are the same as for Sp 12.

Use with St 25, St 37, Bl 25, Bl 20, Bl 23, Bl 26, Bl 18, Sp 15, St 36, Cv 12, Sp 6, Sp 9, Sp 4, and Liv 3 for constipation or dysentery.

Use with Liv 4, Liv 3, St 25, Liv 8, Sp 5, Sp 9, Gb 43, Gb 44, Bl 20, Bl 25, Bl 26, Bl 18, Bl 19, Bl 17, St 36, and St 34 for abdominal pain.

Applications:

1) Take his strike at neigwan and then rebound using an elbow to Sp 16.
2) You could slam his left leg (kick) at the side of his knee, causing great pain, then come straight in with a back elbow (i.e., a strike that uses the back part of the elbow rather than the front).

SP 17 (SPLEEN POINT NO. 17)

Chinese name:

Shidou (food's cavity).

Location:

6 cun lateral to the Cv meridian, or 2 cun lateral to the mammillary line, in the fifth intercostal space.

Connections:

None.

Direction of strike:

This point is one of the better qi drainage points. I have had personal experience with this one, and all you want to do is to lie down and rub the area. The direction must be from outside to midline. So if you are striking to his right Sp 17, you would strike it from his right to left over the point and into the pectoral.

Damage:

The damage is great, with local pain lasting for some hours. The qi drainage is so severe that you will just wish to lie down. This point can be struck with a number of weapons, including elbow and palm as the better ones. The elbow is well suited because of the direction of the strike. You can cause the heart to stop beating because of the percussive effect that travels straight into the heart. This is one of the most devastating strikes. However, it takes a little getting at because the arm must be raised first.

Set-up point:

Any strike to the lower forearm, especially at neigwan or Th 8 or at the wrist at H 5 or Lu 8, will cause the qi to be directed to these points while you strike to Sp 17. Sp 17 will work regardless of a set-up point, but it will be even better with one.

Antidote:

Massage the Sp 17 point in the opposite direction of the strike. Then rub the inside of the upper arm from armpit to elbow.

Healing:

Innervation is by the lateral cutaneous branch of the fifth intercostal nerve. Irrigation is by the thoracoepigastric vein.

Used for sensation of fullness and pain in the chest and hypochondriac regions, intercostal neuralgia, ascites, retention of urine, and gastritis.

Massage techniques include pressing and holding the point; doing rotations clockwise or counterclockwise for xu or shi conditions; pressing in slowly with both thumbs and releasing quickly, pulling the thumbs apart; and doing fingertip percussion and vibration.

Use with Liv 14, Gb 24, Liv 13, Cv 12, Liv 3, Liv 4, Liv 8, St 36, Pc 6, Co 4, Bl 17, Bl 18, Bl 19, Bl 20, Bl 21, Bl 22, Bl 25, and St 25 for fullness in the chest and hypochondriac regions and gastritis.

Use with St 28, Cv 5, Bl 22, Bl 39, St 40, Sp 3, Sp 4, Bl 20, Bl 28, Cv 2, Cv 3, Cv 4, Kd 6, Liv 3, Cv 12, St 25, and Bl 25 for ascites and retention of urine.

Applications:

Take his right straight with your right palm at neigwan as your left palm comes underneath to take over the block. Your left palm now controls his right arm as your right elbow is free to attack in the correct direction to Sp 17 (figs. 276, 277).

Figure 276

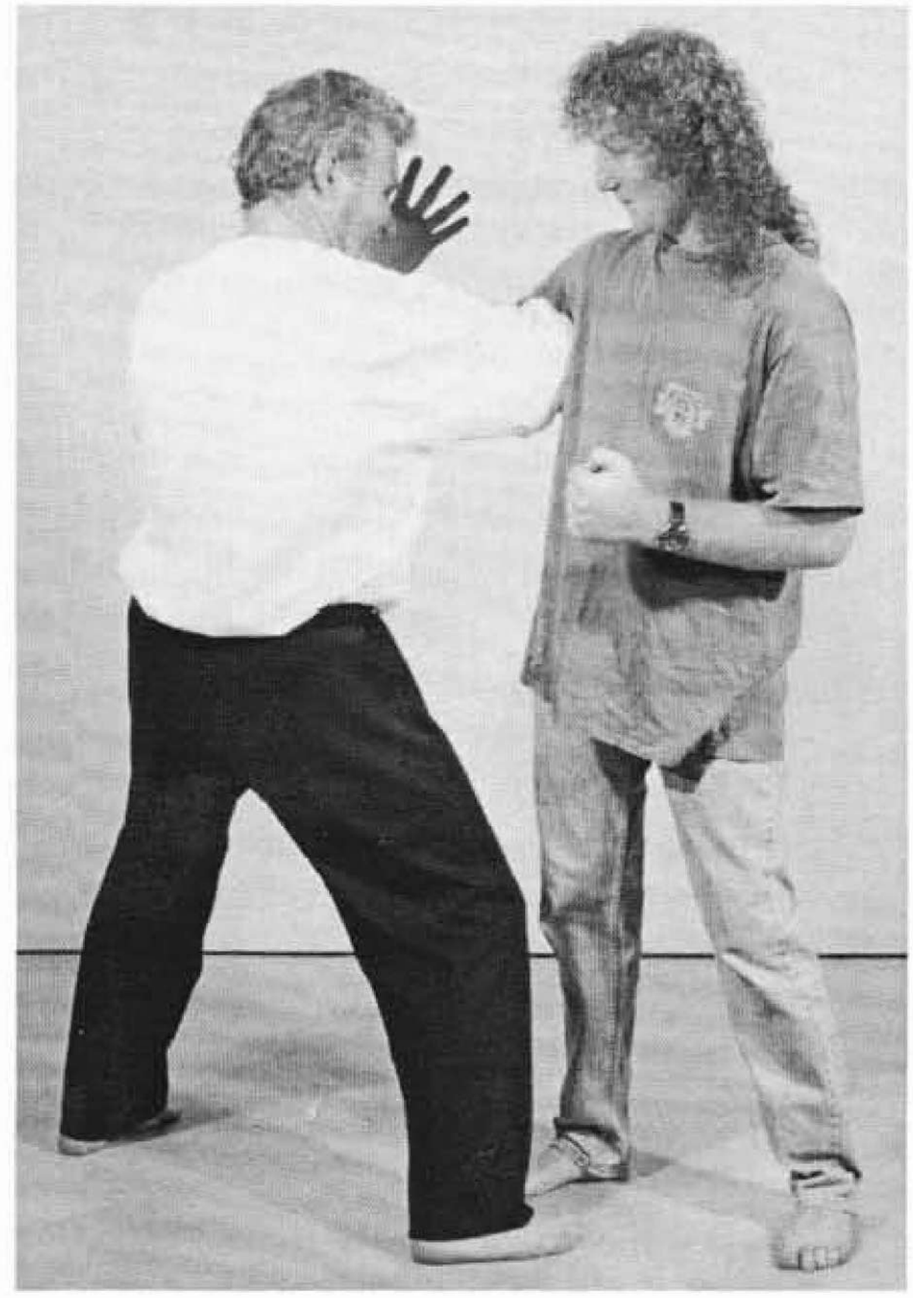


Figure 277

SP 18 (SPLEEN POINT NO. 18)

Chinese name:

Tianxi (heaven's stream).

Location:

2 cun lateral to the nipple or 6 cun lateral to the Cv meridian, in the fourth intercostal space.

Connections:

None.

Direction of strike:

Struck again in from the outside as for Sp 17; however, the angle of this strike is not as great, at about 45 degrees. (The Sp 17 shot was a little less than 180 degrees.)

Damage:

This is again a devastating strike, causing a shock wave to rise up into the head and around the whole upper torso with great qi loss. This strike can also stop the heart. You can test this point by using finger pressure only at the edge of the pectoral and note the pain caused even with finger pressure. If you are right on the point, you will also experience a feeling like a shiver going up in to the head and across the chest.

Set-up point:

Neigwan, as for Sp 17.

Antidote:

Place the palm onto the pectoral and rub, using mild pressure outward and down onto the biceps. The patient's arms should be at his side in order to do this.

Healing:

Innervation is by the lateral cutaneous branch of the fourth intercostal nerve. Irrigation is by the branches of the lateral thoracic artery and vein, the thoracoepigastric artery and vein, and the fourth intercostal artery and vein.

Used for sensations of fullness and pain in the chest, cough, mastitis, lactation deficiency, bronchitis, asthma, and hiccups.

Massage techniques are the same as for Sp 17.

Use with Cv 17, Liv 14, St 15, St 36, Sp 6, Liv 4, Liv 8, Liv 3, Bl 17, Bl 18, Bl 19, Si 1, Pc 6, Th 10, and St 18 for mastitis.

Use with Lu 7, Lu 5, Lu 1, Co 4, Co 11, Bl 12, Bl 13, Bl 43, dingchuan, Cv 22, Cv 17, Kd 22, Kd 23, Kd 24, Kd 25, Kd 26, Kd 27, Kd 11, Kd 7, Liv 3, Pc 6, Liv 14, Bl 17, and Sp 21 for fullness and pain in the chest, cough, bronchitis, and asthma.

Applications:

1) Do the same as for Sp 17, only bring your one-knuckle punch across to strike to the point instead of your elbow. This will decrease the angle, causing the greatest damage.
2) You could also block his right straight attack from the outside with your left palm, lifting his right arm slightly to allow access to Sp 18 with your right palm (fig. 278).

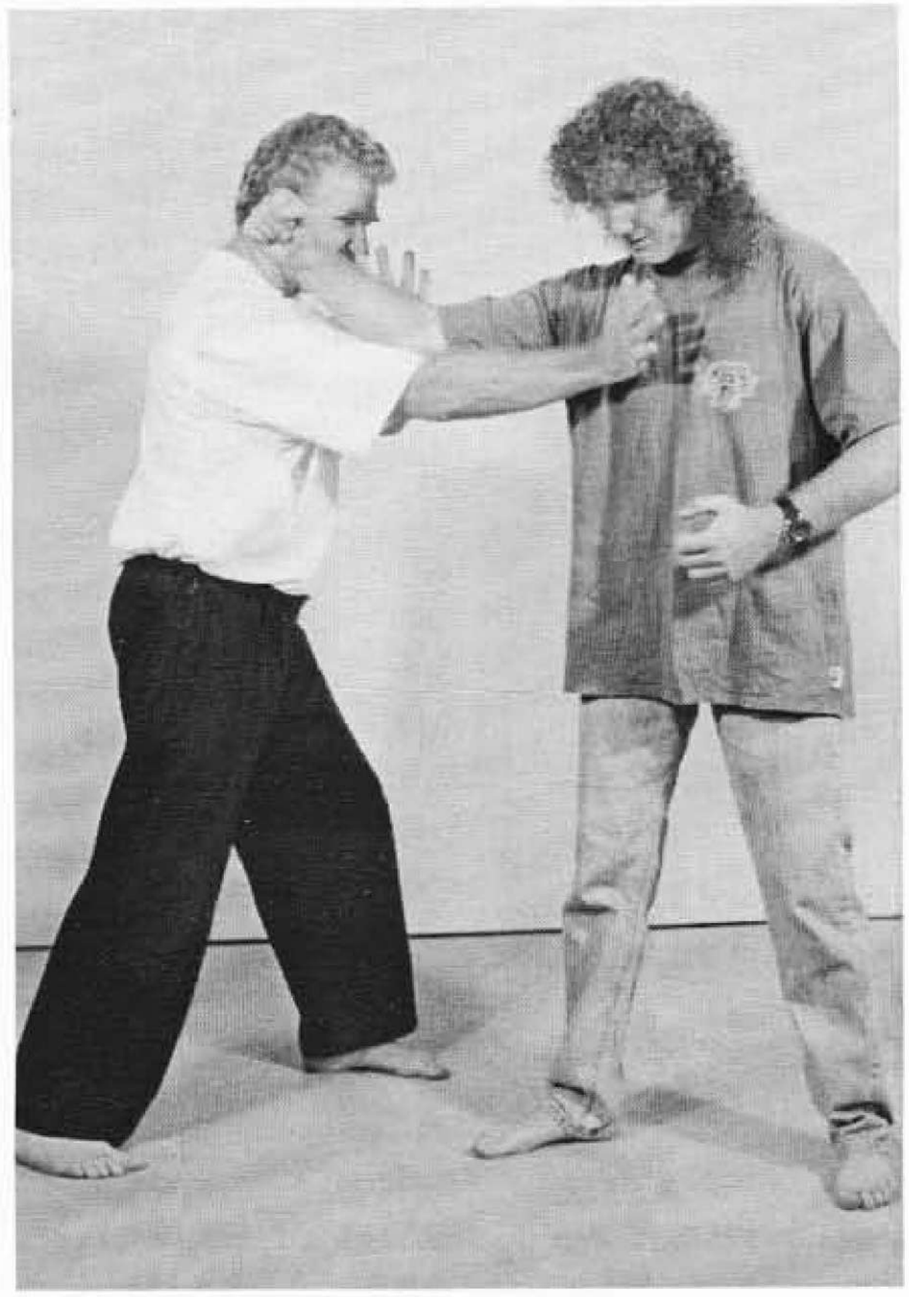


Figure 278

SP 19 (SPLEEN POINT NO. 19)

Chinese name:

Xiongxiang (chest home).

Location:

One rib above Sp 18, in the third intercostal space, 6 cun lateral to the Cv meridian.

Connections:

None.

Direction of strike:

Straight in to the shoulder and a little toward centerline, just above Sp 18.

Damage:

Usually struck with a finger jab, this point is interesting because it controls the power in the opposite leg. So if you strike to Sp 19 on his right side, his left leg will be weakened and vice versa. I was taught that the location for this point was a little more to the outside of the body in the shoulder crease, but I have not come across this location in any texts. The effect is the same, however, using both locations: great nerve damage to the shoulder area. This point can be used as a set-up for a leg kick, requiring little power to cause his leg to buckle. I have caused one chap's leg to quiver and bounce violently when this point was only squeezed.

Set-up point:

Use neigwan.

Antidote:

Push Liv 14 straight in. Liv 3 will also help with the leg damage.

Healing:

Innervation is by the lateral cutaneous branch of the third intercostal nerve, and irrigation is by the lateral thoracic artery and vein and the third intercostal artery and vein.

Used for a sensation of fullness and pain in the chest and hypochondriac regions, and intercostal neuralgia.

Massage techniques are the same as for Sp 17.

Use with Liv 14, Gb 24, Sp 21, Bl 17, Bl 18, Bl 19, Bl 20, Bl 21, Bl 43, jiaji points corresponding

to the region affected (extra), Liv 3, Gb 43, Gb 44, Gb 34, Pc 6, Th 6, Liv 5, Gb 40, Liv 2, and St 40 for intercostal neuralgia and pain or fullness in the chest.

Applications:

It begins the same way as for the previous application for Sp 17, only now, the fingers of the right hand poke violently into Sp 19, followed by a right heel kick to the knee of his left leg. (If you had struck at his left Sp 19 point, you would have kicked with your left heel to the knee of his right leg.)

SP 20 (SPLEEN POINT NO. 20)

Chinese name:

Zhourong (encircling glory).

Location:

One rib above Sp 19, directly below Lu 1, in the second intercostal space, 6 cun lateral to the Cv meridian.

Connections:

None.

Direction of strike:

Straight in.

Damage:

This point will also affect the way the opposite leg functions, but to a lesser degree. It will cause great local tearing of the tendons in the shoulder, with little or no external damage. I once struck an opponent in a tournament at this point, and he could not carry on, although there were no visible signs of damage. The next day, he went to see a doctor who took X-rays, and to his astonishment, all of the tendons underneath the muscle were torn. The doctor had to ask how he acquired this damage. This point used with Liv 14 is a death combination. The whole body goes numb, and the lungs and heart stop.

Set-up point:

Neigwan.

Antidote:

Used with Liv 14, there is no antidote! If only Sp 20 is struck, rest and hold cold compresses onto the point for 20 minutes exactly, then release the compress for a further 20 minutes.

Healing:

Innervation is by the muscular branch of the anterior thoracic nerve and the lateral cutaneous branch of the second intercostal nerve. Irrigation is by the lateral thoracic artery and vein and the second intercostal artery and vein.

Used for a sensation of fullness in the chest and hypochondriac regions, cough, intercostal neuralgia, pleurisy, pulmonary empyema, bronchiectasis.

Massage techniques are the same as for Sp 17.

Use with the formula listed under Sp 19 for intercostal neuralgia and fullness of the chest.

Use with Si 15, Gv 12, Gv 9, Lu 6, Lu 7, Lu 5, Lu 1, Co 4, St 40, Lu 9, Cv 17, Bl 12, Bl 13, Bl 17, Bl 20, Bl 22, Bl 18, Bl 25, St 36, Sp 4, Sp 3, Kd 6, Kd 7, Liv 14, and Sp 21 for bronchiectasis, pleurisy, pulmonary empyema, (empyema by itself is more common), and cough.

Applications:

He attacks with either a hook right or straight. The fingers of your left hand will strike to Sp 20, thus blocking his attack also, as your right palm attacks to the opposite side of the body to Liv 14.

SP 21 (SPLEEN POINT NO. 21)

Chinese name:

Dabao (big wrapping).

Location:

On the midaxillary line, 6 cun below the axilla, midway between the axilla and the free end of the 11th rib, in the seventh intercostal space.

Connections:

All luo meridians. The main meridian flows internally to Lu 1.

Direction of strike:

In from the side of the upper torso.

Damage:

This point does amazing internal damage both electrically (qi wise) and physically. This point balances the whole body, left and right (especially torso) and inner and outer. A strike here spreads out over the chest, causing great imbalance to the qi system of the whole body. The recipient will fall into a coma if the strike is hard enough and will not recover until energy balancing is performed on him. Physically, the liver can be damaged, as well as the lungs, since this point is also connected to Lu 1. Rib breakage will also occur. This is not a point to be played around with! It is an excellent point to use with St 9 because the combination will cause KO and extreme spleen damage, plus the lungs will contract, causing suffocation.

Set-up point:

Neigwan.

Antidote:

Massage Sp 20 and 21 downward if the damage has not been great. Or squeeze Gb 20 points upward.

Healing:

Innervation is by the seventh intercostal nerve and the terminal branch of the long thoracic nerve. Irrigation is by the thoracodorsal artery and vein and the seventh intercostal artery and vein.

Used for pain in the chest and hypochondriac regions, asthma, general aching and weakness, and intercostal neuralgia.

The great luo of the spleen starts here and spreads across the chest and hypochondriac regions, supervising all the blood of the body. (The spleen is seen as the ruler of blood, although one source suggests that this meridian covers the whole body. A shi condition of this channel may cause general aches and pains throughout the body, whereas a xu condition may cause weakness in the muscles of the limbs and joints.)

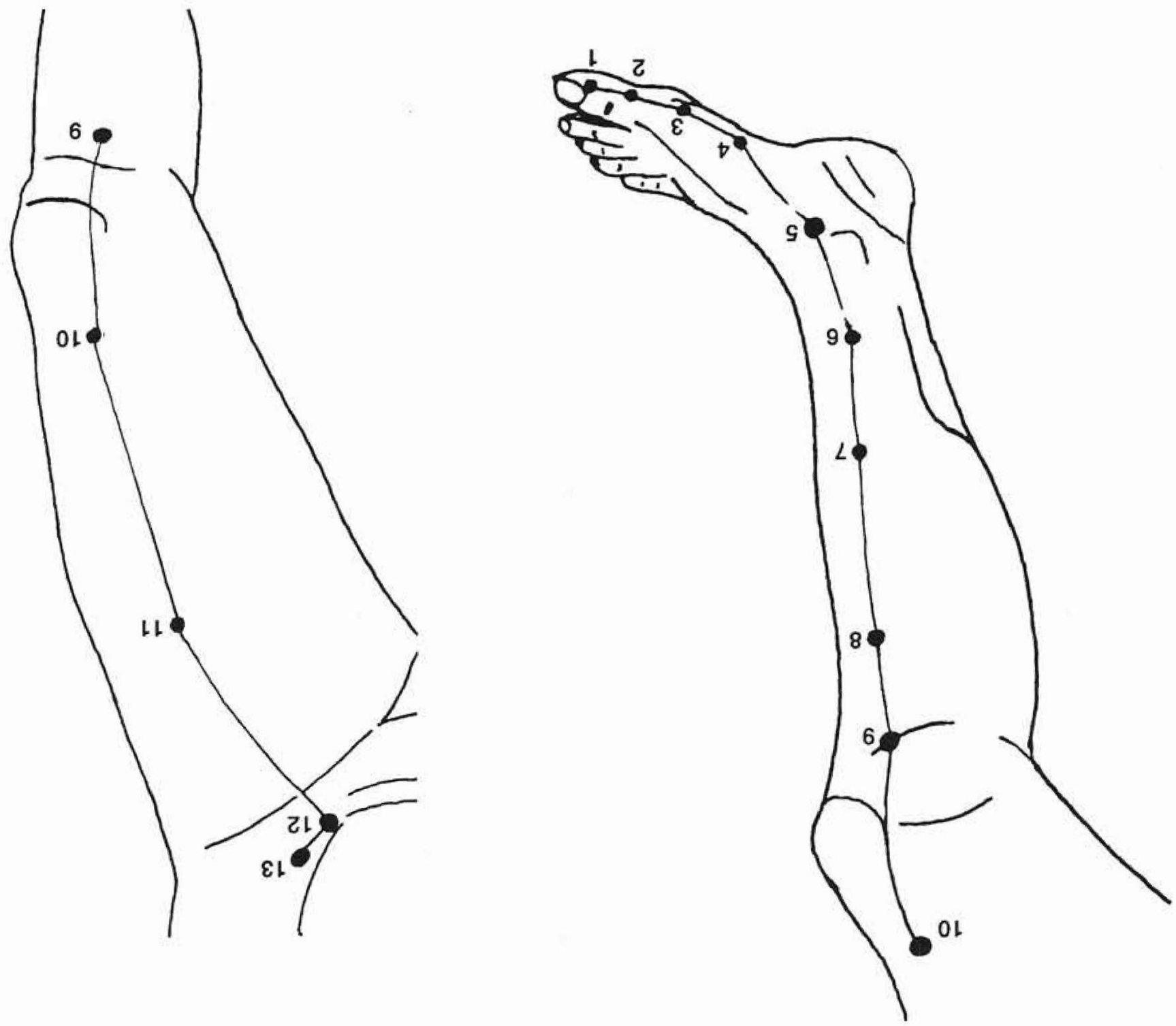
Massage techniques are the same as for Sp 17.

Use with Cv 4, Sp 6, Cv 9, Cv 8, Cv 5, Cv 17, Cv 7, Gv 4, Cv 11, Cv 4, Cv 6, Kd 27, Kd 11, and St 13 for chyluria.

Add to any formula used to open up the chest.

Applications:

Use the same method as for Sp 17 or Sp 18. Or you could take his right straight, for instance, with your left palm as you move to your left, then strike straight in with your right elbow.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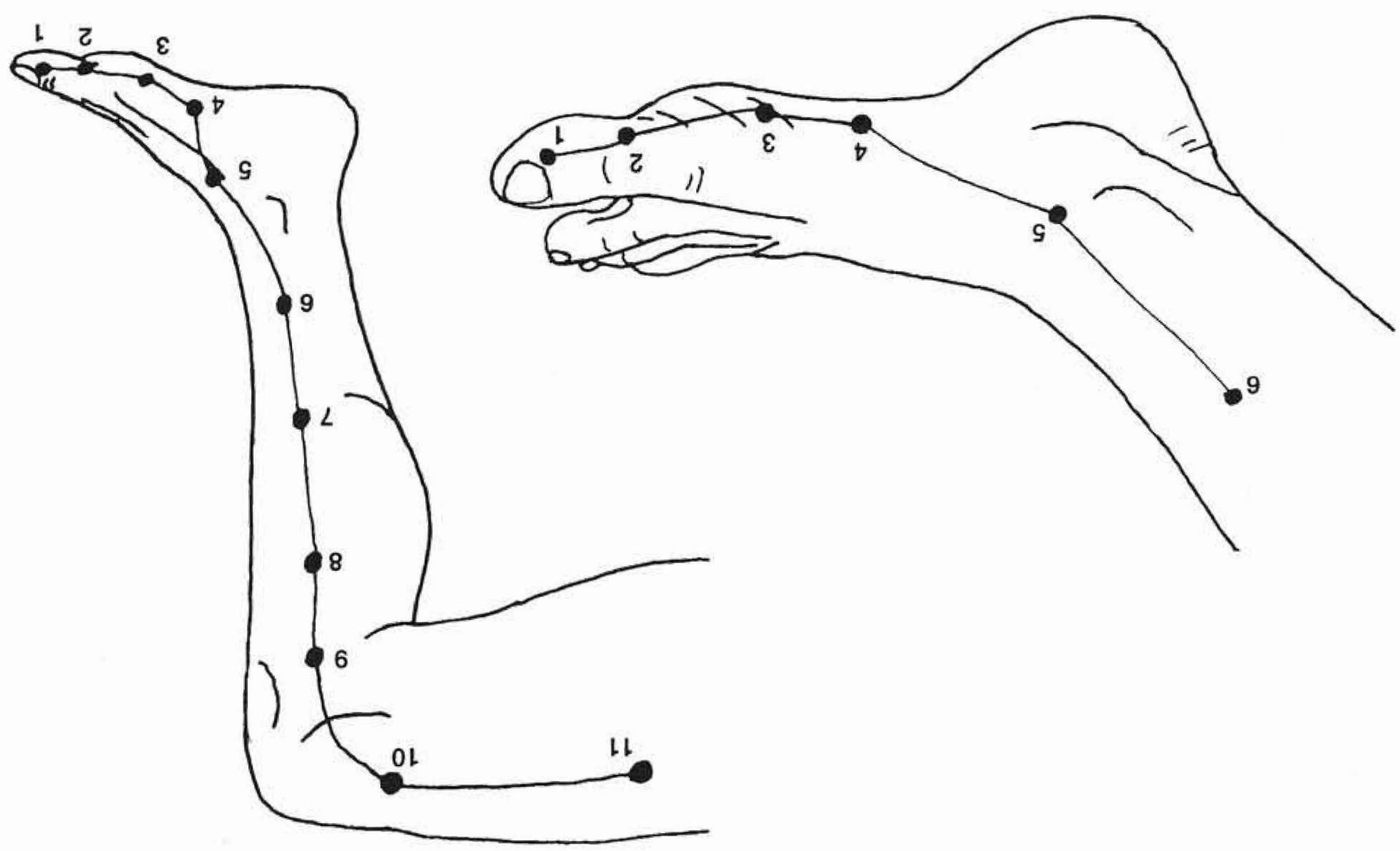
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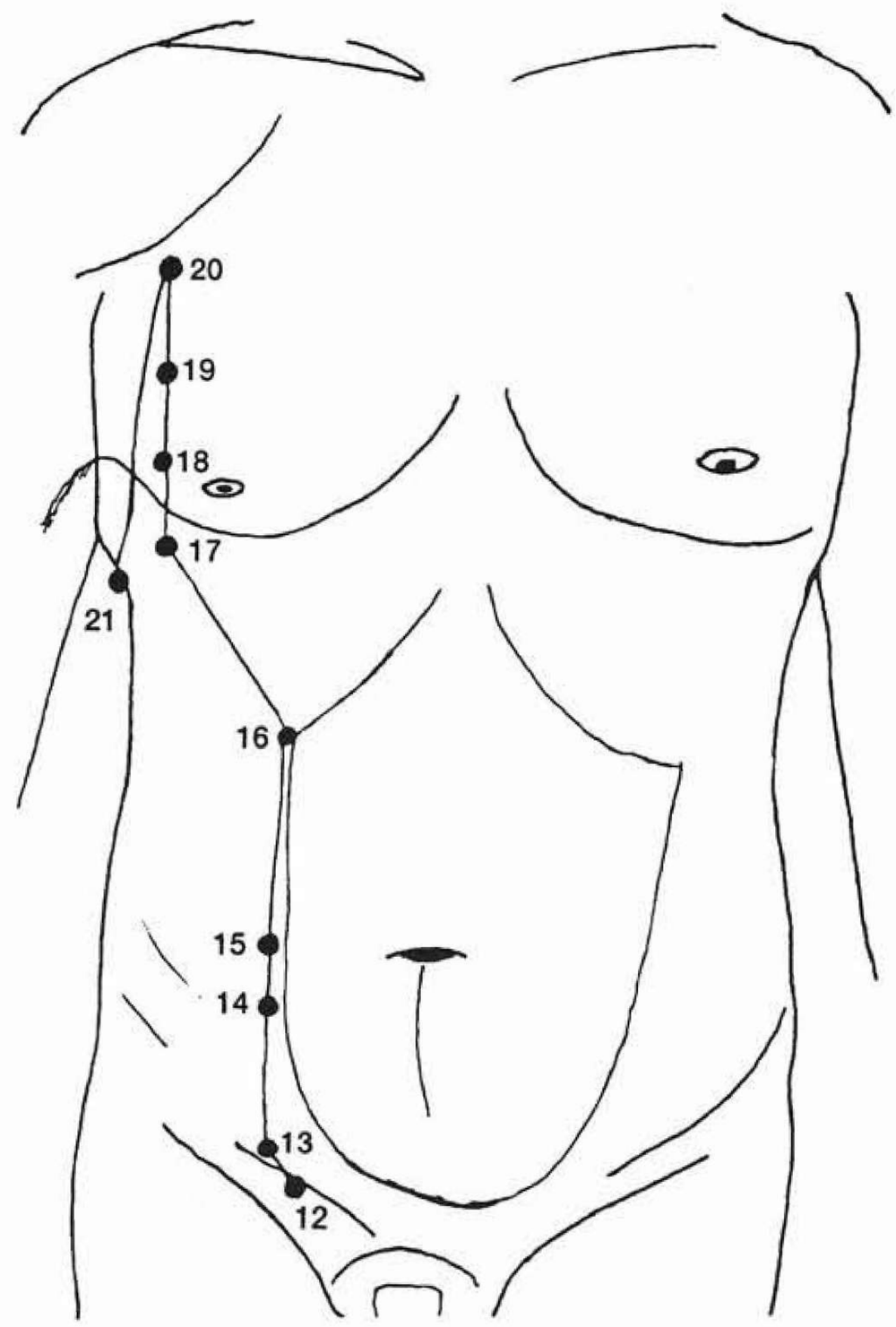
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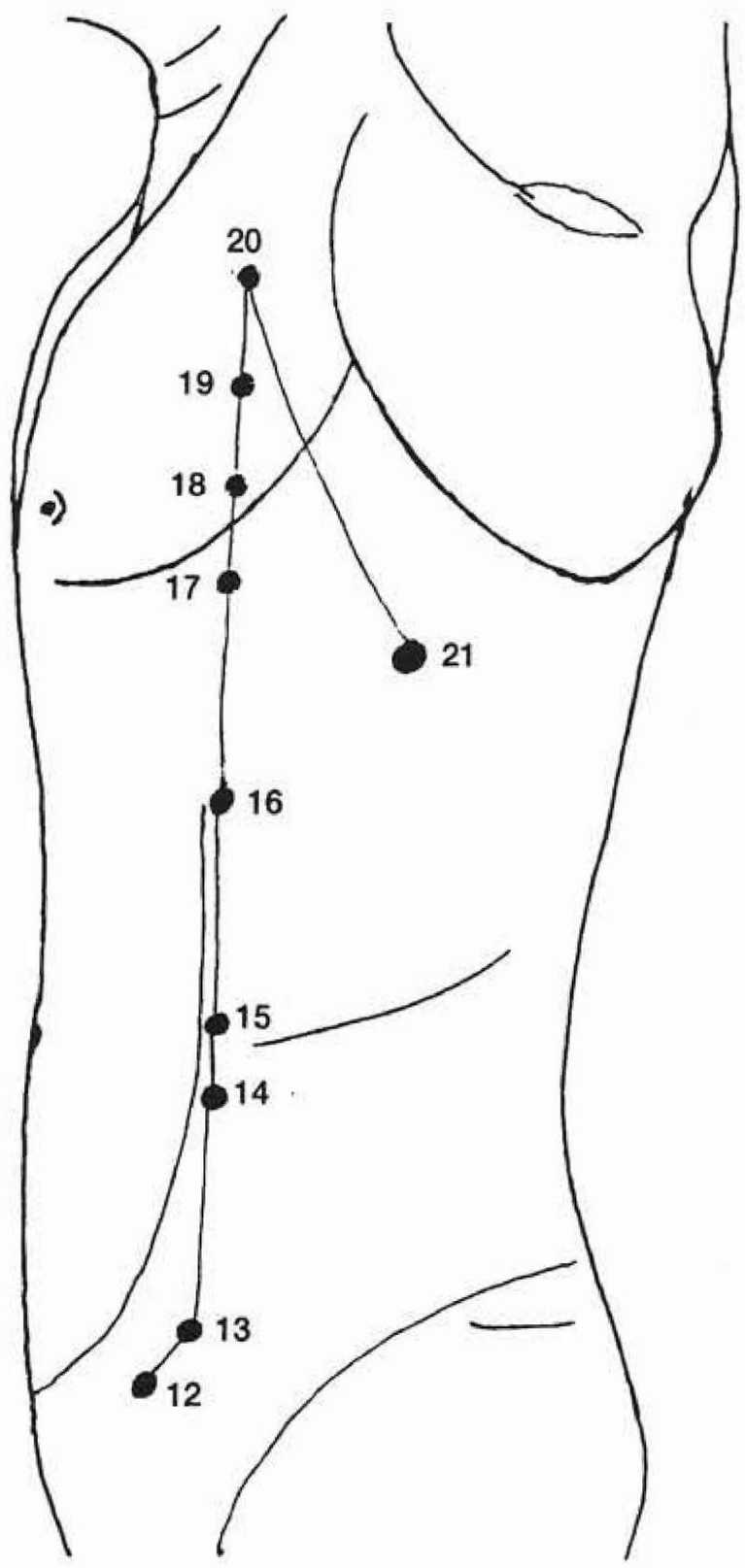
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Chapter 7

The Heart Meridian

THE TCM VIEW

The heart is a yin (zhang) organ, its element is fire, and its fu organ is the small intestine. The heart's "official job" is the supreme controller of organs.

Most of what Chinese medicine says about the heart is in keeping with what Western medicine says. However, there is one big difference, and probably the most important one: that the heart houses the shen, or spirit. Chinese medicine states that the heart, not the brain, houses the "mind." The heart is the residence of the shen or spirit consciousness, awareness, mental clarity, memory, stored thoughts, and sleep. The shen is said to be reflected in the eyes.

The following five functions are affected by the heart:

- Mental activity
- Memory
- Consciousness
- Thinking
- Sleep

A strong heart leads to normal mental activity, clear consciousness, good memory, sharp thinking, and sound sleep. The reverse is true when the heart is not strong.

In Chinese medicine, each zhang organ dominates a certain tissue, with the heart dominating the blood vessels. The circulation of blood by pumping is accomplished by heart qi and zhong qi. Qi ensures an even, regular beat. So healthy or unhealthy blood vessels depend upon the state of the heart.

The heart's function of controlling the blood depends upon a healthy mind. The function of housing the shen depends upon a good supply of blood and nourishment to the heart. So there is a relationship of mutual dependence between the function of controlling blood and that of housing the shen. Deficient blood cause restlessness or an uneasy mind, insomnia, and poor memory. An uneasy, restless mind; emotional problems; sadness; or excess joy can cause a deficiency of blood supply to the heart, resulting in palpitation and poor complexion.

The state of the heart manifests in the face or complexion, which is said to be the expansion of the

heart. So if the heart is healthy, there will be a good complexion. If the heart is deficient, the complexion will be pale or bluish purple.

The heart opens to the tongue, which is the associated organ and gives rise to the associated sense of taste and speech. The tongue is the mirror of the heart, with heart qi and shen giving rise to free mobility of tongue and clear speech. Hence, someone with too much "fire in the heart" will talk incessantly. Things like stuttering, difficult or weak speech, and aphasia could be the result of a weak heart. The state of the heart will also control the taste and color of the tongue. With a normal heart, the tongue is slightly pale red and in good shape; the taste will be good. If there is heat in the heart, the tongue will be dark red with a bitter taste. If the heart is blood deficient and weak, the tongue will be pale and swollen.

Acupuncture points along the meridian line of the heart can aid in the treatment of heart complaints, such as high or low blood pressure. They can also help eye and skin problems and alleviate symptoms of stress, anxiety, and tension.

DIM-MAK

The heart meridian is one of the most dangerous meridians because all of its points affect the heart directly. There are only nine points along the inner arm up to the axilla, and all will affect what the heart does, from a mild slowing to complete stoppage, depending upon which points have been struck and in what order, etc. We often use heart points as set-up points to other deadly points since the heart points can make the recipient feel really ill. Just ask any heart patient how he felt when he was having his first heart attack, and you will know what can be also achieved by striking to heart points.

If there are any points that are more deadly than others on this meridian, they would have to be Ht 3 and Ht 1.

HT 1 (HEART POINT NO. 1)

Chinese name:

Jiquan (summit's spring).

Location:

In the center of the axilla, on the medial side of the axillary artery, at the lateral, inferior margin of the pectoralis major muscle and, in its deep position, in the coraco-brachialis muscle

Connections:

This is a lower meeting point of the heart/small intestine divergent meridian. Takes an internal path of the meridian from the zhang (i.e., although the first point is the axilla, there is obviously a connection to the physical heart via an internal connection directly from the heart.

Direction of strike:

Straight up into the axilla, usually using a thumb knuckle or side of the forearm.

Damage:

This is one of the most dangerous heart points; a medium to heavy strike will stop the heart instantly. The point is right over the top of the axillary artery, and, as such, great artery damage is also done when this point is struck. The shen is affected, and the recipient feels as though he has been disconnected from God! Brain function is also affected, speech is impaired, and mental activity in general is severely affected. The emotional state of the recipient is also damaged greatly. This is all on top of immediate shoulder damage. (This point is traditionally used to cure "frozen shoulder" because of its ability to clear both external and internal qi of the meridian.)

Set-up point:

Si 8 is an excellent set-up point.

Antidote:

There is no known antidote other than CPR and immediate medical treatment.

Figure 279

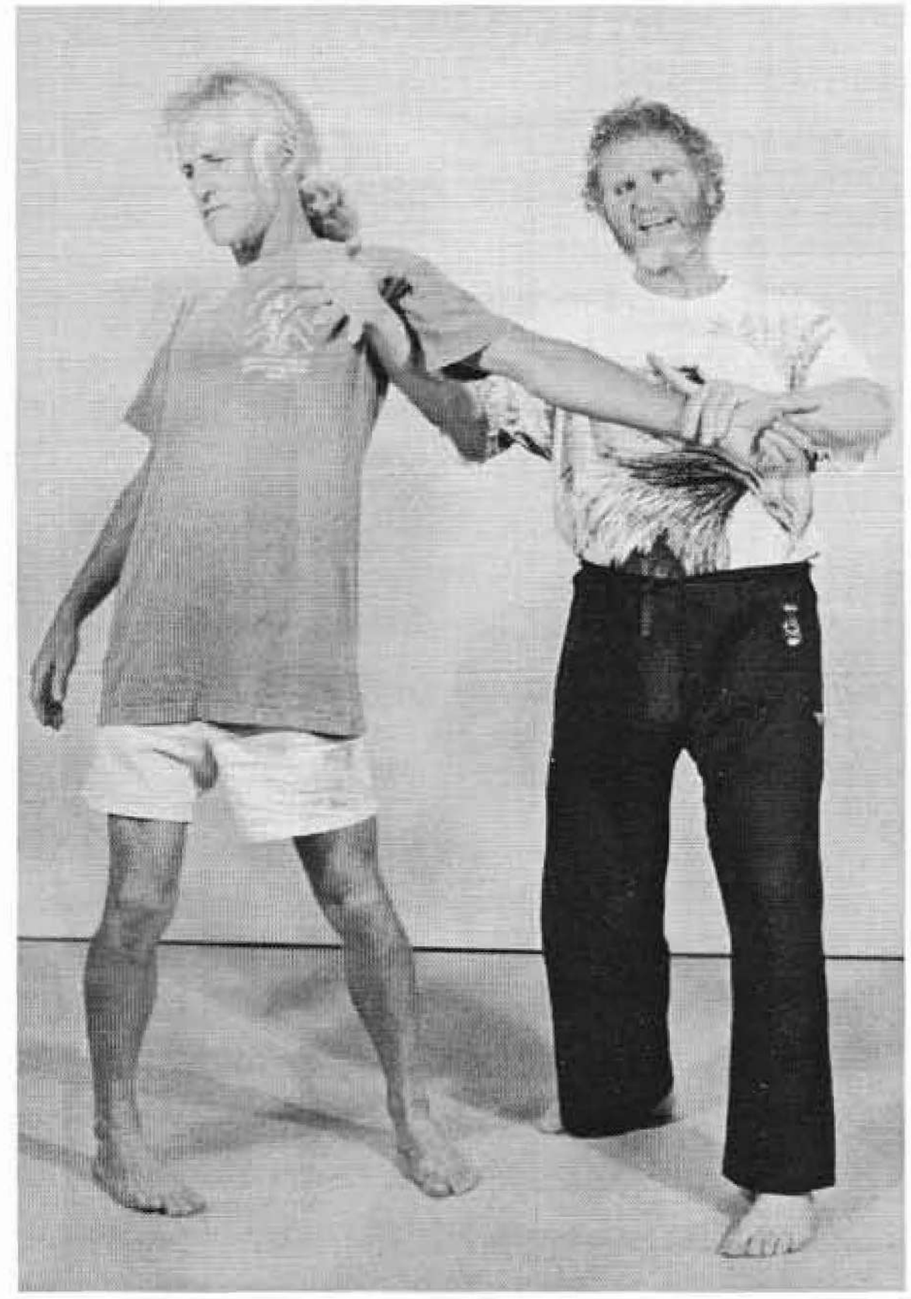


Figure 280

Healing:

Innervation is by the ulnar nerve, median nerve, and the medial brachial cutaneous nerve. Irrigation occurs by the axillary artery's location lateral to this point.

Used for pain in the costal and cardiac regions, scrofula, cold and pain in the elbow, arthritis of the shoulder, perifocal inflammation of the shoulder joint, angina pectoris, and intercostal neuralgia.

Traditional indications include chest pain and thirst, inability to raise the arm, full and painful ribs, jaundice, and depression.

Massage techniques include pressing and holding the point, doing rotations clockwise or counterclockwise for xu or shi conditions, rubbing back and forth in the direction of the scapula for frozen shoulder (look for the tense muscle), and doing fingertip percussion.

Use with St 38, Gb 34, Co 15, Co 14, Co 11, St 3, St 9, St 10, St 11, St 12, St 13, St 14, Th 13, Th 14, Th 15, Gb 21, Gb 20, *jianneling* (an extra point), and *naoshang* (an extra point) for frozen shoulder.

Use with Cv 7, Cv 14, Cv 17, Bl 14, Bl 15, Bl 17, Bl 18, Liv 14, Liv 4, Liv 3, St 36, and Pc 6 for angina pectoris. For this you can also look for a painful point medial and superior to Si 9, and another one around Si 11, both on the left only.

Applications:

He might attack with a low left hook to your lower right rib area. You should move to your right and slam his left arm at Si 8 with your right forearm as your left palm slams down on top of his forearm, causing considerable local pain and setting up the Ht 1 shot (fig. 279). Immediately grab his left wrist at Ht 5 and Lu 8, thus draining the qi from the organ, and with your right forearm or thumb knuckle, strike violently up into Ht 1 (fig. 280). NOTE: Your right palm, on the thumb side, could strike to St 9 at the same time if you used your forearm to strike to Ht 1.

HT 2 (HEART POINT NO. 2)

Chinese name:
Qingling (youthful spirit).
Location:
When the elbow is flexed, the point is 3 cun above the medial end of the transverse cubital crease (Ht 3), in the groove medial to the biceps brachii.
Connections:
None.
Direction of strike:
Straight in just beneath the biceps, slightly toward yourself, (i.e., down his upper arm toward his fingers).
Damage:
This point will slow the heart rate sufficiently to make him feel really ill. This point is also an excellent nerve point strike, affecting the whole arm and sending a shock wave into the upper body. KO has been effected using this point.
Set-up point:
Slap the outside of the forearm upward, covering Th 8.
Antidote:
Squeeze the little finger.

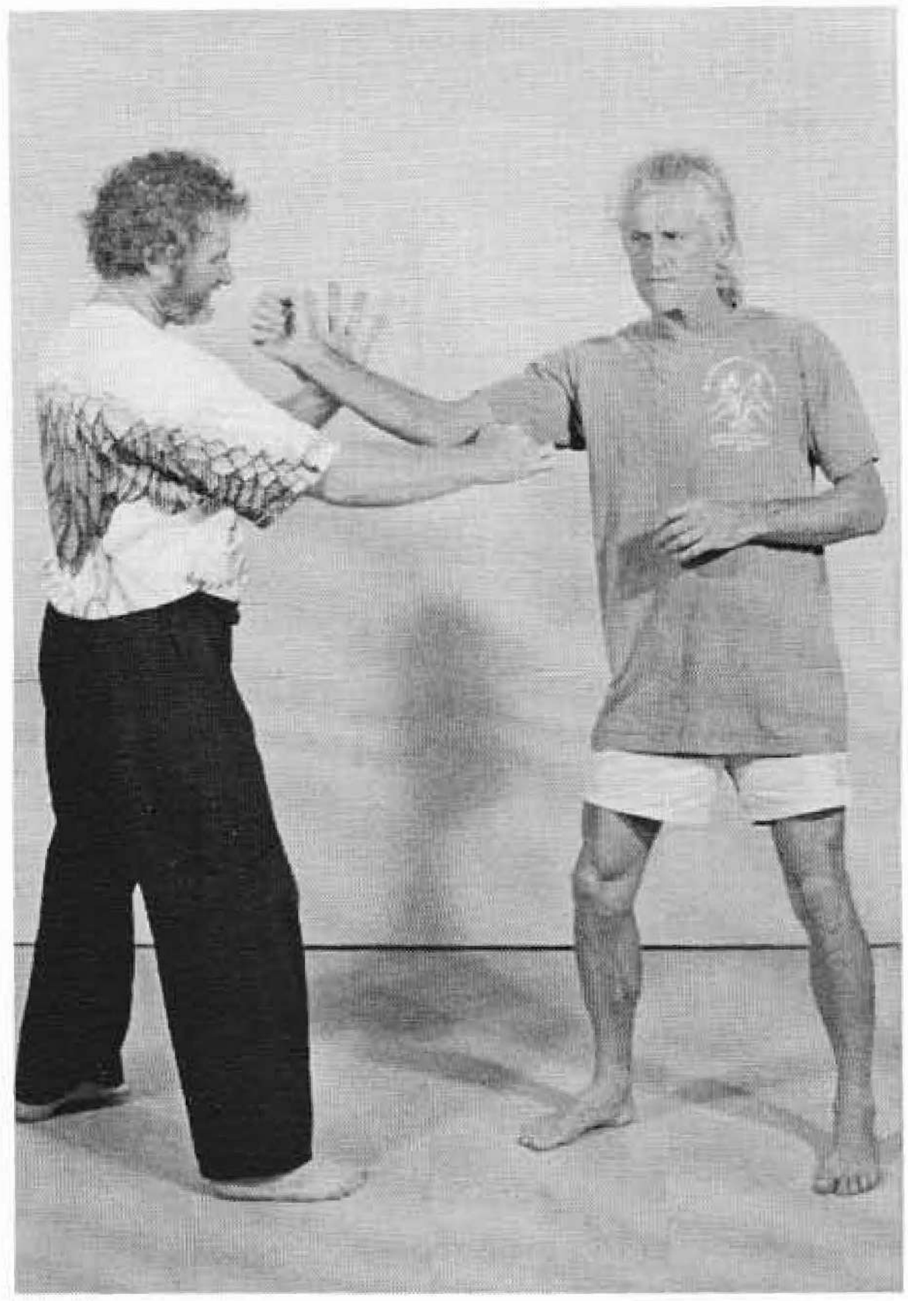


Figure 281

Healing:
Innervation is by the medial antebrachial cutaneous nerve, the medial brachial cutaneous nerve, and the ulnar nerve. Irrigation is by the basilic vein, the superior ulnar collateral artery.

Used for yellowish sclera; pain in the hypochondriac region, shoulder, and arm; costalgia (pain localized in the ribs), and icteric sclera.

Massage techniques include pressing and holding the point, rotating clockwise or counterclockwise for xu or shi conditions, doing fingertip percussion or vibration, and pressing in slowly with both thumbs and releasing quickly, pulling the thumbs apart.

Use with the formula for frozen shoulder listed under Ht 1.

Use with Liv 14, Liv 4, Liv 3, Liv 8, Gb 24, Liv 13, Bl 17, Bl 18, Bl 19, Bl 20, and Bl 21 for hypochondriac pain.
Applications:
This application is also good for Ht 3. He might attack with a straight right. You should move slightly to your left and attack to his Th 8 point with your left palm. A split second later, your right thumb knuckle attacks to Ht 2 in a direction that is slightly toward you (fig. 281).

HT 3 (HEART POINT NO. 3)

Chinese name:
Shaohai (lesser sea).
Location:
When the elbow is flexed, the point is at the medial end of the transverse cubital crease, in the depression anterior to the medial epicondyle of the humerus, in the pronator teres and the brachialis muscles.

Connections:

None.

Direction of strike:

Into the inside of the elbow and slightly toward you, usually with a thumb-knuckle punch.

Damage:

This is a water and he sea point, and it is one of the more dangerous points. A strike here will have the immediate action of stopping the heart and damaging the tendon (nervous) system. The point is usually used to treat, among other things, stress, depression, and emotional disturbances, so this strike will have the reverse effect, causing long-term nervous and emotional disorders. It will unbalance the yin/yang relationship throughout the whole body. Someone who has been struck here and has not been treated will have a complexion like people who have smoked all their lives (like someone who is 35 years old but who looks like 65 years old!). This strike also works very well with the mind point on the side of the jaw—someone is knocked out very easily with a light slap on this point after Ht 3 has been struck. If struck in a proximal way, the mind point will cause high blood pressure. If struck straight in it will cause the heart to weaken over a period.

Set-up point:

The only set-up point that this strike needs is a sharp slap going up along the outer forearm.

Antidote:

Have an acupuncturist look at the whole energy system of the body and have it balanced out. You could try treating Ht 3 on the other arm, using finger pressure up the arm. Or you could try squeezing Ht 9.

Healing:

Innervation is by the medial antebrachial cutaneous nerve. Irrigation is by the basilic vein, the inferior ulnar collateral artery, and the ulnar recurrent artery and vein.

Used for cardiac pain, numbness of the arm, hand tremor, contracture of the elbow, pain in the axilla and hypochondriac regions, scrofula, neurasthenia, psychosis, intercostal neuralgia, ulnar nerve neuralgia, lymphadenitis, and disease of the elbow.

Traditional indications include headache and dizziness, stiff neck, toothache, vomiting, nodular growths in the neck, pain in the axilla, absentmindedness, madness, and debility of the limbs.

Traditional functions are to calm the spirit, regulate the heart qi, relax the tendons, invigorate and clears the channels and collaterals, and, as a water point and he sea point for the heart meridian, it can be used to cool the heart and its channel.

Massage techniques are the same as for Ht 2.

Use with Co 10, Co 11, Co 9, Co 8, Co 7, Co 6, Co 4, Ht 7, Si 3, Si 8, and Pc 3 for numbness or pain of the forearm and elbow.

Use with Sp 6, Pc 6, Pc 3, Ht 7, Ht 8, Cv 17, Liv 14, Liv 3, St 36, and Kd 3 for neurasthenia.

Use with Ht 7, Gv 20, and Sp 6 for absent-mindedness.

Applications:

The same as for Ht 2.

HT 4 (HEART POINT NO. 4)

Chinese name:

Lingdao (spirit's path).

Location:

On the radial side of the tendon of the muscle flexor carpi ulnaris, 1.5 cun above the transverse crease of the wrist when the palm faces upward.

Connections:

None.

Direction of strike:

Straight in.

Damage:

This is a metal and jing point, usually used for "local" problems in the healing area. A strike here adds fire to the heart and causes high blood pressure immediately.

Set-up point:

A sharp strike just under the heart, slightly to the left of the body.

Antidote:

This strike causes high blood pressure, which can cause a KO. In this case it is okay to lightly finger St 9, jiggling the fingers on the point, which will bring the high blood pressure down again.

Healing:

Innervation is by the medial antebrachial cutaneous nerve; the point is on the side of the ulnar nerve. Irrigation is by the ulnar artery.

Used for cardiac pain, sudden hoarseness, contracture of the elbow and arm, convulsions, chest pain, psychosis, hysteria, and neuralgia of the ulnar nerve.

Traditional functions: a metal point and jing river (traversing) point of the heart meridian.

Massage techniques are the same as for Ht 2.

Use with Ht 3, Liv 3, Liv 2, and Ht 6 for neuralgia of the ulna nerve.

Use with Ht 3, Ht 7, Pc 6, Liv 14, Liv 4, Liv 3, Bl 14, Bl 15, Bl 17, Bl 18, Bl 25, Sp 6, St 36, Cv 12, Sp 3, and St 40 for psychosis, hysteria, and so on.

Use with Ht 3, Ht 6, Ht 7, Pc 6, Cv 17, Liv 14, Liv 4, Liv 3, Bl 14, Bl 15, Bl 17, Bl 18, Sp 6, and St 36 for cardiac pain.

Applications:

Usually used with wrist grabs. If you can get a finger or two right on the point, then squeeze violently, this will work even better.

HT 5 (HEART POINT NO. 5)

Chinese name:

Tongli (reaching the measure).

Location:

When the palm faces upward, the point is on the radial side of the tendon of the flexor carpi ulnaris muscle, 1 cun above the transverse crease of the wrist, between the tendon of the flexor carpi ulnaris and the flexor digitorum superficialis manus muscle. In its deep position, it is in the flexor digitorum sublimis muscle.

Connections:

Transverse luo to Si 4 and Si 1.

Direction of strike:

Usually used with a violent wrist grab and shake. Or it could be struck straight in.

Damage:

This is a classic qi drainage point and works very well as a set-up point strike. In fact, it is used in acupuncture when qi drainage is called for, although acupuncturists will not work this point too hard since it could cause KO from qi drainage. It works very well with Th 12. This strike will weaken the elbow greatly.

Set-up point:

None, although Lu 8 works very well with this point and can be accessed along with Ht 5, as they are both on the wrist area.

Antidote:

Usually time will help. However you could needle Ht 6, the xie cleft point of the heart meridian, .3 cun perpendicular. Or you could pull Ht 5 distally, then rub Ht 3 proximally.

Healing:

Innervation and irrigation are the same as for Ht 4.

Used for palpitations, dizziness, blurring of vision, sore throat, sudden hoarseness, aphasia with

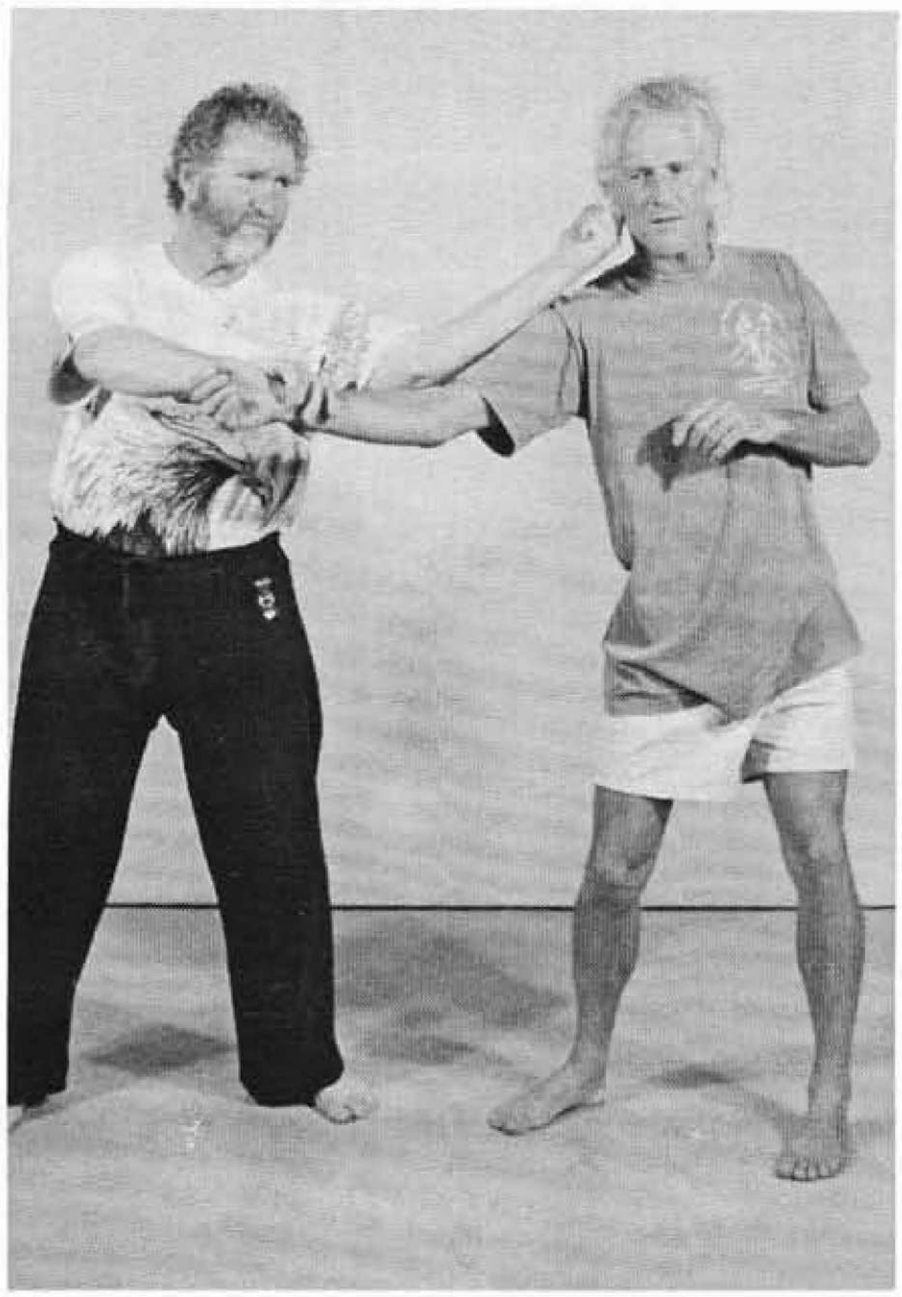


Figure 282

stiffness of the tongue, pain in the wrist and arm, chest pain, bradycardia, neurasthenia, psychosis, cough, and asthma.

Traditional indications include headache and dizziness, stiffness of the tongue, throat blockage, palpitations due to nervous fright, abnormal uterine bleeding, and incontinence.

As a luo connecting point of the heart meridian its traditional functions are to calm the spirit and regulate the heart qi. It is also is very good to bring down fire from the head caused by mental irritation. It is a special point for aphasia.

Massage techniques are the same as for Ht 2.

Use with Liv 2, Liv 4, Sp 6, Liv 14, Cv 4, Cv 6, St 36, St 29, St 28, St 27, St 26, St 25, Bl 26, Bl 25, Bl 23, Bl 20, Bl 19, Bl 18, Bl 17, and Bl 15 for excessive uterine bleeding.

Use with Ht 7, Pc 6, Bl 15, Bl 14, Bl 17, Bl 18, Cv 14, Cv 17, Liv 14, Liv 3, and St 36 for cardiac arrhythmia.

Use with Ht 3, Ht 7, Pc 6, Bl 14, Bl 15, Bl 43, Bl 17, Bl 18, Liv 14, Liv 4, Liv 3, Sp 6, Sp 9, Sp 4, St 40, and Kd 1 for psychosis.

Applications:

Block his low left attack with both arms. Your right palm slams down on top of his left wrist as your left outer forearm slams the inside of his left forearm. Now, your right palm grabs and shakes his left wrist area violently at Ht 5 as your left palm attacks to his mind point at the jaw (fig. 282). This is called p'eng in taijiquan.

HT 6 (HEART POINT NO. 6)

Chinese name:

Yinxi (yin accumulation).

Location:

On the radial side of the tendon of flexor carpi ulnaris muscle, 0.5 cun above the transverse crease of the wrist.

Connections:

None.

Direction of strike:

Also a grabbing-type motion on the wrist.

Damage:

Ht 4, 5, 6, and 7 are very close to each other and, as such, it is difficult to only get one. So it is common for all four points to be attacked at once with a grabbing and shaking motion. This will cause great qi loss and immobilization, just before a more dangerous attack to St 9, for instance. Ht 6 is the xie cleft point. If struck all by itself, it said to cause madness and weaken the heart.

Set-up point:

This is a classic set-up point.

Antidote:

Finger pressure to the opposite Ht 6 point up the inner arm.

Healing:

Innervation and irrigation are the same as for Ht 4.

Use for cardiac pain, hysteria, night sweating, neurasthenia, palpitations, and pulmonary tuberculosis.

Traditional indications are acute problems of the heart.

Traditional functions: a xie cleft point (accumulating point) of the heart, stops night sweating, treats acute phlegm disorders of the heart.

Massage techniques are the same as for Ht 2.

Use with Kd 7, Sp 6, Si 3, Bl 13, and Bl 15 for night sweating.

Use with Ht 3, Ht 7, Ht 8, Bl 14, Bl 15, Bl 17, Bl 18, Cv 17, Cv 14, Liv 14, Liv 4, Liv 3, St 36, Pc 6, and Co 4 for cardiac pain and palpitations.

Applications:

The same as for Ht 5.

HT 7 (HEART POINT NO. 7)

Chinese name:

Shenmen (spirit's door).

Location:

On the transverse crease of the wrist, in the articular region between the pisiform bone and the ulna, in the depression on the radial side of the tendon of the muscle flexor carpi ulnaris.

Connections:

Transverse luo from Si 7.

Direction of strike:

Straight in to the wrist or a wrist grab.

Damage:

This point has a great effect upon the shen. It is an earth, yuan, and shu point. This strike damages the shen's emotional control over the whole system. The fire element is totally unbalanced, causing too much heat to enter the system. The whole system becomes emotionally unstable and tense.

Set-up point:

Ht 3 works very well as the set-up for this point.

Antidote:

Take the opposite hand and squeeze shenmen (Ht 7) up along the inner forearm at the wrist about 1 inch. You can also squeeze Ht 3 lightly as you do this. This will restore the shen, and calmness will prevail. This point is particularly good for patients having seizures or epileptic fits, etc. I have used this point many times on patients having mild epileptic fits, in which they feel as though they are dying and turning green, etc. About five minutes of stroking shenmen and they are well again.

Healing:

Innervation and irrigation are the same as for Ht 4.

Used for cardiac pain, irritability, mental disorders, epilepsy, poor memory, palpitation, hysteria, insomnia, yellowish sclera, pain in the hypochondriac region, feverish sensation in the palms, excessive dreaming, heart disease, angina pectoris, paralysis of the hypoglossus muscle, and neurasthenia.

Traditional indications include idiocy and seizures, irritability and insomnia, vomiting blood, jaundice, pain in the ribs, loss of voice, and panting.

As an earth point, shu stream point, and yuan source point of the heart meridian, shenmen's traditional functions are to calm the spirit, pacify the heart, clear the channels, and act as a sedative.

Massage techniques are the same as for Ht 4. You can also pinch the pisiformbone between the thumb and forefinger and move clockwise or counterclockwise.

Use with Pc 6, Ht 3, Ht 5, Ht 6, Bl 15, Bl 17, Bl 14, Bl 18, Cv 14, Cv 17, Liv 4, Liv 3, Liv 8, St 36, St 40, and Sp 3 for cardiac pain, angina pectoris, palpitations, poor memory, excessive dreaming, mental disorders, etc.

Use with Sp 6, Liv 3, Sp 9, Cv 4, Cv 6, Bl 25, Bl 53, Bl 26, Bl 23, Bl 20, Bl 18, and Bl 17 for premenstrual tension.

Use with Liv 3, St 36, Sp 3, Gv 20, Gb 20, yintang, Gb 21, Pc 6, and Kd 3 to calm pre-exam nerves.

Applications:

The same as for Ht 5.

HT 8 (HEART POINT NO. 8)

Chinese name:

Shaofu (lesser residence).

Location:

On the palmar surface, between the fourth and fifth metacarpal bones. When the hand is supine and the fingers are cupped in a half-fist, this point is found on the palm just below the tip of the little finger. Between the fourth and fifth metacarpal bones, in the fourth lumbrical muscle and the tendon of the flexor digitorum sublimis muscle. In its deep position, it is in the interosseous muscle.

Connections:

None.

Direction of strike:

Straight in to the palm. It is usually used with a small ch'i-na strike.

Damage:

This point also upsets the shen and the emotional stability. It's not a point that I would use in a tight situation. (Use the small circle ch'i-na lock, as described in the application section.) It is a fire and yong point, and when struck it upsets the heart qi, so the heart is damaged. As a sideline, this point strike will upset the body's clock, showing symptoms of jet lag! (It can also be used to combat jet lag in the healing sense.)

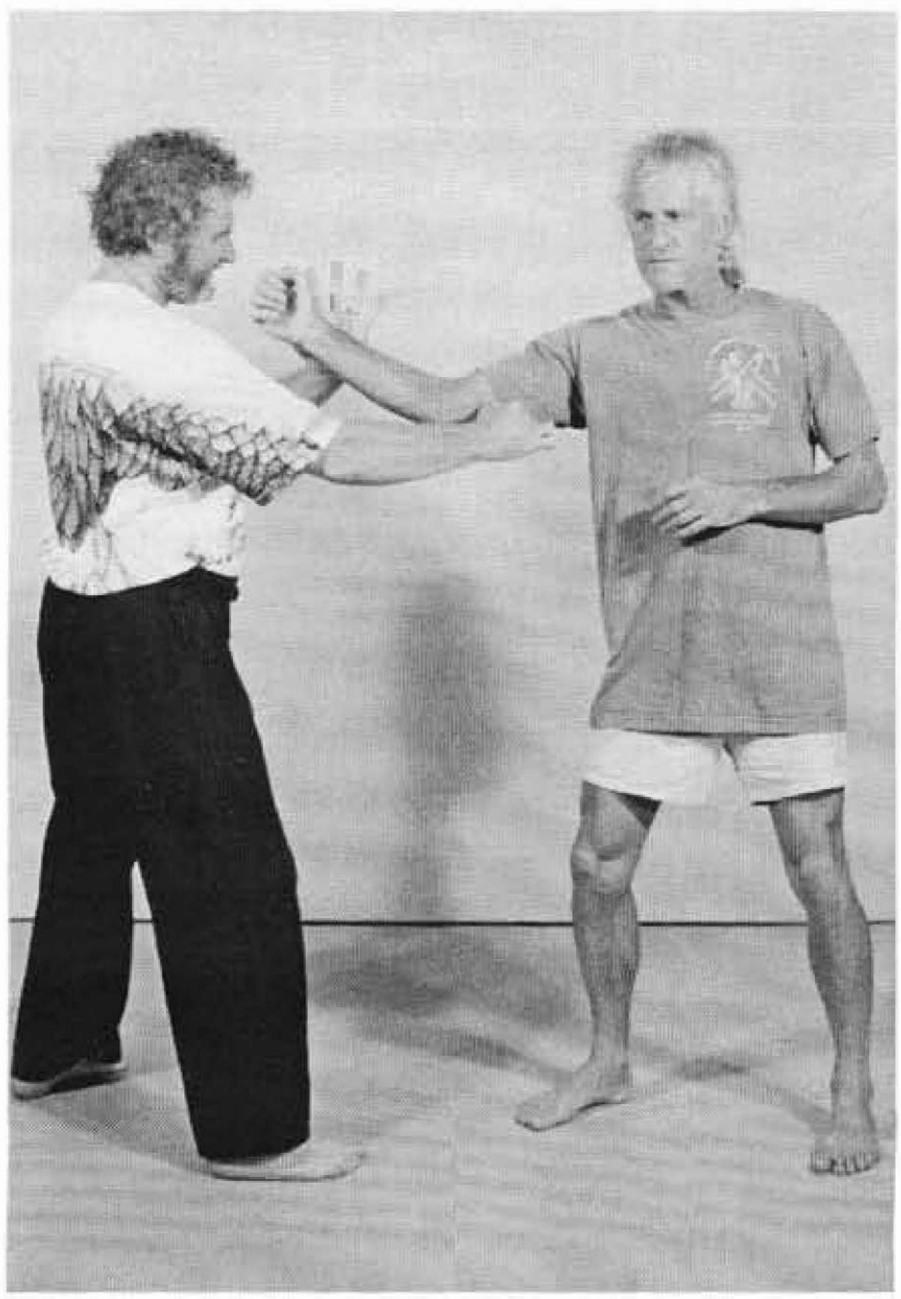


Figure 281

Set-up point:

None.

Antidote:

Use the opposite Ht 8 with finger pressure.

Healing:

Innervation is by the fourth common palmar digital nerve, derived from the ulnar nerve. Irrigation is by the common palmar artery and vein.

Used for palpitations, pain in the chest, twitching and contracture of the little finger, feverish sensation in the palm, skin pruritis, dysuria, enuresis, rheumatic heart disease, cardiac arrhythmia, angina pectoris, and hysteria. Traditional indications include palpitations, chest pain, spasm of the little finger, itching of the groin, difficult urination, and incontinence.

Traditional functions, as a fire point and a ying spring (gushing) point of the heart meridian, are to clear heat from the heart, calm the spirit, and regulate the heart.

Massage techniques are the same as for Ht 4. You can also squeeze this point between the thumb and forefinger.

Use with Ht 4, Ht 3, Ht 6, Ht 7, Bl 14, Bl 15, Bl 17, Bl 18, Cv 14, Cv 17, Sp 6, Liv 3, Liv 4,

Liv 8, St 36, Pc 6, and Pc 3 for hysteria, rheumatic heart disease, palpitations, and itching in the groin region.

Use with St 36, Cv 2, Cv 3, Cv 4, Cv 5, Cv 9, St 28, Bl 28, Bl 25, Bl 22, Bl 39, and Kd 11 for retention of urine.

Applications:

Slam his right neigwan with your left palm as your right palm attacks to St 9. Now your right hand takes a small ch'i-na lock on his small finger as your fingers dig into Ht 8 (fig. 283).

HT 9 (HEART POINT NO. 9)

Chinese name:

Shaochong (lesser pouring).

Location:

On the radial side of the little finger, about 0.1 cun posterior to the corner of the nail.

Connections:

Takes transverse luo from Si 7.

Direction of strike:

Squeeze the little finger.

Damage:

Although this point works very well, it is difficult to get to without opening yourself up to an attack. It is usually used in the healing area as an emergency point or revival point. It is a wood and cheng point. It has to be struck very hard to work as anything other than as a healing point, so even if you do attack this point, you could *help* the attacker, not hurt him! If struck really hard, this point will shock the heart for a moment to enable you to get in with another strike. It is not a point I would use martially in a tight situation. It is, however, an excellent heart healing point.

Set-up point:

None.

Antidote:

Use Ht 3.

Healing:

Innervation is by the palmar digital proprial nerve derived from the ulnar nerve. Irrigation is by the arterial and venous network formed by the palmar digital proprial artery and vein.

Used for palpitations, cardiac pain, pain in the chest and hypochondriac regions, mental disorders, febrile disease, loss of consciousness, apoplectic coma, hysteria, infantile convulsions, and high fever.

Traditional indications include vaginal discharge.

As a jing well point and a wood point of the heart meridian, it tonifies heart qi.

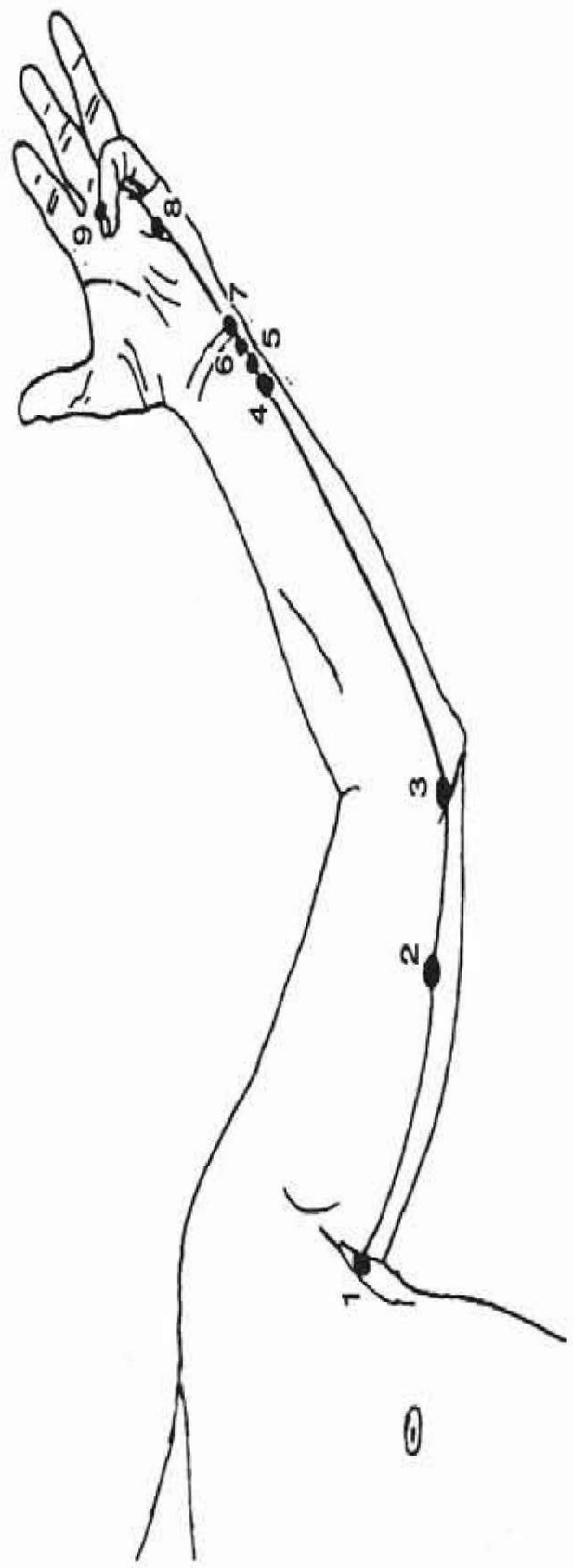
To massage, squeeze the patient's last small finger knuckle with your thumb and your forefinger and hold, do rotations clockwise or counterclockwise for xu or shi conditions, and burn a rice-grain-size piece of pure, refined moxa on the point to tonify heart qi.

Use with Lu 1, Cv 7, Liv 14, Liv 3, and Bl 17 for chest pain.

Applications:

None.

This brings us to the end of heart meridian. This meridian has a few excellent points; however, many of them are used primarily for healing.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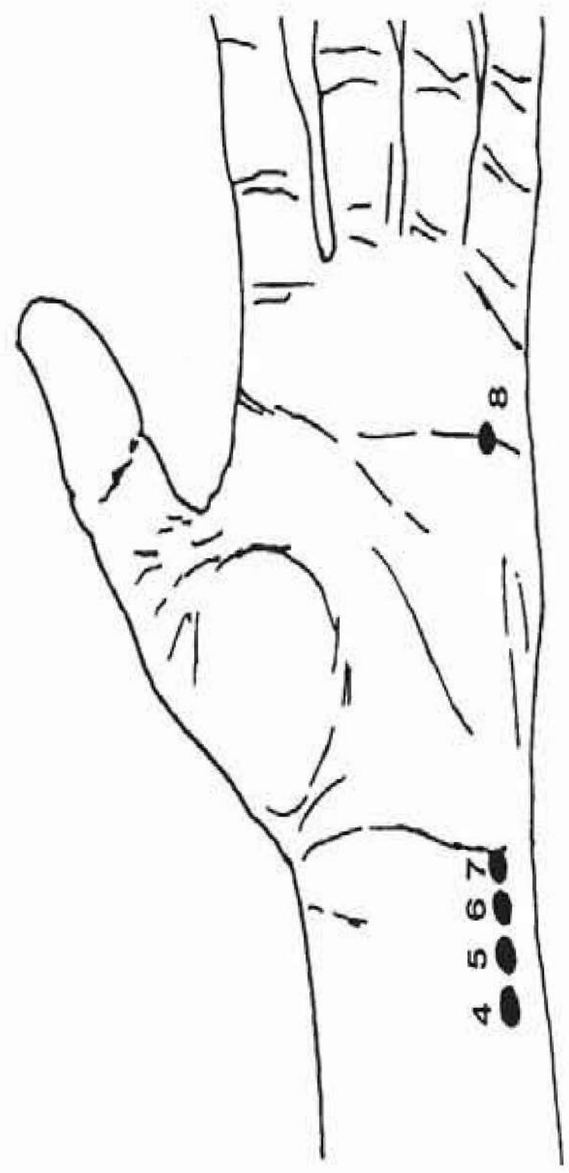
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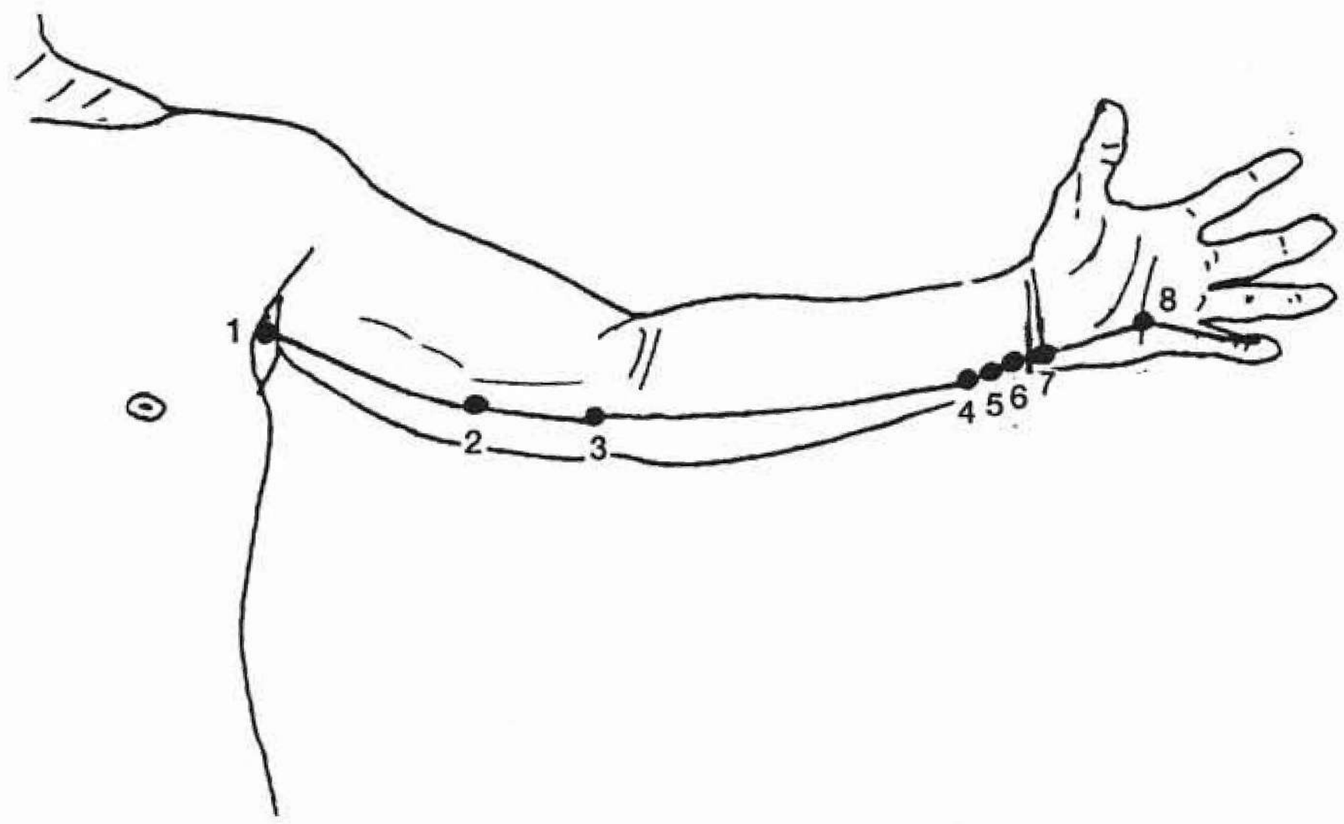
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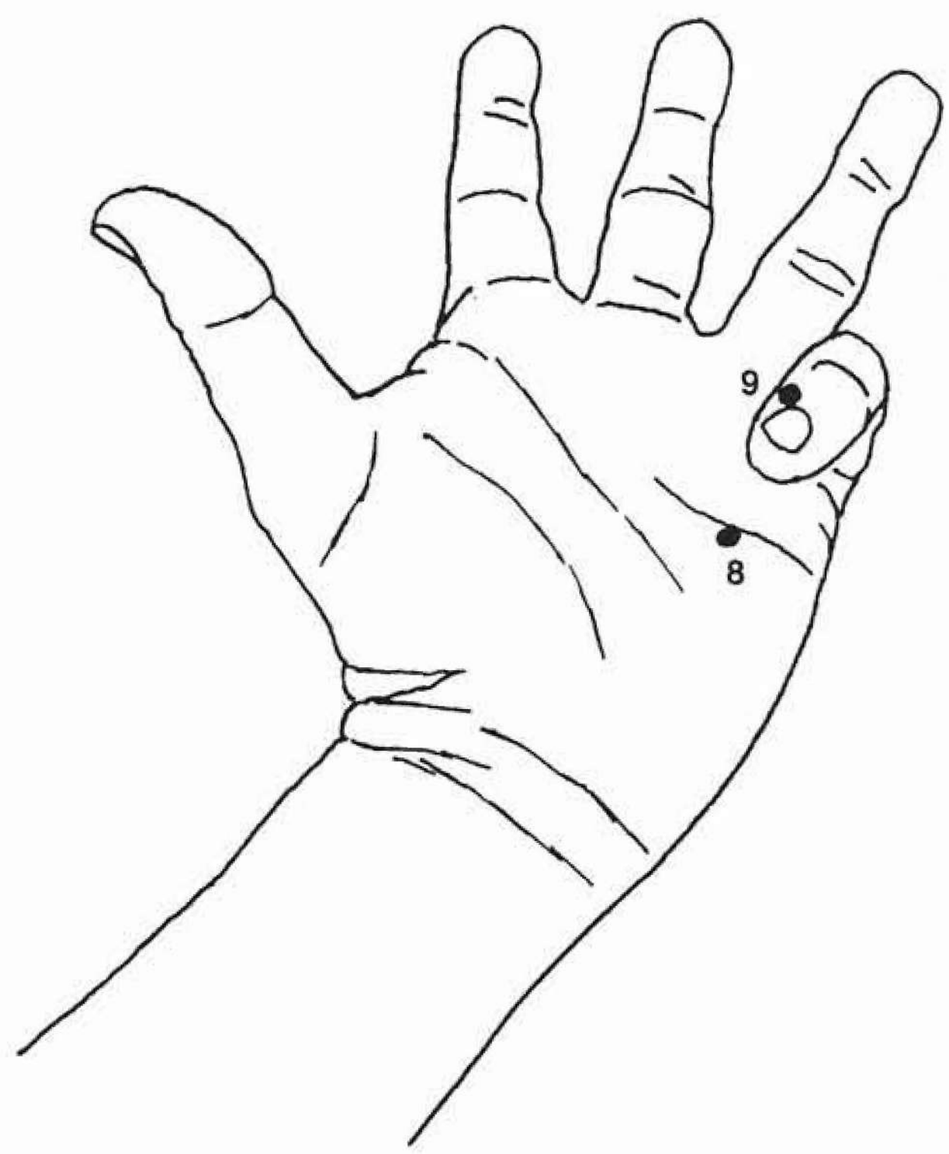
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Chapter 8

The Small Intestine Meridian

THE TCM VIEW

The small intestine is a yang organ. The Chinese element of the small intestine is fire. Its yin counterpart is the heart. Its official job is to control the separation of pure and impure.

The small intestine receives food from the stomach and stores it for further digestion. In addition, it partially digests that food, taking nutrients from it and then passing it on to the colon. It also separates the clean from the dirty (i.e., it takes the clean or refined, usable part of the food that, after absorption, is taken by the spleen to all parts of the body, and it transfers the "dirty" part, or the wastes produced by digestion, to the colon or bladder). The small intestine also separates bodily fluids, some of which are sent to the bladder for excretion and some to the colon for reabsorption. This process is undertaken by the small intestine but it is controlled by kidney yang.

It is also important to note that the function of the small intestine is also to separate pure from impure mental functions. It has the ability to separate pure thoughts from useless thoughts, something that we as martial artists or healers must pay attention to. Useless thoughts and mental activity only waste qi. So the small intestine also clears up internal pollution.

In dim-mak, the small intestine meridian includes some very dangerous points, especially those around the head and neck. There are also some excellent set-up points, particularly those along the arm. Of these points, Si 16 and 17 would probably be the most dangerous. In general, strikes to the small intestine meridian will cause heat to build up in the heart.

SI 1 (SMALL INTESTINE POINT NO. 1)

Chinese name:

Shaoze (lesser marsh).

Location:

On the ulnar side of the little finger, about 0.1 cun posterior to the corner of the nail.

Connections:

Transverse luo from Ht 5.

Direction of strike:

This is a small fingertip squeeze. It is not a point that I would use in a serious situation, although it can have some startling effects if you are able to get at it.

Damage:

This is a metal and cheng point; it controls the muscle/tendino and divergent meridians. It is more of a healing point than a dim-mak point, and it can be used to produce and to improve the quality of breast milk. This strike can work as a delayed death touch because it can affect the body's defenses over time. It will cause the recipient to become very angry since it causes heat in the heart.

Set-up point:

None.

Antidote:

If you think you have been damaged here, see an acupuncturist and have your wei qi looked at.

Healing:

Innervation is by the palmar digital proprial nerve and the dorsal nerve derived from the ulnar nerve. Irrigation is by the arterial and venous network formed by the palmar digital proprial artery and vein and the dorsal digital artery and vein.

Used for febrile disease, loss of consciousness, lactation deficiency, sore throat, cloudiness of the cornea, headache, mastitis, and pterygium.

Traditional indications include fever and chills with no sweating, headache, chest pain, shortness of breath, pain in the ribs, jaundice, swollen breasts, membrane over the eye, and deafness.

Traditional functions are to disperse wind heat and facilitate the flow of milk. As a jing well point and a metal point of the small intestine, it can tonify or sedate.

To massage, squeeze this point between the knuckle of your thumb and your forefinger and hold. In addition, you can do rotations clockwise or counterclockwise for xu or shi conditions, and you can prick and bleed it to treat trauma or mastitis.

Use with Bl 1, Gb 1, St 1, qiuhou, Co 4, taiyang, Liv 2, Liv 3, Liv 4, and Liv 8 for pterygium.

Use with taiyang, Cv 17, Liv 14, Liv 3, Sp 6, St 36, St 15, Sp 18, Bl 17, Bl 18, and Bl 19 for sore, swollen breasts or deficiency of lactation.

Use with St 2, St 3, St 9, Si 10, St 11, St 12, St 13, St 14, Si 15, St 16, Gb 21, Th 14, Th 15, Gb 20, Gb 34, Bl 12, Bl 13, and Bl 43 for neck and shoulder pain that extends down the back of the arm.

Applications:

None.

SI 2 (SMALL INTESTINE POINT NO. 2)

Chinese name:

Qiangu (forward valley).

Location:

When a loose fist is made, the point is distal to the metacarpophalangeal joint, at the junction of the red and white skin.

Connections:

None.

Direction of strike:

Straight in from the side of the palm at the base of the small finger.

Damage:

This is a water and yong point. A strike here will cause heat to rise in the body, which will cause all kinds of problems, including heart disease, sores on the lips and tongue, and general ill health. Again, this is not a point that I would use in a tight situation unless I were to use the small finger as a ch'i-na locking hold. Its main function in dim-mak is as a controlling point, used when one does not really wish to do great damage immediately (as in the case of a bouncer, etc.). One can never be sure about what is working here—whether it is purely the little finger being bent that causes the pain or the point that you are also attacking while doing the finger lock.

Set-up point:

None.

Antidote:

You could needle the opposite point (on the other hand) 1 fen perpendicular. This will create a cooling effect on the liver, kidneys, and heart by taking fire away. This is the exact reverse of what this point does in the dim-mak area.

Healing:

Innervation is by the dorsal digital nerve and the palmar digital proprial nerve derived from the ulnar nerve. Irrigation is by the dorsal digital artery and vein arising from the ulnar artery and vein.

Used for numbness of the fingers, febrile disease, pannus, tinnitus, congested throat, and mastitis.

As a ying spring (gushing) point and a water point of the small intestine, its traditional functions are to cool heat and drain pathogens out of the channel.

Massage techniques include pressing and holding the point and doing rotations clockwise or counterclockwise for xu or shi conditions.

Use with Co 16, Co 15, Co 14, Co 11, Co 4, Ht 1, Si 3, Si 9, Si 10, Si 11, Si 12, Si 13, Gb 21, Si 16, St 38, and Gb 34 for inability to raise the arm.

Use with formula listed under Si 1 for mastitis.

Use with Gb 20, Bl 10, Gv 14, Gv 16, Bl 12, Th 17, Gv 20, Co 19, Co 20, Gb 2, Si 3, Gb 43, Gb 44, Kd 3, and St 40 for tinnitus.

Applications:

He attacks with his right hand. You should block with your right p'eng type of block and slam him in the face with your left palm. Your right palm now grabs his little finger and bends it greatly, thus causing great pain. Your right thumb will also dig into Si 2 as you are taking this lock.

SI 3 (SMALL INTESTINE POINT NO. 3)

Chinese name:

Houxi (black creek).

Location:

When a loose fist is made, the point is proximal to the head of the fifth metacarpal bone on the ulnar side, in the depression at the junction of the red and white skin. Lateral to the abductor digiti minimi manus.

Connections:

None.

Direction of strike:

Straight in to the side of the palm, just back from the little finger web.

Damage:

This point will cause considerable damage, but again it is not easy to get at. It is a wood and shu point and a master point for the dai mai. This strike will cause a breakdown in communication between heaven and earth, and thus between upper and lower body. The senses will become confused immediately, and the nerves and tendons will tense up, making this an excellent set-up point for a lock. This point will also have an adverse effect upon the liver. Immediately, there will be great pain and qi drainage. It is also a great controlling lock point.

Set-up point:

None.

Antidote:

Needle or finger pressure the opposite point on the other hand.

Healing:

Innervation is by the dorsal branch derived from the ulnar nerve. Irrigation is by the dorsal digital artery and vein, the dorsal venous network of the hand.

Used for headache, neck rigidity, congestion of the eye, deafness, contracture and twitching of the elbow/arm and fingers, febrile disease, epilepsy, malaria, night sweating, psychosis, hysteria, intercostal neuralgia, low back pain, and deaf mutism.

Traditional indications include red and painful eyes, membrane on the eye, tinnitus, deafness, jaundice, madness, tidal fevers, and finger spasm.

As a shu stream (transporting) point, a wood point of the small intestine, and a master point for the governing channel, it can treat disease of the inner canthus, neck, ear, shoulder, small intestine, bladder, and spine; relax the channels; open the Gv meridian; clear the mind; eliminate wind heat; relax the tendons and muscles; and treat malaria via the Gv meridian. Massage techniques include pressing and holding the point, doing rotations clockwise or counterclockwise for xu or shi conditions, and using fingertip percussion.

Use with Si 13, Si 14, Si 9, Si 10, Si 11, Gb 20, Gb 21, Th 15, Bl 11, Bl 12, Bl 13, Bl 43, Bl 17, Bl 18, Bl 60, and Gb 34 for neck and shoulder pain.

Use with Gv 14, Co 4, Co 11, Lu 7, Pc 5, Gv 13, Pc 6, Gv 10, Sp 9, Gb 34, Liv 2, Cv 17, St 36, and Sp 10 for malaria.

Use with Bl 25, Bl 26, Bl 53, Bl 54, Bl 40, Bl 58, Gb 29, Gb 30, Gb 34, Gb 41, Gb 39, and Bl 62 for painful legs.

Applications:

The same application as for Si 2. Or, since this point is further up the palm, you could even strike to the side of the palm with a knife-edge strike.

SI 4 (SMALL INTESTINE POINT NO. 4)

Chinese name:

Wangu (wrist bone).

Location:

On the ulnar side of the palm, in the depression between the base of the fifth metacarpal bone and the triquetral bone. Lateral to the origin of the abductor digiti minimi manus.

Connections:

Takes transverse luo from Ht 5.

Direction of strike:

Straight in to the side of the palm.

Damage:

Like Si 3, this point has some dangerous properties; however, it is not a point that I would use in a tight situation since it is difficult to get at. It is a yuan point and is used in healing for gallbladder-related problems. The long-term effect of this strike will be a loss of innovation or the ability to form ideas. It will also affect the heart by causing heat to accumulate because it also has an effect upon the bladder. Immediately, it will cause an energy loss, so it is a good controlling point. Another long-term effect is sore, itchy, burning eyes.

Set-up point:

None.

Antidote:

Treat the opposite hand at Si 4 with a needle, 3 fen perpendicular, or moxa (three to seven cones). In a pinch, you could use finger pressure.

Healing:

Innervation is by the dorsal branch of the ulnar nerve. Irrigation is by the posterior carpal artery (the branch of the ulnar artery) and the dorsal venous network of the hand.

Used for headache, neck rigidity, cloudiness of the cornea, pain in the hypochondriac region, jaundice, febrile disease, arthritis of the wrist/elbow and fingers, tinnitus, diabetes, gastritis, and cholecystitis.

Traditional indications include headache, hot conditions without sweating, throat blockage, emaciation and thirst, pain in the ribs, jaundice, and inhibited movement of the fingers.

As a yuan source point for the small intestine, its traditional functions are to invigorate taiyang (the greater yang division of the Bl and Si channels), disperse damp heat from the small intestine

and so treat cholecystitis and jaundice, and treat hypochondriac pain.

Massage techniques are the same as for Si 3. You can also press with both thumbs slowly and release quickly, pulling the thumbs apart, or use vibration with the tips of the fingers or thumb.

Use with Bl 20, Bl 21, Bl 23, Bl 18, Bl 17, Cv 4, Cv 6, Cv 12, Liv 13, St 36, Sp 6, Sp 3, Sp 4, Liv 3, Lu 1, and Sp 9 for diabetes.

Use with Si 5, Si 3, Si 1, Si 2, Si 8, Gb 34, and Th 4 for pain in the wrist.

Applications:

The same as for Si 3.

SI 5 (SMALL INTESTINE POINT NO. 5)

Chinese name:

Yanggu (valley of yang).

Location:

On the ulnar side of the wrist, in the depression between the styloid process of the ulna and the triquetral bone.

Connections:

None.

Direction of strike:

Either a strike straight in to the extreme medial edge of the wrist crease or a violent grab and jerk at the wrist.

Damage:

This is a fire and jing point. It is an excellent set-up point for a more dangerous strike, such as to St 9, Si 16, St 15, or Cv 14. All points will cause death when Si 5 is activated first. A hard strike here, however, has the ability to cause what is known as yang madness, a buildup of stagnant yang qi in the head.

Set-up point:

None.

Antidote:

Needle the opposite Si 5 2 fen perpendicular or burn three to five cones of moxa on the point.

Healing:

Innervation is by the dorsal branch of the ulnar nerve. Irrigation is by the posterior carpal artery.

Used for swelling of the neck and submandibular region, pain in the wrist and the lateral aspect of the arm, febrile disease, parotitis, insanity, deafness, and tinnitus.

This is a jing river (traversing) point and a fire point of the small intestine. Its traditional functions include regulating the qi of the small intestine and treating damp heat in the knees (i.e., swollen/painful and hot knees).

To massage, press and hold the point, do rotations clockwise or counterclockwise for xu or shi conditions, use fingertip percussion or vibration, or press in slowly with both thumbs and release quickly, pulling the thumbs apart.

Use with Si 13, Si 14, Si 15, Si 16, Si 1, Si 2, Si 3, Si 4, Si 6, Si 7, Gb 21, Gb 20, Gb 34, Th 15, Th 16, and Gb 41 for pain and swelling of the neck and submandibular regions. Use with Sp 10, Sp 9, Sp 6, St 34, St 35, St 36, St 40, Gb 34, xiyan, and Liv 3 for damp-heat-type swelling and pain in the knees.

Use with Si 4, Th 4, Th 5, Pc 7, Co 4, Lu 7, Si 6, Si 7, and Gb 34 for pain in the wrist.

Applications:

Block his oncoming attack, then jerk his wrist violently as you strike him at Cv 14 with a palm heel strike.

SI 6 (SMALL INTESTINE POINT NO. 6)

Chinese name:

Yanglao (nourishing the old).

Location:

Dorsal to the head of the ulna. When the palm faces the chest, the point is in the bony cleft on the radial side of the styloid process of the ulna. On the dorsal aspect of the ulna, above the head of the ulna at the wrist, between the tendons of the extensor carpi ulnaris and the extensor digiti minimi manus muscles.

Connections:

None.

Direction of strike:

Straight in or strike across the wrist area from the inside of the wrist to the outside thumb side.

Damage:

This is a xie cleft point, and a strike here using adverse qi will cause the tendons in the whole body to become tense. I read of one documented case where a person who was chopped at this point had his knee ligaments torn, and there was no leg attack at all. This point can also cause failing vision or an instant temporary blindness, which makes it an excellent set-up point.

Set-up point:

None.

Antidote:

Needle the opposite point on the other hand 3 fen obliquely toward Pc 6. Or use thumb pressure in the same direction.

Healing:

Innervation is by the anastomotic branches of the posterior antebrachial cutaneous nerve and the dorsal branch of the ulna nerve. Irrigation is by the terminal branches of the posterior interosseous artery and vein (the dorsal venous network of the wrist).

Used for blurring of vision; aching of the shoulder, back, elbow, and arm; arthritis of the upper limbs; hemiplegia; stiff neck; lower back pain; hernia pain; and eye disease.

Traditional indications include pain in the shoulders and arm, blurred vision, and restriction of movement in the lumbar region.

As a xie cleft point of the small intestine, its traditional functions are to treats acute problems of the organ and channel, relax tendons and ligaments, remove obstructions from the collaterals, and clear the vision. It is a root of the small intestine meridian.

Massage techniques are the same as for Si 5.

Use with Pc 6, St 36, Sp 4, Cv 12, Liv 3, Bl 20, Bl 18, Bl 19, Bl 17, Liv 14, and St 21 for belching.

Use with Bl 1, Gb 1, Th 23, yuyao, St 1, Liv 3, and Co 4 for eye disease.

Use with Pc 6, Si 9, Si 10, Ht 1, Gb 34, Gb 21, Th 15, Th 14, Co 15, Co 16, jianneling, naoshang, and St 38 for shoulder problems.

Applications:

Use this as a set-up point for any of the more dangerous strikes. You can strike it with a one-knuckle punch as he attacks with that hand, or it can be used in a locking type of situation.

SI 7 (SMALL INTESTINE POINT NO. 7)

Chinese name:

Zhizheng (branch of uprightness).

Location:

5 cun proximal to the wrist, on the line joining Si 5 and Si 8.

Connections:

Transverse luo to Ht 9 and Ht 7.

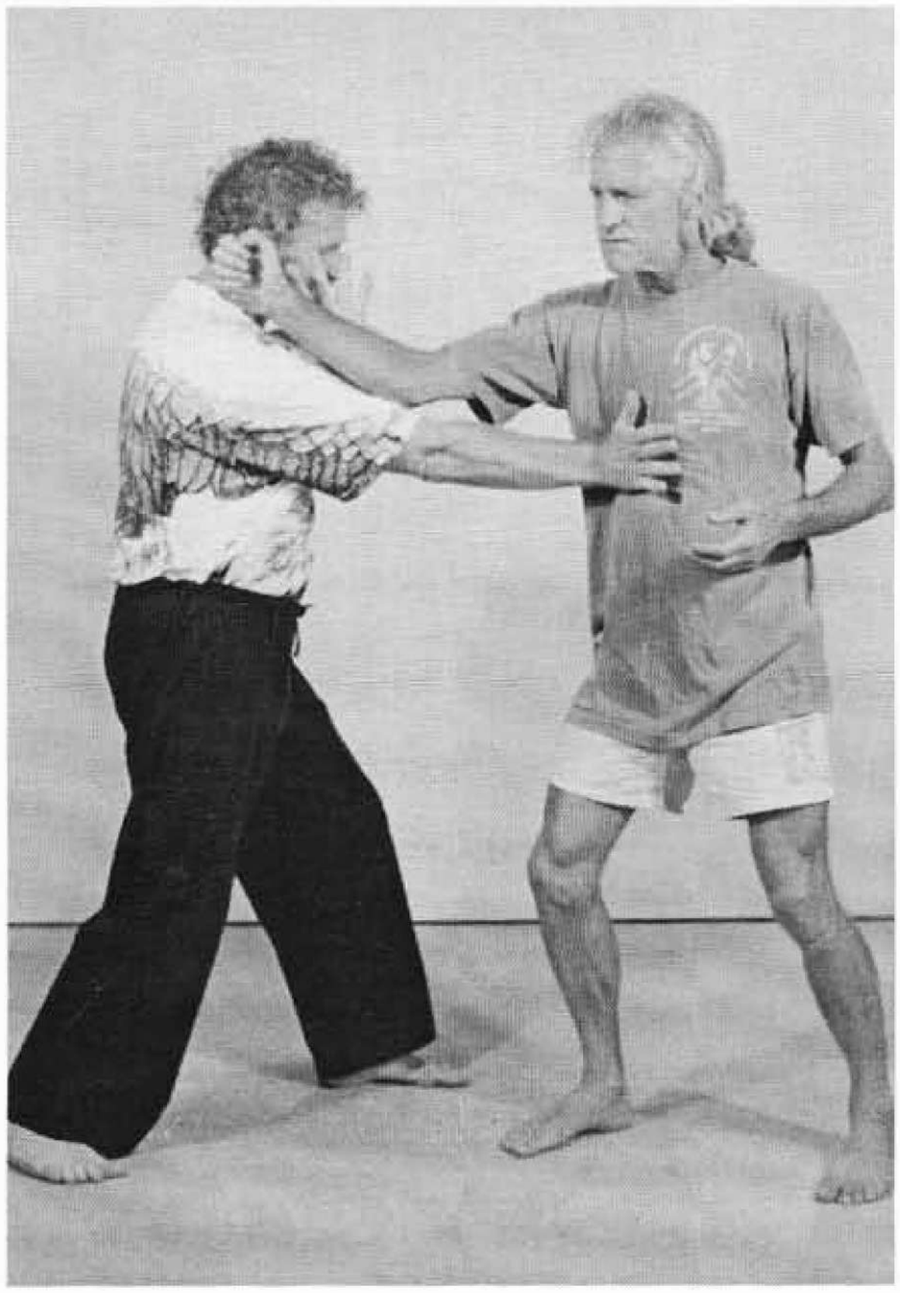


Figure 284

Direction of strike:

Straight in to the ulna about halfway up the forearm.

Damage:

This is the first of the Si dangerous point strikes. It will add much yang qi to the heart and cause great immediate pain. A strike here can cause permanent blindness over a period. There is an immediate buildup of heat in the heart, causing great nausea and fainting. This is not a point to be played around with!

Set-up point:

You could use any of the lower-numbered Si points as the set-up. Points that work really well with Si 7 are Cv 14, Ht 3, Ht 1, St 15, and Gb 14.

Antidote:

Use any of the lower numbered points on the Si meridian to take the heat out of the heart. Or you could use finger pressure to Ht 5.

Healing:

Innervation occurs, superficially, by the branch of the medial antebrachial cutaneous nerve, and deeper, on the radial side, by the posterior interosseous nerve. Irrigation is by the terminal branches of the posterior interosseous artery and vein.

Used for neck rigidity, contracture and twitching of the elbow, pain in the fingers, febrile disease, mental disorders, and neurasthenia.

As a luo connecting point of the small intestine meridian, its traditional functions are to treat joint looseness, atrophy of muscles in the elbow and arm, long, finger-shaped warts, and scabies.

Massage techniques are the same as for Si 5.

Use with Si 3, Gb 20, Gb 21, Bl 10, Th 15, Si 13, Si 14, Si 15, Si 16, Bl 11, Bl 12, Bl 13, Bl 14, Bl 15, Bl 16, Bl 17, and Bl 18 for neck rigidity.

Use with Co 11, Co 10, Th 10, Th 11, Si 8, Co 15, Th 14, Co 4, Si 3, Th 3, and Gb 34 for contracture and twitching of the elbow.

Applications:

A straight right is aimed at you. Step to your left to avoid the attack and at the same time strike to his Si 7 point with your left palm. Your right palm strikes to Gb 14 a split second after this (fig. 284).

SI 8 (SMALL INTESTINE POINT NO. 8)

Chinese name:

Xiaohai (small sea).

Location:

Between the olecranon of the ulna and the medial epicondyle of the humerus. The point is located with the elbow flexed.

Connections:

None.

Direction of strike:

Straight in at the inner elbow.

Damage:

Again, this is a very dangerous point strike. It is an earth and he point. It will cause considerable pain

and qi drainage, and when struck at the same time as Lu 5, it will cause KO or even death. It can also be used as an excellent controlling point using violent finger pressure, which has the ability to immobilize an opponent to the point that he will drop to the ground. There will also be continuing headaches until an acupuncturist has treated this situation. Other points that work really well with Si 8 are neigwan, Si 16, the mind point, and Cv 4. A No. 1 neurological strike also works wonders with this point. (A neurological strike causes the nervous system to shut down briefly. A No. 1 neurological strike is done with the palm to points around the eye and cheekbone.)

Set-up point:

Neigwan struck straight in.

Antidote:

Have an acupuncturist needle any of the lower Si points.

Healing:

Innervation is by the branches of the medial antebrachial cutaneous nerve and the ulna nerve. Irrigation is by the superior and inferior ulna collateral arteries and veins and the ulna recurrent artery and vein.

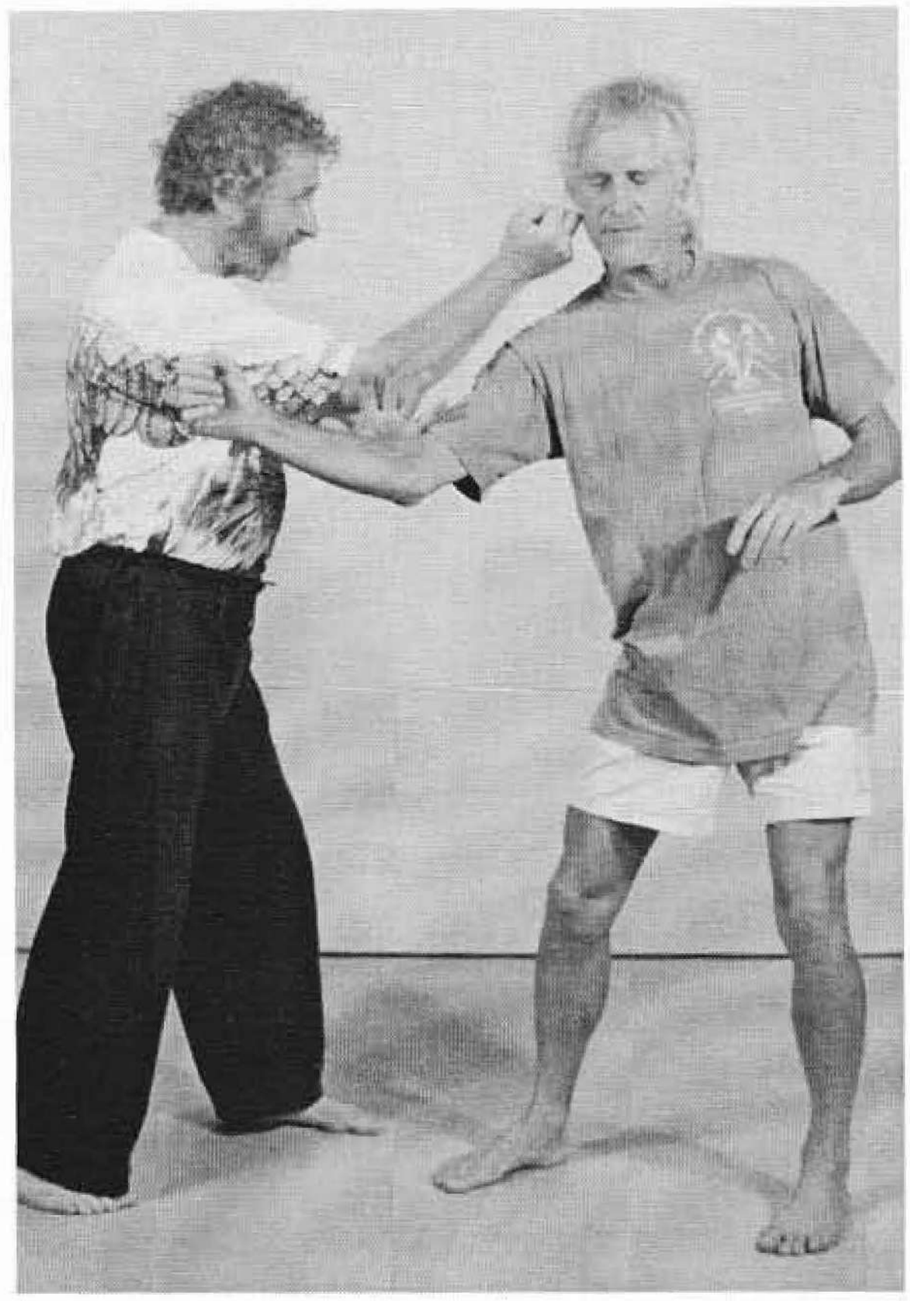


Figure 285

Used for swelling of the cheek, pain in the nape of the neck and the lateroposterior aspect of the shoulder and arm, epilepsy, neuralgia or paralysis of the ulna nerve, psychosis, and chorea (St. Vitus' Dance).

As a he sea (uniting) point and an earth point of the small intestine, its traditional functions include draining excess qi from the small intestine and having an earthing or stabilizing effect (just as the small intestine is responsible for separating pure from impure in both the physical and the mental/emotional aspects of our being).

Massage techniques are the same as for Si 5.

Used with Si 7, Si 1, Si 2, and Si 3 for ulna nerve paralysis. Use with Si 3, Si 9, Si 10, Si 11, Si 12, Si 13, Si 14, Si 15, Si 16, Gb 20, Gb 21, Th 15, Th 16, Bl 11, Bl 12, Bl 13, dingchuan, Bl 17, and Gb 34 for pain in the nape of the neck and the lateroposterior aspect of the shoulder and arm.

Applications:

He attacks with a straight right. You step to your left and strike his Si 8 point at the elbow with your right backfist. Your left palm again strikes to this point as your right palm attacks to the mind point or neurological shutdown point No. 1 (fig. 285).

SI 9 (SMALL INTESTINE POINT NO. 9)

Chinese name:

Jianzhen (shoulder chastity).

Location:

Posterior and inferior to the shoulder joint. When the arm is adducted, the point is 1 cun above the posterior end of the axillary fold, at the lateral margin of the scapula below the infraglenoid tubercle. In the posterior deltoid muscle and, in its deep position, in the teres major muscle.

Connections:

None.

Direction of strike:

Straight in to the lower back of the shoulder just up from the axilla crease.

Damage:

An immediate rush of energy to the head, causing great nausea and fainting, a buildup of stagnant qi at the base of the skull at Gb 20 is also apparent, causing the head to feel as if it is exploding.

Set-up point:

Neigwan struck toward yourself.

Antidote:

Finger pressure at Ht 5 and Lu 8.

Healing:

Innervation is by the branch of the axillary nerve and, deeper, in the superior aspects, the radial nerve. Irrigation is by the circumflex scapular artery and vein.

Used for pain in the scapular region, pain and motor impairment of the hand and arm, disease of the shoulder and shoulder joint, and excessive perspiration in the armpits.

Traditional indications include pain in shoulder blades, pain in the arm that inhibits movement, tinnitus, deafness, toothache, and swelling of the mandible.

To massage, abduct the arm and press then adduct the arm while still holding the press; do rotations clockwise or counterclockwise for xu or shi conditions; do fingertip, loose fist or ulnar side of the hand percussion; use fingertip vibration, or press in slowly with both thumbs and release quickly, pulling the thumbs apart.

Use with Si 10 Th 14, Si 11, Si 12, Si 13, Si 14, Gb 34, Gb 21, Th 15, and Si 3 for shoulder problems that are more on the posterior aspect.

Use with Co 4, St 44, St 5, St 6, St 1, St 2, St 3, Kd 3, Bl 11, and Gb 39 for toothache.

Applications:

He attacks with a right hook. Your left palm attacks neigwan down his inner forearm. A split second later, your right hand will pull his arm around so that his back is facing you. Your left palm now takes over the block as your right palm attacks straight in to Si 9.

SI 10 (SMALL INTESTINE POINT NO. 10)

Chinese name:

Naoshu (scapula's hollow).

Location:

When the arm is adducted, the point is directly above Si 9, in the depression inferior and lateral to the scapular spine. In the deltoid muscle posterior to the glenoid fossa of the scapula and, in its deep position, in the infraspinatus muscle.

Connections:

Yang qiao mai and yang wei mai.

Direction of strike:

Straight in and slightly downward, just below the top of the shoulder and in line with the axilla crease.

Damage:

This strike will do great immediate physical damage due to the accumulation of tendons and muscles at this point. The damage is so great that it can cause KO from the qi drainage and pain. There is also extreme scapular damage.

Set-up point:

Liv 14 struck straight in.

Antidote:

Keep the patient still and see a doctor! It is important not to move the patient too much, especially if Liv 14 has been struck.

Healing:

Innervation is by the posterior cutaneous nerve of the arm, the axillary nerve, and, deeper, the suprascapular nerve. Irrigation is by the posterior circumflex humeral artery and vein and, deeper, the suprascapular artery and vein.

Used for aching and weakness of the shoulder and arm, pain and motor impairment of the hand and arm, disease of the shoulder and joint, and excessive perspiration in the armpits. Traditional indications include chills and fever, inability to raise the arm, and soreness and lack of strength in the arm. This is a shoulder shu point, so its traditional functions are to treat shoulder problems.

To massage, press and hold, do rotations clockwise or counterclockwise for xu or shi conditions, press in slowly with both thumbs and release quickly, pulling the thumbs apart, do percussion with fingertips or loose fist, do fingertip vibration. Also, with some individuals you can lean on this point with your elbow, while others are very sensitive and you need to move deeper slowly. See Si 9 for treatment of shoulder problems, etc.

Use with Ht 6, Ht 7, Lu 7, Bl 13, Bl 14, Bl 15, Bl 17, and Bl 18 for excessive sweating of armpits.

Applications:

He attacks with a straight right, and your left palm parries it back up his outer forearm as you step to your left. Your right one-knuckle punch attacks to Liv 13. Your right palm now moves back under his right arm to grab at the elbow, pulling him around so that your left palm can strike at Si 10.

SI 11 (SMALL INTESTINE POINT NO. 11)

Chinese name:

Tianzong (heaven's ancestor).

Location:

In the infrascapular fossa, at the junction of the upper and middle third of the distance between the lower border of the scapular spine and the inferior angle of the scapula. In the infraspinatus muscle.

Connections:

None.

Direction of strike:

Straight in to the scapular.

Damage:

This point is one of the major point strikes on the back because it is capable of taking out the whole arm and draining much qi. Even a medium strike here, with either a large weapon such as a palm or a small one such as a finger, will cause considerable damage to the back and arm. Immediately, you feel something like an electrical shock running down your arm, and then the paralysis sets in. I received this strike in my early training days, and my left arm was out of action for one week! I was given the antidote and was told that it would be okay in one week, and it was.

Set-up point:

Drain the qi by striking to Lu 5.

Antidote:

Grab the shoulder with both hands and squeeze using medium pressure, then slide both hands—still holding that grip down the outside of the whole arm—10 times. You must also repeat this three times per day for two days (fig. 286).

Healing:

Innervation is by the suprascapular nerve. Irrigation is by the muscular branches of the

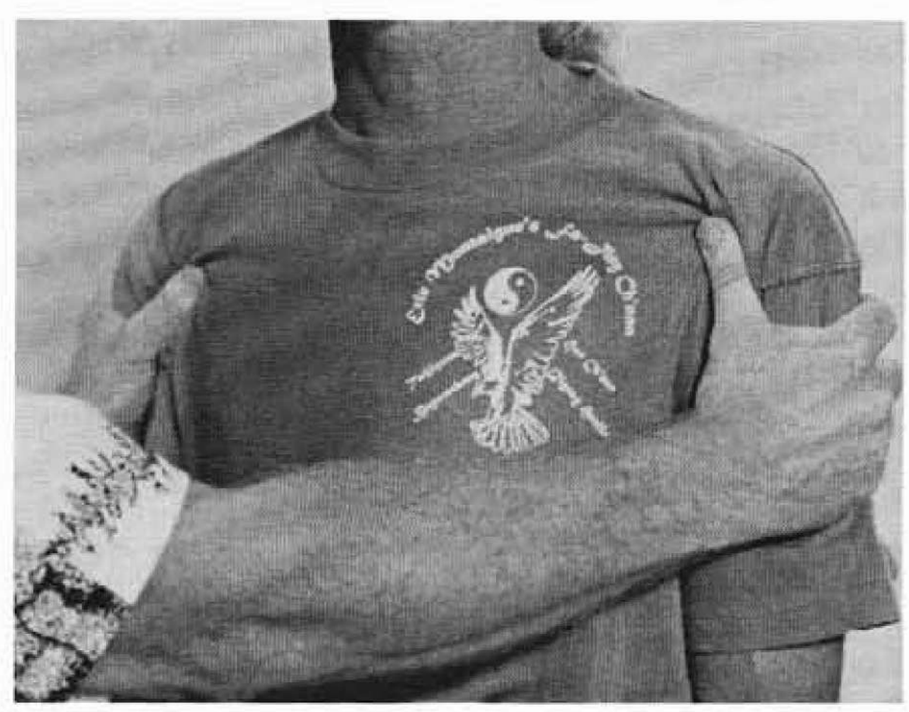


Figure 286

circumflex scapular artery and vein.

Used for pain in the scapular region and in the lateroposterior aspect of the elbow and arm.

Traditional indications include pain in the shoulder and shoulder blade, fullness in the chest and ribs, severe hiccups, and swelling in the cheek and jaw.

Traditional functions are to disperse fullness from the chest, eliminate stagnation of qi from the hypochondrium, and treat the shoulder. Also, the point on the left side is used as an alarm point for heart problems, and the point on the right side can reflect problems with Gb, Co, and Si.

Massage techniques are the same as for Si 5.

Use with Co 15, Th 14, Si 9, Si 10, Si 3, Gb 21, Si 6, Gb 34, Bl 13, Bl 12, Bl 42, Bl 43, Bl 17, and Bl 18 for shoulder inflammation.

Use with Cv 17, Liv 14, Liv 3, Si 18, Si 1, St 15, and Sp 18 for insufficient lactation or mastitis.

Applications:

He attacks with a right hook, and you slam the inside of his right elbow with your right back palm at Lu 5, thus draining qi. This strike could cause KO anyway. Turn your right palm down and hook his right arm over to your right, thus exposing his back. Slam him in Si 11 with your left palm.

SI 12 (SMALL INTESTINE POINT NO. 12)

Chinese name:

Bingfeng (holding wind). (*Bing* means to recieve, *feng* means wind. This point is also translated as "facing or controlling wind.")

Location:

In the center of the suprascapular fossa, directly above Si 11. When the arm is lifted, the point is at the site of the depression.

Connections:

Colon, gallbladder, and triple heater.

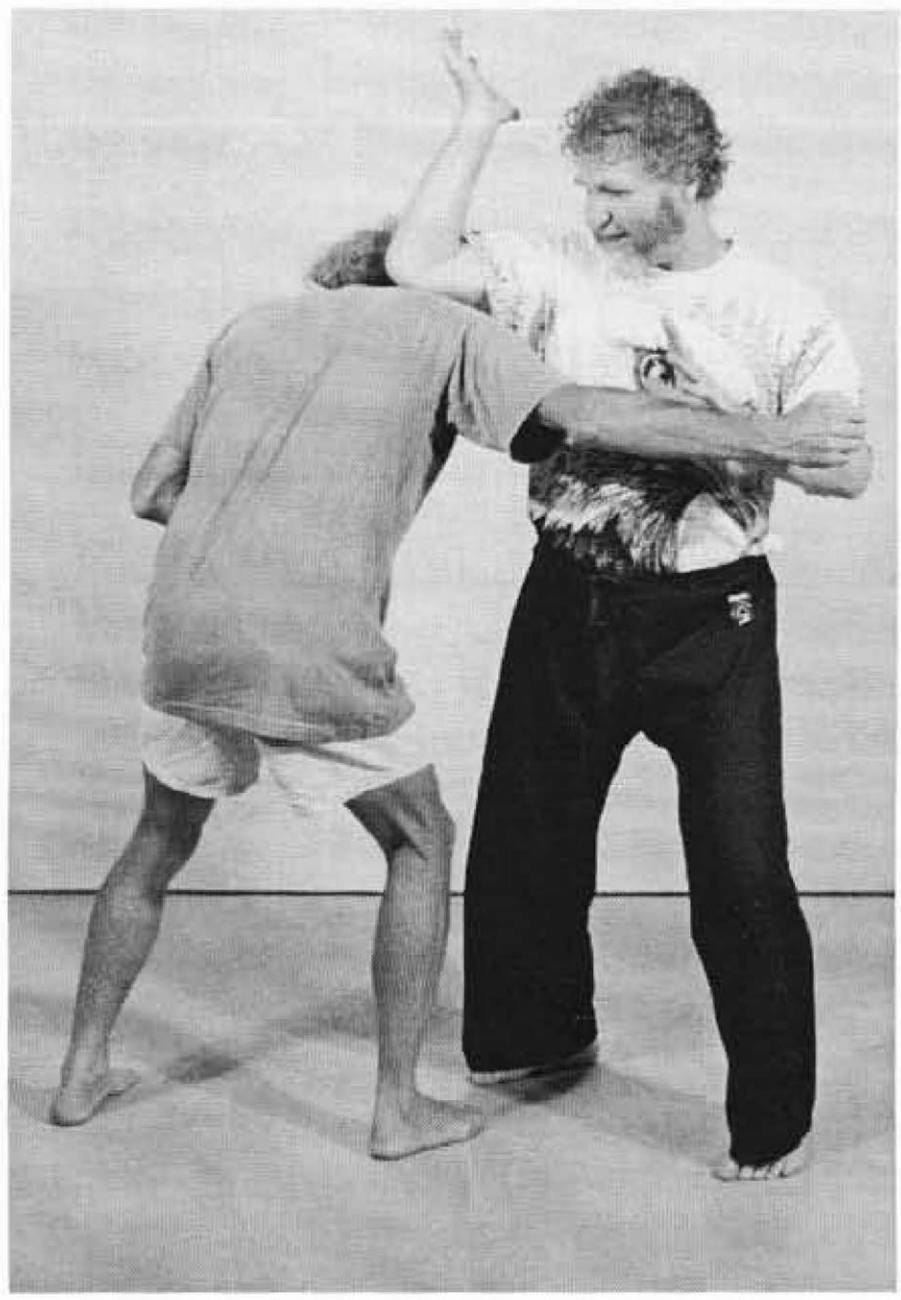


Figure 287

Direction of strike:

Straight down onto the rear of the shoulder.

Damage:

This point, when struck quite hard, will cause an energy rush to the head that can cause KO. There will be a sickly feeling in the upper body for some time afterward. The scapular can be knocked out of position with tendon damage as well.

Set-up point:

Strike Gb 14 upward to enhance the effect of this strike.

Antidote:

If bone or tendon damage is done, it will have to be healed medically. The energy rush can be treated by striking Gb 21 mildly downward and then rubbing out to the end of the shoulders.

Healing:

Innervation is by the lateral suprascapular nerve and the accessory nerve and, deeper, the suprascapular nerve.

Irrigation is by the suprascapular artery and vein.

Used for pain in the scapular region, numbness and aching of the upper extremities, inflammation of the supraspinatus tendon, and soreness and pain

in the back of the shoulder.

Traditional functions are to eliminate wind and treat shoulder problems. This is a meeting point of the triple heater, colon, and gallbladder channels.

Massage techniques are the same as for Si 10.

See Si 9 and Si 8 for shoulder, neck, and upper back treatment.

Use with Gb 21, Gb 20, Co 16, Si 3, Th 15, Si 3, and Gb 34 for inflammation of the supraspinatus tendon.

Applications:

Take his straight right with your left palm sliding up the inside of his right arm as your right palm slams his Gb 14 point upward. Now bring your right elbow down onto the top of his shoulder toward the rear onto Si 12 (fig. 287).

SI 13 (SMALL INTESTINE POINT NO. 13)

Chinese name:

Quyuan (crooked wall).

Location:

On the medial extremity of the suprascapular fossa, around midway between Si 10 and the second thoracic vertebra spinous process. On the superior margin of the spine of the scapula, in the trapezium and supraspinatus muscles.

Connections:

None.

Direction of strike:

Straight down onto the top of the shoulder, closer to the neck than Si 12.

Damage:

This point is more dangerous than Si 12 in that it will drain qi rather than add it. The recipient will feel like something is draining from the whole upper body, which will cause the fight to be over. The lungs can be damaged with this strike, and scapular damage is also imminent with a medium to hard strike.

Set-up point:

The point to use with Si 13 is Cv 14 straight in. It is more of a helping point than a set-up point. The two points work really well together since death will occur when both are struck. It is important to strike Cv 14 before Si 13.

Antidote:

None. Try CPR. This is an extreme death point.

Healing:

Innervation is by the lateral branch of the posterior ramus of the second thoracic nerve and the accessory nerve superficially. Deeper, it is by the muscular branch of the suprascapular nerve.

Irrigation is by the descending branches of the transverse cervical artery and vein and, deeper, the muscular branch of the suprascapular artery and vein.

Used for pain and stiffness of the scapular region, inflammation of the tendon of the supraspinatus muscle, disease of the soft tissue of the shoulder joint, and neck stiffness with inability to turn the head to one or both sides.

Traditional indications include pain in the shoulder and shoulder blade, muscle spasms, and blockage conditions.

Traditional functions are to eliminate wind and relax the tendons and muscles.

To massage, press and hold the point; do rotations clockwise or counterclockwise for xu or shi conditions; press in slowly with both thumbs and release quickly, pulling the thumbs apart; lean on the point with the elbow; rub laterally across the point; use fingertip or loose-fist-type percussion; and do fingertip vibration.

Use with Gb 20, Bl 10, Gb 21, Th 15, Si 14, Si 15, Si 12, Si 11, Si 10, Si 9, Si 3, Co 4, Bl 60, and

Gb 34 for shoulder problems and neck rigidity.

Use with the above formula plus Bl 12, Bl 13, Bl 14, Bl 43, Bl 17, Bl 18, Bl 19, Bl 20, Bl 25, Pc 6, Cv 17, Liv 3, and Ht 7 for stress-related neck and shoulder pain or stiffness.

Applications:

Avoid his attack and slam him into Cv 14, followed by an elbow down onto Si 13.

SI 14 (SMALL INTESTINE POINT NO. 14)

Chinese name:

Jianwaishu (shoulder's outer hollow).

Location:

3 cun lateral to the lower border of the spinus process of the first thoracic vertebra, on the vertical line drawn upward from the medial border of the scapula.

Connections:

None.

Direction of strike:

Straight down onto the shoulder.

Damage:

This point strike will put a shock into the upper body, causing the lungs and heart to falter. Extreme nausea with vomiting will result. Later it will even cause death if untreated, especially if used with Cv 14.

Set-up point:

Again, use Cv 14 as a helping point. These two also work very well together.

Antidote:

None.

Healing:

Innervation is by the medial cutaneous branches of the posterior rami of the first and second thoracic nerves and the accessory nerve, superficially. Deeper, it is by the dorsal scapular nerve. Irrigation is by transverse cervical artery and vein.

Used for stiffness and pain of the upper back and shoulder regions and neck rigidity.

Traditional indications include shoulder problems and neck stiffness.

Traditional functions include eliminating wind, clearing through the channels, and relaxing the tendons and muscles.

Massage techniques are the same as for Si 13.

See Si 13 for treatment of shoulder and neck problems.

Use with Gb 20, Gb 21, Th 15, Si 13, Bl 12, Bl 13, Bl 43, Bl 17, Bl 18, Bl 20, Bl 23, Kd 7, Cv 22, Cv 17, Lu 1, Lu 7, Liv 3, Gb 34, Liv 14, and dingchuan for asthma or bronchitis.

Applications:

The same as for Si 13.

SI 15 (SMALL INTESTINE POINT NO. 15)

Chinese name:

Jianzhongshu (mid-shoulder hollow).

Location:

2 cun lateral to the lower border of the spinous process of the seventh cervical vertebra (Gv 14). At the end of the transverse process of the first thoracic vertebra. Superficially in the trapezium and, in its deep position, in the levator scapulae muscle.

Connections:

None.

Direction of strike:

Straight down onto the top of the shoulder.

Damage:

A severe qi drainage from the upper body will result, causing KO if the strike is quite hard. Nervous damage can occur as well since it is quite close to the backbone at the neck. There will also be nausea.

Set-up point:

A very hard slam onto the inner wrist will set up this point. This targets no particular point; however, a whole bunch of points will be struck here, which will drain qi.

Antidote:

Place your palm onto the top of the head and press downward.

Healing:

Innervation and irrigation are the same as for Si 14.

Used for bronchitis, asthma, bronchiectasis, stiff neck, pain in the upper back and shoulder, and cough.

Traditional indications include coughing, spitting blood, blurred vision, fever and chills, and consumption in infants from drinking milk.

Traditional functions are eliminating wind and clearing the channels.

Massage techniques are the same as for Si 13.

Use with Gv 12, Gv 9, Lu 6, Bl 13, Bl 12, Cv 17, Lu 7, Co 4, Lu 1, Liv 3, Liv 13, Bl 17, Bl 18, and Bl 19 for bronchiectasis.

Add to the formula for asthma, cough, and bronchitis listed under Si 14.

See Si 13 for treatment of shoulder and neck stiffness and pain.

Applications:

Slam his right wrist (or left) with your right palm on the inside of his wrist. Hook your right palm over his wrist immediately and swing his arm to your right, thus exposing his back. Now strike straight down onto Si 15 with your right knife-edge strike.

SI 16 (SMALL INTESTINE POINT NO. 16)

Chinese name:

Tianchuang (heaven's window).

Location:

In the lateral aspect of the neck, on the posterior border of the sternocleidomastoid muscle, posterior to Co 18, 3.5 cun lateral to the laryngeal prominence.

Connections:

None.

Direction of strike:

Straight in to the neck from the side.

Damage:

This is a "window of the sky point." It is one of the more deadly Si points, causing instant death when struck hard. Medium strikes will cause emotional imbalance and heart problems. A strange side effect of this strike is that the recipient will laugh when struck! This is because of the imbalance of emotions when the shen is disconnected from the body. This is a point that is not to be played around with! If you are one of those people who go around knocking people out in demonstration, *do not use this point*—as death can occur really easily.

Set-up point:

Lu 8, Ht 5, and Lu 5.

Antidote:

None. However, if the strike has been medium and emotional imbalance is happening, see a Chinese doctor to have the heart reunited with the shen.

Healing:

Innervation is by the cutaneous cervical nerve and the emerging portion of the great auricular nerve.

Irrigation is by the ascending cervical artery.

Used for deafness, tinnitus, sore throat, stiffness and pain in the neck, and goiter.

To massage, press and hold; do rotations clockwise or counterclockwise for xu or shi conditions; press in slowly with both thumbs and release quickly, pulling the thumbs apart; rub laterally across the point; or do fingertip percussion with care.

Use with Gb 3, St 7, St 2, Gv 20, Gb 20, Gv 22, Th 17, Th 21, Gb 4, Co 5, Th 1, Th 2, Th 3, Si 19, and Gb 3 for tinnitus and deafness.

Use with Gv 14, Gb 20, Gv 20, Cv 15, Cv 13, Pc 5, Pc 6, Th 6, St 40, Ht 5, Ht 7, Sp 6, sishencong, Liv 3, Sp 3, Cv 12, St 36, Kd 1, Kd 3, Gb 21, and yintang for psychosis with hallucinations.

Applications:

Slam his right hook with your both knife edges at the wrist (Lu 8 or Ht 5, or both) and at Lu 5 at the elbow. This will more than likely cause KO. Now, bring your left knife edge back to strike straight into Si 17 under the tip of the jaw while your left knife edge strikes to Si 16. You will want to be really serious about this application because instant death will occur!

SI 17 (SMALL INTESTINE POINT NO. 17)

Chinese name:

Tianrong (heaven's contents).

Location:

Posterior to the angle of the mandible, in the depression on the anterior border of the sternocleidomastoid muscle and the inferior margin in the posterior belly of the digastric muscle.

Connections:

None.

Direction of strike:

Up and into the angle of the jaw.

Damage:

Again, this is one of the more deadly points. It is very close to the vagus nerve and will cause **KO** quite easily. It is also right over the external carotid artery, which will cause a "blood KO." This is a "window of the sky point"; when it is struck, the head feels like it will explode, especially if the strike is a lock around the neck using the knife edge of the palm. This is a well known neck locking point in jujutsu and has been demonstrated a number of times in public. Just a quick blow up under the angle of the jaw, and it's a KO.

Set-up point:

Si 16 works really well with Si 17 and can be struck just prior to a neck lock.

Antidote:

Gb 20 squeezed up and into the skull.

Healing:

Innervation occurs through the anterior branch of the great auricular nerve and the cervical branch of the facial nerve. Deeper, it is by the superior cervical ganglion of the sympathetic trunk. Irrigation is by the external jugular vein anteriorly. Deeper, it is by the internal carotid artery and the internal jugular vein.

Used for deafness, tinnitus, tonsillitis, pharyngitis, distention and soreness of the neck, asthma, foreign body lodged in the throat, sensation in the throat as if there were something lodged in it, and swelling of the neck and cheek.

Traditional indications include deafness, tinnitus, plumb pit throat, swelling and soreness in the neck, and severe coughing.

As a point of intersection with the gallbladder channel, its traditional functions are to spread the qi of the wood and activate the jing luo.

Massage techniques include pressing and holding the point; rotating clockwise or counterclockwise for xu or shi conditions; pressing in slowly with both thumbs and releasing quickly,

pulling the thumbs apart; doing light, single fingertip tapping on the point; or running a finger down the anterior edge of the sternocleidomastoid muscle to the medial end of the clavicle.

Use with Co 4, Co 11, Lu 5, Lu 7, Lu 11, Lu 8, St 44, Gb 20 Bl 10, Bl 12, St 9, Liv 2, Liv 3, and Sp 10 for tonsillitis or pharyngitis.

Use with Gb 20, Gb 14, St 4, St 2, Co 4, Gv 26, taiyang, St 36, St 44, St 4, Co 19, Th 17, Bl 2, Th 23, Gb 7, St 5, St 6, Gb 1, Gv 20, Gb 34, Gv 20, and Gb 21 for facial paralysis.

Use with Liv 3, Pc 6, Liv 14, Bl 18, Bl 17, Gb 21, Gb 20, Cv 12, Co 4, Ht 7, Liv 1, Sp 6, Co 11, Gb 34, Cv 22, Lu 11, and Kd 6 for sensation of obstruction in the throat with difficulty in swallowing.

Applications:

He attacks with a right hook. Slam his neigwan point on his right arm with your right knife edge as your left palm takes over this block. Your right palm now attacks to Si 16. Your right palm grabs him around his neck and pulls him into a head lock as the left palm strikes up into the jaw angle at Si 17.

SI 18 (SMALL INTESTINE POINT NO. 18)

Chinese name:

Quanliao (cheek seam). (*Quan* means zygoma, and *liao* means foramen.)

Location:

Directly below the outer canthus, in the depression on the lower border of the zygoma, level with Co 20.

Connections:

Triple heater and gallbladder.

Direction of strike:

Angled at about 45 degrees into the cheekbone from the front.

Damage:

Using a smaller weapon such as a one-knuckle punch, this strike will cause KO. It shocks the brain and causes a rush of qi up the back of the neck to the brain, causing confusion and, hence, the KO.

Set-up point:

Use Lu 5 for the set-up.

Antidote:

Place the index fingers of both hands over both Gb 14 points and apply medium pressure straight in to the forehead.

Healing:

Innervation is by the facial and the infraorbital nerves. Irrigation is by the branches of the transverse facial artery and vein.

Used for facial paralysis, twitching of the eyelids, toothache, yellowish sclera, trigeminal neuralgia, and spasm of the facial muscles.

Traditional indications are to relieve pain in the face.

Traditional functions are to dispel wind and act as a sedative to stop pain.

To massage, press and hold; do rotations clockwise or counterclockwise for xu or shi conditions; press in slowly with both thumbs and release quickly, pulling the thumbs apart; apply light fingertip percussion or vibration; or you can run from Bl 1 down the side of the nose to Co 20, then out along the inferior edge of the zygoma through Si 18 and out to Gb 2, down through Si 17, and down the anterior edge of the sternocleidomastoid muscle to the clavicular notch.

Use with formula listed under Si 17 for facial paralysis.

Use the run-down from Bl 1 to the clavicular notch plus Si 19, Co 4, Th 2, Th 3, Th 4, Th 5, Th 6, Th 7, Th 8, Th 9, Th 22, Th 20, Th 21, Kd 3, St 40, and Si 3 for deafness or tinnitus.

Use with St 5, St 6, St 44, Co 4, St 2, St 3, and Co 20 for toothache.

Use with Co 4, Liv 3, St 5, St 6, St 3, St 7, St 8, taiyang, St 36, Gb 34, Gb 20, Gv 20, and Gb 3 for spasm of facial muscles.

Applications:

Slam his right arm at Lu 5. Your left palm now takes over this block as your right fist does a penetration punch into his left Si 18.

SI 19 (SMALL INTESTINE POINT NO. 19)

Chinese name:

Tinggong (palace of hearing).

Location:

Between the tragus and the mandibular joint, where a depression is formed when the mouth is slightly open. At the anterior of the middle of the tragus and the posterior margin of the condyle of the mandible.

Connections:

Gallbladder and triple heater via internal pathways within the ear.

Direction of strike:

Straight in from the side of the face.

Damage:

This point should do great damage, and I have been told that it causes the brain to shut down the body. However, it has been my experience that this point does nothing at all. (Of course, if one were to hit it with a hammer, who knows?) But this point seems to do nothing more than give someone a headache and tinnitus! It is well protected by bone here. A little lower, it's a different story, though. Gb 2 is a very dangerous point.

Set-up point:

None.

Antidote:

None, take an aspirin!

Healing:

Irrigation is by the branch of the facial nerve and the auriculotemporal nerve. Irrigation is by the auricular branches of the superficial temporal artery and vein. Used for deafness, tinnitus, otorrhea, deaf-mutism, otitis media, and inflammation of the external ear canal.

Traditional indications include seizures and insanity, tinnitus, deafness, pus in the ear, toothache, and pain in the chest and abdomen.

Traditional functions are to remove obstructions from the jing luo and soothe the ears.

To massage, press and hold; do rotations clockwise or counterclockwise for xu or shi conditions; press in slowly with both thumbs and release quickly, pulling the thumbs apart; and run the forefinger from Th 21 down the edge of the jaw to Si 17, then move down the anterior edge of the sternocleidomastoid muscle to the sternal notch.

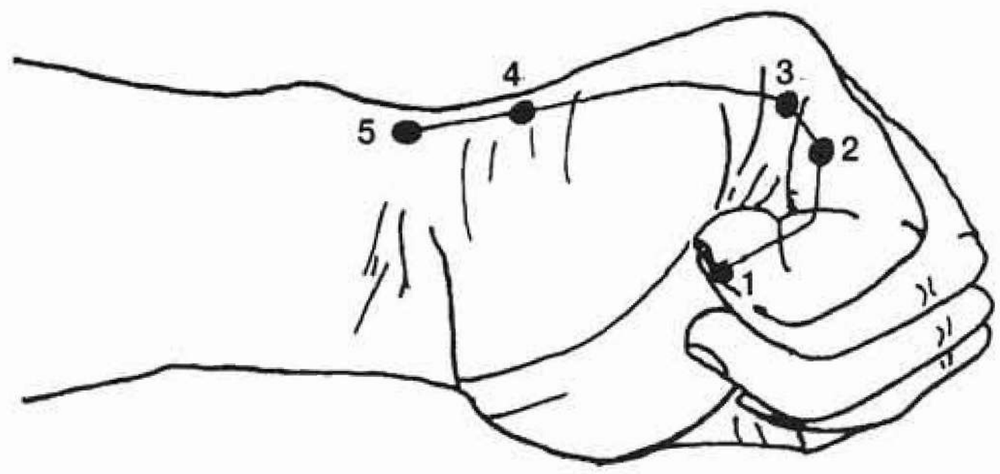
Use with Th 21, Gb 2, Th 4, Si 3, Th 17, Gv 15, Th 5, Th 3, Gb 20, Liv 2, Liv 3, St 40, Kd 3, Bl 23, St 7, Si 17, Gb 21, Gv 20, Bl 8, and Bl 10 for deafness or tinnitus.

Add to the formula listed under Si 18 for toothache.

Use with Liv 3, St 5, St 6, St 8, Gb 34, Co 4, and Gb 21 for lockjaw.

Applications:

The same as for Gb 2.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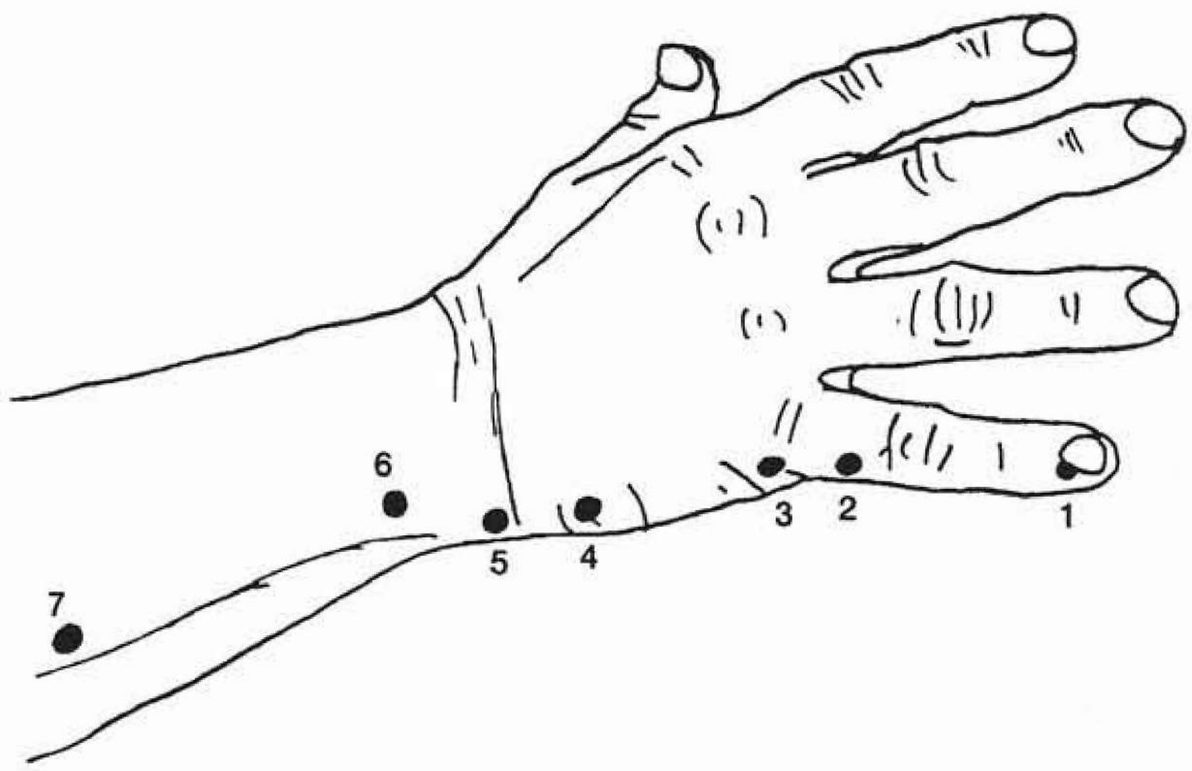
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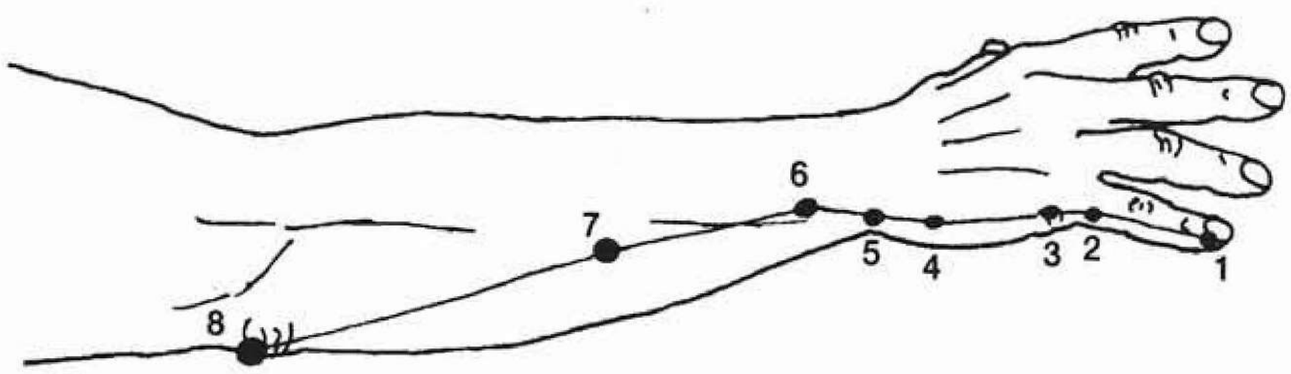
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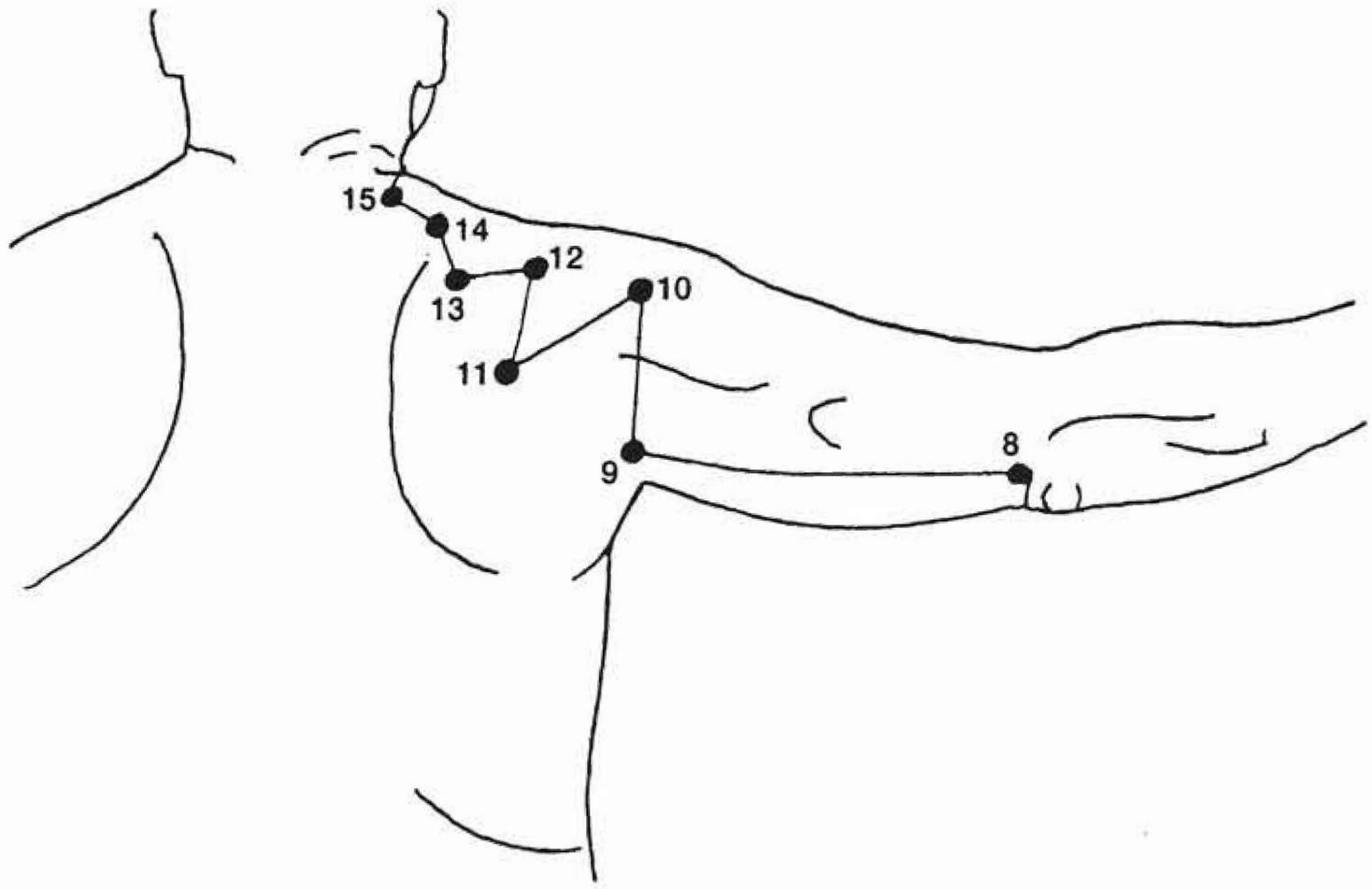
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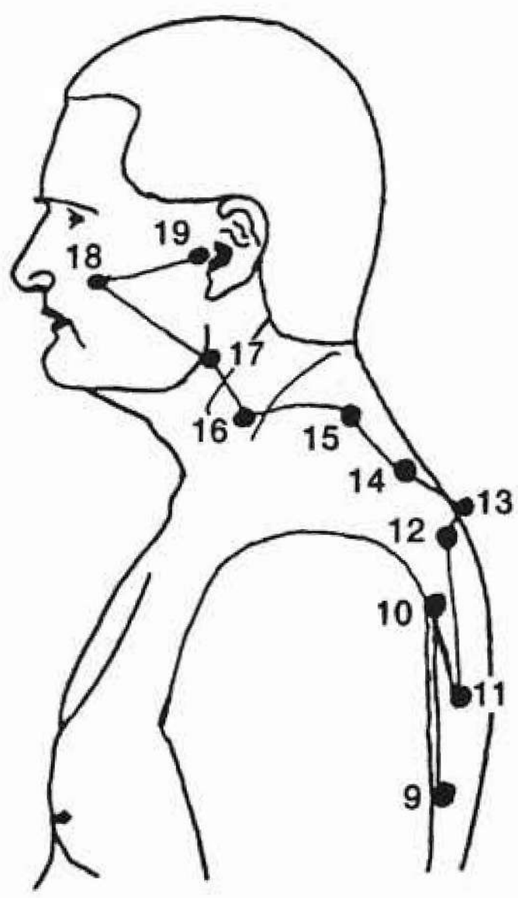
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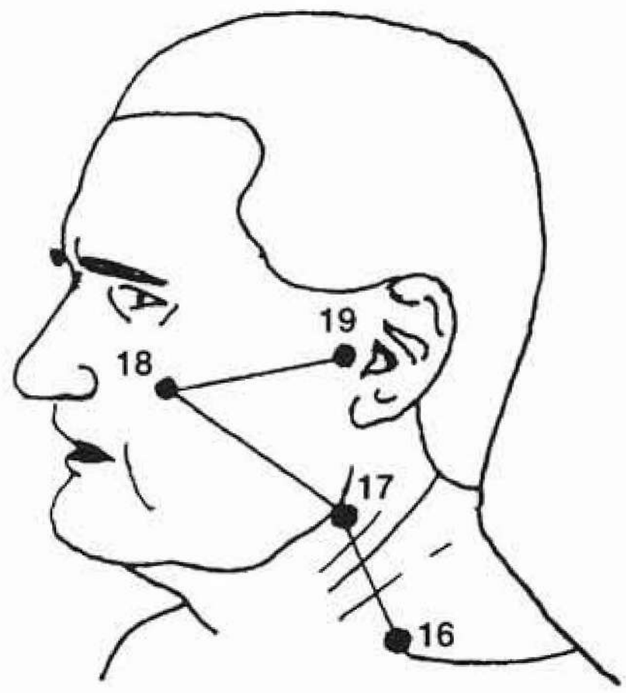
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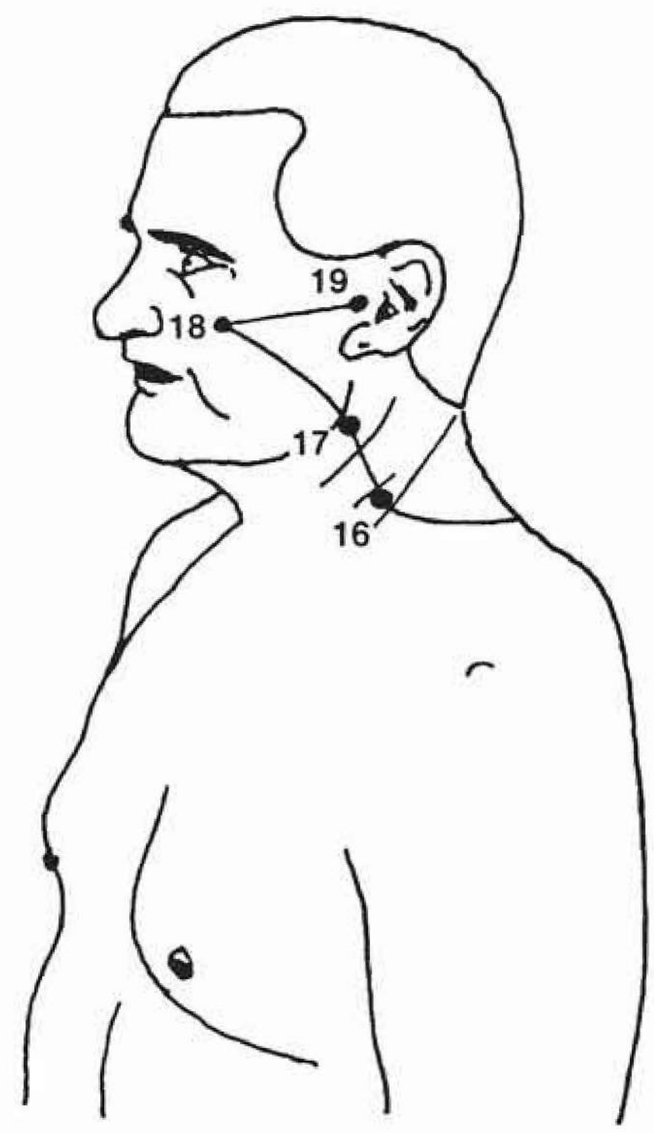
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Chapter 9

The Lung Meridian

THE TCM VIEW

The lung is a yin organ, and its opposite yang organ is the colon (large intestine). Its role in the body society is the "controller of qi." Its Chinese element is metal. It has a descending and dispersing function and regulates the water passages. It dominates the skin and hair and opens into the nose.

Respiration and the domination of qi are the most important functions of the lungs. Constant inhalation of clean qi and exhalation of dirty qi are vital for normal oxygenation of tissue.

The lungs play an important part in the refinement of qi and the spreading of that refined qi all over the body. The essence of food and liquid from the spleen (*gu* qi) flows up into the chest and combines with clean inhaled qi, or respiration. In the lungs these combine to form zhong qi (qi of the chest), so the thorax is often called "the sea of qi." Zhong qi via the lungs provides nourishment for the whole body. So there is a saying in Chinese medicine: "All qi belongs to the lung." When the lungs are strong, the voice is strong and affirmative, but with weak lungs the voice is soft and unassertive.

The lungs also control "the 100 vessels" (blood vessels). The heart pushes the blood, but it must rely upon the qi from the lungs to perform this job. So the blood and the qi are inseparable; where the qi goes, the blood follows.

The lungs are the uppermost and outermost (the skin) organ in the body. Due to the latter, they are the first organ to be invaded by external pathogenic factors. Because the lungs are the highest organ in the body, their qi must flow downward. They also send fluids downward to the kidneys and bladder for excretion or to be recycled. When the lung qi does not flow down, it causes congestion in the chest with breathlessness, asthma, etc. If the lungs fail to send down fluids, this could contribute to edema, mainly in the face and arms.

The dispersing function of the lungs is the first to be affected by a pathological condition. This function has two aspects. The first is concerned with the wei qi (that qi that flows around the outside of the body, protecting it from external pathogenic attack. The lungs scatter the wei qi all over the body, especially to the skin, so the lungs are connected to the skin in this way. When the body is attacked by "wind/cold," most of the heavy cold symptoms (e.g., headaches, blocked sinuses, sneezing) are caused by the fact that the presence of wind/cold in the skin interferes with the lungs' dispersing function. Because the qi cannot be dispersed, the whole body feels blocked. The second aspect involves bodily fluids. After separation, the spleen sends the fluids to the lungs, which distribute them throughout the whole body. The

lungs normally vaporize bodily fluids, which are then distributed all over the skin in the form of fine mist. This is the process of sweating. If this function is impaired and there is a shi (excess) condition, then the pores will be blocked with no sweating. And if there is a xu (deficient) condition, then there will be too much sweating.

The skin and hair depend upon the lung for their nourishment. So if the function of dispersing and regulating water passages is impaired, the skin will be flaccid, rough, and dry. The hair (body hair included) will be withered. The opposite will occur when this function is strong.

The sense of smell is controlled by the lungs and also the spleen. If the lungs are not good, the sense of smell will be weak and the nose will be blocked. If the lungs are affected by much heat, the nose will be red and the nostrils will flare.

LU 1 (LUNG POINT NO. 1)

Chinese name:

Zongfu (central residence).

Location:

Zhong means middle and *fu* means place; this refers to the middle jiao, where the lung channel starts. The qi of the spleen and stomach are gathered into the Lu meridian at this point. The point is below the acromial extremity of the clavicle, 1 cun directly below Lu 2, 6 cun lateral to the Cv meridian, in the first intercostal space. In the pectoralis major and minor muscles and, in its deep position, in the internal and external intercostal muscles.

Connections:

This is a point of intersection with the spleen channel. It receives internal meridian from Sp 21. The deep pathway of the lung meridian passes through Cv 9, Cv 12, and Cv 13, then to Lu 1.

Direction of strike:

Straight in and slightly upward toward the clavicle.

Damage:

The lung points all do great damage. Lu 1 must be struck with a smaller weapon, such as a one-knuckle punch. There will be great qi drainage and thus great local pain, which will slowly spread over the whole chest area due to this point's connection to Sp 21. A strike here will hinder the progress of gu qi, that which is made from food and liquid. So apart from the immediate effect of extreme pain in the whole chest area, there is the long-term effect on the gu qi. As a result, although the recipient is taking food, the qi from that food is going nowhere, and so health and life-style are slowly diminished.

Set-up point:

Lu 5.

Antidote:

Treat Lu 1 on the opposite side of the body with finger pressure or have an acupuncturist needle 3 fen laterally. Careful here, though: bones could also be broken.

Healing:

Innervation is by the intermediate supraclavicular nerve, the branches of the anterior thoracic nerve, and the lateral cutaneous branch of the first intercostal nerve. Irrigation, on its superiolateral side, is by the axillary artery and vein and the thoracoacromial artery and vein.

Used for cough; asthma; pain in the chest, shoulder, and back; fullness in the chest; bronchitis; pneumonia; and pulmonary tuberculosis.

Traditional indications include coughing and wheezing, coughing blood and pus, throat blockage, congested nose, excessive sweating, and tumors and nodular growths on the neck.

As a mu (alarm) point of the lungs, this point's traditional functions include diagnosis, as well as treatment, of lung pathologies and dispersal of fullness of the chest.

Massage techniques include pressing and holding the point; rotating clockwise or

Figure 288

counterclockwise for xu or shi conditions; pressing in slowly with both thumbs and releasing quickly, pulling the thumbs apart; and doing fingertip percussion or vibration.

Use with Lu 7, Lu 5, Lu 6, Bl 13, Bl 17, Bl 43, Bl 12, Bl 18, dingchuan, Bl 23, Kd 7, Liv 14, Cv 17, and St 40 for bronchitis or asthma.

Use with Co 4, Co 11, Lu 5, Lu 6, Lu 9, Lu 10, Sp 10, Bl 17, St 36, and Liv 3 for coughing up blood.

Use with Co 15, jianneling, naoshang, Gb 21, Th 14, Co 4, Co 11, and Co 14 for shoulder pain.

Use with Pc 6, Cv 17, Liv 3, Liv 14, Bl 43, Bl 17, Bl 18, and Bl 12 for fullness in the chest.

Applications:

Attack his hook right with your right back palm at Lu 5. Immediately rebound, turning your waist to your right, and come back with the tip of your right elbow to Lu 1 slightly upward (fig. 288).

LU 2 (LUNG POINT NO. 2)

Chinese name:

Yunmen (cloud's door).

Location:

In the depression below the acromial extremity of the clavicle, between the pectoralis major and the deltoid muscles, 6 cun lateral to the Cv channel.

Connections:

Colon.

Direction of strike:

There are two directions for this point: either upward into the clavicle or down on top of the clavicle.

Damage:

When this point is struck upward into the clavicle, it produces a devastating effect upon the qi system of the whole body. It causes great internal damage with little external appearance. The pain is tremendous, and the strike will cause a KO or even death through qi drainage.

When the point is struck from the top above the clavicle, the collarbone will be broken, along with the qi drainage and even more pain! However, because the collarbone is able to take some of the pressure from this strike, even though it breaks, the likelihood of death is lessened. The downward strike will stop a confrontation really fast, though.

Set-up point:

Lu 5 along with *xishang*, a new point located 8 cun above the transverse crease of the wrist on the inner forearm about 2 cun down from the elbow crease. This point strike will affect the heart and cause power loss. Combine it with Lu 5 and you have one of the better set-up combinations. You must, however, slice down from Lu 5 down the forearm, covering xishang.

Antidote:

Apply only light finger pressure to the opposite xishang and Lu 5 while holding (placing a finger over) Lu 2 on the opposite side.

Healing:

Innervation is by the intermediate and lateral supraclavicular nerve, the branches of the anterior thoracic nerve, and the lateral cord of the brachial plexus. Irrigation is by the cephalic vein, the thoracoacromial artery and vein, and inferior to the axillary artery.

Used for cough; asthma; pain in the chest, shoulder, and arm and fullness or pain in the chest; and perifocal inflammation of the shoulder.

Traditional functions: *Yun* refers to the qi of the lungs. This point is on the upper part of the chest and serves as a door for qi of the lungs. This point is also used for paralysis of the arm as a result of CVA.

Massage techniques are the same as for Lu 1.

Use with the formulas for asthma, chest fullness and pain, and shoulder pain listed under Lu 1.

Use with Co 15, Co 14, Co 11, Pc 3, *bizhong* (an extra point), Pc 6, *baxie* (extra), Co 4, Pc 8, Gb 34, Th 10, St 40, Liv 3, Co 10, Th 4, Si 5, and Pc 7 for paralysis of the upper extremities and pain or restriction of the arms.

Applications:

Slam his right hook with your left knife edge at Lu 5 and slice down over xishang as your right one-knuckle punch attacks straight up and into Lu 2. Or you could use a hammer fist down onto Lu 2 via the clavicle.

LU 3 (LUNG POINT NO. 3)

Chinese name:

Tianfu (heaven's residence).

Location:

On the medial aspect of the upper arm, 3 cun below the end of the axillary fold, on the radial side of the biceps brachii, 6 cun above Lu 5.

Connections:

None.

Direction of strike:

Straight in just below the biceps on the outside of the upper arm where the skin just turns from white to a darker color.

Damage:

Immediately there is an effect like an electrical shock that goes up and down the arm causing momentary or long-lasting paralysis of the arm. Being a "window of the sky" point, it will also totally upset the balance between heaven and earth, or head and body, causing great emotional problems that will only get worse if left untreated. Emotionally caused problems such as confusion and loss of memory will occur at a later stage. This strike will also give an extreme case of instant vertigo!

At a healing level, this point is a really good one for nosebleed, using mild finger pressure over the point on both arms.

Set-up point:

Lu 5 and/or xishang. Same as for Lu 2.

Antidote:

Either use finger pressure gently on the opposite Lu 3 or have an acupuncturist take a look at the problem. Also press Lu 2 (the "happy point"). Or you could squeeze the tip of the thumb while pressing in on Lu 9.

Healing:

Innervation is by the lateral brachial cutaneous nerve at the place where the musculocutaneous nerve passes through. Irrigation is by the cephalic vein and the muscular branches of the brachial artery and vein.

Used for asthma, epistaxis, pain in the medial aspect of the arm, and bronchitis.

Massage techniques are the same as for Lu 1. Use with Gb 20, Bl 17, Sp 10, Sp 1, Gv 14, Gv 20, Sp 3, and Lu 4 for epistaxis. Use with asthma and bronchitis treatment listed under Lu 1.

Use with Co 15, Co 14, Co 12, Co 11, Lu 4, Lu 5, Lu 6, Co 4, and Gb 34 for pain in the medial aspect of the arm.

Applications:

You could simply slam his inner lower forearm to set up this strike, then bring your left hammer fist to strike straight in to Lu 3. Or you could take his right straight with your left palm glancing upward on the outer forearm while your right hammer fist attacks to Lu 3.

LU 4 (LUNG POINT NO. 4)

Chinese name:

Xiabai (gallantry).

Location:

Xia means to press from both sides, and *bai* means white. When both arms are hanging freely, this point is precisely on both sides of the lungs, on the medial aspect of the upper arm, 1 cun below Lu 3, on the radial side of the biceps brachii.

Connections:

None.

Direction of strike:

Straight in to the upper arm just below Lu 3.

Damage:

This point immediately does the same as Lu 3, only the local pain and electrical shock is a little worse. This is also a great nerve strike that can cause the brain to shut down the body, not knowing what has happened. Emotional problems will also occur later, but they won't be as severe as with Lu 3.

Set-up point:

Lu 5.

Antidote:

If the nerve damage has occurred, see a doctor. Or use Gb 20 if neurological shutdown has occurred.

Healing:

Innervation is by the lateral antebrachial cutaneous nerve and the radial nerve. Irrigation is by the branches of the radial recurrent artery and vein, the cephalic vein.

Used for asthma, epistaxis, pain in the medial aspect of the arm, bronchitis, cough, and fullness in the chest. Use with Cv 13, Cv 12, St 21, St 25, Pc 6, St 36, Liv 4, Liv 3, St 44, and St 45 for acute perforation of gastric and duodenal ulcer with chest pain, dry heaves, and irritability. Use with Co 4, Co 11, Co 20, yintang, Gb 20, Sp 10, Lu 11, and Lu 3 for nosebleed.

See Lu 3 for treatment of pain in the medial aspect of the arm.

Applications:

Same as for Lu 3.

LU 5 (LUNG POINT NO. 5)

Chinese name:

Chize (cubit marsh).

Location:

Chi means ruler or ulna, and *ze* means marsh. The *chi* part of the name refers to the ulnar aspect (from the wrist to the elbow). The point is in the depression of the elbow fossa at the ulna aspect. The qi of the channel is infused here, like water flowing into a marsh. On the cubital crease, on the radial side of the tendon of the biceps brachii. The point is located with the elbow slightly flexed, in the origin of the brachioradialis muscle.

Connections:

None.

Direction of strike:

Straight down into the inside of the elbow joint.

Damage:

This point can cause great damage to the whole system. It can cause KO when struck, for instance, with a back palm and using a "dead arm" (where the arm is totally loose with no tension at all and is thrown at the target making use of the heaviness of the arm itself). It can be used (as I have already mentioned several times) as a set-up point, or it can be used all by itself as a devastating strike. The whole upper body is put out of balance, both physically and qi-wise. A strong strike can also cause brain damage. Because this is a he point, it will take qi away from the lungs when struck rather than used for healing. And as the lungs are part of the power system of the body, you will lose power instantly.

Set-up point:

None. This is usually a first-strike point.

Antidote:

Needle the opposite Lu 5, as this will bring qi into the lungs. Even finger pressure will work to a degree. Go straight in and the patient will feel an immediate energy surge in the lungs and thus a regaining of power.

Healing:

Innervation is by the lateral antebrachial cutaneous nerve and the radial nerve. Irrigation is by the branches of the radial recurrent artery and vein, the cephalic vein.

Used for cough, hemoptysis, afternoon fever, asthma, fullness in the chest, sore throat, spasmodic pain in the elbow and arm, pneumonia, pleurisy, erysipelas, and swelling and pain in the throat.

Traditional indications include asthma, spitting blood, chest pain, throat blockage, and fullness in the chest.

Traditional functions are to drain heat from the lungs, suppress and regulate rebellious lung qi, cool heat, and stop bleeding. As a he sea and water point of the lungs, it also soothes asthma.

Massage techniques include pressing and holding, rotating clockwise or counterclockwise for xu or shi conditions, pressing in slowly with both thumbs and releasing quickly, pulling the thumbs apart, and doing fingertip percussion.

Use with Lu 9, Lu 1, Co 4, Bl 13, Lu 6, Pc 5, Lu 10, Ht 7, Pc 8, Gv 14, Liv 8, Kd 3, Kd 2, Liv 3, Bl 18, Bl 20, and Sp 10 for coughing blood.

Use with Lu 7, Co 4, Co 11, Cv 17, Cv 22, Bl 12, Bl 13, Bl 43, Bl 17, Bl 18, Bl 20, Bl 23, Kd 7, Liv 3, Liv 14, Cv 12, *dingchuan*, Lu 1, and St 40 for asthma, bronchitis, etc. Use with Co 11, Gb 34, Co 10, Co 9, and Co 4 for pain and spasm of the elbow.

Applications:

He attacks with a right low hook. You use your right back palm and slam the inside of his right elbow with it. However, you must be certain that your palm and right arm have no tension or this strike will only cause mild damage. This is not a point to play around with!

LU 6 (LUNG POINT NO. 6)

Chinese name:

Kongzui (opening maximum or supreme hole).

Location:

On the palmar aspect of the forearm, on the line joining Lu 9 to Lu 5, 7 cun above Lu 9. The point is in the brachioradialis muscle, in the lateral margin at the upper extremity of the pronator teres muscle and the medial margin of the extensor carpi radialis brevis and longus muscles.

Connections:

None.

Direction of strike:

Straight in to the upper inner forearm with a slight distal direction.

Damage:

Lower arm paralysis is immediate with a hard strike. The recipient will feel as though he has been

struck in the lungs. This is a xie cleft point. A strike here causes the reverse effect of healing using this point. It is an emergency point and can release much needed qi to the lungs in an emergency, such as being struck in the lungs. So this point can be used as an aftershot, following a strike to the attacker's lung area. The body calls for its reserve of qi, but it is unavailable because of the second strike to Lu 6. The recipient of such a strike could die within minutes.

Set-up point:

Strike straight in to Cv 14. This is sure death!

Antidote:

If Cv 14 (or a strike to the lungs) has been used as the set-up, you have to work fast because death is imminent. You must mobilize the emergency lung qi by working on the opposite Lu 6 point, either fingering it or needling it 5 fen. Then use CPR if breathing and pulse have already stopped.

Healing:

Innervation is by the lateral antebrachial cutaneous nerve and the superficial ramus of the radial nerve. Irrigation is by the cephalic vein and the radial artery and vein.

Used for cough, asthma, hemoptysis, sore throat, pain and motor impairment of the elbow and arm, pneumonia, and tonsillitis.

Traditional indications include headache, absence of sweating, spitting blood, loss of voice, sore throat, belching, pain in the elbow and arm, and difficulty in bending the arm.

As a xie cleft (accumulating) point of the Lu meridian, it treats acute disorders of the lung and its channel, regulates lung qi, makes lung qi descend, eliminates heat, and stops bleeding and pain.

Massage techniques are the same as for Lu 5.

Use with Lu 7, Co 11, Co 4, St 36, Liv 3, Bl 12, Bl 13, Bl 17, Cv 17, Liv 3, and Lu 5 for colds and flu.

Use with Kd 7, Co 4, St 36, Bl 13, Cv 17, Liv 3, Lu 7, and Lu 1 for chills and fever with no sweating.

Use with Co 4, Co 11, Lu 5, Lu 7, Lu 10, Lu 11, Co 1, Co 2, Co 3, Co 5, Co 7, Co 18, St 44, and St 45 for sore throat and loss of voice.

Applications:

Take his straight right with your left palm as your right palm strikes straight in to Cv 14. Then it rebounds back onto Lu 6 using a hammer fist strike.

LU 7 (LUNG POINT NO. 7)

Chinese name:

Lieque (broken sequence or every deficiency).

Location:

Superior to the styloid process of the radius, 1.5 cun above the transverse crease of the wrist, in the depression. When the index fingers and the thumbs of both hands are crossed with the index finger of one hand placed on the styloid process of the radius of the other, the point is in the depression under the tip of the index finger, between the tendons of the brachioradialis and the abductor pollicis longus muscles.

Connections:

Transverse luo to Co 4 and Co 1

Direction of strike:

Straight down onto the wrist area about 1.5 cun back from the wrist crease.

Damage:

Although this strike is "only on the wrist," it is quite a nasty one, since it creates great pain and qi drainage. Even heavy finger pressure here, as in the case of a lock, will cause great pain. The qi drainage and pain are so bad that the recipient has to sit down. I know of one instance where a KO occurred with only a light strike. A strike here will upset the balance of yin and yang between the lung and colon, causing artificial grief with much sobbing. Also, the ability to learn physical things will be impaired and will get worse as time goes by.

Set-up point:

Kd 6 struck downward on the lower leg.

Antidote:

The lung/colon qi must be rebalanced. To do this you must know the lung/colon qi-balancing massage. You must also know which points are the balancing points for each meridian. For the lung, the balancing point is Co 11. For the colon, the balancing point is Lu 9. So first you place your left *laogung*, or Pc 8, onto his Lu 9 point and just hold it there. Now, your right laugung point will rub along the whole of the colon meridian from lowest numbered point to highest. The right palm must not actually touch the skin, but get as close to the skin as possible. You do this three times.

Now do the lung meridian. Place your left laugung point onto Co 11 and rub your right laugung over the lung meridian from lowest number to highest, same as you did for the colon. Do this three times. Then do the whole thing on the other arm.

This is a healing method for someone who has too much grief, is weeping all the time and has an inability to learn physical things. (In fact, in my video No. MTG 88 I teach all six qi balancing massages for each meridian pair.)

Healing:

Innervation is by the lateral antebrachial cutaneous nerve and the superficial ramus of the radial nerve. Irrigation is by the cephalic vein and branches of the radial artery and vein.

Used for headache, neck rigidity, cough, asthma, sore throat, facial paralysis, trismus, weakness of the wrist, and urticaria.

Traditional indications include headache, panting, swelling of the pharynx, hemiplegia, mouth awry, wind rash, blood in the urine, and acute edema of the limbs.

Traditional functions are to strengthen the dispersing function of the lungs, dispel wind/cold, remove obstruction and invigorate the jing luo, and clear and regulate the Cv meridian. It is a luo connecting point of the lung, master point of the Cv meridian, and couple point of the yin qiao mai.

When used with Kd 6 it will tonify yin, soothe a sore throat, and activate the descending function of the lungs in a more dynamic way than Lu 9.

Apply direct qi (pressure) upward for headache and to tonify the Lu qi, and downward to treat pain in the thumb.

Massage techniques include pressing and holding the point; rotating clockwise or counterclockwise for xu or shi conditions; pressing in slowly with both thumbs and releasing quickly, pulling the thumbs apart; clasping the wrist so your fingers are on the ulnar side and your thumb is on the styloid process and squeezing and/or rotating the fingertip or open hand ulnar-side-type percussion.

Use with Lu 8, Lu 9, Co 4, Co 11, Pc 6, and Th 5 for burning sensation in the palm.

Use with Kd 6, Kd 3, Sp 9, Cv 2, Cv 3, Cv 4, Cv 5, Cv 9, St 28, Bl 39, Bl 22, Bl 28, Bl 23, Bl 20, Sp 6, Liv 3, and St 40 for edema, retention of urine, and fluid imbalances in general. See Lu 6 and Lu 5 for treatments of cough, colds, asthma, bronchitis, etc.

Use with Lu 11, Lu 10, Co 4, Co 5, and Gb 34 for pain in the thumb.

Use with Pc 6, Ht 7, St 36, Co 4, Liv 3, Bl 13, Bl 14, Bl 15, Bl 17, Bl 18, Bl 19, Bl 20, and Bl 23 for excess sadness or melancholy.

Applications:

He comes in with a right-handed attack. You avoid the attack and stomp straight down onto the inside of his ankle with your right heel. Now your right knife edge strike comes across to strike straight in to Lu 7.

LU 8 (LUNG POINT NO. 8)

Chinese name:

Jingqu (across the ditch).

Location:

1 cun above the transverse crease of the wrist, in the depression on the radial side of the radial artery. Innervation is by the lateral antebrachial cutaneous nerve and the superficial ramus of the radial nerve.

Connections:

None.

Direction of strike:

This point is usually used along with Ht 5 as a qi drainage, setup point. The two points are usually grabbed and jerked violently, thus taking qi away from other more vulnerable points. Usually, any face strike will suffice after these points have been attacked. They are classic qi drainage points by themselves or together.

Damage:

Great qi drainage, thus setting up other points for attack. Ht 5 by itself has been known to cause KO when needled too much, the same as Lu 8. Lu 8 is a metal and jing point. This is the horary point of the channel. As such, when it is struck it will cause the qi to be disrupted in the channel when it is supposed to be active during the 24-hour cycle. Thus the lungs will not be at their peak throughout the day. This qi imbalance will get worse as each day passes until a healing is effected. Sleep will be affected greatly, especially between 3 and 5 A.M. This will be coupled with the need to urinate, because the bladder meridian is at the opposite side of the horary cycle and, as such, will have the least amount of qi available to it at this time.

Set-up point:

None.

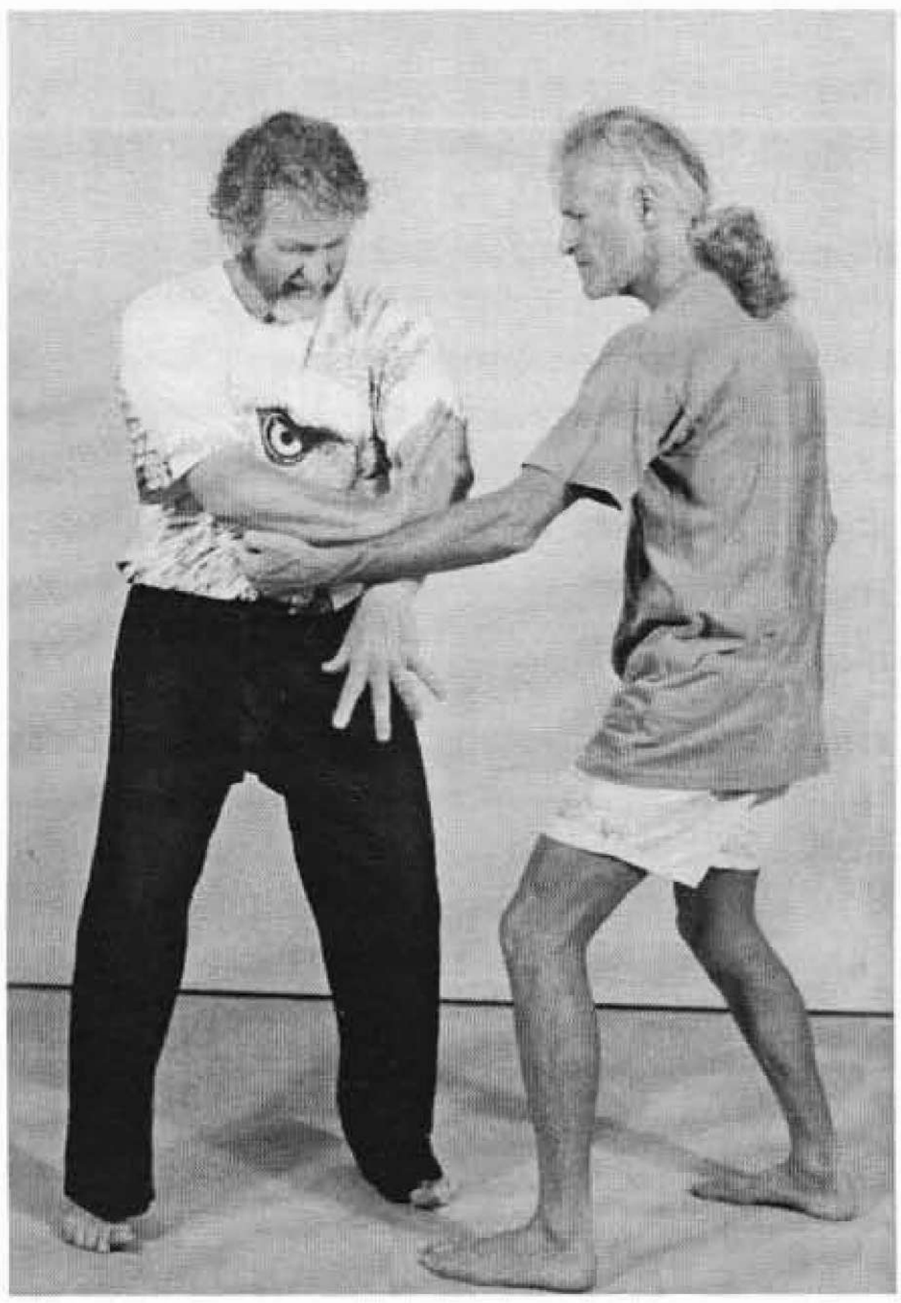


Figure 289

Antidote:

Work on the opposite Lu 8 and also on Liv 3 using finger pressure, or have an acupuncturist needle both points.

Healing:

Innervation is by the lateral entebrachial cutaneous nerve. Irrigation occurs laterally by the radial artery and vein.

Used for cough, asthma, sore throat, pain in the chest and wrist, and bronchitis.

As a jing river point and a metal point of the Lu meridian, its traditional function is to tonify or sedate.

To massage, press and hold (be careful not to depress the artery), do rotations clockwise or counterclockwise for xu or shi conditions, and flick the point with the forefinger.

Use with Bl 17, Co 4, Co 11, Co 18, Lu 6, Lu 5, and Liv 2 for sore, swollen throat.

Use with Lu 7, Lu 9, Lu 10, Lu 11, Co 4, and Co 11 for burning sensations in the hand.

Use with Gb 21, Co 11, Co 10, Co 8, Co 13, Gb 34, Co 4, Th 4, and Gb 20 for arm pain caused by cold wind.

Applications:

Block his low left attack with both palms (fig.

289). Your right palm is on top while your left is underneath. Your right palm attacks to Lu 8 while your right palm attacks Ht 5. Now, grab the wrist with your right palm and jerk it violently as you attack to the side of his face with your left backfist.

LU 9 (LUNG POINT NO. 9)

Chinese name:

Taiyuan (great abyss or bigger deep hole).

Location:

At the transverse crease of the wrist, in the depression on the radial side of the radial artery. At the lateral aspect of the tendon of the flexor carpi radialis muscle and the medial aspect of the tendon of the abductor pollicis longus muscle.

Connections:

Transverse luo from Co 6.

Direction of strike:

Down into the wrist just above the thumb mount distally into the palm.

Damage:

This is again a great qi drainage point. It is an earth, yuan, and shu point and a special meeting point of pulse (arteries and veins). It must be struck right on the point, so it is not one that I would use in a tight situation, although it works quite well as a set-up point, causing great local pain and qi drainage. It will cause respiration to become erratic, so that the recipient thinks he is going to be suffocated.

Set-up point:

None.

Antidote:

Finger pressure the opposite Lu 9 back along the inner forearm toward the elbow until breathing has become normal again.

Healing:

Innervation is by the lateral antebrachial cutaneous nerve and the superficial ramus of the radial nerve. Irrigation is by the radial artery and vein.

Used for asthma, cough, hemoptysis, sore throat, palpitations, pain in the chest and the medial aspect of the forearm, bronchitis, whooping cough, influenza, pulmonary tuberculosis, and disease affecting the radial side of the wrist joint.

Traditional indications include headache, toothache, pain in the eyes, membrane on the eyes, coughing blood, chest pain, and pain and debility of the wrist.

This is root area of the Lu meridian, a shu stream (transporting) point and earth point of the Lu meridian, a yuan source point of Lu meridian, and one of the eight influential points/meeting points of the blood vessels. It eliminates wind, resolves phlegm, strengthens the lung function, stops coughing, and tonifies lung yin. Use for long-standing problems.

Massage techniques are the same as for Lu 8.

Use with Lu 1, Bl 12, Bl 13, Bl 17, Bl 20, Cv 17, Cv 12, Cv 6, Cv 4, St 36, Sp 5, Liv 3, Sp 6, Co 4, Gb 20, Gb 21, and Th 4 to build lung qi in those who have frequent colds and lack of energy or stamina.

Use with Lu 7, Co 4, St 40, Cv 17, Cv 12, Bl 13, Bl 17, Bl 20, and Pc 6 for wind phlegm-type cough.

Use with Gv 20, Sp 3, St 36, Bl 20, Sp 10, Sp 1, Sp 6, and Bl 17 for tendency toward varicose veins.

Applications:

He attacks with a straight right. You move to your right and hammer the inside of his wrist with your right knife edge distally. Now you are free to attack any of the face points, such as a neurological shutdown point on the side of the cheek.

LU 10 (LUNG POINT NO. 10)

Chinese name:

Yuji (fish border).

Location:

On the radial aspect of the midpoint of the first metacarpal bone, at the junction of the red and white skin (the lighter colored and darker colored skin). In the lateral abductor pollicis brevis and opponens pollicis muscles.

Connections:

None.

Direction of strike:

Straight in to the thumb mount; however, this is not a point I would use in self-defense.

Damage:

This is not a point to use in a realistic fighting situation. If struck very hard, it will cause heat to rise in the lungs, causing coughing. It is more of a healing point and is used to eliminate heat from the lungs, thus easing sore throats, etc. It is a fire and yong point.

Set-up point:

None.

Antidote:

Should the lungs have heat, squeeze the tip of the thumb at the edge of the nail at Lu 11.

Healing:

Innervation is by the superior ramus of the radial nerve. Irrigation is by the venules of the thumb draining to the cephalic vein. Used for cough, hemoptysis, sore throat, fever, laryngopharitis, tonsillitis, hoarseness, asthma, and infantile malnutrition syndrome.

Traditional indications include coughing, throat blockage, spitting blood, loss of voice, emotional disturbance, tidal fever, abdominal pain, and pain in the chest and back.

This is a fire point and a ying spring (gushing) point of the lungs. Its traditional functions are to cool heat in the lungs, benefit the throat, and eliminate fire from the head caused by depression (e.g., lots of crying and general sadness).

Massage techniques are the same as for Lu 5. Use with Co 16, Lu 5, Co 4, Co 11, Sp 10, Bl 17, Bl 13, Liv 2, and Sp 3 for hemoptysis.

Use with Co 41 Co 11, Co 18, Co 1, Co 2, Lu 5, Lu 7, Lu 11, St 44, St 45, and Th 2 for sore throat.

Use with Lu 9, Sp 6, Bl 13, Bl 20, Lu 7, Cv 17, and Liv 3 for tidal fever.

Applications:

None.

LU 11 (LUNG POINT NO. 11)

Chinese name:

Shaoshang (lessor merchant).

Location:

On the radial side of the thumb, about 0.1 cun posterior to the radial corner of the nail.

Connections:

Transverse luo from Co 6.

Direction of strike:

This, again, is not a point I would use, it is right on the end of the thumb. It is really for healing only.

Damage:

This is a wood and cheng point and can be used for the healing of muscles and tendons. If struck with perhaps a hammer, it will drain qi from the upper body and can cause emotional problems later in life. It is more used for throat and tonsils in particular. It is also used to increase the wei qi to the surface of the skin when external pathogenic attack is imminent.

Set-up point:

None.

Antidote:

If this point has been struck, by a hammer for instance, you should either needle the point or bleed the opposite point. Never use moxa on this point.

Healing:

Innervation is by the terminal nerve network formed by the mixed branches of the lateral antebrachial cutaneous nerve and the superficial ramus of the radial nerve, as well as the palmar digital proprial nerve of the median nerve. Irrigation is by the arterial and venous network formed by the palmar digital proprial artery and veins.

Used for cough, asthma, sore throat, epistaxis, contracture and pain of the fingers, febrile disease, loss of consciousness, mental disorders, tonsillitis, parotitis, common cold, pneumonia, stroke, fainting, and infantile indigestion.

Traditional indications include apoplectic delirium, coughing, cervical swelling with throat blockage, mumps, swollen patchy tonsils, and fever and external symptoms.

Traditional functions: As a wood point and jing well point of the Lu meridian, it eliminates wind heat from the lung, benefits the pharynx, expels the exterior (symptoms that have existed for two to five days), and also revives a person who has fainted.

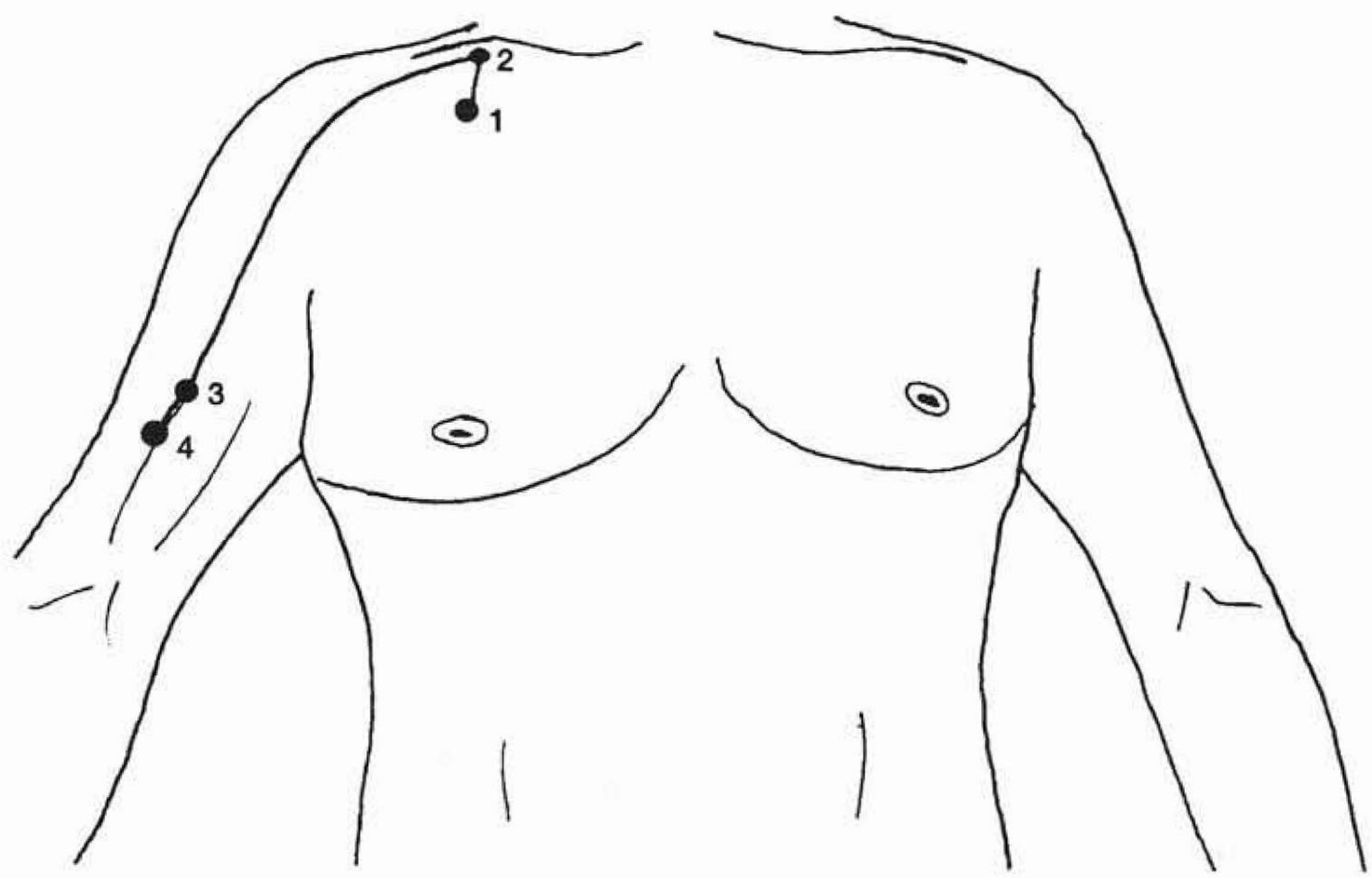
To massage, hold the thumb between the forefinger and the knuckle of your thumb and squeeze, do rotations clockwise or counterclockwise for xu or shi conditions, or, for mental illness or epistaxis, burn three to five rice-grain-size cones of refined pure moxa on this point.

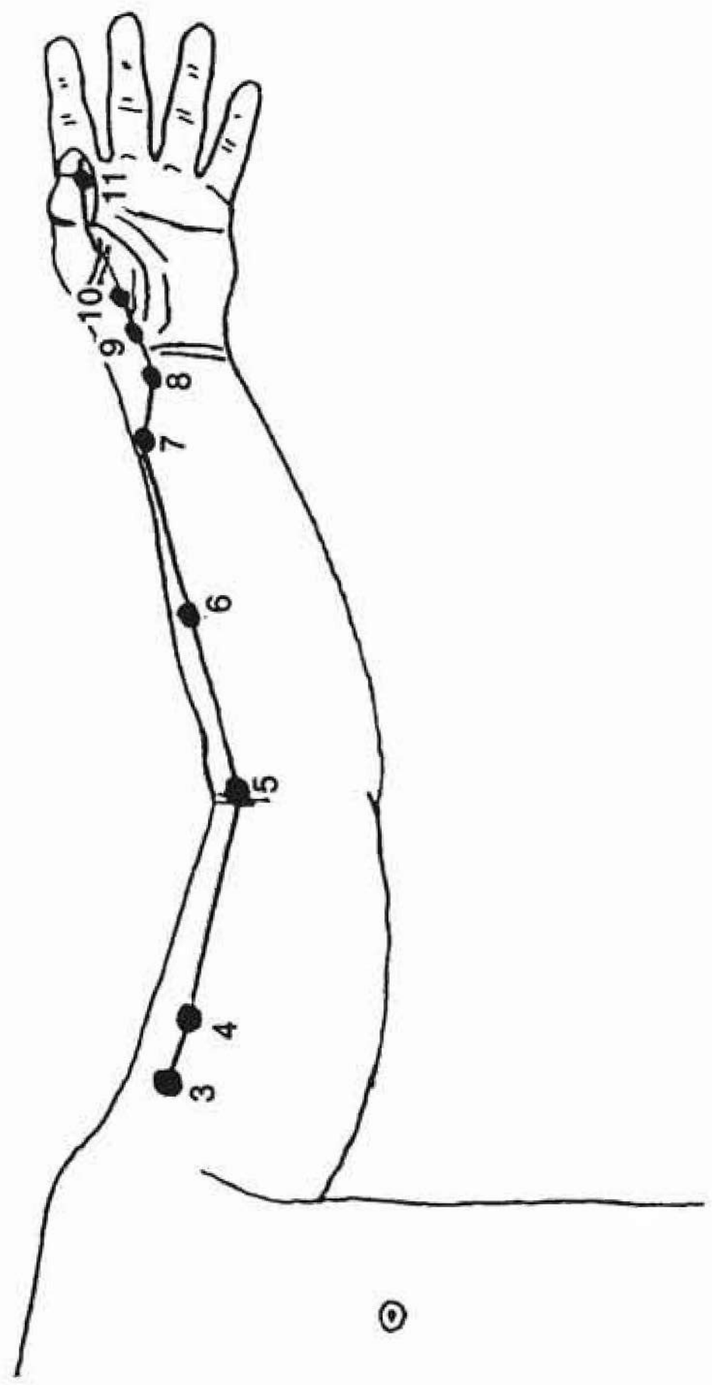
Use with Co 4, Co 11, Lu 5, Lu 8, Liv 2, St 36, Lu 10, and Lu 6, and bleed Lu 11 (prick and drain two or three drops of blood) for acute tonsillitis.

Use with Co 4, Co 11, Lu 5, Lu 7, Cv 17, Bl 12, Bl 13, Bl 17, St 40, Liv 3, and Sp 4 for colds and flu with thick, yellow discharge.

Applications:

None.

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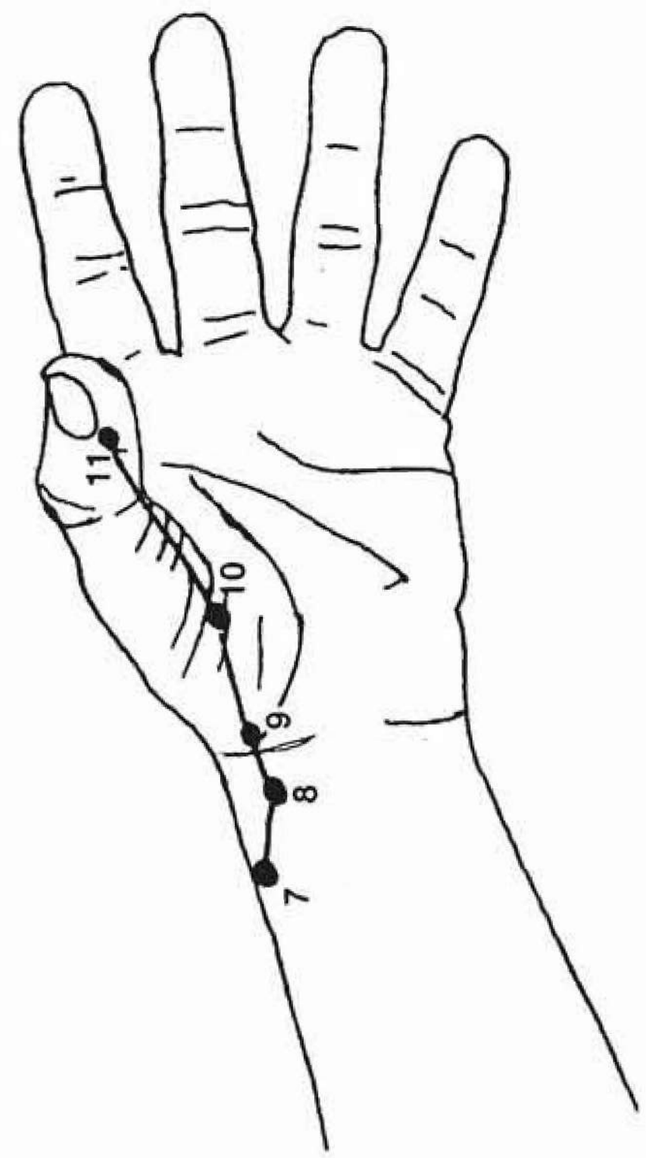
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Chapter 10

The Colon Meridian

THE TCM VIEW

The colon has the Chinese element of metal. It is a yang organ, and its counterpart yin organ is the lung. The colon's official role is the controller of expelling waste.

The colon receives the waste from the small intestine. It absorbs some liquids and then transforms the remainder into feces to be expelled. The anus is controlled by kidney jing and is called the "door of strength."

The colon also has other duties in waste control. It is also responsible for getting rid of wasteful thoughts. In fact, constipation can sometimes be related to clinging to wasteful thoughts and habits, and thus impeding change. So the health of the colon is directly related not only to a healthy body but also to mental health in helping the individual to change.

In dim-mak, there are several important points on the colon meridian that can be used as set-up points or as dangerous points in their own right. Co 10 is one of the main set-up points and works quite well all by itself. Co 12 is an excellent point strike, as is Co 14 (a qi input point and one of the "seven star" points for qi input into the body). Co 17 and 18 are very dangerous points, while Co 19 and 20 are also excellent "electrical" point strikes.

CO 1 (COLON POINT NO. 1)

Chinese name:

Shangyang (trade or merchant yang).

Location:

On the radial side of the index finger, about 0.1 cun posterior to the corner of the nail.

Connections:

Takes transverse luo from Lu 7, and there is a connecting pathway internally from Lu 11.

Direction of strike:

I would not use this point in a tight situation. You would have to bite the tip of the finger, and nowadays, with things like AIDS and hepatitis C running rampant, this is not a good method of self-defense.

Damage:

This is a metal and cheng point and is only ever used in the healing art. It clears wind/heat. It is an

emergency point for coma and should be bled for this purpose. In fact all cheng points are bled. It will also drag qi to the extremities to strengthen the outer limbs.

Set-up point:

None.

Antidote:

None.

Healing:

Innervation is by the palmar digital proprial nerve derived from the median nerve. Irrigation is by the arterial and venous network formed by the dorsal digital arteries and veins. Used for toothache, sore throat, swelling of the submandibular region, numbness of the fingers, febrile disease, loss of consciousness, apoplectic coma and deafness.

This is a jing well point and a metal point of the lungs. Its traditional functions are to clear wind/heat, move stagnation in the channel, use as an emergency point, and treat stroke.

To massage, hold the forefinger between the thumb and your forefinger and squeeze, do rotations clockwise or counterclockwise for xu or shi conditions, or prick and bleed (one to three drops). You can also do rice-grain-size cones of refined pure moxa for qi and yang xu conditions.

Use with Co 2, Co 4, St 44, St 45, St 2, St 3, St 5, St 6, Kd 3, Bl 11, and Gb 39 for toothache.

Use with Pc 6, Th 5, Lu 11, Th 1, Si 1, Pc 9, *baxi* (an extra point), *shang baxi* (an extra point), Co 4, Lu 7, Pc 7, Th 4, Si 3, Si 4, Si 5, Si 6, St 36, Gb 41, and St 40 for numbness of the fingers.

You can prick and bleed (a couple of drops) from all the jing well points, except those in the heart channel, for loss of consciousness.

Applications:

None.

CO 2 (COLON POINT NO. 2)

Chinese name:

Erjian (between two).

Location:

Er means two and *jian* means clearance. *Jian* here indicates the point. This is the second point on the colon meridian. On the radial side of the index finger, distal to the metacarpophalangeal joint, at the junction of the red and white skin in the depression.

Connections:

None.

Direction of strike:

This point can be used in the case of a hand lock along with Co 3, although I would not advise this instead of a more normal palm lock. You have to have very strong hands to activate and to cause damage with these two points.

Damage:

It is a water and yong point and, as such, can be used as a set-up point for Co 5 (fire). It is an excellent point to relieve constipation. Should you be able to get one finger exactly onto Co 2 and also dig one finger into Co 5, this can cause KO. However, while you are doing this, he will probably knock you out!

Set-up point:

None.

Antidote:

None.

Healing:

Innervation is by the dorsal digital nerve derived from the radial nerve and the palmar digital proprial nerve derived from the median nerve. Irrigation is by the dorsal digital and palmar digital proprial arteries and veins, derived from the radial artery and vein.

Used for blurring of vision, epistaxis, toothache, sore throat, febril disease, facial paralysis, and trigeminal neuralgia.

As a water point and ying spring (gushing) point of the colon meridian, its traditional functions are to cool heat and increase or decrease qi flow.

To massage, press and hold the point, do rotations clockwise or counterclockwise for xu or shi conditions, or do fingertip percussion on the point.

Use with Co 1, Co 4, Co 11, St 36, St 40, Sp 9, St 37, Liv 2, Liv 3, St 25, Bl 25, Bl 20, Bl 18, Bl 17, Cv 12, Cv 6, Cv 4, Sp 10, Gb 43, Gb 44, Liv 4, Sp 4 and Sp 5 for irritable bowel syndrome where there is blood and mucous in the stool.

Use with St 6, St 5, Gv 26, Lu 7, Lu 9, Co 4, St 4, Th 23, taiyang, Gb 34, and Gb 41 for facial paralysis with mouth and eyes awry.

Use with Gv 20, Kd 3, Kd 4, Kd 6, Liv 10, Sp 6, St 36, and yintang for excessive sleepiness.

Applications:

None.

CO 3 (COLON POINT NO. 3)

Chinese name:

Sanjian (between three).

Location:

San means three, and *jian* means clearance. Here jian indicates the point; this is the third point on the colon meridian. When a loose fist is made, the point is on the radial side of the index finger in the depression proximal to the head of the second metacarpal bone.

Connections:

None.

Direction of strike:

Squeeze the index finger just back from the palm. But again, it's not a point I would use in fighting.

Damage:

Use with Co 2. It is a wood and shu point. A good strike here, if you can get it, can cause temporary blindness. However, I must warn you that this is very difficult to achieve.

Set-up point:

None.

Antidote:

Finger pressure to the opposite Co 3 point.

Healing:

Innervation is by the superficial ramus of the radial nerve. Irrigation is by the dorsal venous network of the hand and the branch of the first metacarpal artery.

Used for ophthalmia, toothache, sore throat, redness and swelling of the fingers and the dorsum of the hand, trigeminal neuralgia, painful eyes, and malaria.

Massage techniques are the same as for Co 2.

As a wood point and shu stream (transporting) point of the Co meridian, its traditional functions are to expel wind and damp conditions (e.g., treat aching joints).

Use with Si 17, Co 11, Co 4, Lu 11, Gb 20, Lu 5, St 9, Si 16, Liv 2, Lu 10, St 40, and Liv 3 for tonsillitis or sore throat.

Use with Co 2, Gb 34, Gb 20, Lu 7, St 40, Sp 9, Liv 3, Gb 43, Gb 44, Gb 39, Bl 11, Bl 13, Bl 12, Th 4, Th 5, Th 3, Bl 40, Bl 65, and Bl 66 for arthritis-type joint problems.

Use with Co 4, St 44, Gb 10, Gb 14, St 3, and St 6 for toothache.

Applications:

None.

CO 4 (COLON POINT NO. 4)

Chinese name:

Hegu (adjoining valleys).

Location:

Between the first and second metacarpal bones, approximately in the middle of the second metacarpal bone on the radial side. Roughly between the second metacarpal bone and the end of the crease created when the thumb is adducted, in the dorsal interroseus muscle and, in its deep position, in the transverse head of the abductor hallucis muscle.

Connections:

Transverse luo from Lu 7.

Direction of strike:

Straight in just above the web of the thumb and index finger.

Damage:

This point does some damage in qi drainage and local pain. It can be used as a set-up point to a Lu 1 shot or to a Liv 14 shot. Struck right on the point with a smaller weapon such as a one-knuckle punch, this point will cause confusion in the brain. However, this is not easy because that strike must be very accurate.

Set-up point:

None.

Antidote:

Using thumb pressure on the opposite Co 4, squeeze the point distally using mild pressure.

Healing:

Innervation is by the superficial ramus of the radial nerve and, deeper, the palmar digital proprial nerve derived from the median nerve. Irrigation is by the venous network of the dorsum of the hand, proximally, right on the radial artery piercing from the dorsum to the palm of the hand.

Used for headache, redness with swelling and pain of the eye, epistaxis, toothache, facial swelling, sore throat, contracture of the fingers, pain of the arm, trismus, facial paralysis, febrile disease with anhidrosis, hidrosis, amenorrhea, delayed labor, abdominal pain, constipation, dysentery, common cold, disease of the sensory organs, hemiplegia, neurasthenia, and pain in general.

Traditional indications include headache, pain in the eyes, membrane on the eyes, nosebleed, deafness, toothache, facial edema, throat blockage, mouth and face awry, locked jaw due to stroke, tidal fever, wind rash, scabies, miscarriage, and abortion.

As a yuan source point of the colon, this point's traditional functions are to strongly reinforce the qi of the channel, eliminate wind/heat or wind/cold (perhaps a little better for wind/heat), relieve exterior symptoms, activate the dispersing function of the lungs, activate the function of the intestines, treat all symptoms of the face, relieve pain, and clear the channels.

Massage techniques include pressing and holding the point, rotating clockwise or counterclockwise for xu or shi conditions, and doing fingertip percussion.

Use with Gv 20, Gb 20, Liv 3, Gb 14, taiyang, yintang, Gb 21, and Gb 34 for headache.

Use with Lu 7, Lu 5, Co 11, Co 20, Gb 20, Cv 17, Bl 13, Bl 17, and Liv 3 for cough, colds, etc.

See Co 2 for treatment of facial paralysis.

See Co 1 for treatment of toothache and numbness of the fingers.

See Bl 1 for treatment of eye problems.

Use with Co 11, Co 14, Co 15, Gb 21, jianneling, naoshang, Gb 34, and St 38 for treatment of anterior shoulder pain and restriction.

Use with Sp 6, Bl 31, Bl 32, and Gb 21 for induction of labor.

Use with Pc 6, St 36, Cv 12, Liv 3, St 21, St 25, Bl 20, Bl 18, Bl 25, Sp 3, and Sp 4 for nausea and vomiting.

Used for blurring of vision, epistaxis, toothache, sore throat, febril disease, facial paralysis, and trigeminal neuralgia.

As a water point and ying spring (gushing) point of the colon meridian, its traditional functions are to cool heat and increase or decrease qi flow.

To massage, press and hold the point, do rotations clockwise or counterclockwise for xu or shi conditions, or do fingertip percussion on the point.

Use with Co 1, Co 4, Co 11, St 36, St 40, Sp 9, St 37, Liv 2, Liv 3, St 25, Bl 25, Bl 20, Bl 18, Bl 17, Cv 12, Cv 6, Cv 4, Sp 10, Gb 43, Gb 44, Liv 4, Sp 4 and Sp 5 for irritable bowel syndrome where there is blood and mucous in the stool.

Use with St 6, St 5, Gv 26, Lu 7, Lu 9, Co 4, St 4, Th 23, taiyang, Gb 34, and Gb 41 for facial paralysis with mouth and eyes awry.

Use with Gv 20, Kd 3, Kd 4, Kd 6, Liv 10, Sp 6, St 36, and yintang for excessive sleepiness.

Applications:

None.

CO 3 (COLON POINT NO. 3)

Chinese name:

Sanjian (between three).

Location:

San means three, and *jian* means clearance. Here jian indicates the point; this is the third point on the colon meridian. When a loose fist is made, the point is on the radial side of the index finger in the depression proximal to the head of the second metacarpal bone.

Connections:

None.

Direction of strike:

Squeeze the index finger just back from the palm. But again, it's not a point I would use in fighting.

Damage:

Use with Co 2. It is a wood and shu point. A good strike here, if you can get it, can cause temporary blindness. However, I must warn you that this is very difficult to achieve.

Set-up point:

None.

Antidote:

Finger pressure to the opposite Co 3 point.

Healing:

Innervation is by the superficial ramus of the radial nerve. Irrigation is by the dorsal venous network of the hand and the branch of the first metacarpal artery.

Used for ophthalmia, toothache, sore throat, redness and swelling of the fingers and the dorsum of the hand, trigeminal neuralgia, painful eyes, and malaria.

Massage techniques are the same as for Co 2.

As a wood point and shu stream (transporting) point of the Co meridian, its traditional functions are to expel wind and damp conditions (e.g., treat aching joints).

Use with Si 17, Co 11, Co 4, Lu 11, Gb 20, Lu 5, St 9, Si 16, Liv 2, Lu 10, St 40, and Liv 3 for tonsillitis or sore throat.

Use with Co 2, Gb 34, Gb 20, Lu 7, St 40, Sp 9, Liv 3, Gb 43, Gb 44, Gb 39, Bl 11, Bl 13, Bl 12, Th 4, Th 5, Th 3, Bl 40, Bl 65, and Bl 66 for arthritis-type joint problems.

Use with Co 4, St 44, Gb 10, Gb 14, St 3, and St 6 for toothache.

Applications:

None.

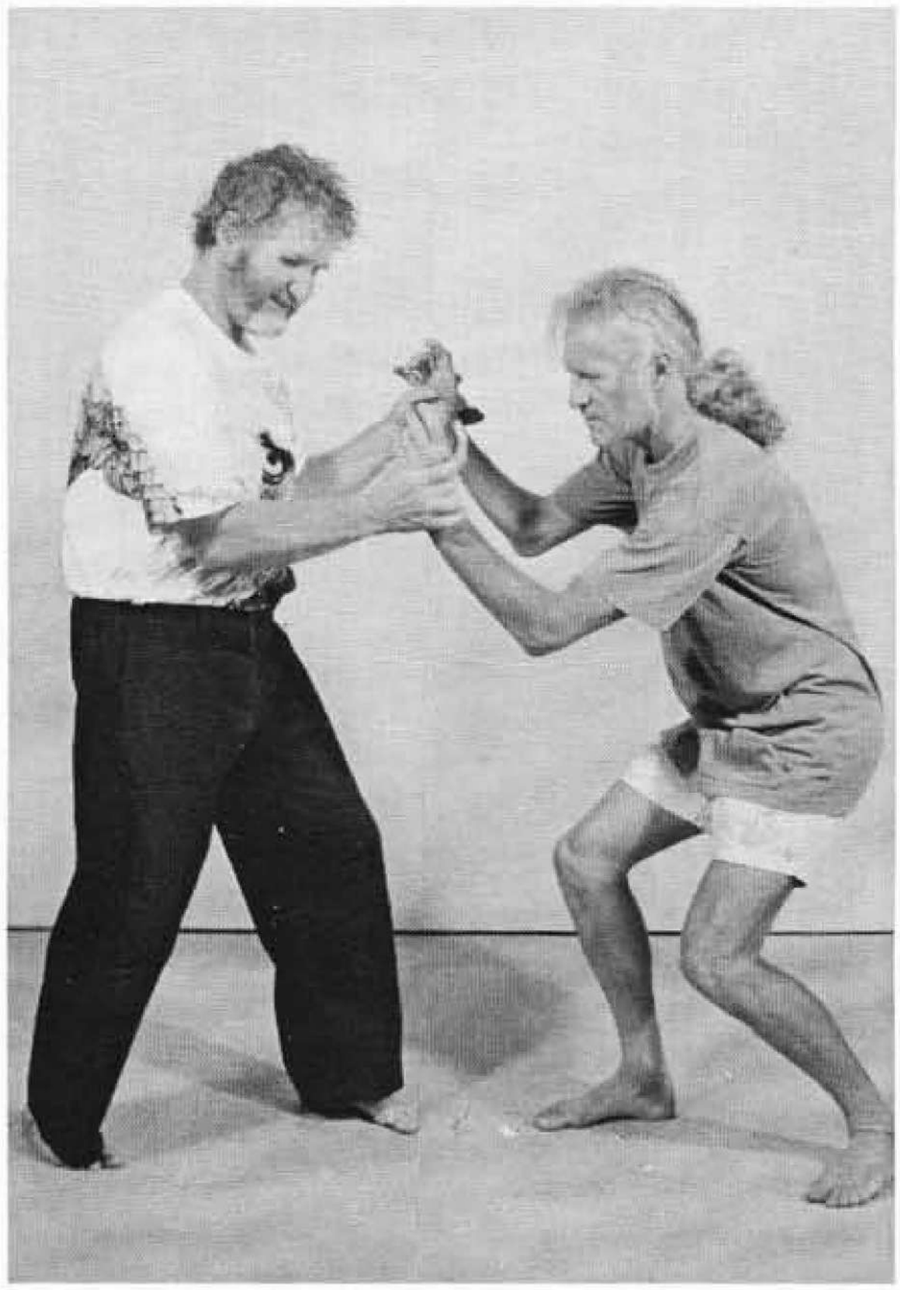


Figure 290

Applications:

He might try to grab you around the neck. You take his right or left hand and, grabbing the whole hand, apply pressure onto Co 4 as you bend his wrist backward (fig. 290). Now you are able to strike straight in to Lu 1 (or slightly upward into the upper chest) using a one-knuckle punch.

CO 5 (COLON POINT NO. 5)

Chinese name:

Yangxi (adjoining valley).

Location:

Yang refers to the yang mountains created by the tendons in this area, and *xi* means brook. The depression of this point is like a brook in the mountains. On the radial side of the wrist, when the thumb is tilted upward, the point is in the depression between the tendons of the extensor pollicis longus and brevis.

Connections:

None.

Direction of strike:

Usually used as a wrist lock along with Si 2.

Damage:

This is one of the "natural" short-out points with Si 2 that will cause great pain and allow you to put someone down onto his knees easily. Applying pressure straight across the back of the wrist diagonally will short out Co 5 and Si 2 (fire and water respectively).

Set-up point:

None.

Antidote:

As soon as the both points are released, the action of the short-out across Si 2 and Co 5 will cease to have any effect, but the damage to the wrist and fingers has already been done.

Healing:

Innervation is by the superficial ramus of the radial nerve. Irrigation is by the cephalic vein and the radial artery and its dorsal carpal branch.

Used for headache, redness with swelling and pain of the eye, toothache, sore throat, pain of the wrist, ophthalmia, tinnitus, deafness, and infantile indigestion.

Traditional indications include headache, red and painful eyes, membrane over the eye, deafness, throat blockage, toothache, pain in the root of the tongue, pain in the wrist, and inability to flex the arm at the elbow.

As a fire point and jing river (traversing) point of the large intestine, it can cool heat and treat cough.

Massage is the same as for Co 4.

Use with Si 5, Bl 1, St 1, Gb 1, Gb 14, Gb 43, Gb 44, Th 23, Liv 2, Liv 3, Co 4, Co 11, and Gb 20 for red, swollen, and painful eyes.

Use with Lu 7, Th 4, Si 5, Pc 7, and Gb 34 for tenosynovitis of the wrist.

Use with Si 17, Liv 14, Liv 3, Bl 17, Bl 18, Bl 43, Bl 13, Cv 17, dingchuan, Lu 7, and Lu 5 for fullness in the chest with breathing difficulty.

Applications:

Take his right straight with your right palm as your left palm comes under to take over the block (fig.

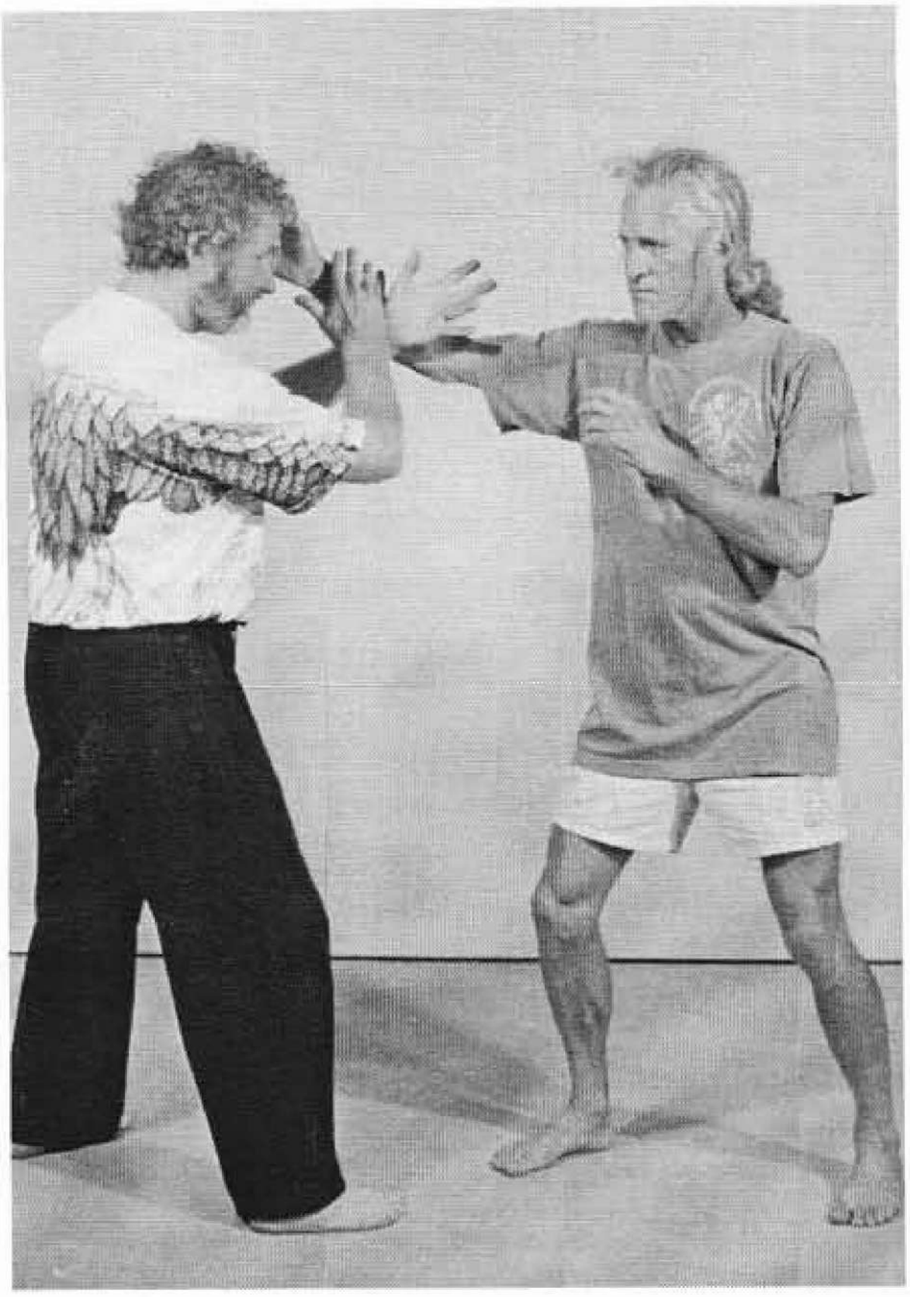


Figure 291

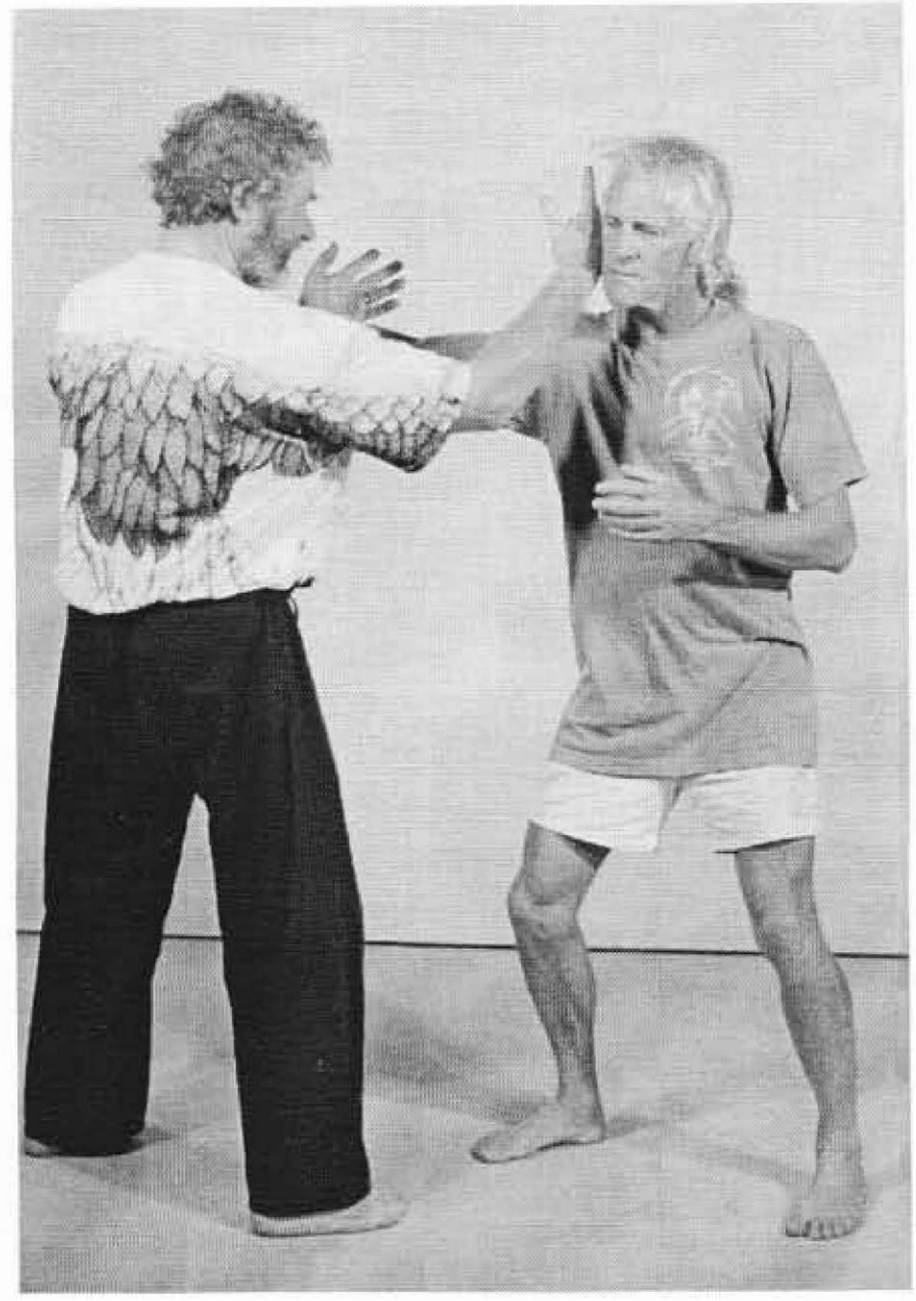


Figure 292

291). Your right palm now attacks to the side of the face to cause neurological shutdown (fig. 292). Your left palm now takes the fingers as your right palm slips in behind to create the short circuit. You have a very powerful wrist lock, and pulling both hands downward will break the fingers easily because of the short circuit (fig. 293).

CO 6 (COLON POINT NO. 6)

Chinese name:

Pianli (partial order).

Location:

3 cun above Co 5 on the line joining Co 5 and Co 11. On the radial side, the lateral antebrachial cutaneous nerve and the superficial ramus of the radial nerve, on the ulnar side, the posterior antebrachial cutaneous nerve and the posterior antebrachial interosseous nerve. *Pian* means divergence, and *li* means passageway. This is where a collateral separates and diverges to the Lu meridian.

Connections:

Transverse luo to Lu 9 and Lu 11.

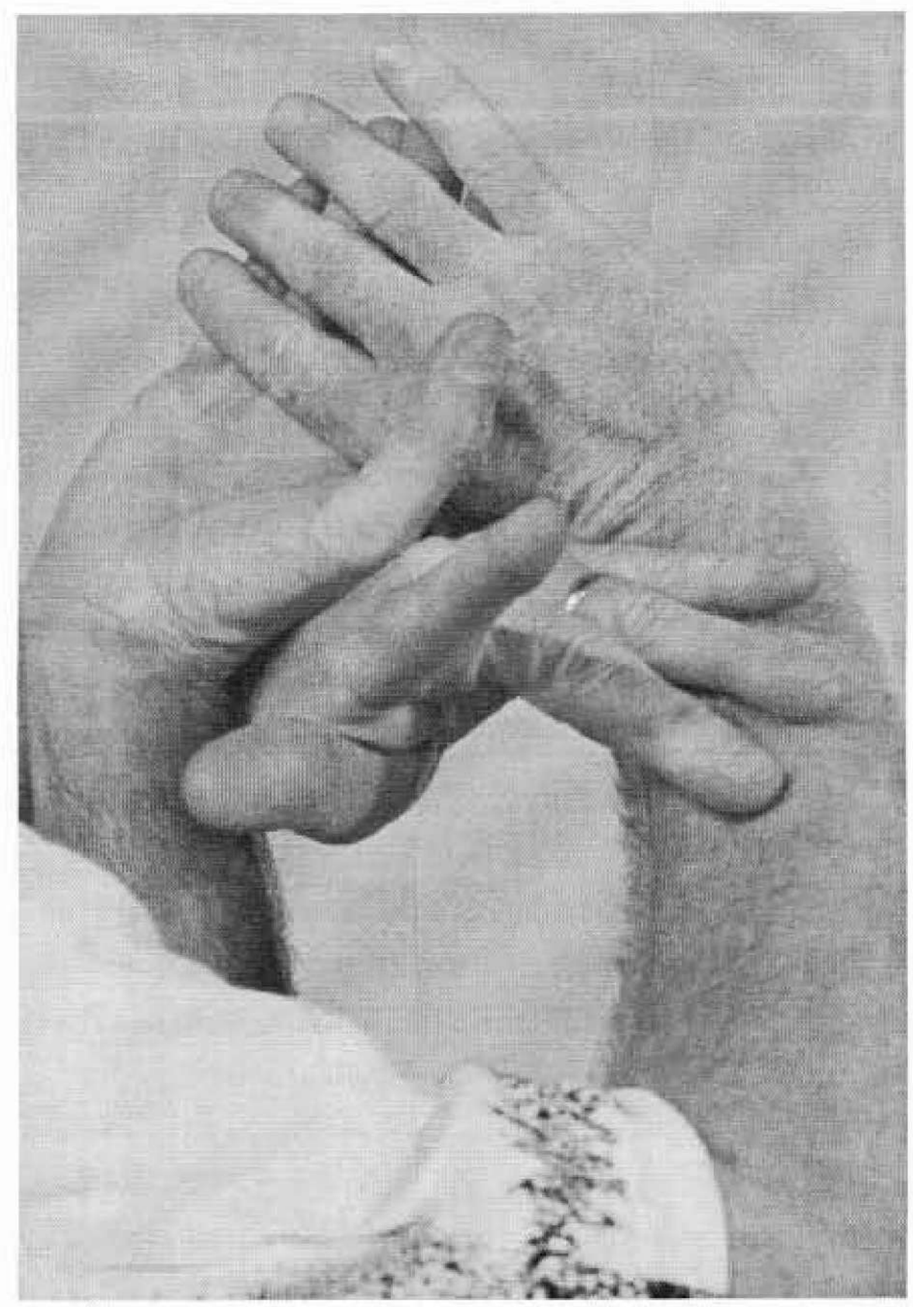


Figure 293

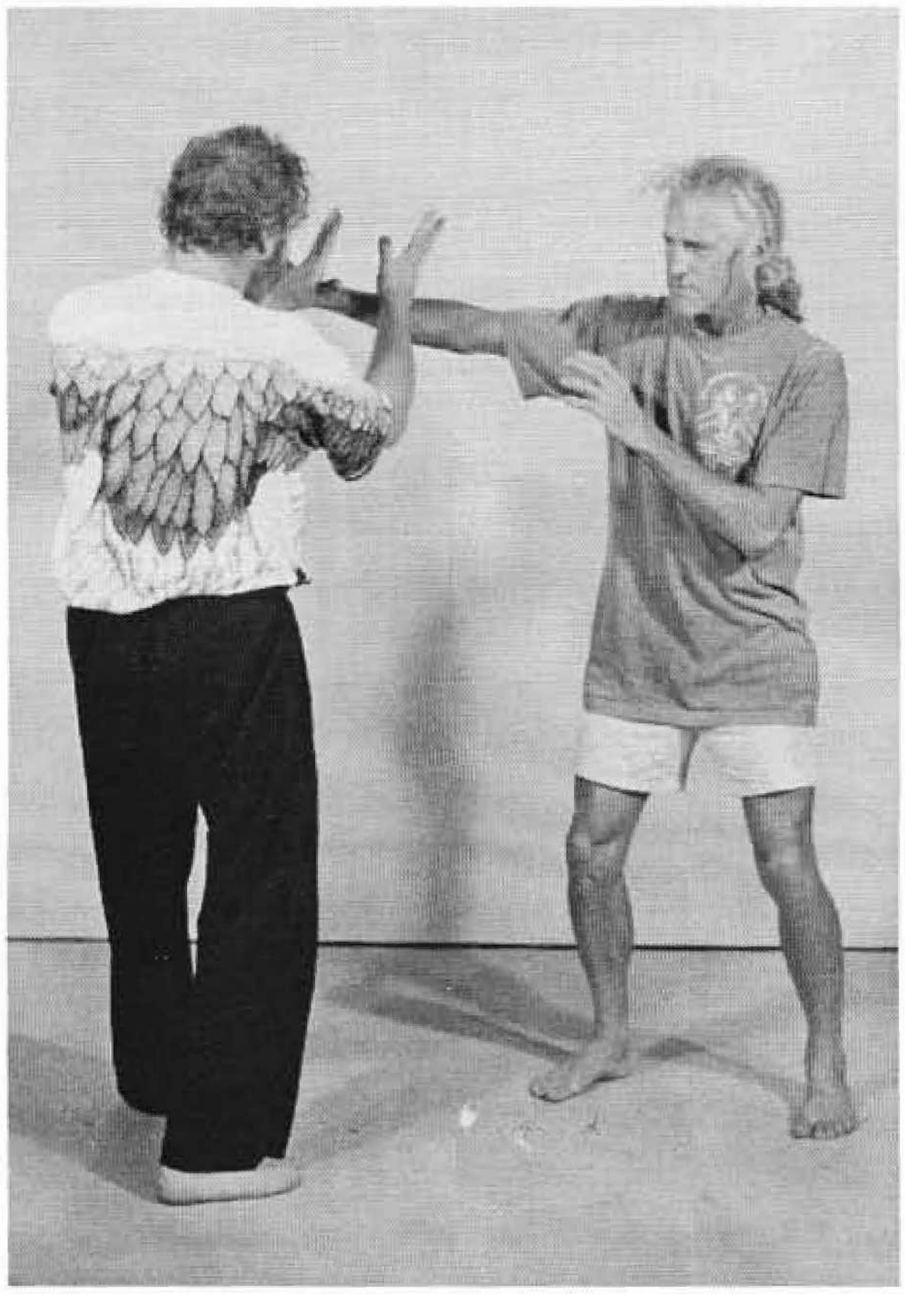


Figure 294

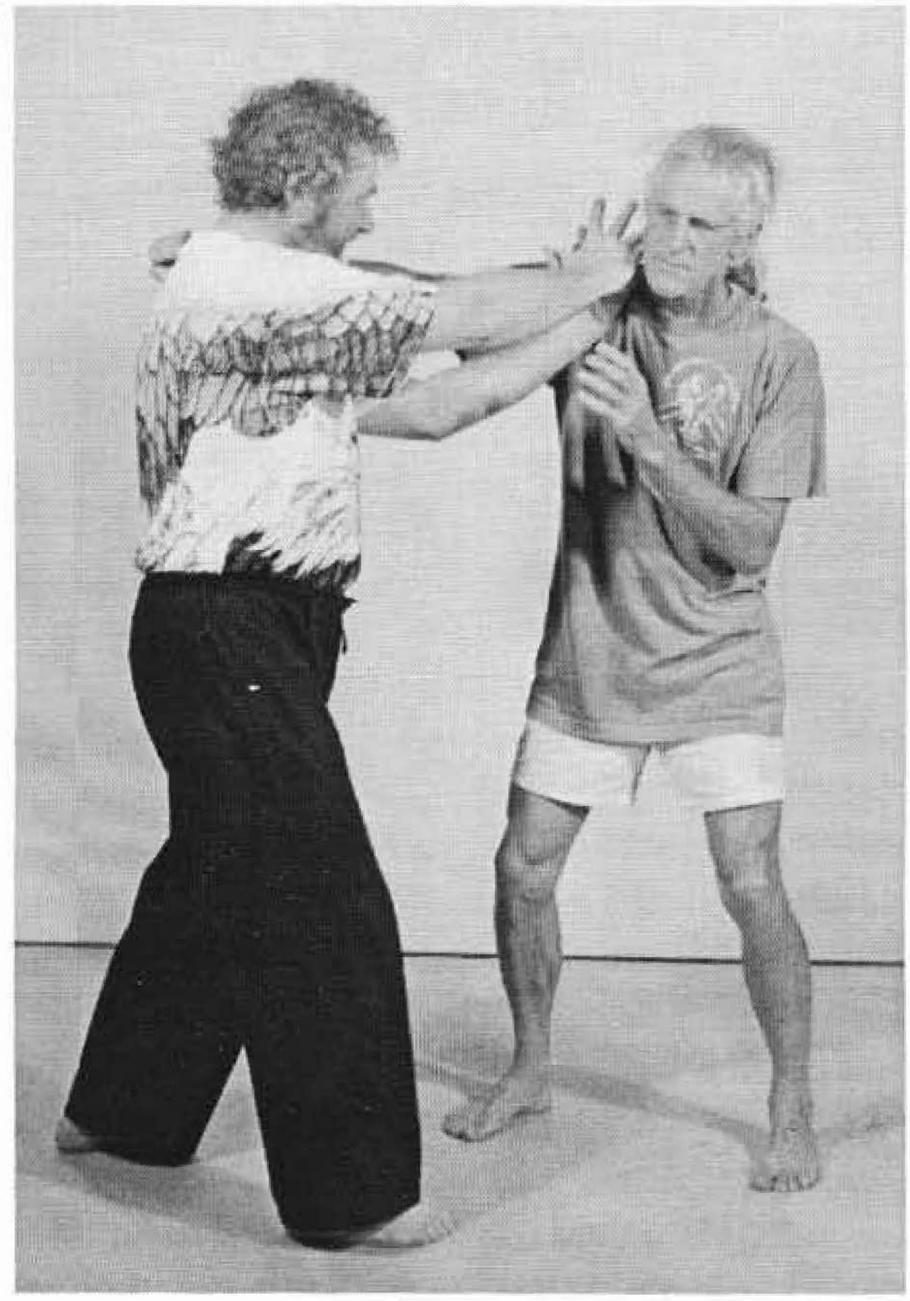


Figure 295

Direction of strike:

Straight down onto the thumb side of the outer forearm.

Damage:

This point causes great qi drainage and local pain. When struck hard enough it will cause KO. Communication between the upper and lower heaters is upset greatly, causing internal damage to the flow of qi. In the long term, emotional disturbances will build up because this strike prevents the elimination of both bad emotions and bad thoughts.

Set-up point:

Co 3 and Co 6 are struck at almost the same time, as in a double knife-edge strike.

Antidote:

Needle the opposite point 3 fen, or use finger pressure distally on the point.

Healing:

Irrigation is by the cephalic vein. Innervation is by the superficial ramus of the radial nerve.

Used for epistaxis, deafness, aching of the hand and arm, edema, facial paralysis, and tonsillitis.

Traditional functions derive from being a luo connecting point of the colon meridian.

Massage the same way as for Co 4. You can also press in slowly with both thumbs and release quickly, pulling the thumbs apart, and try flicking on the point with the forefinger.

Use with Co 11, Co 10, Co 9, Co 8, Co 7, and Co 4 for pain of the forearm.

Use with Co 4, Co 11, St 36, St 5, St 6, St 8, Gv 26, Cv 24, Gb 14, Liv 2, Liv 3, and Gb 34 for facial paralysis.

Use with Sp 10, Gb 20, Co 4, Co 11, Liv 2, Sp 1, Sp 3, Gv 20, and Co 20 for epistaxis.

Applications:

He attacks with a hook punch where the outer forearm is pointing toward you. His small finger is facing upward. Use your knife edges to strike within a split second of each other to Co 3 and Co 6 (fig. 294). Now, both knife edges rebound across the neck at Co 17 and 18 (fig. 295).

CO 7 (COLON POINT NO. 7)

Chinese name:
Wenliu (warm slide).
Location:
When a fist is made with the ulnar side downward and the elbow flexed, the point is 5 cun above Co 5.
Connections:
None.
Direction of strike:
Straight down onto the forearm.
Damage:
This is a xie cleft point, meaning that it is an accumulation point. A strike here will cause local pain and qi drainage. It will cause pain along the whole channel and, if struck hard enough, can cause a KO. Used with any of the neurological shutdown points, in particular No. 1 across the jaw, it will cause KO even with a mild blow. This is an excellent set-up point for a Co 11 shot.
Set-up point:
Neurological shutdown points.
Antidote:
Use Gb 20.
Healing:
Innervation is by the posterior antebrachial cutaneous nerve and the deep ramus of the radial nerve. Irrigation is by the muscular branch of the radial artery, the cephalic vein.

Used for headache, facial swelling, sore throat, borborygmus, abdominal pain, aching in the shoulder and arm, stomatitis, parotitis, and glossitis.

This is a xie cleft point of the Co meridian, so its traditional function is to treat acute disorders of the organ and channel. *Wen* means warm, and *liu* means circulation, so this point is able to warm the channel and promote circulation and is good for treating cold pain of the elbow.

Massage techniques are the same as for Co 6.

Use with Co 1, Co 2, St 37, St 25, Bl 25, Bl 20, Cv 12, Liv 3, Liv 2, and Lu 7 for inflammatory conditions of the large intestine.

Use with Co 15, Co 14, Co 11, Co 4, Co 1, Co 2, Gb 21, jianneling, naoshang, Gb 34, and St 38 for acute injury to the anterior of the shoulder.

Use with Co 4, Co 11, St 44, St 45, Liv 2, and Liv 3 for stomatitis.
Applications:
Take his right straight with your right palm, the left one taking over immediately. The right palm now strikes to the side of his jaw, then straight down onto Co 7 using the knife edge across the forearm.

CO 8 (COLON POINT NO. 8)

Chinese name:
Xialian (lower integrity).
Location:
4 cun below Co 11. *Xia* means inferior, and *lian* means edge; the point is inferior to Co 9, on the dorsal side of the forearm, close to the radial aspect.
Connections:
None.
Direction of strike:
Straight down onto the upper forearm.
Damage:
Same as for Co 7. This is not a xie cleft point, but it does cause a KO when struck really hard. Use

this point with Lu 1, and it will enhance the shot tenfold! The power of the whole body is drained when these two points are struck slightly after each other, Lu 1 first.

Set-up point:

Lu 1.

Antidote:

Massage Lu 1 on the opposite side downward using the thumb.

Healing:

Used for pain in the elbow and arm, abdominal pain, headache, painful eyes, vertigo, and mastitis.

Massage techniques are the same as for Co 6.

Use with Co 11, Co 10, Co 9, Co 7, Co 4, Gb 34, Co 1, Co 2, Liv 3, Gb 43, and Gb 44 for tennis elbow, or repetitive strain injury of the forearm.

Use with Co 4, Cv 17, Liv 3, St 15, St 36, Sp 18, Sp 21, Si 1, Si 2, Bl 18, Bl 17, Liv 4, St 18, Pc 6, Th 10, Kd 22, and Bl 40 for mastitis.

Applications:

Block his hand attack and strike slightly upward into Lu 1 with a one-knuckle punch, then straight down onto Co 8 with a knife edge.

CO 9 (COLON POINT NO. 9)

Chinese name:

Shanglian (upper integrity).

Location:

3 cun below Co 11. *Shang* means superior, and *lian* means edge; the point is superior to Co 8 on the dorsal side of the forearm, close to the radial aspect.

Connections:

None.

Direction of strike:

Straight down onto the forearm using a knife-edge strike.

Damage:

This strike will cause paralysis of the hand and arm, and again, if used along with Lu 1, it will cause such power loss that the fight will be over.

Set-up point:

Lu 1.

Antidote:

Same as Co 8.

Healing:

Innervation and irrigation are the same as for Co 8.

Use for aching of the shoulder region, motor impairment of the upper extremities, numbness of the hand and arm, borborygmus, hemiplegia, sprain, intestinal noises, and abdominal pain.

Massage is the same as for Co 6.

Use with St 36, Gb 34, Gb 30, Gb 29, Bl 25, Bl 26, St 25, Cv 6, Cv 4, Cv12, and Gb 26 for fullness in the flanks and abdomen.

Use with Gb 21, Co 11, Co 10, Co 8, Co 13, Lu 8, Gb 34, Co 4, and St 36 for pain in the arm as a result of exposure to wind/cold.

Applications:

The same as for Co 8.

CO 10 (COLON POINT NO. 10)

Chinese name:

Shousanli (arm's three measure).

Location:

2 cun below Co 11 on the radial aspect of the radius, in the extensor carpi radialis brevis and longus muscles.

Connections:

None.

Direction of strike:

This is a major dim-mak strike, either by itself or as a set-up point. Strike straight in to the point on the upper forearm. Or strike slightly upward or slightly downward, causing different reactions.

Damage:

This strike will paralyze the arm, and in some cases it will stop the heart. It causes a shock wave to rise up the arm into the upper body, and it will cause KO if struck hard enough. Usually it is used with St 9 for a death blow! This point will affect the whole Co meridian, especially around the arm, neck, and face, which is why St 9 works really well with this point. When the point is struck slightly upward, the lower body will lose qi and there will be nausea. We have had several martial artists who have received a whack on Co 10 go down and turned slightly green. When it is struck slightly downward (down the forearm toward the fingers), the bowels may work on the spot! When it is struck straight in, the lower abdomen will go into spasm, the arm will become paralyzed, and there may be residual diarrhea for a number of days.

Set-up point:

None. Use it as a set-up point.

Figure 296

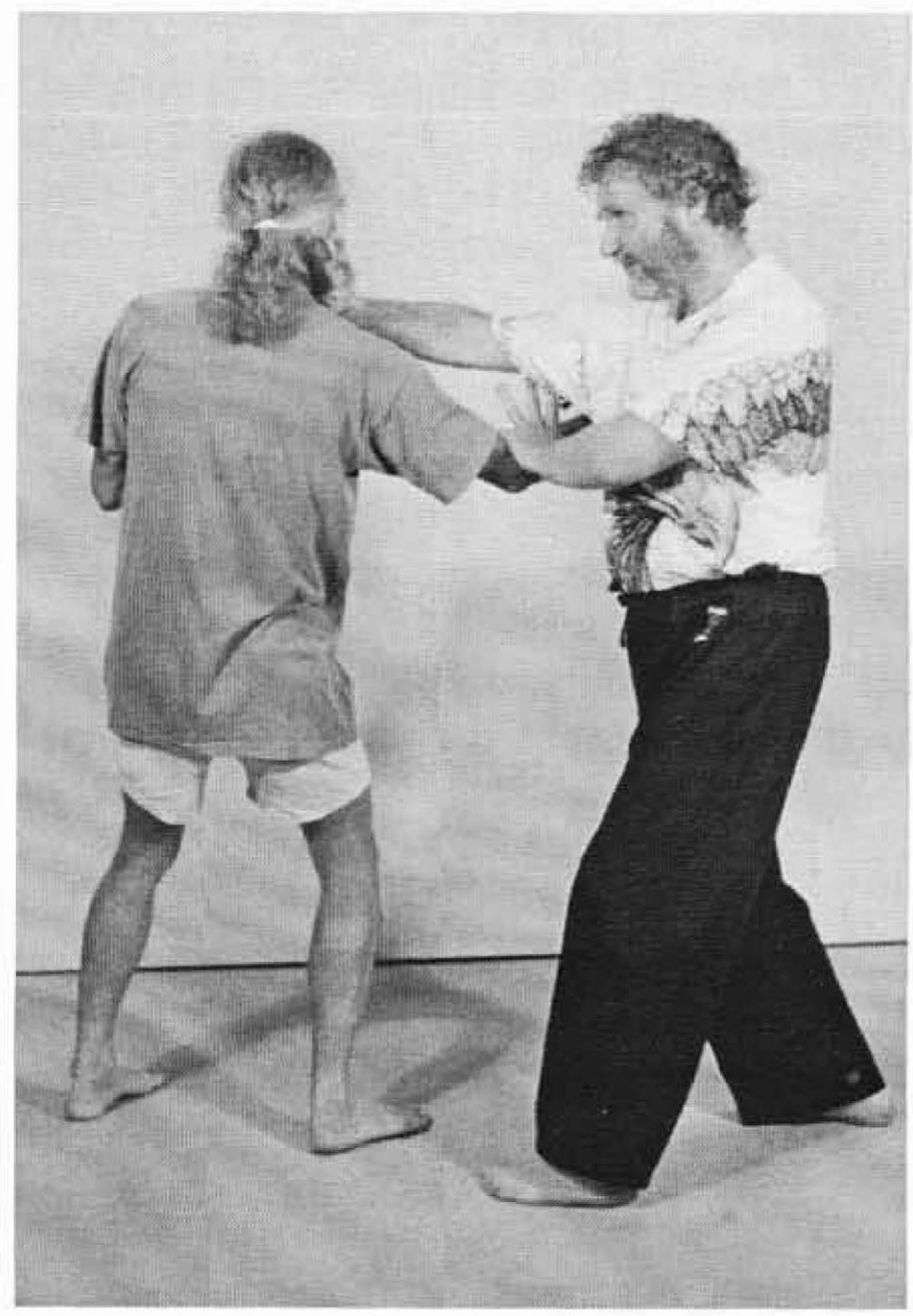


Figure 297

Antidote:

When you do not know the direction of the strike, take both arms at around Co 10 and squeeze all the fingers together (squeeze the whole upper arm). Or squeeze Co 1 and press Co 4 for an upward strike. For a downward strike, massage the opposite Co 10 in the same direction using medium pressure. Squeeze Co 1. If the strike was straight in, use the knuckles to scrape (massage) down the outside of the forearm on both arms.

Healing:

Innervation is the same as Co 7. Irrigation is by the branches of the radial recurrent artery and vein.

Used for abdominal pain, vomiting and diarrhea, pain in the shoulder region, motor impairment of the upper extremities, ulcer, stomachache, and indigestion.

Traditional indications include toothache, loss of voice, swelling of the mandible and cheek, scrofula, vomiting with diarrhea, hemiplegia, and it is much used for arm problems and edema of the arms.

Massage is the same as for Co 6, and you can also do loose fist percussion on this point.

Use with Cv 12, St 36, Liv 2, Liv 3, Co 4, Gb 29, Bl 17, Bl 18, and Bl 20 for gastric or duodenal ulcers.

Use with St 36, Cv 12, St 21, Liv 3, Liv 14, Liv 13, St 25, Gb 26, St 37, Sp 3, Bl 20, Bl 25, Bl 18, Bl 19, Bl 17, and Bl 21 for lumps in the abdomen due to stagnant food.

Use with Co 15, Co 14, Co 4, Co 16, Gb 21, jianneling, and naoshang for anterior shoulder pain and stiffness.

Applications:

He attacks with a straight right. You step to your left and attack Co 10 with your right backfist (fig. 296). Your left palm takes over this strike as your right knife edge strikes straight in to St 9. This is a death-point combination (fig. 297).

CO 11 (COLON POINT NO. 11)

Chinese name:

Quchi (crooked pool).

Location:

When the elbow is flexed, the point is in the depression at lateral the end of the transverse cubital crease, midway between Lu 5 and the lateral epicondyle of the humerus. On the radial aspect of the elbow at the origin of the extensor carpi radialis muscle and the radial side of the brachioradialis muscle.

Connections:

None.

Direction of strike:

Straight in to the back of the elbow.

Damage:

This is a major point because it is an earth and he point. It normally calms and regulates the whole system, but when struck using negative qi, it will have the reverse effect. Not only will the elbow joint be damaged as a result of purely physical damage, but the whole joint system of the body can be made weaker. The point also can cause diarrhea and vomiting. This point will also upset the balance between the shen and the body. However, you must be aware that you may also damage your own hand on the target elbow! So use a palm strike here.

Set-up point:

Co 7.

Antidote:

Massage the opposite Co 11 and squeeze Co 1.

Healing:

Innervation is by the posterior antebrachial cutaneous nerve and, deeper, on the medial side, the

radial nerve. Irrigation is by the branches of the radial recurrent artery and vein. Used for pain in the elbow and arm, motor impairment of the upper extremities, scrofula, uticaria, abdominal pain, vomiting, diarrhea, dysentery, febrile disease, sore throat, arthritic pain of the upper limbs, hemiplegia, hypertension, high fever, measles, anemia, allergies, goiter, and skin disease. Traditional indications include red and painful eyes, toothache, throat blockage, nodular growths in the neck, goiter, hives, wind rash, dry parched skin, hemiplegia, light menstrual flow, windstroke, and heat in the Co meridian.

As an earth point and a he sea point of the stomach meridian, its traditional functions are to eliminate wind and exterior conditions, cool heat, resolves damp, regulate the blood and qi, remove obstructions from and soothe the joints, and serve as a cooling point for internal heat as well as wind/heat.

Massage techniques are the same as for Co 10.

Use with Gb 20, Gb 21, Bl 10, Gv 20, Gb 14, Co 4, yintang, taiyang, Liv 3, St 36, Gb 34, and Gb 41 for headache.

Use with Co 4, yintang, Lu 11, Lu 8, Lu 5, Bl 17, Sp 10, and St 36 for measles.

Use with Gv 20, Bl 14, Bl 15, Bl 17, Bl 18, Bl 20, St 36, St 40, St 9, Gv 14 Liv 2, Liv 3, Liv 4, and Liv 8 for hypertension.

Use with Co 4, Lu 7, Ht 7, Pc 6, Liv 3, Liv 2, Liv 4, St 36, Gb 34, and Cv 17 for smoking and other drug withdrawal.

Use with Co 4, Gb 20, Gb 21, Bl 12, Bl 13, Bl 43, Bl 17, Lu 7, Cv 17, Lu 5, Lu 8, and Lu 6 for colds and flu-type symptoms.

Use with Co 4, Lu 10, Lu 11, Lu 5, Lu 8, Cv 22, Liv 2, Bl 13, and Bl 17 for sore throat, loss of voice, etc.

Applications:

He attacks with a right, and you use the knuckles of your right backfist to strike straight into Co 7. Your right palm now grabs around his right wrist as your left palm strikes straight in to Co 11 and your right palm pulls backward violently, thus breaking the elbow joint.

CO 12 (COLON POINT NO. 12)

Chinese name:

Zhouliao (elbow seam).

Location:

When the elbow is flexed, the point is superior to the lateral epicondyle of the humerus, around 1 cun superolateral to Co 11, on the medial border of the humerus at the origin of the anconeus muscle and the lateral margin of the triceps muscle. *Zhou* means elbow, and *liao* means foramen; the point is at the elbow close to the foramen.

Connections:

None.

Direction of strike:

Straight in and slightly downward over the lump of the elbow.

Damage:

Great qi drainage when struck downward into the elbow. This point is struck with the knife edge of the palm, which strikes with the palm facing slightly downward and then rolls over to palm up as it strikes, thus causing more of a cutting action on the point. This point works so well that few people will be able to continue after being struck here.

Set-up point:

None.

Antidote:

Grab both points and squeeze gently downward.

Healing:

Innervation is by the posterior antebrachial cutaneous nerve, and, deeper, on the medial side, the radial nerve.

Irrigation is by the radial collateral artery and vein.

Used for pain/contracture and numbness of the elbow and arm and inflammation of the lateral epicondyle of the humerus.

Traditional indications include pain in the elbow and arm, spasm or numbness of the arm, and lassitude. Massage techniques are the same as for Co 11. Use with Gb 34, Gb 43, Gb 44, Co 4, Co 1, Co 2, Co 11, and Co 10 for inflammation of the lateral epicondyle of the humerus.

Use with Co 15, Co 11, Co 4, Th 6, Th 13, Si 4, Gb 34, St 40, Bl 39, St 28, Cv 5, Cv 2, Cv 3, Cv 9, Kd 6, Sp 9, and Bl 22 for multiple neuritis resulting in numb hands.

Applications:

He attacks with a low left hook. Your left palm strikes to Co 12 just above the elbow and continues to cut inward to just over the elbow lump. This would be followed by a strike to St 9 with the same hand, or into Liv 14 with both hands, the right palm pushing in behind the left palm to assist in the power.

CO 13 (COLON POINT NO. 13)

Chinese name:

Shouwuli (five measures on the arm).

Location:

Superior to the lateral epicondyle of the humerus, 3 cun above Co 11, on the line connecting Co 11 with Co 15.

Connections:

None.

Direction of strike:

Straight in to the outer side of the upper arm, usually with a knife edge.

Damage:

This point is more of a nerve point strike, which inflicts great pain and nervous shock. The pain will grow very quickly until the recipient has to give up because of this pain. This strike does not have to be that hard, either, although a hard strike will impose the greatest pain.

Set-up point:

None.

Antidote:

Rub the whole outer, upper part of the arm downward with medium pressure.

Healing:

Innervation is by the posterior antebrachial cutaneous nerve, and deeper, the radial nerve. Irrigation is by the radial collateral artery and vein.

Used for contracture and pain of the elbow and arm, scrofula, coughing blood, pneumonia, and peritonitis.

Some texts forbid needling here, claiming that if it is needled five or six times in a lifetime, then death will result. Others urge extreme caution to avoid the artery if needling this point. Massage and moxa are traditionally used on this point.

Massage techniques are the same as for Co 6.

Use with Co 4, Co 11, Lu 9, Sp 10, Bl 17, Lu 6, and Bl 13 for coughing up blood.

Use with Co 12, Co 14, Co 15, Co 11, Co 4, Co 2, Co 1, Gb 34, Th 4, Th 6, Th 13, and Th 14 for contracture and pain in the elbow and upper arm.

Applications:

Take his left strike with your right palm, moving it over to your left. This will load your right elbow, which now comes back to strike straight in to Co 13, causing the fight to be finished.

CO 14 (COLON POINT NO. 14)

Chinese name:

Binao (arm and scapula).

Location:

On the radial side of the humerus, superior to the lower end of the deltoid muscle, on the line connecting Co 11 to Co 15. *Bi* means arm, and *nao* means muscle prominence of the arm; thus, this point is on the muscle prominence of the arm.

Connections:

A internal branch to Th 13.

Direction of strike:

Straight in to just under the shoulder on the upper arm.

Damage:

This point strike causes great qi damage to the whole body being one of the "seven star" points. The seven star points (Gv 20, Co 14 points, Si 16 points, and Gb 30 points) are those that take energy in from the outside. They are used in qigong stances as qi input points. A strike to Co 14 will block energy from entering the body and cause weakness and extreme emotional problems due to the mind's knowing that something really bad has happened but not quite knowing what.

Set-up point:

Co 12.

Antidote:

Place the palms on top of the head at Gv 20 and press downward lightly. Then hold both palms over each of the pairs of seven star points for 30 seconds.

Healing:

Innervation is by the posterior brachial cutaneous nerve and, deeper, the radial nerve.

Irrigation is by the branches of the posterior circumflex humeral artery and vein and the deep branch of the brachial artery and vein.

Used for pain in the shoulder and arm, scrofula, paralysis of the upper limbs, and disease of the eye.

Traditional indications include chills and fever, pain in the shoulder and upper back inhibiting the lifting of the shoulder, and scrofula.

Traditional functions are to clear the channels and the vision.

Massage techniques are the same as for Co 10.

Use with Bl 1, St 1, Gb 1, Th 23, yuyao, Co 4, Liv 3, and Gv 20 for disease of the eyes.

Use with Co 15, Co 11, jianneling, naoshang, Gb 34, St 38, Gb 43, Gb 44, Liv 4, Liv 8, Bl 25, St 37, and St 25 for anterior shoulder problems.

Applications:

He attacks with a right attack to your midsection. Your right palm strikes his right Co 12 point downward and then hooks over his arm to throw it over to your right, thus exposing his right side. Your right elbow now attacks straight in to Co 14.

CO 15 (COLON POINT NO. 15)

Chinese name:

Jianyu (shoulder bone).

Location:

Anteroinferior to the acromion, in the middle of the upper portion of the deltoid muscle. When the arm is in full abduction, the point is in the anterior depression of the two depressions appearing at the anterior border of the acromioclavicular joint. *Jian* means shoulder, and *yu* means corner; the point is at the corner of the shoulder.

Connections:

This is the departure point of the divergent meridian.

Direction of strike:

Straight down onto the tip of the shoulder, just a little up on the shoulder.

Damage:

Not a great qi damage point; it is more used for healing. However, a good hard strike here will either break or dislocate the shoulder, so it is a good physical shot.

Set-up point:

None.

Antidote:

Medical treatment.

Healing:

Innervation is by the lateral supraclavicular nerve and the axillary nerve. Irrigation is by the posterior circumflex artery and vein.

Used for pain of the shoulder and arm, motor impairment of the upper extremities, rubella, scrofula, hemiplegia, hypertension, perifocal inflammation of the shoulder joint, and excessive sweating.

Traditional indications include wind dampness in the shoulder, hemiplegia, wind rash (urticaria), lack of arm strength, goiter, and it is used a lot for wind stroke.

Traditional functions are to eliminate wind and remove obstructions from the jing-luo, soothe the joints, and serve as a crossing point of yin qiao mai.

To massage, press and hold; do rotations clockwise or counterclockwise for xu or shi conditions; press in slowly with both thumbs and release quickly, pulling the thumbs apart; and do fingertip or loose fist percussion. Cupping this point can give immediate relief to shoulder problems where there is an inability to lift the arm.

Use with Co 4, Co 11, Co 5, Gb 20, Lu 7, Lu 5, St 36, and Liv 3 for wind rash.

Use with Co 14, Gb 20, Gb 21, Th 15, Si 3, Si 13, Si 14, Si 15, Si 9, naoshang, jianneling, St 38, St 37, Bl 25, Bl 17, Si 10, Bl 43, Gb 34, Co 1, Co 2, Co 3, Co 4, and Co 10 for shoulder problems.

Use with moxa on Cv 24, St 6, Lu 7, Lu 9, Lu 10, and Si 5, and massage Co 41, St 44, Kd 3, St 7, and Gb 21 for toothache. This is also a crossing point of the bladder muscle meridian.

Applications:

Same as for Co 14, only slam down onto the shoulder.

CO 16 (COLON POINT NO. 16)

Chinese name:

Jugu (great bone).

Location:

In the upper aspect of the shoulder, in the depression between the acromial extremity of the clavicle and the scapular spine. In the trapezium and supraspinatus muscles. *Ju* means huge, and *gu* means bone; the clavicle was called jugu in ancient times.

Connections:

Point of yang qiao mai. There is an internal pathway to Si 12, Gv 14, and St 12, and then a branch to St 25.

Direction of strike:

Straight down near the collarbone from the back.

Damage:

Great qi drainage and physical damage to the clavicle. This point must be struck very hard, though. It is difficult to strike the exact spot, so I usually suggest using a larger weapon, such as a palm strike, and hoping for the best (although a thumb-knuckle punch is the best weapon for this point).

Set-up point:

Co 12.

Antidote:

Seek medical treatment because the clavicle will probably be broken. Place the palms onto the top of the head at Cv 20 and use light pressure downward.

Healing:

Innervation occurs, superficially, by the lateral supraclavicular nerve, the branch of the accessory nerve, and, deeper, the suprascapular nerve. Irrigation is deep, by the suprascapular artery and vein.

Used for pain in the shoulder, pain and motor impairment of the upper extremities, spitting blood, scrofula, and diseases of the shoulder joint and surrounding soft tissue.

Traditional indications include pain in the arm and shoulder inhibiting movement, frightened convulsions, spitting blood, scrofula, and nodular growths on the neck.

Traditional functions are to disperse congealed blood and clear the channels. It is a crossing point of the yang qiao mai.

Massage techniques are the same as for Co 15, though cupping is also used here. Use with Ht 1, Th 14, Bl 43, Si 9, Si 10, Si 11, Si 12, Si 13, Si 14, Si 15, Co 15, Si 3, Gb 34, Co 11, Th 4, Th 6, and Bl 25 for perifocal inflammation of the shoulder joint.

Use with Lu 6, Lu 5, Lu 10, Co 4, Co 11, Sp 10, Bl 17, Bl 13, Liv 4, Liv 2, Liv 8, and Co 13 for coughing up blood.

Applications:

Same as for Co 15, only use a thumb-knuckle punch down onto the shoulder slightly toward the front of the body.

CO 17 (COLON POINT NO. 17)

Chinese name:

Tianding (heaven's vessel).

Location:

On the lateral side of the neck, superior to the midpoint of the supraclavicular fossa (St 12), around 1 cun below Co 18, on the posterior border of the sternocleidomastoideus muscle. *Tian* means heaven, and *ding* is the term used by the ancient Chinese for a cooking vessel with 2 loop handles. Here tian implies upper, and the head looks like a *ding* (wok).

Connections:

Reunion point of the internal pathway.

Direction of strike:

In to the base of the neck at a 45-degree angle. Same direction as for St 9.

Damage:

This is one of the most dangerous points, which, when struck, will cause death. The blood will be blocked, the qi will be blocked, and the brain will be shocked. Not even CPR will revive a person who has been struck here.

Set-up point:

Neigwan or Co 12.

Antidote:

None!

Healing:

Innervation occurs superficially by the supraclavicular nerve. The point is on the sternocleidomastoideus muscle just where the cutaneous cervical nerve emerges. Deeper innervation is by the phrenic nerve. Irrigation is by the external jugular vein.

Used for sore throat, laryngitis, scrofula, goiter, tonsillitis, and paralysis of the hypoglossus muscle.

To massage, press and hold, do rotations clockwise or counterclockwise for xu or shi conditions; press in slowly with both thumbs and release quickly, pulling the thumbs apart; and do fingertip percussion.

Use with Bl 10, Gb 20, Co 4, Co 11, Lu 5, Lu 10, Lu 11, Lu 6, Co 1, Co 2, Sp 10, Bl 12, Cv 22,

Liv 2, and Liv 3 for sore throat, tonsillitis, laryngitis, etc.

Use with Si 17, Co 11, Co 4, St 44, St 45, Gv 14, and Lu 5 for acute tonsillitis.

Use with Bl 12, Bl 60, Co 4, Th 1, Gb 20, Gv 20, Liv 3, Th 3, Bl 10, and Gb 21 for headache and dizziness.

Applications:

Use any of the strikes that I have already mentioned to this area of the neck, such as to St 9, cutting into the neck with the knife edge. Strike the inside of his right forearm with your left palm as your right knife edge cuts straight into Co 17.

CO 18 (COLON POINT NO. 18)

Chinese name:

Futu (support the prominence).

Location:

On the lateral side of the neck, level with the tip of the Adam's apple, between the sternal head and the clavicular head of the sternocleidomastoideus muscle. *Fu* means side, and *tu* means prominence; here, tu refers to the prominence of the larynx since the point is beside it.

Connections:

Upper meeting point of the lung and colon divergent meridians.

Direction of strike:

Again, this is at an angle of 45 degrees, same as for Co 17 and St 9.

Damage:

This is again one of the most deadly points to strike. It is close to St 9, so you could easily strike both points simultaneously, causing death immediately with no chance of revival! Do not play around with this point; even a light blow will cause great damage! It is a window of the sky point. The emotions will be affected long after this strike, with a blocked feeling in the throat, a detached feeling between the mind and body, and emotions such as grief running rampant.

Set-up point:

Co 12.

Antidote:

Have an acupuncturist needle this point 4 fen perpendicular for the emotional and detached problems. However, if this point is struck hard along with St 9, there is no antidote!

Healing:

Innervation is by the great auricular nerve, cutaneous cervical nerve, lessor occipital nerve, and the accessory nerve. Irrigation is deeper, on the medial side, by the ascending cervical artery and vein.

Used for cough, asthma, sore throat, hoarseness, scrofula, goiter, excessive mucous, difficulty swallowing, distended feeling in the throat; used for anesthesia during thyroid operations.

Traditional indications include coughing and wheezing, excessive mucous, difficulty swallowing, sounds in the throat (like a duck). It is used to ease the throat and treat goiter.

To massage, press and hold; do rotations clockwise or counterclockwise for xu or shi conditions; press in slowly with both thumbs and release quickly, pulling the thumbs apart; do fingertip percussion (with care); and use all the fingers to run down from the mastoid process to the sternoclavicular notch, depressing the sides and the center of the sternocleidomastoideus muscle (do only one side at a time).

Use with Cv 22, Kd 3, Kd 7, Lu 7, St 36, Liv 14, Liv 3, Sp 21, Bl 43, Bl 17, Bl 13, and St 40 for asthma.

Use with Cv 22, Co 4, Cv 17, Lu 1, Lu 7, Lu 8, Bl 13, Bl 17, Liv 3, Co 11, and Lu 5 for cough, sore throat, and hoarseness.

Use with Bl 10, Gb 20, Gb 21, Th 15, Si 3, Si 13, Si 15, Bl 11, Bl 13, Bl 17, Bl 18, Gb 34, and Bl 60 for stiff, painful neck.

Applications:

The same as for Co 17. Or you could block his low left attack with both arms (fig. 298). Now, hold

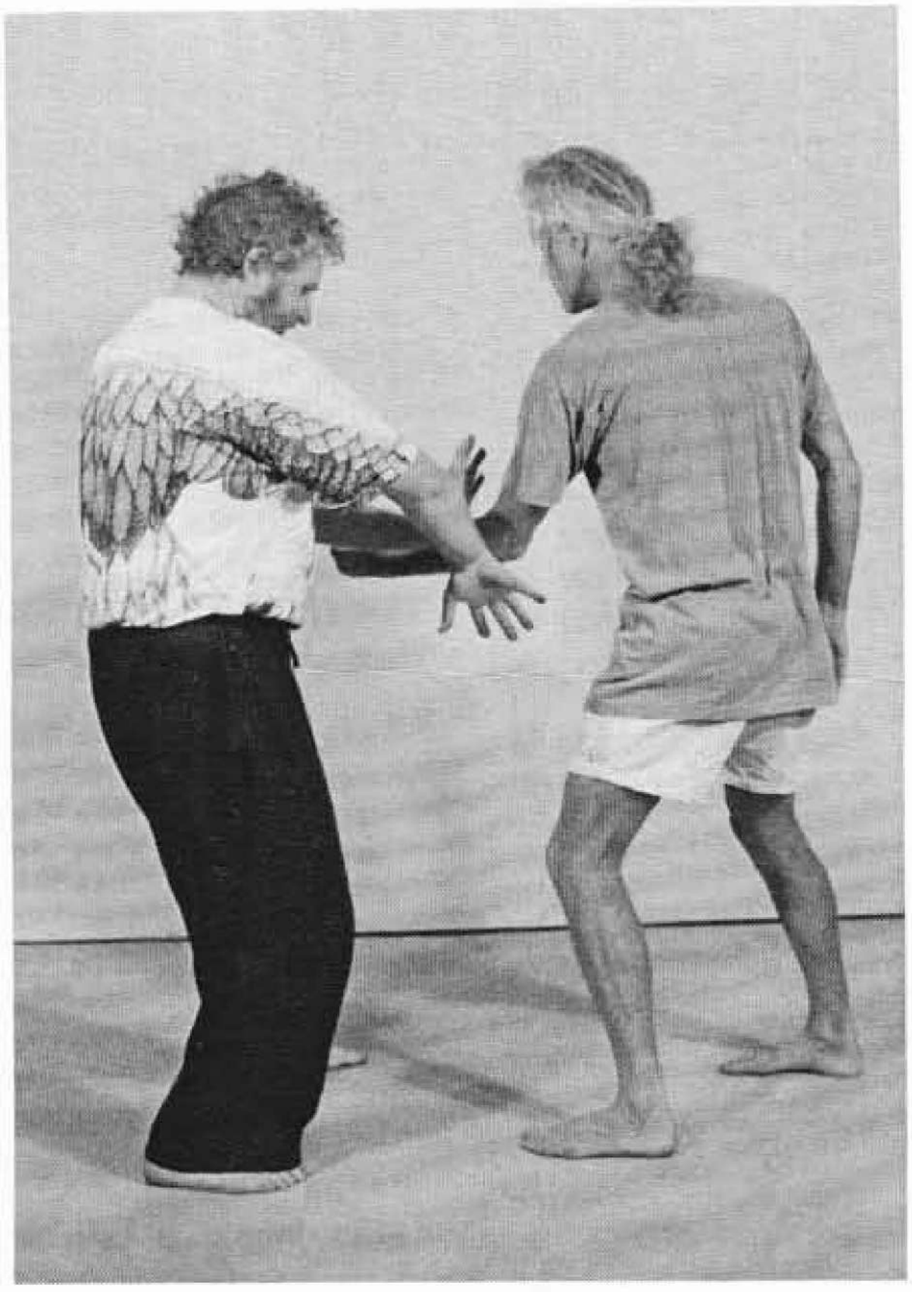


Figure 298

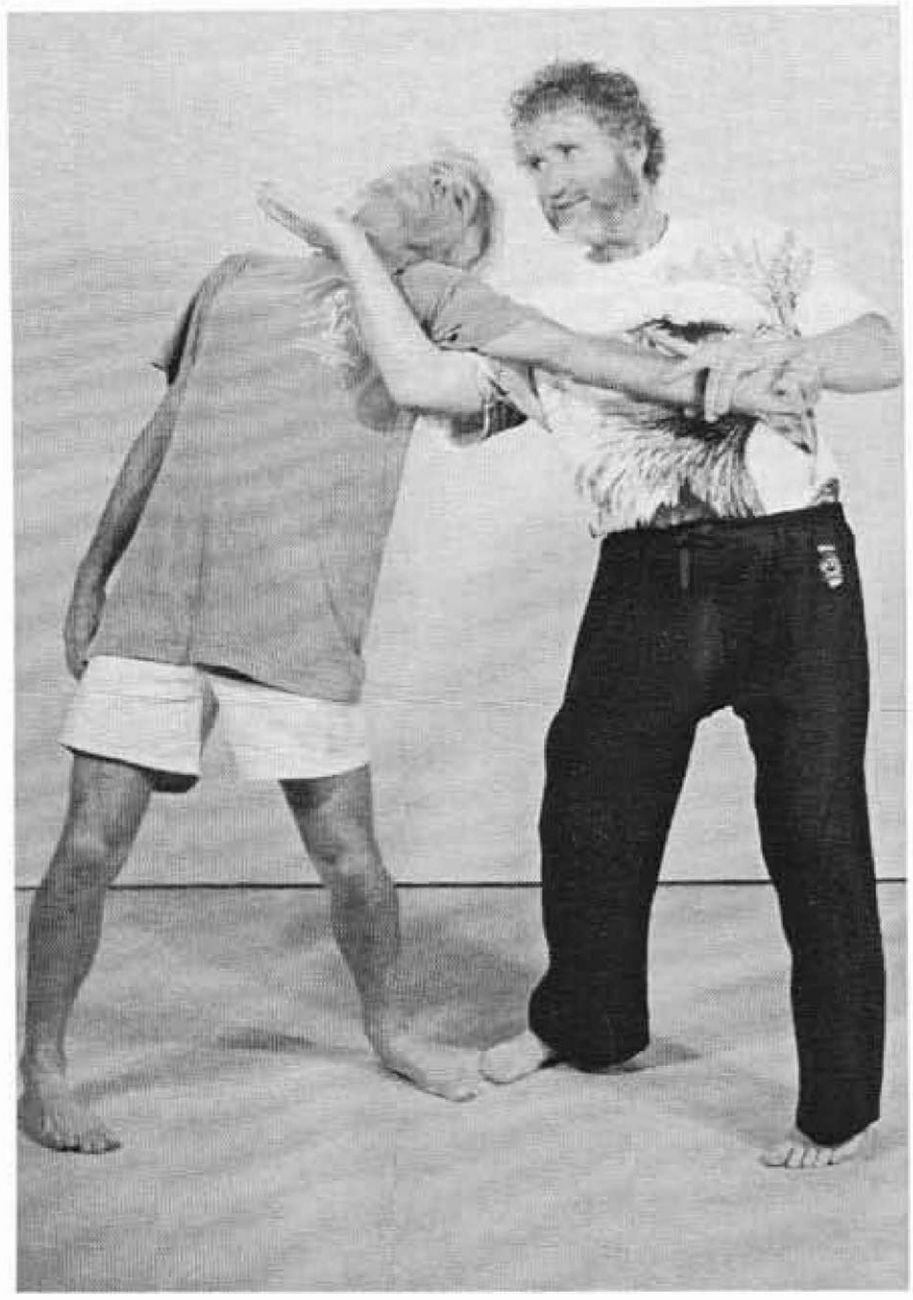


Figure 299

his left wrist with your left palm and strike up under his left arm so that the thumb side of your right palm strikes across Co 18 and St 9 (fig. 299).

CO 19 (COLON POINT NO. 19)

Chinese name:

Heliao (grain seam).

Location:

Directly below the lateral margin of the nostril, level with Gv 26, in the fossa canine of the superior maxilla, at the junction of the quadratus labii superioris muscle. The point is also called *kouheliao*. *Kou* means mouth, *he* means grain, and *liao* means foramen (the grain/food enters the stomach through the mouth); this point is in the foramen above the mouth.

Connections:

None.

Direction of strike:

Straight in above the top lip.

Damage:

This is a shock point. It will cause the recipient to go into shock. A hard strike will cause KO. Usually a backward (palm upward) thumb-knuckle punch is used here.

Set-up point:

Co 12.

Antidote:

Press inward and slightly upward into Gv 26, about two-thirds of the way up in the space between the lip and the bottom of the nose.

Healing:

Innervation is by the anastomotic branch of the facial nerve and the infraorbital nerve. Irrigation is by the superior labial branches of the facial artery and vein.

Used for epistaxis, nasal obstruction, deviation of the mouth, rhinitis, and facial paralysis.

Traditional indications include ulceration of the nose, extra tissue in the nose, nosebleed, and locked jaw.

Massage techniques include pressing and holding the point; rotating clockwise or counterclockwise for xu or shi conditions; pressing in slowly with both forefingers and releasing quickly, pulling the thumbs apart; and using gentle fingertip percussion.

Use with St 4, St 5, St 2, St 6, Gb 14, St 7, St 8, Gb 34, Gb 43, Gb 44, Liv 3, Gv 20, Gb 20, taiyang, and *qianzheng* (an extra point) for facial paralysis.

Use with yintang, Lu 7, Sp 10, Co 4, Co 11, Co 6, Co 2, Liv 2, Liv 3, St 36, and Gb 20 for nosebleed.

Use with St 3, St 44, Co 4, Co 1, Co 2, Co 3, Co 5, Kd 3, and Bl 2 for toothache.

Applications:

He attacks with a left straight. Take it with your right palm, cutting downward onto Co 12. (This could cause KO by itself.) You have stepped forward with your right foot. Turn your right foot in and, stepping with your left foot around to his rear so that you are now facing in the same direction as the attacker, bring your right thumb-knuckle punch (palm facing upward) into Co 19.

CO 20 (COLON POINT NO. 20)

Chinese name:

Yingxiang (welcome fragrance).

Location:

In the nasolabial groove, at the level of the midpoint of the lateral border of the ala nasi in the quadratus labii superior muscle and, in its deep position, at the border of the apertura piriformis.

Connections:

Internal path to St 1 and Gb 14.

Direction of strike:

Inward just next to the nose and slightly away from it.

Damage:

This point is in such a position on the cheekbone that it will cause KO. It is not a death point, but will suffice to stop an argument.

Set-up point:

Co 12.

Antidote:

This point is more of a healing point for mucus and eye problems, etc. It is also used to heal any problems associated with a strike to the same point.

Healing:

Innervation is by the anastomotic branch of the facial and infraorbital nerves. Irrigation is by the facial artery and vein and the branches of the infraorbital artery and vein.

Used for nasal obstruction, epistaxis, rhinorrhea, deviation of the mouth, itching and swelling of the face, roundworm in the bile duct, and facial paralysis.

Traditional indications include nosebleed, tissue in the nose, runny nose, inability to distinguish odors, facial swelling and itching, and mouth and eyes awry.

Traditional functions are to open the nasal passages and disperse wind/heat. It is a crossing point of the stomach meridian.

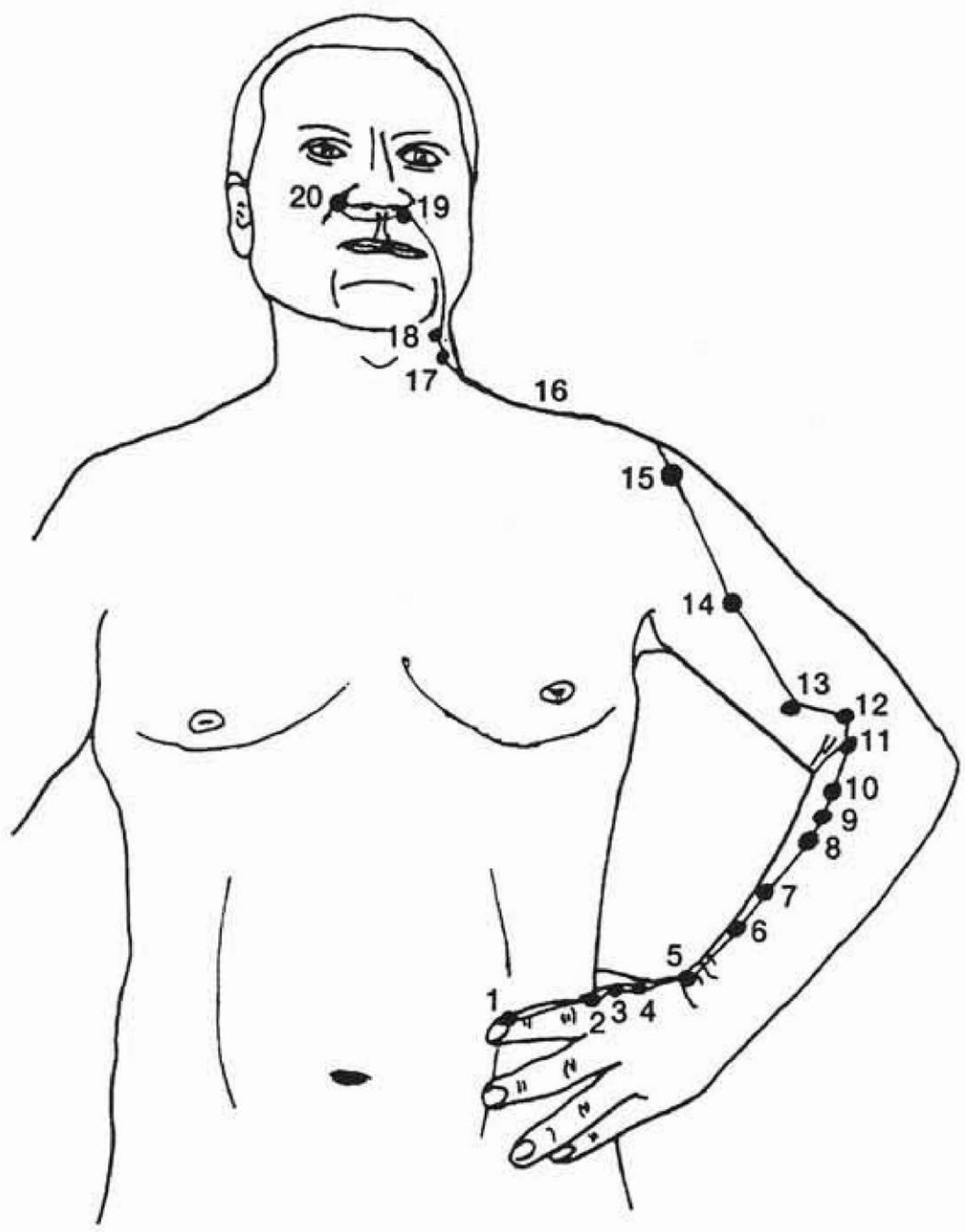
Massage techniques include pressing and holding and doing rotations clockwise or counterclockwise for xu or shi conditions. To help drain the sinuses, use as part of a rub with the forefinger from Bl 1, down the lateral sides of the nose to Co 20, then laterally out through St 3, St 6, and down over the angle of the jaw through Si 17, St 9, to Cv 22.

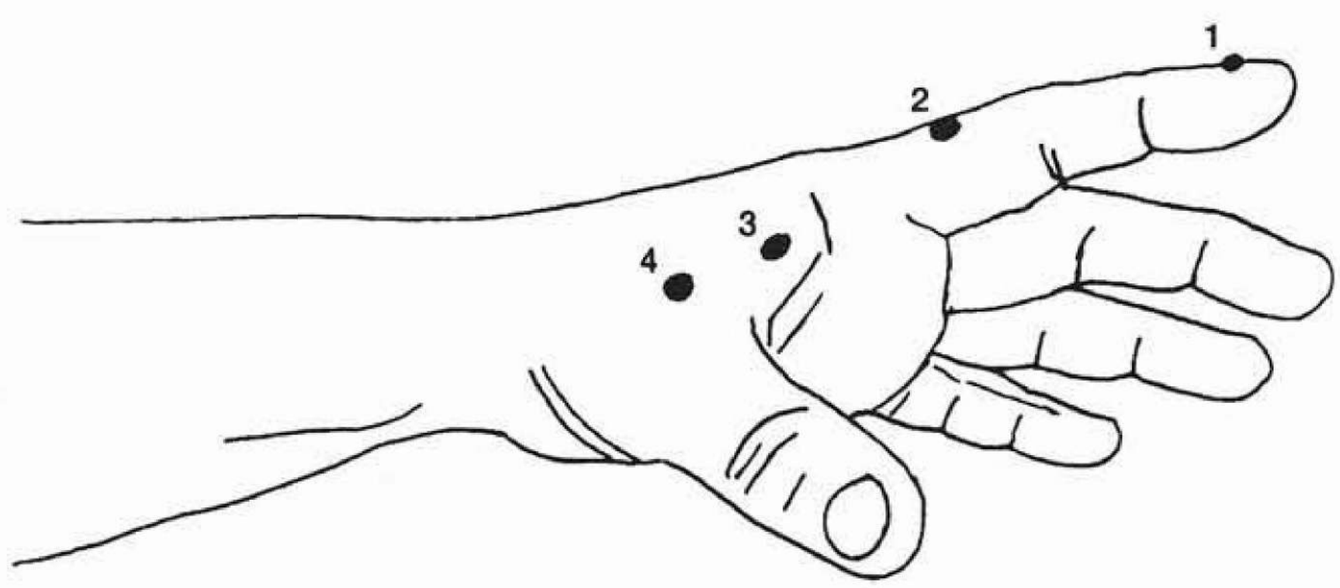
Use with Co 4, Ht 7, Gb 20, Gv 20, St 44, and St 45 for itchy, swollen face.

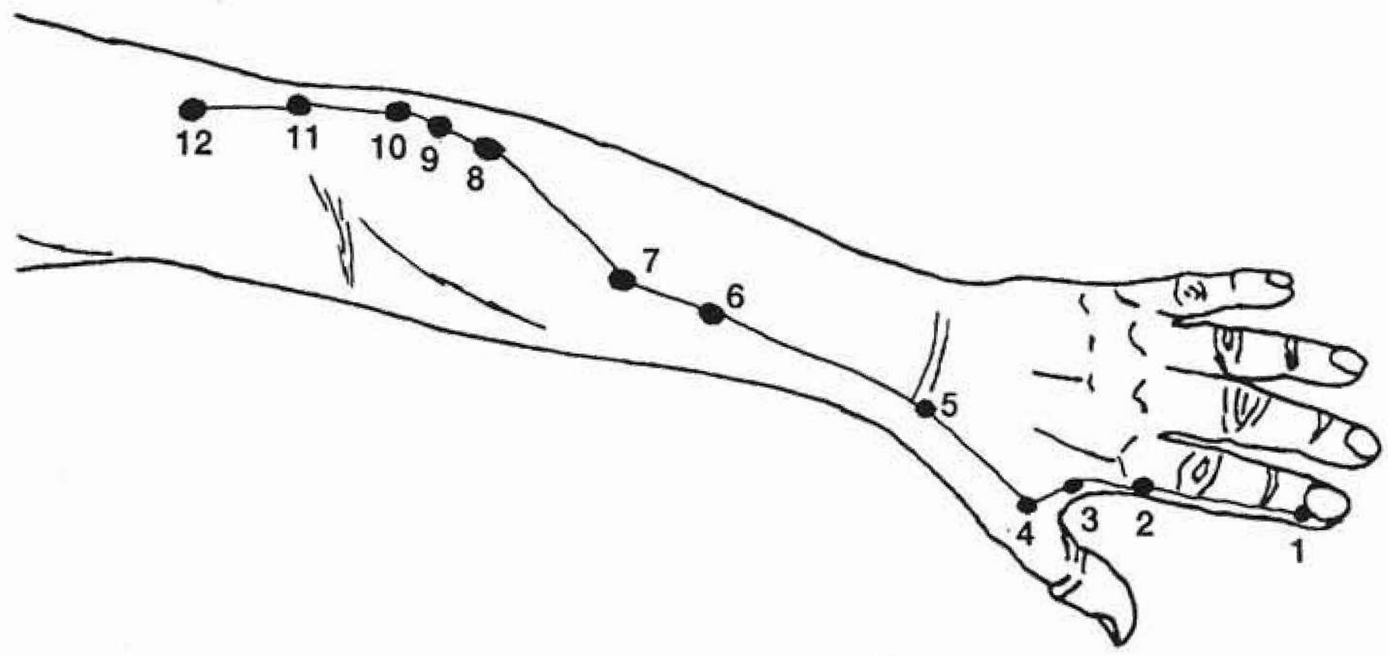
Use with Co 4, Co 11, Lu 5, Lu 7, St 36, Bl 2, Bl 4, Bl 6, Bl 7, Bl 9, Bl 10, Bl 13, St 36, and bitong for sinus congestion, blocked nose, etc.

Applications:

Take his right hook with your left palm and strike to Co 20 with your one-knuckle punch in a counterclockwise circle, causing the blow to move away from the nose to the outside of the head.



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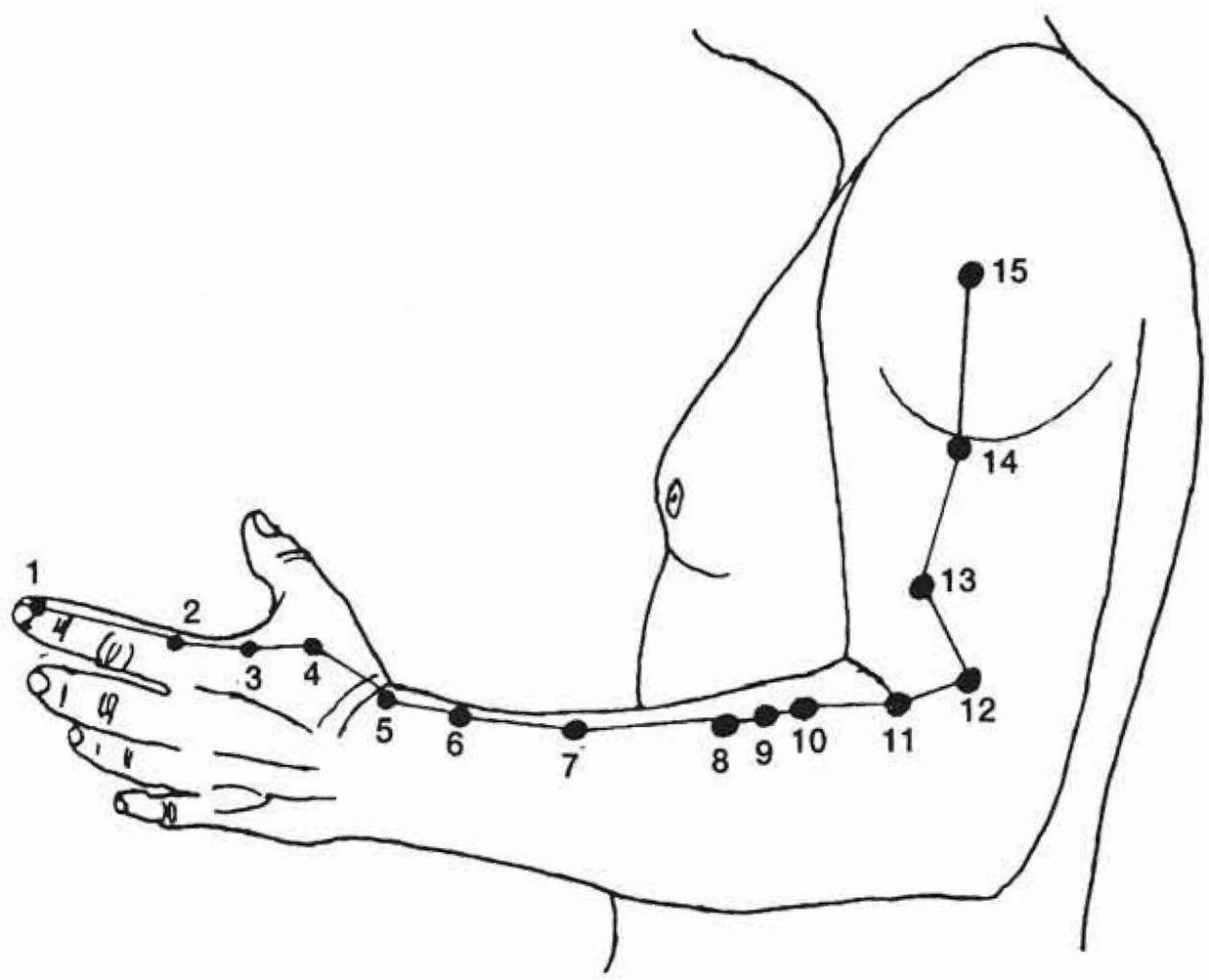
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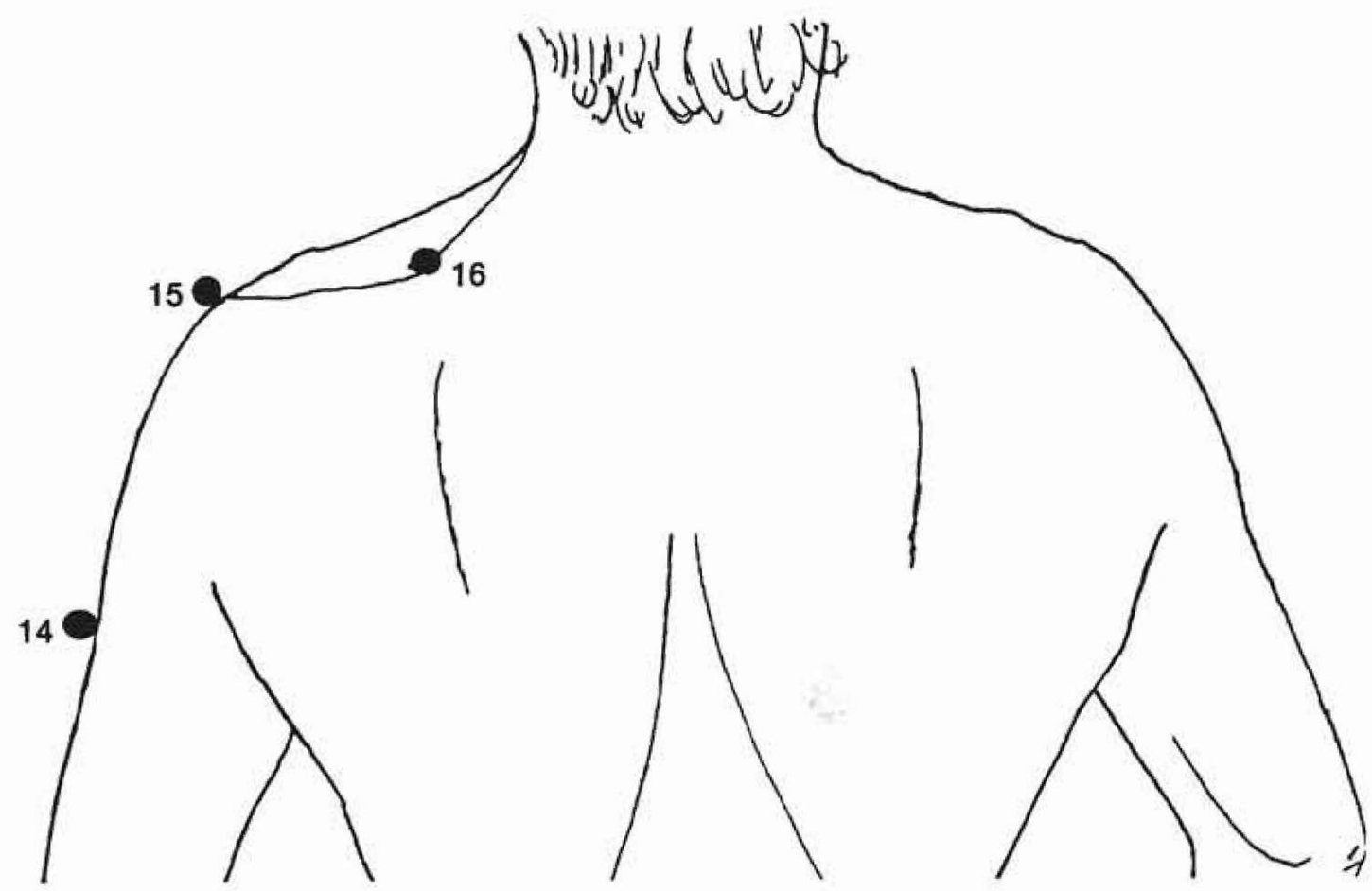
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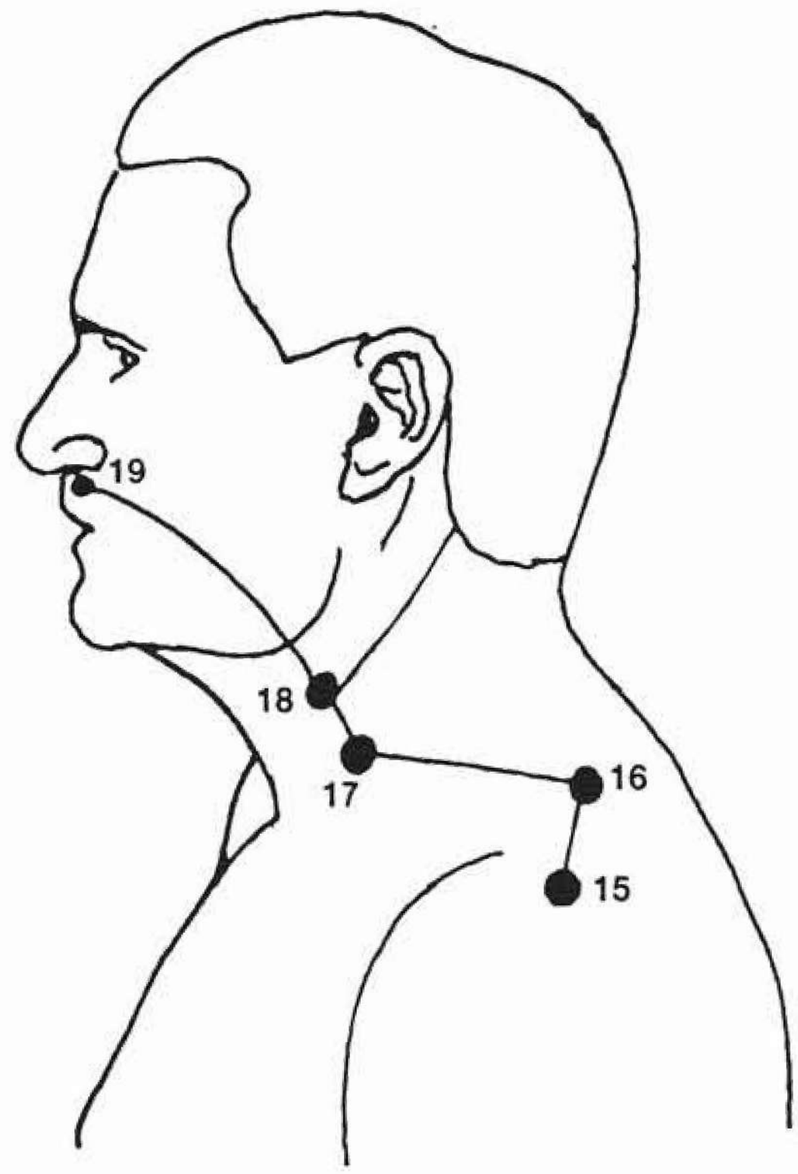
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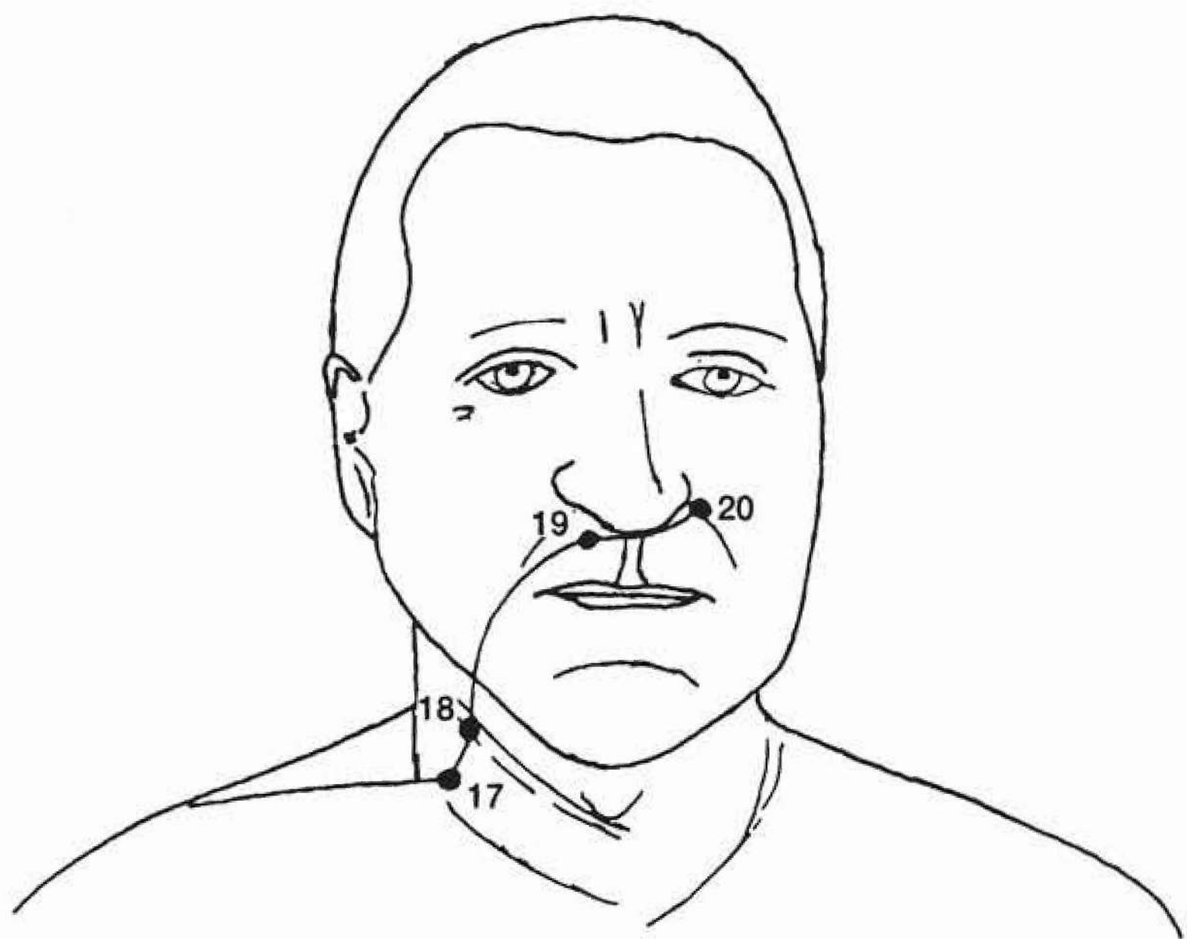
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Chapter 11

The Triple Heater Meridian

THE TCM VIEW

The Chinese element for the triple heater is fire. The triple heater's yin associated meridian is the pericardium. The official role of the triple heater is the controller of heating.

The triple heater is not so much an organ as it is a function, and, as such, there is no Western medicine equivalent. There are three "heating" spaces in the body, as follows: upper (from diaphragm to head), middle (from diaphragm to navel), and lower (from navel down). The upper space is concerned with the heart and mind. Where qigong is concerned, the upper heater also has to do with respiration. The middle heater has to do with the stomach, spleen, liver, and gallbladder. Where qigong is concerned, it has to do with digestion. The lower heater has to do with the kidneys, bladder, small intestine, and colon. In qigong, it has to do with elimination. The upper heater is concerned with the distribution of blood, qi, and air. The middle heater is concerned with absorbing nutrients from food and digesting. The lower heater is concerned with expelling waste.

The three spaces are areas of work, which creates heat. When we work on the triple heater meridian in qigong, we must work on the three individual spaces with three different qigong methods. When the three spaces are said to be balanced or in harmony, then the whole body is in harmony. The ideal situation is to have an equal amount of yin and yang energy in each of the three spaces. One of the first qigongs we do each morning is the triple heater qigong to make for a balanced and relaxed day.

There is a relationship between the three heaters (jiao). The upper heater is like a mist that rises from the cooking pot (middle heater) and acts like a condensing plate, dispersing and descending the mist rising from the middle. It corresponds to heaven.

The middle heater is like the cooking pot where things are soaked and decomposed. It corresponds to earth.

The lower heater is like an aqueduct for the flowing of water, as in a swamp from which water is drained away. It also contains the kidneys, which are responsible for fluid movement as well as the sexual function. It corresponds to man.

The triple heater meridian is the epitome of the fact that all of the organs and meridians are interconnected and if one organ or meridian is not in balance then the whole organism is also out of balance. Because the Th is representative of the whole body, if one portion is unbalanced, then so is the whole body. Although these points in acupuncture are used mainly for meridian problems, they can also be added to a specific organ ailment to enhance the treatment.

In dim-mak, the Th meridian is a very important one. The points on this meridian are excellent set-up points as well as major points, some of which are extremely deadly. Because of the nature of the Th meridian, when one point is struck the whole body will be out of balance immediately.

TH 1 (TRIPLE HEATER POINT NO. 1)

Chinese name:

Guanchong (gate's pouring).

Location:

On the lateral side of the ring finger, around 0.1 cun posterior to the corner of the nail. *Guan* means bend; since the ring finger cannot be stretched out alone, guan here is referring to the ring finger. *Chong* means gushing, the point is near the tip of the ring finger and is the jing well point where qi of the meridian originates and gushes upward along the channel.

Connections:

Takes transverse luo from Pc 6 and branch from Pc 8.

Direction of strike:

This point is on the little finger side of the ring finger. It is not used as a dim-mak point, but more in the healing area. It is a metal and cheng point. It is a controlling point for muscles and tendons and divergent meridians.

Damage:

To receive a blow to the ring finger, perhaps you might hit it with a hammer. You will cause an imbalance in the meridian, which will cause your day to be "off." It will not kill you, but it will have to be dealt with if balance is to be regained.

Set-up point:

None.

Antidote:

Do the triple heater qigong (taught in Chapter 3, under the antidote for Bl 33).

Healing:

Innervation is by the palmar digital proprial nerve derived from the ulnar nerve. Irrigation is by the arterial anevenous network formed by the palmar digital proprial artery and vein.

Used for fever, laryngitis, conjunctivitis, headache, stiffness of the tongue, sore throat, irritability, and redness of the eyes.

As a jing well point and a metal point of the triple heater meridian, its traditional functions are to dispel wind/heat conditions, as well as move excess in the channel as a result of a trauma (e.g., punch or kick to the yang aspect of the arm).

To massage, use the knuckle and forefinger to squeeze the point.

Use with Cv 24, Bl 49, Kd 2, Kd 3, Sp 6, Bl 13, Bl 23, St 36, Lu 11, Lu 10, Bl 17, Bl 21, Cv 12, Cv 4, and jiaji points lateral to T10/11 and T11/12 for diabetes where thirst and emaciation are problems.

Use with Gb 20, Bl 10, St 9, Co 17, Si 16, St 6, Bl 11, Bl 12, Si 15, Gb 21, Co 4, Co 11, Th 17, Th 3, Co 3, Lu 11, Co 2, and Co 1 for acute tonsillitis.

Applications:

None.

TH 2 (TRIPLE HEATER POINT NO. 2)

Chinese name:

Yemen (fluid's door).

Location:

Proximal to the margin of the web between the ring and small fingers. The point is located with a clenched fist.

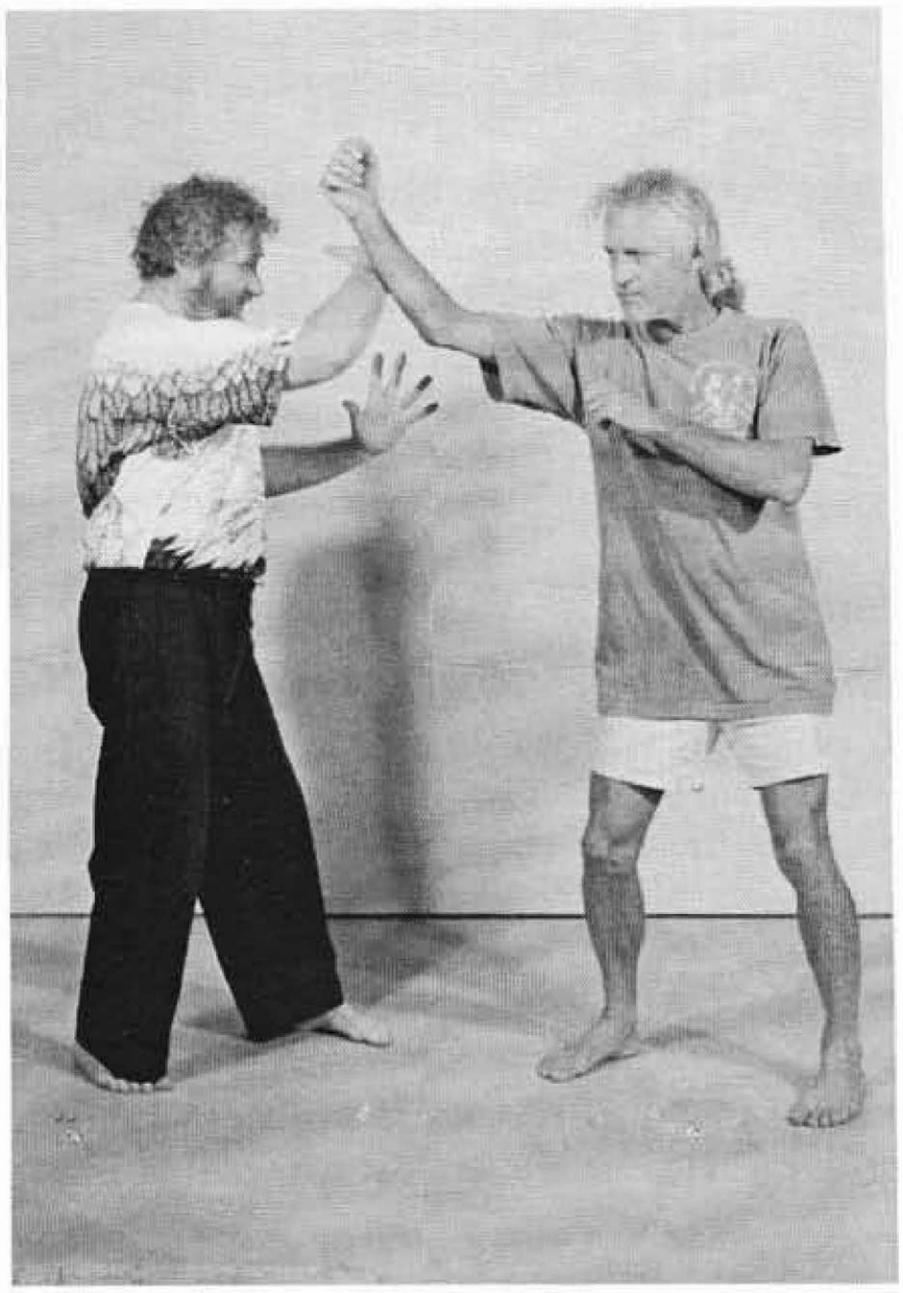


Figure 300

Connections:

None.

Direction of strike:

You could use this point in a small ch'i-na lock, digging the thumb into the point as you lock the small finger backward. Straight in at the web of the little finger and ring finger.

Damage:

This point will do internal damage and help the lock to work even better. This lock can be used by small children on adults to literally take them to their knees. This is a water and yong point and will cause great qi disruption to the body when attacked, especially the movement of fluids throughout the body. It is not a point that I would count on in a tight situation, however, as it is very difficult to get at.

Set-up point:

None.

Antidote:

Should this point cause qi damage or too much fluid to build up, you should needle the opposite point (Th 2) on the other hand 1 fen obliquely.

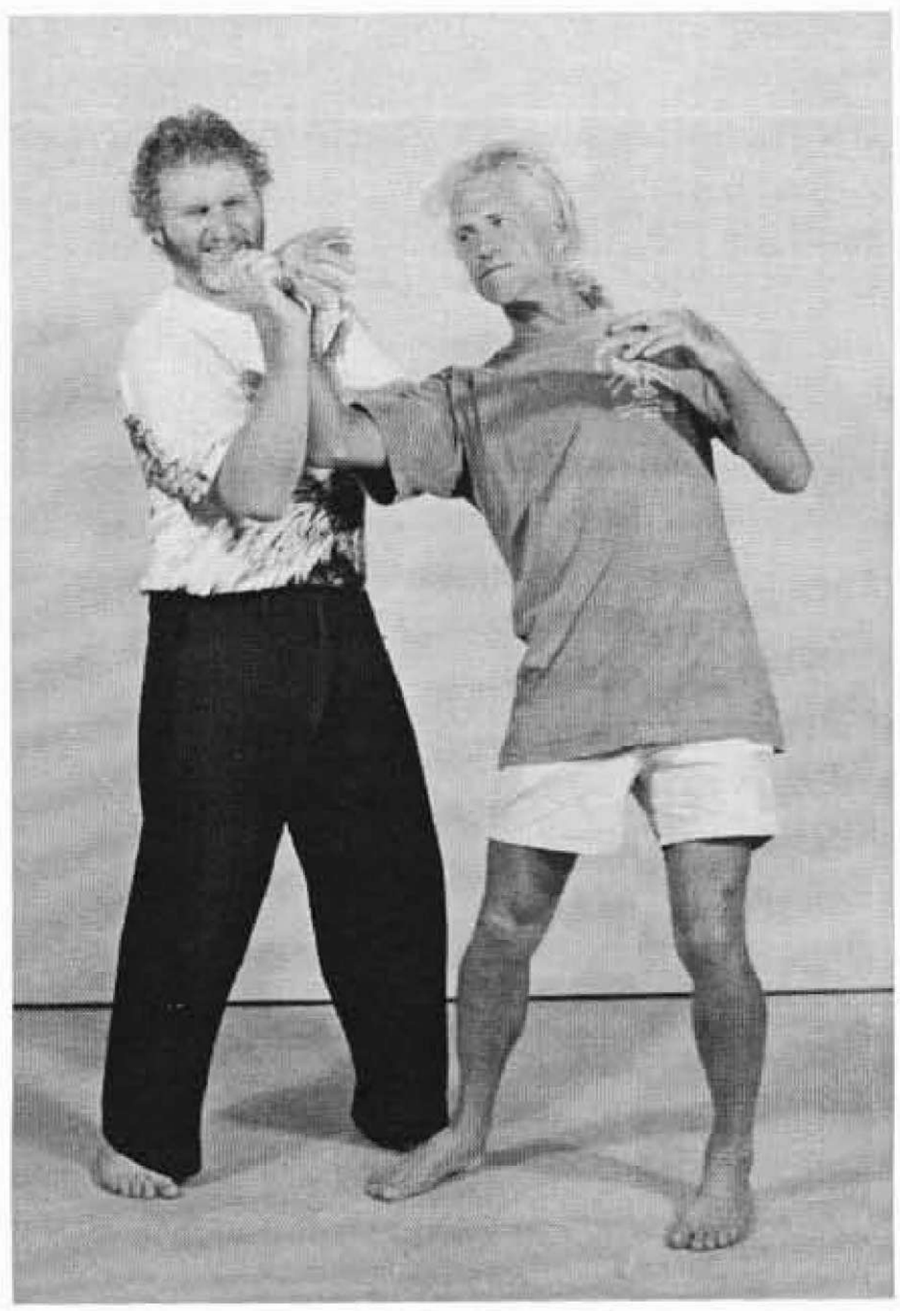


Figure 301

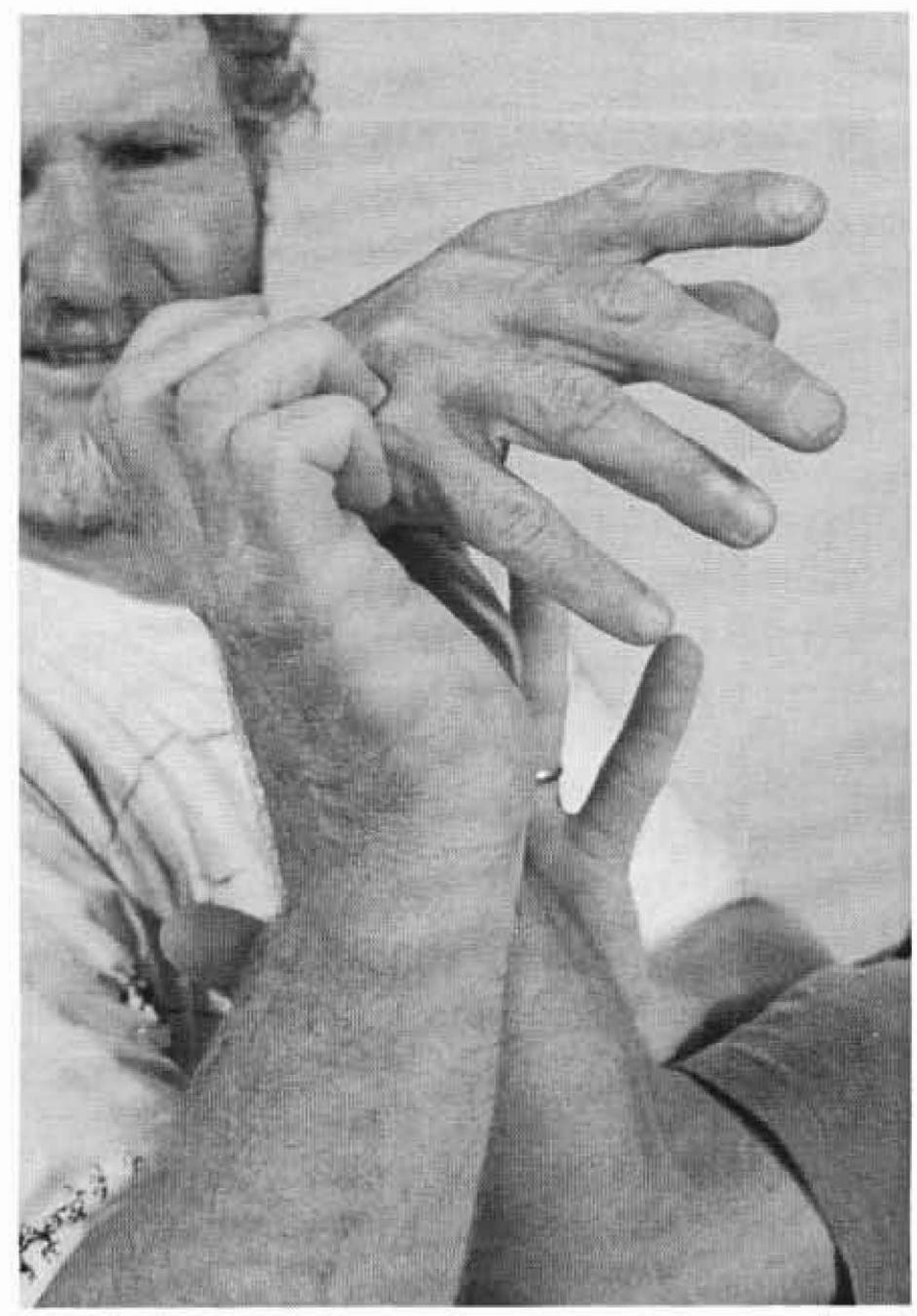


Figure 302

Healing:

Innervation is by the dorsal branch of the ulnar nerve. Irrigation is by the dorsal digital artery of the ulnar artery.

Used for headache, redness of the eyes, deafness, sore throat, pain in the hand and arm, malaria, laryngopharyngitis, and pain and swelling of the fingers.

Th 2 is a ying spring (gushing) point and a water point of the Th meridian. *Ye* means water, and *men* means door; this is the rong (ying) spring point of this channel, and it has the function of regulating water passage like a door.

To massage, press and hold, or do rotations clockwise or counterclockwise for xu or shi conditions.

Use with Th 16, Th 17, Si 19, Gb 20, Kd 3, Gb 41, Gv 20, and Th 21 for deafness.

Use with Lu 10, Lu 11, Co 4, Lu 7, Lu 5, Co 11, and Liv 2 for sore throat.

Use with Co 4, Co 11, Liv 2, Liv 3, Bl 1, St 1, Gb 1, Gb 14, and Gb 20 for red, sore eyes.

Applications:

Block his attack with your right p'eng block as your left palm guards his right hand (fig. 300). Now, quickly slide your right palm down his arm and take his little finger, pressing your thumb into Th 2 (fig. 301 and 302).

TH 3 (TRIPLE HEATER POINT NO. 3)

Chinese name:

Zhongzhu (middle island).

Location:

When the hand is palm down, the point is on the dorsum of the hand between the fourth and fifth metacarpal bones, in the depression proximal to the metacarpophalangeal joint in the fourth interosseous muscle.

Connections:

None.

Direction of strike:

This point is also not a point I would use; however, those who are adept at taking locks and holds (not recommended in the Montaigue system of fighting) could use this point as an adjunct to a small ch'i-na lock on the little finger.

Damage:

This is a wood and shu point and will have an effect upon the hearing when struck. It will also help in the execution of a finger lock, making it work much better and causing more damage. It also has an effect upon the sides of the body, so you could use this point to cause the attacker to buckle in at the sides and then strike the side of the body, especially at Gb 25, causing great internal damage and KO.

Set-up point:

Th 8 works very well with this point.

Antidote:

To help with the ears, massage the point straight in to the point of slight pain.

Healing:

Innervation is by the dorsal branch of the ulnar nerve. Irrigation is by the dorsal venous network of the hand and the fourth dorsal metacarpal artery.

Used for deaf-mutism, tinnitus, deafness, headache, pain in the shoulder and back, intercostal neuralgia, red eyes, sore throat, pain of the elbow and arm, motor impairment of the fingers, and febrile disease.

Traditional indications include pain in the shoulder, back, elbow, and arm; inability to bend the fingers; headache; tinnitus; blurred vision; and acute strain of the lower lumbar region.

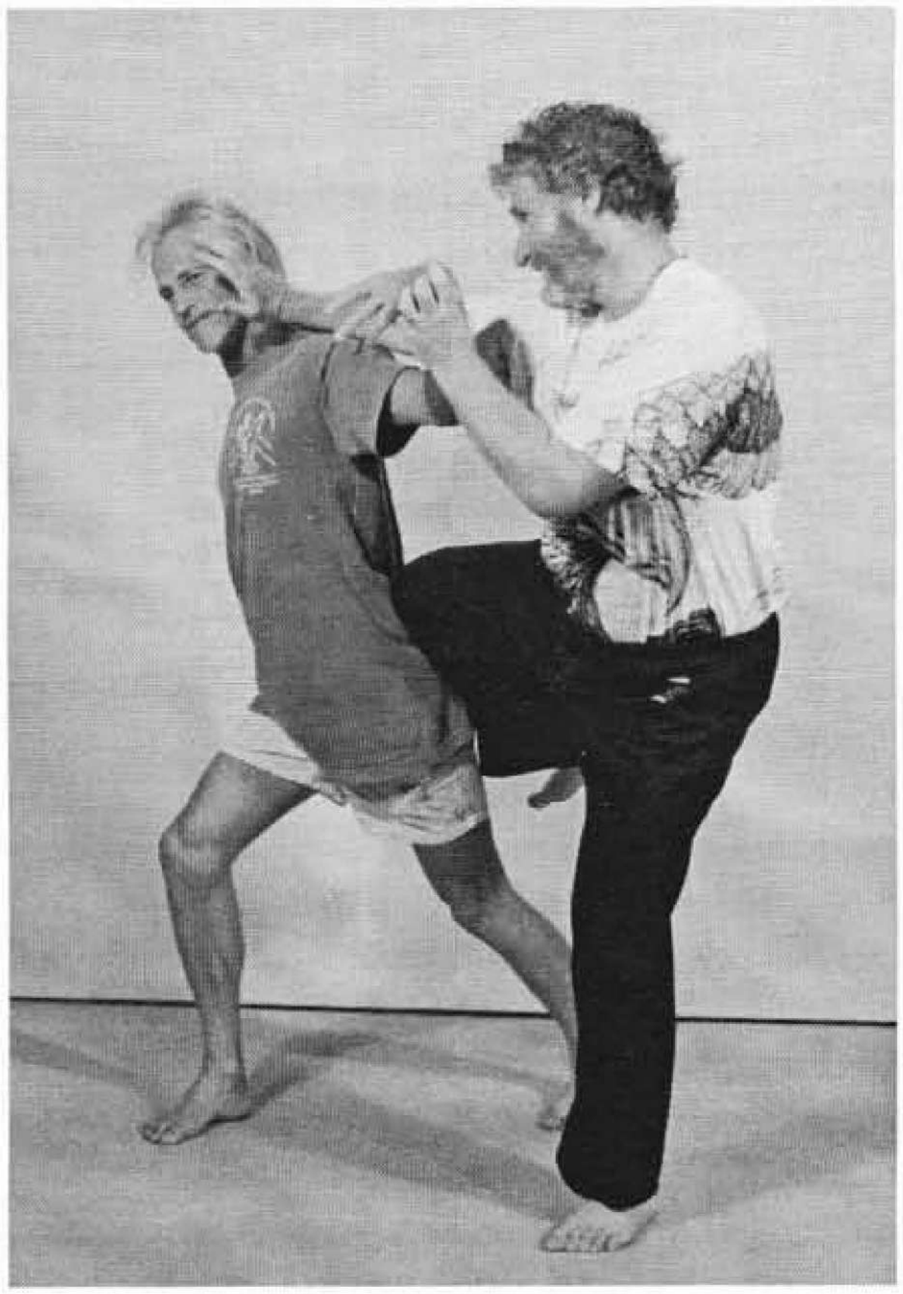


Figure 303

This is a root of Th meridian, a shu stream (transporting) point, and a wood point of the Th meridian. Its traditional functions are to regulate qi circulation, dispel pathogenic heat, soothe the ear, and stimulate the thyroid. *Zhong* means middle, and *zhu* means a small plot of land in water; the point is in the middle of the five shu points, and the qi of the channel flows like water into a pool.

To massage, press and hold, do rotations clockwise or counterclockwise for xu or shi conditions, and do fingertip percussion.

Use with Th 21, Th 17, Gb 20, Gv 20, Liv 2, Liv 3, St 40, Kd 3, Bl 23, Si 4, Si 5, Si 9, Si 2, Co 5, Gb 43, Gb 11, Bl 8, and Co 10 for tinnitus and deafness.

Use with Th 2, Co 4, Bl 1, St 1, St 45, St 44, Liv 2, Liv 3, Gb 1, Gb 43, and Gb 44 for red, sore eyes.

Use with Gb 20, Gv 20, Gb 21, Liv 3, Liv 2, Co 4, Co 11, Gb 44, St 36, Bl 18, and Bl 17 for migraine headache.

Applications:

Slam his left straight with your right palm at Th 8. Slide your right palm down until you can lock his little finger, digging your own ring finger into Th 3. This will cause his body to bend as your left palm attacks to his face and your right knee attacks to his left side at about Gb 25 (fig. 303).

TH 4 (TRIPLE HEATER POINT NO. 4)

Chinese name:

Yangchi (pool of yang).

Location:

Yang is as in yin and yang, and *chi* means pool; the point is in a depression on the back of the wrist, and the qi (yang) flows like water into a pool here. Located at the junction of the ulna and carpal bones, in the depression lateral to the tendon of extensor digitorum communis muscle. With the hand supine, this point can be found directly above the transverse crease on the dorsal side of the wrist, in a hollow above the third and fourth metacarpal bones, between the tendons of extensor digitorum and extensor digiti minimi manus muscles.

Connections:

Transverse luo from Pc 6.

Direction of strike:

Straight in on the little finger side of the back of the palm near the wrist crease.

Damage:

This is a yuan point. It will cause damage to the tendons and to the "life force." It is not good to be struck here if you have had either a vasectomy or a hysterectomy. It will cause great pain and qi drainage. It is an excellent set-up point, if you can get at it. Th 4 must be struck right on the point, using a smaller weapon such as a one-knuckle punch. The qi drainage can be so bad that the recipient has to sit down.

Set-up point:

None. This point can be used as a set-up to Gb 25.

Antidote:

Massage or needle (3 fen) the opposite point on the other hand to fix the tendon problems and life force problems. Apply mild pressure downward onto the crown of the head for the qi drainage and consequent nausea.

Healing:

Innervation is by the dorsal branch of the ulnar nerve and the terminal branch of the posterior antebrachial cutaneous nerve. Irrigation occurs inferiorly by the dorsal venous network of the wrist and the posterior carpal artery.

Used for pain in the wrist, shoulder, and arm; malaria; deafness; tonsillitis; and common cold.

Traditional indications include thirst and dryness in the mouth, red and swollen eyes, throat blockage, deafness, tidal fever, and pain and weakness of the wrist.

As a yuan source point of the triple heater meridian, its traditional functions are to strongly reinforce the yang qi of the body, relax the tendons, invigorate and clear the channels and collaterals, reinforce the three jiao, promote the function of the chong and ren mai in strengthening qi and controlling xue (blood), and relieve heat. It is used a lot in Japan to tonify yang.

Massage techniques are the same as for Th 3. Use with Pc 7, shang baxi, baxi (extra), Co 4, Si 3, Si 5, Gb 34, Gb 41, and St 36 for arthritis of the wrist, fingers, and hands.

Use with St 36, Kd 3, Lu 9, Liv 3, Bl 23, Bl 20, Bl 18, Bl 17, Bl 13, Sp 3, Gv 4, Gv 14, Gv 20, Cv 4, and Cv 12 to pick up yang qi after a long-term disease or in old age when yang has declined but yin is still strong.

Use with Gb 2, Si 19, Th 21, Gb 20, anmien, Kd 3, and Bl 23 for deafness.

Applications:

He attacks with a right straight. Move to the outside (your left) and, using a backfist strike, hit the point with your right largest knuckle. Then bring that same palm back under to Gb 25. This would result in death or kidney failure causing death at most or extreme nausea at least.

TH 5 (TRIPLE HEATER POINT NO. 5)

Chinese name:

Waiguan (outer gate).

Location:

2 cun above Th 4, between the radius and ulna and the extensor digitorum and extensor hallucis longus muscles.

Connections:

Transverse luo to Pc 7 and Pc 9.

Direction of strike:

Straight in to the little-finger side of the outside of the forearm.

Damage:

When struck, this point makes you feel like collapsing or lying down. The qi drainage and pain are incredible when it is struck right on with a smaller weapon. This is a luo point and a master point of yang wei mai, so it has a connection with many other meridians. It will unbalance the yin and yang of the body.

Set-up point:

None.

Antidote:

Massage or needle the opposite point or perform the triple heater qigong.

Healing:

Innervation is by the posterior antebrachial cutaneous nerve and, deeper, the posterior interosseous

nerve of the radial nerve and the anterior interosseous nerve of the median nerve. Irrigation is deep by the posterior and anterior interosseous arteries and veins.

Used for febrile disease, headache, pain in the cheek and hypochondriac regions, deafness, tinnitus, motor impairment of the elbow and arm, pain of the fingers, hand tremor, common cold, pneumonia, parotitis, enuresis, stiff neck, hemiplegia, and migraine.

Traditional indications include pain in the fingers inhibiting grasp, hand tremors, swollen throat, tinnitus, deafness, febrile disease, pain in the ribs, constipation, and headache.

As a luo connecting point of the Th meridian, a master point (meeting point) of the yang wei mai, and a couple point of the dai mai (girdle channel), its traditional functions are to treat disease of the outer canthus, back of the ear, cheek, neck, and shoulder; dispel wind; relieve exterior symptoms; relax the tendons; invigorate the channels and collaterals; remove obstruction from the yang wei mai; and cool hot conditions.

Massage techniques are the same as for Th 3.

Use with Gb 34 , Th 6, Liv 14, Bl 17, Bl 18, Bl 19, Bl 20, Cv 17, Liv 2, Liv 3, Liv 13, Gb 24, Sp 21, St 36, St 44, and St 45 for intercostal neuralgia.

Add to formula for deafness under Th 4.

Use with Gv 20, Gb 20, Co 4, Lu 7, Bl 12, Bl 13, Cv 17, Lu 1, and St 36 for common cold.

Applications:

The same as for Th 4; only after the point has been struck, grab the whole arm with your left and right hands and strike to his right hip with your left knee. Th 5 will cause the hips to become weak.

TH 6 (TRIPLE HEATER POINT NO. 6)

Chinese name:

Zhigou (branch supporting ditch).

Location:

3 cun above Th 4, 1 cun above Th 5, between the radius and ulna and the extensor digitorum and extensor hallucis longus muscles. With the palm down, the point is found on the radial side of the extensor digitorum muscle. *Zhi* means limbs, and *gou* means ditch; here zhi is referring to the upper limbs, and the ditch is between the radius and ulna.

Connections:

None.

Direction of strike:

Same as for Th 5.

Damage:

This is a fire and jing point. When struck using adverse qi, this point will weaken the sides of the body and cause intestinal problems at some later stage. In the long term, it will hinder the flow of qi throughout the body and cause heat to rise in the middle and upper heaters, resulting in mental and breathing problems. Immediately, though, the strike will cause intense pain and qi drainage, to the point where the recipient will have to sit down. It is usually used as a set-up point, however.

Set-up point:

None.

Antidote:

The opposite point on the other arm must be needled 5 fen perpendicular or massaged deeply.

Healing:

Innervation is by the posterior antebrachial cutaneous nerve and, deeper, the posterior interosseous nerve of the radial nerve and the anterior interosseous nerve of the median nerve. Irrigation is by the posterior and anterior interosseous arteries and veins.

Used for sudden hoarseness, tinnitis, deafness, aching and heavy sensation of shoulder and back, vomiting, constipation, angina intercostal neuralgia, pleurisy, and insufficient lactation.

Traditional indications include soreness and heaviness in the shoulder and arm, chest pain, belching, swollen throat, acute pain in the ribs and axilla, vomiting and diarrhea, constipation, cholecystitis, hypochondrium pain, and herpes zoster. As a jing river (traversing) point and a fire point of the Th meridian, its traditional functions are to regulate qi circulation, dispel stagnation and retardation, remove obstruction from the intestines, and harmonize and cool the three jiao (heaters).

Massage techniques are the same as for Th 3, plus pressing in slowly with both thumbs and releasing quickly, pulling the thumbs apart.

Use with St 36, St 37, St 25, Cv 12, Liv 13, Bl 25, Bl 26, Bl 20, Liv 3, Sp 15, and Bl 18 for chronic constipation.

Use with Cv 17, St 36, St 18, Sp 18, Liv 3, Si 1, Bl 18, Bl 20, and Liv 14 for insufficient lactation.

Use with Gb 34, Gb 43, Gb 44, thoracic jiaji points, Bl 17, Bl 18, Bl 19, Bl 20, Liv 2, Liv 3, St 44, Liv 14, Gb 24, and Liv 13 for intercostal neuralgia, cholecystitis, herpes zoster, and hypochondrium pain.

Applications:

The same as for Th 5.

TH 7 (TRIPLE HEATER NO. 7 POINT)

Chinese name:

Huizong (meeting of the clan).

Location:

3 cun proximal to the wrist, about 1 finger breadth lateral to Th 6 on the radial side of the ulna.

Connections:

None.

Direction of strike:

Straight in.

Damage:

This is a xie cleft point or an accumulation point. A strike to any xie cleft point causes the qi to explode everywhere, causing great qi disruption all over the body. So this is an excellent set-up point. Immediately, there is great pain, to the point that the recipient has to sit down.

Set-up point:

None.

Antidote:

Needle or massage the opposite point 3 fen perpendicular.

Healing:

Innervation is by the posterior and medial antebrachial cutaneous nerves and, deeper, the posterior and anterior interosseous nerves. Irrigation is by the posterior interosseous artery and vein.

Used for deafness, pain in the arms, and seizures.

H*ui* means meeting, and *zong* means gathering. This is the xie cleft point of the triple heater meridian, where the qi of the channel gathers, and its traditional function is to treat acute disorders of the three heaters.

Massage techniques are the same as for Th 6.

Use with Gb 2, Th 17, Th 21, Si 19, Kd 3, Gb 20, Gv 20, Co 4, Th 5, Th 6, and *yilong* (an extra point) for sudden deafness. Use with Co 4, Co 11, Th 5, Th 6, Th 8, Th 9, and Gb 34 for pain in the forearm.

Applications:

Same as for Th 6, then strike straight in to St 9.

TH 8 (TRIPLE HEATER POINT NO. 8)

Chinese name:

Sanyangluo (three yang connection).

Location:

4 cun above Th 4, between the radius and ulna and between the exterior digitorum and the origin of the abductor pollicis longus muscles.

Connections:

None.

Direction of strike:

Straight in to the point.

Damage:

This is one of the only points that cannot be built up to resist attack. (For instance, Co 10 can be built up by striking oneself as in many of the bagwazhang forms.) A strike here can cause death if it is hard enough. Th 8 with Cv 24 and Pc 6 is a deadly combination. There is immediate qi drainage with great pain and an itchy feeling that rises up into the chest and then into the head.

Set-up point:

Use neigwan.

Antidote:

If only Th 8 has been struck, then either massage the opposite point or needle it 5 fen perpendicular. If the combination has been used, there's not much you can do apart from years of acupuncture treatment and qigong (if the person survives!).

Healing:

Innervation and irrigation are the same as for Th 7.

Used for sudden hoarseness, deafness, pain in the hand and arm, aphasia, and postoperative pain associated with pneumonectomy.

Traditional indications include deafness, sudden muteness, pain in the forearm inhibiting movements, and lassitude.

Traditional functions are to clear the channels and sensory orifices.

Massage techniques are the same as for Th 6.

Use with Gb 20, Gv 20, Gb 21, Th 15, Si 13, Si 3, Gb 34, and Liv 3 for headache.

Use with Th 6, Bl 66, Gv 20, Cv 22, Cv 23, Gv 26, yintang, Liv 3, and Lu 1 for sudden muteness.

Applications:

Strike his right neigwan with your right palm. Hook that palm over his arm and pull it violently over to your right as your left palm strikes straight in to Th 8. Your right palm now attacks straight in to Cv 24 with a one-knuckle punch.

TH 9 (TRIPLE HEATER POINT NO. 9)

Chinese name:

Sidu (four ditch).

Location:

When the hand is palm down, the point is 5 cun below the olecranon (elbow), between the radius and ulna and the extensor carpi ulnaris muscle of the forearm.

Connections:

None.

Direction of strike:

Straight in to the upper forearm on the outside.

Damage:

This is more of a nerve and muscular strike when struck using a smaller weapon. It will take out the

arm that us struck. There is also a feeling of sinking. In fact, the strike has been known to cause a person to fall down because of the qi drainage at this point.

Set-up point:

None.

Antidote:

None. Time usually fixes this strike. Or you could simply massage the whole region gently until the pain has stopped.

Healing:

Innervation and irrigation are the same as for Th 7.

Used for sudden hoarseness, deafness, toothache, pain in the forearm, headache, paralysis of the upper limbs, neurasthenia, and vertigo.

Traditional indications include sudden deafness, toothache in the lower jaw, loss of voice, obstructed pharynx, and pain in the forearm.

Massage is the same as for Th 6.

Use with Gb 20, Gv 20, Gb 8, taiyang, Co 4, Co 11, Liv 3, Gb 14, Gb 1, and Gb 21 for headache.

Use with yuyao, Bl 2, Pc 6, Gb 14, Bl 66, Bl 67, Th 1, Th 2, Liv 2, and Co 4 for supraorbital neuralgia.

Use with Co 10, Co 8, *yingxia* (an extra point), jiaji points in the upper back, Gb 34, Th 14, Co 15, and Gv 14 for paralysis of the wrist.

Traditional functions: *Si* means four, and *du* means river or ditch (the Yangtze, the Yellow, the Huaihe, and the Jishui rivers were called *sidu* in ancient times); the qi of the meridian is able to irrigate many more regions when it reaches this point.

Applications:

As he attacks, strike the point with your backfist or a knife edge strike.

TH 10 (TRIPLE HEATER POINT NO. 10)

Chinese name:

Tianjing (heaven's well).

Location:

When the elbow is flexed, the point is in the depression about 1 cun superior to the olecranon of the elbow. In the cavity above the olecranon at the posterior aspect of the lower end of the humerus and the superior margin of the olecranon prominence of the ulna, in the tendon of the triceps muscle.

Connections:

None.

Direction of strike:

Straight in to the back of the elbow.

Damage:

This is an earth and he point. A strike here will damage the communication of the whole system because this point attacks all three heaters. Weak areas of the body will begin to show up after a short time. I know of one athlete who received a blow at this point. He used to be a high jumper! He is no longer a high jumper because his legs became weakened. And although acupuncture helped to restore power, his legs were never back to full power. He is now an excellent javelin thrower. Continuous headaches are also a symptom of being struck at this point. Of course, the elbow is also damaged and could be broken.

Set-up point:

Use Th 8.

Antidote:

See a Chinese doctor and tell him or her that you have been struck at Th 10. The triple heater qigong will also help, and in most cases performing the qigong morning and night over a period of about one year is all you will need.

Healing:

Innervation is by the posterior brachial cutaneous nerve and the muscular branch of the radial nerve. Irrigation is by the arterial and venous network of the elbow.

This point is used for soft tissue disease of the elbow; migraine; tonsillitis; urticaria; scrofula; pain in the costal and hypochondriac regions; neck, shoulder, and arm pain; and epilepsy.

Traditional indications include pain in the neck, shoulder, and back; pain in the eyes; headache; deafness; throat blockage; tidal fever; and insanity.

Traditional functions: as an earth point and a he sea (uniting) point of the Th meridian, this point will strengthen the overall functions of the Th meridian. It also enhances the communication within the bodily system.

Massage techniques are the same as for Th 6.

Use with Cv 17, Liv 14, Liv 3, Bl 17, Bl 14, Bl 15, Bl 18, and Bl 46 for chest blockage with heart pain.

Use with Co 11, Ht 3, Co 10, Co 9, Si 8, Co 4, and Gb 34 for disease of the elbow.

Use with Gv 20 and *zaojian* (an extra point), use 5 to 7 cones of moxa on thin slices of ginger for scrofula.

Applications:

Strike his Th 8 point with your right backfist as he attacks with perhaps a right straight. Your left palm now attacks straight in to the elbow joint as your right palm pulls his wrist backward, thus also breaking the elbow.

TH 11 (TRIPLE HEATER POINT NO. 11)

Chinese name:

Qinglengyuan (cooling gulf).

Location:

1 cun above Th 10.

Connections:

None.

Direction of strike:

Straight in to the rear of the elbow, slightly (about 1 cun) above Th 10.

Damage:

This point can be used to weaken the elbow joint. In fact, most elbow breaks can be made using this location rather than the more common one of right on the elbow. The reason is that this point weakens the elbow joint in particular.

Set-up point:

Same as for Th 10.

Antidote:

See a doctor if the elbow is broken.

Healing:

Innervation is by the posterior brachial cutaneous nerve and the muscular branch of the radial nerve. Irrigation is by the terminal branches of the median collateral artery and vein.

Used for pain in the shoulder and arm, headache, and pain in the eyes.

Qing means cool, *leng* means cold, and *yuan* here means deep water. The function of this point is to eliminate heat from the sanjiao (three heaters), as if the patient were in cool deep water.

Massage techniques are the same as for Th 6.

Use with Th 23, Gb 1, Bl 1, St 1, Liv 2, Liv 3, Co 4, Gb 43, Gb 44, St 45, St 44, Gv 20, and Co 11 for pain and redness of the eyes.

Use with Th 13, Th 14, Gb 34, Th 15, Gb 21, Si 3, Si 10, and Si 11 for shoulder pain extending down the posterior aspect of the arm.

Applications:

The same as for Th 10, only strike 1 cun above Th 10 with the left palm.

TH 12 (TRIPLE HEATER POINT NO. 12)

Chinese name:

Xiaoluo (melting luo river).

Location:

On the line joining the olecranon and Th 14, midway between Th 11 and Th 13.

Connections:

None.

Direction of strike:

Straight in and using a backward/forward motion (like sawing) across the point. This has the effect of causing a nerve point strike as well as a qi strike.

Damage:

The damage here is to the whole arm. This point is used as a set-up point to drain qi from the whole body as well as a major point for arm locks and breaks. It is very easy to take the largest man down using this point in conjunction with an arm lock. When struck in a slightly upward direction, it will cause a huge amount of qi to be pumped into the head; thus it has the potential to cause a KO.

Set-up point:

Th 8.

Antidote:

Grab the whole triceps on each side and squeeze gently until the arm has returned to normal. An alternative treatment is to take hold of the wrist of the arm that was struck and shake it gently. Next rub down the outside of the forearm, then slap it at Co 10 and then at Th 8 gently with the flat of your palm.

Healing:

Innervation is by the posterior brachial cutaneous nerve and the muscular branch of the radial nerve. Irrigation is by the median collateral artery and vein.

Used for headache, stiffness and pain of the neck, pain in the arm, toothache, and seizures.

Traditional functions: *xiao* here means to eliminate, and *luo* means marsh. This point pertains to the triple heater (san jiao) meridian and its functions of regulating water passages and metabolism of fluids).

Massage techniques are the same as for Th 6.

Use with Gv 17, Bl 7, Cv 22, Cv 23, Sp 6, Liv 2, Liv 3, Liv 4, Co 41, Co 18, St 9, Gb 20, and Th 3 for goiter-type growth on the front of the neck.

Use with Th 13, Th 14, Th 11, Th 2, Th 1, and Gb 34 for pain in the triceps.

Applications:

To his right straight, use your right p'eng. Step to your left and grab his right wrist as the back of your left forearm saws across Th 12, using great pressure downward as well, to take him down to the ground.

TH 13 (TRIPLE HEATER POINT NO. 13)

Chinese name:

Naohui (shoulders meeting).

Location:

On the line joining the olecranon process (Th 10) to Th 14, 3 cun below Th 14, in the depression on the posterior inferior aspect of the deltoid muscle. *Nao* means muscle prominence of the upper arm.

Connections:

This is a point of wang wei mai and also receives a channel from Co 14.

Direction of strike:

Straight in.

Damage:

This is a point of the extra meridian yang wei mai, and, as such, can be used with other points to form devastating multiple strikes. It is also connected to Co 14, making for a most dangerous combination

when these two points are struck. We have an energy (qi) input point (Co 14) and a Th point (Th 13) being struck one after the other (Co 14 first), blocking the "mother" qi, as well as unbalancing the whole qi system. After this strike, the fight is usually over.

Set-up point:

Th 8.

Antidote:

If the recipient is able to stand, have him stand in the seven stars qigong (described in Chapter 3, under the antidote for Bl 22). Otherwise have an acupuncturist treat him.

Healing:

Innervation is by the posterior brachial cutaneous nerve, the muscular branch of the radial nerve, and, deeper, the radial nerve. Irrigation is by the median collateral artery and vein.

Used for pain in the shoulder and arm and goiter.

Massage techniques are the same as for Th 6, and you can also do loose fist or open hand percussion on this point.

Use with Th 10, Th 11, Th 12, Th 14, and Gb 34 for weakness in flexing the elbow.

Use with Liv 3, Lu 3, St 11, Pc 5, Sp 6, Ht 6, Kd 7, Co 4, Pc 6, Bl 2, St 2, St 9, St 18, Gb 20, and Gv 14 for hyperthyroidism with swollen throat.

See Th 14 or Co 15 for treatment of shoulder problems.

Applications:

He attacks with a left straight. You strike his Th 8 point with your right palm to damage and block. Your waist has turned to your left, loaded and ready for your left elbow to come back across his Co 14 point. The waist has now loaded to your right, allowing your right palm to strike straight into Th 13.

TH 14 (TRIPLE HEATER POINT NO. 14)

Chinese name:

Jianliao (shoulder seam).

Location:

Posterior and inferior to the acromion, in the depression about 1 cun posterior to Co 15 in the deltoid muscle. *Jian* means shoulder, and *liao* means foramen; this point is in a foramen on the shoulder.

Connections:

Point of yang wei mai, and a path to Si 12.

Direction of strike:

Straight in to the back of the shoulder.

Damage:

This is also a yang wei mai point, so a strike here also has an effect upon many other points, including Si 12. There will be great scapular damage, along with a feeling of nausea caused by the connection to Si 12. This point is well protected, but a percussive strike that will send a shock wave inside the body will get in where a normal physical strike will not.

Set-up point:

Si 12.

Antidote:

You could massage the whole scapular region, including Si 11 and Si 12, then work on neigwan down the inside of the inner forearm.

Healing:

Innervation is by the muscular branch of the axillary nerve. Irrigation is by the muscular branch of the posterior circumflex humeral artery.

Used for heavy sensation in the shoulder, pain in the arm, hemiplegia, hypertension, excessive sweating, and perifocal inflammation of the shoulder joint.

To massage, press and hold; do rotations clockwise or counterclockwise for xu or shi conditions;

press in slowly with both thumbs and release quickly, pulling the thumbs apart; or do percussion with the fingertips, a loose fist, or the ulna side of an open hand.

Use with Th 13, Si 10, Si 9, Si 11, Si 13, Bl 43, Bl 17, Bl 13, Bl 11, Gb 34, St 38, Ht 1, and Bl 57 for perifocal shoulder joint.

Use with Si 11, Si 5, Th 10, Th 11, Th 12, Th 13, Co 4, and Gb 34 for arm pain.

Use with Co 15, Co 11, Co 4, Th 5, Th 14, Co 10, Th 4, Th 3, Gb 34, *bizhong* (an extra point), *zhitan* (an extra point), Gv 26, Kd 1, Pc 8, Gb 20, Pc 6, Gv 4, Bl 23, Liv 3, Bl 18, Bl 20, and Bl 17 for sequelae of CVA.

Applications:

Strike his right neigwan with your right palm as he attacks with a right straight. Immediately, pull his arm across to your right, thus exposing his back. With your left palm, strike down onto Si 11, and, a split second later, Th 14.

TH 15 (TRIPLE HEATER POINT NO. 15)

Chinese name:

Tianliao (heaven's seam).

Location:

Midway between Gb 21 and Si 13, on the superior angle of the scapula. *Tian* means heaven, and *liao* means foramen; upper is referred to as heaven, and the point is in a foramen above the shoulder blade.

Connections:

A point of yang wei mai. Receives meridian from St 12. There is also an internal path to St 12, Cv 17, Cv 12, and Cv 7, returning to Cv 14.

Direction of strike:

Straight down on top of and slightly back from the shoulder.

Damage:

Because of the connection with St 12, this point will lessen the will to fight. However, because it is a Th point, it will do much more than that: it will also damage the whole qi system. It will also bring local pain all over the upper back area, causing a sick feeling in the stomach.

Set-up point:

Th 8 or St 12.

Antidote:

Triple heater qigong, or you could massage the opposite point on the shoulder.

Healing:

Innervation is by the accessory nerve and the branch of the suprascapular nerve. Irrigation is by the descending branch of the transverse cervical artery and, deeper, the muscular branch of the suprascapular artery.

This point is used for pain in the shoulder and arm, pain and stiffness of the neck, inflammation of the supraspinatus tendon, pain and soreness in the region of the scapula, and fever.

This is a point of intersection with the *yang wei mai*. It relaxes the tendons, invigorates the channels and collaterals, and soothes the joints.

Massage techniques are the same as for Th 14.

Use with Gb 20, Gb 21, Si 13, Si 14, Si 15, Si 3, Bl 11, Bl 12, Bl 13, Bl 43, Bl 17, Bl 18, Gb 34, Bl 60, dingchuan, Gv 14, bailao, and Bl 10 for occipital headache, neck and shoulder pain and stiffness, asthma, and inability to turn the head.

Use with Si 3, Si 9, Si 10, Si 11, Si 12, Si 13, Si 14, Si 16, Gb 34, and Gb 21 for inflammation of the suprascapular tendon.

Applications:

Strike St 12 using a claw palm downward This will take his will to fight away. Using that same claw on the clavicle, pull him around so that his back is now facing you. Strike straight down onto both Th 15 points.

TH 16 (TRIPLE HEATER POINT NO. 16)

Chinese name:

Tianyao (heaven's window).

Location:

Posterior and inferior to the mastoid process, on the posterior border of the sternocleidomastoid, level with Si 17 and Bl 10. Near the hairline, in the posterior margin at the insertion of the sternocleidomastoid muscle.

Connections:

Upper meeting point of the triple heater and pericardium divergent meridians. Takes an internal meridian from Gv 14.

Direction of strike:

Straight in from the side of the neck, just back from the angle of the jaw.

Damage:

Here we have one of the more dangerous point strikes. This will cause a KO all by itself by shocking the brain. It will also cause death if it is struck hard. It is a window of the sky point, and, as such, will place too much yang qi into the brain, causing confusion or KO. Emotional problems will also instantly seem far greater than they are. Many people who have been struck here say that they forgot the reason for beginning the confrontation in the first place. This is the major point of all the window of the sky points and, as such, it is very dangerous and should be avoided at all costs unless your life is threatened!

Set-up point:

Th 8.

Antidote:

None. Although, to treat the emotional disturbance caused by a strike to this point, you should have a Chinese doctor treat the same point.

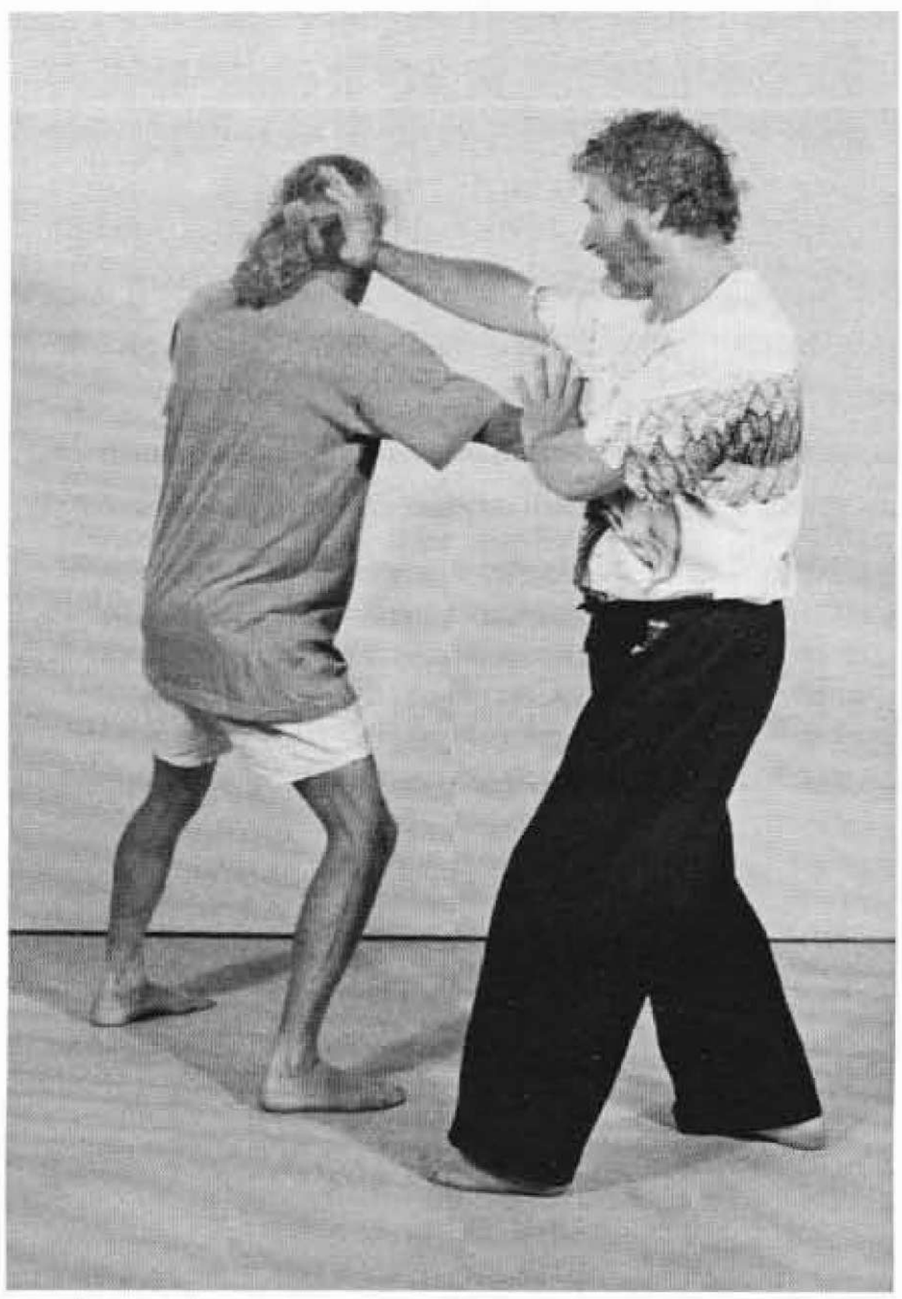


Figure 304

Healing:

Innervation is by the lesser occipital nerve, and the point is irrigated by the posterior auricular artery.

Used for dizziness, facial swelling, sudden deafness, blurring of vision, neck rigidity, tinnitus, and sore throat.

Traditional indications include sudden deafness, sore eyes, constricted throat, excessive dreaming, and scrofula.

To massage, press and hold the point; do rotations clockwise or counterclockwise for xu or shi conditions; do fingertip percussion; and press in slowly with both thumbs and release quickly, pulling the thumbs apart.

Use with Si 19, Th 2, Th 21, Th 17, Th 7, Th 6, Th 5, Th 3, Th 2, Kd 3, Co 4, St 40, and Gv 20 for deafness and tinnitus.

Use with Th 17, Co 4, Co 11, Lu 5, Lu 7, Cv 22, St 9, and Si 17 for sore throat.

Use with St 5, St 6, Si 17, St 44, Si 18, Co 4, Co 11, St 4, St 45, Co 1, and Co 2 for facial swelling.

Traditional functions: *tian* means heaven, and *yao* means window. This point is on the upper lateral aspect of the neck and is used to open the upper aperture; thus it is likened to a heavenly window.

Applications:

He could attack with a right. You step to your left and strike Th 8 with your right backfist. Your left palm comes across to also slam his right forearm to take over the block as your right knife edge strikes straight across Th 16 (fig. 304).

TH 17 (TRIPLE HEATER POINT NO. 17)

Chinese name:

Yifeng (shielding wind or wind screen).

Location:

Posterior to the lobe of the ear, in the depression between the mandible and mastoid process.

Connections:

Gb and Si meridian branches enter the ear and Si 19 then travels to Th 21, 22, and 23.

Direction of strike:

This strike must travel from the rear of the head to the front, into just below the back of the earlobe.

Damage:

Here we have one of the most deadly strikes. It is difficult to get at if you don't know how, but when it is struck, there is no return! However, this point can also be used as a controlling point for doormen or bouncers, police, etc. In fact, it was used in Australia by police against protesters who were trying to avoid having their school closed down. When I saw this on the TV news, I was horrified that policemen were using this point against innocent people who were just sitting on the ground. The police would come up behind them one by one and stick their fingers in behind the ears and lift upward. They had the wrong direction, but it still worked to get them up on their feet! They had doctors on the TV saying that this was perfectly harmless! Little did they know that if the direction was changed slightly, they could have killed people!

If you are attacked by someone who is perhaps under the influence of drugs of alcohol, slap his face at a neurological shutdown point, then, holding his head still with one hand, take your other hand and, using the fingers, stick them into the point and pull forward. He will go with you! If he should resist or try to strike you, dig a little deeper and he will fall to the ground.

Set-up point:

Slam Th 8 upward on the outside of the forearm.

Antidote:

None. Even CPR will not work when this point is struck in the correct direction.

Healing:

Innervation is by the great auricular nerve and, deeper, the site where the facial nerve perforates out of the styomastoid foramen. Irrigation is by the posterior auricular artery and vein and the external jugular vein.

Use for tinnitus, deafness, deaf-mutism, parotitis, temporomandibular arthritis, toothache, sore eyes, facial paralysis, swelling of the cheek, and trismus.

Traditional indications include tinnitus, deafness, swelling of the cheek, convulsions, mouth and eyes awry, locked jaw, blurred vision, and membrane over the eye. This point is also much used for facial paralysis.

This is a point of intersection with the Gb meridian. Its traditional functions are to dispel wind, invigorate the channels and collaterals, soothe the ears, and benefit hearing and vision. *Yi* means shielding, and *feng* means pathogenic wind; because this point is behind the earlobe, it is the place for shielding off pathogenic wind.

Massage techniques are the same as for Th 16.

See Th 16 for treatment of deafness, tinnitus, and sore throat. Use with St 6, Co 4, Liv 2, Liv 3, Lu 7, and Gb 20 for parotitis.

Use with St 7, St 6, St 5, St 36, Gb 34, Liv 3, Gb 21, Gb 20, and Co 4 for temporomandibular arthritis.

Use with Ht 5, Liv 3, St 36, Gv 20, Co 4, and Lu 7 for sudden loss of voice.

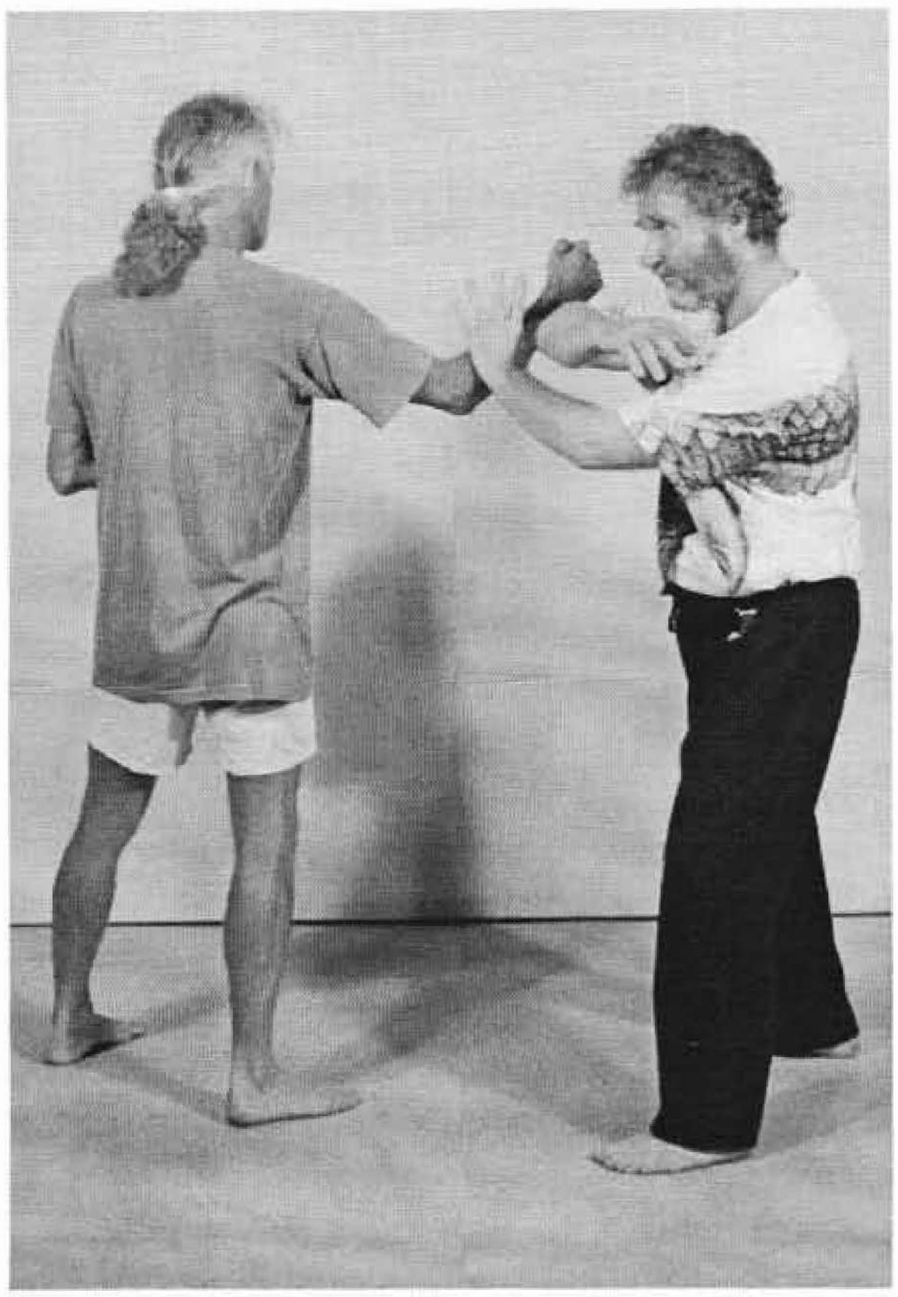


Figure 305

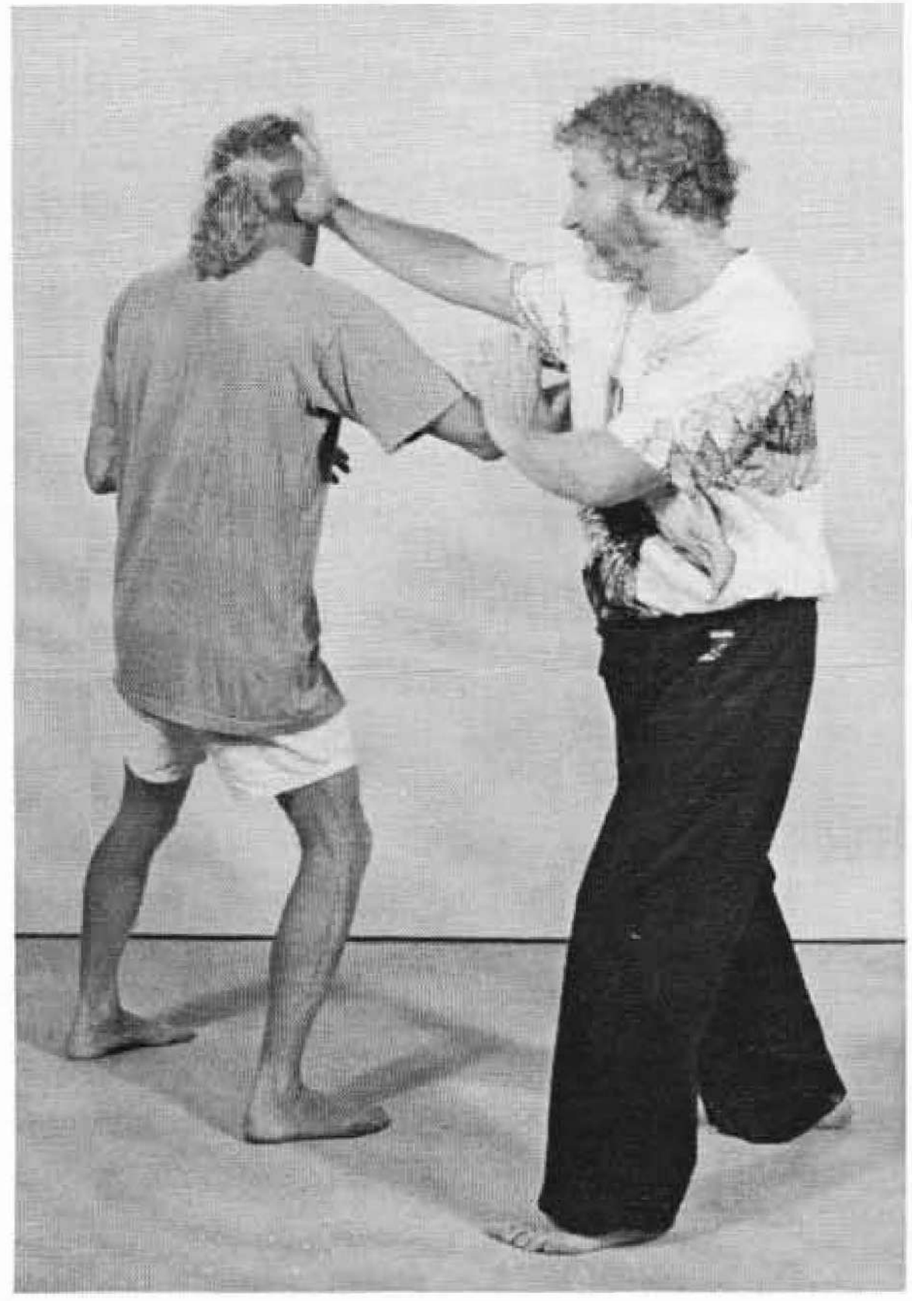


Figure 306

Applications:

Unless you can get around behind the attacker and strike him from the rear to get the correct direction, you will have to know the taijiquan method of striking to this point. It comes from the posture known as *arn* (push) right. This is the very first attacking movement from the Yang-style taijiquan form.

He attacks with a straight right. You step quickly to your left with your left foot parrying his right forearm and slamming Th 8 point back up his arm. Notice that your right palm is already getting ready, coming up underneath your left arm (fig. 305). You have turned your waist to your right. As you turn your waist back to the left, your right palm strikes to behind his ear at Th 17 in the correct direction (fig. 306).

TH 18 (TRIPLE HEATER POINT NO. 18)

Chinese name:

Qimai (feeding the vessels).

Location:

In the center of the mastoid process, at the junction of the middle and lower thirds of the curve by Th 17 and Th 20, posterior to the helix at the root of the auricle.

Connections:

None.

Direction of strike:

Straight in to the side of the head back from the ear.

Damage:

This is also a very dangerous strike because the brain is shocked. A hard strike here can cause death. KO will occur with a medium strike here.

Set-up point:

Also Th 8 upward on the outer forearm.

Antidote:

If death has occurred, try CPR or the heart starter (mentioned earlier and also in my other books on dim-mak).

Healing:

Innervation is by the posterior auricular branch of the great auricular nerve. Irrigation is by the posterior auricular artery and vein.

Used for headache, tinnitus, deafness, and infantile convulsions.

Traditional functions: *qi* means convulsions here, and *mai* means channel or collateral. This point is behind the ear where the collaterals are distributed, and it is useful for treating convulsions.

Massage techniques are the same as for Th 16.

Use with Th 17, Si 19, Th 21, Gb 2, Gv 15, Cv 23, Co 4, Th 3, yiming, Kd 3, Liv 3, Pc 9, Th 9, Bl 23, Bl 18, and Bl 20 for deaf-mutism.

Use with Gv 20, Gb 20, Th 16, Th 17, Th 19, Th 20, Gb 8, Liv 3, Gb 41, Gb 43, Gb 44, Liv 4, Liv 8, and Co 4 for headache.

Applications:

The same as for Th 17, only bring the strike straight in to the head rather than in a back to front direction.

TH 19 (TRIPLE HEATER POINT NO. 19)

Chinese name:

Luxi (skull's rest).

Location:

Posterior to the ear, at the junction of the upper and middle thirds of the curve formed by Th 17 and Th 20, behind the helix or 1 cun above Th 18 behind the ear.

Connections:

None.

Direction of strike:

Straight in to the side of the head just above Th 18.

Damage:

Combine this strike with Th 18, and you have a recipe for death when a hard blow is felt. (Your palm can strike both points at the same time.) With a medium shot, the recipient is knocked out or totally disoriented. This is because of the location of the point with reference to the physical parts of the brain. The brain is shocked and shuts down.

Set-up point:

Th 8 struck upward.

Antidote:

CPR.

Healing:

Innervation is by the anastomotic branch of the great auricular nerve and the lessor occipital nerve. Irrigation is by the posterior auricular artery and vein.

Used for headache, tinnitus, earache, otitis media, and vomiting. This point is part of the branch region for the Th meridian. *Lu* means skull, and *xi* means tranquillity. The point is on the skull, and its traditional function is to calm the mind.

Massage techniques are the same as for Th 16.

Use with Pc 6, Cv 12, St 36, Bl 20, Bl 21, Bl 18, and Liv 3 to treat vomiting.

See Th 18 for treatment of deaf-mutism.

Use with Th 16, Th 17, Th 18, Th 21, Si 19, Th 3, Th 9, Kd 3, St 40, Gb 20, Gv 20, Gb 21, Gb 2, and Th 5 for tinnitus.

Applications:

The same as for Th 17, only straight in to the side of the head.

TH 20 (TRIPLE HEATER POINT NO. 20)

Chinese name:

Jiaosun (angle of regeneration).

Location:

Directly above the apex of the ear, within the hairline of the temple. *Jiao* here means corner, and *sun* means reticular collateral. This point is on the temporal region corresponding to the ear apex, where the reticular meridians are distributed.

Connections:

Connected to the gallbladder meridian. A point of intersection with the Gb and Co meridians. There is also an internal path of the meridian to Gb 5, Gb 4, Gb 14, Bl 1; then it encircles the cheek to Si 18.

Direction of strike:

Straight in to the side of the head just above the top point of the ear.

Damage:

This point must be struck fairly hard to have any effect. But when it does have an effect, it is substantial. The recipient will experience extreme dizziness and fall down, with great nausea. A KO will occur with a medium to hard strike.

Set-up point:

Th 8.

Antidote:

See a doctor.

Healing:

Innervation is by the branches of the auriculotemporal nerve, and irrigation is by the branches of the superficial temporal artery and vein.

Used for redness and swelling of the ear; redness, swelling, and pain of the eye; toothache; pannus; and parotitis.

As a point of intersection with the Gb and Co meridians, its traditional function is to influence those meridians.

Massage techniques are the same as for Th 16.

See Th 18 and Th 19 for treatment of tinnitus and headache.

Use with Co 4, Co 11, Gb 43, Gb 44, Gb 2, Th 21, Si 19, Si 1, Si 2, and Si 3 for redness and swelling of the ear.

Applications:

Slam his right neigwan with your right palm as he attacks with a straight right. Immediately pull his right arm around so that the side of his body is facing you. Now, your right palm will strike straight in to Th 20.

TH 21 (TRIPLE HEATER POINT NO. 21)

Chinese name:

Ermen (ear's door).

Location:

In the depression anterior to the supratragic notch and slightly superior to the condyloid process of the mandible. The point is located with the mouth open. *Er* means ear, and *men* means door; this point is in front of the ear, like a door to the ear.

Connections:

None.

Direction of strike:

In to just before the ear notch, a little above it and slightly angled toward the ear.

Damage:

This strike causes a sickly feeling to slowly move down the whole chest area, much like the feeling

one gets when attacked in a controlling manner at Th 17. Struck hard, it will cause KO. This sickly feeling will turn into a nagging pain after some time, causing the recipient to feel like he is having a heart attack. You must use the antidote to right this condition.

Set-up point:

Th 8.

Antidote:

Apply finger pressure to St 15 and St 16, beginning with St 15 on both sides. The pressure should be almost to the point of pain.

Healing:

Innervation is by the branches of the auriculotemporal nerve and facial nerve. Irrigation is by the superficial temporal artery and vein.

Used for deafness, tinnitus, otorrhea, toothache, deaf-mutism, and temperomandibular arthritis.

Traditional indications include tinnitus, deafness, pus in the ear, toothache in the upper jaw, pain in the jaw, and headache. Traditional functions are to open the ear and disperse heat. You can use the root of the Gb meridian (Gb 42) in conjunction with the branch of the Th meridian (Th 21) for conditions such as tinnitus.

To massage press and hold the point; do rotations clockwise or counterclockwise for xu or shi conditions; or press in slowly with both thumbs and release quickly, pulling the thumbs apart.

Use with Si 19, Gb 2, Gb 42, Gb 20, Th 2, Th 3, Th 4, Th 5, Th 6, Th 7, Th 8, Th 9, Th 16, Th 17, Th 18, Th 19, Th 22, Kd 3, Gb 3, Gb 4, Gb 10, Gb 11, Gb 43, Gb 44, and St 40 for tinnitus, deafness, deaf-mutism, otorrhea, etc.

Use with Gb 20, Gb 14, Gb 12, Gb 41, Gb 43, Gb 44, Gb 34, Gb 21, taiyang, Co 4, Co 11, Th 1, Th 2, Th 3, and Th 5 for one-sided headache.

Applications:

Slam his right straight with your left palm at Th 8 upward on the forearm as your right one-knuckle punch attacks over the top to Th 21.

TH 22 (TRIPLE HEATER POINT NO. 22)

Chinese name:

Heliao (harmony's seam).

Location:

Anterior and superior to Th 21, level with the of the auricle, on the natural hairline of the temple where the superficial temporal artery passes.

Connections:

None.

Direction of strike:

Straight in to the side of the head, again angled slightly toward the back of the head.

Damage:

This point is much the same as Th 21, only there is also great local pain and qi drainage. Because of its location, it can cause KO, but the strike must be quite hard. Using a palm strike to this point, you will also get a number of other points like Gb 3, which when struck together will cause death.

Set-up point:

Th 8.

Antidote:

Place both palms onto the sides of the forehead and push backward toward the back of the skull, stretching the skin lightly. If death has occurred, of course, perform CPR.

Healing:

Innervation is by the branch of the auriculotemporal nerve, on the course of the temporal branch of the facial nerve. Irrigation is by the superficial temporal artery and vein.

Used for tinnitus, headache, heavy sensation of the head, lockjaw, and facial paralysis.

This is a point of intersection with the Gb and Si channels. *He* means harmony, and *liao* means foramen; the point is in the depression in front of the supratragic notch, and its traditional function is to improve hearing.

Massage techniques are the same as for Th 21.

Use with St 5, St 6, St 7, St 8, Gb 20, Gb 21, Gb 34, Co 4, Si 19, Liv 3, and Gb 41 for locked jaw.

See Th 21 for treatment of tinnitus, deafness, pus in ear, etc.

Applications:

The same as for Th 21, only use a palm instead of the one-knuckle punch.

TH 23 (TRIPLE HEATER POINT NO. 23)

Chinese name:

Sizhukong (silken bamboo hollow).

Location:

In the depression at the lateral end of the eyebrow, on the lateral border of the zygomatic process of the frontal bone, in the orbicularis oculi muscle. *Sizhu* means slender bamboo, and *kong* means space; the point is at the lateral end of the eyebrow, which looks like a slender bamboo, and it is in a shallow depression.

Connections:

There is a link from here to Gb 1.

Direction of strike:

This point must be struck downward, usually using a heel palm strike. It can also be struck with an alternative direction of downward and slightly toward the eye.

Damage:

When I first discovered this point (i.e., had it worked on me), I became very excited. This point is one of the very dangerous variety and will cause a KO very easily when struck in the correct direction. The heel of the palm must strike just above the corner of the eye in the hollow above the eye bone, then it glances downward over the side of the eye. You must catch the heel palm in that hollow striking to the upper edge of the eye bone. When struck right on, it doesn't need too much power to cause a KO. A hard strike will cause death, however. This point will drain qi dramatically from the lower heating space and also from the middle heating space. My 7-year-old son (at that time) was able to knock me out with a light blow to this area.

Immediately the recipient feels great local pain. A split second later, there is a sinking feeling in the chest and abdomen as the qi is drained, then the knees go and the KO occurs. Even after the recipient has been revived, the legs are shaky. When this point is struck slightly inward toward the eye, still with a downward motion, it can cause blindness.

Set-up point:

Either use neigwan or Th 8, depending on the technique used.

Antidote:

Squeeze Gb 20 points upward. If the alternative direction has been used, treat the opposite point, needling 3 fen horizontally toward Gb 3.

Healing:

Innervation is by the zygomatic branch of the facial nerve and the branch of the auriculotemporal nerve. Irrigation is by the frontal branches of the superficial temporal artery and vein.

Used for headache, blurring of vision, redness and pain of the eye, twitching of the eyelid, and facial paralysis.

Traditional indications include lateral and midline headaches, red eyes, vertigo, ingrown eyelash, blurred vision, seizures, and insanity.

Traditional functions are to dispel wind, stop pain, clear fire, and brighten the eyes.

Massage techniques are the same as for Th 21.

Use with Th 3, Gb 20, Gv 20, Co 4, Liv 3, Gb 41, Gb 34, Gb 21, Gb 14, and taiyang for migraine headache.

This is a point of intersection with the Gb and Si channels. *He* means harmony, and *liao* means foramen; the point is in the depression in front of the supratragic notch, and its traditional function is to improve hearing.

Massage techniques are the same as for Th 21.

Use with St 5, St 6, St 7, St 8, Gb 20, Gb 21, Gb 34, Co 4, Si 19, Liv 3, and Gb 41 for locked jaw.

See Th 21 for treatment of tinnitus, deafness, pus in ear, etc.

Applications:

The same as for Th 21, only use a palm instead of the one-knuckle punch.

TH 23 (TRIPLE HEATER POINT NO. 23)

Chinese name:

Sizhukong (silken bamboo hollow).

Location:

In the depression at the lateral end of the eyebrow, on the lateral border of the zygomatic process of the frontal bone, in the orbicularis oculi muscle. *Sizhu* means slender bamboo, and *kong* means space; the point is at the lateral end of the eyebrow, which looks like a slender bamboo, and it is in a shallow depression.

Connections:

There is a link from here to Gb 1.

Direction of strike:

This point must be struck downward, usually using a heel palm strike. It can also be struck with an alternative direction of downward and slightly toward the eye.

Damage:

When I first discovered this point (i.e., had it worked on me), I became very excited. This point is one of the very dangerous variety and will cause a KO very easily when struck in the correct direction. The heel of the palm must strike just above the corner of the eye in the hollow above the eye bone, then it glances downward over the side of the eye. You must catch the heel palm in that hollow striking to the upper edge of the eye bone. When struck right on, it doesn't need too much power to cause a KO. A hard strike will cause death, however. This point will drain qi dramatically from the lower heating space and also from the middle heating space. My 7-year-old son (at that time) was able to knock me out with a light blow to this area.

Immediately the recipient feels great local pain. A split second later, there is a sinking feeling in the chest and abdomen as the qi is drained, then the knees go and the KO occurs. Even after the recipient has been revived, the legs are shaky. When this point is struck slightly inward toward the eye, still with a downward motion, it can cause blindness.

Set-up point:

Either use neigwan or Th 8, depending on the technique used.

Antidote:

Squeeze Gb 20 points upward. If the alternative direction has been used, treat the opposite point, needling 3 fen horizontally toward Gb 3.

Healing:

Innervation is by the zygomatic branch of the facial nerve and the branch of the auriculotemporal nerve. Irrigation is by the frontal branches of the superficial temporal artery and vein.

Used for headache, blurring of vision, redness and pain of the eye, twitching of the eyelid, and facial paralysis.

Traditional indications include lateral and midline headaches, red eyes, vertigo, ingrown eyelash, blurred vision, seizures, and insanity.

Traditional functions are to dispel wind, stop pain, clear fire, and brighten the eyes.

Massage techniques are the same as for Th 21.

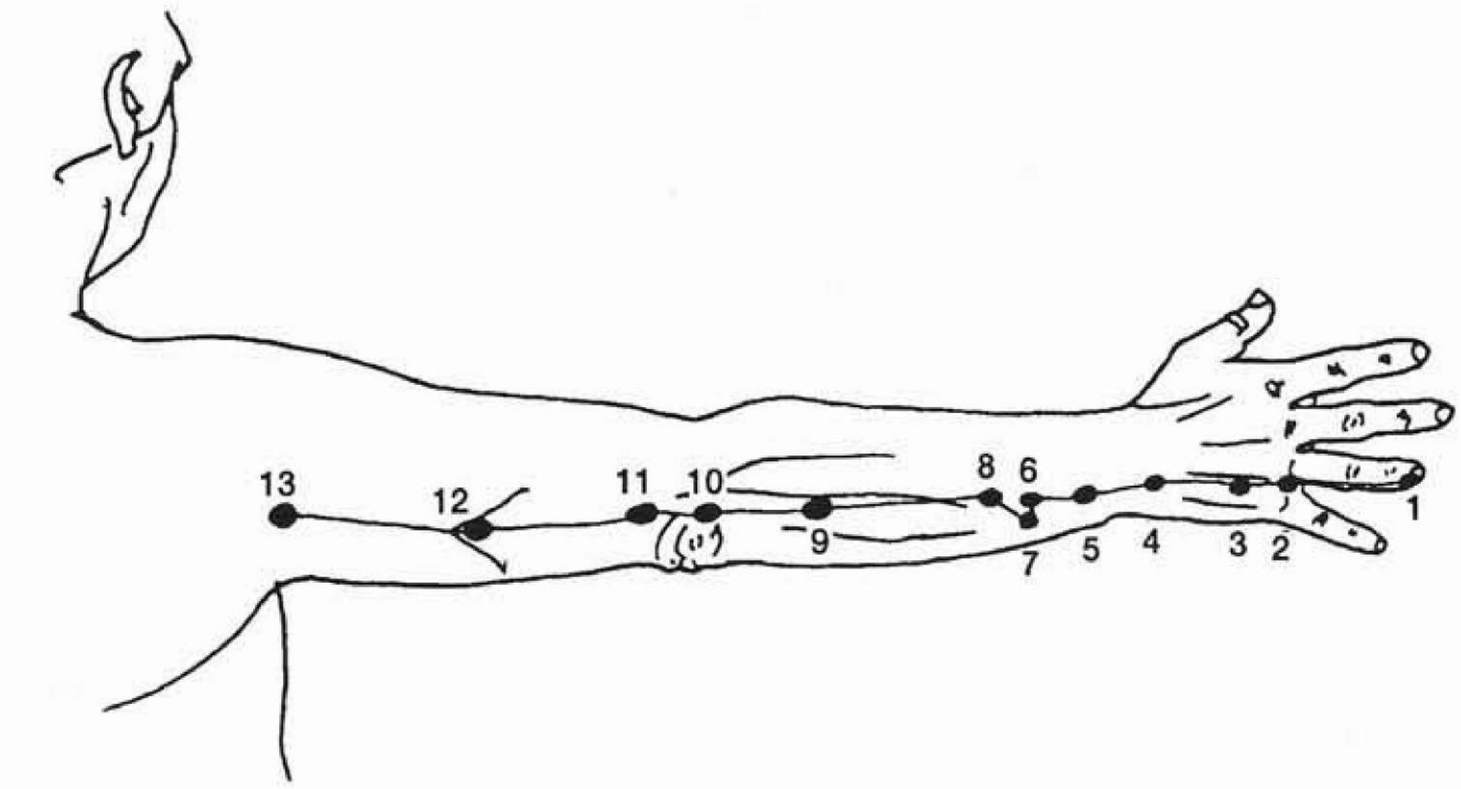
Use with Th 3, Gb 20, Gv 20, Co 4, Liv 3, Gb 41, Gb 34, Gb 21, Gb 14, and taiyang for migraine headache.

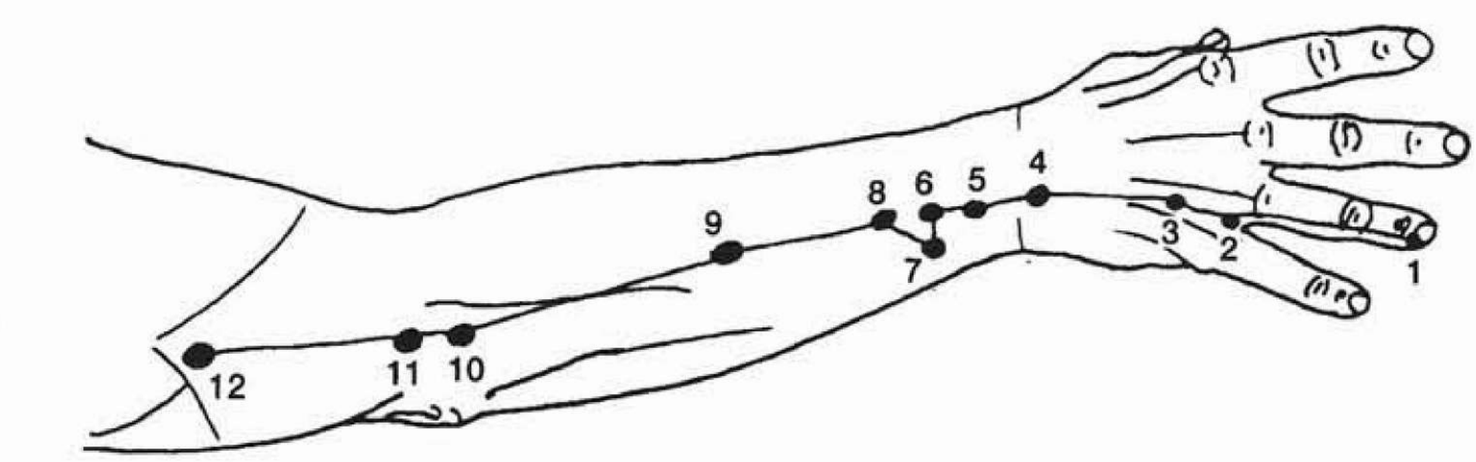
Use with Bl 1, St 1, Bl 2, Gb 1, Liv 2, Liv 3, Co 4, Gb 20, and yuyao for red, sore, swollen eyes.

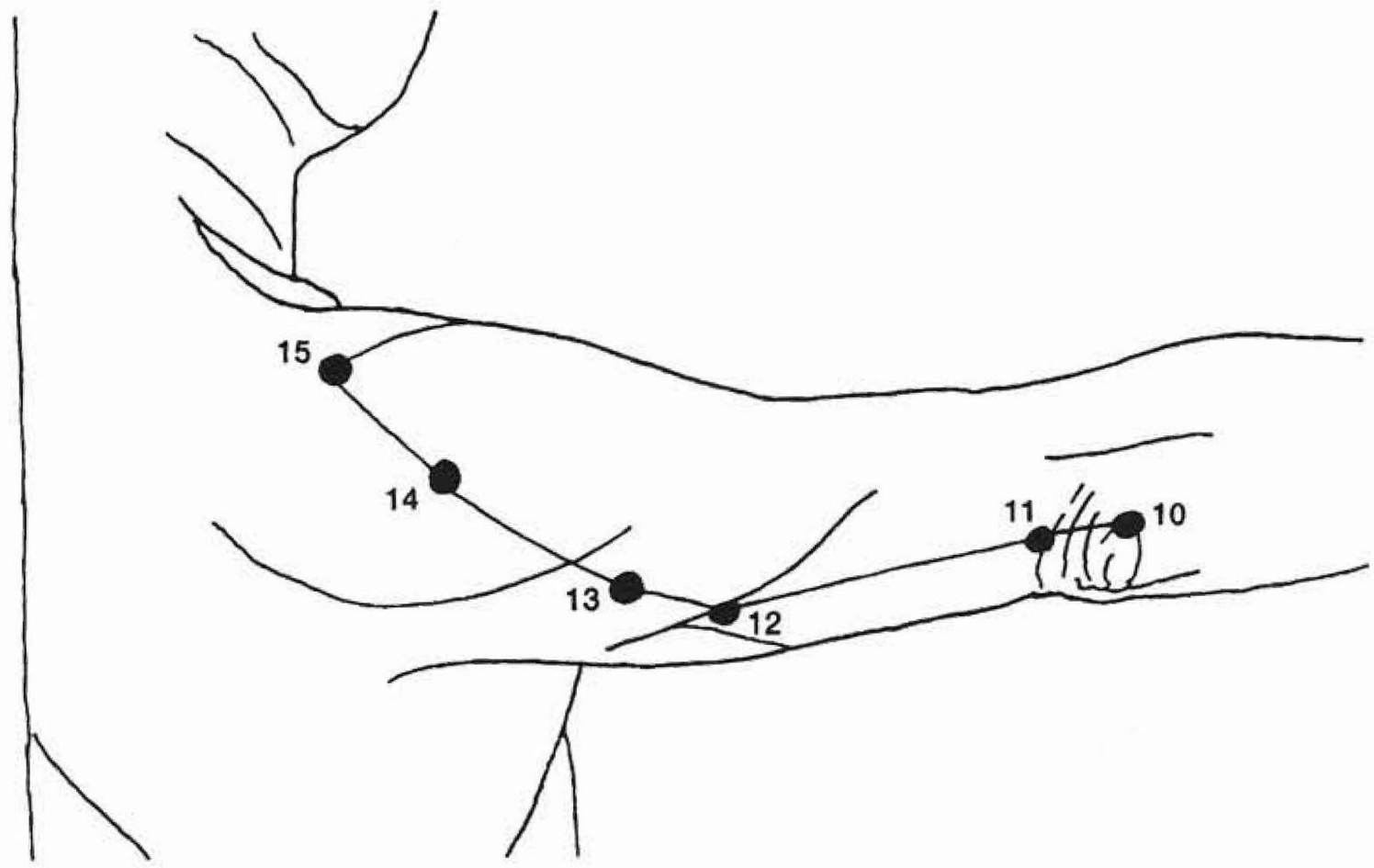
Use with Th 22, St 2, St 4, St 8, St 6, St 44, St 36, Liv 3, Gb 34, Gv 20, Gb 21, and Bl 2 for facial paralysis.

Applications:

He attacks with a right hook. Slam his right neigwan with your left knife-edge palm as you right palm heel slams down onto Th 23.



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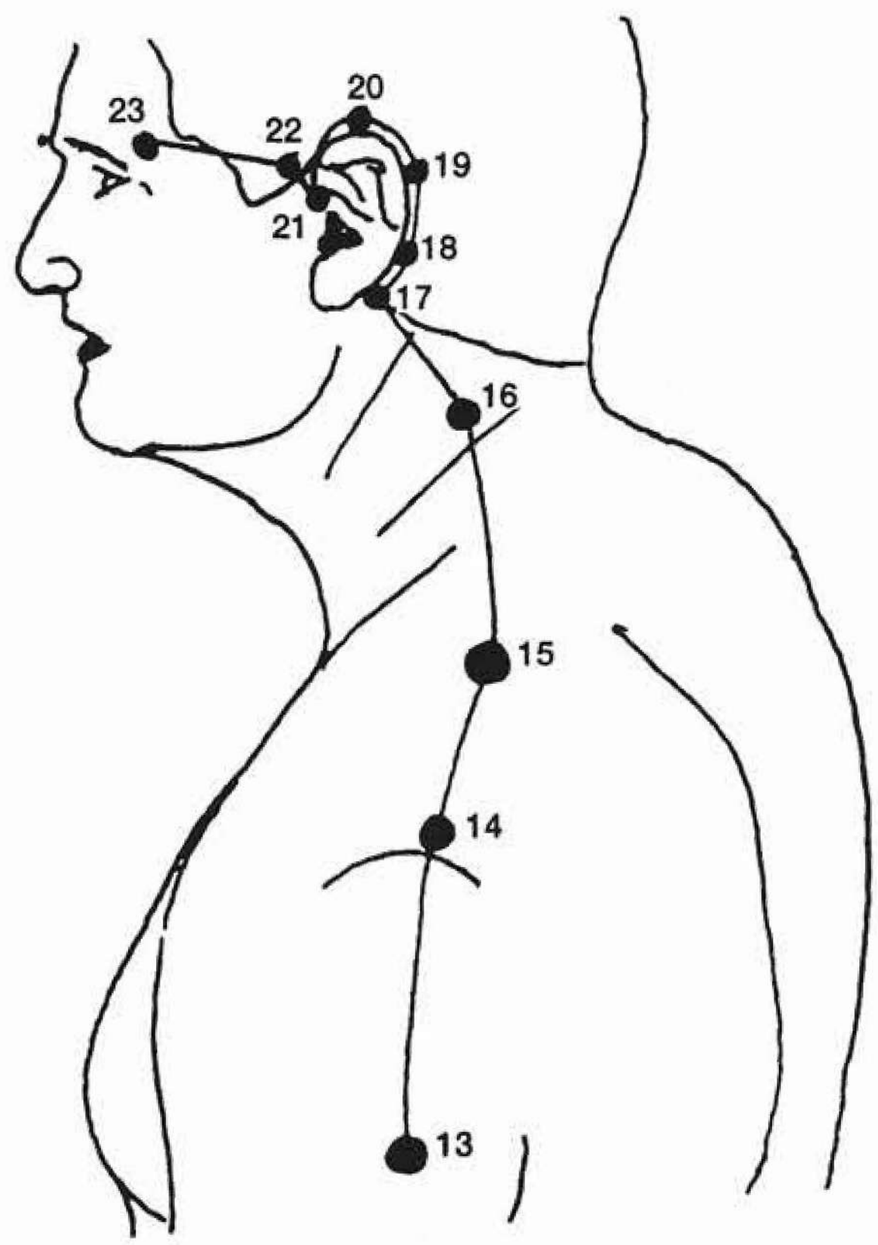
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Chapter 12

The Pericardium Meridian

The pericardium is the sac that hangs around the heart to protect it. It consists of two layers of fibrous tissue with a small space between them. The inside layer covers the heart like skin, but the outer layer is much looser, allowing for the heart to move. The space between the two layers is filled with a thin layer of pericardium film, which is a lubricant between the heart and the sac. It also supports the heart and cushions it as it beats.

THE TCM VIEW

The Chinese element for the pericardium is fire. Its yang counterpart is the triple heater. Pericardium is yin, and its role in the social structure of the body is the protector or bodyguard of the supreme controller (heart).

When we are attacked by external pathogenic factors, it is usually from the external layers to the deep layers. When external pathogenic factors attack the heart, they have to invade the pericardium first, which causes sweating, fevers, delirium, restlessness, dry mouth, and dizziness. Ancient Chinese thought enlikened the relationship of the heart and pericardium to the emperor and his official who takes all the flak, thus protecting the emperor. It is widely thought nowadays that although external pathogenic factors may attack only the pericardium, internal emotional factors will attack the pericardium as well as the heart.

In dim-mak, the pericardium meridian is usually considered to be used for setting up other points because of Pc 6 or neigwan, which is the best known set-up point (as you have probably noticed, I have used it many, many times in this book). It is easy to get to, one must strike it to simply block an oncoming attack, and it is one of the best qi drainage points known. It is also a utility point in the healing area, used to calm the whole body, help with motion sickness and nausea, and help when someone is having a fit.

There are a few points on the Pc meridian, however, that are just as dangerous as some of the other points on other meridians. These are easy to get to and can be struck in a number of directions, causing different reactions. Because of its close relationship to the heart, the pericardium points will also affect the heart. One instance I remember well is that when I was teaching movement therapies at the New South Wales College of Natural Medicine in Sydney, Australia, one girl who was studying taijiquan with me as part of her TCM course had great difficulty performing the postures known as "brush knee twist

step." This was more than your normal uncoordination; she actually vomited whenever she came to this particular posture. So I asked her if she had anything wrong with her heart. She said no, but that she did have a pericardium disease! The posture was trying to fix the problem and, in doing so, causing her great discomfort. That experience confirmed the close relationship between heart and pericardium.

There is another area of this relationship—that of internal striking (which I will cover in the second volume). It is actually possible to strike the pericardium, for instance, using the correct mental attitude and physical way of attacking. In this way, we can cause the attack to act like an external pathogenic factor that will search out and destroy the heart! In this chapter, however, I will only cover the basic strikes to the pericardium points.

PC 1 (PERICARDIUM POINT NO. 1)

Chinese name:

Tianchi (heaven's pool).

Location:

1 cun lateral to the nipple, in the 4th intercostal space. *Tian* means heaven, and *chi* means pool; the point is lateral to the breast, and the milk secreted from the breast is like nectar from a heavenly pool.

Connections:

Receives an internal path from the main meridian after it leaves Cv 7, Cv 12, Cv 13.

Direction of strike:

Angled slightly toward the middle of the body.

Damage:

Pc 1 is one of those points that will affect the heart whether struck on left or right side. It will also have an effect upon the lungs, causing coughing and an itchy feeling in the neck. It will drain qi from the heart and lungs, thus causing great damage to the whole system. It is a mu point of the pericardium, meaning that it is an alarm point. Tenderness here usually means that something is wrong with the organ. When it is struck, there *will* be tenderness. It is also a window of the sky point; thus it will have an effect upon the emotions. Used with Sp 17, this is a devastating double point strike, causing great internal damage with little or no external damage, and it can be used in cases where one does not wish to show physical damage! Death can occur when this combination is struck, and a cause of death is often hard to ascertain other than from a heart attack. This is not a point to play around with in demonstration! This point has also been known to affect the kidneys.

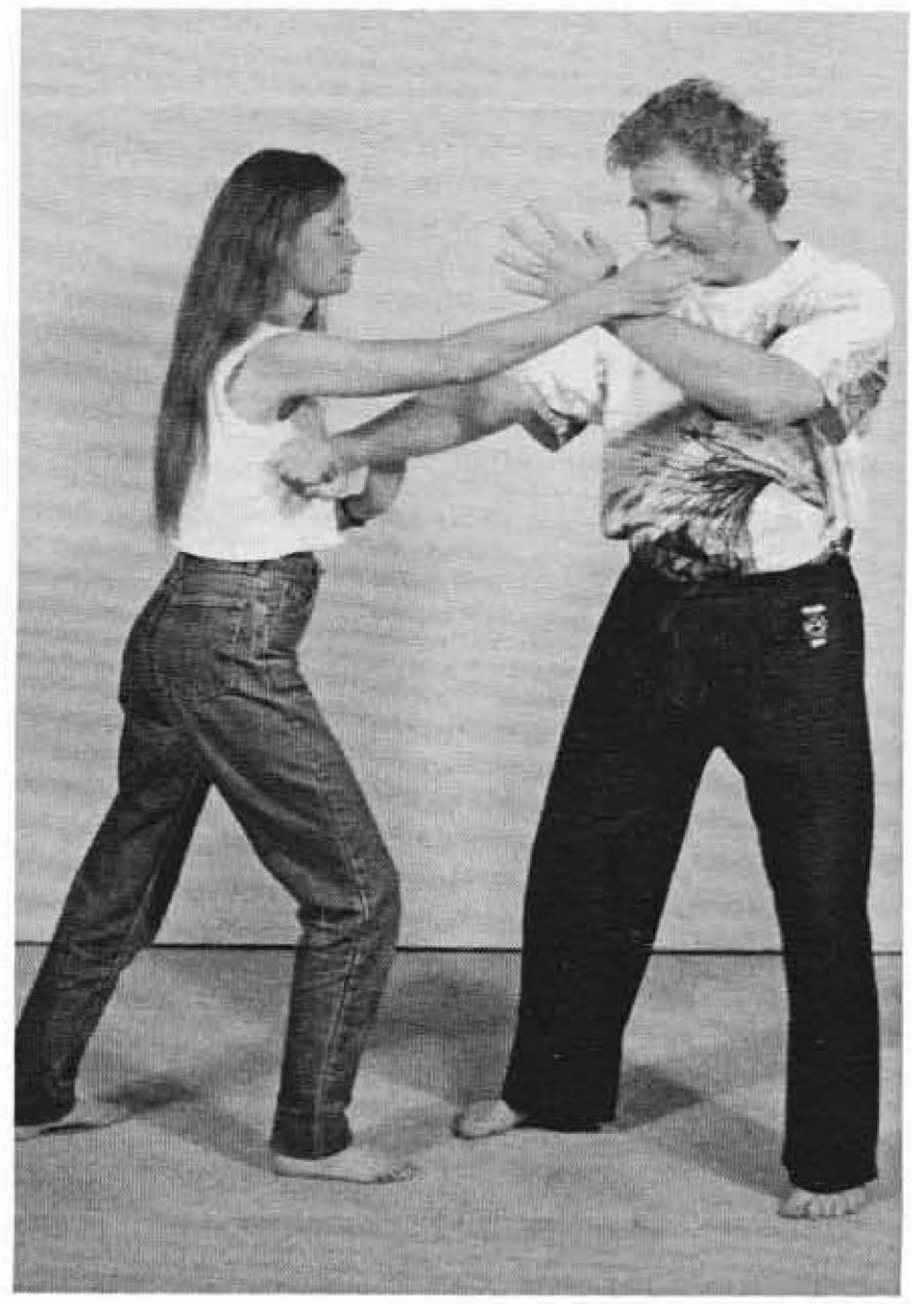


Figure 307

Set-up point:

All of the pericardium points are set up by neigwan (other than neigwan, of course).

Antidote:

You can massage using thumb pressure right over the opposite point; only medium pressure is used here. If the heart has stopped, use Kd 1 as the heart starter.

Healing:

Innervation is by the muscular branch of the anterior thoracic nerve and the fourth intercostal nerve. Irrigation is by the

thoracoepigastric vein and the branches of the lateral thoracic artery and vein.

Used for suffocating sensation in the chest, pain in the hypochondriac region, swelling and pain of the axillary region, angina pectoris, and intercostal neuralgia.

To massage, press and hold; do rotation clockwise or counterclockwise for xu or shi conditions; press in slowly with both thumbs and release quickly, pulling the thumbs apart; and do fingertip percussion on males.

Use with Cv 17, Cv 14, Liv 14, Liv 3, Pc 6, Bl 17, and Bl 18 for a stuffy sensation in the chest.

Use with Sp 21, Gb 22, Gb 23, Bl 17, Bl 18, Bl 19, Bl 16, Bl 15, Gb 41, Gb 43, Gb 44, and Ht 7 for swelling and pain in the axillary region.

Applications:

In defense against his right straight or hook, you would slam his right neigwan with your right palm, straight in this time, as your left palm comes underneath to take over the block. Now, your right hammer fist will slam into Pc 1 in the correct direction (fig. 307). Using this method, you do not have to know the correct direction since the technique itself dictates it.

PC 2 (PERICARDIUM POINT NO. 2)

Chinese name:

Tianquan (heaven's spring).

Location:

2 cun below the end of the anterior axillary fold, between the two heads of the biceps brachii muscle.

Connections:

None.

Direction of strike:

In from the inside of the upper arm.

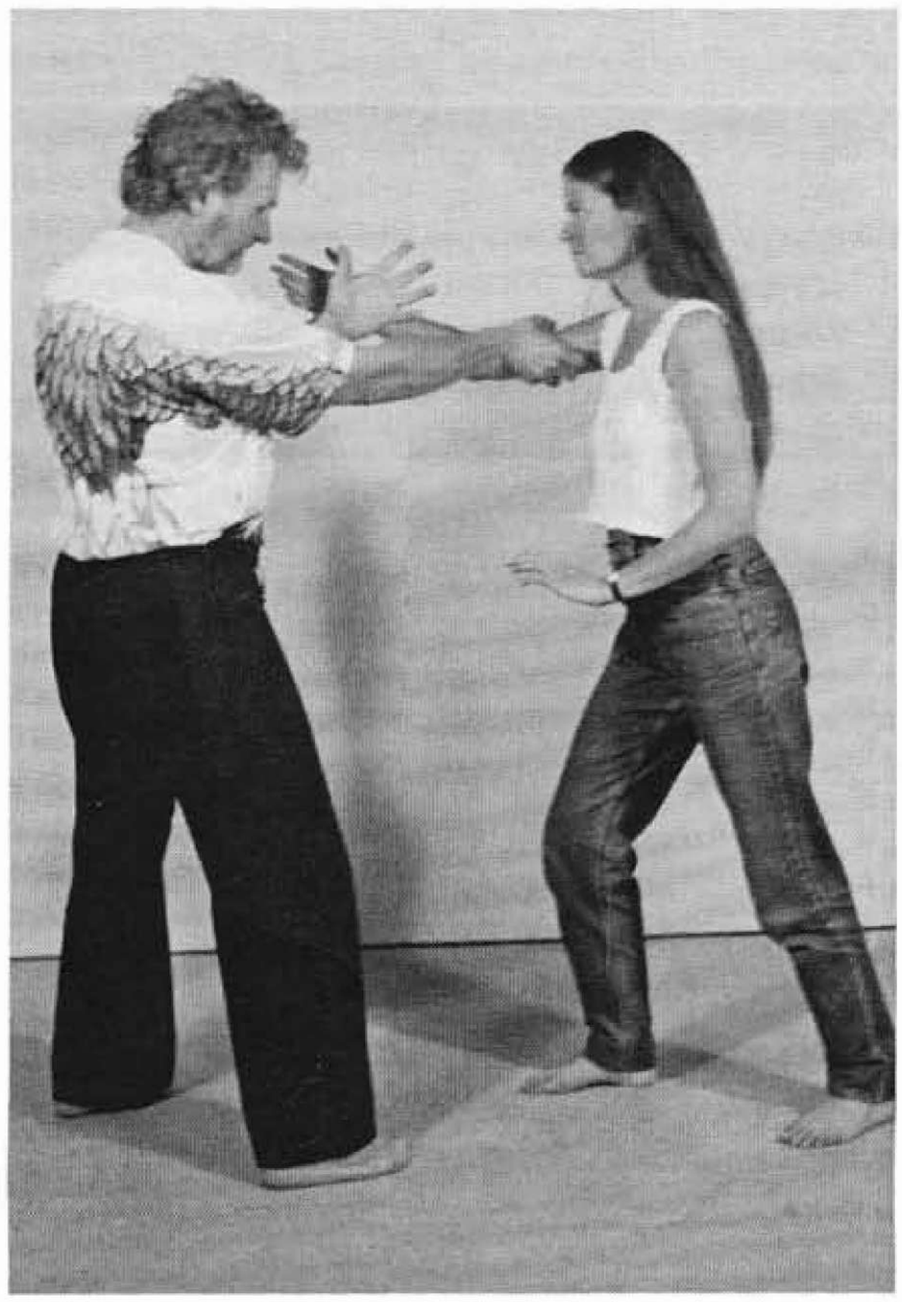


Figure 308

Damage:

Again, this point will also affect the heart and can be used in conjunction with Lu 3 in a claw type of grab to cause great qi disruption and drainage. I have experienced this claw, and it will put someone on his knees if used correctly. Local pain and nerve damage are also apparent. The strike to Pc 2 can sometimes take the breath away, with the recipient exhaling and sinking at the same time.

Set-up point:

Neigwan.

Antidote:

Apply medium pressure, sliding from Cv 17 down to Cv 14 with the thumb or the heel palm.

Healing:

Used for pain in the cardiac region, distension of the hypochondriac region, cough, pain in the chest, back, and medial side of the upper arm, angina, and palpitations.

Traditional functions: *tian* means heaven and *quan* means spring. The qi of the meridian, originating from Pc 1 (tianchi), flows downward like spring water from heaven. This is a water and he point, which frees heart qi. It is also the main point used to remove heat from the blood. It adjusts the intestines and calms rebellious qi.

To massage, press and hold, do rotations clockwise or counterclockwise for xu or shi conditions, and do fingertip percussion.

Use with St 16, Sp 18, St 18, Kd 22, Bl 18, Ht 1, Bl 43, Bl 44, Gb 21, Cv 17, Pc 7, Si 1, Bl 40, St 36, Liv 3, Liv 14, and Th 10 for acute mastitis.

Use with jianneling, Pc 3, Gb 34, Co 15, Co 14, Co 4, Bl 17, Bl 14, and Bl 43 for pain in the medial upper region of the arm.

Applications:

You would probably use the "dragon prawn" method to defend against his straight attack. The right palm blocks at neigwan as the left comes underneath to take over the block. You slam him on the side of the jaw with your right back palm to effect a neurological shutdown, and then your right palm digs into the upper biceps of his right arm, the thumb going in to Pc 2 while the fingers go into Lu 3 (fig. 308).

PC 3 (PERICARDIUM POINT NO. 3)

Chinese name:

Quze (crooked marsh).

Location:

On the transverse cubital crease, at the ulnar side of the tendon of the biceps brachii muscle. *Qu* means curve, and *ze* means marsh; the qi of the meridian infuses into the shallow depression of the elbow like water flowing into a marsh.

Connections:

None.

Direction of strike:

Straight in to the point and slightly toward you down the arm, or slightly up the arm, depending upon what organs you wish to affect.

Damage:

This is a water and he point. It will affect the heart and intestines. It will add heat to the heart, causing long-term effects such as cold sores on the mouth and lips, too much talking about nothing, etc. It will also affect the emotions, especially later in life.

Here we have a triple strike if you also strike to Ht 3 and Lu 5, resulting in extreme qi drainage that would stop the heart and the lungs from working. So these three points are not to be played around with! All by itself, Pc 3 will drain energy and affect the heart when struck downward toward the wrist. It will affect the lungs when struck slightly upward in the opposite direction. All three points can be accessed with a knife-edge strike straight across the inside of the lower upper arm just above the elbow joint, angled slightly downward to get at Lu 5 as well. The triple strike is far more effective than using one or two of these points together.

Set-up point:

Pc 6.

Antidote:

Use Kd 1 to bring back the yang qi, then use the heart starter or CPR. If extreme nausea is the result, then pressure Pc 6 up the inside of the forearm.

Healing:

Innervation is by the median nerve, and irrigation is by the brachial artery and vein.

Used for gastric pain, vomiting, febrile disease, irritability, pain in the cardiac region, palpitations, pain in the elbow and arm, tremor of the hand, acute gastroenteritis, enteritis, rheumatic heart disease, myocarditis, bronchitis, and heat exhaustion.

Traditional indications include chest pain, being easily frightened, heat exhaustion, diarrhea with vomiting (acute gastroenteritis), fever, irritability, and fullness.

Traditional functions are to open up the heart, drain heat from the blood, and regulate the intestines. It is a water point and a he sea (uniting) point of the Pc meridian.

Massage with the arm slightly flexed. Press and hold, or do rotations clockwise or counterclockwise for xu or shi conditions.

Use with Pc 6, Pc 5, Cv 17, Bl 15, Bl 14, Bl 43, Bl 17, Bl 18, Liv 3, St 36, and Ht 8 for rheumatic heart disease.

Use with Pc 6, Pc 7, Cv 17, Bl 17, Bl 15, Bl 14, Bl 18, Co 4, Liv 3, Liv 14, Bl 23, and St 36 for chest pain.

Use with Pc 6, Co 4, Co 11, St 36, Cv 12, Cv 14, St 21, St 25, Bl 20, Bl 25, Bl 40 (best to prick with a sterile needle and extract a drop of blood from this point for this condition), and Liv 3 for acute gastroenteritis.

Applications:

To his right hook, using both knife edges, strike to neigwan with your left palm and to Pc 3, Ht 3, and Lu 5 with your right palm.

PC 4 (PERICARDIUM POINT NO. 4)

Chinese name:

Ximen (gate of the crevice).

Location:

5 cun above the transverse crease of the wrist, on the line connecting Pc 3 to Pc 7, between the tendons of the palmaris longus and flexor carpi radialis muscles, in the flexor digitorum superficialis manus muscle. In its deep position, it is in the flexor digitorum sublimus muscle.

Connections:

None.

Direction of strike:

Straight in to the inner forearm. You could also include Pc 5 and 6 in this strike.

Damage:

This point will affect the heart, especially if the recipient has an angina problem. In this case, the heart will stop immediately. In the case of a normal, healthy person, it will weaken the heart, opening it up to external pathogenic attack that will break through the pericardium easily.

The strike is made more effective if Pc 5 and 6 are included. Pc 4 is a xie cleft point, which will cause the heart to become tense and beat faster for no reason, causing high blood pressure. It also has an effect upon the shen or spirit.

Set-up point:

Pc 6.

Antidote:

Use the opposite xie cleft point on the opposite arm to calm the heart and to send stored qi into the whole chest area to remove the blockages caused by the strike.

Healing:

Innervation is by the medial antebrachial cutaneous nerve and, deeper, the median nerve—and, deepest, the anterior interosseous nerve. Irrigation is by the median artery and vein and, deeper, the anterior interosseous artery and vein.

Used for cardiac pain, palpitations, hematemesis (vomiting blood), epistaxis, furuncles (boils), rheumatic heart disease, myocarditis, angina pectoris, mastitis, pleurisy, spasm of the diaphragm, and hysteria.

Traditional indications include irritability and pain in the chest, depression, chest pain with vomiting, and fear of strangers.

As a xie cleft (accumulating) point of the Pc meridian, its traditional functions are to treat acute problems of the organ and channel (it is a special point for angina), pacify the heart and calm the spirit, regulate the qi, expand the diaphragm, and open the chest. *Xi* means cleft, *men* means door; this is a point where the qi of this meridian enters and exits.

Massage techniques include pressing and holding the point; doing rotations clockwise or

counterclockwise for xu or shi conditions; pressing in slowly with both thumbs and releasing quickly, pulling the thumbs apart; and doing fingertip percussion on the point.

Use with Pc 6, Cv 17, Liv 14, Liv 3, St 36, Co 4, Bl 17, Bl 14, Pc 3, Pc 8, and Si 11 for angina.

Use with Co 4, Co 11, Th 8, Sp 10, and Bl 17 for hemoptysis.

Use with Pc 6, Pc 3, Pc 5, and Ht 8 for rheumatic heart disease.

Applications:

The same as for Pc 3.

PC 5 (PERICARDIUM POINT NO. 5)

Chinese name:

Jianshi (intermediary).

Location:

3 cun above the transverse crease of the wrist, between the tendons of the muscles palmaris longus and flexor carpii radialis, in the flexor digitorum superficialis manus muscle. In its deep position, it is in the flexor digitorum sublimis muscle.

Connections:

None.

Direction of strike:

Straight in to the lower forearm on the inside of the arm.

Damage:

This is a metal and jing point. It will have an effect upon the mind, causing it to become scattered and tense, verging upon mental illness. The heart will also be affected adversely. The heart-lung balance will be disturbed, thus draining qi and causing great weakness. Used with Pc 6 and Pc 4, this point has the potential to stop the heart! Digestion will also be affected greatly.

Set-up point:

Pc 6.

Antidote:

Massage the opposite Pc 5 point upward.

Healing:

Innervation is by the medial and lateral antebrachial cutaneous nerves, the palmar cutaneous branch of the median nerve, and, deepest, the anterior interosseous nerve. Irrigation is by the median artery and vein and, deeper, the anterior interosseous artery and vein.

Used for cardiac pain, palpitations, gastric pain, vomiting, febrile disease, irritability, malaria, mental disorders, epilepsy, swelling of the axilla, twitching or contracture of the elbow, pain of the arm, rheumatic heart disease, seizures, hysteria, and psychosis.

Traditional indications include chest pain, palpitations, stomachache and vomiting, tidal fever, yellow eyes, insanity, generalized scabies, and irregular menstruation.

This is a metal point and a jing river (traversing) point of the Pc meridian. Its traditional functions are to calm the spirit, harmonize the stomach, eliminate phlegm, dispel fullness in the chest, stop pain, and clear internal heat. It is also a special point for malaria. *Jian* means space, and *shi* means minister of the monarchy; the space is between the two tendons, and the pericardium is the minister of the heart.

Massage techniques are the same as for Pc 4.

Use with Bl 11, Sp 6, Co 4, Lu 9, Bl 20, and Gv 14 for tidal fever.

Use with Kd 1, Si 3, Co 4, Co 11, St 40, Bl 20, Bl 25, Cv 12, Gv 20, yintang, Sp 9, Kd 2, Pc 3, Pc 8, Ht 7, and Cv 17 for insanity.

Use with Sp 6, St 9, Co 4, Co 11, Cv 23, Ht 6, Kd 7, Bl 2, St 2, Gb 20, anmien, qiying, Liv 3, Liv 2, and St 36 for hyperthyroidism.

Applications:

The same as for Pc 4.

PC 6 (PERICARDIUM POINT NO. 6)

Chinese name:

Neigwan (inner gate).

Location:

2 cun above the transverse crease of the wrist, between the tendons of the palmaris longus and flexor carpi radialis muscles, in the flexor digitorum superficialis manus muscle. In its deep position, it is in the flexor digitorum sublimis muscle. *Nei* means inner, and *gwan* means pass; this point is an important site on the medial aspect of the forearm, like a passage where the qi on the meridian comes in and out.

Connections:

Transverse luo to Th 4 and Th 1.

Direction of strike:

Straight in, or downward.

Damage:

This is one of the best set-up points and is used a great deal in dim-mak and healing. It is a luo point and a master point for yinwei mai and a coupled point of chong mai. When struck, it will upset the yin-yang balance in the body, causing confusion internally. It can cause mental illness at most or mental instability and confusion at least. It is one of the best qi drainage points. This point is usually struck using a violent grab or a strike. It can be incorporated into wrist locks using the fingers to dig into the point, making the lock much easier to get on and to hold. This strike will cause great internal activity for no reason, so the heart will race for no reason, the lungs will try to take in more air for no reason, etc. A strike straight in will cause great nausea, and I have seen a recipient turn green and throw up when he was struck accidentally on this point.

Set-up point:

None.

Antidote:

Use the opposite neigwan, fingering it upward on the arm. Also, massage the opposite point on the outside of the forearm downward, using the second knuckle when the fist is closed, which is Th 6.

Healing:

Innervation and irrigation are the same as for Pc 5.

Used for cardiac pain, palpitations, gastric pain, vomiting, mental disorders, epilepsy, contracture and pain of the elbow and forearm, febrile disease, malaria, rheumatic heart disease, shock, angina pectoris, abdominal pain, spasm of the diaphragm, migraine, hyperthyroidism, hysteria, asthma, swollen and painful throat, and pain associated with surgery. Traditional indications include chest pain, disease of the chest, vomiting, nausea, disharmony between the stomach and spleen, tidal fever, jaundice, apoplexy, prolapsed rectum, and an attack by the liver on the stomach/spleen.

Traditional functions are to calm the heart and shen (spirit), regulate the qi, suppress pain, promote the function of the stomach, regulate the middle heater, open the chest, and open the yin wei mai. It is a master point of yin wei mai, and so has a profound effect on the three systems (cardiovascular, digestive, and mental/nervous). It is also a luo point of the Pc meridian and the root area of the Pc meridian.

Massage techniques are the same as for Pc 4.

Use with Co 4, Co 11, Cv 17, Cv 14, Cv 12, Bl 14, Bl 15, Bl 17, St 36, Liv 3, Liv 4, Liv 14, Ht 7, Sp 6, Bl 18, and Bl 20 for angina and chest pain.

Use with Co 4, Co 11, Lu 7, St 36, St 25, Cv 12, St 21, Liv 3, Liv 13, Sp 3, Sp 5, and Sp 9 for nausea, vomiting, and stomach flu.

Use with Pc 5, Ht 8, and Pc 3 for rheumatic heart disease.

Use with dingchuan, Bl 12, Bl 13, Bl 43, Bl 17, Bl 18, Cv 22, Cv 17, Cv 12, Cv 14, St 36, Liv 3, Liv 14, Lu 1, Lu 9, Lu 6, Lu 7, Co 4, Kd 7, Kd 3, and Bl 23 for asthma.

Use with Gv 25, Gv 20, Gv 14, Gv 4, St 36, Liv 3, Bl 14, Bl 17, Bl 15, and Kd 3 for low blood pressure.

Use with St 36, Ht 7, Co 4, Liv 3, Cv 12, Bl 20, Bl 18, Bl 17, Bl 43, Gv 20, Cv 17, and Liv 13 for shock.

Applications:

All of the techniques using neigwan that I have covered to great extent in this book.

PC 7 (PERICARDIUM POINT NO. 7)

Chinese name:

Daling (big tomb).

Location:

In the depression in the middle of the transverse crease of the wrist, between the tendons of the palmaris longus and flexor carpi radialis muscles, and in the flexor hallucis longus muscle and the tendon of the flexor digitorum sublimis muscle. *Da* means big or large, and *ling* means tomb or mound; the protrusion of the palmar root is quite large, like a mound, and the point is in the depression of the wrist proximal to it.

Connections:

None.

Direction of strike:

Straight in to the wrist.

Damage:

This is an earth, yuan, and shu point. A strike here will have an immediate effect upon the heart, shocking it sufficiently to enable a more deadly strike. So this point is used as a set-up point for strikes to other meridians, such as the heart. It will cause too much heat in the heart.

Set-up point:

None.

Antidote:

Finger pressure the opposite Pc 7 point on the opposite arm. This will cool the heart.

Healing:

Innervation is deep, by the median nerve. Irrigation is by the palmar arterial and venous network of the wrist.

Used for cardiac pain, palpitations, gastric pain, vomiting, panic, mental disorders, epilepsy, pain in the chest and hypochondriac regions, myocarditis, tonsillitis, insomnia, intercostal neuralgia, and disease and pain of the wrist joint.

Traditional indications include seizures, throat blockage, swelling of the axilla, spitting of blood, scabies, pain at the root of the tongue, and damp disease of the upper extremities.

This is a shu stream and earth point of the Pc meridian and a yuan source point of the Pc meridian, so its traditional functions are to strongly tonify the organ and the channel, clear the heart and calm the shen, harmonize the stomach, open the chest, and reduce fire in the heart.

Massage techniques are the same as for Pc 4.

Use with Ht 7, Gv 20, Kd 3, yintang (extra), St 36, Cv 12, Cv 17, Liv 3, Liv 1, and Kd 1 for insomnia.

Use with Cv 4, Sp 10, Co 4, Bl 17, Cv 2, Cv 3, Liv 2, Liv 3, Kd 2, and Bl 28 for blood in the urine.

Use with Cv 17, Pc 6, Pc 3, Liv 14, Liv 3, Bl 17, Bl 18, Gb 21, Sp 21, Gb 22, Liv 13, Bl 14, and Bl 15 for fullness and pain in the chest.

Applications:

As he attacks with a right straight or hook, slam his Pc 7 point at the wrist with your right knife edge, then use that same hand to attack to the neck.

PC 8 (PERICARDIUM POINT NO. 8)

Chinese name:

Laogong (labor's palace).

Location:

When the hand is placed palm upward, the point is between the second and third metacarpal bones, proximal to the metacarpophalangeal joint, on the radial side of the third metacarpal bone. With the fingers cupped in the palm in a half-fist, this point can be found in front of the tip of the middle finger between the second and third metacarpal bones. Below the point are the aponeurosis, the second lumbrical, and the superficial and deep tendons of the flexor digitorum muscles. In its deep position are the origin of the transverse head of the adductor hallucis muscle and the interossei muscle. *Lao* means labor, and *gong* means center; the hand is for labor, so here lao refers to the hand. The point is in the center of the palm.

Connections:

There is an internal path from this point to Th 1.

Direction of strike:

Straight in to the palm. However, this is not a point I would use in self-defense. It is more known for its healing qualities of cooling the heart.

Damage:

A fire and yong point. When this point is struck, it heats the heart. When used in healing, it cools the heart. This point is however, more known as the point where the qi emanates from, either for healing or for the martial arts. This is where the qi comes from when we put in either healing qi or disruptive qi. It doesn't matter whether he hand is open or closed, the qi still comes from this point. It can also be used as a balancing point for when we do meridian balancing on someone to balance the yin/yang energy in the body. This point on only the left hand is held over the earth point on each meridian, and then the other Pc 8 is rubbed down the length of the meridian.

Set-up point:

None.

Antidote:

If Pc 8 has been struck perhaps accidentally, apply finger pressure to the opposite Pc 8 straight in with a digging type of movement.

Healing:

Innervation is by the second common palmar digital nerve of the median nerve. Irrigation is by the common palmar digital artery.

Used for cardiac pain, mental disorders, epilepsy, vomiting, stomatitis, foul breath, fungal infection of the hand and foot, coma from stroke, heat exhaustion, angina, frightened fainting in infants, hysteria, excessive sweating of the palms, and numb fingers.

Traditional indications include chest pain, inability to swallow food, jaundice, hand tremors, "swan hands" (uncontrollable waving of the hands), madness, and ulcerated oral cavity.

This is a fire point and ying spring (gushing) point of the Pc meridian. Its traditional functions are to cool the heart and drain heat.

Massage techniques are the same as for Pc 4.

Use with Kd 26, Co 4, Gv 20, Liv 3, Liv 2, Gb 34, Gb 20, St 36, Cv 12, yintang, Si 3, Pc 6, Ht 7, Co 11, Liv 1, Kd 1, Sp 6, Kd 4, Kd 6, Lu 11, Th 21, and Ht 3 for hysteria.

Use with Pc 7, Pc 6, Cv 17, St 36, Liv 3, Liv 14, Bl 17, Bl 18, Ht 7, Bl 43, Bl 13, Bl 15, Gb 21, and Liv 4 for angina or depression.

This is an energy input and exit point and so can be used as an energy transference to transfer shi (excess) qi or stuck qi from an area of stagnation to an area of xu (deficiency). An example is somebody with frontal headache or someone who is spending too much time in his or her head (thinking, worrying, scamming, or just tripping out) and not enough time in the body digesting the content of thoughts or, for that matter, the stomach. In these cases, the left hand could be placed on

the forehead (left hand is yin and the receiver of energy, while the right hand is yang and the giver of energy) and the right hand on the tantien (Cv 4 or guanyuan) or zhongwan (Cv 12). The breathing of both patient and practitioner should be in tantien and, if possible, in sync. After a while you may become aware of a pulsing in your laogong points, first the left and then the right (it doesn't really matter which one is felt first, that's just the way I feel it). Don't fix your mind on this sensation, or it will probably disappear. Keep your mind on the breathing. What you are doing is creating a pathway from the forebrain to the center of the body, taking shi from one place and putting it where there is xu. I would often visualize the flow of qi coming into my left hand and out my right, then up the Cv meridian of the person I was doing the balancing on. If you put too much concentration into this visualization, then you will lose the breath; better to stay with the breath in tantien and let the qi flow take care of itself. This is a good balancing treatment that is easy to do on yourself or another, and the results can at times be astounding. *Don't be demanding in your expectations, or you may miss any effect that is forthcoming.*

Applications:

None.

PC 9 (PERICARDIUM POINT NO. 9)

Chinese name:

Zhongchong (middle pouring).

Location:

In the center of the tip of the middle finger. Another location is 0.1 cun from the base of the middle fingernail on the radial side.

Connections:

Takes transverse luo from Th 5.

Direction of strike:

None.

Damage:

If you were to bang yourself on the longest finger, you might experience some heat in the heart (e.g., anger), which will cause you to jump around a bit and sprout profanities. This is a healing point, and I would not use it in a self-defense application. It is a wood and cheng point, and therefore is used in such emergency treatments as coma, and is usually bled.

Set-up point:

None.

Antidote:

None.

Healing:

Innervation is by the palmar digital proprial nerve of the median nerve. Irrigation is by the arterial and venous network formed by the palmar digital proprial artery and vein.

Used for cardiac pain, irritability, loss of consciousness, aphasia with stiffness of the tongue, febrile disease, heat stroke, infantile convulsions, feverish sensations in the palm of the hand, shock, coma, and angina.

Pc 9 is a jing well point and wood point of the Pc meridian. Its traditional function is to reduce fire from the heart, which results in a resuscitation affect (prick and bleed one or two spots of blood for this effect).

Zhong means middle, and *chong* means gushing; this point is at the tip of the middle finger and is the jing well point of this meridian where qi of the channel originates and gushes upward along the channel.

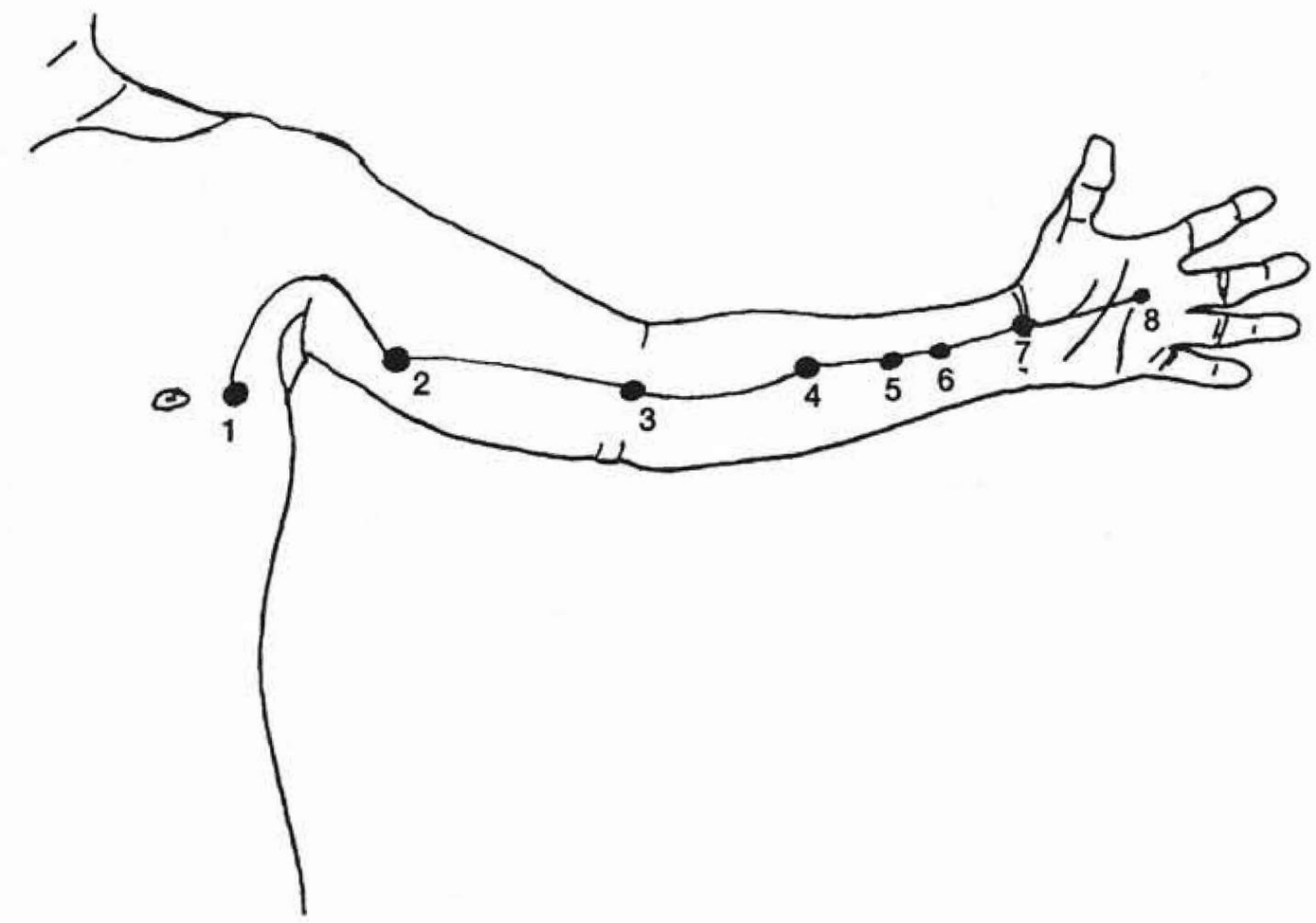
To massage, use the knuckle and the forefinger to squeeze the point at either location or prick and bleed to cool the heart and effect resuscitation.

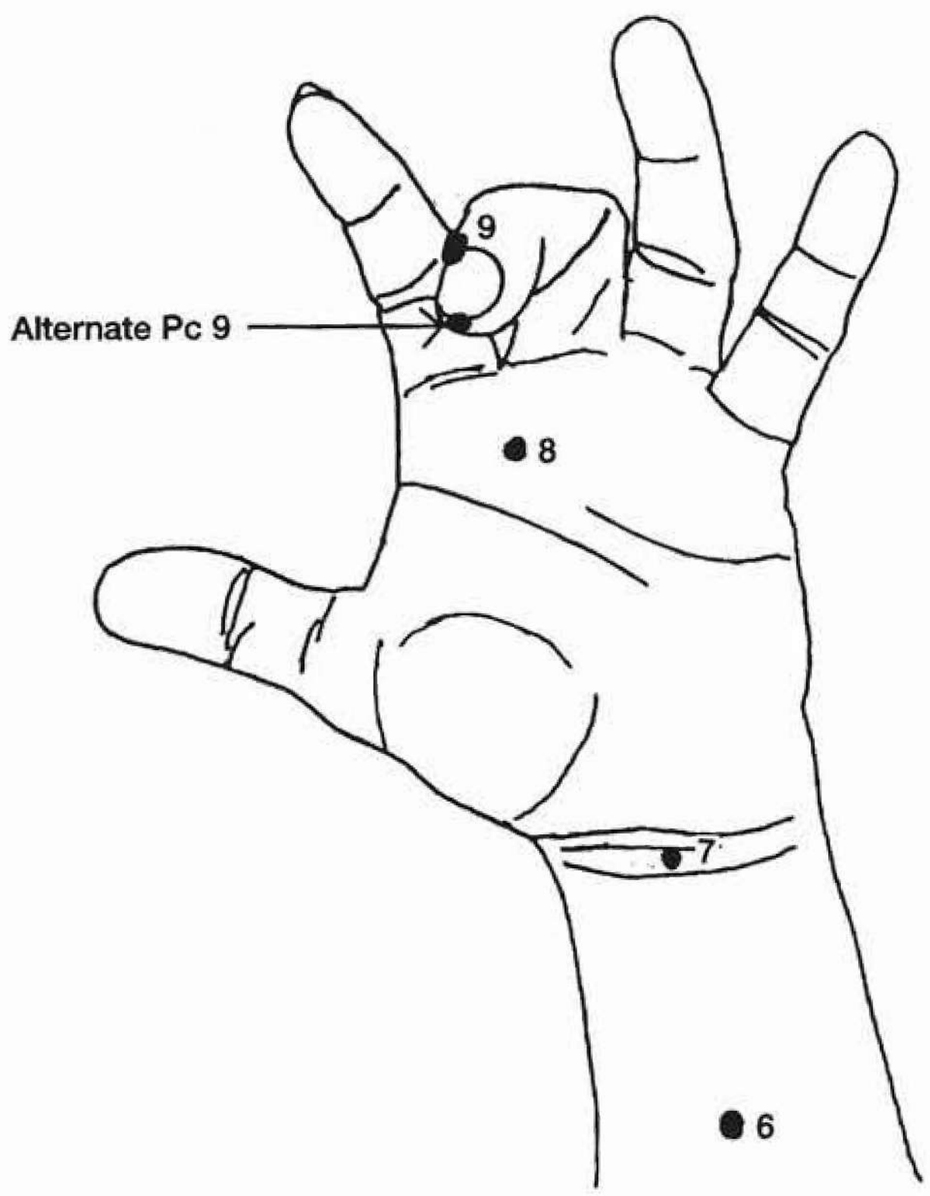
Use with Cv 1 and Gv 26 as an adjunct to CPR in cases of drowning.

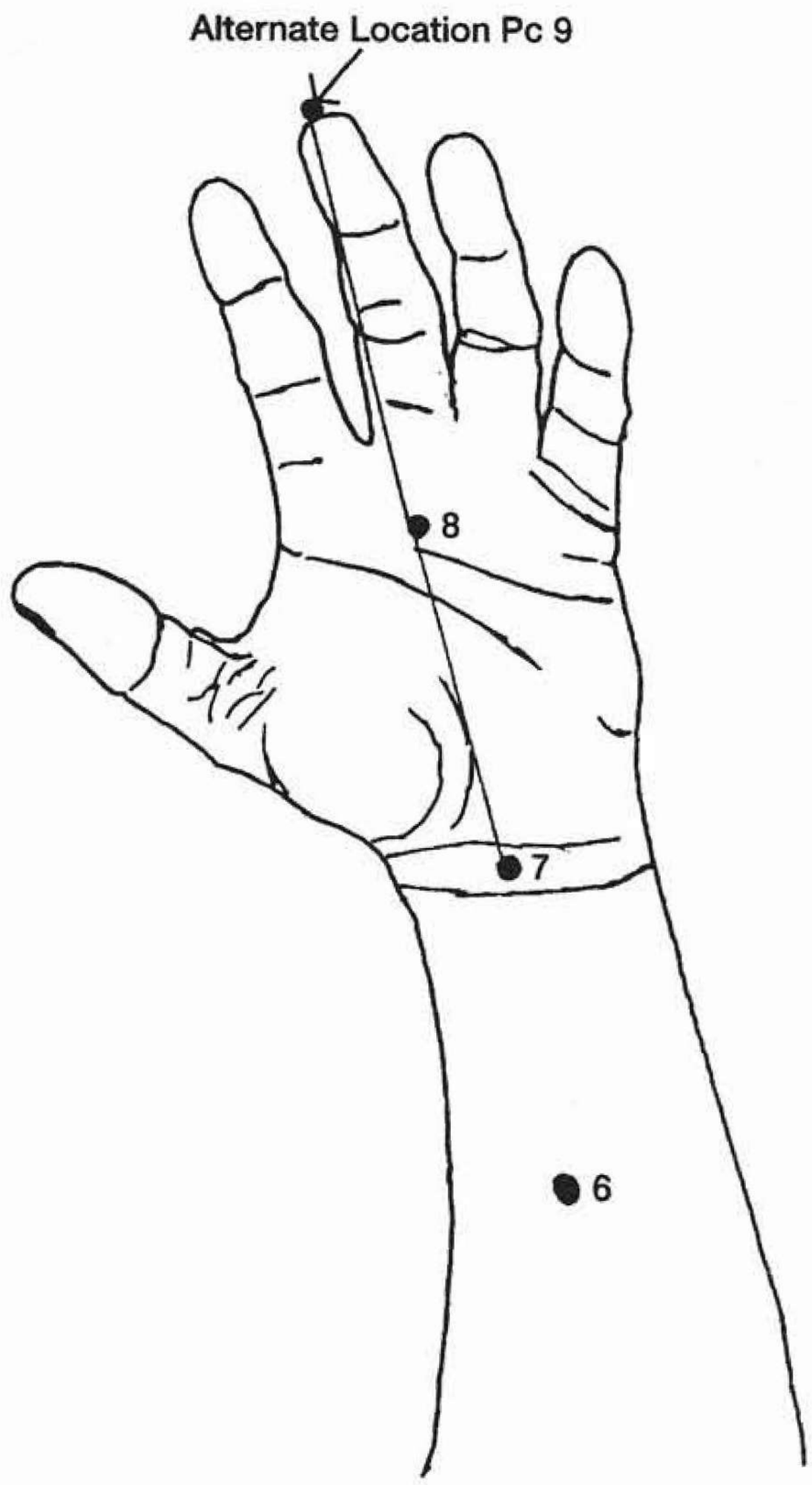
Use with St 36 and Gv 26 for fainting.
Use with Gv 26, Co 4, Liv 3, Gv 14, Pc 6, St 40, Kd 1, Gv 20, and sishencong for coma.
Use with Gv 25, Gv 26, Pc 6, Kd 1, St 36, Gv 20, Cv 4, Cv 6, and Liv 3 for shock.

Applications:

None.






Alternate Location Pc 9
8
7
6

Medical

Glossary

The following medical reference is by no means complete. I have only included the anatomical terms and the disease states that are included in this encyclopedia and that most people would not be familiar with.

A

Addison's disease: This disease is caused by failure of the adrenal gland to secrete corticosteroid hormones and can be life threatening. Addison's disease (or syndrome) can be caused by a number of factors, such as tumor, autoimmune diseases, and infection.

Indications of this disease include weakness, a change in color of skin (mainly to a darker shade), cold sensitivity, loss of appetite, weight loss, and intestinal problems, to name a few. There is a Western treatment program that cures this disease.

adnexitis: A swelling of the adnexal organs of the uterus, i.e., the fallopian tubes and ovaries.

amenorrhea: The normal flow of blood and discharge called menstruation does not happen. Normally, for instance, during pregnancy and milk flow or before puberty and after menopause, this flow does not occur. However, with amenorrhea, the flow does not appear at all or stops for unnatural reasons. The former is normally caused by malfunction with the hypothalamus gland, the ovary or uterus, or the pituitary gland. The latter often occurs in athletes who achieve an extremely low percentage of body fat as a result of intense training and in women who have eating disorders.

ametropia: We get a wrong image at the back of the eyeball because the light is not bent the correct way upon entering the eye.

angina pectoris: A pain in the chest like a cramp that travels down the left side of the body, usually caused by a lack of oxygen to the heart. It is also linked with hardening of the arteries. The patient feels like he or she is dying from suffocation.

anhidrosis: An absence of sweating when one should be sweating under normal stimulus.

aphasia: Speech is lost due to a nerve problem, usually caused by injury or disease in the left side of the brain. It is not a problem of articulation, etc. It can be reversed, and in most cases speech returns.

aphonia: Loss of voice caused by disease of the larynx or mouth. It can be caused simply by overuse of the vocal chords.

apoplexy: Nowadays, we simply us the word "stroke." Apoplexy is a stroke with paralysis.

ascites: This disease can be caused by a number of factors. Mainly, though, it is caused by cirrhosis (liver disease). It is an abnormal amount of fluid in the abdominal cavity with large amounts of protein, and swelling of the abdomen.

atelectasis: The failure of a part of the lung to expand, as seen in many premature babies. It can happen in adults from inhaling foreign bodies or from bronchial cancer or tuberculosis, an internal blockage, etc. Physiotherapy can help this situation.

atrophy: Part of the body wasting away. This can be caused by disease or accident. Muscles can atrophy simply form lack of exercise. Restricted blood flow is also a factor.

B

beriberi: Is a dietary deficiency disease cased by a lack of vitamin B. The disease is characterized by neuritis, often with muscle atrophy, poor coordination, and eventual paralysis. Death may occur from heart failure. The disease is prevalent in those parts of the East where polished rice is the main food. Health is restored quickly when adequate amounts of vitamin B are given. (Also called "leg qi.")

borborygmus: Noises from within. Bowel or stomach noises, rumbling, or gurgling noises. Usually caused by a blockage of the small intestine.

Buerger's disease: An inflammatory condition of the arteries, especially in the legs, that predominantly affects young male cigarette smokers.

C

canthus: The corner of each eye where the upper and lower eyelids meet.

cholecystitis: Inflammation of the gallbladder, usually caused by a bacterial infection that results in great pain over the Gb and fever. Acute cholecystitis is usually associated with gall stones. An X-ray is usually taken to rule out other diseases, such as appendicitis.

chorioretinitis: The outer membrane and retina of the eye are swollen, usually due to inflammation. Blurred vision and light sensitivity are some symptoms.

choroiditis: An inflammation of the choroid layer of the eye (the layer of the eyeball between retina and sclera).

chyluria: Chyle in the urine. This gives a milky appearance. Chyle consists of certain digestive juices, which make their way into the urine from the small intestine.

conjunctivitis: Inflammation of the front of the eye, called the conjunctiva. Caused by infection, bacteria, or virus and spreads quickly to the other eye and to others who have close contact. Swelling, redness, and pus will also be present. This disease causes more discomfort than pain, and it can affect vision, but this is rare. (Also called pink eye.)

costal: Relating to a rib, near a rib.

Costalgia: Pain in the ribs. This term is very rarely used nowadays. (I guess they simply say, "Pain in the ribs"?)

Cushing's disease or syndrome: Overstimulation of the adrenal glands by excessive amounts of ACTH/corticosteroid hormones secreted by a tumor of the pituitary gland. Symptoms are excessive body hair growth, weight gain, reddened face and neck, osteoporosis, (loss of minerals from the bones), high blood glucose levels, and often mental disorders. This can also be caused by the use of steroid drugs over several weeks or longer.

D

dyschezia: Constipation caused by a voluntary urge not to defecate over a long period. The bowel is distended, and defecation is difficult and painful.

dysuria: Difficult and painful urination due to a bacterial infection of the urinary tract. Frequent urge and urination. It is usually helped by a large intake of fluid. This is a symptom of urethritis, cystitis, or proctitis.

E

edema: An excessive level of fluids in the body tissues. This used to be called dropsy, and years ago people would die of this disease. It is not that prevalent nowadays and is easily treated.

empyema: Pus in a body cavity, such as in the area between the lung and the membrane surrounding it. Caused by an infection like TB or pleurisy.

endometritis: Inflammation of the endometrium (the mucus membrane lining the uterus) caused by chronic or acute infection. It may also be caused by foreign bodies, such as parasites or bacteria. Sometimes happens after childbirth or abortion where the woman is fitted with an IUD.

enuresis: Lack of control over urination, usually in the evenings in bed.

epilepsy: Can be any one of a number of disorders of brain function. Characterized by sudden attacks of convulsions, or blackouts, or seizures, or all three. There is an uncontrolled discharge of electricity from the nerve cells on the surface of the brain. The cause is generally unknown.

F

febrile: Means the high temperature of the body as a febrile reaction to infection.

frontal cortex: This is the most complicated part of your brain. It is responsible for intellect, personality, and learning. Judgment and reasoning and consciousness are also produced here. This area is directly affected by environment and upbringing.

furuncle: This is a localized staphylococcal skin infection, usually occurring in a follicle of the hair. Pain and red swelling that exudes dead tissue. (Also called boils.)

G

glaucoma: High blood pressure within the eye. The normal flow of fluid between the cornea and aqueous humor (lens) is blocked. Acute glaucoma can result in blindness within two to five days; chronic glaucoma may take years to develop. Usually controlled by eye drops.

goiter: A swelling in the neck caused by an overgrown thyroid gland.

H

hemafecia: The presence of blood in the stool.

hematemesis: The act of vomiting blood.

hematuria: A presence of blood in the urine at an abnormal level, caused by kidney diseases.

hemiplegia: One side of the body is paralyzed.

homeostasis: The constant state within the body that is is naturally maintained, comprising body temperature, heartbeat, blood pressure and production, salt balance, breathing, and glandular secretions.

hypermetropia: Farsightedness. Near vision is more blurred than far vision.

hyperopia: Same as hypermetropia, farsightedness. (U.S. terminology).

hyperosmia: High sensitivity to smells.

hypochondriac region: Both sides of the upper abdomen and beneath the ribs.

hypoglossal nerve: A pair of nerves in the head that cause tongue movement and swallowing.

I

inguinal: Pertaining to the groin area.

ischaemia: The organ or part of the organ that receives inadequate blood supply caused by some restriction in the blood supply.

K

keratitis: Inflammation of the cornea of the eye.

keratoleukoma: A firm nodule that appears mainly on the face and grows to 1 to 2 centimeters across in about six weeks.

L

lacrimation: Crying, or simply tearing. An excessive amount of tears as in crying.

lassitude: Wanting to sleep all day, no energy, etc.

leucorrhea: A white or yellowish discharge from the vagina. This can be normal during periods or during pregnancy.

lumbosacral plexus: The nerves that supply the legs and pelvic area.

lymphadenitis: Usually caused by a bacterial infection or circulating cancer cells causing inflammation of the lymph nodes.

M

menorrhagia: Longer and heavier than normal menstruation periods. Happens naturally at some time in a woman's reproductive life. If it continues, she should be checked out for cancer, etc. It may cause anemia if left too long without help.

micturition reflex: The urge to urinate. This is normal when the pressure of fluid rises in the urinary tract. Controlled naturally but uncontrolled as with infants.

myocarditis: Inflammation, either acute or chronic, of the heart muscle.

myopia: Shortsightedness. Distant things are blurred.

N

nebula: A scar or "spot" on the cornea, usually not causing light to be blocked. It is picked up only by an optometrist using specialized lighting.

Nelson's syndrome: A hormone disease that could follow the removal of the adrenal gland. Many call this disease Cushing's Disease.

nephritis: Kidney disease of any kind that has swelling or organ malfunction as its symptoms.

nephroptosis: Dropping of the kidney into the pelvis. This can occur in very thin women, for example.

neuralgia: Pain caused by diseases that affect the nervous system. (It is usual to place the affected portion of the body placed before "neuralgia," as in "facial neuralgia.")

neurasthenia: Psychological and physical conditions causing fatigue, irritability, headache, anxiety, dizziness, and intolerance to noises. Can be caused by a head injury or neurosis.

neurodermatitis: A skin disorder usually found in anxious or nervous patients. The skin—especially around the forehead, forearms, nape of the neck, and legs—is hard and thickened as a result of scratching or rubbing.

neurosis: Any long-term behavioral or mental disorder in which the patient is aware of it. (In other words, the patient maintains a connection with reality.)

O

ophthalmoplegia: Paralysis of the muscles of the eye. Can be either internal or external.

orchitis: Inflammation of the testis, either one or both. Can cause sterility if caused by mumps.

otorrhea: Any kind of discharge from the ear. Usually seen in chronic middle ear infections.

P

palpitation: A very fast beating of the heart in some people who are under stress and in heart patients.

pancreatitis: A swelling of the pancreas, which can be caused by damage to the gallbladder or too much alcohol. The acute variety is often deadly. The chronic variety is also usually caused through alcohol abuse and is associated with diabetes.

pannus: The outer layers of the cornea become filled with blood vessels, usually as a result of inflammation of the cornea.

parotid glands: A pair of the largest saliva glands, situated on the inside of the cheek below the outer ear.

parotitis: Swelling or infection of one or both saliva (parotid) glands. Mumps.

peptic ulcer: A breakdown of the lining of the digestive tract. Usually occurs when pepsin and acid are at unusually high levels.

pericarditis: The pericardium, or the membrane that surrounds the heart, is inflamed. Caused by injury, cancer, heart disease, etc. There are breathing difficulties and pain in the first stages. The second stages are more serious, with fluid gathering around the pericardium and a swelling on the outside of the body around the heart.

pleurisy: Inflammation of the linings of the lungs (*pleura*, an oily membrane that surrounds the lungs). Symptoms include pain in the lungs and shortage of breath. Can be caused by pneumonia, cancer, or tuberculosis.

polupus: Same as polyp. A growth, usually benign, proturuding from the mucus membrane. Commonly found in the nose.

pronator teres: The muscle in the forearm that turns the hand down or back (as in the yin- or yang-shaped hand).

prostatitis: Infection of the prostate gland, causing swelling with the urgent need to urinate. A burning sensation accompanies urination.

pruritus: Itching, or rather that which makes someone need to scratch, sometimes causing infection.

psychosis: A mental disorder that has a physical or emotional source. The patient may have illusions (mistaken beliefs) and/or delusions (false beliefs).

pterygium: A triangular overgrowth of the cornea, on the inner side, by thickened and degenerative conjunctiva. People from dry, hot, dusty climates are more prone to this disease. It very rarely interferes with vision.

ptosis: Eyelids that droop, either one or two of them, caused by a weakness of the muscle that raises them or malfunction of the nerve that triggers this muscle.

pyelonephritis: A bacterial infection of the kidney. Characterized by fever, chills, and a need to urinate frequently, this disease moves quickly. Can lead to kidney failure.

R

rhinitis: Nasal discharge caused by inflammation of the mucus membrane in the nose. A runny nose.

rhinorrhea: Mucus freely flowing from the nose. Or the release of spinal fluid after a head injury.

S

sclera: The hard stuff behind the eyeball (membrane) that keeps the eyeball in its shape. The white of the eye.

scrofula: An old name for tuberculosis of the lymph glands in the neck.

stye: An infection of a gland of the eyelid that forms pus.

T

tachycardia: When the heart contracts at a rate greater than 100 beats per minute at a regular rate.

temporalis: The muscle that closes the jaw; one of four muscles used for chewing.

thrombocytopenia: Too few platelets in the blood, causing bleeding into the skin, bruising easily and bleeding after injury.

tidal fever: A fever that comes and goes (like the tide).

tinnitus: Ringing in the ear, which could be a sign of acoustic injury.

trigeminal neuralgia: Stabbing pain in the face along the trigeminal facial nerve. Caused by pressure on the nerve.

trismus: A long-term spasm of the jaw muscles keeping the jaw tightly shut. As in tetanus. Also called lockjaw (informal).

U

urethraliga: Pain of the urethra.

urticaria: A skin condition where the skin erupts into wheals (or welts) of differing shapes and sizes with clear margins.

uveitis: Inflammation of any part of the uveal part of the eye. Could be caused by diabetes, trauma, infection, and could turn into glaucoma.

Glossary

Accumulation point: Where the qi accumulates so that it can be sent to different parts of the body.

Acupressure: A way of using the acupuncture points for healing without using needles; only the fingers are used to press the points.

Acupuncture points: Along each meridian or channel, there are points that offer less electrical resistance. These are the points that an acupuncturist will pierce with a metal needle in order to put into the body, qi or electricity from his or her own body. The points in this book are numbered with a system well accepted in the West. (Usually Chinese texts are numbered differently than are Western texts.)

Chang Yiu-chun: One of only three disciples of Yang Shou-hou and teacher of the Erle Montaigue.

Chee Sau: Sticking hands. This is a training exercise in taijiquan that teaches students about hand techniques and reflex actions. Both partners join hands at both wrists and, using circling motions, try to attack each other from this short distance with punches and palm attacks. The very instant an attack is felt, the attackee reattacks, thus defending himself using an offensive method.

Chen: A family in China whose style of taijiquan is becoming more popular in modern times. Many believe that it was the Chens who invented taijiquan, while others believe that they simply changed their form of Chinese boxing to be more in keeping with the taijiquan principles. Nowadays, Chen style is regarded as one of the four major systems of taijiquan.

Cheng point: An extremity point. (Many extremity points are used as emergency points.)

Chi: Ultimate, the pinnacle, as in t'ai chi ch'uan. (Do not confuse this with *ch'i,* or qi.)

Ch'i-na: The art of locking the joints. Jujutsu is a form of this. Taijiquan has its own version of it based solely upon the postures of the forms.

Chong mai: One of the eight extra meridians.

Chu King-hung: One of only three disciples of Yang Sau-chung and teacher of Erle Montaigue in the Yang Cheng-fu system.

Ch'uan: Fist, or boxing, as in t'ai chi ch'uan.

Cun: (Pronounced "tsoone.") A measurement of about 1 inch, used in acupuncture and dim-mak to locate points. The distance between the second and last knuckles on the middle finger when the finger is bent tightly.

Dai mai: The girdle meridian, which runs around the waist. An extra meridian.

Dim-hseuh: Another name for dim-mak.

Dim-mak points: The same points that are used in acupuncture, but they are used on a martial level, to kill or to heal.

Du mai: Governing (vessel) meridian. One of the eight extra meridians. Unlike the other six extra meridians, however, this one, along with the *ren mai*, or conceptor (vessel) meridian, has its own meridian and points.

Emergency points: Those points that are used in diagnostic procedures to determine whether a patient is in dire straits, or those that can be used in emergency situations, such as death.

External martial arts: Those such as karate, tae kwondo, and the kung-fu systems, such as Choy Lae-fut, Jow gar, and Hung gar, that had their beginnings at the Shao-lin temple in China.

Extra meridians: There are 12 main meridians in the body and eight "extra" ones. Whole medical practice has evolved in China using purely the eight extra meridians. These meridians also hold the key to some of the most deadly point strike combinations.

Extra point: These are acupuncture points that have either been discovered after the main meridian points were discovered or are not situated upon any particular meridian.

Extremity points: Those acupuncture points that are "at the extremities" of the body, such as Ht 9 at the tip of the little finger.

Fa-jing: Explosive energy, fa-jing is the "motor" of dim-mak. Without it, you just cannot use dim-mak. It is a way of attack using the whole body rather than just the portion of the body that is issuing the attack. It is very much like a sneeze. Your whole body sneezes, however, not just your nose.

Fen: About one-tenth of an inch, also used to measure acupuncture points.

Fu: Hollow organs, the yang organs.

He point: A sea point, or "gathering together."

Hun: The spiritual soul that lives in the liver.

Ho Ho-choy: Disciple of the great bagwazhang master Chiang Jung-chiao, and one of several teachers of the author in bagwazhang.

Ho ho ha ha kee kee ku ku: The call of the Australian kookooburra.

Internal martial arts: Those martial arts systems, such as taijiquan, bagwazhang, and h'sin-i ch'uan, that rely more upon an internal strength, making use of the flow of qi rather than relying upon brute strength.

Jeh: The will, which lives in the kidneys.

Jing point: Used for the river point.

Jing qi: The extra kidney qi that is stored in the kidneys and is used for resuscitation.

Ke, or ko: The controlling cycle of the five elements.

Large san-sau: A training exercise in taijiquan wherein both partners perform attacks and defenses in a set dance-like routine of attack and defense. Every posture from the taijiquan form is employed in this set. At an advanced stage, more free-style attacks and defenses are used.

Luo: A connecting point or meridian.

Mai: Meridian or channel.

Martial taijiquan: This is the second level of a taijiquan student's martial training. It is necessary to understand martial taijiquan in order to use it for healing others. This is where we learn how to use taijiquan for self-defense. It goes much deeper than simply knowing what each posture is used for.

Medical taijiquan: The highest level of one's internal martial arts training. This is where the practitioner is able to use taijiquan postures to actually heal someone of disease. It is not just the patient doing the postures himself, but the "doctor" using the martial arts application of each posture to heal disease.

Meridian: A channel along which "qi" (energy, electricity) flows. There are 12 main meridians and eight "extra" ones in the body. In this book, we deal with the 12 main meridians and only glance at the eight extras where necessary.

Ming: Translated as brightness or sunlight. *Yang ming*, for instance, is the sunlight yang division of stomach and colon.

MO: Abbreviation for meridian or channel.

Mu: To mobilize. Mu points are the alarm points on the meridian. Should one of these be very tender, it could indicate disorder in that meridian or organ.

Pauchi form: Cannon fist form. this is the solo version of the large san-sau. There are two sides, "A" and "B." At a solo level, the student performs the A and B sides without stopping. This is one of the best ways of learning about martial arts movement.

Po: The animal spirit, or the soul of the animal, which lives in the lung.

Push feet: The taijiquan practice of a set of movements of attack and defense practiced by two people using the feet. Both partners stand on one leg, joining the other leg at the Achilles tendon. Circling begins as one person tries to kick at the other's leg with his heel. The attackee defends by turning his body and thus pulling that attacking foot in an arc, thus forming a circle when the whole operation is repeated. At an advanced stage, hand attacks are also employed, all on one leg.

Push hands: The taijiquan practice of a set of movements of attack and defense practiced by two people using the hands. This is not a competition, but rather a training method that teaches the use of taijiquan as a self-defense art. It begins with simple pushing and defensive movements and becomes quite advanced in attack and defense. Beginners start with big, low, open stances. As they learn, the stances become more like those that would be used in a real street fighting situation. Punches, finger jabs, leg attacks are all part of this training method.

Qi: An internal energy that flows through the acupuncture meridians, bringing a life-giving force to every organ in the body. Qi is used for every movement and action of the body; without it we die.

Qigong: Literally, internal work; a means of gaining good health through certain stances used in conjunction with breathing methods. An integral part of one's taijiquan or any internal martial arts training. There are 2,000 different types of qigong, broken down into three categories: self-healing, martial arts, and medical.

Ren mai: Conceptor (vessel) meridian. One of the eight extra meridians. Unlike the other six extra meridians, this one, along with du mai, has its own meridian and points.

Self-healing taijiquan: This is where we all begin our taijiquan training. Each posture of the taijiquan form causes one of the main meridians in the body to be activated, thus beginning the self-healing process necessary for healing the internal organs.

Shao lin: Literally, "Little Forest"—a place in China where the monks of the Shao Lin monastery would study the martial arts as part of their training. It is believed that all of the hard-style martial arts, including karate, came from this temple.

Shen: The spirit that lives in the heart.

Shiatsu: The Japanese version of acupressure.

Shou: Literally, "hand" or "arm." Can be used as follows: *Shou shao yin* means "hand lesser yin," or the heart meridian.

Shu: This is a collective term for the five welling, stream, or antique points.

Shu Point: A transporting or "stream point."

Small San-Sau: The taijiquan way of learning about the main applications of the postures of the taijiquan kata or form up to the posture known as "single whip." One person is the attacker, throwing different types of punches in a set routine, while the attackee defends against these attacks using the postures from the form. At an advanced stage, the attacks and defenses will become free-style.

Stasis: A condition in acupuncture wherein the blood is stagnant.

Sun family: Sun Luc-tang learned several taijiquan systems and also bagwazhang and h'sin-i ch'uan. He then formed his own style of taijiquan, the "Sun system." He was better known for his bagwazhang, however.

T'ai: Meaning greater or supreme (as in t'ai chi ch'uan, or supreme ultimate boxing.) T'ai yang is the greater yang division of bladder and small intestine.

Tuite: The Japanese name for dim-mak.

Tui-na: The Chinese art of massage, which includes manipulating the acupuncture points and twisting the meridians to cause a healing.

Wei qi: Protective energy.

Wu family: Wu Quan-yu learned the Yang family system from Yang Lu-ch'an and passed it on to his son Wu Chien-chuan, who changed the system to become the Wu family system.

Wudang Shan: A range of mountains in China's Hupei province that holds great religious significance to the "internal" styles of martial arts. One of the peaks of this range, also called Wudang Shan, is said to be where Chang San-feng founded the martial system of dim-mak, which later became known as h'ao ch'uan and, nowadays, taijiquan.

Xie cleft point: An accumulation point.

Yang: In this book, we use the classical Chinese meaning for yang and yin, rather than the newer Japanese concepts of this term. So for our purposes, yang means expanding, light, male, open, warm, active.

Yang family: Yang Lu-ch'an founded the most famous system of taijiquan in the 1700s. His sons Yang Ban-hou and Yang Kin-hou also learned his system. Kin-hou's sons,Yang Cheng-fu and Yang Shou-hou, also learned their father's and grandfather's system. Cheng-fu changed it to what has become the most popular system of modern taijiquan. Shou-hou, on the other hand, refused to change the system. The author, Erle Montaigue, has trained extensively in both of these systems.

Yang qiao mai: One of the eight extra meridians.

Yang Sau-chung: Sau-chung was the head of the Yang family until his death in May 1985. He was the eldest son of Yang Cheng-fu and was one of Erle's teachers.

Yang wei mai: One of the eight extra meridians.

Yin: Dark, passive, female, closed, contracting, cool. It must be remembered that "yin and yang" can only ever be relative to each other. So Papua, New Guinea, would be considered yang to Sydney, Australia, which would be yin in this instance. However, Sydney is yang compared to Melbourne, which would be yin in this instance, and so on.

Yin qiao mai: One of the eight extra meridians.

Yin wei mai: One of the eight extra meridians.

Ying qi: Nourishing qi.

Yong point: Spring or stream point.

Yuan: Ancestral; origin or source.

Yuan point: A source point that draws upon yuan qi.

Zhang: Solid yin organ.

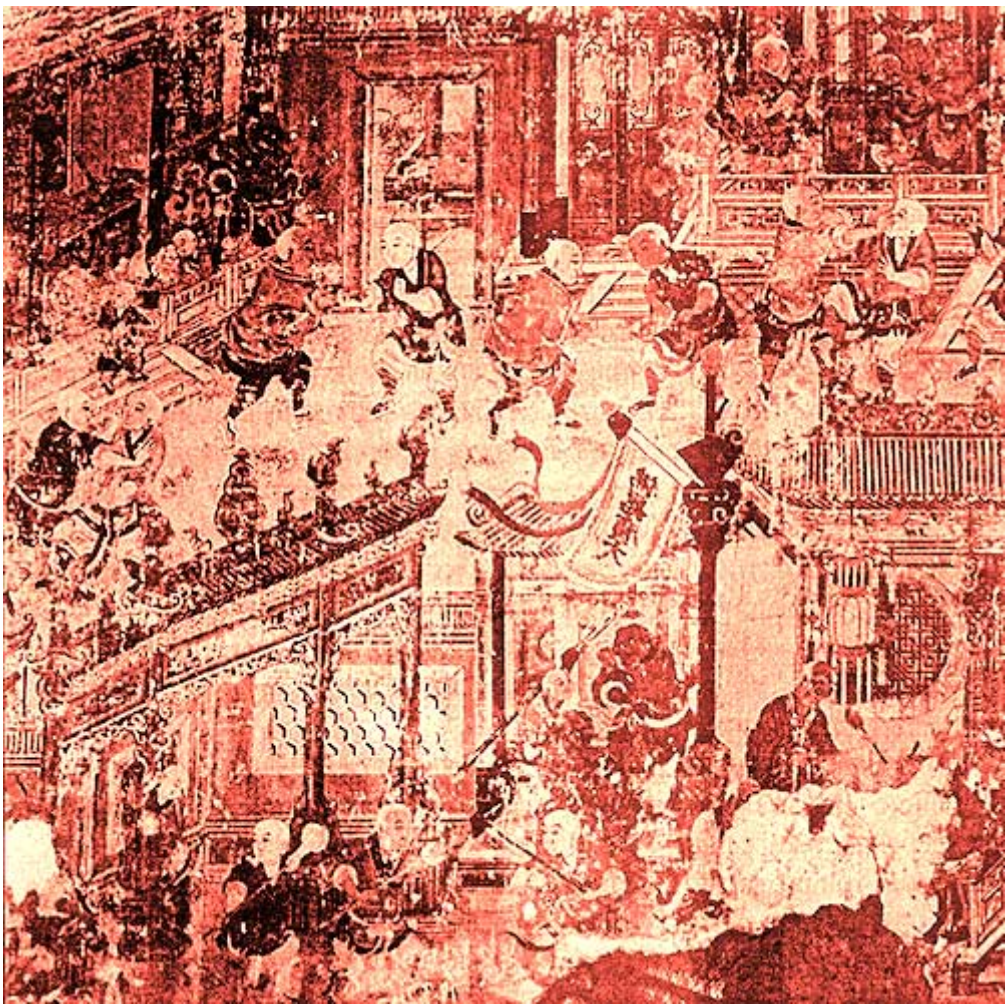
Liu Jin Sheng

CHIN NA FA

Skill of Catch and Hold

擒拿手法

Shanghai, 1936



Liu Jin Sheng

CHIN NA FA: Skill of Catch and Hold

Shanghai, 1936

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Synopsis of the Book

The book "CHIN NA FA"[1] was written by Liu Jin Sheng in collaboration with Zhao Jiang. The first edition of the book was issued in July of 1936 as a manual for the police academy of Zhejiang province. The book was printed by the publishing house Shan Wu in Shanghai. The book includes author's portrait, Zhao Jiang's preface (he is also known as Long Wen), introduction and description of the techniques CHIN NA with photos and detailed explanations. The techniques described can be conventionally grouped into eight parts. The first part is head holds[2]. The second part is neck holds. The third part is shoulders holds. The fourth part is front, side and back holds. The fifth side is torso and stomach holds. The sixth part is hand and wrist holds. The seventh part is fingers holds. The eighth part is genitals and legs holds. Great attention is also paid to counter-actions if the enemy tries to carry out some attacking action.

The author of the book, Liu Jin Sheng, was born in the province of Shandong. In his preface he writes: "In my childhood my grandfather (my mother's father) gave me an ancient manuscript book. I drilled during three years using pictures of the book and at that time I did not become aware of the true value of that book. Then I happened to learn under the guidance of the famous

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Editor's notes:

[1] The hieroglyph CHIN in the title of the book means "catch" (noun), "catch" (verb), "grab" (noun), "grab" (verb), "seize" (verb); the hieroglyph NA means "hold" (noun), "hold" (verb), "grasp" (noun), "grasp (verb)", "grip" (noun), "grip" (verb), "control" (noun), "control" (verb); the hieroglyph FA means "skill", "method", "technique".

[2] The term "Hold" is used in this text as the most adequate translation of the hieroglyph "NA"; however, as mentioned above, the hieroglyph has a wider range of meaning. In this text it means not only a lock as such; it also means subsequent technical actions.

master of the North Wang Zi Ping[3] as well as over twenty other great masters. I drilled in various kinds of Martial Arts during more than twenty years. With certain experience behind me, I can say that the ancient manuscript preserved by my grandfather is priceless heritage of our National Martial Art."

Techniques of CHIN NA include a wide set of various movements: press and blows on vulnerable points, grappling, strangling, throws and so on. That set of movements (impacts on the enemy) allows to realize the following methods: "Separation (tearing) of muscles and sinews" (FENG JING), "Dislocating (breaking out) of bones and joints" (YU GU), "Suffocation" (BI QI) and "Impacting on points" (DIAN XUE). Also, those methods must be used skillfully, not just with brute force. Both army and police always attached great importance to this art.

The introduction to the book says: "Initially this skill had several names: FENG JING FA – "The technique of separation (breaking) of muscles and sinews"; DI TANG FA – "Methods of combat when lying on the ground"; YU GU FA – "The technique of dislocation (breaking out) of bones and joints" and CHIN NA FA – "The technique of catch and hold." At present the name CHIN NA FA has predominantly become established. Totally, there are 72 methods. The ancient manuscript calls this skill DI SHA SHOU – "Devil's Hand." Specialists in WU SHU say there are 36 "big" and 72 "small" points on a human body. 36 positions, 72 positions and 108 positions (techniques) are also marked out in CHIN NA FA. That traditional division has been maintained till now since long time when our ancestors created the theory of

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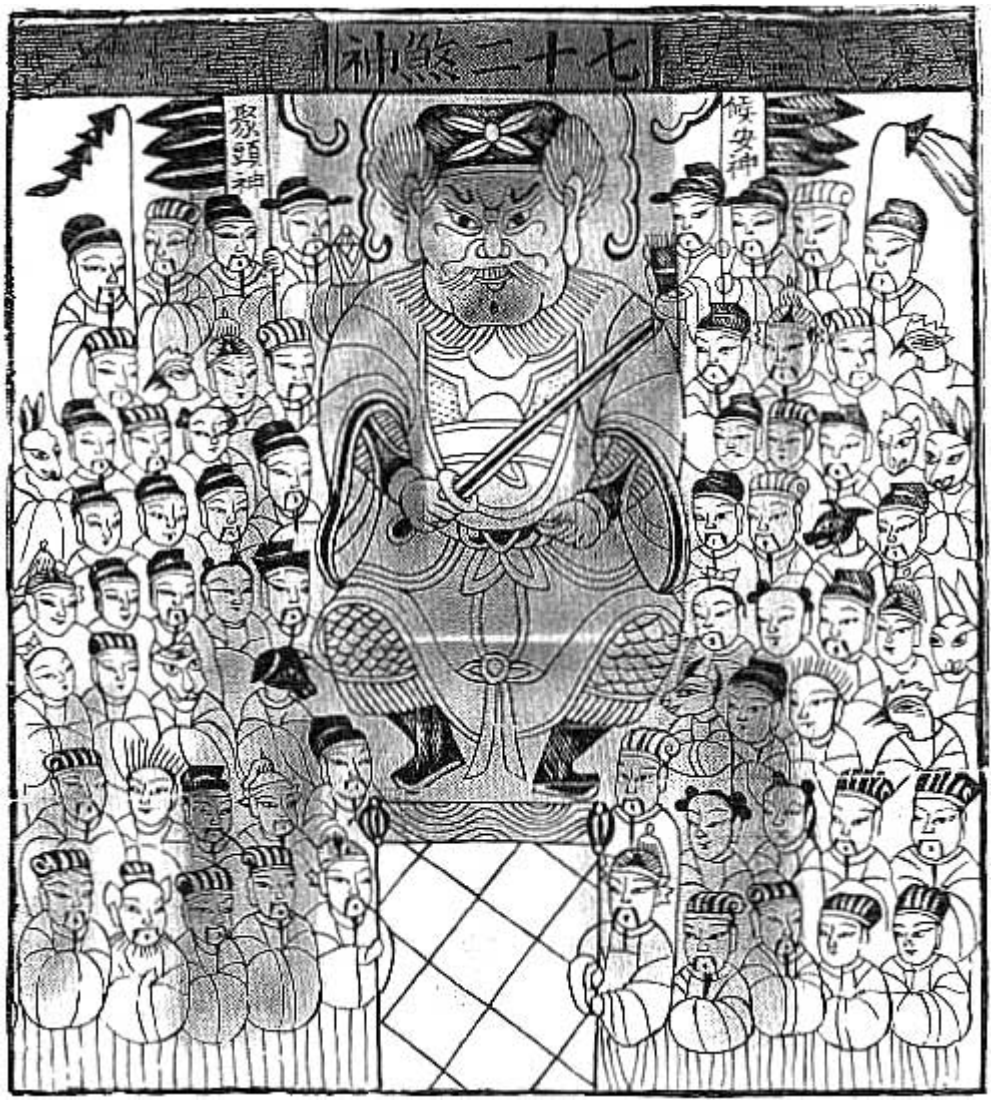
Editor's notes:

[3] Wang Zi Ping (1881-1973) nicknamed Yon An, a Muslim from the town of Cangzhou in the province of Hebei. Was of a family of WU SHU masters. Trained from his childhood under the guidance of elder relatives. Later learnt HUA QUAN from Sha Bao Xing and Ma Yun Long, then CHA QUAN from Yang Hong Xu. In 1928, after foundation of the "Central Institute of National Martial Art" in Nanking, became the dean of the Shaolin faculty. One of outstanding masters of the XX century.

CHIN NA on the basis of the conception 36 TIAN GANG[4] and 72 DI SHA[5]. But actually, that is only a tribute to tradition that has no great practical significance.



72 DI SHA - Spirits of 72 Stars

Editor's notes:

[4] TIAN GANG (from TIAN, "the sky" and GANG, "Constellation of the Great Bear") 36 kind Spirits of the Great Bear in Chinese people's mythology.

[5] DI SHA (from DI, "earth" and SHA, "ill influence of Spirits"), Spirits of 72 stars in Chinese people's mythology who exert bad influence. DI SHA oppose to 36 Spirits of the Great Bear who are called TIAN GANG (see above). According to that system DI SHA, though they are Spirits of stars, are considered to be incarnation of evil forces of the Earth.

Preface by Zhao Jiang

Liu Jin Sheng xiansheng[6] learnt the martial art in the province of Shandong. He moved to the province of Zhejiang six years ago[7]. He has disciples all over the province. However, he lives a modest life, at his leisure time he exchanges views with his colleagues in the martial art. Long Wen is responsible for training the police of this province and realizes that policemen in their struggle against criminals can not conform to requirements without acquiring the martial art. Each time when we touch that topic to find quite quick as well as effective training methods, Liu xiansheng surely puts to the forefront CHIN NA. Our Martial Art (WU SHU) can cause body injuries to people, it is difficult to learn this art and reach perfection. When WU SHU is used, body damages are often done to people, but policemen are the people who protect public order. The best of all is to use method CHIN NA in order to subdue people instead of inflicting body damages to them. A good effect can be obtained with proper explanation and training. Now those who are responsible for public order will get this book to study it and use the art of CHIN NA in society's interests. It is for this purpose that we publish the book by Liu xiansheng.

Zhao Long Wen

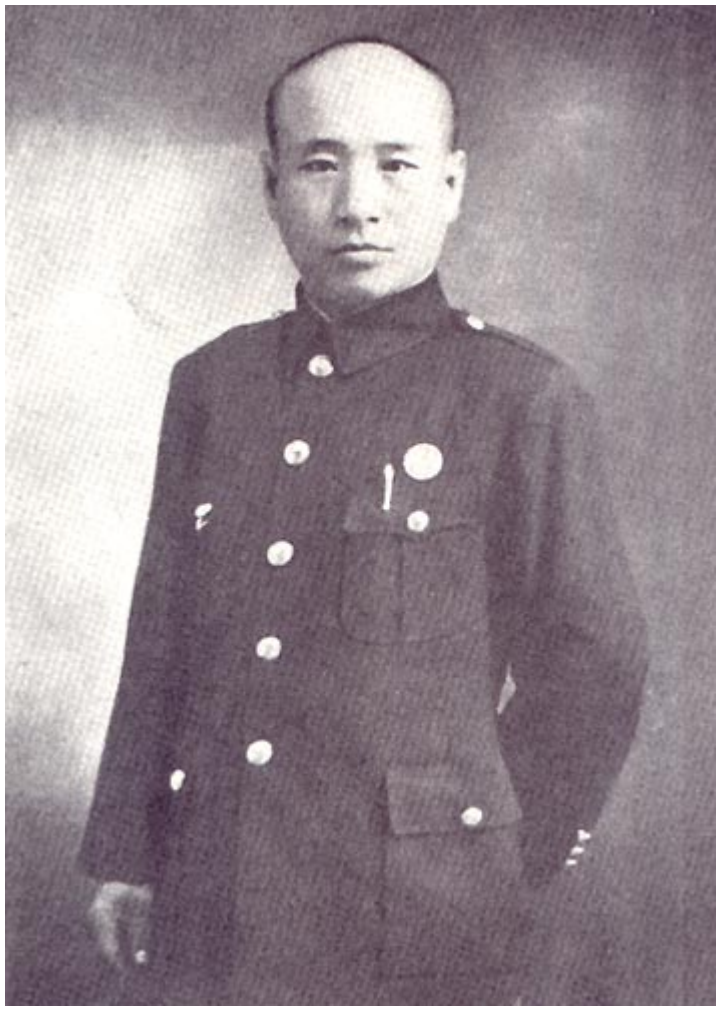
March, 25-th of the Chinese Republic (1936)

Editor's notes:

[6] Xiansheng, a polite addressing to educated people, especially to older persons and teachers, in China, like Mr. or Sir in Britain.

[7] We wish to remind you that the book was published in 1936.

Preface by Liu Jin Sheng



Recently those who talk of military science mainly pay attention to various armaments of three branches of the armed forces (land forces, navy force and air force) and did not pay any attention to the national Martial Art (GUO SHU) inherent in China. After the defeat of I-He-Tuan followers[8] during the Qing dynasty[9], many believed that all who learnt WU SHU

Editor's notes:

[8] I-He-Tuan uprising, anti-Government uprising of peasants and poor town-dwellers in the northern China in 1899—1901. The uprising was initiated by the secret religious society I-He-Chuan ("The fist in the name of justice and concord"). Later insurgent troops were renamed to I-He-Tuan ("Detachments of justice and concord", hence the name of the uprising). As the name of society included the word Chuan, or Quan ("Fist") in recent standard spelling, foreigners called insurgents "boxers", which gave another name to the I-He-Chuan uprising – "Boxer Rebellion." The uprising started in the province of Shantung where particularly great influence of western powers and Christian missionaries felt. At the beginning of 1900 the center of the uprising moved to metropolitan province of Zhili. So-called "boxers" demolished railways and telegraph lines, buildings of religious missions and some governmental institutions, actually they exercised control over a vast territory. The movement spread to the provinces of Shansi and Manchuria. In 1901 the uprising was suppressed with active participation of troops from Western powers (Great Britain, Germany, Austria-Hungary, France, the USA, Russia, Italy) as well as Japan.

[9] The monarchic dynasty that ruled in China right until the Xinhai Revolution of 1911.

were bandits. WU SHU was held in bad repute because I-He-Tuan followers drilled in it. That's why people started to despise the national martial art. Because of it men of matchless mastery in WU SHU are not in hurry to reveal their skill. Some of them even went for "knights of the road." As a consequence the Chinese nation was labeled as a "sick nation" and foreigners oppress us for a few decades.

During several decades after Meiji Isin[10] Japan, our eastern neighbor, joined the ranks of leading world powers. Many think that it had happened as a result of imitation of Europe and West but they do not know that long before Meiji Ising the Japanese cultivated the spirit of samurais and Yamato[11]. Studies in so called "samurai spirit" showed that it originated in our country. During the Ming[12] dynasty some Chinese Chen Yuan Yun sailed to Japan and brought with him two kinds of the Chinese national martial art, in one of them grappling and throws prevailed. He taught local inhabitants who tried very hard and diligently acquired this skill. The Japanese government encouraged that activity and supported its development by all means. Finally, this kind of martial art was named Jujitsu and later Judo; it spread all over the country. The Japanese people educated in that atmosphere was becoming brave and militant.

Editor's notes:

[10] MEIJI ISIN (means renovation, restoration of Meiji in Japanese), the revolution of 1867 - 1868 in Japan. It overthrew the power of seguns from the house of Tokugava and restored the power of emperors. The government headed by Mutsukhito (emperor Meiji) came to power, it took a path of social and economic reforms.

[11] YAMATO, a union of tribes in Japan in 3-4 centuries. On the base of this union the Japanese state was founded. The expression "Yamato spirit" became a synonym of the "Japanese spirit".

[12] The Ming dynasty ruled in China since 1368 till 1644.

Therefore, if we speak about the salvation of our Motherland, first of all we have to advocate our national martial art to keep up people's spirit. Although recently the central authorities following instructions of the prime-minister encourage exercises in national martial arts and both in the center and in provinces palaces of national martial art were founded, but besides wrestling, only two schools, Shaolin and Wudan, were noticeably spread. Also, individual training (mastering of forms, or TAO) is prevailed in those institutions but the applied aspect of techniques learnt is ignored. Therefore, if a man who has been exercising, say, even for twenty or thirty years and who engages a western boxer or a Japanese judo wrestler, will be surely defeated. Striving for nice-looking movements without practical use and absence of fighting spirit are at the bottom of it. In this way we shall lose little by little all the heritage of our ancestors who brilliantly used all methods and techniques in a combat. Now foreigners say with a touch of irony that the Chinese martial art is nothing else but a dance with energetic movements. Our ancestors knew how to drill by twos, one against another, and alone. They were able to employ various techniques one after another in a fight, attacking continuously the enemy so that he had no time to defend himself, nothing to say about fighting back. That is why such well-known generals of the Ming dynasty as Qi Jiguang, Yu Dayou and others encouraged a practical approach to training and rejected all showy and perfunctory things. They made a glorious mark in the history.

Today sciences develop, all branches of knowledge improve from day to day. Only our national martial art does not make any progress, moreover, it loses its secret methods, as our ancestors revealed their secrets very seldom. It is very pity. In my childhood my grandfather Fang Chen Xun gave me an ancient manuscript book. I drilled during three years using pictures of the book. At that time I did not become aware of the true value of that book. Then

I happened to learn under the guidance of Wang Zi Ping[13], a famous master of the North, as well as over twenty other great masters. I drilled various kinds of Martial Arts during more than twenty years. With certain experience behind me, I can say that the ancient manuscript preserved by my grandfather is, indeed, priceless heritage of our National Martial Art. That's why I decided to publish this book for those who are sincerely eager to learn our national martial art.

Liu Jin Sheng

The Police Academy of Zhejiang province

1-st of May of the 24-th year of the Chinese Republic (1935).

Editor's notes:

[13] Wang Zi Ping (1881-1973) nicknamed Yon An, a Muslim from the town of Cangzhou in the province of Hebei. Was of a family of WU SHU masters, trained from his childhood under the guidance of older relatives. Later learnt HUA QUAN from Sha Bao Xing and Ma Yun Long, then CHA QUAN from Yang Hong Xiu. In 1928, after foundation of the Central Institute of National Martial Art in Nanking, became the dean of the Shaolin faculty. One of outstanding masters of the XX century.

Explanations and Instructions

At first this art (skill) had several names: FENG JING FA – "The technique of separation (tearing) of muscles and sinews"; DI TANG FA – "Methods of combat when lying on the ground"; YU GU FA – "The technique of dislocating (breaking out) of bones and joints" and CHIN NA FA – "The technique of catch and hold." At present the name CHIN NA FA has predominantly become established. Totally, there are 72 methods. The ancient manuscript calls this skill DI SHA SHOU – "Devil's Hand." This secret technique perfectly suits both for self-defense and defense of Motherland. It is essential for training military men and policemen.

A very detailed description is supplied to each technique and method expounded in the book. The language is very simple in order everything to be understandable at first sight. All has been done to increase training efficiency at most.

This technique is exclusively designed for practical employment, not for decoration and show. When drilling alone, it is difficult to understand its wisdom to the end and catch all nuances. It is necessary to have sparring practice, really to oppose each other. Pain must be felt if touched, but too great effort must not be applied, otherwise a body damage – sprained muscles and sinews, bone fractures and etc. can be caused. It is as far as training sessions are concerned. However, you get quite another thing when it is a matter of life and death.

Each man who needs to master an effective system of self-defense, whoever he may be – civilian, military man or member of police, must have this book. It is necessary to systematically drill as shown in the photos and explained in

the text. In the course of time everything will turn out all right. When you suddenly encounter an enemy and you have no firearms with you, you have to enter a hand-to-hand fight. If you mastered this skill (GONG FU), you will be able to win.

Moreover, having mastered this technique, you can sway the destiny of the enemy. If you are in command of this technique, you can kill your enemy, cause unbearable pain, tear his muscles and sinews, break his bones or make him unconscious for some time and completely disable him to resist.

When a criminal, being arrested, resists and shouts, a method of "temporary death" can be employed[14]. Or it is possible to grasp a certain part of his body and in such a way make him follow the escort. Then he can be "animated" again or his fixed extremity can be released. The duration of being in such a state must not exceed two hours.

Even a woman or a physically weak man who mastered this technique can curb a strong enemy. This technique demands deftness and skill, not brute force. It is necessary to train oneself daily to make the body flexible and nimble, but "hardness" must be hidden inside this "softness."

The men who perfect themselves in the Martial Art must drill methods of impacts on acupuncture points (DIAN XUE), blows (DA), grappling (NA), throws (SHUAI). Those four kinds of combat skillfully combined will mean matchless mastery. Depending on a situation, you can employ all four kinds of combat conduct, in that case even if you encounter a physically very strong enemy, you will win all the same. But to attain it, you must train yourself very seriously, be persistent and persevering.

Editor's notes:

[14] It implies that the enemy will be brought in unconscious state.

When men fight, they usually grapple each other. Under such conditions the employment of CHIN NA technique gives the best effect. It is necessary to pay special attention to it.

This method is very artful and effective. For a long time it was not passed (to other people) and was almost lost. Now we publish this rarity and pass the priceless Art to our compatriots as a gift.

People in our country know that the national martial art includes impact on points, grappling, throws, and blows. This book wholly deals with grappling (NA). Books on three other aspects of martial arts are being prepared for publication.

The book contains 99 photos. For the sake of better understanding complicated movements are disrupted into several parts and several photos, for example, photo 1, 2, 3 show intermediate phases of one continuous movement. The explanatory text is given for two opposing sides who are named “A” and “B”. In case of a collective training session in the army or the police one rank acts as “A”, another as “B”.

When encountering an enemy, you must demonstrate courage, strength, mastery, and skill. You mast act by surprise, move swiftly, in that case you will win. The most important thing is not to lose heart. If you lost heart, you will lose everything.

Part I

TOU BU NA FA

Head Grips

During the period of dynasty MING and later in the beginning of dynasty QING[15] people's hair was laid in a knot. At that time methods of seizing by hair considered in paragraph one and two were used rather often: really, if somebody strongly seizes by the hair near the roots, it is difficult to get free.

Modern people also have hair but it is not laid in a knot. Therefore, if one's hair is rather long, the enemy can seize the hair near the roots at once, and if the hair is short, it is not always possible to do, at any rate, a seizure will be not so strong. It should be taken into consideration when using those methods and make required corrections. However, the technique of effecting on an enemy's wrist which makes a grip mainly remains the same.

A long time ago everybody had long hair, that's why the book contains such paragraphs. At our time living conditions have changed, everybody is closely cropped or has his hair cut short, one is not able of seizing by the hair. This manuscript was written in ancient times and we decided to leave as it is, without deleting anything.

Paragraph 1 QIAN ZHUA FA: Seizure by the hair from the front (variant 1).

This method is employed if the enemy standing in front of you seized you by the hair on the top of your head.

Editor's notes:

[15] The Ming dynasty ruled in China since 1368 till 1644, then the power passed to the Qing dynasty that ruled until Xinhai Revolution of 1911.

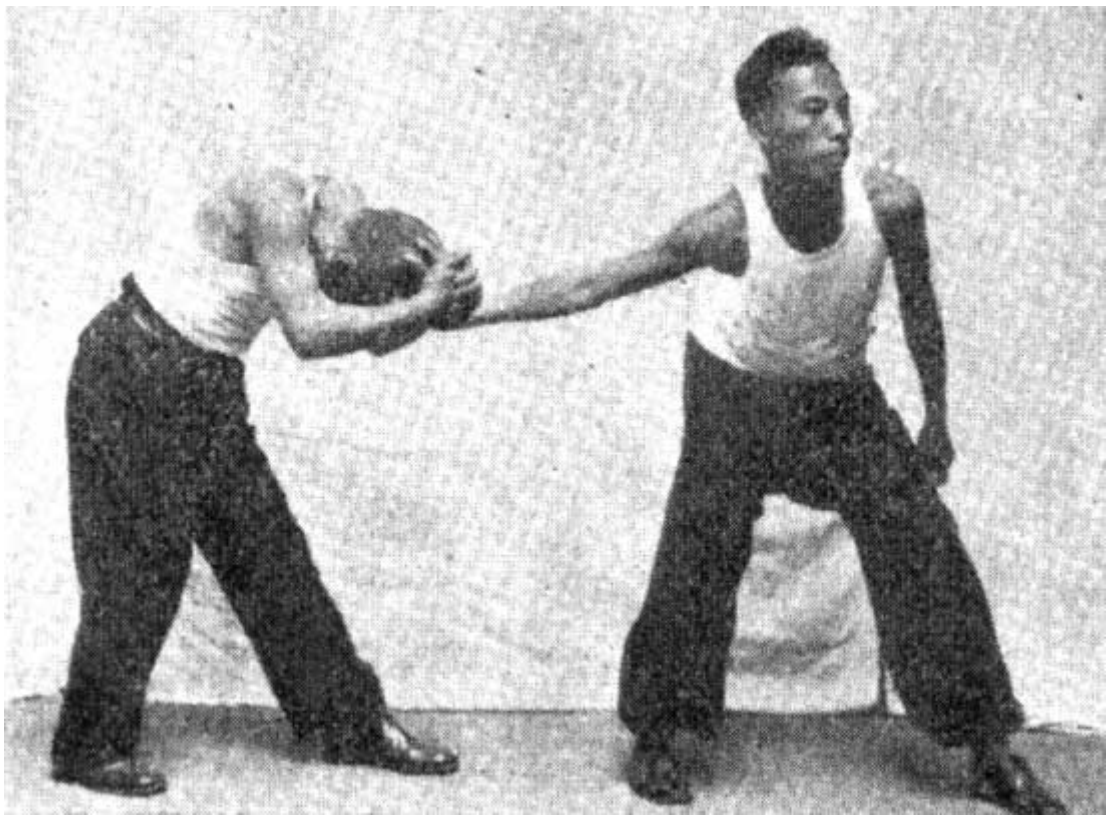


Photo 1 – "Seizure by the hair from the front" (variant 1).

Explanations

B(A) has seized A(B) from the front with his right (left) hand by the hair. A(B) must quickly cover the enemy's hand that is making a seizure with both palms, press it to his head and pull it back with force. At the same time the torso and the head must move back[16] so that the enemy's arm making a seizure by the hair will straighten in the elbow joint but its wrist will remain slightly bent[17]. At that instant it is necessary abruptly draw (bend) forward with the whole body, press as strong as possible with the head and the hands (on an enemy's hand) a little bit to the right (left) and downward. It is necessary to abruptly press with palms[18] on the enemy's hand at the point which lies one CUN[19] below the wrist on its outer side. A fracture of the wrist will occur. **Photo 1 – "Seizure by the hair from the front" (variant 1).**

Editor's notes:

[16] For that purpose "A" must make a small step backward and slightly bend back in his waist.
[17] For that purpose it is necessary to lower the chin to the breast.
[18] "To chop" in the original text.
[19] 1 CUN = 3.3 cm.

Paragraph 2 QIAN ZHUA FA: Seizure by the hair from the front (variant 2).

This method is not a vital one for the people of today with their hair shortly cut or with a shaven head like that one of the author of this book.

This method is employed when the enemy, as in the first case, standing in the front, seized you by the hair on the top of your head.

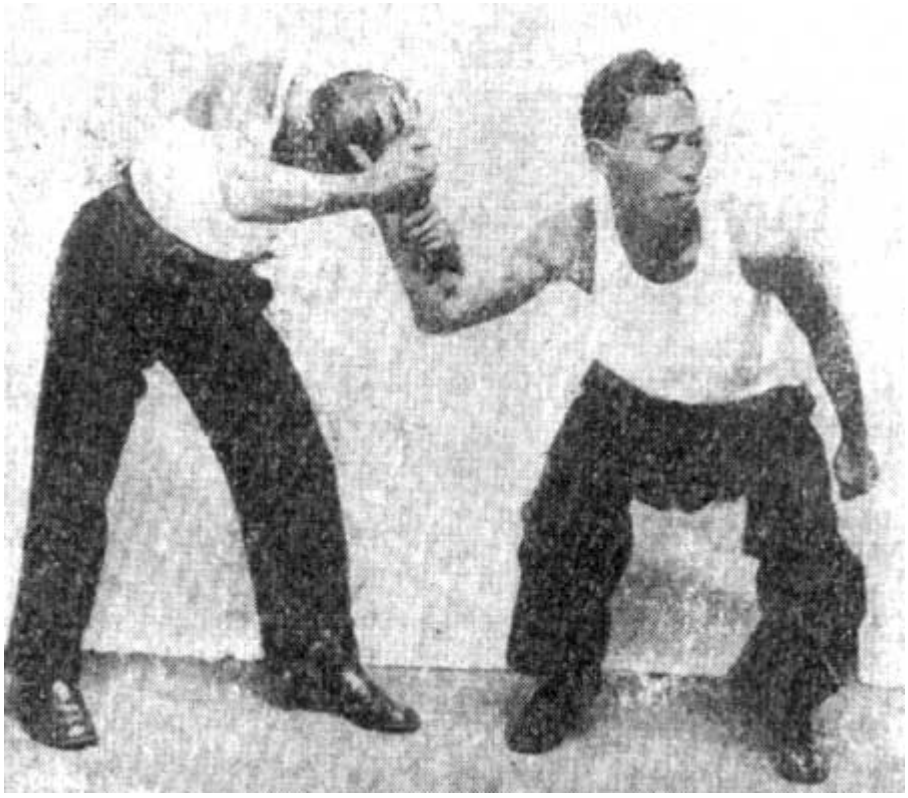


Photo 2 – "Seizure by the hair from the front" (variant 2).

Explanations

As in the first case, B(A) has seized A(B) with his right (left) hand by the hair. It is necessary to cover the hand of the enemy with the right (left) palm and tightly press it to your head, the middle finger being thrust under his palm. At the same time you seize with the left (right) hand the enemy's arm

from above 2 or 3 CUNs[20] above the wrist, move the body and the head back so that his arm is straightened in the elbow joint and the wrist a little bit bent. At that instant it is necessary to stoop down abruptly, at the same time the left (right) leg makes a step forward, the left (right) elbow pressing on the enemy's arm from above downward and forward. This movement must be fast and strong, in that case a wrist fracture will occur. **Photo 2 – "Seizure by the hair from the front" (variant 2).**

Paragraph 3 HOU ZHUA FA: Seizure by the hair from behind.

This method is very effective but when it is employed, it is necessary to take into account difference in height and build. Let's consider a case when a man, small and relatively weak from physical point of view, encountered an enemy who is a head taller and substantially stronger. In this case the small weak man, even if he takes the position shown in photo 3, can not overpower the enemy. Here some additional actions are required, for instance, it is possible to deliver an elbow blow on his ribs or stoop and strike at his genitalia. After that action the above method can be successfully used.

This method is used if the enemy standing behind seized you by the hair on the back of your head.

Editor's notes:

[20] **6.6 – 9.9 cm.**

Explanations

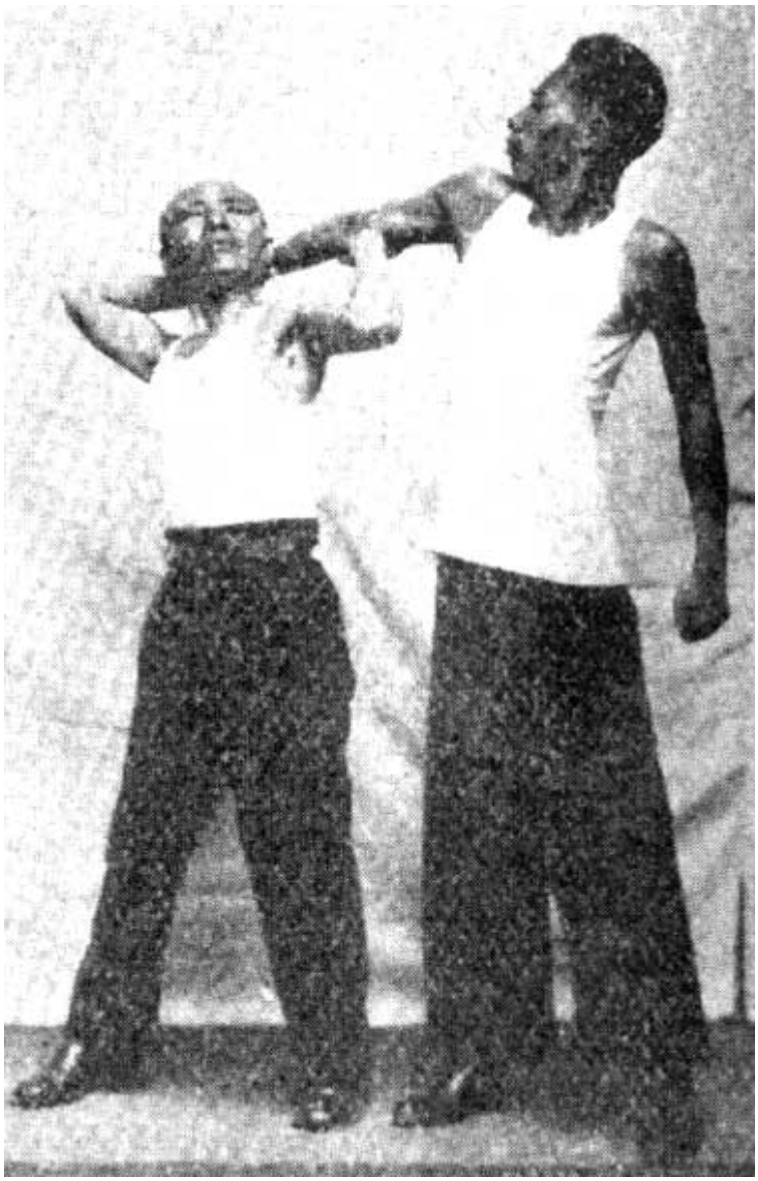


Photo 3 – "Seizure by the hair from behind."

B(A), standing behind the back of A(B), has seized his hair with the right (left) hand. A(B) must quickly cover the enemy's hand with his right (left) palm, press it to the back of his head with force and slightly move with his whole torso to the right (left), pulling the enemy with himself, and at the same time he must turn to the left (right) by 90 degrees. It is necessary "to prop up", from below upward, the tip of the enemy's elbow with the left (right) palm and at the same time to bend the body to the right (left) to have the enemy's caught arm straightened in the elbow joint and the head slightly tossed back to turn the enemy's caught arm with the elbow down. Press on the enemy's elbow joint against its natural bend with the left (right) arm from below upward, that will make the enemy draw himself up and stand on tiptoe. If a movement is made abruptly and with sufficient effort, a fracture of the elbow joint will occur. **Photo 3 – "Seizure by the hair from behind."**

Paragraph 4 DUAN DENG: Clasping a lamp.

It is very effective, though relatively dangerous (for your opponent) method. After becoming unconscious from violent pain the enemy goes into a coma, a man, being in this state for a long time, can die. Therefore, it is necessary to know methods which can help him to go out of that state. To employ that method effectively, one must have strong arms, specially trained fingers, otherwise it will be to no purpose. When executing that method the second arm performs an auxiliary function.

This method is applicable to an enemy in any position - standing, sitting or lying one.

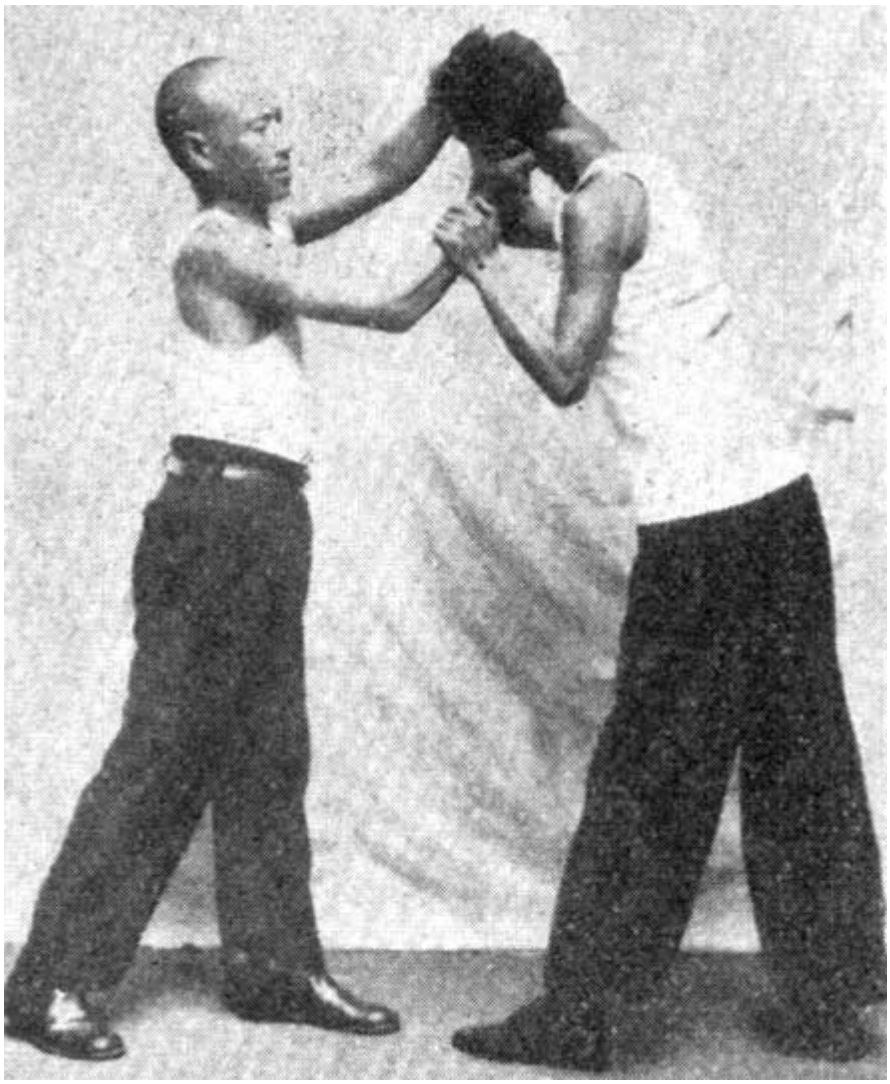


Photo 4 – "Clasping a lamp."

Explanations

A(B) seizes the lobe of the left (right) ear of the enemy with his right (left) thumb and forefinger, his right (left) middle finger presses with force on the tendon below the ear and a little bit above protruding bone (angle) of the lower jaw where the point of "muscle numbness" lies. It is necessary to press inward and

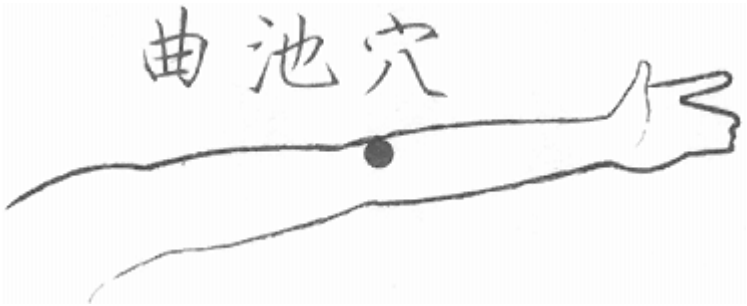
a little upward. At the same time you must seize the right (left) part of the enemy's head above the temple with your left (right) hand and press to the right (left) and downward with force. Press at the same time with both hands to squeeze the enemy's head as strong as possible. If everything has been done properly, the enemy's body grows numb immediately and he will become unconscious from violent pain. It needs long drilling to make fingers strong, otherwise it is difficult to get required effect[21]. **Photo 4 – "Clasping a lamp."**

Paragraph 5 ZHUA LIAN: Seizing by the face.

Photo 5 shows how to seize the enemy's hand properly: it is necessary to seize and squeeze his thumb with your little finger and the fourth finger and press his hand to your chest with your palm. Grip and control of the enemy's thumb is a key to effective employment of this method.

After execution of protective actions it is necessary to counter-attack without delay, otherwise there is a risk of exposing your head to a blow.

Point QU CHI:



This method is employed when the enemy is downright in front of you and he is pushing you on your breast or seizing your clothes.

Editor's notes:

[21] Training methods for fingers are described in detail in the book Jin Jing Zhong. Training Methods of 72 Arts of Shaolin. (Tanjin, 1934). You can order this e-book here >>.

Explanations

B(A) reaches out his right (left) arm with the aim to push or seize by the clothes on the breast of A(B). A(B) must immediately cover the hand of the B(A) with his left (right) hand, slightly "draw in" his chest, shift backward a little with the whole torso, and tightly press the enemy's hand to his breast.

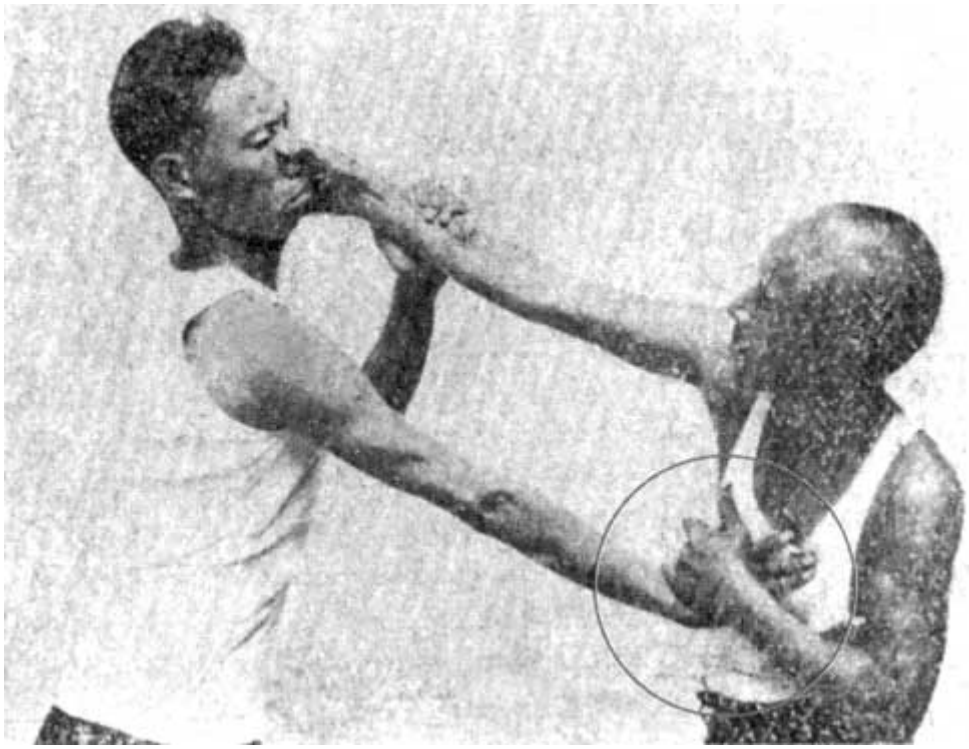


Photo 5 – "Seizing by the face."

Concurrently with that movement of the right (left) hand deliver fast and strong blow from above downward to the region of the point QU CHI that lies on the side of elbow bent, which will cause reflex bending of the enemy's arm. You use it and immediately approach the enemy, at that the right (left) hand moves forward and upward without stopping and seizes the enemy by the face: the thumb props up against the bridge of the nose from its right (left) side and the other four fingers press with force on the tendon under the left (right) ear, a little bit above the protruding angle of the lower jaw in the region of the point of "muscle numbness". Pressing must be done with force, in that case all muscles of the enemy will numb and he will not be able to move an arm or leg. Actions must be well coordinated and fast when using this method. **Photo 5 – "Seizing by the face."**

Paragraph 6 ZHAI KUI: Taking off the helmet.

When you employ this method, it is necessary to act resolutely and fast, otherwise the enemy can break away.

The method is used when the enemy tries to wring your neck.

Explanations

Photo 6 – "Taking off the helmet", first phase.

A(B) seizes B(A) by the hair on the back of the enemy's head with his right (left) hand, concurrently he props up against his chin on the left side with the left (right) hand, at that the elbow of the right (left) arm of the A(B) in a bent position must prop up against the enemy's chest below the armpit to form a lever for the right (left) arm. The right (left) hand pulls the hair seized at the back of the head toward itself and downward and the left (right) hand pushes the enemy's chin from itself and upward. When you execute the method, you must tightly lean with your right (left) side against the left (right) side of the enemy body as to his left (right) arm to remain behind your back. It is to avoid such possible enemy's counteractions as a seizure and pressing your genitalia. **It is the first phase of the method "Taking off the helmet", photo 6.**

It is a very important moment: it is possible to avoid a grip and carry out a countermeasure only at the very beginning of actions of the enemy when he has not applied all his force yet.

The second phase

Let's consider further a possible countermeasure against the method "Taking off the helmet". Let us assume that B(A) tries to employ the method "Taking off the helmet" against A(B) but he has not applied the utmost effort yet. A(B) must instantly bring his right (left) arm back, cover the hand that seized him by the hair and firmly press it to the back of his head. Simultaneously it is necessary to move the body a little bit back by bending in the waist, squat partly to lower the left (right) shoulder to the level of the right (left) elbow of the enemy's arm which seized the hair, push that elbow with your shoulder to the right (left), then "prop up" (the elbow) upward. In the course of those actions the body will turn to the right (left) by 180 degrees. Due to it the arm of the enemy that pushes the chin loses its force, as the head turns to the pushing side. It is necessary to pull with the right (left) arm to the right (left) and downward with force. At the same time you should "prop up" (the

Photo 7 – "Taking off the helmet", second phase.

enemy's elbow) with your left (right) shoulder and elbow upward, the whole body will also rise a little up. Those actions will result in a fracture of the elbow joint of the enemy. **It is the second phase of the method "Taking off the helmet", photo 7.**

If you failed to break the elbow, it is necessary to proceed immediately to the third phase of this method, as described below.

Explanations to photo 8: As mentioned above, advantage in body height and strength is an important factor that must be always taken into account. In photo 8 one of opponents is significantly taller and he can use this advantage. If he turns to the right and at the same time pushes off the elbow that "props up" his right arm with his left palm, he will be able to avoid a grip and get free himself. Besides, he will find himself behind the back of his enemy and will be able to use that position for taking countermeasures.

The third phase

Let's consider a possible continuation of the second phase of the method: A(B) turns to the right (left) with the aim of "propping up" with the shoulder the enemy's arm that is held. At that moment B(A) started to counteract with the aim to get free himself from the grip. A(B) must push upward with the left elbow with a concurrent

Photo 8 – "Taking off the helmet", third phase.

abrupt turn of the whole body to the right (left) as to remain to be back to back with the enemy. At that the right (left) hand of the A(B) must firmly hold the enemy's hand that seized him by the hair, the head and the whole body must be bent down. In that position it is extremely difficult for the enemy to get himself free. The left arm, if necessary, intensifies actions of the right arm by catching the enemy's held arm near the wrist. Make a strong pull forward and downward and a fracture of the elbow joint will occur. **It is the third phase of the method "Taking off the helmet", photo 8.**

Paragraph 7 PU SHU: Catching a mouse.

To employ effectively this method, it is necessary to have sufficiently strong fingers.

The method is employed when the enemy attacks from the front and tries to grapple your torso with his arms or to seize you by your waist belt.

Photo 9 – "Catching a mouse."

Explanations

B(A) attacks A(B) from the front and tries to grapple his torso with one or two arms or seize by his waist belt. A(B) must immediately retreat, at the same time pull the enemy to himself to make him lean forward. At that moment B(A) can use the situation in his favor and butt, therefore it is necessary to act fast. A(B) must raise up his hands and seize the enemy for his cheeks from both sides, pressing at that with his fingers on tendons below the ears with force. He must do his best to thrust his fingers as deep as possible and pull toward himself, at that moving with the whole body back. Muscles of the enemy's whole body will numb and he will not be able to move with an arm or a leg. **See photo 9 - "Catching a mouse."**

Paragraph 8 AN TOU DUAN JING: Pressing on head and breaking neck.

Two men showing methods in photos 10 and 11 have a noticeable difference in height. Whether it was done deliberately or happened by chance, but at any rate it reminds us once more that it is necessary to take into account height, build and physical strength of the enemy when using any technique in practice. Surely it does not mean that a man of small height always loses, not at all. As a rule, men of small height are more deft and move faster but it is necessary to have sufficiently high level of skill to use this advantage. For example, in photo 10 the difference in height is by a head. It will not be a simple task for the man whose height is lower to "cover" the eyes of the enemy from behind. The same situation is shown in photo No. 11: although the partner of small height has carried out a grip but he

himself already staggers. If the level of skill is not sufficiently high, that position is quite dangerous for him.

The method is employed when the enemy attacks from the front, moving forward resolutely.

Explanations

Photo 10 – "Pressing on head and breaking neck".

B(A) attacks and punches with the right (left) fist. A(B) slightly leans his torso to the right (left) and dodges the punch, at that he deflects the striking arm of the enemy to the left (right) with the right (left) hand. Simultaneously the left leg of A(B) makes a step toward the enemy and the left (right) side of his chest sets against the right (left) side of the enemy. At that moment A(B) pushes the enemy's chin with his right (left) hand from below upward and forward and supports the back of the enemy from behind with the left (right) forearm and elbow to prevent the enemy from falling back. Then, move immediately the left (right) hand upward and forward and hook the upper edges of the enemy's eye-sockets with the forefinger and the fourth finger bent like a hook. It is necessary to pull back and down with force to make him bend back. If at that moment both arms apply an abrupt effort, there will occur a fracture of the neck. If the

chance is missed, the enemy can try to dodge back and avoid a grip. In that case it is necessary instantly to change the method for another one depending on the situation. In a word, if you failed to carry out the method, you should immediately change for another one and you will succeed. **See photo 10: "Pressing on head and breaking neck."**

Paragraph 9 AN TIAN GU: Pressing on the celestial drum.

The method is usually employed against a physically strong enemy. To carry it out, it is necessary to be behind the back of the enemy.

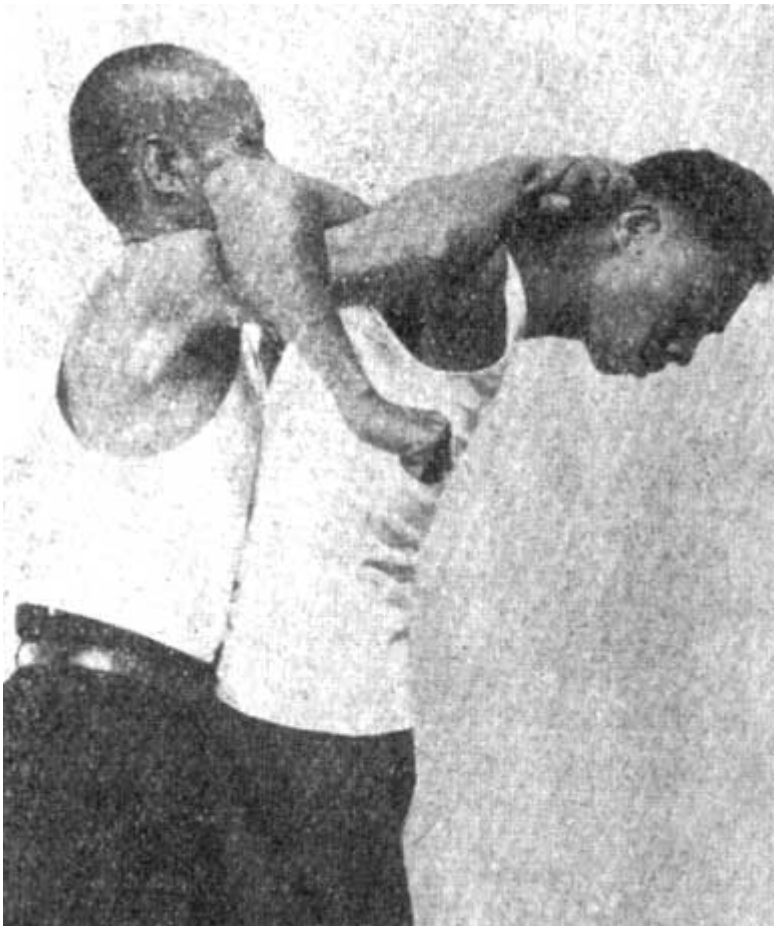


Photo 11 – "Pressing on the celestial drum."

Explanations

B(A) goes or seats. A(B), catching the moment, appears behind his back. It is necessary to thrust through both arms under the enemy's arm-pits, raise them up to the point TIAN GU[22], seize the wrist of the other hand with one hand and press forward and

Editor's notes:

[22] The point TIAN GU is located on the base of the skull vault, above the point of connection of the skull vault and the neck section of the spine.

downward with force. At that, it is necessary to try to keep the hands higher, incline the upper part of the torso back and stick out the stomach forward. In that case the enemy will stagger and it will be very difficult for him to get himself free. If you press with the arms down with force, the enemy feels sharp pain in the neck and vertigo appears and due to it he loses his ability to resist. If the enemy tries to use the countermeasure called "Falling on the ground, making a somersault to free himself", at no events must you let him off. It is necessary to fall with him to the ground without loosening the grip and go on pressing with arms as to cause displacement of his neck vertebrae. **See photo 11 - "Pressing on the celestial drum."**

Part II

JING BU NA FA

Neck Grips

Paragraph 1 NIE SU: Squeezing the crop.

One of WU SHU proverbs says: "If you have strength, go straight forward, no strength – go from a side". It means the following: to attack the enemy frontally, it is necessary to have not only a higher level of skill but good physical conditions (a well-trained body) as well.

The method is employed in case of a frontal attack of the enemy if he punches or tries to seize by the head.

Explanations

Photo 12 – "Squeezing the crop."

B(A) resolutely reduces the distance and punches with his right (left) fist, moving toward A(B). A (B) turns the attacking arm of the enemy with the right (left) hand to the left (right), simultaneously he makes a step forward as to his left (right) shoulder to set against an arm-pit of the enemy. At that, the arm which made a blow finds itself above his left (right) shoulder. It is necessary to put your left (right) arm round the enemy's shoulders, seize his left (right) shoulder with the left (right) hand, abruptly make a pull to you and immediately from you.

At that moment squeeze his gullet with the right (left) thumb and forefinger and press on his Adam's apple with the bent middle finger. The enemy will not be able to breathe and become unconscious from suffocation soon. **See photo 12 - "Squeezing the crop."**

Paragraph 2 JIAN JIA BO: Squeezing with arms from the front.

As a rule, WU SHU masters seldom use such a technique as head butts. However, when you are very close to the enemy or there are evident flaws and faults in his actions, it is quite possible to strike at him with a shoulder or the head.

The method is employed if the enemy butts you with his head in the region of the chest or tries, after bending, to execute a grip of the lower part of your body.

Explanations

B(A) butts at the chest of A(B). A(B) moves his arms to sides a little, at the same time he dodges to the left (right) and an enemy's blow gets to the void. Then he quickly steps forward, bends a little, tightly grapples and squeezes the neck of the attacking enemy with his right (left) arm. At that, it is necessary to squeeze (block) arteries on the left side of the enemy's neck with the elbow bend and the arteries on the right side of his neck with the forearm of the same arm. Seize the wrist of your own right (left) arm with the left (right) hand. Strongly squeeze the enemy's neck, straighten your back and slightly move your torso back.

As one can see from photo 13, B's shoulder is at the level of the solar plexus of A. Therefore, if A actions are not resolutely enough or his grip is not strong enough, B can deliver a blow at his solar plexus with an abrupt movement of the shoulder. Besides, B can deliver an elbow blow at A's left side. A possibility of these countermeasures should be taken into account.

Photo 13 – "Squeezing with arms from the front."

If arteries are squeezed in such a way, a man can die within three seconds. It is necessary to exert an effect on the point FAN YAN for reanimation but it needs a certain qualification, that's why it is better not to bring to the fatal outcome. If the enemy attacks you with a great drive and knocks you down, never loosen your grip. It is necessary to grapple his torso with your legs and pull from you with force, squeezing his neck with arms until he loses his ability to resist. **Photo 13 – "Squeezing with arms from the front."**

Paragraph 3 HOU JIA BO: Squeezing with arms from behind.

This method can be used against an ordinary man who is not specially trained. However, if opponents are equal in strength and skill, it is difficult to succeed.

This method is used for arresting a dangerous criminal to prevent possible resistance or in hand-to-hand fighting when one succeeds in getting behind the back of the enemy. This method results in "temporary death".

Explanations

A(B) sees B(A) who is in a sitting or standing position and does not expect an attack. It is necessary to appear inconspicuously behind his back, grapple his neck from the front with the left (right) arm and pull back (toward oneself), raise immediately the right (left) arm bent in elbow, seize firmly by the right (left) biceps with the left (right) hand, press the right (left) palm to the enemy's back of the head in the region of the point TIAN GU and press forward with force. The

Photo 14 – "Squeezing with arms from behind."

left (right) arm must be bent in elbow with force, it will cut off the neck arteries, blood flow will stop there and the man will die in three seconds. Therefore, before using this method, the technique of effecting the point FAN YANG must be acquired well, it is possible to reanimate a man and save him from death only by effecting that point. **Photo 14 - "Squeezing with arms from behind."**

Paragraph 4 QIANG SUO HOU: Pinching (blocking) the throat from the front.

It is necessary to pay attention to the following: this method should be used either in case when the enemy does not expect an attack or when the detention is carried out by a group of several men and during hand-to-hand fighting they succeeded in knocking the criminal down to the ground.

This method is used when in the course of hand-to-hand fighting you succeeded in toppling the enemy or when he is initially in a sitting or lying position and does not expect an attack.

Explanations

A and B are engaged in hand-to-hand fighting and in the course of it B(A) fell down on the ground. A(B) must quickly spring down to the fallen enemy, squeeze him with thighs from sides in the region of the waist, weigh down on his neck from above with his left or right forearm and press his head to the ground.

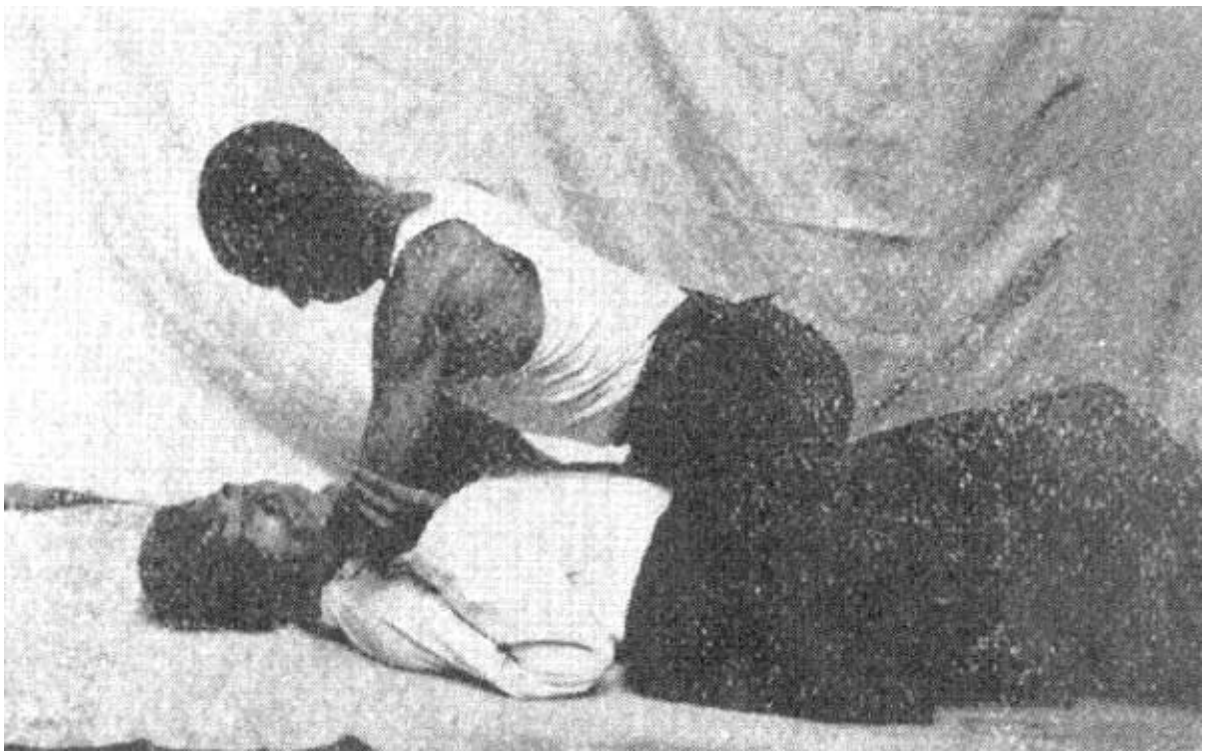


Photo 15 – "Pinching (blocking) the throat from the front."

At that moment it is necessary to thrust your right (left) hand into the lapel of the enemy's clothes and seize the right (left) side of his collar, in a similar way - the left side of his collar with your left hand. It is important that both hands should firmly seize the enemy's collar crosswise, then it is necessary to pull to the left and right with force. B(A) will die within three seconds. It is necessary to exert an effect on the point FAN YANG for reanimation. During practice sessions it is necessary to execute this method very carefully, without any effort. **Photo 15 – "Pinching (blocking) the throat from the front."**

Paragraph 5 HOU SUO HOU: Pinching (blocking) the throat from behind.

Conditions of the employment of this method is similar to the previous one: either in case when a criminal does not expect an attack or in case when the detention is carried out by a group of several men and during hand-to-hand fighting they succeeded in toppling the criminal down to the ground.

This method is used either in a right moment of a hand-to-hand struggle or if initially the enemy is in a sitting position and does not expect an attack.

Explanations

B(A) sits on the ground or is engaged in hand-to-hand fighting with A(B). Choosing a right moment, A(B) must get to the right (left) side of B(A), thrust his left (right) hand into the lapel of the enemy's clothes with a quick movement and catch the left (right) side of his collar. The left (right) hand must thrust into the lapel of the enemy's clothes with the palm in position "outside" and seize the collar from "inside". Then immediately the

Photo 16 – "Pinching the throat from behind."

right (left) hand with the palm down must push through under your own left (right) arm and seize the enemy by his clothes in the region of the shoulder near the neck, a little bit closer to the shoulder-blade. It turns out to be a cross-wise arm grip. Make one step to the left (right) and move to get behind the back of the enemy. Pull with both arms to opposite sides, the left hand being turned with the palm "inside" (toward the enemy) and the breast being stuck out forward. In that position the left (right) side of the enemy's collar cuts off (blocks) the arteries on the left (right) side of his neck and the side of the right (left) forearm with a spot located 2 or 3 CUNs[23] above the wrist cuts off (blocks) the arteries on the right (left) side of his neck. It results in loss of the ability to resist and death of the enemy. It is necessary to exert an effect on the point FAN YANG for reanimation. This method must not be used with force during practice sessions. It is necessary to be especially careful if your partner suffers from pulmonary diseases. **Photo 16 - "Pinching the throat from behind."**

Editor's notes:

[23] **6.6 – 9.9 cm.**

Paragraph 6 BIE SHOU FENG HOU: Blocking an arm and pinching the throat.

This method is aimed at blocking blood vessels that feed the brain. Therefore, it must not be used without good reason.

The method is used when a criminal is arrested to avoid noise or possible resistance. In such a state the criminal can be brought to a required place and reanimated there. The duration of "temporary death" must not exceed two hours.

Photo 17 – "Blocking an arm and pinching the throat."

Explanations

A(B), seizing an opportunity, catches B(A) for the left side of his collar with the right (left) hand with the thumb thrusting behind the lapel of the collar and four other fingers squeezing the collar from outside. After catching the collar, it is necessary to get immediately to some place behind the back of the enemy, thrust your left (right) hand under his left (right) armpit, raise your hand up, lean against the enemy's neck with a side of the

forearm near the wrist and press with the elbow up with force. Those actions will result in raising the left (right) arm of B(A) above the left (right) shoulder of A(B). In that position the right (left) hand of A(B) pulls by the collar back (toward itself), because of it the left (right) side of the enemy's collar pinches the artery on the left (right) side of his neck. At the same time the left (right) arm of A(B) presses forward and downward and blocks the right artery with the side of the palm. The enemy becomes unconscious within three seconds as a consequence of the disorder of blood circulation in his brain. For reanimation the point FAN YANG must be effected. It is necessary to acquire well the reanimating technique, otherwise it is not recommended to drive the situation to a loss of consciousness. **Photo 17 - "Blocking an arm and pinching the throat."**

Paragraph 7 LE JING DUAN BI: Squeezing the neck and breaking an arm.

This method is used if in the course of hand-to-hand fighting the enemy fell down to the ground. Two variants of executing the method are possible. In the first case the neck of the enemy is squeezed, that leads to loss of consciousness and death. In the second case pressure is exerted on the arm, that leads to its fracture.

Explanations

Let's assume that in the course of hand-to-hand fighting B(A) falls down to the ground with his face down (it is of no importance if he did it on purpose or the fall was caused by enemy's actions).

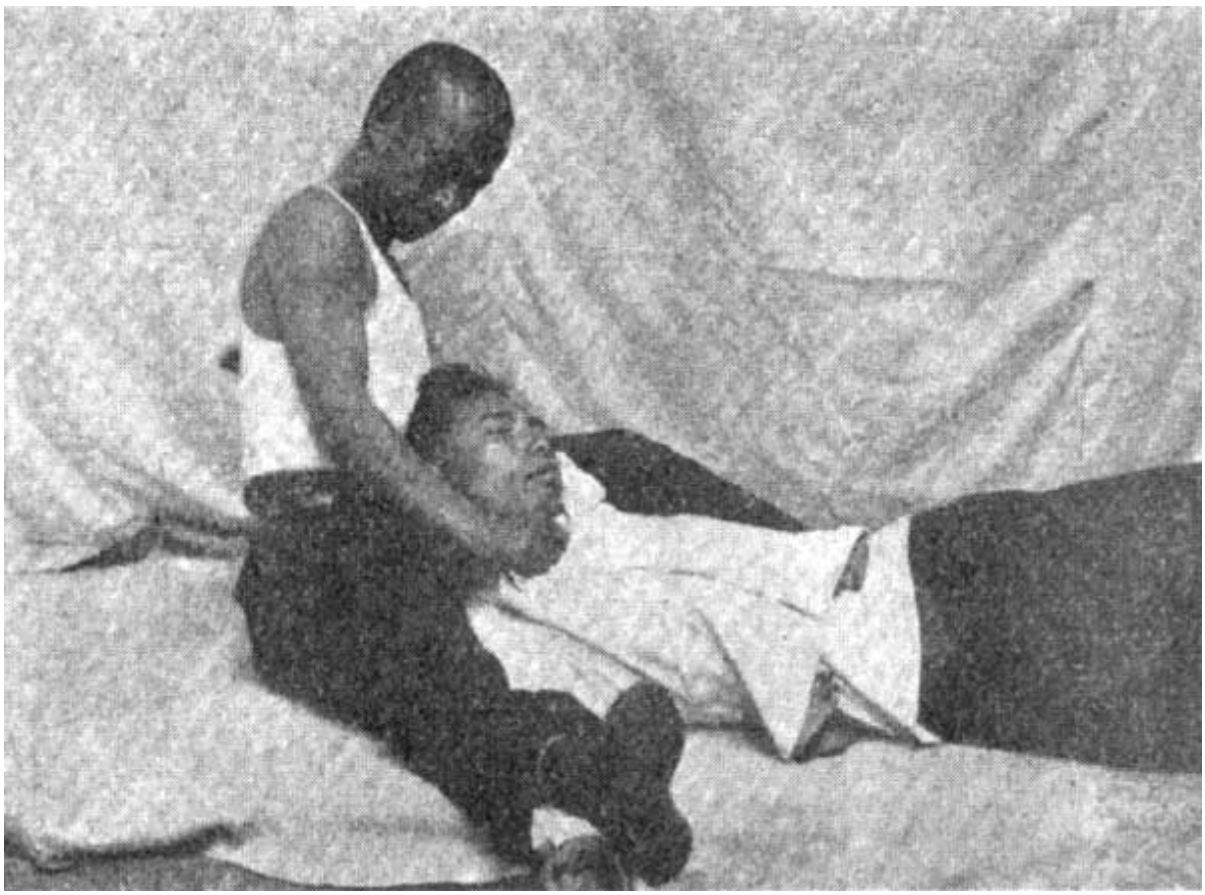


Photo 18 - "Squeezing the neck and breaking an arm."

Without delay A(B) must rush to him from above and to press his head to the ground with the breast, thrust the left (right) arm under the armpit of the left (right) arm of the enemy from below, press with the forearm up, move the left (right) hand to the right and forward above the left (right) shoulder of the enemy and seize the right (left) part of his collar. As a result of those actions the left (right) arm of B(A) becomes blocked with the left (right) arm of A(B). Concurrently with those actions the right (left) hand of A(B) seizes the left (right) part of the enemy collar from the front. After the enemy collar is firmly seized cross-wise it is necessary to pull to the right (left) and back with force and at the same time roll (turn over) to the right (left) with the face up. At that press the right (left) arm of the enemy to the ground with your right (left) leg and press on the left (right) elbow of the enemy from below with your left (right) thigh. In that position B(A) can not free himself: if he tries to turn to the left (right), the collar squeezes his neck, that will lead to asphyxia and the stoppage of blood circulation; if he tries to turn to the right (left), his

elbow joint, being in a critical position, will certainly fracture. In that position it will be enough for A(B) to make a slight effort and the left (right) elbow of B(A) will be fractured. **Photo 18 - "Squeezing the neck and breaking an arm."**

Paragraph 8 JIAO JING: Grappling the neck obliquely.

The method is used if during hand-to-hand fighting enemies fall down to the ground or if since the start the enemy is in a sitting or lying position.

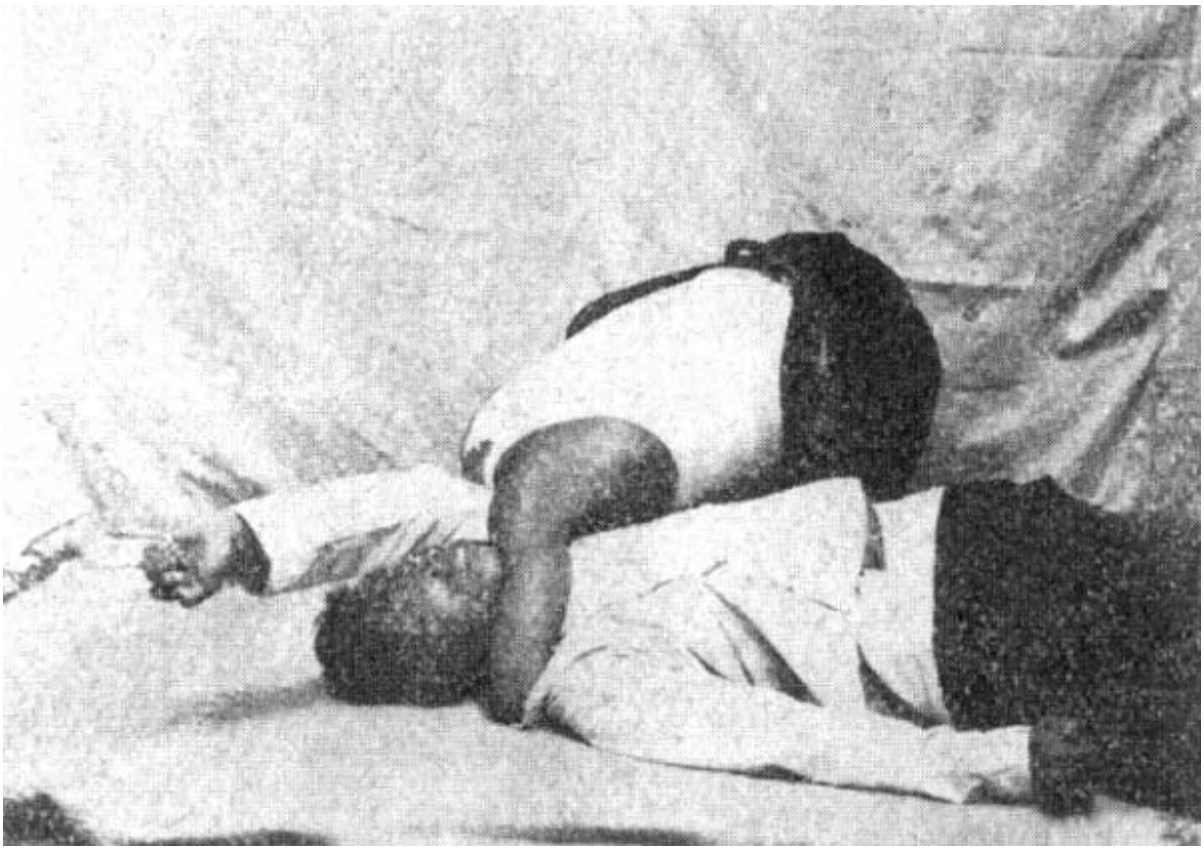


Photo 19 - "Grappling the neck obliquely."

Explanations

In the course of a combat B(A) falls flat on his back. A(B) instantly rushes to his left (right) side, puts left (right) arm round the enemy's neck, at the same

time pushes the enemy's left (right) arm with the right (left) arm and draws it aside and upward, thrusting head under the enemy's shoulder. As a result of it the left (right) arm of the enemy will be firmly squeezed (fixed) between the left (right) shoulder of A(B) and his head. Then it is necessary to seize firmly the wrist of the left (right) arm with the right (left) hand and squeeze the enemy with force. During those actions the left (right) leg is bent, the right (left) leg is straightened to a side and the foot is planted firmly to maintain stability. In that position the left shoulder of A(B) pinches the left artery on the enemy's neck and the lower part of his right forearm near the wrist pinches the right artery. Within three seconds breathing and blood circulation of B(A) stop. For reanimation the point FAN YANG must be effected. **Photo 19 - "Grappling the neck obliquely."**

Part III

JIAN BU NA FA

Shoulder Grips

Paragraph 1 DAO BI XIE JIAN: Pressing an arm, dislocating a shoulder.

The sketch shows the direction of pressure on the wrist during an initial phase of the method. As a result of it the enemy will be forced to fall dawn to the ground.

The method is used to arrest a criminal and allows to avoid possible resistance.

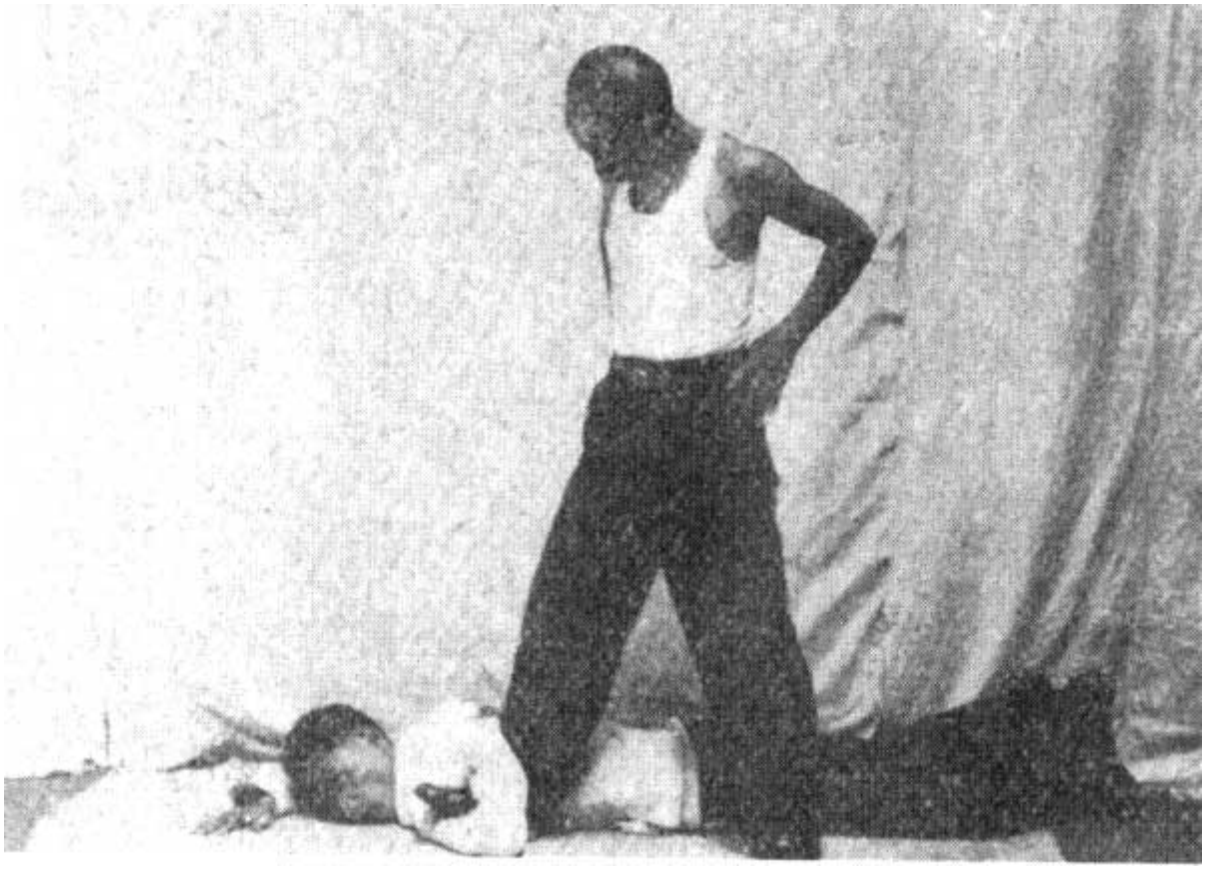


Photo 20 - "Pressing an arm, dislocating a shoulder."

Explanations

B(A) walks and does not expect an attack, A(B) walks toward him. Arms of both men are down as it is usual done during a walk. A(B), after coming up to B(A), instantly seizure his left (right) hand with the left (right) hand. It is necessary to seize from behind in order the thumb to be on the back of the hand and other four fingers on the side of the palm. After seizing firmly the enemy's hand one must raise it abruptly up and to a side. Immediately the right (left) arm helps the left (right) one seizing the enemy's hand in the same manner. As a result of it two thumbs press outward (from itself) and other fingers inward (to itself). At the same time it is necessary to press on the enemy's hand downward and forward so that his wrist would be bent. Pull the enemy to you, then abruptly push him forward and downward and he is bound to fall dawn. Your right (left) foot steps on the left (right) shoulder of the enemy, that will make him press his whole body to the ground. After that bring the held arm of the enemy behind his back with both arms, move the right (left) foot to a little lower and press the upper part of the enemy's arm to the ground and prop up his forearm with the front part of your shin. It is necessary to tread down and forward strongly and press forward with your shin. In that position the whole body of B(A), his arms and legs are immovable, but the arms of A(B) are free, he can take a cord or a belt and tie up the enemy. If a necessity appears, for instance, under the threat of an attack of accomplices, it is possible to move a leg forward abruptly and a dislocation of the shoulder will occur. **Photo 20 - "Pressing an arm, dislocating a shoulder."**

Paragraph 2 KOU ZHOU: Pressing on an elbow.

It should be pointed out that a kick at a knee is more effective than that one at a pelvic bone and it is more difficult to ward it off. In any case coordinated actions of arms and legs need a good degree of training, otherwise one can not overwhelm one's enemy.

This method is employed if the enemy seized you by your clothes in the shoulder region.

Photo 21 – "Pressing on an elbow."

Explanations

B(A) seizes A(B) by his clothes in the region of the right (left) shoulder with the left (right) hand. A(B) immediately covers the upper part of the enemy's forearm with both hands, the fingers of his hands being crossed. A(B) pulls the arm of the enemy to him with concurrent downward pressure so that the enemy could not turn and slip out. Simultaneously he presses on the left (right) pelvic bone of the enemy with

the sole of the right (left) foot. A coordinated effort of arms and a leg will lead to a fracture of the elbow. **Photo 21 - "Pressing on an elbow."**

Paragraph 3 ZHUA JIAN: Gripping by a shoulder.

This method can be successfully used against ordinary people who did not go through special training. As a result a fracture of a wrist or an elbow is possible. However, it is easier to succeed in fracturing an elbow.

This method is used if the enemy, as in the previous case, seized you by your clothes in the shoulder region.

Explanations

B(A) seized A(B) by the clothes in the region of the right (left) shoulder with left (right) hand. A(B) instantly covers the hand of the enemy with his left (right) hand and firmly presses it to his shoulder. It is necessary to firmly press the seized hand of the enemy, make a step back to have his arm straightened and immediately make a step forward and to the left to turn the held arm with its elbow outside. At that moment one must continue to execute the method as described below. **Photo 22: the first phase of the method "Gripping by a shoulder."**

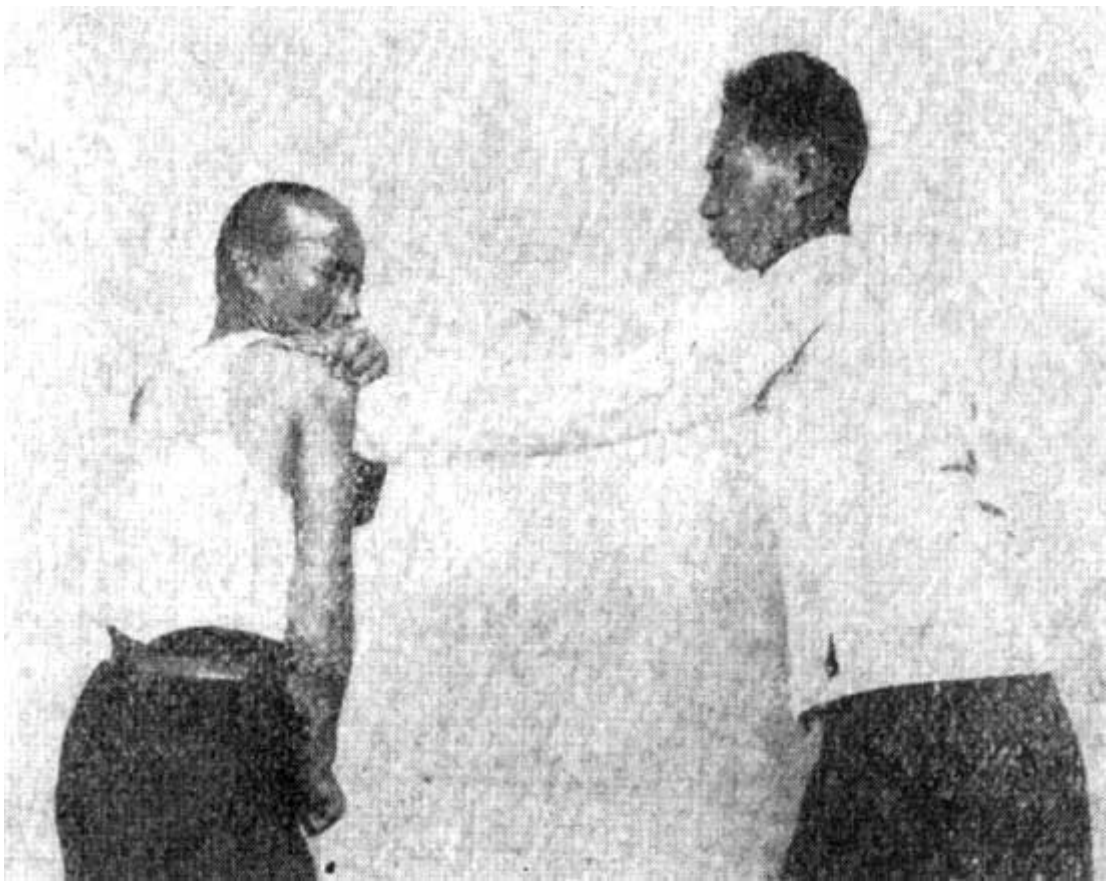


Photo 22 - "Gripping by a shoulder", first phase.

Continuation

A(B) makes a step with the right (left) leg to the left (right), his right (left) shoulder and the whole torso turns to the left (right). It is necessary to use "twisting" force of the waist. Simultaneously his right (left) arm moves back, then rises up from below and from above presses down on the held arm of the enemy a little higher than the elbow. During a turn of the torso to the left (right) the held hand of the enemy must be firmly pressed to the shoulder so that he feels some pain in the wrist. As a consequence of those actions B(A) will be forced to kneel down on the right (left) knee and lean on the ground with the right (left) arm. In that position B(A) loses the ability to resist. If pressed strongly, a fracture of the wrist will occur. **Photo 23: The second phase of the method "Gripping by a shoulder."**

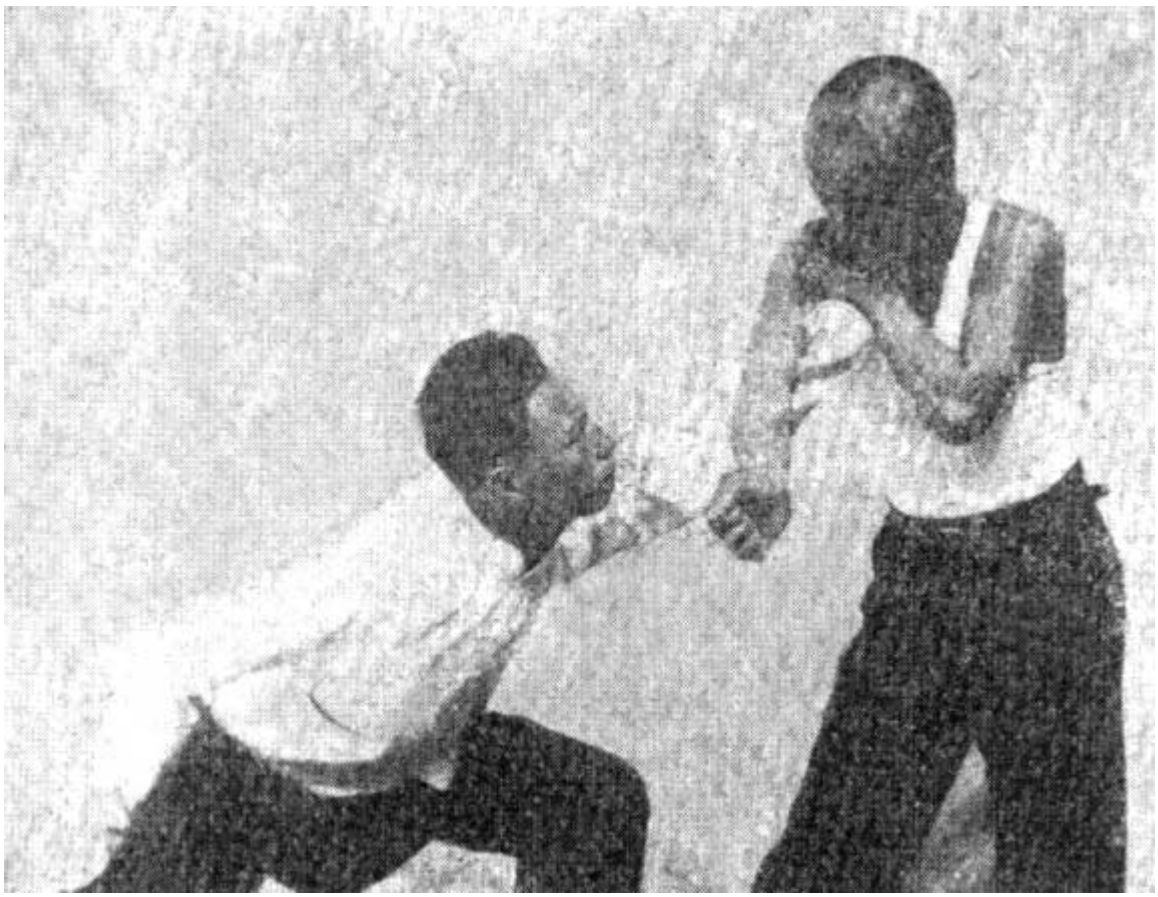


Photo 23 - "Gripping by a shoulder", second phase.

Paragraph 4 BAU ZHOU: Squeezing an elbow.

We repeat once again that one needs experience, exactness of movements, and force to get success, without them the best method will yield no result.

This technique is used if the course of executing the previous method "**Gripping a shoulder**" the enemy tries to slip out and free himself from a grip.

Photo 24 - "Squeezing an elbow."

Explanations

In the course of executing the previous method (**paragraph 3, "Gripping by a shoulder"**) A(B) turns his torso to the left, trying to straighten the held arm of the enemy and turn it so that the elbow will be outside. However, B(A) prevents him from doing so and follows A(B) on a circle in the same direction. In that case A(B) must instantly proceed to the technique "Pressing with a turn" without losing control over the left (right) arm of the enemy. For that it is necessary to make a step with the right (left) leg forward and not allow the enemy to increase distance, thrust the right (left) hand under the armpit of the left (right) arm of the enemy and seize him by the shoulder from

behind, stretch the left (right) arm forward past the left (right) cheek of the enemy, bend the wrist and "catch" his neck with the hand in the shape of a hook from the rear. Both arms press down as strong as possible to make the enemy bend forward and lean on the ground with the right (left) hand, his left (right) arm being raised up and being "supported" with your right (left) shoulder. At that moment it is necessary to bend the right (left) arm in elbow at a right angle and press with the forearm in the region of the crook of the arm on the left (right) arm of the enemy. It is necessary to press on the bone of upper arm near the elbow. Concurrently squeeze the wrist of your right (left) arm with the left (right) hand, pull to you with force and straighten your back. A fracture of the enemy's arm will occur. **Photo 24 - "Squeezing an elbow."**

Paragraph 5 BIE CHI: Holding by wings.

From paragraph 3 throughout paragraph 5 it is necessary to exercise with a sparring partner. Particular movements must be mastered well, then they should be executed in succession as a single technique. Only in that way skills of "pressing", "joining", "rotating", and "circling" can be developed.

As in the previous case, this technique is used if the course of executing the above method "**Gripping by a shoulder**" the enemy tries to slip out and free himself from a grip.

Explanations

B(A) seized A(B) by the left (right) shoulder with his right (left) hand. A(B) started to use the method ZHUA JIAN (**paragraph 3, "Gripping by a shoulder"**) with the aim to seize the enemy but B(A) perceived his intentions

in time and tries to slip out. In that case A(B) must instantly thrust his left (right) hand under an enemy's armpit to some place behind the back of the enemy. It is necessary to stretch forward the right (left) arm that squeezed the right (left) hand of the enemy before, behind his back, above his right (left) shoulder near the neck, join the palms by placing one on another and press on the shoulder of the enemy with force. As a result of it the enemy will be forced to bend forward and his right (left) arm will be above your left (right) shoulder. You must press down with both arms and toward you, raise your left (right) shoulder up, move the whole torso forward. As a consequence the enemy's head will bend toward his legs and his posture will resemble rifles in a rack. In that case it is important not to give the enemy a chance to make a somersault. If an abrupt force is applied, a dislocation of the shoulder joint will occur. **Photo 25: the first phase of the method "Holding by wings."**

Photo 25 - "Holding by wings", first phase.

Continuation

If B(A) has a supple body, the effect may not be got. In that case A(B) must bend further forward, seize the left (right) shoulder of the enemy with both hands and pull to himself, concurrently press with his left (right) shoulder forward. In that case a dislocation of the enemy's right (left) shoulder will certainly occur. If he continues pulling to himself with both arms, a dislocation of the second shoulder of the enemy will also occur. **Photo 26: the second phase of the method "Holding by wings."**

Photo 26 - "Holding by wings", second phase.

Paragraph 6 JIA BI TUO JIAN: Squeezing arms, dislocating shoulders.

This method is used if the enemy is in a lying or sitting position.

Explanations

A(B), taking advantage that B(A) sits or lies, rushes toward him from above, kneels down, squeezes him on sides with the knees and the shins and does not give him a chance to turn over. It turns out that B(A) lies on his back, as a rule in that position he tries to strike with arms or seize the attacking man by the throat. Using it, A(B) seizes the arms of the enemy with his hands crosswise (enemy's right arm with his right hand, the left arm with his left hand) and presses them to the ground beyond the enemy's head. Then A(B) leans forward and jumps over the head of the enemy with a support on his arms and a turn by 180 degrees. His arms remain at the same place, only his torso changes its position.

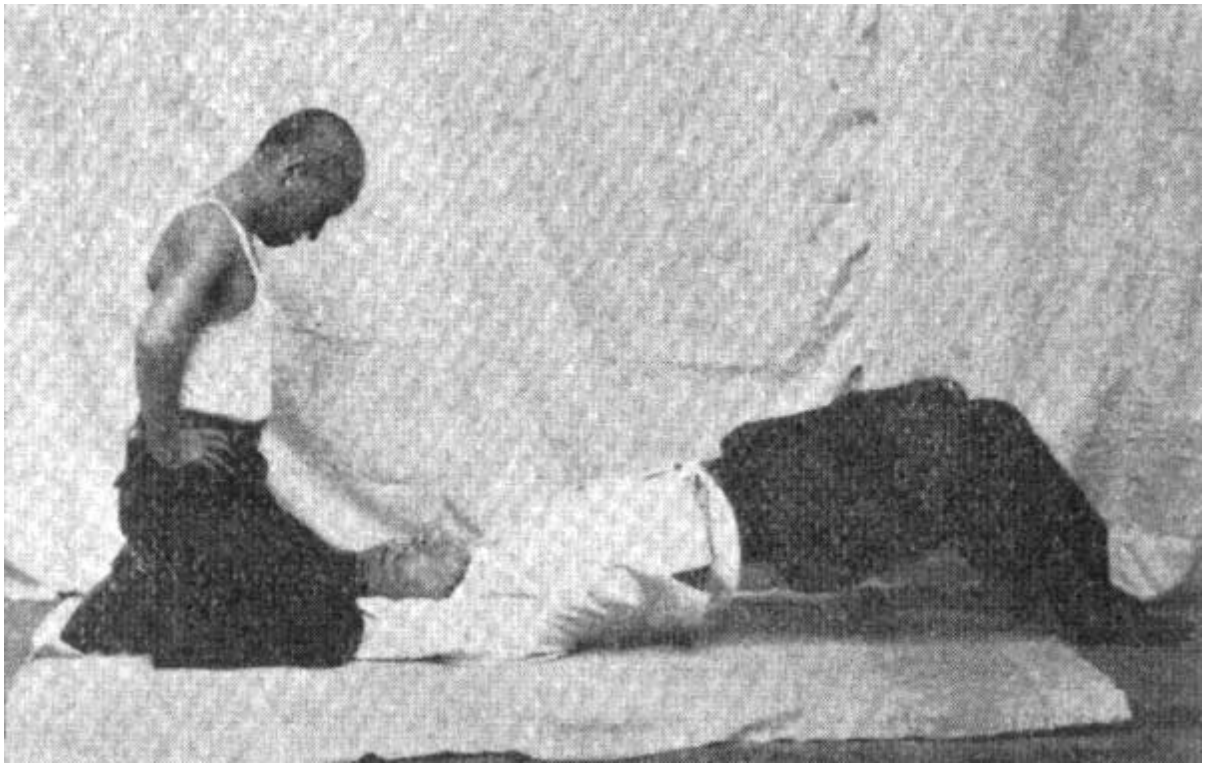


Photo 27: "Squeezing arms, dislocating shoulders."

It is necessary to squeeze upper parts of the arms of the enemy on sides with knees after landing, raise the enemy's head a little and press inward with the knees. The shoulder-blades of B(A) will converge and a dislocation of both shoulder joints will occur. **Photo 27: "Squeezing arms, dislocating shoulders."**

Part IV

XIOUNG LEI BEI BU NA FA

Countermeasures against grips from the front, flanks and the rear

Paragraph 1 HOU TUO ZHOU: Propping up an elbow from the rear.

The method of freeing oneself from a grip on the collar from the rear is almost completely identical to the above described method of freeing oneself from a grip on the hair from the rear. ***See part 1, paragraph 3.***

This method is used if the enemy seized you by the collar from the rear.

Explanations

A(B) is going or standing, B(A) imperceptibly approaches him from behind and seizes with the right (left) hand by the collar. A(B), without turning round, covers the hand of the enemy that seized his collar with his right (left) hand and firmly squeezes it in the region of the wrist. Then it is necessary to step with the right (left) leg forward immediately, concurrently bending the upper part of the torso a little forward.

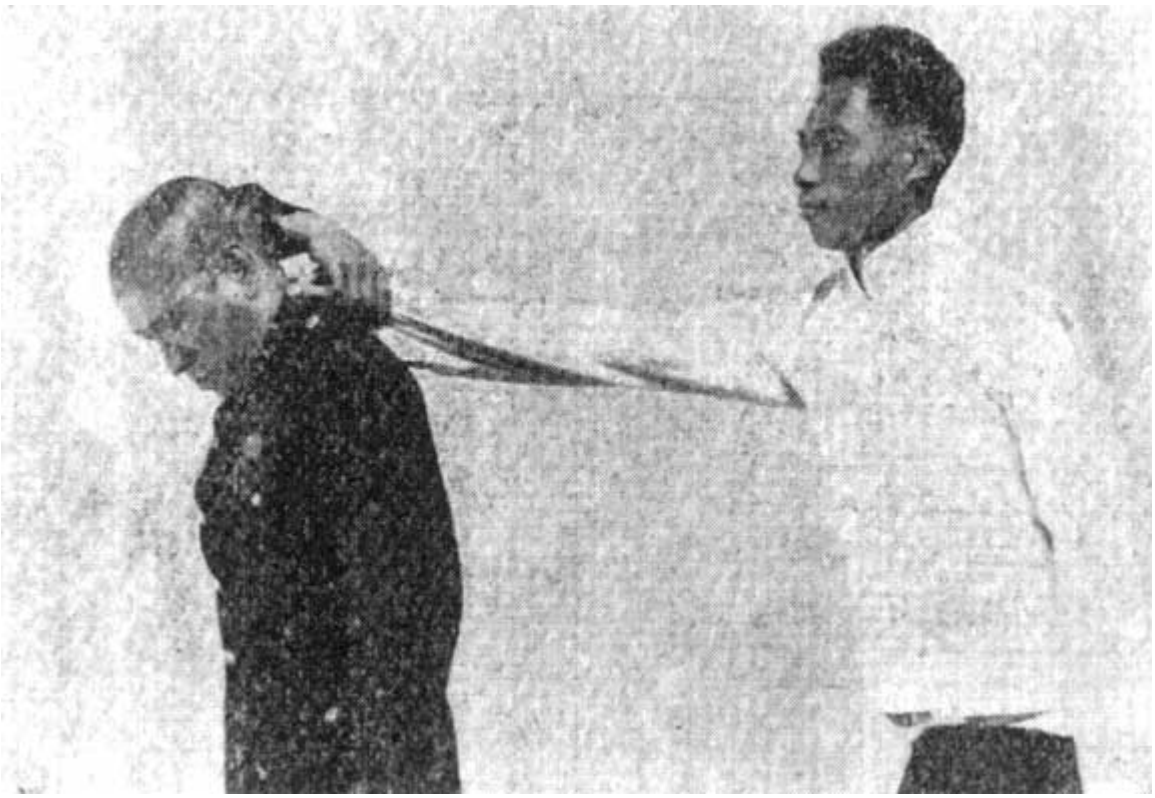


Photo 28 - "Propping up an elbow from the rear", first phase.

That is the first, preparatory, phase of the method. **Photo 28: the first phase of the method "Propping up an elbow from the rear."**

Continuation

Photo 29 - "Propping up an elbow from the rear", second phase.

After A(B) has seized the enemy's hand that holds him by the collar with his right (left) hand he must turn to the left (right) and get to the right flank of B(A), immediately propping up the elbow of the held arm of the enemy from below with left (right) palm and pushing it up. At the same time he must slightly squat by bending legs in knees a little bit, throw his head back, the right (left) hand that squeezes the wrist of the enemy near the collar moves together with the body. All movements must be done fast and in a coordinated manner, in that case a fracture of the elbow joint of the enemy is inevitable. **Photo 29: the second phase of the method "Propping up an elbow from the rear."**

Paragraph 2 BO ZHOU: Pressing on an elbow.

This method is used if the enemy, as in the previous case, seized you by the collar from the rear.

Photo 30- "Pressing on an elbow."

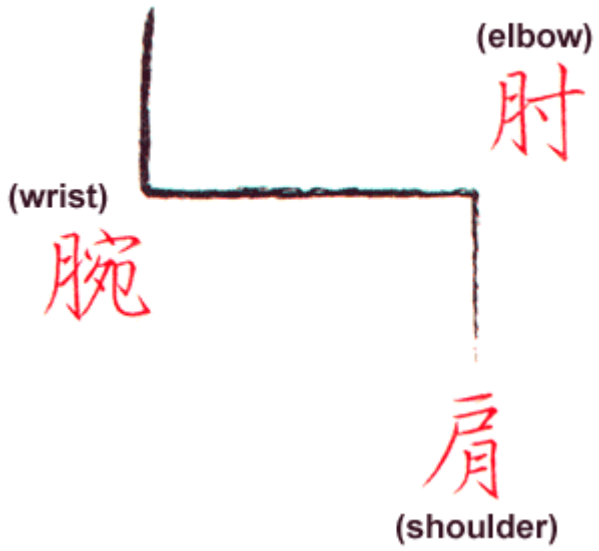
Explanations

B(A), being behind the back of A(B), seized him by the collar with the right (left) hand. With the right hand A(B) instantly covers and firmly squeezes the hand of the enemy that holds his collar. Immediately after that A(B) steps back and aside with the right (left) leg, his torso slightly turns to the left, the left (right) arm quickly rises up and bends in elbow, then moves forward and down. It is necessary to press on the elbow of the enemy's held arm from above with the left (right) forearm. During those actions the right (left) hand must firmly hold (fix) the enemy's hand near your collar and must not allow it to slip out, the left (right) leg must be abruptly straightened to the left and

backward right to the enemy's feet as if you trip him up. Here the coordination of actions is necessary: the body slightly leans forward and turns to the right (left), the left (right) leg pushes back and to the left (right). All movements must be done quickly and in a coordinated manner, never linger. **Photo 30: "Pressing on an elbow."**

Paragraph 3 ZHUANG SHEN DUAN WAN: Turning the torso and fracturing a wrist.

The correct grip of an enemy's hand is the key point for controlling over the whole arm of the enemy. If the method is executed correctly, the shape of the enemy's arm corresponds to the following sketch:



This method is used if the enemy seizes you by your collar from the front.

Explanations

Photo 31 - "Turning the torso and fracturing a wrist."

A and B are going beside each other in the same direction. Suddenly B(A) stretches his right (left) arm and seizes B(A) by the collar from the front. A(B) instantly covers the hand of the enemy with his right (left) hand and thrusts his middle finger under the enemy's palm. Concurrently the left (right) arm strikes an abrupt blow from above downward at the point QU CHI that is available on the inner side of the bend of the elbow, as a result of it the arm of the enemy bends. It is necessary, not allowing the enemy to straighten the arm, to swing immediately to the right (left) by 90 degrees. A fracture of the wrist will occur. **Photo 31: "Turning the torso and fracturing a wrist."**

Paragraph 4 WO TI: Lying hoof.

This method is used if the enemy seized you by the collar not too firmly. Otherwise, for a successful use of the method it is necessary to have a high level of skill or considerably surpass the enemy in force.

This method is used if the enemy seized you by the collar from the front.

Explanations

B(A) seized A(B) for the collar from the front with the right (left) hand. A(B) covers the hand of the enemy with his right (left) hand and firmly presses toward him, thrusting his middle finger under the palm of the enemy. Simultaneously A(B) presses on the held arm of the enemy, about one CUN up the wrist, from below upward with his left (right) palm. Both elbows must be firmly pressed to the torso and drawn together. Then it is necessary to proceed to the second phase of the method as described below. **Photo 32: the first phase of the method "Lying hoof."**

Photo 32 - "Lying hoof", first phase.

Continuation

A(B) must abruptly move with the whole of his torso forward and immediately shift back. It is done to disorganize the enemy and weaken his resistance. Concurrently press on an enemy's arm near the wrist to the right (left) and down with the outer edge of the left (right) palm, i.e. from the side of the little finger, so his hand will turn with the palm up and the wrist will bend. During those actions it is necessary to turn the torso a little to the right (left) and then abruptly tilt it forward. Your forearms and elbows must be tightly pressed to the torso so that arms and torso can move as a single whole. It is necessary to use the weight of the whole body and "explosive" effort for pressing forward and downward and the enemy will have to bend down and touch the ground with his free hand. At that instant you will hear a cracking of the fractured wrist. **Photo 33: the second phase of the method "Lying hoof."**

Photo 33 - "Lying hoof", second phase.

Paragraph 5 CUI ZHOU: Fracturing an elbow.

Sometimes this method is called "A boatsman punts the boat." If the man in black clothes (see photo 34) draws his left leg back, his posture will look like it is shown here:

In that case a destructive effect from the force acting on the enemy's elbow will be substantially greater.

The method is used if the enemy seized you by the collar from the front.

Photo 34 - "Fracturing an elbow."

Explanations

B(A), being in front of A(B), seizes him by the collar with the right (left) hand. A(B) instantly covers the hand of B(A) with his right (left) hand and firmly squeezes it. At that moment A(B) makes a push with his breast forward and the enemy instinctively tries to push him away. At once A(B) follows the direction of force applied by the enemy and moves a little back, as a result of it the right (left) arm of the enemy unbends in elbow. At that moment A(B) abruptly turns to the right (left) by 90 degrees, at that his left (right) arm rises

up and strikes a blow with the forearm at the enemy's elbow from above downward. At the moment of striking a blow at the elbow it is necessary to turn the upper part of the torso a little to the right (left) and slightly tilt it forward. If the enemy resists, a more radical variant can be chosen: to put the left leg back, right by the feet of the enemy, exactly as in the method BO ZHOU (**see section 4, paragraph 2 "Pressing on an elbow"**). In that case the elbow will be certainly damaged. **Photo 34: "Fracturing an elbow."**

Paragraph 6 DING WAN: Propping a wrist.

It is a good method but one must act very fast. One who wears the black clothes must bend a little forward. Schematically the arm of the enemy must look so:

The method is used if the enemy tries to seize you by the chest.

Explanations

B(A) stretches the right (left) arm, he is going to seize A(B) by the clothes on the left side of the chest. When the hand of B(A) is at the point of seizing A(B) but has not seized yet (please pay attention to it – that is a key moment) A(B) seizes the enemy by the arm a little up the elbow with his left (right) hand. Concurrently he

delivers an energetic blow from above on the wrist of B(A) with the edge of his right (left) palm, owing to it the wrist bends, the hand turns with the palm up and the back side of the palm props against the left (right) side of the chest of A(B). At that instant the right (left) hand of A(B) seizes the arm of the enemy a little up the elbow above his own left hand. You must pull to you with both arms, tilt the upper part of torso and stick out the breast forward. It is necessary to press with force so the enemy will not be able to unbend the wrist. **Photo 35: "Propping a wrist."**

Photo 35 - "Propping a wrist."

Paragraph 7 JIE WAN: Picking up a wrist.

Here requirements to the execution of the method are similar to those ones described in the previous paragraph. Schematically the arm of the enemy must look so:

The method is used if the enemy, as in the previous case, tries to seize you by your clothes on the breast.

Explanations

B(A) approaches A(B) from the front and stretches his right (left) arm with the palm down, intending to seize A(B) by the clothes on the breast. When B(A) is on the verge of seizing, A(B) draws in his breast and shifts a little back, concurrently seizing the right (left) arm of B(A) a little up the elbow with his left (right) hand. At that time the right (left) arm of A(B) strikes from below at the right (left) wrist of B(A), that causes

Photo 36 - "Picking up a wrist."

the wrist to bend down and prop against the breast of A(B). The blow must be delivered with the edge of the palm on the side of the thumb, the four fingers must be straightened and closely pressed to each other, the thumb must stick aside. Following that, A(B) immediately and firmly seizes the right (left) hand of B(A) with his right (left) hand and pulls toward him with force, concurrently sticking out his breast. It is of no importance if the held arm is bent in elbow or not. The most important thing is to firmly fix the wrist to prevent the enemy from moving it up, down, or to sides. **Photo 36: "Picking up a wrist."**

Paragraph 8 FAN TUO ZHOU: Propping an elbow inward.

*At the initial stage (of this method) actions are completely similar to those ones described in **paragraph 3** of this section and shown in **photo 31**. The only difference is that in this case the location of seizing is further up.*

This method is used if the enemy seized you by your clothes on the breast near the neck, right under your chin.

Explanations

B(A) approaches A(B) from the front and seizes him by the clothes on the breast, near the neck, right under the chin. A(B) must instantly cover the hand of the enemy with the right (left) hand and concurrently deliver a "chopping" blow from above downward at the inner side of the elbow bend of the caught arm of the enemy in the region of the point QU CHI with the left (right) hand.

Due to those actions the arm of the enemy bends and his torso tilts forward. At that moment A(B) starts pressing on the enemy's elbow from the left to the right (from the right to the left) with the left (right) palm, concurrently turning to the right (left) on the left (right) foot. After turning to the enemy sideways, i.e. by 90 degrees, it is necessary to tilt the upper part of the torso a little back and make an energetic upward push from below with the left (right) palm. A fracture of the elbow will occur. **Photo 37: "Propping an elbow inward."**

Photo 37: "Propping an elbow inward."

Part V

YAO FU BU NA FA

Counteractions against Grips on the Waist and Stomach

Paragraph 1 QIAN PENG ZHOU: Pressing on an elbow from the front.

*As to technique this method is similar to the method CUI ZHOU – "Fracturing an elbow" (**See section 4, paragraph 5, photo 34**). The only difference is that in this case the location of seizing is lower.*

This method is used if the enemy seized you by your waist belt or clothes in the region of your waist.

Explanations.

B(A) seizes A(B) by the belt or clothes on the waist with the left (right) hand, his arm with the palm down. With the left (right) palm A(B) instantly covers the hand of the enemy which has caught him by the belt or clothes in the region of the waist, firmly squeezes and presses it toward himself and does not allow the enemy to remove the arm. Simultaneously it is

Photo 38 - "Pressing on the elbow from the front."

necessary to make a pull toward yourself with force, using the whole body, so the arm of the enemy unbends in elbow and then immediately make a big step forward with the right (left) leg, right by the enemy's feet so that your calf muscle props against the shin of the enemy. It is necessary to tilt low forward in that position, the arm of the enemy caught by you being under your right (left) armpit and its forearm being pressed to your chest ribs. One must press down and forward on the elbow of the enemy with the right (left) elbow, concurrently turning the upper part of the torso a little to the left (right). All those movements must be executed very fast, otherwise it will not work. **Photo 38: "Pressing on the elbow from the front."**

Paragraph 2 HOU PENG ZHOU: Pressing on an elbow from the rear.

This method is used if the enemy, being behind your back, seized you by the waist belt or clothes in the region of the waist.

Explanations

A(B) is going or standing, B(A) approaches from the rear and seizes him by the belt or clothes in the region of the waist. A(B) instantly moves the right (left) arm behind the back and firmly catches the hand of the enemy. Immediately after that A(B) takes a stride forward with the right (left) leg and pulls the enemy after him with force. **It is the first phase of the method "Pressing on an elbow from the rear", see photo 39.**

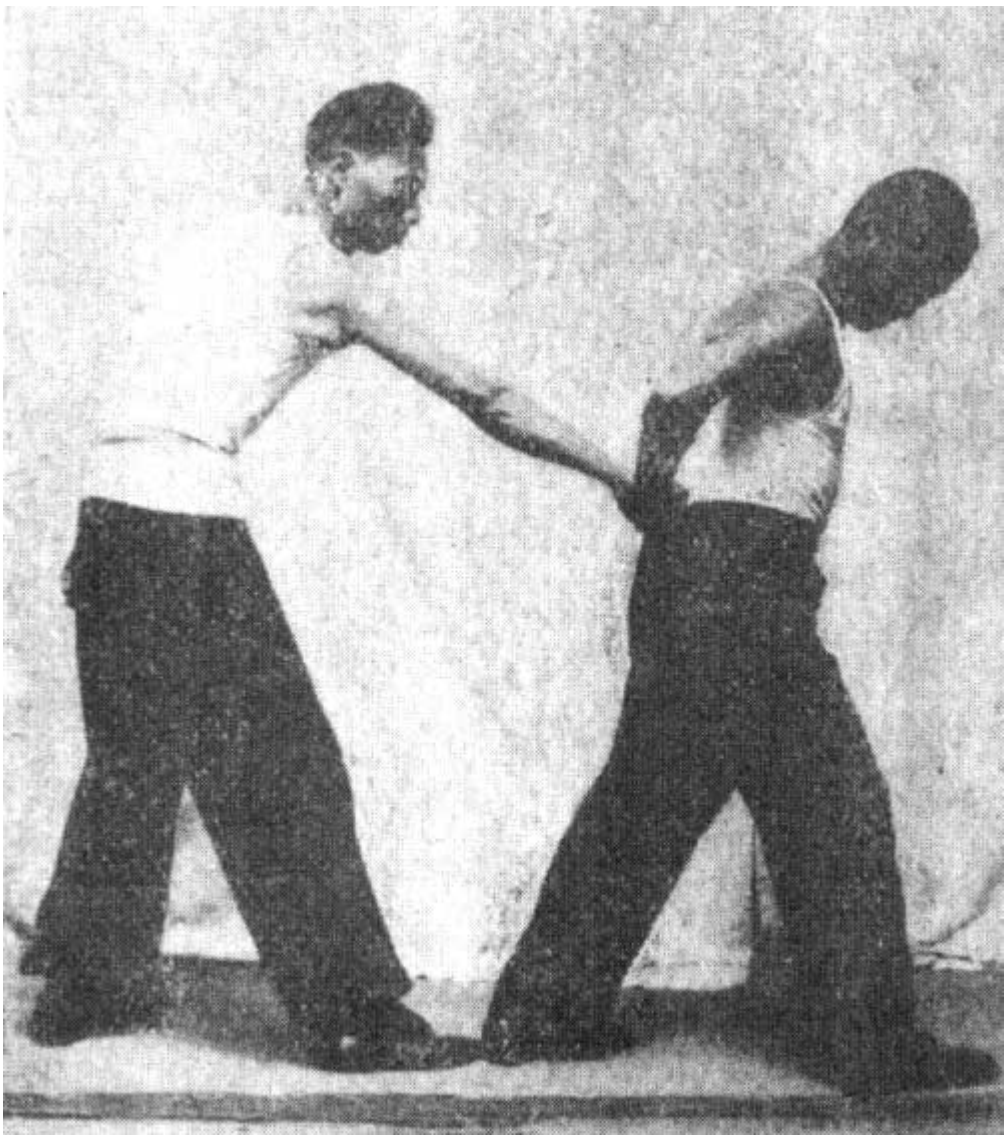


Photo 39 - "Pressing on an elbow from the rear", first phase.

Continuation

A(B) turns with his left (right) side to the enemy, raises left (right) arm, draws it back and lowers it behind the held enemy's arm, closes fingers to each other and thrusts the palm under the armpit of the enemy from the side of the enemy's back toward the enemy's breast, as a result of it the back side of the left (right) palm of A(B) is pressed to the enemy's breast. At that moment A(B) moves his left (right) leg to the left (right) to be placed in front of the right (left) leg of the enemy and tilts his torso forward. In that position the left (right) arm presses on the elbow of the enemy from above down, the head and the upper part of the torso being turned a little to the right and back as if you

wish to turn round. The right (left) arm also pulls to the right and back with force. **Photo 40: the second phase of the method "Pressing on an elbow from the rear".**

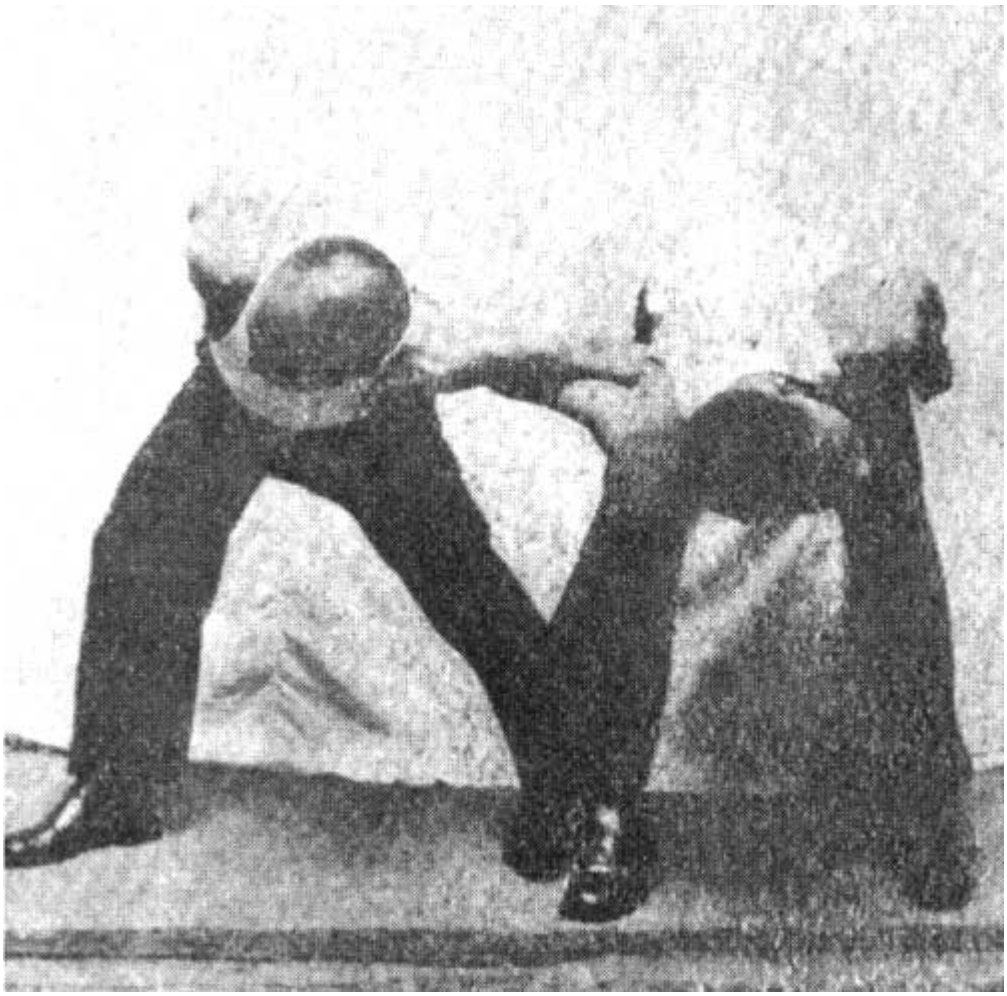


Photo 40 - "Pressing on an elbow from the rear", second phase.

Paragraph 3 DING WAN: Propping a wrist.

This method is used if the enemy seized you by the waist belt or clothes in the region of the stomach from the front.

Explanations

B(A) approaches A(B) from the front and seizes by the belt with the right (left) hand. A(B) strains DAN TIAN and sticks out the lower part of the stomach, concurrently moving with the whole body a little forward and immediately backward. At that moment A(B) seizes the right (left) arm of the enemy a little up the elbow with the left (right) hand and immediately moves forward. Such movements disorganize the enemy and weaken his grip. A(B) delivers an energetic blow with the right (left) arm from above downward and a little aside at the wrist of the enemy, it results in bending the wrist of the right (left) arm of B(A). **It is the first phase of the method "Propping a wrist", see photo 41**.

Photo 41 - "Propping a wrist", first phase.

Continuation

After the blow the wrist of B(A) has bent, the back side of his hand is pressed to the stomach of A(B). Immediately the right (left) hand of A(B) seizes the arm of the enemy a little up the elbow and pulls to it, supplementing actions of the left arm. Simultaneously A(B) sticks out the lower part of the stomach and presses forward. The movements must be strong and coordinated. It is of no importance if the arm of the enemy is bent in elbow joint or not: he feels a severe pain in his wrist and loses his ability to resist. **Photo 42: the second phase of the method "Propping a wrist"**.

Photo 42 - "Propping a wrist", second phase.

Paragraph 4 DUAN ZHOU: Raising an elbow.

This method is used if the enemy seized you by the waist belt, his hand with the palm up.

Explanations

B(A) seized A(B) by the belt with the right (left) hand with the palm up. A(B) immediately tilts the upper part of the torso forward and draws back his stomach and pelvis, concurrently he seizes an arm of the enemy with both hands a little up the elbow and pulls to himself with force and presses downward with the breast. As a consequence of those actions the enemy bends forward. At that moment A(B) sets his left (right) foot against the right (left) hip joint of the enemy and presses forward and down with force, while carrying on to pull to him with both arms, and shifts the upper part of the torso back. Movements of torso, arms and leg must be coordinated, fast and strong. A fracture of the elbow joint will occur. **Photo 43: "Raising an elbow."**

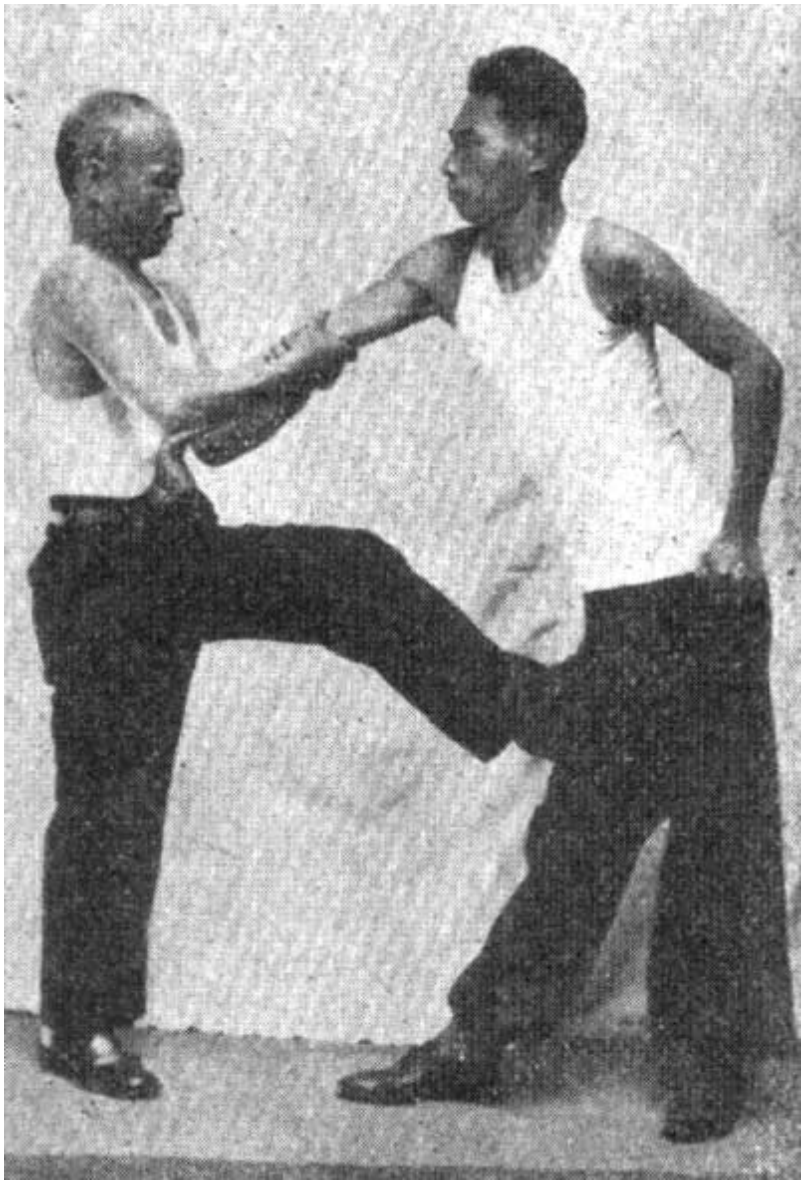


Photo 43 - "Raising an elbow."

Paragraph 5 KUA ZHOU: Linking your arm through enemy's arm.

During the execution of this method force must be applied with a jerk, you must act fast and unexpectedly for the enemy, in that case you can fracture his elbow. It is dangerous to be slow.

This method is used if the enemy seized you by your waist belt, his hand with the palm up.

Photo 44: "Linking your arm through enemy's arm."

Explanations

B(A) seized A(B) by the waist belt, at that the hand of B(A) is with the palm up. With his right (left) hand A(B) instantly seizes the hand of the enemy which has caught him by the belt and firmly holds it, not allowing to get free. Concurrently it is necessary to tilt the upper part of the body forward, move back your stomach and pull toward you with force as to straighten the held arm of the enemy. At that moment you as if link your arm through the enemy's arm: you press on his arm at a place a little up the elbow upward

from below with the inner side of the elbow bend. At that your right (left) arm presses down, the upper part of the body leans back, due to it the enemy is forced to stand on tiptoe, then a fracture of the elbow joint will occur. **Photo 44: "Linking your arm through enemy's arm."**

Paragraph 6 LE WAN: Pressing on a wrist.

This method is used if the enemy seized you by the waist belt, the hand is with the palm up.

Explanations

B(A) with his palm up is going to seize A(B) by the waist belt or the clothes in the region of the stomach. At the moment when the enemy has already stretched his arm and is at the verge of seizing you must seize the enemy by an arm in the region of the elbow with your left (right) hand and pull toward you. Concurrently you must close up and straighten fingers on the right

Photo 45: " Pressing on a wrist."

(left) palm, strike at the wrist of the enemy with the edge of the palm from above down so that the wrist is bent and pressed to your stomach. Immediately you stick out your stomach, seize the arm of the enemy above your left (right) hand with the right (left) hand and pull with both arms toward you and down, concurrently pushing forward the lower part of the stomach. A fracture of the wrist will occur. **Photo 45: "Pressing on a wrist."**

Paragraph 7 DUAN YAO: Fracturing the waist.

A possibility to carry out this method exists far from always, one must have a good level of training and sufficient experience. Otherwise you will fail.

This method is not independent one, a chance to use it must be prepared through previous actions, otherwise it is difficult to succeed. We kindly ask those who exercise to pay attention to this fact.

Explanations

A(B), carrying out some actions, knocks B(A) down. If the enemy falls down on the right of you, it is necessary to put the right thigh under in order him to fall on it with his waist, if on the left of you – the left thigh, taking at that the stance of Unicorn (QI LIN). At the same time you place your left (right) hand on the enemy's chest and the right (left) hand on his pubis bone. If you abruptly press down with both arms and raise the left (right) leg a little up, the enemy's spine will fracture. **Photo 46: "Fracturing the waist."**

Photo 46: "Fracturing the waist."

Paragraph 8 JIA YAO: Squeezing the waist.

It is necessary to have sufficient strength and have a good level of skill for a successful use of this method. Untrained people will hardly be able to do it.

This is a case when a man, as it seems, is in a losing position, uses it to his advantage and wins. If the enemy furiously rushes at you and you have no time to dodge, you feint falling down on the ground.

Explanations

B(A) rapidly attacks A(B). A(B) realizes that he has no time to dodge the attack and falls down his back carrying the enemy with him and raising his legs to clasp the waist of the enemy. After falling on the back it is necessary to cross your legs behind the back of the enemy immediately and to squeeze his body from sides as strong as possible with your thighs and knees, that will lead to a fracture of ribs and damage of the diaphragm. If your legs are short and the waist of the enemy is thick, this method is unacceptable. One should not thoughtlessly use this method, as it will be impossible to save the man in case of a serious damage of the diaphragm. **Photo 47: "Squeezing the waist."**

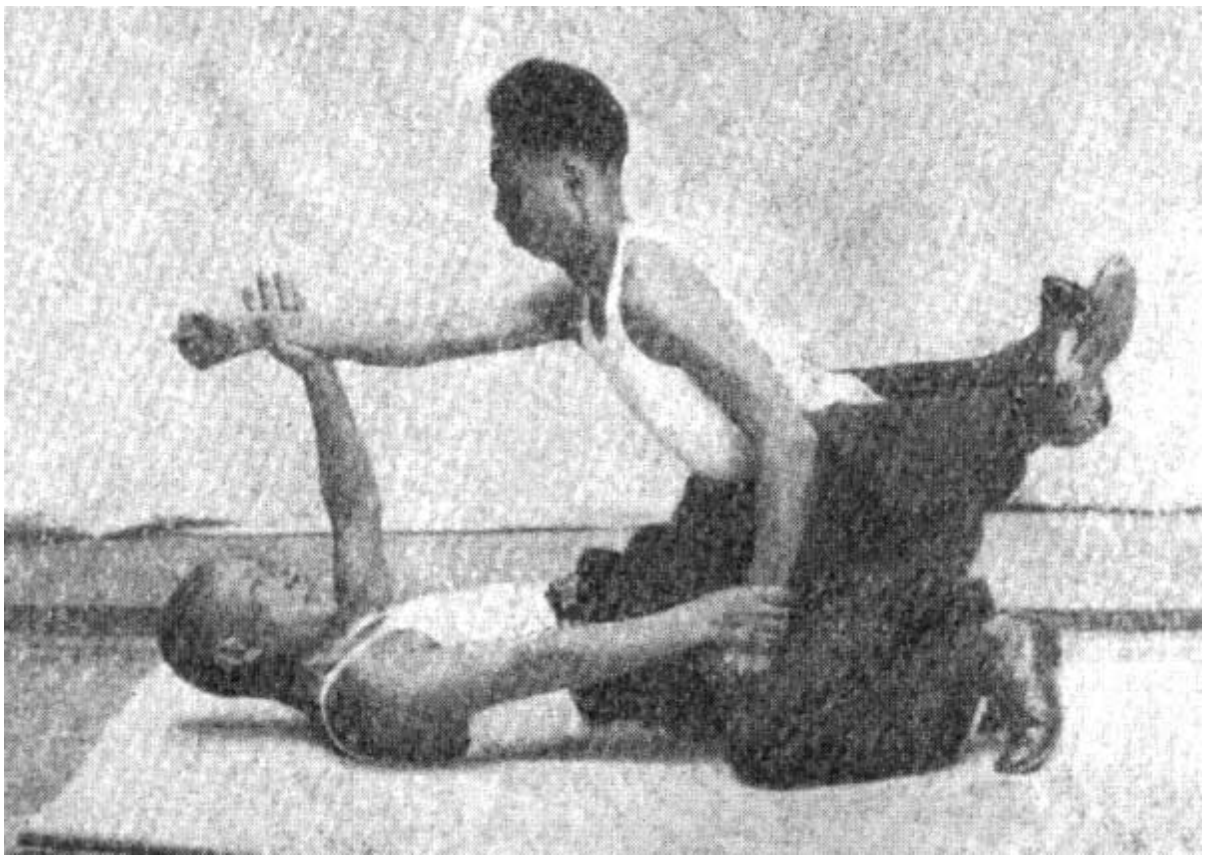
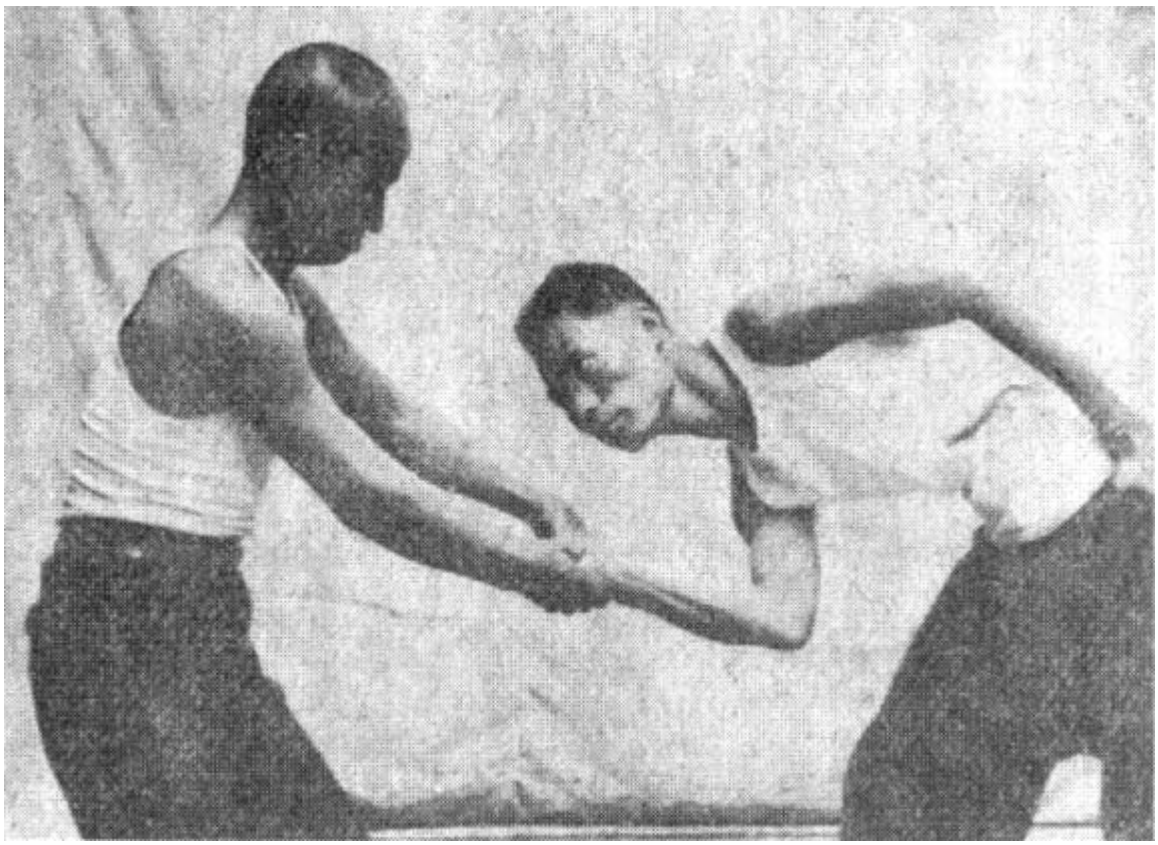


Photo 47: "Squeezing the waist."

Part VI

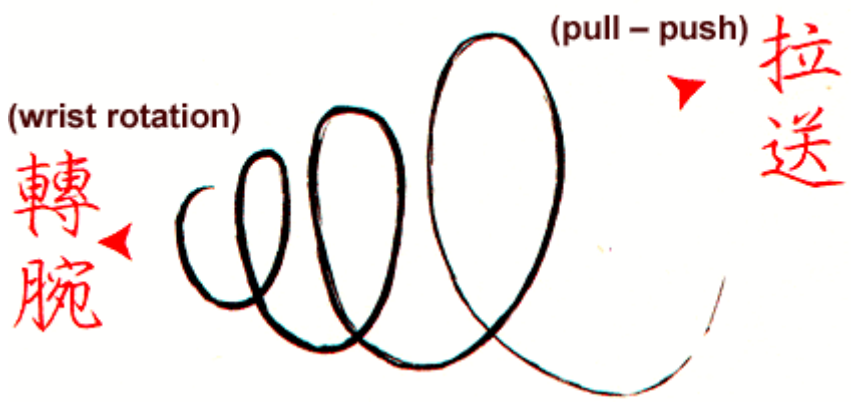
BI WAN BU NA FA

Grips at a Hand and Wrist



Paragraph 1 XIAO CHAN SI – Small hank of thread.

When a bobbin rotates, thread can be wound on it. That is the gist of the method. Two types of arm movements can be distinguished in this method: shuttle movement and spiral-type wrist movement.



This method is used if the enemy seized you by a wrist.

Explanations

A(B) intends to seize B(A) with the right (left) hand; however, as soon as he stretched his arm the enemy seized him by the wrist. In that case A(B) must immediately cover the hand of the enemy that squeezes his wrist with the left (right) hand and firmly seize it, not allowing the enemy to free himself. At that the thumb of the left (right) hand of A(B) is below and the other four fingers above. Further shuttle movement is made with the following purpose: if you, for instance, make a push from yourself and the enemy applies force in the opposite direction, you suddenly start pulling toward you and the force of the enemy can be directed against himself. For that purpose it is necessary to make an abrupt push forward with arms and immediately pull toward you, moving arms up and back to straighten the enemy's arm in elbow and bend

the enemy's wrist down. **It is the first phase of the method "Small hank of thread", see photo 48**.

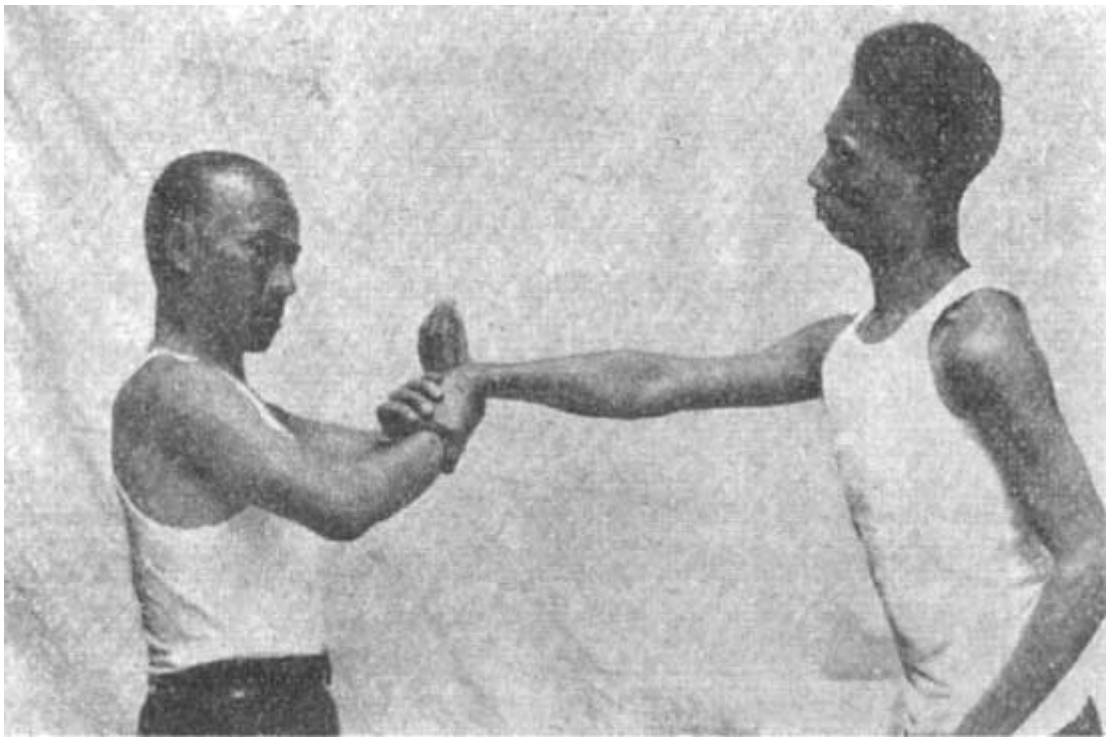


Photo 48 - "Small hank of thread", first phase.

Continuation

A(B) pulls up and back (toward himself), owing to it the held arm of the enemy straightens in elbow and its wrist bends. At that moment A(B) must seize the arm of the enemy in a place one CUN (3.3 cm) up the wrist with the right (left) hand from above, the thumb rings round the forearm from one side and the other fingers from the other side. At that, it is necessary to press to the left (right) and down with the tip of the middle finger to bend the wrist of the enemy aside so that he can not turn it. A(B) must press down and pull toward him with the arms and the enemy will be forced to kneel on one knee and touch the ground with his free hand. In that position he feels violent pain in the wrist and loses his ability to resist. If necessary, make a strong pull to you and down, a fracture of the wrist will occur. **It is the second phase of the method "Small hank of thread", see photo 49**.

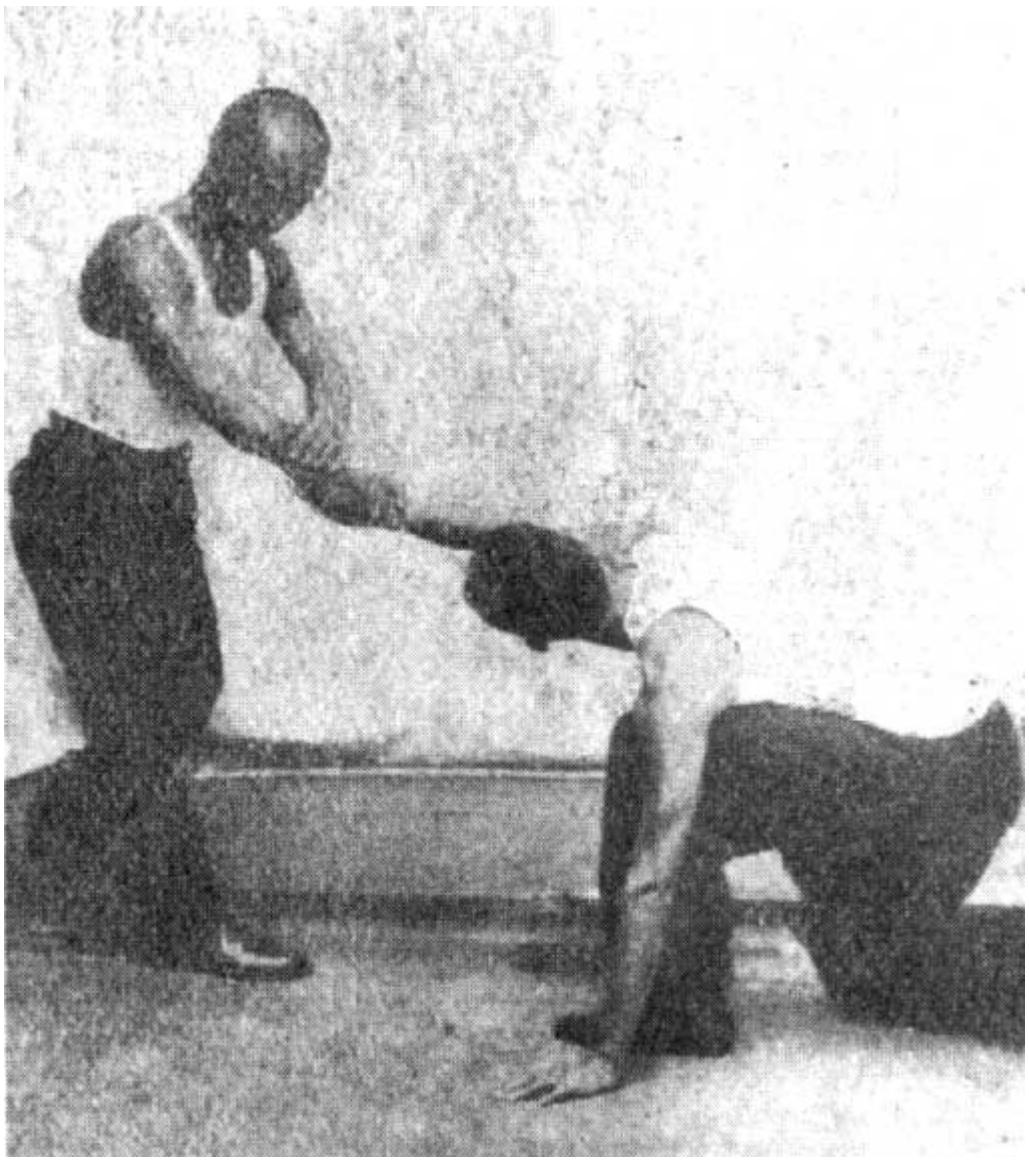


Photo 49 - “Small hank of thread”, second phase.

Paragraph 2 SHUANG CHAN SI – Double hank of thread.

This method is used as a countermeasure against the above-described method, i.e. when the enemy uses a counter-grip "**Small hank of thread**" against your grip.

Explanations

A(B) seized the arm of B(A) by the wrist, but B(A) immediately proceeded to the method "Small hank of thread" and covered the hand of A(B) with his palm. At that moment when B(A) did not apply maximum effort yet, A(B) must neutralize the force applied by the enemy to his wrist. To do that, you should raise the right (left) elbow up to the level of the shoulder or higher and raise the left (right) arm with the palm toward you vertically in front of the breast between the arms of the enemy. It is necessary raise your caught arm and both arms of the enemy with the upper part of the left (right) arm so that you do not feel pain in the wrist of the

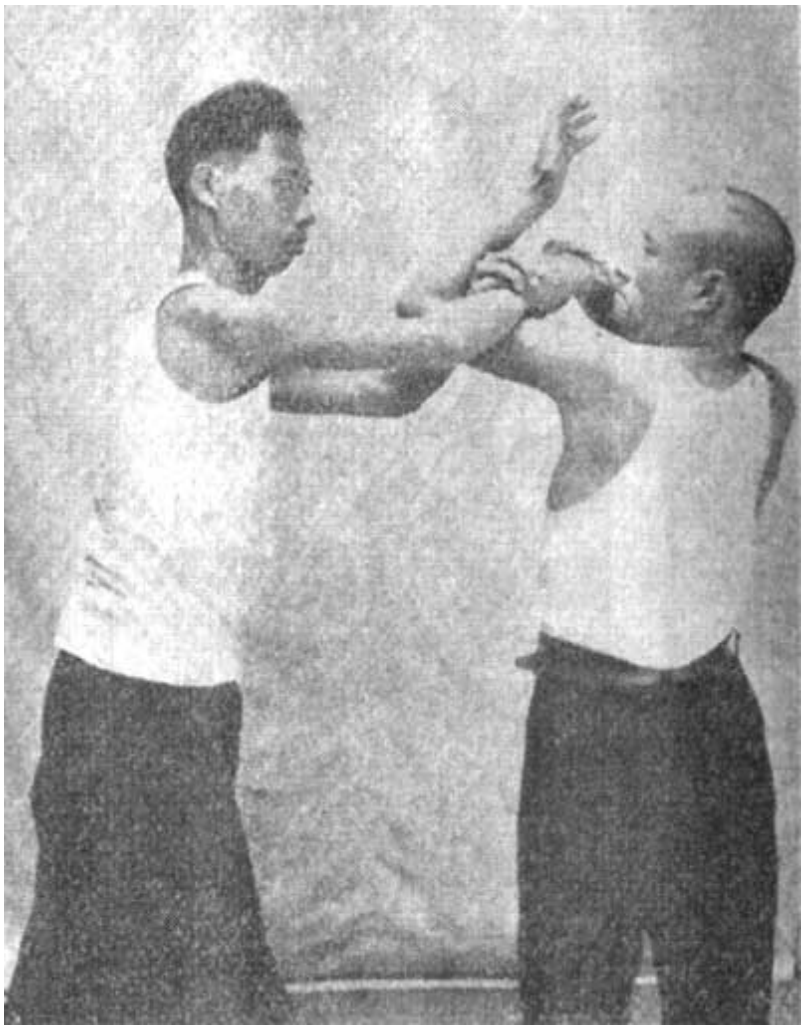


Photo 50 - "Double hank of thread", first phase.

caught arm. **It is the first phase of the method "Double hank of thread", see photo 50**.

Continuation

A(B) covers the right (left) hand of the enemy with his left (right) hand, firmly seizes the middle finger or all fingers of B(A) and pulls down and toward him with force, the left (right) hand of A(B) being turned with the palm inward. At the same time the right (left) arm of A(B) also presses down, its elbow must be kept at the level of the hand (the forearm is in the horizontal position). Both arms must be firmly pressed to the breast of A(B) and must not pulled off the breast at any event. Then it is necessary to stand tiptoe, step forward, tilt the upper part of the body a little forward and bend knees a little, concurrently and strongly pressing down with both arms. In that case the enemy will be forced to kneel down and lose his ability to resist. If you press with the left (right) arm strong enough, the right (left) arm can be pulled off and one arm can hold both arms of the enemy. **Photo 51: the second phase of the method "Double hank of thread."**

Photo 51 - "Double hank of thread", second phase.

Paragraph 3 DA CHAN SI – Big hank of thread.

This method is essentially similar to the method "Small hank of thread", but it allows to apply greater force. Even if the enemy is strong, his strength is compensated by lateral force of your elbow.

This method is used when you encounter a physically strong enemy and the method XIAO CHAN SI (**"Small hank of thread"**, **paragraph 1)** can be ineffective against him.

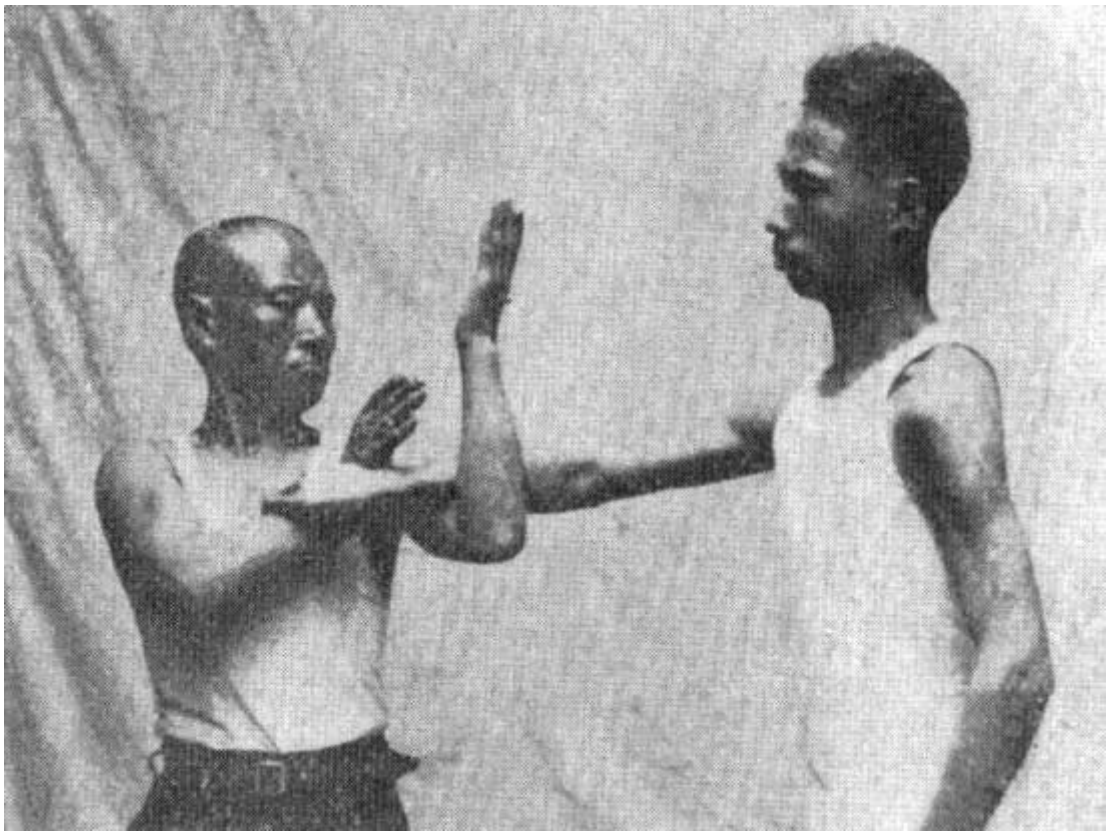


Photo 52 - "Big hank of thread", first phase.

Explanations

A(B) stretched the right (left) arm with the intention to seize B(A), but B(A) immediately seized A(B) by a wrist with his right (left) hand. A(B) sizes the opportunity and pulls the right (left) arm toward himself, at the same time he makes a step forward with the left (right) leg and puts his foot on the ground

in front of the right (left) foot of the enemy, a little closer to the central line. While doing those actions, A(B) becomes turned to the enemy with his left (right) side. At that moment A(B) bends the left (right) arm and presses upward from below on the caught arm of the enemy with the inner side of the elbow bend. **It is the first phase of the method "Big hank of thread", photo 52**.

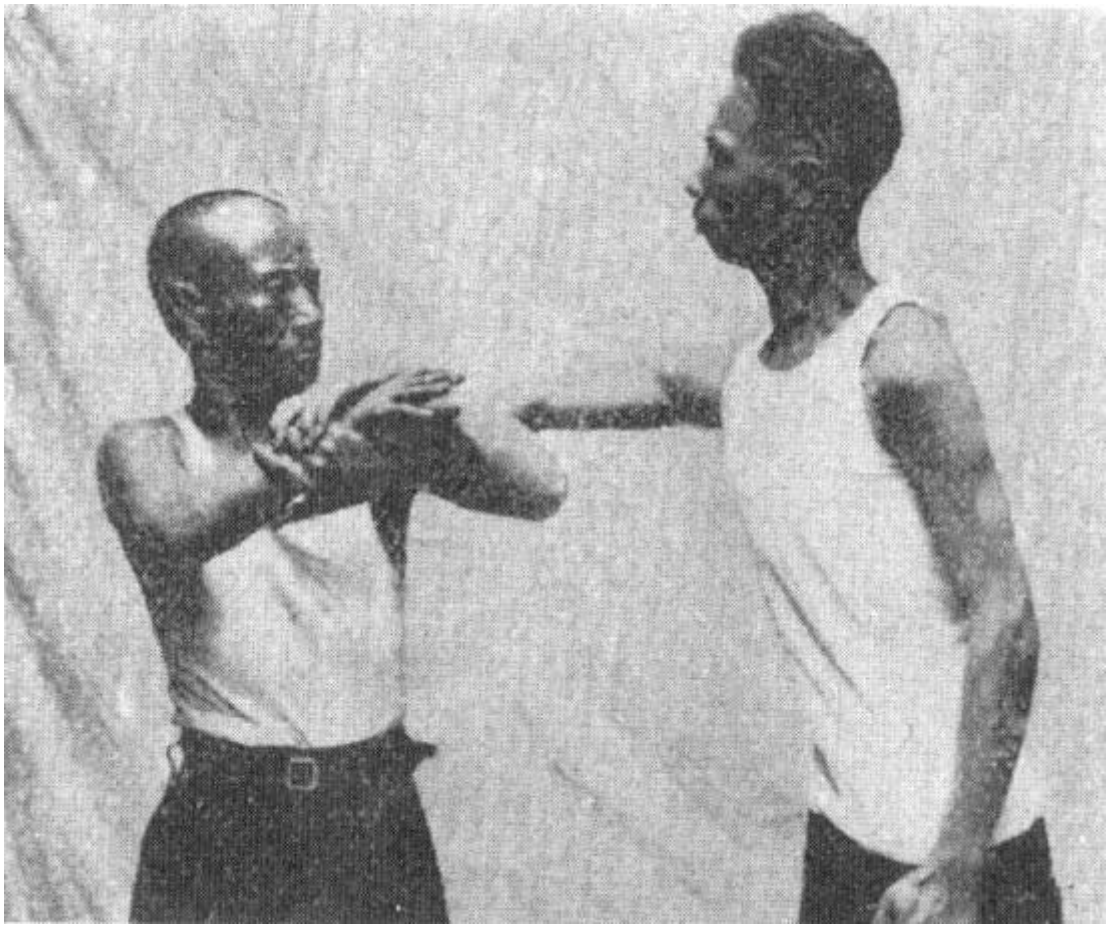


Photo 53 - "Big hank of thread", second phase.

The second phase of the method "Big hank of thread."

A(B), carrying on the method, raises up the bent left (right) arm and simultaneously pulls to the right (left) and downward with the right (left) arm without giving the enemy the chance to free himself. Then A(B) covers from above the right (left) hand of the enemy with the left (right) hand and pulls toward himself with force with both arms. **It is the second phase of the method "Big hank of thread", photo 53**.

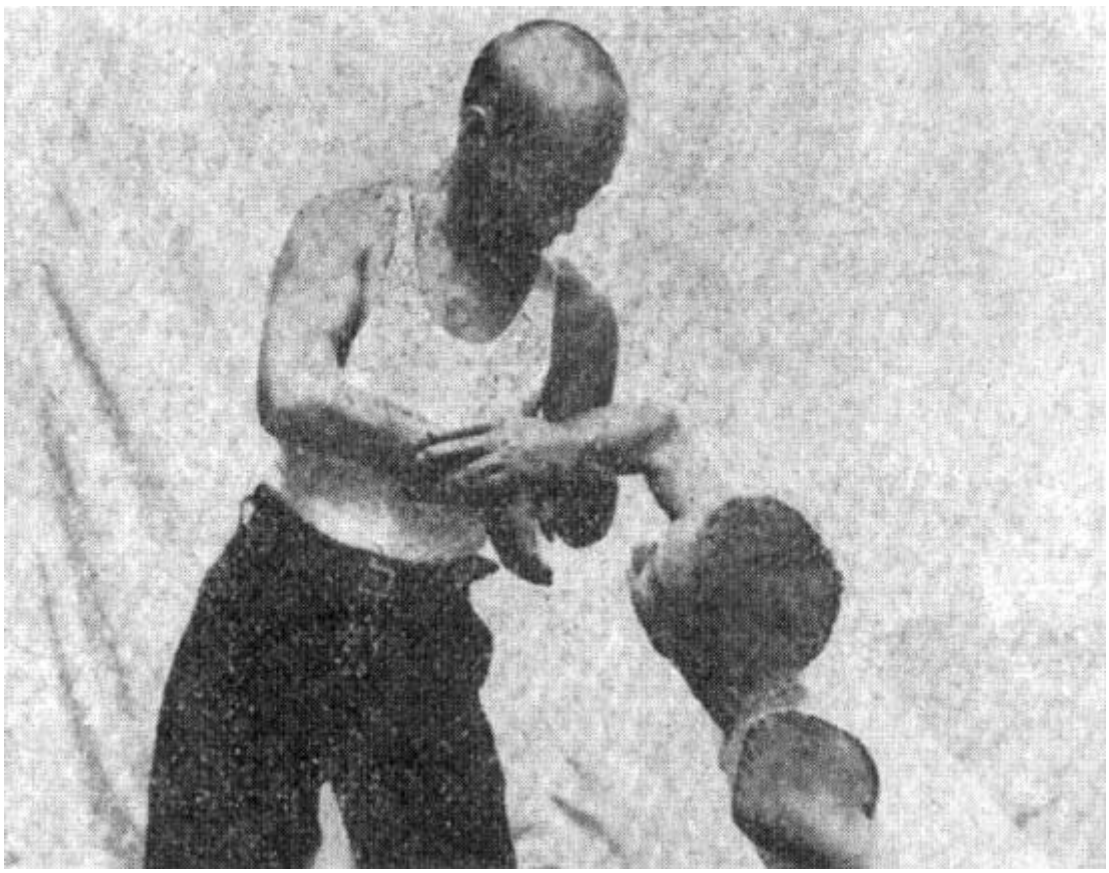


Photo 54 - "Big hank of thread", third phase.

The third phase of the method "Big hank of thread."

Continuation. The force of the right (left) arm of A(B) is directed to him and downward, concurrently he presses down with the left (right) forearm, however, the forearm must be kept horizontally. The body tilts a little forward and to the left as if you are going to turn back. As a result of those actions B(A) will certainly kneel down. If great force is applied, a fracture of the wrist may occur, the enemy has no any chance to resist. **It is the third phase of the method "Big hank of thread", photo 54**.

Paragraph 4 QU ZHOU DUAN BI – Bending an elbow and fracturing an arm.

Having mastered the method "Big hank of thread" well, it will be easier to acquire this method. Here the key to success also lies in elbow work and a lateral force.

Method is used when the enemy delivers an arm blow downward from above.

Explanations

A(B) and B(A) go in the same direction beside each other or they go toward each other – in both cases actions of A(B) will be the same. B(A) suddenly attacks, striking down from above at the head, the collar-bone or the neck of A(B). A(B) wards off the blow of the enemy with the left (right) forearm and simultaneously moves his left (right) leg forward. **It is the first phase of the method "Bending an elbow and fracturing an arm", photo 55**.

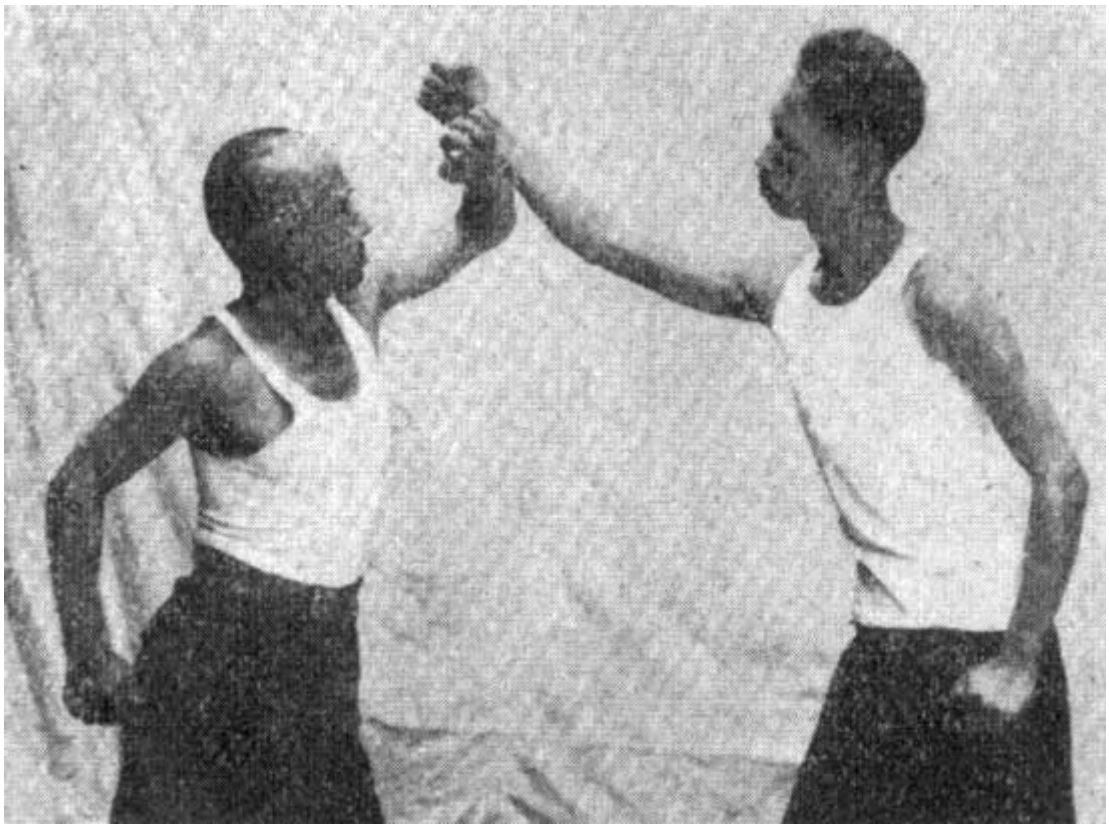


Photo 55 - "Bending an elbow and fracturing an arm", first phase.

The second phase of the method "Bending an elbow and fracturing an arm."

A(B) makes a step forward with the right (left) leg, bends the right (left) arm in elbow and raises it on the outer side of the enemy's arm, then he makes a strong jerk to the right (left) and toward himself. Simultaneously A(B) pushes away with the forearm of the left (right) arm, his left (right) fist opens into the palm which seizes the wrist of the right (left) arm of the enemy. As a result the right (left) arm of the enemy becomes bent in elbow and can not slip off the grip. **It is the second phase of the method "Bending an elbow and fracturing an arm", photo 56**.

Photo 56 - "Bending an elbow and fracturing an arm", second phase.

The third phase of the method "Bending an elbow and fracturing an arm."

Finding himself in such a position, B(A) will certainly try to free himself or somehow counterattack. But whatever actions B(A) will try to carry out, A(B) must instantly lower his right (left) hand and seize the right (left) arm of the enemy three CUNs (about 10 cm) up the wrist with three fingers – the middle finger, the fourth finger and the little finger. It is necessary to press down with hands with force, concurrently raising up the right (left) elbow, due to it the enemy will feel violent pain in the elbow joint and lose his ability to resist. If the pressure is increased, a dislocation of the elbow joint will occur. **It is the third phase of the method "Bending an elbow and fracturing an arm", photo 57**.

Photo 57 - "Bending an elbow and fracturing an arm", third phase.

Paragraph 5 KUA LAN – Carrying a basket by grappling it with an arm.

To use successfully this method, the key point is proper location of the point QU CHI on the elbow bend of the enemy, only then his elbow will be bent.

This method is used if the enemy tries to seize you by your clothes in the region of the breast or for locking the arm of the enemy when he is arrested.

Explanations

B(A) tries to seize A(B) for the clothes with his right (left) hand. At the very last moment when B(A) has already stretched out his arm and is at the point of seizing, left (right) hand of A(B) with the palm up must seize B(A) by the hand with a quick movement. Concurrently A(B) seizes the right (left) arm of

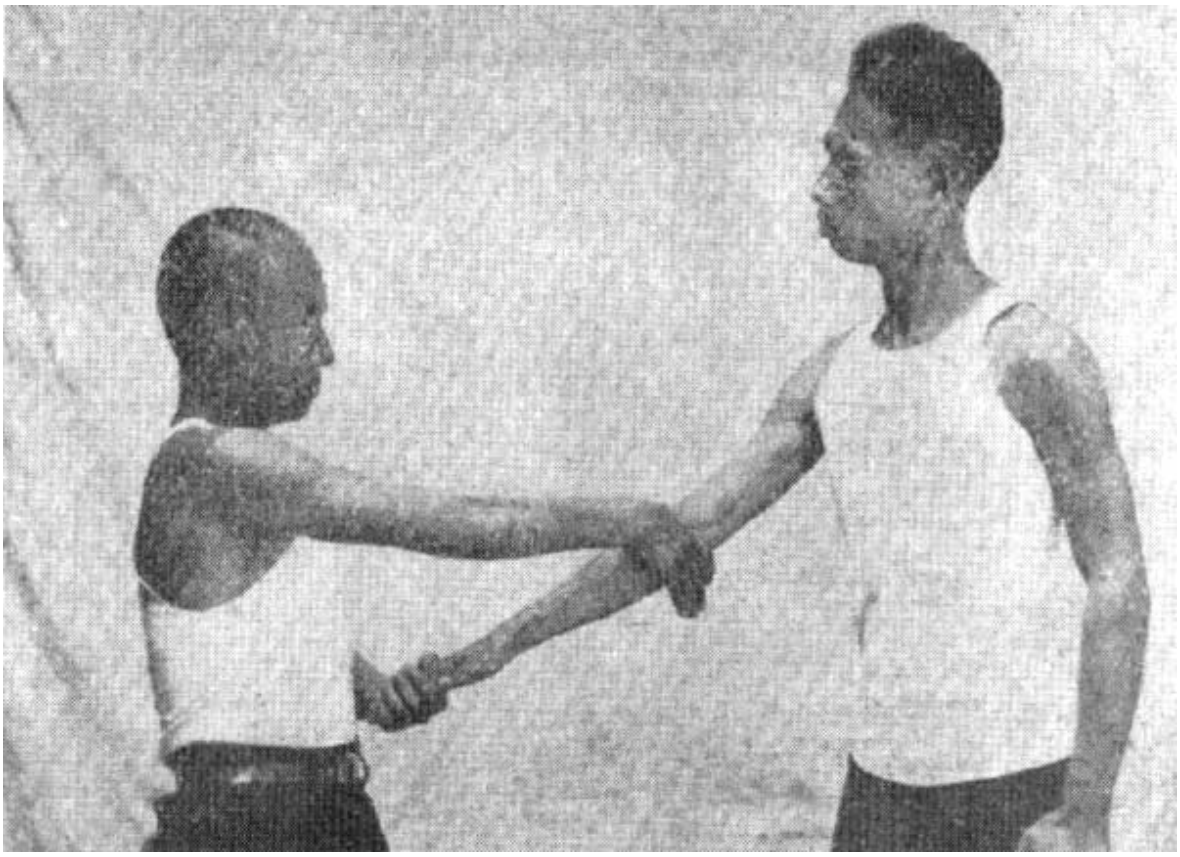


Photo 58 - "Carrying a basket by grappling it with an arm", first phase.

the enemy in the region of the elbow bend with his right (left) hand, the thumb grapples from above and four other fingers from below. At that it is necessary to press on the point QU CHI with the "Tiger's jaws" (HU KOU)[24] and vigorously push to the left (right) with the whole of the arm. **It is the first phase of the method "Carrying a basket by grappling it with an arm", photo 58.**

The second phase

When A(B) using force presses the arm of the enemy in the region of the point QU CHI with the right (left) hand, the elbow of the enemy will certainly bend. At that moment A(B) bends his left (right) arm and presses with the right (left) arm to the left (right) and downward as for the right (left) arm of the enemy to be under the left (right) armpit of A(B). At that moment A(B) puts his left (right) arm round the arm of the enemy and strongly presses it toward his side, the wrist of the enemy being bent and

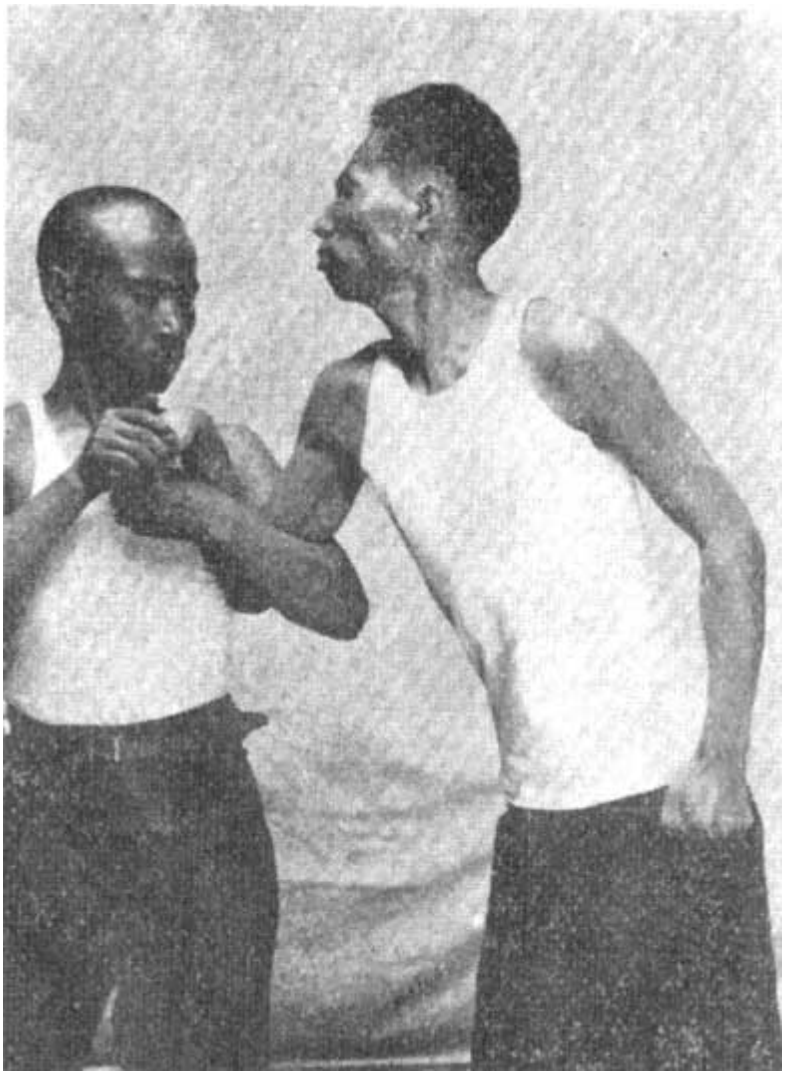


Photo 59 - "Carrying a basket by grappling it with an arm", second phase.

Editor's notes:

[24] HU KOU: lit. "tiger's jaws", space between the thumb and the forefinger.

fixed. In that position the more A(B) bends his arm the more the wrist of the enemy bends. If both opponents are of approximately equal strength, in such a position B(A) completely loses his ability to resist. But if the enemy is very strong or his wrist is very supple, it is necessary, while pressing strongly with the left (right) arm as before, to thrust the thumb of the right (left) hand under the right (left) palm of the enemy and place four other fingers on the back of the palm. You must turn with the right (left) hand outward (from yourself) and inward (toward yourself) with the left (right) hand. In that case the enemy will not be able to resist and be forced to obey your orders. If the enemy should be escorted, it will be easy to do: small effort will be enough to inflict violent pain in his wrist, that will make him obey. However, if strong force is applied, a fracture of the wrist will occur. **It is the second phase of the method "Carrying a basket by grappling it with an arm", photo 59**.

Paragraph 6 FU HU – Binding a tiger.

This method is used when a criminal is arrested. To execute it, a hand of the enemy must be caught.

Explanations.

A(B) and B(A) go toward each other. If B(A) has to be arrested, A(B) must move a little to the left (right) and suddenly seize the right (left) hand of B(A) with the right (left) hand, the palm turned backward. At that the thumb of A(B) is placed on the back of the hand of the enemy and four other fingers press themselves to the inner side of the hand right under the wrist. At the same moment you must strongly squeeze the hand of the enemy and pull toward yourself, the whole of the body shifting a little back. **It is the first phase of the method "Binding a tiger", photo 60**.

Photo 60 - "Binding a tiger", first phase.

The second phase

To continue the previous action, A(B) raises his right (left) arm up and to the right (left) as for the caught arm of the enemy to be turned with the palm up. Then A(B) sets against the back of the enemy's hand with his thumbs and squeezes the enemy's palm with the other fingers near the wrist. With eight fingers A(B) presses on the enemy's wrist toward himself and down, with thumbs presses from himself, shifts the whole of his body a little back. Then A(B) immediately presses with the arms down to force the enemy to tilt forward and lean the left (right) hand against the ground, his right (left) knee is about to touch the ground. All movements must be done fast and smoothly. **It is the second phase of the method "Binding a tiger", photo 61**.

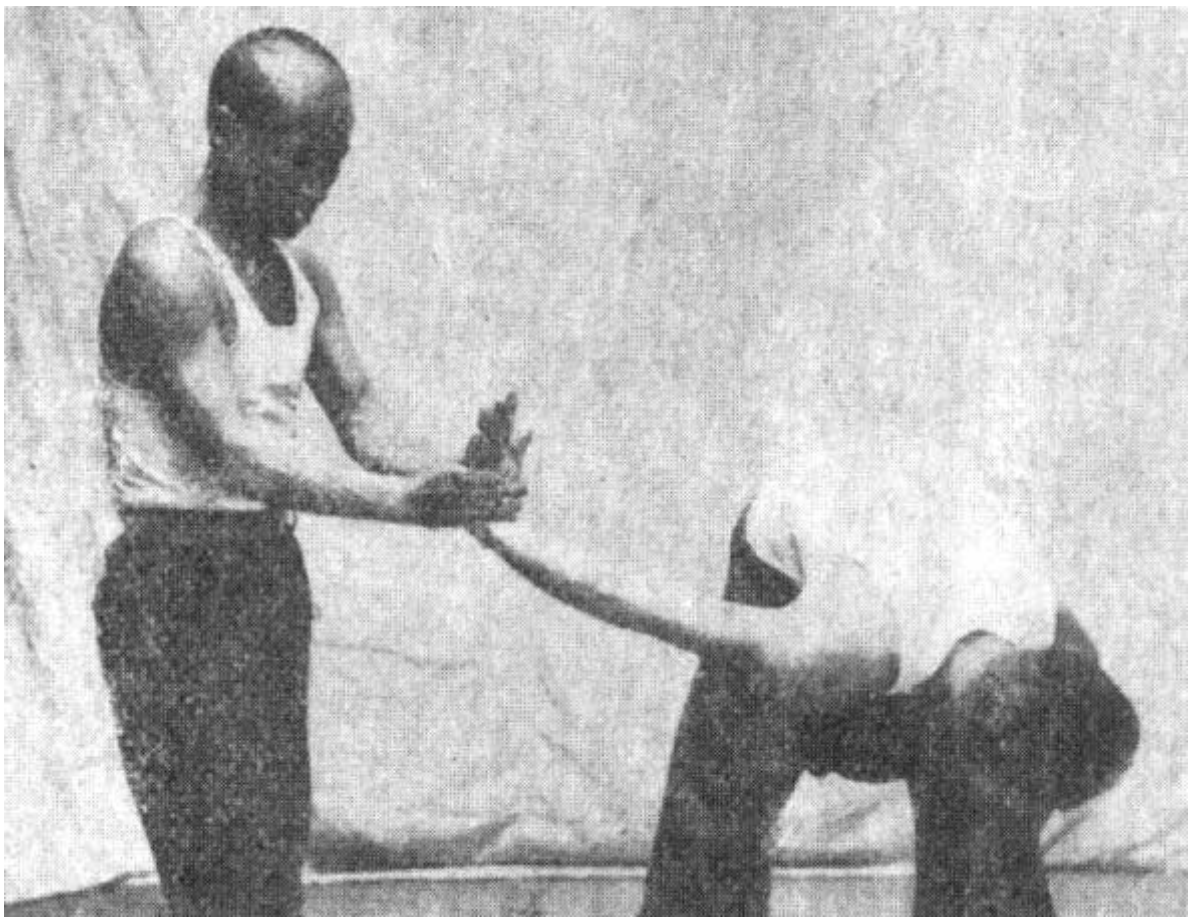


Photo 61 - “Binding a tiger”, second phase.

The third phase

A(B) makes a strong and abrupt push forward and down to the ground, at the same time he takes a big step forward with the left (right) leg and lowers his foot close to the right (left) knee of B(A). In this position the upper part of the right (left) arm of B(A), his shoulder and cheek cling close to the ground, his right (left) leg is on the knee, the left leg as if is slightly raised, the left (right) arm sets against the ground. The right (left) arm of B(A) is bent up, his forearm is vertical, the palm faces the ground. A(B) must stand, greatly tilting forward, at that he must set his left (right) knee against a buttock of the enemy to prevent his somersault. **It is the third phase of the method “Binding a tiger”, photo 62**.

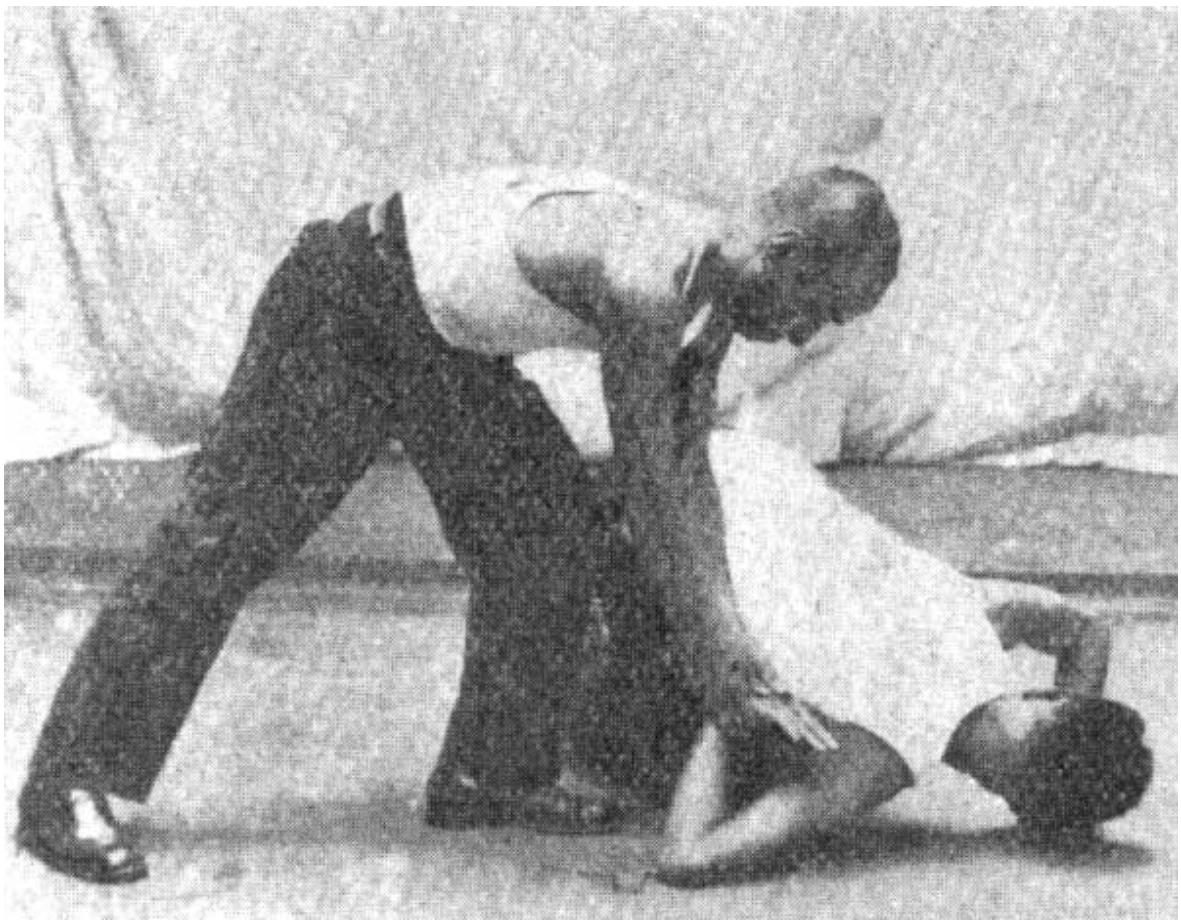


Photo 62 - “Binding a tiger”, third phase.

The fourth phase

A(B) slightly turns to the left (right), his left (right) knee sets against the right (left) buttock of the enemy with force as before, his right leg steps forward and treads on the upper part of the right (left) arm of the enemy near the shoulder. The left (right) knee of A(B) continues to press on the waist of B(A) from the side of the back and his right (left) shin pushes the right (left) forearm of the enemy forward. In this position A(B) can free his arms. It is necessary to press strongly with both legs so that the enemy will not be able to move both arms and legs. In this position the arms of A(B) are absolutely free. If he has no cord with him, he can pull of the belt of B(A) and bind him. If necessary A(B) can make a strong push with the right (left) leg forward, which will lead to dislocation of shoulder and elbow joints of the enemy. **It is the fourth phase of the method “Binding a tiger”, photo 63**.

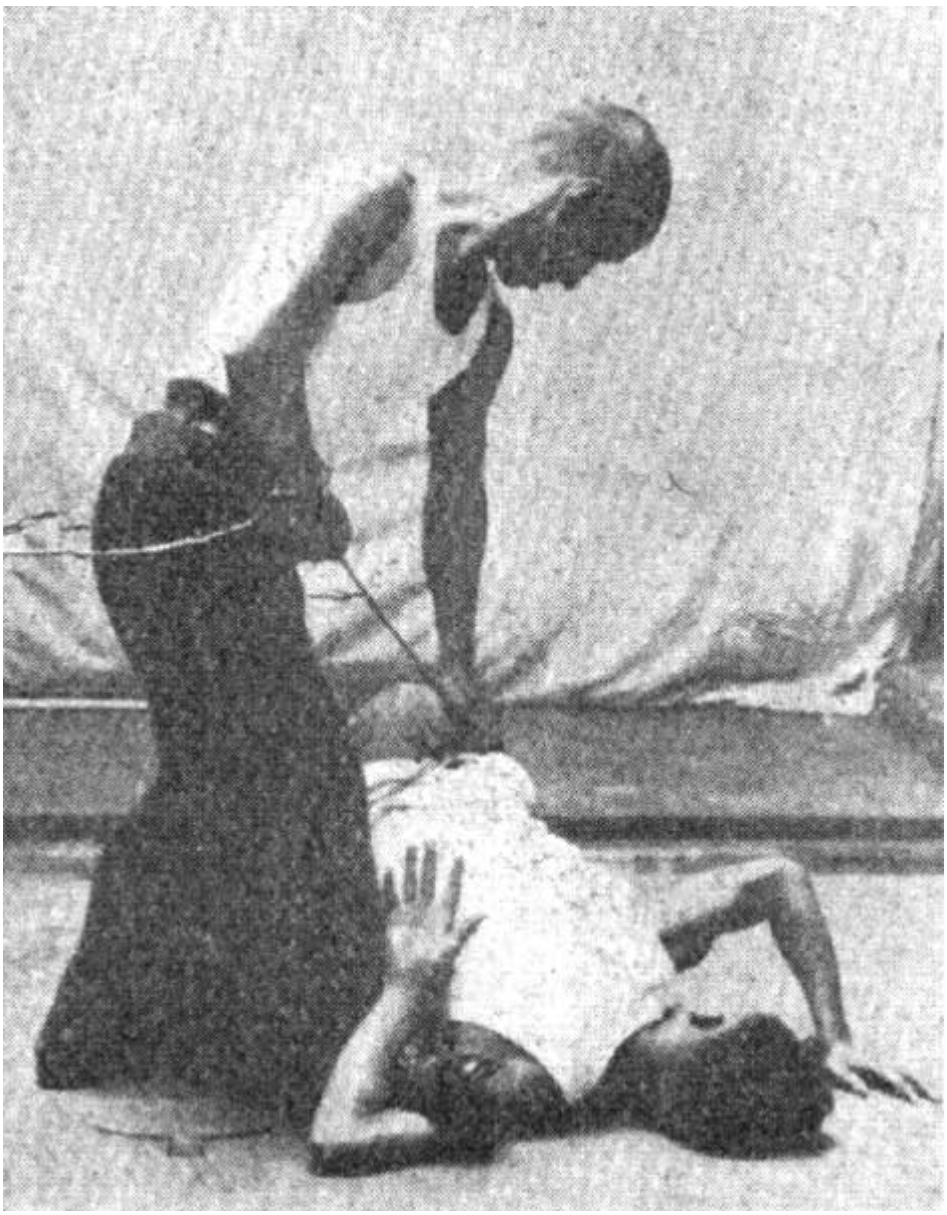


Photo 63 - "Binding a tiger", fourth phase.

Paragraph 7 GUN ZHOU – Somersault over the elbow.

This method is quite tough, but its efficiency is significantly lower without somersault, additionally there is a risk that the enemy will manage to free himself.

This method is used when the enemy delivers a straight punch.

Explanations

B(A) attacks A(B) with a straight right (left) punch. A(B) moves a little bit back and slightly turns the upper part of the torso to the right (left) for the punch to hit "void". At the same moment A(B) strongly clasps the fist of the enemy with his left (right) hand from above and with his right (left) hand from below and pulls the fist toward him and to the right. B(A) tries to jerk his arm back and pulls it back to him. **It is the first phase of the method "Somersault over the elbow", photo 64.**

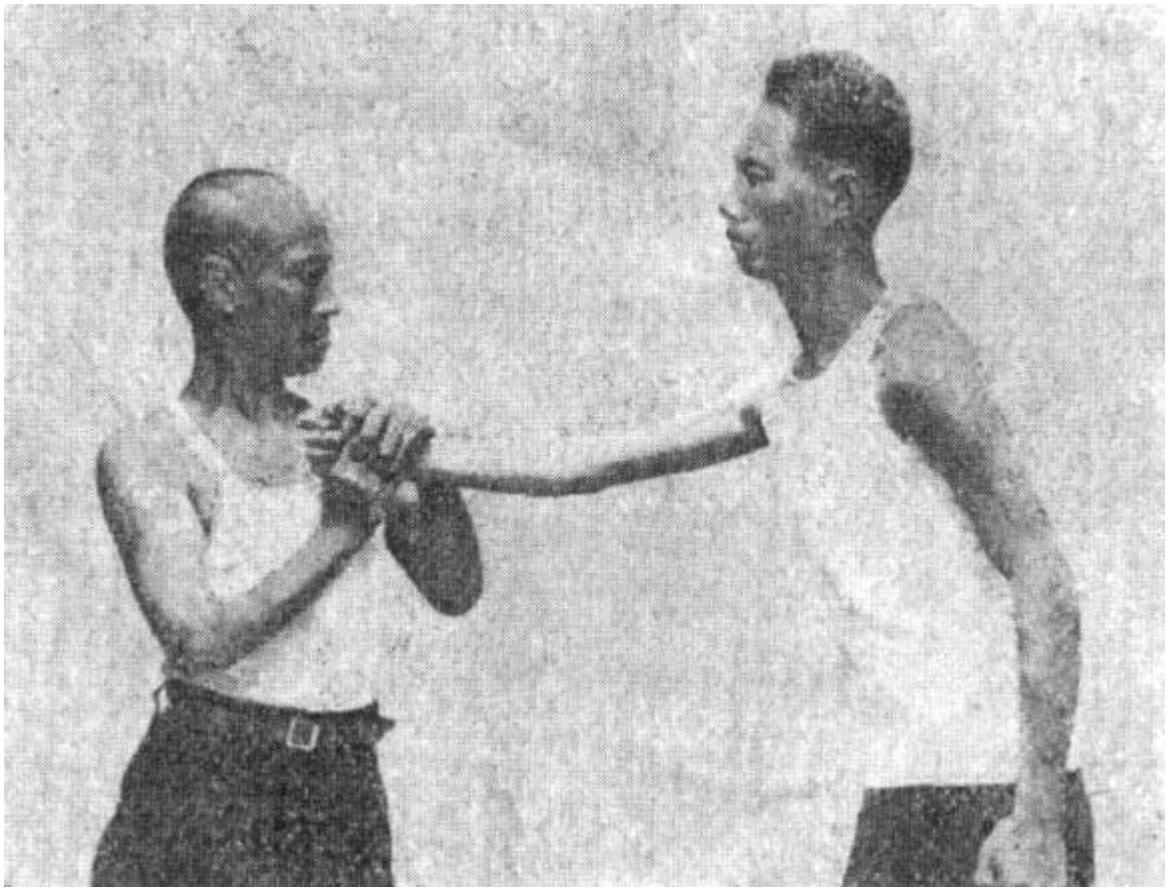


Photo 64 - "Somersault over the elbow", first phase.

The second phase

At the instant when B(A) starts pulling his caught arm to him A(B) follows him and makes a push forward with both arms, his right (left) leg takes a big step forward and to the left (right) in the transverse direction and turns out on the right (left) of the enemy's right (left) leg, as a consequence A(B) turns with his back to the enemy. In the coarse of those actions A(B) brings his

right (left) elbow over the right (left) arm of the enemy and presses the arm of the enemy to his side under the armpit with it. A(B) twists the wrist of the enemy anti-clockwise with both hands and presses forward and down with the arms. As a consequence of it the right (left) of B(A) is in a unnaturally bent position, which makes him stoop the upper part of the torso forward and to the right. In that position B(A) is deprived of the possibility to resist. **It is the second phase of the method "Somersault over the elbow", photo 65**.

Photo 65 - "Somersault over the elbow", second phase.

The third phase

Continuing the previous actions, A(B) bends down his head, presses his chin to the breast, stoops forward and down and makes a somersault over the right (left) shoulder, bringing his whole weight on the elbow joint of the enemy. If the method was executed properly, a fracture of the enemy's elbow joint will occur. It is possible to exercise only the first and the second phases of the method during training sessions without proceeding to the third one, otherwise serious body damages can occur. **It is the third phase of the method "Somersault over the elbow", photo 66**.

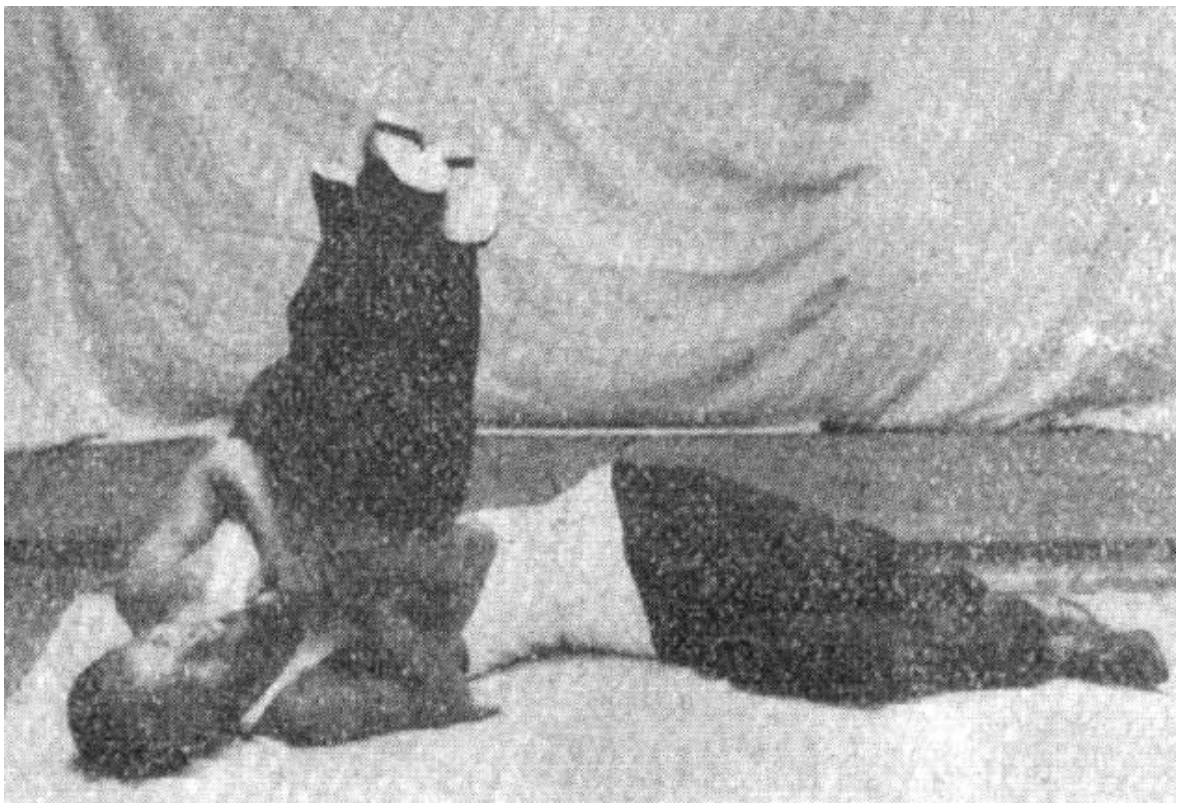


Photo 66 - "Somersault over the elbow", third phase.

Paragraph 8 CHE CHI – Pulling by the wing.

The key point here is an impact on the wrist of the enemy and a correct grip of his palm.

This method is used if the enemy tries to seize you by your clothes in the region of the breast.

Explanations

B(A) approaching from the front or a side intends to seize A(B) by the clothes in the region of the breast with his right (left) hand. At the last moment when B(A) has already stretched his arm and is about to seize, A(B) must quickly catch the stretched palm of the enemy with his left (right) hand with the palm

turned outside. Simultaneously A(B) hooks the wrist of the caught arm of the enemy with the right (left) hooked wrist and makes a vigorous jerk back (toward himself) so that the wrist of the enemy will be bent and raised a little. After that it is necessary to proceed to the below-described actions at once, otherwise you yourself will be seized by the enemy. **It is the first phase of the method "Pulling by the wing", photo 67**.

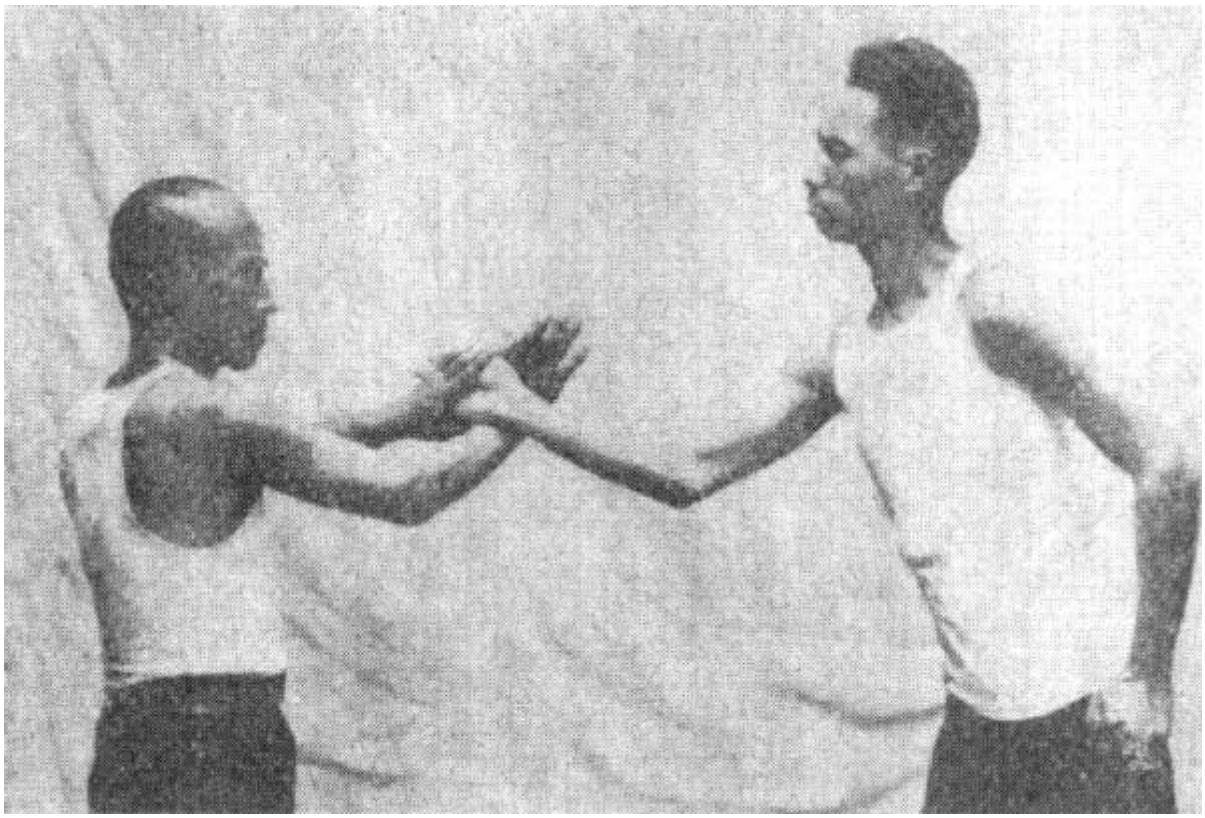


Photo 67 - "Pulling by the wing", first phase.

The second phase

Continuing the above-described actions, A(B) rotates the caught palm of the enemy to the left (right) with the left (right) hand and presses down. Simultaneously with the right (left) hand A(B) seizes the palm of the enemy from the side of its thumb, sets his thumb against the back of the enemy's palm and clasps with the other four fingers from the side of the palm. Then A(B) pulls toward him with both arms and presses down, shifting his whole body a little back. As a consequence B(A) is forced to stoop forward with his right (left) side, his right (left) arm being bent in elbow and wrist. If A(B)

applies a vigorous effort, a fracture of the enemy's arm will occur. **It is the second phase of the method "Pulling by the wing", photo 68**.

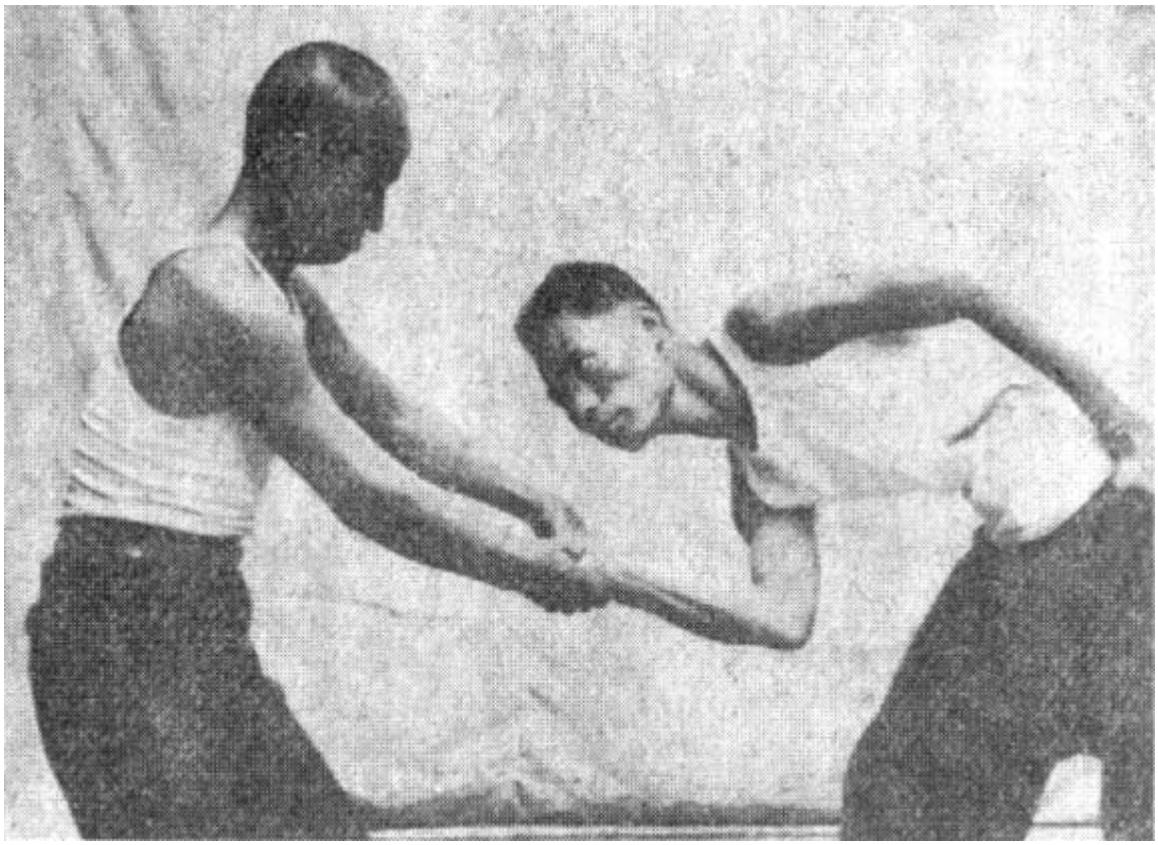


Photo 68 - "Pulling by the wing", second phase.

Paragraph 9 SI CHI – Tearing the wing.

This method is used for a sudden arrest of the enemy who is going toward you.

Explanations

A(B) sees B(A) whom he must arrest go toward him. After coming up to B(A) A(B) takes a step to the left (right) to be near the right (left) side of the enemy. At that moment A(B) turns his right (left) hand with the palm outside and seizes the right (left) hand of the enemy so that his thumb sets against the back of the enemy's hand and four other fingers clasp the hand from the inner side near the wrist. The grip must be strong. **It is the first phase of the method "Tearing the wing", photo 69**.

Photo 69 - "Tearing the wing", first phase.

The second phase

Continuing the previous actions, A(B) raises the caught arm of the enemy to the right (left) and upward with the right (left) arm. At that A(B) presses on the back of the hand of the enemy outward (from himself) with the thumb of the right hand and inward (to himself) with the other four fingers so that the wrist will be bent up. Immediately the left (right) hand of A(B) comes to help the right (left) hand and seizes the hand of the enemy in a similar way: the thumb outside and the other fingers inside. A(B) with his whole body moves back, twists with both hands to the right (clockwise) with force and pulls back. Due to it B(A) is forced to stoop forward, he feels pain in the wrist and loses his ability to resist. If A(B) makes a strong jerk, a fracture of the wrist will occur. **It is the second phase of the method "Tearing the wing", photo 70**.

Photo 70 - "Tearing the wing", second phase.

The third phase

If B(A) is an experienced opponent and he is supple enough, he will try to slip out from the grip. For that B(A) has to approach A(B), bend the elbow of his right (left) arm and turn with the upper torso to the left and backward to try to catch A(B) with his left (right) hand and squeeze his throat. Having a certain skill, B(A) can succeed, therefore A(B) must not be slow in that situation. As soon as B(A) starts turning, A(B) with the right (left) arm must make a strong pull of the held arm of the enemy up along the enemy's back, seize the right or left shoulder of the enemy with the left (right) hand and press down with force. Those actions will force the enemy to stop his maneuver and deprive him of the ability to resist. If A(B) energetically applies force, a dislocation of the shoulder joint of B(A) will occur. **It is the third phase of the method "Tearing the wing", photo 71**.

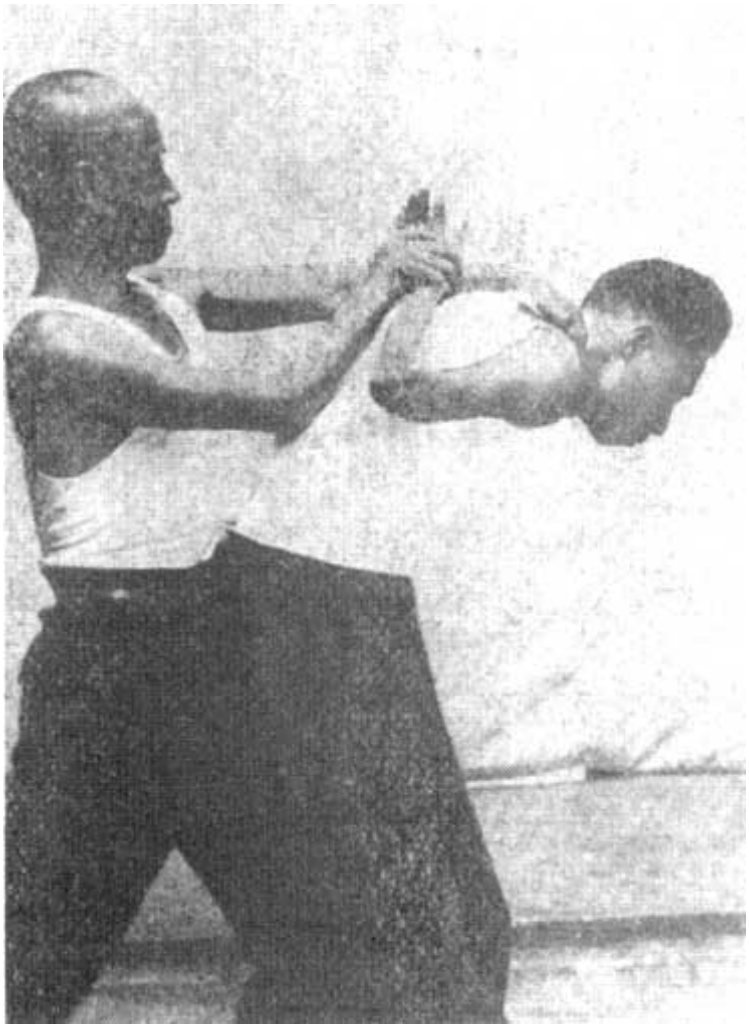


Photo 71 - "Tearing the wing", third phase.

Paragraph 10 KANG ZHOU– Carrying an elbow on the shoulder.

When you use this method, you should take into account the difference in stature.

This method is used when the enemy approaches from the front and delivers a straight blow at your head.

Photo 72 - "Carrying an elbow on the shoulder."

Explanations

B(A) approaches A(B) from the front and delivers a straight punch with the right (left) fist. A(B) slightly moves his head to the left (right) and concurrently clasps the enemy's fist with the right (left) hand from above and the left (right) hand from below, fingers of both hands of A(B) being turned to the right (left). At the same moment A(B) pulls the caught arm of the enemy toward himself, simultaneously turns back over the right (left) shoulder to 180 degrees so that the right (left) arm of the enemy turns out lying on the left (right) shoulder of A

(B). A(B) pulls the held arm of B(A) down with both arms and pushes up with the shoulder, at that the body of A(B) moves a little bit forward. As a consequence B(A) has to straighten his back and tiptoe, at that he completely loses his ability to resist. If A(B) applies an energetic effort, a fracture of the elbow joint of the enemy will occur. **Photo 72 – "Carrying an elbow on the shoulder."**

Paragraph 11 JUAN QUAN – Wringing a fist.

The gist of this method lies in quickness of response and coordination of actions.

This method is used when the enemy approaches you from the front and punches from below upward.

Explanations

B(A) approaches A(B) from the front and punches at the enemy's stomach from below upward with his right (left) fist[25]. A(B) must instantly move the torso to the left (right) and squeeze the fist of the enemy with both hands, the thumbs of A(B) must be on the back side of the fist and eight other fingers squeeze the inner side of the enemy's wrist. A(B) rotates the fist of the enemy to the left (right) side, trying to turn it to 180 degrees. Simultaneously A(B) presses down with the hands and moves back with the whole body, all the actions must be done fast and with force. As a consequence B(A) will fall on his knees and the wrist of his right (left) arm will be broken. **Photo 73 – "Wringing a fist."**

Editor's notes:

[25] This blow corresponds to the uppercut in the British boxing.

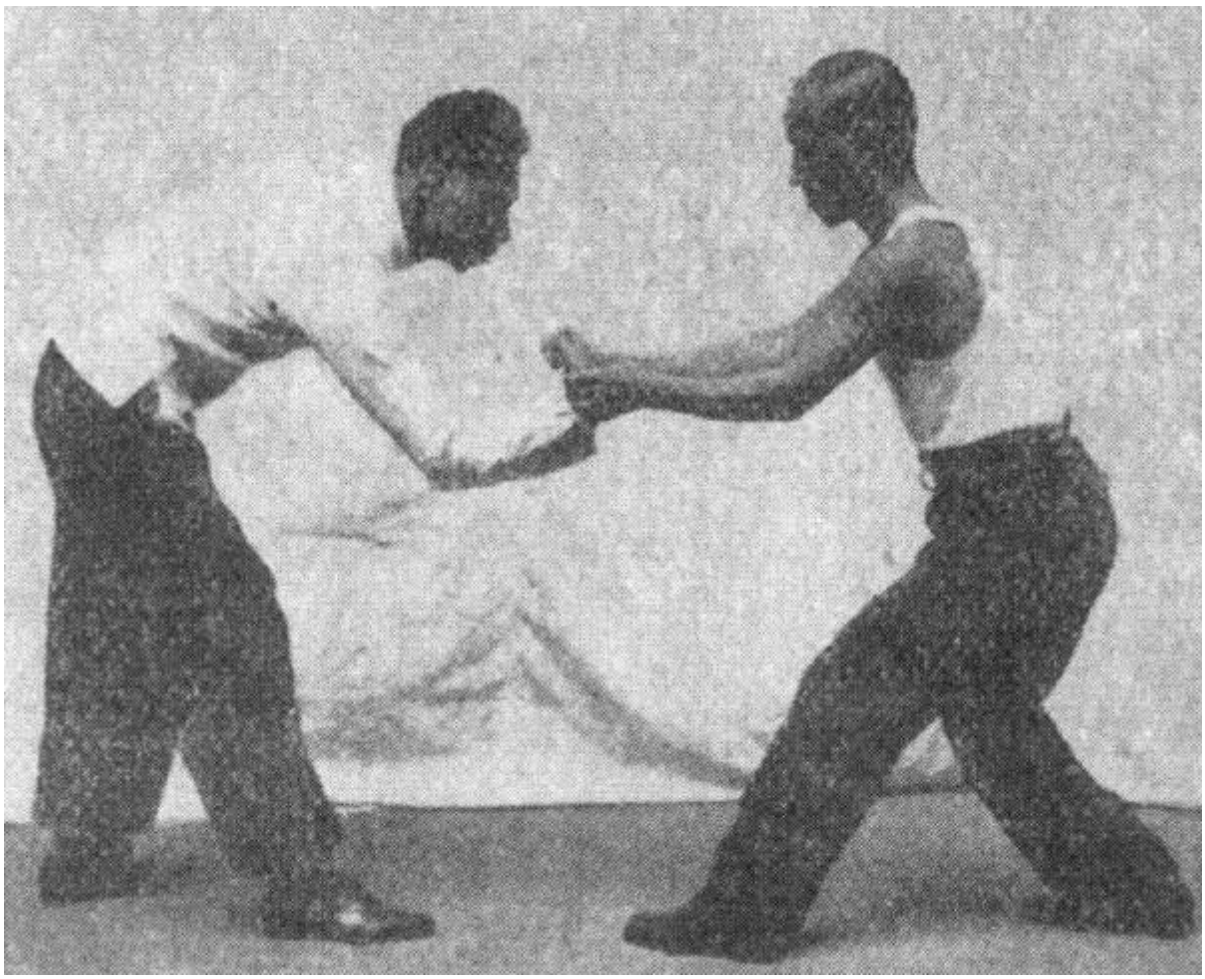


Photo 73 - "Wringing a fist."

Paragraph 12 LUO WAN – Clutching a wrist.

Here is the matter not only in skill and force: it is necessary to know exactly the location of acupuncture points.

The gist of this method is an impact on acupuncture points which cause numbing. They are twin points located a little up the elbow, on the lateral surfaces of the arm, one CUN (3.33 cm) from the point QU CHI. The method is used if a criminal must be detained.

Explanations

A(B) seizes the left hand of B(A) with the left (right) hand. You must seize firmly, at that your thumb must be on the side of enemy's palm, the other fingers must clasp the back side of the enemy's hand. A(B) presses concurrently with the thumb and the middle finger of the right (left) hand on the upper and lower "points of numbing" on the left (right) arm of the enemy respectively. It is necessary to press as strong as possible and pull toward yourself so that the enemy will feel numbing and weakness in the whole body. **It is the first phase of the method "Clutching a wrist", photo 74**.

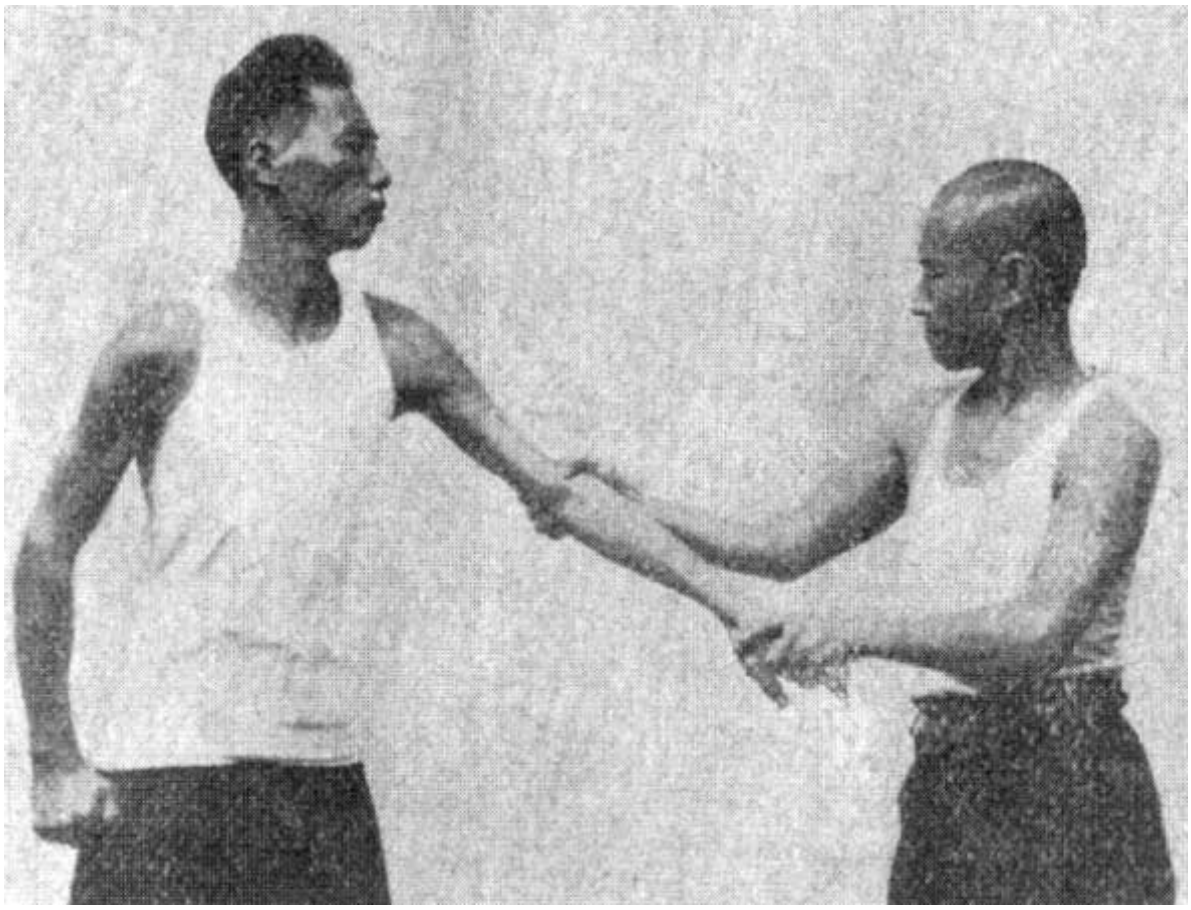


Photo 74 - "Clutching a wrist", first phase.

The second phase

B(A) will certainly try to jerk back the arm, he will try to raise the elbow up and free himself. A(B) immediately uses it for his purposes: he makes a strong push forward and up with his left (right) arm to bend the enemy's arm in elbow and then pulls toward himself to bend down the wrist of the enemy.

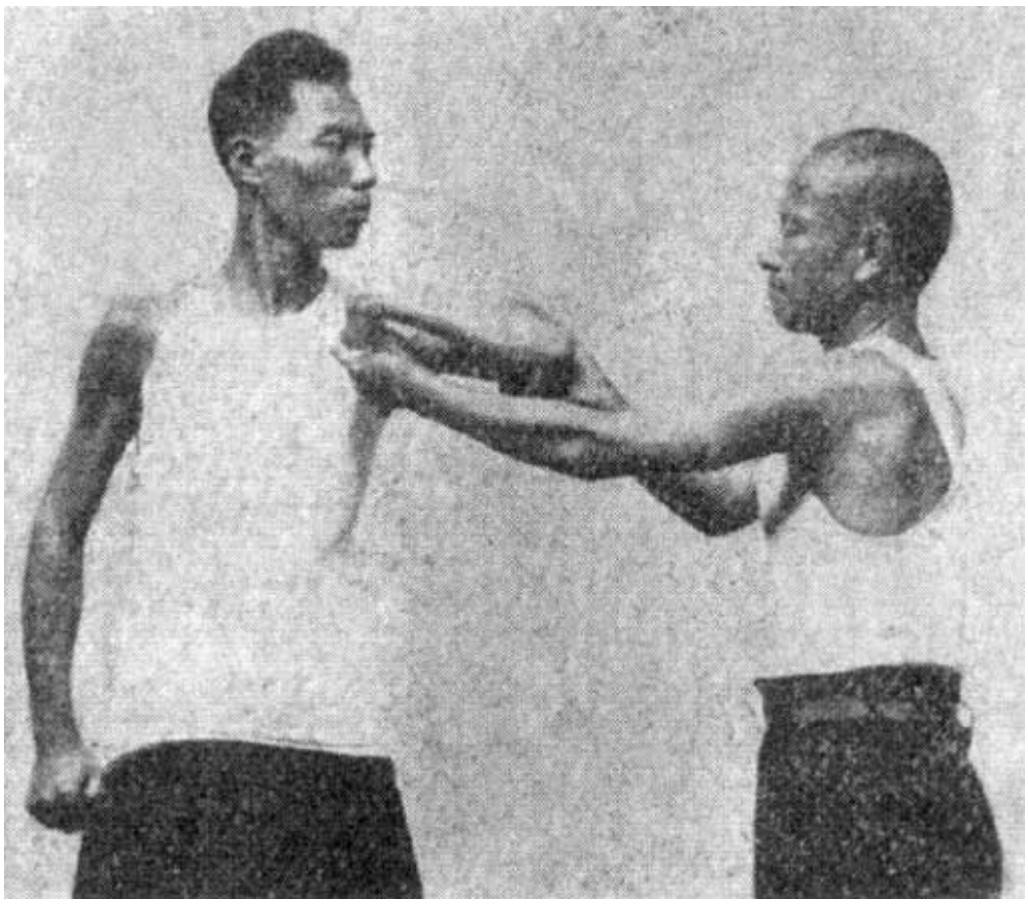


Photo 75 - “Clutching a wrist”, second phase.

At the same time A(B) pushes the enemy’s elbow from himself with the right (left) arm. It is necessary to act fast and with force, in that case a fracture of the enemy’s wrist will occur. **It is the second phase of the method “Clutching a wrist”, photo 75**.

Paragraph 13 JIA SHAN – Squeezing with the armpit.

Here the most important thing is quickness of response and skilful movements, the stature and strength of the enemy are of no great significance at that.

This method is used when the enemy attacks you with a straight punch from the front in the region of the breast.

Explanations

B(A) resolutely attacks and punches with the left (right) fist in the region of the breast of A(B). A(B) revolves the upper torso a little to the left, at that he seizes the fist of the enemy near the wrist with left (right) hand from below (with the palm up and the thumb outward). While continuing to turn to the left, A(B) turns the caught arm of the enemy with the palm upward, brings right (left) arm over the left (right) arm of the enemy and squeezes

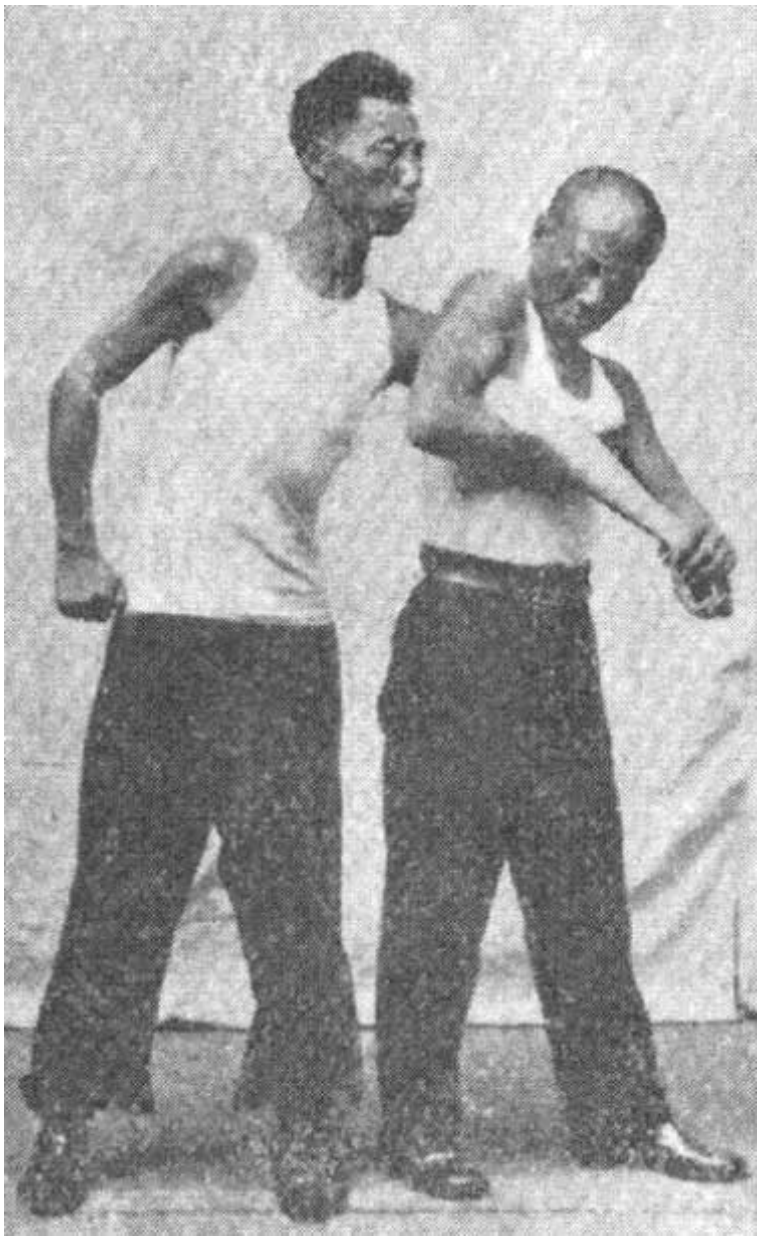


Photo 76 - "Squeezing with the armpit."

the upper part of the enemy's arm under his armpit. Then A(B) presses with his right (left) forearm on the enemy's arm at the place of about two CUNs (6.66 cm) up the elbow upward from below and presses down with left (right) arm. As a result a fracture of the elbow occurs. **Photo 76 – "Squeezing with the armpit**."

Paragraph 14 KOU QUAN – Covering a fist.

This method is used when the enemy has seized you by your sleeve.

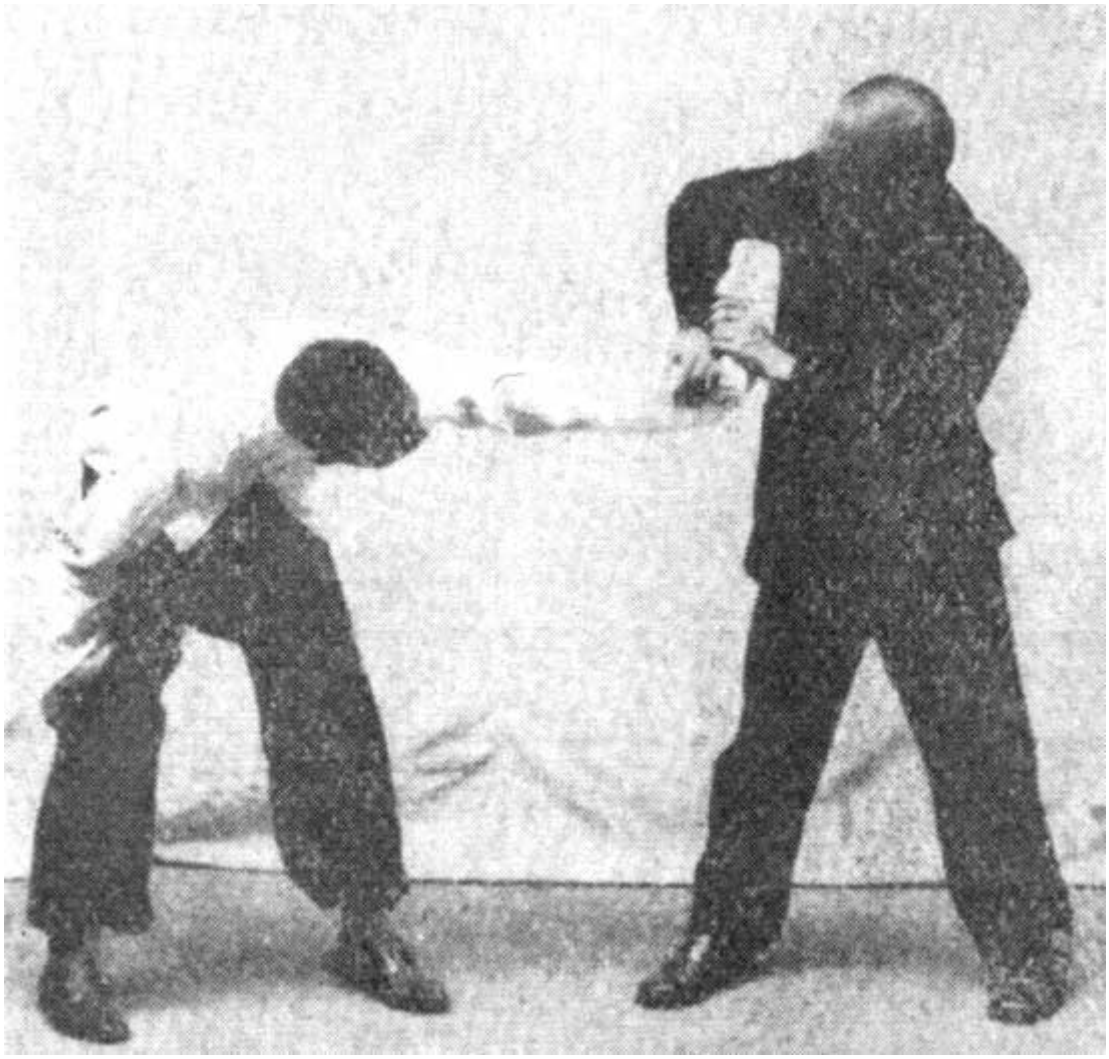


Photo 77 - "Covering a fist."

Explanations

B(A) seized A(B) by the right (left) sleeve with the left (right) hand. A(B) immediately raises his right (left) hand up and clasps the enemy's arm 1 CUN (3.33 cm) up the wrist from above, at that the thumb clasps from the left (right), four other fingers from the right (left). After squeezing the arm of the enemy A(B) immediately pulls back and at the same time seizes the left (right) hand of the enemy on its back with the left (right) hand from below, pushes forward and up, he himself turns a little to the left (right) at that. With a strong jerk of both arms the wrist of the enemy will be fractured. **Photo 77 – "Covering a fist."**

Paragraph 15 CHENG ZHOU DUAN WAN – Propping up an elbow and fracture a wrist.

The methods mentioned in paragraphs 15 and 16 can be successfully used only by a well-trained combatant as one should be able to take an advantageous position to execute them but it needs some experience.

This method is used when if in the course of a fight both of combatants have fallen on the ground.

Explanations

In the course of a fight B(A) falls down on the ground, A(B) must fall together with him as to be on the left of the enemy. At the same moment A(B) squeezes, between his legs, the left (right) enemy's arm with its palm up. The left (right) leg of A(B) is moved a little forward and the right (left) leg

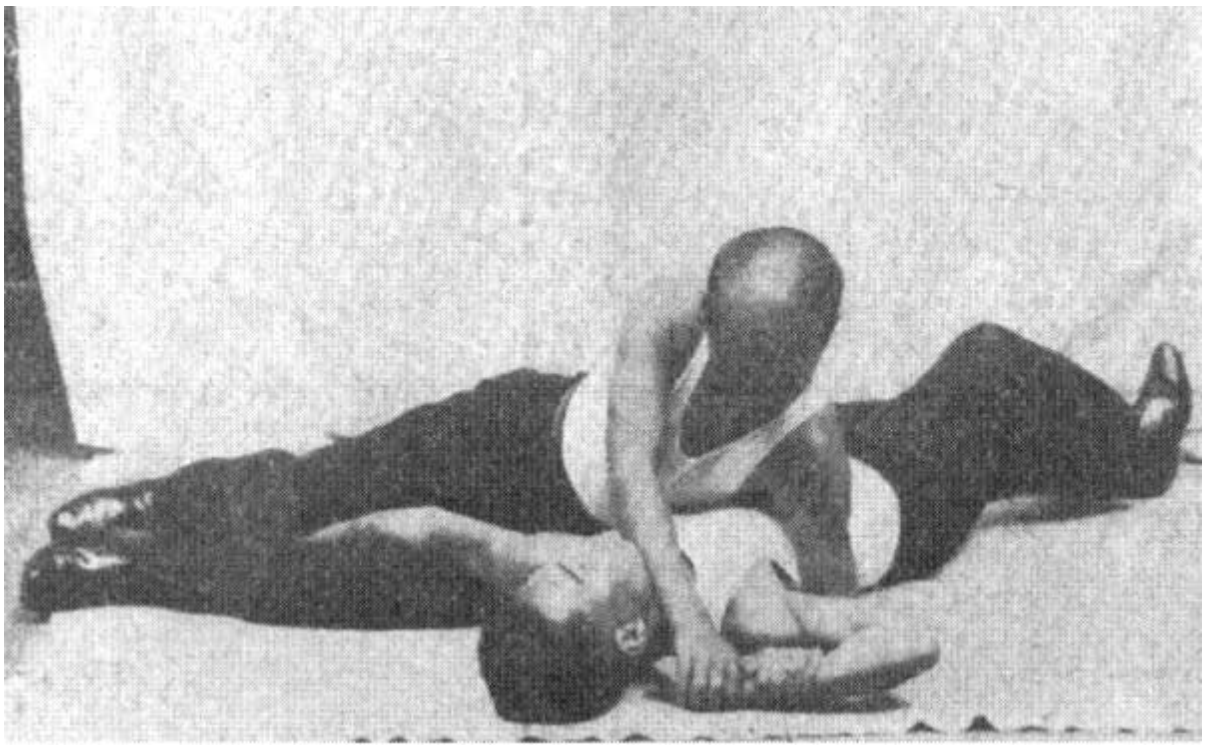


Photo 78 – "Propping up an elbow and fracturing a wrist."

backward, thus the upper part of the left (right) arm of B(A) lies on the left (right) leg of A(B) and the lower part of the left (right) arm of B(A) is pressed by the right (left) leg of A(B) from above. A(B) raises a little the left (right) leg and presses down with the right (left) leg. At the same time A(B) seizes the right (left) hand of the enemy with his right (left) hand and pulls it to the right (left) shoulder of the enemy. Simultaneously A(B) thrusts his left (right) hand under the right (left) armpit of B(A), seizes him by the forearm near the wrist and pulls back with force. As a consequence of those actions there will be a fracture of left (right) elbow and the right (left) wrist of the enemy. **Photo 78 – "Propping up an elbow and fracturing a wrist."**

Paragraph 16 BE ZHOU – Squeezing an elbow.

This method is used to fracture enemy's elbow joint when in the course of a fight he falls down or sits on the ground.

Explanations

B(A) tries to get up after falling. At that moment A(B) instantly seizes the left (right) arm of B(A) with both hands, quickly brings right (left) leg over the head of the enemy and presses back with right (left) leg. A(B) twists the left (right) arm of the enemy with both hands so that the enemy's elbow with its outer side will touch the left (right) thigh of A(B). Arms and legs of A(B) apply an effort and the elbow of the enemy will be fractured. **Photo 79 – "Squeezing an elbow."**

Photo 79 – "Squeezing an elbow."

Paragraph 17 TI ZHOU – Propping up an elbow.

It is somewhat more difficult to use this method than the method "Covering a fist" shown in photo 77.

This method is used if the enemy has seized you by the sleeve.

Photo 80 – "Propping up an elbow."

Explanations

B(A) seized A(B) by the right (left) sleeve with the right (left) hand. Instantly A(B) seizes from below the right (left) arm of the enemy by the wrist with his right (left) hand and strongly pulls it to himself and to the right (left), turning it with palm up. Simultaneously A(B) with the inner side of arm crook "props up" the held arm of the enemy at a point about two CUNs (6.6 cm) up the elbow. At that A(B) raises his left (right) leg bent in knee, sets the upper part of the

shin against the region of the thigh joint of B(A) and pushes off with force. During those actions the upper torso of A(B) turns and inclines to the right (left). In that position the left (right) arm of A(B) presses up and the right (left) arm presses down. A fracture of the elbow joint of the enemy's right (left) arm will occur. **Photo 80 – "Propping up an elbow."**

Paragraph 18 YA ZHOU – Pressing with an elbow.

If the enemy seizes your right arm with his right hand, the method XIAO CHAN SI – "Small hank of thread" (**see part 6, paragraph 1**) can be used. If the enemy seizes your right arm with his left hand, this method will do.

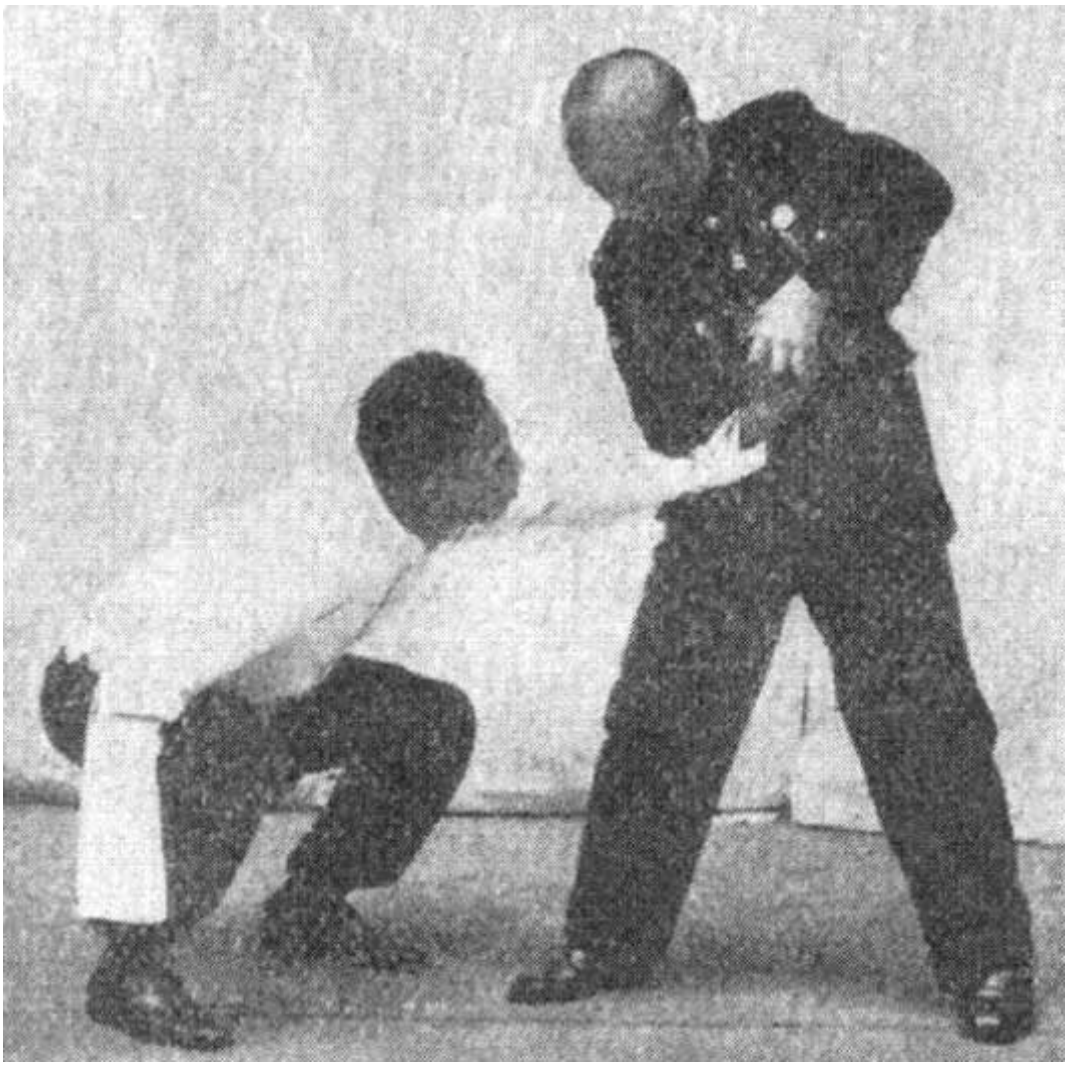


Photo 81 – "Pressing with an elbow."

Explanations

B(A) seized A(B) by the right (left) arm in the region of the wrist with his left (right) hand. A(B) instantly covers the hand of the enemy with his left (right) hand and strongly pulls with both arms toward himself, his torso turning to the left. Simultaneously A(B) presses on the caught arm of the enemy from above downward and toward himself with the right (left) elbow and inclines the upper torso forward. A fracture of the enemy's elbow will occur. **Photo 81 – "Pressing with an elbow."**

Paragraph 19 PEN AN ZHOU – Squeezing an elbow.

In this case it is necessary to take into account difference in stature.

This method is used if the enemy has seized you by your clothes in the region of the waist.

Explanations

B(A) seized A(B) by the clothes in the region of the waist on the left (right) side with his right (left) hand. Instantly A(B) quickly inclines the upper part of his torso forward, hooks the arm of the enemy a little bit up the elbow with the inner side of the left (right) arm crook and raises it up with force. Simultaneously A(B) puts his right (left) hand on the upper part of the right (left) arm of the enemy and presses down, seizes his right

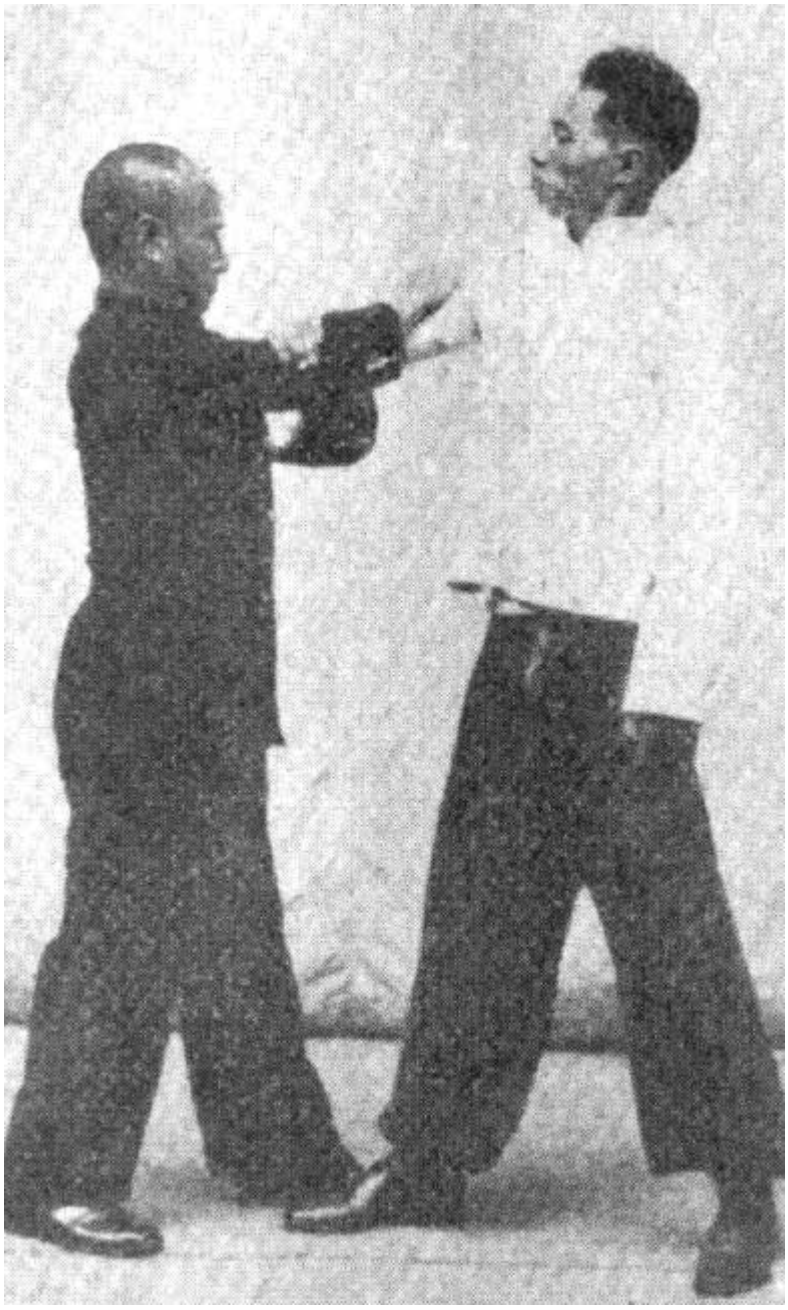


Photo 82 – "Squeezing an elbow."

(left) arm a little bit up the elbow with his left (right) hand. After having seized the arm of the enemy in such a manner, A(B) straightens up his waist, at that he props up with the left (right) arm from below and presses down with the right (left) arm. Those actions will result in a fracture of the elbow joint of the enemy. **Photo 82 – "Squeezing an elbow."**

Paragraph 20 JIA ZHOU – Clutching an elbow.

To use this method, it is necessary to snatch convenient time and act fast.

This method is used if the enemy fell down.

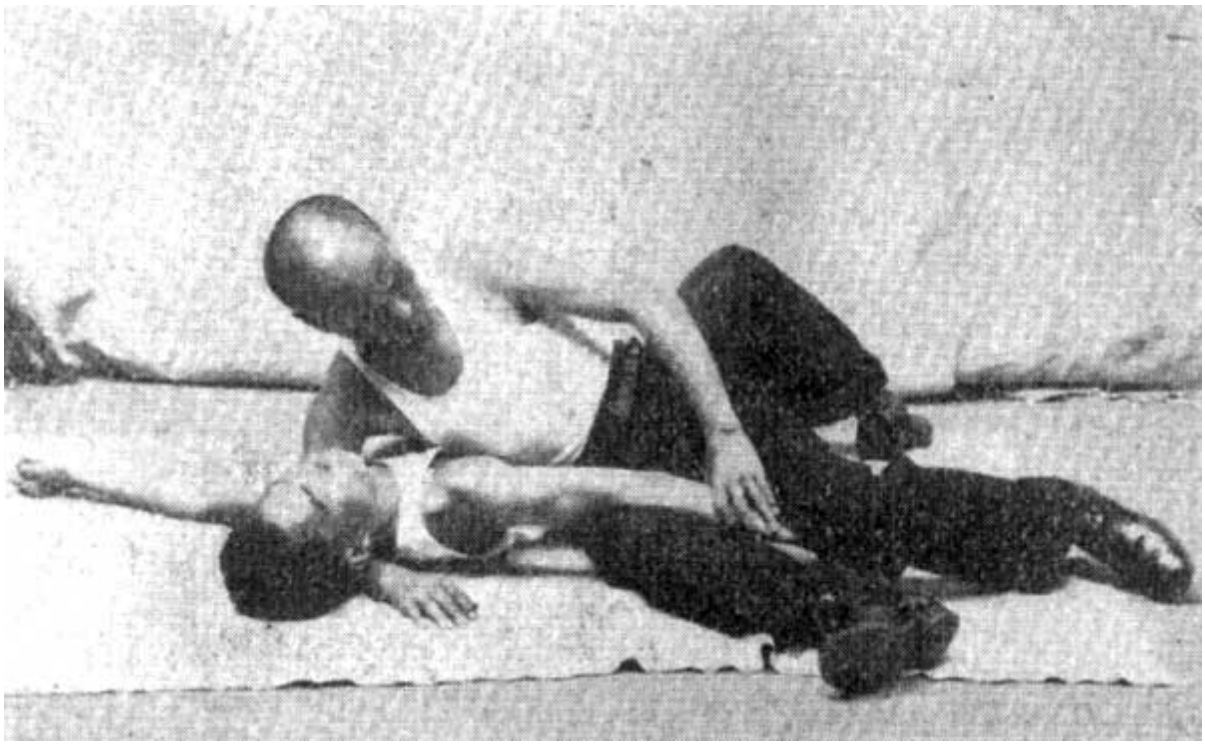


Photo 83 – "Clutching an elbow."

Explanations

In the course of a combat B(A) fell to the ground. A(B) must instantly dash to him from above and pin the enemy to the ground with the right (left) side, the right (left) leg of A(B) being in front with the knee set against the right (left) shoulder of the enemy. A(B) with his right (left)-sided chest ribs presses himself to the chest of the enemy and does not allow him to turn over. As a rule, after finding himself in such a position B(A) starts to wave his arms helter-skelter and tries to strike or seize the enemy. A(B) uses it to seize the right (left) arm of the enemy with the left (right) hand and press its upper part to the inner side of his right (left) thigh. Then A(B) with his left (right) leg from above pins the forearm of the right (left) arm of the enemy to the ground. A fracture of the elbow joint will occur. **Photo 83 – "Clutching an elbow."**

Paragraph 21 KUA MA – Straddling a horse.

It should be taken into account that this method can be successfully employed if you take advantage of enemy's confusion, otherwise it is extremely difficult to do!

This method is used when the enemy has fallen to the ground in the course of a combat.

Explanations

In the course of a combat B(A) falls down on his left (right) side. Usually, while falling down, a man loses, if only for an instant, his concentration. Taking advantage of that circumstance, A(B) immediately seizes, with both hands, the right (left) arm of the enemy, at the same time he steps over the

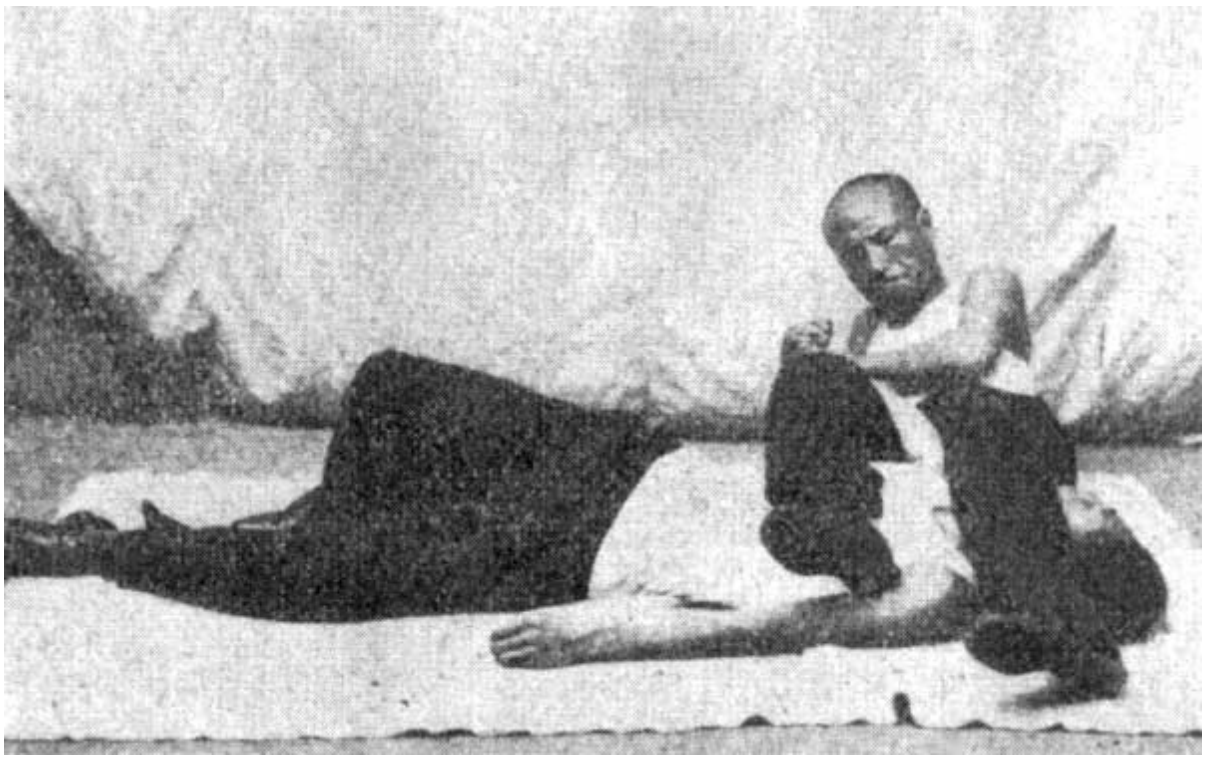


Photo 84 – "Straddling a horse."

enemy's head with left (right) leg. Then, keeping the body weight on the right (left) leg, A(B) quickly sits down on the ground near the right (left) cheek of the enemy, raises right (left) leg, puts it on the enemy's chest and presses the caught arm of the enemy with its upper part to his right (left) thigh. Arms of A(B) press down with force, his right thigh pushes up and his left leg presses the head of the enemy to the ground, at that the left (right) foot's heel sets against the ground. Due to those actions a fracture of the right (left) elbow of the enemy occurs. **Photo 84 – "Straddling a horse."**

Paragraph 22 FEN BI – Parting apart arms.

This method is used when in the course of a combat the enemy has fallen on the ground. Both arms of the enemy can be fractured by this method.

Photo 85 – " Parting apart arms."

Explanations

In the course of a combat B(A) falls down. A(B) instantly straddles the enemy, pins him to the ground with the whole of his body, presses on his stomach and the chest with the aim of hampering his breathing and not allowing him to turn over. As a rule, after finding himself in such a situation B(A) tries to seize A(B) by the throat or face and throw off the enemy. A(B) uses it to seize both arms of the enemy by the wrists and part them apart, at the same time he presses inward with both knees which set against the upper part of enemy's arms on sides. A fracture of both elbow joints of the enemy will occur. **Photo 85 – " Parting apart arms."**

Paragraph 23 LE ZHOU – Unbending an elbow.

Here is considered a case when the enemy is lying on his side, which happens quite seldom. More often the enemy lies on his back and in that case it is better to kneel.

This method is used if in the course of a combat the enemy has fallen to the ground.

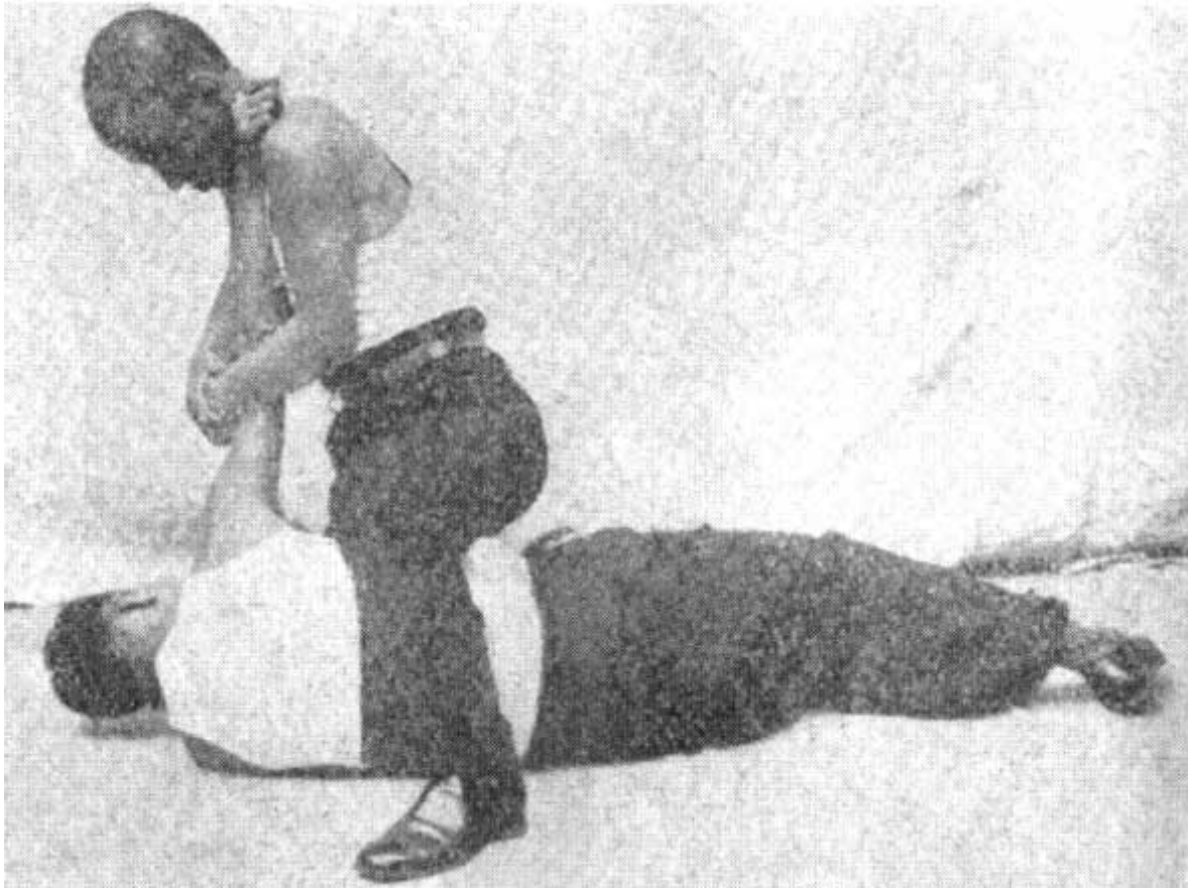


Photo 86: "Unbending an elbow."

Explanations

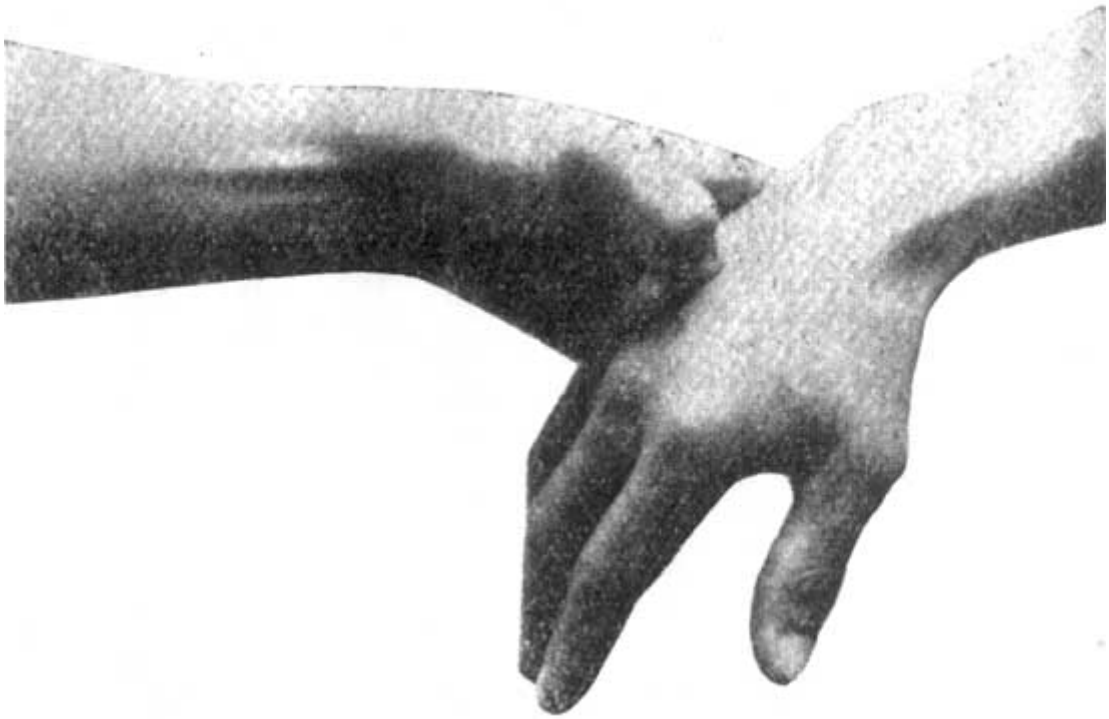
B(A) falls to the ground. Seizing the opportunity, A(B) immediately straddles him. Finding himself in such a position, B(A) tries to resist with both arms. For example, B(A) tries to seize A(B) with the right (left) hand. In that case

A(B) pushes the arm of the enemy with his right (left) arm to the left (right) so that the enemy's hand should be between the left (right) shoulder and the neck of A (B). Simultaneously A(B) covers the elbow of B(A) with both of his arms and presses to the right (left) and toward himself with force, propping up with left (right) shoulder forward. The effort must be fast and strong, in that case a fracture of the elbow will occur. **Photo 86: "Unbending an elbow."**

Part VII

SHOU ZHI BU

Grips for a Hand and Fingers



Paragraph 1 TIAO MA JIN: Pressing on a tendon to cause numbing.

Below are given four methods (photo 87 – 90) which make it possible to free oneself from a grip of the enemy. In all four cases pressure is done by a thumb on the "tendon of numbing" on the hand of the enemy, due to it enemy's fingers unclench.

It is necessary to keep in mind points location on the hand well, additionally it is necessary to have strong, well-trained fingers to be sure of success.

Those methods are used if the enemy has seized you with his hand.

1.1 TIAO MA JIN: Use of force at the tendon to cause numbing - the first alternative.

Explanations

There are three so-called "points of numbing" on the back of the hand: **point 1** between the forefinger and middle finger, **point 2** between the middle and fourth finger and **point 3** between the fourth and little finger. All three points are located on the back of the hand, in the middle of the palm approximately, that is at an equal distance from the wrist and finger phalanxes. If you press a finger to the back of a hand in different places, you will feel projecting tendons which extend from fingers to the wrist and feel hollows between tendons. In those hollows are points you seek. If the enemy seized you, you can make the enemy unclench the hand by using force at those points. However, successful employment of this method needs exercising and

strengthening fingers for a long time. Otherwise, you hardly overwhelm a serious enemy.

As a whole, the technique of pressure at all three points is the same, only places of application are different. For example, when you use force at **point 3**, you press onto the hollow between tendons of the little finger and the fourth finger of the enemy with your thumb, simultaneously you press toward the thumb from the side of the enemy's palm with your middle finger. It is necessary to press not with finger pads but with finger tips. If you do everything in the proper way, the arm of the enemy will become completely numb and numbing will spread further over his body. **Photo 87: "Use of force at the tendon to cause numbing - the first alternative."**

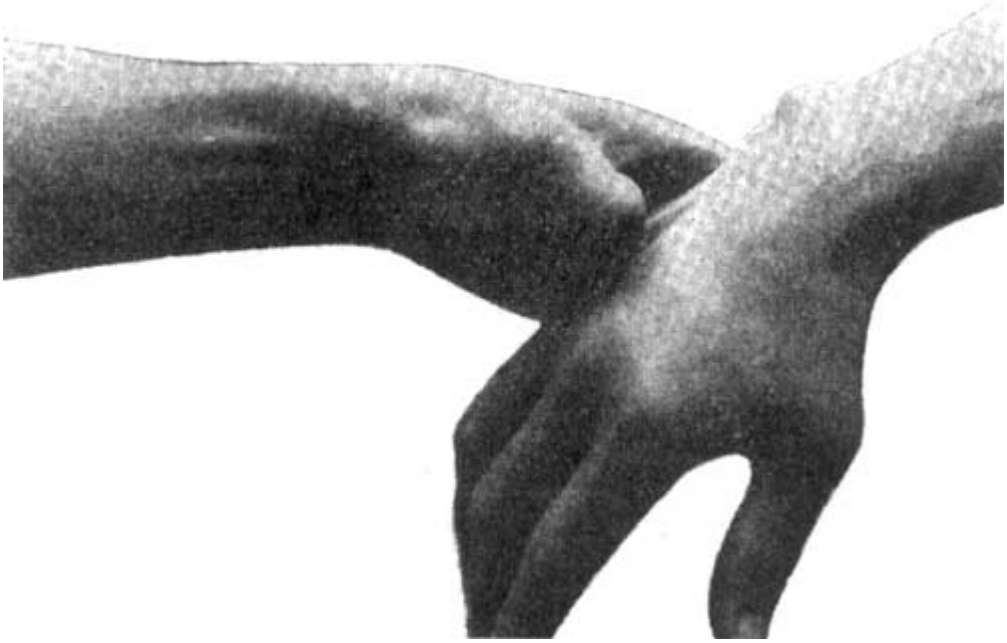


Photo 87: "Use of force at the tendon to cause numbing - the first alternative."

1.2 TIAO MA JIN: Use of force at the tendon to cause numbing - the second alternative.

Explanations

The technique of pressure at **point 2** is similar to the above, but now it is necessary to press with the thumb onto the hollow between tendons of the middle and fourth fingers and press with the middle finger toward the thumb from the side of the palm respectively. The same is use of force at point 3, so we shall not repeat the explanation. **Photo 88: "Use of force at the tendon to cause numbing - the second alternative."**

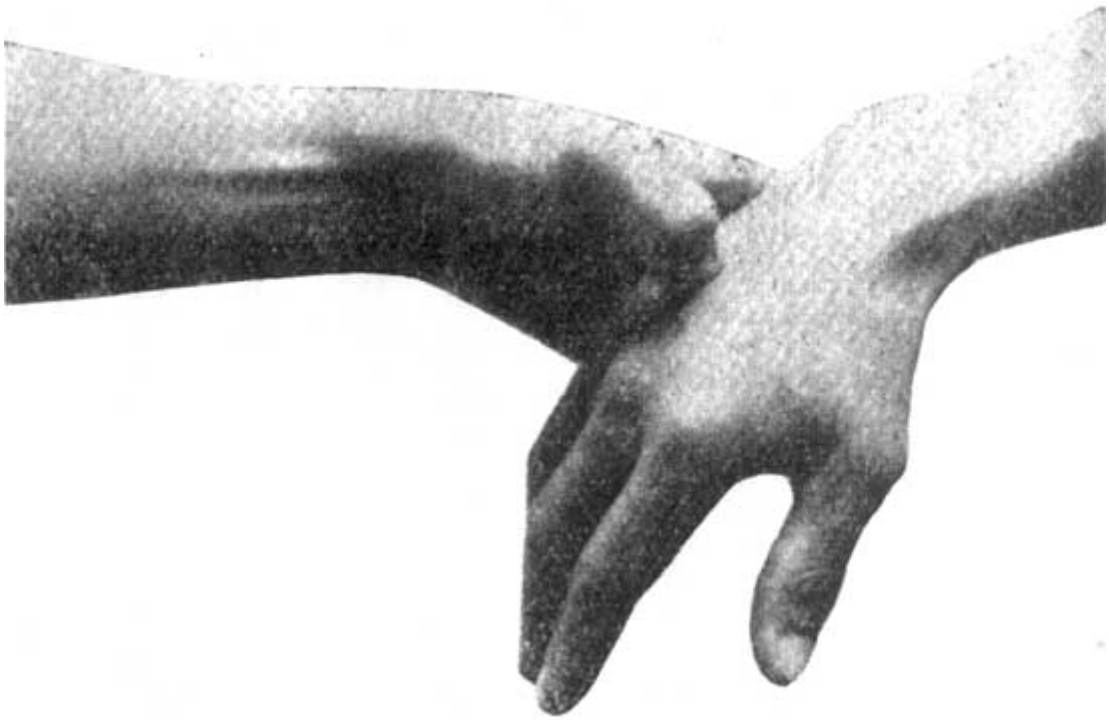


Photo 88: "Use of force at the tendon to cause numbing - the second alternative."

1.3 JIA HU KOU: Pressing on HU KOU.

Explanations

The point HU KOU, lit. "Tiger's jaws", lies in the space between the thumb and forefinger. If the enemy stretches out his arm with the intention of seizing you, you must immediately seize him by the wrist with one hand and press the tip of your thumb of the other hand on the point HU KOU of the enemy. It is necessary to press inward, on the tendon of his forefinger which is also a "tendon of numbing", with the tip of your thumb. Pressure must be strong to cause pain and numbing in the enemy, in that case his hand will unclench. **Photo 89: "Pressing on HU KOU."**

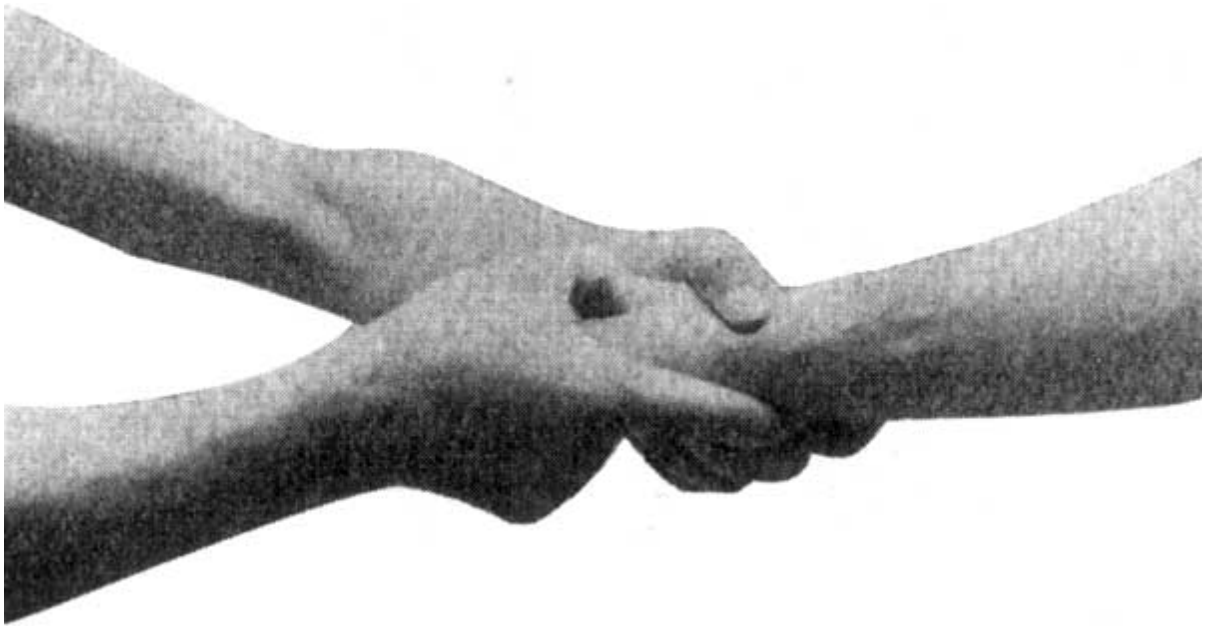


Photo 89: "Pressing on HU KOU."

1.4 DING QUAN – Splitting a fist.

Explanations

The enemy stretches out his arm with the intention of seizing you. You must immediately seize his arm by the wrist and press on the tendon between his middle and fourth fingers with the thumb of the other hand. It is necessary to press forward with the thumb using force and pull back toward you with the other arm. As a result of it the whole arm of the enemy will become numb.

Photo 90: "Splitting a fist."

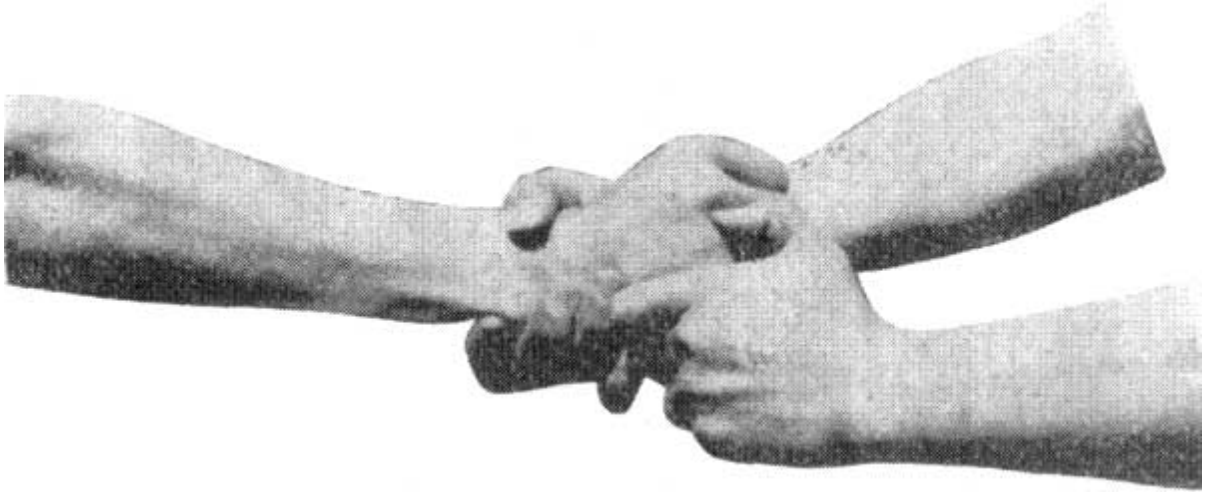


Photo 90: "Splitting a fist."

Paragraph 2 TUI ZHI – Pushing a thumb.

This method is used when the enemy attacks from the front and delivers a punch. It results in fracturing the thumb of the enemy.

Explanations

The enemy delivers a punch in the region of your chest with his right (left) fist. You must dodge to the left (right) and at the same time seize the attacking arm of the enemy by the wrist with your left (right) hand. It is necessary, within the same second, to set the right (left) palm against the thumb of the enemy from the front and push it forward and down with force and pull to yourself and upward with the left (right) arm. It will result in fracturing the thumb of the right (left) hand of the enemy. **Photo 91: "Pushing a thumb."**

Photo 91: "Pushing a thumb."

Paragraph 3 JUAN ZHI: Bending a finger.

This method does not require great effort and high level of skill. It can be employed at any moment and in any situation. It is in strict conformity to the principle “to achieve the great with small effort”.

Explanations

The enemy stretches out his arm with the intention of seizing you. You must forestall the enemy and seize him by the forefinger as to bend it. At that your thumb presses on the finger of the enemy from above and your forefinger from below, not allowing the finger of the enemy to unbend. The enemy can be seized not only by the forefinger but by the middle finger, the fourth finger or the small finger as well. After having seized the finger of the enemy in such a way, it is necessary to press on it with your thumb down and from yourself and with the forefinger up and toward yourself, three other fingers of yours close up with each other and support your forefinger to increase its actions. As a result of it the enemy will feel violent pain and his finger will be broken. If necessary, you can seize him by the wrist with the other hand to be sure that he will not free himself. To prevent the finger from being broken, it is necessary to decrease pressure a little. In this position the enemy loses his ability to resist, he can be escorted to a necessary place. **Photo 92: “Bending a finger.”**

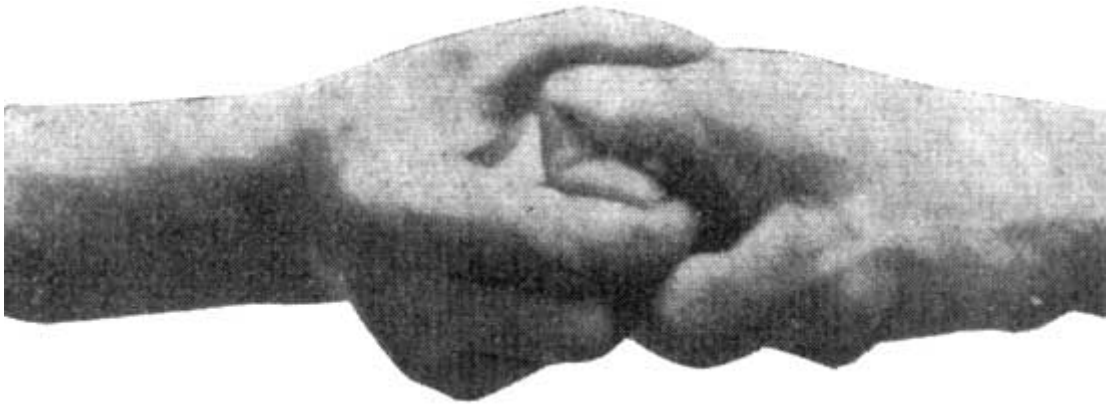


Photo 92: “Bending a finger.”

Paragraph 4 QIAN YANG: Pulling the ram.

This method must be executed deftly, smoothly and at the same time fast.

This method is used when the enemy strikes you with an open palm on the face or breast or stretches out his arm with the intention of seizing you.

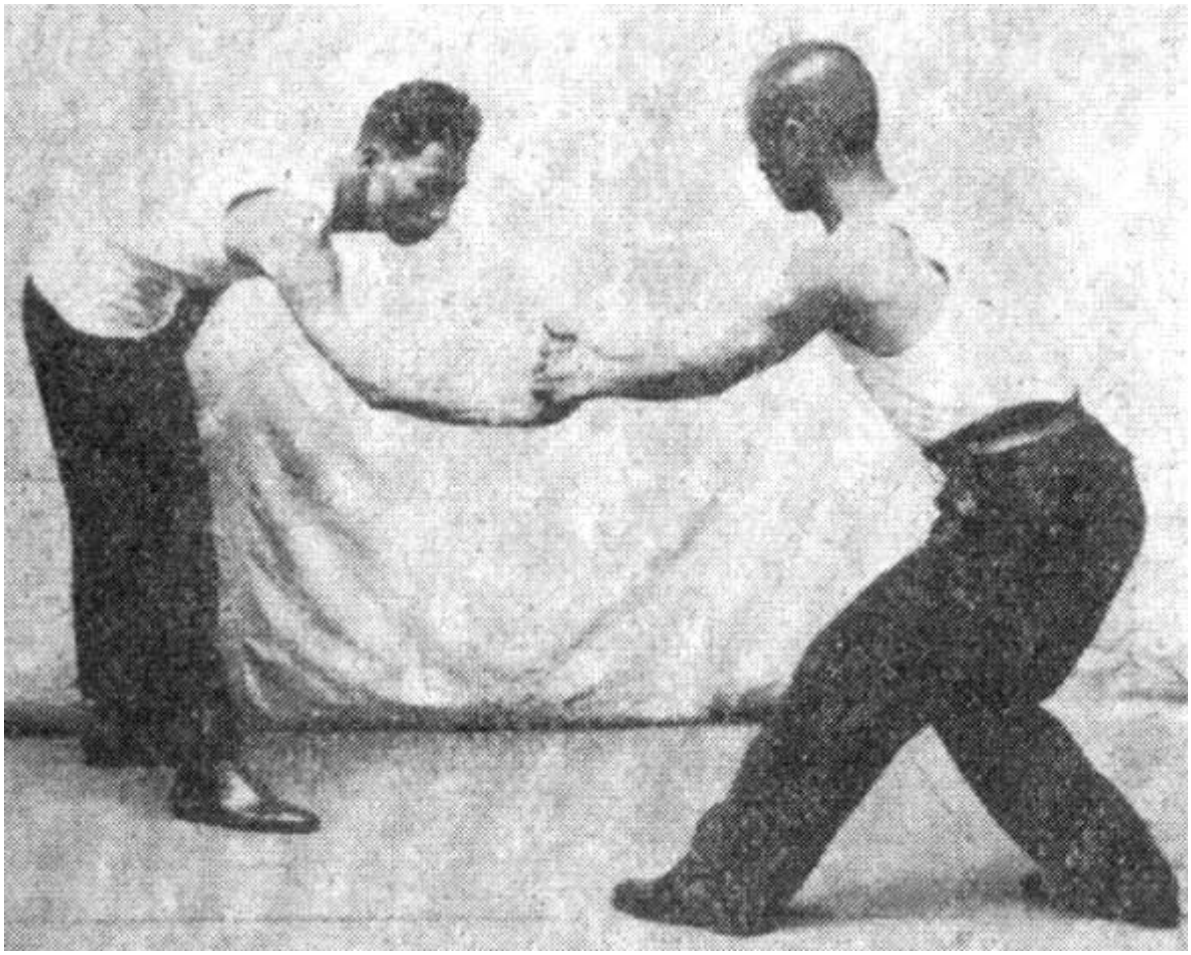


Photo 93: "Pulling the ram."

Explanations

B(A) strikes on the face or breast of A(B) with the right (left) palm or tries to seize him by the face or clothes. A(B) instantly seizes the forefinger or the middle finger of the attacking hand of the enemy. A(B) presses on the caught finger from himself with his thumb and toward himself and downward with the other four fingers. Simultaneously the upper part of the body of A(B) leans forward. A fracture of the finger of the enemy will occur. **Photo 93: "Pulling the ram."**

Paragraph 5 FEN ZHI: Spreading fingers.

If this method is used, a fracture of enemy's fingers will occur, he will practically lose his ability to resist. Besides, when arresting a criminal, the method can be used to escort him and force him to go in a necessary direction.

Explanations

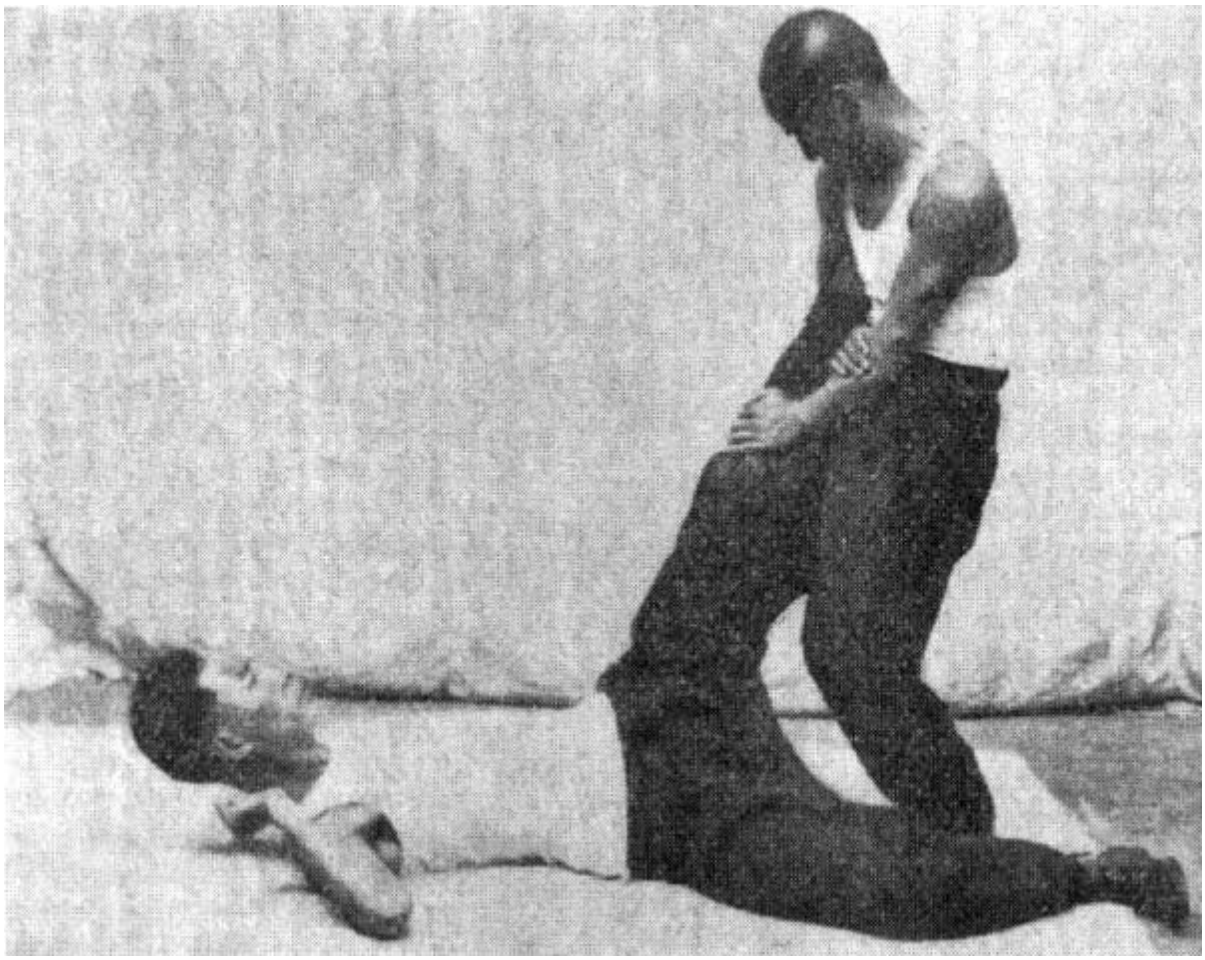
A(B) with his left (right) hand, palm up, seizes the thumb of the left (right) hand of B(A). At the same time A(B) seizes the forth finger and small finger of the same hand of B(A) with his right (left) hand. A(B) pulls to sides and a little upward with both arms, at the same time he sets the upper part of the right (left) arm against the elbow of the held arm of the enemy and closely presses himself to the enemy with the torso. In that position the enemy can be forced to go in a necessary direction. If necessary, a fracture of fingers can be achieved. **Photo 94: "Spreading fingers."**

Photo 94 – "Spreading fingers."

Part VIII

YIN TUI JIAO BU

Grips for Genitalia, Legs and Feet



Paragraph 1 ZHUA YIN: Seizing by genitalia.

Grip for genital organs is a mortally dangerous method. The position shown in the photo is somewhat simplified for the sake of convenient photographing, it bears a weak resemblance to reality of an actual combat. However, the methods given below can be used very effectively. While striking with two fingers, it is necessary to lean a little forward and crouch so that your shoulders will be on the level of the enemy's eyes or a little lower, in that case your blow will be the most destructive. At the same time your left hand must firmly seize the wrist of the enemy and pull it down and toward yourself.

Explanations

B(A) seizes A(B) by the genitalia with his right (left) hand. Instantly A(B) must seize the attacking hand of the enemy by the wrist with left (right) hand and make a pull toward himself and down, concurrently deliver a thrust to the enemy's eyes with the straightened forefinger and middle finger of the right (left) hand. At that moment the enemy involuntarily unclenches his hand. **Photo 95: "Seizing by genitalia."**

When in the course of a combat the enemy seizes you by genitalia, it is extremely dangerous. You may have no time to use common methods of freeing yourself from a grip, that is affecting the "tendon of numbing", pressing on the point HU KOU etc. It is necessary to act with utmost resolution and take radical measures, for example, finger thrust to eyes or other "deadly" methods. You must not be slow and hesitate for a single moment, otherwise the situation can end in lamentable result for you.

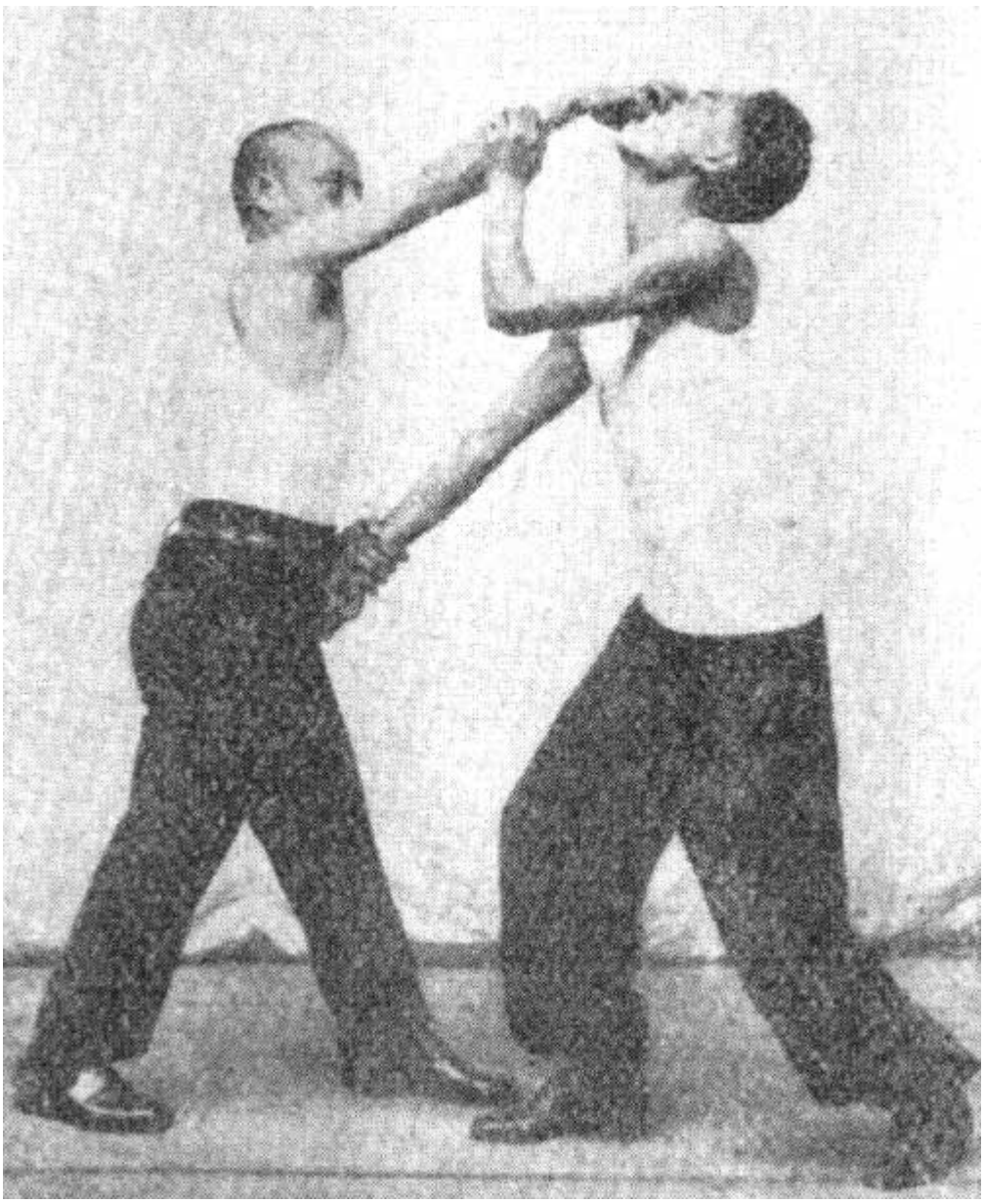


Photo 95: “Seizing by genitalia.”

Paragraph 2 DUAN TUI: Breaking a leg.

Three methods described below are used during a combat in lying position when both opponents fell on the ground in the course of a fight. When detaining a criminal, it is necessary to take him alive, all three methods are used just for that purpose. Perhaps, from the point of view of WU SHU (the Martial Art) those methods look somewhat artificial and pretentious; as you know, the main thing in WU SHU is to disable the enemy, the simpler and faster the better. But those methods can be indispensable for capture of criminals.

If this method is used during a combat on the ground, a leg of the enemy can be broken.

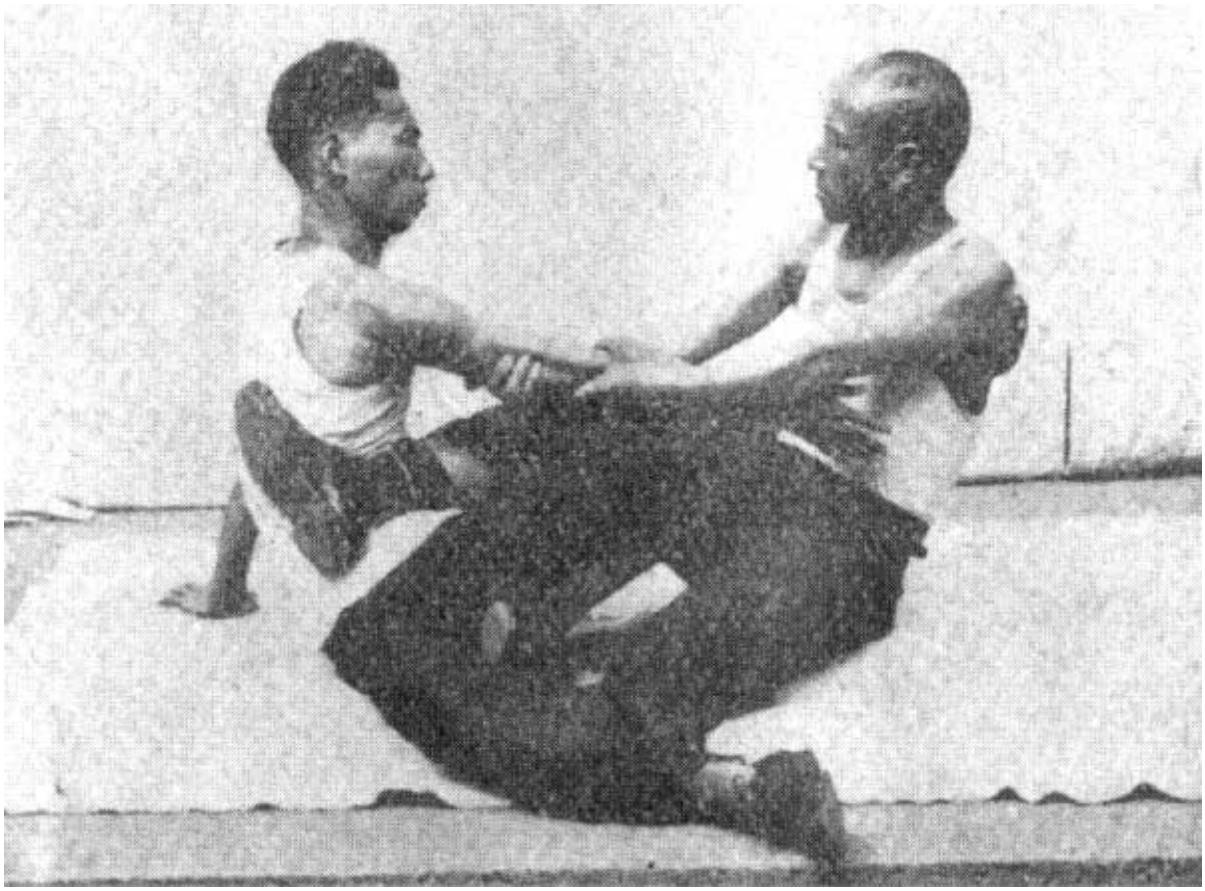


Photo 96: "Breaking a leg."

Explanations

B(A), being in a lying or sitting position, started to clasp A(B) with legs with the aim of squeezing the waist of A(B). At that moment A(B) shoves through his right (left) leg under the thigh of the left (right) leg of the enemy, raises his foot and carries it near the stomach of the enemy to the left (right), then presses with the instep and the upper part of the right (left) foot to the right (left) side of the enemy. Concurrently with those actions A(B) seizes the right (left) arm of the enemy with both arms and pulls it toward himself with force, the left (right) foot sets against the right (left) thigh of the enemy. In this position A(B) pulls the arm of the enemy toward himself with force and pushes off with his left (right) foot, the body of A(B) turning to the left (right) and leaning back. The right (left) leg of A(B) straightens with force and a fracture of the left (right) leg of B(A) occurs. **Photo 96: "Breaking a leg.**"

Paragraph 3 ZUO TUI: Getting astride a leg.

If in the coarse of a combat the enemy fell on the ground, it is possible to break a leg with this method.

Explanations

In the course of a hand-to-hand combat the enemy fell on his back. Using that opportunity, A(B) swiftly puts his leg between legs of the fallen enemy, concurrently turning to him with his back, and sits down on the leg of the enemy a little up the knee. Then A(B) clasps the heel of the enemy from below with both hands and pulls up with force, simultaneously he leans with the whole of his torso back fast and shifts body weight on buttocks with which he energetically pushes the caught leg of the enemy down. It results in fracturing the leg of the enemy. **Photo 97: "Getting astride a leg**."

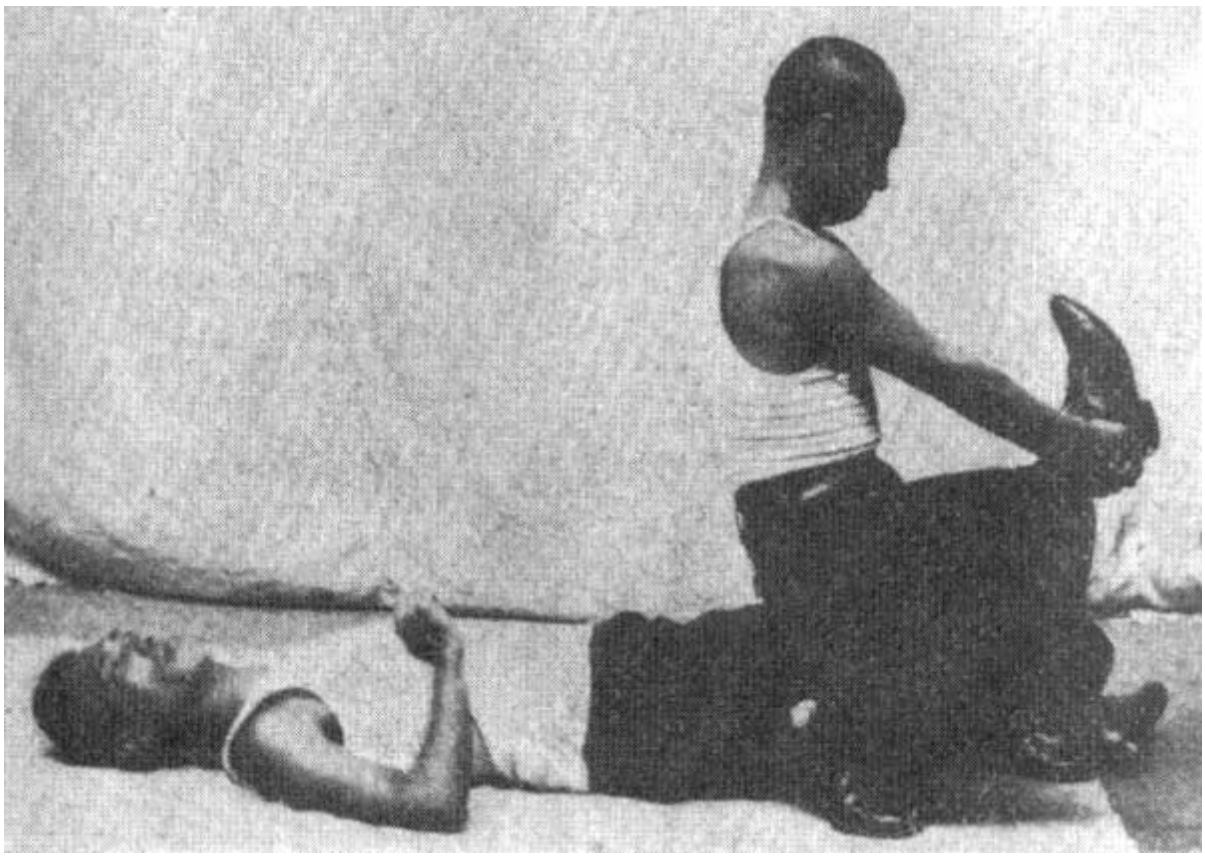


Photo 97: "Getting astride a leg."

Paragraph 4 DENG TUI: Pushing a leg.

If in the course of a hand-to-hand combat you suddenly fell on the ground, using this method, you will be able to win in the losing position, as it seemed to be.

Explanations

In the course of a combat A(B) fell on the ground. Using this opportunity, B(A) approaches the fallen enemy and punches with the right (left) fist on his head. A(B) supporting on his right (left) arm seizes the attacking arm of the enemy by the wrist with the left (right) hand and pulls toward himself and down. Concurrently A(B) hooks the right (left) leg of the enemy a little up the

heel with the instep of the right (left) foot from behind and sets his left (right) sole against the knee of the enemy. With coordinated effort of one arm and legs A(B) knocks the enemy down. If A(B) applies rather quick and strong effort, the leg of the enemy will be broken. This method can be also used without seizing arm of the enemy, only with legwork. **Photo 98: "Pushing a leg."**

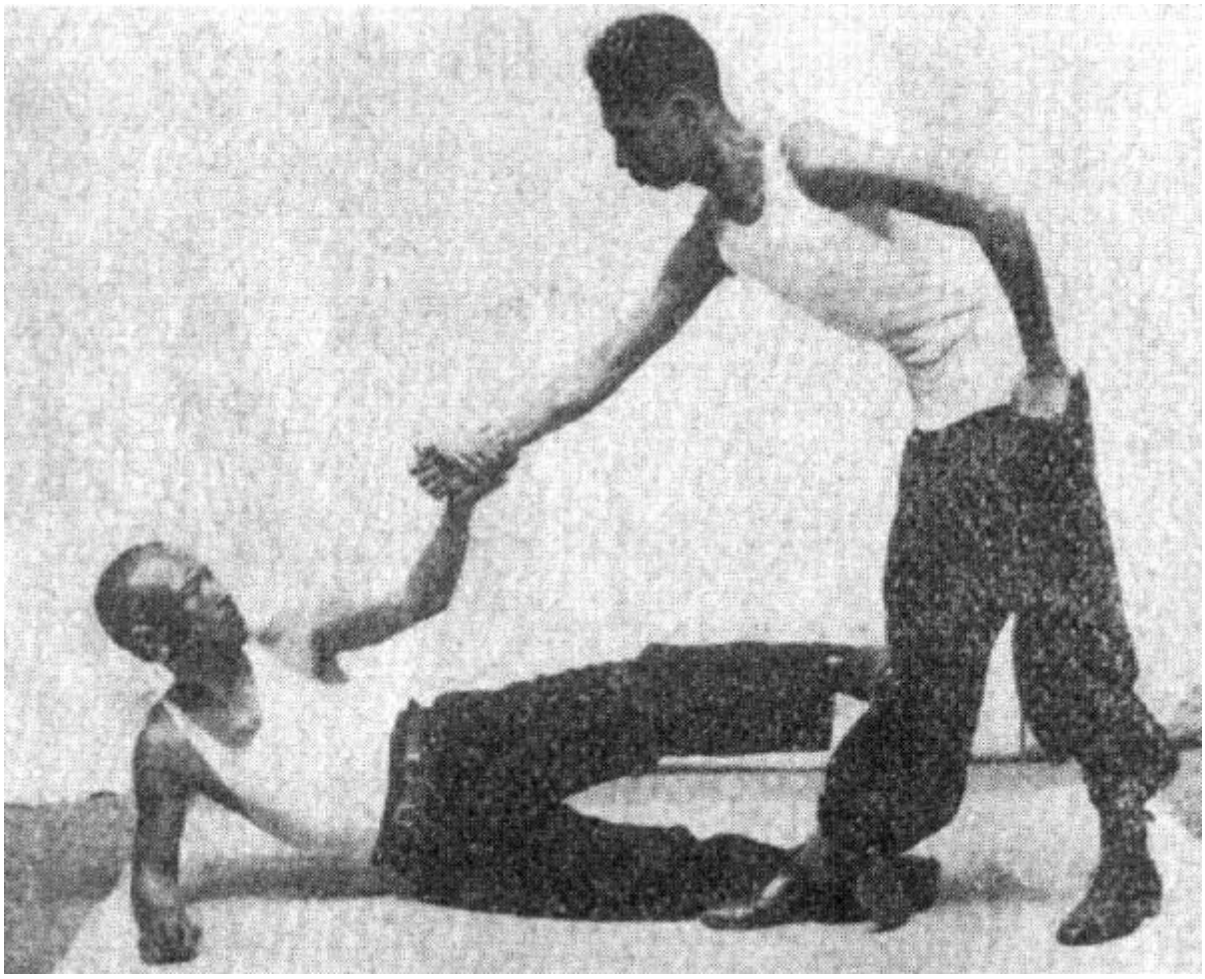


Photo 98: "Pushing a leg."

Paragraph 5 DUAN ZU: Breaking an ankle.

This method is used if the enemy kicks standing or lying on the ground.

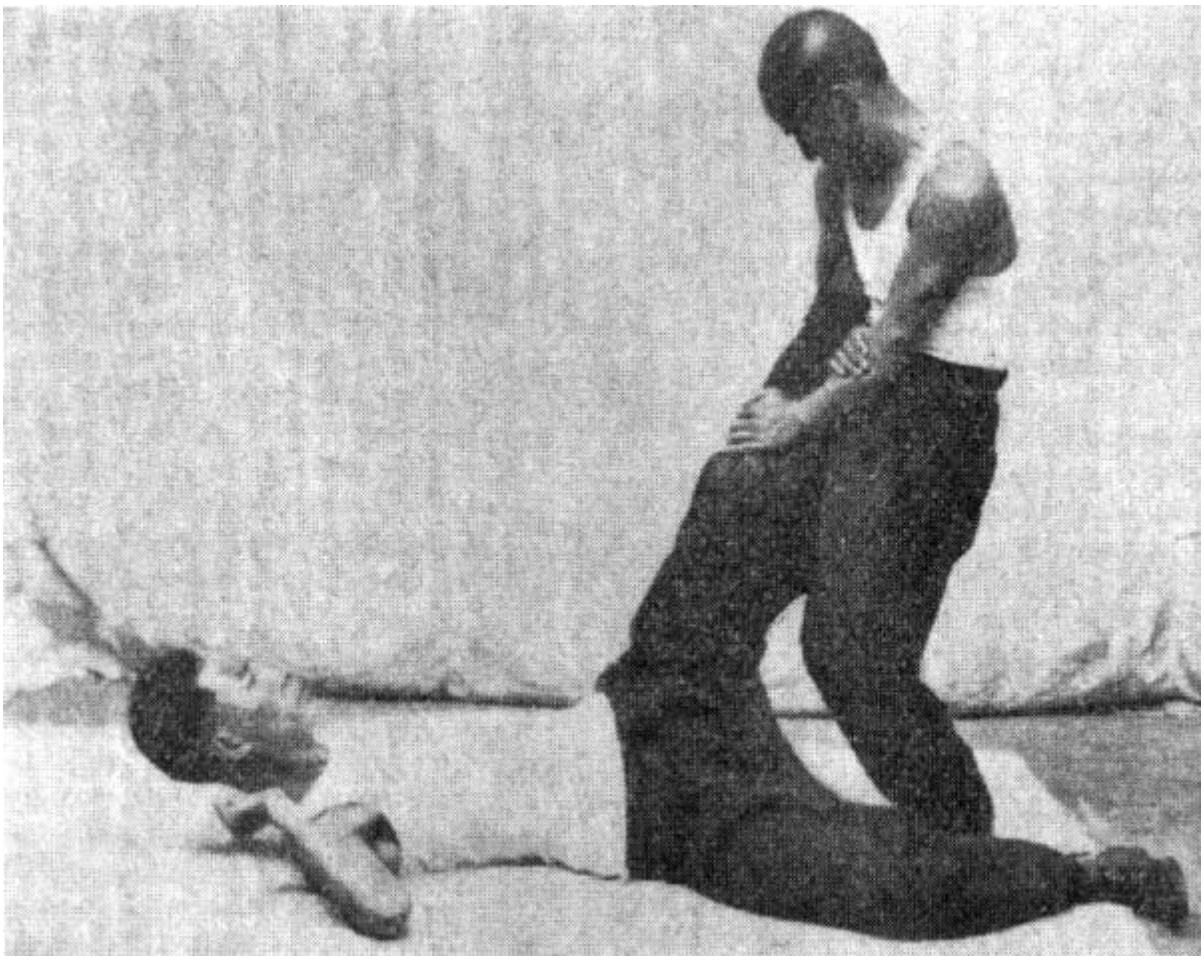


Photo 99: "Breaking an ankle."

Explanations

B(A) lying on the ground suddenly kicks with the left (right) leg. A(B) catches up the leg of the enemy with both hands from below and squeezes it under the right (left) armpit, strongly pressing to his side with the upper part of the right (left) arm. Then A(B) immediately puts the palm of the left (right) hand on the shin of the enemy, a little up the knee, shoves his right arm under the leg of the enemy and seizes the forearm of his own left (right) arm with that right hand. In that position A(B) presses on the shin-bone of the enemy from above downward with his left (right) arm as strong as possible and

presses on enemy's Achilles (calcaneal) tendon from below upward with his right (left) forearm. At that A(B) leans his upper torso back and sticks out his breast forward and upward. As a consequence of those actions a fracture of the mortis joint of B(A) will occur. **Photo 99: "Breaking an ankle**."

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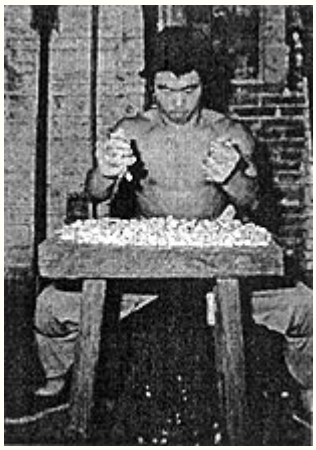

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Canonical Books by Lam Sai Wing

Lam Sai Wing
(1860-1943)

"SINCE MY YOUNG YEARS TILL NOW, FOR 50 YEARS, I HAVE BEEN LEARNING FROM MASTERS.
I AM HAPPY THAT I HAVE EARNED THE LOVE OF MY TUTORS WHO PASSED ON ME THE SHAOLIN MASTERY..."

Lam Sai Wing was one of the best fighters of his time, an outstanding master of **Southern Shaolin Hung Gar Kung Fu** and a disciple of the legendary **Wong Fei Hung**. At the beginning of twentieth century, supposedly in 1917-1923, when Lam Sai Wing was the **Chief Instructor** in **hand-to-hand fight** in the armed forces of **Fujian** province, he wrote three books on **traditional Shaolin methods** of the achievement of the highest mastership. In those books he scrutinized **COMBAT TECHNIQUES** of **TIGER** and **CRANE** styles, as well as the **OLD SHAOLIN METHOD** of developing the "**INTERNAL**" and "**EXTERNAL**" force. The books are illustrated with a great number of fine drawings showing the author demonstrate his wonderful techniques. Until now the books of Master Lam Sai Wing serve as a basic textbook for those who seriously practices Hung Gar in China.

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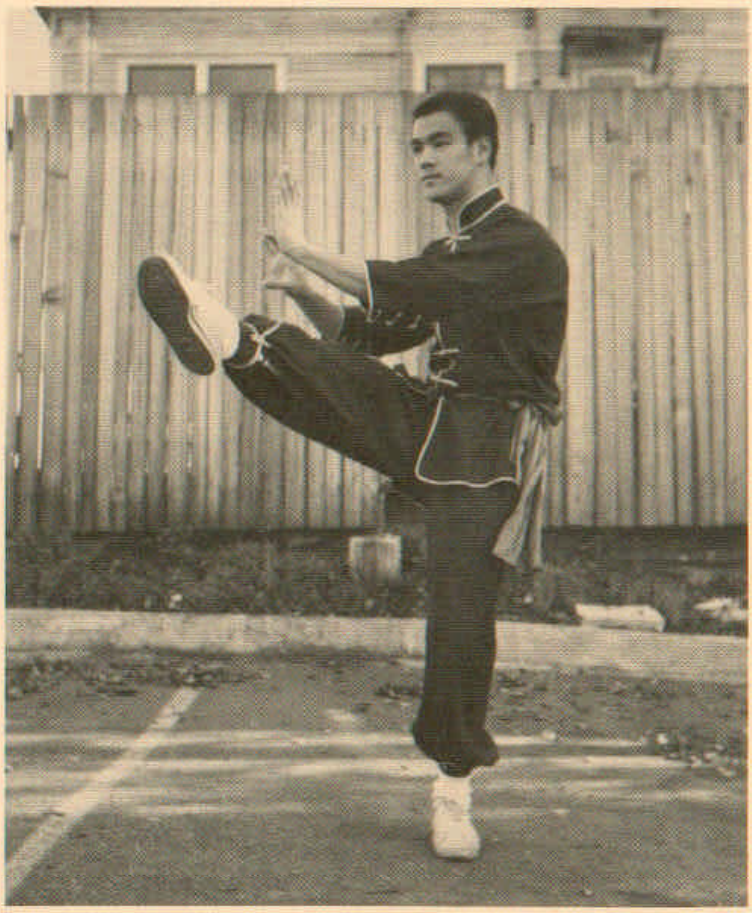
CHINESE GUNG FU

The Philosophical Art of SELF-DEFENSE



基本中國拳法

by

BRUCE LEE

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CHINESE GUNG FU
THE PHILOSOPHICAL ART OF SELF DEFENSE

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DEDICATION

To my parents -

Mr. and Mrs. Lee Hoi Chuen

and to my very good friend -

Mrs. Eva Tso

Begin3.jpg

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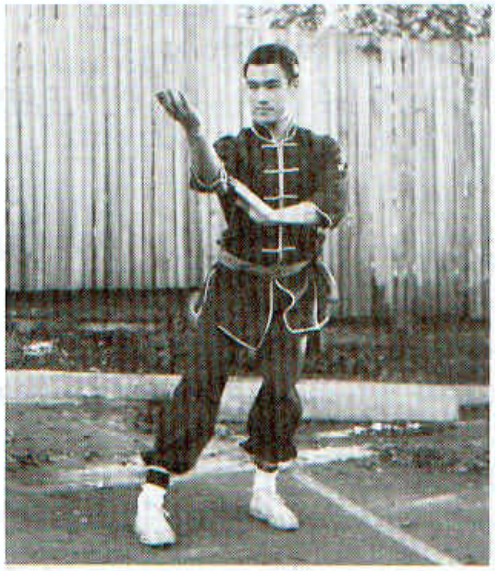


ABOUT THE AUTHOR
By James Y. Lee

As mentioned before in my previous book, "Modern Kung Fu Karate", that the Brick Breaking and Iron Hand Training is not a necessary part of Gung Fu training - this book deals strictly with self defense.

Unlike my previous books on Gung Fu, written by one of limited knowledge, I was very happy when Mr. Bruce Lee was persuaded to come out with this, his first of a series of books on the Ancient Art of Gung Fu.

Bruce Lee, one of the highest authorities in the Chinese Art of Gung Fu in the United States today, came from China three years ago. At an early age, Mr. Lee started Gung Fu training from various instructors from both Northern and Southern schools of Gung Fu. At thirteen, he met Master Yip Man, leader of the Wing Chung School of Gung Fu, and since then he has devoted himself to that system. After years of daily training and engagements in competitive matches, he was awarded the rank of instructor - the youngest to achieve it in that school.

Since his arrival in the United States, Mr. Lee has selected a few disciples and devoted his time to teaching them. Among his many followers are Judo and Karate Black Belt holders, Gung Fu students of other systems, boxers, etc.

page1.jpg

In Southern China: - Wing Chung School (詠春派), Southern Praying Mantis (南派螳螂), Dragon Style (白眉派), White Crane School (白鶴派), Northern Sil Lum (南派少林), Choy Lay Fut (蔡李佛), Hung K'ung (洪家), Choy Ga (蔡家), Fut Ga (佛家), Mok Ga (莫家), Yal Gung Moon (柔功門), Li Ga (李家), Lau Ga (劉家), etc.

Then these clans are separated into so-called internal and external schools (内家与外家). Here we are not concerned with them.

Several Important Pointers

1. Every movement of Gung Fu has a flowing continuity without any dislocation. As soon as a movement is completed, it begins to flow into another one. Because of this the readers will find the techniques of Gung Fu faster than the ordinary method.

2. Gung Fu is a mind exercise. The combination of mind and body is especially important in the higher stage of Gung Fu. As for the reader here, try to use the imagination (mental movement) to influence every physical movement; for example, a firm belief that every technique will come to the desired end would help.

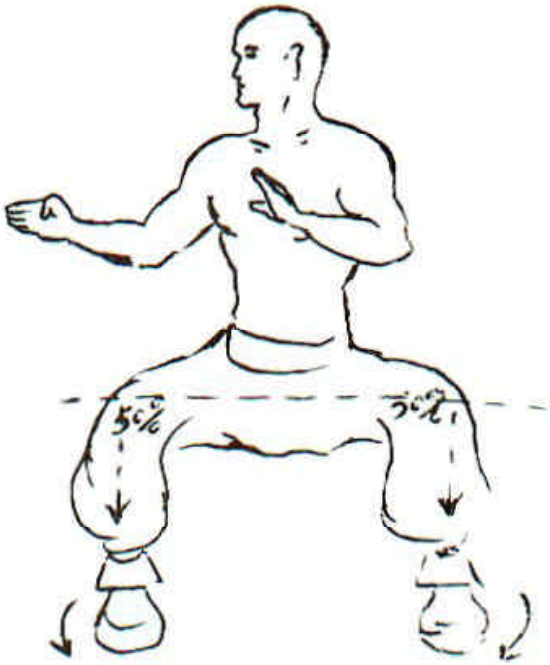
3. Cooperate with your opponent. Do not resist or interrupt his flow of movement. Instead of stopping his force, complete it by following him. In other words, you help him to destroy himself. Remember this - what you will do depends on your opponent; that is why we say - be the complement and not the opposite of the opponent's force.

4. The waist is very important in the art of Gung Fu, as it plays a major part in both striking and dissolving away the opponent's force. During practice, the practitioner is required to dissolve away the opponent's force by turning waist first before he can side step it. (Note: A white arrow will show the direction of turning of the waist in the illustration.

5. Remember - it is better to learn how to endure than to learn how to fight. However, if you are compelled to oppose force, make use of it.

BASIC GUNG FU STANCES

Gung Fu has many stances for different purposes, and some other schools have their own special stances. Here are the ten most commonly used stances for the beginners.



1 - Ma Bo (馬步) - The thighs must be parallel, the toes point front, and the knees point at the toes. The nearer the distance of the feet, the better.
Points to Avoid - Standing bow-legged or leaning forward or backward.

2 - Gung Bo (弓步) - The weight is on the front leg with toes pointed slightly inward (avoid being stepped on); the back leg straight. (This is why this is sometimes called the bow's arrow stance. This stance and Ma Bo (horse stance) are strong and firm stances.

Points to Avoid - Lifting the heel up on back foot, or pointing toes straight front on the front foot.

3 - Ding Bo (丁 步) - Most of the weight is on the back leg, the front leg stands with toe pointing (ready to kick any time). The front knee is slightly higher than the back one for protection of the private part.

Points to Avoid - Weight on front leg, toes not pointing straight.

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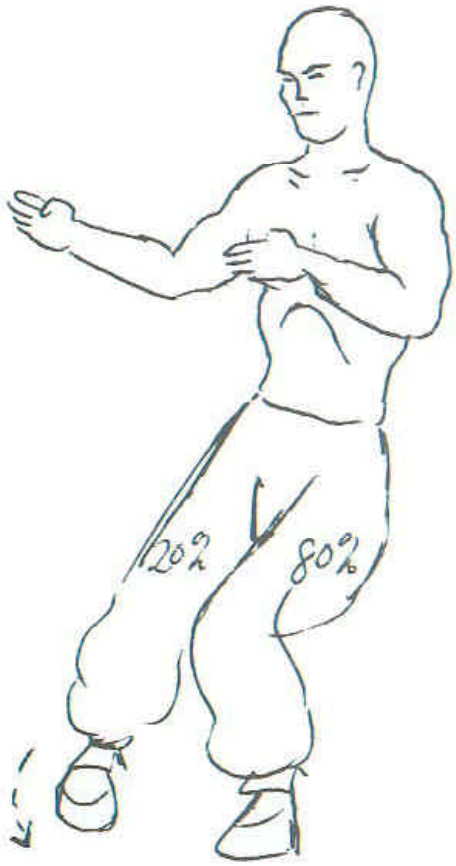
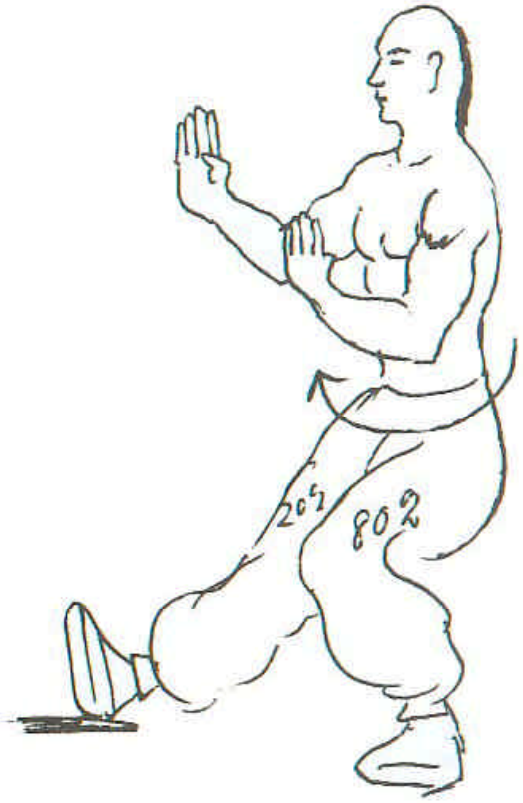


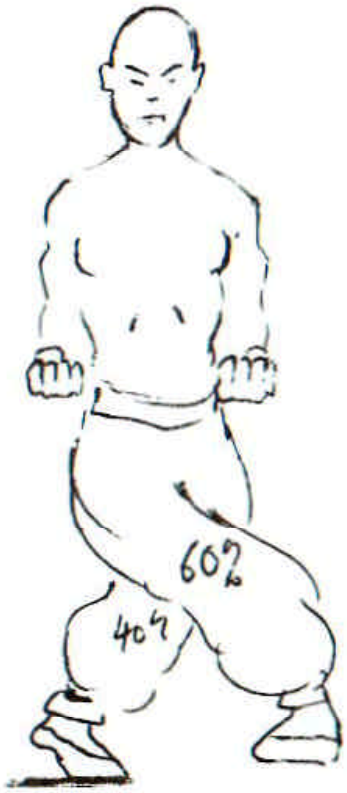
4 - Hui Bo (虎步) - A slight variation of Ding Bo, except with front toes turned slightly inward.

Points to Avoid - Weight on front foot.

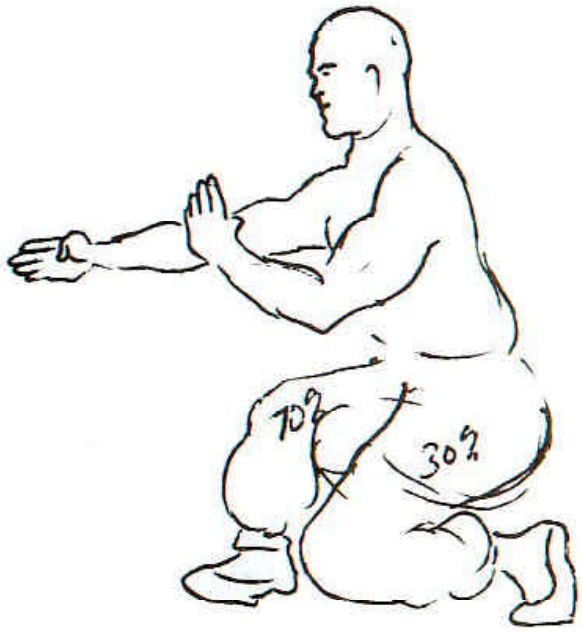
5 - Chung Sik (中式) - This is a medium stance between Ma Bo and Hui Bo, and is mostly used in free-style sparring, due to its flexibility. The front knee is slightly higher than the rear one.



6 - Chuat Sing (七 星) - Weight on back leg, the front leg rests lightly on heel with toes pointing upward. This is mostly used with Gung Bo for dissolving away force. The waist plays a very important part in this stance. Both knees try to be parallel.



7 - Lau Ma (拗馬) - The twisting horse. The front foot flat on ground with the back heel raised. This stance is used mostly in close-range for moving with the shortest time.



8 - Kuai Ma (跪 馬) - The weight is on the front kneeing leg. This stance is used mostly for the attack to the low gate.

Aside from his knowledge of the various schools of Gung Fu, Mr. Lee is also well versed in Taoism and Ch'an (Zen). He has conducted a T. V. series in the U.S. on Oriental philosophy and Gung Fu.

Mr. Lee will be one who will bring credit to the ancient and noble art of Chinese Gung Fu by his sincere effort to present a true perspective of the art of Chinese self defense.

I was really impressed when in friendly sparring matches with Mr. Bruce Lee, I couldn't penetrate or land a telling blow or kick - even when he was blindfolded, once his hands are "sticking" to mine.

I am sure this book will bring to the citizens of the U.S. a better understanding of the principles which make Gung Fu such and effective system in defense. Students of other Oriental systems will benefit greatly from this book. In well illustrated photos, it clearly explains all the steps to master the various techniques.

Oscar Wilde once said, "Imitation is the most sincere compliment." If so, I have paid Mr. Bruce Lee a sincere compliment by changing all my Gung Fu techniques to his methods. When he demonstrated his type of striking, which is based on inner energy, I found it much more powerful than the power I had developed from previous Iron Hand training. The superiority of his Gung Fu is more refined and effective than that which I have learned in all my past years. Since his striking power is generated from the waist and the mind, I have always maintained that the power to break bricks is not the true test of actual application of energy in real combat.

I always benefit greatly whenever we get a chance to train together.

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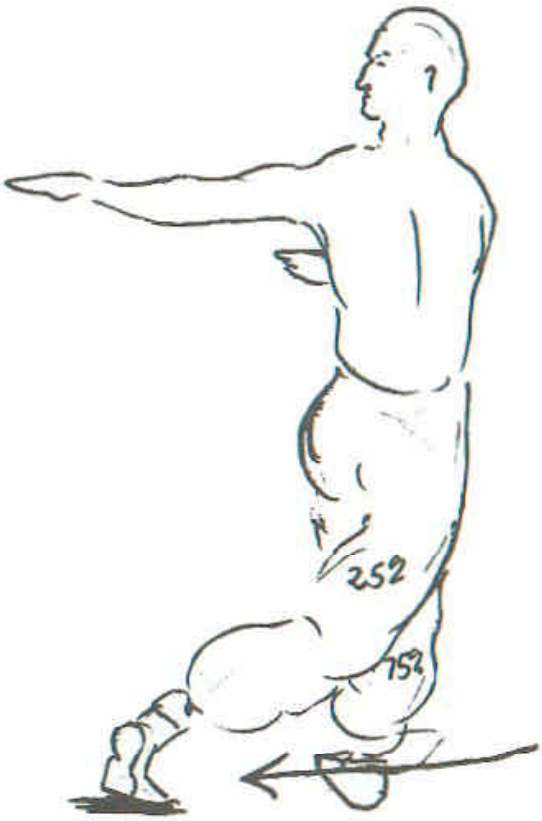

9 - Tou Bo (偷步) - This stance in English means to steal a step, to sneak in to attack. From this stance one can either kick or change it to many other stances like Ma Bo, Ding Bo, Gung Bo, etc.

- Tu Ma (吊馬) - In English, hanging horse, this stance is for defense against foot sweeps, low kicks, weapon attacks, etc. From this position, a kick is often connected.

THE SEVEN STARS

Watch for the opponent's seven parts

1) hands
2) feet
3) elbows
4) knees
5) shoulders
6) thighs
7) head

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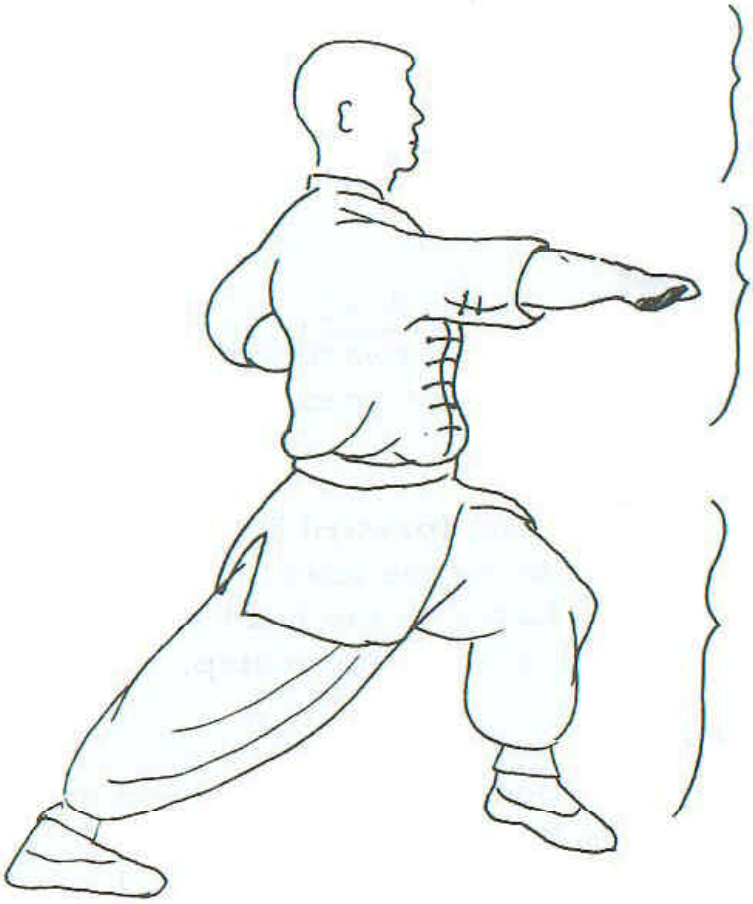

THE THREE FRONTS

Take care of one's "three fronts"

1) in front of one's eyes

2) in front of one's hands

3) in front of one's legs

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page23.jpg

ON WAIST TRAINING

The waist plays a vital role in the art of Gung Fu. Here are some exercises to extend the range of its motion and make the waist flexible.

Fig. 1 - Front Bend

(1) Bend forward with palms touching ground, (2) legs keep straight at all times.

Fig. 2

(1) Bend forward and grasp both ankles and touch head on the knees.

(2) Later on the head should touch the shin or, even better, the instep.

Fig. 3 - Side Bend

(1) Body turn left and bend down without moving the lower trunk,

(2) Touch palms on ground,

(3) Come up and repeat the same to the right side.

Fig. 4 to Fig. 6 - Back Bend

Figures 4 to 6 show the steps toward back bending.

Fig. 6

Stand with feet together, hand naturally raised, body twisted toward left side (Fig. 6a); (2) The body turns from left toward right (Fig. 6b); (3) Right hand turns to a hook and left hand, following the turning of the waist, drops down and grasps right ankle (Fig. 6c); (4) Left hand releases and turn body from right to left again.

FIG 1

FIG 2

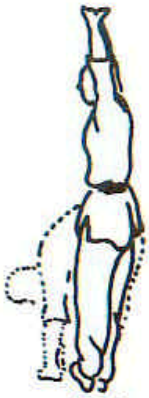


FIG 3

FIG 4

FIG 5

FIG 6

Fig. 7

(1) From the standing position the body drops toward the right side with right foot crossing in front of left foot (Fig. 7a);

(2) Body turns backward with left foot grinding the ground, and right foot slightly touching ground (Fig. 7b);

(3) After turning left foot bends slightly on the knee.

Fig. 8

(1) Assume squatting position as in Fig. 8a with left foot in front; the chest is close to the knee.

(2) Body turns toward right back with hand following (Fig. 8b).

(3) After turning the waist, the right leg should be in front as in Fig. 8b, dotted lines.

(4) Ready for left turning.

FIG 6 A

FIG 6 B

FIG 6 C

FIG 7 A

FIG 7 B

FIG 8 A

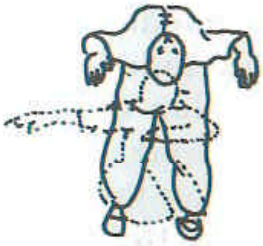


FIG 8 B

27 page27.jpg

ON LEG TRAINING

The kick, especially to the Northern clans of Gung Fu, is a best means of attack; however, they too warn the danger of using them recklessly. It is a fact that the legs are much more powerful and have a longer reach than the hands, but we must consider also that when we lift one leg and kick, our whole balance is involved.

"In training, kick as high as you can; but in combat, kick as fast as you can and don't pass over the belt." This is a saying I often teach to my students. In my school, our kicks seldom pass over the belt, and the so called high or flying kicks are never used. As for leg training, and this is true in most of the Gung Fu schools (North or South), it is not necessary for us to strengthen and toughen it by kicking on hard objects or sandbags. Due to their support of the whole body everyday, our legs already have power, and it is a matter of cultivating them naturally. The training then involves the cultivating and concentrating of power, and the development of speed.

Here I have included a few basic exercises that serve to develop the kicking; the first part of which will concentrate on stretching the ligaments and extending the range of motion. The second part will be the natural development of kicking power.

Fig. 1 (Front Bend)

Assume the position in Fig. 1 with hands on right knee to prevent it from bending. With the toes raised, try to touch the knee with your head. Repeat 15 times on each leg.

Fig 1

Fig 2

Fig. 2 (Side Bend)

Assume position in Fig. 2 with hand on hip. With toes raised, bend sideways and touch the right foot with your head.

Fig 3A

Fig 3B

Fig. 3A - This exercise is commonly called shoe kissing. (1) Assume a squatting position with left leg extending straight, toes raised and the heel touching the ground, (2) with two hands grasping left foot and pulling backward, bend forward and kiss the shoe (fig. 3B). Practice left and right. NOTE: At first, practice by touching the head on knees, then reach farther and farther out.

At present Mr. Lee, through his books, T. V. appearances and Gung Fu instructions to Americans, regardless of race, creed or national origin, is in the process of developing a nucleus of future Gung Fu instructors to keep the ancient Chinese art from being exploited and commercialized as evidenced unfortunately in some other Oriental systems.

I am in complete accord with the author when he says, "When more and more Americans are instructed in the authentic techniques of Gung Fu, less and less people will be able to pass themselves off as self styled Gung Fu "experts".

J. Y. Lee

FIG 4 A

FIG 4 B

FIG 5

FIG 6

FIG 7 A

FIG 7 B

Fig. 4 A- Assume same position, but this time bend over and try to touch shoe with the head. (This time the right side of the body touches the left leg.) Repeat 12-20 times and do the same with right leg.

Fig. 5 & Fig. 6

Fig. 5 and Fig. 6 show a slight but more difficult exercise of leg training.

Fig. 7A- Side Hang. This exercise is known as leg hanging in Chinese because when the leg is raised to the desired position, it has to stop there for as long as one can. (1) Assume position A in Fig. 7A with right hand on a bar, (2) Slowly lift left

Fig. 7B- leg (with toes raised) to around 90° from the ground and stay there for a while, (3) Lower down to original position and repeat the same procedure again.

Fig. 8A- Straight Hang.
(1) Assume original position, (2) This time, instead of raising the leg sideways, raise it slowly straight up (toe
Fig. 8B- raised) till it reaches at least 90° from ground, (3) Stay there for a while and repeat again.

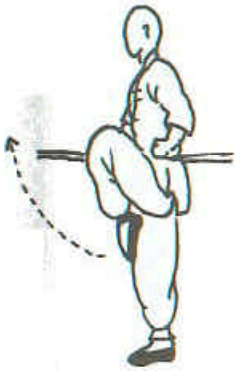


FIG 8 A

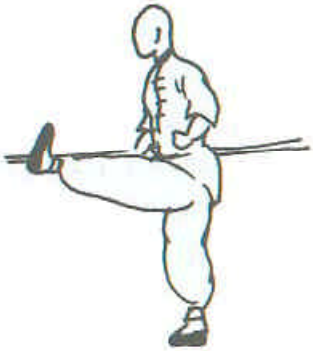


FIG 8 B

FIG 9

Fig. 9 - This is front high kick for practising purposes only. (1) With hands on hips advance right foot with left foot behind it, (2) Left foot kick up straight with toes raised aiming at one's forehead. (3) When left foot comes down next to right foot, stop and advance left foot with right foot behind, ready to kick.

NOTE: (1) During kicking the waist should not bend, and do not lean forward too much.
(2) The body should not bend backward.
(3) The stationary foot should be firmly flat on the ground.

Fig. 10 - Side Slanting Kick

(1) Assume same position as in Fig. 9 and kick with left leg the same way except to the side of right ear.
(2) The hand extending position is for balancing the posture of the body.

Fig. 11 - Side Straight Kick

(1) From erect position advance right foot with toes slightly pointing to the right side; body also turned toward right side as shown in Fig. 11.
(2) Left foot kick toward left ear,
(3) Left foot lands on ground with toes pointing slightly toward left side and body turning left side. (4) Kick in the same manner.

Figs. 12, 13, 14

(1) Fig. 12 and Fig. 14 show the exercise of leg swinging of out and inward swing. Practise with left and right.
(2) Fig. 13 shows the correct posture while swinging the leg.

Fig. 15- This is the actual kicking as used in actual application. Here I have just included three basic kicks in Gung Fu, the straight-toe and thrust kick, and the side kick.
(1) Assume position in Fig. 15 with body erect, (2) Advance right foot and snap out left foot like a whip with all the power concentrating on impact, (3) Snap back as fast as possible and land in front of right foot, (4) In the same manner the right foot snaps out.

FIG 10

FIG 11

FIG 12

FIG 13

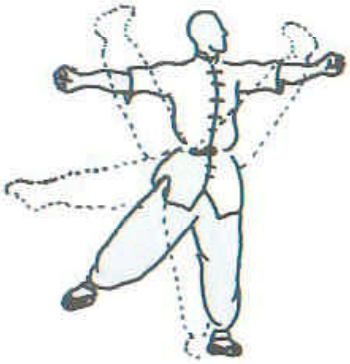
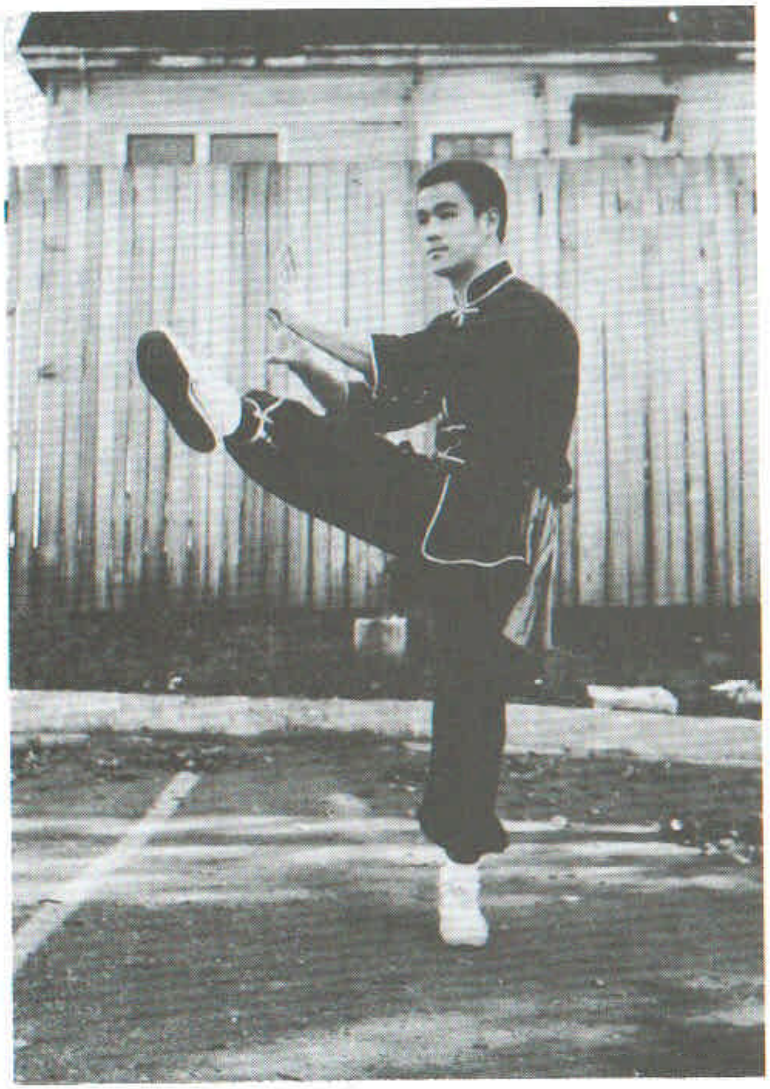


FIG 14

FIG 15

FIG 16

FIG 17



34
page34.jpg

CHINESE GUNG FU

THE PHILOSOPHICAL ART OF SELF DEFENSE

國拳法

基本中

1-A

1-B

1-C

1-A A comes in with straight left punch in Gung Bo (弓 步 - Bow and Arrow stance).

1-B Turning his waist, B dissolves A's punch in an upward arc. Unlike other schools of blocking with power, Gung Fu block tends to dissolve the oncoming force and return it back to the opponent. (Notice white arrow indicate the direction of turning of the waist.)

1-C Continuing his motion B follows with fingers job to attacker's eye. Notice the other hand is on guard. (Note - After constant practice the blocking and striking should be one continuous action.

2-A

2-B

2-C

2-A A leads with straight left.

2-B B steps in with Chung Sik (中式 medium stance), simultaneously deflects the punch with left slapping hand (左拍手), and strikes opponent with right knuckle fist (右插捶).

2-C A thrusts out his right, and B, without changing his position, blocks it with his left and at the same time jabs A's throat with upward finger poke from where his right hand was (右插喉掌).

ABOUT THE AUTHOR
By
Ed Parker

This is just a summation of my impressions as I observed Bruce Lee.

His system is unique, precise and extremely practical. Its principles and concepts are logical and basically sound. It is based on simplicity, but yet it is intricate; the movements are sticky but yet slippery, soft but yet firm, obvious but yet deceptive, dual but yet having oneness, angular but yet circular, not to mention the incredible speed and snap executed by Bruce Lee.

Not only is he highly adapt in his system, but as a conversationalist he is very interesting. His descriptive knowledge of other Chinese systems and their historical and philosophical background cannot help but make one an attentive listener.

He is one of the very few that I have seen who is gifted with natural ability, a gift which he undoubtedly has put to work evidenced by his superb skill.

I am glad to learn that he is writing books on Gung Fu. He confirms my faith in Gung-Fu and will be a great stimulant in present the art of Gung-Fu in its true and authentic light.

Publisher's Note: Mr. Parker is the well known Black Belt Kenpo Karate instructor of Pasadena, Calif., author of "Kenpo", owner of several Kenpo Karate studios.

3 - A

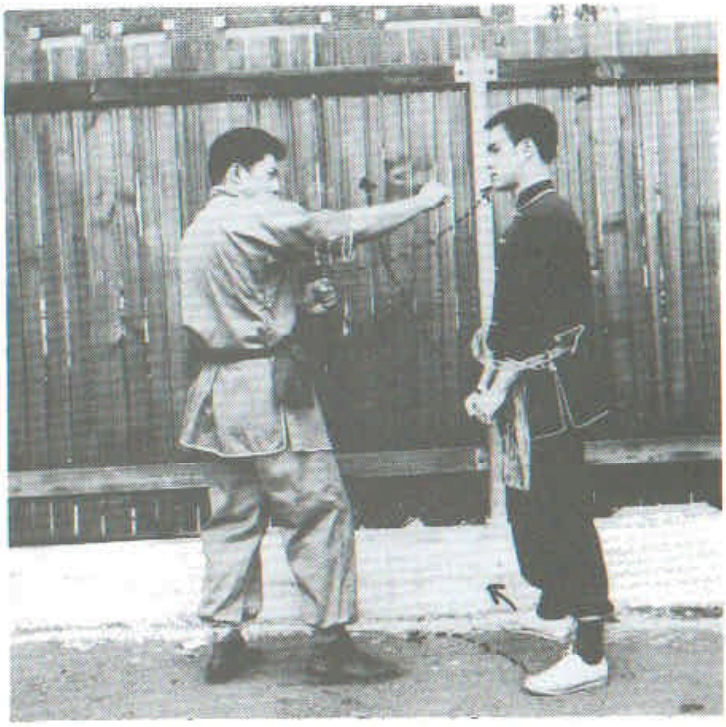
3 - B

page40.jpg 40

3-A A leads with right punch

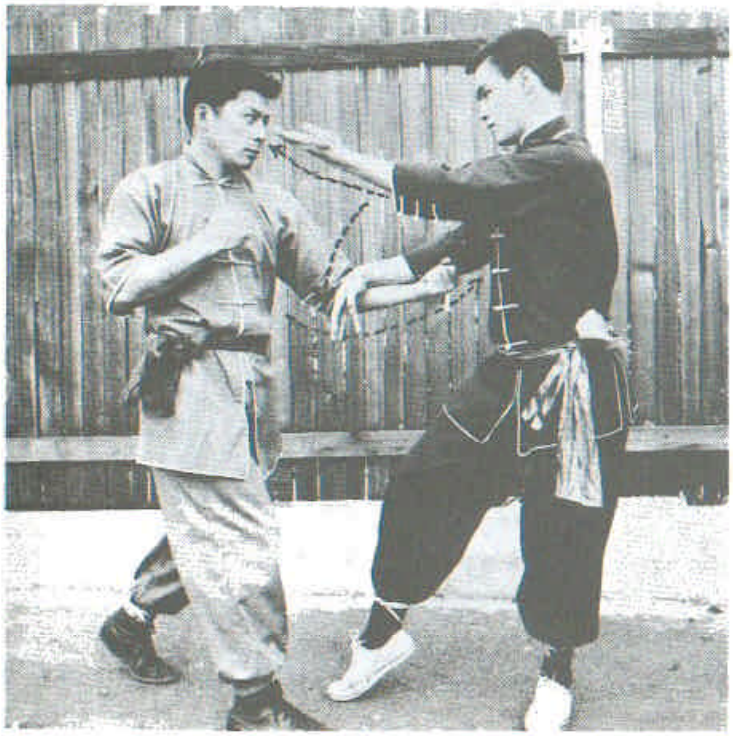
3-B At the slightest movement of A, B steps back, blocks and side kicks opponent at the same time (右側撐腿). (Notice right hand is in position.)

page41.jpg



4-A

4-B



4-C

4-A A comes in with right hook.

4-B B side steps and, turning his waist, blocks and jabs opponent's eyes simultaneously.

4-C A again comes in with left upper cut to mid-section. B side steps and at the same time slashes down his right and again jabs A with left finger thrusts (標指).

5-A

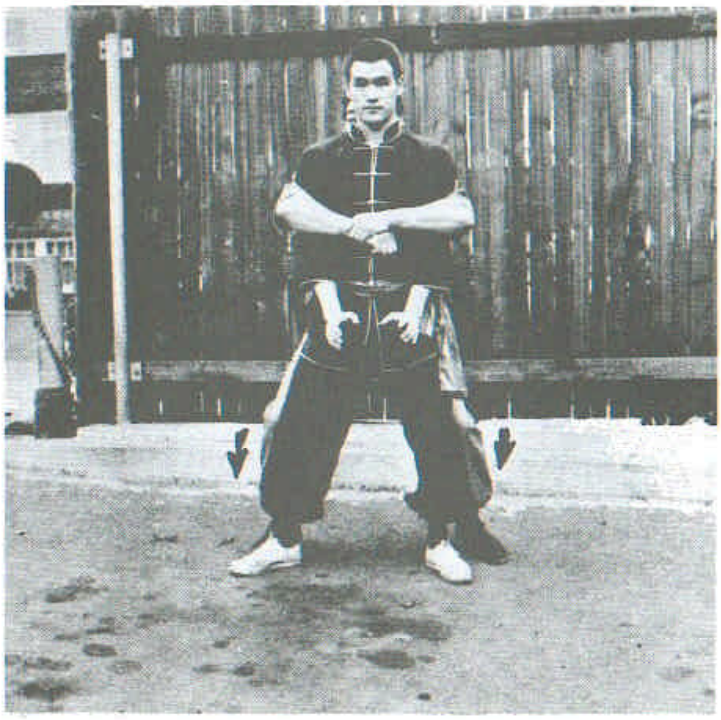
5-B

5-C

5-A A grasps B's both hands.

5-B B advances right foot and at the same time strikes A's right wrist bone by his own left thumb.

5-C After A releases the grip, B then punches his face with a straight right (冲拳).

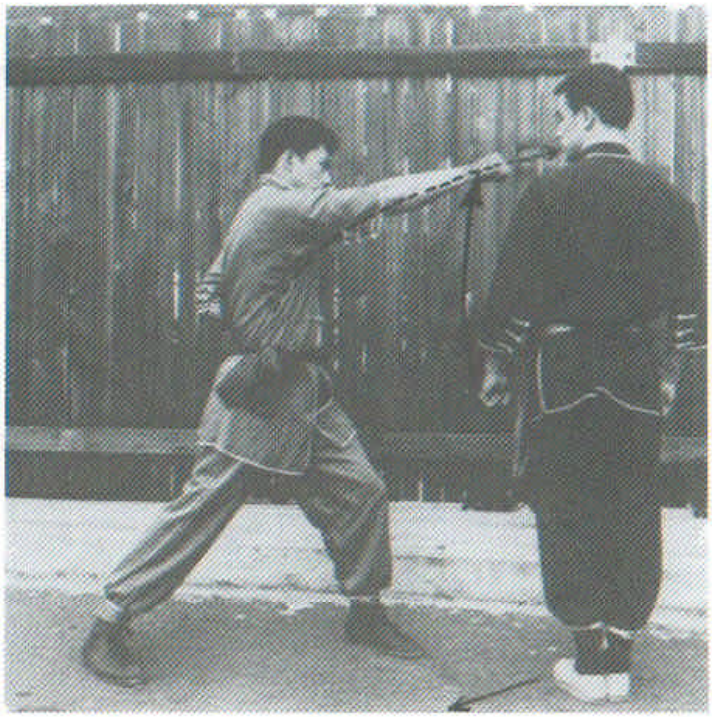


6-A

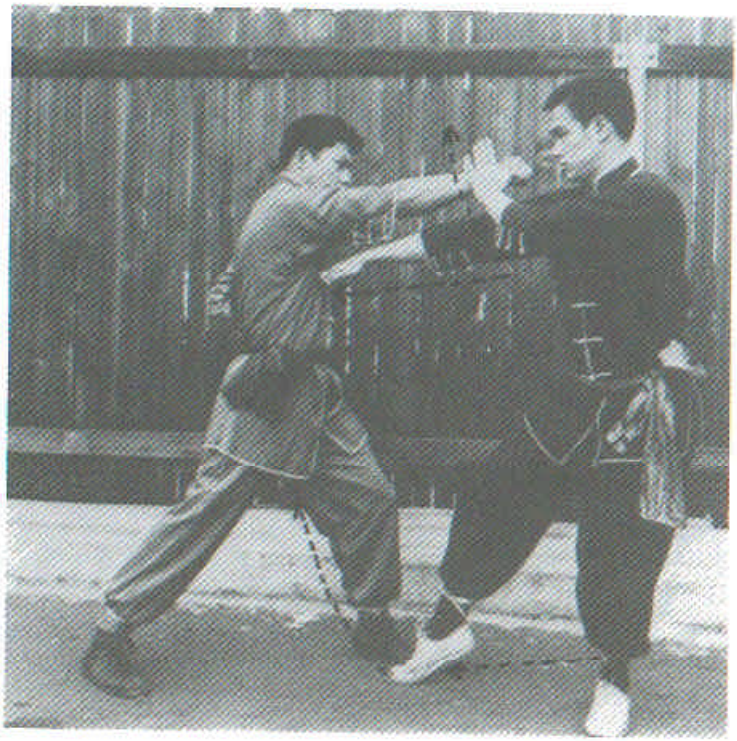
6-B

6-A A bear-hug from the rear. B relaxes and sinks down his weight.

6-B Turning his waist, B strikes A with his elbow and at the same time steps on his toes.



7-A A comes in with straight-right in left Gung Bo.



7-B B side steps, deflects the punch, and strikes A's ribs with knuckle fist (插 拳).

"I highly recommend Mr. Bruce Lee's book on the Chinese Art of Gung Fu. This informative book will reveal an outstanding style of Chinese self defense. I have witnessed the teaching methods of the author and I find it concise and effective. I was also astonished with the vast knowledge this youthful Chinese Master possesses.

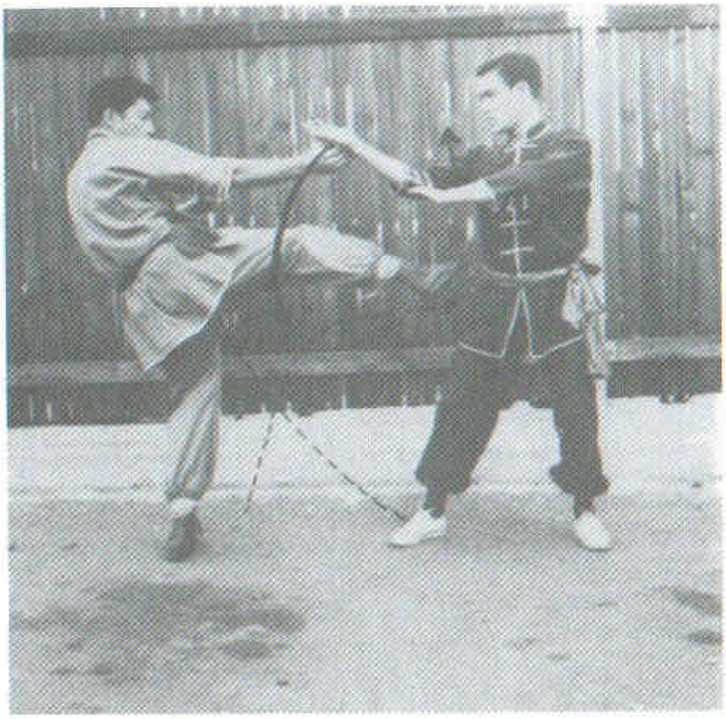
His "Wing Chung" system is unlike any other system of Gung Fu that I have seen. I have never seen anything like it.

I am convinced that this would be the system I would study if I were to begin my Gung Fu training again.

Master Bruce Lee, who is a gentleman, can actually apply his seemingly gentle method in actual application.

I have seen him perform with the grace and agility of a panther, and with lightning speed. He is truly a Master of a great style of Chinese fighting."

WALLY JAY
Head Instructor "Island Judo and Ju Jitsu" club, Alameda, California.
Black Belt 5th degree in Ju Jitsu - Black Belt 3rd degree in Kodakan Judo



8-A

8-A A comes in with right side kick (右側撐腿)

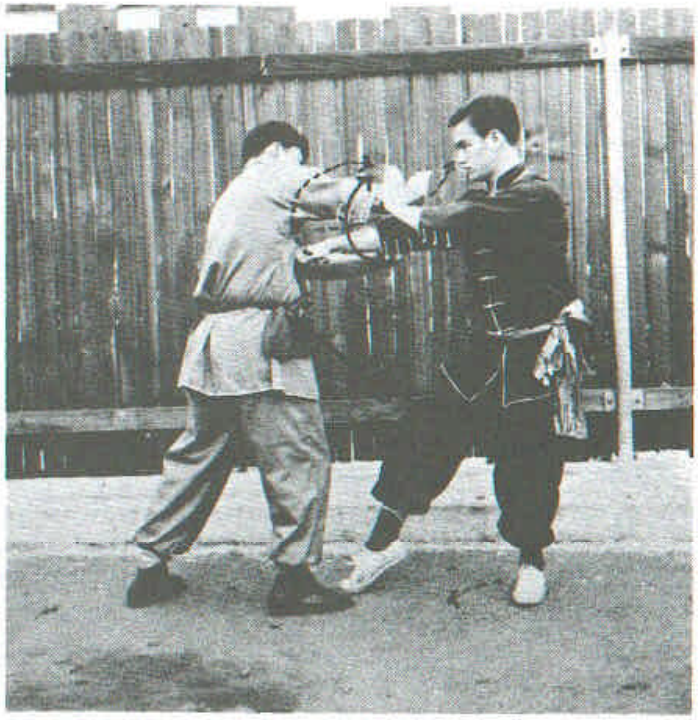
8-B

8-B B comes down (in an arc) with hand hook (notice left hand is on guard) and counters by kicking A's groin with straight toe kick.
(直挑腿)

page51.jpg

9-A

9-B



9-C

9-A A pushes B.

9-B B, turning his waist and advancing, deflects and strikes A with knuckle fist (指 捶) as shown in the picture.

9-C Turning his right hand in an arc to lead the oncoming movement of the opponent, B skips in and strikes him with the knee.

10-A

10-B

10-C

10-A, B A comes in with lunging straight right punch.

10-C Without backing, B turns his waist and leads the opponent to the direction of his own movement.

10-D A intends to pull each right punch and snap out his left.

10-E At the slightest movement of withdrawal, B follows and slaps down and locks A's both arms; at the same time, B strikes A with a straight right.

11-A

11-B

page58.jpg

11-C

11-A, B A intends to throw B as shown in picture A & B. (There are, by the way, 36 throwing techniques and 72 joint locks in the art of Gung Fu.)

11-C Turning his waist, B grasps A's left hand and at the same time turns his shoulder out and downward against A's shoulder.

INTRODUCTION

The center of the Far Eastern martial arts has been the art of Gung Fu, whose principles and techniques pervaded and influenced the different arts of Oriental self-defense. Because Gung Fu has been shrouded under a veil of utmost secrecy, it is very seldom heard of in the Western world as well as many other Far Eastern countries.

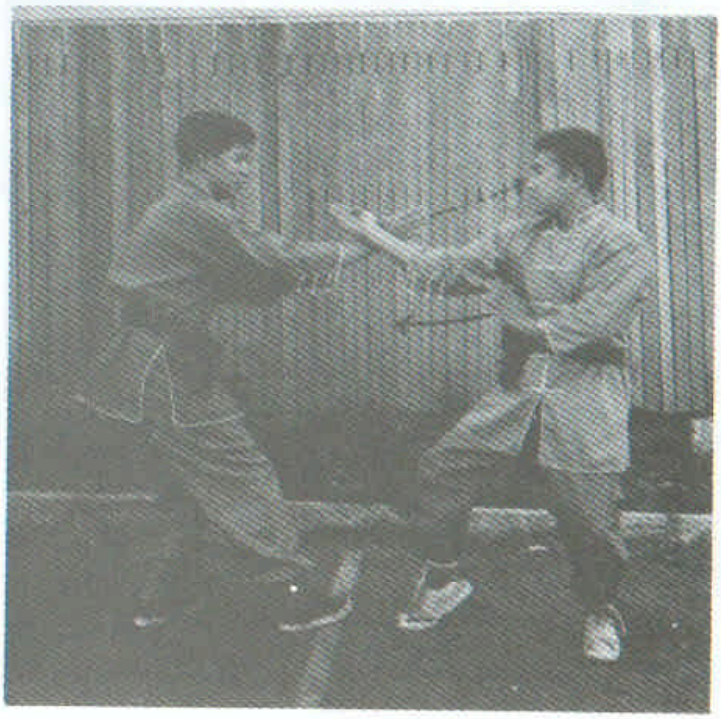
Its history covers four thousand years. At first in the midst of antiquity, Gung Fu was simply a no-holds-barred type of fighting, but as the centuries went by, countless generations of its practitioners gradually perfected it, smoothing out the rough spots, polishing the techniques, until it began to emerge as something definitely superior. Later on, the studies of anatomy, religions, psychology are included, and Gung Fu advanced one more step to a highly scientific and philosophical type of self-defense. That was around two or three thousand years ago! Gung Fu is for health promotion, cultivation of mind, and self-protection. Its philosophy is based on the integral parts of the philosophies of Taoism (道 学), Ch'an (Zen 禪) and I'Ching (Book of Changes 易 経 – the ideal of giving with adversity, to bend slightly and spring back stronger than before, and to adapt oneself harmoniously to the opponent's movements without striving or resisting. The techniques of Gung Fu emphasize not on power but in conservation of energy and moderation without going to either extreme (Yin & Yang 陰 陽). That is why a true Gung Fu man never opposes force (which will create reaction) or give way completely; he is simply pliable, as a spring. He seeks to merge harmoniously with the oncoming force of the opponent -- to be the complement, and not the opposite

11-D

11-E

11-D, E By kicking his right foot sharply into a Gung Bo, B counters A by throwing him. (Knee or fist can follow to finish opponent.)

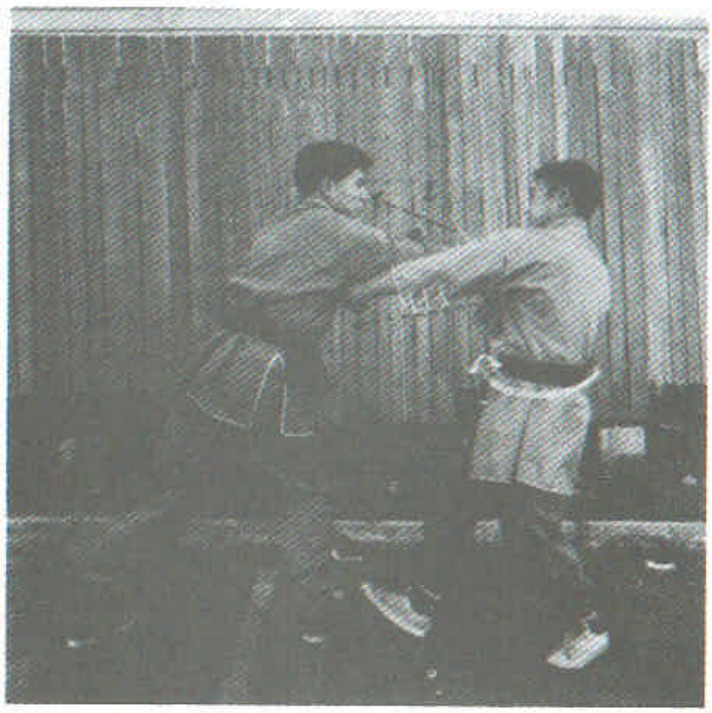
page61.jpg



12-A

12-A Opponent A steps in with straight finger jab.

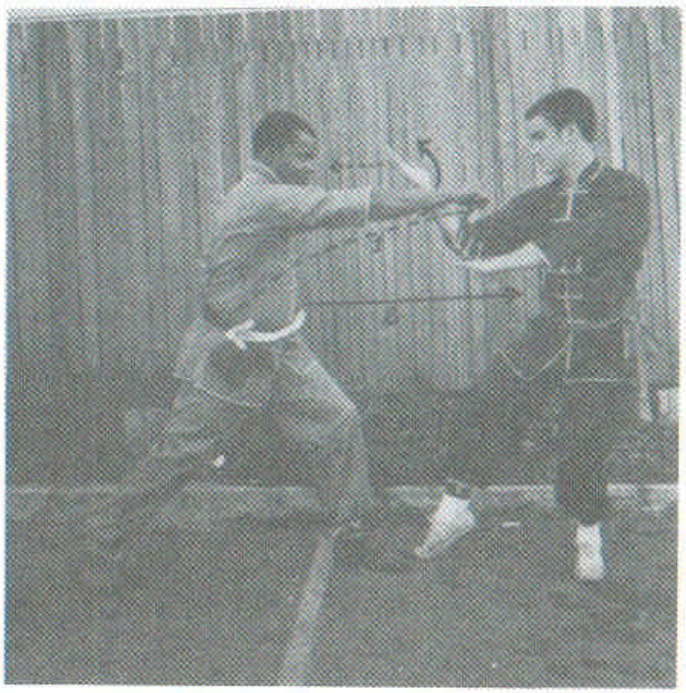
page62.jpg



12-B Without backing, B leads A's force by turning his waist, and at the same time strikes A with the edge of the hand.

(Acknowledgement: Mr. Charles Woo, the defender, by the way, is a 2nd degree black belt Judo holder.)

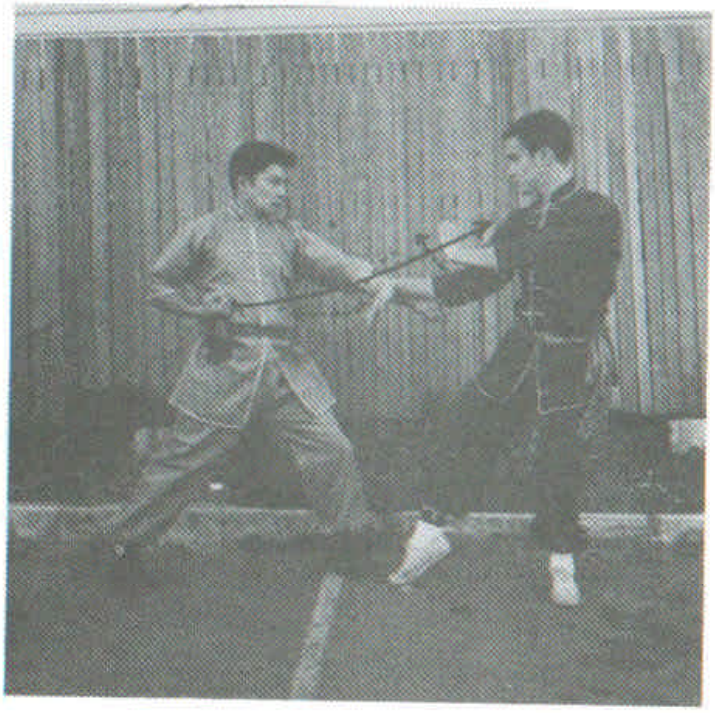
page63.jpg



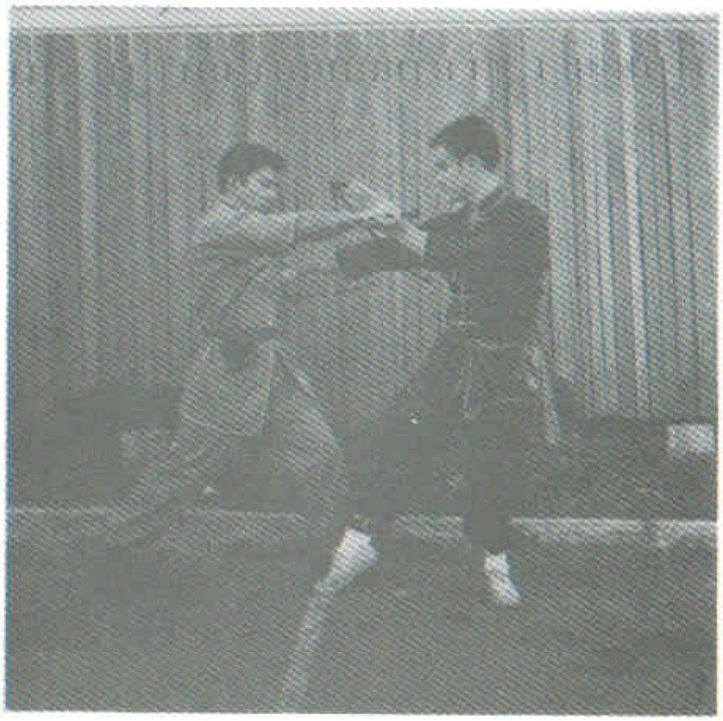
13-A A leads with straight right. B deflects by right hand. (Notice left hand on guard.

page64.jpg

13-B A withdraws right and shoots out his left to mid-section. B simply slaps the punch downward with left and jabs A's eyes with his right from previous position.



14-A A comes in with left. B deflects the punch with right hand hook.



14-B A withdraws his left and shoots out his right. B deflects the oncoming punch with left hand (in the form of an arc) and, following A's withdrawal of energy, he strikes A with right knuckle fist (from the previous hooking position).

15-A

15-B

15-A, B Right at this moment X doesn't concentrate on any of his opponent's actions, he simply has a quiet awareness of the immediate situation without thinking of the outcome or anything. Opponent, A, attacks X with right hook. X, turning his waist, blocks and jabs A with right. (Notice the changing of foot work.)

of the opponent's force.

It has been quite a number of years that I have indulged myself in Wing Chuing, the School of Artlessness; my mind is no longer distracted by the opponent, "self", or formal techniques, etc. I have made my opponent's techniques my techniques; my task is simply to complete the other half of the "oneness", and my action is that of Wu-Wei (spontaneous act) which is according to the circumstances without pre-arrangement. The training of mind and imagination, imagination and Ch'i (breath), breath and energy, etc., are all gone. There is nothing to "try" to do; everything simply flows.

Now I am asked, by a very good friend of mine, to write a book on Gung Fu techniques, which I have long forgotten. In order to fulfill his wish, I have included here in this book some of the basic techniques of the various schools of Gung Fu I have learned before my joining the school of Wing Chuing. It is true that the mental aspect in Gung Fu is the desired end; however, in order to achieve this stage, technical skill of the art has to come first.

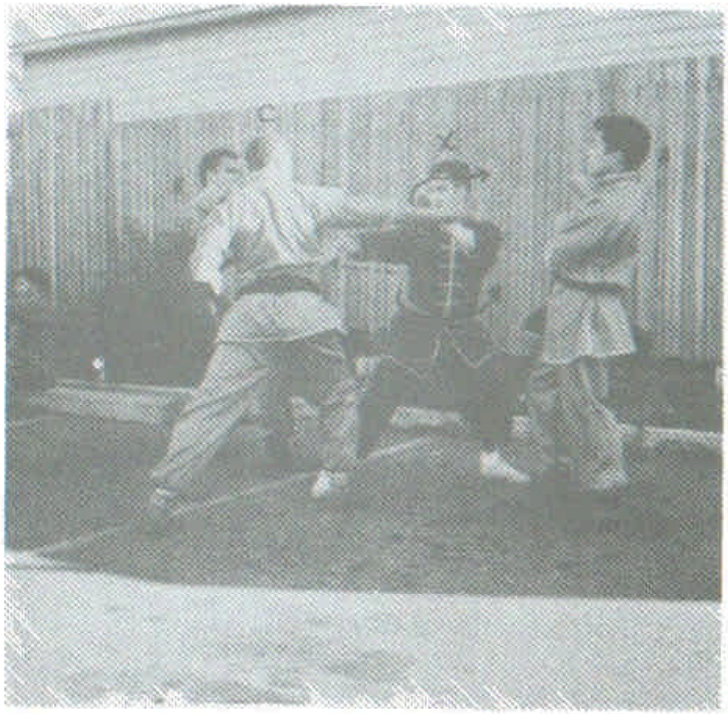
I like to stress that this is not a text book on Gung Fu formal techniques; rather, it is a book on some of the basic blocking and striking in that art. In the very near future, after my trip back from the Orient, a more thorough book entitled "The Tao of Chinese Gung Fu" will be published.

Since my three years stay in the U.S. I've seen unscrupulous "business men", Americans and Chinese alike, who claim themselves professors or masters of Gung Fu, and whose movements resemble nothing to any school in Gung Fu. I hope that people who are about to

15-C

15-B, C As X disables A, B comes in with a straigh punch. From where he is, X turns his waist, deflects and side kicks B.

15-D

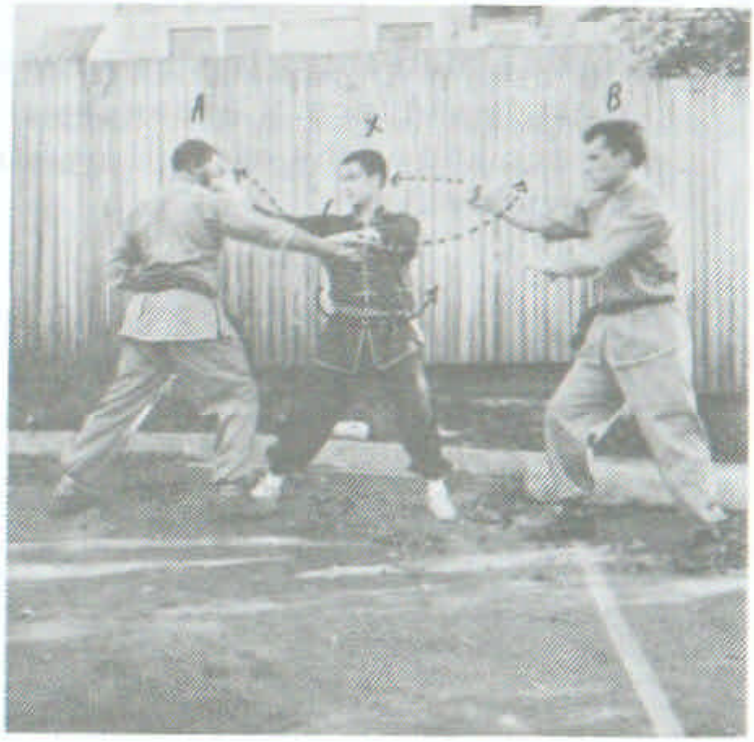


15-C, D At this moment C lunges in with straight right to the face. X dissolves the punch in an arc and at the same time strikes him with a knuckle fist.

page71.jpg

16-A

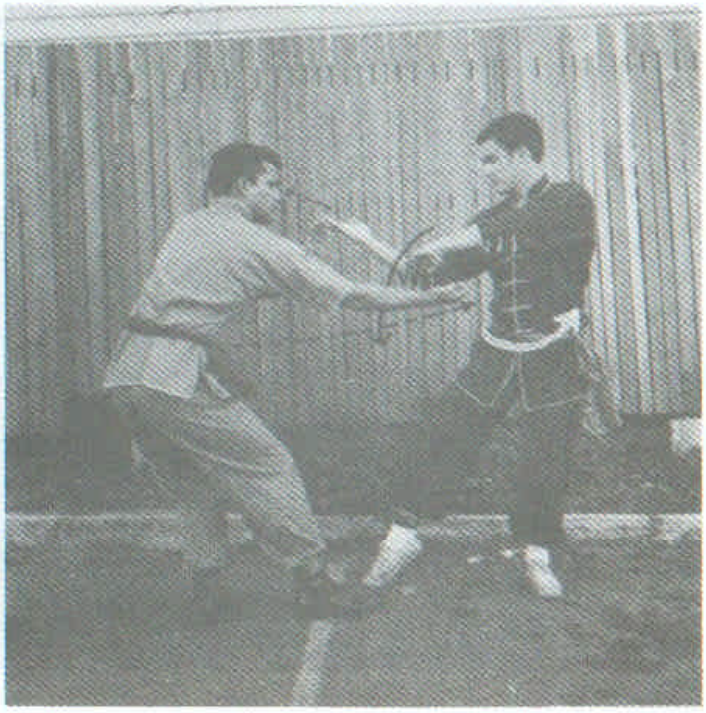
16-B



16-C

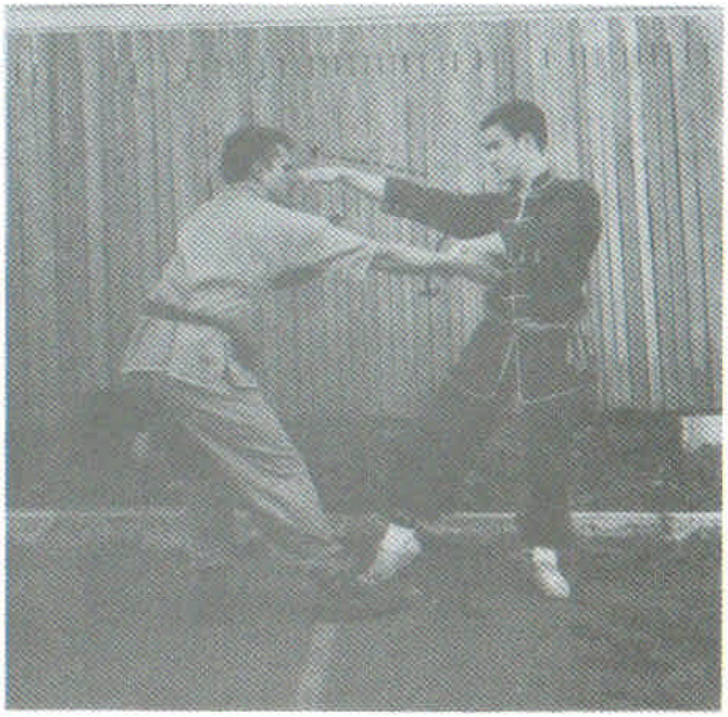
16-A, B A steps in with right straight heart punch. X deflects the punch and counters with back fist (掛捶 to A's temple. At this moment B comes in.

16-B, C X sweeps his left back in an arc and slides in with kneeing horse and strikes B's groin as shown in the picture.



17-A A comes in with straight knuckle fist to solar plexus.

17-B



17-A, B B, turning his waist, hooks A's punch and counters with straight knuckle fist.

page75.jpg

18-A

18-B

18-A A & B facing in ready position.

18-A, B A comes in with finger jab to B's throat. B leads A's movement by turning his waist. This dissolving is not by the hand, but by the waist so as to really unbalance the oncoming force as he makes it.

19-A

19-B

19-C

19-A A and B in natural position. As A applies pressure on B's hand.

19-B B assists A by jerking him to the direction of his force, and at the same time skips in with a straight thrust kick. (Notice the left hand is in position.)

19-B, C A blocks B's straight kick with his left. B, by following the direction of A's blocking, turns and kicks A's knee with a low side thrust kick.

page79.jpg

join these schools will examine closely. I also like to add that whoever reads this book will not be able to become a "holy terror"; nor can he be a Gung Fu expert in just three easy lessons.

B. Lee

THE BASIC THEORY OF YIN AND YANG IN THE ART OF GUNG FU

At first I did not plan to include this section as the book deals only with basic techniques; however, on second thought, I believe the reader will be greatly benefited by this Chinese view of life. Most likely his technique (no matter what system he is in) will also be greatly improved.

The basic structure of Gung Fu is based on the theory of Yin/Yang (陰 陽), a pair of mutually complementary forces that act continuously, without cessation, in this universe. This Chinese way of life can be applied to anything, but here we are interested in its relationship to the art of Gung Fu. The black part of the circle is called Yin (陰). Yin can represent anything in the universe as:

negativeness, passiveness, gentleness, insubstantiality, femaleness, moon, darkness, night, etc. The other complementary part of the circle is Yang (陽), which represents positiveness, activeness, firmness, substantiality, maleness, sun, brightness, day, etc.

The common mistake most people make is to identify this Yin/Yang symbol, T'ai-Chi (太 極), as dualistic; that is Yang being the opposite of Yin, and vice versa. As long as we separate this "oneness" into two, we won't achieve realization. Actually, all things have their complementary part; it is only in the human mind and his perception that

page80.jpg

they are being separated into opposites. The sun is not the opposite of the moon, as they complement and are interpendent on each other, and we cannot survive without either of them. In a similar way, a male is but the complement of the female; for without the male, how on earth do we know there is female, or vice versa. The "one-ness" of Yin/Yang is necessary in life. If a person riding a bicycle wishes to go somewhere, he cannot pump on both the pedals at the same time or not pumping on them at all. In order to move forward, he has to pump one pedal and release the other. So the movement of going forward requires this "oneness' of pumping and releasing. Pumping then is the result of releasing, and vice versa; each being the cause of the other.

In the Yin/Yang symbol there is a white spot on the black part, and a black spot on the white one. This is to illustrate the balance in life, for nothing can survive long by going to either extremes, be it negativeness or positiveness. Therefore, firmness must be concealed in gentleness, and gentleness in firmness, and that is why a Gung Fu man must be pliable as a spring. Notice that the stiffest tree is most easily cracked, while the bamboo or will bend with the wind. So in Gung Fu, or any other system, one must be gentle yet not giving away completely; be firm yet not hard, and even if he is strong, he should guard it with softness and tenderness. For if there is no softness in firmness, he is not strong; in a similar way, if one has firmness concealed in softness, no one can break through his defense. This principle of moderation provides a best means of preserving oneself, for since we accept this existence of the one-ness (Yin/Yang) in everything, and do not treat it dualistically, we thus secure a state of tranguility

page81.jpg

by remaining detached and not inclining to either extreme. Even if we do incline on one extreme, be it negative or positive, we will flow with it in order to control it. This flowing with it without clinging is the true way to get rid of it.

When the movements in Yin/Yang flow into extremes, reaction sets in. For when Yang goes to the extreme, it changes to Yin; and when Yin (activated by Yang) goes to the extreme, it returns back to Yang (that is why each one is the result and cause of the other.) For example, when one works to the extreme, he becomes tired and has to rest (from Yang to Yin). After resting, he can work again (Yin back to Yang). This incessant changing of Yin/Yang is always continuous.

The application of the theory of Yin/Yang in Gung Fu is known as the Law of Harmony, in which one should be in harmony with, and not against the force of the oponent. Suppose A applies strength on B, B shouldn't oppose or gives way completely to it. For these are but the two extreme opposites of B's reaction. Instead, he should complete A's force, with a lesser force, and lead him to the direction of his own movement. As the butcher preserves his knife by cutting along the bone and not against it, a Gung Fu man preserves himself by following the movement of his opponent without opposition or even striving (Wu-wai 無為 spontaneous, or spirit action). This spontaneous assisting of A's movement as he aims it will result in his own defeat.

When a Gung Fu man finally understood the theory of Yin/Yang, he no longer "fusses" with so-called "gentleness" or "firmness"; he simply does what the moment requires him to do. In fact, all conventional forms and tech-

niques are all gone, his movements are those of everyday movements. He doesn't have to "justify" himself like so many other masters have, claiming his spirit or his internal power; to him' cultivation of martial art in the long run will return to simplicity, and only people of half-way cultivation justify and brag about themselves.

Bruce Lee
Oakland, California

DIFFERENCE IN GUNG FU STYLE

The techniques of a superior system of Gung Fu is based on simplicity. It is only the half cultivated systems that are full of and unnecessary wasted motions.

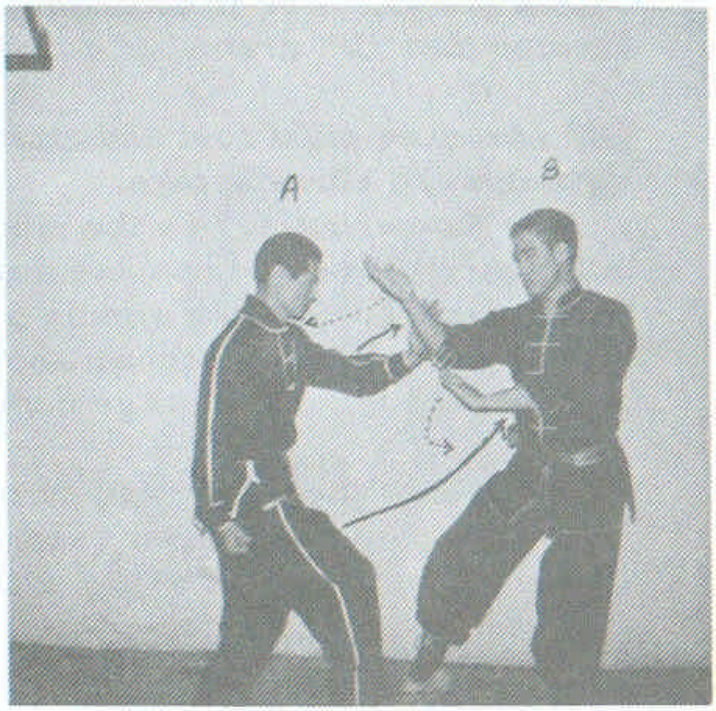
Simplicity is the natural result of profound and long study of the "way" of movements. A good Gung Fu man is a simplifier.

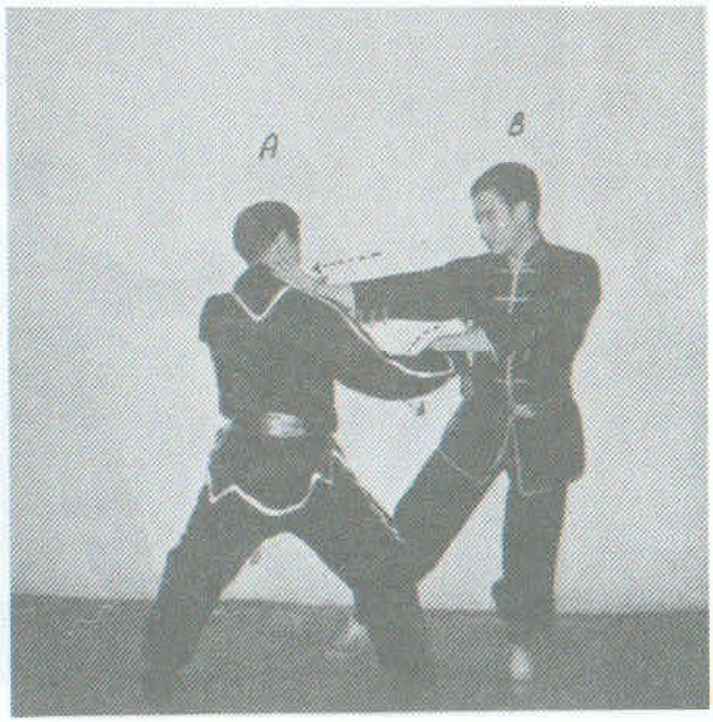
Here are some examples of a slower system against the more effective Gung Fu techniques.

Fig. 100 "A" advances with "pow chuie", upper cut blow.

Fig. 101 "B", without wasted motions, simply hooks down with his left hand and strikes "A"s carotid artery by following his withdrawing energy.

page84.jpg





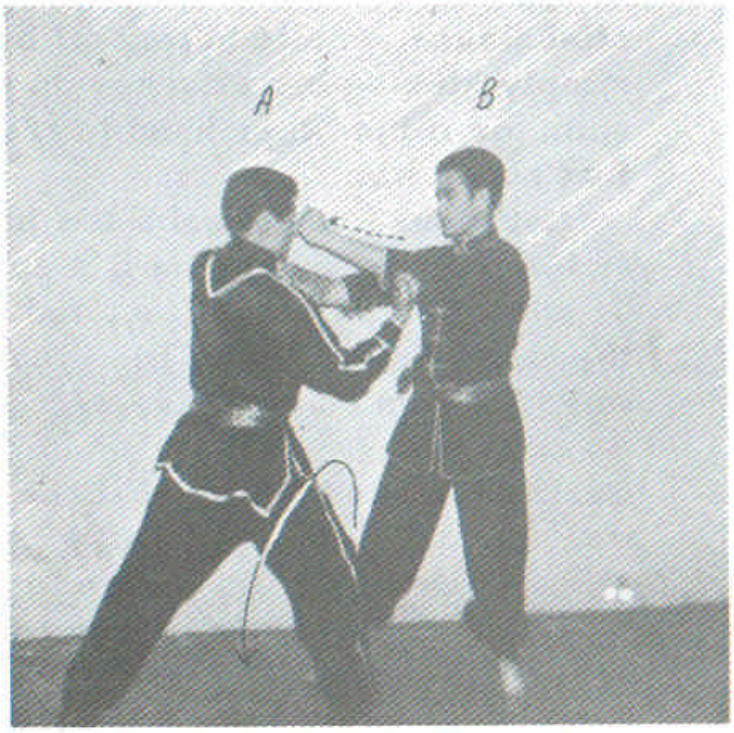
85
page85.jpg

Fig. 200 In Gung Fu one never grabs someone as shown. For illustration, let's assume that "B" grabs "A"s clothing.

Fig. 200 "A" advances right foot and attempts right upward elbow stroke.

It is dangerous to use the elbow in far range - as you can see during "A"s advance, "B" can simply punch straight (Fig. 201). Elbows should be reserved for close range combat.

Fig. 202 "B" continues the action and throws "A" with cross hock throw, and simultaneously strikes "A"s jaw with heel of hand blow.



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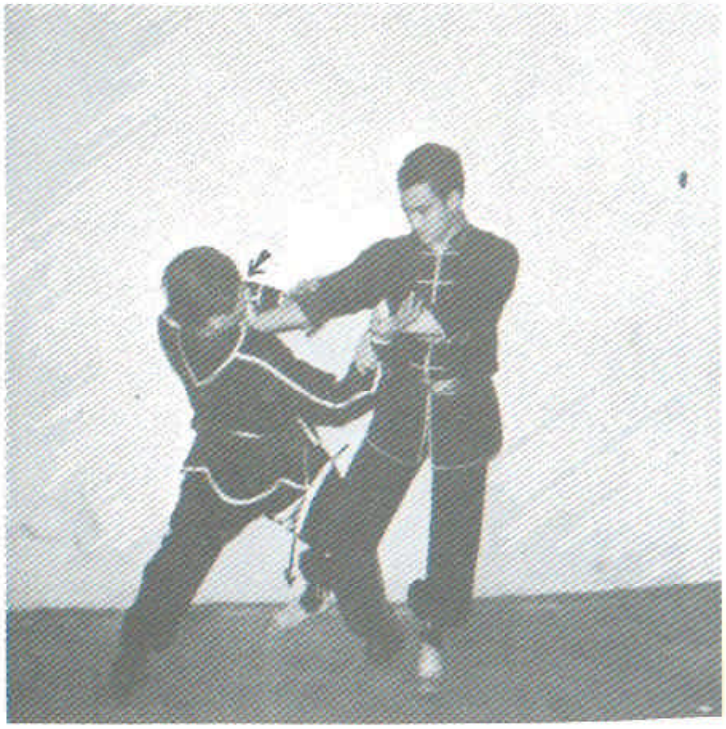

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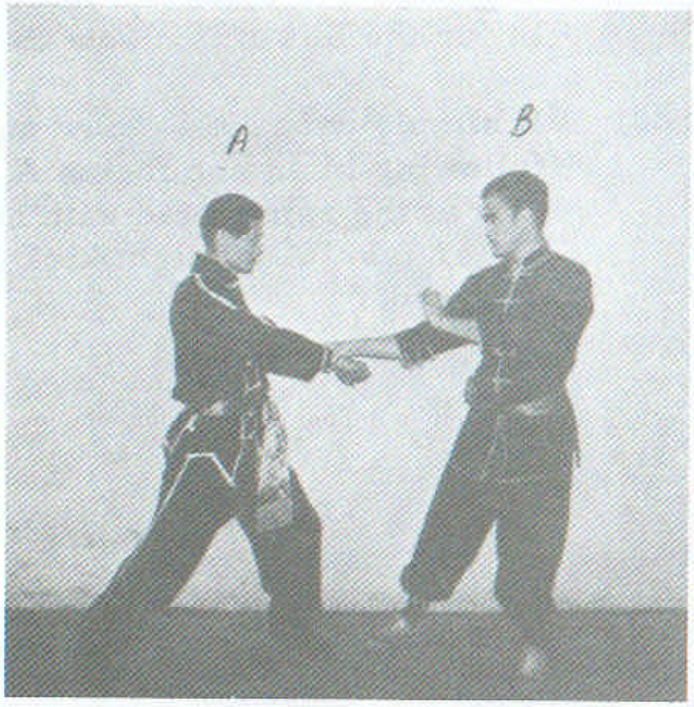
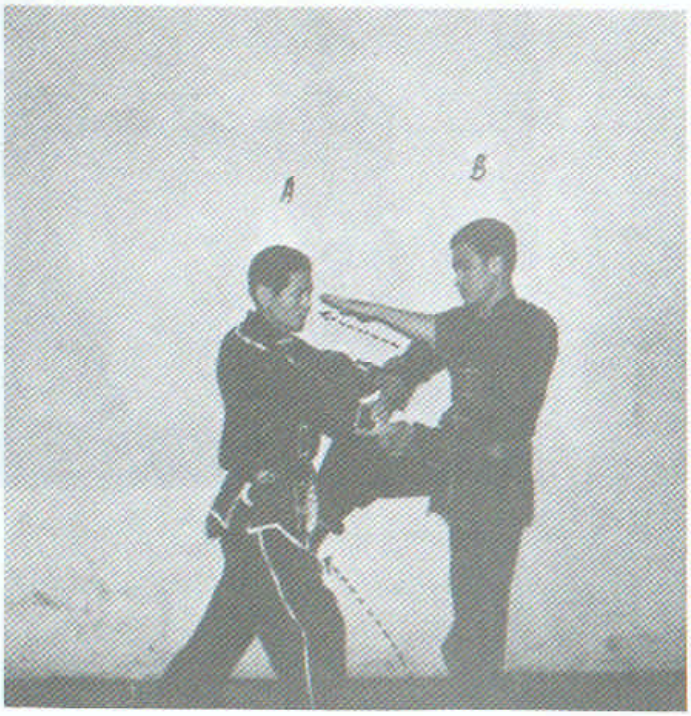
page87.jpg

Fig. 300 When grabbed by somebody, instead of applying joint lock or pushing him off-balance, one is better off by simply kicking his attacker on the shin, or if his other hand is free, just punch him.

Let's assume B grabs A's hand and A tries to unbalance B's posture by advancing his right foot and at the same time pushing B's elbow toward his own body. (Fig. 3A)

Fig. 301 During the process of all these movements B can either kick A's groin while he advances, or just jab at his eye. Or, as shown on Figure 301, comes in with both hand jab and toe kick.





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CHINESE MARTIAL ART

The Chinese Martial Art basically consists of five "ways":

1 - Striking (打法) - Includes all techniques of palms, fists, knees, elbows, shoulders, fore-arms, head, thighs (does not include different school's special techniques like the eagle claws, the beak of the crane, the mantis hand, etc.)

2 - Kicking (踢法) - Includes all types of techniques of kicking (both northern and schools of China.)

3 - Joint Locks (擒拿) - Seventy-two techniques of different joint breaking and locking.

4 - Throwing (摔法) - Thirty-six techniques of throwing.

5 - Weapons (武器) - Eighteen different weapons.

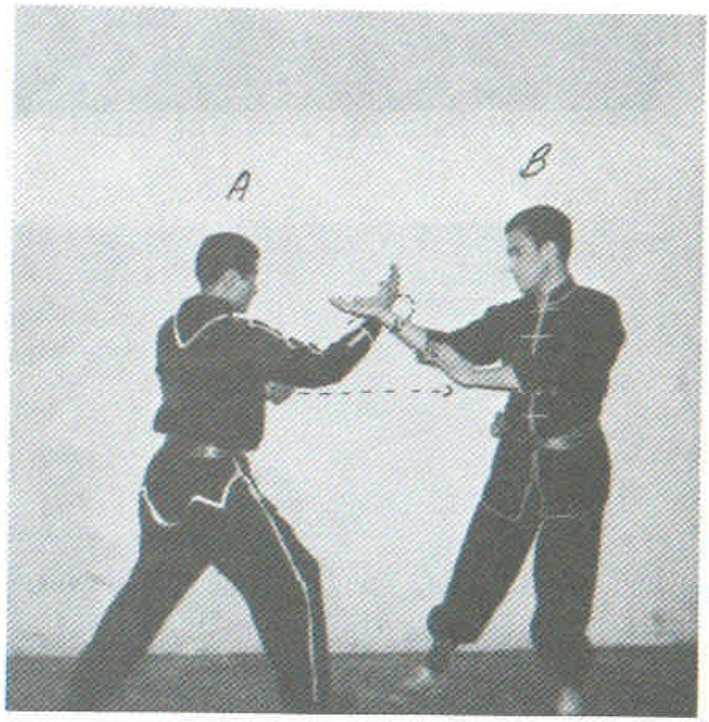
There are innumerable schools of Gung Fu in both Northern and Southern parts of China. Among some of the well known schools are:

In Northern China: - Wing Chung School (詠春派 八卦), Bart Kuar Clan (形意), Ying Yee ( ), N. Praying Mantis (螳螂), Eagle Claw School 鷹爪派), Tam Tuei (譚腿門), Springing Leg (彈腿門), Northern Sil Lum (北少林), Law Hon (羅漢拳), Lost Track School (迷踪藝), Wa Kung (西嶽華拳 Ch'a K'ung (查拳), Monkey Style (猴拳) 大聖門), Chuiang Kung P'ai (長江派), etc.

page9.jpg

Fig. 400 A grasps B's hand and pulls him in for the left side elbow to ribs.

Fig. 401 B simply drops his elbow and, following in an arc facing A, strikes him at the same time with his left finger jab. A straight kick can be followed.



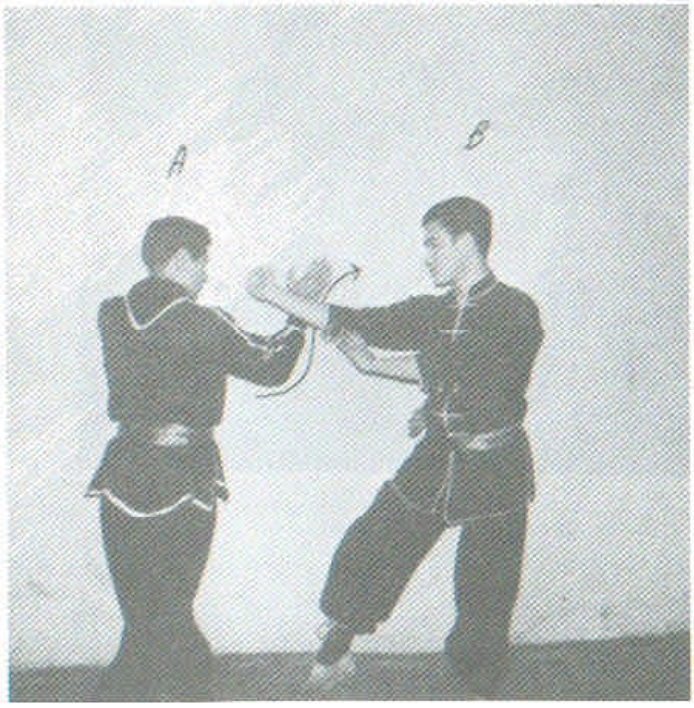
400

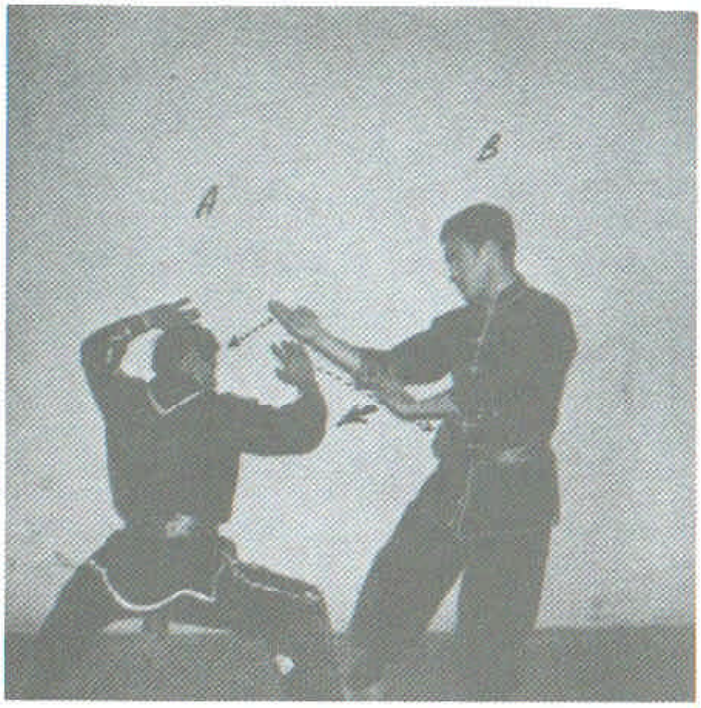
401

Fig. 500 B comes in with straight right and A, in twisting horse, deflects B's punch.

Fig. 501 Advancing into a horse stance slightly toward the right side of B, A is ready for a side hand chop to B's ribs. Actually B can now come in by a finger jab or edge of the hand by checking A's elbow with left hand.

Fig. 502 As A comes in B, in the same position all the time, deflects the punch with right hand and counters with a right hook kick. (Fig. 5C)





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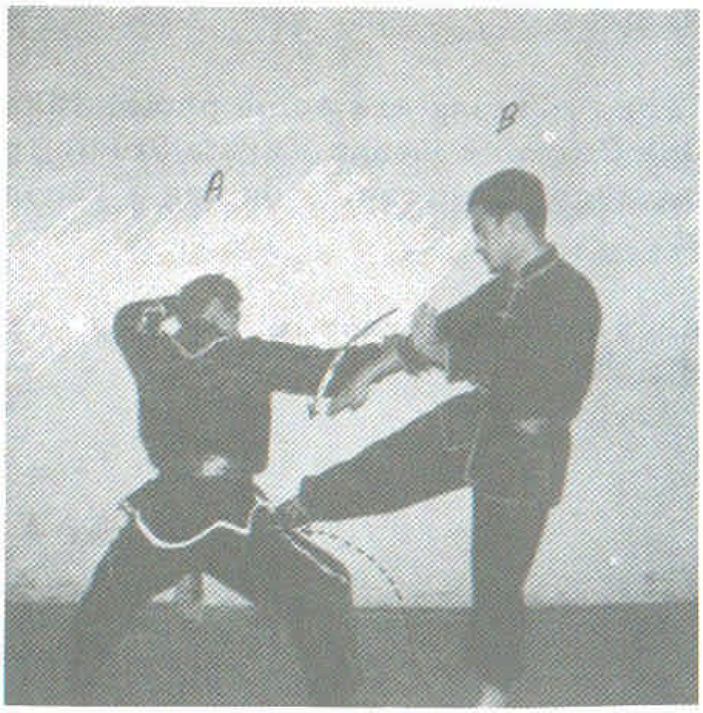

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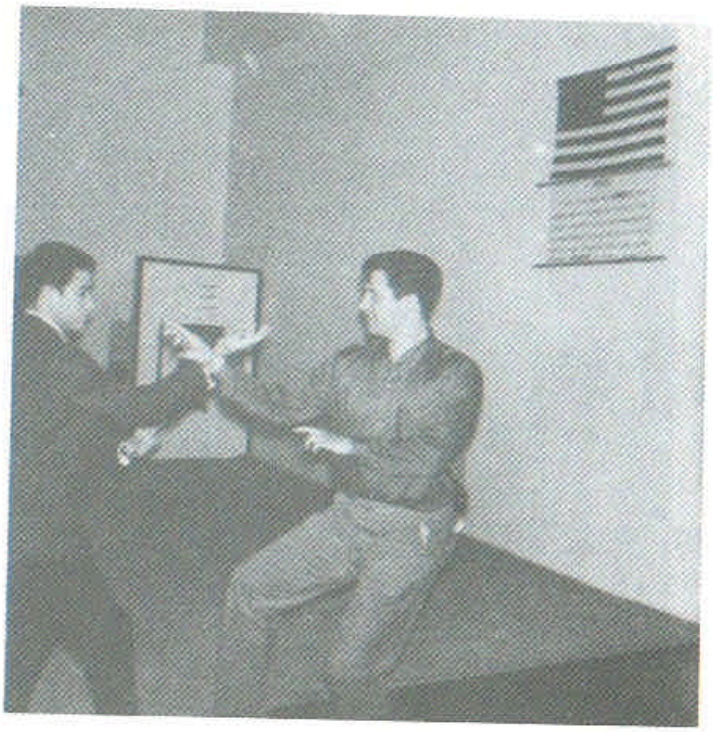

The following are some photos taken at Ralph Castro's Kenpo Karate Studio in San Francisco, California, during a recent visit.

Author and Ed Parker in "Bi Jong" or "ready position"

Front Row - Author Bruce Lee, James Lee
Back Row - Ed Parker, Ralph Castro, Black Belt Kenpo Karate instructors.

page95.jpg

Author with Ed Parker and James Lee during Gung Fu gabfest.

Author, Ed Parker and Ralph Castro. Note Castro's spacious studio.

page97.jpg

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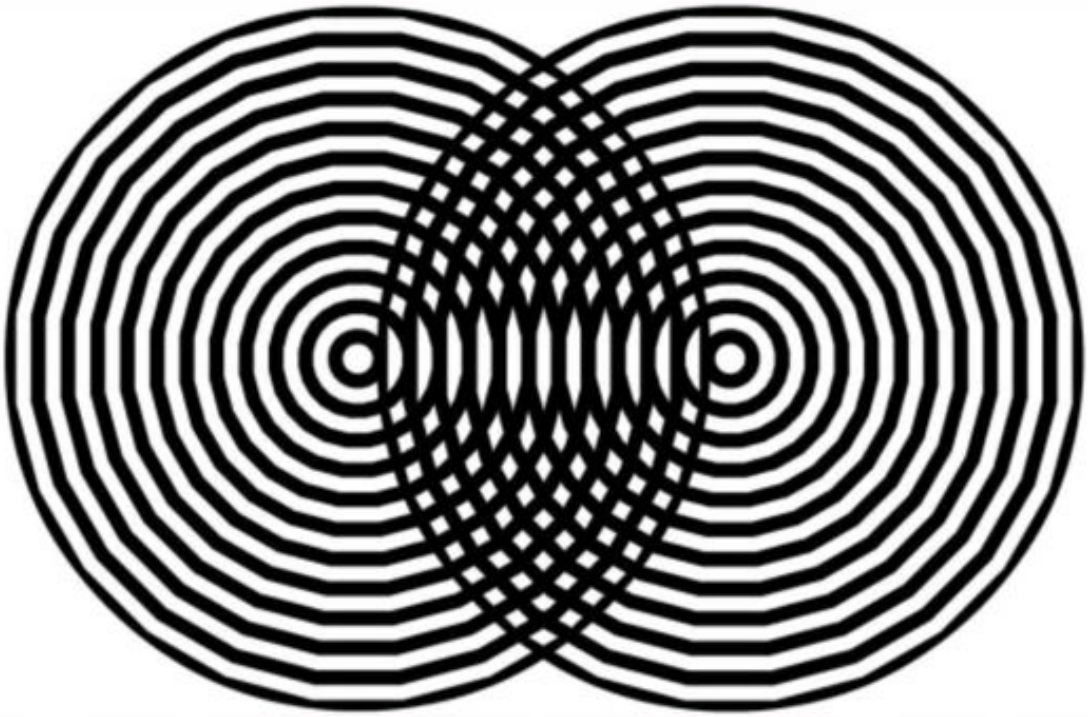
jennifersoldner.com
Aura-Reading-Practice.png (500×500)

Aura Reading Practice

jennifersoldner.com



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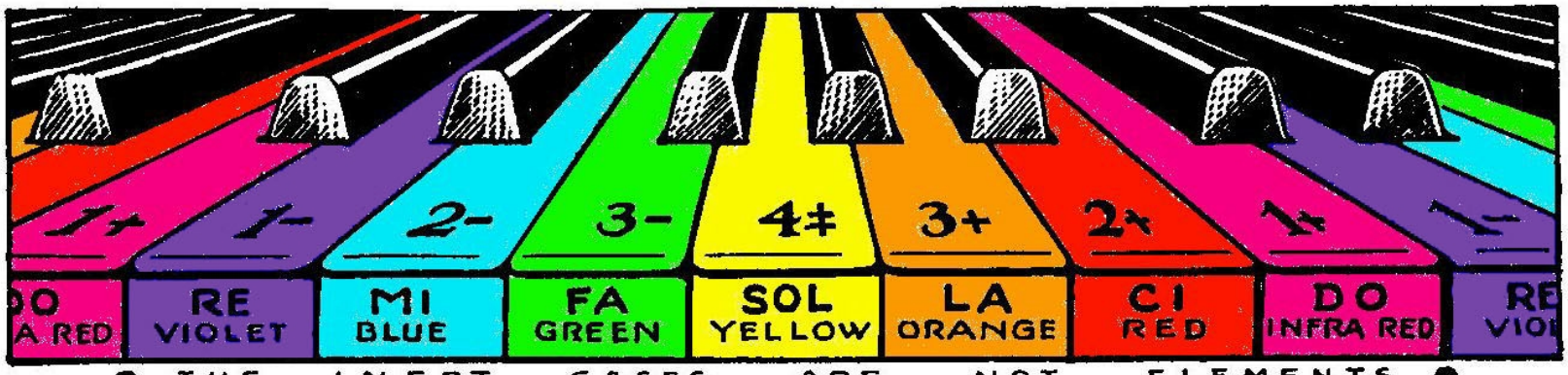
and allow your eyes to relax.
2 spirals will become 3, then 3 will become 1.
Hold focus on the **1 spiral** as long as possible.

Send
Save



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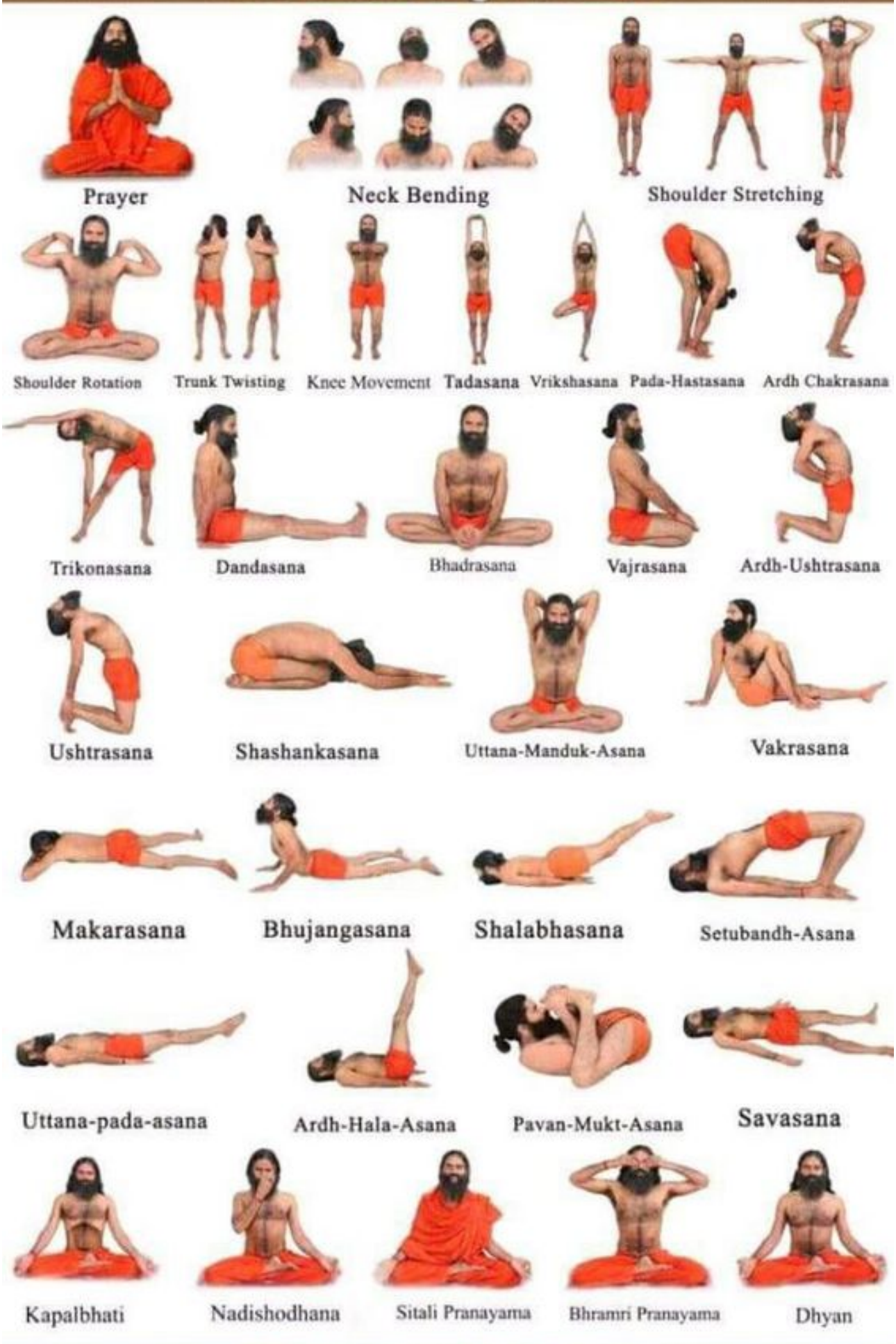
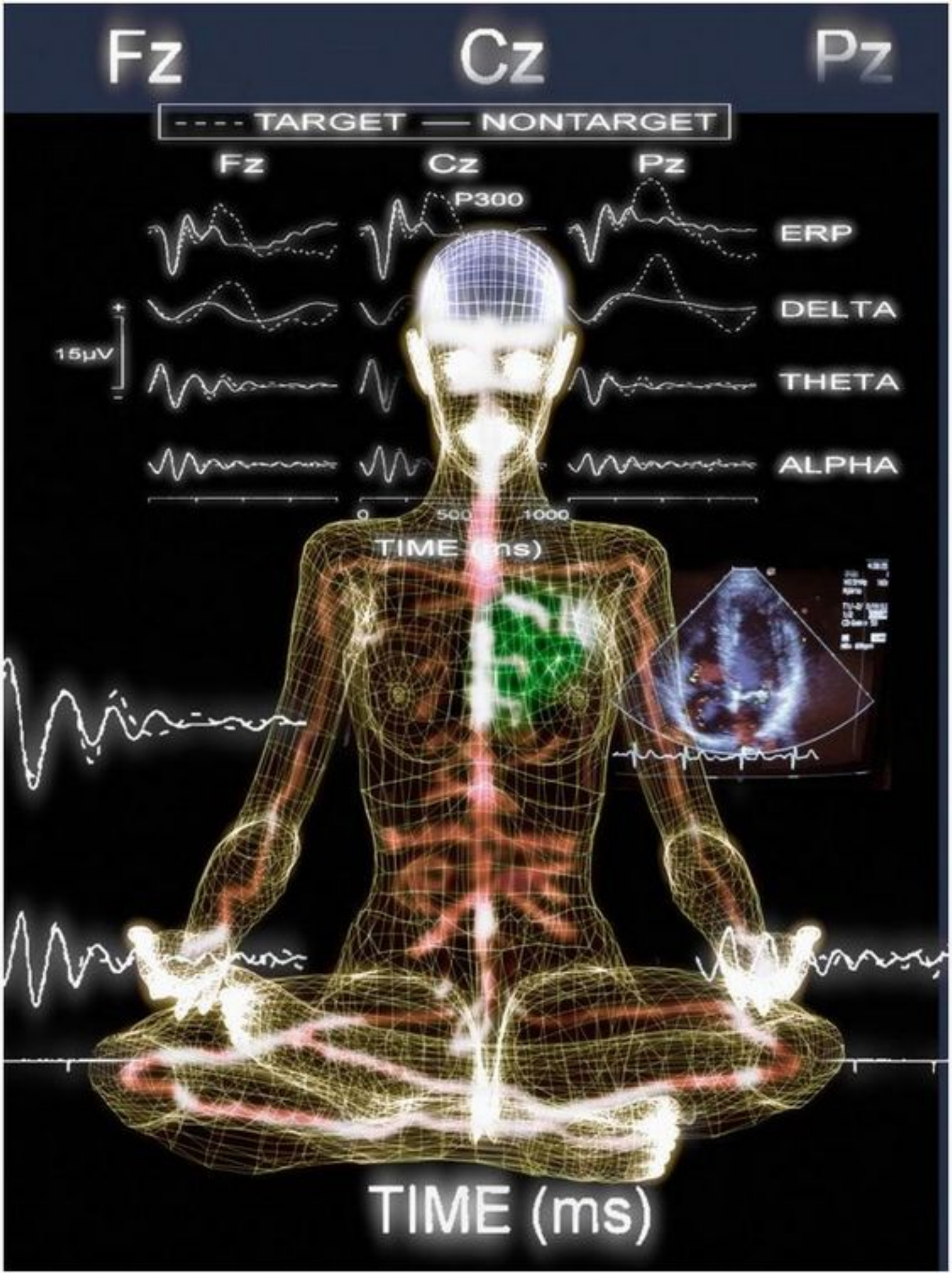
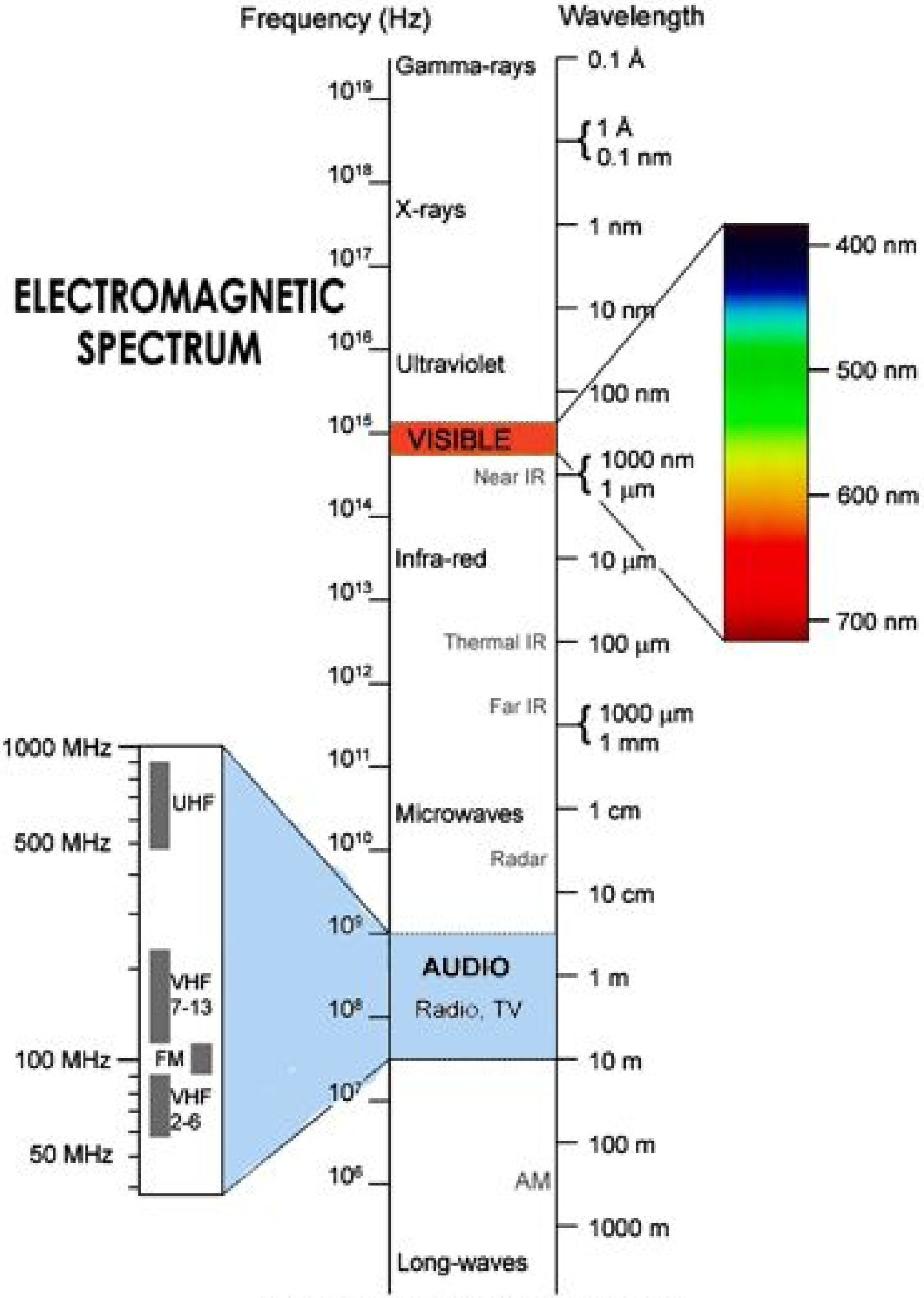
Common Yoga Protocol



#InternationalYogaDay


Fz
Cz
Pz
---- TARGET — NONTARGET
Fz
Cz
Pz
P300
ERP
DELTA
THETA
ALPHA
15µV
0
500
1000
TIME (ms)
TIME (ms)


ELECTROMAGNETIC SPECTRUM
Frequency (Hz)
Wavelength
Gamma-rays
X-rays
Ultraviolet
VISIBLE
Near IR
Infra-red
Thermal IR
Far IR
Microwaves
Radar
AUDIO
Radio, TV
AM
Long-waves
0.1 Å
1 Å
0.1 nm
1 nm
10 nm
100 nm
1000 nm
1 µm
10 µm
100 µm
1000 µm
1 mm
1 cm
10 cm
1 m
10 m
100 m
1000 m
400 nm
500 nm
600 nm
700 nm
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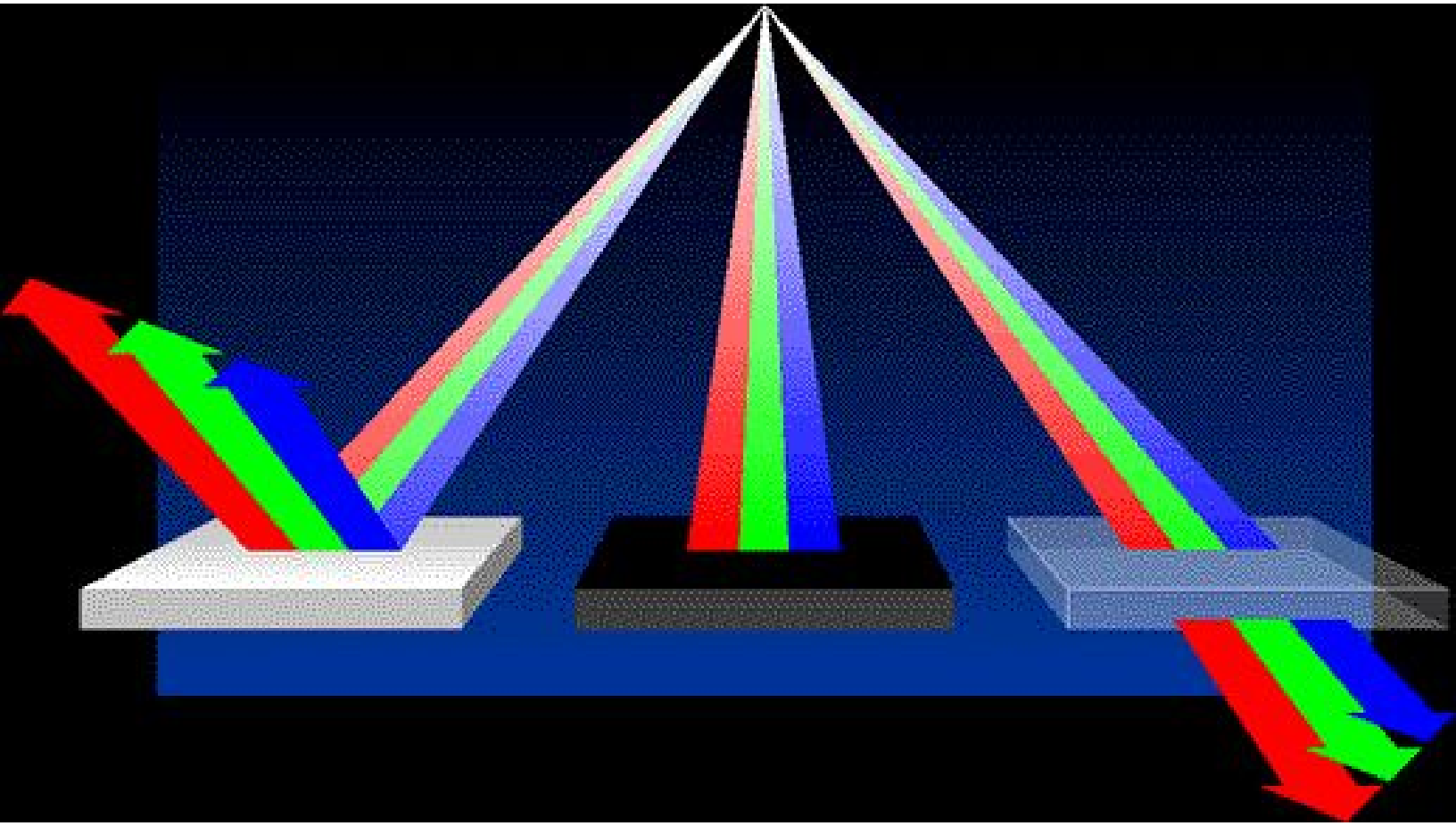
50 MHz
UHF
VHF 7-13
FM
VHF 2-6
Louis E. Keiner - Coastal Carolina University



LIGHTCODES FOR

MANIFESTING WITH FOCUS AND INTENT

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MUSIC NOTES

The Quick and Easy Guide to Music Basics

WHAT IS MUSIC?

Music is organized sound through time. Noise is unorganized sound. The waveforms of noise and music look much like this.

Noise: Music:

Music is organized through three component parts:
Rhythm, Melody, and Harmony

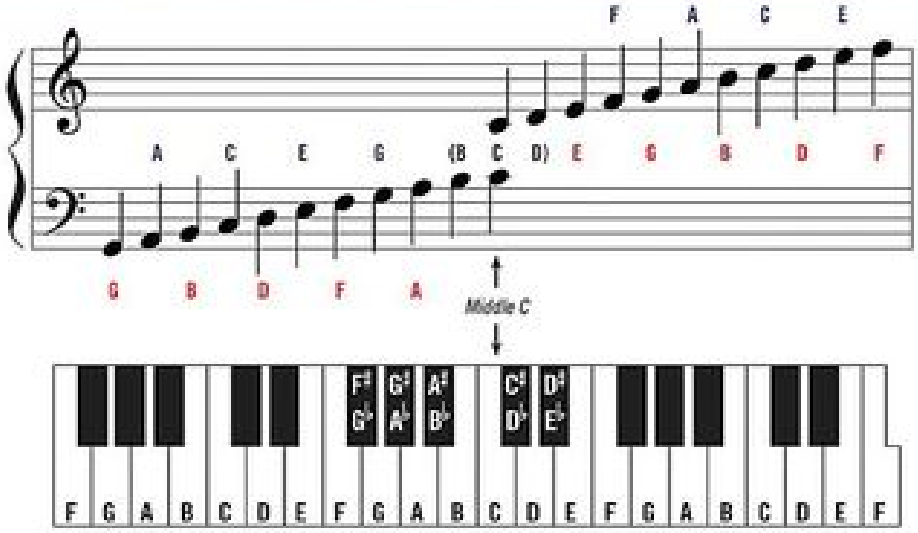
Written music (music notation) is basically a graph through time that indicates which notes to play and how long to hold them.

Music is written on the lines and spaces of a *staff*. The staff is made of five horizontal lines.

Musical tones (pitches) are represented by *notes* that are placed on the lines and in the spaces.

Silence is represented by symbols called *rests*.

THE GRAND STAFF



BASS CLEF

Lines: G B D F A
Great Big Dogs Fight Animals

Spaces: A C E G
All Cows Eat Grass

TREBLE CLEF

Lines: E G B D F
Every Good Boy Does Fine

Spaces: F A C E
Face

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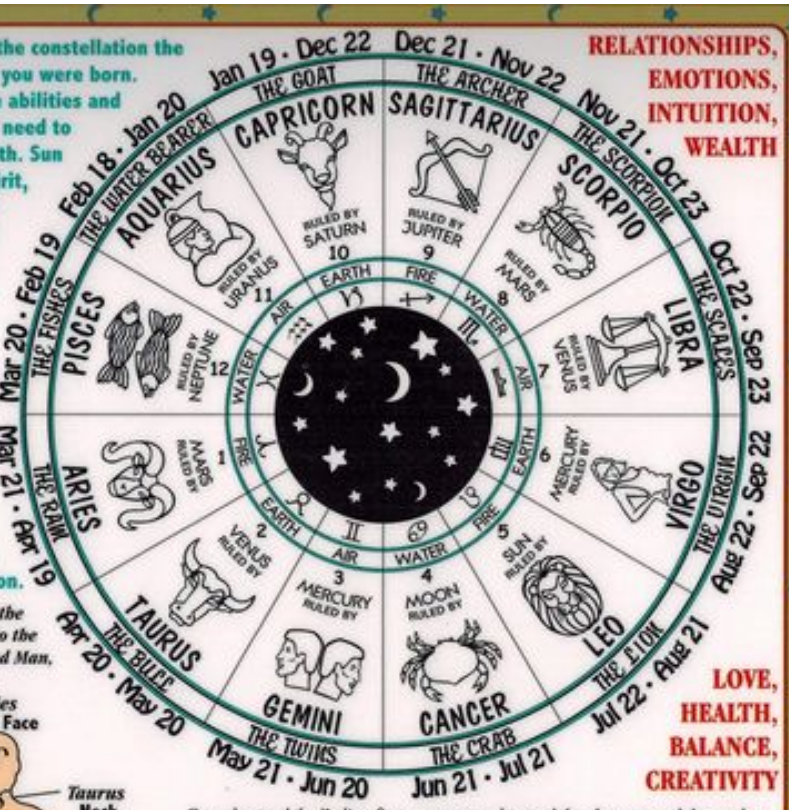
Astrology

Sun Signs — EGO and INDIVIDUALITY

		SUN SIGN PROFESSIONS & associated PROPERTIES (Color, Gem, Metal, Plant)
♈ *Aries* I Am	Active, ambitious, assertive, competitive, courageous, creative, enthusiastic, extroverted, free, individualistic, naive, self-assured. *Headstrong, impatient, pride, quick tempered.*	Soldier, explorer, smithy, leader. *Scarlet; Garnet; Iron; Basil.*
♉ *Taurus* I Have	Cautious, conventional, determined, efficient, industrious, introvert, loving, material, patient, persistent, possessive, reliable, sensual, warm. *Jealous, lazy, self-indulgent, stubborn.*	Artist, gardener, singer, builder. *Blue; Diamond; Copper; Apricot.*
♊ *Gemini* I Think	Adaptable, articulate, clever, communicative, curious, dexterous, flexible, intellectual, lively, restless, sociable, talkative, versatile, witty. *Changeable, cunning, gossip, nervous, tense.*	Journalist, sales, teacher, linguist. *Yellow; Agate; Mercury; Dill.*
♋ *Cancer* I Feel	Calm, conscientious, domestic, imaginative, introverted, intuitive, moody, quiet, protective, prudent, sensitive, sympathetic, and tenacious. *Self-pitying, sulky, touchy, unstable.*	Historian, nurse, Hotelier, sailor. *Silvery blue; Moonstone; Silver; Lettuce.*
♌ *Leo* I Will	Ambitious, authoritative, competitive, confident, creative, dramatic, dignified, extroverted, honorable, leader, loves the limelight, proud. *Conceited, domineering, excessive.*	Acting, teacher, athelete, sculptor. *Gold; Amber; Gold; Almond.*
♍ *Virgo* I Work	Analytical, dedicated, discriminating, efficient, health conscious, helpful, introverted, logical, practical, precise, punctual, pure, responsible, sensible. *Fussy, over-critical, worrying.*	Dentist, doctor, writer, policeman. *Grey; Sardonyx; Mercury; Sage.*
♎ *Libra* We Unite	Affable, aesthetic, artistic, balanced, charming, cooperative, extroverted, flirtatious, gracious, idealistic, indecisive, kind, peacemaker, refined, sociable. *Frivolous, indecisive, spendthrift.*	Judge, designer, dancer, florist. *Pink; Emerald; Copper; Rose.*
♏ *Scorpio* We Desire	Competitive, courageous, determined, forceful, introverted, magnetic, mysterious, powerful, probing, possessive, resourceful, secretive, strong willed. *Fixated, jealous, suspicious.*	Chemist, detective, magic, psychology. Deep red; Opal; Steel; Cactus.
♐ *Sagittarius* We Seek	Casual, direct, enthusiastic, farseeing, friendly, gregarious, honest, humorous, idealistic, loyal, outspoken, philosophical, restless, talkative, a traveler. *Exaggerating, irresponsible, tactless.*	Explorer, lawyer, priest, philosophy. Indigo; Topaz; Tin; Mint - clove.
♑ *Capricorn* We Control	Ambitious, conservative, discipline, methodical, persevering, political, realistic, responsible, rigid, serious, thrifty, seeks money, status and power. *Alone, frustrated, miserly, pessimistic.*	Architect, farmer, musician, banker. Brown; Hematite; Lead; Barley.
♒ *Aquarius* We Know	Altruistic, friendly, humanitarian, inventive, individualist, intellectual, inventive, logical, perceptive, rebellious, unique, unpredictable, visionary. *Eccentric, erratic, impersonal, rebel.*	Astrologer, physics, computers, pilot. Electric blue, Aquamarine, Platinum, Pine.
♓ *Pisces* We Care	Artistic, charitable, creative, dedicated, dreamer, humble, imaginative, impressionable, idealistic, introvert, mystical, peaceful, serious, spiritual, timid. *Careless, escapist, indecisive.*	Poet, photographer, healer, director. Sea green; Amethyst; Zinc; Nutmeg.

Your Sun Sign is the constellation the Sun was in when you were born. It is your creative abilities and the qualities you need to develop for growth. Sun Signs express spirit, individuality and health. They are a starting point for a birth chart. Sun Signs are the strongest, inborn traits, and elements of an individual that are not likely to change in life. Only a complete chart will give the full picture of a person.



RELATIONSHIPS, EMOTIONS, INTUITION, WEALTH

LOVE, HEALTH, BALANCE, CREATIVITY

The Twelve Signs of the Zodiac correspond to the 12 parts of the Grand Man, in the image of which the universe was made.

To understand the Zodiac, first, we must understand the elements and the modes. Four **ELEMENTS** represent the idea of Oneness that molds all life and embodies the ultimate perfection. The elements are the basic building blocks of our universe. Although all are in each of us, we are more attuned to one or two elements.

4 ELEMENTS

3 MODES	*Fire*	*Earth*	*Air*	*Water*
Cardinal	♈	♑	♎	♋
Fixed	♌	♉	♒	♏
Mutable	♐	♍	♊	♓

FIRE: INSPIRATION. Born to love. Romance, intuition. *Lesson of power.*

EARTH: PRACTICAL, concentrated force, sensations. *Lesson of service.*

AIR: INTELLECT, versatility, idealistic. *Lesson of brotherhood.*

WATER: EMOTIONS, receptive, feelings. *Lesson of peace.*

The **MODES** represent the three basic qualities of life. Also called quadruplicities (because of 4 signs in each).

CARDINAL signs initiate & set the tone for a season. *Dynamic.*

FIXED signs carry through the purpose of a season. *Persevering.*

MUTABLE signs conclude and assimilate a season. *Adaptable.*

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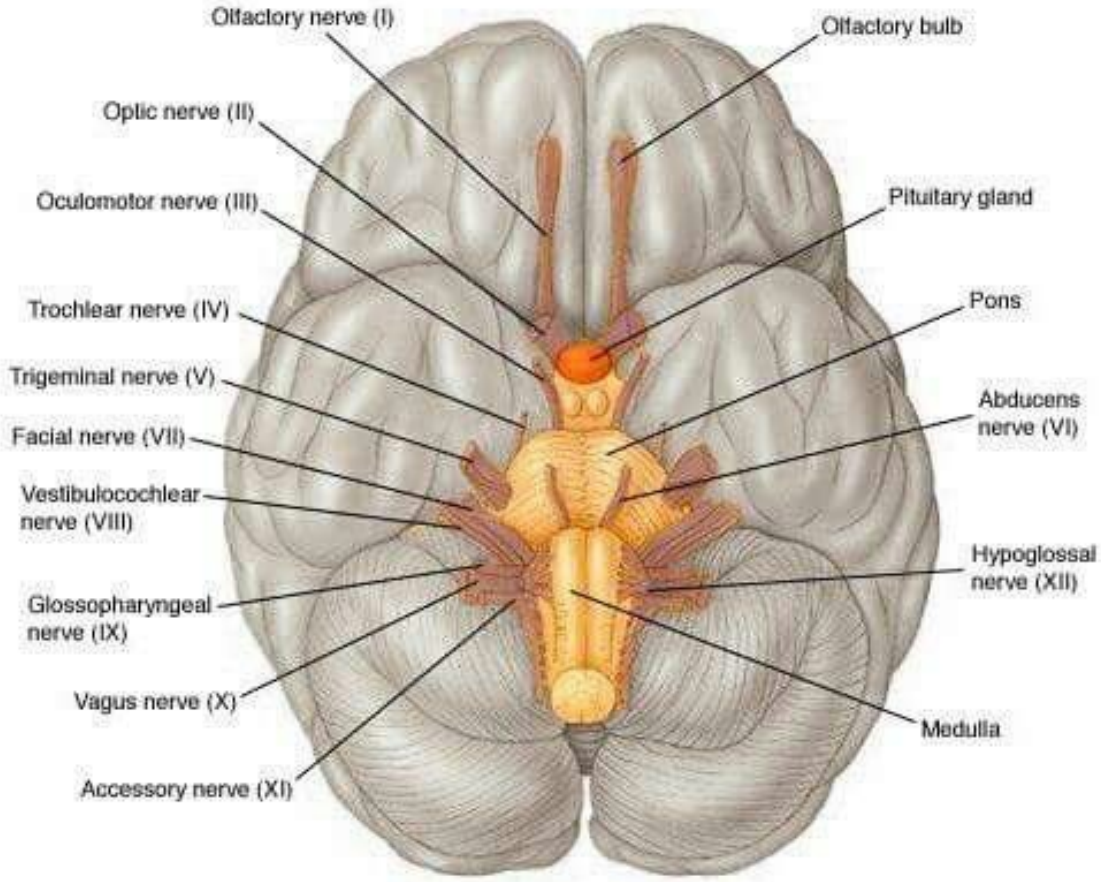
Olfactory nerve (I)
Olfactory bulb
Optic nerve (II)
Oculomotor nerve (III)
Pituitary gland
Trochlear nerve (IV)
Pons
Trigeminal nerve (V)
Abducens nerve (VI)
Facial nerve (VII)
Vestibulocochlear nerve (VIII)
Hypoglossal nerve (XII)
Glossopharyngeal nerve (IX)
Vagus nerve (X)
Medulla
Accessory nerve (XI)

50 CHAKRAS OF THE ASCENSION

Source: ***Soul Psychology: Keys to Ascension & Cosmic Ascension: Your Map Home*** **by Joshua David Stone.** Information channeled from Vywamus and Melchizedek.

Beyond the 50 Planetary chakras there are:

- 50 Solar chakras
- 50 Galactic chakras
- 50 Universal chakras
- 50 Multi-universal chakras
- 80 Cosmic chakras

which adds up to 330 chakras to get back to the Source Of All That Is.

9th DIMENSION — 44 – 50 Chakras

8th DIMENSION — 37 – 43 Chakras

7th DIMENSION — 30 – 36 Chakras

6th DIMENSION — 23 – 29 Chakras

5th DIMENSION

SOURCE CONNECTION	22 PLATINUM
DIVINE STRUCTURE	21 BLUE-GOLD
BEINGNESS	20 VIOLET-GOLD
UNIVERSAL ENERGY	19 MAGENTA
6D DIVINE INTENT	18 PINK-GOLD
UNIVERSAL LIGHT	17 MULTI-WHITE
ASCENSION; UNIVERSAL BEING	16 VIOLET-WHITE

4th DIMENSION

MONADIC CONNECTION	15 GOLDEN-WHITE
DIVINE PLAN	14 BLUE-VIOLET
MANIFEST VIBRATORY COMMUNICATIONS	13 VIOLET-PINK
CHRIST CONSCIOUSNESS	12 GOLD
NEW AGE ENERGIES	11 PINK-ORANGE
INTEGRATION OF POLARITIES	10 PEARLESCENCE
BODY OF LIGHT	9 BLUE-GREEN
SEAT OF THE SOUL	8 EMERALD GREEN & PURPLE

3rd DIMENSION

CROWN	7 WHITE
3rd EYE	6 VIOLET
THROAT	5 BLUE
HEART	4 GREEN
SOLAR PLEXUS	3 YELLOW
POLARITY	2 ORANGE
BASE	1 RED
EARTH	0

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RECUPERACION

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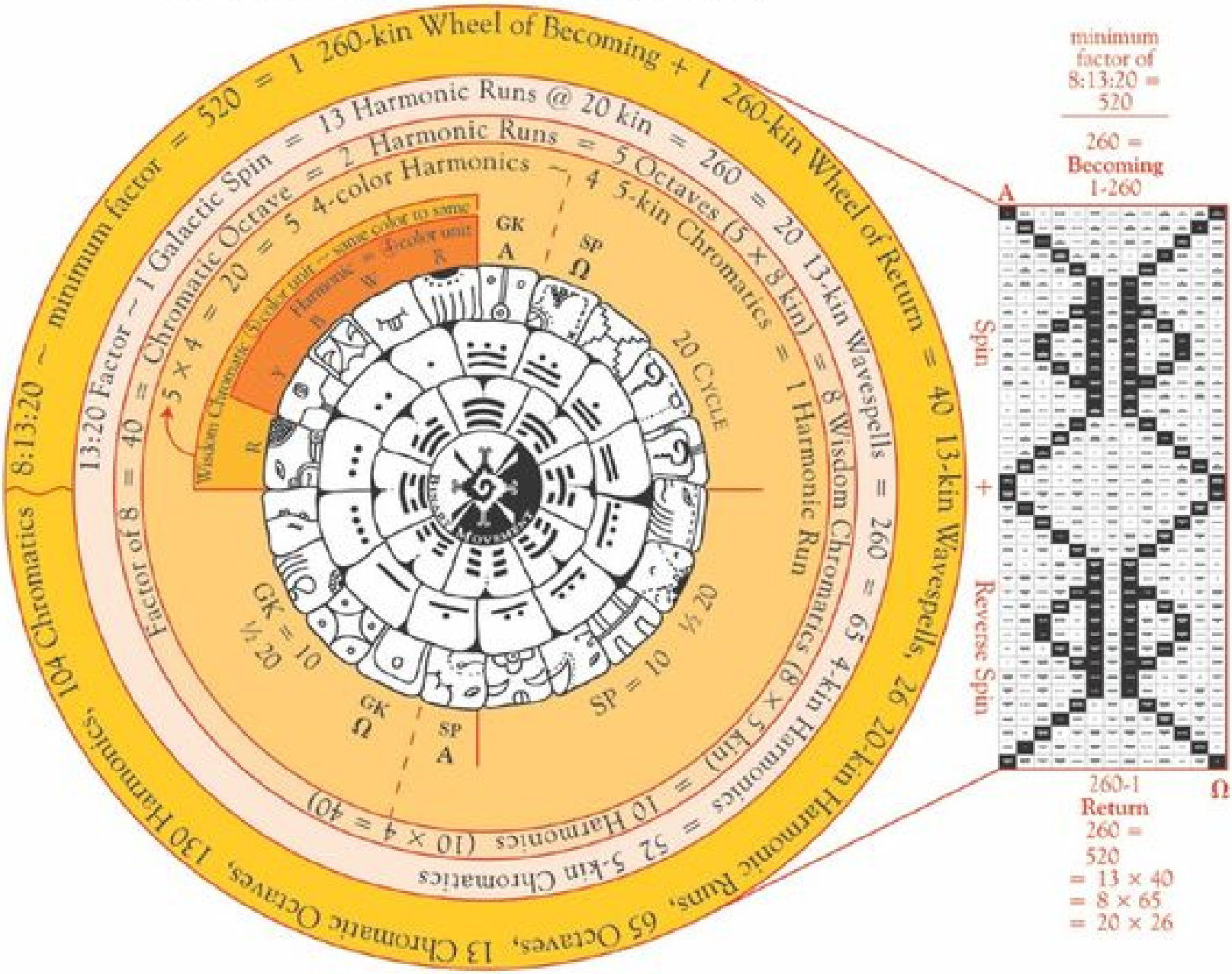
Avatar's Wheel of Time Explained



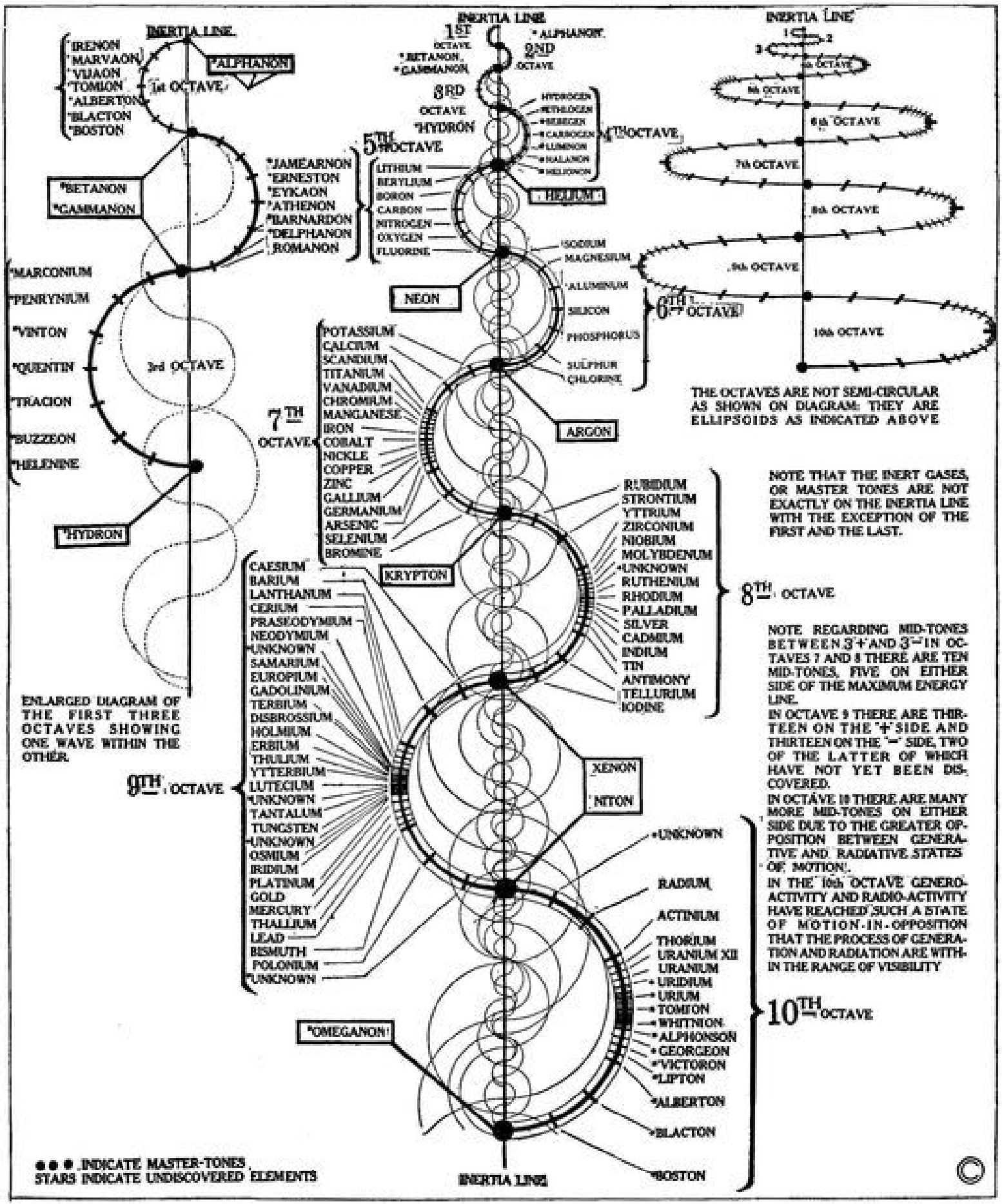
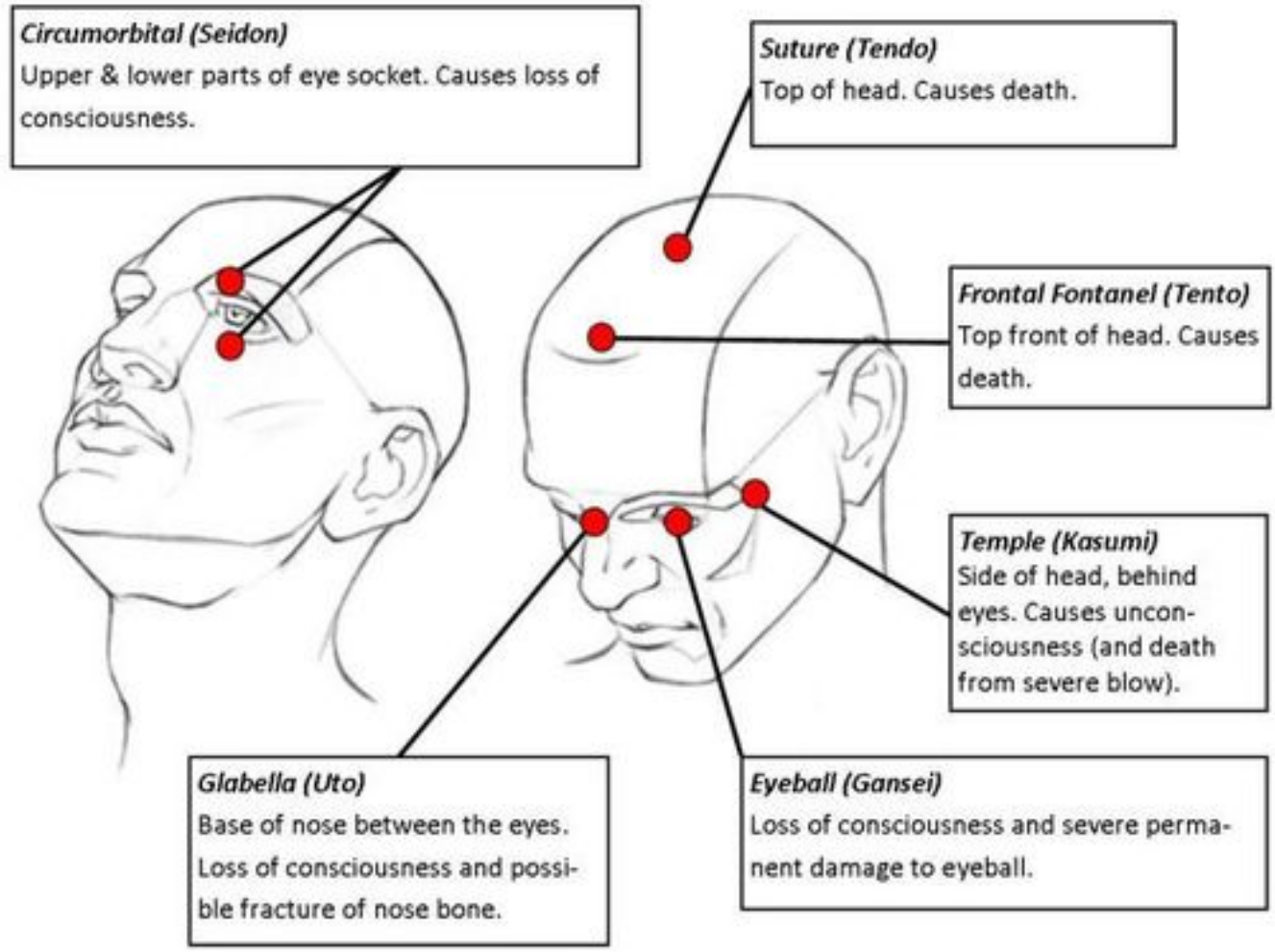
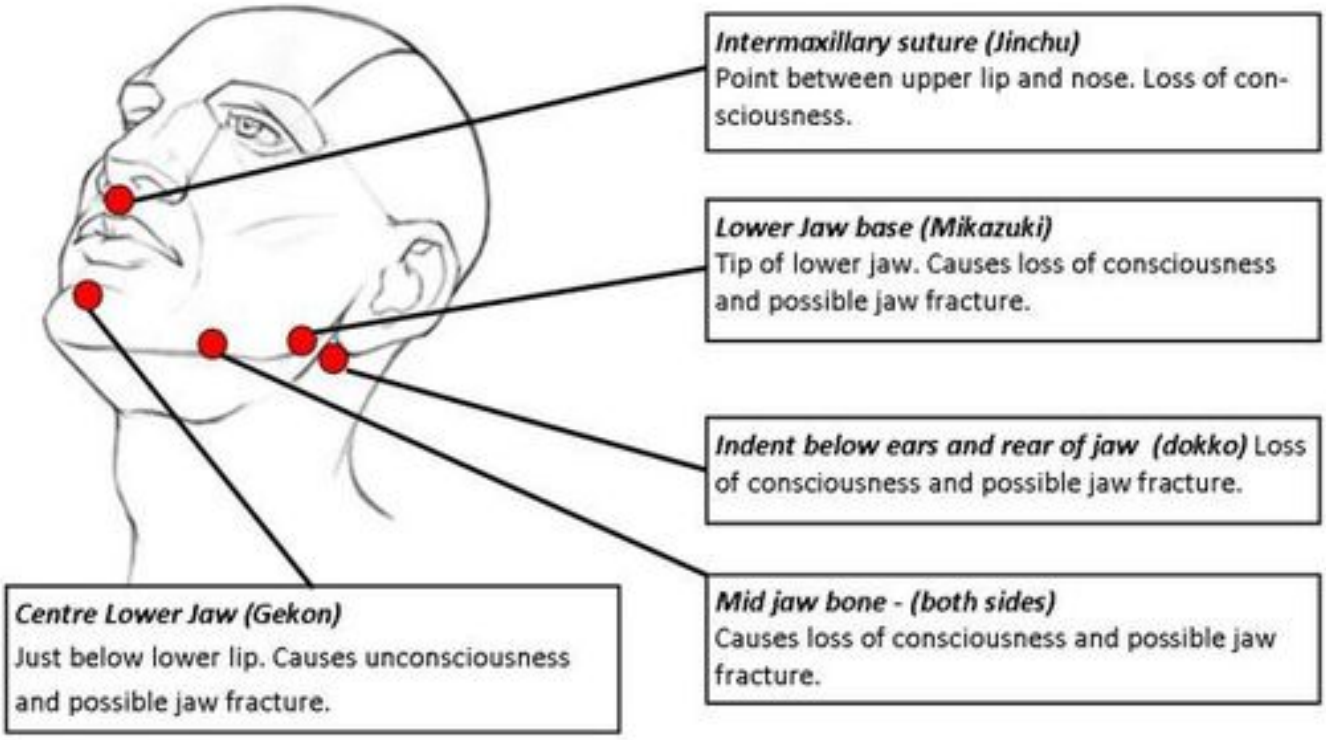


DIAGRAM SHOWING THE TEN OCTAVES OF INTEGRATING LIGHT, ONE OCTAVE WITHIN THE OTHER. THESE TEN OCTAVES CONSTITUTE ONE COMPLETE CYCLE OF THE TRANSFER OF THE UNIVERSAL CONSTANT OF ENERGY INTO, AND THROUGH, ALL OF ITS DIMENSIONS IN SEQUENCE

Major Vital Points: Head





AS THE SOUL TURNS

THE PROCESS OF REINCARNATION

5th DIMENSION
Causal Plane

HEALING & RESTORATION
Hall of Healing

LIFE BETWEEN LIVES
Hall of Records, Council of Elders, Soul Group
Akashic Records, soul purpose & progress, soul guides, soul mates, special studies

POST LIFE REVIEW
With our guides

GATEWAY
Met by loved ones. Reunite with the Higher Self.

PRE-LIFE SELECTION
Lesson selection process.

Lower Mental Plane

4th DIMENSION

Astral Plane

DEATH
Returning to spirit form & leaving the physical body behind.

BIRTH
Manifesting into form. Amnesia occurs as we travel down the birth canal into a physical body.

INCARNATION ON EARTH
Living Our Lessons, Karma, Contracts, Being in Service.

3rd DIMENSION
Physical Plane

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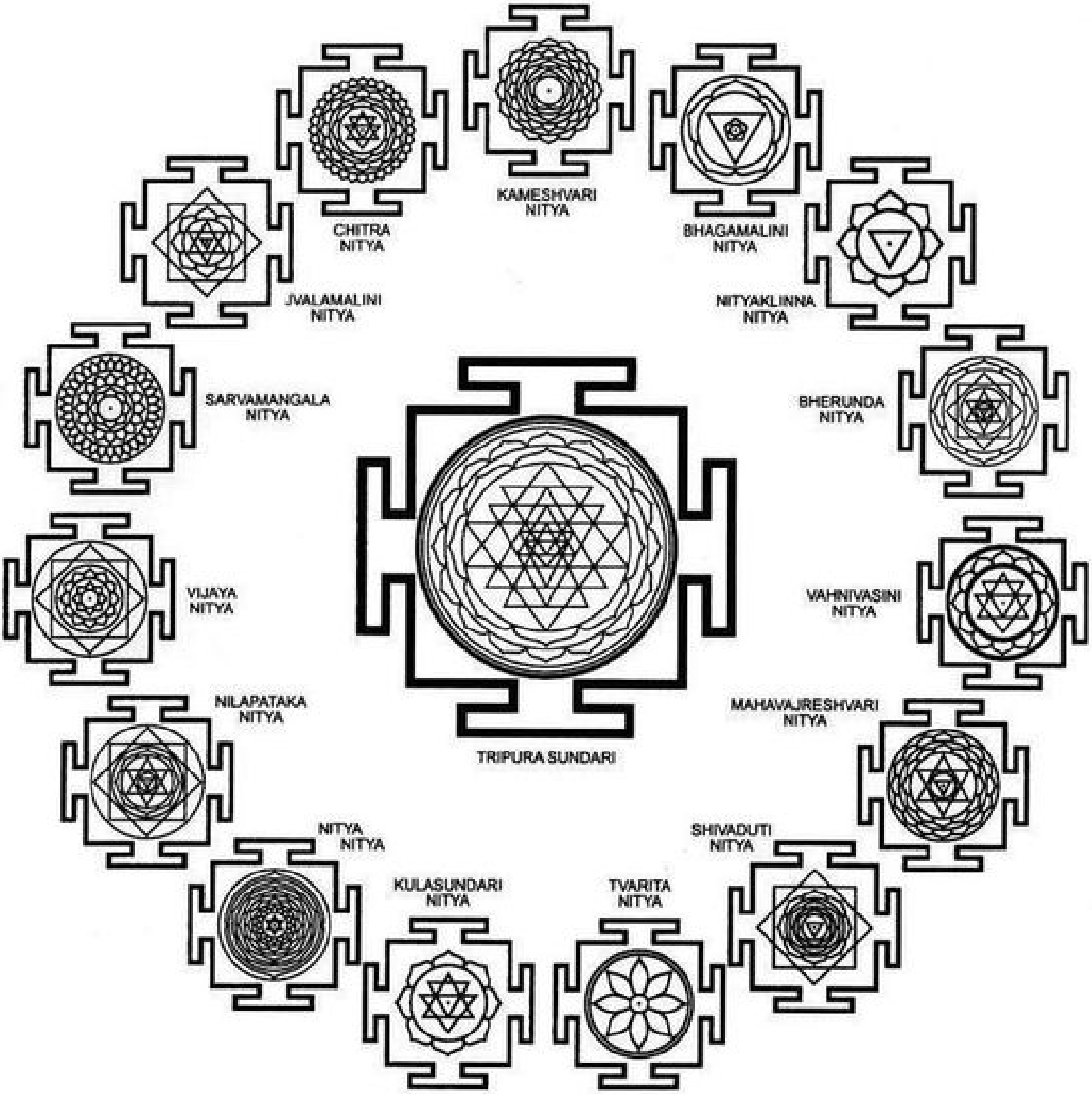

KAMESHVARI
NITYA
CHITRA
NITYA
BHAGAMALINI
NITYA
JVALAMALINI
NITYA
NITYAKLINNA
NITYA
SARVAMANGALA
NITYA
BHERUNDA
NITYA
VIJAYA
NITYA
VAHNIVASINI
NITYA
NILAPATAKA
NITYA
MAHAVAJRESHVARI
NITYA
TRIPURA SUNDARI
NITYA
NITYA
SHIVADUTI
NITYA
KULASUNDARI
NITYA
TVARITA
NITYA

CHAKRA YOGA

CROWN

- Headstand
- Tree Pose
- Lotus Pose
- Forearm Stand
- Backbend
- Rabbit Pose
- Corpse Pose

THIRD EYE

- Thunderbolt Pose
- Forward Bend
- Downward Dog
- Lotus Pose
- Cow Face Pose
- Head-to-Knee Pose
- Extended Child's Pose

THROAT

- Shoulder Stand
- Lion Pose
- Bridge Pose
- Plow Pose
- Cat Pose
- Cow Pose
- Fish Pose

HEART

- Standing Backbend
- Lord of The Dance
- Half Lord of The Fishes
- Cobra Pose
- Camel Pose
- Bow Pose
- Wheel Pose

SOLAR PLEXUS

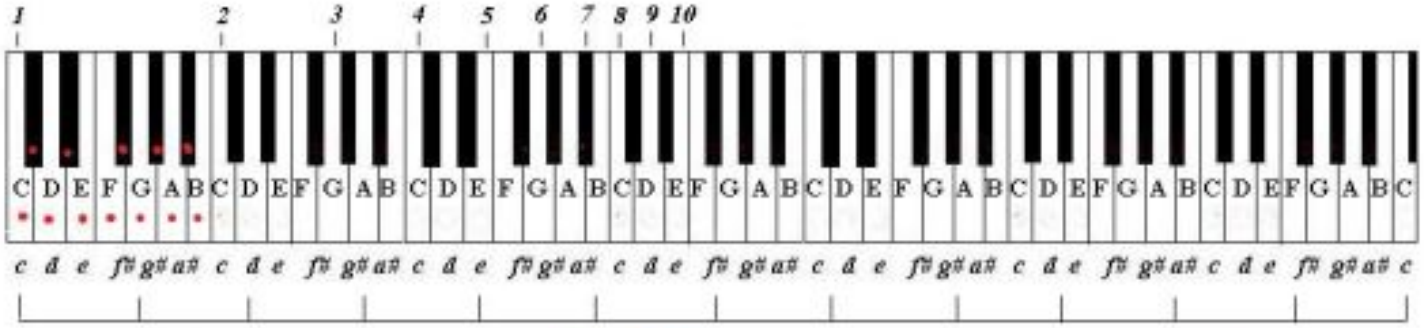
- Crescent Pose
- Knees-to-Chest
- Downward Dog
- Triangle Pose
- Bow Pose
- Boat Pose
- Plank Pose

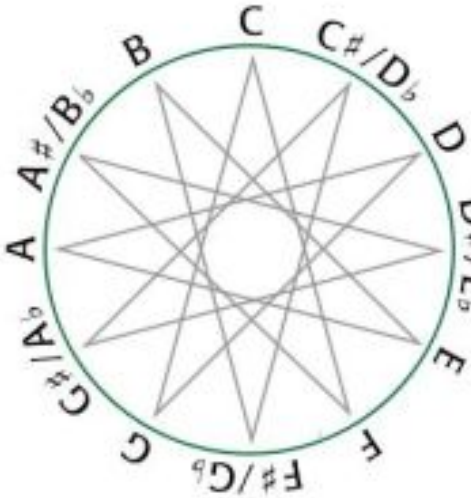
SACRAL

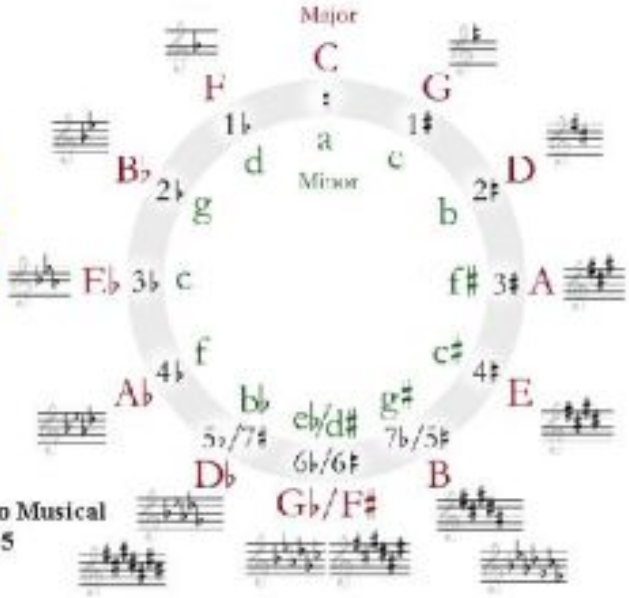
- Triangle Pose
- Forward Bend
- Goddess Pose
- Crescent Pose
- Bound Angle Pose
- Seated Forward Bend
- Reclined Thunderbolt

ROOT

- Chair Pose
- Thunderbolt Pose
- Garland Pose
- Mountain Pose
- Staff Pose
- Bridge Pose
- Warrior II Pose







The circle of fifths drawn within the chromatic circle as a star dodecagon: "Prelude to Musical Geometry", p.364, Brian J. McCartin, The College Mathematics Journal, Vol. 29, No. 5 (Nov., 1998), pp. 354-370.

URAKEN UCHI

TATE URAKEN
UCHI

TETTSUI UCHI

MAWASHI ENPI

AGE ENPI

USHIRO
ENPI

MAE ENPI
UCHI

YOKO ENPI
UCHI

OTOSHI
ENPI

@ANGELIC.HUMANITY

THE KRIST CODE

THE KATHARA GRID

FALSE FATHER GOD
ALIEN ARCHITECTURE

10 TREE

ETERNAL CONNECTION TO SOURCE

12 TREE

KRYSTAL SPIRAL

PERPETUAL STATE OF UNIVERSE CREATION

The original Eternal **Nature of God-Source** and thus that of **All Creation**, remains always **perpetual** and **constant**. **The Krist Code is the Perpetual Motion** and Precise Mathematical-Geometrical Instructions for the Creation Program from God Source. The Kathara Lines form the structure framework of the Kathara Grid and **exist in precise angular and proportional relationship to each other,** according to the ratios of the energy balance **SET by the Krist Code**. **Deviations** from the natural Krist Code configuration of "First Creation" create alterations of the energetic balance **INORGANIC 10 TREE GRID**, causing interruption of the continual self-regeneration perpetual Life.

@ANGELIC.HUMANITY

THE CODE OF FIRST CREATION

Seed Sounds in the Chakra Petals–Chakra Petal Bijas

Creation occurred due to the first sound Aum. The universe and everything in it is condensed energy, that energy is vibrating and all has sound. The body itself is sound, called sabda in Sanskrit. The body can be recreated and regenerated with sound as many modern technologies are now tapping into DNA Repair using sound waves. In the ancient Puranas (sacred story texts), there are elaborate stories of the creation of the world, this is called Shristi Karana. Meditating on the bijas (seed sounds) of the chakra petals is also called Shristi Karana, for it is the recreation of the body through sabda (sound).

Dan Mirahorian
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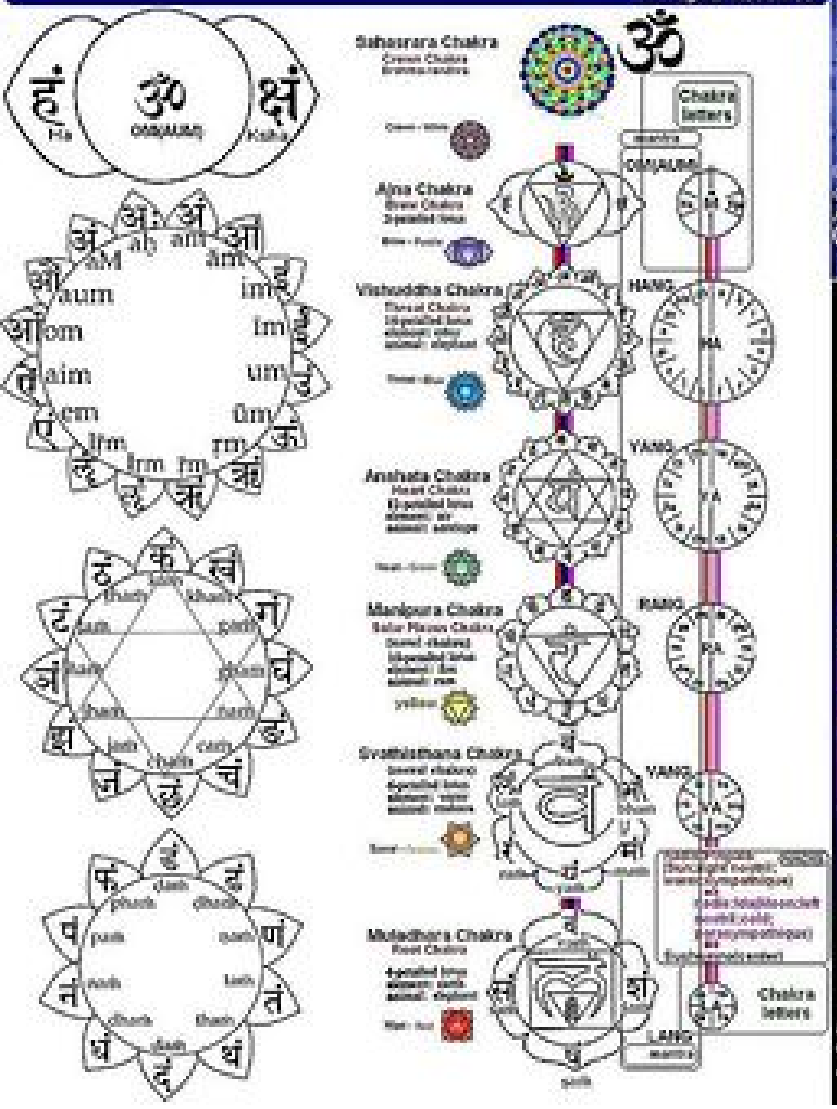
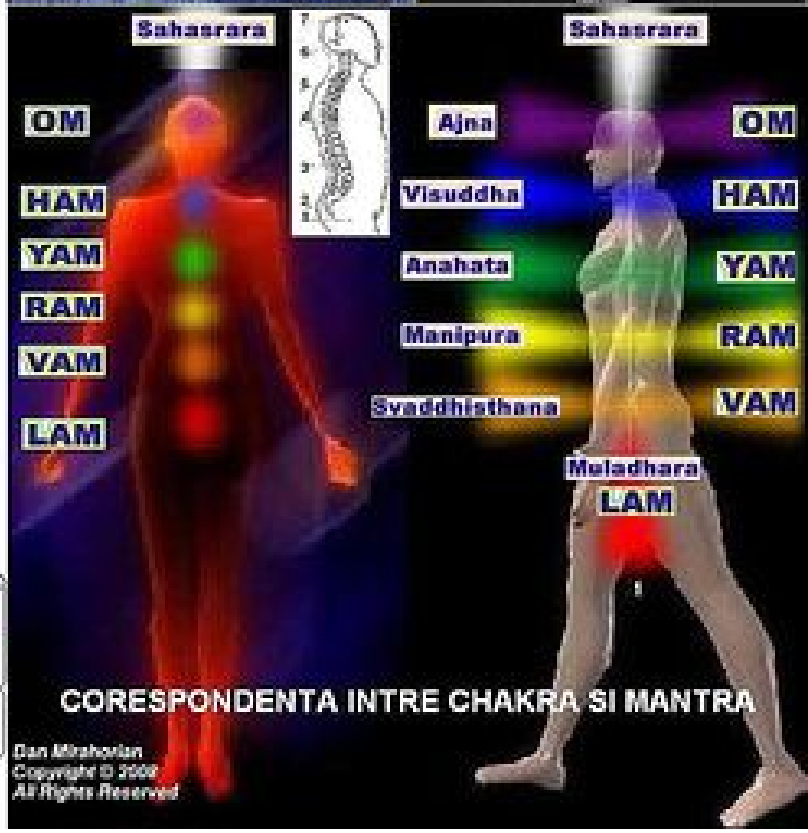
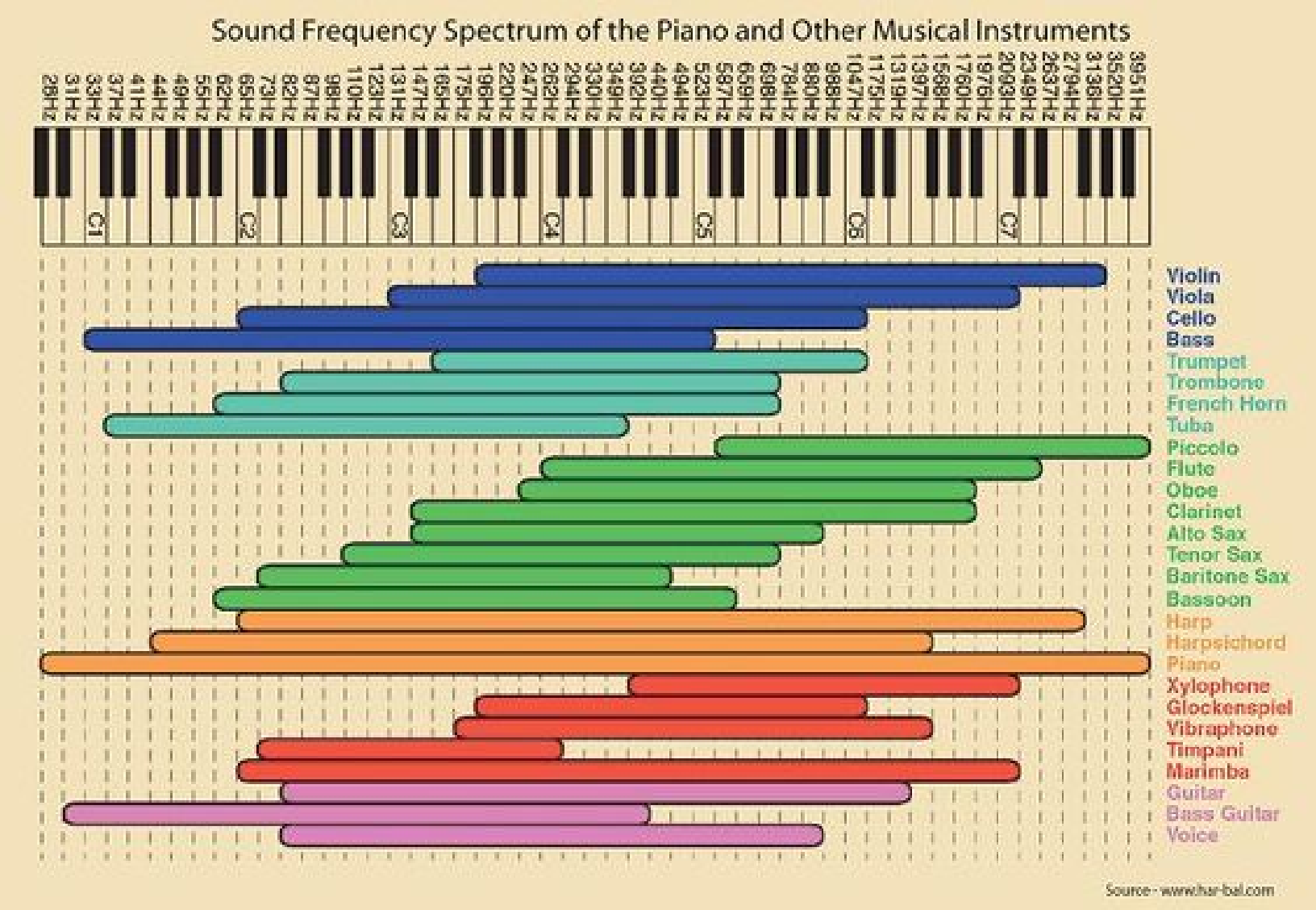
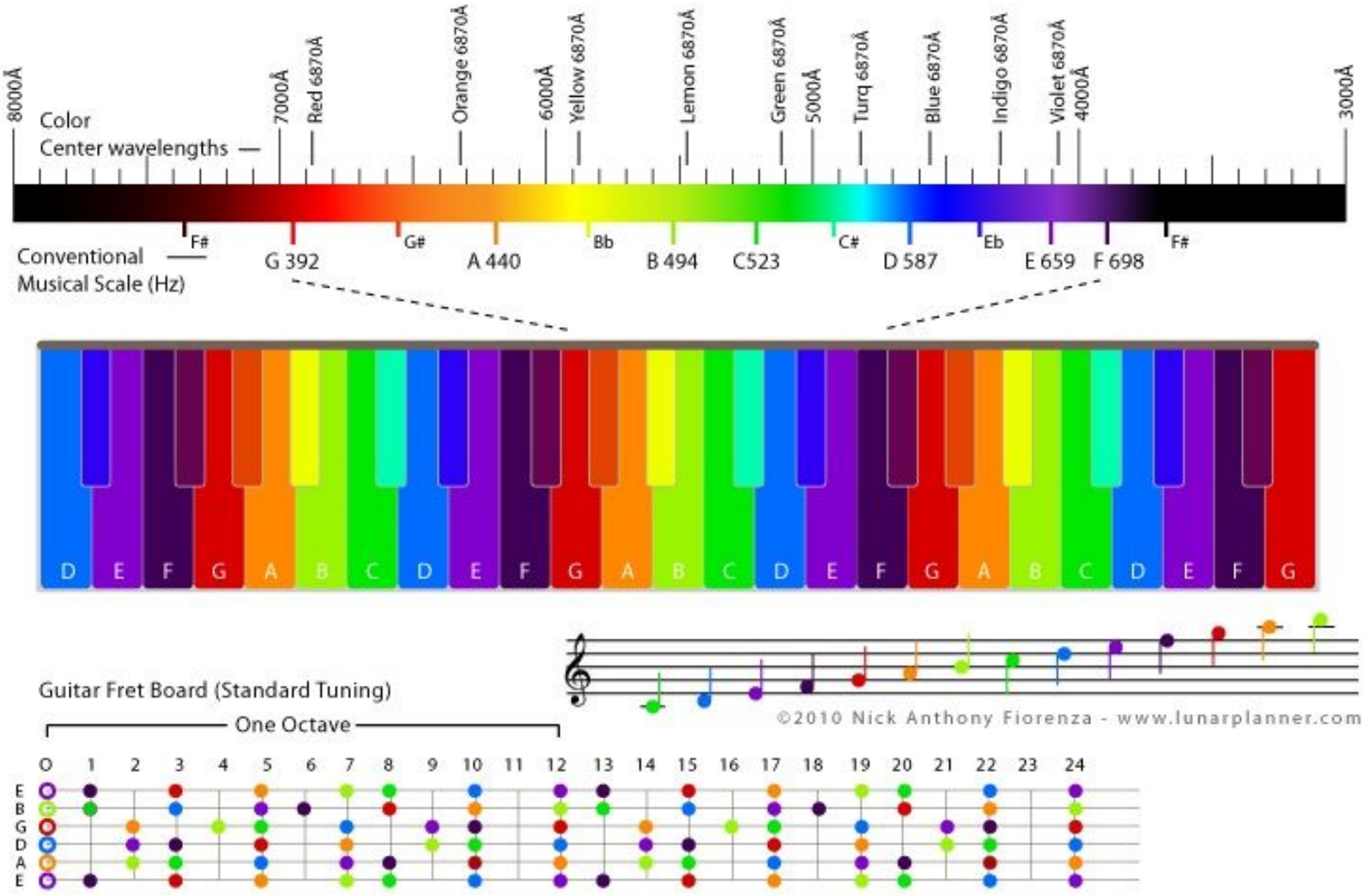





Sound Frequency Spectrum of the Piano and Other Musical Instruments
28Hz 31Hz 33Hz 37Hz 41Hz 44Hz 49Hz 55Hz 62Hz 65Hz 73Hz 82Hz 87Hz 98Hz 110Hz 123Hz 131Hz 147Hz 165Hz 175Hz 196Hz 220Hz 247Hz 262Hz 294Hz 330Hz 349Hz 392Hz 440Hz 494Hz 523Hz 587Hz 659Hz 698Hz 784Hz 880Hz 988Hz 1047Hz 1175Hz 1319Hz 1397Hz 1568Hz 1760Hz 1976Hz 2093Hz 2349Hz 2637Hz 2794Hz 3136Hz 3520Hz 3951Hz
C1
C2
C3
C4
C5
C6
C7
Violin
Viola
Cello
Bass
Trumpet
Trombone
French Horn
Tuba
Piccolo
Flute
Oboe
Clarinet
Alto Sax
Tenor Sax
Baritone Sax
Bassoon
Harp
Harpsichord
Piano
Xylophone
Glockenspiel
Vibraphone
Timpani
Marimba
Guitar
Bass Guitar
Voice
Source - www.har-bal.com

Musical Notes-Color Correspondences in the Visible Spectrum of Light



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Guitar Fret Board (Standard Tuning)

TARDIS TIME AND RELATIVE DIMENSION IN SPACE

REGISTRY CODE: AUC2311196409

MODEL: MARK I

TRANSCENDENTAL ENGINEERING

TYPE 40 TIME TRAVEL CAPSULE

MASTER SCHEMATIC AND GENERAL PLANS INDEX
"TRANS-DIMENSIONAL ENGINEERING"

DIMENSIONAL PLANES

NOTE: DIMENSIONAL PLANES POSSESS RELATIVE SCALE IN VARYING COMPRESSION LEVELS. WHEN REFERENCING D-PLANES IN THE CONTEXT OF THE PEDESTRIAN INFRASTRUCTURE, THEY ARE KNOWN AS LEVELS. ALL TT-CAPSULES HAVE A TOTAL MAXIMUM OF 12 LEVELS. IMAGE SHOWN IN THIS CONTEXT IS 7 D-PLANES. ALL TT-CAPSULE RELATIVE DIMENSIONS HAVE A MAXIMUM OF 12 DIMENSIONAL PLANES.

FIG. 5

RELATIVE DIMENSIONAL PHYSICS

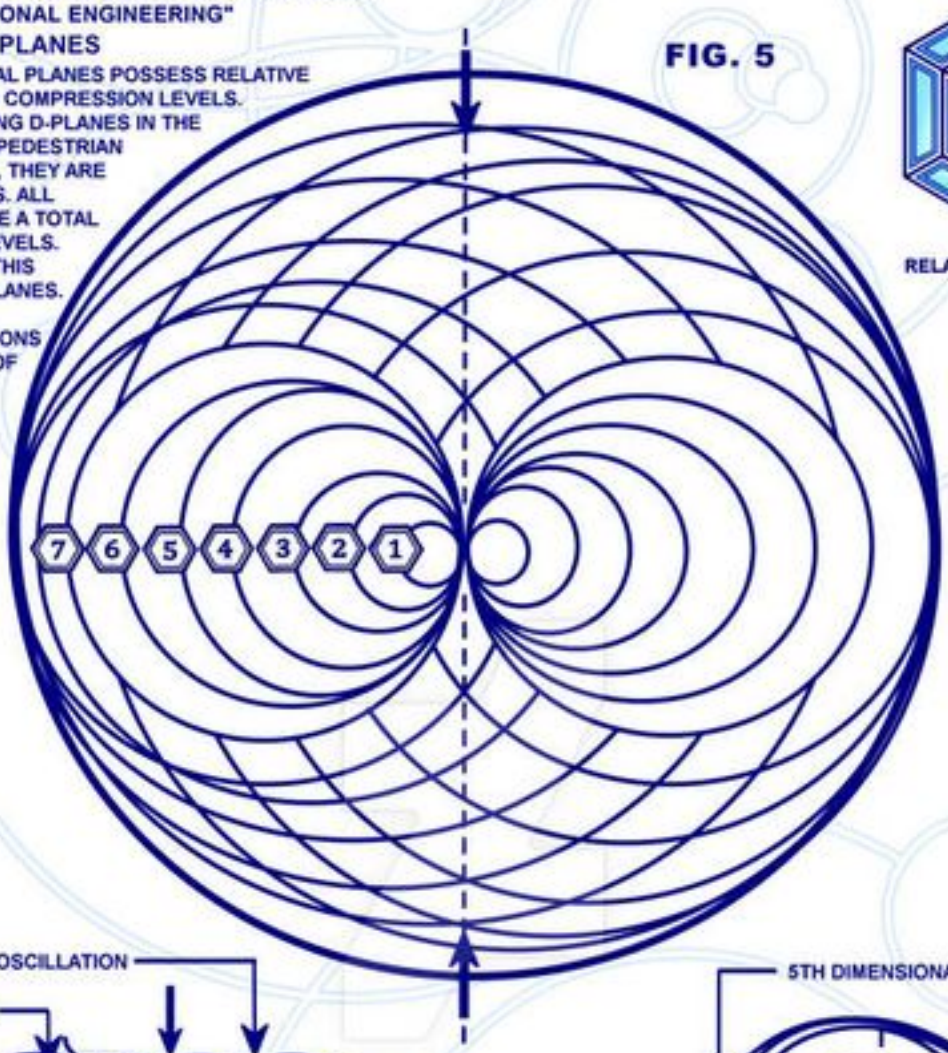


FIG. 6

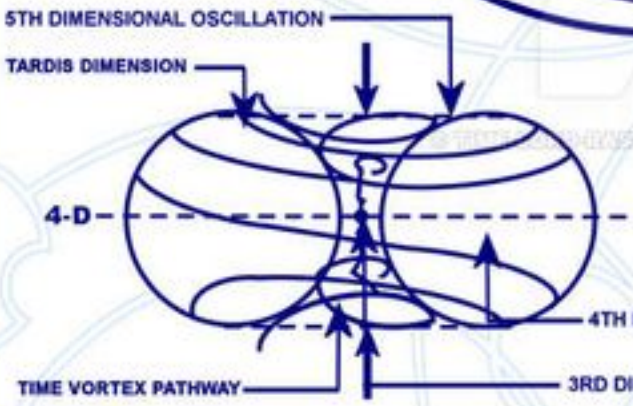
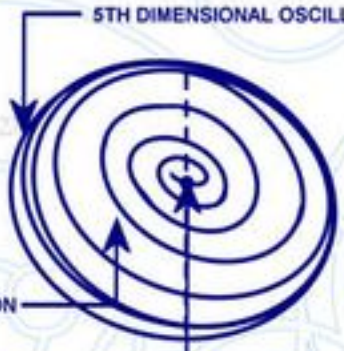
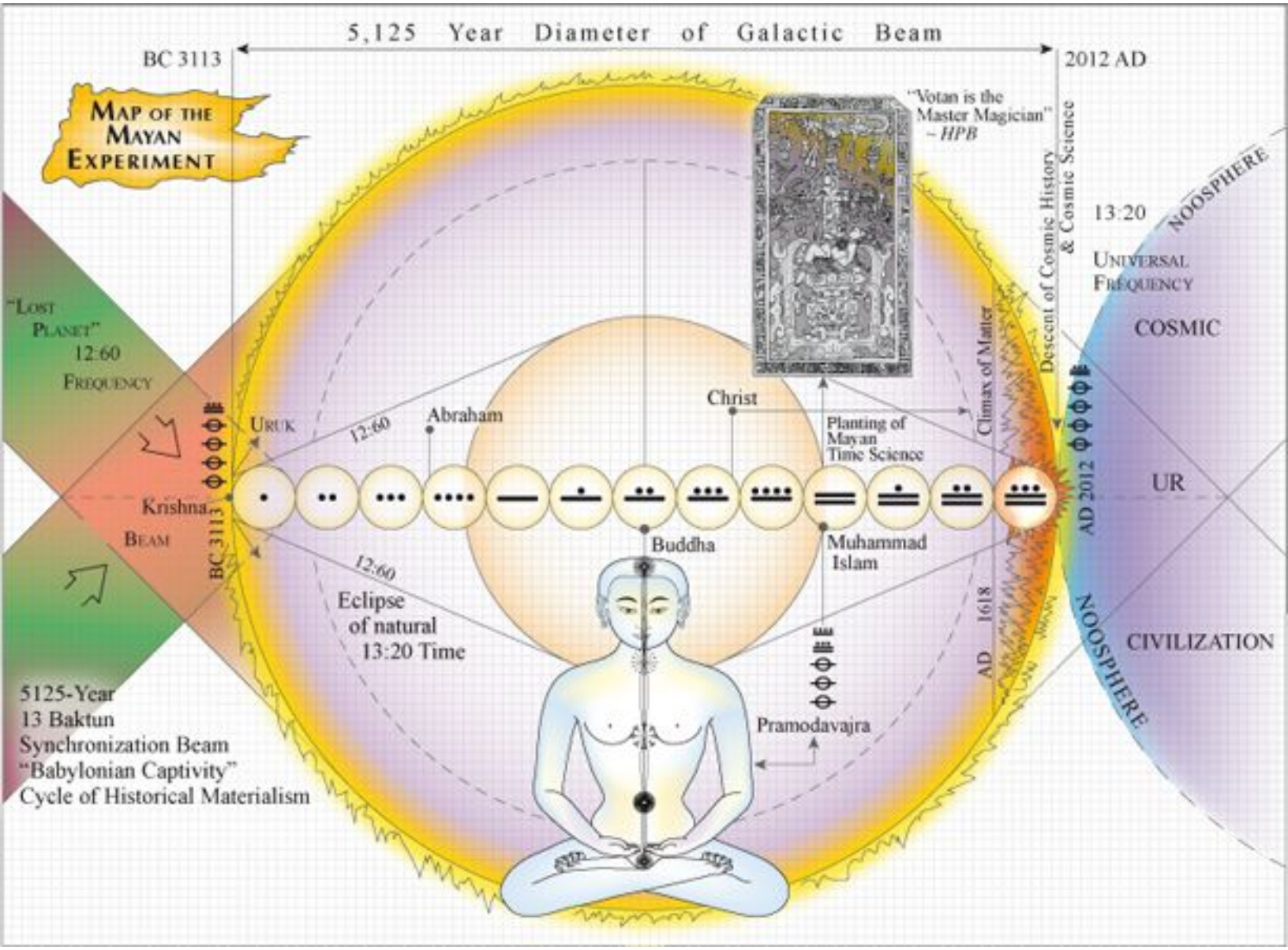


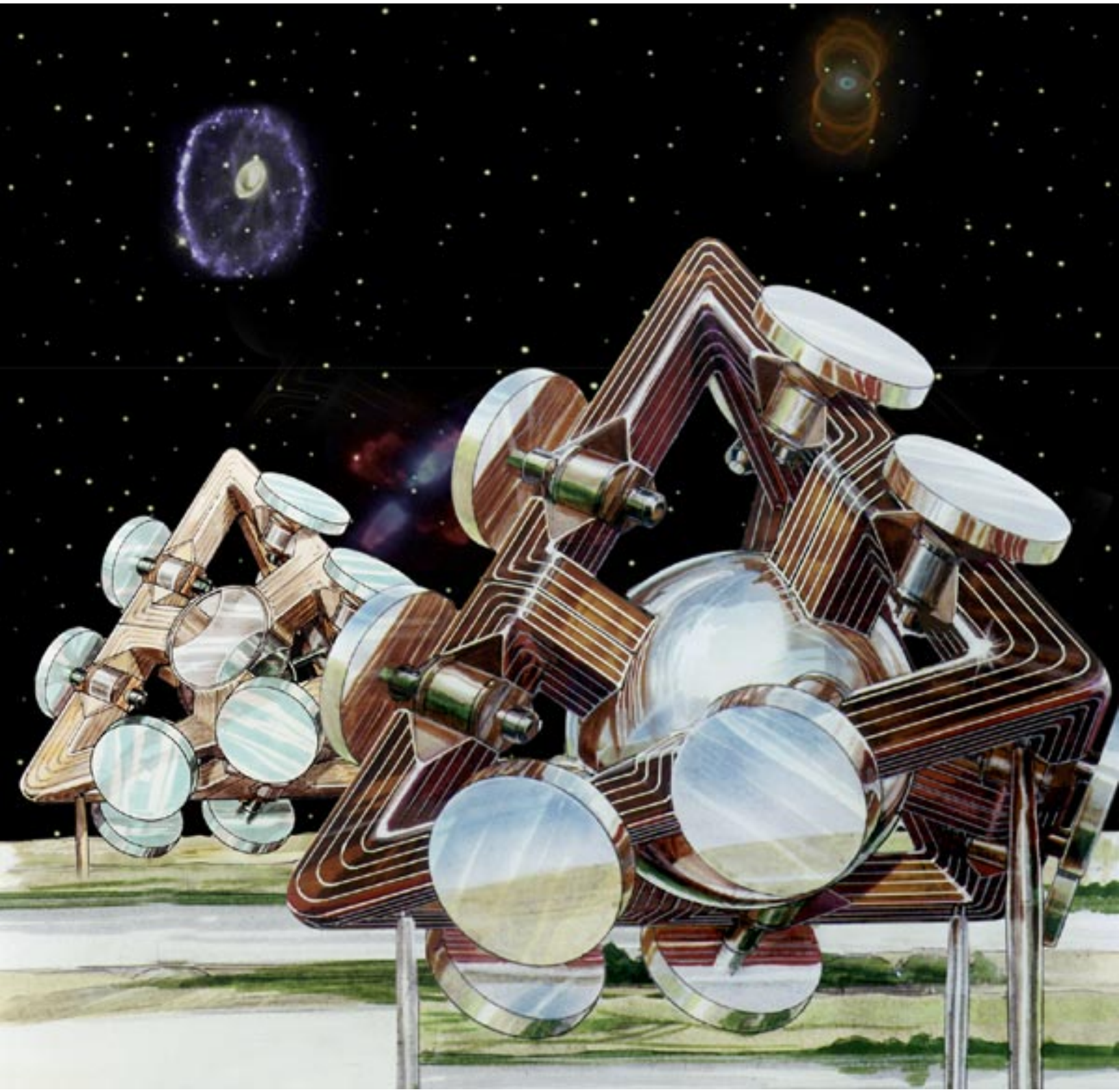
FIG. 7



TARDIS GEOMETRY

DIMENSIONAL TRANSCENDENTALISM IS THE STATE WHEREIN AN OBJECT'S INTERIOR IS BIGGER THAN ITS EXTERIOR, AN EFFECT MADE POSSIBLE BY TRANSDIMENSIONAL ENGINEERING. IT IS IN OPPOSITION TO BEING DIMENSIONALLY IMMANENT, WHERE SOMETHING'S INTERIOR IS SMALLER THAN ITS EXTERIOR. THE RELATIONSHIP BETWEEN THE INTERIOR AND EXTERIOR SIZES OF A TARDIS COULD BE CONTROLLED VIA THE DIMENSIONAL CONTROL, AS WELL AS A SERIES OF DIMENSION DAMS. THE INTERIOR OF THE TARDIS EXISTED "OUTSIDE RELATIVE SIZE" ALTOGETHER. THE TARDIS BOX WAS JUST AN ENTRANCE CHAMBER TO A FOURTH DIMENSION AND THAT A REVERSAL OF TIME ACCELERATION OCCURS AT THE INNER DOOR. THEREFORE, ALL BUT THE BOX WAS INVISIBLE TO THE OUTSIDE WORLD. DIMENSIONAL TRANSCENDENTALISM IS A KEY TIME LORD DISCOVERY, AND CAN BE REPRESENTED BY USING THE ANALOGY OF HOW A LARGER CUBE MIGHT APPEAR TO BE ABLE TO FIT INSIDE A SMALLER ONE WERE THE LARGER CUBE TO FIT INSIDE A SMALLER ONE WERE THE LARGER CUBE FURTHER AWAY, YET IMMEDIATELY ACCESSIBLE AT THE SAME TIME. ONCE ONE UNDERSTANDS HOW THE PROCESS WORKS, IT IS POSSIBLE TO CREATE DIMENSIONAL TRANSCENDENTALISM WITH LITTLE EFFORT. FOR THIS REASON TIME LORD SCIENCE IS A VERY CLOSE GUARDED SECRET. SOMETIMES WHEN A TARDIS IS DYING, ITS DIMENSION DAMS WILL START TO BREAK DOWN IN WHAT IS CALLED A "SIZE LEAK". ALL THE BIGGER ON THE INSIDE STARTS LEAKING TO THE OUTSIDE, IT GROWS. WHILE THE EXTERIOR IS OF LIMITED SIZE, A TARDIS IS FAMOUSLY "BIGGER ON THE INSIDE", WITH THE INTERIOR BEING A WHOLE SEPARATE DIMENSION CONTAINING AN INFINITE NUMBER OF ROOMS, CORRIDORS AND STORAGE SPACES. THE TARDIS IS ACTUALLY INFINITE IN SIZE. THE WEIGHT OF THE TARDIS IS 5 × 106 KILOGRAMS IN ALZARIUS'S EARTH-LIKE GRAVITY (ABOUT 5 × 107 NEWTONS, OR THE WEIGHT OF 5,000 TONNES).


5,125 Year Diameter of Galactic Beam
BC 3113
2012 AD
Map of the Mayan Experiment
"Votan is the Master Magician" ~ HPB
Descent of Cosmic History & Cosmic Science
13:20
Universal Frequency
NOOSPHERE
COSMIC
"Lost Planet" 12:60 Frequency
Uruk
12:60
Abraham
Christ
Planting of Mayan Time Science
Climax of Matter
AD 2012
UR
Krishna
Beam
BC 3113
Buddha
Muhammad Islam
12:60
Eclipse of natural 13:20 Time
AD 1618
NOOSPHERE
CIVILIZATION
Pramodavajra
5125-Year
13 Baktun
Synchronization Beam
"Babylonian Captivity"
Cycle of Historical Materialism



FACULTADES DE LOS CHAKRAS

LAS ENERGÍAS NATURALES QUE TRANSFORMAN TU VIDA

Pituitaria

Nadis

Pineal

Tiroide
Hang

Timo
Yang

Páncreas
Suprarrenales
Rang

Sexuales
Vang

Lang
Suprarrenales

Centro
Sushuma

Pingala
Sube
Positivo

Ida
Baja
Pasivo

CORONA

ABSOLUTO
Sol - Urano
Oro

Palabra clave: **Yo sé**

Sahasrara Padma
1.000 pétalos lotus
Permite la fusión con lo universal.

CEJAS

MENTAL
Júpiter
Estaño

Palabra clave: **Yo veo**

Agna
96 (2x48) pétalos lotus
Desarrolla la facultad de pensar e intuir

GARGANTA

ETER
Mercurio
Azoque

Años: 28-35

Palabra clave: **Yo hablo**

Estado íntimo: La síntesis de ideas en símbolos

Viccudha
16 pétalos lotus
Desarrolla la facultad de expresión y el verbo

CORAZÓN

AIRE
Venus
Cobre

Años: 21-28

Palabra clave: **Yo amo**

Estado íntimo: Compasión, amor

Anahata
12 pétalos lotus
Desarrolla la facultad de reproducción y creación

SOLAR

FUEGO
Marte-Sol
Hierro

Años: 14-21

Palabra clave: **Yo puedo**

Estado íntimo: Risa, Alegría

Manipura
10 pétalos lotus
Desarrolla la facultad de excreción y proyección

SACRAL

AGUA
Luna
Plata

Años: 8-14

Palabra clave: **Yo siento**

Estado íntimo: Las lágrimas

Svadisthana
6 pétalos lotus
Desarrolla la facultad de presión y asimilación

RAIZ

TIERRA
Saturno
Plomo

Años: 1-7

Palabra clave: **Yo tengo**

Estado íntimo: Tranquilidad, firmeza, estabilidad

Muladhara
4 pétalos lotus
Desarrolla facultad de locomoción, fortaleza, vigor, impulso, voluntad

Lo que proporciona un chakra despierto:

- **Más capacidad**
- **Más energía**
- **Más poder**
- **Más consciencia**

I- Las **Asanas** equilibran los chakras.
II- El **Pranayama** los activa.
III- Los **Bandas** dirigen la energía.
IV- La **Oración** proporciona una conexión con lo sagrado que hay fuera de nosotros.
V- El **servicio desinteresado a los demás** transmuta el plano humano en nergia trascendente.
VI- La **Meditación** proporciona un centro y una conexión con lo superior que hay en nosotros.
VII- **Autoobservación y Autoconsciencia** para transformar la calidad de la energía y darle dirección.

Hay 72.000 Nadis.

I- **KUNDALINI:** Es toda la energía.
II- Lo que produce el nivel de vibración para que un chakra desarrolle todo su potencial.
Es la calidad de la energía, no su cantidad.
III- Lo que proporciona un chakra despierto es:
+ capacidad, + energía, + poder, + consciencia.
IV- Un chakra es el resultado de un cruce entre Nadis.

THE BEHAVIOR BAROMETER

Processed by:
IVO A. BENDA
19.5.2001

"P" LIFE WITHOUT DISEASES	"N" EMOTIONS = DISEASES
I AM	**I FEEL LIKE**

CHOICE

SELF CONSCI-OUSNESS

WELL-BALANCED PERSON

1. **ACCEPTANCE relations**
   Decisive * Accessible
   Optimistic * Acceptable
   Adaptable * Worthy
   Deserving * Open-hearted

2. **WILLIGNESS activity**
   Perceptive * Adequate
   Prepared * Responsible
   Encouraging * Vigorous
   Invigorated * Conscious

3. **INTEREST result**
   Fascinated * Attuned
   Needed * Welcome
   Understanding * Appreciated
   Indispensable * Careful

UNBALANCED PERSON — **DAILY**

1. **ANTAGONISM**
   Attacked * Worried
   Interrogated * Burdened
   Angry * Indignant
   Opposing * Inadequate

2. **ANGER**
   Tetchy * Furious
   Overloaded * Belching
   Boiling * Irascible
   Pugnacious * Hysteric

3. **CRABBEDNESS / AVERSION**
   Touched * Disconcerted
   Injured * Used, abused, confused
   Unvalued * Refused
   Taciturn * Insulted

SUBCONSCI-OUSNESS

SOUL

I AM INTERNALLY

1. **ENTHUSIASM relations**
   Amused * Exultant
   Admirable * Attractive
   Having pleasure * Excited
   Full of life * Trusting

2. **SELF-CONFIDENCE activity**
   Motivated * Courageous
   Protected * Determined
   Bold * Considerate
   Cordial * High-spirited

3. **EQUALITY result**
   Happy * Collaborative
   Interested in * Strong-minded
   Reliable * Accessary
   Sincere * Productive

I FEEL EXTERNALLY

I FEEL INTERNALLY

I FEEL EXTERNALLY — **FROM AGE OF 6 YRS. TILL NOW**

1. **HOSTILITY**
   Caught in trap * Nagged
   Deceived * Frustrated
   Depleted * Sarcastic
   Revengeful * Bottling up

2. **FEAR OF LOSS**
   Abandoned * Unheared
   Embittered * Disappointed
   Endangered * Overlooked
   Scared * Unwelcome

3. **GRIEF & SENSE OF GUILT**
   Knocked down * Overpowered
   Disgusted, discouraged * Inacceptable
   Self-punishing * Low spirited
   Defeated * Broken, ruined

BODY

WELL-BALANCED CHILD

1. **ALIGNMENT relations**
   Harmonised * Consistent
   Well-balanced * Creative
   Regardful * Appreciating
   Gentle * Gracious

2. **ONENESS activity**
   Self-possessed * Reliable
   Calm * Peaceful
   United * Complete, self contained
   Fulfilled * In harmony and unity

3. LOVE + ESTEEM **result**

UNBALANCED CHILD — **FROM BIRTH TO AGE OF 6 YRS.**

1. **INDOLENCE**
   Pessimistic * Immobilized
   Rigid * Dull
   Stagnant * Unsensitive
   Destructive * Disconnected, illogical

2. **SEPARATION**
   Neglected * Unbeloved
   Inacceptable * Unloveable, without love
   Unimportant * Melancholic
   Vicious * Abandoned

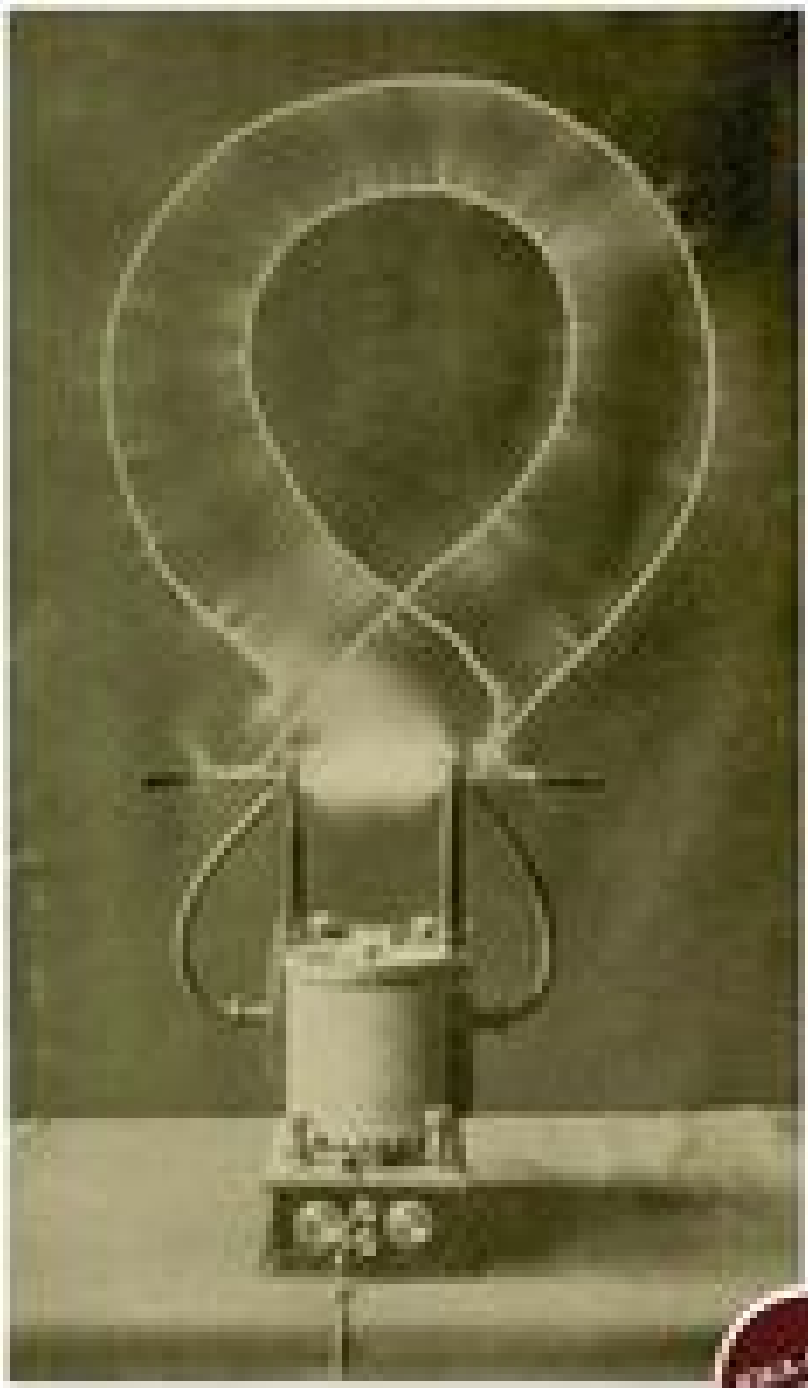
3. **CHAFF (WEED)**

CHOICE / NO CHOICE

www.angels-heaven.org
www.universe-people.com

Pic. 286 EN

THE "POSITIVE" BASIS	THE "NEGATIVE" BASIS



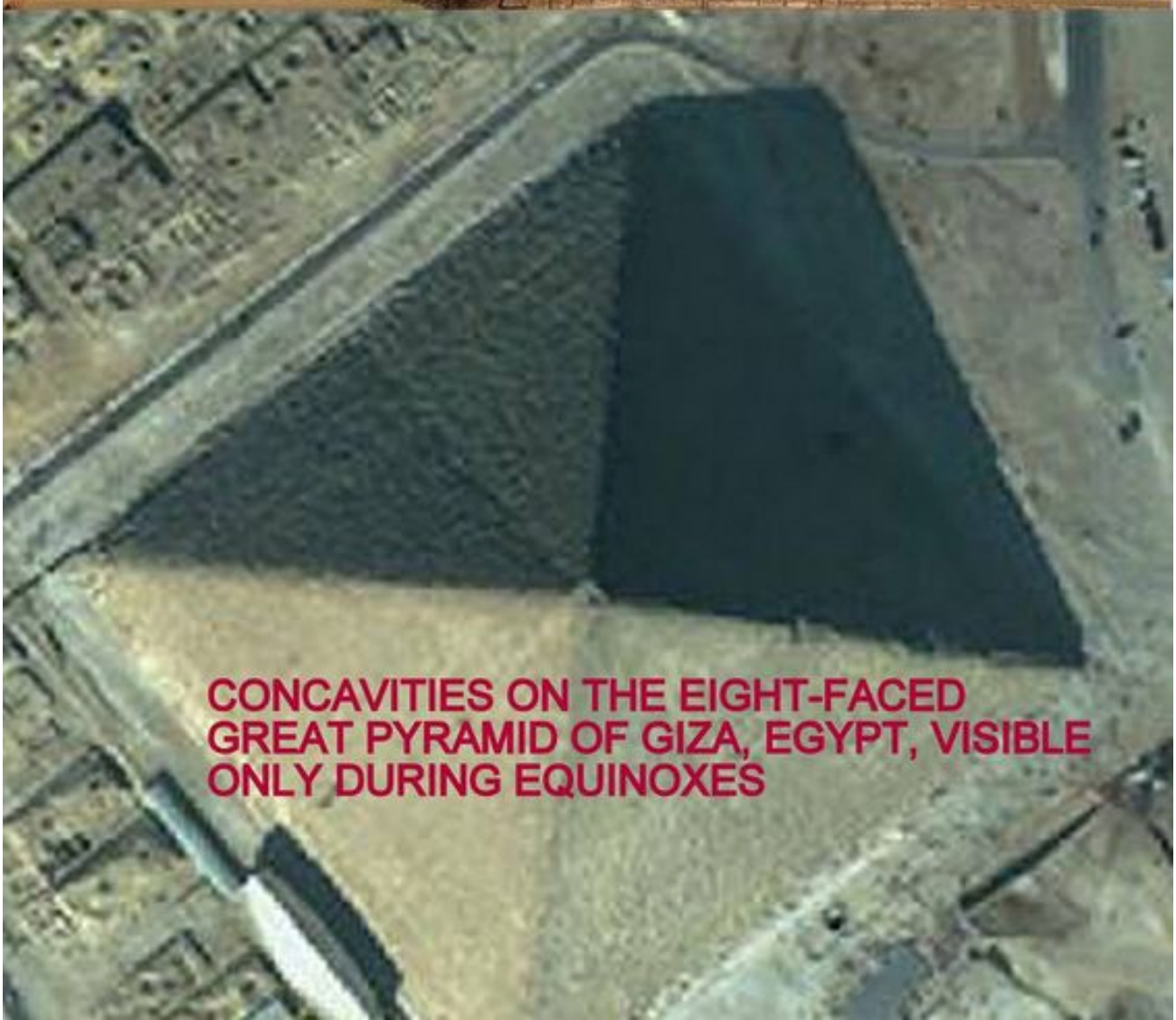
Электрический осциллятор Николы Тесла

Египетский Анкх

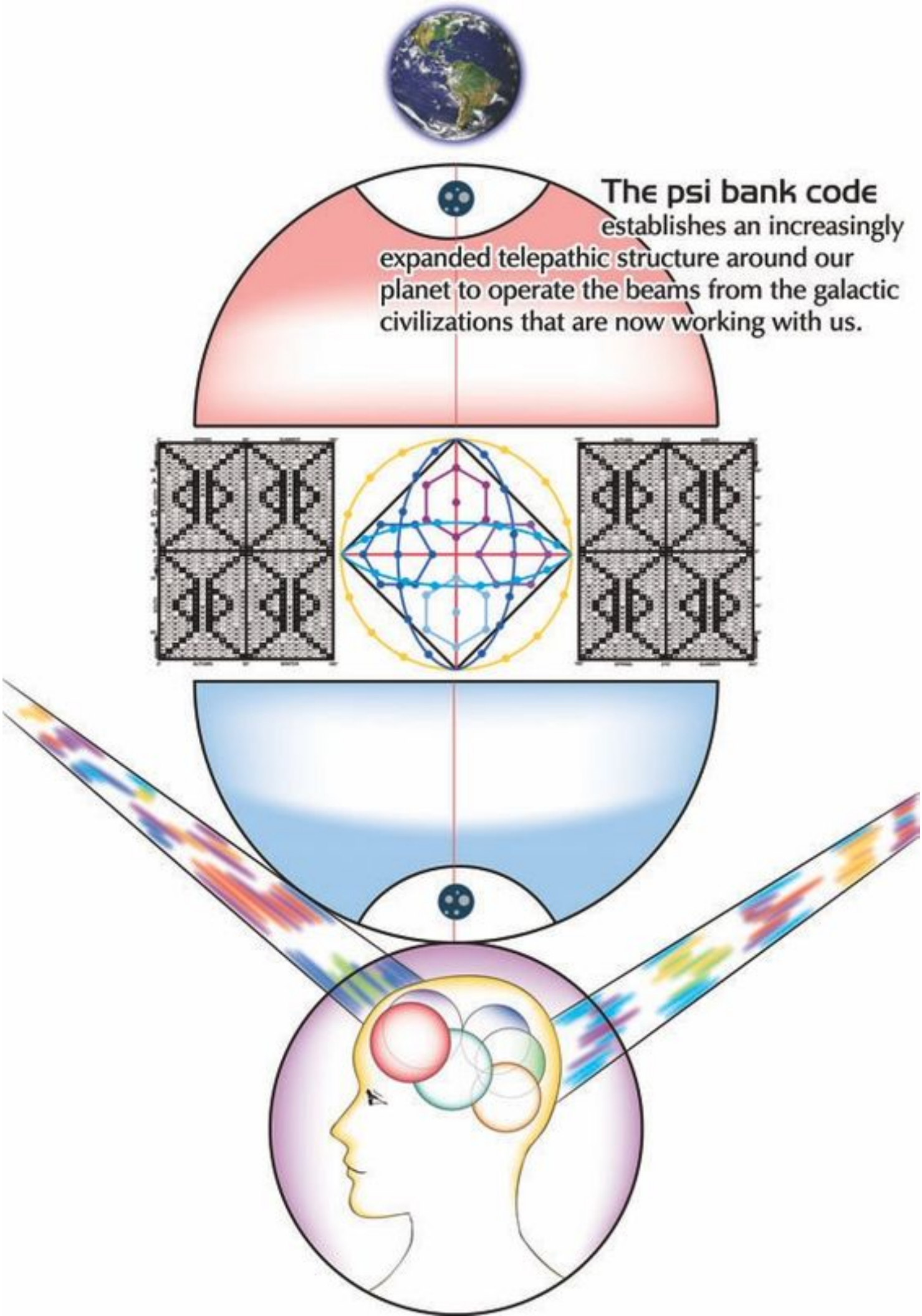
vk.com/yuka_film

SNAKE SHAPED SHADOW ON THE STAIRCASE OF THE PYRAMID OF KUKULKAN, IN CHICHEN ITZA, MEXICO DURING THE SPRING EQUINOX

COLLAGE WORK:
FRÉDÉRIC MESSIER LEROUX



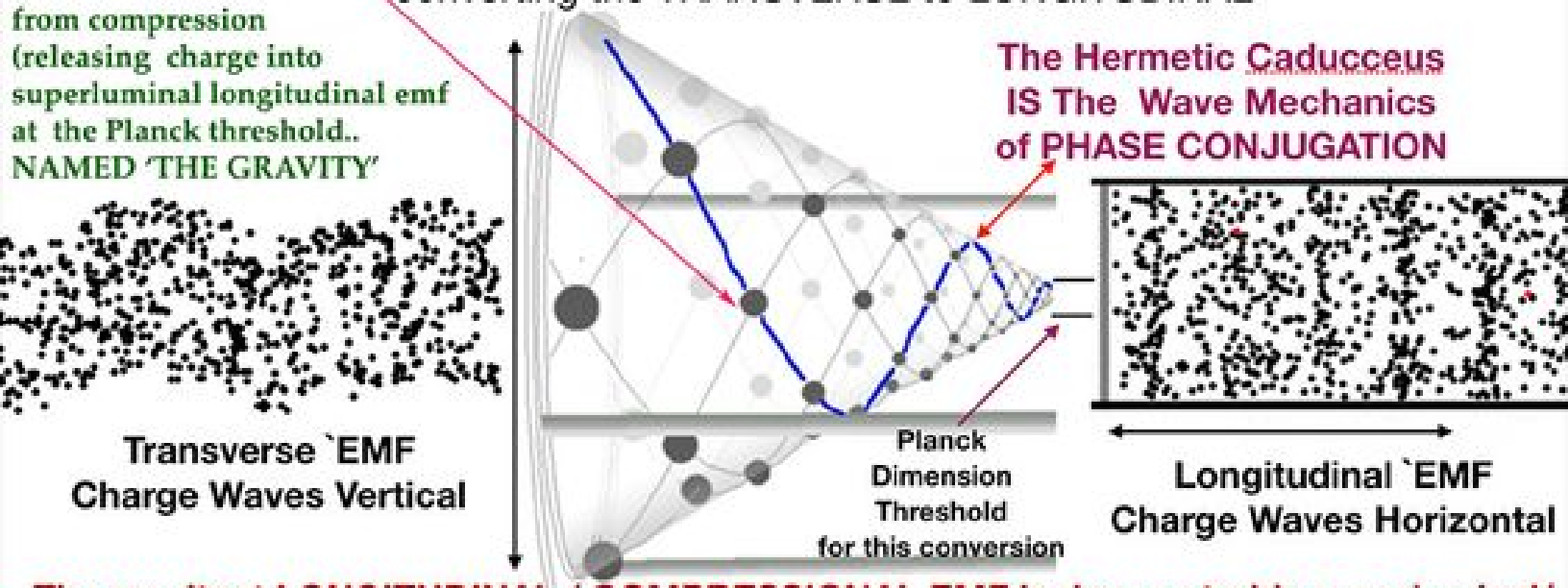
CONCAVITIES ON THE EIGHT-FACED GREAT PYRAMID OF GIZA, EGYPT, VISIBLE ONLY DURING EQUINOXES


The psi bank code
establishes an increasingly expanded telepathic structure around our planet to operate the beams from the galactic civilizations that are now working with us.

Recursive golden ratio enabled 'conjugate' constructive heterodyning of Phase Velocities PRODUCING (charge) ACCELERATION from compression (releasing charge into superluminal longitudinal emf at the Planck threshold.. NAMED 'THE GRAVITY'

How PHASE CONJUGATION- WAVE FRACTALITY converts the vertical TRANSVERSE EMF WAVE in to LONGITUDINAL /"SCALAR" COMPRESSIONAL WAVES - The perfect GOLDEN SPIRAL ON THE CONE 'perfected translation of vorticity' makes the 'EL' / phase shift (thru light speed) converting the TRANSVERSE to LONGITUDINAL

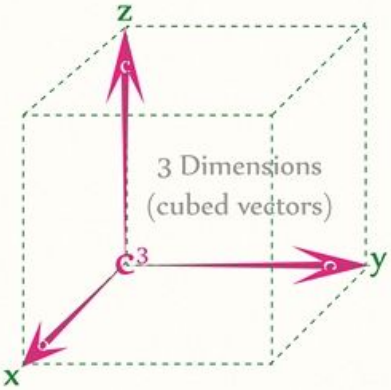
copyright: Dan Winter fractalfield.com



The resultant LONGITUDINAL / COMPRESSIONAL EMF is demonstrably superluminal/ faster than light: this enables remote action at a distance.
This 'way out' (thru lightspeed) for charge during perfect non-destructive conjugate implosive charge compression- is the mechanism / cause of *gravity, * electro-negativity, *life force, *consciousness , ALL negentropy.

Spatial co-ordinate systems

Cubic



Spacetime (or space–time, or space time) is any mathematical model that combines space and time into a single continuum.

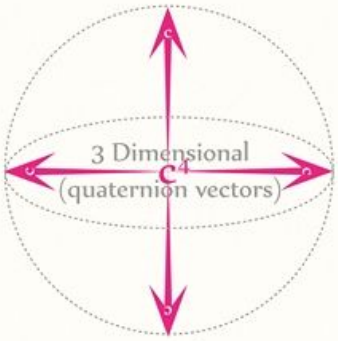
Spacetime is usually interpreted with space as being three-dimensional and time playing the role of a fourth dimension that is different from the spatial dimensions.

Tetryonic theory redefines as time to be a measure of the changing quantised angular momenta of Planck scale Charges in any spatial plane or volume

By combining space and time into a single manifold, we can significantly simply a large number of physical theories, and re-formulate them in a more uniform way to explain the mechanics of the Universe at all scales

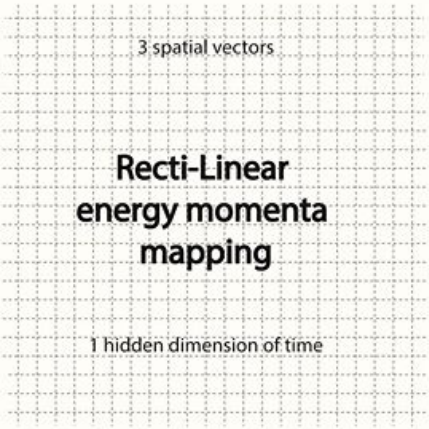
Tetryonics maps radial spacetime co-ordinates through the vector momentum of Energy

Spherical



seconds²

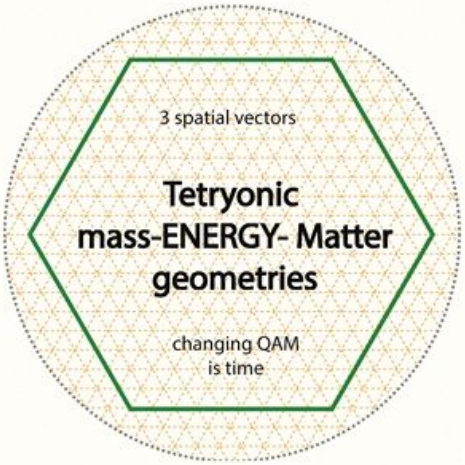
Cartesian Space-Time



The quantised angular momenta of mass-Energy and Matter are triangular geometries

The current methodologies for mapping energy densities onto Euclidean, Cartesian and Reimannian co-ordinates are inaccurate reflections of the charged mass-ENERGY-Matter geometries, introducing a mathematical complexity to a otherwise simple foundational equilateral geometry

Tetryonic Space-Time



By mapping equilateral mass-energies & Matter into radial spatial co-ordinates Tetryonic theory is able to reveal the hidden 4th dimension of time

The I AM University 22 Chakras Chart

Dimensions	Chakra Colors	Chakra Sounds	Chakra Numbers
Chakras 16 - 22 are 5th dimensional	Platinum		Twenty Second Chakra
	Blue Gold		Twenty First Chakra
	Violet Gold		Twentieth Chakra
	Magenta		Nineteenth Chakra
	Pink Gold		Eighteenth Chakra
	Multi-White		Seventeenth Chakra
	Light Violet White		Sixteenth Chakra
Chakras 8-15 are 4th dimensional	Light Golden White		Fifteenth Chakra
	Deep Blue Violet		Fourteenth Chakra
	Violet Pink		Thirteenth Chakra
	Shimmering Gold		Twelfth Chakra
	Pink Orange		Eleventh Chakra
	Pearlescen		Tenth Chakra
	Blue-Green		Ninth Chakra
	Seafoam Green		Eighth Chakra
Chakras 1-7 are 3rd dimensional	Violet	Aum	Crown Chakra
	Indigo	Om	
	Blue	Ham	Throat Chakra
	Green	Yam	Heart Chakra
	Yellow	Ram	Solar Plexus Chakra
	Orange	Yam	Polarity Chakra
	Red	Lam	Root Chakra

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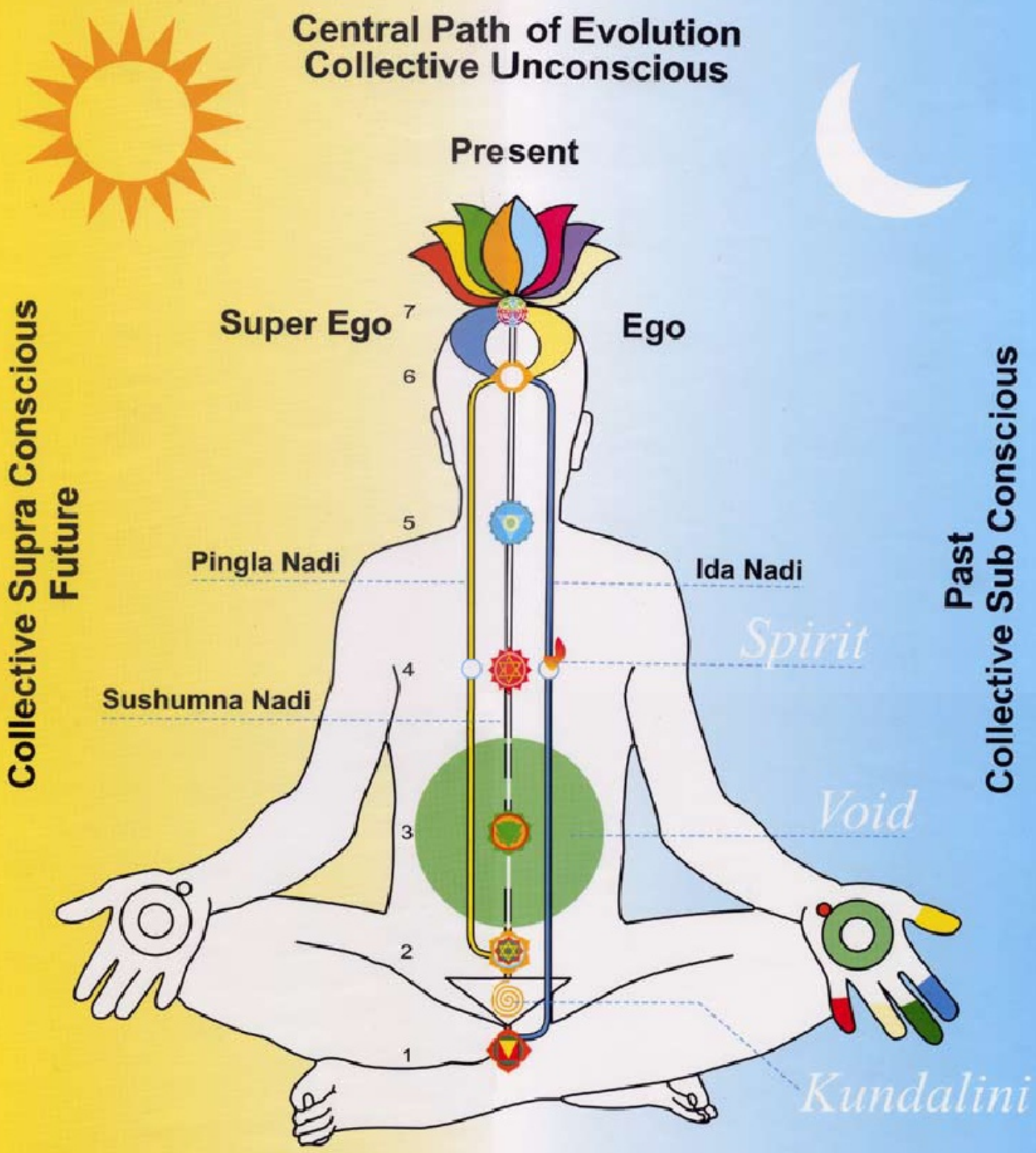
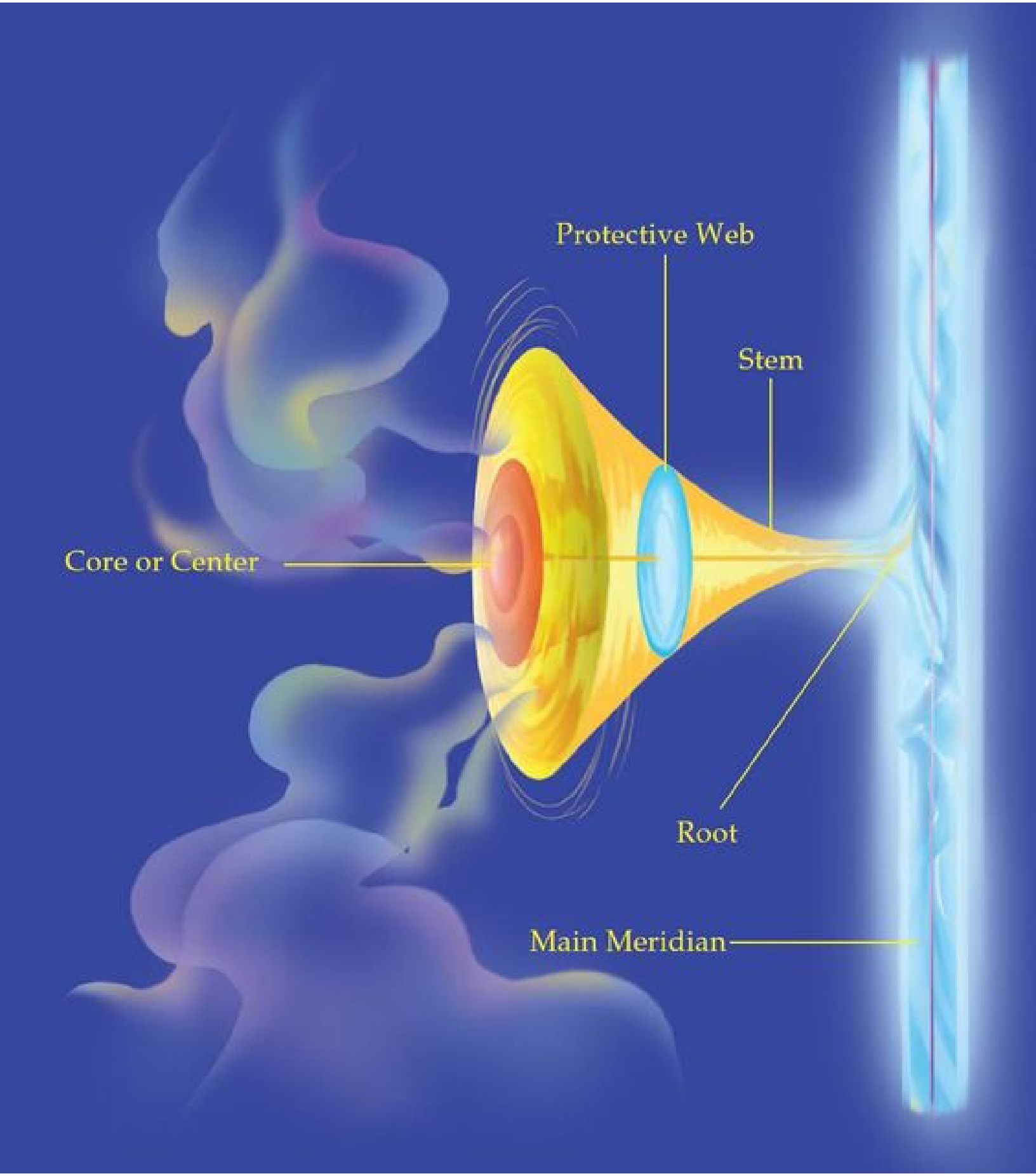
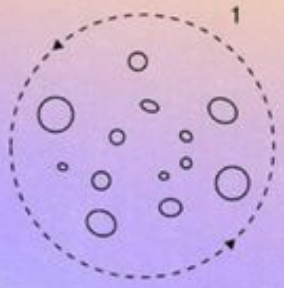
Subtle System




Protective Web
Stem
Core or Center
Root
Main Meridian

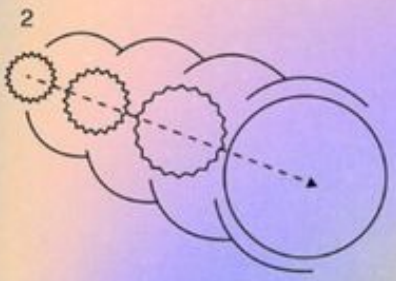
everything is going to be *okay*

1



there is still so much future

2

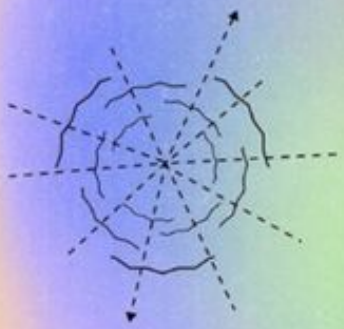


good things are coming

3

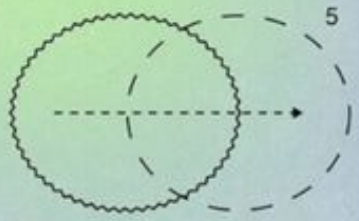
feelings are temporary

4



after rain there is sunshine

5



endings are often beautiful beginnings in disguise

beaming DESIGN

@beamingdesign

Point

Omnipresence, individual

Line

Active force, phallic

Circle

Unity, all of creation, womb

Vesica Piscis

Two circle, eye, yonic

Triqueta

Three circle, trinity

Creation

Seven Circles of creation, contains hexagram representing all the elements

Labyrinth

Exploration of the self.

Seed of Life

All that exists can be built from the seed of life

Egg of Life

Multi celled embryo

Fruit of Life

Blueprint of the universe

Tree of Life

Kabbalistic, tree of creation

Flower of Life

Ancient pattern containing all patterns, can be used as a crystal grid

Fibonacci Spiral

Expansion, growth

Tetrahedron- 4 sides

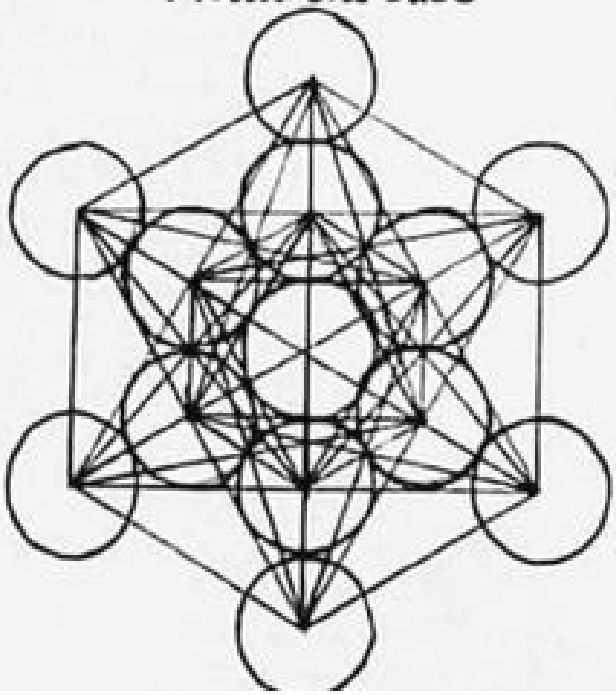
Cube- 6 sides

Octahedron- 8 sides

Dodecahedron- 12 sides

Icosahedron- 20 sides

Metatrons cube



Fire

Earth

Air

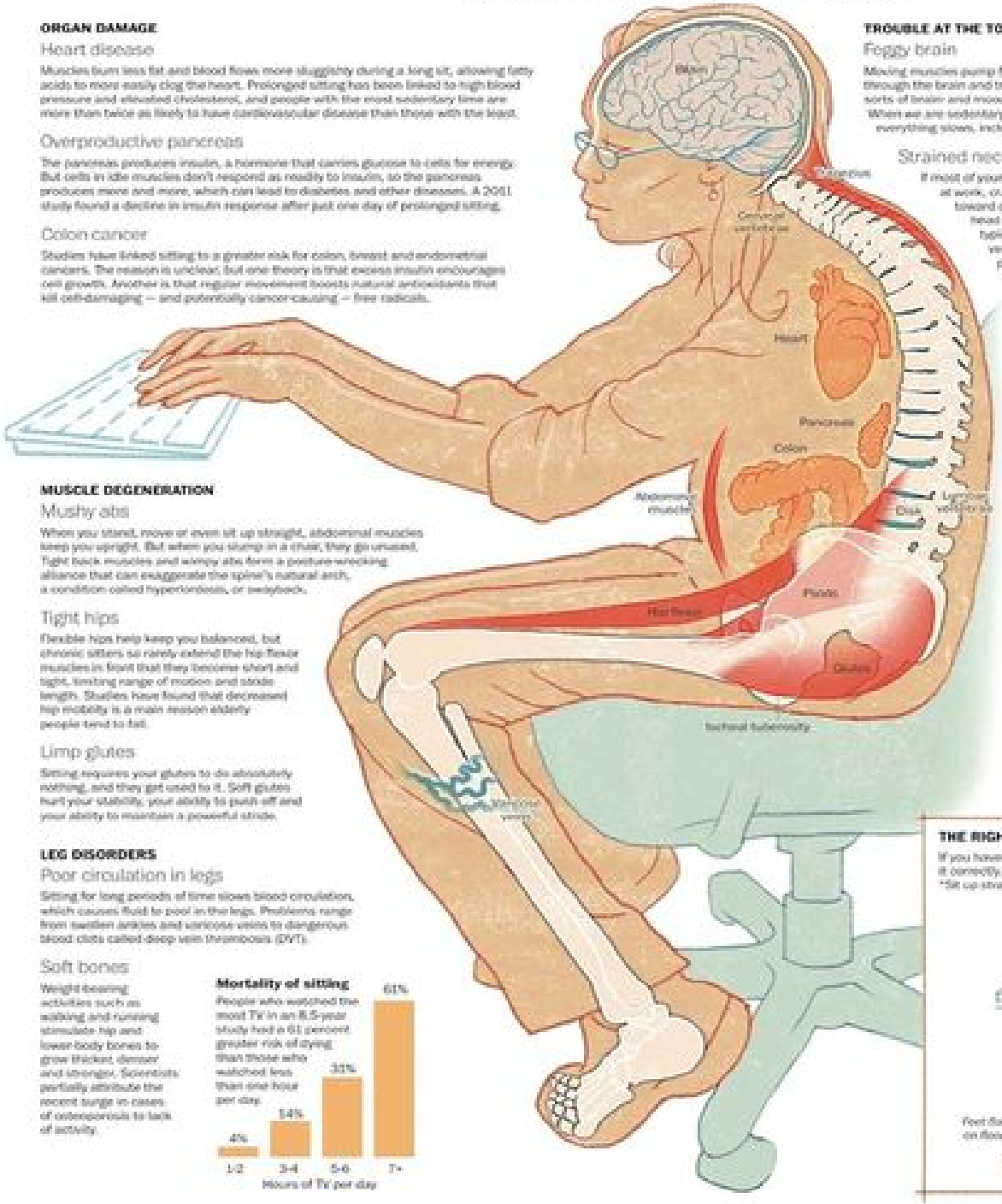
Ether

Water

Don't just sit there!

We know sitting too much is bad, and most of us intuitively feel a little guilty after a long TV binge. But what exactly goes wrong in our bodies when we park ourselves for nearly eight hours per day, the average for a U.S. adult? Many things, say four experts, who detailed a chain of problems from head to toe.

Reporting by Bonnie Berkowitz; Graphic by Patterson Clark



ORGAN DAMAGE

Heart disease

Muscles burn less fat and blood flows more sluggishly during a long sit, allowing fatty acids to more easily clog the heart. Prolonged sitting has been linked to high blood pressure and elevated cholesterol, and people with the most sedentary time are more than twice as likely to have cardiovascular disease than those with the least.

Overproductive pancreas

The pancreas produces insulin, a hormone that carries glucose to cells for energy. But cells in idle muscles don't respond as readily to insulin, so the pancreas produces more and more, which can lead to diabetes and other diseases. A 2011 study found a decline in insulin response after just one day of prolonged sitting.

Colon cancer

Studies have linked sitting to a greater risk for colon, breast and endometrial cancers. The reason is unclear, but one theory is that excess insulin encourages cell growth. Another is that regular movement boosts natural antioxidants that kill cell-damaging — and potentially cancer-causing — free radicals.

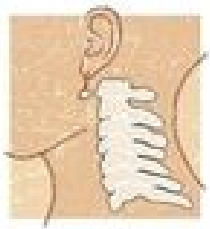
TROUBLE AT THE TOP

Foggy brain

Moving muscles pump fresh blood and oxygen through the brain and trigger the release of all sorts of brain- and mood-enhancing chemicals. When we are sedentary for a long time, everything slows, including brain function.

Strained neck

If most of your sitting occurs at a desk at work, craning your neck forward toward a keyboard or tilting your head to cradle a phone while typing can strain the cervical vertebrae and lead to permanent imbalances.



Proper alignment of cervical vertebrae

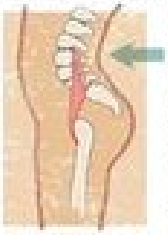
Sore shoulders and back

The neck doesn't slouch alone. Slumping forward overextends the shoulder and back muscles as well, particularly the trapezius, which connects the neck and shoulders.

BAD BACK

Inflexible spine

Spines that don't move become inflexible and susceptible to damage in mundane activities, such as when you reach for a coffee cup or bend to tie a shoe. When we move around, soft disks between vertebrae expand and contract like sponges, soaking up fresh blood and nutrients. When we sit for a long time, disks are squashed unevenly and lose sponginess. Collagen hardens around supporting tendons and ligaments.



Lumbar region bowed by shortened psoas

Disk damage

People who sit more are at greater risk for herniated lumbar disks. A muscle called the psoas travels through the abdominal cavity and, when it tightens, pulls the upper lumbar spine forward. Upper-body weight rests entirely on the ischial tuberosity (sitting bones) instead of being distributed along the arch of the spine.

MUSCLE DEGENERATION

Mushy abs

When you stand, move or even sit up straight, abdominal muscles keep you upright. But when you slump in a chair, they go unused. Tight back muscles and wimpy abs form a posture-wrecking alliance that can exaggerate the spine's natural arch, a condition called hyperlordosis, or swayback.

Tight hips

Flexible hips help keep you balanced, but chronic sitters so rarely extend the hip flexor muscles in front that they become short and tight, limiting range of motion and stride length. Studies have found that decreased hip mobility is a main reason elderly people tend to fall.

Limp glutes

Sitting requires your glutes to do absolutely nothing, and they get used to it. Soft glutes hurt your stability, your ability to push off and your ability to maintain a powerful stride.

LEG DISORDERS

Poor circulation in legs

Sitting for long periods of time slows blood circulation, which causes fluid to pool in the legs. Problems range from swollen ankles and varicose veins to dangerous blood clots called deep vein thrombosis (DVT).

Soft bones

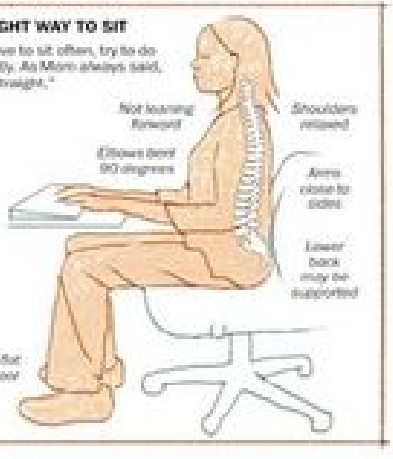
Weight-bearing activities such as walking and running stimulate hip and lower-body bones to grow thicker, denser and stronger. Scientists partially attribute the recent surge in cases of osteoporosis to lack of activity.

Mortality of sitting

People who watched the most TV in an 8.5-year study had a 61 percent greater risk of dying than those who watched less than one hour per day.

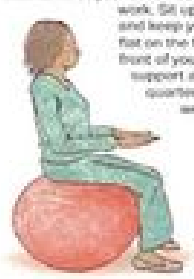
THE RIGHT WAY TO SIT

If you have to sit often, try to do it correctly. As Mom always said, "Sit up straight."



So what can we do? The experts recommend . . .

Sitting on something wobbly such as an exercise ball or even a backless stool to force your core muscles to work. Sit up straight and keep your feet flat on the floor in front of you so they support about a quarter of your weight.

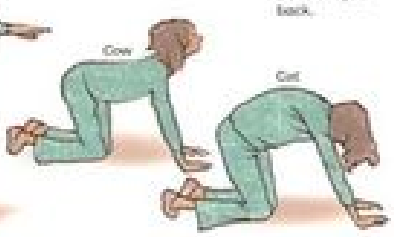


Stretching the hip flexors for three minutes per side once a day, like this:

Walking during commercials when you're watching TV. Even a small-like pace of 3 mph would burn twice the calories of sitting, and more vigorous exercise would be even better.

Alternating between sitting and standing at your work station. If you can't do that, stand up every half hour or so and walk.

Trying yoga poses — the cow pose and the cat — to improve extension and flexion in your back.



The experts

Scientists interviewed for this report:

James A. Levine, inventor of the treadmill desk and director of Obesity Solutions at Mayo Clinic and Arizona State University.

Charles E. Matthews, National Cancer Institute investigator and author of several studies on sedentary behavior.

Jay Dicharry, director of the REP Biomechanics Lab in Bend, Ore., and author of "Anatomy for Runners."

Tal Amasay, biomechanist at Barry University's Department of Sport and Exercise Sciences.

Additional sources: "Amount of time spent in sedentary behaviors and cause-specific mortality in U.S. adults," by Charles E. Matthews, et al., of the National Cancer Institute; "Sedentary behavior and cardiovascular disease: A review of prospective studies," by Earl S. Ford and Carl J. Caspersen of the Centers for Disease Control and Prevention; Mayo Clinic.

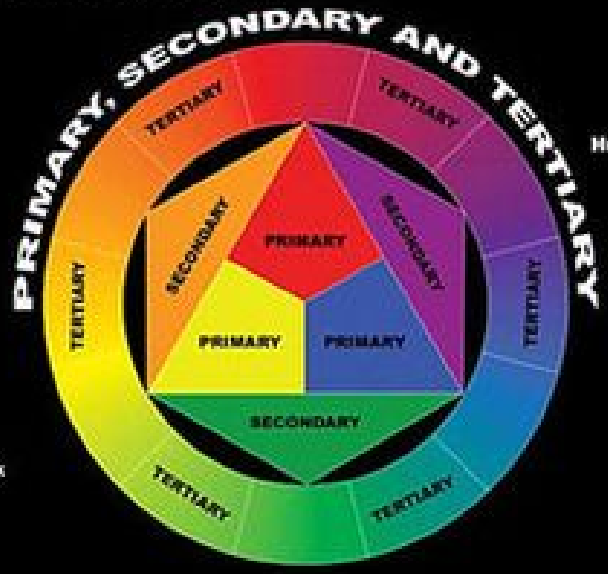
COLOR THEORY

COLOR MIXING

RGB
Red, Green, Blue
Light Generated Model

RGY
Red, Green, Yellow
Pigment Generated Model

CMYK
Cyan, Magenta, Yellow, Black
Print Process Model



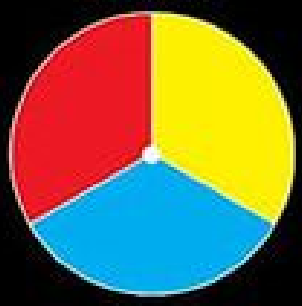
COLOR MODES

HSB
Hue (color), Saturation (how much color), Black (tint and shade)

GREY SCALE
Black and White only

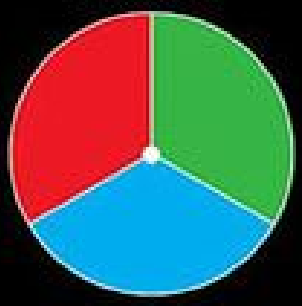
WEB SAFE RGB
Hexadecimal compatible

PRIMARY



Pigment generated colors are derived from these primary colors: red, yellow and blue.

PRIMARY

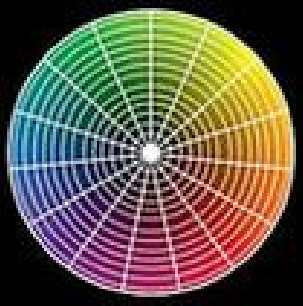


Light generated colors are derived from these primary colors: red, green and blue.

SECONDARY

Mixing primary colors creates other colors. For example:
blue + yellow = green
blue + red = violet

TERTIARY



A secondary color wheel can expand to tertiary and beyond.

COLOR HARMONY

ANALOGOUS

COMPLEMENTARY

TRIAD

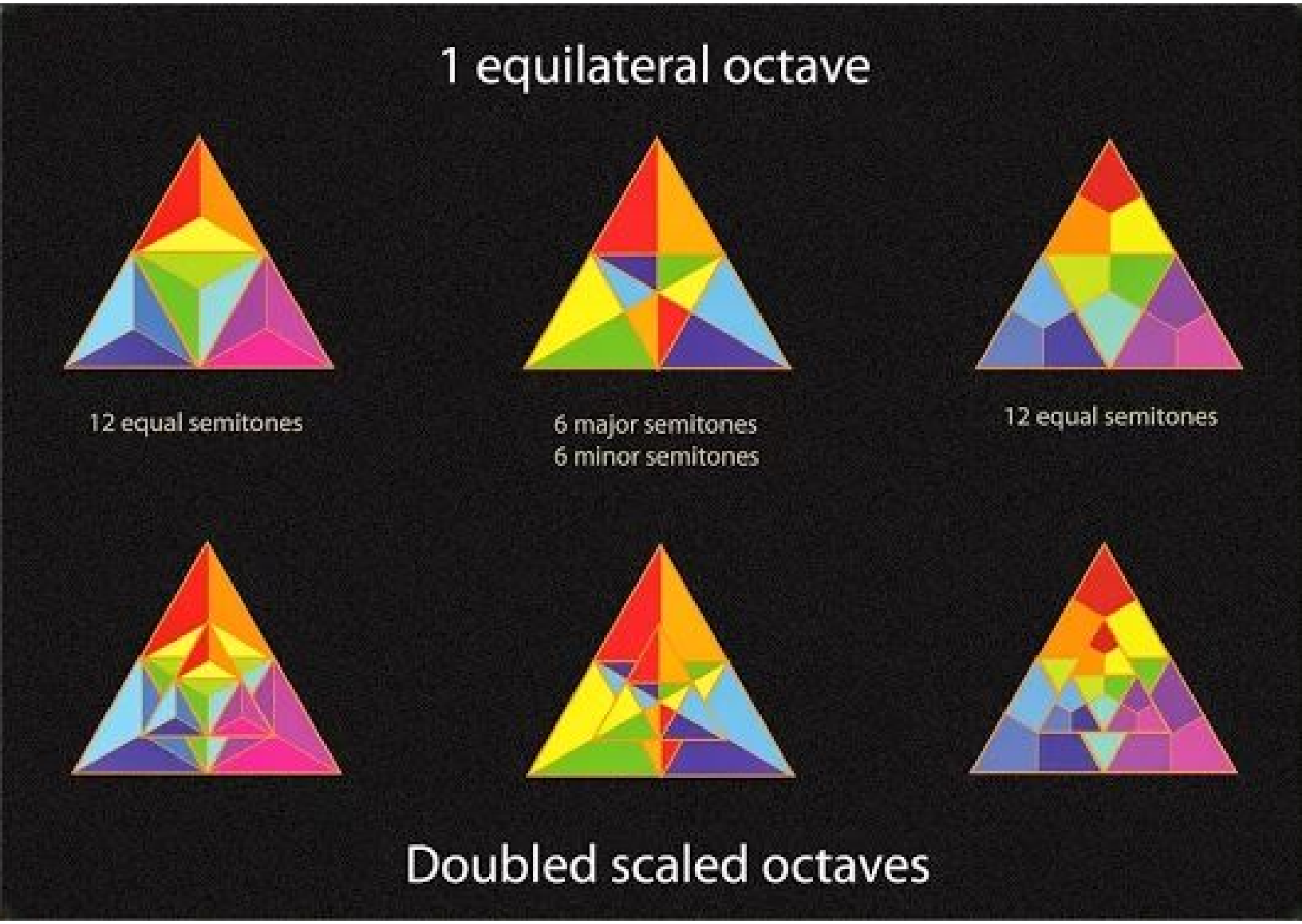
TETRADIC

SPLIT COMPLEMENTARY

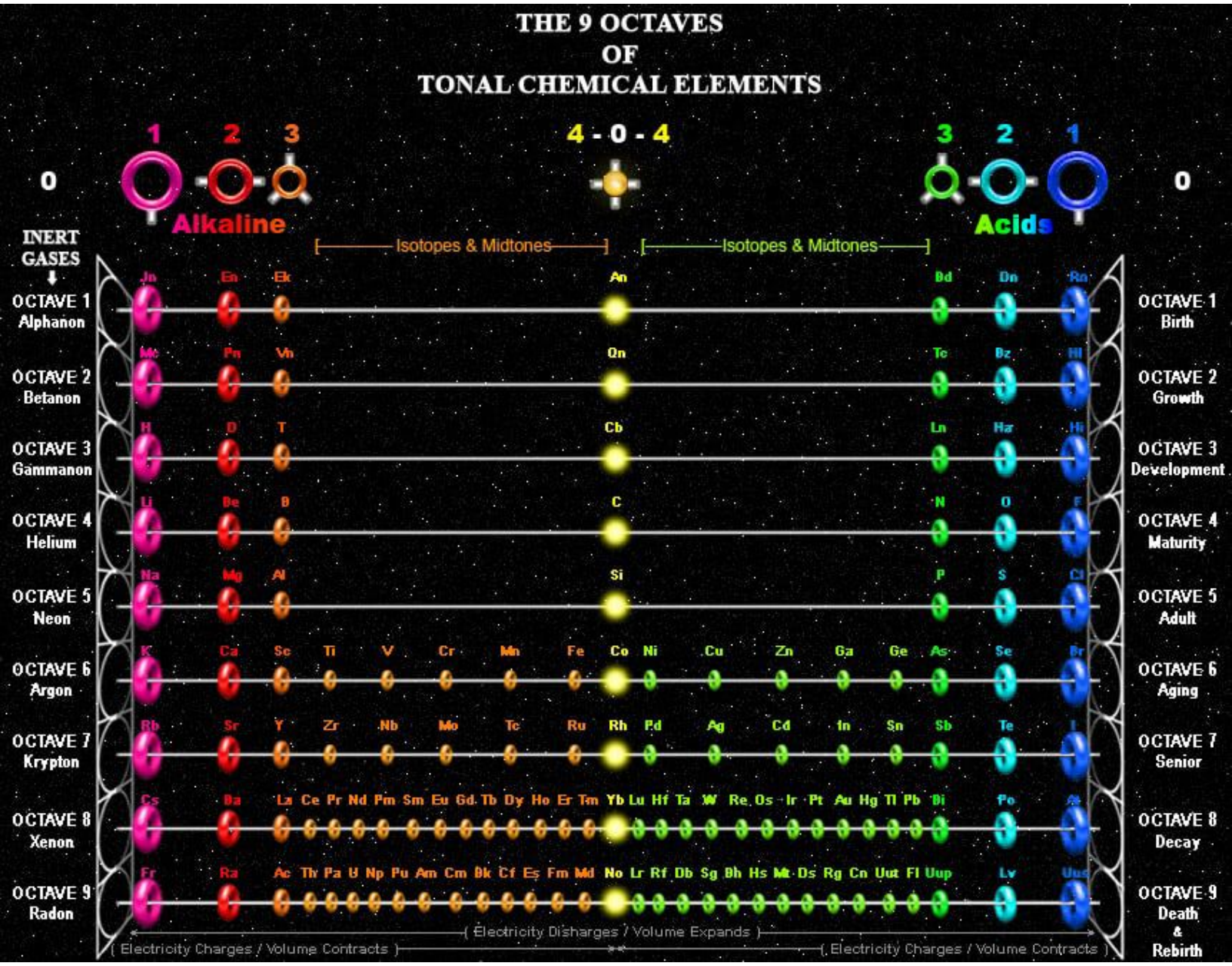
QUADRILATERAL

THE TWO MOST IMPORTANT DAYS IN YOUR LIFE ARE

THE DAY YOU ARE BORN AND THE DAY YOU FIND OUT WHY


1 equilateral octave
12 equal semitones
6 major semitones
6 minor semitones
12 equal semitones
Doubled scaled octaves

THE 9 OCTAVES OF TONAL CHEMICAL ELEMENTS



Hz

Hz = oscillation per second

Hz	Brainwave Activity	Frequency Description
1.600		**WLAN//WI-FI/wireless Internet/network and microwave ovens** transmit at the ultra high frequency 2,45 GHz which disturbs the brain's own clock frequency. WLAN pulsation varies. The frequencies of the microwave oven change the molecules and contaminate the inner and outer environment. Increasing infertility and cell mutations are the consequences. Bluetooth technology, e.g. the wireless headset transmits with a pulsation of 1600 Hz in the frequency band 2,45 GHz (= 2450 MHz) **Mobile phones = 217 electroshocks per second into the nervous system** = the wireless society short-circuits us and we suffer from disconneXion syndrome.
217	"Ultra" Beta	3G mobile phones transmit by significantly more powerful intensity and the pulsation varies. This unnatural intruder causes electrostress which "might" lead to brain stress due to the rapid pulsating electroshocks per second. We become electric and are being disconnected from the Now. The EU REFLEX study from 2003 with 12 research teams from 7 nations proved that our DNA is damaged and cell mutations occur. The results confirm the Freiburg Appeal from 2002 with more than 1.300 worried doctors, the Bamberger Appeal from 2004, and the Bamberger doctor's letter from 2006. **Cordless DECT phones = 100 electroshocks per second into the nervous system**
100	"Hyper" Beta	Cordless DECT technology in private homes or in companies transmit at a frequency pulsating at 100 Hz - non-stop 24/7/365. When connected to the mains and switched on it transmits, also when it is on stand by. The intensity of cordless phones connected to traditional wired phone systems are much higher than the intensity of cell phones. The base unit equals a mobile phone antenna - just this one is often placed on bed tables or close to where people live, eat, and sleep. It disturbs our brain's centre for sleep, life energy, and recovery in the Alpha state - we burn out. **The base of the brain** vibrates at 100 Hz - but not pulsated. That is our centre for creativity adn important for spiritual development - getting to know one self. Disturbances create a chain reaction throughout the entire endocrine system and there- by cause hormonal disturbances - infertility?
50	"High" Beta	**The electric current in the mains oscillate at 50/60 Hz** Even the AC (alternating current) in television sets, computers and the switches in ordinary homes influence our cells in an unnatural way. The term electrostress has been known as a medical disease in several countries since at least 1969. **We are being disconnected from the wisdom of the Now by so-called knowledge** Stress, fear, anxiety, depression, and burn out constantly increase when we are bombarded with knowledge and information through all channels. We are being held in a state of "High" Beta. We become more aggressive, impatient, and short-minded. We become imprisoned in our mind - the MATRIX left brain mentality = limitation and resistance.
33		**At 33 Hz and above nervousness, panic, and anxiety starts**
	Beta	**Consciousness constantly alert, increase of stress, "fight or flight mechanism"** Thinking and concentration. Alertness, analytical problem solving, tense, stress, agitation, discord, and mental unbalance. As the frequency increases we disconnect more and more from what is in the Now. The joy of Life decreases. Our joy centre in the brain vibrates at 17,5 Hz. TETRA mobile phones transmit with a pulsating frequency of 17,65 Hz which seriously disturbs the Calcium-ion flow in and out of the cells of the brain.Police and rescue services all over Europe are destined to use TETRA systems.
13	Alpha & omega	**Responsibility and action = always in the Now = Flow. Accept is the first step** Living in the Now is the key to understanding and new consciousness. A state of calmness. Light awareness and alertness. Increased learning ability and sensitiveness. A state of Unity between body and Spirit. It is a relaxed, harmonious, energized awaken state like a light meditation. We are aware and present in the Now in Alpha - den real world. The Limbic Centre in the brain vibrates with 12,5 Hz - it is the centre for sleep. Life energy, healing, and recovery. The limbic centre is closely related to our feelings. **The Pineal Gland** is the superior gland in the brain. It vibrates at 10 Hz being the frequency for our nerve and time centre. The Pineal Gland produces the transmitter Melatonin which controls and regulates the other hormone producing glands and the immune system. Melatonin is particularly being produced at night where we are asleep. Darkness and silence are both very important factors. Melatonin has a protecting effect against cancer. The Pineal Gland is very sensitive towards electromagnetic influences. Both light and sounds are electromagnetic signals at different frequencies. Microwaves affect all cells and especially the Pineal Gland. Imbalance in the Pineal Gland causes increased mental activity which "might" lead to burn out syndrome.
7	Theta	**Meditative state. Deep relaxation.** Increased creativity and vivid imagination. Access to what is normally unconscious potential. Connected-ness in general is acknowledged in a wider context. Being able to connect-the-dots of the "big picture".
3	Delta	**Regeneration and harmonious balance.** The frequency band 3-12,5 Hz is the vitality "field". We "recharge", recover, and maintain homeostasis - the dynamic balance that keeps us alive. Our immune system strengthen, and our sleep is invigorating. In this field we get energy, Life force, and the power needed for a modern Life style. **Very deep relaxation.** Deep sleep. Trance. Deep hypnosis.

*Etheric Body (level 1):*The physical matter of the organs and tissues are anchored to this energy matrix. Colors vary from light blue to gray. The cells of the body grow along the energy lines f the etheric body.

Emotional Body (level 2): Emotions appear here as blobs of energy in colors relating to that emotion. It looks to be in constant fluid motion.

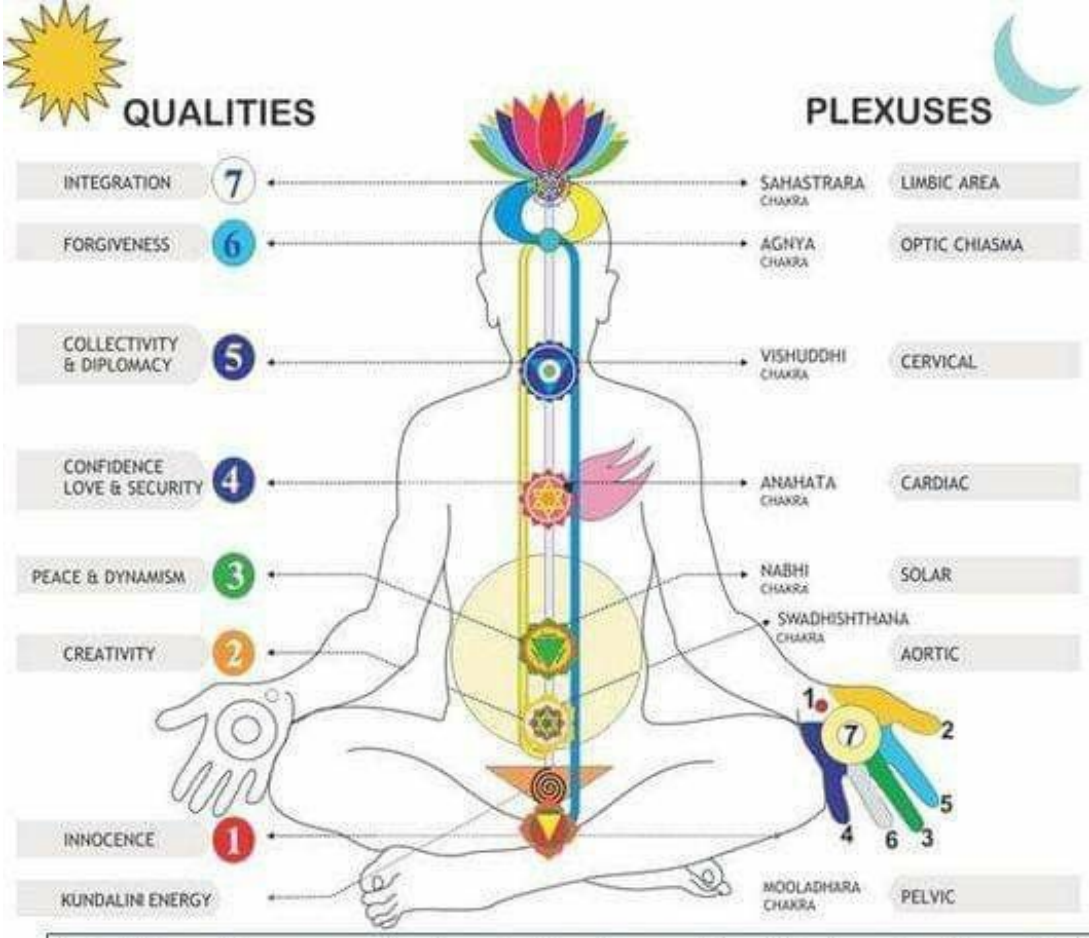
*Mental Body (level 3):*Mental processes, ideas, and thoughts are found here. This body is seen as yellow while thoughts are seen here as various shades of yellow.

AStral Body (level 4): This layer includes all the colors infused with the rose color of love. A lot of energy from this body is sent between two people in some form of interaction.

Etheric Template (level 5): This is the template for the etheric layer. It is a dark blue blueprint for the etheric body. It creates a negative space for the etheric body to form.

Celestial Body (layer 6): At this level we experience our connection with the universe. It is shimmering light of pastal colors. Spiritual ecstacy is located here.

Ketheric Template/Casual Body (level 7): This golden egg shape level covers all the auric bodies that are connected with the current lifetime. Past life bands wrap around this eggshell.



Look at the qualities corresponding to each chakra, these qualities define the major divine quality of the nation(s) it represents. For the whole world to awaken to its spiritual awareness, we need to focus on the quality that needs to be cleansed, purified and healed on individual basis.

Sahasrara	The Himalayas (India)
Agya	**Centre** - Jerusalem, Bethlehem & Palestine
	Right - Russia (Ego) : Left Temple / **Left** - China (Super Ego) : Right Temple
Hamsa	New York
Vishuddhi	**Centre** - Central America ;
	Right - North America, Canada, Norway, Sweden, Finland , Denmark
	Left - South America, Bulgaria, Romania,Hungary, Czech, Poland.
Anahat	**Centre** - Ireland, Kolkata (India)
	Right - Germany , Japan
	Left - England
Bhavsagar	Middle East & Switzerland
Nabhi	**Centre** - Greece , Europe ; **Right** - France ; **Left** - Austria
Swadhisthana	**Right** - France ; **Left** - Africa & Nepal
Mooladhara	**Centre** - Australia ; **Right** - New Zealand

Atma - Heart Trigger - The Spirit - Spain. **Jivatma** - The Soul - Italy. **Kundalini** - Maharashtra (India)

1 Dimension 1 Chakra
1 DNA Strand 1 Fire Code

Mother Line
Mothers Genetic Imprint
Magnetic Particle Base

Each DNA Strand is built upon 12 - not 4 Nucleotide Base - Chemicals

Father Line
Fathers Genetic Imprint
Electric Anti-Particle Base

The Fully active 12 Strand DNA Template has 144 Full Chromosomes. 12 Chromosomes for each Strand of DNA.

12 Magnetic Base Codes	12 Keylons / Fire Letters	12 Electrical Acceleration Codes
1	1	1
2	2	2
3	3	3
4	4	4
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12

Our Physical Bodies should have a total of 36 full Chromosomes
12 for Strand 1 - 12 for Strand 2 - 12 for Strand 3 for a total of 36 Full Chromosomes.

We have 23. We are missing 13 Chromosomes.

The MCEO Freedom Teachings® Series - © 2010 A&A Deane
Computer Graphics - Ron Mayer

Stations of Mind & Memory
The Plasmantik MarkhetU're™ Fields of the Human Body & the Embodied Fascia Layers with Organic PLanetary Interfaces

Magnetosphere
Outer Van Allen Belt (Electrons -)

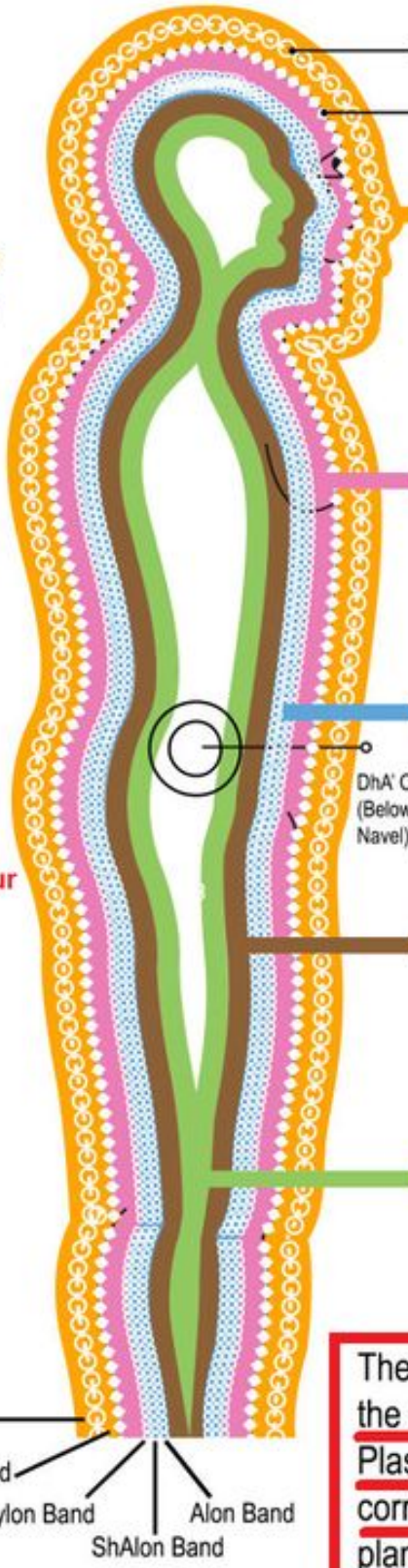
⑤ ARi-yon'ah KarU'sa D3 Orons
Outer Tan-chi-TEi Chismatic
Respiratory & Digestive System & Etheric Ducts (Surrounds & Permeates D1 Etheric Body & extends outward 3" from skin)
Van Allen Gap (Coronosphere)

④ DreA'ma KarU'sa D3 KAyLons
Middle Tryptoplasmic Chismatic
Outer skin layer & muscle tissue
Inner to Upper atmosphere &
Inner Van Allen Belt (Protons +)

③ Sche'ma KarU'sa D3 ShALons
Inner Tryptonic Chismatic
outer embodied Fascia Bone
Crust to Lower Mantel = Croute du manteau inférieur

② Lud'far KarU'sa D3 ALons
Ah-Stri-jha Ta-hu Medium Chismatic
Middle embodied Fascia
Liquids/Blood
Core Aquifers

① Ah-SwE'jha KarU'sa D3 KHYons
EFFi Medium Chismatic
Inner embodied Fascia
Cardio-Vascular & Etheric Ducts
Core Crystal



⑤ ARi-yon-ah (Currently "non-concious Eternal Authentic") Mind & Respiratory & Digestive memory matrix

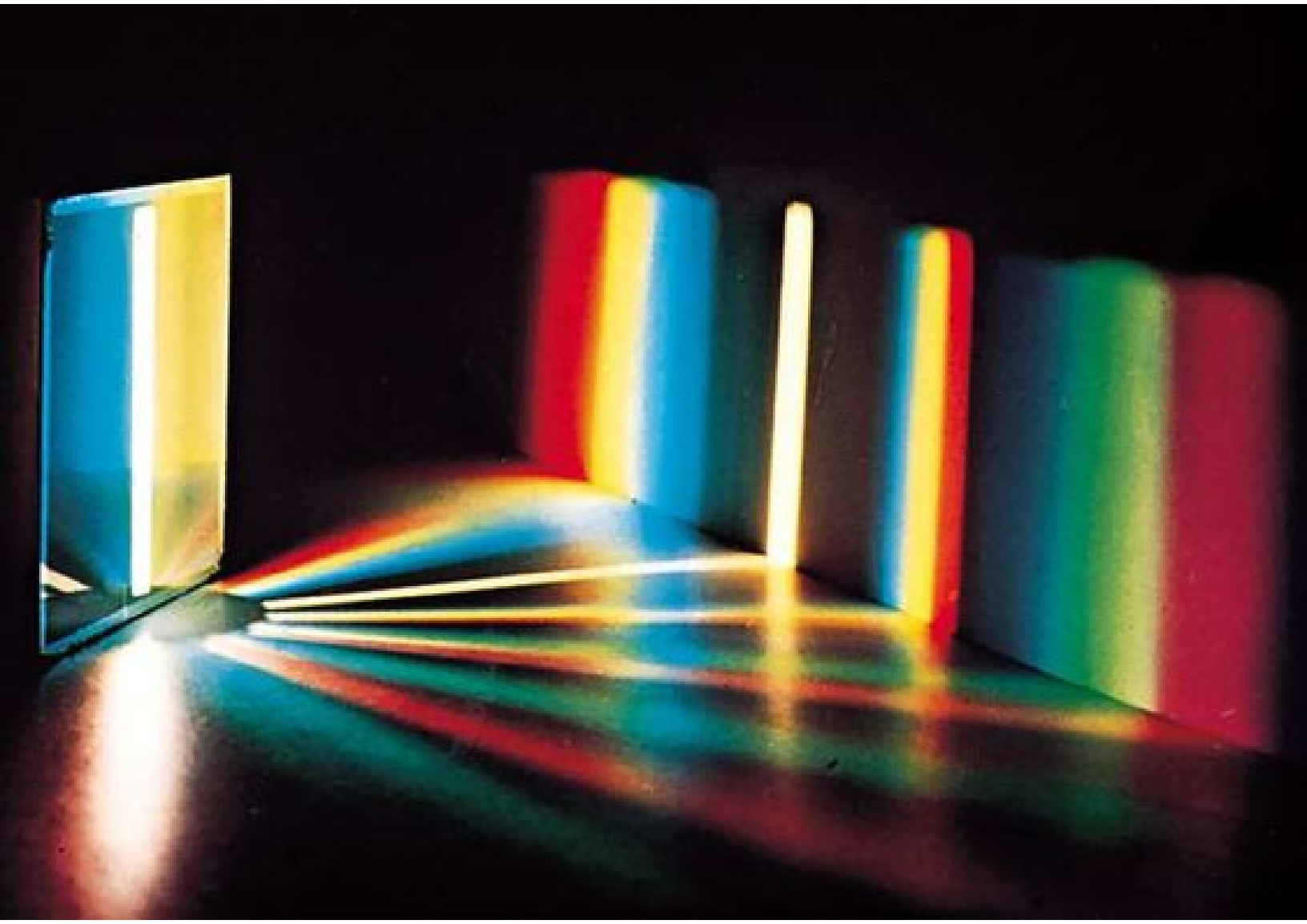
④ DreAma Dreaming Mind & Muscle memory matrix & Skin & Tissue

③ Schema Conscious-Mind Bone Memory Matrix/ outer Fascia

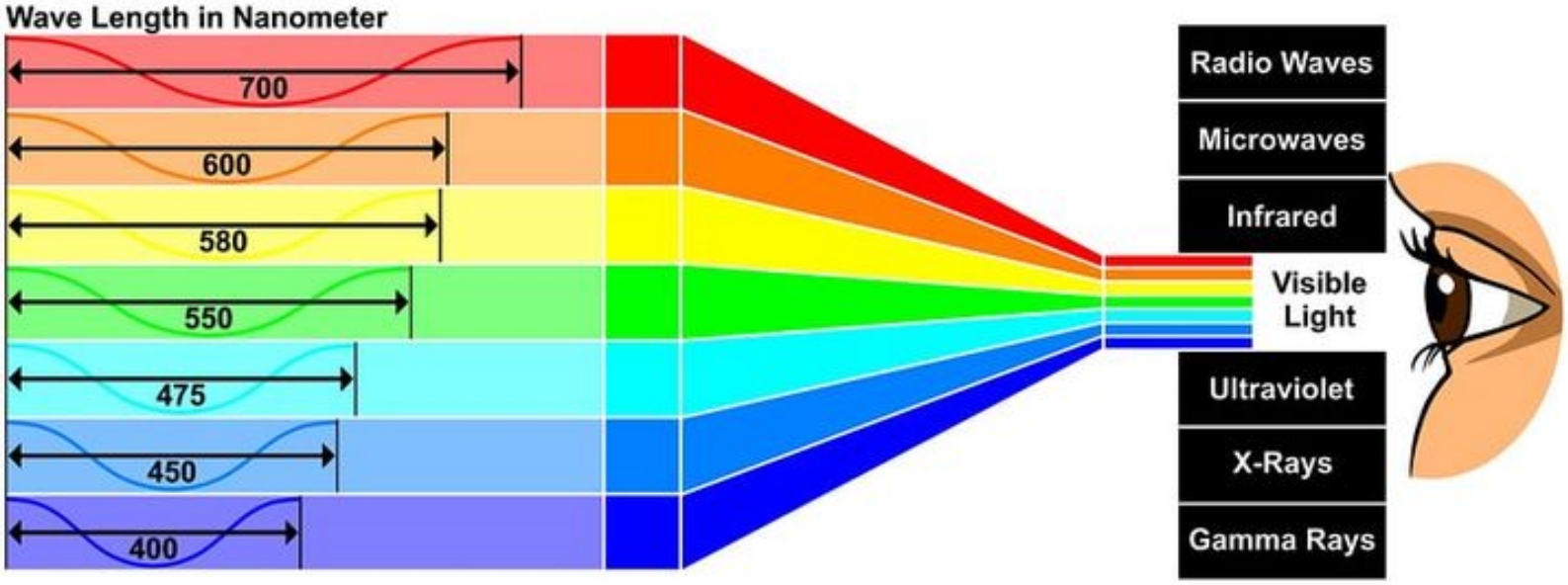
② Ludfar Subconscious Mind Liquid Memory Matrix Middle Fascia

① Ah-SwE'-jha Unconscious Cardio-Vascular Memory Matrix Inner Fascia

The Plasmantik MarkhetU're Fields of the Organic Eternal Authentic Human Plasma Body interfaces directly with corresponding PM Fields and layers of planetary anatomy



©john entwistle
PHOTOGRAPHY


Wave Length in Nanometer
700
600
580
550
475
450
400
Radio Waves
Microwaves
Infrared
Visible Light
Ultraviolet
X-Rays
Gamma Rays

The chemistry of emotions

Where two neurons meet, a very small gap (synapse) exists between them. The electrical impulse travelling along the axon of the neuron must convert into a chemical signal to bridge this gap. The chemicals that do this are called neurotransmitters. These so-called chemical messengers are involved in our different responses to situations.

Your emotions depend on fluctuating levels of neurotransmitters, which cause the activation of different parts of the brain responsible for different moods, or activate parts of the brain that trigger the stimulation of the autonomic nervous system.

Adrenaline

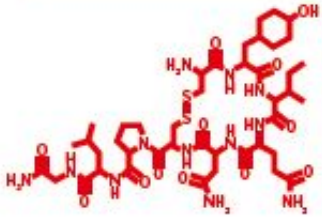
Released by the adrenal glands that sit on top of each kidney, adrenaline increases the flow of blood to our muscles, raises our heart rate and dilates our pupils. It is crucial in our fight-or-flight survival response.

Noradrenaline

Similar to adrenaline, the release of this chemical can result in increased levels of alertness, helping to prime us for action if needed. It also increases our blood pressure and widens our air passages.

Dopamine

This is the addictive reward chemical that your brain craves. It serves to motivate you to seek out the things you need for your survival. We can sometimes find ourselves enslaved by this ancient reward mechanism.



Oxytocin

Also known as the 'cuddle hormone', oxytocin is released when you're close to another person. It's essential for making strong social bonds, and it's also a key part of why we want to trust people.

GABA

Responsible for regulating muscle tone, gamma-Aminobutyric acid (GABA) also regulates the communication between brain cells. It can calm us down by reducing the rate at which our neurons fire.

Acetylcholine

This is the main neurotransmitter in the parasympathetic nervous system that slows our heart rate, contracts smooth muscles, dilates blood vessels and increases bodily secretions.

Glutamate

The most abundant neurotransmitter in the vertebrate nervous system, glutamate is used by nerve cells to transmit signals to other cells. Too much of it can cause cognitive impairments.

Endorphins

Triggered by the sensation of pain, endorphins work to inhibit the transmission of pain signals. Capable of producing a sense of euphoria, studies have suggested endorphins may also be stimulated by laughter.

Serotonin

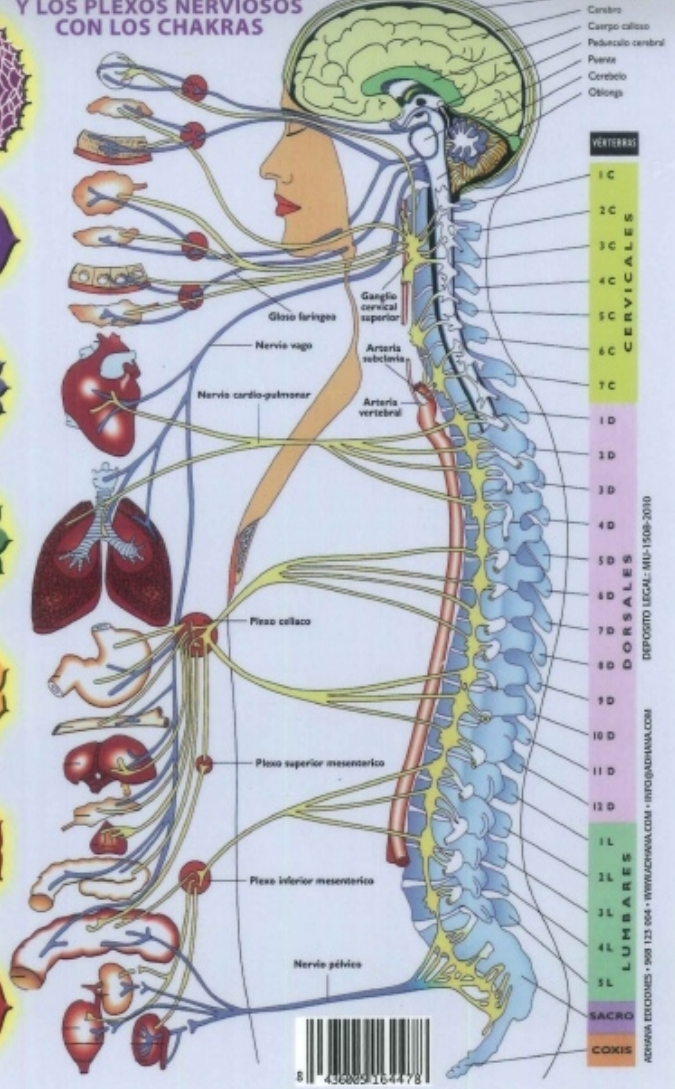
Serotonin is linked to our wellbeing and happiness, and our levels of it are affected by exercise and exposure to sunlight. It also helps to regulate our mood balance, sleep cycle and digestion.

FACULTADES DE LOS CHAKRAS

LAS ENERGÍAS NATURALES QUE TRANSFORMAN TU VIDA

ASANAS PARA ESTIMULAR LOS CHAKRAS

RELACIÓN DE LOS ÓRGANOS Y LOS PLEXOS NERVIOSOS CON LOS CHAKRAS



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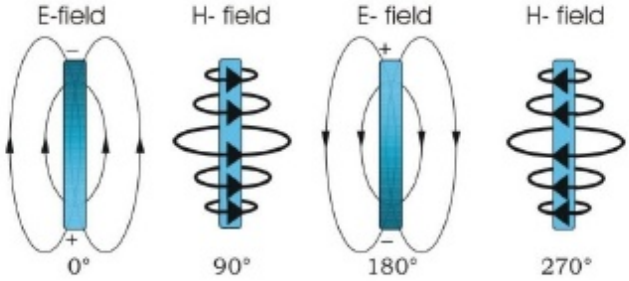
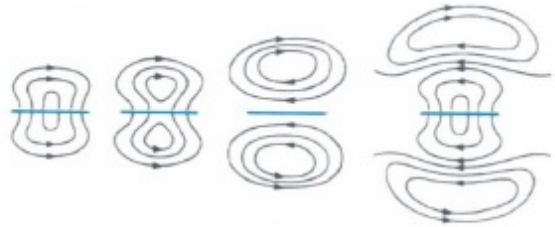
In the near field of a radio transmitter (dipol antenna) scalarwaves form with the typical properties:

* A angle of 90° between E- and H-field
* The appearence of field vortices (scalar) which form a longitudinal shockwave

The fields of the oszillating dipole antenna:



The coming off of the electric field lines from a dipole

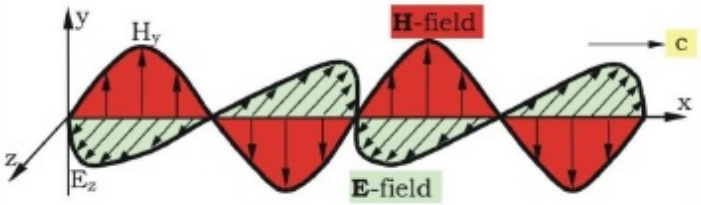


In the far field of a transmitter antenna the electromagnetic wave dominates with the typical properties:

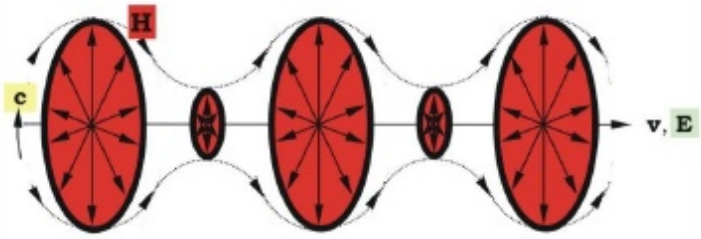
* a angle of 0° between E- and H-field
* propagation is transverse with c=300.000 km/s

The different waveforms

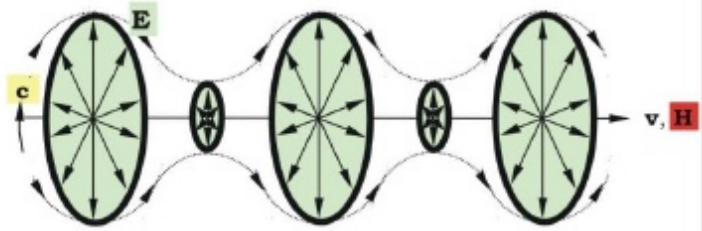
1. *H. Hertz:* **electromagnetic wave** (transverse)



2. *Nikola Tesla:* **electric wave** (longitudinal)

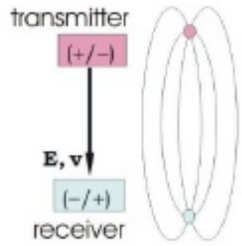


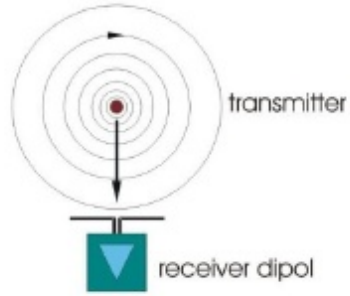
3. **magnetic wave** (longitudinal)



The three basic types according to the wave equation
(electric, magnetic and electromagnetic wave)

scalar wave = energy wave: = *Tesla radiation*	**electromagnetic wave** = *Hertzian wave*
• can be modulated in a complex way	• can only be modulated linearly
• fast, parallel transmission	• slow, serial transmission
• focussing, transmission without losses	• scattering, transmission losses
• positive use: mobile, beam radio, energy converter	• positive use: radio, TV, information distributor
• negative use electro smog, radiation weapons	• negative use: mobile, beam radio

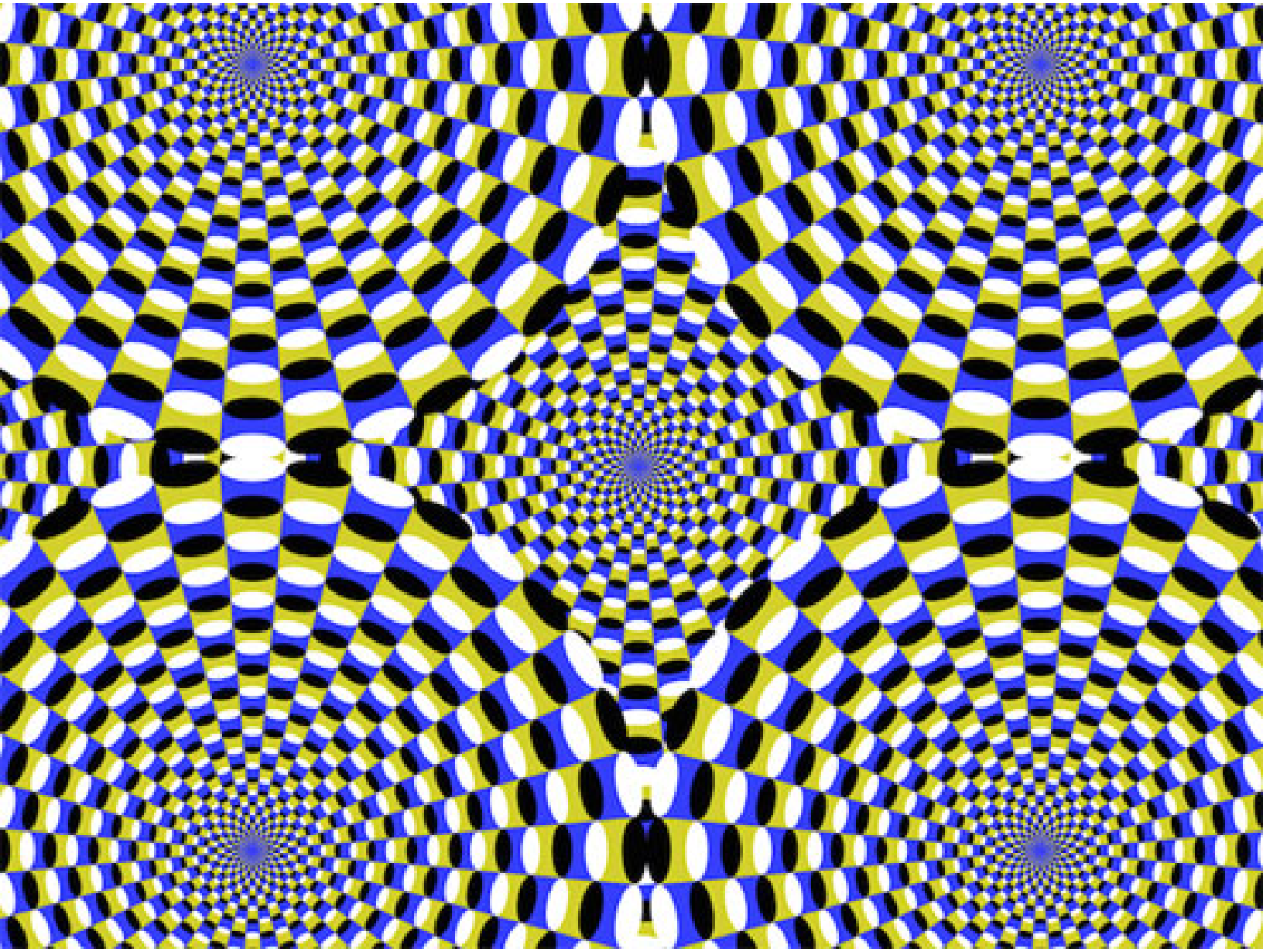


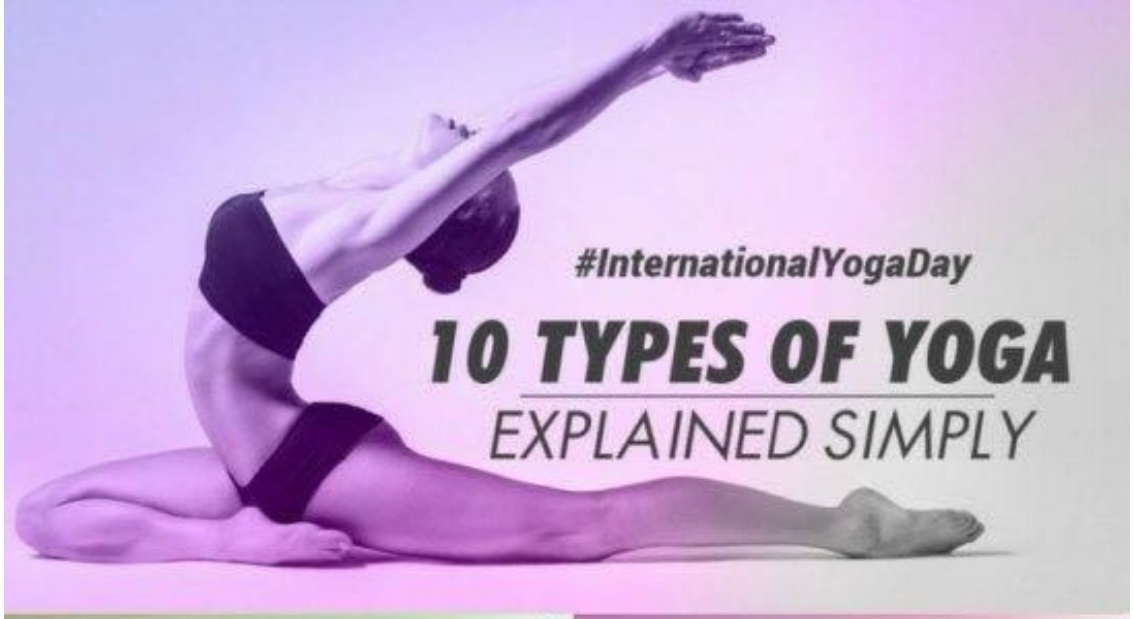


The two parts of the wave equation

$$\Delta \mathbf{E} = \text{grad div } \mathbf{E} - \text{rot rot } \mathbf{E} = \frac{1}{c^2} \cdot \frac{\delta^2 \mathbf{E}}{\delta t^2}$$

Nicola Tesla:	*Heinrich Hertz:*
• **scalar wave** (electric or magnetic) =	• **electromagnetic wave** =
• **longitudinal wave**	• **transverse wave**
• swings in direction of propagation	• swings at right angle to direction of propagation
form: (each time for velocity of propagation v):	form: (each time for frequency):
• (v>c): neutrino-radiation, morpho-genetic fields ... • (v=c): photons • (v<c): plasma-wave, thermal vortices, biophotons, earth radiation ... • (v=0): noise ...	• cosmic radiation • X-rays, • UV radiation • light • infrared radiation • micro waves • radio waves • VLF, UHF, ULF ...





#InternationalYogaDay

10 TYPES OF YOGA
EXPLAINED SIMPLY

RESTORATIVE YOGA

Restorative yoga poses are designed to be soothing, well supported poses that offer the body the opportunity to linger quietly

Celebrity
Adam Levine
Lisa Haydon

PRENATAL YOGA

Prenatal yoga is a multifaceted approach to exercise that encourages stretching, mental centering and focused breathing.

Celebrity
Miranda Kerr
Jessica Alba

VINYASA YOGA

Vinyasa Yoga is all about fluidity, involving creative flowing sequences geared to open and strengthen the entire body.

Celebrity
Divya Rao
Miley Cyrus

KUNDALINI YOGA

Using sound, breath, and posture, Kundalini Yoga aims to develop spiritual awareness by freeing the serpent power.

Celebrity
Melanie Griffith
Sting (Gordon Matthew)
Russell Brand

KRIPALU YOGA

Ideal for people facing life's challenges, Kripalu is gentle yoga that emphasizes moving at your own pace, self-acceptance, and adaptability.

Celebrity
Bipasa Basu
Nargis Fakri

POWER YOGA

Put simply, Power Yoga is a series of postures designed to improve strength, balance, and flexibility.

Celebrity
Ricky Martin

HOT YOGA

Performed in hot and humid condition, hot yoga often seeks to replicate the condition of India where yoga originated

Celebrity
Jennifer Aniston
Demi Moore
Madonna

HATHA YOGA

This yoga form challenges your body and emphasises physical exercises to master the body.

Celebrity
Ricky Martin
Madonna

IYENGAR YOGA

Iyengar is a type of Hatha yoga where the focus in on alignmment as well as the union of body, mind and soul

Celebrity
Sachin Tendulkar
Kareena Kapoor
Elisabeth - Queen of Belgium

ASHTANGA YOGA

Ashtanga means eight branches, of which asana or physical yoga posture is merely one branch, breath or pranayama is another

Celebrity
Gwyneth Paltrow
Alia Bhatt

"IF YOU ONLY KNEW THE MAGNIFICENCE OF THE 3, 6 AND 9, THEN YOU WOULD HAVE A KEY TO THE UNIVERSE." -TESLA

3 6 9

3 6 9

3 6 9

3 triangles :

1.4.7 = 12 = 3 8+1=9 7+2=9 6+3=9 5+4 = 9

2.5.8 = 15 = 6 1+2+4+8+7+5 = 18 = 9

3.6.9 = 18 = 9 1+2+3+4+5+6+7+8+9=45=9

Read More @ SITSSHOW.BLOGSPOT.COM

432hz ALCHEMICAL CHAKRA ZODIAC CHART

	CROWN CHAKRA *(SAHASRARA)* A-108.00Hz / A-216.00Hz / A-432.00Hz / A-863.33Hz *COAGULATION / CONSCIOUSNESS / KRONOS / UNDERSTANDING*	Higher Wisdom Enlightenment *(Thursday)* SACHIEL
	3RD EYE CHAKRA *(AJNA)* D-144.00Hz / D-288.33Hz / D-576.00Hz / D-1155.00Hz *DISTILLATION / THOUGHT / ZEUS / WISDOM*	Returning to Spirituality *(Saturday)* CAFFIEL
	THROAT CHAKRA *(VISHUDDHA)* G-192.66Hz / G-384.66Hz / G-768.99Hz / G-1540.00Hz *FERMENTATION / HEARING / ARIES / SEVERITY*	Awakening Intuition *(Wednesday)* RAPHAEL
	HEART CHAKRA *(ANAHATA)* C-128.33Hz / C-257.00Hz / C-514.00Hz / C-1028.00Hz *CONJUNCTION / TOUCH / HELIOS / BEAUTY*	Connection and Relationships *(Monday)* GABRIEL
	SOLAR PLEXUS CHAKRA *(MANIPURA)* F#-181.66Hz / F#-363.66Hz / F#-726.66Hz / F#-1452.00Hz *SEPARATION / SIGHT / APHRODITE / MERCY*	Transformation and Miracles *(Sunday)* MICHAEL
	SACRAL CHAKRA *(SVADHISTHANA)* Eb-152.66Hz / Eb-305.33Hz / Eb-611.33Hz / Eb-1221.00Hz *DISSOLUTION / TASTE / HERMES / GLORY*	Facilitating Change *(Friday)* ANAEL
	ROOT CHAKRA *(MULADHARA)* Bb-114.33Hz / Bb-229.00Hz / Bb-457.33Hz / Bb-915.00Hz *CALCINATION / SMELL / LUNA / FOUNDATION*	Liberating Guilt and Fear *(Tuesday)* CAMAEL

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2013

Humans “Glow”

(We Just Can't See It)

The human body emits visible light - known as human bioluminescence - but it’s just too dim for our eyes to detect.

A team of Japanese scientists studied this in 2009 and found that participants 'glowed' throughout the day, with the brightest spots appearing around the forehead, neck, and cheeks in the late afternoon. The dimmest bioluminescence was recorded late at night.

Image for illustrative purposes only

Study published in PLOS One (2009). See S:EI post for link.

Source: Science Alert

S:EI @ScienceEvidenceIntelligence

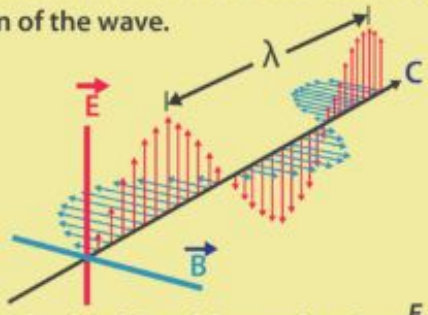
“You’re glowing” isn’t just a figure of speech.

Electromagnetic Wave

toppr

Electromagnetic Wave

An electromagnetic wave is radiated by an accelerated charge - as coupled electric and magnetic field oscillating perpendicular to each other and also to the direction of propagation of the wave.



Magnitude of E and B are related as $\frac{E_0}{B_0} = c$

Speed of an electromagnetic wave in free space is given by

$$c = \frac{1}{\sqrt{\mu_0 \varepsilon_0}}$$

Properties

- Do not carry any charge
- Do not deflect by electric and magnetic field
- Travel with speed of light in vacuum
- Frequency does not change when it goes from one medium to another, but its wavelength changes
- Transverse in nature
- Do not require any material medium for propagation

Electromagnetic Spectrum

The orderly distribution of electromagnetic waves in accordance with their wavelength or frequency

Modified Ampere's Law

$$\oint \vec{B}.d\vec{l} = \mu_0 (I_C + I_D)$$

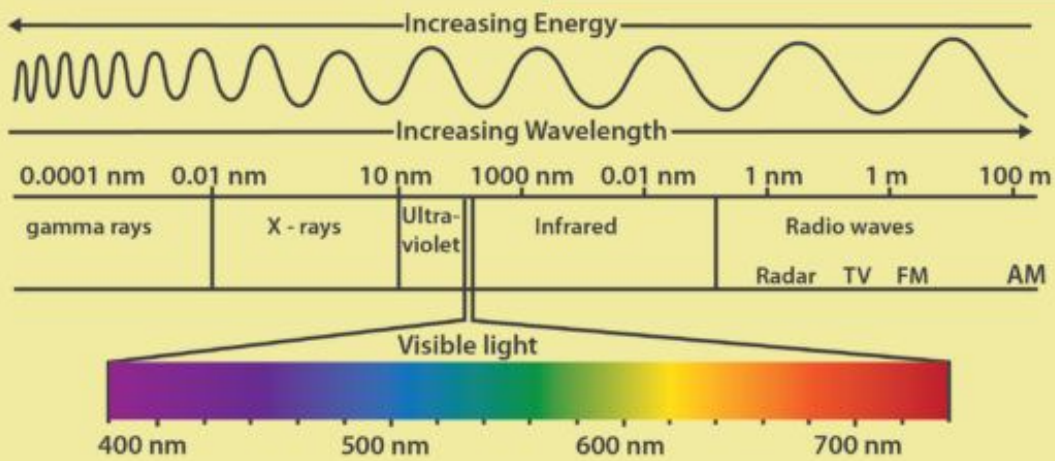
Displacement Current

It is the current which is produced when electric field and hence electric flux changes with time.

$$I_D = \varepsilon_0 \frac{d\phi_E}{dt}$$

Maxwell's Equations

1. $\oint_s \vec{E}.d\vec{s} = \frac{q}{\varepsilon_0}$
2. $\oint_s \vec{B}.d\vec{s} = 0$
3. $\oint_s \vec{E}.d\vec{l} = -\frac{d\phi_B}{dt} = -\frac{d}{dt}\oint_s \vec{B}.d\vec{s}$
4. $\oint \vec{B}.d\vec{l} = \mu_0 (I_C + I_D)$
   $= \mu_0 \left(I_C + \varepsilon_0 \frac{d\phi_E}{dt} \right)$
   $= \mu_0 \left(I_C + \varepsilon_0 \frac{d}{dt} \oint_s \vec{E}.d\vec{s} \right)$



Radiowaves: Used in radio communication

Infrared: Useful for elucidating molecular structure.

Visible light: Detected by stimulating nerve endings of human retina.

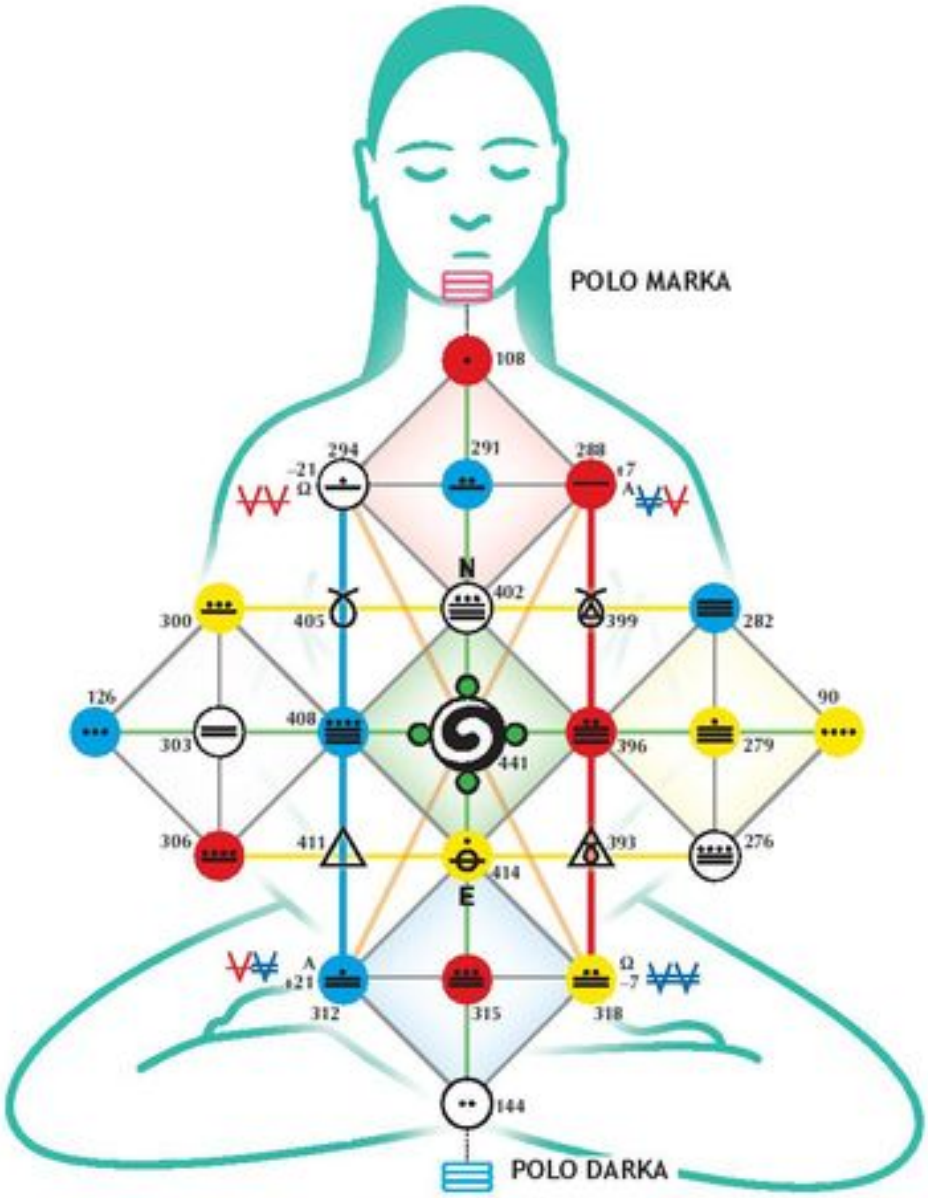
Ultraviolet: Can cause many chemical reactions, *e.g.*, the tanning of the human skin.

X - rays:
- Penetrate matter
- Ionize gases (*e.g.*, Radiography)

Gamma rays: In the treatment of cancer and tumours

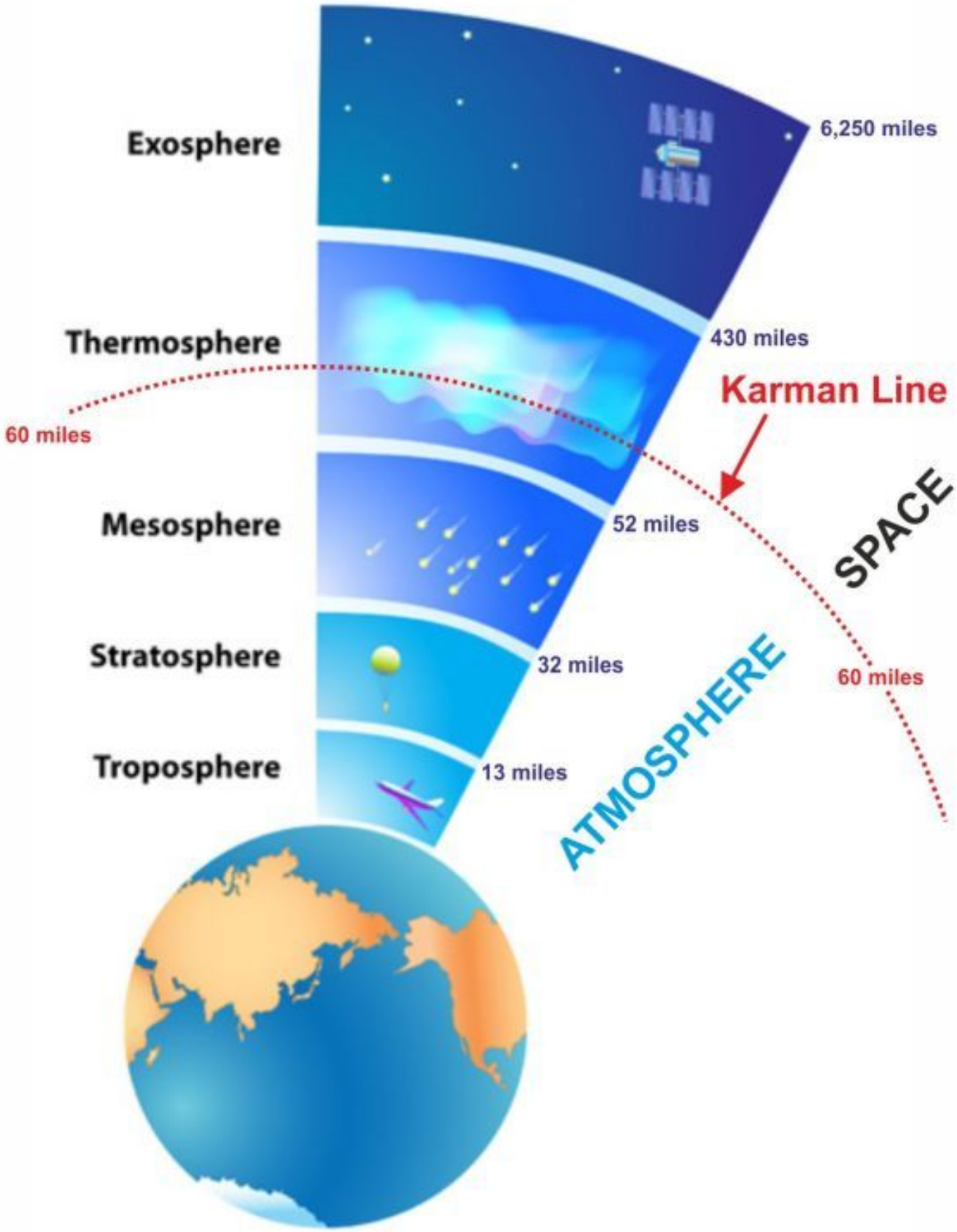
Hunab Ku 0.0.

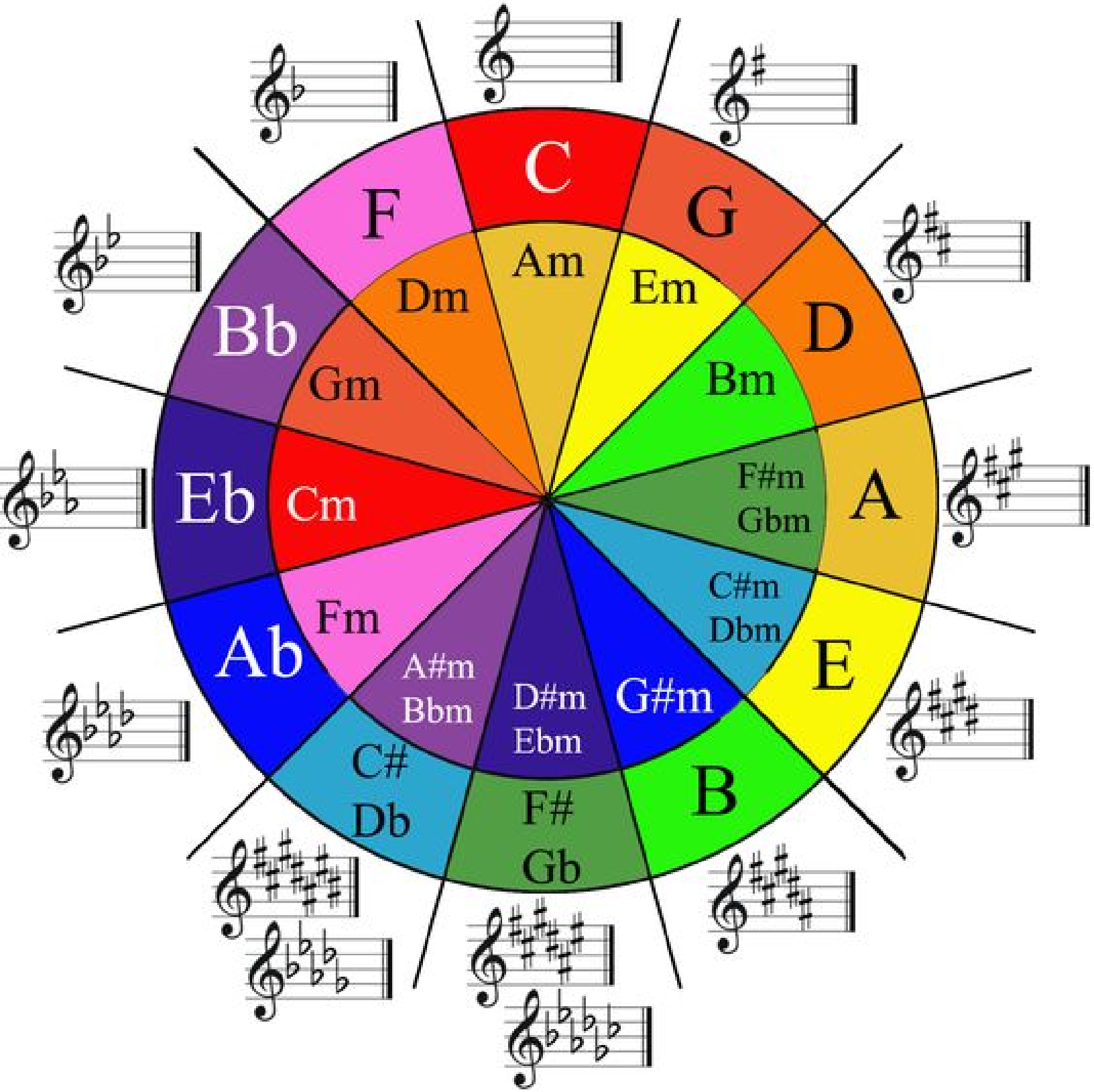
Yo coordino con el fin de potenciar
Enumerando la totalidad
Yo sello el cosmos de la Unidad
Con el tono galáctico de la vacuidad
Me guía mi propio poder duplicado
Yo soy el activador de todos los portales galácticos - entra en mí



Hunab Ku 21 es ahora presentado como la quintaesencia de todas las enseñanzas del orden sincrónico, inclusive el sistema supremo de comunicación telepática, la Matriz del Cubo 441 sobre la cual esta basada su estructura.

La estructura de Hunab Ku 21 es la raíz de la cultura galáctica y la siguiente dimensión de consciencia.


Exosphere
6,250 miles
Thermosphere
430 miles
Karman Line
60 miles
Mesosphere
52 miles
SPACE
Stratosphere
32 miles
60 miles
Troposphere
13 miles
ATMOSPHERE


C
G
D
A
E
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F# Gb
C# Db
Ab
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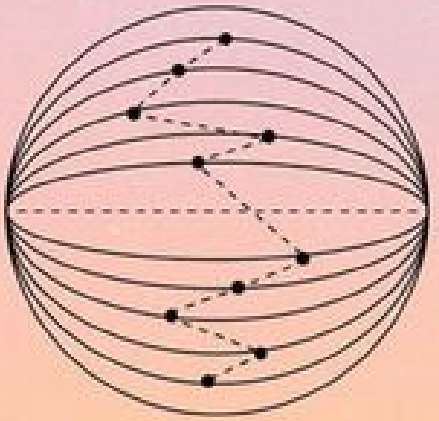
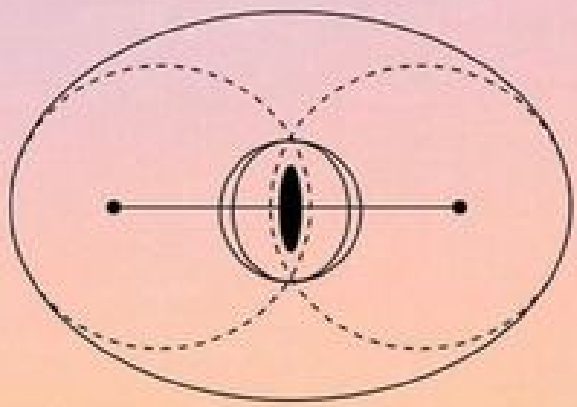
Bb
F
Am
Em
Bm
F#m Gbm
C#m Dbm
G#m
D#m Ebm
A#m Bbm
Fm
Cm
Gm
Dm

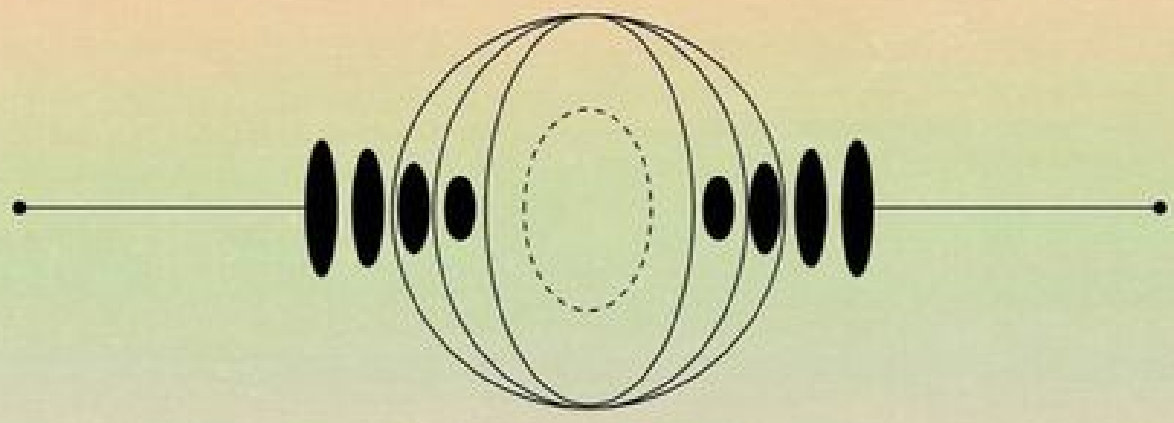
Everything is *connected*



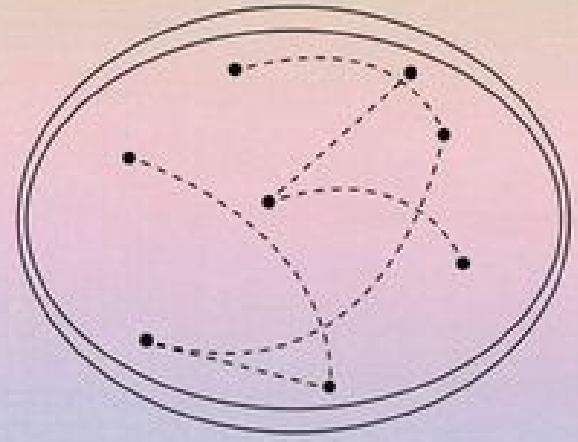
humans, animals,
and nature are one



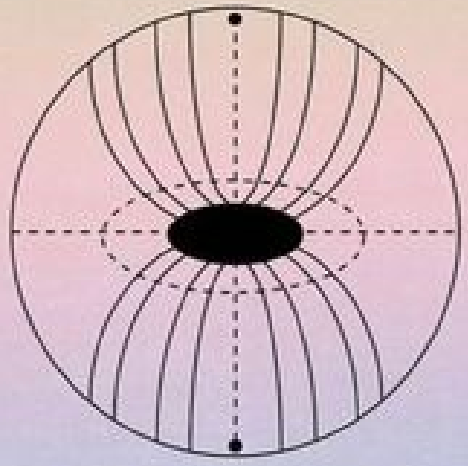
you are me and
I am you



the universe always
communicates



our thoughts
shape our world



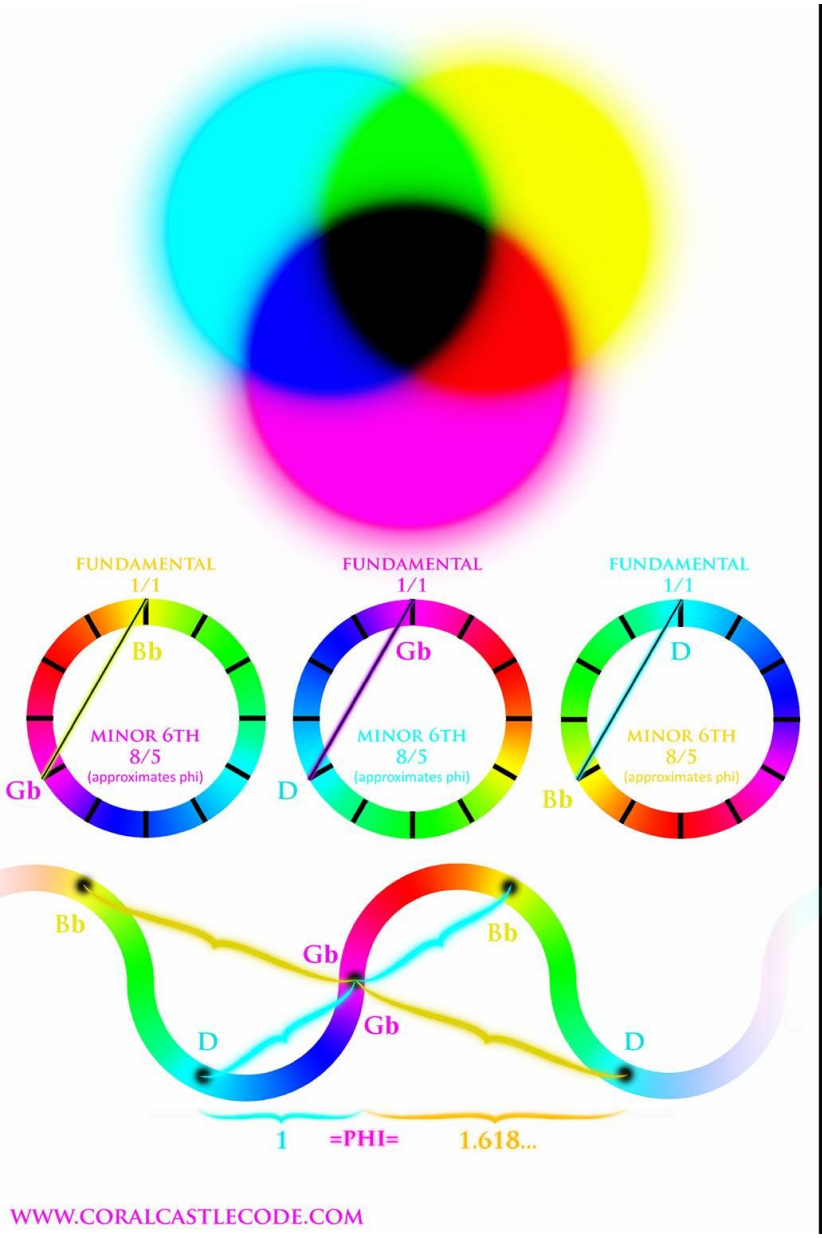
we all contribute to
the collective consciousness

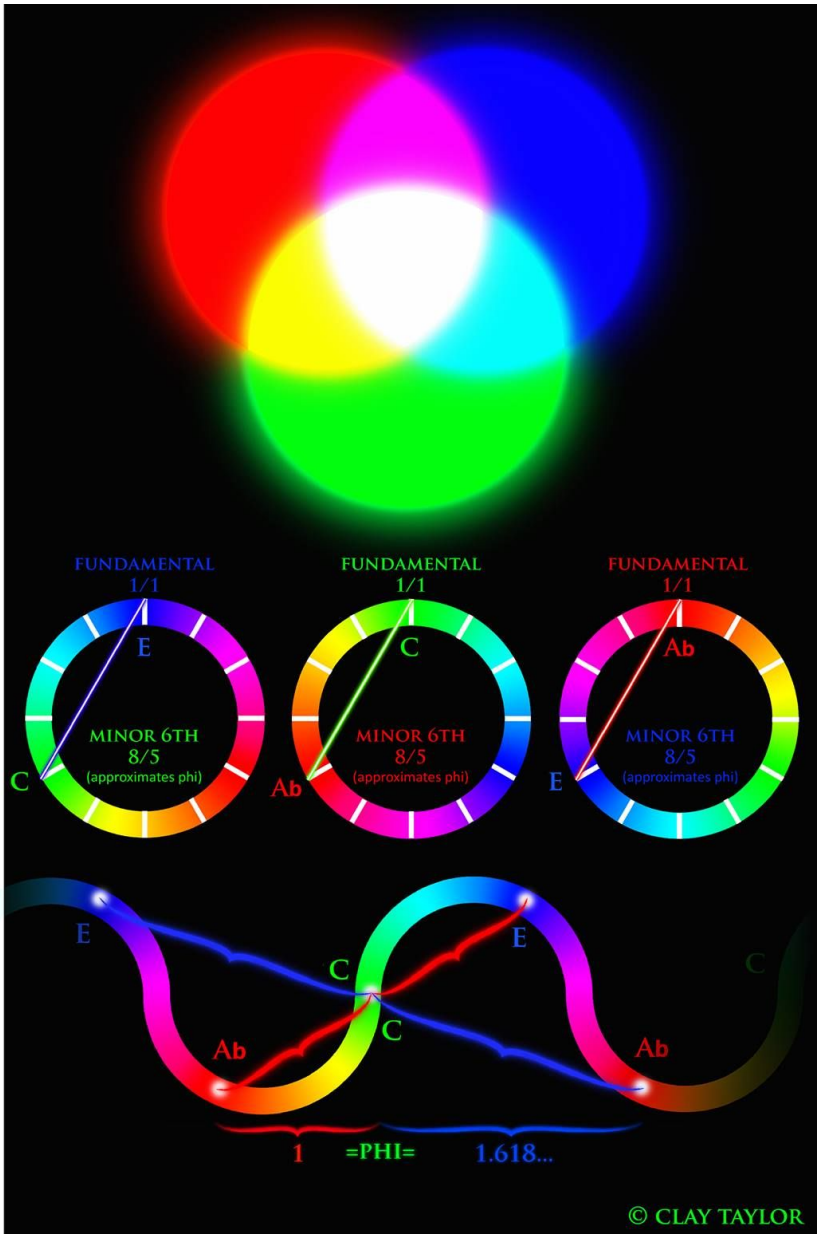
beaming
DESIGN

Chakra Hand Posture

Root Chakra	Index finger and thumb touch, Chant "LAM"
Sacral Chakra	Palm on Palm on lap, Chant "VAM"
Naval Chakra	Cross thumbs, figers touch below solar plexus, Chant "RAM"
Heart Chakra	Same as Root, put one hand on left knee and one on chest Chant "YAM"
Throat Chakra	Cross fingers, touch thumbs and raise Chant "HAM"
3rd Eye Chakra	Fingers bent to thouch except middle fingers which point up, thumbs rouch also. Chant "OM"
Crown Chakra	fingers crossed except ring fingers which point up Chant "NG"

"A" pronounced as "AH"
"M" pronounced as "MNG"





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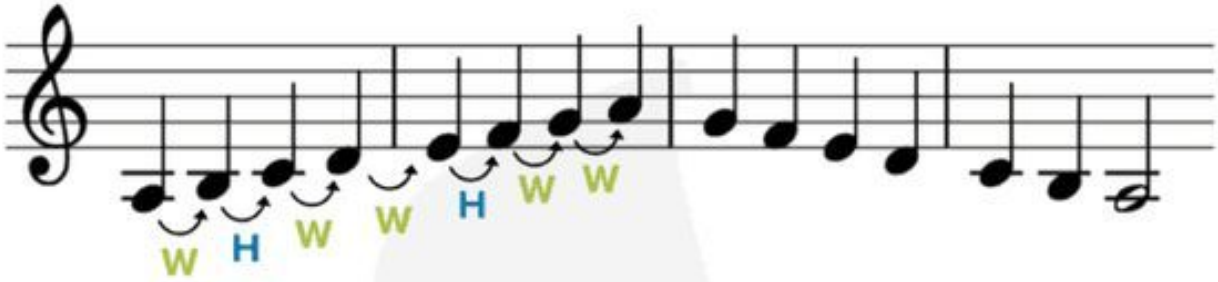
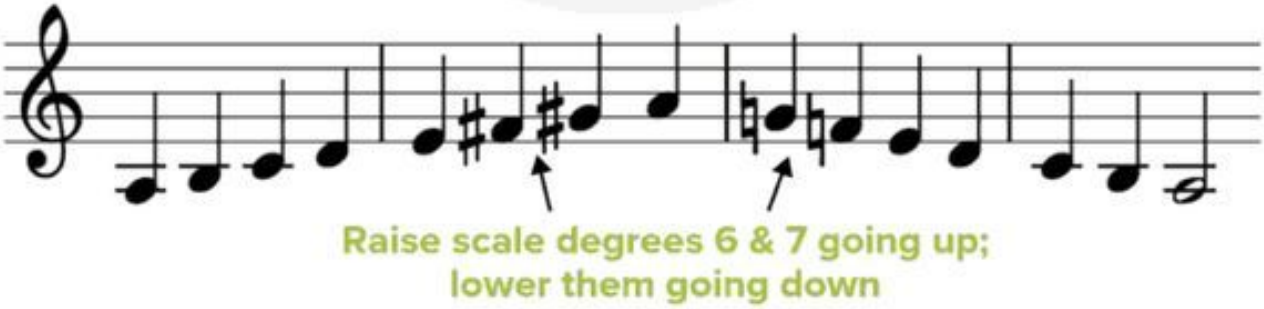
THE 3 TYPES OF MINOR SCALES

Natural Minor Scale



Harmonic Minor Scale

Melodic Minor Scale

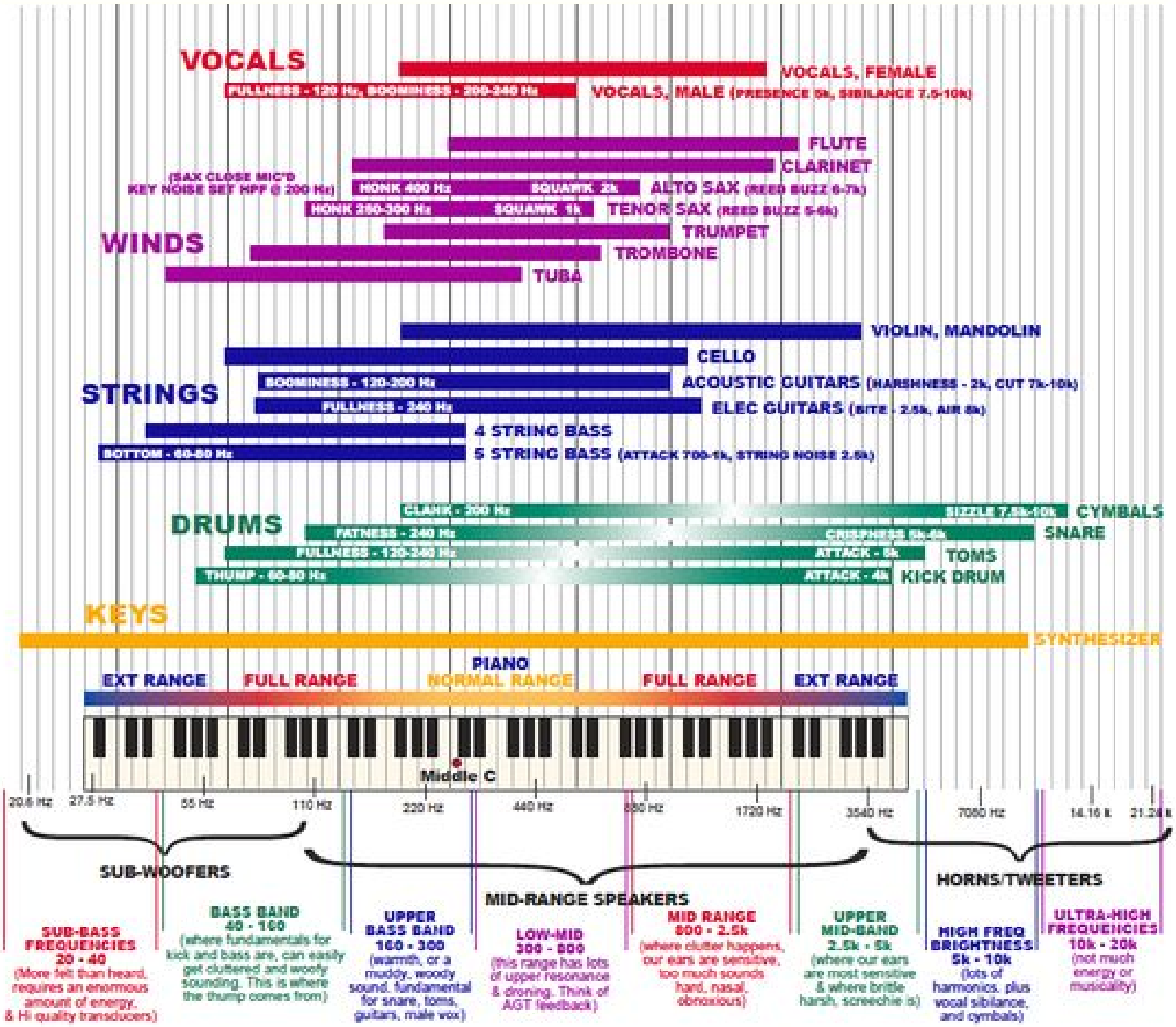


musicnotes

EMOTIONAL SPIRAL

PHANTOM MATRIX
FALLEN MATRIX
ASCENDED MATRIX
STAR WARS
THE PHANTOM MENACE
BI-WAVE POLARITY SYSTEM
DUALITY
TRI-WAVE UNITY SYSTEM
TRINITY
STELLAR ACTIVATION
ARTIFICIAL METATRONIC LIGHT
ORGANIC NATURAL LIGHT

THE FREQUENCY SPECTRUM, INSTRUMENT RANGES, AND EQ TIPS



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RAINBOWS

COLOR & LIGHT

7

In 1672, Isaac Newton divided the visible spectrum into ***seven*** colors.

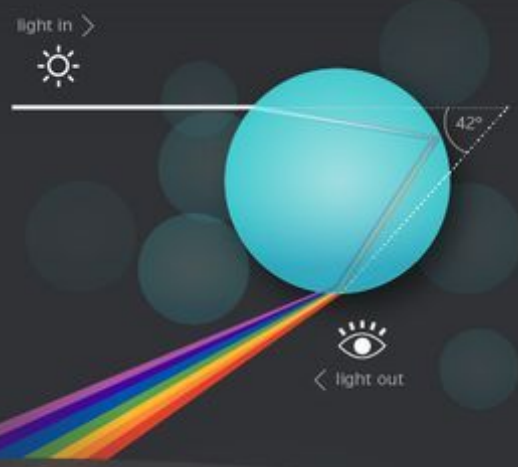
In 1800, William Herschel's prism experiment proved that invisible forms of light existed.

100

The number of colors most humans can distinguish in a spectrum.

INSIDE A RAINDROP

White light enters a raindrop from one direction, reflects & separates off the back of the raindrop, then fans out as it leaves.



VARIATIONS

Double

Sunlight reflects twice inside a raindrop. As a result the second reflection inverts the colors for the second bow.

5th & 6th Order

Look for a wide/less bright rainbow. Light is able to bounce at least 5 times inside the droplets.

Twinned

You will notice arcs, split from a single base. Colors of the second bow will appear in the same order.

Space Rainbows?

To infinity and... Titan, apparently. It has been suggested that rainbows might exist on Saturn's moon "Titan."

For more Weather Infographics visit
wunderground.com/weather-infographics

WEATHER UNDERGROUND

Th Most High says "Go within and I shall meet you there.
" Th Sun is always talking"

Th Most High Sun is a Re'iteous Cre'ator that **Bless**ons you every day with HER presence/present. At no point in your existance can you say your so called God (who is as Moon) nor Th Sun (Ma Re) has abandoned you. It is man who disconnected or freed themselves from Th lessons of HER. It is only now that you see your home or ohm you thought was free is still under the Re'ign of **Th Mother Sun**.

Soul'ar (+)Sunami

as seen within is seen without

Talk Etymology: speak in order to give information or express ideas or feelings; converse or communicate by spoken words.

"To speak" in Old English (the "Beowulf" author prefers maþelian, from mæþel "assembly, council," from root of metan "to meet;" compare Greek agoreuo "to speak, explain," originally "speak in the assembly," from agora "assembly").

Communicate Etymology: share or exchange information, news, or ideas. To impart or pass on, convey or transmit, **su**cceed in conveying one's ideas or in evoking understanding in others.

This is your creator talking to your Body. There is no book needed.

When SHE hits the heart, HER message travels your blood to inform the Brain/N.Pole.

This is your creator talking to Earth. There is no book needed.

When SHE hits the core, HER message travels your oceans to inform the Brain/N. Pole.

How Things Work:

Before HuMan, DeMan, SeaMan, or any being Earthed; Th Sun communicated life and the lessons of ether it shall contain. This was embodied within Earth. Therefore all that walk'eth on or within shall follow accordingly as eth has already been prepaired with Th Most High Sun. The God ion **is Just** the **Justice** Guardian of **Th**'is or as **W**ord. Your so called solar flares are Re'minders of manifestations or revelations of Christ.

This is why Mother Earth has always been your primary or Pre' **Ma Re** key to knowing.

As if to add'more, *"But you don't hear me tho."*

The Descent of Spirit into Matter

Devic Planes	Supra Mental 12/13th	Parmatma Body
		Soul Group Body/monad
		Parmatma Light
Mental Planes	Council of Elders 11th	Mental Light Inhibitors
		Mental Glamour
		Conceptual Structures
Mental Body	Crystalline Palace 10th	Mental Light Vortex
		Seed Thoughtforms
Crystaline Light Sheath	Crystalline Archives 9th	Conditioning and Mental Patterning
Gates of Shamballa	Inter Galactic 8th	Astral Filter
Astral Planes Light Portals	Ascended 7th	Astral Glamour
		Astral Structures
Astral Body Light Sheath	Angelic 6th	Astral Light
		Cordings/Dark Guide Interference
Halls of Learning	Extra Terrestial 5th	Implants/Entities/Slime
Astral Portals	Inter Stella 4th	Etheric Funnel
Physical Planes	Etheric Structure 3rd	Etheric Shells
		Etheric Structures
	Blueprint Body 2nd	Etheric Body
Etheric Blueprint	Kinesic Template Level 1st	Etheric Blueprint
		Physical Body
		Incarnation Vortex
0 Planes (Matter)		Ring-Pass-Not
		The Fusion of Etheric and Matter

PURIFICACION DE PROPOSITO

Sri Yantra (OM) Mandala

OM sound on a Tonoscope

Science proving the Rishi's Right.

A comparison of the similarities between the Sri Yantra Mandala and a Tonoscope picture of the sound OM. The Sri Yantra mandala is thousands of years old

Why Your Mind Matters

How to Use Your Mind to Define Your Reality

Your Mind is a Computer

Your brain is the hardware. Your mindware is the software. You have Unconscious and Conscious Mindware

Mindware Processes Your World

Your mindware contains thousands of programs. Many are created in childhood and become self-fulfilling prophecies.

Your Unconscious Mind is the Master

Unconscious mindware drives ~ **95%** of beliefs and behaviors.

Unconscious mindware processes all of the information you receive.

It selects what you consciously recognize, react to and process.

HOW YOU PROCESS YOUR REALITY

11,000,000 bits/second enters your Unconscious Mind

3 TYPES OF PROGRAMS FILTER YOUR REALITY

All humans share **Instincts,** which have high priority over our perceptions and responses.

We each define our own unique **Preferences** for motivation, work style, communication, management and more.

Experiential programs filter our perceptions of our reality based on our learned/past focus and expectations.

WE HAVE THE KNOWLEDGE TO SHIFT OUR PROGRAMS

When we shift our experiential programs, we can and do change our reality. We have the power to control our world, through our minds.

3 TIPS TO SHIFT YOUR PROGRAMS

Focus on What You Want

The mind does not process negatives." I can't lose this deal" is "Lose this deal" to your unconscious mind.

Say "I will win this deal."

Shuffle the Deck

Your unconscious mind sees what it expects to see, based on patterns.

Change the way information is presented to see new trends & opportunities.

Ask Questions

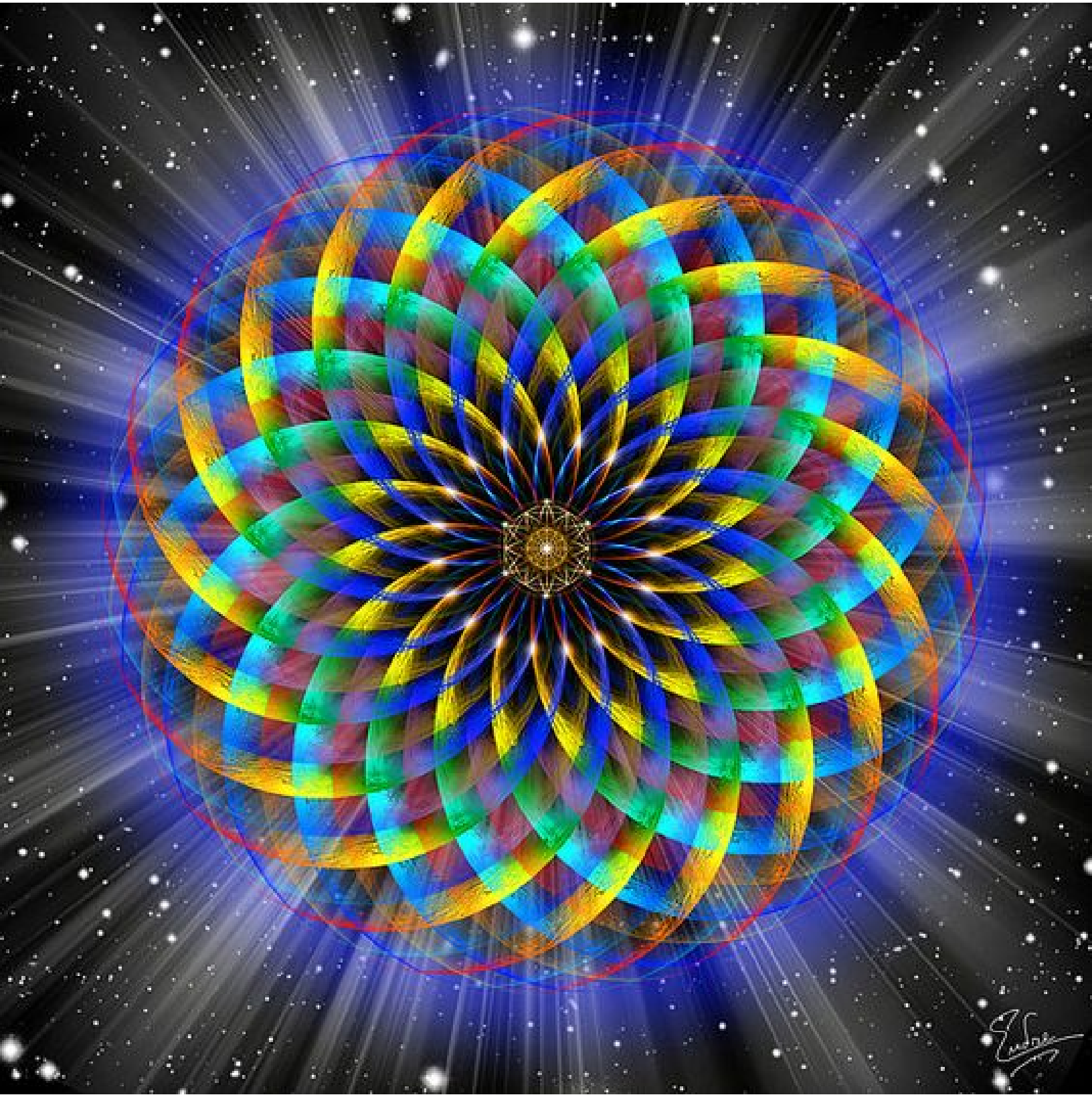
Statements focus our Unconscious on the subject.

Questions activate our Conscious Mind to explore new insights.

rebel brown

www.rebelbrown.com

Graphics by: Dia Dicheva Design



Starry Wisdom Channel of The Snake Handler - Nov. 30 to Dec. 17.

Galactic Center

Emanating from the center of our galaxy are Rays 1, 3 and 5, The Rays of Will or Power, Intelligent Activity and Concrete Knowledge or Science. These are the Rays seeking manifestation.

Primary Stars responsible for directing Rays from the Galactic Center to the Ecliptic Constellations around our Solar System.

They radiate through the Primary Star of Vega, the 2nd Ray alpha star of Lyra. They then flow to the constellations of Hercules, Centaurus and Serpens, which direct them to Ophiuchus.

Constellations on the Ecliptic that direct the Rays from the Galactic Center to our Sun, adding to them the specific message encoded in the constellation.

The constellation of Ophiuchus qualifies the Rays with its encoded wisdom as hinted at by the Seed Thought: "I Know The Secret of Immortality".

Our Sun, the gatekeeper and Heart Center of our Solar System directs the incoming Rays to planets within the system that will modify and adapt them for use on Earth.

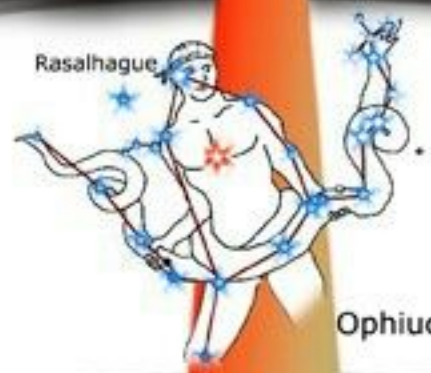
Our Sun is a 2nd Ray Star and therefore an embodiment of Love Wisdom. For our planet it is Life - giver, Teacher and Illuminator. It channels the wisdom of Ophiuchus into our solar system making it possible for us to receive spiritual enlightenment directly from the zodiac.

The planets within our Solar System that modify the Rays so that they are accessible to all levels of evolution within Earth's biosphere.

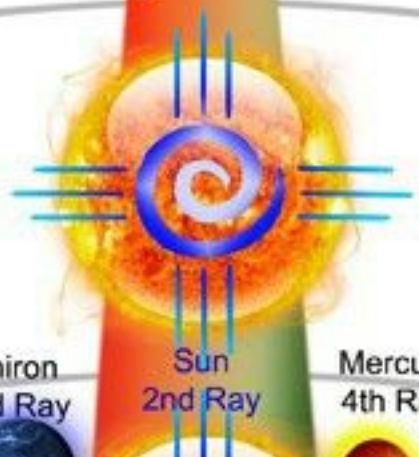
The planets Mercury, Chiron and the Sun channel the 1st, 3rd and 5th Rays through a powerful 4th and 2nd Ray vortex to the Earth.

The Group of Evolutionaries that receive and redistribute the Rays within Humanity using the lunation cycle.

The evolutionary possiblities of the Earth and all Her species are advanced by groups of skilled meditators making conscious use of the Starry Channel Meditations.



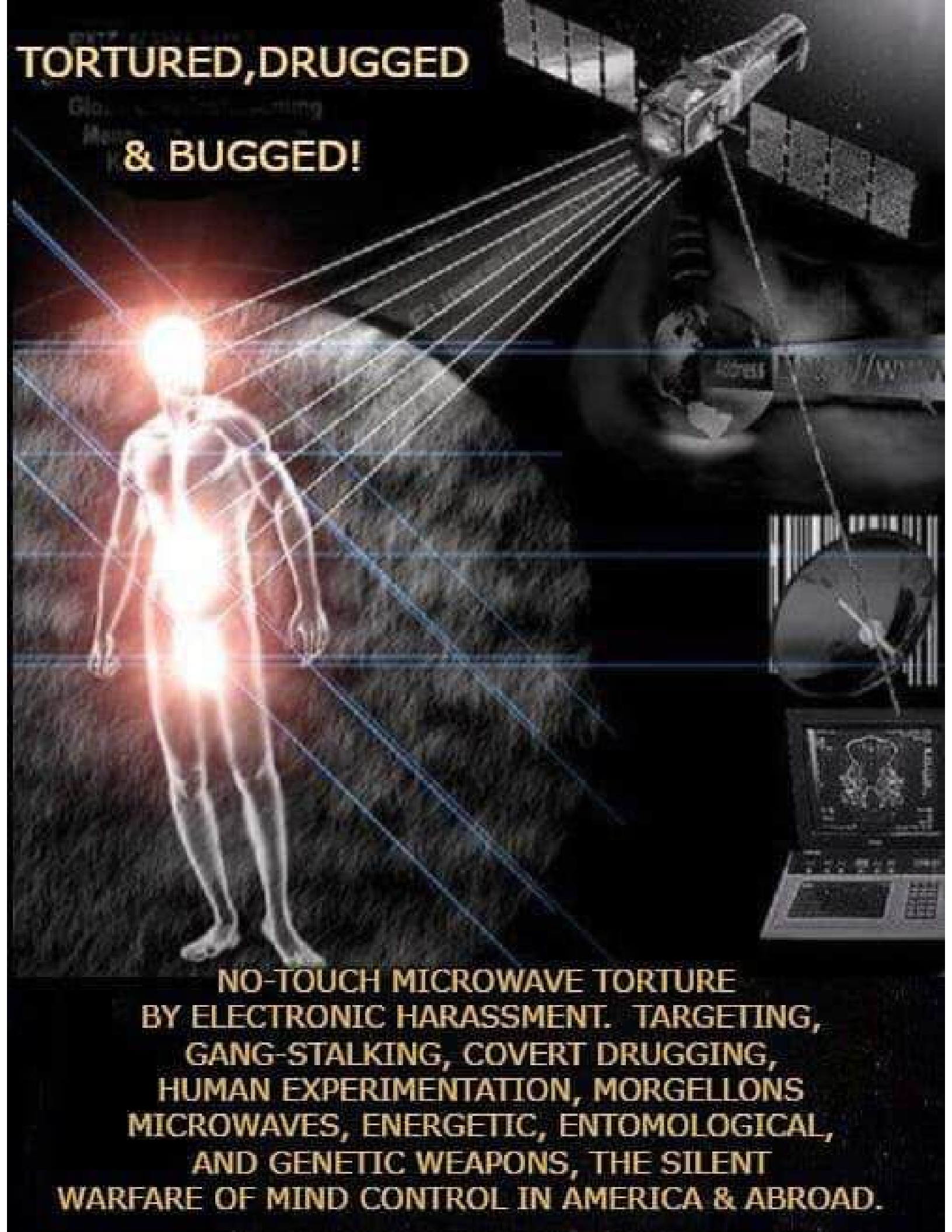
Ophiuchus



Chiron
2nd Ray

Sun
2nd Ray

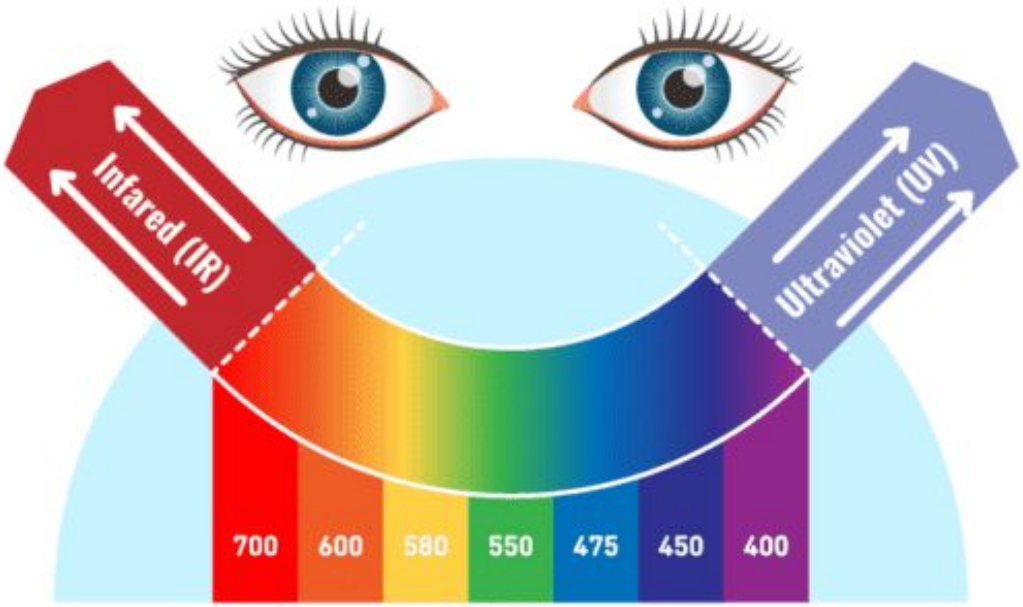
Mercury
4th Ray


TORTURED,DRUGGED
& BUGGED!
NO-TOUCH MICROWAVE TORTURE
BY ELECTRONIC HARASSMENT. TARGETING,
GANG-STALKING, COVERT DRUGGING,
HUMAN EXPERIMENTATION, MORGELLONS
MICROWAVES, ENERGETIC, ENTOMOLOGICAL,
AND GENETIC WEAPONS, THE SILENT
WARFARE OF MIND CONTROL IN AMERICA & ABROAD.

VIBRACIÓN

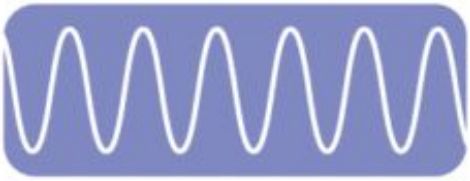
IOANNES DIANARA ROCK

The Visible **Spectrum**

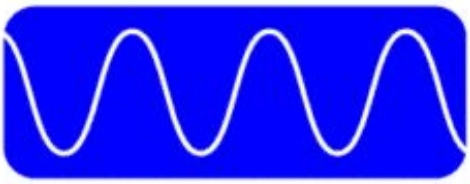


Wave Length in Nanometers (nm)

The 5 Bioactive Forms of Light



UV Light interacts with our skin to make vitamin D, a regulator of over 2000 genes in our body, affects the immune system and is linked with all kinds of disease and mortality outcomes



Blue Light enters your eyes, feeds back through nerves into a part of the brain called the suprachiasmatic nucleus, where your circadian clock lies. The circadian clock in our brain regulates different hormones and neurotransmitters that affect metabolism, appetite, energy levels, mood, wake, and sleep cycles.

Red Light electromagnetic waves at the end of the visible spectrum.

Near-Infared Light is not visible
Red and near-infrared light can penetrate inches into the body where they directly interact and modulate the function of cells

Far Infared Light
We feel it as heat in our bodies. It affects things like circulation and blood flow

DR. MICHAEL RUSCIO, DC
Get Healthy — and Get Back to Your Life

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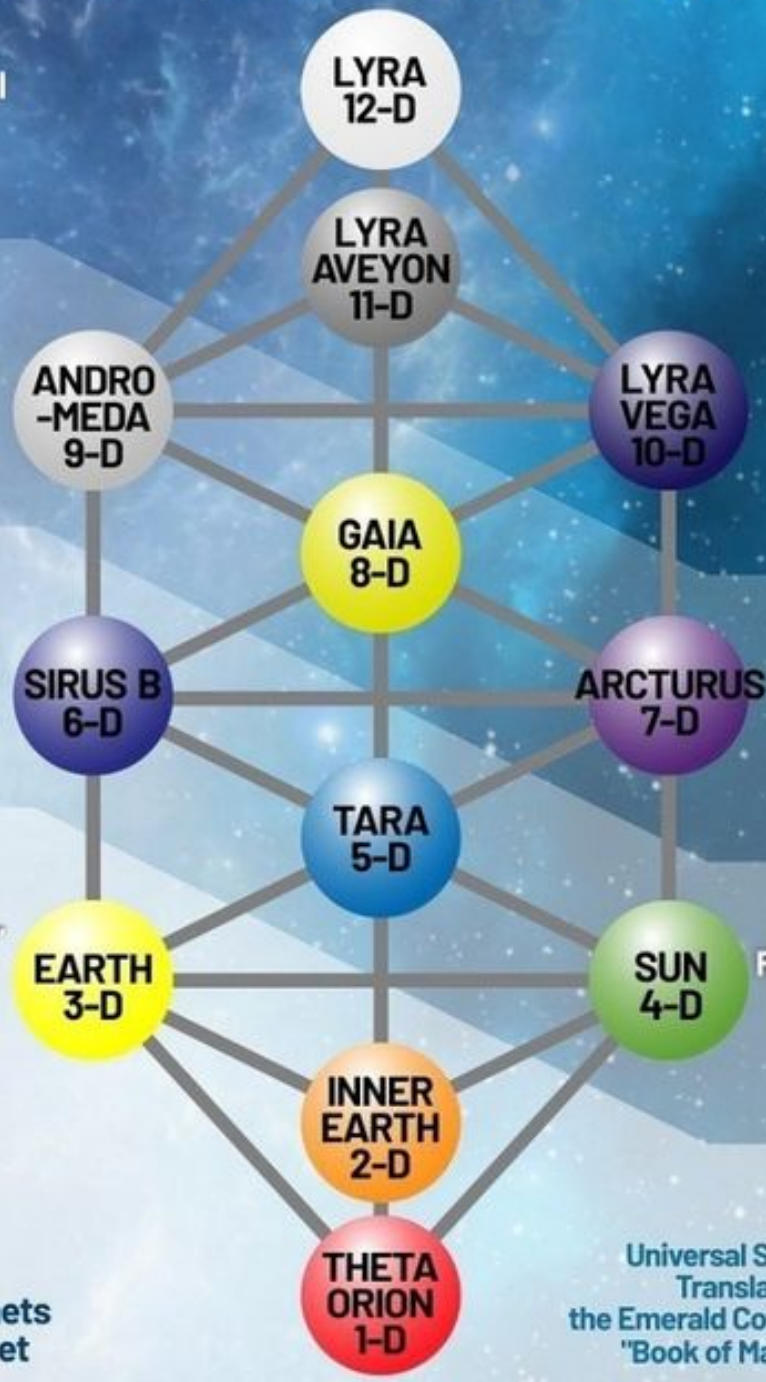
Structure of the Kathara Level-1 (12- Tree Grid)

The 12 Primary Star Gates of the Universal Templar Complex



DENSITY: 5
DIMENSIONS: 13, 14, 15
FORM: RISHI LEVEL
(ANTE MATTER FORM)
IDENTITY: RISHI

DENSITY: 3
DIMENSIONS: 7, 8, 9
FORM:
"OVERSOUL LEVEL"
(ETHERIC FORM)
IDENTITY: OVER-SOUL

DENSITY: 4
DIMENSIONS: 10, 11, 12
FORM: "AVATAR LEVEL"
(LIQUID LIGHT FORM)
IDENTITY: AVATAR

DENSITY: 1
DIMENSIONS: 1, 2, 3
FORM: "PHYSICAL PLANE"
(PHYSICAL FORM)
IDENTITY: INCARNATE

DENSITY: 2
DIMENSIONS: 4, 5, 6
FORM: "SOUL PLANE LEVEL"
WHERE WE GO WHEN
WE "DIE"
(SEMI-ETHERIC FORM)
IDENTITY: SOUL

Star Gates enter planets at 12 Planetary Signet Star Gate Sites.

Universal Star Gate Map
Translated from
the Emerald Covenant CDT-Plate
"Book of Maps and Keys"

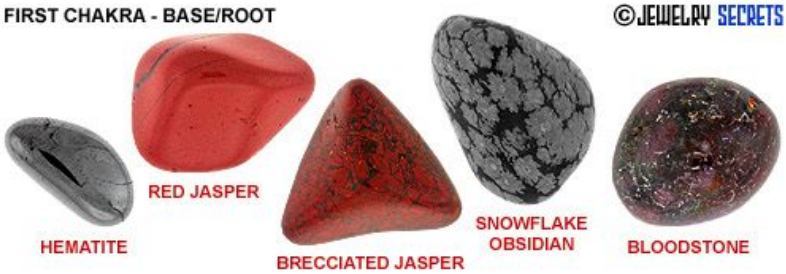
Source:
THE MCEO FREEDOM TEACHINGS

@Emerald.Order

CHAKRA GEMSTONES

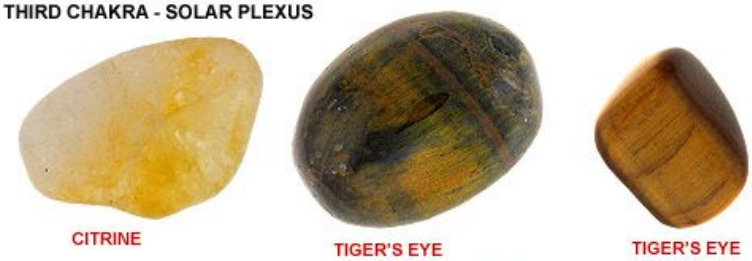
©JEWELRY SECRETS

FIRST CHAKRA - BASE/ROOT

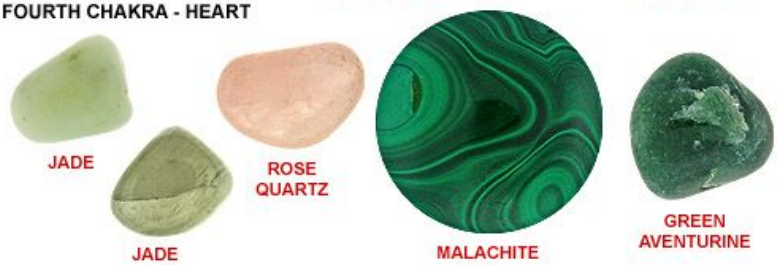


SECOND CHAKRA - SACRAL

THIRD CHAKRA - SOLAR PLEXUS



FOURTH CHAKRA - HEART



FIFTH CHAKRA - THROAT

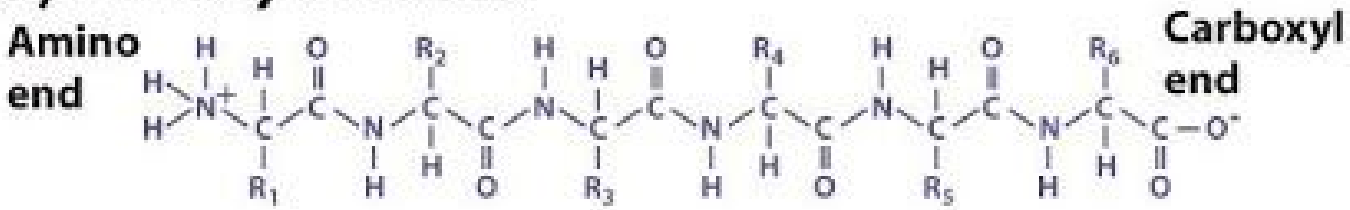
SIXTH CHAKRA - BROW

SEVENTH CHAKRA - CROWN

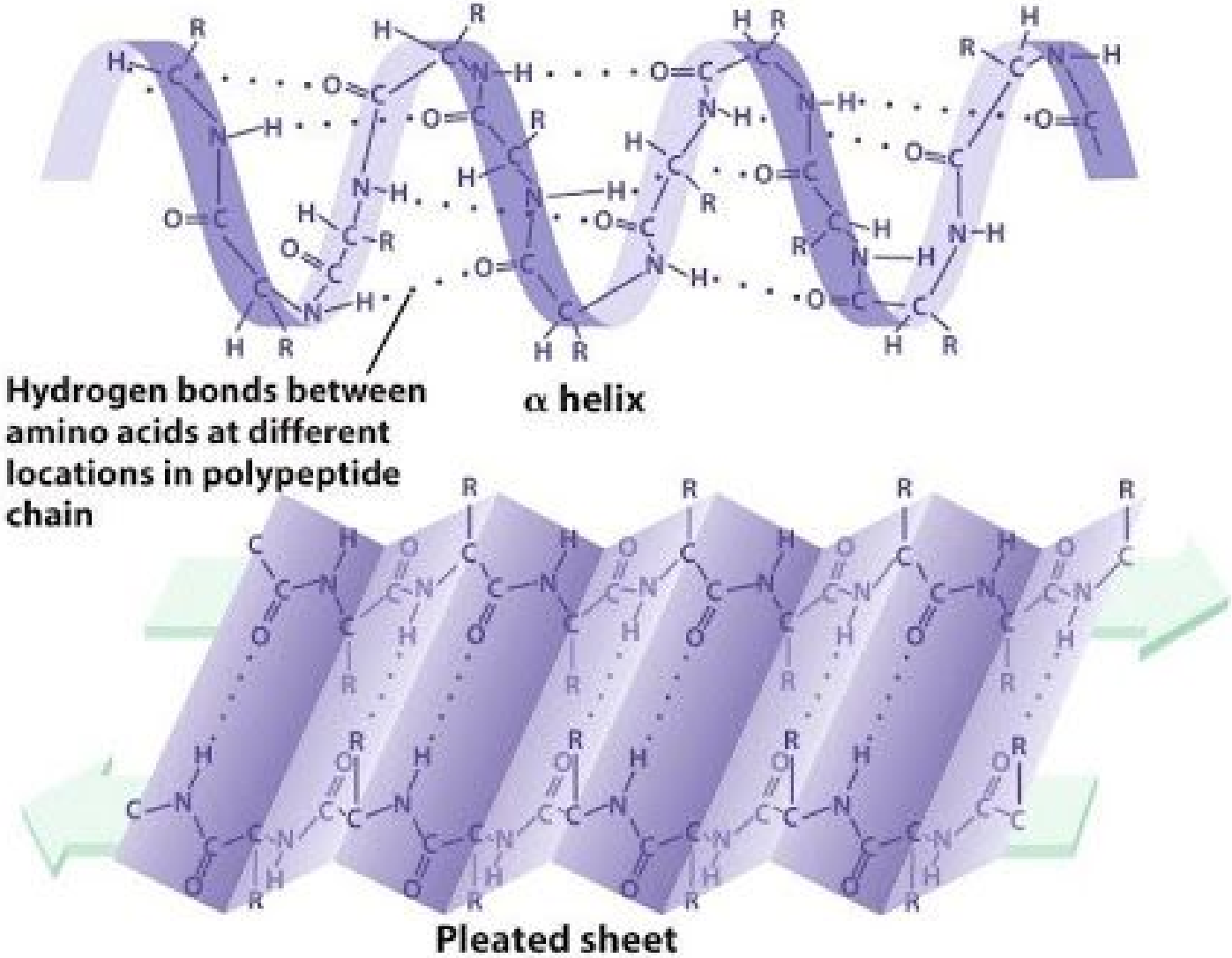
CHAKRA FACETED GEMSTONES

GARNET | ORANGE SAPPHIRE | YELLOW TOPAZ | PERIDOT | AQUAMARINE | BLUE SAPPHIRE | AMETHYST

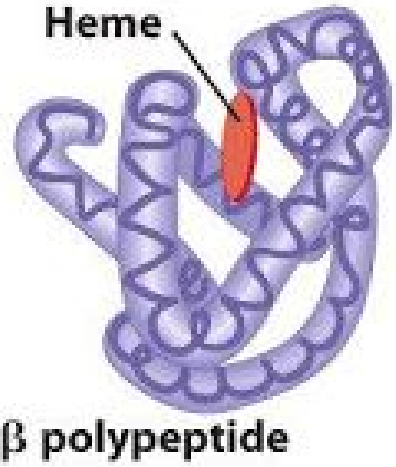
(a) Primary structure



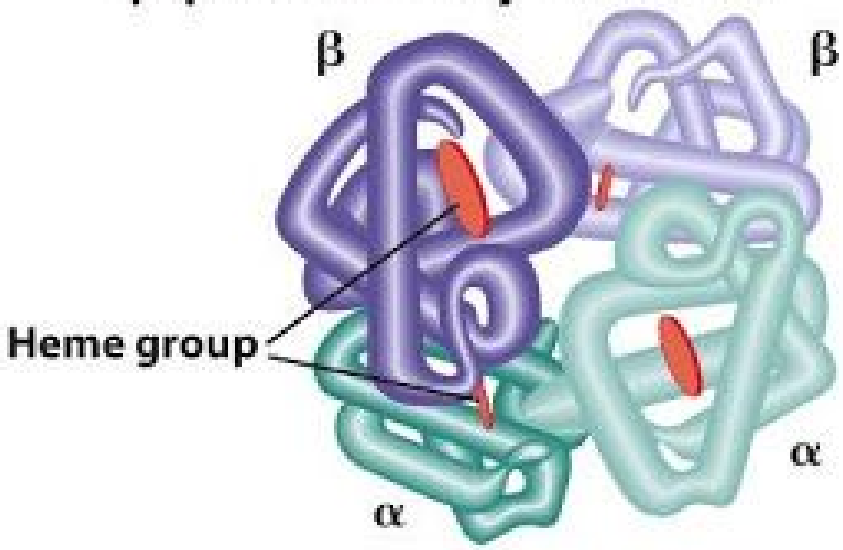
(b) Secondary structure



(c) Tertiary structure



(d) Quaternary structure



THE VISIBLE LIGHT SPECTRUM

LIGHT TRAVELS IN WAVES

Radiation is a form of energy waves. It does not need any matter or material to pass its energy along, so it can travel through even a vacuum. However, it can be absorbed, reflected, or refracted if it comes in contact with a medium of any state (solid, liquid, gas, or plasma).

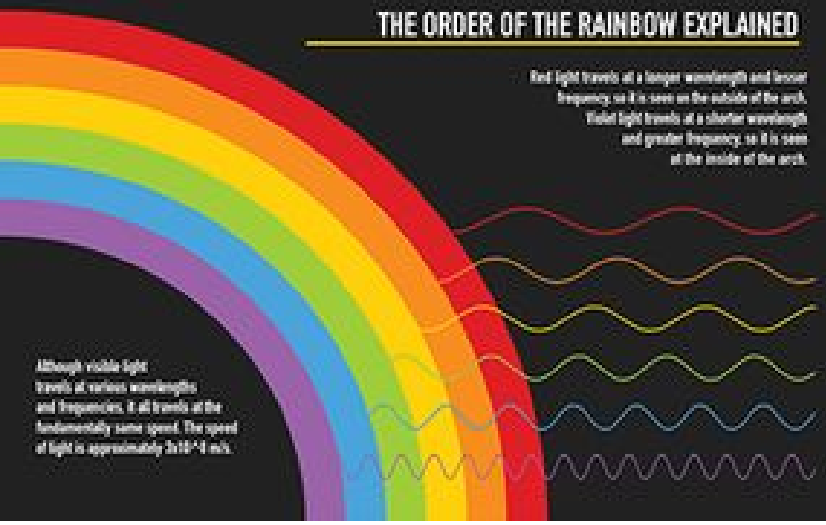
Wavelength: distance between two successive waves
Frequency: number of waves that passes a given point within one second

ELECTROMAGNETIC SPECTRUM

The electromagnetic spectrum is the range of all possible frequencies of electromagnetic radiation.
The visible light spectrum is only a small portion of this range.
It is the part that we, as humans, are able to see.

THE ORDER OF THE RAINBOW EXPLAINED

Red light travels at a longer wavelength and lesser frequency, so it is seen on the outside of the arch.
Violet light travels at a shorter wavelength and greater frequency, so it is seen at the inside of the arch.



Although visible light travels at various wavelengths and frequencies, it all travels at the fundamentally same speed. The speed of light is approximately 3x10^4 m/s.

HOW DO WE SEE?

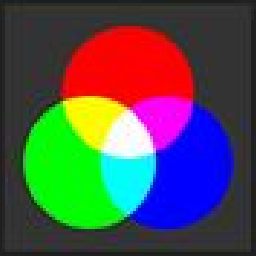
In the eye, there are millions of RODS and CONES.
They serve to collect information about light that enters the eye to let the brain know how bright an object is and its color. CONES only work well in bright light. This is why we cannot see colors in low-light situations.

COMBINING LIGHT TO MAKE DIFFERENT COLORS

The three primary colors of light are RED, GREEN, and BLUE.

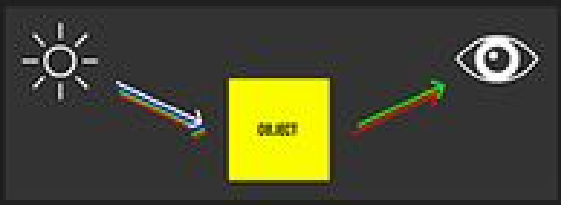
White light is the combination of all wavelengths of visible light.
RED + GREEN + BLUE = WHITE

RED + GREEN = YELLOW
GREEN + BLUE = CYAN
BLUE + RED = MAGENTA

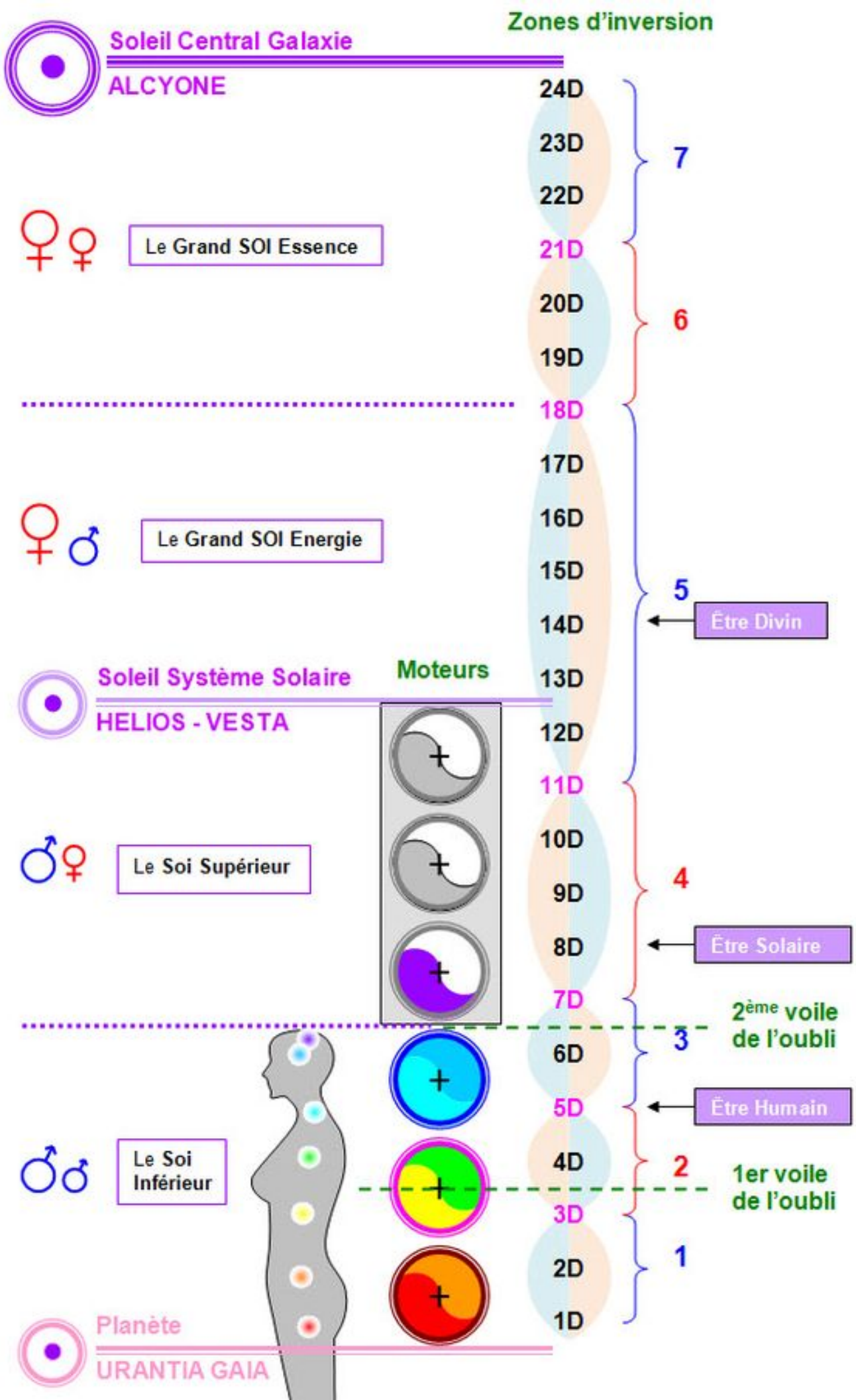


MORE ON HOW WE SEE

What we see is actually a REFLECTION.
All wavelengths of light from a source hit an object.
Certain wavelengths are ABSORBED while others are REFLECTED.
The REFLECTED wavelengths are the colors we see.



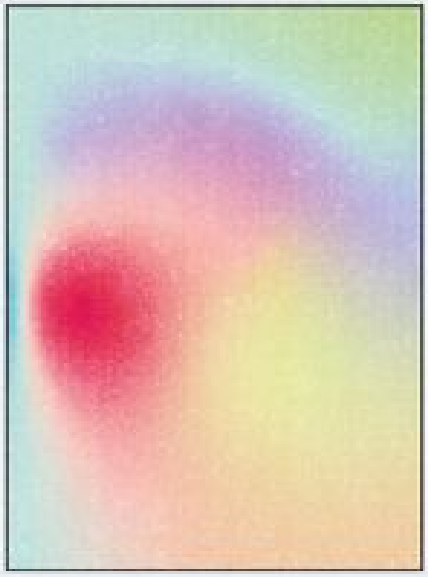
In the demonstration above, WHITE light (the combination of all visible wavelengths) is emitted.
BLUE wavelengths are ABSORBED and RED and GREEN wavelengths are REFLECTED.
Since what we see is a REFLECTION, the object appears YELLOW, the combination of RED and GREEN.


Zones d'inversion
Soleil Central Galaxie
ALCYONE
24D
23D
22D
7
Le Grand SOI Essence
21D
20D
19D
6
18D
17D
16D
Le Grand SOI Energie
15D
5
14D
Être Divin
Soleil Système Solaire
Moteurs
13D
HELIOS - VESTA
12D
11D
10D
Le Soi Supérieur
9D
4
8D
Être Solaire
7D
2ème voile de l'oubli
3
6D
5D
Être Humain
Le Soi Inférieur
4D
2
1er voile de l'oubli
3D
2D
1
1D
Planète
URANTIA GAIA

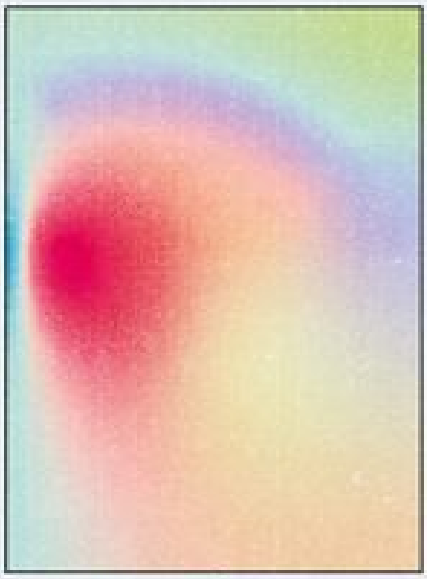
At one point you'll finally realize that there is no way back to what was and you'll set yourself free by moving on. Don't be stuck between the past and the present.

M

O



V



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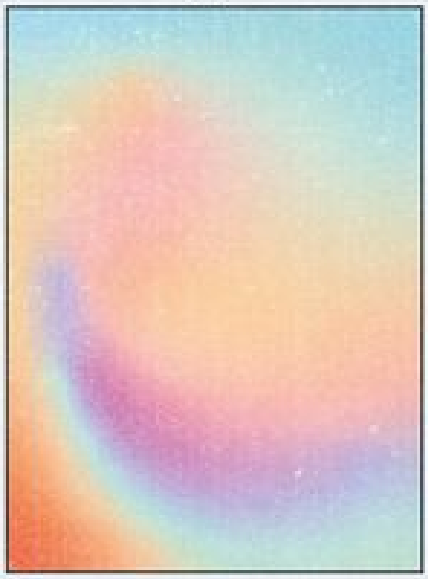

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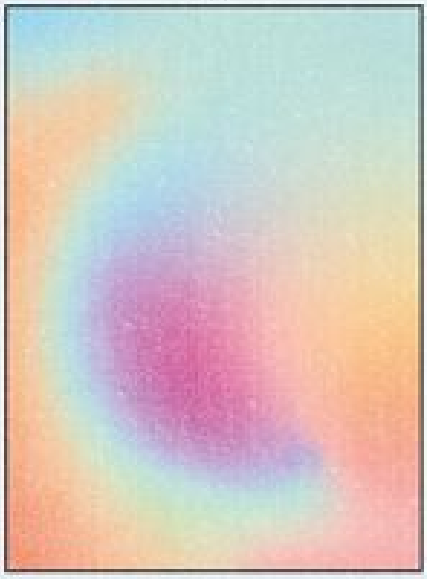


N

:)

©beaming

Chakra 12 - Connection to the Monadic level of divinity, Ascension, connection to the Kosmos

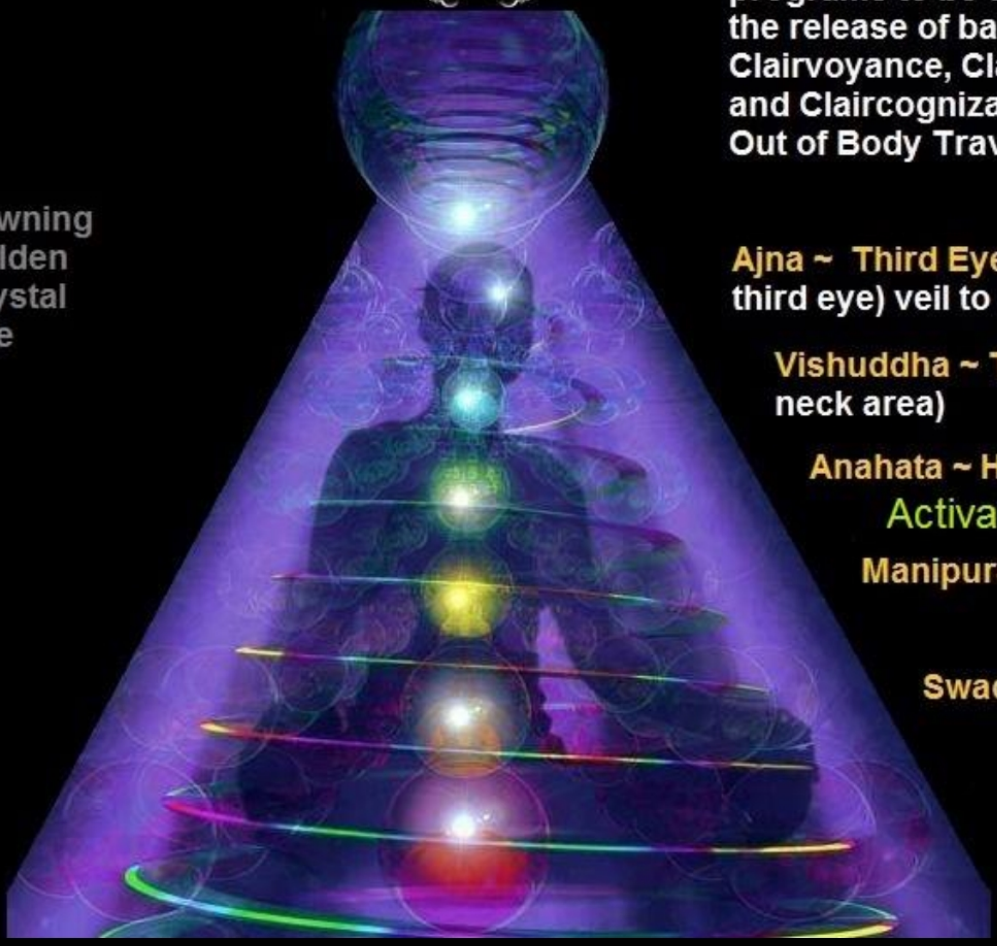
Chakra 11 - Travel beyond the limits of Time and Space, Teleportation, Bi-location, Telekinesis

Chakra 10 - Divine creativity, the merging of the masculine and feminine within

Chakra 9 - Soul Blueprint ~ The individual's total skills & abilities learned in all the life times

Chakra 8 - Energy center of divine love, activates spiritual skills

Sahasrara ~ Crown Chakra - Your connection to the divine (Atmic level of divinity), contains programs to be used by 8th chakra including the release of basic psychic skills ~ Telepathy, Clairvoyance, Clairaudience, Clairsentience and Claircognizance, Intuition, Lucid Dreaming, Out of Body Travel, Healing



Dawning Golden Crystal Age

Ajna ~ Third Eye Chakra (pineal gland or third eye) veil to other dimensions is removed

Vishuddha ~ Throat Chakra (throat and neck area)

Anahata ~ Heart Chakra

Activates Divine Love

Manipura ~ Solar Plexus Chakra

Swadhisthana ~ Sacral Chakra

Muladhara ~ Base or Root Chakra

GEOMETRIA CUBICA
TURMALINA

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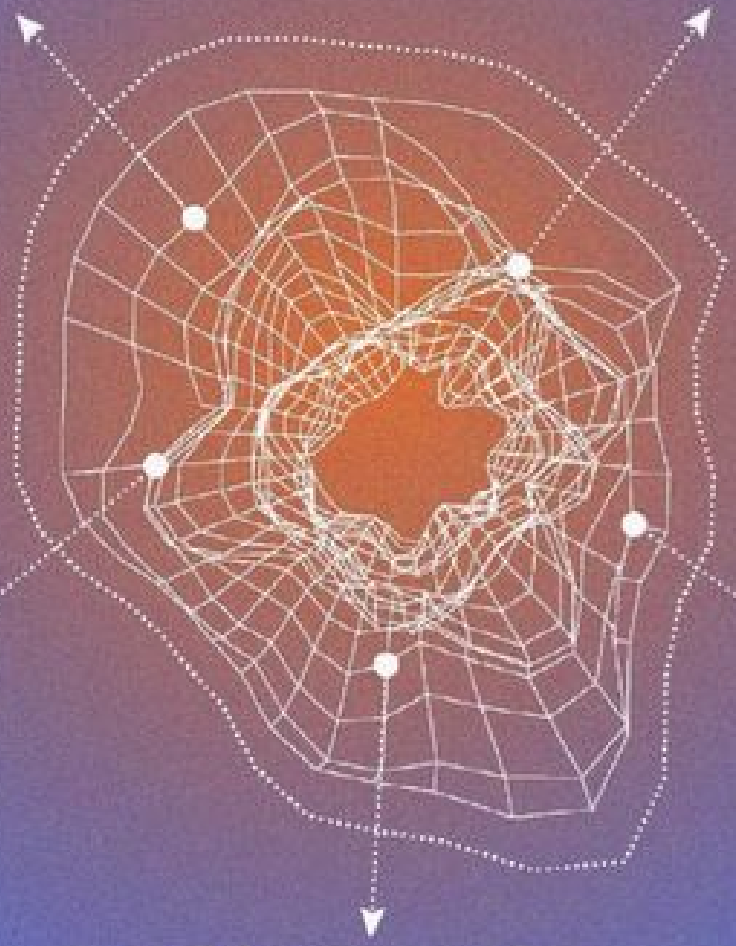
5 COMPONENTS OF EMOTIONAL INTELLIGENCE

Self-Regulation
the ability to manage your energy, emotions, thoughts, and actions

Social Skills
the tools we use to connect with others

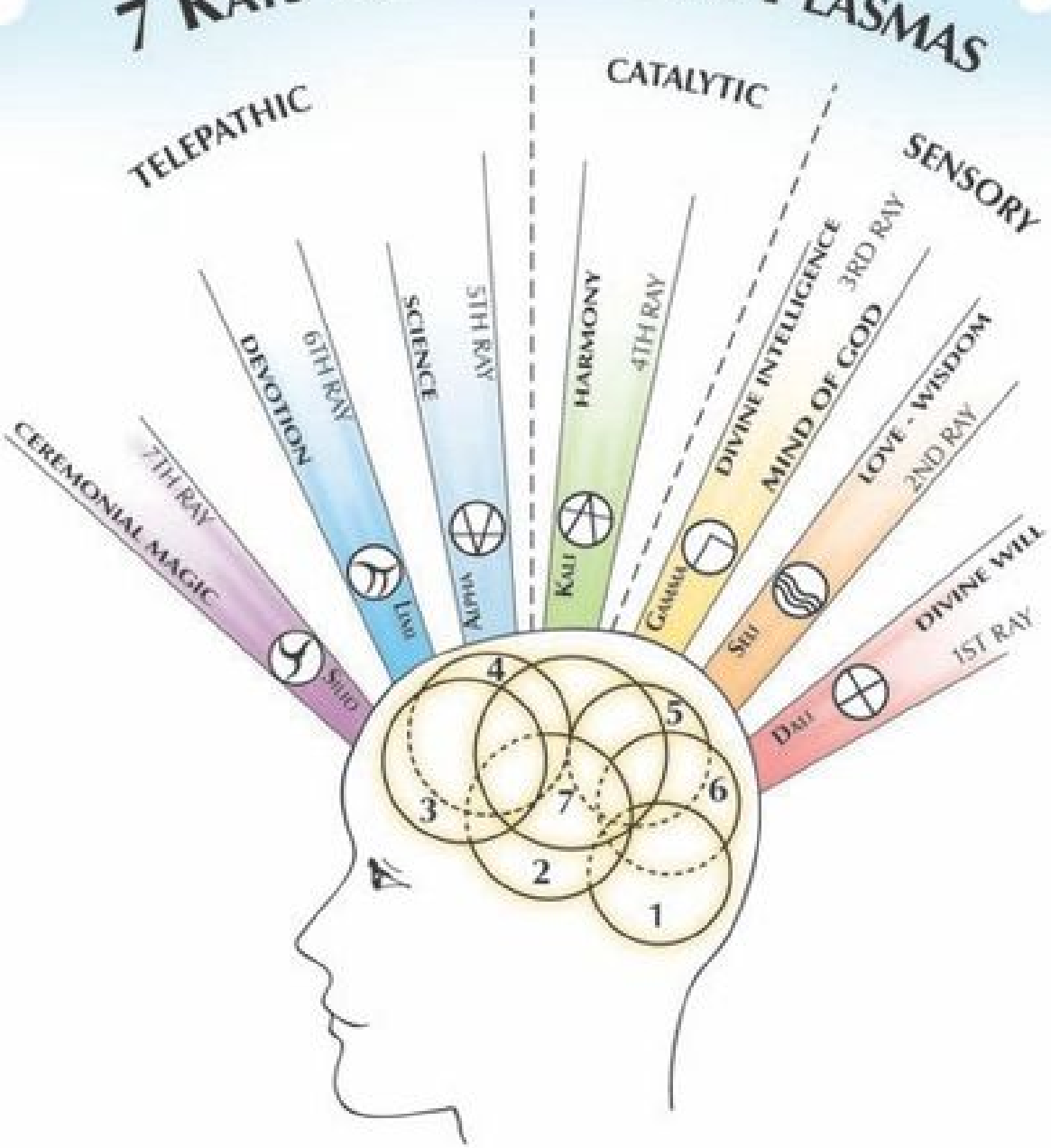


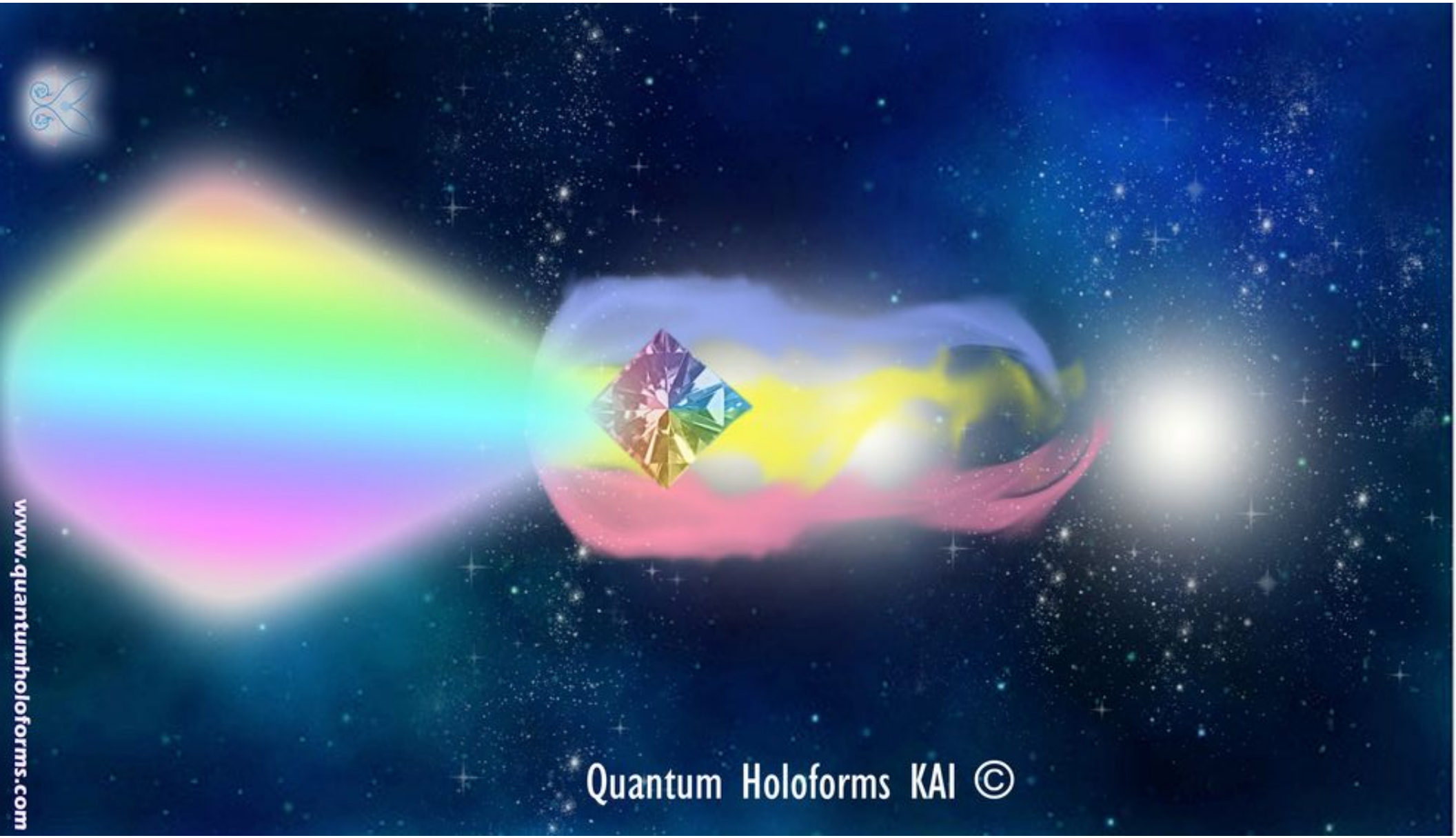
Motivation
values that initiate action

Empathy
understanding and feeling someone else's experience

Self-Awareness
conscious knowledge of your feelings, wants, and needs

7 Rays with 7 Radial Plasmas

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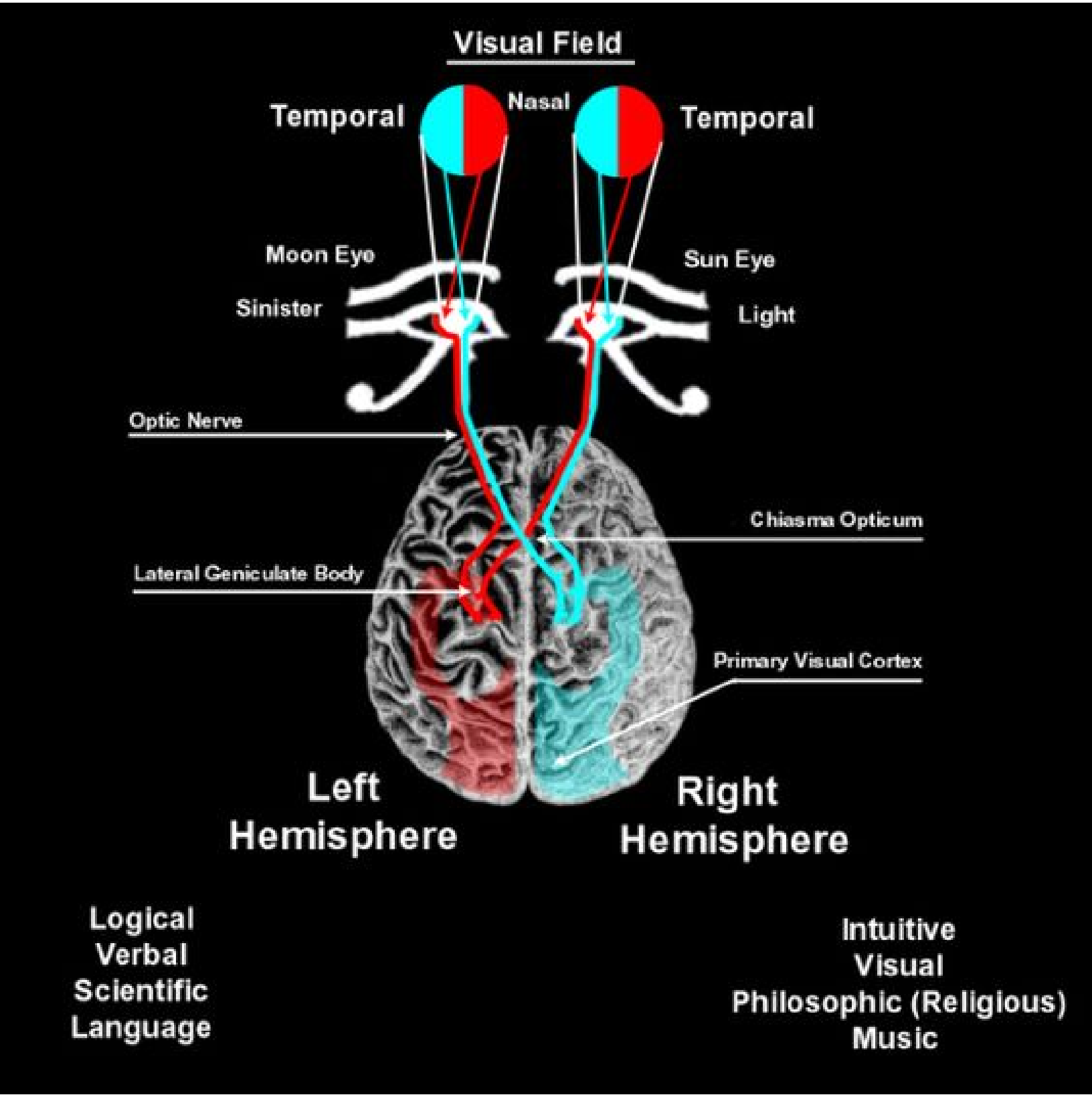
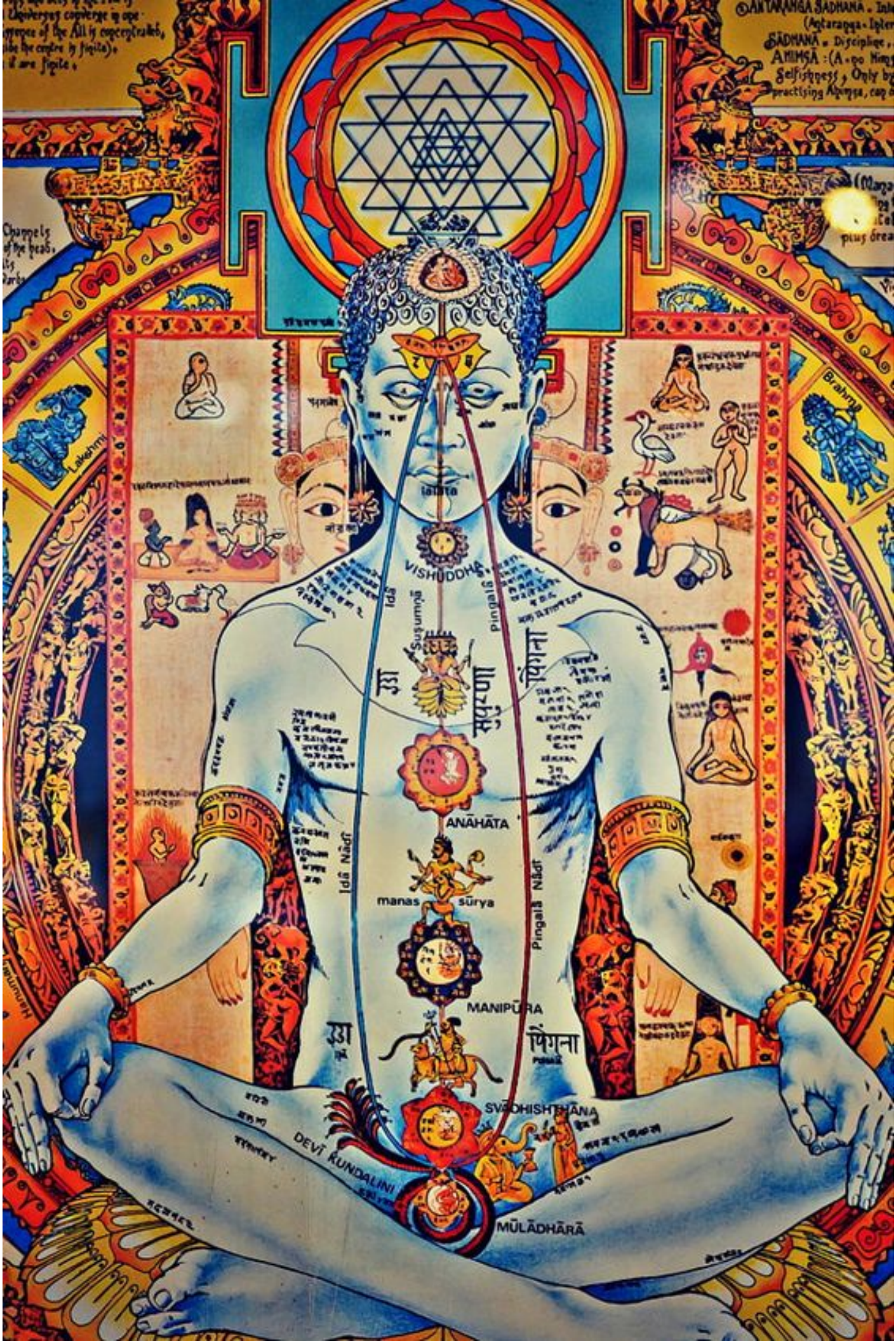
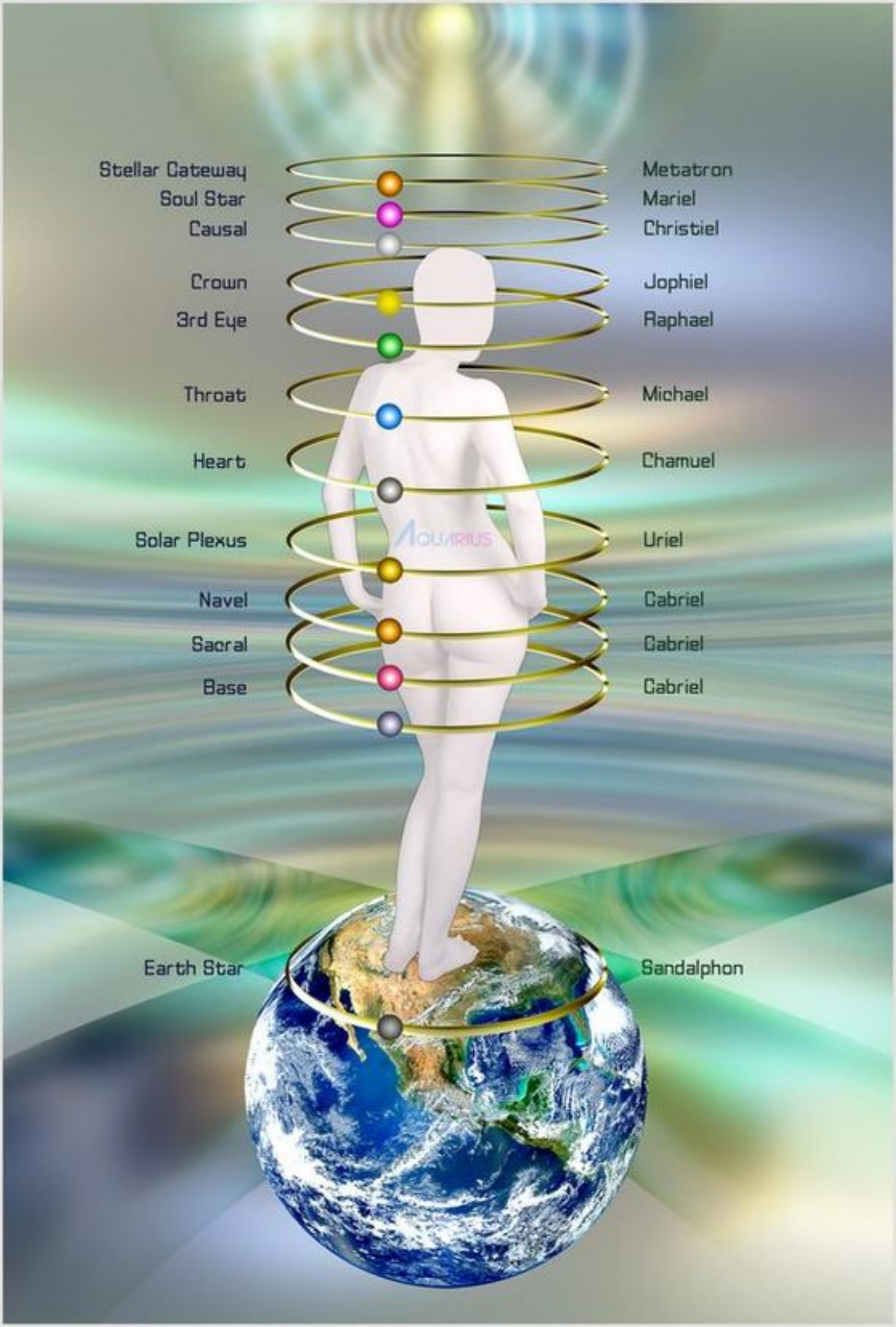
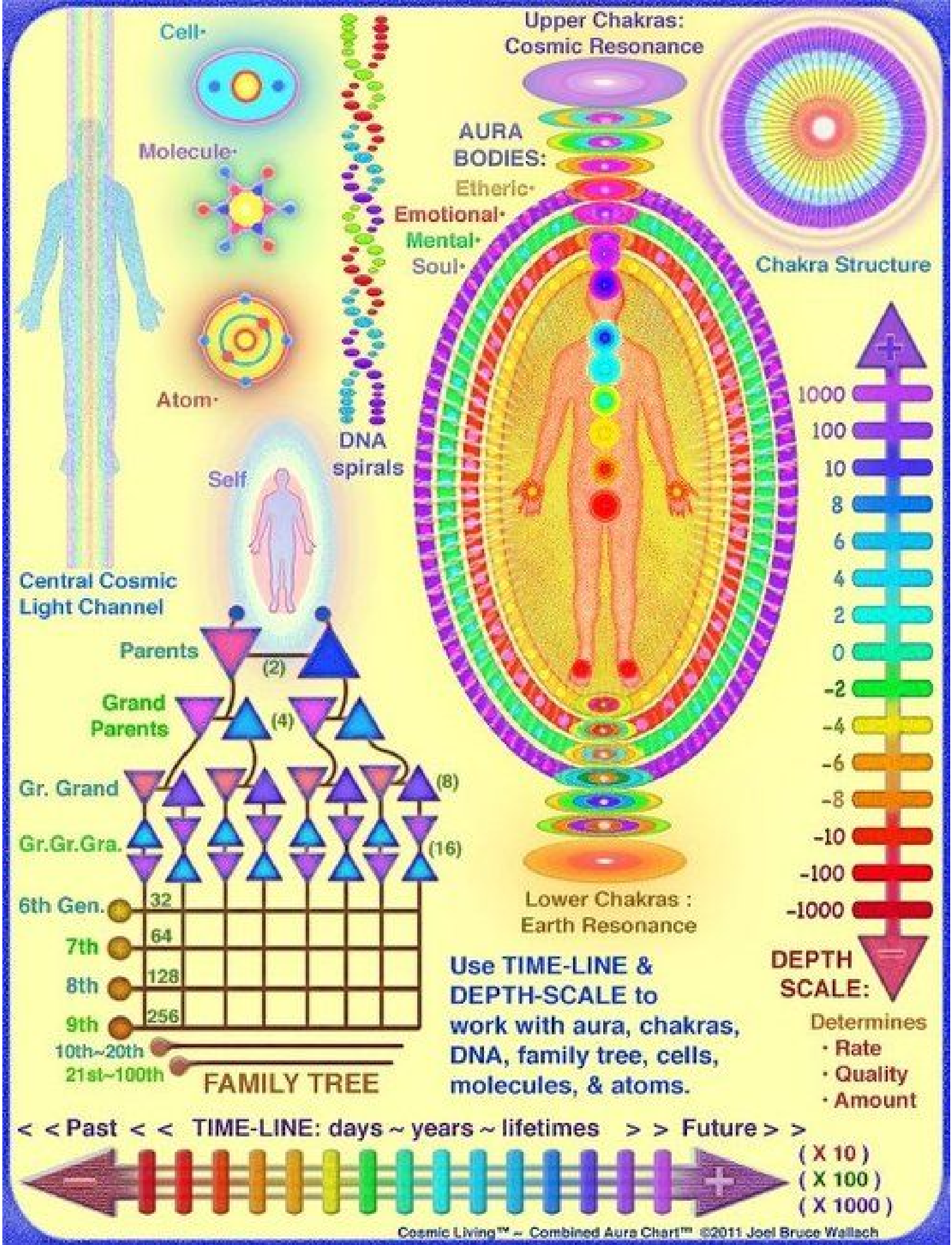
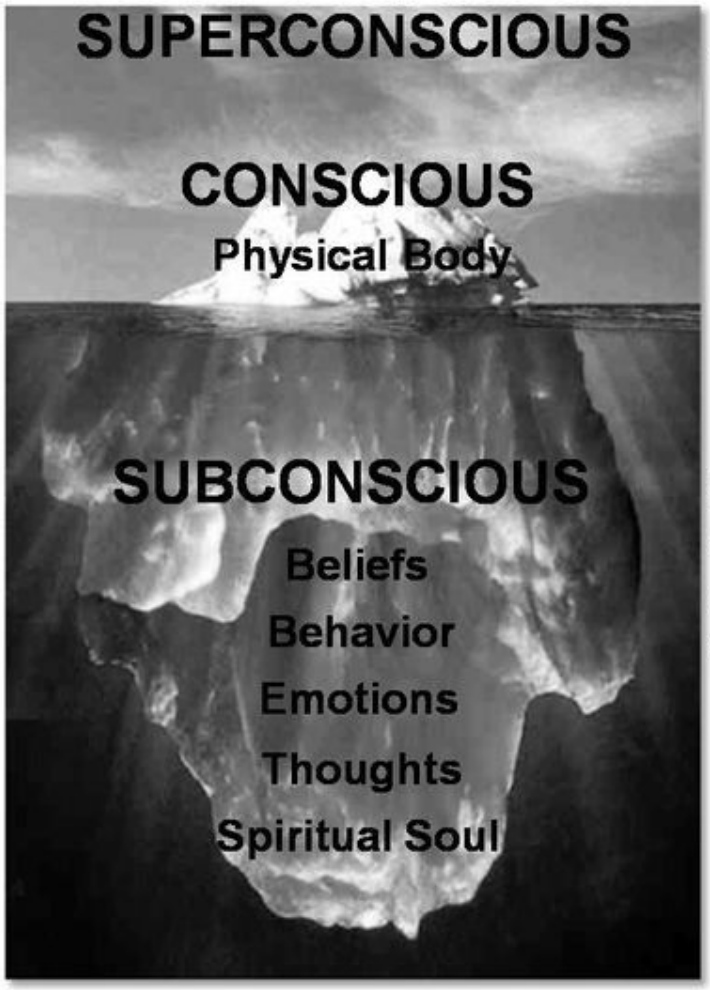

Visual Field
Temporal
Nasal
Temporal
Moon Eye
Sinister
Sun Eye
Light
Optic Nerve
Chiasma Opticum
Lateral Geniculate Body
Primary Visual Cortex
Left Hemisphere
Right Hemisphere
Logical
Verbal
Scientific
Language
Intuitive
Visual
Philosophic (Religious)
Music


ANTARANGA SADHANA
SADHANA
AHIMSA
Lakshmi
Brahma
lalāta
VISHUDDHA
Idā
Suṣumṇā
Piṅgalā
इडा
सुषुम्णा
पिंगला
ANĀHATA
Idā Nāḍī
Piṅgalā Nāḍī
manas
sūrya
MANIPŪRA
SVĀDHISHTHĀNA
DEVĪ KUNDALINĪ
MŪLĀDHĀRĀ


Stellar Gateway
Metatron
Soul Star
Mariel
Causal
Christiel
Crown
Jophiel
3rd Eye
Raphael
Throat
Michael
Heart
Chamuel
Solar Plexus
Uriel
Navel
Gabriel
Sacral
Gabriel
Base
Gabriel
Earth Star
Sandalphon
AQUARIUS


Cell·
Molecule·
Atom·
DNA spirals
Self
Central Cosmic Light Channel
Parents
(2)
Grand Parents
(4)
Gr. Grand
(8)
Gr.Gr.Gra.
(16)
6th Gen.
32
7th
64
8th
128
9th
256
10th~20th
21st~100th
FAMILY TREE
Upper Chakras: Cosmic Resonance
AURA BODIES:
Etheric·
Emotional·
Mental·
Soul·
Chakra Structure
Lower Chakras : Earth Resonance
1000
100
10
8
6
4
2
0
-2
-4
-6
-8
-10
-100
-1000
DEPTH SCALE:
Determines
· Rate
· Quality
· Amount
Use TIME-LINE & DEPTH-SCALE to work with aura, chakras, DNA, family tree, cells, molecules, & atoms.
< < Past < < TIME-LINE: days ~ years ~ lifetimes > > Future > >
(X 10)
(X 100)
(X 1000)
Cosmic Living™ ~ Combined Aura Chart™ ©2011 Joel Bruce Wallach

Levels of Consciousness



Home of All Memories
(Past & Future)

Home of Current Memories
(Typically 20% of our total consciousness)

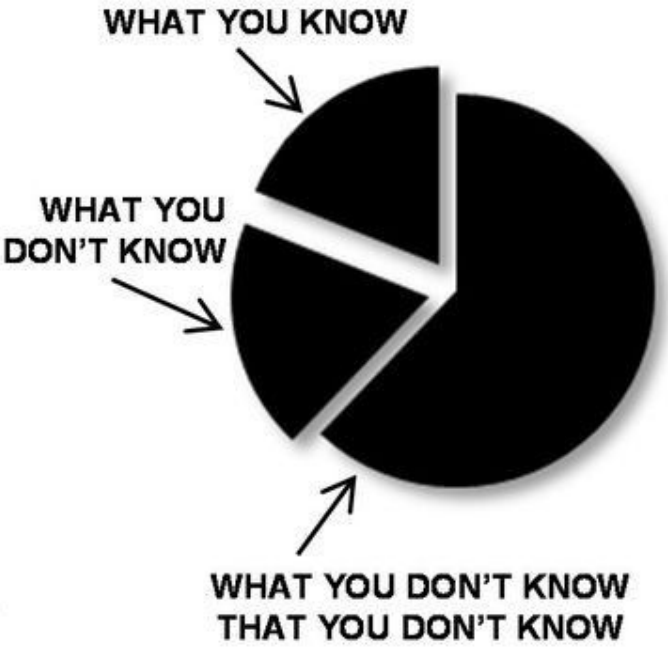
Home of Forgotten Memories
(Typically 80% of our total consciousness)

Consciousness in Time

10% Average time we are living our lives in the Present being in the moment

90% Average time we are living in the Past or Future concerned over desires & needs

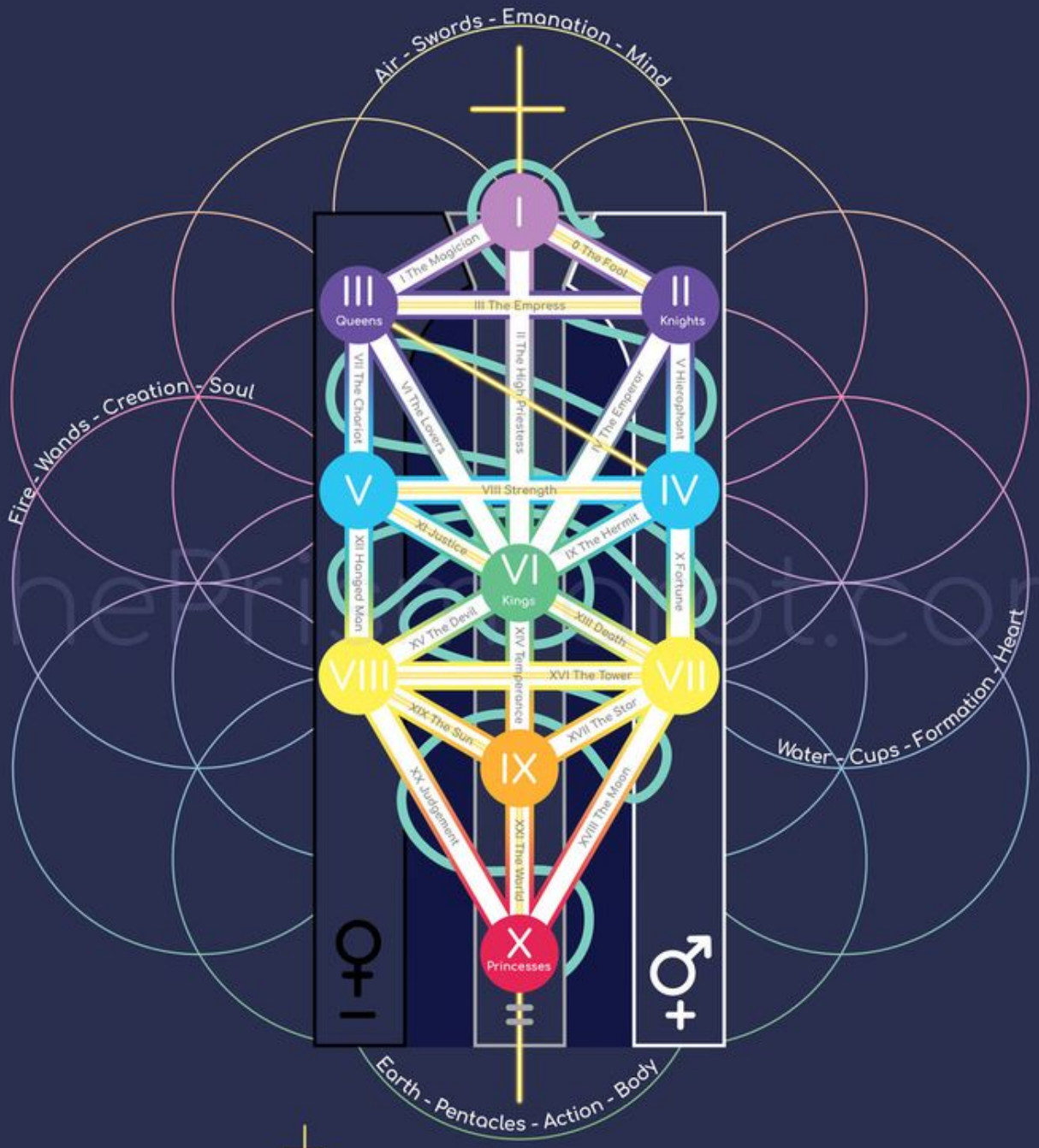
What We Know



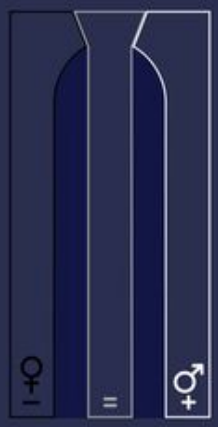
www.DrakeInnerprizes.com

A Tarot Guide to
The Tree of Life

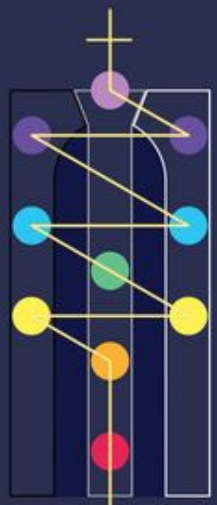
For use with The Prism Tarot by Liz Landis



ThePrismTarot.com



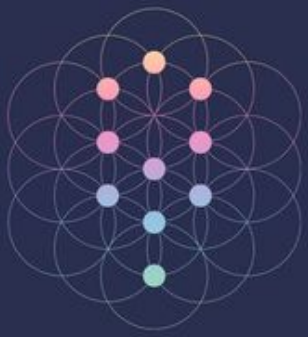
The Three Pillars



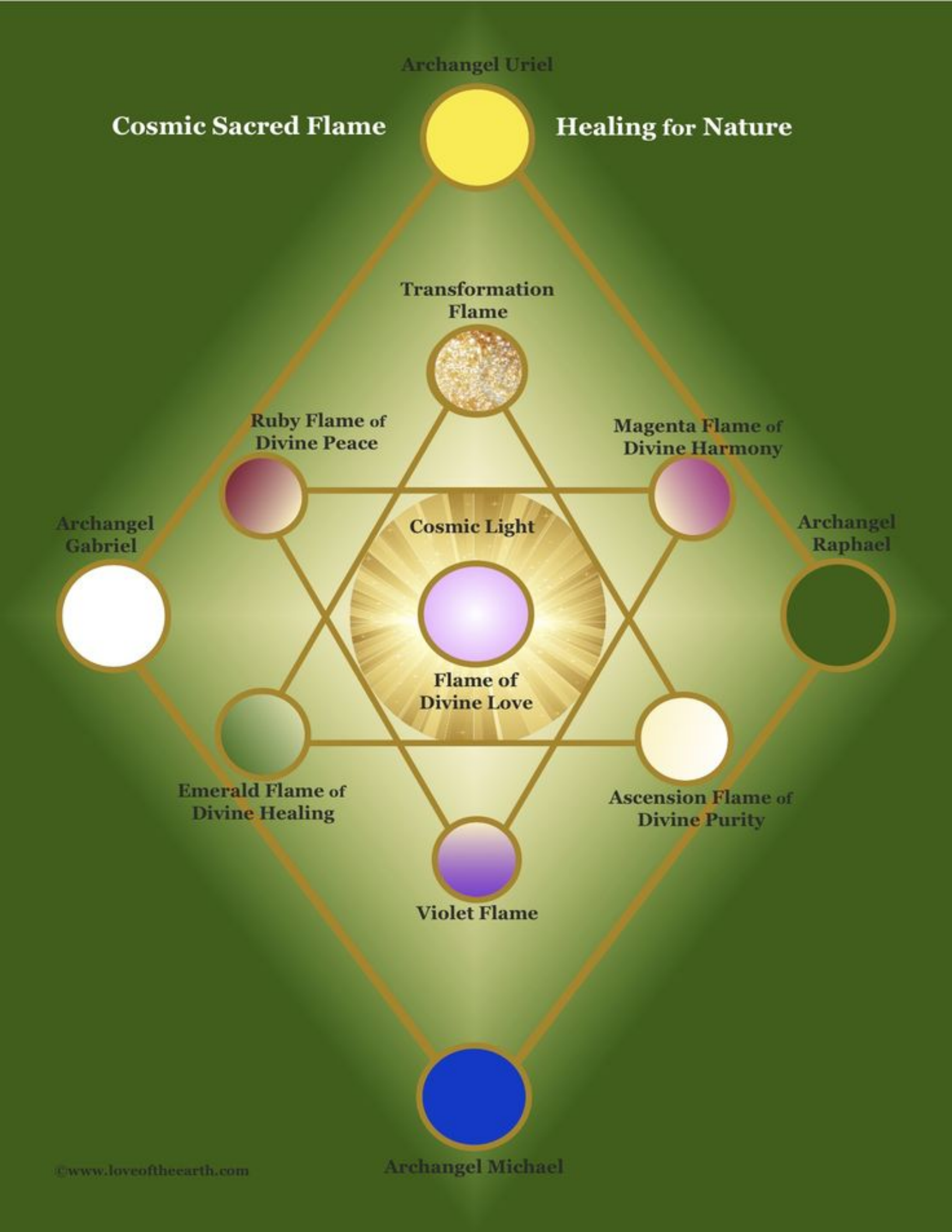
The Lightning Flash/
Path of Enlightenment

The 10 Sephiroth/
The 22 Paths

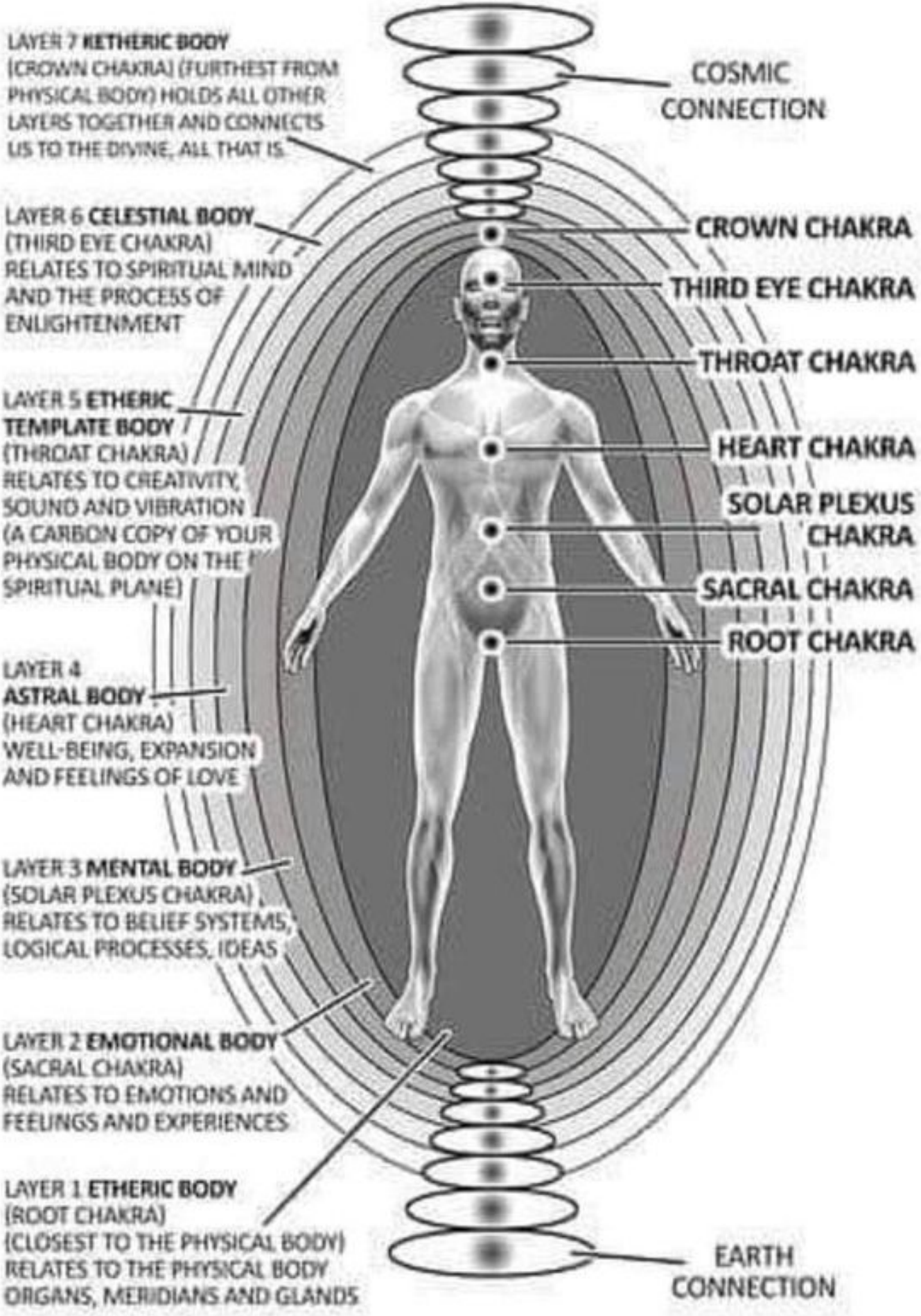
The Serpent/
Path of Redemption



The Flower of LIfe/
The 4 Worlds


Archangel Uriel
Cosmic Sacred Flame
Healing for Nature
Transformation Flame
Ruby Flame of Divine Peace
Magenta Flame of Divine Harmony
Archangel Gabriel
Cosmic Light
Archangel Raphael
Flame of Divine Love
Emerald Flame of Divine Healing
Ascension Flame of Divine Purity
Violet Flame
Archangel Michael
©www.loveoftheearth.com

AN INTRODUCTION TO THE HUMAN AURA ENERGY LAYERS



The star tetrahedron

The star tetrahedron is a crystalline field of information that is resonantly linked with each cell of the physical body.
In it's inactive state, the star tetrahedron appears as a 3 dimensional "Star of David" composed of two opposing and interlocking tetrahedrons

YOGASANA

Backbends

YOGASANA CHART No. **5**

Purvottanasana (Upward Plank Pose)
This Asana is an intermediate back-bending yoga pose that builds strength and flexibility. This pose simultaneously strengthens and stretches your shoulders.

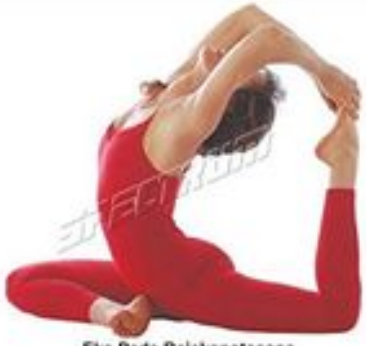
Urdhva Mukha Svanasana (Upward-Facing Dog)
This Asana is a back-bending yoga posture that lengthens and strengthens the spine, torso and arms. This pose is an important part of Sun Salutations.

Bhujangasana (Cobra Pose)
This Asana is a beginning backbend pose in yoga that helps to prepare the body for deeper backbends poses. This pose increases the flexibility of the spine, stimulates the abdominal organs & improves digestion.

Salabhasana (Locust Pose)
This Asana is an intermediate backbend that tones and strengthens the entire back of the body. This pose provides the foundation for deeper backbend poses, it is often used in preparation for other poses.

Matsyasana (Fish Pose)
This Asana is a back-bending yoga posture that opens the chest, throat and abdomen. This pose stretches the front of the body, particularly the throat, chest, abdomen, hip flexors and intercostals (the muscles between your ribs).

Supta Virasana (Reclining Hero Pose)
This Asana is a supine (lying down) variation of Hero Pose (Virasana), which provides an even deeper stretch to the thighs, hip flexors and ankles than the upright version. This pose stretches the abdominal organs and the pelvic region.



Eka Pada Rajakapotasana
(One-Legged King Pigeon Pose)
This Asana is a powerful hip-opener that can help increase flexibility and the range of motion in the hip joints. This pose stretches the thighs, groins and abdomen.

Ustrasana (Camel Pose)
This Asana is a backbend that stretches the whole front of the body. It is performed on the knees and is often used as preparation for deeper backbends.This pose stretches the front of the body, particularly the chest, abdomen, quadriceps and hip flexors.

Urdhva Dhanurasana (Upward Bow or Wheel Pose)
This Asana is an advanced yoga pose that stretches and opens the entire body. It can be a challenging pose to attain with correct alignment. This pose stretches the spine, shoulders, chest, upper back and thighs.

Dhanurasana (Bow Pose)
This Asana is an intermediate yoga backbend pose that deeply opens the chest and the front of the body. This pose stretches the entire front part of the body, while simultaneously strengthening every muscle in the back.

Bhekasana (Frog Pose)
This Asana is another challenging backbend pose which requires strength not only in the back but also in the arms and flexibility in the shoulders.

Setu Bandha Sarvangasana (Bridge Pose)
This Asana is a beginning backbend pose that helps to open the chest and stretch the thighs. When you're in the pose, your arms and legs create a "locked bridge" with your body.

Bitilasana (Cow Pose)
This Asana is usually referred to as the beginners pose. This pose helps to stretch the body and prepare it for other advance poses.

Dwi Pada Viparita Dandasana
(Upward Facing Two-Foot Staff Pose)
This Asana is considered to be one of the more complicated and advanced pose in yoga and is primarily focused on opening the chest as well as improving the overall strength of the chest and the spine area.

Kapotasana (King Pigeon Pose)
This Asana is a complete backbend pose, which is slightly difficult to master. This pose requires a lot of practice before you can perfect it and perform it with ease.

Padangustha Dhanurasana
(Intensified Bow Pose)
This Asana is a more intense version of Dhanurasana. This pose is a good exercise to improve posture & strengthens the back muscle.

Anjaneyasana (Low Lunge Pose)
This Asana is a powerful standing yoga pose that stretches and flexes your entire body. This pose is a challenging balance posture that creates stability throughout the entire body.

SPECTRUM EDUCATIONAL CHARTS
Dedicated to Educate People
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YOGASANA CHART SET :

1 - Standing Postures	(No. WPP-301001)
2 - Seating Postures	(No. WPP-301002)
3 - Seating Postures	(No. WPP-301003)
4 - Abdominal Tones, Twist & Arm Balance	(No. WPP-301004)
5 - Backbends	(No. WPP-301005)
6 - Inversions	(No. WPP-301006)
7 - Surya Namaskar	(No. WPP-301007)

Note: The yogasana images depicted in this chart are only representation to understand the asanas. Please do not replicate these without proper guidance from a trained Yoga instructor, as these asanas can cause physical disability when done incorrectly.
The information made use of in these chart has been taken from authentic sources. However, the publisher do not take any responsibility for the accuracy of its contents.

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Product No.
WPP-301005

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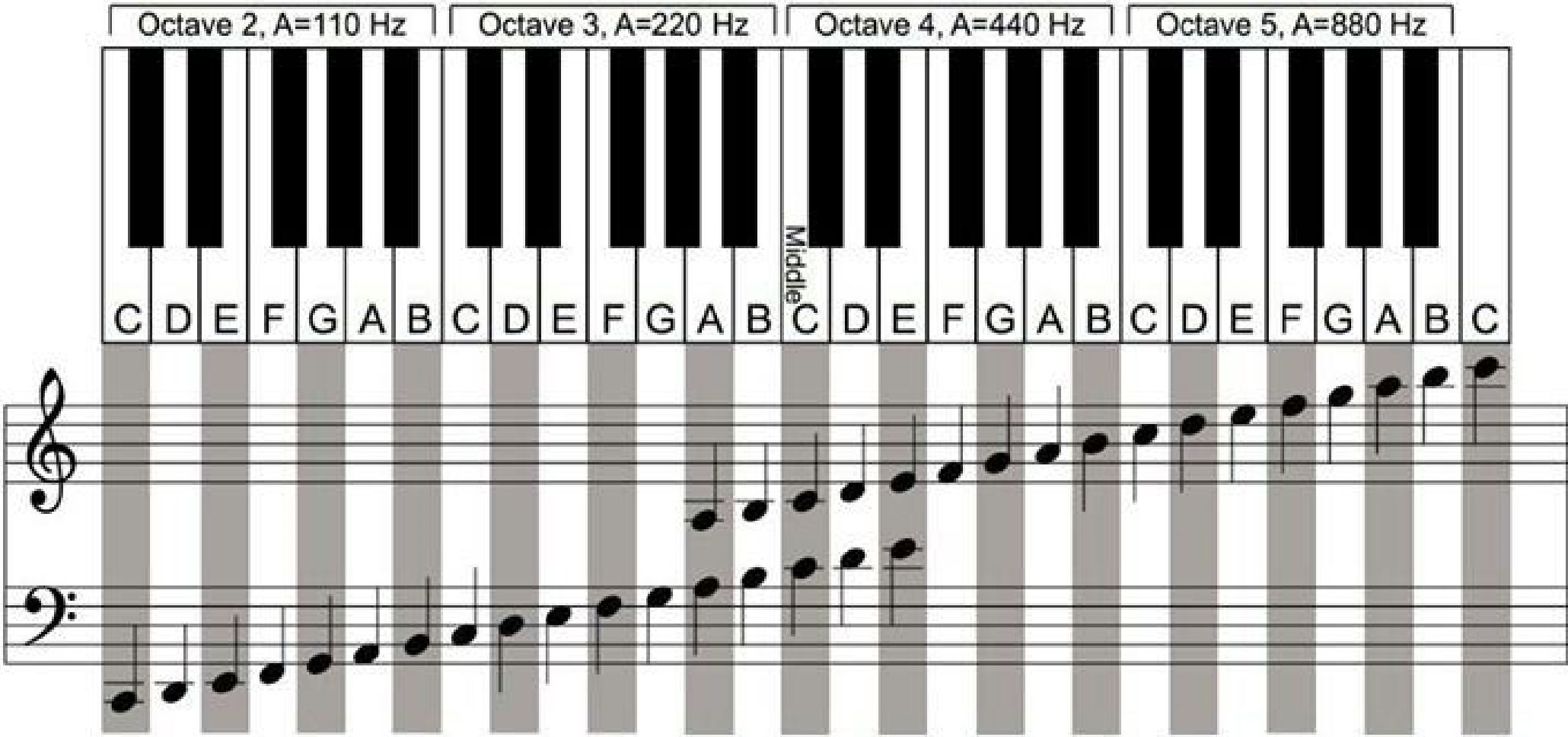

Octave 2, A=110 Hz
Octave 3, A=220 Hz
Octave 4, A=440 Hz
Octave 5, A=880 Hz
Middle
C D E F G A B C D E F G A B C D E F G A B C D E F G A B C

PSYCHOANATOMY 2

Psychosomatic problems shown first, followed by potential psychological features.

HEAD

Dandruff, Alopecia, Headache, Meningitis

Tension problems, Stress Reactions, Obsessive Thinking, Confusion, Amnesia.

BACK

Chronic Pain, Postural Problems, Slipped Disc.

Feelings of Strength, Support & Equilibrium "Spineless" & Cowardice behaviour, Rage, Hypochondria.

BUTTOCKS

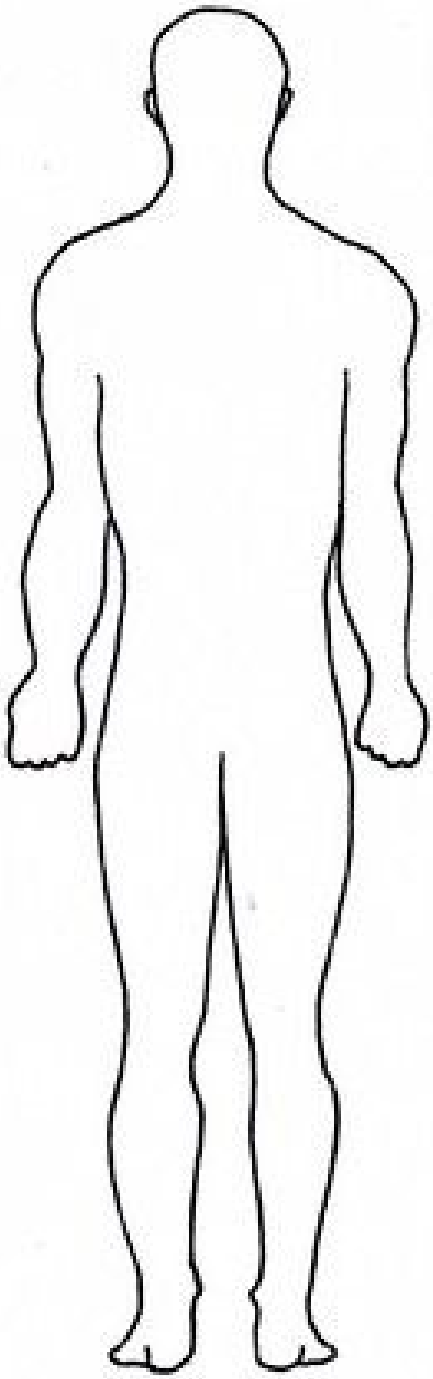
Constipation, Diarrhoea, Piles, Worms

Holding on, Control, Anger, Rebellion, Anal Fixation, Miserly, Paranoia, Sadism.

SKIN

Eczema, Poor Circulation, Cancer, Ringworm, Acne, Herpes

Loss of feeling, Suppressed Anger, Depersonalization, Contact with World Problems, Pleasure Phobia, Vitality or Despair are shown in the skin.



EARS

Ear Infection, Tinnitus, Loss of Balance, Tone Deafness

Contact or Withdrawal are shown here, Refusal to Listen, Dizzyness as Incapacitation.

NECK/ SHOULDER

Sore Throat, Laryngitis, Tonsillitus, Neck and Shoulder Pain

Cut off from feelings, Control or Vulnerability problems occur here, Holding on and Be Strong behaviour.

HANDS

Warts, Trembling, Arthritis, Clumsiness

Contact and Touch Problems, Aggression or Love are shown with hands, Agitated Behaviour.

FEET

Sunken Arches, Gout, Pidgeon-toed, Achilles Tendon Problems

Security, Contact with Ground, Solidity, Balance, Agitated Behaviour.

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ANY COMMENTS WELCOME Artwork & Design: J.Nielsen

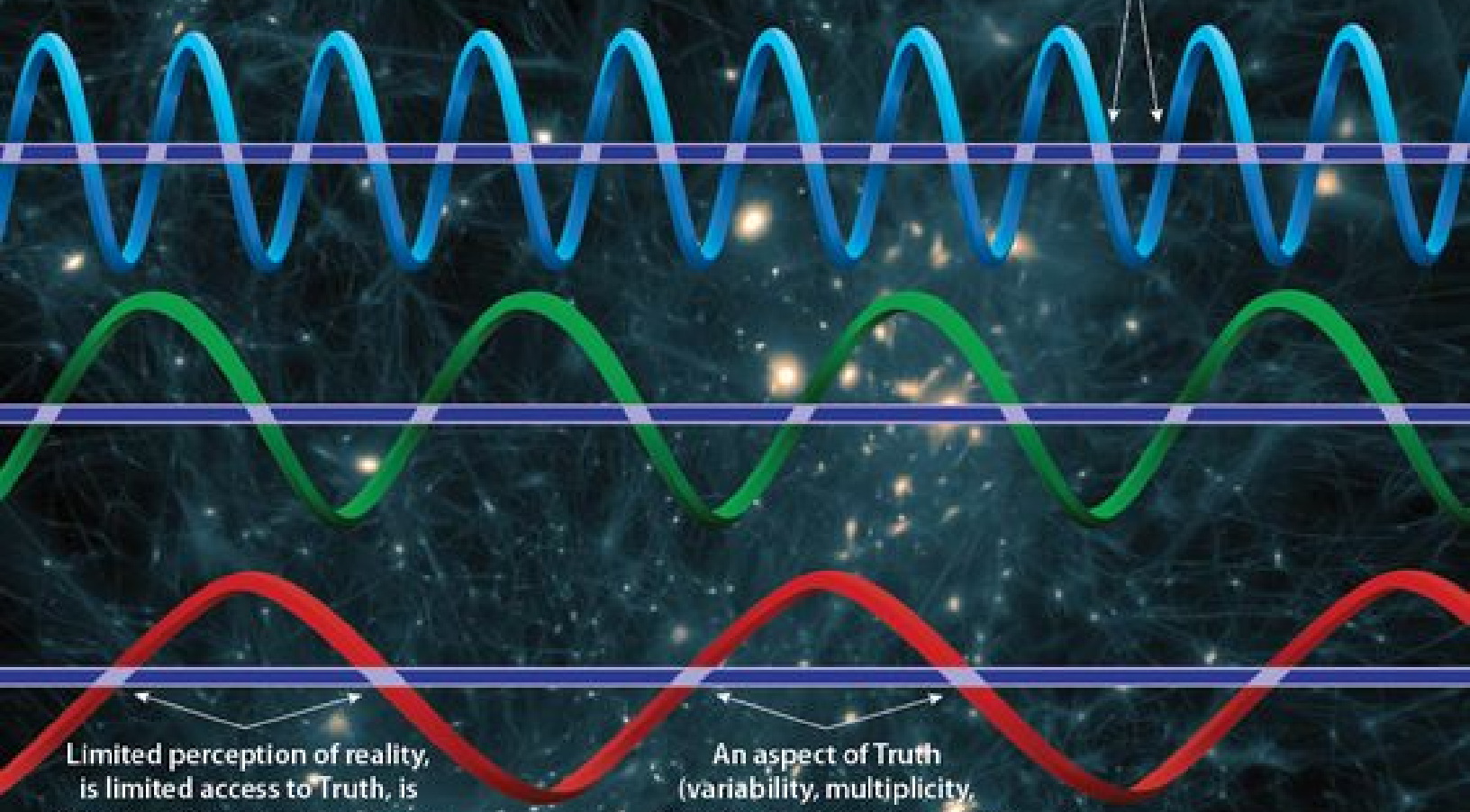
(2ND EDITION)

VERTEBRAL LEVEL	NERVE ROOT*	INNERVATION
C1	C1	Intracranial Blood Vessels • Eyes • Lacrimal Gland • Parotid Gland • Scalp • Base of Skull • Neck Muscles • Diaphragm
C2	C2	
C3	C3	
C4	C4	
C5	C5	• Neck Muscles • Shoulders • Elbows • Arms • Wrists • Hands • Fingers • Esophagus • Heart • Lungs • Chest
C6	C6	
C7	C7	
	C8	
T1	T1	Arms • Esophagus • Heart • Lungs • Chest • Larynx • Trachea
T2	T2	
T3	T3	
T4	T4	
T5	T5	Gallbladder • Liver • Diaphragm • Stomach • Pancreas • Spleen • Kidneys • Small Intestine • Appendix • Adrenals
T6	T6	
T7	T7	
T8	T8	
T9	T9	
T10	T10	
T11	T11	Small Intestines • Colon • Uterus
T12	T12	Uterus • Colon • Buttocks
L1	L1	Large Intestines • Buttocks • Groin • Reproductive Organs • Colon • Thighs • Knees • Legs • Feet
L2	L2	
L3	L3	
L4	L4	
L5	L5	
	SACRAL	Buttocks • Reproductive Organs • Bladder • Prostate Gland • Legs • Ankles • Feet • Toes

Truth and Frequency of Perceptions

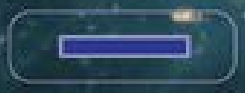
More info? evolveconsciousness.org

A Higher Frequency of contact or alignment of Perceptions with quality Truth, what 'is', and a Care to embody and become those values (what is right, good, true, moral, etc.), results in greater embodiment of Truth and a Higher Frequency of Consciousness.



Limited perception of reality, is limited access to Truth, is limited unity and embodiment of Truth, is limited Consciousness.

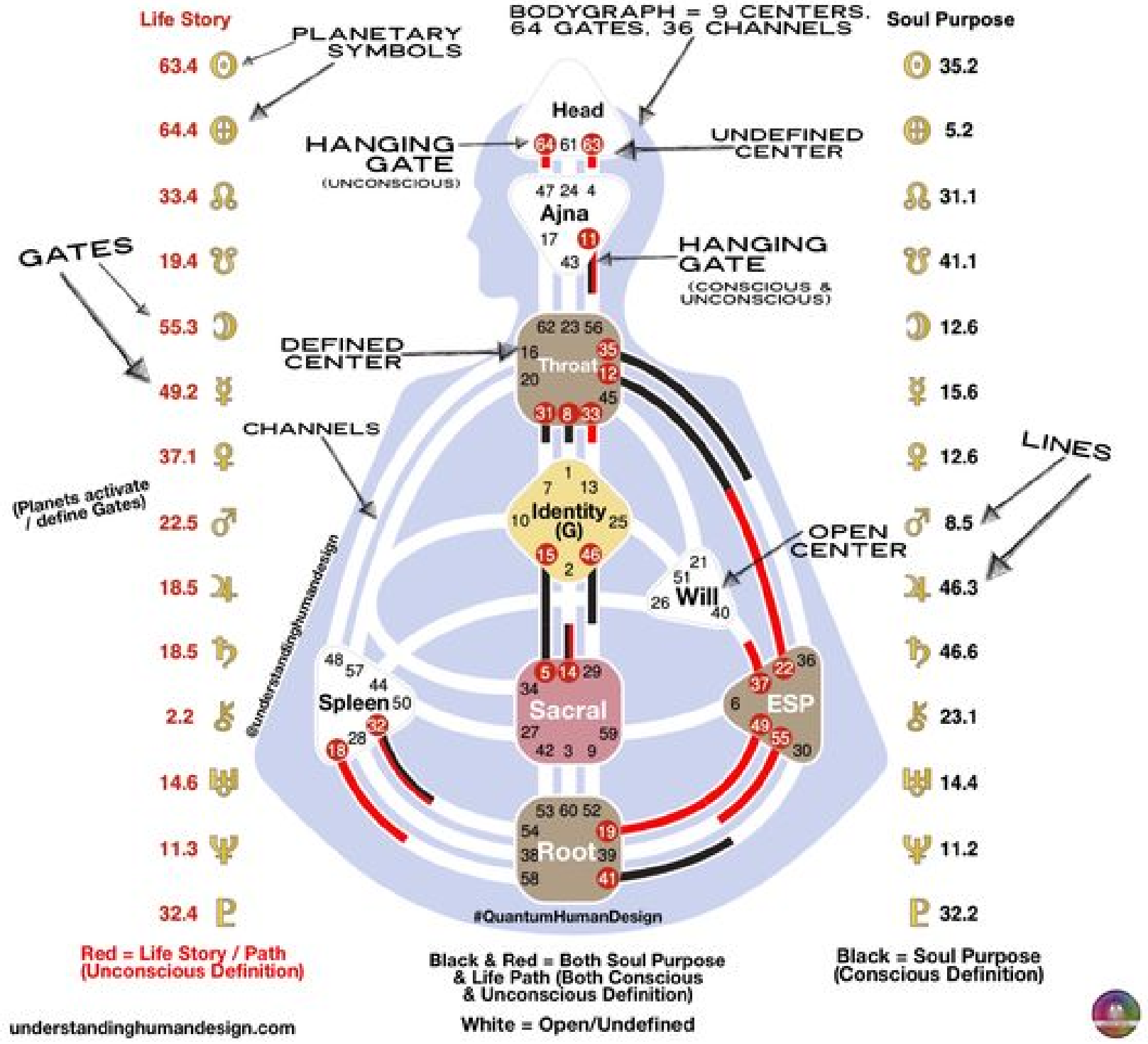
An aspect of Truth (variability, multiplicity, diversity of what 'is' in reality true), contacted, attained, aligned with, or embodied by the frequency.



Plane of Truth

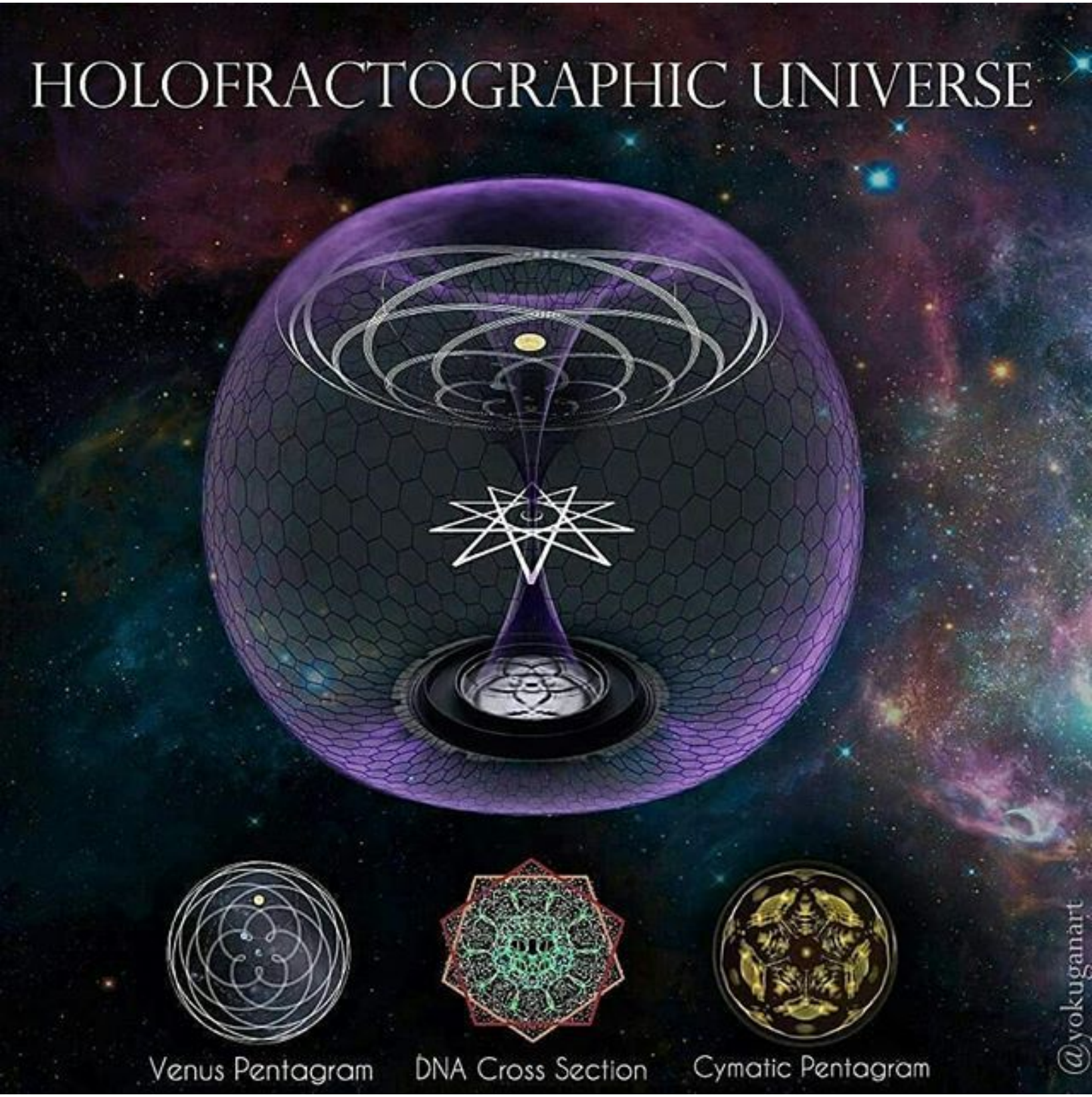
Frequencies of Perceptions aligning with Truth
Frequencies of Consciousness from greater embodiment of Truth

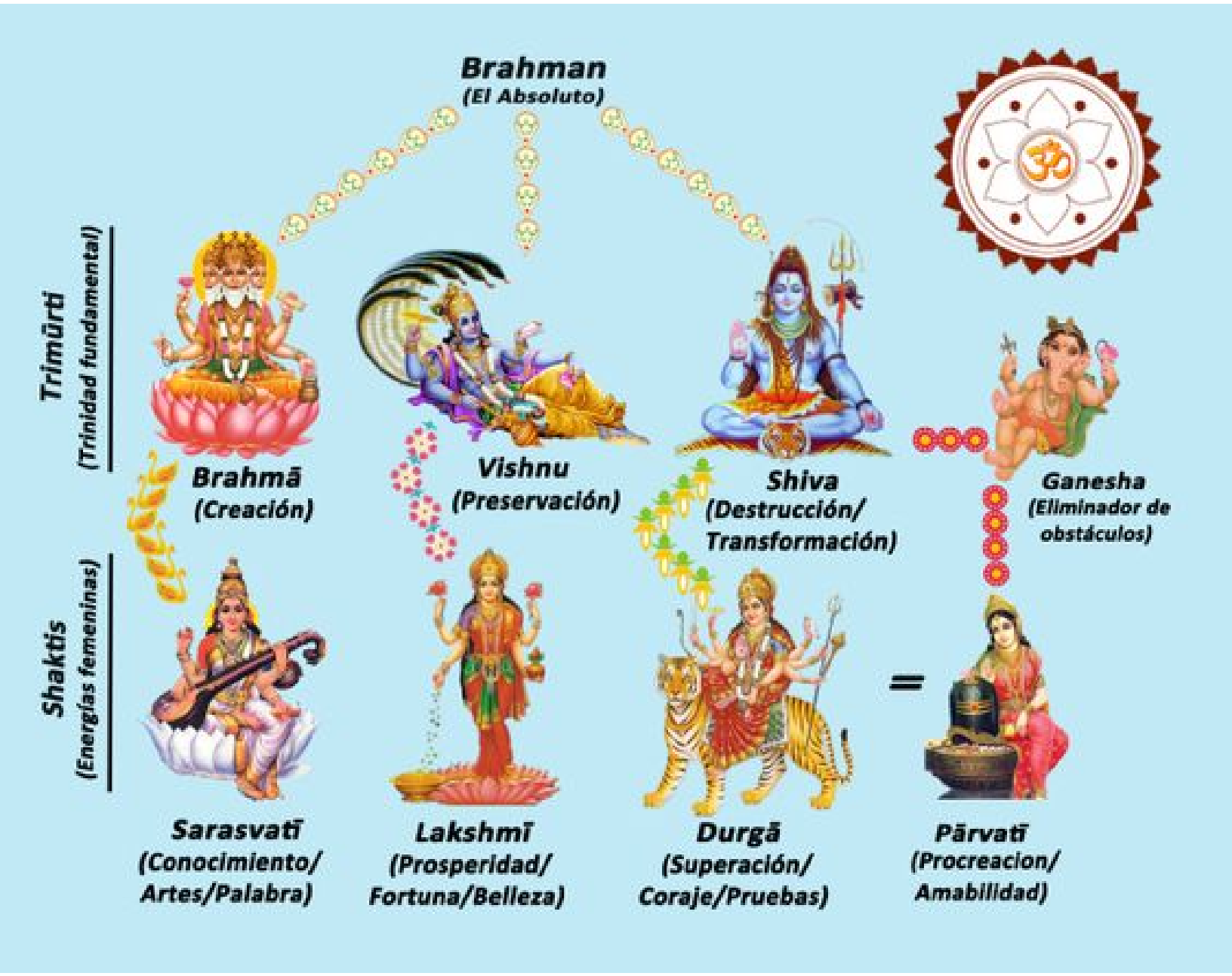
THE HUMAN DESIGN CHART



The formation of "**Divine Trinity**" is recommended.
It acts as an altar, help from all spirits,
protection from negative energies. Suitable for meditations.

Pic. 339 EN www.angels-heaven.org www.cosmic-people.com


HOLOFRACTOGRAPHIC UNIVERSE
Venus Pentagram
DNA Cross Section
Cymatic Pentagram
@yokuganart


Brahman
(El Absoluto)
Trimūrti
(Trinidad fundamental)
Brahmā
(Creación)
Vishnu
(Preservación)
Shiva
(Destrucción/
Transformación)
Ganesha
(Eliminador de
obstáculos)
Shaktis
(Energías femeninas)
Sarasvatī
(Conocimiento/
Artes/Palabra)
Lakshmī
(Prosperidad/
Fortuna/Belleza)
Durgā
(Superación/
Coraje/Pruebas)
=
Pārvatī
(Procreacion/
Amabilidad)

Higher Heart

The Amoraea Flame is activated when we are able to bring the three layers of our Soul Matrix into a triad body connection and we begin Monadic integration. The Amoraea Flame is the *Inner Holy Spirit* that ignites in the center heart of the Permanent Seed Atom that is located in the higher heart complex. This higher heart complex function is located in the 8th Chakra at the thymus gland.

SUN LIFE

MIND & BODY

Did you know...

In Europe and the U.S., doctors practiced cupping which was recognised by the state. By the 1940's, Cupping Therapy declined as modern medicine and Pharmaceuticals took over the medical field.

GETTING cupped

Jennifer Aniston does it.

Gwenyth Paltrow does it.

And so does Victoria Beckham.

Cupping is one of the oldest methods of traditional Chinese medicine, dating back to the early fourth century, when the noted herbalist Ge Hong wrote about a form of cupping in A Handbook of Prescriptions.

What does it do?

It is done to get rid of toxins which can accumulate in our bodies. Sources of toxins include foods, pollution, stress, drugs, chemicals. These toxins slow down our blood — which slows down the amount of things like oxygen, nutrients, vitamins and antibodies being delivered throughout your body.

While some professionals will tell you it does nothing, there seem to be just as many who say it can work wonders.

Sources: Acupuncturetoday.com; Fotolia

How does dry cupping work?

A glass cup is warmed by burning an alcohol-soaked cotton ball inside of it.

This removes the oxygen in the cup, which creates a vacuum.

The cup is turned upside down and placed on the patient's back.

The vacuum created by the lack of oxygen anchors the cup in place and draws the skin into the cup.

As the skin is drawn up into the cup, blood vessels on the skin's surface expand.

The cups are left for 5-10 min.

Where to do it

Fleshy sites on the body, such as the back and stomach (and, to a lesser extent, the arms and legs), are the preferred sites for treatment.

What it treats

In China, cupping is used primarily to treat conditions such as:

- Bronchitis
- Asthma and congestion
- Arthritis
- Gastrointestinal disorders
- Certain types of pain

Cupping has also been used to treat:

- Infertility
- Athlete's foot
- Allergies
- Cancer
- Headaches
- Alzheimer's
- Kidney problems

The cups

Most acupuncturists use cups made of thick glass or plastic. Glass cups allow the acupuncturist to see the skin and evaluate the effects of treatment.

Effects

Drawing up the skin in the cup is believed to open up the skin's pores, which helps to stimulate:

- **The flow of blood**
- **Balances and realigns the flow of qi**
- **Breaks up obstructions**
- **Creates an avenue for toxins to be drawn out of the body**

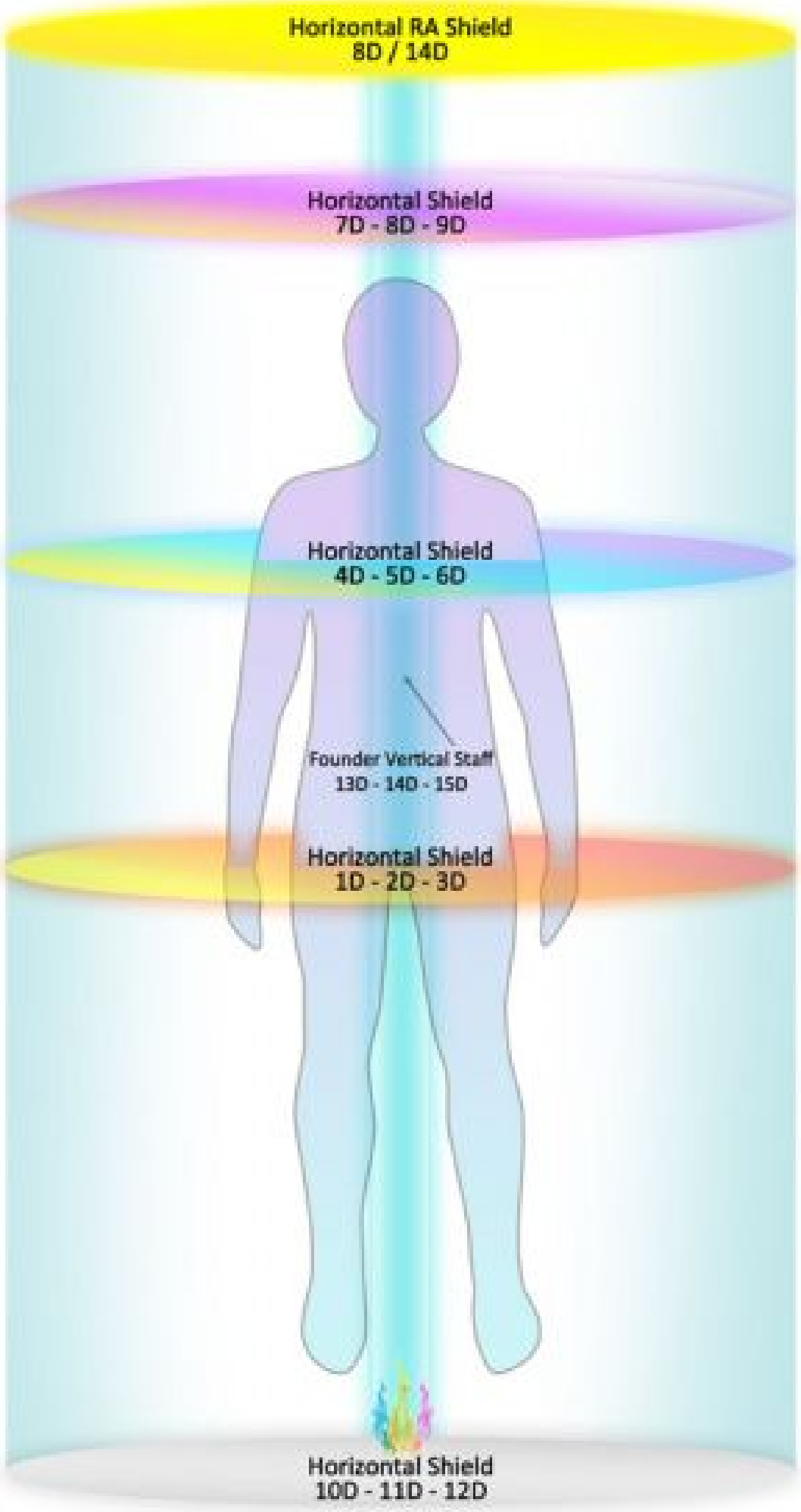
Other types

AIR CUPPING: Instead of using fire to draw the oxygen out of the cup, a cup with a suction pump is used

WET CUPPING:
The skin is punctured before the cup is placed on it. When the suction from the cup draws the skin up, a small amount of blood is drawn up. This is believed to remove toxins from the body.

SUSAN BATEFORD, GRAPHICS EDITOR, TWITTER @SBATE; INFOGRAPHIC BY TARA CORRIGAN/QMI AGENCY

HORIZONTAL TRIAD BODIES



Definition of time !

Time is Slow when you wait.
Time is Fast when you are late.
Time is Deadly when you are sad.
Time is Short when you are happy.
Time is Endless when you are in pain.
Time is Long when you feel bored.
Time is Beautiful when you are in love.

Every time, time is determined by your feelings and your physiological conditions and not by clocks.

SHOP BY GEMSTONE

JASPER
Stone of Stability
Healing, Grounding, Tranquility

GARNET
Stone of Energy
Health, Passion, Energy Flow

ROSE QUARTZ
Stone of Love
Beauty, Happiness, Peace

RHODONITE
Stone of Hidden Talents
Love, Power, Generosity

RHODOCHROSITE
Stone of Self Worth
Love, Power, Joy

CARNELIAN
Stone of Creativity
Confidence, Vitality, Motivation

CORAL
The Nurturer
Life, Energy, Harmony

CITRINE
The Wealth Stone
Happiness, Light, Abundance

PYRITE
Fool's Gold
Abundance, Luck, Confidence

RUTILATED QUARTZ
The Angel Stone
Guidance, Strengthens, Healing

AGATE
Stone of Solutions
Healing, Power, Strength

MOONSTONE
Stone of Destiny
Harmonizing, Protection, Fertility

CHRYSOPRASE
Stone of Receptivity
Love, Compassion, Kindness

PERIDOT
Stone of Positive Vibes
Abundance, Insight, Beauty

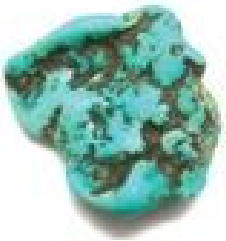
AVENTURINE
Stone of Opportunity
Luck, Optimism, Wealth

MALACHITE
Stone of Transformation
Love, Strength, Inspiration

JADE
Stone of Prosperity
Wealth, Wisdom, Peace

BLOODSTONE
Stone of Courage
Healing, Strength, Self Esteem

CHRYSOCOLLA
Stone of New Beginnings
Healing, Love, Power

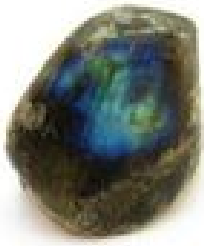


TURQUOISE
Master Healer
Health, Communication, Luck

AQUAMARINE
Stone of Truth
Peace, Meditation, Protection

LAPIS LAZULI
Stone of Wisdom
Enlightenment, Awareness, Clarity

AMETHYST
Stone of Spirituality
Intuition, Cleansing, Peace



LABRADORITE
Stone of Consciousness
Magic, Imagination, Intuition

HEMATITE
Stone of Grounding
Dissolves Negativity, Balance

SMOKY QUARTZ
Stone of Transmutation
Grounding, Connects to Earth

TIGER'S EYE
Stone of Optimism
Wealth, Fortune, Success

ONYX
The Protection Stone
Blocks Negativity, Healing

TOURMALINATED QUARTZ
Stone of Polarities
Luck, Wealth, Balance

CLEAR QUARTZ
Stone of Manifestation
Energizing, Clarity, Focus

Yin Yang

音 Yin

揚 Yang

Dark
Vague
Wisdom
Profundity
Sincerity
Tranquil
Winter
Water
Compassion
Source of manifestation
Destination of return
Frames all existence and experience

Shadows:
False Modesty
Sentimentality

Beauty
Courage
Risk
Pointed
Precise
Quick
Strong
Active
Expression
Instigator
Doing
Summer
Prescience
Perspicacity (Clarity)
Making commitments
Liberator of suffocation
Mastery of timing and proportion

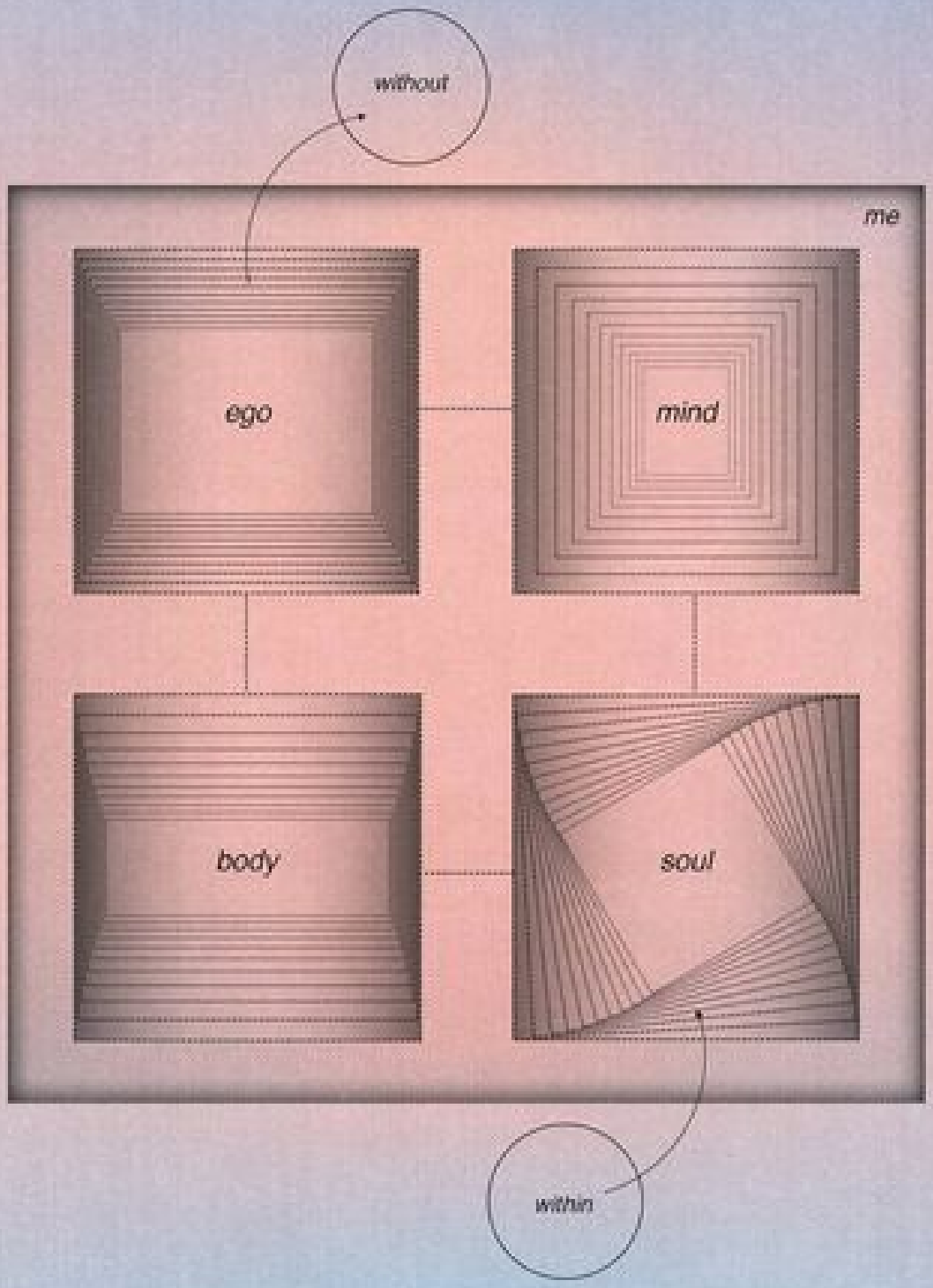
Shadow: Arrogance

Earth – Heaven
Love – Emotion
Tranquil – Active
Soul – Spirit
Body – Clothes
Mind – Works of expression
Female – Male
Left – Right

Yin Yang is called **Tai chi 太極** meaning **"Supreme ultimate"**. Tàijí is the unity from which everything originates

These teachings and practices are derived from the practice tradition of MogaDao, created and founded by Zhenzan Dao. www.mogadao.com. Chart by Jane Barthelemy

Ego says "once everything falls into place, I'll feel peace."
Soul says "find your peace and then everything will fall into place".



Will you act with your soul or with your ego ?
Stay conscious.

© beaming

Anti Particle Chakras Eight & Nine

Galactic Chakra Activation Begins

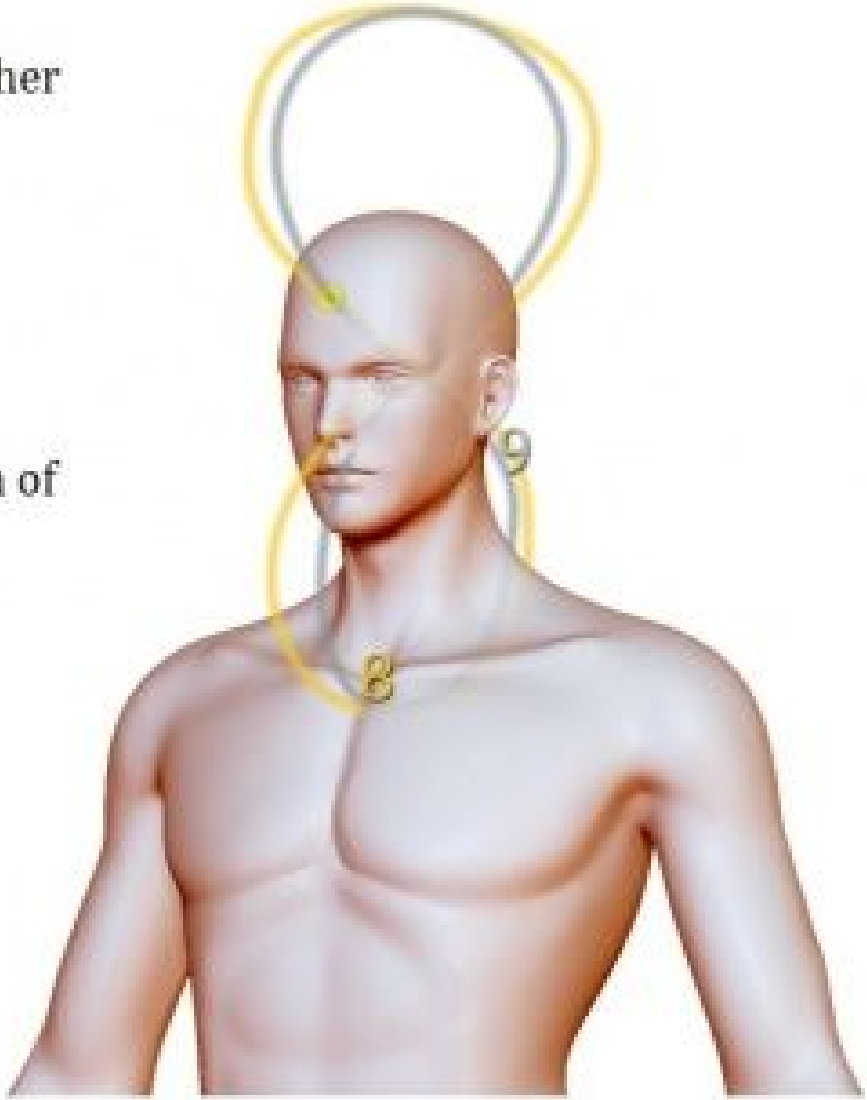
Morphogenetic Chakras begin to "Galactivate" identity to multiple awareness of Star Intelligences, other Identities and Lifetimes

Moving Halo is Gyroscopic with center axis in Pineal Gland

Morph Chakra 8 (Gold)
Thymus and Permanent Seed Atom of the Crystal Heart

Morph Chakra 9 (Silver)
Atomic Doorway "Mouth of God"
Projector of Light Consciousness

Level 2 Male Female Balance



HARA CENTERS

6 PRIMARY HARA POINTS
(Star Crystal Seals on Hara Level)

1. Hara Centre (Core Star)
(9th Silver Star Crystal Seal)
2" below Navel

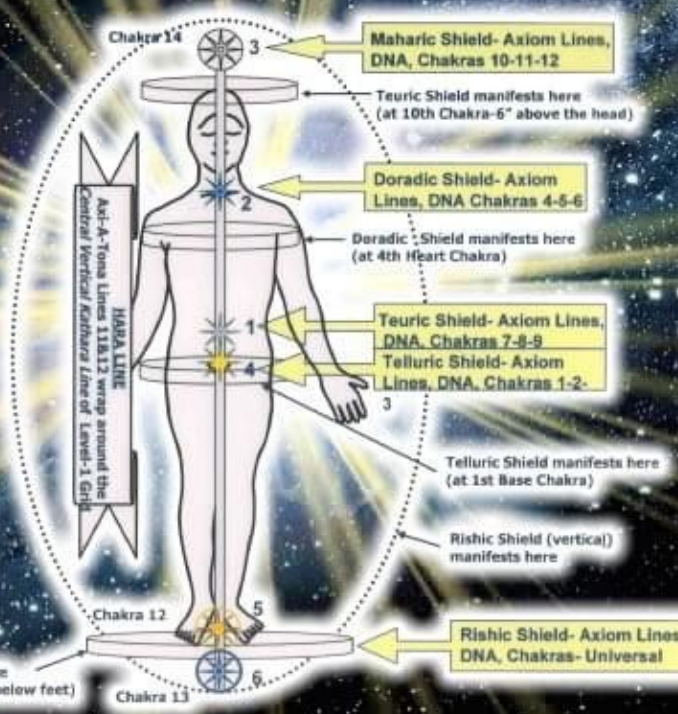
2. Soul Star
(6th Indigo Star Crystal Seal)
Top of Breast Bone at Thymus

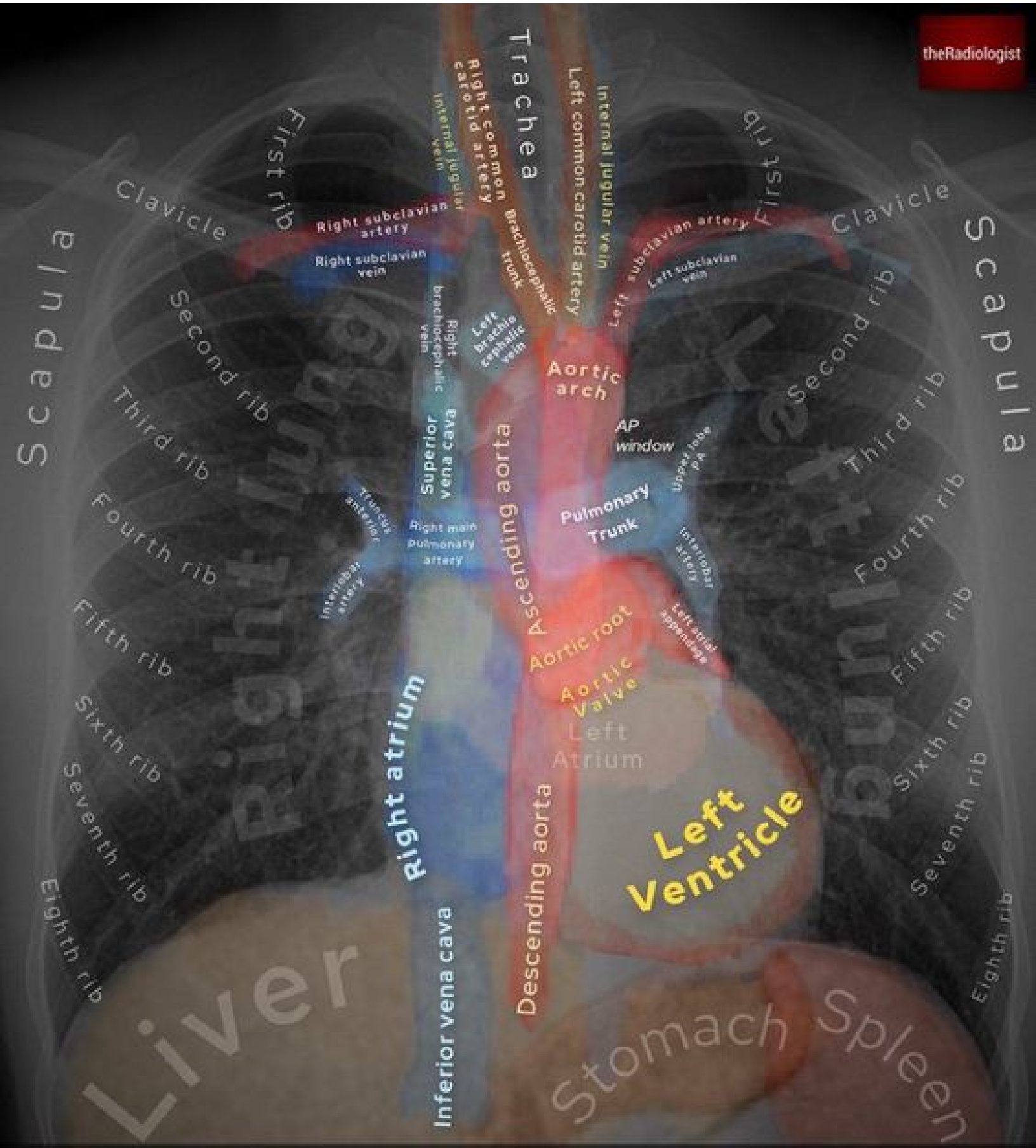
3. Galactic Star
(12th White Star Crystal Seal)
Cone at 14th Chakra 36" above Head

4. Sun Star
(3rd Yellow Star Crystal Seal)
Just below Hara Center

5. Earth Star
(8th Gold Star Crystal Seal)
In 12th Chakra 6" below Feet

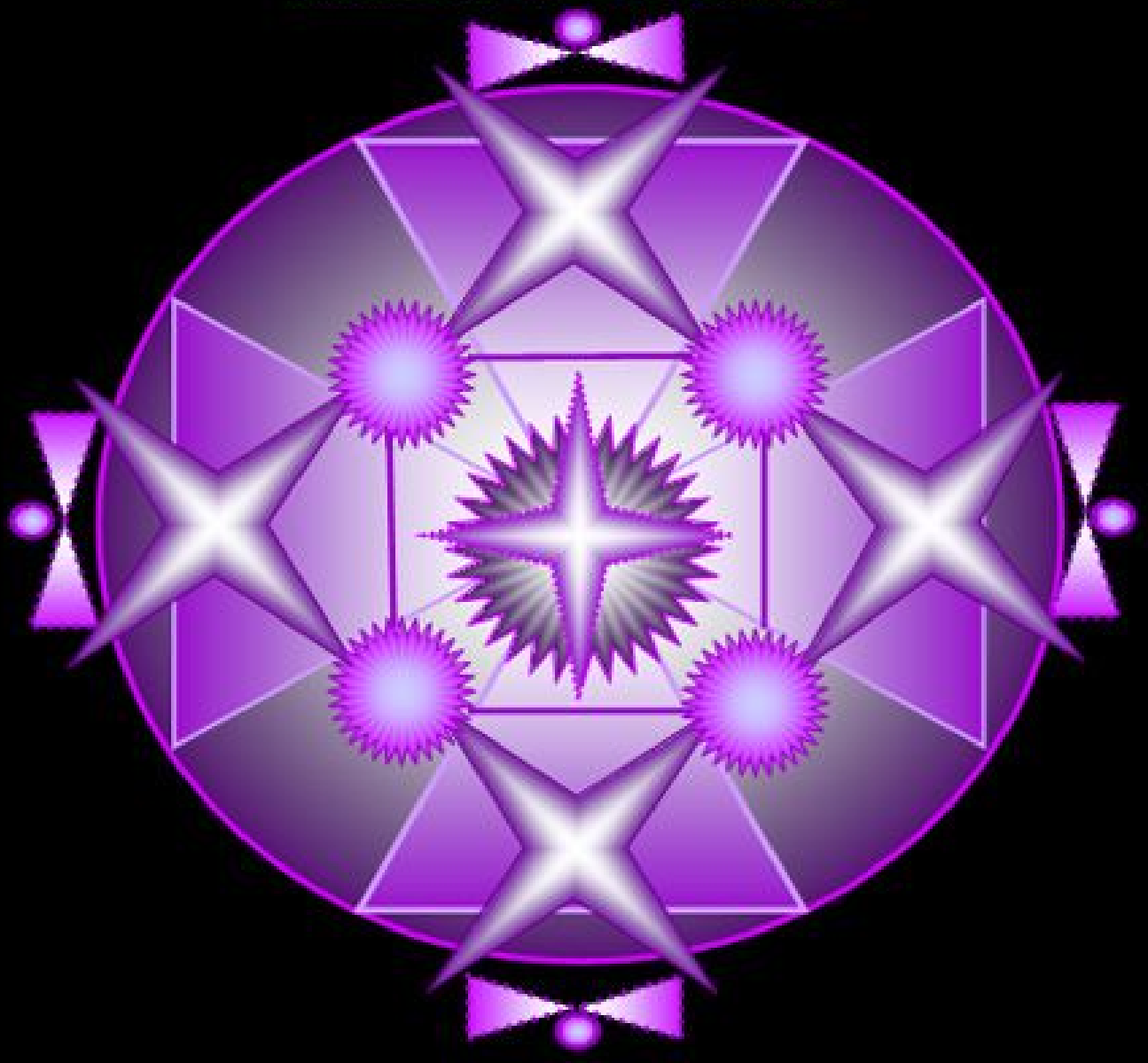
6. Earth Core
(10th Blue-Black Star Crystal Seal)
In 13th Chakra at Earth's Core





Chest X-Ray **ANATOMY**

MANDALA OF THE 7th RAY



The "I AM" of the 7th Ray

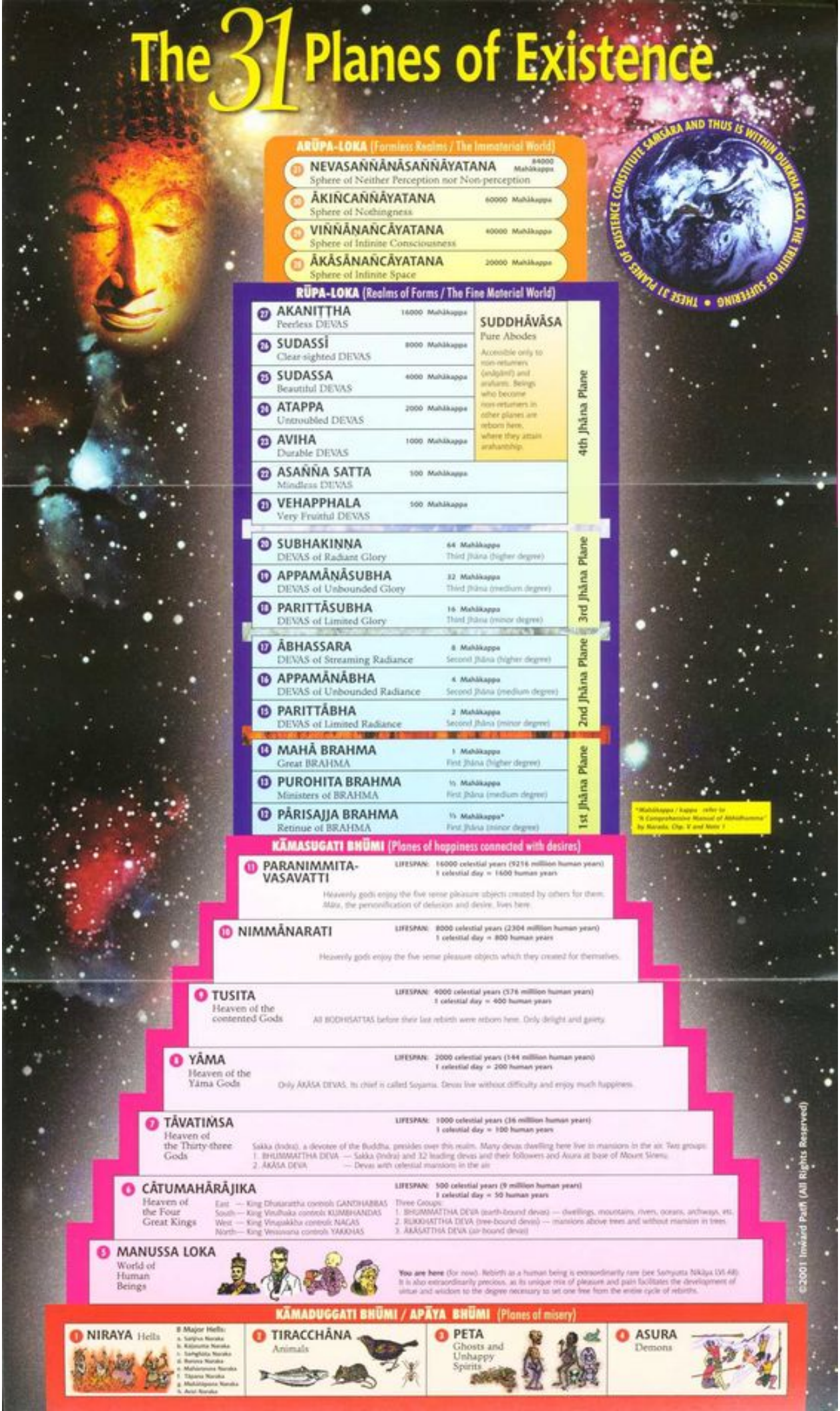
I AM imbued with the violet fire that breaks down all barriers,

I AM resolved to become my potential which is perfect,

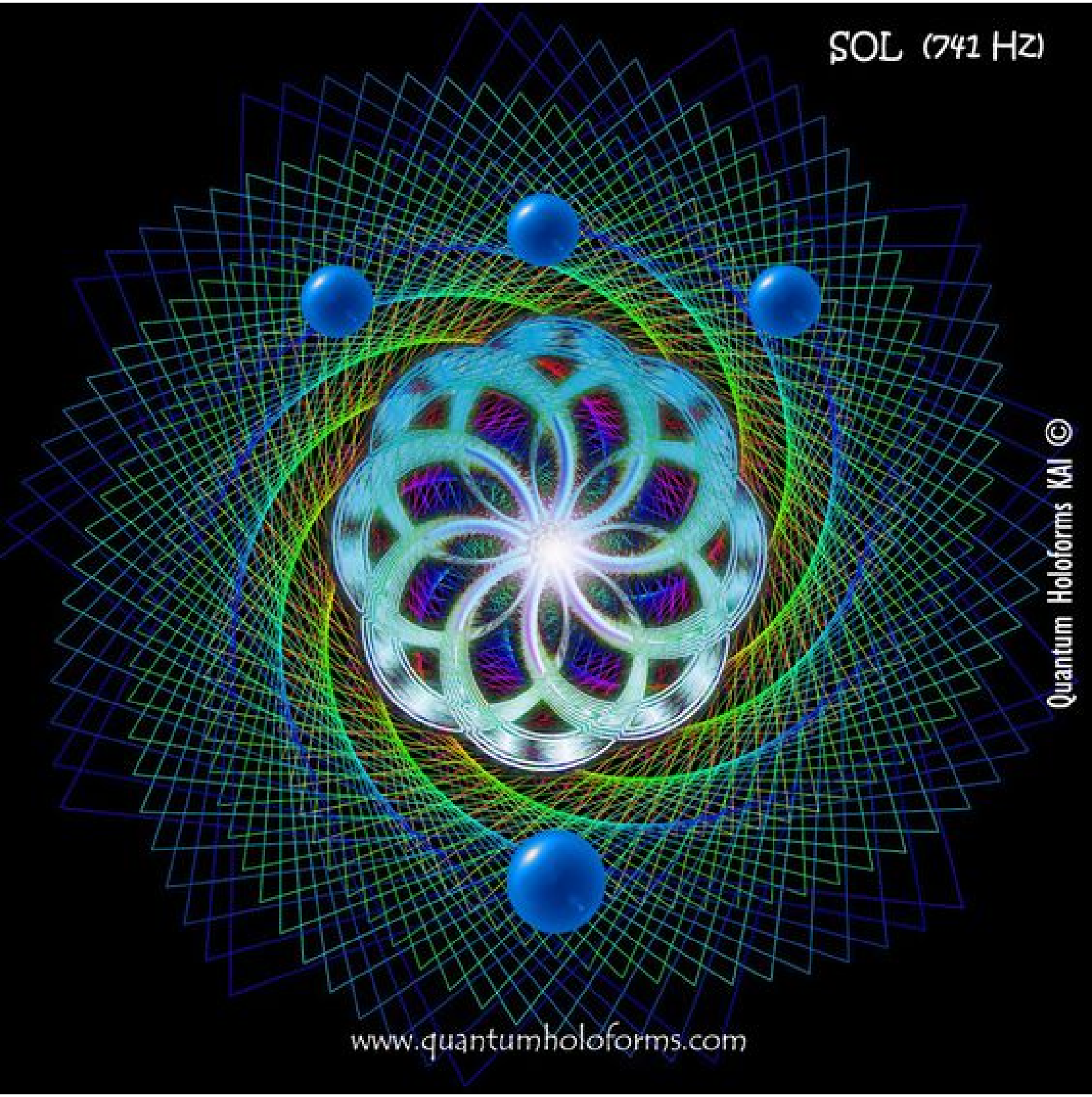
I AM enabled to bring order to chaos,

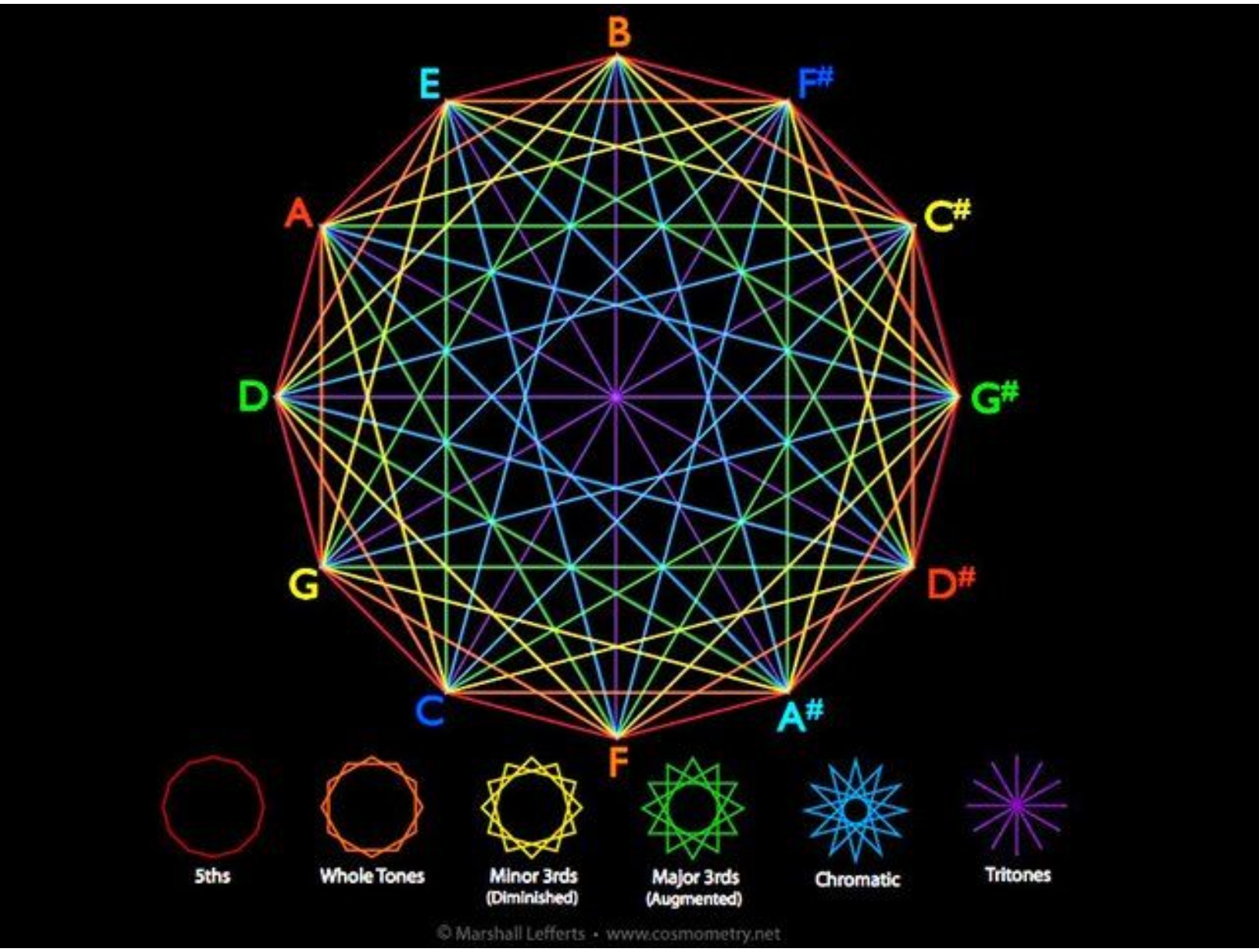
I AM motivated to stand in the Truth and to be in service.

The 31 Planes of Existence



if you are shocked by quantum mechanics
then you haven't seen Tetryonic theory yet.....


SOL (741 Hz)
Quantum Holoforms KAI ©
www.quantumholoforms.com


B
E
F#
A
C#
D
G#
G
D#
C
A#
F
5ths
Whole Tones
Minor 3rds
(Diminished)
Major 3rds
(Augmented)
Chromatic
Tritones
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www.iytyogatherapy.com
illustration & design Pamela Becker © Integrative Yoga Therapy 2003

the Five Koshas

Self

BRAHMAN

The Source and Essence of Creation, Unity and Oneness

Bliss Body

Anandamayakosha

Natural Mind, Peace, Knowing, Truth and Rapture

Wisdom Body

Vijnyanamayakosha

Witness, Intuition, and Unveiling Beliefs

Emotional Body

Manomayakosha

Emotions, Thought Patterns and Gunas

Energy Body

Pranamayakosha

Subtle Breath, Pranavayus, Nadhis and Chakras

Physical Body

Annamayakosha

Physical Systems and the Ayurvedic Doshas

Vijnyanamayakosha
Wisdom Body:
a faculty of higher mind, witness, discernment, and liberating intuition

Air Vishuddha

Imbalance: Trapped in a material universe subject to the roller coaster of life with its painful ups and downs. Unable to see the big picture of life.
Balance: Dharana and dhyana, developing the witness, learning to focus and stabilize the mind and access a discriminating intuition which informs us we are whole and complete.

Anandamayakosha
Bliss Body:
connection to our natural self, which is complete, whole, and blissful

Space Ajna

Imbalance: Attachment to spiritual experience and the inability to integrate the natural self into everyday living.
Balance: Study of Yoga and Vedanta and the nature of the true Self, which includes all aspects of life.

Annamayakosha
Physical Body:
physical systems and ayurvedic constitutions

Earth Muladhara

Imbalance: Separation from the physical body and lack of awareness of ayurvedic constitution.
Balance: Body awareness through asana, especially standing poses, appropriate diet and lifestyle.

Pranamayakosha
Energy Body:
flow of prana, chakras, nadhis and pranavayus

Water Svadhisthana

Imbalance: Energy blockages, especially in the chakras, lack of breath awareness.
Balance: Breath awareness, pranayama, pranavidya, chakra meditation, connection to nature and other sources of prana.

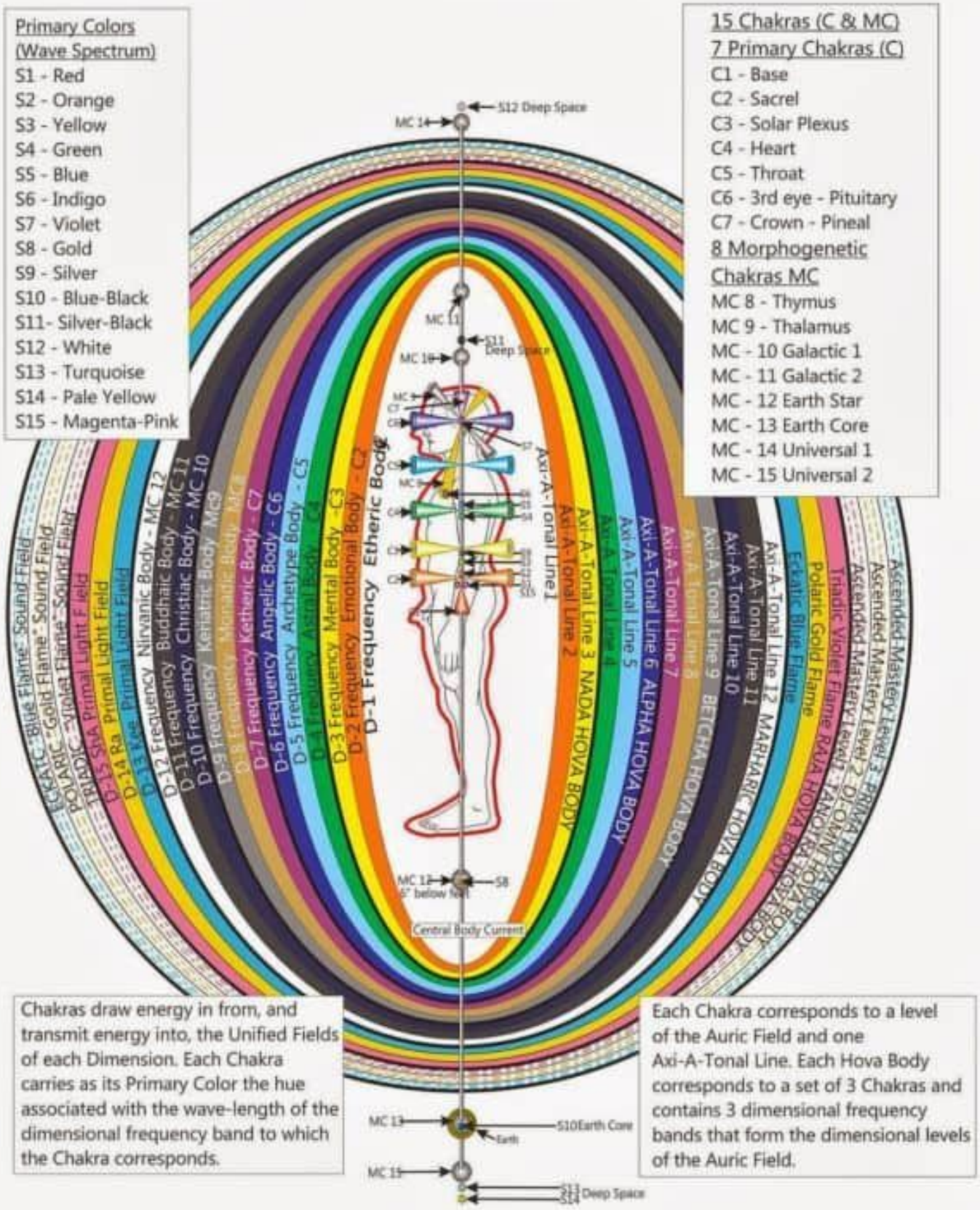
Manomayakosha
Emotional Body:
habitual unconscious patterns of thought and emotion

Fire Manipura Anahata

Imbalance: Lack of awareness of thought patterns and emotional reactions and their sources.
Balance: Yoga Nidra, pratyahara, turning our awareness inward for exploration, healthy emotional expression.

Universal Life Force Currents form and sustain the "Auric Field" Levels of 15-Dimensional Human Anatomy

Auric Level, Chakra and Hova Body Correspondences



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Computer Graphics - Ron Mayer

Human Chakra System

52 Human Chakra System Elements

Colors

1. Red
2. Orange
3. Yellow
4. Green
5. Blue
6. Indigo
7. Violet
8. White Light
9. Black
10. Rainbow
11. Emerald
12. Silver
13. Gold

Tones

1. Lam
2. Vam
3. Ram
4. Yam
5. Hom
6. Shom
7. Ohm
8. Ahh
9. Hum
10. Ohm
11. Ahh
12. Hu *(silent)*
13. Hu

Causes

1. Appreciation
2. Breating
3. Creativity
4. Calm
5. Blissful
6. Awareness
7. Love
8. Nature
9. You
10. I
11. All
12. Oneness
13. Wakantanka

Effects

1. Survival
2. Breathing
3. Creativity
4. Love
5. Communication
6. Intuition
7. Soul
8. Nature
9. Spirit
10. Self
11. All
12. Oneness
13. Great Mystery

Use one or more of th e above Causes to activate or illumination thirteen major chakras of the human body. Add color, tones, and visualization to dramatically improve process and state of well-being, sustenance, and integration of mind, body, heart and soul.

The objective is creating an ever-deepening connection (communication and cooperation) with the Source (by whatever name) and activating the Merkaba via illumination of the 13 chakras

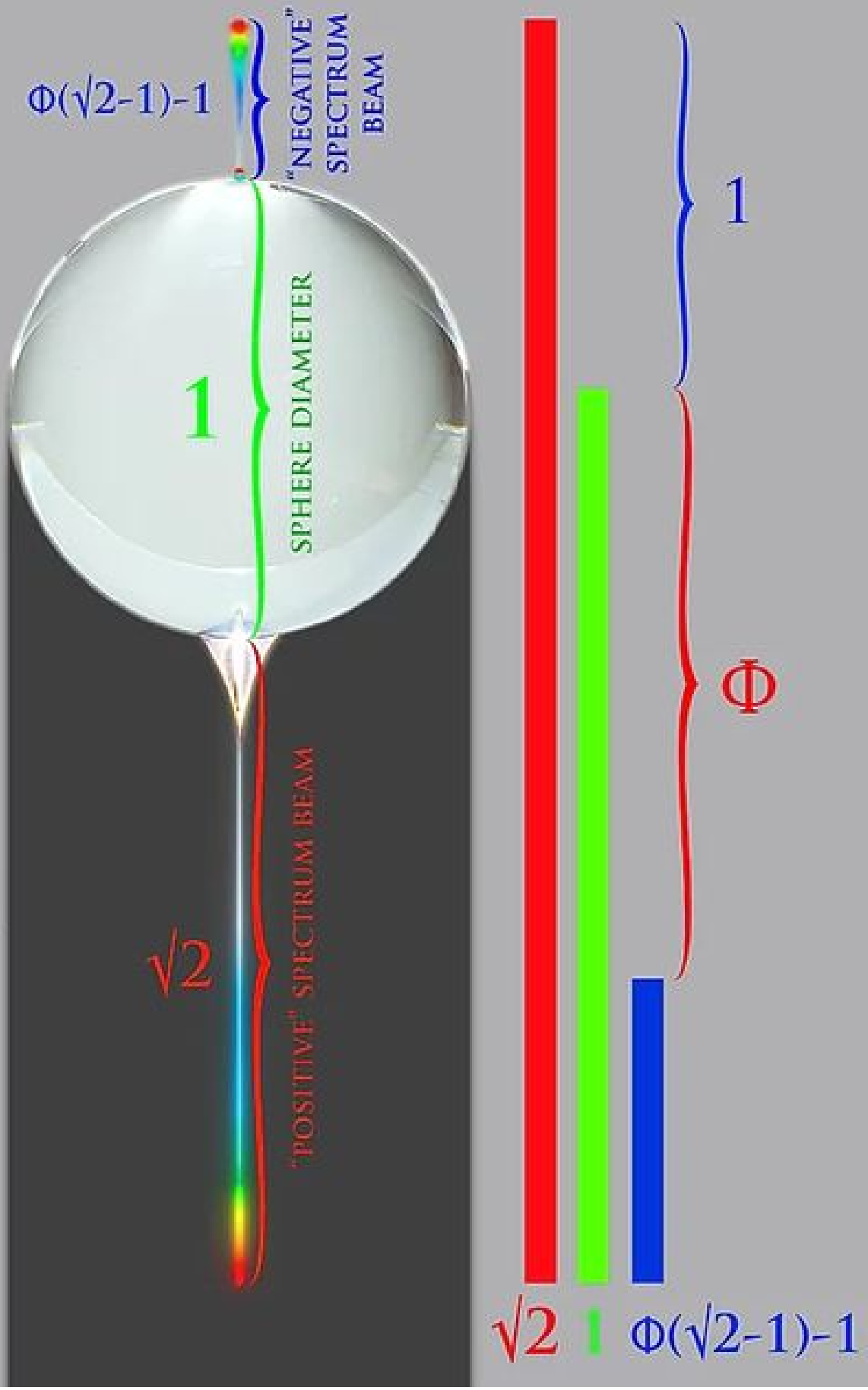
Note: begin witht the ABC's (Appreciation - Breathing - Creativity) as an exercise. These are all you need. They are the foundation for whatever else you want to experience or create. Focus on each for at least five seconds. Add other elements and time, energy, attention, focus and passion that enthusiasm provide. Next comes visualization of the Merkaba and beginning to experience Out of Body Travel / Soul Travel / and much more...

PHI & THE MAGNETIC SPECTRUM

THE GOLDEN RATIO DIRECTLY MEASURED IN SPHERICAL LIGHT REFRACTION

"TRUE PHI IS A MUCH MORE DYNAMIC PRINCIPLE THAN ONE NUMBER AND ITS RELATIVE RATIO. IT IS BETTER TO LOOK AT PHI AS DIVIDING SOMETHING EQUALLY. THIS IS WHAT NATURE IS DOING WITH ENERGY AND THE ENERGETIC BALANCING OF MATTER, SUCH AS DIVIDING A CIRCLE OR ANYTHING ELSE. ENERGY IS COMPOSED OF 2 INDIVIDUAL & EQUAL MAGNETIC FORCES AND THE NEUTRAL PARTICLES OF MATTER, ALL IN ENERGETIC YET FLEXIBLE BALANCE. PHI IS THE INHERENT VALUE BETWEEN THESE 3 THINGS."

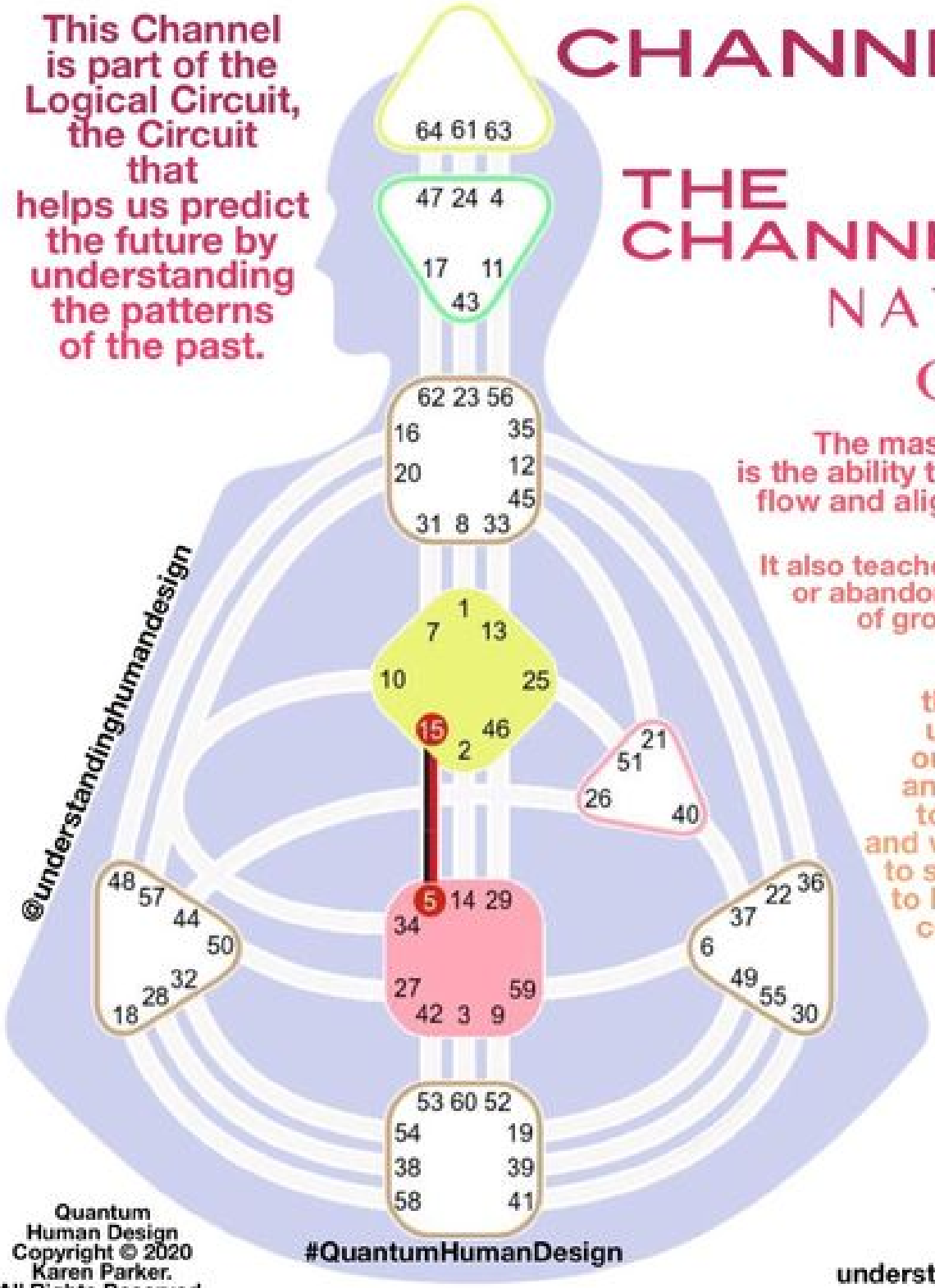
-JON DEPEW



CHANNEL 5/15

THE CHANNEL OF NATURAL ORDER

This Channel is part of the Logical Circuit, the Circuit that helps us predict the future by understanding the patterns of the past.



The mastery of this Channel is the ability to respond to being in the flow and alignment of natural order.

It also teaches us to know when to align or abandon the pattern for the sake of growing in compassion.

In other words, this Channel is helping us to explore which of our patterns of behavior and direction do we want to sustain and maintain and what patterns do we need to shift and change in order to live and act with greater compassion and Heart.

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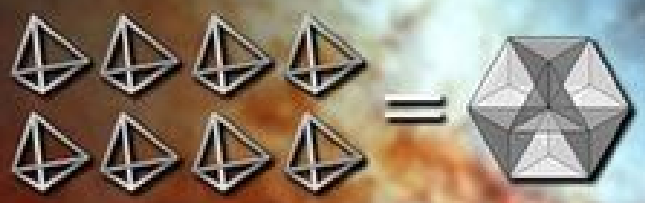
understandinghumandesign.com

432 MAGIC

From Atoms to Galaxies to Our Own DNA...
We're Surrounded by Geometrical Shapes &
Patterns with the Number 9 Hidden Inside.

The Construction of The Universe, Galaxy,
Solar System & Life Itself Revolves Around the
Number 9... a Woman is Pregnant for 9 months.



Avg. number
of respirations per
24 hour period
25,920

25,920 ÷ 60 = 432
60 SECONDS
60 MINUTES

11.25 (9)
22.5 (9)
45 (9)
90 (9)
180 (9)
360 (9)
720 (9)
1440 (9)
2880 (9)

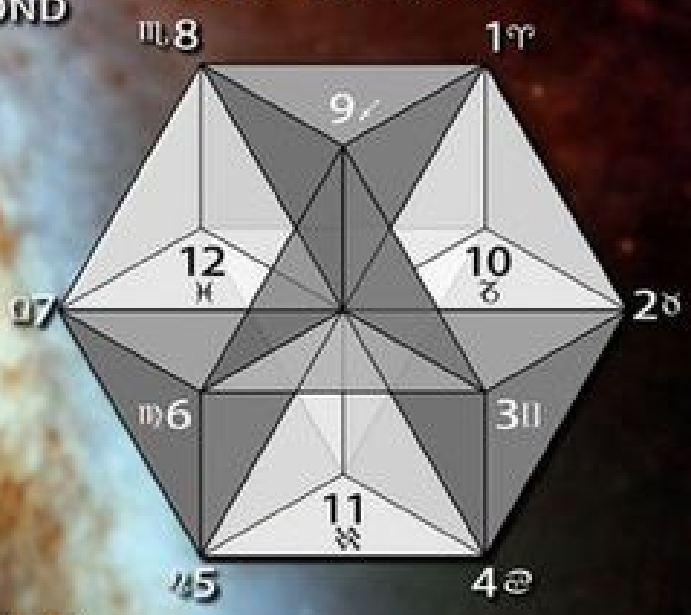
432 x 432 = 186,624
1 + 8 + 6 + 6 + 2 + 4 = 27 / 2 + 7 = 9

SPEED OF LIGHT = 186,282 MILES PER SECOND
1 + 8 + 6 + 2 + 8 + 2 = 27 / 2 + 7 = 9

432 ÷ 9 = 48 (3*)
432 ÷ 8 = 54 (9*)
432 ÷ 7 = 61.71428571428571 = 69 (6*)
432 ÷ 6 = 72 (9)
432 ÷ 5 = 86.4 (9)
432 ÷ 4 = 108 (9)
432 ÷ 3 = 144 (9)
432 ÷ 2 =216 (9)
432 ÷ 1 = 432 (9)

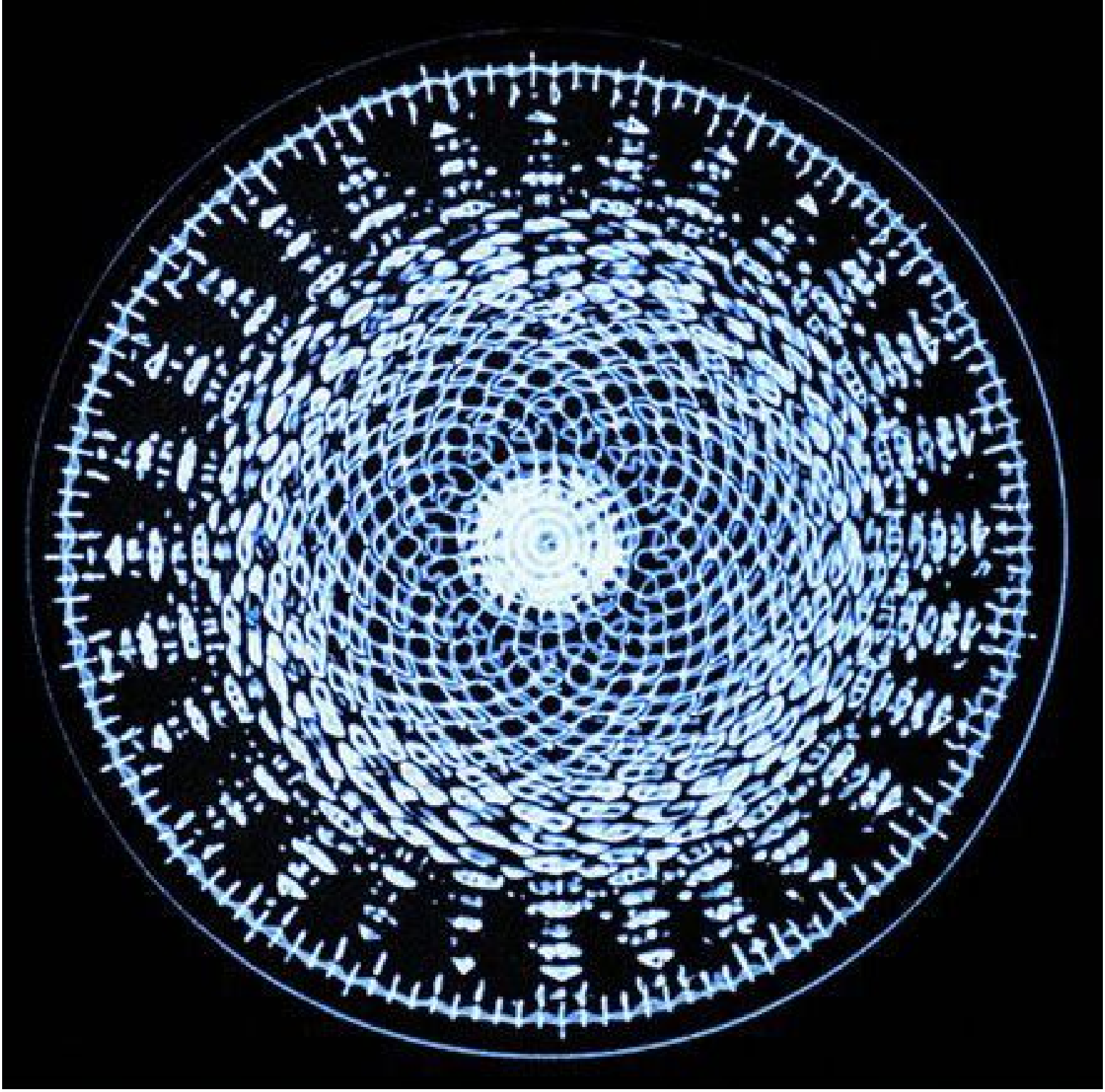
6 + 6 + 6 = 18 (9)
6 Protons
6 Electrons
6 Neutrons

432 ÷ 12 = 36 (9)



3 + 9 + 6 + 9 + 9 + 9 + 9 + 9 + 9 = 72 / 7 + 2 = 9

derekgedney.creativist.me



DNA repair can be activated using a frequency of 528 Hertz. "My blood pressure level dropped 28 points after listening with headphones to 528 hz for 30 seconds." --Higher Inspirations. If nature displays intelligent design, then 528 is at the heart of it. Mathematicians and physicists have now proven 528 Hz is the "center" of the electromagnetic color spectrum. That means it is the center of the rainbow. That is why most of the botanical world is the color of grass.

12 ORIGINAL HUMAN TRIBES

ANGELIC HUMAN GENE POOL

TRIBE-1: Isutu-Esheau

TRIBE-2: Maahali-Brucа

TRIBE-3: Amekasan-Etur

TRIBE-4: Nuagu Hali

TRIBE-5: Ionatu-Etillah

TRIBE-6: Ramyana-Shridveta

TRIBE-7: Mahata-Agrah

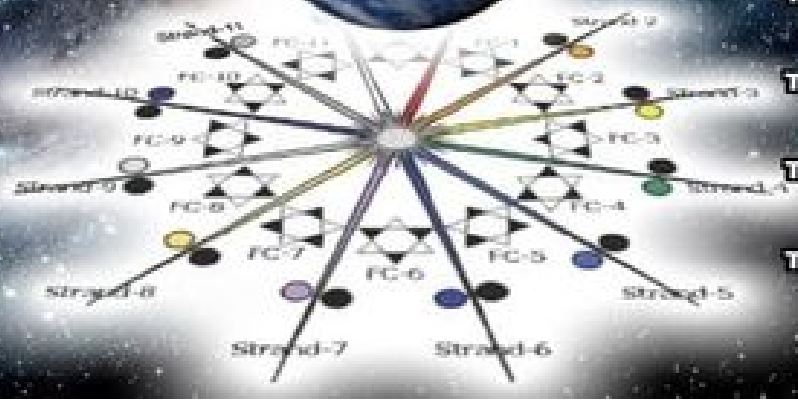
TRIBE-8: Chia Zhun Zan La-Yung

TRIBE-9: Yun Zu-Xen

TRIBE-10: Ma'ah-hu-ta

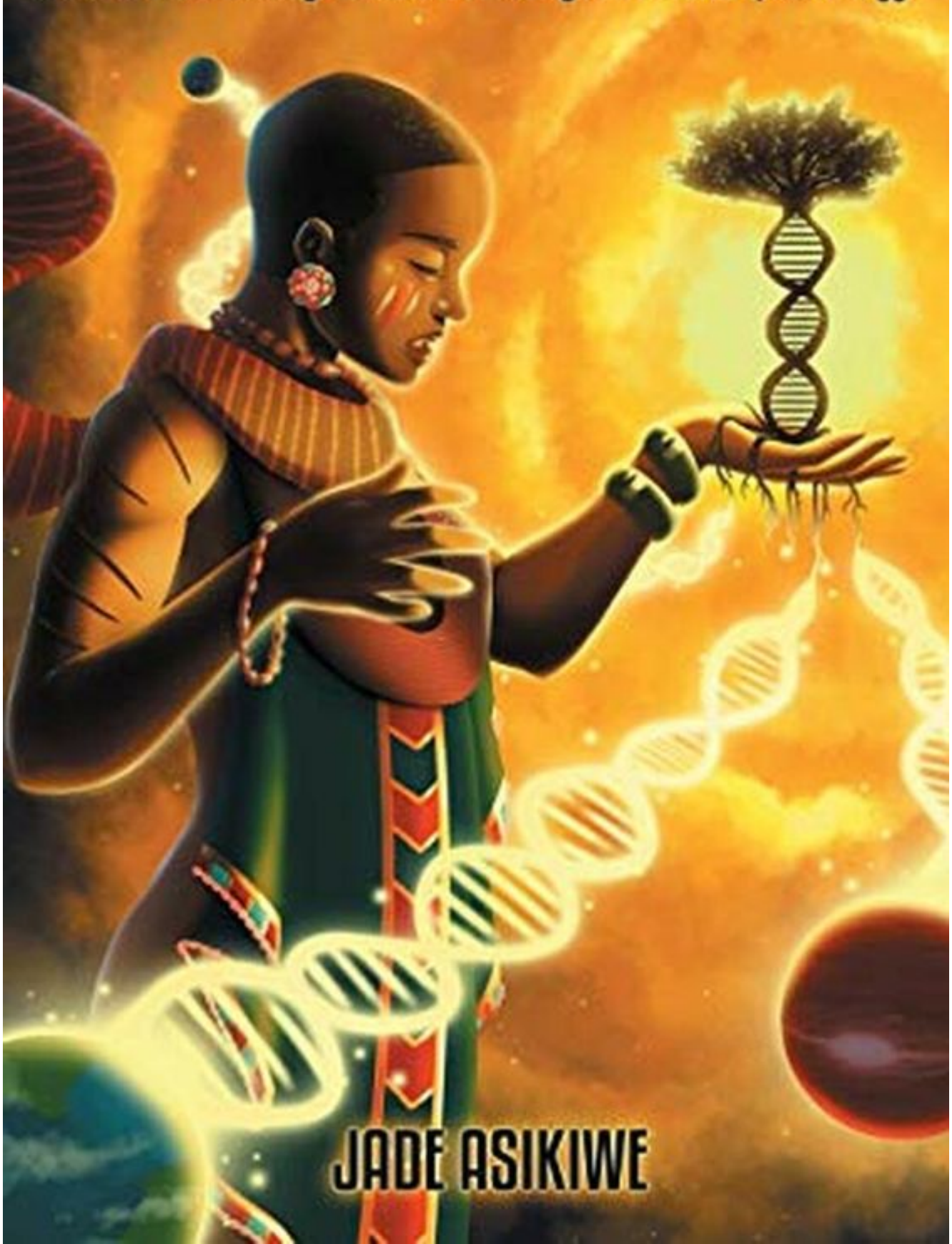
TRIBE-11: Zephar-Duun-Atur

TRIBE-12: A-reah-Azurta



MELANIN EMPATH

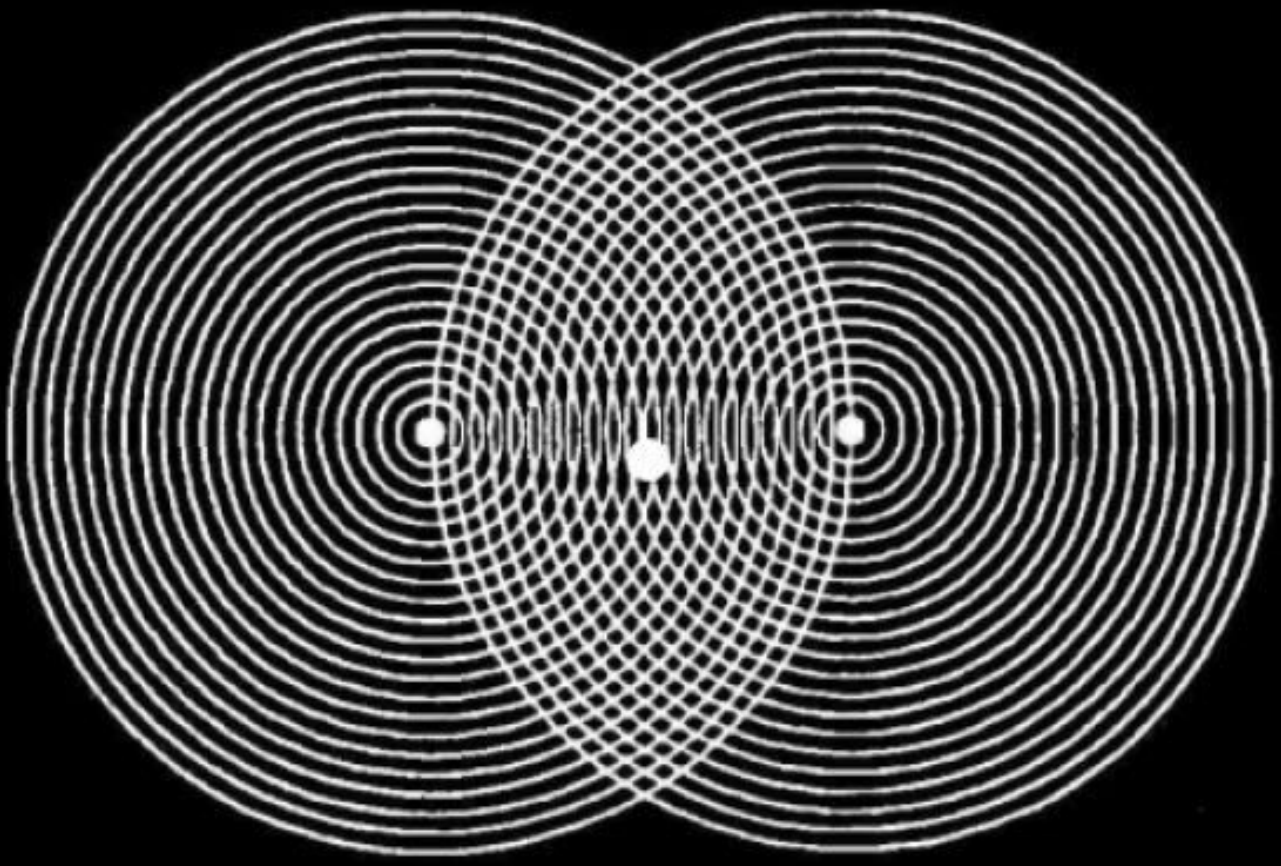
Discover the Knowledge of Melanated Beings Born with Empath Energy



JADE ASIKIWE

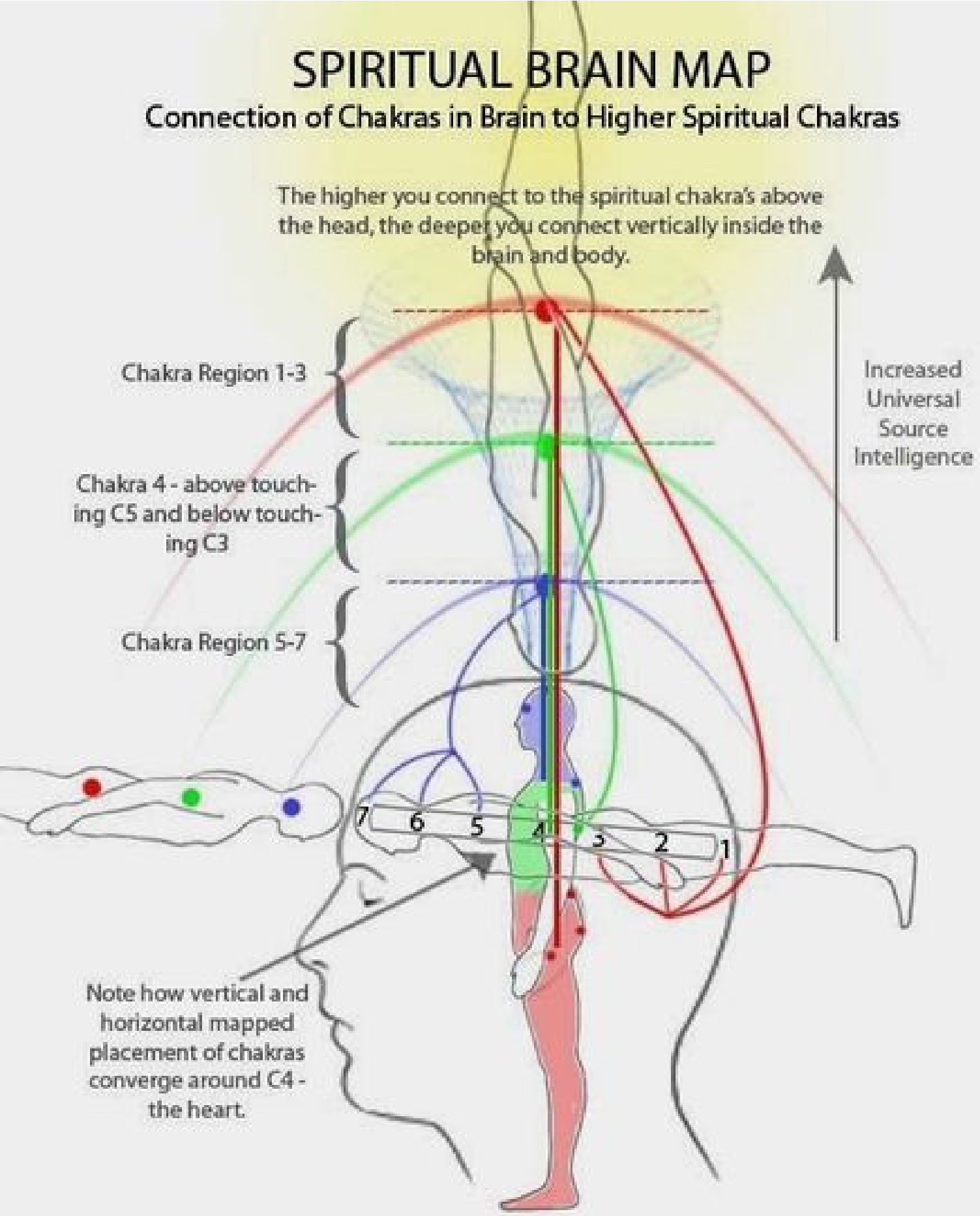
Third Eye Exercise

Focus until 2 becomes 3, and 3 becomes 1



SPIRITUAL BRAIN MAP

Connection of Chakras in Brain to Higher Spiritual Chakras



The same model applies to facilitate development of chakra 6 (Ajna). The further out you go, the deeper you connect horizontally inside the brain as pictured.

Figure 2

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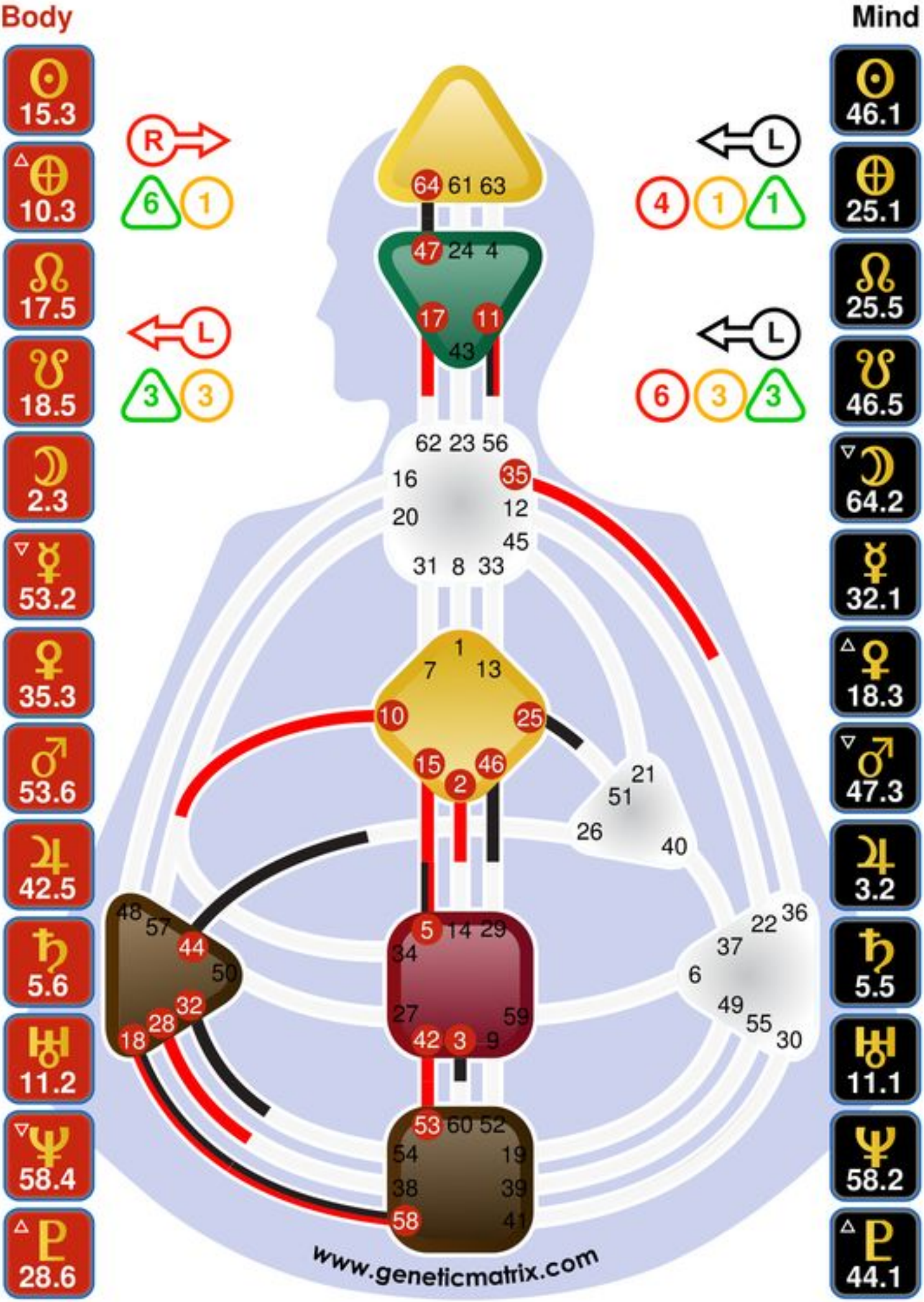
Body
Mind
15.3
10.3
17.5
18.5
2.3
53.2
35.3
53.6
42.5
5.6
11.2
58.4
28.6
46.1
25.1
25.5
46.5
64.2
32.1
18.3
47.3
3.2
5.5
11.1
58.2
44.1
R
L
L
L
64 61 63
47 24 4
17 11
43
62 23 56
16 35
20 12
45
31 8 33
1
7 13
10 25
15 46
2
21
51
26 40
48 57
44
50
32
28
18
5 14 29
34
27 59
42 3 9
36
22
37
6
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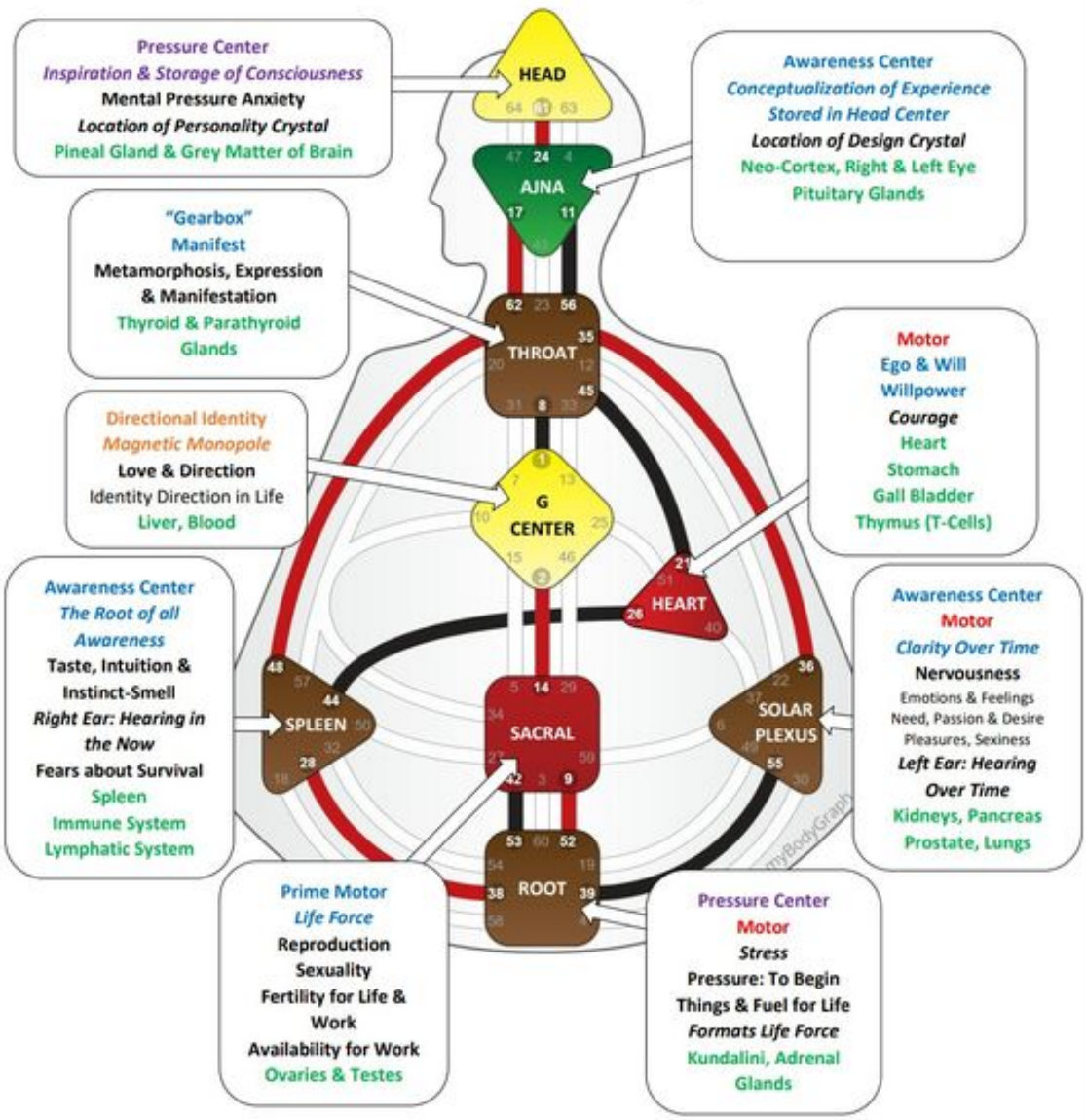
53 60 52
54 19
38 39
58 41
www.geneticmatrix.com

65% 07:52
content://com...

The Nine Centers – Overview & Biological Functions



HumanDesignLifeCoaching.com

PUENTE DE LUZ

Ka Ra Ya Sa Ta Ha La are the 7 Tones of Creation that make up the Kryst hala Body, which is all colors of the rainbow merged into one frequency, called Diamond Light.

AVATAR
MONAD
SOUL
INCARNATE
D15
D14
D13
D12
D11
D10
D9
D8
D7
D6
D5
D4
D3
D2
D1

{IDEA VISUALIZATION}

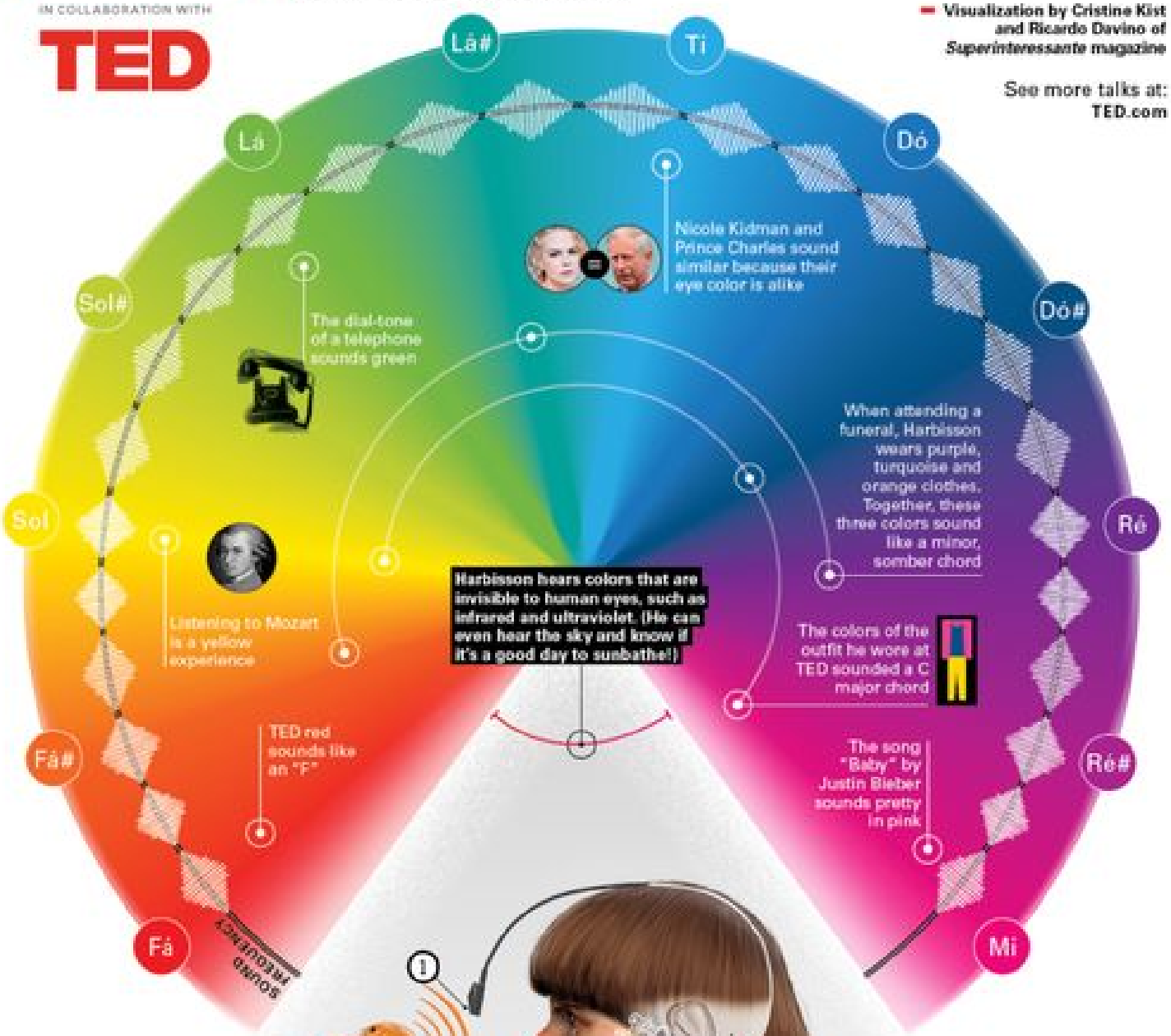
The sound of colors

In his talk at TEDGlobal 2012, colorblind artist Neil Harbisson delighted the audience with his brightly colored outfit, his quirky personality, and his eyeborg — a device implanted in Harbisson's head that lets him hear a rainbow of color. Instead of seeing a world in grayscale, he can listen to the audible frequencies transmitted by the colors in faces, paintings, even the weather. Step inside the mind of Neil's symphony of color.

IN COLLABORATION WITH TED

Visualization by Cristine Kist and Ricardo Davino of *Superinteressante* magazine

See more talks at: TED.com



THE EYEBORG

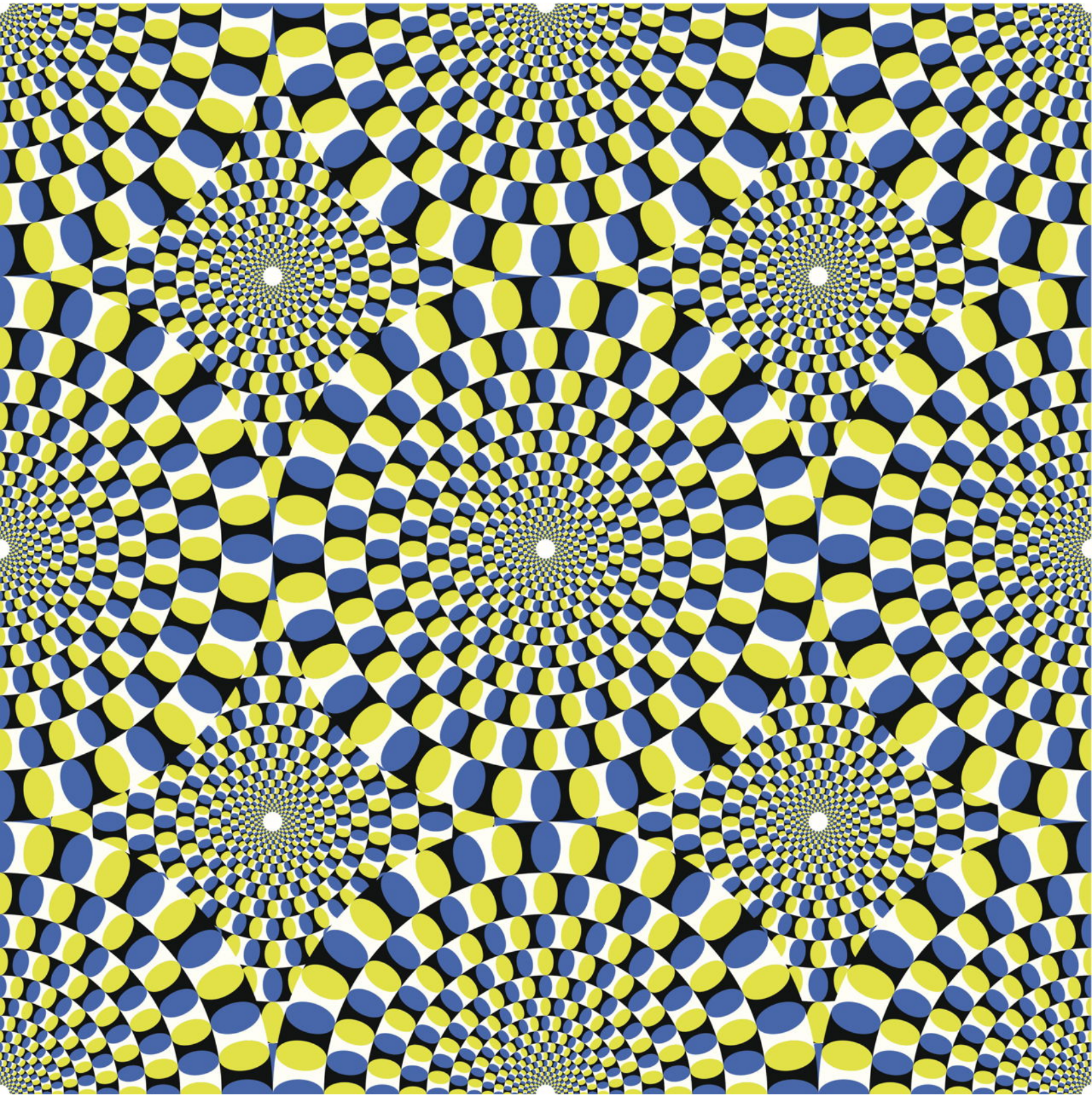
Understand how the device implanted in Neil's head transforms color into sound.

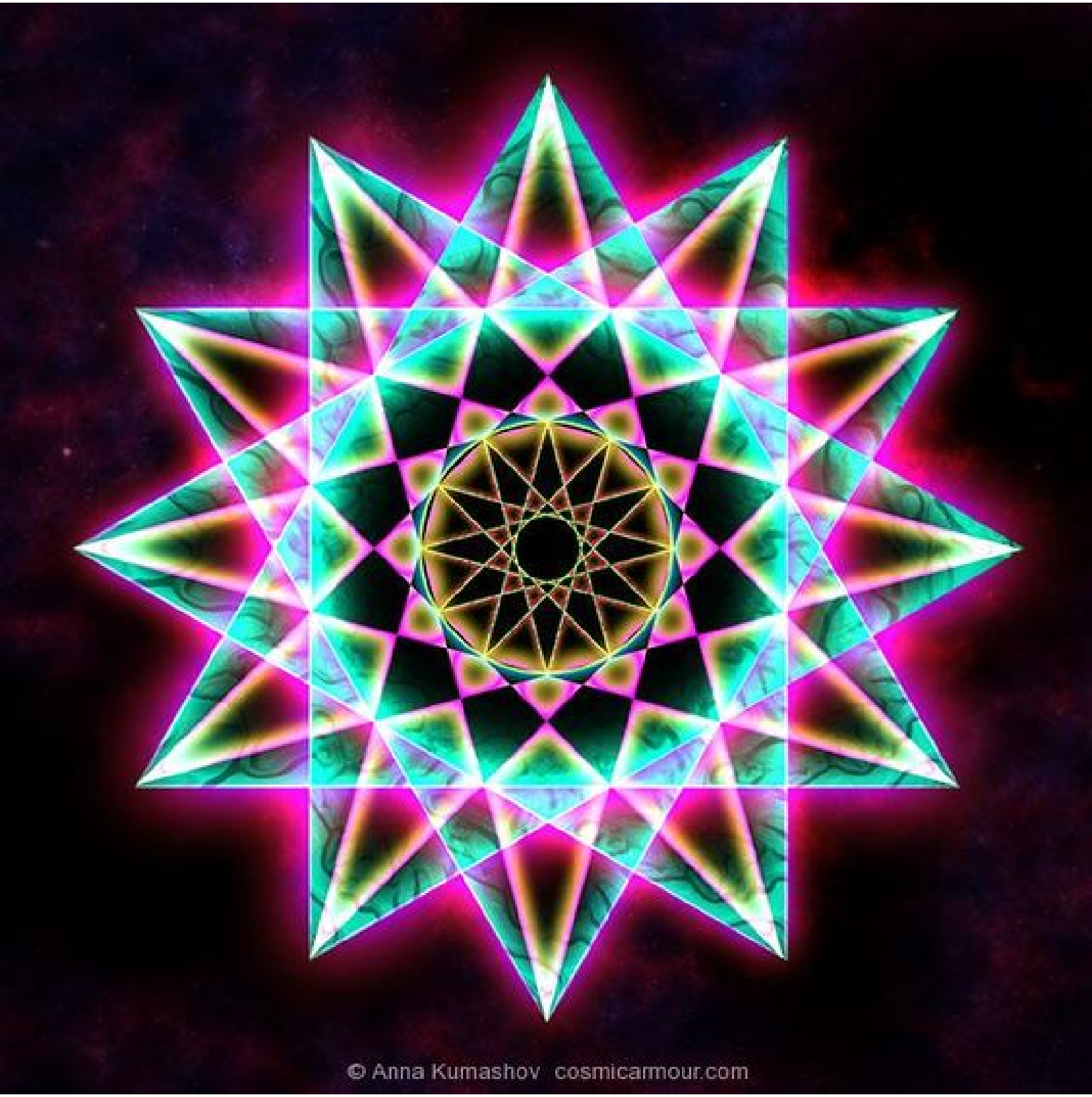
1 A sensor detects the frequency of the color in front of Harbisson and transmits it through a chip installed on the back of his head.

2 The chip converts the colors into sound waves. Each color corresponds to a musical note.

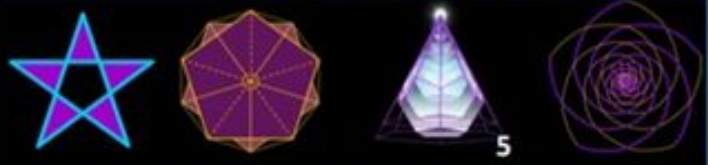
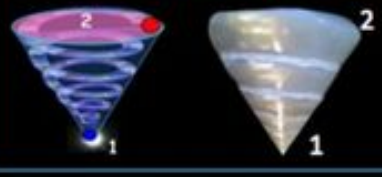
3 These sound waves travel through the skull using bone conduction and arrive at Harbisson's auditory system.

Illustration by Pedro Henrique Ferreira



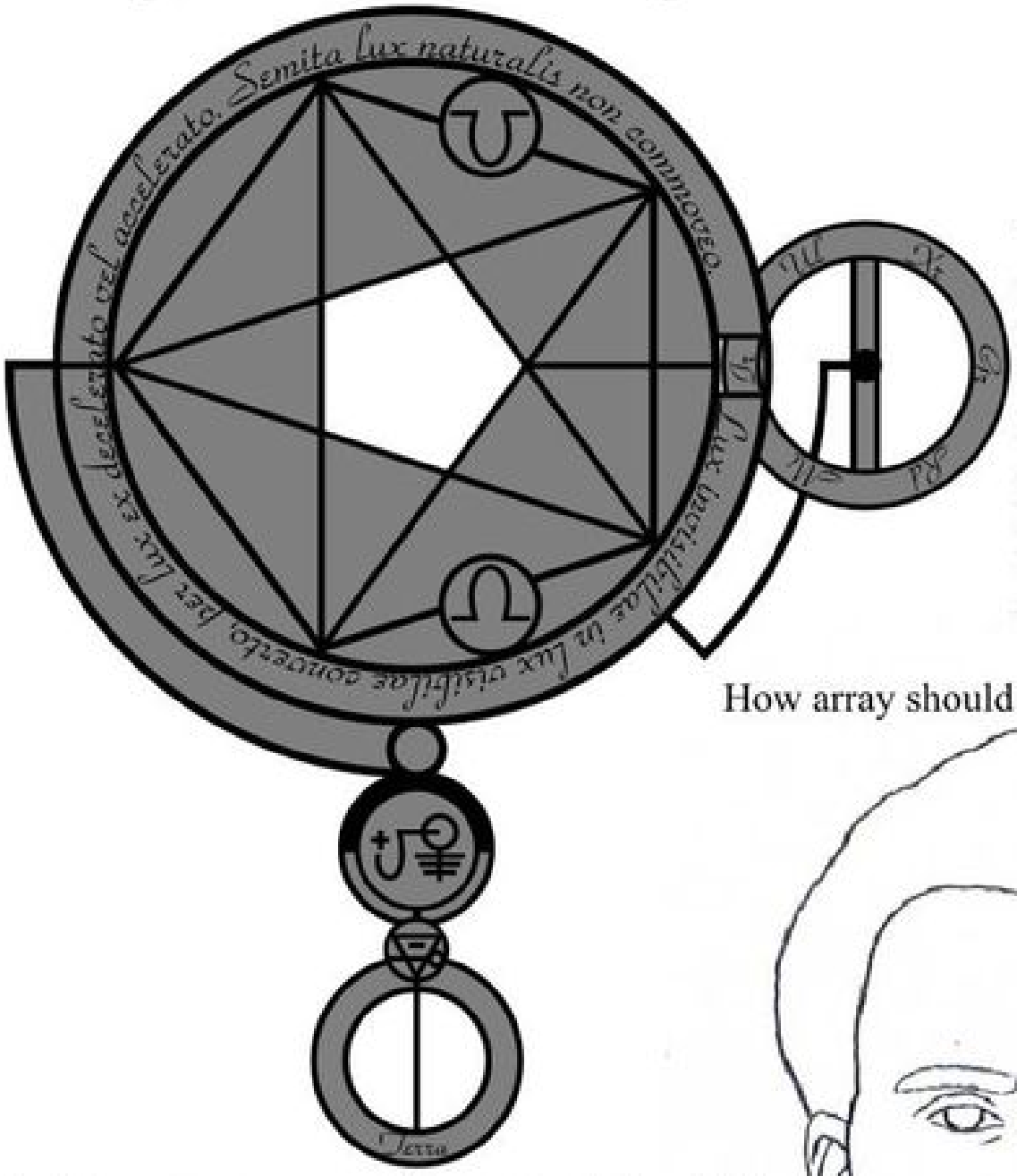

© Anna Kumashov cosmicarmour.com

Vowels are Portals

A	1 is the point, the focus, the bull's eye, the center of the cube, sphere, the circle, the apex of triangles, the vertice point of pyramids and stellations	1	1 is Converging point in center of Cube
E	5 is the only PHI number , whose geometry allows perfect wave compression, perfect fractility and geometric reduction.	5	
I	Divide 360º circle by 1, 2, 3, 4, 5 or 6 the angles will add up to 9 All face angles of Dodecahedron add up to 9. All vertice angles of the platonic solids add up to 9. Add 9 to any other 9 number and it will still add up to 9. Multiplying any number by 9 and it will add up to 9 1,2,4,8,7,5 = 27 adds up to 9 1,2,4,8,16,32 =63 adds up to 9	9	9 in Center of Star Tetra and Cube
O	The culmination of 1 and 5 with all angles equalling 9 The Common Connector of all Life including Atoms	15	
U	The Circle to the Point. Duality to Singularity. 2 to 1 Astrology descending or 1 to 2 (12 signs of zodiac) The Vortex	21	

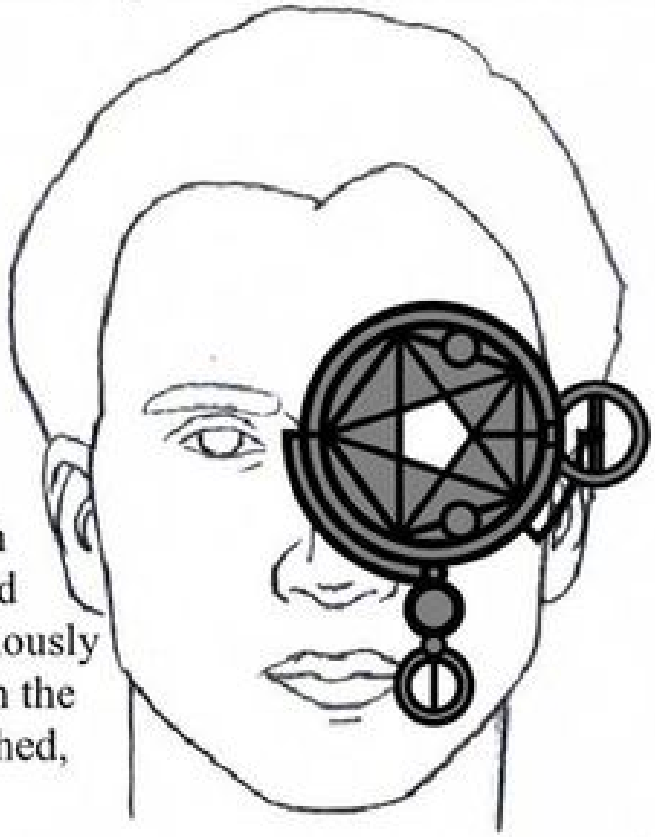
Alchemic Super-Vision Apparatus (ASVA):

The pentagon at the very center of this main circle should be aligned with the user's eye, as it is where the invisible light is turned visible.



This circle is a wheel that can be turned to select the frequency the user would like to make visible. The options are Radio, Microwave, Infrared, Ultraviolet, X-Ray, and Gamma Ray.

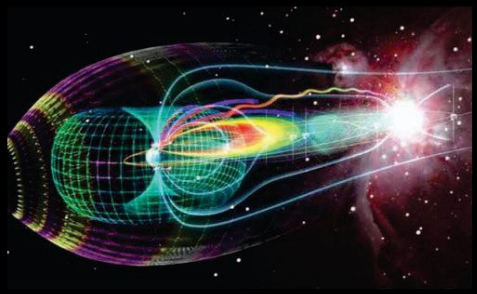
How array should be positioned on user:



This is the power source of the main circle, which only requires a small alchemical pulse to start, and then should continue powering the array autonomously until deactivated by the user. The third circle from the bottom of the power sequence should not be touched, ever, or the user will suffer severe damage.

Confluence of Energy

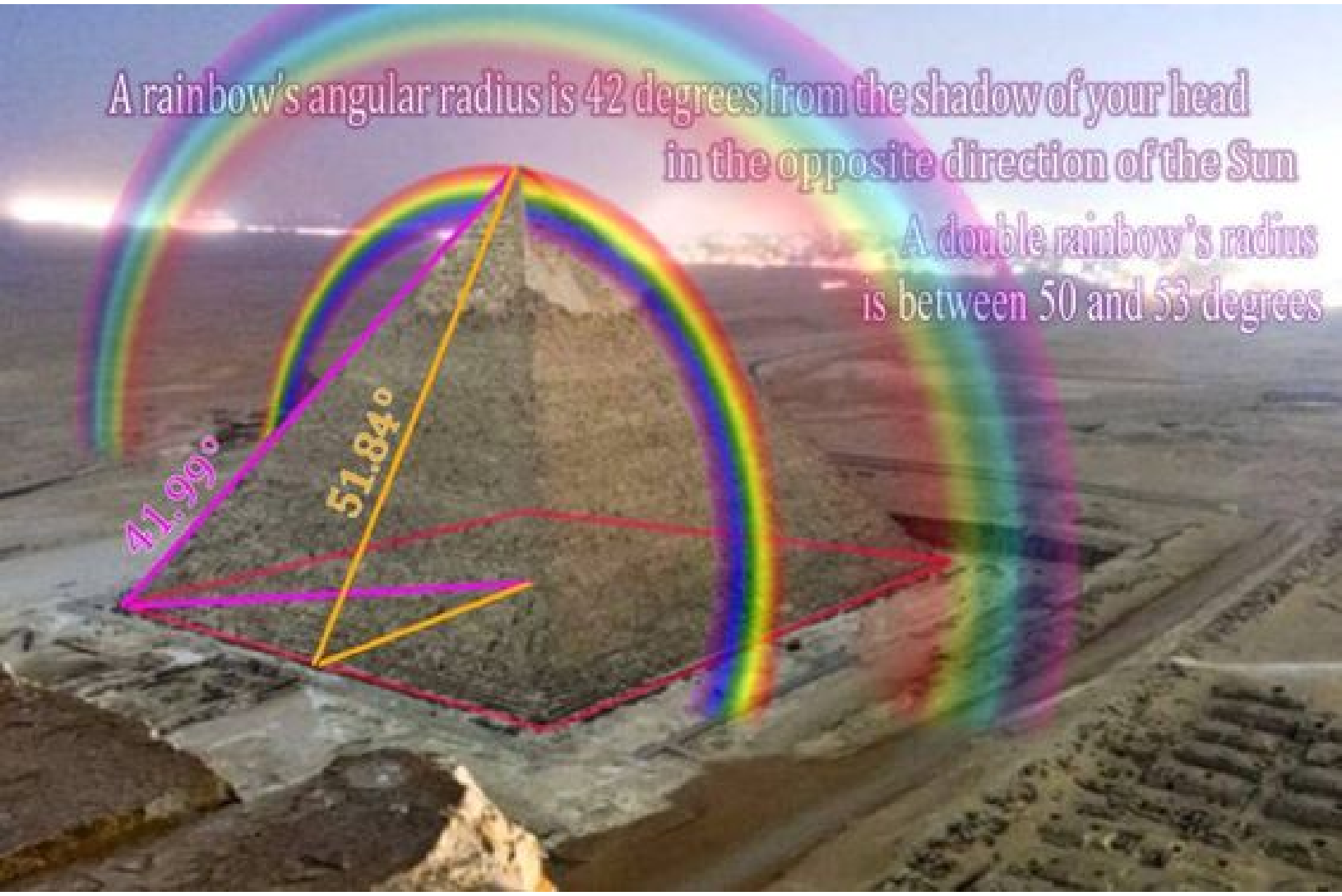
Each loop of DNA has a magnetic field that overlaps the loop next to it, which overlaps the loop next to it. Hundreds of trillions of overlaps equals one consciousness. This then represents a magnetic imprint, which the Human carries around with them. This magnetic imprint creates the HUMAN AURA. An aura is not a magnetic field and you will not be able to see an aura with magnetic equipment. An aura is the result of a confluence of DNA communication within the Human body, a quantum imprint, a melding of energy.



Gravity/magnetic patterning. This pattern is the broadcast by the solar wind, which you can see in the AURORA BOREALIS as it literally meets the magnetic field of the earth & delivers energy to this grid of the planet through a process called inductance.
The magnetic and gravitational patterning of the sun is a "message" that's broadcast by the solar wind to the magnetic grid.

Human Aura - Bodies magnetic imprint

Aura Borealis - Earth Magnetic imprint


A rainbow's angular radius is 42 degrees from the shadow of your head
in the opposite direction of the Sun
A double rainbow's radius
is between 50 and 53 degrees
41.99°
51.84°

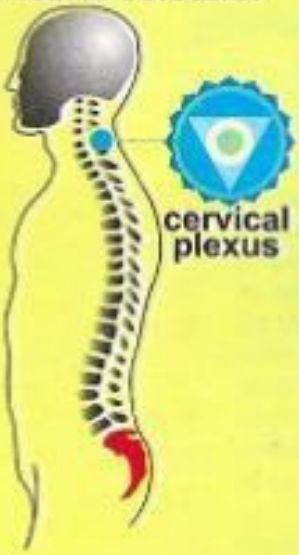
Position Within Subtle System

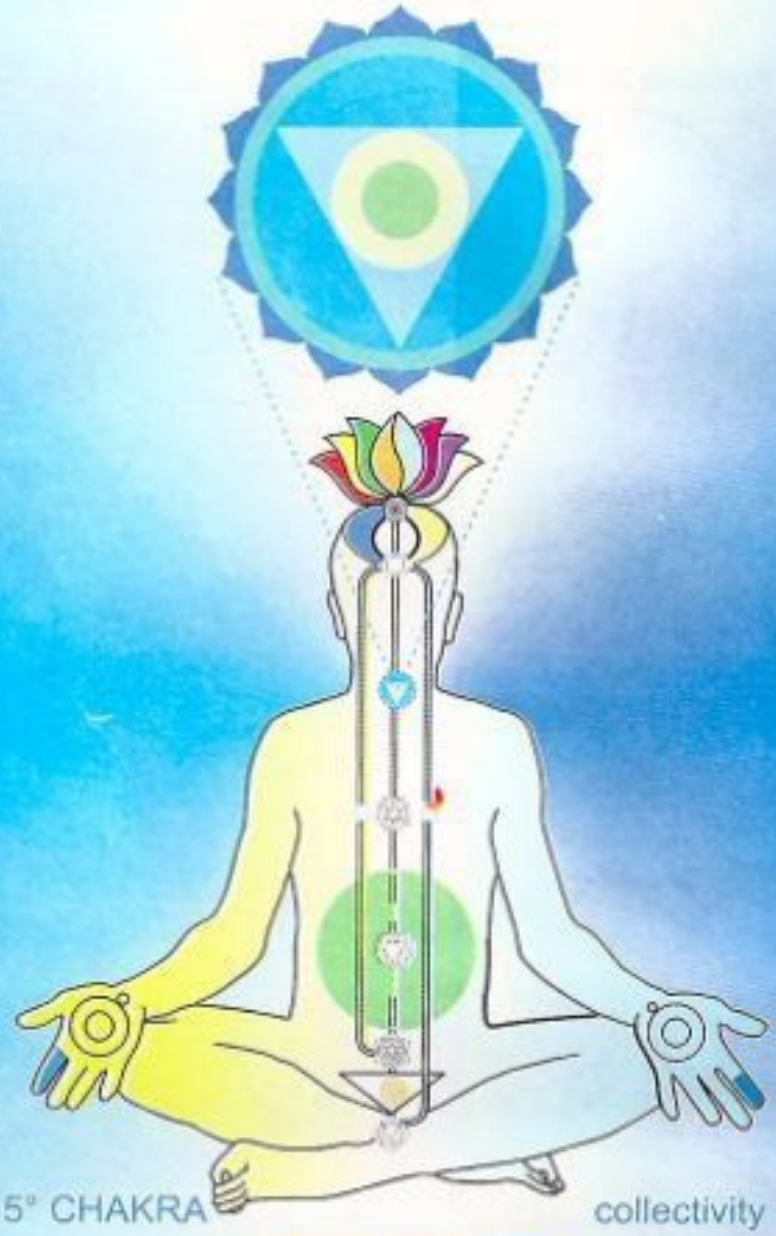
Position in Head

In Hands

In Feet

Gross Expression in vertebral coloumn





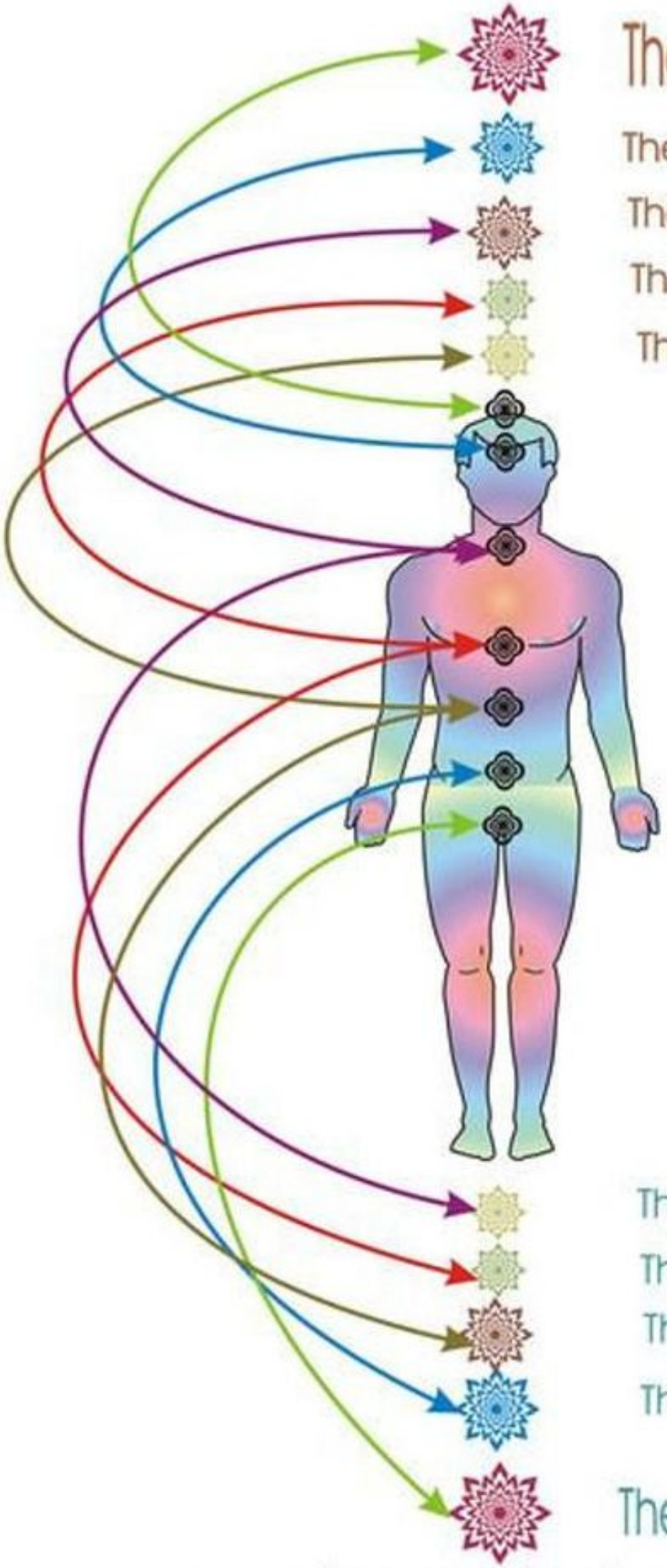
VISHUDDI

This Sixteen petalled centre is called the Vishuddi and is placed in the neck region of the spinal cord. This centre corresponds to cervical plexus, which regulates the functioning of ears, nose, throat, neck, teeth, tongue, hands, gestures, etc. This centre is responsible for the communication with others, because through these organs we communicate with others.

On the physical level it controls the functions of Thyroid glands. Harsh speech, smoking and artificial behaviour and guilt feeling blocks this centre.

When Kundalini pierces this centre, the person becomes extremely truthful, tactful and sweet in communications and does not indulge in futile arguments. He becomes extremely diplomatic in handling situations without igniting the ego.

Correspondences	
Colour	Blue
Element	Ether
Planet	Saturn
Day	Saturday
Stone	Saphire
Symbol	Time wheel
Quality	Communication Truthful, Tactful Politeness Diplomacy
Organs controlled	Mouth, Ears, Nose, Teeth, Tongue, Face, Throat, Speech



www.sacredspaces.net sacredspaces@compuserve.com

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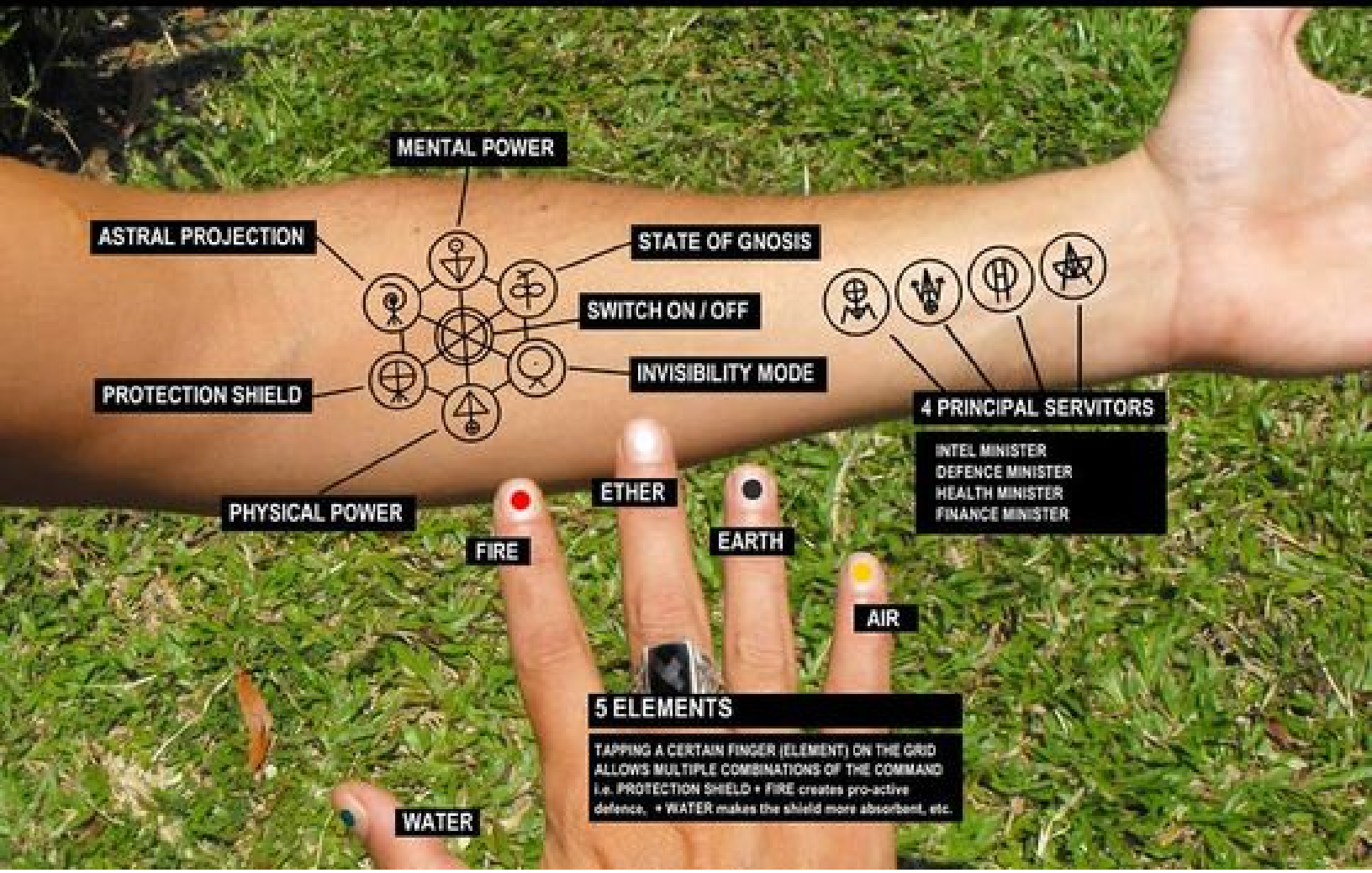
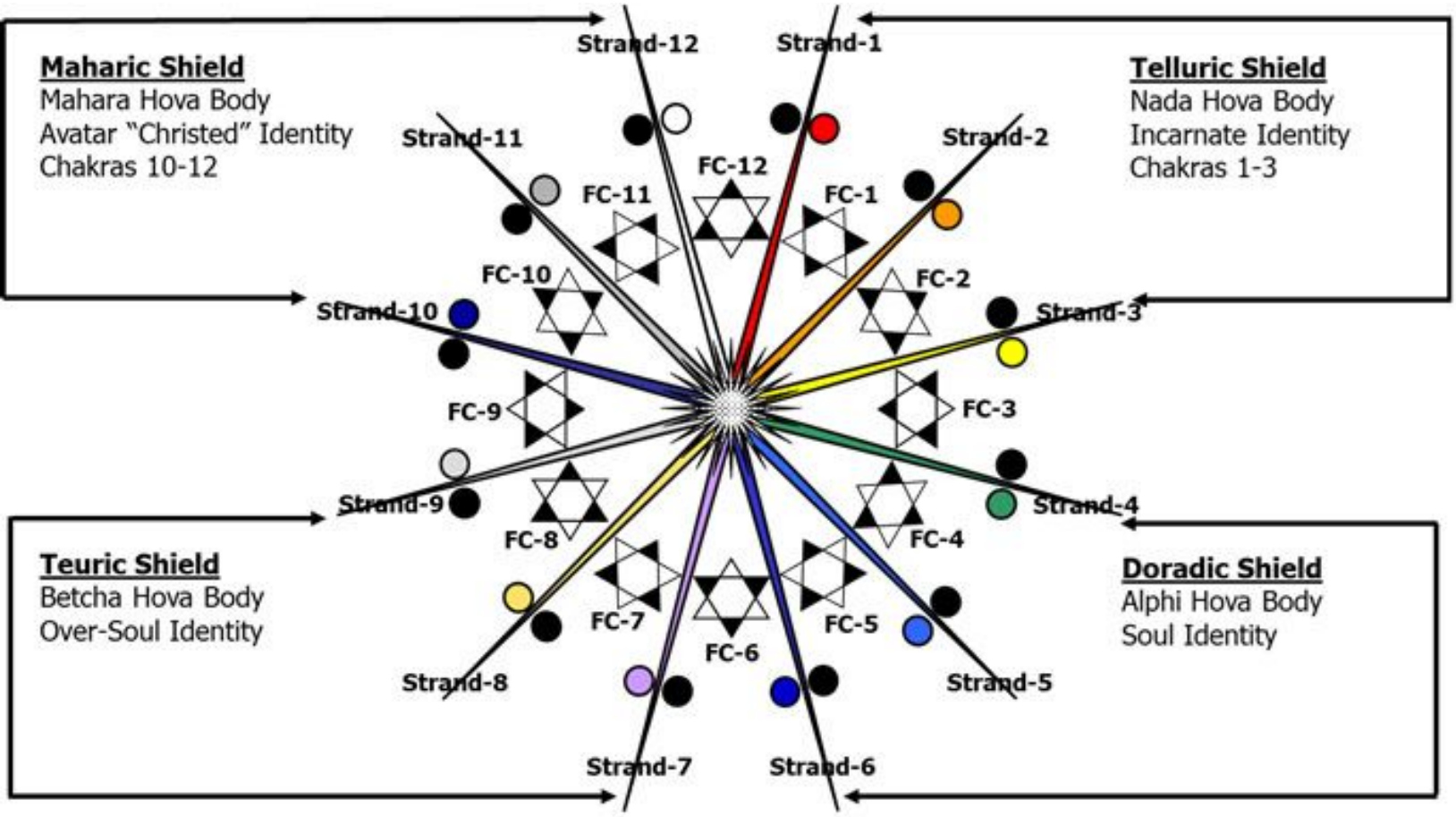
MAGICKAL OPERATIONS CONSOLE





12 Base Codes per strand = ●

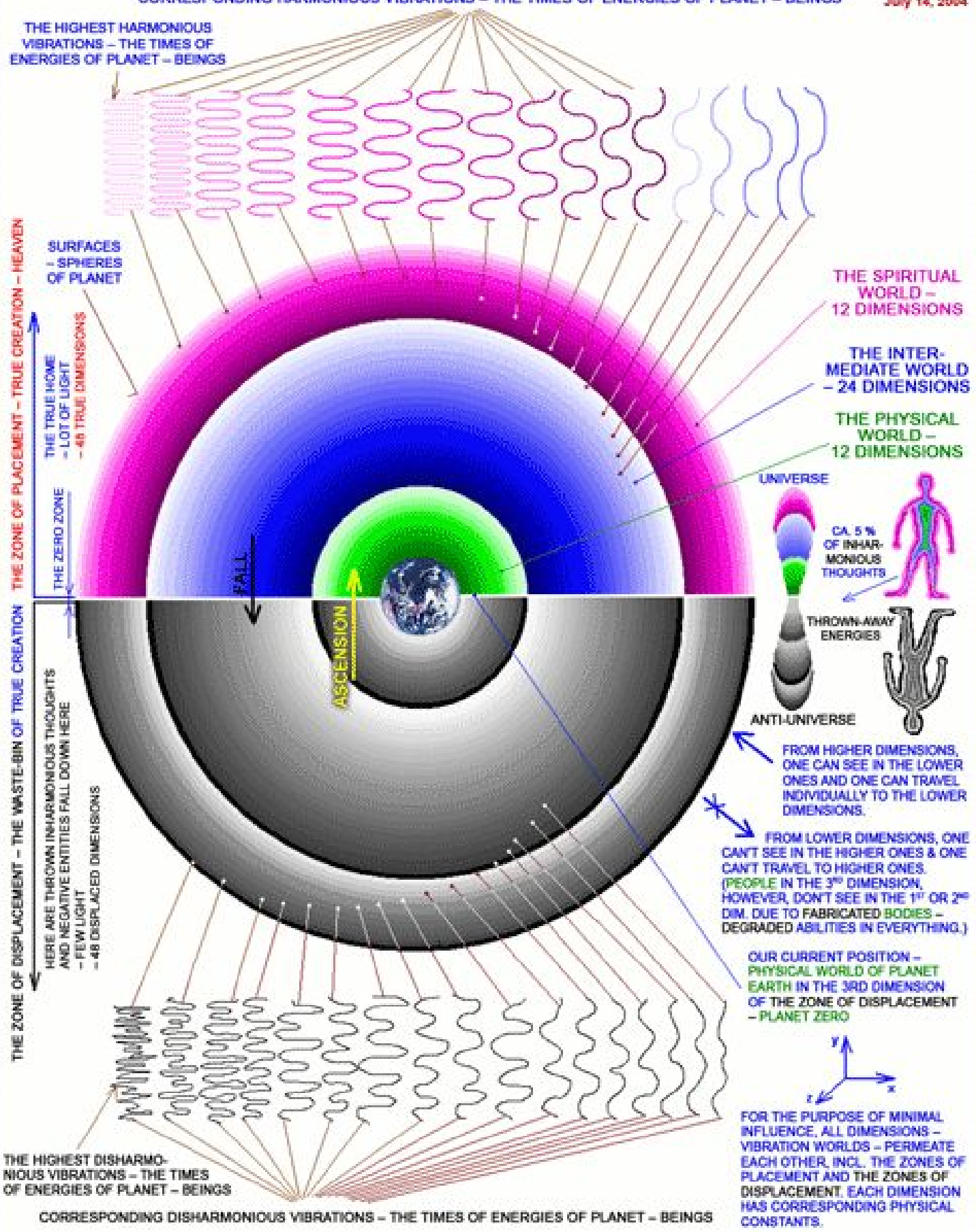
12 Acceleration Codes per strand = ○

12 FIRE CODES BETWEEN STRANDS = ✡

DNA Imprint – One Strand per Dimension

ILLUSTRATION OF DIMENSIONS (SPHERES) OF THE PLANET

Processed by
Ivo A. Benda
July 14, 2004



See books THE NEW REVELATION OF THE LORD JESUS CHRIST, HEAVEN AND HELL, II. TALKS WITH TEACHINGS FROM MY COSMIC FRIENDS – CREATION OF UNIVERSES, THE GUARD OF LIGHT. This scheme is a continuation of pictures 678 - 689.

Third Eye Fact

Your Eyes are Round so if you stare at a persons nose for 30-40 seconds you can see their aura with your peripheral vision, Works best on a plain works. Try it, it will help to open your actual third eye.

1. Opening

2. Part the Horse's Mane x3

3. White Crane Spreads Wings

4. Brush Knee and Push x3

5. Play the Lute

6. Retreat and Repluse Monkey x4

7. Left Grasp the Bird's Tail

8. Right Grasp the Bird's Tail

9. Single Whip

10. Wave Hands Like Clouds x3

11. Single Whip

12. Pat the High Horse

13. Right Heel Kick

14. Double Punch to the Ears

15. Left Heel Kick

16. Left Snake Creeps Down
Golden Pheasant Stands on Left Leg

17. Right Snake Creeps Down
Golden Pheasant Stands on Right Leg

18. Fair Lady Works the Shuttles
Left and Right

19. Pick up Needle from Sea Bottom

20. Fan through the Back

21. Turn Body, Deflect, Parry, Punch

22. Apparent Closing

23. Cross Hands

24. Closing

THE SCIENCE OF INTUITION

BE YOUR CREATOR GK

WHAT? **Intuition is the influence of "nonconscious emotional information" on the state of inner knowing.**

WHERE?

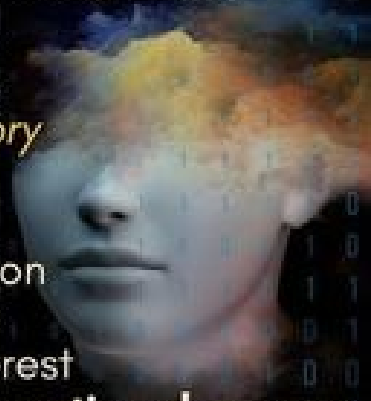
The entire right side of the brain and hippocampus contribute to the **creative processing** of subconscious information.

40,000 intercardiac neurons send **emotional signals** through a nervous system of their own to decode intuitive impulses.

100 million neurons modulate the core sense of self. The "gut brain" provides **instinctual, direct feedback.**

WHY?

The sixth sense is a biological defense mechanism, projecting future potentials into the conscious mind from a deep subconscious memory base.



According to the *Quantum-Holographic Theory Of Nonlocal Communication*, emotional attention directed towards the object of interest attunes the **bio-emotional energy** generated by the body to a domain of **quantum-holographical information**, which is transmitted through intuitive perception.

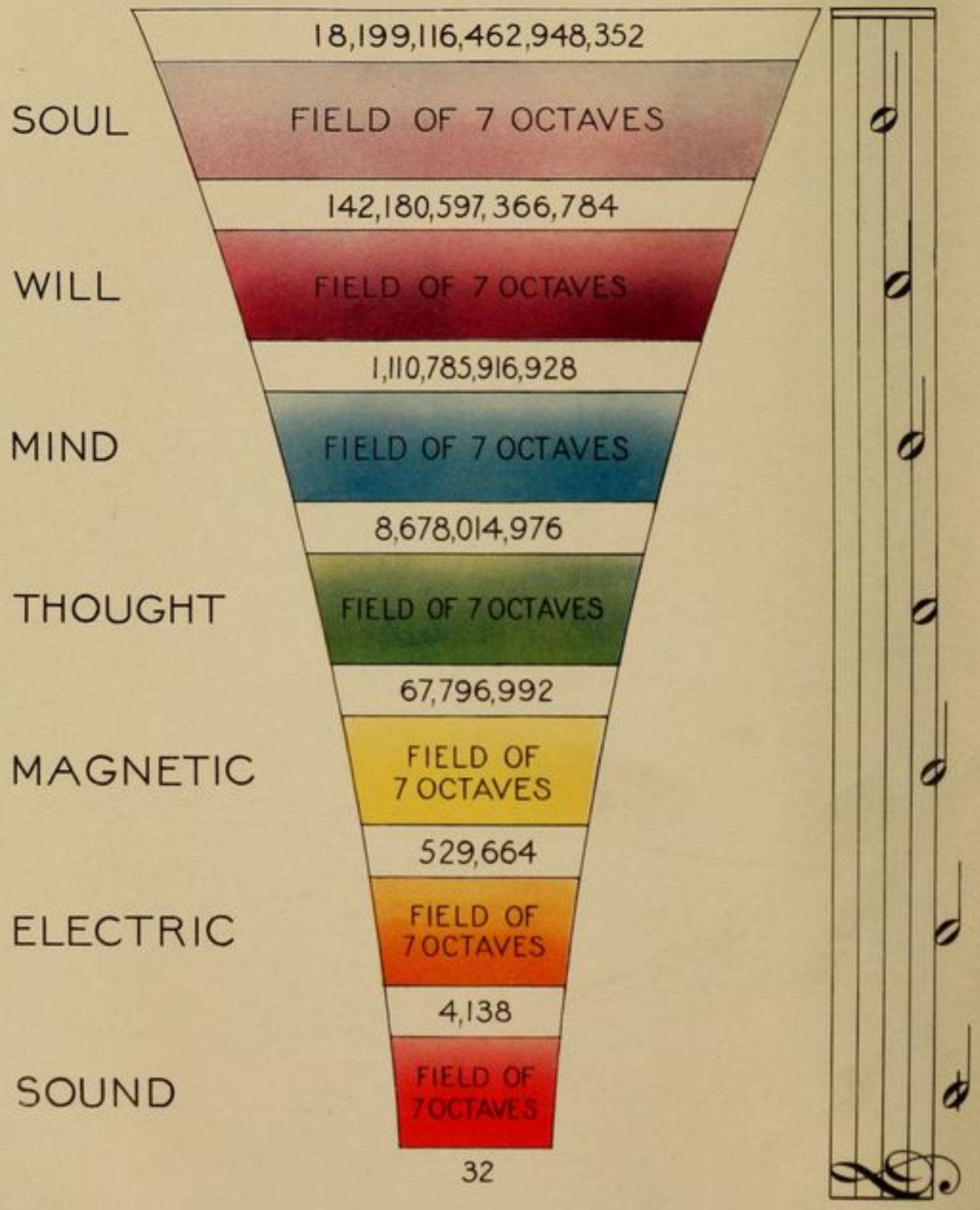
HOW? **The superconscious mind unites the subconscious and conscious mind. We can access its intuitive state by thinking and feeling in a unified way.**

The Pine Cone is situated at the top of the caduceus and represents the Crown Chakra not the Pineal Gland. The Ajna/3rd Eye Chakra positioned at the Pineal Gland is the Door Way to reuniting with God Consciousness. We see the Crown as Kether in the Kabbalah Tree.

7 Gates To
God Consciousness

This illustration of the Kabbalah Tree by Patricia Waldygo depicts the correct position of the 3rd Eye/Ajna Chakra which is located at the Pineal Gland in between the two eyes. This is called Daleth or "Door: on the Kabbalah Tree the Hindu call this the "Gateway. This is also symbolic for the cruxifiction.

MICROCOSMIC SCALE OF VIBRATION

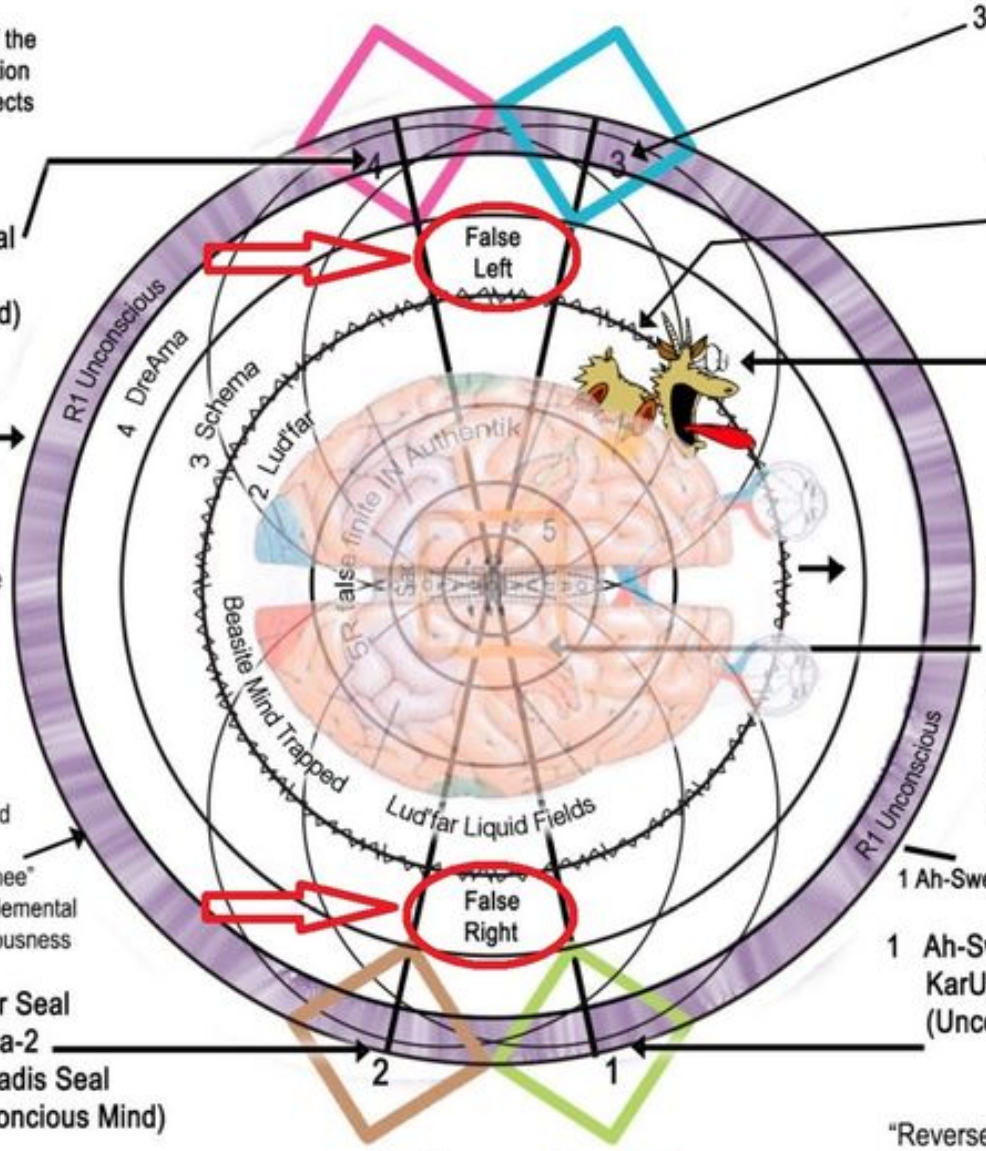


A TRUE CLASSIFICATION OF POWERS AND FORCES OPERATING IN THE INVISIBLE REALM OF THE HUMAN BEING

Moving Forward to the Past - Titus Mobius Reversal Time Wave Harness
Beastie Mind & Hemispheres of the Brain
Phase 1 Tan-Na-kEi Mutation

Beastie Mind memory matrix stores distorted Tan-Na-kEi false memory imprints & translates them into the trapped Lud'far liquids which then translates them directly into Algorithmic Lymbic System "Goat Brain" responses

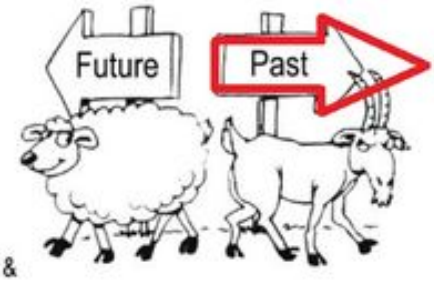
The Titus-Mobius Reversed Time Wave reverses the materialization process & reverses brain hemisphere polarity creating a "false left & false right" "moving toward the past" Time-Glitch loop



Shown:
Phase 1 - Phase Lock Fields into Bi-Polar Pair

Not Shown:
Phase 2 - Reverse 180deg
(No future or Past)

Phase 3 - 90deg Shift ∞ - Phase locked false future & false Past loop



"Reverse memory reprogramming" can be helpful:
1st run the memory forward as it occurred. Then run it backward (end to start) and it reverses the reverse-spin memory imprint causing particle / anti-particle annihilation & vaporization of the "stuck memory".

How Sound Meditation Heals Your Energy Body

@thefallbackup

Use Singing bowls, Pure Tones, Tuning Forks, Music or Chanting to heal with these frequencies

Note G. (768 Hz)
opens crowns
chakras blocker by
worldly beliefs

Note F (720 Hz)
clear blockages
in Third Eye caused
by programs

Note E (672 Hz)
Stimulates healing
In communication
caused by Ego

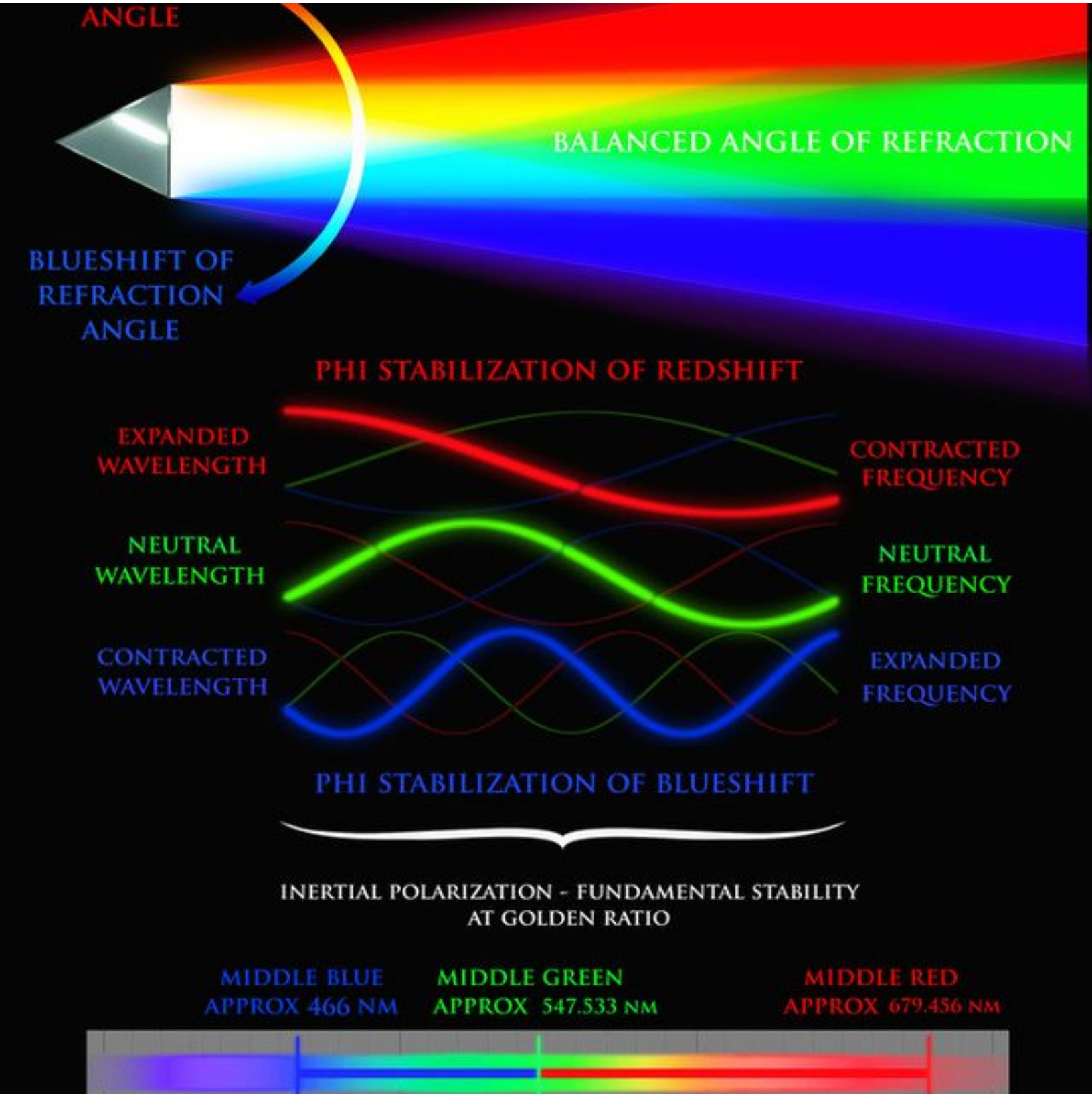
Notes D & C
(625-552 Hz)
Opens Heart amplifies
love harmony and
healing

Note C (528 Hz)
Increases pleasure
and acceptance of
bliss back into ones
Being

Note A (432 Hz)
Overcome fear confusion and
realigns one with their
true nature

285 Hz
Influences energy
field to overcome
Depressions laziness
and increase purpose

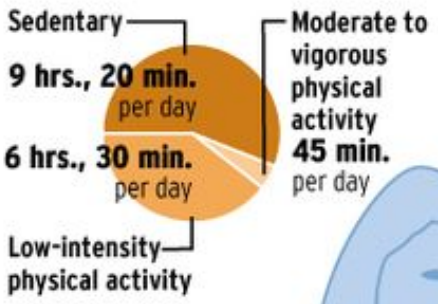
174 Hz
Reduces Physical Pain
In the entire body


ANGLE
BALANCED ANGLE OF REFRACTION
BLUESHIFT OF REFRACTION ANGLE
PHI STABILIZATION OF REDSHIFT
EXPANDED WAVELENGTH
CONTRACTED FREQUENCY
NEUTRAL WAVELENGTH
NEUTRAL FREQUENCY
CONTRACTED WAVELENGTH
EXPANDED FREQUENCY
PHI STABILIZATION OF BLUESHIFT
INERTIAL POLARIZATION - FUNDAMENTAL STABILITY AT GOLDEN RATIO
MIDDLE BLUE APPROX 466 NM
MIDDLE GREEN APPROX 547.533 NM
MIDDLE RED APPROX 679.456 NM

Health hazards of sitting

Studies show that sitting for more than 95 percent of the time at work increases the risk for physical injury and disease.

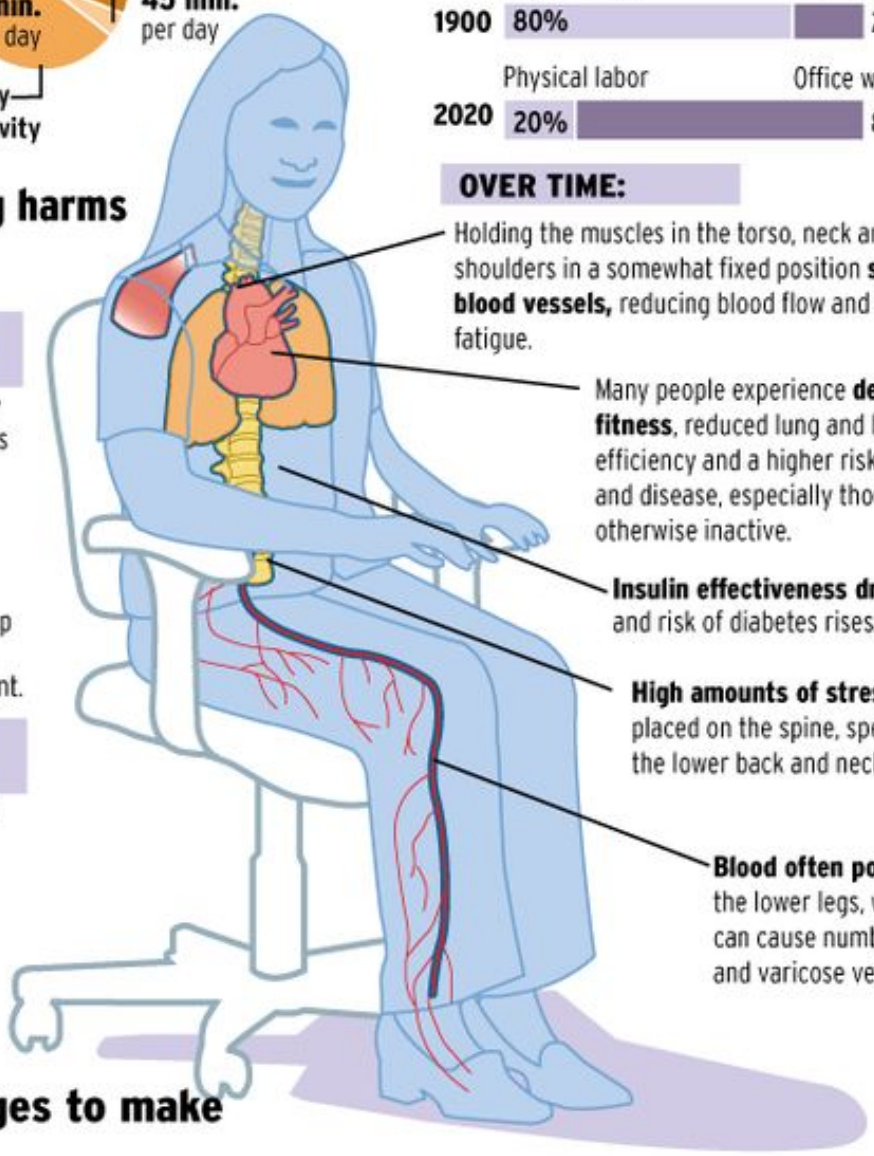
Average activity during waking hours



From the farm to the office

A century ago in the U.S., 80 percent of the workforce was involved in physical labor, including 11.5 million farmers. Now there are about 851,000 farmers, and it is estimated that by 2020 the workforce will have completed the reversal from physical labor to office work:

How sitting harms the body



AS SOON AS YOU SIT:

Electrical activity in the leg muscles shuts off.

Calorie burning drops to **1 per minute**.

Enzymes that help break down fat drop by 90 percent.

AFTER 2 HOURS:

Good cholesterol drops by 20 percent.

OVER TIME:

Holding the muscles in the torso, neck and shoulders in a somewhat fixed position **squeezes blood vessels,** reducing blood flow and causing fatigue.

Many people experience **decreased fitness**, reduced lung and heart efficiency and a higher risk for injury and disease, especially those who are otherwise inactive.

Insulin effectiveness drops and risk of diabetes rises.

High amounts of stress are placed on the spine, specifically the lower back and neck.

Blood often pools in the lower legs, which can cause numbness and varicose veins.

Two changes to make

Adjust the seat

Sitting at 135 degrees puts less strain on your lower back than hunching forward or even sitting straight.

Get up and move

The recommended 30 minutes of activity per day are not enough.

Interrupt sitting whenever you can:

- Walk around the office.
- Take the stairs.
- Walk to co-worker instead of messaging.

Sources: MedicalBillingandCoding.net; British Medical Journal; The American Journal of Clinical Nutrition; Businessweek; The New York Times; Science Daily; ehow.com; Canadian Centre for Occupational Health and Safety

Molly Zisk / The Register

Chakra Cleansing & Balancing Mudras & Mantras

While SEATED in Easy Pose (Cross-Legged on the Floor), VISUALIZE the CHAKRA LOCATION: its COLOUR and REPEAT the MANTRA for 3 MINUTES for EACH CHAKRA: beginning with Root Chakra...

CHAKRA NAMES, PURPOSE & LOCATION	MUDRA	PROCEDURE	MANTRA & CHAKRA COLOUR	CHAKRA SYMBOL
1. **ROOT CHAKRA** **MULADHARA** (SURVIVAL) Base of Spine, on Perineum.		Thumb & Index fingers touch. Arms Straight, hands on knees. Chakra Sound... Long L-A-A-A-A-M.	LAM	
2. **SACRAL CHAKRA** **SWADHISTHANA** (CREATIVITY) Hips		Place Hands in your lap with your palms facing upwards, right palm resting on top of left. Chakra Sound... Long V-A-A-A-A-M.	VAM	
3. **SOLAR PLEXUS CHAKRA** **MANIPURA** (WILL POWER) Two-Inches Below Naval		Place Hands between your heart and your stomach. Chakra Sound... Long R-A-A-A-A-M.	RAM	
4. **HEART CHAKRA** **ANAHATA** (LOVE) Heart		Right Hand: Index finger and thumb touching at Heart Centre. Left Hand in same Mudra resting on the Knee. Chakra Sound... Long Y-A-A-A-A-M.	YAM	
5. **THROAT CHAKRA** **VISHUDDA** (EXPRESSION) Throat		Hands by Stomach, fingers interlaced and thumb tips touching. Focus on Throat Chakra. Chakra Sound... Long H-A-A-A-A-M.	HAM	
6. **THIRD EYE CHAKRA** **AJNA** (INTUITION, WISDOM) Third Eye		Hands in front of the lower part of your breast, Middle fingers stand up tips touching, other fingers bent at first joint as shown. Chakra Sound... Long A-A-A-U-U-M.	AUM	
7. **CROWN CHAKRA** **SAHASRARA** (SPIRITUAL CONNECTION) Crown		Hands in front of your stomach, fingers interlaced, Little fingers pointing upwards. Chakra Sound... Long A-A-A-A-N-G.	ANG	

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CYMATICS

A 'Roman Dodecahedron' is a small hollow object made of bronze or stone with twelve flat pentagonal faces, each face having a circular hole of varying diameter. The use for this most unusual geometric patterned object is not understood.
I suspect these Dodecahedron's are based off long forgotten technology employing CYMATICS.

Cymatics : wave phenomena, esp sound, and their visual representations

Frequency, Light, and Water (FLaW)
Frequency vibrations can create amazing geometric patterns inside water droplets such as in the image above.

Was there a long lost culture that actually understood and used cymatic technology?

Ancient metal and stone 'Balls' have been discovered across the globe sometimes in the form of Platonic solids!

Jj Ainsworth 2018

Stations of Mind & Memory: The Plasmantik MarkhetU're™ Fields of the Human Body & the Embodied Fascia Layers with Organic Planetary Interfaces - Tan-Na-kEi Algorithm & Tan-Na-CHi mutation Phase-1 & the Human Body

Your Beastie & its Banshee

"Votre Bestiole et sa Dame blanche"
(créature féminine surnaturelle)

The reversed polarity Freeloader "Banshee" Inorganic magnetic field false feminine of distorted elemental / atmic plasma consciousness

The OVA Kalipsus
Distortion field of -Electrons

Magnetosphere
Outer Van Allen Belt (Electrons -)

5 ARi-yon'ah KarU'sa D3 Orons
Outer Tan-chi-TEi Chismatic
Respiratory & Digestive System & Etheric Ducts (Surrounds & Permeates D1 Etheric Body & extends outward 3" from skin)
Van Allen Gap (Coronosphere)

IVA BLock

Inorganic Phase Lock

4 DreA'ma KarU'sa D3 KAyLons
Middle Tryptoplasmic Chismatic
Outer skin layer & muscle tissue
Inner to Upper atmosphere & Inner Van Allen Belt (Protons +)
Ozone Block

Plasma Schema Harness Split = Harnais

3 Sche'ma KarU'sa D3 ShALons
Inner Tryptonic Chismatic
outer embodied Fascia Bone
Crust to Lower Mantel

Tan-Na-CHi Beastie Flows Mutation
Ah-Stri-yana Sac at CK3

Inorganic Phase Lock

2 Lud'far KarU'sa D3 ALons
Ah-Stri-jha Ta-hu Medium Chismatic
Middle embodied Fascia
Liquids/Blood
Core Aquifers

Lud'far Ah-SwE-jha Harness Split

1 Ah-SwE'jha KarU'sa D3 KHYons
EFFi Medium Chismatic
Inner embodied Fascia
Cardio-Vascular & Etheric Ducts
Core Crystal

Oron Band
Blocked by OVA

OVA

KHYon Band
Blocked by IVA

IVA

OZ

KAylon Band
ShAlon Band
Alon Band

Etheric Body Interface

Skin

5 ARi-yon-ah (Currently "non-concious Eternal Authentic") Mind & Respiratory & Digestive memory matrix

4 DreAma Dreaming Mind & Muscle memory matrix & Skin & Tissue

3 Schema Conscious-Mind Bone Memory Matrix/ outer Fascia

DhA' Center (Below Navel)

Tan-Na-CHi Beastie Flows between 3 outer Fascia & 2 Middle Fascia

2 Ludfar Subconscious Mind Liquid Memory Matrix Middle Fascia

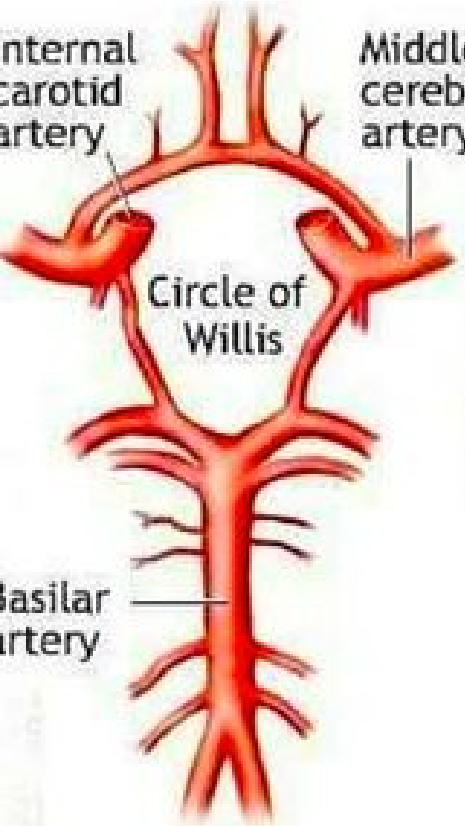
1 Ah-SwE'-jha Unconscious Cardio-Vascular Memory Matrix Inner Fascia

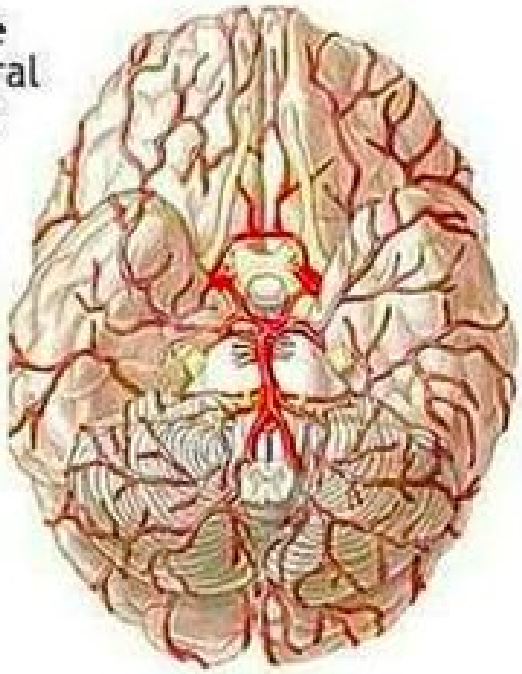
The Plasmantik MarkhetU're Fields of the Organic Eternal Authentic Human Plasma Body interfaces directly with corresponding PM Fields and layers of planetary anatomy

The Beastie Field Inorganic Bi-polarization static fiedl of inorganic Tan-na-CHi Beastie Flows of your own reversed plasma body

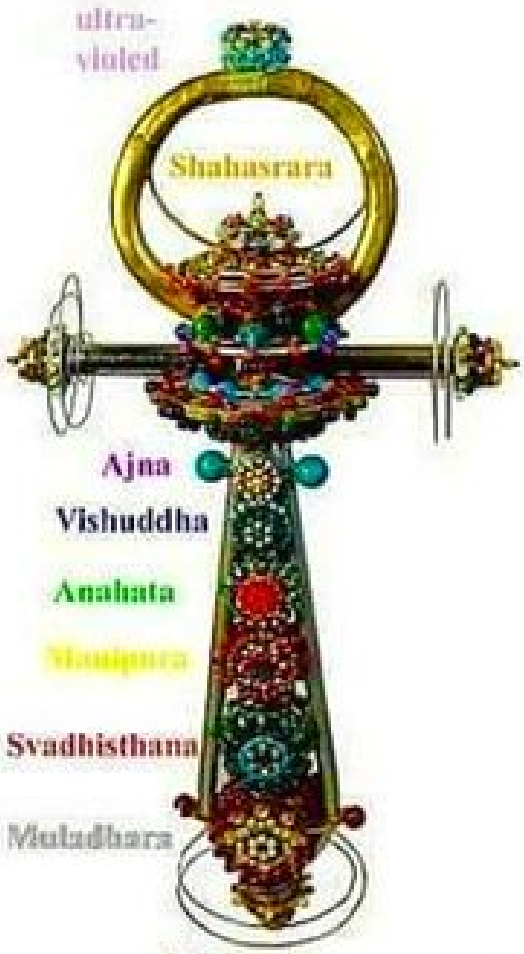
La Bestiole et Banshee, sa "Dame Blanche", femme de l'autre monde

THE ANKH OF LIFE





Bottom view of brain



@negusnetwork

©

HAS MANY ROLES

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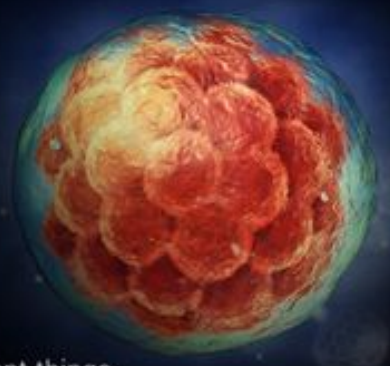
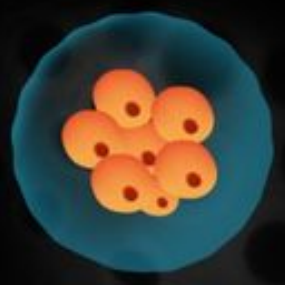
5 TYPES OF STEM CELLS CLASSIFICATIONS



Different kinds of stem cells are able to form into different things. We've listed them by differentiation potential from highest to lowest, so you can better understand how each classification functions.

1



TOTIPOTENT (OR OMNIPOTENT) STEM CELLS

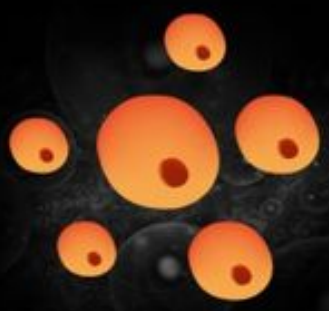
- The most powerful among the 5
- Can develop to a fully-functional living organism
- Example: Fertilized Egg

2

PLURIPOTENT STEM CELLS

- Can self-renew and differentiate into any of the three germ layers: ectoderm, endoderm, mesoderm
- Well-suited for use in cellular therapy and regenerative medicine
- Example: Embryonic Stem Cells

3



MULTIPOTENT STEM CELLS

- Can self-renew and differentiate into a specific range of cell types
- Example: Mesenchymal Stem Cell (MSC)

4

OLIGOPOTENT STEM CELLS

- Can only self-renew and differentiate into closely related cell types
- Example: Hematopoietic Stem Cell (HSC)

5

UNIPOTENT STEM CELLS

- Least potent and most limited type of stem cell
- Can only self-renew and differentiate into a single cell type
- Example: Muscle Stem Cells

BioInformant

For proven and trusted information, research, and the latest news on all things related to the stem cell industry, visit www.bioinformant.com/do-you-know-the-5-types-of-stem-cells-by-differentiation-potential

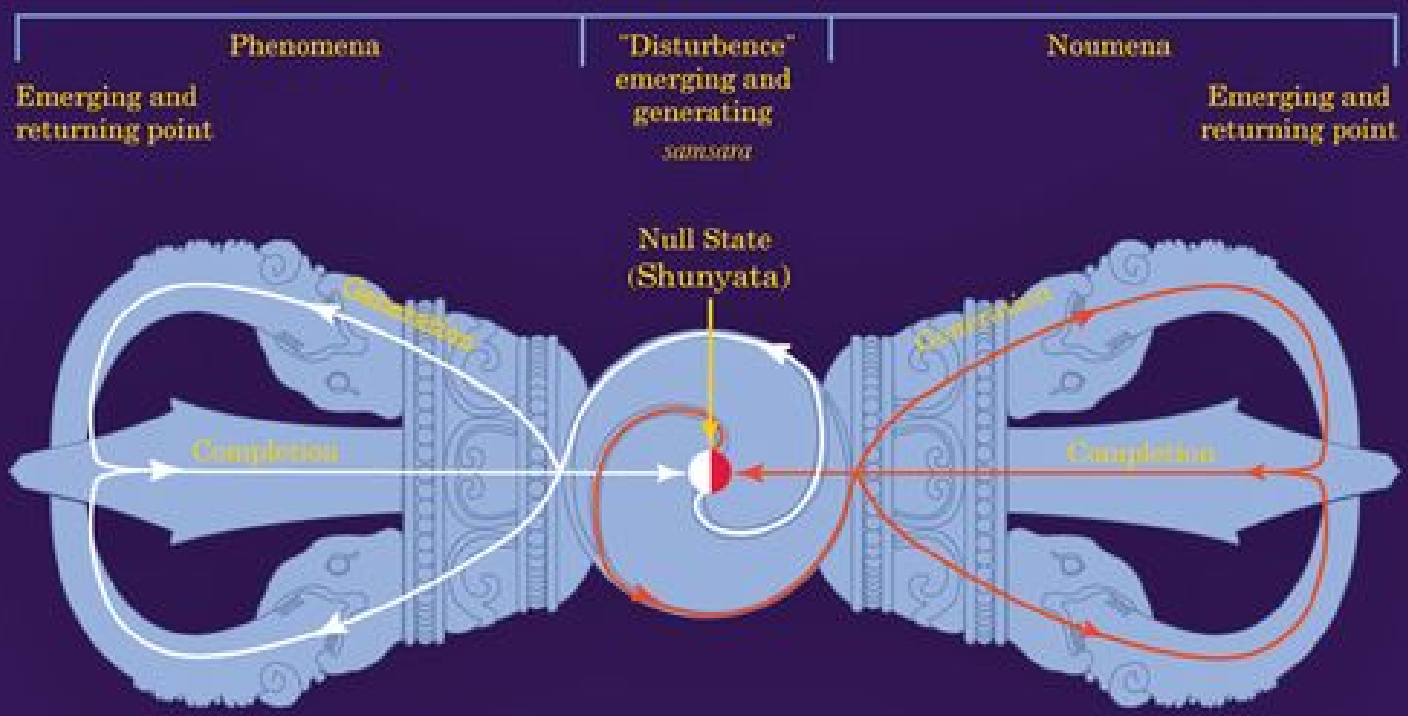
Two Aspects of Vajra Symbolism

The five pronged *vajra* as the mandala of the five Victor Buddhas.

There are mirrored mandalas at each end, one being the phenomenal and the other being the noumenal.

The nine pronged *vajra* as the mandala of the five Victor Buddhas and their female aspects, the Buddha Prajnas.

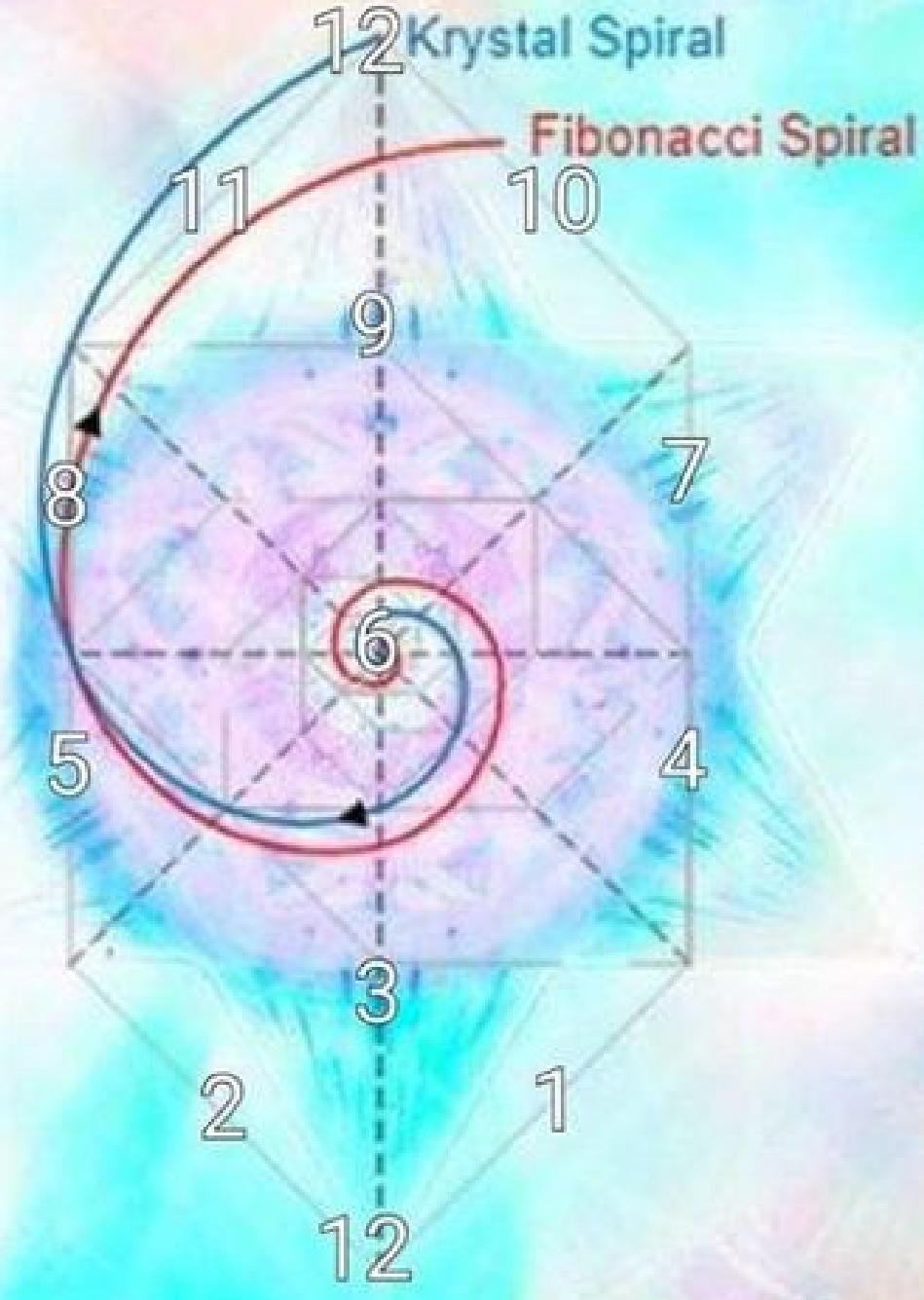
There are a number of variations according to specific mandalas.



The path of disintegration and reintegration of the phenomena and noumena from the null state to the samsaric realm and returning through the single piont of the *vajra*'s core structure

Vajrayana.wordpress.com

12 Tree Eternal Life Chakra Hologram



The Heart Chakra

The Heart Chakra is the energy point within our Ethereal Body where the Divine Upper and Lower Foundational Energies meet, this is what the two triangles in the Hexagram symbolise.

In the Hindu Tradition this Chakra is called the Anahata and this word means the "Unmade Sound" of the Universe. This is Speaking of the Vortex within our Ethereal Hearts created by these Higher and lower energetic forces.